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ANALYTICAL REPORT

Job Number: 320-76765-2

Job Description: SJRWP Supplemental Design Investigation

For:
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Attention: Janie Smith

Approved for release.
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8/23/2021 3:32 PM

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08/23/2021

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Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 7/27/2021 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.3º C.

Dioxin
Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following sample run on instrument DFS 1 exceeded this criteria: 11215702-072421-BN-SJSB104 (16-18) (320-76765-9), 11215702-072521-BN-SJSB092 (16-18) (320-76765-19), (CCV 320-516133/1) and (CCV 320-516475/16). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Job ID: 320-76765-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072421-BN-SJSB104 (16-18) — Lab Sample ID: 320-76765-9

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8,9-HxCDF	0.35	J B q	6.2	0.042	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	3.6	J B	6.2	0.12	pg/g	1	☼	1613B	Total/NA
OCDD	130	B	12	0.18	pg/g	1	☼	1613B	Total/NA
Total HxCDD	1.1	J B q	6.2	0.060	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.35	J B q	6.2	0.044	pg/g	1	☼	1613B	Total/NA
Total HpCDD	12	B	6.2	0.12	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072521-BN-SJSB092 (16-18) — Lab Sample ID: 320-76765-19

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	4.5		1.1	0.097	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.33	J B q	5.7	0.18	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.61	J q	5.7	0.22	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.6	J B	5.7	0.18	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.66	J q	5.7	0.028	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.41	J B	5.7	0.029	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	20	B	5.7	0.20	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.44	J B q	5.7	0.053	pg/g	1	☼	1613B	Total/NA
OCDD	450	B	11	0.40	pg/g	1	☼	1613B	Total/NA
Total TCDD	4.5	B	1.1	0.097	pg/g	1	☼	1613B	Total/NA
Total TCDF	33	B q	1.1	0.14	pg/g	1	☼	1613B	Total/NA
Total HxCDD	16	B q	5.7	0.20	pg/g	1	☼	1613B	Total/NA
Total HxCDF	1.1	J B q	5.7	0.028	pg/g	1	☼	1613B	Total/NA
Total HpCDD	64	B	5.7	0.20	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.44	J B q	5.7	0.050	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	20	B	1.1	0.23	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76765-2

Client Sample ID: 11215702-072421-BN-SJSB104 (16-18)

Lab Sample ID: 320-76765-9

Date Collected: 07/24/21 16:10
Matrix: Sediment
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**21.7**		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	**78.3**		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072421-BN-SJSB104 (16-18)

Lab Sample ID: 320-76765-9

Date Collected: 07/24/21 16:10
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 78.3

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.2	0.071	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
2,3,7,8-TCDF	ND		1.2	0.063	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
1,2,3,7,8-PeCDD	ND		6.2	0.083	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
1,2,3,7,8-PeCDF	ND		6.2	0.056	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
2,3,4,7,8-PeCDF	ND		6.2	0.055	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
1,2,3,4,7,8-HxCDD	ND		6.2	0.058	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
1,2,3,6,7,8-HxCDD	ND		6.2	0.065	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
1,2,3,7,8,9-HxCDD	ND		6.2	0.056	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
1,2,3,4,7,8-HxCDF	ND		6.2	0.042	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
1,2,3,6,7,8-HxCDF	ND		6.2	0.046	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
1,2,3,7,8,9-HxCDF	**0.35**	**J B q**	6.2	0.042	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
2,3,4,6,7,8-HxCDF	ND		6.2	0.045	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
1,2,3,4,6,7,8-HpCDD	**3.6**	**J B**	6.2	0.12	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
1,2,3,4,6,7,8-HpCDF	ND		6.2	0.038	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
1,2,3,4,7,8,9-HpCDF	ND		6.2	0.036	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
OCDD	**130**	**B**	12	0.18	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
OCDF	ND		12	0.092	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
Total TCDD	ND		1.2	0.22	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
Total TCDF	ND		1.2	0.18	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
Total PeCDD	ND		6.2	0.35	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
Total PeCDF	ND		6.2	0.056	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
Total HxCDD	**1.1**	**J B q**	6.2	0.060	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
Total HxCDF	**0.35**	**J B q**	6.2	0.044	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
Total HpCDD	**12**	**B**	6.2	0.12	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1
Total HpCDF	ND		6.2	0.038	pg/g	☼	08/05/21 06:41	08/13/21 20:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*56*		*25 - 164*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-2,3,7,8-TCDF	*58*		*24 - 169*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-1,2,3,7,8-PeCDD	*56*		*25 - 181*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-1,2,3,7,8-PeCDF	*57*		*24 - 185*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-2,3,4,7,8-PeCDF	*65*		*21 - 178*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-1,2,3,4,7,8-HxCDD	*65*		*32 - 141*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-1,2,3,6,7,8-HxCDD	*57*		*28 - 130*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-1,2,3,4,7,8-HxCDF	*75*		*26 - 152*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-1,2,3,6,7,8-HxCDF	*62*		*26 - 123*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-1,2,3,7,8,9-HxCDF	*59*		*29 - 147*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-2,3,4,6,7,8-HxCDF	*60*		*28 - 136*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*71*		*23 - 140*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*66*		*28 - 143*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*77*		*26 - 138*	*08/05/21 06:41*	*08/13/21 20:33*	*1*
13C-OCDD	*69*		*17 - 157*	*08/05/21 06:41*	*08/13/21 20:33*	*1*

Client Sample ID: 11215702-072421-BN-SJSB104 (16-18) Lab Sample ID: 320-76765-9

Date Collected: 07/24/21 16:10 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 78.3**

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*74*		*35 - 197*	*08/05/21 06:41*	*08/13/21 20:33*	*1*

Client Sample ID: 11215702-072521-BN-SJSB092 (16-18) Lab Sample ID: 320-76765-19

Date Collected: 07/25/21 14:40 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**16.9**		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	**83.1**		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072521-BN-SJSB092 (16-18) Lab Sample ID: 320-76765-19

Date Collected: 07/25/21 14:40 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 83.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**4.5**		1.1	0.097	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
1,2,3,7,8-PeCDD	ND		5.7	0.11	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
1,2,3,7,8-PeCDF	ND		5.7	0.063	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
2,3,4,7,8-PeCDF	ND		5.7	0.065	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
1,2,3,4,7,8-HxCDD	**0.33**	**J B q**	5.7	0.18	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
1,2,3,6,7,8-HxCDD	**0.61**	**J q**	5.7	0.22	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
1,2,3,7,8,9-HxCDD	**1.6**	**J B**	5.7	0.18	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
1,2,3,4,7,8-HxCDF	**0.66**	**J q**	5.7	0.028	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
1,2,3,6,7,8-HxCDF	ND		5.7	0.029	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
1,2,3,7,8,9-HxCDF	**0.41**	**J B**	5.7	0.029	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
2,3,4,6,7,8-HxCDF	ND		5.7	0.028	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
1,2,3,4,6,7,8-HpCDD	**20**	**B**	5.7	0.20	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
1,2,3,4,6,7,8-HpCDF	**0.44**	**J B q**	5.7	0.053	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
1,2,3,4,7,8,9-HpCDF	ND		5.7	0.047	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
OCDD	**450**	**B**	11	0.40	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
OCDF	ND		11	0.067	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
Total TCDD	**4.5**	**B**	1.1	0.097	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
Total TCDF	**33**	**B q**	1.1	0.14	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
Total PeCDD	ND		5.7	1.7	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
Total PeCDF	ND		5.7	0.24	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
Total HxCDD	**16**	**B q**	5.7	0.20	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
Total HxCDF	**1.1**	**J B q**	5.7	0.028	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
Total HpCDD	**64**	**B**	5.7	0.20	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1
Total HpCDF	**0.44**	**J B q**	5.7	0.050	pg/g	☼	08/05/21 06:41	08/14/21 07:15	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*59*		*25 - 164*	*08/05/21 06:41*	*08/14/21 07:15*	*1*
13C-2,3,7,8-TCDF	*59*		*24 - 169*	*08/05/21 06:41*	*08/14/21 07:15*	*1*
13C-1,2,3,7,8-PeCDD	*55*		*25 - 181*	*08/05/21 06:41*	*08/14/21 07:15*	*1*
13C-1,2,3,7,8-PeCDF	*57*		*24 - 185*	*08/05/21 06:41*	*08/14/21 07:15*	*1*
13C-2,3,4,7,8-PeCDF	*63*		*21 - 178*	*08/05/21 06:41*	*08/14/21 07:15*	*1*
13C-1,2,3,4,7,8-HxCDD	*70*		*32 - 141*	*08/05/21 06:41*	*08/14/21 07:15*	*1*
13C-1,2,3,6,7,8-HxCDD	*58*		*28 - 130*	*08/05/21 06:41*	*08/14/21 07:15*	*1*
13C-1,2,3,4,7,8-HxCDF	*78*		*26 - 152*	*08/05/21 06:41*	*08/14/21 07:15*	*1*
13C-1,2,3,6,7,8-HxCDF	*68*		*26 - 123*	*08/05/21 06:41*	*08/14/21 07:15*	*1*

Client Sample ID: 11215702-072521-BN-SJSB092 (16-18) Lab Sample ID: 320-76765-19

Date Collected: 07/25/21 14:40 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 83.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	60		29 - 147	08/05/21 06:41	08/14/21 07:15	1
13C-2,3,4,6,7,8-HxCDF	63		28 - 136	08/05/21 06:41	08/14/21 07:15	1
13C-1,2,3,4,6,7,8-HpCDD	67		23 - 140	08/05/21 06:41	08/14/21 07:15	1
13C-1,2,3,4,6,7,8-HpCDF	68		28 - 143	08/05/21 06:41	08/14/21 07:15	1
13C-1,2,3,4,7,8,9-HpCDF	79		26 - 138	08/05/21 06:41	08/14/21 07:15	1
13C-OCDD	72		17 - 157	08/05/21 06:41	08/14/21 07:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	69		35 - 197	08/05/21 06:41	08/14/21 07:15	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**20**	**B**	1.1	0.23	pg/g	☼	08/05/21 06:41	08/21/21 18:23	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	56		24 - 169	08/05/21 06:41	08/21/21 18:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	74		35 - 197	08/05/21 06:41	08/21/21 18:23	1

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76765-2

Client Sample ID: 11215702-072421-BN-SJSB104 (16-18) — Lab Sample ID: 320-76765-9

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	ND		1.2	0.071	pg/g	1	0.036	1613B
2,3,7,8-TCDF	ND		1.2	0.063	pg/g	0.1	0.0032	1613B
1,2,3,7,8-PeCDD	ND		6.2	0.083	pg/g	1	0.042	1613B
1,2,3,7,8-PeCDF	ND		6.2	0.056	pg/g	0.03	0.00084	1613B
2,3,4,7,8-PeCDF	ND		6.2	0.055	pg/g	0.3	0.0083	1613B
1,2,3,4,7,8-HxCDD	ND		6.2	0.058	pg/g	0.1	0.0029	1613B
1,2,3,6,7,8-HxCDD	ND		6.2	0.065	pg/g	0.1	0.0033	1613B
1,2,3,7,8,9-HxCDD	ND		6.2	0.056	pg/g	0.1	0.0028	1613B
1,2,3,4,7,8-HxCDF	ND		6.2	0.042	pg/g	0.1	0.0021	1613B
1,2,3,6,7,8-HxCDF	ND		6.2	0.046	pg/g	0.1	0.0023	1613B
1,2,3,7,8,9-HxCDF	**0.35**	**J B q**	6.2	0.042	pg/g	0.1	**0.035**	1613B
2,3,4,6,7,8-HxCDF	ND		6.2	0.045	pg/g	0.1	0.0023	1613B
1,2,3,4,6,7,8-HpCDD	**3.6**	**J B**	6.2	0.12	pg/g	0.01	**0.036**	1613B
1,2,3,4,6,7,8-HpCDF	ND		6.2	0.038	pg/g	0.01	0.00019	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.2	0.036	pg/g	0.01	0.00018	1613B
OCDD	**130**	**B**	12	0.18	pg/g	0.0003	**0.039**	1613B
OCDF	ND		12	0.092	pg/g	0.0003	0.000014	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		0.22	TEQ

Client Sample ID: 11215702-072521-BN-SJSB092 (16-18) — Lab Sample ID: 320-76765-19

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**4.5**		1.1	0.097	pg/g	1	**4.5**	1613B
1,2,3,7,8-PeCDD	ND		5.7	0.11	pg/g	1	0.055	1613B
1,2,3,7,8-PeCDF	ND		5.7	0.063	pg/g	0.03	0.00095	1613B
2,3,4,7,8-PeCDF	ND		5.7	0.065	pg/g	0.3	0.0098	1613B
1,2,3,4,7,8-HxCDD	**0.33**	**J B q**	5.7	0.18	pg/g	0.1	**0.033**	1613B
1,2,3,6,7,8-HxCDD	**0.61**	**J q**	5.7	0.22	pg/g	0.1	**0.061**	1613B
1,2,3,7,8,9-HxCDD	**1.6**	**J B**	5.7	0.18	pg/g	0.1	**0.16**	1613B
1,2,3,4,7,8-HxCDF	**0.66**	**J q**	5.7	0.028	pg/g	0.1	**0.066**	1613B
1,2,3,6,7,8-HxCDF	ND		5.7	0.029	pg/g	0.1	0.0015	1613B
1,2,3,7,8,9-HxCDF	**0.41**	**J B**	5.7	0.029	pg/g	0.1	**0.041**	1613B
2,3,4,6,7,8-HxCDF	ND		5.7	0.028	pg/g	0.1	0.0014	1613B
1,2,3,4,6,7,8-HpCDD	**20**	**B**	5.7	0.20	pg/g	0.01	**0.20**	1613B
1,2,3,4,6,7,8-HpCDF	**0.44**	**J B q**	5.7	0.053	pg/g	0.01	**0.0044**	1613B
1,2,3,4,7,8,9-HpCDF	ND		5.7	0.047	pg/g	0.01	0.00024	1613B
OCDD	**450**	**B**	11	0.40	pg/g	0.0003	**0.14**	1613B
OCDF	ND		11	0.067	pg/g	0.0003	0.000010	1613B
2,3,7,8-TCDF - RA	**20**	**B**	1.1	0.23	pg/g	0.1	**2.0**	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Job ID: 320-76765-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072521-BN-SJSB092 (16-18) (Continued)

Lab Sample ID: 320-76765-19

						WHO 2005 ND = ½ EDL		
Analyte	**Result**	**Qualifier**	**NONE**	**NONE**	**Unit**	**TEF**	**TEQ**	**Method**
Total Dioxin/Furan TEQ					pg/g		7.3	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-76765-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-76765-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (35-197)							
320-76765-9	11215702-072421-BN-SJSB104	74							
320-76765-19	11215702-072521-BN-SJSB092 (16-18)	69							
320-76765-19 - RA	11215702-072521-BN-SJSB092 (16-18)	74							
MB 320-513227/1-A	Method Blank	80							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (31-191)							
LCS 320-513227/2-A	Lab Control Sample	79							
LCSD 320-513227/3-A	Lab Control Sample Dup	81							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76765-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76765-9	11215702-072421-BN-SJSB104	56	58	56	57	65	65	57	75
320-76765-19	11215702-072521-BN-SJSB09 2 (16-18)	59	59	55	57	63	70	58	78
320-76765-19 - RA	11215702-072521-BN-SJSB09 2 (16-18)		56						
MB 320-513227/1-A	Method Blank	62	58	63	59	64	64	58	61

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76765-9	11215702-072421-BN-SJSB104	62	59	60	71	66	77	69
320-76765-19	11215702-072521-BN-SJSB09 2 (16-18)	68	60	63	67	68	79	72
320-76765-19 - RA	11215702-072521-BN-SJSB09 2 (16-18)							
MB 320-513227/1-A	Method Blank	56	57	56	69	65	73	79

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-513227/2-A	Lab Control Sample	57	54	58	55	61	61	56	59
LCSD 320-513227/3-A	Lab Control Sample Dup	57	54	57	54	59	62	56	60

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-513227/2-A	Lab Control Sample	53	52	53	62	60	67	69
LCSD 320-513227/3-A	Lab Control Sample Dup	54	54	53	62	60	68	69

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD

Isotope Dilution Summary

Client: GHD Services Inc.
Job ID: 320-76765-2
Project/Site: SJRWP Supplemental Design Investigation

PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76765-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-513227/1-A
Matrix: Sediment
Analysis Batch: 515770

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513227

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.038	pg/g		08/05/21 06:41	08/13/21 06:33	1
2,3,7,8-TCDF	0.113	J q	1.0	0.021	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,7,8-PeCDD	ND		5.0	0.051	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,7,8-PeCDF	ND		5.0	0.035	pg/g		08/05/21 06:41	08/13/21 06:33	1
2,3,4,7,8-PeCDF	ND		5.0	0.035	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,4,7,8-HxCDD	0.175	J	5.0	0.030	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.032	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,7,8,9-HxCDD	0.0808	J	5.0	0.028	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.026	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.026	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,7,8,9-HxCDF	0.150	J	5.0	0.021	pg/g		08/05/21 06:41	08/13/21 06:33	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.021	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,4,6,7,8-HpCDD	0.227	J	5.0	0.044	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,4,6,7,8-HpCDF	0.143	J q	5.0	0.029	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.036	pg/g		08/05/21 06:41	08/13/21 06:33	1
OCDD	0.685	J	10	0.042	pg/g		08/05/21 06:41	08/13/21 06:33	1
OCDF	0.144	J	10	0.023	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total TCDD	0.0948	J q	1.0	0.038	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total TCDF	0.210	J q	1.0	0.021	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total PeCDD	ND		5.0	0.051	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total PeCDF	ND		5.0	0.035	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total HxCDD	0.451	J	5.0	0.030	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total HxCDF	0.150	J	5.0	0.023	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total HpCDD	0.472	J	5.0	0.044	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total HpCDF	0.143	J q	5.0	0.032	pg/g		08/05/21 06:41	08/13/21 06:33	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*62*		*25 - 164*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-2,3,7,8-TCDF	*58*		*24 - 169*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,7,8-PeCDD	*63*		*25 - 181*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,7,8-PeCDF	*59*		*24 - 185*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-2,3,4,7,8-PeCDF	*64*		*21 - 178*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,4,7,8-HxCDD	*64*		*32 - 141*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,6,7,8-HxCDD	*58*		*28 - 130*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,4,7,8-HxCDF	*61*		*26 - 152*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,6,7,8-HxCDF	*56*		*26 - 123*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,7,8,9-HxCDF	*57*		*29 - 147*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-2,3,4,6,7,8-HxCDF	*56*		*28 - 136*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*69*		*23 - 140*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*65*		*28 - 143*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*73*		*26 - 138*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-OCDD	*79*		*17 - 157*	*08/05/21 06:41*	*08/13/21 06:33*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*80*		*35 - 197*	*08/05/21 06:41*	*08/13/21 06:33*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-513227/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 515770 **Prep Batch: 513227**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	20.2		pg/g		101	67 - 158
2,3,7,8-TCDF	20.0	20.9		pg/g		104	75 - 158
1,2,3,7,8-PeCDD	100	107		pg/g		107	70 - 142
1,2,3,7,8-PeCDF	100	108		pg/g		108	80 - 134
2,3,4,7,8-PeCDF	100	97.4		pg/g		97	68 - 160
1,2,3,4,7,8-HxCDD	100	97.1		pg/g		97	70 - 164
1,2,3,6,7,8-HxCDD	100	106		pg/g		106	76 - 134
1,2,3,7,8,9-HxCDD	100	105		pg/g		105	64 - 162
1,2,3,4,7,8-HxCDF	100	96.7		pg/g		97	72 - 134
1,2,3,6,7,8-HxCDF	100	107		pg/g		107	84 - 130
1,2,3,7,8,9-HxCDF	100	106		pg/g		106	78 - 130
2,3,4,6,7,8-HxCDF	100	105		pg/g		105	70 - 156
1,2,3,4,6,7,8-HpCDD	100	107		pg/g		107	70 - 140
1,2,3,4,6,7,8-HpCDF	100	106		pg/g		106	82 - 122
1,2,3,4,7,8,9-HpCDF	100	98.8		pg/g		99	78 - 138
OCDD	200	214		pg/g		107	78 - 144
OCDF	200	205		pg/g		103	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*57*		*20 - 175*
13C-2,3,7,8-TCDF	*54*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*58*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*55*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*61*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*61*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*56*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*59*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*53*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*52*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*53*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*62*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*67*		*20 - 186*
13C-OCDD	*69*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*79*		*31 - 191*

Lab Sample ID: LCSD 320-513227/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 515770 **Prep Batch: 513227**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	20.0	20.2		pg/g		101	67 - 158	0	50
2,3,7,8-TCDF	20.0	20.9		pg/g		105	75 - 158	0	50
1,2,3,7,8-PeCDD	100	107		pg/g		107	70 - 142	1	50
1,2,3,7,8-PeCDF	100	107		pg/g		107	80 - 134	1	50
2,3,4,7,8-PeCDF	100	97.4		pg/g		97	68 - 160	0	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-513227/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 515770 **Prep Batch: 513227**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,7,8-HxCDD			100	98.2		pg/g		98	70 - 164	1	50
1,2,3,6,7,8-HxCDD			100	104		pg/g		104	76 - 134	3	50
1,2,3,7,8,9-HxCDD			100	103		pg/g		103	64 - 162	2	50
1,2,3,4,7,8-HxCDF			100	96.6		pg/g		97	72 - 134	0	50
1,2,3,6,7,8-HxCDF			100	105		pg/g		105	84 - 130	2	50
1,2,3,7,8,9-HxCDF			100	104		pg/g		104	78 - 130	2	50
2,3,4,6,7,8-HxCDF			100	106		pg/g		106	70 - 156	1	50
1,2,3,4,6,7,8-HpCDD			100	108		pg/g		108	70 - 140	1	50
1,2,3,4,6,7,8-HpCDF			100	107		pg/g		107	82 - 122	1	50
1,2,3,4,7,8,9-HpCDF			100	98.1		pg/g		98	78 - 138	1	50
OCDD			200	212		pg/g		106	78 - 144	1	50
OCDF			200	204		pg/g		102	63 - 170	1	50

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*57*		*20 - 175*
13C-2,3,7,8-TCDF	*54*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*57*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*54*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*59*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*62*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*56*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*60*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*54*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*54*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*53*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*62*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*68*		*20 - 186*
13C-OCDD	*69*		*13 - 199*

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*81*		*31 - 191*

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-76765-A-1 DU **Client Sample ID: Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 511304

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	33.0			28.3		%				16	20
Percent Solids	67.0			71.7		%				7	20

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-76765-2
Project/Site: SJRWP Supplemental Design Investigation

Specialty Organics

Prep Batch: 513227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76765-9	11215702-072421-BN-SJSB104 (16-18)	Total/NA	Sediment	HRMS-Sox	
320-76765-19 - RA	11215702-072521-BN-SJSB092 (16-18)	Total/NA	Sediment	HRMS-Sox	
320-76765-19	11215702-072521-BN-SJSB092 (16-18)	Total/NA	Sediment	HRMS-Sox	
MB 320-513227/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-513227/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
LCSD 320-513227/3-A	Lab Control Sample Dup	Total/NA	Sediment	HRMS-Sox	

Analysis Batch: 515770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-513227/1-A	Method Blank	Total/NA	Sediment	1613B	513227
LCS 320-513227/2-A	Lab Control Sample	Total/NA	Sediment	1613B	513227
LCSD 320-513227/3-A	Lab Control Sample Dup	Total/NA	Sediment	1613B	513227

Analysis Batch: 516133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76765-9	11215702-072421-BN-SJSB104 (16-18)	Total/NA	Sediment	1613B	513227

Analysis Batch: 516475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76765-19	11215702-072521-BN-SJSB092 (16-18)	Total/NA	Sediment	1613B	513227

Analysis Batch: 518850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76765-19 - RA	11215702-072521-BN-SJSB092 (16-18)	Total/NA	Sediment	1613B	513227

General Chemistry

Analysis Batch: 511304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76765-9	11215702-072421-BN-SJSB104 (16-18)	Total/NA	Sediment	D 2216	
320-76765-19	11215702-072521-BN-SJSB092 (16-18)	Total/NA	Sediment	D 2216	
320-76765-A-1 DU	Duplicate	Total/NA	Sediment	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Job ID: 320-76765-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072421-BN-SJSB104 (16-18)
Lab Sample ID: 320-76765-9

Date Collected: 07/24/21 16:10
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511304	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072421-BN-SJSB104 (16-18)
Lab Sample ID: 320-76765-9

Date Collected: 07/24/21 16:10
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 78.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513227	08/05/21 06:41	FC	TAL SAC
Total/NA	Analysis	1613B		1	516133	08/13/21 20:33	KSS	TAL SAC

Client Sample ID: 11215702-072521-BN-SJSB092 (16-18)
Lab Sample ID: 320-76765-19

Date Collected: 07/25/21 14:40
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511304	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072521-BN-SJSB092 (16-18)
Lab Sample ID: 320-76765-19

Date Collected: 07/25/21 14:40
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 83.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513227	08/05/21 06:41	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518850	08/21/21 18:23	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513227	08/05/21 06:41	FC	TAL SAC
Total/NA	Analysis	1613B		1	516475	08/14/21 07:15	KSS	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-76765-2
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDD
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDF
1613B	HRMS-Sox	Sediment	OCDD
1613B	HRMS-Sox	Sediment	OCDF
1613B	HRMS-Sox	Sediment	Total HpCDD
1613B	HRMS-Sox	Sediment	Total HpCDF
1613B	HRMS-Sox	Sediment	Total HxCDD
1613B	HRMS-Sox	Sediment	Total HxCDF
1613B	HRMS-Sox	Sediment	Total PeCDD
1613B	HRMS-Sox	Sediment	Total PeCDF
1613B	HRMS-Sox	Sediment	Total TCDD
1613B	HRMS-Sox	Sediment	Total TCDF
D 2216		Sediment	Percent Moisture
D 2216		Sediment	Percent Solids
TEQ		Sediment	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76765-2

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76765-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76765-9	11215702-072421-BN-SJSB104 (16-18)	Sediment	07/24/21 16:10	07/27/21 09:45
320-76765-19	11215702-072521-BN-SJSB092 (16-18)	Sediment	07/25/21 14:40	07/27/21 09:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76765-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: WDM 320-510264/1 Client Sample ID:

Date Analyzed: 07/26/21 09:21 Lab File ID: 26JL2110D5_1.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,6,8-TCDF	15.13	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,6,8-TCDD	16.07	Peak assignment corrected	arghestanis	07/26/21 12:21
2,3,4,7-TCDF	17.63	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,7-TCDD	18.22	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDD	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDF	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,8,9-TCDD	19.47	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,8,9-TCDF	19.49	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,4,6,8-PeCDF	19.76	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,4,7,9-PeCDD	21.58	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDD	25.91	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDF	26.14	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,8-HxCDF	28.48	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,4,6,7,9-HxCDD	30.02	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,7-HxCDD	32.30	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,3,4,8,9-HxCDF	32.61	Peak assignment corrected	arghestanis	07/26/21 12:23

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76765-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: IC 320-510264/3 Client Sample ID:

Date Analyzed: 07/26/21 10:51 Lab File ID: 26JL2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.35	Invalid Compound ID	stephensk	07/27/21 08:15

Lab Sample ID: IC 320-510264/4 Client Sample ID:

Date Analyzed: 07/26/21 11:36 Lab File ID: 26JL2110D5_4.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,4,7,8-PeCDF	24.13	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDF	30.84	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDD	31.93	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8,9-HpCDF	35.01	Peak assignment corrected	arghestanis	07/26/21 12:31

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76765-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 515770

Lab Sample ID: MB 320-513227/1-A Client Sample ID:

Date Analyzed: 08/13/21 06:33 Lab File ID: 12AU2110D5_25.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/16/21 13:36
2,3,7,8-TCDF	17.36	Baseline	dadunj	08/16/21 13:35
1,2,3,4,7,8-HxCDD	31.73	Split Peak	dadunj	08/16/21 13:36
1,2,3,7,8,9-HxCDD	32.15	Split Peak	dadunj	08/16/21 13:37
1,2,3,7,8,9-HxCDF	32.35	Split Peak	dadunj	08/16/21 13:36
1,2,3,4,6,7,8-HpCDF	33.79	Split Peak	dadunj	08/16/21 13:37
1,2,3,4,6,7,8-HpCDD	34.58	Split Peak	dadunj	08/16/21 13:37
OCDD	36.95	Split Peak	dadunj	08/16/21 13:38
OCDF	37.02	Split Peak	dadunj	08/16/21 13:37

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76765-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76765-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 518850

Lab Sample ID: 320-76765-19 RA Client Sample ID: 11215702-072521-BN-SJSB092 (16-18) RA

Date Analyzed: 08/21/21 18:23 Lab File ID: 21AU2111D2_008.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.67	Peak Tail	bennettd	08/23/21 10:02

1613B

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76765-2

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 516133

Lab Sample ID: CCV 320-516133/1 Client Sample ID:

Date Analyzed: 08/13/21 14:02 Lab File ID: 13au21dfs1_2.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,4-TCDD	21.58	Peak assignment corrected	stephensk	08/13/21 14:53
2,3,7,8-TCDD	22.00	Baseline	stephensk	08/13/21 14:54
13C-1,2,3,7,8-PeCDD	29.75	Incomplete Integration	stephensk	08/13/21 14:54
1,2,3,7,8-PeCDD	29.78	Incomplete Integration	stephensk	08/13/21 14:54
13C-1,2,3,7,8,9-HxCDD	36.68	Baseline	stephensk	08/13/21 14:56

Lab Sample ID: 320-76765-9 Client Sample ID: 11215702-072421-BN-SJSB104 (16-18)

Date Analyzed: 08/13/21 20:33 Lab File ID: 13au21dfs1_10.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,6,7,8-HpCDF		Invalid Compound ID	dadunj	08/17/21 09:17
1,2,3,4,7,8,9-HpCDF		Invalid Compound ID	dadunj	08/17/21 09:17
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/17/21 09:17
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/17/21 09:16
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/17/21 09:17
1,2,3,7,8,9-HxCDD		Invalid Compound ID	dadunj	08/17/21 09:17
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/17/21 09:16
1,2,3,7,8-PeCDF		Invalid Compound ID	dadunj	08/17/21 09:16
2,3,7,8-TCDD		Invalid Compound ID	dadunj	08/17/21 09:16
1,2,3,7,8,9-HxCDF	36.86	Split Peak	dadunj	08/17/21 09:16
1,2,3,4,6,7,8-HpCDD	39.59	Split Peak	dadunj	08/17/21 09:17

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76765-2

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 516475

Lab Sample ID: CCV 320-516475/16 Client Sample ID:

Date Analyzed: 08/14/21 02:27 Lab File ID: 13au21dfs1_18.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.51	Baseline	stephensk	08/14/21 17:26
37Cl4-2,3,7,8-TCDD	21.87	Peak assignment corrected	stephensk	08/14/21 17:26
13C-1,2,3,7,8,9-HxCDD	36.62	Baseline	stephensk	08/14/21 17:29
13C-1,2,3,4,7,8,9-HpCDF	39.88	Baseline	stephensk	08/14/21 17:28
13C-OCDD	42.08	Baseline	stephensk	08/14/21 17:30

Lab Sample ID: 320-76765-19 Client Sample ID: 11215702-072521-BN-SJSB092 (16-18)

Date Analyzed: 08/14/21 07:15 Lab File ID: 13au21dfs1_24.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8,9-HpCDF		Invalid Compound ID	dadunj	08/17/21 09:36
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/17/21 09:34
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/17/21 09:34
1,2,3,7,8-PeCDF		Invalid Compound ID	dadunj	08/17/21 09:34
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/17/21 09:34
2,3,4,7,8-PeCDF		Invalid Compound ID	dadunj	08/17/21 09:34
OCDF		Invalid Compound ID	dadunj	08/17/21 09:36
2,3,7,8-TCDF	20.54	Baseline	stephensk	08/16/21 08:25
1,2,3,4,7,8-HxCDD	36.15	Invalid Compound ID	dadunj	08/17/21 09:35
1,2,3,6,7,8-HxCDD	36.31	Baseline	dadunj	08/17/21 09:35
1,2,3,7,8,9-HxCDF	36.86	Baseline	dadunj	08/17/21 09:35
1,2,3,4,6,7,8-HpCDF	38.68	Baseline	dadunj	08/17/21 09:36

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30		CIL, Lot ER09031903		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

773035

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

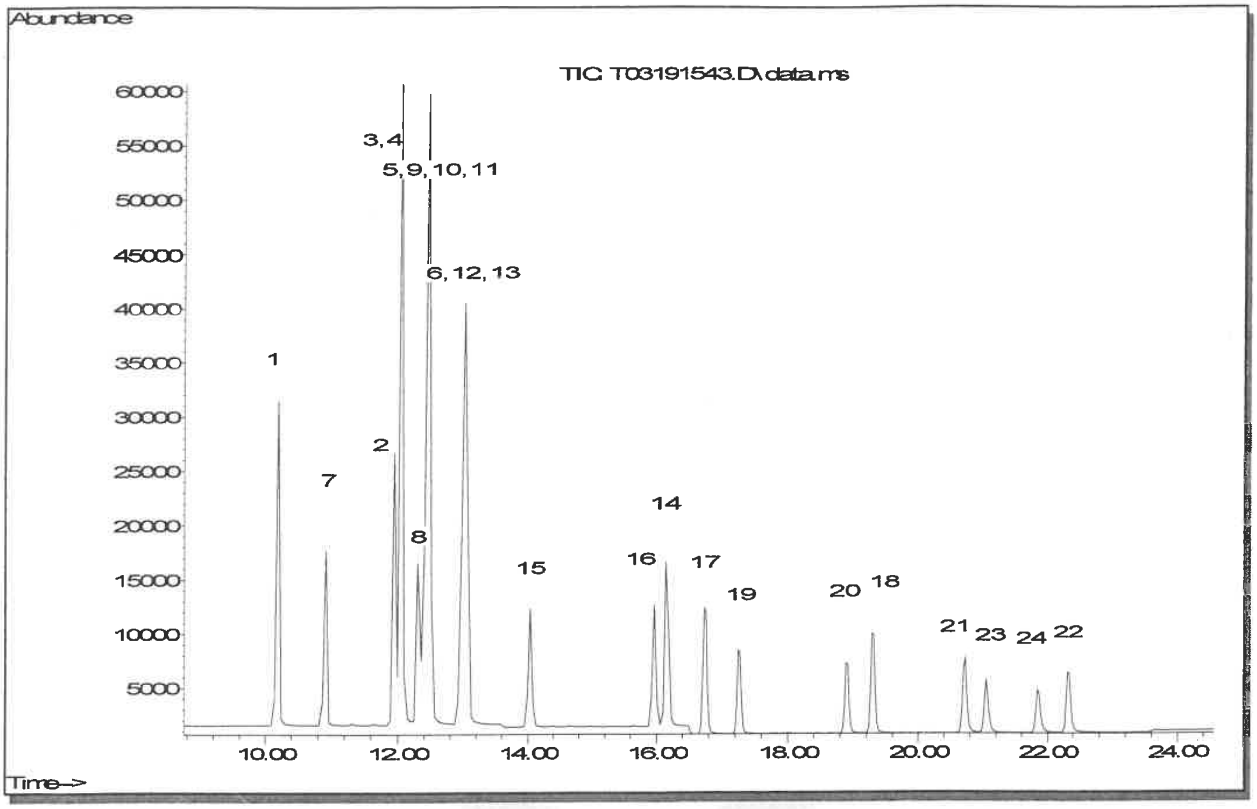

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

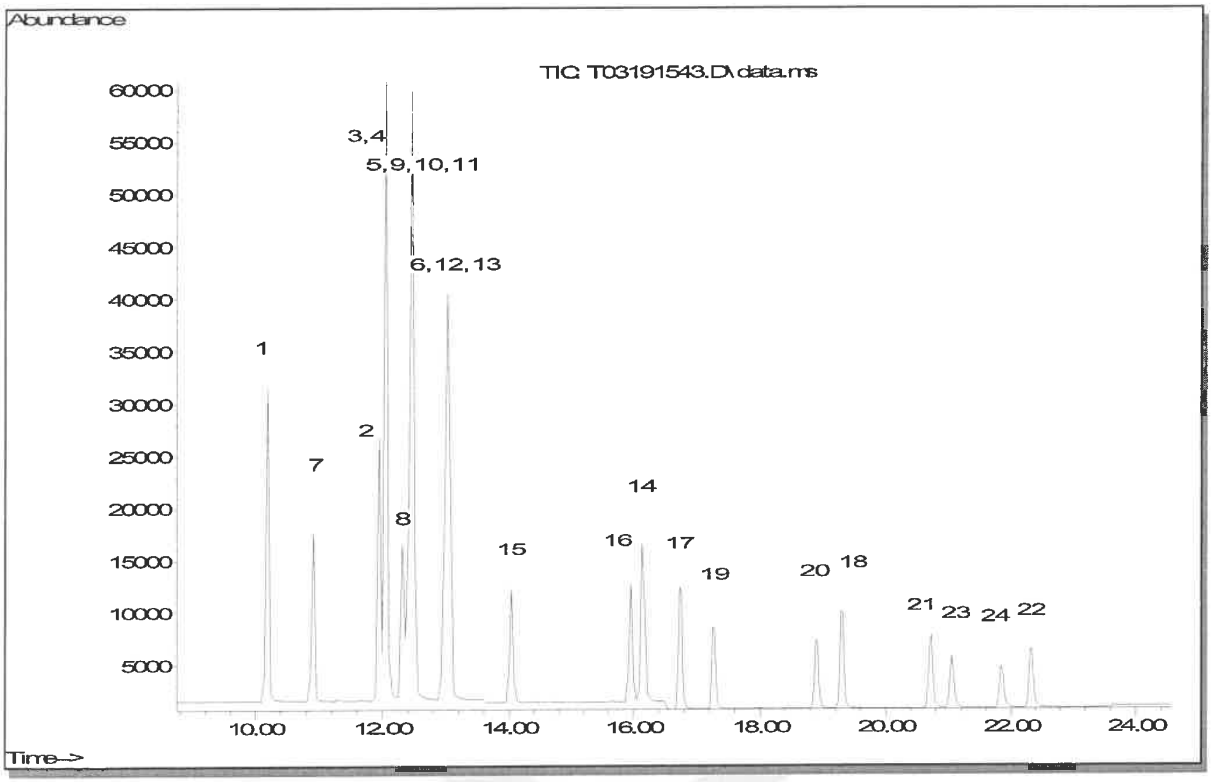

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r: 3/30/20

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

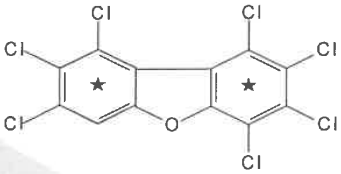

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

773049

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

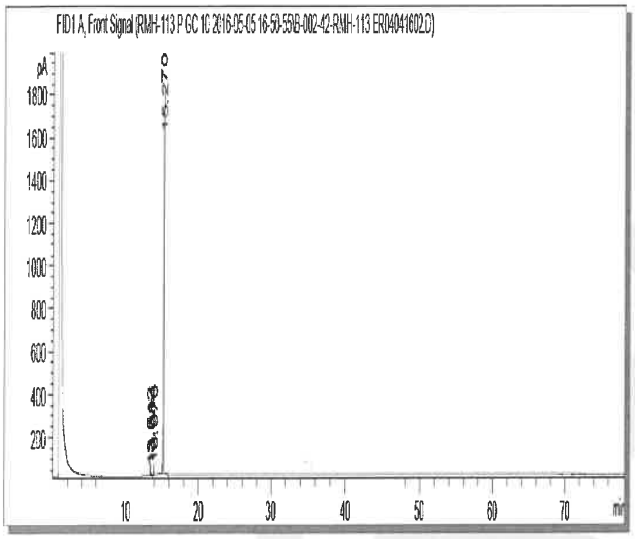

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

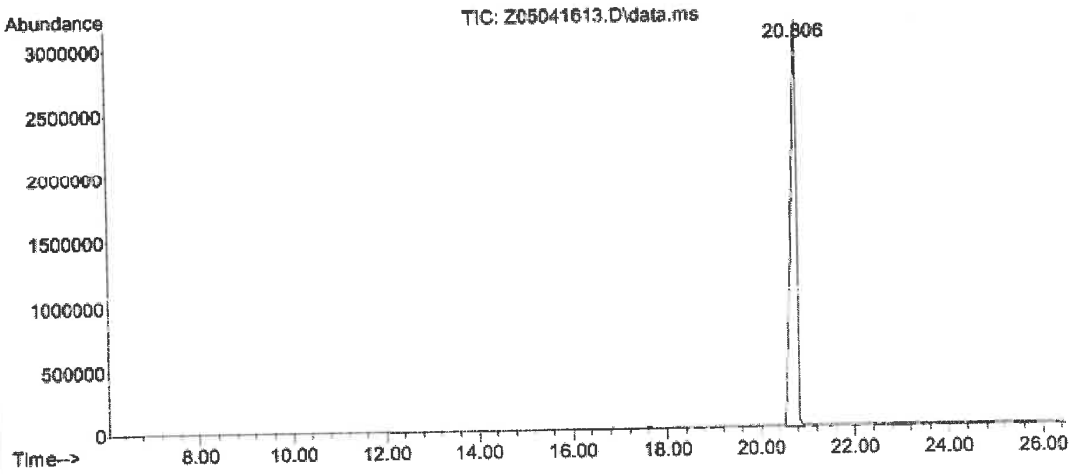

Mass Spectrum

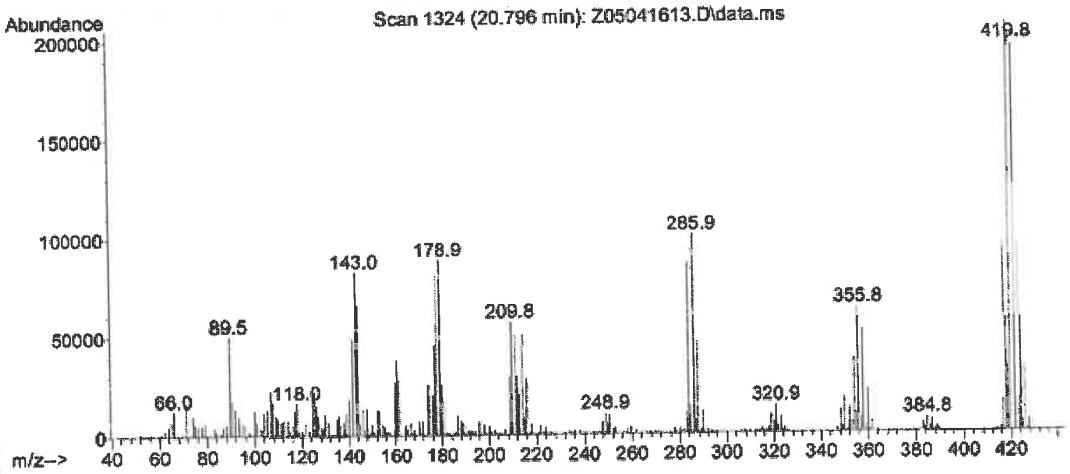

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 SAL

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

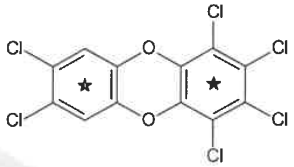

Catalog Number:	ED-946
Solution Lot:	ER04211601
Expiration Date:	June 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

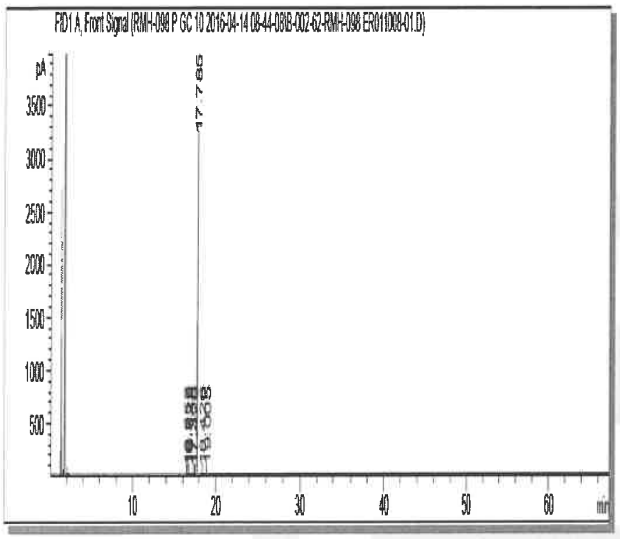

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 50 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Data File Name: RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument: GC#10
Sample Name: ER011008-01
Acquired: April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

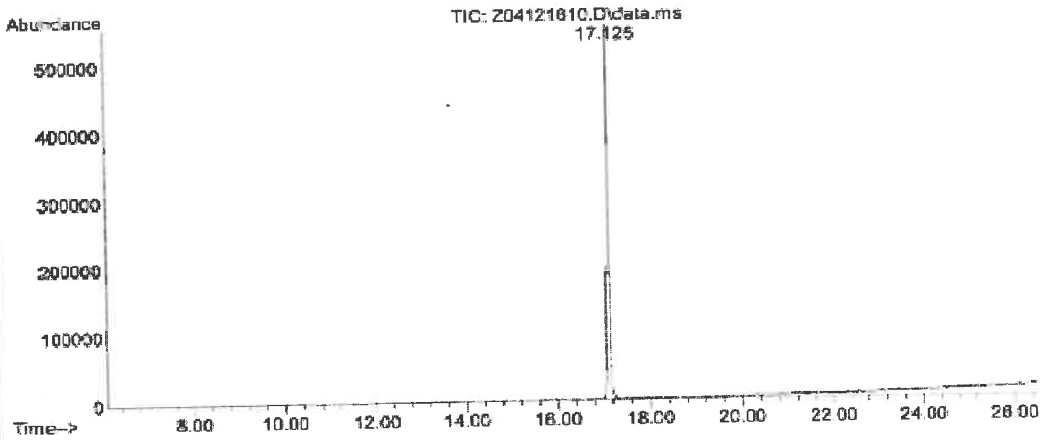

Mass Spectrum

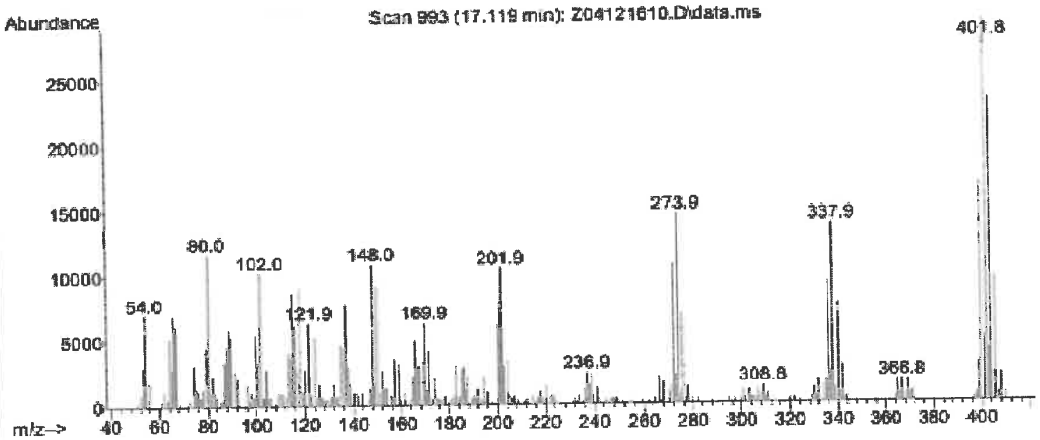

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

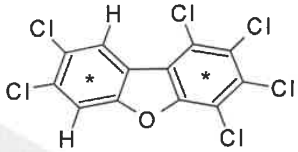

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot:	ER11281601

Chemical Formula:	$^{13}C_{12}Cl_6H_2O$
CAS Number:	114423-98-2
Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

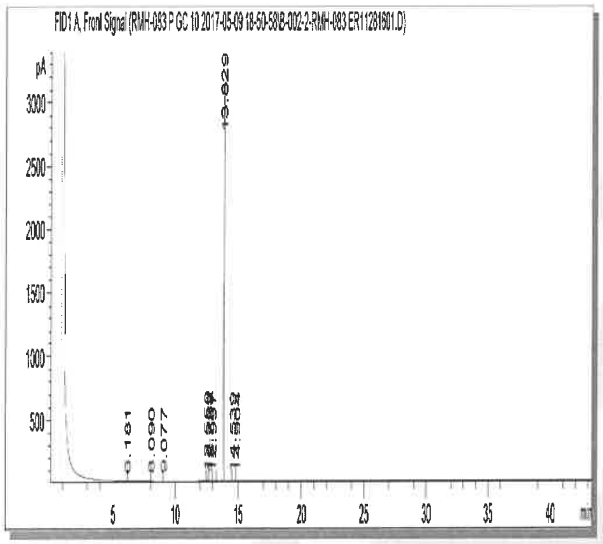

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

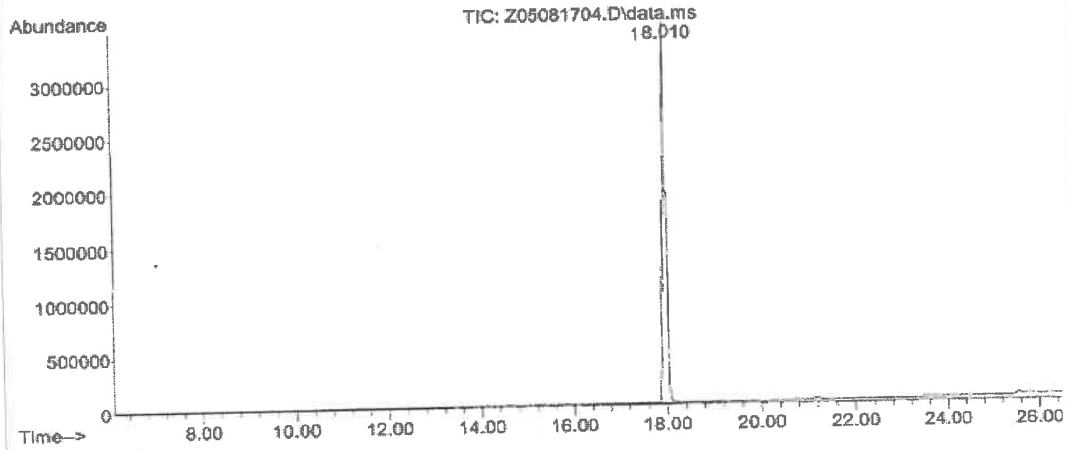

Mass Spectrum

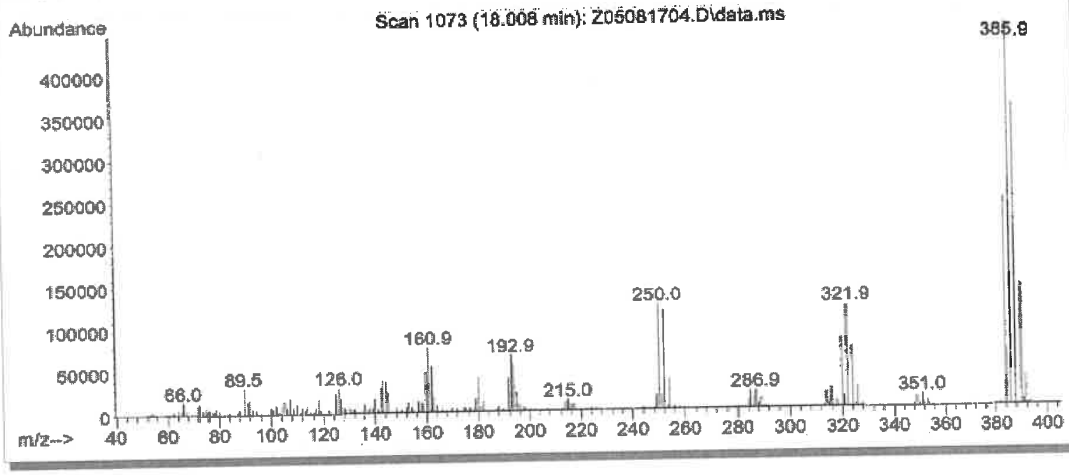

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

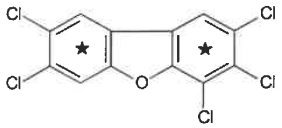

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

773066

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

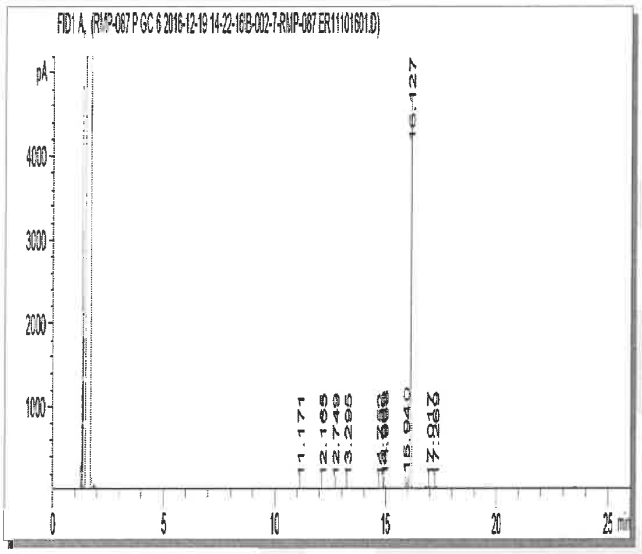

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

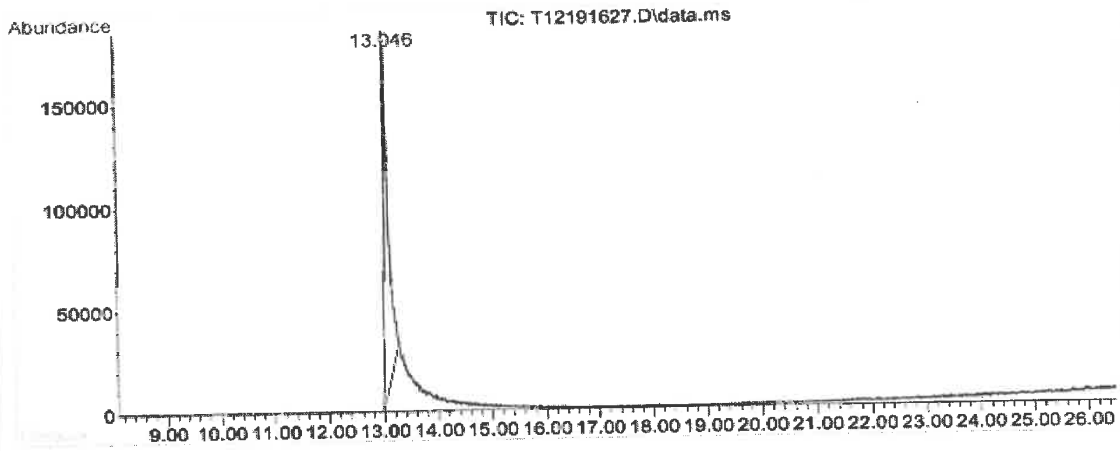

Mass Spectrum

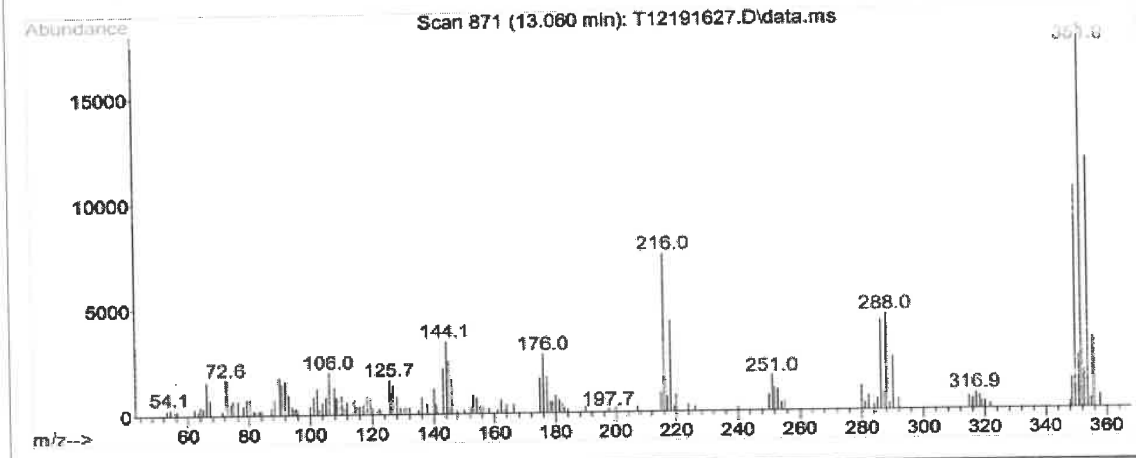

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

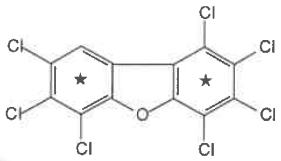

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

773071

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}HCl_7O$
Compound Lot:	ER020507-02	**CAS Number:**	109719-84-8
		Molecular Weight:	421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

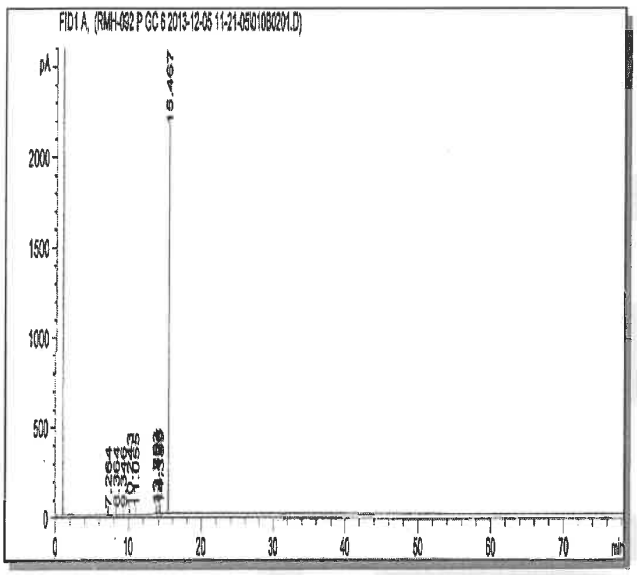

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument:	GC#6
Sample Name:	ER020507-02
Acquired:	December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

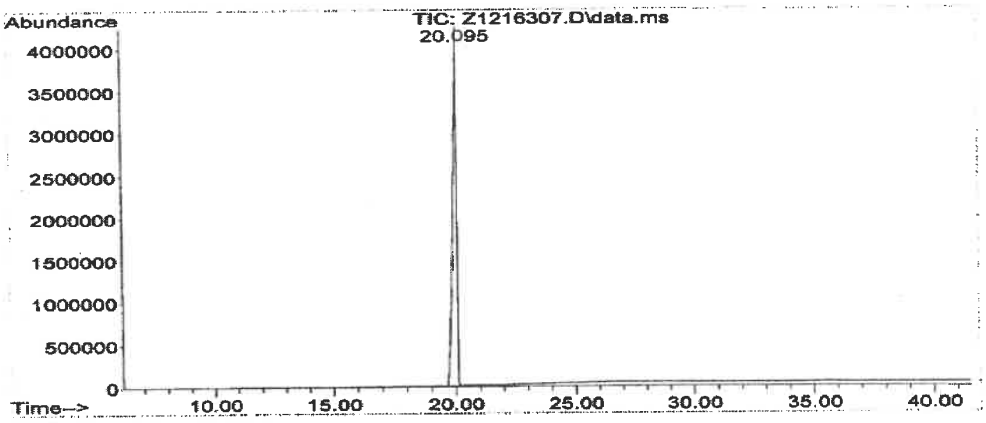

Mass Spectrum

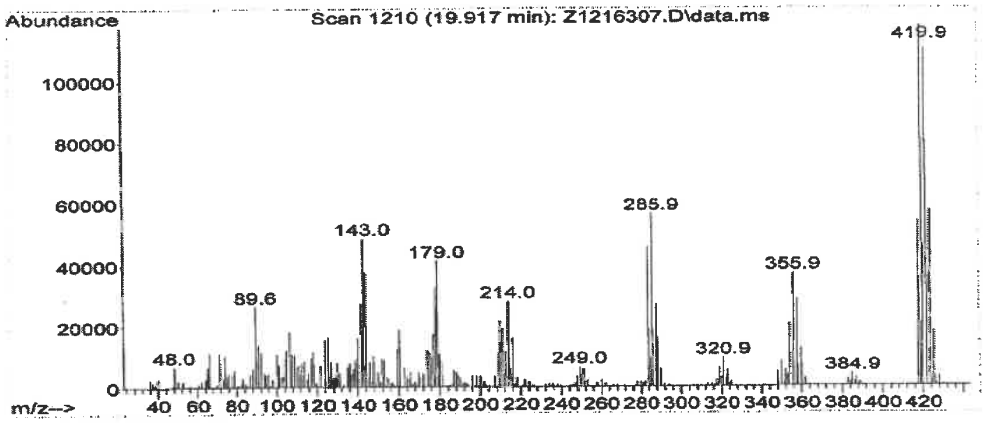

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

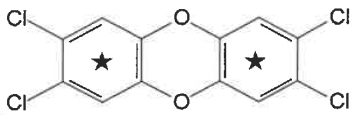

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

773078

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

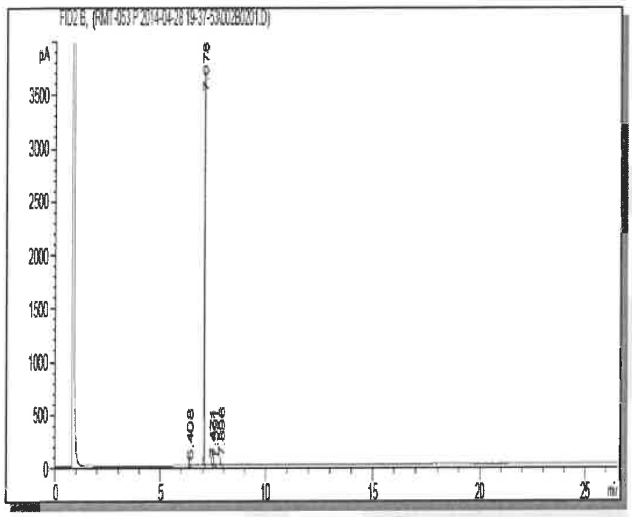

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
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Total Ion Chromatogram

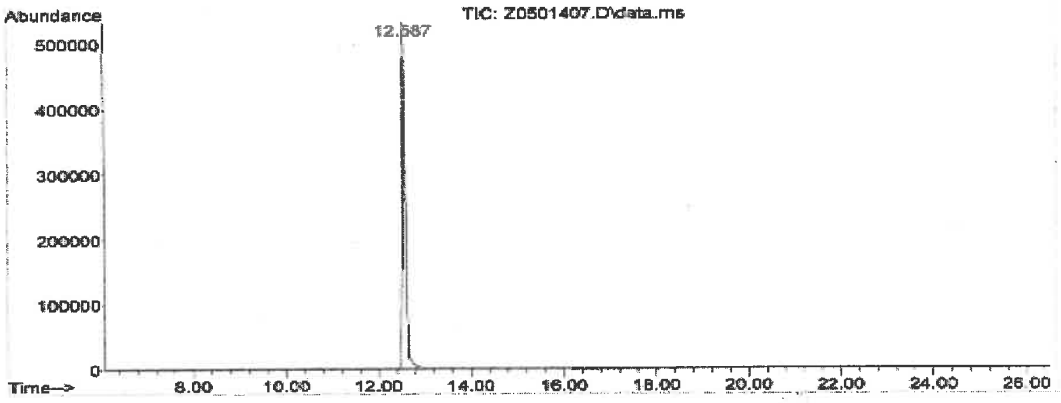

Mass Spectrum

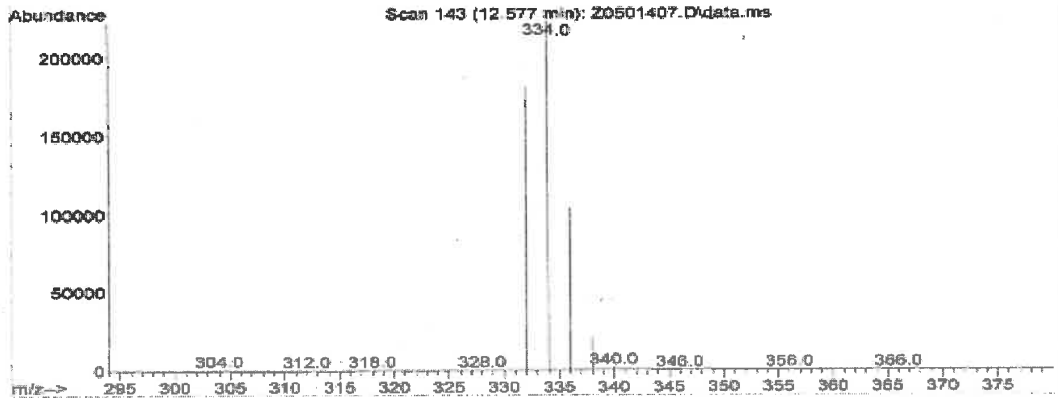

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

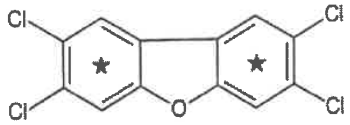

Catalog Number: EF-904
Solution Lot: ER09131601
Expiration Date: September 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

773083

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

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GC/FID

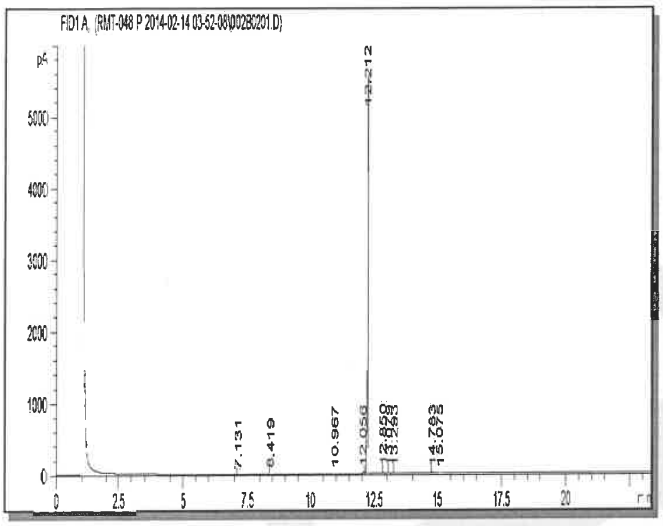

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

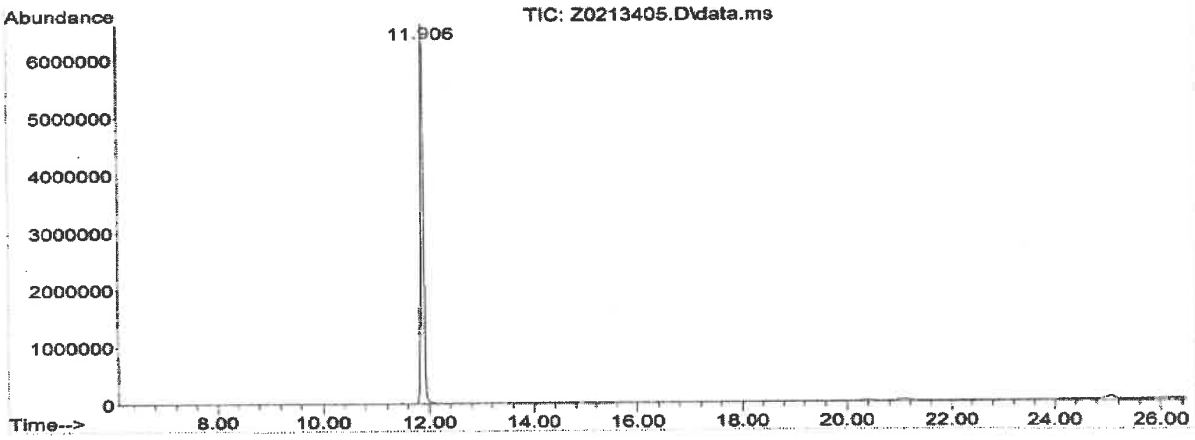

Mass Spectrum

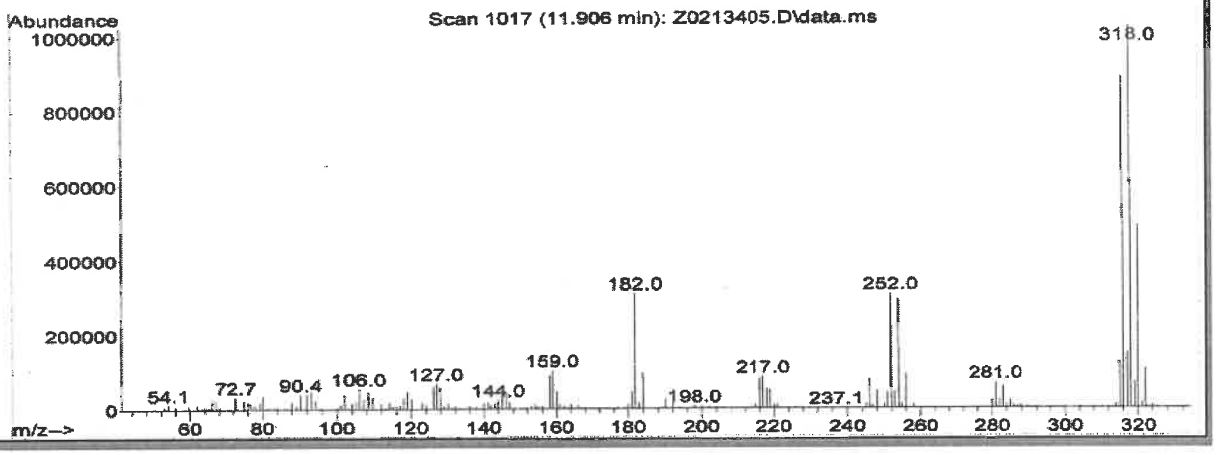

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Reagent

HRDXNIDA_00443

Rec'd 10-19-20

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

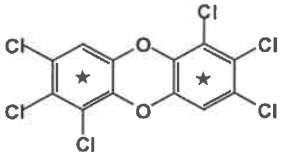

Catalog Number: ED-966
Solution Lot: ER03151801
Expiration Date: March 2028
Solvent: n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

773088

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

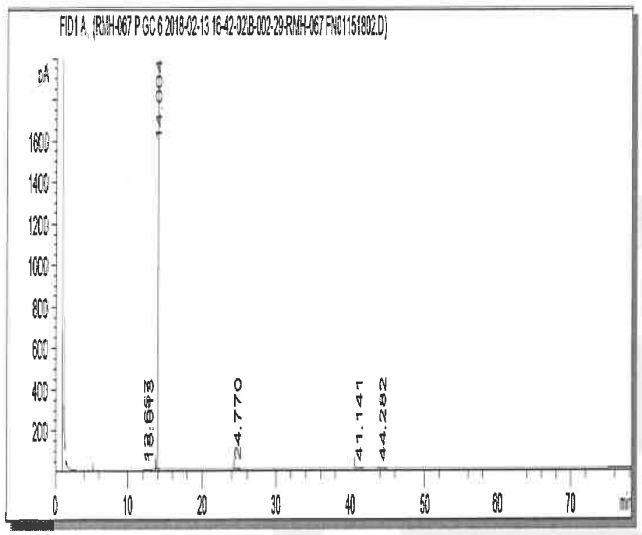

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

```
Compound Name          : 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number             : FN01151802
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Mon Mar 05 10:17:33 2018
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
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Total Ion Chromatogram

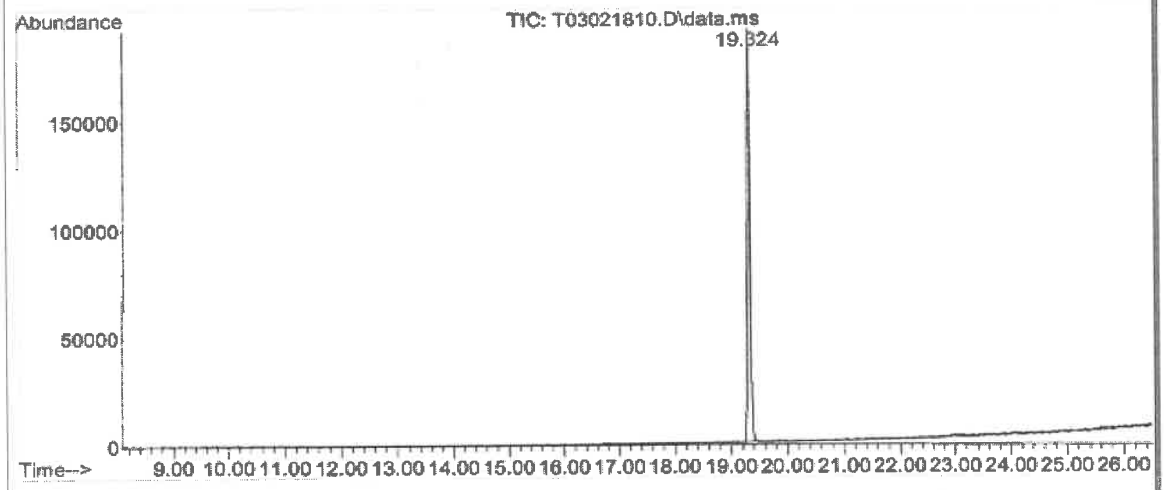

Mass Spectrum

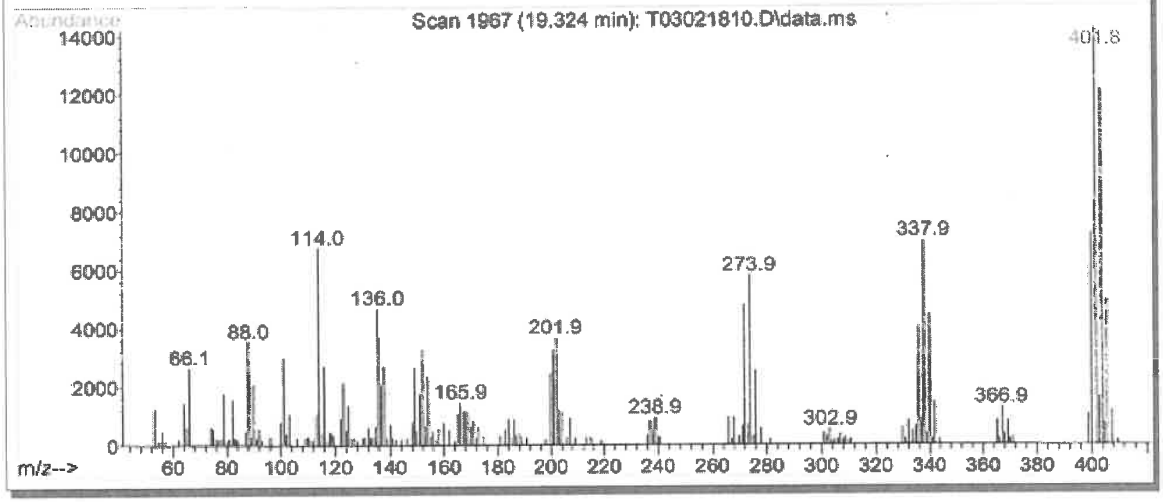

Reagent

HRDXNIDA_00457

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

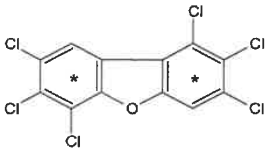

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

773093

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

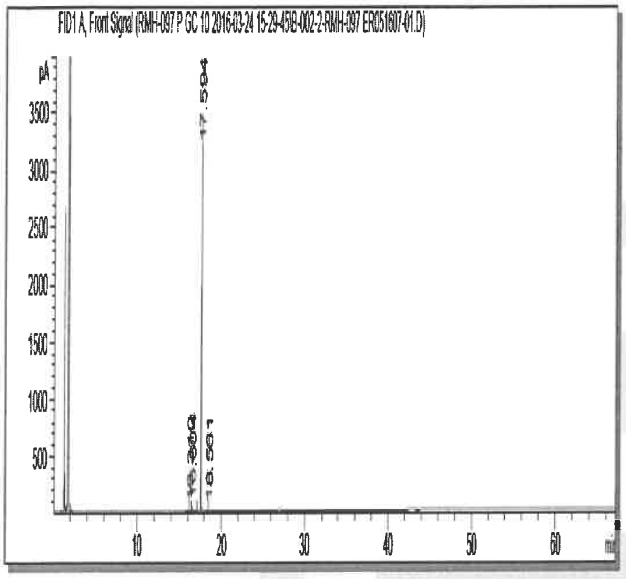

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

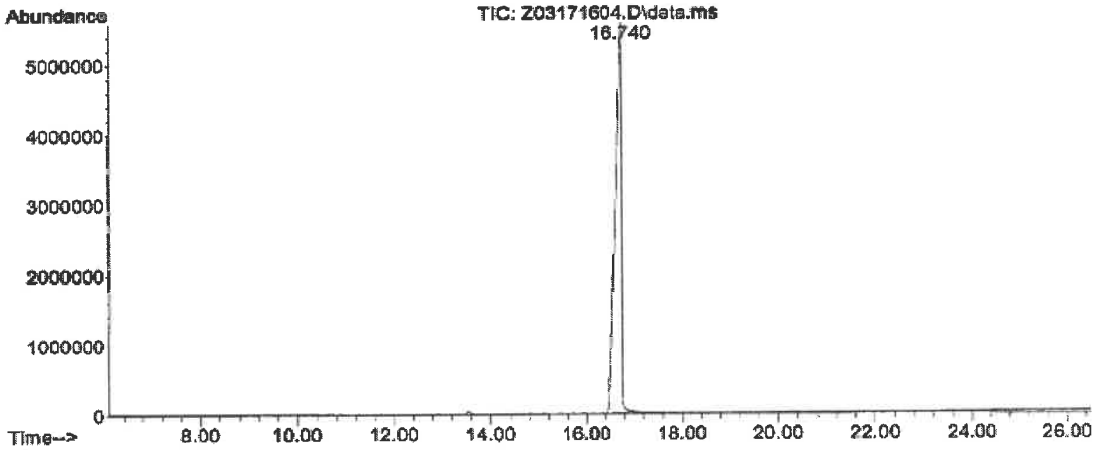

Mass Spectrum

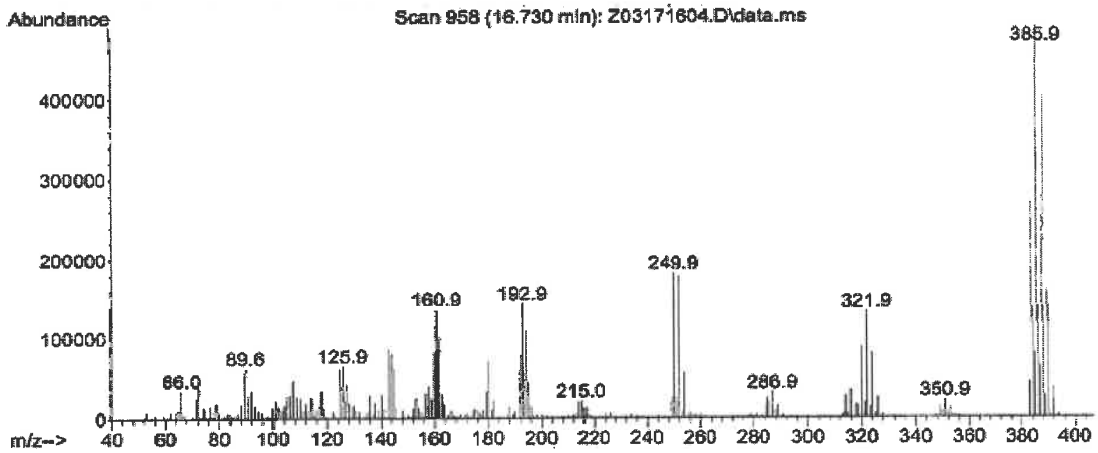

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

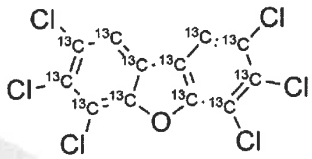

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

773100

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER09051801

Chemical Formula: $^{13}C_{12}H_2Cl_6O$
CAS Number: 116843-05-1
Molecular Weight: 386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

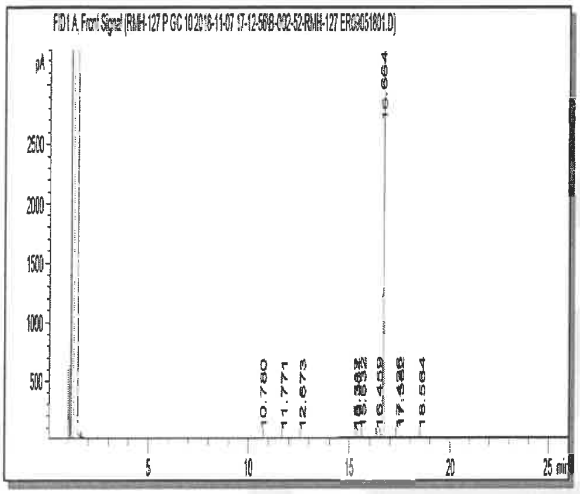

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

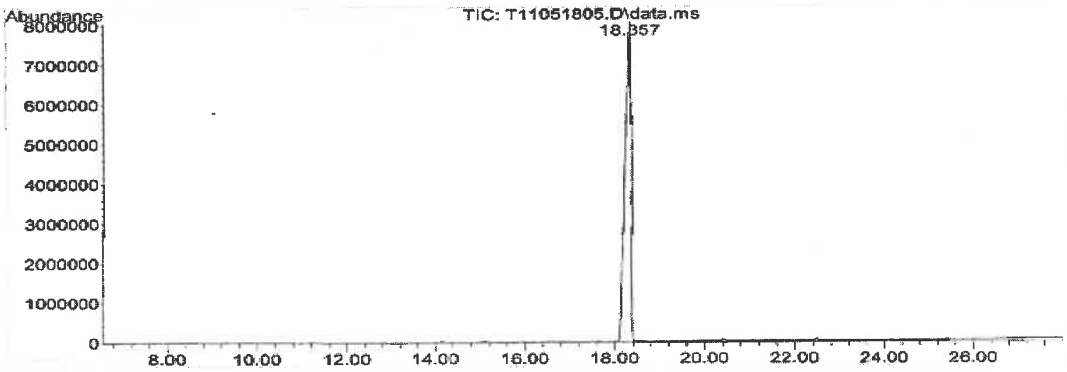

Mass Spectrum

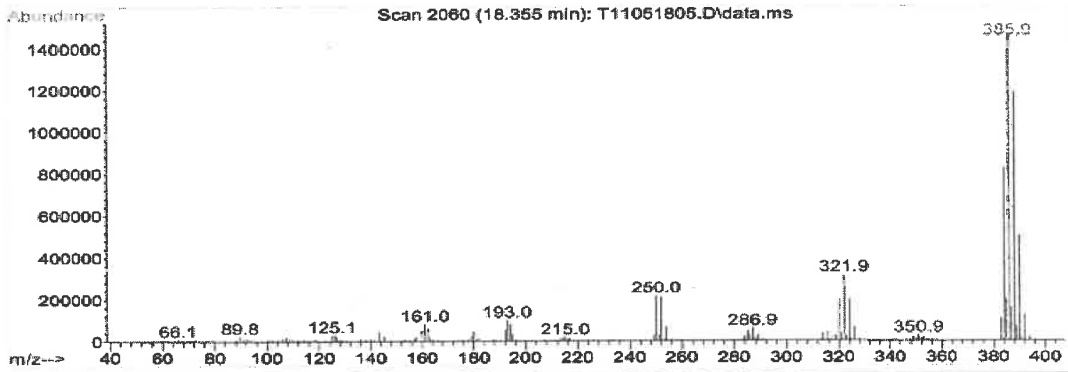

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

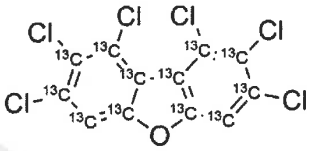

Catalog Number: EF-986
Solution Lot: ER01062016
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

773107

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

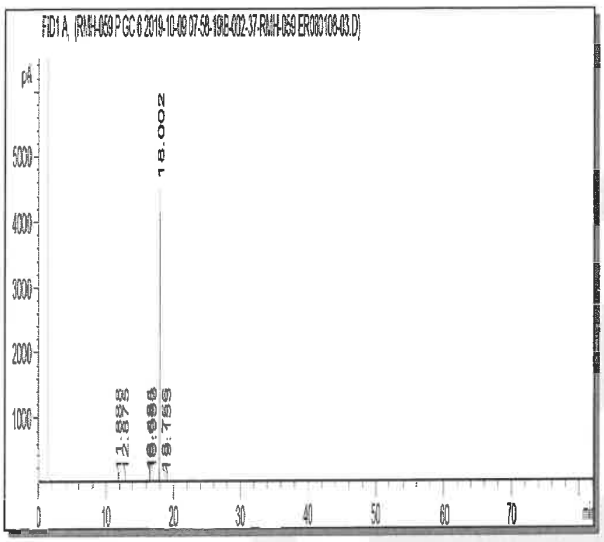

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

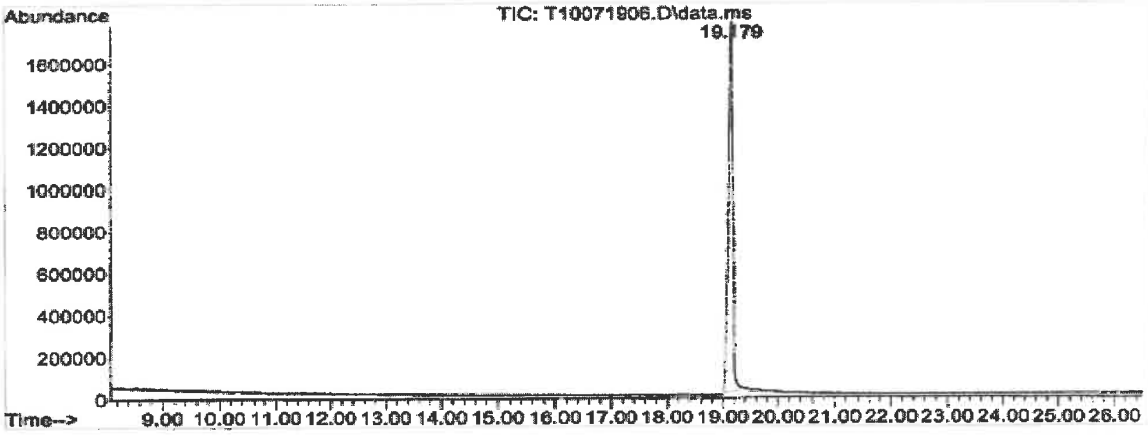

Mass Spectrum

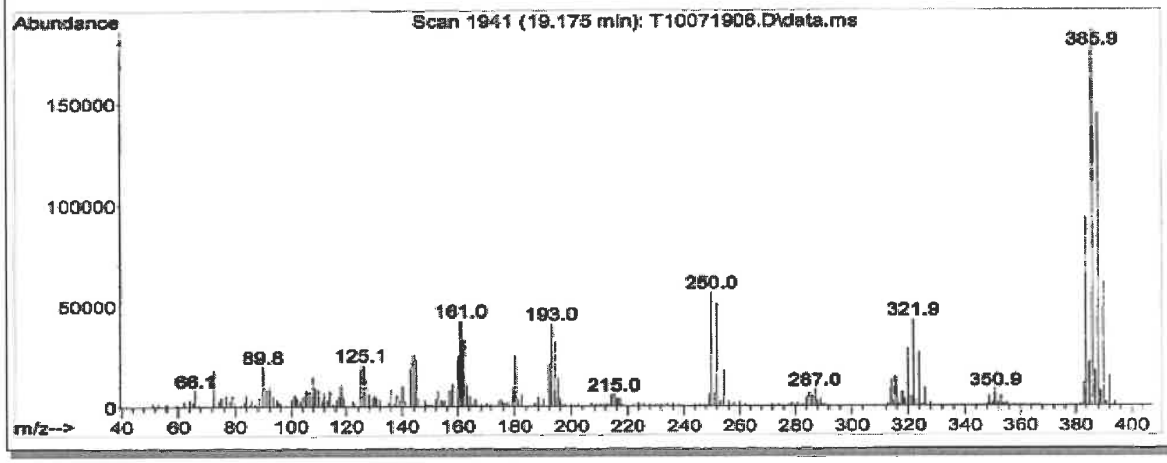

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

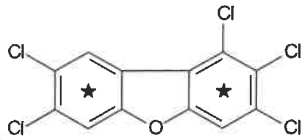

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O$
Compound Lot:	ER090110-01	**CAS Number:**	109719-77-9
		Molecular Weight:	352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

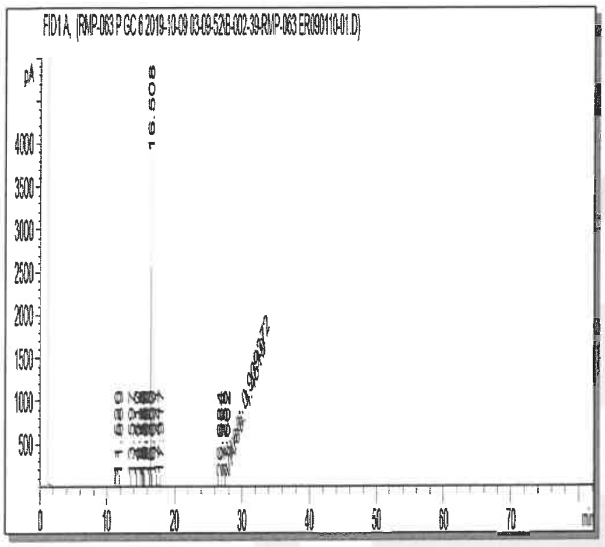

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Sample Name: ER090110-01
Acquired: October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

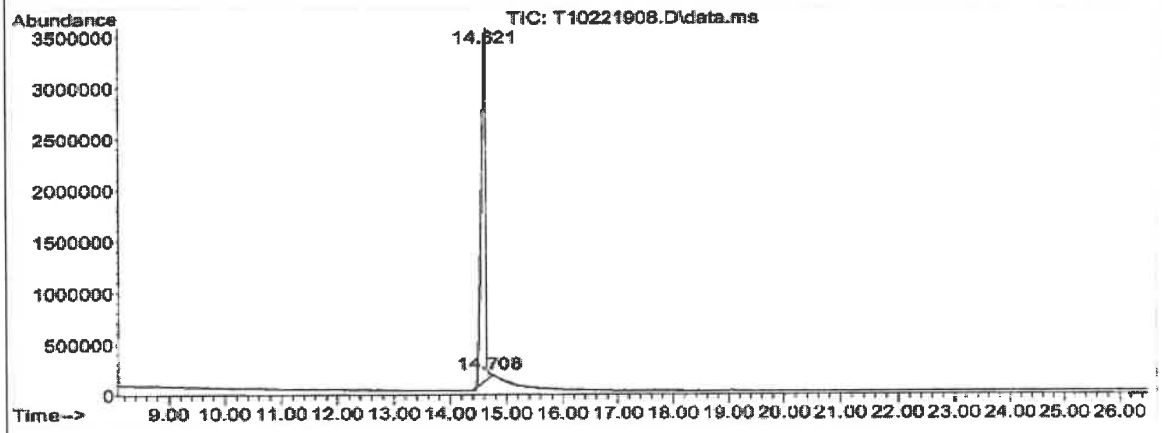

Mass Spectrum

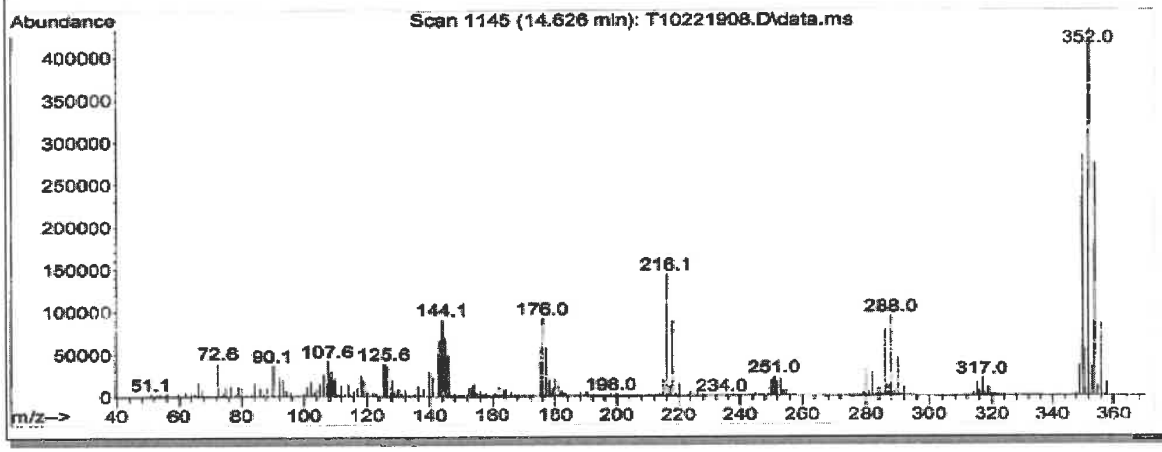

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

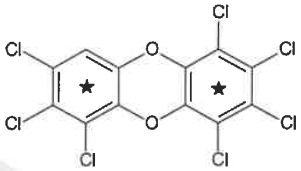

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

773121

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	0.999

Neat Material Data

Compound Name:	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}HCl_7O_2$
Compound Lot:	ER100110-01	**CAS Number:**	109719-83-7
		Molecular Weight:	437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

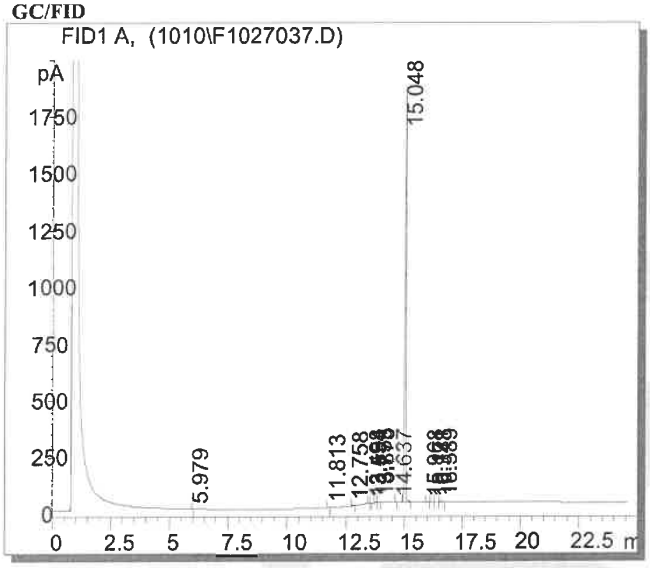

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

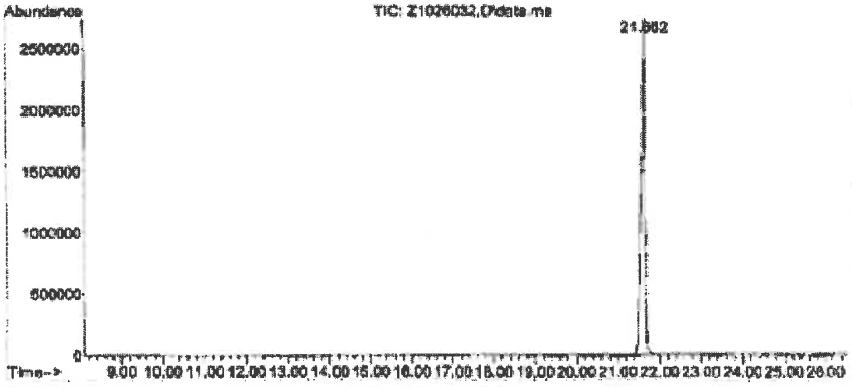

Mass Spectrum

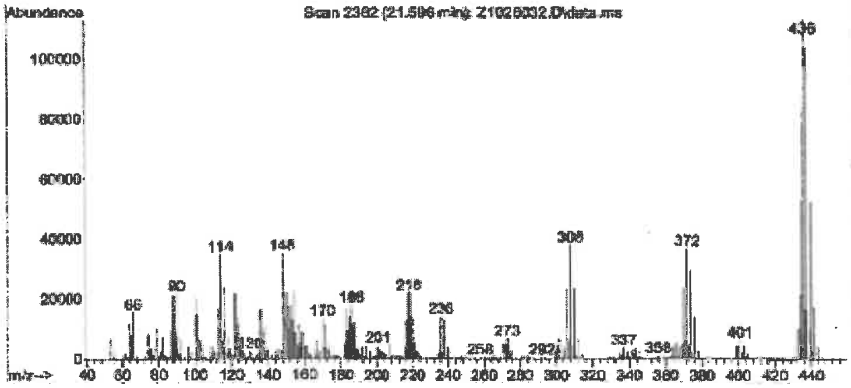

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

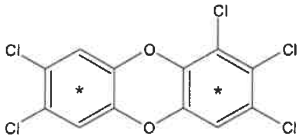

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

773126

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER06241403

Chemical Formula: $^{13}C_{12}H_3Cl_5O_2$
CAS Number: 109719-79-1
Molecular Weight: 368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

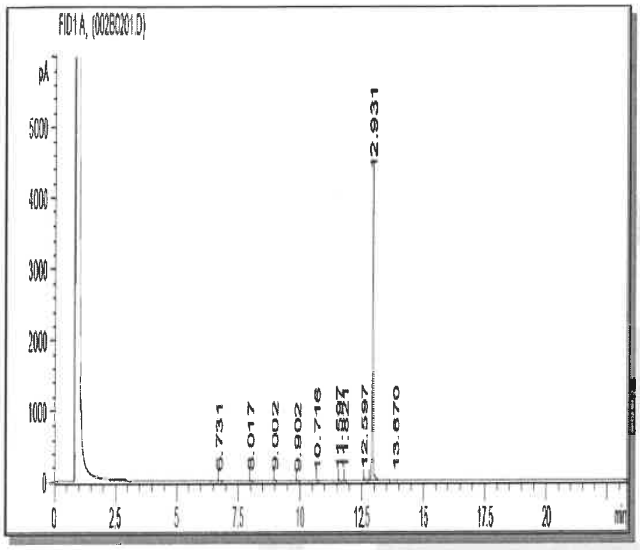

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

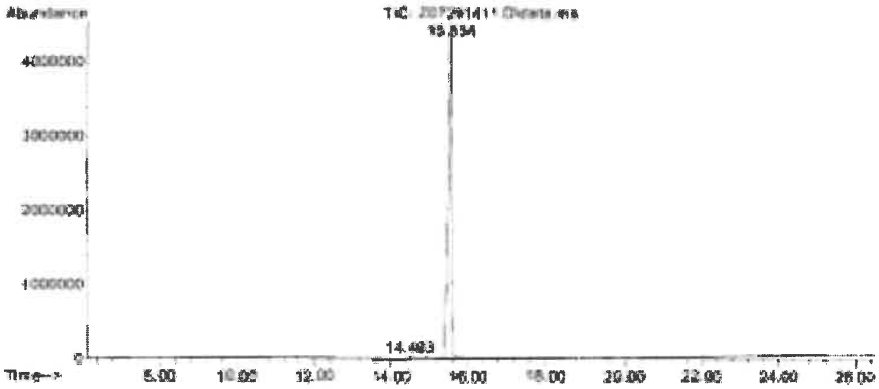

Mass Spectrum

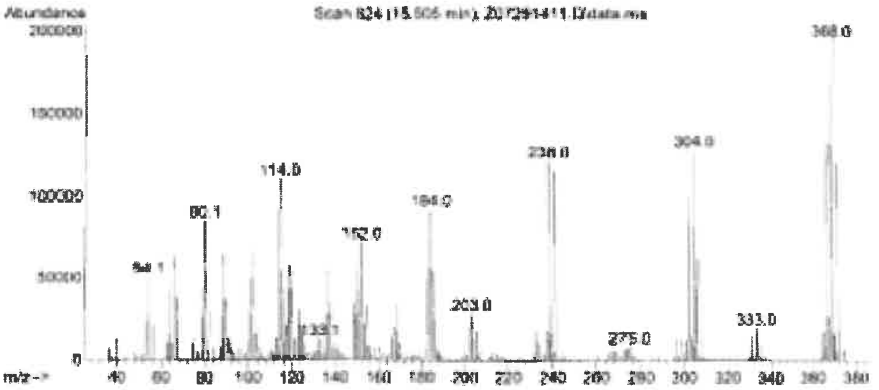

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

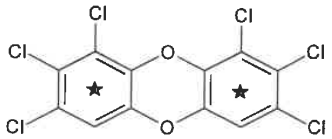

Catalog Number:	ED-996
Solution Lot:	ER08221601
Expiration Date:	September 2026
Solvent:	n-Nonane:Toluene (80:20)
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

773133

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

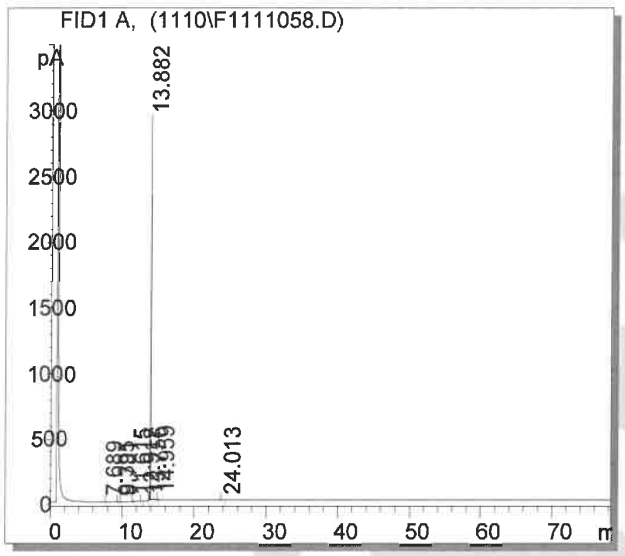

Column:	DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1110\F1111058.D
Instrument:	GC#6
Sample Name:	ER110510-01
Acquired:	November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

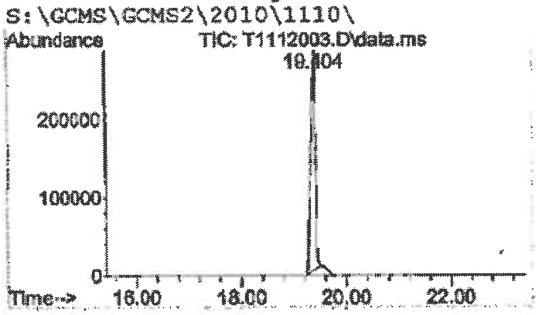

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

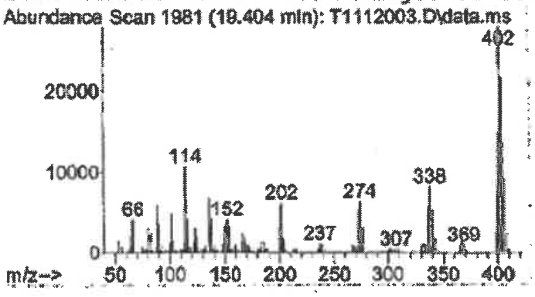

SIM Ion Chromatogram 1

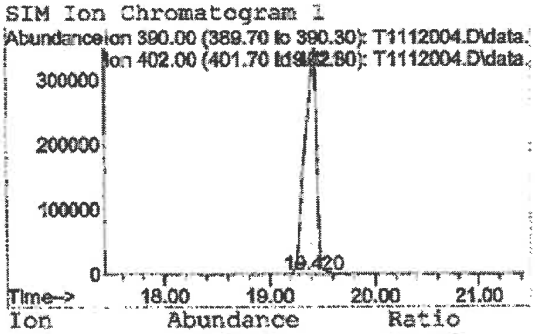

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

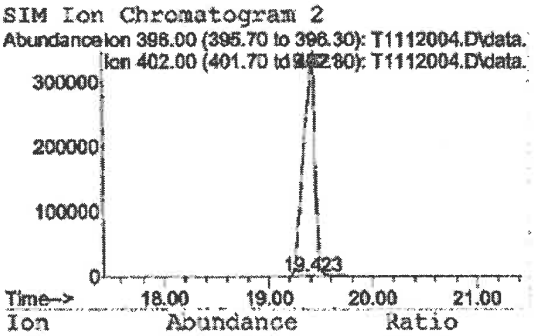

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

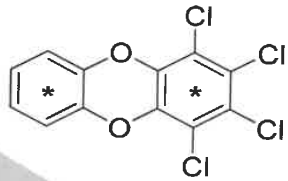

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 13194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

773140

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

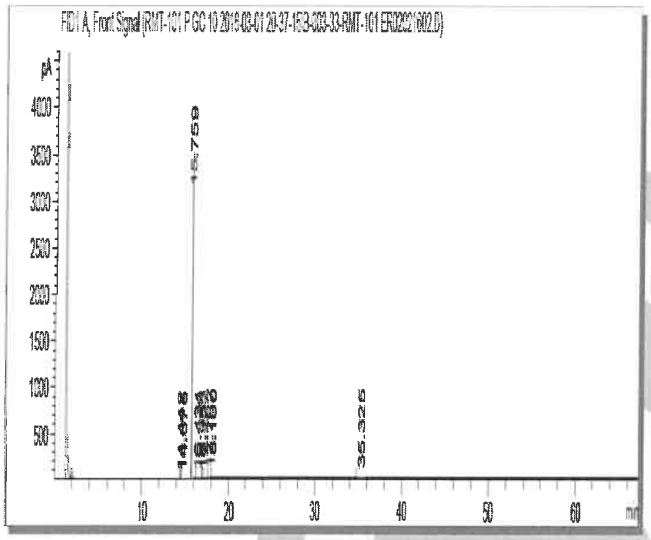

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

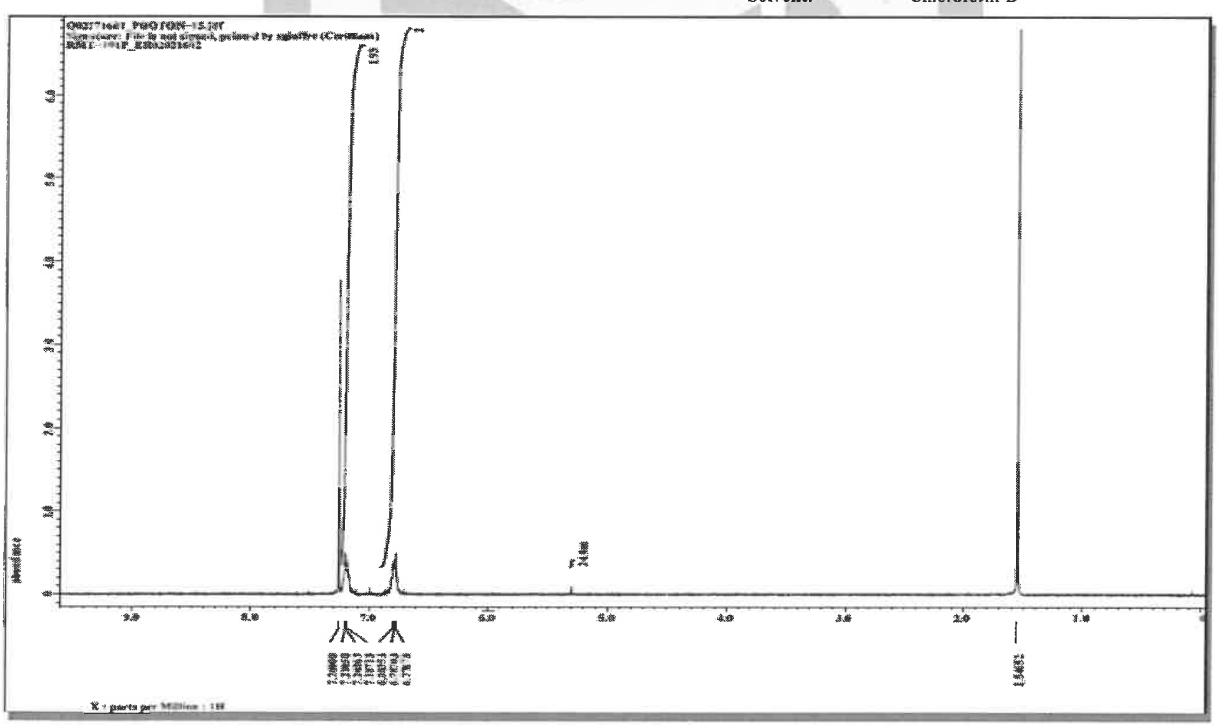

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number	: ER02021602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Feb 19 12:55:12 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

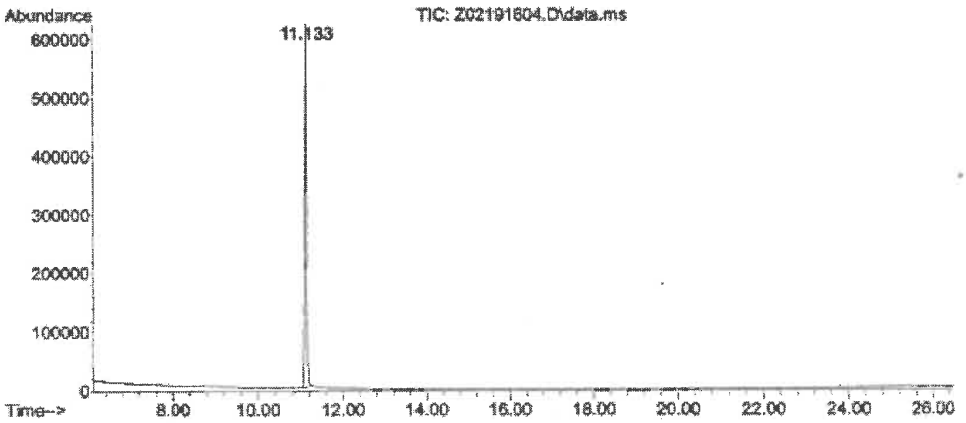

Mass Spectrum

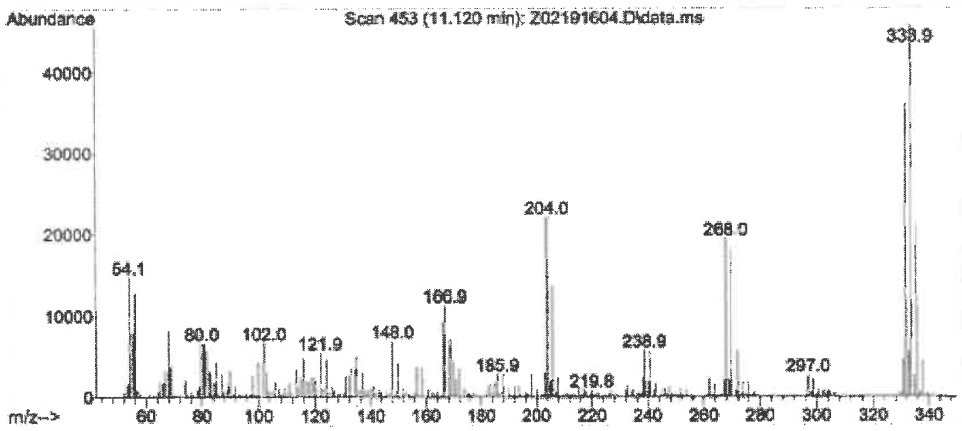

Reagent

HRDXNTA_00108

(2)

P: 4ba/19 SKJ

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

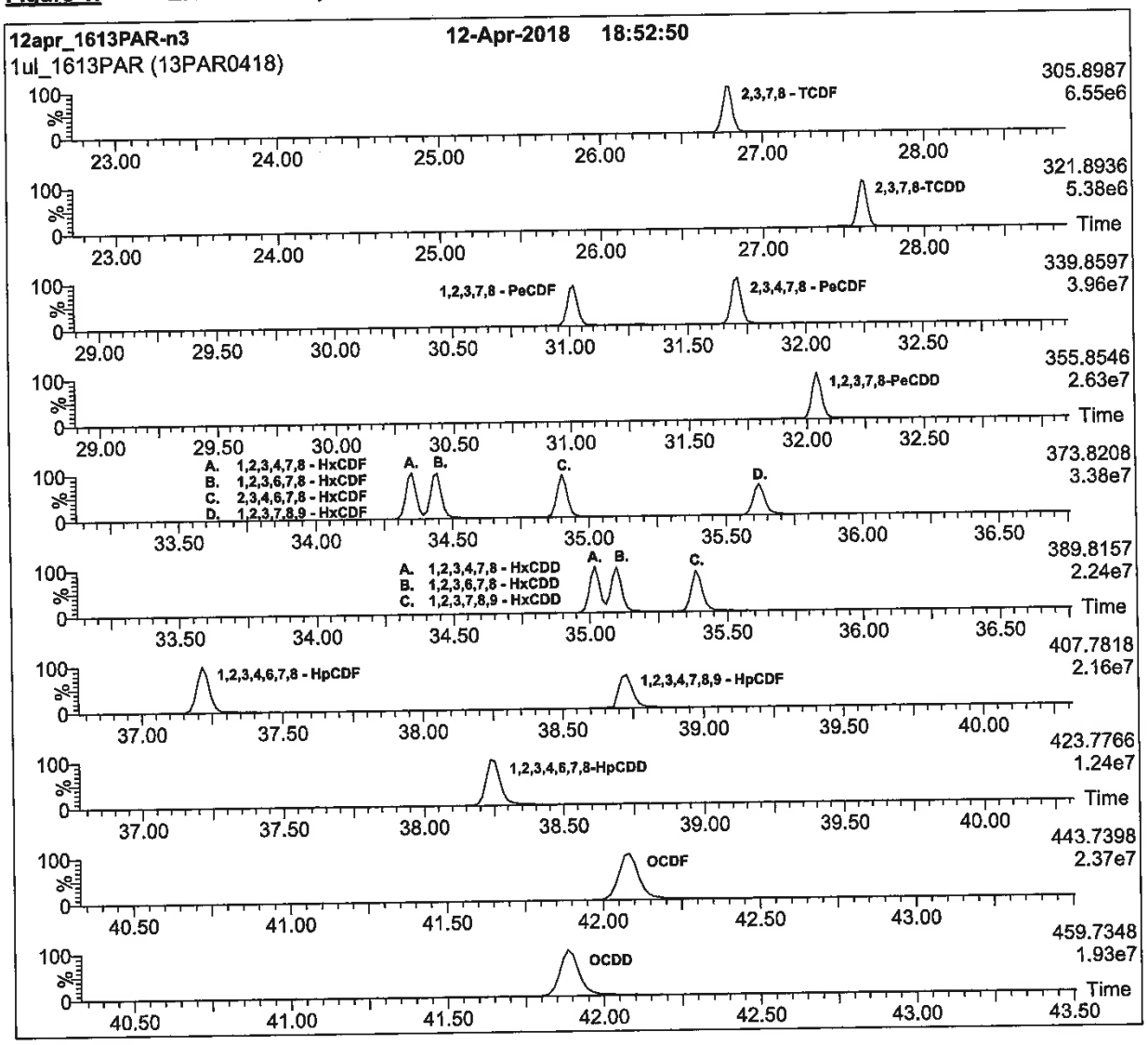

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

(3)

P: 4/3dic SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number: EDF-7999-10X
Solution Lot: ER02241602
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

773150

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/ECD
Column:	DB-5ms, 30 m x 0.25 mm ID, 0 25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min hold 3 min
Injector Temp:	Cool on-column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397 1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386 6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0 8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0 7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

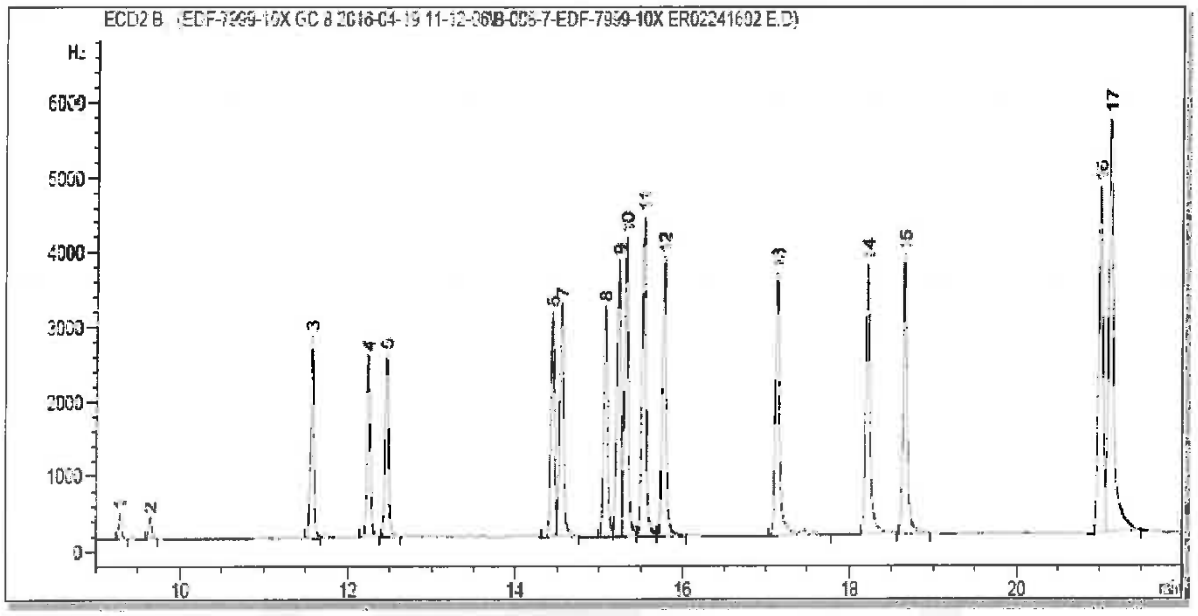

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Method 1613 PAR Stock Solution

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

773155

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

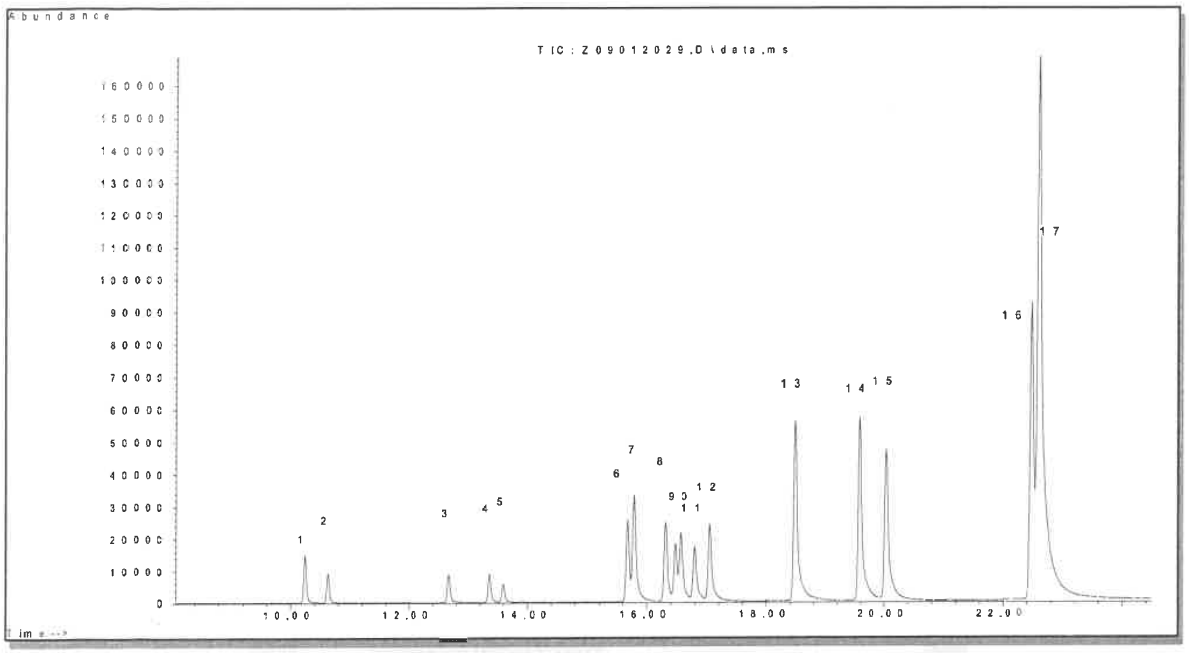

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-513227/2-A	54	57	79	55	61	58	59	53
	LCSD 320-513227/3-A	54	57	81	54	59	57	60	54

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-513227/2-A	53	61	56	52	60	62	67	69
	LCSD 320-513227/3-A	53	62	56	54	60	62	68	69

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-072521-BN -SJSB092 (16-18) RA	320-76765-19 RA	56	74

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-072421-BN -SJSB104 (16-18)	320-76765-9	58	56	74	57	65	56	75	62
11215702-072521-BN -SJSB092 (16-18)	320-76765-19	59	59	69	57	63	55	78	68
	MB 320-513227/1-A	58	62	80	59	64	63	61	56

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072421-BN -SJSB104 (16-18)	320-76765-9	60	65	57	59	66	71	77	69
11215702-072521-BN -SJSB092 (16-18)	320-76765-19	63	70	58	60	68	67	79	72
	MB 320-513227/1-A	56	64	58	57	65	69	73	79

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 12AU2110D5_26.d

Lab ID: LCS 320-513227/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	20.2	101	67-158	
2,3,7,8-TCDF	20.0	20.9	104	75-158	
1,2,3,7,8-PeCDD	100	107	107	70-142	
1,2,3,7,8-PeCDF	100	108	108	80-134	
2,3,4,7,8-PeCDF	100	97.4	97	68-160	
1,2,3,4,7,8-HxCDD	100	97.1	97	70-164	
1,2,3,6,7,8-HxCDD	100	106	106	76-134	
1,2,3,7,8,9-HxCDD	100	105	105	64-162	
1,2,3,4,7,8-HxCDF	100	96.7	97	72-134	
1,2,3,6,7,8-HxCDF	100	107	107	84-130	
1,2,3,7,8,9-HxCDF	100	106	106	78-130	
2,3,4,6,7,8-HxCDF	100	105	105	70-156	
1,2,3,4,6,7,8-HpCDD	100	107	107	70-140	
1,2,3,4,6,7,8-HpCDF	100	106	106	82-122	
1,2,3,4,7,8,9-HpCDF	100	98.8	99	78-138	
OCDD	200	214	107	78-144	
OCDF	200	205	103	63-170	
13C-2,3,7,8-TCDD	200	115	57	20-175	
13C-2,3,7,8-TCDF	200	109	54	22-152	
13C-1,2,3,7,8-PeCDD	200	117	58	21-227	
13C-1,2,3,7,8-PeCDF	200	110	55	21-192	
13C-2,3,4,7,8-PeCDF	200	121	61	13-328	
13C-1,2,3,4,7,8-HxCDD	200	122	61	21-193	
13C-1,2,3,6,7,8-HxCDD	200	112	56	25-163	
13C-1,2,3,4,7,8-HxCDF	200	118	59	19-202	
13C-1,2,3,6,7,8-HxCDF	200	106	53	21-159	
13C-1,2,3,7,8,9-HxCDF	200	105	52	17-205	
13C-2,3,4,6,7,8-HxCDF	200	105	53	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	125	62	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	119	60	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	134	67	20-186	
13C-OCDD	400	276	69	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 12AU2110D5_27.d

Lab ID: LCSD 320-513227/3-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCSD CONCENTRATION (pg/g)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	20.2	101	0	50	67-158	
2,3,7,8-TCDF	20.0	20.9	105	0	50	75-158	
1,2,3,7,8-PeCDD	100	107	107	1	50	70-142	
1,2,3,7,8-PeCDF	100	107	107	1	50	80-134	
2,3,4,7,8-PeCDF	100	97.4	97	0	50	68-160	
1,2,3,4,7,8-HxCDD	100	98.2	98	1	50	70-164	
1,2,3,6,7,8-HxCDD	100	104	104	3	50	76-134	
1,2,3,7,8,9-HxCDD	100	103	103	2	50	64-162	
1,2,3,4,7,8-HxCDF	100	96.6	97	0	50	72-134	
1,2,3,6,7,8-HxCDF	100	105	105	2	50	84-130	
1,2,3,7,8,9-HxCDF	100	104	104	2	50	78-130	
2,3,4,6,7,8-HxCDF	100	106	106	1	50	70-156	
1,2,3,4,6,7,8-HpCDD	100	108	108	1	50	70-140	
1,2,3,4,6,7,8-HpCDF	100	107	107	1	50	82-122	
1,2,3,4,7,8,9-HpCDF	100	98.1	98	1	50	78-138	
OCDD	200	212	106	1	50	78-144	
OCDF	200	204	102	1	50	63-170	
13C-2,3,7,8-TCDD	200	114	57			20-175	
13C-2,3,7,8-TCDF	200	108	54			22-152	
13C-1,2,3,7,8-PeCDD	200	114	57			21-227	
13C-1,2,3,7,8-PeCDF	200	109	54			21-192	
13C-2,3,4,7,8-PeCDF	200	118	59			13-328	
13C-1,2,3,4,7,8-HxCDD	200	124	62			21-193	
13C-1,2,3,6,7,8-HxCDD	200	112	56			25-163	
13C-1,2,3,4,7,8-HxCDF	200	119	60			19-202	
13C-1,2,3,6,7,8-HxCDF	200	108	54			21-159	
13C-1,2,3,7,8,9-HxCDF	200	108	54			17-205	
13C-2,3,4,6,7,8-HxCDF	200	106	53			22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	124	62			26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	120	60			21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	136	68			20-186	
13C-OCDD	400	275	69			13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab File ID: 12AU2110D5_25.d Lab Sample ID: MB 320-513227/1-A

Matrix: Sediment Date Extracted: 08/05/2021 06:41

Instrument ID: 10D5 Date Analyzed: 08/13/2021 06:33

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-513227/2-A	12AU2110D5_26.d	08/13/2021 07:18
	LCSD 320-513227/3-A	12AU2110D5_27.d	08/13/2021 08:03
11215702-072421-BN-SJSB104 (16-18)	320-76765-9	13au21dfs1_10.d	08/13/2021 20:33
11215702-072521-BN-SJSB092 (16-18)	320-76765-19	13au21dfs1_24.d	08/14/2021 07:15
11215702-072521-BN-SJSB092 (16-18) RA	320-76765-19 RA	21AU2111D2_008.d	08/21/2021 18:23

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76765-2
SDG No.:
Client Sample ID: 11215702-072421-BN-SJSB104 (16-18)
Lab Sample ID: 320-76765-9
Matrix: Sediment
Lab File ID: 13au21dfs1_10.d
Analysis Method: 1613B
Date Collected: 07/24/2021 16:10
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 10.32(g)
Date Analyzed: 08/13/2021 20:33
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 21.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516133
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.2	0.071
51207-31-9	2,3,7,8-TCDF	ND		1.2	0.063
40321-76-4	1,2,3,7,8-PeCDD	ND		6.2	0.083
57117-41-6	1,2,3,7,8-PeCDF	ND		6.2	0.056
57117-31-4	2,3,4,7,8-PeCDF	ND		6.2	0.055
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.2	0.058
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.2	0.065
19408-74-3	1,2,3,7,8,9-HxCDD	ND		6.2	0.056
70648-26-9	1,2,3,4,7,8-HxCDF	ND		6.2	0.042
57117-44-9	1,2,3,6,7,8-HxCDF	ND		6.2	0.046
72918-21-9	1,2,3,7,8,9-HxCDF	0.35	J B q	6.2	0.042
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.2	0.045
35822-46-9	1,2,3,4,6,7,8-HpCDD	3.6	J B	6.2	0.12
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		6.2	0.038
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.2	0.036
3268-87-9	OCDD	130	B	12	0.18
39001-02-0	OCDF	ND		12	0.092
41903-57-5	Total TCDD	ND		1.2	0.22
30402-14-3	Total TCDF	ND		1.2	0.18
36088-22-9	Total PeCDD	ND		6.2	0.35
30402-15-4	Total PeCDF	ND		6.2	0.056
34465-46-8	Total HxCDD	1.1	J B q	6.2	0.060
55684-94-1	Total HxCDF	0.35	J B q	6.2	0.044
37871-00-4	Total HpCDD	12	B	6.2	0.12
38998-75-3	Total HpCDF	ND		6.2	0.038

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76765-2
SDG No.:
Client Sample ID: 11215702-072421-BN-SJSB104 (16-18)
Lab Sample ID: 320-76765-9
Matrix: Sediment
Lab File ID: 13au21dfs1_10.d
Analysis Method: 1613B
Date Collected: 07/24/2021 16:10
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 10.32(g)
Date Analyzed: 08/13/2021 20:33
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 21.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516133
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	56		25-164
89059-46-1	13C-2,3,7,8-TCDF	58		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	56		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	57		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	65		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	65		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	57		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	75		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	62		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	59		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	60		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	71		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	66		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	77		26-138
114423-97-1	13C-OCDD	69		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	74		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d
Lims ID: 320-76765-A-9-A
Client ID: 11215702-072421-BN-SJSB104 (16-18)
Sample Type: Client
Inject. Date: 13-Aug-2021 20:33:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76765-a-9-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 09:18:36 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1626

First Level Reviewer: stephensk Date: 16-Aug-2021 08:15:44

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.469	711740	0.81	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.508	560198	0.81	1.3459	58.5	58.5	0.1627	0.1627	58.48	
2,3,7,8-TCDF	20.532						0.0254	0.0254		
A Non-2,3,7,8-sub-TCDF	19.948						0.0254	0.0717		RQU
S Total TCDF							0.0717	0.0717		
D 13C-2,3,7,8-TCDD	21.865	370591	0.80	0.9317	55.9	55.9	0.5794	0.5794	55.89	
2,3,7,8-TCDD	21.899						0.0285	0.0285		RQU
$ 37Cl4-2,3,7,8-TCDD	21.899	212722		1.0083	29.6	29.6	0.0140	0.0140	74.10	
A Non-2,3,7,8-sub-TCDD	20.790						0.0285	0.0901		RQU
S Total TCDD							0.0901	0.0901		
D 13C-1,2,3,7,8-PeCDF	27.340	466582	1.64	1.1405	57.5	57.5	0.1796	0.1796	57.48	
1,2,3,7,8-PeCDF	27.332						0.0226	0.0226		RQU
D 13C-2,3,4,7,8-PeCDF	28.847	518235	1.60	1.1253	64.7	64.7	0.1820	0.1820	64.70	
2,3,4,7,8-PeCDF	28.880						0.0224	0.0224		
A F1 PeCDFs	24.692						0.009244	0.009244		RQU
A Non-2,3,7,8-sub-PeCDF	28.186						0.0225	0.0225		RQU
S Total PeCDF							0.0226	0.0226		
D 13C-1,2,3,7,8-PeCDD	29.672	285124	1.62	0.7165	55.9	55.9	0.0421	0.0421	55.91	
1,2,3,7,8-PeCDD	29.689						0.0337	0.0337		RQU
A Non-2,3,7,8-sub-PeCDD	29.966						0.0337	0.1421		RQU
S Total PeCDD							0.1421	0.1421		
D 13C-1,2,3,4,7,8-HxCDF	34.963	524525	0.53	0.9648	75.1	75.1	0.2691	0.2691	75.10	
1,2,3,4,7,8-HxCDF	35.014						0.0171	0.0171		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.132	478452	0.52	1.0708	61.7	61.7	0.2425	0.2425	61.73	
1,2,3,6,7,8-HxCDF	35.206						0.0188	0.0188		
D 13C-2,3,4,6,7,8-HxCDF	35.940	450470	0.54	1.0413	59.8	59.8	0.2493	0.2493	59.76	
2,3,4,6,7,8-HxCDF	36.015						0.0180	0.0180		
D 13C-1,2,3,7,8,9-HxCDF	36.833	415397	0.56	0.9731	59.0	59.0	0.2668	0.2668	58.97	
1,2,3,7,8,9-HxCDF	36.858	727	1.24	1.2401	0.1569	0.1411	0.0170	0.0170		RQM
A Non-2,3,7,8-sub-HxCDF	35.087						0.0176	0.0353		RQU
S Total HxCDF					0.1569	0.1411	0.0177	0.0177		RQ
* 13C-1,2,3,7,8,9-HxCDD	36.639	723867	1.29	1.8E+04	100.0	100.0				a

773170

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-1,2,3,4,7,8-HxCDD	36.151	357077	1.29	0.7587	65.0	65.0	0.2110	0.2110	65.02	
1,2,3,4,7,8-HxCDD	36.159						0.0233	0.0233		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.269	352700	1.25	0.8593	56.7	56.7	0.1863	0.1863	56.70	
1,2,3,6,7,8-HxCDD	36.159						0.0261	0.0261		RQU
1,2,3,7,8,9-HxCDD	36.656						0.0228	0.0228		RQU
A Non-2,3,7,8-sub-HxCDD	35.441	1689	1.24	1.0545	0.4917	0.4513	0.0240	0.4513		RQMa
S Total HxCDD					0.4917	0.4513	0.0241	0.0241		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.638	353861	0.47	0.7359	66.4	66.4	0.2158	0.2158	66.42	
1,2,3,4,6,7,8-HpCDF	38.655						0.0153	0.0153		RQU
D 13C-1,2,3,4,7,8,9-HpCDF	39.893	383396	0.45	0.6854	77.3	77.3	0.2317	0.2317	77.28	
1,2,3,4,7,8,9-HpCDF	39.919						0.0147	0.0147		RQU
A Non-2,3,7,8-sub-HpCDF	39.272						0.0149	0.0149		U
S Total HpCDF							0.0153	0.0153		
D 13C-1,2,3,4,6,7,8-HpCDD	39.582	347729	1.08	0.6745	71.2	71.2	0.1585	0.1585	71.22	
1,2,3,4,6,7,8-HpCDD	39.590	5353	0.92	1.0503	1.466	1.466	0.0468	0.0468		Ma
A Non-2,3,7,8-sub-HpCDD	39.272	12656	1.01	1.0503	3.465	3.465	0.0468	3.465		
S Total HpCDD					4.931	4.931	0.0468	0.0468		
D 13C-OCDD	42.078	542017	0.87	0.5446	137.5	137.5	0.2041	0.2041	68.74	
OCDF	42.224						0.0371	0.0371		
OCDD	42.086	156601	0.89	1.0620	54.4	54.4	0.0748	0.0748		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d
Lims ID: 320-76765-A-9-A
Client ID: 11215702-072421-BN-SJSB104 (16-18)
Sample Type: Client
Inject. Date: 13-Aug-2021 20:33:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76765-a-9-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 09:18:36 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1626

First Level Reviewer: stephensk Date: 16-Aug-2021 08:15:44

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.469	21.462	0		318493	47222	144	360	328		a
333.9338	21.478	21.462	1		393247	58742	85	212	691	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.508	20.489	1	0.955	250533	33694	68	170	496		
317.9389	20.499	20.489	1	0.955	309665	46382	25	62	1855	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.532						4	10			
305.8987	20.532						5	12			
A Non-2,3,7,8-sub-TCDF											U
303.9016	16.865	19.948	-185	0.822	46	28	4	10	7		
305.8987	16.882	19.948	-184	0.823	73	28	5	12	6	0.63(0.65-0.89)	
	Empc Correction				59	36	5	12	7		
13C-2,3,7,8-TCDD											
331.9368	21.865	21.849	1	1.018	164863	21913	144	360	152		
333.9338	21.847	21.849	0	1.018	205728	27001	85	212	318	0.80(0.65-0.89)	
2,3,7,8-TCDD											RQU
319.8965	21.866						5	12			
321.8936	21.866						1	2			
37Cl4-2,3,7,8-TCDD											
327.8847	21.899	21.866	2	1.020	212722	28067	6	15	4678		
A Non-2,3,7,8-sub-TCDD											U
319.8965	18.128	20.790	-159	0.829	74	35	5	12	7		
	Empc Correction				25	14	5	12	3		
321.8936	18.154	20.790	-158	0.830	33	19	1	2	19	2.24(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	27.340	27.323	1	1.273	289643	45882	49	122	936		
353.8970	27.332	27.323	1	1.273	176939	25623	38	95	674	1.64(1.32-1.78)	
1,2,3,7,8-PeCDF											RQU
339.8597	27.356						1	2			
341.8567	27.356						6	15			
13C-2,3,4,7,8-PeCDF											
351.9000	28.847	28.838	1	1.344	319005	46817	49	122	955		
353.8970	28.839	28.838	0	1.343	199230	28562	38	95	752	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.880						1	2			
341.8567	28.880						6	15			
A F1 PeCDFs											U
339.8597	24.397	24.692	-18	0.892	19	8	1	2	8		
341.8567	24.475	24.692	-13	0.895	238	52	2	5	26	0.08(1.32-1.78)	
	Empc Correction				12	5	2	5	3		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	26.245	28.186	-116	0.960	19	12	1	2	12		
341.8567	26.304	28.186	-113	0.962	84	28	6	15	5	0.23(1.32-1.78)	
	Empc Correction				12	7	6	15	1		
13C-1,2,3,7,8-PeCDD											
367.8949	29.672	29.671	0	1.382	176449	25790	7	17	3684		
369.8919	29.672	29.671	0	1.382	108675	16708	6	15	2785	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											RQU
355.8546	29.688						5	12			
357.8516	29.688						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.111	29.966	-231	0.880	361	69	5	12	14		
	Empc Correction				37	15	5	12	3		
357.8516	26.144	29.966	-229	0.881	24	10	1	2	10	15.04(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.963	34.978	-1	0.954	181432	35094	52	130	675		
385.8610	34.972	34.978	0	0.954	343093	66995	118	295	568	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	34.995						3	7			
375.8178	34.995						5	12			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.132	35.138	0	0.959	163775	30166	52	130	580		
385.8610	35.132	35.138	0	0.959	314677	57424	118	295	487	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.155						3	7			
375.8178	35.155						5	12			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.940	35.954	-1	0.981	157334	31370	52	130	603		
385.8610	35.940	35.954	-1	0.981	293136	60163	118	295	510	0.54(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	35.963						3	7			
375.8178	35.963						5	12			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.833	36.838	0	1.005	149016	33886	52	130	652		
385.8610	36.833	36.838	0	1.005	266381	61231	118	295	519	0.56(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	36.858	36.854	0	1.001	403	106	3	7	35		
375.8178	36.884	36.854	2	1.001	405	92	5	12	18	1.00(1.05-1.43)	M
	Empc Correction				324	85	5	12	17		
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.497	35.087	-95	0.958	78	24	3	7	8		
375.8178	33.540	35.087	-93	0.959	132	50	5	12	10	0.59(1.05-1.43)	
	Empc Correction				62	19	5	12	4		
13C-1,2,3,7,8,9-HxCDD											a
401.8559	36.639	36.644	0		407169	91445	63	157	1452		a
403.8529	36.639	36.644	0		316698	72255	42	105	1720	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.151	36.164	-1	0.987	200968	45493	63	157	722		
403.8529	36.151	36.164	-1	0.987	156109	35455	42	105	844	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.181						4	10			
391.8127	36.181						4	10			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.269	36.282	-1	0.990	195671	42740	63	157	678		
403.8529	36.260	36.282	-1	0.990	157029	34340	42	105	818	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8158	36.291						4	10			
391.8127	36.291						4	10			
1,2,3,7,8,9-HxCDD											RQU
389.8158	36.661						4	10			
391.8127	36.661						4	10			
A Non-2,3,7,8-sub-HxCDD											RQMa
389.8158	34.264	35.441	-70	0.945	935	222	4	10	56		a
391.8127	34.281	35.441	-69	0.945	905	191	4	10	48	1.03(1.05-1.43)	M
	Empc Correction				754	179	4	10	45		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.638	38.659	-1	1.055	112474	29080	47	117	619		
419.8220	38.638	38.659	-1	1.055	241387	61808	57	142	1084	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQU
407.7817	38.667						7	17			
409.7788	38.667						1	2			
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.893	39.912	-1	1.089	119329	32158	47	117	684		
419.8220	39.885	39.912	-2	1.089	264067	71942	57	142	1262	0.45(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8,9-HpCDF											RQU
407.7817	39.921						7	17			
409.7788	39.921						1	2			
A Non-2,3,7,8-sub-HpCDF											U
407.7817	39.272						7	17			
409.7788	39.272						1	2			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.582	39.601	-1	1.080	180587	49966	40	100	1249		
437.8140	39.582	39.601	-1	1.080	167142	45571	30	75	1519	1.08(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											Ma
423.7767	39.590	39.610	-1	1.000	2567	677	9	22	75		M
425.7737	39.582	39.610	-2	1.000	2786	571	10	25	57	0.92(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.959	39.272	-19	0.984	6351	1554	9	22	173		
425.7737	38.950	39.272	-19	0.984	6305	1613	10	25	161	1.01(0.88-1.20)	
13C-OCDD											
469.7780	42.078	42.105	-2	1.148	251657	60069	32	80	1877		
471.7750	42.078	42.105	-2	1.148	290360	70900	41	102	1729	0.87(0.76-1.02)	
OCDF											
441.7428	42.206						1	2			
443.7399	42.206						12	30			
OCDD											
457.7377	42.086	42.113	-2	1.000	73901	16869	9	22	1874		
459.7348	42.086	42.113	-2	1.000	82700	19986	12	30	1666	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 17-Aug-2021 09:18:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Lims ID:	320-76765-A-9-A		
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Inject. Date:	13-Aug-2021 20:33:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	9

Non-2,3,7,8-sub-TCDF, RT: 19.948

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	560198	80076

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	560198	80076

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.865	46	28	73	28	0.0197	0.63	RQ
16.865	46	28	59	36	0.0174		Empc Correction
19.829	195	41	239	90	0.0717	0.82	

Compound is Marked ND

Report Date: 17-Aug-2021 09:18:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Lims ID:	320-76765-A-9-A		
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Inject. Date:	13-Aug-2021 20:33:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	9

Non-2,3,7,8-sub-TCDD, RT: 20.790

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	370591	48914

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	370591	48914

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.128	74	35	33	19	0.0268	2.24	RQ
18.128	25	14	33	19	0.0146		Empc Correction
18.446	166	35	193	51	0.0901	0.86	
19.760	88	22	164	75	0.0632	0.54	RQ
19.760	88	22	114	28	0.0507		Empc Correction
20.276	104	51	19	7	0.0309	5.47	RQ
20.276	14	5	19	7	0.008281		Empc Correction
22.611	131	51	30	18	0.0404	4.37	RQ
22.611	23	13	30	18	0.0133		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Lims ID:	320-76765-A-9-A		
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Inject. Date:	13-Aug-2021 20:33:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	9

F1 PeCDFs, RT: 24.692

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	466582	71505
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	518235	75379

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	492408	73442

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.397	19	8	238	52	0.0506	0.08	RQ
24.397	19	8	12	5	0.006106		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Lims ID:	320-76765-A-9-A		
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Inject. Date:	13-Aug-2021 20:33:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	9

Non-2,3,7,8-sub-PeCDF, RT: 28.186

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	466582	71505
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	518235	75379

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	492408	73442

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
26.245	19	12	84	28	0.0203	0.23	RQ
26.245	19	12	12	7	0.006106		Empc Correction

Compound is Marked ND

Report Date: 17-Aug-2021 09:18:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Lims ID:	320-76765-A-9-A		
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Inject. Date:	13-Aug-2021 20:33:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	9

Non-2,3,7,8-sub-PeCDD, RT: 29.966

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	285124	42498

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	285124	42498

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.111	361	69	24	10	0.1290	15.04	RQ
26.111	37	15	24	10	0.0204		Empc Correction
27.769	253	33	171	29	0.1421	1.48	
28.704	67	30	123	24	0.0637	0.54	RQ
28.704	67	30	43	19	0.0369		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Lims ID:	320-76765-A-9-A		
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Inject. Date:	13-Aug-2021 20:33:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	9

Non-2,3,7,8-sub-HxCDF, RT: 35.087

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	524525	102089
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	478452	87590
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	450470	91533
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	415397	95117

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	467211	94082

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.497	78	24	132	50	0.0373	0.59	RQ
33.497	78	24	62	19	0.0249		Empc Correction
35.805	175	33	89	27	0.0469	1.97	RQ
35.805	110	33	89	27	0.0353		Empc Correction

Compound is Marked ND

Report Date: 17-Aug-2021 09:18:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Lims ID:	320-76765-A-9-A		
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Inject. Date:	13-Aug-2021 20:33:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	9

Non-2,3,7,8-sub-HxCDD, RT: 35.441

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	357077	80948
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	352700	77080
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	354888	79014

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.264	935	222	905	191	0.4917	1.03	RQM
34.264	935	222	754	179	0.4513		Empc Correction
Signal Totals:							
	935	222	754	179			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1840	413				1.03	RQM
	1689	401					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.4917 = (1840 * 100.000) / (354888 * 1.055)

Empc Amount: 0.4513 = (1689 * 100.000) / (354888 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

Report Date: 17-Aug-2021 09:18:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Lims ID:	320-76765-A-9-A		
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Inject. Date:	13-Aug-2021 20:33:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	9

Non-2,3,7,8-sub-HpCDF, RT: 39.272

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	353861	90888
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	383396	104100

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	368628	97494

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 17-Aug-2021 09:18:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Lims ID:	320-76765-A-9-A		
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Inject. Date:	13-Aug-2021 20:33:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	9

Non-2,3,7,8-sub-HpCDD, RT: 39.272

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	347729	95537

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	347729	95537

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.959	6351	1554	6305	1613	3.47	1.01	
Signal Totals:							
	6351	1554	6305	1613			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12656	3167				1.01	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.465 = (12656 * 100.000) / (347729 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d				
Injection Date:	13-Aug-2021 20:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-9-A	Lab Sample ID:	320-76765-9		
Client ID:	11215702-072421-BN-SJSB104 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.88
Area: 492
Amount: 0.173739
Amount Units: pg/ul

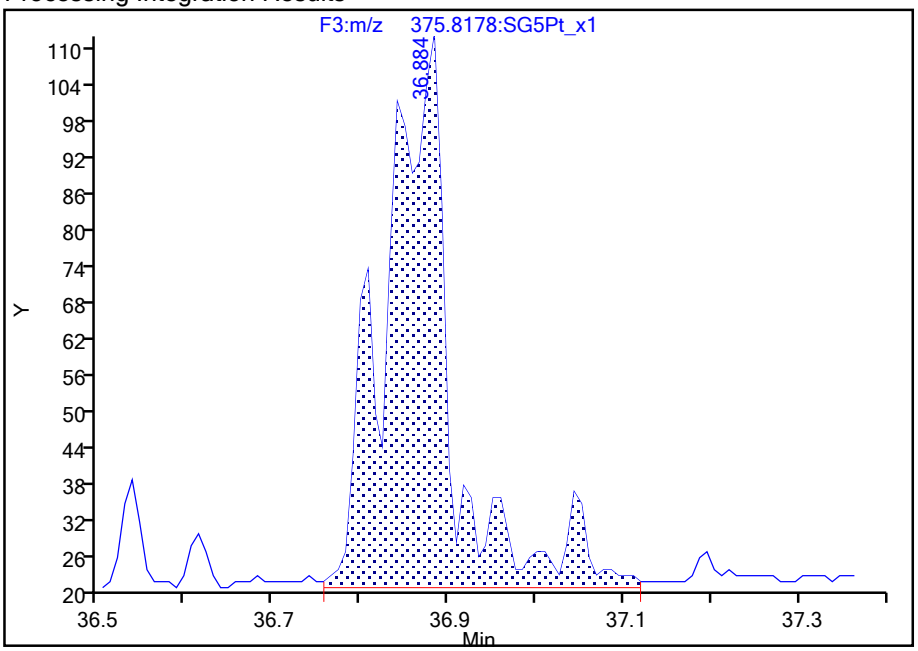

Manual Integration Results

RT: 36.88
Area: 405
Amount: 0.156850
Amount Units: pg/ul

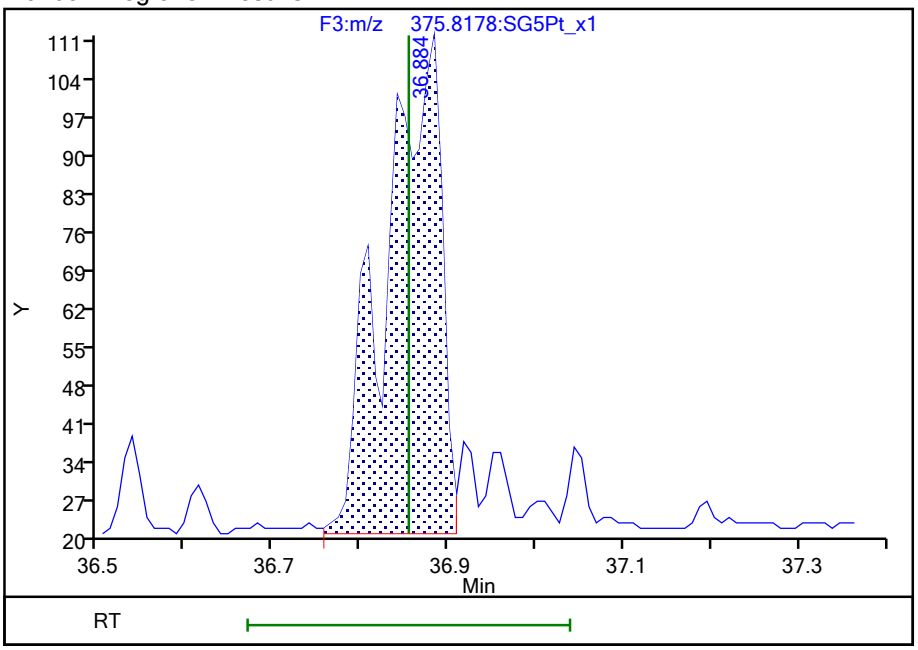

Reviewer: dadunj, 17-Aug-2021 09:16:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d				
Injection Date:	13-Aug-2021 20:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-9-A	Lab Sample ID:	320-76765-9		
Client ID:	11215702-072421-BN-SJSB104 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (34.25- 36.63)

Signal: 2

Processing Integration Results

RT = 34.281 Area = 973

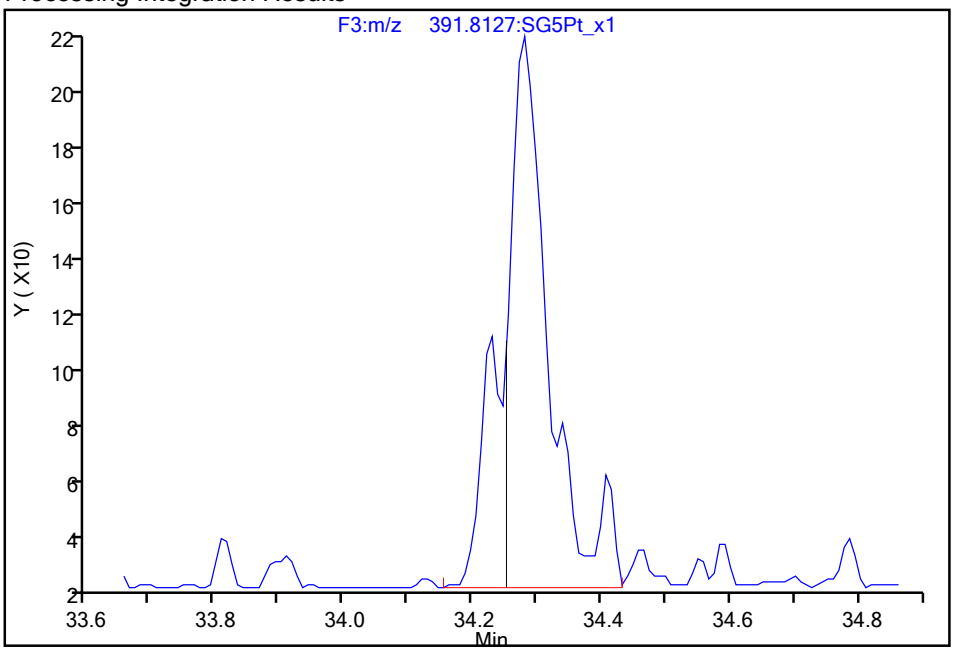

Manual Integration Results

RT = 34.281 Area = 905 M

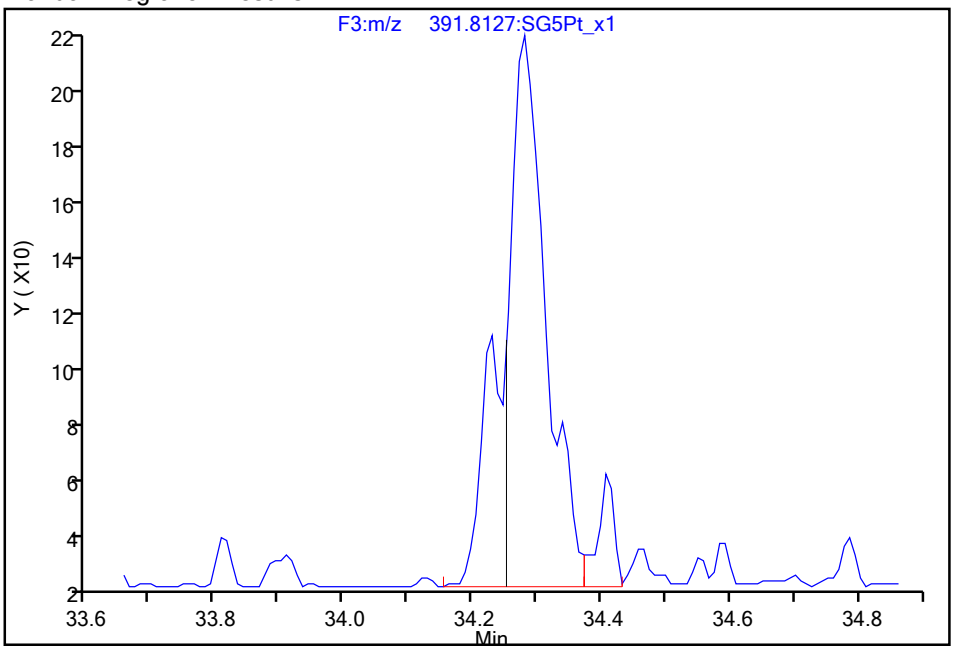

Reviewer: dadunj, 17-Aug-2021 09:17:17

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d				
Injection Date:	13-Aug-2021 20:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-9-A	Lab Sample ID:	320-76765-9		
Client ID:	11215702-072421-BN-SJSB104 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

Not Detected
Expected RT: 39.61

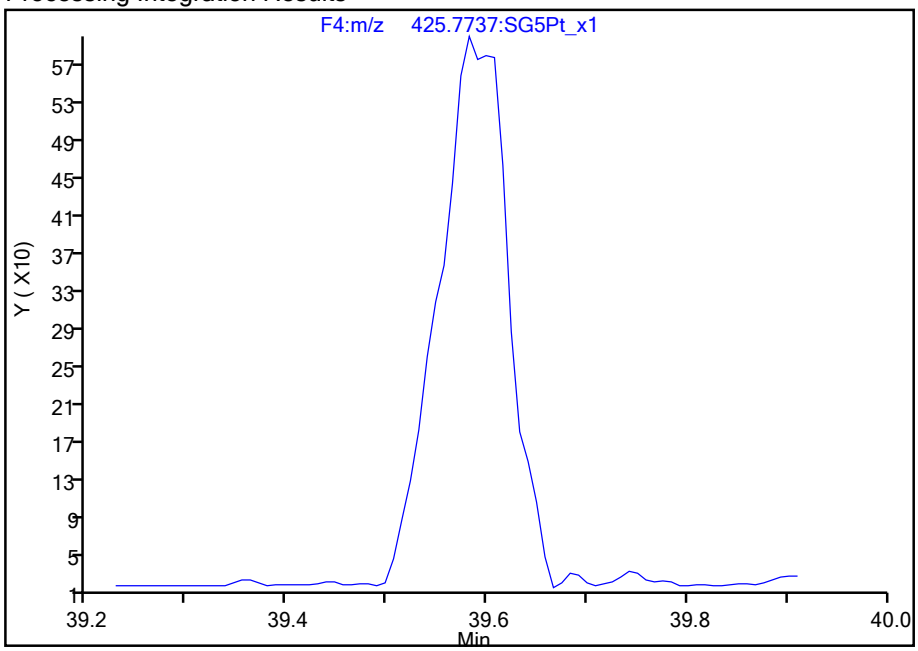

Manual Integration Results

RT: 39.58
Area: 2786
Amount: 1.465693
Amount Units: pg/ul

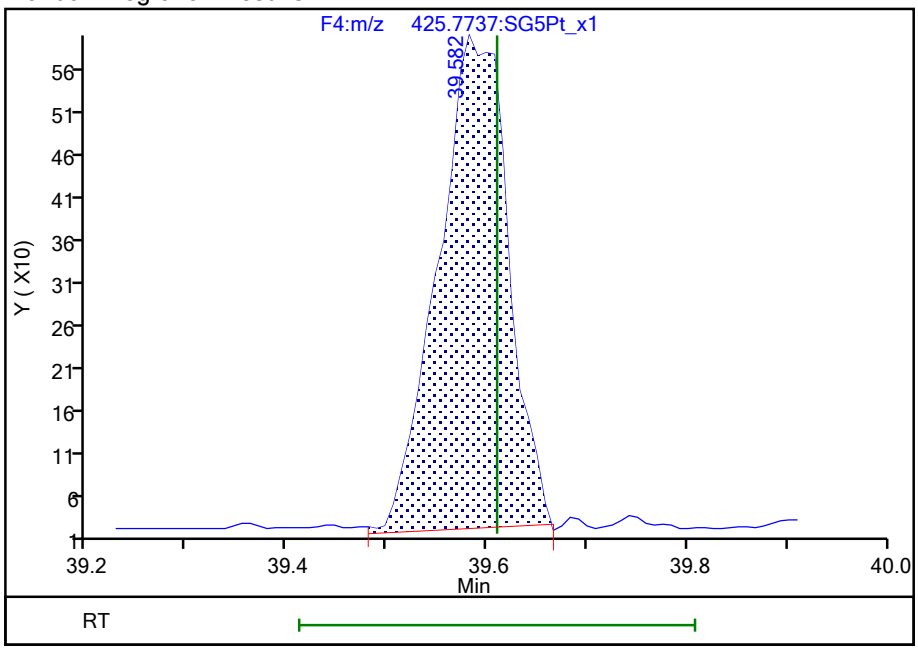

Reviewer: dadunj, 17-Aug-2021 09:17:44
Audit Action: Manually Integrated Audit Reason: Split Peak

773187

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d				
Injection Date:	13-Aug-2021 20:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-9-A	Lab Sample ID:	320-76765-9		
Client ID:	11215702-072421-BN-SJSB104 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 39.61

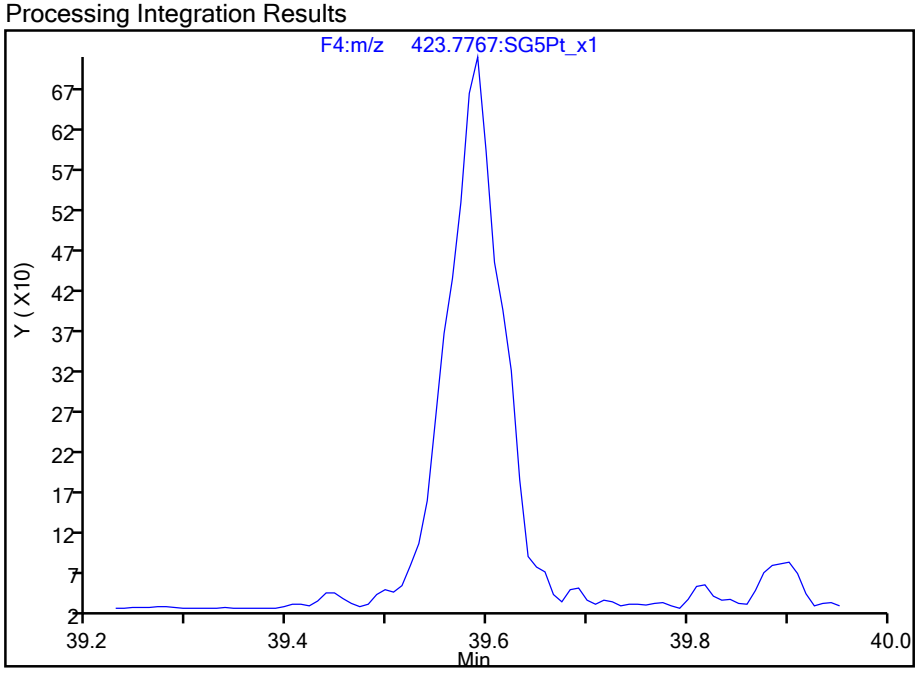

Manual Integration Results

RT: 39.59
Area: 2567
Amount: 1.465693
Amount Units: pg/ul

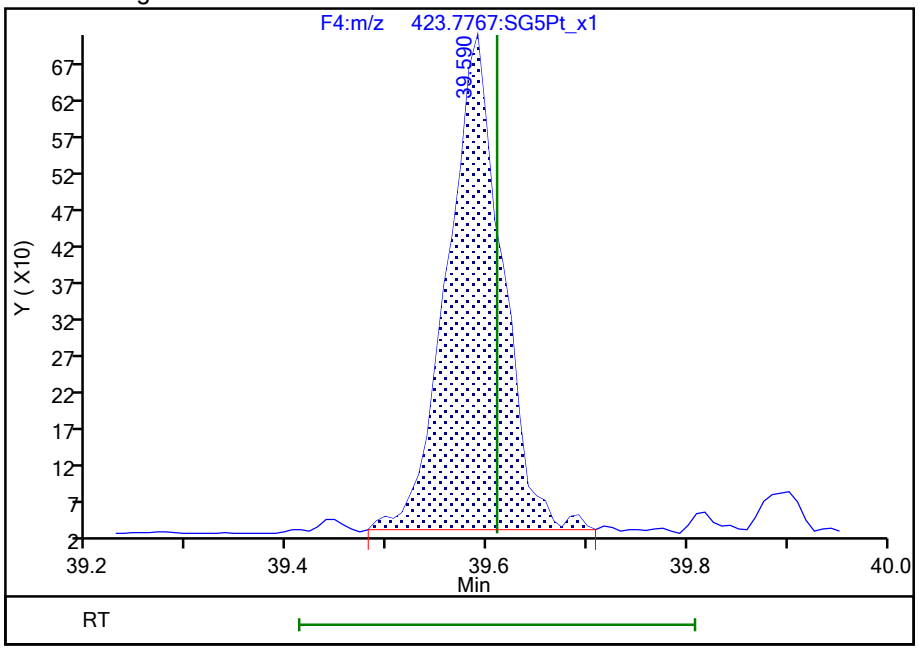

Reviewer: dadunj, 17-Aug-2021 09:17:48
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

773188

Report Date: 17-Aug-2021 09:18:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

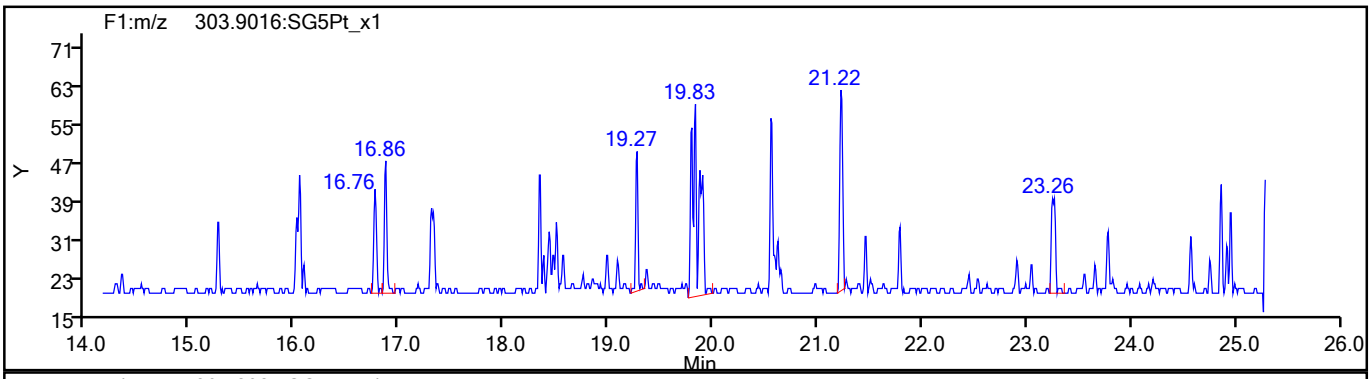

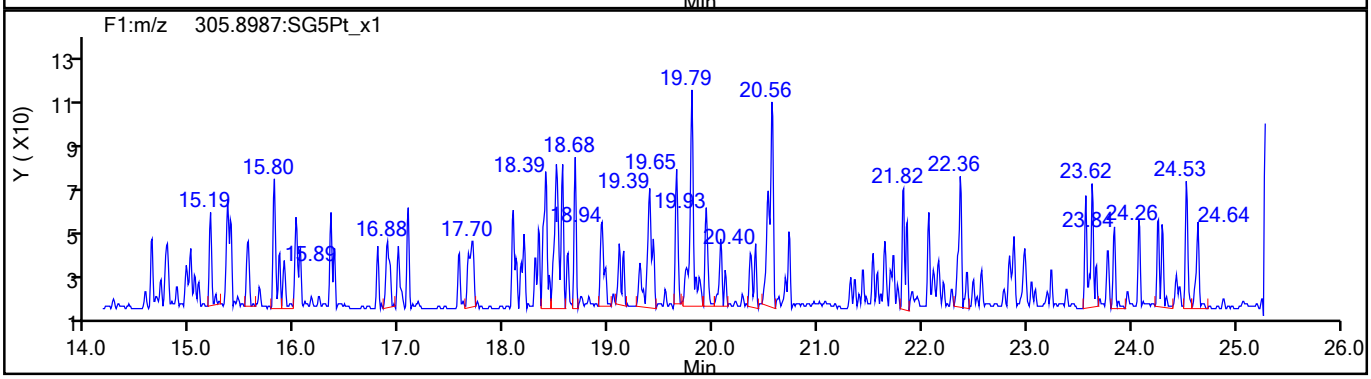

TCDF Standards

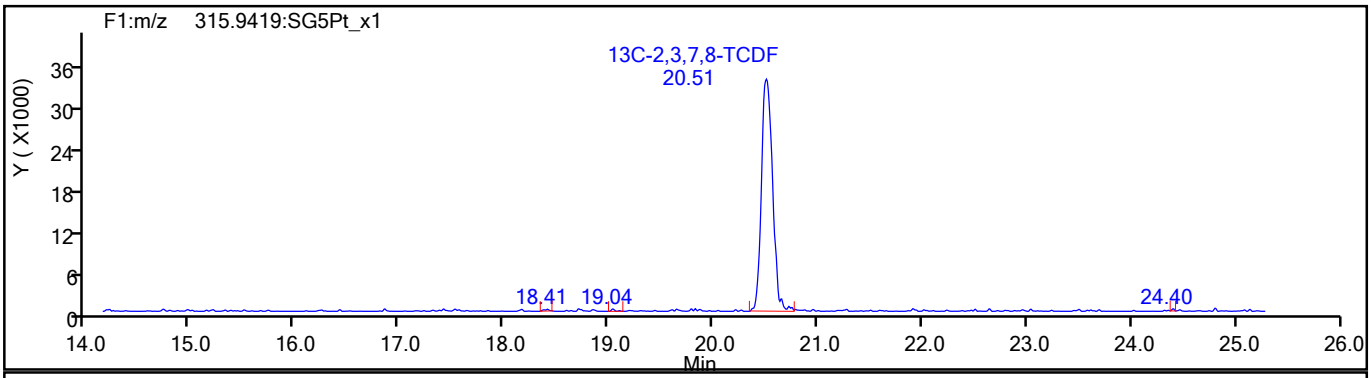

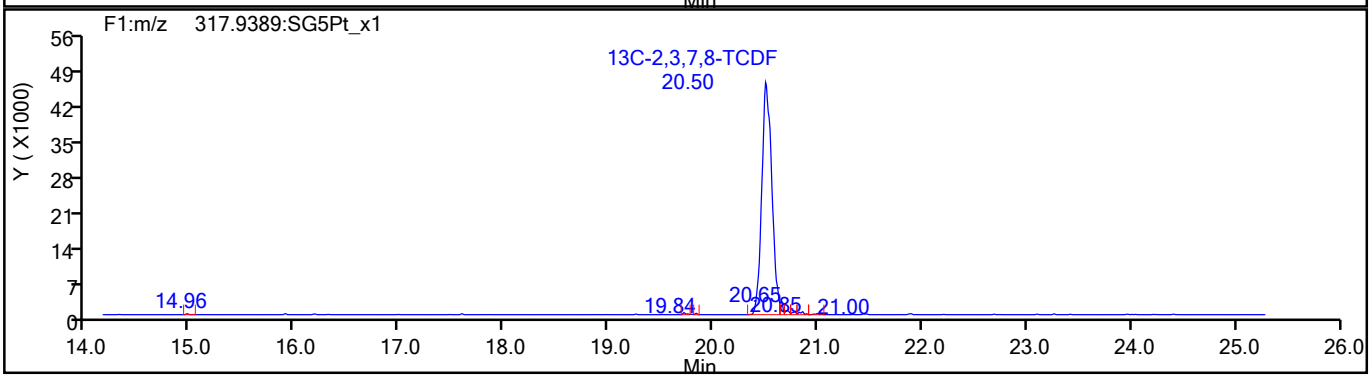

773189

Report Date: 17-Aug-2021 09:18:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

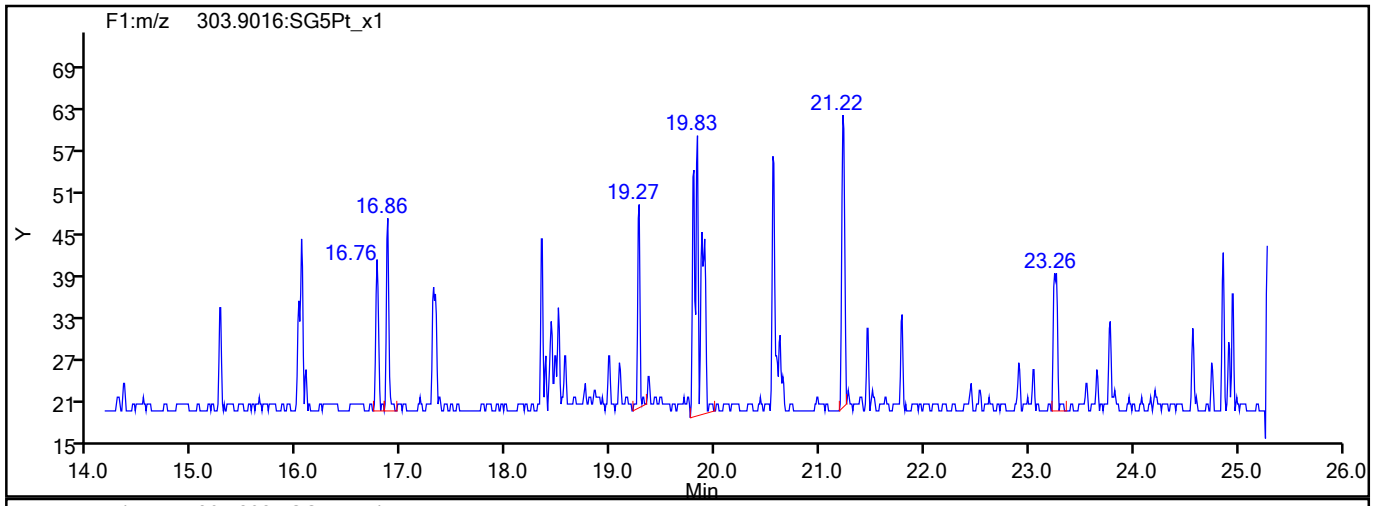

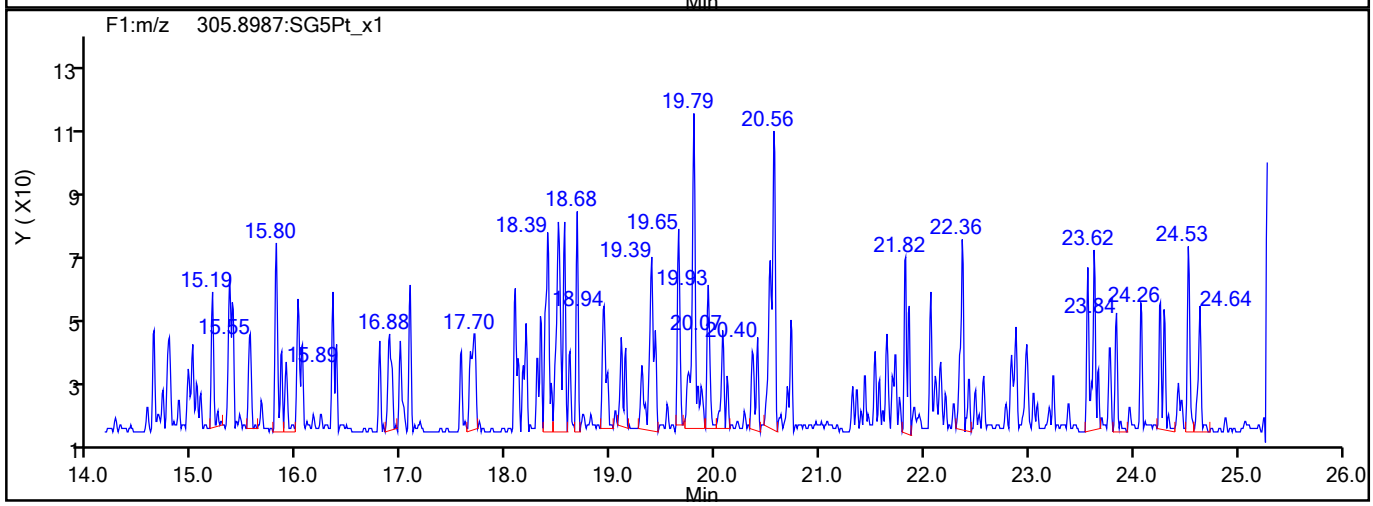

TCDF Interference Mass

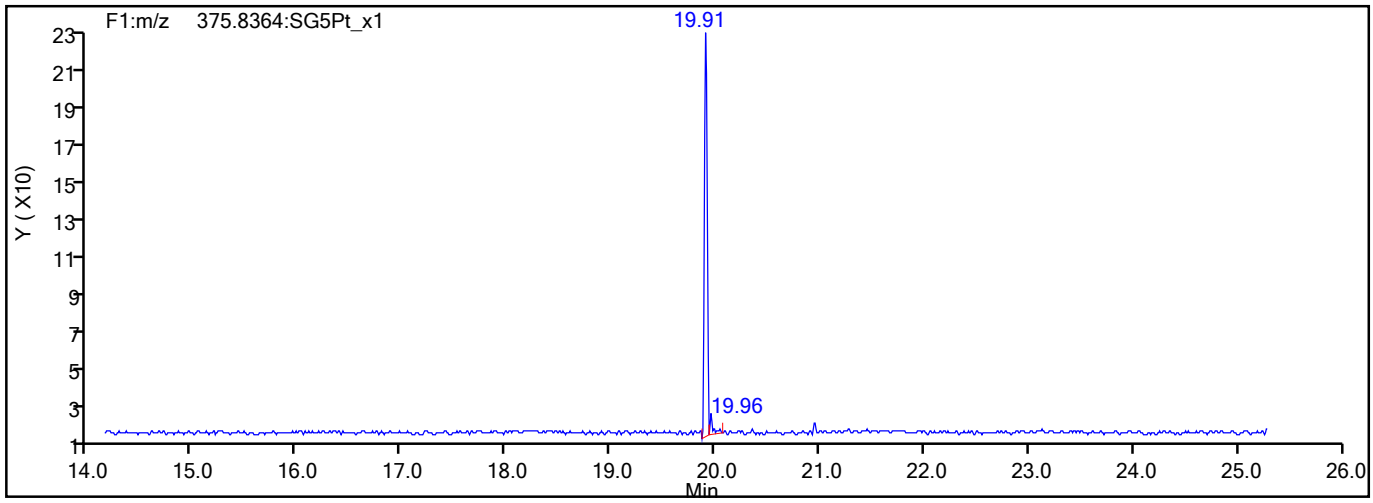

773190

Report Date: 17-Aug-2021 09:18:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

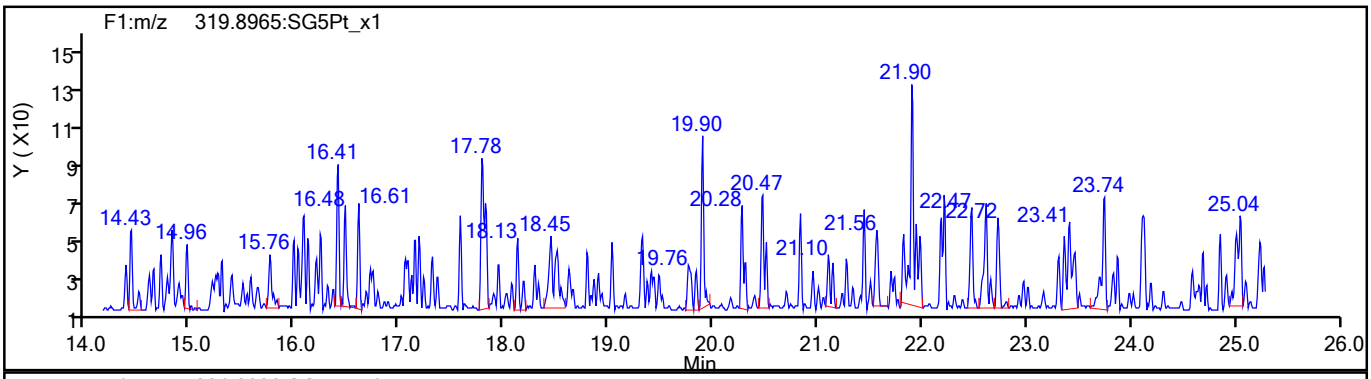

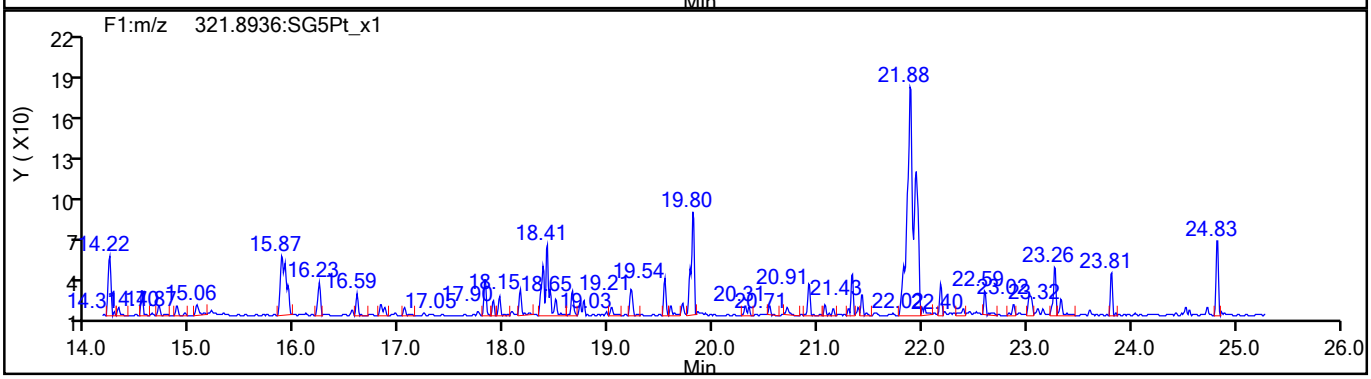

TCDD Standards

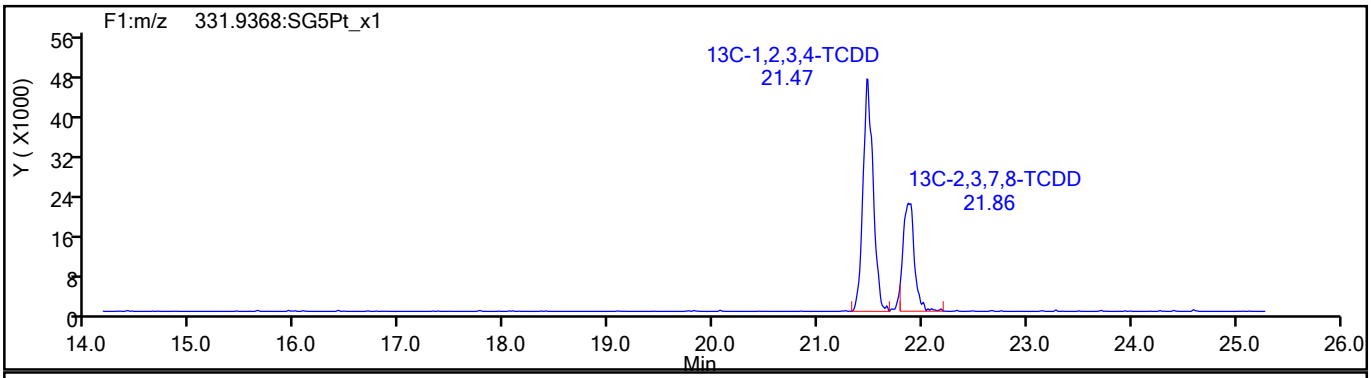

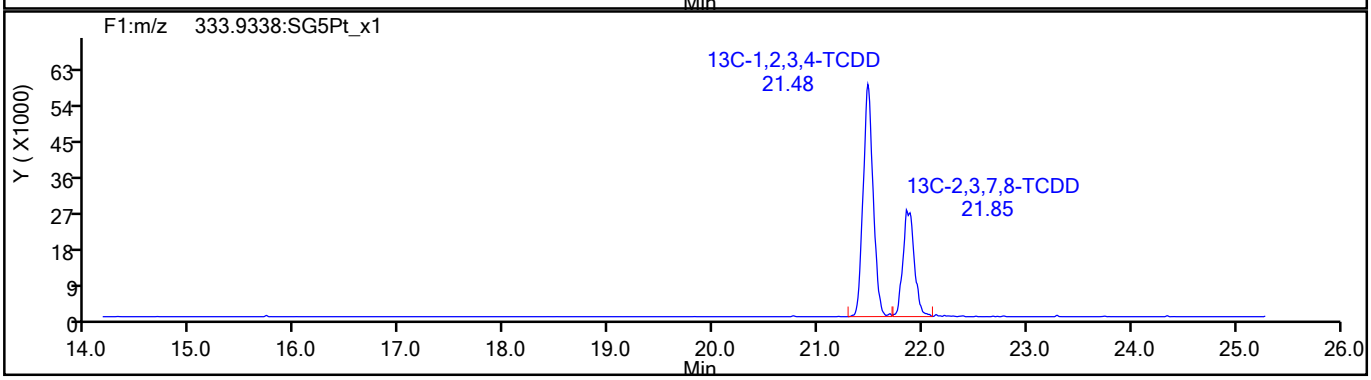

773191

Report Date: 17-Aug-2021 09:18:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

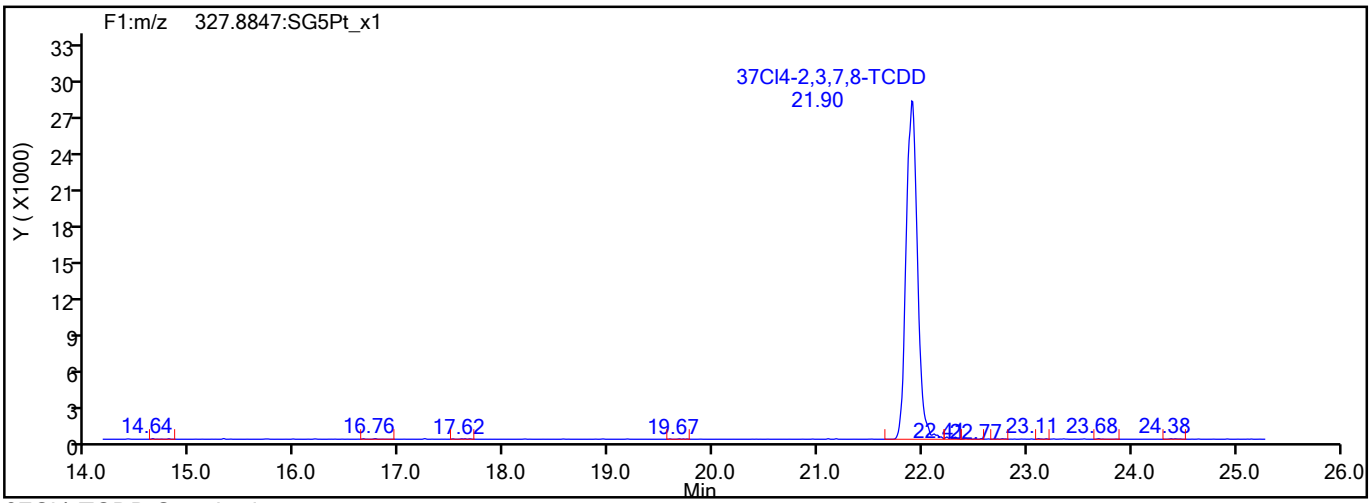

37Cl4-TCDD Standards

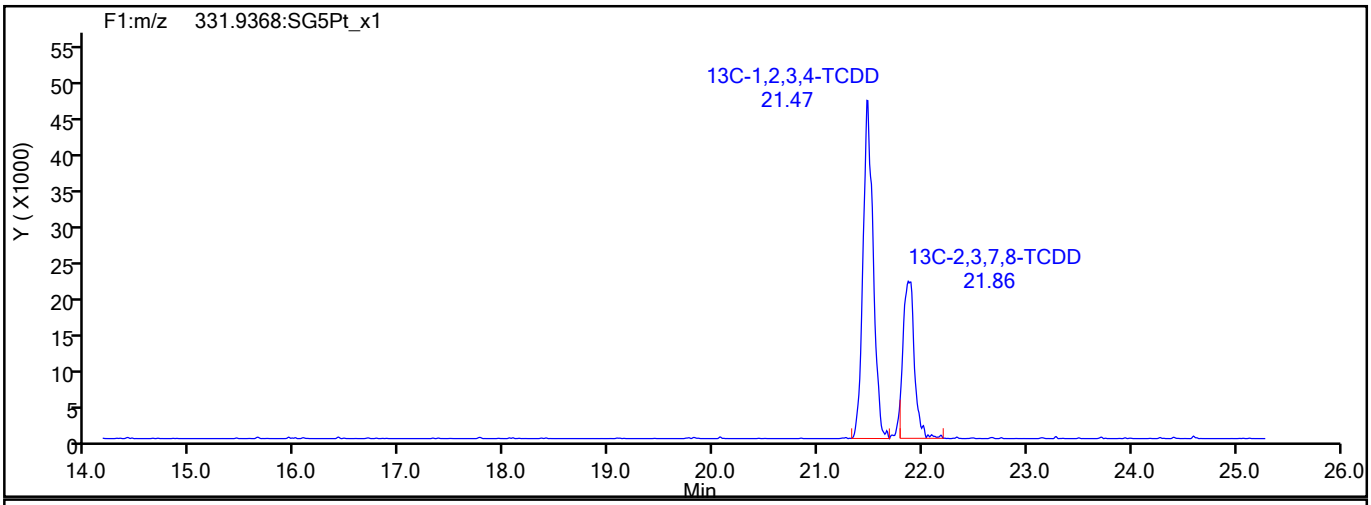

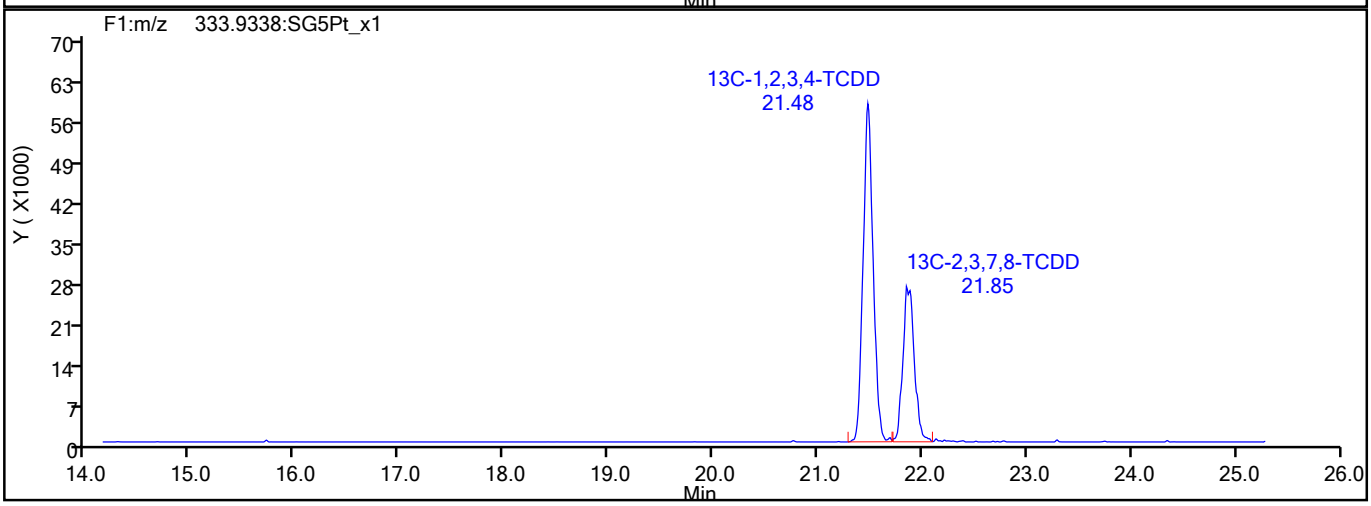

773192

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

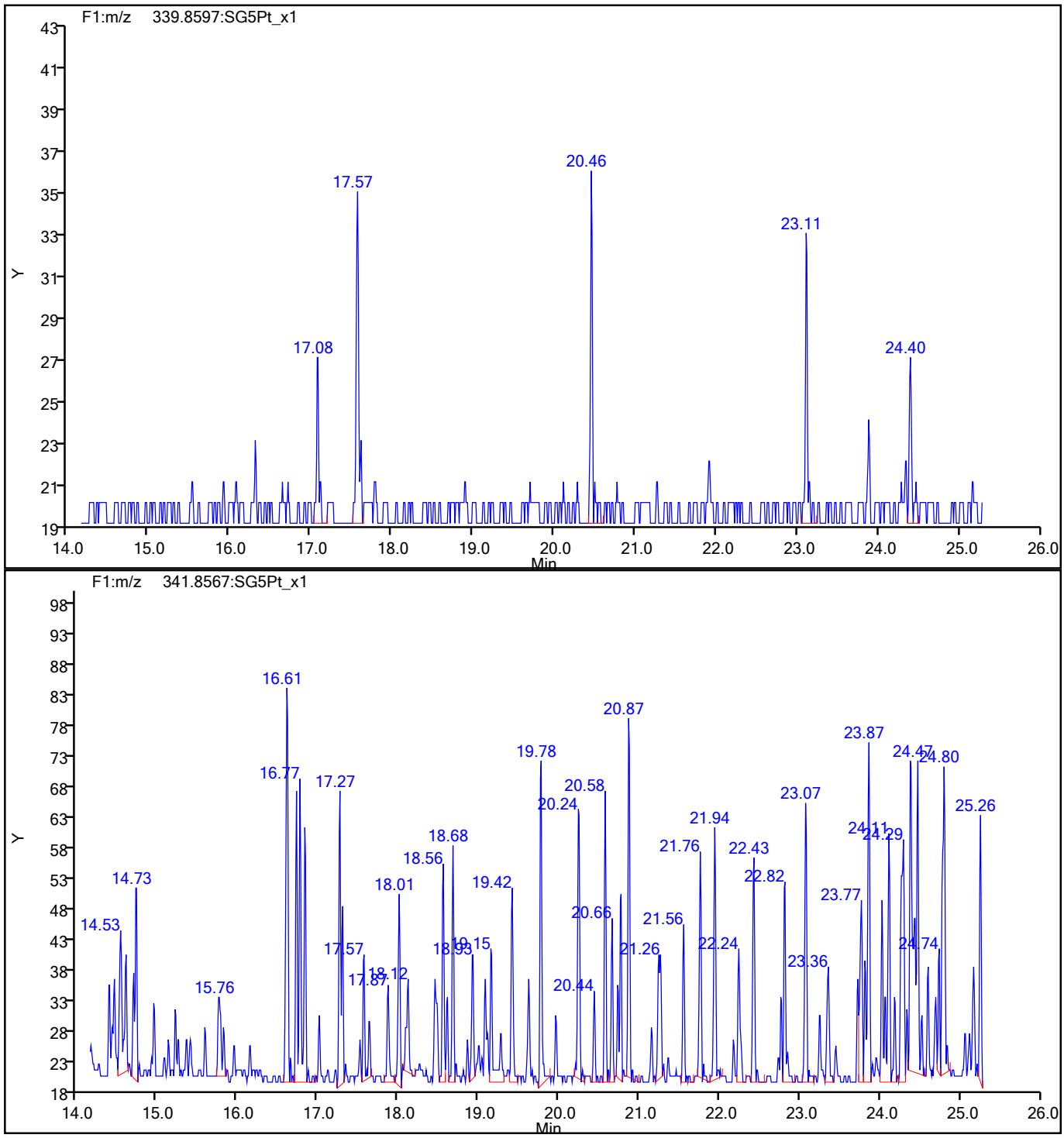

773193

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

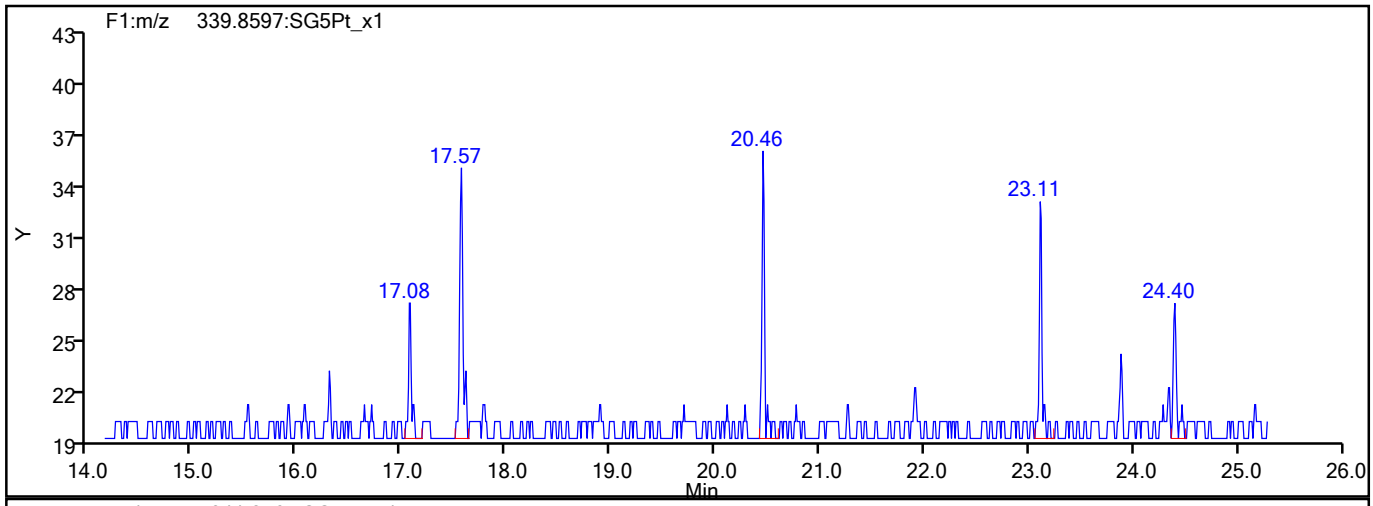

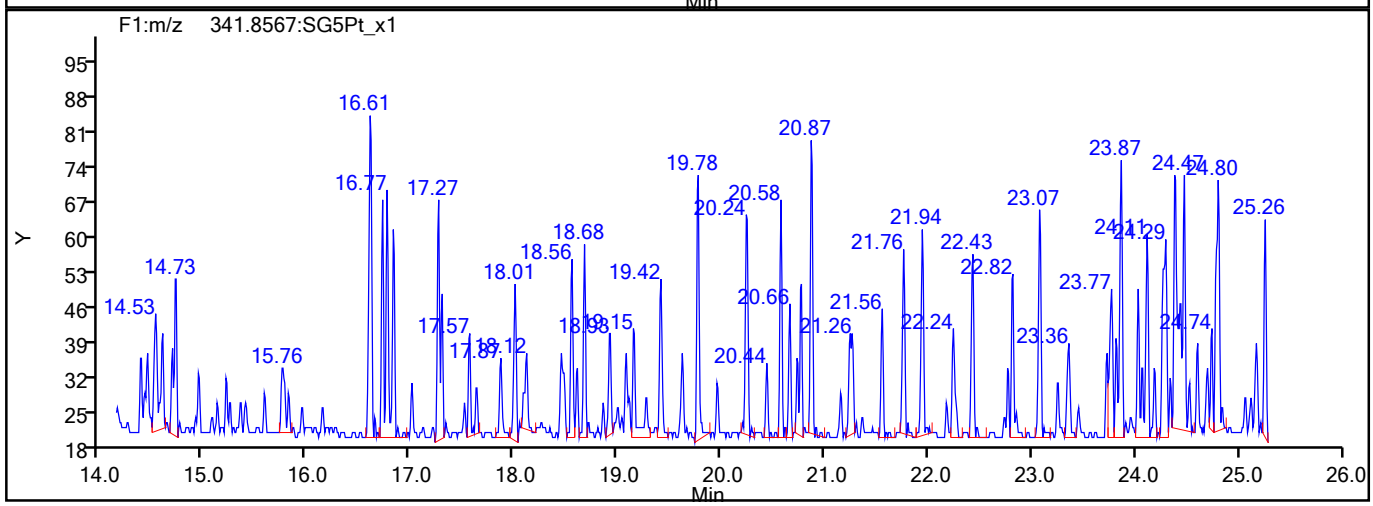

F1 PeCDFs Interference Mass

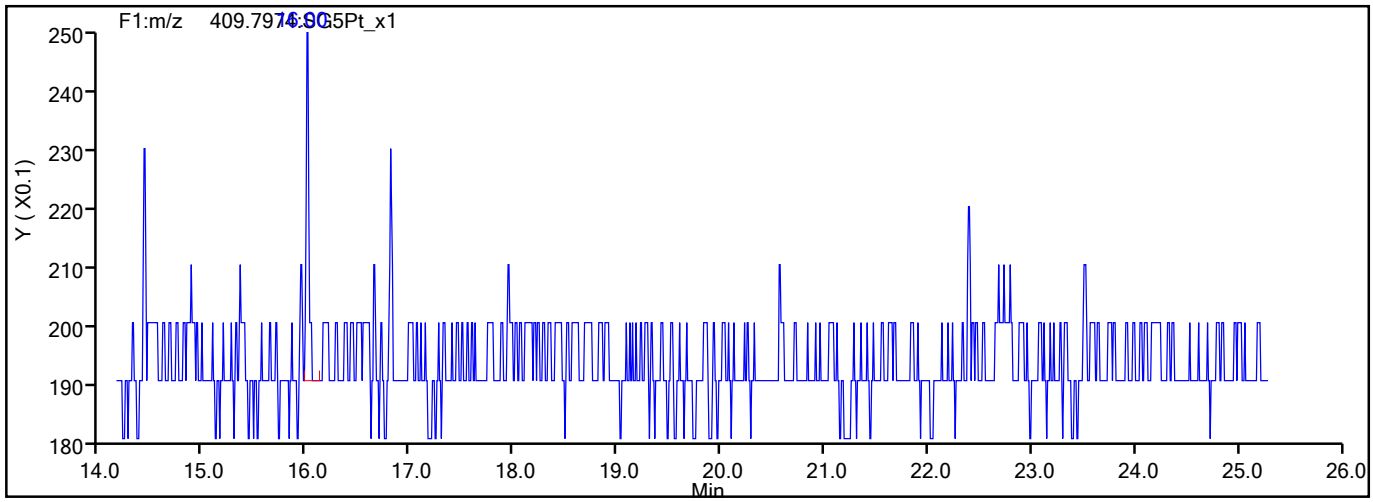

773194

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

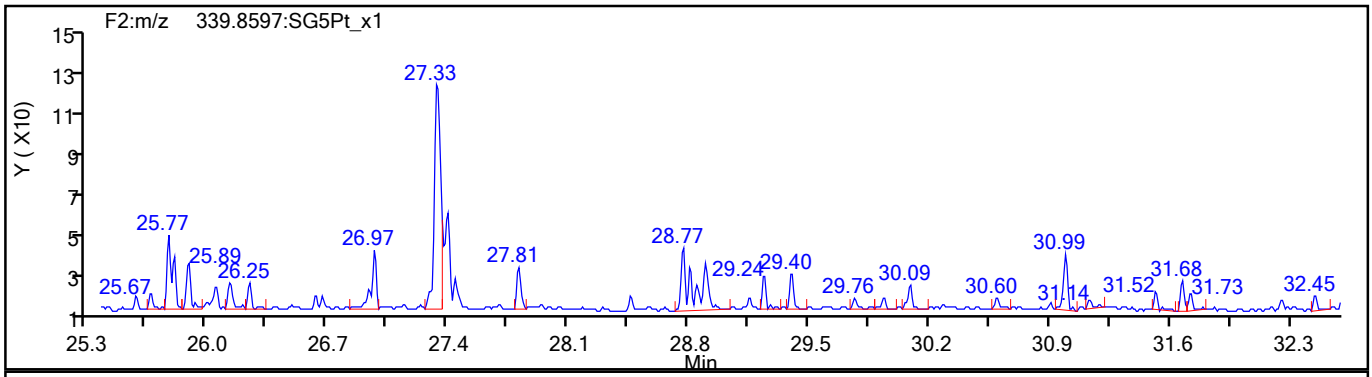

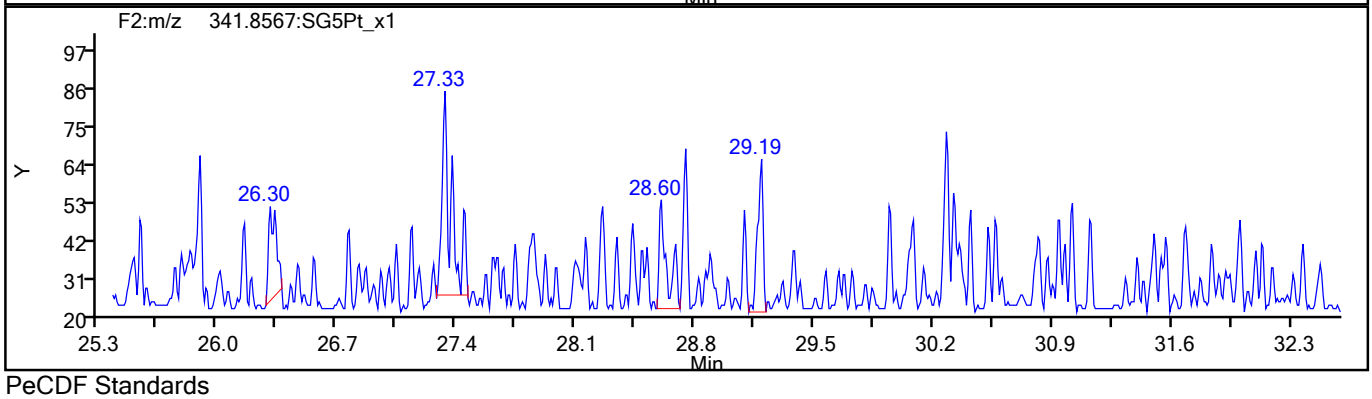

PeCDF Standards

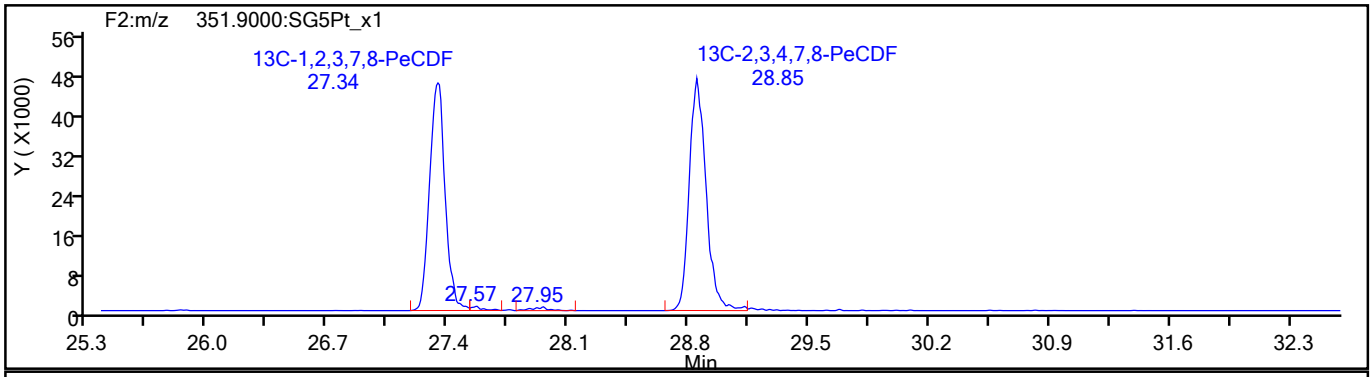

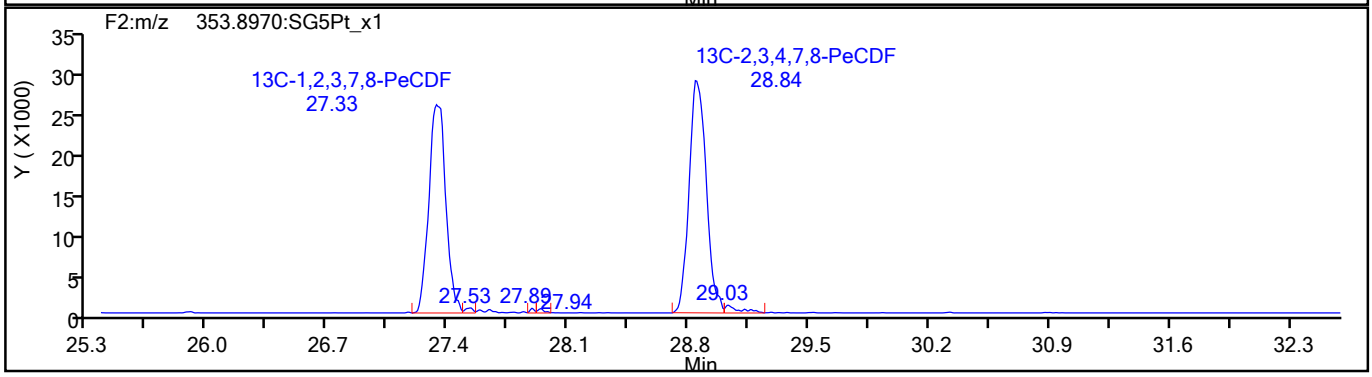

773195

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

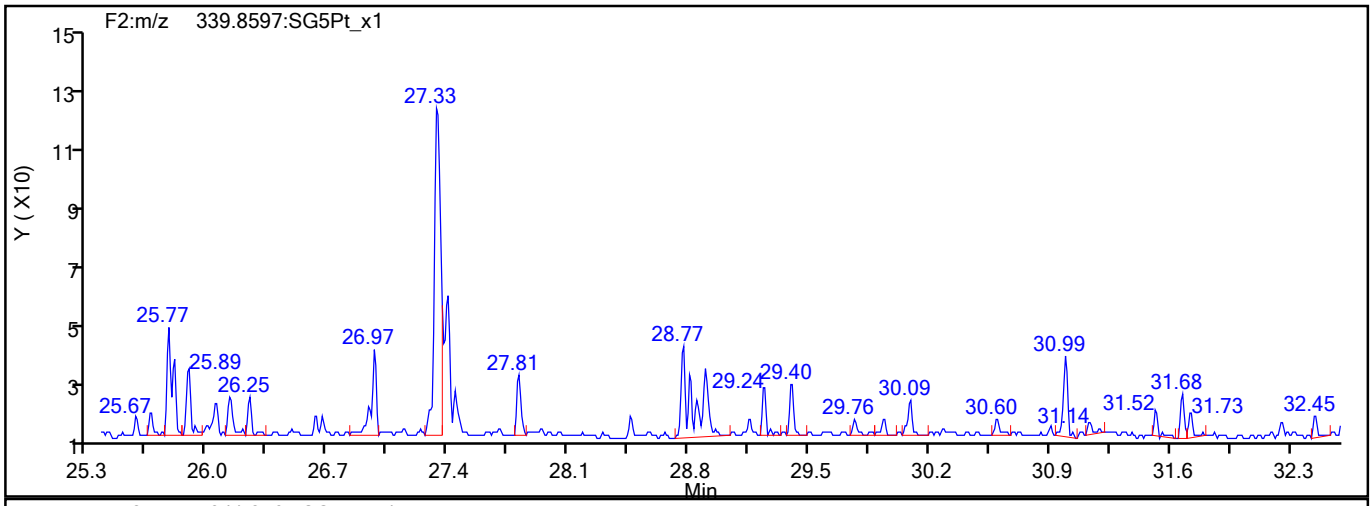

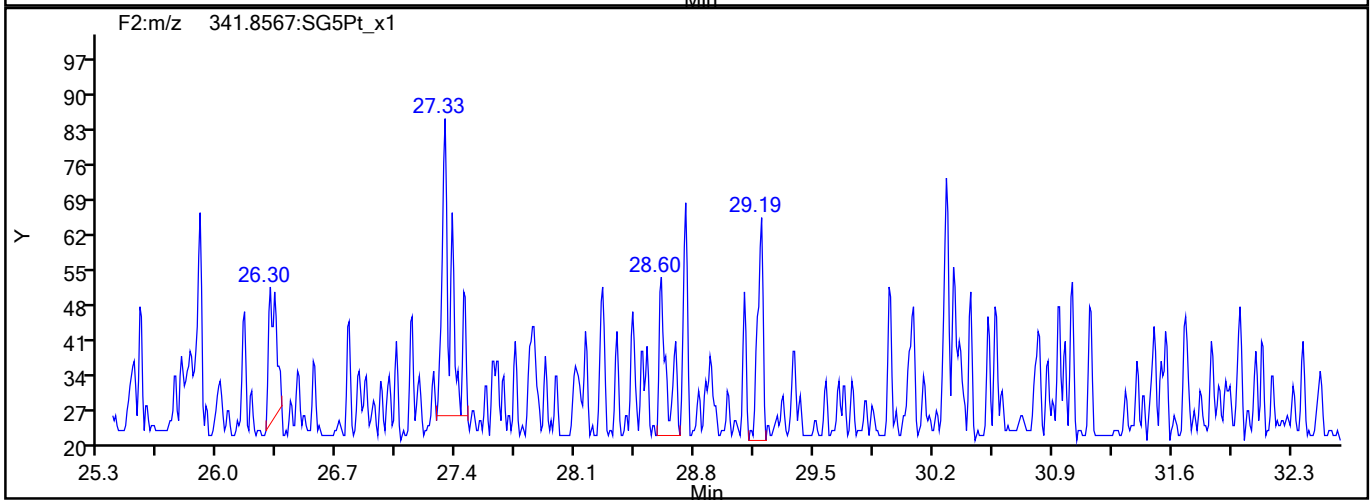

PeCDF Interference Mass

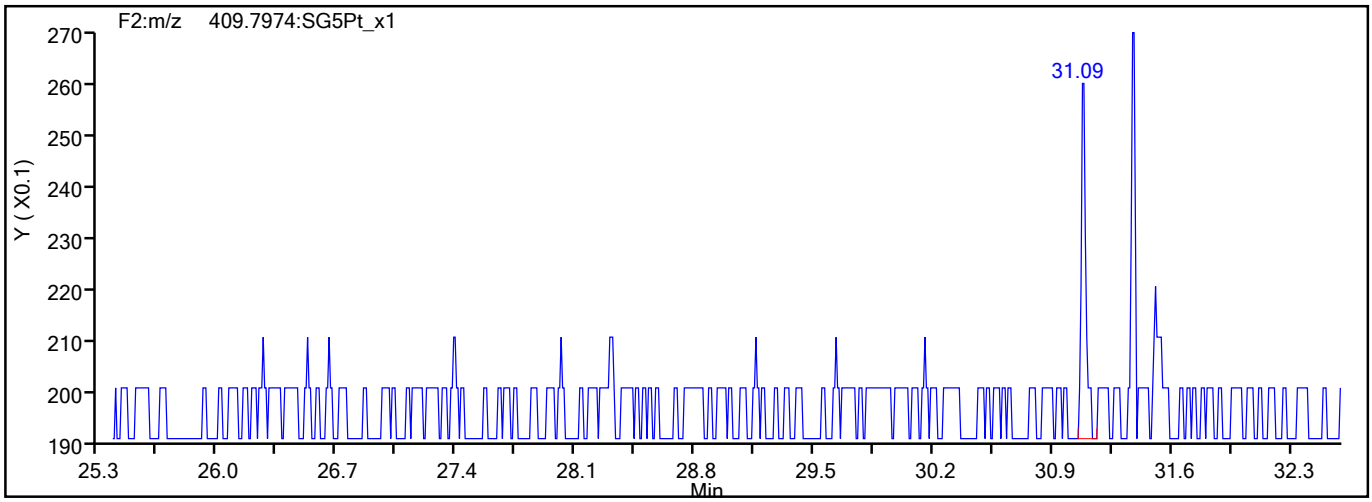

773196

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

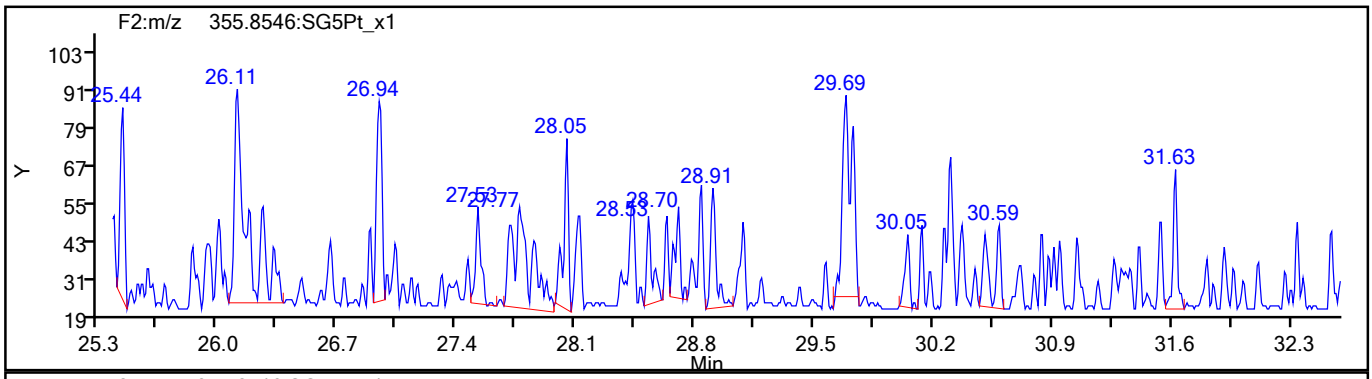

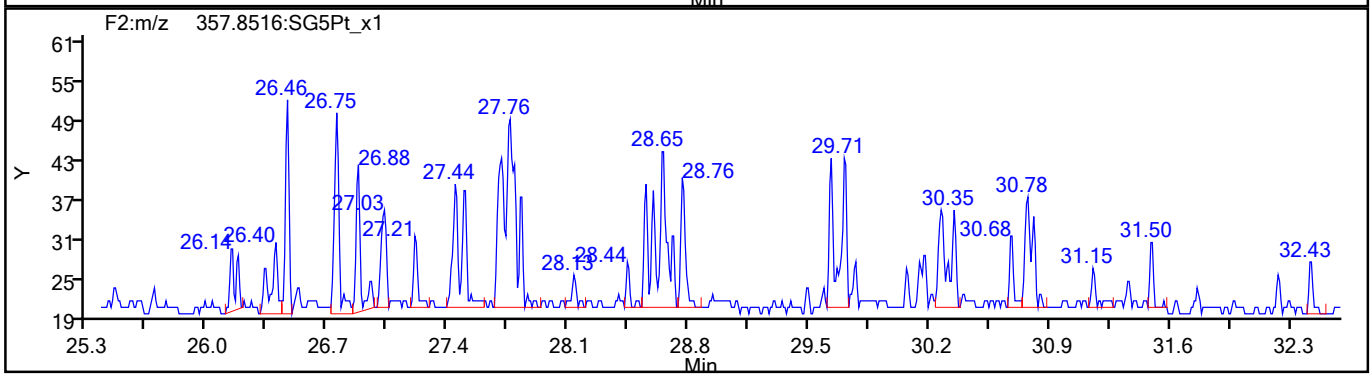

PeCDD Standards

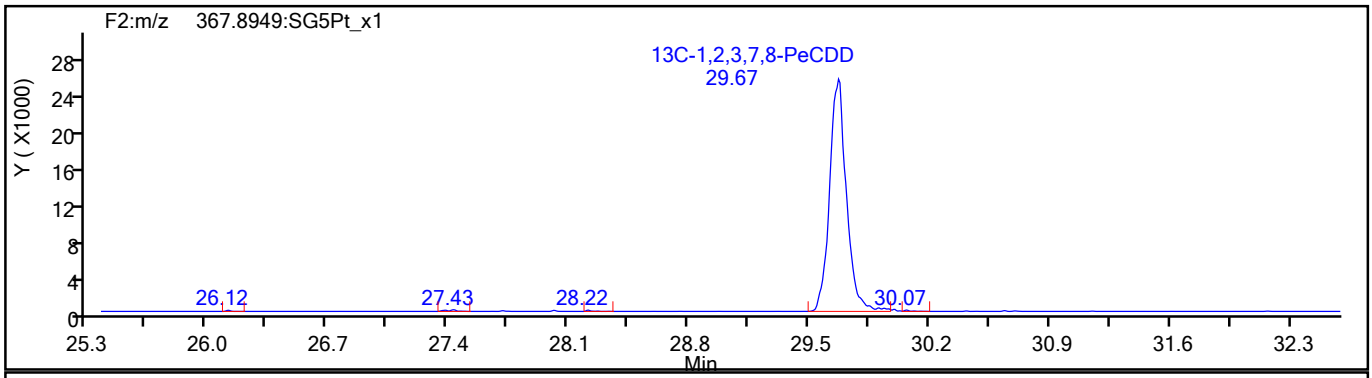

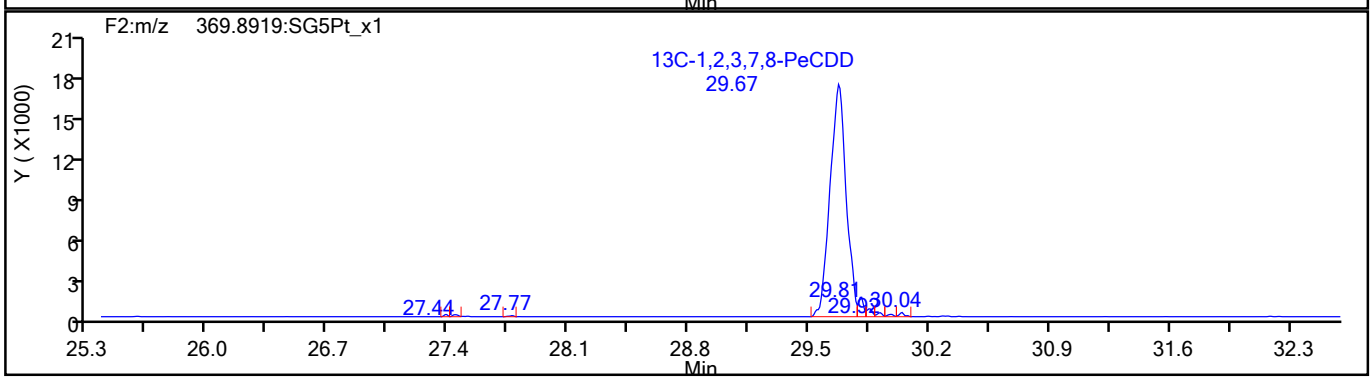

773197

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

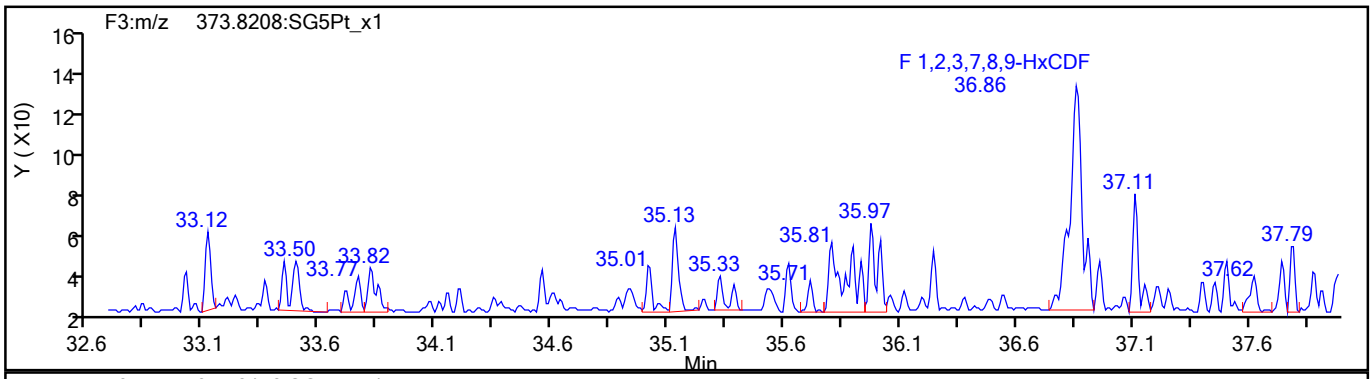

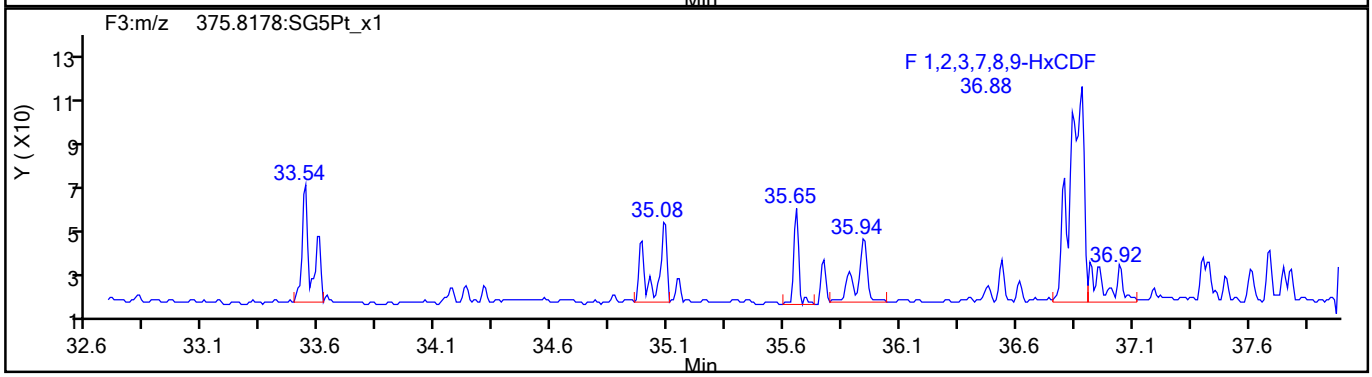

HxCDF Standards

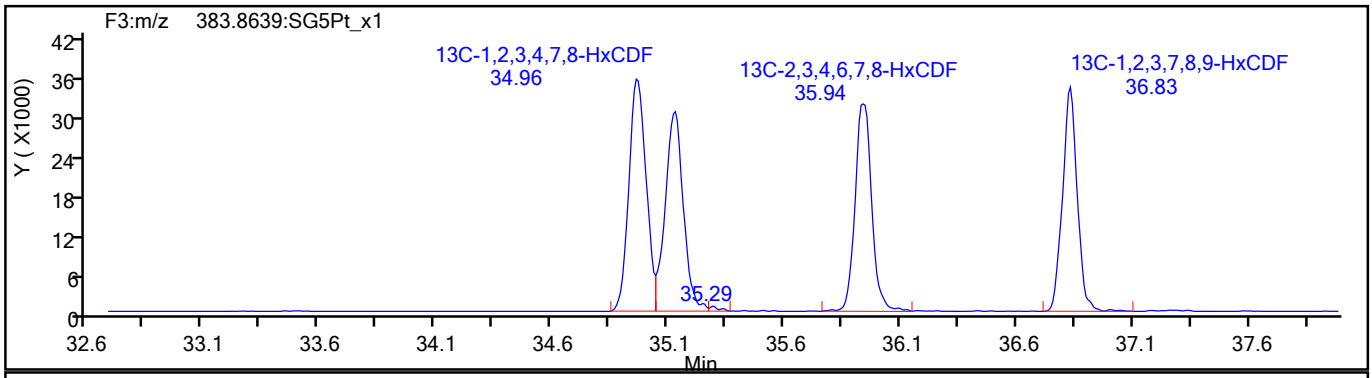

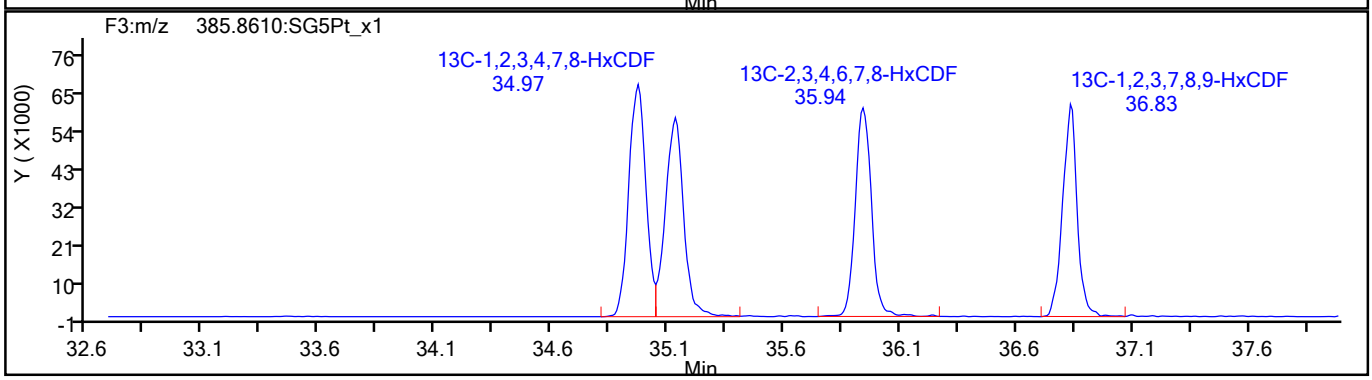

773198

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

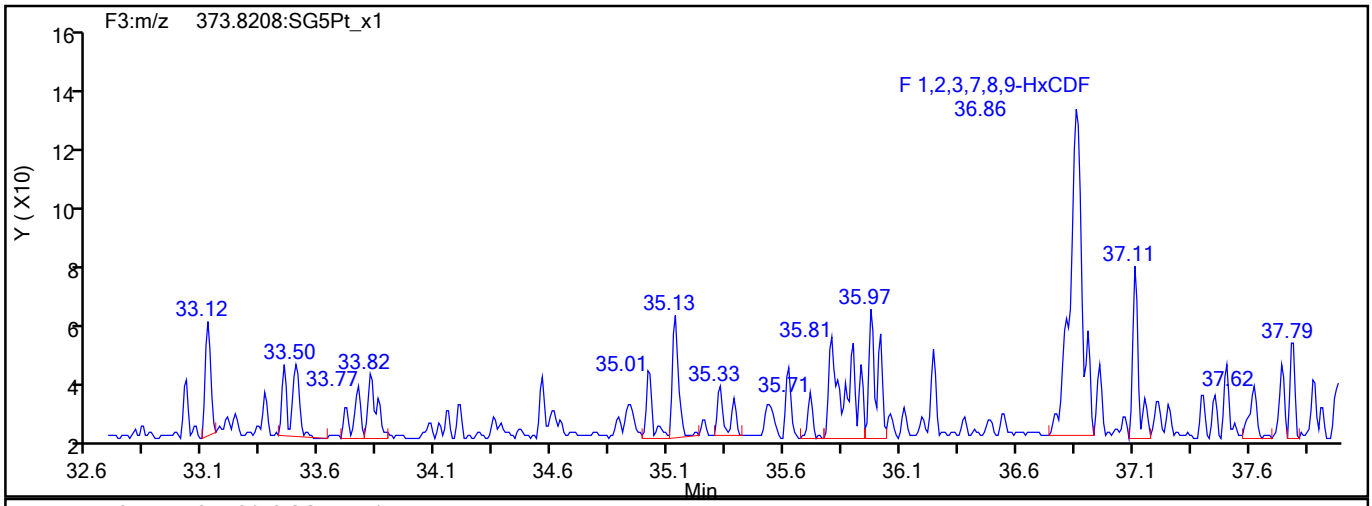

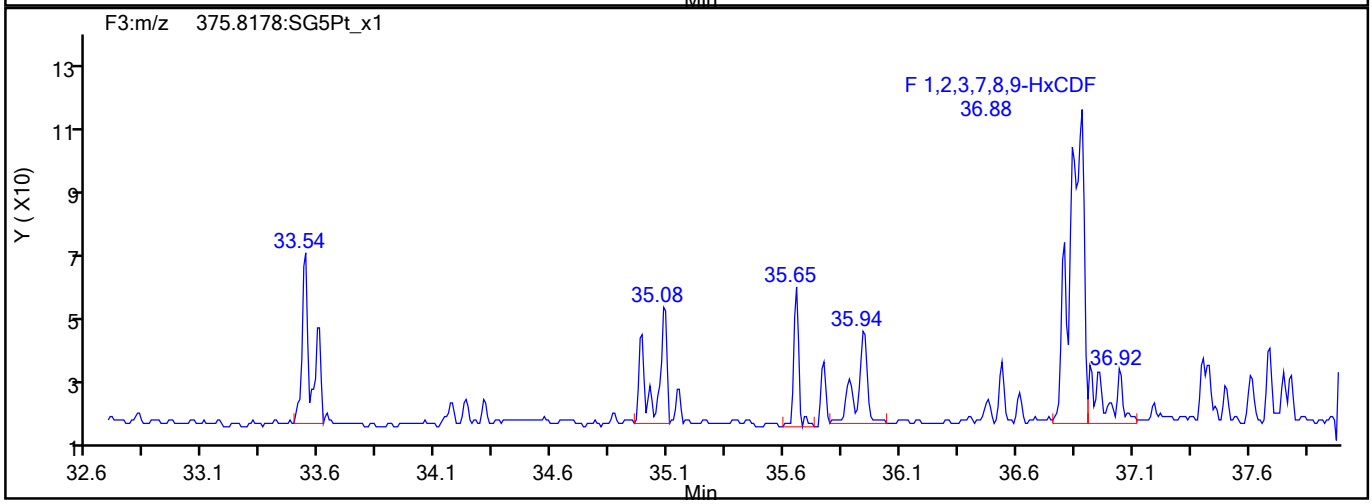

HxCDF Interference Mass

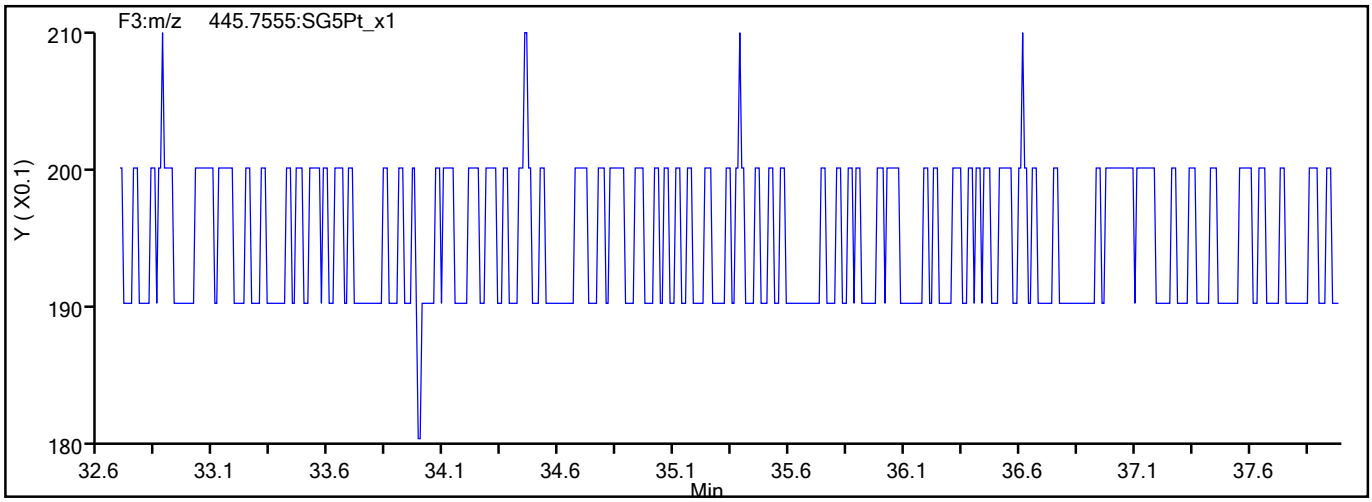

773199

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

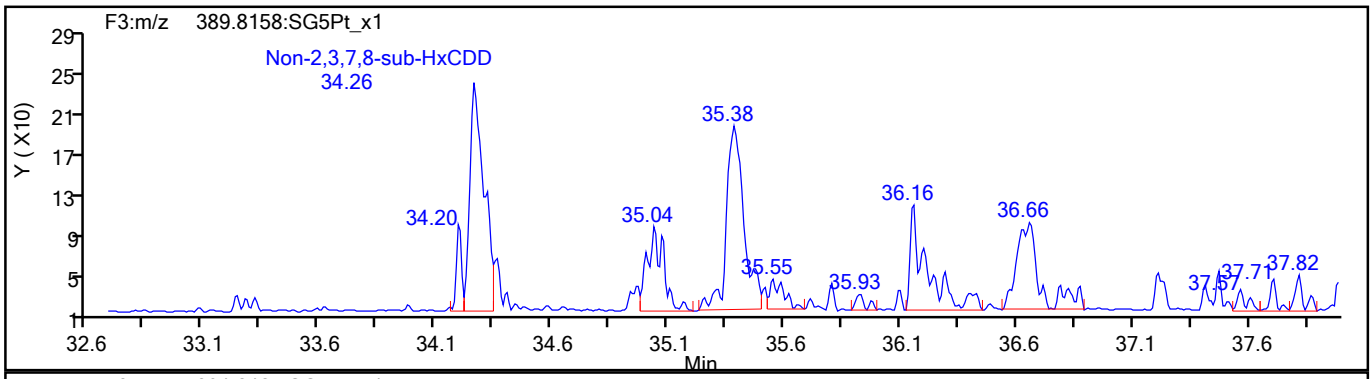

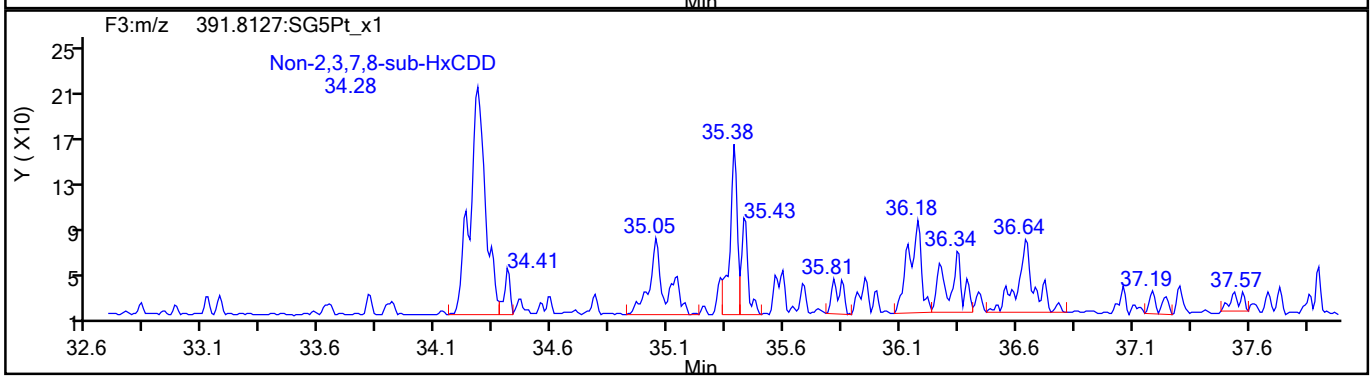

HxCDD Standards

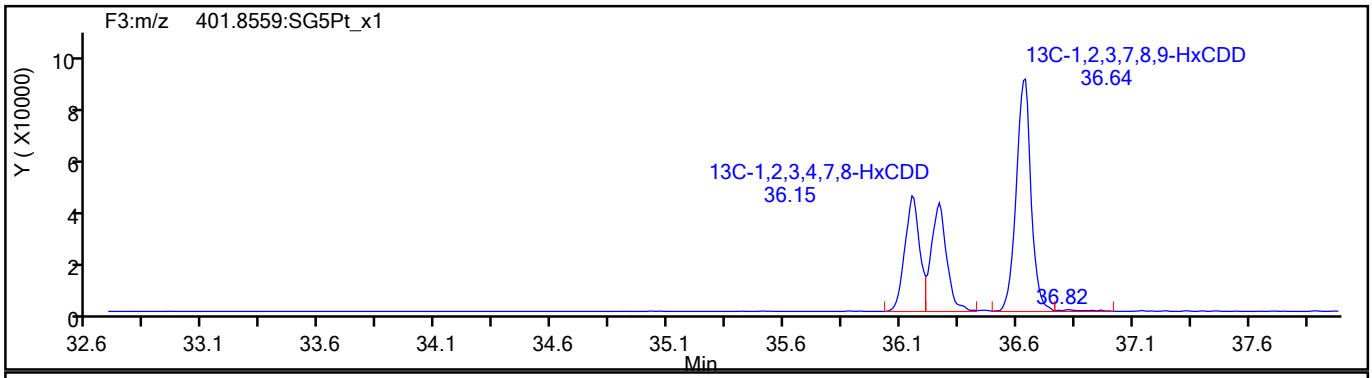

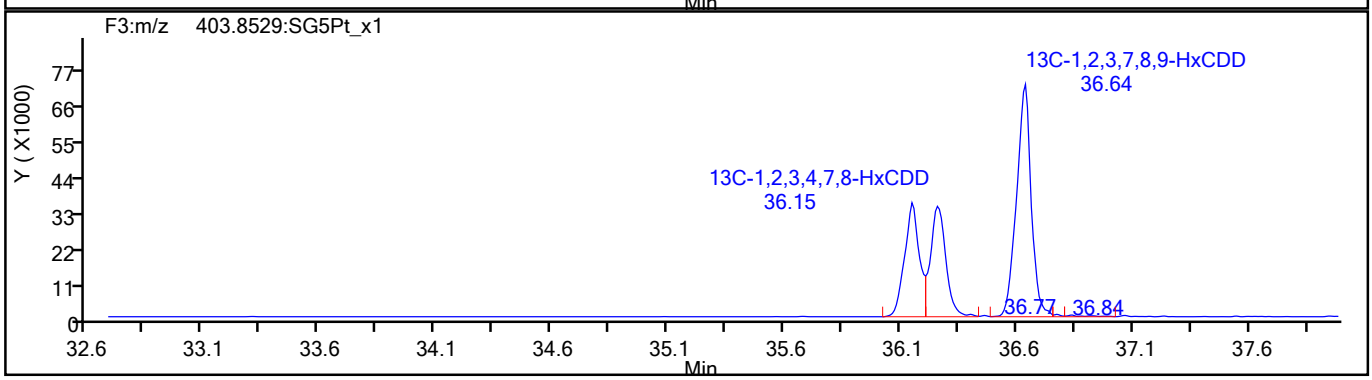

773200

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

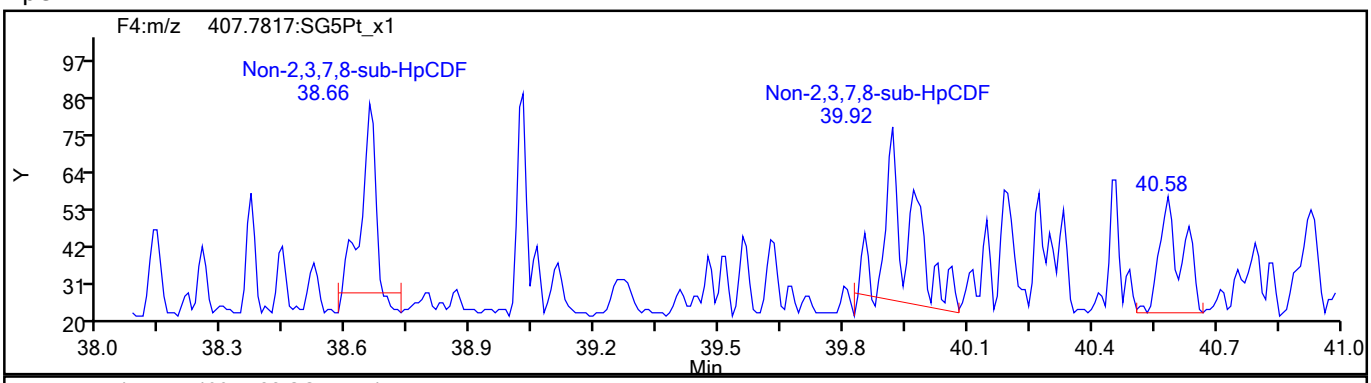

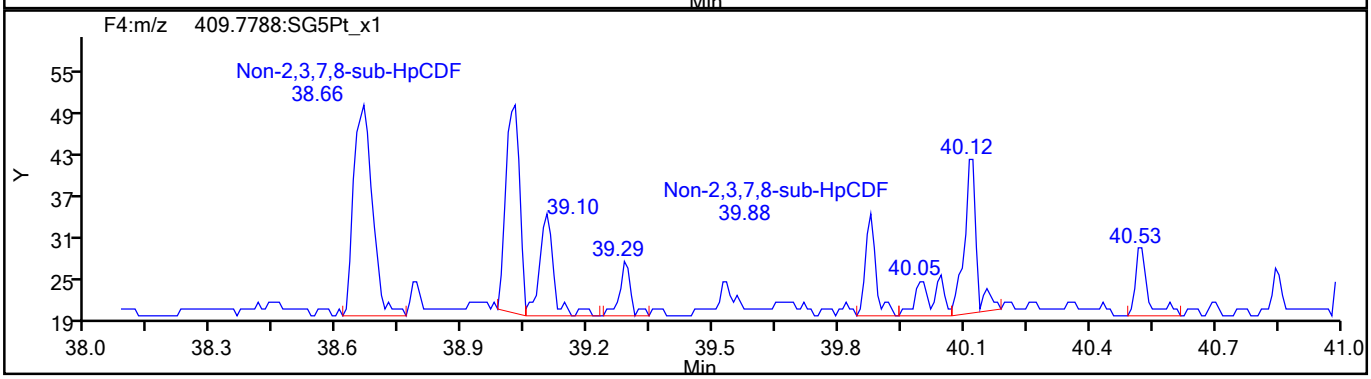

HpCDF Standards

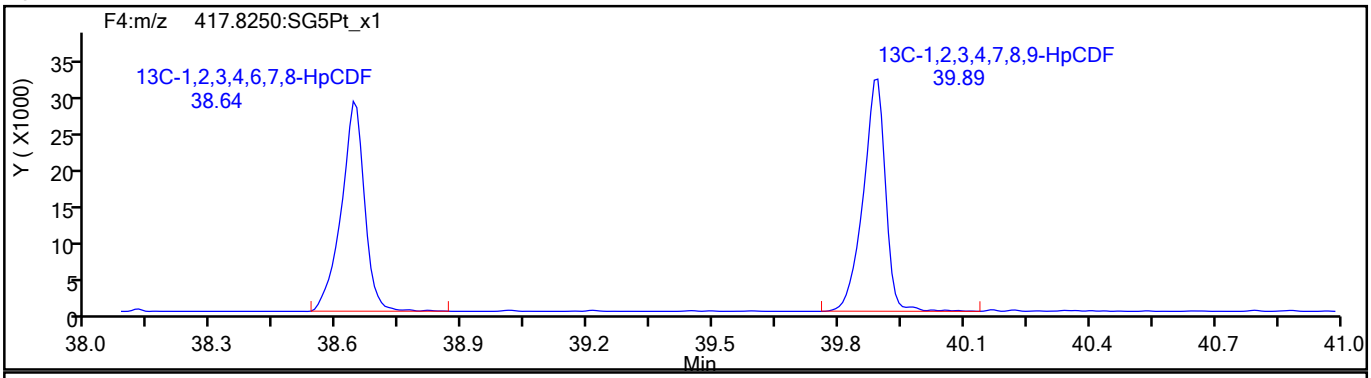

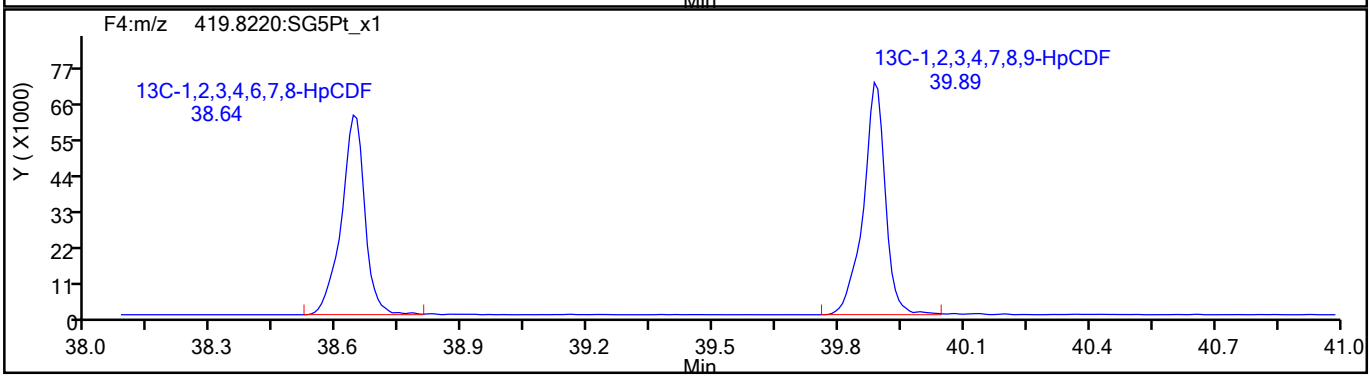

773201

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
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HpCDF

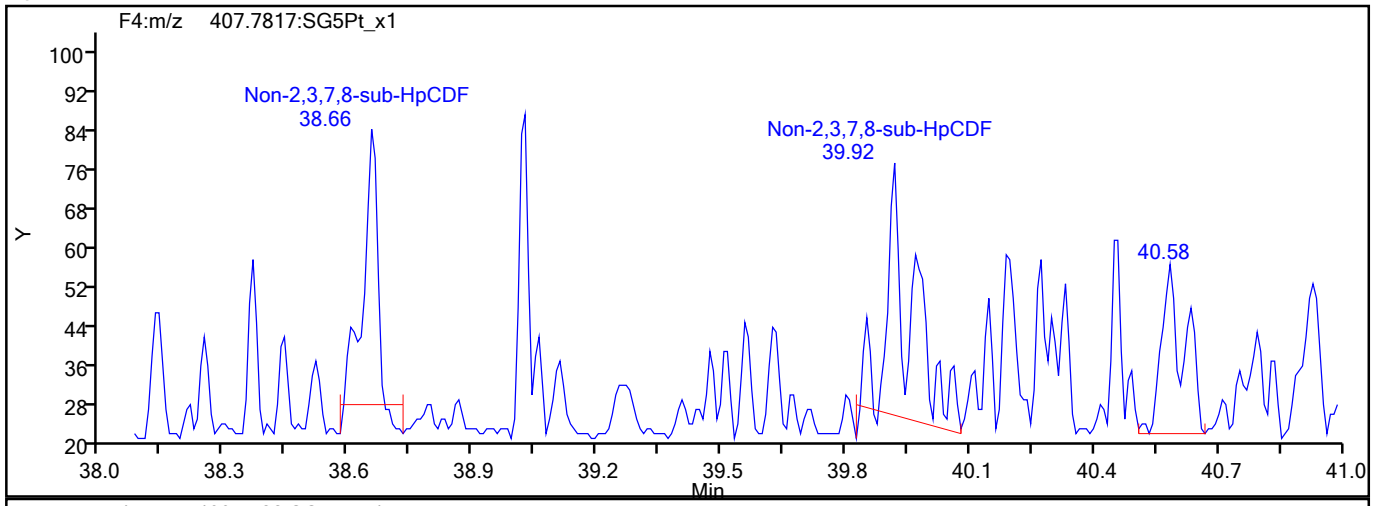

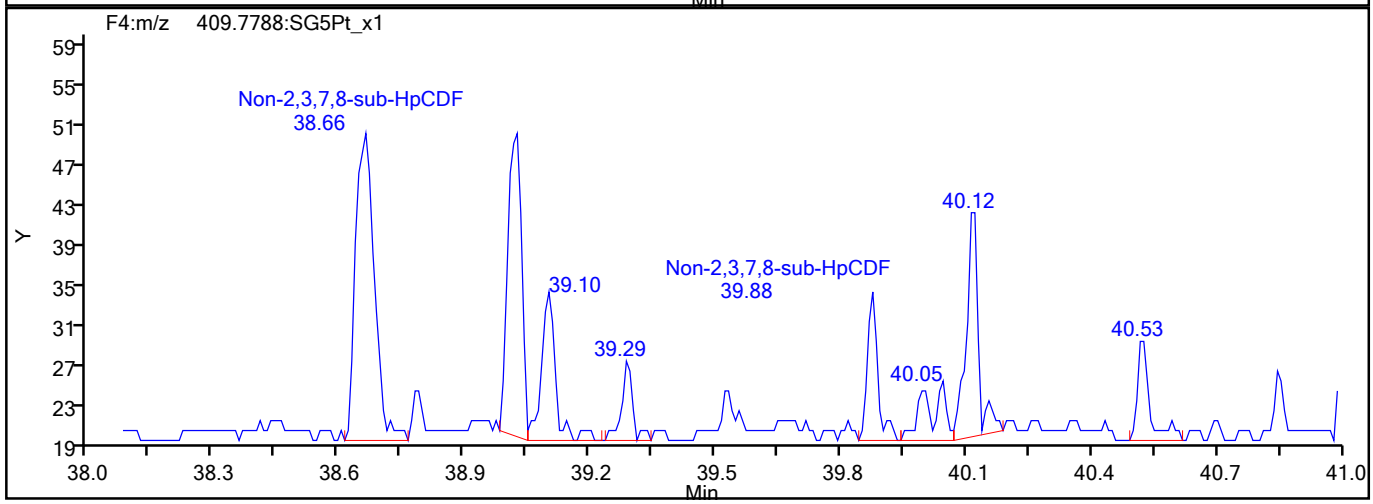

HpCDF Interference Mass

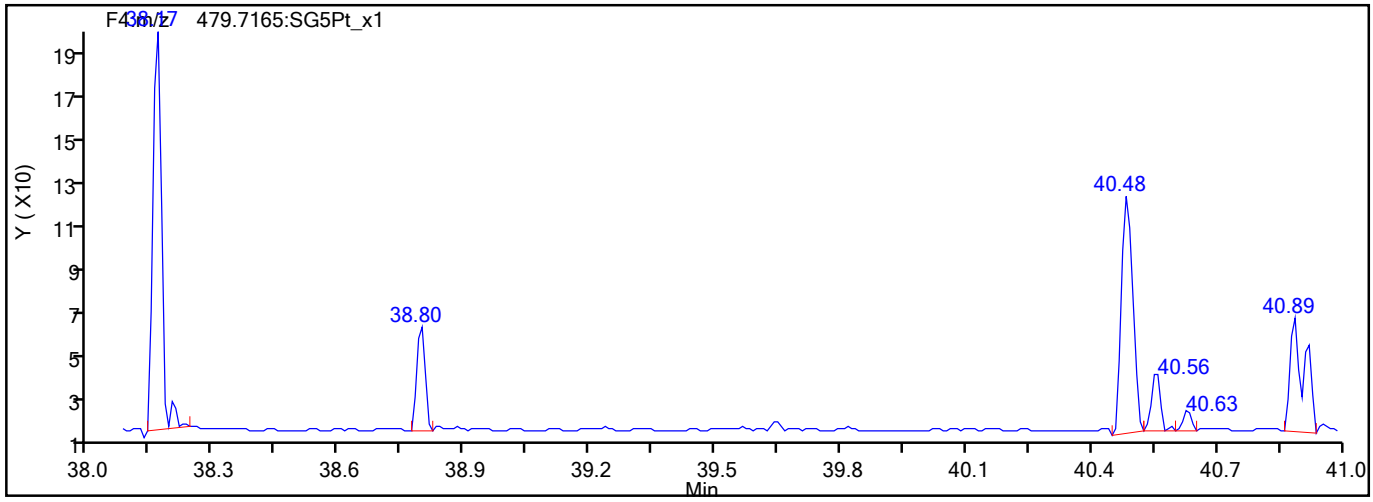

773202

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

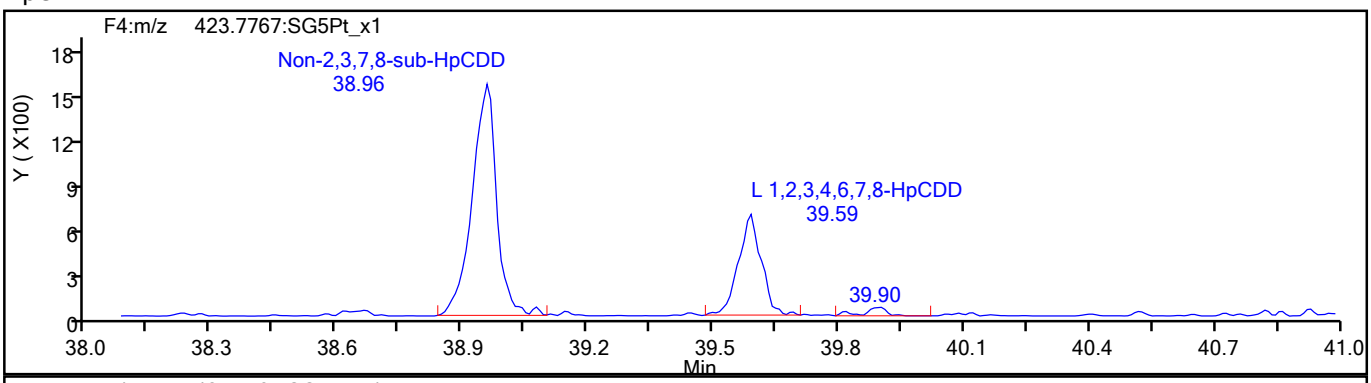

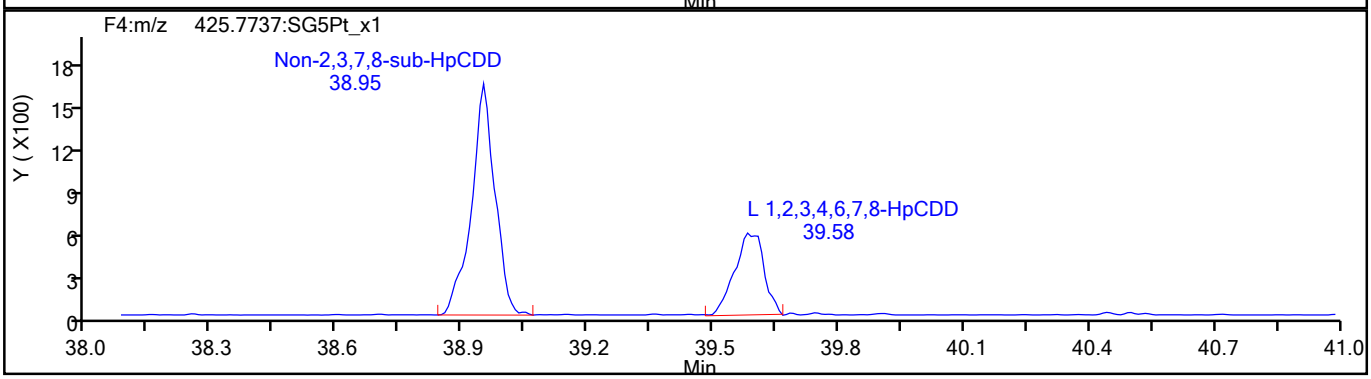

HpCDD Standards

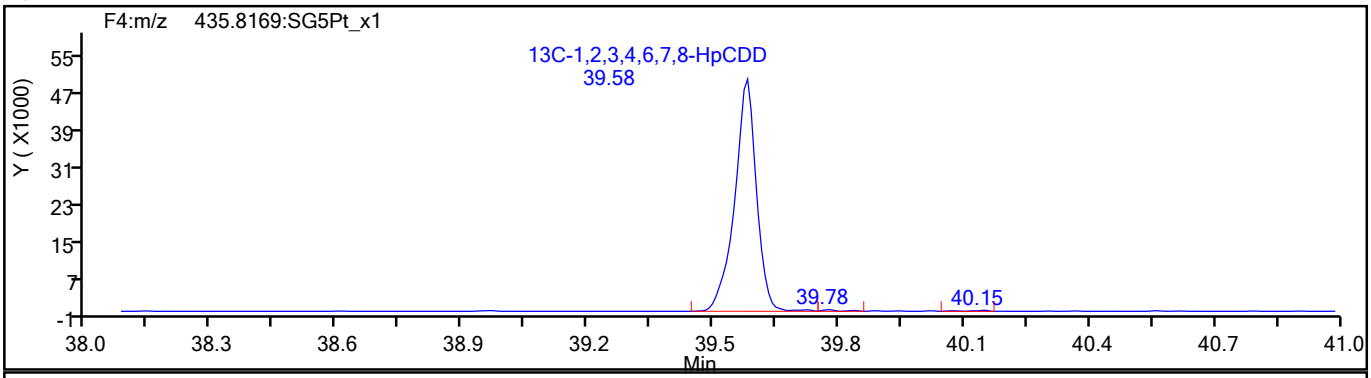

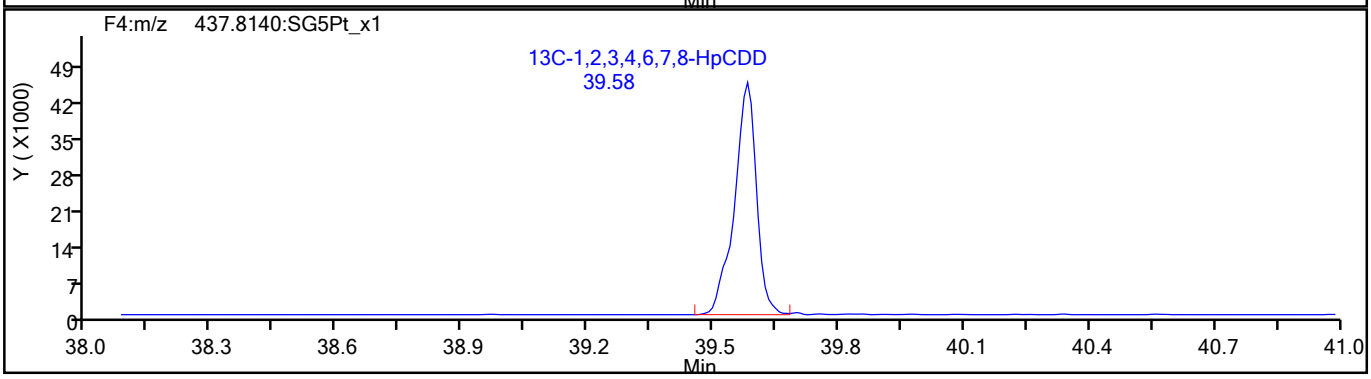

773203

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
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OCDF

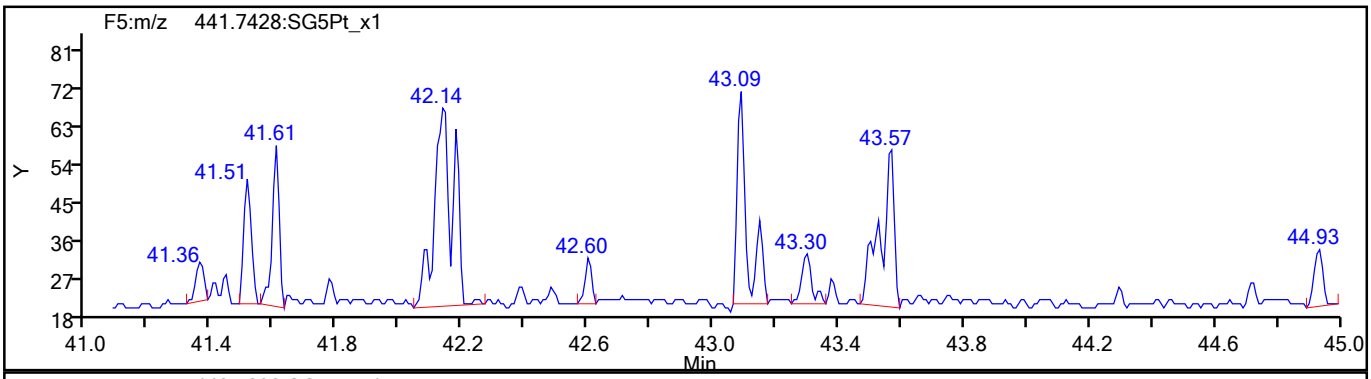

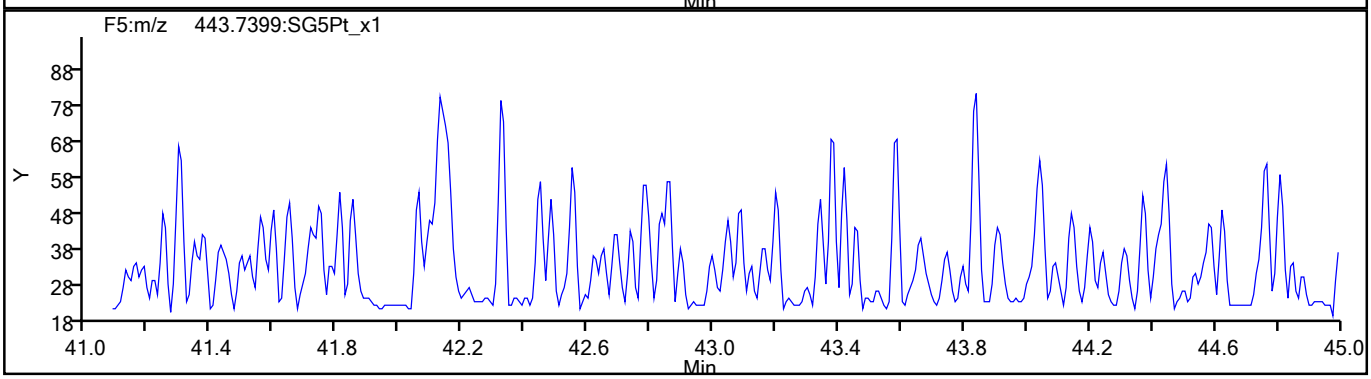

OCDF Standards

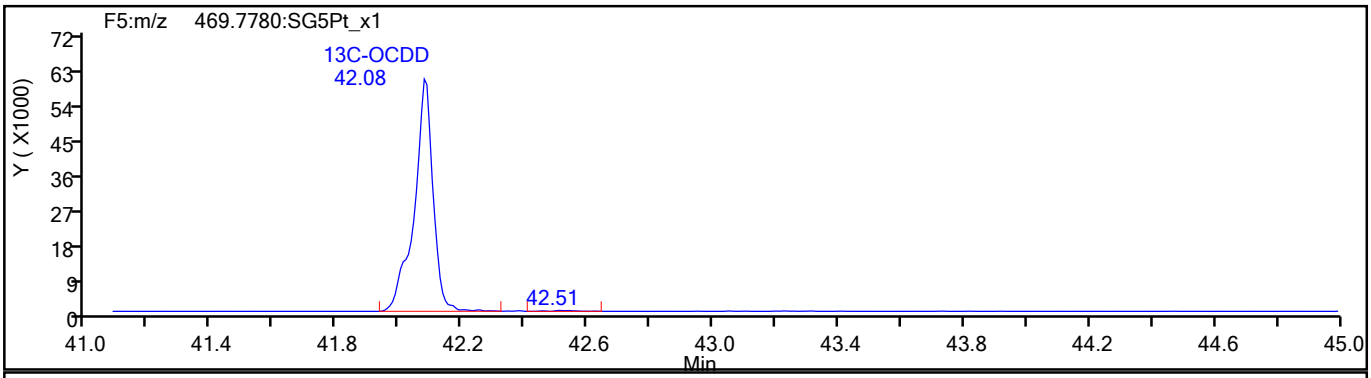

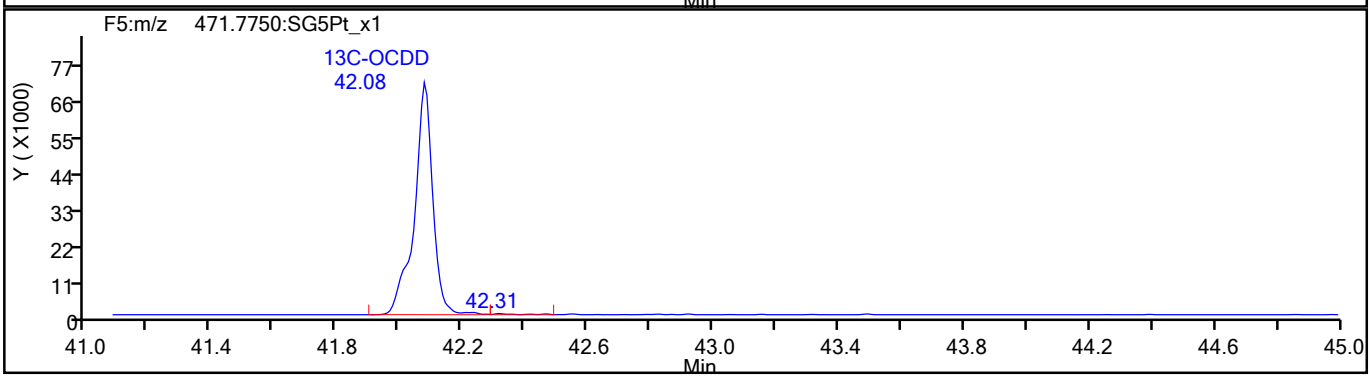

773204

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

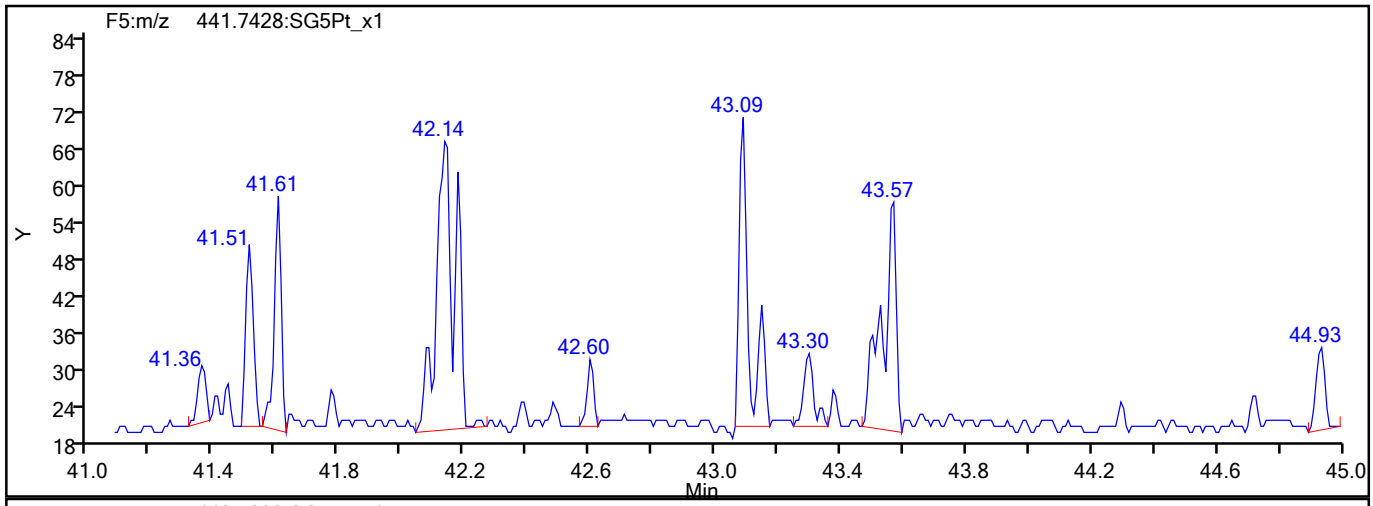

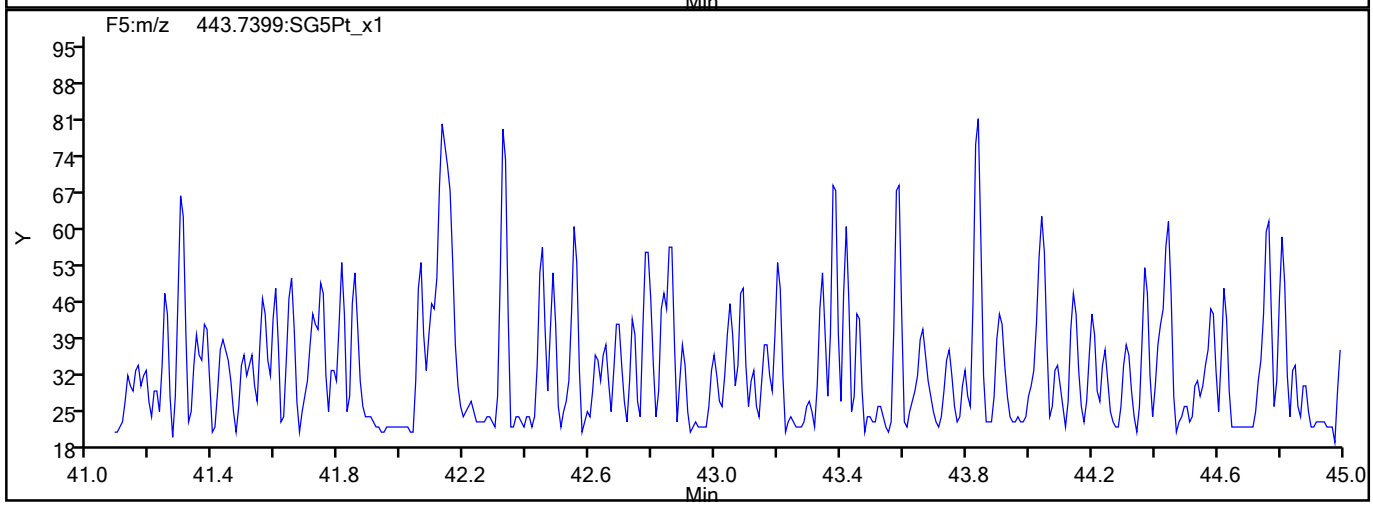

OCDF Interference Mass

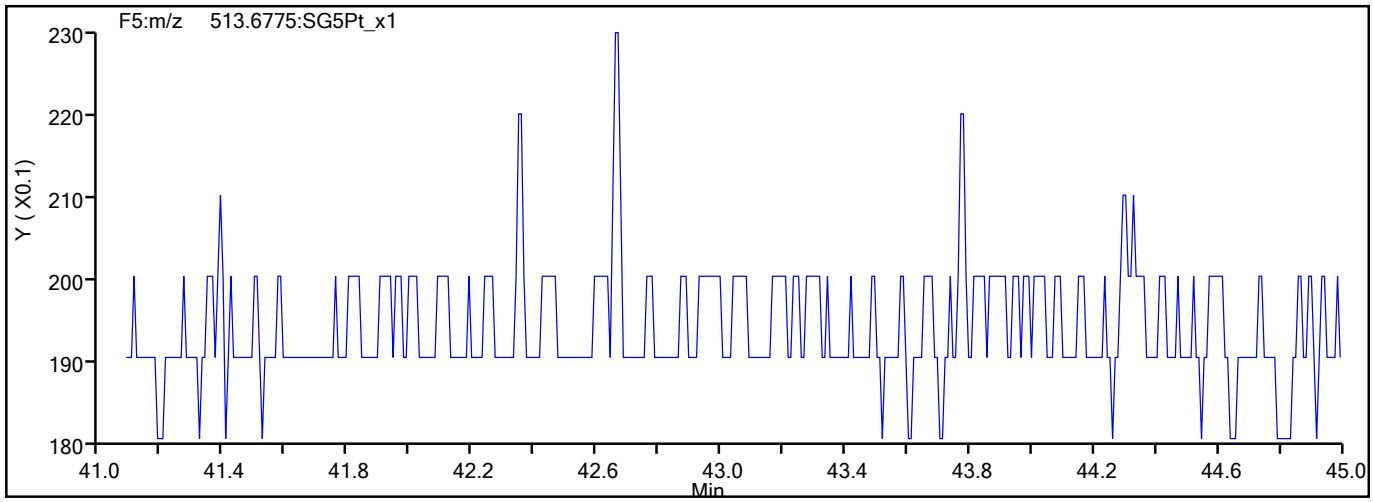

773205

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

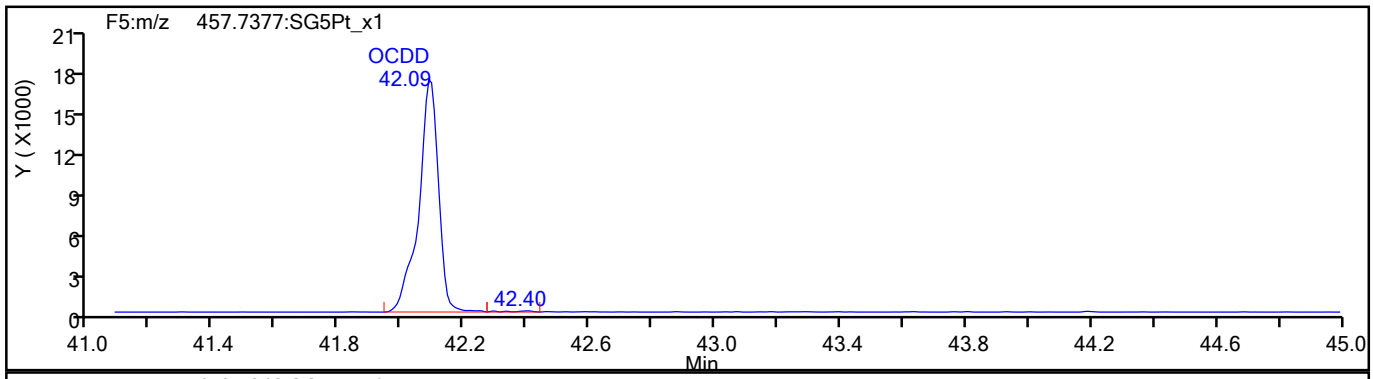

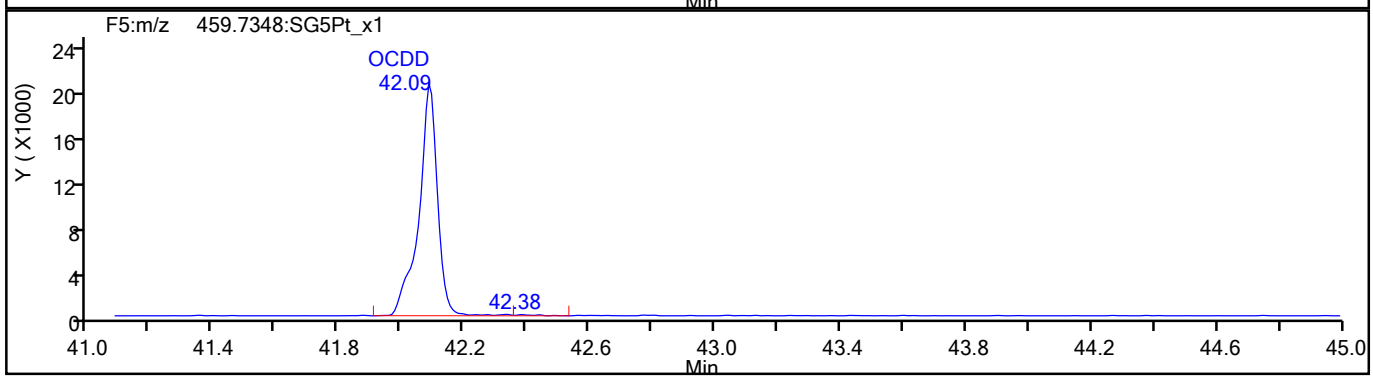

OCDD Standards

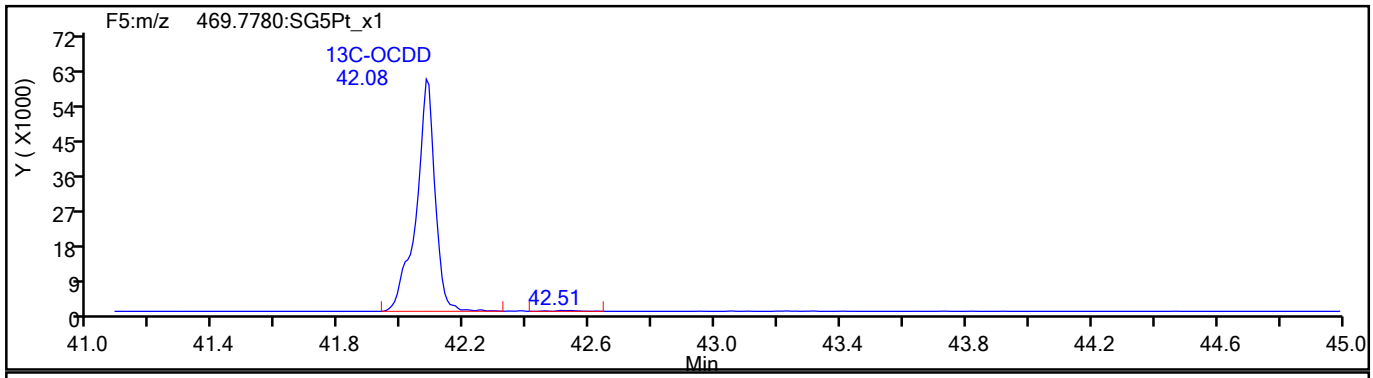

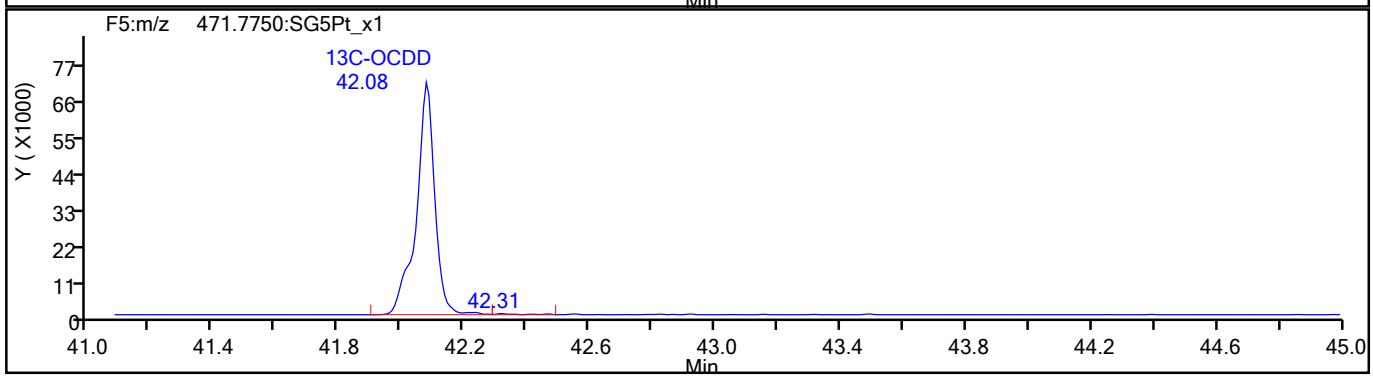

773206

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_10.d		
Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

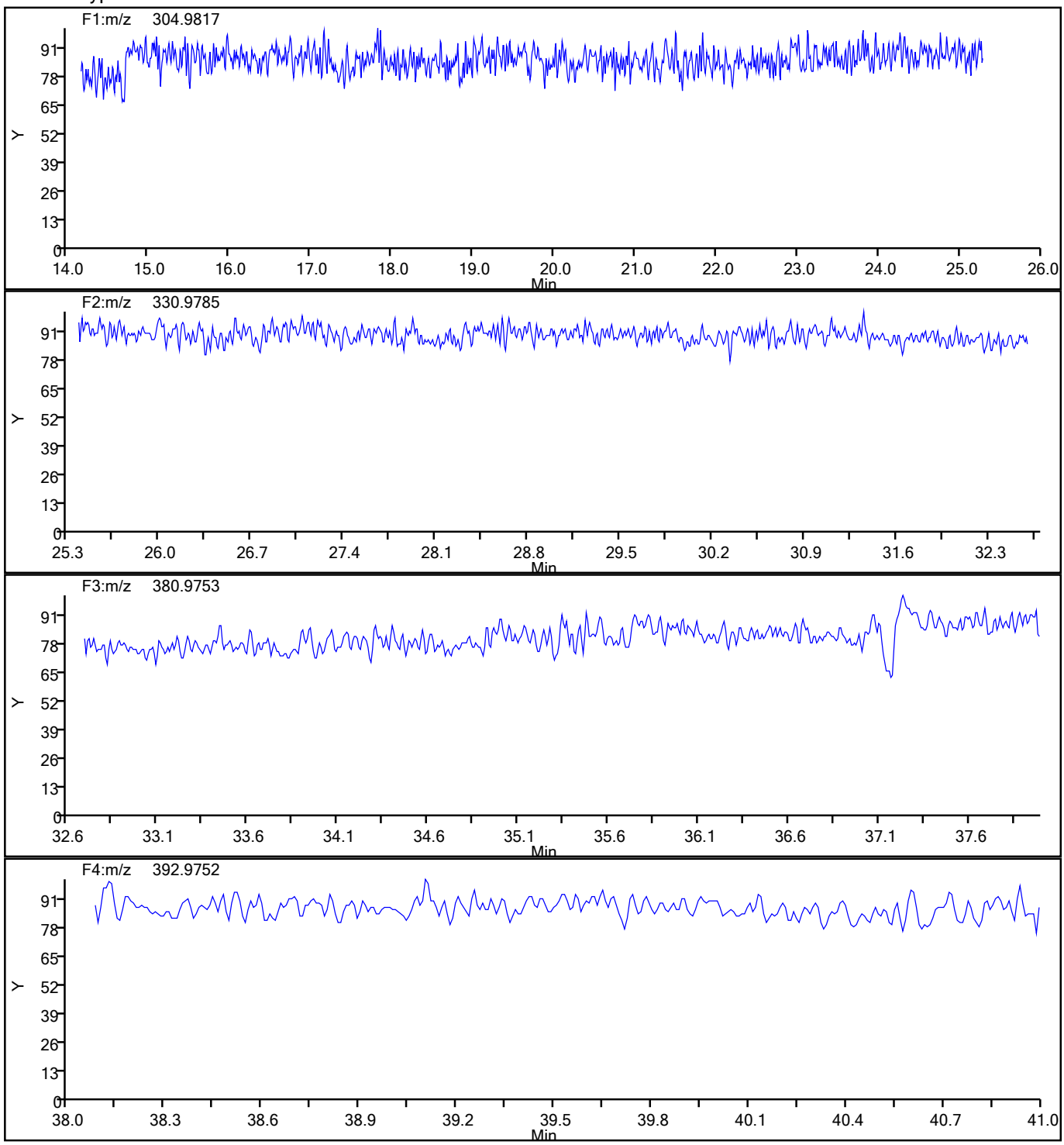

773207

Report Date: 17-Aug-2021 09:18:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 20:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072421-BN-SJSB104 (16-18)		
Worklist#:	516133	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

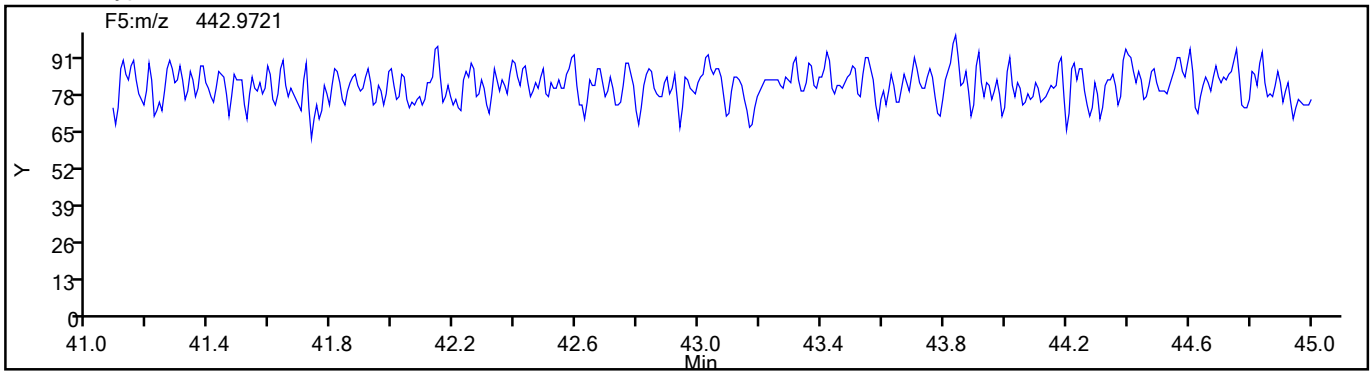

773208

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76765-2
SDG No.:
Client Sample ID: 11215702-072521-BN-SJSB092 (16-18)
Lab Sample ID: 320-76765-19
Matrix: Sediment
Lab File ID: 13au21dfs1_24.d
Analysis Method: 1613B
Date Collected: 07/25/2021 14:40
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 10.50(g)
Date Analyzed: 08/14/2021 07:15
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 16.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516475
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	4.5		1.1	0.097
40321-76-4	1,2,3,7,8-PeCDD	ND		5.7	0.11
57117-41-6	1,2,3,7,8-PeCDF	ND		5.7	0.063
57117-31-4	2,3,4,7,8-PeCDF	ND		5.7	0.065
39227-28-6	1,2,3,4,7,8-HxCDD	0.33	J B q	5.7	0.18
57653-85-7	1,2,3,6,7,8-HxCDD	0.61	J q	5.7	0.22
19408-74-3	1,2,3,7,8,9-HxCDD	1.6	J B	5.7	0.18
70648-26-9	1,2,3,4,7,8-HxCDF	0.66	J q	5.7	0.028
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.7	0.029
72918-21-9	1,2,3,7,8,9-HxCDF	0.41	J B	5.7	0.029
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.7	0.028
35822-46-9	1,2,3,4,6,7,8-HpCDD	20	B	5.7	0.20
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.44	J B q	5.7	0.053
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.7	0.047
3268-87-9	OCDD	450	B	11	0.40
39001-02-0	OCDF	ND		11	0.067
41903-57-5	Total TCDD	4.5	B	1.1	0.097
30402-14-3	Total TCDF	33	B q	1.1	0.14
36088-22-9	Total PeCDD	ND		5.7	1.7
30402-15-4	Total PeCDF	ND		5.7	0.24
34465-46-8	Total HxCDD	16	B q	5.7	0.20
55684-94-1	Total HxCDF	1.1	J B q	5.7	0.028
37871-00-4	Total HpCDD	64	B	5.7	0.20
38998-75-3	Total HpCDF	0.44	J B q	5.7	0.050

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76765-2
SDG No.:
Client Sample ID: 11215702-072521-BN-SJSB09 2 (16-18)
Lab Sample ID: 320-76765-19
Matrix: Sediment
Lab File ID: 13au21dfs1_24.d
Analysis Method: 1613B
Date Collected: 07/25/2021 14:40
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 10.50(g)
Date Analyzed: 08/14/2021 07:15
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 16.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516475
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	59		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	55		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	57		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	63		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	70		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	58		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	78		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	68		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	60		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	63		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	67		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	68		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	79		26-138
114423-97-1	13C-OCDD	72		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	69		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d
Lims ID: 320-76765-A-19-A
Client ID: 11215702-072521-BN-SJSB092 (16-18)
Sample Type: Client
Inject. Date: 14-Aug-2021 07:15:00 ALS Bottle#: 0 Worklist Smp#: 22
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76765-a-19-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 06:18:16 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1604

First Level Reviewer: krenns Date: 17-Aug-2021 06:18:16

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.493	741051	0.81	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.504	589832	0.75	1.3459	59.1	59.1	0.2086	0.2086	59.14	
2,3,7,8-TCDF	20.538	58949	0.77	1.0802	9.252	9.252	0.0606	0.0606		M
A Non-2,3,7,8-sub-TCDF	19.948	33381	0.77	1.0802	5.428	5.239	0.0606	4.205		RQa
S Total TCDF					14.7	14.5	0.0606	0.0606		RQ
D 13C-2,3,7,8-TCDD	21.863	408001	0.80	0.9317	59.1	59.1	0.2084	0.2084	59.10	
2,3,7,8-TCDD	21.915	8529	0.89	1.0753	1.944	1.944	0.0425	0.0425		
$ 37Cl4-2,3,7,8-TCDD	21.889	205479		1.0083	27.5	27.5	0.0267	0.0267	68.75	
A Non-2,3,7,8-sub-TCDD	20.790						0.0425	0.3152		RQU
S Total TCDD					1.944	1.944	0.0425	0.0425		
D 13C-1,2,3,7,8-PeCDF	27.345	479222	1.54	1.1405	56.7	56.7	0.1877	0.1877	56.70	
1,2,3,7,8-PeCDF	27.354						0.0274	0.0274		RQU
D 13C-2,3,4,7,8-PeCDF	28.844	521591	1.60	1.1253	62.5	62.5	0.1902	0.1902	62.55	
2,3,4,7,8-PeCDF	28.894						0.0283	0.0283		U
A F1 PeCDFs	24.692						0.008845	0.0388		RQU
A Non-2,3,7,8-sub-PeCDF	28.186						0.0278	0.1056		RQU
S Total PeCDF							0.1056	0.1056		
D 13C-1,2,3,7,8-PeCDD	29.669	293371	1.62	0.7165	55.3	55.3	0.0445	0.0445	55.26	
1,2,3,7,8-PeCDD	29.669						0.0498	0.0498		RQU
A Non-2,3,7,8-sub-PeCDD	29.966						0.0498	0.7205		RQU
S Total PeCDD							0.7205	0.7205		
D 13C-1,2,3,4,7,8-HxCDF	34.976	539348	0.54	0.9648	78.1	78.1	0.2278	0.2278	78.09	
1,2,3,4,7,8-HxCDF	34.993	1778	1.24	1.1474	0.3188	0.2873	0.0123	0.0123		RQ
D 13C-1,2,3,6,7,8-HxCDF	35.136	518036	0.51	1.0708	67.6	67.6	0.2053	0.2053	67.58	
1,2,3,6,7,8-HxCDF	34.993						0.0127	0.0127		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.953	473315	0.51	1.0413	63.5	63.5	0.2111	0.2111	63.49	
2,3,4,6,7,8-HxCDF	36.020						0.0121	0.0121		RQU
D 13C-1,2,3,7,8,9-HxCDF	36.837	421410	0.53	0.9731	60.5	60.5	0.2259	0.2259	60.49	
1,2,3,7,8,9-HxCDF	36.862	930	1.42	1.2401	0.1780	0.1780	0.0125	0.0125		M
A Non-2,3,7,8-sub-HxCDF	35.087						0.0124	0.0653		RQMU
S Total HxCDF					0.4968	0.4653	0.0124	0.0124		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.643	715881	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.163	378293	1.25	0.7587	69.7	69.7	0.1595	0.1595	69.65	
1,2,3,4,7,8-HxCDD	36.146	582	1.24	1.0608	0.1627	0.1450	0.0804	0.0804		RQMa
D 13C-1,2,3,6,7,8-HxCDD	36.281	354172	1.25	0.8593	57.6	57.6	0.1408	0.1408	57.58	
1,2,3,6,7,8-HxCDD	36.306	934	1.24	0.9933	0.3107	0.2655	0.0944	0.0944		RQM
1,2,3,7,8,9-HxCDD	36.643	2784	1.20	1.1094	0.6852	0.6852	0.0805	0.0805		
A Non-2,3,7,8-sub-HxCDD	35.441	22555	1.24	1.0545	5.983	5.840	0.0847	4.185		RQM
S Total HxCDD					7.142	6.936	0.0851	0.0851		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.651	359265	0.46	0.7359	68.2	68.2	0.2539	0.2539	68.19	
1,2,3,4,6,7,8-HpCDF	38.676	988	1.04	1.4421	0.2108	0.1907	0.0232	0.0232		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	39.906	385995	0.47	0.6854	78.7	78.7	0.2726	0.2726	78.67	
1,2,3,4,7,8,9-HpCDF	39.922						0.0203	0.0203		U
A Non-2,3,7,8-sub-HpCDF	39.272						0.0216	0.0216		U
S Total HpCDF					0.2108	0.1907	0.0218	0.0218		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	39.594	324689	1.15	0.6745	67.2	67.2	0.1421	0.1421	67.24	
1,2,3,4,6,7,8-HpCDD	39.602	29210	1.07	1.0503	8.565	8.565	0.0873	0.0873		
A Non-2,3,7,8-sub-HpCDD	39.272	66698	1.06	1.0503	19.6	19.6	0.0873	19.6		
S Total HpCDD					28.1	28.1	0.0873	0.0873		
D 13C-OCDD	42.090	563199	0.91	0.5446	144.5	144.5	0.1342	0.1342	72.23	
OCDF	42.090						0.0293	0.0293		RQU
OCDD	42.098	580922	0.90	1.0620	194.3	194.3	0.1747	0.1747		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d
Lims ID: 320-76765-A-19-A
Client ID: 11215702-072521-BN-SJSB092 (16-18)
Sample Type: Client
Inject. Date: 14-Aug-2021 07:15:00 ALS Bottle#: 0 Worklist Smp#: 22
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76765-a-19-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 06:18:16 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1604

First Level Reviewer: krenns Date: 17-Aug-2021 06:18:16

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.493	21.462	2		331817	44056	41	102	1075		a
333.9338	21.484	21.462	1		409234	56377	37	92	1524	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.504	20.489	1	0.954	253174	38409	91	227	422		
317.9389	20.504	20.489	1	0.954	336658	48710	22	55	2214	0.75(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.538	20.532	0	1.002	25647	3561	9	22	396		
305.8987	20.538	20.532	0	1.002	33302	4843	14	35	346	0.77(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											RQa
303.9016	19.815	19.948	-8	0.966	10850	1568	9	22	174		a
305.8987	19.815	19.948	-8	0.966	15941	2599	14	35	186	0.68(0.65-0.89)	
303.9016	21.312	19.948	82	1.039	1119	408	9	22	45		a
305.8987	21.321	19.948	82	1.040	2657	485	14	35	35	0.42(0.65-0.89)	
	Empc Correction				1453	529	14	35	38		
303.9016	23.713	19.948	225	1.157	1836	362	9	22	40		a
305.8987	23.705	19.948	225	1.156	2182	351	14	35	25	0.84(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.863	21.849	1	1.017	181099	24908	41	102	608		
333.9338	21.872	21.849	1	1.018	226902	29794	37	92	805	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.915	21.866	3	1.002	4028	579	7	17	83		
321.8936	21.906	21.866	2	1.002	4501	743	3	7	248	0.89(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.889	21.866	1	1.018	205479	27246	11	27	2477		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											U
319.8965	17.897	20.790	-173	0.819	97	74	7	17	11		
321.8936	17.888	20.790	-174	0.818	220	87	3	7	29	0.44(0.65-0.89)	
	Empc Correction				125	96	3	7	0		
13C-1,2,3,7,8-PeCDF											
351.9000	27.345	27.323	1	1.272	290834	46653	61	152	765		
353.8970	27.329	27.323	0	1.272	188388	29604	25	62	1184	1.54(1.32-1.78)	
1,2,3,7,8-PeCDF											RQU
339.8597	27.356						2	5			
341.8567	27.356						7	17			
13C-2,3,4,7,8-PeCDF											
351.9000	28.844	28.838	0	1.342	320642	48216	61	152	790		
353.8970	28.844	28.838	0	1.342	200949	29033	25	62	1161	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											U
339.8597	28.880						2	5			
341.8567	28.880						7	17			
A F1 PeCDFs											U
339.8597	24.161	24.692	-32	0.884	77	26	1	2	26		
341.8567	24.126	24.692	-34	0.882	123	43	2	5	22	0.63(1.32-1.78)	
	Empc Correction				49	16	2	5	0		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	25.906	28.186	-137	0.947	319	77	2	5	39		
341.8567	25.855	28.186	-140	0.946	226	89	7	17	13	1.41(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.669	29.671	0	1.380	181531	25062	7	17	3580		
369.8919	29.661	29.671	-1	1.380	111840	17114	6	15	2852	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											RQU
355.8546	29.688						7	17			
357.8516	29.688						2	5			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.967	29.966	-180	0.909	1200	210	7	17	30		
357.8516	26.950	29.966	-181	0.908	1012	191	2	5	96	1.19(1.32-1.78)	
	Empc Correction				774	135	2	5	0		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.976	34.978	0	0.955	188849	36866	60	150	614		
385.8610	34.976	34.978	0	0.955	350499	69056	87	217	794	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQ
373.8208	34.993	34.995	0	1.000	1179	248	4	10	62		
	Empc Correction				984	239	4	10	60		
375.8178	35.001	34.995	0	1.001	794	193	2	5	97	1.48(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.136	35.138	0	0.959	176058	32887	60	150	548		
385.8610	35.136	35.138	0	0.959	341978	64445	87	217	741	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.155						4	10			
375.8178	35.155						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.953	35.954	0	0.981	159721	35634	60	150	594		
385.8610	35.953	35.954	0	0.981	313594	66817	87	217	768	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQU
373.8208	35.963						4	10			
375.8178	35.963						2	5			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.837	36.838	0	1.005	145687	33588	60	150	560		
385.8610	36.837	36.838	0	1.005	275723	62828	87	217	722	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.862	36.854	0	1.001	546	153	4	10	38		M
375.8178	36.854	36.854	0	1.000	384	114	2	5	57	1.42(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											MU
373.8208	33.536	35.087	-93	0.959	143	43	4	10	11		
	Empc Correction				54	29	4	10	0		
375.8178	33.553	35.087	-92	0.959	44	24	2	5	12	3.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.643	36.644	0		398542	93468	47	117	1989		
403.8529	36.643	36.644	0		317339	73501	34	85	2162	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.163	36.164	0	0.987	210334	45778	47	117	974		
403.8529	36.163	36.164	0	0.987	167959	38636	34	85	1136	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQMa
389.8158	36.146	36.181	-2	1.000	393	105	15	37	7		M
	Empc Correction				322	104	15	37	7		
391.8127	36.188	36.181	0	1.001	260	84	14	35	6	1.51(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.281	36.282	0	0.990	196774	42719	47	117	909		
403.8529	36.281	36.282	0	0.990	157398	34054	34	85	1002	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQM
389.8158	36.306	36.291	1	1.001	676	155	15	37	10		
	Empc Correction				517	153	15	37	10		
391.8127	36.281	36.291	-1	1.000	417	124	14	35	9	1.62(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											
389.8158	36.643	36.661	-1	1.013	1517	276	15	37	18		
391.8127	36.626	36.661	-2	1.013	1267	210	14	35	15	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQM
389.8158	34.286	35.441	-69	0.945	8865	1675	15	37	112		M
391.8127	34.286	35.441	-69	0.945	7297	1400	14	35	100	1.21(1.05-1.43)	
389.8158	35.397	35.441	-3	0.976	3539	729	15	37	49		M
391.8127	35.380	35.441	-4	0.975	3407	599	14	35	43	1.04(1.05-1.43)	M
	Empc Correction				2854	587	14	35	42		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.651	38.659	0	1.055	113322	28156	56	140	503		
419.8220	38.651	38.659	0	1.055	245943	67321	69	172	976	0.46(0.37-0.51)	

Report Date: 17-Aug-2021 06:18:16 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											RQM
407.7817	38.676	38.667	1	1.001	504	163	10	25	16		M
409.7788	38.676	38.667	1	1.001	588	152	3	7	51	0.86(0.88-1.20)	M
	Empc Correction				484	156	3	7	52		
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.906	39.912	0	1.089	123529	39642	56	140	708		
419.8220	39.897	39.912	-1	1.089	262466	80741	69	172	1170	0.47(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											U
407.7817	39.921						10	25			
409.7788	39.921						3	7			
A Non-2,3,7,8-sub-HpCDF											U
407.7817	39.272						10	25			
409.7788	39.272						3	7			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.594	39.601	0	1.081	173596	51430	29	72	1773		
437.8140	39.594	39.601	0	1.081	151093	46674	35	87	1334	1.15(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.602	39.610	0	1.000	15126	4161	20	50	208		
425.7737	39.602	39.610	0	1.000	14084	4035	16	40	252	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.971	39.272	-18	0.984	34288	10040	20	50	502		
425.7737	38.971	39.272	-18	0.984	32410	8855	16	40	553	1.06(0.88-1.20)	
13C-OCDD											
469.7780	42.090	42.105	-1	1.149	268533	66699	24	60	2779		
471.7750	42.090	42.105	-1	1.149	294666	73464	25	62	2939	0.91(0.76-1.02)	
OCDF											RQU
441.7428	42.206						2	5			
443.7399	42.206						9	22			
OCDD											
457.7377	42.098	42.113	-1	1.000	275646	73054	22	55	3321		
459.7348	42.098	42.113	-1	1.000	305276	80709	30	75	2690	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 17-Aug-2021 06:18:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Lims ID:	320-76765-A-19-A		
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Inject. Date:	14-Aug-2021 07:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516475	Lims Sample ID:	22

Non-2,3,7,8-sub-TCDF, RT: 19.948

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	589832	87119

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	589832	87119

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.815	10850	1568	15941	2599	4.20	0.68	a
21.312	1119	408	2657	485	0.5927	0.42	RQa
21.312	1119	408	1453	529	0.4037		Empc Correction
23.713	1836	362	2182	351	0.6306	0.84	a
Signal Totals:							
	13805	2338	19576	3479			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	34585	5773				0.66	RQa
	33381	5817					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 5.428 = (34585 * 100.000) / (589832 * 1.080)
Empc Amount: 5.239 = (33381 * 100.000) / (589832 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 17-Aug-2021 06:18:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Lims ID:	320-76765-A-19-A		
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Inject. Date:	14-Aug-2021 07:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516475	Lims Sample ID:	22

Non-2,3,7,8-sub-TCDD, RT: 20.790

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	408001	54702

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	408001	54702

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.897	97	74	220	87	0.0723	0.44	RQ
17.897	97	74	125	96			Empc Correction
18.353	309	62	418	98	0.1657	0.74	
18.628	498	55	34	19	0.1213	14.65	RQ
18.628	26	14	34	19			Empc Correction
19.781	975	157	408	137	0.3152	2.39	RQ
19.781	314	105	408	137			Empc Correction
21.295	203	40	225	95	0.0976	0.90	RQ
21.295	173	73	225	95			Empc Correction
21.433	405	130	428	95	0.1899	0.95	RQ
21.433	329	73	428	95			Empc Correction
21.992	478	140	152	79	0.1436	3.14	RQ
21.992	117	60	152	79			Empc Correction
22.560	228	76	368	60	0.1358	0.62	RQ
22.560	228	76	296	98			Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Lims ID:	320-76765-A-19-A		
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Inject. Date:	14-Aug-2021 07:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516475	Lims Sample ID:	22

F1 PeCDFs, RT: 24.692

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	479222	76257
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	521591	77249

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	500406	76753

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.161	77	26	123	43	0.0388	0.63	RQ
24.161	77	26	49	16			Empc Correction

Compound is Marked ND

Report Date: 17-Aug-2021 06:18:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Lims ID:	320-76765-A-19-A		
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Inject. Date:	14-Aug-2021 07:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516475	Lims Sample ID:	22

Non-2,3,7,8-sub-PeCDF, RT: 28.186

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	479222	76257
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	521591	77249

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	500406	76753

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.906	319	77	226	89	0.1056	1.41	
30.983	73	17	93	40	0.0322	0.78	RQ
30.983	73	17	47	10			Empc Correction

Compound is Marked ND

Report Date: 17-Aug-2021 06:18:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Lims ID:	320-76765-A-19-A		
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Inject. Date:	14-Aug-2021 07:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516475	Lims Sample ID:	22

Non-2,3,7,8-sub-PeCDD, RT: 29.966

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	293371	42176

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	293371	42176

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.967	1200	210	1012	191	0.7205	1.19	RQ
26.967	1200	210	774	135			Empc Correction
27.084	105	59	24	14	0.0420	4.38	RQ
27.084	37	21	24	14			Empc Correction
28.086	61	47	49	12	0.0358	1.24	RQ
28.086	61	47	39	30			Empc Correction
28.667	1260	158	447	119	0.5560	2.82	RQ
28.667	692	184	447	119			Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Lims ID:	320-76765-A-19-A		
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Inject. Date:	14-Aug-2021 07:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516475	Lims Sample ID:	22

Non-2,3,7,8-sub-HxCDF, RT: 35.087

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	539348	105922
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	518036	97332
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	473315	102451
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	421410	96416

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	488027	100530

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.536	143	43	44	24	0.0318	3.25	RQ
33.536	54	29	44	24			Empc Correction
36.854	0	0	384	114	0.0653	0.00	

Compound is Marked ND

Report Date: 17-Aug-2021 06:18:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Lims ID:	320-76765-A-19-A		
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Inject. Date:	14-Aug-2021 07:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516475	Lims Sample ID:	22

Non-2,3,7,8-sub-HxCDD, RT: 35.441

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	378293	84414
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	354172	76773
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	366232	80593

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.286	8865	1675	7297	1400	4.18	1.21	M
35.397	3539	729	3407	599	1.80	1.04	RQM
35.397	3539	729	2854	587	1.66		Empc Correction
Signal Totals:							
	12404	2404	10151	1987			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23108	4403				1.16	RQM
	22555	4391					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 5.983 = (23108 * 100.000) / (366232 * 1.055)

Empc Amount: 5.840 = (22555 * 100.000) / (366232 * 1.055)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 17-Aug-2021 06:18:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Lims ID:	320-76765-A-19-A		
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Inject. Date:	14-Aug-2021 07:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516475	Lims Sample ID:	22

Non-2,3,7,8-sub-HpCDF, RT: 39.272

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	359265	95477
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	385995	120383

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	372630	107930

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 17-Aug-2021 06:18:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Lims ID:	320-76765-A-19-A		
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Inject. Date:	14-Aug-2021 07:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516475	Lims Sample ID:	22

Non-2,3,7,8-sub-HpCDD, RT: 39.272

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	324689	98104

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	324689	98104

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.971	34288	10040	32410	8855	19.6	1.06	
Signal Totals:							
	34288	10040	32410	8855			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	66698	18895				1.06	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 19.558 = (66698 * 100.000) / (324689 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d				
Injection Date:	14-Aug-2021 07:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 20.54
Area: 31470
Amount: 8.964700
Amount Units: pg/ul

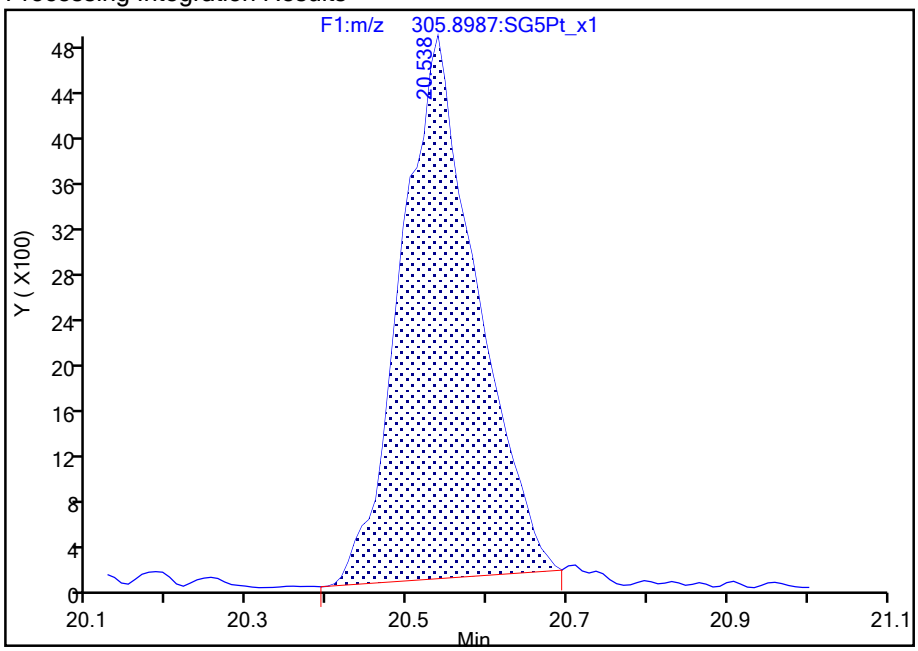

Manual Integration Results

RT: 20.54
Area: 33302
Amount: 9.252238
Amount Units: pg/ul

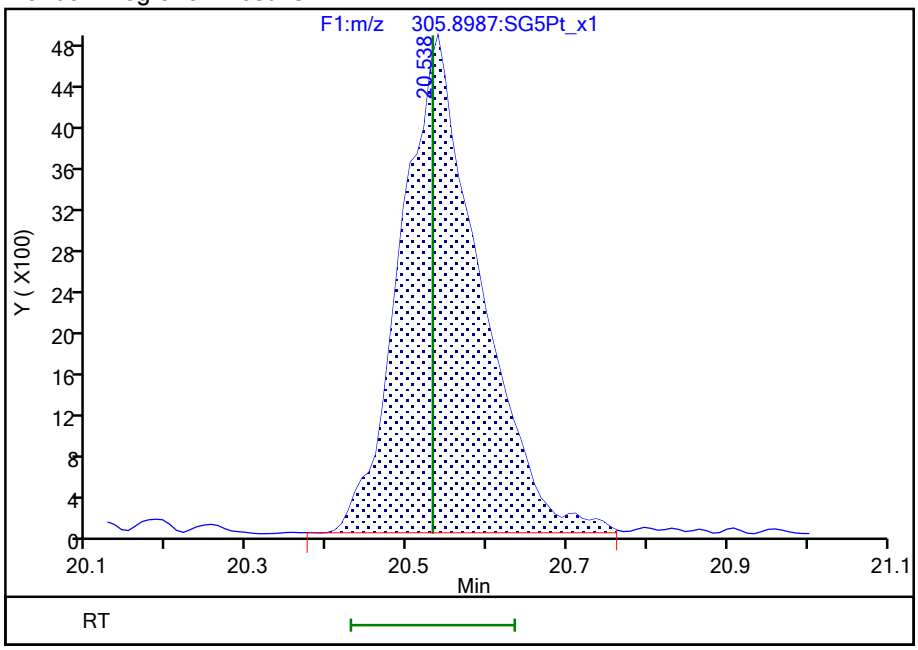

Reviewer: stephensk, 16-Aug-2021 08:25:50

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d				
Injection Date:	14-Aug-2021 07:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Not Detected
Expected RT: 36.85

Processing Integration Results

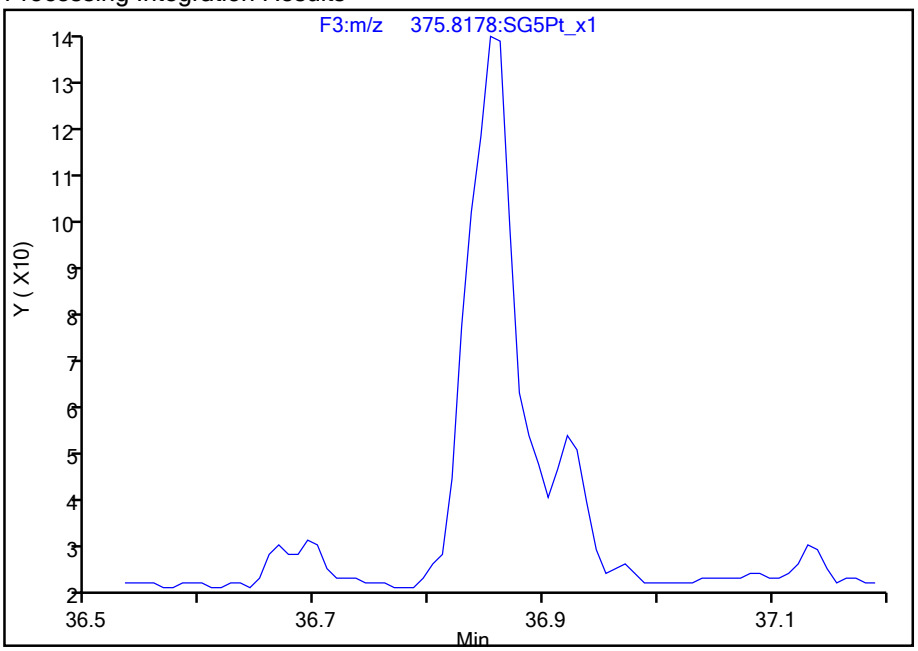

Manual Integration Results

RT: 36.85
Area: 384
Amount: 0.177957
Amount Units: pg/ul

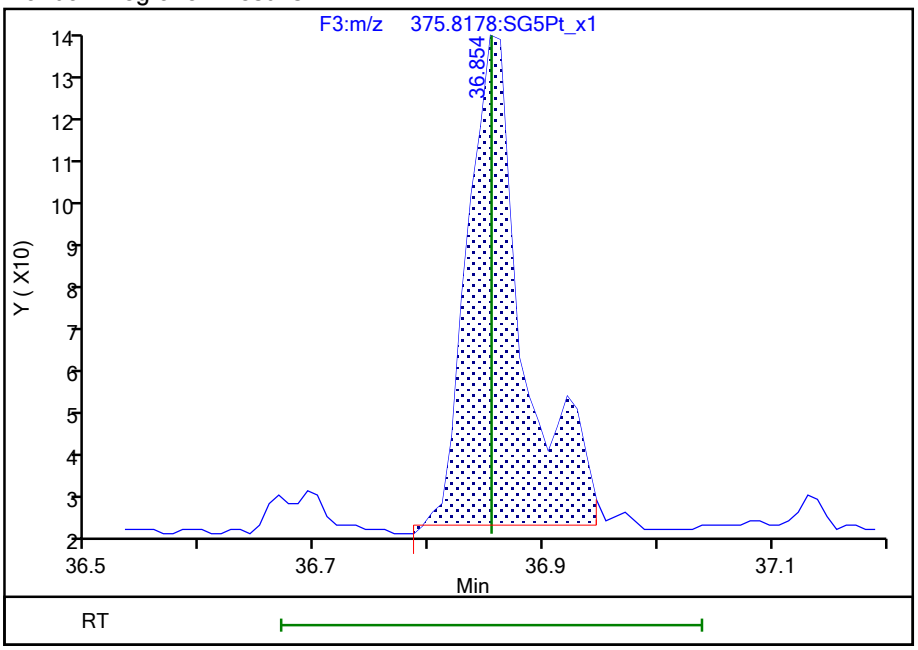

Reviewer: dadunj, 17-Aug-2021 09:35:14
Audit Action: Manually Integrated Audit Reason: Baseline

773228

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d				
Injection Date:	14-Aug-2021 07:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Not Detected
Expected RT: 36.85

Processing Integration Results

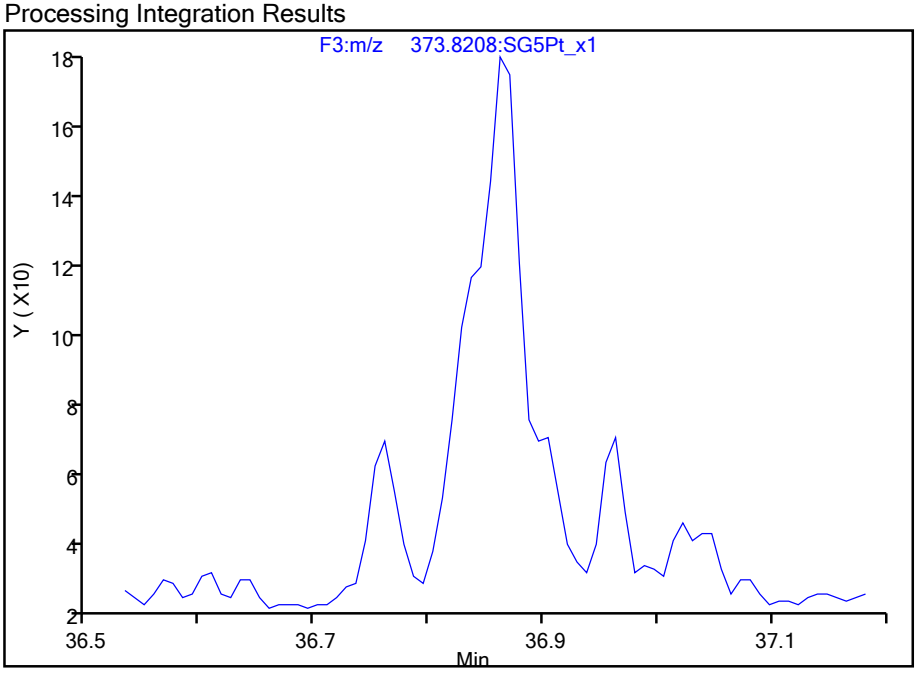

Manual Integration Results

RT: 36.86
Area: 546
Amount: 0.177957
Amount Units: pg/ul

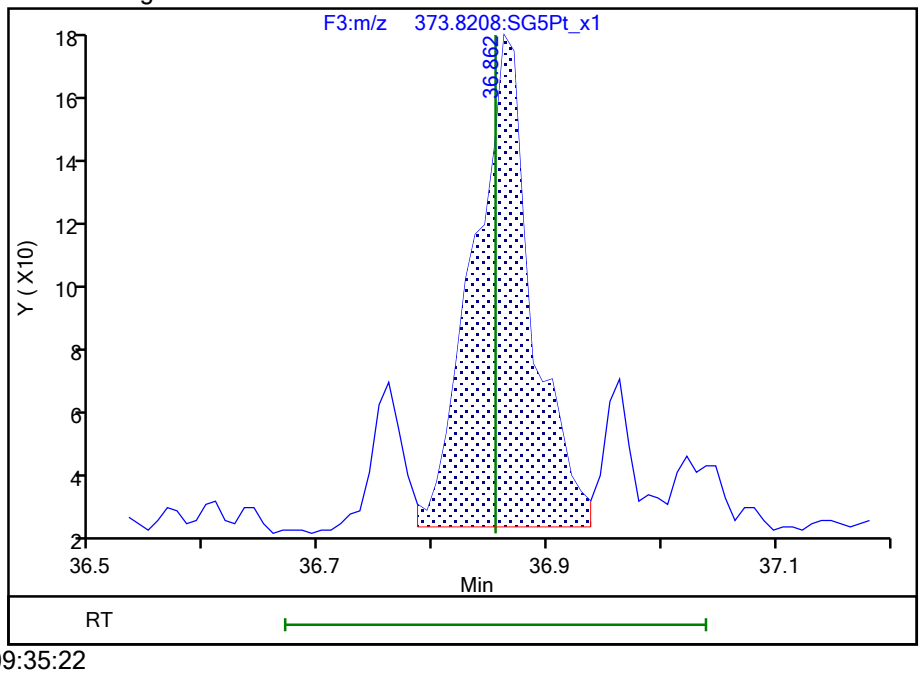

Reviewer: dadunj, 17-Aug-2021 09:35:22
Audit Action: Split an Integrated Peak Audit Reason: Baseline

773229

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d				
Injection Date:	14-Aug-2021 07:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 36.28
Area: 678
Amount: 0.337412
Amount Units: pg/ul

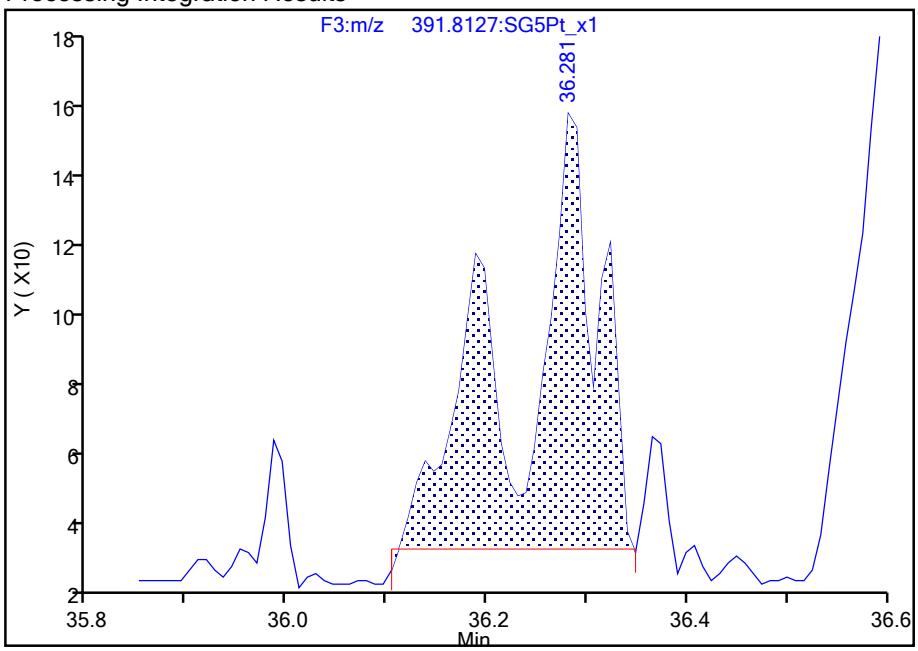

Manual Integration Results

RT: 36.19
Area: 260
Amount: 0.162726
Amount Units: pg/ul

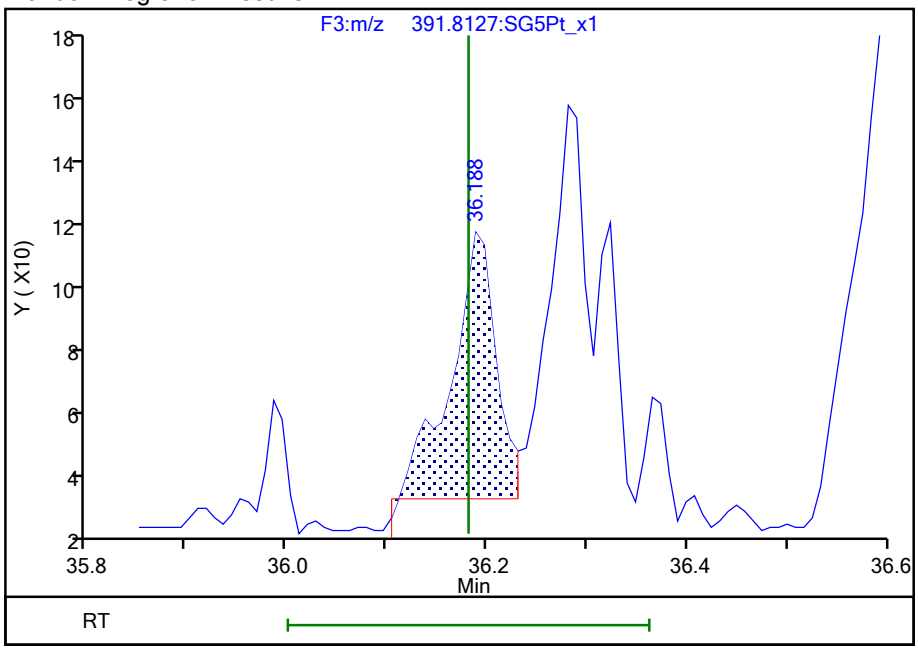

Reviewer: dadunj, 17-Aug-2021 09:35:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

773230

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d				
Injection Date:	14-Aug-2021 07:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

Processing Integration Results

RT: 36.31
Area: 1354
Amount: 0.337412
Amount Units: pg/ul

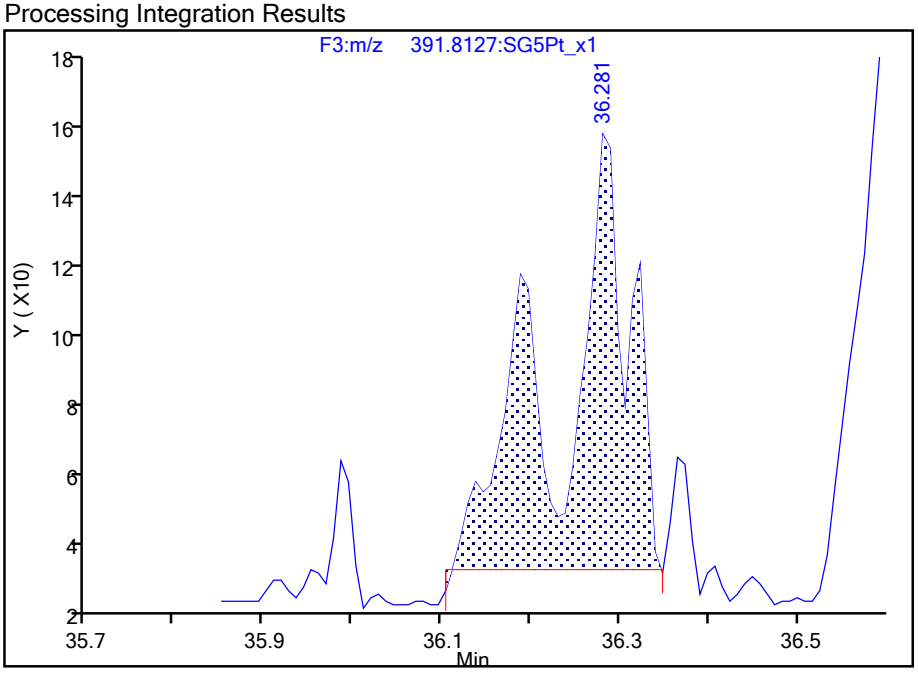

Manual Integration Results

RT: 36.15
Area: 653
Amount: 0.162726
Amount Units: pg/ul
Reviewer: dadunj, 17-Aug-2021 09:35:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d				
Injection Date:	14-Aug-2021 07:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 36.31
Area: 676
Amount: 0.337412
Amount Units: pg/ul

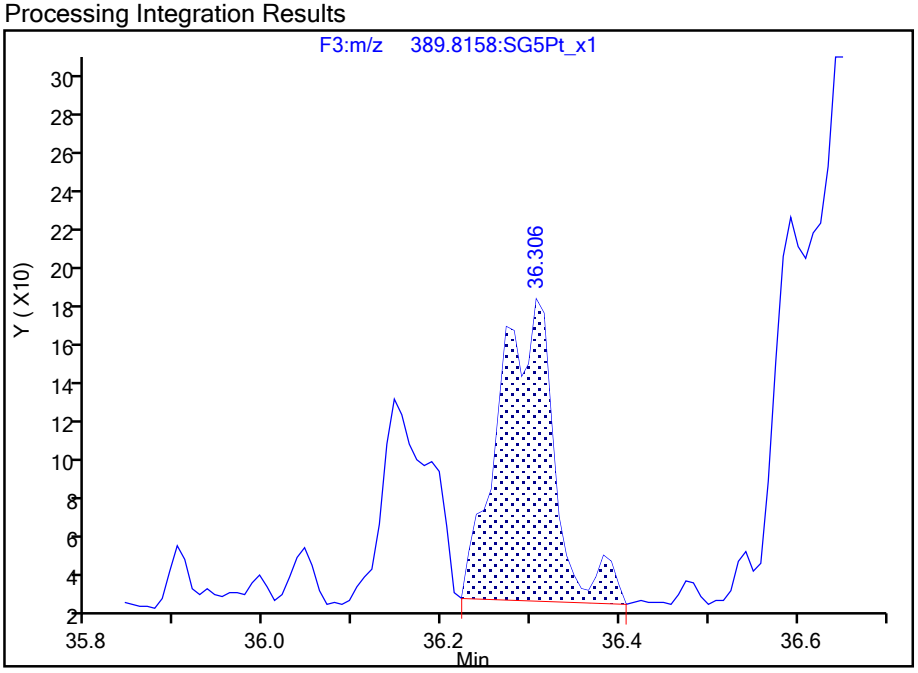

Manual Integration Results

RT: 36.15
Area: 393
Amount: 0.162726
Amount Units: pg/ul

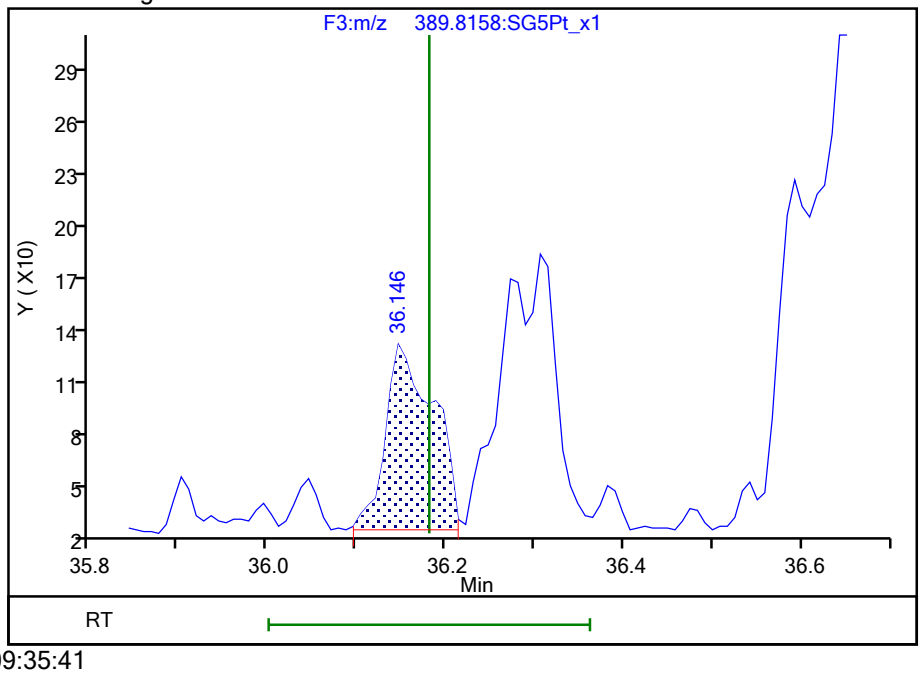

Reviewer: dadunj, 17-Aug-2021 09:35:41
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

773232

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d				
Injection Date:	14-Aug-2021 07:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 36.28
Area: 678
Amount: 0.384863
Amount Units: pg/ul

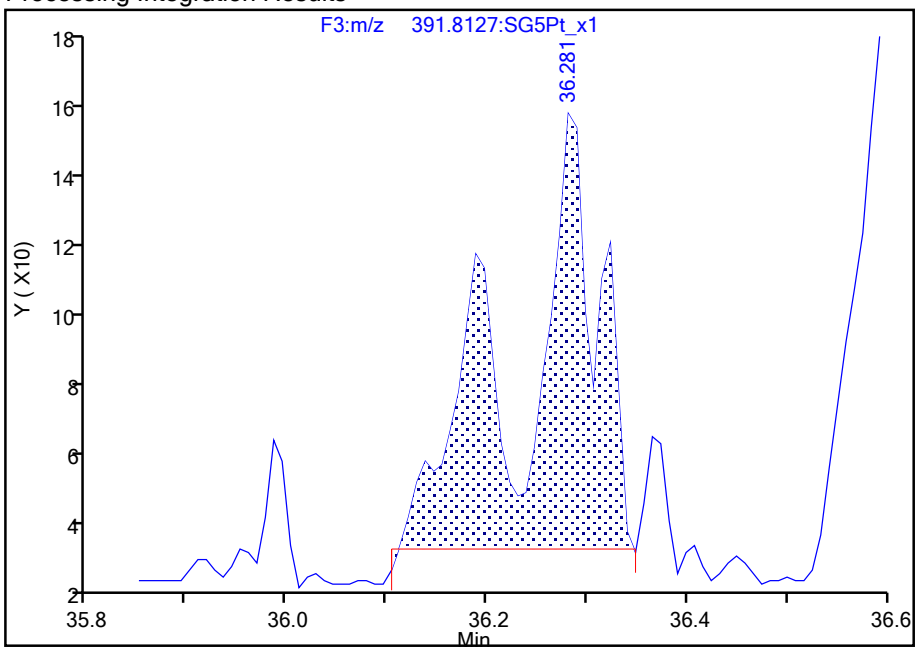

Manual Integration Results

RT: 36.28
Area: 417
Amount: 0.310676
Amount Units: pg/ul

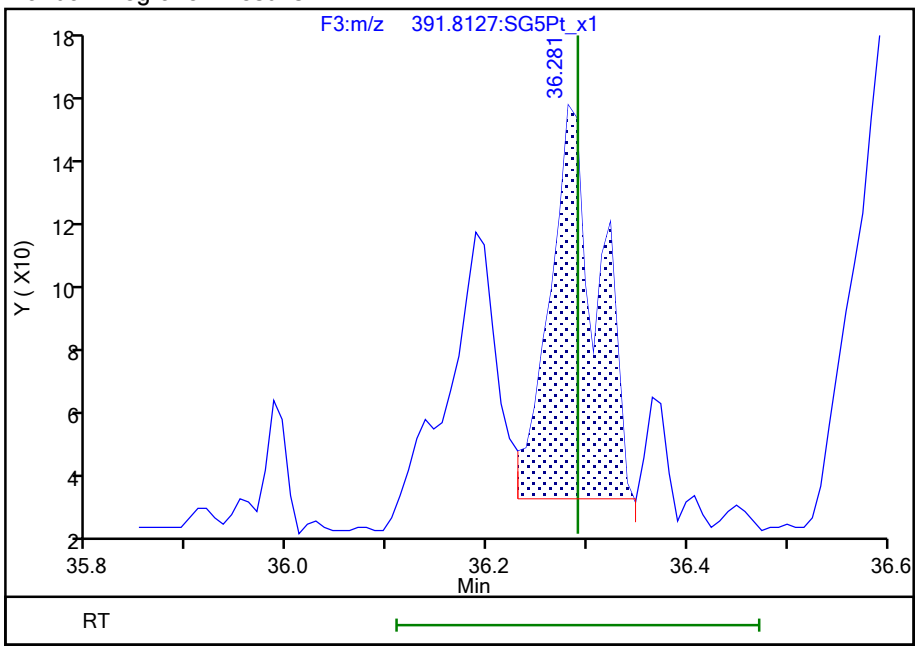

Reviewer: dadunj, 17-Aug-2021 09:35:35

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d				
Injection Date:	14-Aug-2021 07:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.25- 36.63)

Signal: 1

Processing Integration Results

RT = 34.286 Area = 9028

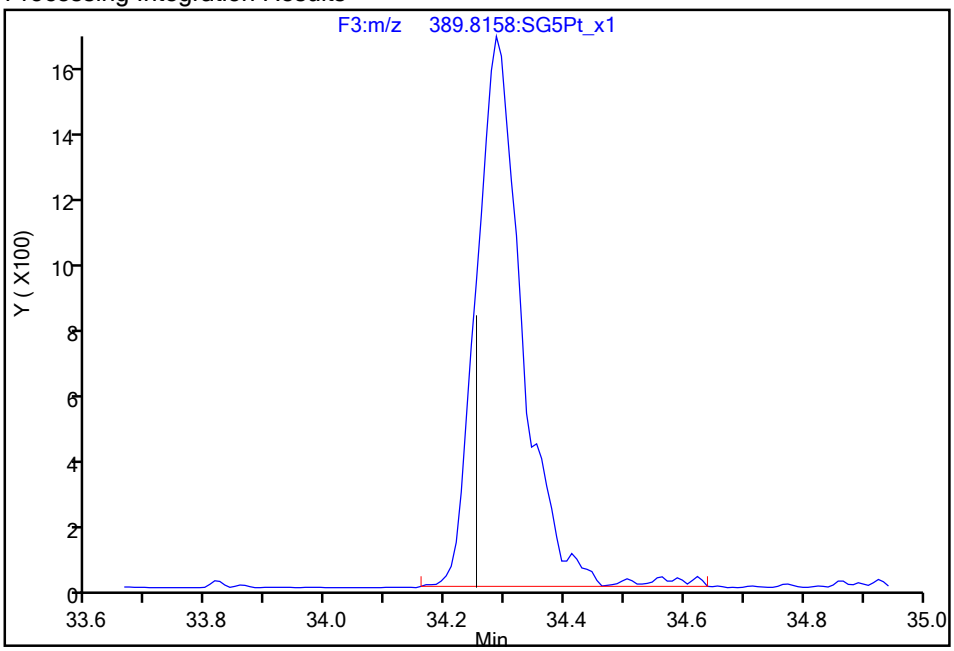

Manual Integration Results

RT = 34.286 Area = 8865 M

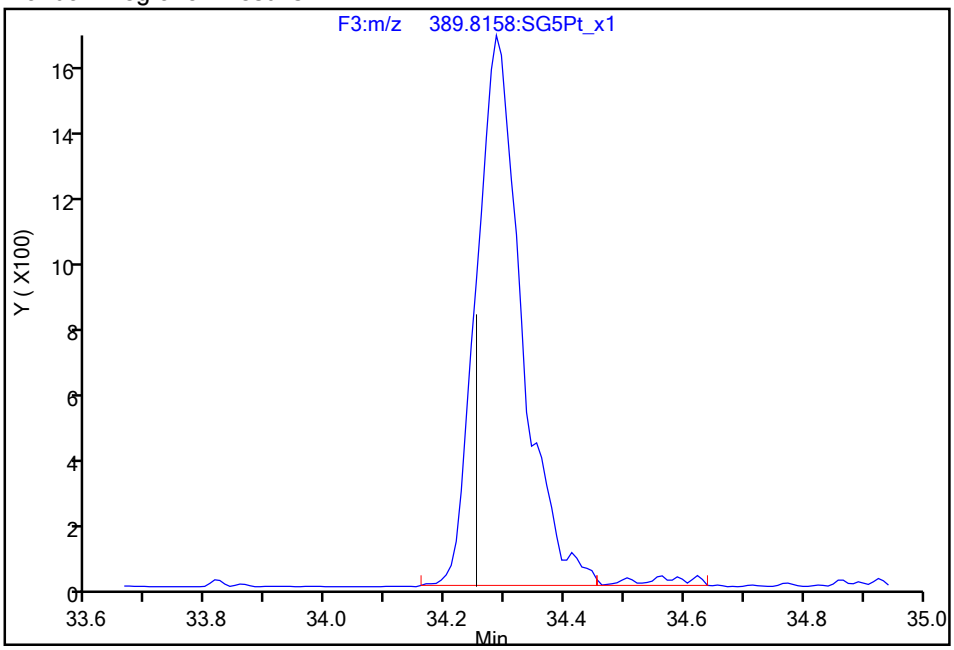

Reviewer: dadunj, 17-Aug-2021 09:35:49

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d				
Injection Date:	14-Aug-2021 07:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.25- 36.63)

Signal: 1

Processing Integration Results

RT = 35.397 Area = 4026

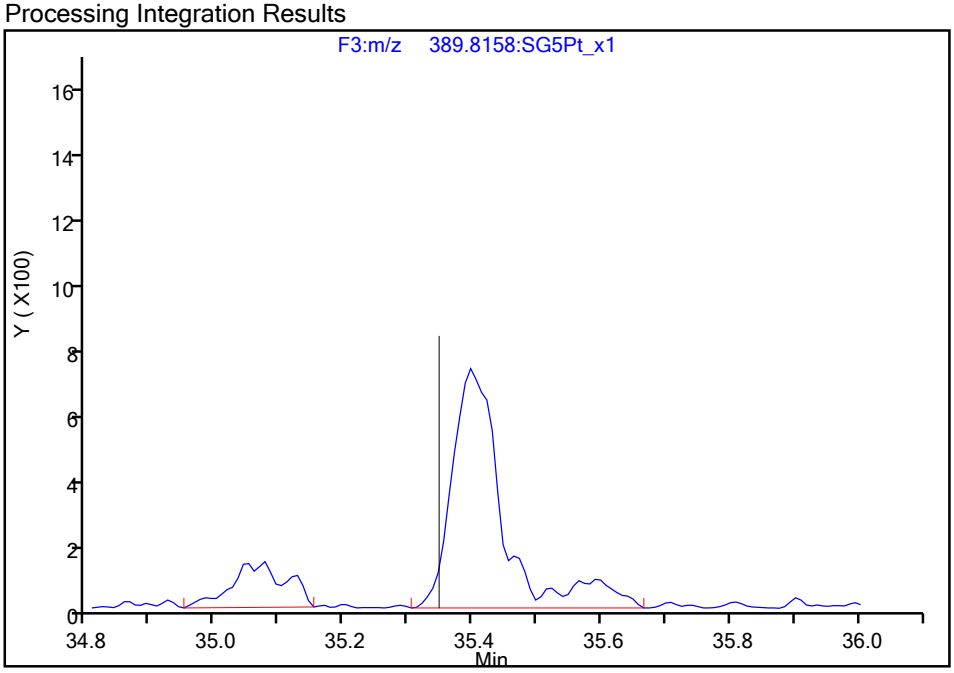

Manual Integration Results

RT = 35.397 Area = 3539 M

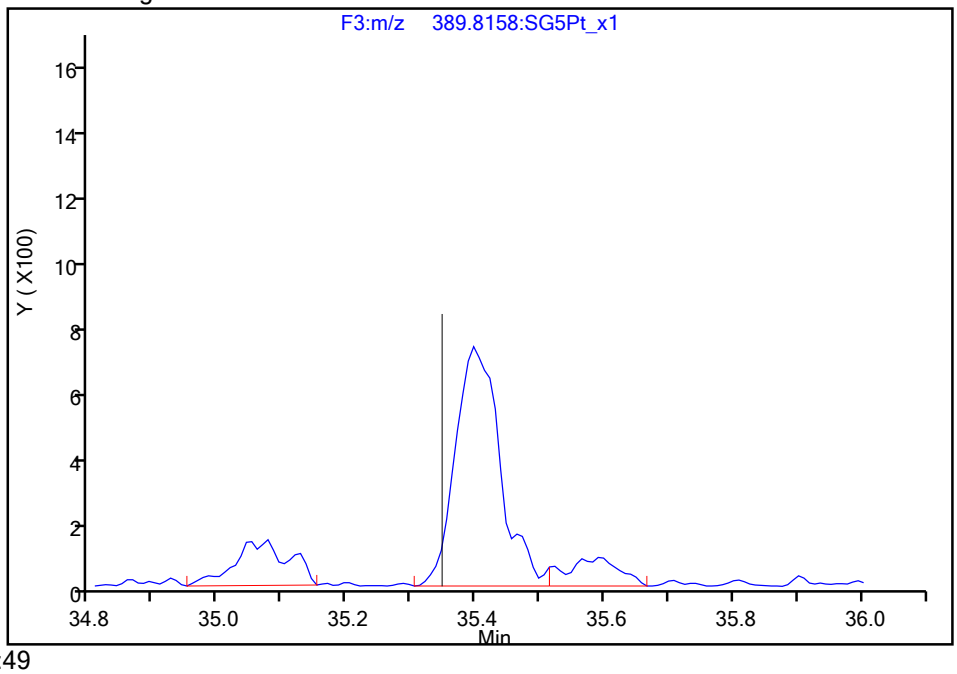

Reviewer: dadunj, 17-Aug-2021 09:35:49

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d				
Injection Date:	14-Aug-2021 07:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (34.25- 36.63)

Signal: 2

Processing Integration Results

RT = 35.380 Area = 3712

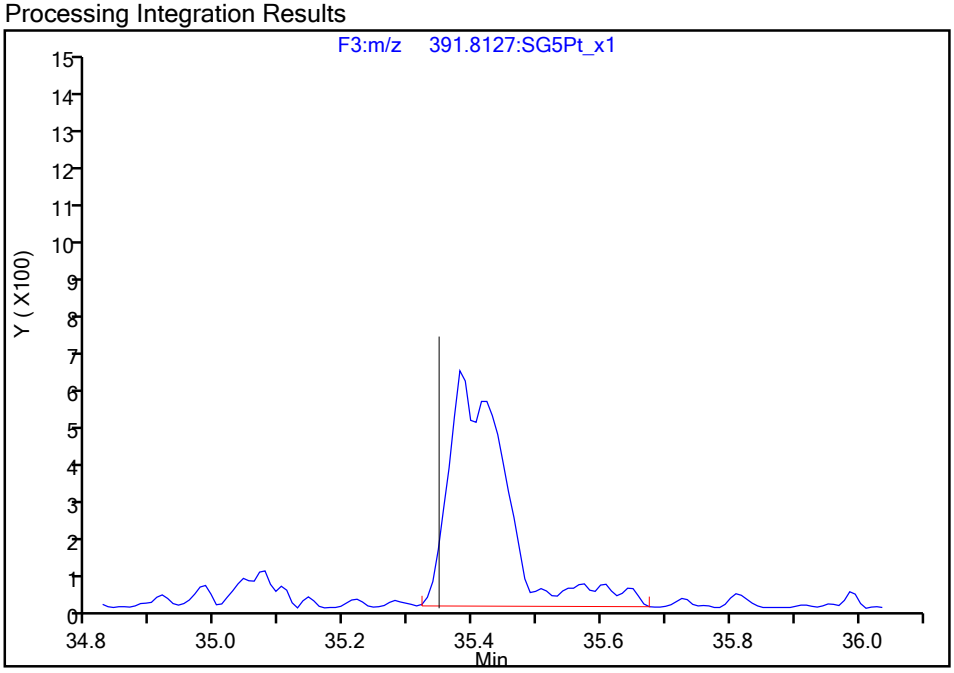

Manual Integration Results

RT = 35.380 Area = 3407 M

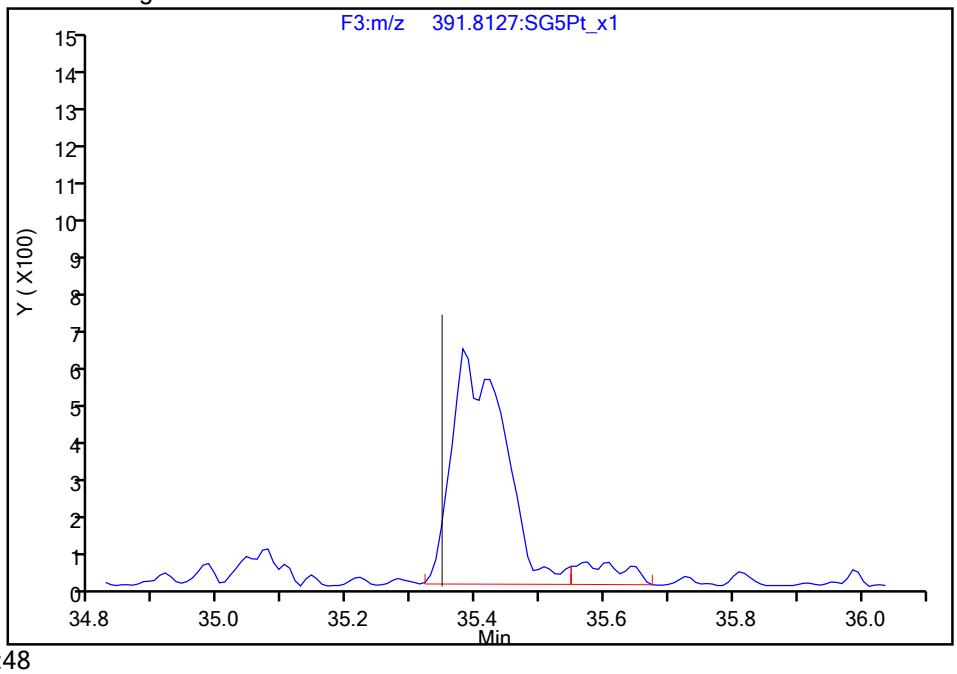

Reviewer: dadunj, 17-Aug-2021 09:35:48

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d				
Injection Date:	14-Aug-2021 07:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 38.68
Area: 617
Amount: 0.238571
Amount Units: pg/ul

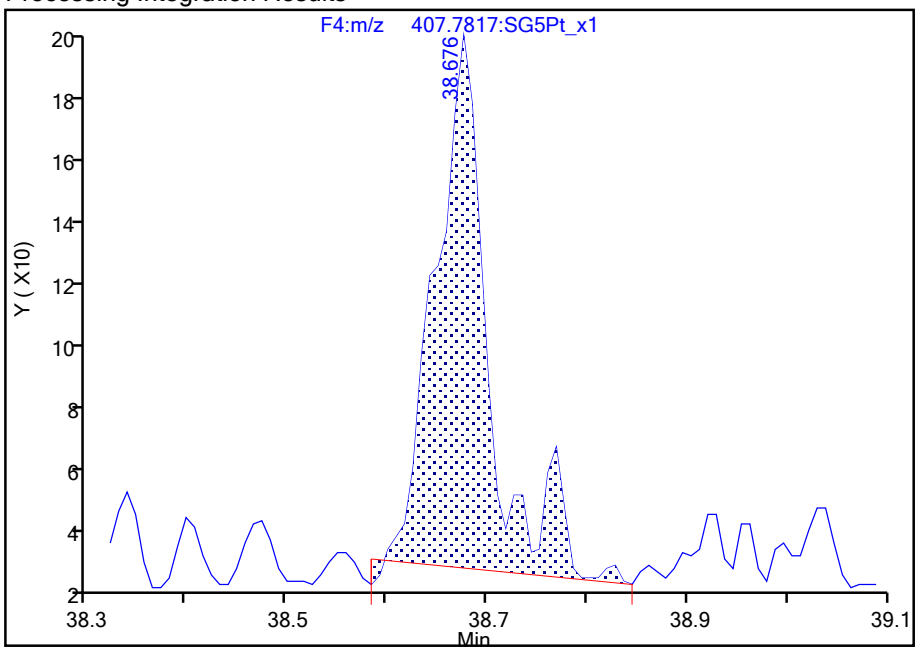

Manual Integration Results

RT: 38.68
Area: 504
Amount: 0.210776
Amount Units: pg/ul

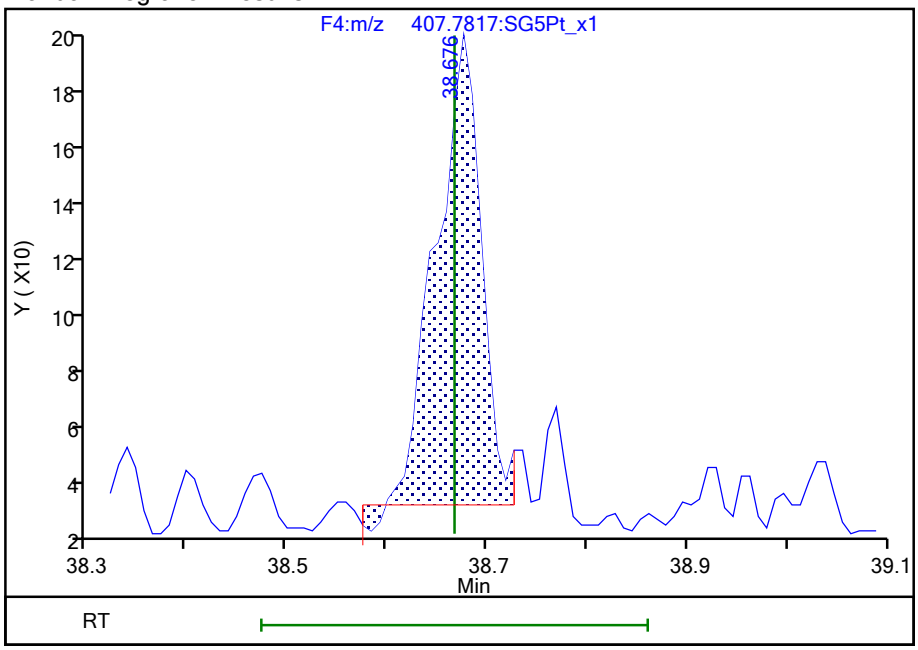

Reviewer: dadunj, 17-Aug-2021 09:36:00

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d				
Injection Date:	14-Aug-2021 07:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.68
Area: 619
Amount: 0.238571
Amount Units: pg/ul

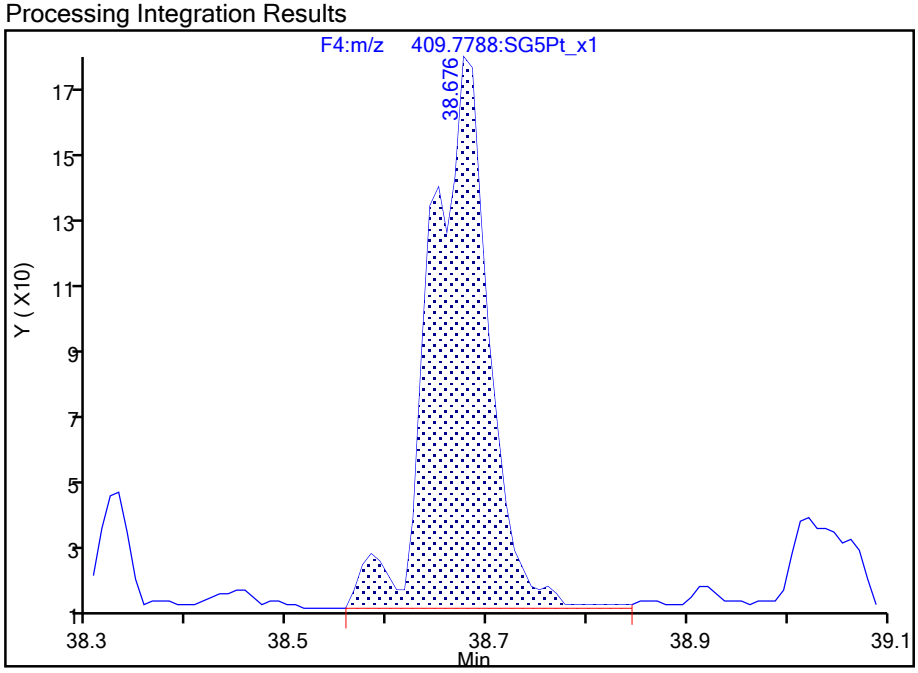

Manual Integration Results

RT: 38.68
Area: 588
Amount: 0.210776
Amount Units: pg/ul

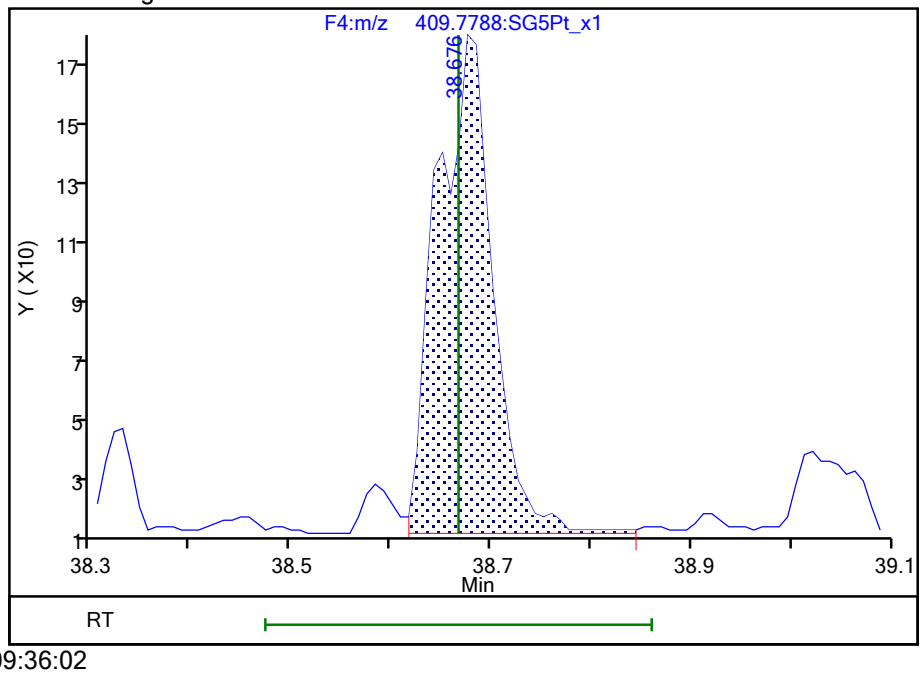

Reviewer: dadunj, 17-Aug-2021 09:36:02

Audit Action: Split an Integrated Peak Audit Reason: Baseline

773238

Report Date: 17-Aug-2021 06:18:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

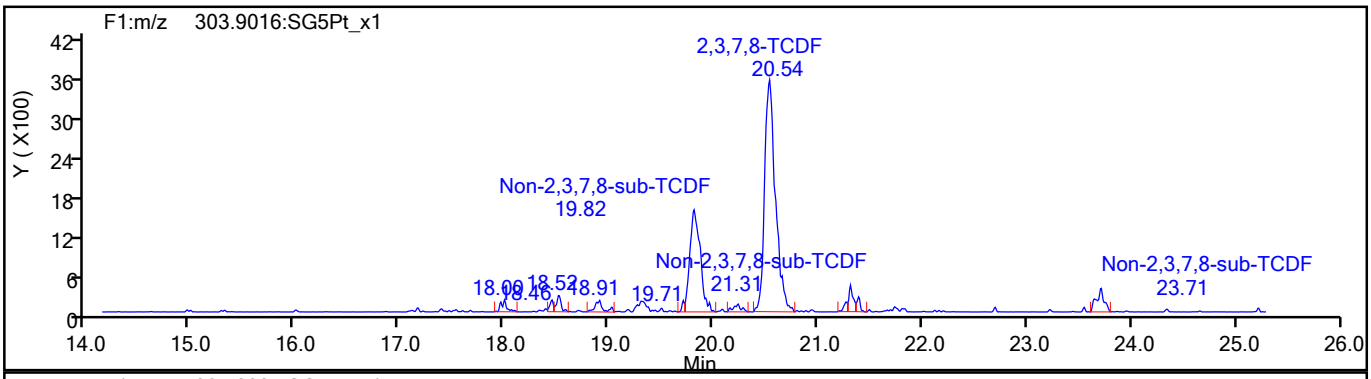

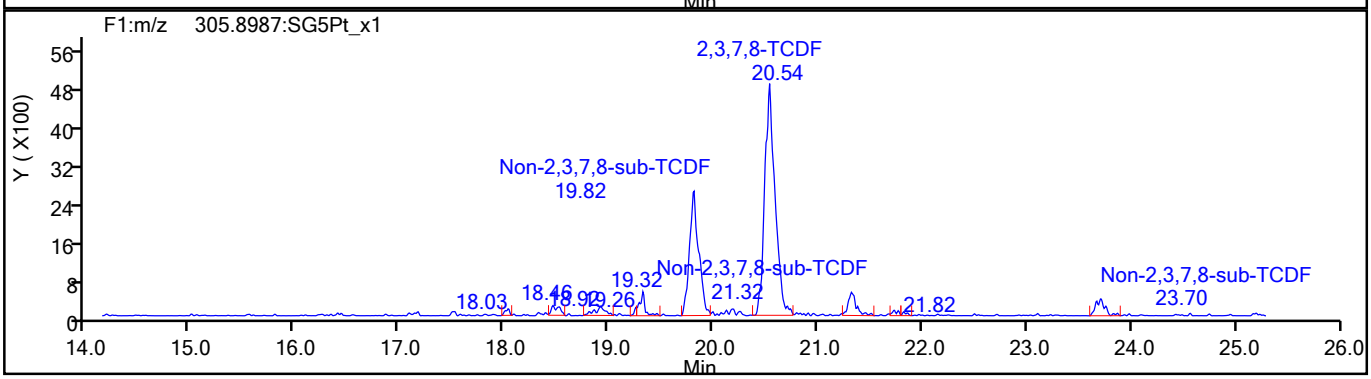

TCDF Standards

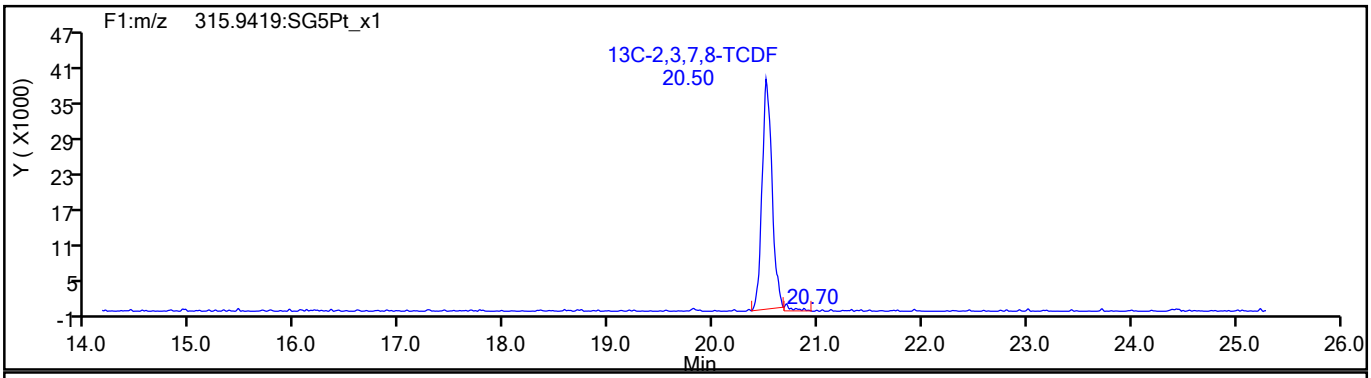

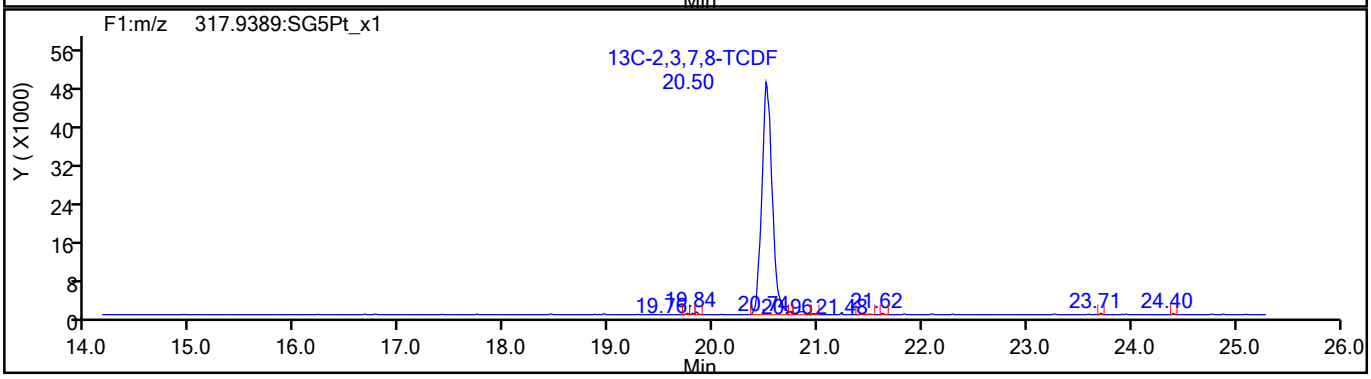

773239

Report Date: 17-Aug-2021 06:18:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

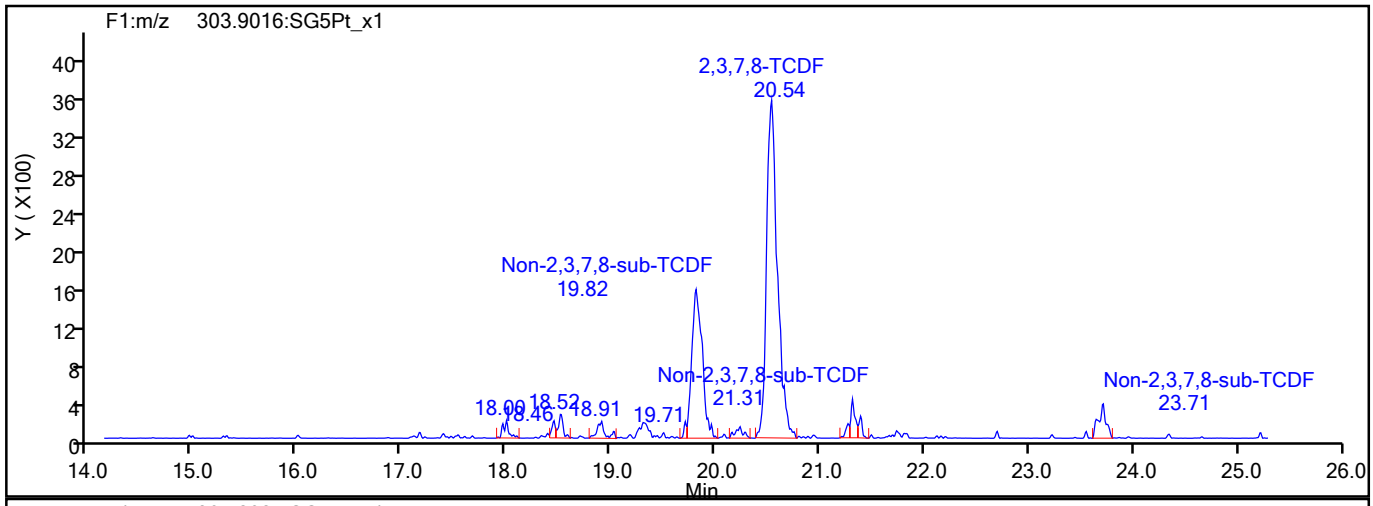

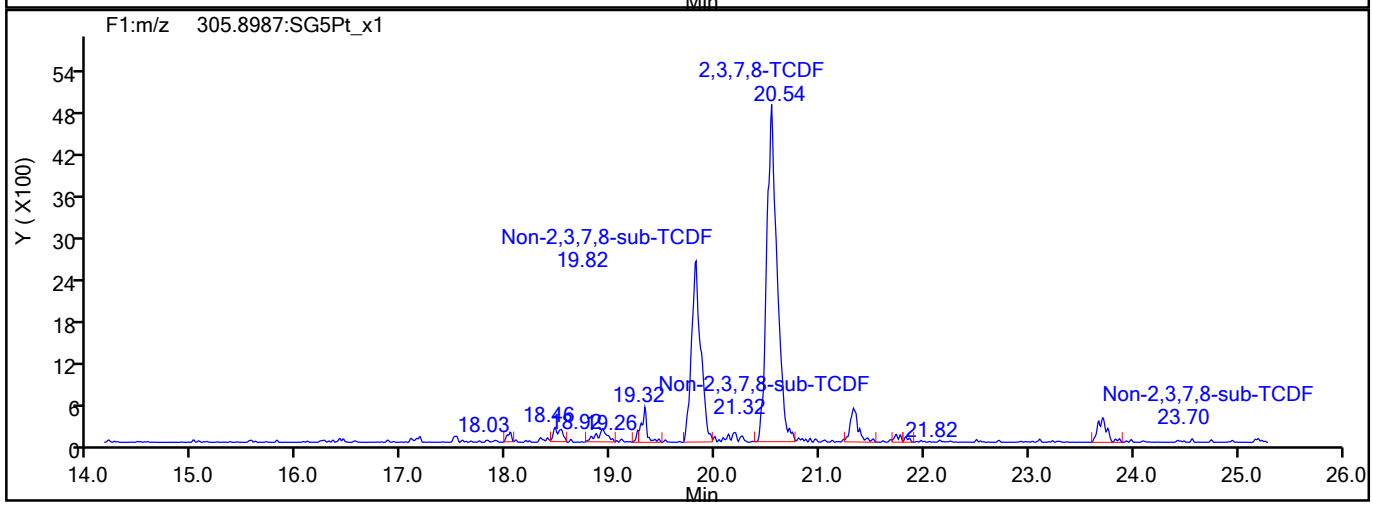

TCDF Interference Mass

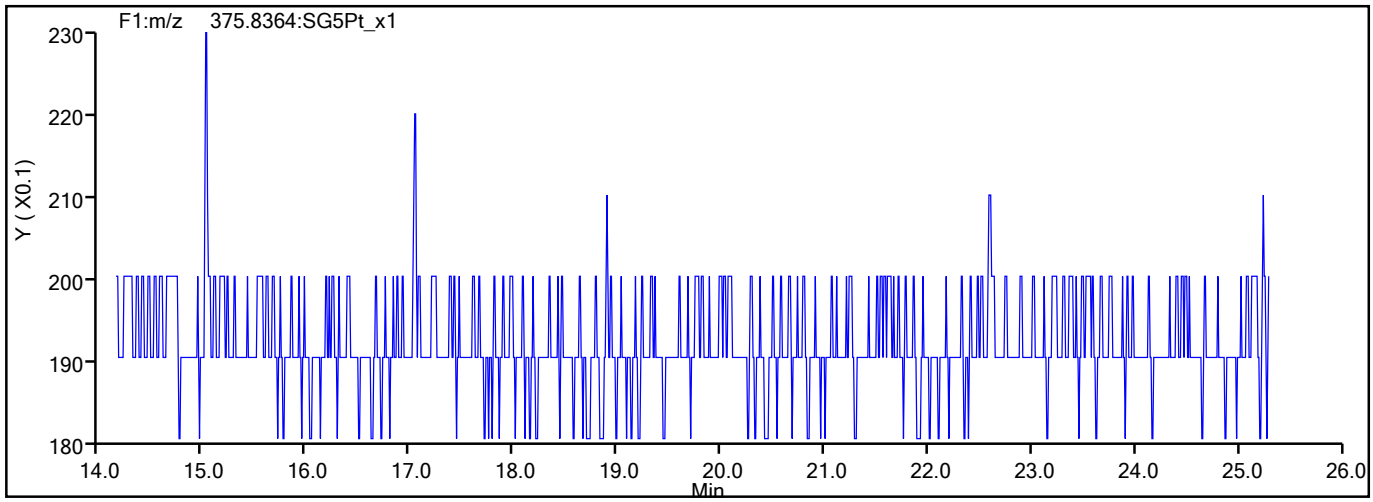

773240

Report Date: 17-Aug-2021 06:18:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

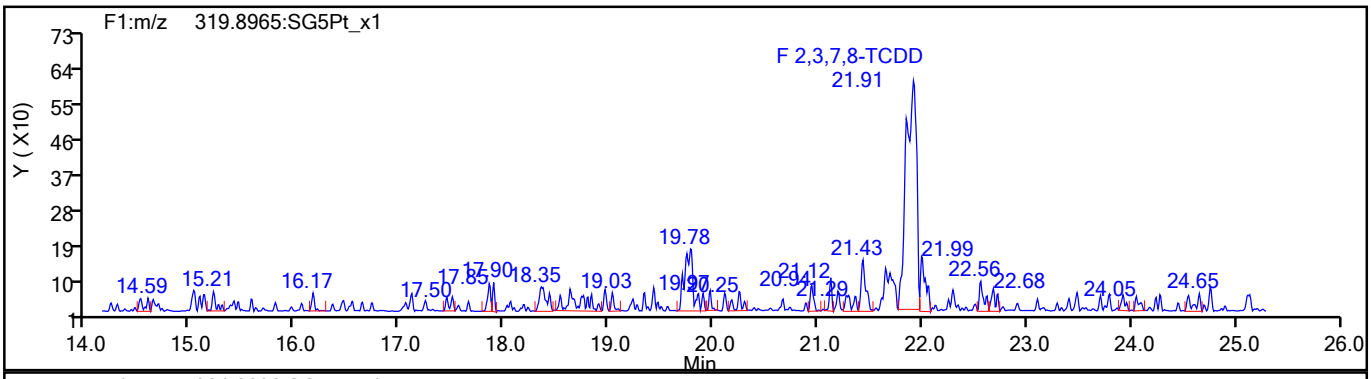

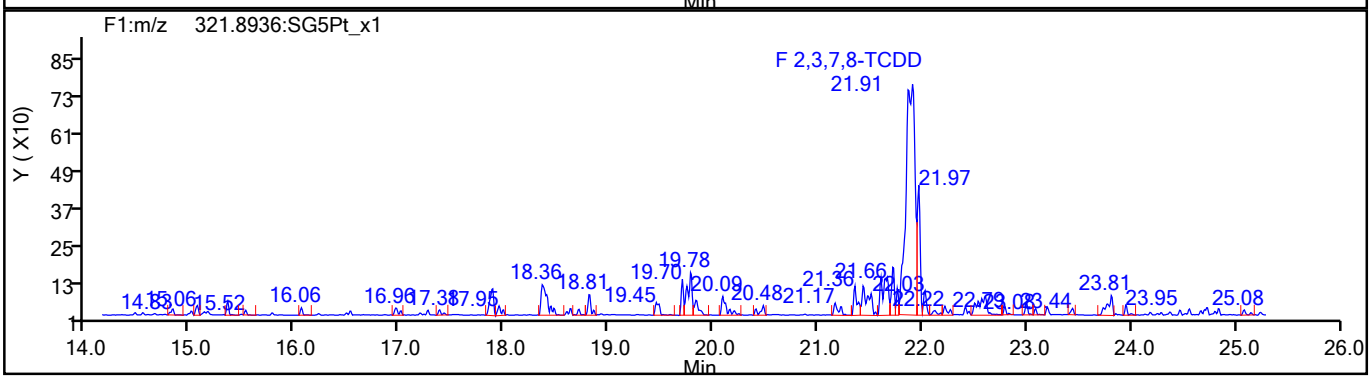

TCDD Standards

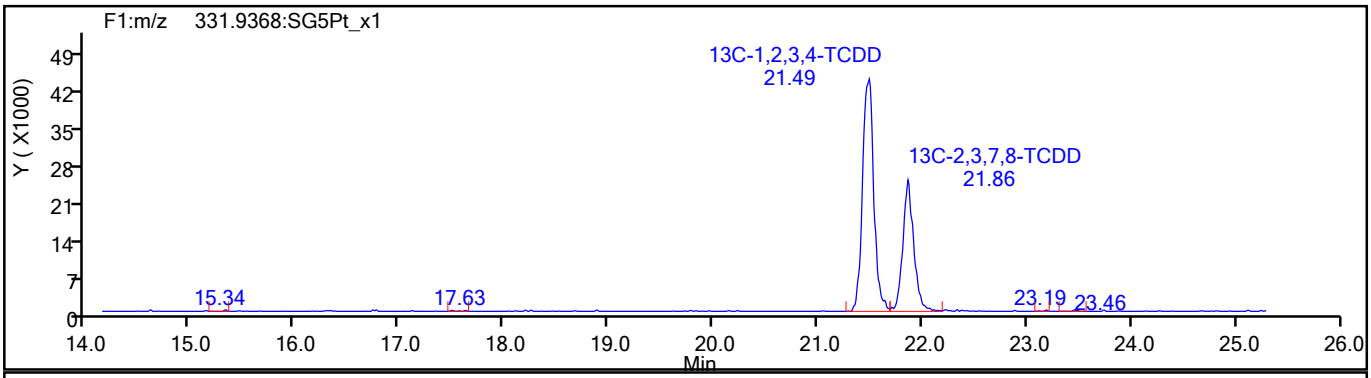

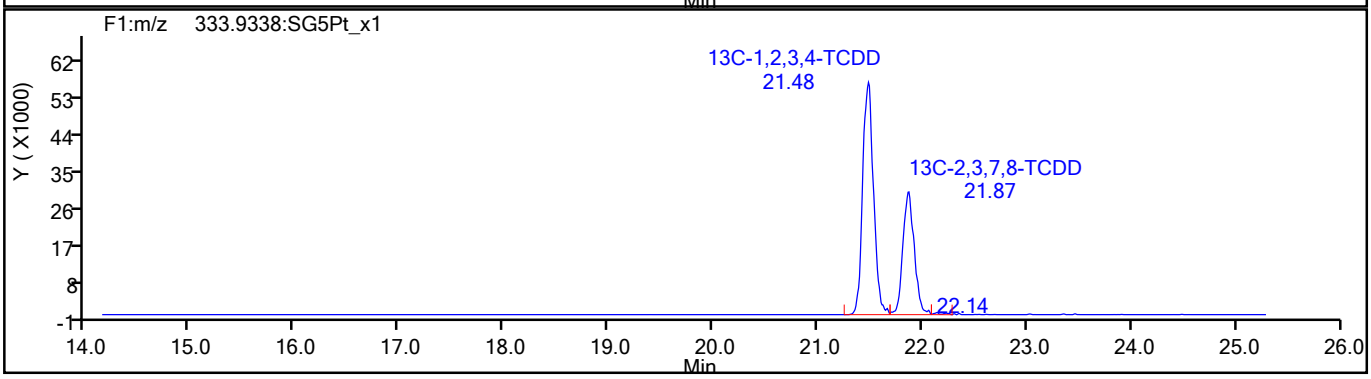

773241

Report Date: 17-Aug-2021 06:18:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

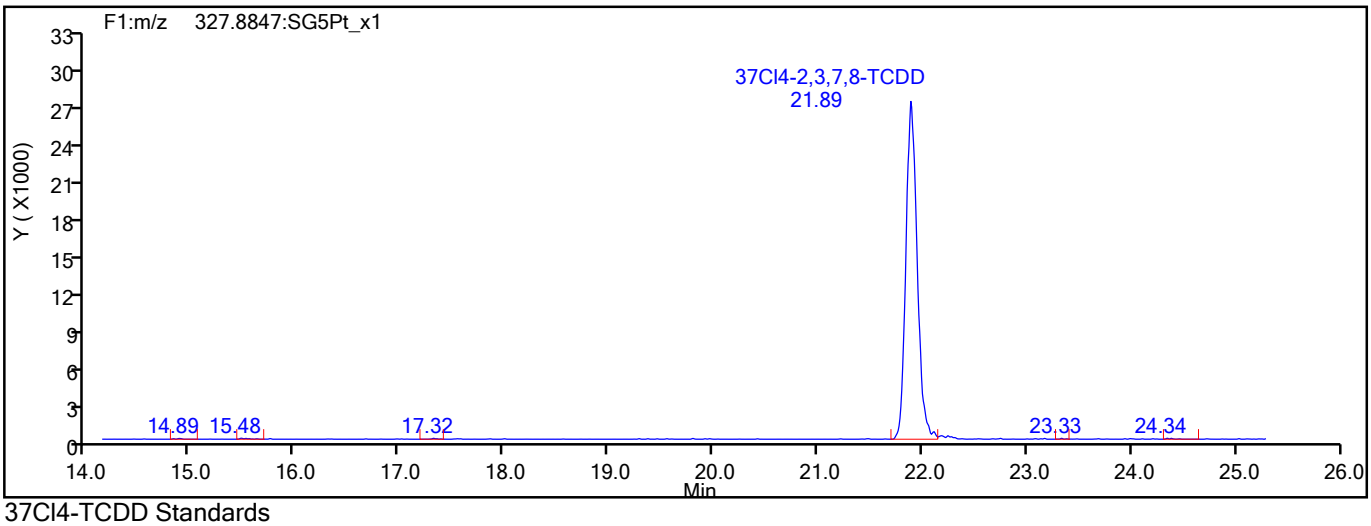

37Cl4-TCDD Standards

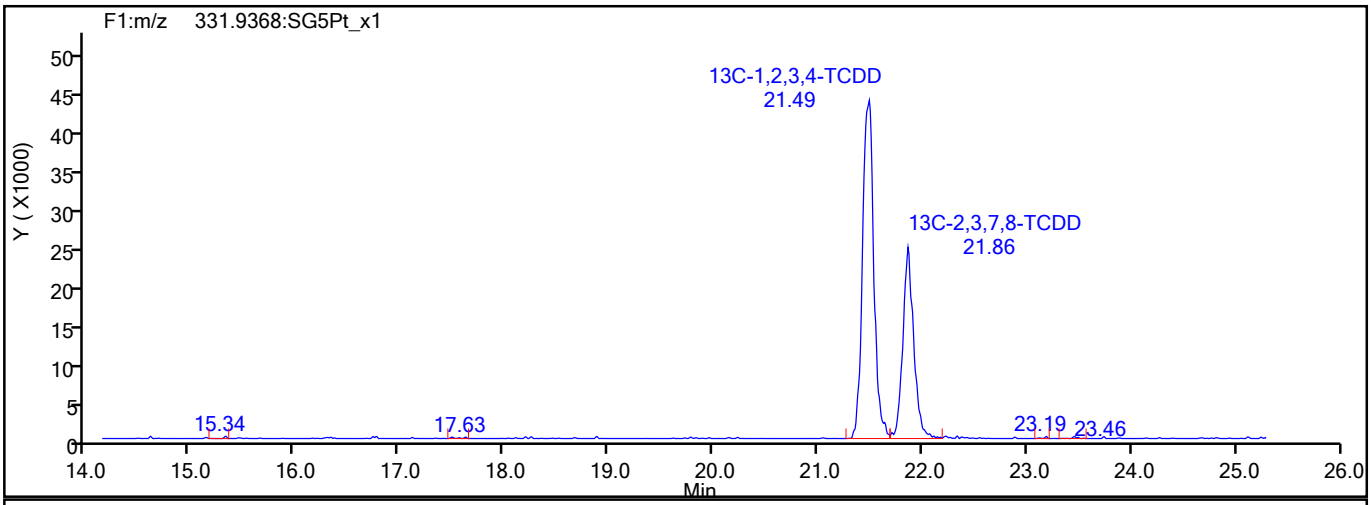

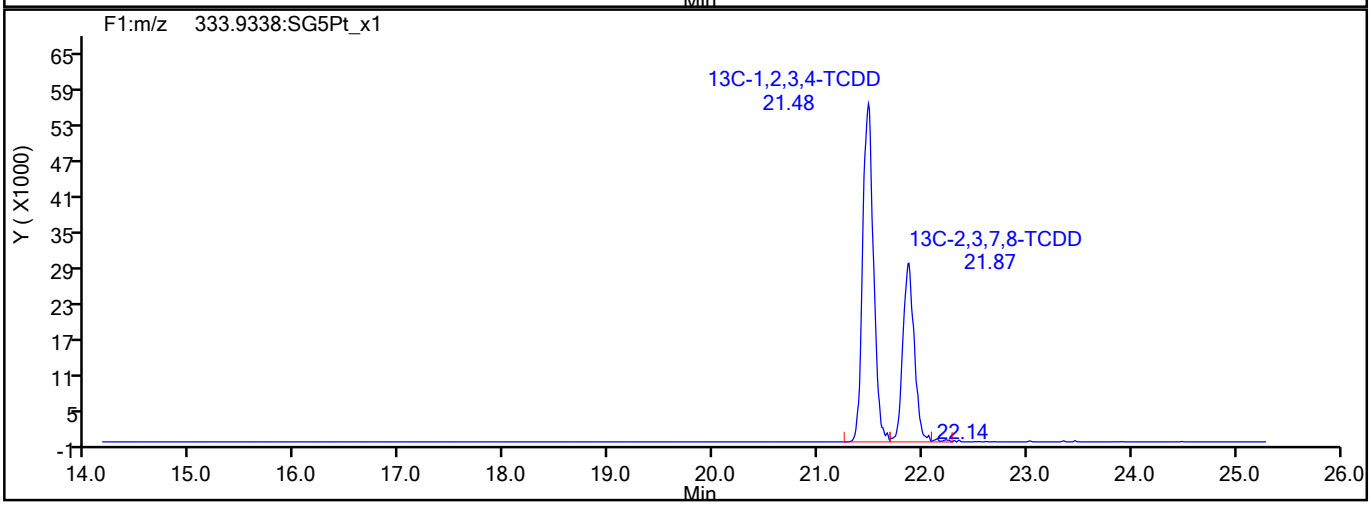

773242

Report Date: 17-Aug-2021 06:18:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

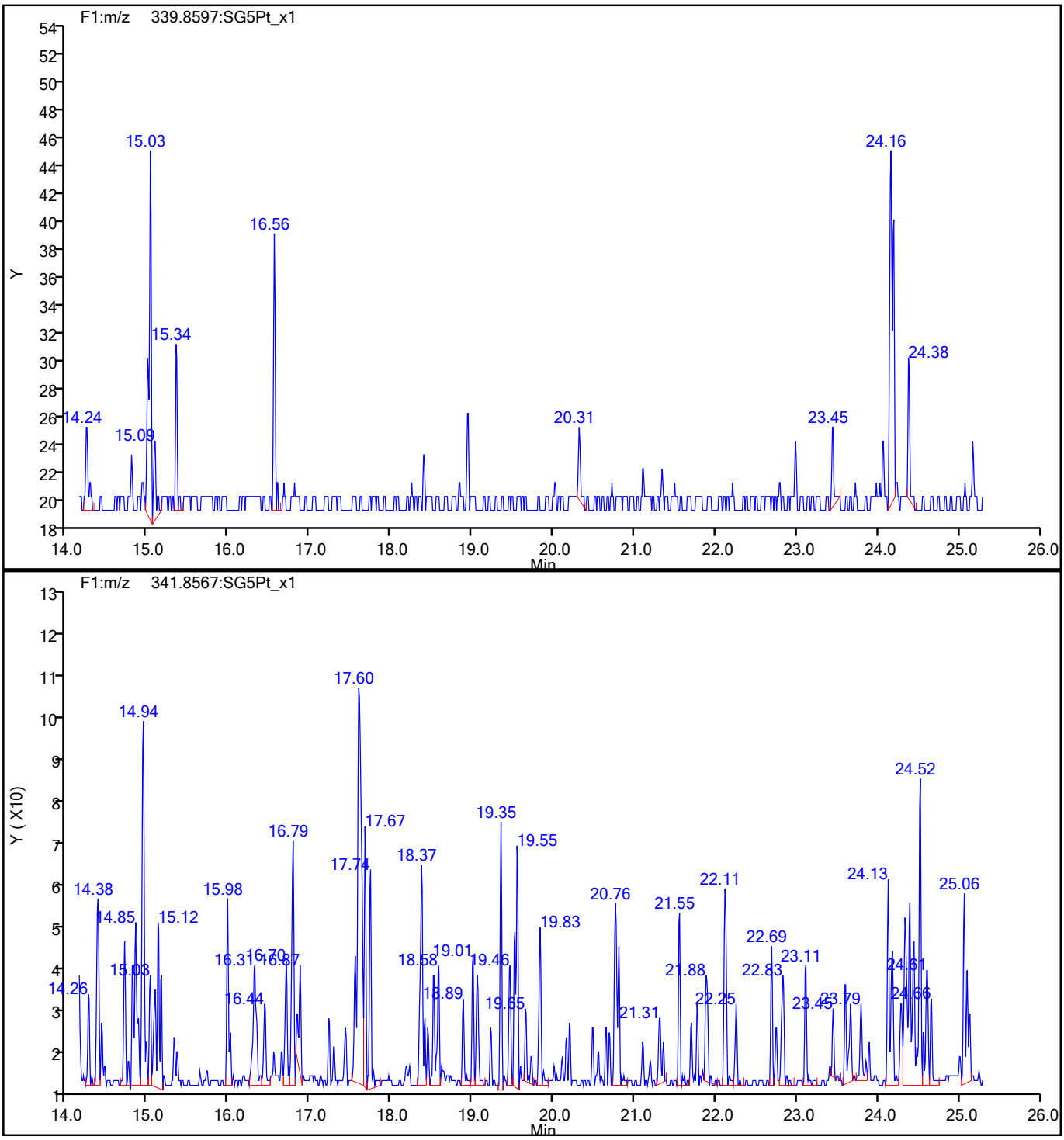

773243

Report Date: 17-Aug-2021 06:18:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

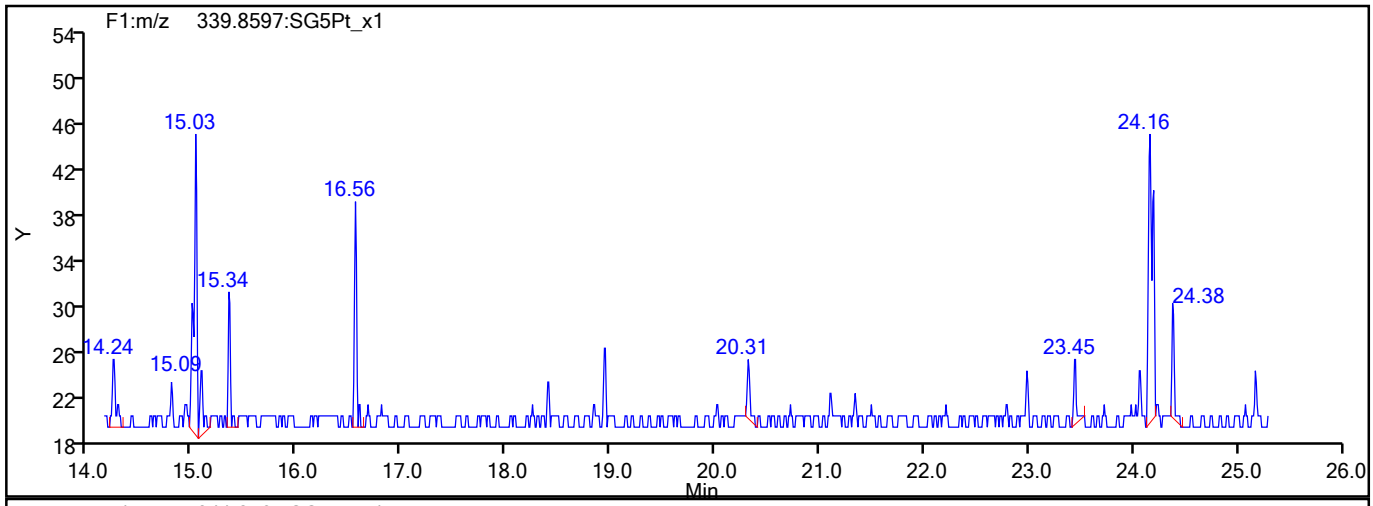

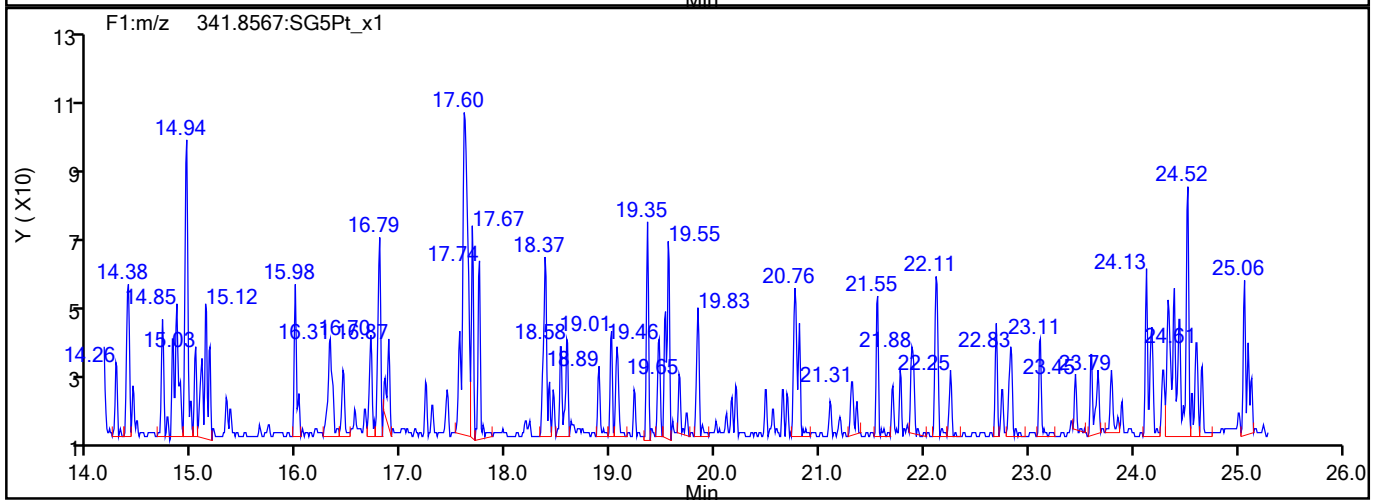

F1 PeCDFs Interference Mass

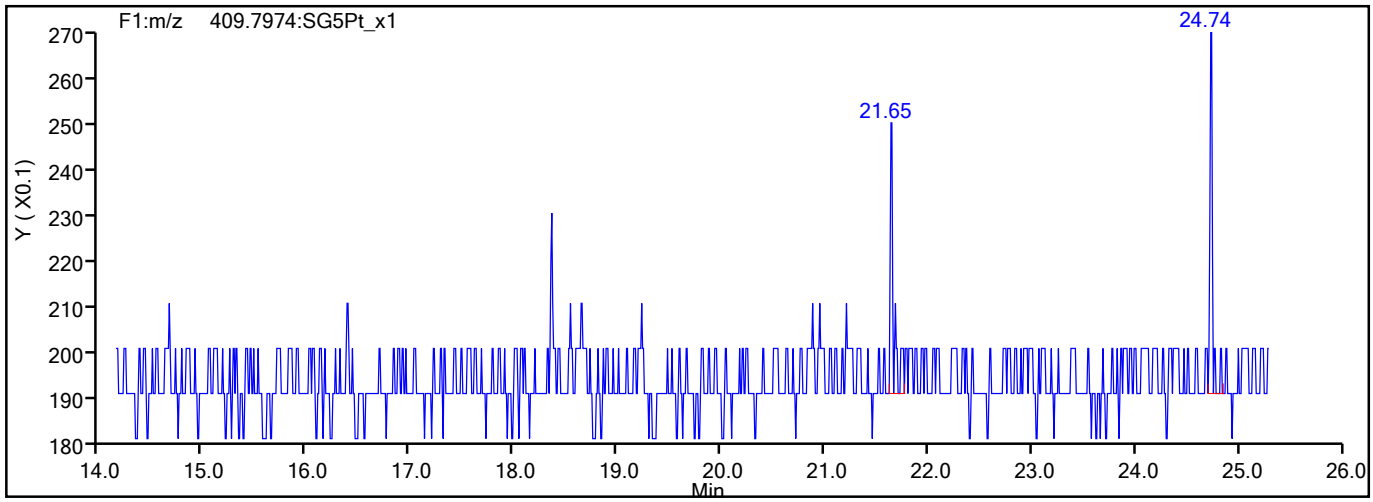

773244

Report Date: 17-Aug-2021 06:18:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

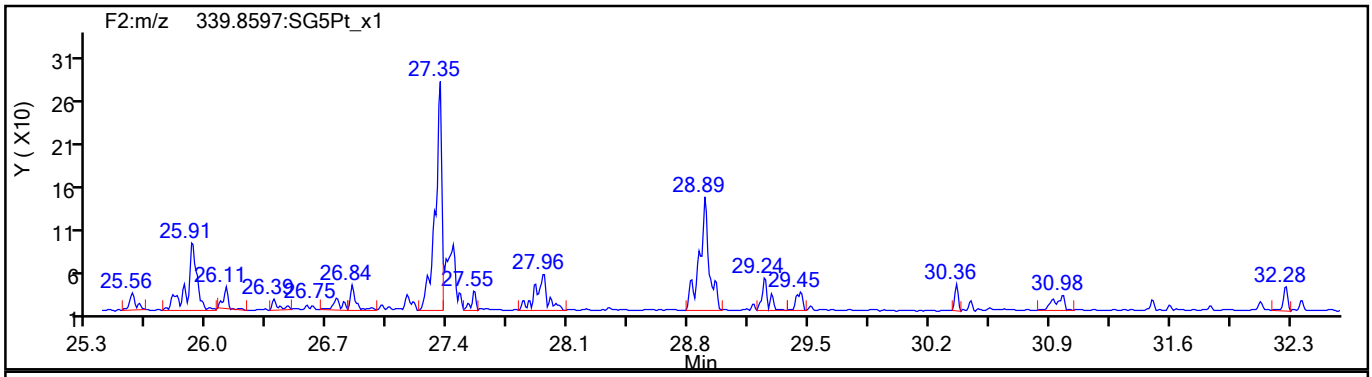

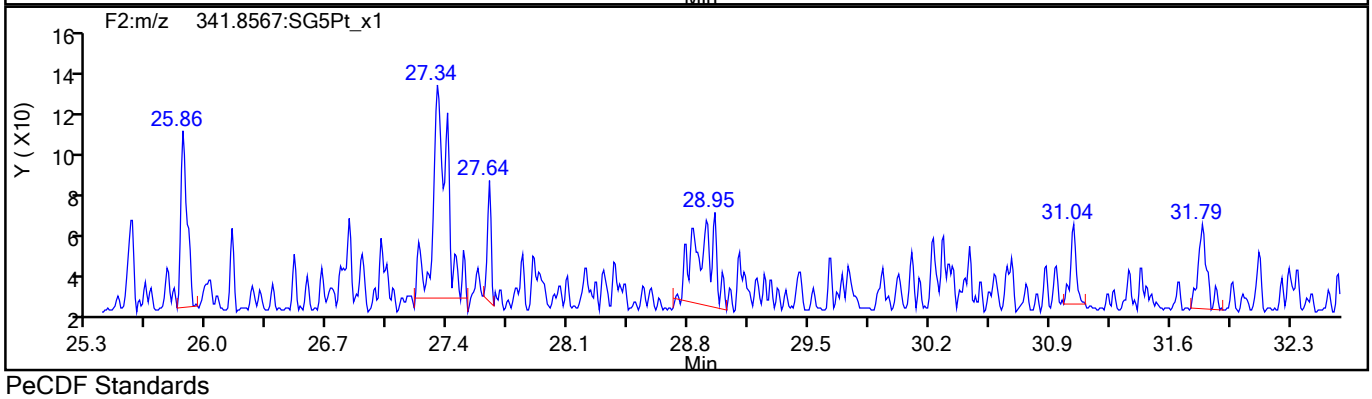

PeCDF Standards

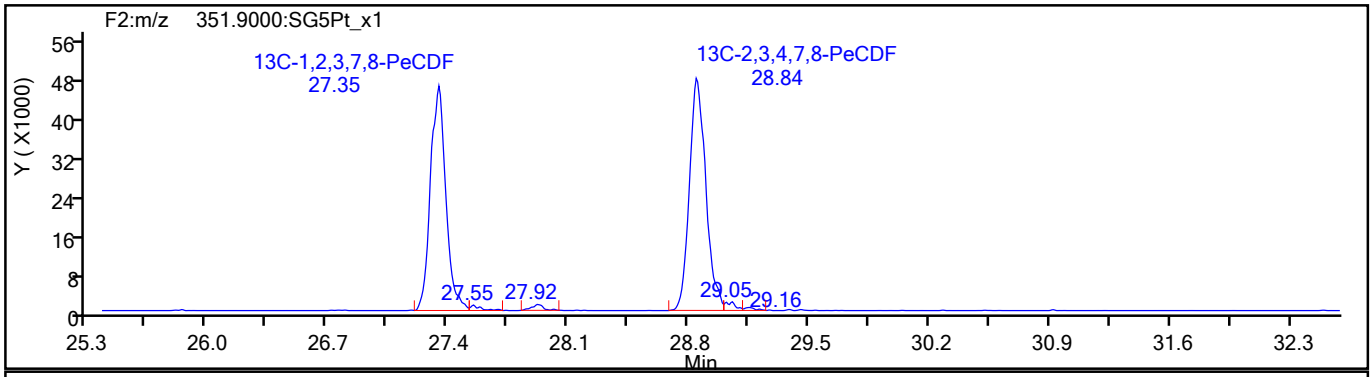

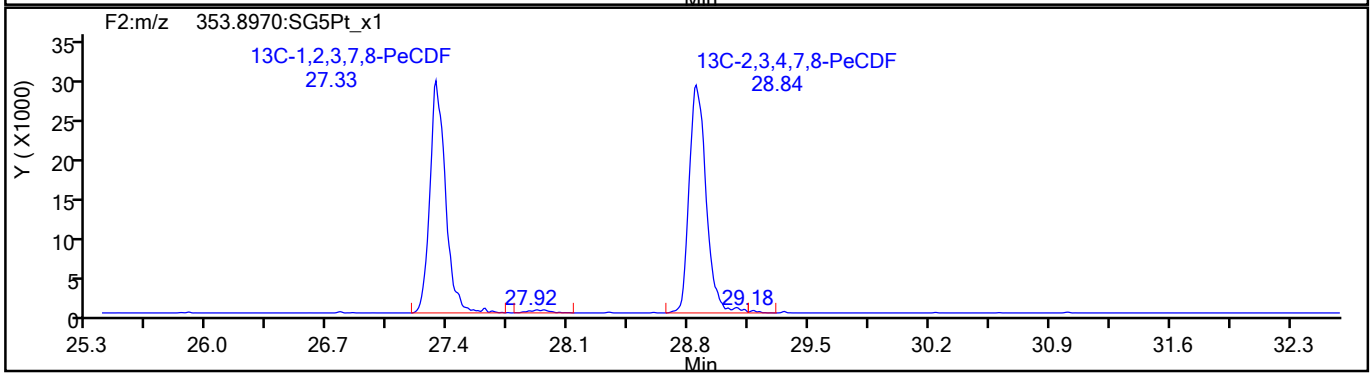

773245

Report Date: 17-Aug-2021 06:18:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

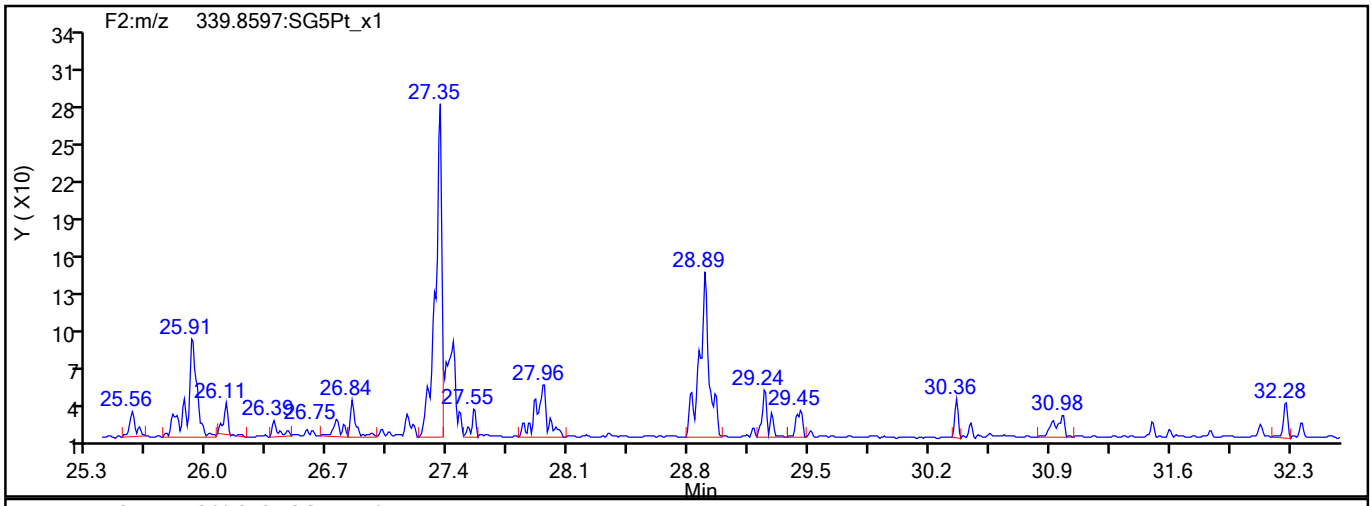

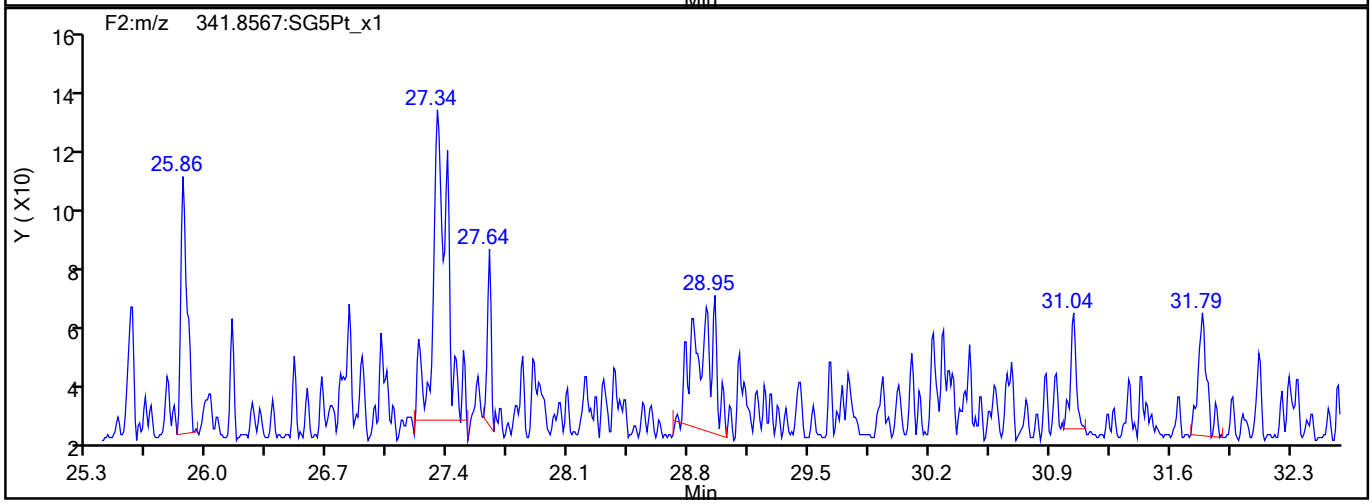

PeCDF Interference Mass

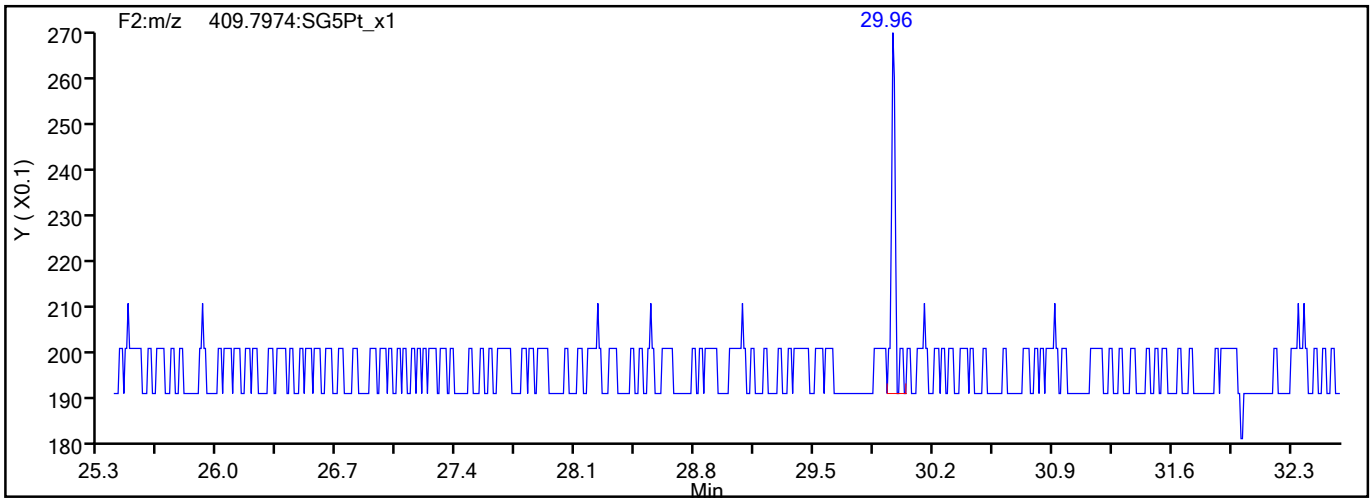

773246

Report Date: 17-Aug-2021 06:18:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

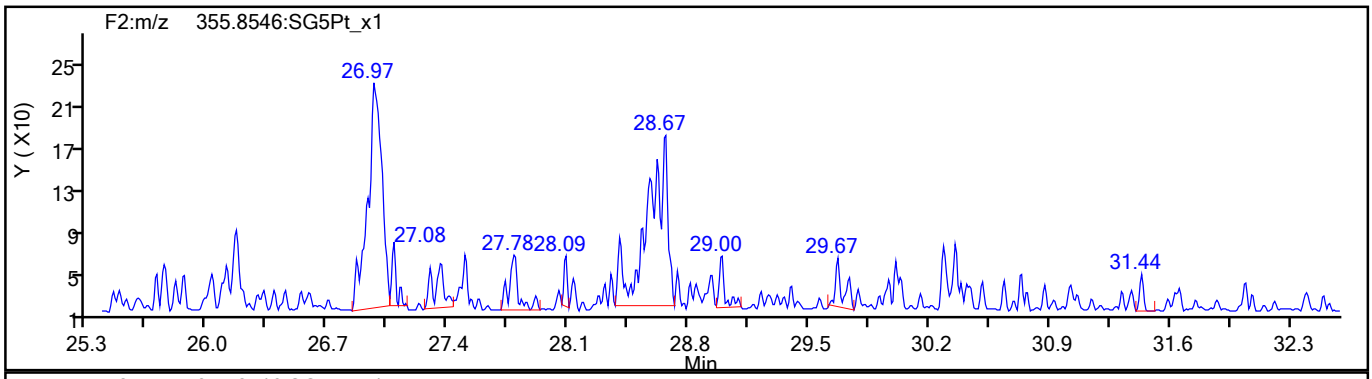

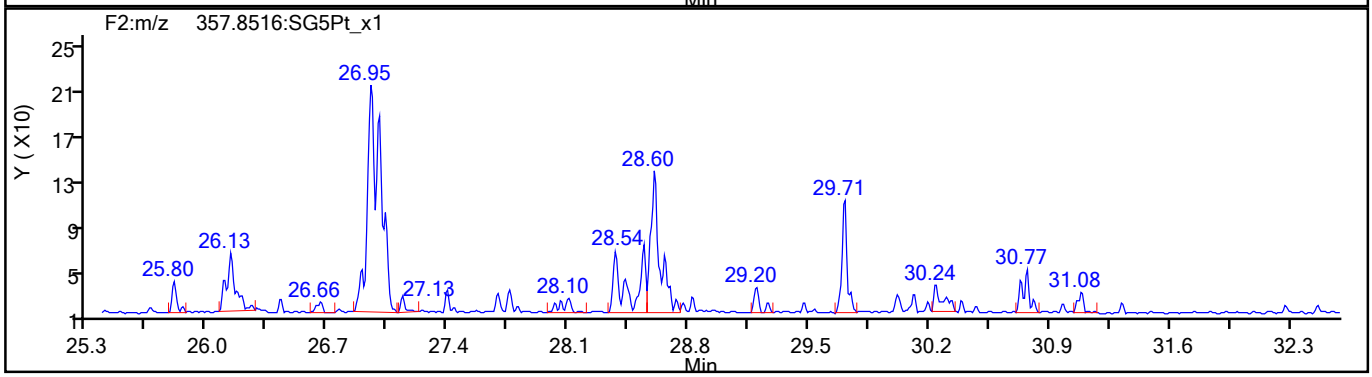

PeCDD Standards

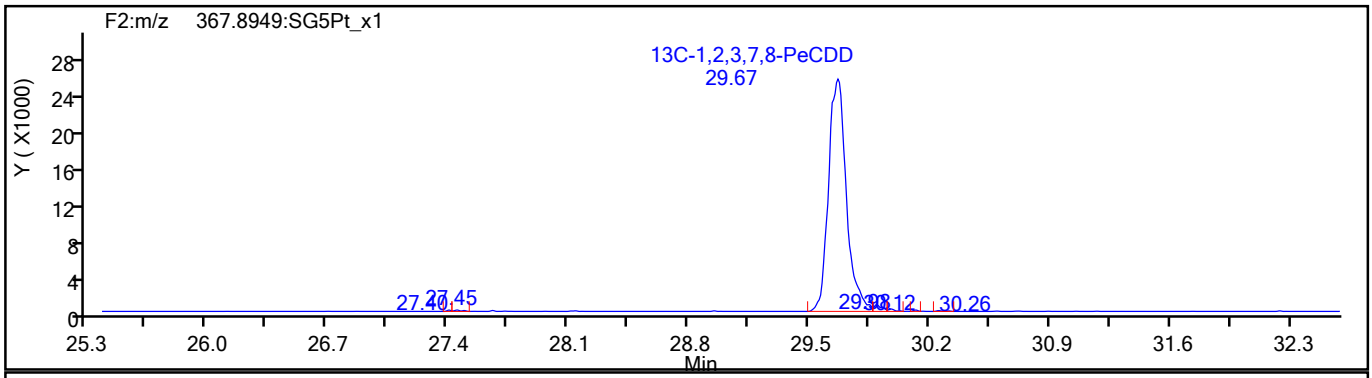

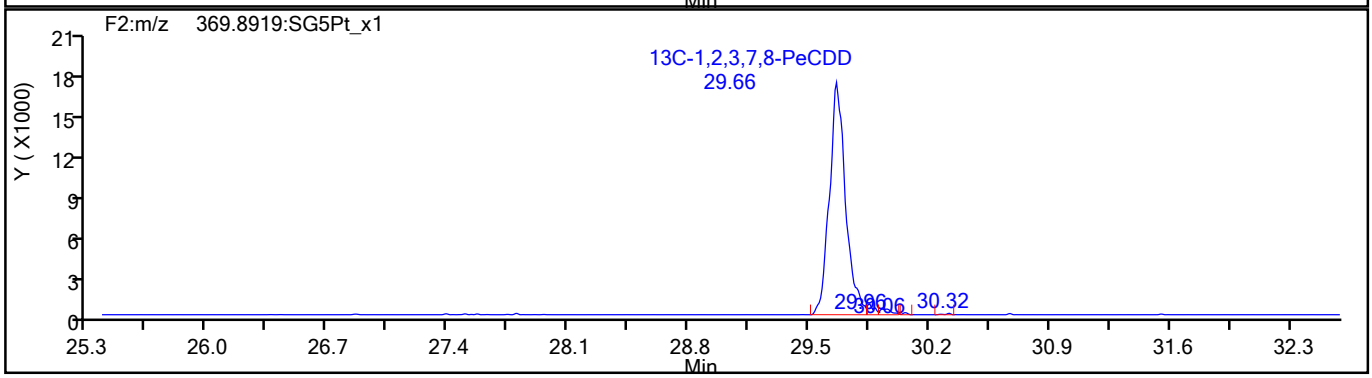

773247

Report Date: 17-Aug-2021 06:18:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

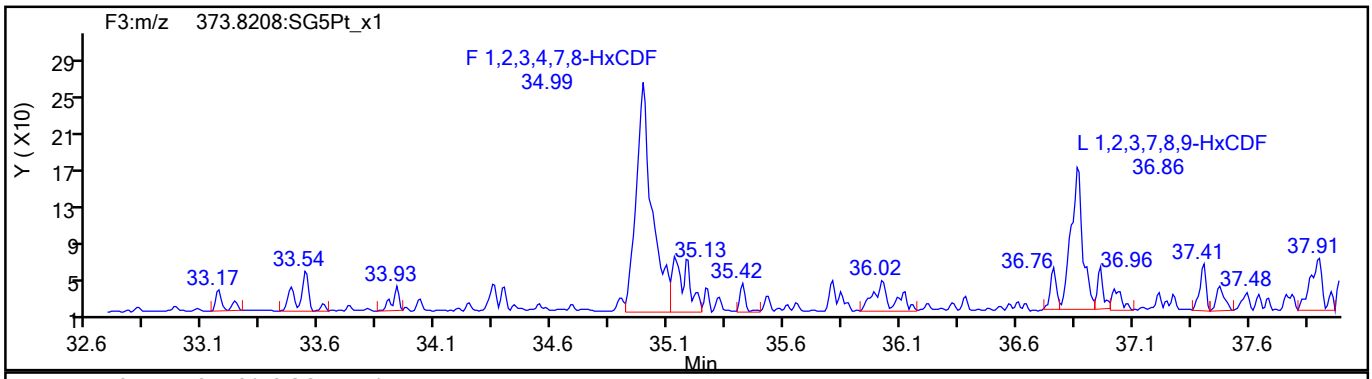

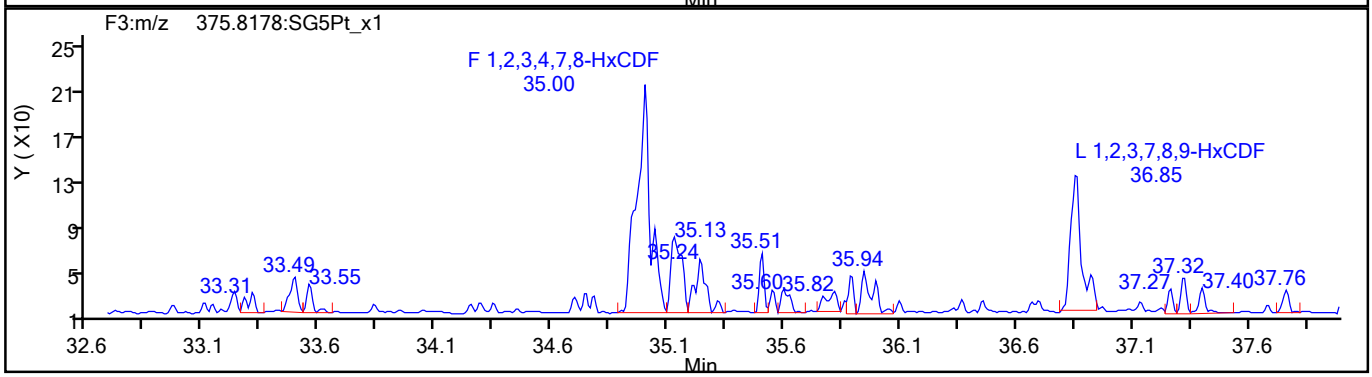

HxCDF Standards

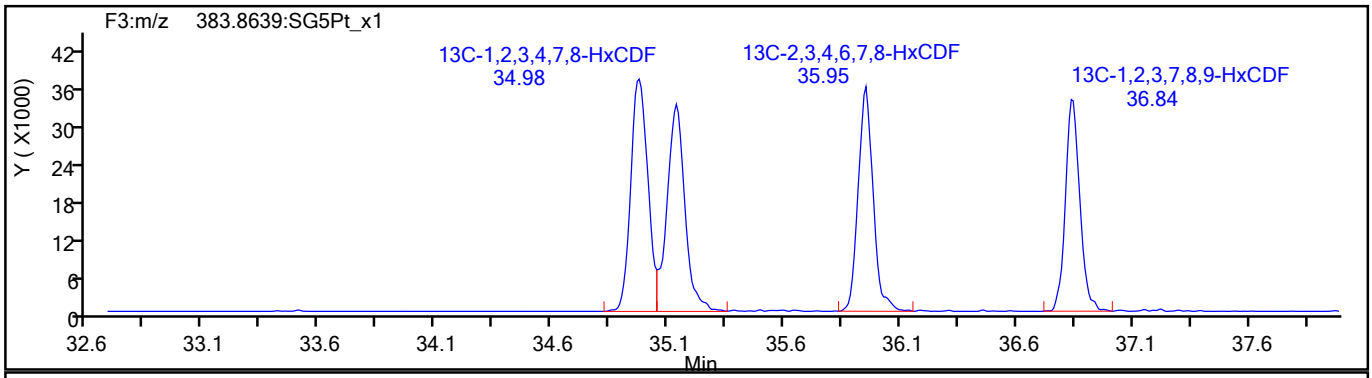

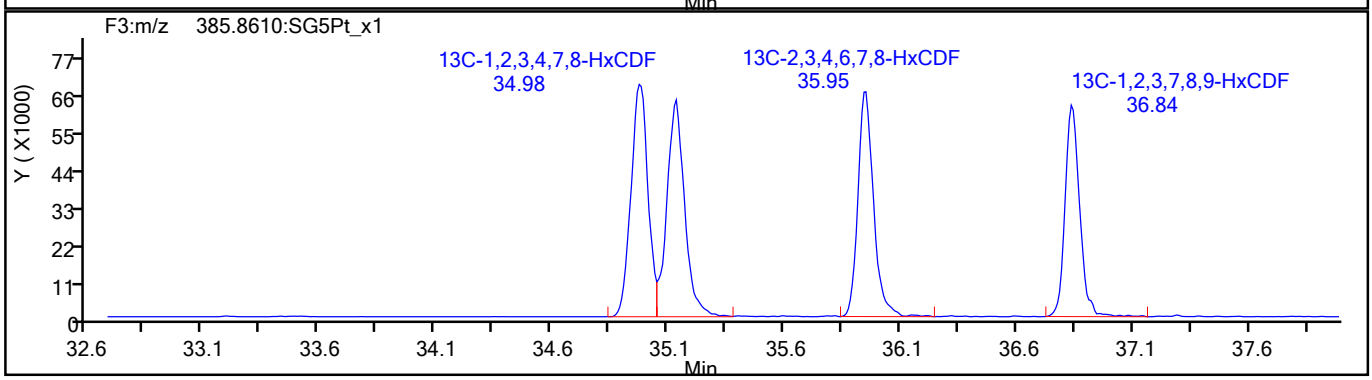

773248

Report Date: 17-Aug-2021 06:18:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

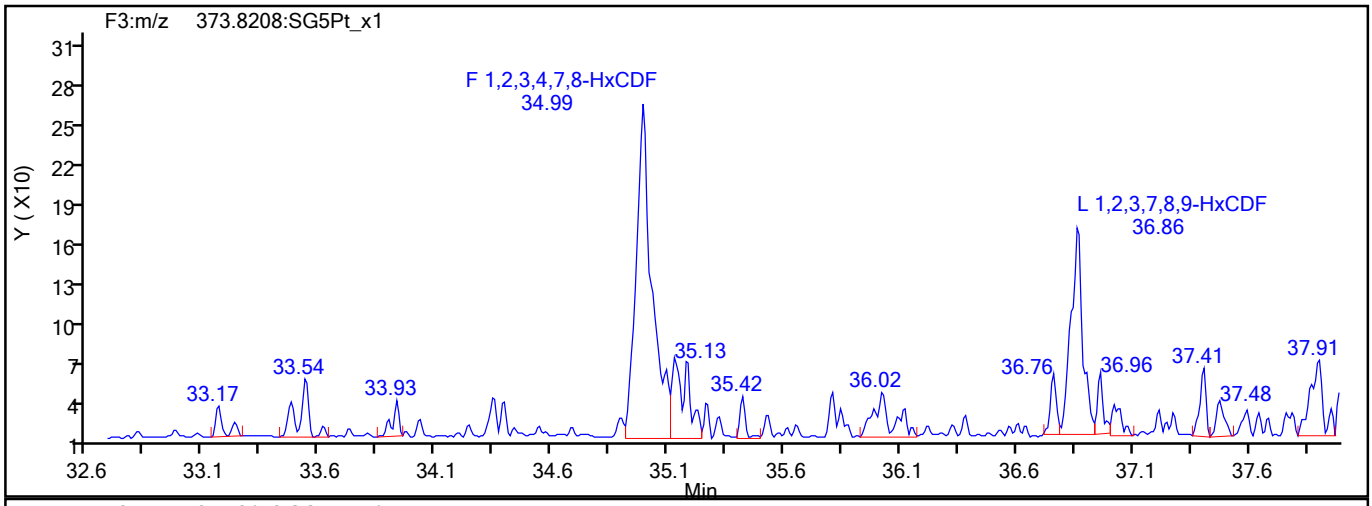

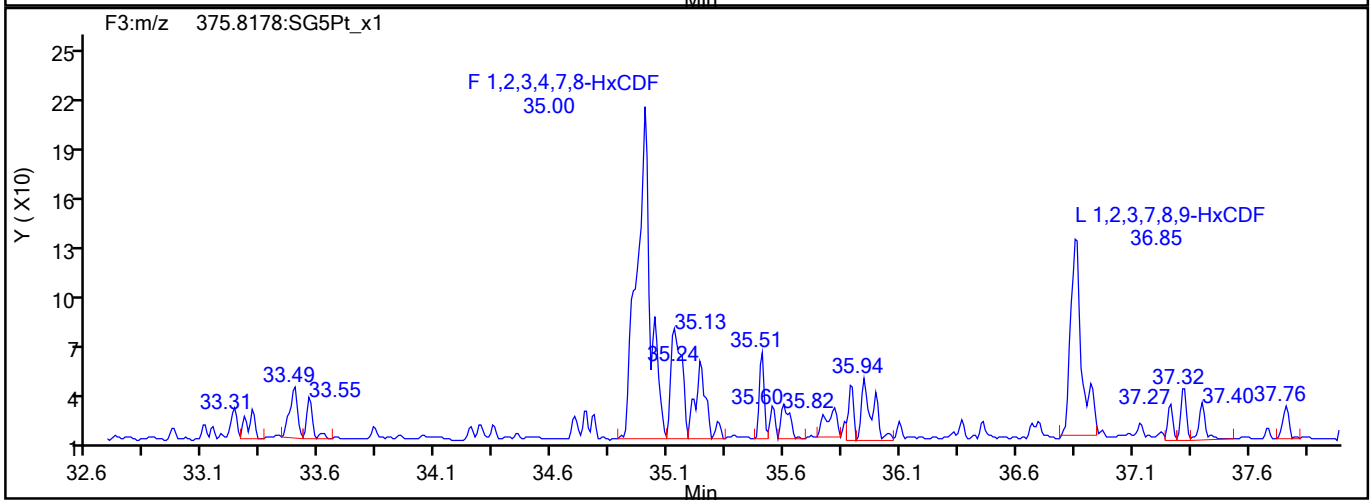

HxCDF Interference Mass

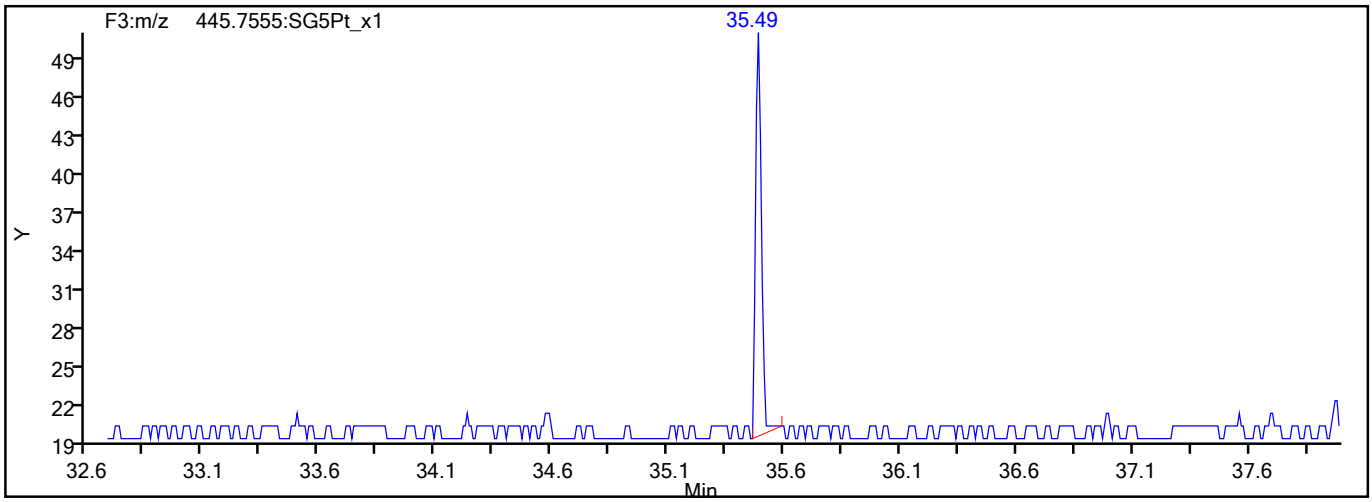

773249

Report Date: 17-Aug-2021 06:18:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

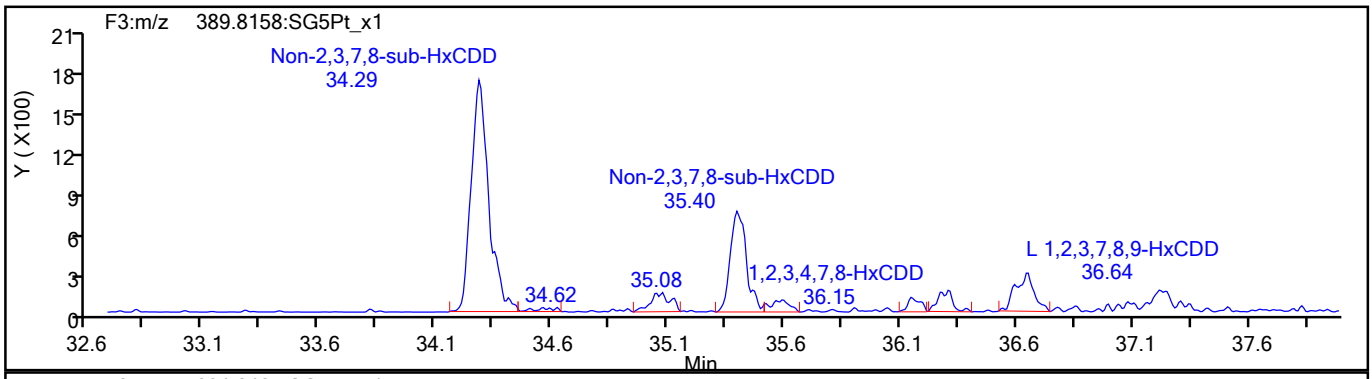

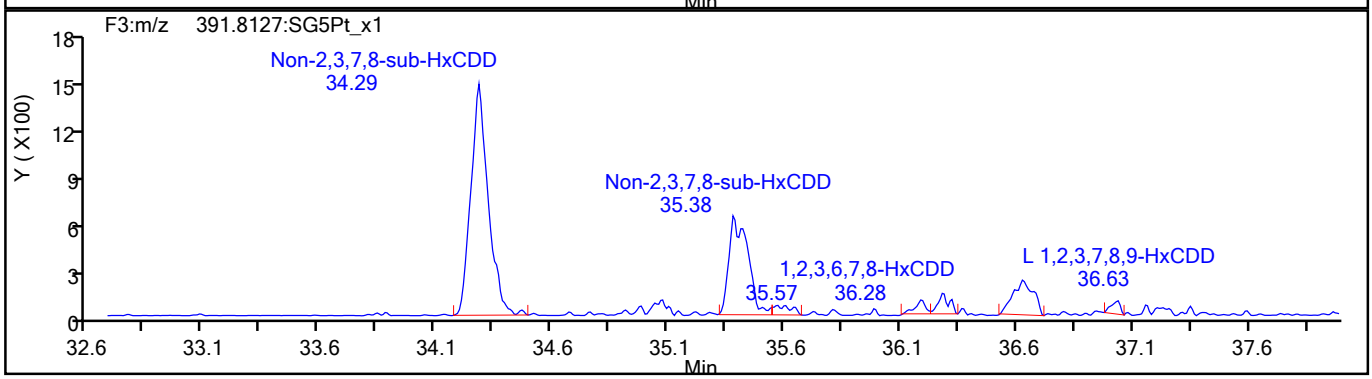

HxCDD Standards

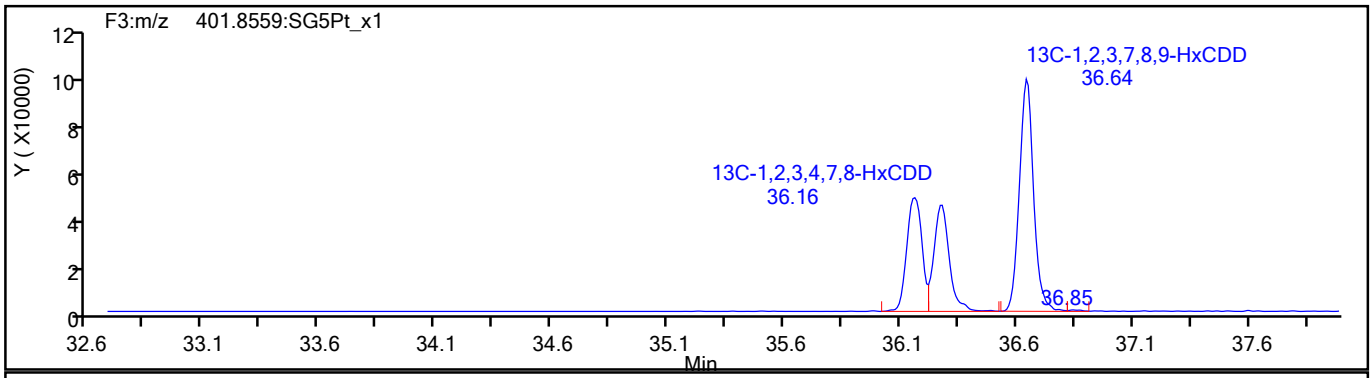

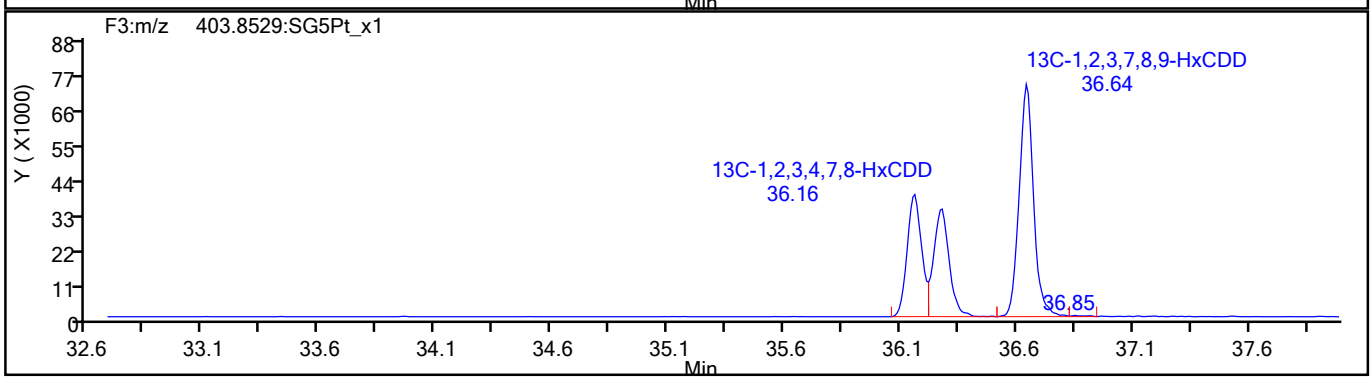

773250

Report Date: 17-Aug-2021 06:18:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

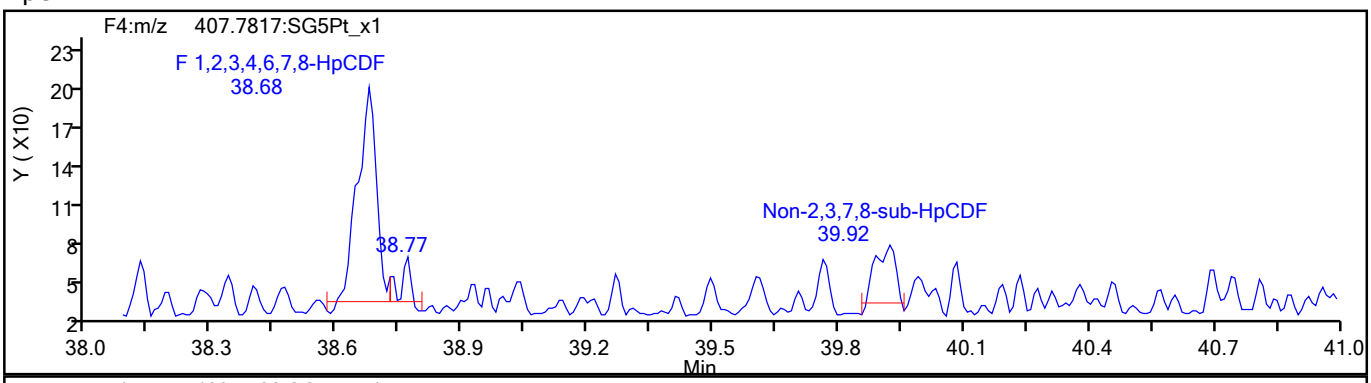

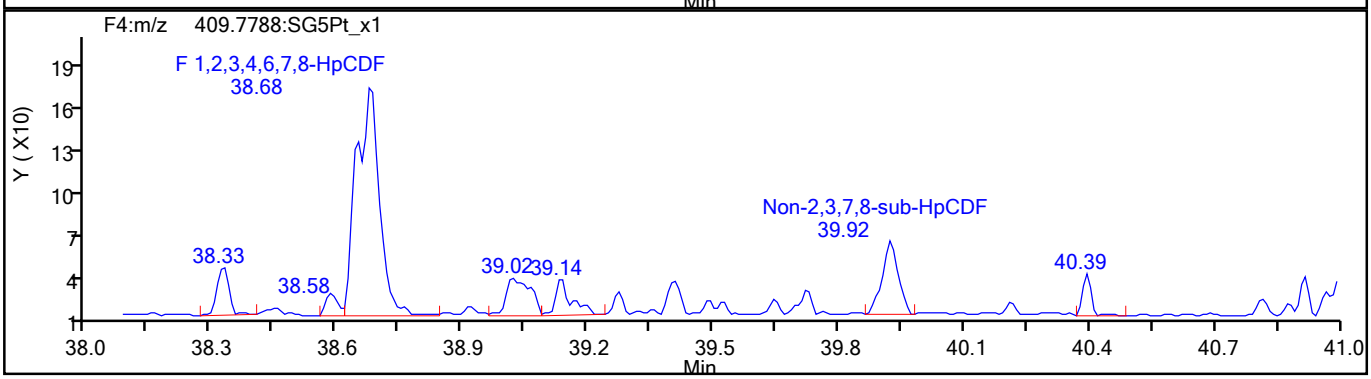

HpCDF Standards

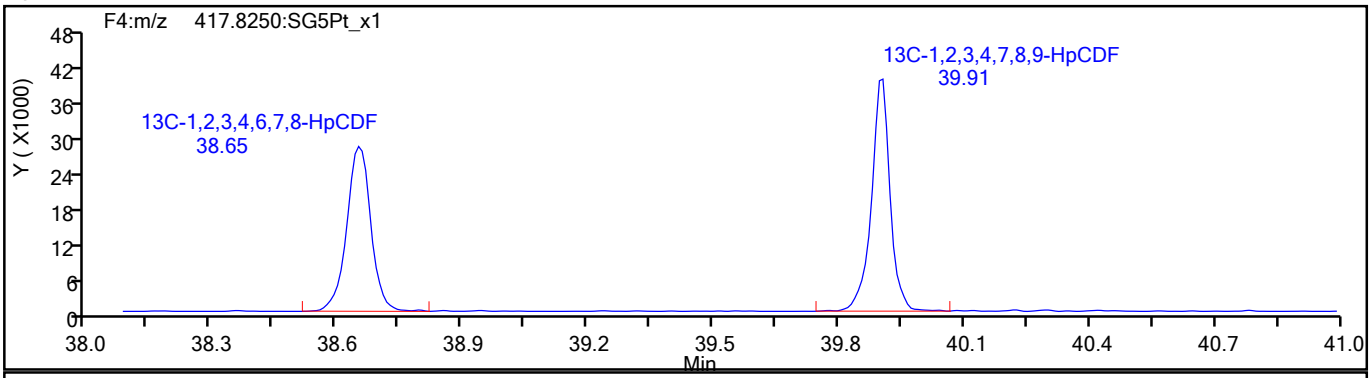

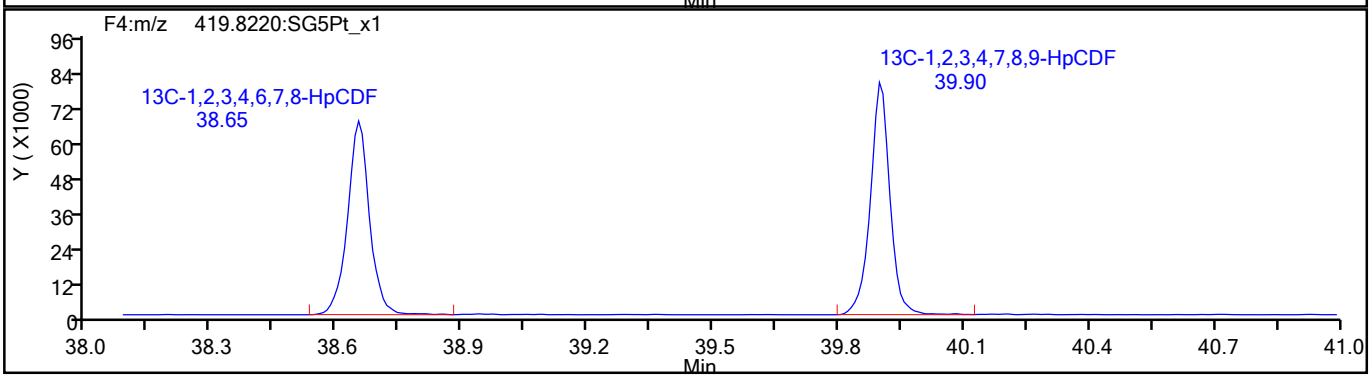

773251

Report Date: 17-Aug-2021 06:18:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

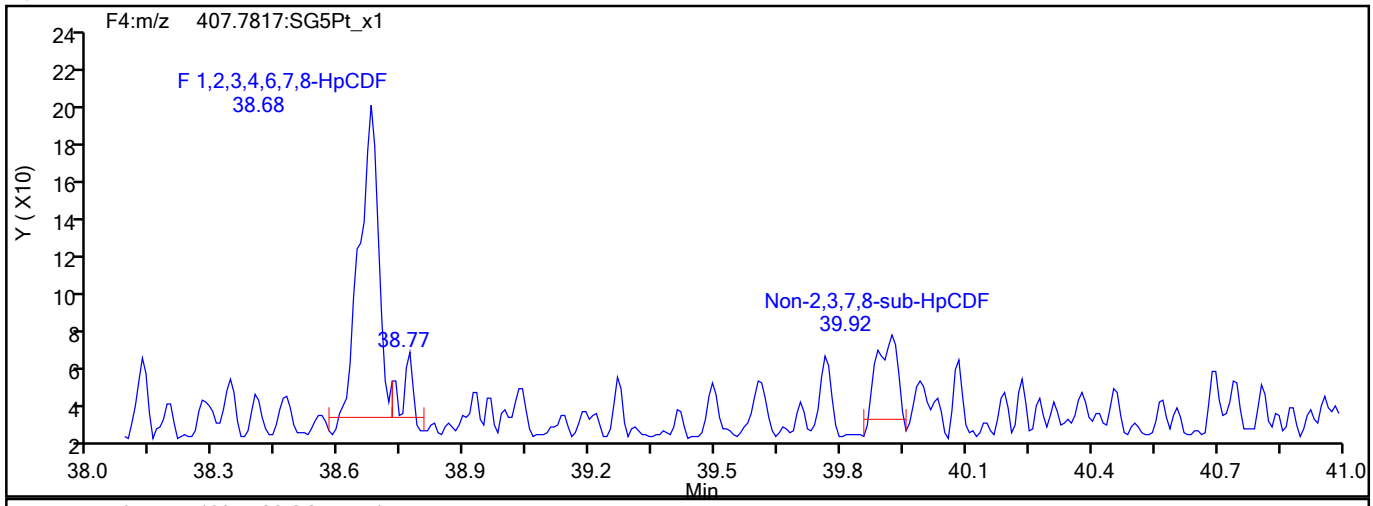

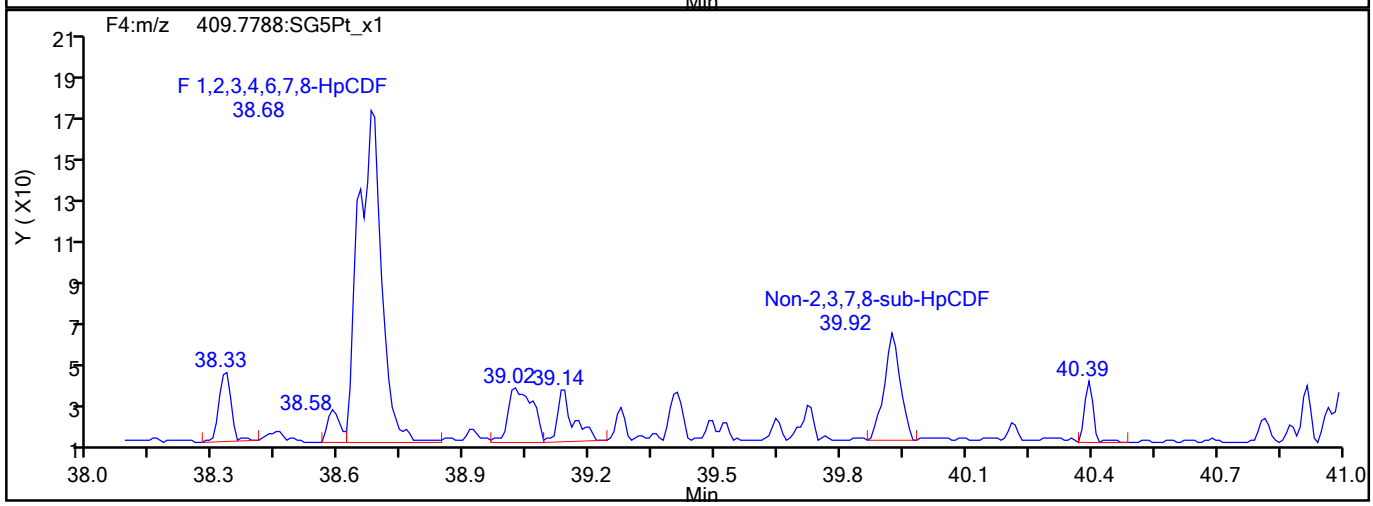

HpCDF Interference Mass

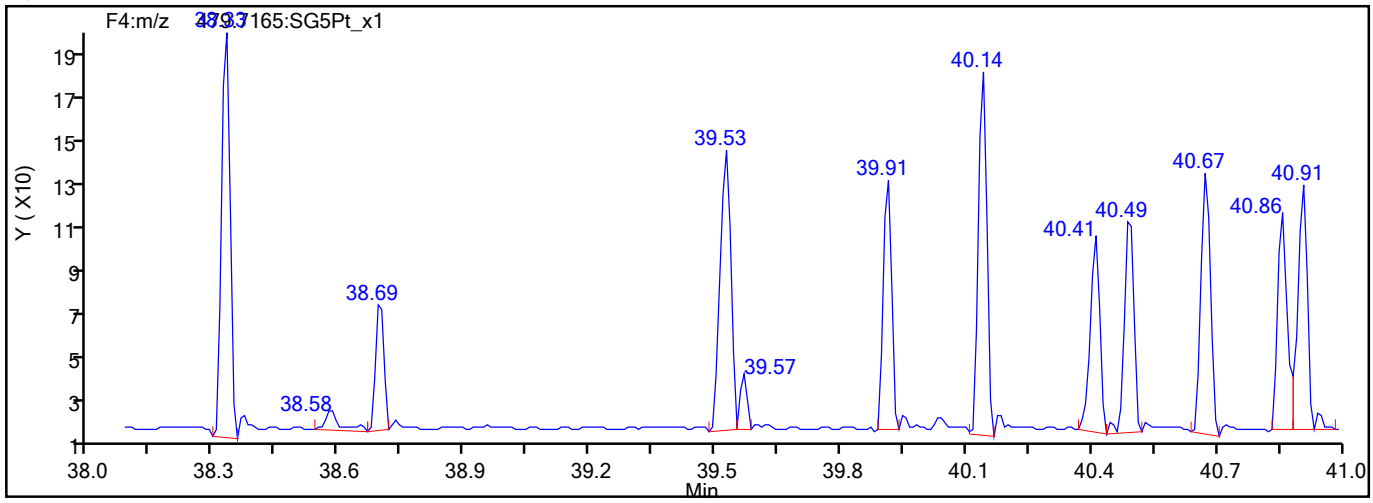

773252

Report Date: 17-Aug-2021 06:18:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

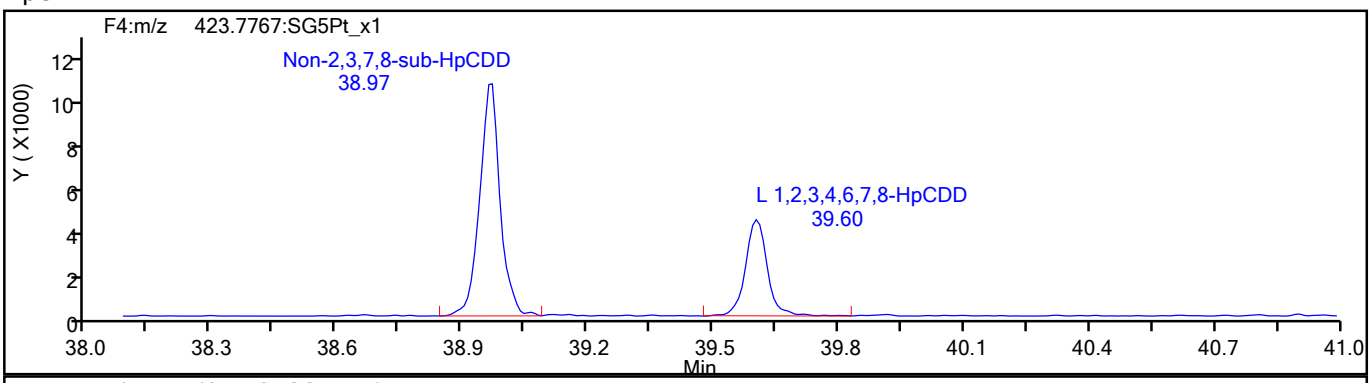

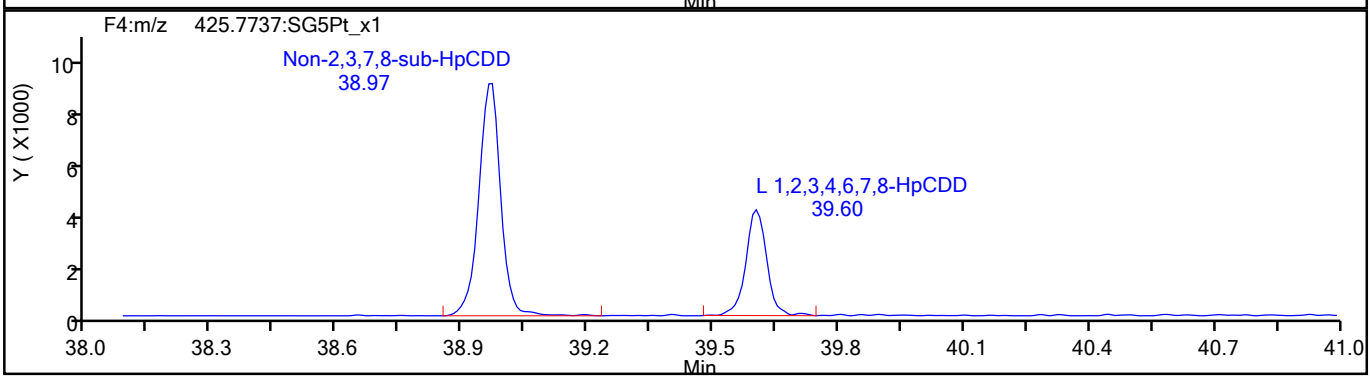

HpCDD Standards

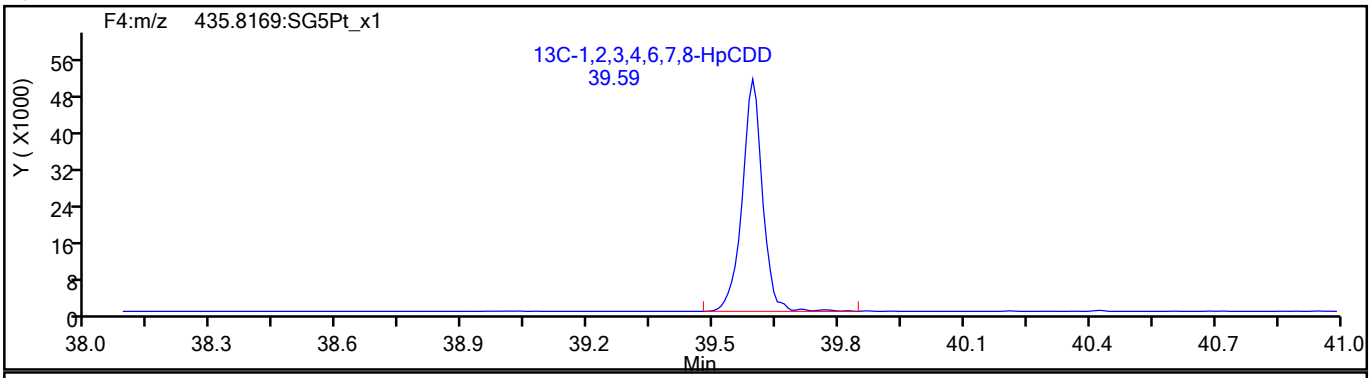

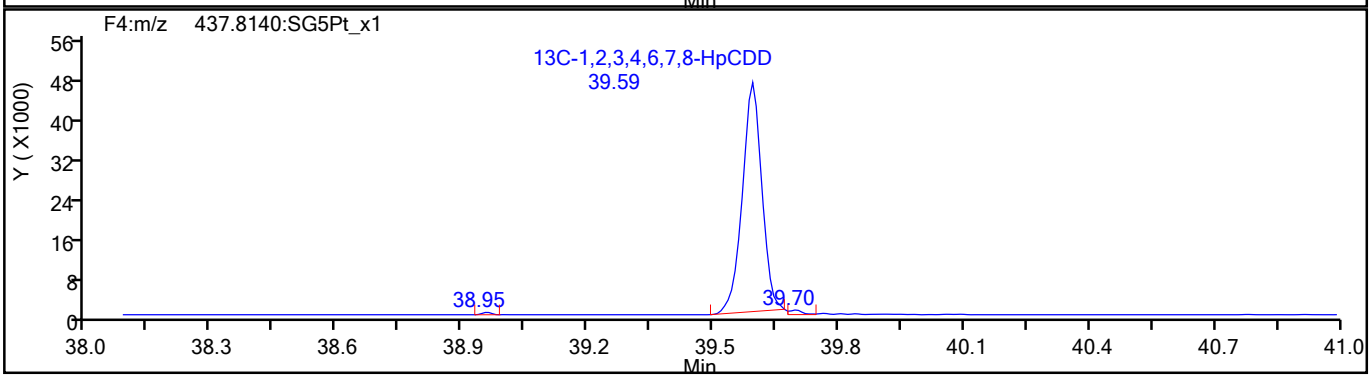

773253

Report Date: 17-Aug-2021 06:18:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

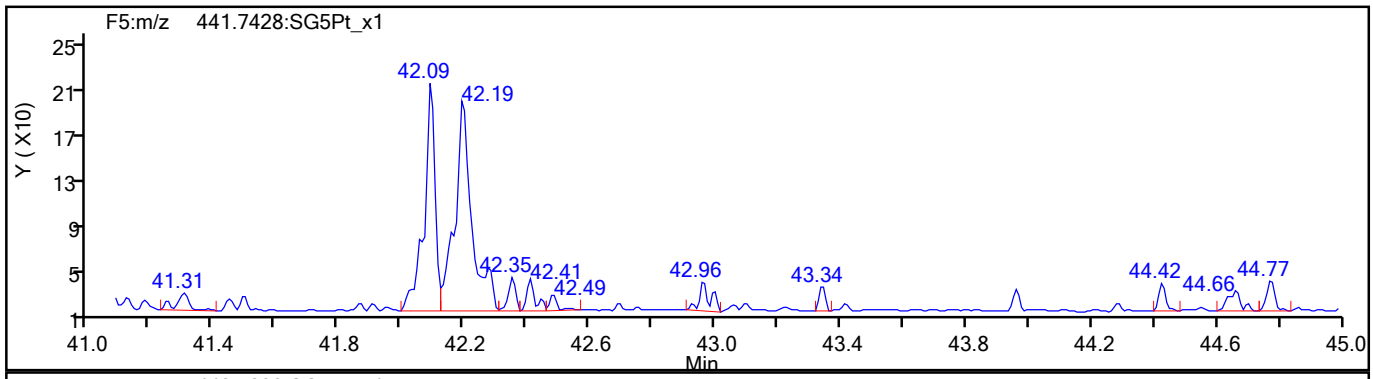

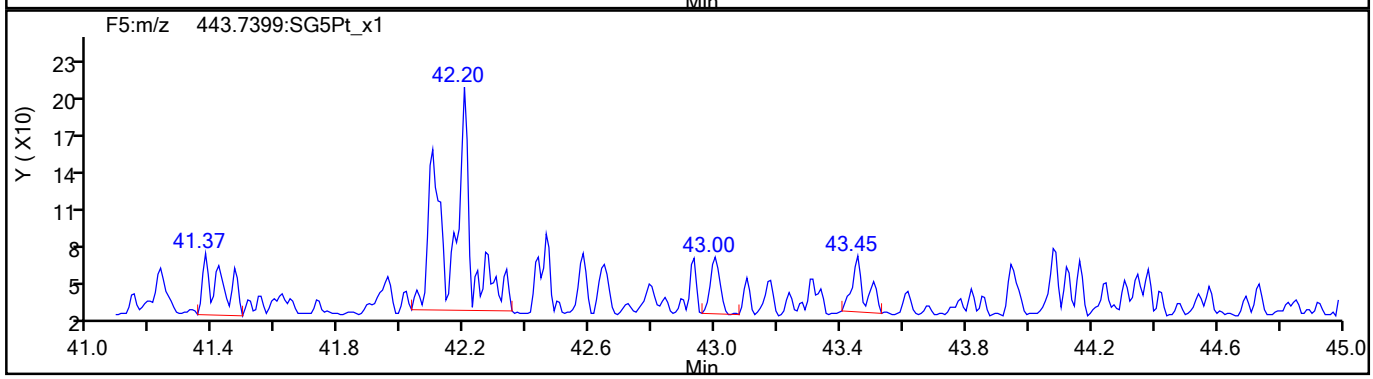

OCDF Standards

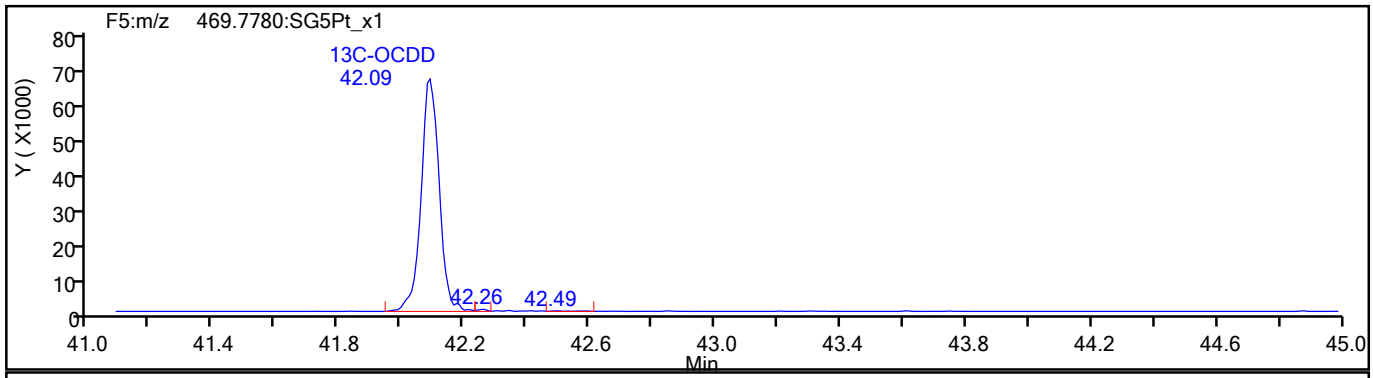

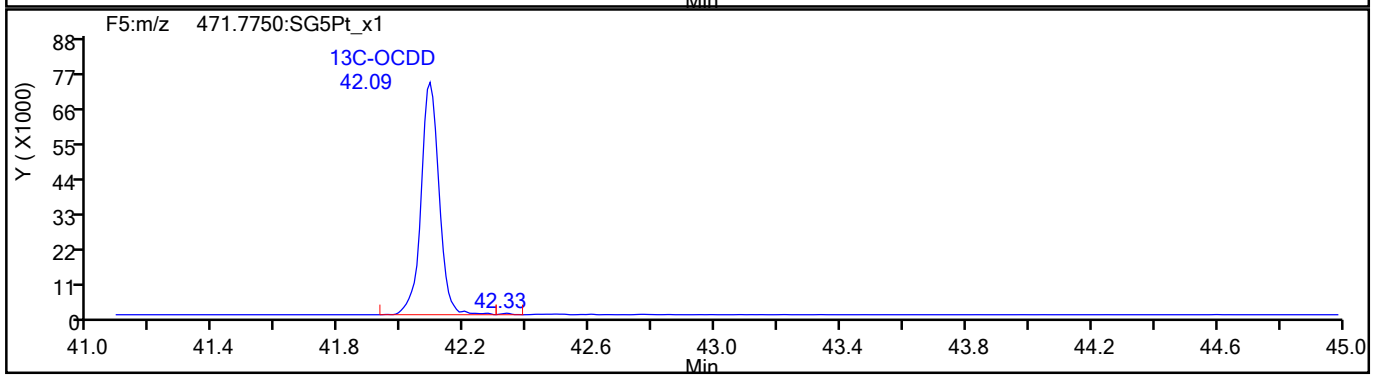

773254

Report Date: 17-Aug-2021 06:18:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

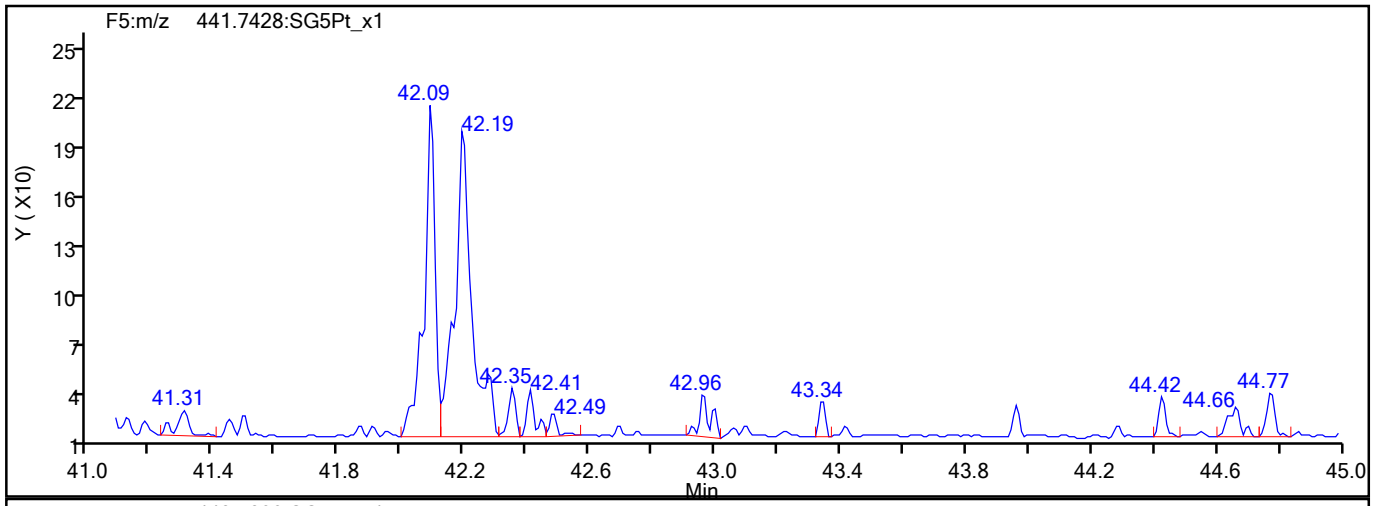

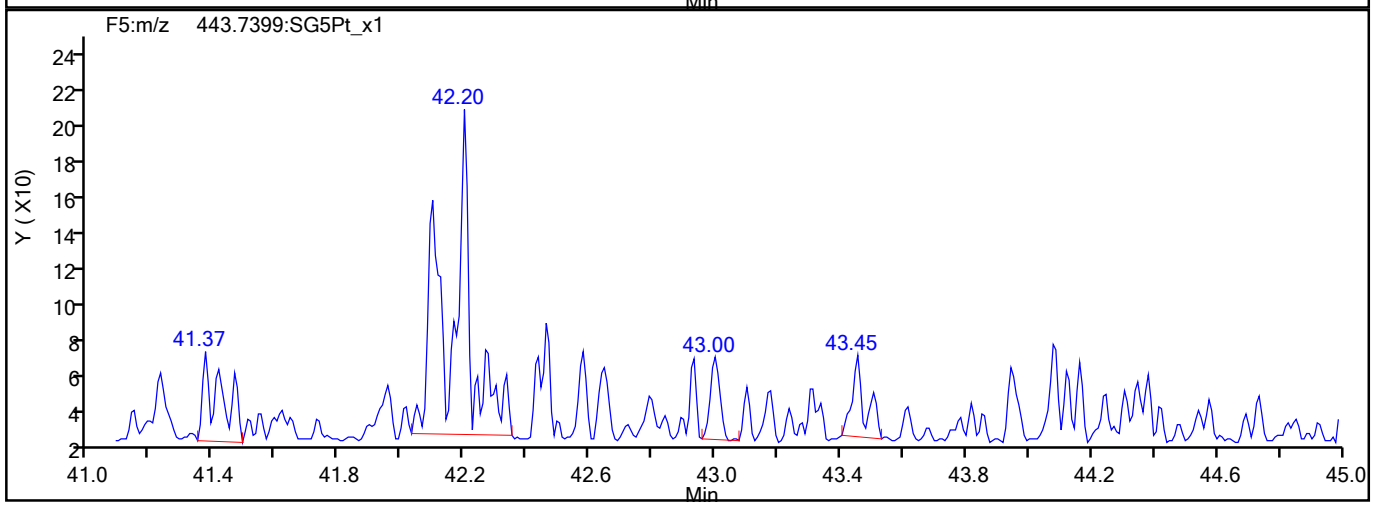

OCDF Interference Mass

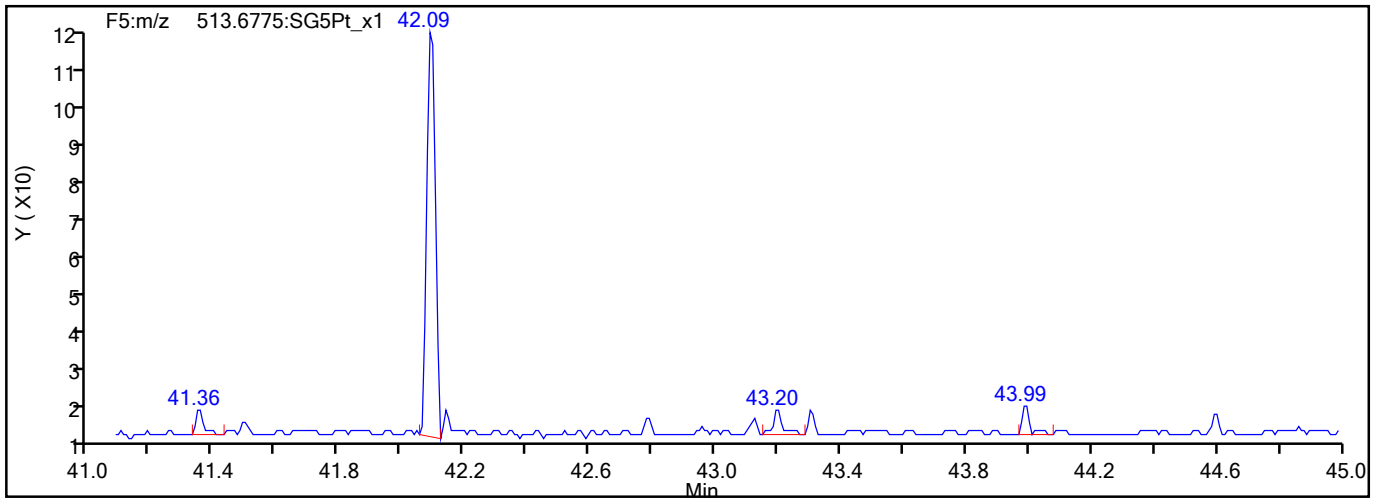

773255

Report Date: 17-Aug-2021 06:18:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

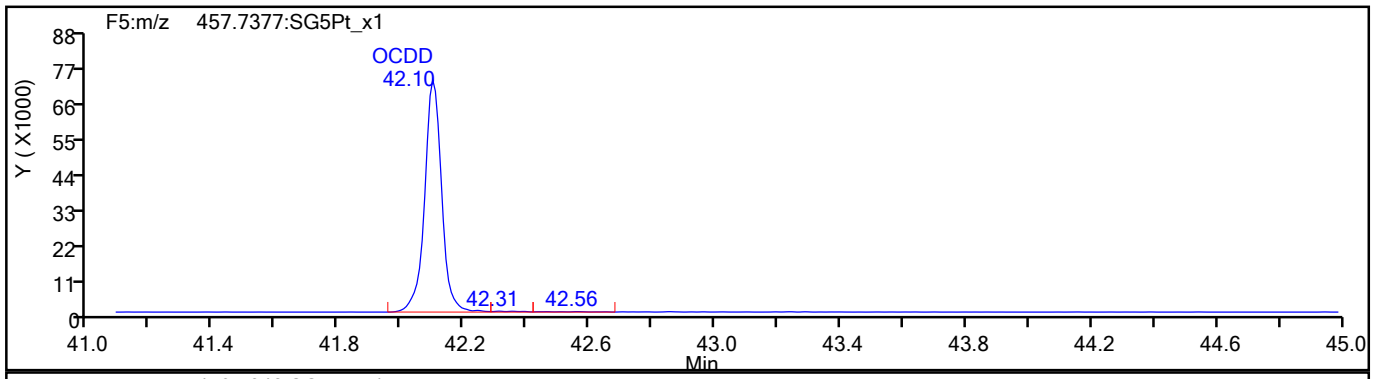

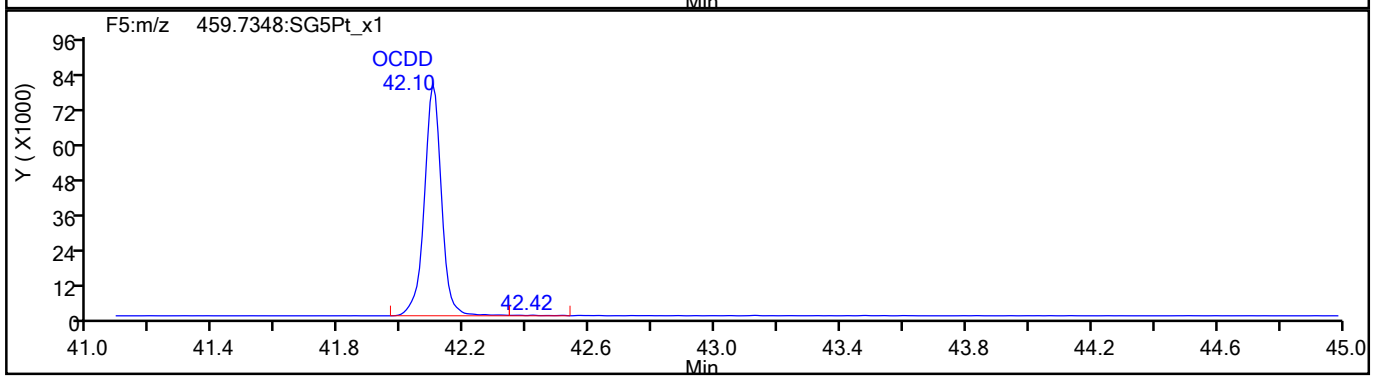

OCDD Standards

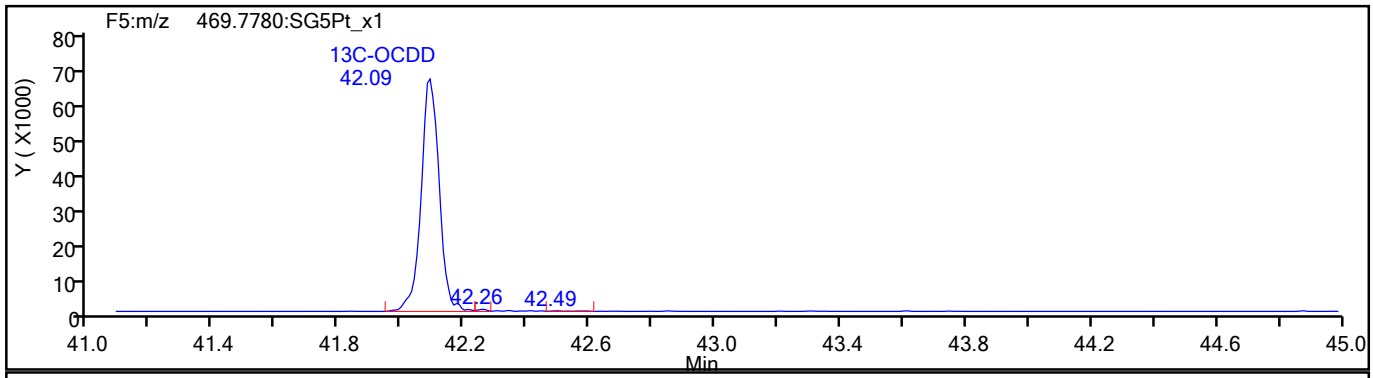

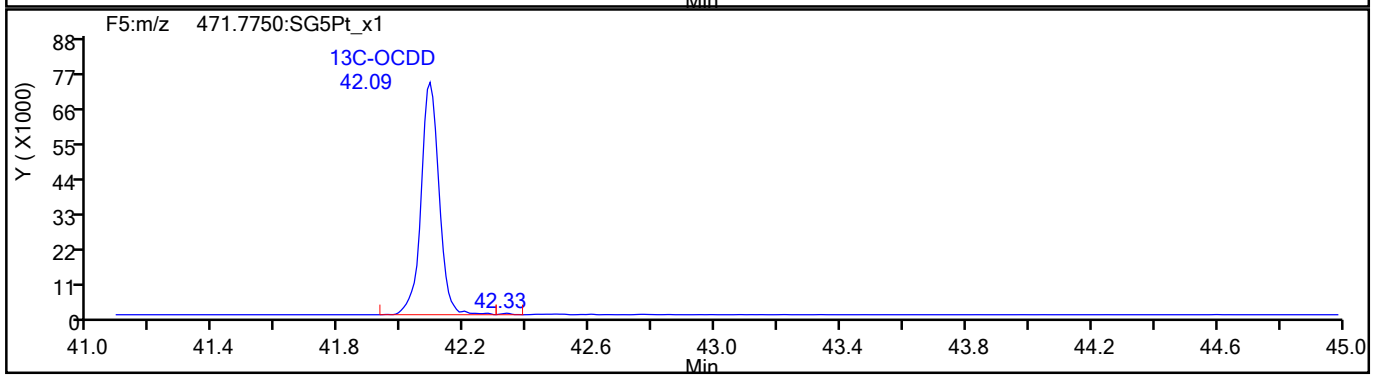

773256

Report Date: 17-Aug-2021 06:18:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

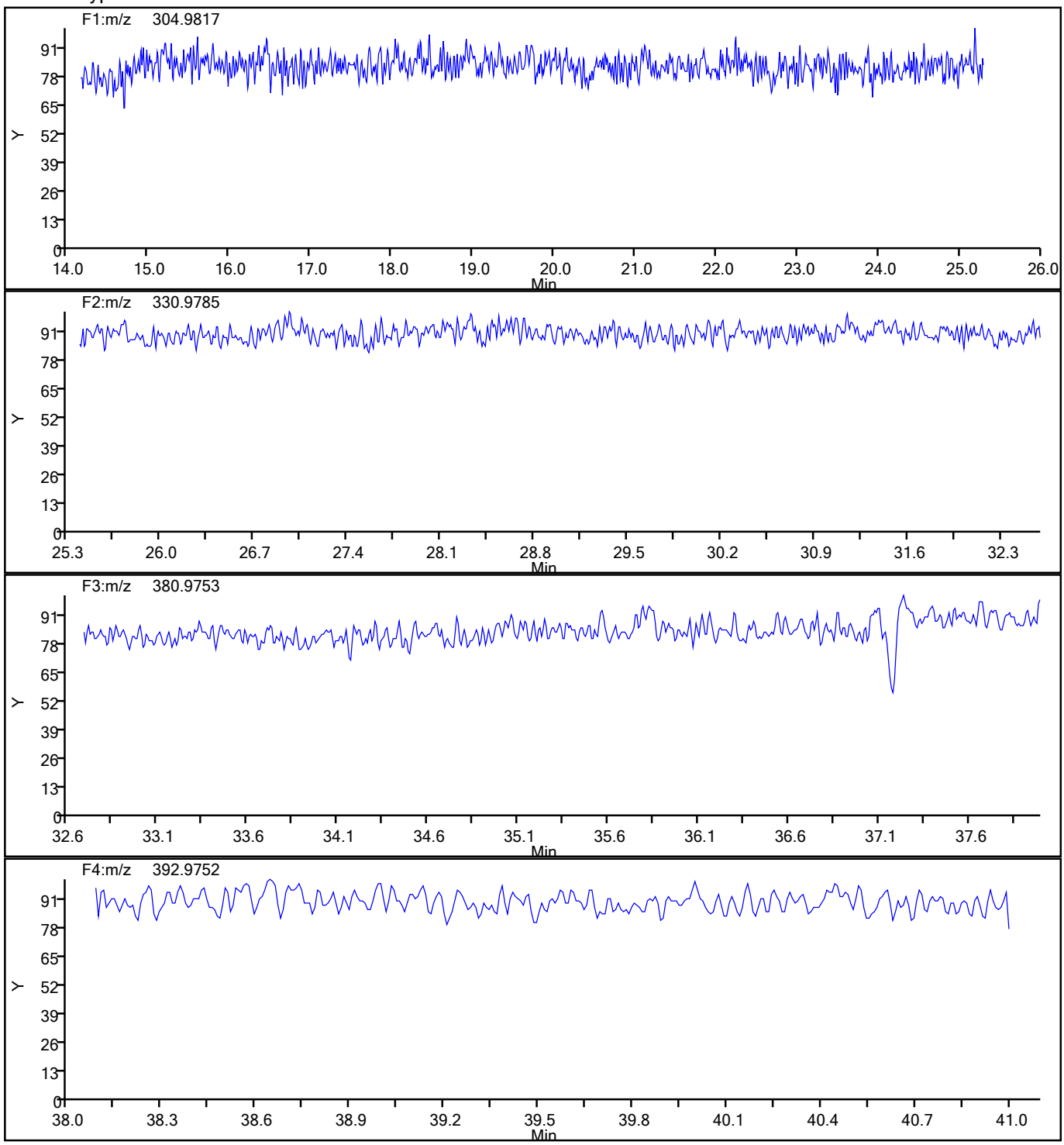

773257

Report Date: 17-Aug-2021 06:18:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_24.d		
Injection Date:	14-Aug-2021 07:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	516475	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

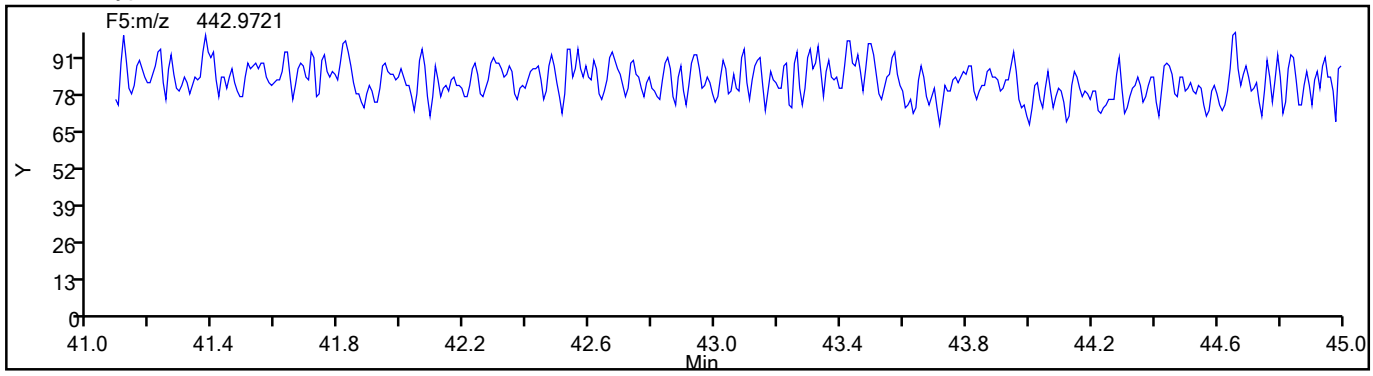

773258

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76765-2
SDG No.:
Client Sample ID: 11215702-072521-BN-SJSB092 (16-18) RA
Lab Sample ID: 320-76765-19 RA
Matrix: Sediment
Lab File ID: 21AU2111D2_008.d
Analysis Method: 1613B
Date Collected: 07/25/2021 14:40
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 10.50(g)
Date Analyzed: 08/21/2021 18:23
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 16.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518850
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	20	B	1.1	0.23

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	56		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	74		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_008.d
Lims ID: 320-76765-A-19-A
Client ID: 11215702-072521-BN-SJSB092 (16-18)
Sample Type: Client
Inject. Date: 21-Aug-2021 18:23:03 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76765-A-19-A RI
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:03:08

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.323	38781484	0.72	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.640	28733534	0.79	1.3327	55.6	55.6	0.2120	0.2120	55.60	
2,3,7,8-TCDF	17.667	2473940	0.77	0.9978	8.629	8.629	0.1001	0.1001		M
D 13C-2,3,7,8-TCDD	16.090	18882499	0.74	0.8749	55.7	55.7	0.6908	0.6908	55.65	
2,3,7,8-TCDD	16.104	497066	0.87	1.0570	2.490	2.490	0.1126	0.1126		
$ 37Cl4-2,3,7,8-TCDD	16.104	9933226		0.8648	29.6	29.6	0.0764	0.0764	74.04	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_008.d
Lims ID: 320-76765-A-19-A
Client ID: 11215702-072521-BN-SJSB092 (16-18)
Sample Type: Client
Inject. Date: 21-Aug-2021 18:23:03 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76765-A-19-A RI
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:03:08

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.323	16.309	1		16297451	3594003	9180	22950	392		
333.9339	16.323	16.309	1		22484033	4876573	11299	28247	432	0.72(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.640	17.640	0	1.081	12702933	2346070	5001	12502	469		
317.9389	17.640	17.640	0	1.081	16030601	3004908	4571	11427	657	0.79(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.667	17.653	1	1.002	1075928	176898	900	2250	197		
305.8987	17.653	17.653	0	1.001	1398012	266034	1238	3095	215	0.77(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.090	16.076	1	0.986	8026465	1796997	9180	22950	196		
333.9339	16.076	16.076	0	0.985	10856034	2396316	11299	28247	212	0.74(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.104	16.103	0	1.001	231250	51662	963	2407	54		
321.8936	16.104	16.103	0	1.001	265816	56566	1033	2582	55	0.87(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.104	16.103	0	0.987	9933226	2258178	2239	5597	1009		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_008.d				
Injection Date:	21-Aug-2021 18:23:03	Instrument ID:	11D2		
Lims ID:	320-76765-A-19-A	Lab Sample ID:	320-76765-19		
Client ID:	11215702-072521-BN-SJSB092 (16-18)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.65
Area: 1408344
Amount: 8.664902
Amount Units: pg/ul

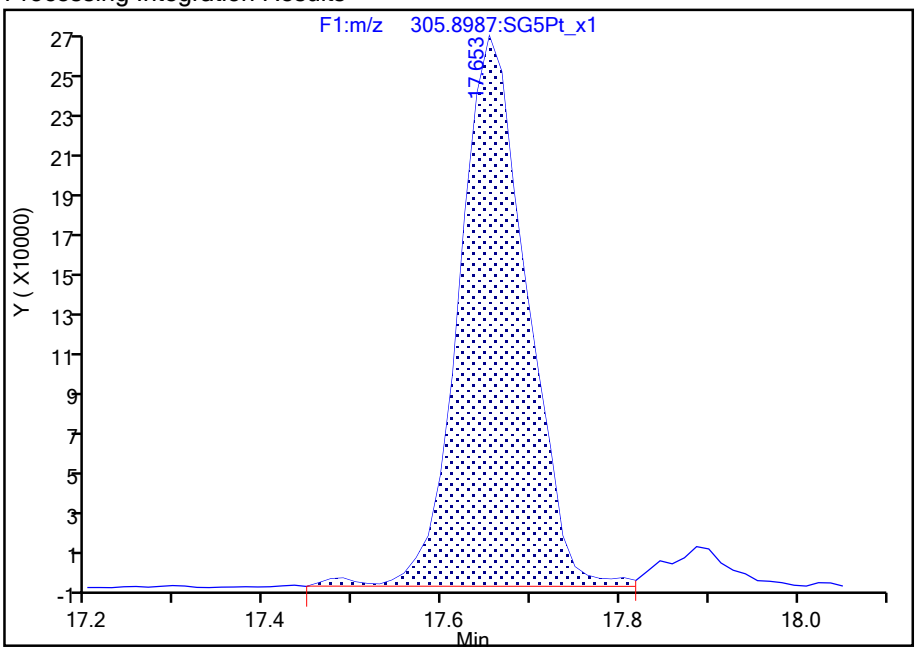

Manual Integration Results

RT: 17.65
Area: 1398012
Amount: 8.628865
Amount Units: pg/ul

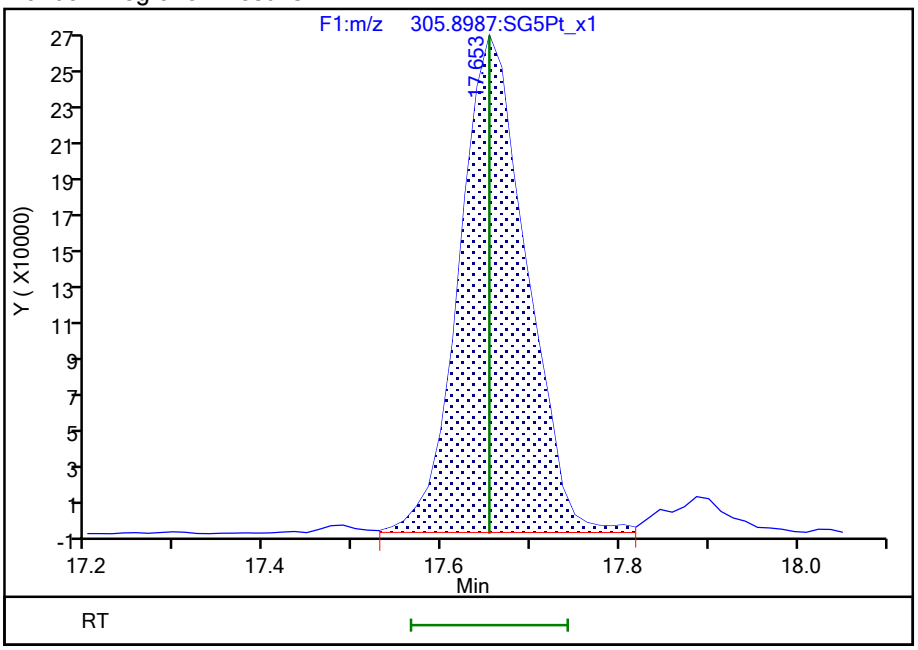

Reviewer: bennettd, 23-Aug-2021 10:02:58

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 23-Aug-2021 10:28:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_008.d		
Injection Date:	21-Aug-2021 18:23:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	518850	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

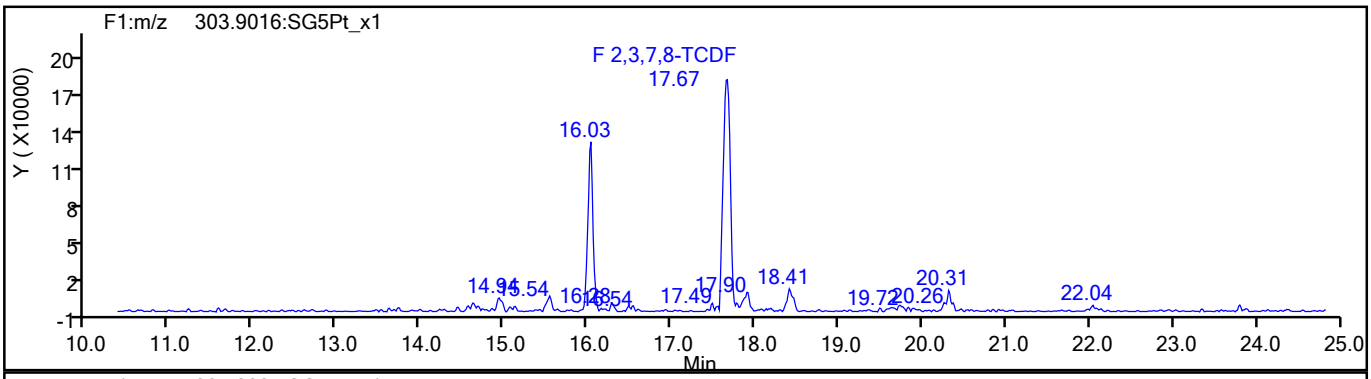

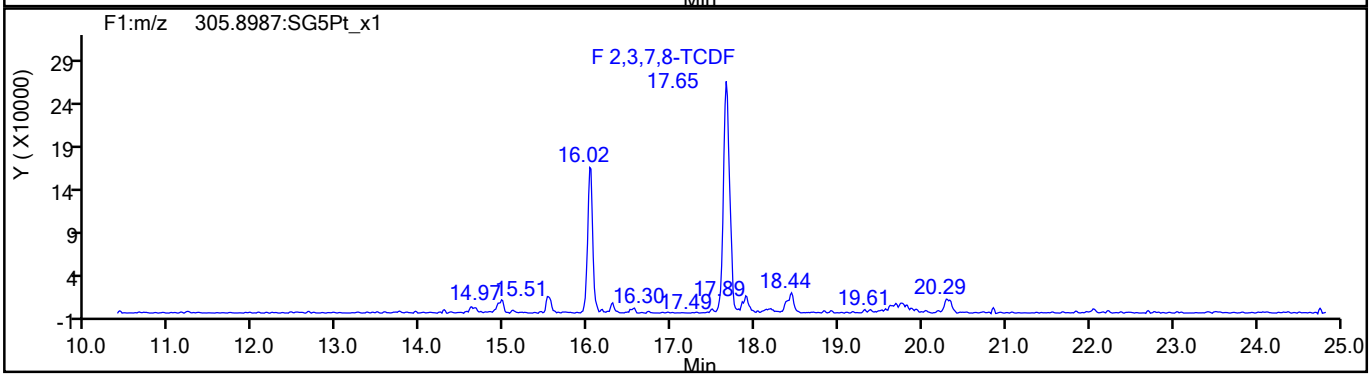

TCDF Standards

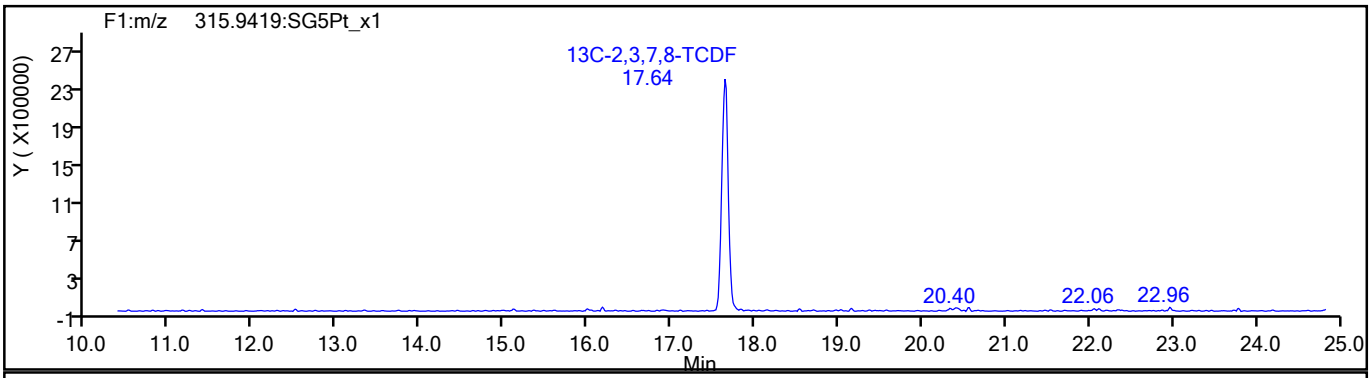

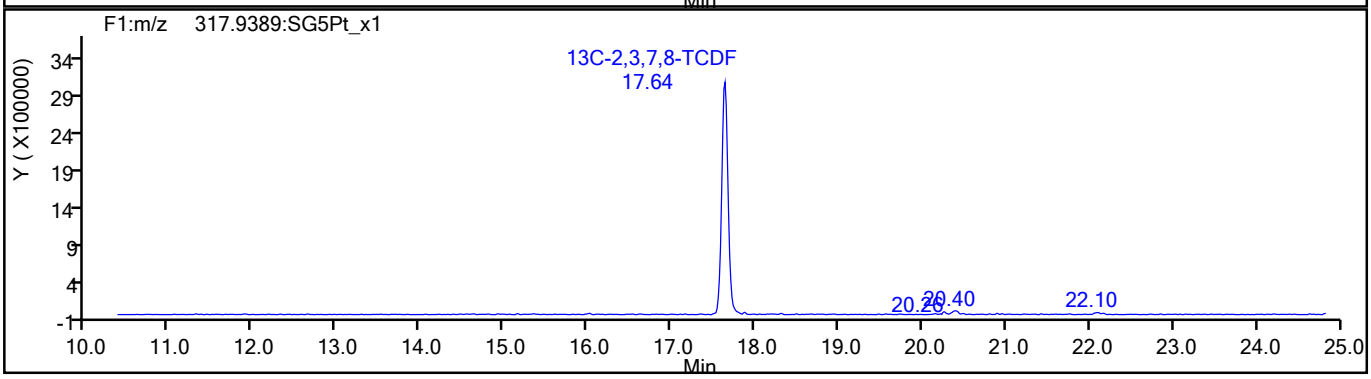

773263

Report Date: 23-Aug-2021 10:28:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_008.d		
Injection Date:	21-Aug-2021 18:23:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	518850	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

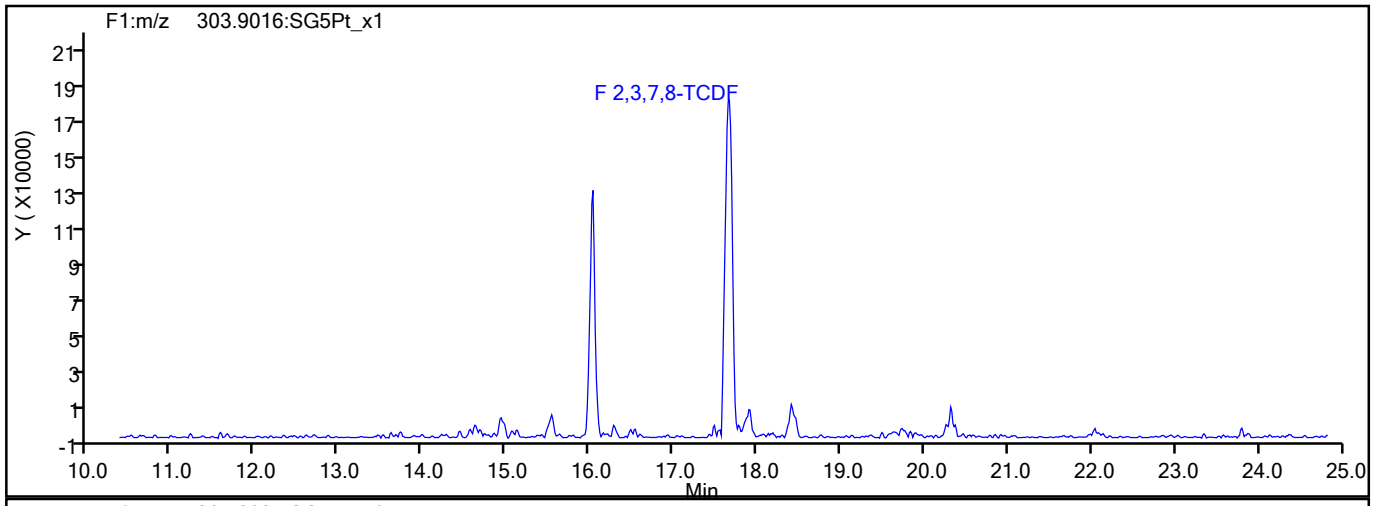

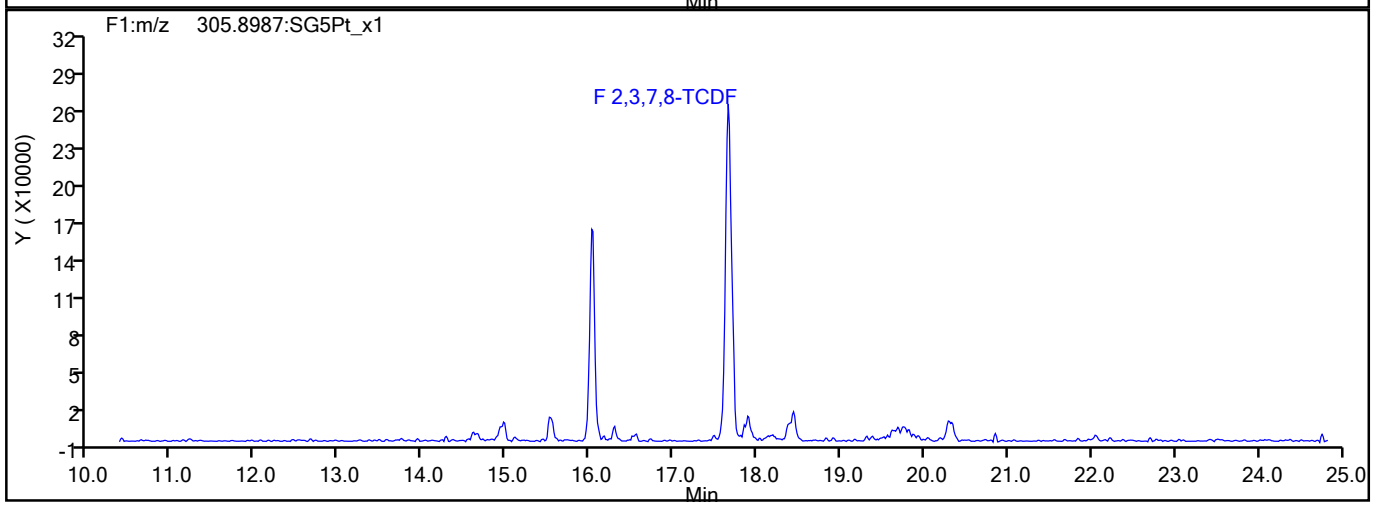

TCDF Interference Mass

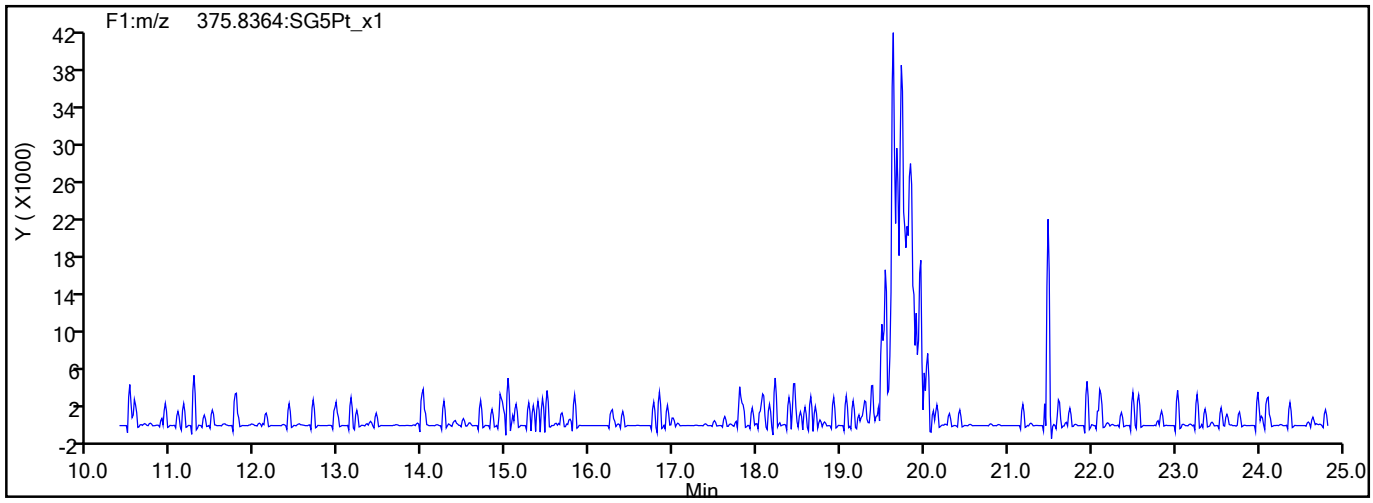

773264

Report Date: 23-Aug-2021 10:28:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_008.d		
Injection Date:	21-Aug-2021 18:23:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	518850	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

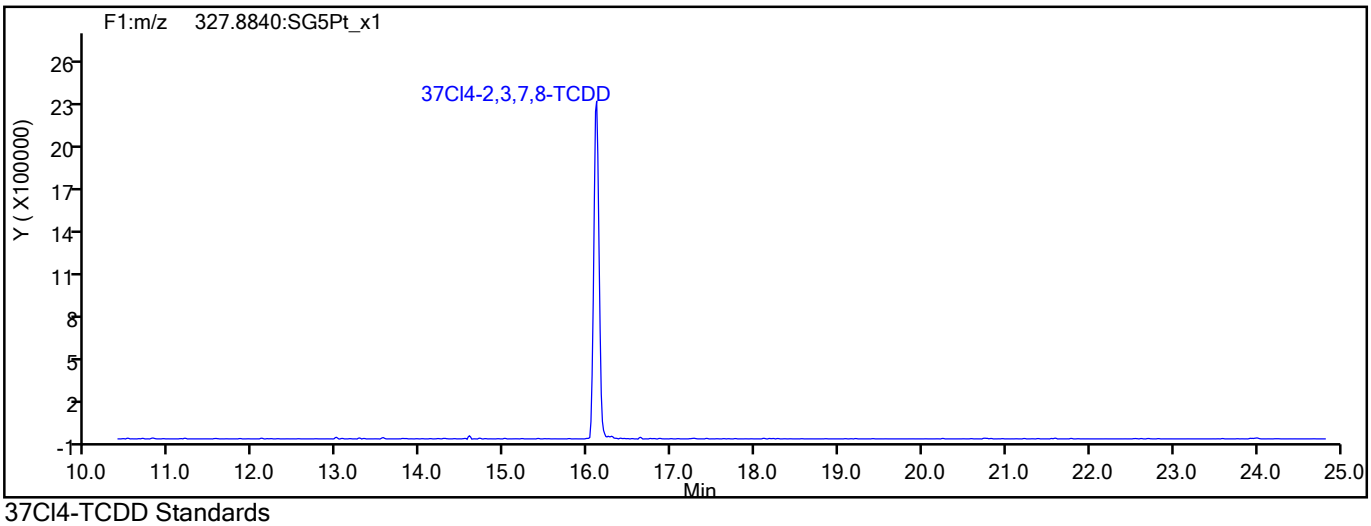

37Cl4-TCDD Standards

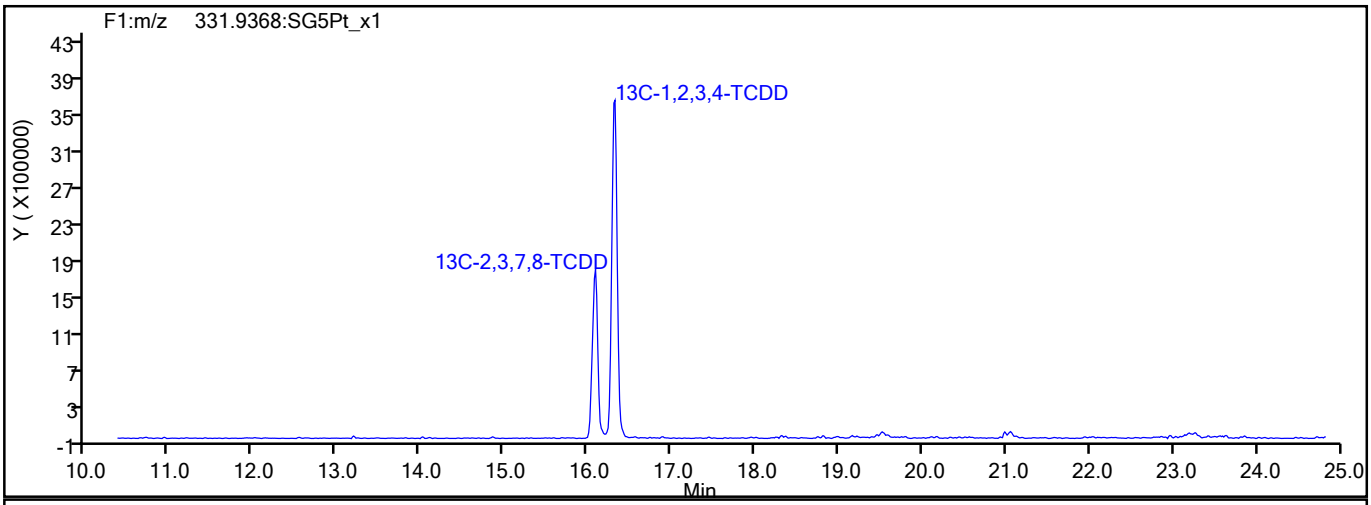

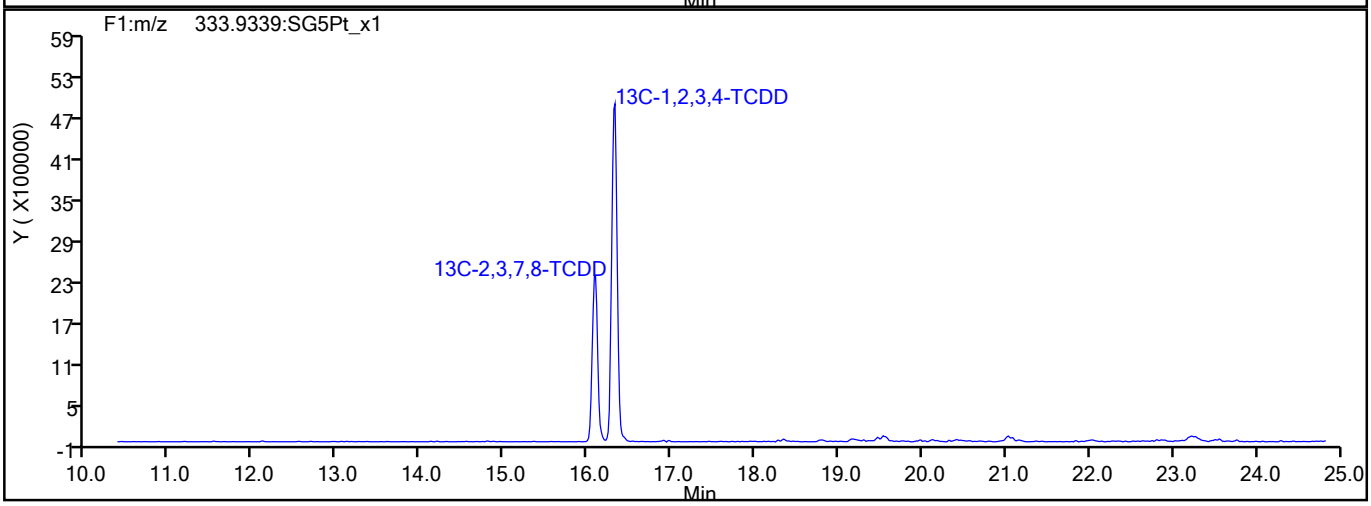

773265

Report Date: 23-Aug-2021 10:28:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_008.d		
Injection Date:	21-Aug-2021 18:23:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072521-BN-SJSB092 (16-18)		
Worklist#:	518850	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

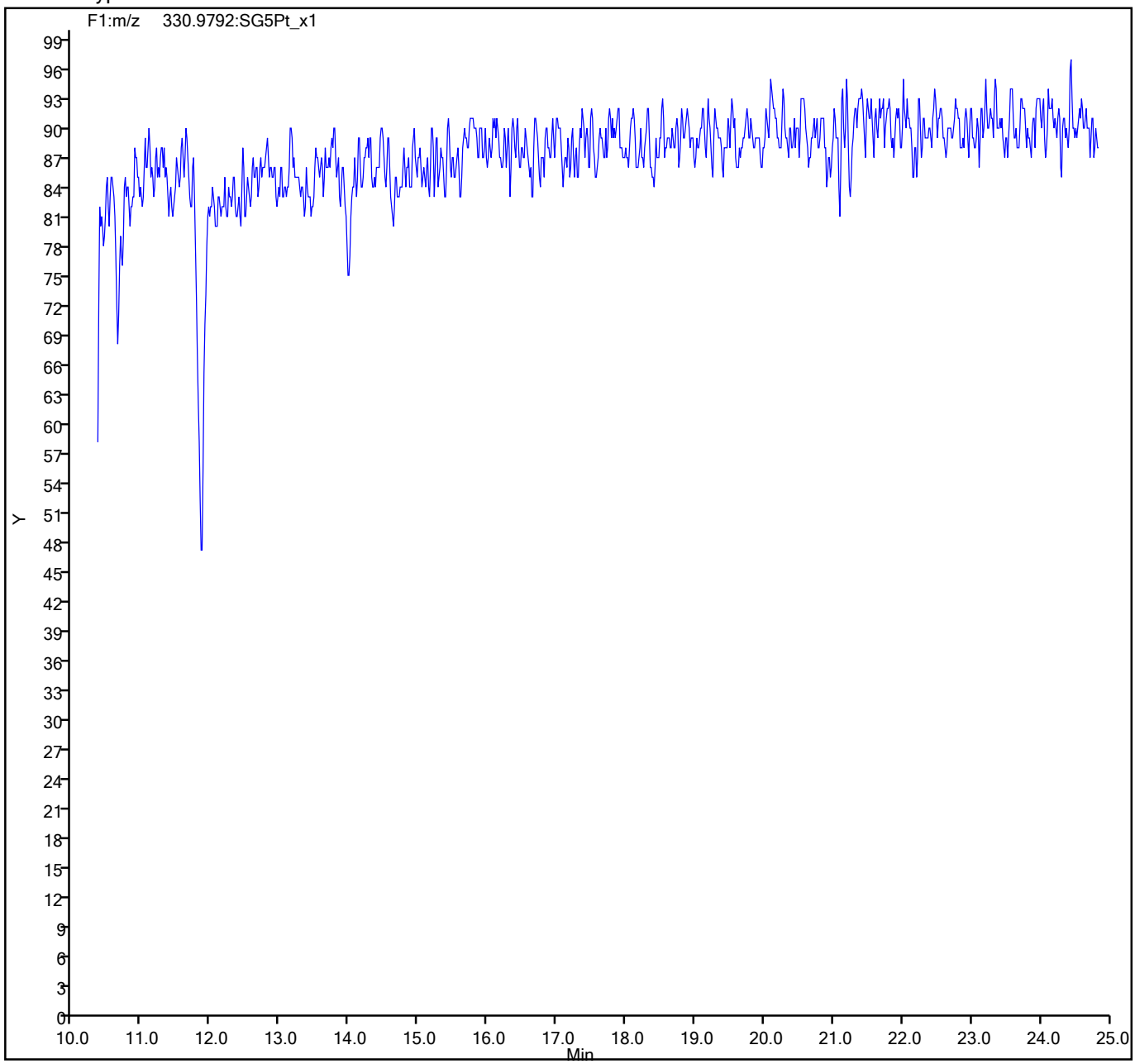

773266

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.0287	0.8698	1.0458	1.1094	1.0657	AveID		1.0239				8.9		20.0			
2,3,7,8-TCDD	1.2575	1.0971	1.2651	1.3434	1.3075	AveID		1.2541				7.5		20.0			
1,2,3,7,8-PeCDF	1.0739	0.9128	1.0891	1.1370	1.0928	AveID		1.0611				8.1		20.0			
2,3,4,7,8-PeCDF	1.0408	0.8610	1.0466	1.1082	1.0356	AveID		1.0184				9.1		20.0			
1,2,3,7,8-PeCDD	1.0578	0.9031	1.0680	1.1310	1.0823	AveID		1.0484				8.2		20.0			
1,2,3,4,7,8-HxCDF	1.1222	0.9192	1.1025	1.1936	1.0881	AveID		1.0851				9.3		20.0			
1,2,3,6,7,8-HxCDF	1.1488	0.9637	1.1546	1.1966	1.1664	AveID		1.1260				8.2		20.0			
2,3,4,6,7,8-HxCDF	1.2223	0.9863	1.1858	1.2415	1.2018	AveID		1.1675				8.9		20.0			
1,2,3,4,7,8-HxCDD	1.0979	0.8906	1.1304	1.1671	1.0341	AveID		1.0640				10.2		20.0			
1,2,3,6,7,8-HxCDD	1.0294	0.8529	1.0113	1.0930	1.0138	AveID		1.0001				8.9		20.0			
1,2,3,7,8,9-HxCDD	1.1551	0.9428	1.1999	1.2421	1.1227	AveID		1.1325				10.2		20.0			
1,2,3,7,8,9-HxCDF	1.1733	1.0136	1.1898	1.2479	1.2072	AveID		1.1664				7.7		20.0			
1,2,3,4,6,7,8-HpCDF	1.4474	1.2413	1.4986	1.5485	1.4706	AveID		1.4413				8.2		20.0			
1,2,3,4,6,7,8-HpCDD	1.1119	0.9539	1.1176	1.1675	1.1205	AveID		1.0943				7.5		20.0			
1,2,3,4,7,8,9-HpCDF	1.3136	1.1269	1.3622	1.4520	1.3321	AveID		1.3174				9.0		20.0			
OCDD	1.1009	0.9635	1.1652	1.1829	1.1226	AveID		1.1070				7.8		20.0			
OCDF	1.3863	1.1912	1.5145	1.5858	1.5129	AveID		1.4382				10.8		20.0			
13C-2,3,7,8-TCDF	1.6500	1.5631	1.6241	1.6170	1.6703	Ave		1.6249				2.5		35.0			
13C-2,3,7,8-TCDD	0.9128	0.8588	0.8965	0.8940	0.9345	Ave		0.8993				3.1		35.0			
13C-1,2,3,7,8-PeCDF	1.1977	1.1539	1.2193	1.2121	1.2674	Ave		1.2101				3.4		35.0			
13C-2,3,4,7,8-PeCDF	1.2269	1.1924	1.2487	1.2129	1.3165	Ave		1.2395				3.8		35.0			
13C-1,2,3,7,8-PeCDD	0.7558	0.7433	0.7524	0.7498	0.8049	Ave		0.7612				3.3		35.0			
13C-1,2,3,4,7,8-HxCDF	1.0875	1.1006	1.0706	1.0371	1.1225	Ave		1.0837				3.0		35.0			
13C-1,2,3,6,7,8-HxCDF	1.1466	1.1401	1.1115	1.1251	1.1163	Ave		1.1279				1.3		35.0			
13C-2,3,4,6,7,8-HxCDF	1.0781	1.0785	1.0541	1.0562	1.0518	Ave		1.0637				1.3		35.0			
13C-1,2,3,4,7,8-HxCDD	0.7413	0.7515	0.6926	0.7049	0.7769	Ave		0.7334				4.7		35.0			
13C-1,2,3,6,7,8-HxCDD	0.8884	0.8870	0.8694	0.8685	0.8876	Ave		0.8802				1.2		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9787	0.9851	0.9497	0.9522	0.9722	Ave		0.9676				1.6		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.8030	0.7818	0.7501	0.7625	0.7677	Ave		0.7730				2.6		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6554	0.6478	0.6343	0.6458	0.6528	Ave		0.6472				1.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6985	0.7093	0.6800	0.6816	0.7346	Ave		0.7008				3.2		35.0			
13C-OCDD	0.4462	0.4357	0.4273	0.4575	0.4691	Ave		0.4472				3.7		35.0			
37Cl4-2,3,7,8-TCDD	0.9705	0.9794	1.1718	1.1876	1.2264	Ave		1.1071				11.1					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	557485	1709191	10638776	44524782	204575642	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	376984	1184284	7104238	29808948	140421448	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	2112140	6620354	41588176	171023920	795873691	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	2096967	6452410	40928436	166805723	783403837	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	1312779	4219570	25165054	105236005	500555284	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	1949462	6041767	37525146	155057762	737075796	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	2104086	6561860	40802767	168618976	785709889	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	2104896	6352404	39741365	164241378	762810877	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	1300030	3996910	24891170	103044220	484857042	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	1460747	4517909	27953752	118900298	543061818	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	1503407	4612548	29794954	122394998	563888565	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	1834100	5963032	35924190	148834491	708280047	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	1856599	5795616	35740964	147892240	681312007	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	1164074	3690749	22538791	94435922	441437476	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	1465634	4773949	29450636	123968724	590555312	2.50	10.0	50.0	200	1000
OCDD		AveID	1569338	5013385	31656667	135570174	635652839	5.00	20.0	100	400	2000
OCDF		AveID	1976175	6198469	41147202	181747068	856685987	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	108384725	98246522	101724636	100332269	95980421	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	59957723	53975587	56155483	55471422	53698206	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	78674290	72525655	76368219	75205597	72829681	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	80591659	74944110	78214582	75259591	75649463	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	49643581	46721712	47124414	46524396	46251010	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	69484482	65726932	68075509	64951889	67741189	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	73262388	68089005	70677463	70459920	67363664	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	68885161	64406928	67028498	66145684	63471184	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	47363504	44877133	44039927	44144841	46886171	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	56759108	52974056	55284532	54392394	53564396	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	62528954	58828058	60389284	59636084	58669892	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	51308225	46691158	47697671	47752972	46328151	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	41876556	38689128	40333717	40442950	39395832	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	44628352	42362179	43238622	42687625	44333848	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	57018462	52034518	54338243	57303880	56623863	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	318727	1231219	7339670	29474361	140953034	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\26JL2110D5.SPL
Last Modified: Monday, July 26, 2021 16:58:03 Pacific Daylight Time
Printed: Tuesday, July 27, 2021 07:40:45 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	26JL2110D5_1	WDM HRDXNCP_00042	WDM 072621	Tray01:1	Dioxin		SMA
2	26JL2110D5_2	SB Solvent Blank C-14	SB 072621	Tray01:3			SMA
3	26JL2110D5_3	CS-2 HRDXNL2_00032	IC 072621	Tray01:4	Dioxin		SMA
4	26JL2110D5_4	CS-3 HRDXNL3_00029	IC 072621A	Tray01:5	Dioxin		SMA
5	26JL2110D5_5	CS-4 HRDXNL4_00099	IC 072621B	Tray01:2	Dioxin		SMA
6	26JL2110D5_6	CS-5 HRDXNL5_00032	IC 072621C	Tray01:6	Dioxin		SMA
7	26JL2110D5_7	CS-6 HRDXNL6_00028	IC 072621D	Tray01:7	Dioxin		SMA
8	26JL2110D5_8	SB Solvent Blank C-14	SB 072621A	Tray01:3			SMA
9	26JL2110D5_9	ICV HRDXNIC_00047	ICV 072621	Tray01:8	Dioxin		SMA
10	26JL2110D5_10	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS
11	26JL2110D5_11	WDM HRDXNCP_00042	WDM 031621C	Tray01:1	Dioxin		KSS
12	26JL2110D5_12	SB Solvent Blank C-14	SB 072621B	Tray01:3			KSS
13	26JL2110D5_13	mb 320-508015/1-a	mb 320-508015/1-a	Tray01:9	1613B/8290/Water	D255	KSS
14	26JL2110D5_14	lcs 320-508015/2-a	lcs 320-508015/2-a	Tray01:10	1613B/8290/Water		KSS
15	26JL2110D5_15	lcsd 320-508015/3-a	lcsd 320-508015/3-a	Tray01:11	1613B/8290/Water		KSS
16	26JL2110D5_16	320-76081-a-3-c	320-76081-a-3-c	Tray01:12	1613B/8290/Water		KSS
17	26JL2110D5_17	SB Solvent Blank C-14	SB 072621C	Tray01:3			KSS
18	26JL2110D5_18	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS

LOGFILE CHECKED
DB 7/27/21

773272

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:18:21 Pacific Daylight Time

M 292.9824 R 12499

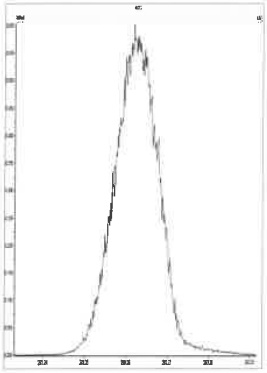

M 304.9824 R 12752

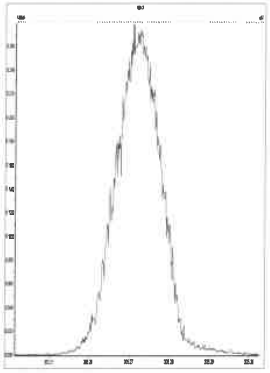

M 318.9792 R 13230

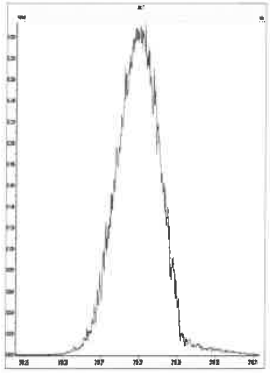

M 330.9792 R 12691

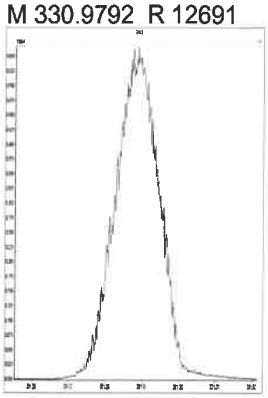

M 342.9792 R 12885

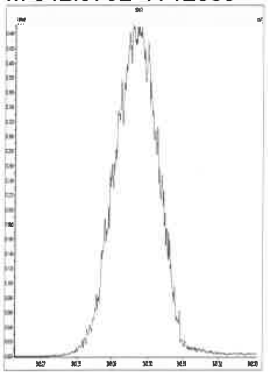

M 354.9792 R 12138

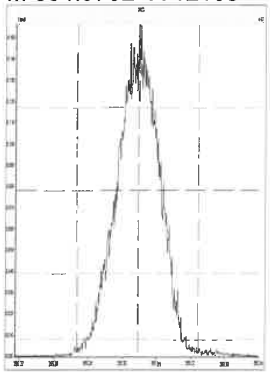

M 366.9792 R 13090

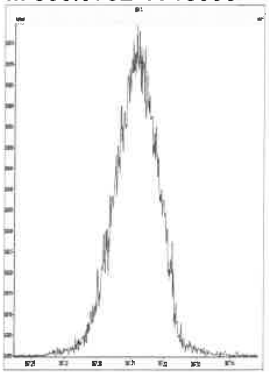

M 380.9760 R 12562

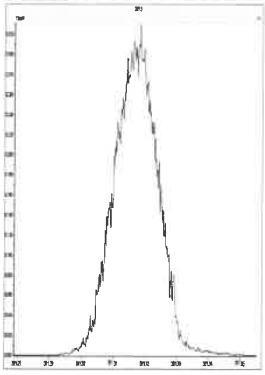

M 392.9760 R 12753

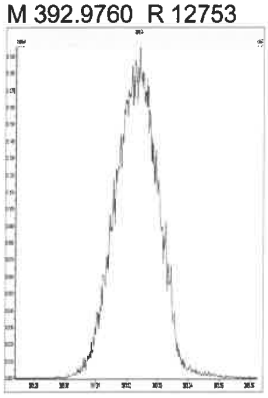

M 404.9760 R 12137

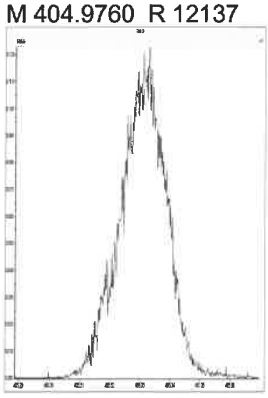

M 416.9760 R 12563

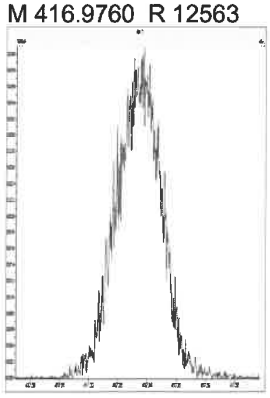

773273

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:04 Pacific Daylight Time

M 318.9792 R 13300

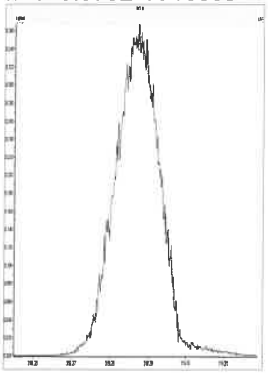

M 330.9792 R 12691

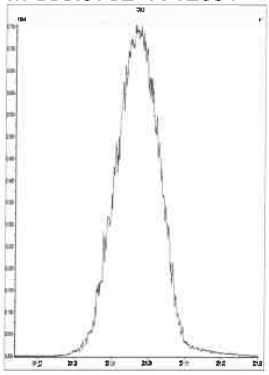

M 342.9792 R 12499

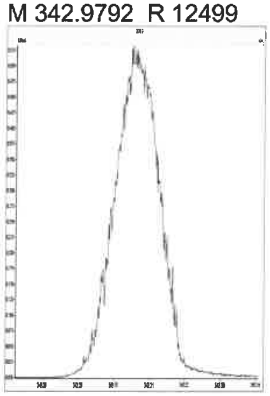

M 354.9792 R 12374

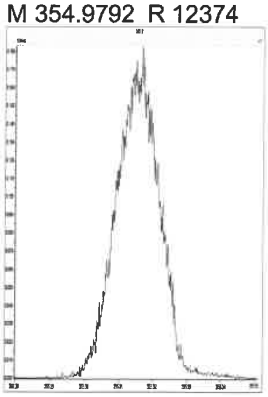

M 366.9792 R 12691

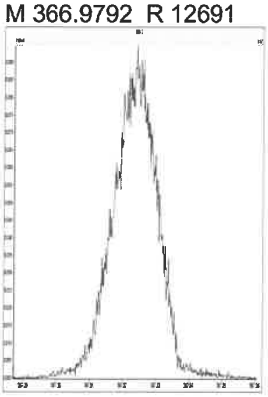

M 380.9760 R 12690

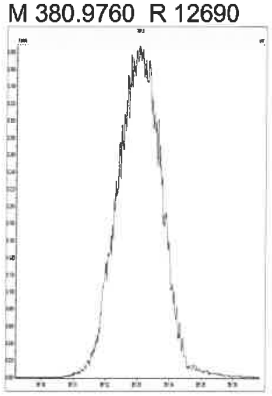

M 392.9760 R 12885

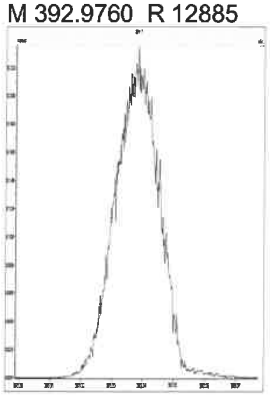

M 404.9760 R 12817

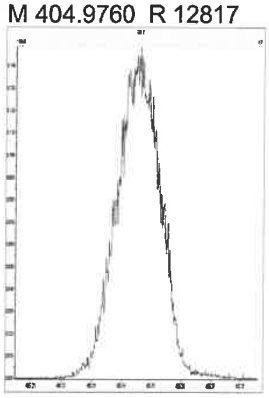

M 416.9760 R 12954

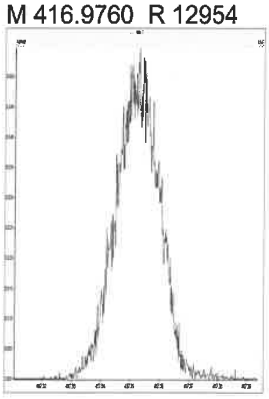

773274

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:43 Pacific Daylight Time

M 366.9792 R 12440

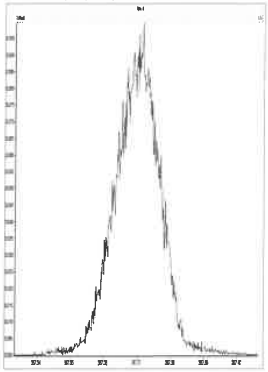

M 380.9760 R 12955

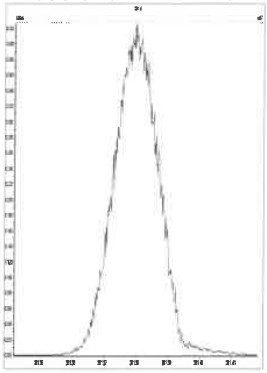

M 392.9760 R 12690

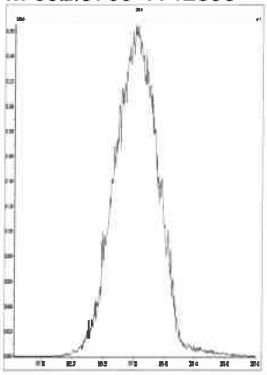

M 404.9760 R 12957

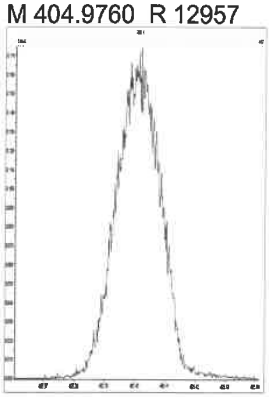

M 416.9760 R 13516

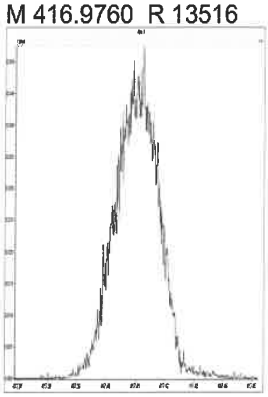

M 430.9728 R 12564

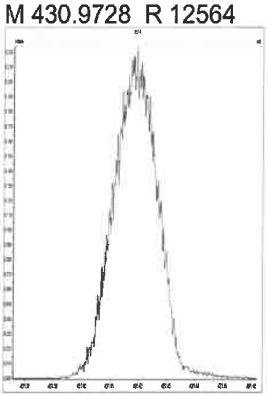

M 442.9728 R 12953

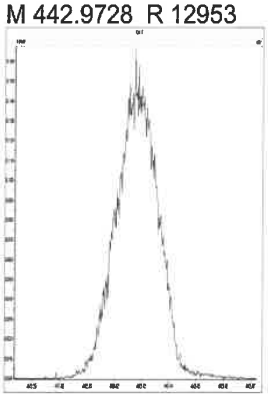

M 454.9728 R 13226

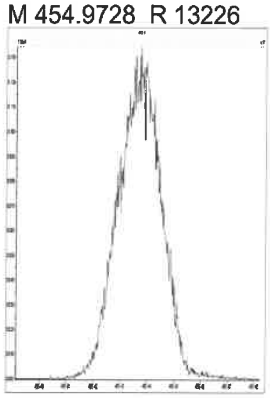

773275

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:20:01 Pacific Daylight Time

M 380.9760 R 12885

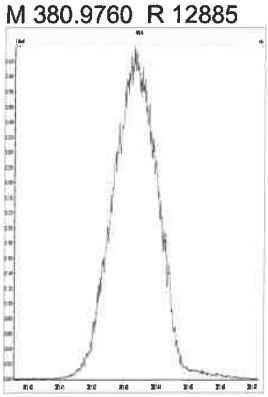

M 392.9760 R 12955

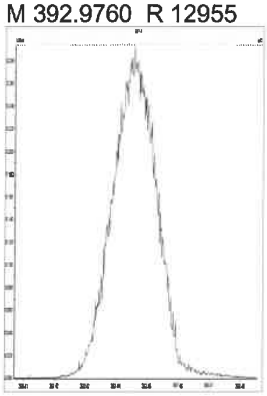

M 404.9760 R 12756

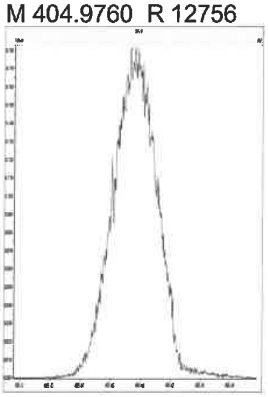

M 416.9760 R 13368

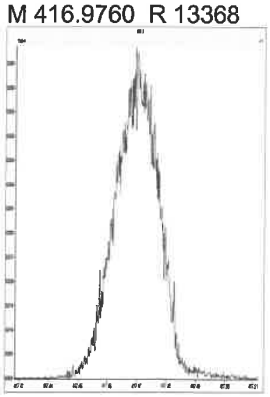

M 430.9728 R 12758

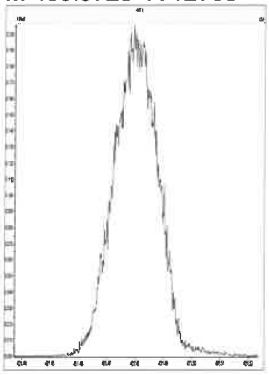

M 442.9728 R 13229

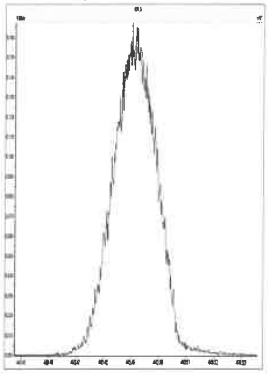

M 454.9728 R 13737

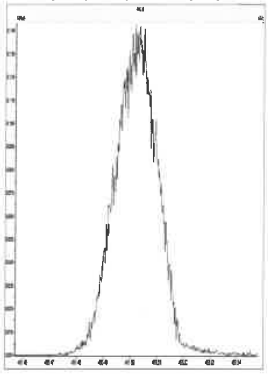

M 466.9728 R 12952

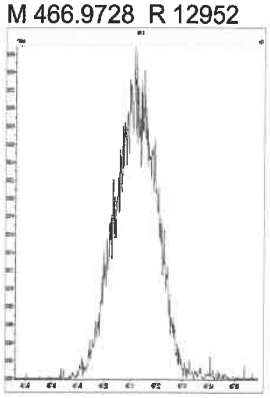

M 480.9696 R 12819

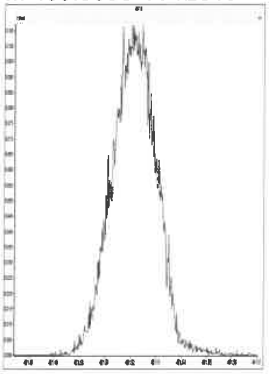

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:21:28 Pacific Daylight Time

M 380.9760 R 12630

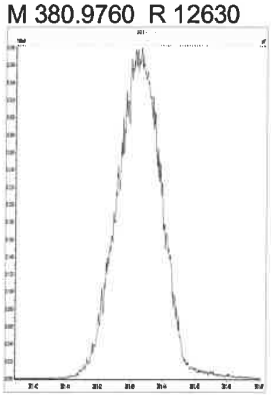

M 392.9760 R 12687

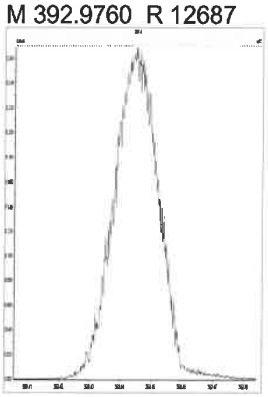

M 404.9760 R 13441

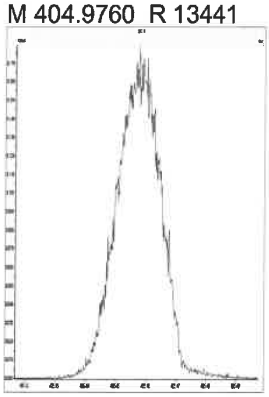

M 416.9760 R 12886

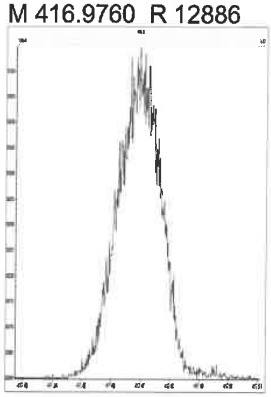

M 430.9728 R 12952

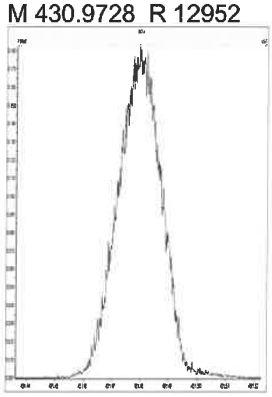

M 442.9728 R 12564

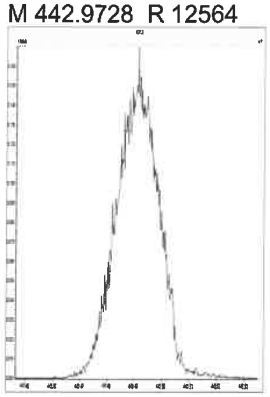

M 454.9728 R 13228

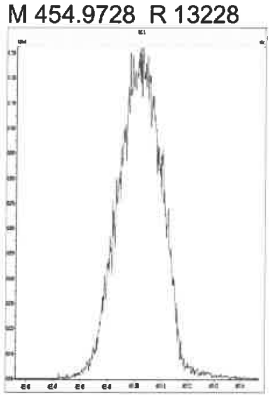

M 466.9728 R 12689

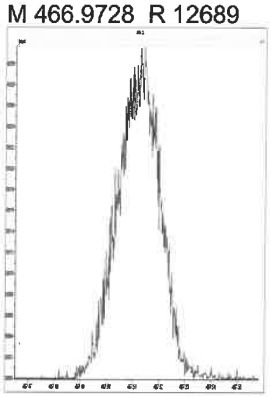

M 480.9696 R 13226

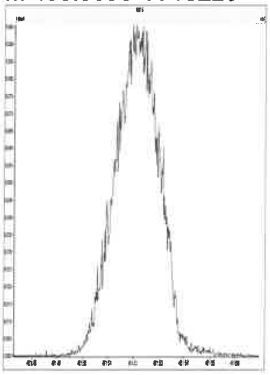

M 492.9696 R 13090

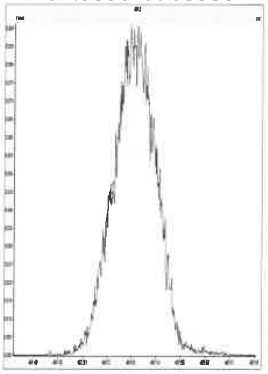

M 504.9696 R 13021

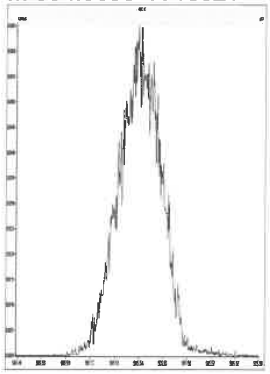

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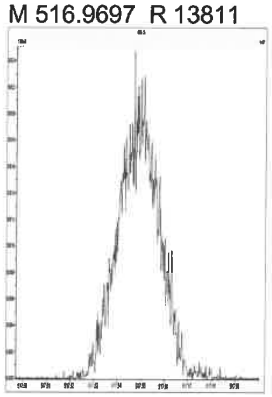

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M 292.9824 R 12322

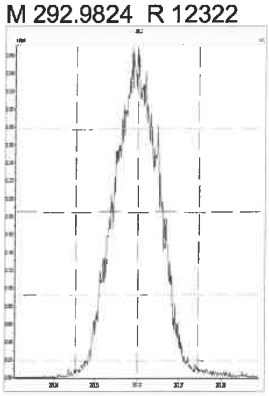

M 304.9824 R 12923

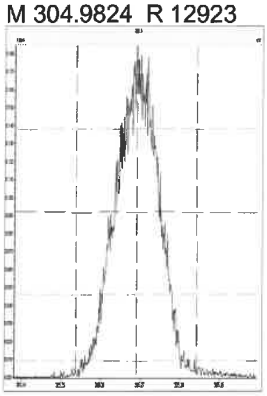

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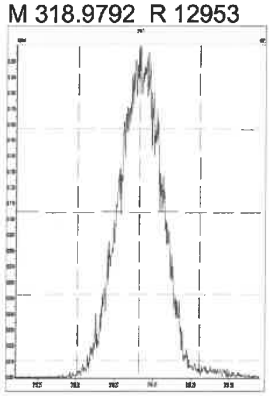

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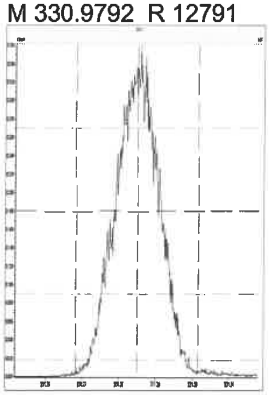

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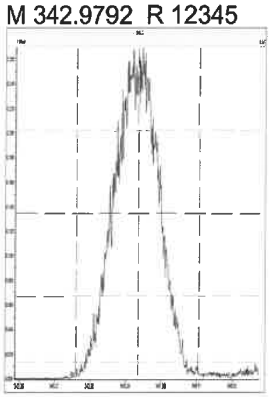

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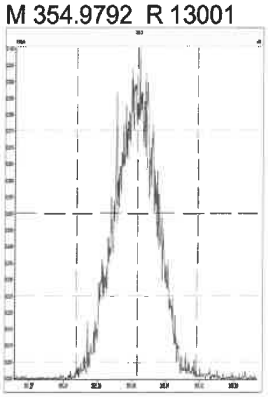

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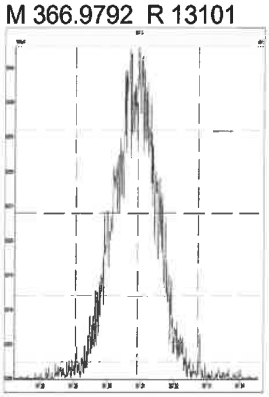

M 380.9760 R 13055

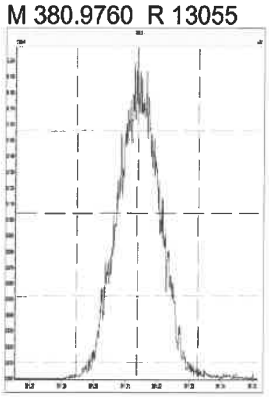

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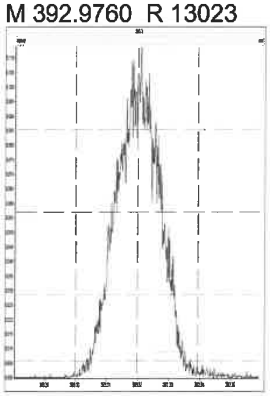

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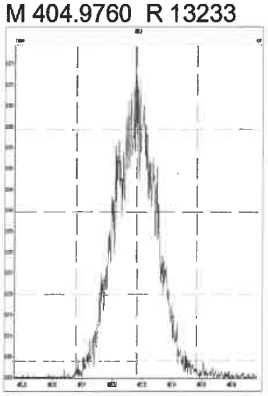

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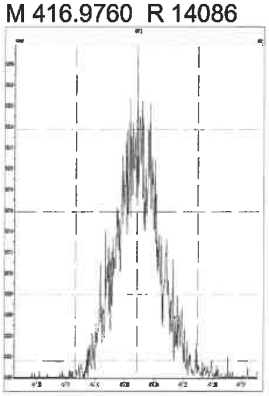

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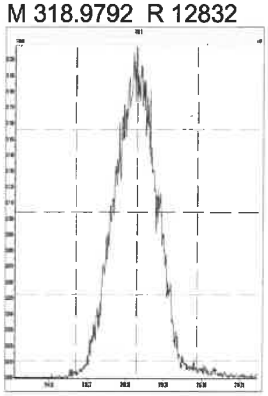

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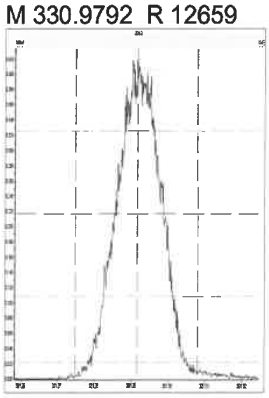

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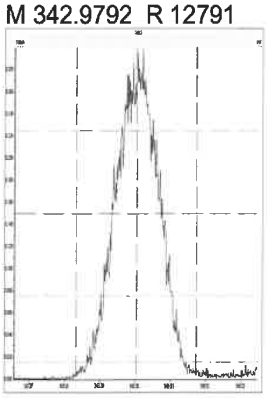

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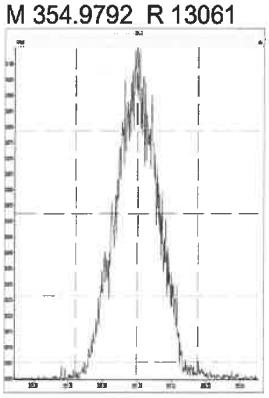

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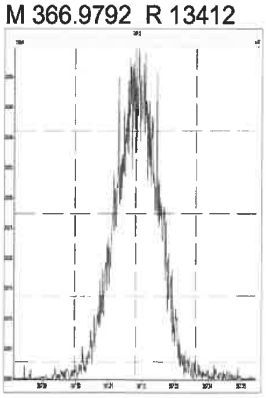

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M 380.9760 R 13021

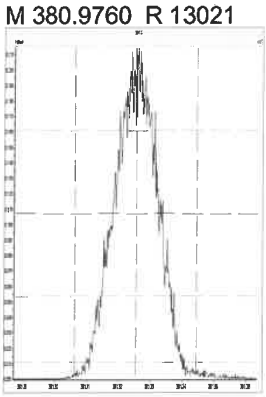

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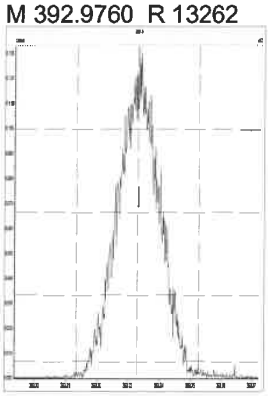

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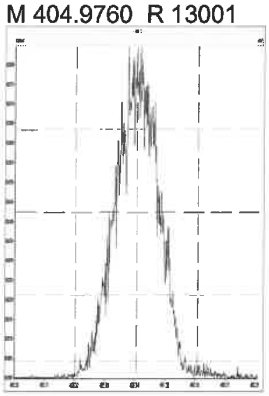

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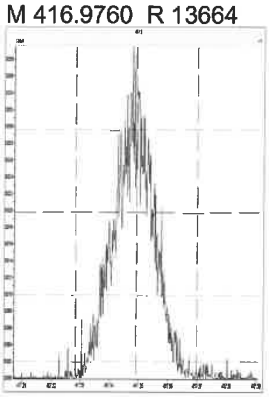

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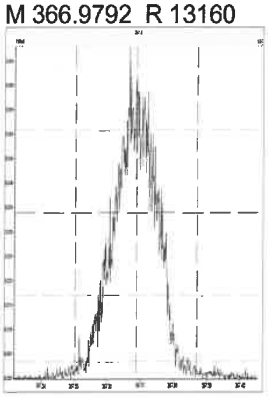

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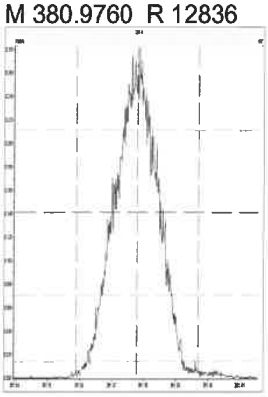

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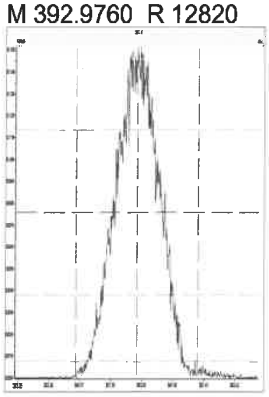

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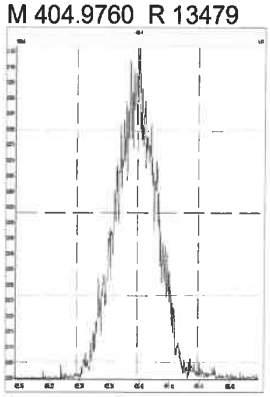

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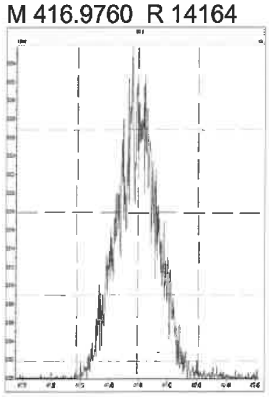

M 430.9728 R 13727

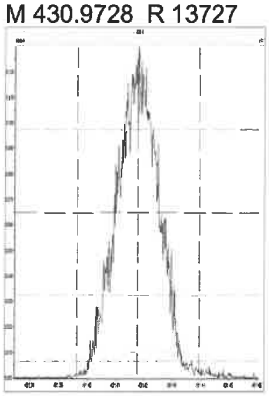

M 442.9728 R 13415

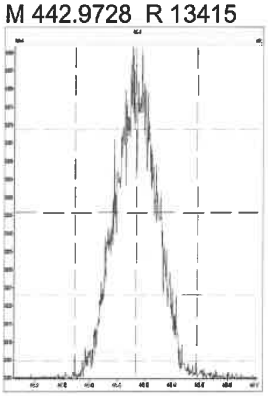

M 454.9728 R 13335

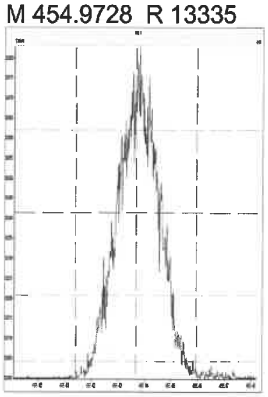

M 380.9760 R 13021

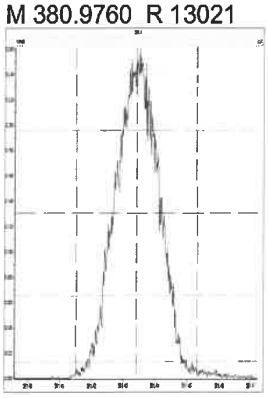

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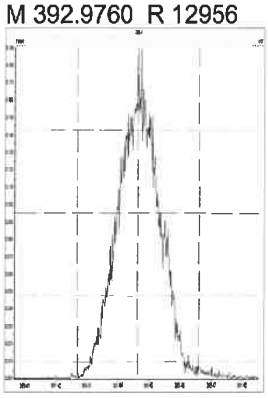

M 404.9760 R 13194

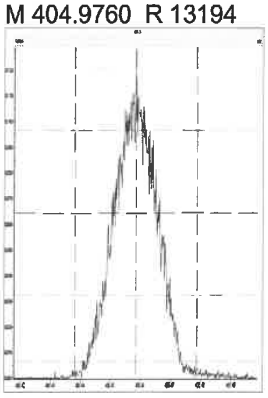

M 416.9760 R 13592

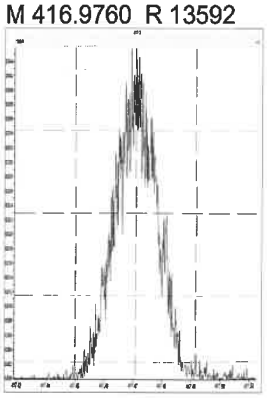

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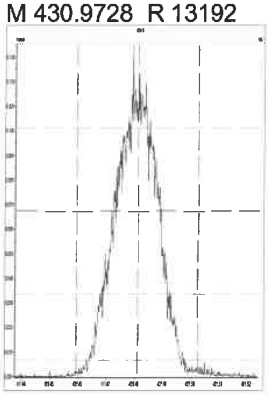

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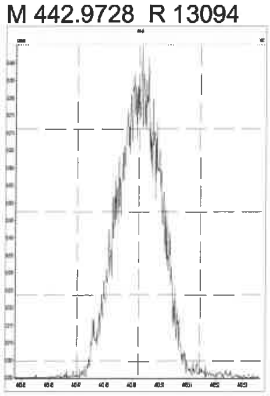

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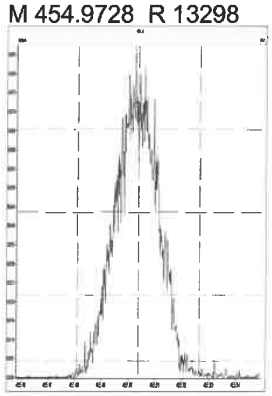

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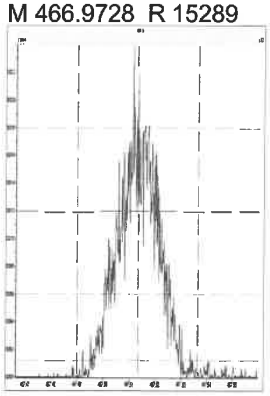

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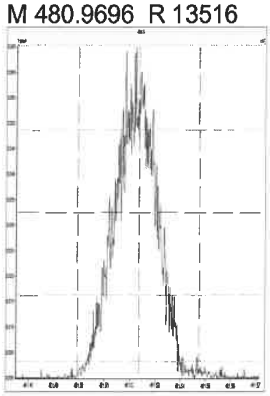

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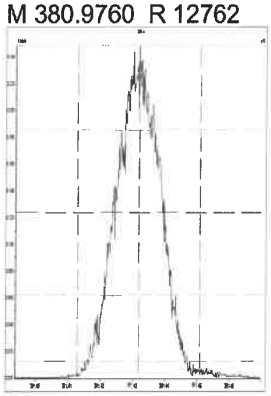

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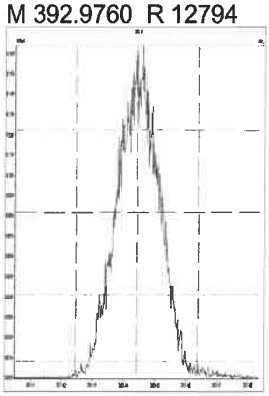

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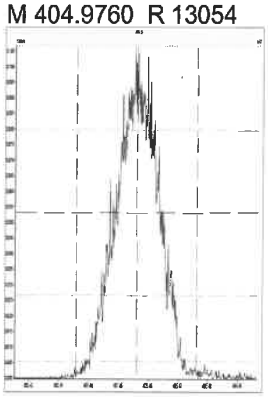

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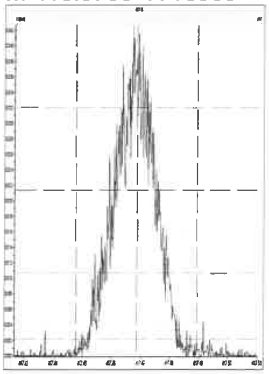

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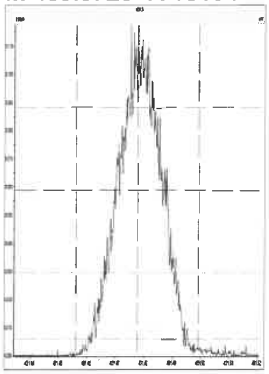

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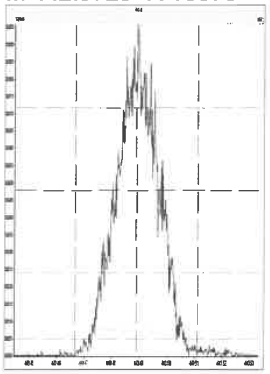

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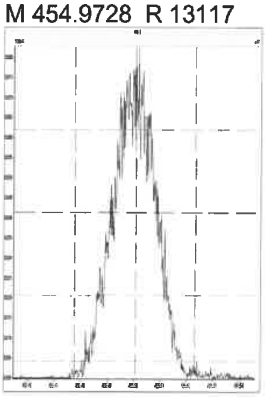

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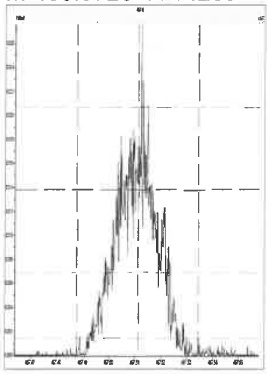

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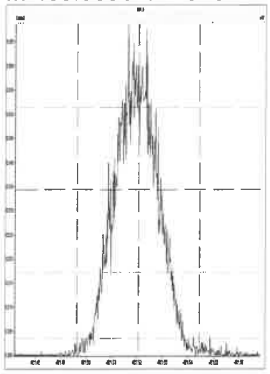

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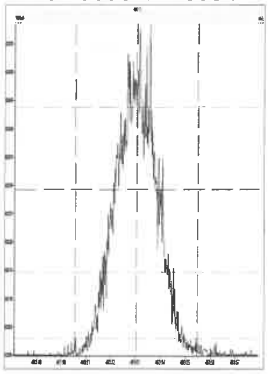

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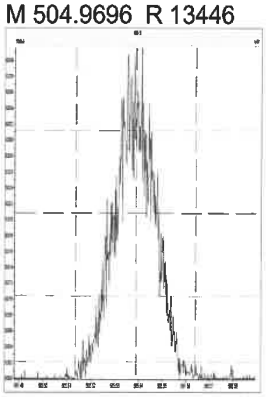

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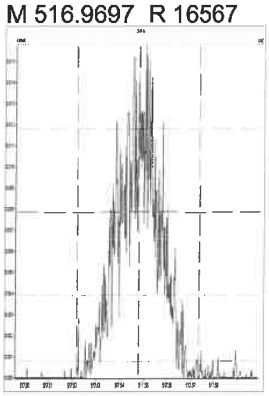

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M 292.9824 R 12376

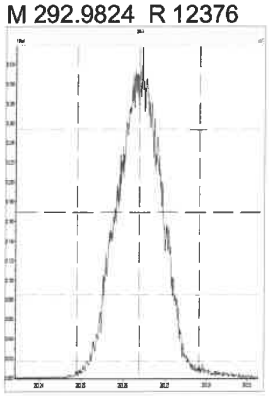

M 304.9824 R 12412

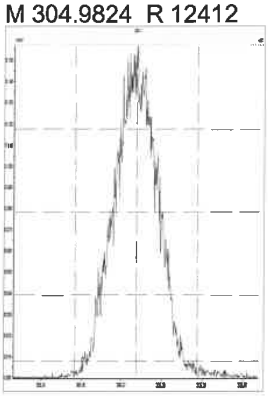

M 318.9792 R 12886

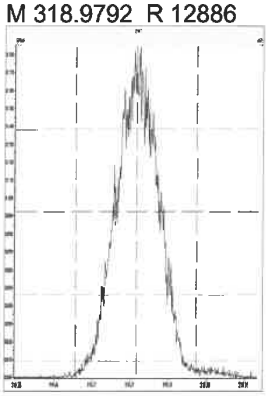

M 330.9792 R 12820

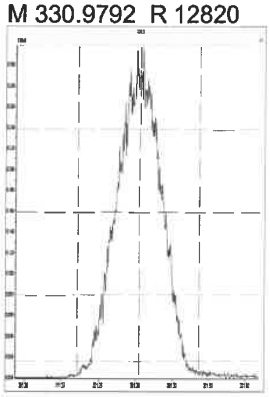

M 342.9792 R 12788

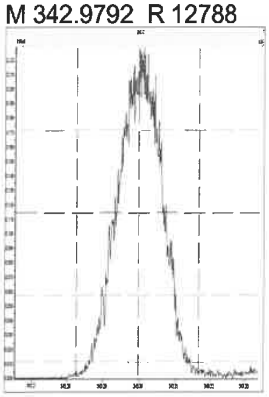

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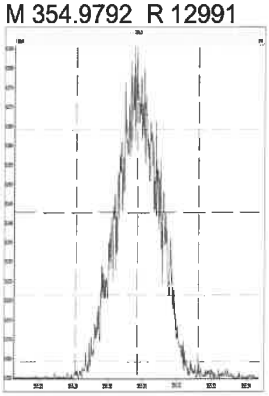

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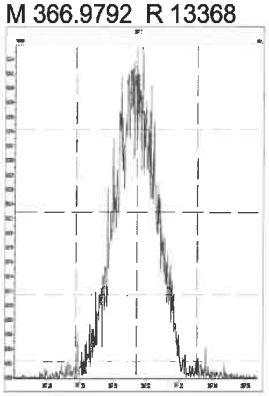

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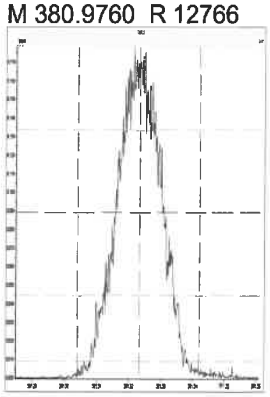

M 392.9760 R 13080

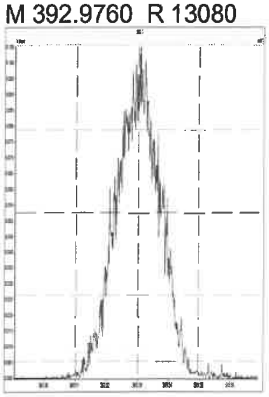

M 404.9760 R 13514

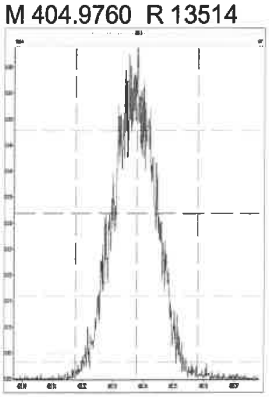

M 416.9760 R 14713

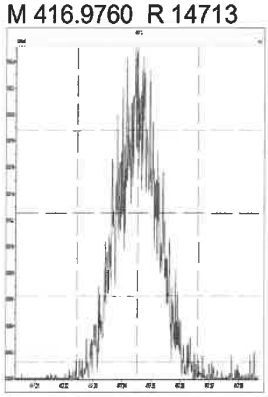

M 318.9792 R 12628

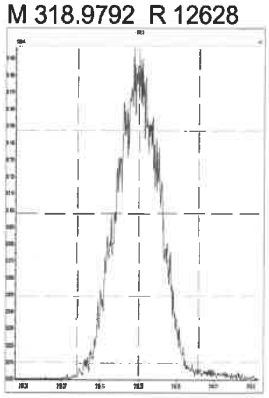

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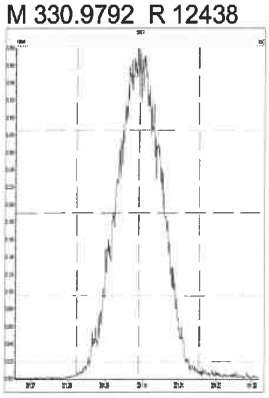

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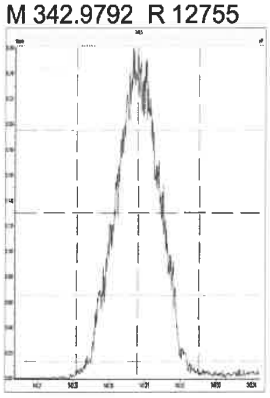

M 354.9792 R 12755

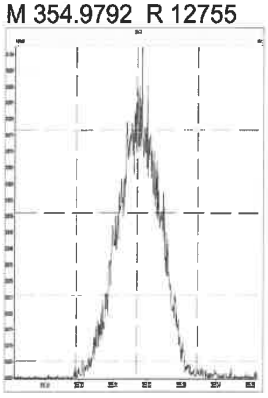

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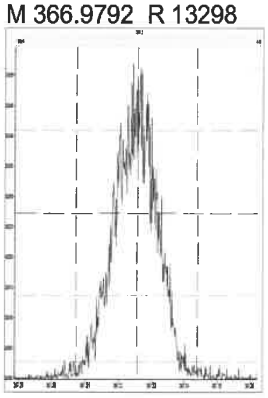

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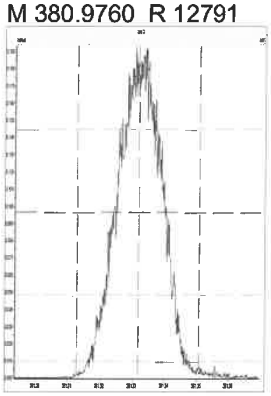

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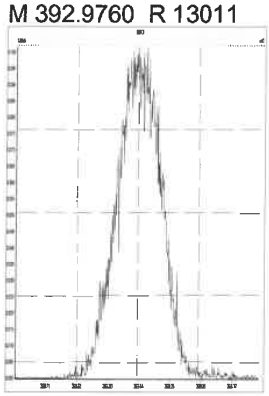

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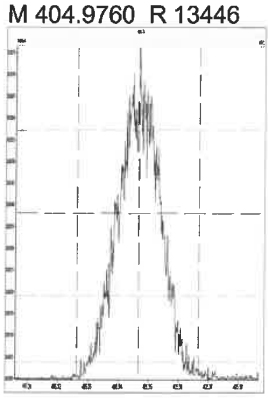

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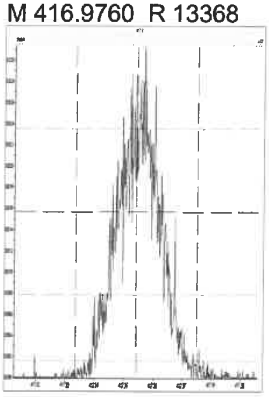

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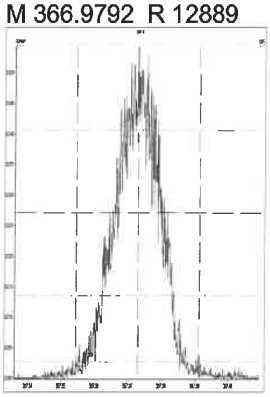

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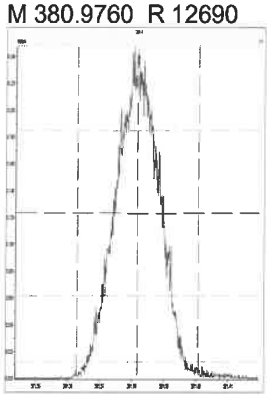

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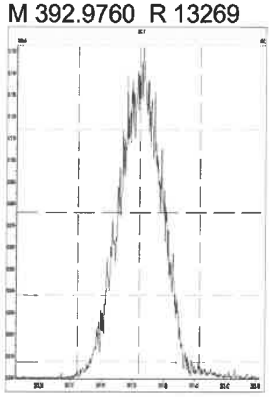

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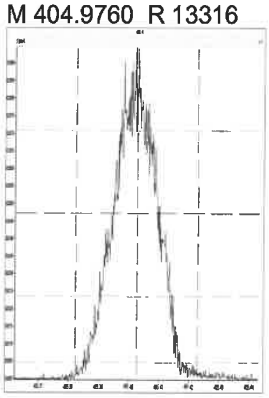

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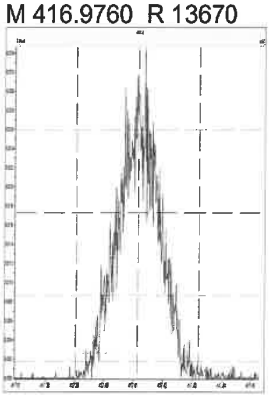

M 430.9728 R 13055

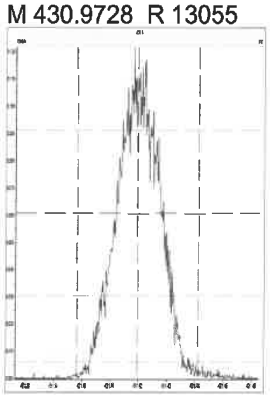

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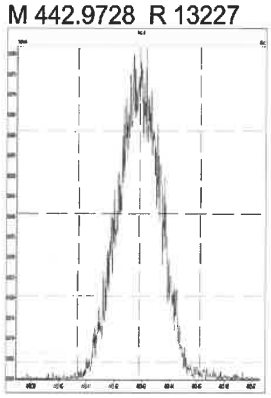

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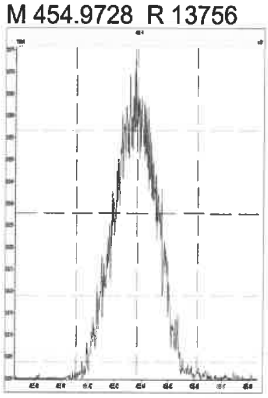

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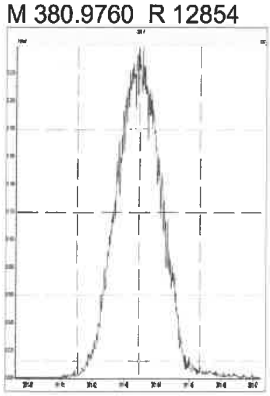

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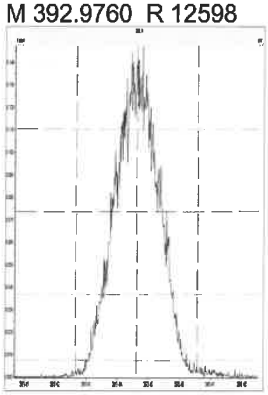

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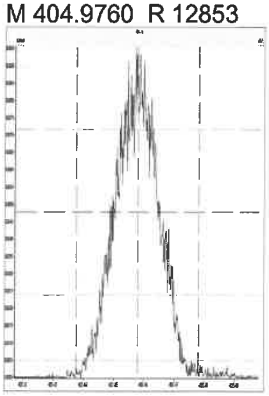

M 416.9760 R 13928

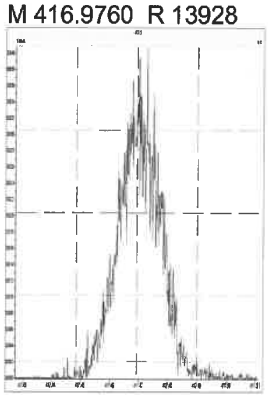

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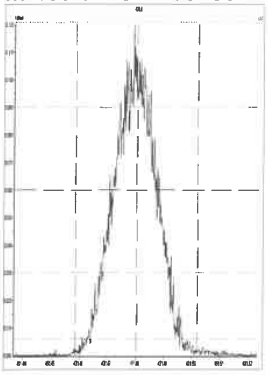

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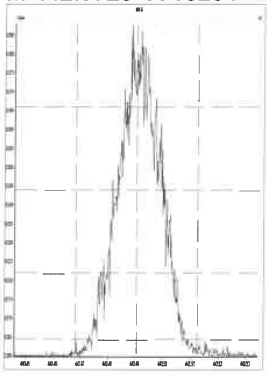

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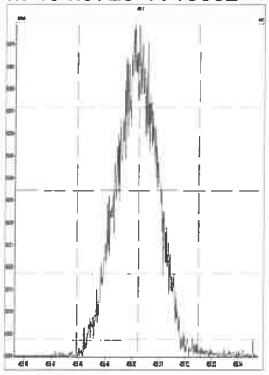

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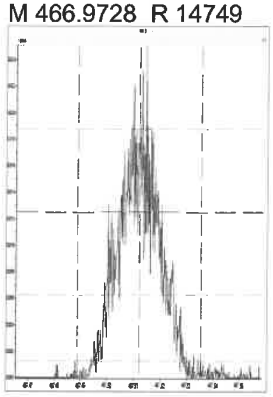

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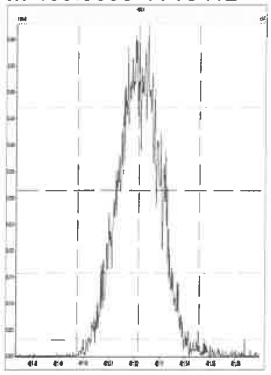

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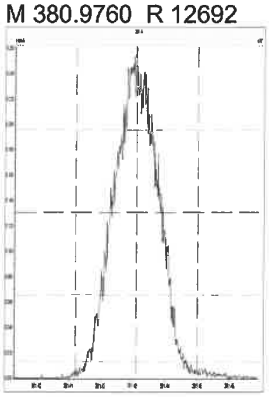

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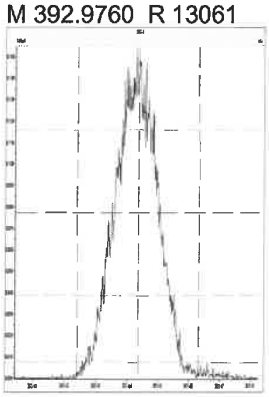

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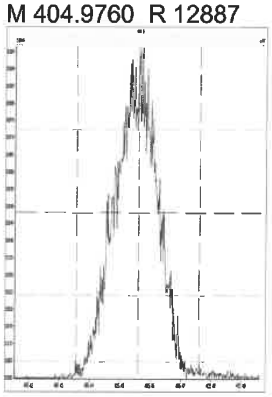

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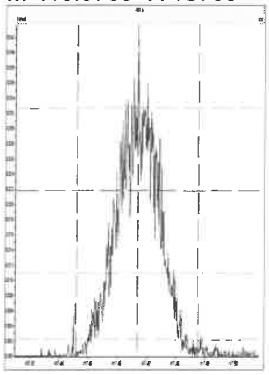

M 430.9728 R 12760

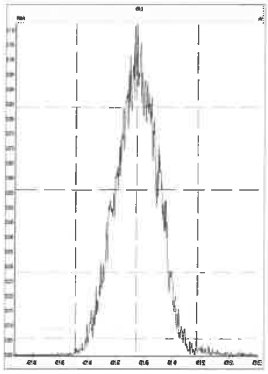

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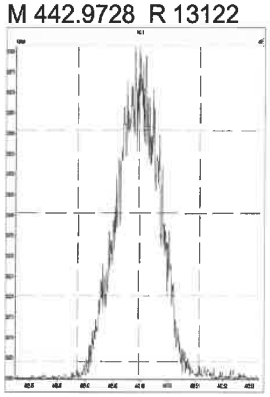

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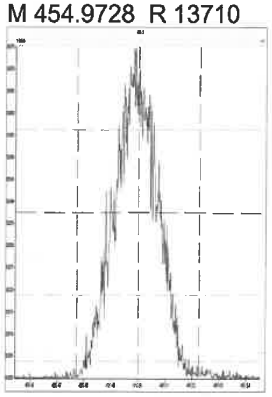

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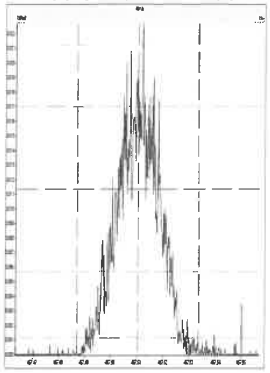

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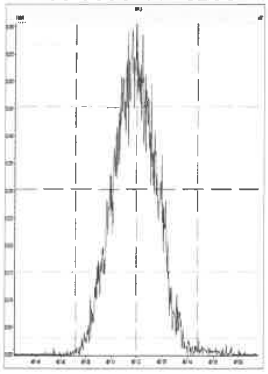

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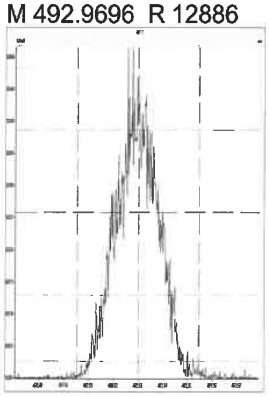

M 504.9696 R 13600

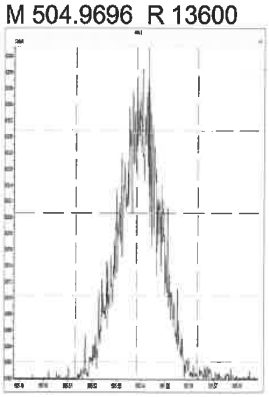

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M 516.9697 R 15872

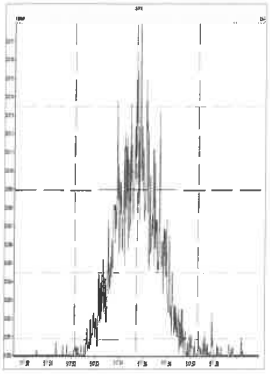

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Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

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Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	65685883	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	108384725	0.78	1.6249	101.5	101.5	0.1385	0.1385	102	
2,3,7,8-TCDF	17.628	557485	0.78	1.0239	0.5023	0.5023	0.009259	0.009259	100	
S Total TCDF					0.5023	0.5023	0.009259	0.009259		
D 13C-2,3,7,8-TCDD	18.338	59957723	0.80	0.8993	101.5	101.5	0.1222	0.1222	101	
$ 37Cl4-2,3,7,8-TCDD	18.338	318727		1.1071	0.4383	0.4383	0.006072	0.006072	87.65	
2,3,7,8-TCDD	18.354	376984	0.89	1.2541	0.5013	0.5013	0.0150	0.0150	100	M
S Total TCDD					0.5013	0.5013	0.0150	0.0150		
D 13C-1,2,3,7,8-PeCDF	22.749	78674290	1.60	1.2101	99.0	99.0	0.2282	0.2282	98.98	
1,2,3,7,8-PeCDF	22.776	2112140	1.63	1.0611	2.530	2.530	0.0220	0.0220	101	
D 13C-2,3,4,7,8-PeCDF	24.126	80591659	1.57	1.2395	99.0	99.0	0.2228	0.2228	98.99	
2,3,4,7,8-PeCDF	24.153	2096967	1.56	1.0184	2.555	2.555	0.0245	0.0245	102	
S Total PeCDF					5.085	5.085	0.0233	0.0233		
D 13C-1,2,3,7,8-PeCDD	24.862	49643581	1.62	0.7612	99.3	99.3	0.1197	0.1197	99.28	
1,2,3,7,8-PeCDD	24.889	1312779	1.42	1.0484	2.522	2.522	0.0218	0.0218	101	
S Total PeCDD					2.522	2.522	0.0218	0.0218		
D 13C-1,2,3,4,7,8-HxCDF	30.835	69484482	0.52	1.0837	100.4	100.4	0.5299	0.5299	100	
1,2,3,4,7,8-HxCDF	30.849	1949462	1.23	1.0851	2.586	2.586	0.0289	0.0289	103	
D 13C-1,2,3,6,7,8-HxCDF	30.995	73262388	0.52	1.1279	101.7	101.7	0.5091	0.5091	102	
1,2,3,6,7,8-HxCDF	31.022	2104086	1.18	1.1260	2.551	2.551	0.0273	0.0273	102	
D 13C-2,3,4,6,7,8-HxCDF	31.754	68885161	0.52	1.0637	101.4	101.4	0.5398	0.5398	101	
2,3,4,6,7,8-HxCDF	31.767	2104896	1.20	1.1675	2.617	2.617	0.0225	0.0225	105	
D 13C-1,2,3,7,8,9-HxCDF	32.512	62528954	0.51	0.9676	101.1	101.1	0.5935	0.5935	101	
1,2,3,7,8,9-HxCDF	32.526	1834100	1.21	1.1664	2.515	2.515	0.0244	0.0244	101	
S Total HxCDF					10.3	10.3	0.0258	0.0258		
* 13C-1,2,3,7,8,9-HxCDD	32.339	63892665	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	47363504	1.27	0.7334	101.1	101.1	0.5001	0.5001	101	
1,2,3,4,7,8-HxCDD	31.940	1300030	1.26	1.0640	2.580	2.580	0.0268	0.0268	103	
D 13C-1,2,3,6,7,8-HxCDD	32.033	56759108	1.25	0.8802	100.9	100.9	0.4167	0.4167	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	1460747	1.28	1.0001	2.573	2.573	0.0268	0.0268	103	
1,2,3,7,8,9-HxCDD	32.353	1503407	1.26	1.1325	2.550	2.550	0.0244	0.0244	102	
S Total HxCDD					7.703	7.703	0.0260	0.0260		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	51308225	0.44	0.7730	103.9	103.9	1.147	1.147	104	
1,2,3,4,6,7,8-HpCDF	33.924	1856599	1.05	1.4413	2.511	2.511	0.0321	0.0321	100	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44628352	0.44	0.7008	99.7	99.7	1.266	1.266	99.67	
1,2,3,4,7,8,9-HpCDF	35.017	1465634	1.06	1.3174	2.493	2.493	0.0442	0.0442	99.72	
S Total HpCDF					5.003	5.003	0.0381	0.0381		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	41876556	1.01	0.6472	101.3	101.3	0.6709	0.6709	101	
1,2,3,4,6,7,8-HpCDD	34.726	1164074	1.06	1.0943	2.540	2.540	0.0284	0.0284	102	
S Total HpCDD					2.540	2.540	0.0284	0.0284		
D 13C-OCDD	37.093	57018462	0.89	0.4472	199.6	199.6	0.2479	0.2479	99.79	
OCDF	37.201	1976175	0.91	1.4382	4.820	4.820	0.0196	0.0196	96.40	
OCDD	37.105	1569338	0.92	1.1070	4.973	4.973	0.0246	0.0246	99.45	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		29725607	7464659	4167	10417	1791		
333.9339	18.142	18.142	0		35960276	9003139	3074	7685	2929	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	47438761	11992473	9243	23107	1297		
317.9389	17.613	17.616	0	0.971	60945964	15328013	5578	13945	2748	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	244966	62557	418	1045	150		
305.8987	17.628	17.631	0	1.001	312519	74119	618	1545	120	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	26677109	6242710	4167	10417	1498		
333.9339	18.338	18.338	0	1.011	33280614	7789380	3074	7685	2534	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.011	318727	66577	443	1107	150		
2,3,7,8-TCDD											M
319.8965	18.354	18.357	0	1.001	177891	43427	698	1745	62		M
321.8936	18.354	18.357	0	1.001	199093	47894	356	890	135	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	48367116	8680931	10780	26950	805		
353.8970	22.749	22.754	0	1.254	30307174	5346402	7413	18532	721	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	1307686	232308	692	1730	336		
341.8567	22.762	22.779	-1	1.001	804454	137466	619	1547	222	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	49186157	7929286	10780	26950	736		
353.8970	24.126	24.129	0	1.330	31405502	5197836	7413	18532	701	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	1276283	202864	692	1730	293		
341.8567	24.153	24.156	0	1.001	820684	134634	619	1547	218	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	30684379	4744795	3870	9675	1226		
369.8919	24.862	24.865	0	1.370	18959202	2913489	2133	5332	1366	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	770345	123302	470	1175	262		
357.8516	24.889	24.892	0	1.001	542434	83964	231	577	363	1.42(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23885791	5080702	12413	31032	409		
385.8610	30.835	30.838	0	0.953	45598691	9653525	24179	60447	399	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.857	0	1.000	1073816	228005	1130	2825	202		
375.8178	30.849	30.857	0	1.000	875646	183719	720	1800	255	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	25163610	5186426	12413	31032	418		
385.8610	30.995	31.003	0	0.958	48098778	9847658	24179	60447	407	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.001	1138605	230252	1130	2825	204		
375.8178	31.008	31.022	-1	1.000	965481	194261	720	1800	270	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	23545536	6005512	12413	31032	484		
385.8610	31.754	31.756	0	0.982	45339625	11622590	24179	60447	481	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	1148495	290976	1130	2825	258		
375.8178	31.767	31.772	0	1.000	956401	245408	720	1800	341	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.512	32.523	-1	1.005	21115296	5525344	12413	31032	445		
385.8610	32.512	32.523	-1	1.005	41413658	10740911	24179	60447	444	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	1004237	260741	1130	2825	231		
375.8178	32.526	32.534	0	1.000	829863	215930	720	1800	300	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		35492157	8840472	14115	35287	626		
403.8529	32.339	32.342	0		28400508	7090007	9259	23147	766	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	26497467	7547113	14115	35287	535		
403.8529	31.927	31.929	0	0.987	20866037	5954906	9259	23147	643	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	725563	201392	885	2212	228		
391.8127	31.940	31.945	0	1.000	574467	160999	657	1642	245	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	31586686	7983088	14115	35287	566		
403.8529	32.033	32.033	0	0.991	25172422	6406461	9259	23147	692	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	819435	207367	885	2212	234		
391.8127	32.047	32.047	0	1.000	641312	163363	657	1642	249	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	837706	208716	885	2212	236		
391.8127	32.353	32.355	0	1.013	665701	168193	657	1642	256	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	15666898	4905580	16994	42485	289		
419.8220	33.912	33.914	0	1.049	35641327	11012481	39521	98802	279	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	949994	280926	1603	4007	175		
409.7789	33.924	33.926	0	1.000	906605	280503	1346	3365	208	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13532847	3927195	16994	42485	231		
419.8220	35.005	35.010	0	1.082	31095505	8744356	39521	98802	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	755406	231092	1603	4007	144		
409.7789	35.017	35.020	0	1.000	710228	201627	1346	3365	150	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	21029381	6108519	13979	34947	437		
437.8140	34.714	34.716	0	1.073	20847175	6052425	13690	34225	442	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	599401	178801	821	2052	218		
425.7737	34.726	34.726	0	1.000	564673	160703	693	1732	232	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26904388	6653832	3548	8870	1875		
471.7750	37.093	37.094	0	1.147	30114074	7334467	3515	8787	2087	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	941996	224700	300	750	749		
443.7399	37.189	37.199	-1	1.003	1034179	253612	487	1217	521	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	750544	177364	389	972	456		
459.7348	37.105	37.106	0	1.000	818794	206090	374	935	551	0.92(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.35
Area: 201476
Amount: 0.545465
Amount Units: pg/ul

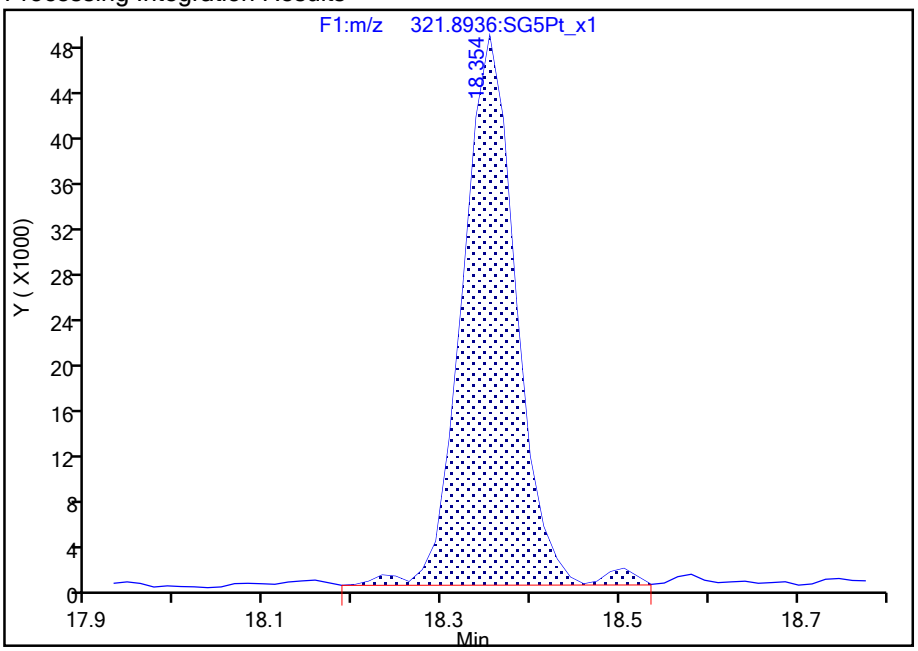

Manual Integration Results

RT: 18.35
Area: 199093
Amount: 0.501347
Amount Units: pg/ul

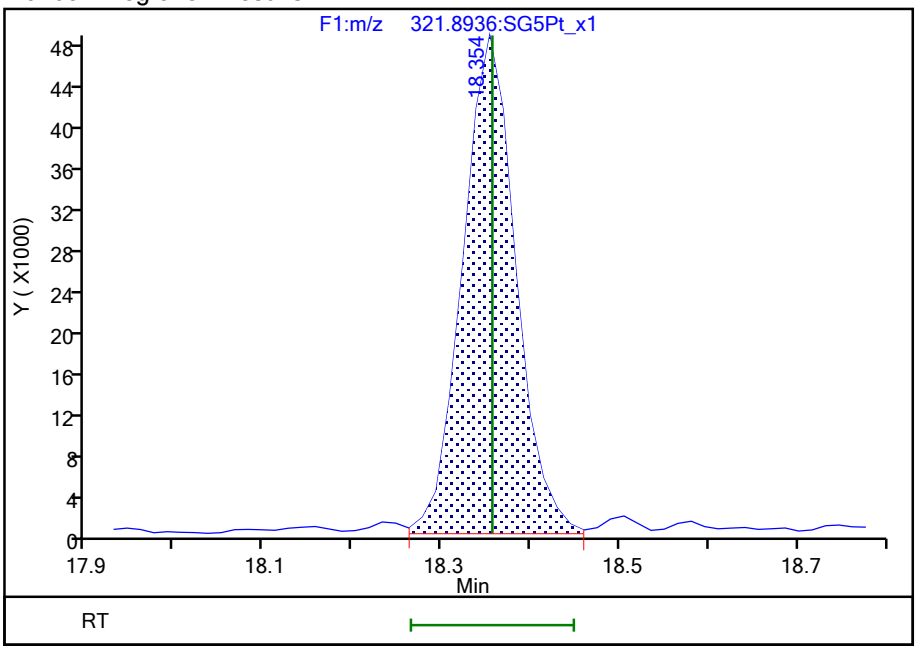

Reviewer: stephensk, 27-Jul-2021 08:15:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

773291

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

Processing Integration Results

RT: 18.35
Area: 394678
Amount: 0.545465
Amount Units: pg/ul

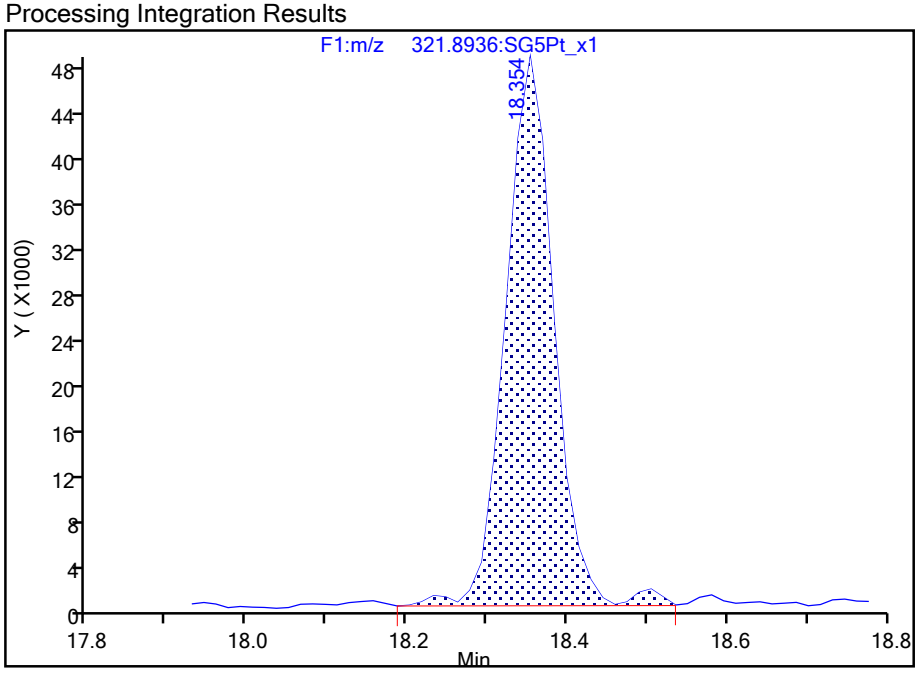

Manual Integration Results

RT: 18.35
Area: 376984
Amount: 0.501347
Amount Units: pg/ul
Reviewer: stephensk, 27-Jul-2021 08:15:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

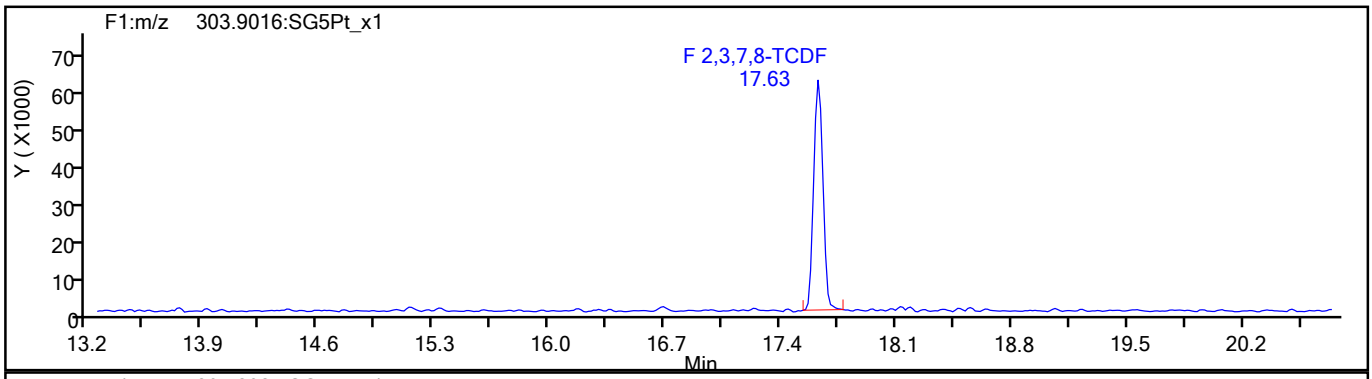

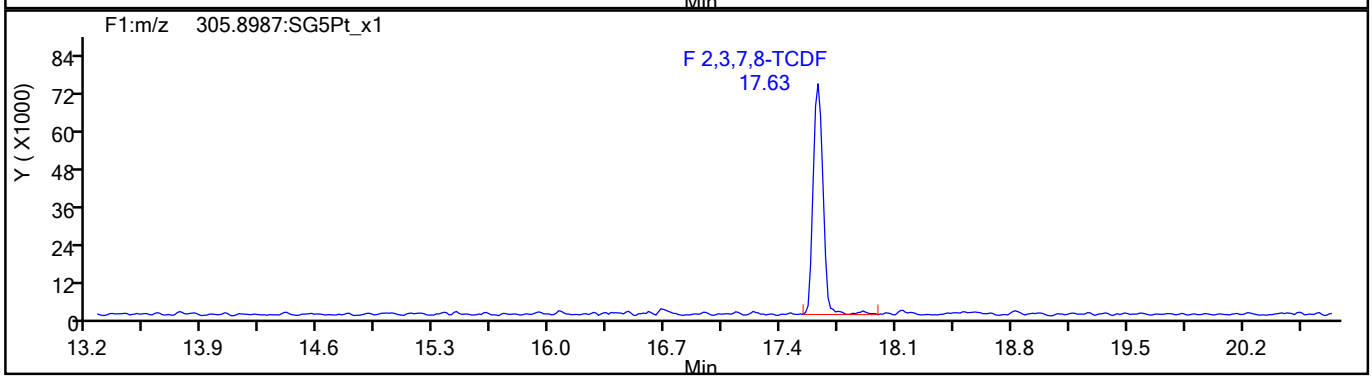

TCDF Standards

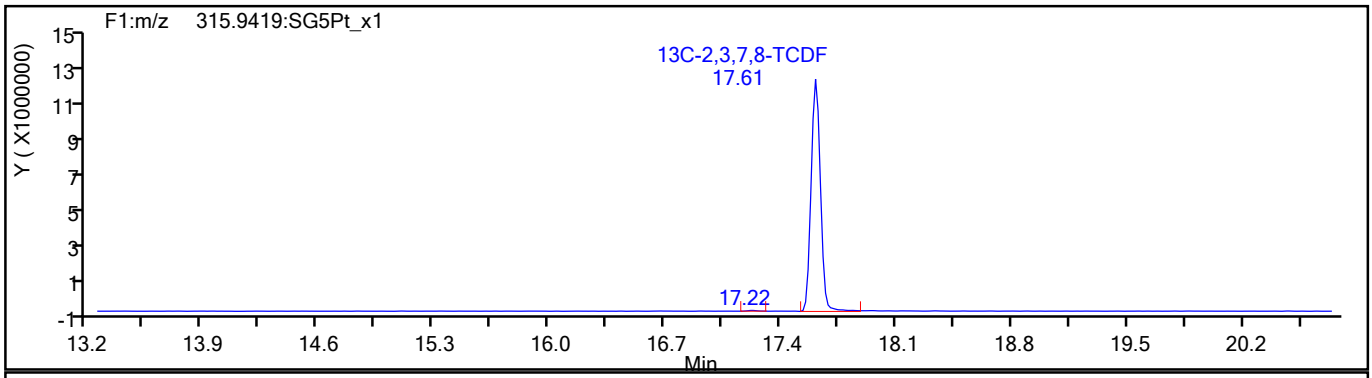

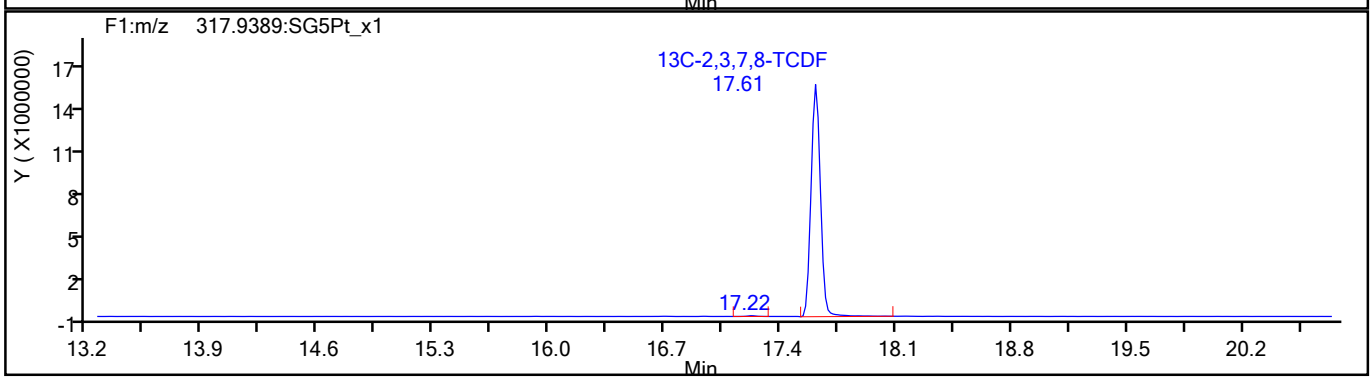

773293

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

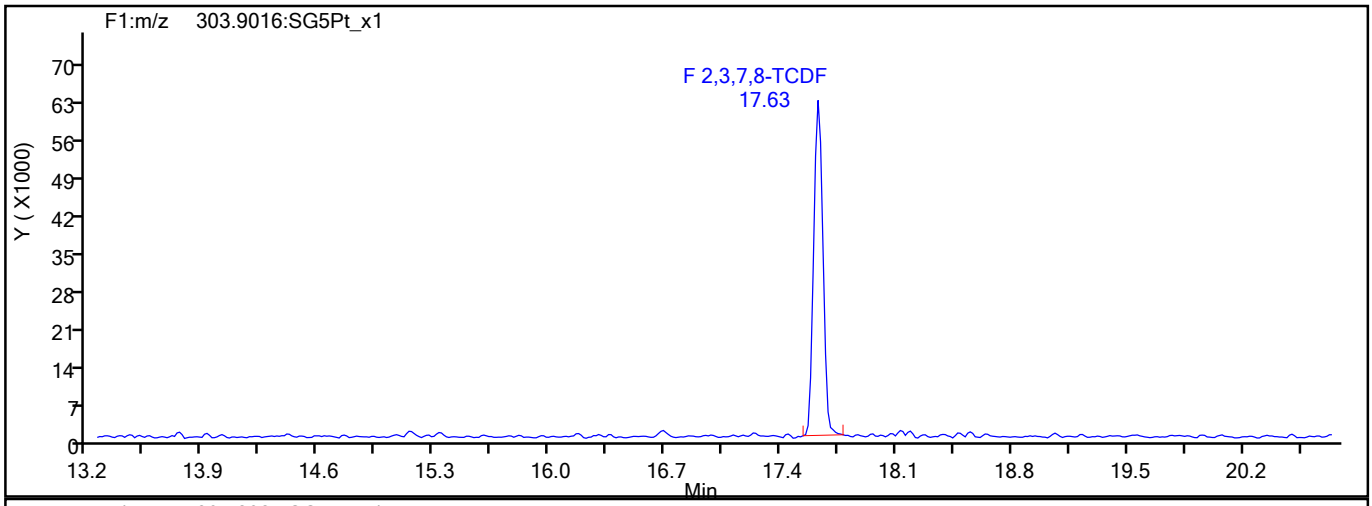

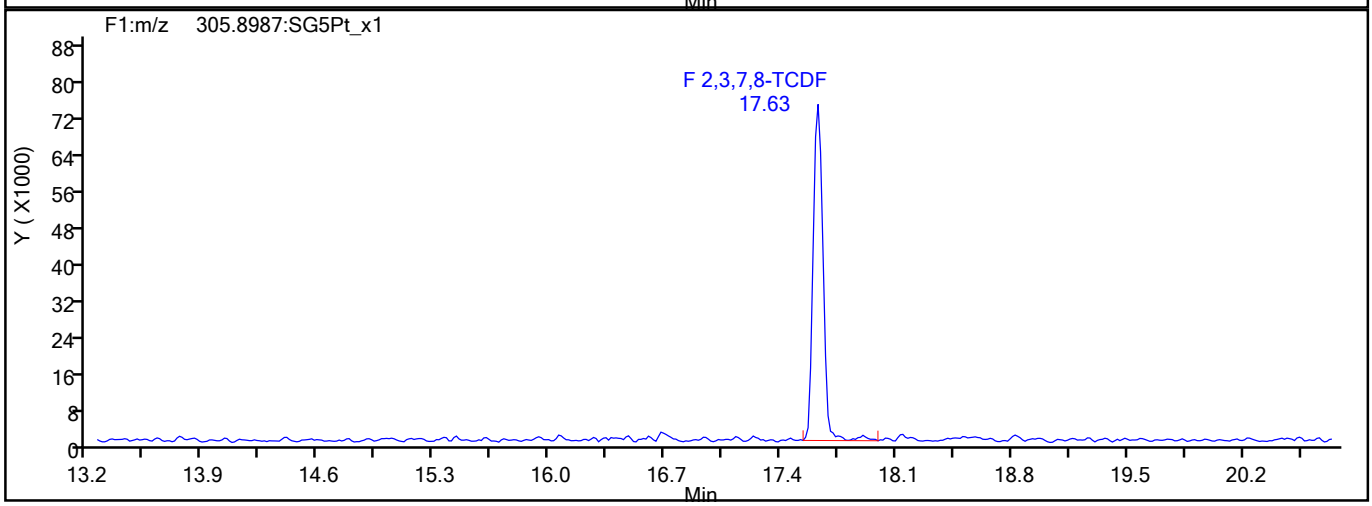

TCDF Interference Mass

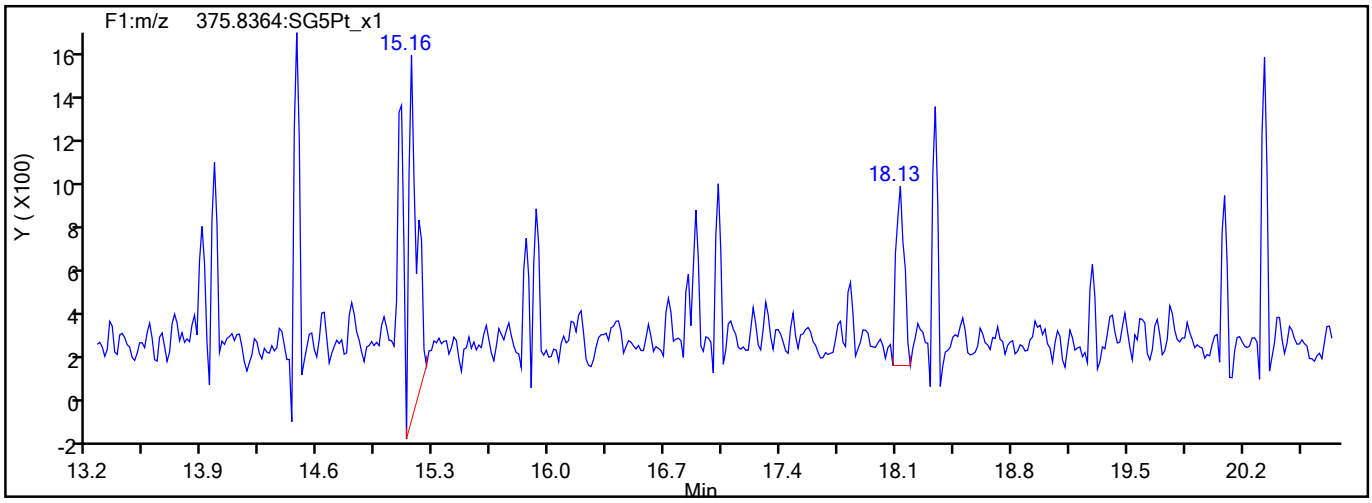

773294

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

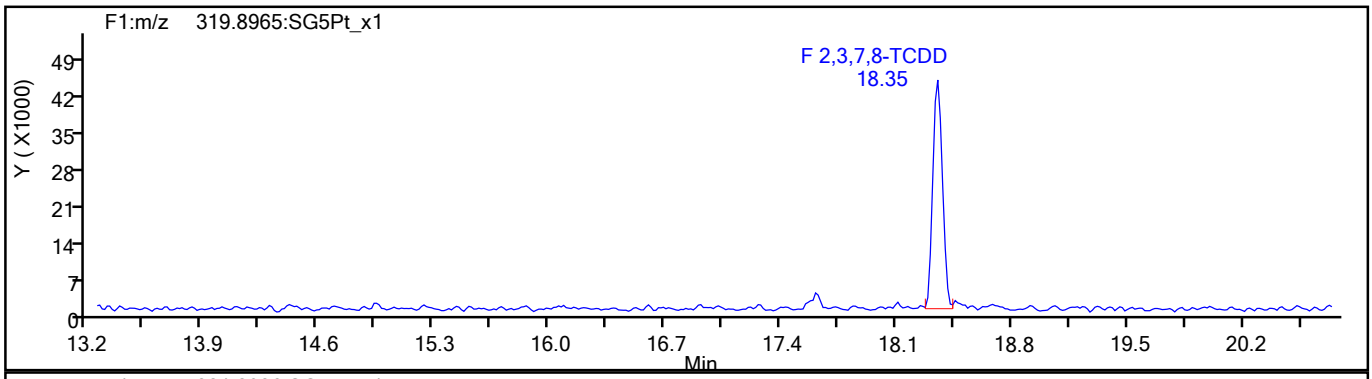

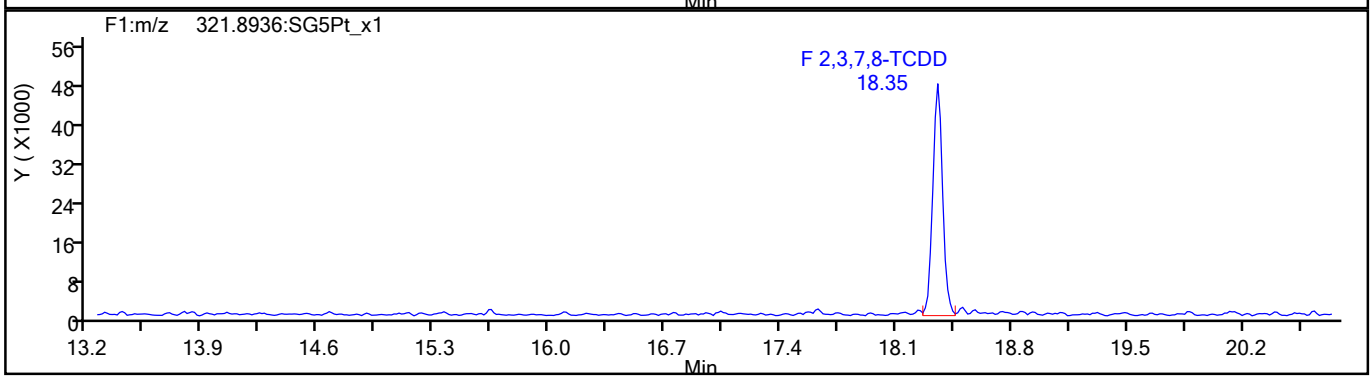

TCDD Standards

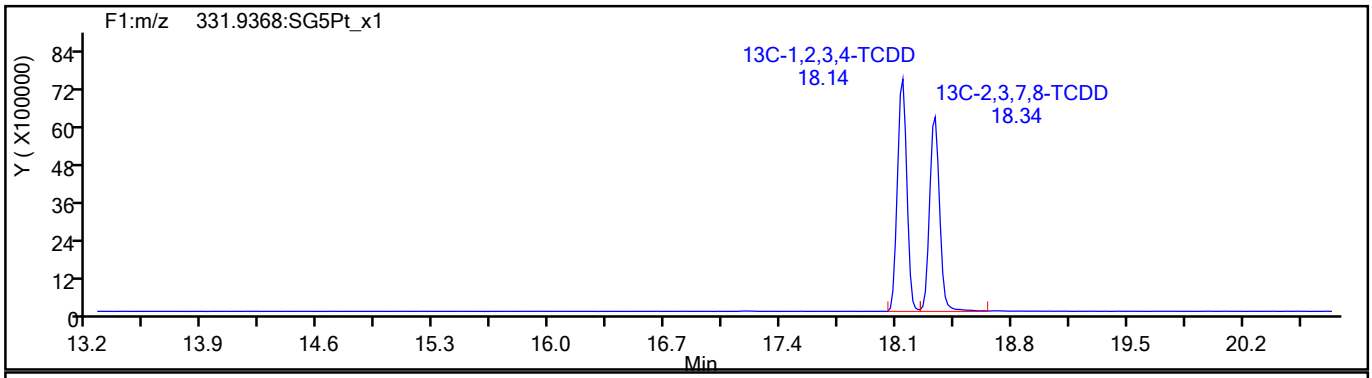

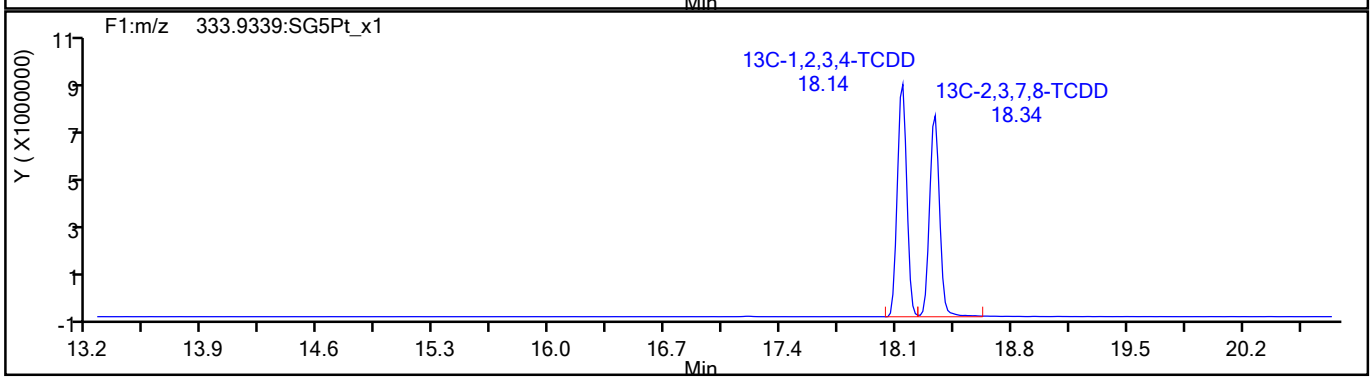

773295

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

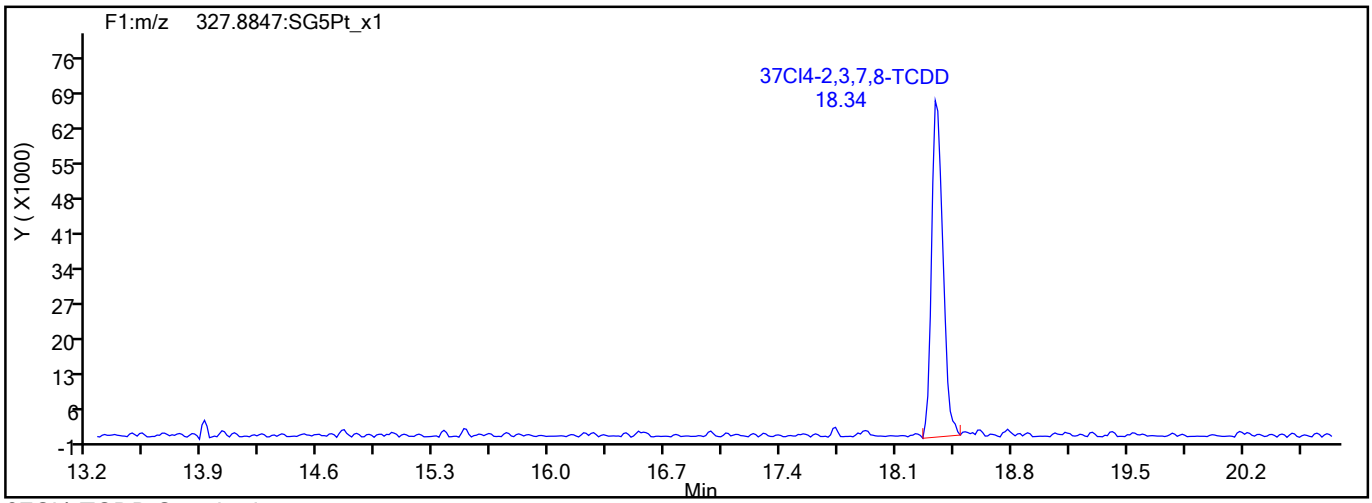

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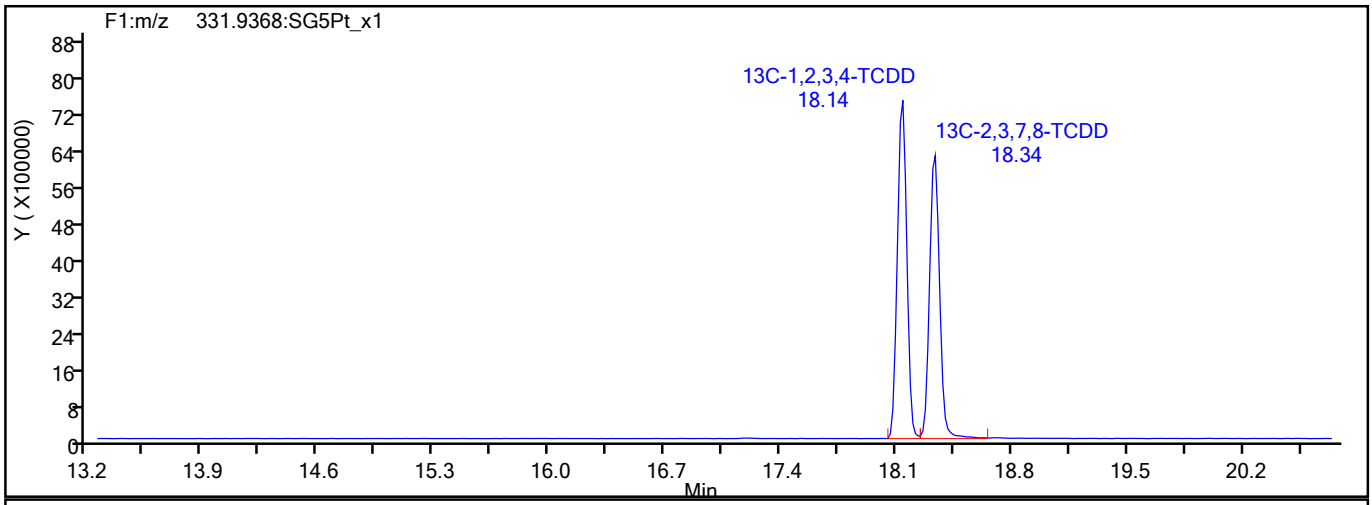

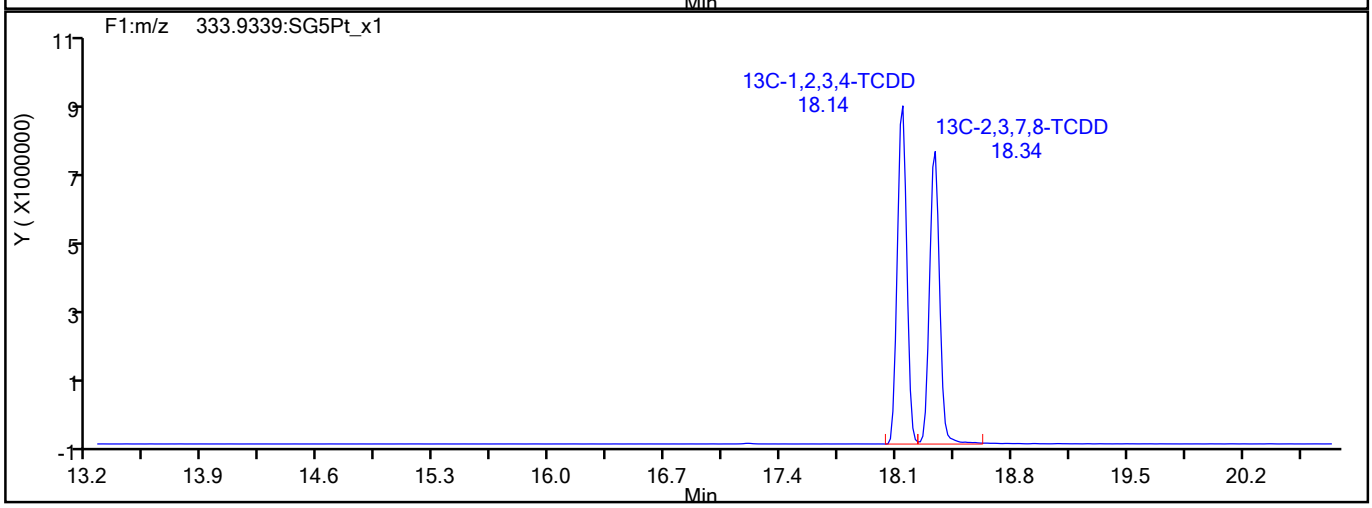

773296

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

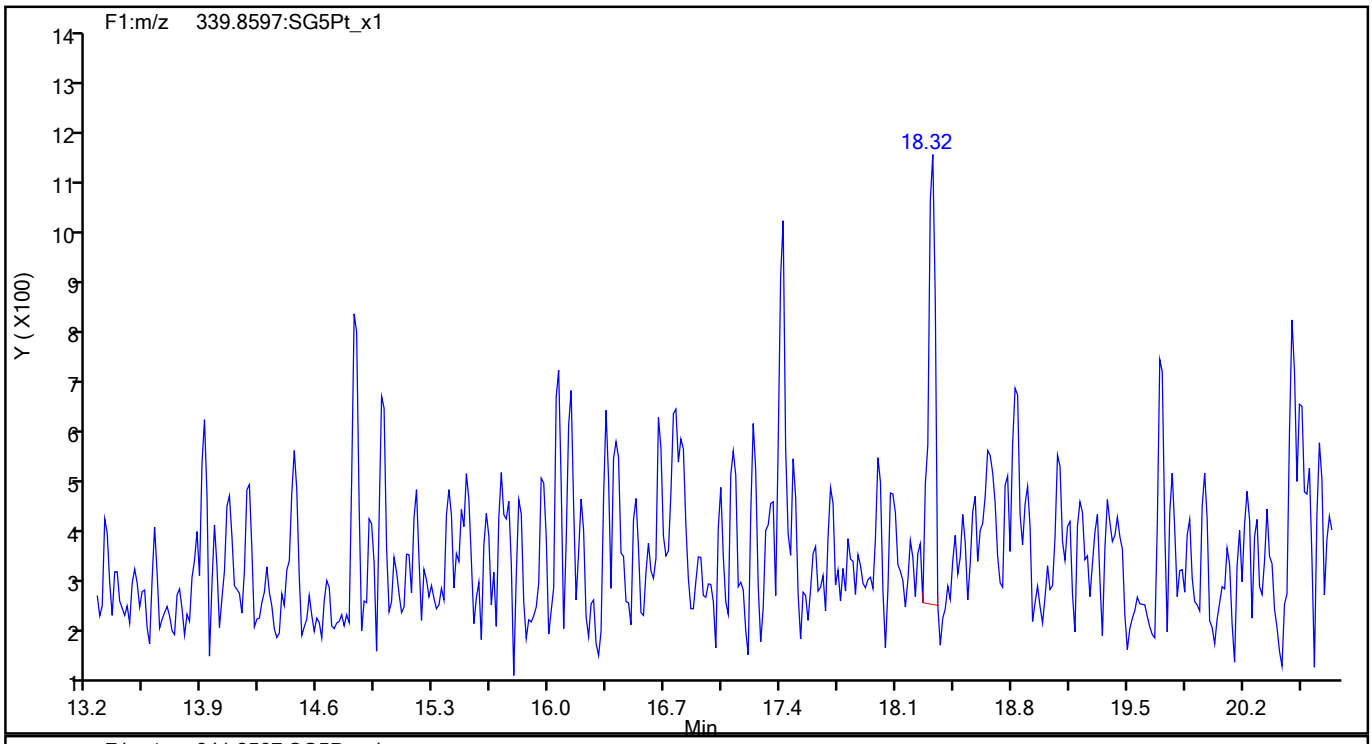

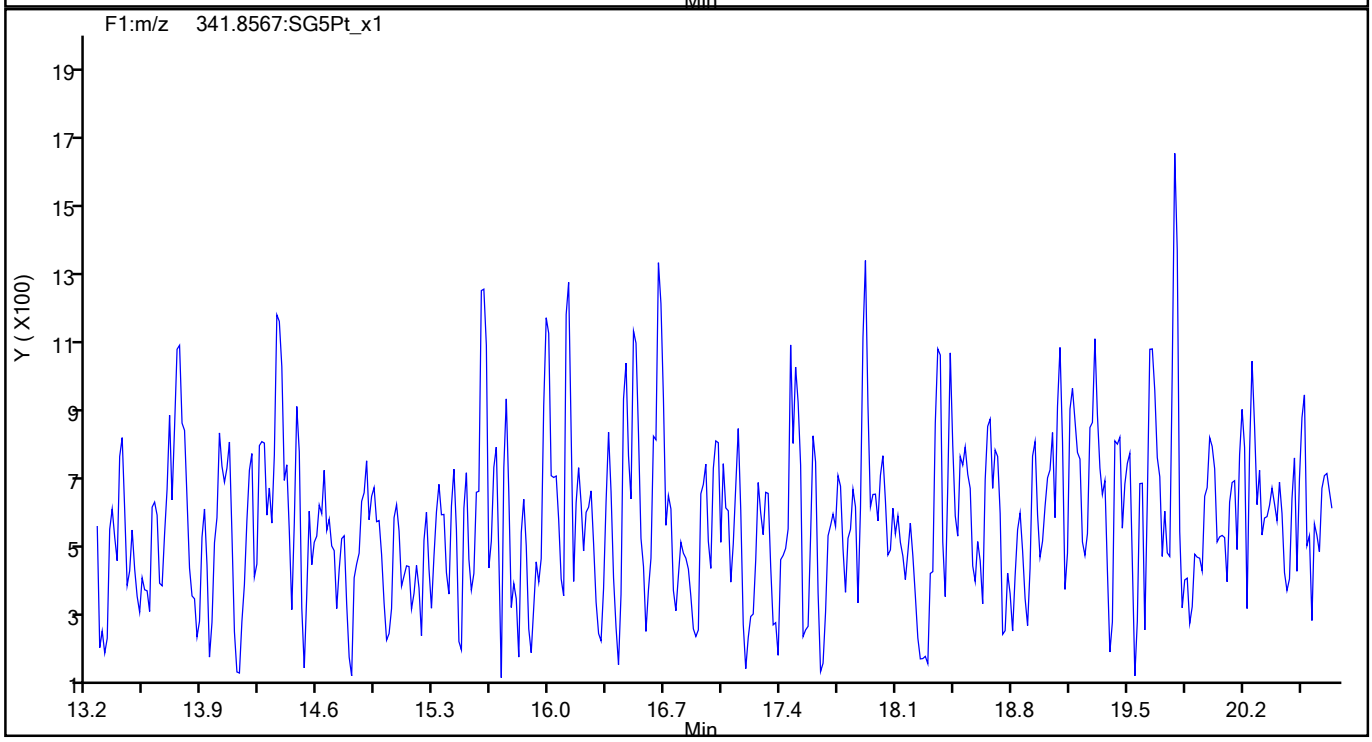

773297

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

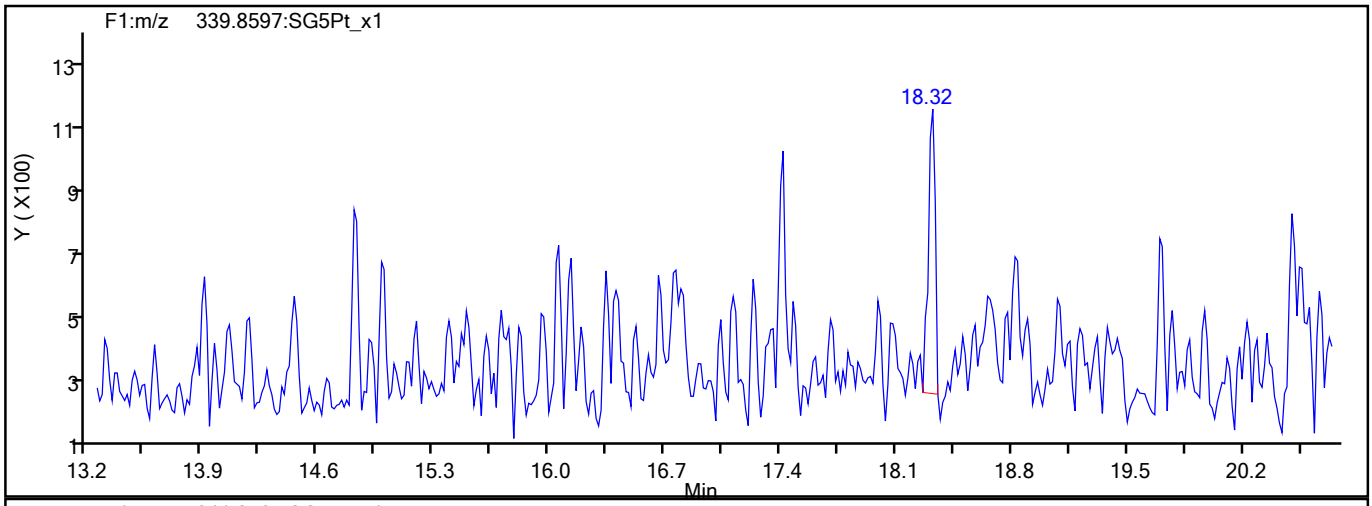

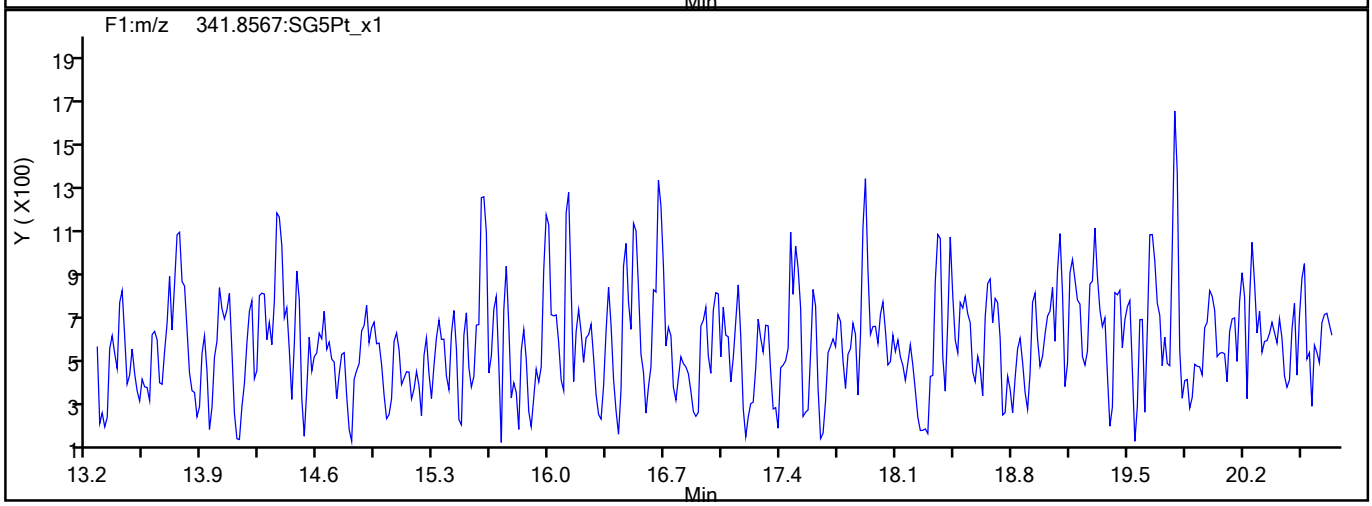

F1 PeCDFs Interference Mass

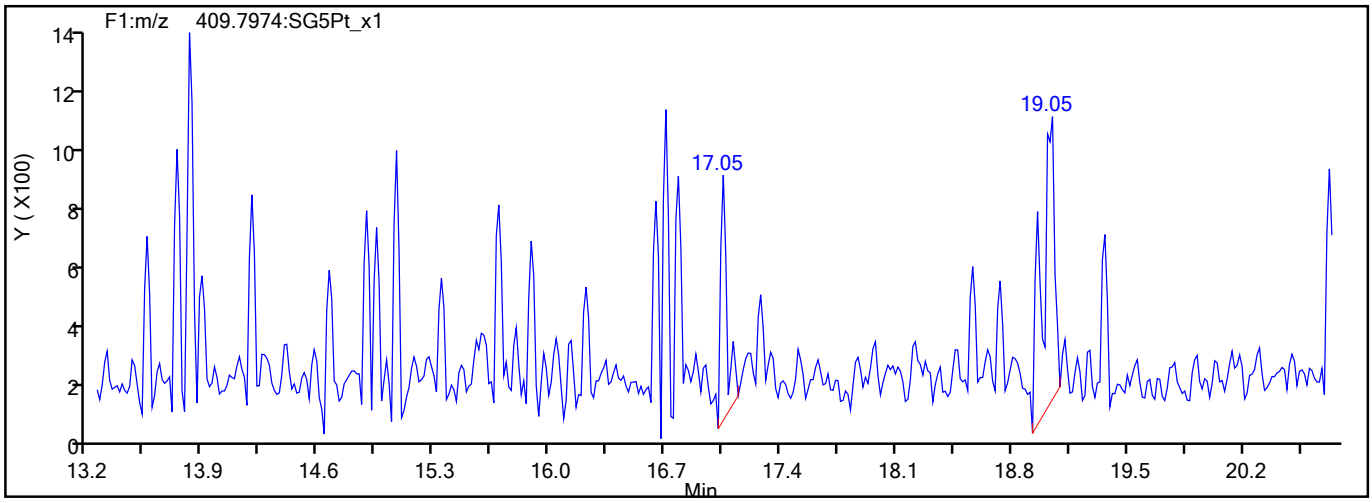

773298

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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PeCDF

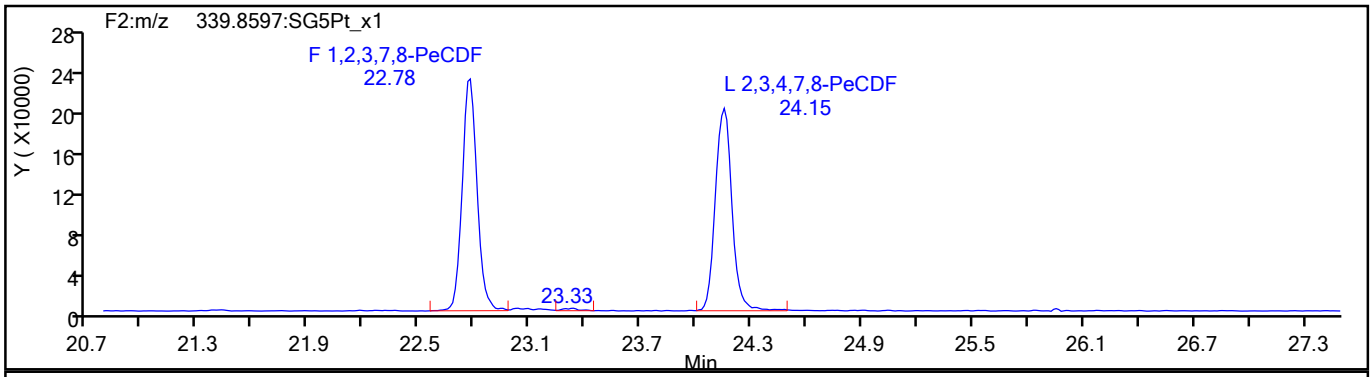

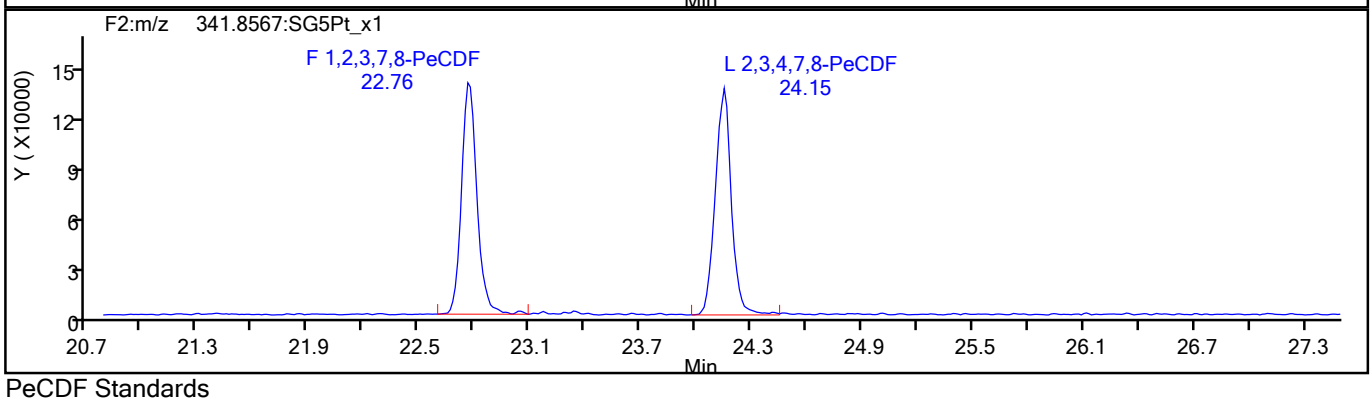

PeCDF Standards

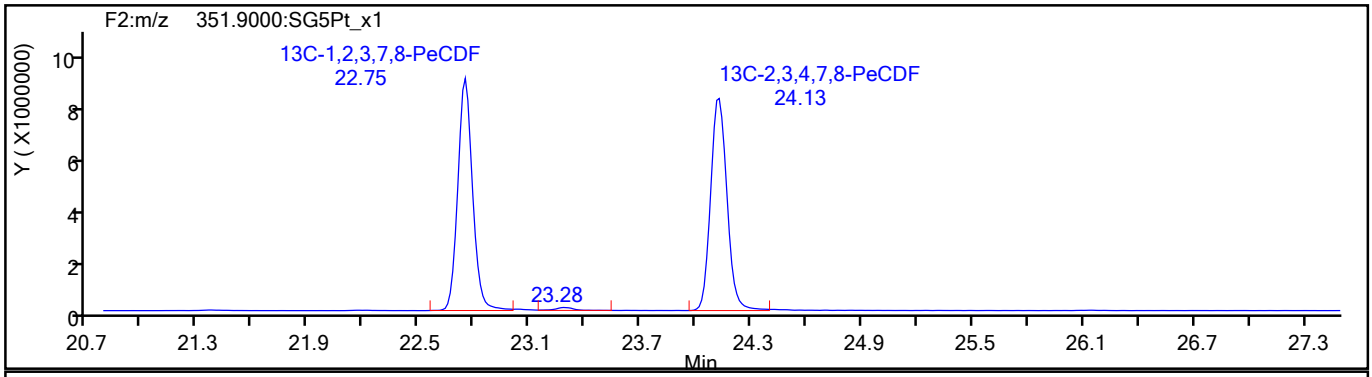

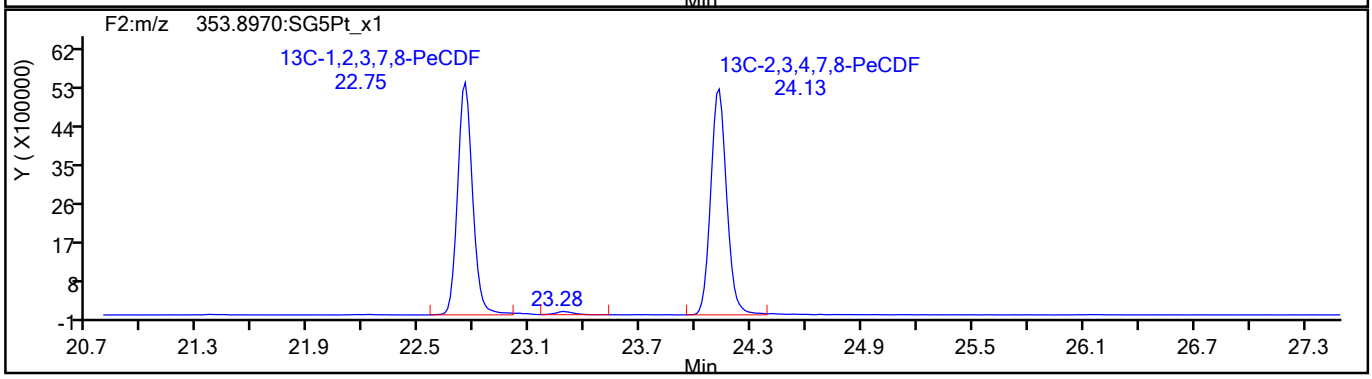

773299

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

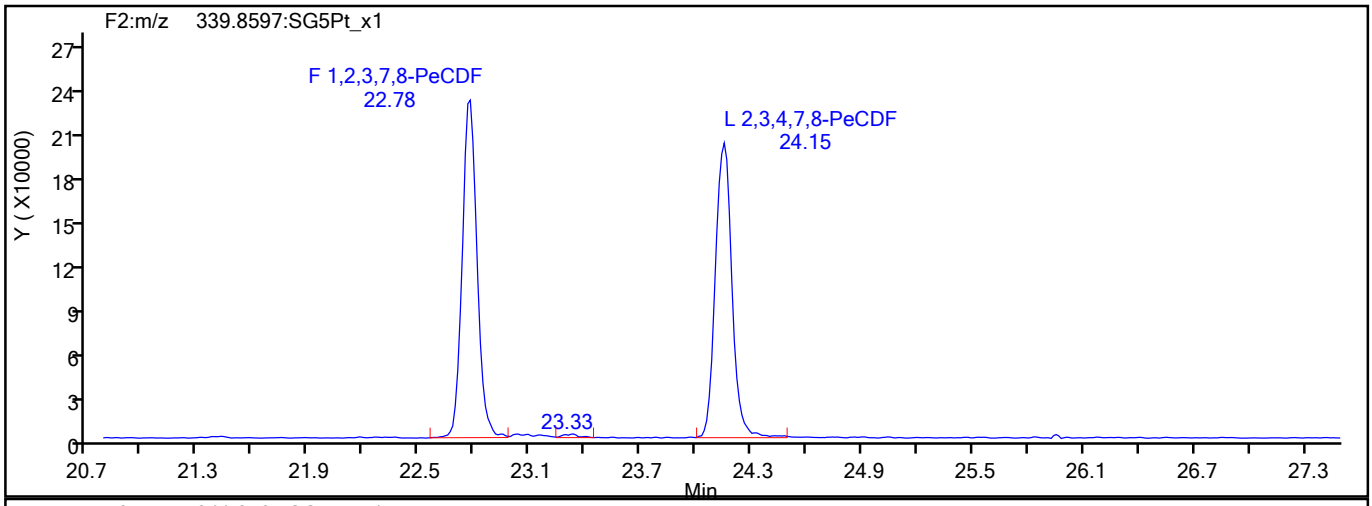

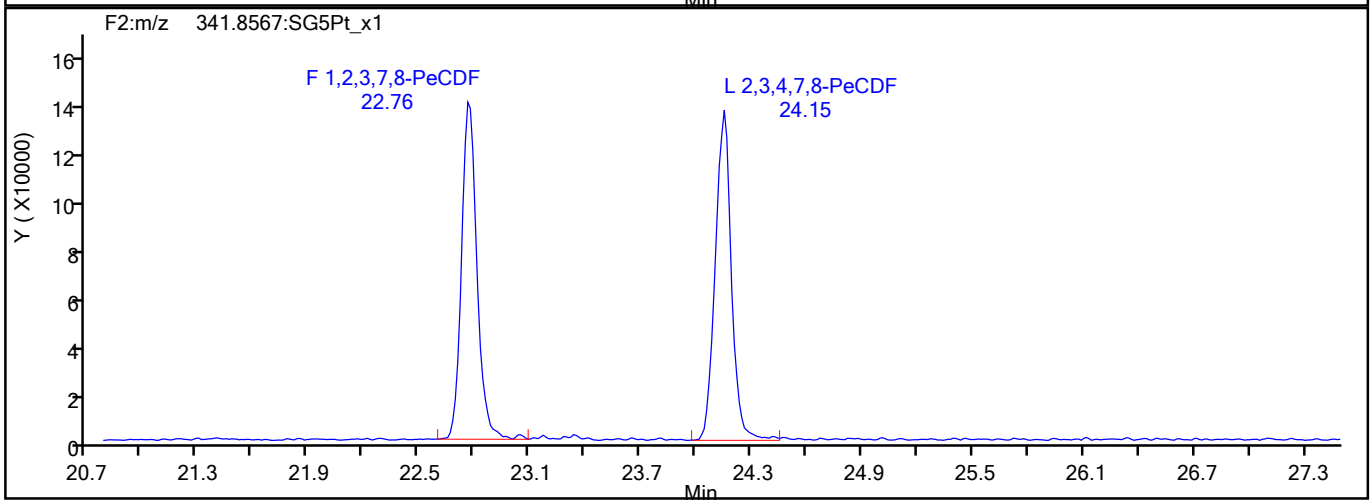

PeCDF Interference Mass

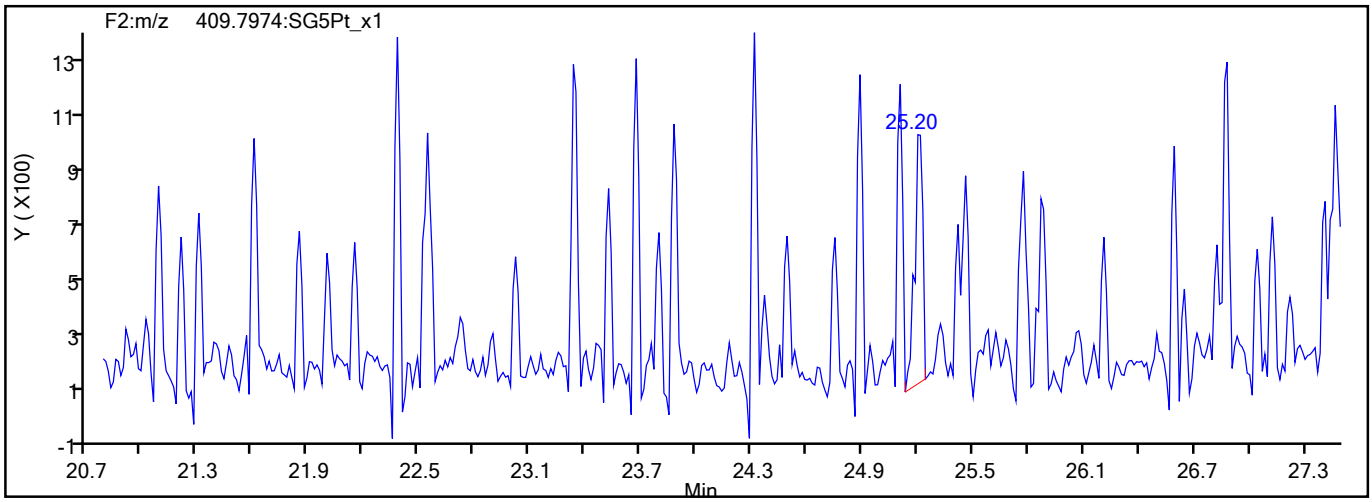

773300

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

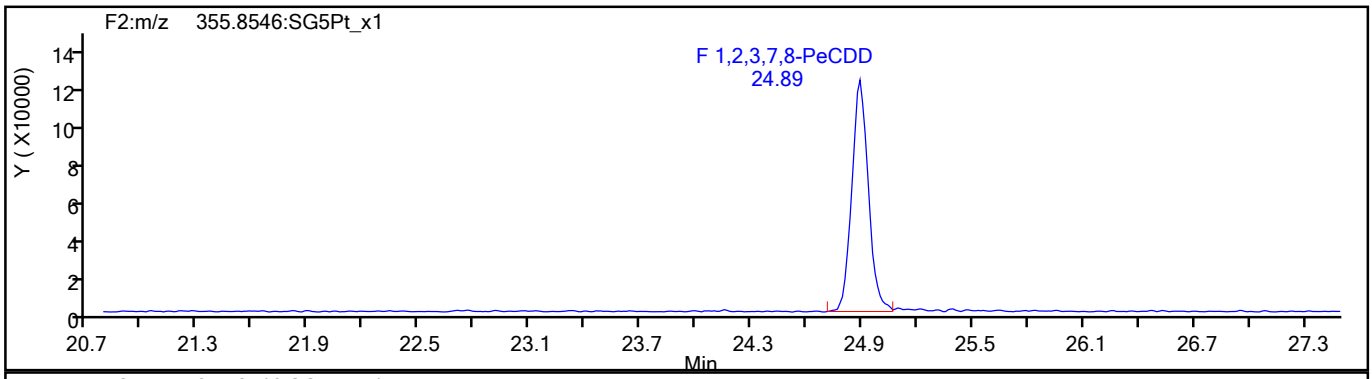

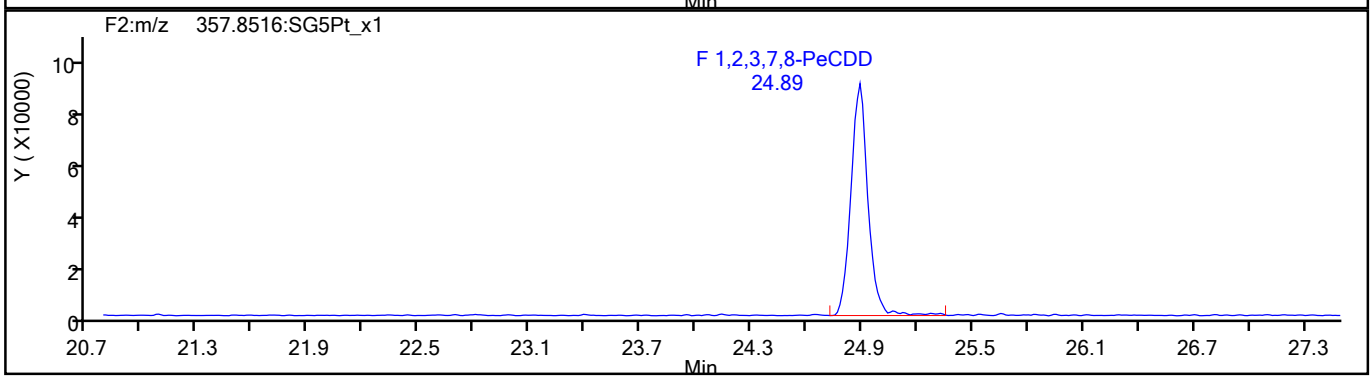

PeCDD Standards

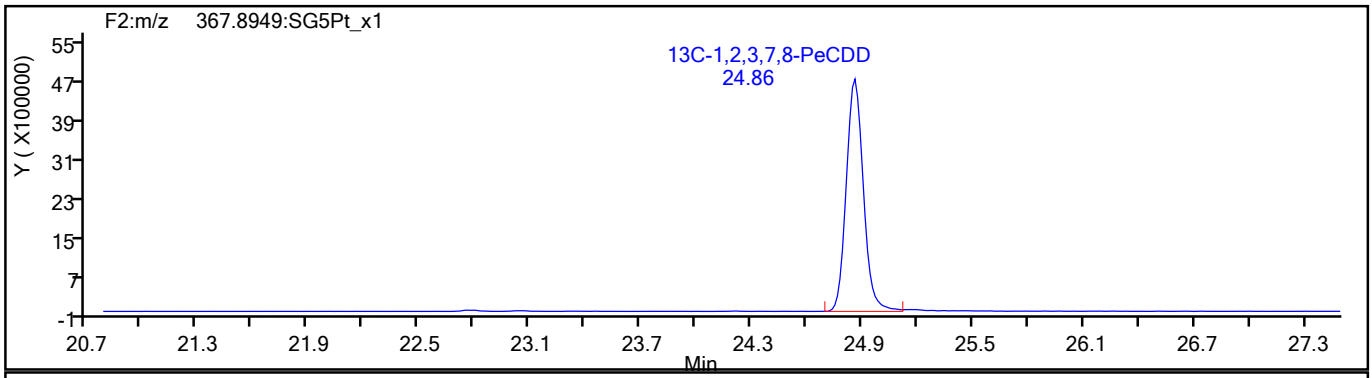

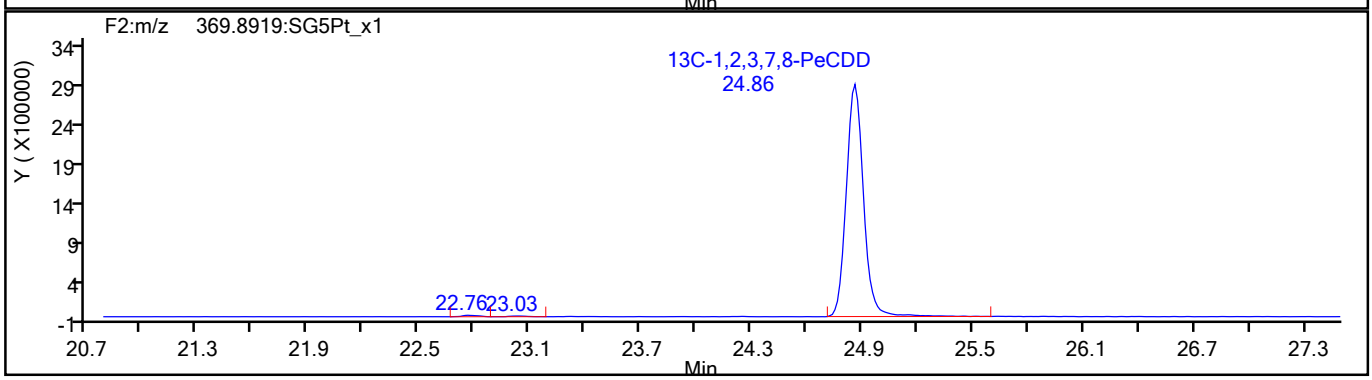

773301

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

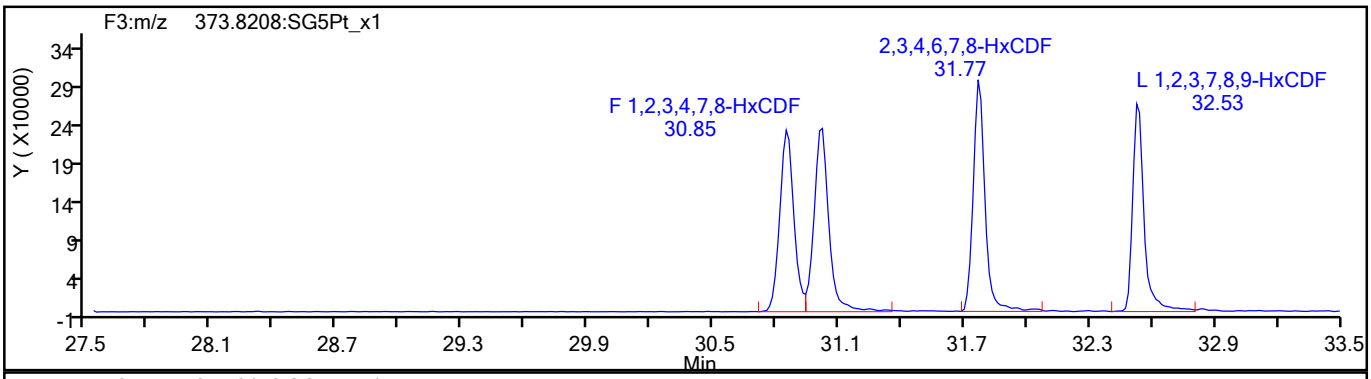

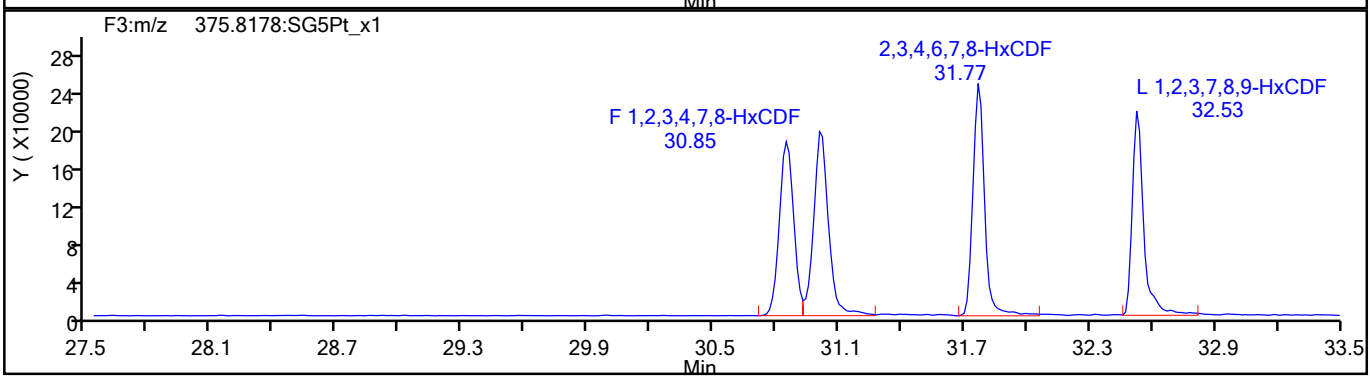

HxCDF Standards

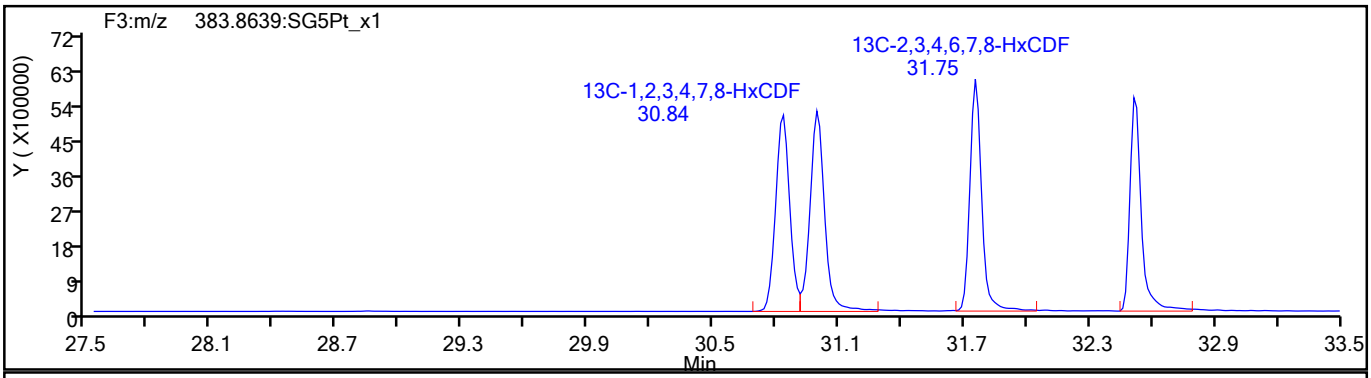

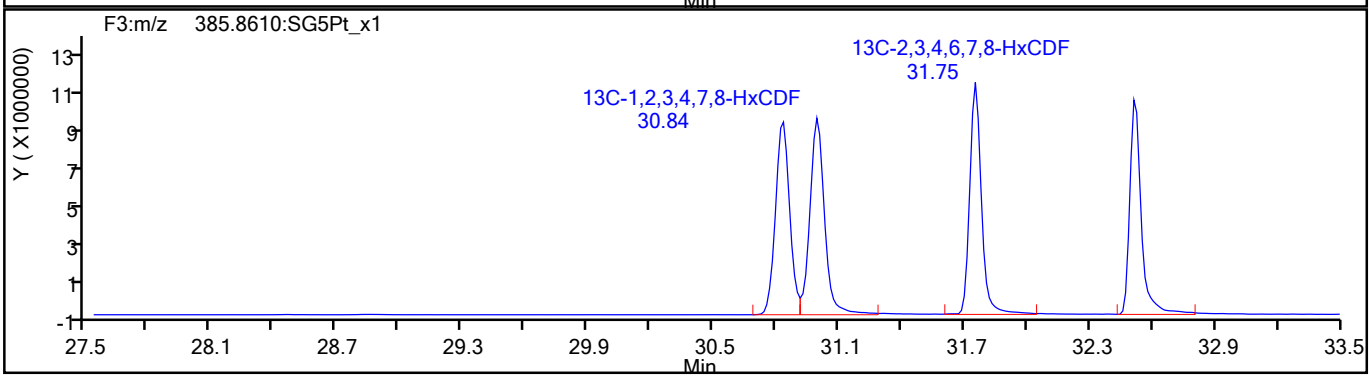

773302

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

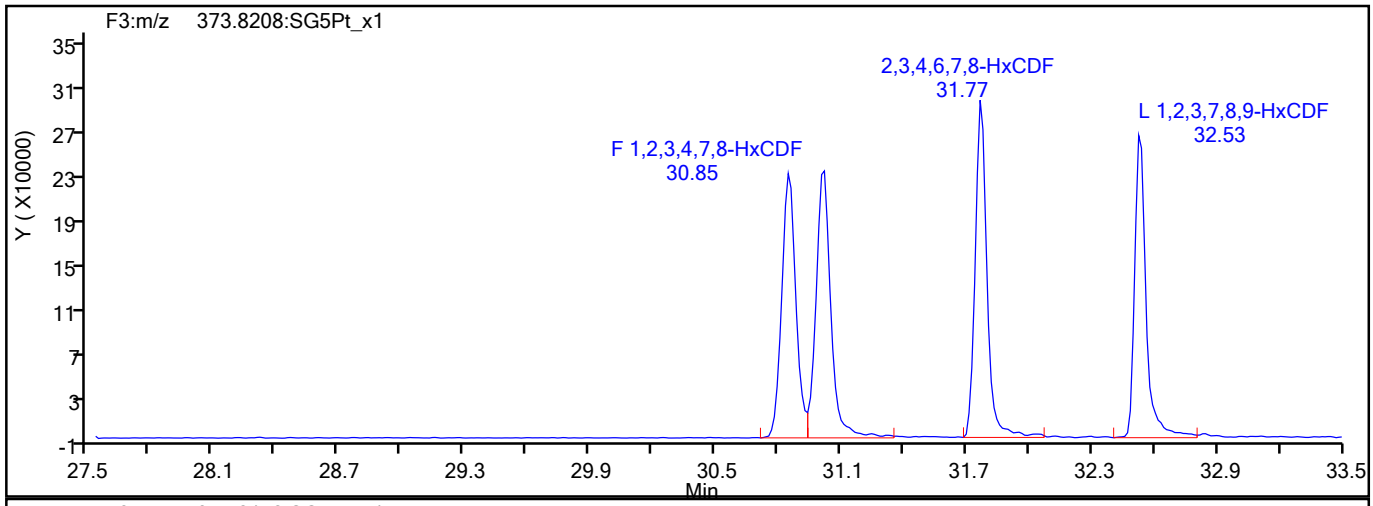

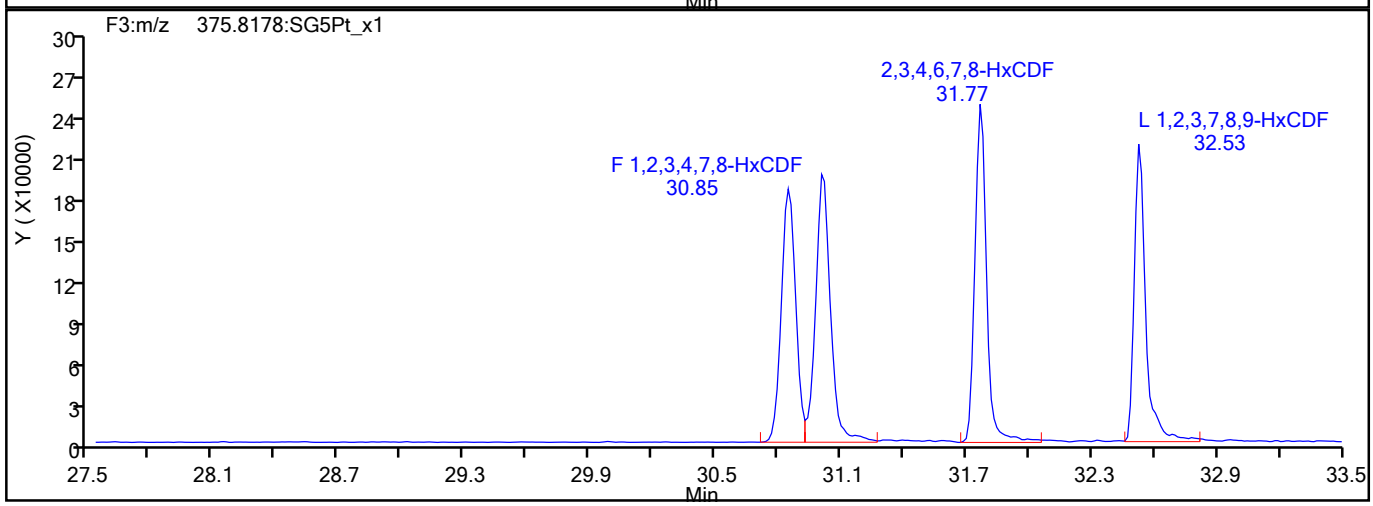

HxCDF Interference Mass

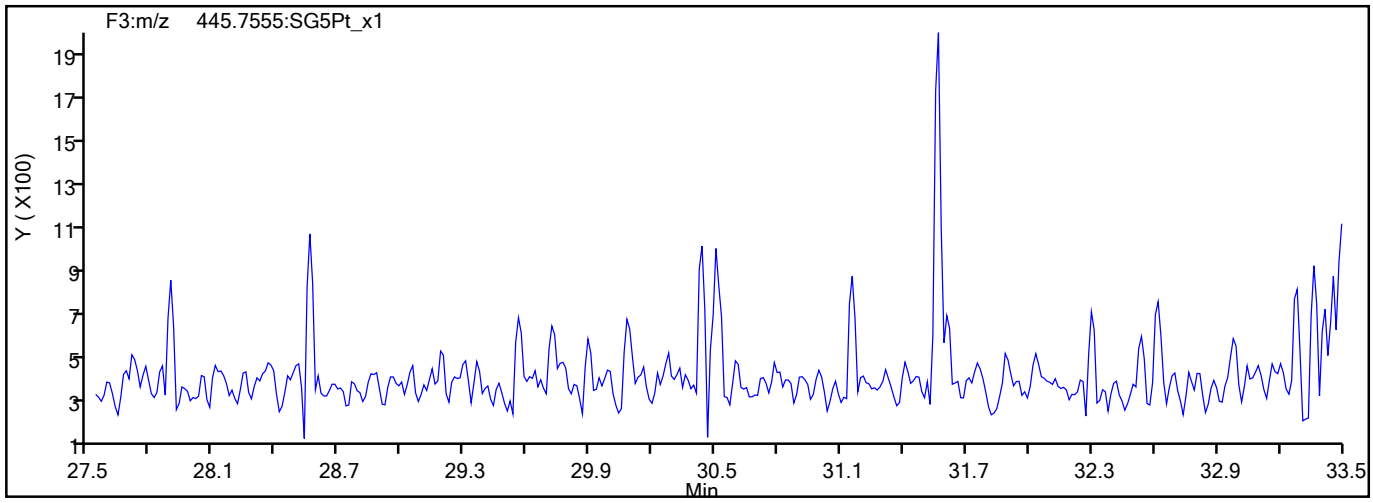

773303

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDD

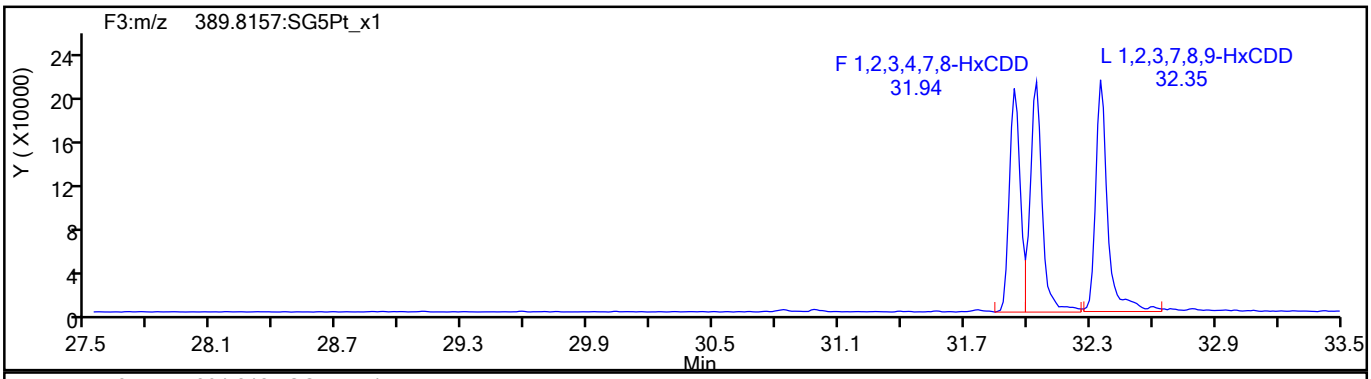

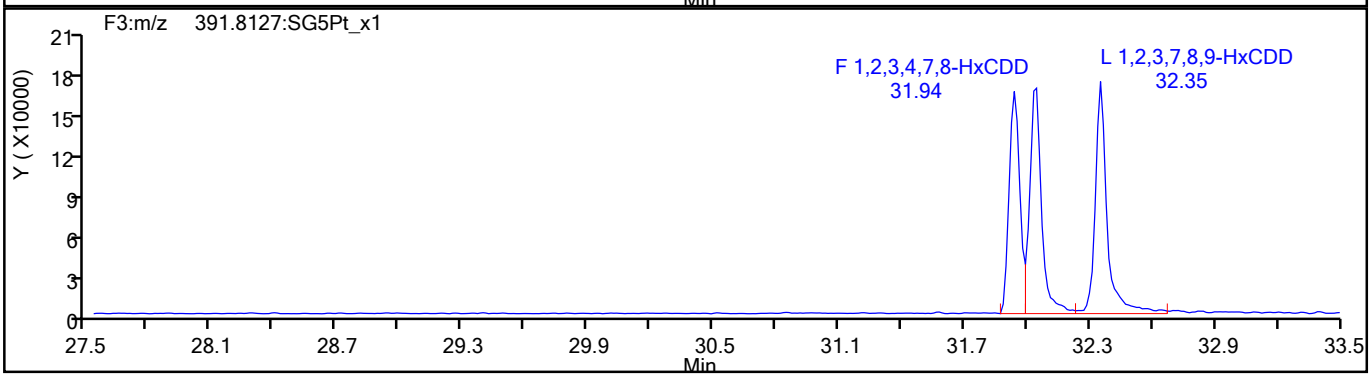

HxCDD Standards

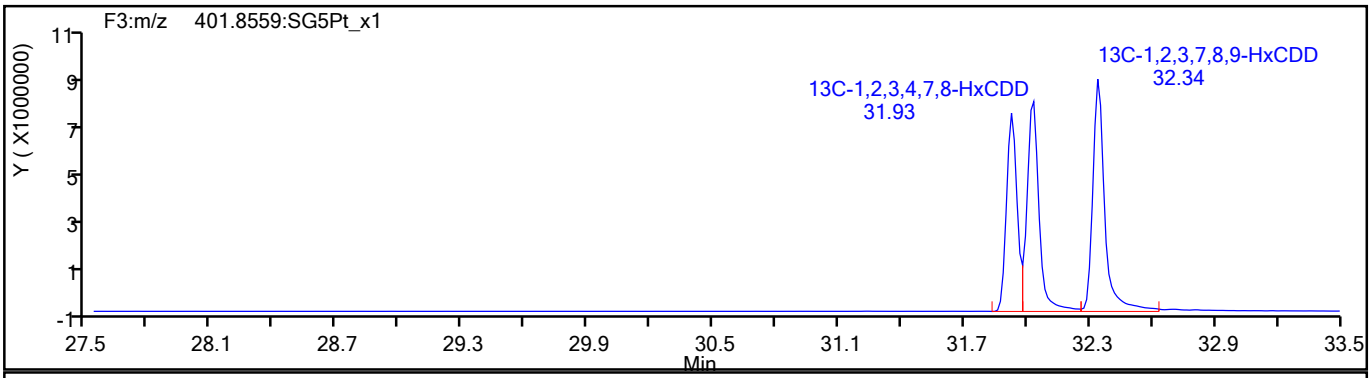

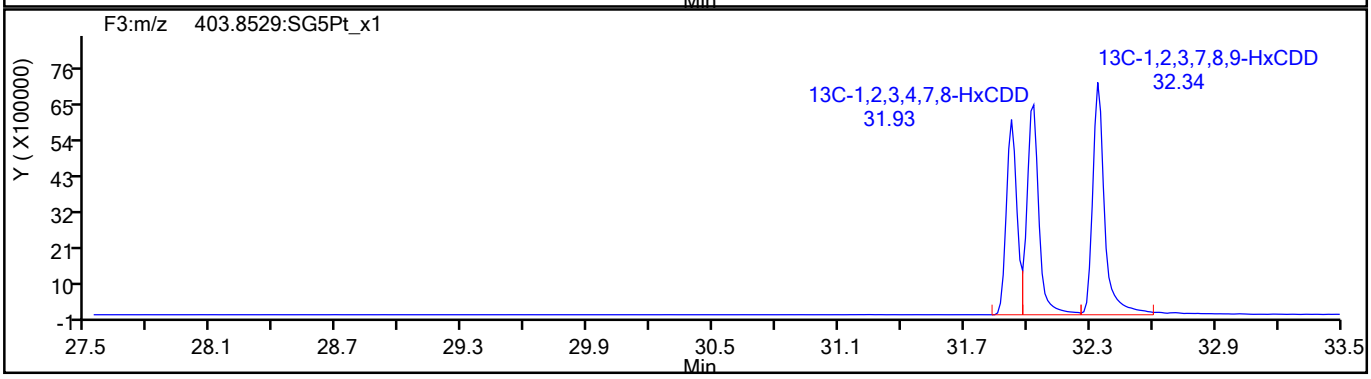

773304

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

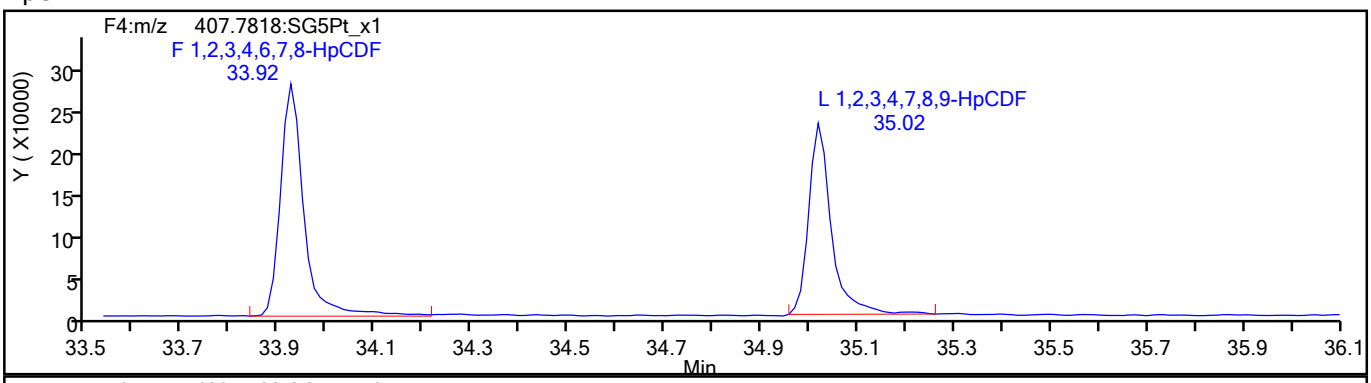

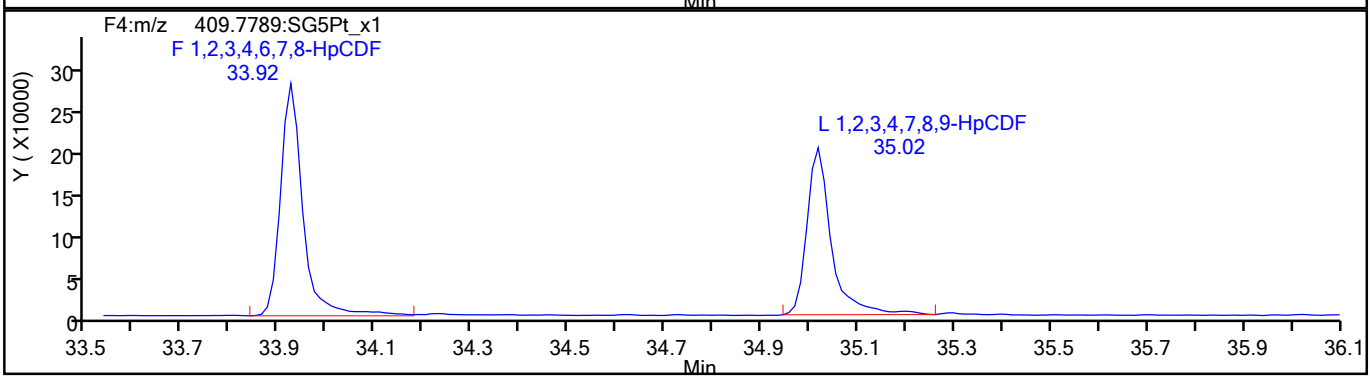

HpCDF Standards

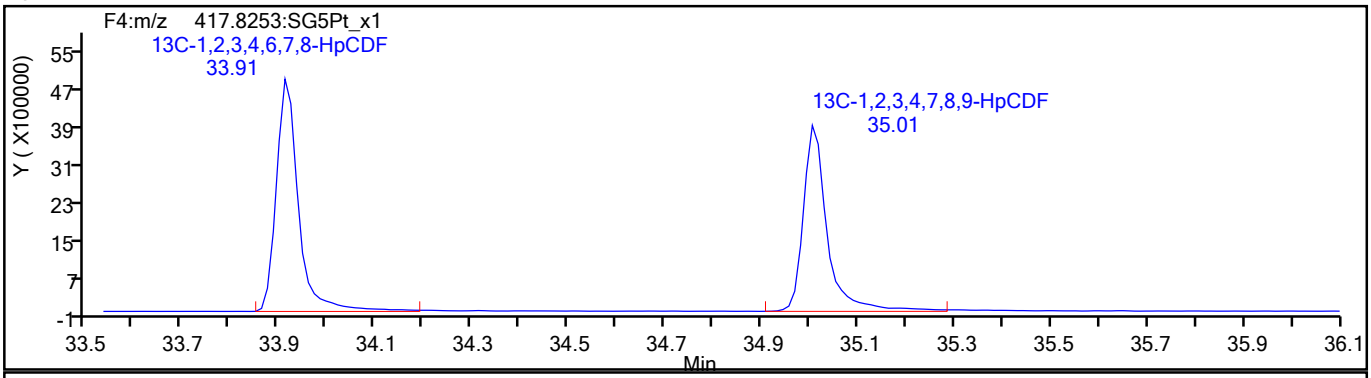

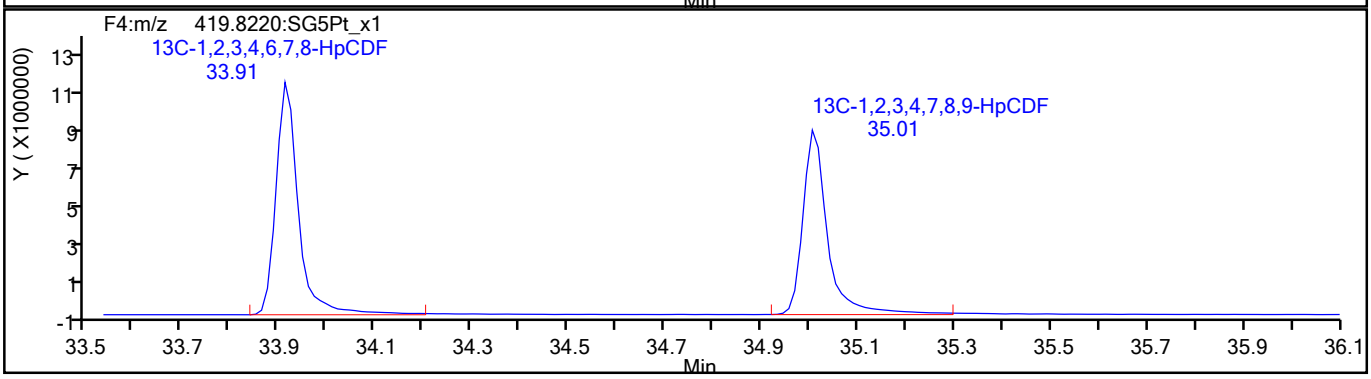

773305

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

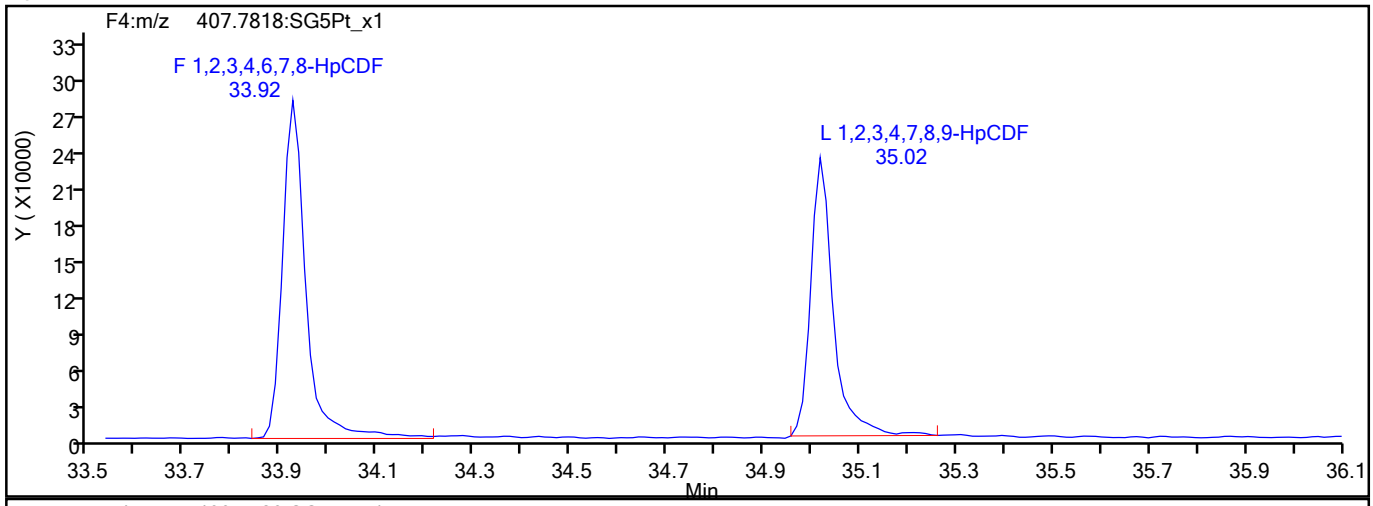

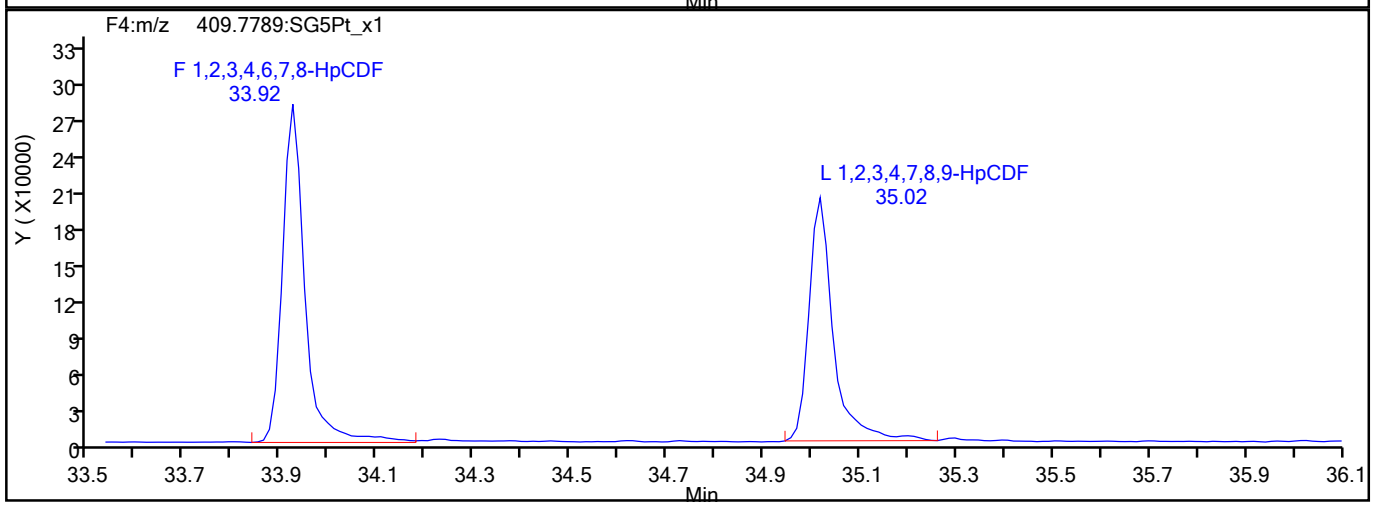

HpCDF Interference Mass

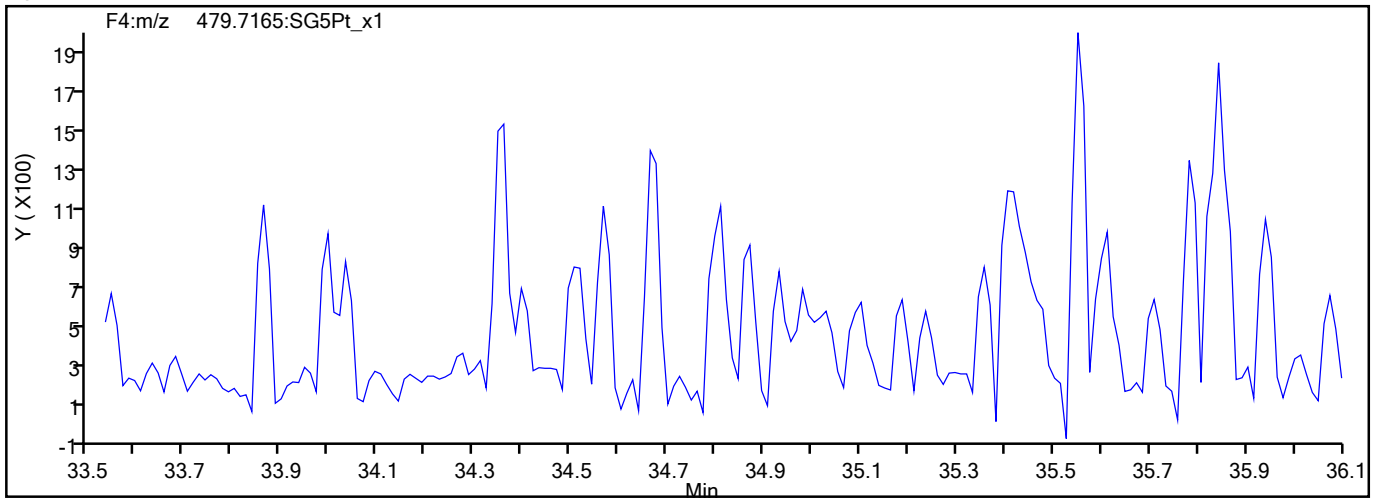

773306

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

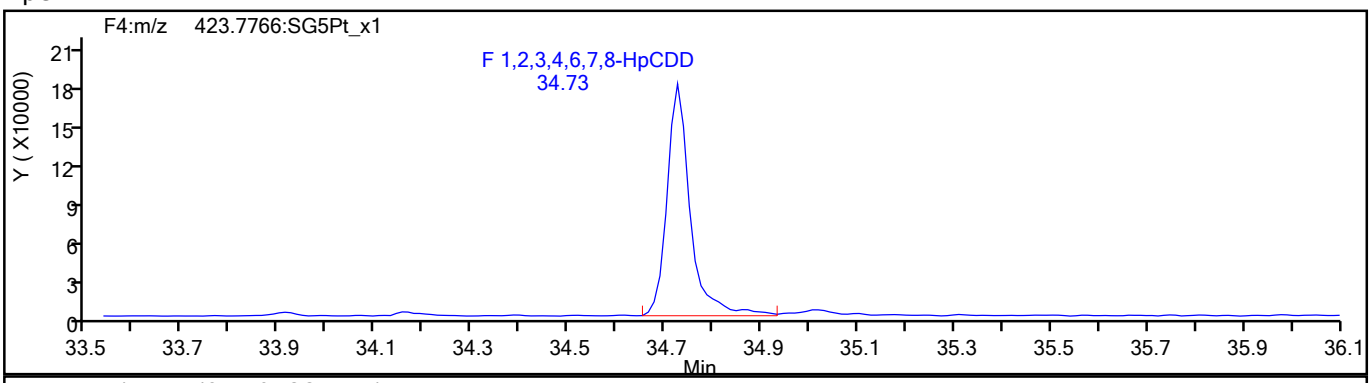

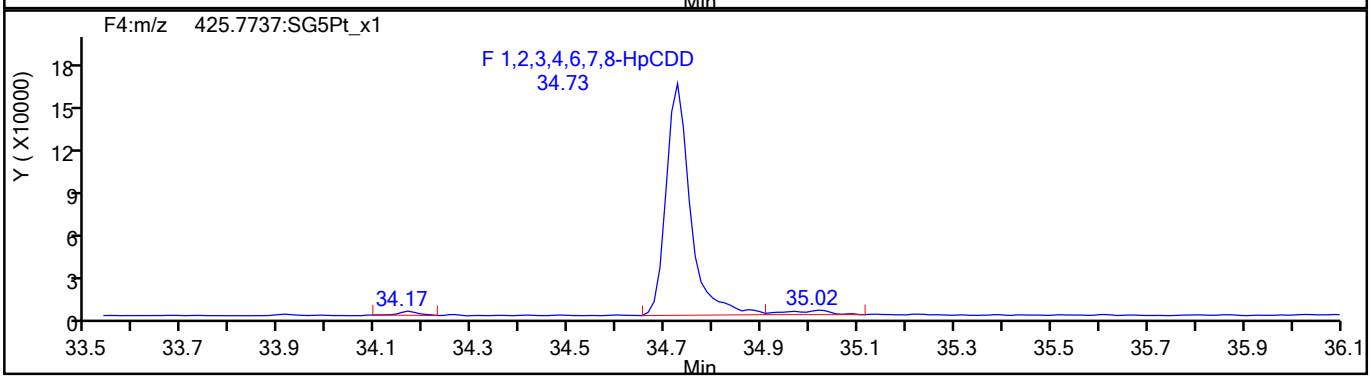

HpCDD Standards

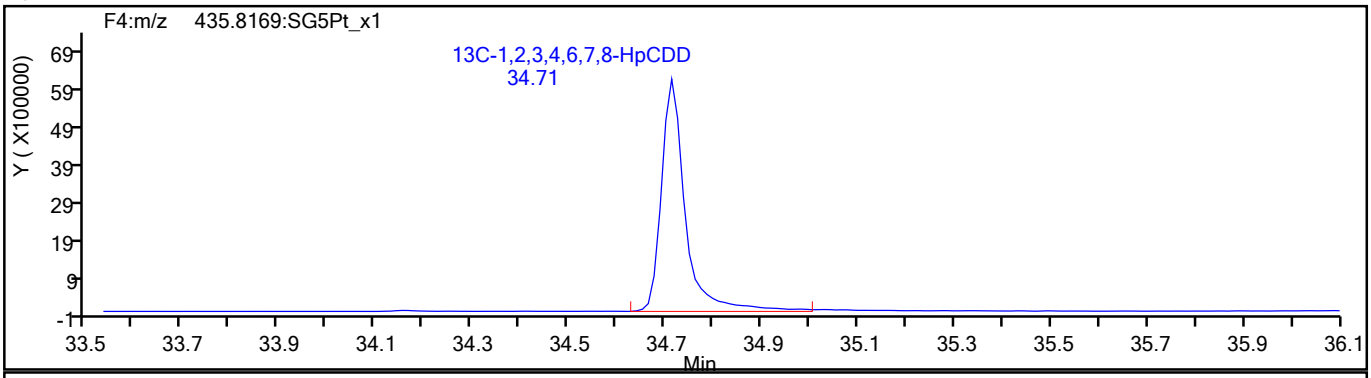

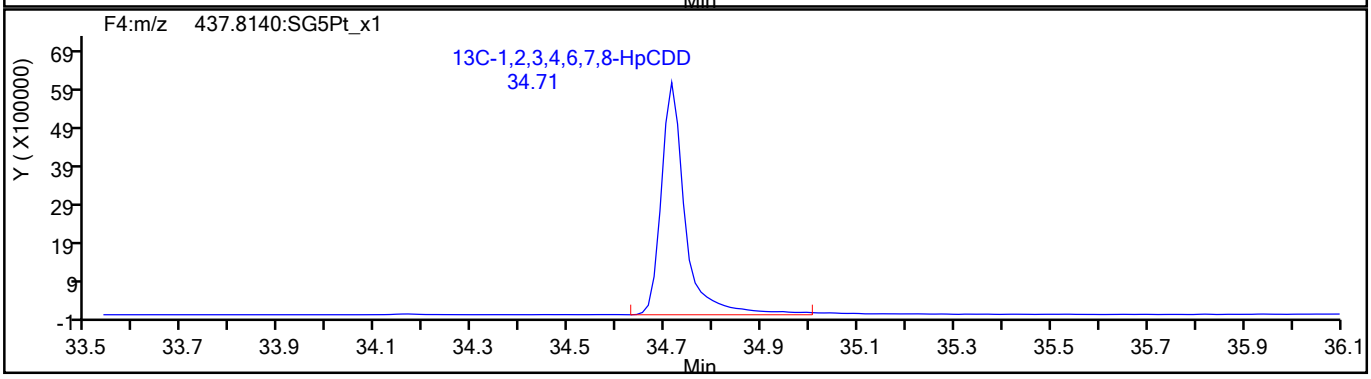

773307

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

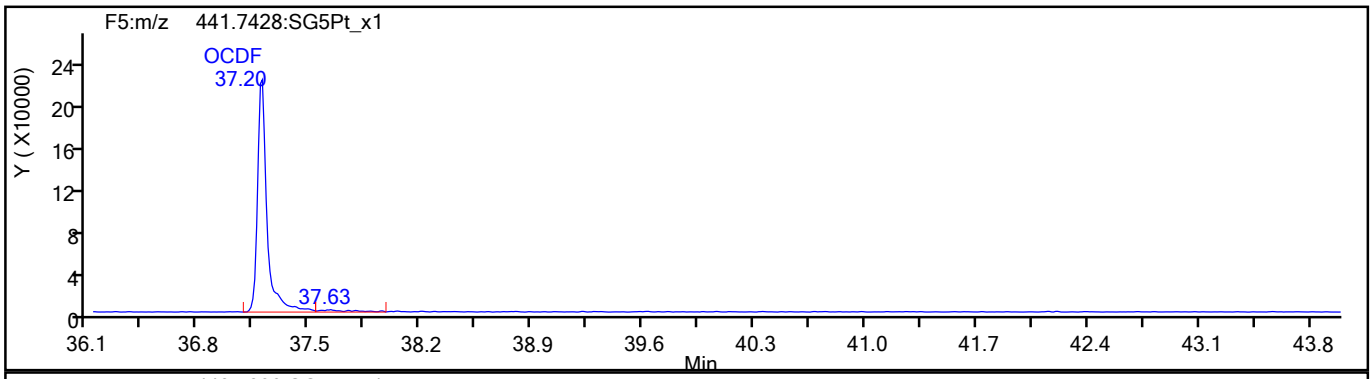

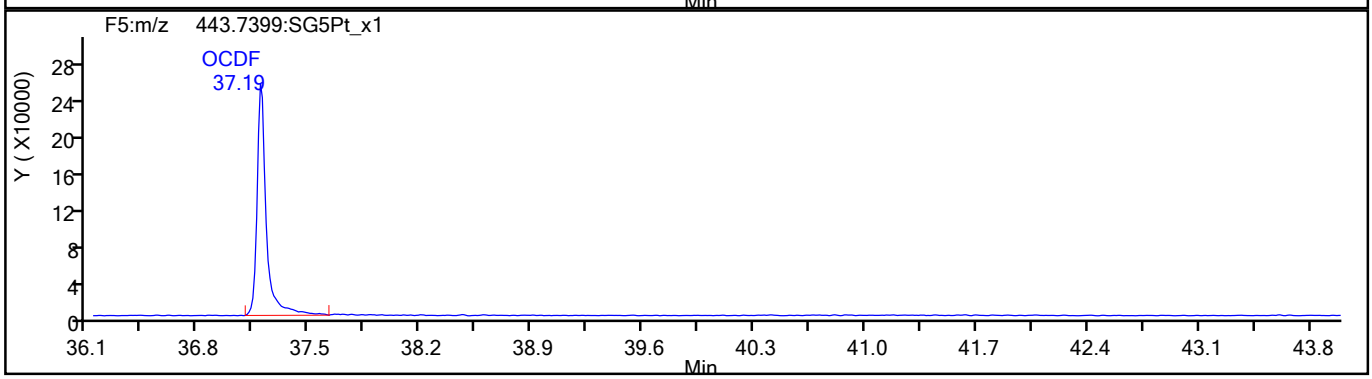

OCDF Standards

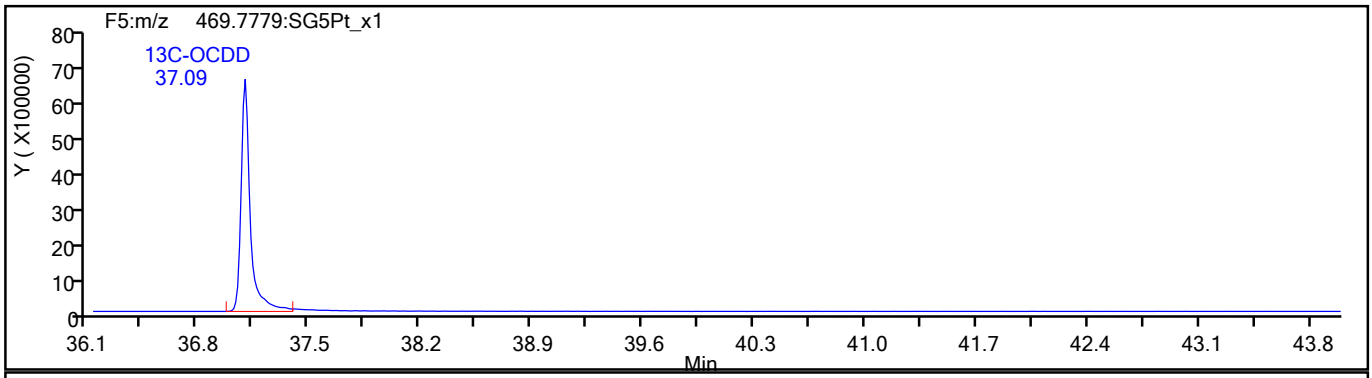

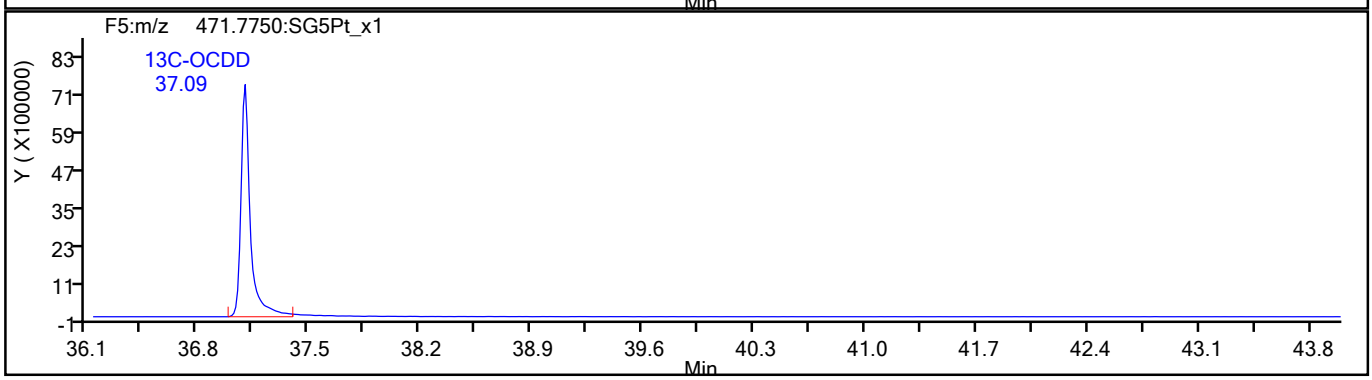

773308

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

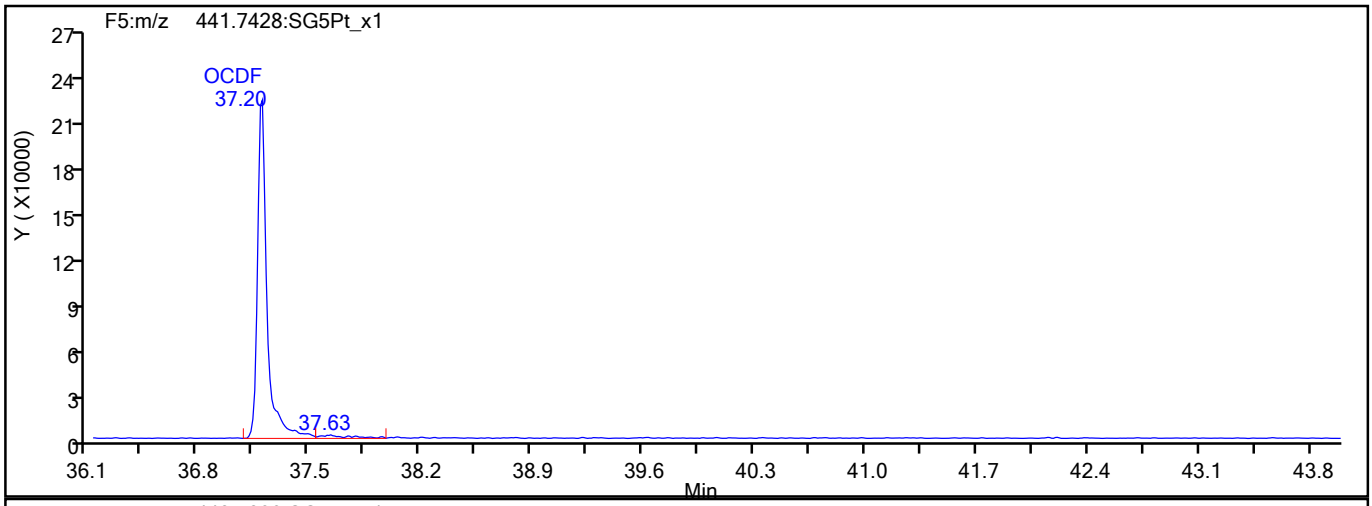

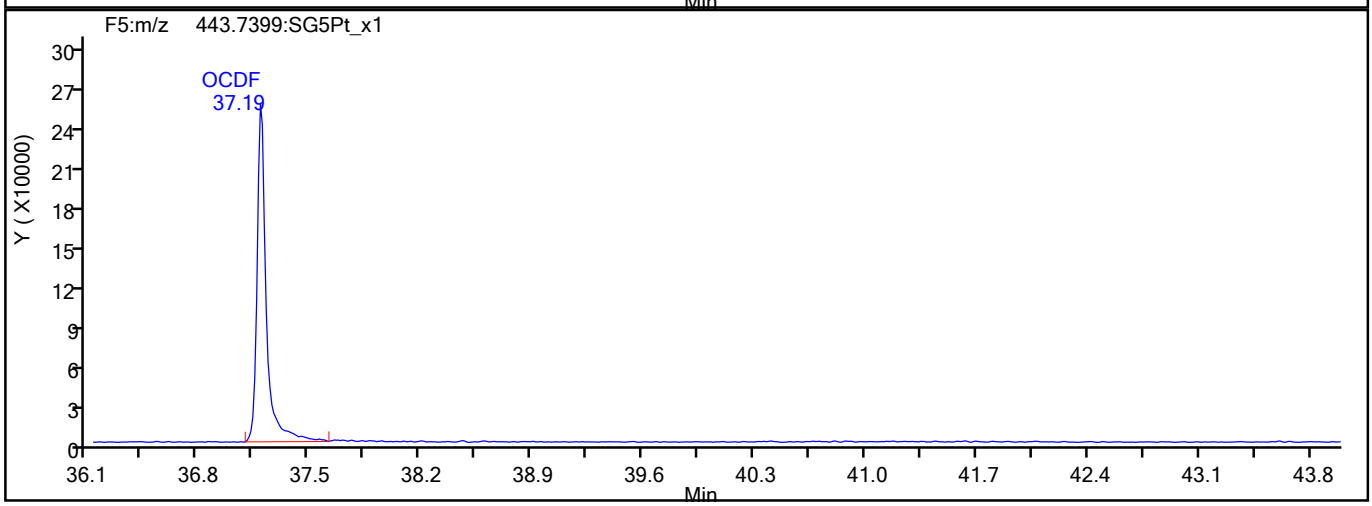

OCDF Interference Mass

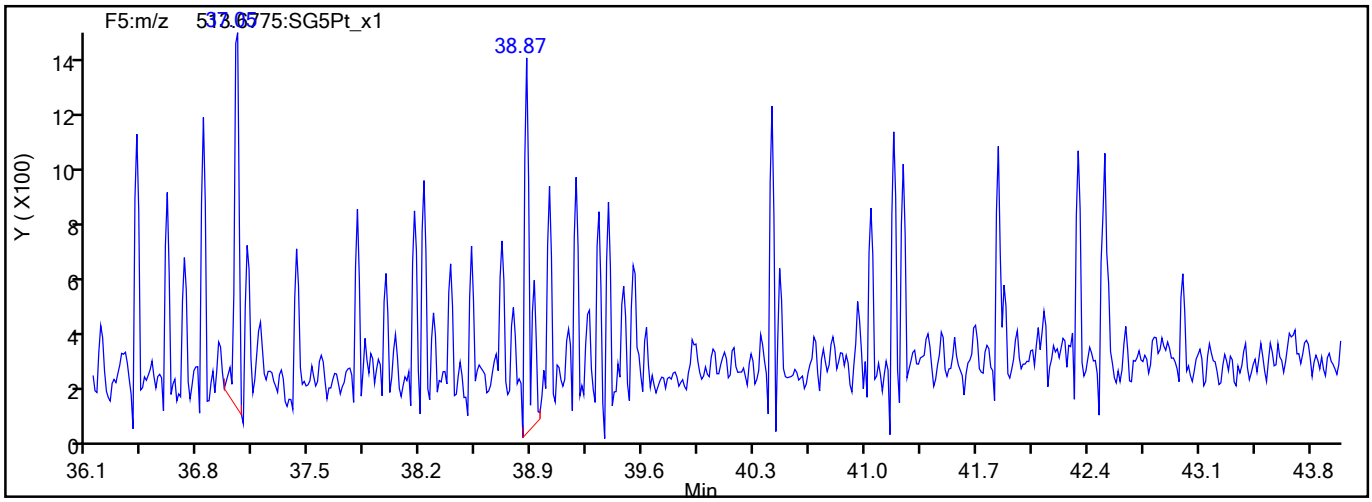

773309

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

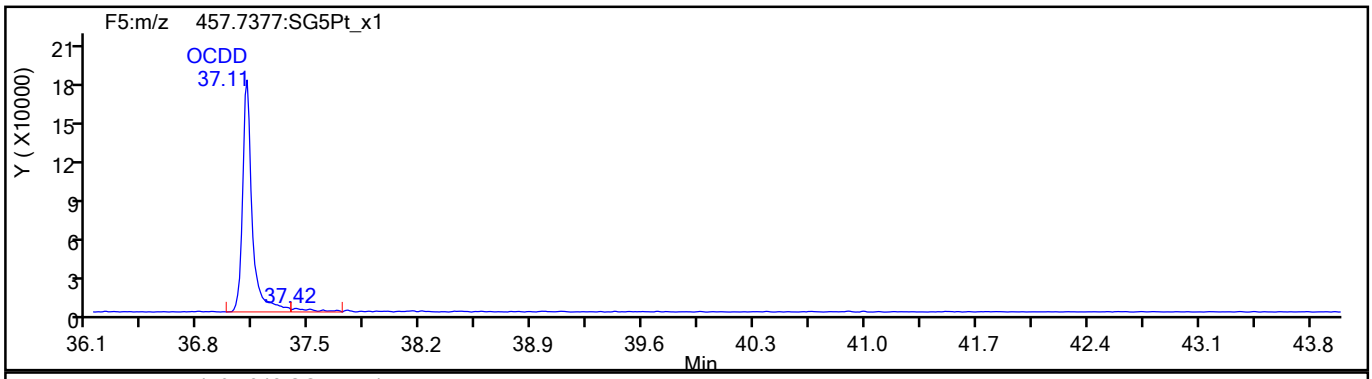

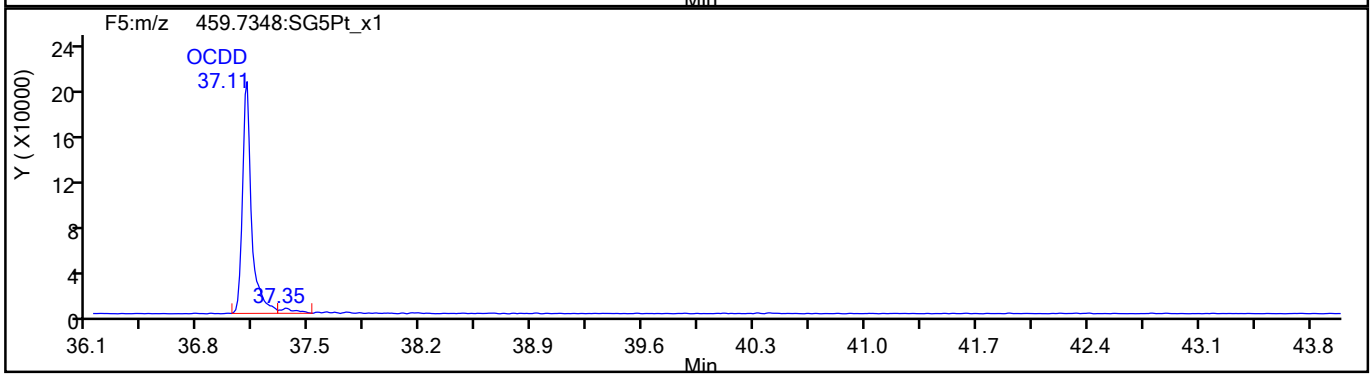

OCDD Standards

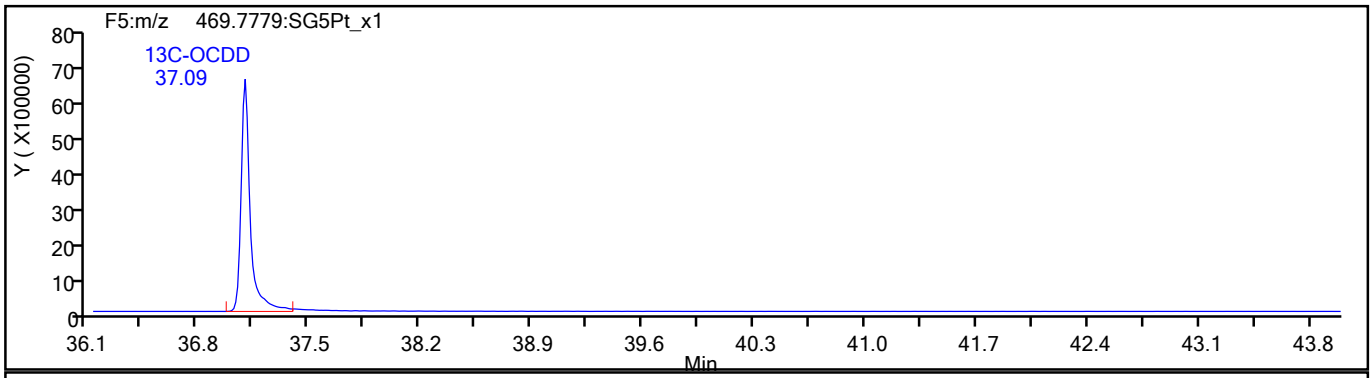

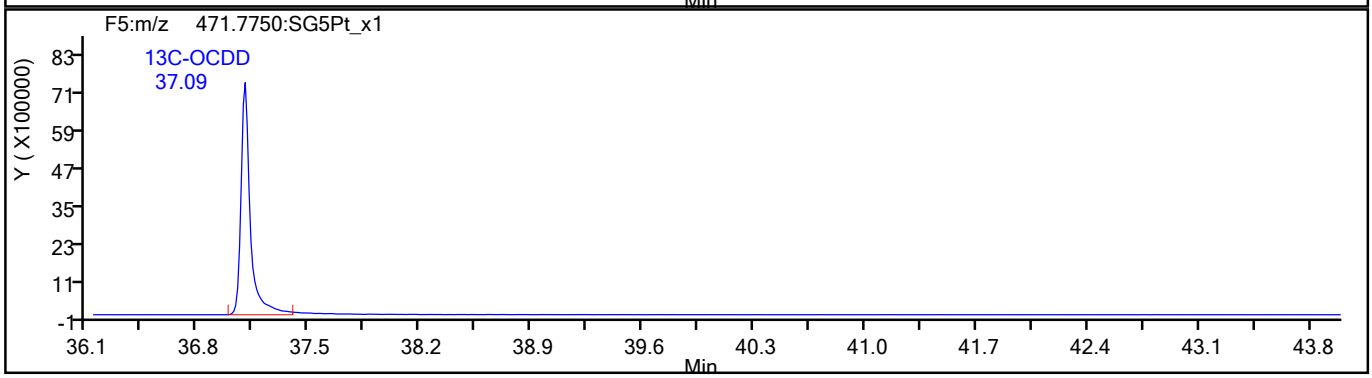

773310

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

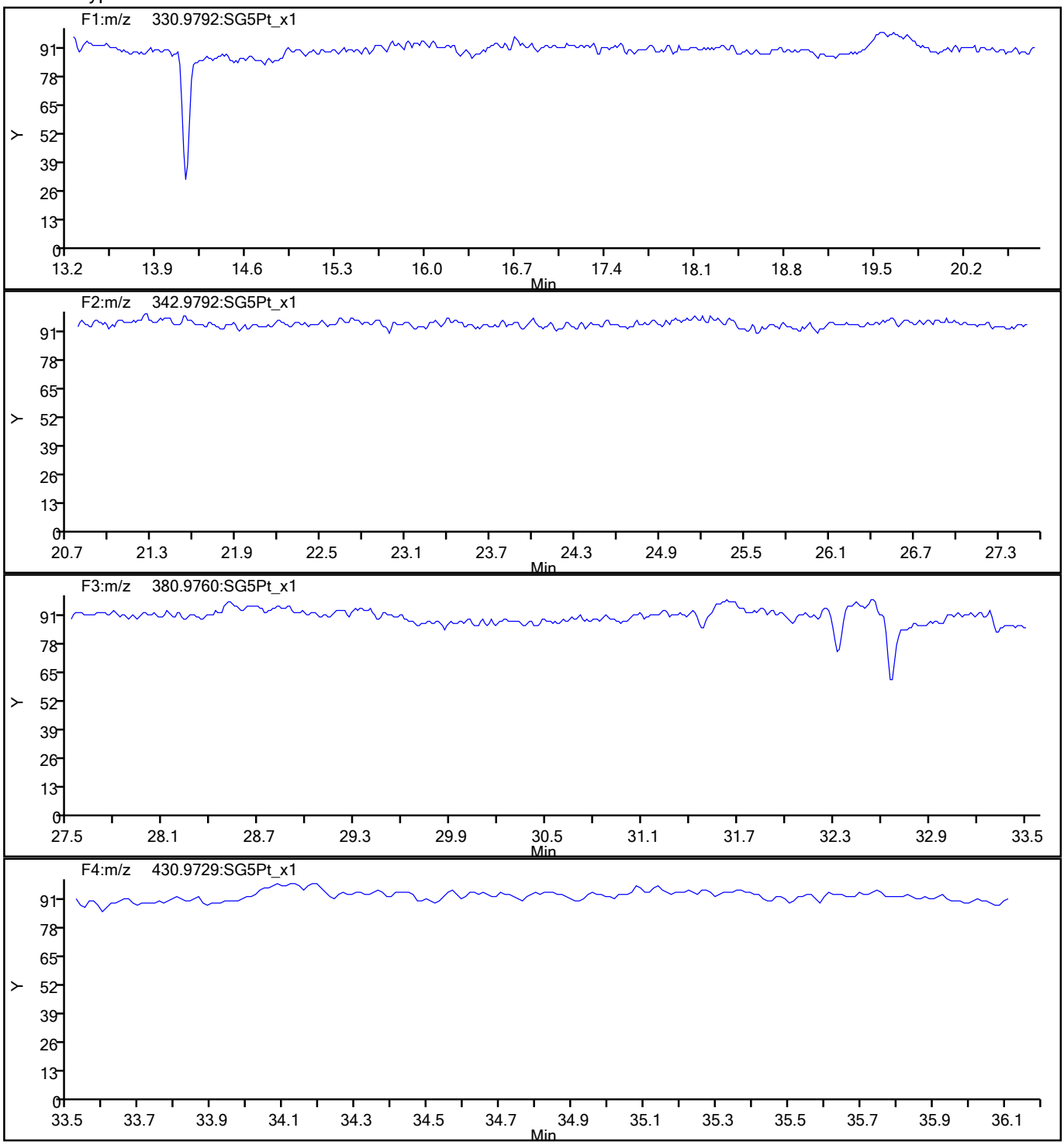

773311

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

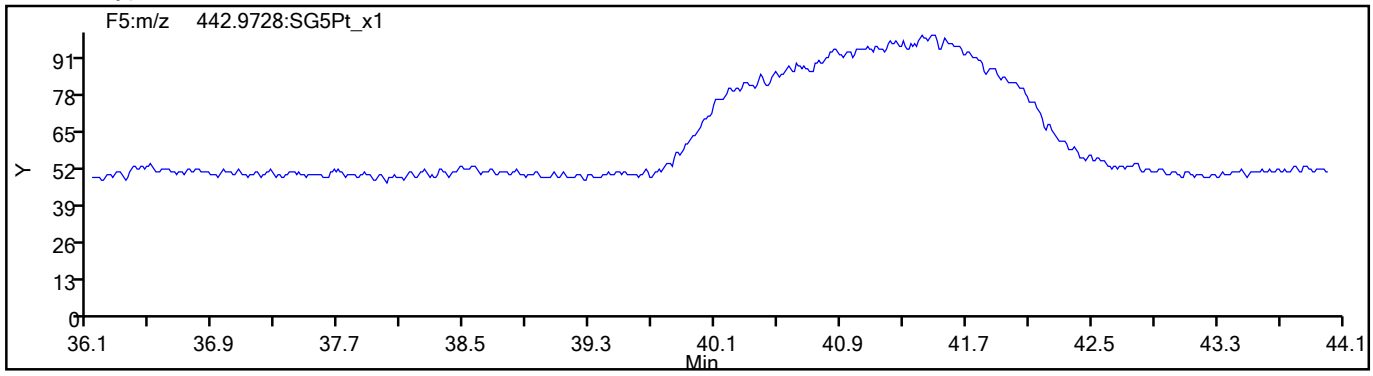

773312

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62853211	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	98246522	0.78	1.6249	96.2	96.2	0.1370	0.1370	96.20	
2,3,7,8-TCDF	17.628	1709191	0.74	1.0239	1.699	1.699	0.0115	0.0115	84.95	
S Total TCDF					1.699	1.699	0.0115	0.0115		
D 13C-2,3,7,8-TCDD	18.338	53975587	0.81	0.8993	95.5	95.5	0.1627	0.1627	95.49	
$ 37Cl4-2,3,7,8-TCDD	18.354	1231219		1.1071	1.769	1.769	0.009070	0.009070	88.47	
2,3,7,8-TCDD	18.354	1184284	0.77	1.2541	1.750	1.750	0.0187	0.0187	87.48	
S Total TCDD					1.750	1.750	0.0187	0.0187		
D 13C-1,2,3,7,8-PeCDF	22.749	72525655	1.59	1.2101	95.4	95.4	0.2163	0.2163	95.36	
1,2,3,7,8-PeCDF	22.776	6620354	1.62	1.0611	8.602	8.602	0.0369	0.0369	86.02	
D 13C-2,3,4,7,8-PeCDF	24.126	74944110	1.59	1.2395	96.2	96.2	0.2111	0.2111	96.20	a
2,3,4,7,8-PeCDF	24.153	6452410	1.61	1.0184	8.454	8.454	0.0398	0.0398	84.54	
S Total PeCDF					17.1	17.1	0.0383	0.0383		
D 13C-1,2,3,7,8-PeCDD	24.862	46721712	1.62	0.7612	97.7	97.7	0.1174	0.1174	97.65	
1,2,3,7,8-PeCDD	24.889	4219570	1.58	1.0484	8.614	8.614	0.0282	0.0282	86.14	
S Total PeCDD					8.614	8.614	0.0282	0.0282		
D 13C-1,2,3,4,7,8-HxCDF	30.835	65726932	0.51	1.0837	101.6	101.6	0.5284	0.5284	102	a
1,2,3,4,7,8-HxCDF	30.848	6041767	1.22	1.0851	8.471	8.471	0.0611	0.0611	84.71	
D 13C-1,2,3,6,7,8-HxCDF	30.995	68089005	0.53	1.1279	101.1	101.1	0.5077	0.5077	101	
1,2,3,6,7,8-HxCDF	31.021	6561860	1.24	1.1260	8.559	8.559	0.0596	0.0596	85.59	
D 13C-2,3,4,6,7,8-HxCDF	31.753	64406928	0.52	1.0637	101.4	101.4	0.5383	0.5383	101	
2,3,4,6,7,8-HxCDF	31.767	6352404	1.21	1.1675	8.448	8.448	0.0492	0.0492	84.48	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58828058	0.51	0.9676	101.8	101.8	0.5918	0.5918	102	
1,2,3,7,8,9-HxCDF	32.526	5963032	1.22	1.1664	8.691	8.691	0.0536	0.0536	86.91	
S Total HxCDF					34.2	34.2	0.0559	0.0559		
* 13C-1,2,3,7,8,9-HxCDD	32.339	59719891	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44877133	1.26	0.7334	102.5	102.5	0.4904	0.4904	102	a
1,2,3,4,7,8-HxCDD	31.940	3996910	1.25	1.0640	8.370	8.370	0.0541	0.0541	83.70	
D 13C-1,2,3,6,7,8-HxCDD	32.033	52974056	1.27	0.8802	100.8	100.8	0.4087	0.4087	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.046	4517909	1.28	1.0001	8.528	8.528	0.0541	0.0541	85.28	
1,2,3,7,8,9-HxCDD	32.353	4612548	1.27	1.1325	8.324	8.324	0.0492	0.0492	83.24	
S Total HxCDD					25.2	25.2	0.0525	0.0525		
D 13C-1,2,3,4,6,7,8-HpCDF	33.911	46691158	0.44	0.7730	101.1	101.1	1.219	1.219	101	
1,2,3,4,6,7,8-HpCDF	33.924	5795616	1.06	1.4413	8.612	8.612	0.0908	0.0908	86.12	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	42362179	0.44	0.7008	101.2	101.2	1.344	1.344	101	a
1,2,3,4,7,8,9-HpCDF	35.017	4773949	1.04	1.3174	8.554	8.554	0.1198	0.1198	85.54	
S Total HpCDF					17.2	17.2	0.1053	0.1053		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	38689128	1.01	0.6472	100.1	100.1	0.6644	0.6644	100	
1,2,3,4,6,7,8-HpCDD	34.725	3690749	1.06	1.0943	8.717	8.717	0.0588	0.0588	87.17	
S Total HpCDD					8.717	8.717	0.0588	0.0588		
D 13C-OCDD	37.093	52034518	0.88	0.4472	194.9	194.9	0.3057	0.3057	97.43	
OCDF	37.189	6198469	0.89	1.4382	16.6	16.6	0.0331	0.0331	82.83	
OCDD	37.105	5013385	0.90	1.1070	17.4	17.4	0.0477	0.0477	87.03	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28386456	7046087	6003	15007	1174		
333.9339	18.142	18.142	0		34466755	8558284	3128	7820	2736	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42972486	10763336	8679	21697	1240		
317.9389	17.613	17.616	0	0.971	55274036	13878642	5218	13045	2660	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	725190	178427	386	965	462		
305.8987	17.628	17.631	0	1.001	984001	248871	771	1927	323	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24153490	5697854	6003	15007	949		
333.9339	18.338	18.338	0	1.011	29822097	7031837	3128	7820	2248	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	1231219	295748	627	1567	472		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	516509	120344	727	1817	166		
321.8936	18.354	18.357	0	1.001	667775	162973	470	1175	347	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44514928	7853181	9659	24147	813		
353.8970	22.749	22.754	0	1.254	28010727	4960984	6675	16687	743	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	4089215	716349	1056	2640	678		
341.8567	22.776	22.779	0	1.001	2531139	446464	949	2372	470	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											a
351.9000	24.126	24.129	0	1.330	46033296	7621284	9659	24147	789		a
353.8970	24.126	24.129	0	1.330	28910814	4739818	6675	16687	710	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	3984657	653372	1056	2640	619		
341.8567	24.153	24.156	0	1.001	2467753	411895	949	2372	434	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28869986	4442492	3510	8775	1266		
369.8919	24.862	24.865	0	1.370	17851726	2719251	2068	5170	1315	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	2584600	398905	491	1227	812		
357.8516	24.889	24.892	0	1.001	1634970	246537	355	887	694	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											a
383.8639	30.835	30.838	0	0.953	22324815	4908430	11721	29302	419		a
385.8610	30.835	30.838	0	0.953	43402117	9487505	22146	55365	428	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.848	30.857	0	1.000	3322045	734549	2125	5312	346		
375.8178	30.848	30.857	0	1.000	2719722	584076	1696	4240	344	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	23443638	4852452	11721	29302	414		
385.8610	30.995	31.003	0	0.958	44645367	9390378	22146	55365	424	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.001	3628802	774738	2125	5312	365		
375.8178	31.021	31.022	0	1.001	2933058	621989	1696	4240	367	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.753	31.756	0	0.982	22116278	5724833	11721	29302	488		
385.8610	31.753	31.756	0	0.982	42290650	10891641	22146	55365	492	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	3476984	900887	2125	5312	424		
375.8178	31.767	31.772	0	1.000	2875420	748664	1696	4240	441	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	19952155	5224965	11721	29302	446		
385.8610	32.512	32.523	-1	1.005	38875903	10047992	22146	55365	454	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	3272570	870864	2125	5312	410		
375.8178	32.526	32.534	0	1.000	2690462	702575	1696	4240	414	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33208186	8207924	11753	29382	698		
403.8529	32.339	32.342	0		26511705	6578059	9521	23802	691	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	31.927	31.929	0	0.987	24991401	7247079	11753	29382	617		a
403.8529	31.927	31.929	0	0.987	19885732	5749736	9521	23802	604	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	2220855	634454	1798	4495	353		
391.8127	31.940	31.945	0	1.000	1776055	520388	1195	2987	435	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29637474	7731021	11753	29382	658		
403.8529	32.033	32.033	0	0.991	23336582	6105317	9521	23802	641	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.046	32.047	0	1.000	2539756	681391	1798	4495	379		
391.8127	32.046	32.047	0	1.000	1978153	525440	1195	2987	440	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	2578931	681238	1798	4495	379		
391.8127	32.353	32.355	0	1.013	2033617	530890	1195	2987	444	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.911	33.914	0	1.049	14324046	4548819	17096	42740	266		
419.8220	33.911	33.914	0	1.049	32367112	10373412	38619	96547	269	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	2984390	989226	3939	9847	251		
409.7789	33.924	33.926	0	1.000	2811226	912647	3871	9677	236	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											a
417.8253	35.005	35.010	0	1.082	12913204	3817815	17096	42740	223		a
419.8220	35.005	35.010	0	1.082	29448975	8551787	38619	96547	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	2430692	699814	3939	9847	178		
409.7789	35.017	35.020	0	1.000	2343257	686031	3871	9677	177	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19472945	5796031	12697	31742	456		
437.8140	34.714	34.716	0	1.073	19216183	5692167	12738	31845	447	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.725	34.726	0	1.000	1901971	557241	1605	4012	347		
425.7737	34.725	34.726	0	1.000	1788778	518346	1352	3380	383	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	24422535	6155132	2912	7280	2114		
471.7750	37.093	37.094	0	1.147	27611983	6845350	5172	12930	1324	0.88(0.76-1.02)	
OCDF											
441.7428	37.189	37.199	-1	1.003	2921445	715883	635	1587	1127		
443.7399	37.189	37.199	-1	1.003	3277024	845078	603	1507	1401	0.89(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	2373314	577341	633	1582	912		
459.7348	37.105	37.106	0	1.000	2640071	638330	739	1847	864	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.13

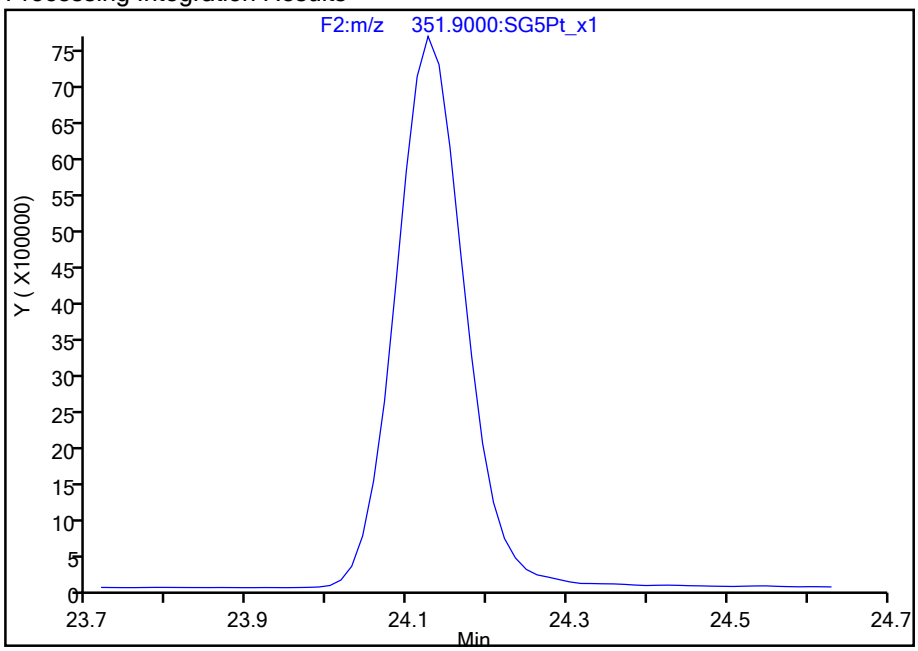

Manual Integration Results

RT: 24.13
Area: 46033296
Amount: 96.198549
Amount Units: pg/ul

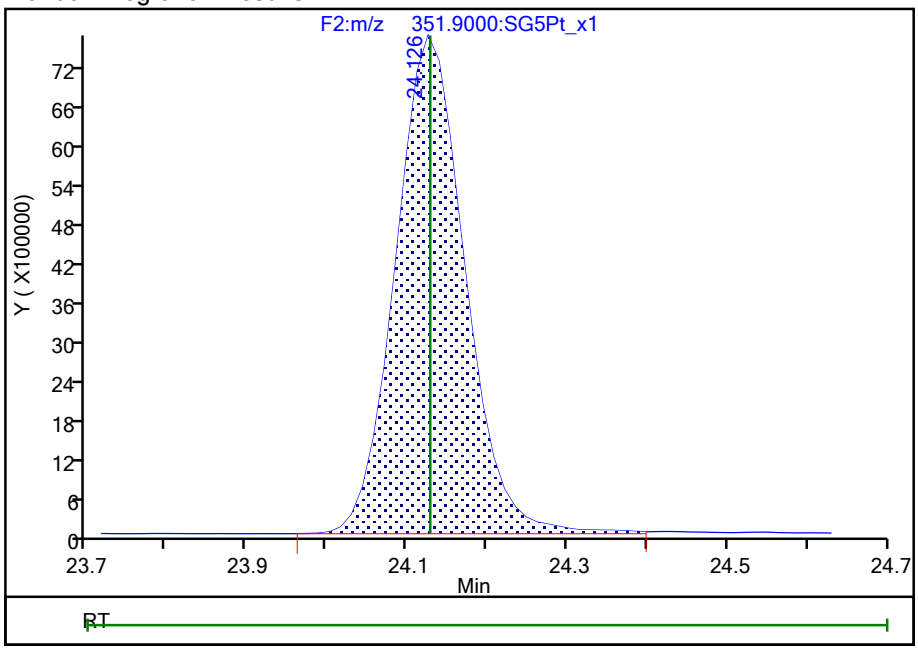

Reviewer: arghestanis, 26-Jul-2021 12:30:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

773318

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDF, CAS: 114423-98-2

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.84

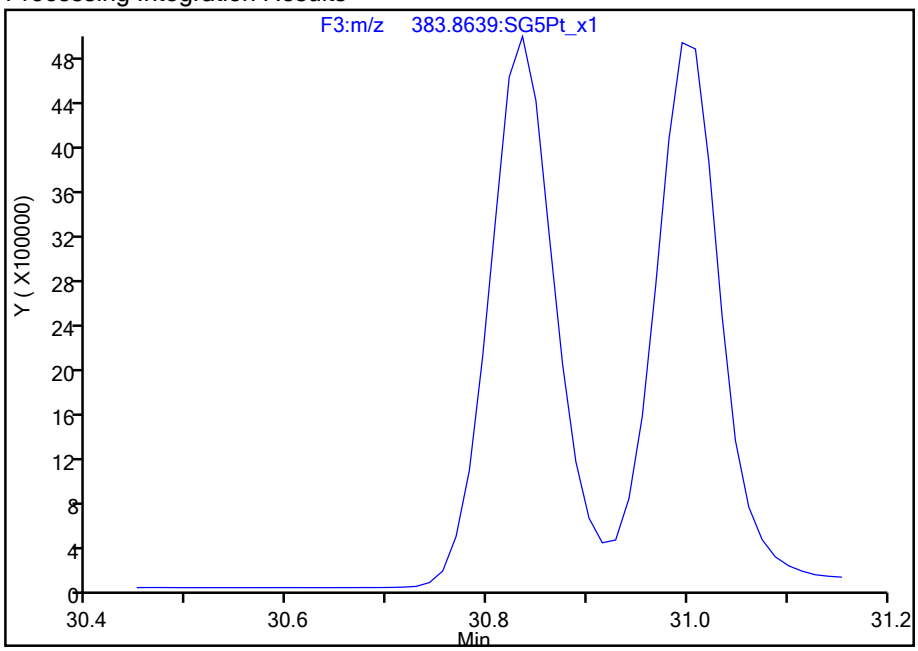

Manual Integration Results

RT: 30.84
Area: 22324815
Amount: 101.5622
Amount Units: pg/ul

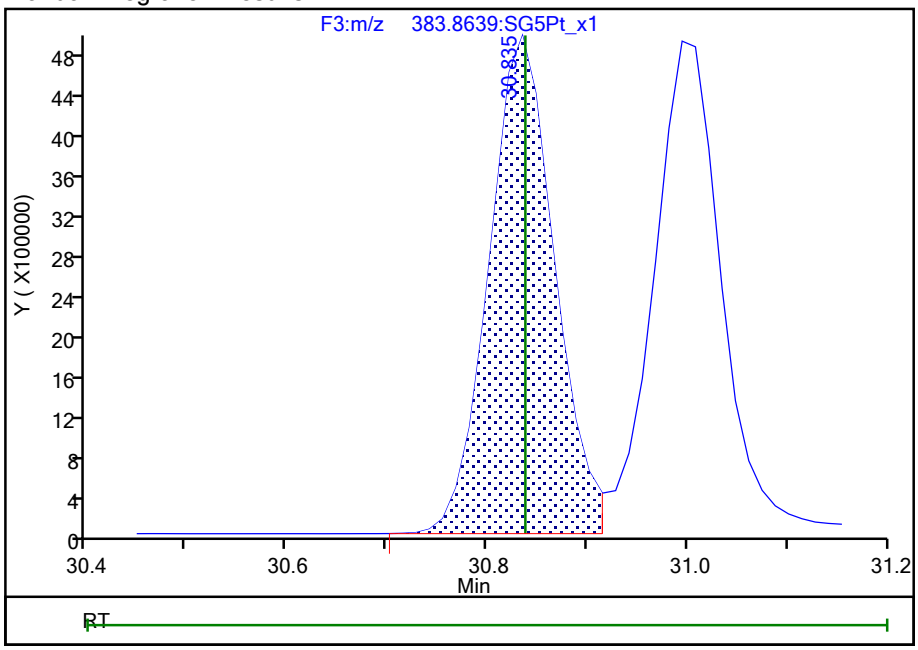

Reviewer: arghestanis, 26-Jul-2021 12:30:40
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

773319

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.93

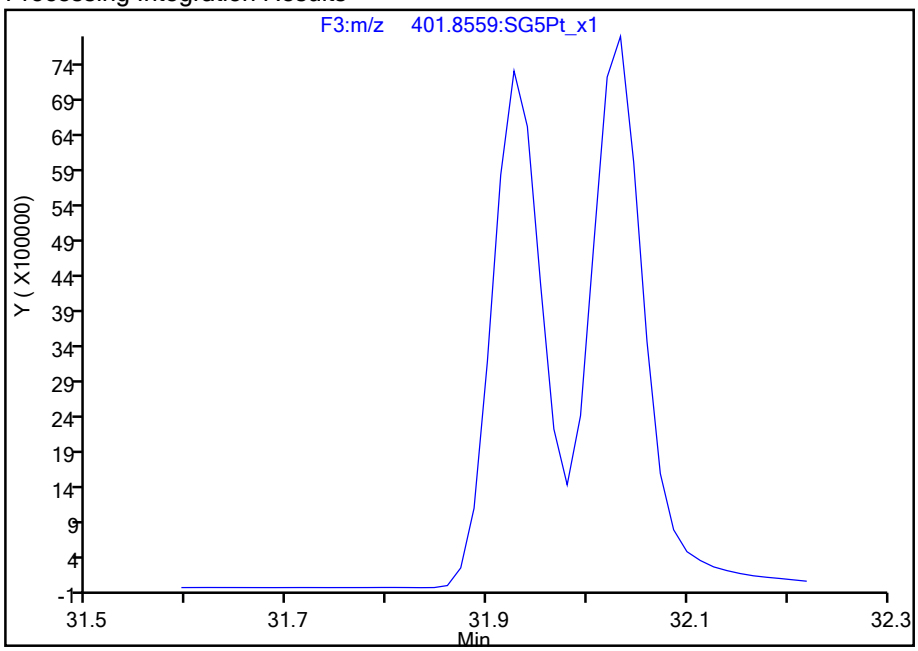

Manual Integration Results

RT: 31.93
Area: 24991401
Amount: 102.4585
Amount Units: pg/ul

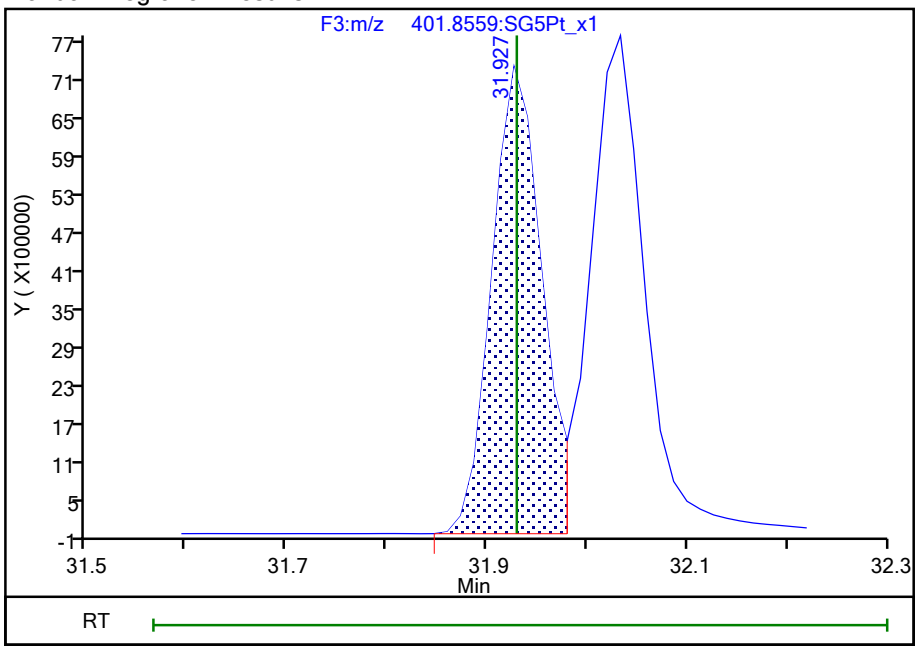

Reviewer: arghestanis, 26-Jul-2021 12:30:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.01

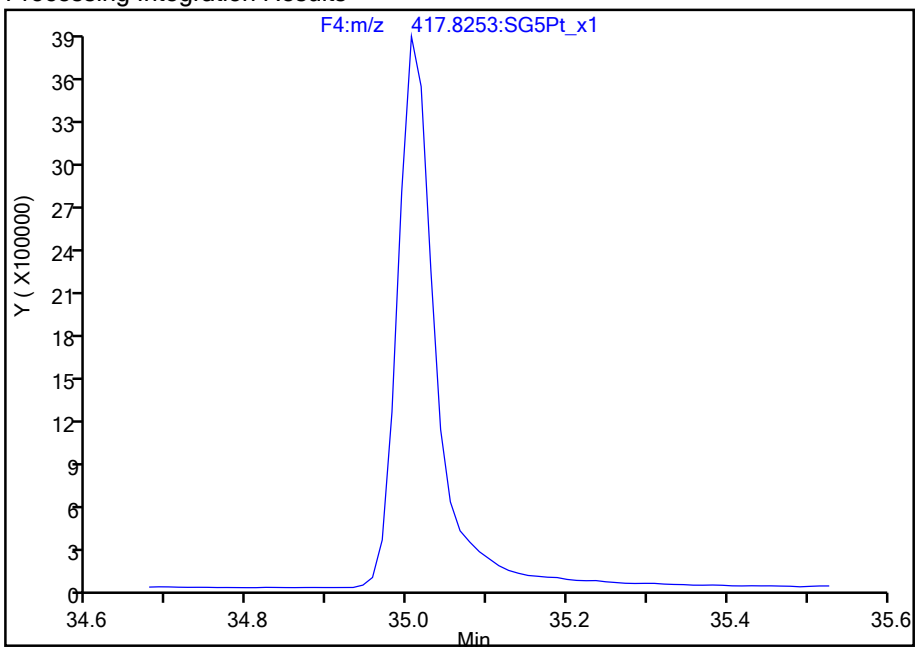

Manual Integration Results

RT: 35.01
Area: 12913204
Amount: 101.2180
Amount Units: pg/ul

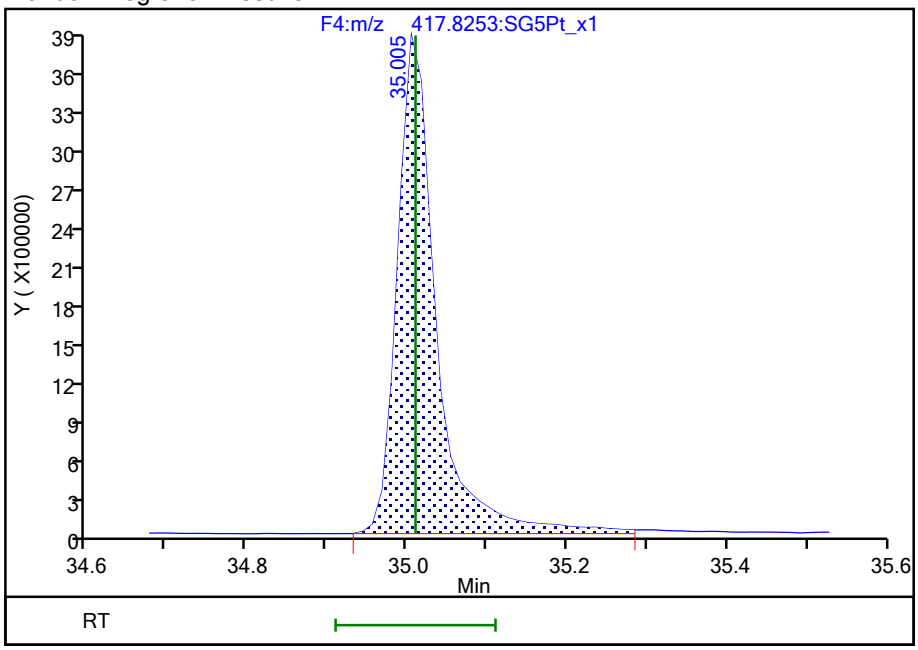

Reviewer: arghestanis, 26-Jul-2021 12:31:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

773321

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

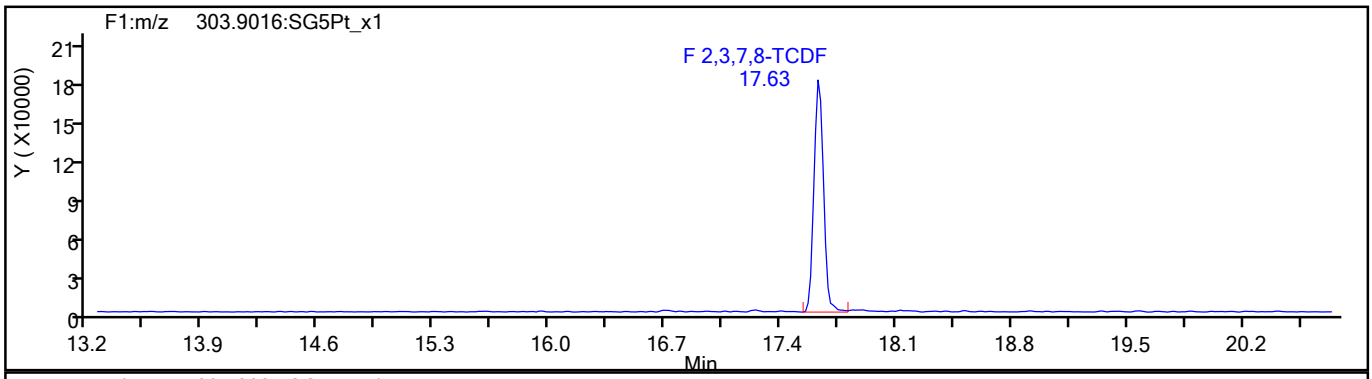

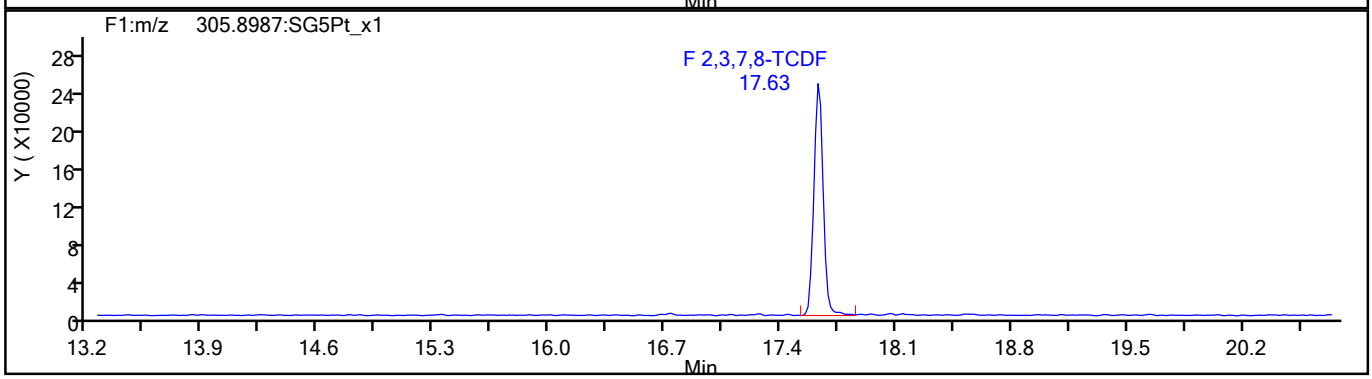

TCDF Standards

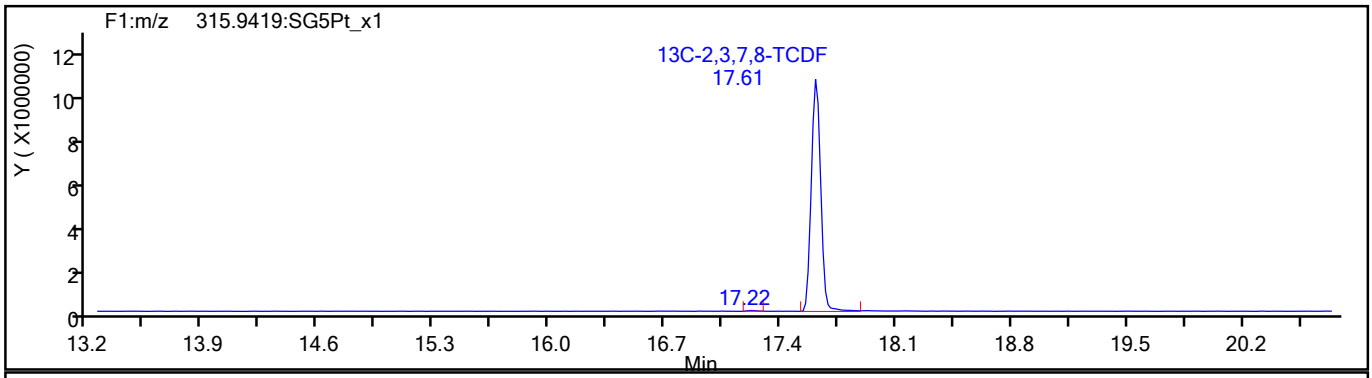

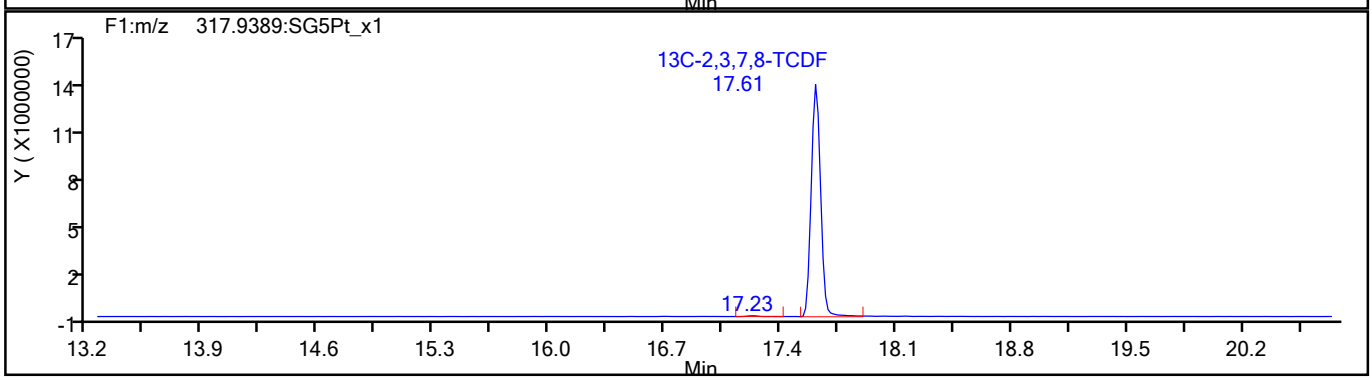

773322

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

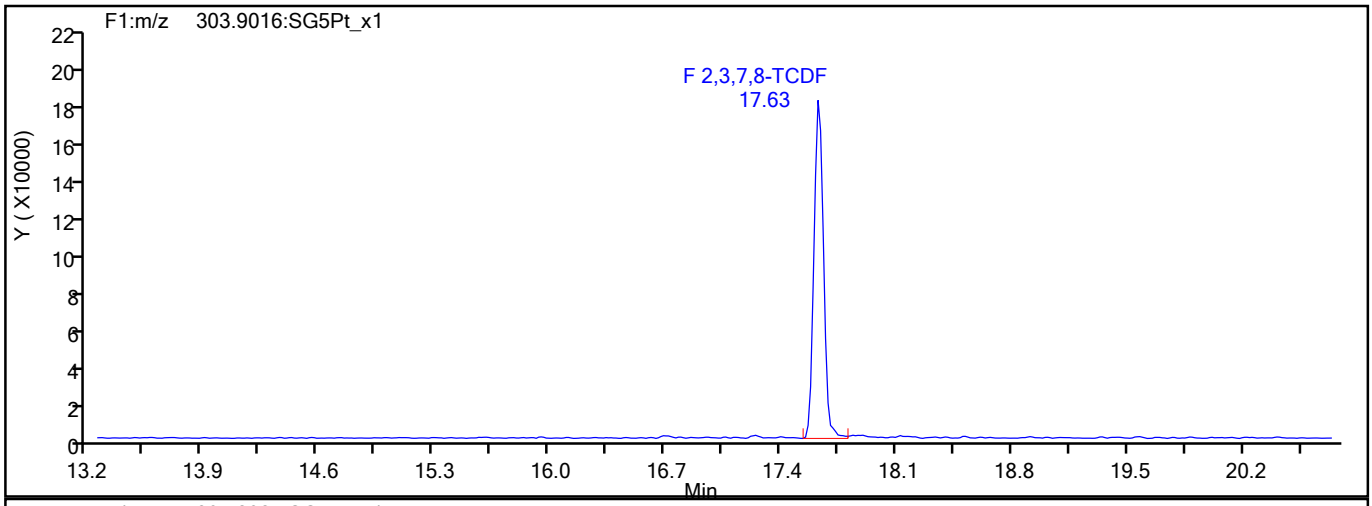

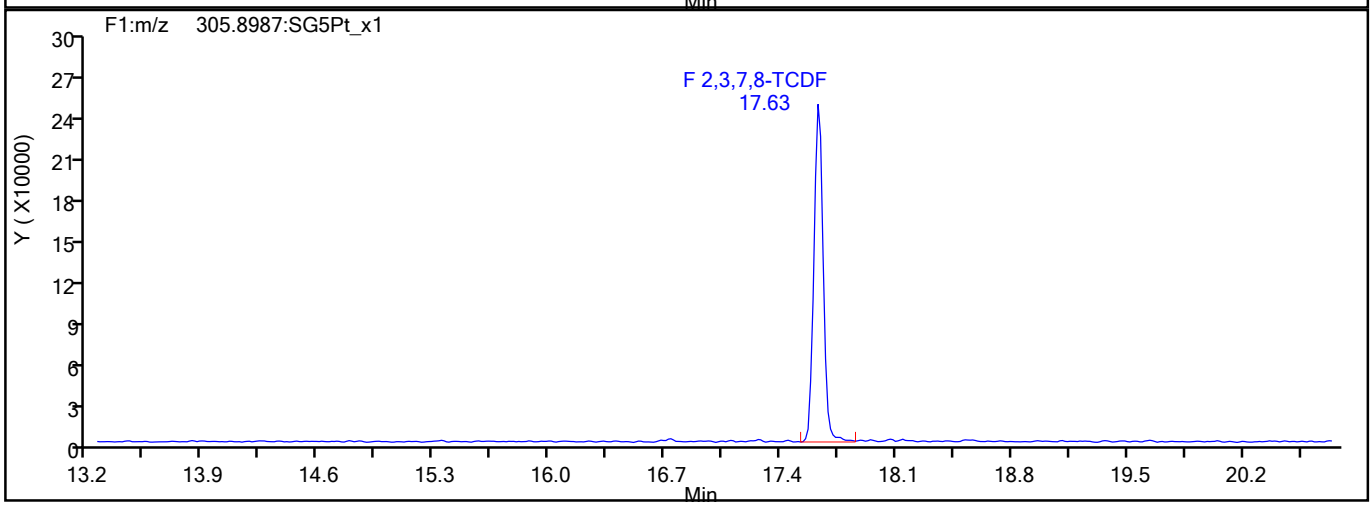

TCDF Interference Mass

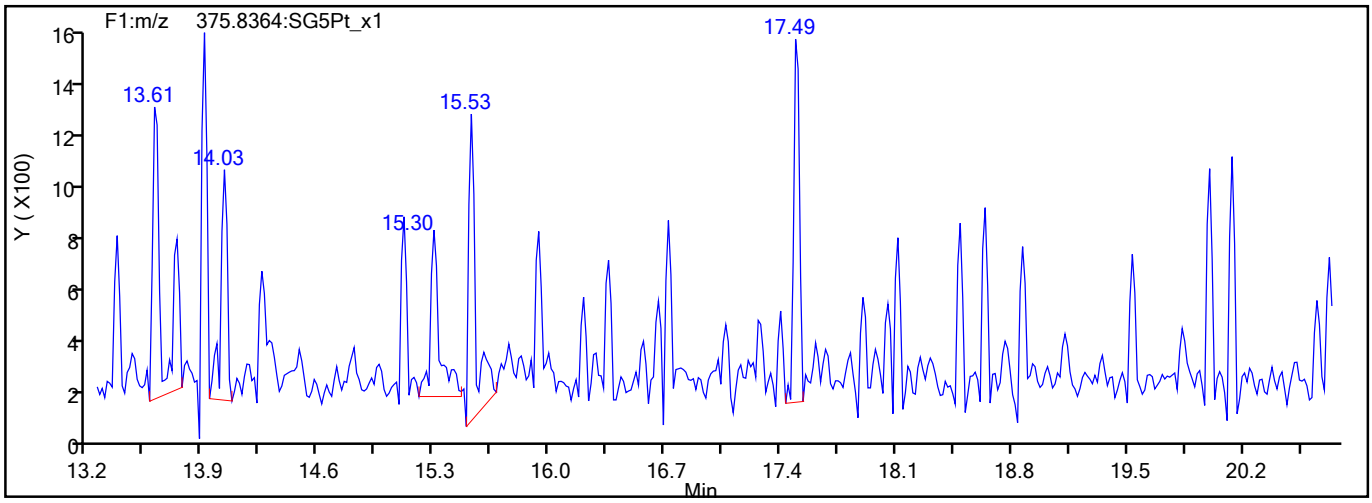

773323

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

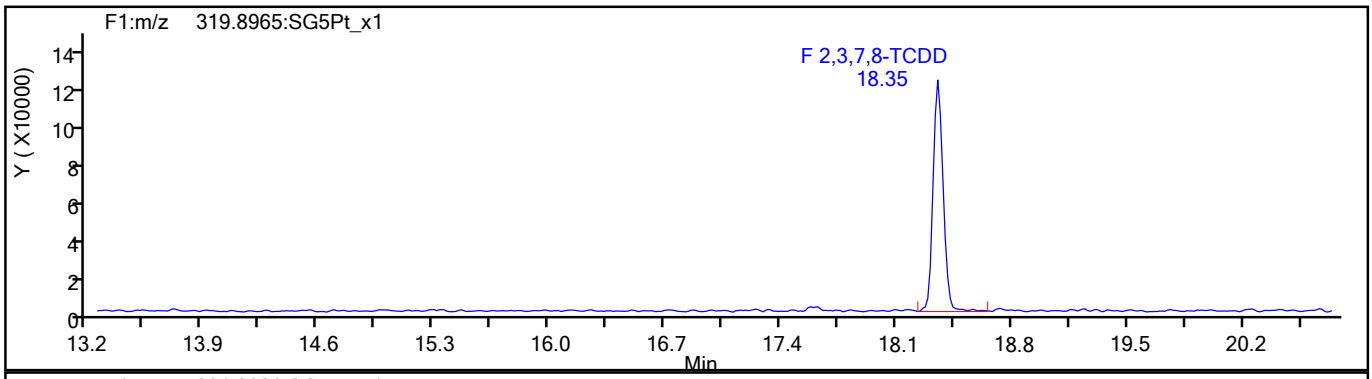

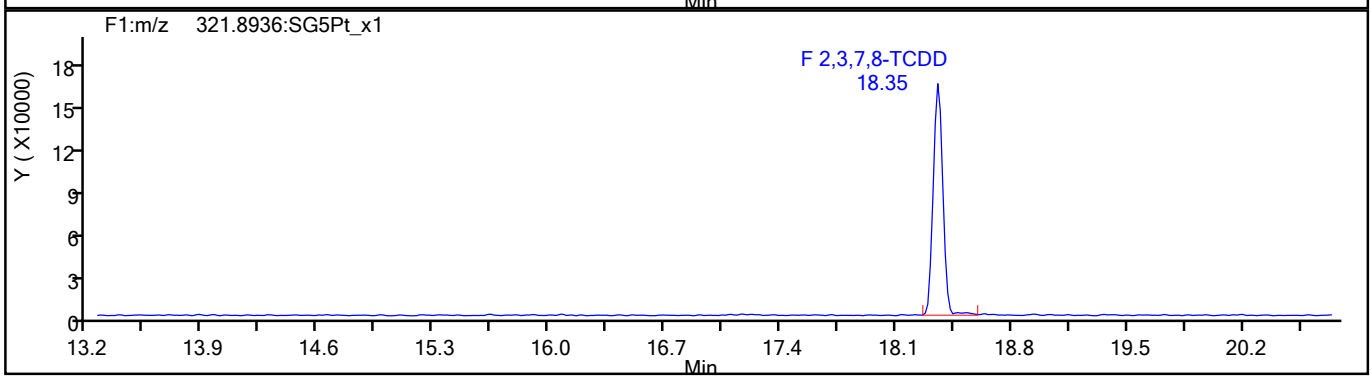

TCDD Standards

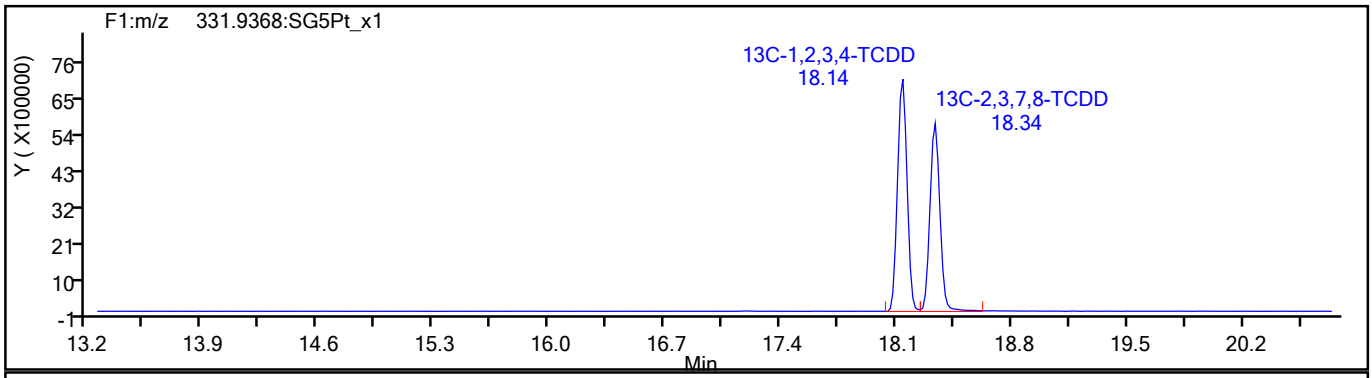

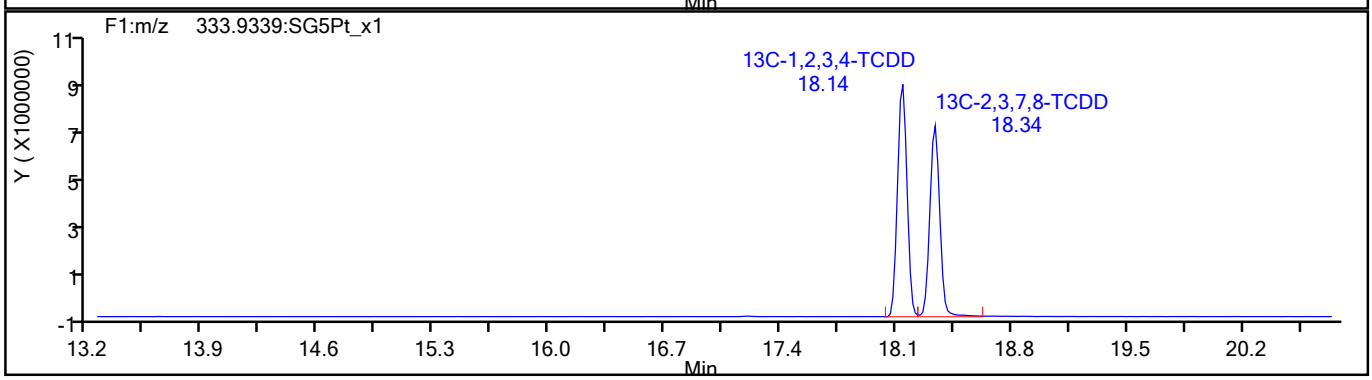

773324

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

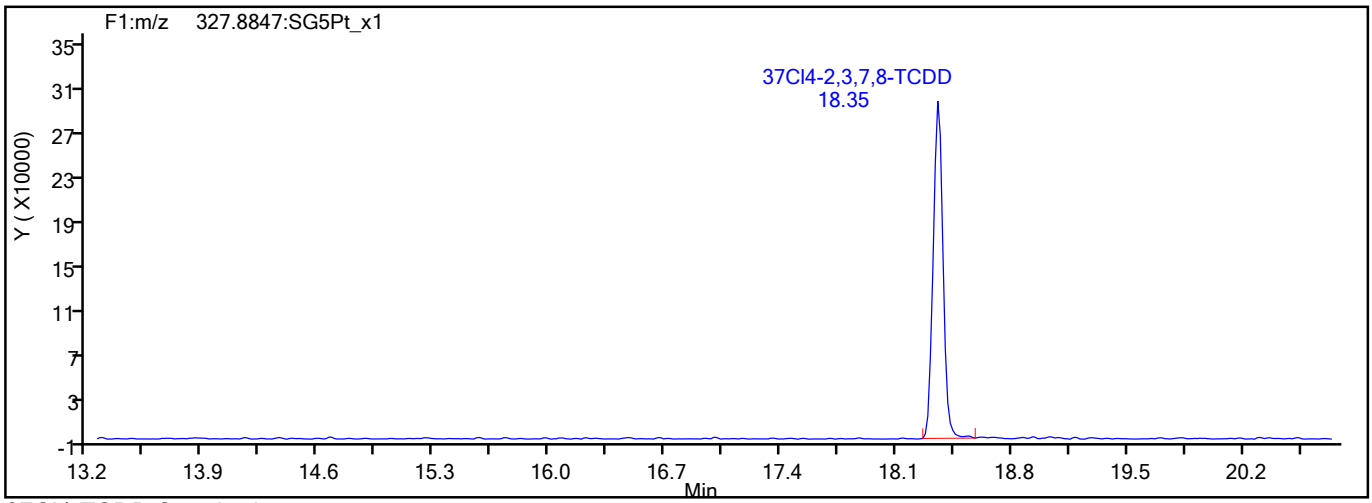

37Cl4-TCDD Standards

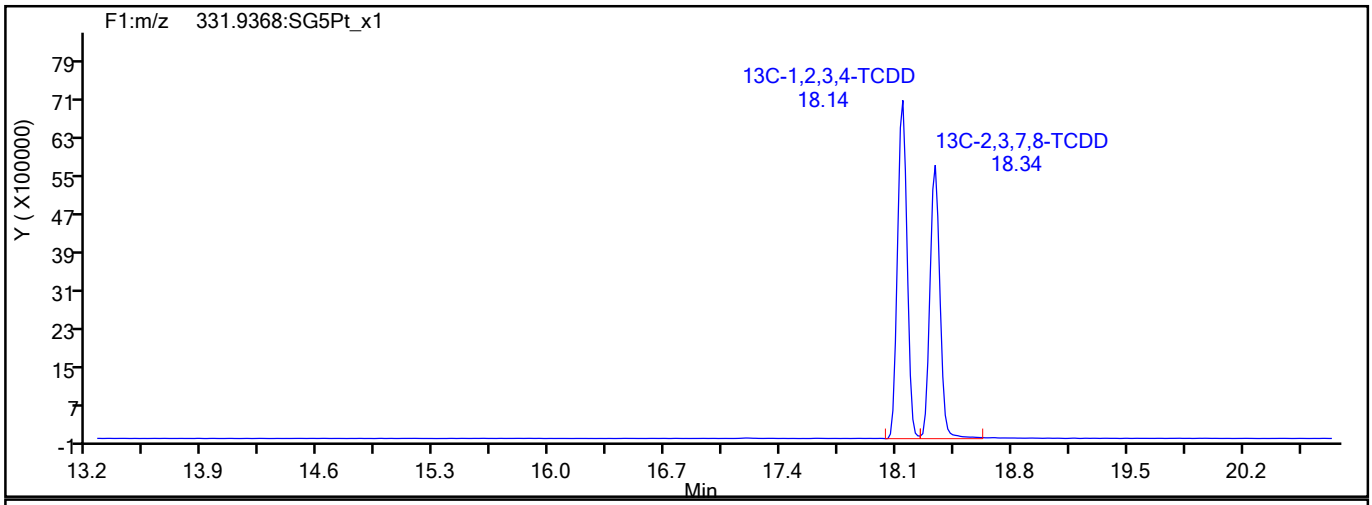

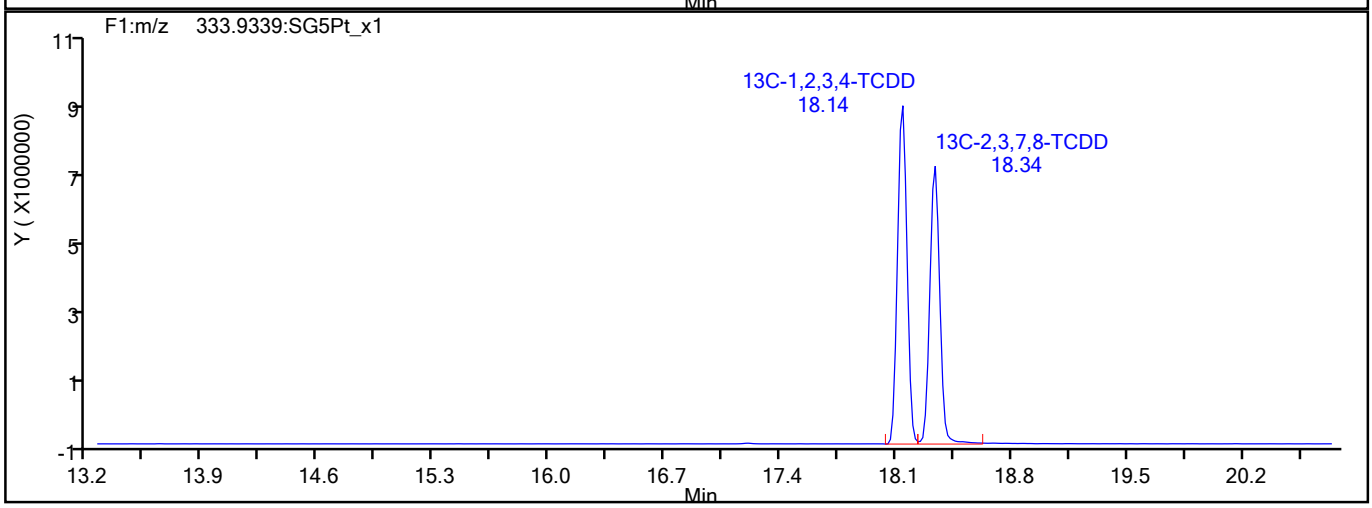

773325

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

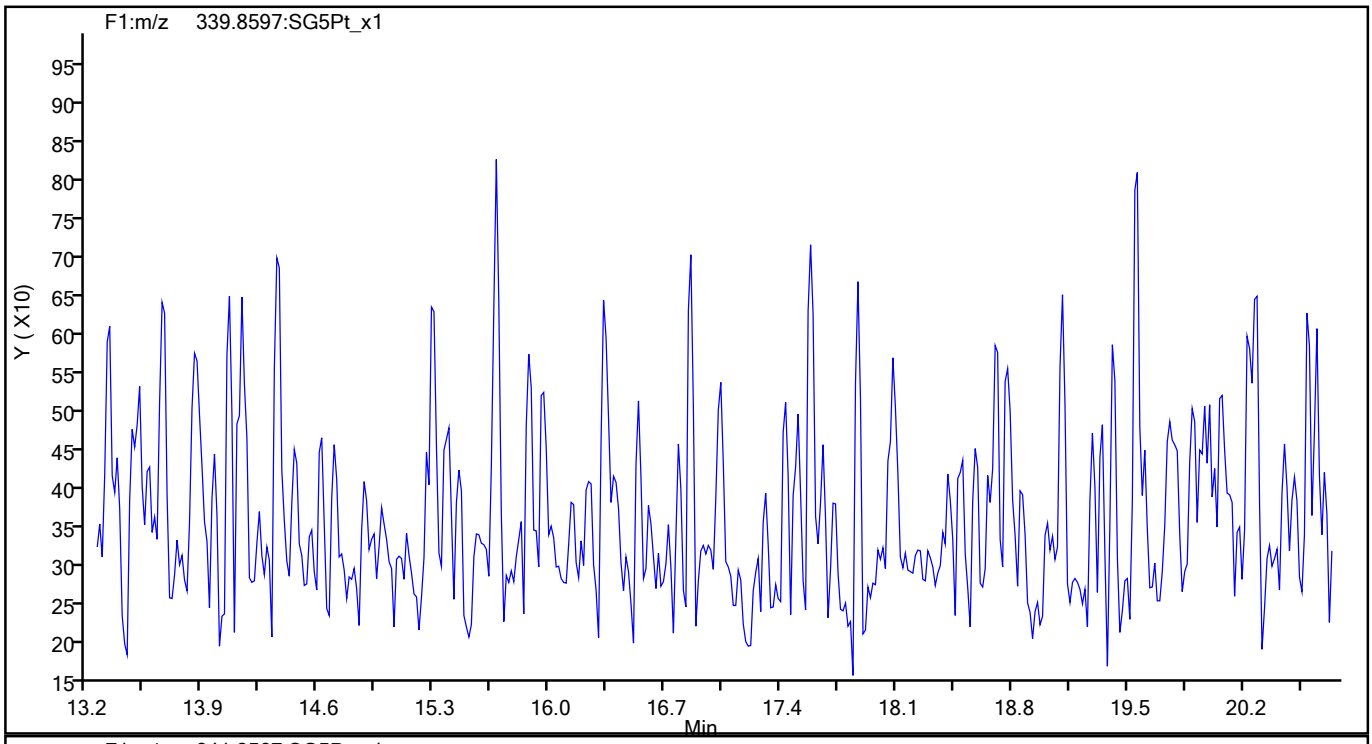

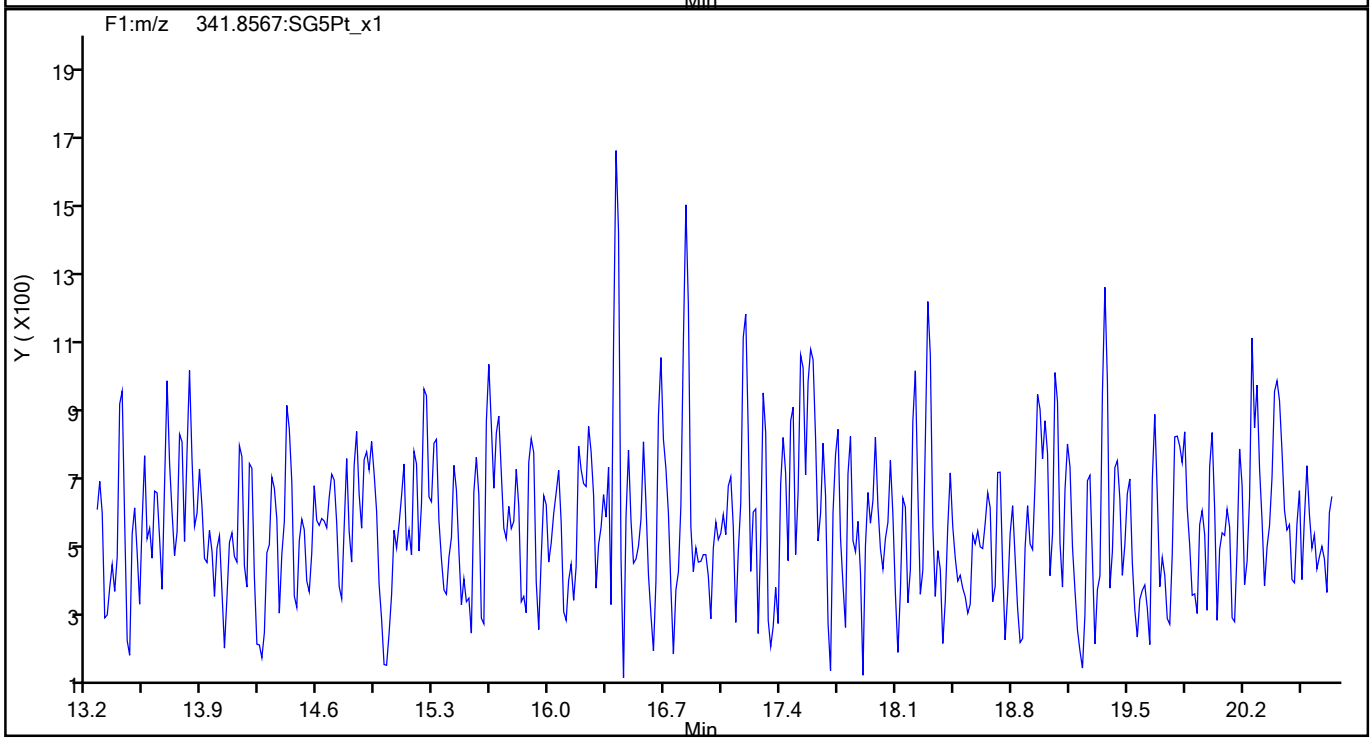

773326

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

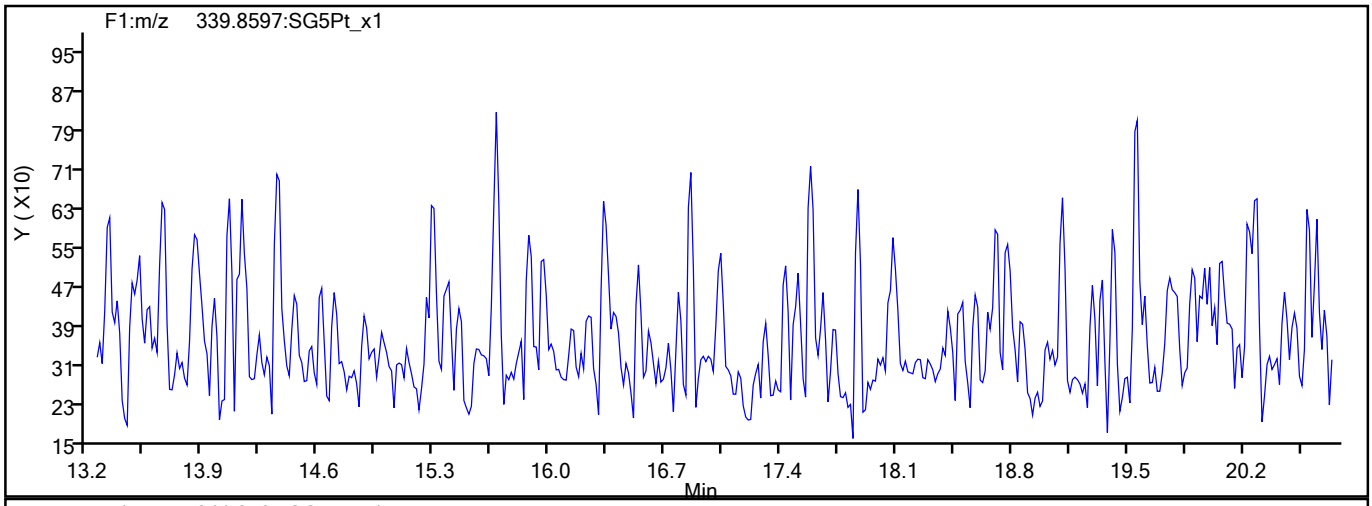

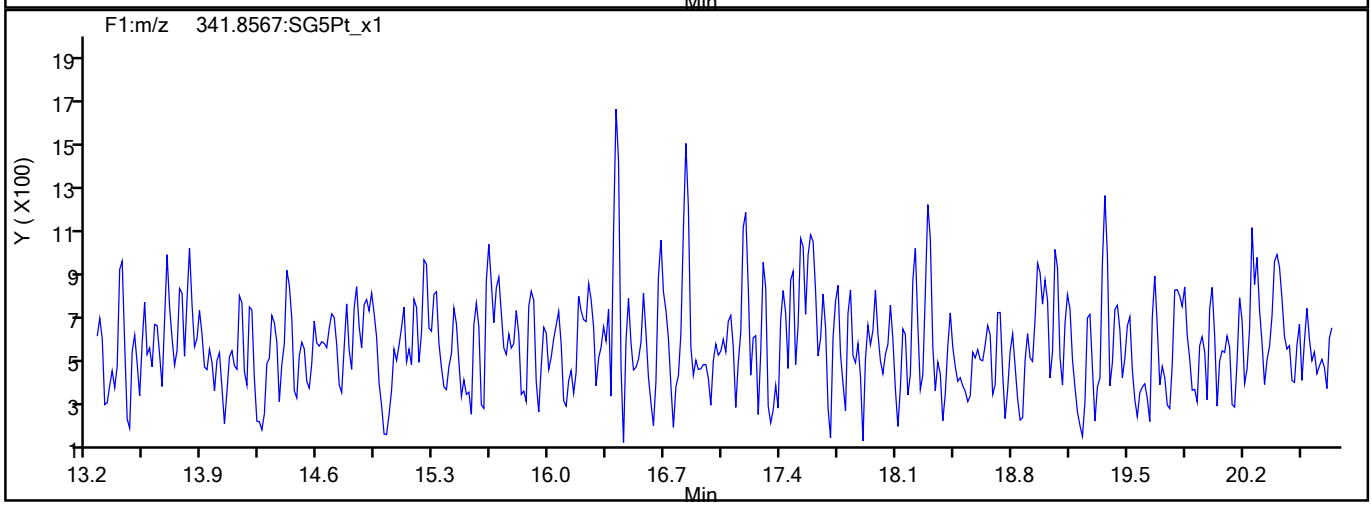

F1 PeCDFs Interference Mass

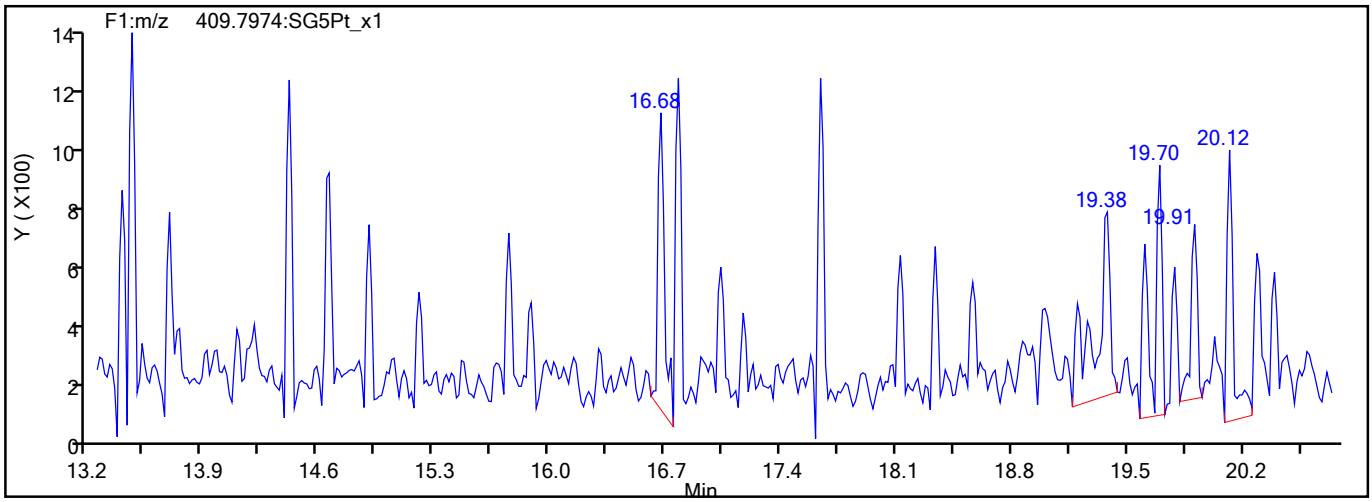

773327

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

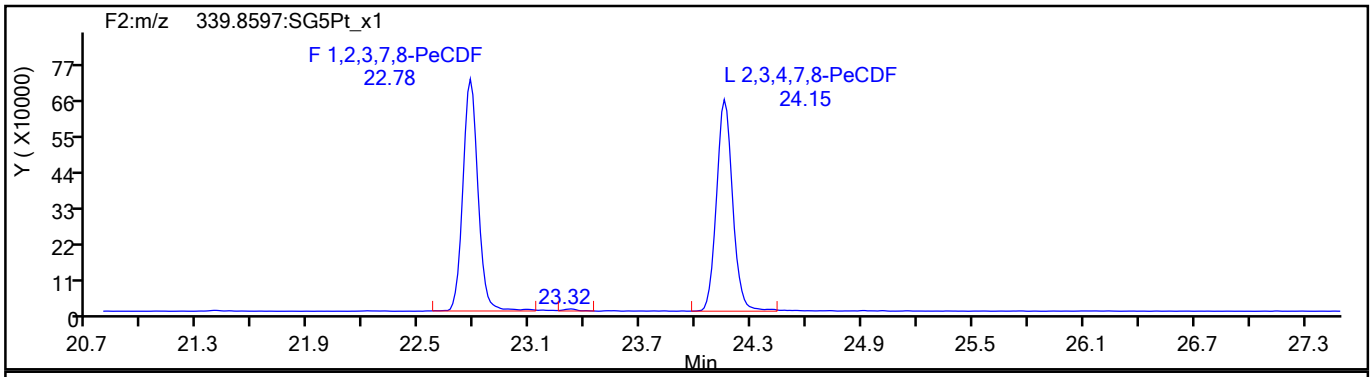

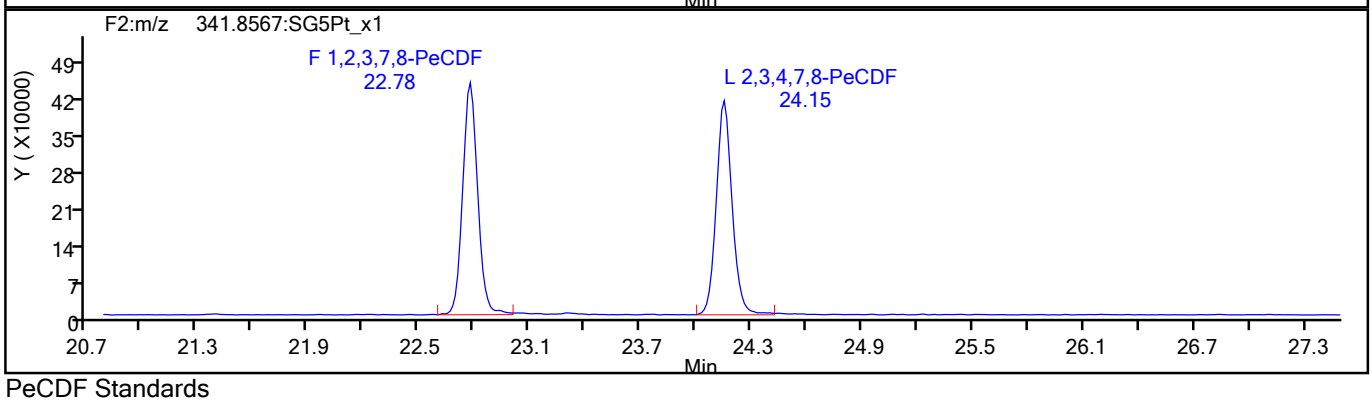

PeCDF Standards

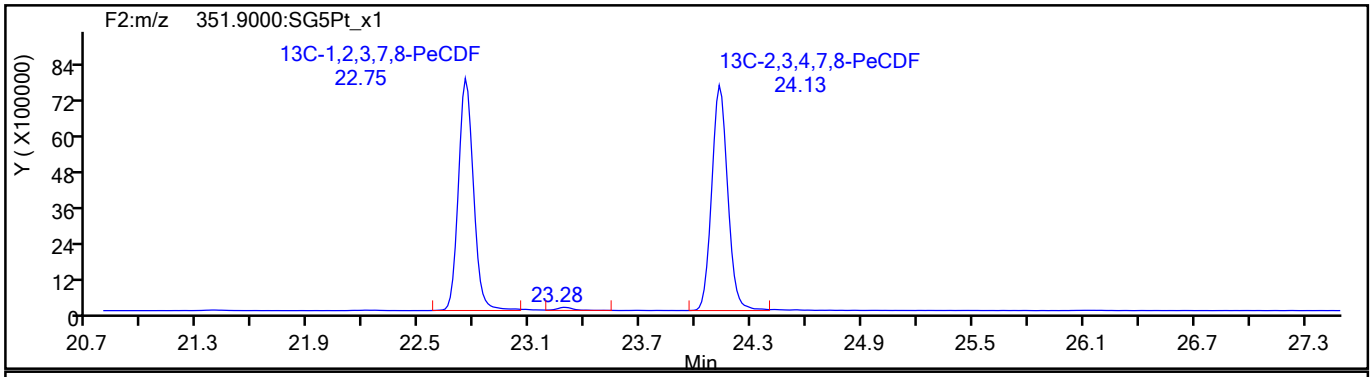

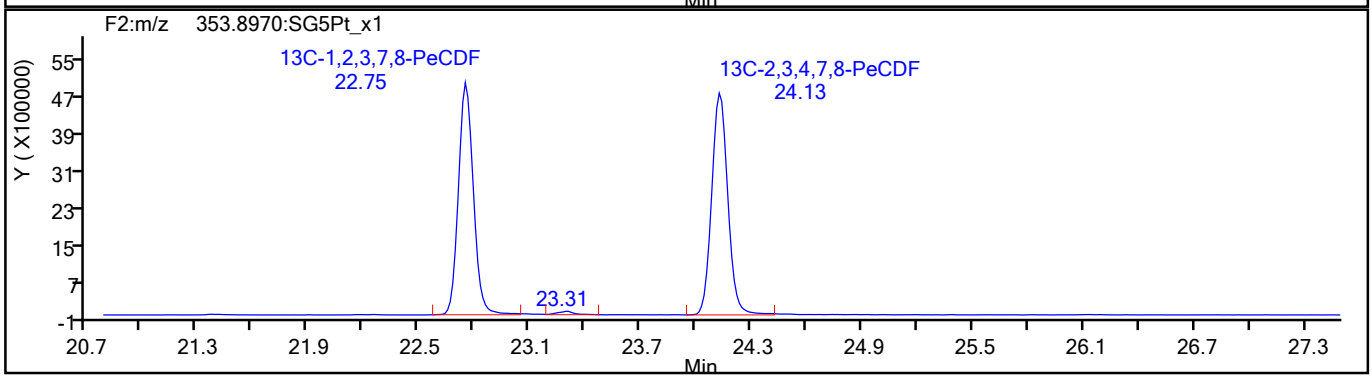

773328

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

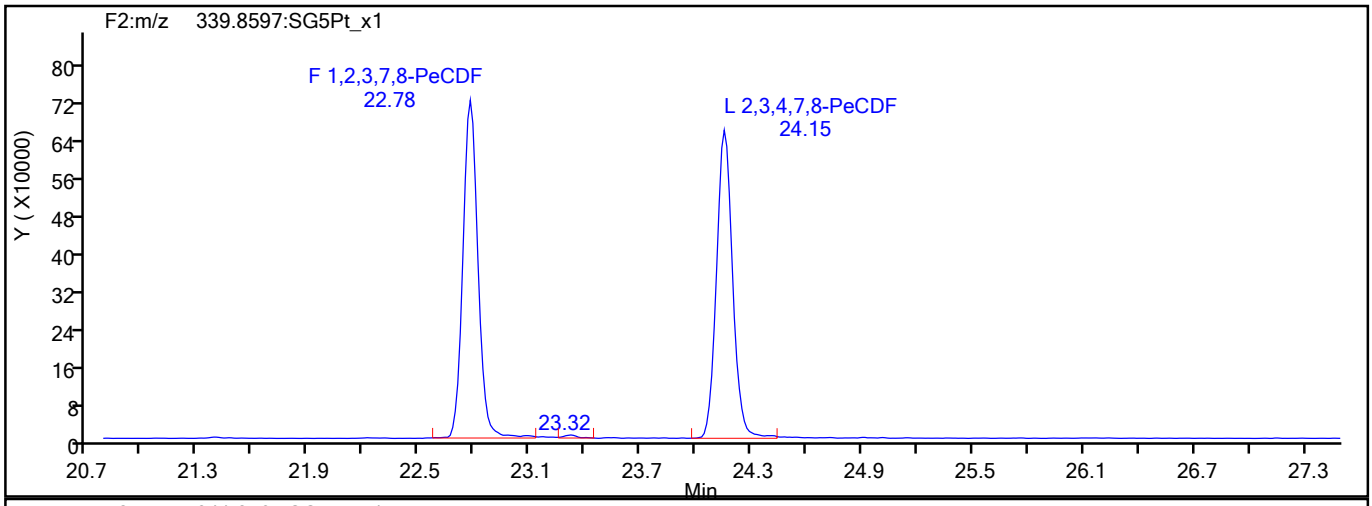

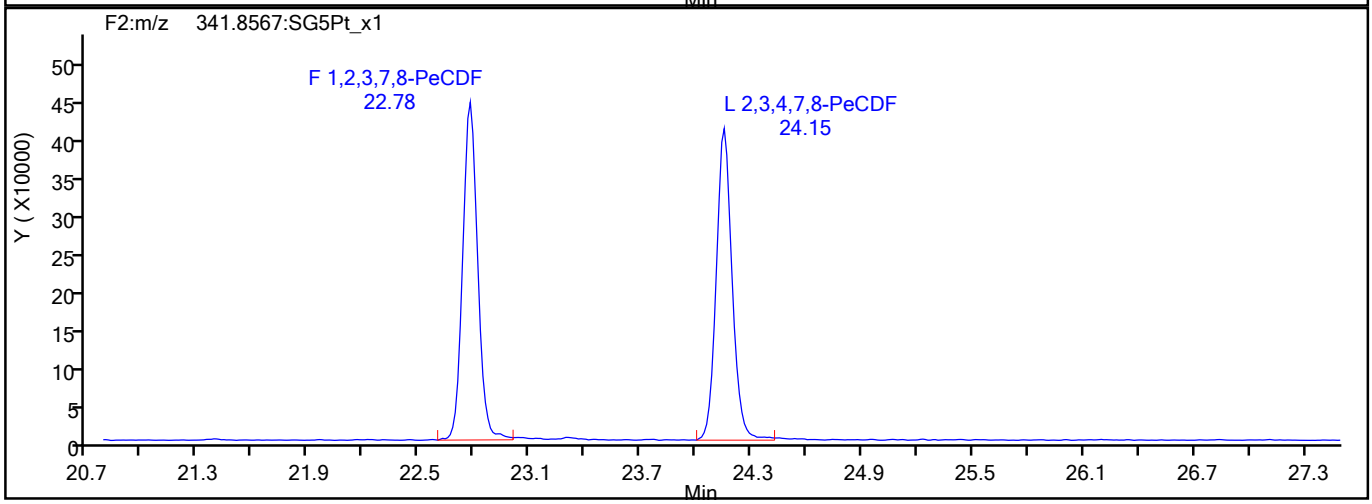

PeCDF Interference Mass

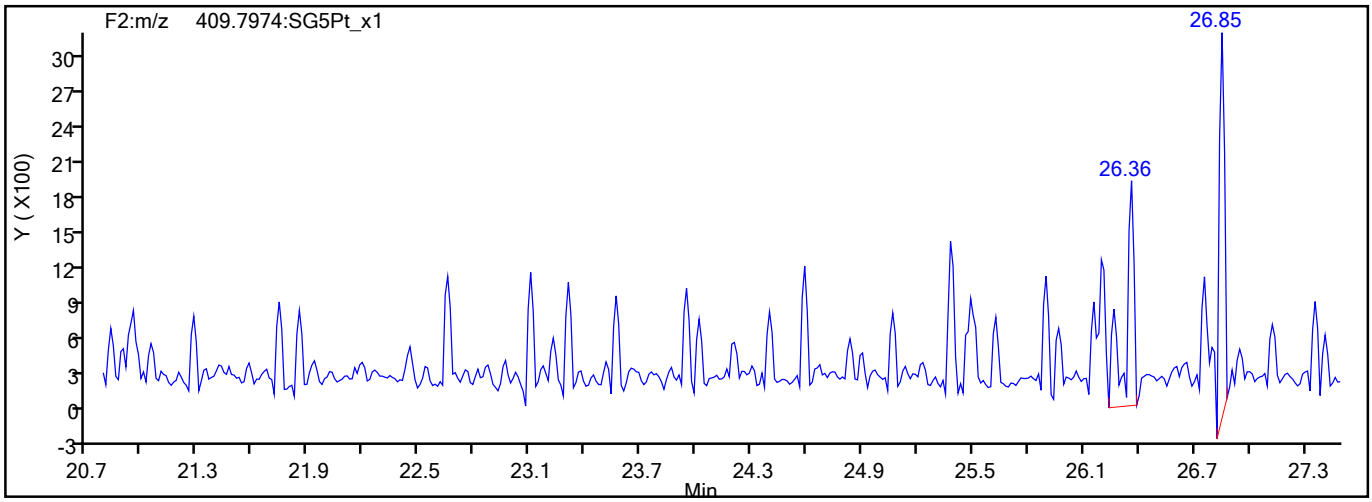

773329

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

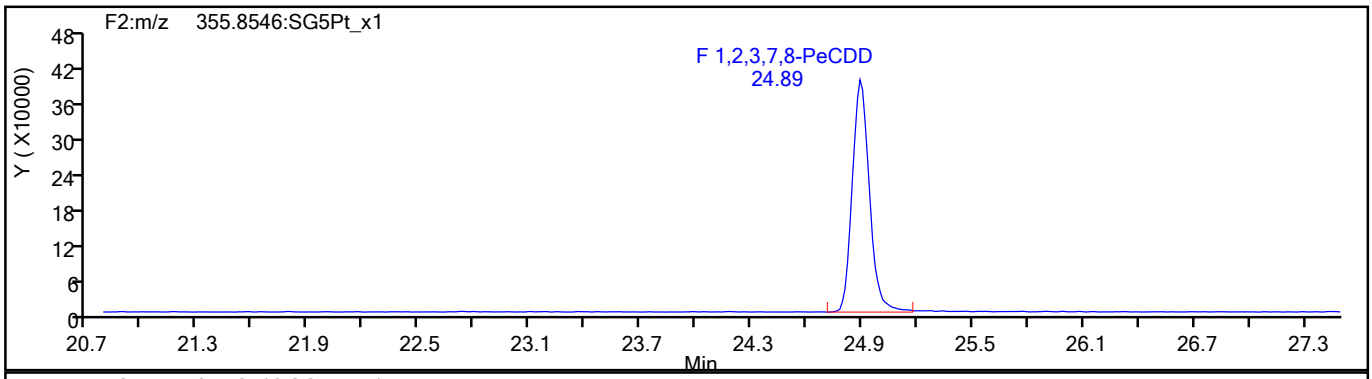

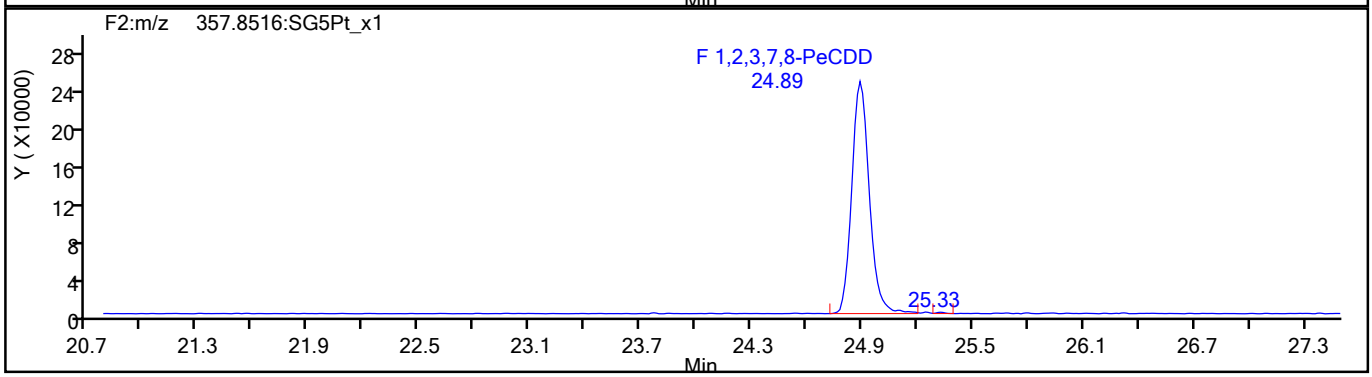

PeCDD Standards

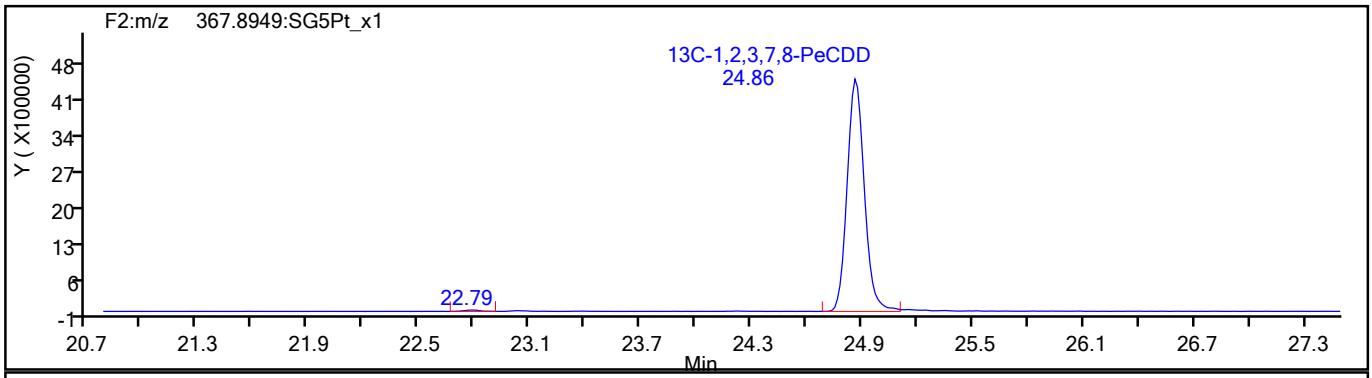

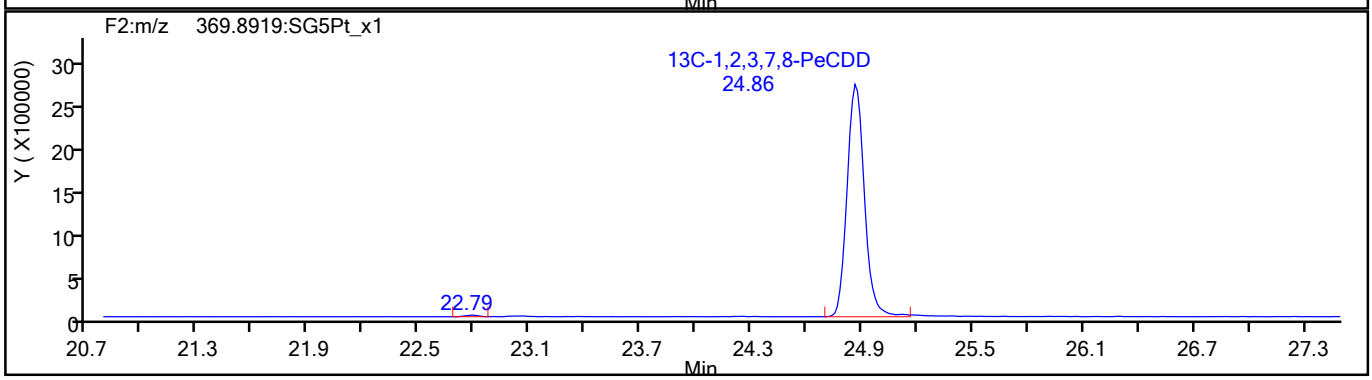

773330

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

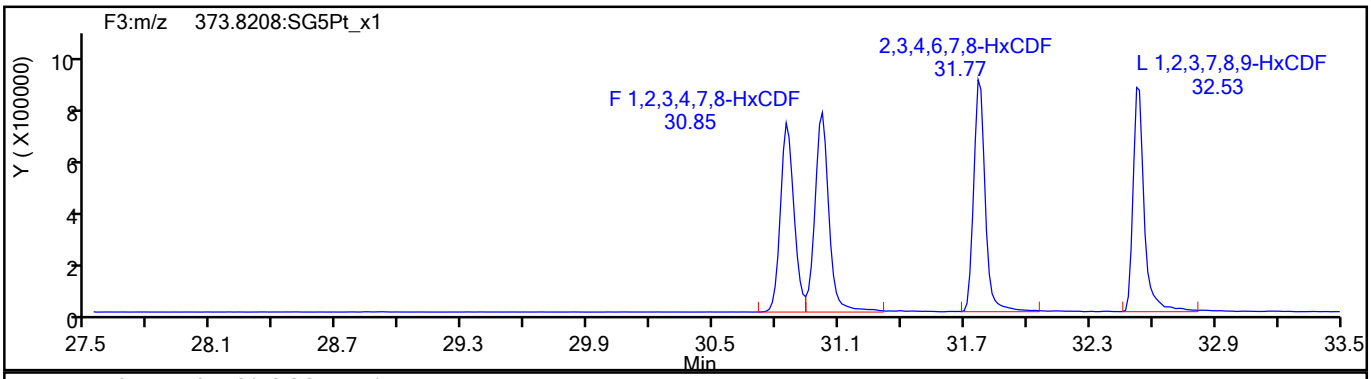

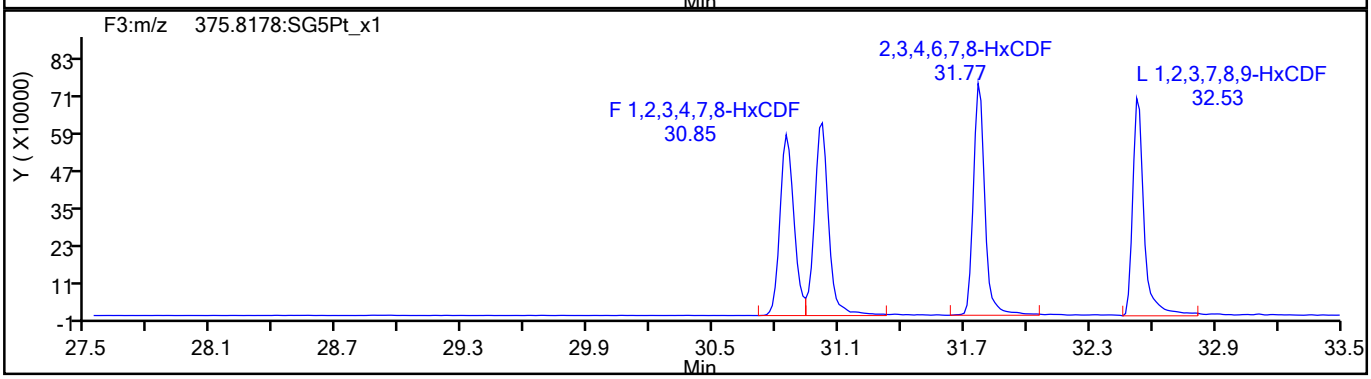

HxCDF Standards

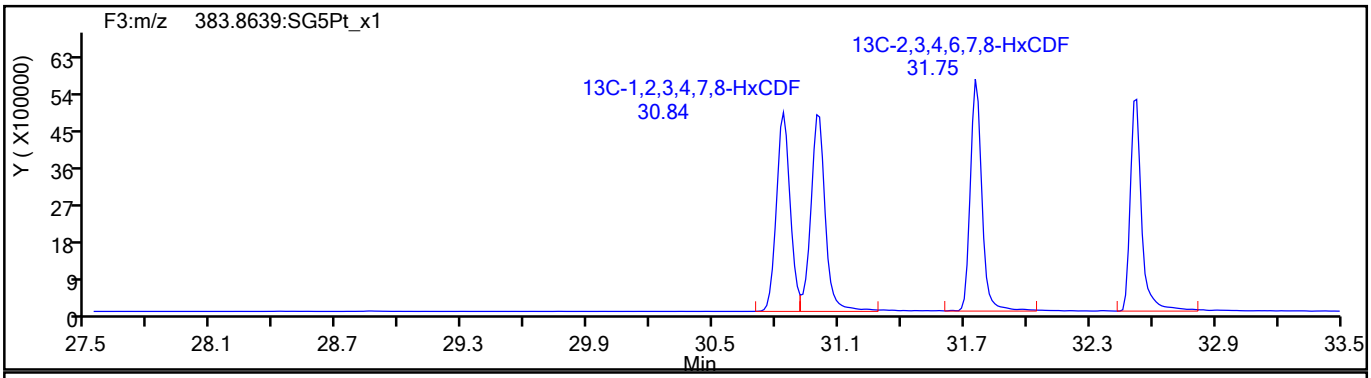

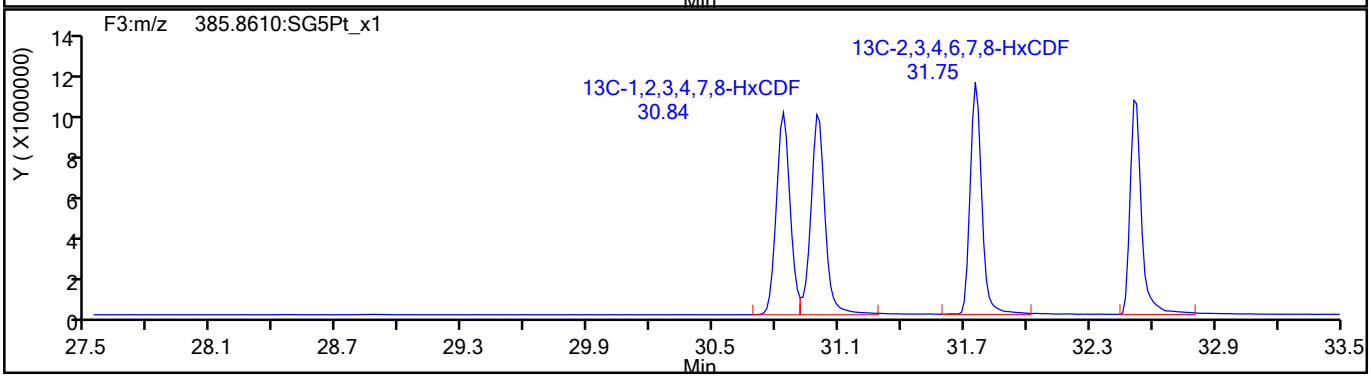

773331

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

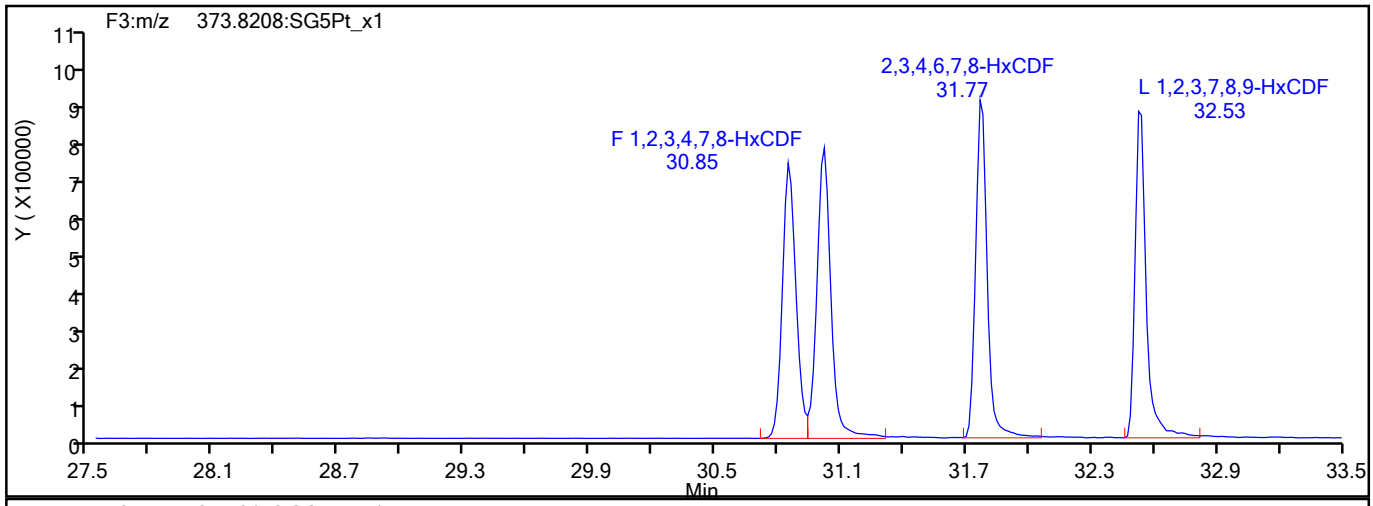

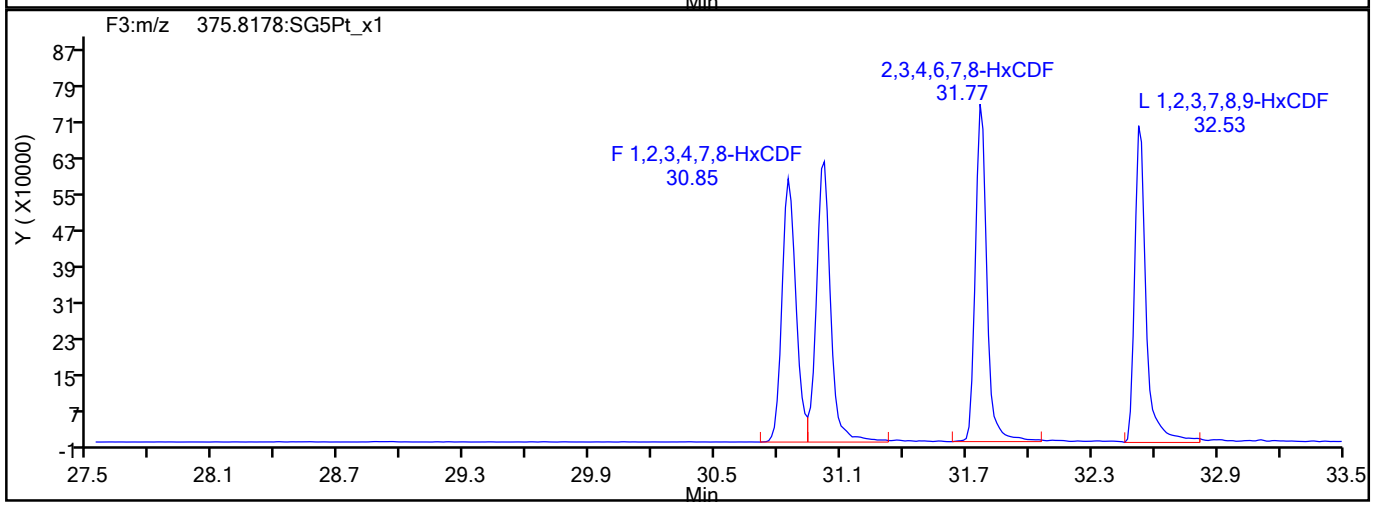

HxCDF Interference Mass

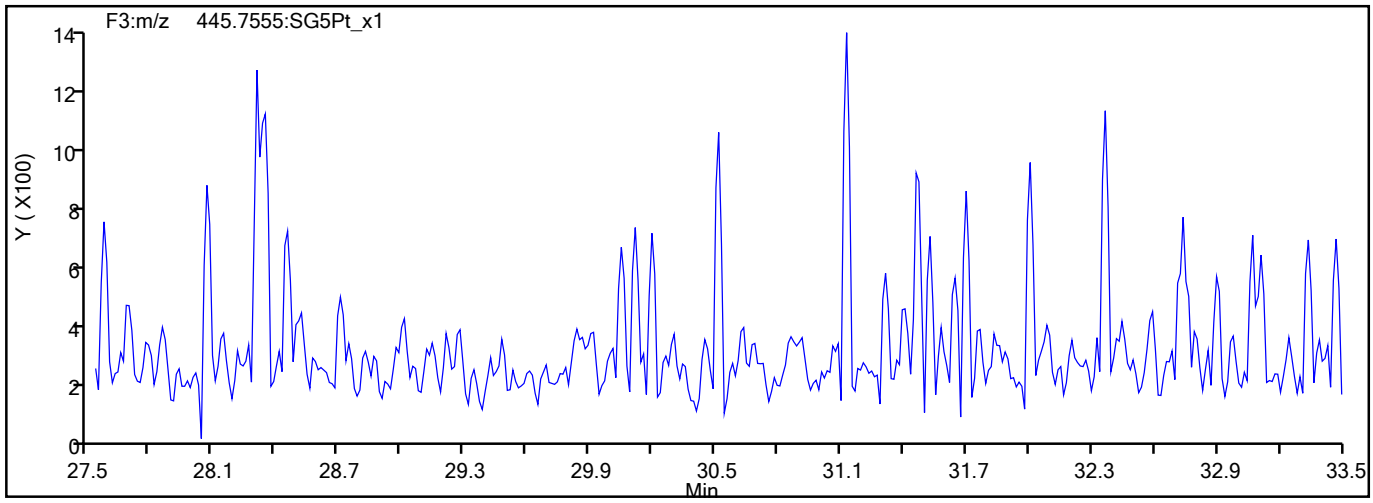

773332

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

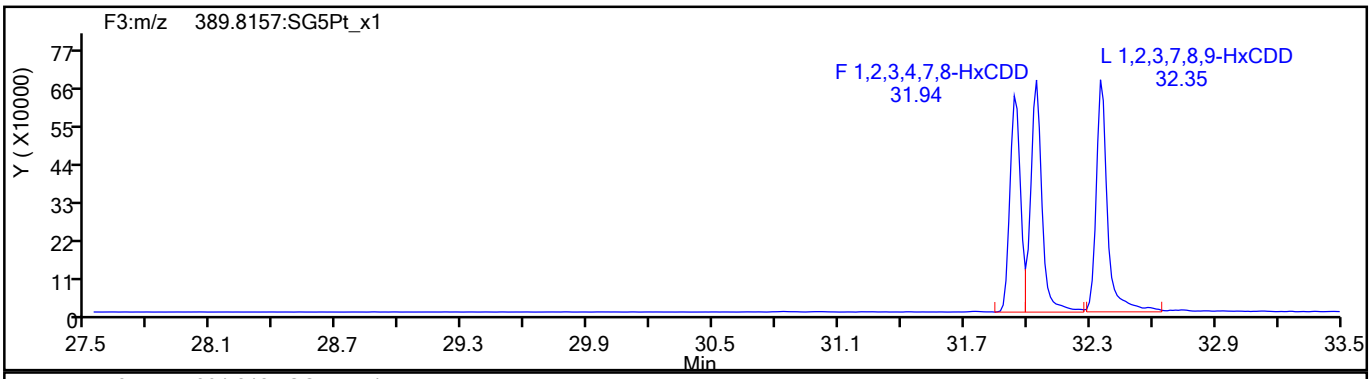

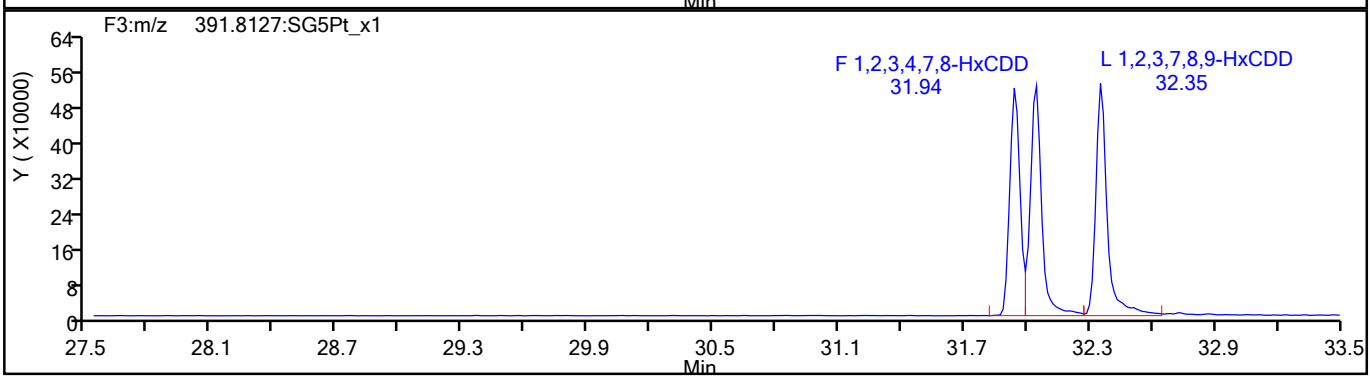

HxCDD Standards

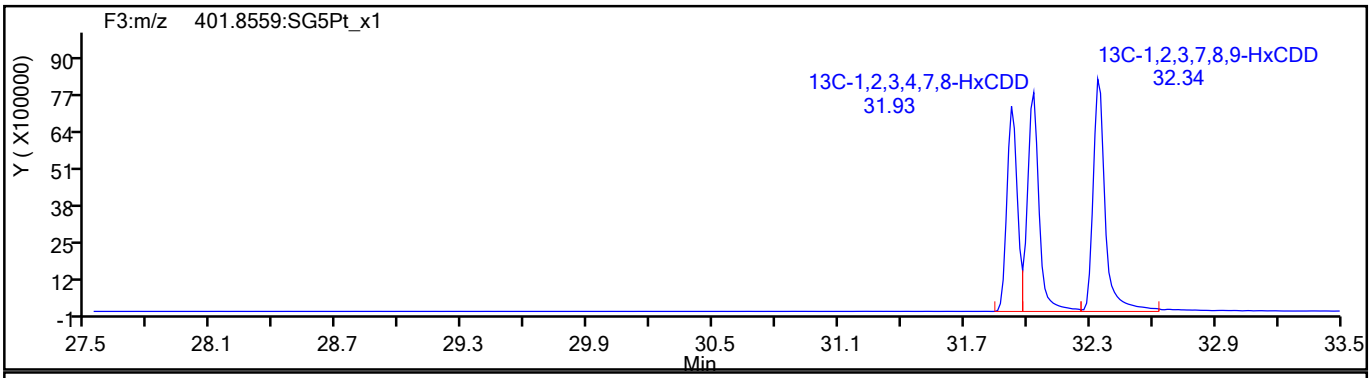

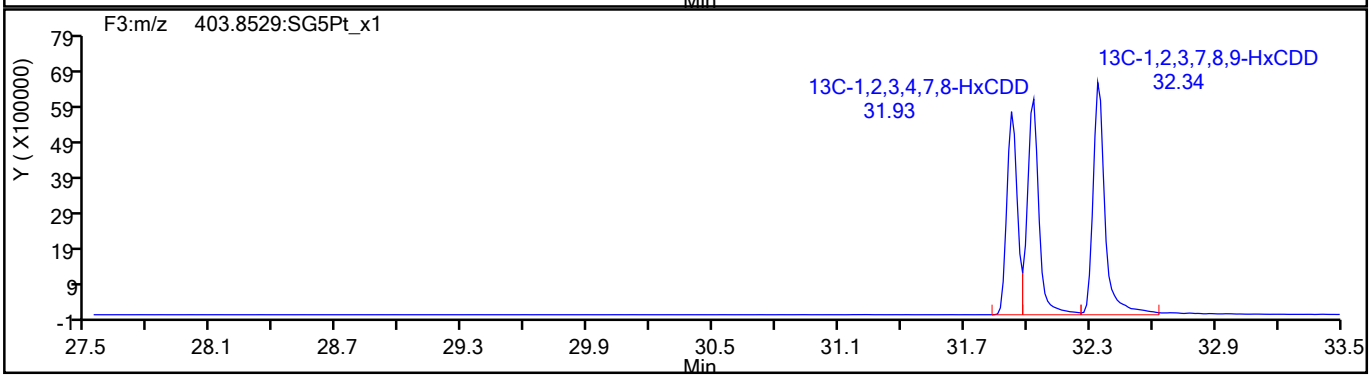

773333

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

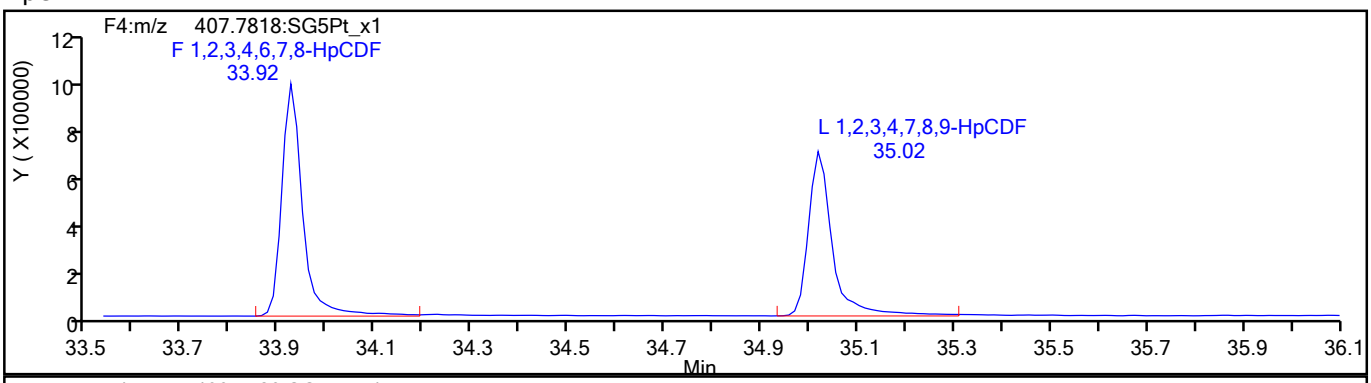

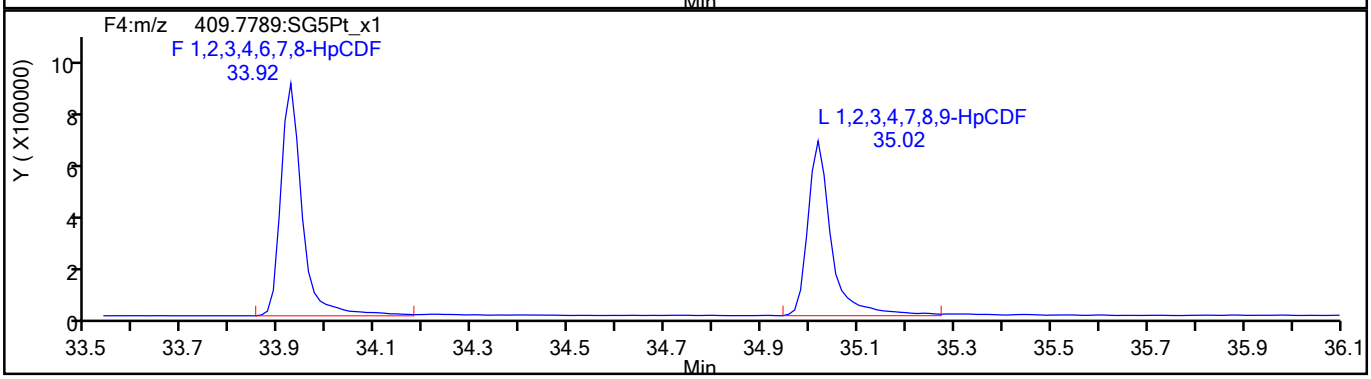

HpCDF Standards

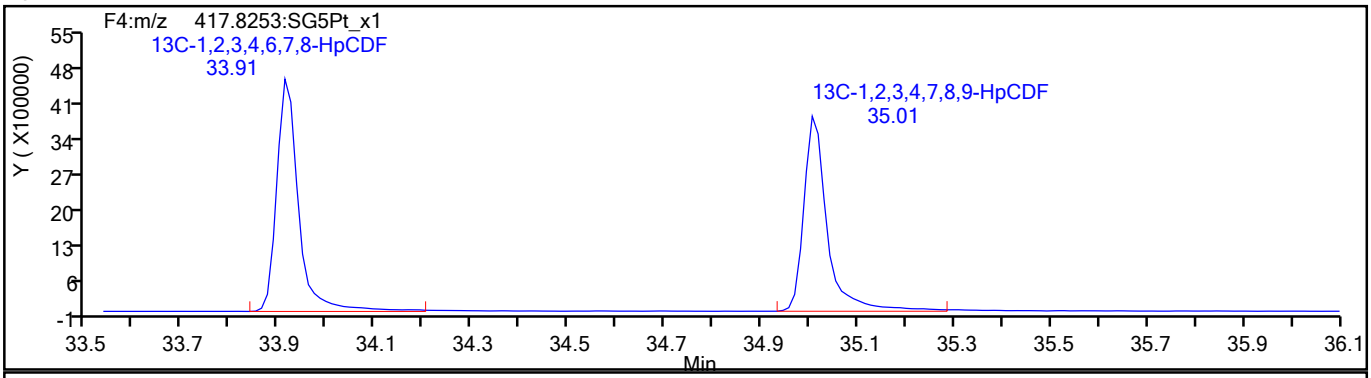

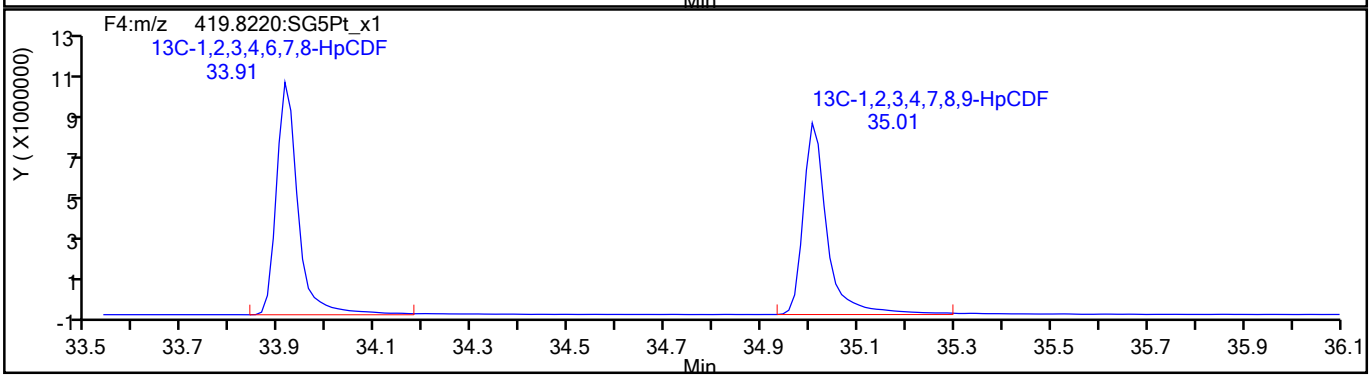

773334

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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HpCDF

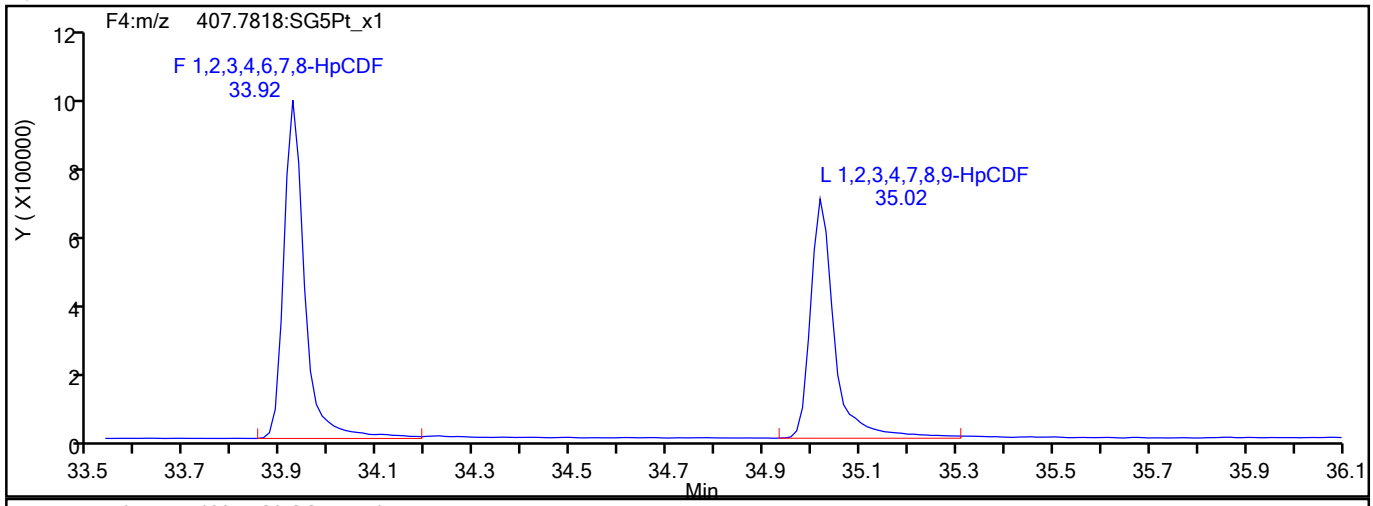

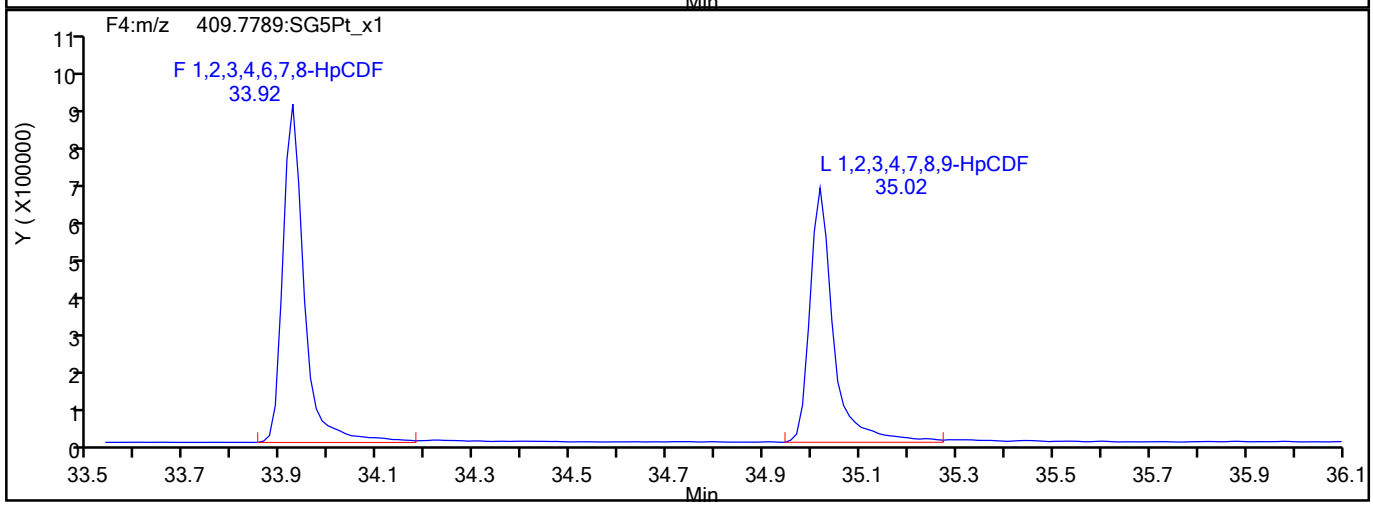

HpCDF Interference Mass

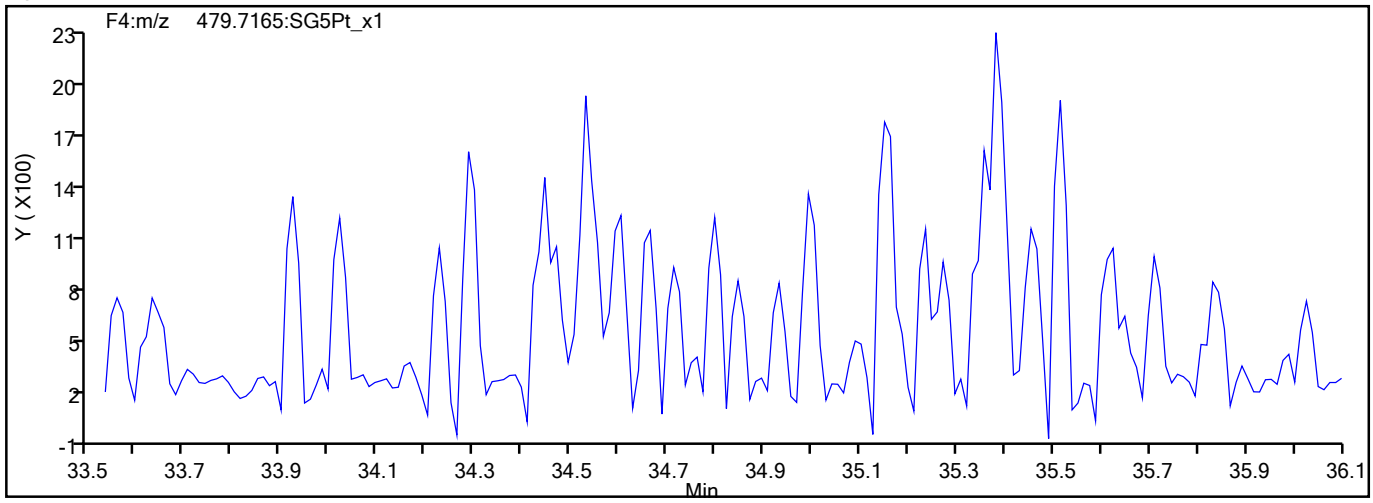

773335

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

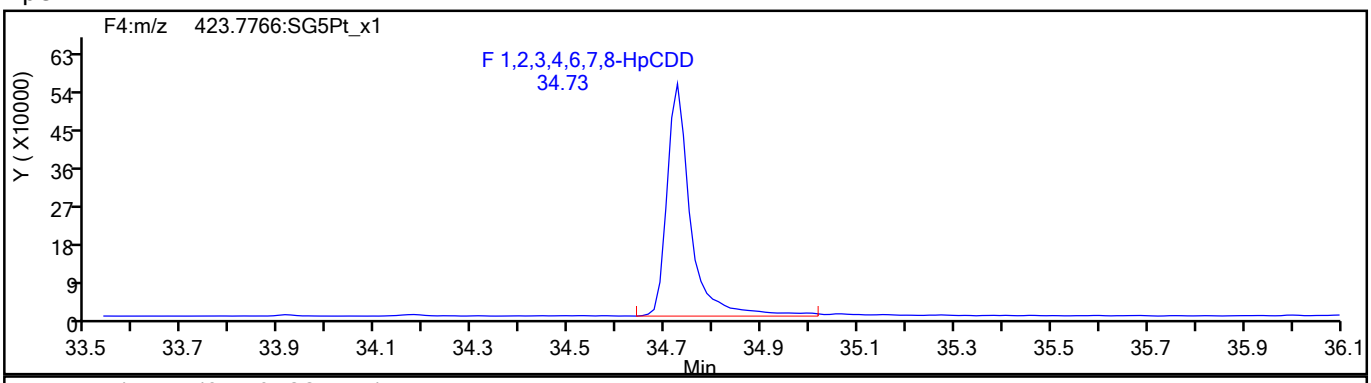

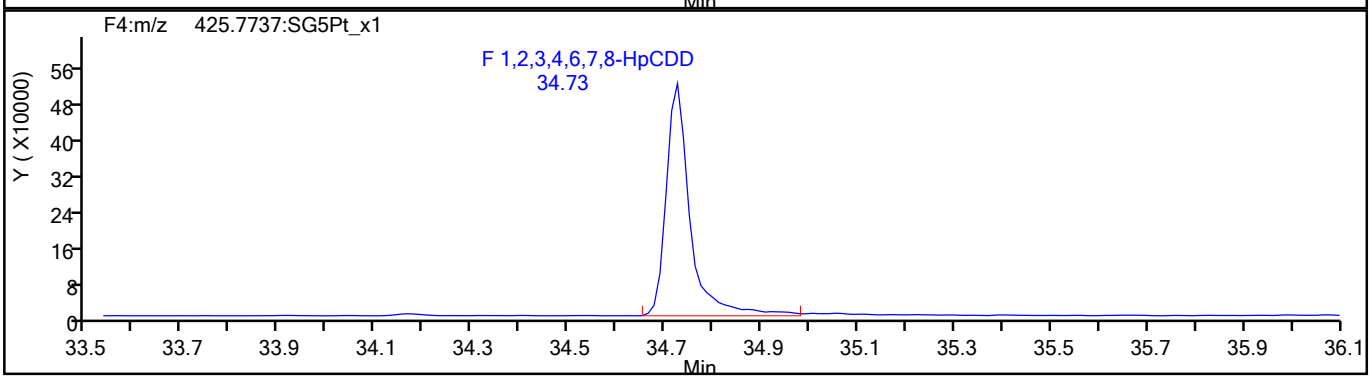

HpCDD Standards

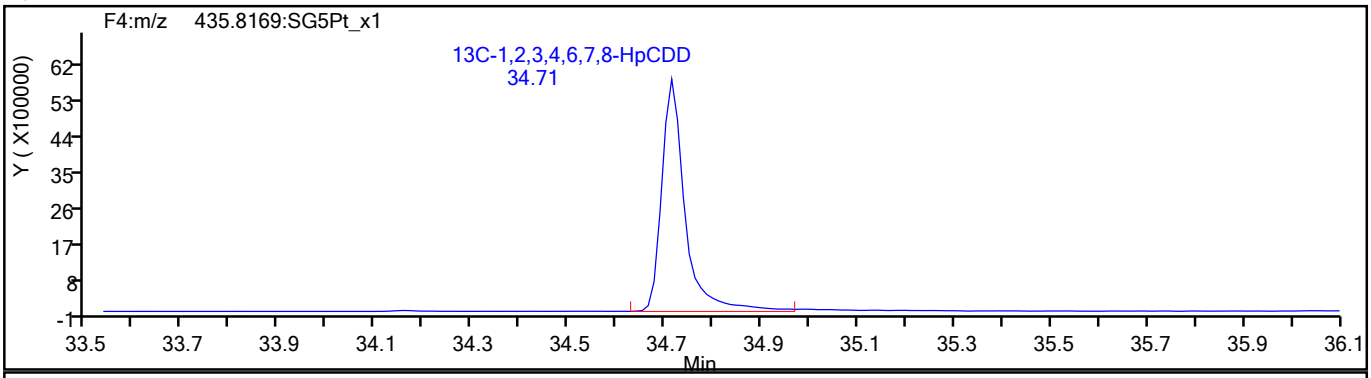

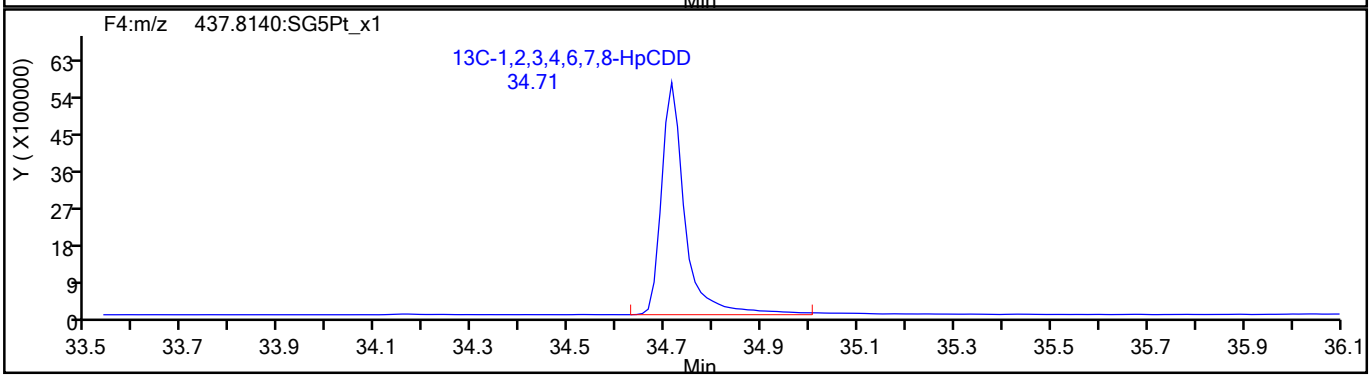

773336

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

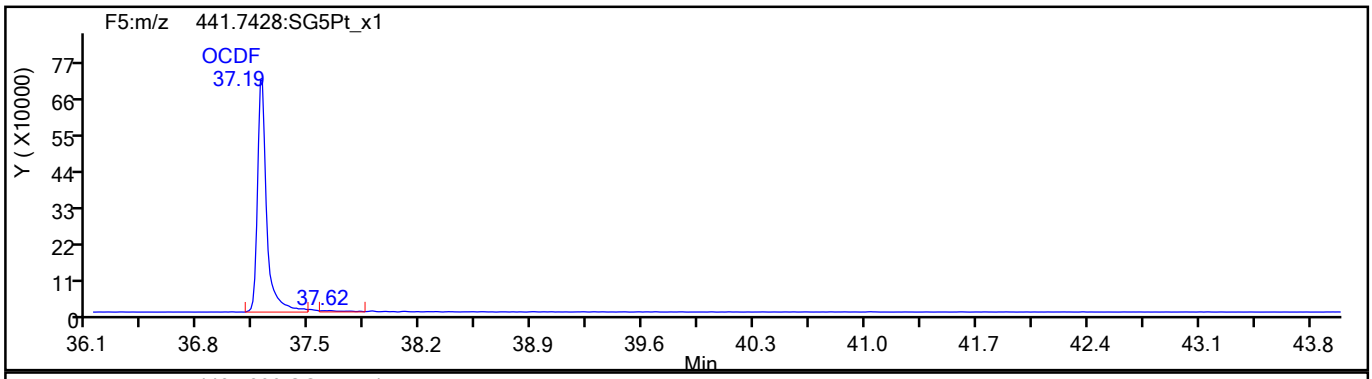

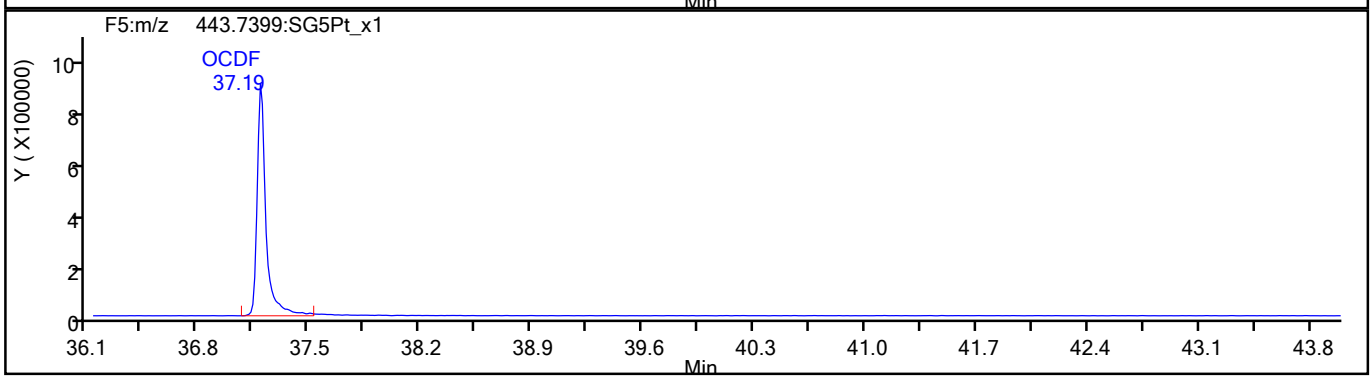

OCDF Standards

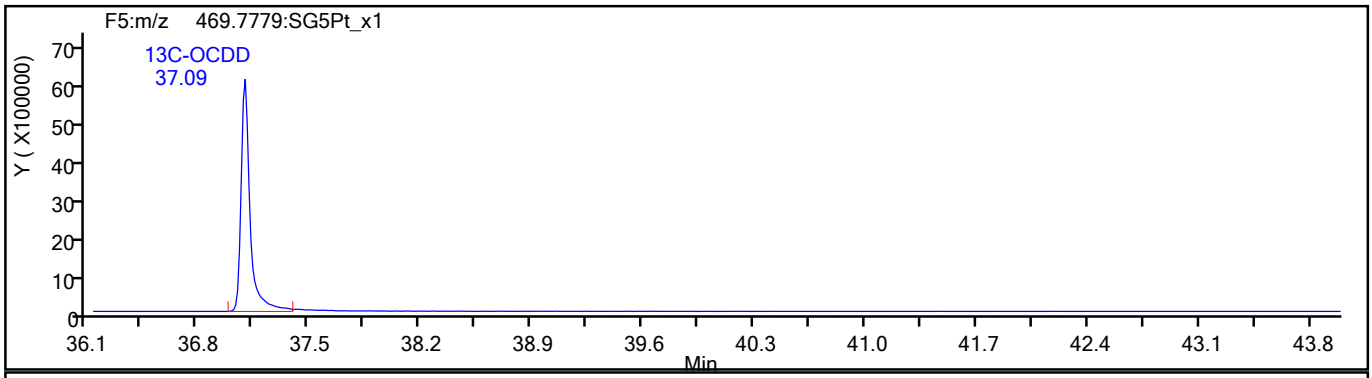

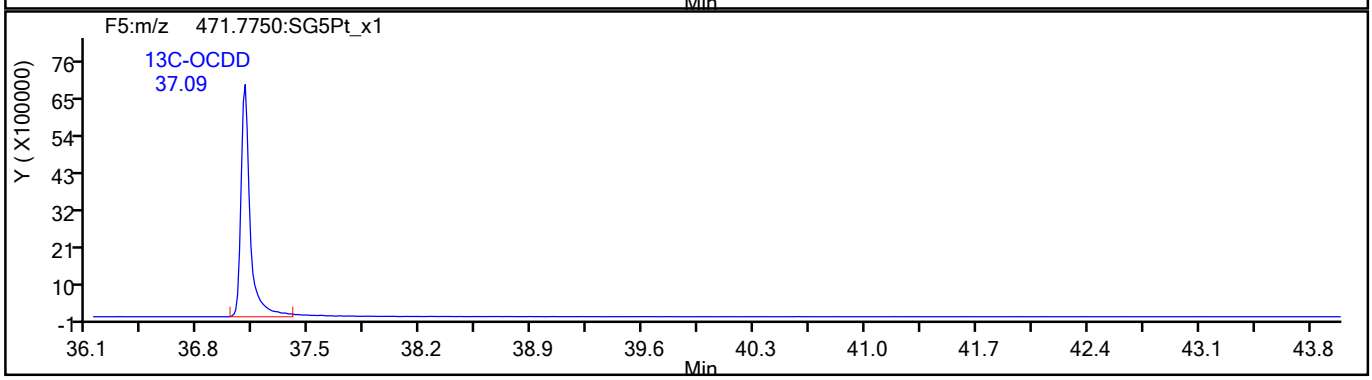

773337

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

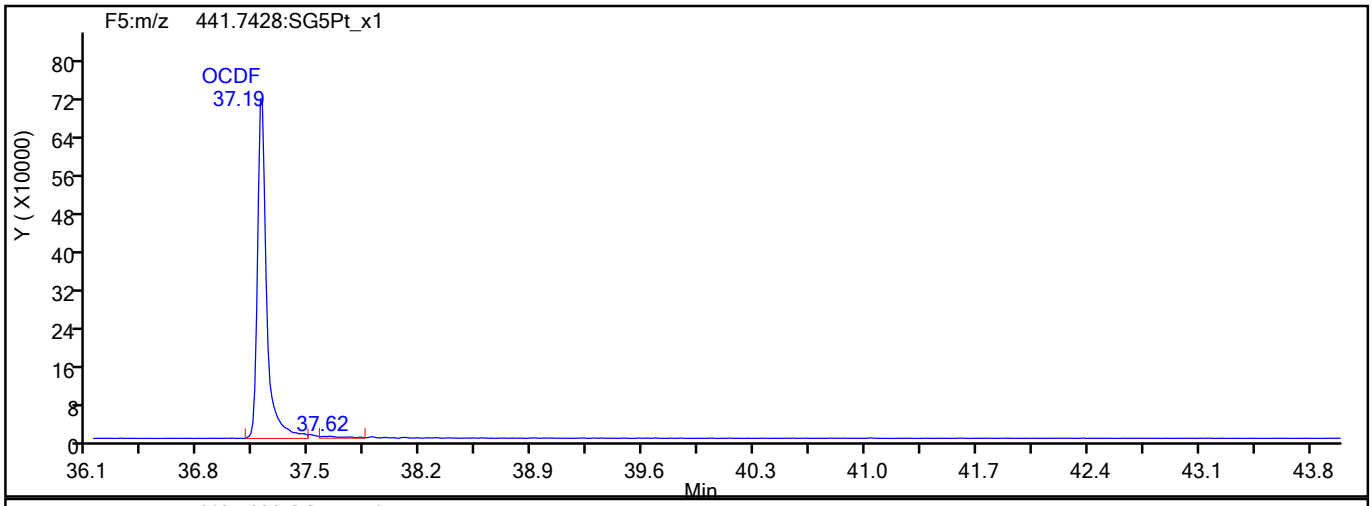

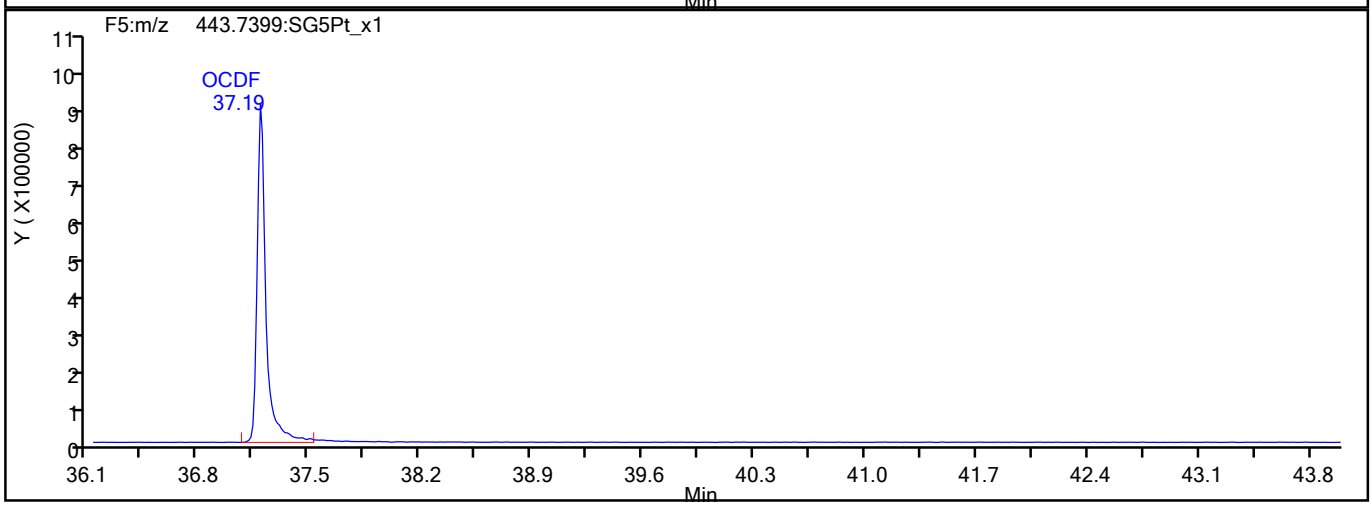

OCDF Interference Mass

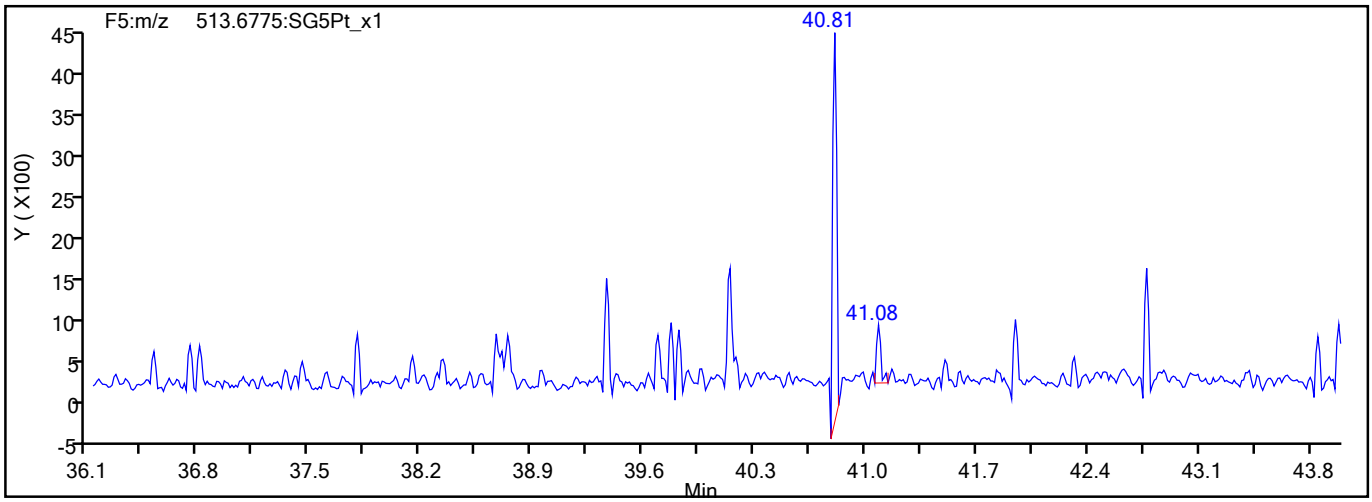

773338

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

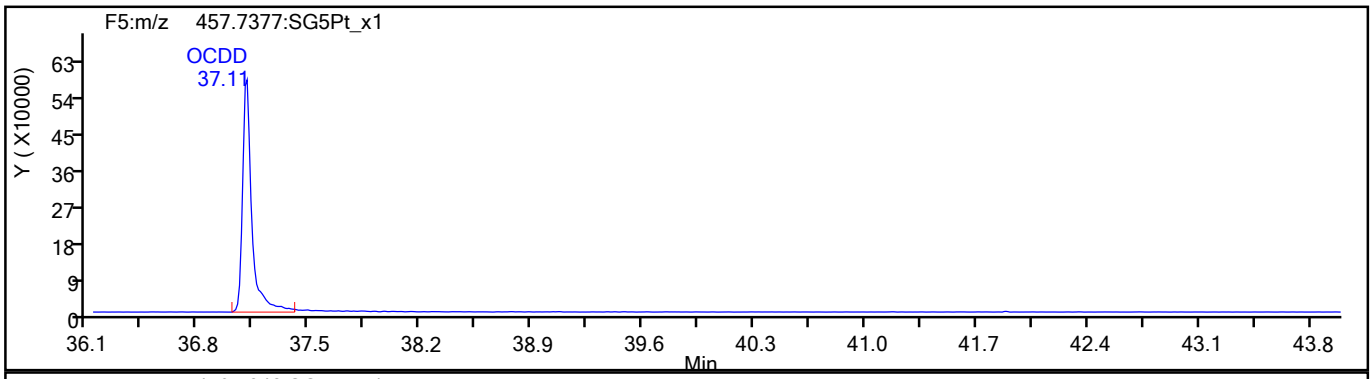

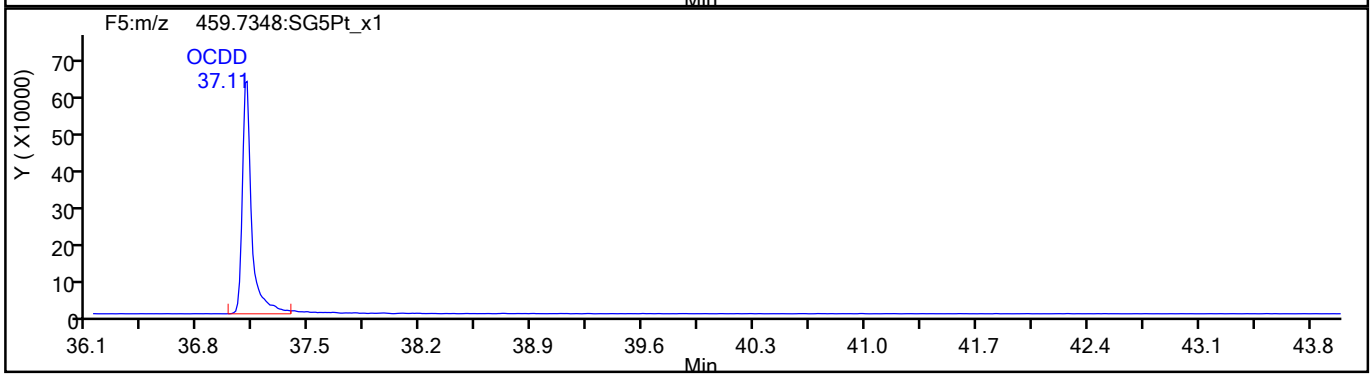

OCDD Standards

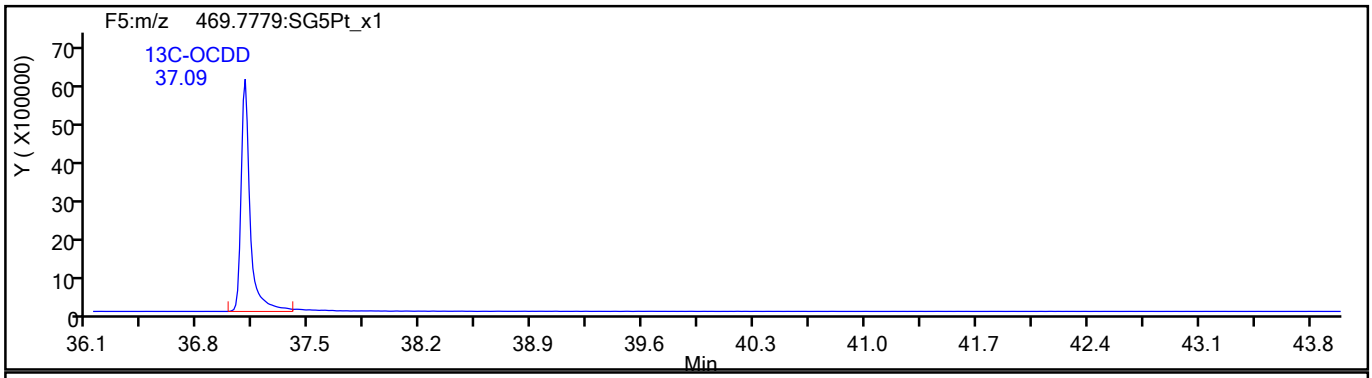

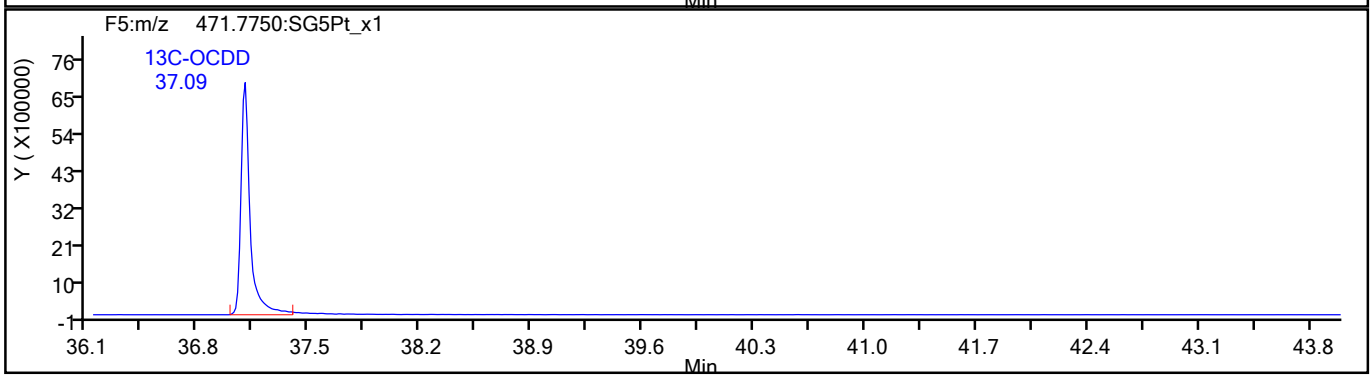

773339

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

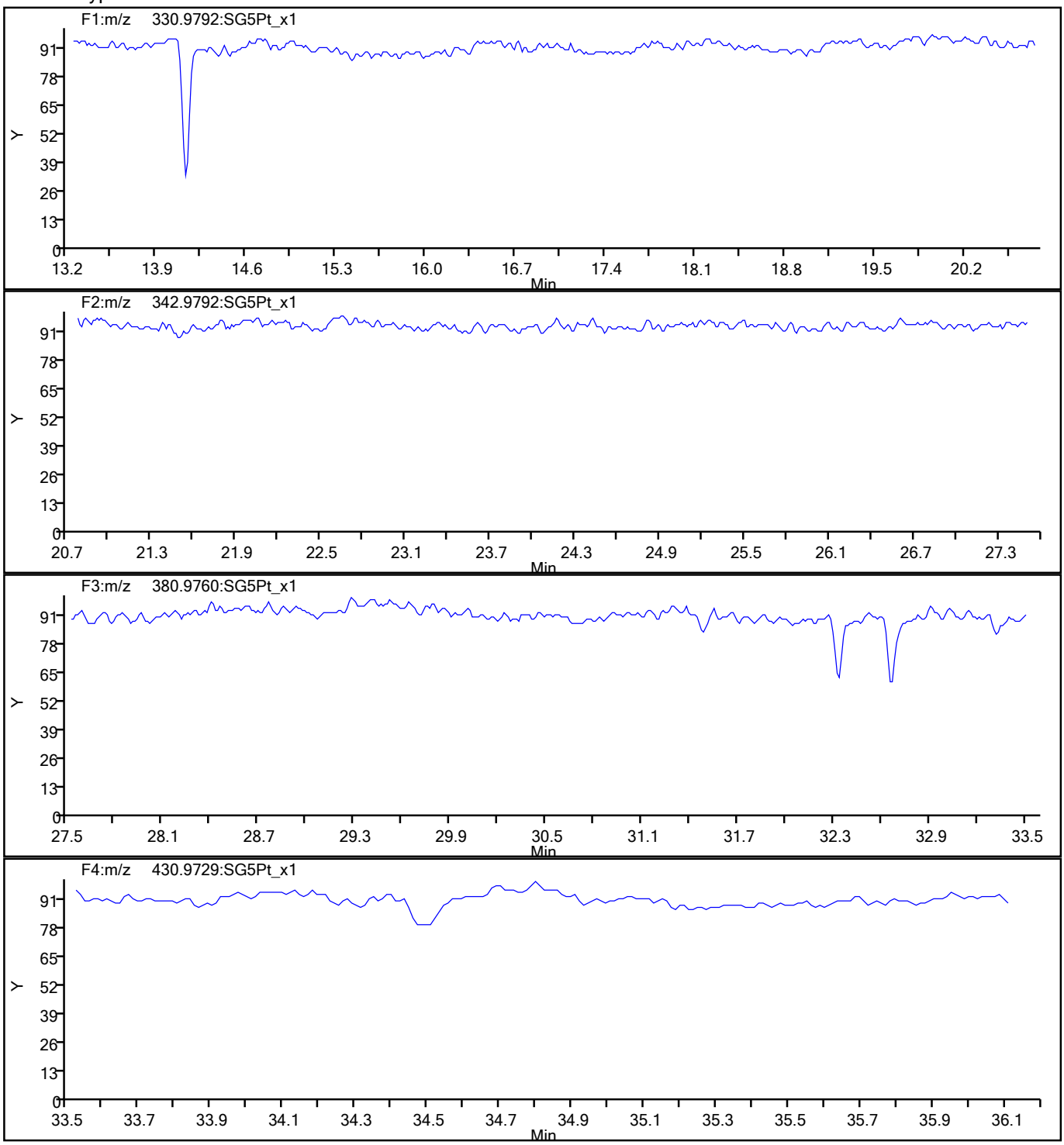

773340

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

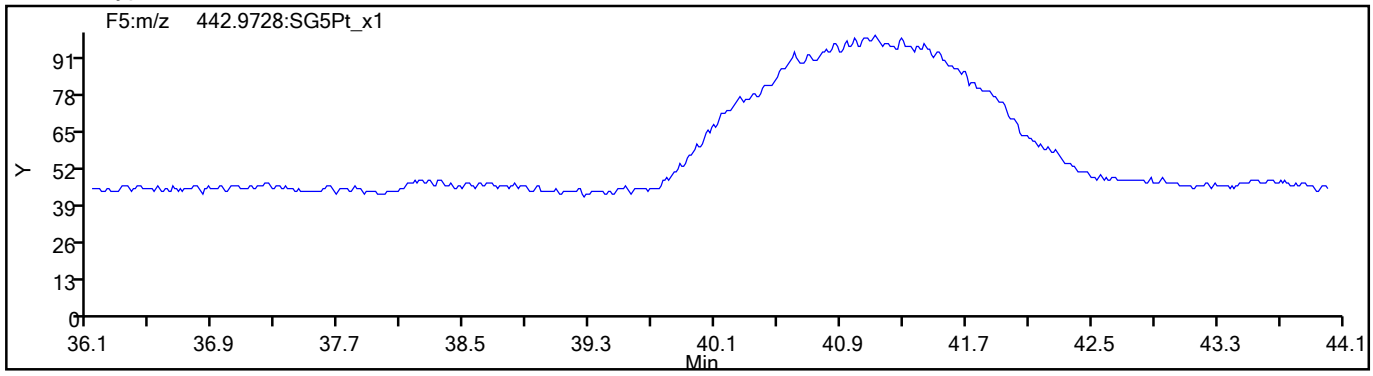

773341

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62635225	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	101724636	0.78	1.6249	99.9	99.9	0.2242	0.2242	99.95	
2,3,7,8-TCDF	17.643	10638776	0.78	1.0239	10.2	10.2	0.0283	0.0283	102	
S Total TCDF					10.2	10.2	0.0283	0.0283		
D 13C-2,3,7,8-TCDD	18.338	56155483	0.81	0.8993	99.7	99.7	0.1510	0.1510	99.69	
$ 37Cl4-2,3,7,8-TCDD	18.369	7339670		1.1071	10.6	10.6	0.0132	0.0132	106	
2,3,7,8-TCDD	18.369	7104238	0.76	1.2541	10.1	10.1	0.0224	0.0224	101	
S Total TCDD					10.1	10.1	0.0224	0.0224		
D 13C-1,2,3,7,8-PeCDF	22.762	76368219	1.58	1.2101	100.8	100.8	0.2109	0.2109	101	
1,2,3,7,8-PeCDF	22.789	41588176	1.62	1.0611	51.3	51.3	0.1508	0.1508	103	
D 13C-2,3,4,7,8-PeCDF	24.139	78214582	1.58	1.2395	100.7	100.7	0.2059	0.2059	101	
2,3,4,7,8-PeCDF	24.167	40928436	1.60	1.0184	51.4	51.4	0.1656	0.1656	103	
S Total PeCDF					102.7	102.7	0.1582	0.1582		
D 13C-1,2,3,7,8-PeCDD	24.876	47124414	1.60	0.7612	98.8	98.8	0.1214	0.1214	98.83	
1,2,3,7,8-PeCDD	24.903	25165054	1.62	1.0484	50.9	50.9	0.0669	0.0669	102	
S Total PeCDD					50.9	50.9	0.0669	0.0669		
D 13C-1,2,3,4,7,8-HxCDF	30.849	68075509	0.52	1.0837	98.8	98.8	0.4389	0.4389	98.79	
1,2,3,4,7,8-HxCDF	30.862	37525146	1.24	1.0851	50.8	50.8	0.2914	0.2914	102	
D 13C-1,2,3,6,7,8-HxCDF	31.009	70677463	0.52	1.1279	98.5	98.5	0.4217	0.4217	98.54	
1,2,3,6,7,8-HxCDF	31.022	40802767	1.21	1.1260	51.3	51.3	0.2729	0.2729	103	
D 13C-2,3,4,6,7,8-HxCDF	31.767	67028498	0.52	1.0637	99.1	99.1	0.4471	0.4471	99.10	
2,3,4,6,7,8-HxCDF	31.781	39741365	1.22	1.1675	50.8	50.8	0.2260	0.2260	102	
D 13C-1,2,3,7,8,9-HxCDF	32.526	60389284	0.52	0.9676	98.2	98.2	0.4916	0.4916	98.15	
1,2,3,7,8,9-HxCDF	32.540	35924190	1.21	1.1664	51.0	51.0	0.2363	0.2363	102	
S Total HxCDF					203.9	203.9	0.2566	0.2566		
* 13C-1,2,3,7,8,9-HxCDD	32.353	63588089	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.941	44039927	1.25	0.7334	94.4	94.4	0.3731	0.3731	94.43	
1,2,3,4,7,8-HxCDD	31.954	24891170	1.33	1.0640	53.1	53.1	0.1747	0.1747	106	
D 13C-1,2,3,6,7,8-HxCDD	32.034	55284532	1.26	0.8802	98.8	98.8	0.3109	0.3109	98.78	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	27953752	1.21	1.0001	50.6	50.6	0.1666	0.1666	101	
1,2,3,7,8,9-HxCDD	32.367	29794954	1.26	1.1325	53.0	53.0	0.1552	0.1552	106	
S Total HxCDD					156.7	156.7	0.1655	0.1655		
D 13C-1,2,3,4,6,7,8-HpCDF	33.924	47697671	0.44	0.7730	97.0	97.0	1.328	1.328	97.03	
1,2,3,4,6,7,8-HpCDF	33.937	35740964	1.05	1.4413	52.0	52.0	0.5190	0.5190	104	
D 13C-1,2,3,4,7,8,9-HpCDF	35.018	43238622	0.44	0.7008	97.0	97.0	1.465	1.465	97.03	
1,2,3,4,7,8,9-HpCDF	35.030	29450636	1.07	1.3174	51.7	51.7	0.6741	0.6741	103	
S Total HpCDF					103.7	103.7	0.5966	0.5966		
D 13C-1,2,3,4,6,7,8-HpCDD	34.726	40333717	1.03	0.6472	98.0	98.0	0.5563	0.5563	98.00	
1,2,3,4,6,7,8-HpCDD	34.726	22538791	1.03	1.0943	51.1	51.1	0.2539	0.2539	102	
S Total HpCDD					51.1	51.1	0.2539	0.2539		
D 13C-OCDD	37.094	54338243	0.87	0.4472	191.1	191.1	0.2612	0.2612	95.55	
OCDF	37.202	41147202	0.91	1.4382	105.3	105.3	0.1155	0.1155	105	
OCDD	37.106	31656667	0.89	1.1070	105.3	105.3	0.1572	0.1572	105	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28287778	7074314	3903	9757	1813		
333.9339	18.142	18.142	0		34347447	8672273	4653	11632	1864	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.616	1	0.972	44652675	10978931	8756	21890	1254		
317.9389	17.628	17.616	1	0.972	57071961	13787474	14192	35480	971	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.631	1	1.001	4665898	1145703	1759	4397	651		
305.8987	17.643	17.631	1	1.001	5972878	1458593	1111	2777	1313	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	25132336	5946858	3903	9757	1524		
333.9339	18.338	18.338	0	1.011	31023147	7337223	4653	11632	1577	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.369	18.354	1	1.012	7339670	1703834	921	2302	1850		
2,3,7,8-TCDD											
319.8965	18.369	18.357	1	1.002	3077636	720367	906	2265	795		
321.8936	18.369	18.357	1	1.002	4026602	947792	588	1470	1612	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46742521	8181774	9794	24485	835		
353.8970	22.762	22.754	0	1.255	29625698	5225925	6278	15695	832	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.789	22.779	1	1.001	25738852	4452039	5088	12720	875		
341.8567	22.789	22.779	1	1.001	15849324	2731041	3494	8735	782	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.139	24.129	1	1.331	47906018	7878060	9794	24485	804		
353.8970	24.139	24.129	1	1.331	30308564	4845446	6278	15695	772	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.167	24.156	1	1.001	25185293	4111601	5088	12720	808		
341.8567	24.167	24.156	1	1.001	15743143	2618923	3494	8735	750	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.876	24.865	1	1.371	29023498	4508866	3701	9252	1218		
369.8919	24.876	24.865	1	1.371	18100916	2812844	2121	5302	1326	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.903	24.892	1	1.001	15548746	2422000	1286	3215	1883		
357.8516	24.903	24.892	1	1.001	9616308	1489099	768	1920	1939	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.849	30.838	1	0.954	23323404	5008910	10853	27132	462		
385.8610	30.849	30.838	1	0.954	44752105	9511743	20971	52427	454	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.000	20753403	4584464	10058	25145	456		
375.8178	30.862	30.857	0	1.000	16771743	3729681	8311	20777	449	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.009	31.003	0	0.958	24213048	5206646	10853	27132	480		
385.8610	31.009	31.003	0	0.958	46464415	9739576	20971	52427	464	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	22352739	4771379	10058	25145	474		
375.8178	31.022	31.022	0	1.000	18450028	3943683	8311	20777	475	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.767	31.756	1	0.982	22835025	6015846	10853	27132	554		
385.8610	31.767	31.756	1	0.982	44193473	11391437	20971	52427	543	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.781	31.772	1	1.000	21800962	5788708	10058	25145	576		
375.8178	31.781	31.772	1	1.000	17940403	4765095	8311	20777	573	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.005	20681548	5801162	10853	27132	535		
385.8610	32.526	32.523	0	1.005	39707736	10862121	20971	52427	518	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.540	32.534	0	1.000	19691436	5514300	10058	25145	548		
375.8178	32.540	32.534	0	1.000	16232754	4594829	8311	20777	553	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.353	32.342	1		35642869	9349119	10403	26007	899		
403.8529	32.353	32.342	1		27945220	7378163	7908	19770	933	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.941	31.929	1	0.987	24473480	7240164	10403	26007	696		
403.8529	31.941	31.929	1	0.987	19566447	5775722	7908	19770	730	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.954	31.945	1	1.000	14220855	4121905	5566	13915	741		
391.8127	31.954	31.945	1	1.000	10670315	3199272	4114	10285	778	1.33(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.034	32.033	0	0.990	30876044	8117648	10403	26007	780		
403.8529	32.034	32.033	0	0.990	24408488	6404371	7908	19770	810	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	15327109	4211681	5566	13915	757		
391.8127	32.047	32.047	0	1.000	12626643	3343117	4114	10285	813	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.367	32.355	1	1.013	16583478	4368640	5566	13915	785		
391.8127	32.353	32.355	0	1.013	13211476	3519862	4114	10285	856	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.924	33.914	1	1.049	14460337	4683854	18083	45207	259		
419.8220	33.924	33.914	1	1.049	33237334	10568693	50629	126572	209	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.937	33.926	1	1.000	18301949	5790856	23497	58742	246		
409.7789	33.924	33.926	0	1.000	17439015	5585138	22139	55347	252	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.018	35.010	0	1.082	13111896	3936331	18083	45207	218		
419.8220	35.018	35.010	0	1.082	30126726	8910423	50629	126572	176	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.030	35.020	1	1.000	15206712	4448229	23497	58742	189		
409.7789	35.018	35.020	0	1.000	14243924	4117019	22139	55347	186	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.726	34.716	1	1.073	20474082	5927612	12552	31380	472		
437.8140	34.714	34.716	0	1.073	19859635	5735510	11540	28850	497	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	11412485	3410093	6511	16277	524		
425.7737	34.726	34.726	0	1.000	11126306	3358586	6451	16127	521	1.03(0.88-1.20)	
13C-OCDD											
469.7779	37.094	37.094	0	1.147	25234291	6398501	3020	7550	2119		
471.7750	37.094	37.094	0	1.147	29103952	7389026	4794	11985	1541	0.87(0.76-1.02)	
OCDF											
441.7428	37.202	37.199	0	1.003	19626693	5149784	2565	6412	2008		
443.7399	37.202	37.199	0	1.003	21520509	5563126	2015	5037	2761	0.91(0.76-1.02)	
OCDD											
457.7377	37.106	37.106	0	1.000	14916504	3846231	2276	5690	1690		
459.7348	37.106	37.106	0	1.000	16740163	4277323	2524	6310	1695	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

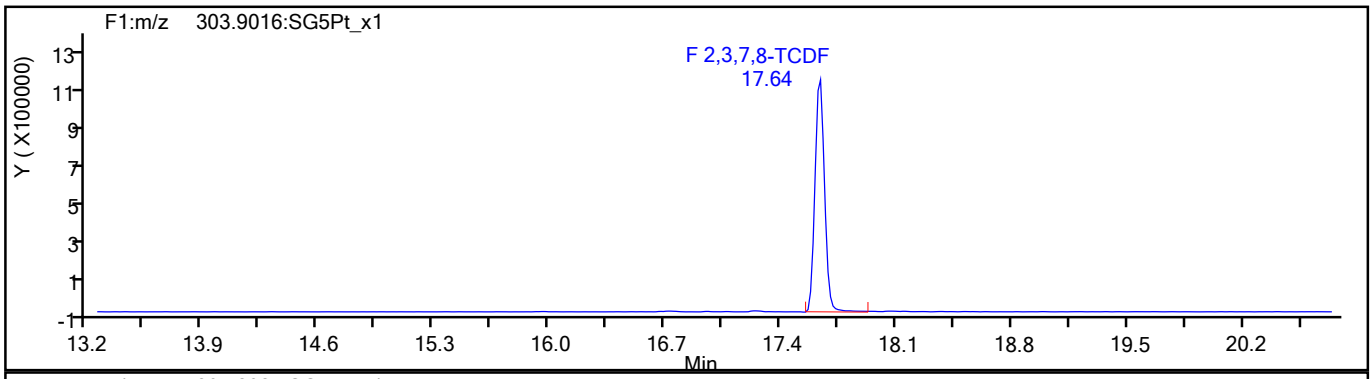

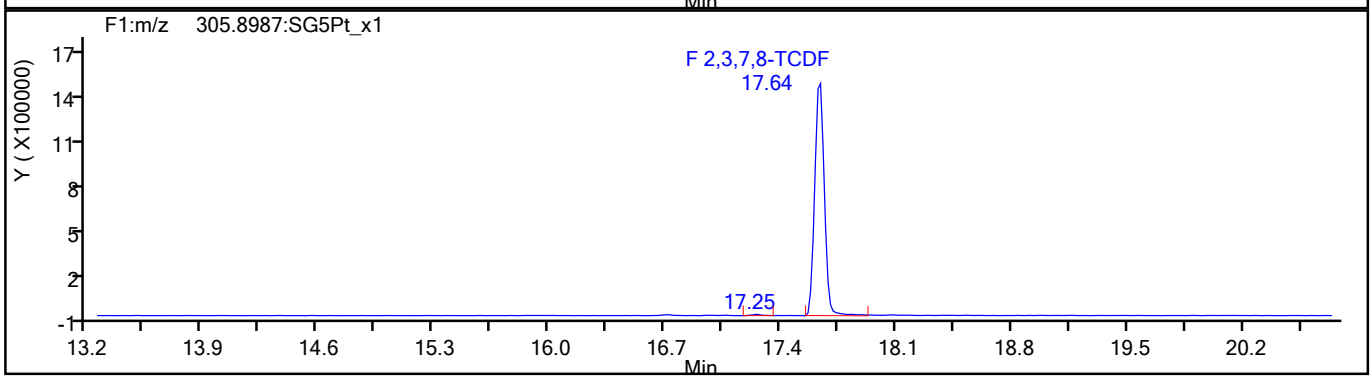

TCDF Standards

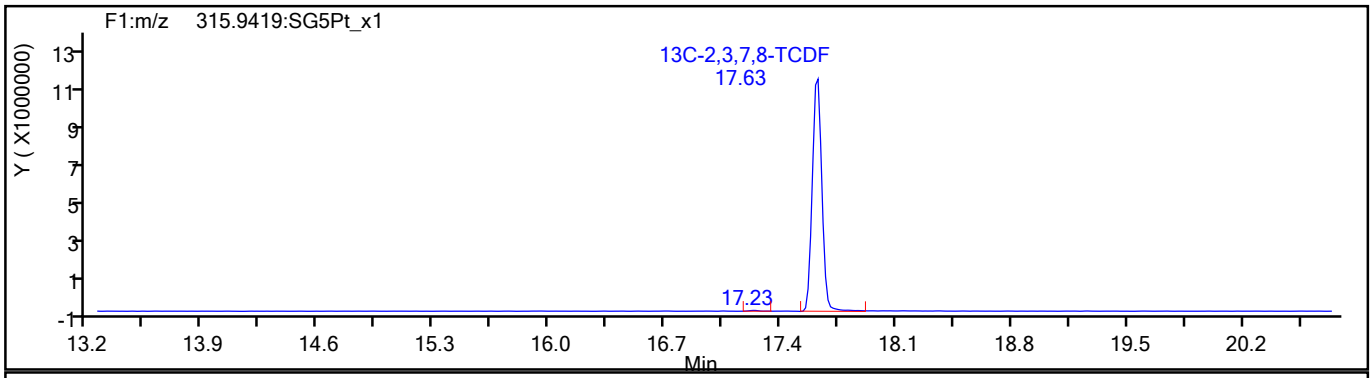

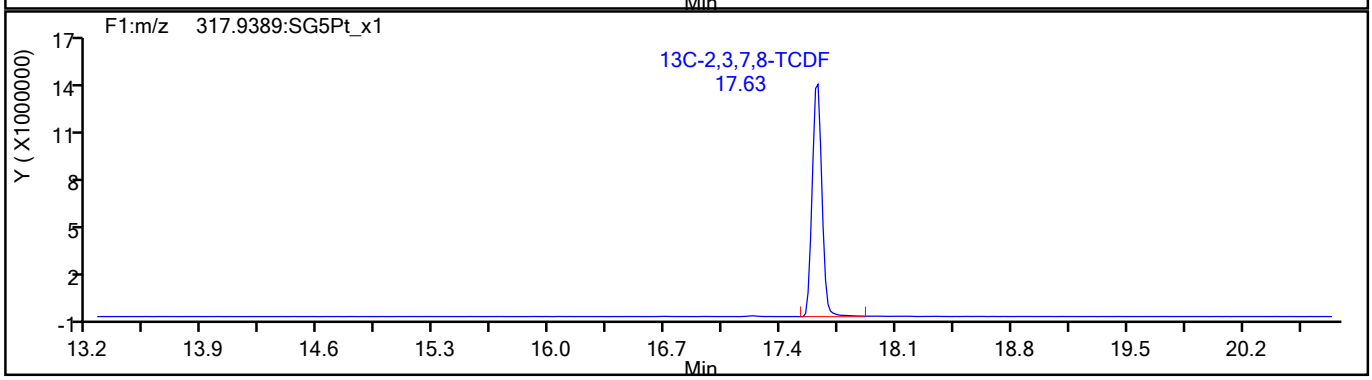

773347

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

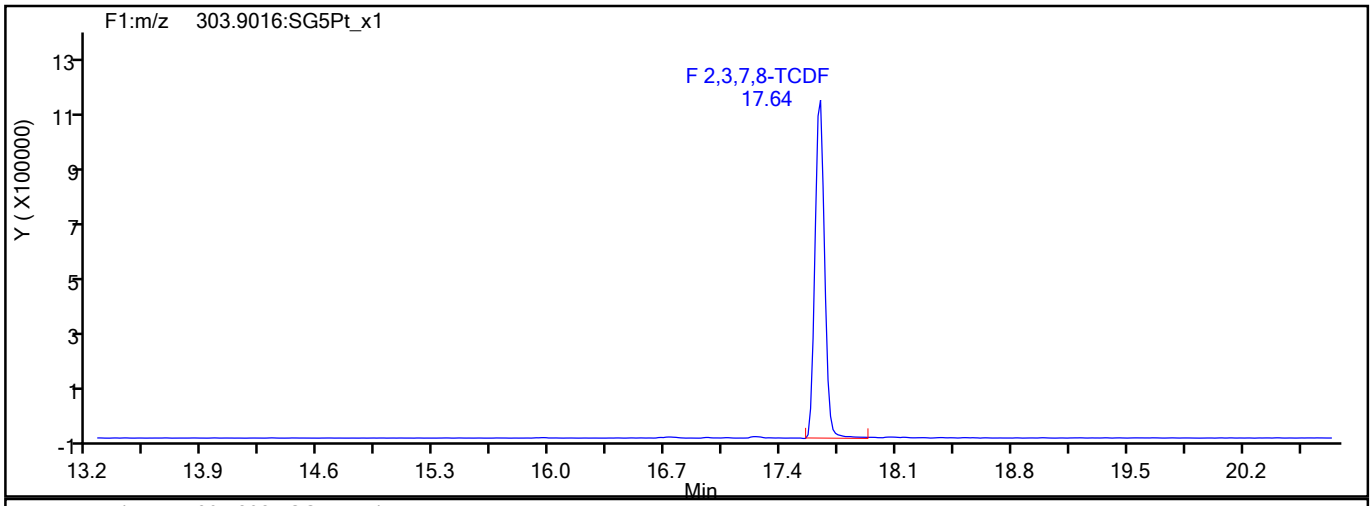

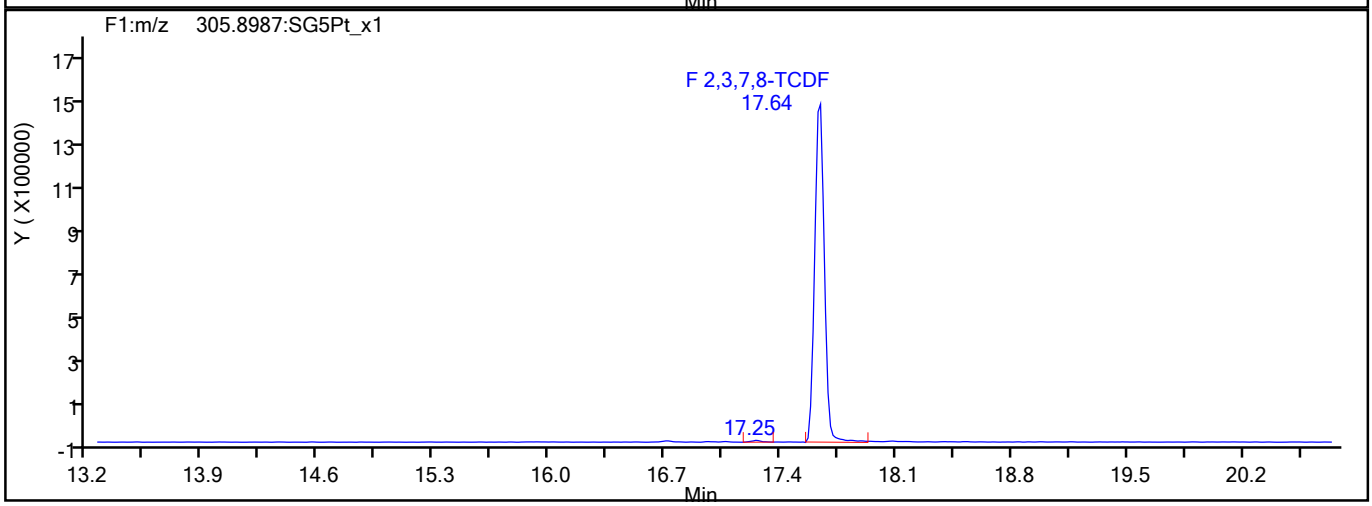

TCDF Interference Mass

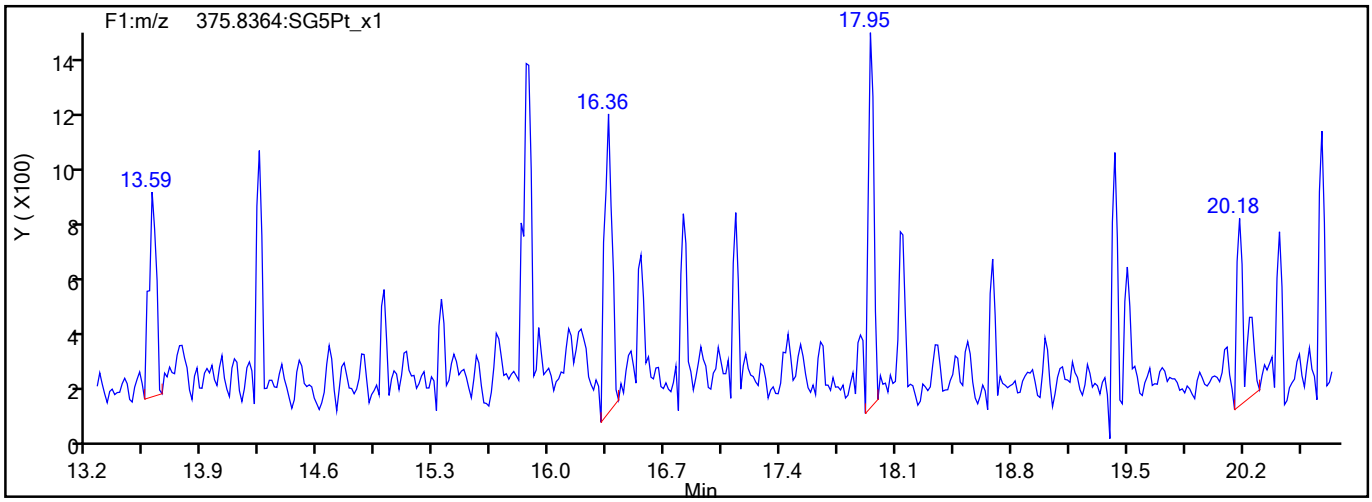

773348

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

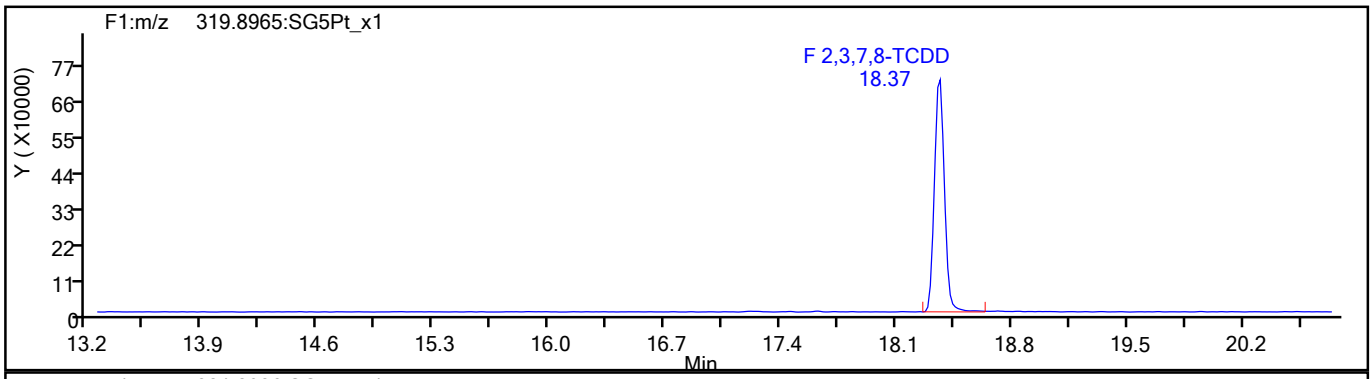

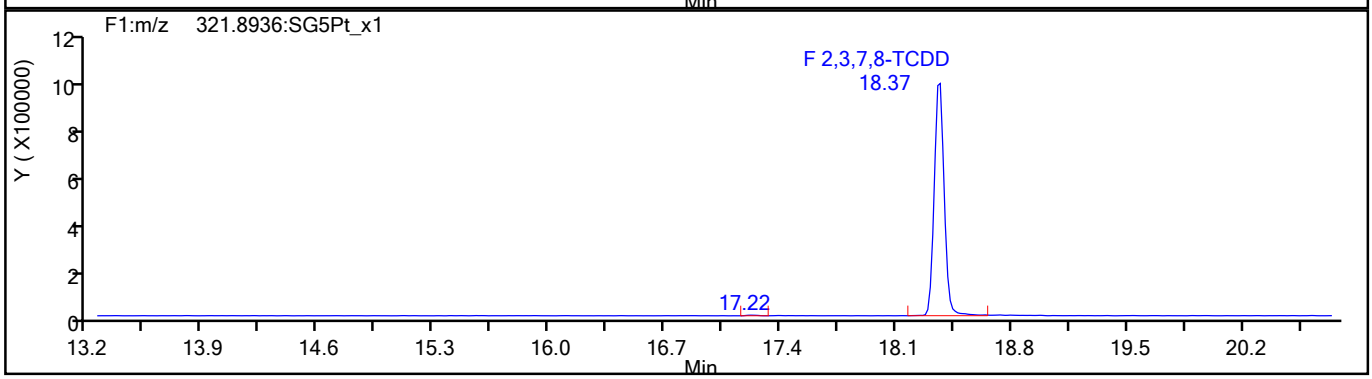

TCDD Standards

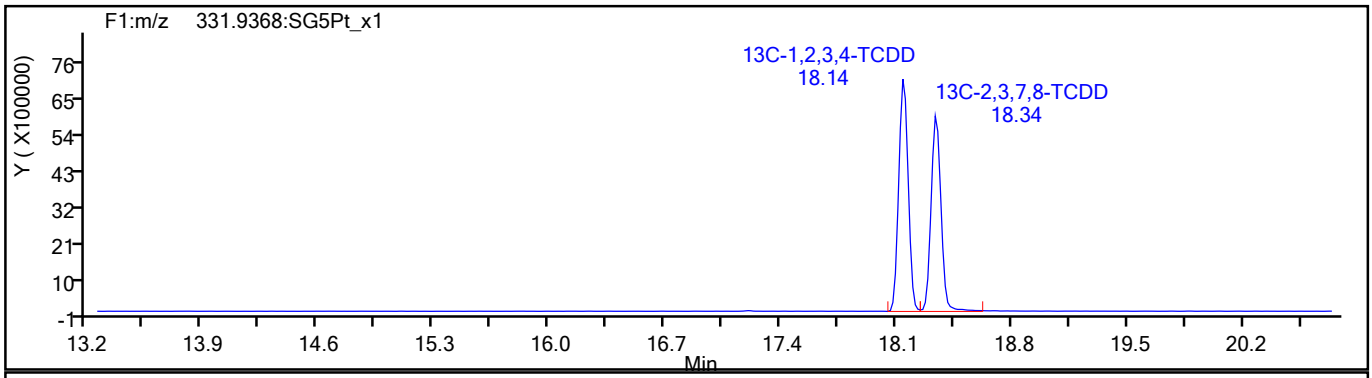

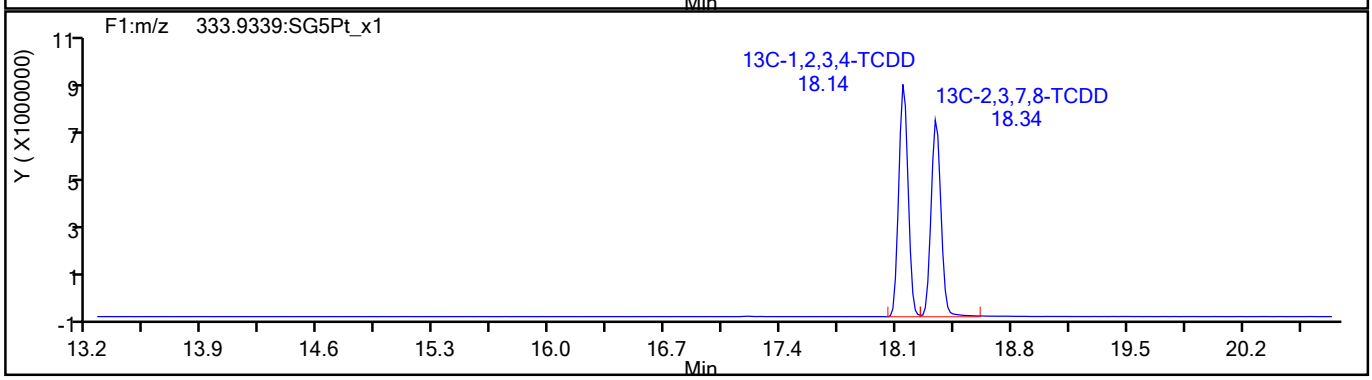

773349

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

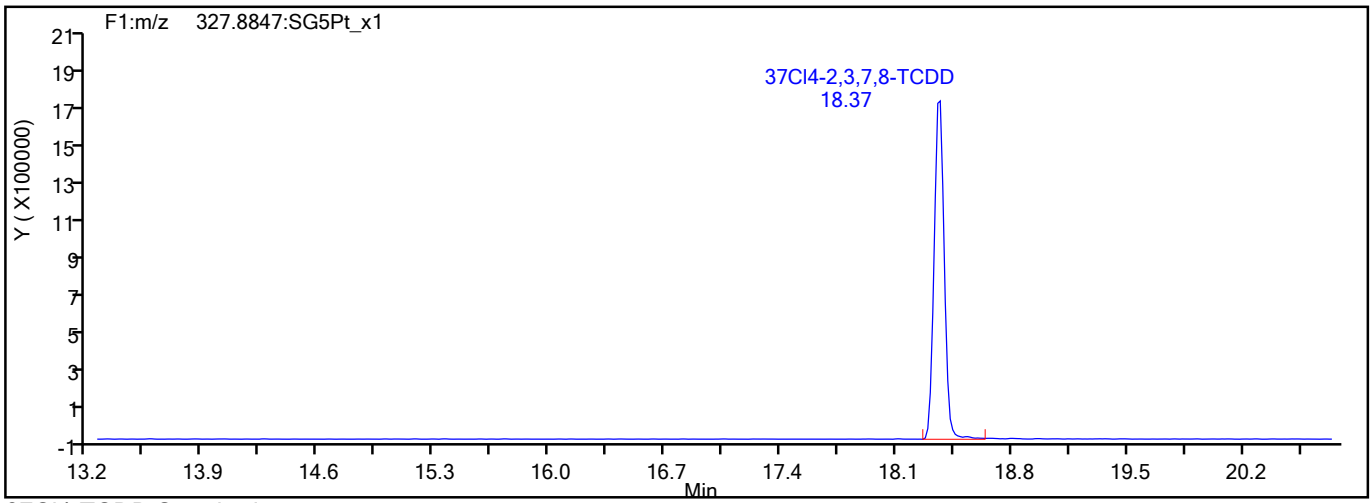

37Cl4-TCDD Standards

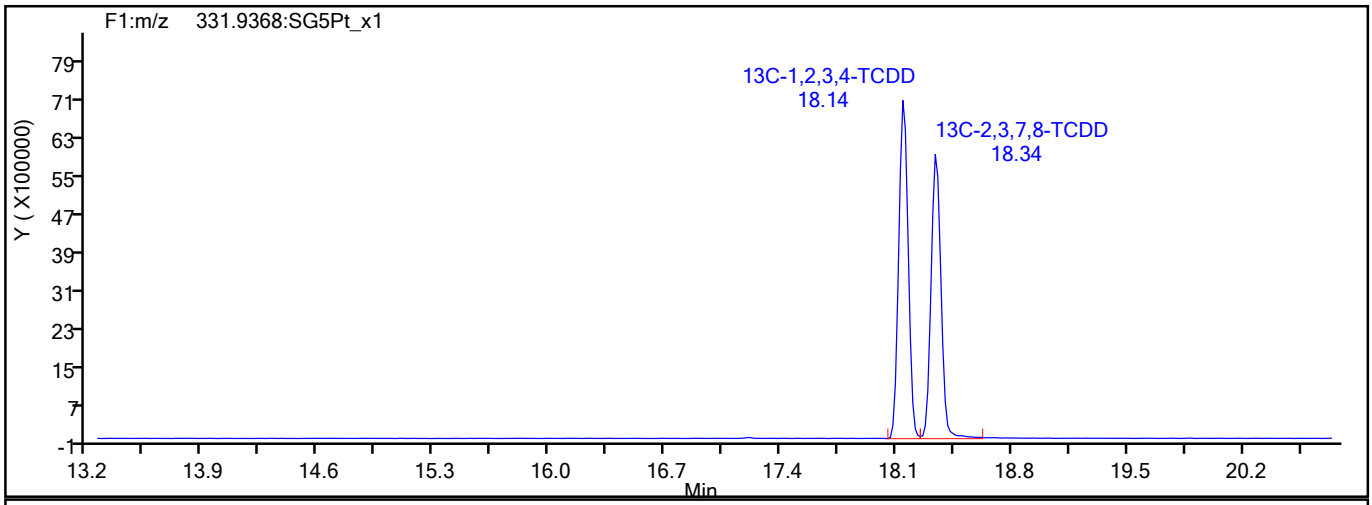

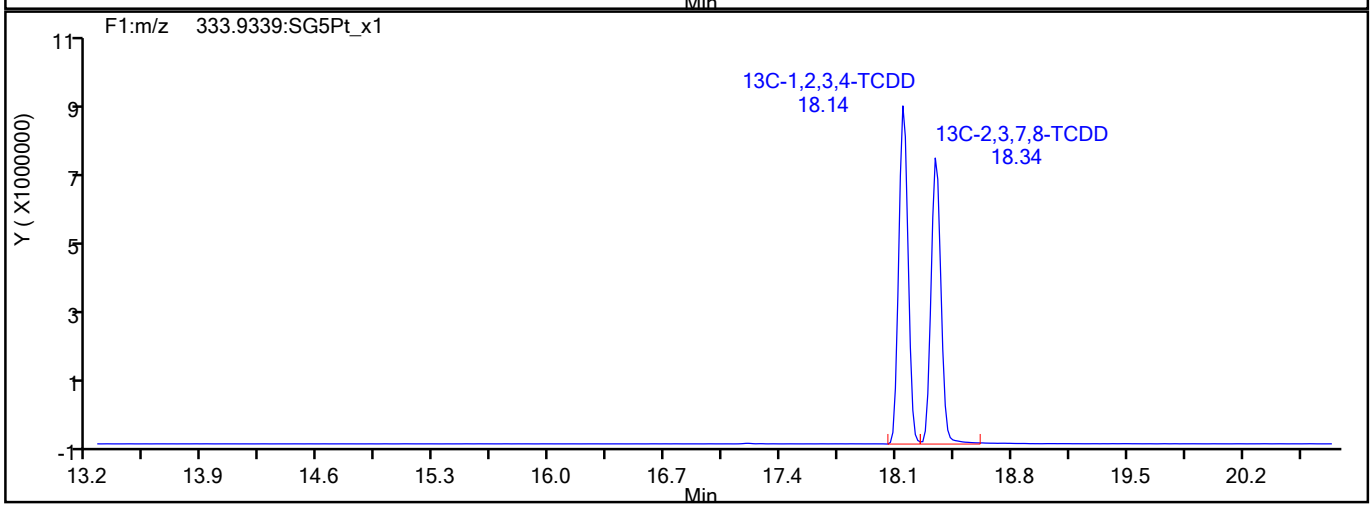

773350

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

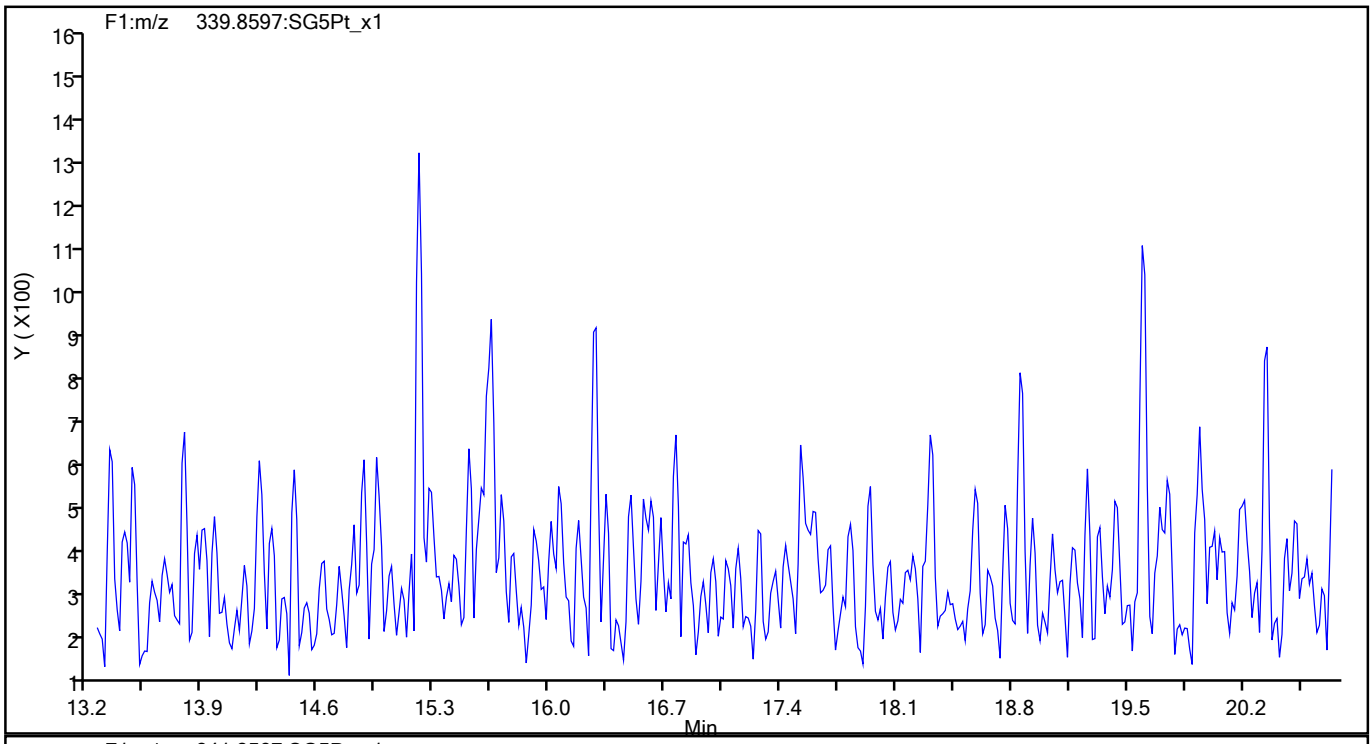

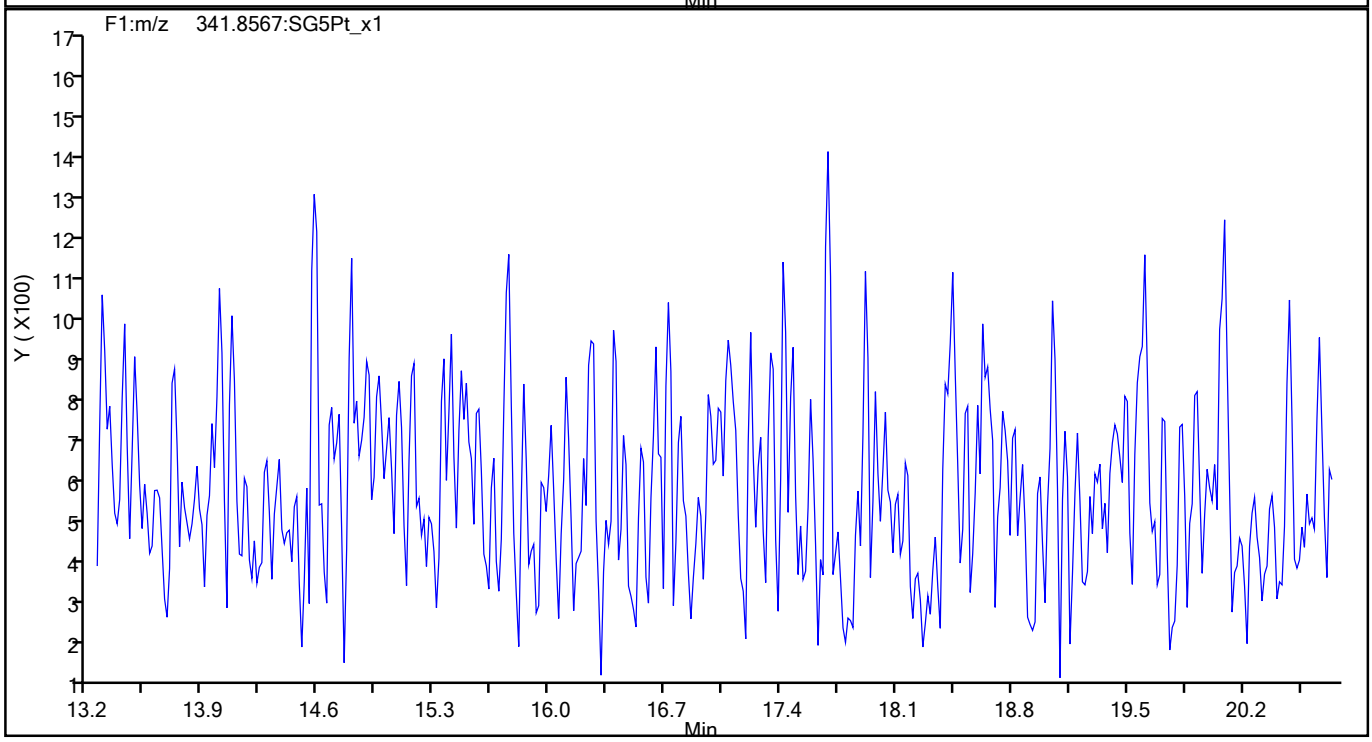

773351

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

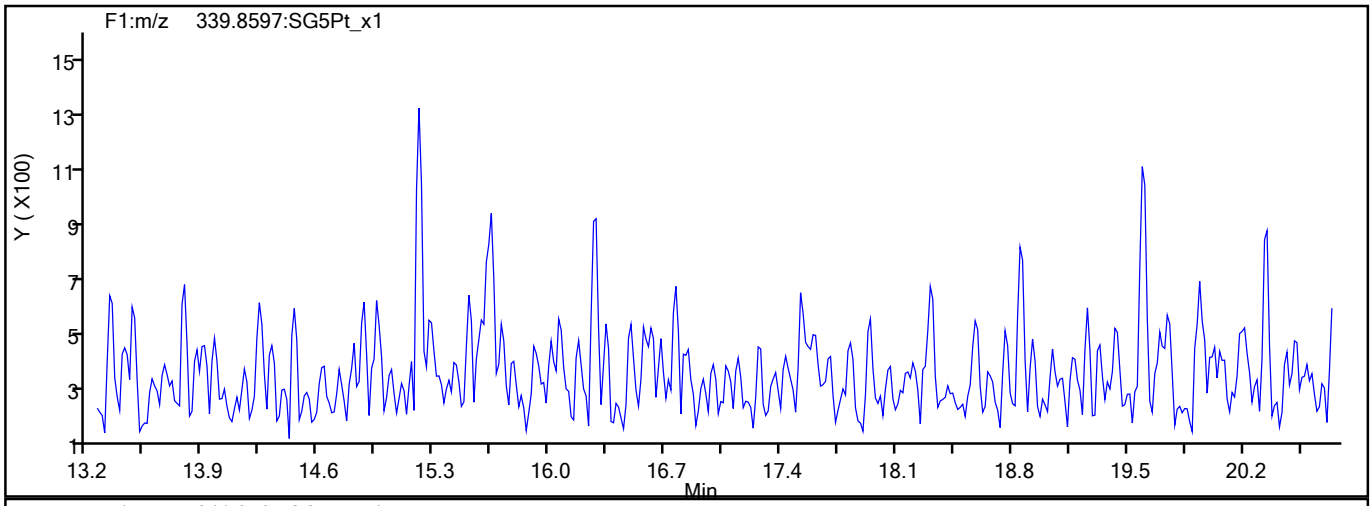

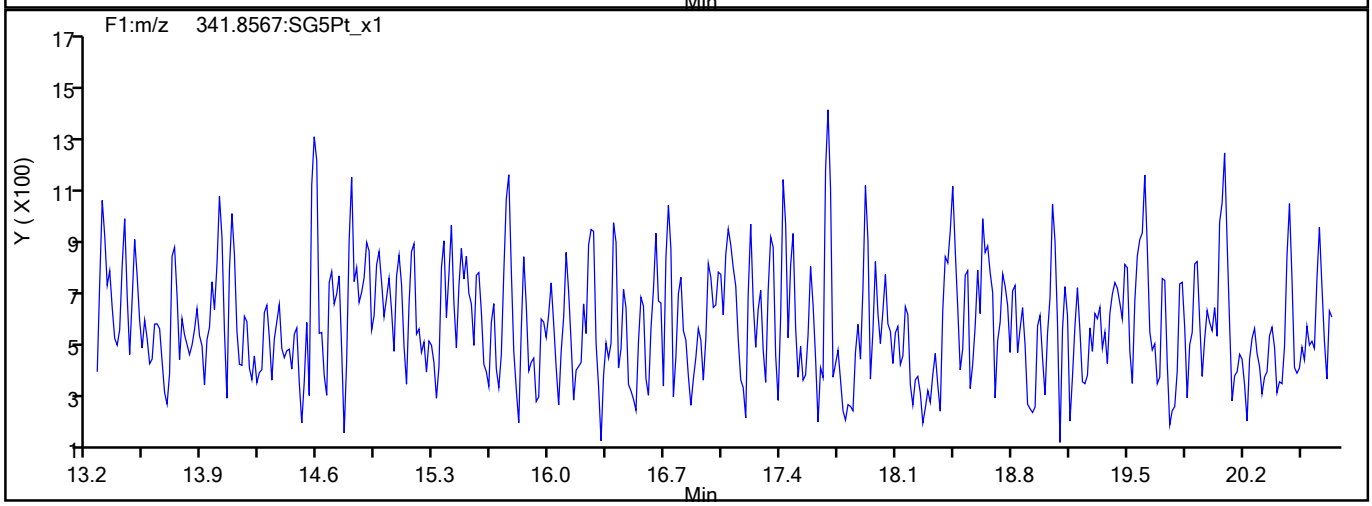

F1 PeCDFs Interference Mass

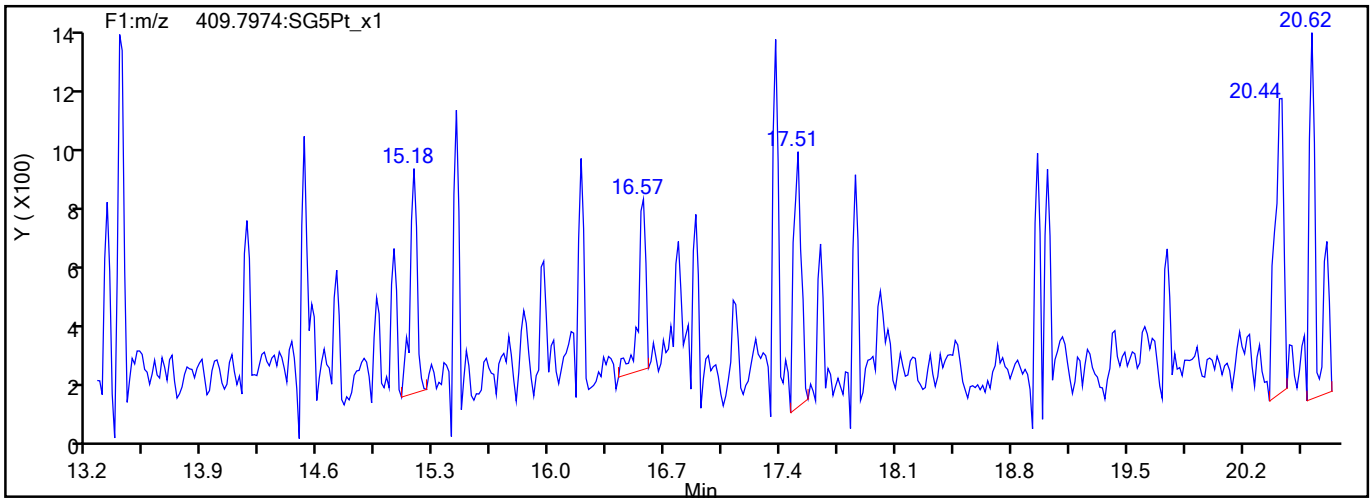

773352

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

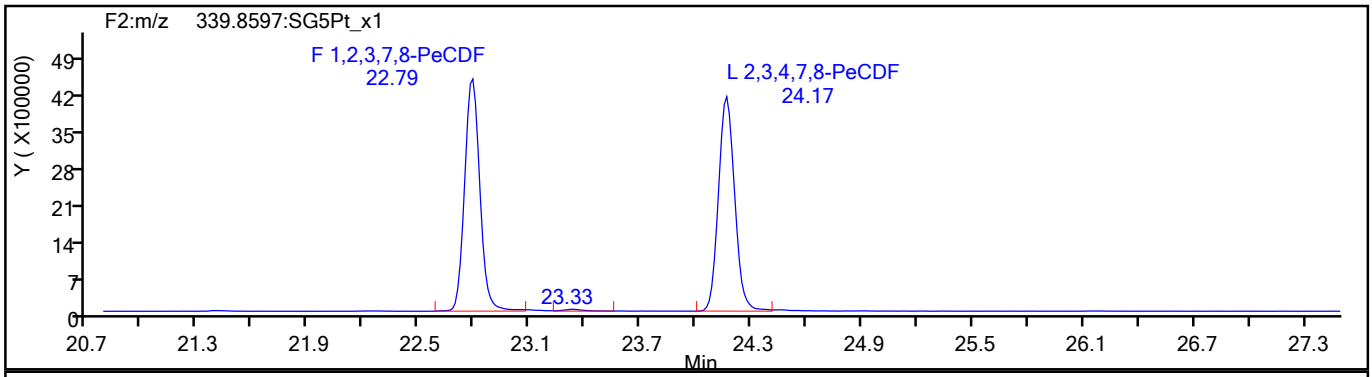

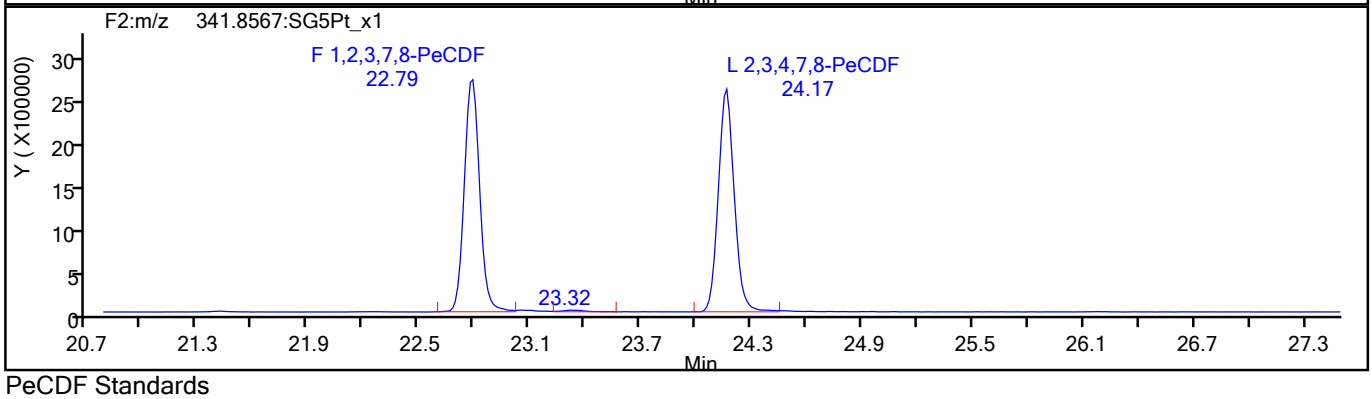

PeCDF Standards

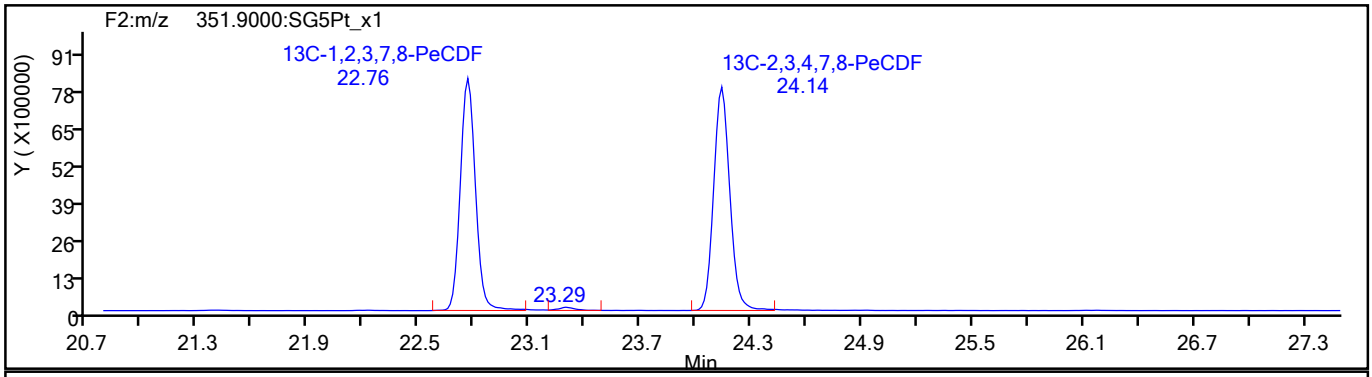

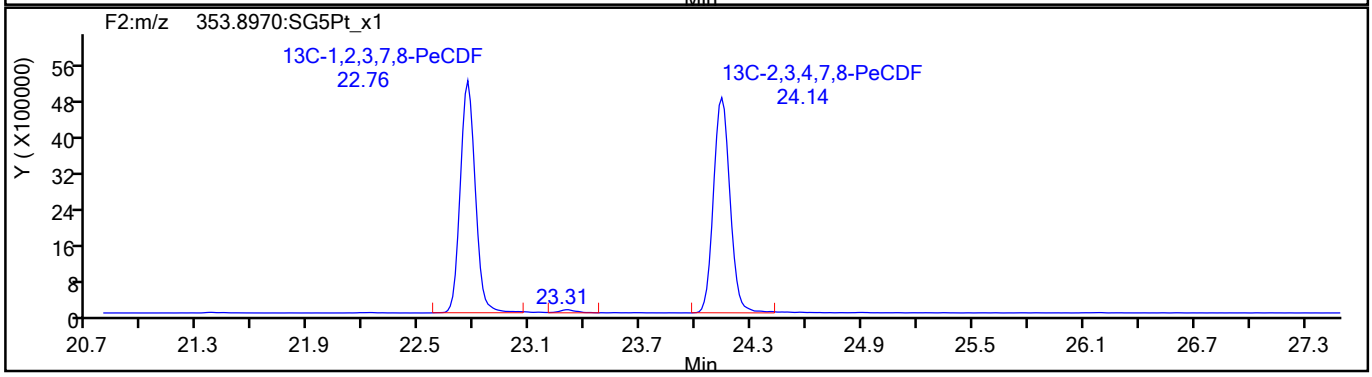

773353

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

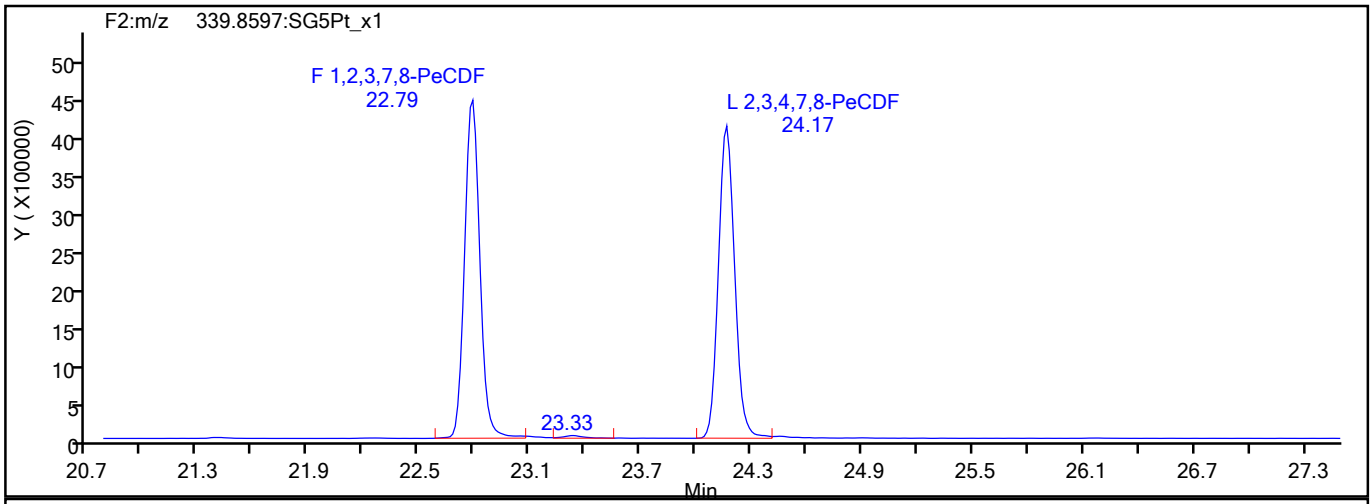

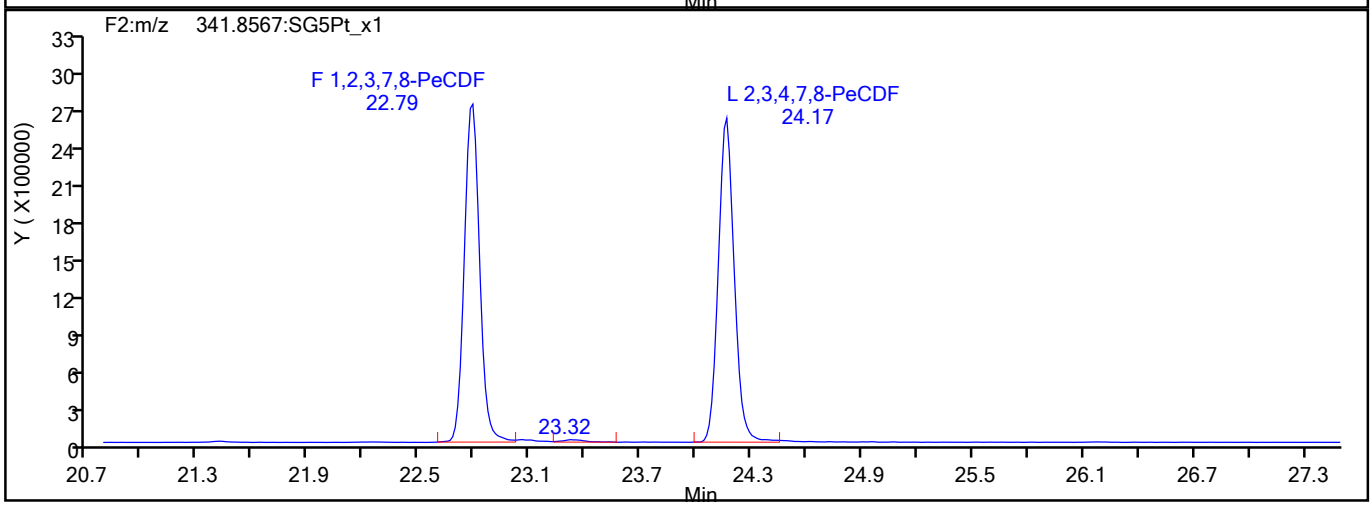

PeCDF Interference Mass

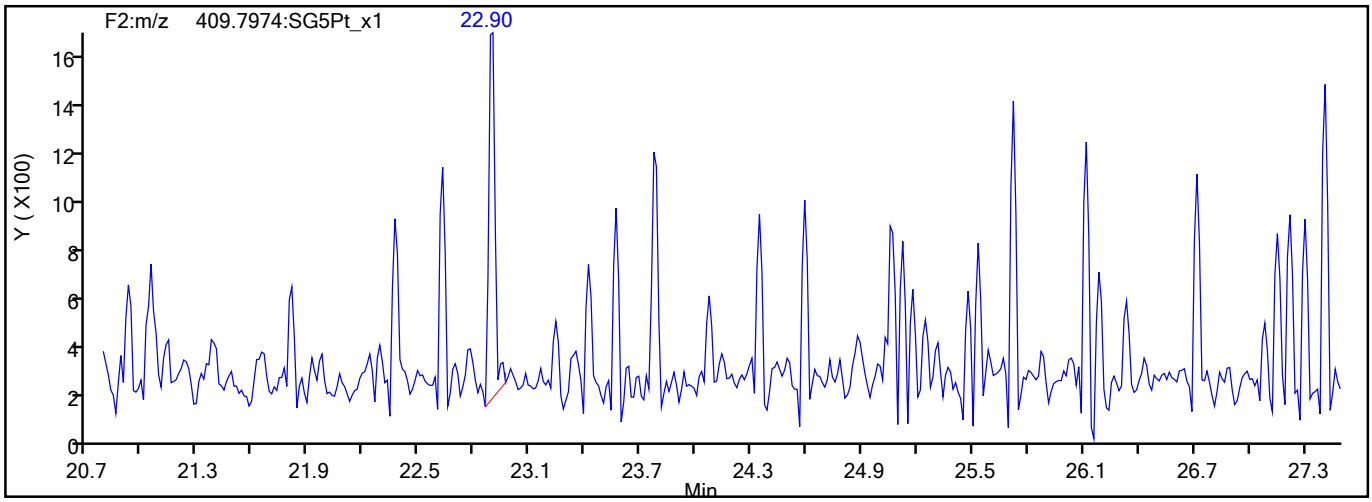

773354

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

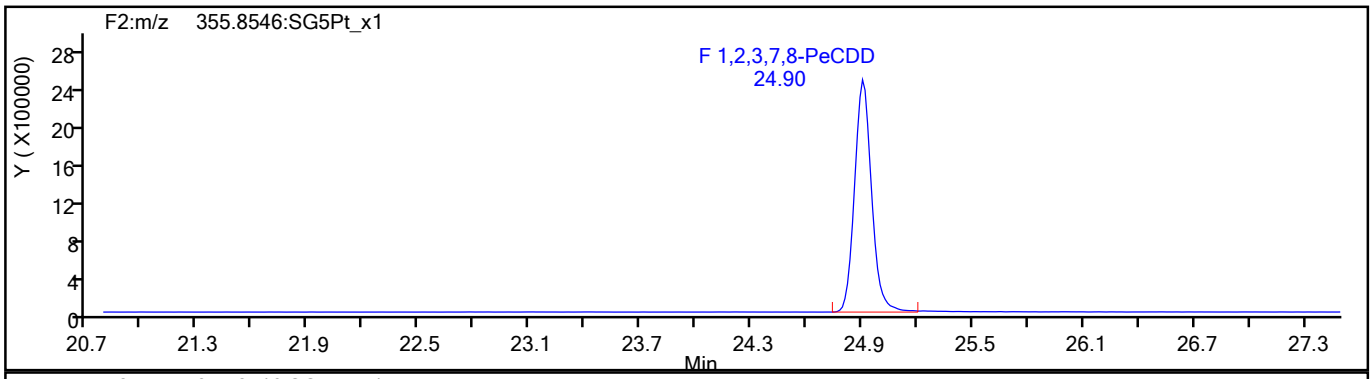

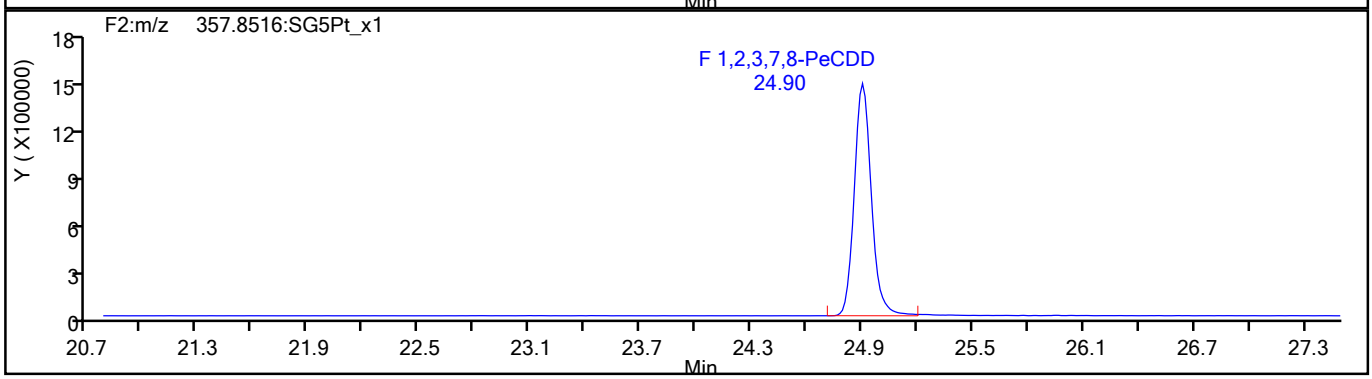

PeCDD Standards

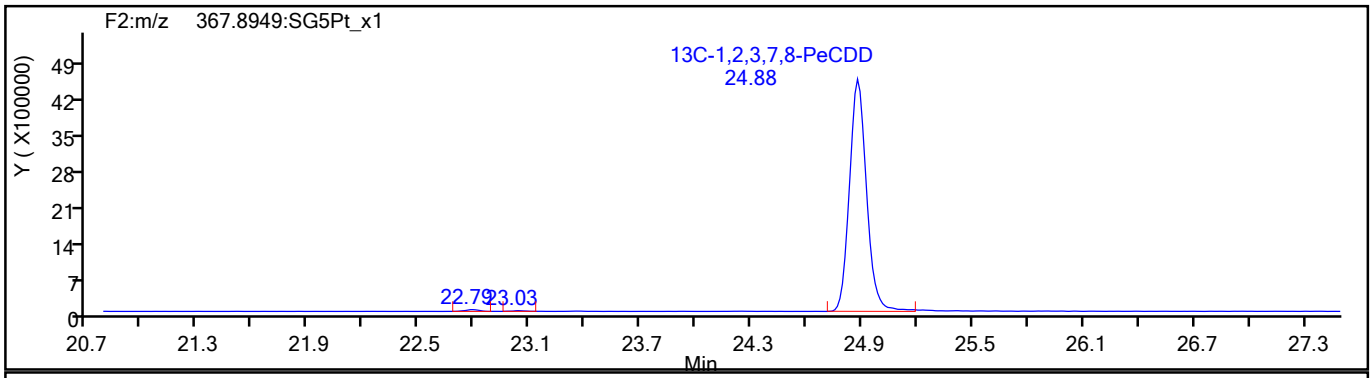

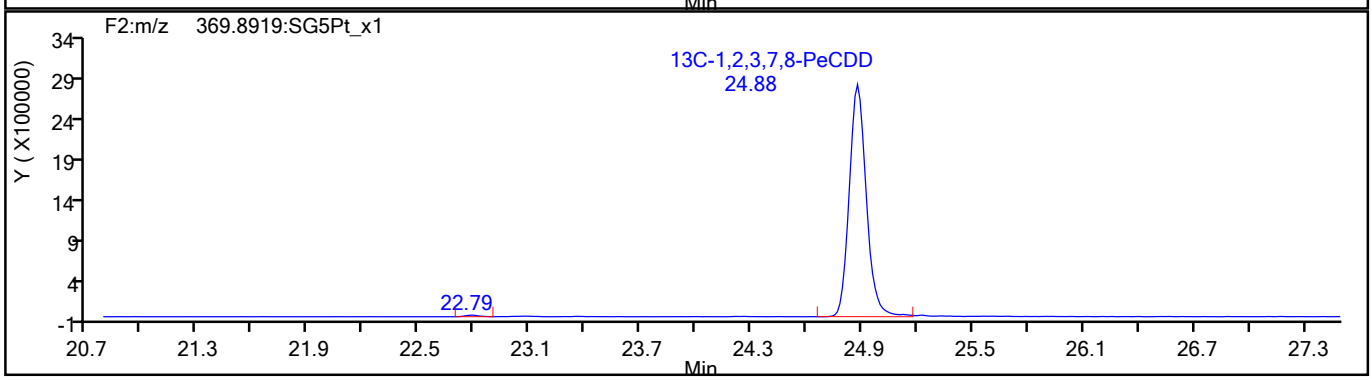

773355

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

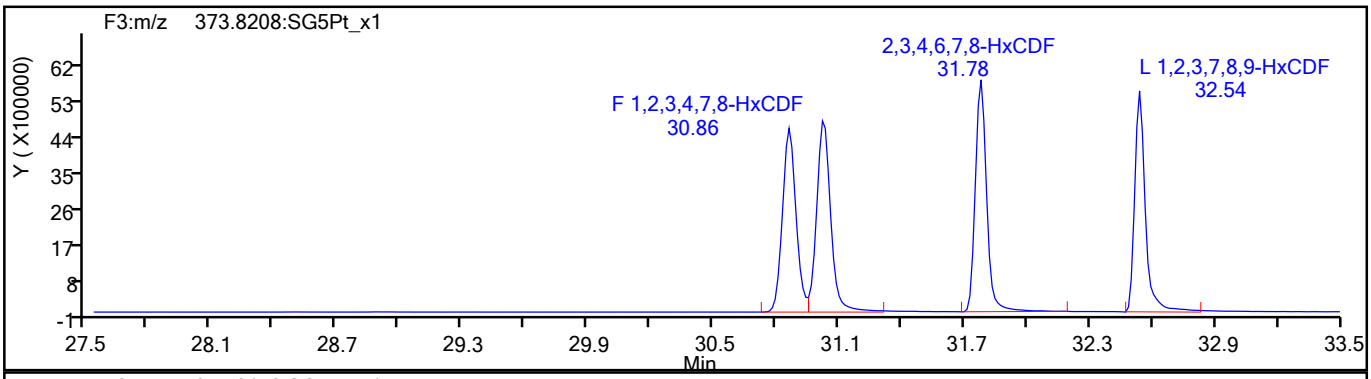

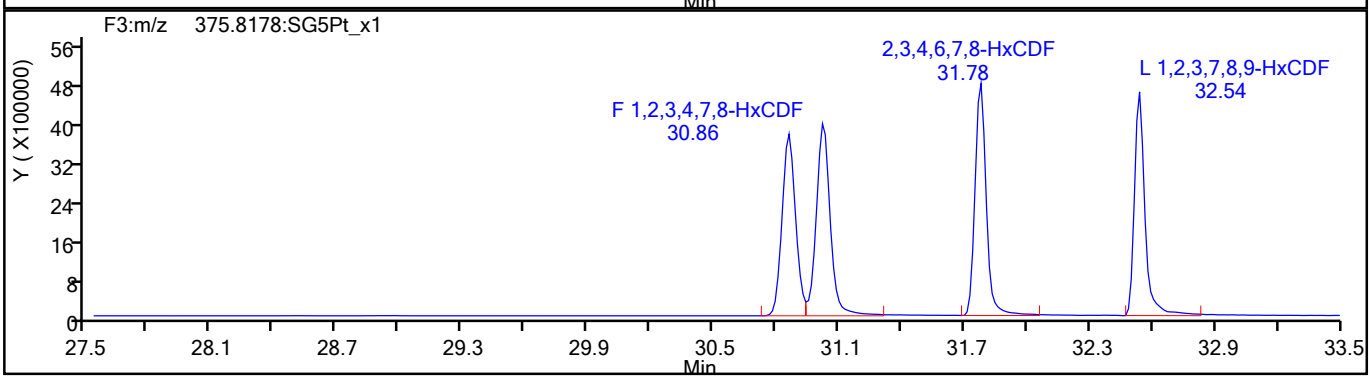

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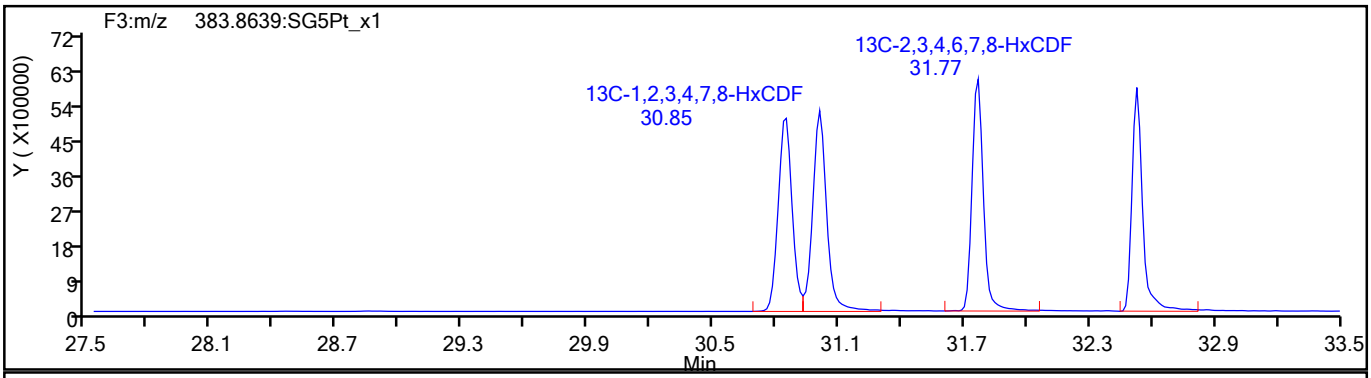

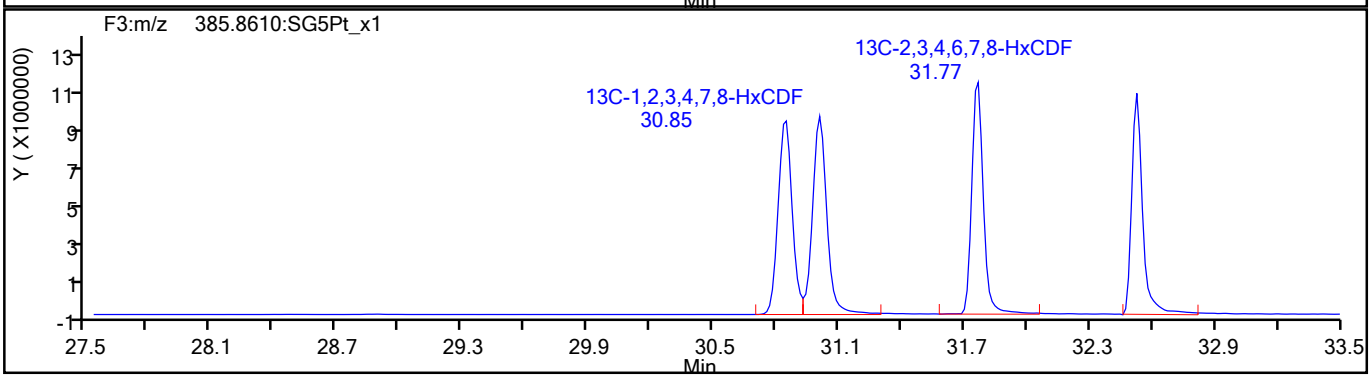

773356

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

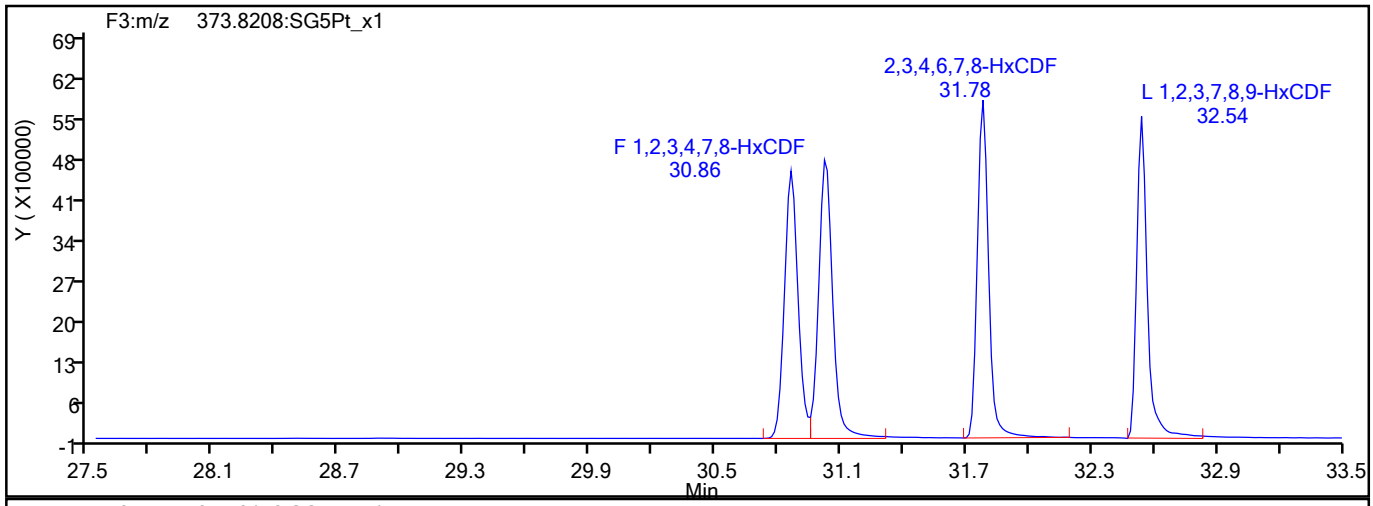

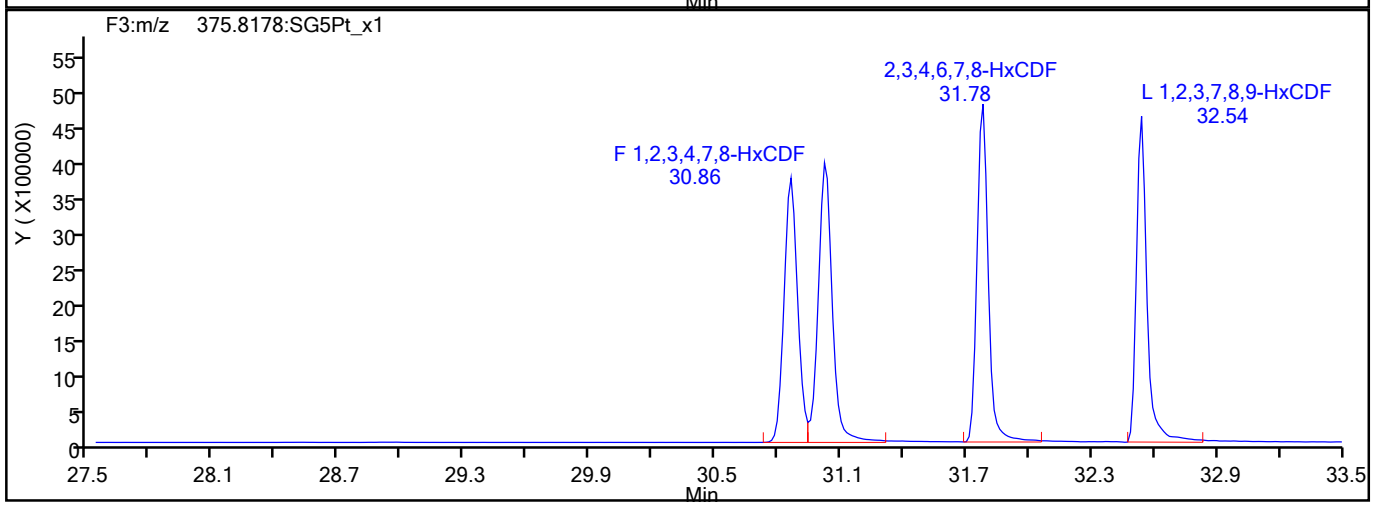

HxCDF Interference Mass

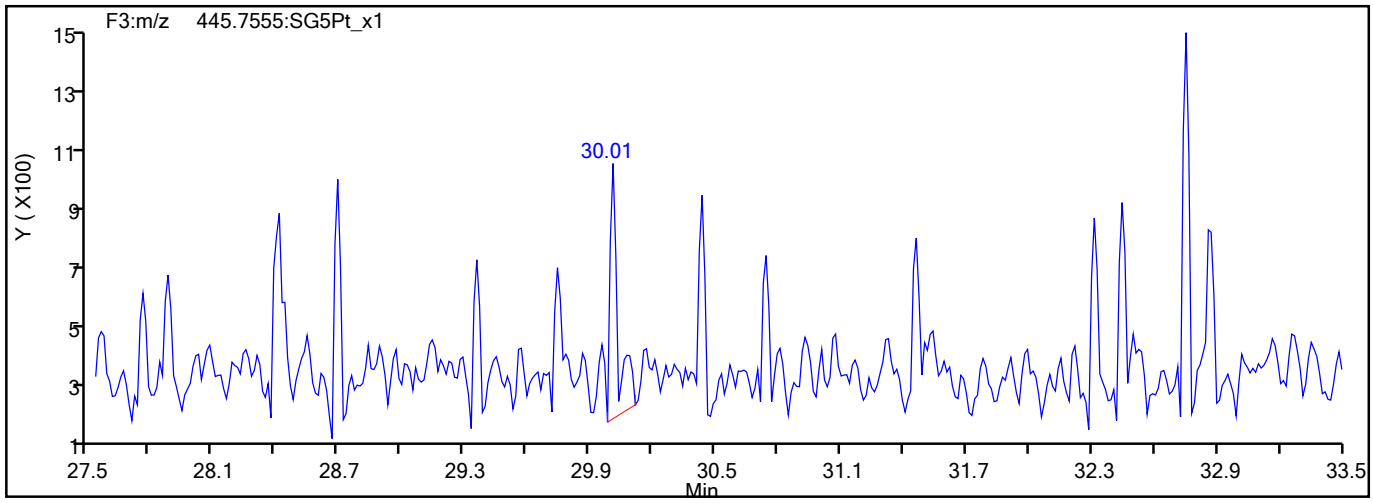

773357

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

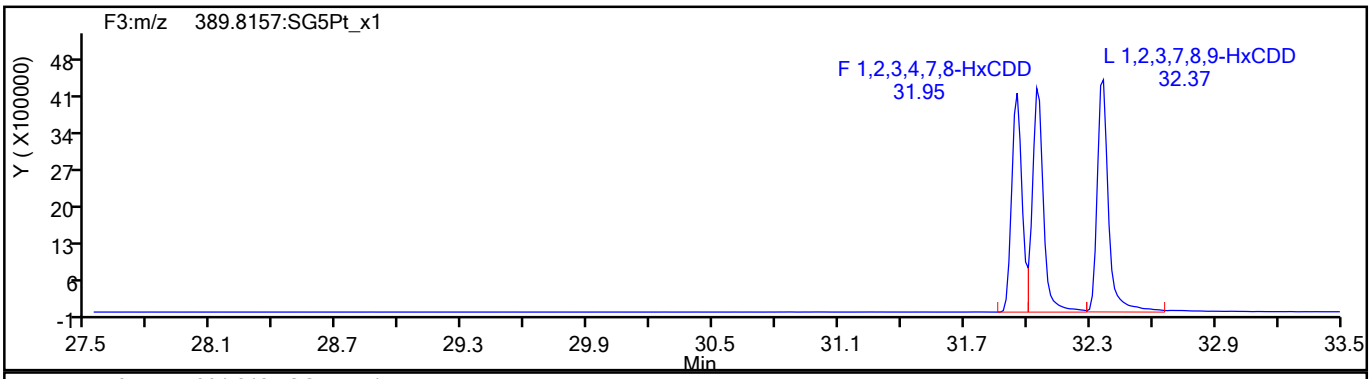

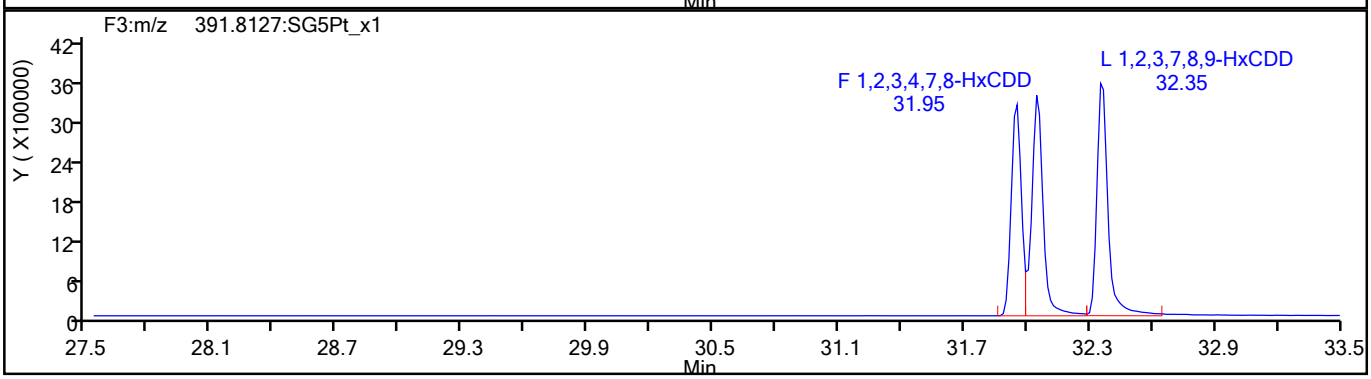

HxCDD Standards

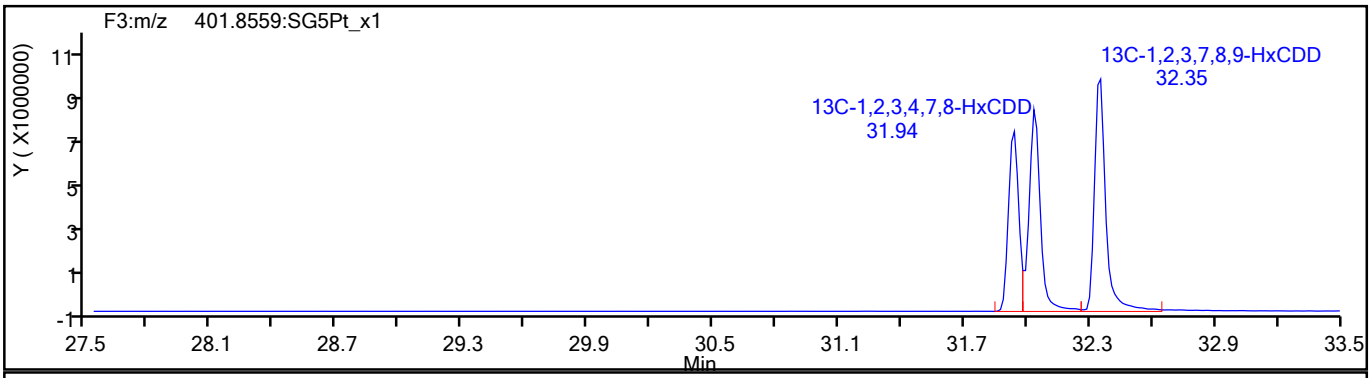

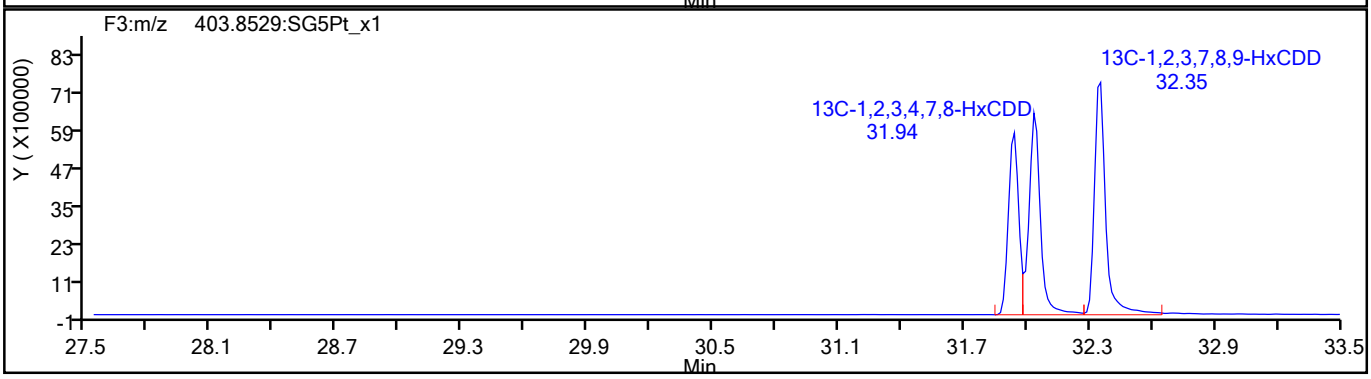

773358

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

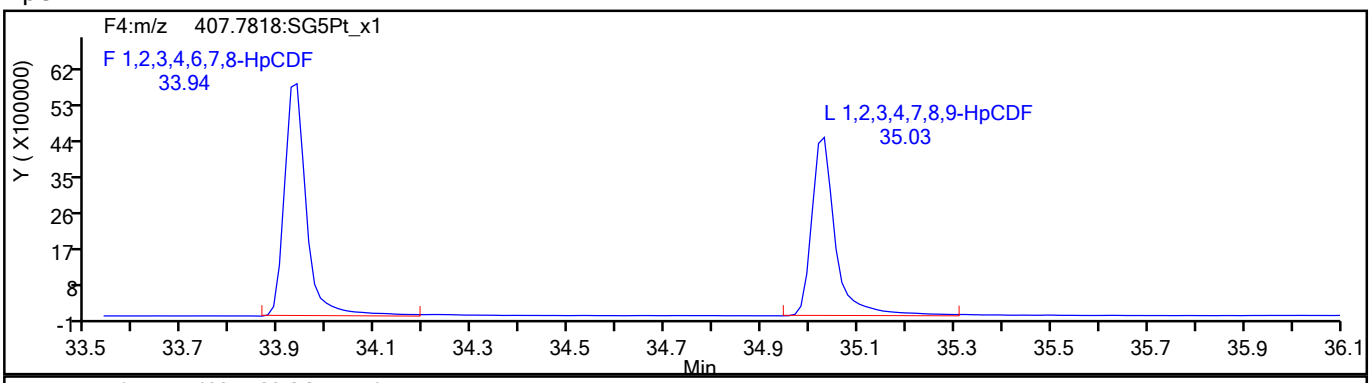

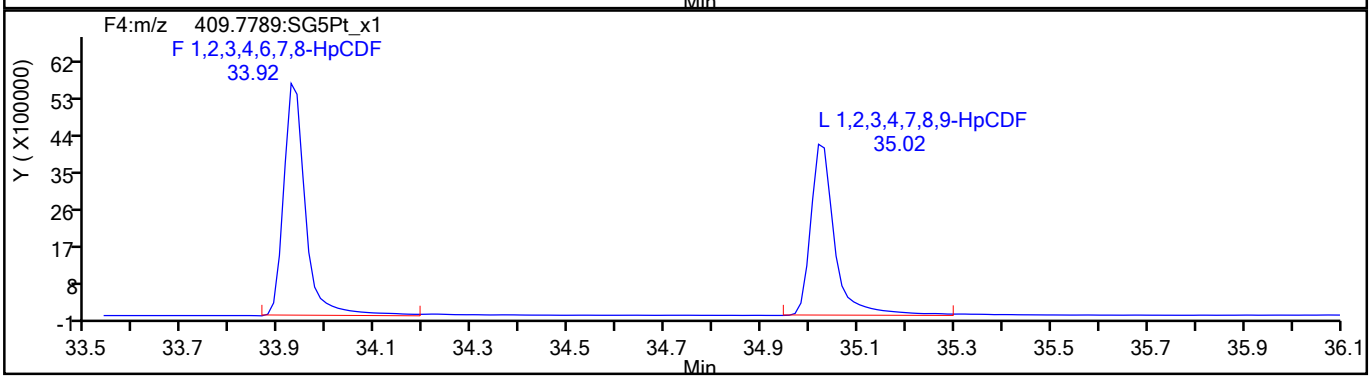

HpCDF Standards

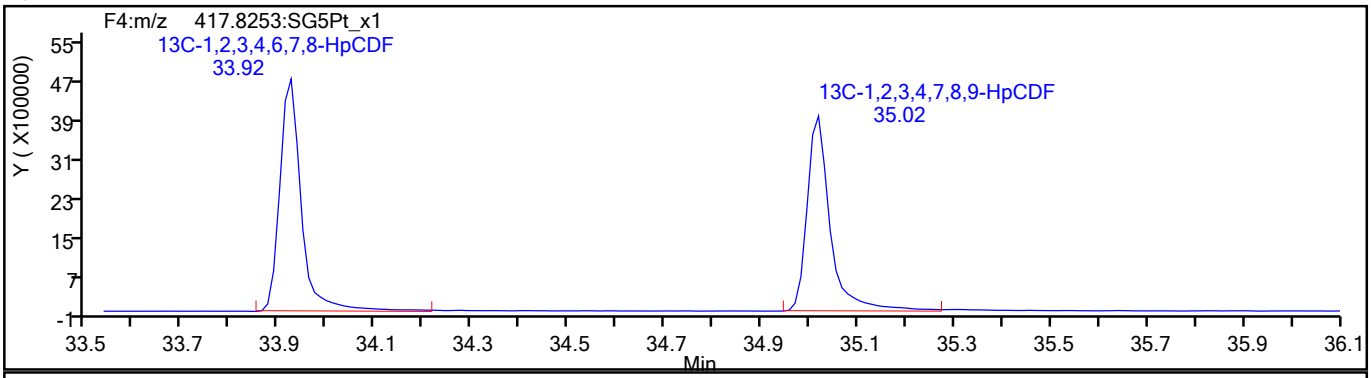

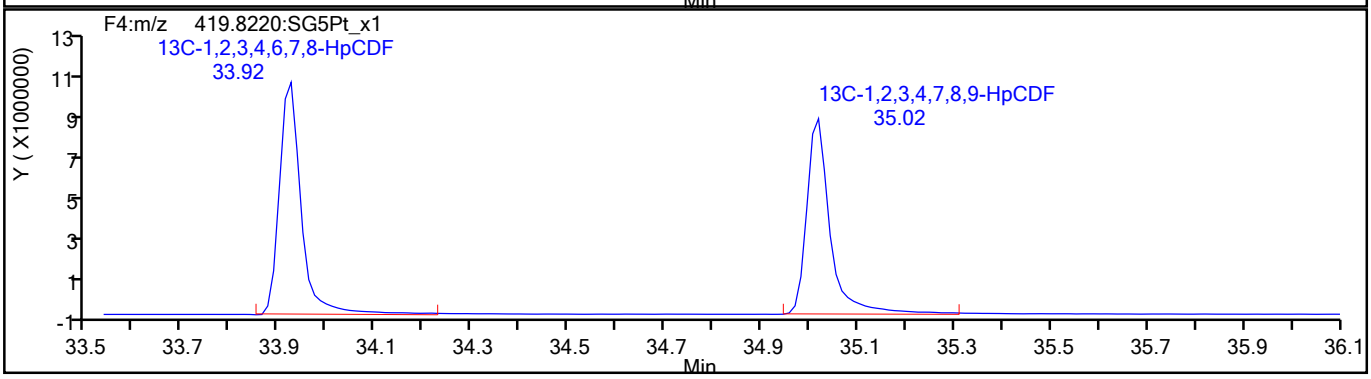

773359

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

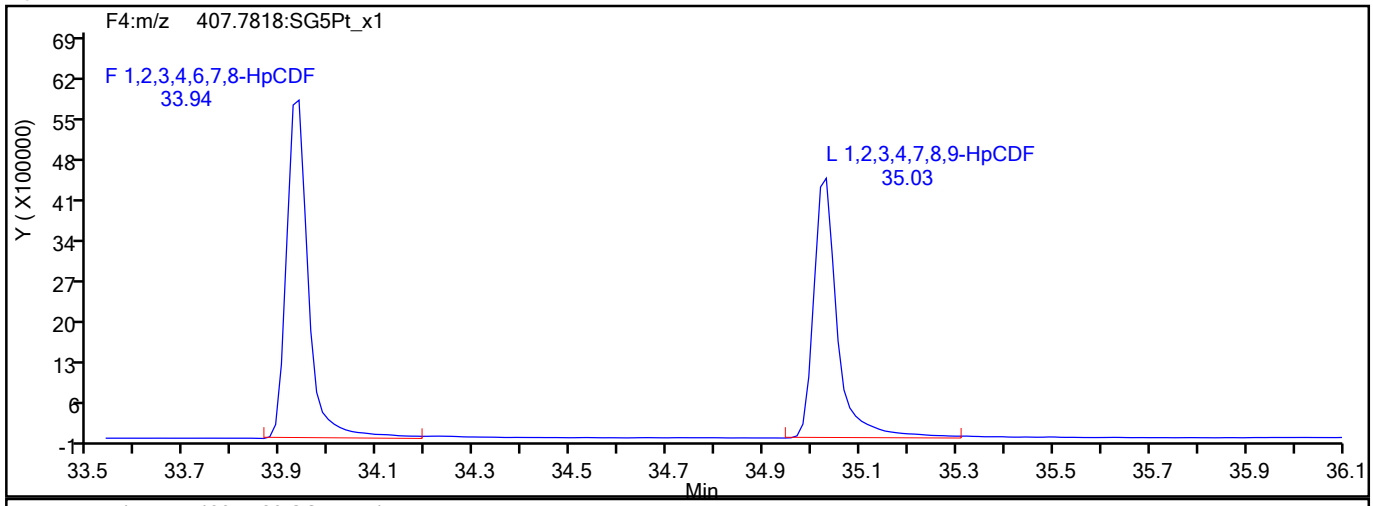

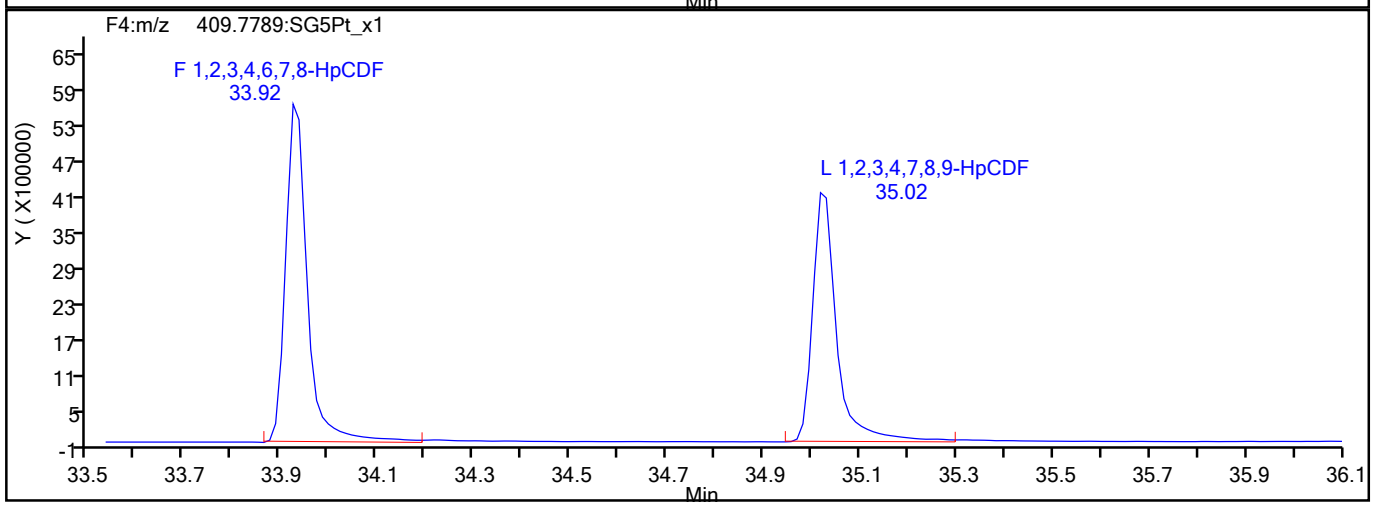

HpCDF Interference Mass

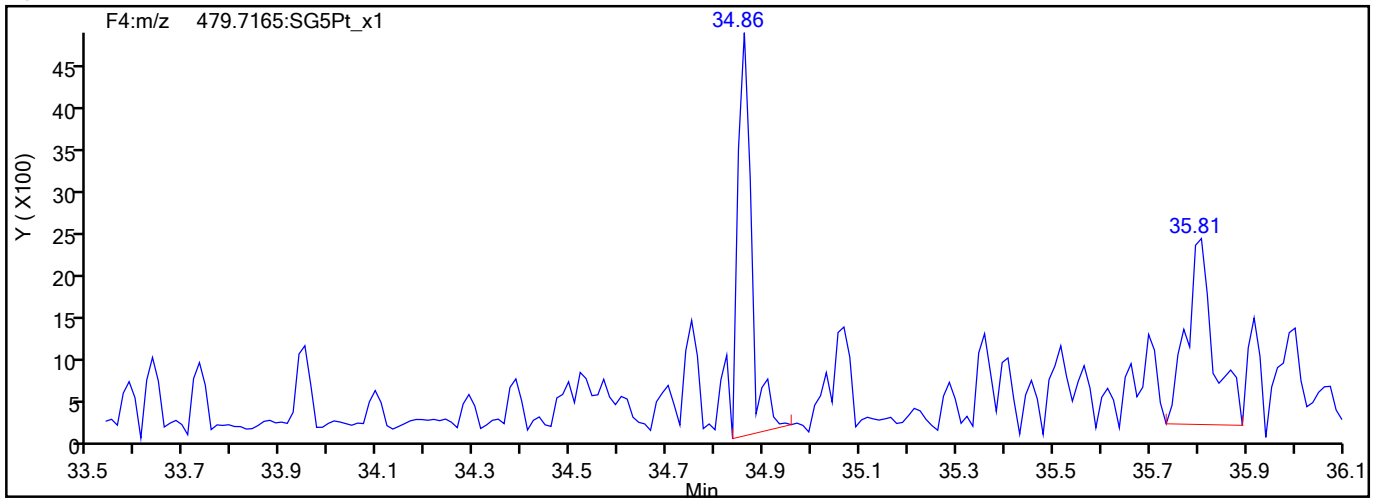

773360

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

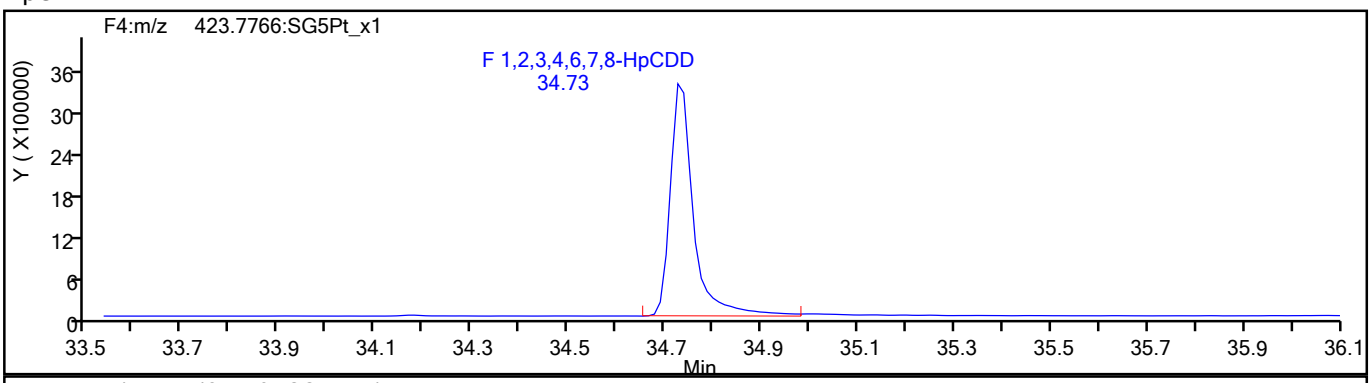

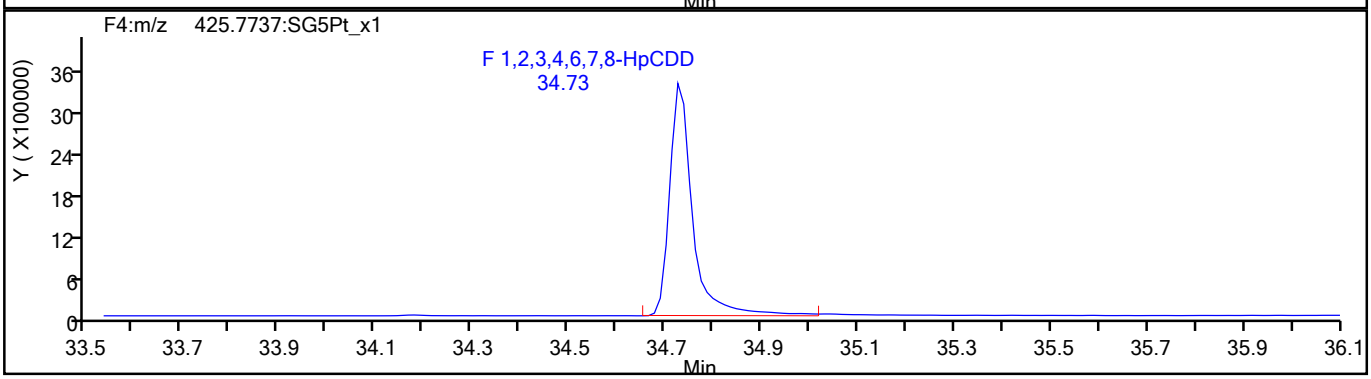

HpCDD Standards

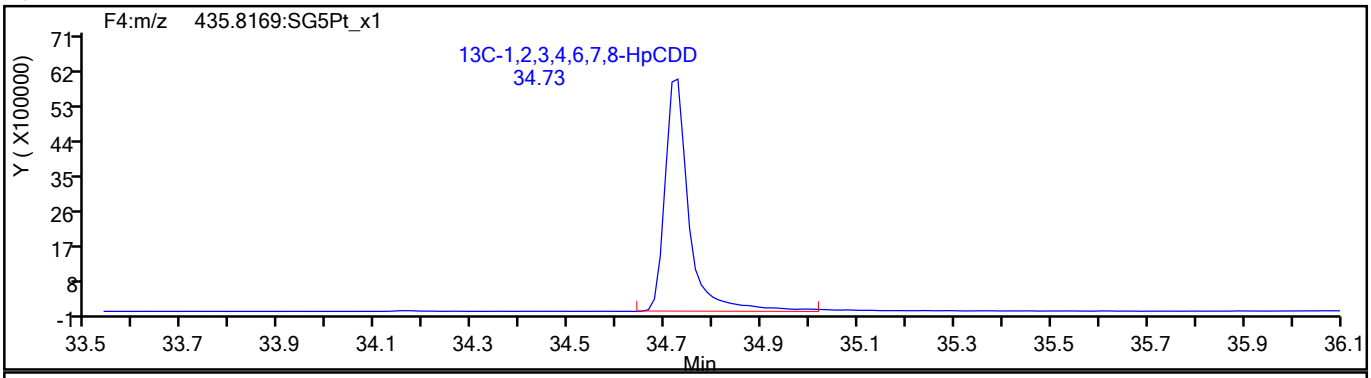

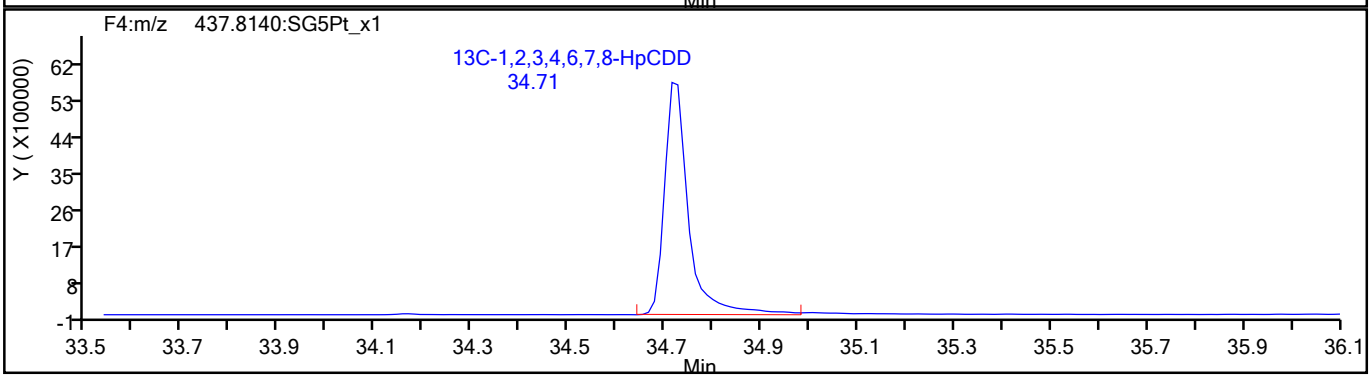

773361

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

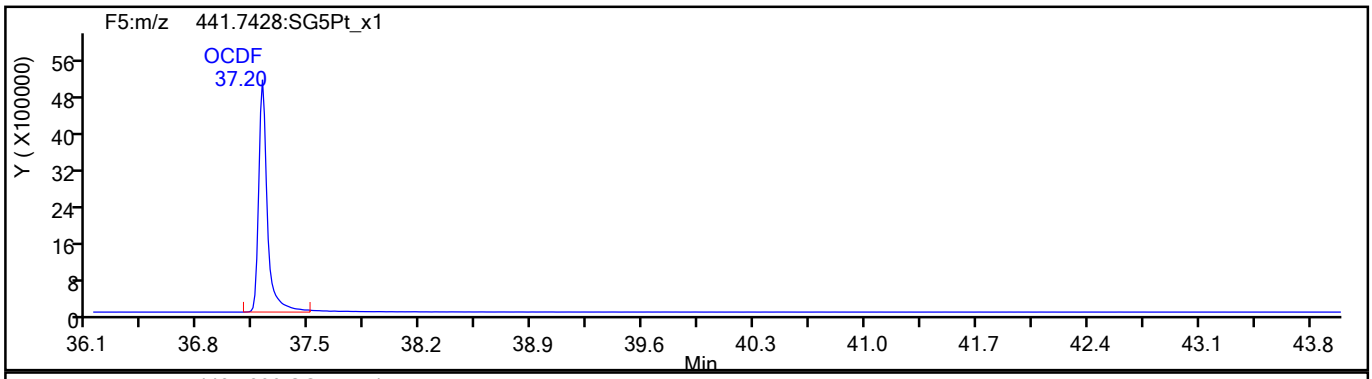

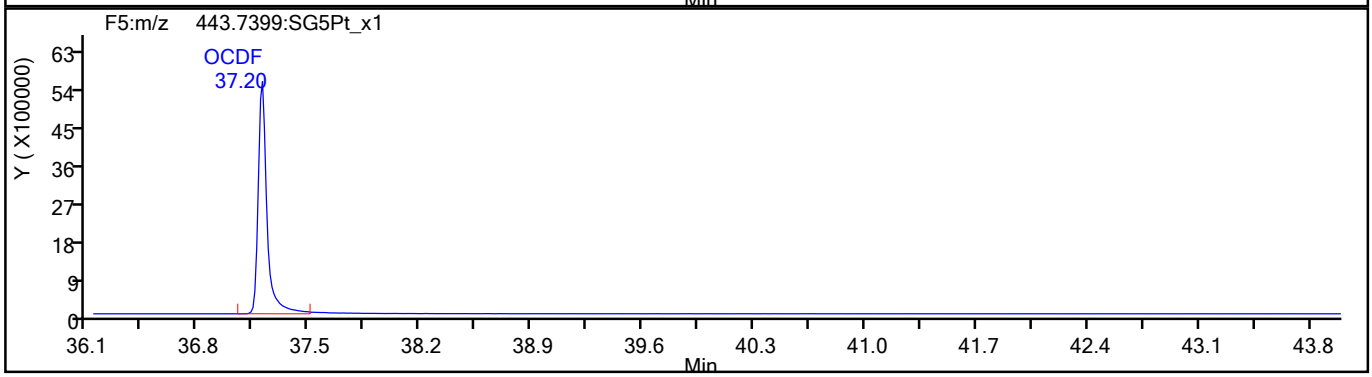

OCDF Standards

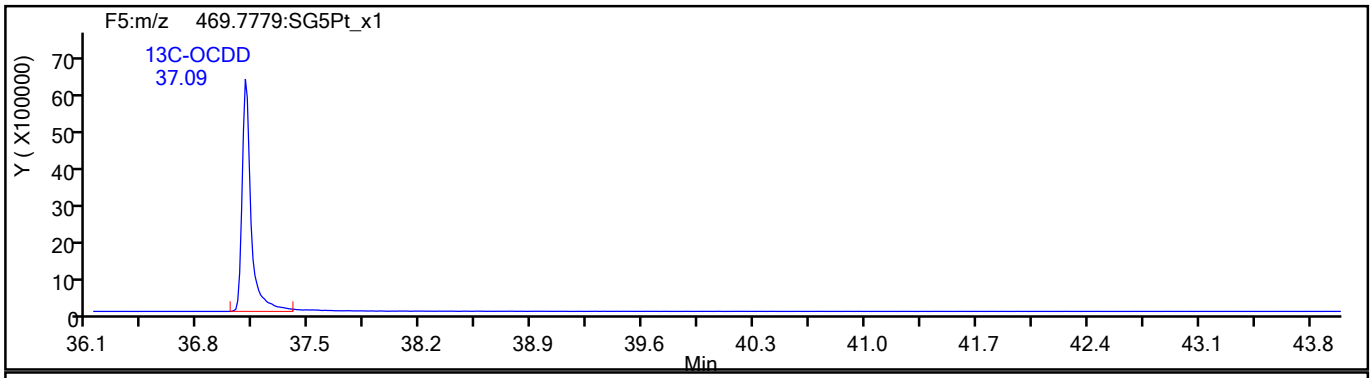

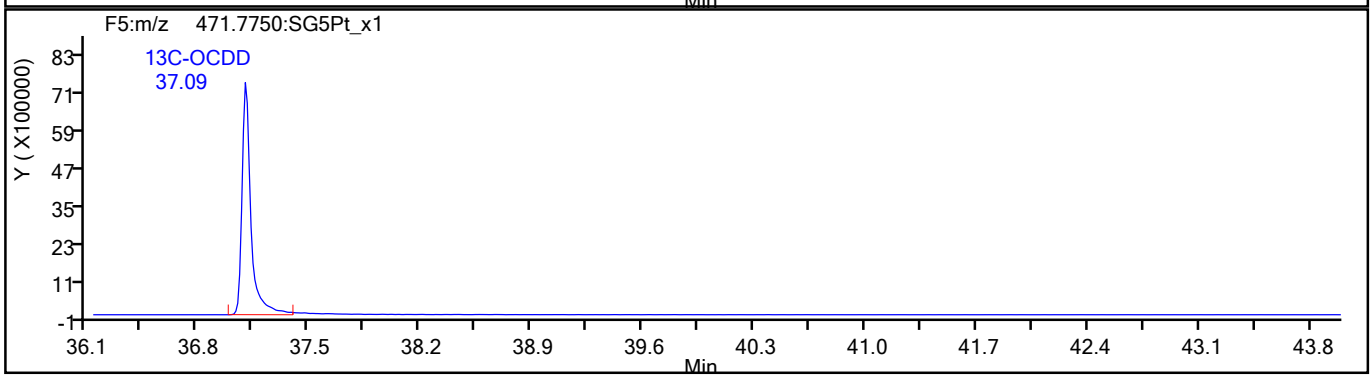

773362

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

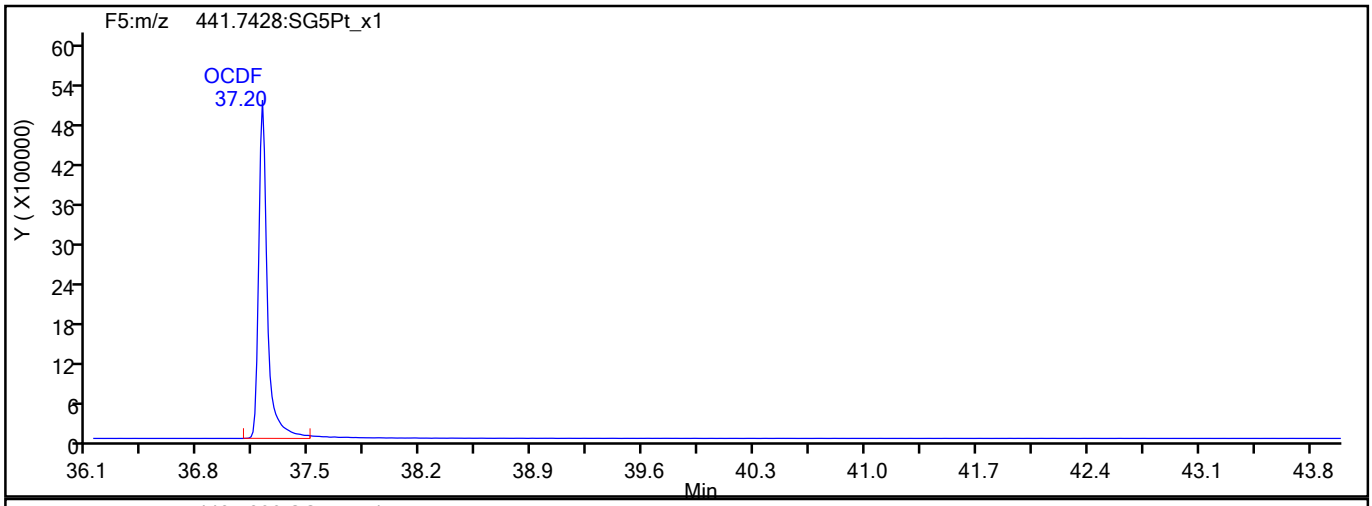

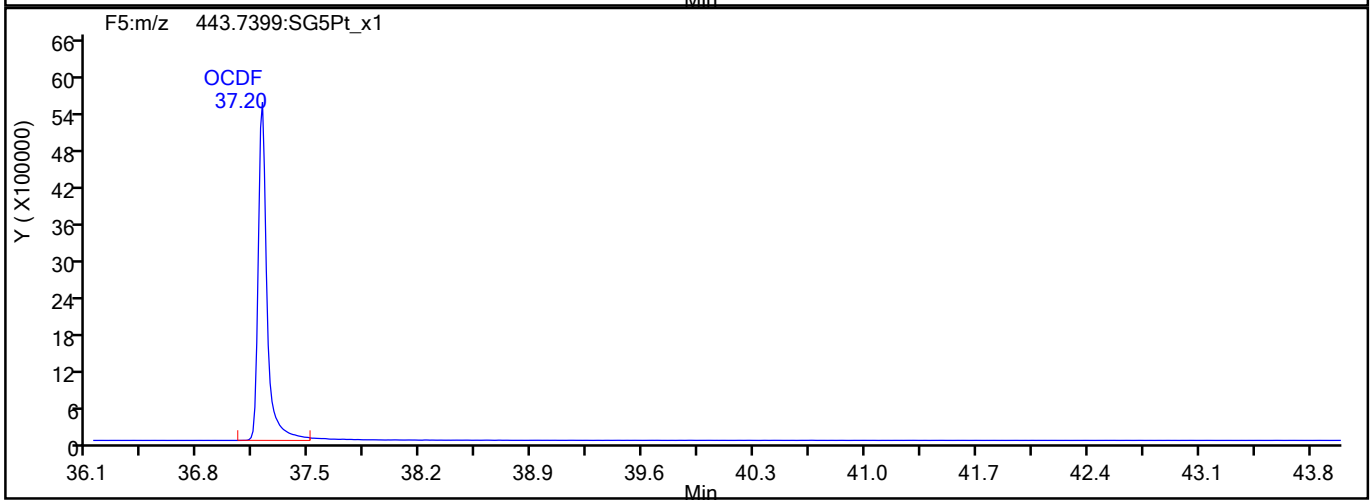

OCDF Interference Mass

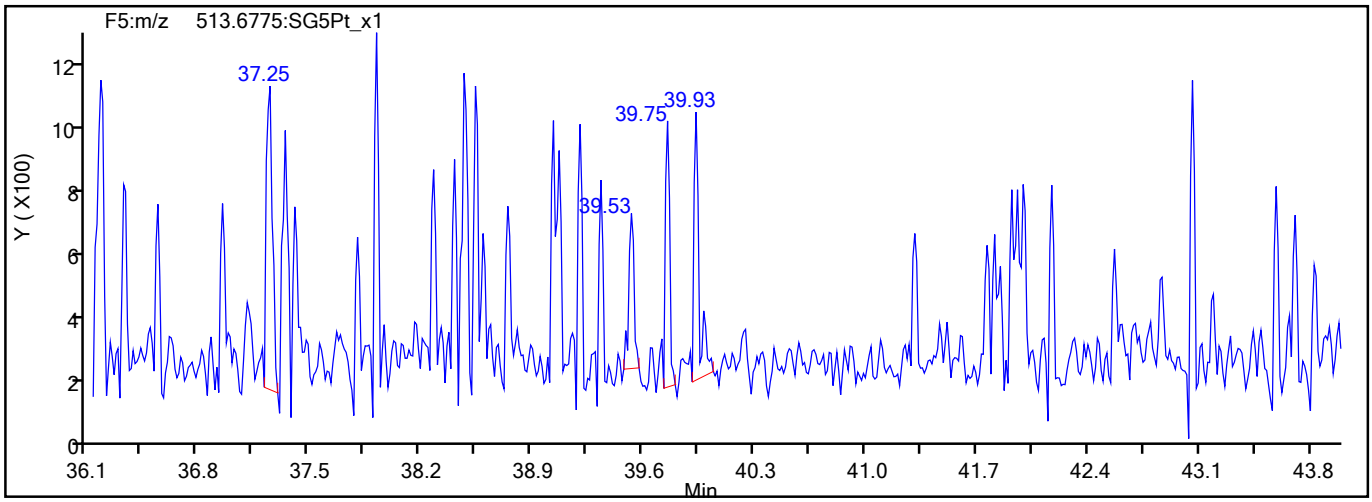

773363

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

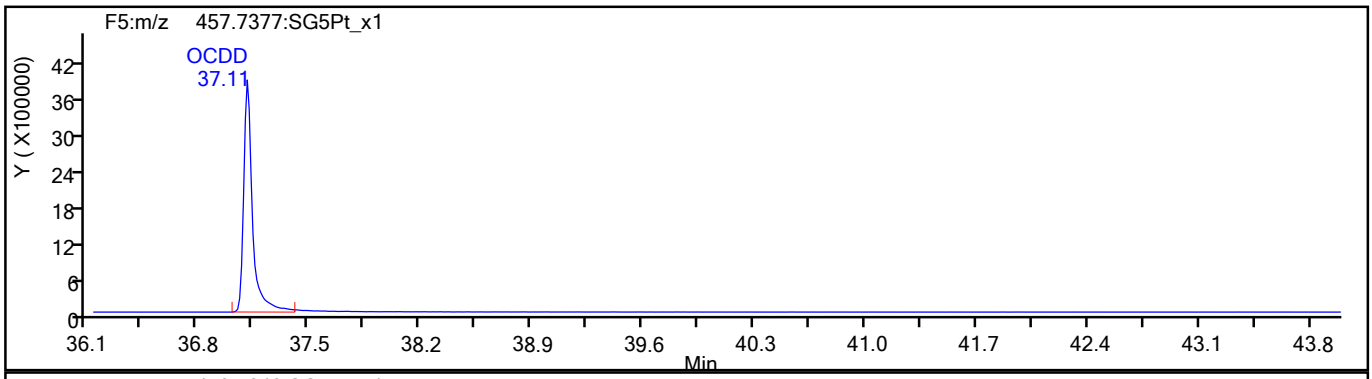

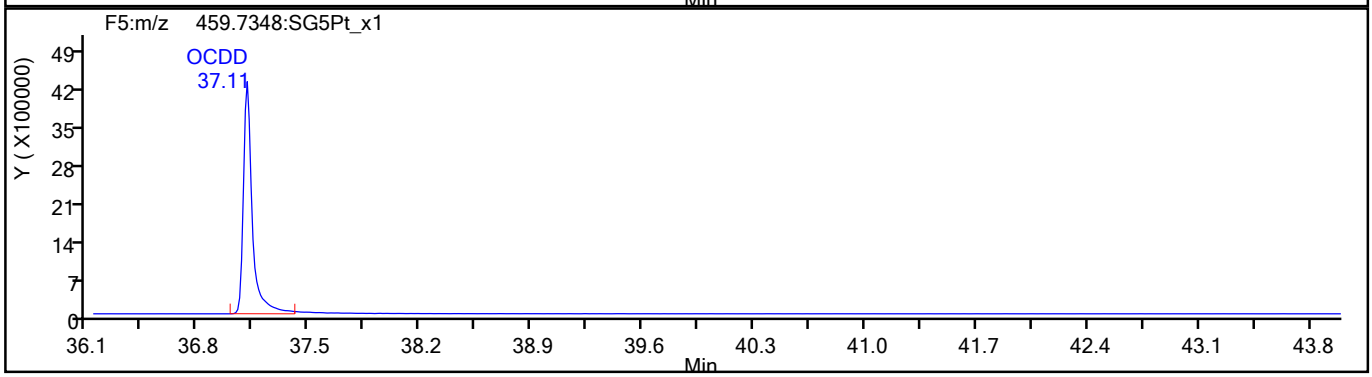

OCDD Standards

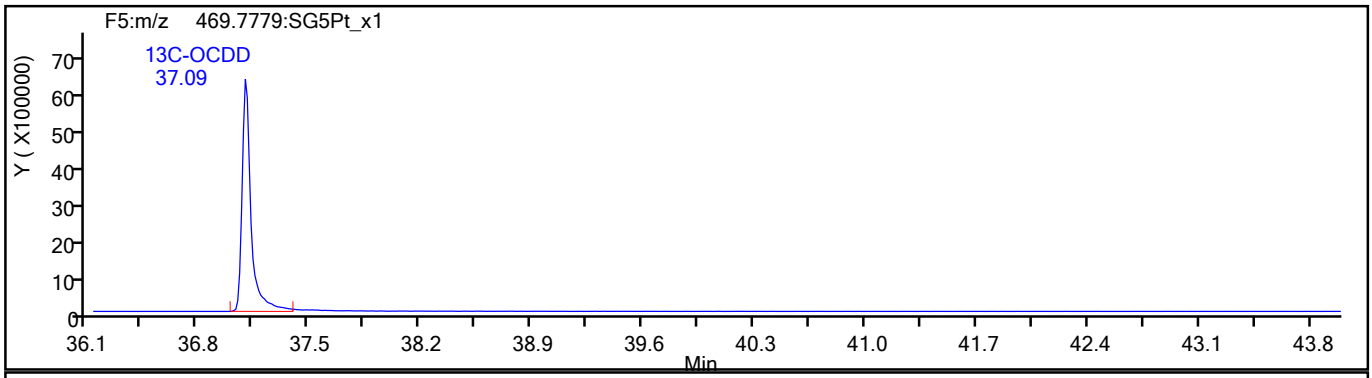

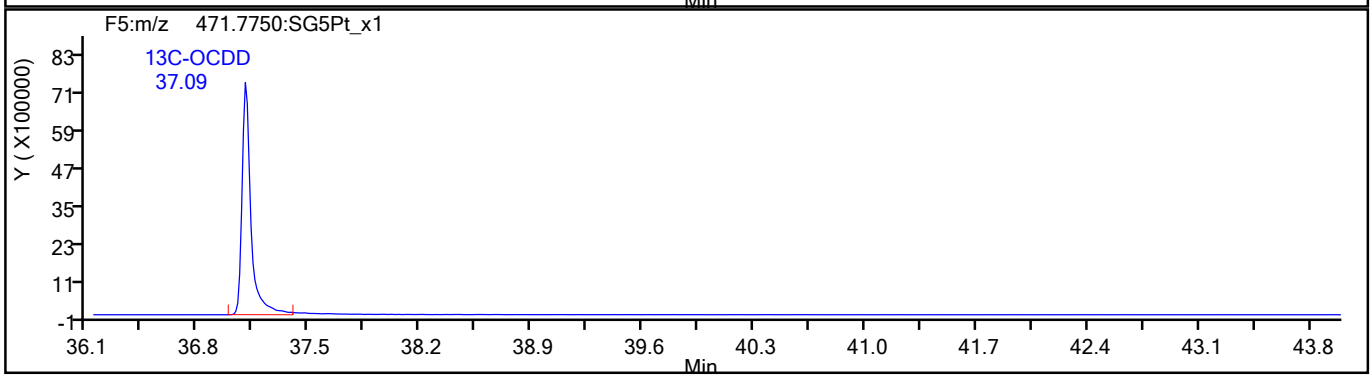

773364

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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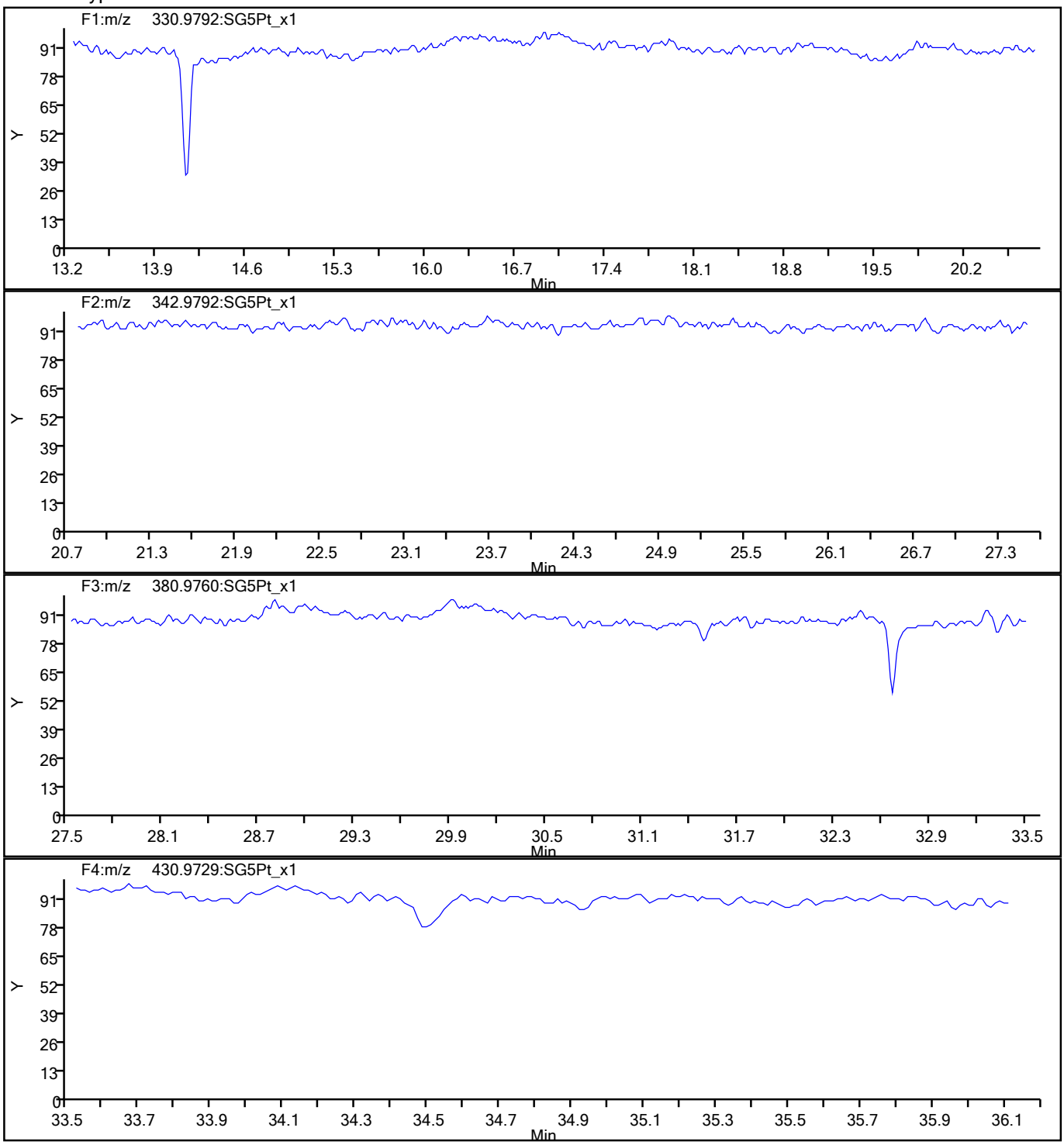

773365

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

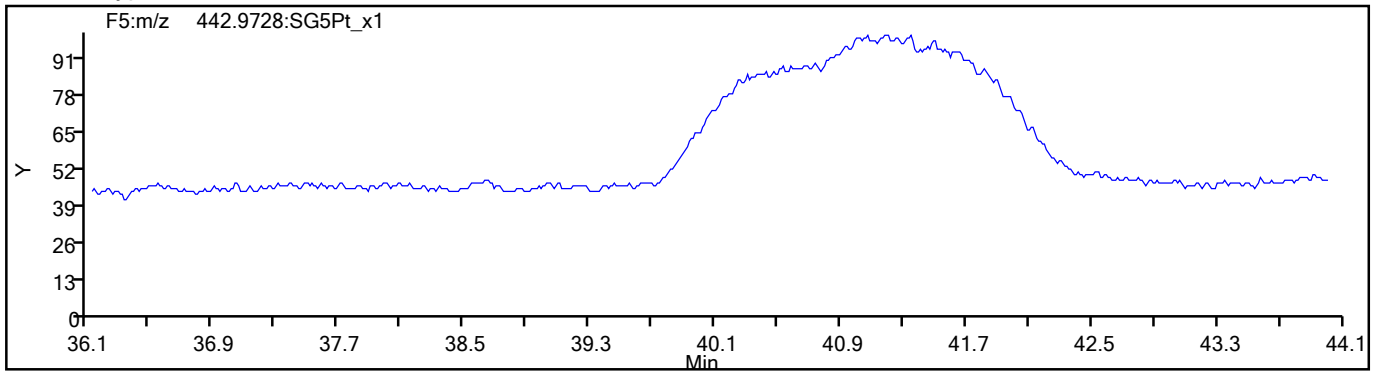

773366

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62046988	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	100332269	0.78	1.6249	99.5	99.5	0.1367	0.1367	99.52	
2,3,7,8-TCDF	17.628	44524782	0.76	1.0239	43.3	43.3	0.0503	0.0503	108	
S Total TCDF					43.3	43.3	0.0503	0.0503		
D 13C-2,3,7,8-TCDD	18.338	55471422	0.81	0.8993	99.4	99.4	0.1780	0.1780	99.41	
$ 37Cl4-2,3,7,8-TCDD	18.354	29474361		1.1071	42.9	42.9	0.0363	0.0363	107	
2,3,7,8-TCDD	18.354	29808948	0.78	1.2541	42.8	42.8	0.0471	0.0471	107	
S Total TCDD					42.8	42.8	0.0471	0.0471		
D 13C-1,2,3,7,8-PeCDF	22.762	75205597	1.60	1.2101	100.2	100.2	0.2087	0.2087	100	
1,2,3,7,8-PeCDF	22.776	171023920	1.60	1.0611	214.3	214.3	0.5904	0.5904	107	
D 13C-2,3,4,7,8-PeCDF	24.126	75259591	1.60	1.2395	97.9	97.9	0.2038	0.2038	97.86	
2,3,4,7,8-PeCDF	24.153	166805723	1.58	1.0184	217.6	217.6	0.6563	0.6563	109	
S Total PeCDF					431.9	431.9	0.6233	0.6233		
D 13C-1,2,3,7,8-PeCDD	24.862	46524396	1.64	0.7612	98.5	98.5	0.1093	0.1093	98.50	
1,2,3,7,8-PeCDD	24.889	105236005	1.57	1.0484	215.7	215.7	0.2317	0.2317	108	
S Total PeCDD					215.7	215.7	0.2317	0.2317		
D 13C-1,2,3,4,7,8-HxCDF	30.835	64951889	0.52	1.0837	95.7	95.7	0.4366	0.4366	95.70	
1,2,3,4,7,8-HxCDF	30.862	155057762	1.22	1.0851	220.0	220.0	1.165	1.165	110	
D 13C-1,2,3,6,7,8-HxCDF	31.008	70459920	0.52	1.1279	99.7	99.7	0.4194	0.4194	99.75	
1,2,3,6,7,8-HxCDF	31.022	168618976	1.23	1.1260	212.5	212.5	1.081	1.081	106	
D 13C-2,3,4,6,7,8-HxCDF	31.754	66145684	0.53	1.0637	99.3	99.3	0.4448	0.4448	99.29	
2,3,4,6,7,8-HxCDF	31.780	164241378	1.21	1.1675	212.7	212.7	0.8912	0.8912	106	
D 13C-1,2,3,7,8,9-HxCDF	32.526	59636084	0.52	0.9676	98.4	98.4	0.4890	0.4890	98.41	
1,2,3,7,8,9-HxCDF	32.539	148834491	1.23	1.1664	214.0	214.0	0.9364	0.9364	107	
S Total HxCDF					859.2	859.2	1.018	1.018		
* 13C-1,2,3,7,8,9-HxCDD	32.339	62627787	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44144841	1.25	0.7334	96.1	96.1	0.3745	0.3745	96.11	
1,2,3,4,7,8-HxCDD	31.953	103044220	1.27	1.0640	219.4	219.4	0.6488	0.6488	110	
D 13C-1,2,3,6,7,8-HxCDD	32.033	54392394	1.25	0.8802	98.7	98.7	0.3120	0.3120	98.67	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	118900298	1.28	1.0001	218.6	218.6	0.5965	0.5965	109	
1,2,3,7,8,9-HxCDD	32.353	122394998	1.26	1.1325	219.4	219.4	0.5651	0.5651	110	
S Total HxCDD					657.3	657.3	0.6034	0.6034		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	47752972	0.44	0.7730	98.6	98.6	1.001	1.001	98.64	
1,2,3,4,6,7,8-HpCDF	33.924	147892240	1.06	1.4413	214.9	214.9	2.024	2.024	107	
D 13C-1,2,3,4,7,8,9-HpCDF	35.017	42687625	0.44	0.7008	97.3	97.3	1.104	1.104	97.26	
1,2,3,4,7,8,9-HpCDF	35.017	123968724	1.06	1.3174	220.4	220.4	2.743	2.743	110	
S Total HpCDF					435.3	435.3	2.383	2.383		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	40442950	1.02	0.6472	99.8	99.8	0.5241	0.5241	99.77	
1,2,3,4,6,7,8-HpCDD	34.726	94435922	1.04	1.0943	213.4	213.4	0.9683	0.9683	107	
S Total HpCDD					213.4	213.4	0.9683	0.9683		
D 13C-OCDD	37.093	57303880	0.88	0.4472	204.6	204.6	0.2753	0.2753	102	
OCDF	37.201	181747068	0.91	1.4382	441.1	441.1	0.4159	0.4159	110	
OCDD	37.105	135570174	0.90	1.1070	427.4	427.4	0.4029	0.4029	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		27754917	7076779	4201	10502	1685		
333.9339	18.142	18.142	0		34292071	8691565	5896	14740	1474	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	43967601	10754823	8470	21175	1270		
317.9389	17.613	17.616	0	0.971	56364668	13840834	5538	13845	2499	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	19278962	4714580	2218	5545	2126		
305.8987	17.628	17.631	0	1.001	25245820	6261705	2854	7135	2194	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24807018	5848000	4201	10502	1392		
333.9339	18.338	18.338	0	1.011	30664404	7186127	5896	14740	1219	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	29474361	7040079	2537	6342	2775		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	13088265	3099418	1571	3927	1973		
321.8936	18.354	18.357	0	1.001	16720683	3961925	1508	3770	2627	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46265218	8069932	9479	23697	851		
353.8970	22.749	22.754	0	1.254	28940379	5072009	6452	16130	786	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	105236981	18677381	20013	50032	933		
341.8567	22.776	22.779	0	1.001	65786939	11693027	12919	32297	905	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46298187	7561650	9479	23697	798		
353.8970	24.126	24.129	0	1.330	28961404	4756017	6452	16130	737	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	102234081	17002363	20013	50032	850		
341.8567	24.153	24.156	0	1.001	64571642	10773383	12919	32297	834	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28884955	4397104	3175	7937	1385		
369.8919	24.862	24.865	0	1.370	17639441	2717935	2071	5177	1312	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	64347111	9837651	3945	9862	2494		
357.8516	24.889	24.892	0	1.001	40888894	6265054	2969	7422	2110	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	22237957	4900100	10775	26937	455		
385.8610	30.835	30.838	0	0.953	42713932	9213265	21190	52975	435	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	85201859	18424877	39257	98142	469		
375.8178	30.849	30.857	0	1.000	69855903	15011303	32096	80240	468	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	23996455	5001651	10775	26937	464		
385.8610	31.008	31.003	0	0.959	46463465	9659865	21190	52975	456	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	92842545	20075526	39257	98142	511		
375.8178	31.022	31.022	0	1.000	75776431	16178695	32096	80240	504	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	22792396	5861290	10775	26937	544		
385.8610	31.754	31.756	0	0.982	43353288	11282982	21190	52975	532	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.780	31.772	0	1.001	89865159	23412461	39257	98142	596		
375.8178	31.767	31.772	0	1.000	74376219	19191516	32096	80240	598	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20506438	5659225	10775	26937	525		
385.8610	32.526	32.523	0	1.006	39129646	10674002	21190	52975	504	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	82057134	22664755	39257	98142	577		
375.8178	32.539	32.534	0	1.000	66777357	17875439	32096	80240	557	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		34509982	9306847	9505	23762	979		
403.8529	32.339	32.342	0		28117805	7584182	9052	22630	838	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	24560847	6976899	9505	23762	734		
403.8529	31.927	31.929	0	0.987	19583994	5667072	9052	22630	626	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.953	31.945	0	1.001	57595942	16510469	19316	48290	855		
391.8127	31.940	31.945	0	1.000	45448278	13107381	15598	38995	840	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	30198617	8138784	9505	23762	856		
403.8529	32.033	32.033	0	0.991	24193777	6493948	9052	22630	717	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	66690137	17959920	19316	48290	930		
391.8127	32.047	32.047	0	1.000	52210161	14135061	15598	38995	906	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	68169382	18483699	19316	48290	957		
391.8127	32.353	32.355	0	1.013	54225616	14872863	15598	38995	954	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14610497	4589210	16388	40970	280		
419.8220	33.912	33.914	0	1.049	33142475	10497182	35883	89707	293	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	75936953	24520194	90693	226732	270		
409.7789	33.924	33.926	0	1.000	71955287	23549459	85368	213420	276	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.017	35.010	0	1.083	12971814	3739945	16388	40970	228		
419.8220	35.017	35.010	0	1.083	29715811	8442322	35883	89707	235	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	63647403	18553677	90693	226732	205		
409.7789	35.017	35.020	0	1.000	60321321	17850429	85368	213420	209	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	20381379	6053926	11567	28917	523		
437.8140	34.714	34.716	0	1.073	20061571	5957434	11351	28377	525	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	48165795	14539111	26079	65197	558		
425.7737	34.726	34.726	0	1.000	46270127	14041663	24831	62077	565	1.04(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26901378	6693523	3896	9740	1718		
471.7750	37.093	37.094	0	1.147	30402502	7661603	4420	11050	1733	0.88(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	86562223	22814939	9244	23110	2468		
443.7399	37.201	37.199	0	1.003	95184845	24785143	7929	19822	3126	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	64116469	16176091	6061	15152	2669		
459.7348	37.105	37.106	0	1.000	71453705	17977820	6746	16865	2665	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

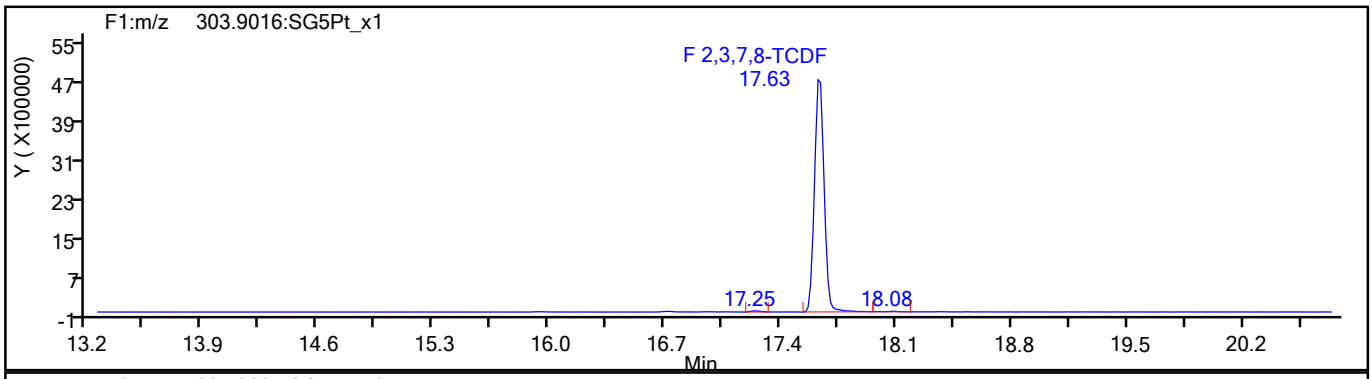

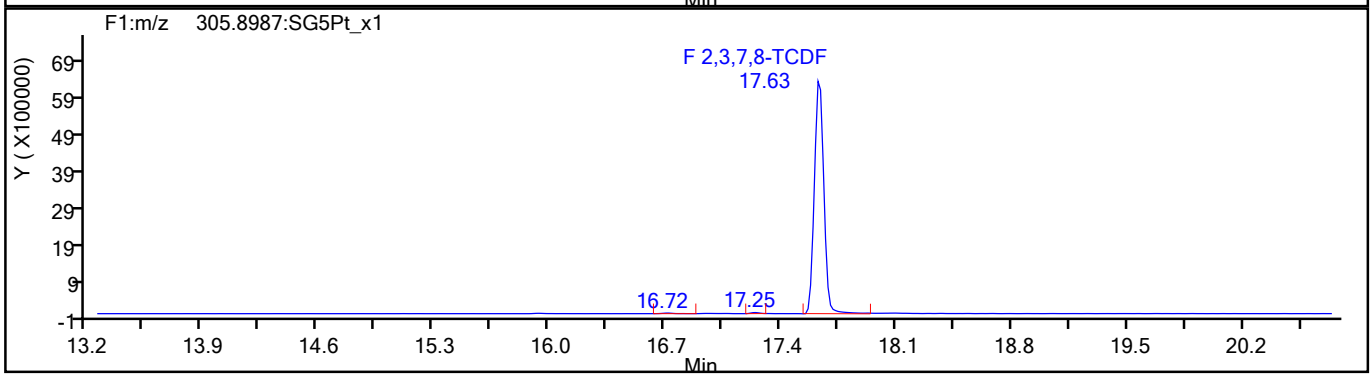

TCDF Standards

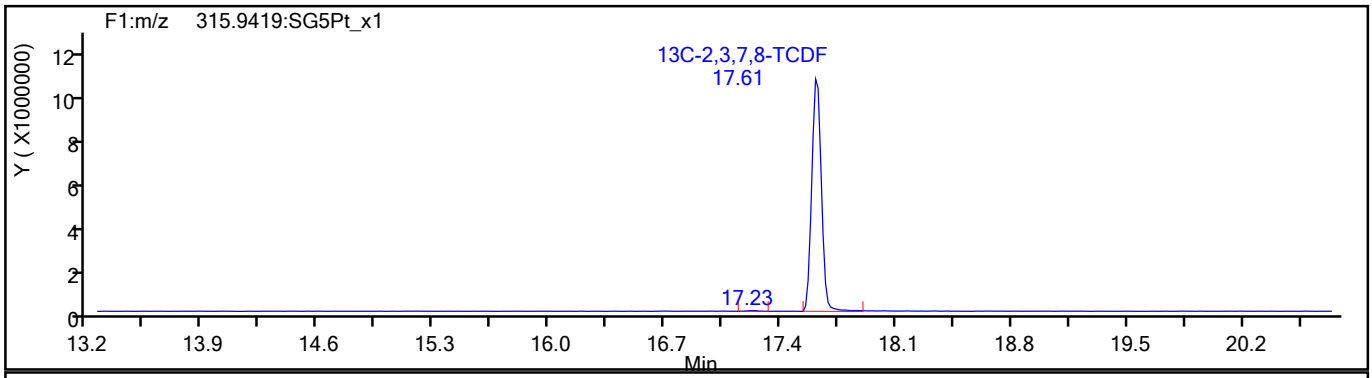

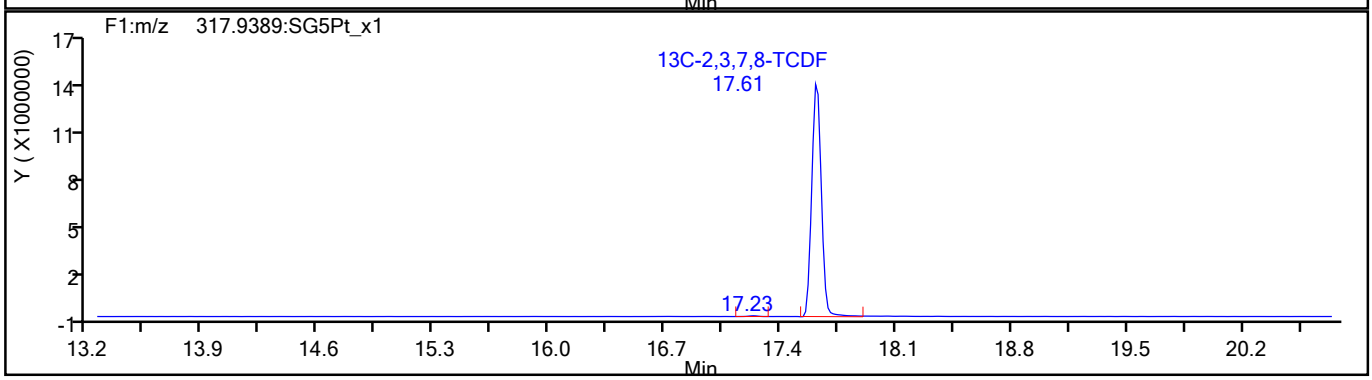

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Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

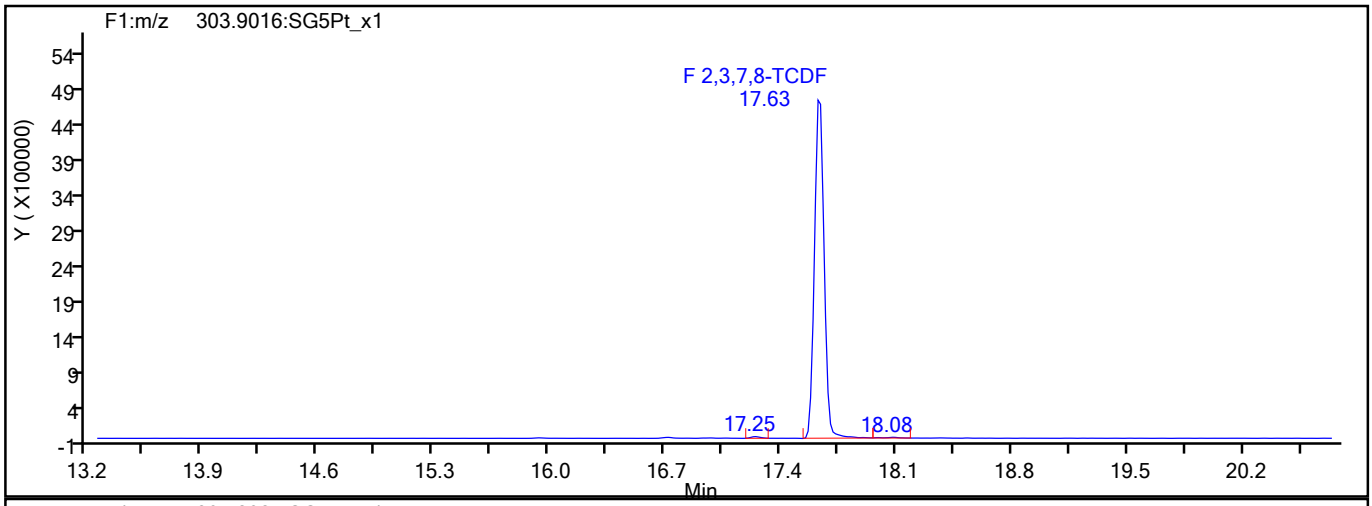

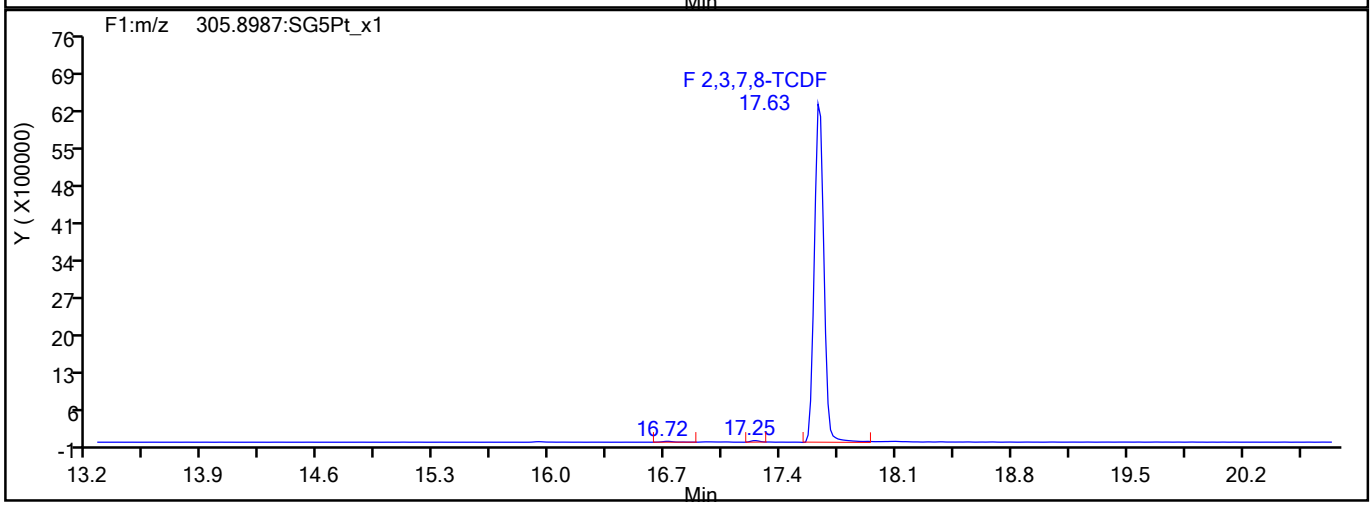

TCDF Interference Mass

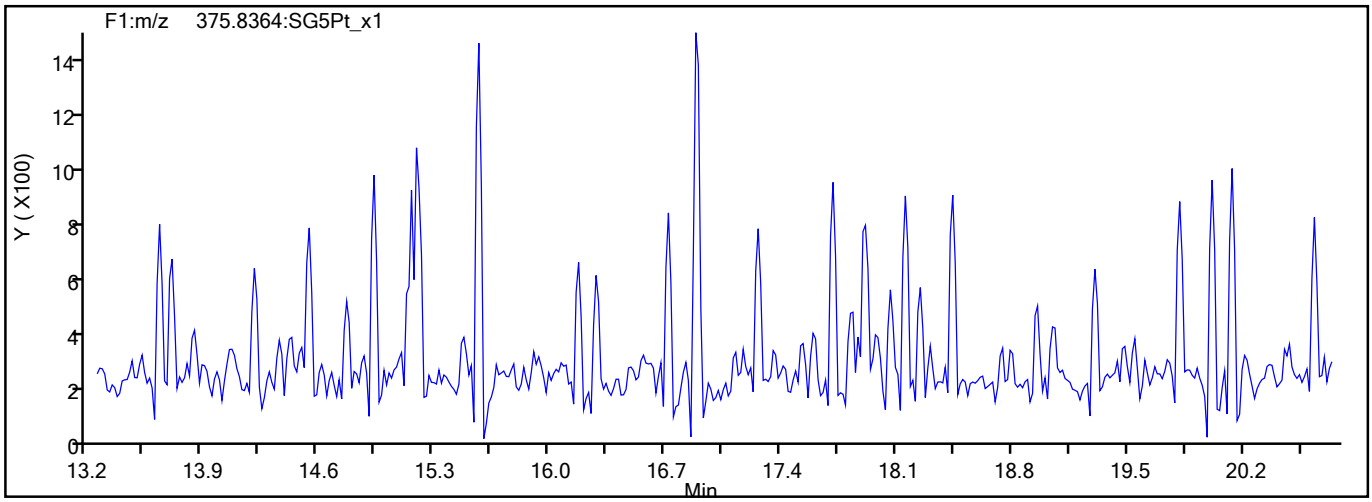

773373

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

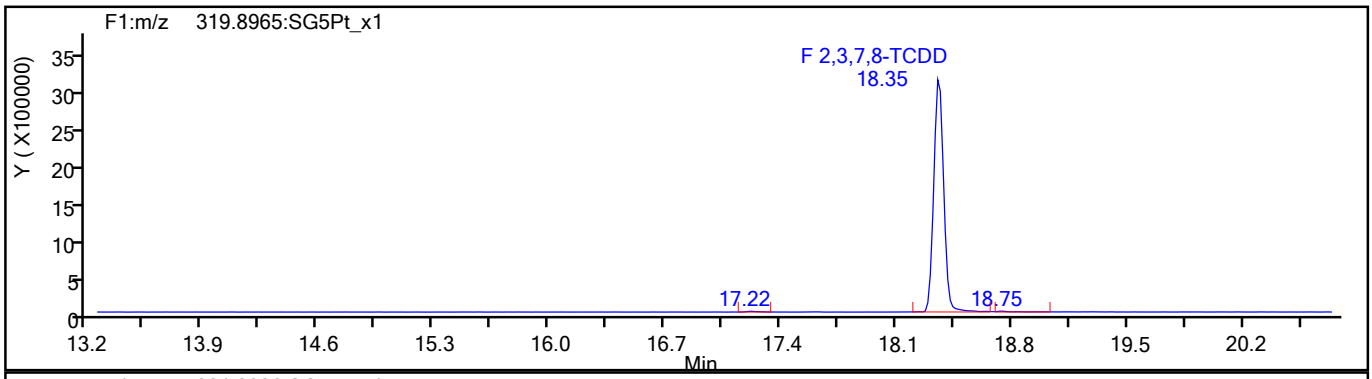

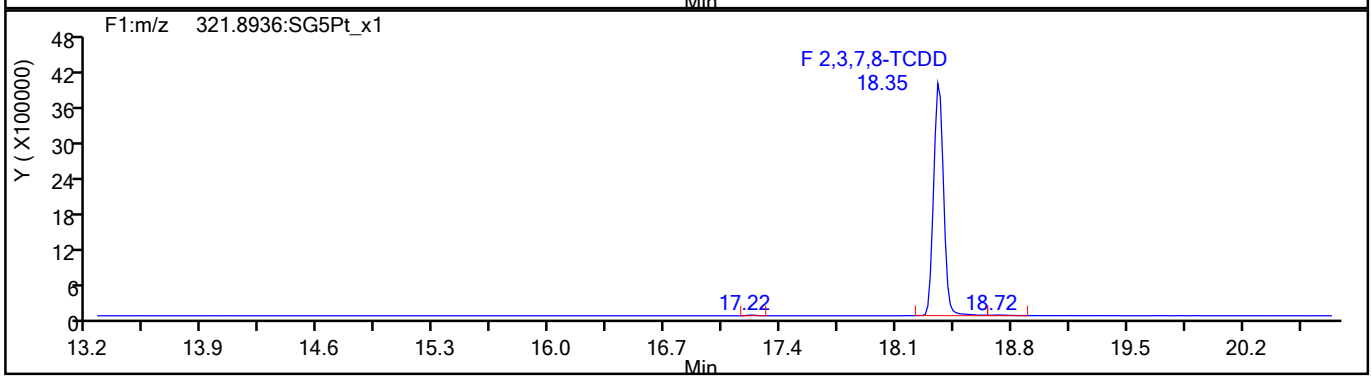

TCDD Standards

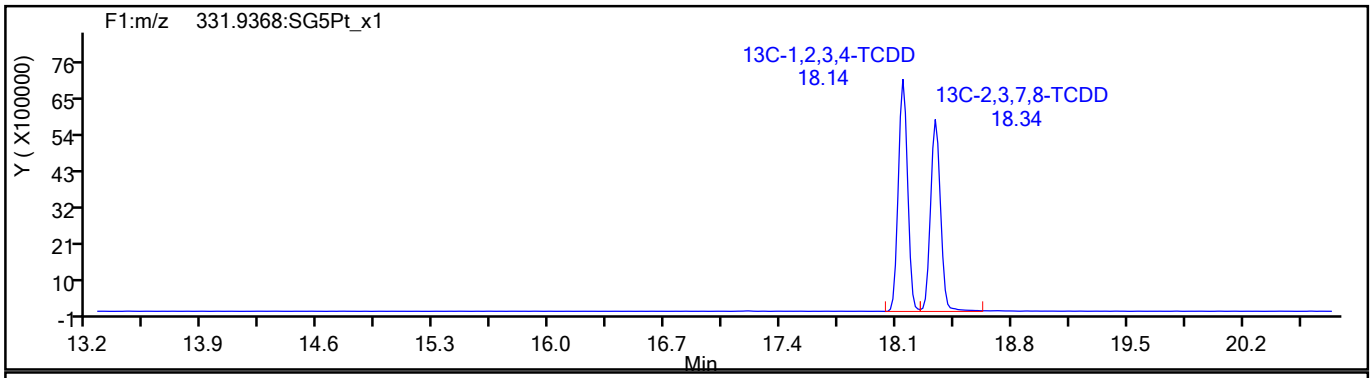

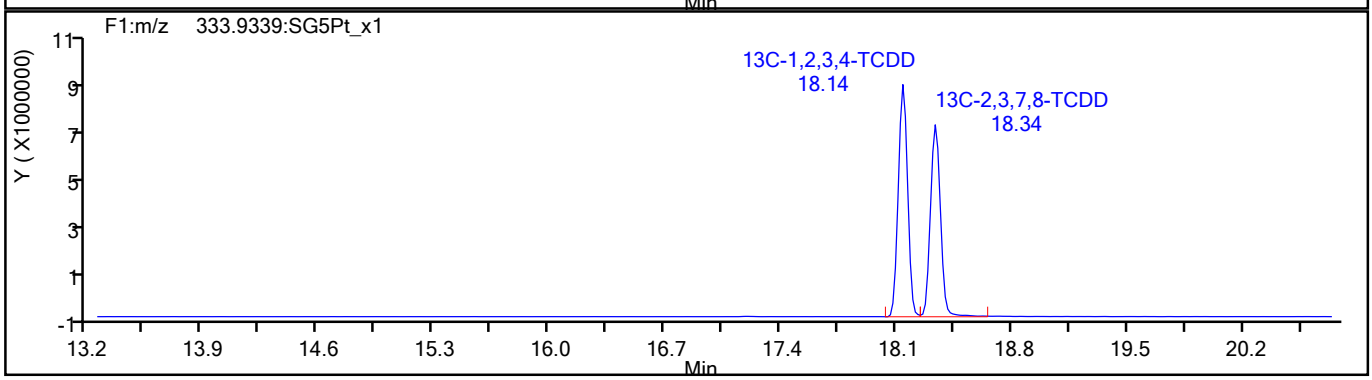

773374

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

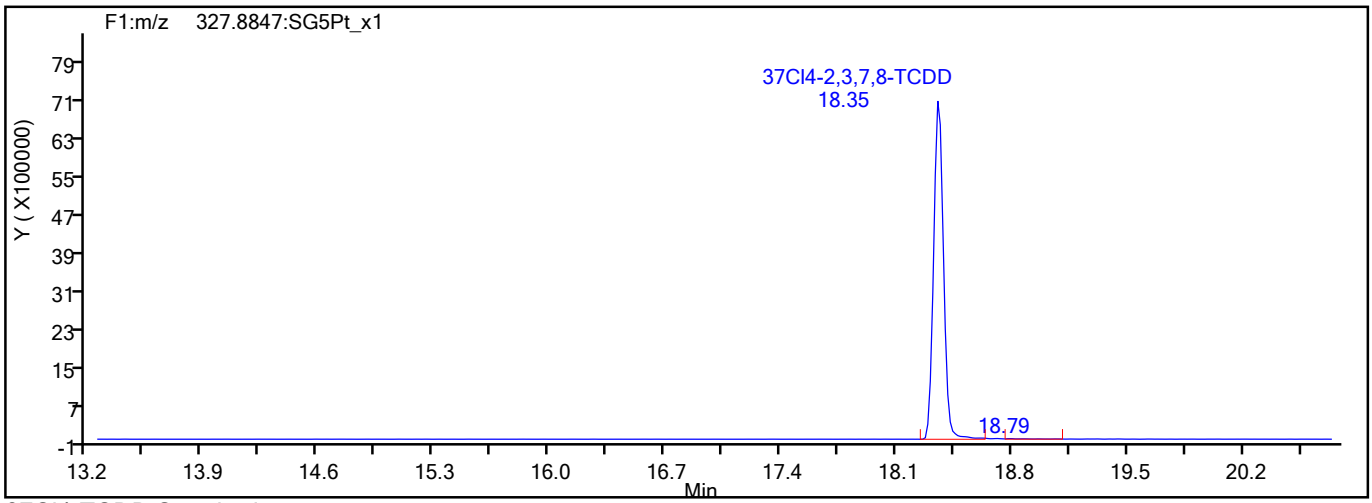

37Cl4-TCDD Standards

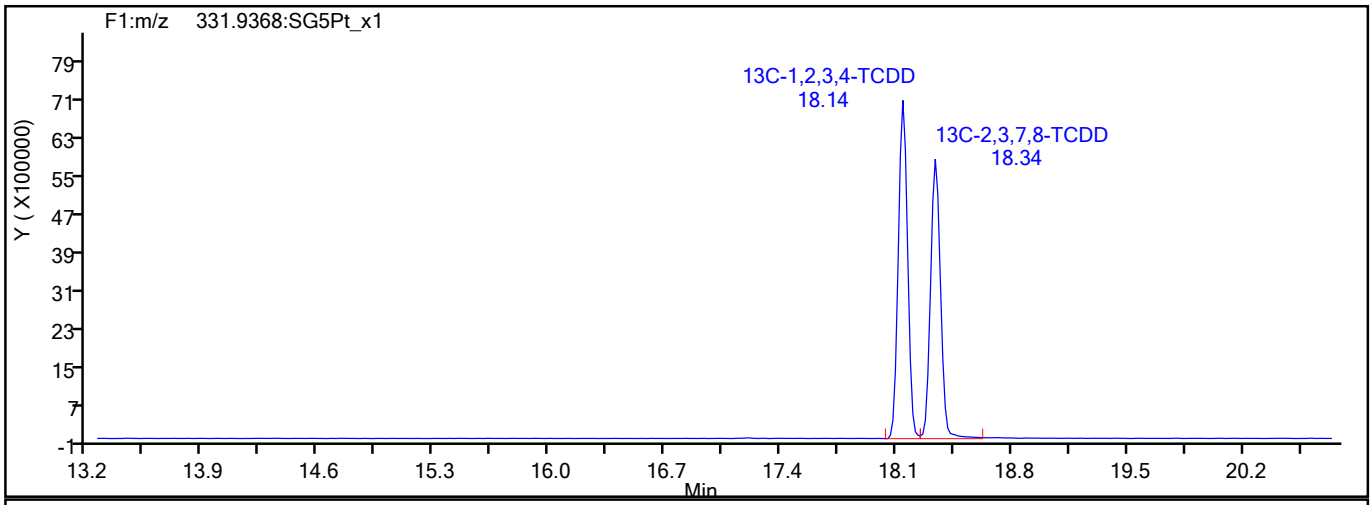

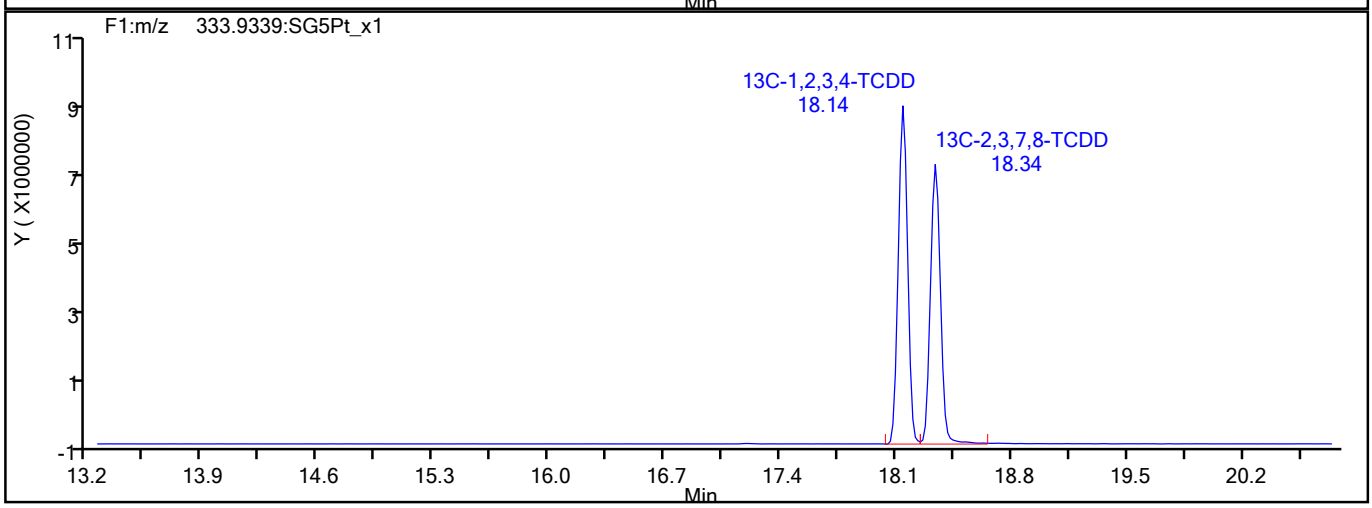

773375

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

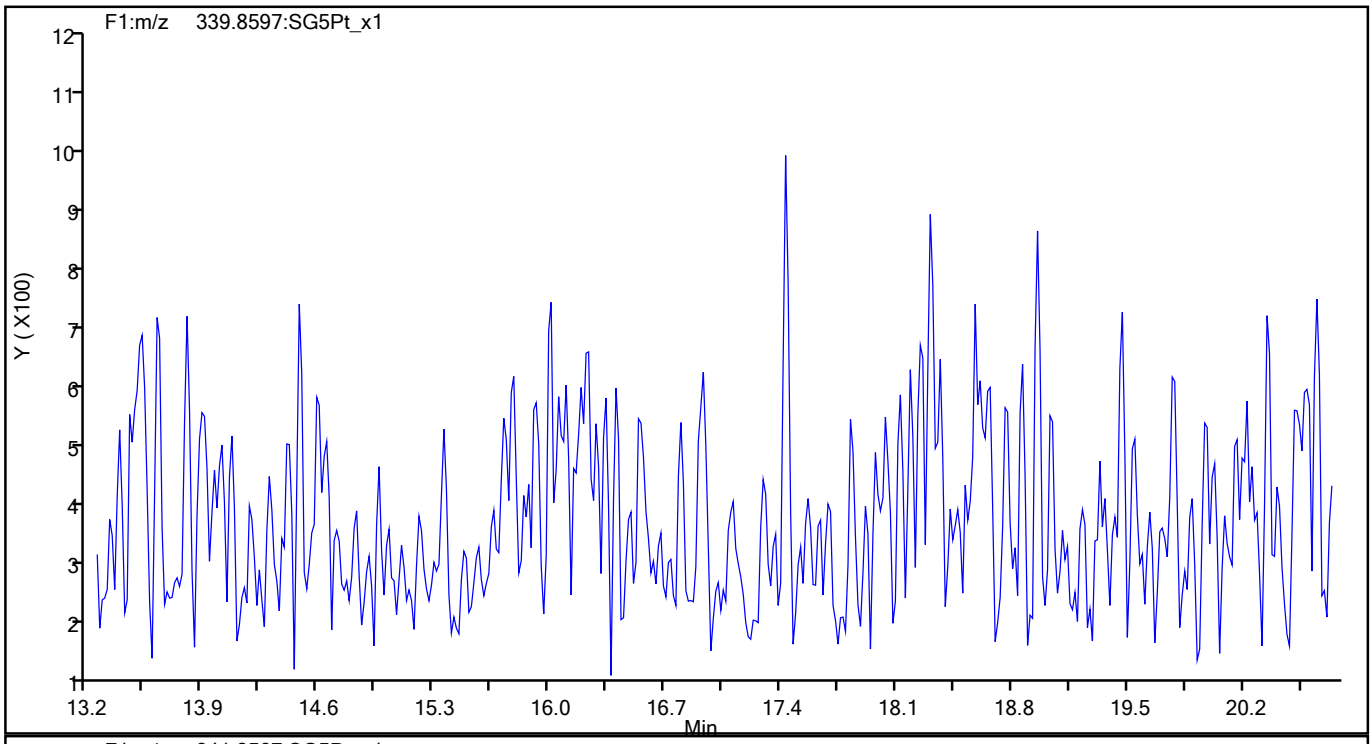

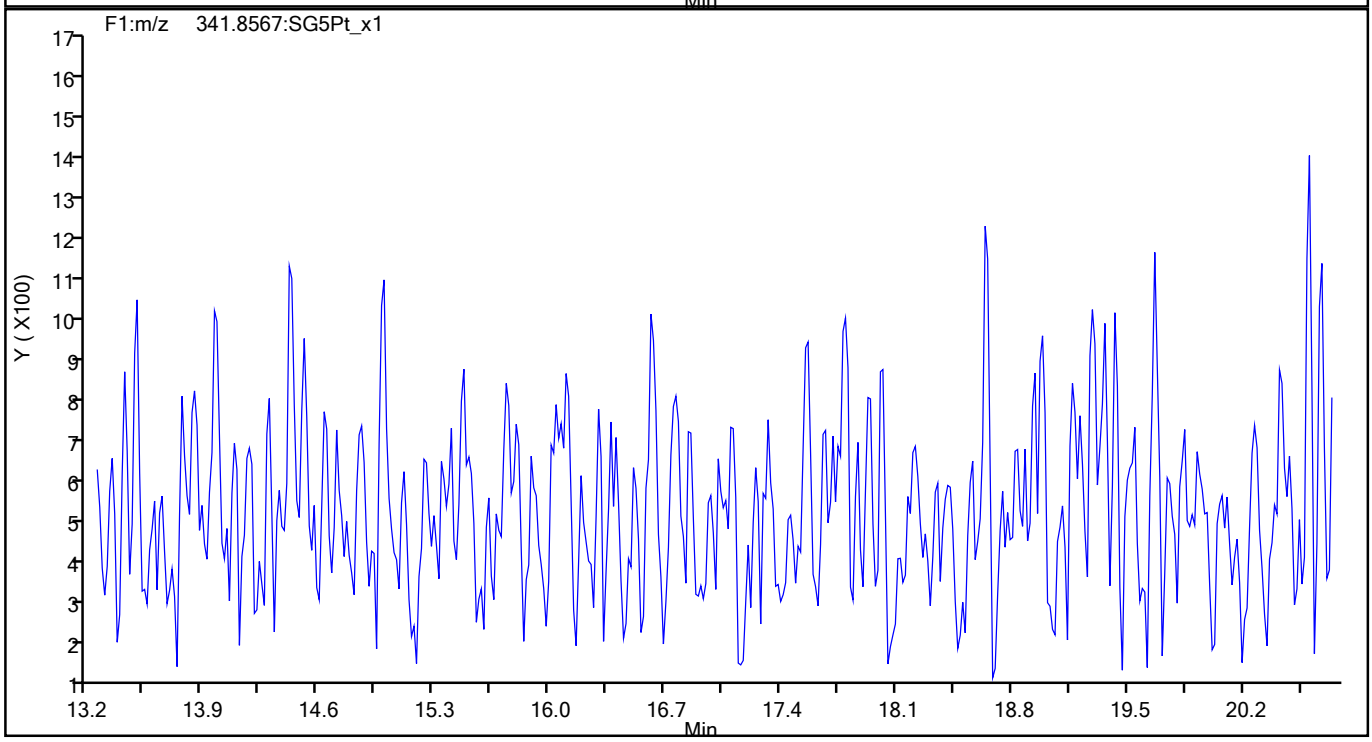

773376

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

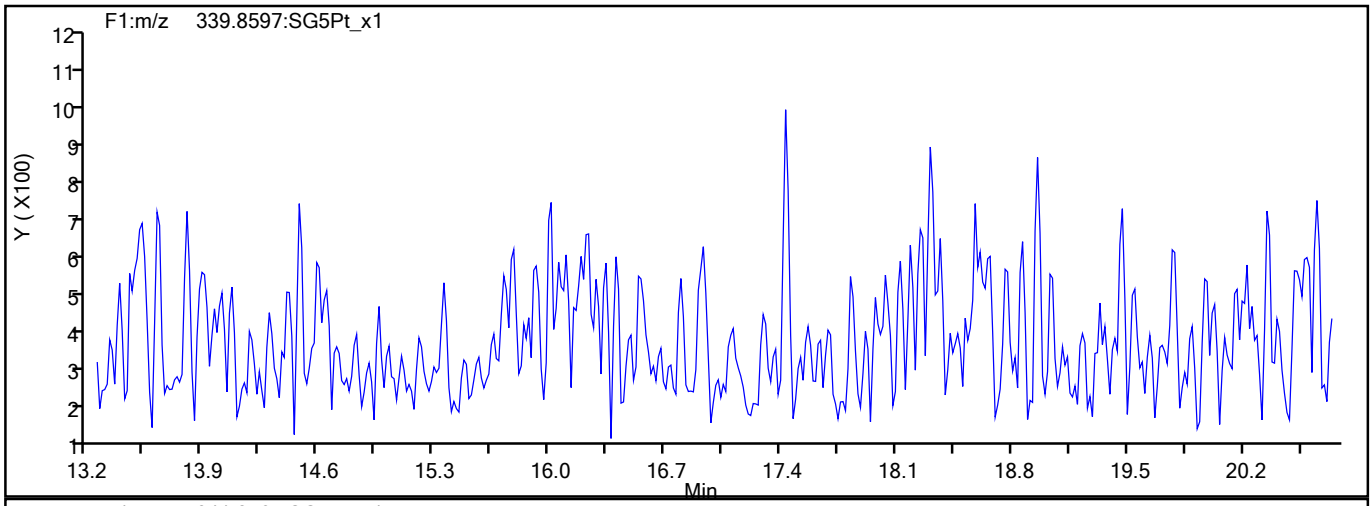

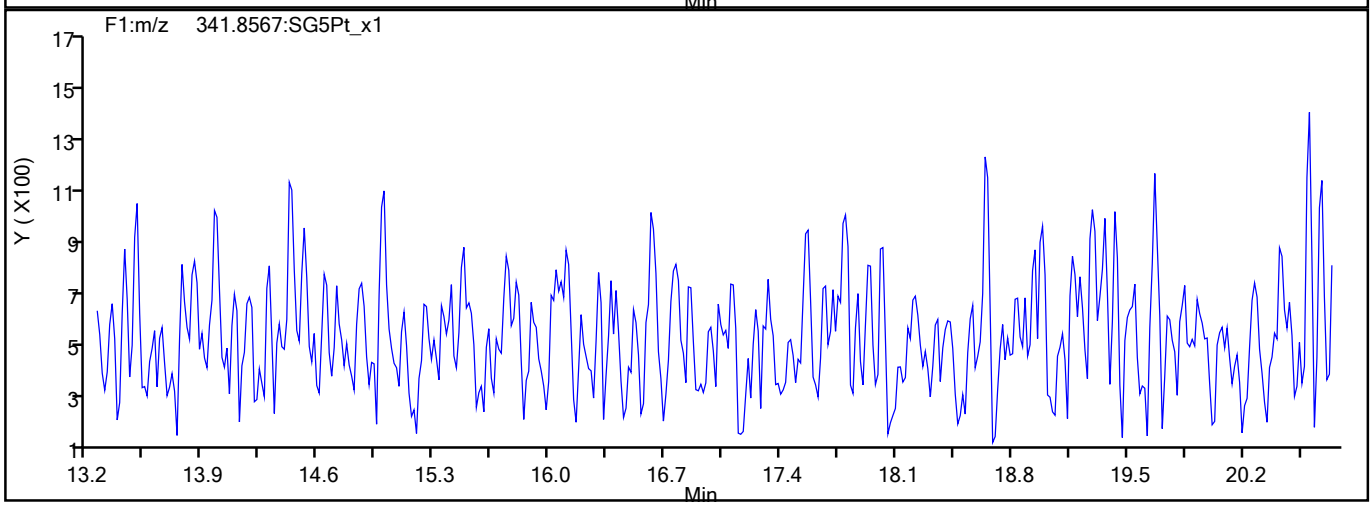

F1 PeCDFs Interference Mass

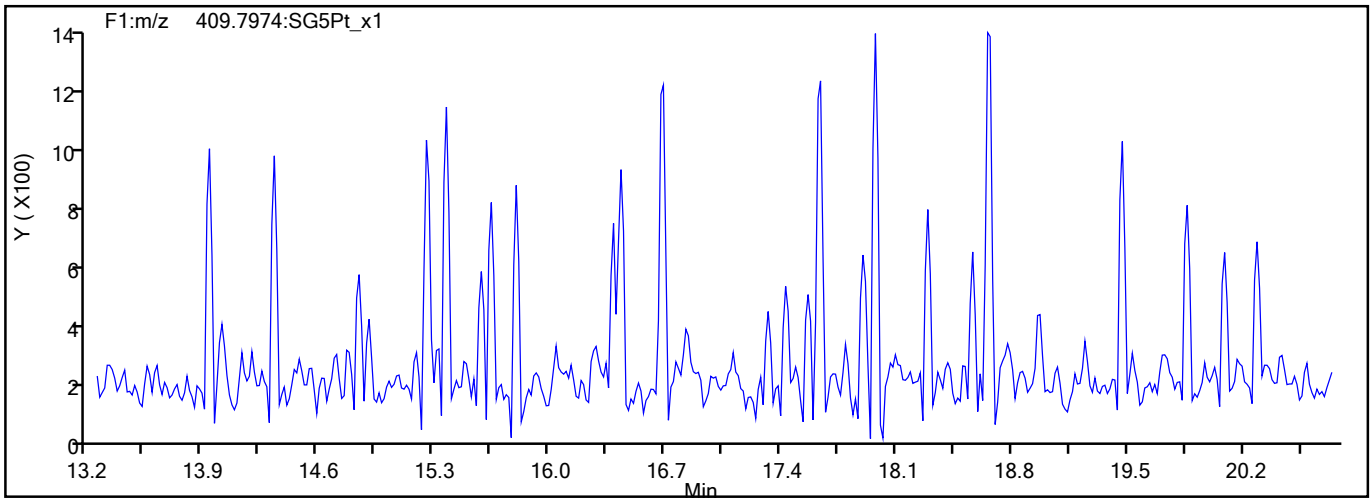

773377

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

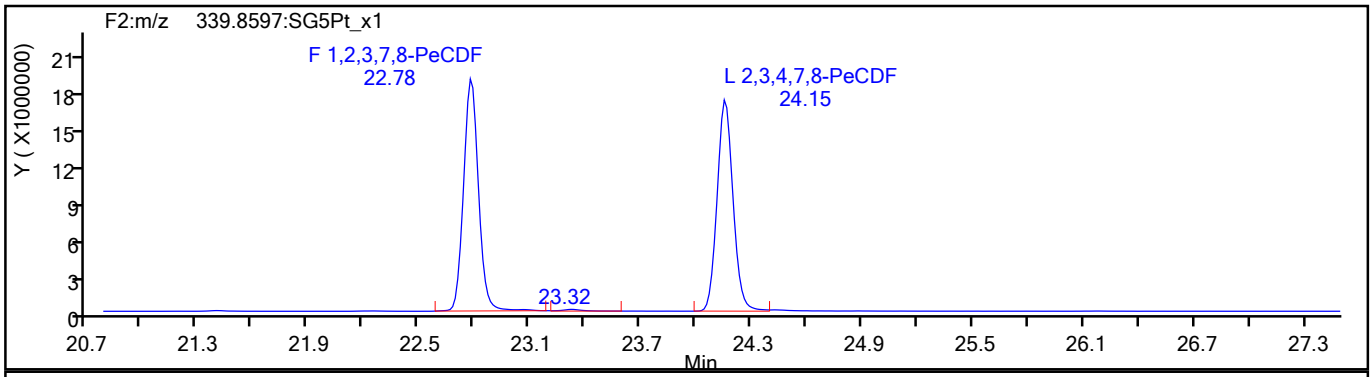

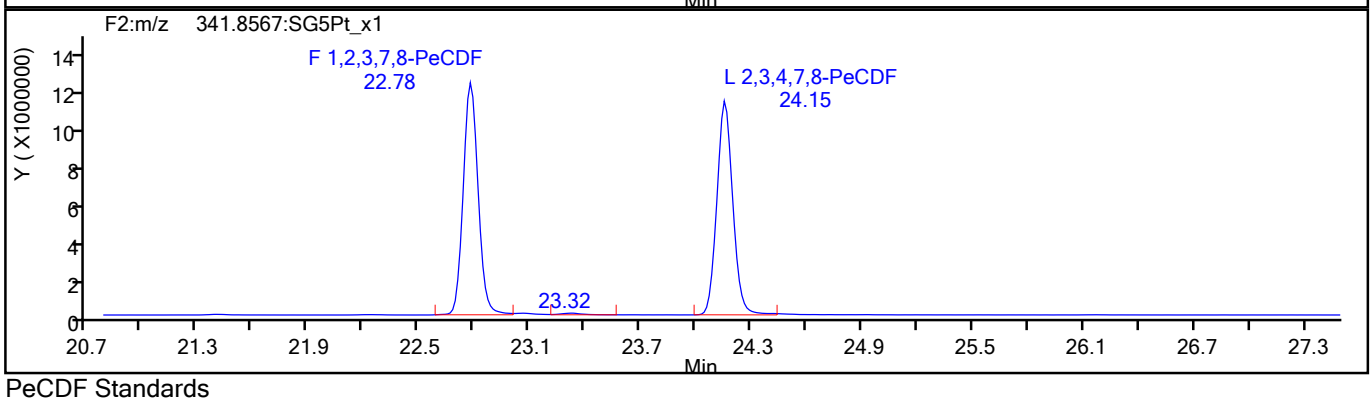

PeCDF Standards

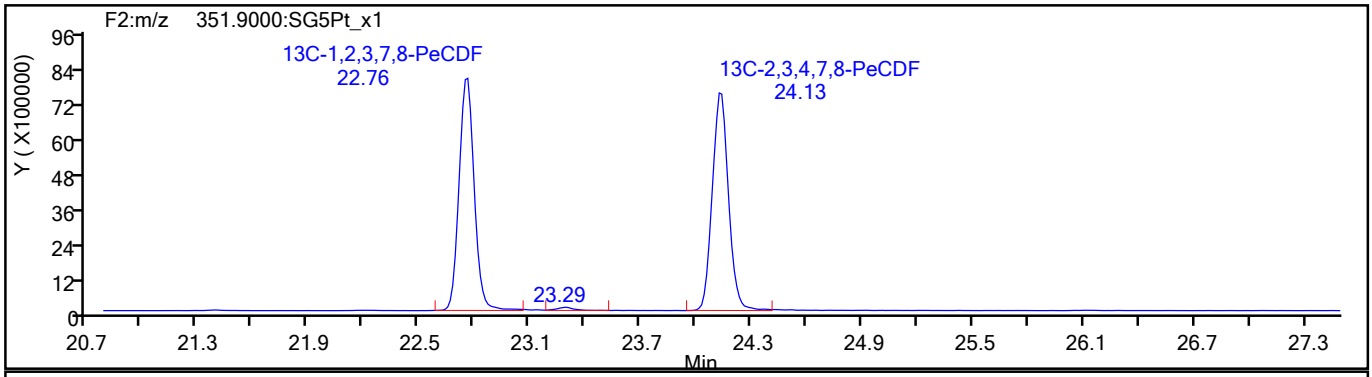

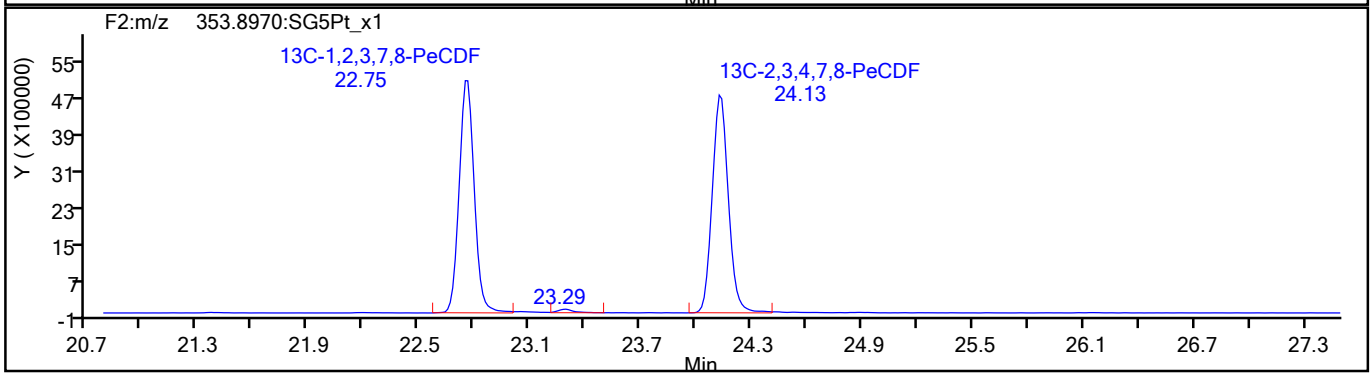

773378

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

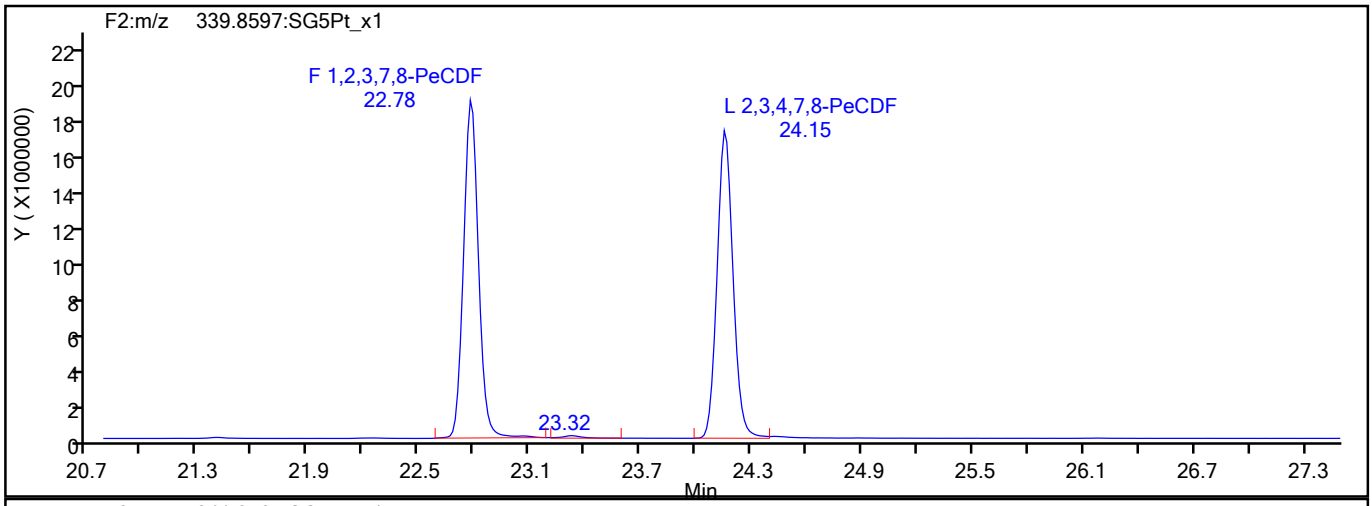

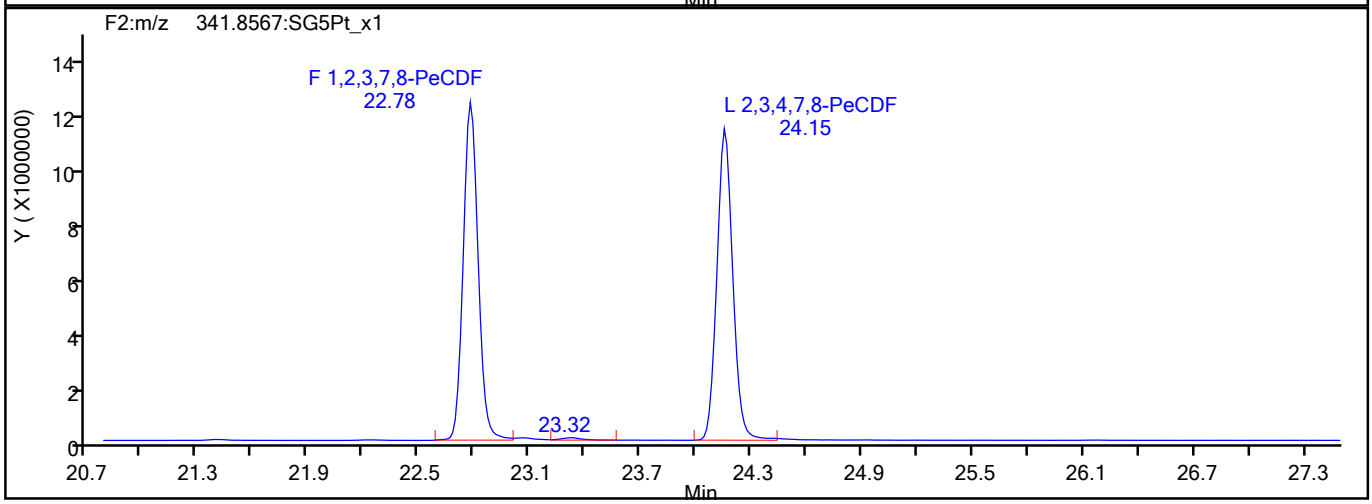

PeCDF Interference Mass

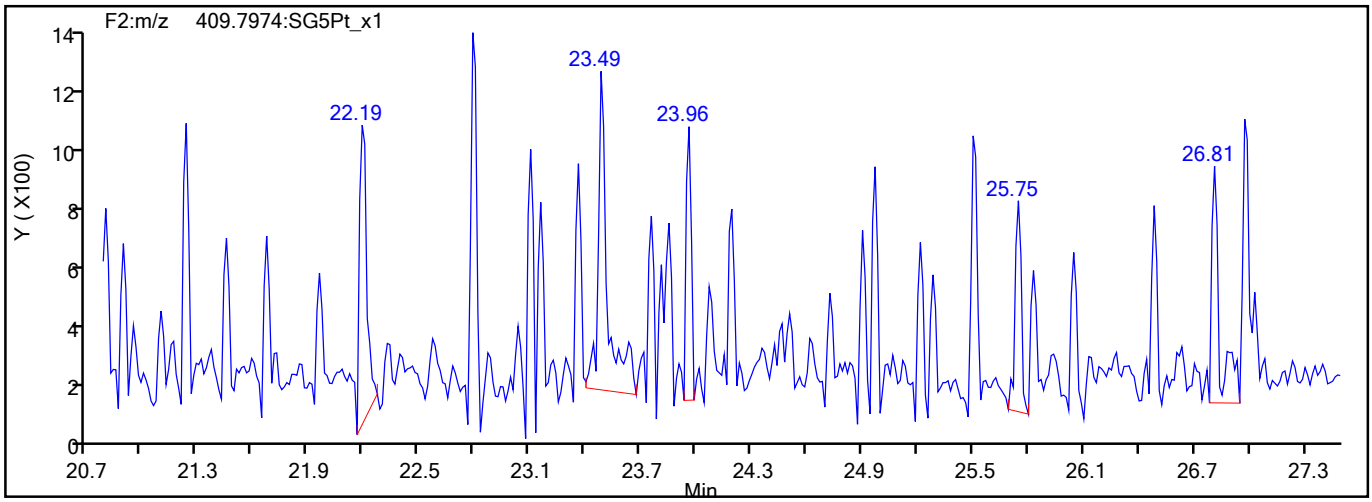

773379

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

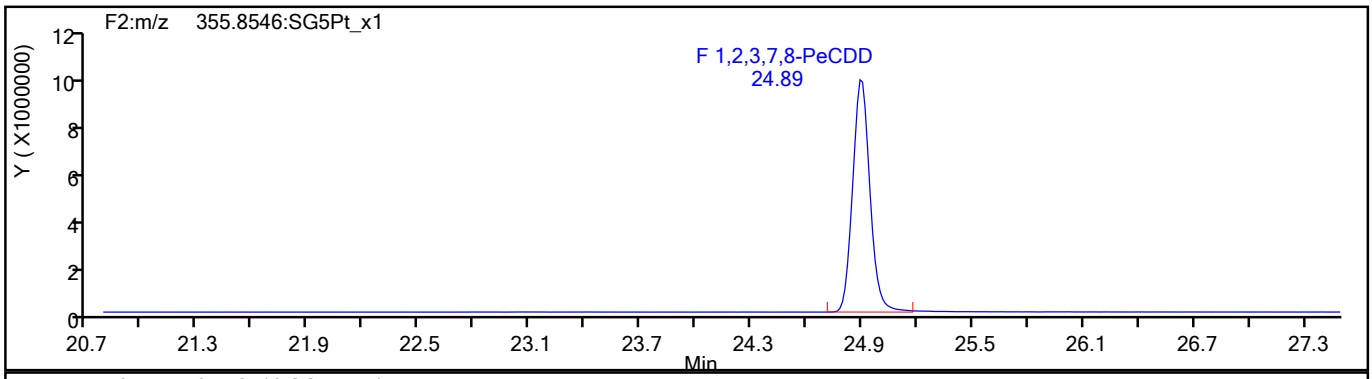

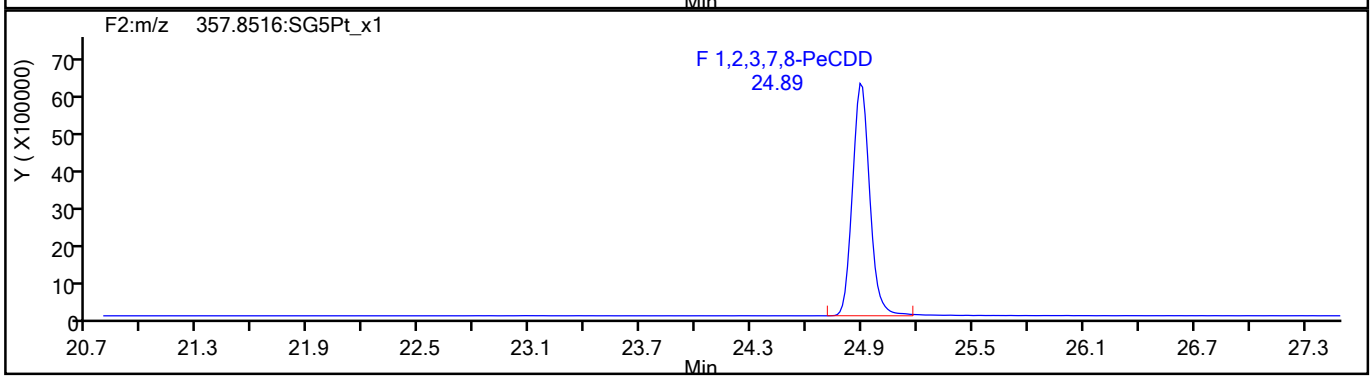

PeCDD Standards

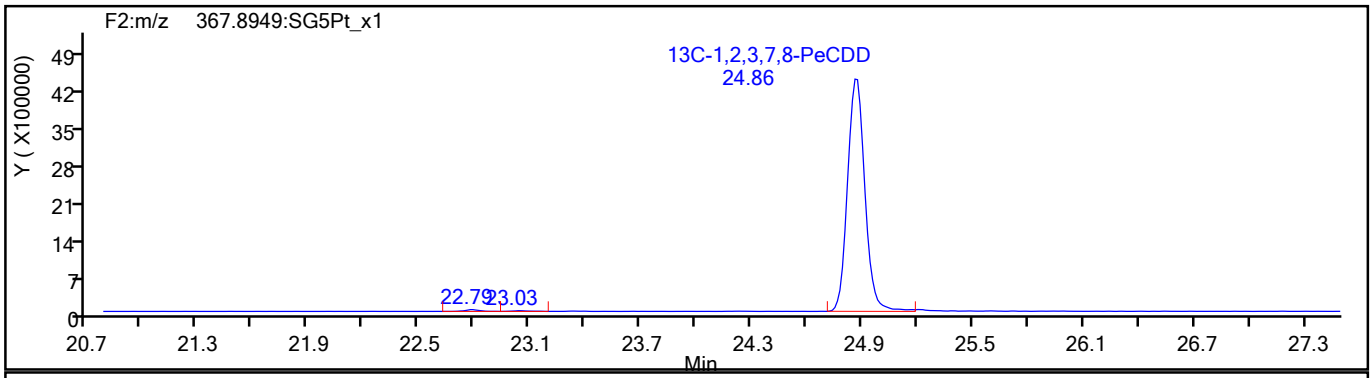

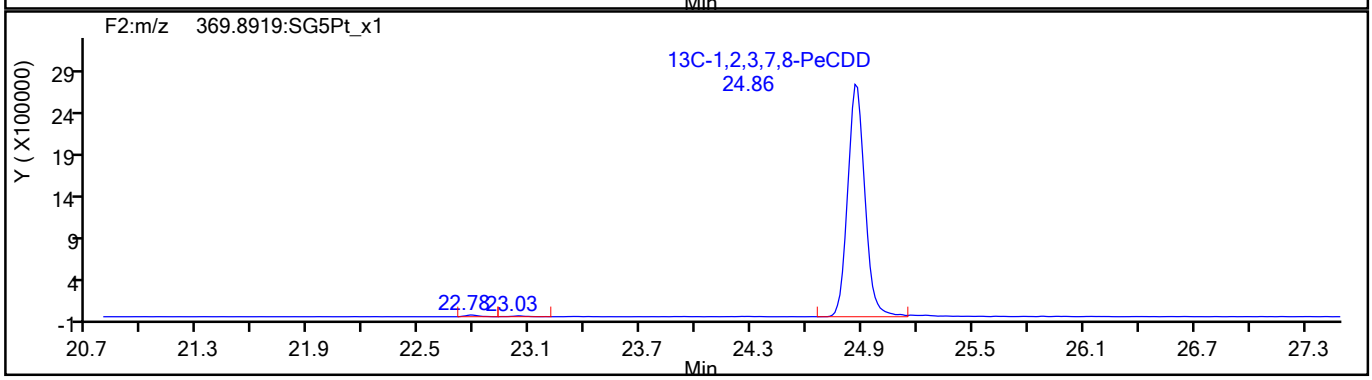

773380

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

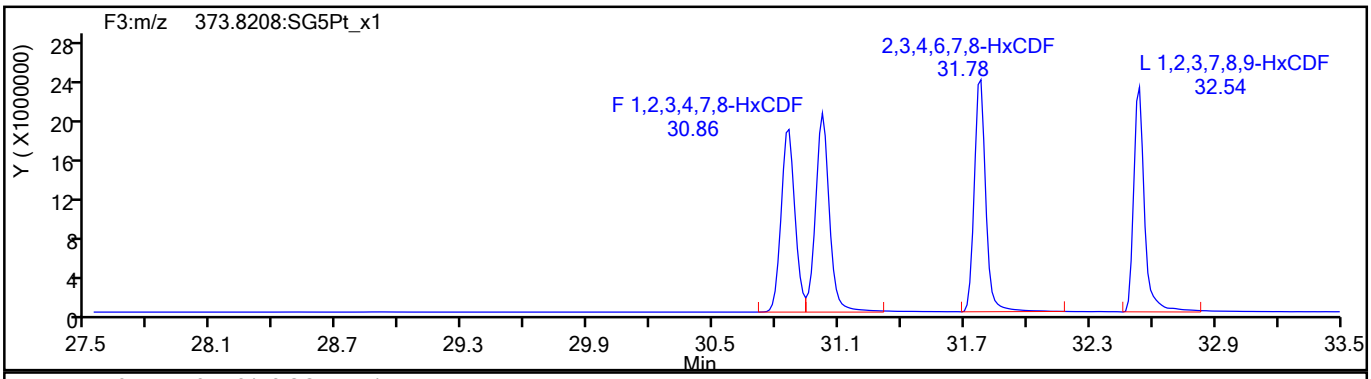

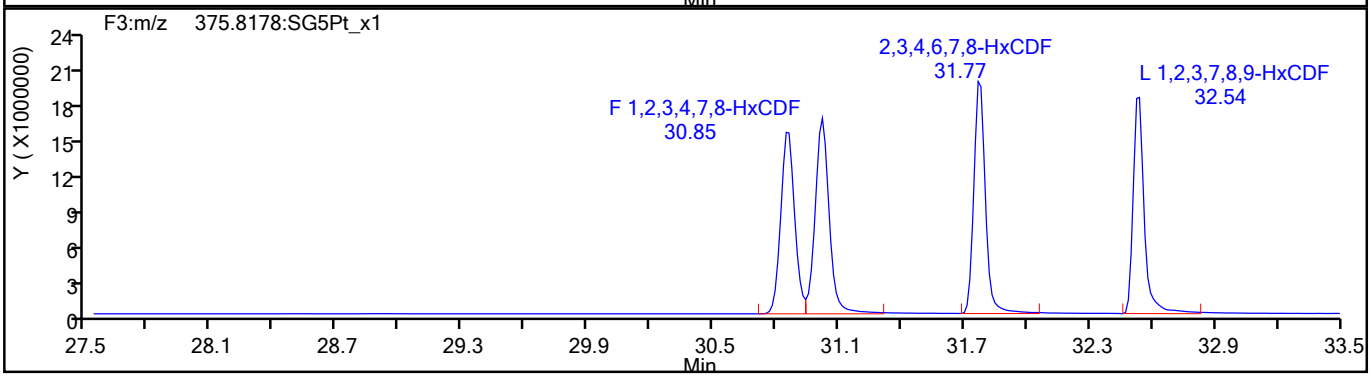

HxCDF Standards

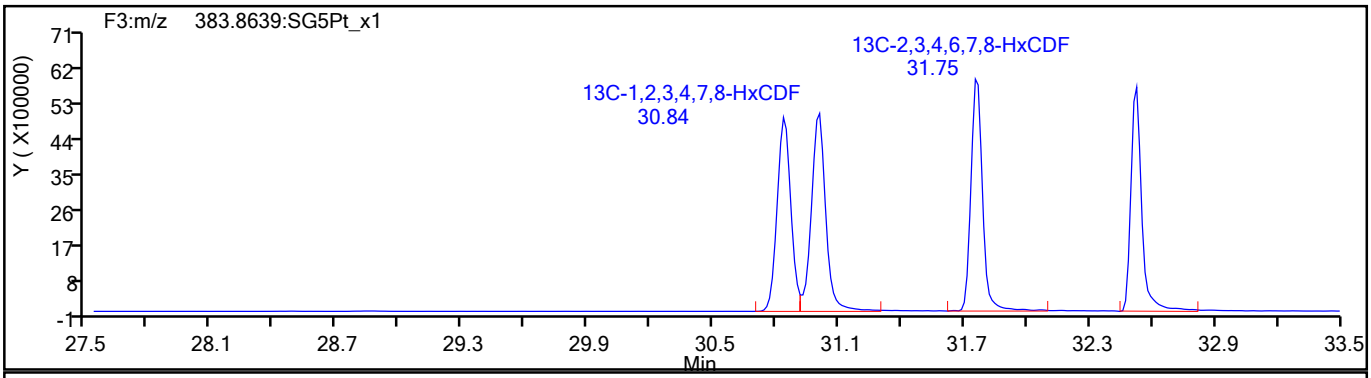

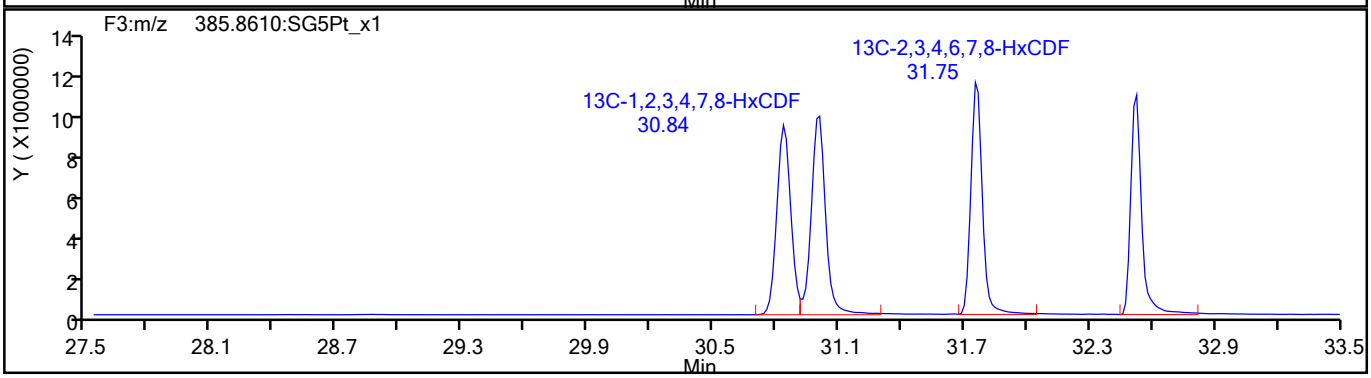

773381

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

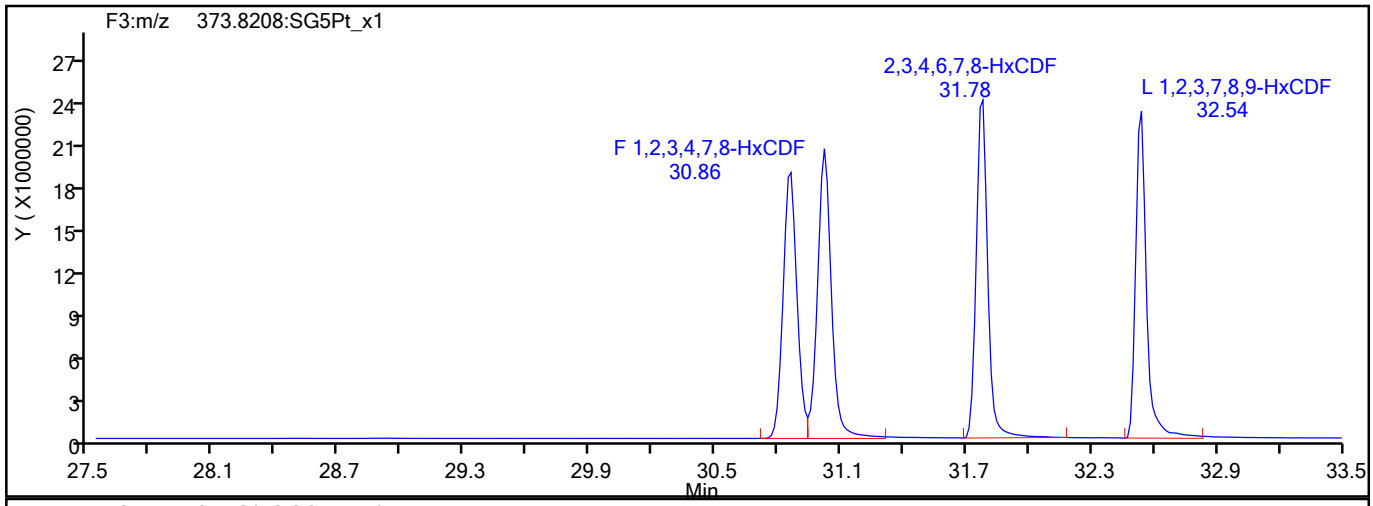

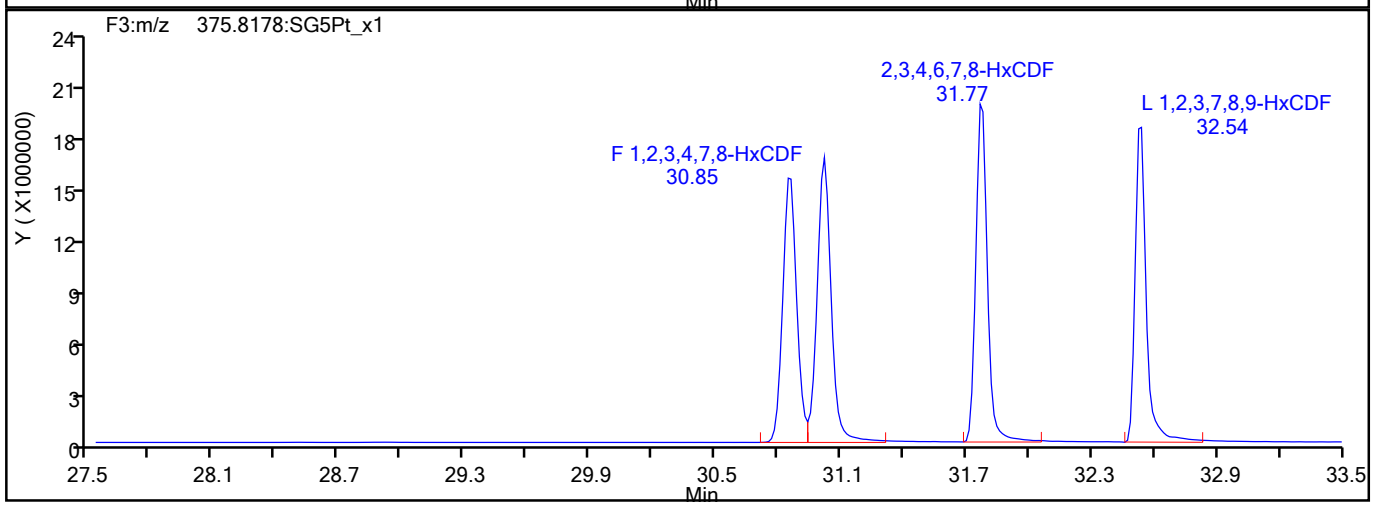

HxCDF Interference Mass

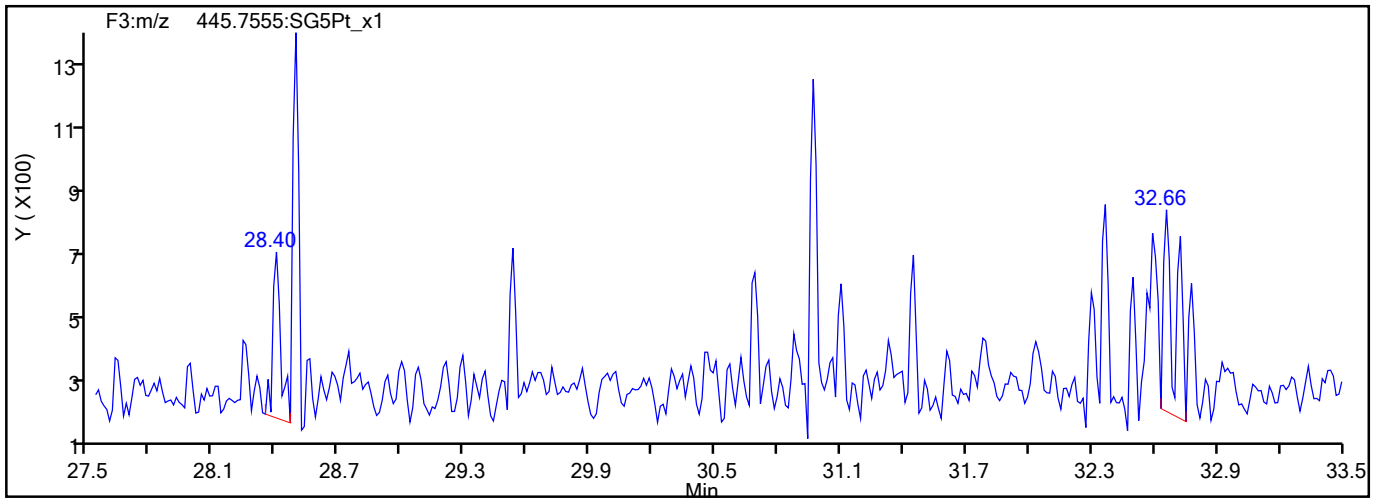

773382

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

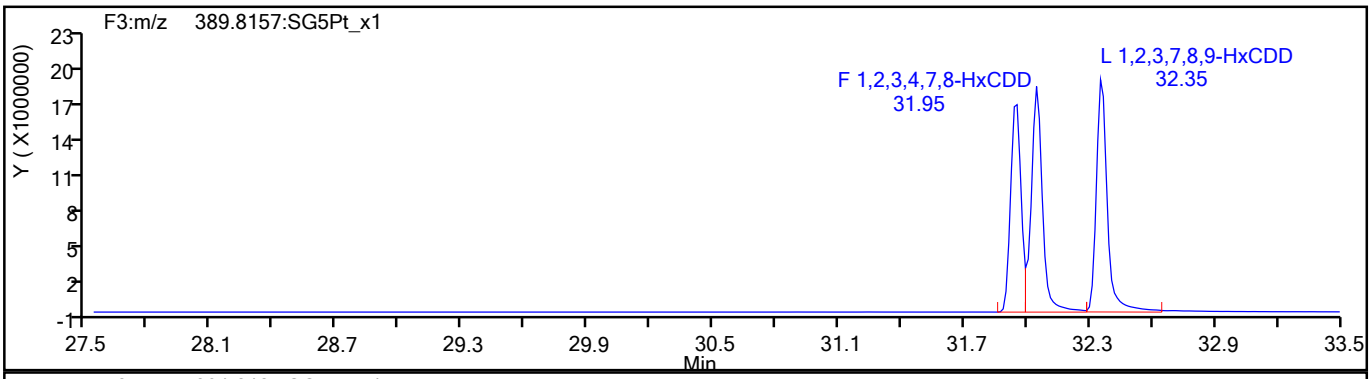

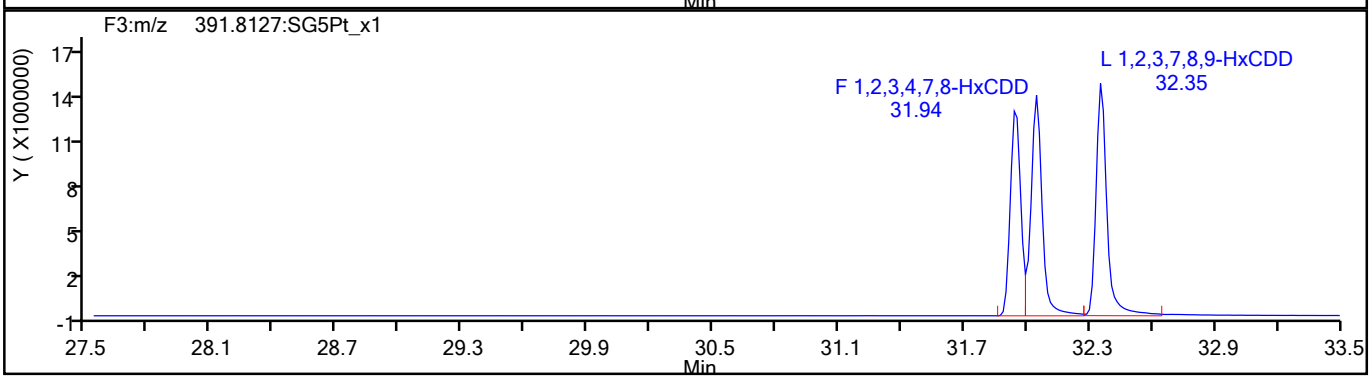

HxCDD Standards

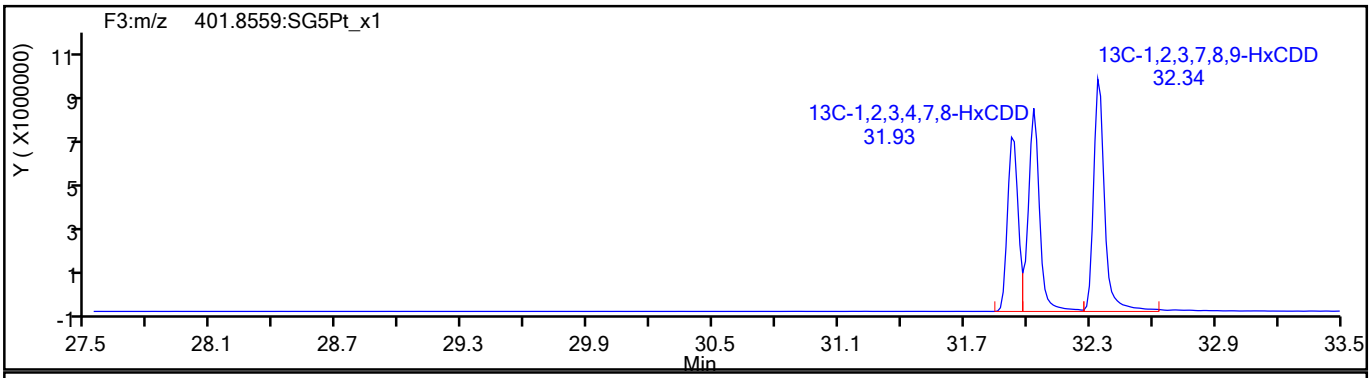

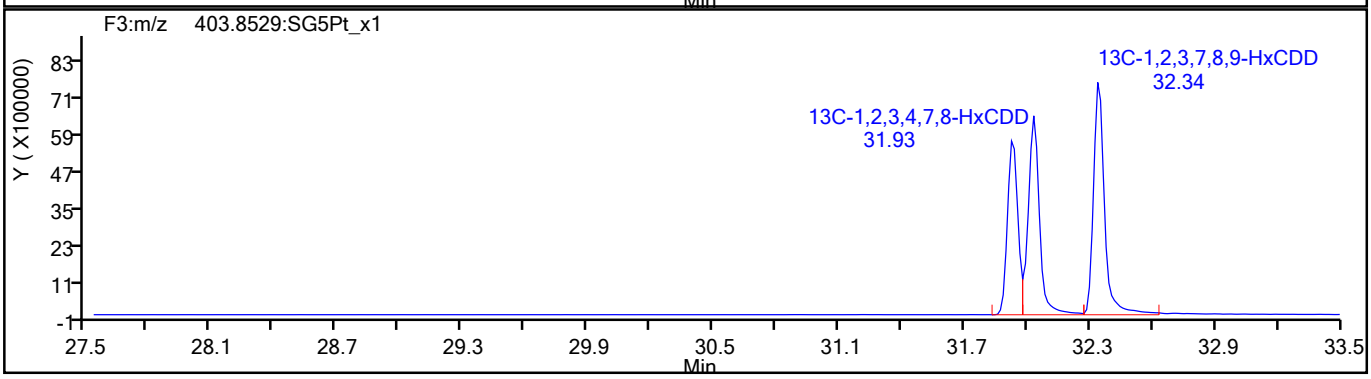

773383

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

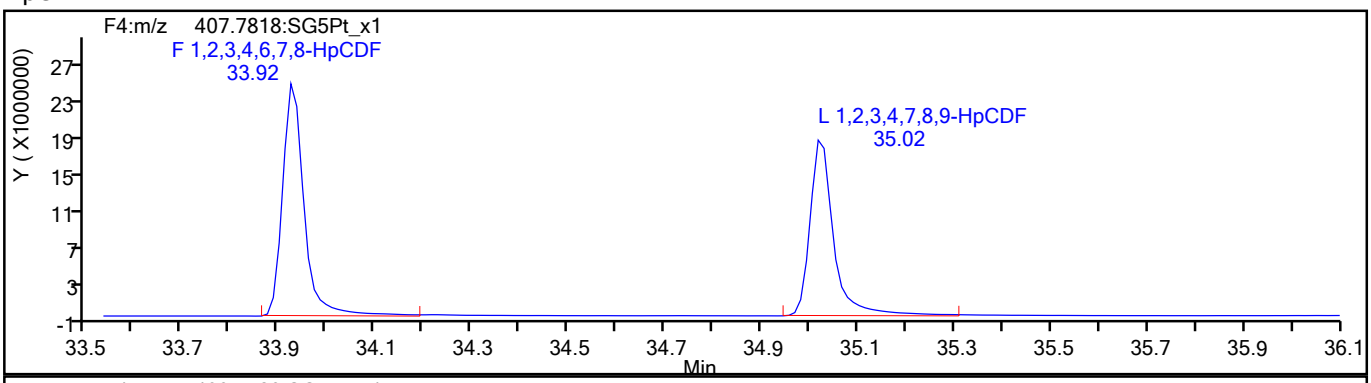

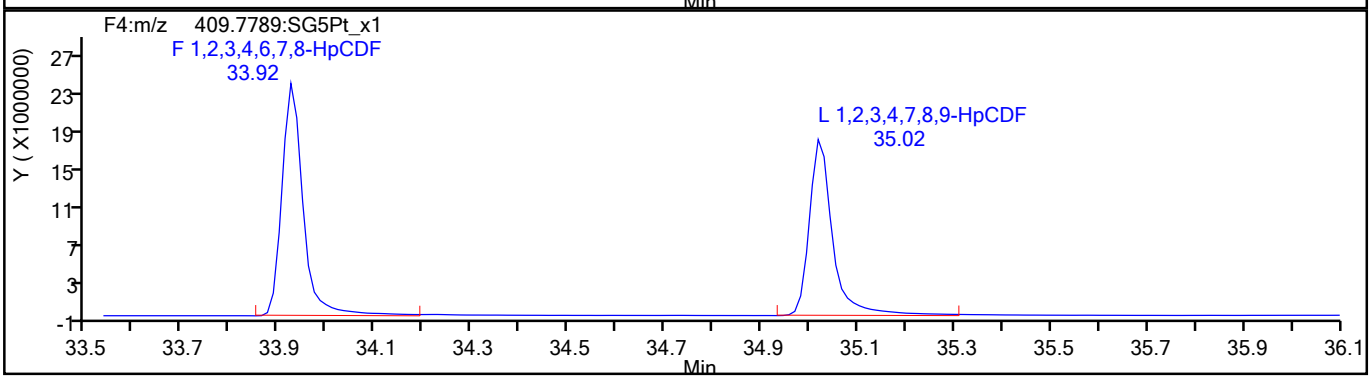

HpCDF Standards

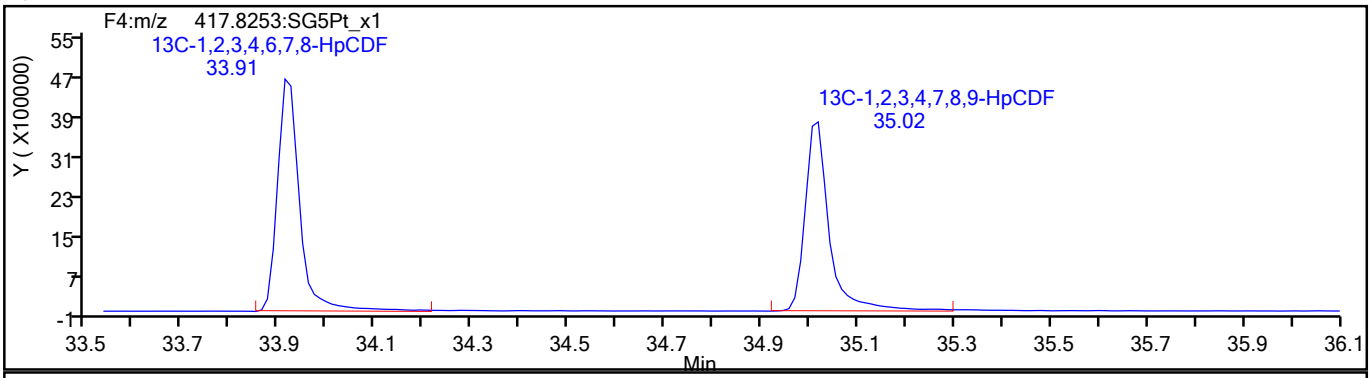

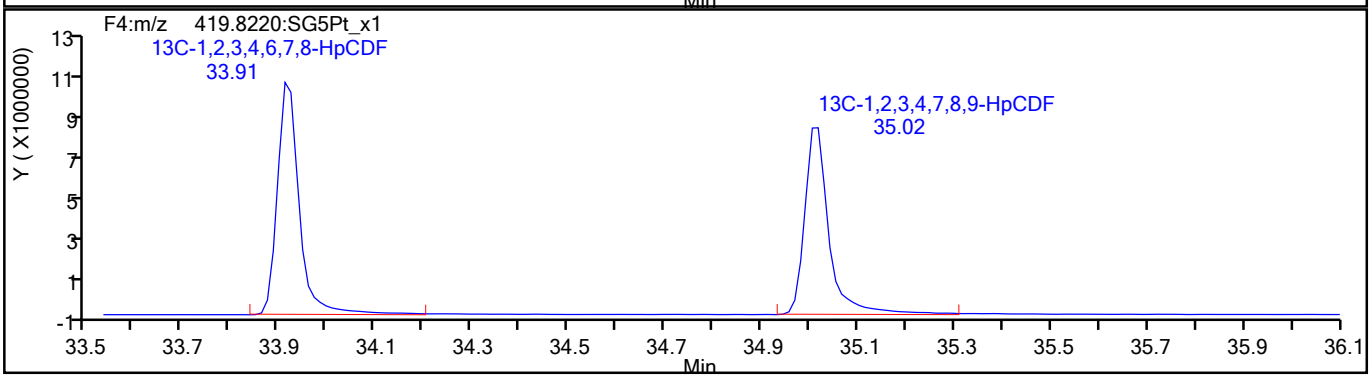

773384

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

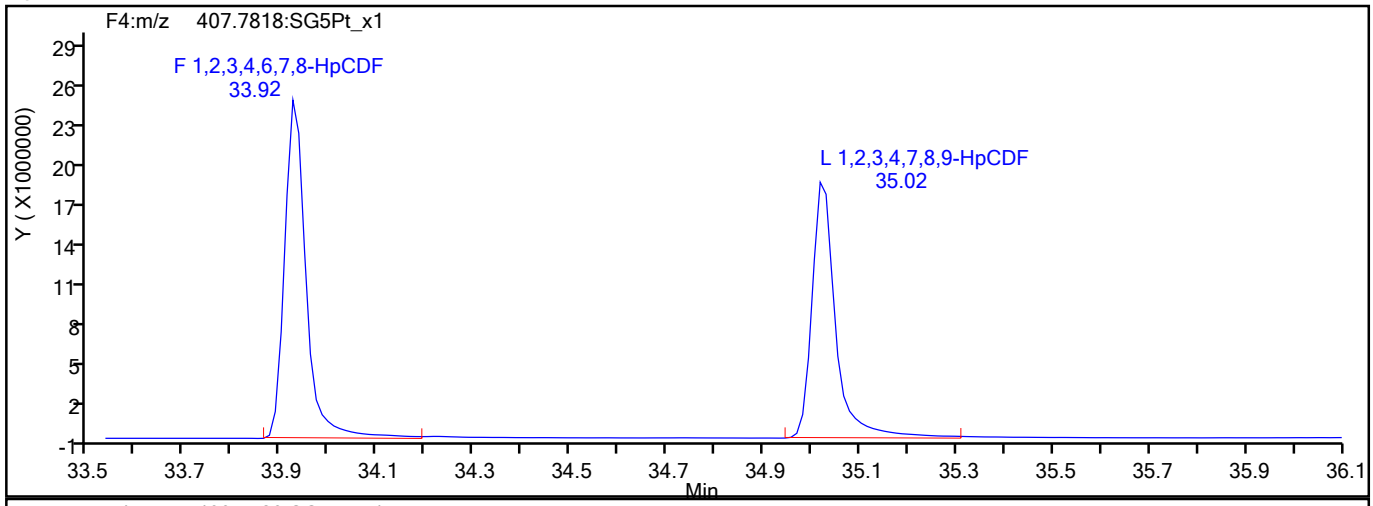

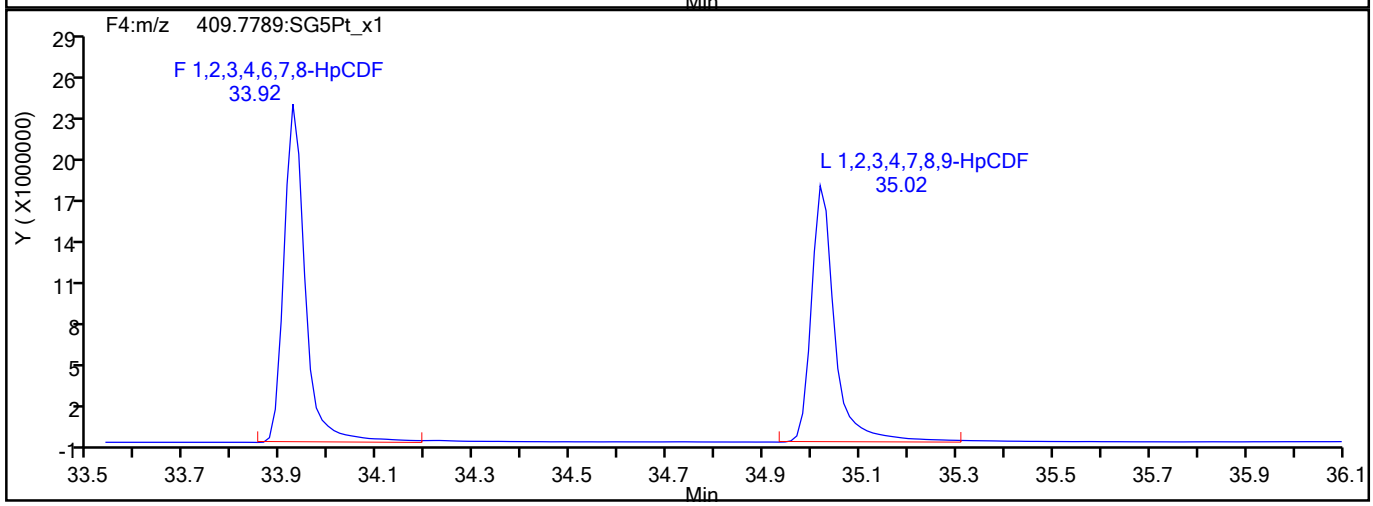

HpCDF Interference Mass

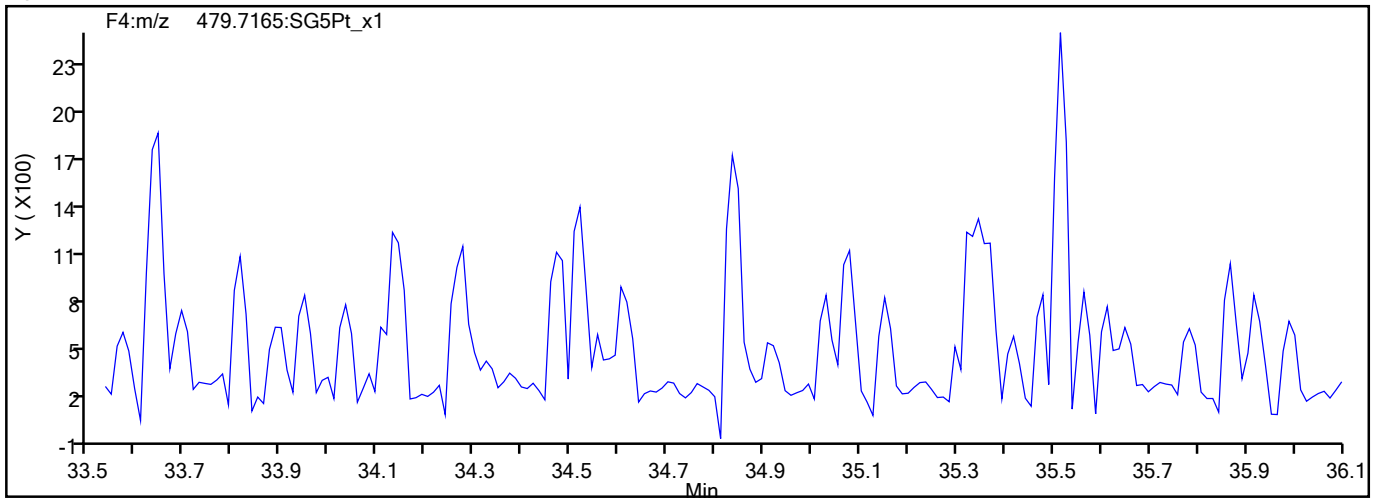

773385

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

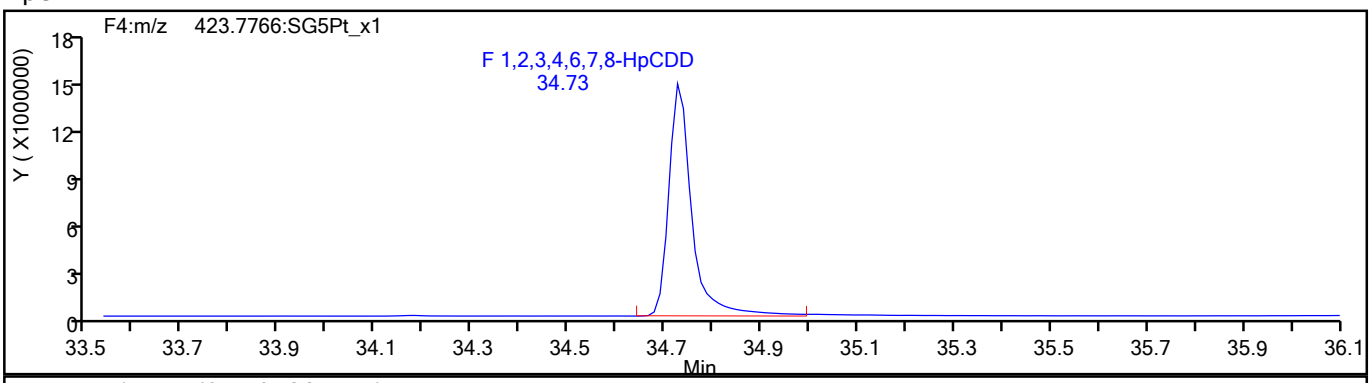

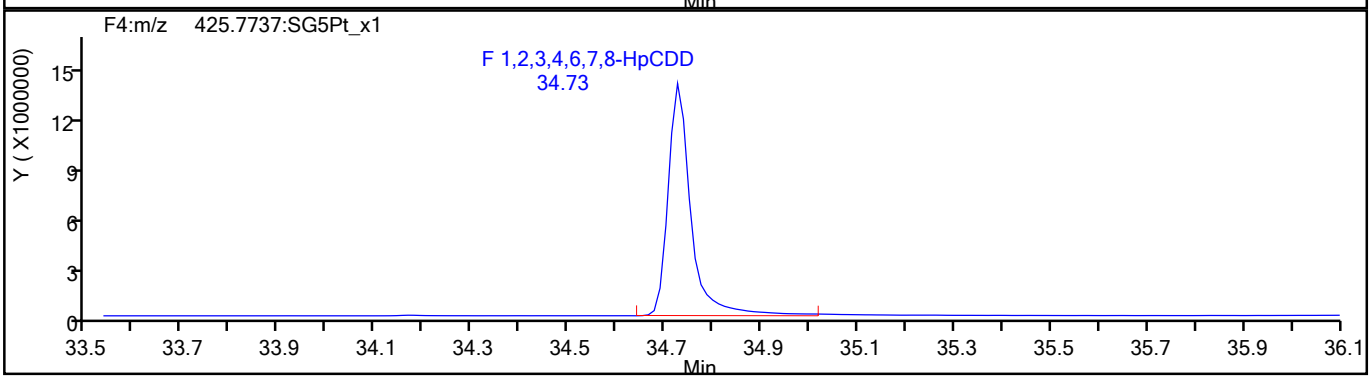

HpCDD Standards

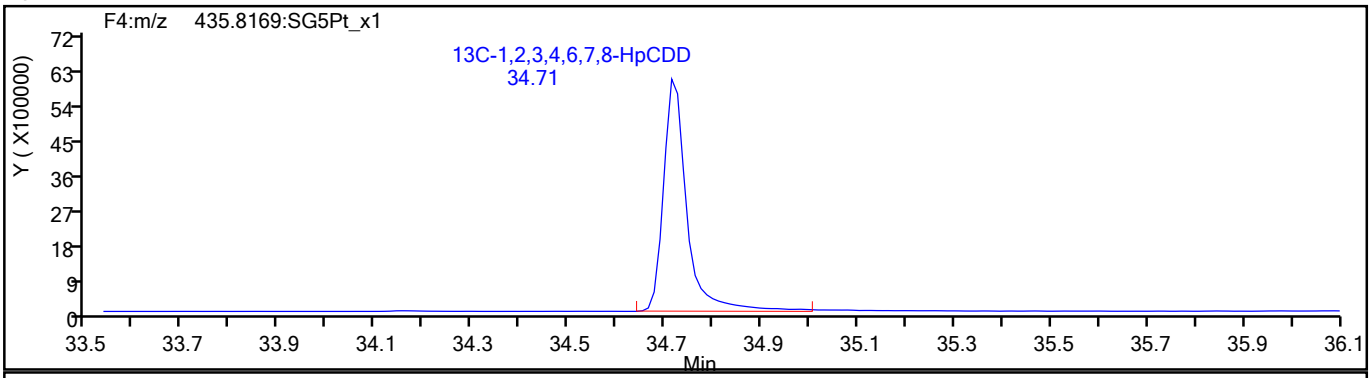

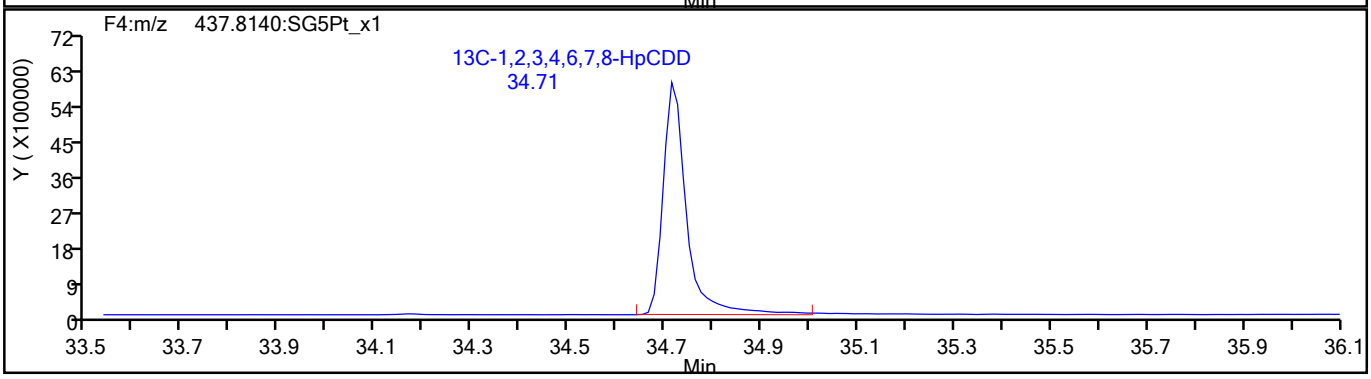

773386

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

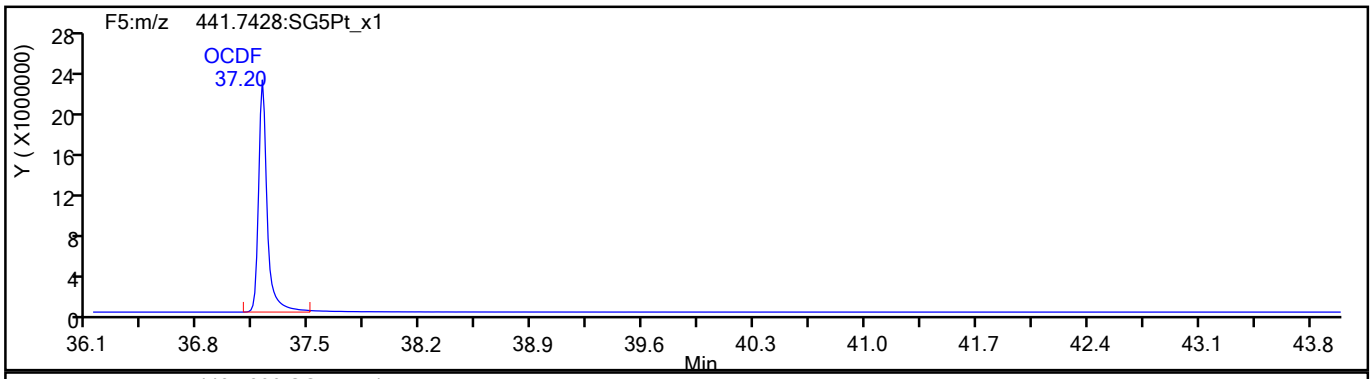

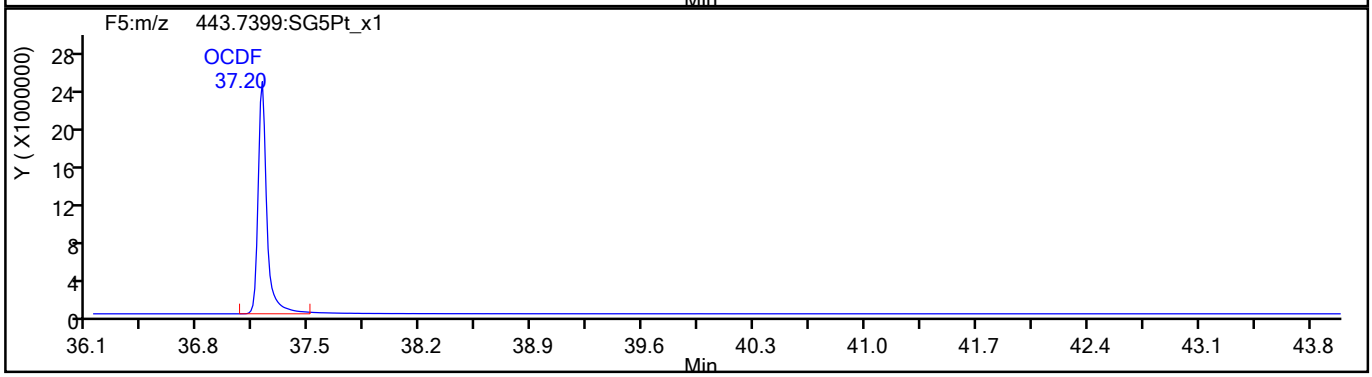

OCDF Standards

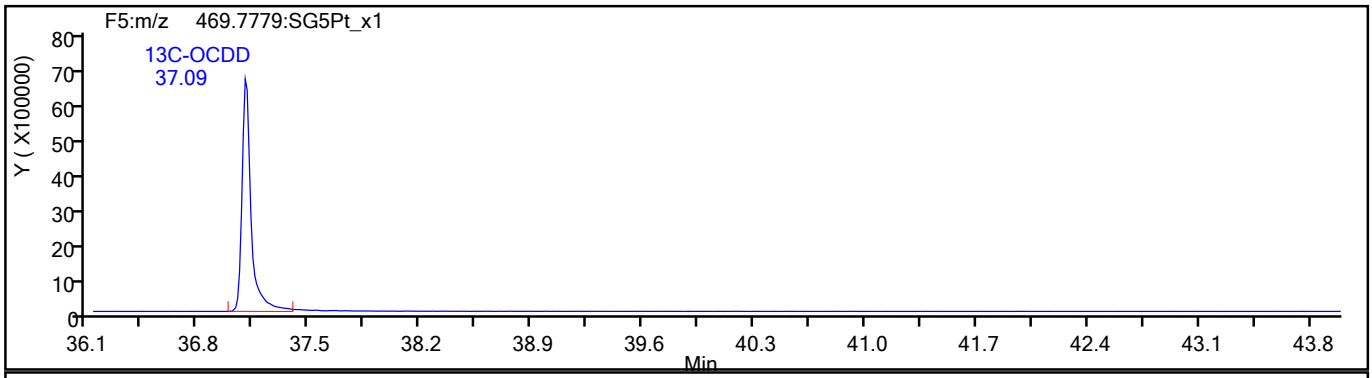

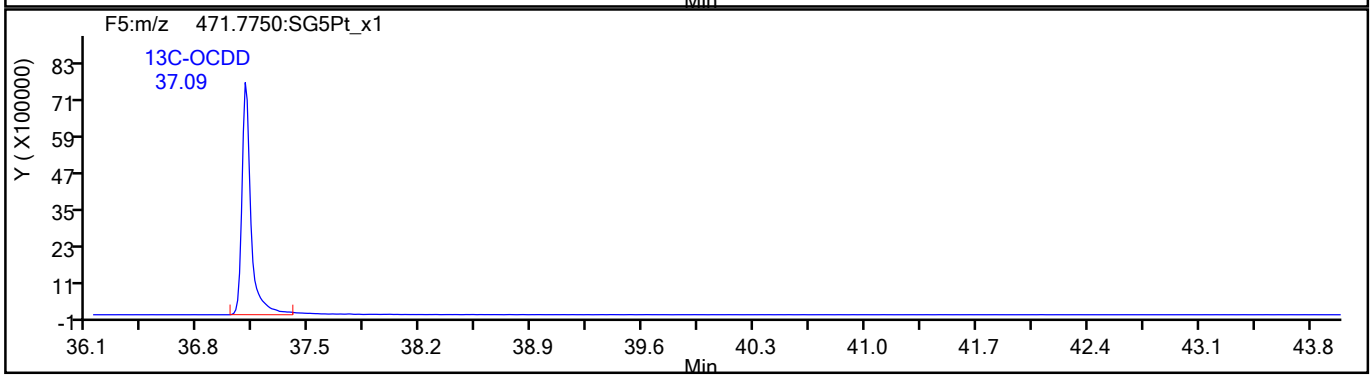

773387

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

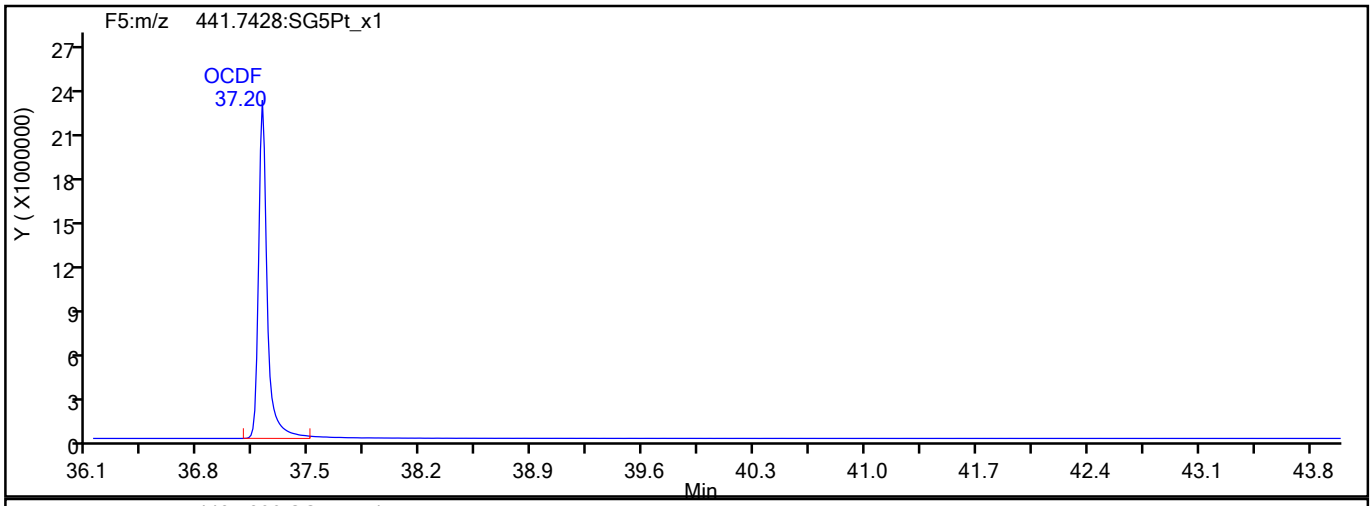

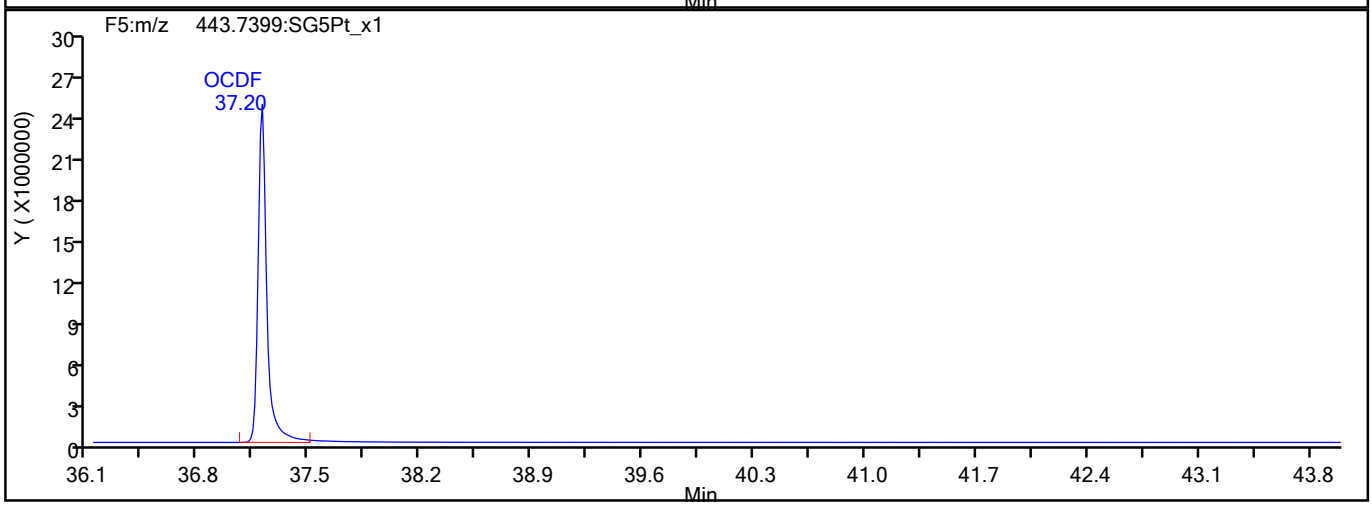

OCDF Interference Mass

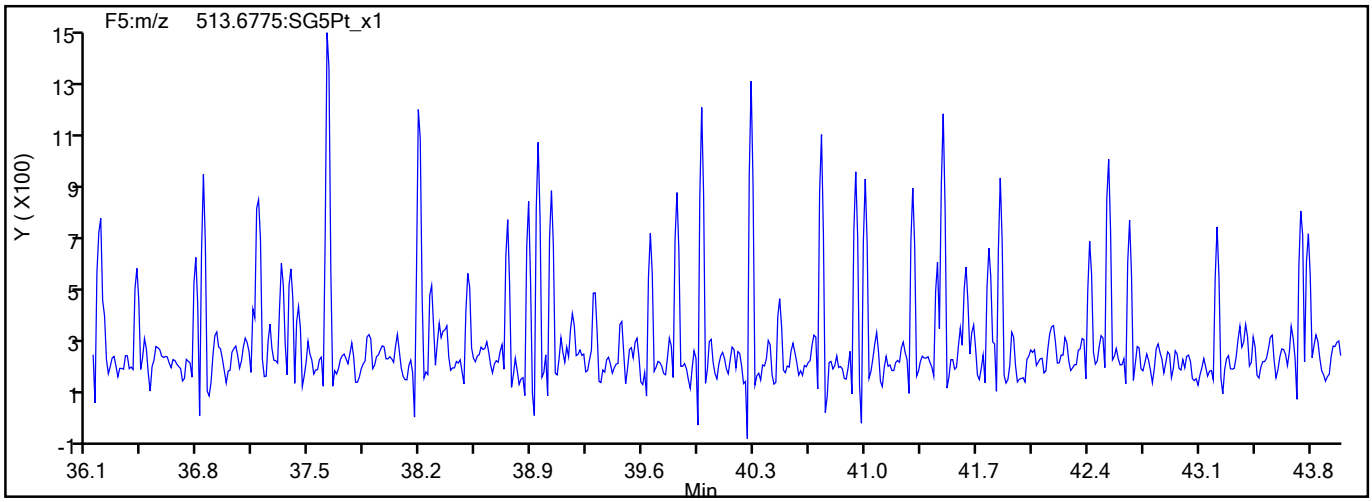

773388

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

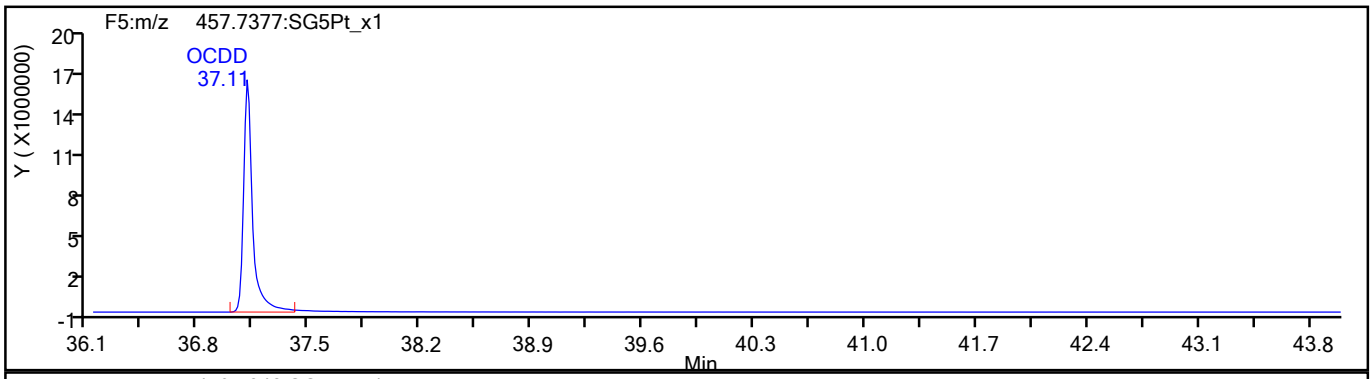

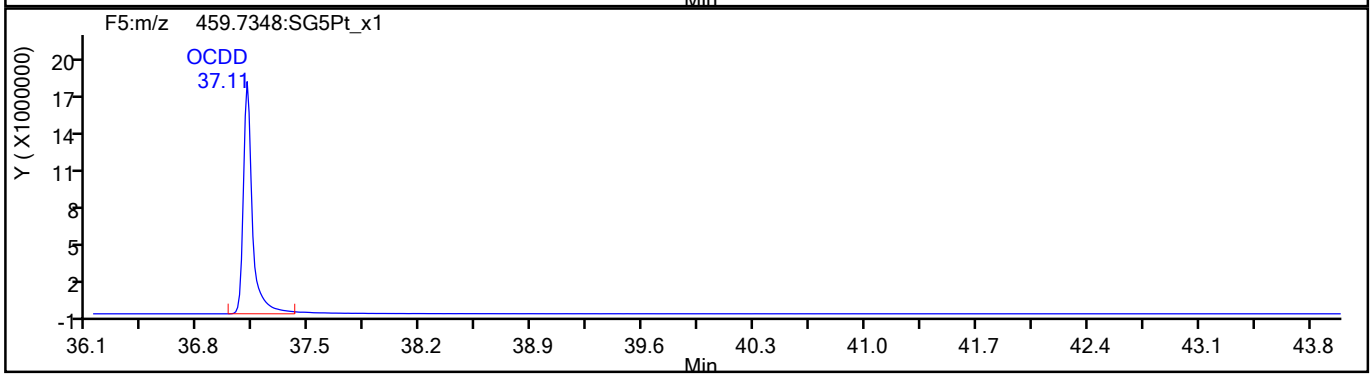

OCDD Standards

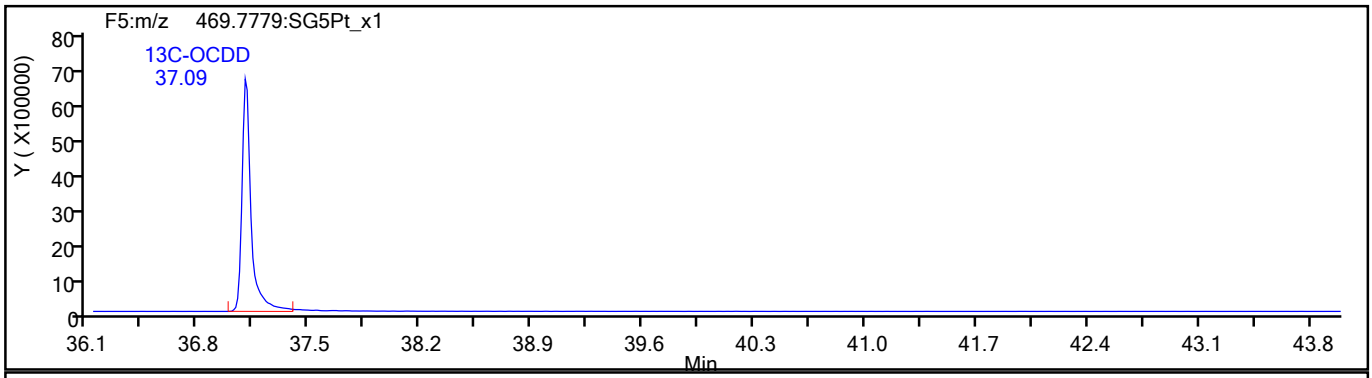

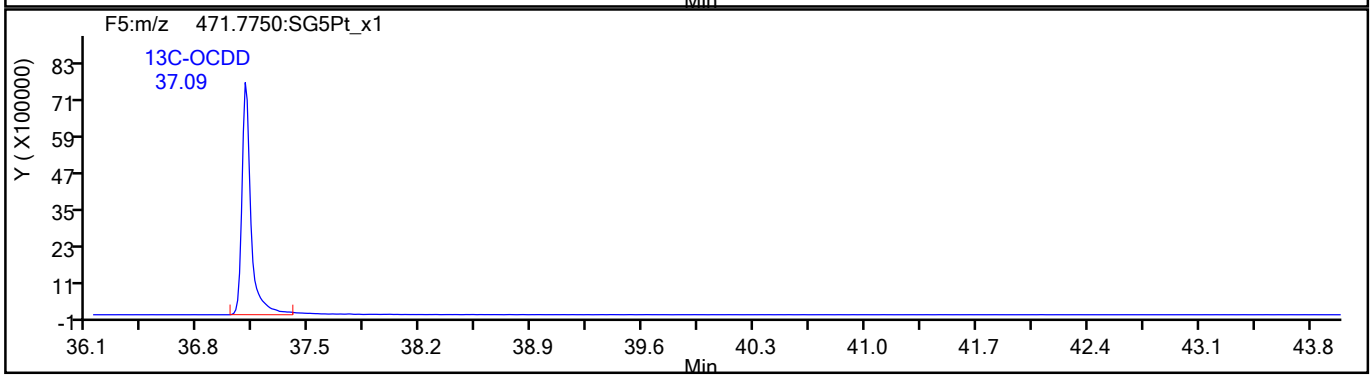

773389

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

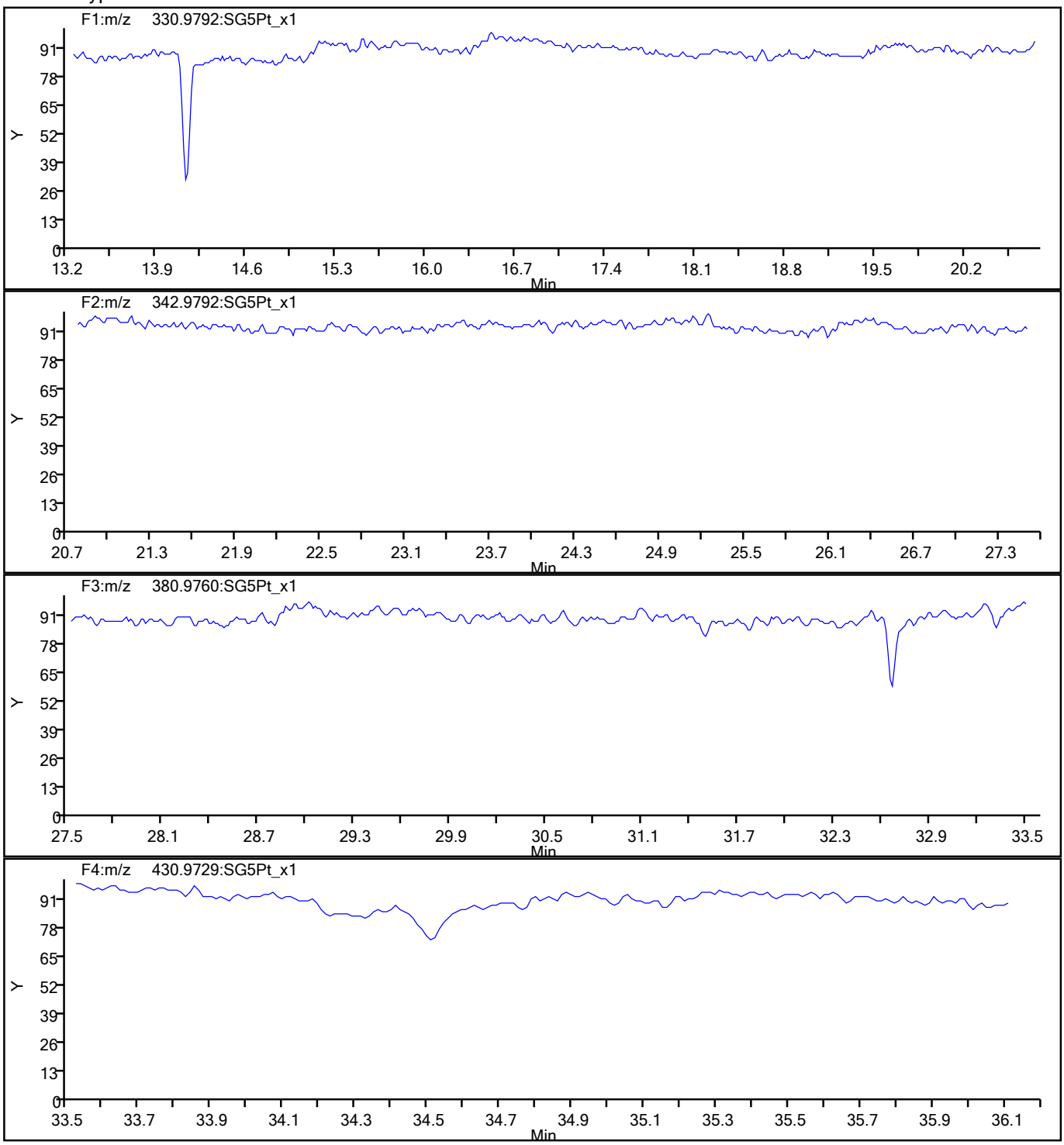

773390

Report Date: 27-Jul-2021 15:17:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

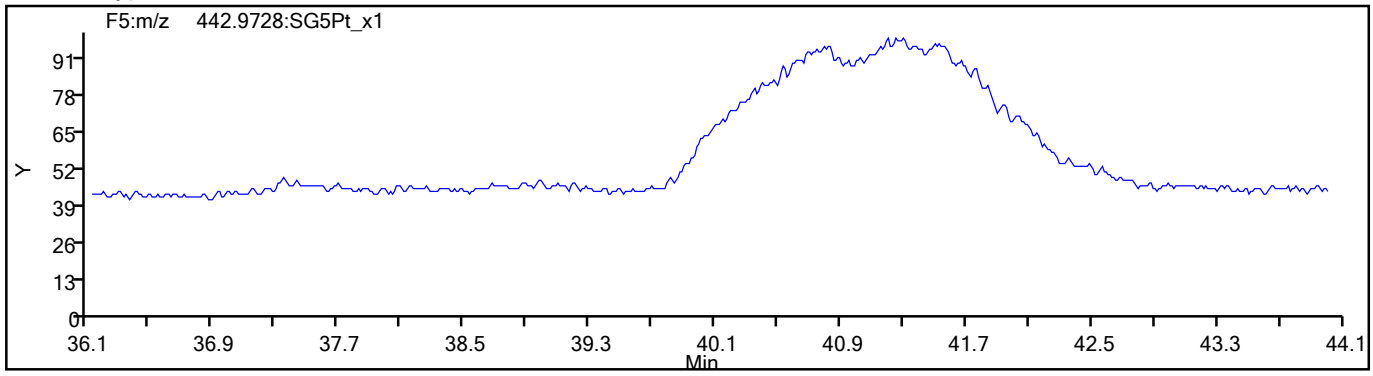

773391

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	57464333	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	95980421	0.79	1.6249	102.8	102.8	0.1660	0.1660	103	
2,3,7,8-TCDF	17.628	204575642	0.78	1.0239	208.2	208.2	0.2336	0.2336	104	
S Total TCDF					208.2	208.2	0.2336	0.2336		
D 13C-2,3,7,8-TCDD	18.338	53698206	0.83	0.8993	103.9	103.9	0.1396	0.1396	104	
$ 37Cl4-2,3,7,8-TCDD	18.354	140953034		1.1071	221.5	221.5	0.1318	0.1318	111	
2,3,7,8-TCDD	18.354	140421448	0.79	1.2541	208.5	208.5	0.1362	0.1362	104	
S Total TCDD					208.5	208.5	0.1362	0.1362		
D 13C-1,2,3,7,8-PeCDF	22.749	72829681	1.58	1.2101	104.7	104.7	0.2112	0.2112	105	
1,2,3,7,8-PeCDF	22.776	795873691	1.61	1.0611	1029.8	1029.8	2.482	2.482	103	
D 13C-2,3,4,7,8-PeCDF	24.126	75649463	1.61	1.2395	106.2	106.2	0.2062	0.2062	106	
2,3,4,7,8-PeCDF	24.153	783403837	1.59	1.0184	1016.8	1016.8	2.723	2.723	102	
S Total PeCDF					2046.7	2046.7	2.602	2.602		
D 13C-1,2,3,7,8-PeCDD	24.862	46251010	1.64	0.7612	105.7	105.7	0.1196	0.1196	106	
1,2,3,7,8-PeCDD	24.889	500555284	1.58	1.0484	1032.3	1032.3	0.8910	0.8910	103	
S Total PeCDD					1032.3	1032.3	0.8910	0.8910		
D 13C-1,2,3,4,7,8-HxCDF	30.835	67741189	0.53	1.0837	103.6	103.6	0.3784	0.3784	104	
1,2,3,4,7,8-HxCDF	30.862	737075796	1.21	1.0851	1002.7	1002.7	4.903	4.903	100	
D 13C-1,2,3,6,7,8-HxCDF	31.008	67363664	0.51	1.1279	99.0	99.0	0.3636	0.3636	98.97	
1,2,3,6,7,8-HxCDF	31.021	785709889	1.22	1.1260	1035.8	1035.8	4.873	4.873	104	
D 13C-2,3,4,6,7,8-HxCDF	31.754	63471184	0.52	1.0637	98.9	98.9	0.3855	0.3855	98.87	
2,3,4,6,7,8-HxCDF	31.767	762810877	1.21	1.1675	1029.4	1029.4	3.909	3.909	103	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58669892	0.52	0.9676	100.5	100.5	0.4238	0.4238	100	
1,2,3,7,8,9-HxCDF	32.539	708280047	1.22	1.1664	1035.0	1035.0	4.123	4.123	104	
S Total HxCDF					4103.0	4103.0	4.452	4.452		
* 13C-1,2,3,7,8,9-HxCDD	32.339	60348148	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	46886171	1.24	0.7334	105.9	105.9	0.3391	0.3391	106	
1,2,3,4,7,8-HxCDD	31.940	484857042	1.26	1.0640	971.9	971.9	2.786	2.786	97.19	
D 13C-1,2,3,6,7,8-HxCDD	32.033	53564396	1.27	0.8802	100.8	100.8	0.2826	0.2826	101	
1,2,3,6,7,8-HxCDD	32.047	543061818	1.27	1.0001	1013.8	1013.8	2.795	2.795	101	
1,2,3,7,8,9-HxCDD	32.353	563888565	1.26	1.1325	991.3	991.3	2.541	2.541	99.13	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDD					2977.0	2977.0	2.707	2.707		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	46328151	0.45	0.7730	99.3	99.3	0.9693	0.9693	99.31	
1,2,3,4,6,7,8-HpCDF	33.924	681312007	1.05	1.4413	1020.4	1020.4	8.187	8.187	102	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44333848	0.44	0.7008	104.8	104.8	1.069	1.069	105	
1,2,3,4,7,8,9-HpCDF	35.017	590555312	1.06	1.3174	1011.1	1011.1	10.5	10.5	101	
S Total HpCDF					2031.5	2031.5	9.356	9.356		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	39395832	1.02	0.6472	100.9	100.9	0.4739	0.4739	101	
1,2,3,4,6,7,8-HpCDD	34.726	441437476	1.05	1.0943	1024.0	1024.0	3.855	3.855	102	
S Total HpCDD					1024.0	1024.0	3.855	3.855		
D 13C-OCDD	37.093	56623863	0.89	0.4472	209.8	209.8	0.2327	0.2327	105	
OCDF	37.201	856685987	0.91	1.4382	2104.0	2104.0	1.905	1.905	105	
OCDD	37.105	635652839	0.90	1.1070	2028.1	2028.1	1.855	1.855	101	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		26125466	6597193	4577	11442	1441		
333.9339	18.142	18.142	0		31338867	7893522	2702	6755	2921	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42243137	10877420	7832	19580	1389		
317.9389	17.613	17.616	0	0.971	53737284	13863668	7802	19505	1777	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	89710432	22799700	10338	25845	2205		
305.8987	17.628	17.631	0	1.001	114865210	29189675	13335	33337	2189	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24360997	5757558	4577	11442	1258		
333.9339	18.338	18.338	0	1.011	29337209	6914283	2702	6755	2559	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	140953034	33738158	8459	21147	3988		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	62065087	14965631	3913	9782	3825		
321.8936	18.354	18.357	0	1.001	78356361	18744482	4747	11867	3949	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44649559	7939527	8573	21432	926		
353.8970	22.749	22.754	0	1.254	28180122	5062354	6242	15605	811	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	490871580	87021007	84135	210337	1034		
341.8567	22.776	22.779	0	1.001	305002111	54503599	52854	132135	1031	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46717935	7613965	8573	21432	888		
353.8970	24.126	24.129	0	1.330	28931528	4737188	6242	15605	759	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	480352978	79104825	84135	210337	940		
341.8567	24.153	24.156	0	1.001	303050859	50060127	52854	132135	947	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28720712	4433240	3087	7717	1436		
369.8919	24.862	24.865	0	1.370	17530298	2751802	2189	5472	1257	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	306292917	47311146	15348	38370	3083		
357.8516	24.889	24.892	0	1.001	194262367	30133208	11499	28747	2621	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23491874	5084915	9674	24185	526		
385.8610	30.835	30.838	0	0.953	44249315	9441190	17790	44475	531	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	404173144	87133654	170642	426605	511		
375.8178	30.848	30.857	0	1.000	332902652	71216591	138478	346195	514	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	22854682	4877346	9674	24185	504		
385.8610	31.008	31.003	0	0.959	44508982	9206926	17790	44475	518	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.000	431948071	93438031	170642	426605	548		
375.8178	31.021	31.022	0	1.000	353761818	76246532	138478	346195	551	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	21747421	5871662	9674	24185	607		
385.8610	31.754	31.756	0	0.982	41723763	11062051	17790	44475	622	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	417841952	110026703	170642	426605	645		
375.8178	31.767	31.772	0	1.000	344968925	92108448	138478	346195	665	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20172563	5575575	9674	24185	576		
385.8610	32.512	32.523	-1	1.005	38497329	10495423	17790	44475	590	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	388834443	107441652	170642	426605	630		
375.8178	32.526	32.534	0	1.000	319445604	89819128	138478	346195	649	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33485933	9289499	8951	22377	1038		
403.8529	32.339	32.342	0		26862215	7454274	7708	19270	967	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	25994948	7598983	8951	22377	849		
403.8529	31.927	31.929	0	0.987	20891223	6054958	7708	19270	786	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	270288224	77533273	86149	215372	900		
391.8127	31.940	31.945	0	1.000	214568818	61952830	75747	189367	818	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29946566	8106259	8951	22377	906		
403.8529	32.033	32.033	0	0.991	23617830	6373294	7708	19270	827	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	303387935	83103965	86149	215372	965		
391.8127	32.047	32.047	0	1.000	239673883	65565020	75747	189367	866	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	314172702	87971106	86149	215372	1021		
391.8127	32.353	32.355	0	1.013	249715863	70210414	75747	189367	927	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14282220	4787635	15981	39952	300		
419.8220	33.912	33.914	0	1.049	32045931	10687518	34202	85505	312	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	349397605	118035783	389676	974190	303		
409.7789	33.924	33.926	0	1.000	331914402	111658032	340706	851765	328	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13509696	4047534	15981	39952	253		
419.8220	35.005	35.010	0	1.082	30824152	9120201	34202	85505	267	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	303260617	91538482	389676	974190	235		
409.7789	35.017	35.020	0	1.000	287294695	87143866	340706	851765	256	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19890119	6131671	10444	26110	587		
437.8140	34.714	34.716	0	1.073	19505713	6051375	10100	25250	599	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	225857690	69087451	102453	256132	674		
425.7737	34.726	34.726	0	1.000	215579786	65898474	103127	257817	639	1.05(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26710485	6689918	2659	6647	2516		
471.7750	37.093	37.094	0	1.147	29913378	7452640	4311	10777	1729	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	409115360	108366645	37076	92690	2923		
443.7399	37.201	37.199	0	1.003	447570627	117808946	40434	101085	2914	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	300559615	76562352	27801	69502	2754		
459.7348	37.105	37.106	0	1.000	335093224	85854399	30277	75692	2836	0.90(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

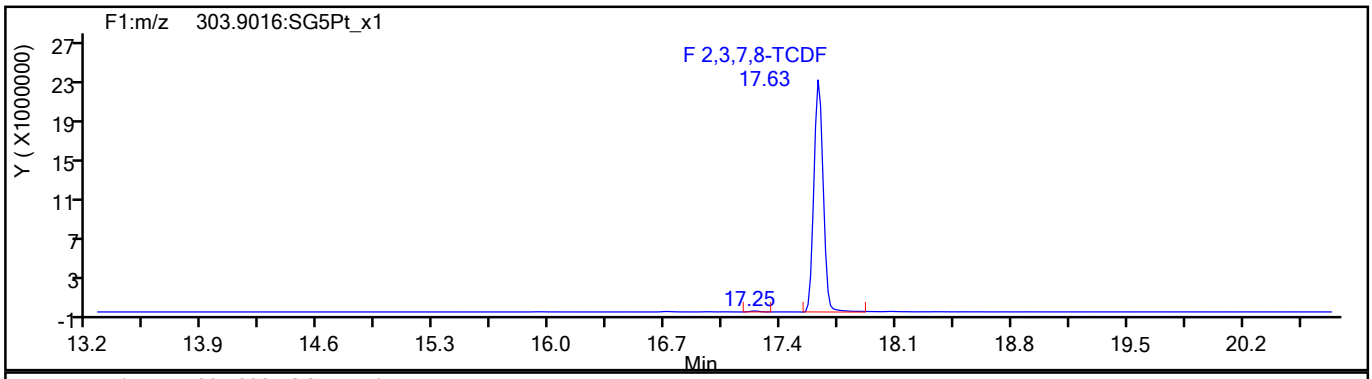

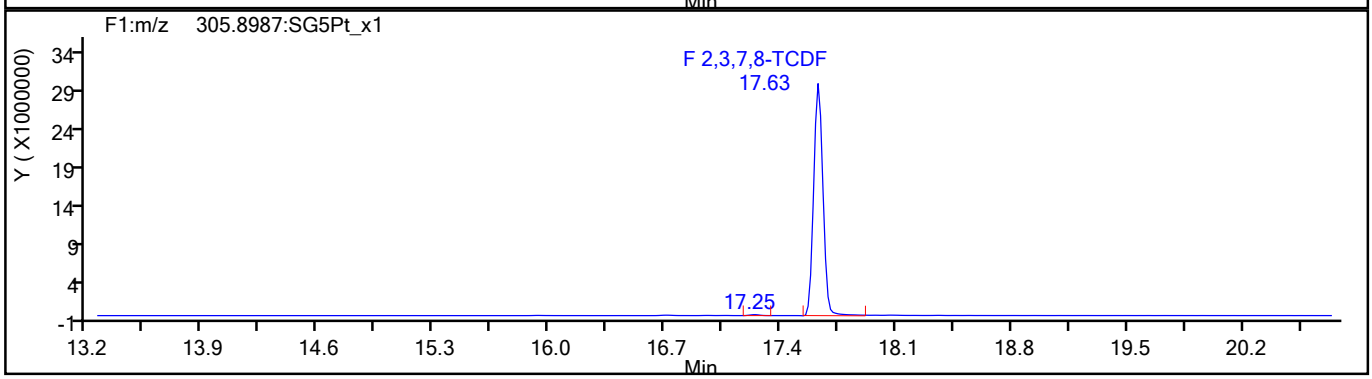

TCDF Standards

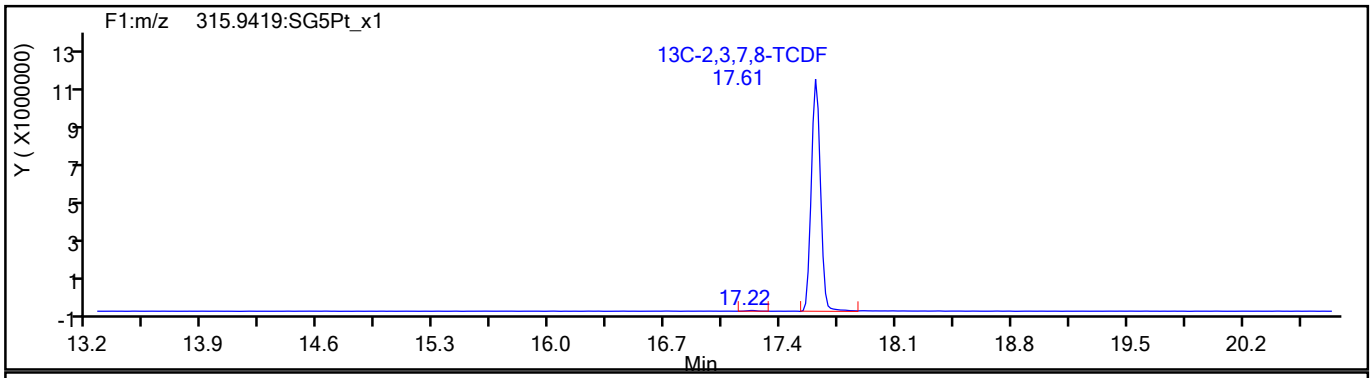

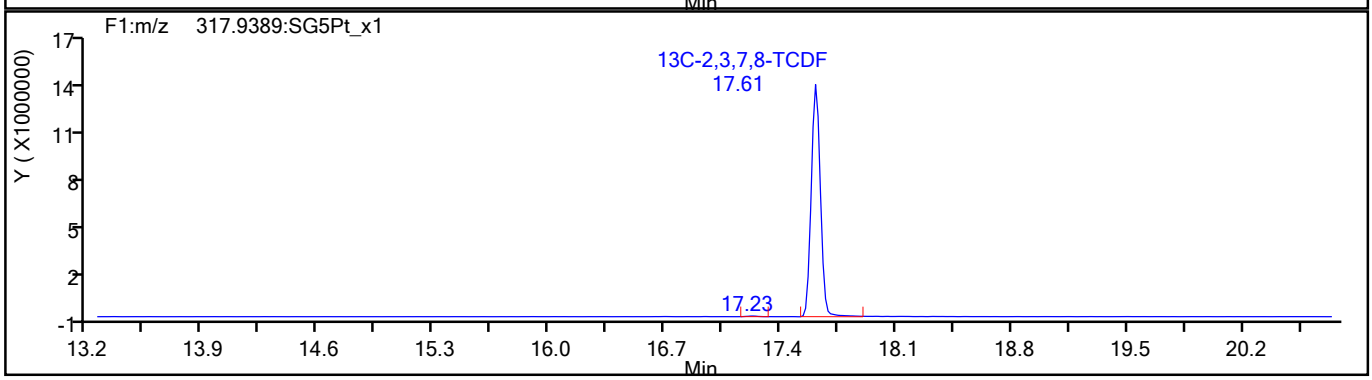

773397

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

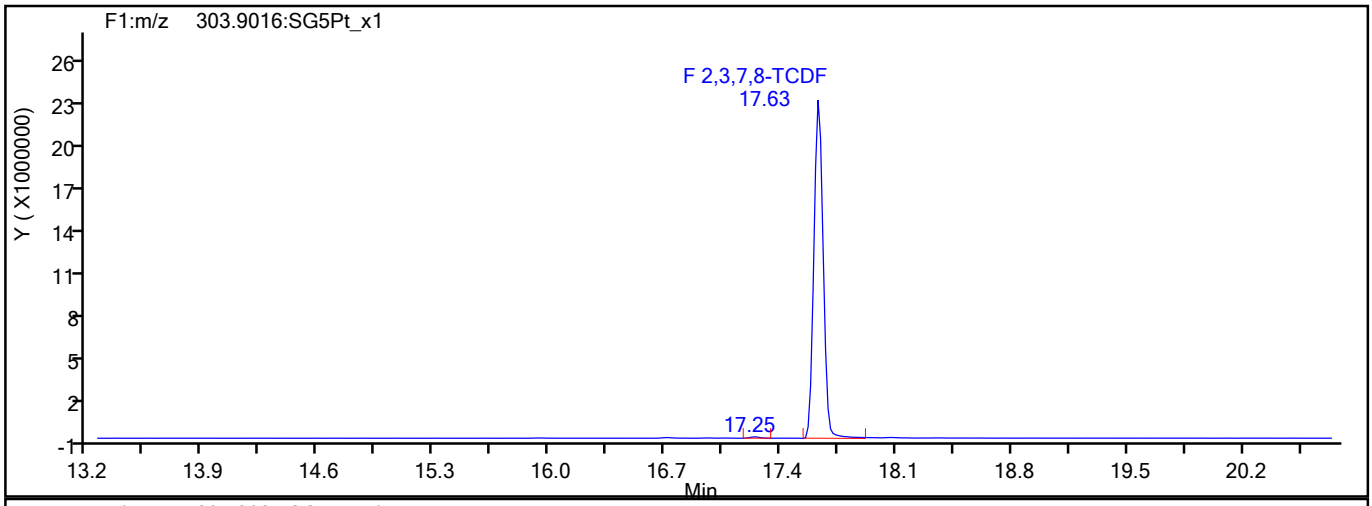

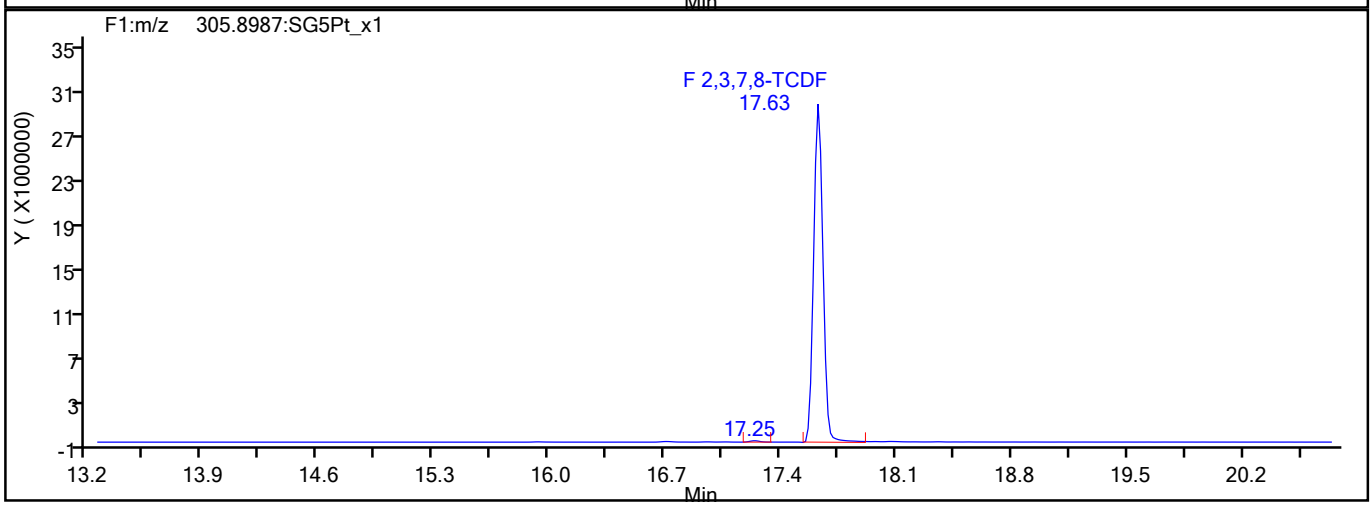

TCDF Interference Mass

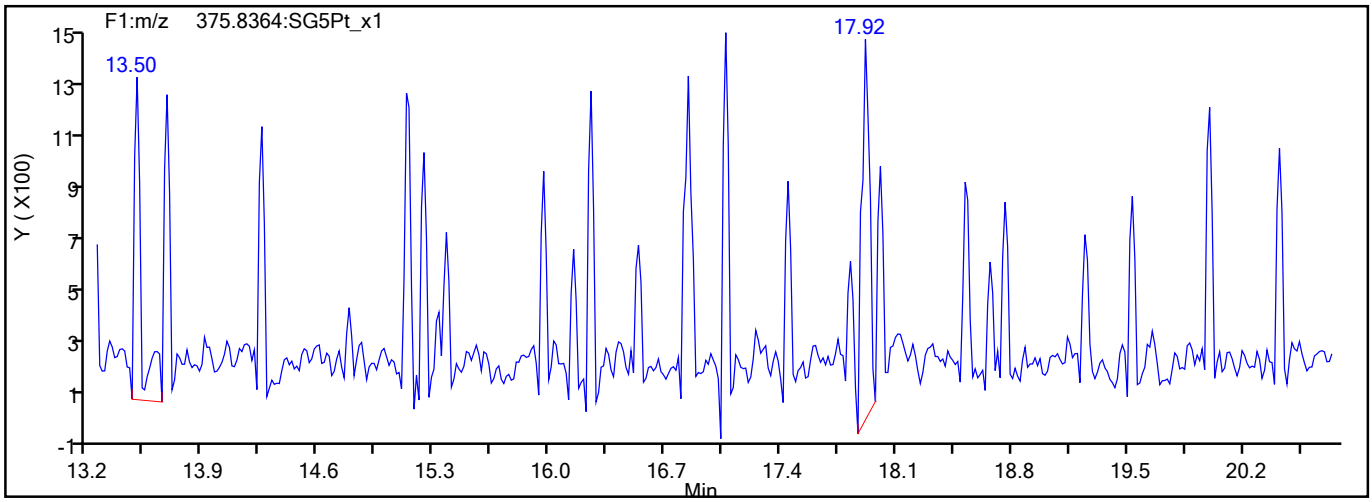

773398

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

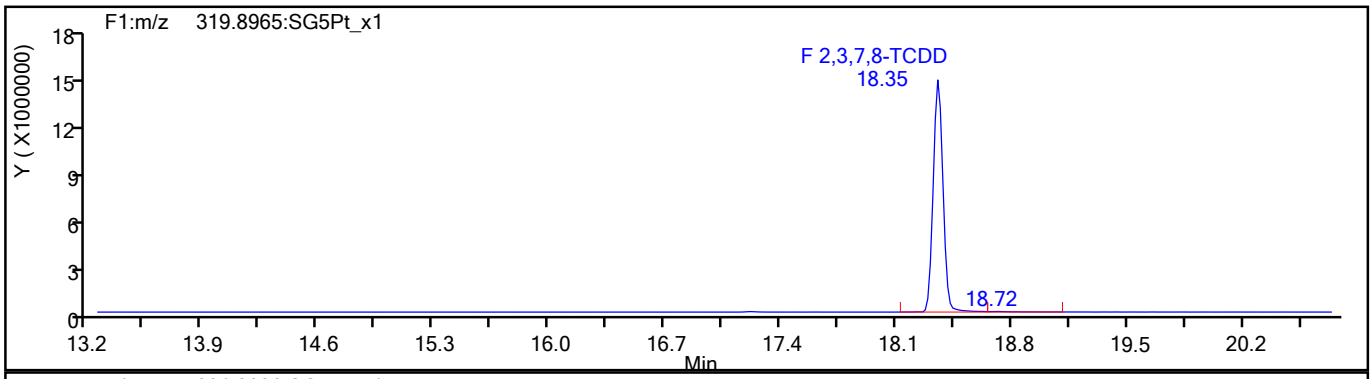

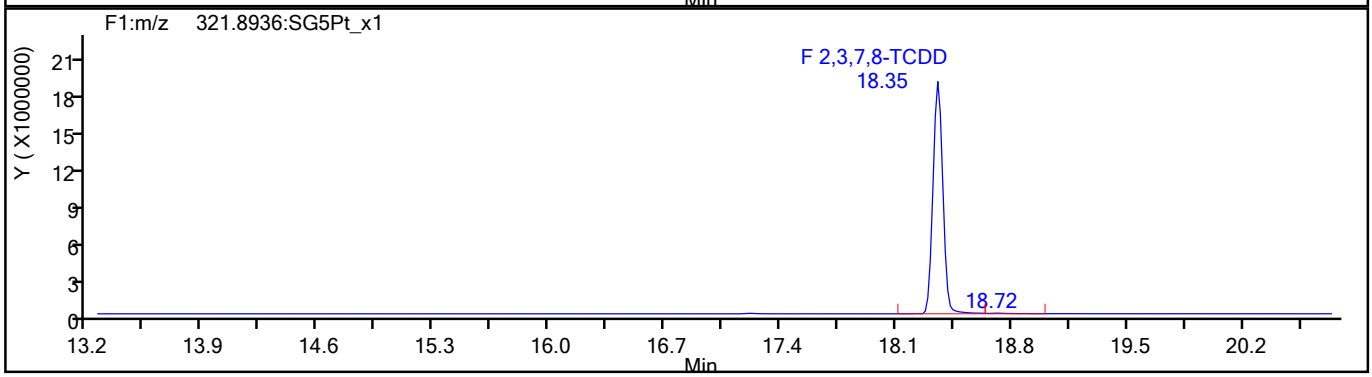

TCDD Standards

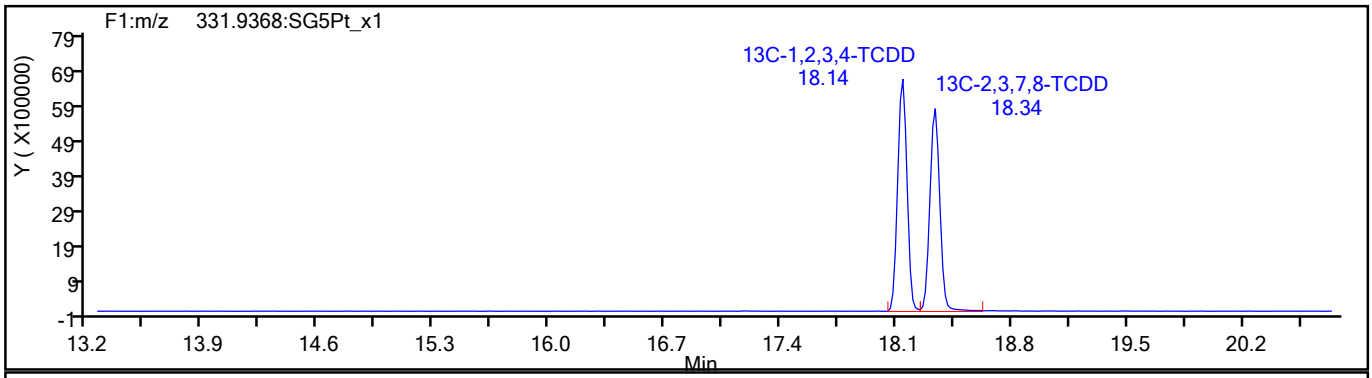

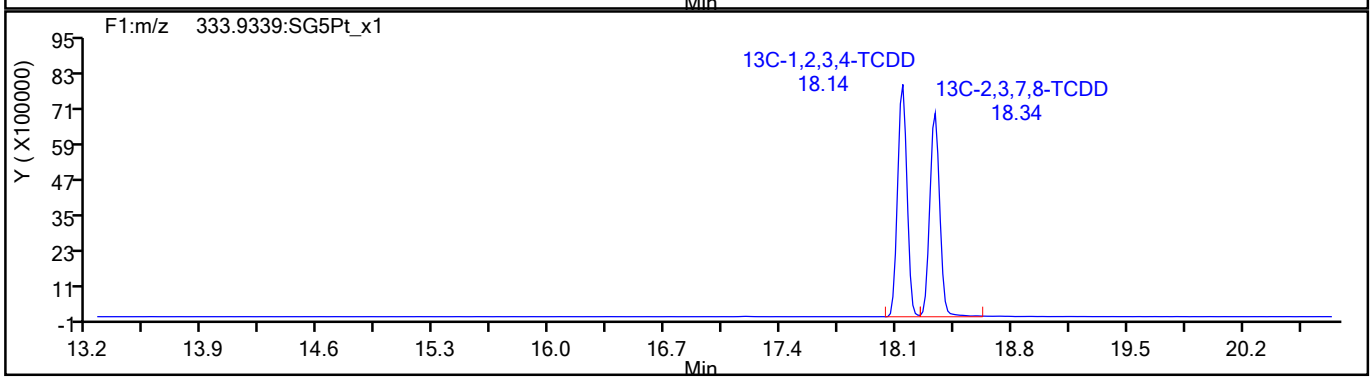

773399

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

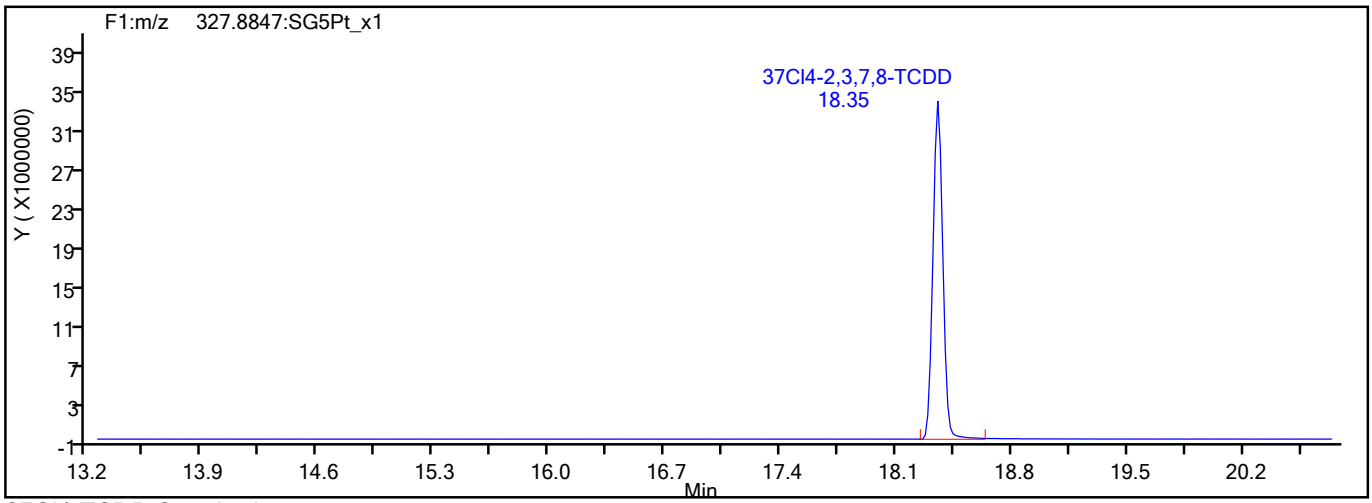

37Cl4-TCDD Standards

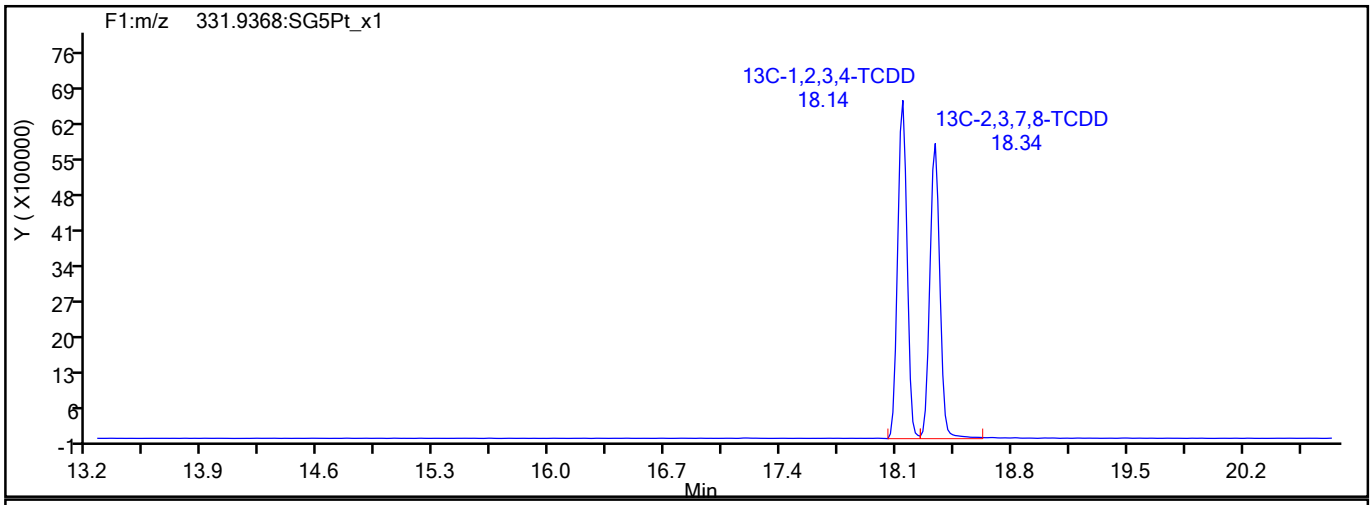

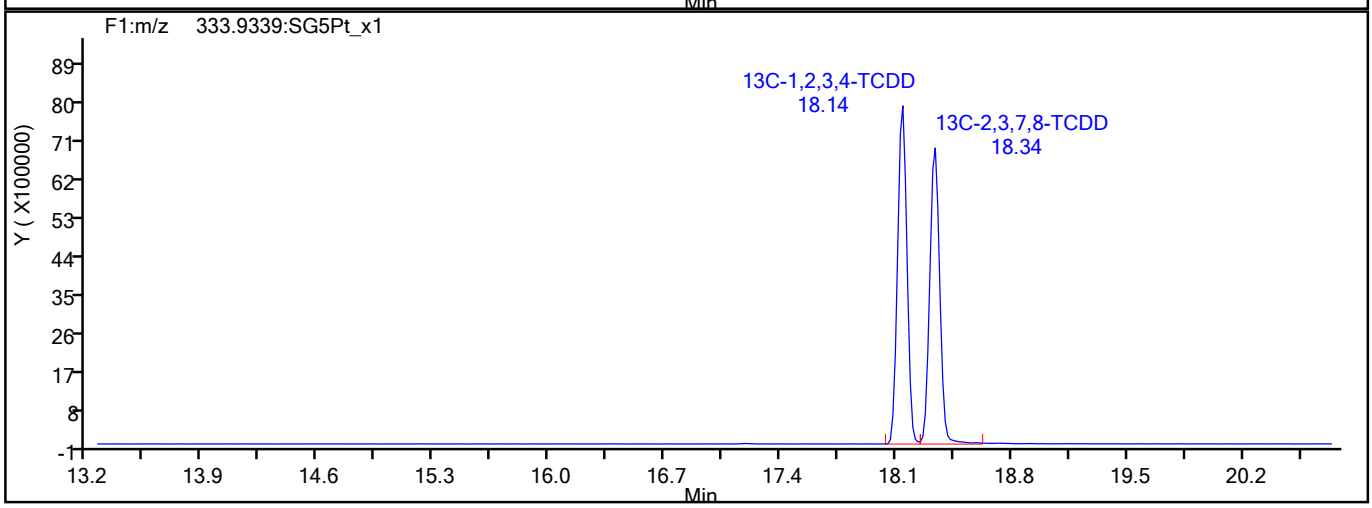

773400

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

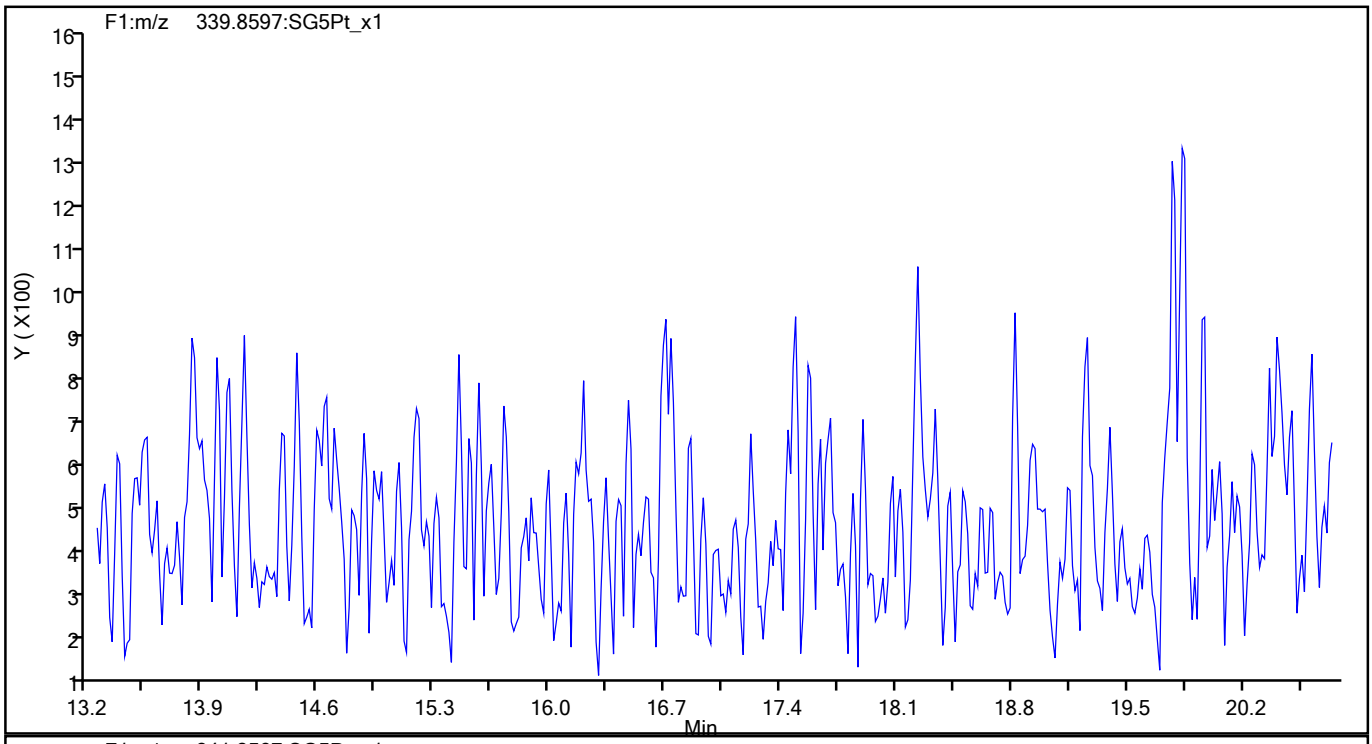

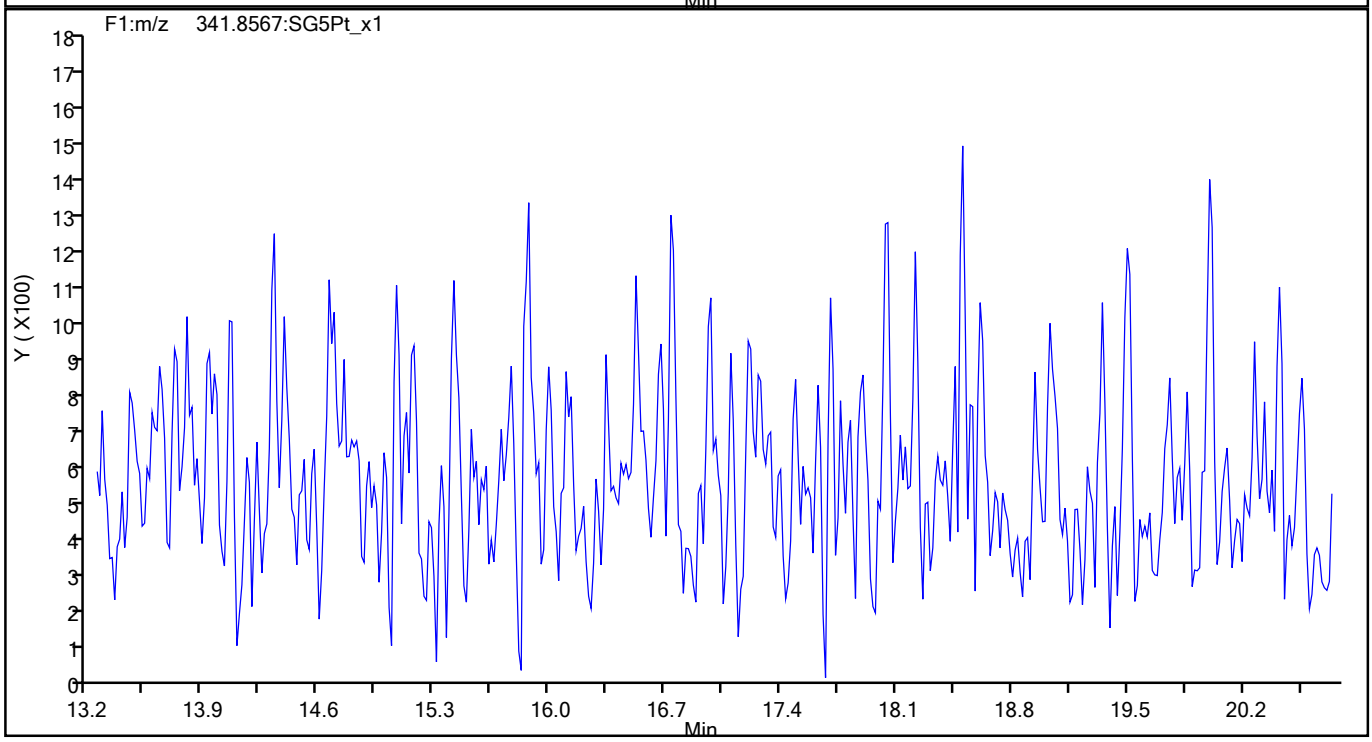

773401

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

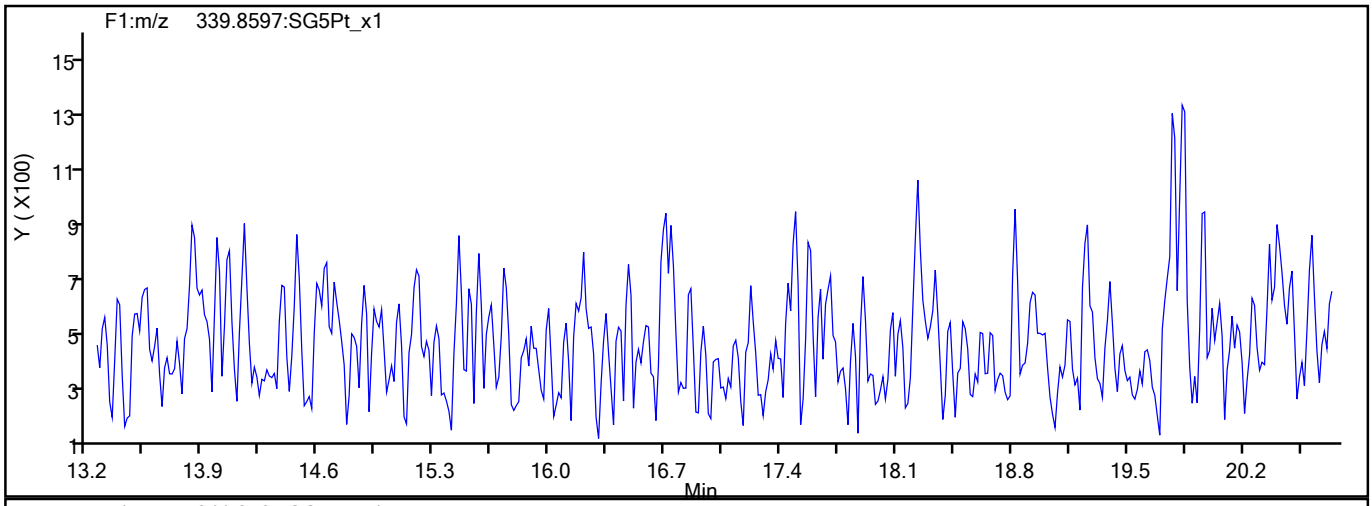

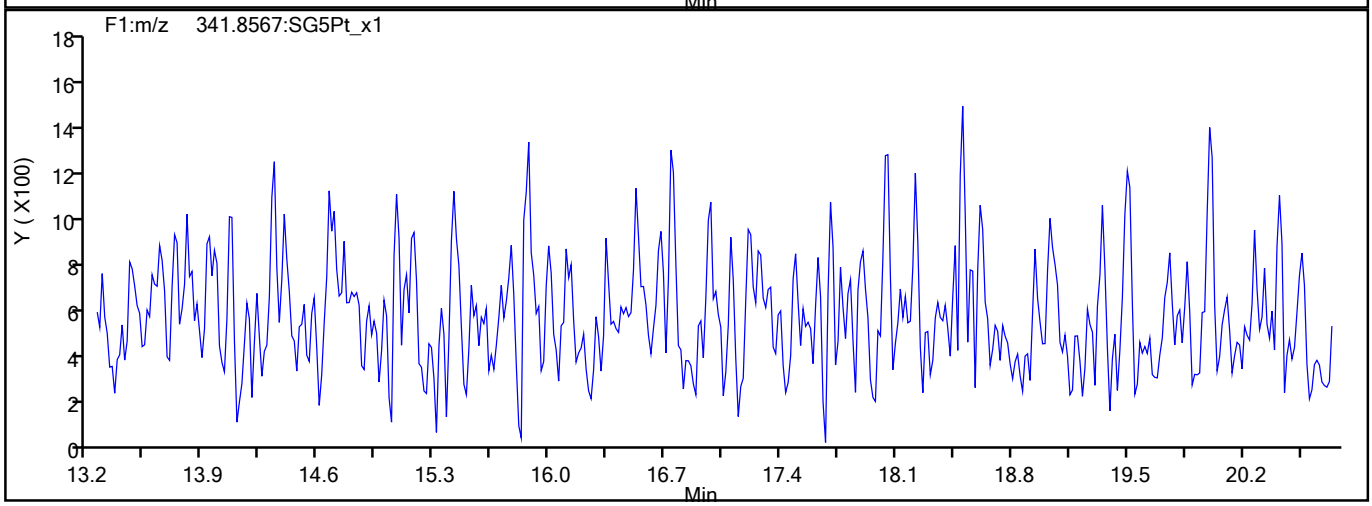

F1 PeCDFs Interference Mass

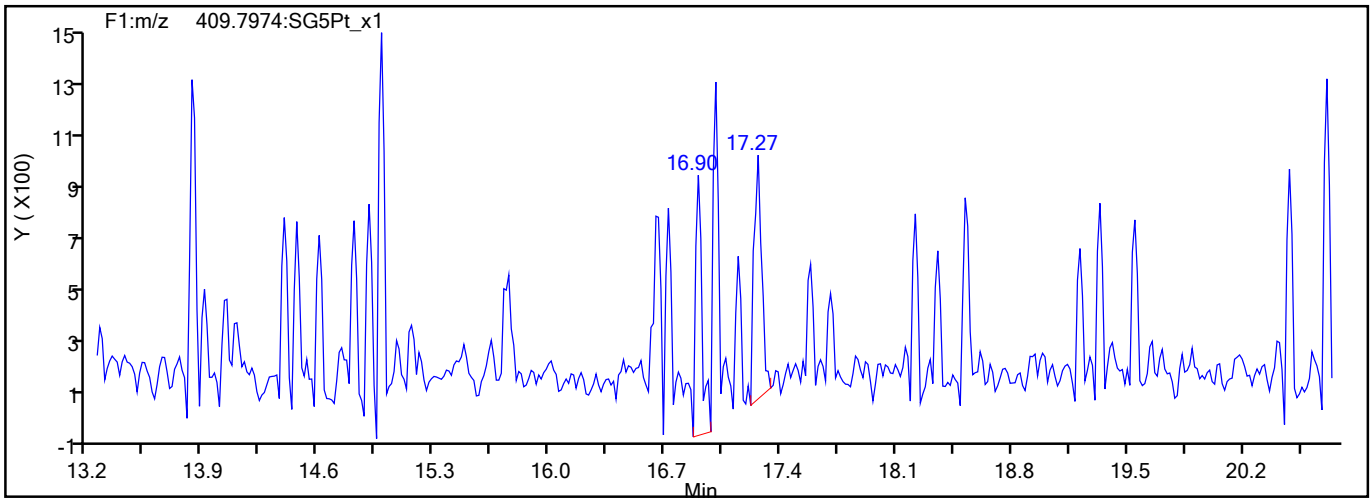

773402

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

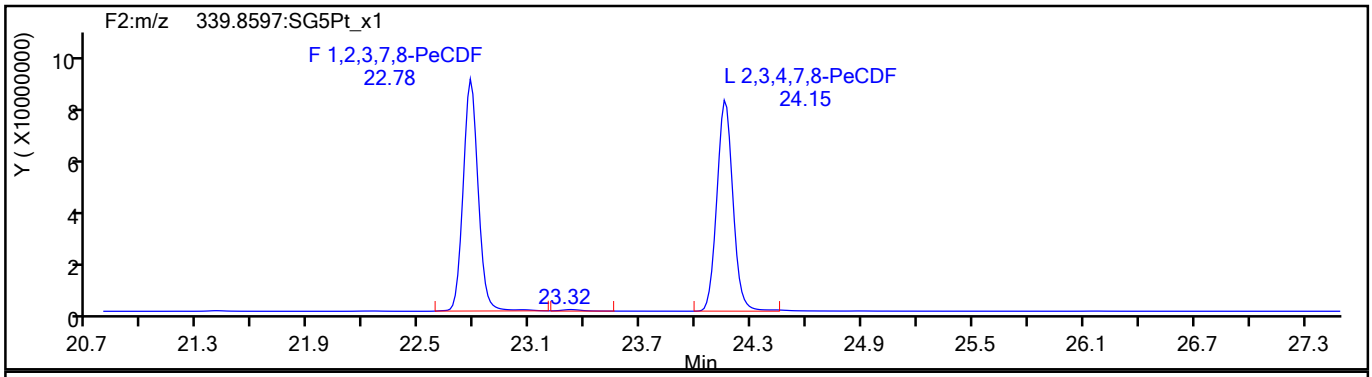

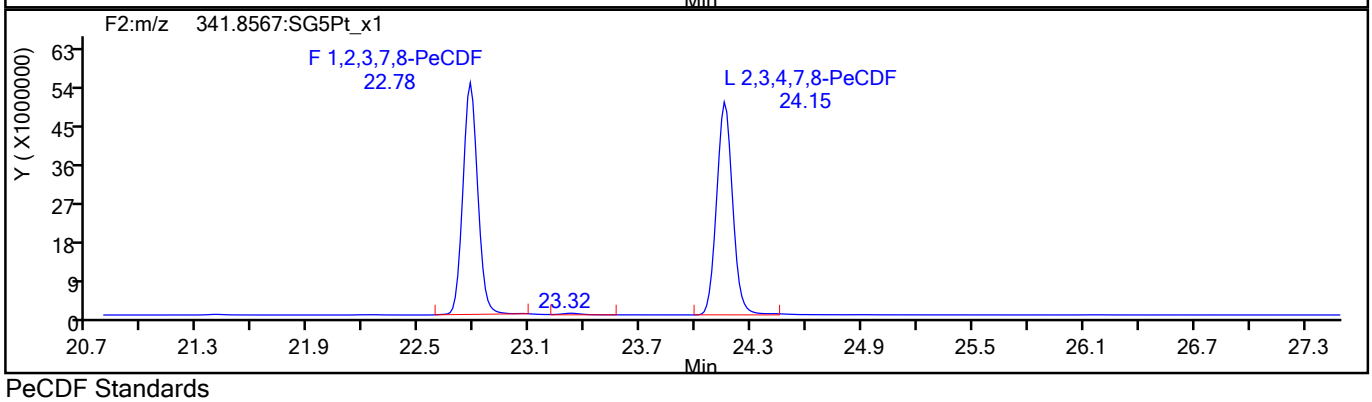

PeCDF Standards

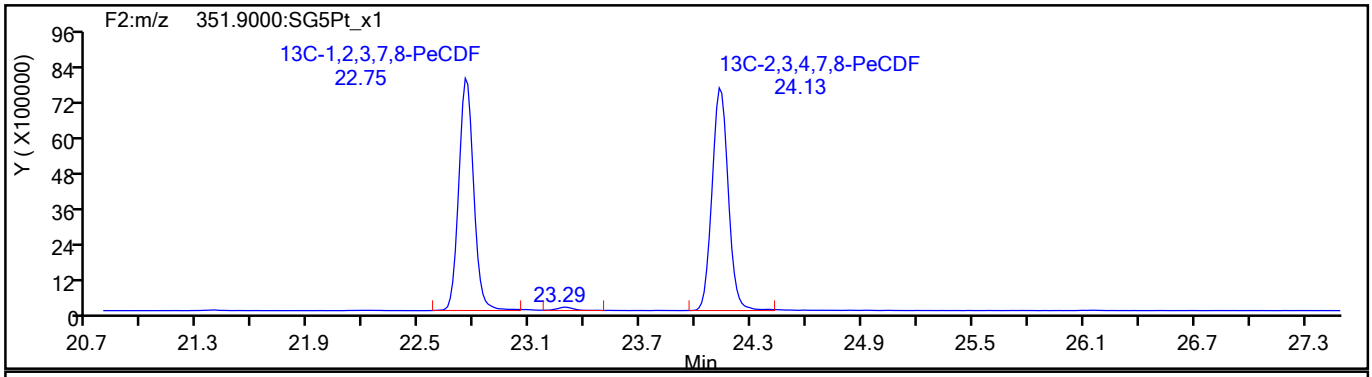

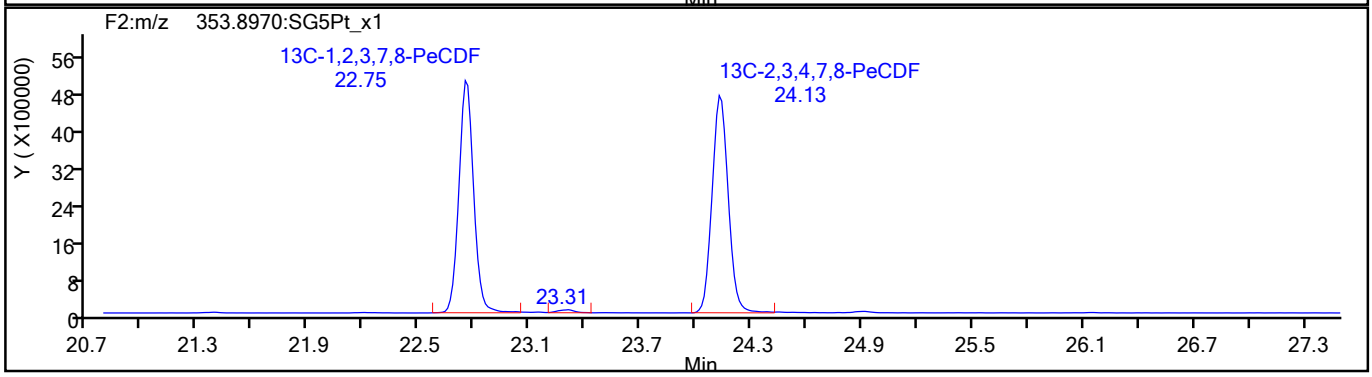

773403

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

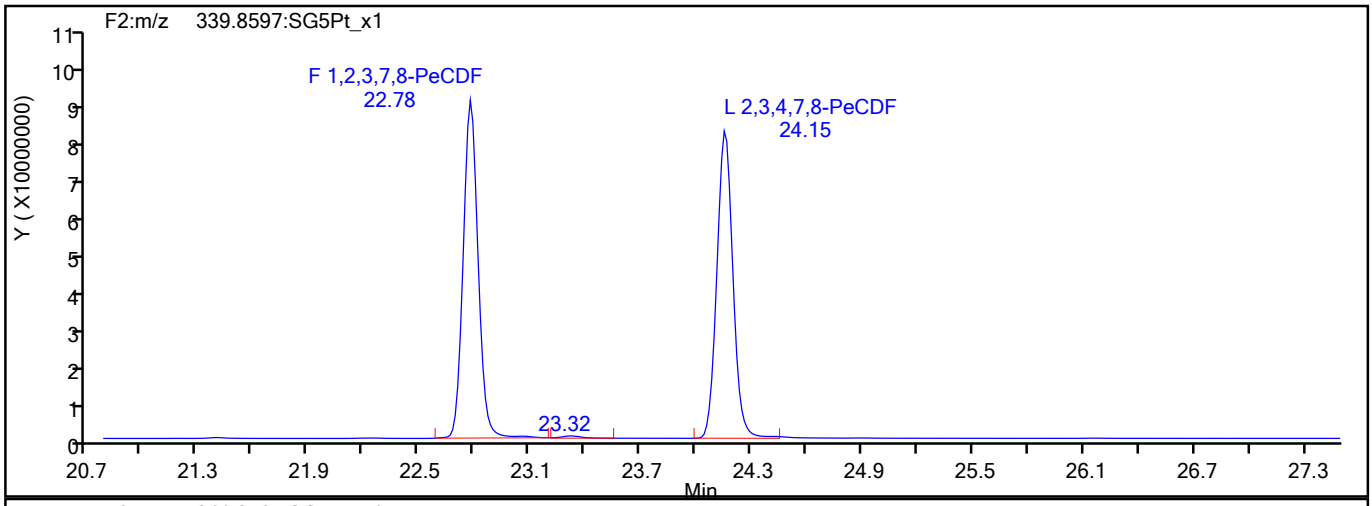

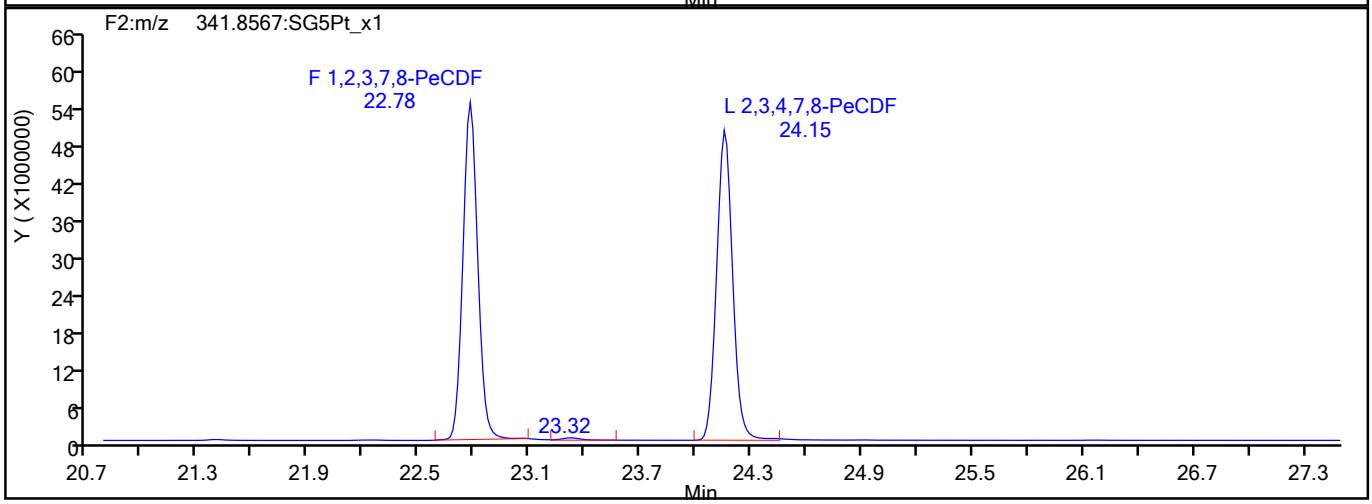

PeCDF Interference Mass

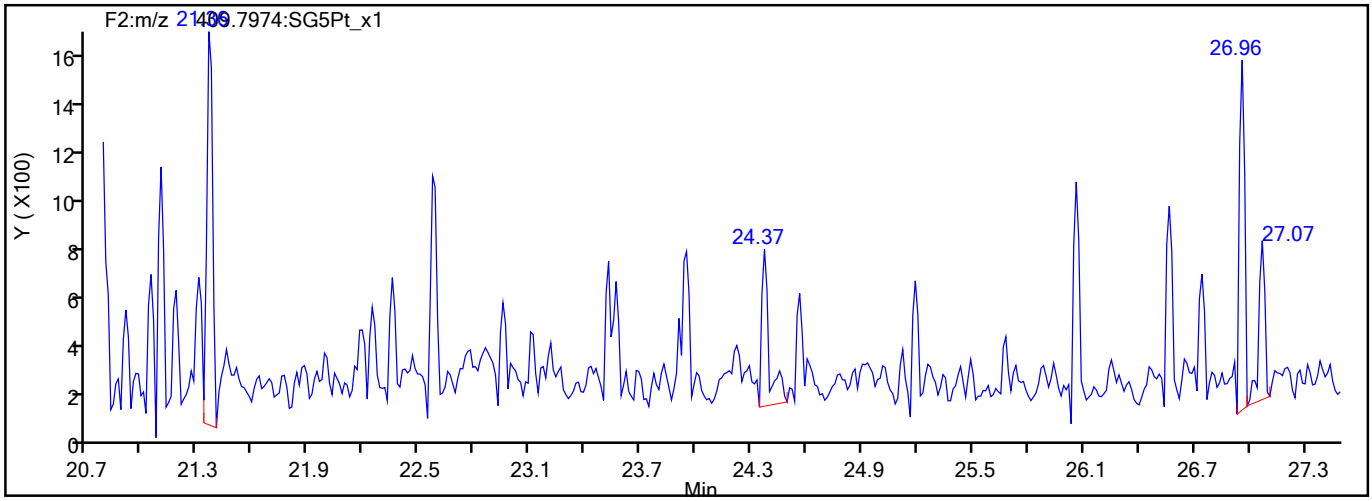

773404

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

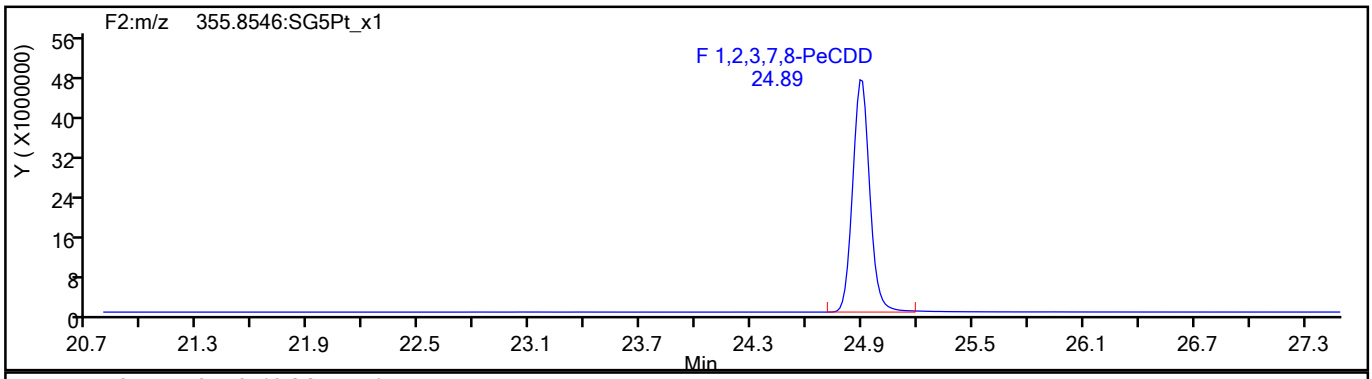

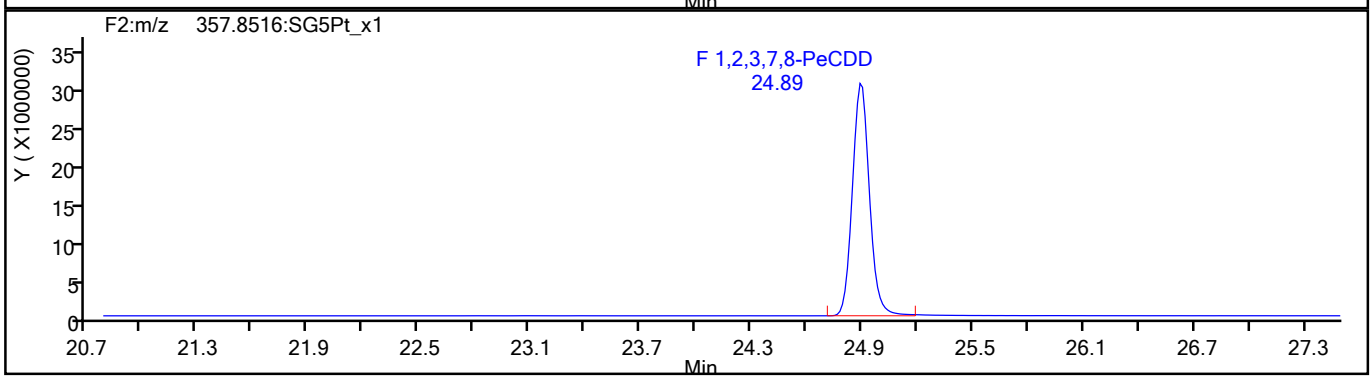

PeCDD Standards

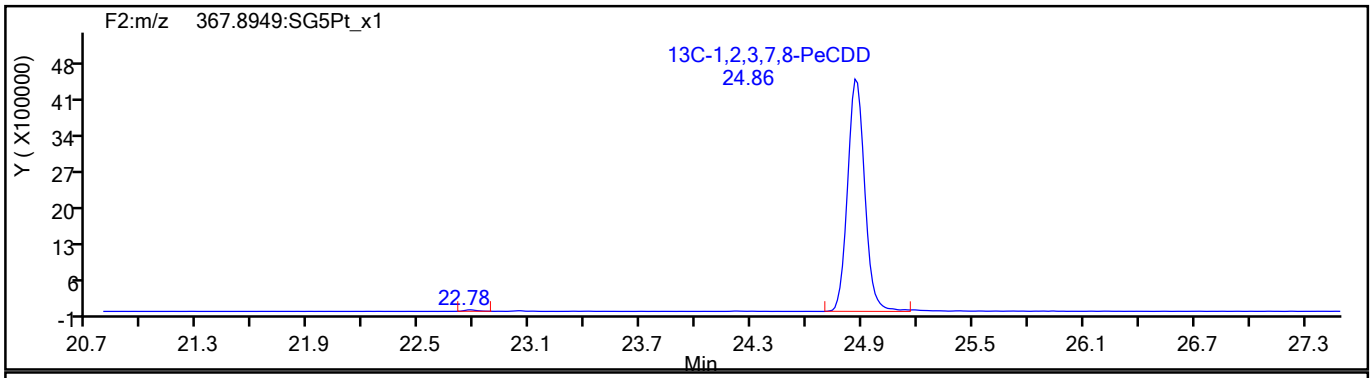

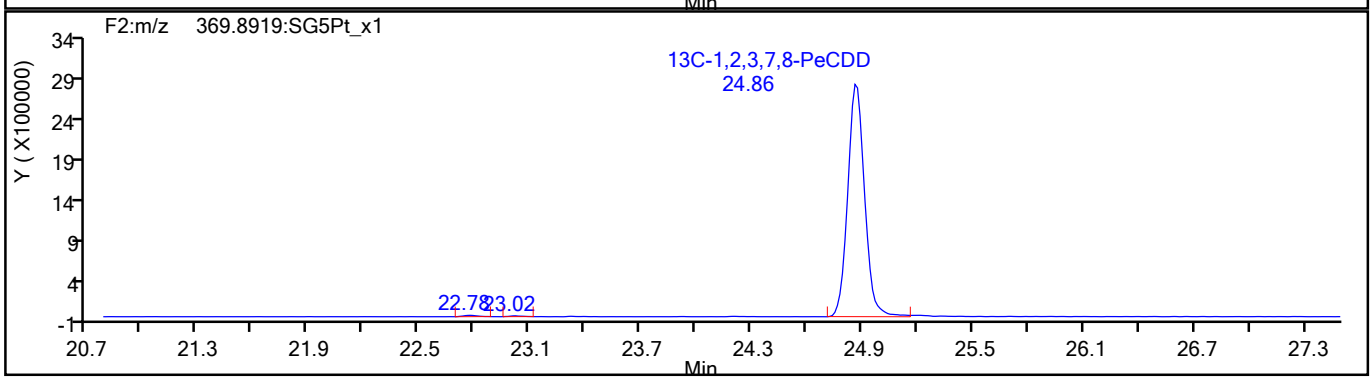

773405

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

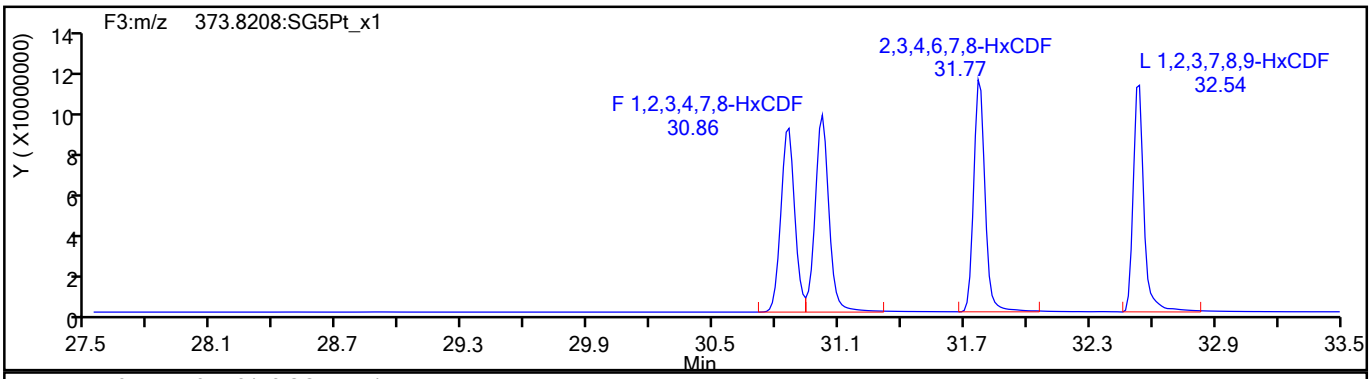

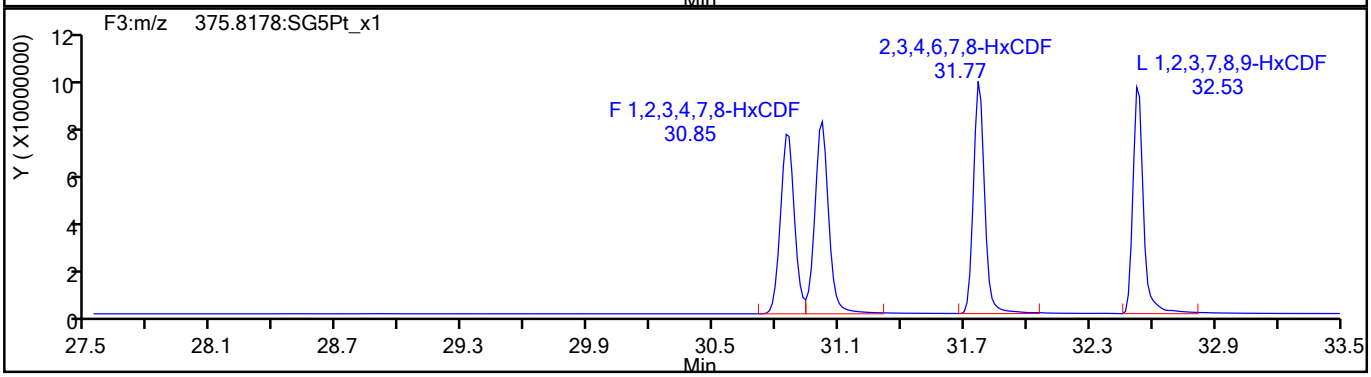

HxCDF Standards

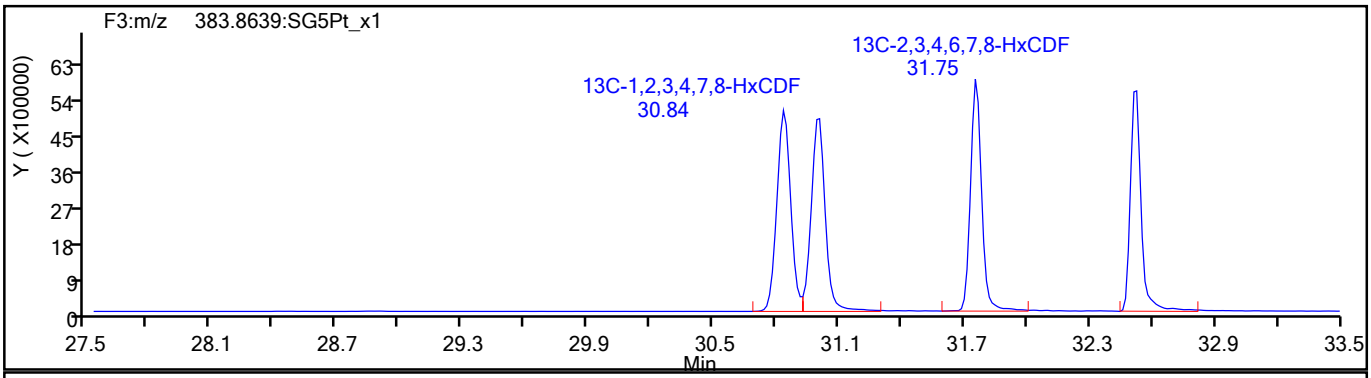

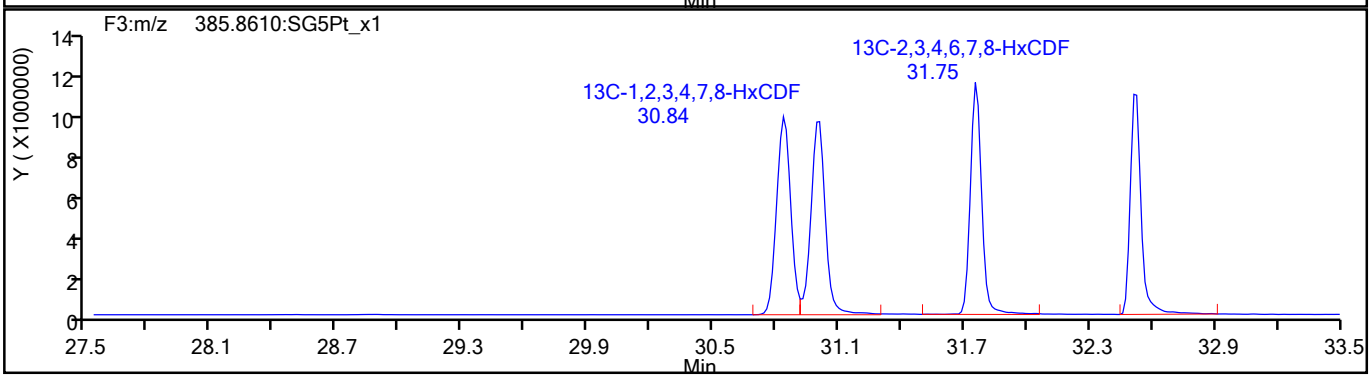

773406

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

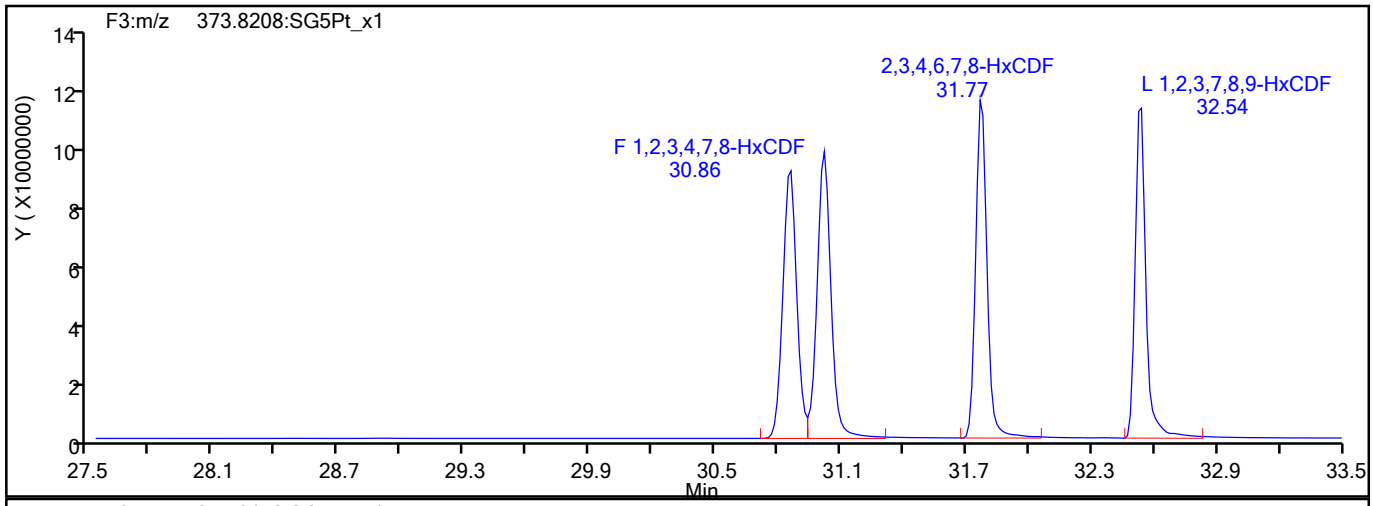

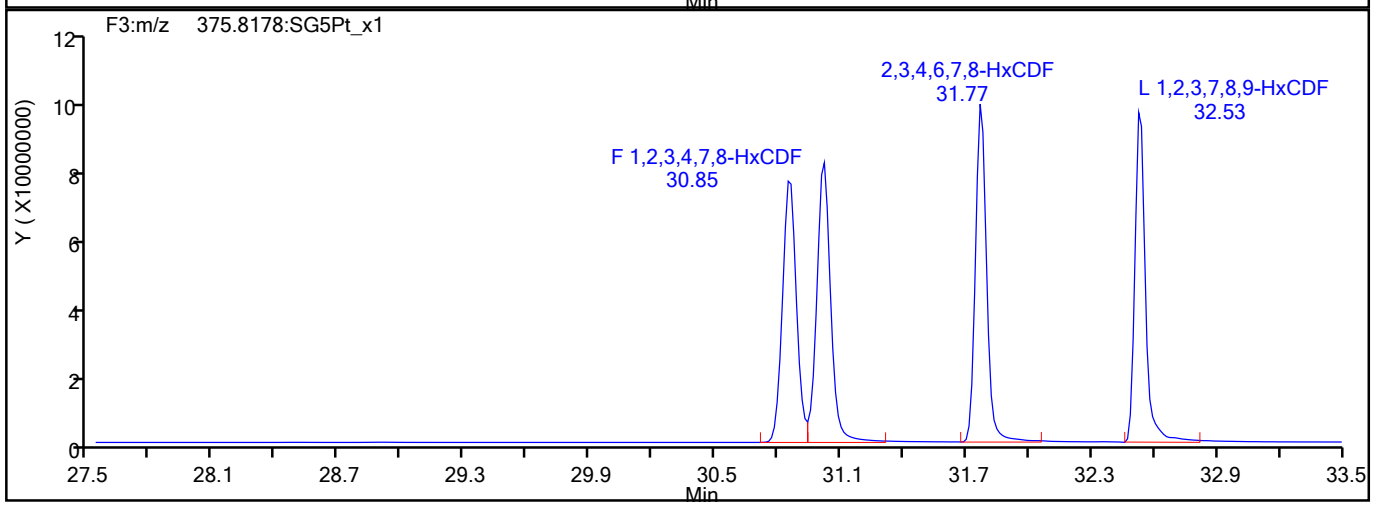

HxCDF Interference Mass

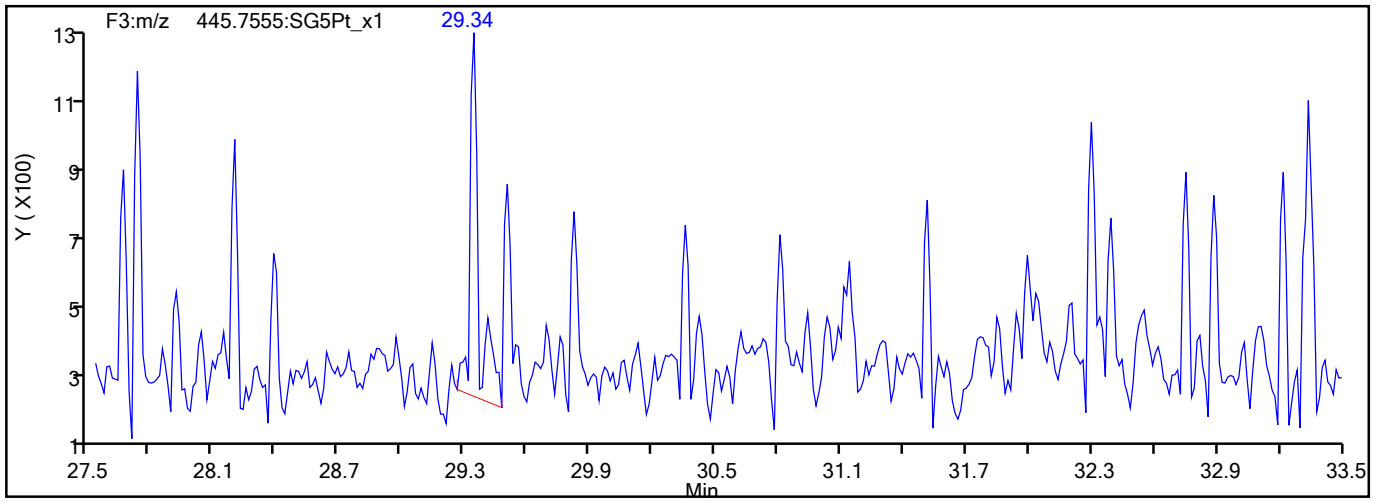

773407

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

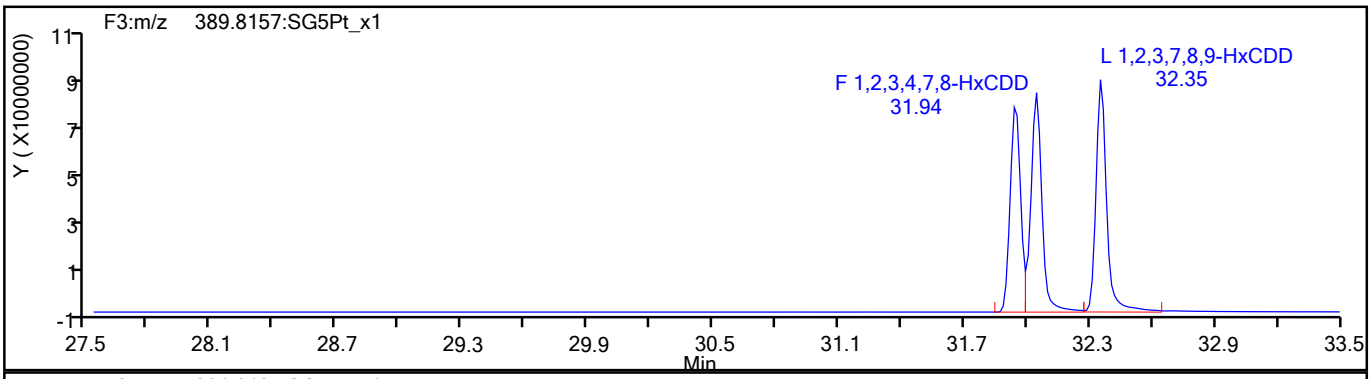

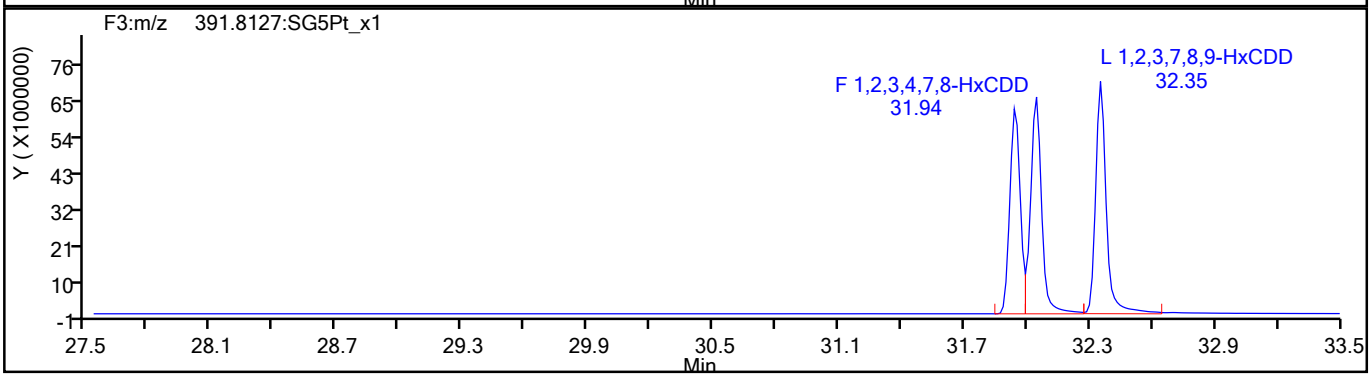

HxCDD Standards

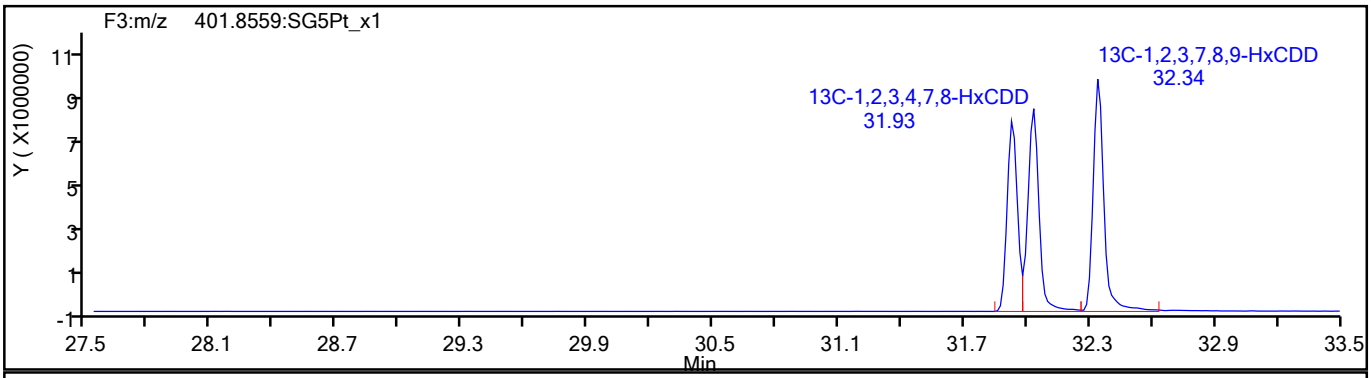

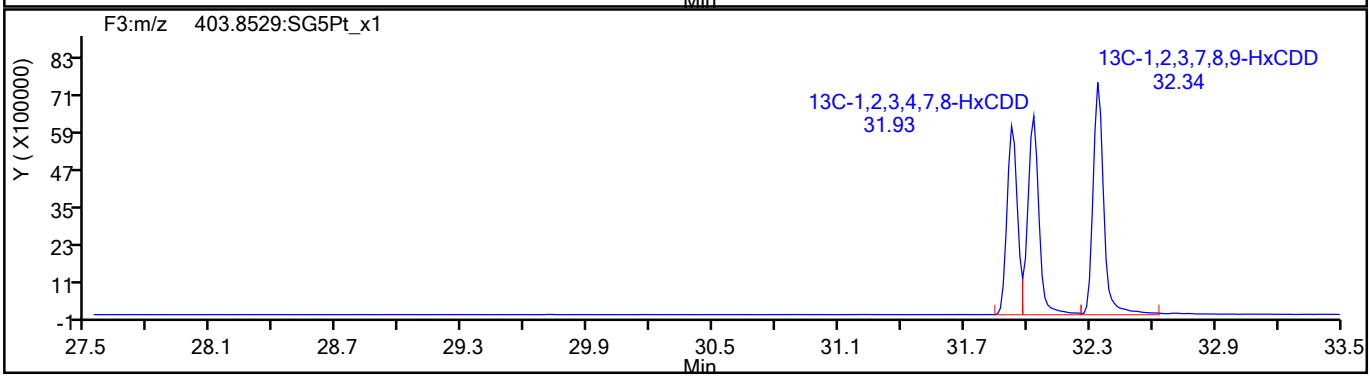

773408

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

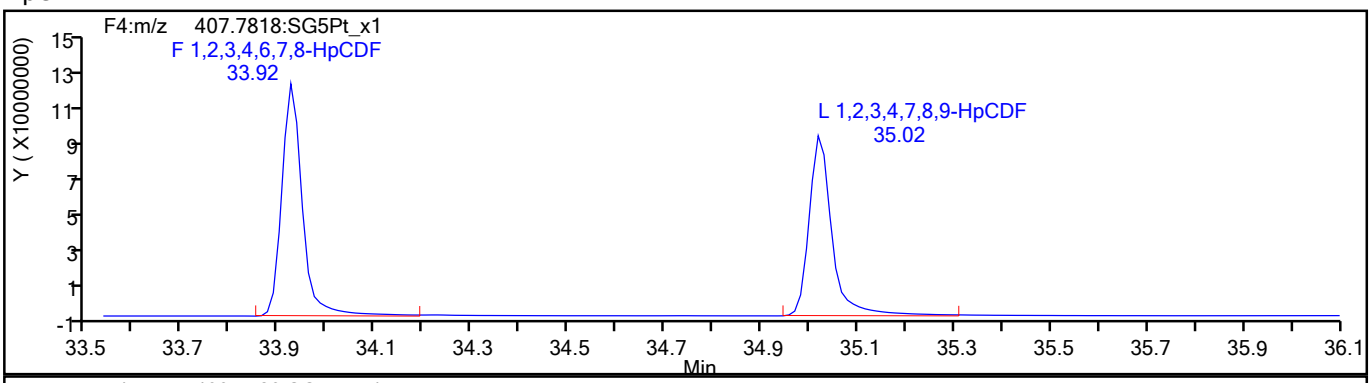

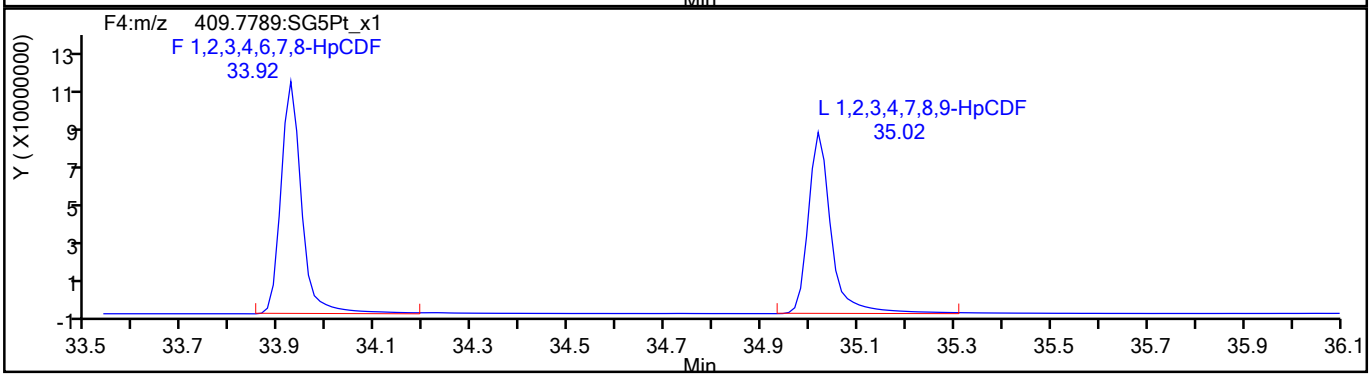

HpCDF Standards

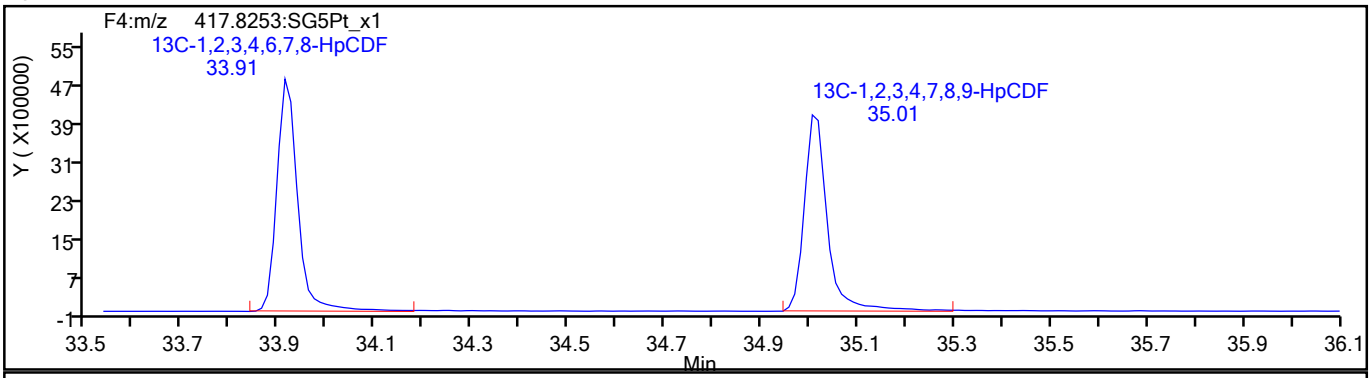

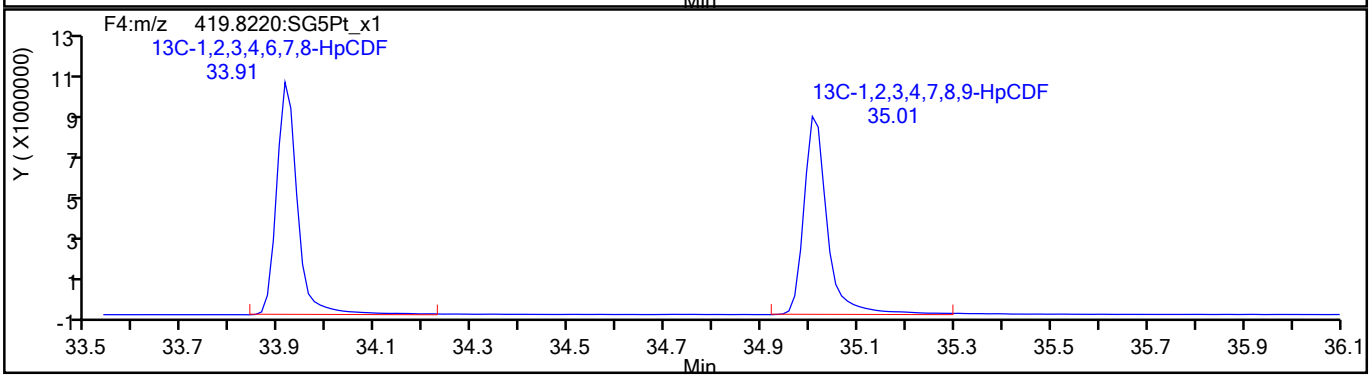

773409

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

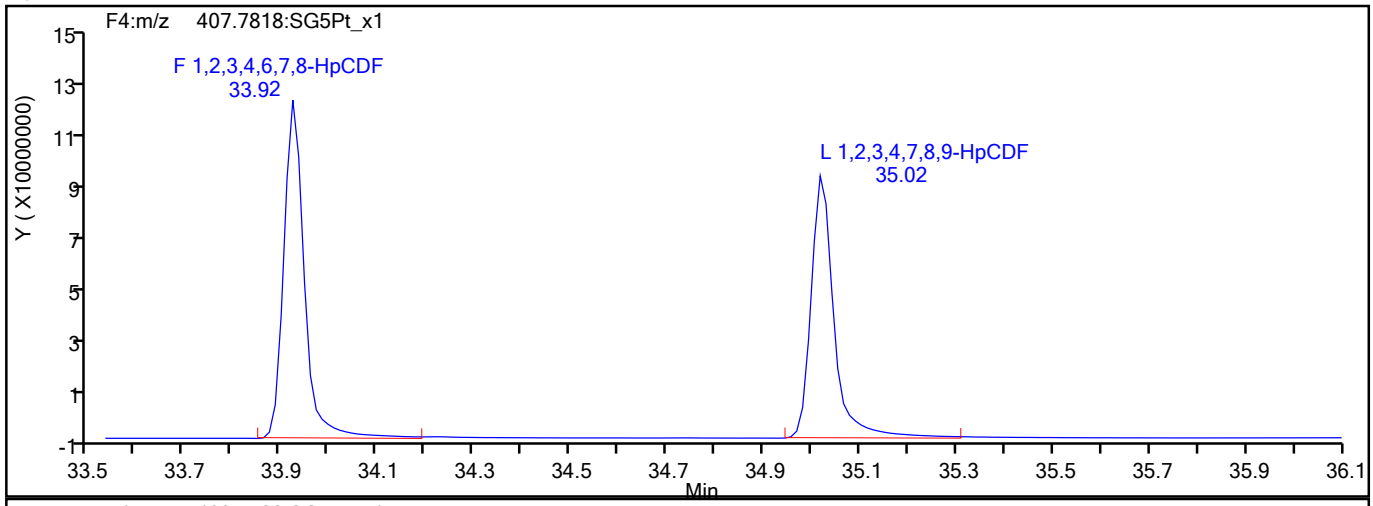

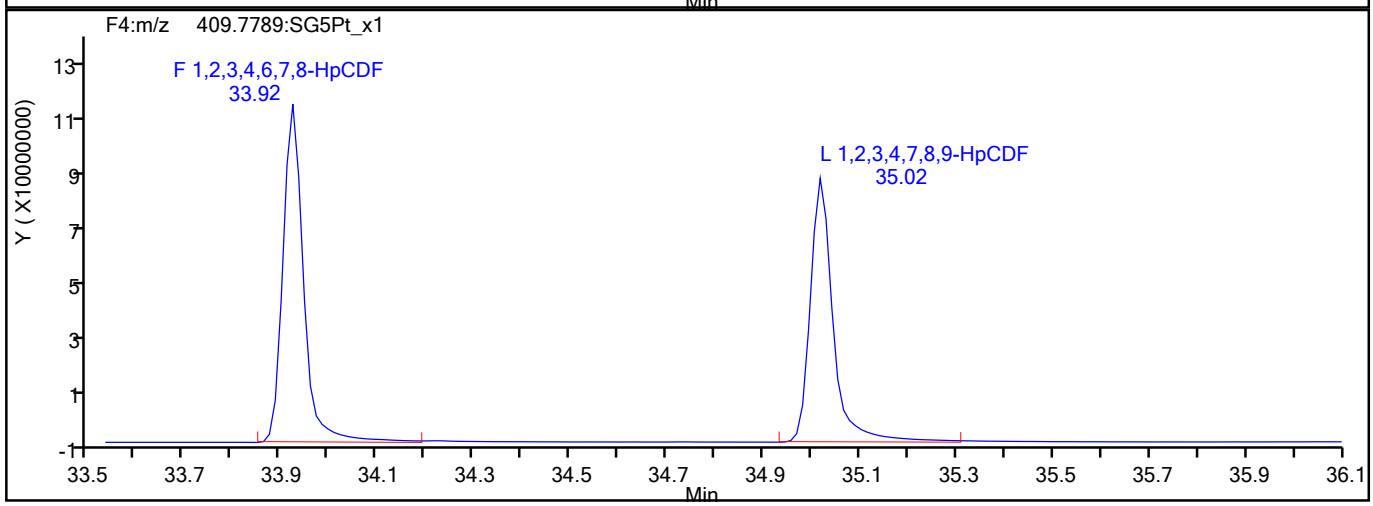

HpCDF Interference Mass

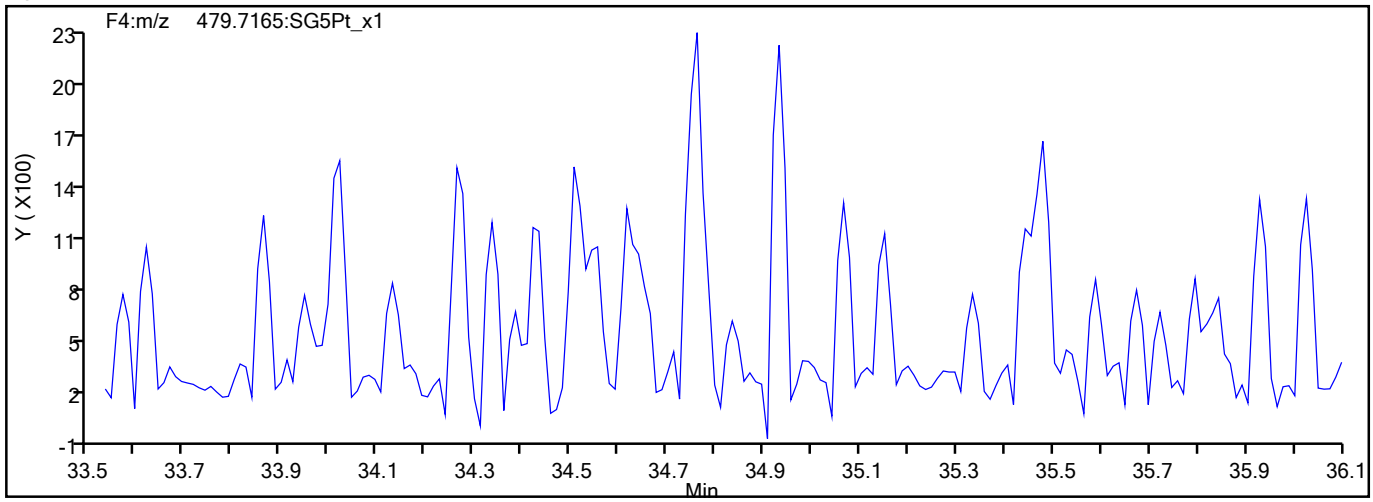

773410

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

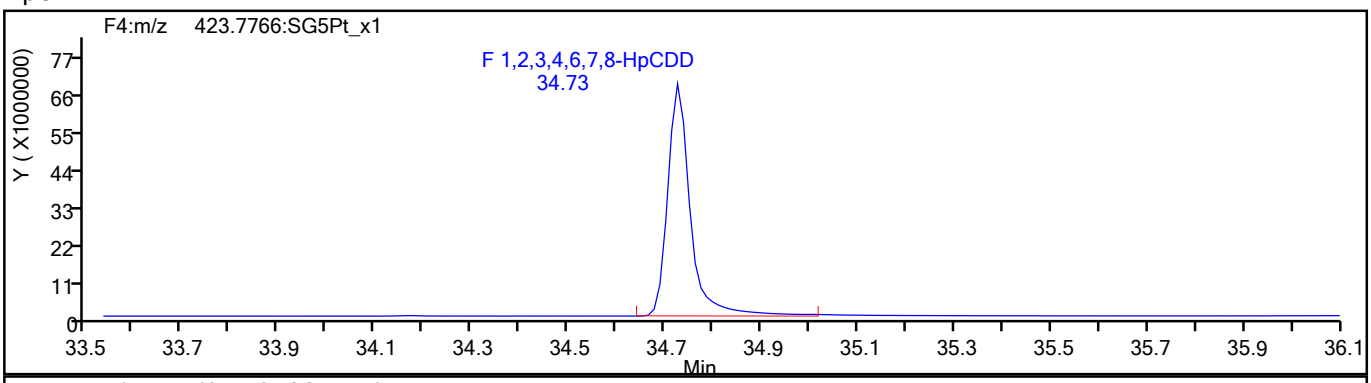

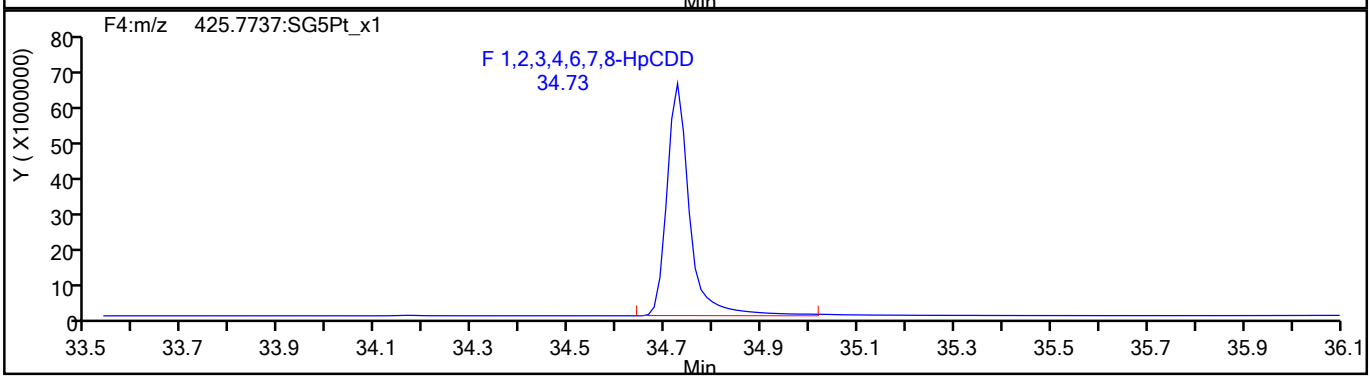

HpCDD Standards

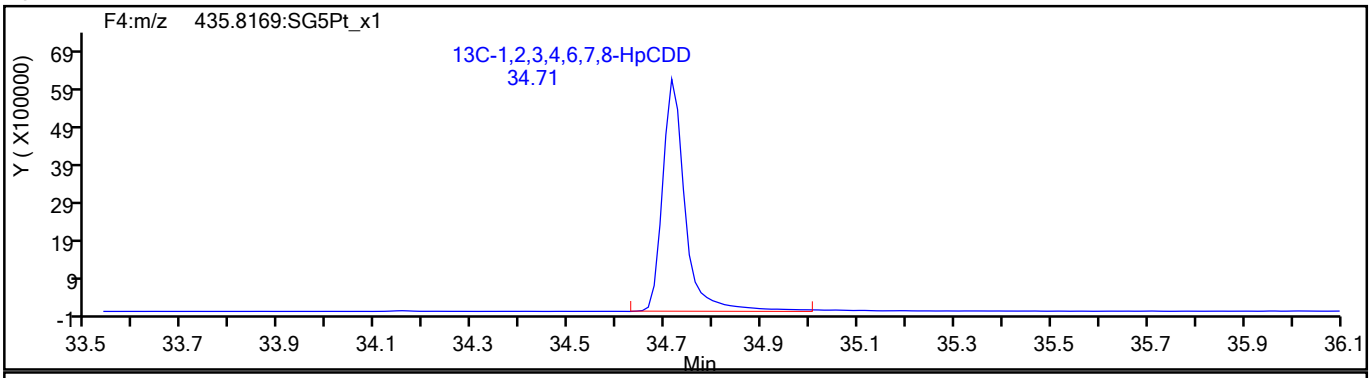

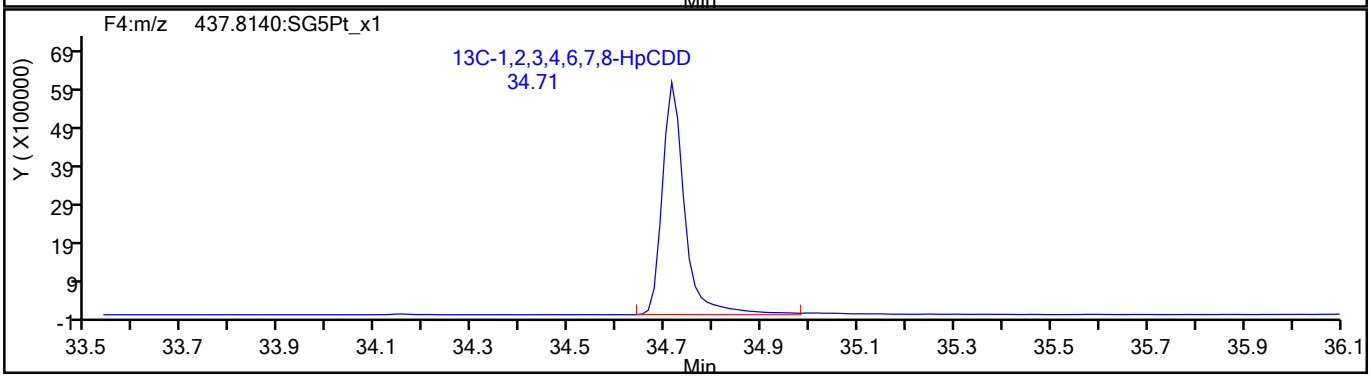

773411

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

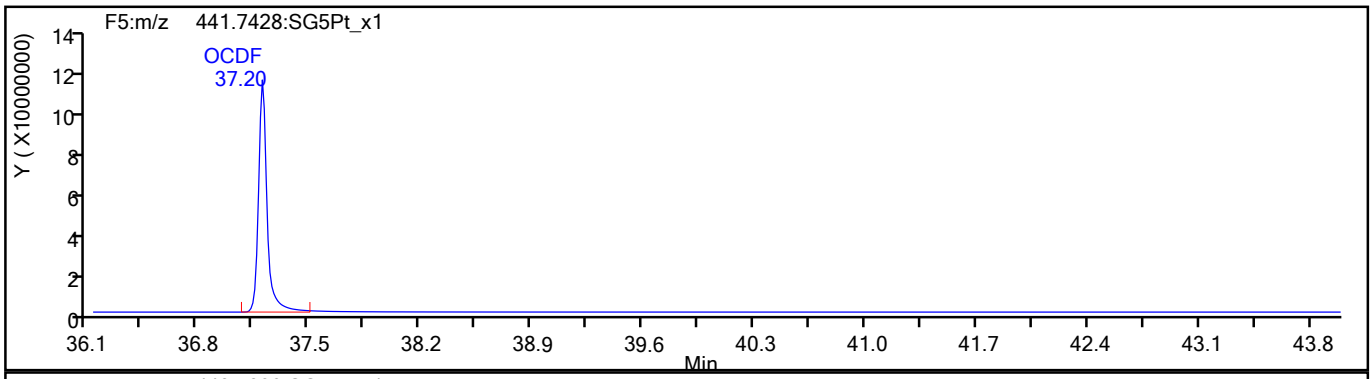

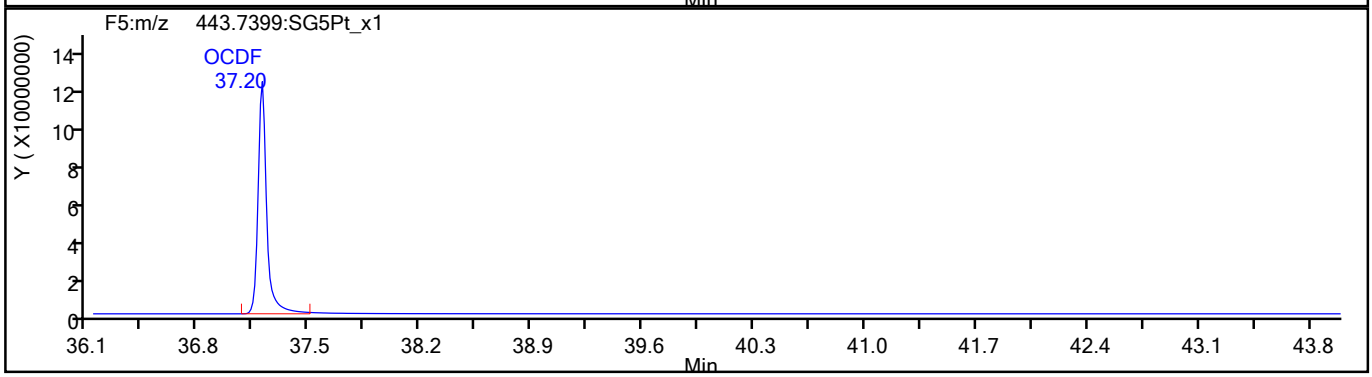

OCDF Standards

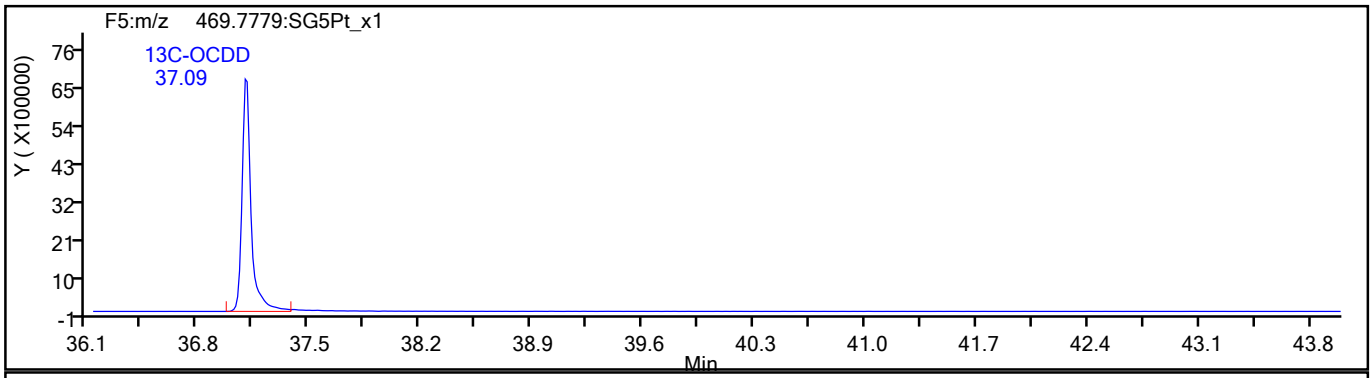

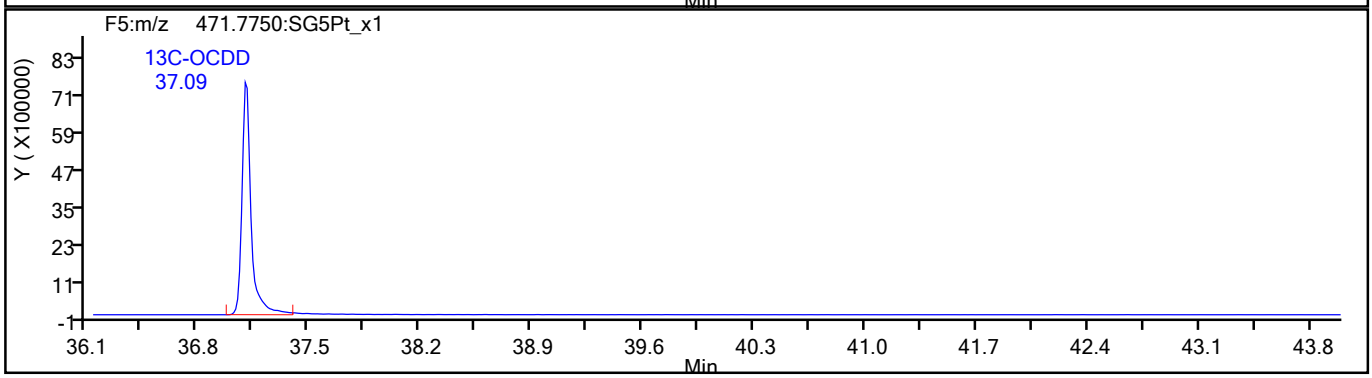

773412

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

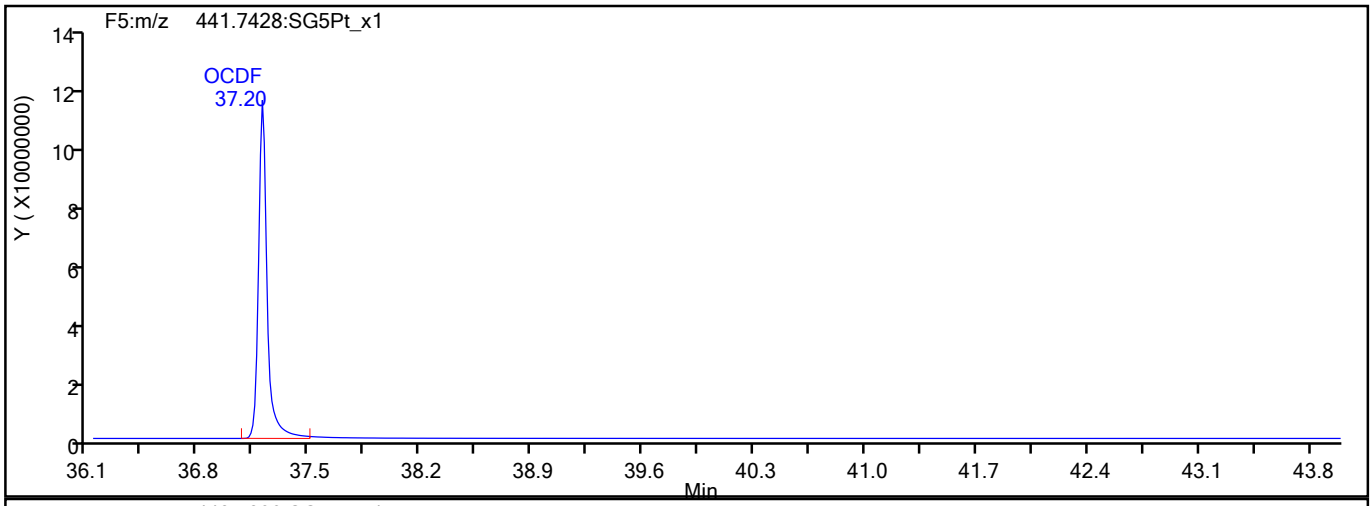

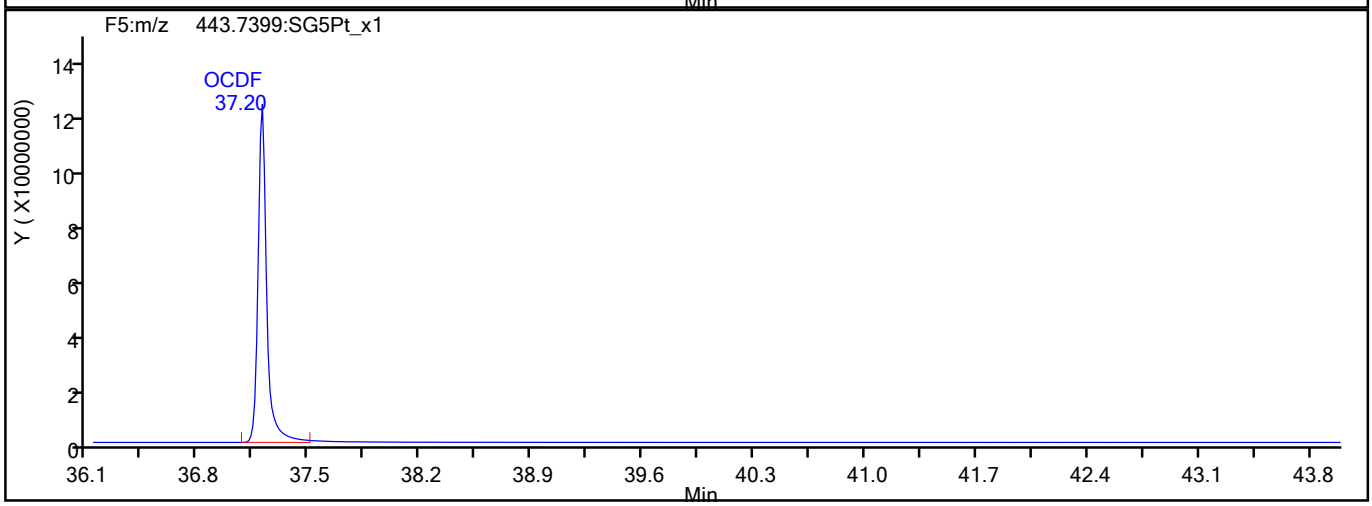

OCDF Interference Mass

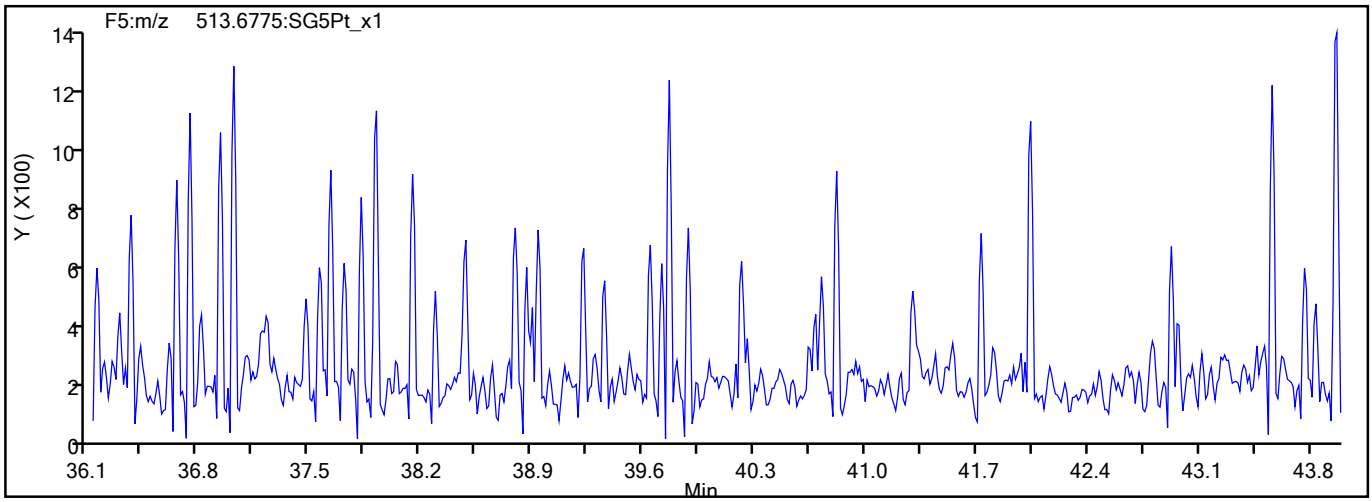

773413

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

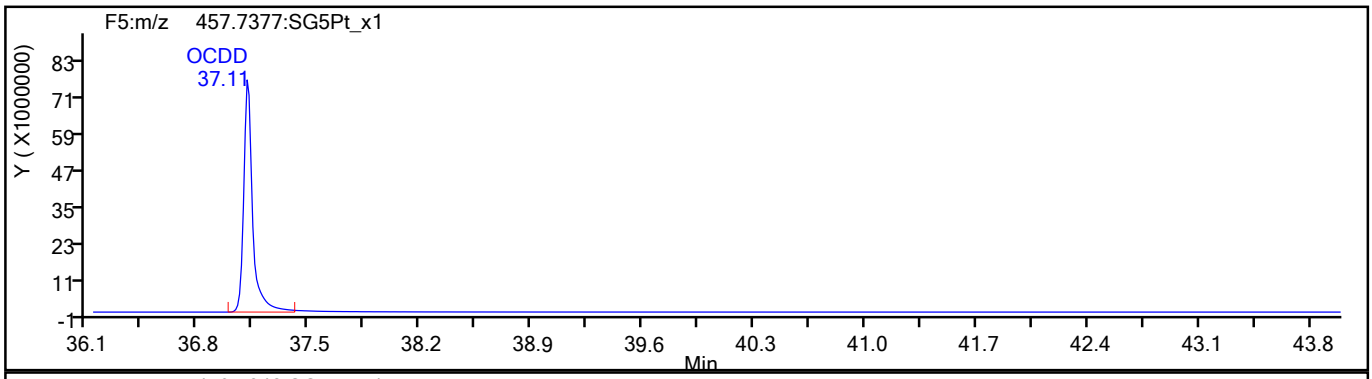

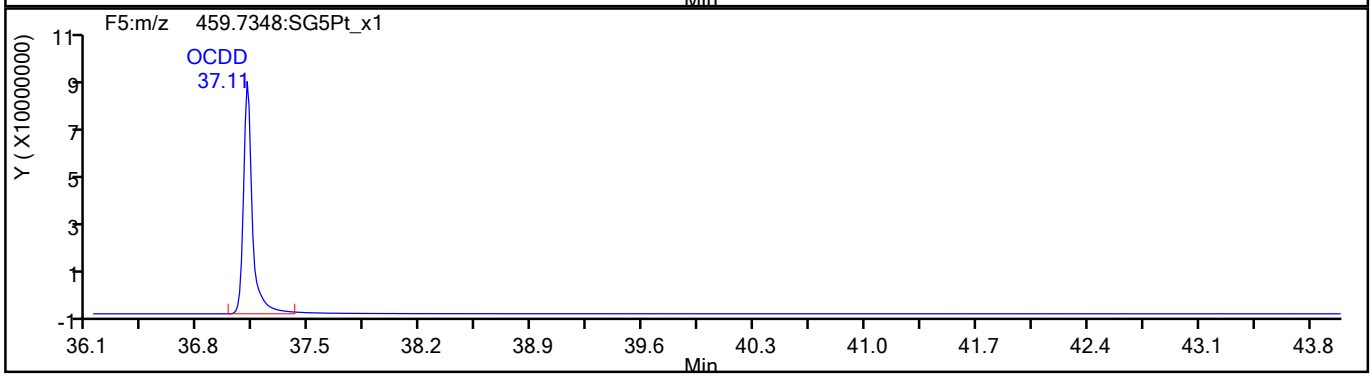

OCDD Standards

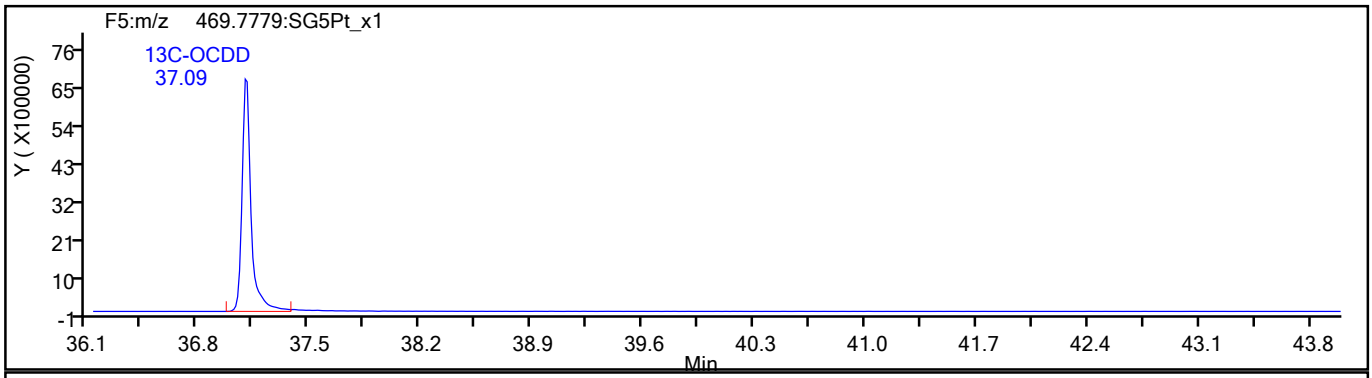

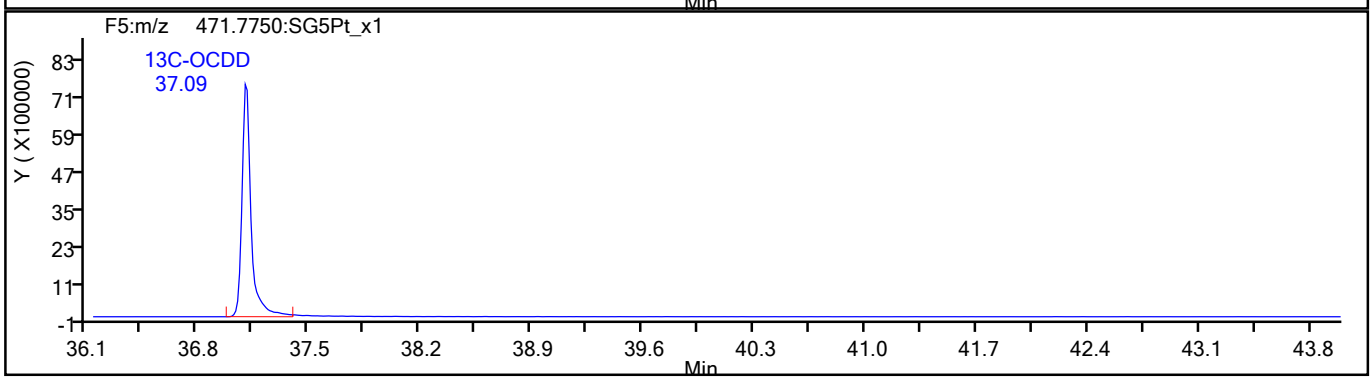

773414

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

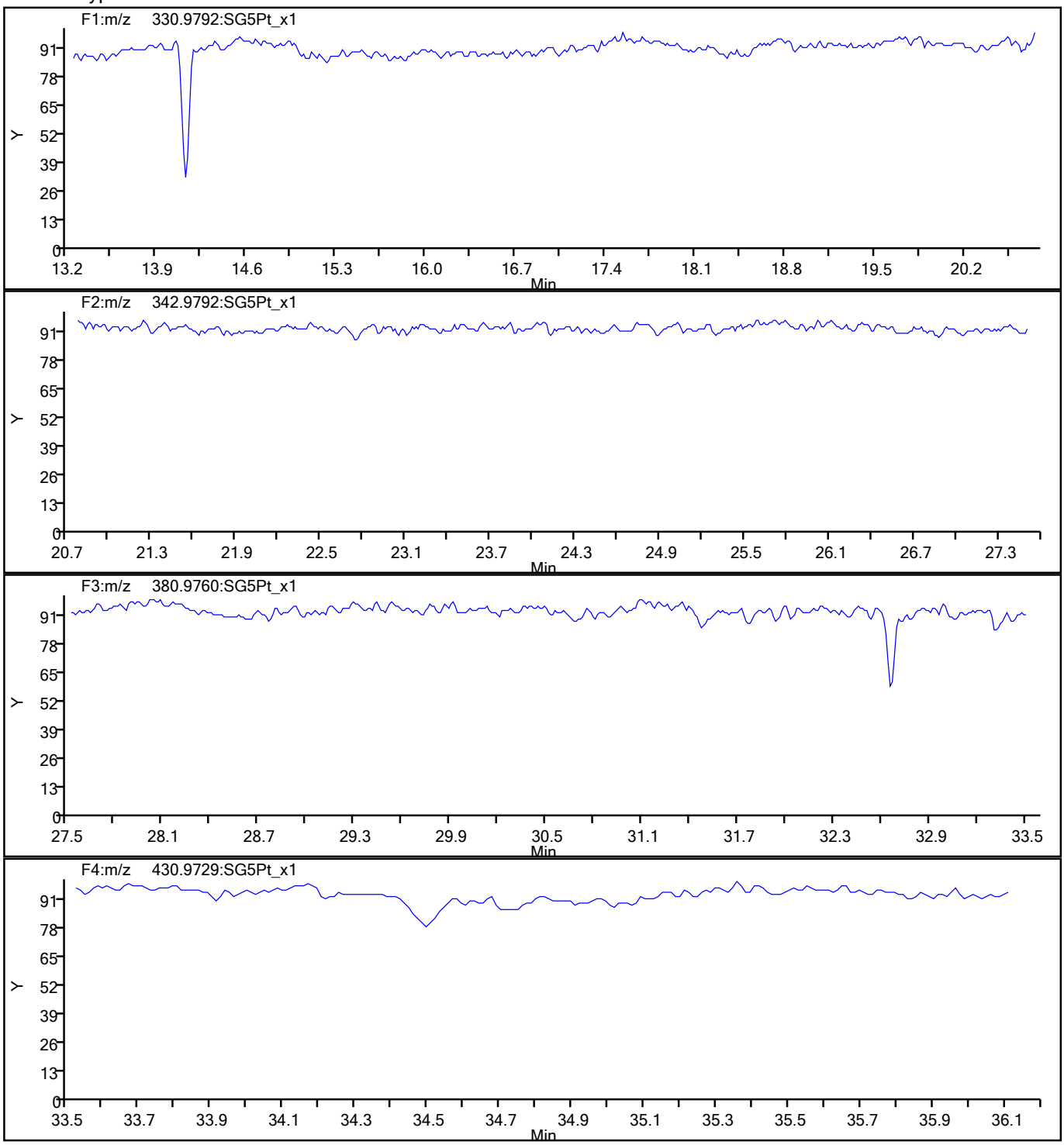

773415

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

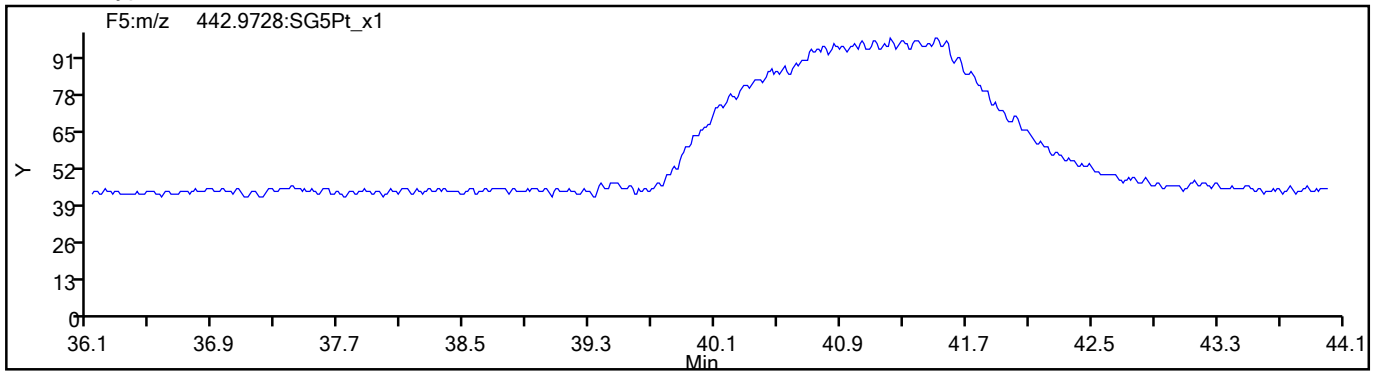

773416

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.094

Error Coefficients

Standard Error:	226000000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.779775	100.0	41876556.0	1.11191	Y
2	IC 320-510264/4	10.0	9.539499	100.0	38689128.0	0.95395	Y
3	IC 320-510264/5	50.0	55.880768	100.0	40333717.0	1.117615	Y
4	IC 320-510264/6	200.0	233.50404	100.0	40442950.0	1.16752	Y
5	IC 320-510264/7	1000.0	1120.518221	100.0	39395832.0	1.120518	Y

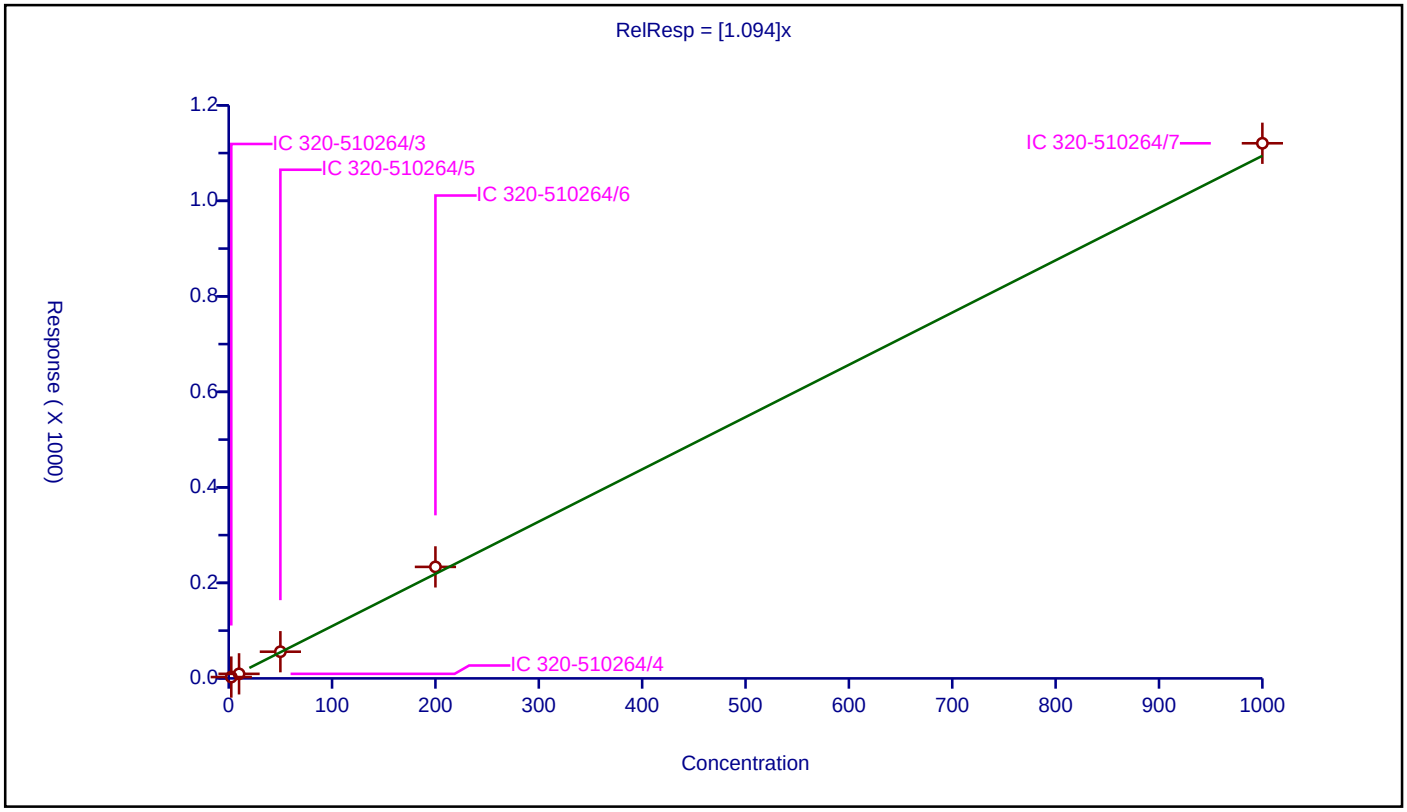

773417

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.441

Error Coefficients

Standard Error:	349000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.618521	100.0	51308225.0	1.447408	Y
2	IC 320-510264/4	10.0	12.412663	100.0	46691158.0	1.241266	Y
3	IC 320-510264/5	50.0	74.932304	100.0	47697671.0	1.498646	Y
4	IC 320-510264/6	200.0	309.702692	100.0	47752972.0	1.548513	Y
5	IC 320-510264/7	1000.0	1470.622057	100.0	46328151.0	1.470622	Y

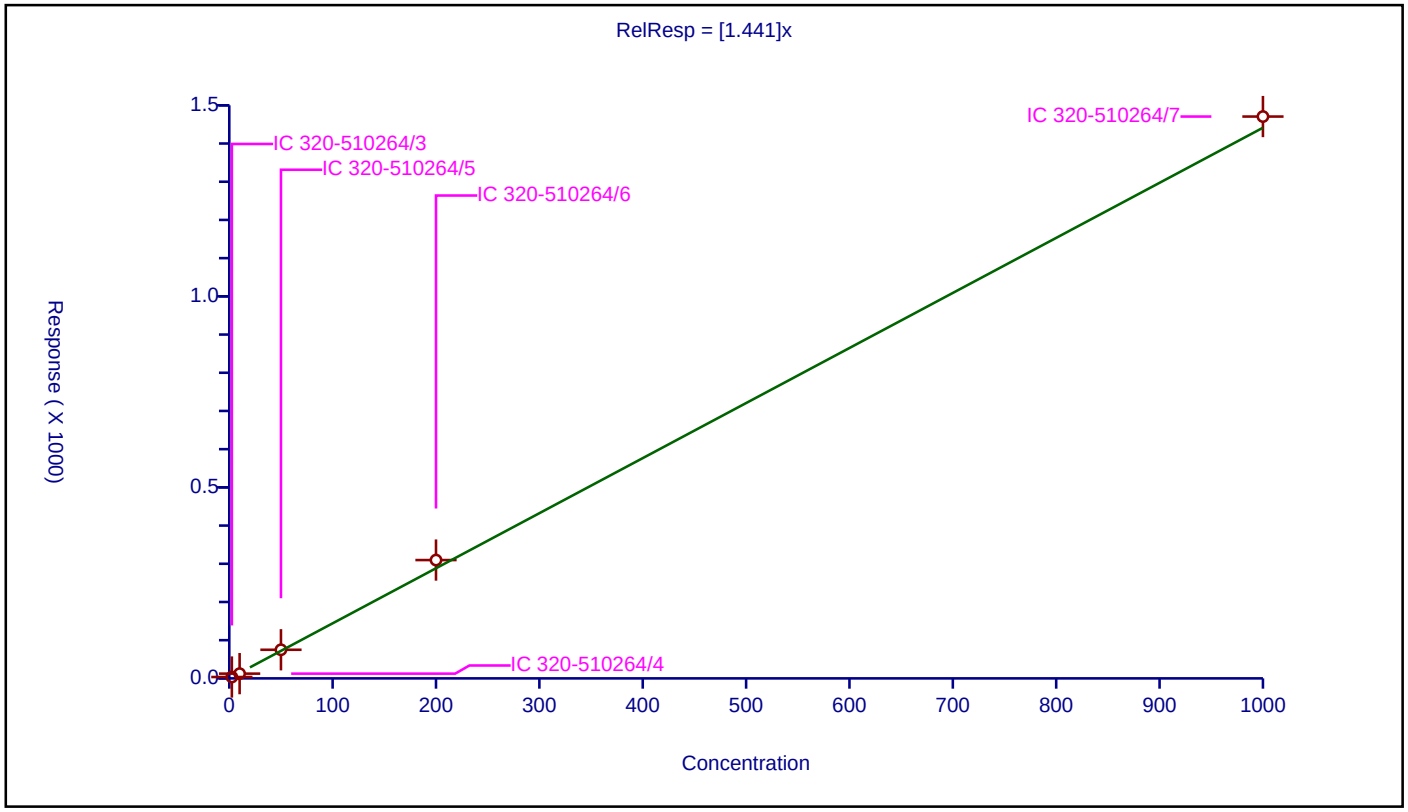

773418

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	302000000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.284087	100.0	44628352.0	1.313635	Y
2	IC 320-510264/4	10.0	11.269366	100.0	42362179.0	1.126937	Y
3	IC 320-510264/5	50.0	68.111875	100.0	43238622.0	1.362237	Y
4	IC 320-510264/6	200.0	290.409045	100.0	42687625.0	1.452045	Y
5	IC 320-510264/7	1000.0	1332.064187	100.0	44333848.0	1.332064	Y

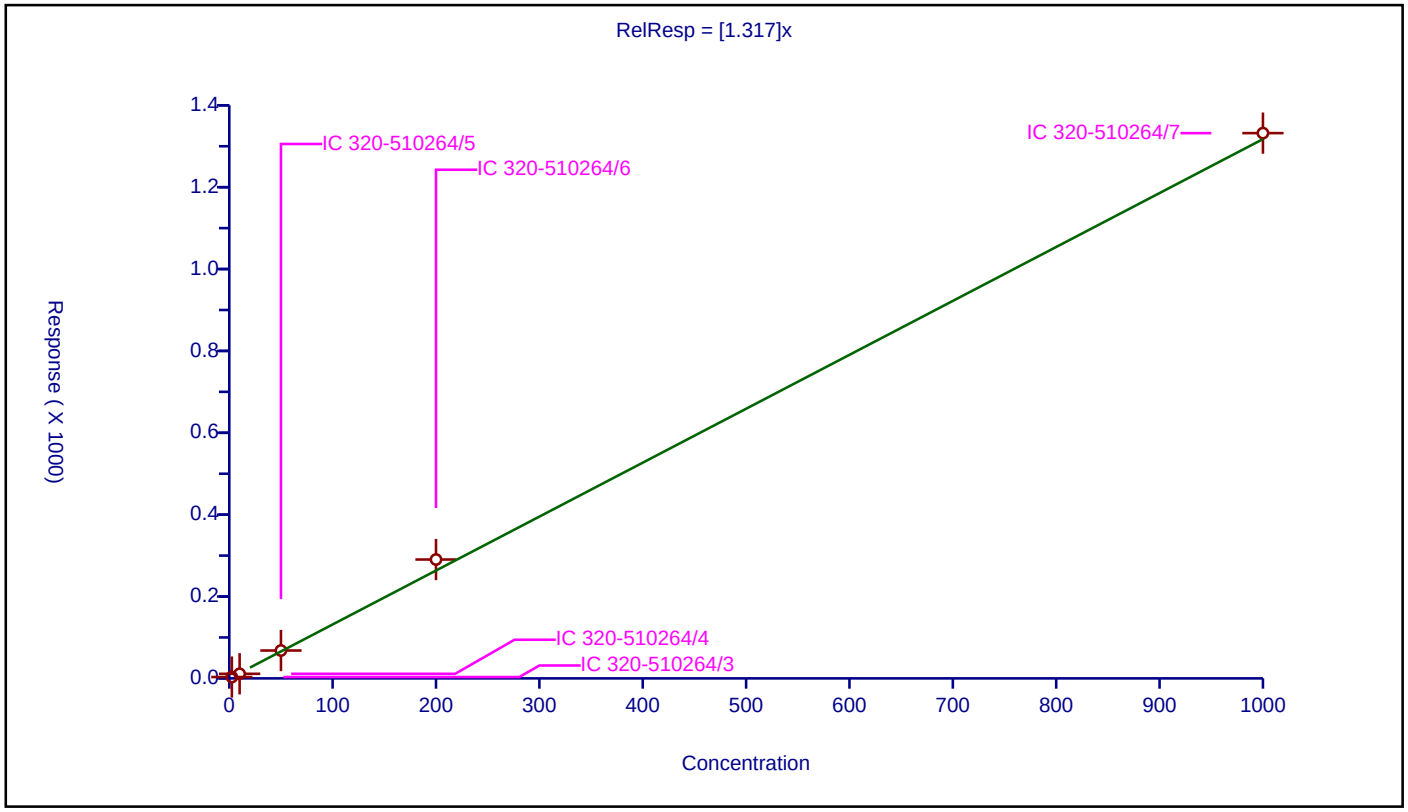

773419

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	248000000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.744793	100.0	47363504.0	1.097917	Y
2	IC 320-510264/4	10.0	8.90634	100.0	44877133.0	0.890634	Y
3	IC 320-510264/5	50.0	56.519553	100.0	44039927.0	1.130391	Y
4	IC 320-510264/6	200.0	233.423018	100.0	44144841.0	1.167115	Y
5	IC 320-510264/7	1000.0	1034.115245	100.0	46886171.0	1.034115	Y

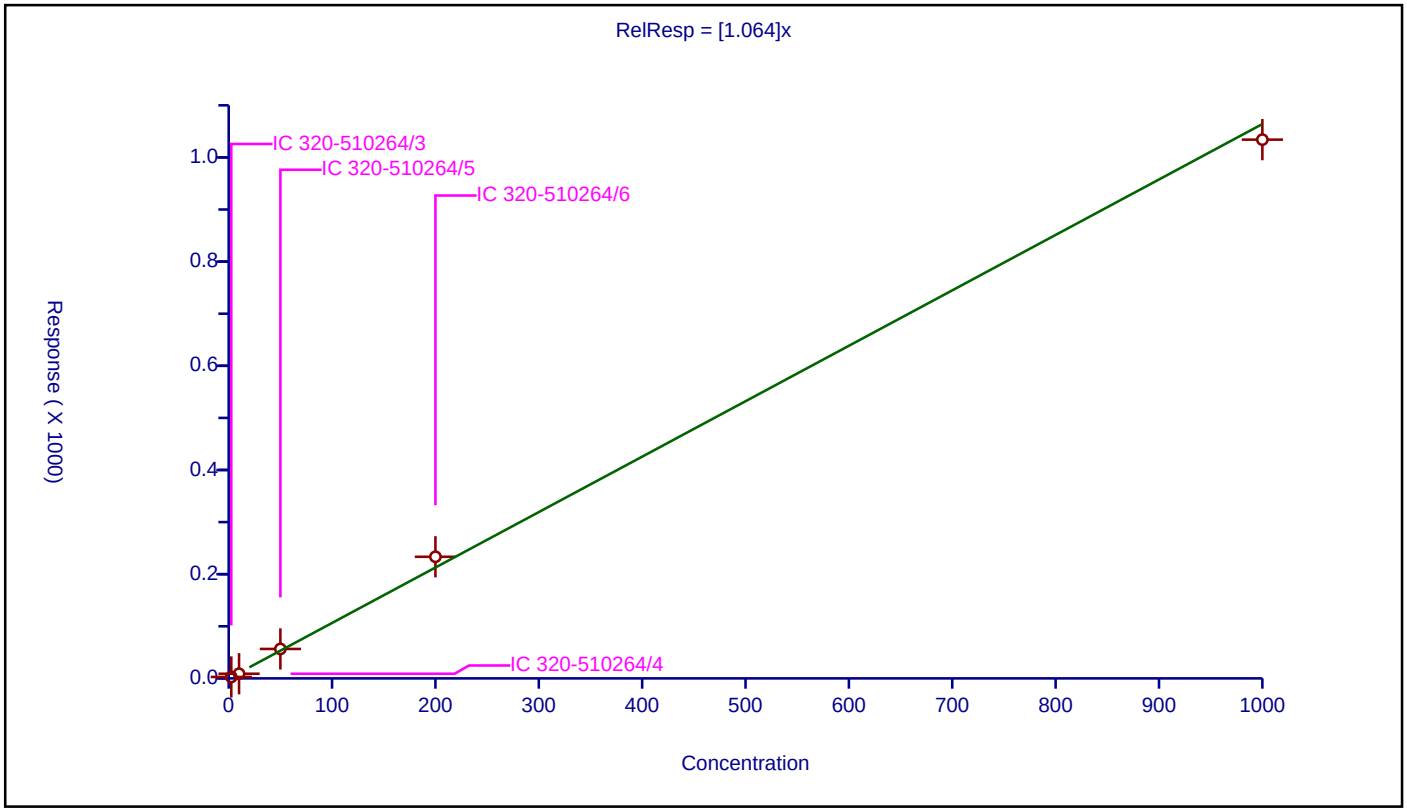

773420

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.085

Error Coefficients

Standard Error:	377000000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.805608	100.0	69484482.0	1.122243	Y
2	IC 320-510264/4	10.0	9.192224	100.0	65726932.0	0.919222	Y
3	IC 320-510264/5	50.0	55.122828	100.0	68075509.0	1.102457	Y
4	IC 320-510264/6	200.0	238.727102	100.0	64951889.0	1.193636	Y
5	IC 320-510264/7	1000.0	1088.07626	100.0	67741189.0	1.088076	Y

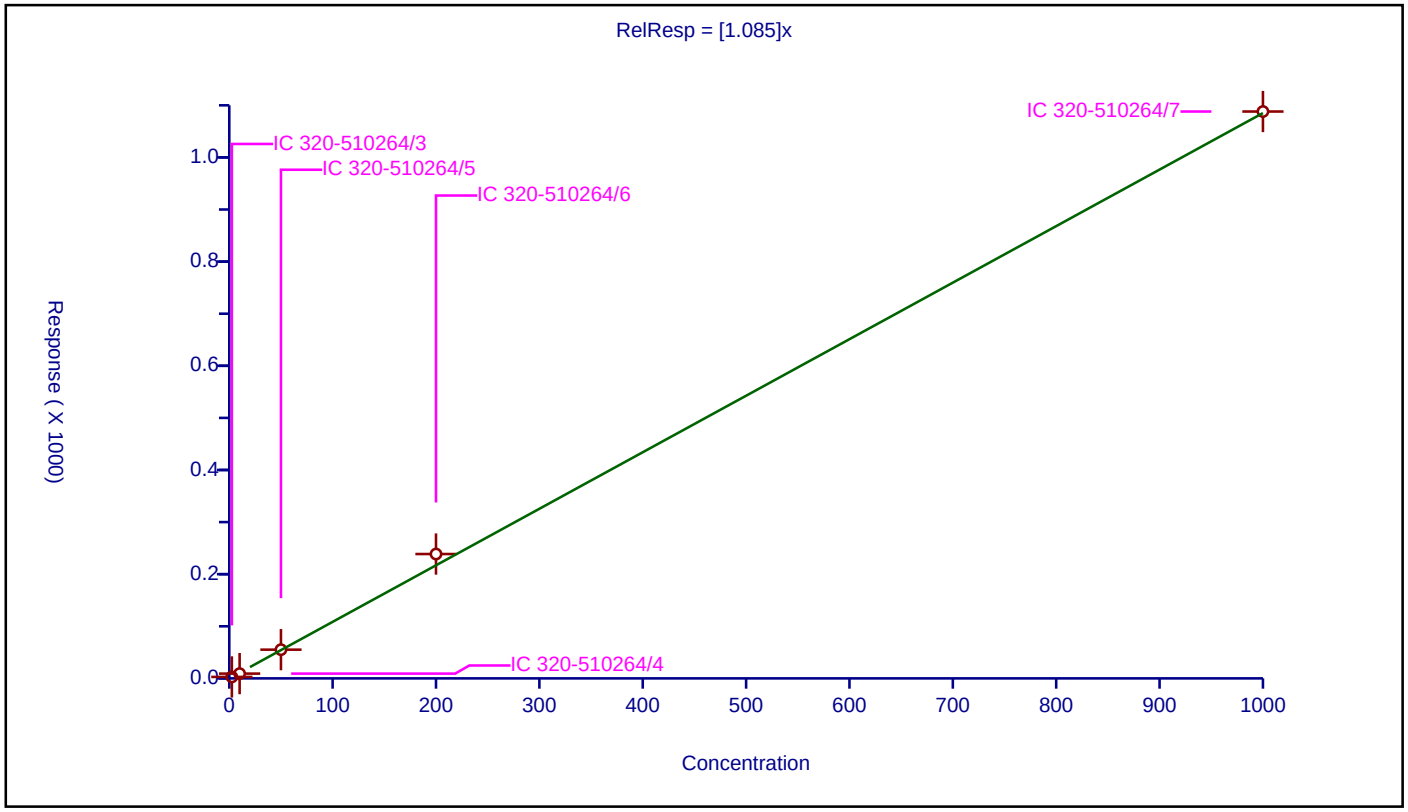

773421

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1

Error Coefficients

Standard Error:	278000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.57359	100.0	56759108.0	1.029436	Y
2	IC 320-510264/4	10.0	8.528531	100.0	52974056.0	0.852853	Y
3	IC 320-510264/5	50.0	50.563423	100.0	55284532.0	1.011268	Y
4	IC 320-510264/6	200.0	218.597288	100.0	54392394.0	1.092986	Y
5	IC 320-510264/7	1000.0	1013.848486	100.0	53564396.0	1.013848	Y

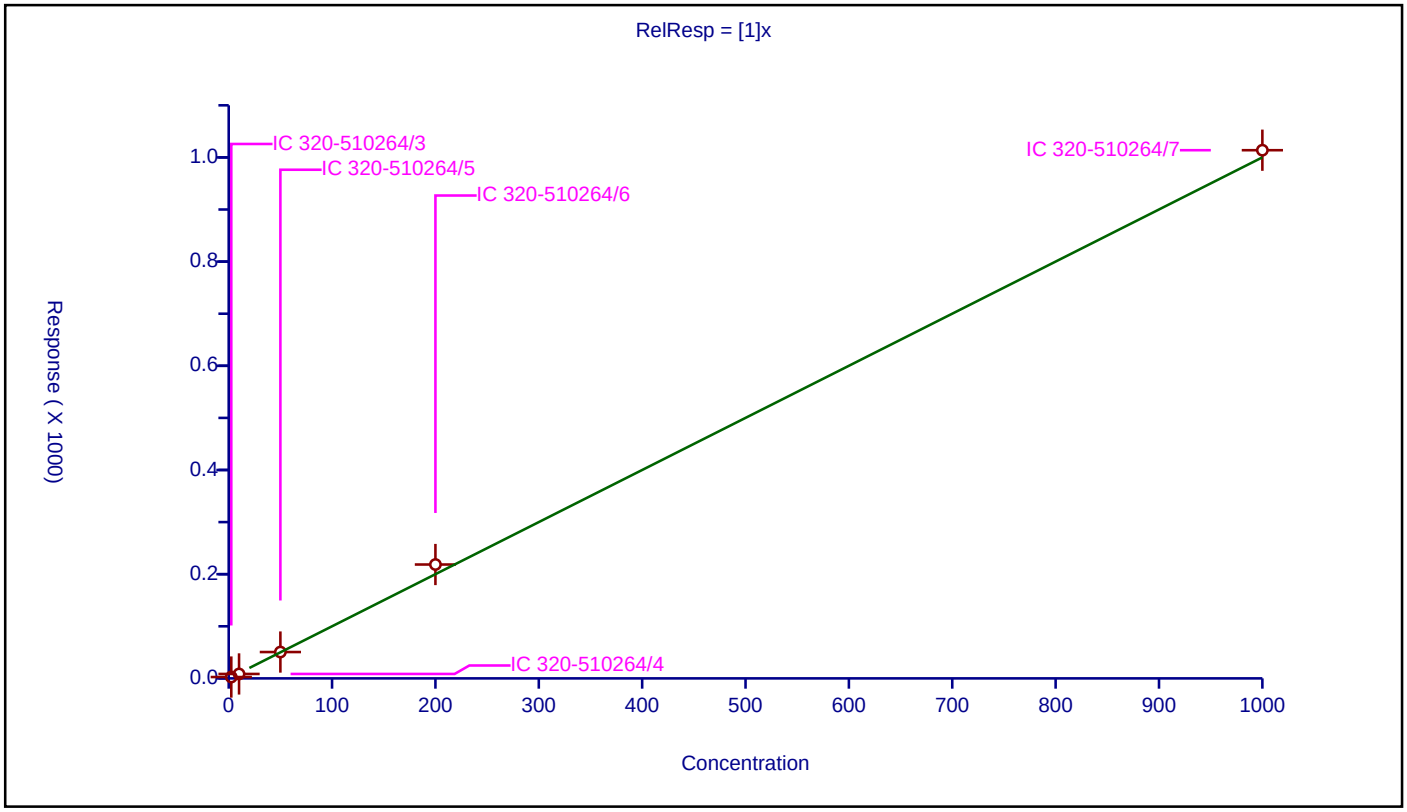

773422

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.126

Error Coefficients

Standard Error:	402000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.871987	100.0	73262388.0	1.148795	Y
2	IC 320-510264/4	10.0	9.63718	100.0	68089005.0	0.963718	Y
3	IC 320-510264/5	50.0	57.730945	100.0	70677463.0	1.154619	Y
4	IC 320-510264/6	200.0	239.311904	100.0	70459920.0	1.19656	Y
5	IC 320-510264/7	1000.0	1166.370477	100.0	67363664.0	1.16637	Y

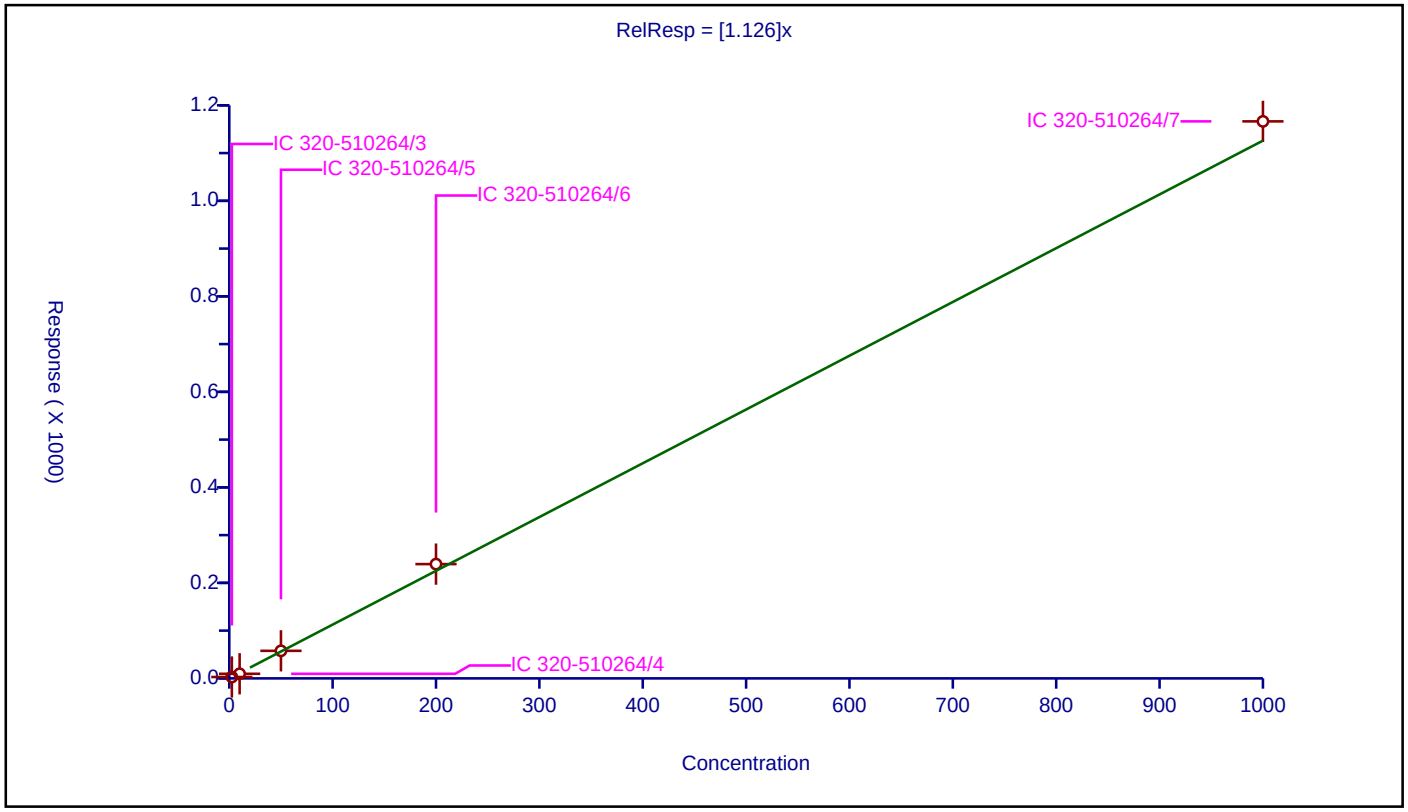

773423

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.248

Error Coefficients

Standard Error:	289000000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.174189	100.0	47363504.0	1.269675	Y
2	IC 320-510264/4	10.0	10.27817	100.0	44877133.0	1.027817	Y
3	IC 320-510264/5	50.0	67.654413	100.0	44039927.0	1.353088	Y
4	IC 320-510264/6	200.0	277.257762	100.0	44144841.0	1.386289	Y
5	IC 320-510264/7	1000.0	1202.675657	100.0	46886171.0	1.202676	Y

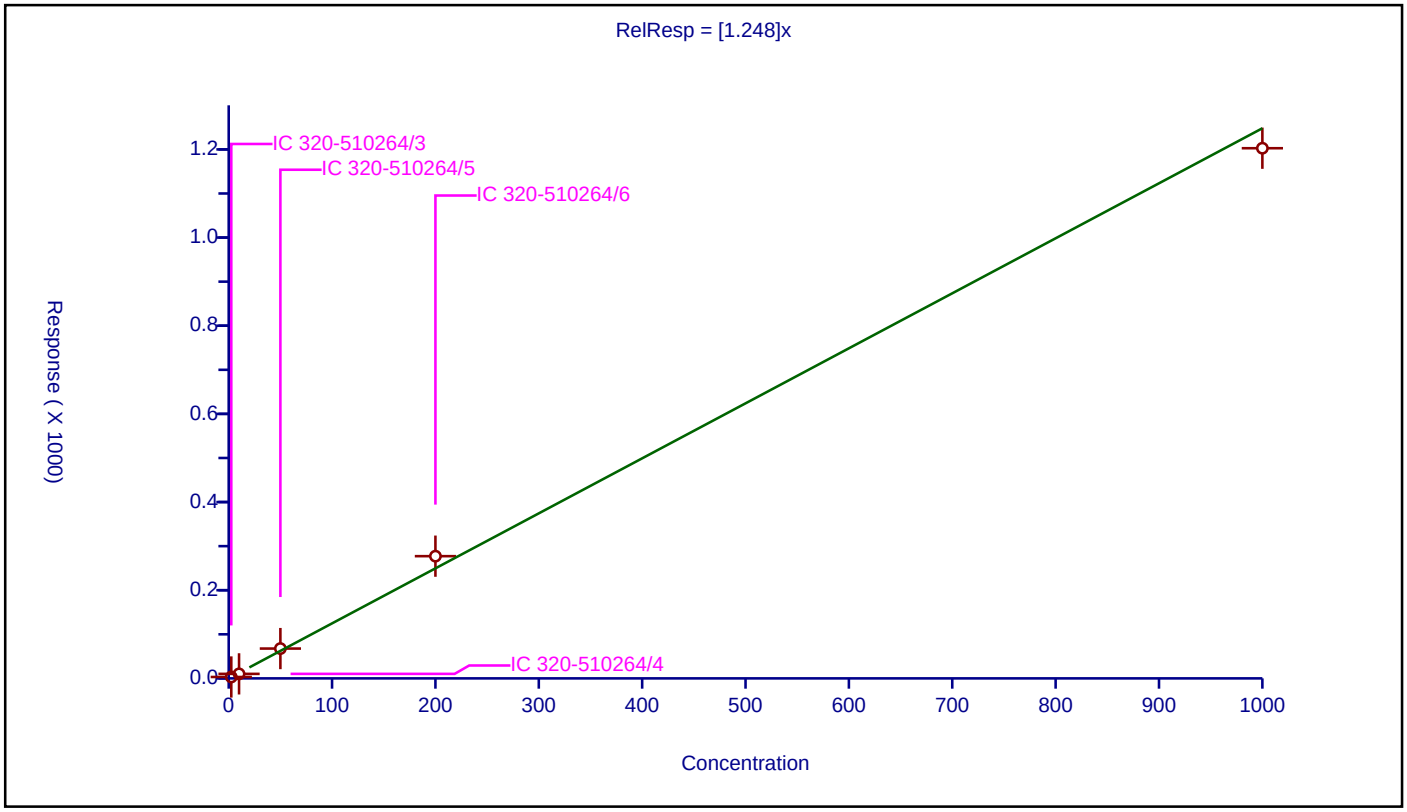

773424

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.166

Error Coefficients

Standard Error:	362000000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.933201	100.0	62528954.0	1.17328	Y
2	IC 320-510264/4	10.0	10.136374	100.0	58828058.0	1.013637	Y
3	IC 320-510264/5	50.0	59.48769	100.0	60389284.0	1.189754	Y
4	IC 320-510264/6	200.0	249.571201	100.0	59636084.0	1.247856	Y
5	IC 320-510264/7	1000.0	1207.229164	100.0	58669892.0	1.207229	Y

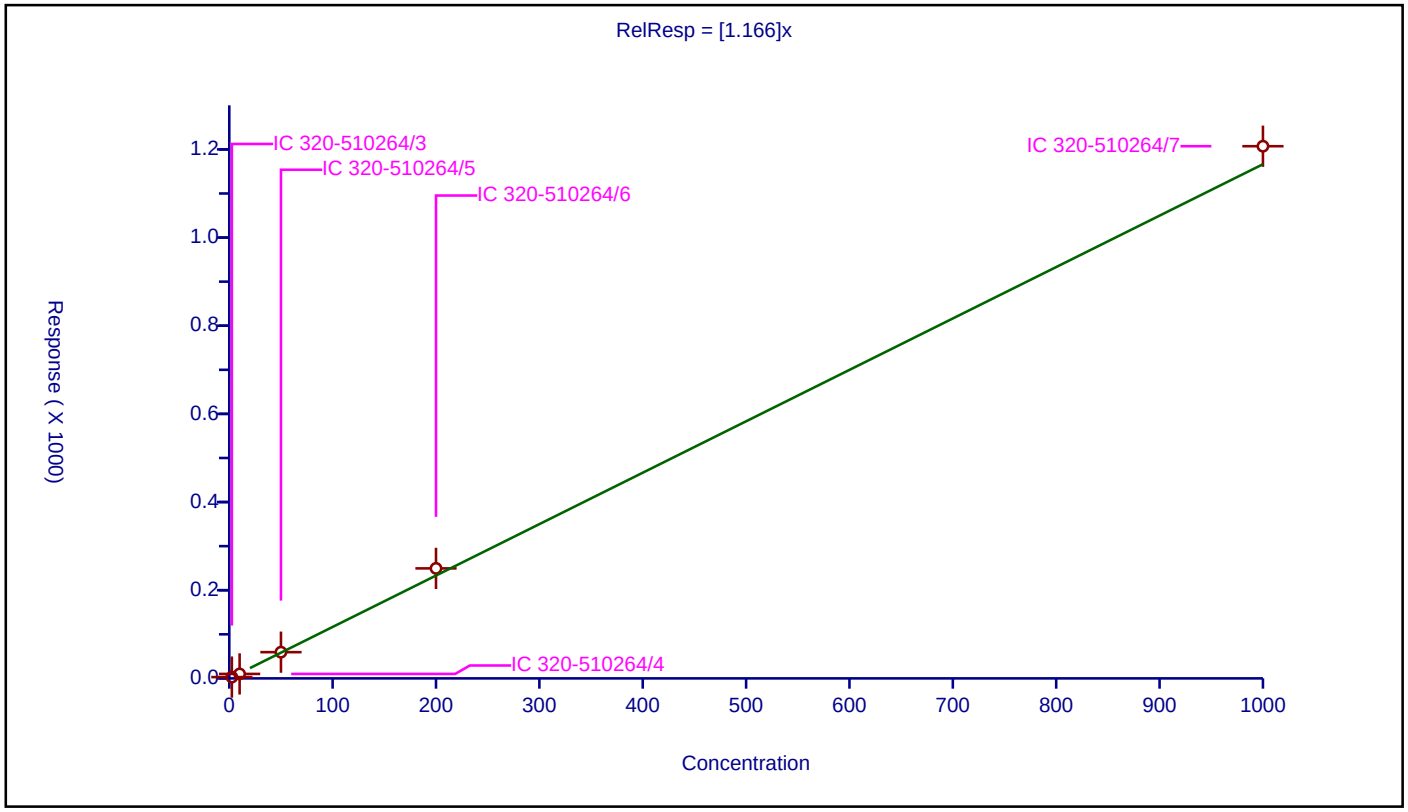

773425

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.048

Error Coefficients

Standard Error:	256000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.644408	100.0	49643581.0	1.057763	Y
2	IC 320-510264/4	10.0	9.031283	100.0	46721712.0	0.903128	Y
3	IC 320-510264/5	50.0	53.401309	100.0	47124414.0	1.068026	Y
4	IC 320-510264/6	200.0	226.195317	100.0	46524396.0	1.130977	Y
5	IC 320-510264/7	1000.0	1082.258061	100.0	46251010.0	1.082258	Y

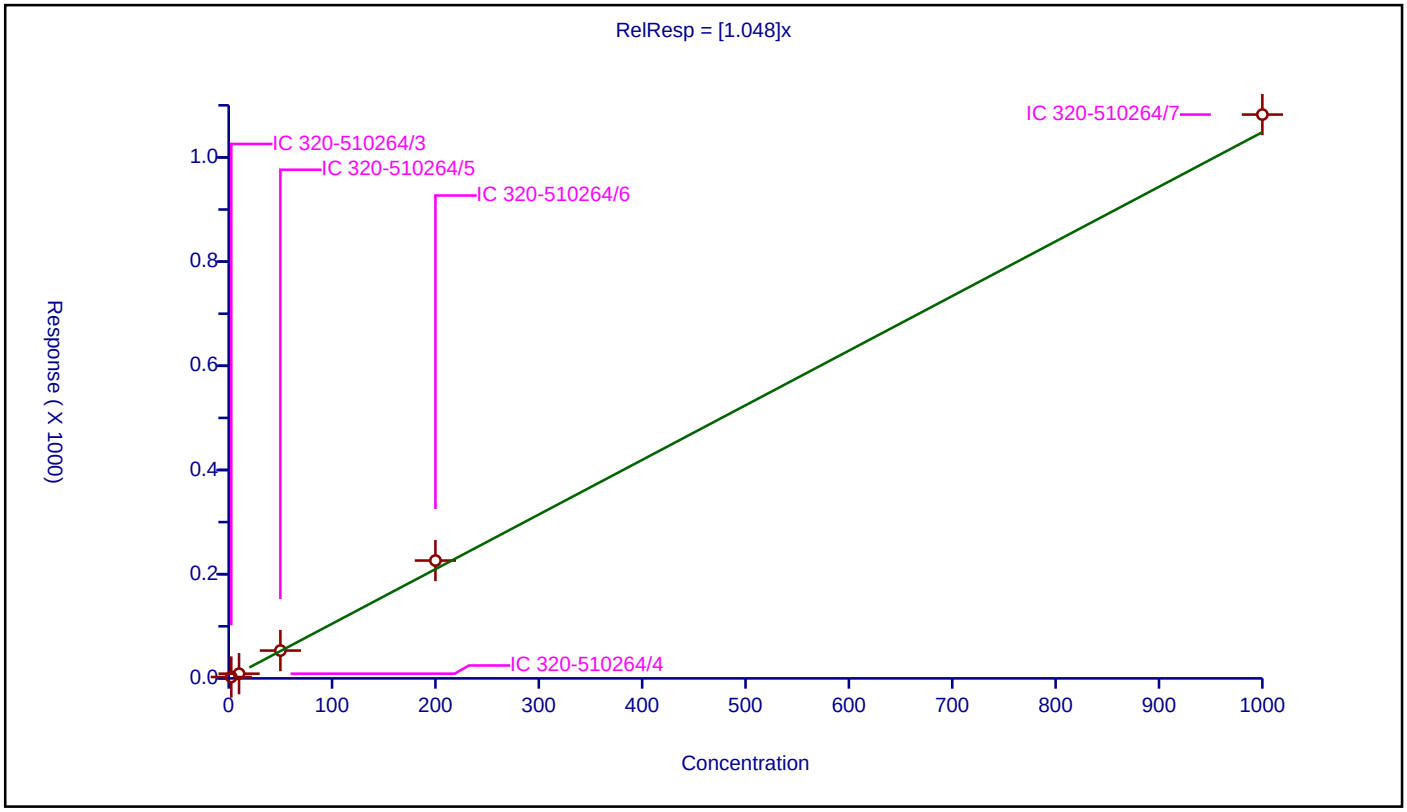

773426

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	408000000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.684664	100.0	78674290.0	1.073865	Y
2	IC 320-510264/4	10.0	9.128293	100.0	72525655.0	0.912829	Y
3	IC 320-510264/5	50.0	54.457439	100.0	76368219.0	1.089149	Y
4	IC 320-510264/6	200.0	227.4085	100.0	75205597.0	1.137042	Y
5	IC 320-510264/7	1000.0	1092.787556	100.0	72829681.0	1.092788	Y

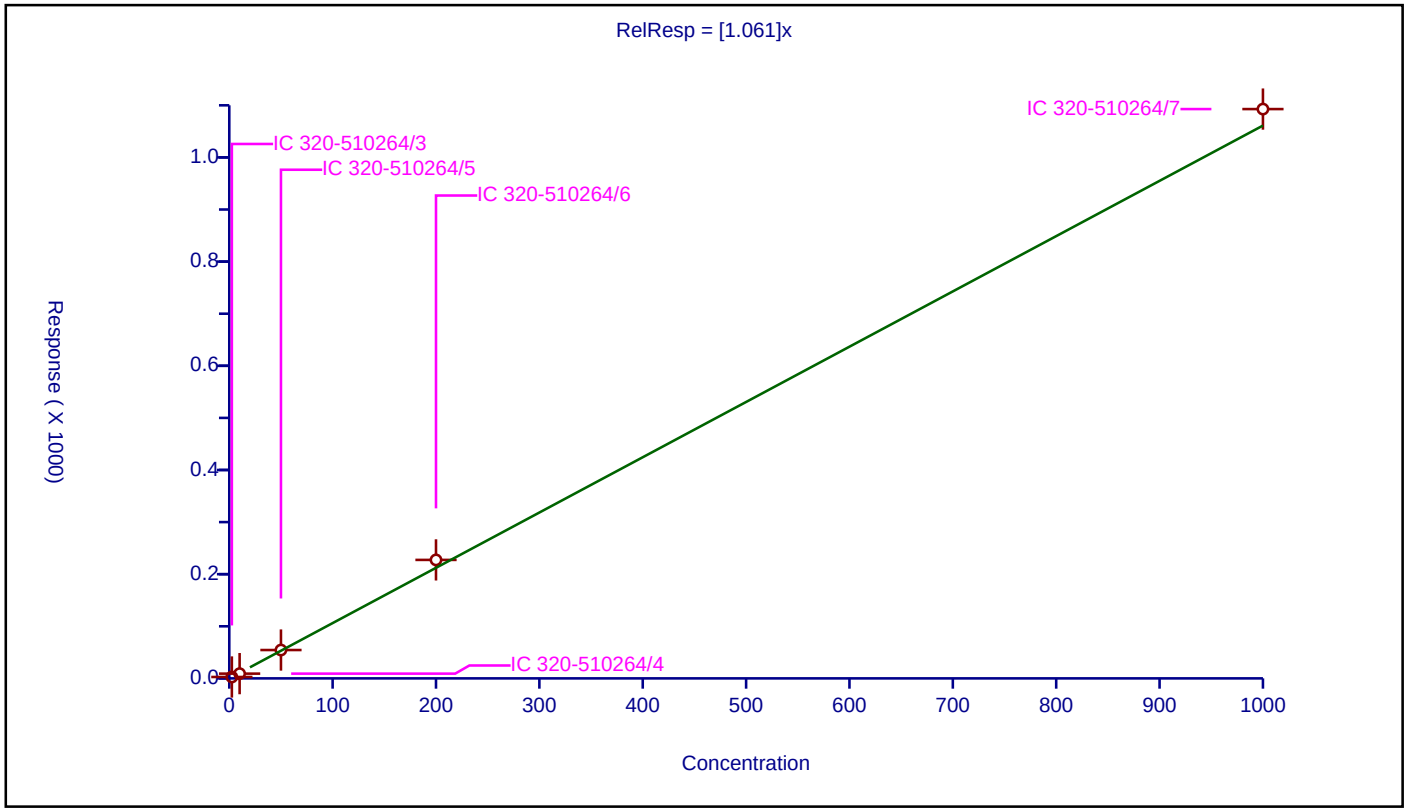

773427

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	391000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.05566	100.0	68885161.0	1.222264	Y
2	IC 320-510264/4	10.0	9.86292	100.0	64406928.0	0.986292	Y
3	IC 320-510264/5	50.0	59.290251	100.0	67028498.0	1.185805	Y
4	IC 320-510264/6	200.0	248.302486	100.0	66145684.0	1.241512	Y
5	IC 320-510264/7	1000.0	1201.822353	100.0	63471184.0	1.201822	Y

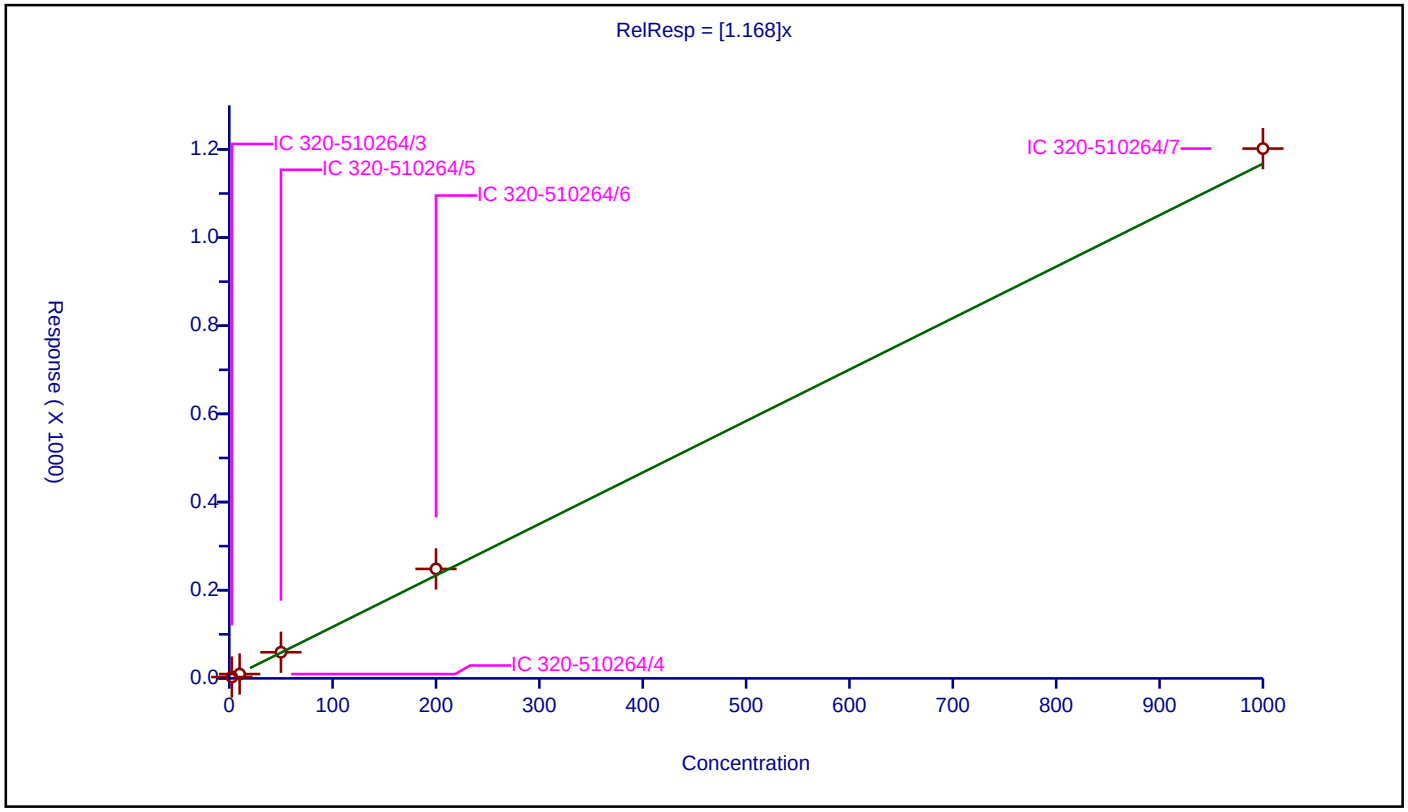

773428

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.018

Error Coefficients

Standard Error:	401000000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.601965	100.0	80591659.0	1.040786	Y
2	IC 320-510264/4	10.0	8.609629	100.0	74944110.0	0.860963	Y
3	IC 320-510264/5	50.0	52.328396	100.0	78214582.0	1.046568	Y
4	IC 320-510264/6	200.0	221.640486	100.0	75259591.0	1.108202	Y
5	IC 320-510264/7	1000.0	1035.570916	100.0	75649463.0	1.035571	Y

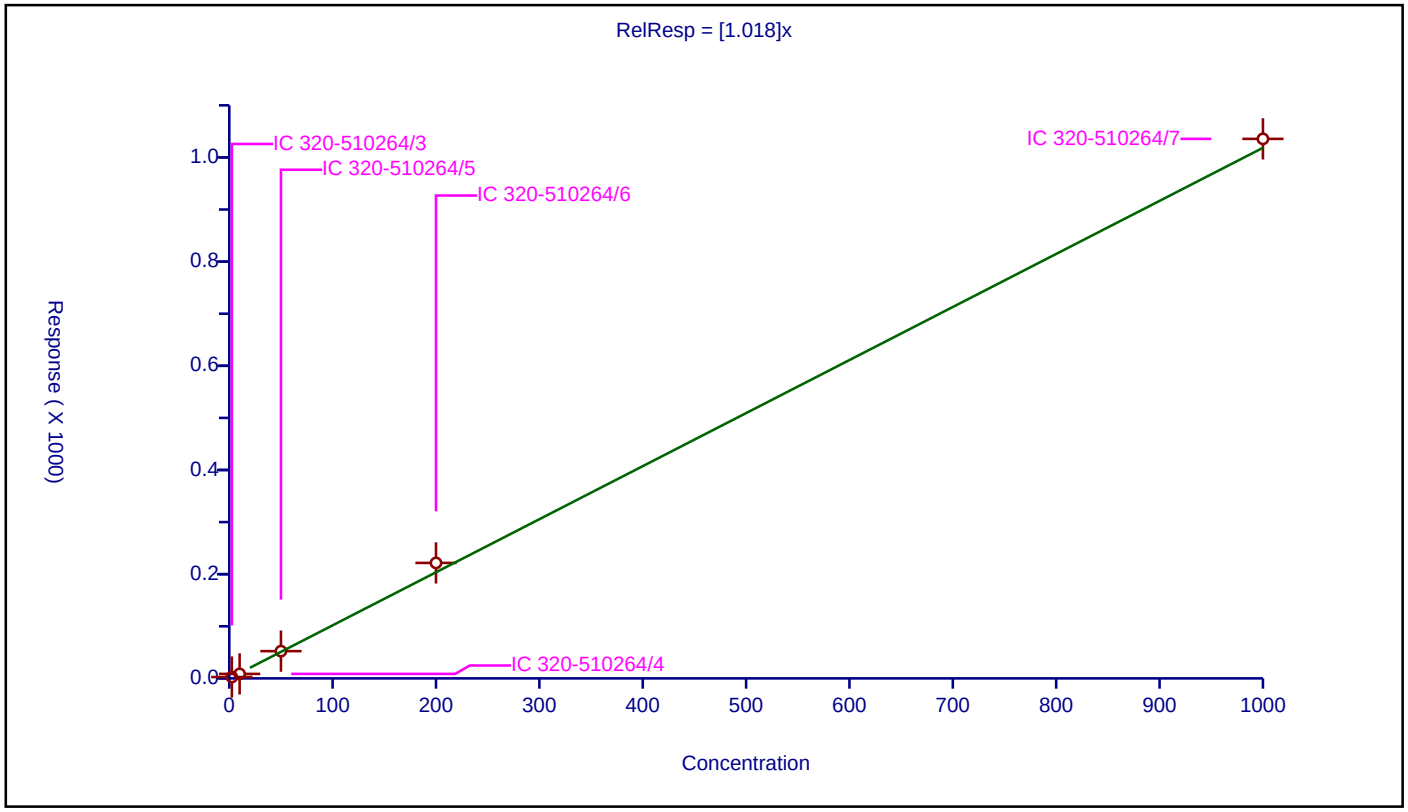

773429

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.254

Error Coefficients

Standard Error:	71900000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.62875	100.0	59957723.0	1.257499	Y
2	IC 320-510264/4	2.0	2.19411	100.0	53975587.0	1.097055	Y
3	IC 320-510264/5	10.0	12.651014	100.0	56155483.0	1.265101	Y
4	IC 320-510264/6	40.0	53.737487	100.0	55471422.0	1.343437	Y
5	IC 320-510264/7	200.0	261.501191	100.0	53698206.0	1.307506	Y

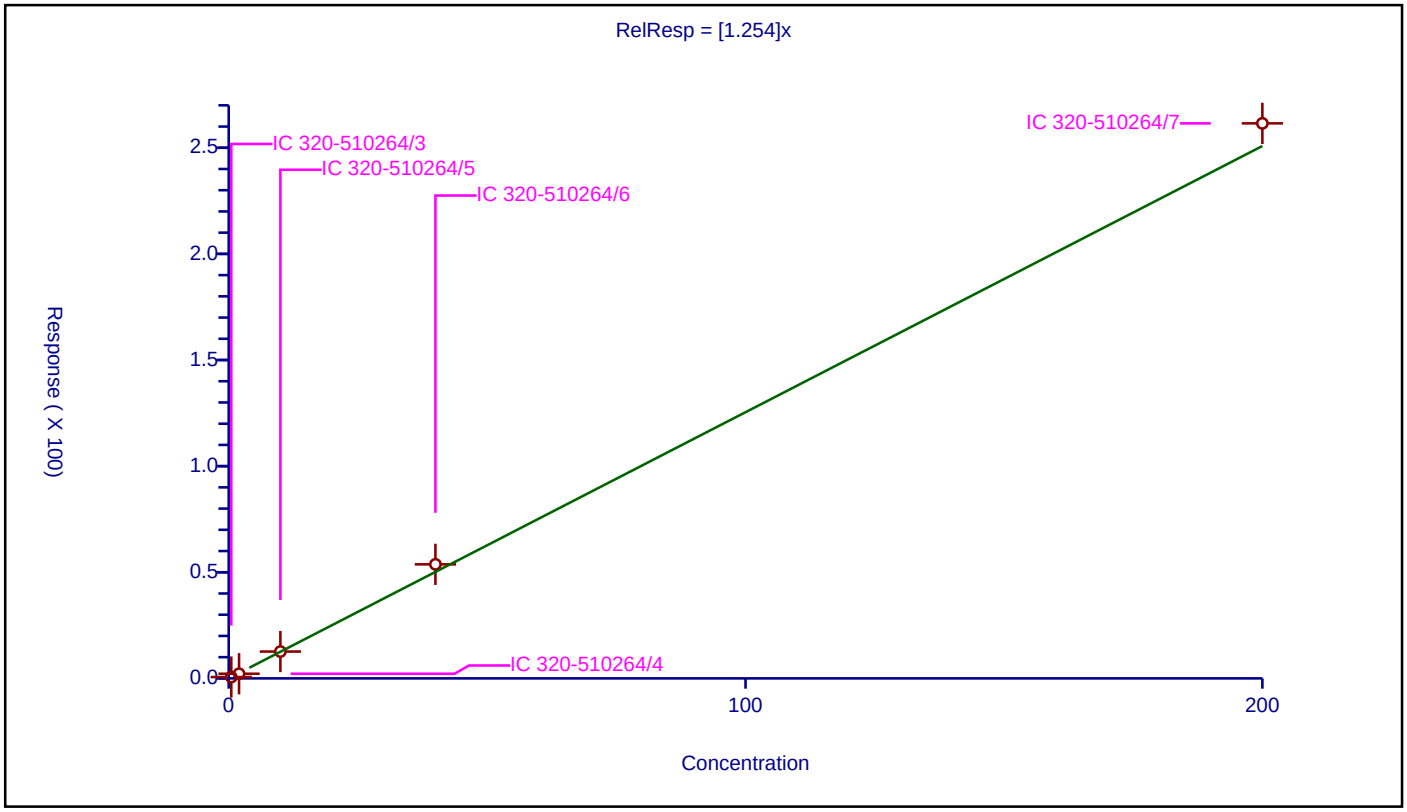

773430

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.024

Error Coefficients

Standard Error:	105000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.514358	100.0	108384725.0	1.028715	Y
2	IC 320-510264/4	2.0	1.739696	100.0	98246522.0	0.869848	Y
3	IC 320-510264/5	10.0	10.458407	100.0	101724636.0	1.045841	Y
4	IC 320-510264/6	40.0	44.37733	100.0	100332269.0	1.109433	Y
5	IC 320-510264/7	200.0	213.143097	100.0	95980421.0	1.065715	Y

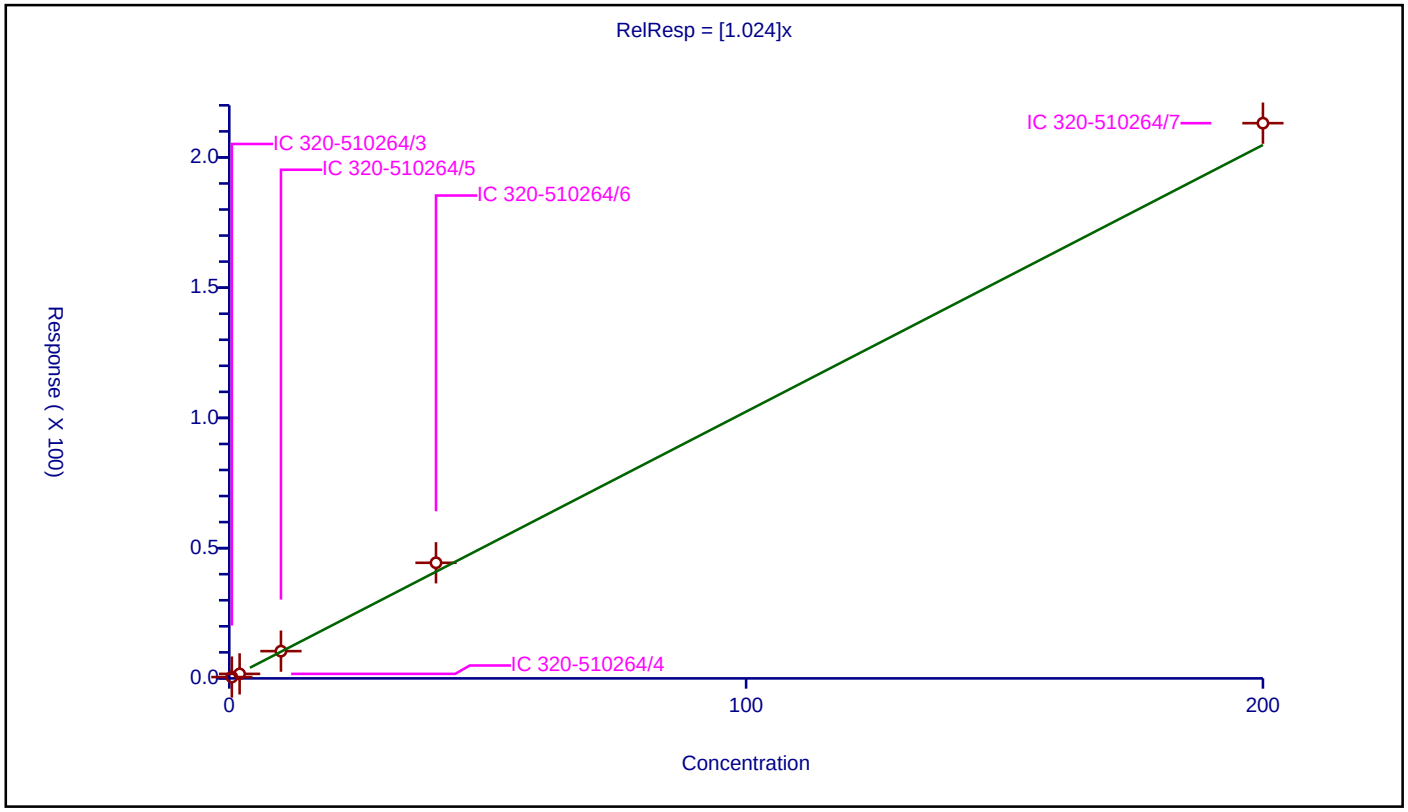

773431

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	72100000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.485229	100.0	65685883.0	0.970458	Y
2	IC 320-510264/4	2.0	1.95888	100.0	62853211.0	0.97944	Y
3	IC 320-510264/5	10.0	11.718119	100.0	62635225.0	1.171812	Y
4	IC 320-510264/6	40.0	47.503291	100.0	62046988.0	1.187582	Y
5	IC 320-510264/7	200.0	245.287862	100.0	57464333.0	1.226439	Y

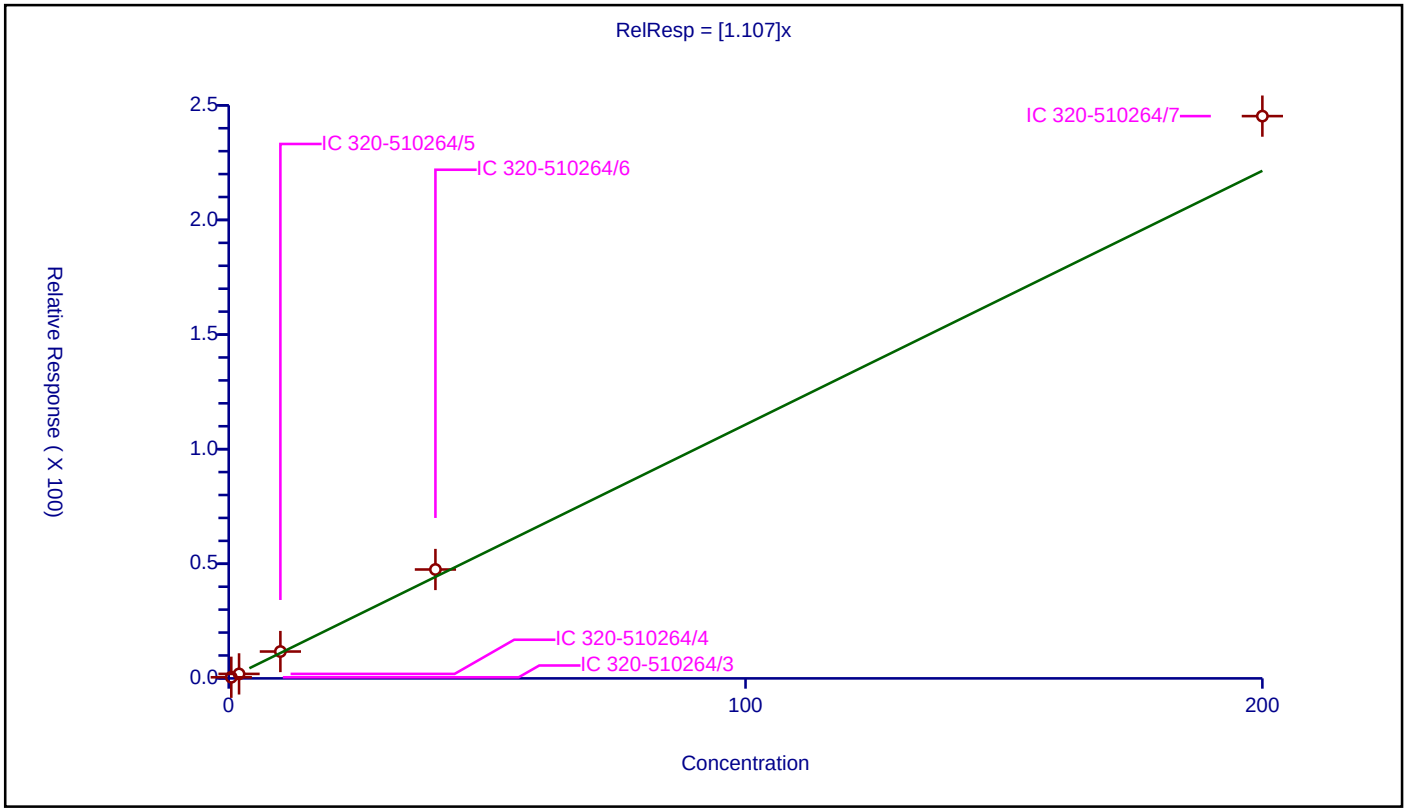

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	325000000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	5.504666	200.0	57018462.0	1.100933	Y
2	IC 320-510264/4	20.0	19.269459	200.0	52034518.0	0.963473	Y
3	IC 320-510264/5	100.0	116.51708	200.0	54338243.0	1.165171	Y
4	IC 320-510264/6	400.0	473.162285	200.0	57303880.0	1.182906	Y
5	IC 320-510264/7	2000.0	2245.176522	200.0	56623863.0	1.122588	Y

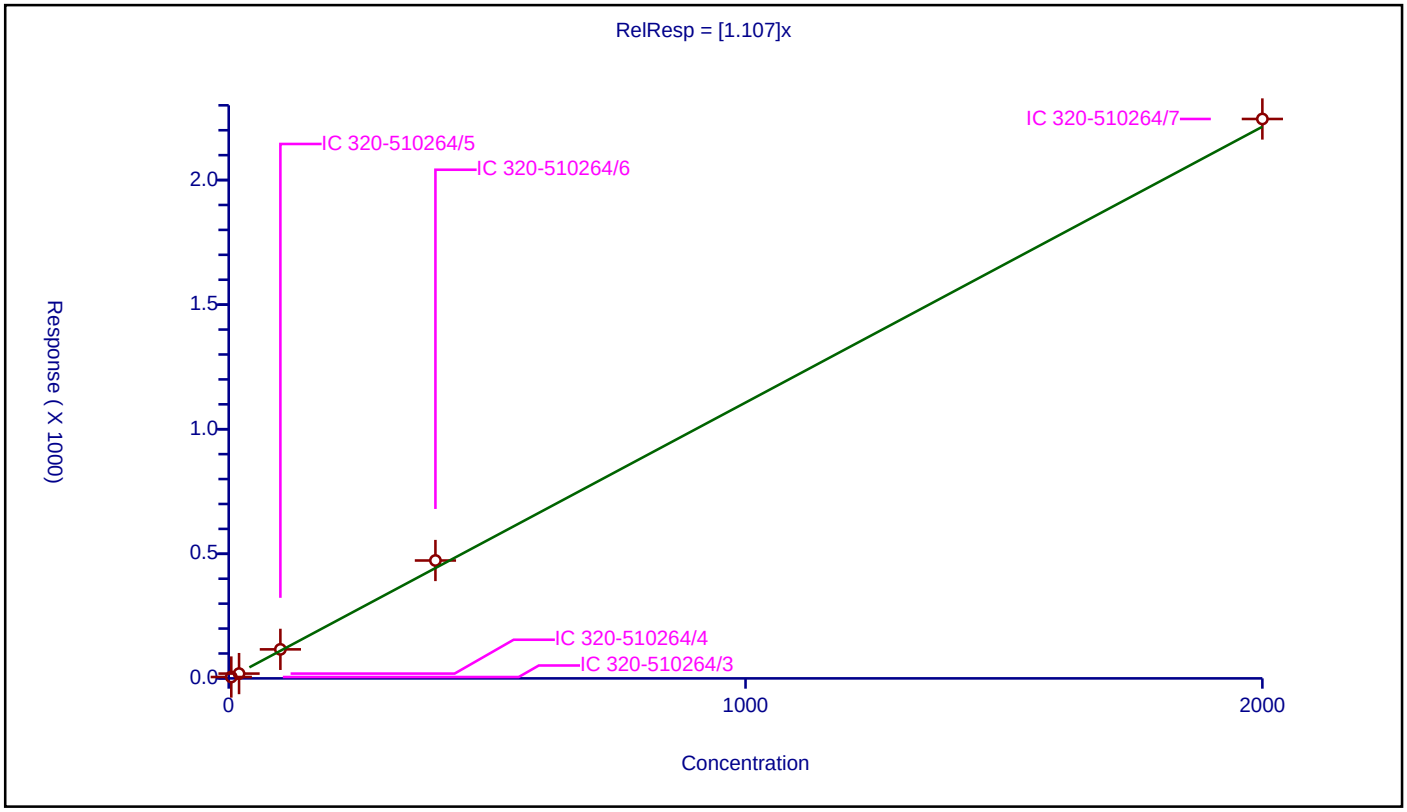

773433

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.438

Error Coefficients

Standard Error:	438000000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	6.931702	200.0	57018462.0	1.38634	Y
2	IC 320-510264/4	20.0	23.824451	200.0	52034518.0	1.191223	Y
3	IC 320-510264/5	100.0	151.448408	200.0	54338243.0	1.514484	Y
4	IC 320-510264/6	400.0	634.327267	200.0	57303880.0	1.585818	Y
5	IC 320-510264/7	2000.0	3025.883229	200.0	56623863.0	1.512942	Y

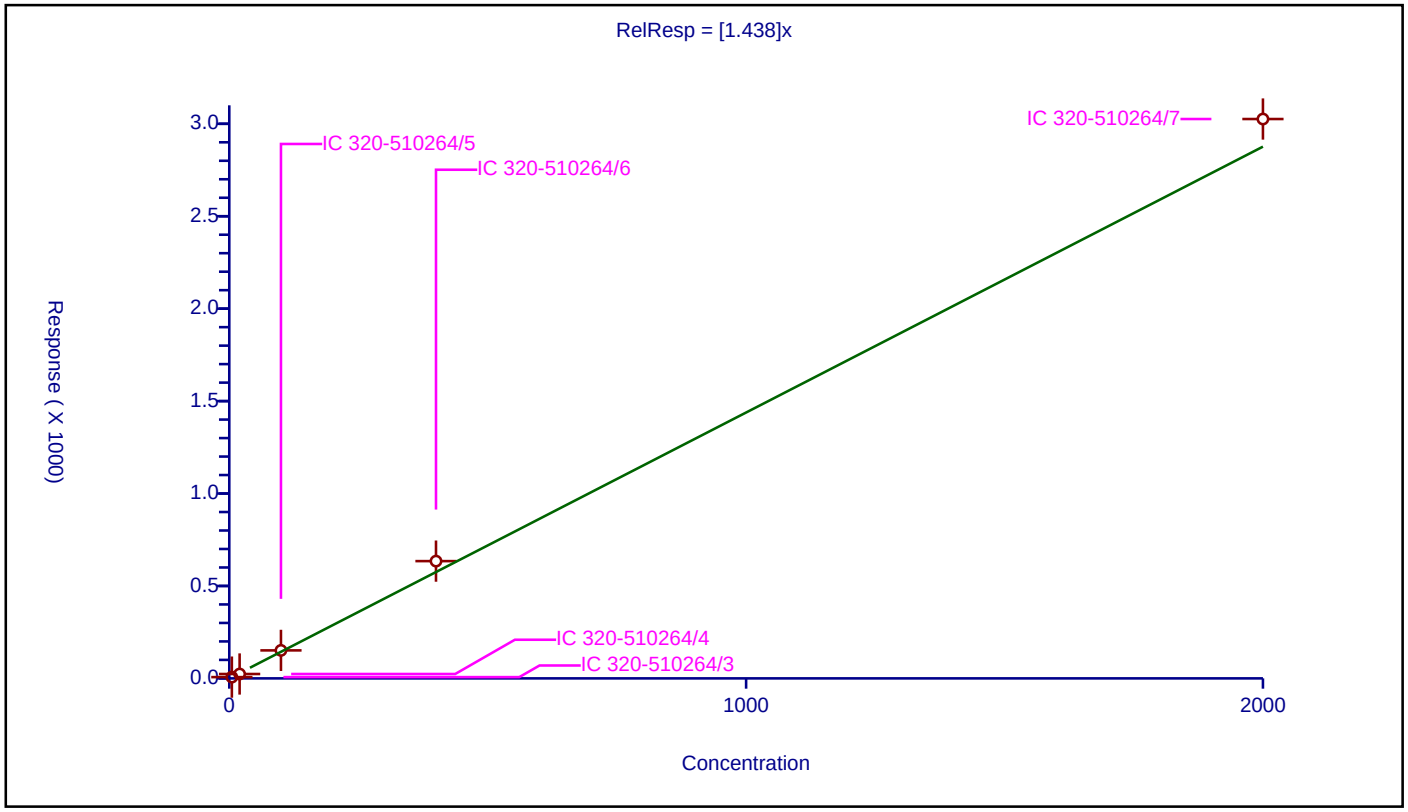

773434

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

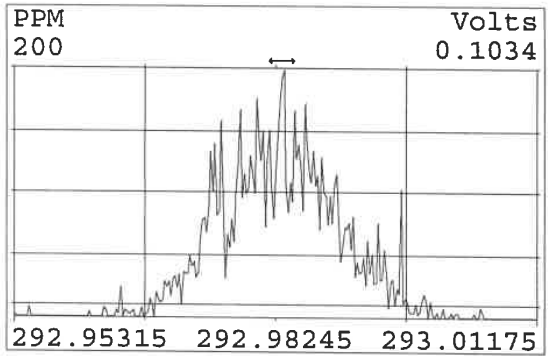

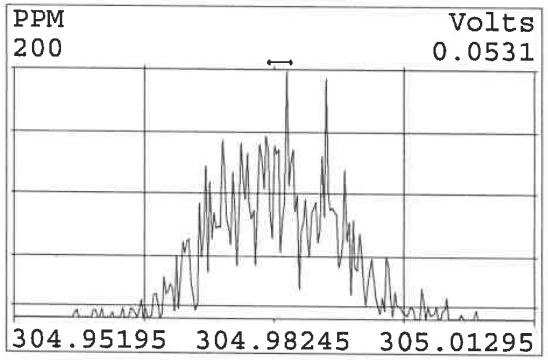

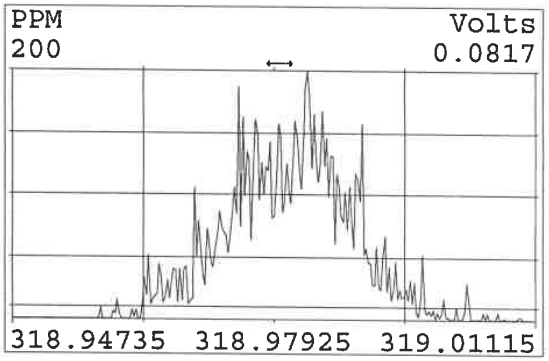

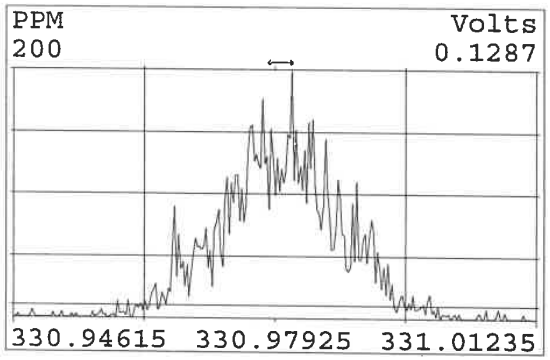

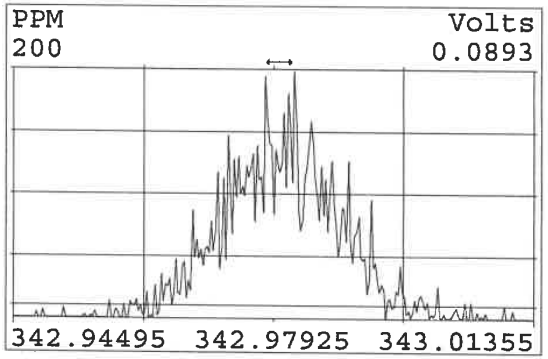

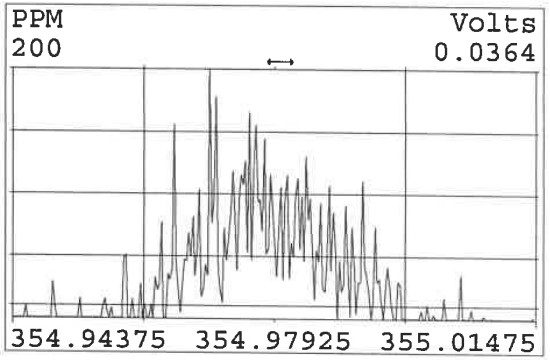

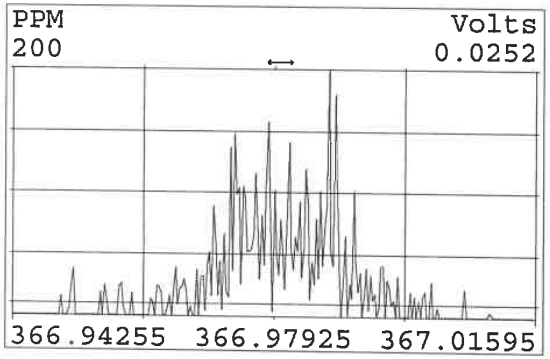

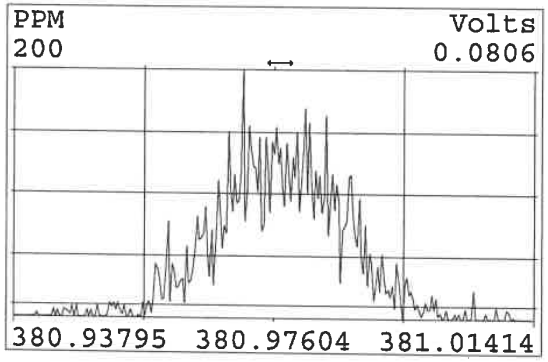

773438

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

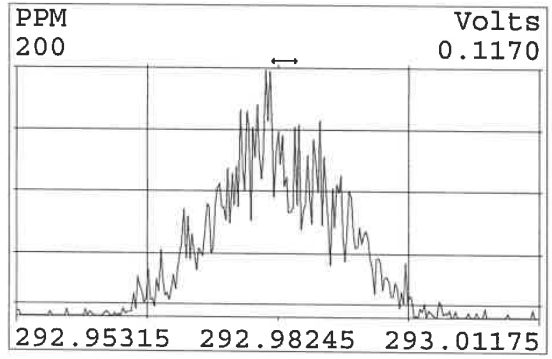

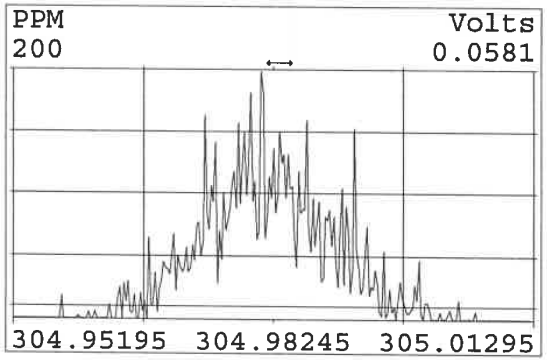

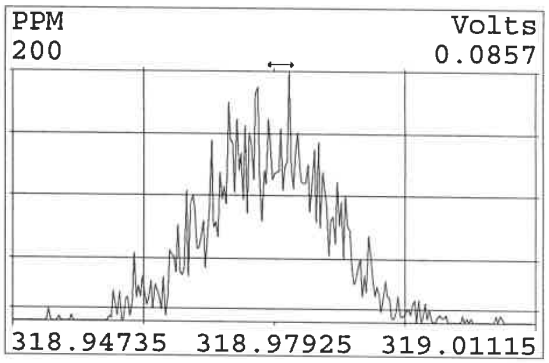

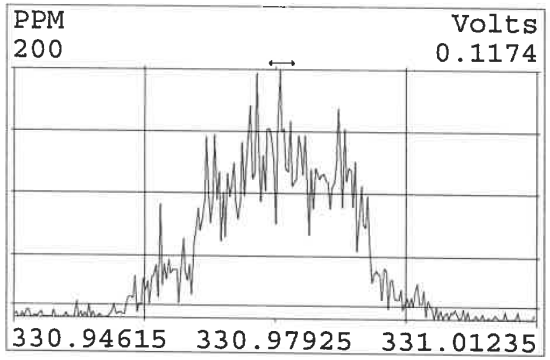

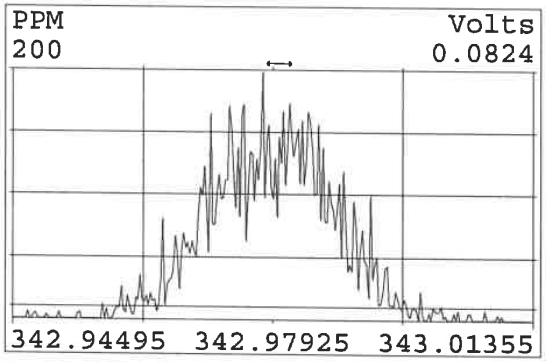

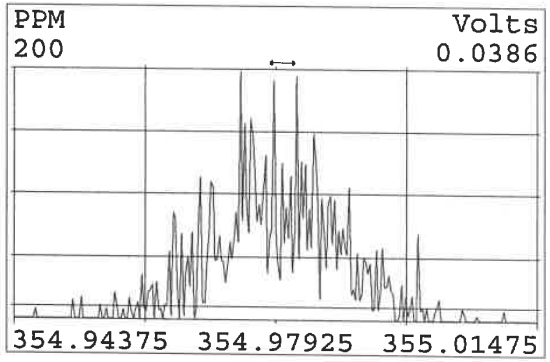

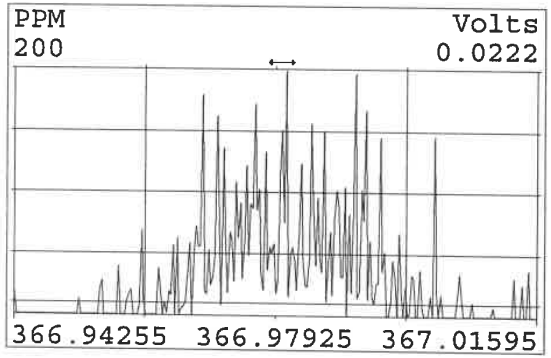

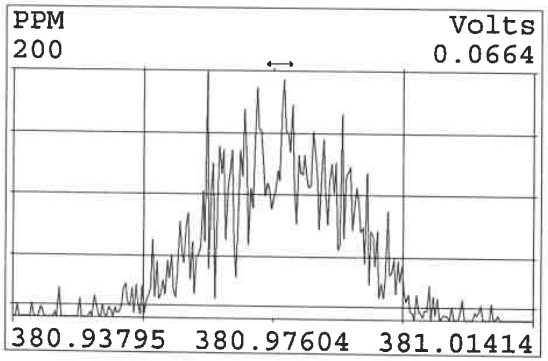

773439

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

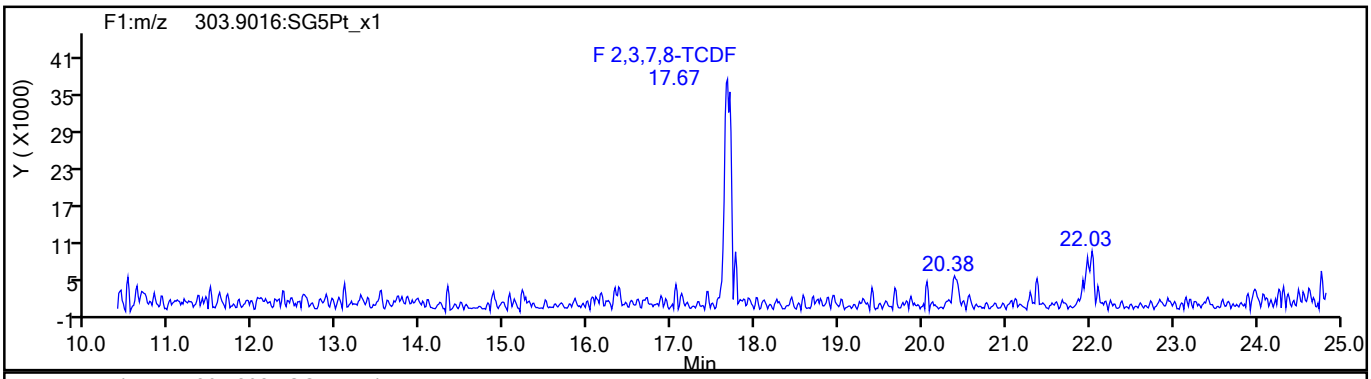

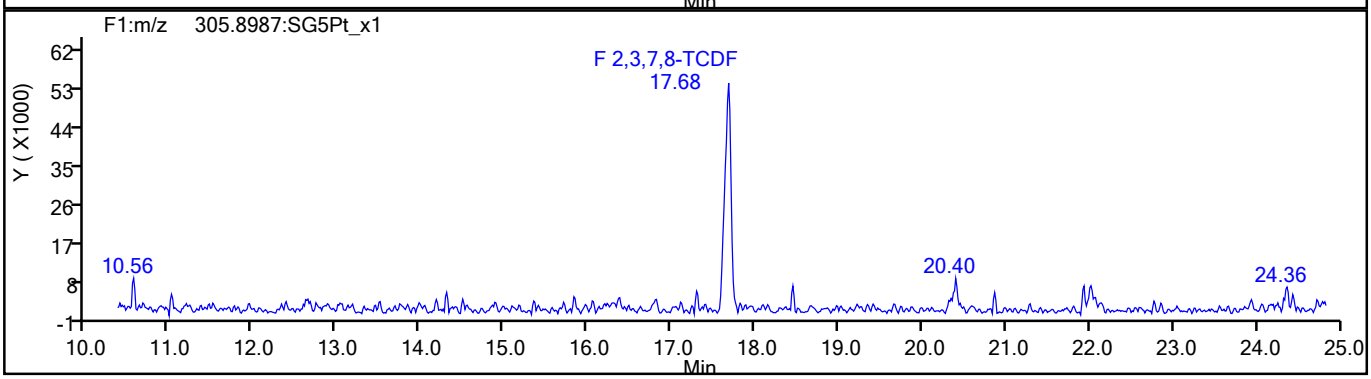

TCDF Standards

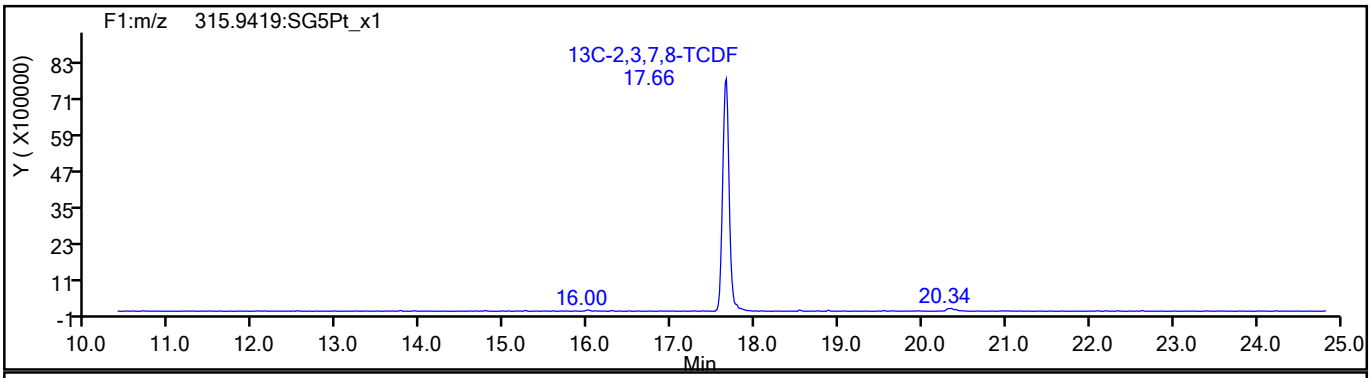

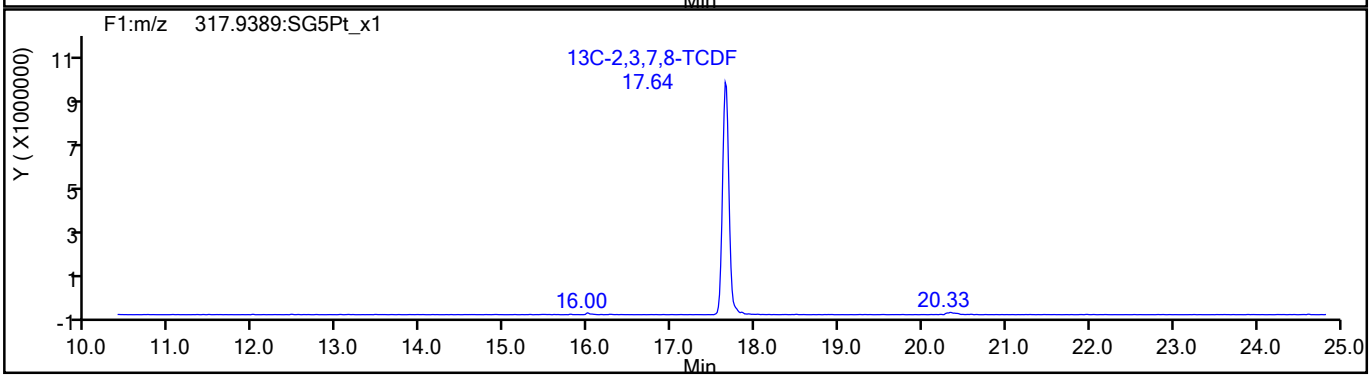

773442

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

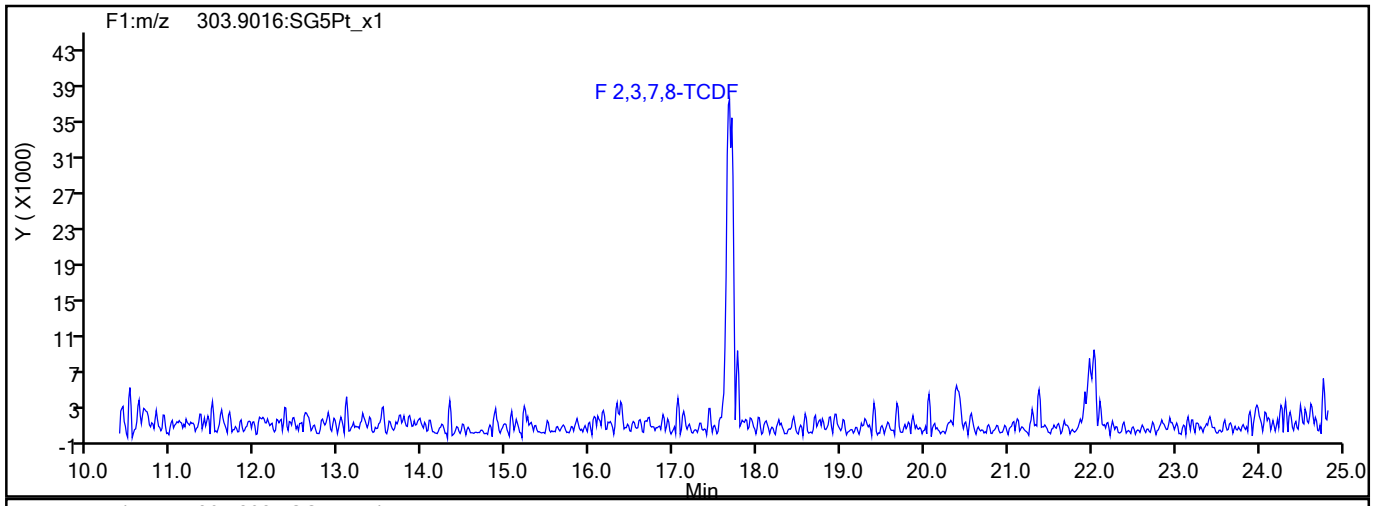

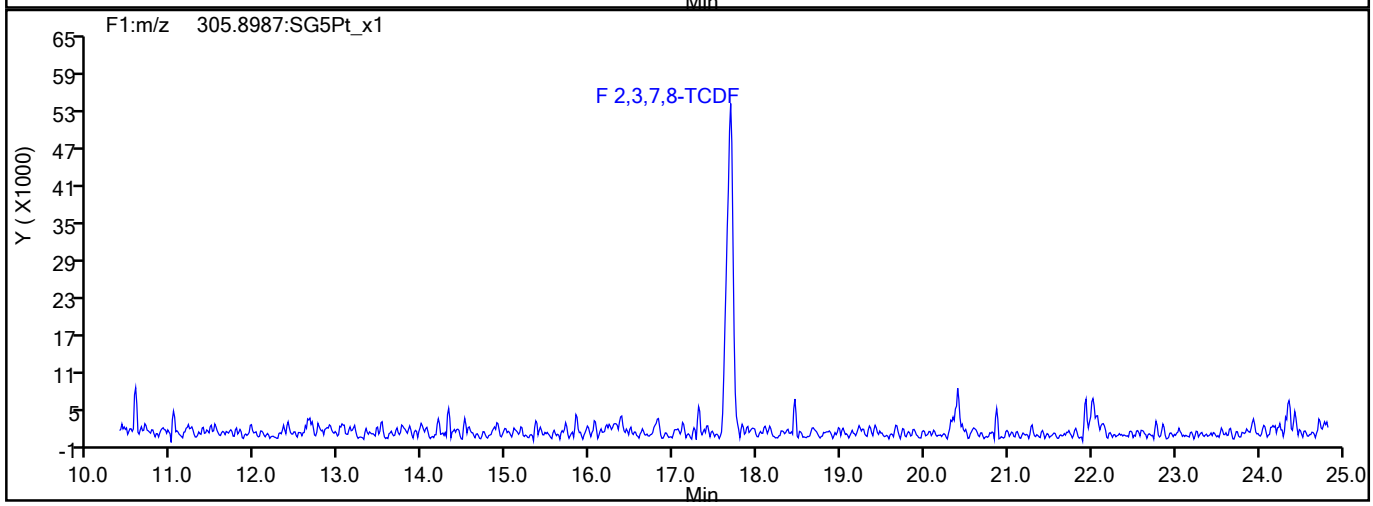

TCDF Interference Mass

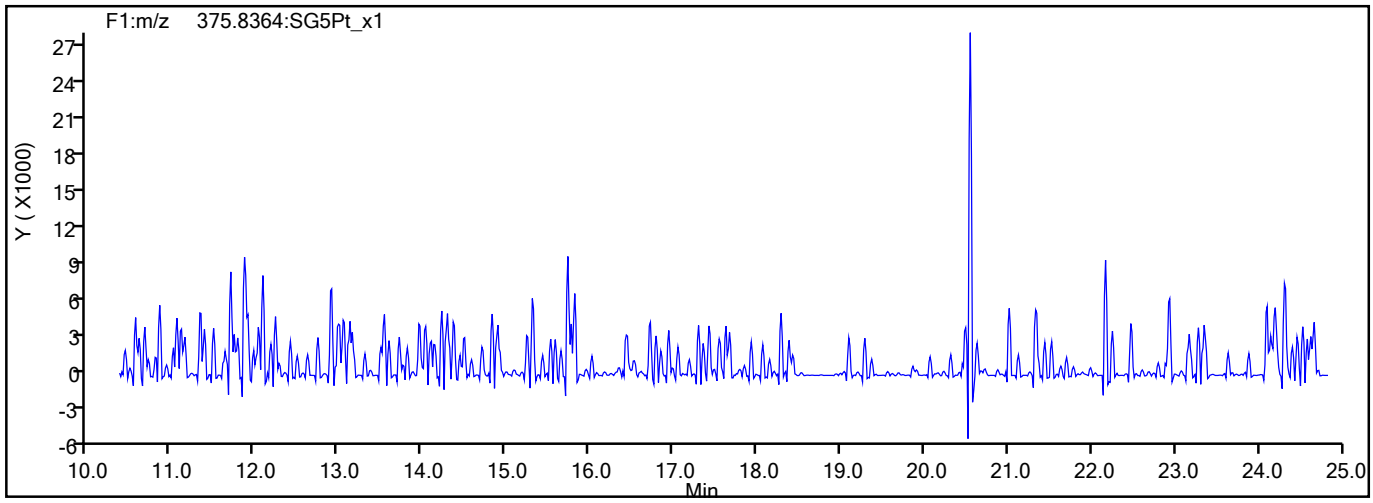

773443

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

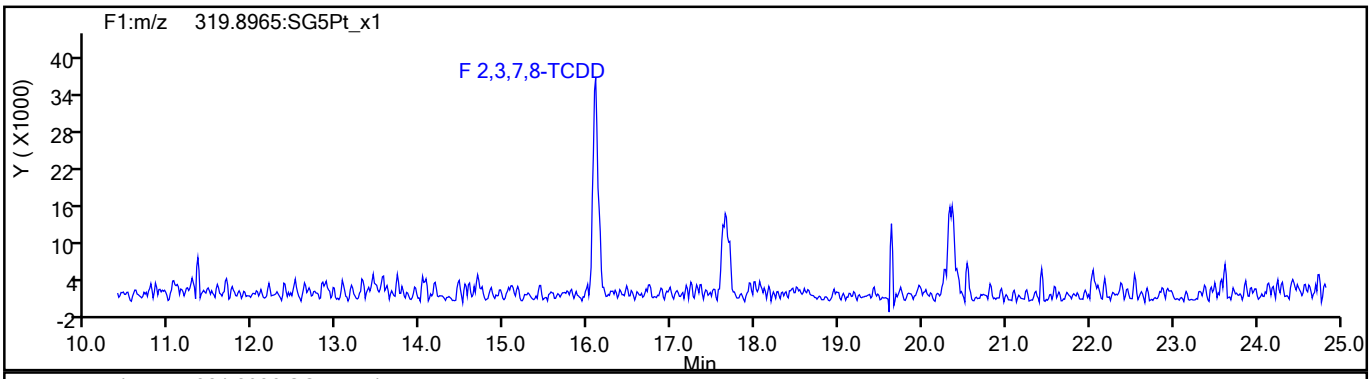

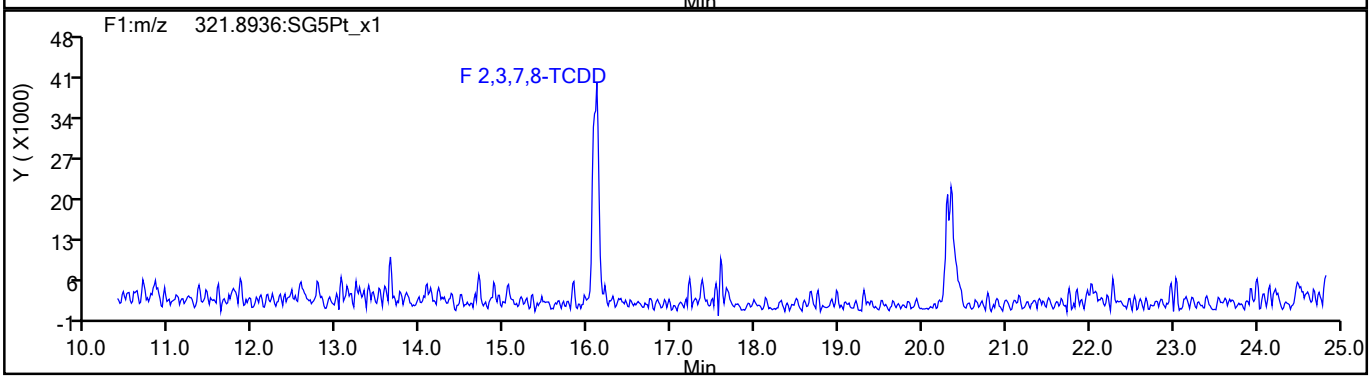

TCDD Standards

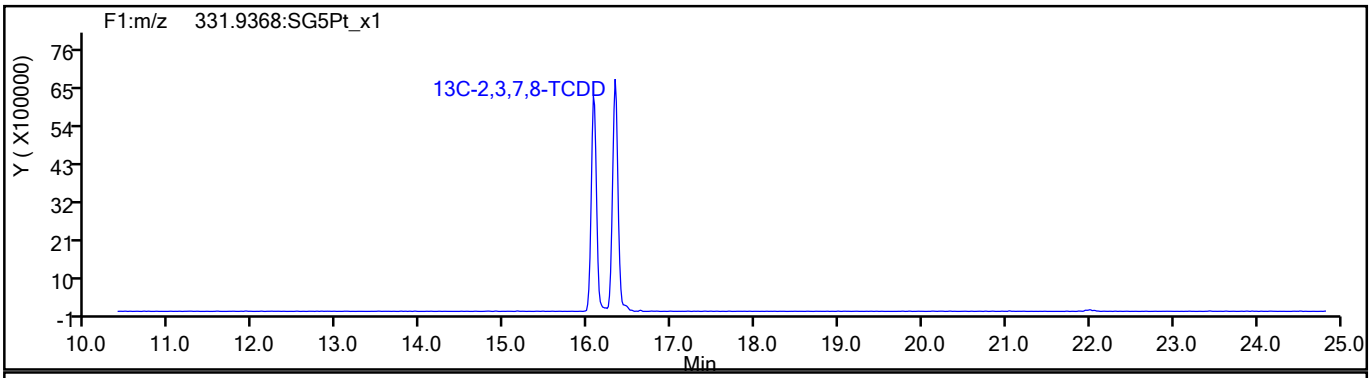

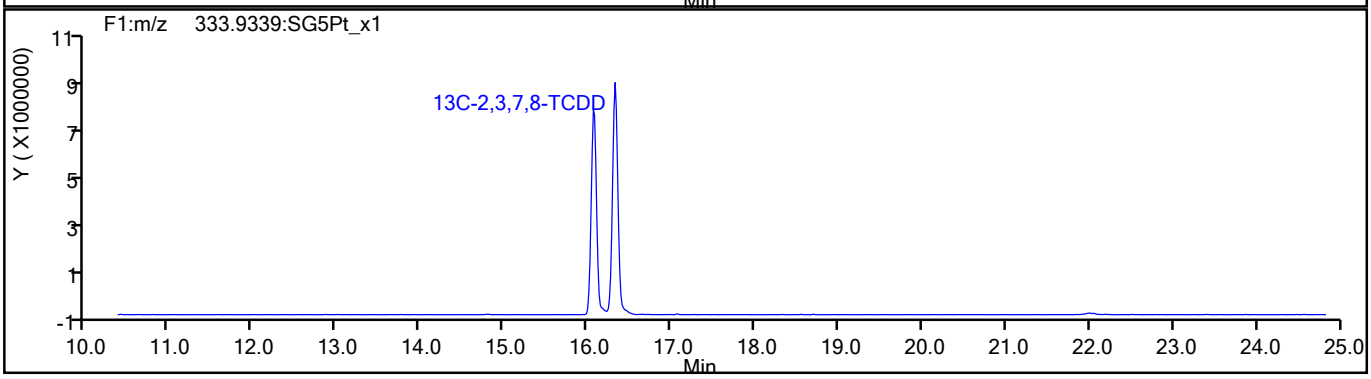

773444

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

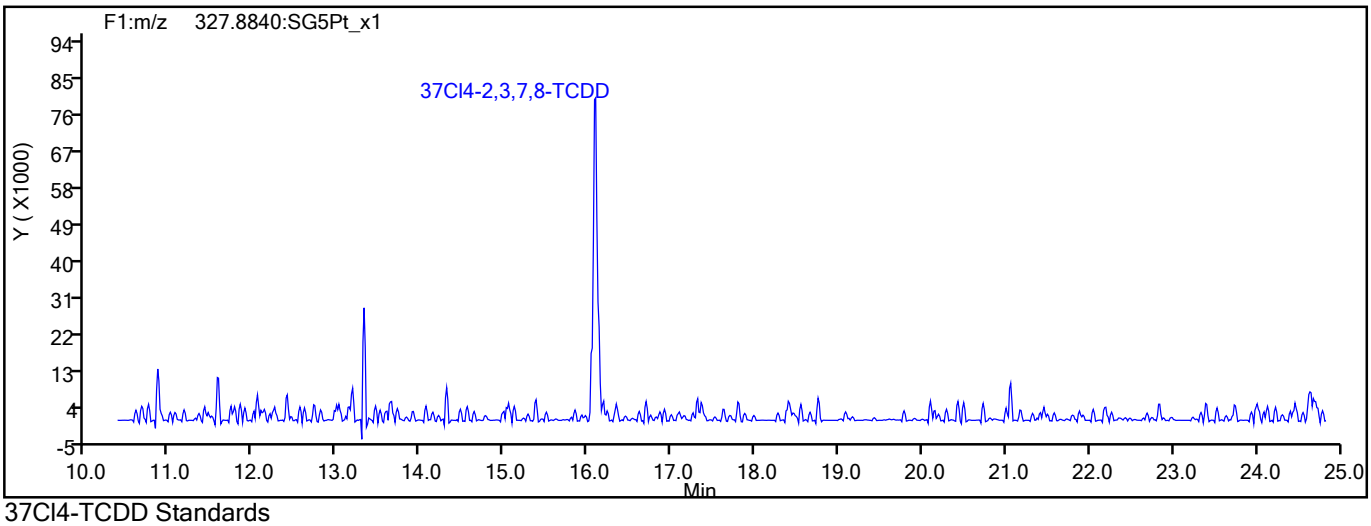

37Cl4-TCDD Standards

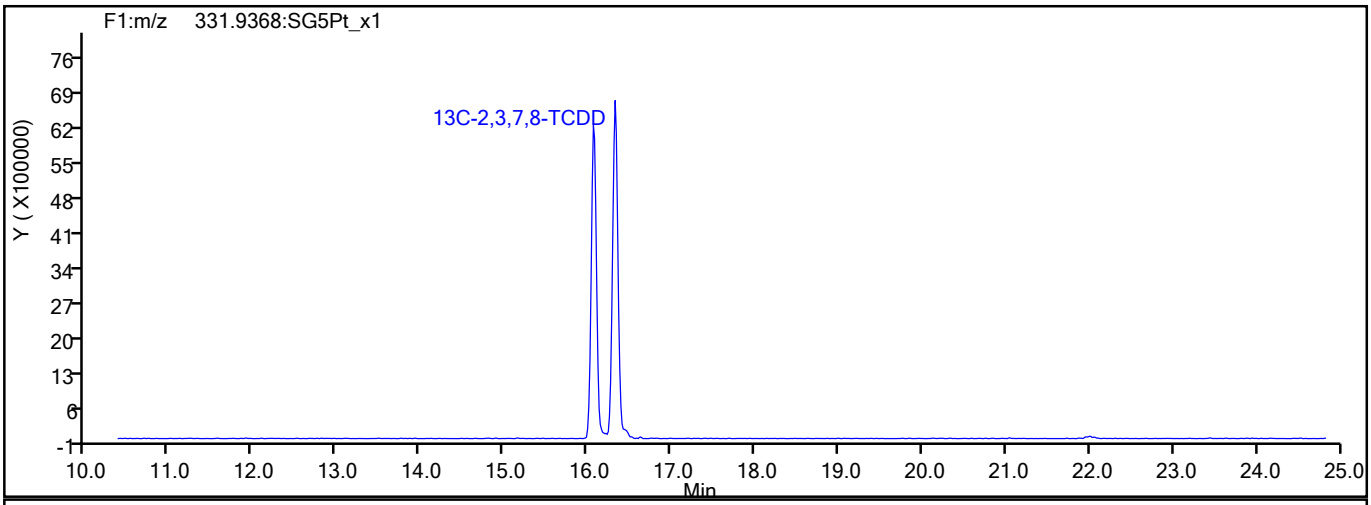

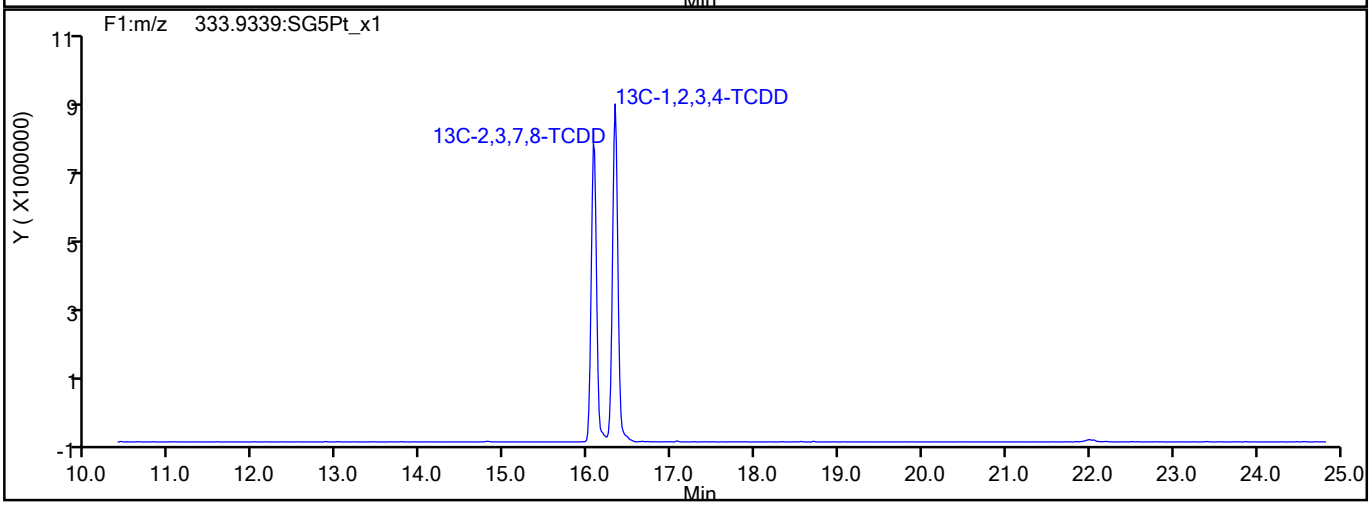

773445

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

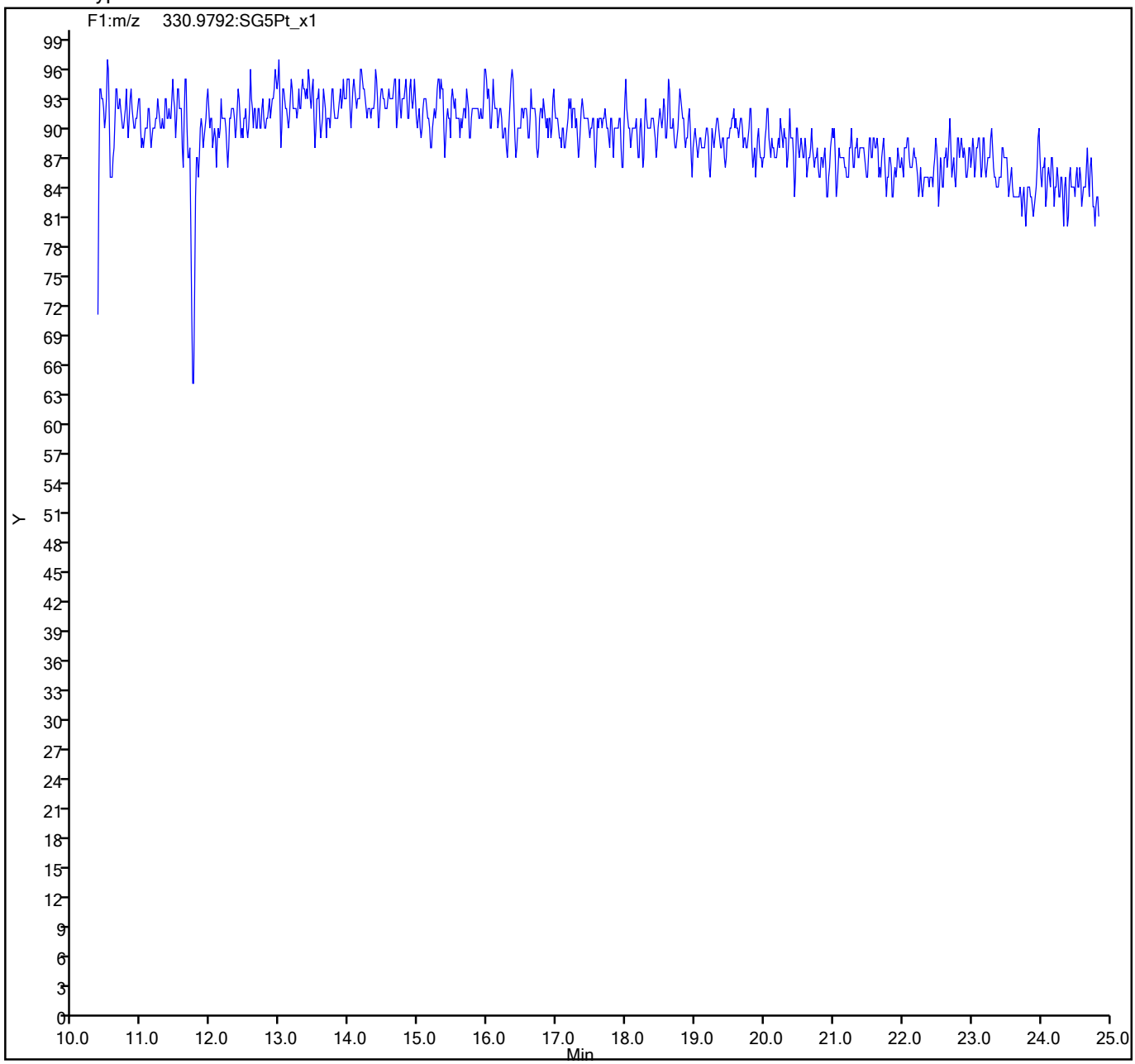

773446

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags
Review Flags
M - Manually Integrated

Reagents:
HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

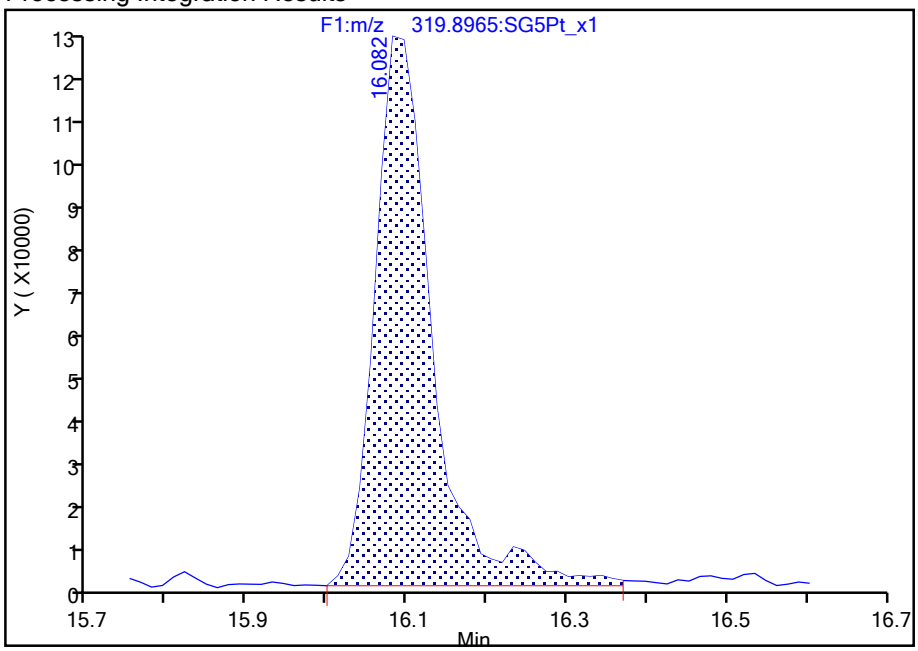

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

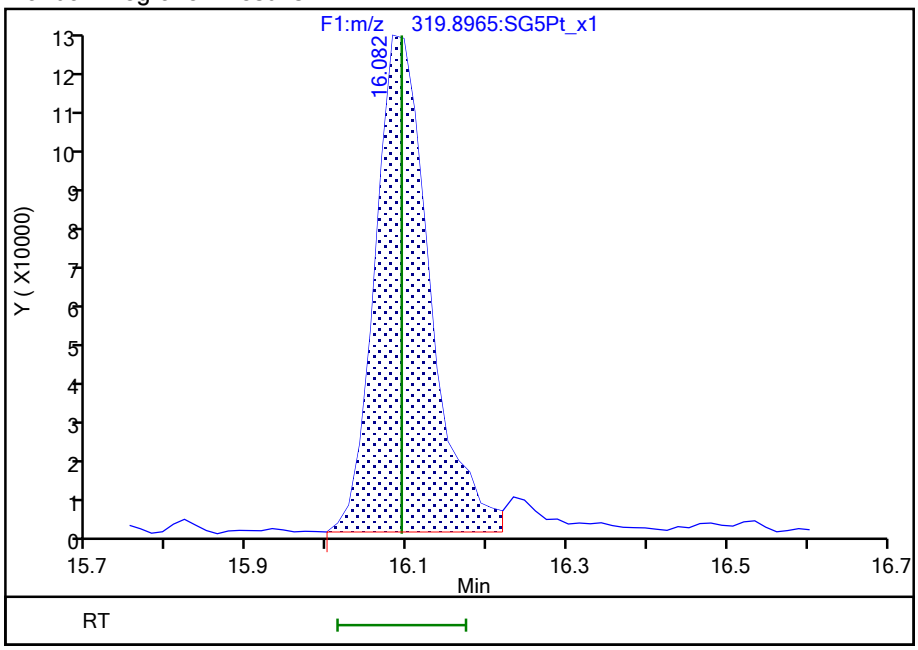

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

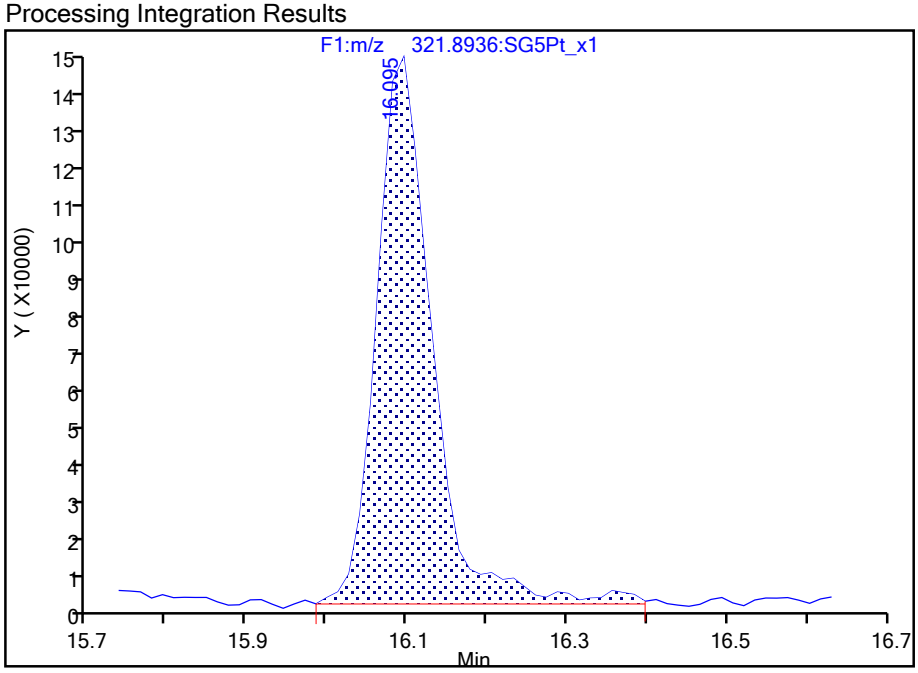

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

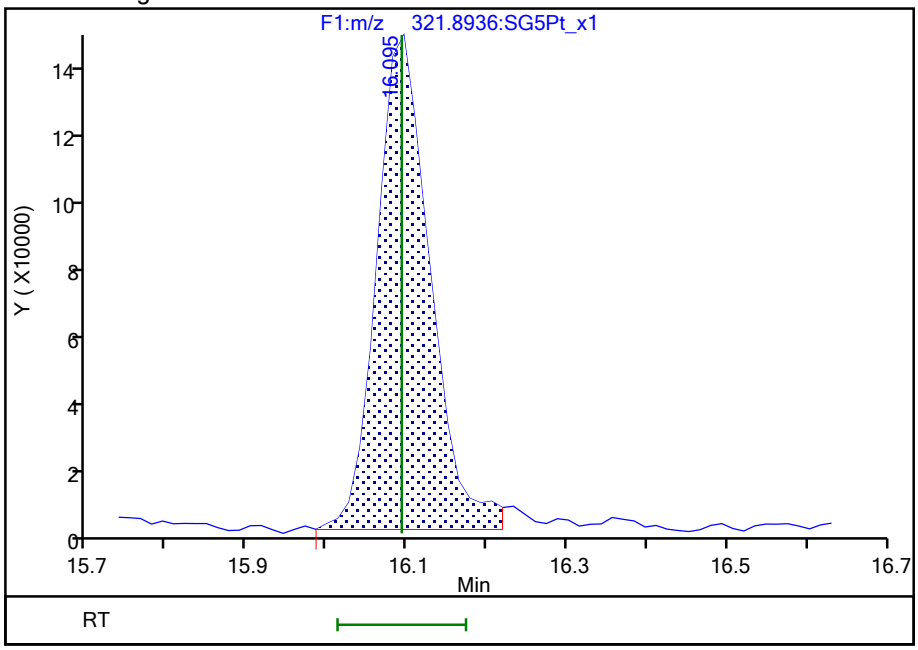

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

773450

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

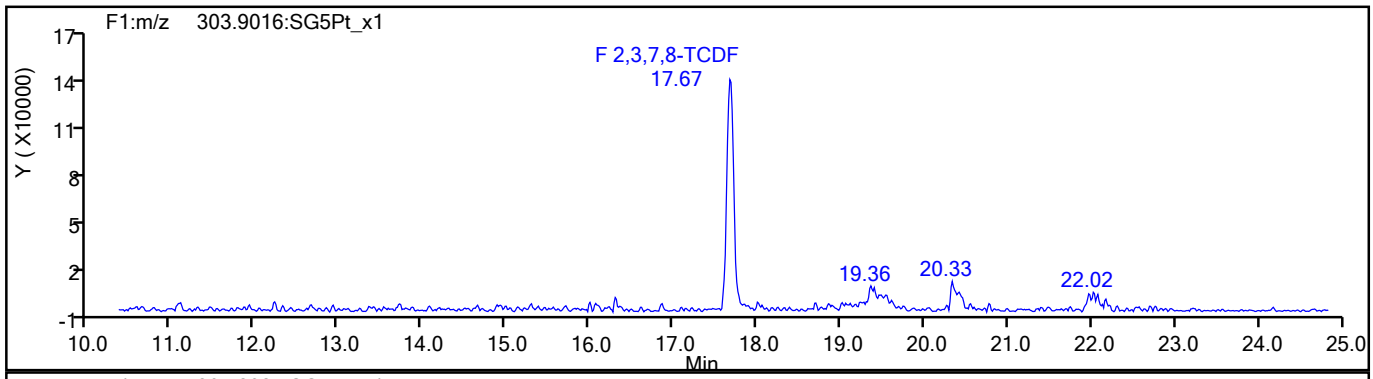

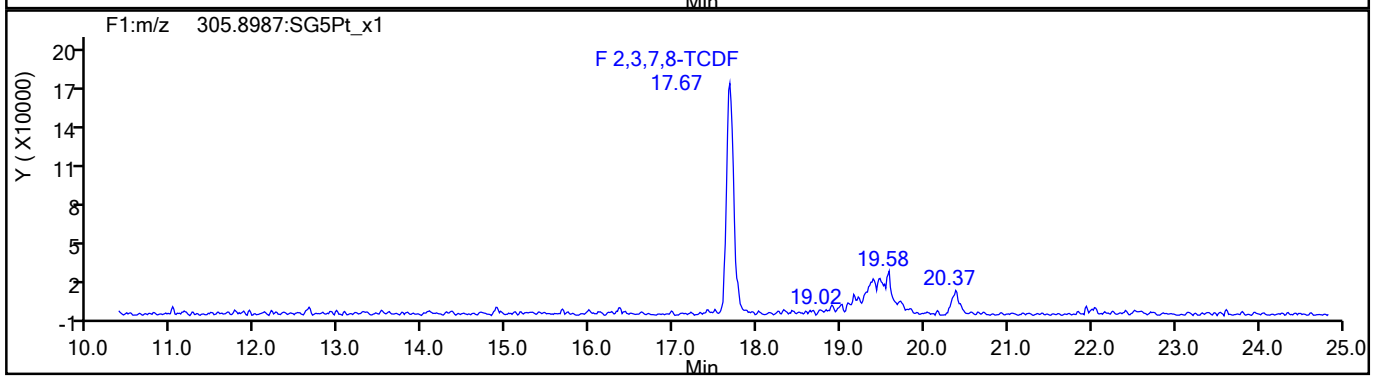

TCDF Standards

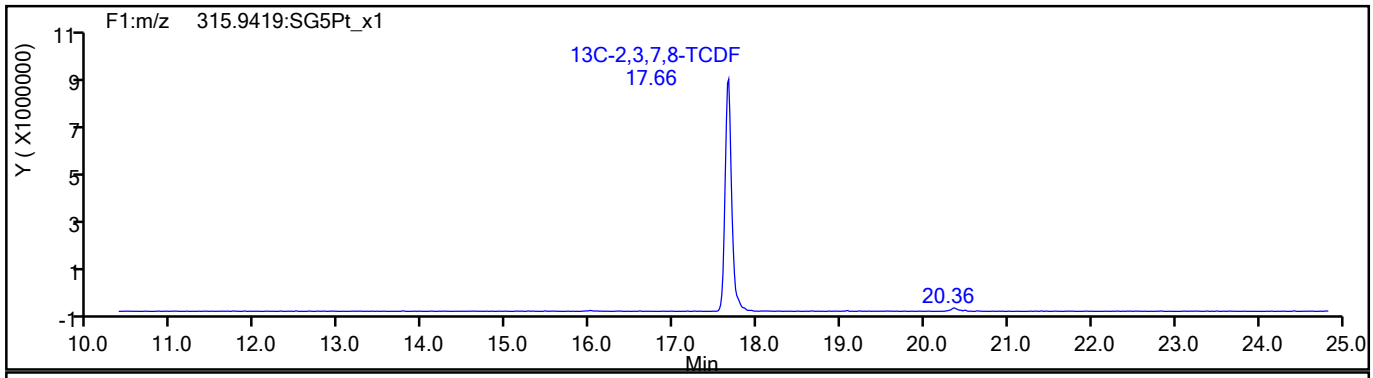

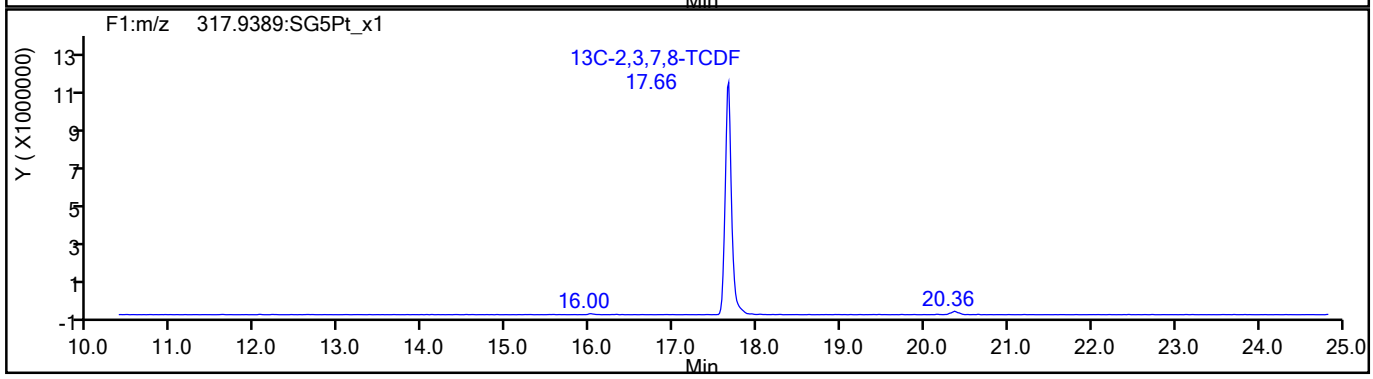

773451

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

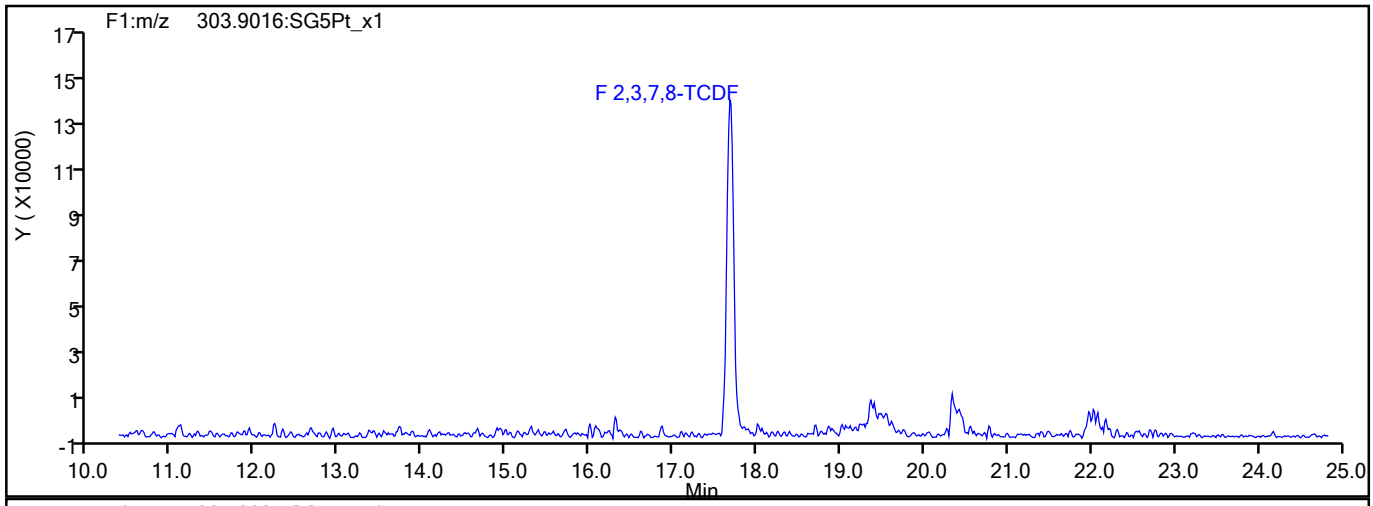

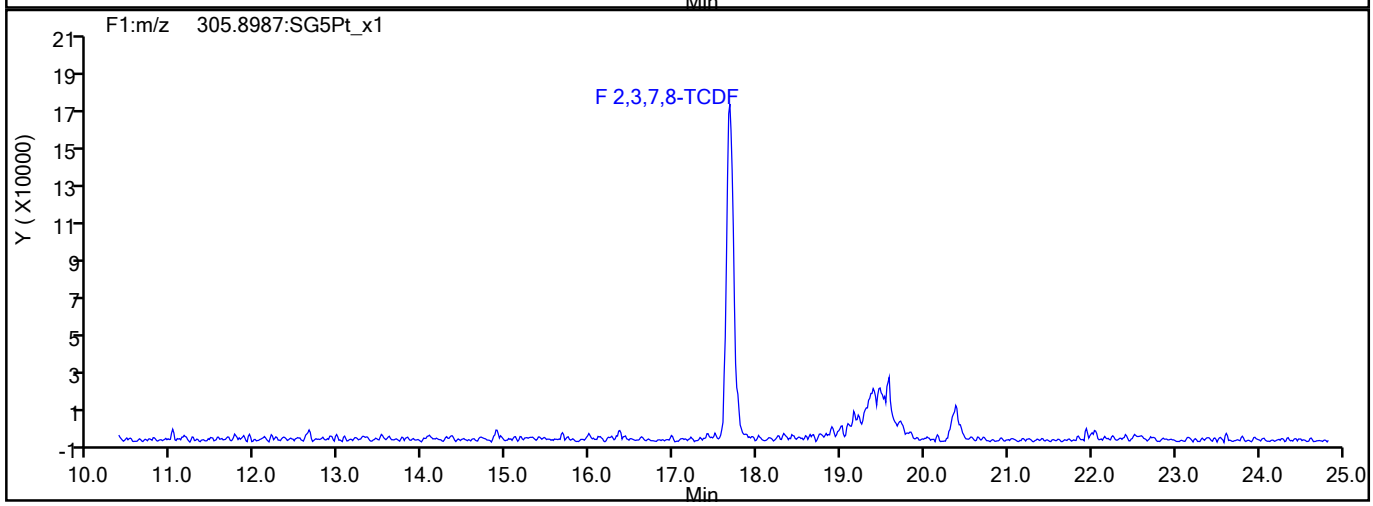

TCDF Interference Mass

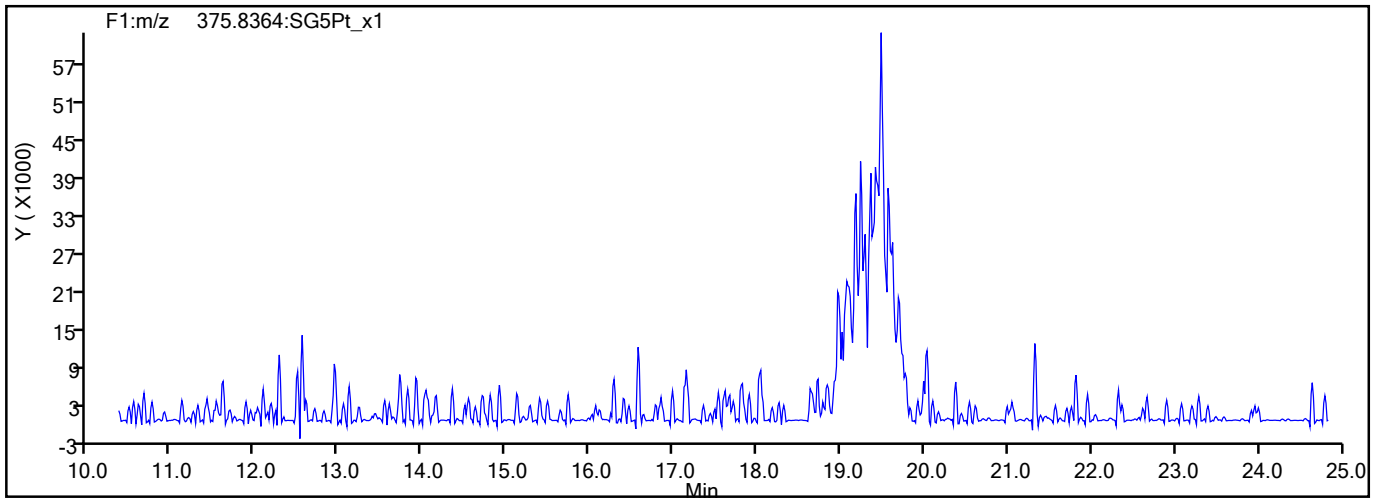

773452

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

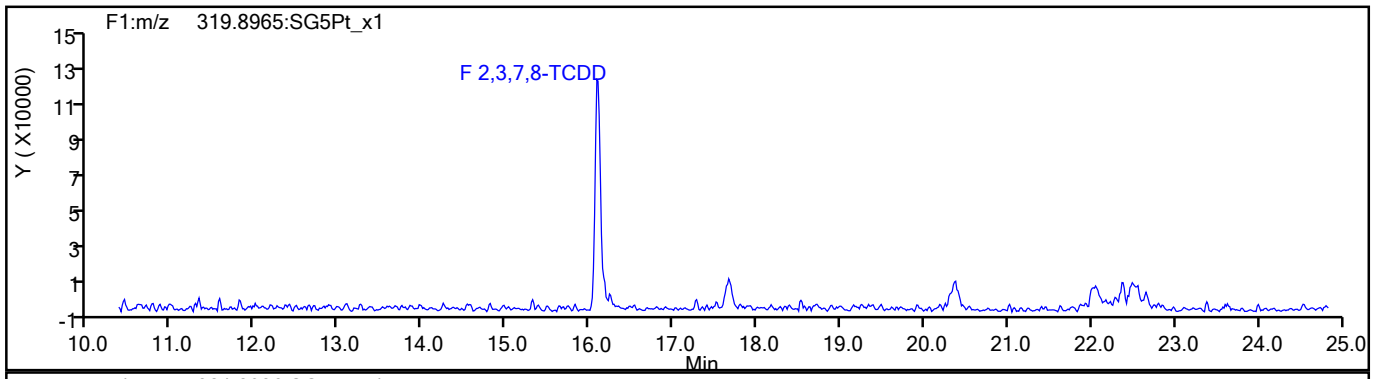

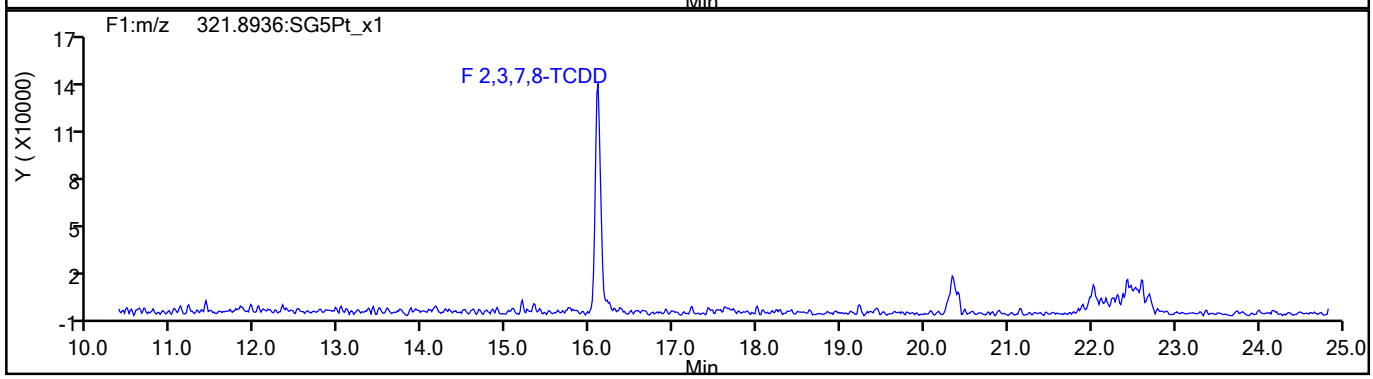

TCDD Standards

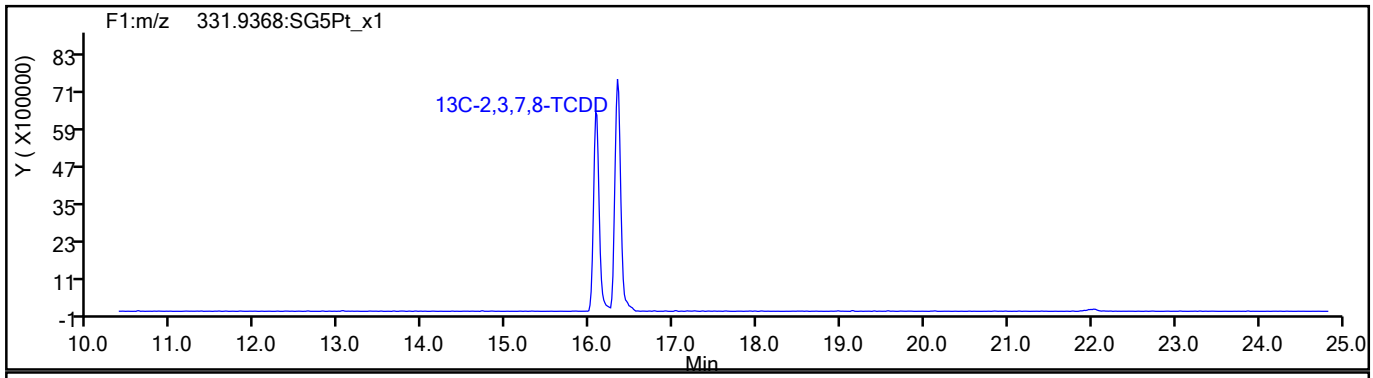

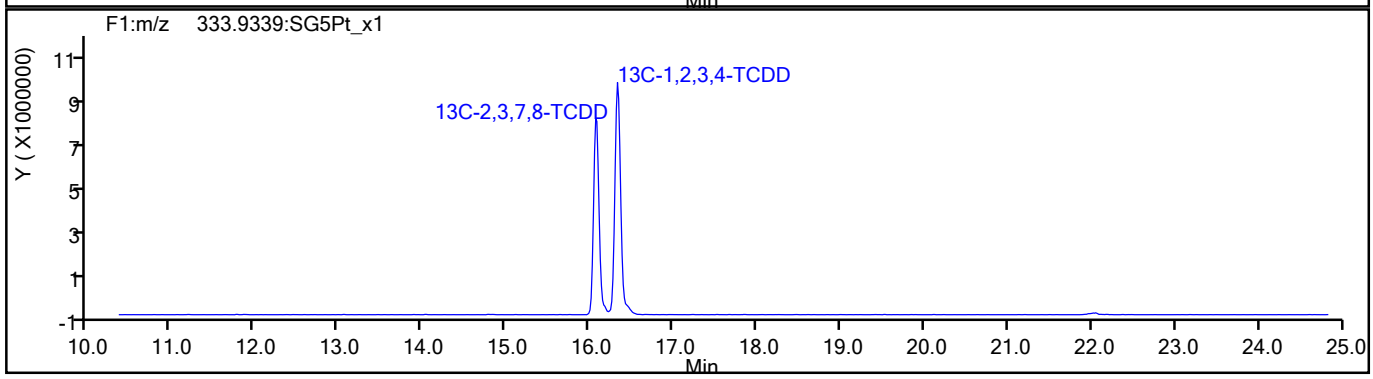

773453

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

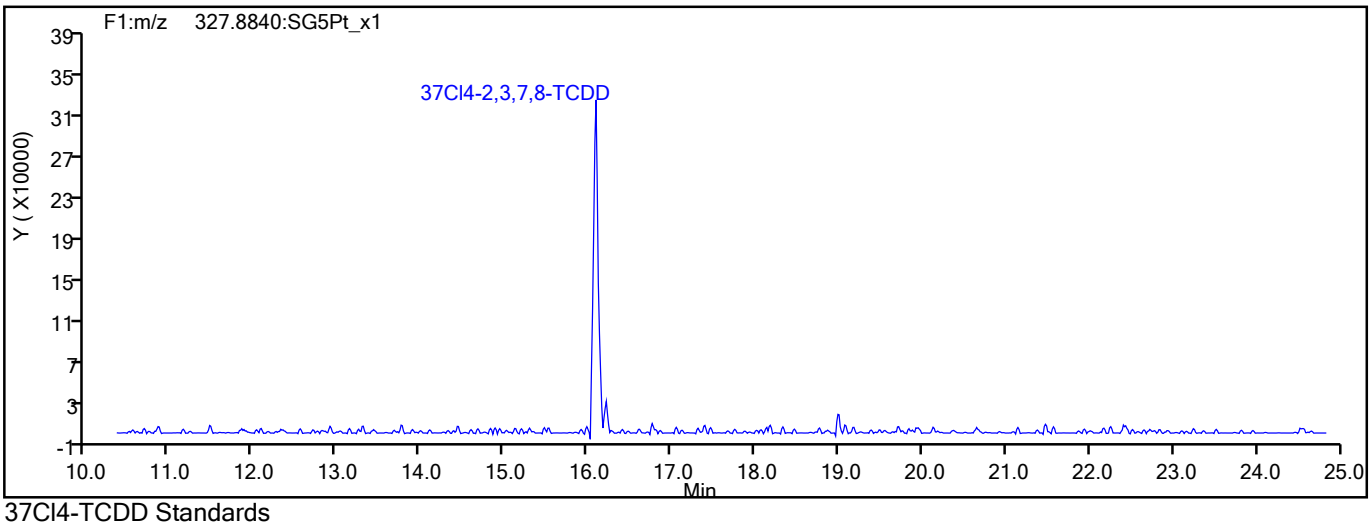

37Cl4-TCDD Standards

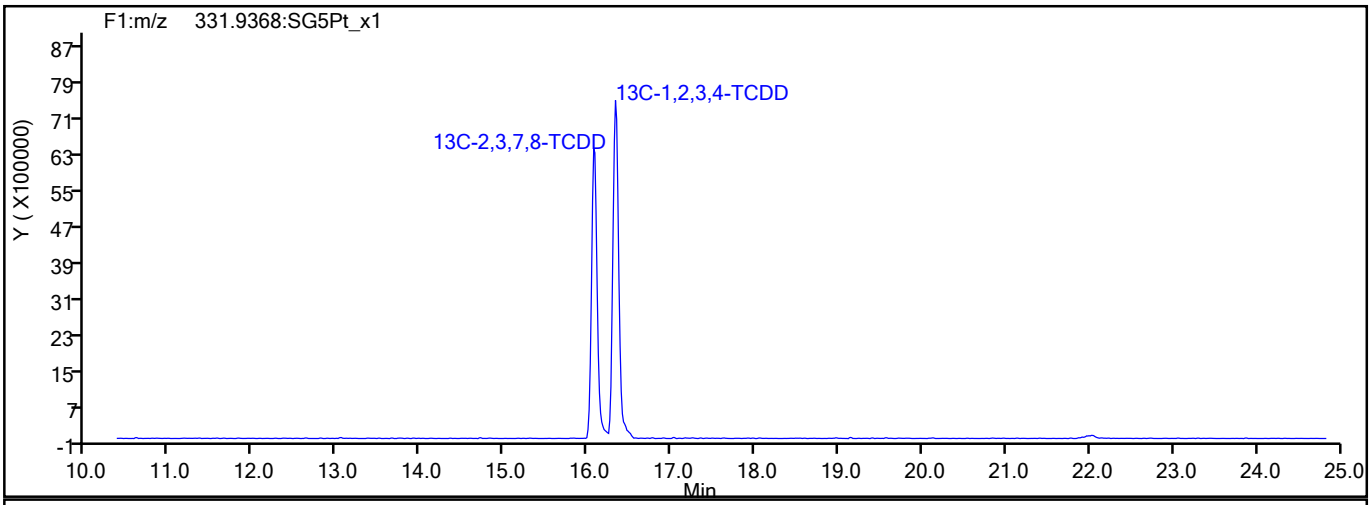

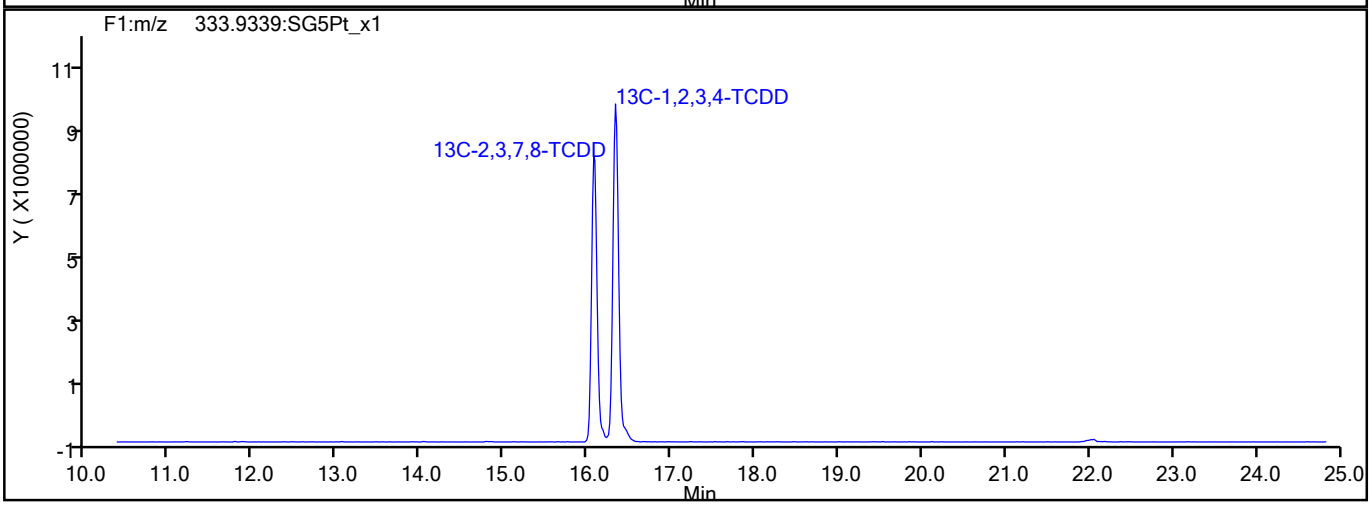

773454

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

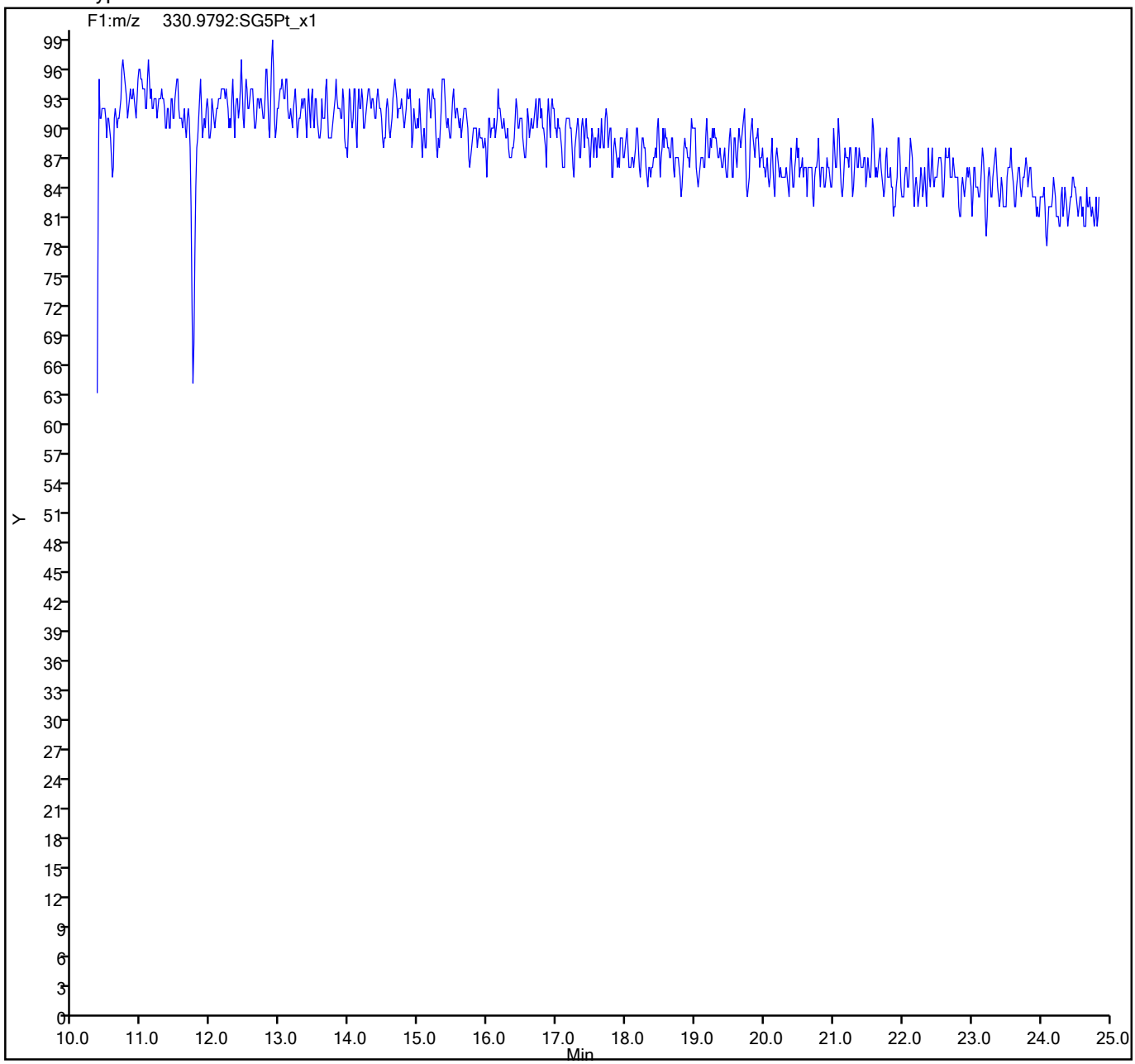

773455

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

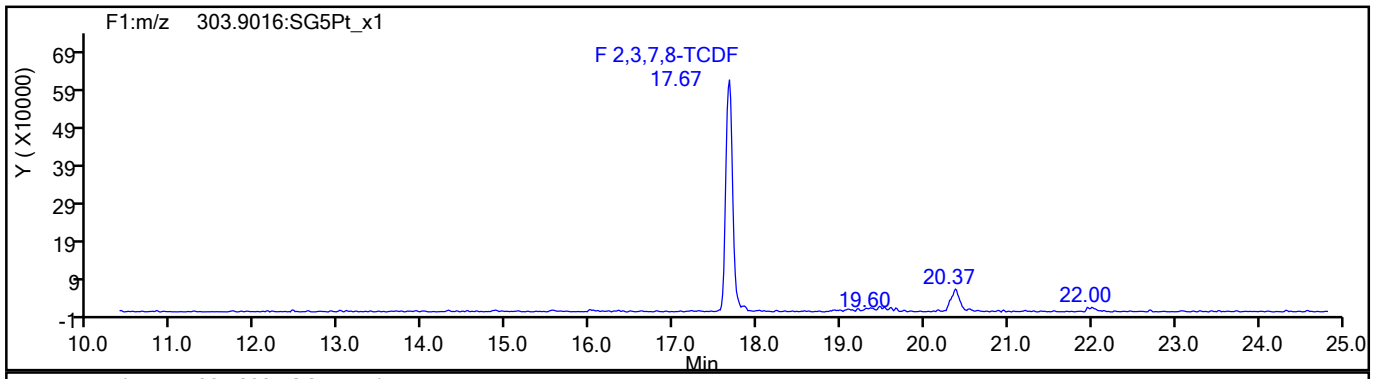

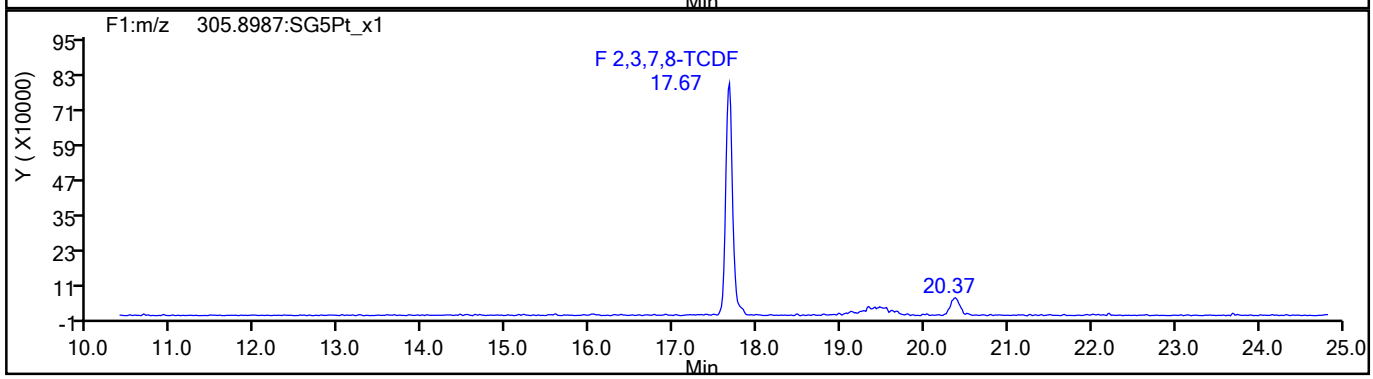

TCDF Standards

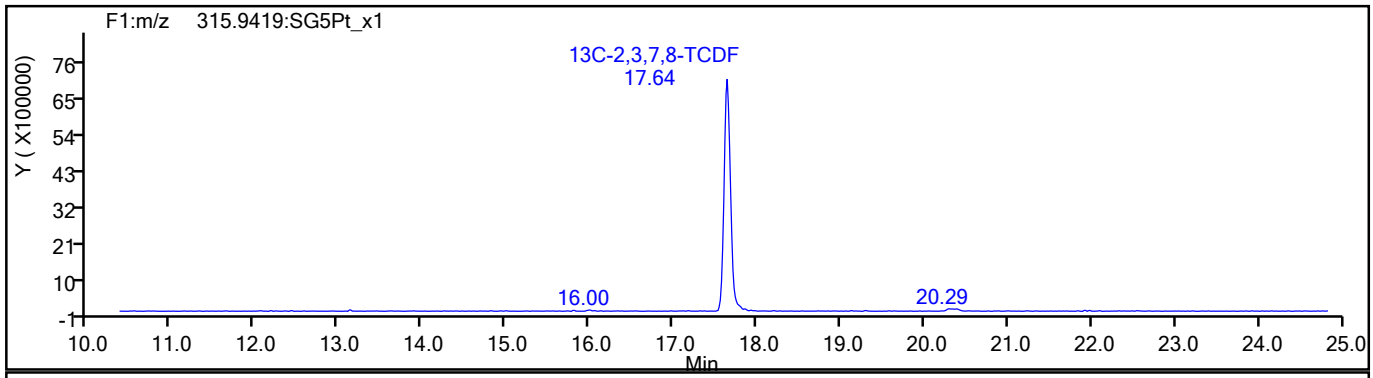

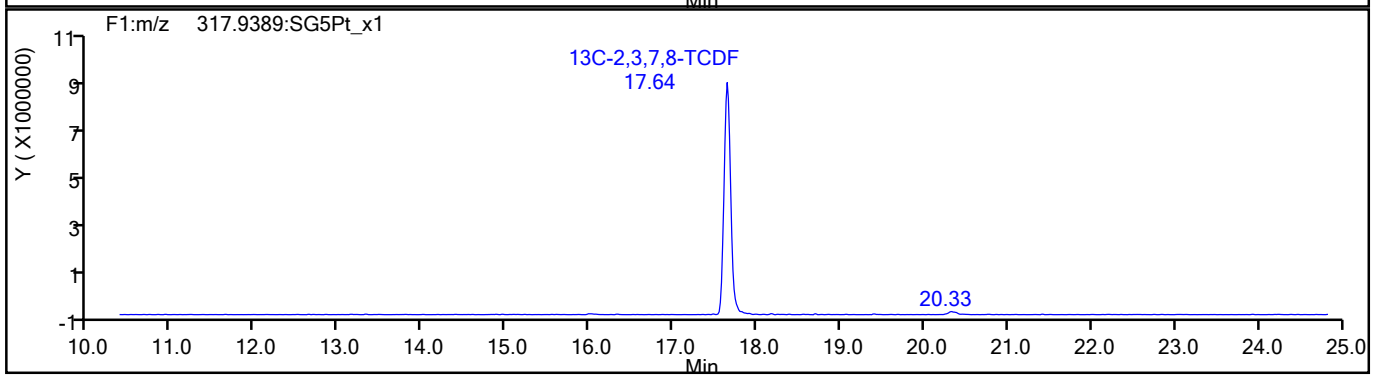

773458

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

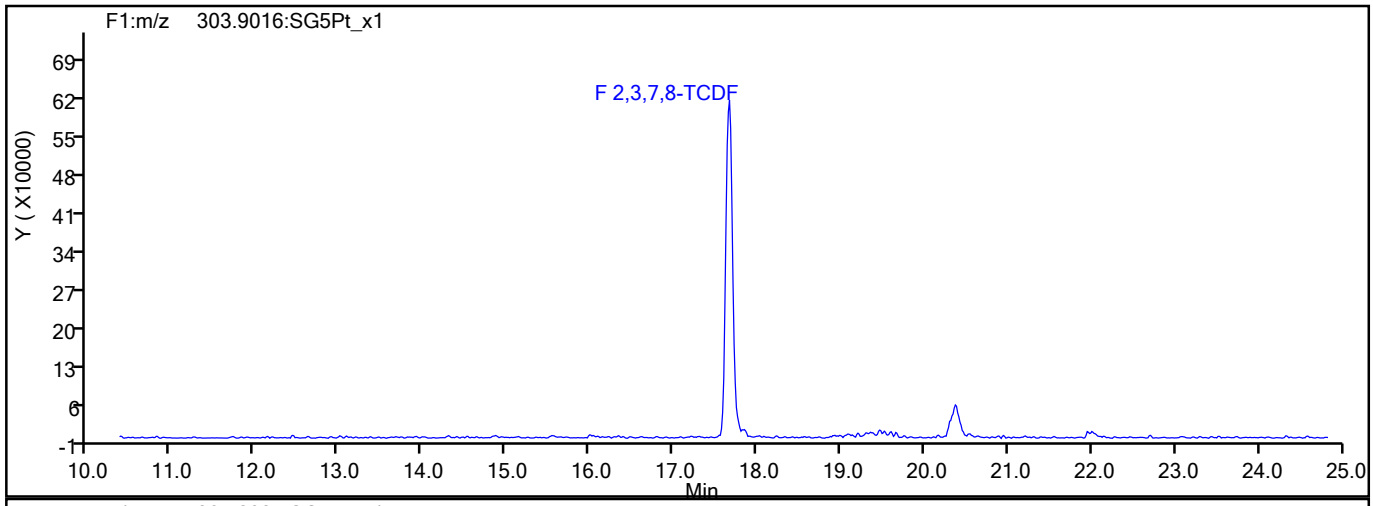

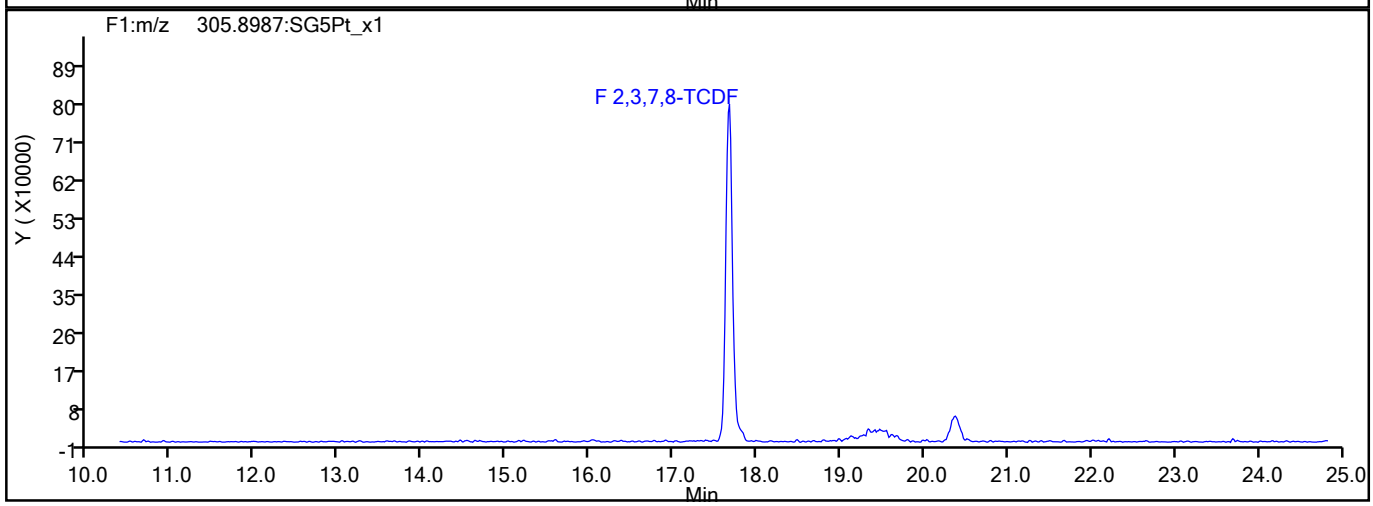

TCDF Interference Mass

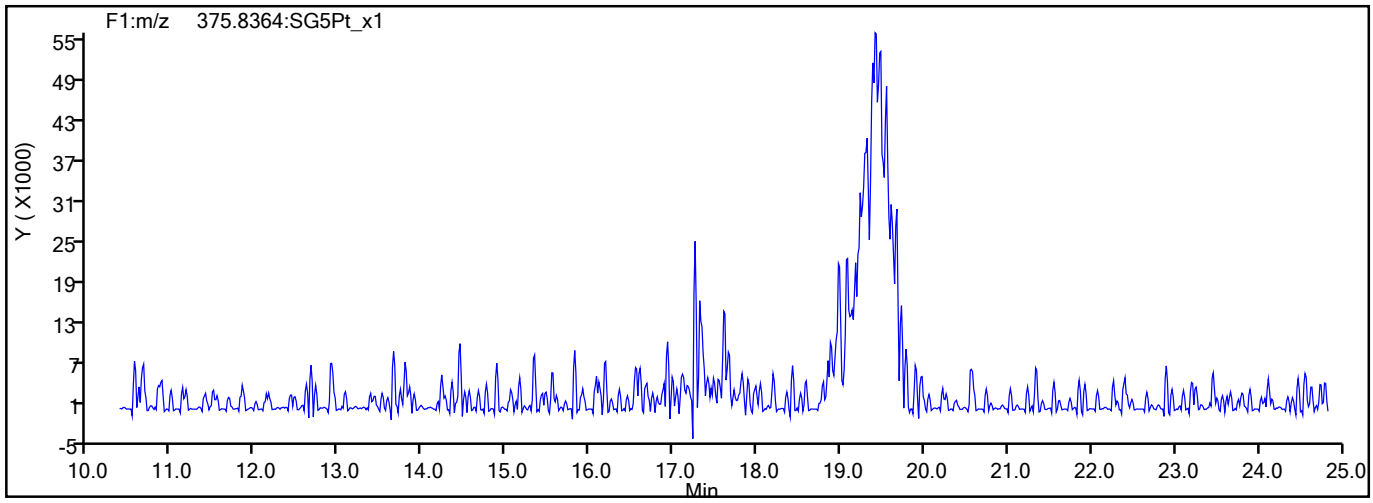

773459

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

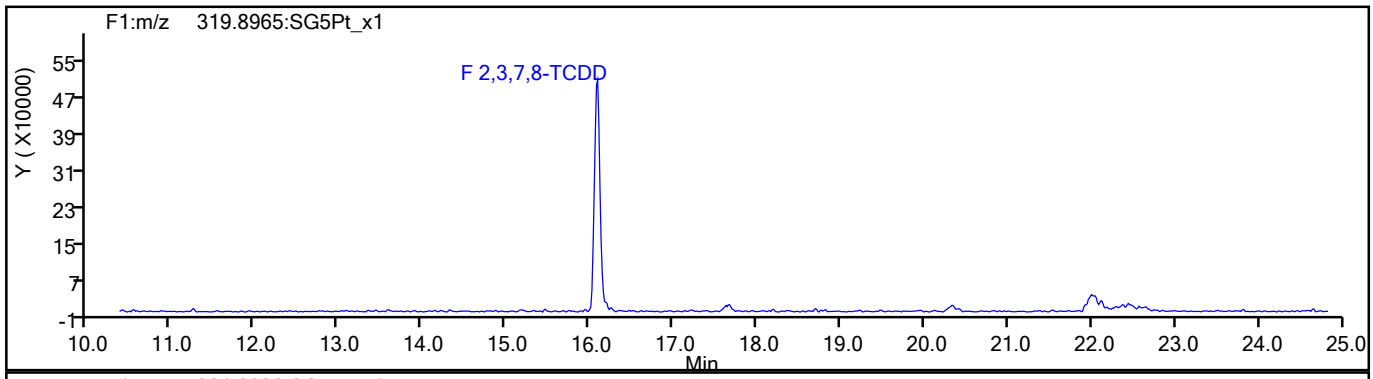

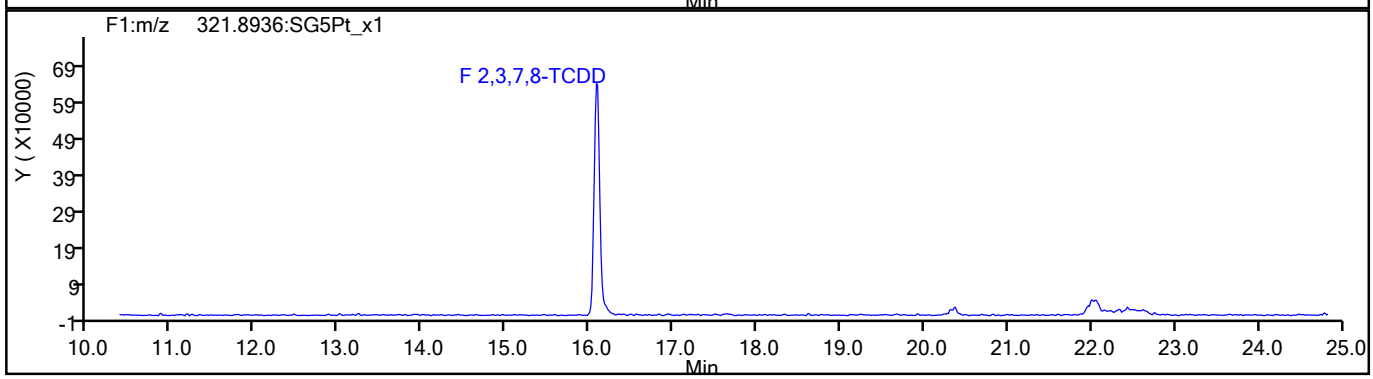

TCDD Standards

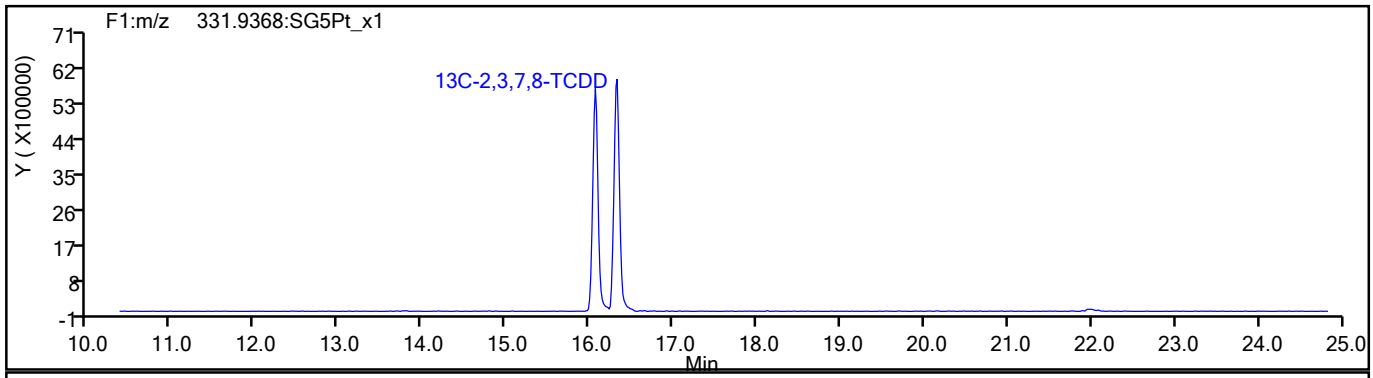

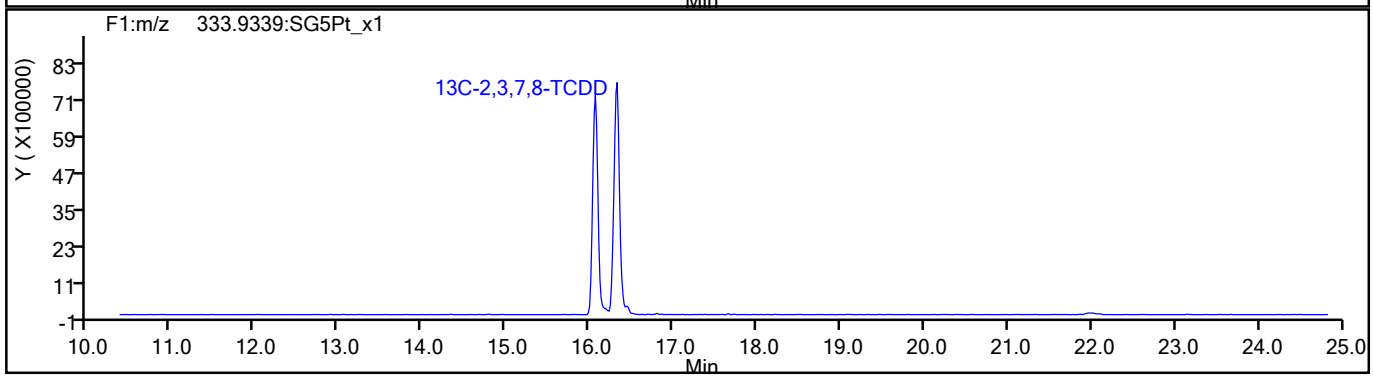

773460

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

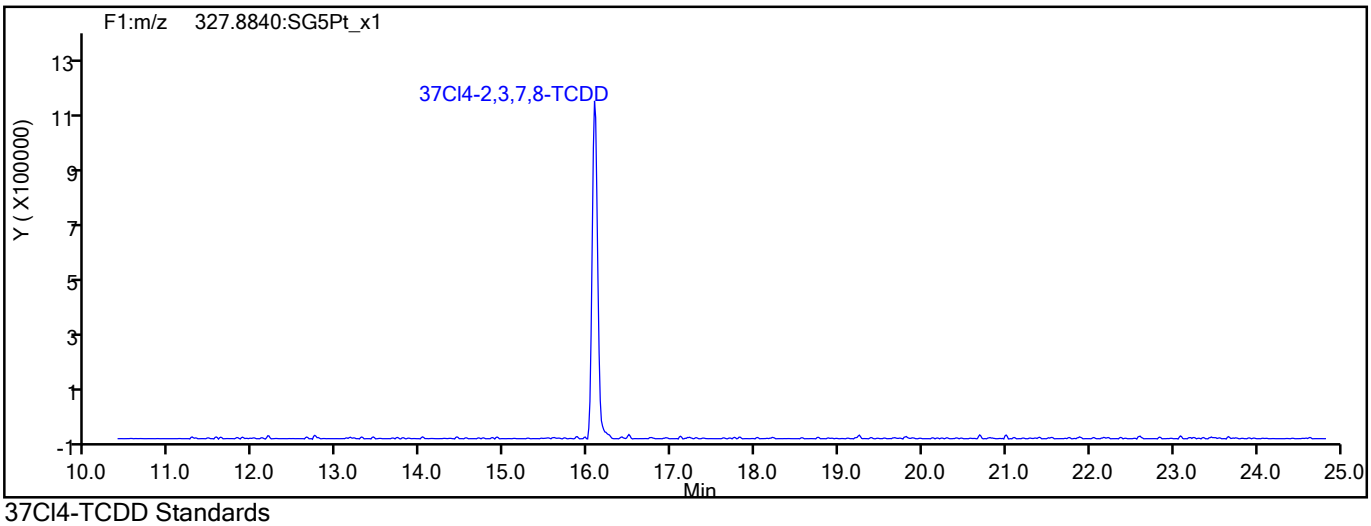

37Cl4-TCDD Standards

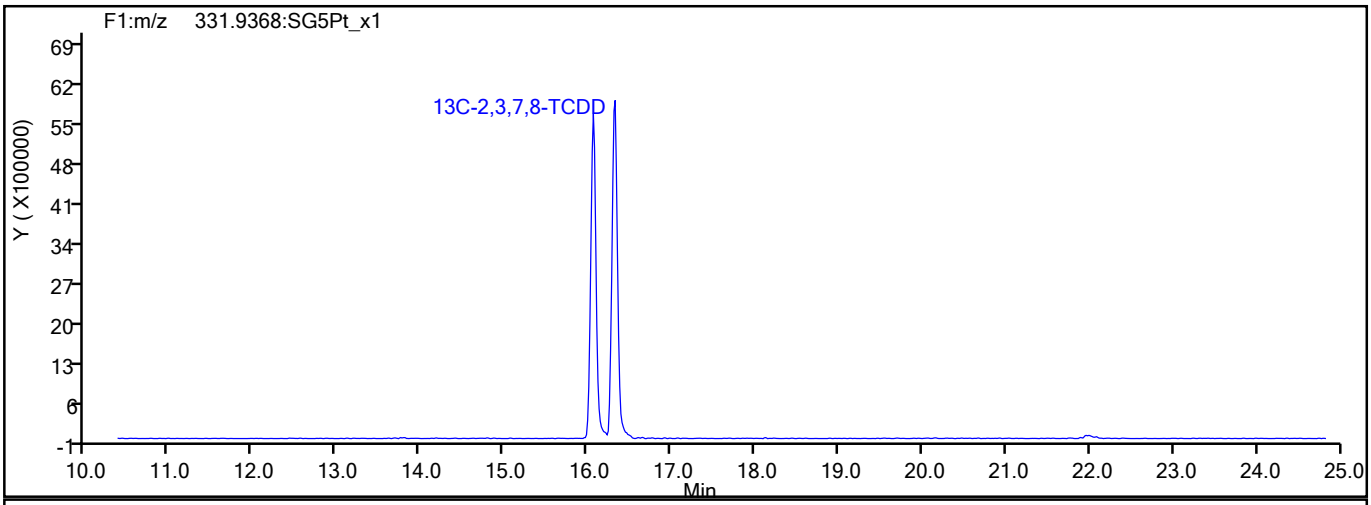

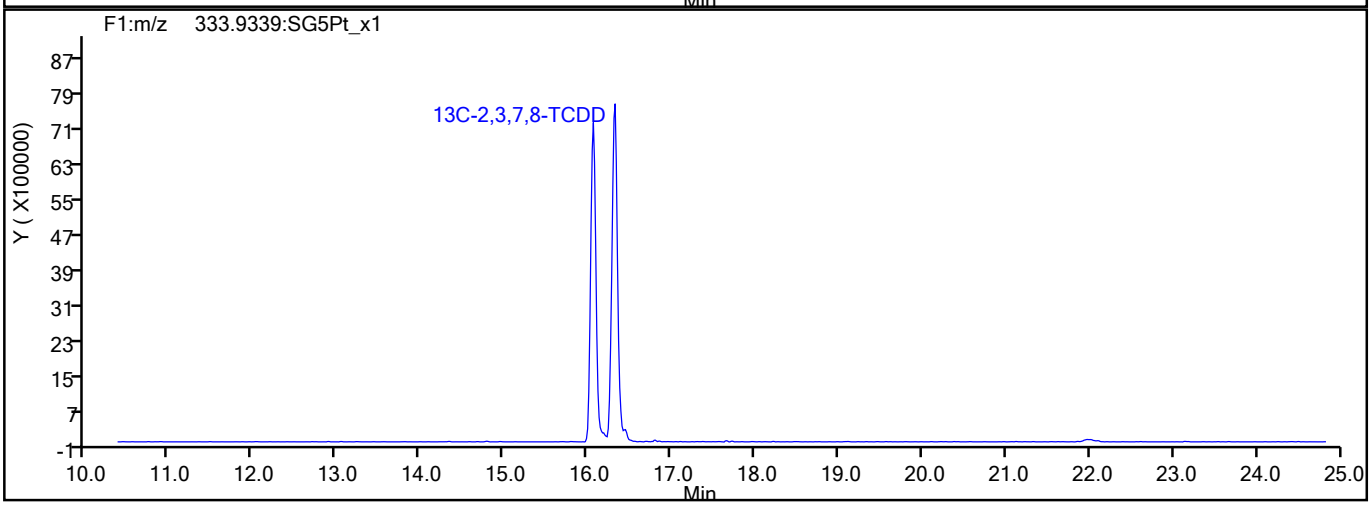

773461

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

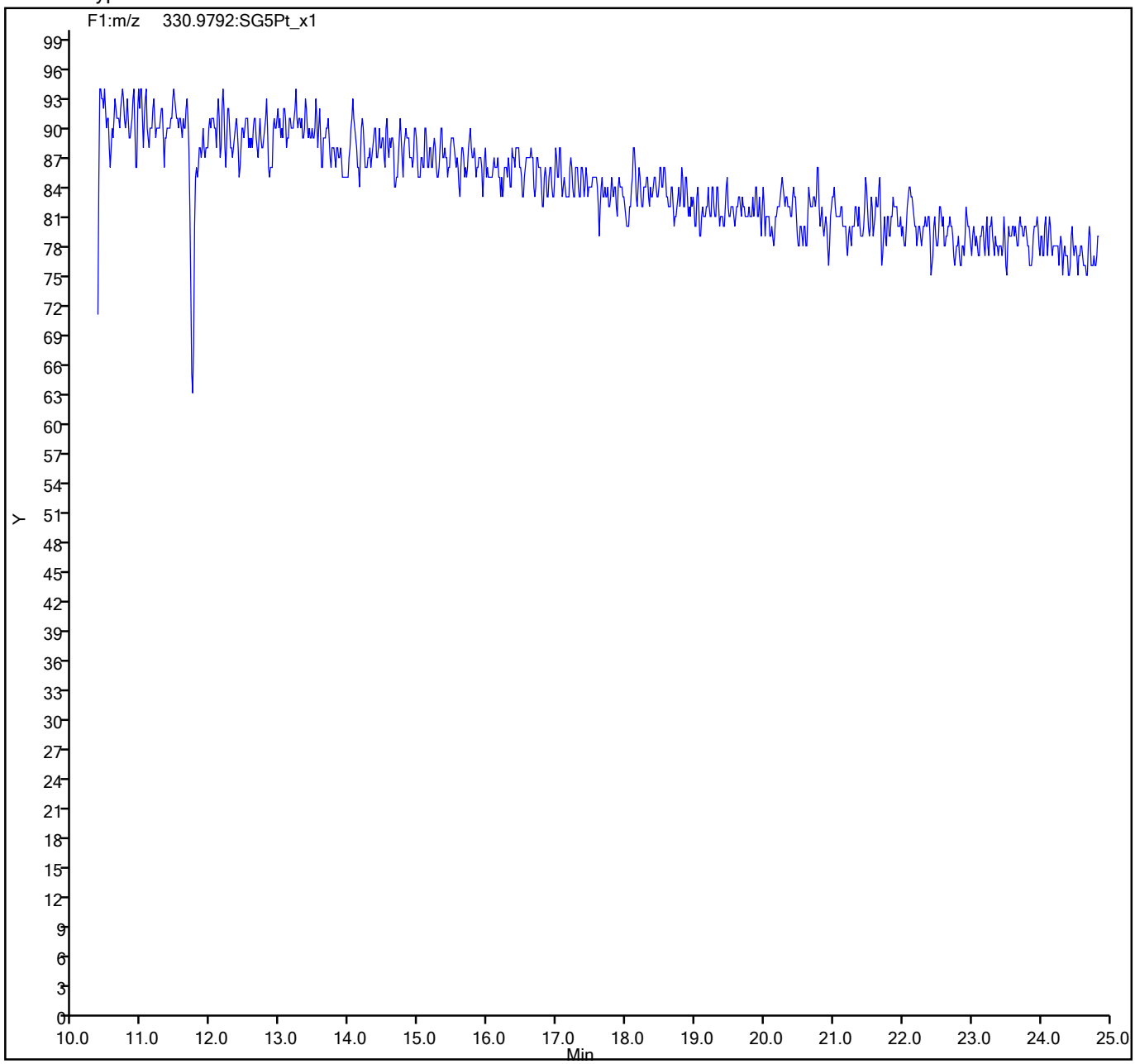

773462

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

773463

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

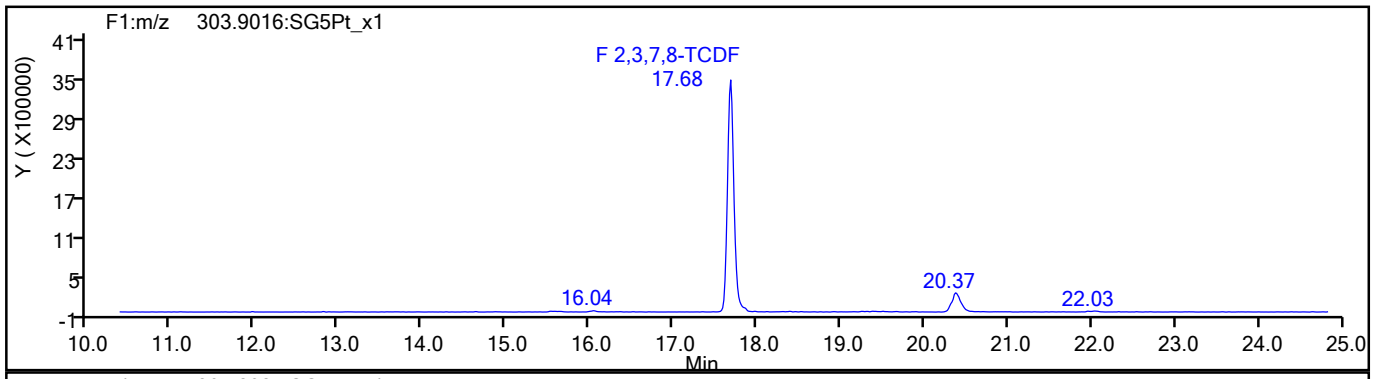

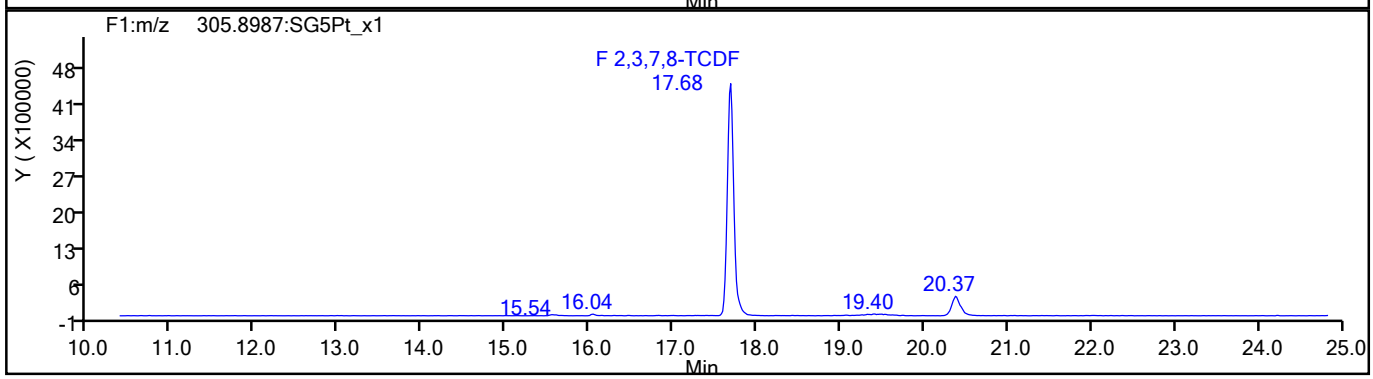

TCDF Standards

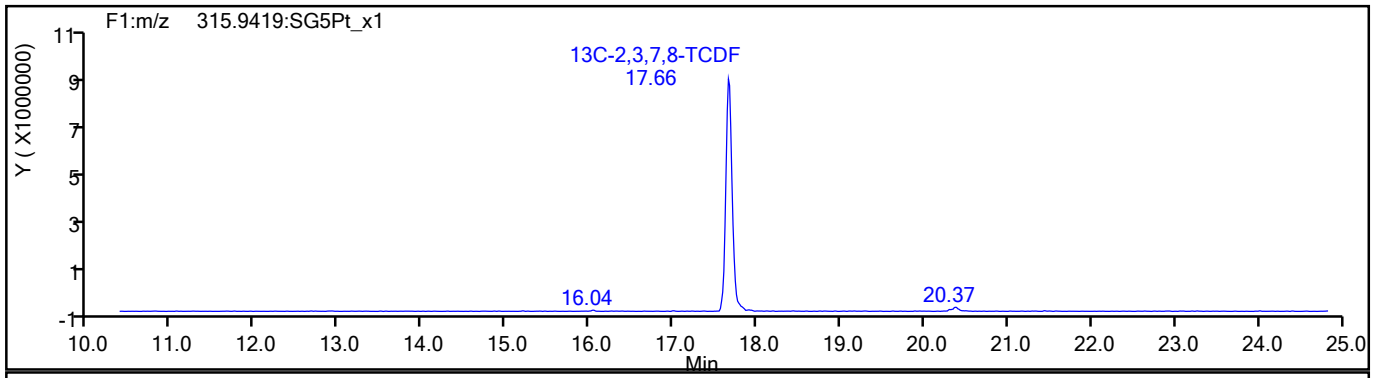

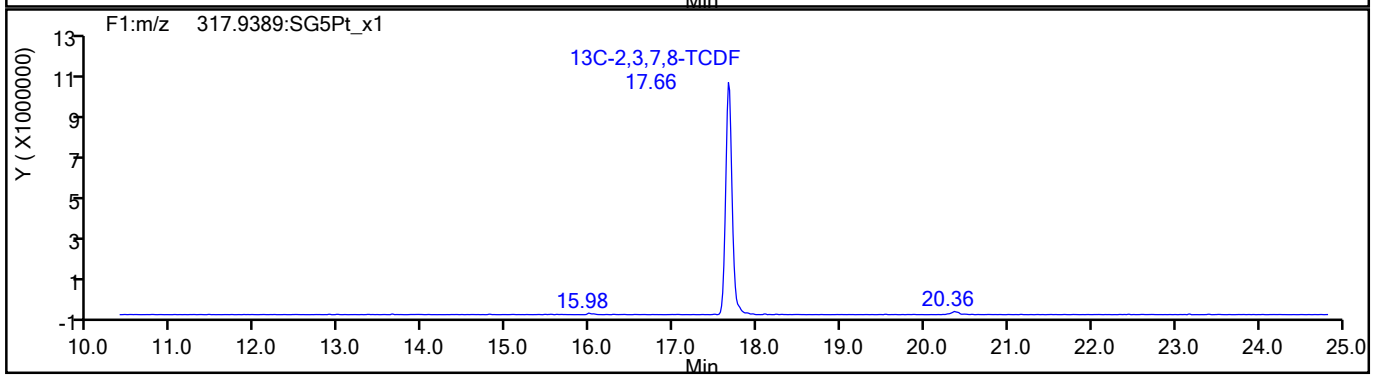

773465

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

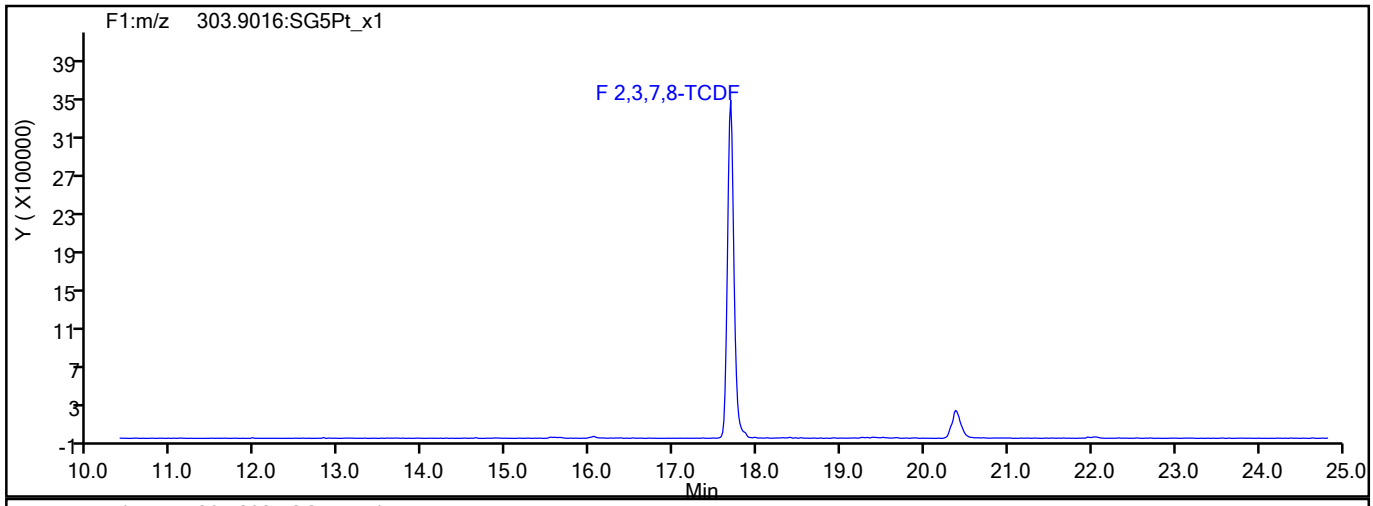

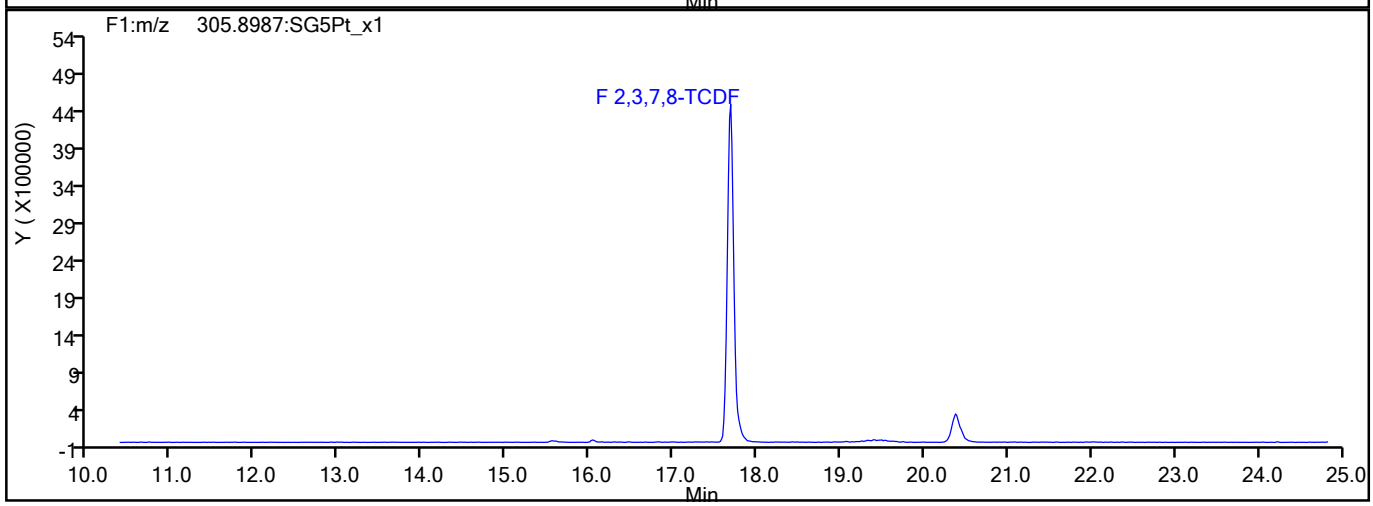

TCDF Interference Mass

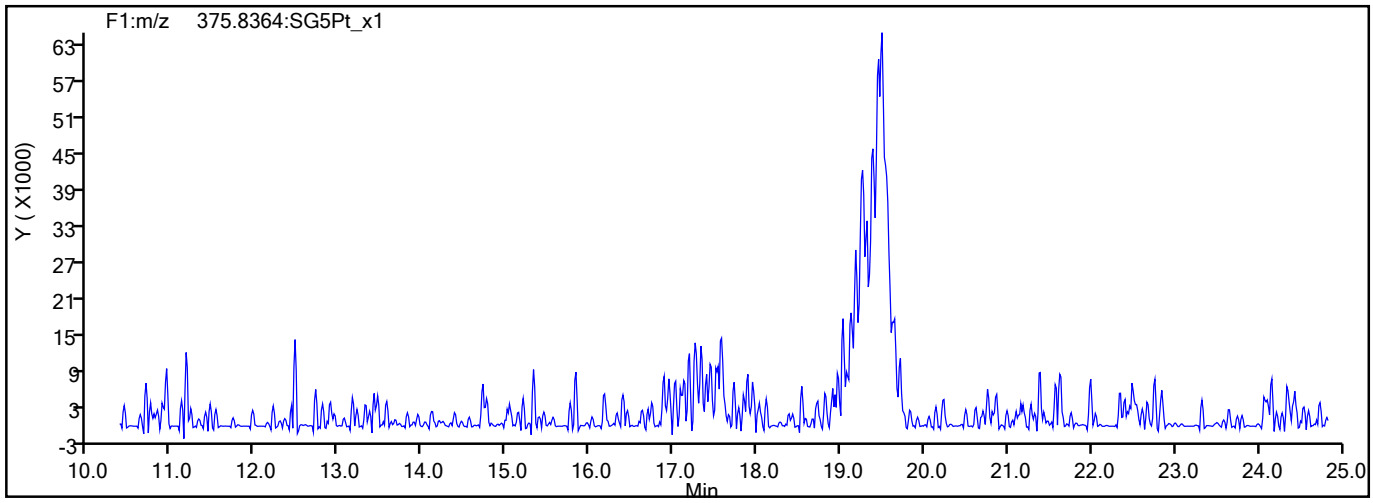

773466

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

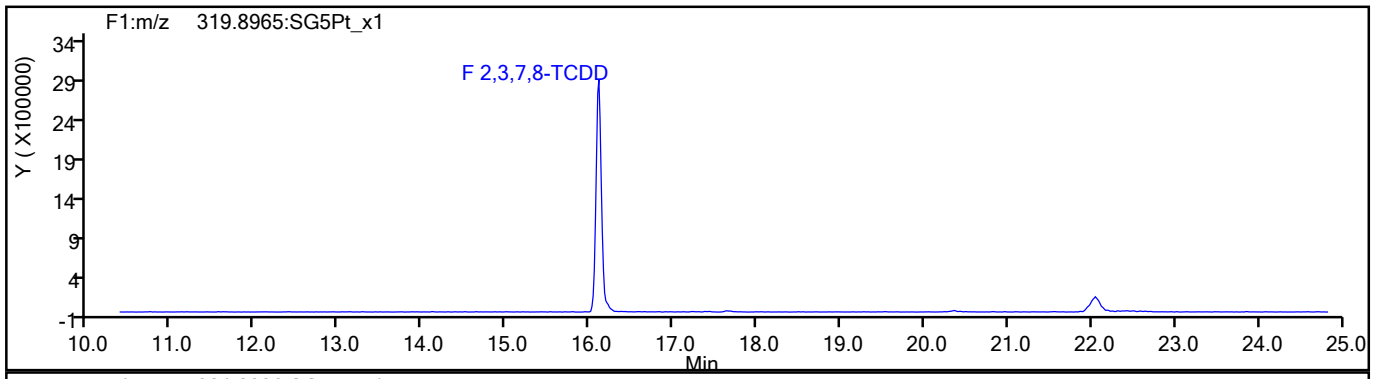

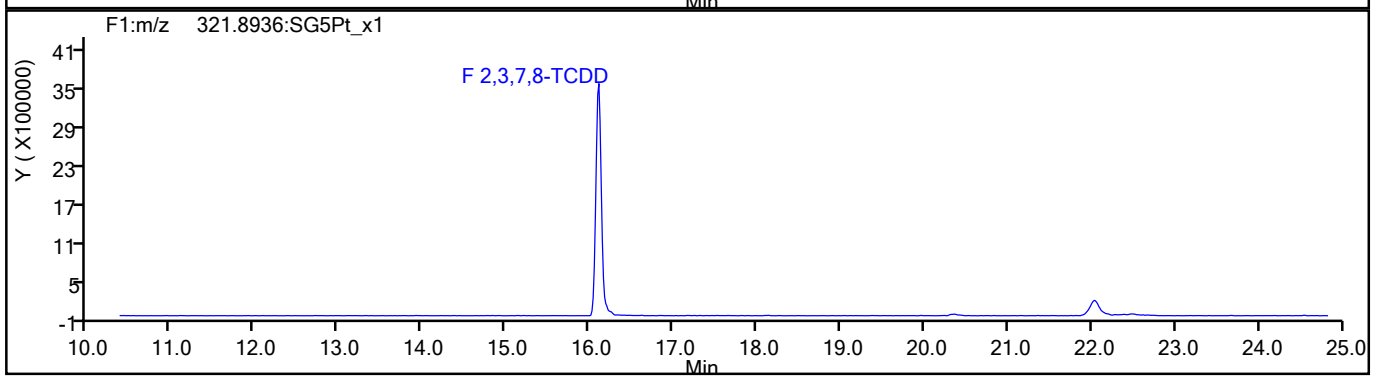

TCDD Standards

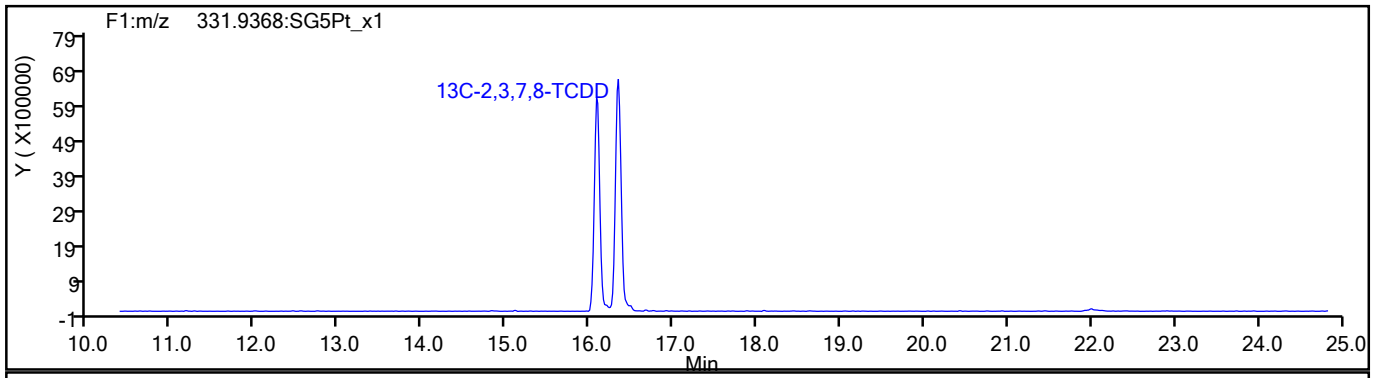

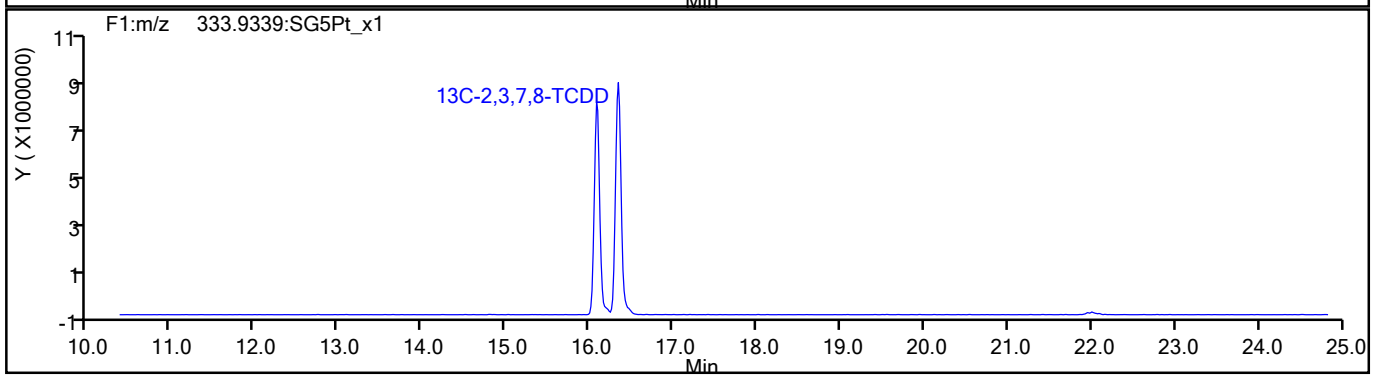

773467

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

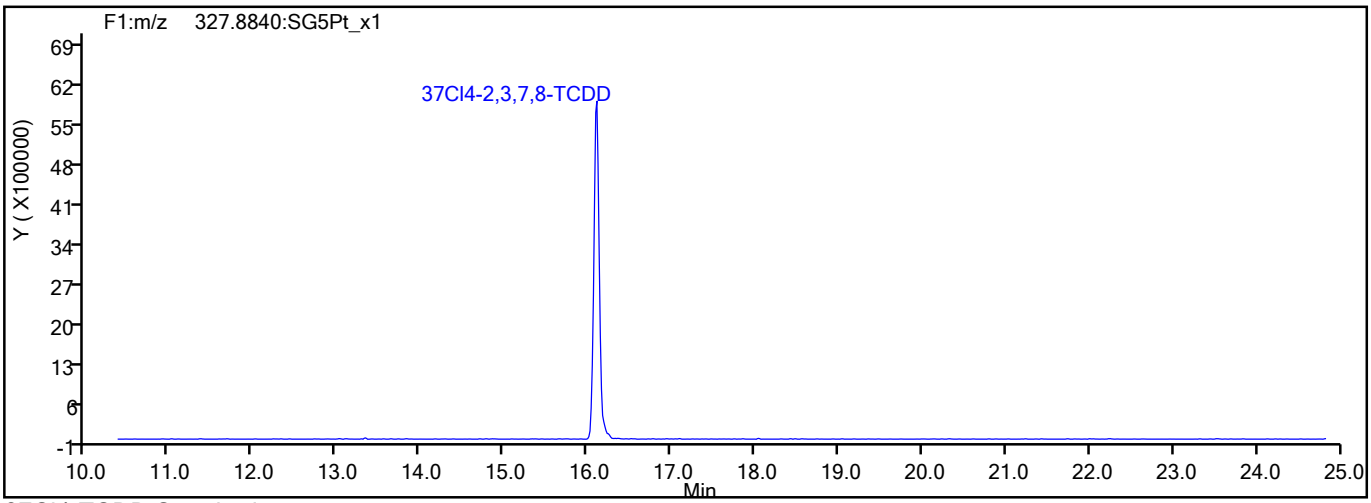

37Cl4-TCDD Standards

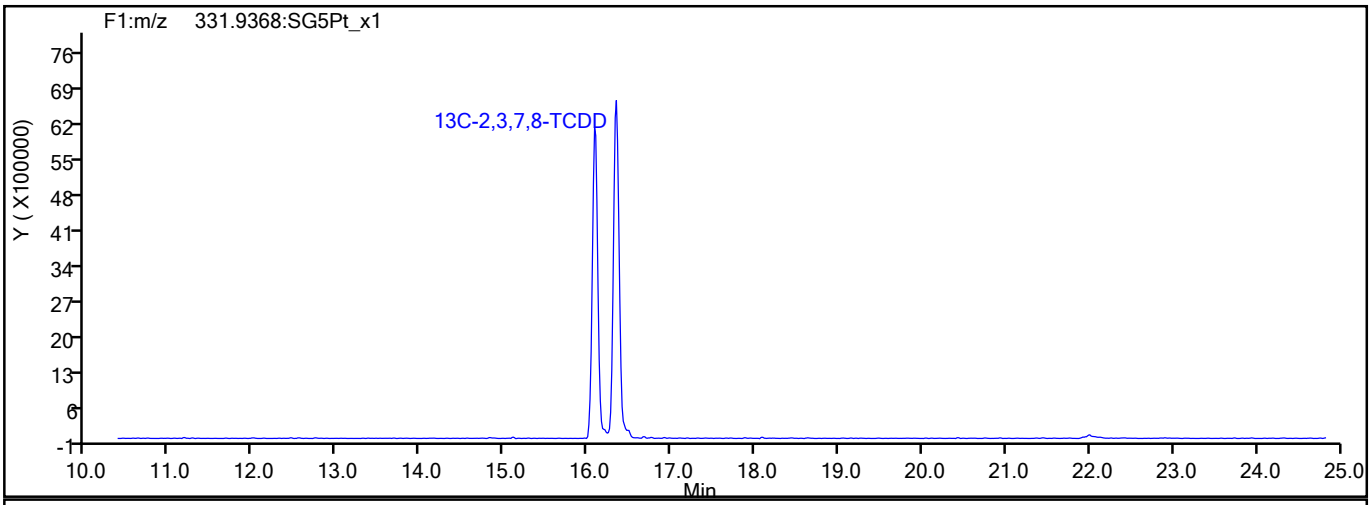

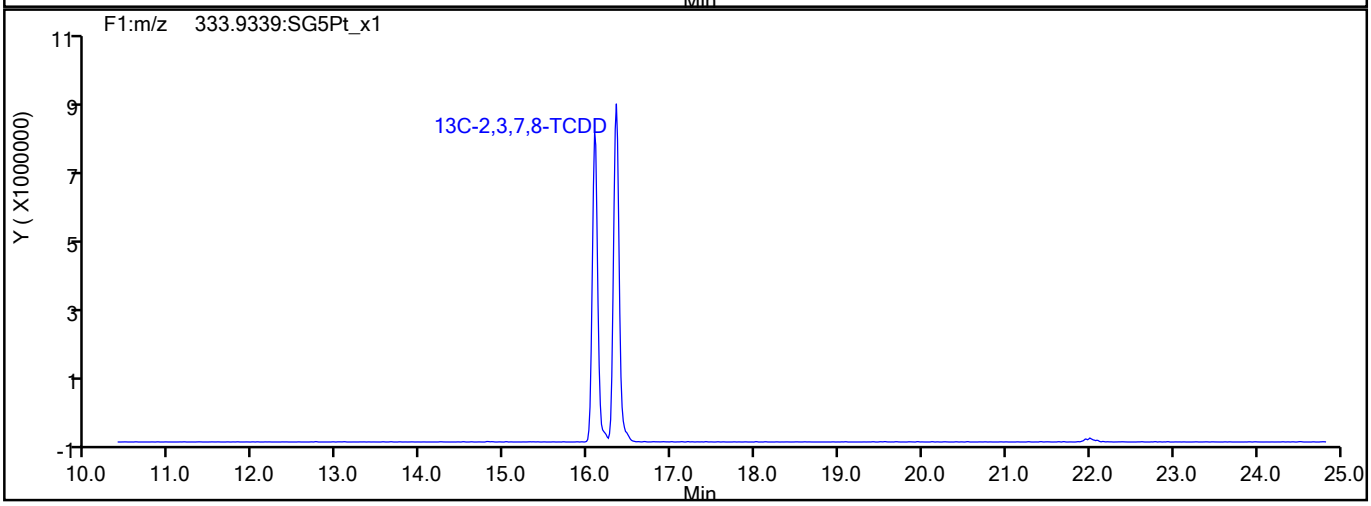

773468

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

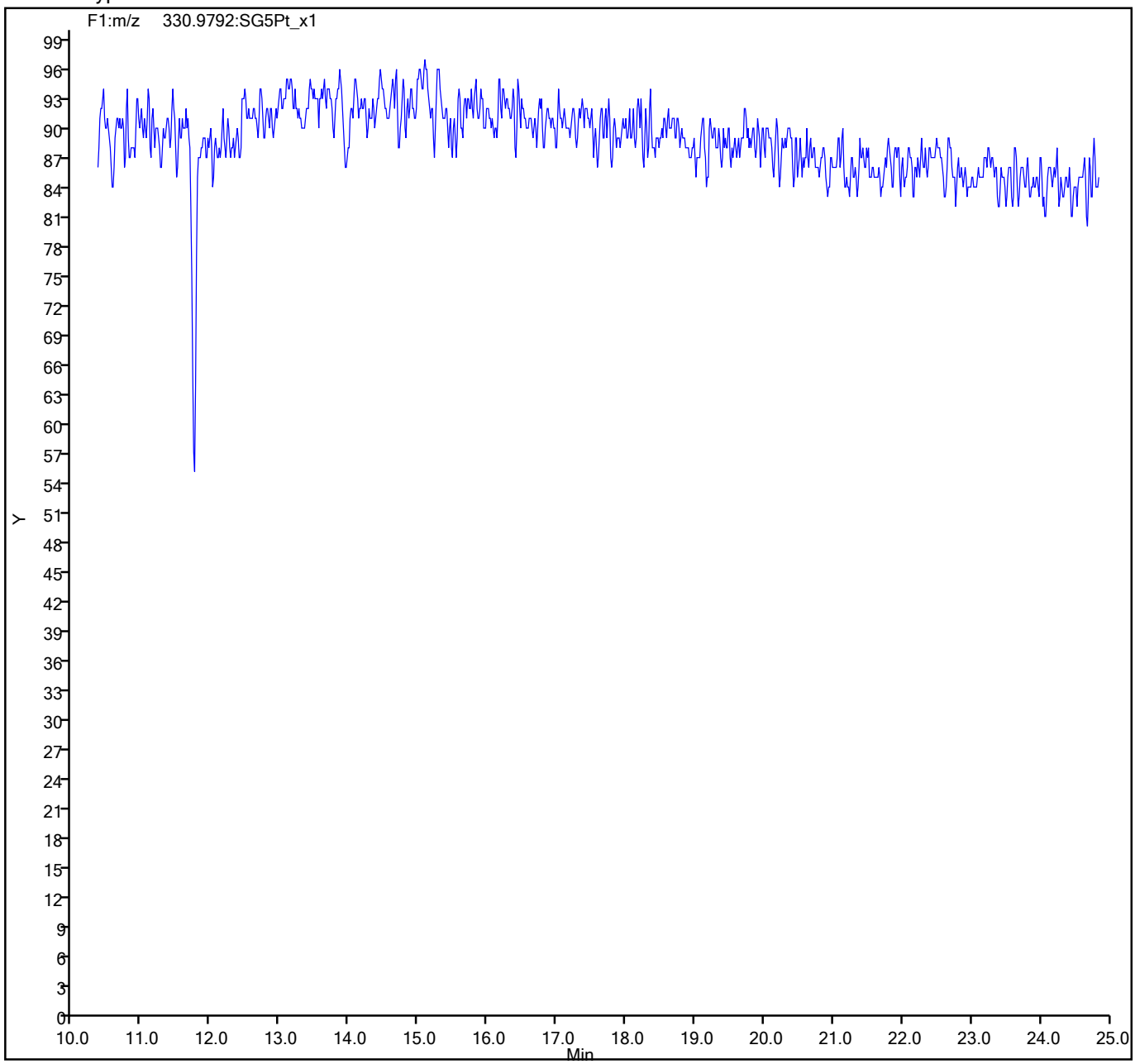

773469

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

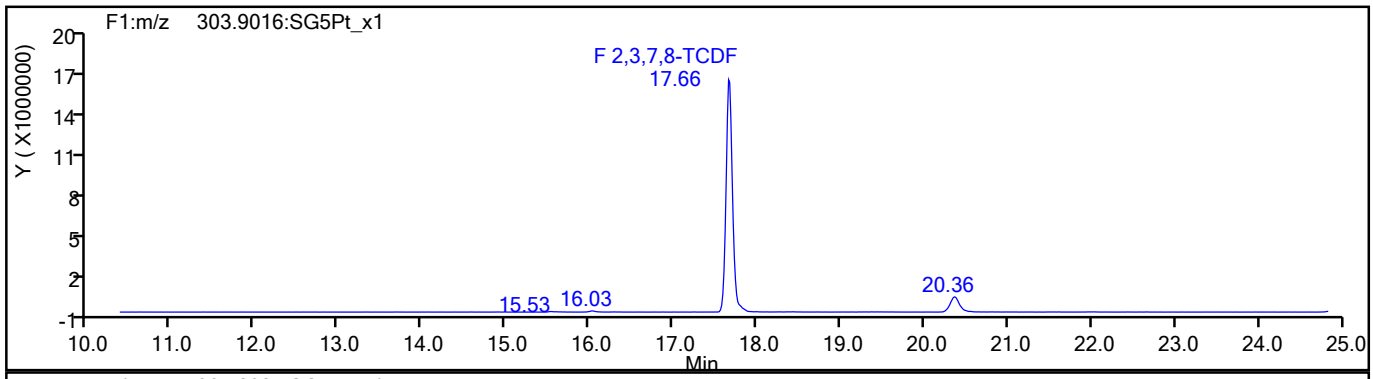

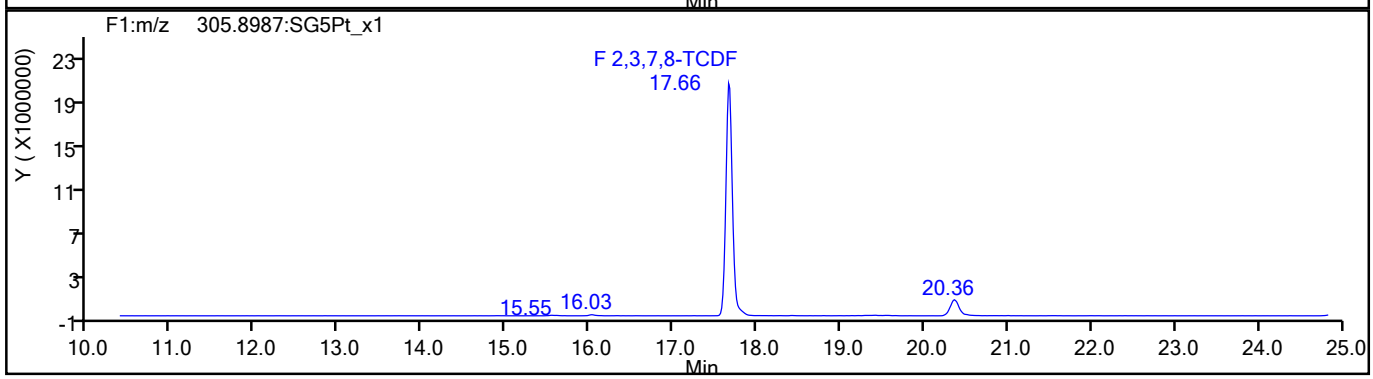

TCDF Standards

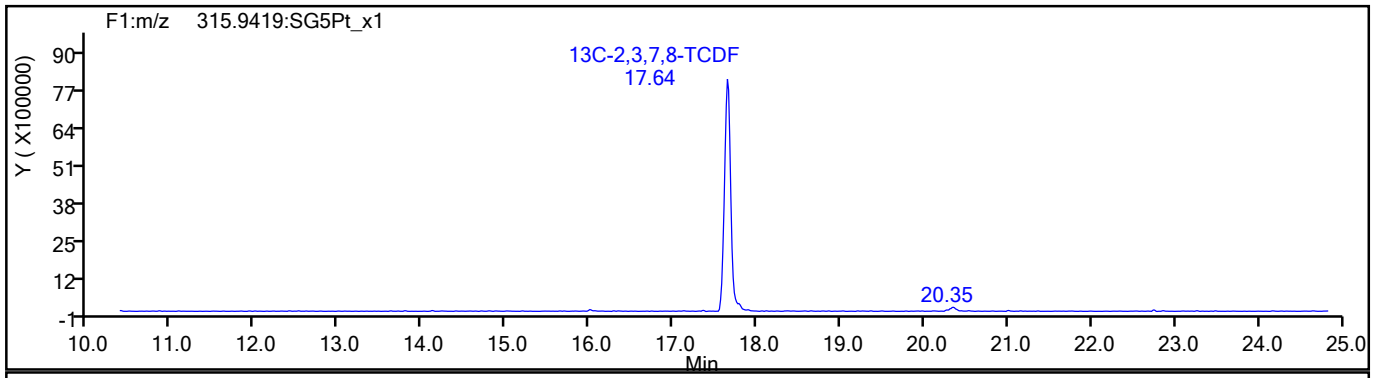

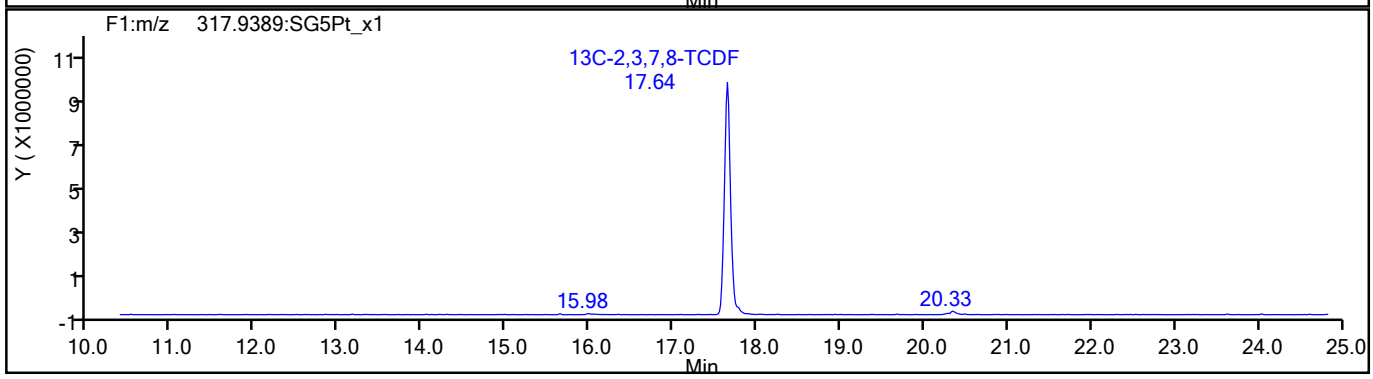

773472

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

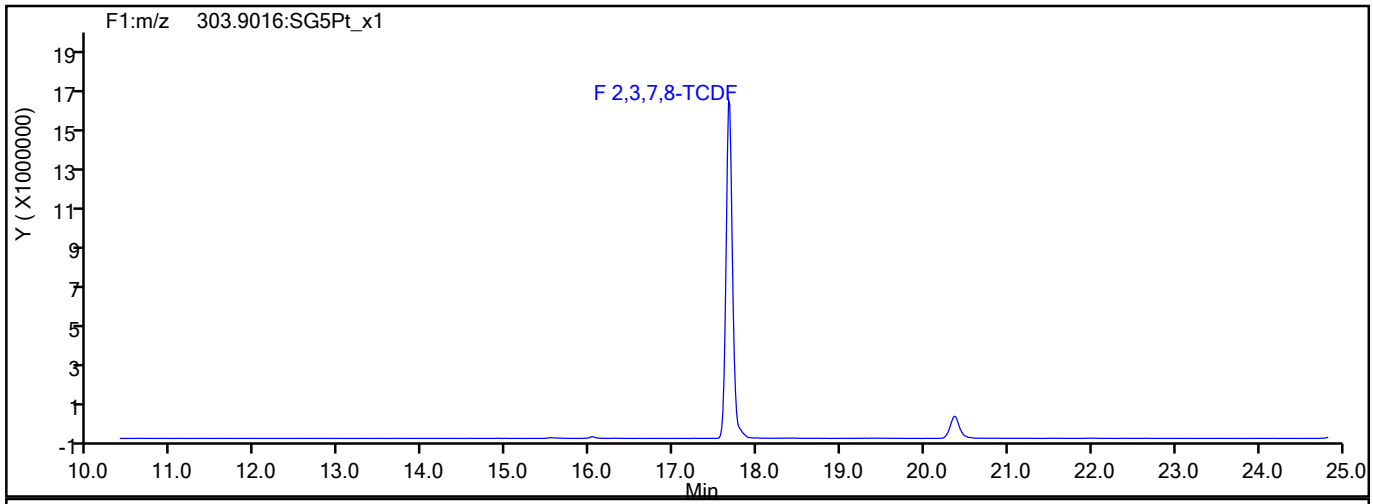

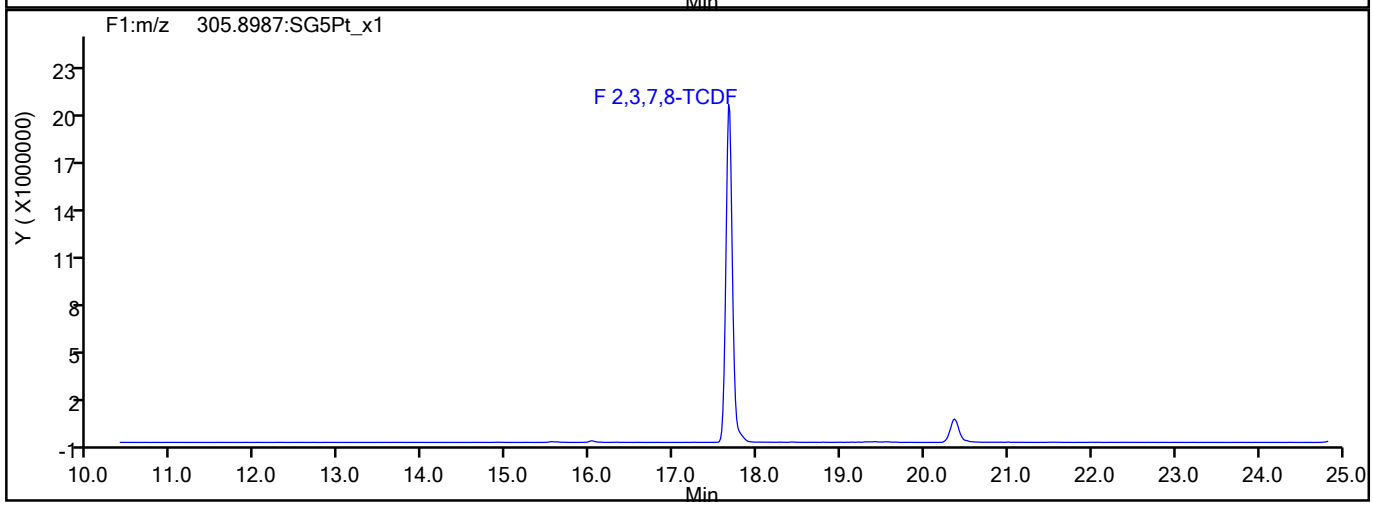

TCDF Interference Mass

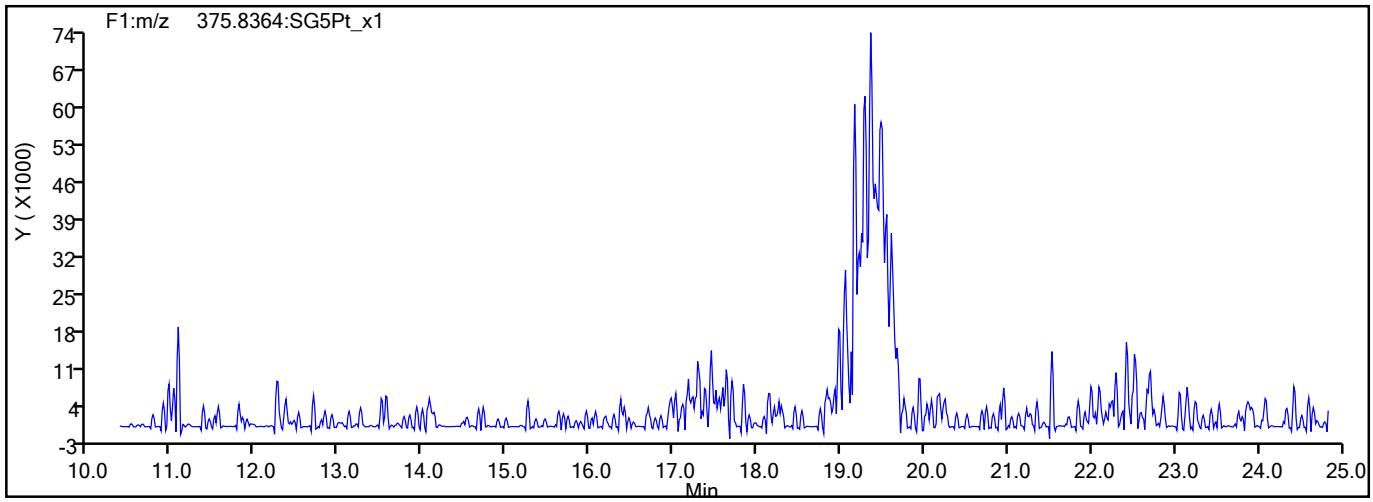

773473

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

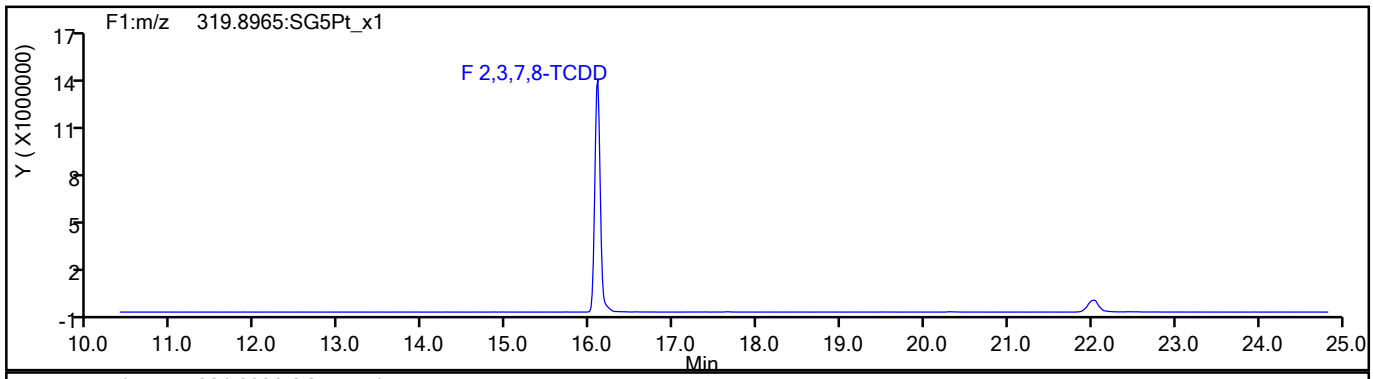

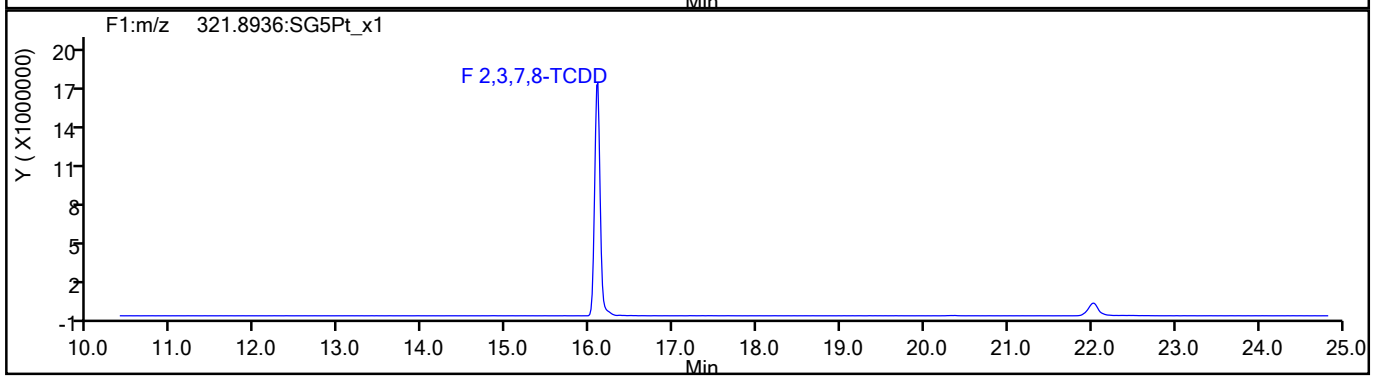

TCDD Standards

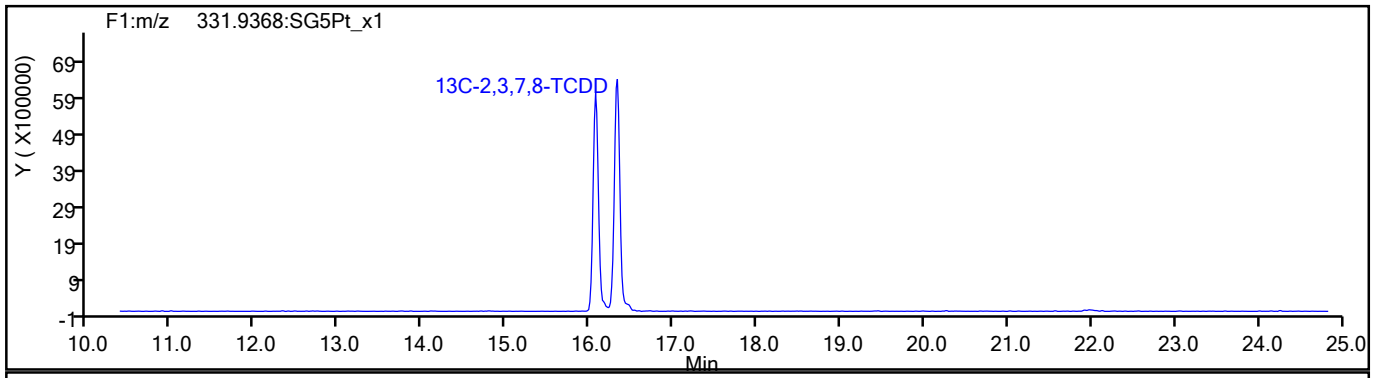

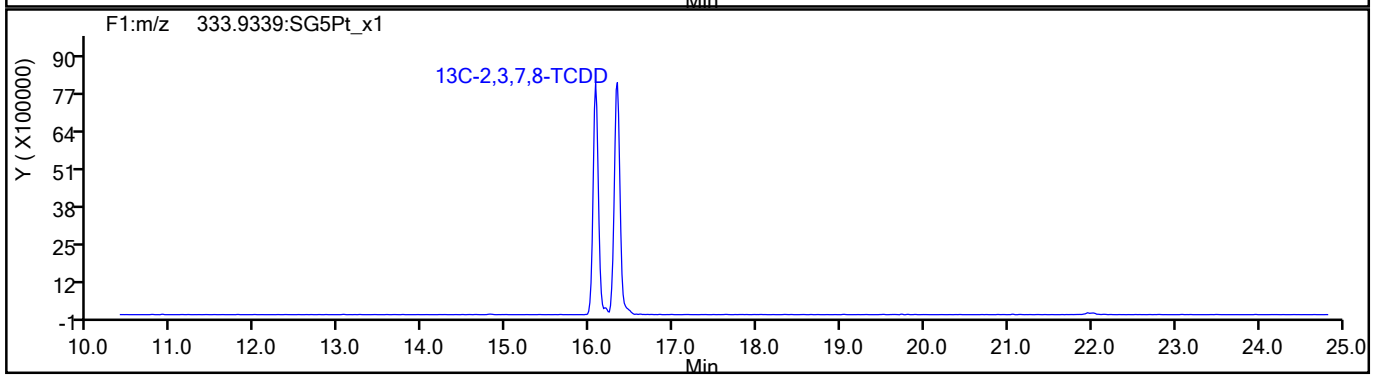

773474

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

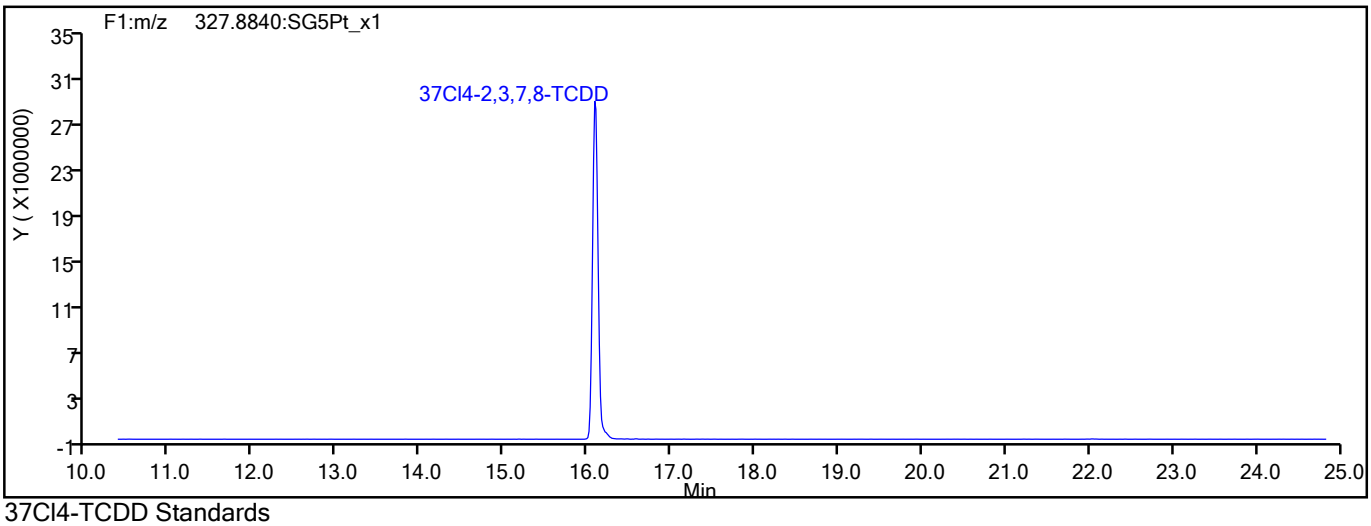

37Cl4-TCDD Standards

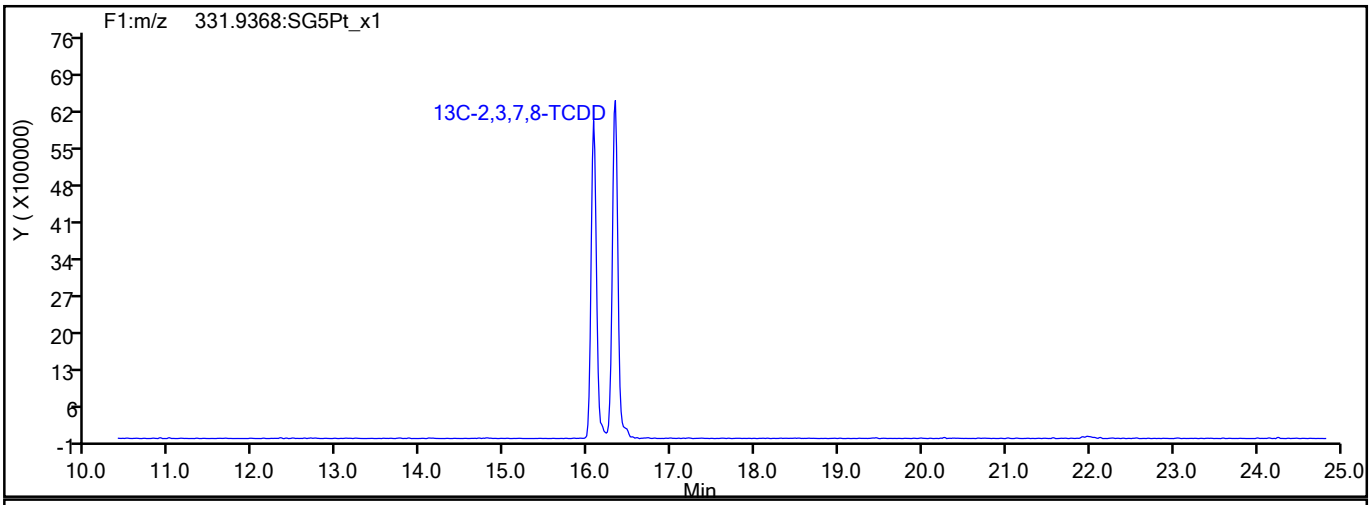

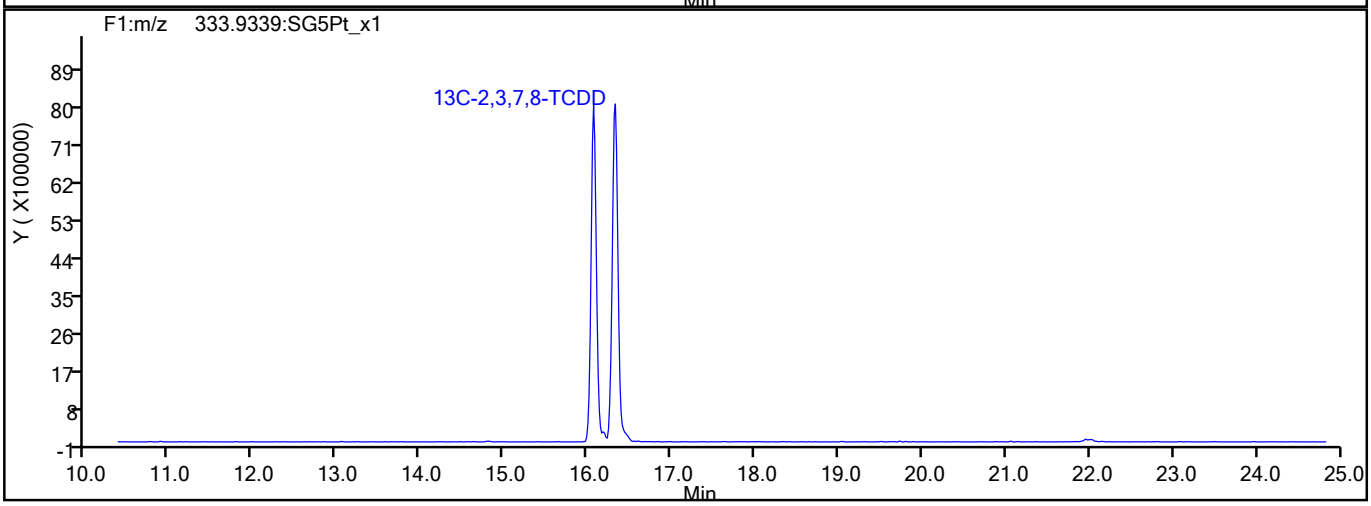

773475

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

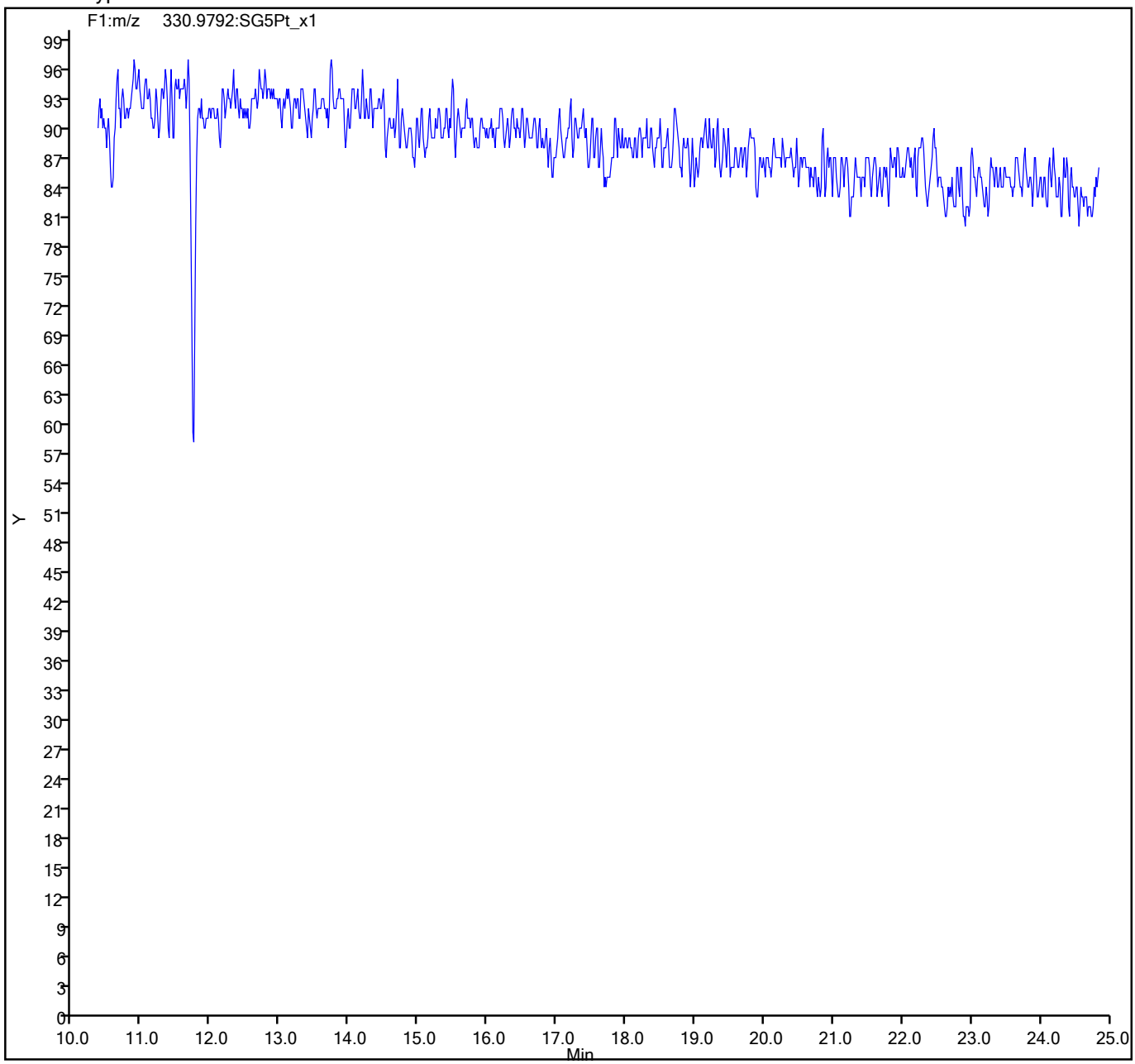

773476

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

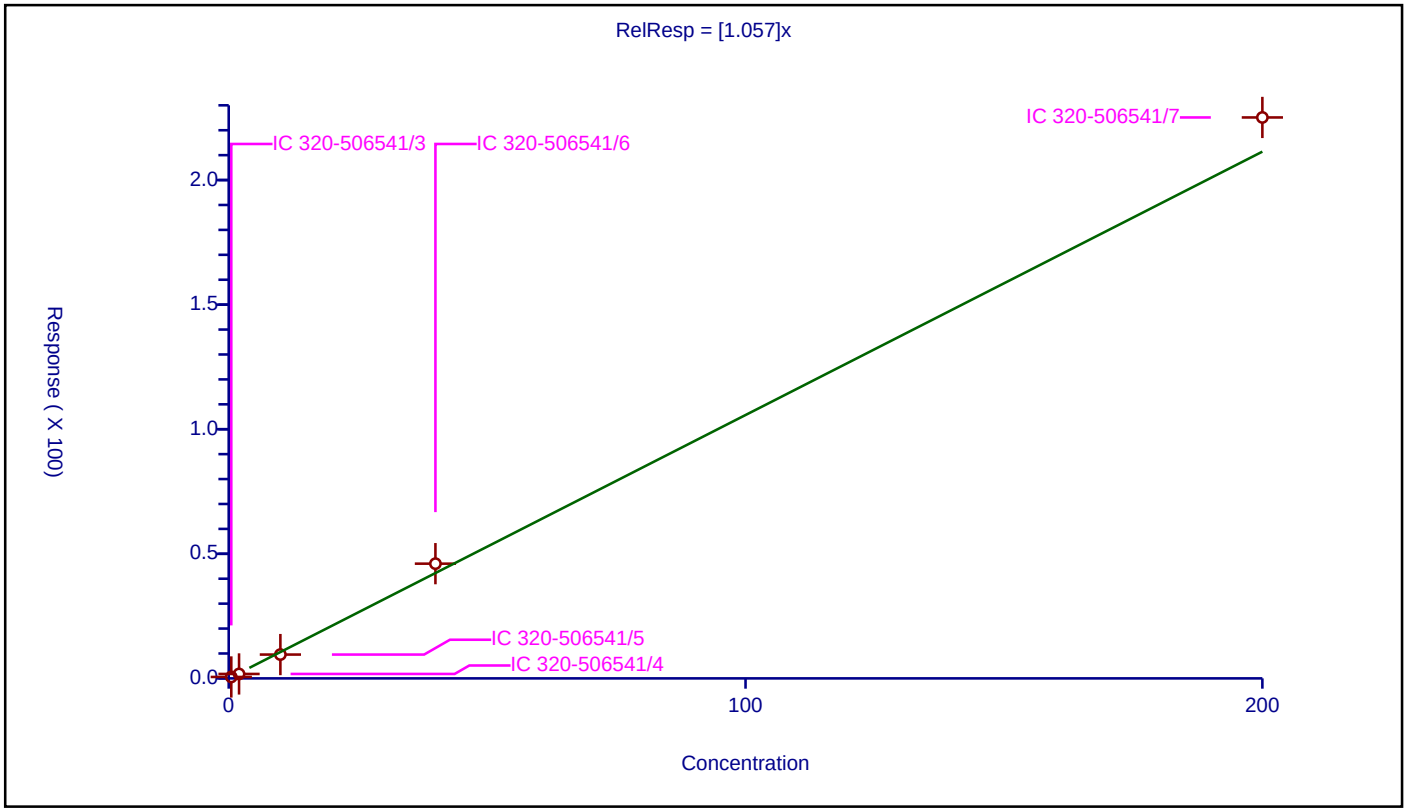

773477

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

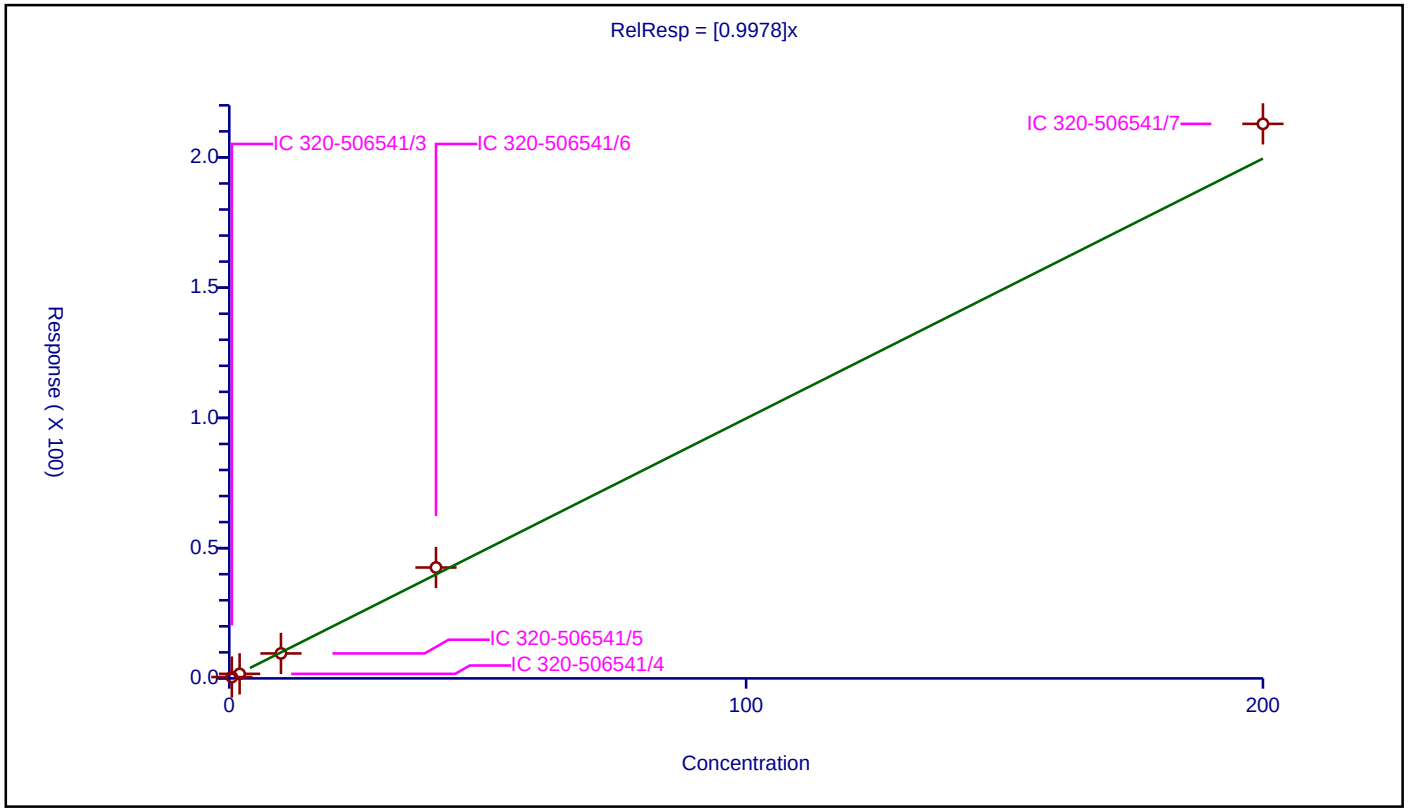

773478

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

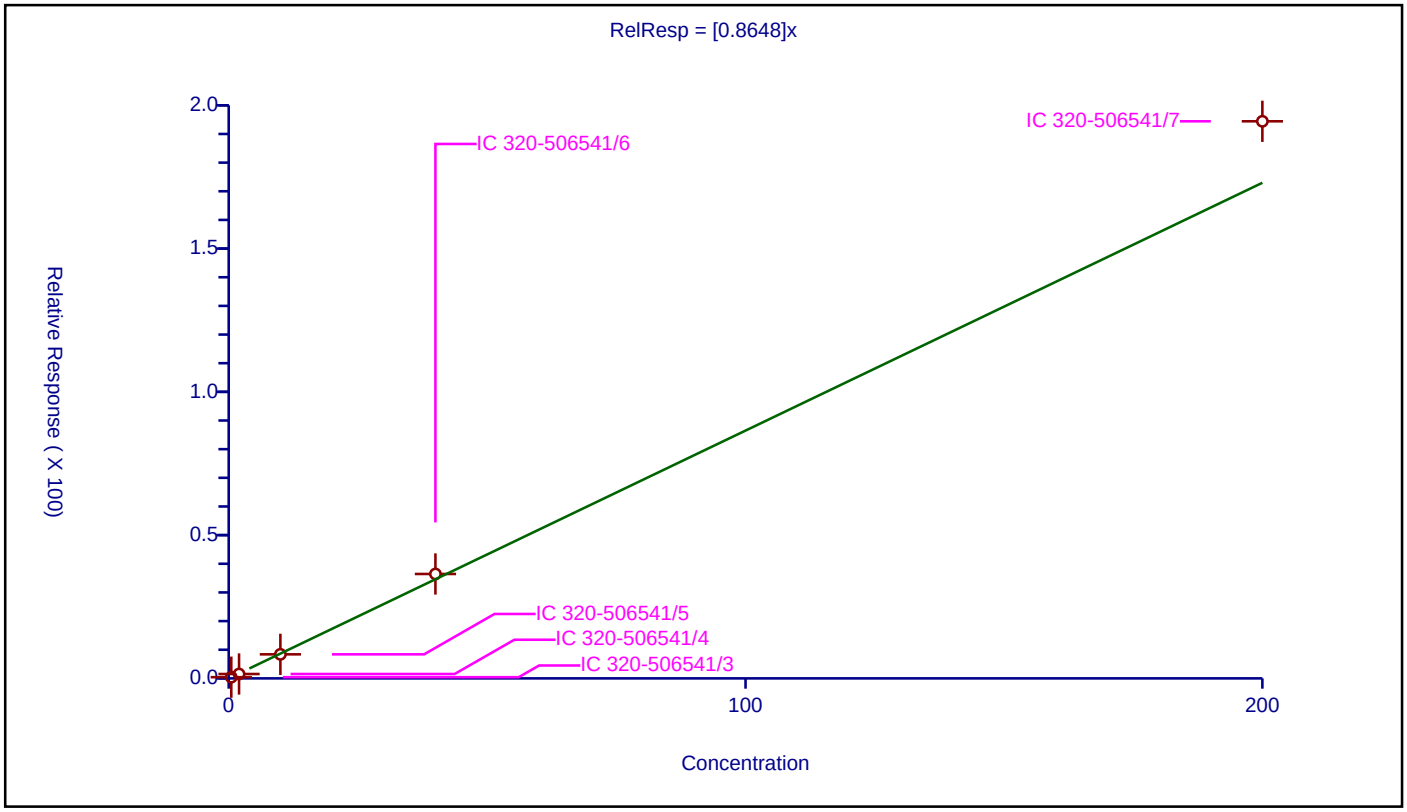

773479

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.2335	0.9635	1.0464	1.1217	1.0358	AveID		1.0802				9.5		20.0			
2,3,7,8-TCDD	1.1335	0.9559	1.0998	1.1237	1.0638	AveID		1.0753				6.7		20.0			
1,2,3,7,8-PeCDF	1.1920	0.9412	1.0373	1.0897	1.0112	AveID		1.0543				8.9		20.0			
2,3,4,7,8-PeCDF	1.1233	0.8984	0.9921	1.0636	0.9619	AveID		1.0079				8.7		20.0			
1,2,3,7,8-PeCDD	1.0719	0.9520	1.0685	1.1015	1.0385	AveID		1.0465				5.5		20.0			
1,2,3,4,7,8-HxCDF	1.2226	1.0072	1.1873	1.2073	1.1126	AveID		1.1474				7.8		20.0			
1,2,3,6,7,8-HxCDF	1.3374	1.0951	1.2359	1.2506	1.1700	AveID		1.2178				7.5		20.0			
2,3,4,6,7,8-HxCDF	1.3135	1.1007	1.2368	1.2623	1.1590	AveID		1.2145				7.0		20.0			
1,2,3,4,7,8-HxCDD	1.1235	0.9702	1.0749	1.1249	1.0104	AveID		1.0608				6.5		20.0			
1,2,3,6,7,8-HxCDD	1.0557	0.8863	1.0416	1.0264	0.9567	AveID		0.9933				7.1		20.0			
1,2,3,7,8,9-HxCDD	1.3093	0.9566	1.1202	1.1079	1.0532	AveID		1.1094				11.6		20.0			
1,2,3,7,8,9-HxCDF	1.3581	1.1239	1.2532	1.2757	1.1897	AveID		1.2401				7.1		20.0			
1,2,3,4,6,7,8-HpCDF	1.5412	1.2896	1.4855	1.5240	1.3700	AveID		1.4421				7.5		20.0			
1,2,3,4,6,7,8-HpCDD	1.1377	0.9531	1.0459	1.0970	1.0178	AveID		1.0503				6.8		20.0			
1,2,3,4,7,8,9-HpCDF	1.4057	1.1770	1.3459	1.3937	1.2235	AveID		1.3092				7.9		20.0			
OCDD	1.1328	0.9954	1.0870	1.1027	0.9920	AveID		1.0620				6.1		20.0			
OCDF	1.3392	1.1863	1.3349	1.3964	1.3271	AveID		1.3168				5.9		20.0			
13C-2,3,7,8-TCDF	1.3569	1.2925	1.2977	1.3484	1.4339	Ave		1.3459				4.2		35.0			
13C-2,3,7,8-TCDD	0.9164	0.8941	0.9478	0.9250	0.9750	Ave		0.9317				3.3		35.0			
13C-1,2,3,7,8-PeCDF	1.0773	1.0923	1.1314	1.1553	1.2461	Ave		1.1405				5.8		35.0			
13C-2,3,4,7,8-PeCDF	1.1109	1.0890	1.0480	1.1277	1.2510	Ave		1.1253				6.8		35.0			
13C-1,2,3,7,8-PeCDD	0.6866	0.6668	0.7308	0.7224	0.7758	Ave		0.7165				5.9		35.0			
13C-1,2,3,4,7,8-HxCDF	0.8656	0.8706	1.1172	0.9651	1.0057	Ave		0.9648				10.8		35.0			
13C-1,2,3,6,7,8-HxCDF	0.9280	0.9536	1.2227	1.0830	1.1668	Ave		1.0708				12.0		35.0			
13C-2,3,4,6,7,8-HxCDF	0.8692	0.9805	1.1292	1.1087	1.1190	Ave		1.0413				10.9		35.0			
13C-1,2,3,4,7,8-HxCDD	0.6435	0.7681	0.8180	0.7773	0.7866	Ave		0.7587				8.8		35.0			
13C-1,2,3,6,7,8-HxCDD	0.7368	0.8783	0.8857	0.9060	0.8896	Ave		0.8593				8.1		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9679	0.9781	1.0054	0.9456	0.9684	Ave		0.9731				2.2		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.7002	0.7170	0.7171	0.7555	0.7898	Ave		0.7359				4.9		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6351	0.6548	0.6640	0.7261	0.6926	Ave		0.6745				5.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6394	0.6623	0.6557	0.7259	0.7437	Ave		0.6854				6.8		35.0			
13C-OCDD	0.5202	0.5165	0.5084	0.5910	0.5871	Ave		0.5446				7.5		35.0			
37Cl4-2,3,7,8-TCDD	0.9654	0.9590	1.0722	1.0074	1.0375	Ave		1.0083				4.8					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	19533	50956	258022	1274052	6137031	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	12122	34971	198062	875630	4286034	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	74934	210335	1114982	5302236	26032333	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	72817	200175	987812	5051373	24861382	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	42943	129872	741897	3351337	16645947	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	46374	155611	1093397	4293581	21902419	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	54388	185321	1245549	4991420	26721257	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	50026	191527	1151149	5157631	25388405	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	31680	132244	724729	3222329	15558498	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	34082	138142	760446	3426727	16661405	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	39595	139741	786511	3436144	17279185	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	57602	195077	1038574	4445357	22553786	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	47287	164108	878086	4243438	21181967	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	31661	110761	572466	2935203	13800004	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	39382	138335	727362	3728415	17812004	2.50	10.0	50.0	200	1000
OCDD		AveID	51642	182470	910980	4803166	22803823	5.00	20.0	100	400	2000
OCDF		AveID	61051	217473	1118740	6082696	30505464	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	3167014	2644389	2465726	2839435	2962515	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	2138853	1829253	1800864	1948011	2014532	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	2514489	2234847	2149791	2432949	2574521	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	2592947	2228025	1991303	2374722	2584740	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	1602476	1364144	1388641	1521254	1602880	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	1517222	1545033	1841825	1778238	1968615	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	1626653	1692336	2015594	1995567	2283961	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	1523436	1740015	1861559	2042874	2190509	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	1127895	1363103	1348471	1432215	1539784	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	1291365	1558668	1460100	1669337	1741498	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	1696557	1735785	1657413	1742331	1895740	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	1227279	1272526	1182209	1392194	1546113	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	1113145	1162117	1094713	1337869	1355803	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	1120663	1175351	1080883	1337573	1455766	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	1823492	1833139	1676139	2177938	2298668	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	11266	39241	203726	848616	4287059	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	08JN21ADFS1_1	Resolution Check	RC 060821A	46			GRB	1.000	
2	08JN21ADFS1_2	WDM HRDXNCP_00042	WDM 060821A	1	Dioxin		GRB	1.000	
3	08JN21ADFS1_3	SB Solvent Blank C-14	SB 060821	3			GRB	1.000	
4	08JN21ADFS1_4	CS-2 HRDXNL2_00032	IC 060821	4	Dioxin		GRB	1.000	
5	08JN21ADFS1_5	CS-3 HRDXNL3_00029	IC 060821A	5	Dioxin		GRB	1.000	
6	08JN21ADFS1_6	CS-4 HRDXNL4_00099	IC 060821B	2	Dioxin		GRB	1.000	
7	08JN21ADFS1_7	CS-5 HRDXNL5_00032	IC 060821C	6	Dioxin		GRB	1.000	
8	08JN21ADFS1_8	CS-6 HRDXNL6_00028	IC 060821D	7	Dioxin		GRB	1.000	
9	08JN21ADFS1_9	Resolution Check	RC 060821B	46			GRB	1.000	
10	08JN21ADFS1_10	SB Solvent Blank C-14	SB 060821A	3			GRB	1.000	
11	08JN21ADFS1_11	ICV HRDXNIC_00047	ICV 060821	8	Dioxin		GRB	1.000	
12	08JN21ADFS1_12	Resolution Check	RC 060821C	46			GRB	1.000	
13	08JN21ADFS1_13	CCV CS-4 HRDXNL4_00099	CCV 060821A	2	Dioxin		GRB	1.000	
14	08JN21ADFS1_14	WDM HRDXNCP_00042	WDM 060821B	1	Dioxin		GRB	1.000	
15	08JN21ADFS1_15	mb 320-482224/1-a RI	mb 320-482224/1-a	10	8290/Solid	100	GRB	20.000	g
16	08JN21ADFS1_16	320-72057-a-23-a mdlv RI (7)	320-72057-a-23-a mdlv	11	8290/Solid		GRB	20.000	g
17	08JN21ADFS1_17	320-72057-a-24-a mdlv RI (8)	320-72057-a-24-a mdlv	12	8290/Solid		GRB	20.000	g
18	08JN21ADFS1_18	320-72057-a-25-a mdlv RI (9)	320-72057-a-25-a mdlv	13	8290/Solid		GRB	20.000	g
19	08JN21ADFS1_19	320-72057-a-26-a loqv RI (10)	320-72057-a-26-a loqv	14	8290/Solid		GRB	20.000	g
20	08JN21ADFS1_20	320-74542-b-3-a	320-74542-b-3-a	15	8290A/Solid	D245	GRB	10.000	g
21	08JN21ADFS1_21	320-74542-b-2-a	320-74542-b-2-a	16	8290A/Solid		GRB	10.000	g
22	08JN21ADFS1_22	320-74542-b-1-a	320-74542-b-1-a	17	8290A/Solid		GRB	10.000	g
23	08JN21ADFS1_23	lcs 320-496101/2-a	lcs 320-496101/2-a	18	8290A/Solid		GRB	10.000	g
24	08JN21ADFS1_24	lcsd 320-496101/3-a	lcsd 320-496101/3-a	19	8290A/Solid		GRB	10.000	g
25	08JN21ADFS1_25	mb 320-496101/1-a	mb 320-496101/1-a	20	8290A/Solid		GRB	10.000	
26	08JN21ADFS1_26	Resolution Check	RC 060821D	46			GRB	1.000	
27	08JN21ADFS1_27	CCV CS-4 HRDXNL4_00099	CCV 060821B	2	Dioxin		GRB	1.000	
28	08JN21ADFS1_28	Resolution Check	RC 060821E	46			GRB	1.000	
29	08JN21ADFS1_29	WDM HRDXNCP_00042	WDM 060821C	1	Dioxin		GRB	1.000	
30	08JN21ADFS1_30	SB Solvent Blank C-14	SB 060821B	3			GRB	1.000	
31	08JN21ADFS1_31	320-74542-b-4-a	320-74542-b-4-a	21	8290A/Solid	D245	GRB	10.000	g
32	08JN21ADFS1_32	320-74542-b-5-a	320-74542-b-5-a	22	8290A/Solid		GRB	10.000	g
33	08JN21ADFS1_33	320-74542-b-6-a	320-74542-b-6-a	23	8290A/Solid		GRB	10.000	g
34	08JN21ADFS1_34	320-74542-b-7-a	320-74542-b-7-a	24	8290A/Solid		GRB	10.000	g
35	08JN21ADFS1_35	320-74542-b-8-a	320-74542-b-8-a	25	8290A/Solid		GRB	10.000	g
36	08JN21ADFS1_36	320-74542-b-9-a	320-74542-b-9-a	26	8290A/Solid		GRB	10.000	g
37	08JN21ADFS1_37	SB Solvent Blank C-14	SB 060821C	3			GRB	1.000	
38	08JN21ADFS1_38	Resolution Check	RC 060821F	46			GRB	1.000	
39	08JN21ADFS1_39	CCV CS-4 HRDXNL4_00099	CCV 060821C	2	Dioxin		GRB	1.000	
40	08JN21ADFS1_40	Resolution Check	RC 060821G	46			GRB	1.000	

LOG FILE ✓'d
06/09/21
GRB

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 12:20
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10809 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10359 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10673 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10724 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10609 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10694 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10161 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10386 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10328 [5%height]

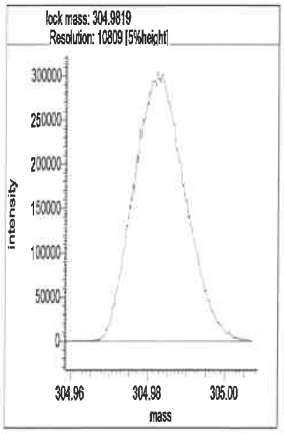

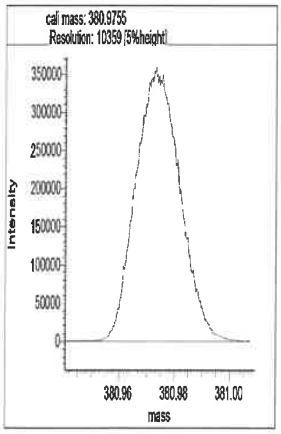

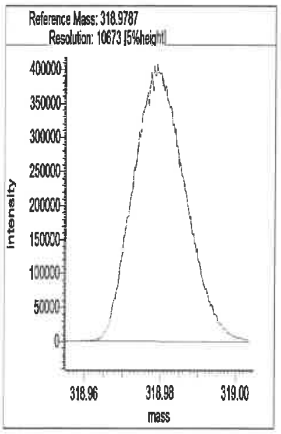

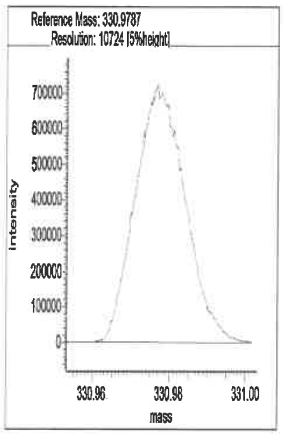

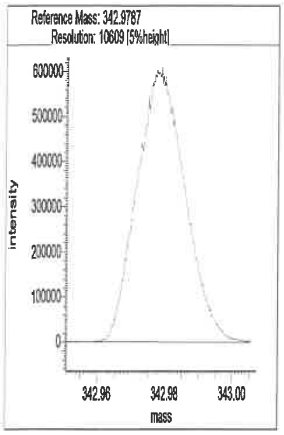

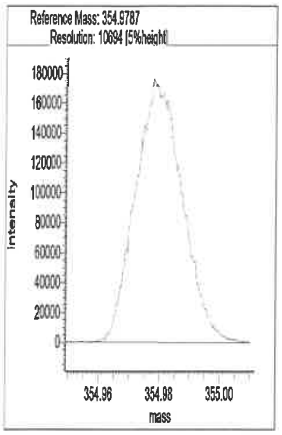

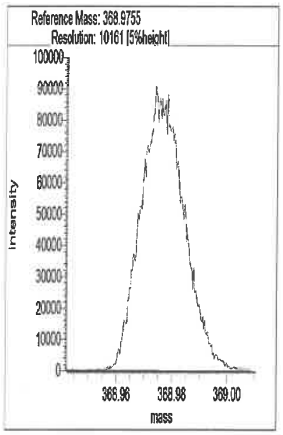

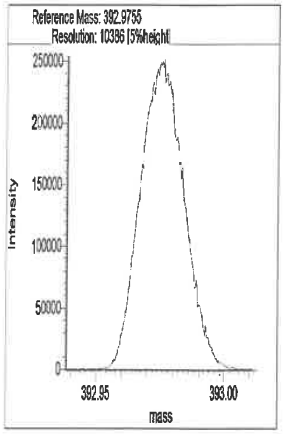

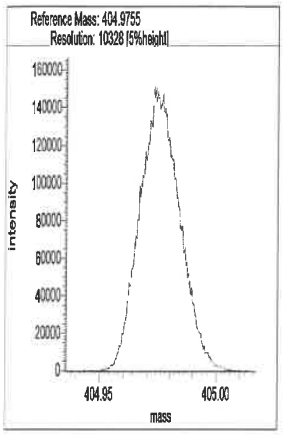

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10749 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10650 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10687 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10661 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10183 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10343 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10397 [5%height]

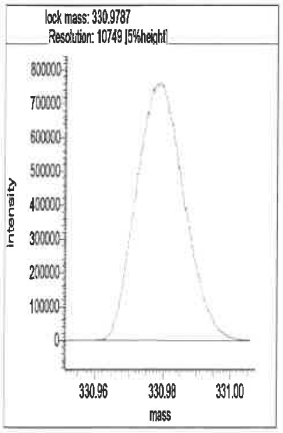

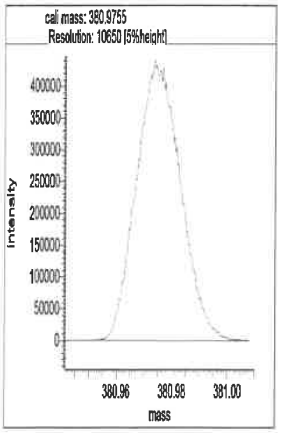

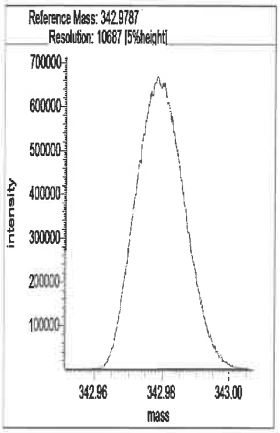

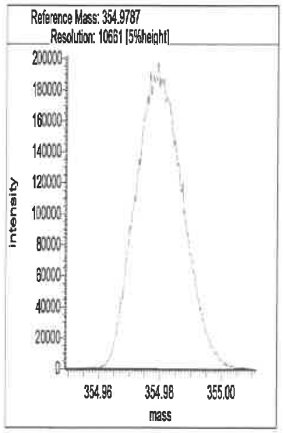

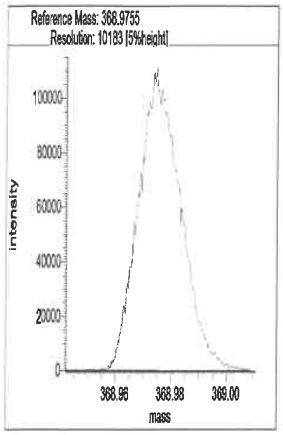

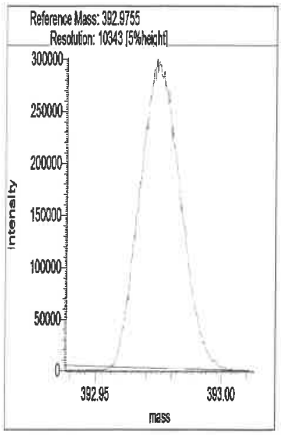

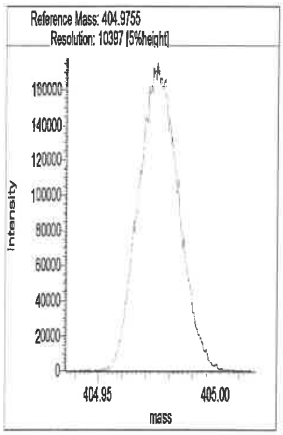

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10665 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10632 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10792 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10868 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10680 [5%height]

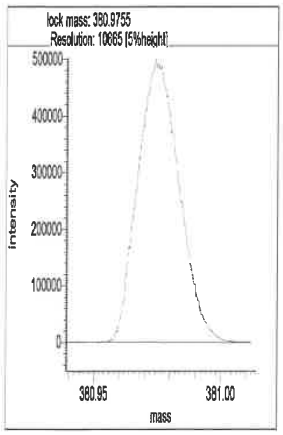

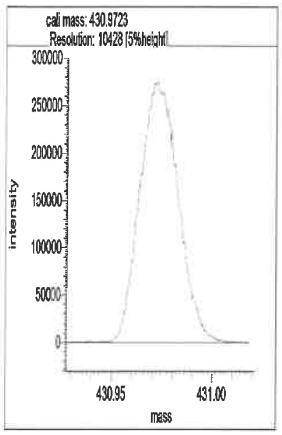

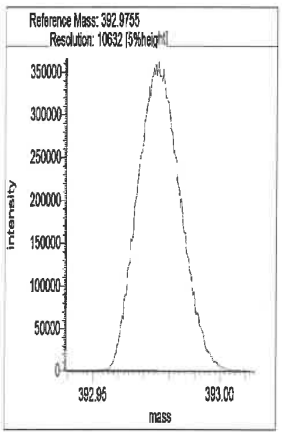

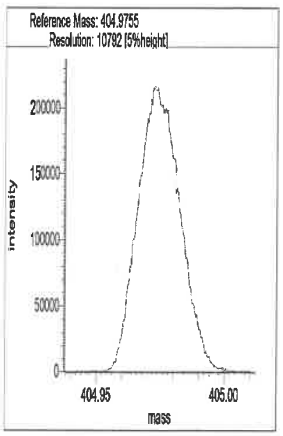

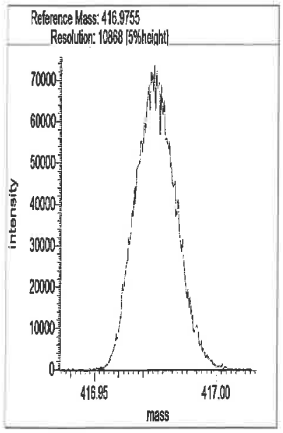

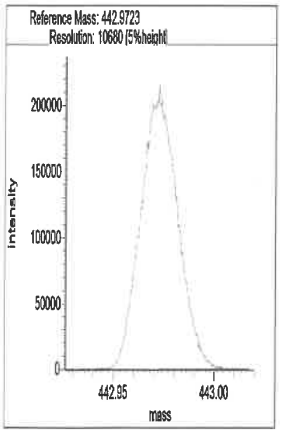

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10780 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10428 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10519 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10746 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10596 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10599 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10334 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10486 [5%height]

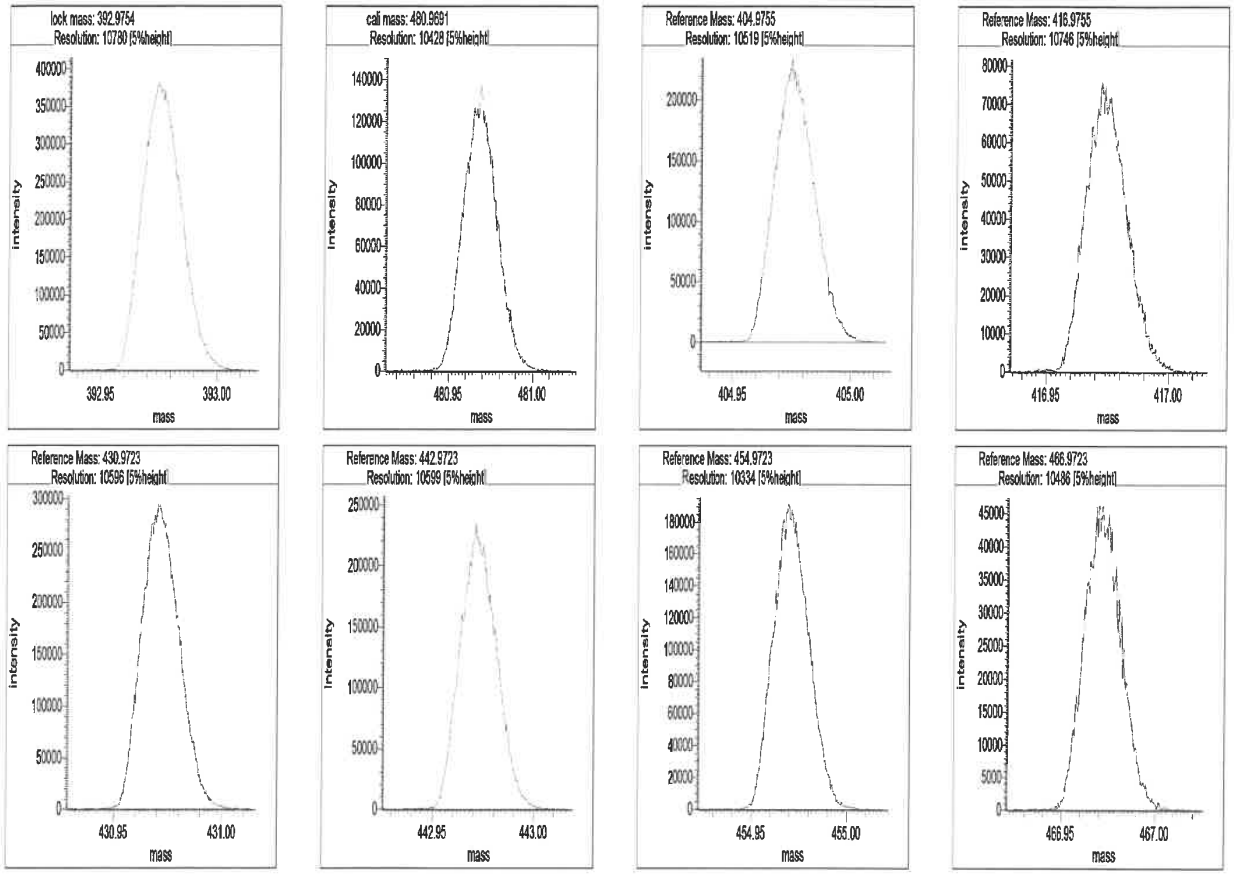

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10812 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10576 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10586 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10905 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10543 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10541 [5%height]

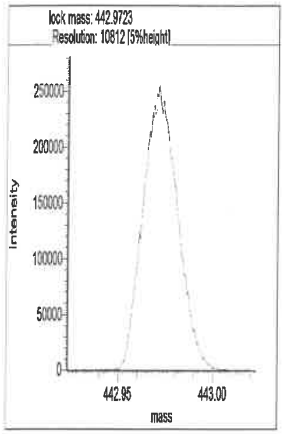
lock mass: 442.9723
Resolution: 10812 [5%height]
Intensity
mass

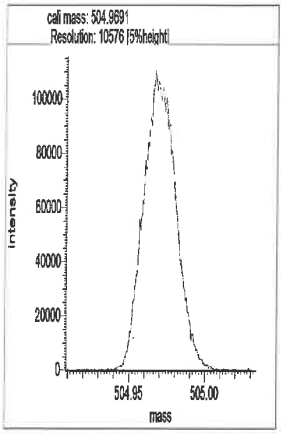
cali mass: 504.9691
Resolution: 10576 [5%height]
Intensity
mass

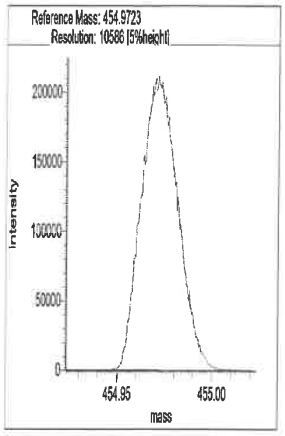
Reference Mass: 454.9723
Resolution: 10566 [5%height]
Intensity
mass

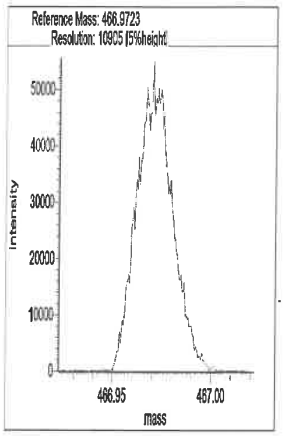
Reference Mass: 466.9723
Resolution: 10905 [5%height]
Intensity
mass

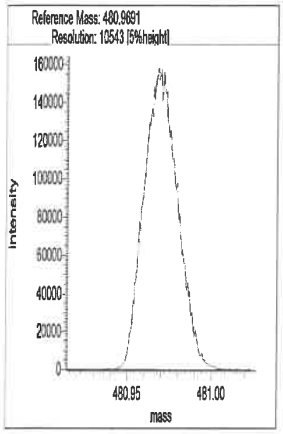
Reference Mass: 480.9691
Resolution: 10543 [5%height]
Intensity
mass

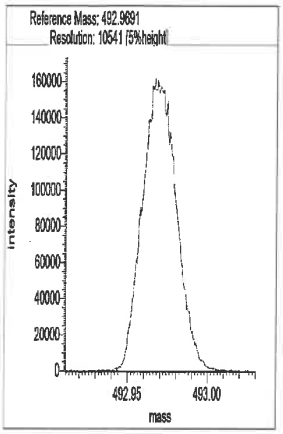
Reference Mass: 492.9691
Resolution: 10541 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 18:18
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11138 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10557 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10815 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11047 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10923 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10964 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10533 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10381 [5%height]

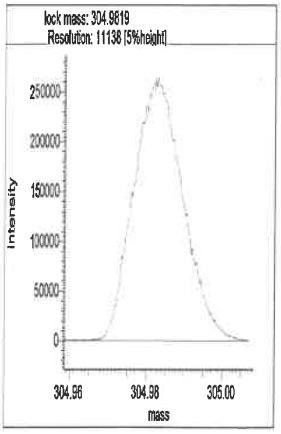

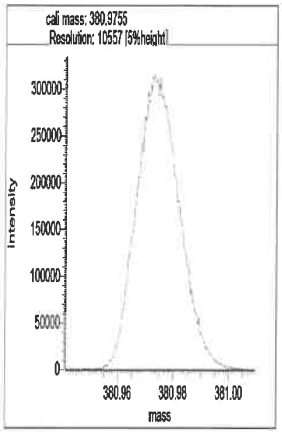

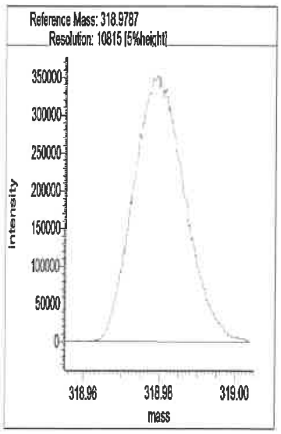

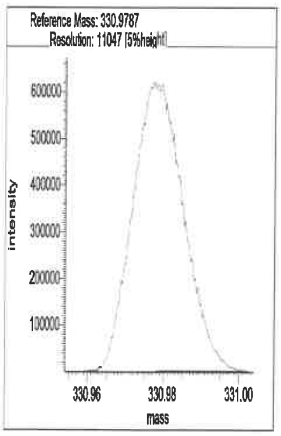

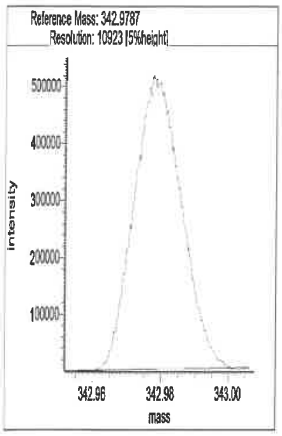

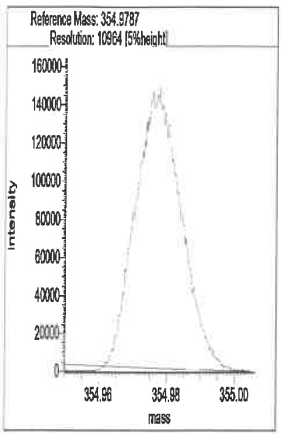

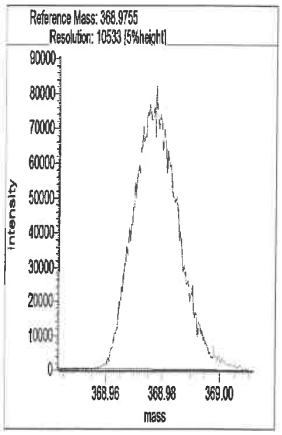

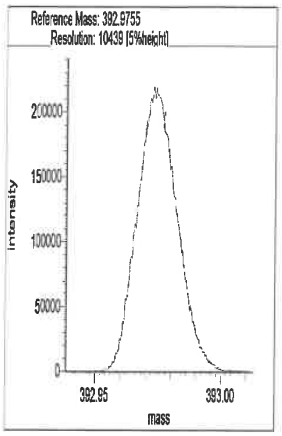

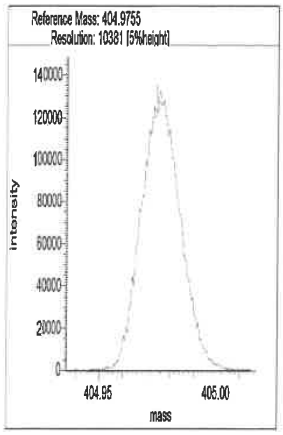

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10931 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10771 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11049 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10941 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10429 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10942 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10794 [5%height]

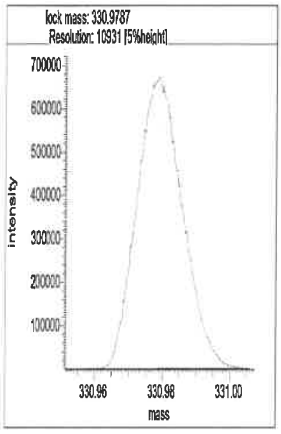

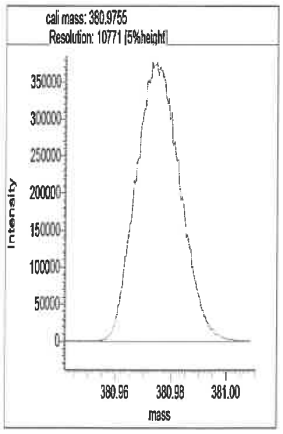

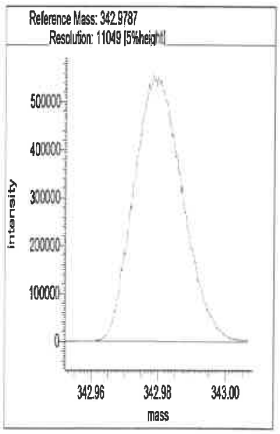

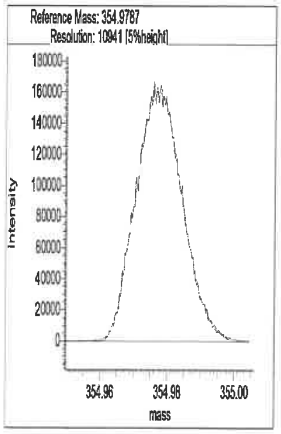

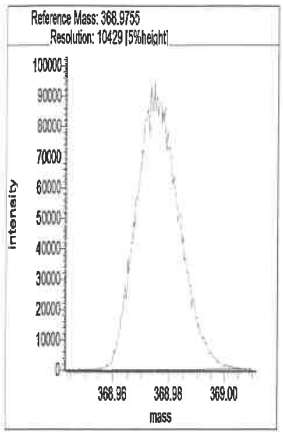

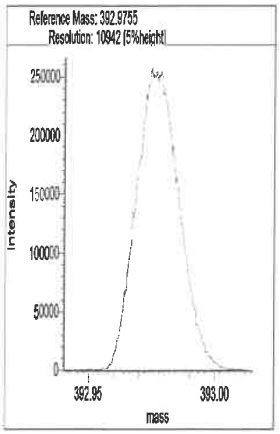

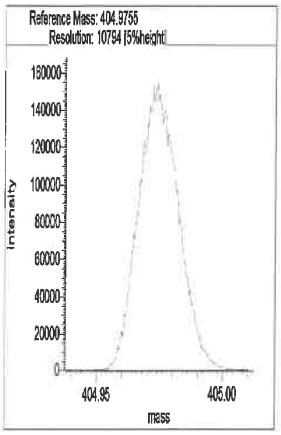

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10885 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10505 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10981 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10838 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11244 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10864 [5%height]

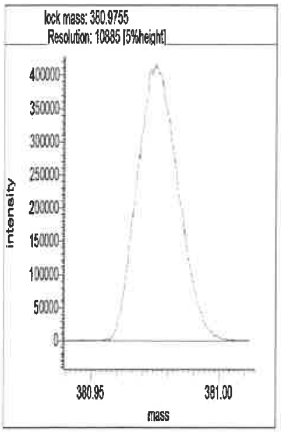

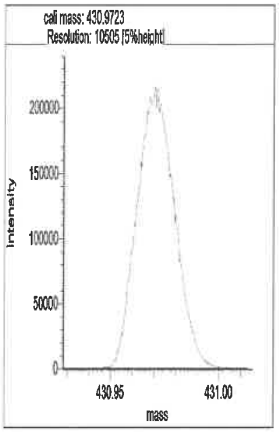

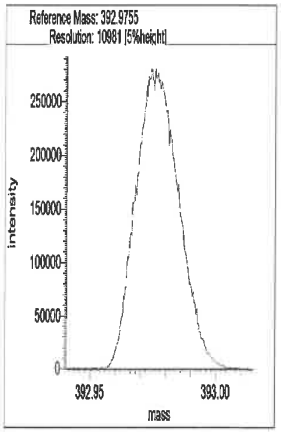

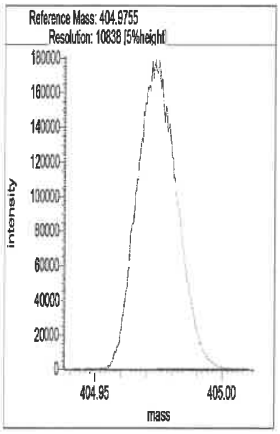

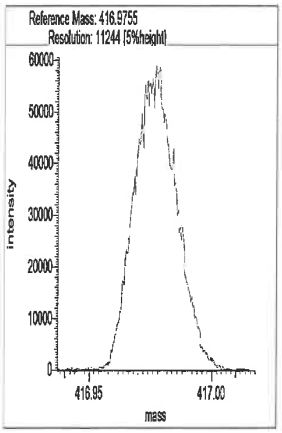

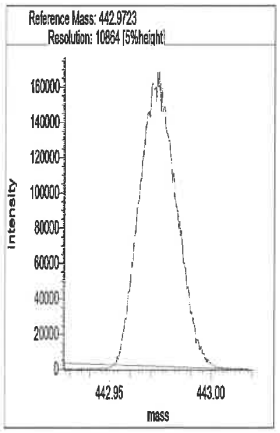

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10912 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10920 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10645 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11021 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10722 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10705 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10886 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11473 [5%height]

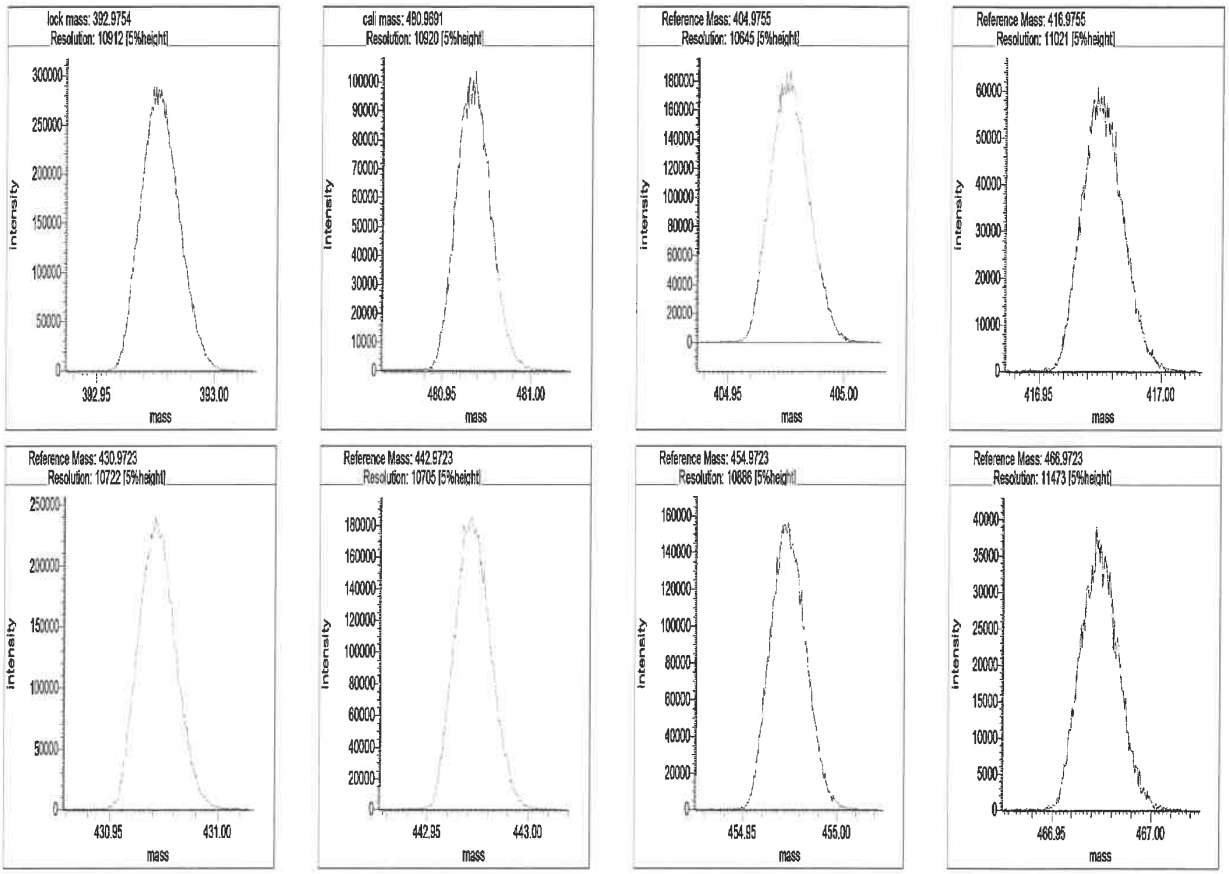

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11094 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10852 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11104 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11145 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10592 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10719 [5%height]

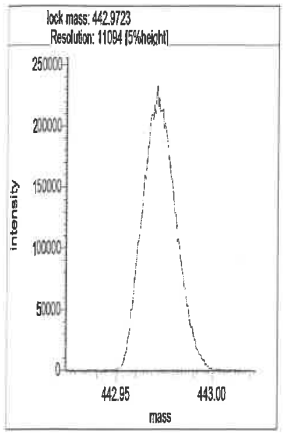
lock mass: 442.9723
Resolution: 11094 [5%height]
Intensity
mass

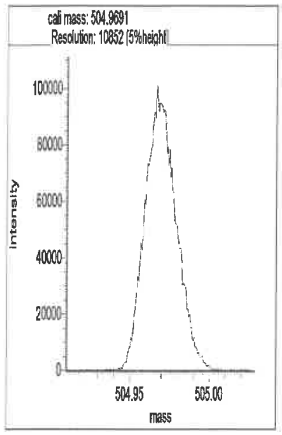
cali mass: 504.9691
Resolution: 10852 [5%height]
Intensity
mass

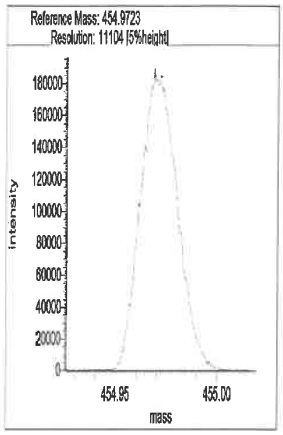
Reference Mass: 454.9723
Resolution: 11104 [5%height]
Intensity
mass

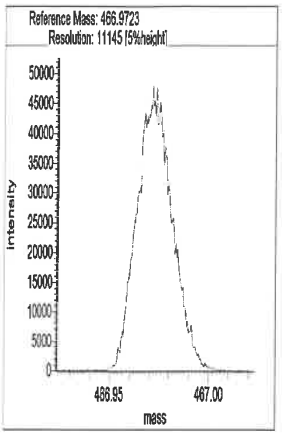
Reference Mass: 466.9723
Resolution: 11145 [5%height]
Intensity
mass

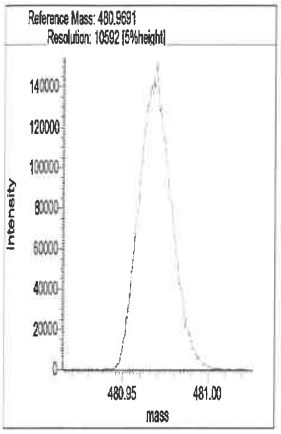
Reference Mass: 480.9691
Resolution: 10592 [5%height]
Intensity
mass

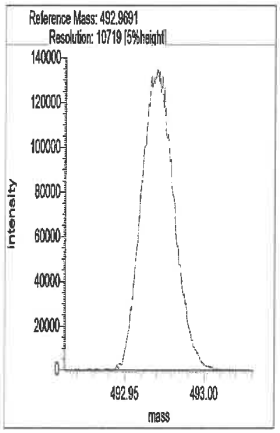
Reference Mass: 492.9691
Resolution: 10719 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 20:13
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11228 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10780 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10868 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10774 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10877 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10591 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10487 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10710 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10243 [5%height]

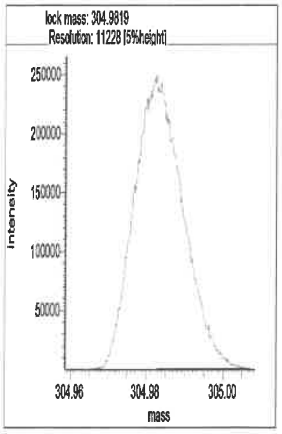

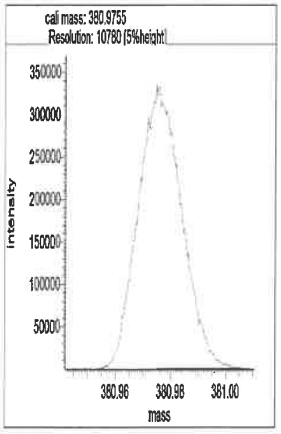

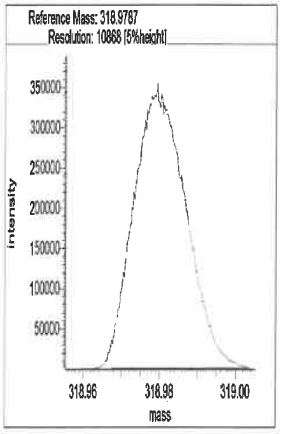

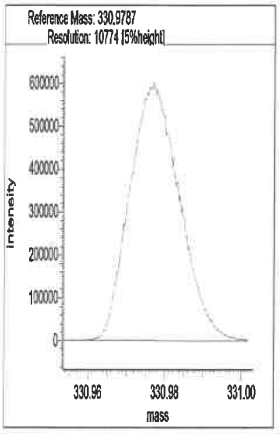

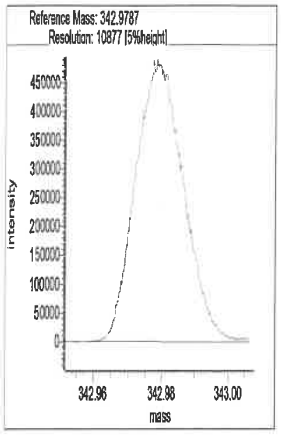

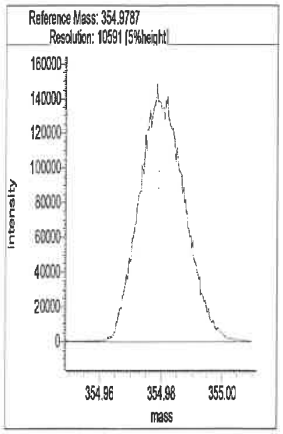

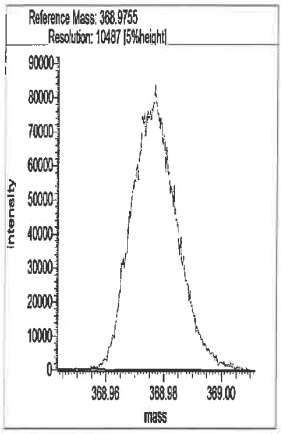

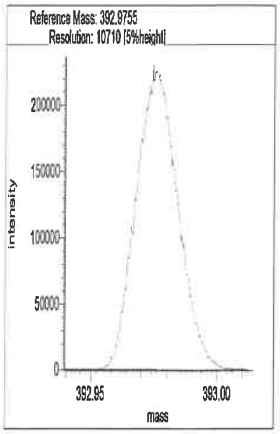

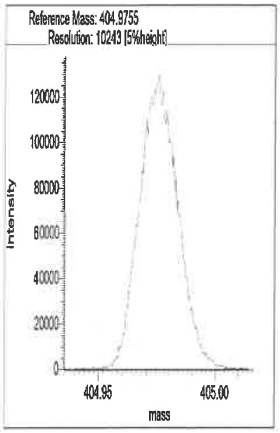

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10867 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10936 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10948 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10910 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10174 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10675 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10514 [5%height]

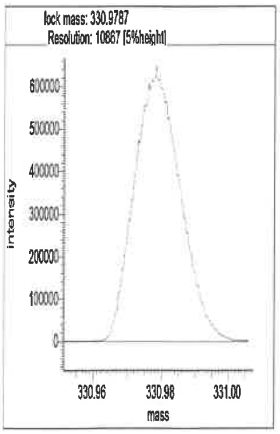

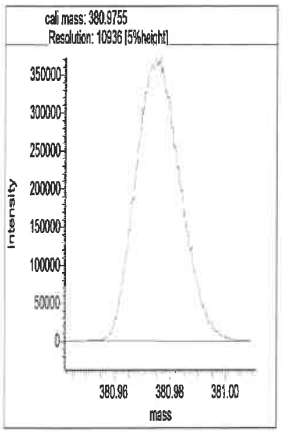

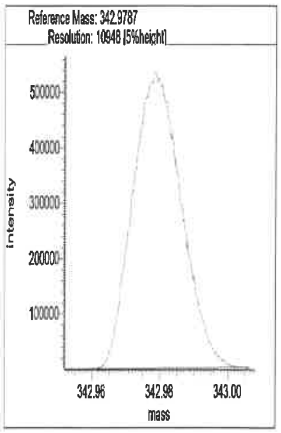

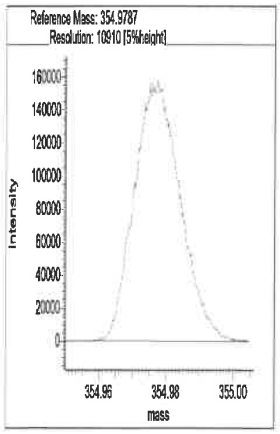

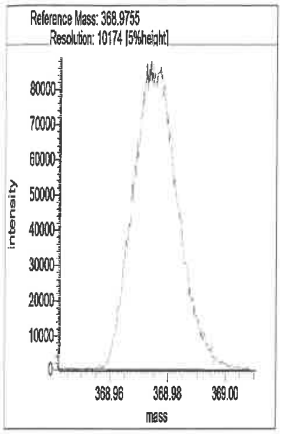

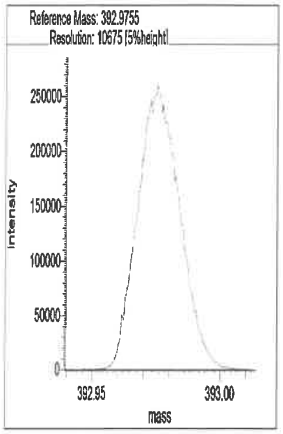

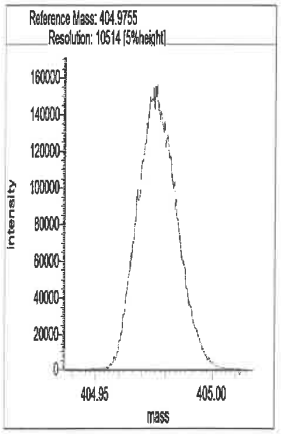

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10898 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10782 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11034 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11134 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10786 [5%height]

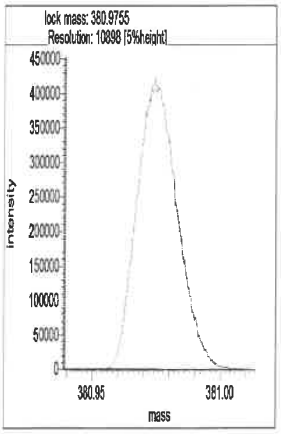

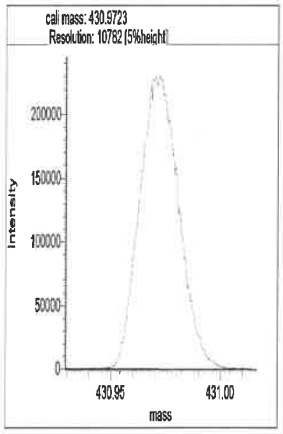

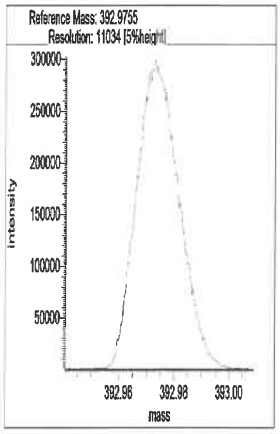

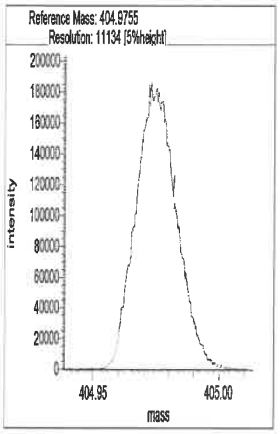

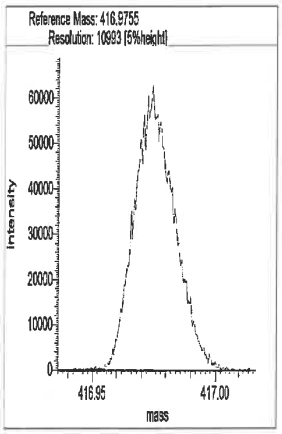

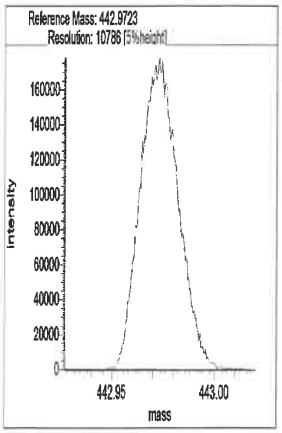

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11155 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10418 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10767 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10954 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10613 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11028 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10950 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10877 [5%height]

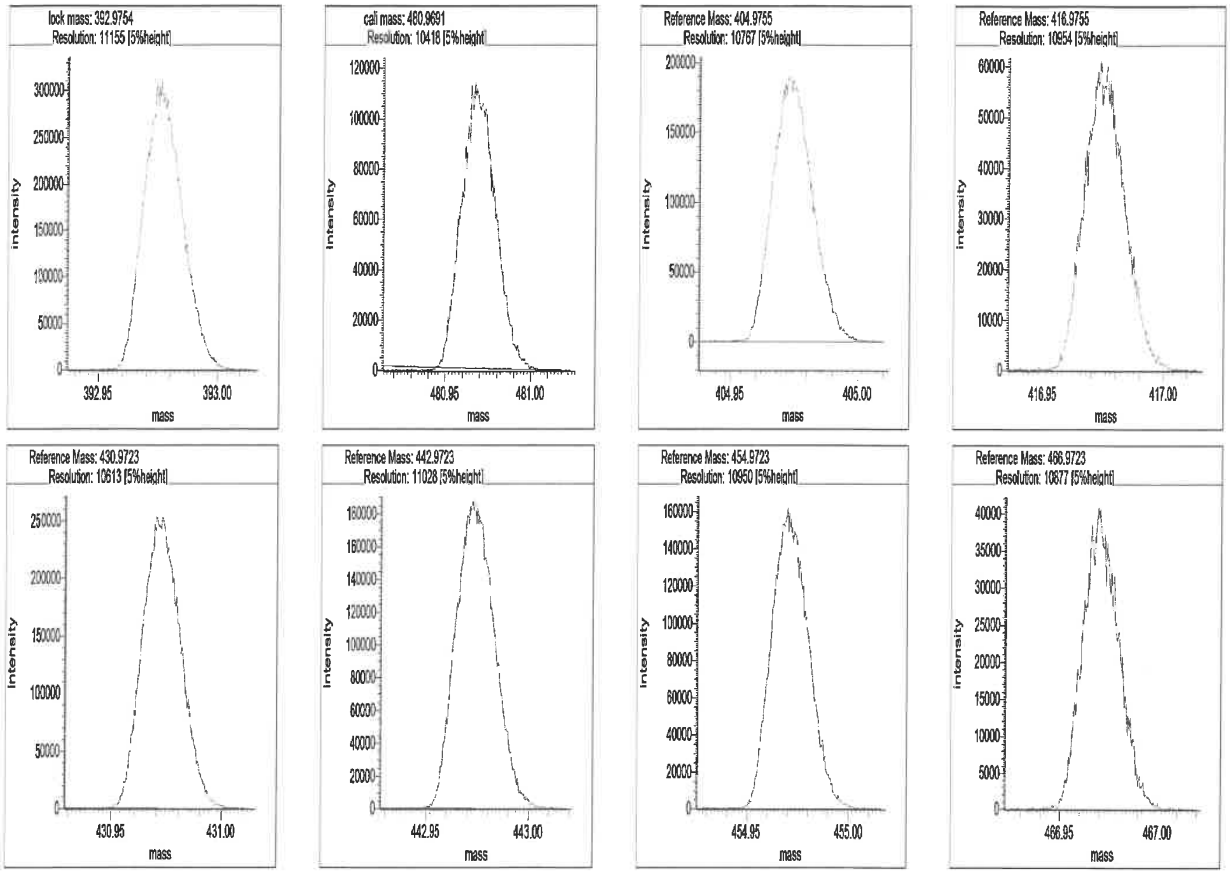

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10985 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10829 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11149 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11382 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11128 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11097 [5%height]

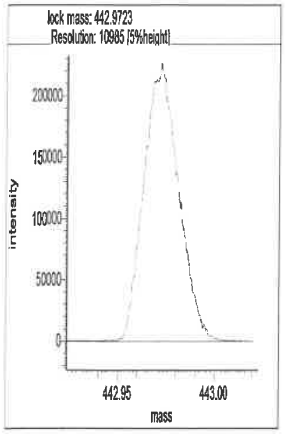
lock mass: 442.9723
Resolution: 10985 [5%height]
intensity
mass

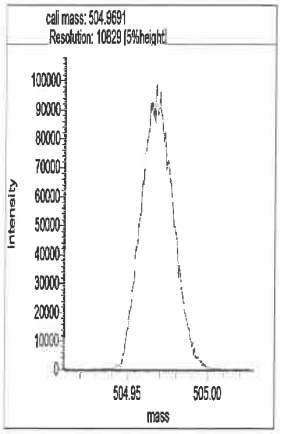
cali mass: 504.9691
Resolution: 10629 [5%height]
intensity
mass

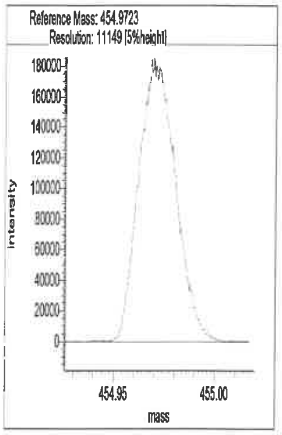
Reference Mass: 454.9723
Resolution: 11149 [5%height]
intensity
mass

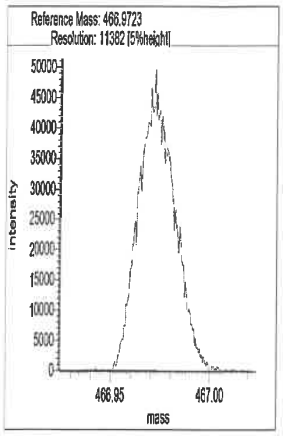
Reference Mass: 466.9723
Resolution: 11382 [5%height]
intensity
mass

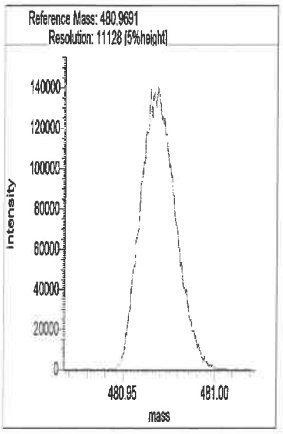
Reference Mass: 480.9691
Resolution: 11128 [5%height]
intensity
mass

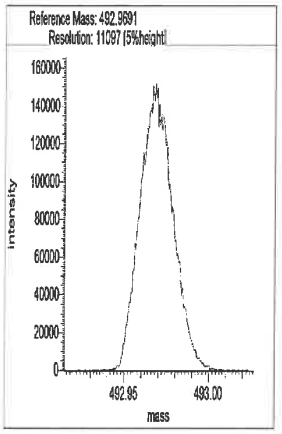
Reference Mass: 492.9691
Resolution: 11097 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.564	2334037	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.628	3167014	0.81	1.3459	100.8	100.8	0.1546	0.1546	101	
2,3,7,8-TCDF	19.662	19533	0.82	1.0802	0.5710	0.5710	0.007637	0.007637	114	
S Total TCDF					0.5710	0.5710	0.007637	0.007637		
D 13C-2,3,7,8-TCDD	20.933	2138853	0.81	0.9317	98.4	98.4	0.1772	0.1772	98.36	
$ 37Cl4-2,3,7,8-TCDD	20.941	11266		1.0083	0.4787	0.4787	0.005933	0.005933	95.74	
2,3,7,8-TCDD	20.967	12122	0.71	1.0753	0.5270	0.5270	0.0223	0.0223	105	
S Total TCDD					0.5270	0.5270	0.0223	0.0223		
D 13C-1,2,3,7,8-PeCDF	26.587	2514489	1.59	1.1405	94.5	94.5	0.3469	0.3469	94.46	
1,2,3,7,8-PeCDF	26.613	74934	1.71	1.0543	2.827	2.827	0.0199	0.0199	113	
D 13C-2,3,4,7,8-PeCDF	28.046	2592947	1.57	1.1253	98.7	98.7	0.3516	0.3516	98.72	
2,3,4,7,8-PeCDF	28.071	72817	1.61	1.0079	2.786	2.786	0.0219	0.0219	111	
S Total PeCDF					5.613	5.613	0.0209	0.0209		
D 13C-1,2,3,7,8-PeCDD	28.830	1602476	1.59	0.7165	95.8	95.8	0.1271	0.1271	95.83	
1,2,3,7,8-PeCDD	28.855	42943	1.72	1.0465	2.561	2.561	0.0215	0.0215	102	
S Total PeCDD					2.561	2.561	0.0215	0.0215		
D 13C-1,2,3,4,7,8-HxCDF	34.406	1517222	0.52	0.9648	89.7	89.7	0.3358	0.3358	89.72	
1,2,3,4,7,8-HxCDF	34.431	46374	1.30	1.1474	2.664	2.664	0.0219	0.0219	107	
D 13C-1,2,3,6,7,8-HxCDF	34.583	1626653	0.54	1.0708	86.7	86.7	0.3026	0.3026	86.67	
1,2,3,6,7,8-HxCDF	34.608	54388	1.19	1.2178	2.746	2.746	0.0201	0.0201	110	
D 13C-2,3,4,6,7,8-HxCDF	35.468	1523436	0.53	1.0413	83.5	83.5	0.3112	0.3112	83.47	
2,3,4,6,7,8-HxCDF	35.485	50026	1.25	1.2145	2.704	2.704	0.0183	0.0183	108	
D 13C-1,2,3,7,8,9-HxCDF	36.404	1696557	0.52	0.9731	99.5	99.5	0.3330	0.3330	99.47	
1,2,3,7,8,9-HxCDF	36.421	57602	1.21	1.2401	2.738	2.738	0.0145	0.0145	110	
S Total HxCDF					10.9	10.9	0.0187	0.0187		
* 13C-1,2,3,7,8,9-HxCDD	36.210	1752780	1.29	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.695	1127895	1.27	0.7587	84.8	84.8	0.2005	0.2005	84.82	
1,2,3,4,7,8-HxCDD	35.712	31680	1.20	1.0608	2.648	2.648	0.0198	0.0198	106	
D 13C-1,2,3,6,7,8-HxCDD	35.822	1291365	1.29	0.8593	85.7	85.7	0.1770	0.1770	85.74	
1,2,3,6,7,8-HxCDD	35.839	34082	1.16	0.9933	2.657	2.657	0.0196	0.0196	106	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.227	39595	1.15	1.1094	2.950	2.950	0.0182	0.0182	118	
S Total HxCDD					8.255	8.255	0.0192	0.0192		
D 13C-1,2,3,4,6,7,8-HpCDF	38.321	1227279	0.46	0.7359	95.1	95.1	0.3550	0.3550	95.14	
1,2,3,4,6,7,8-HpCDF	38.329	47287	1.05	1.4421	2.672	2.672	0.0138	0.0138	107	
D 13C-1,2,3,4,7,8,9-HpCDF	39.611	1120663	0.46	0.6854	93.3	93.3	0.3812	0.3812	93.29	
1,2,3,4,7,8,9-HpCDF	39.619	39382	1.04	1.3092	2.684	2.684	0.0149	0.0149	107	
S Total HpCDF					5.356	5.356	0.0144	0.0144		
D 13C-1,2,3,4,6,7,8-HpCDD	39.307	1113145	1.06	0.6745	94.2	94.2	0.2577	0.2577	94.15	
1,2,3,4,6,7,8-HpCDD	39.316	31661	0.99	1.0503	2.708	2.708	0.0190	0.0190	108	
S Total HpCDD					2.708	2.708	0.0190	0.0190		
D 13C-OCDD	41.797	1823492	0.90	0.5446	191.0	191.0	0.3325	0.3325	95.51	
OCDF	41.890	61051	0.95	1.3168	5.085	5.085	0.0322	0.0322	102	
OCDD	41.805	51642	0.88	1.0620	5.333	5.333	0.0182	0.0182	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.564	20.547	1		1041449	163457	148	370	1104		
333.9338	20.564	20.547	1		1292588	204311	95	237	2151	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.628	19.616	1	0.954	1415927	226149	197	492	1148		
317.9389	19.628	19.616	1	0.954	1751087	282985	109	272	2596	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.662	19.646	1	1.002	8785	1472	3	7	491		
305.8987	19.662	19.646	1	1.002	10748	1598	14	35	114	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.933	20.910	1	1.018	956834	140160	148	370	947		
333.9338	20.924	20.910	1	1.018	1182019	172842	95	237	1819	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.941	20.935	0	1.018	11266	1696	9	22	188		
2,3,7,8-TCDD											
319.8965	20.967	20.939	2	1.002	5046	703	25	62	28		
321.8936	20.950	20.939	1	1.001	7076	1165	5	12	233	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.587	26.560	2	1.293	1544614	271650	354	885	767		
353.8970	26.587	26.560	2	1.293	969875	166951	228	570	732	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.613	26.584	2	1.001	47325	8180	13	32	629		
341.8567	26.596	26.584	1	1.000	27609	5058	24	60	211	1.71(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.046	28.014	2	1.364	1584958	253357	354	885	716		
353.8970	28.037	28.014	1	1.363	1007989	162868	228	570	714	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.071	28.039	2	1.001	44929	7445	13	32	573		
341.8567	28.063	28.039	1	1.001	27888	4385	24	60	183	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.830	28.801	2	1.402	983567	149258	81	202	1843		
369.8919	28.830	28.801	2	1.402	618909	95647	53	132	1805	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.855	28.828	2	1.001	27146	4327	17	42	255		
357.8516	28.863	28.828	2	1.001	15797	2500	5	12	500	1.72(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.406	34.384	1	0.950	521957	103110	186	465	554		
385.8610	34.406	34.384	1	0.950	995265	195967	351	877	558	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.431	34.405	2	1.001	26220	5205	19	47	274		
375.8178	34.431	34.405	2	1.001	20154	4061	11	27	369	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.583	34.562	1	0.955	567371	107545	186	465	578		
385.8610	34.583	34.562	1	0.955	1059282	198264	351	877	565	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.608	34.582	2	1.001	29510	5690	19	47	299		
375.8178	34.600	34.582	1	1.000	24878	4701	11	27	427	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.468	35.444	1	0.980	527302	117266	186	465	630		
385.8610	35.468	35.444	1	0.980	996134	220962	351	877	630	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.485	35.461	1	1.000	27767	6035	19	47	318		
375.8178	35.476	35.461	1	1.000	22259	4941	11	27	449	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.404	36.388	1	1.005	582391	143633	186	465	772		
385.8610	36.404	36.388	1	1.005	1114166	273141	351	877	778	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.421	36.402	1	1.000	31508	7777	19	47	409		
375.8178	36.421	36.402	1	1.000	26094	6045	11	27	550	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.210	36.192	1		987922	232825	142	355	1640		
403.8529	36.210	36.192	1		764858	181339	110	275	1649	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.695	35.680	1	0.986	630506	153231	142	355	1079		
403.8529	35.695	35.680	1	0.986	497389	118761	110	275	1080	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.712	35.695	1	1.000	17291	4375	12	30	365		
391.8127	35.712	35.695	1	1.000	14389	3541	11	27	322	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.822	35.805	1	0.989	727495	166749	142	355	1174		
403.8529	35.822	35.805	1	0.989	563870	125792	110	275	1144	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.839	35.820	1	1.000	18295	4156	12	30	346		
391.8127	35.830	35.820	1	1.000	15787	3353	11	27	305	1.16(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.227	36.208	1	1.015	21159	5138	12	30	428		
391.8127	36.218	36.208	1	1.015	18436	4550	11	27	414	1.15(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.321	38.305	1	1.058	389255	110351	150	375	736		
419.8220	38.321	38.305	1	1.058	838024	240182	283	707	849	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.329	38.317	1	1.000	24164	7010	18	45	389		
409.7788	38.329	38.317	1	1.000	23123	6463	10	25	646	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.611	39.600	1	1.094	351407	112029	150	375	747		
419.8220	39.611	39.600	1	1.094	769256	246420	283	707	871	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.619	39.608	1	1.000	20064	6267	18	45	348		
409.7788	39.628	39.608	1	1.000	19318	5891	10	25	589	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.307	39.293	1	1.086	574080	172930	147	367	1176		
437.8140	39.307	39.293	1	1.086	539065	163690	141	352	1161	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.316	39.301	1	1.000	15770	4799	17	42	282		
425.7737	39.316	39.301	1	1.000	15891	4656	10	25	466	0.99(0.88-1.20)	
13C-OCDD											
469.7780	41.797	41.785	1	1.154	864827	245324	148	370	1658		
471.7750	41.797	41.785	1	1.154	958665	273299	152	380	1798	0.90(0.76-1.02)	
OCDF											
441.7428	41.890	41.875	1	1.002	29681	8172	14	35	584		
443.7399	41.881	41.875	0	1.002	31370	8963	30	75	299	0.95(0.76-1.02)	
OCDD											
457.7377	41.805	41.794	1	1.000	24122	6775	8	20	847		
459.7348	41.805	41.794	1	1.000	27520	7850	12	30	654	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

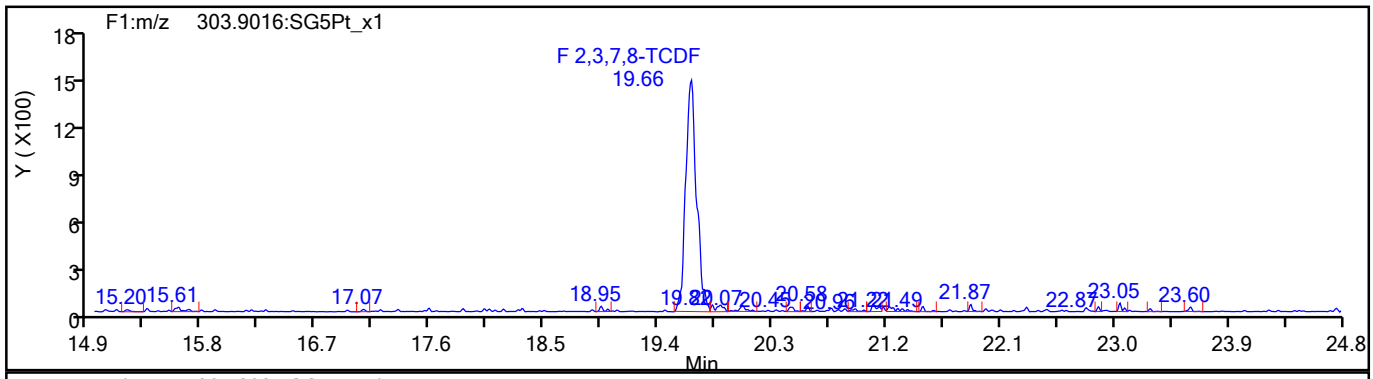

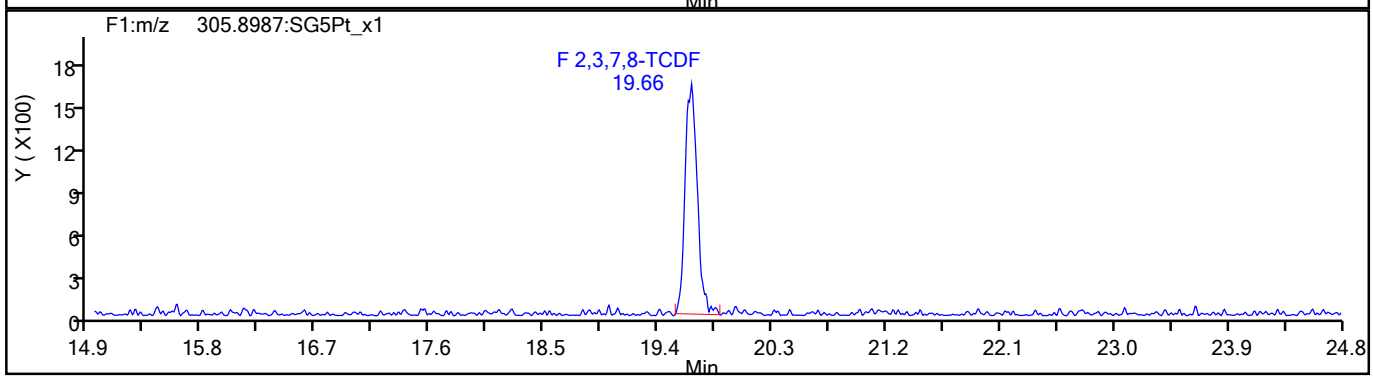

TCDF Standards

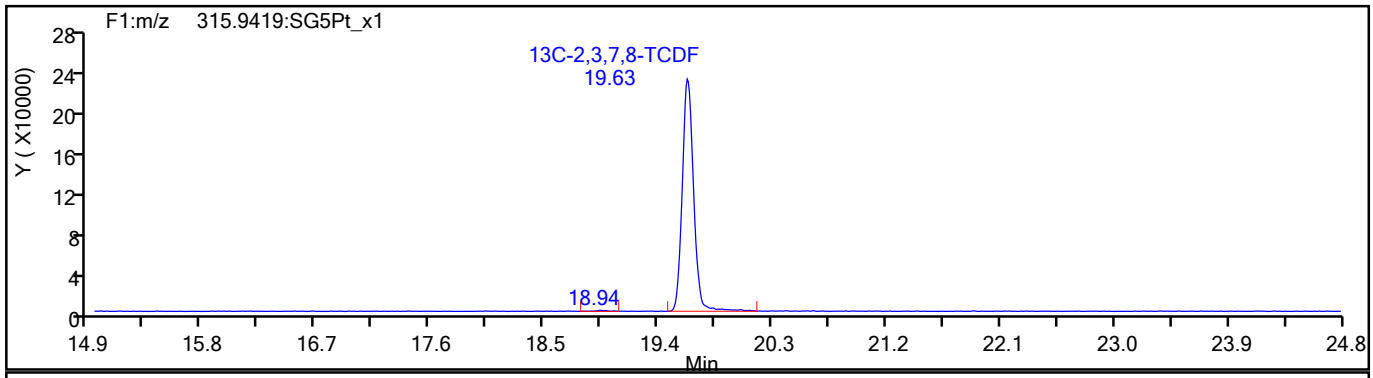

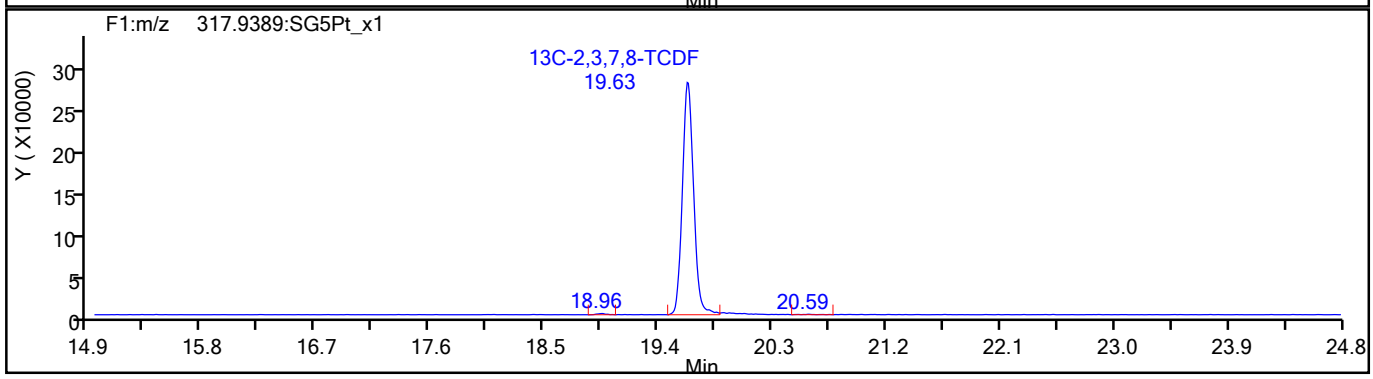

773506

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

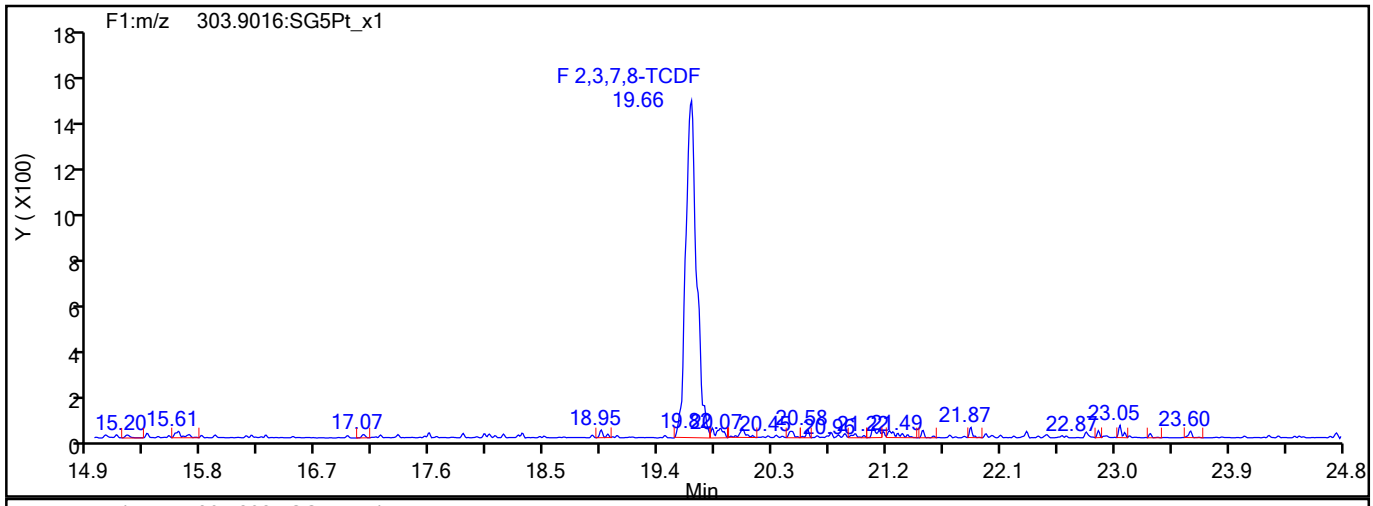

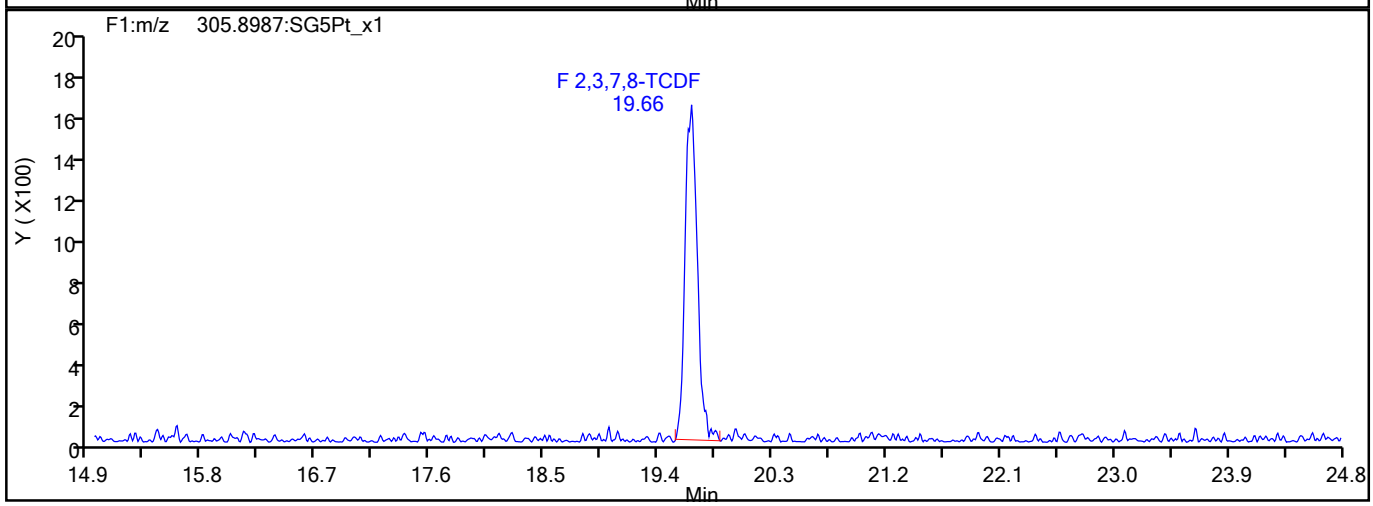

TCDF Interference Mass

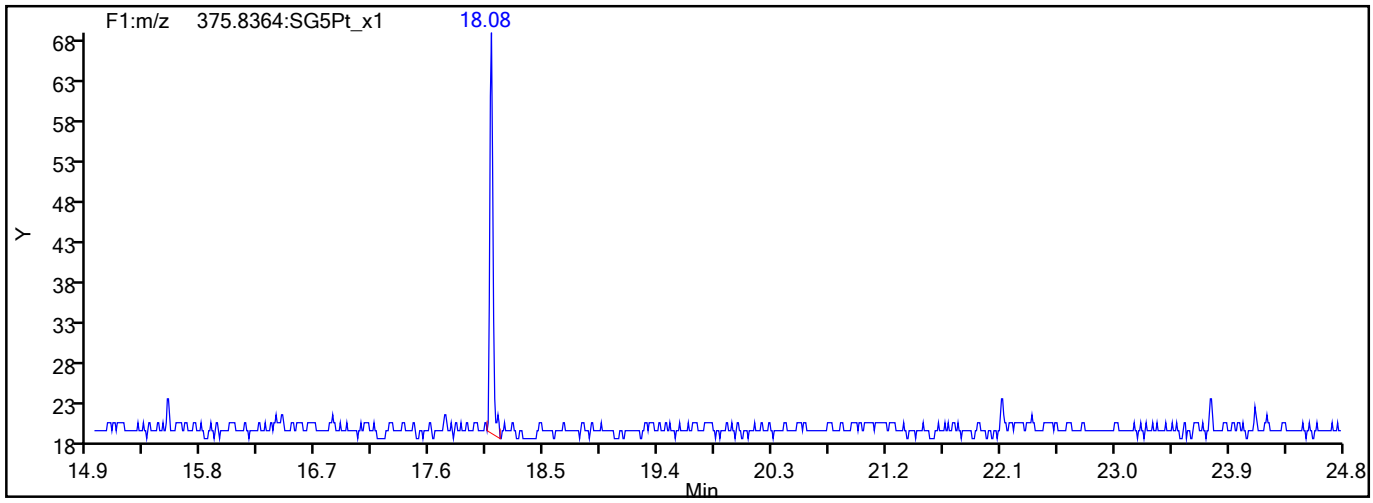

773507

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

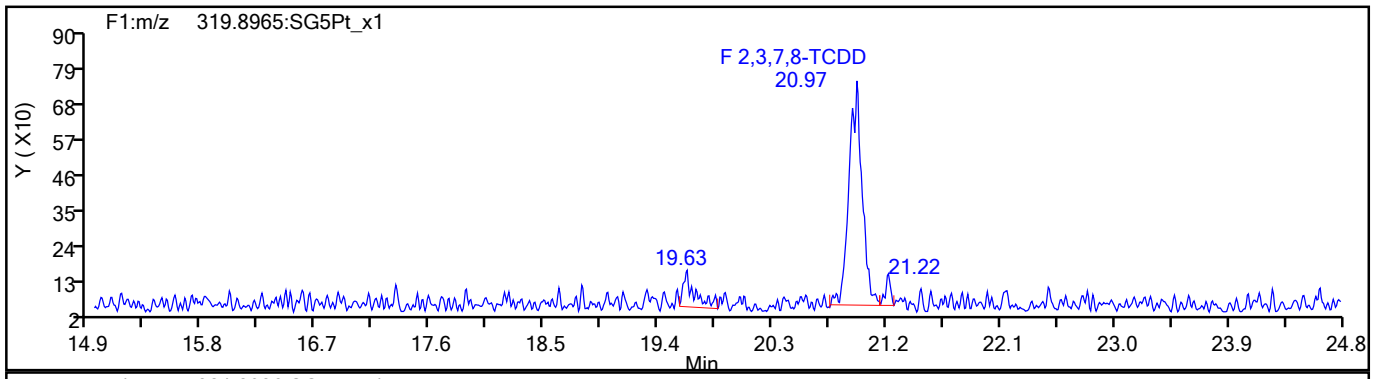

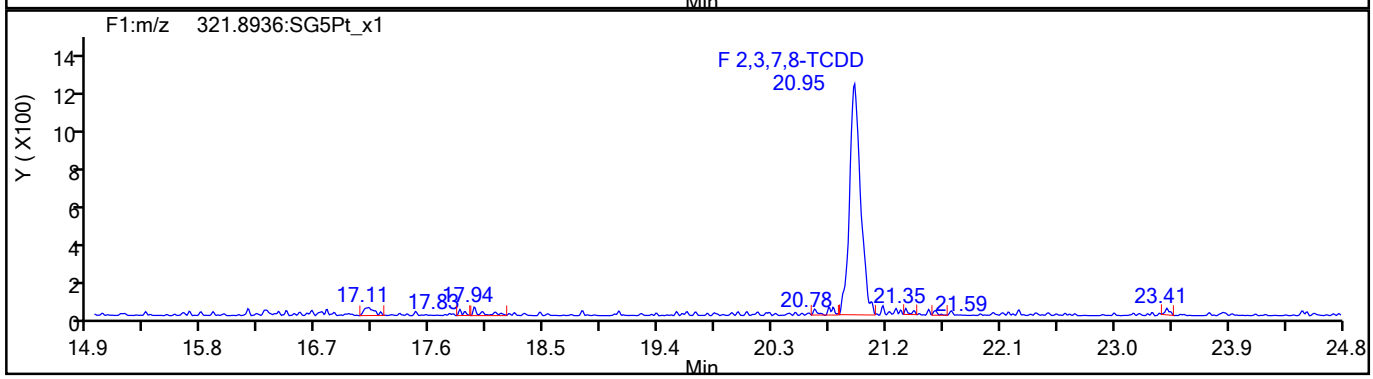

TCDD Standards

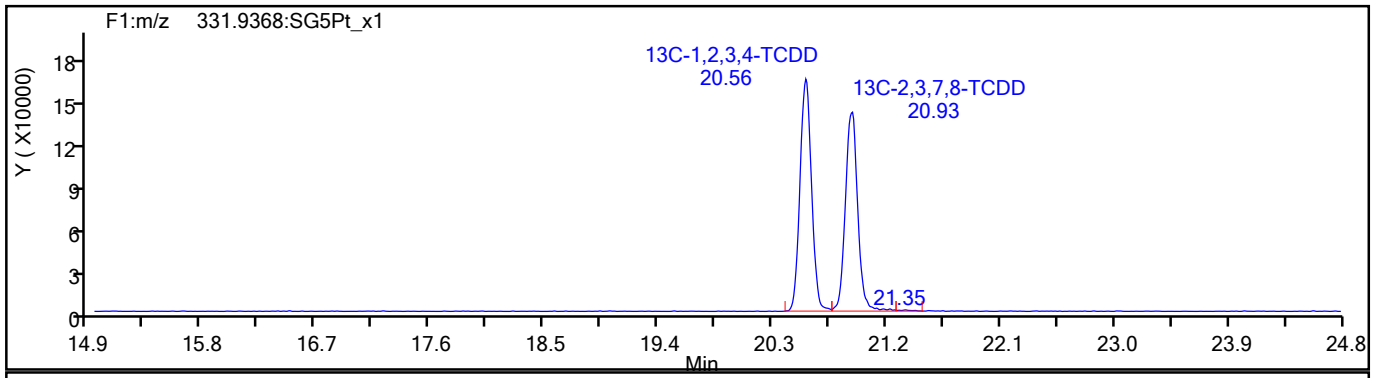

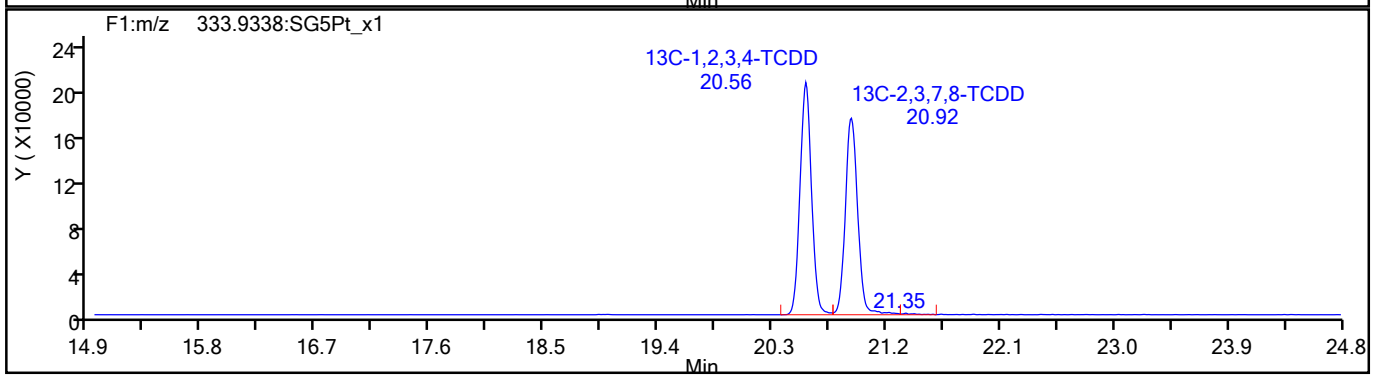

773508

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

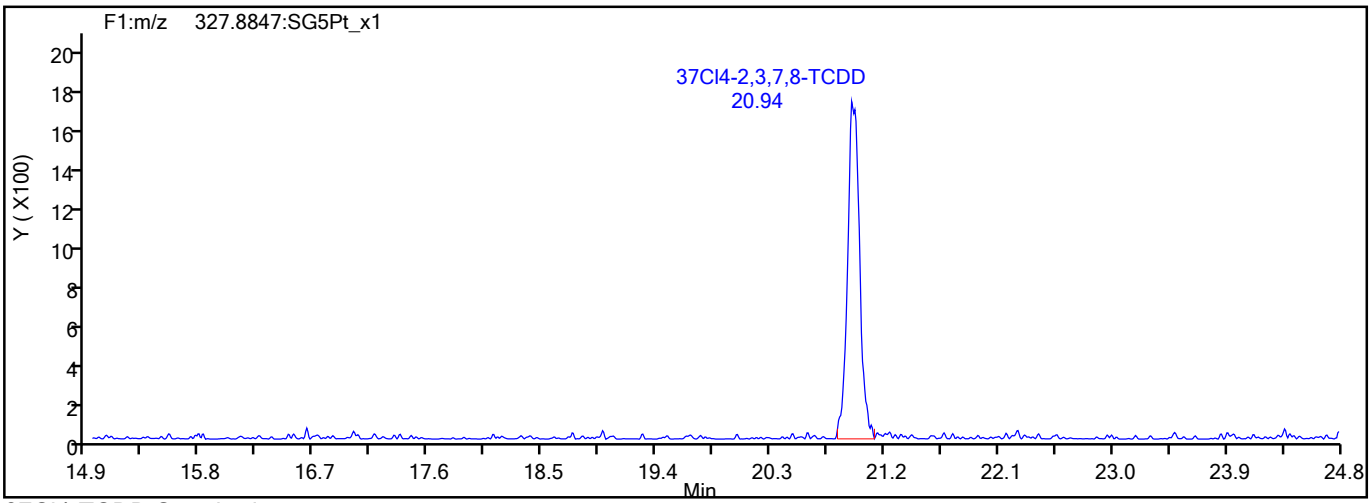

37Cl4-TCDD Standards

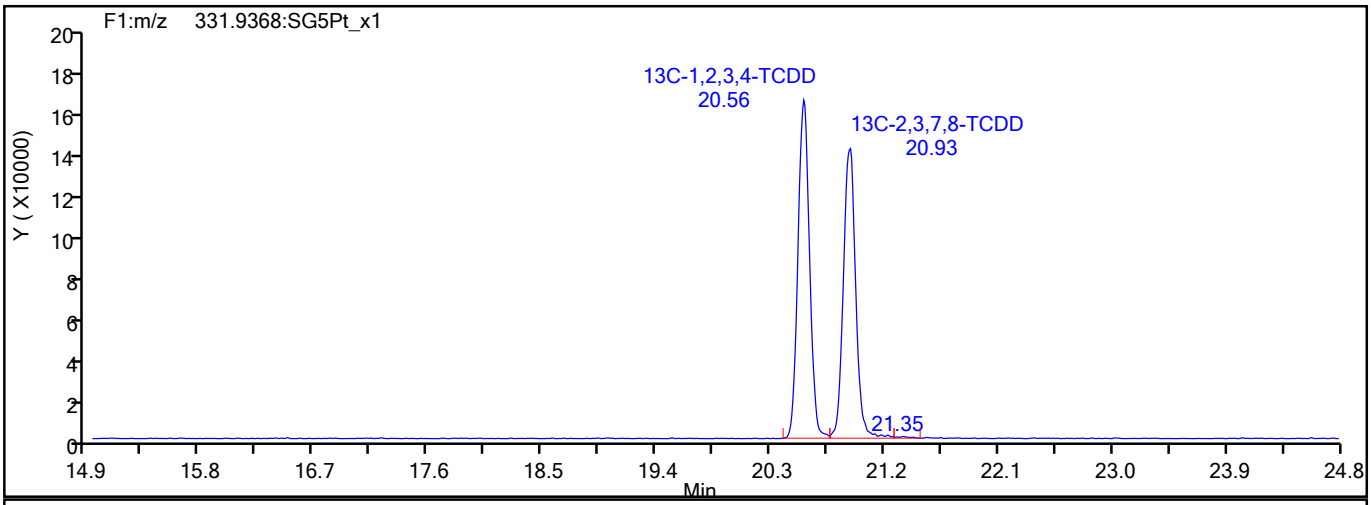

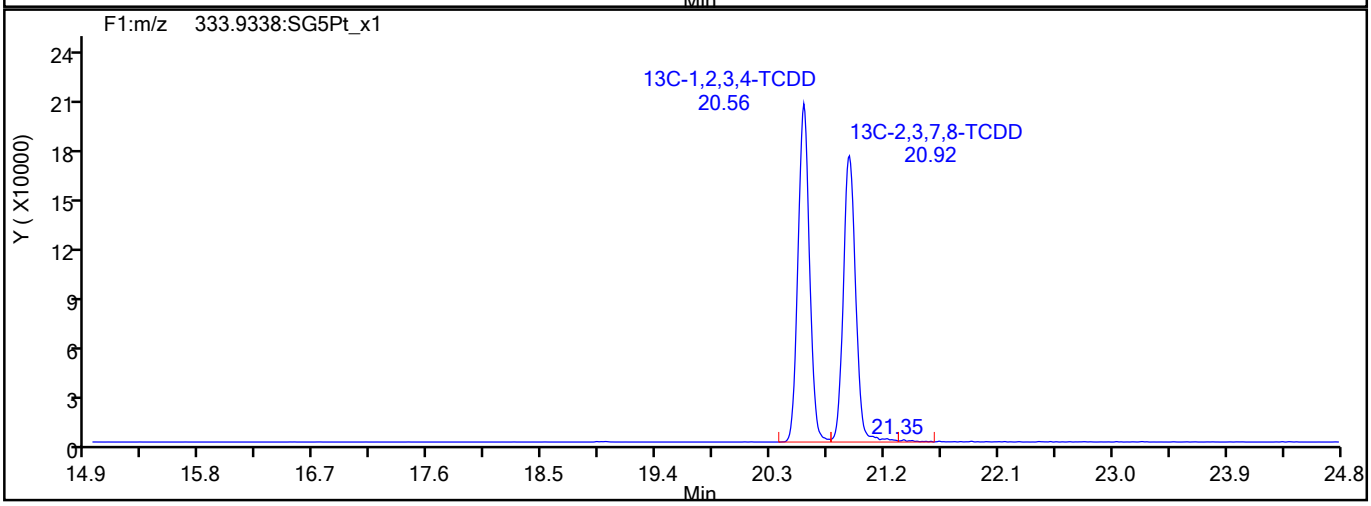

773509

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

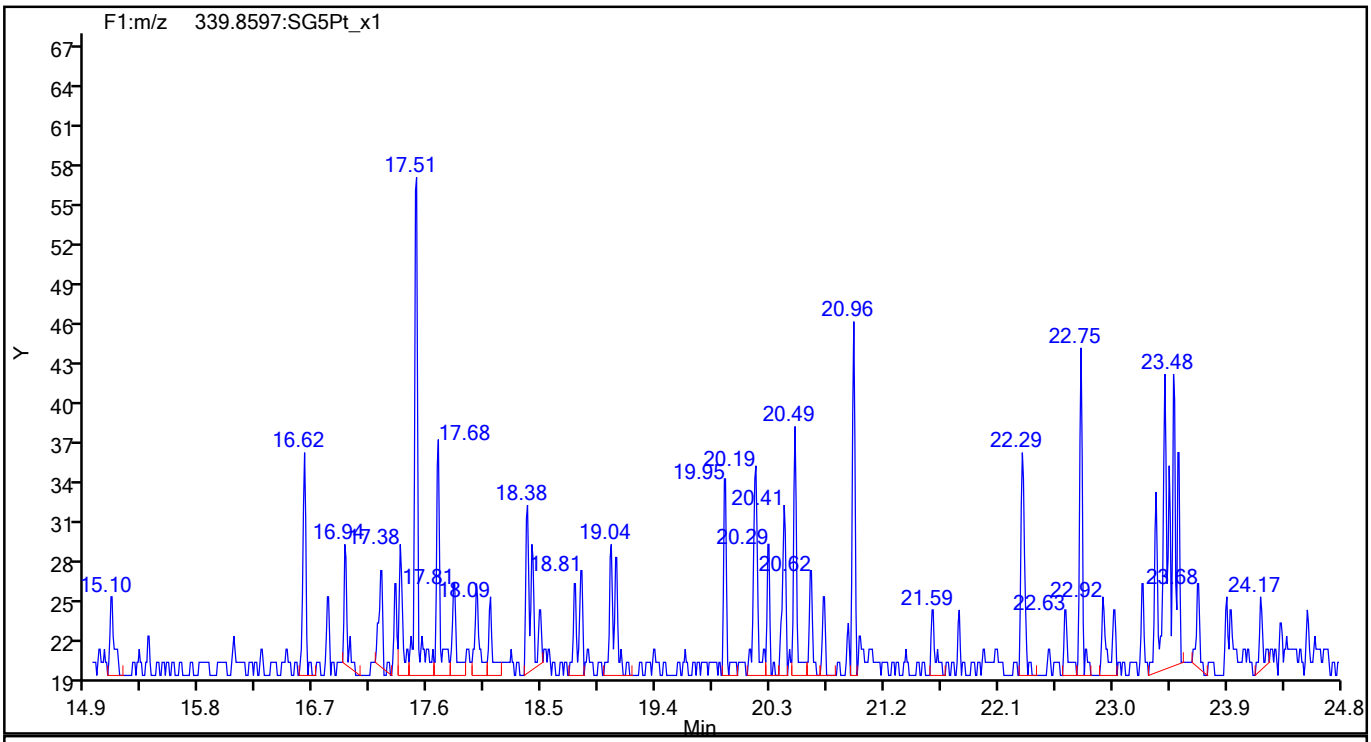

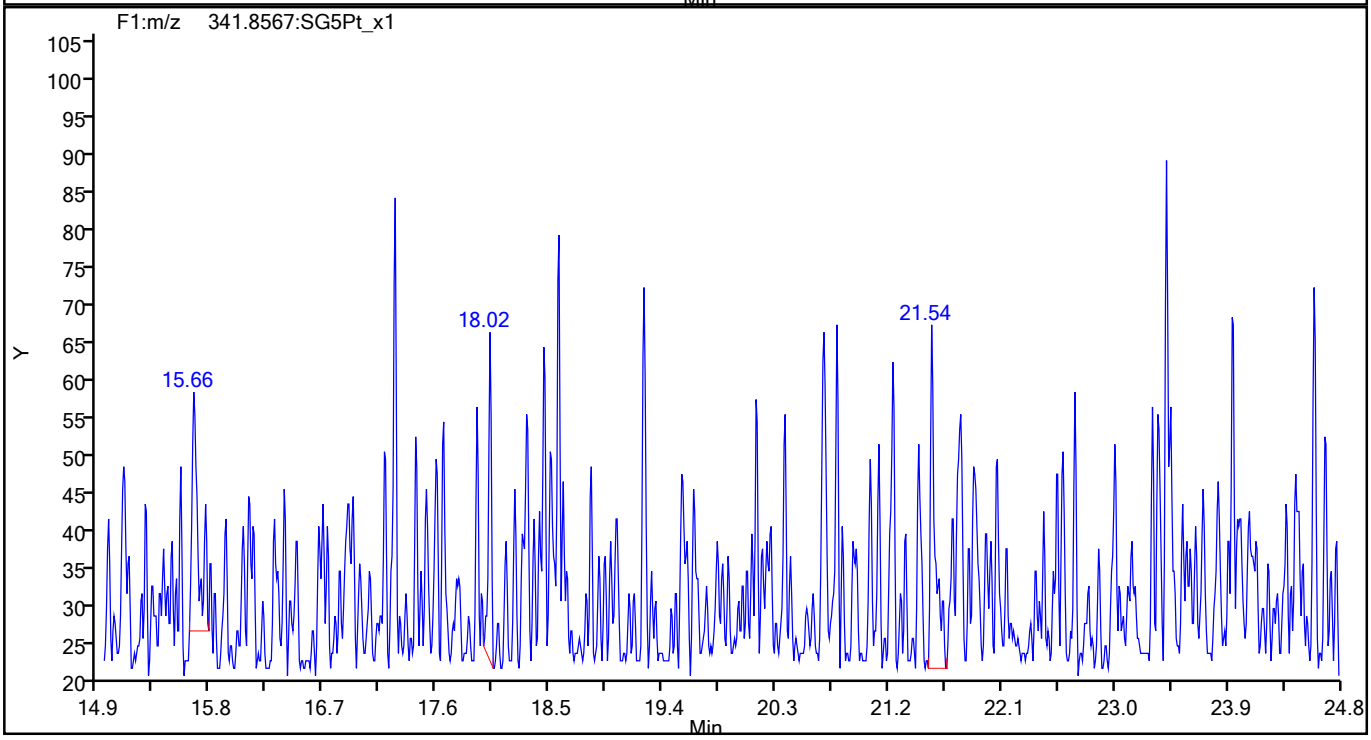

773510

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

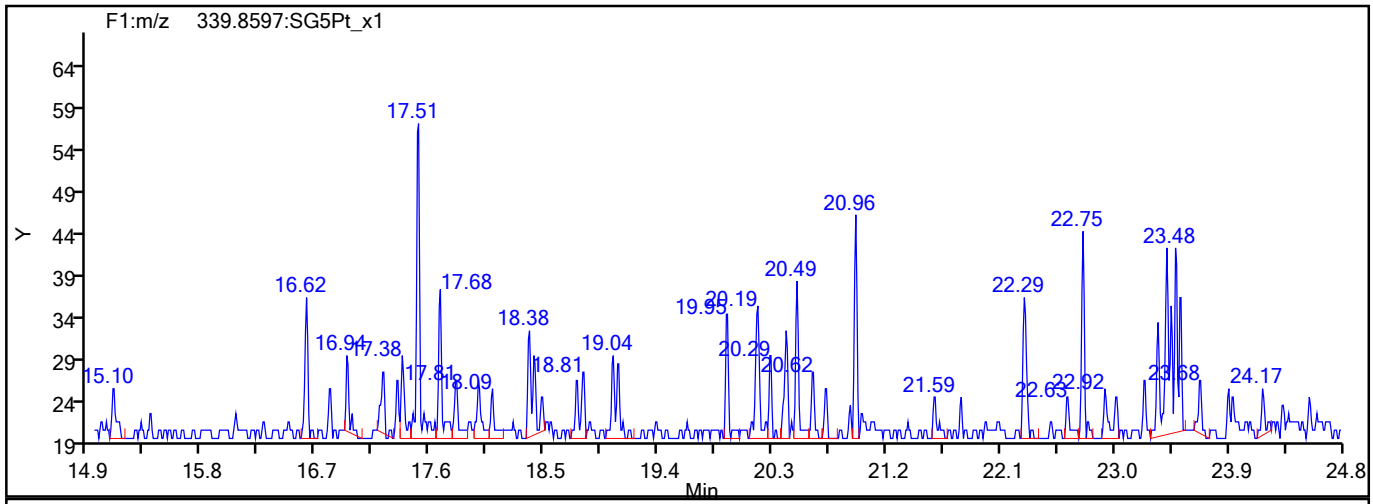

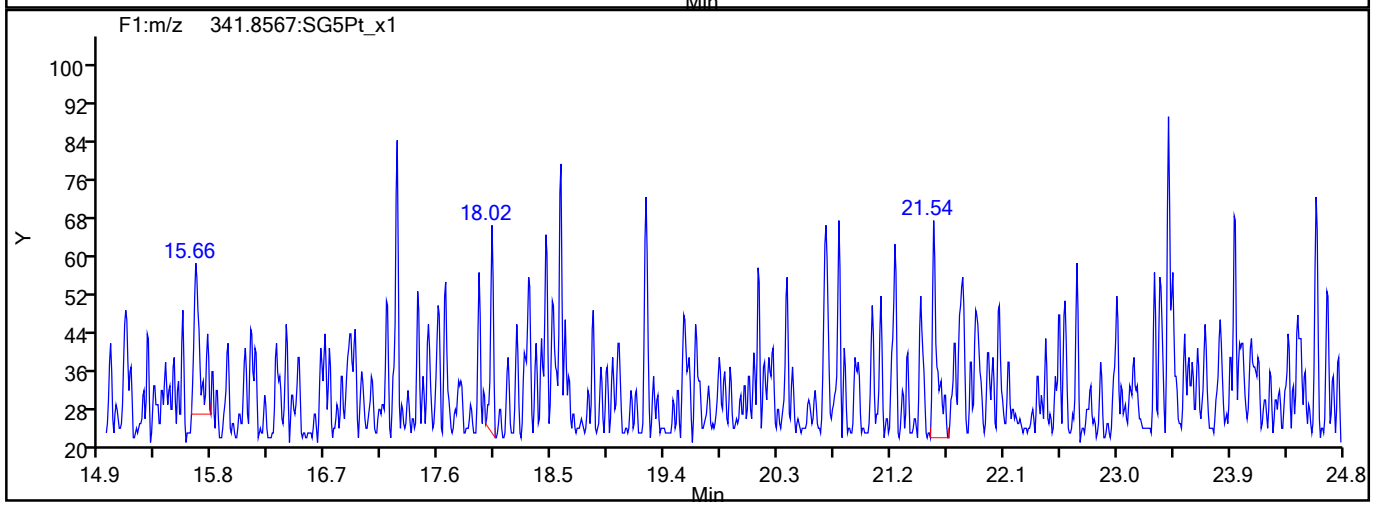

F1 PeCDFs Interference Mass

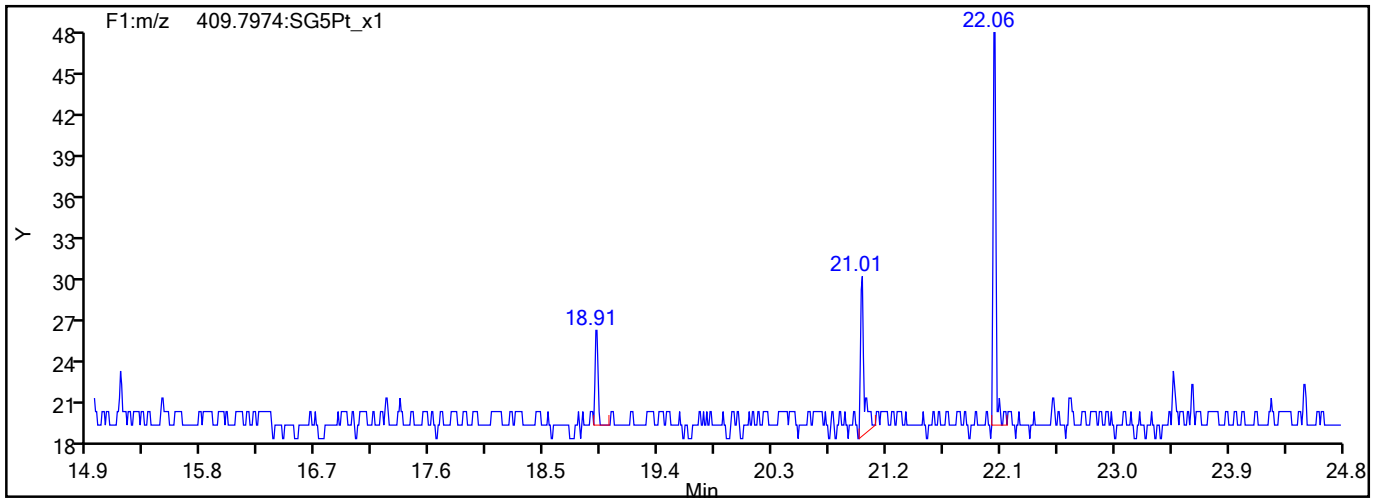

773511

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

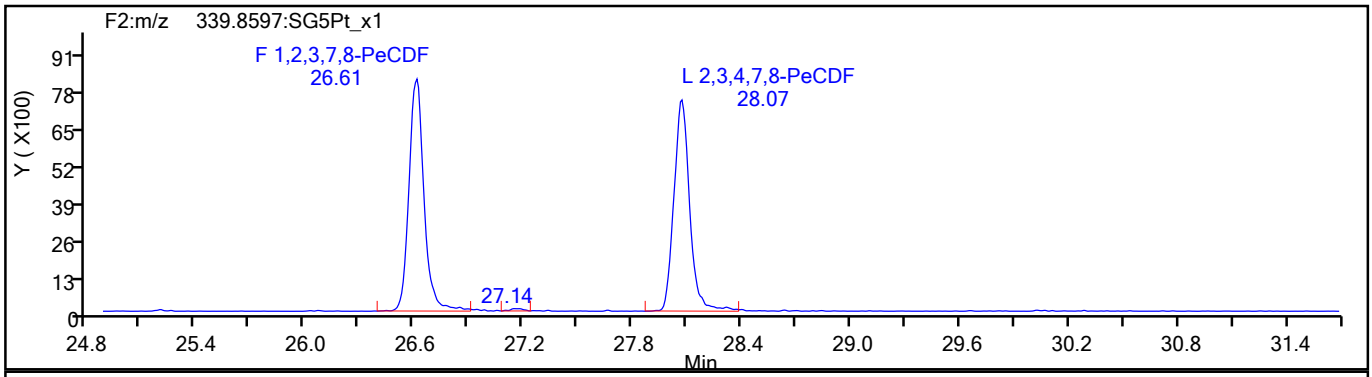

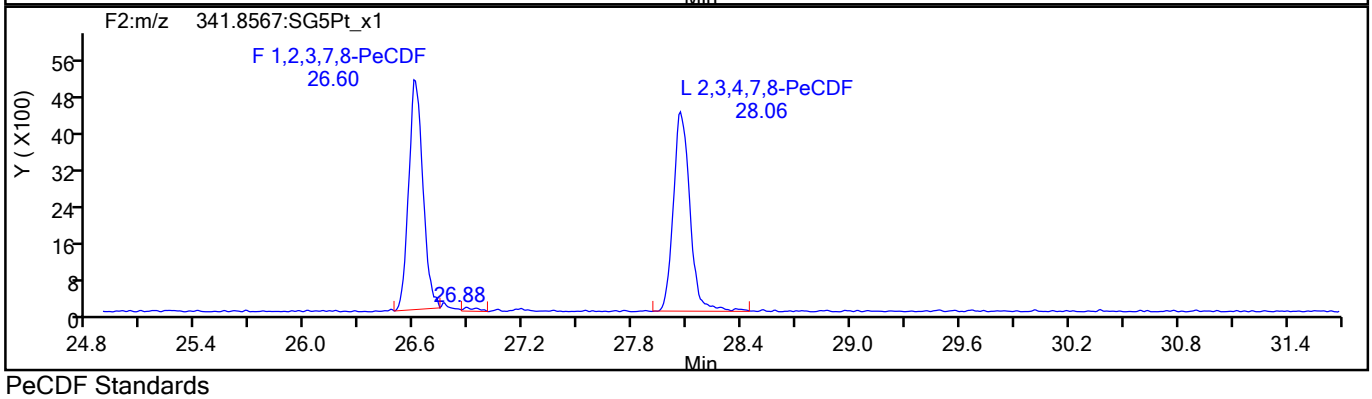

PeCDF Standards

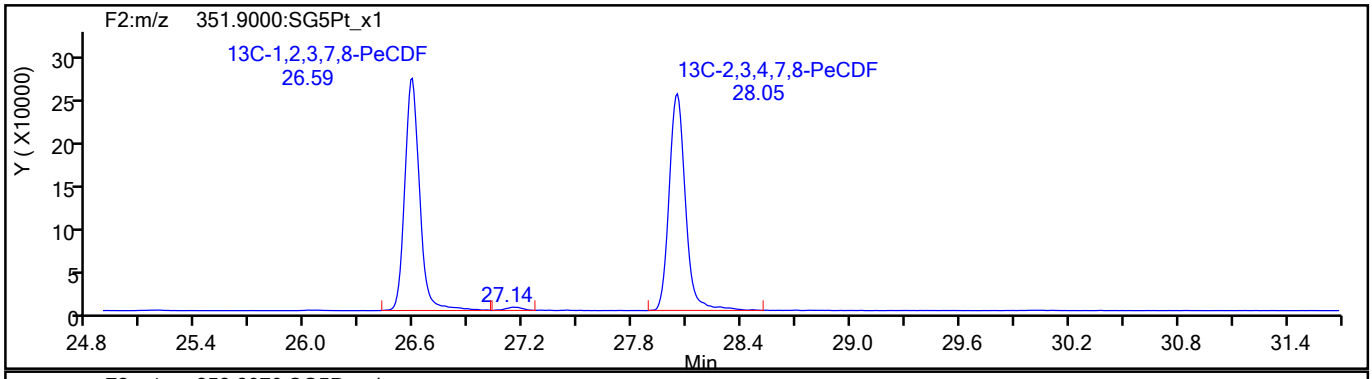

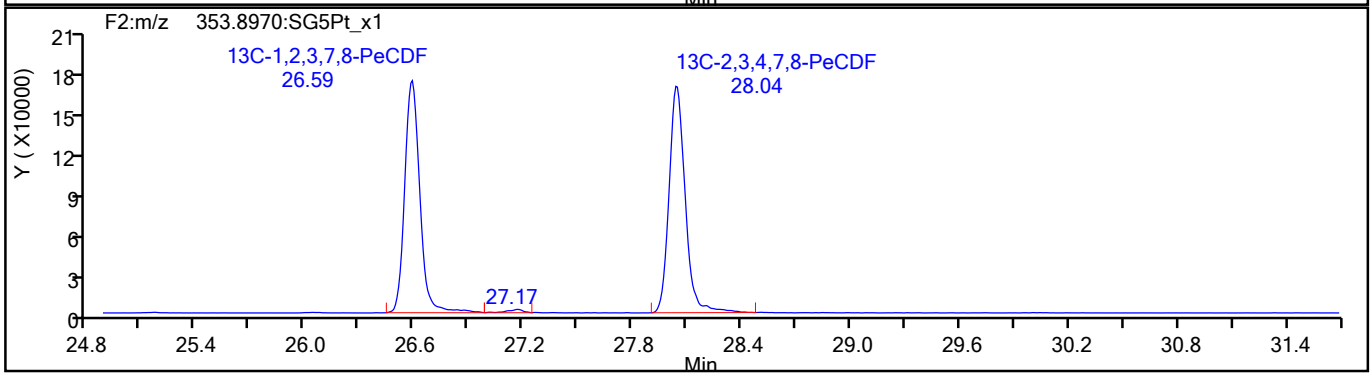

773512

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

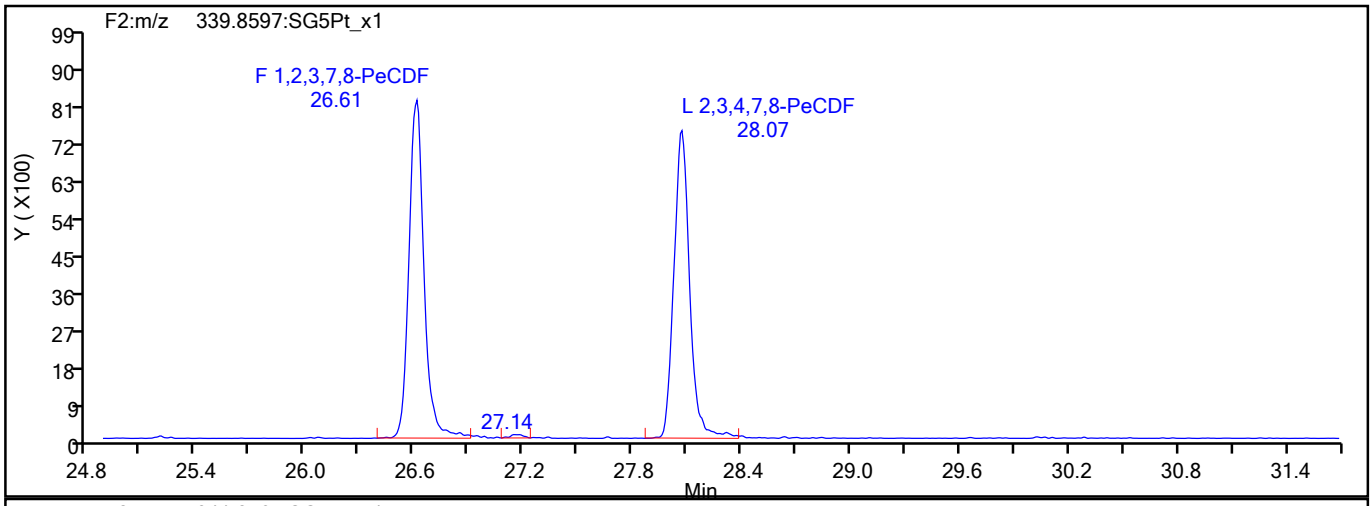

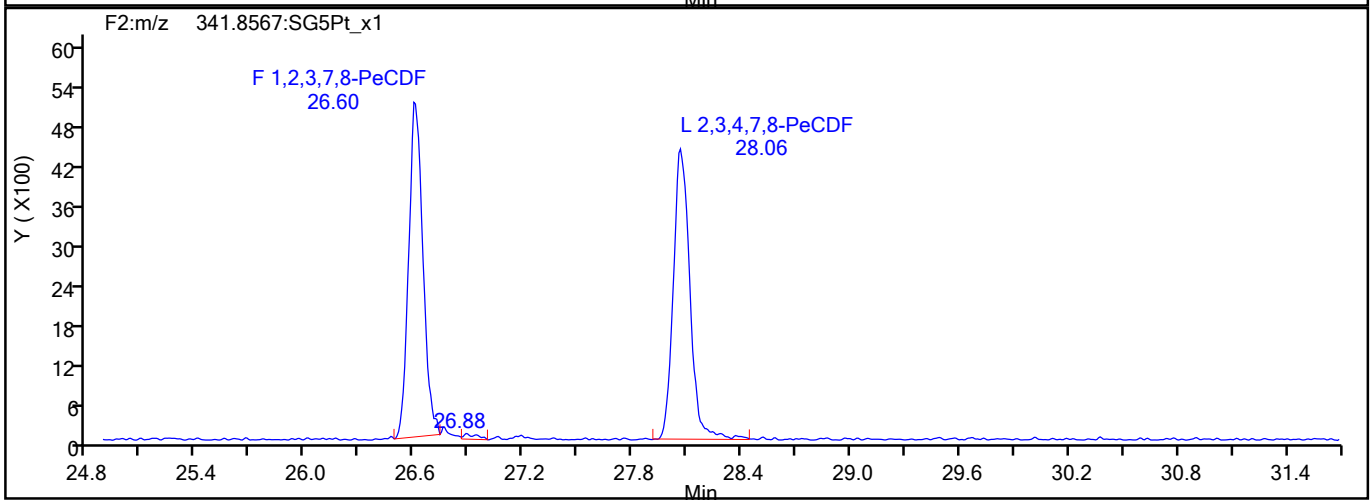

PeCDF Interference Mass

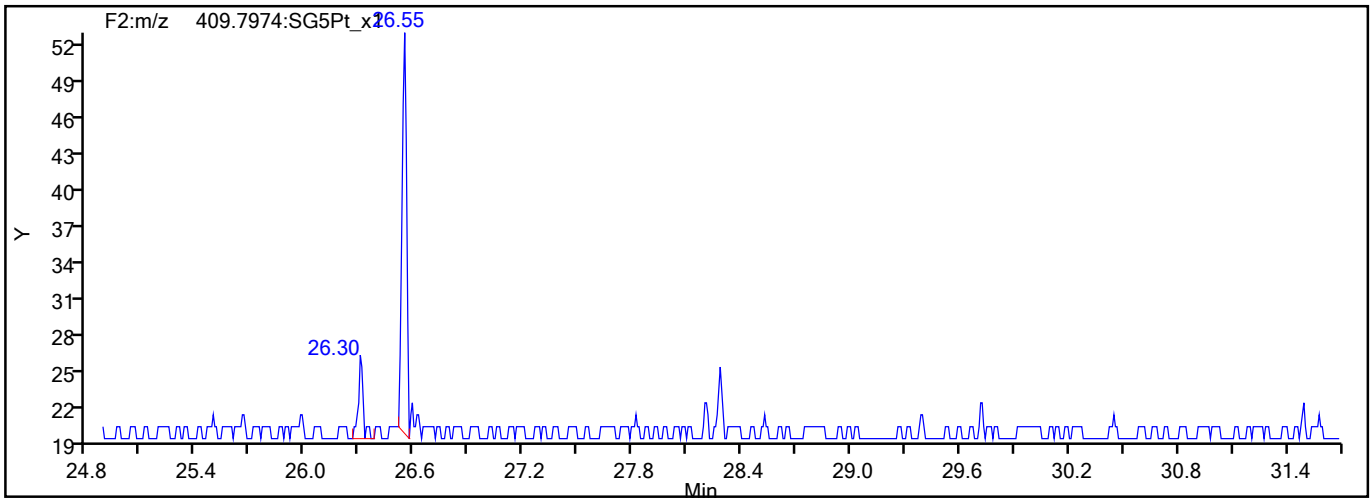

773513

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

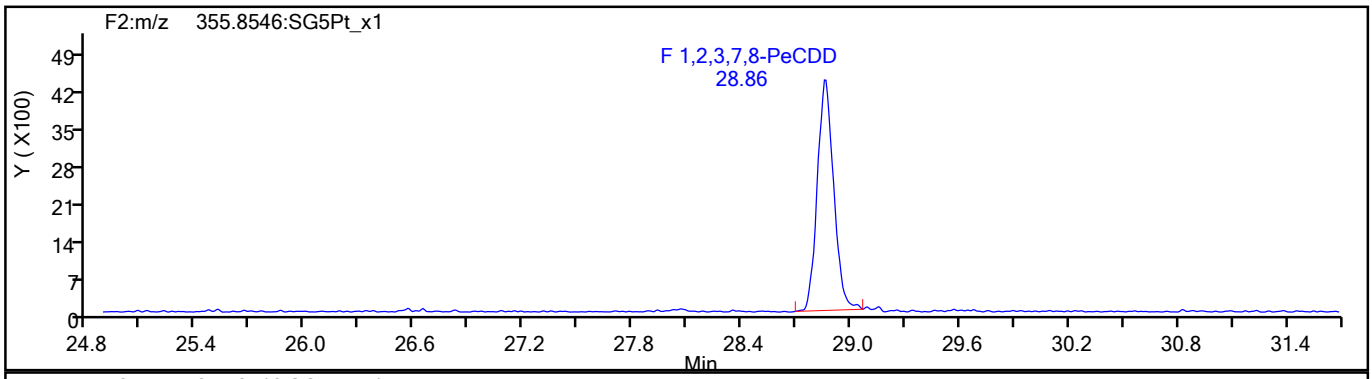

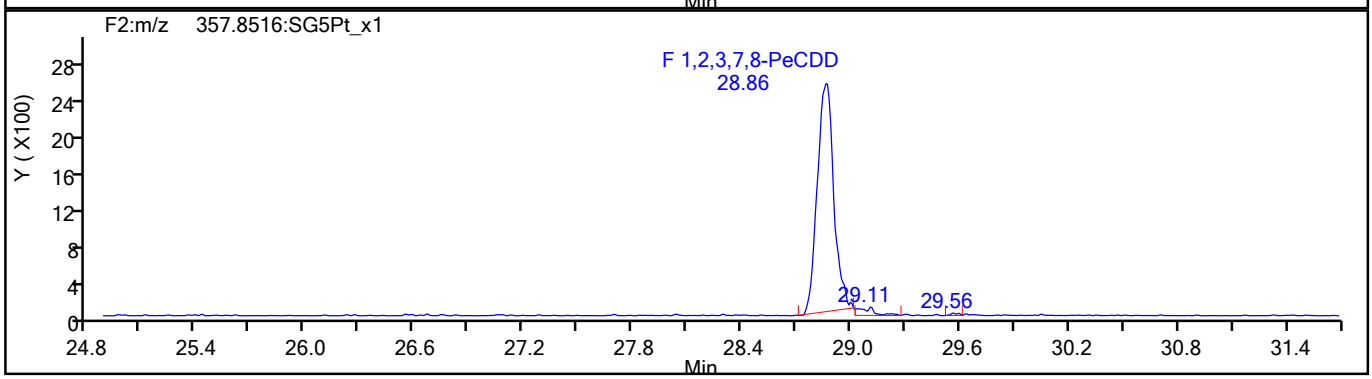

PeCDD Standards

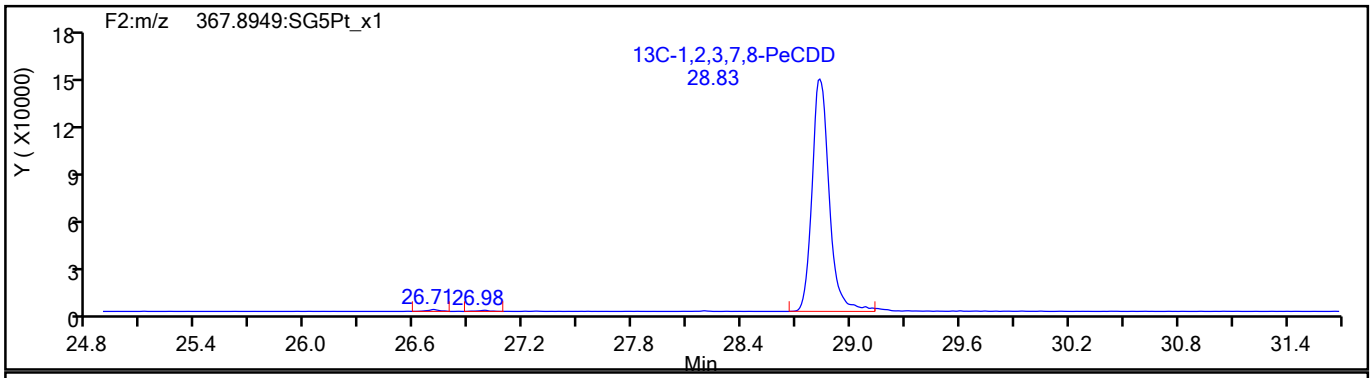

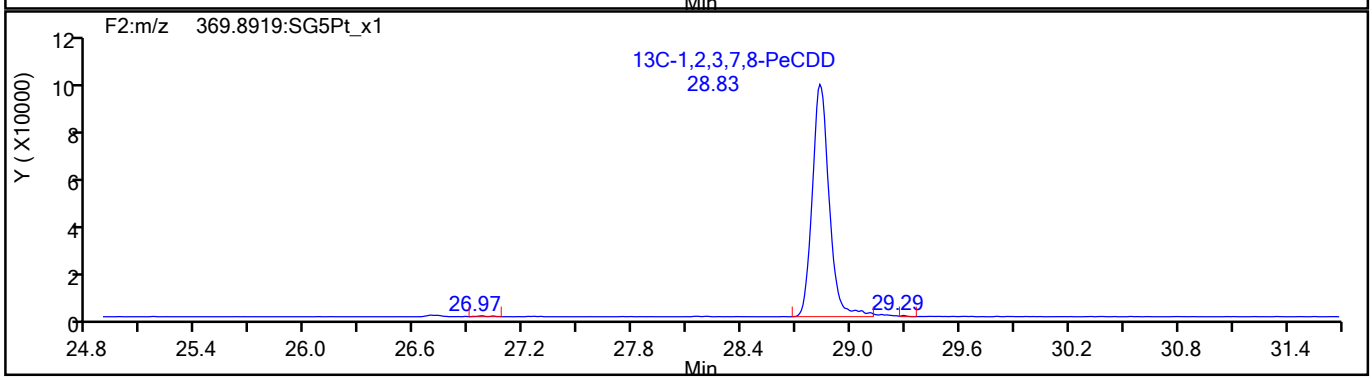

773514

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

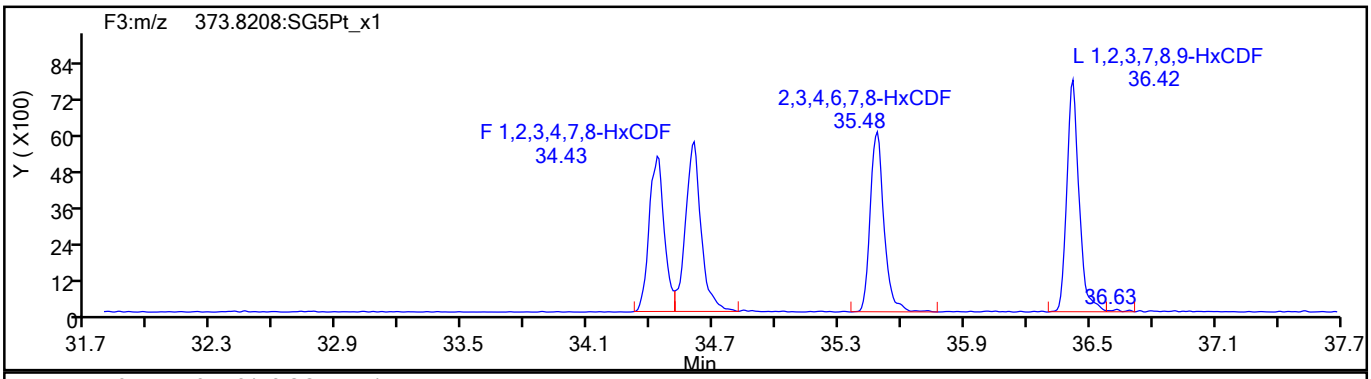

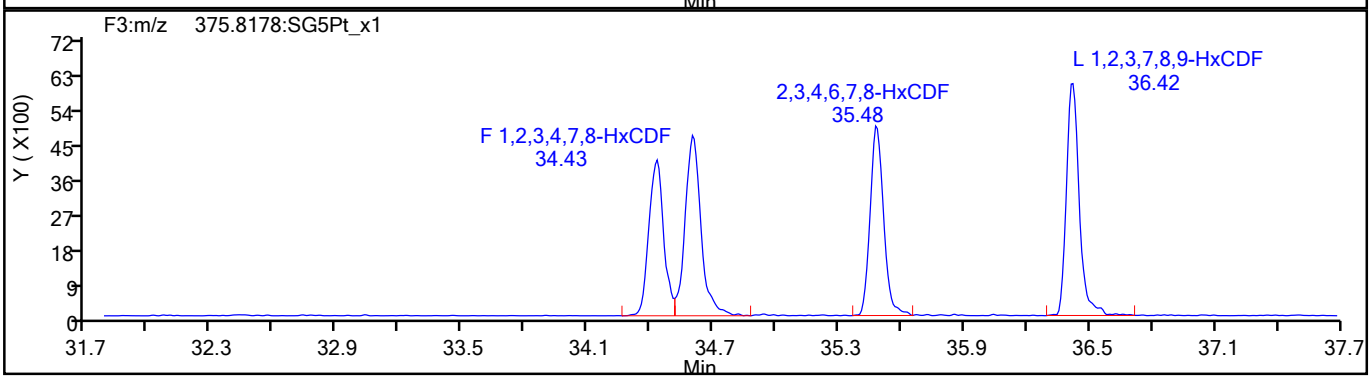

HxCDF Standards

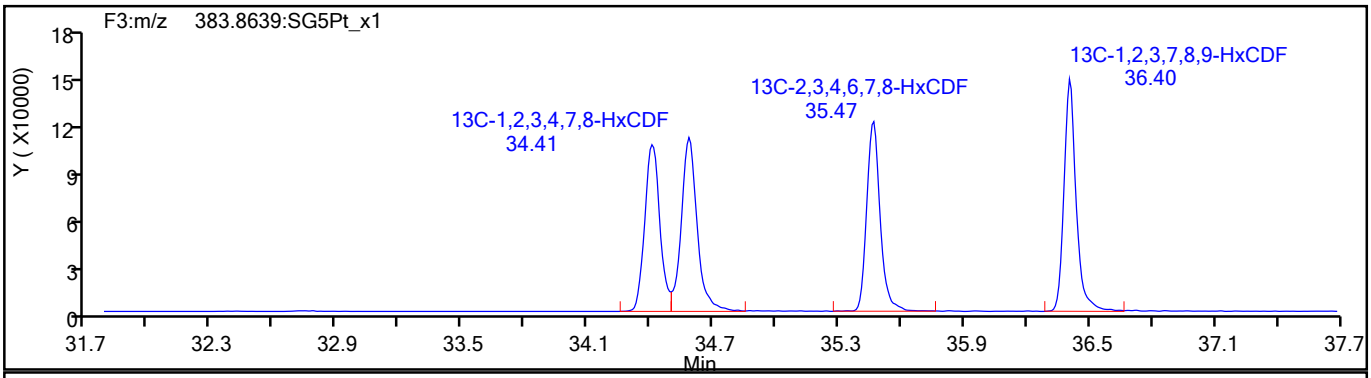

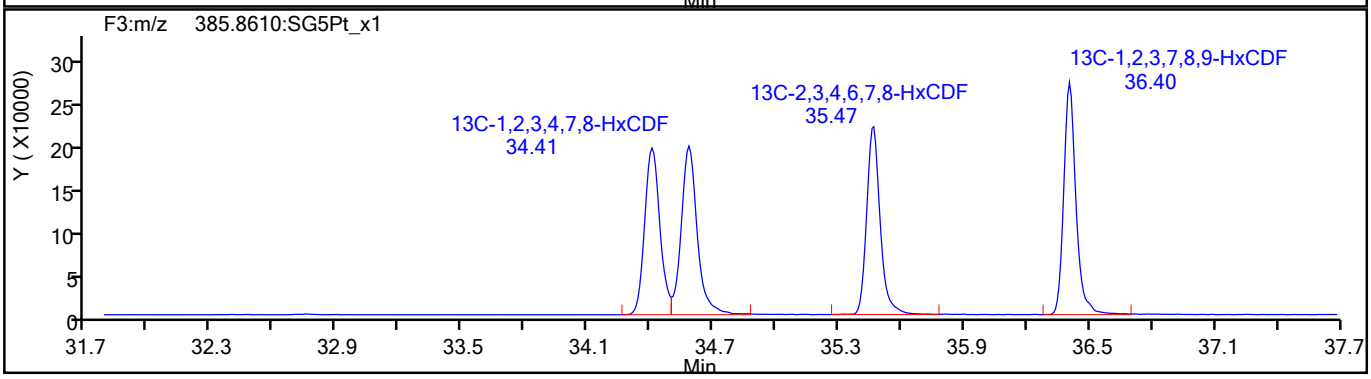

773515

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

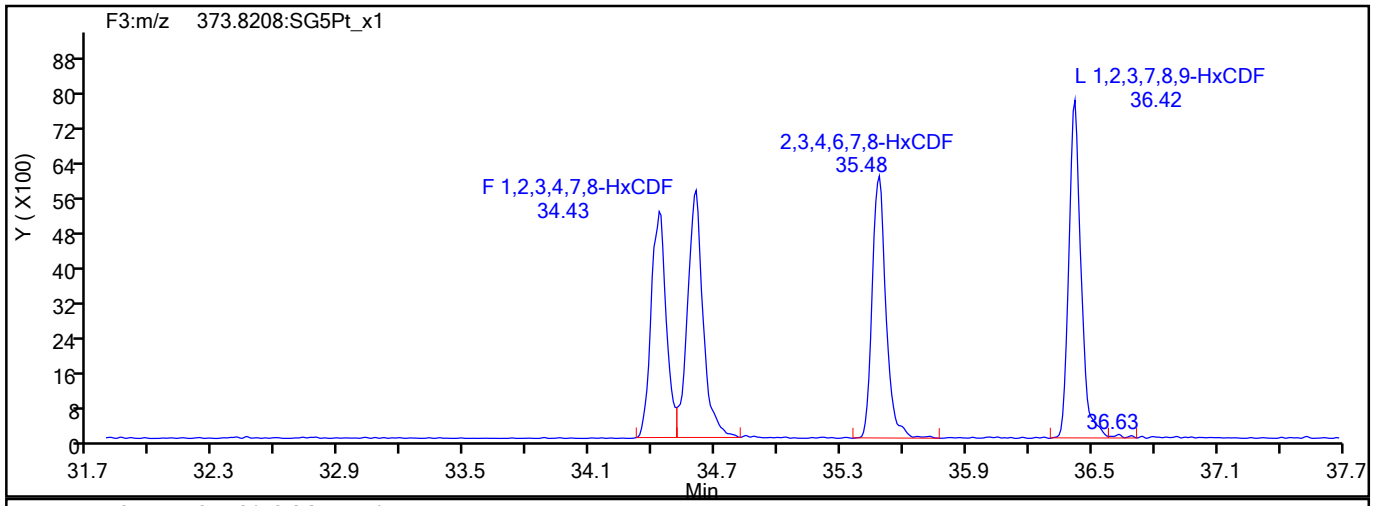

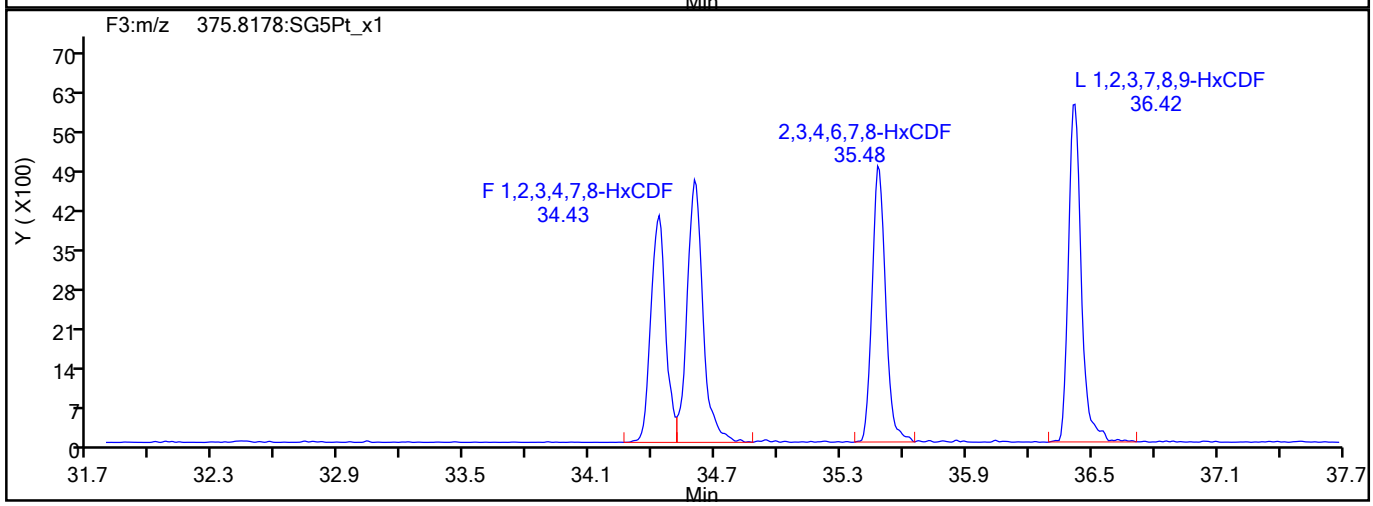

HxCDF Interference Mass

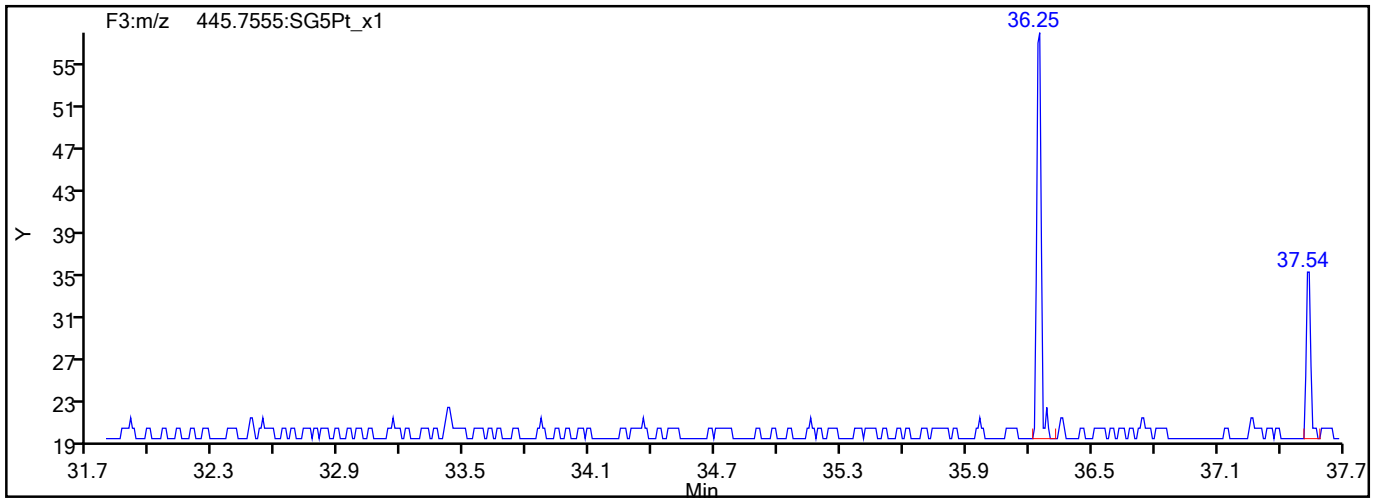

773516

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

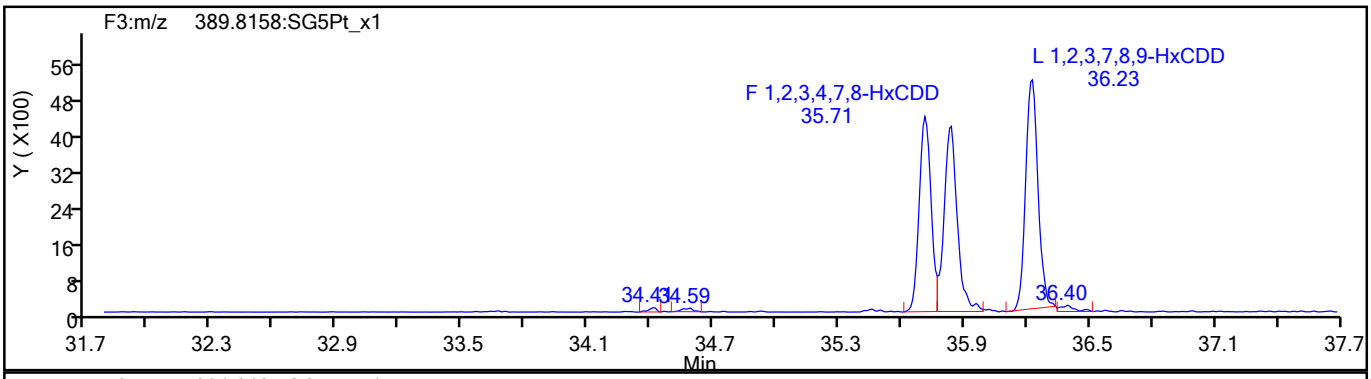

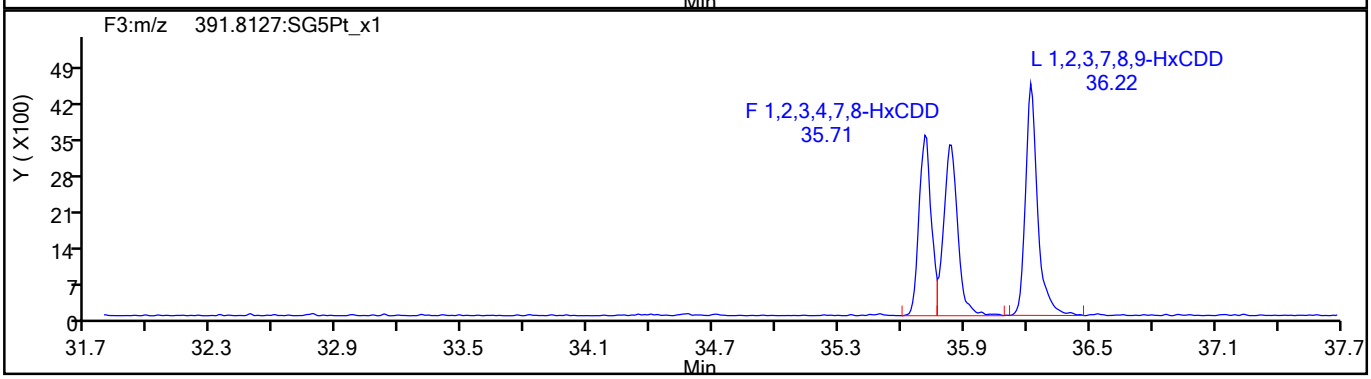

HxCDD Standards

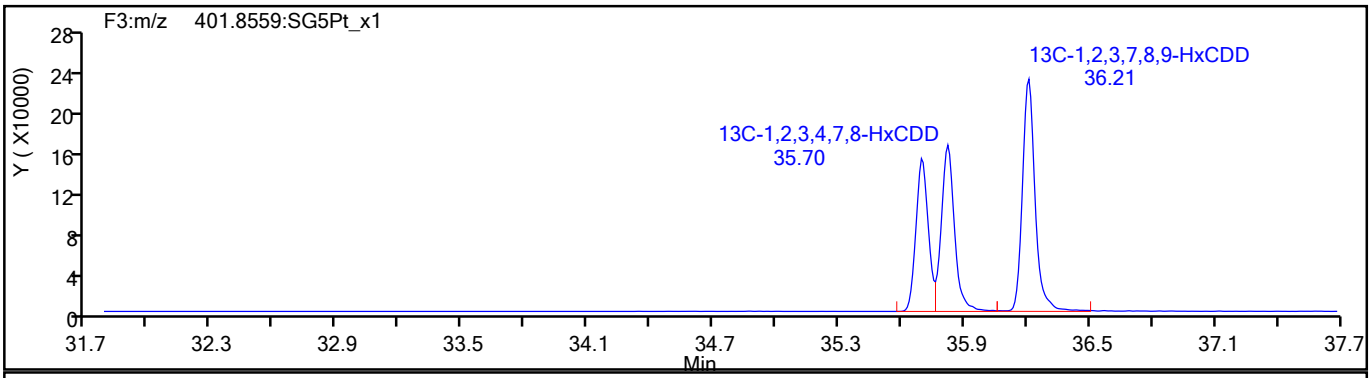

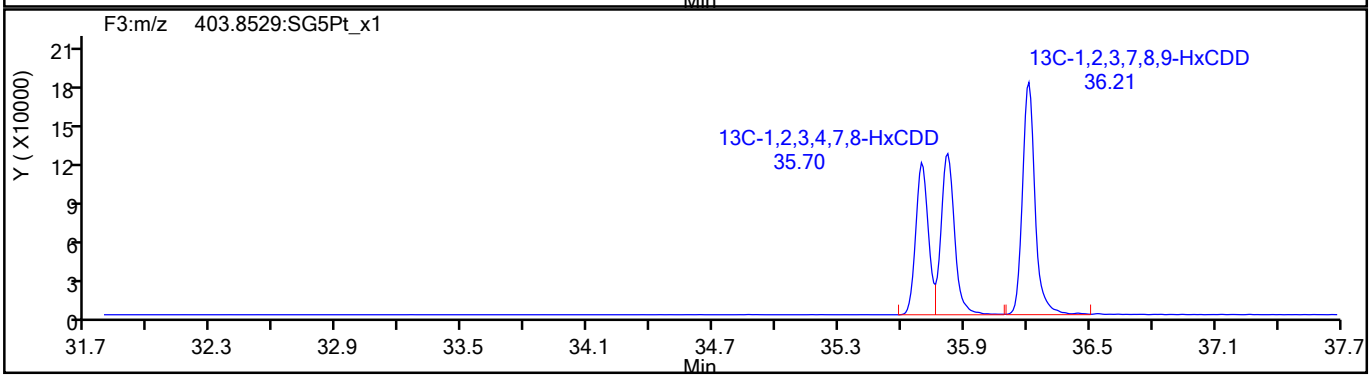

773517

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

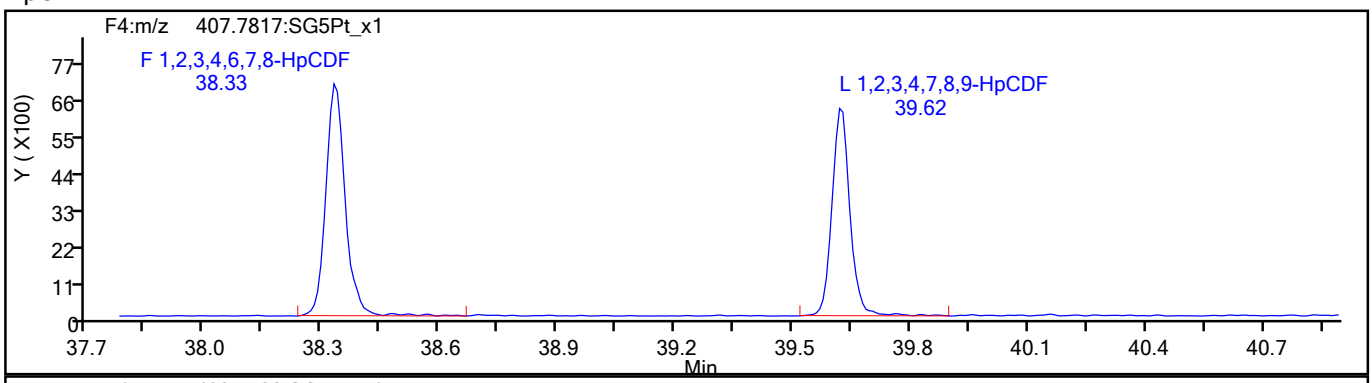

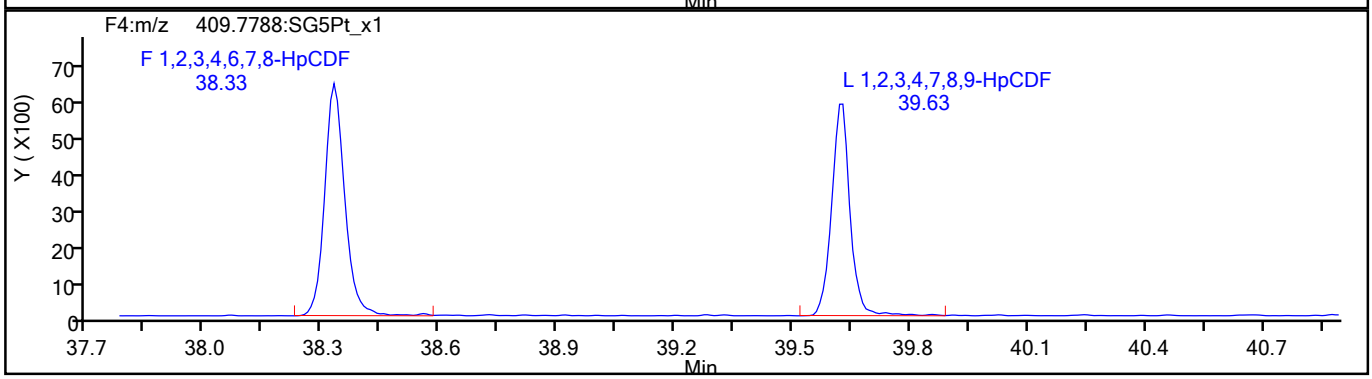

HpCDF Standards

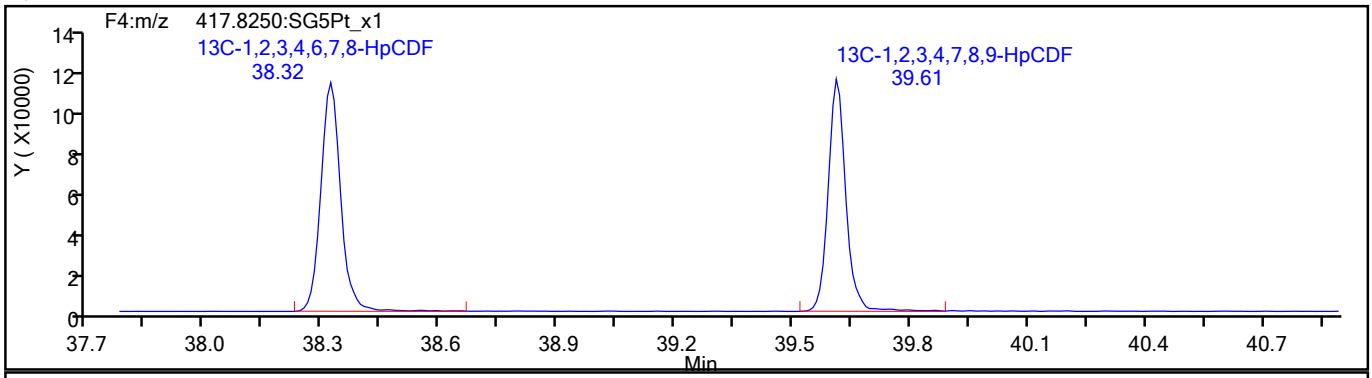

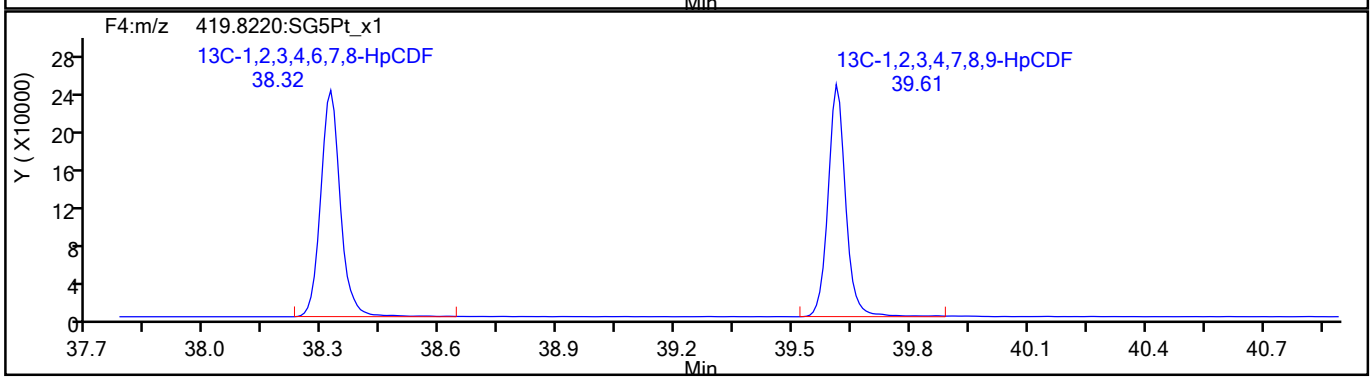

773518

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

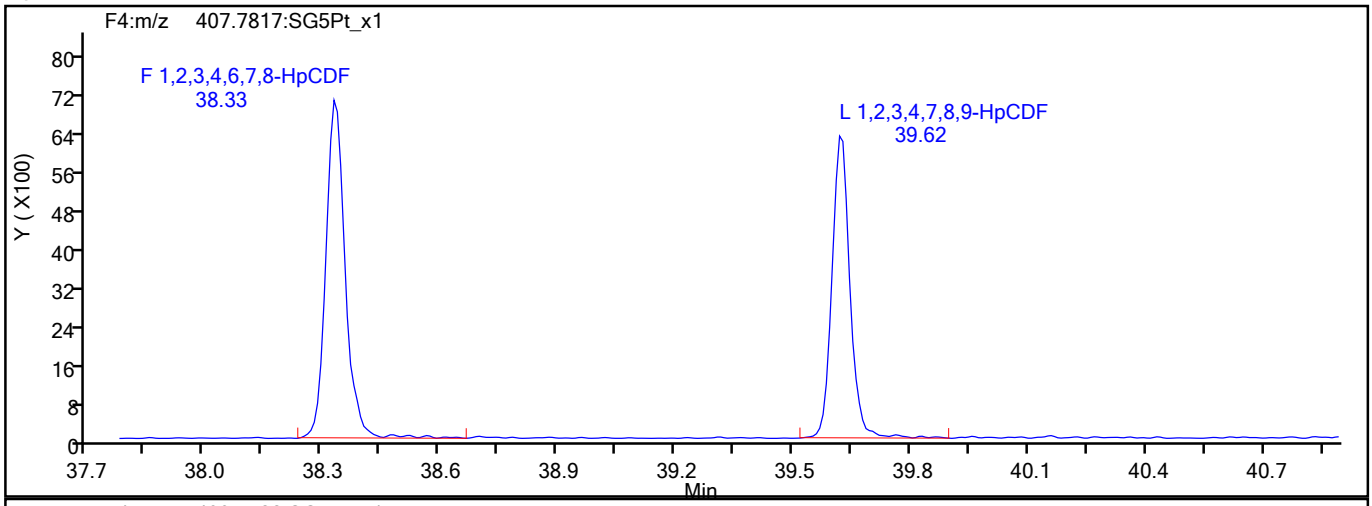

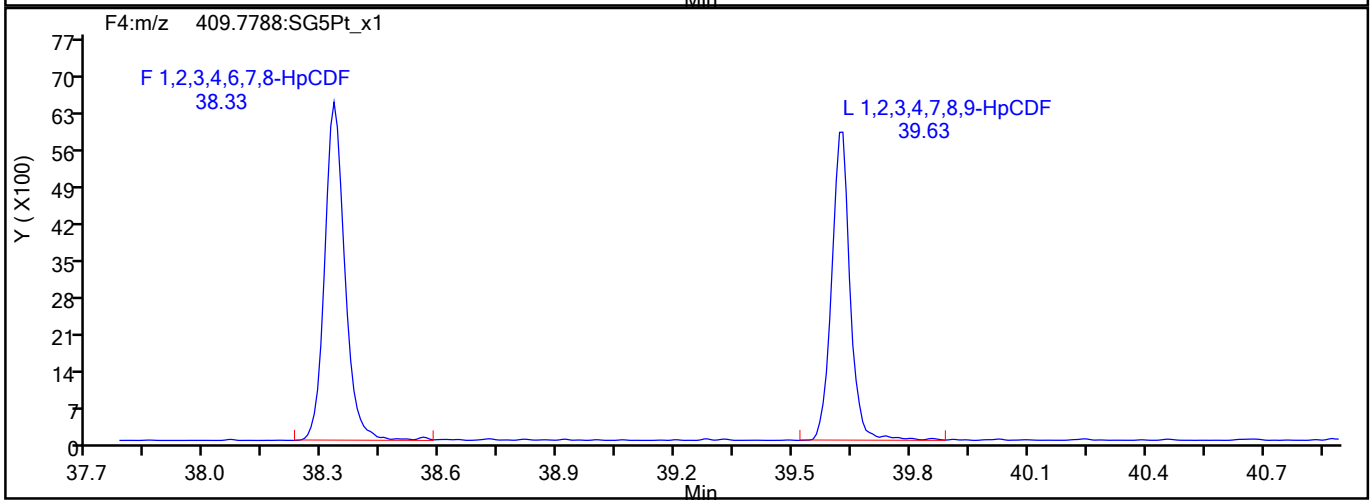

HpCDF Interference Mass

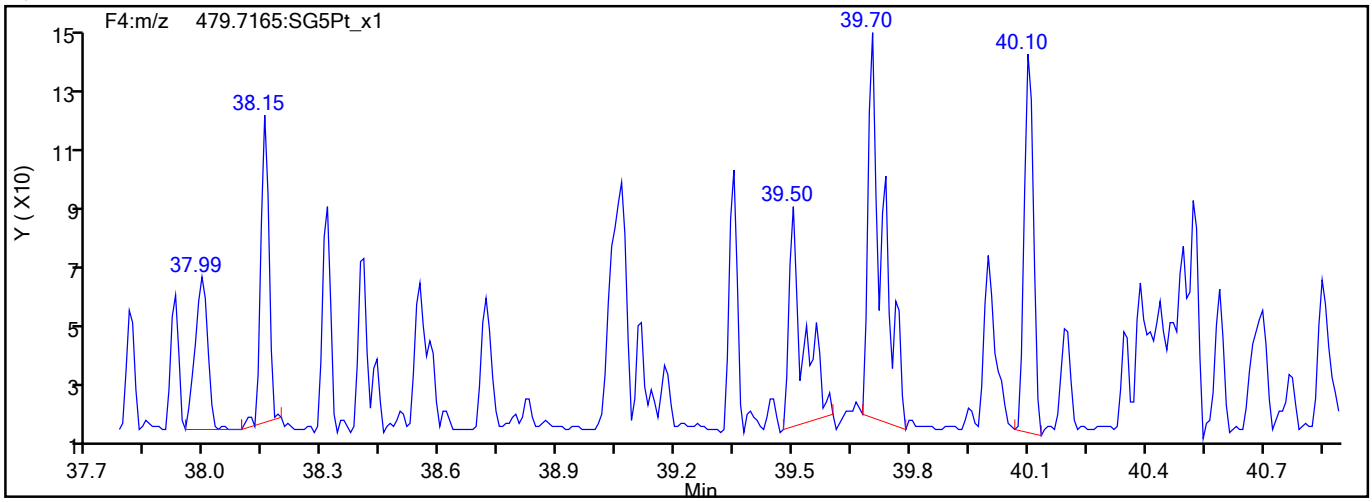

773519

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

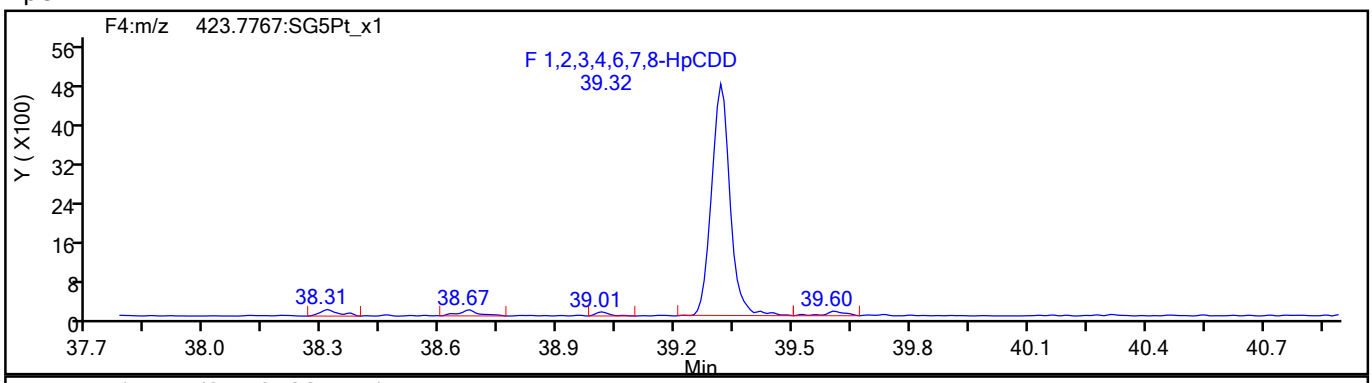

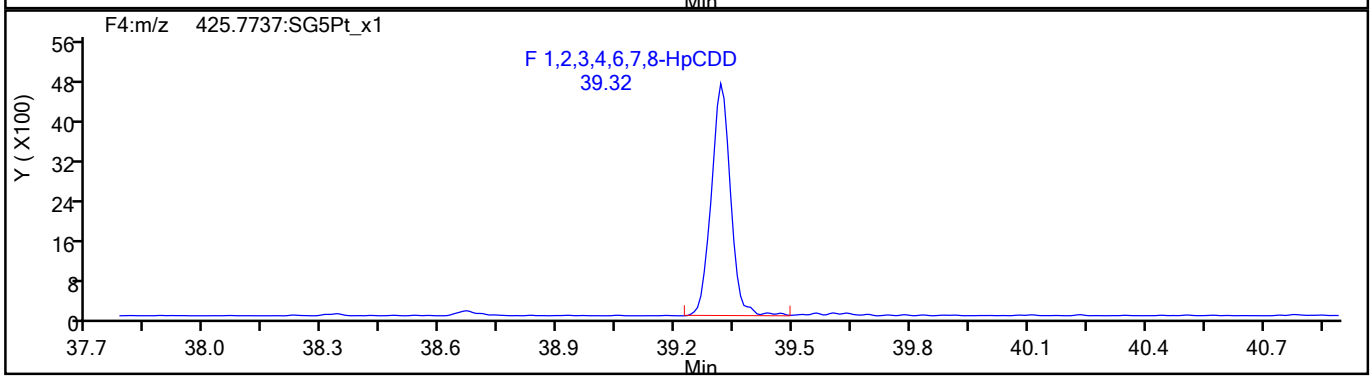

HpCDD Standards

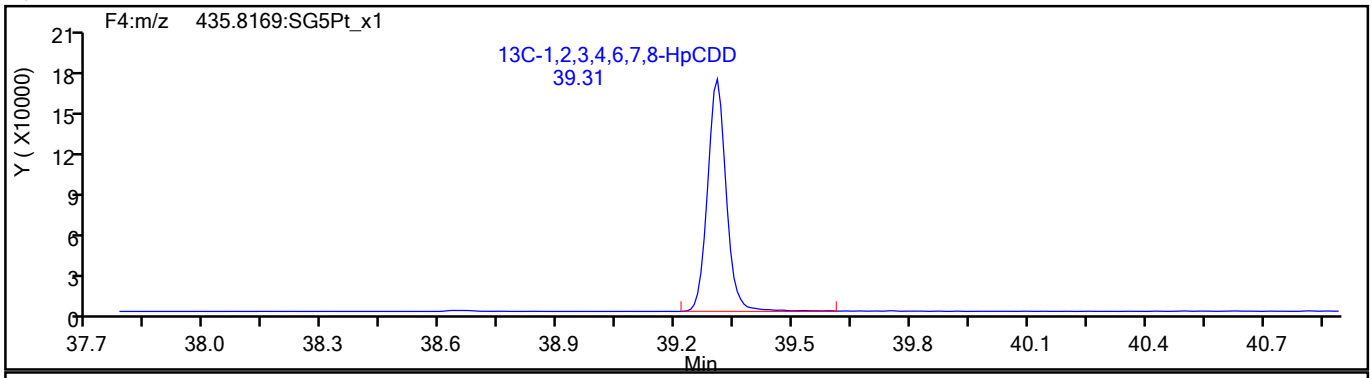

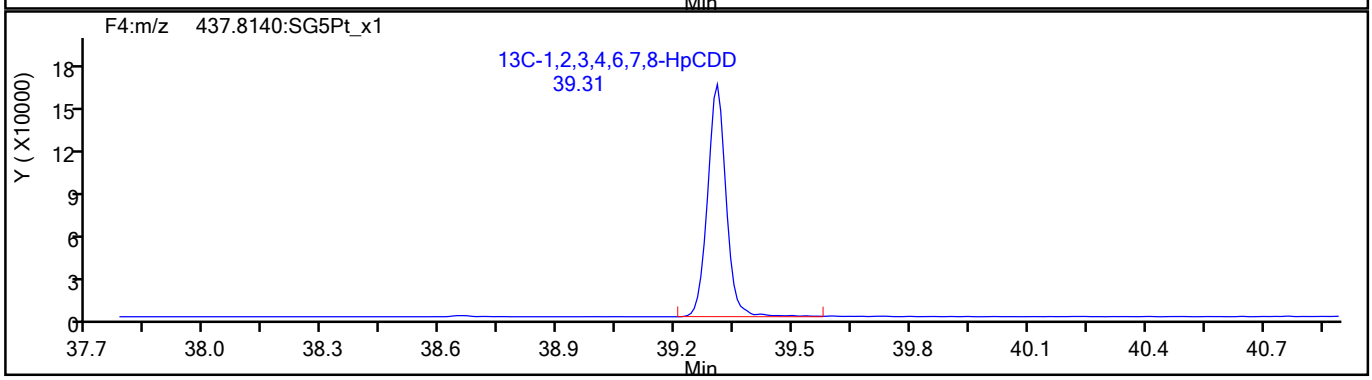

773520

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

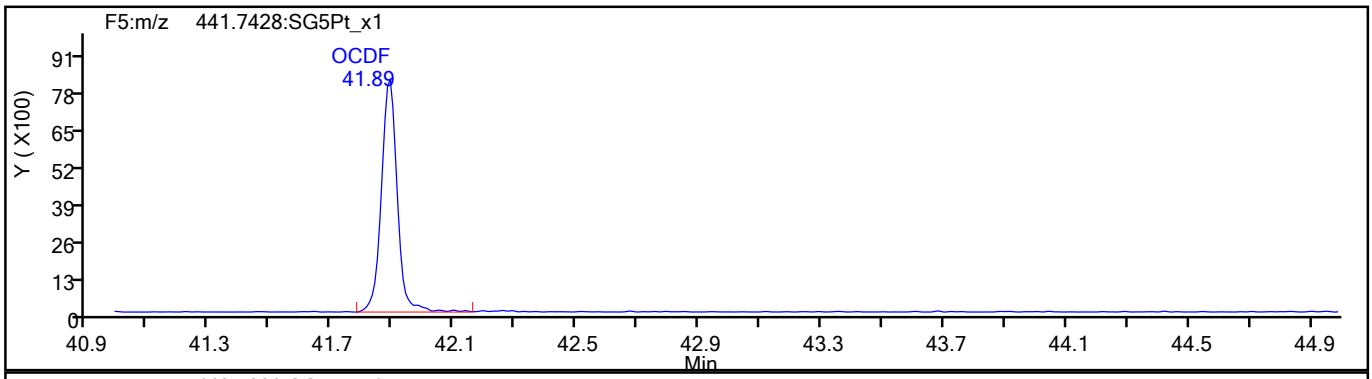

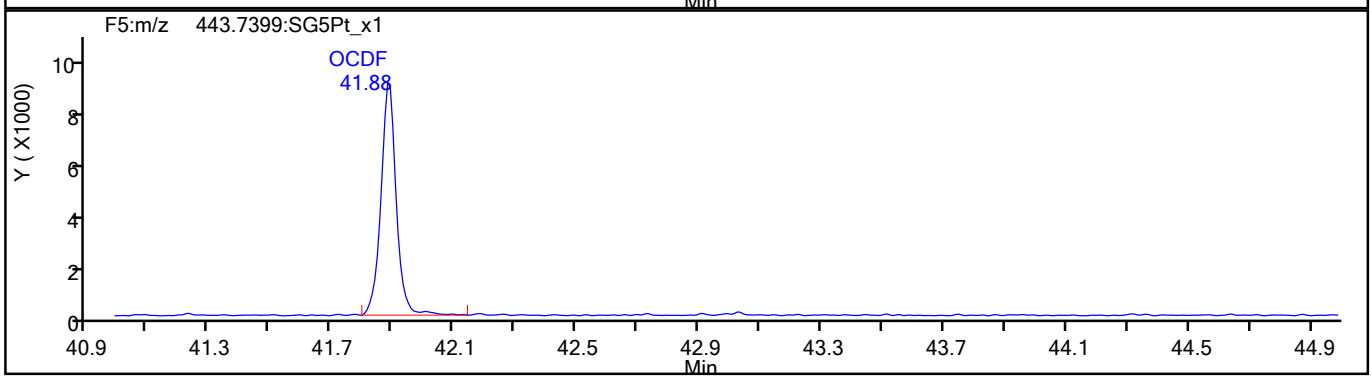

OCDF Standards

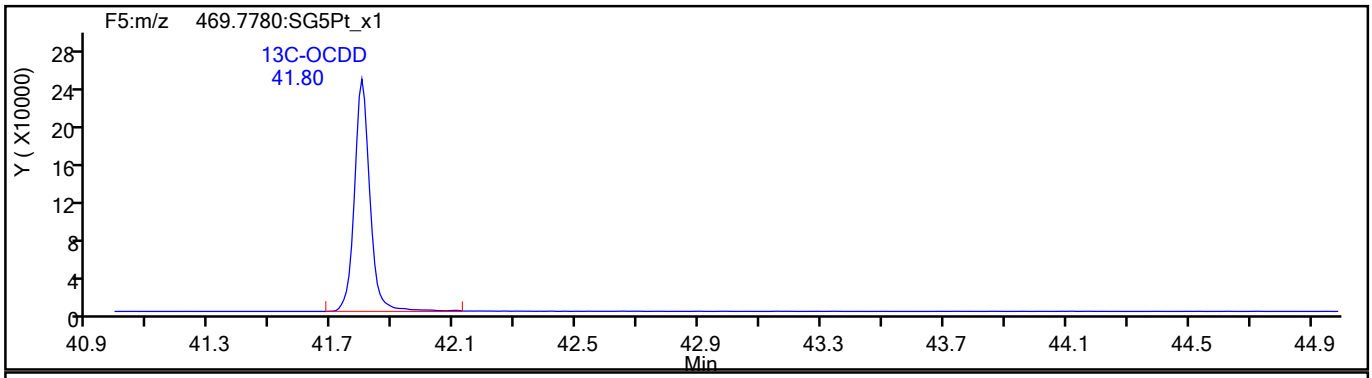

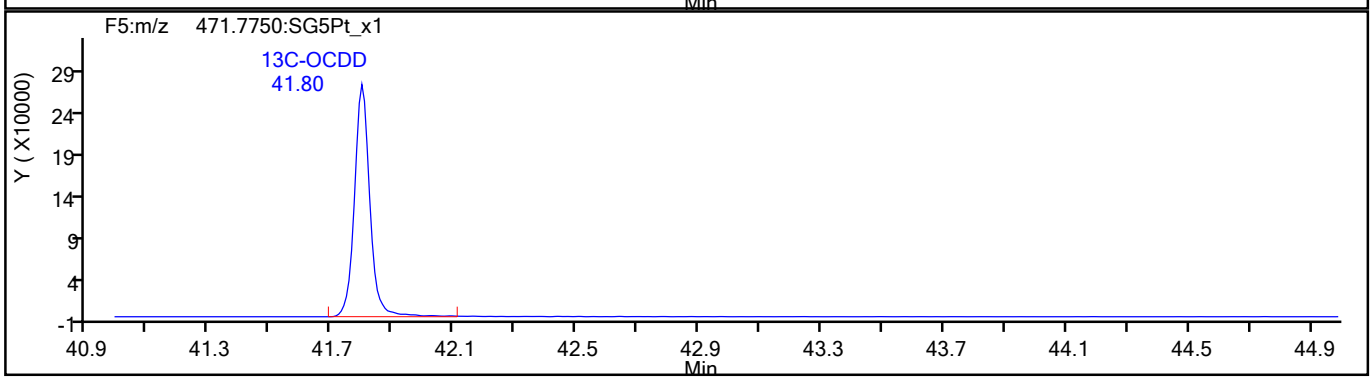

773521

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

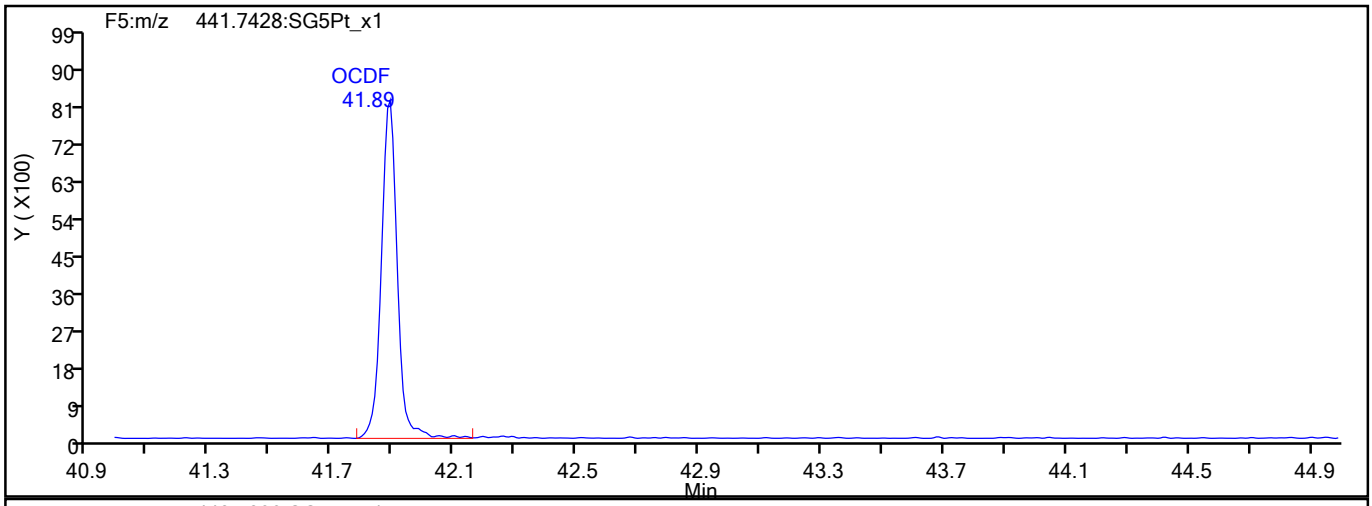

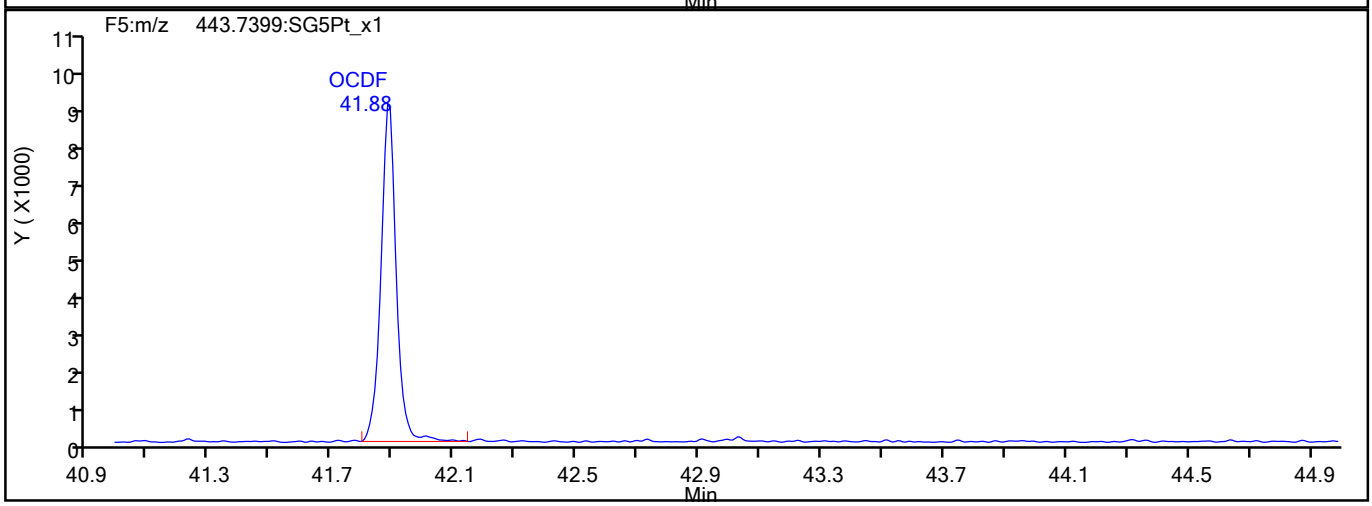

OCDF Interference Mass

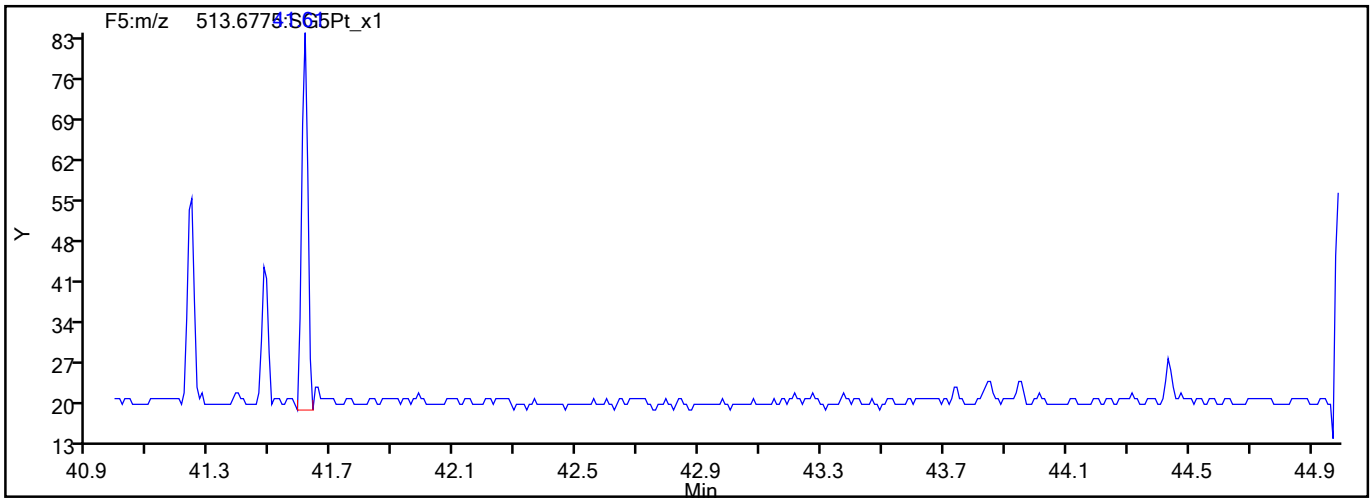

773522

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

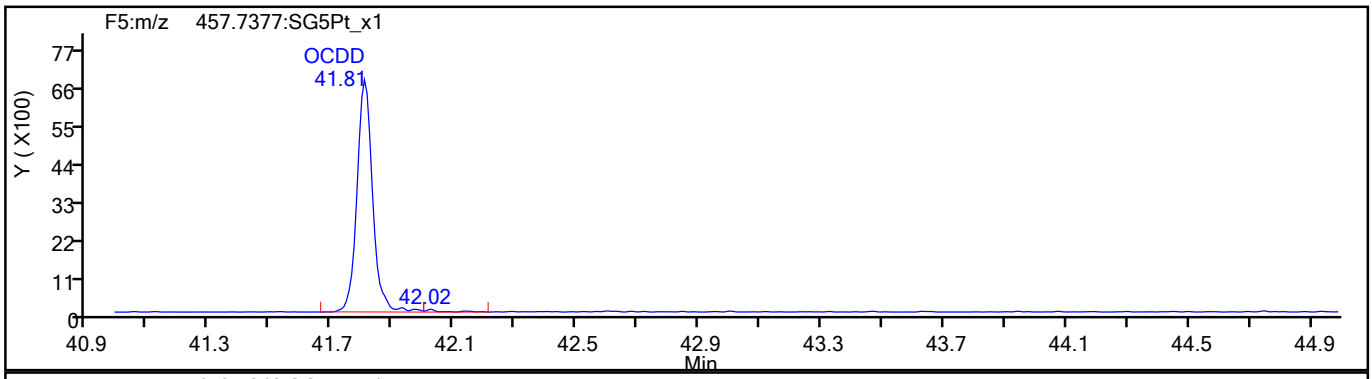

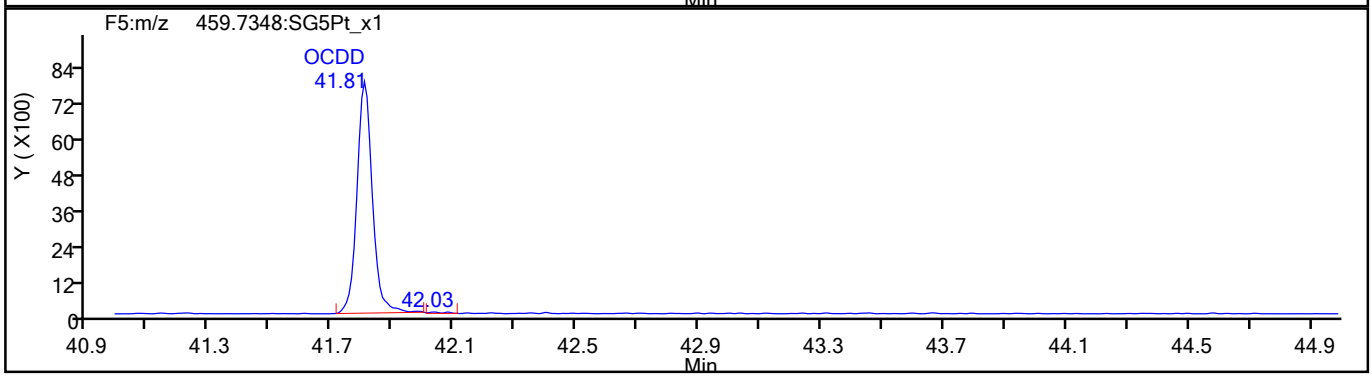

OCDD Standards

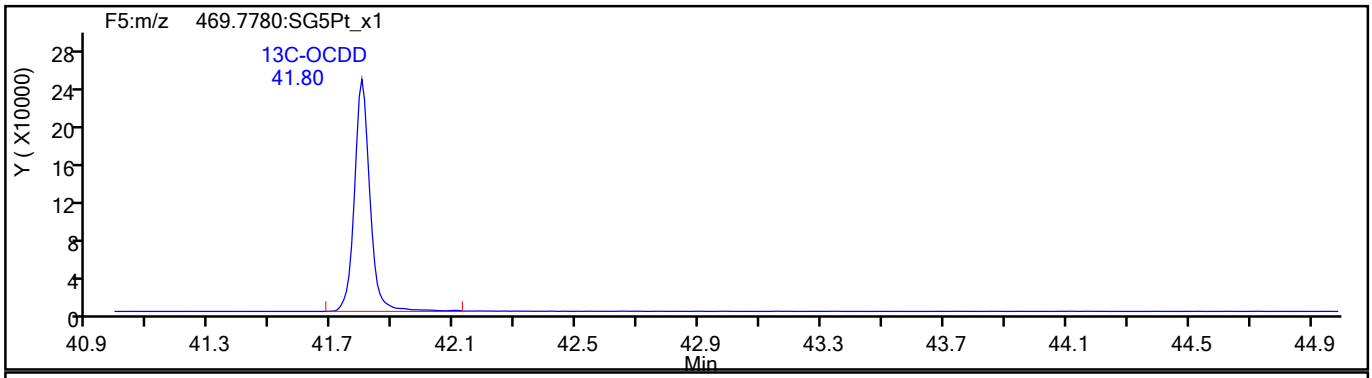

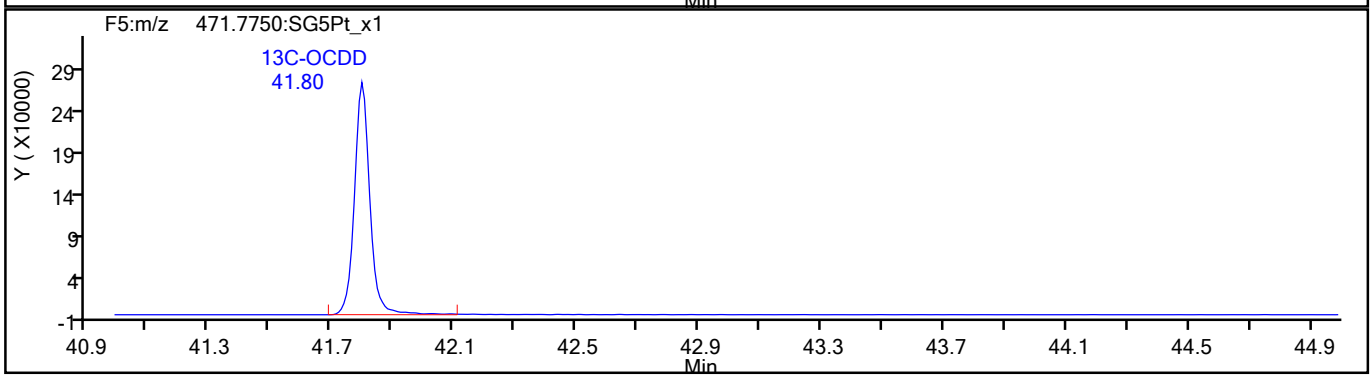

773523

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

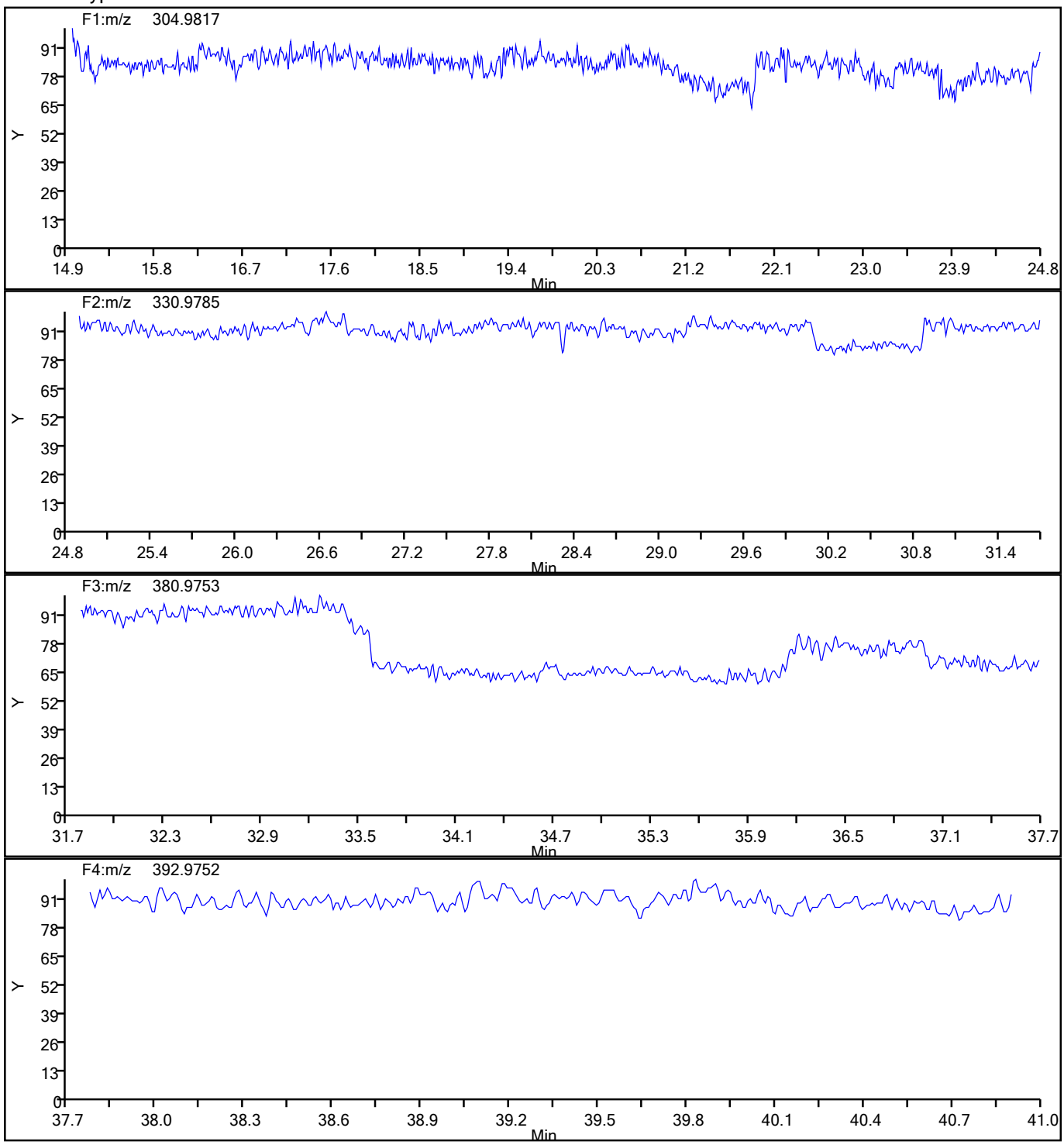

773524

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

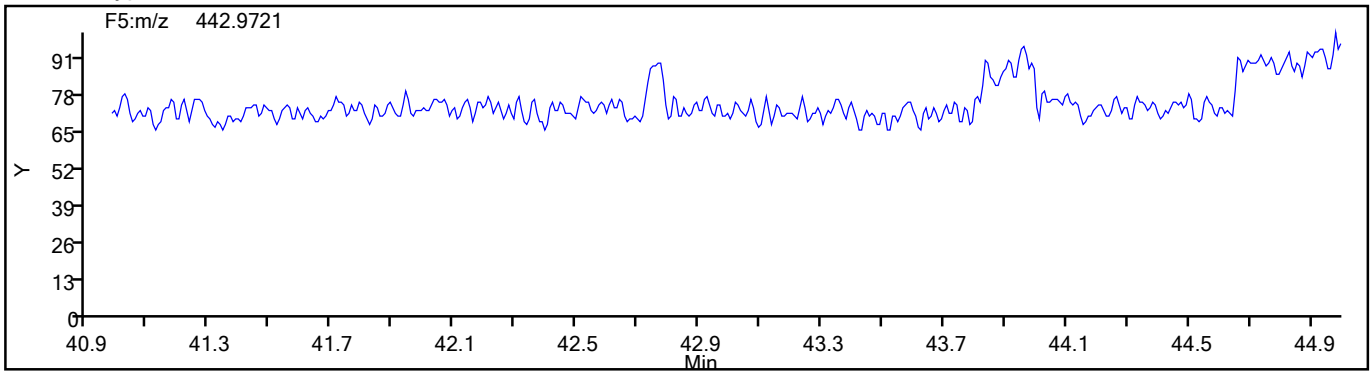

773525

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.534	2045939	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.606	2644389	0.79	1.3459	96.0	96.0	0.2067	0.2067	96.04	
2,3,7,8-TCDF	19.641	50956	0.80	1.0802	1.784	1.784	0.0111	0.0111	89.19	
S Total TCDF					1.784	1.784	0.0111	0.0111		
D 13C-2,3,7,8-TCDD	20.886	1829253	0.79	0.9317	96.0	96.0	0.1871	0.1871	95.97	
$ 37Cl4-2,3,7,8-TCDD	20.929	39241		1.0083	1.902	1.902	0.006151	0.006151	95.11	
2,3,7,8-TCDD	20.929	34971	0.82	1.0753	1.778	1.778	0.0298	0.0298	88.89	
S Total TCDD					1.778	1.778	0.0298	0.0298		
D 13C-1,2,3,7,8-PeCDF	26.541	2234847	1.61	1.1405	95.8	95.8	0.3208	0.3208	95.78	
1,2,3,7,8-PeCDF	26.566	210335	1.55	1.0543	8.927	8.927	0.0325	0.0325	89.27	
D 13C-2,3,4,7,8-PeCDF	27.991	2228025	1.61	1.1253	96.8	96.8	0.3252	0.3252	96.77	
2,3,4,7,8-PeCDF	28.016	200175	1.56	1.0079	8.914	8.914	0.0356	0.0356	89.14	
S Total PeCDF					17.8	17.8	0.0341	0.0341		
D 13C-1,2,3,7,8-PeCDD	28.784	1364144	1.60	0.7165	93.1	93.1	0.1177	0.1177	93.06	
1,2,3,7,8-PeCDD	28.809	129872	1.62	1.0465	9.097	9.097	0.0251	0.0251	90.97	
S Total PeCDD					9.097	9.097	0.0251	0.0251		
D 13C-1,2,3,4,7,8-HxCDF	34.367	1545033	0.52	0.9648	90.2	90.2	0.3810	0.3810	90.23	
1,2,3,4,7,8-HxCDF	34.384	155611	1.20	1.1474	8.778	8.778	0.0522	0.0522	87.78	
D 13C-1,2,3,6,7,8-HxCDF	34.544	1692336	0.52	1.0708	89.1	89.1	0.3433	0.3433	89.05	
1,2,3,6,7,8-HxCDF	34.569	185321	1.24	1.2178	8.992	8.992	0.0483	0.0483	89.92	
D 13C-2,3,4,6,7,8-HxCDF	35.429	1740015	0.54	1.0413	94.2	94.2	0.3530	0.3530	94.16	
2,3,4,6,7,8-HxCDF	35.446	191527	1.25	1.2145	9.063	9.063	0.0405	0.0405	90.63	
D 13C-1,2,3,7,8,9-HxCDF	36.374	1735785	0.52	0.9731	100.5	100.5	0.3778	0.3778	101	
1,2,3,7,8,9-HxCDF	36.390	195077	1.27	1.2401	9.062	9.062	0.0369	0.0369	90.62	
S Total HxCDF					35.9	35.9	0.0445	0.0445		
* 13C-1,2,3,7,8,9-HxCDD	36.180	1774694	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.665	1363103	1.28	0.7587	101.2	101.2	0.1971	0.1971	101	
1,2,3,4,7,8-HxCDD	35.682	132244	1.27	1.0608	9.146	9.146	0.0258	0.0258	91.46	
D 13C-1,2,3,6,7,8-HxCDD	35.792	1558668	1.27	0.8593	102.2	102.2	0.1740	0.1740	102	
1,2,3,6,7,8-HxCDD	35.809	138142	1.21	0.9933	8.922	8.922	0.0262	0.0262	89.22	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.196	139741	1.27	1.1094	8.622	8.622	0.0240	0.0240	86.22	
S Total HxCDD					26.7	26.7	0.0253	0.0253		
D 13C-1,2,3,4,6,7,8-HpCDF	38.291	1272526	0.47	0.7359	97.4	97.4	0.3733	0.3733	97.43	
1,2,3,4,6,7,8-HpCDF	38.308	164108	1.06	1.4421	8.943	8.943	0.0378	0.0378	89.43	
D 13C-1,2,3,4,7,8,9-HpCDF	39.589	1175351	0.46	0.6854	96.6	96.6	0.4008	0.4008	96.63	
1,2,3,4,7,8,9-HpCDF	39.598	138335	1.04	1.3092	8.990	8.990	0.0420	0.0420	89.90	
S Total HpCDF					17.9	17.9	0.0399	0.0399		
D 13C-1,2,3,4,6,7,8-HpCDD	39.286	1162117	1.05	0.6745	97.1	97.1	0.2422	0.2422	97.08	
1,2,3,4,6,7,8-HpCDD	39.294	110761	1.07	1.0503	9.075	9.075	0.0319	0.0319	90.75	
S Total HpCDD					9.075	9.075	0.0319	0.0319		
D 13C-OCDD	41.775	1833139	0.91	0.5446	189.7	189.7	0.2857	0.2857	94.83	
OCDF	41.868	217473	0.91	1.3168	18.0	18.0	0.0452	0.0452	90.09	
OCDD	41.784	182470	0.91	1.0620	18.7	18.7	0.0368	0.0368	93.73	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.534	20.547	-1		908781	140893	128	320	1101		
333.9338	20.542	20.547	0		1137158	181590	97	242	1872	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.606	19.616	-1	0.955	1167638	192853	232	580	831		
317.9389	19.615	19.616	0	0.955	1476751	240851	127	317	1896	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.641	19.646	0	1.002	22722	3787	5	12	757		
305.8987	19.632	19.646	-1	1.001	28234	4422	16	40	276	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.886	20.910	-1	1.017	809102	120100	128	320	938		
333.9338	20.895	20.910	-1	1.018	1020151	151021	97	242	1557	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.929	20.935	0	1.019	39241	6110	8	20	764		
2,3,7,8-TCDD											
319.8965	20.929	20.939	-1	1.002	15743	2433	27	67	90		
321.8936	20.929	20.939	-1	1.002	19228	3031	8	20	379	0.82(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.541	26.560	-1	1.293	1380136	237735	280	700	849		
353.8970	26.549	26.560	-1	1.293	854711	147619	192	480	769	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.566	26.584	-1	1.001	127910	22847	25	62	914		
341.8567	26.566	26.584	-1	1.001	82425	14553	28	70	520	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	27.991	28.014	-1	1.363	1373543	227507	280	700	813		
353.8970	27.991	28.014	-1	1.363	854482	140253	192	480	730	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.016	28.039	-1	1.001	121955	19987	25	62	799		
341.8567	28.016	28.039	-1	1.001	78220	12878	28	70	460	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.784	28.801	-1	1.402	839338	134094	55	137	2438		
369.8919	28.775	28.801	-2	1.401	524806	82953	54	135	1536	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.809	28.828	-1	1.001	80255	12276	18	45	682		
357.8516	28.809	28.828	-1	1.001	49617	7332	5	12	1466	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.367	34.384	-1	0.950	530041	107506	195	487	551		
385.8610	34.367	34.384	-1	0.950	1014992	209541	410	1025	511	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.384	34.405	-1	1.000	84954	17499	46	115	380		
375.8178	34.384	34.405	-1	1.000	70657	14926	30	75	498	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.544	34.562	-1	0.955	582468	111482	195	487	572		
385.8610	34.544	34.562	-1	0.955	1109868	211659	410	1025	516	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.569	34.582	-1	1.001	102510	19443	46	115	423		
375.8178	34.561	34.582	-1	1.000	82811	15785	30	75	526	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.429	35.444	-1	0.979	608469	136128	195	487	698		
385.8610	35.429	35.444	-1	0.979	1131546	250431	410	1025	611	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.446	35.461	-1	1.000	106373	23069	46	115	502		
375.8178	35.446	35.461	-1	1.000	85154	19256	30	75	642	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.374	36.388	-1	1.005	597532	142559	195	487	731		
385.8610	36.374	36.388	-1	1.005	1138253	273050	410	1025	666	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.390	36.402	-1	1.000	109103	26446	46	115	575		
375.8178	36.390	36.402	-1	1.000	85974	20436	30	75	681	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.180	36.192	-1		992912	228100	138	345	1653		
403.8529	36.180	36.192	-1		781782	183211	108	270	1696	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.665	35.680	-1	0.986	765726	187664	138	345	1360		
403.8529	35.665	35.680	-1	0.986	597377	148078	108	270	1371	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.682	35.695	-1	1.000	73908	17289	18	45	961		
391.8127	35.682	35.695	-1	1.000	58336	14382	19	47	757	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.792	35.805	-1	0.989	870562	199612	138	345	1446		
403.8529	35.792	35.805	-1	0.989	688106	154356	108	270	1429	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.809	35.820	-1	1.000	75558	17193	18	45	955		
391.8127	35.809	35.820	-1	1.000	62584	14006	19	47	737	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.196	36.208	-1	1.015	78157	18353	18	45	1020		
391.8127	36.196	36.208	-1	1.015	61584	14405	19	47	758	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.291	38.305	-1	1.058	404086	116332	150	375	776		
419.8220	38.291	38.305	-1	1.058	868440	254106	302	755	841	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.308	38.317	-1	1.000	84325	24268	44	110	552		
409.7788	38.299	38.317	-1	1.000	79783	22737	37	92	615	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.589	39.600	-1	1.094	368476	114509	150	375	763		
419.8220	39.589	39.600	-1	1.094	806875	252758	302	755	837	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	70636	21558	44	110	490		
409.7788	39.598	39.608	-1	1.000	67699	21216	37	92	573	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.286	39.293	0	1.086	594894	185269	137	342	1352		
437.8140	39.286	39.293	0	1.086	567223	172933	132	330	1310	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.294	39.301	0	1.000	57275	17734	30	75	591		
425.7737	39.294	39.301	0	1.000	53486	17016	18	45	945	1.07(0.88-1.20)	
13C-OCDD											
469.7780	41.775	41.785	-1	1.155	873143	243136	128	320	1900		
471.7750	41.775	41.785	-1	1.155	959996	268180	128	320	2095	0.91(0.76-1.02)	
OCDF											
441.7428	41.868	41.875	0	1.002	103359	30074	20	50	1504		
443.7399	41.859	41.875	-1	1.002	114114	32506	41	102	793	0.91(0.76-1.02)	
OCDD											
457.7377	41.784	41.794	-1	1.000	86745	24118	17	42	1419		
459.7348	41.784	41.794	-1	1.000	95725	27065	23	57	1177	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

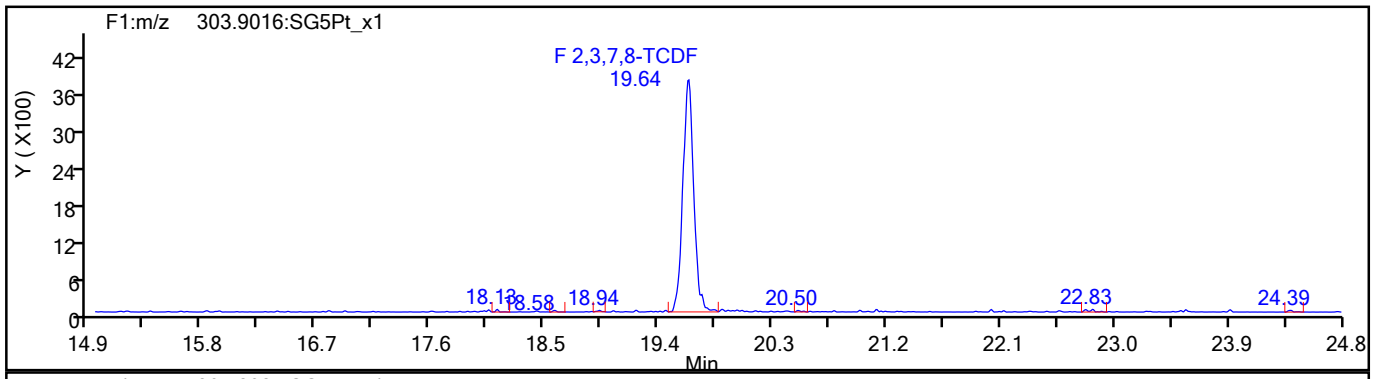

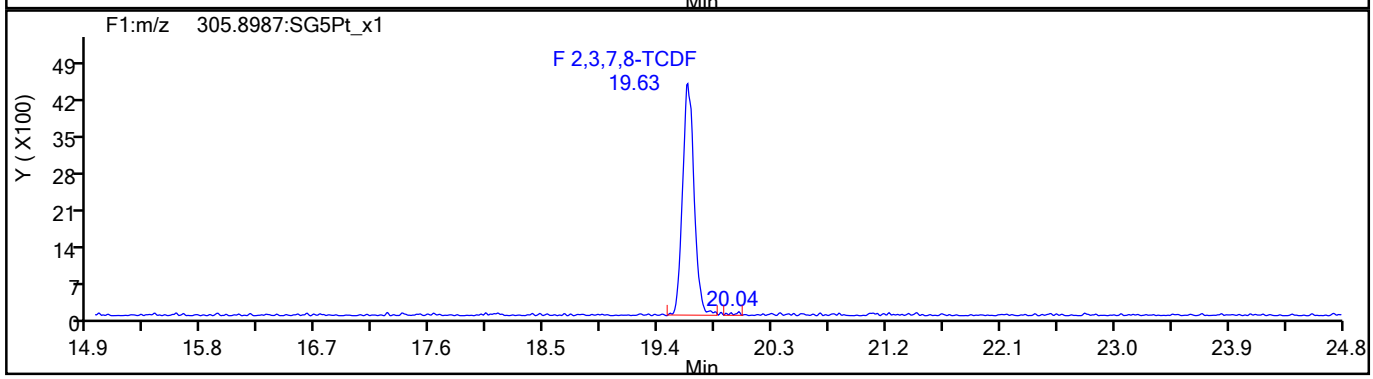

TCDF Standards

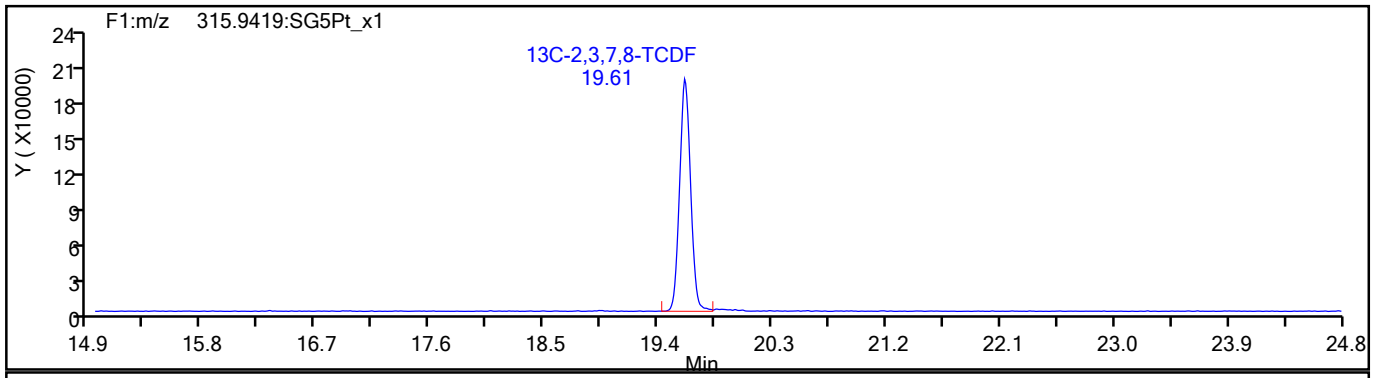

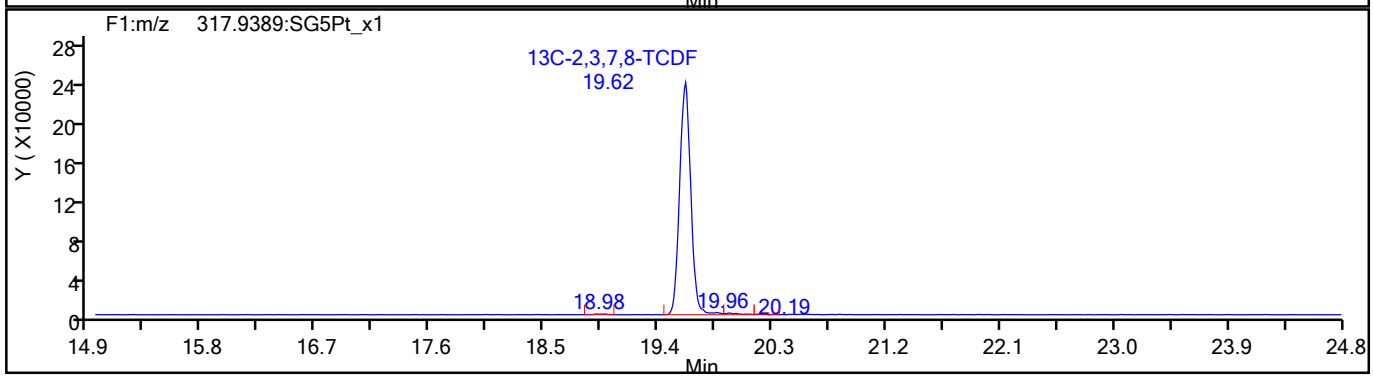

773531

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

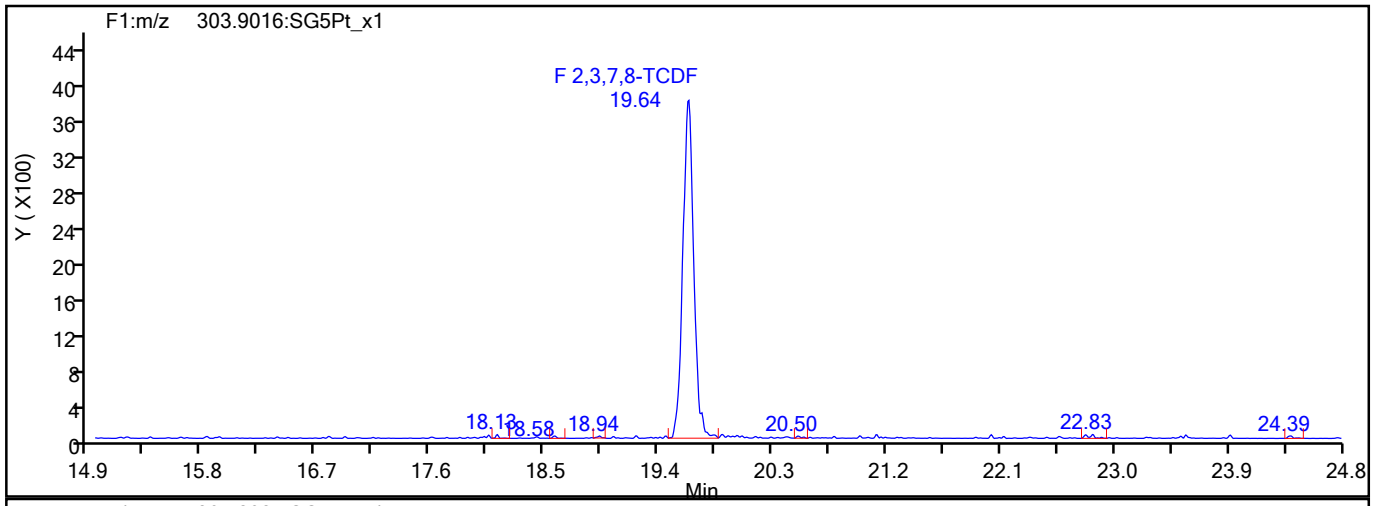

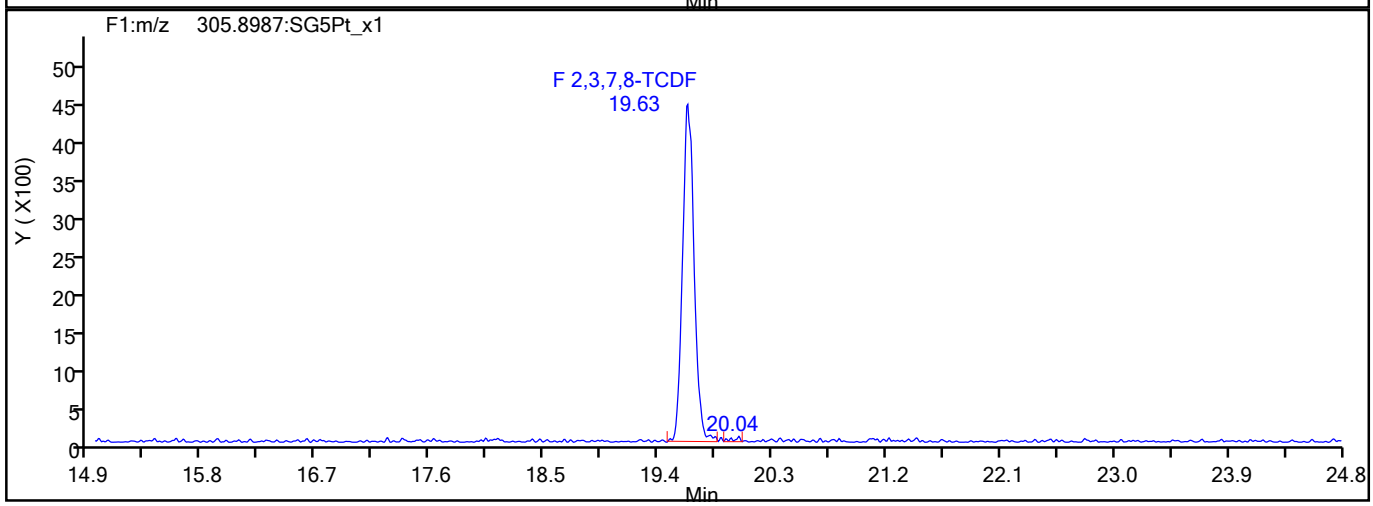

TCDF Interference Mass

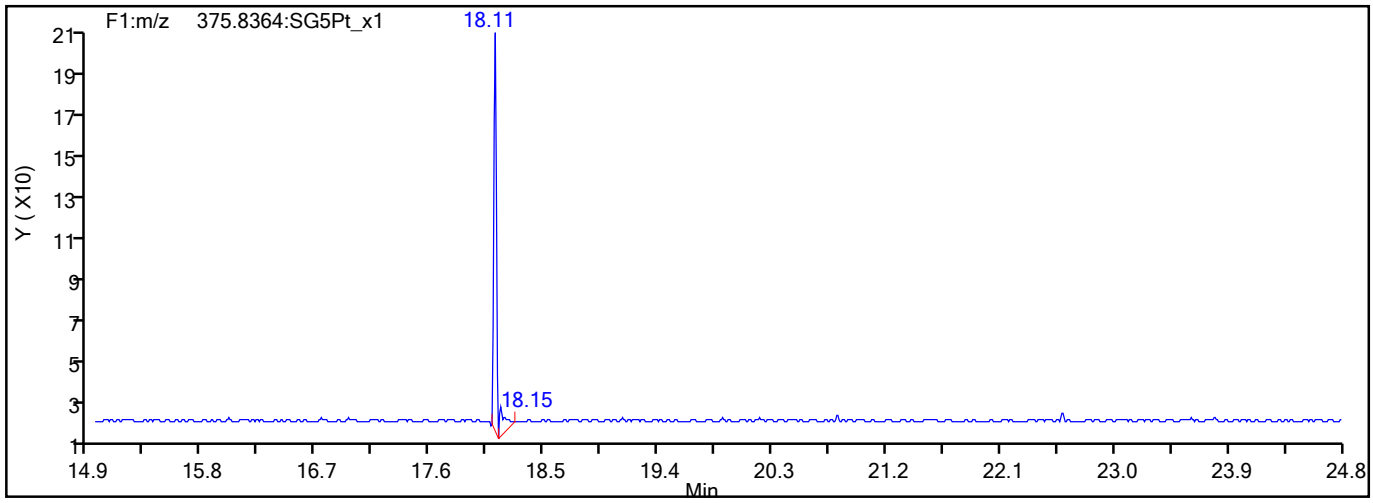

773532

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

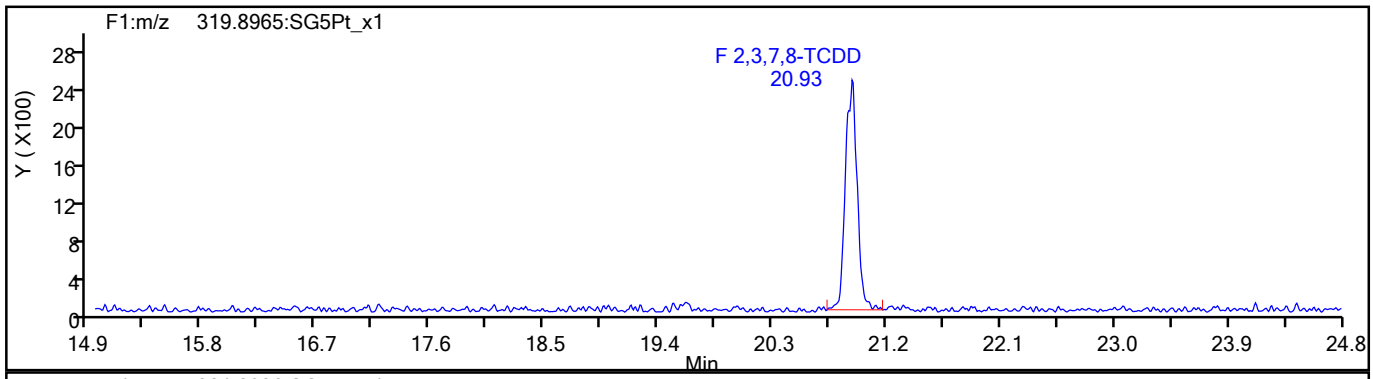

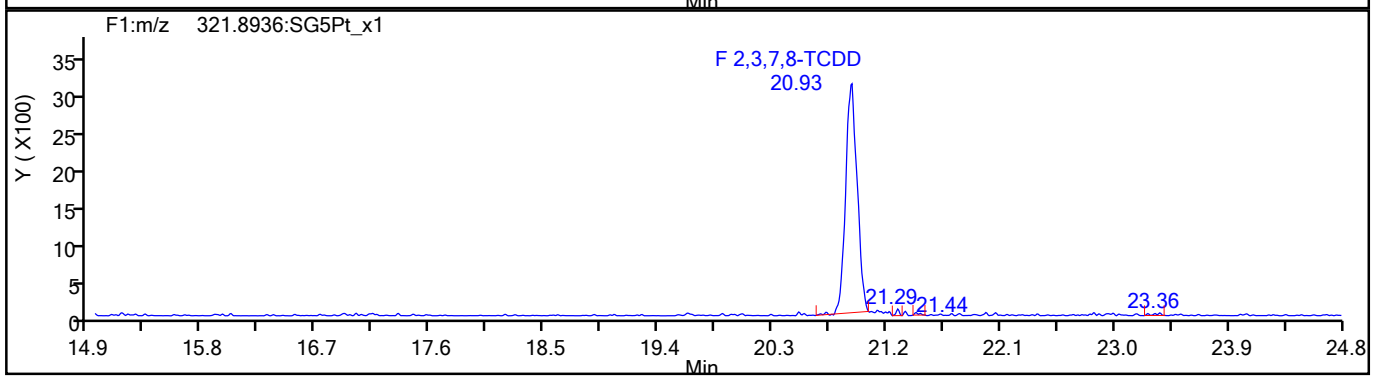

TCDD Standards

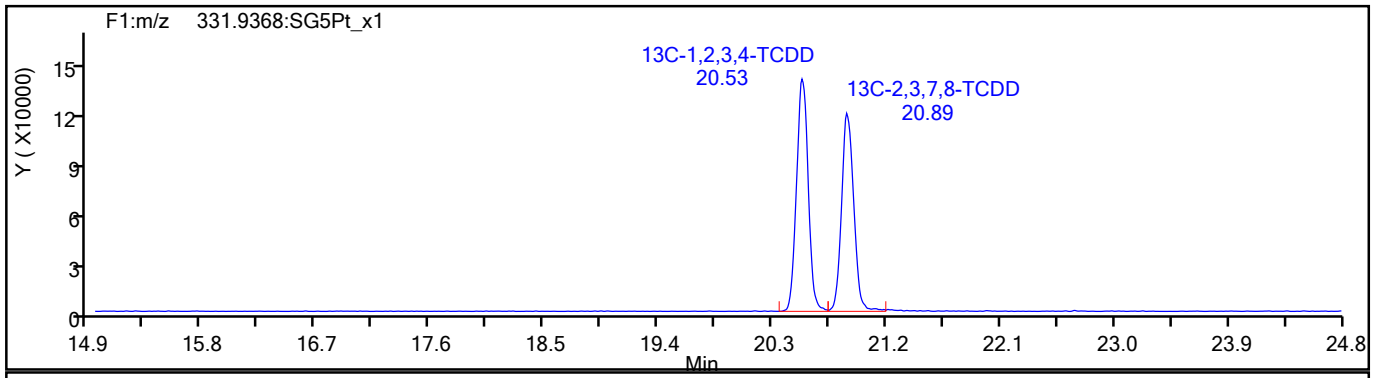

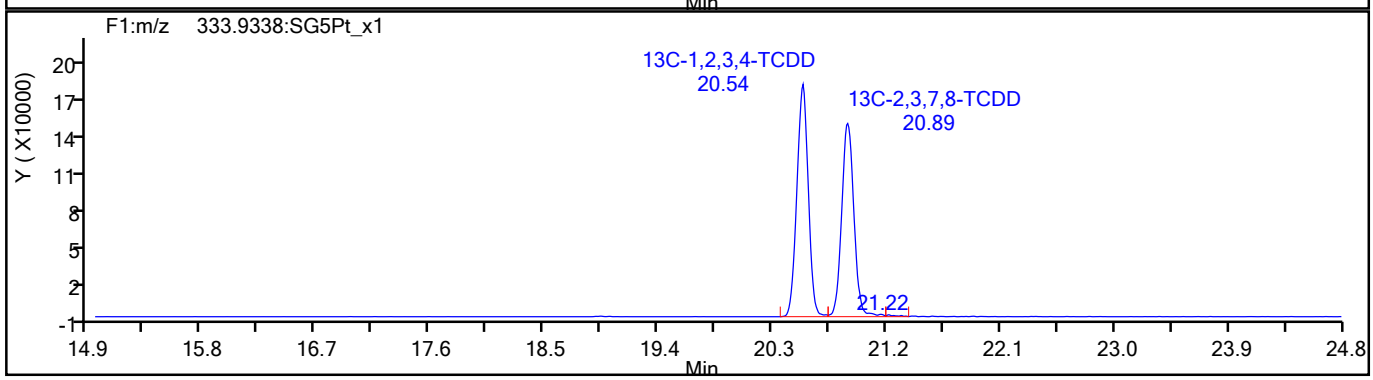

773533

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

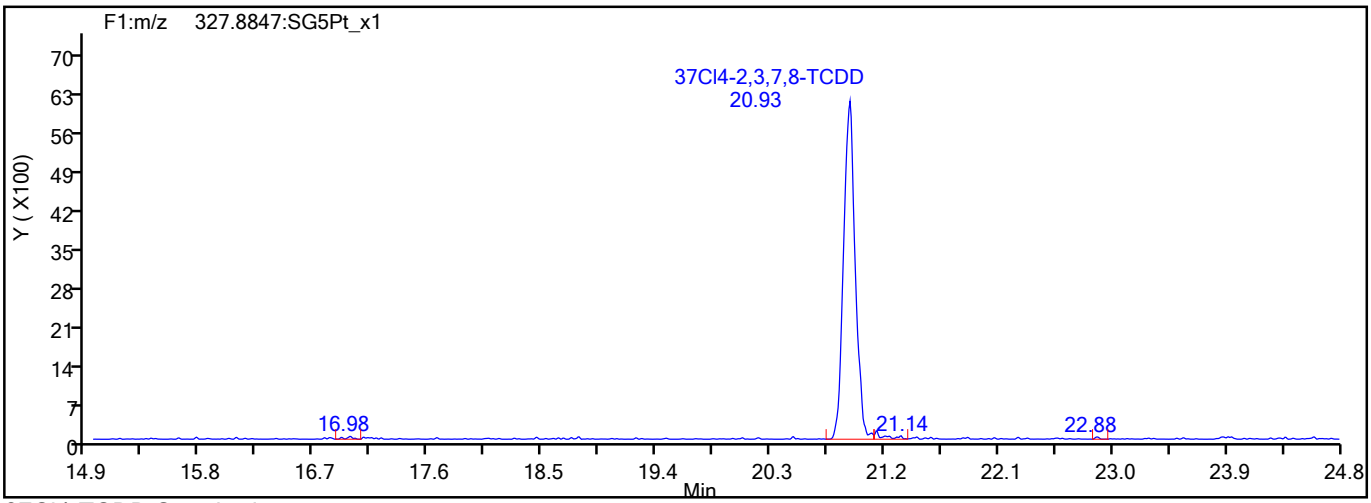

37Cl4-TCDD Standards

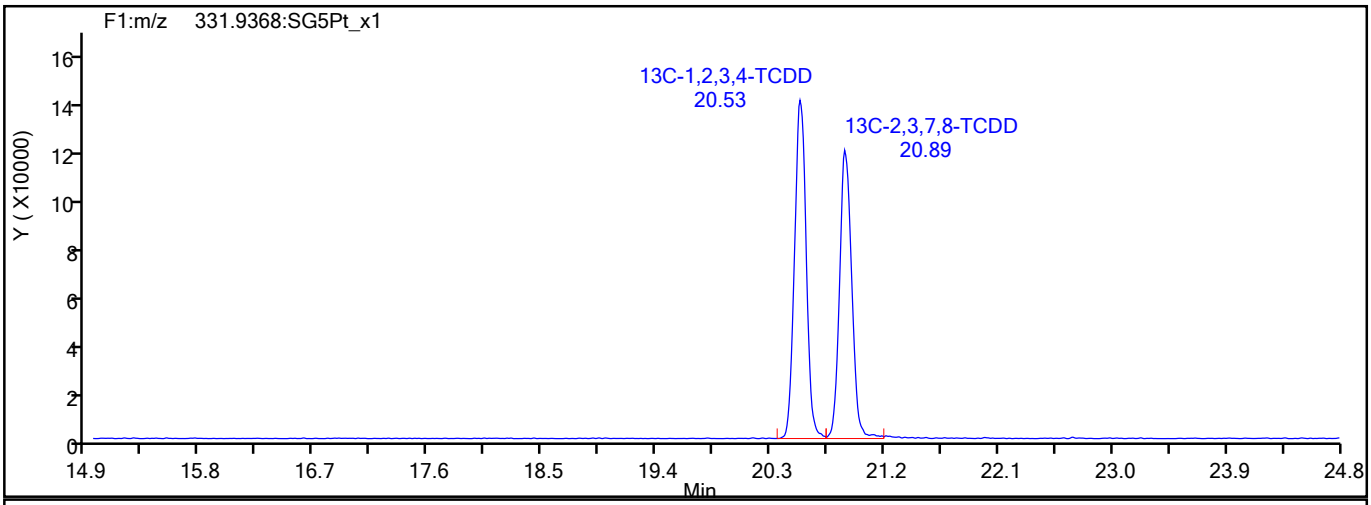

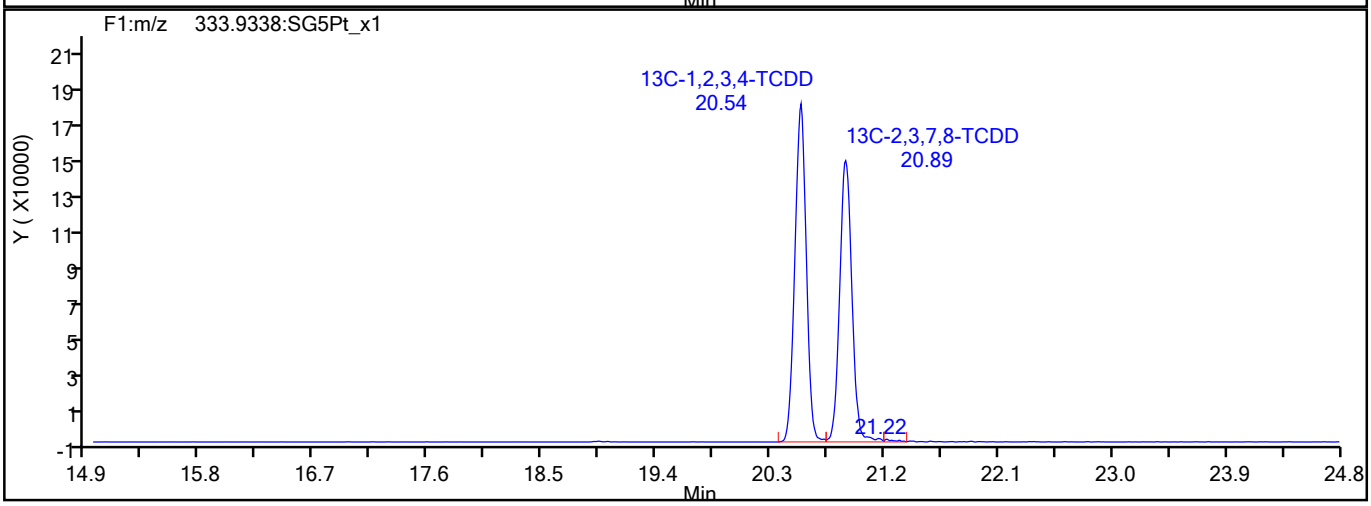

773534

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

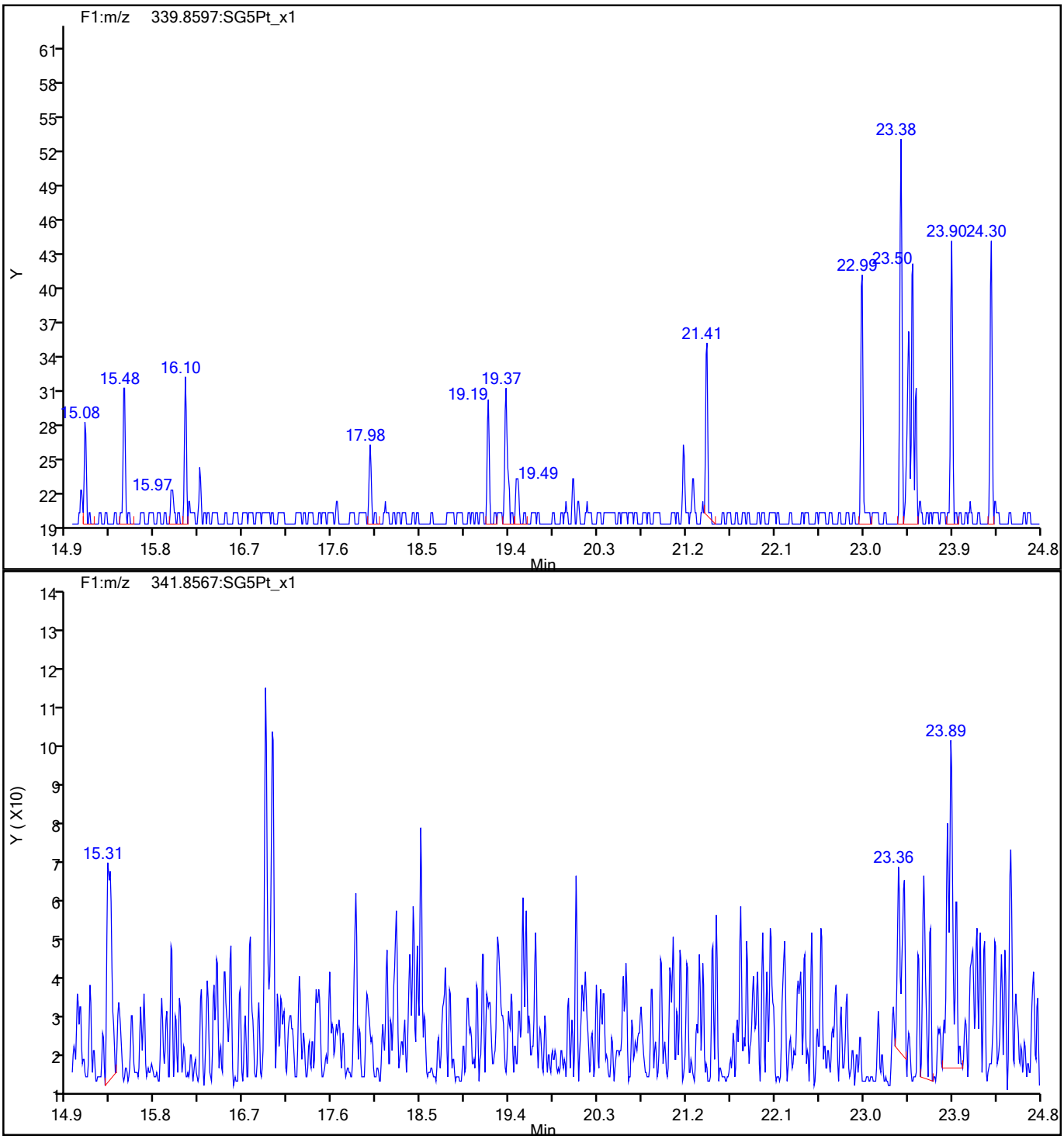

773535

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

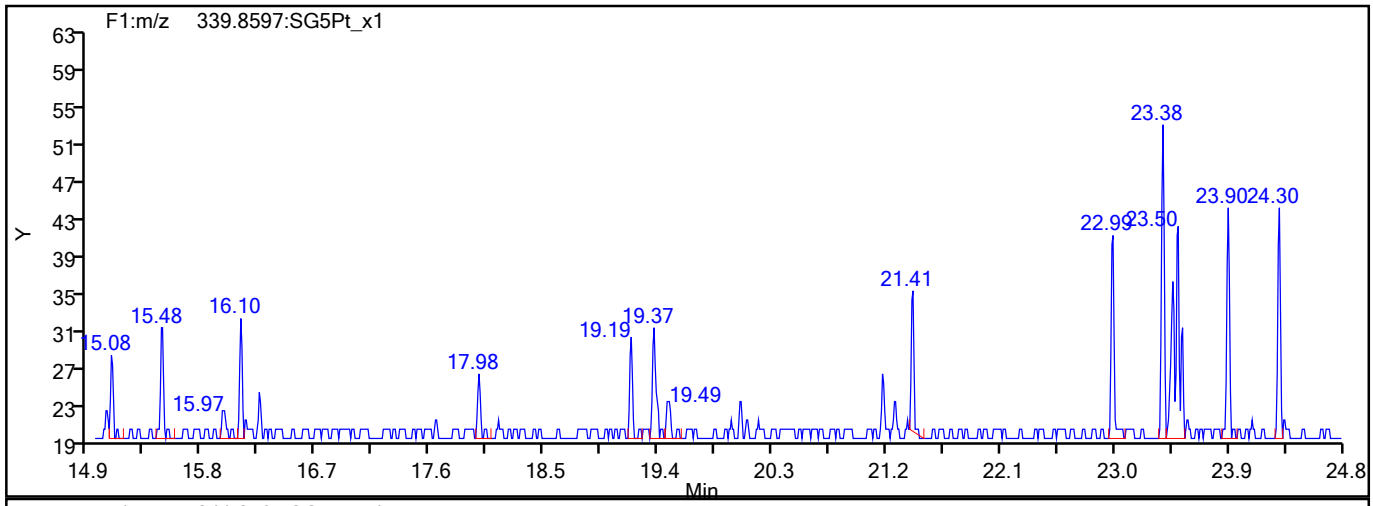

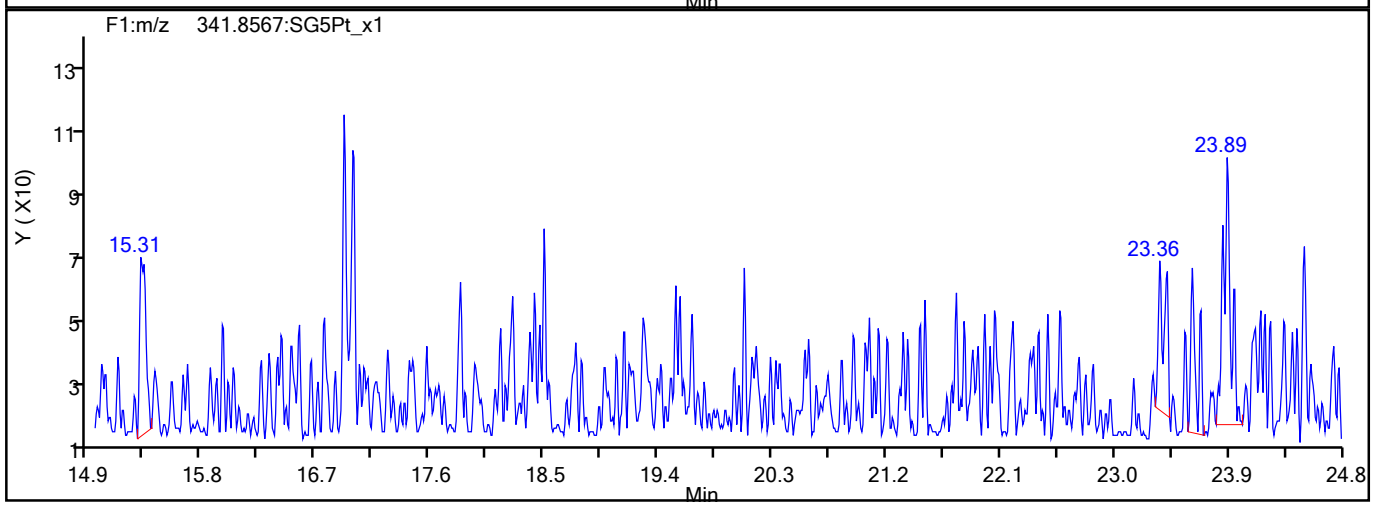

F1 PeCDFs Interference Mass

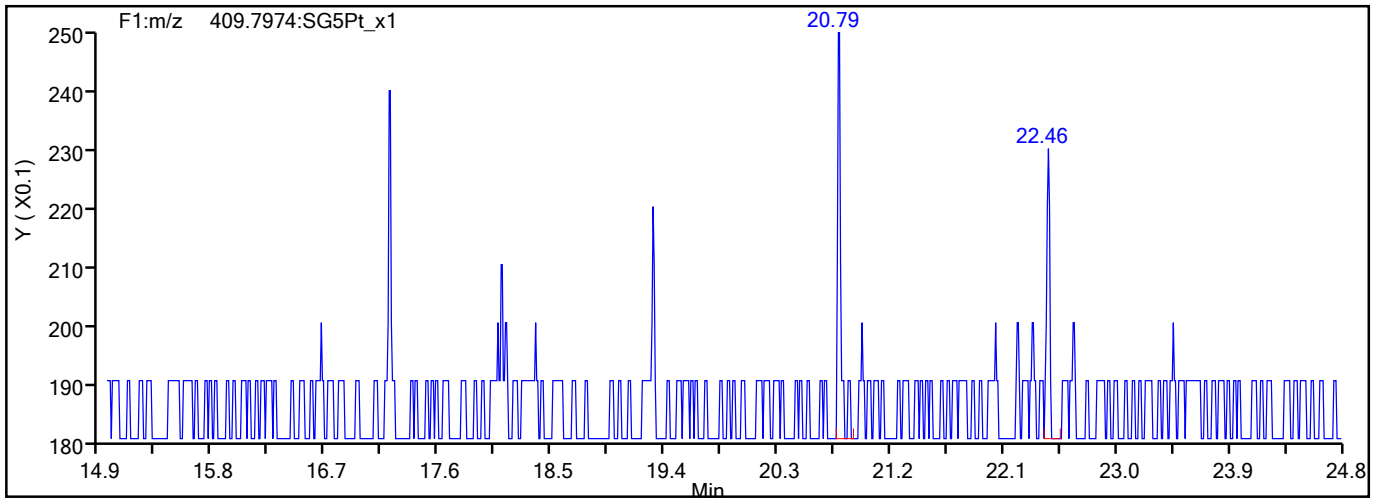

773536

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

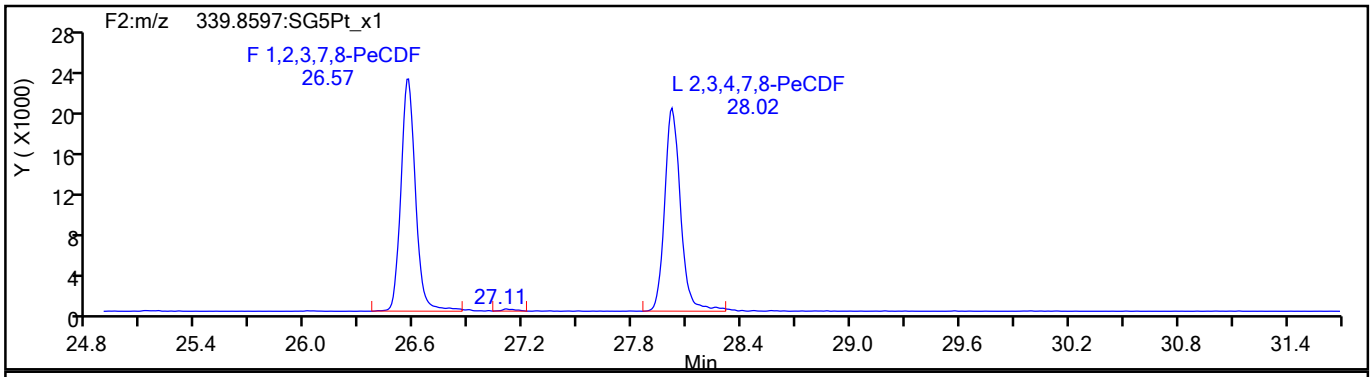

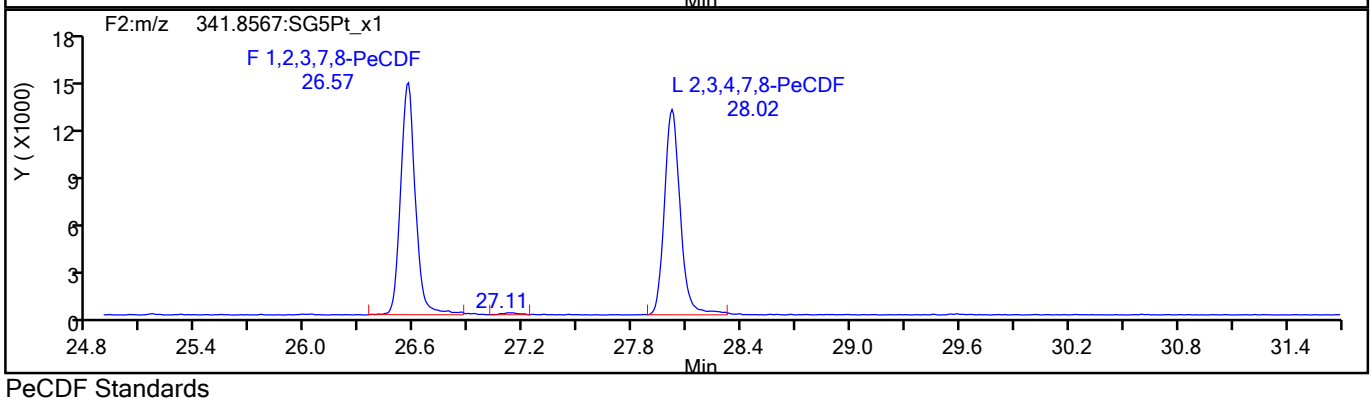

PeCDF Standards

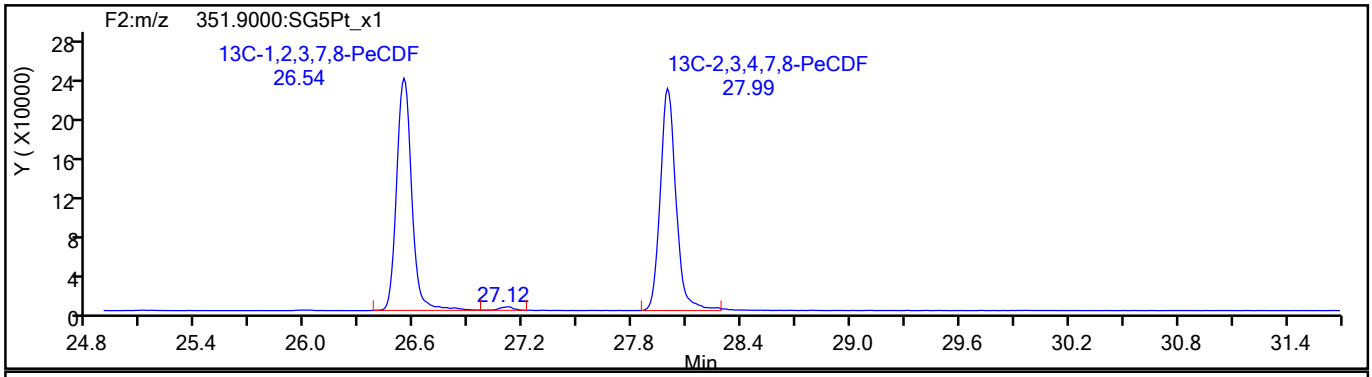

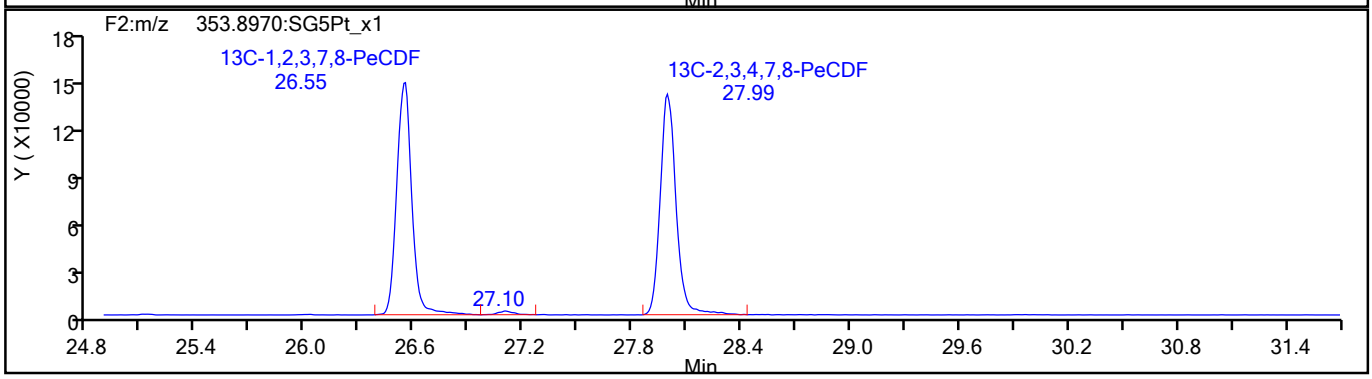

773537

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

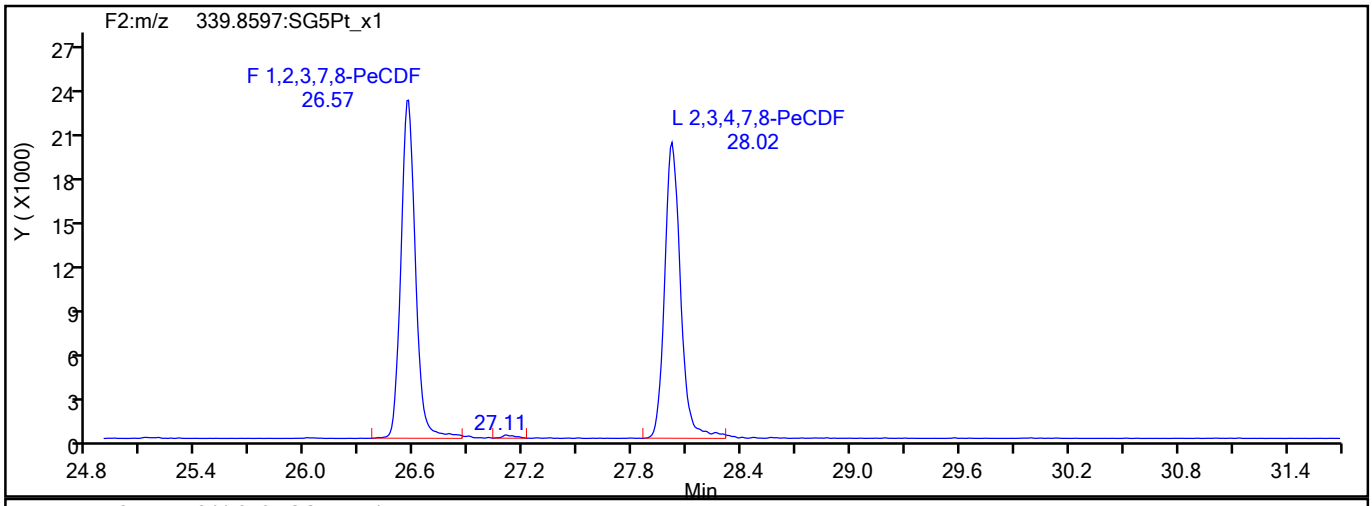

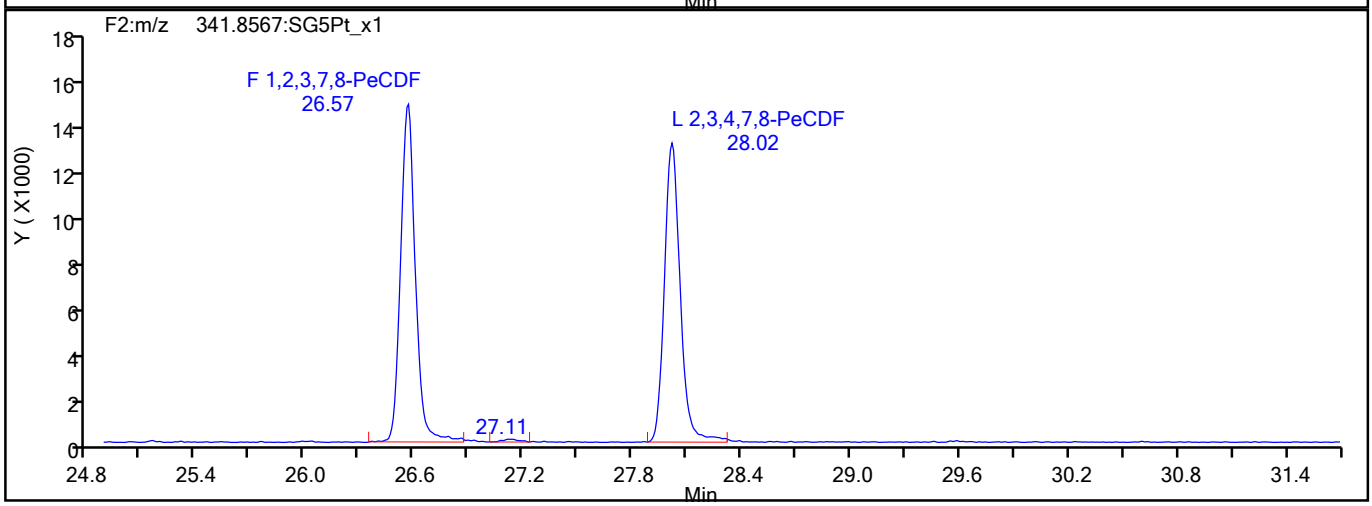

PeCDF Interference Mass

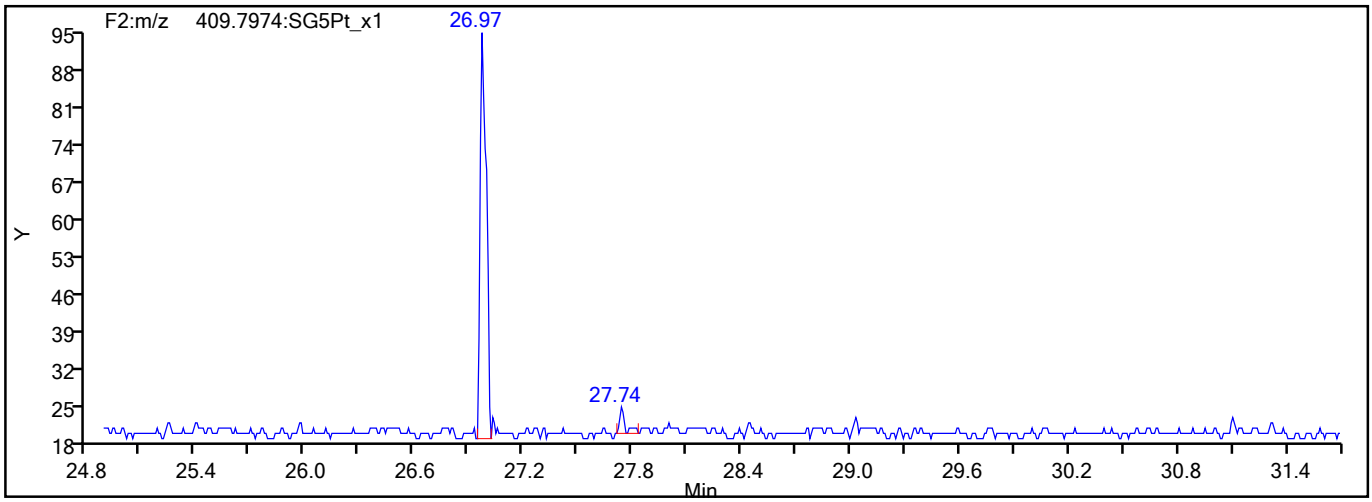

773538

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

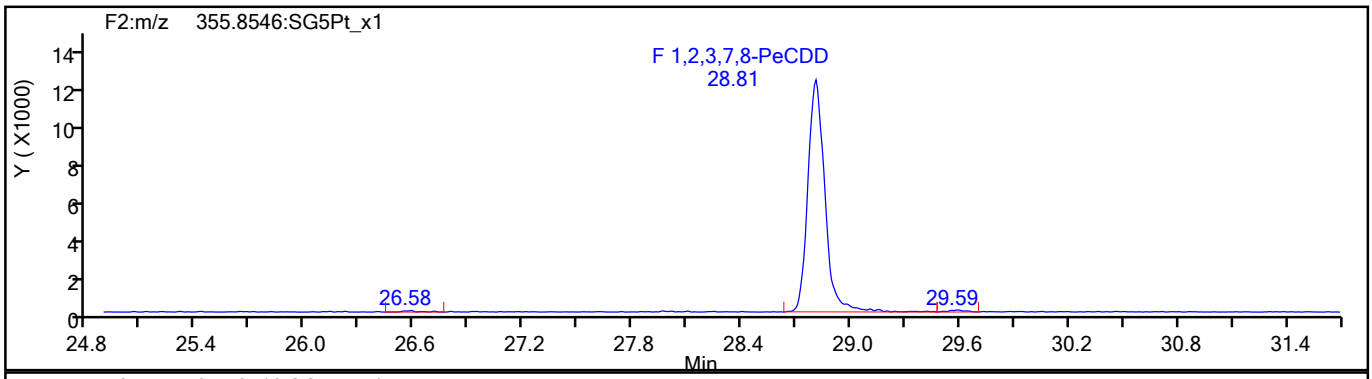

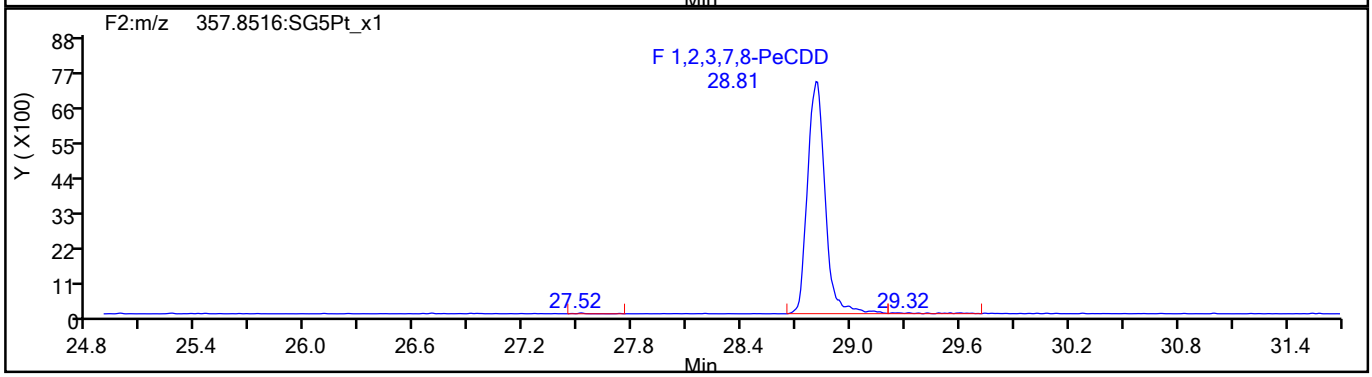

PeCDD Standards

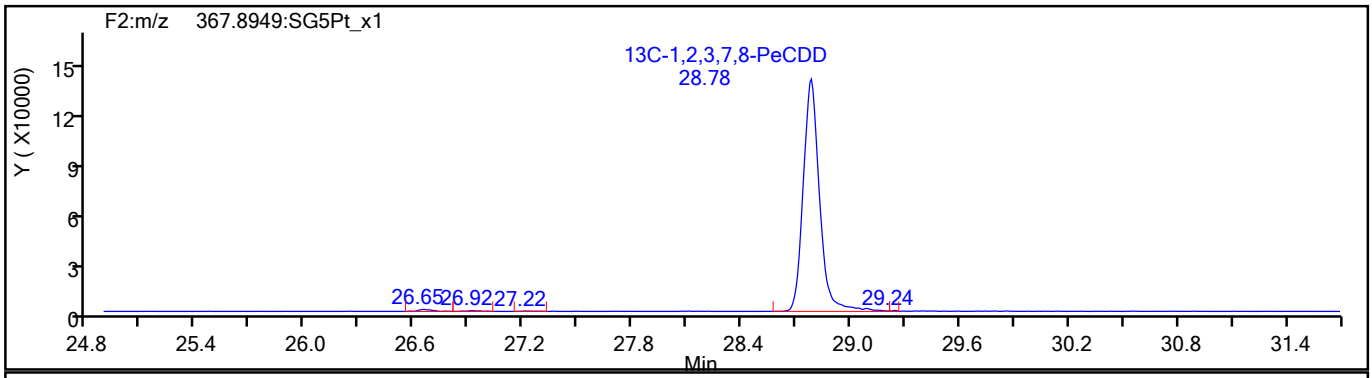

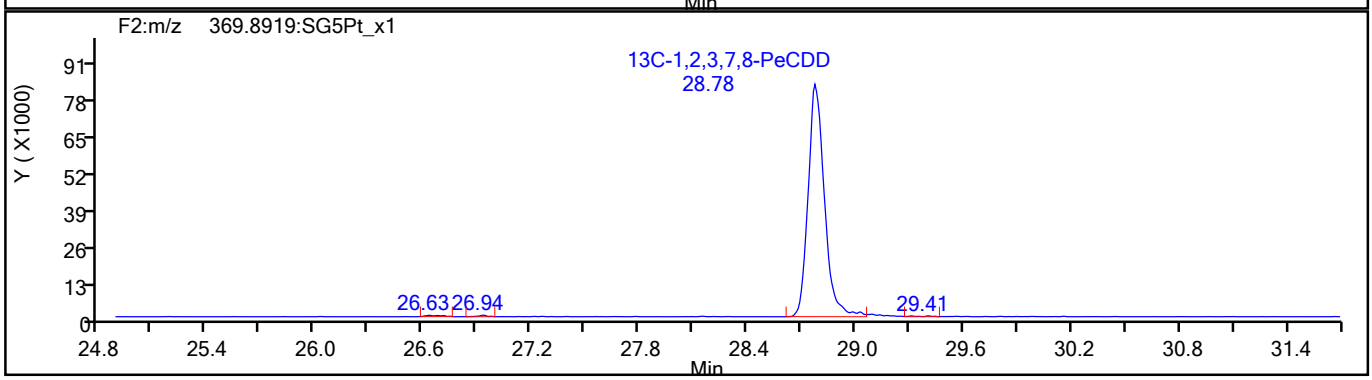

773539

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

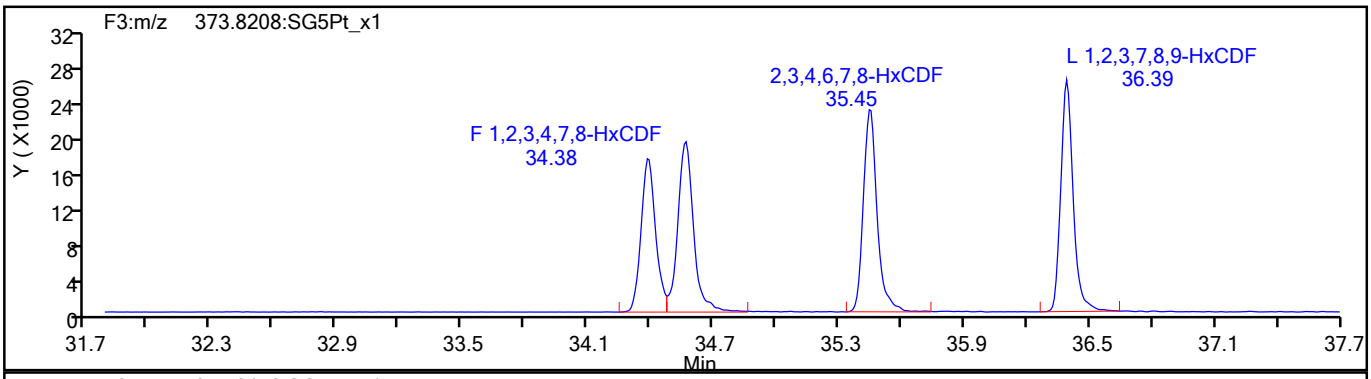

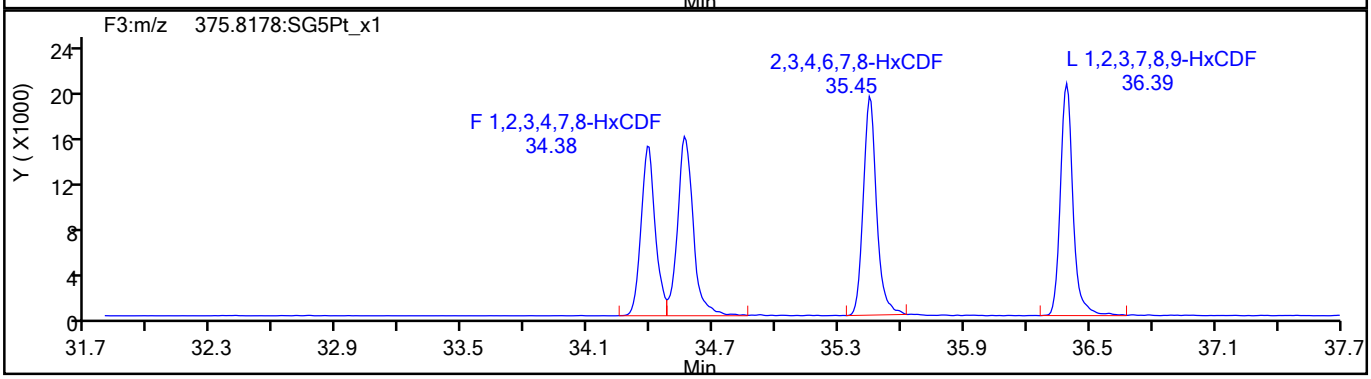

HxCDF Standards

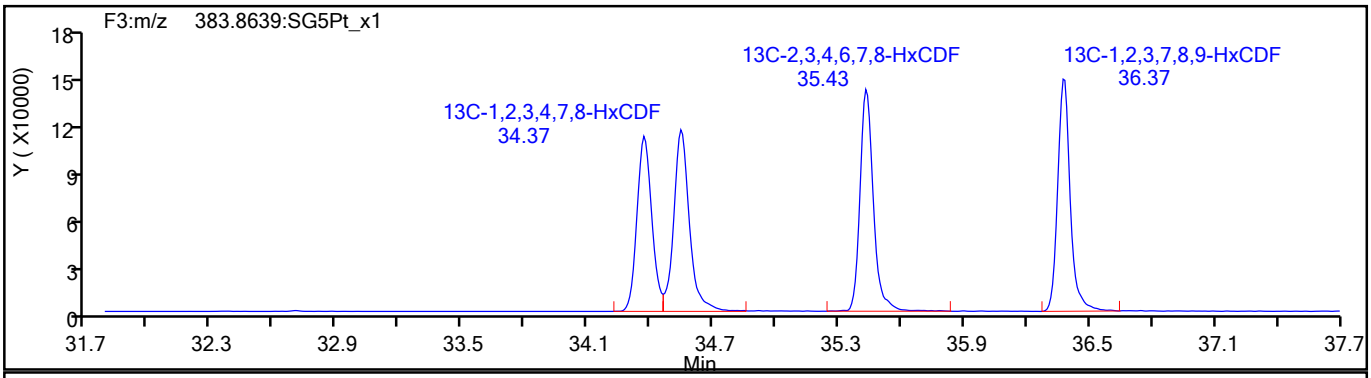

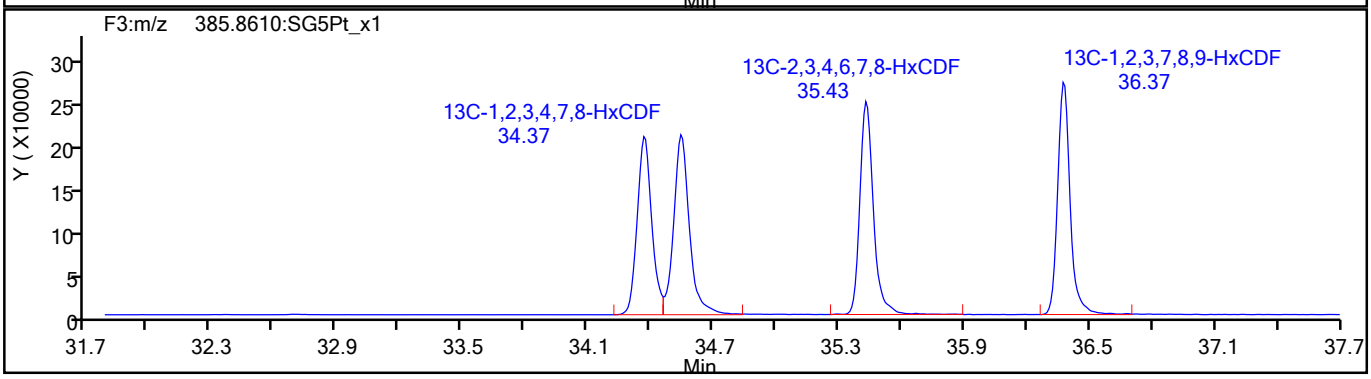

773540

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

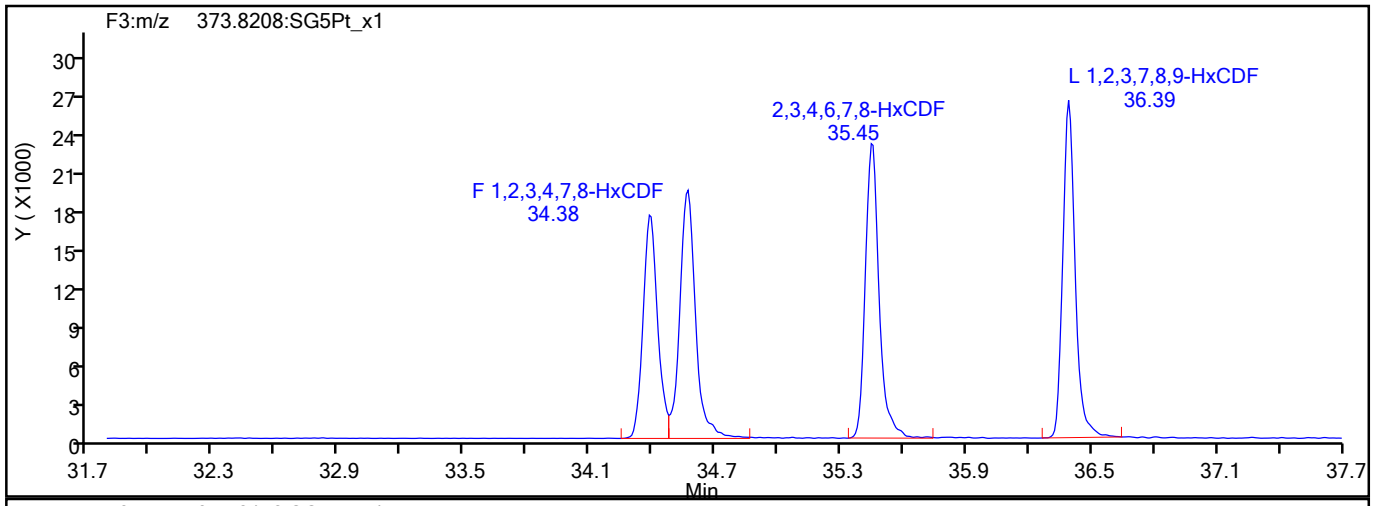

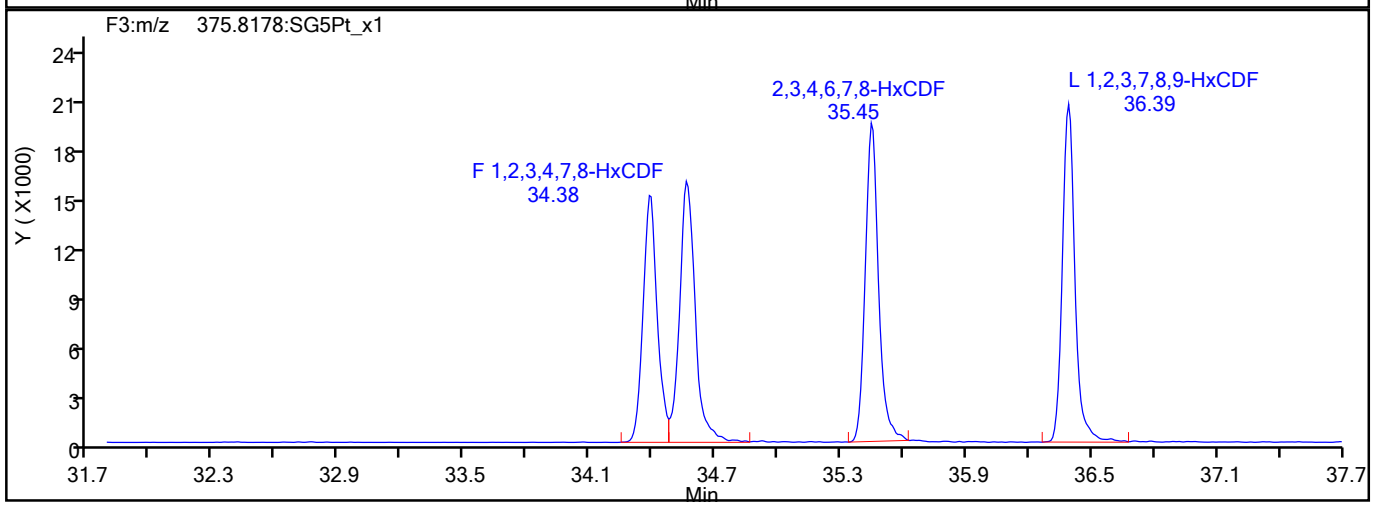

HxCDF Interference Mass

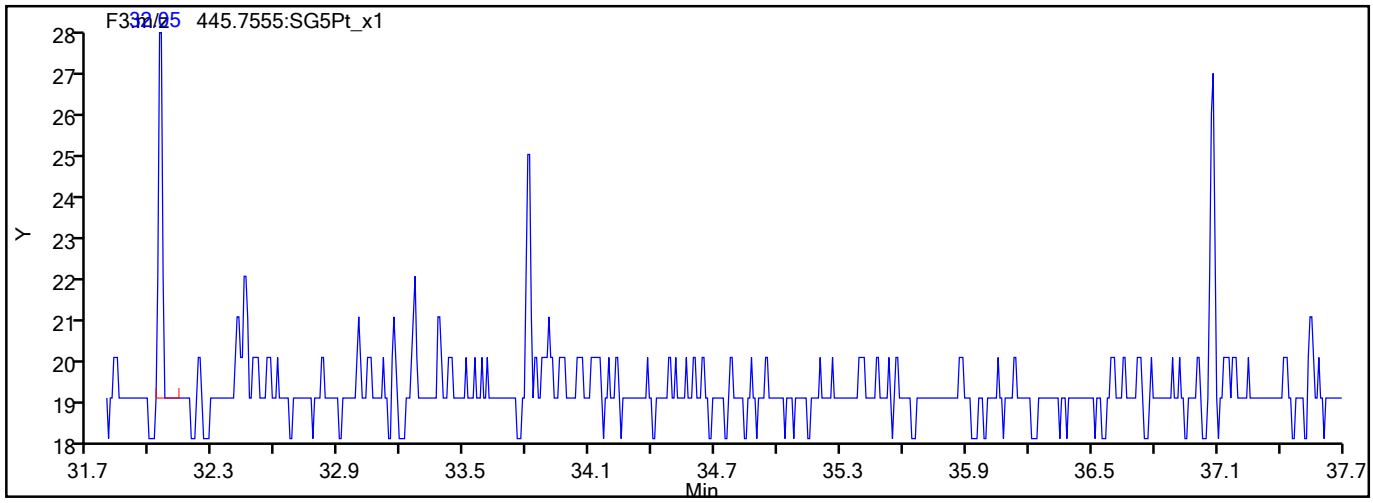

773541

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

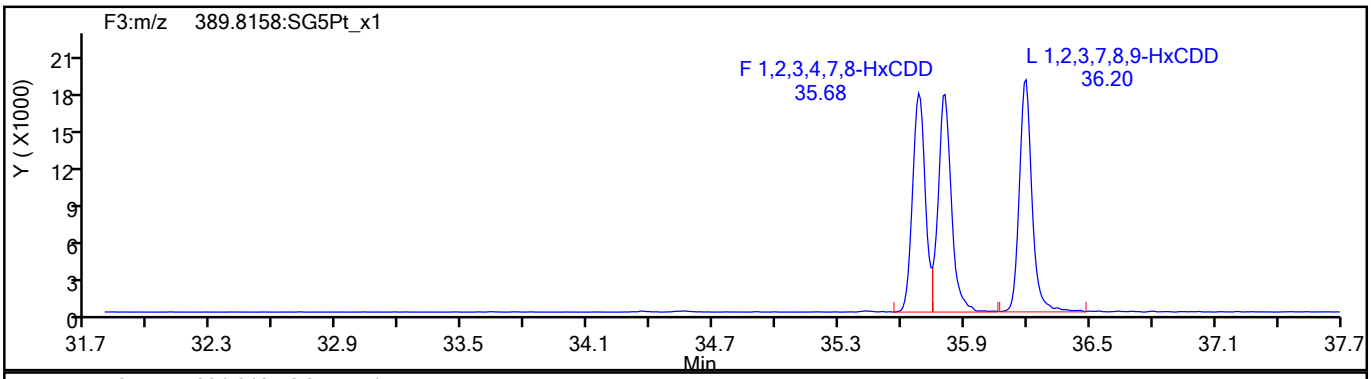

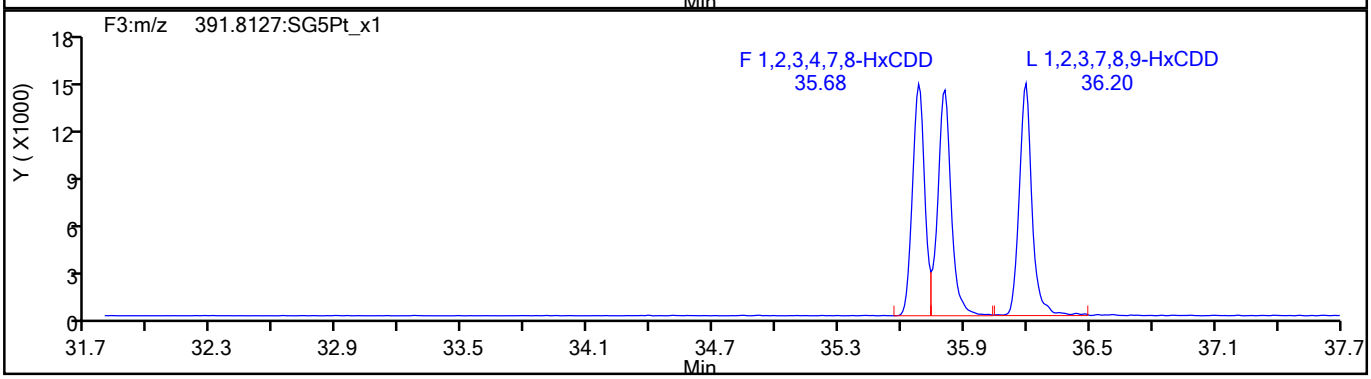

HxCDD Standards

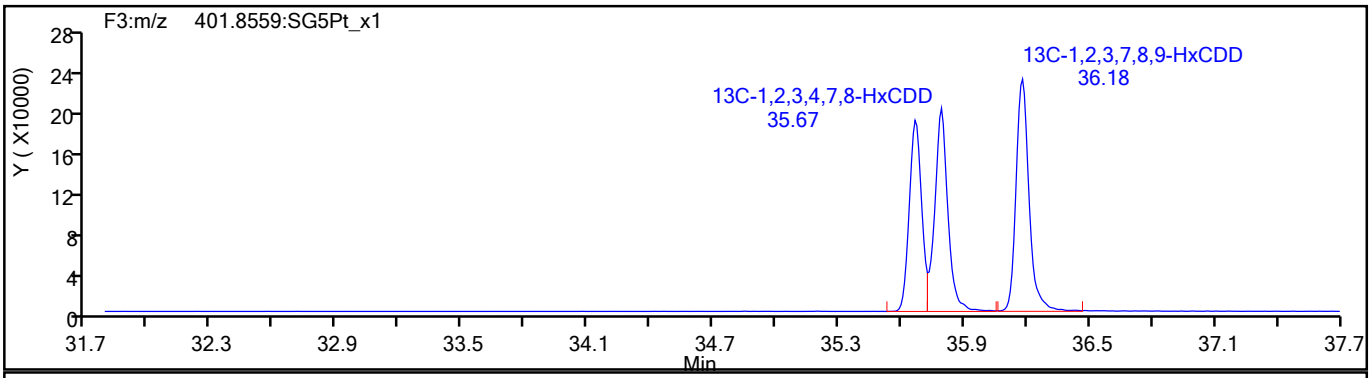

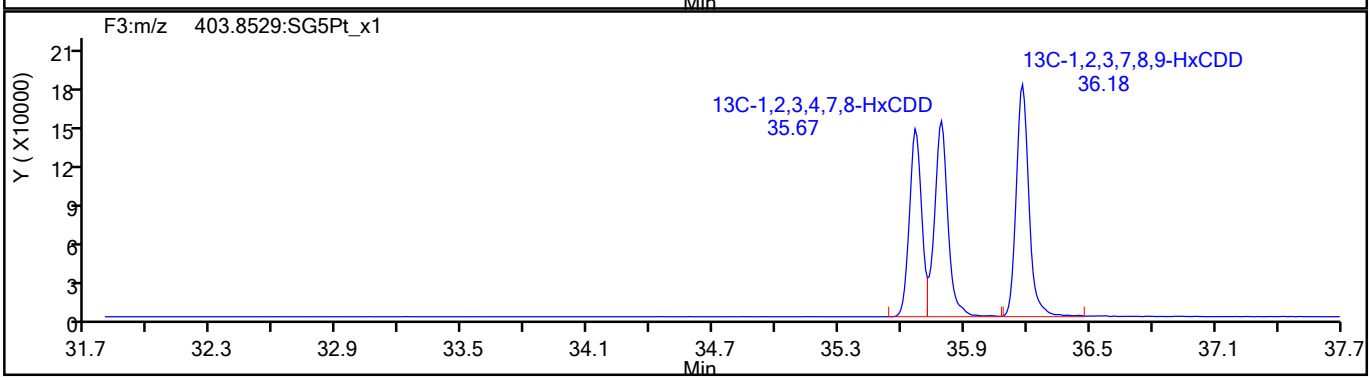

773542

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

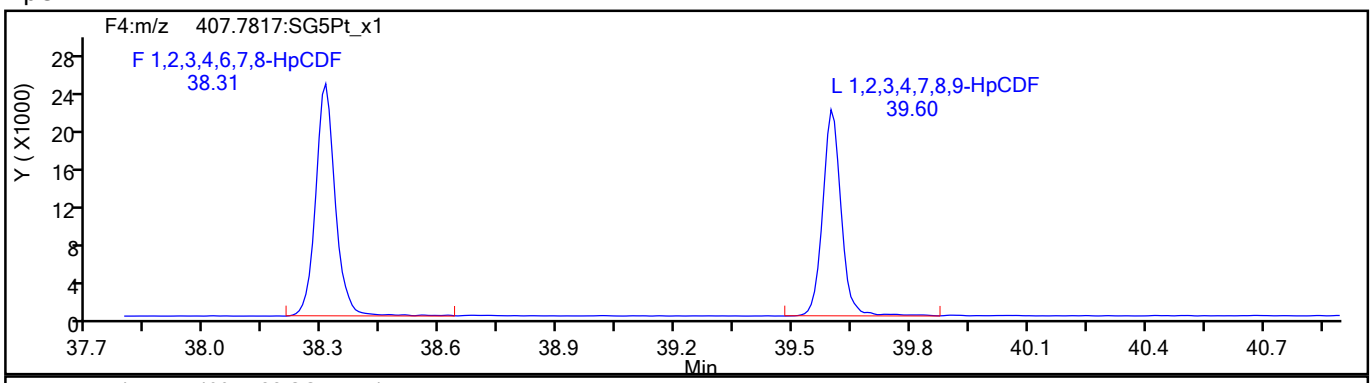

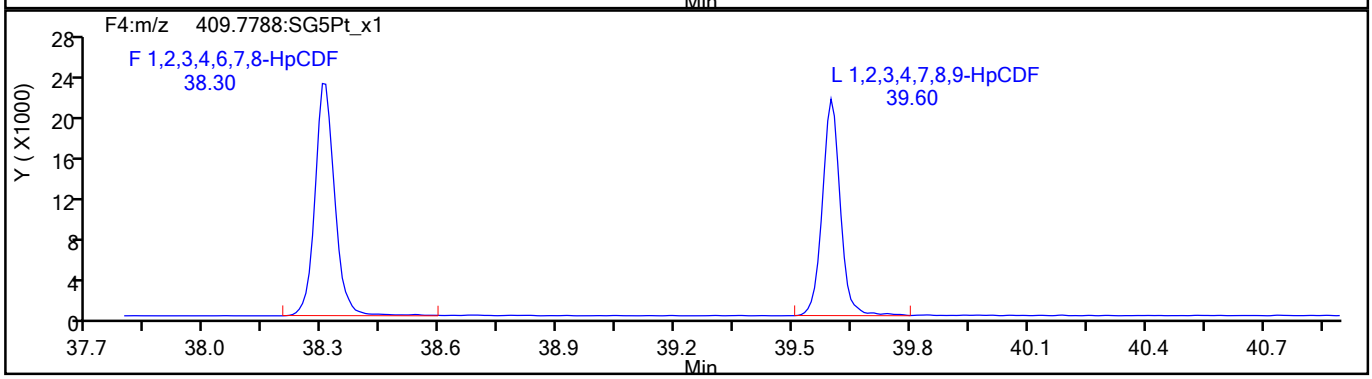

HpCDF Standards

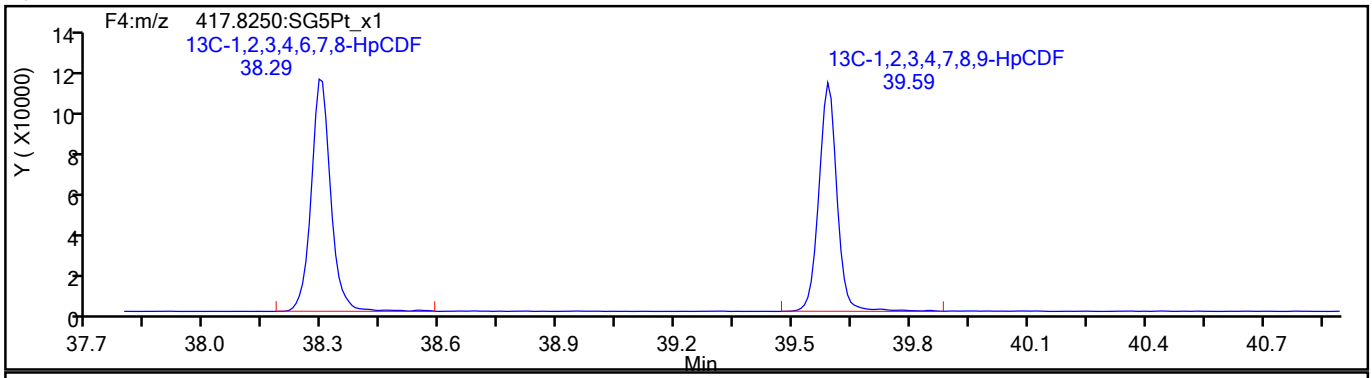

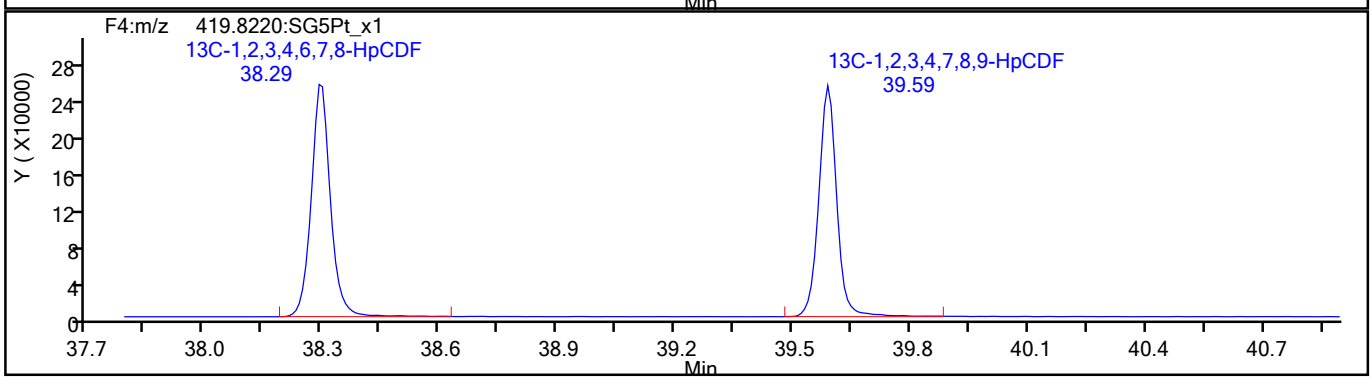

773543

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

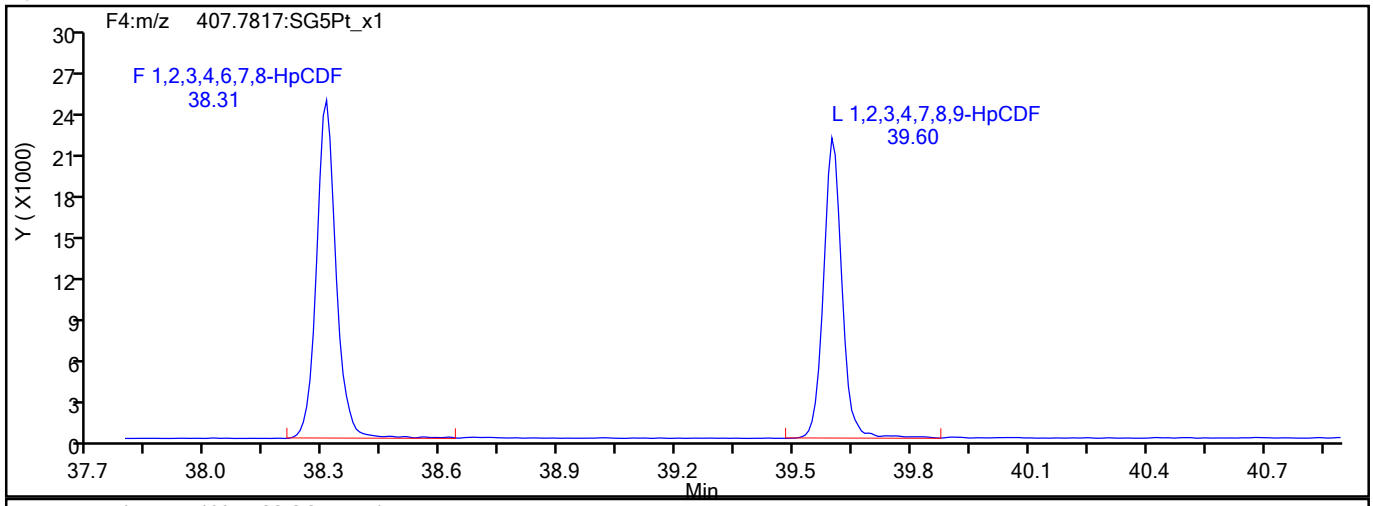

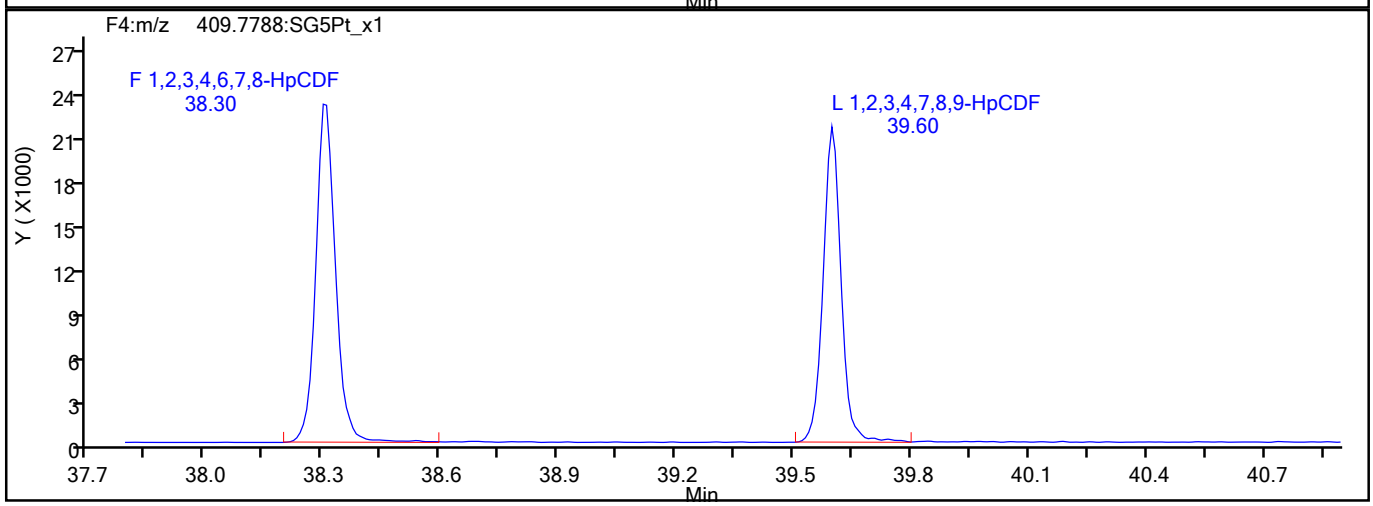

HpCDF Interference Mass

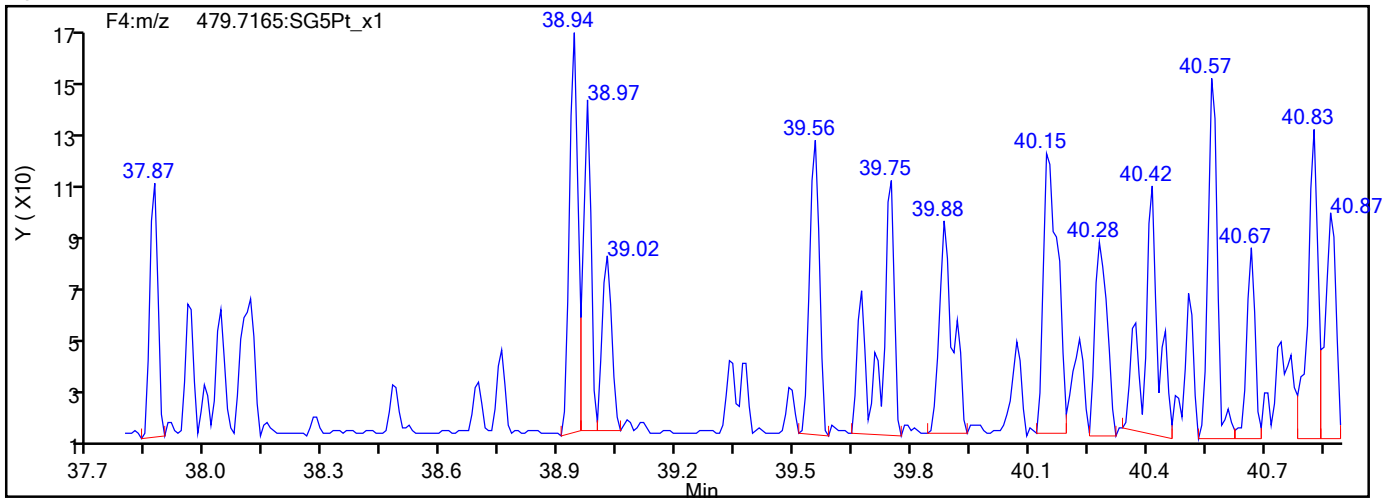

773544

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

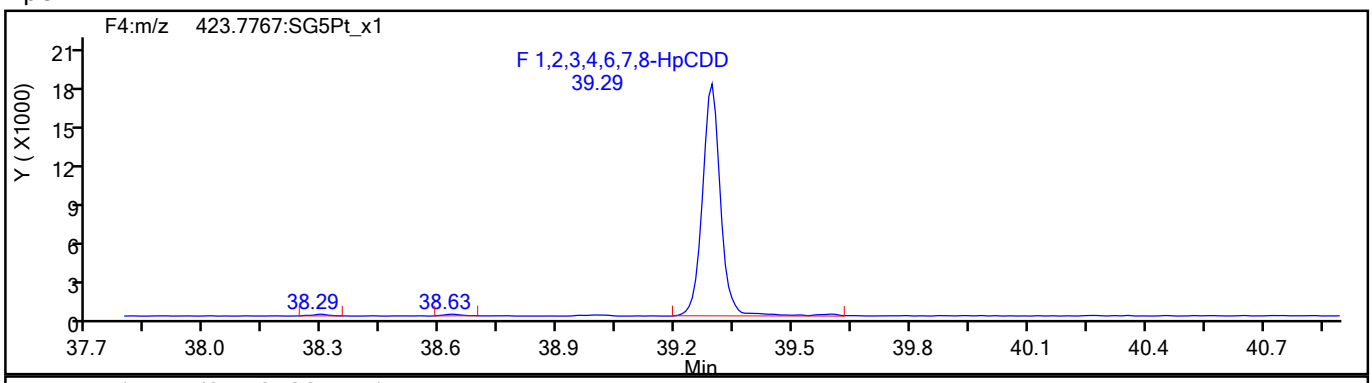

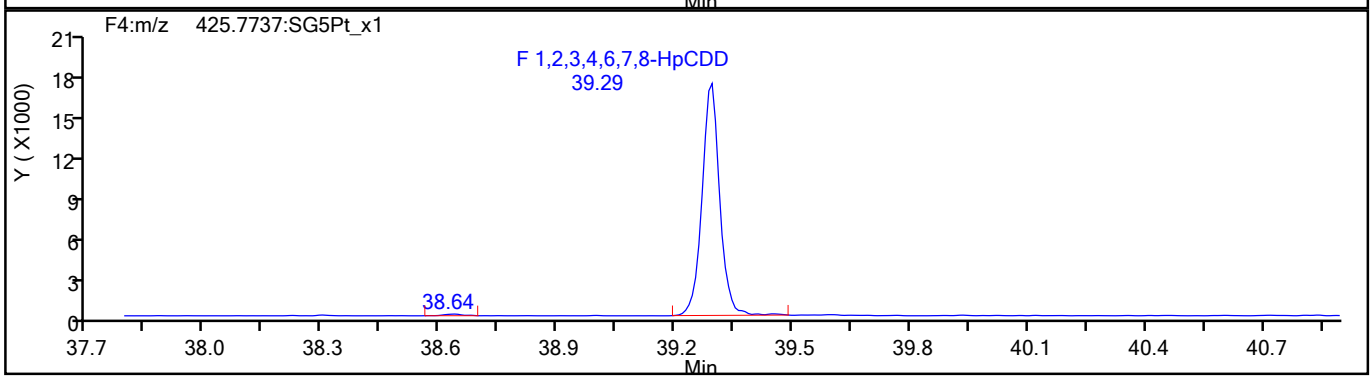

HpCDD Standards

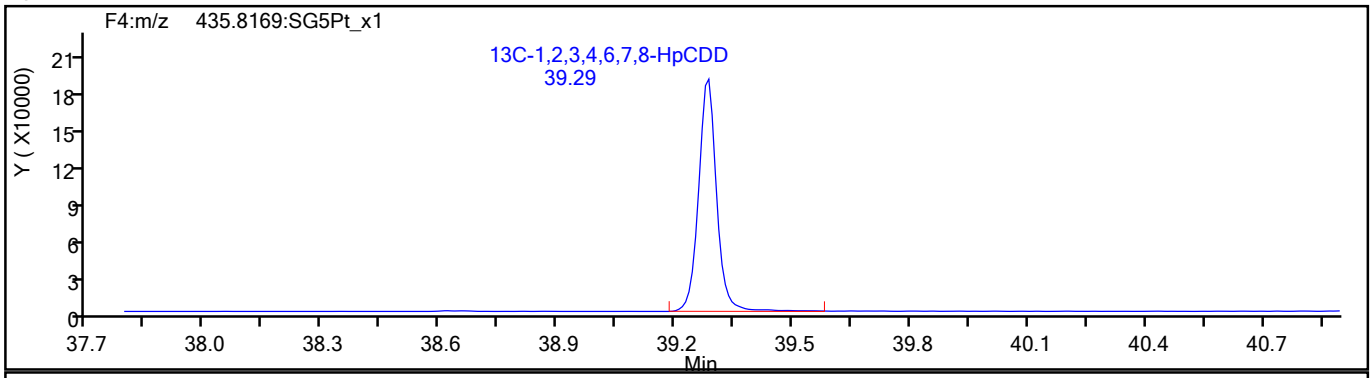

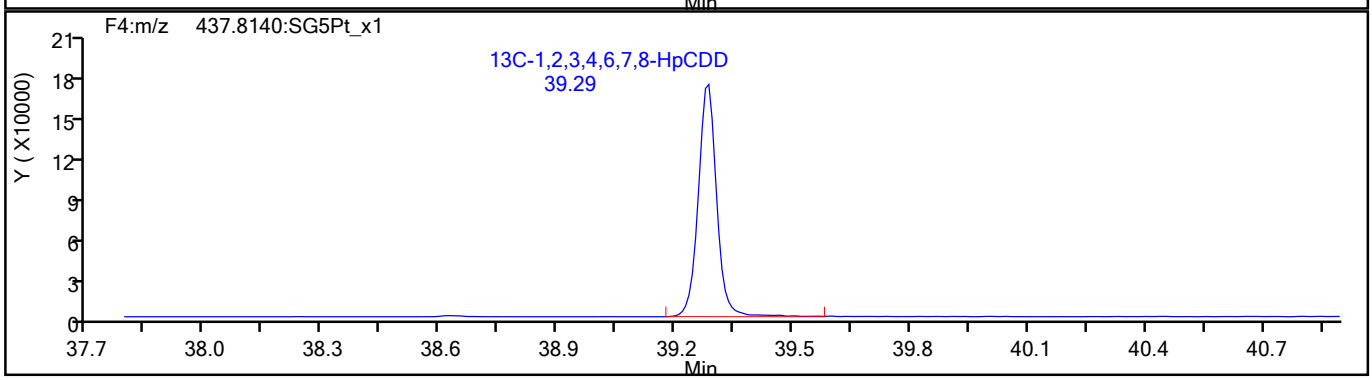

773545

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
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OCDF

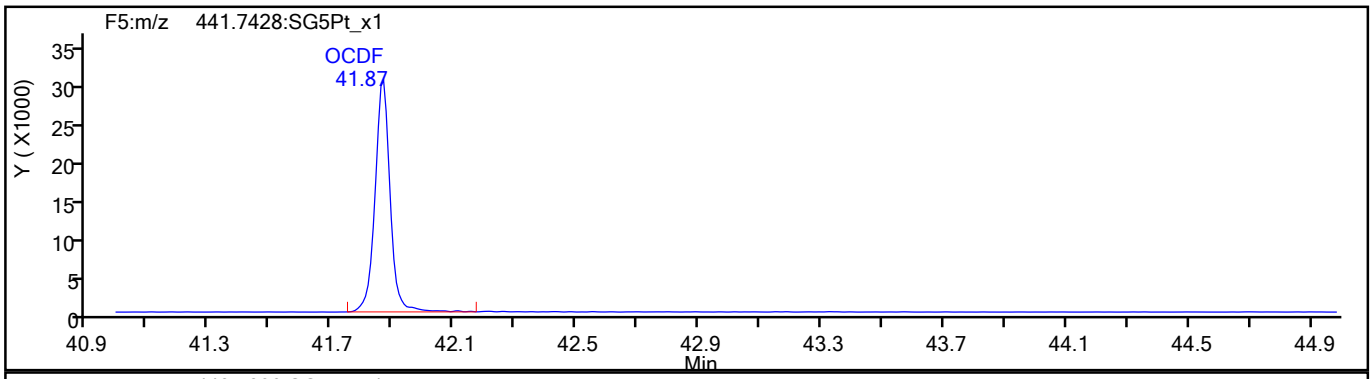

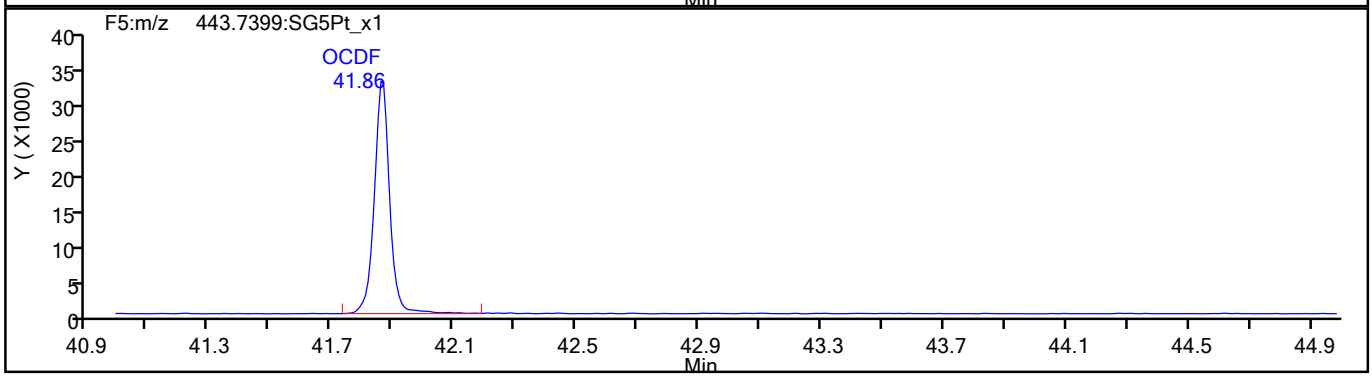

OCDF Standards

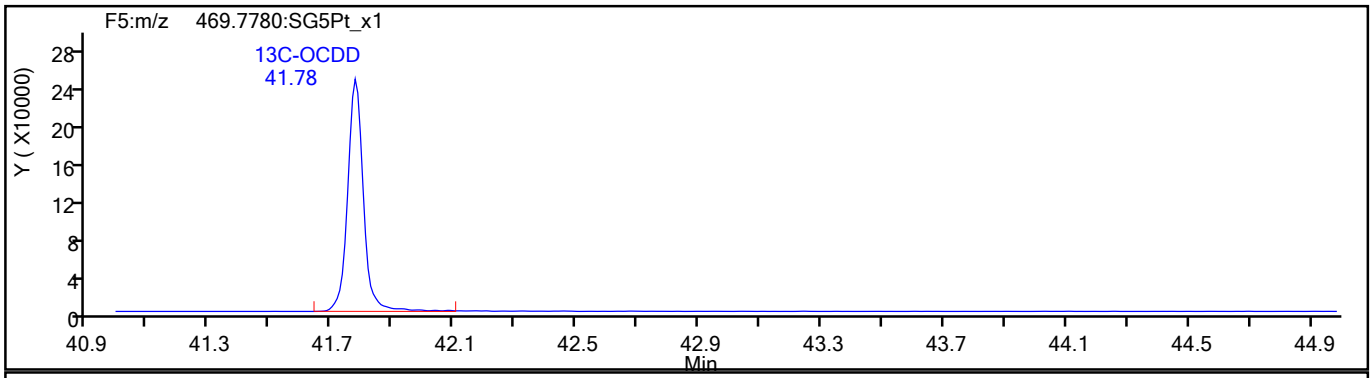

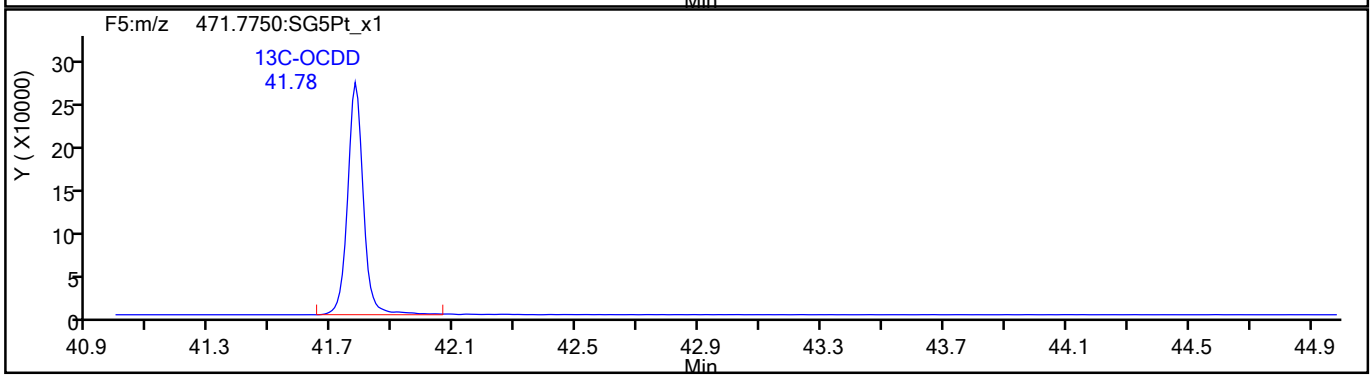

773546

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

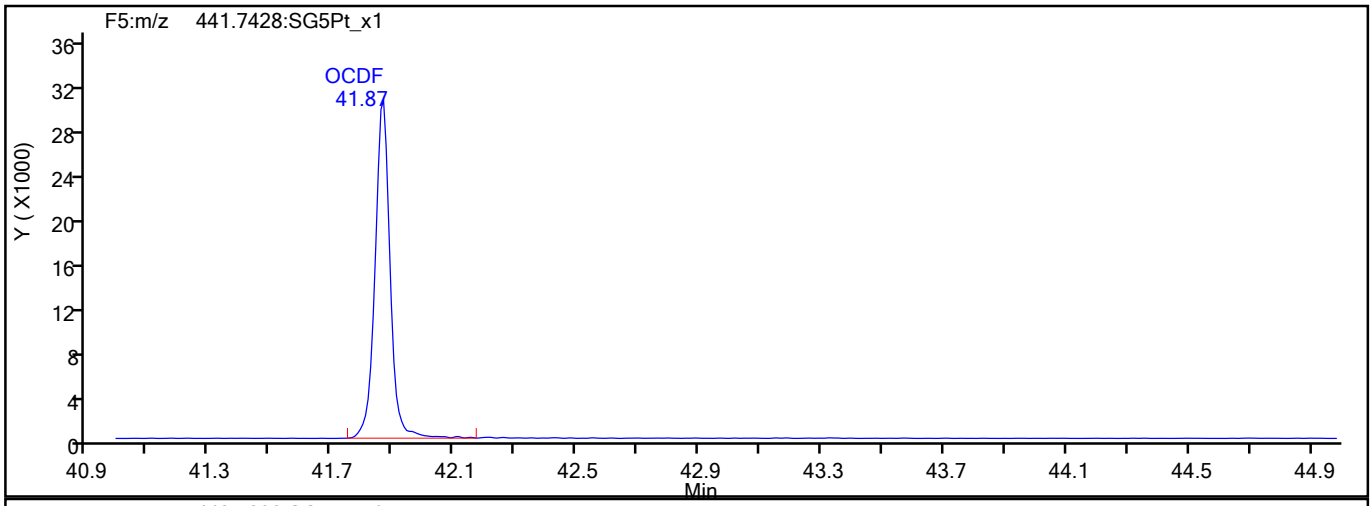

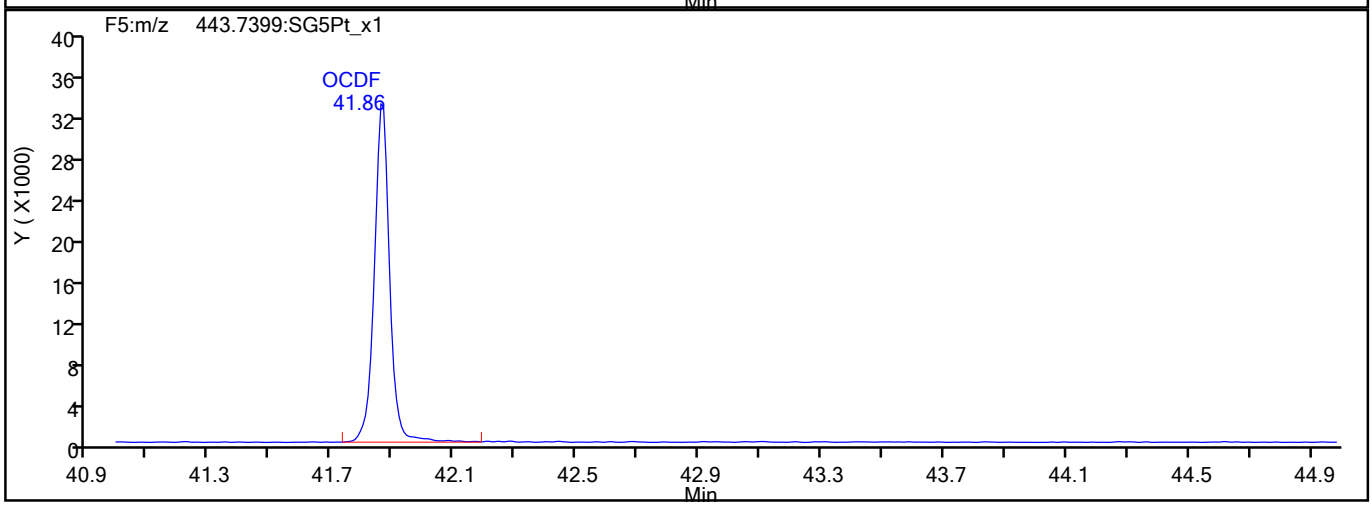

OCDF Interference Mass

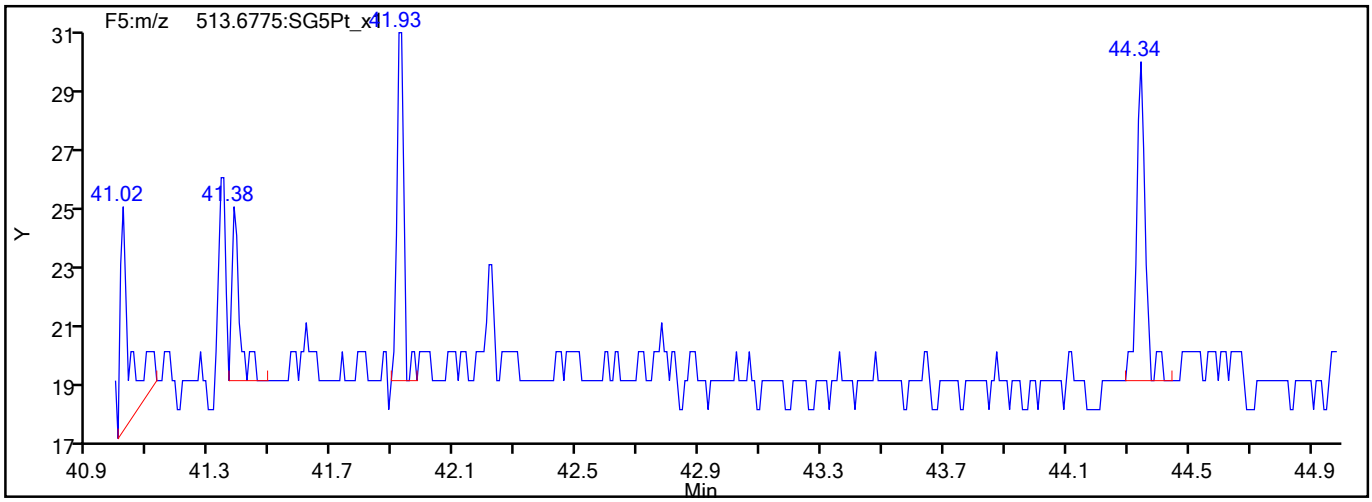

773547

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

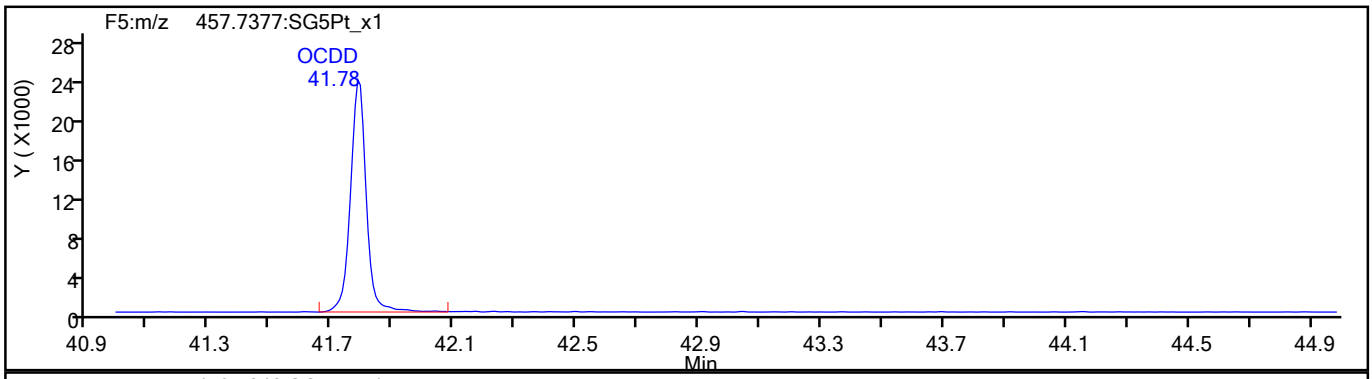

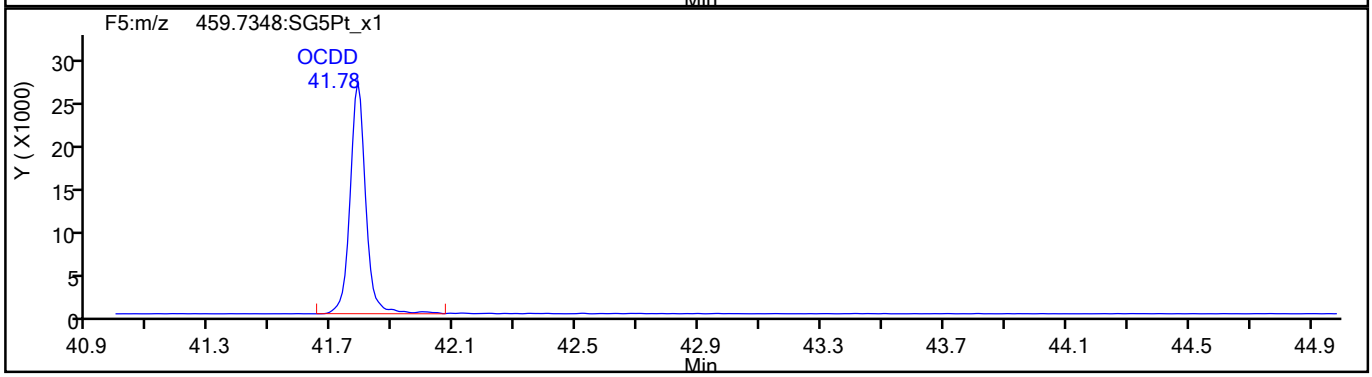

OCDD Standards

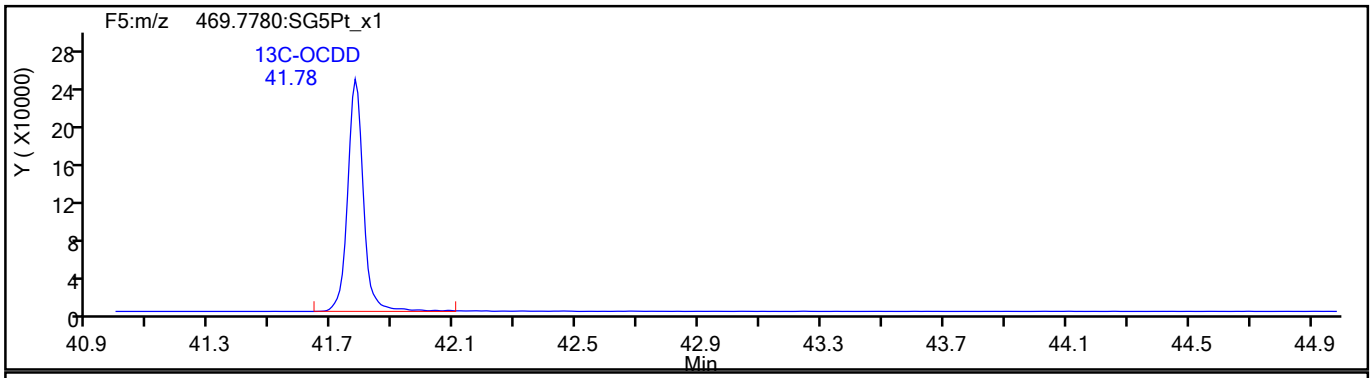

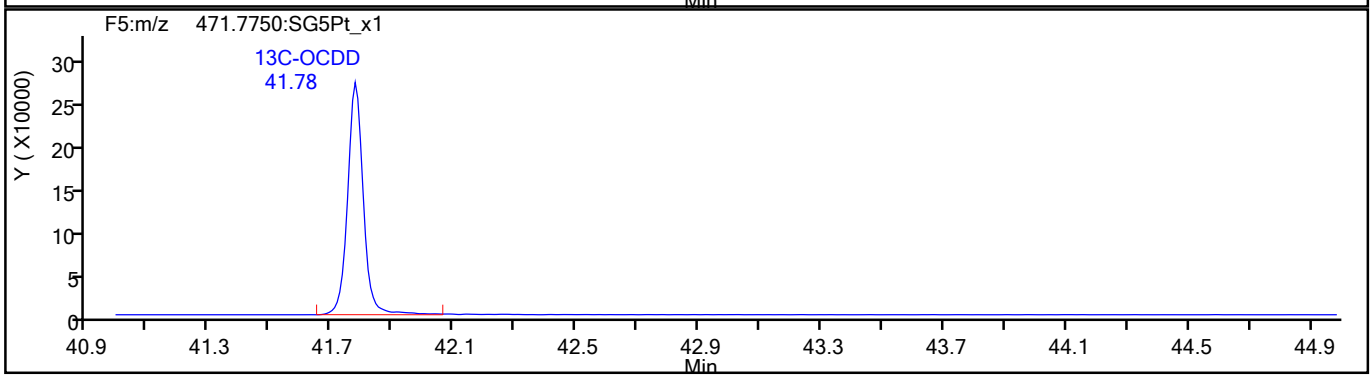

773548

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

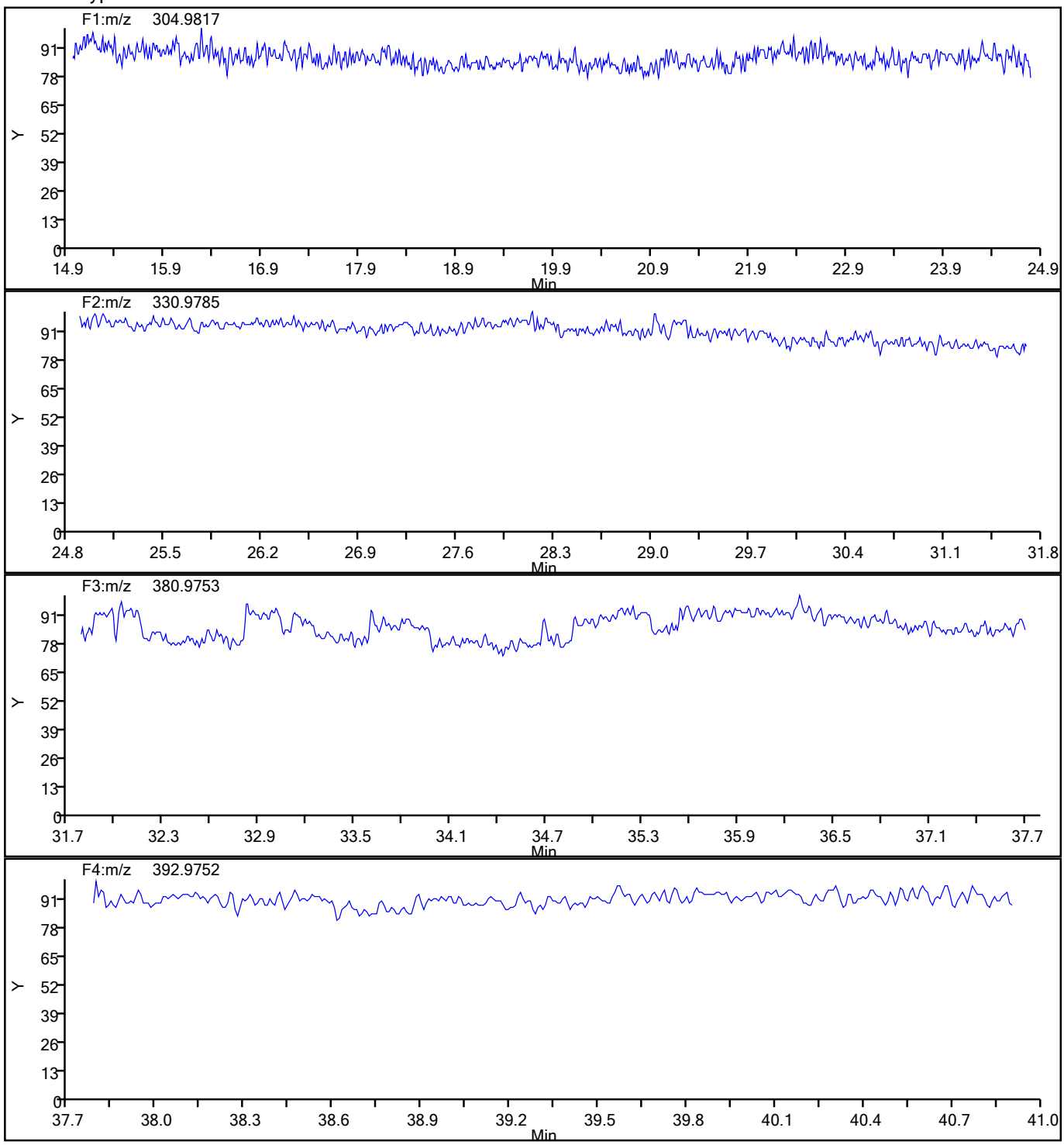

773549

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

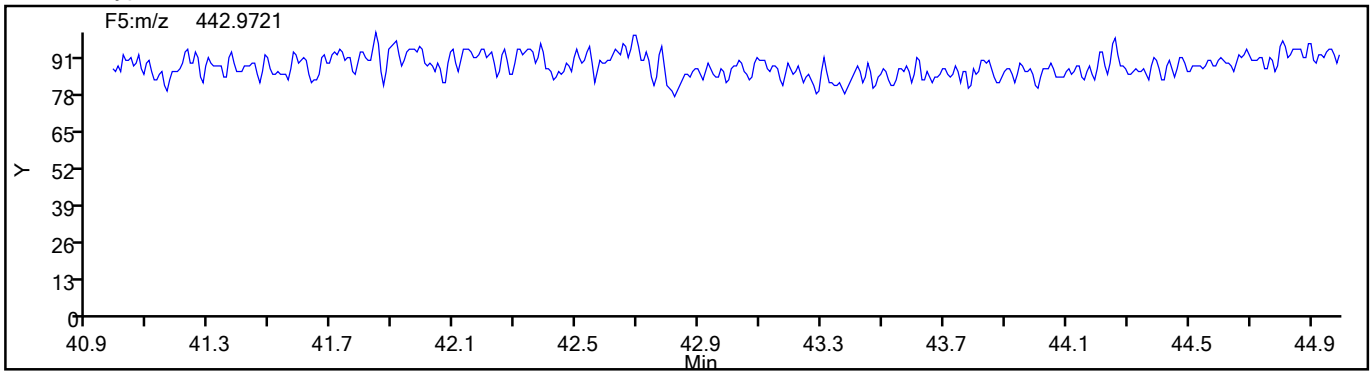

773550

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.546	1900111	0.78	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.619	2465726	0.79	1.3459	96.4	96.4	0.1978	0.1978	96.42	
2,3,7,8-TCDF	19.645	258022	0.78	1.0802	9.687	9.687	0.0168	0.0168	96.87	
S Total TCDF					9.687	9.687	0.0168	0.0168		
D 13C-2,3,7,8-TCDD	20.907	1800864	0.81	0.9317	101.7	101.7	0.1641	0.1641	102	
$ 37Cl4-2,3,7,8-TCDD	20.933	203726		1.0083	10.6	10.6	0.0134	0.0134	106	
2,3,7,8-TCDD	20.924	198062	0.75	1.0753	10.2	10.2	0.0351	0.0351	102	
S Total TCDD					10.2	10.2	0.0351	0.0351		
D 13C-1,2,3,7,8-PeCDF	26.556	2149791	1.60	1.1405	99.2	99.2	0.3269	0.3269	99.20	
1,2,3,7,8-PeCDF	26.573	1114982	1.57	1.0543	49.2	49.2	0.1379	0.1379	98.39	
D 13C-2,3,4,7,8-PeCDF	28.006	1991303	1.58	1.1253	93.1	93.1	0.3313	0.3313	93.13	
2,3,4,7,8-PeCDF	28.031	987812	1.58	1.0079	49.2	49.2	0.1665	0.1665	98.44	
S Total PeCDF					98.4	98.4	0.1522	0.1522		
D 13C-1,2,3,7,8-PeCDD	28.790	1388641	1.58	0.7165	102.0	102.0	0.1629	0.1629	102	
1,2,3,7,8-PeCDD	28.824	741897	1.57	1.0465	51.1	51.1	0.0499	0.0499	102	
S Total PeCDD					51.1	51.1	0.0499	0.0499		
D 13C-1,2,3,4,7,8-HxCDF	34.384	1841825	0.54	0.9648	115.8	115.8	0.3936	0.3936	116	
1,2,3,4,7,8-HxCDF	34.401	1093397	1.25	1.1474	51.7	51.7	0.1928	0.1928	103	
D 13C-1,2,3,6,7,8-HxCDF	34.561	2015594	0.53	1.0708	114.2	114.2	0.3547	0.3547	114	
1,2,3,6,7,8-HxCDF	34.578	1245549	1.24	1.2178	50.7	50.7	0.1720	0.1720	101	
D 13C-2,3,4,6,7,8-HxCDF	35.447	1861559	0.53	1.0413	108.4	108.4	0.3647	0.3647	108	
2,3,4,6,7,8-HxCDF	35.463	1151149	1.26	1.2145	50.9	50.9	0.1650	0.1650	102	
D 13C-1,2,3,7,8,9-HxCDF	36.399	1657413	0.54	0.9731	103.3	103.3	0.3903	0.3903	103	
1,2,3,7,8,9-HxCDF	36.408	1038574	1.24	1.2401	50.5	50.5	0.1718	0.1718	101	
S Total HxCDF					203.9	203.9	0.1754	0.1754		
* 13C-1,2,3,7,8,9-HxCDD	36.197	1648545	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.691	1348471	1.27	0.7587	107.8	107.8	0.2143	0.2143	108	
1,2,3,4,7,8-HxCDD	35.699	724729	1.28	1.0608	50.7	50.7	0.0918	0.0918	101	
D 13C-1,2,3,6,7,8-HxCDD	35.809	1460100	1.24	0.8593	103.1	103.1	0.1892	0.1892	103	
1,2,3,6,7,8-HxCDD	35.826	760446	1.23	0.9933	52.4	52.4	0.0967	0.0967	105	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.214	786511	1.27	1.1094	50.5	50.5	0.0872	0.0872	101	
S Total HxCDD					153.6	153.6	0.0919	0.0919		
D 13C-1,2,3,4,6,7,8-HpCDF	38.316	1182209	0.45	0.7359	97.4	97.4	0.3866	0.3866	97.44	
1,2,3,4,6,7,8-HpCDF	38.324	878086	1.05	1.4421	51.5	51.5	0.1699	0.1699	103	
D 13C-1,2,3,4,7,8,9-HpCDF	39.614	1080883	0.46	0.6854	95.7	95.7	0.4151	0.4151	95.66	
1,2,3,4,7,8,9-HpCDF	39.622	727362	1.05	1.3092	51.4	51.4	0.1875	0.1875	103	
S Total HpCDF					102.9	102.9	0.1787	0.1787		
D 13C-1,2,3,4,6,7,8-HpCDD	39.302	1094713	1.07	0.6745	98.4	98.4	0.2448	0.2448	98.45	
1,2,3,4,6,7,8-HpCDD	39.310	572466	1.05	1.0503	49.8	49.8	0.1044	0.1044	99.58	
S Total HpCDD					49.8	49.8	0.1044	0.1044		
D 13C-OCDD	41.794	1676139	0.90	0.5446	186.7	186.7	0.2845	0.2845	93.34	
OCDF	41.887	1118740	0.90	1.3168	101.4	101.4	0.1189	0.1189	101	
OCDD	41.803	910980	0.89	1.0620	102.4	102.4	0.1082	0.1082	102	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.546	20.547	0		832498	129736	116	290	1118		
333.9338	20.546	20.547	0		1067613	165878	65	162	2552	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.619	19.616	0	0.955	1091704	180342	213	532	847		
317.9389	19.619	19.616	0	0.955	1374022	217372	102	255	2131	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.645	19.646	0	1.001	113254	18239	10	25	1824		
305.8987	19.645	19.646	0	1.001	144768	23858	19	47	1256	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.907	20.910	0	1.018	803279	117913	116	290	1016		
333.9338	20.907	20.910	0	1.018	997585	152094	65	162	2340	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.933	20.935	0	1.019	203726	29833	16	40	1865		
2,3,7,8-TCDD											
319.8965	20.924	20.939	-1	1.001	85173	13080	31	77	422		
321.8936	20.941	20.939	0	1.002	112889	16258	10	25	1626	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.556	26.560	0	1.292	1323851	238814	266	665	898		
353.8970	26.556	26.560	0	1.292	825940	146442	175	437	837	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.573	26.584	-1	1.001	680306	120693	132	330	914		
341.8567	26.573	26.584	-1	1.001	434676	76404	92	230	830	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.006	28.014	0	1.363	1219332	203015	266	665	763		
353.8970	28.006	28.014	0	1.363	771971	130766	175	437	747	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.031	28.039	0	1.001	604266	98138	132	330	743		
341.8567	28.031	28.039	0	1.001	383546	62644	92	230	681	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.790	28.801	-1	1.401	851334	132655	82	205	1618		
369.8919	28.790	28.801	-1	1.401	537307	81623	56	140	1458	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.824	28.828	0	1.001	452903	70092	31	77	2261		
357.8516	28.824	28.828	0	1.001	288994	44853	14	35	3204	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.384	34.384	0	0.950	645542	131022	198	495	662		
385.8610	34.384	34.384	0	0.950	1196283	248690	400	1000	622	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.401	34.405	0	1.000	607111	119877	181	452	662		
375.8178	34.401	34.405	0	1.000	486286	95304	155	387	615	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.561	34.562	0	0.955	696119	139607	198	495	705		
385.8610	34.561	34.562	0	0.955	1319475	261396	400	1000	653	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.578	34.582	0	1.000	690624	134257	181	452	742		
375.8178	34.578	34.582	0	1.000	554925	106932	155	387	690	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.447	35.444	0	0.979	648311	145832	198	495	737		
385.8610	35.447	35.444	0	0.979	1213248	273234	400	1000	683	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.463	35.461	0	1.000	640849	139500	181	452	771		
375.8178	35.463	35.461	0	1.000	510300	111840	155	387	722	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.399	36.388	1	1.006	579583	134604	198	495	680		
385.8610	36.399	36.388	1	1.006	1077830	259553	400	1000	649	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.408	36.402	0	1.000	575769	139453	181	452	770		
375.8178	36.408	36.402	0	1.000	462805	111702	155	387	721	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.197	36.192	0		918631	219913	146	365	1506		
403.8529	36.197	36.192	0		729914	173739	110	275	1579	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.691	35.680	1	0.986	754120	185149	146	365	1268		
403.8529	35.691	35.680	1	0.986	594351	145418	110	275	1322	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.699	35.695	0	1.000	407415	100236	71	177	1412		
391.8127	35.699	35.695	0	1.000	317314	80745	58	145	1392	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.809	35.805	0	0.989	809032	182963	146	365	1253		
403.8529	35.809	35.805	0	0.989	651068	152224	110	275	1384	1.24(1.05-1.43)	

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.826	35.820	0	1.000	419224	96522	71	177	1359		
391.8127	35.826	35.820	0	1.000	341222	77256	58	145	1332	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.214	36.208	0	1.015	440686	104923	71	177	1478		
391.8127	36.214	36.208	0	1.015	345825	82846	58	145	1428	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.316	38.305	1	1.059	366846	105531	154	385	685		
419.8220	38.316	38.305	1	1.059	815363	231224	294	735	786	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.324	38.317	0	1.000	449936	128816	169	422	762		
409.7788	38.324	38.317	0	1.000	428150	123728	161	402	768	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.614	39.600	1	1.094	340338	106309	154	385	690		
419.8220	39.606	39.600	0	1.094	740545	229697	294	735	781	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.622	39.608	1	1.000	372140	117961	169	422	698		
409.7788	39.622	39.608	1	1.000	355222	111585	161	402	693	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.302	39.293	1	1.086	567057	176920	136	340	1301		
437.8140	39.302	39.293	1	1.086	527656	171361	124	310	1382	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.310	39.301	1	1.000	293602	91347	77	192	1186		
425.7737	39.310	39.301	1	1.000	278864	87962	76	190	1157	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.794	41.785	1	1.155	795323	226496	132	330	1716		
471.7750	41.794	41.785	1	1.155	880816	252365	112	280	2253	0.90(0.76-1.02)	
OCDF											
441.7428	41.887	41.875	1	1.002	530577	155278	73	182	2127		
443.7399	41.887	41.875	1	1.002	588163	168537	77	192	2189	0.90(0.76-1.02)	
OCDD											
457.7377	41.803	41.794	1	1.000	427984	122796	54	135	2274		
459.7348	41.803	41.794	1	1.000	482996	140394	56	140	2507	0.89(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

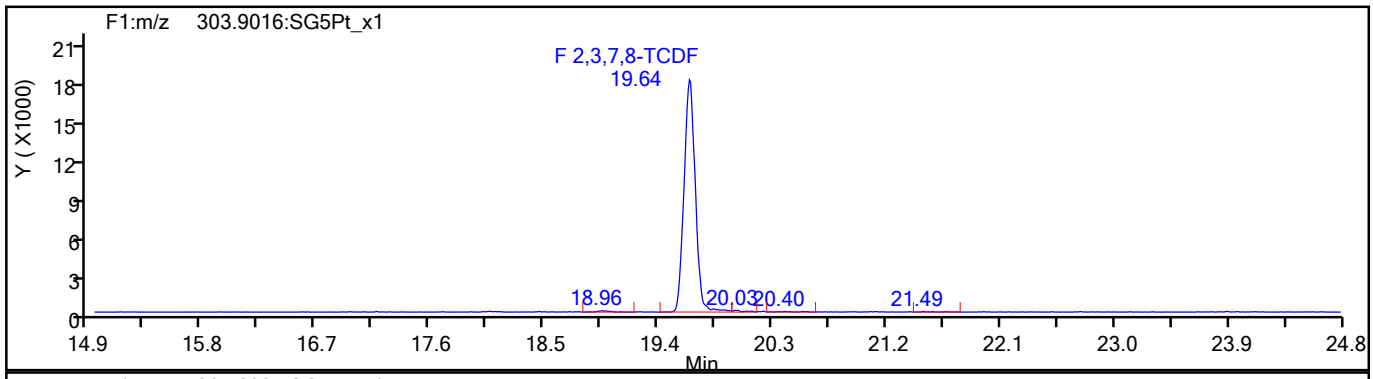

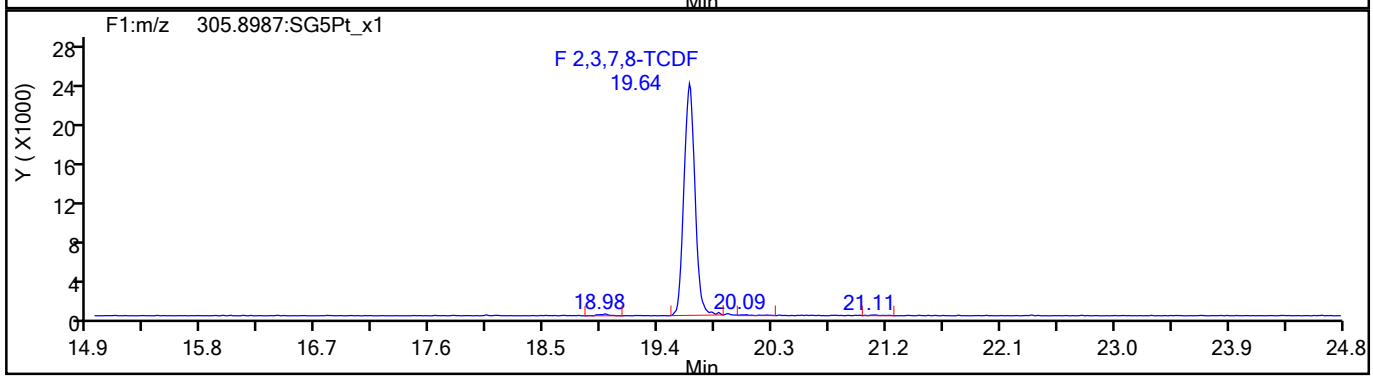

TCDF Standards

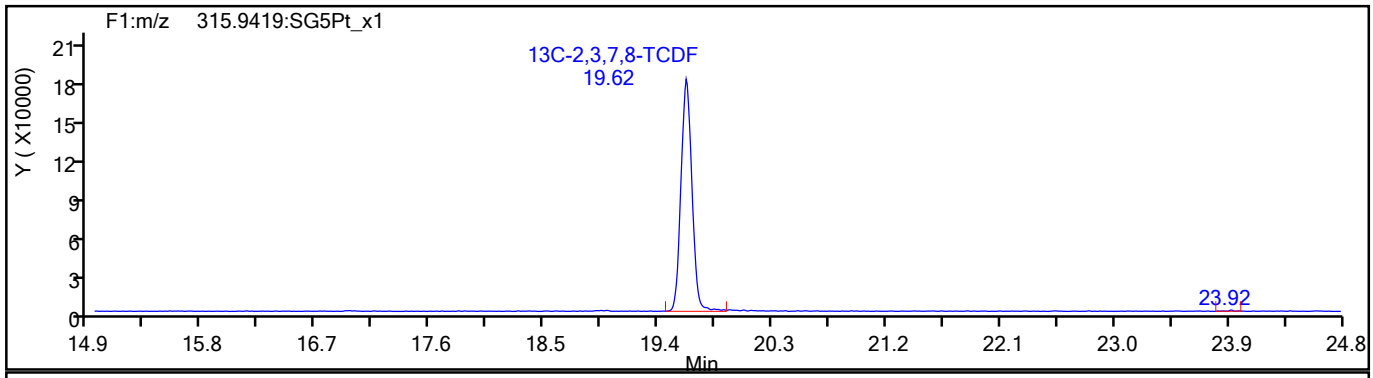

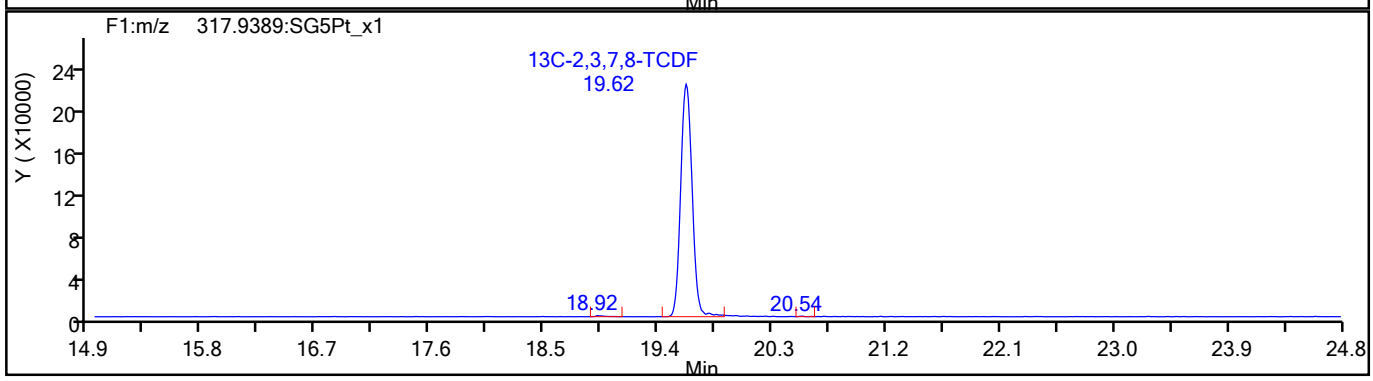

773556

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

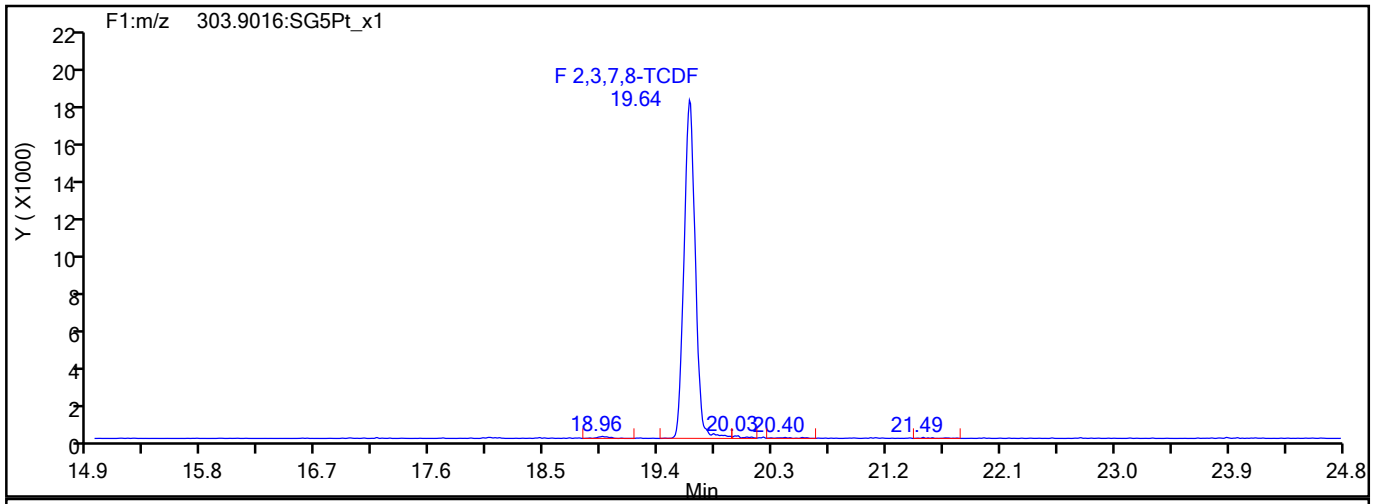

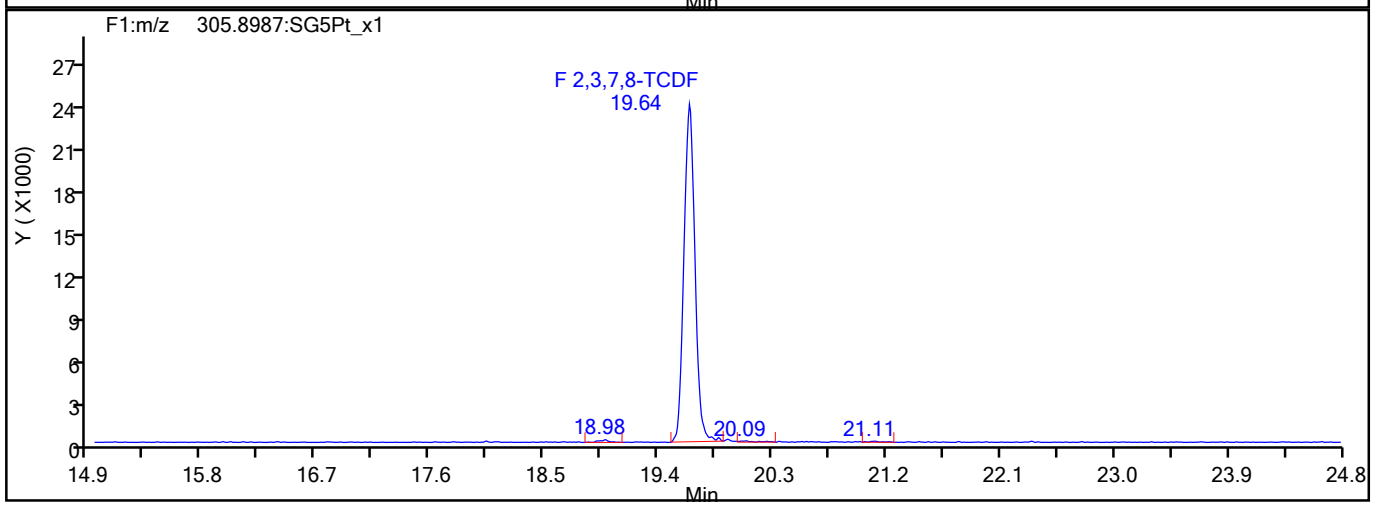

TCDF Interference Mass

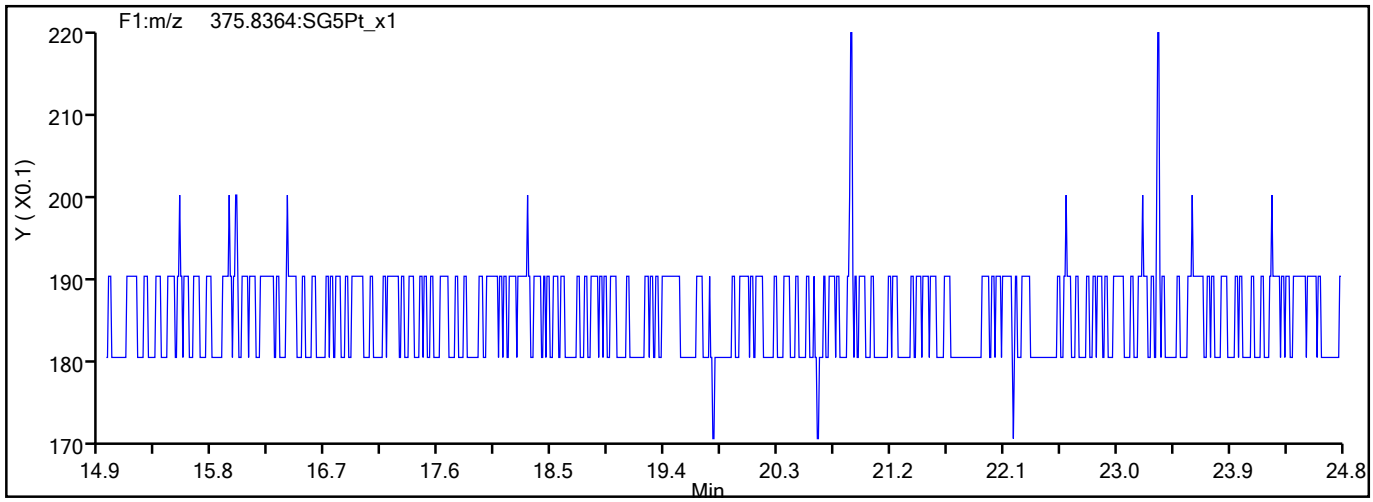

773557

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

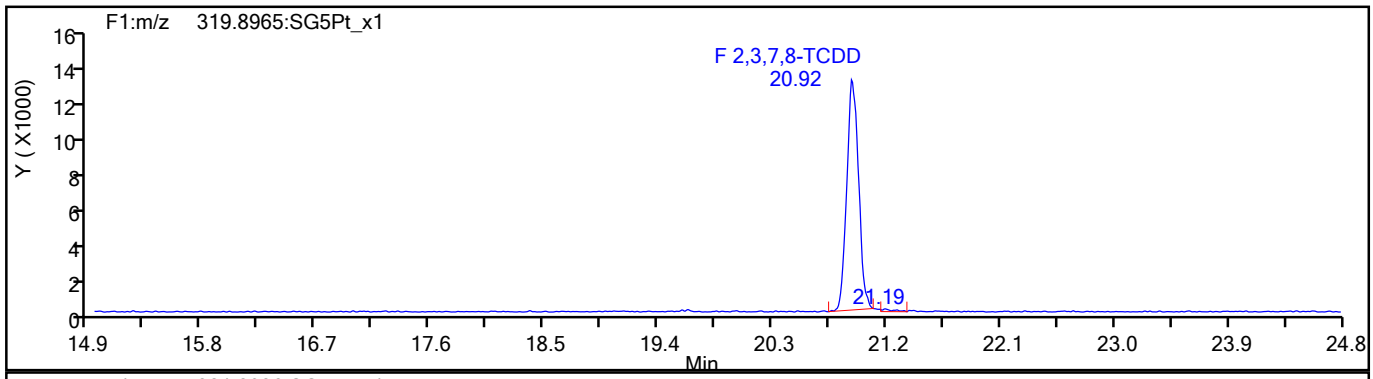

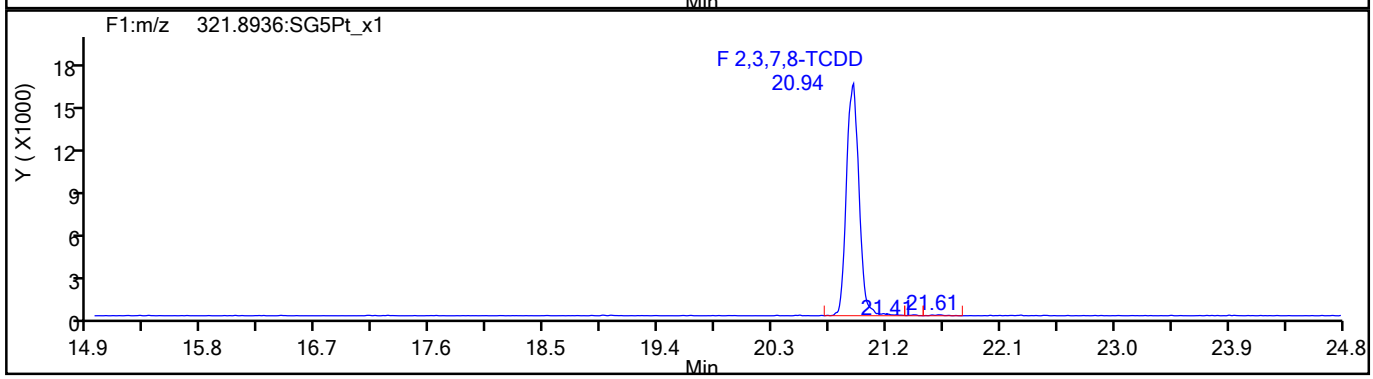

TCDD Standards

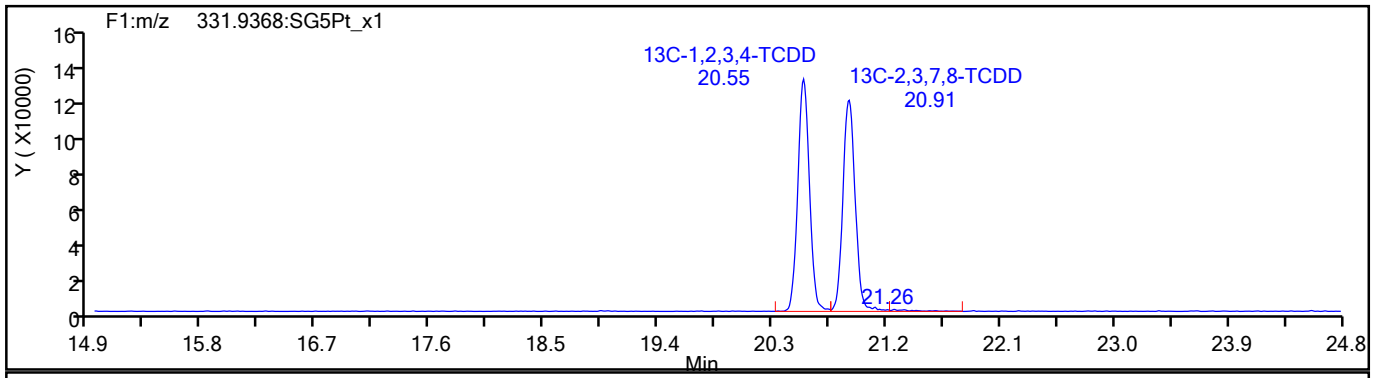

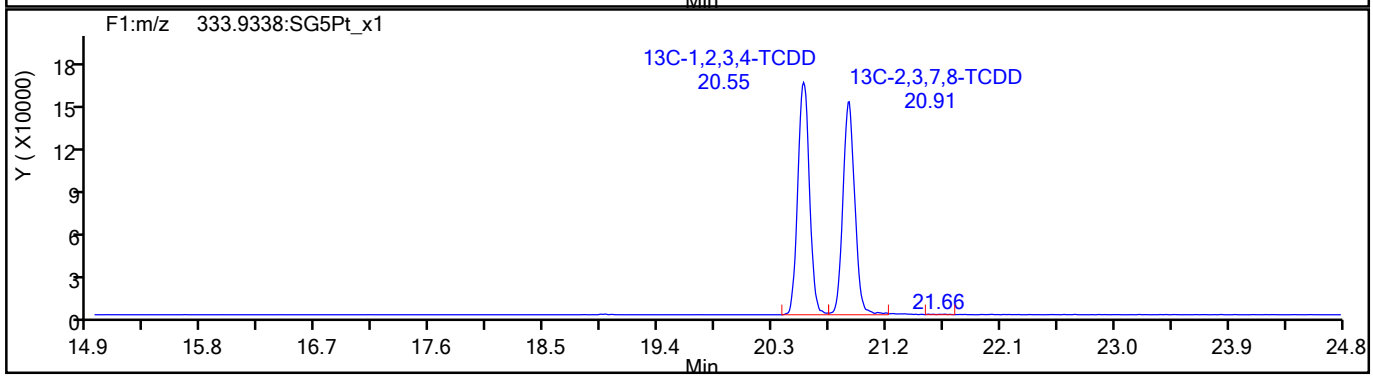

773558

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

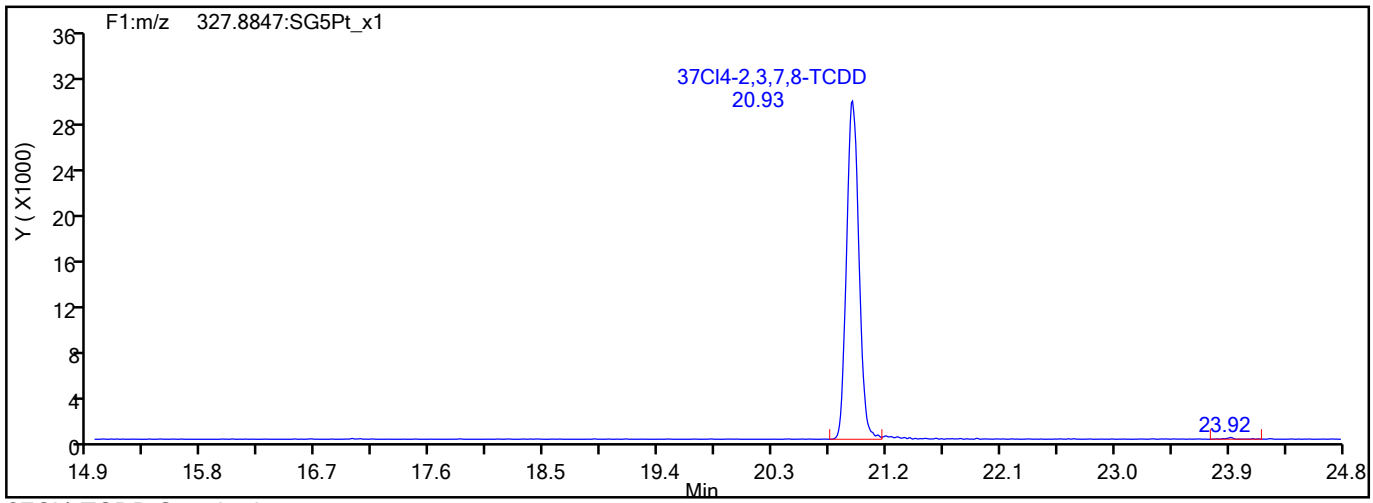

37Cl4-TCDD Standards

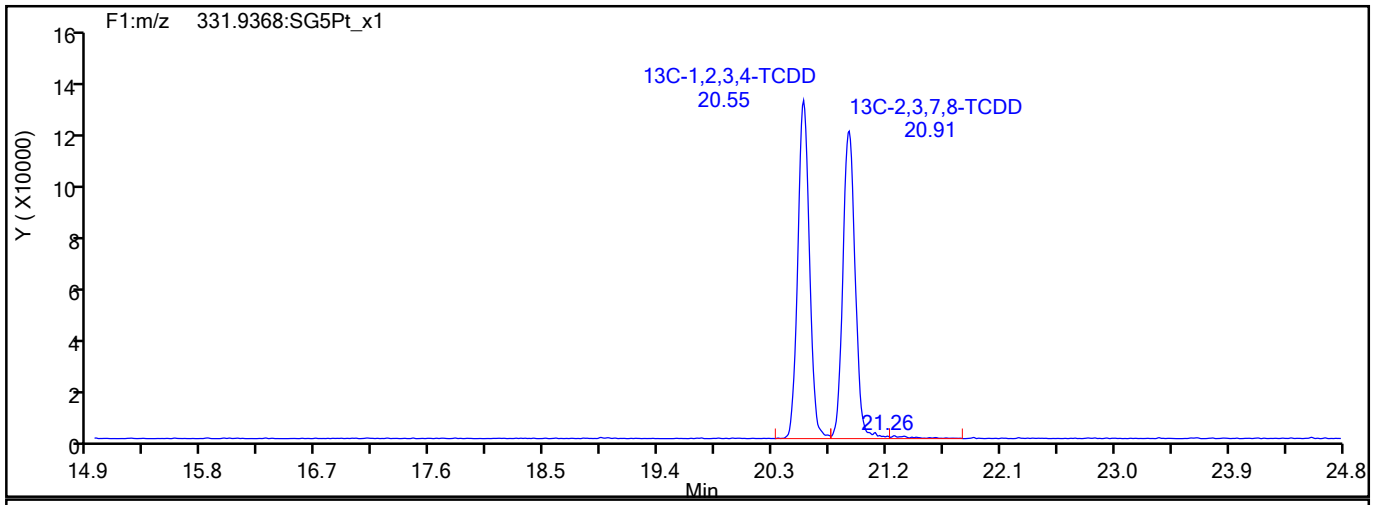

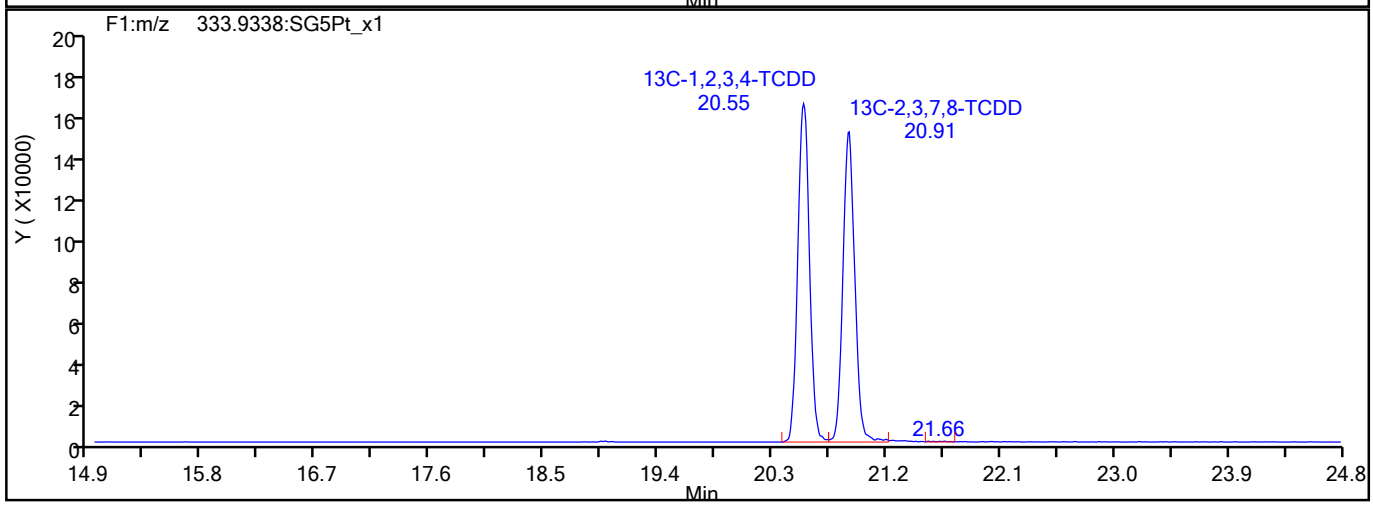

773559

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

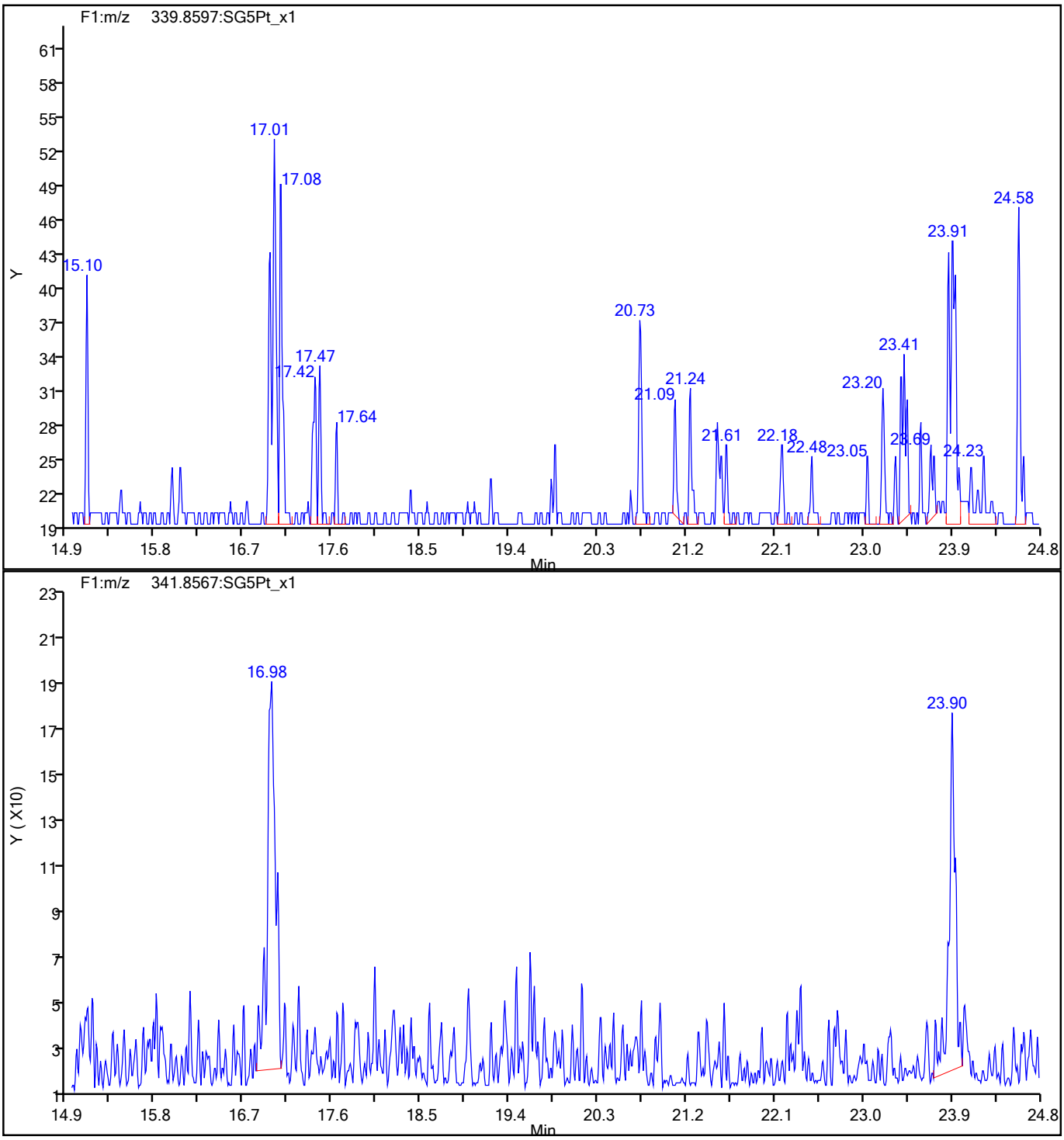

773560

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

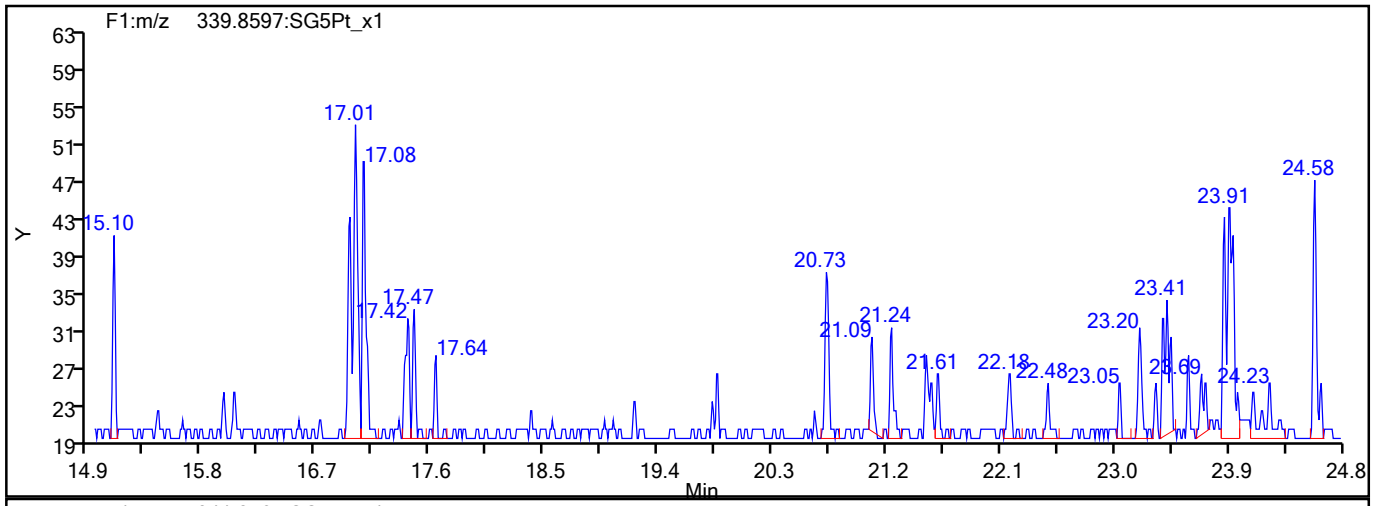

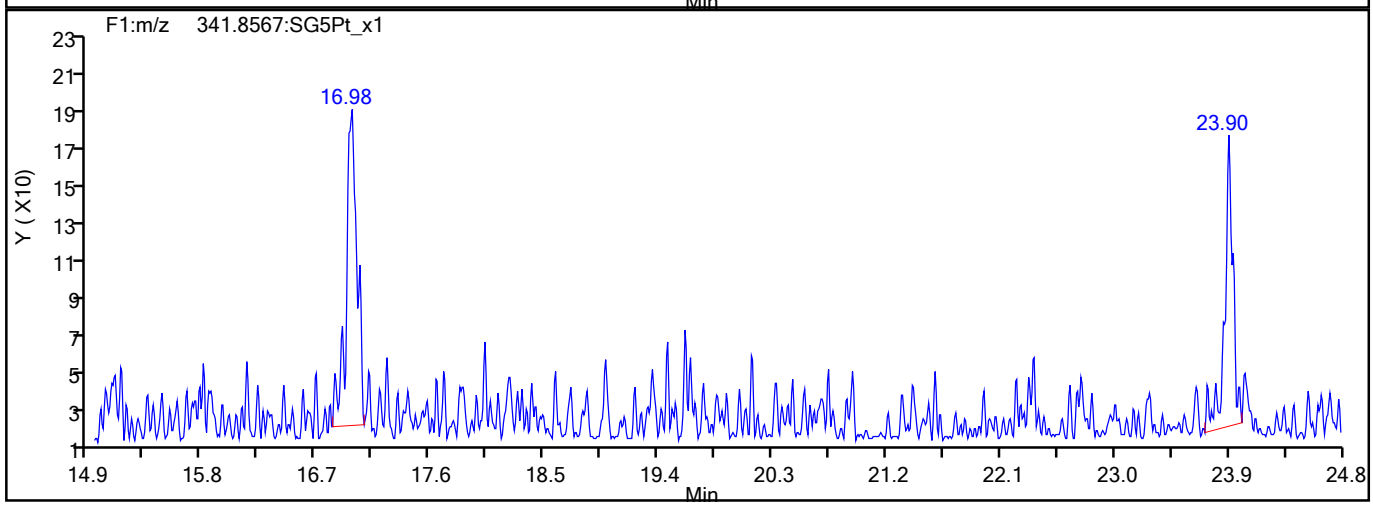

F1 PeCDFs Interference Mass

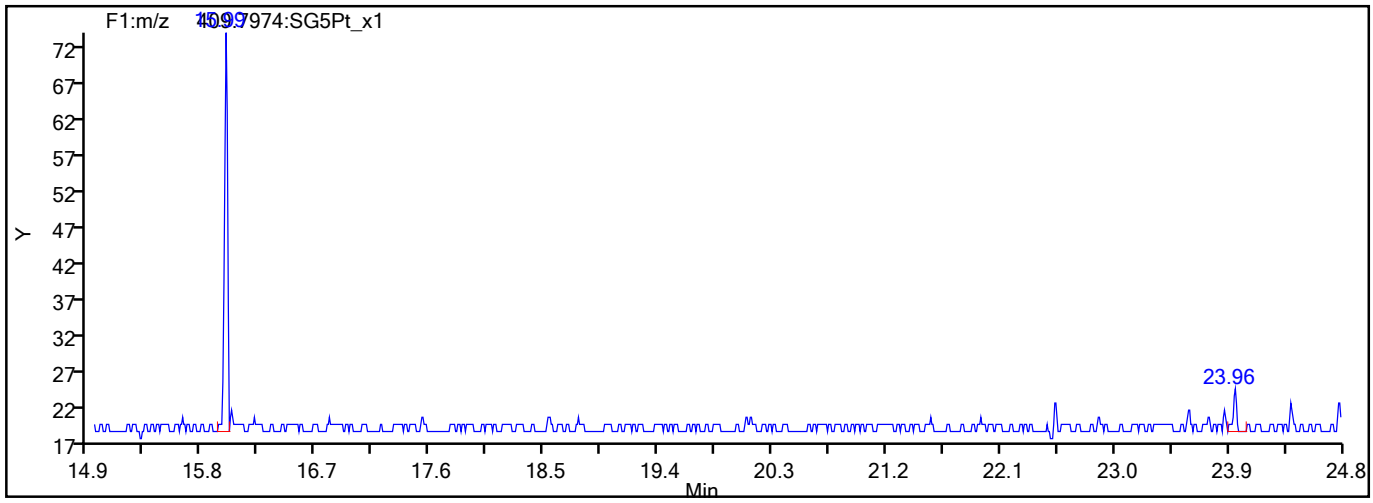

773561

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

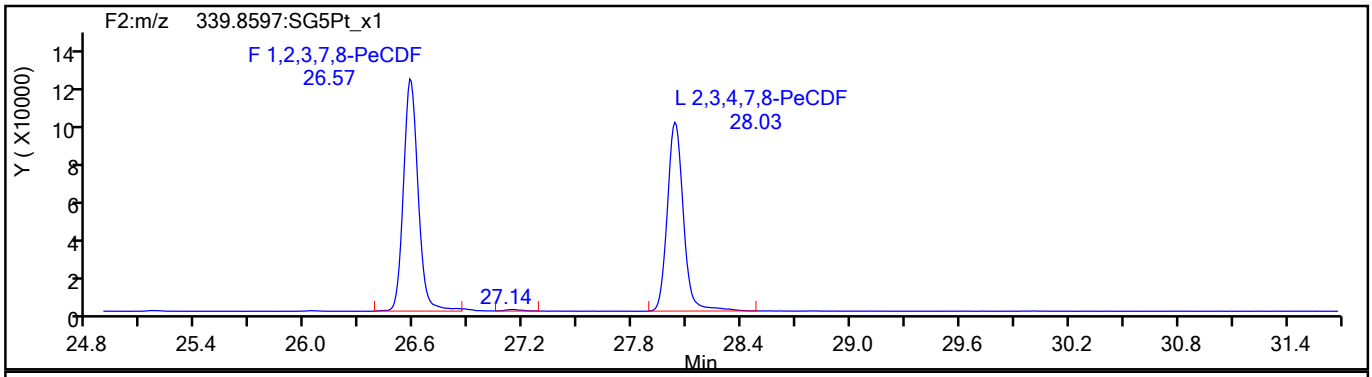

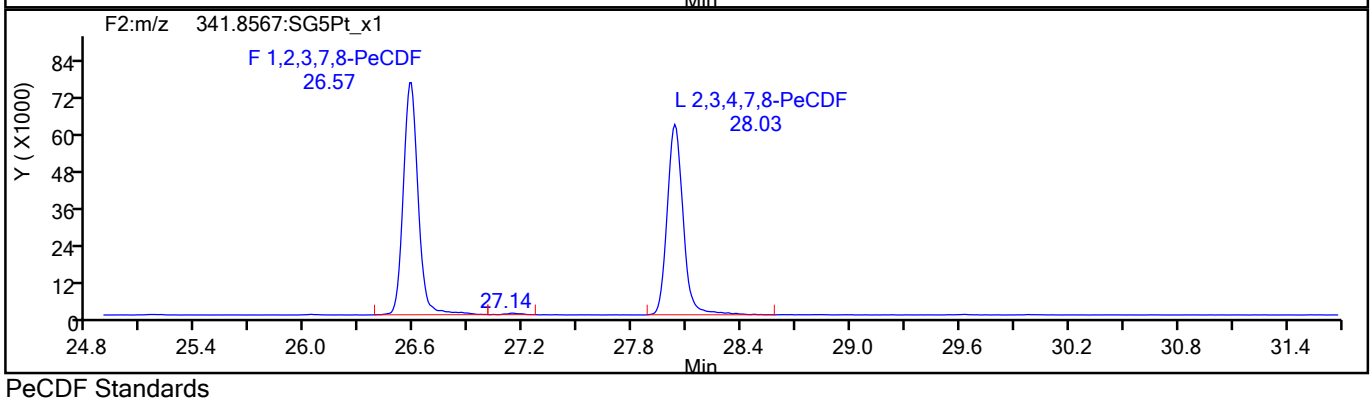

PeCDF Standards

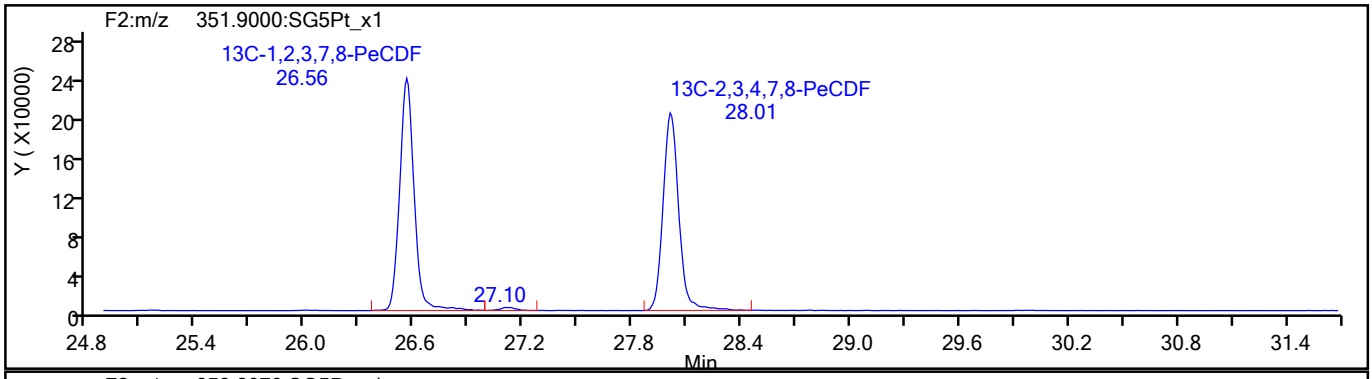

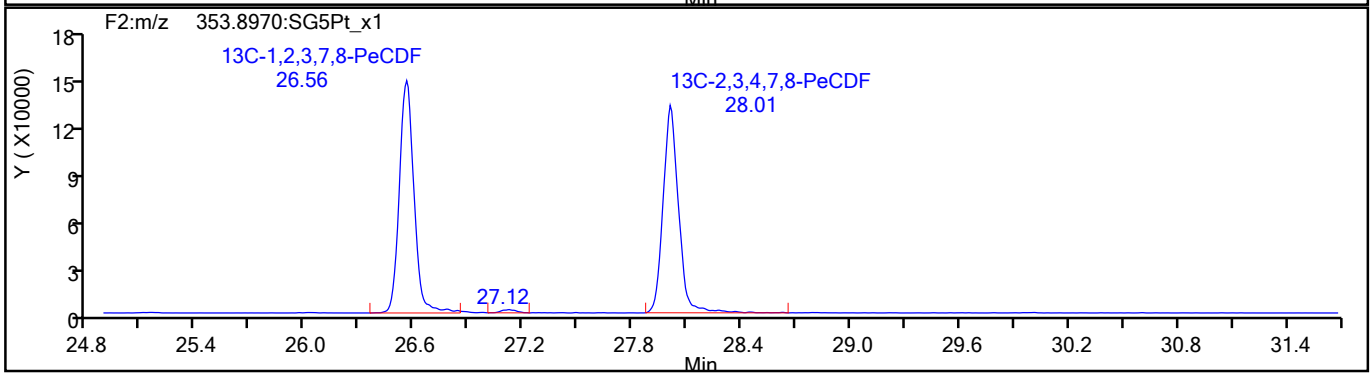

773562

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

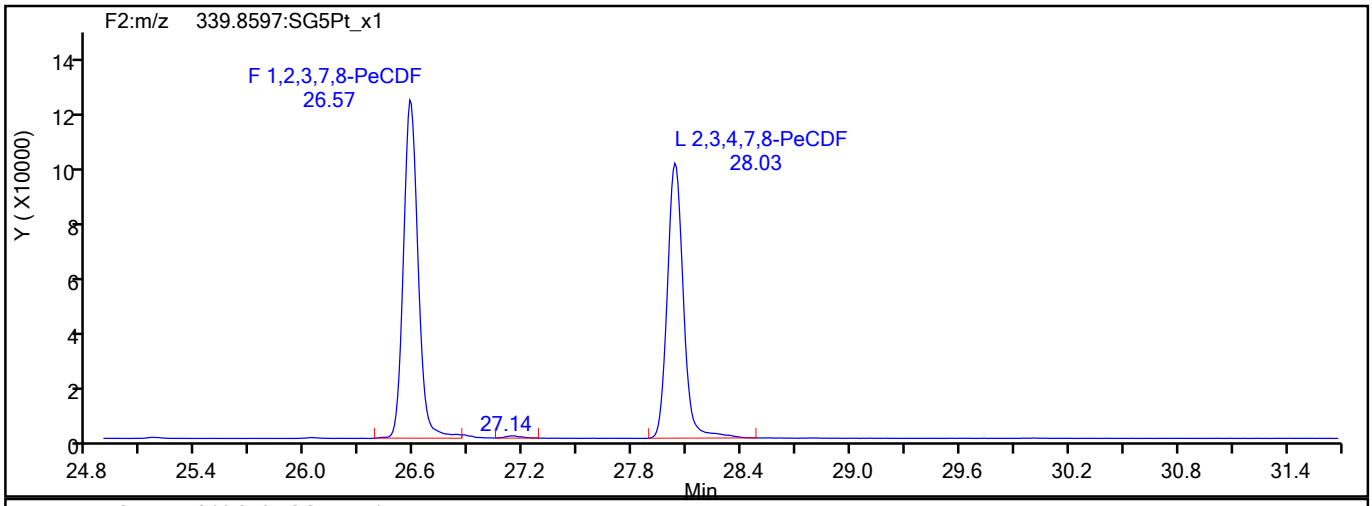

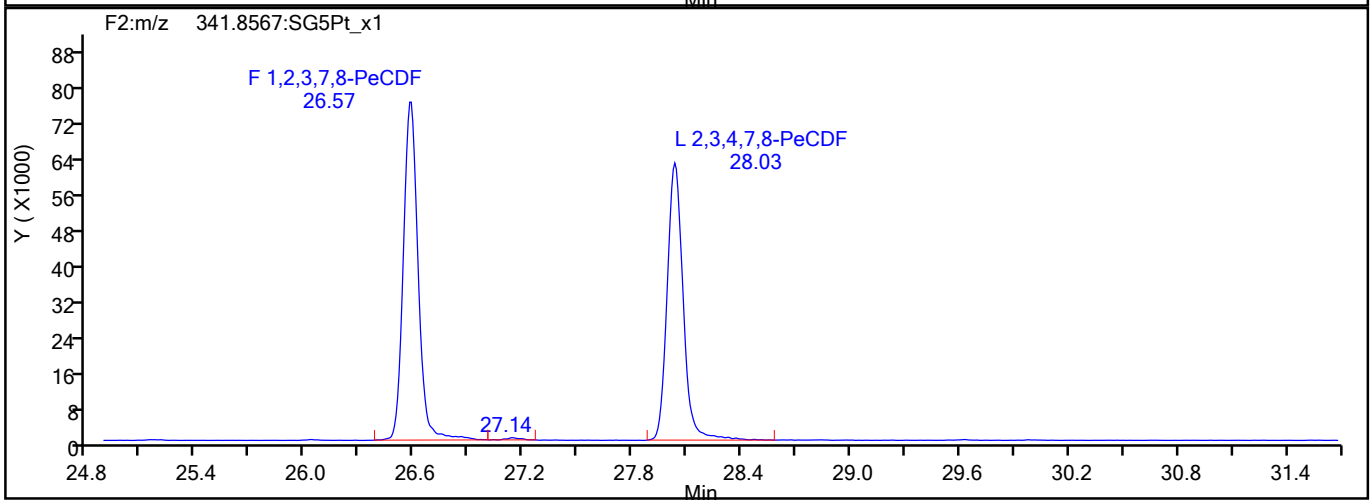

PeCDF Interference Mass

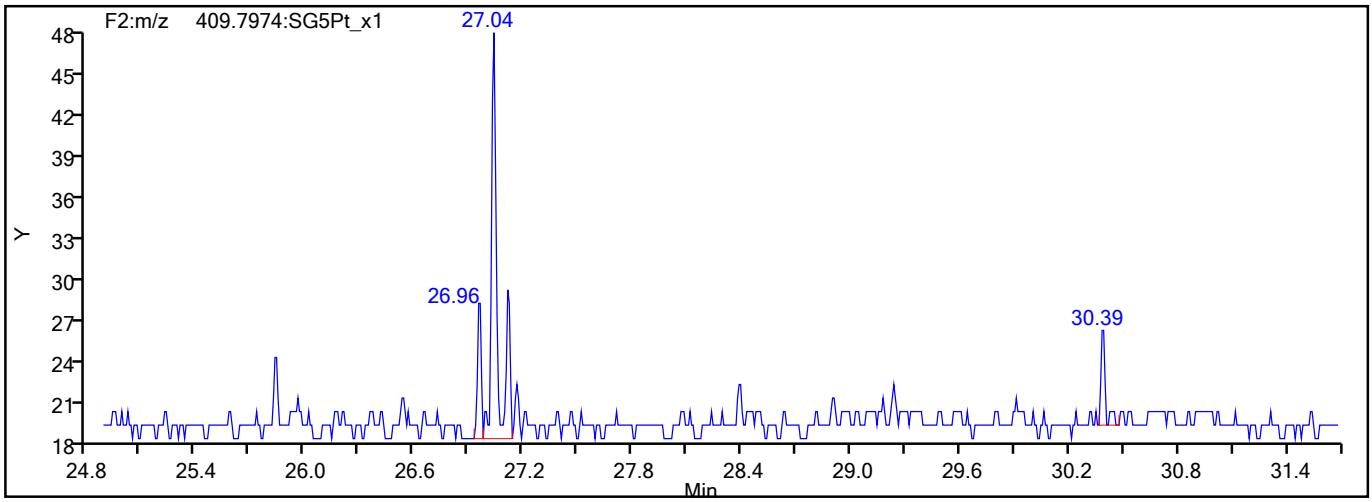

773563

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

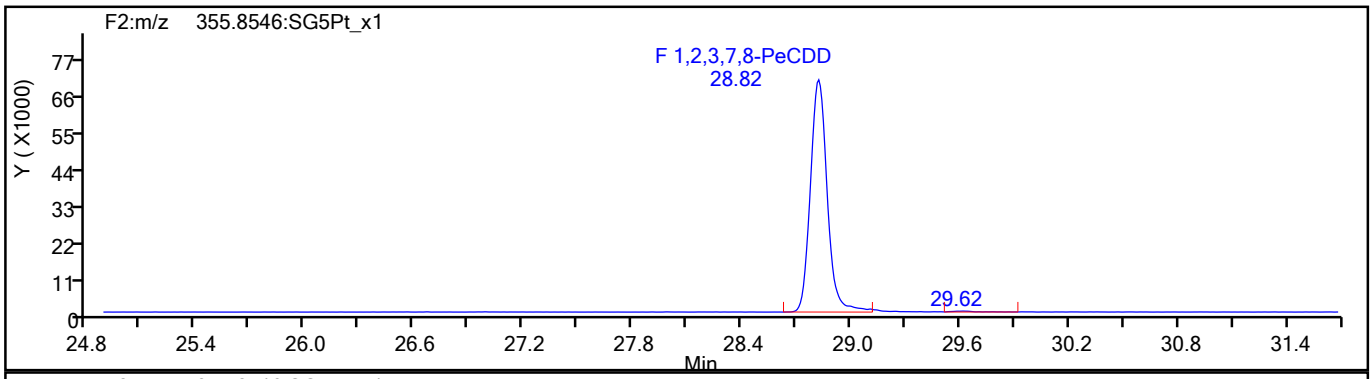

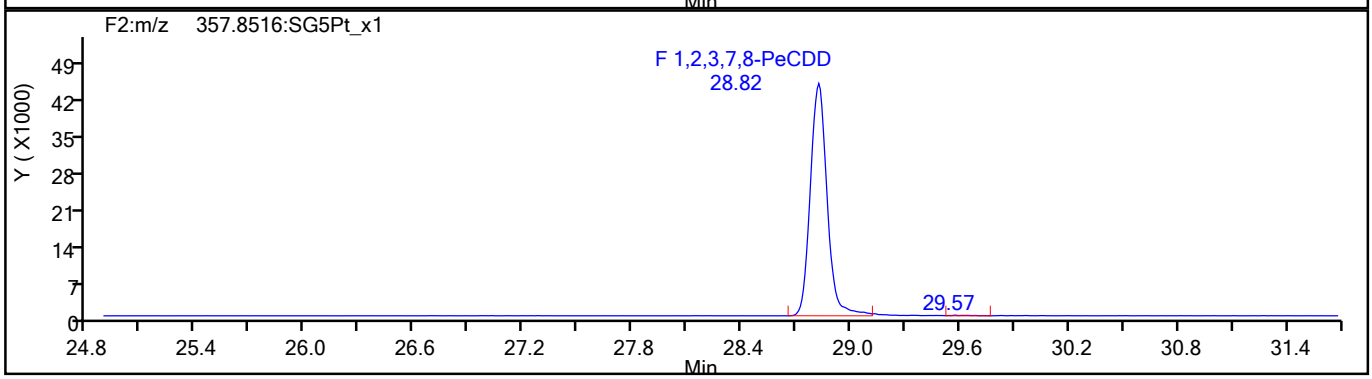

PeCDD Standards

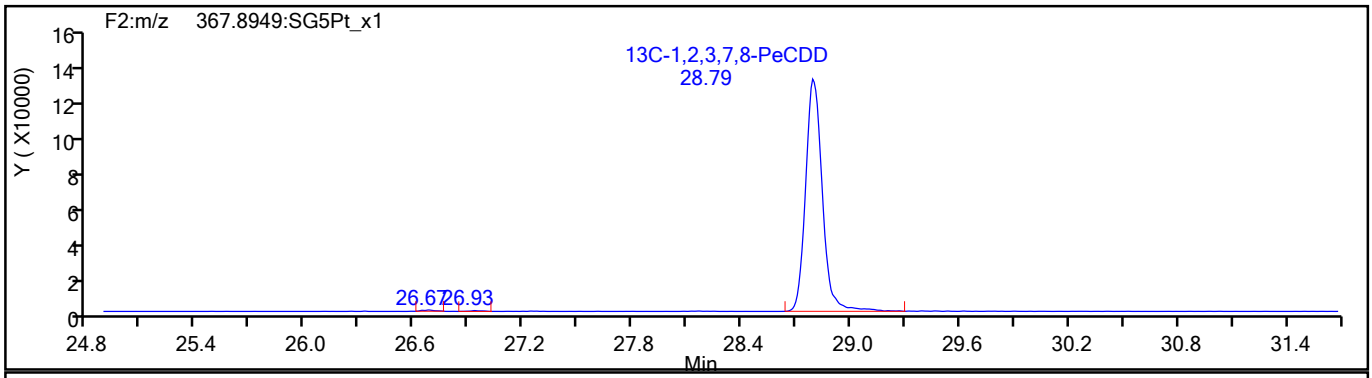

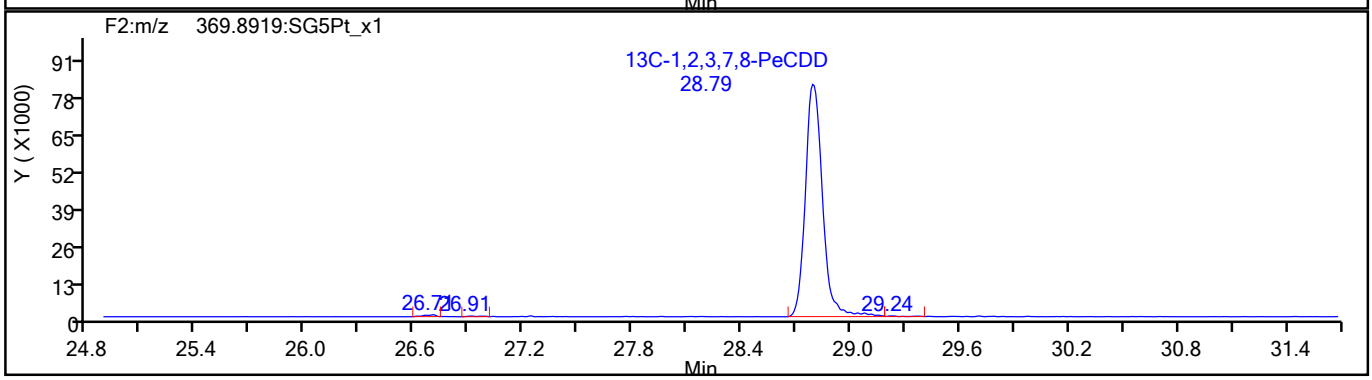

773564

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

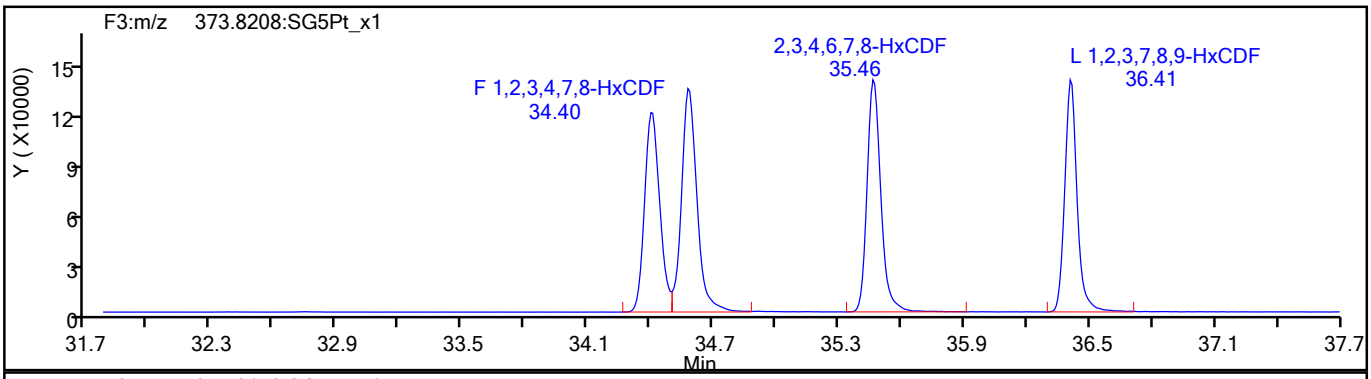

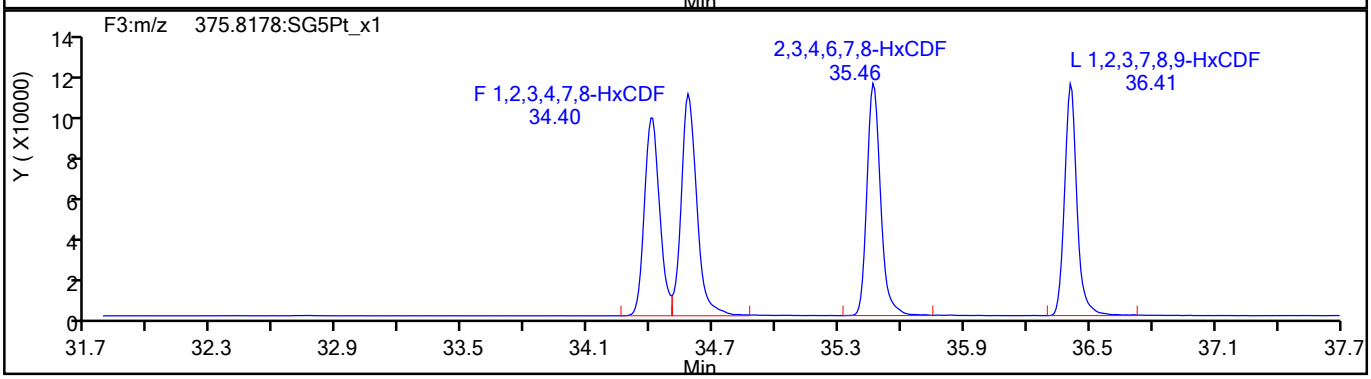

HxCDF Standards

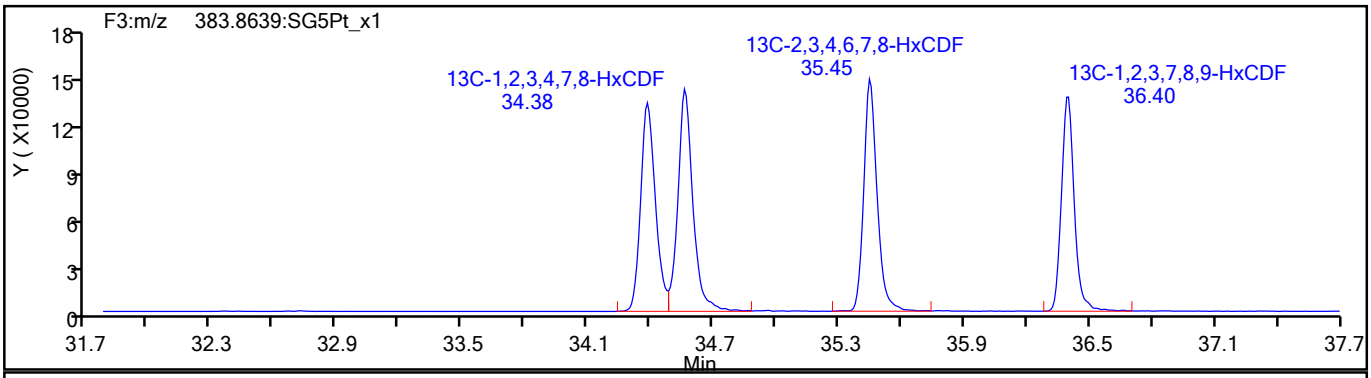

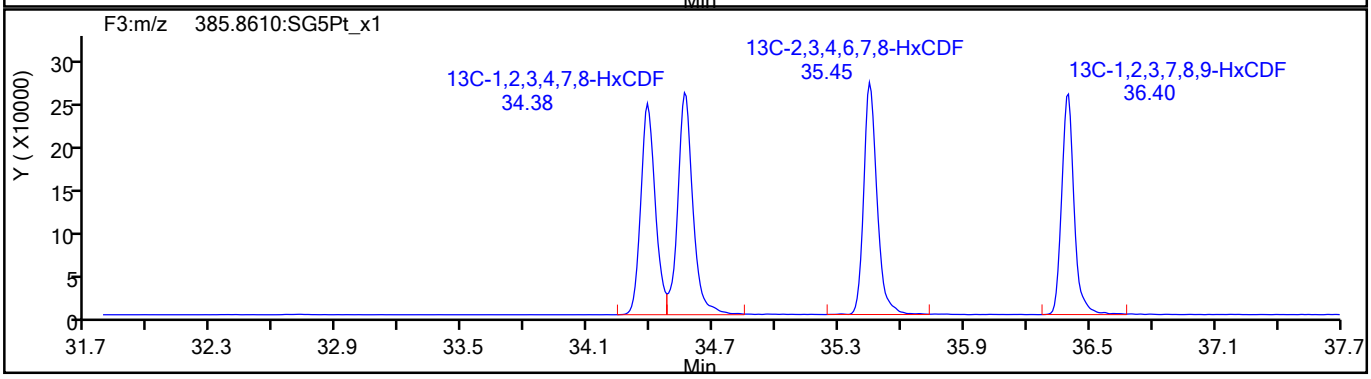

773565

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

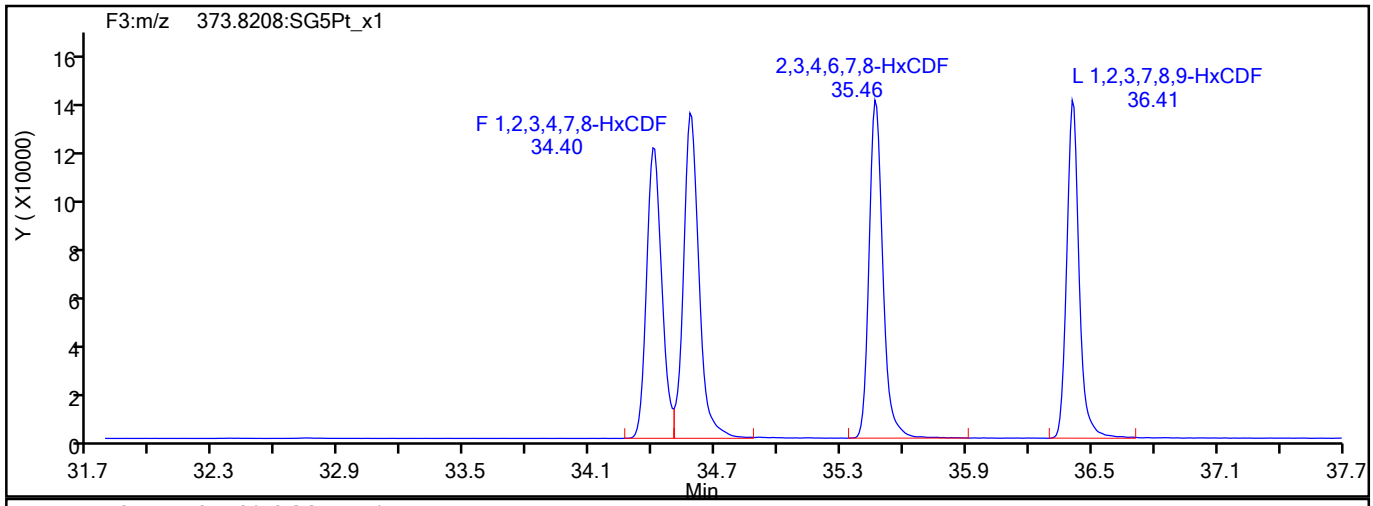

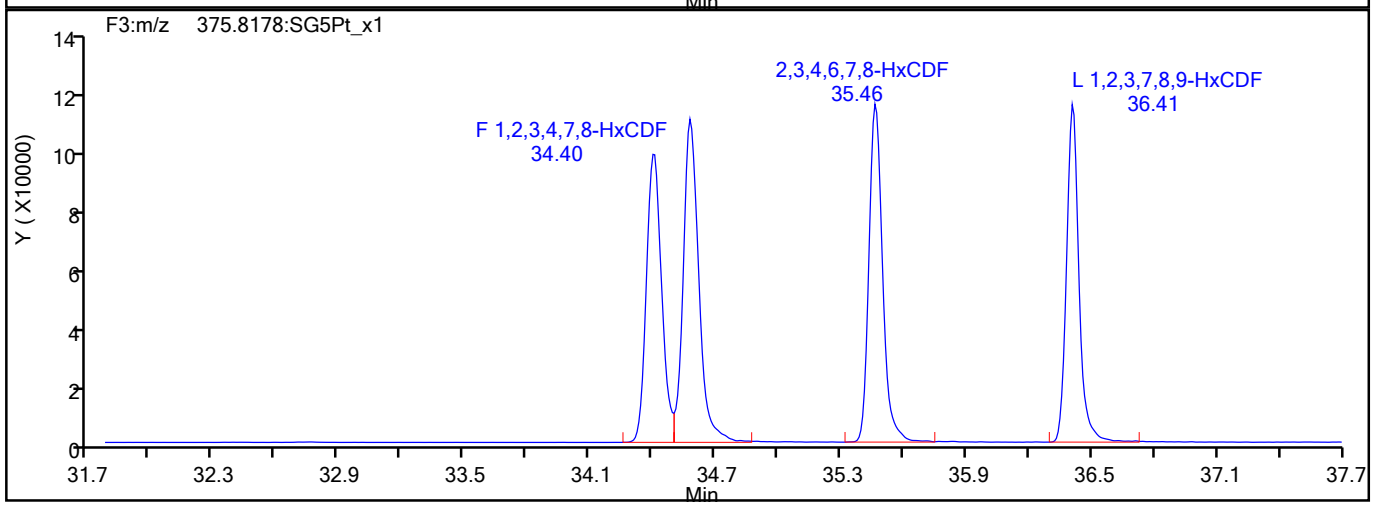

HxCDF Interference Mass

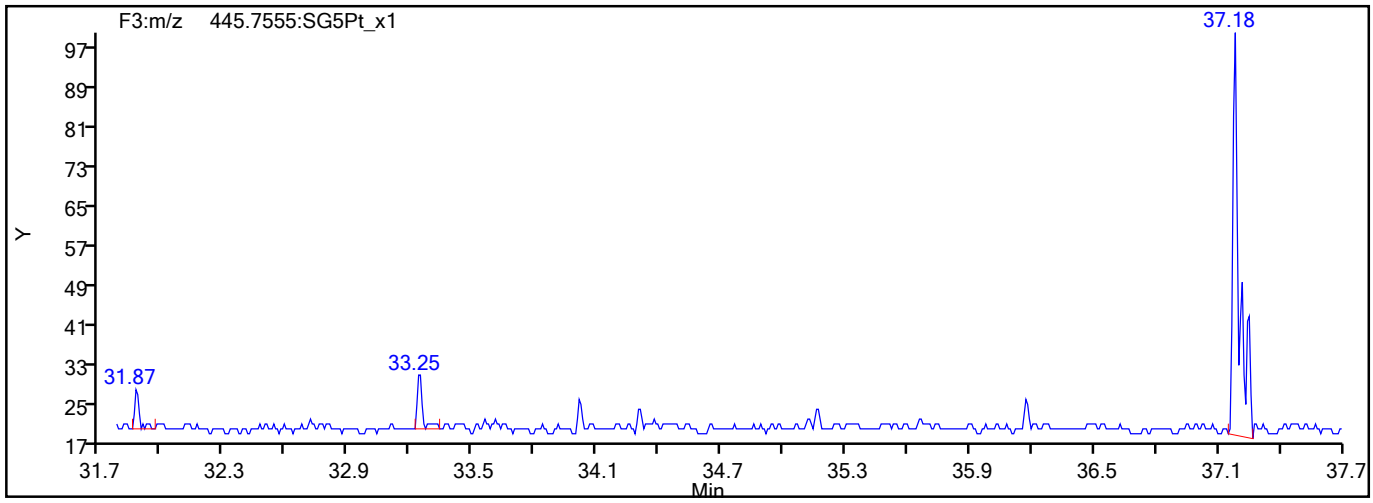

773566

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

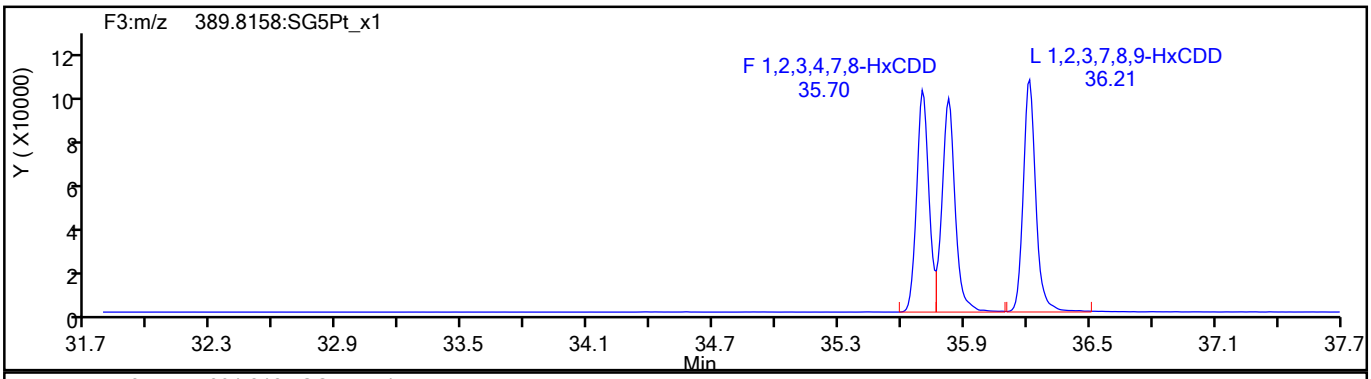

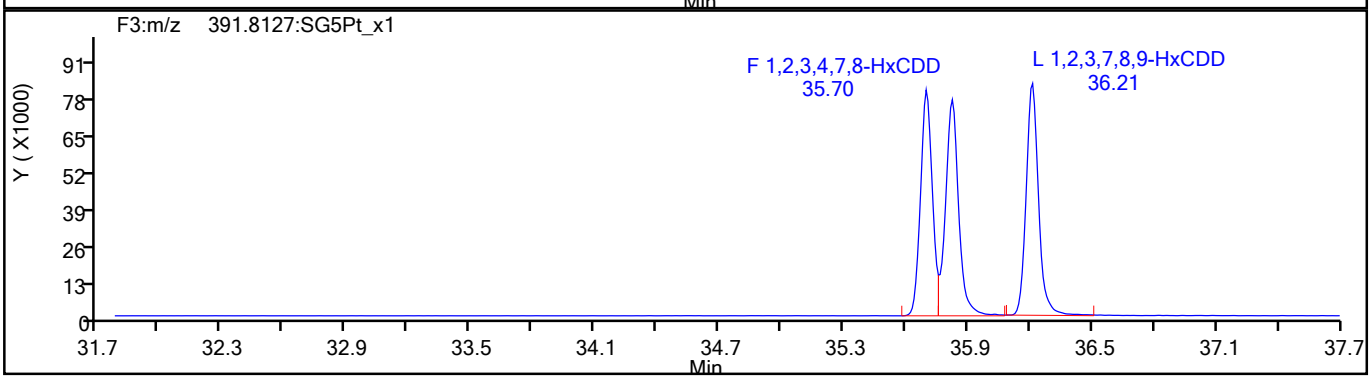

HxCDD Standards

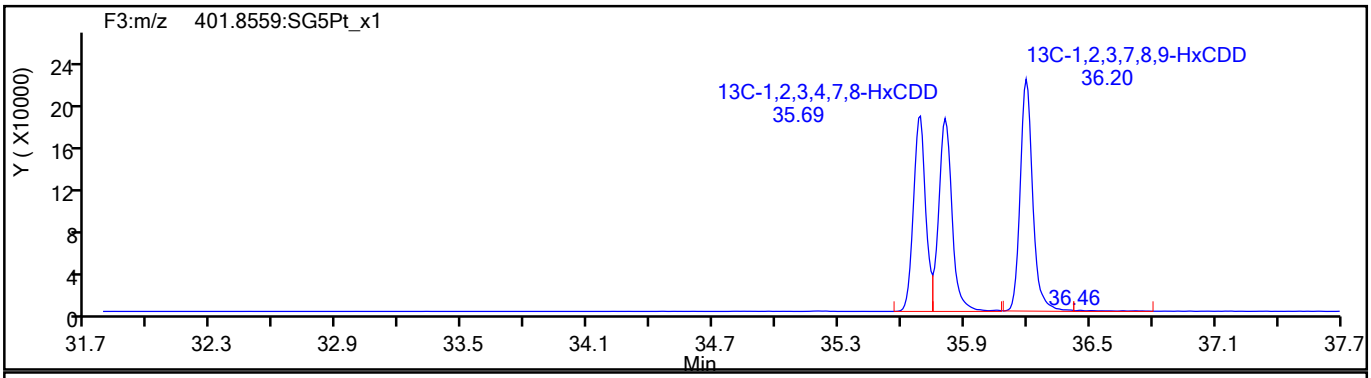

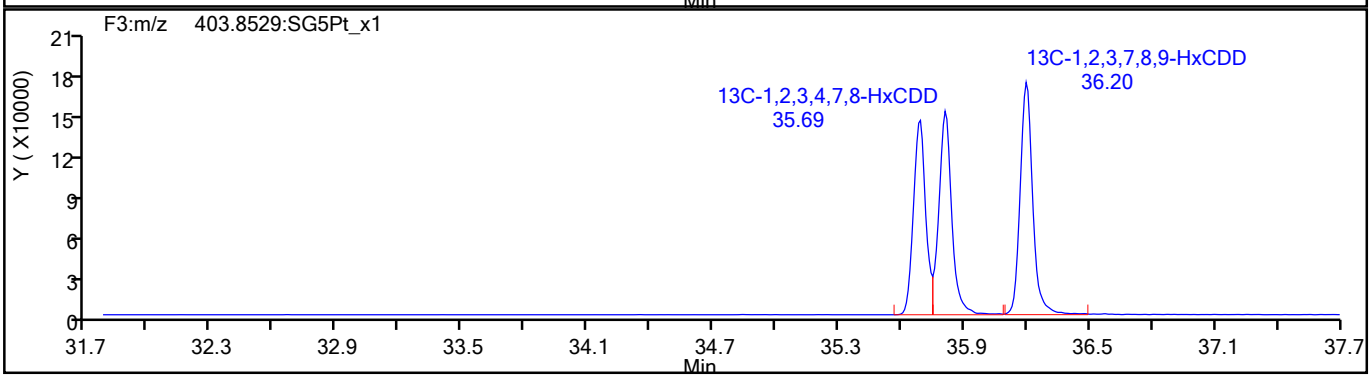

773567

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

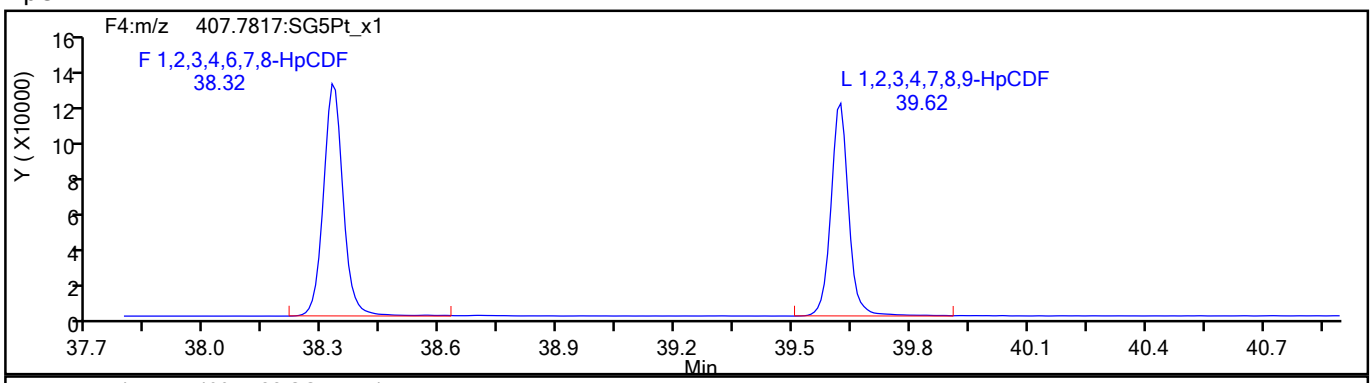

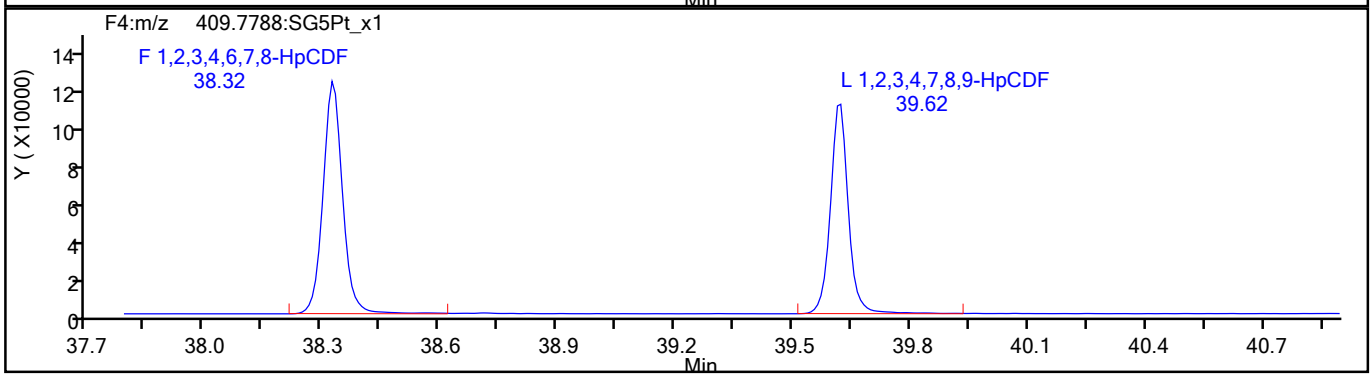

HpCDF Standards

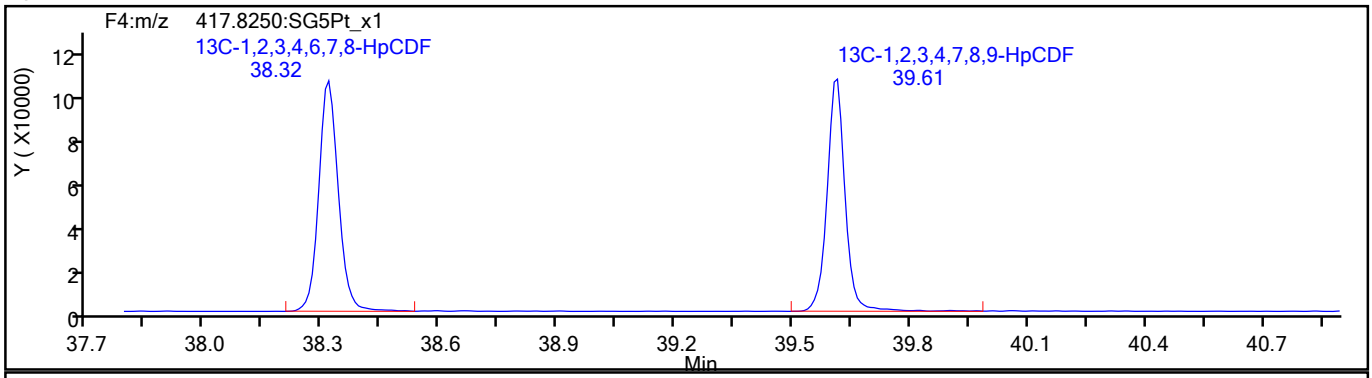

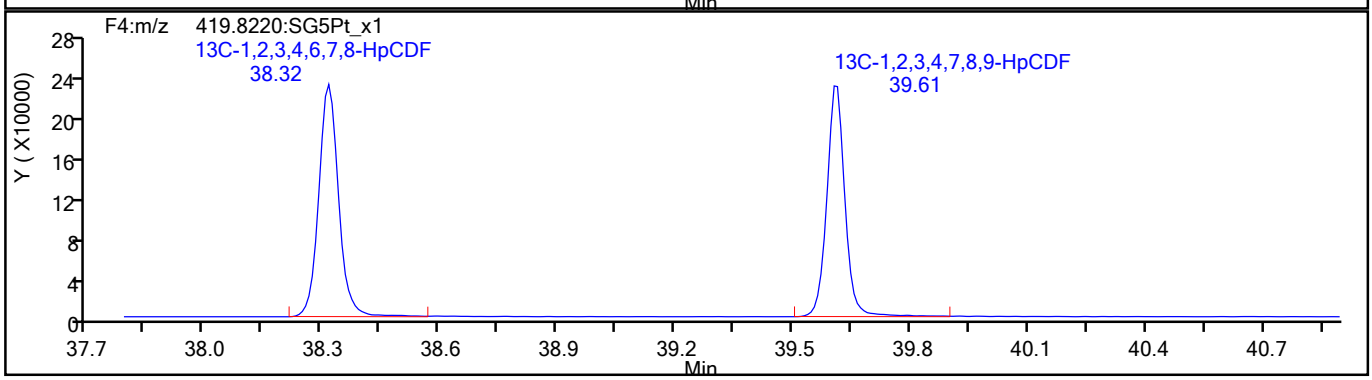

773568

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

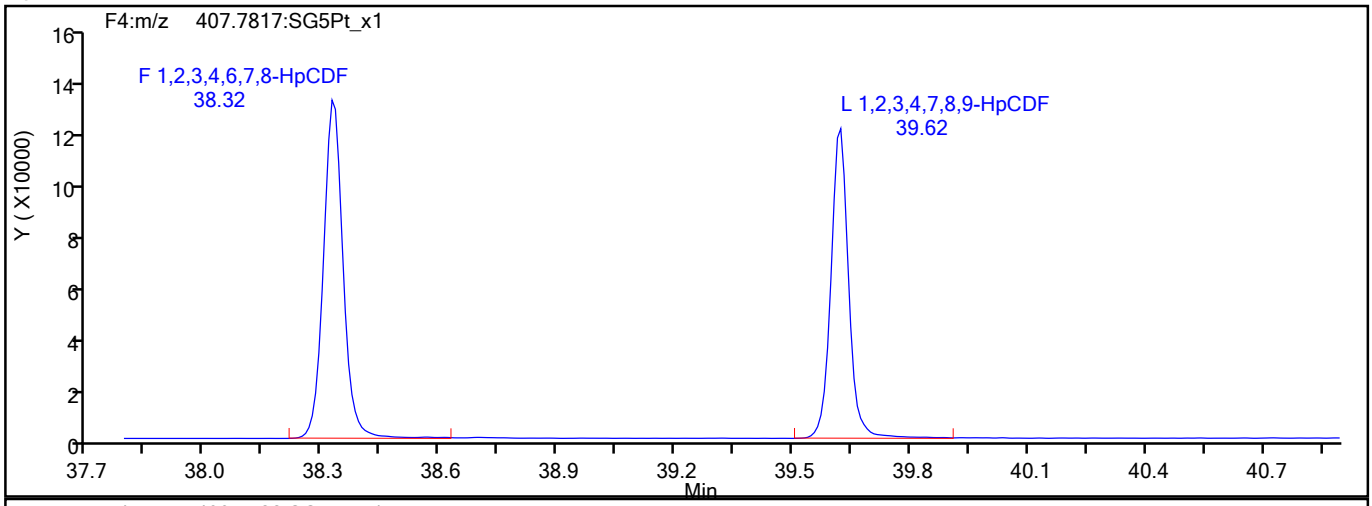

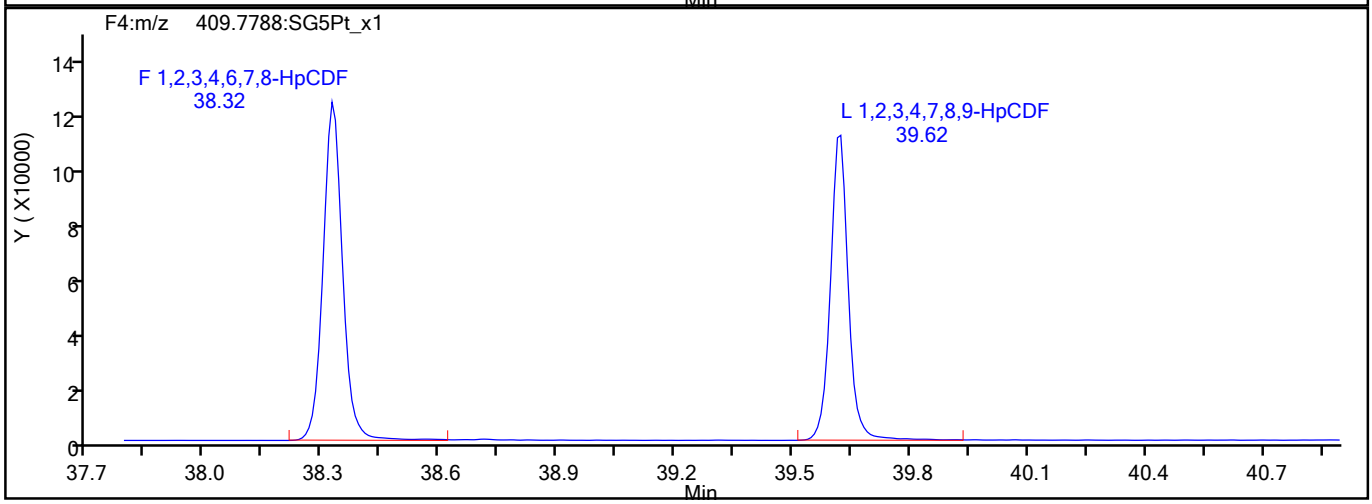

HpCDF Interference Mass

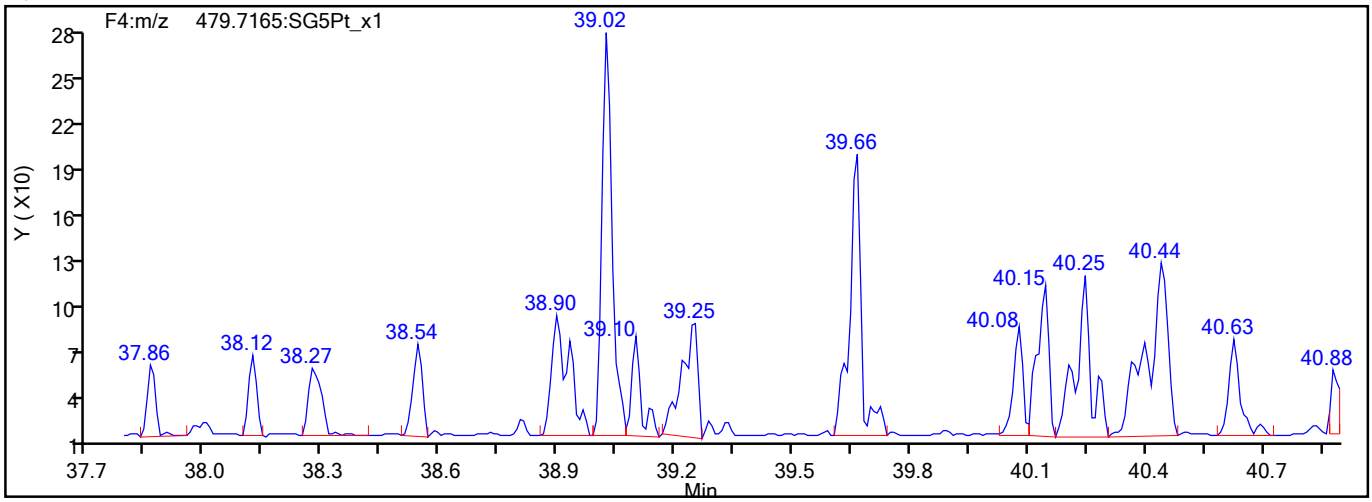

773569

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

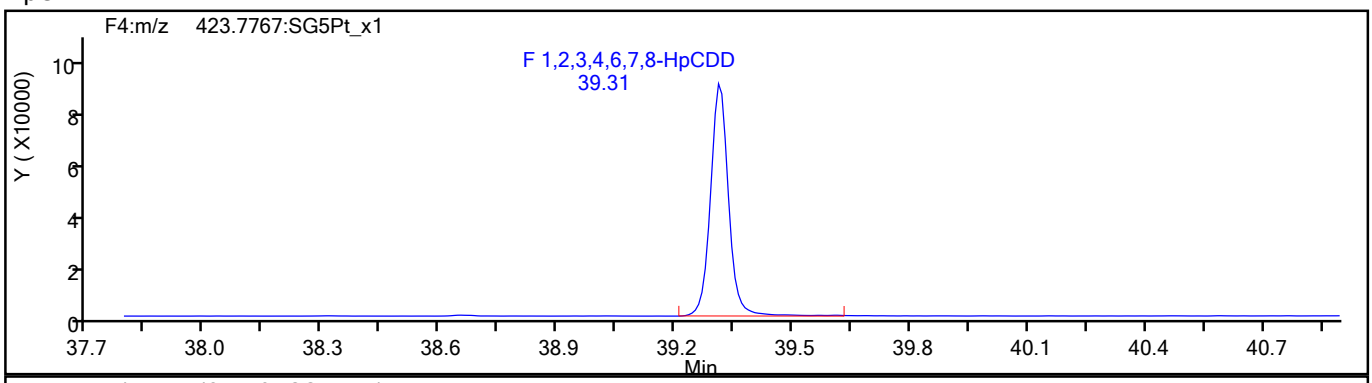

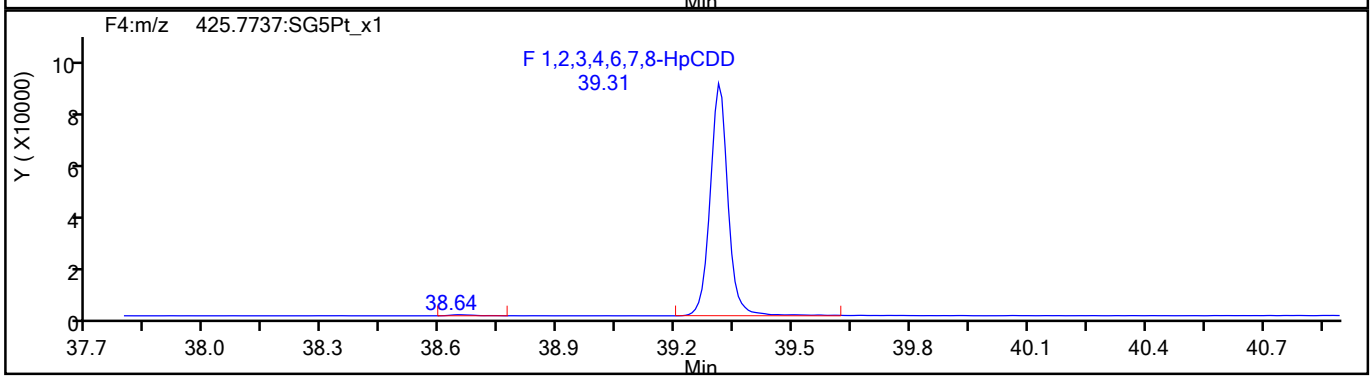

HpCDD Standards

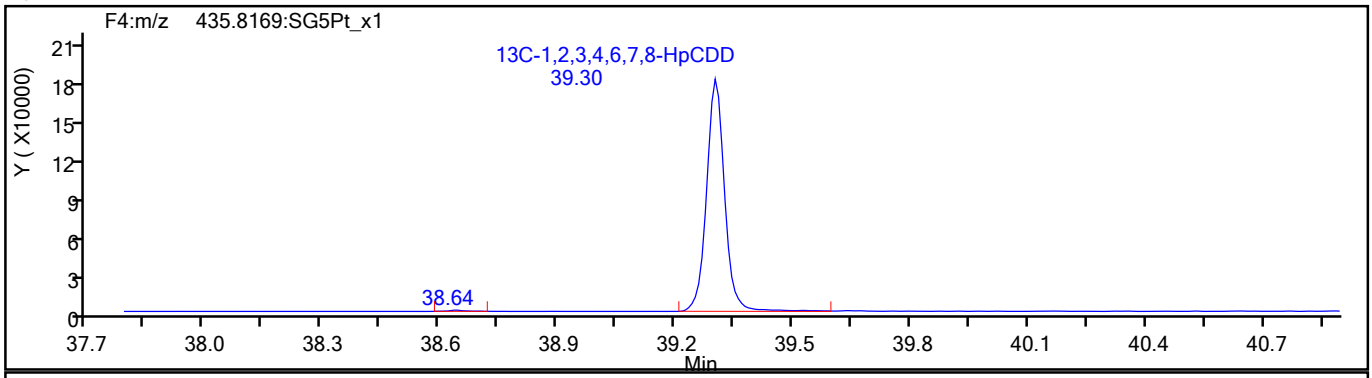

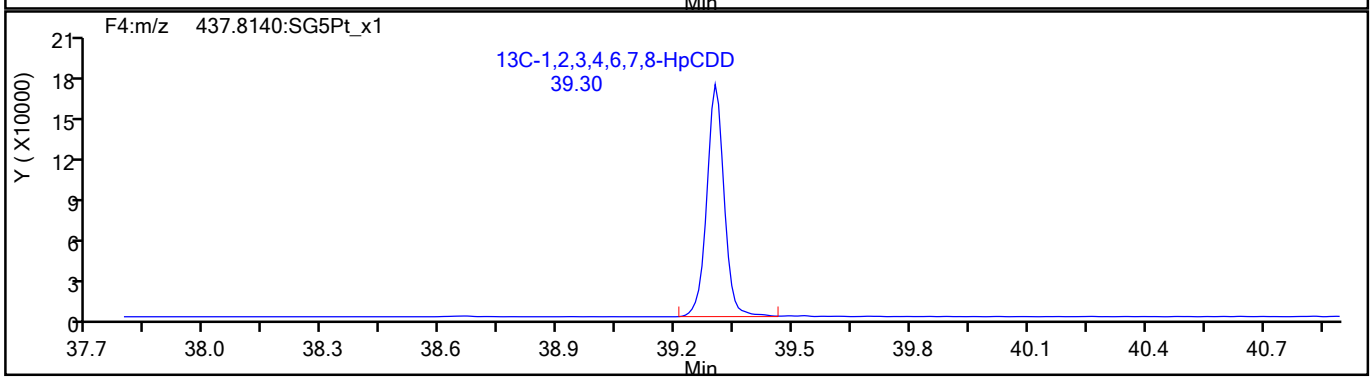

773570

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

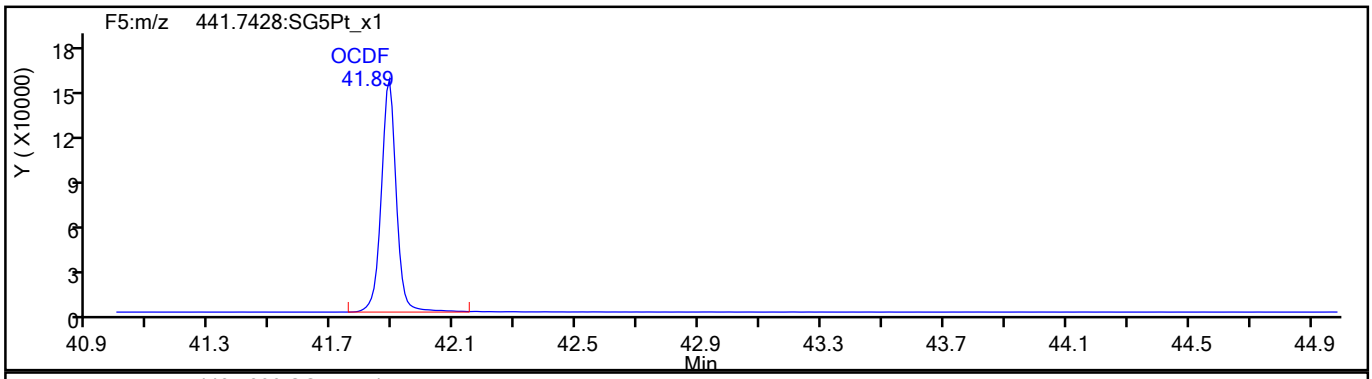

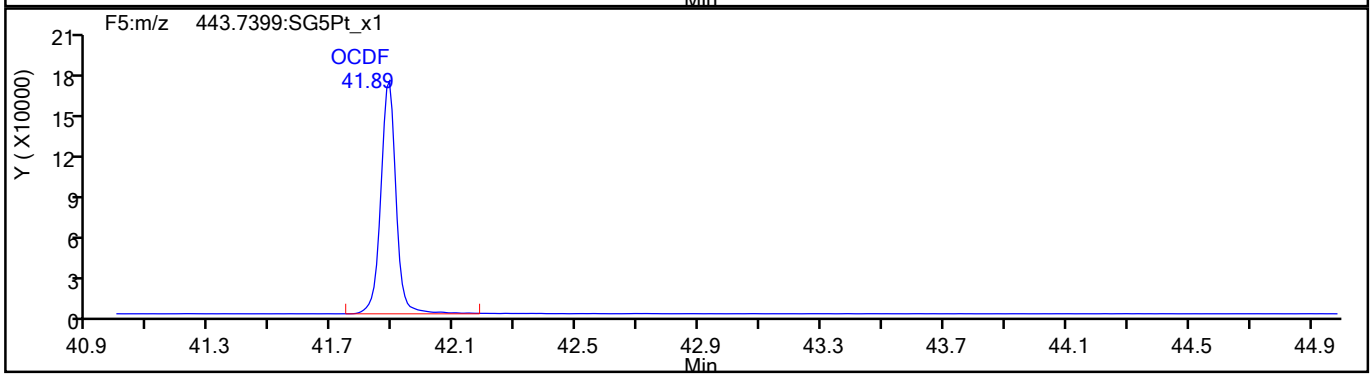

OCDF Standards

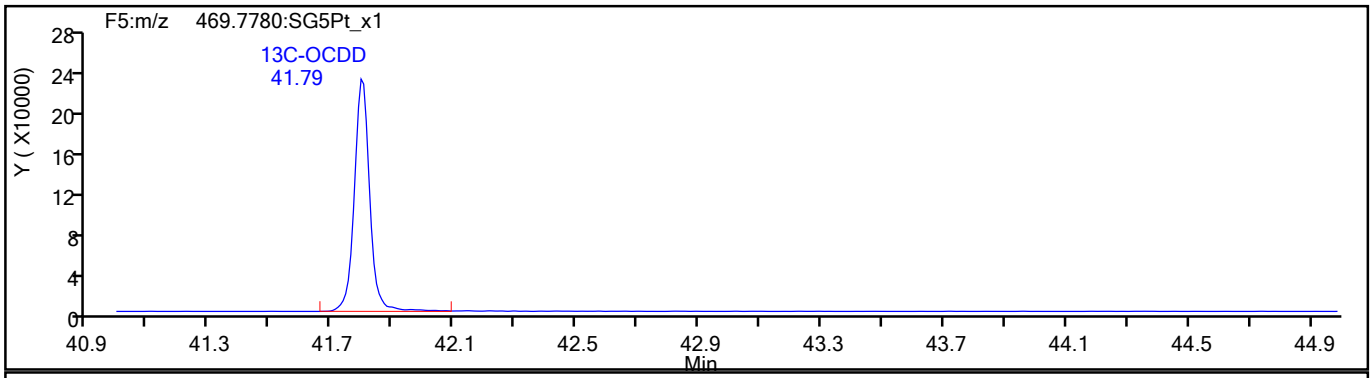

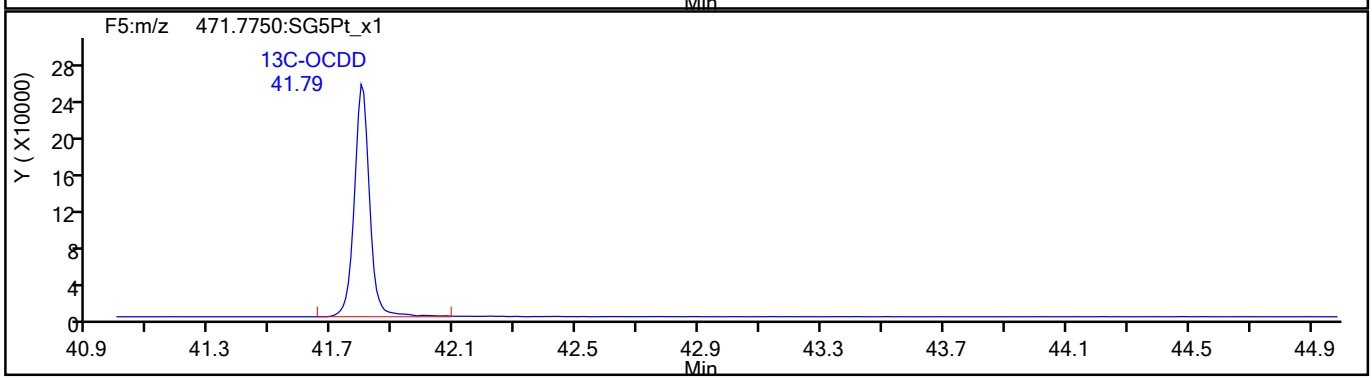

773571

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

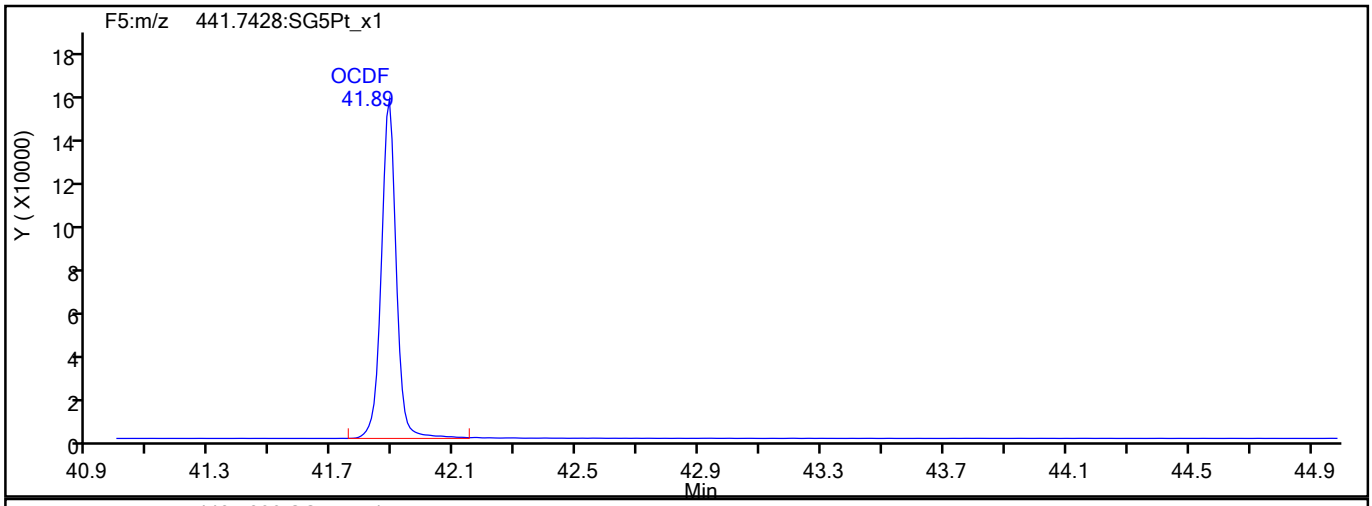

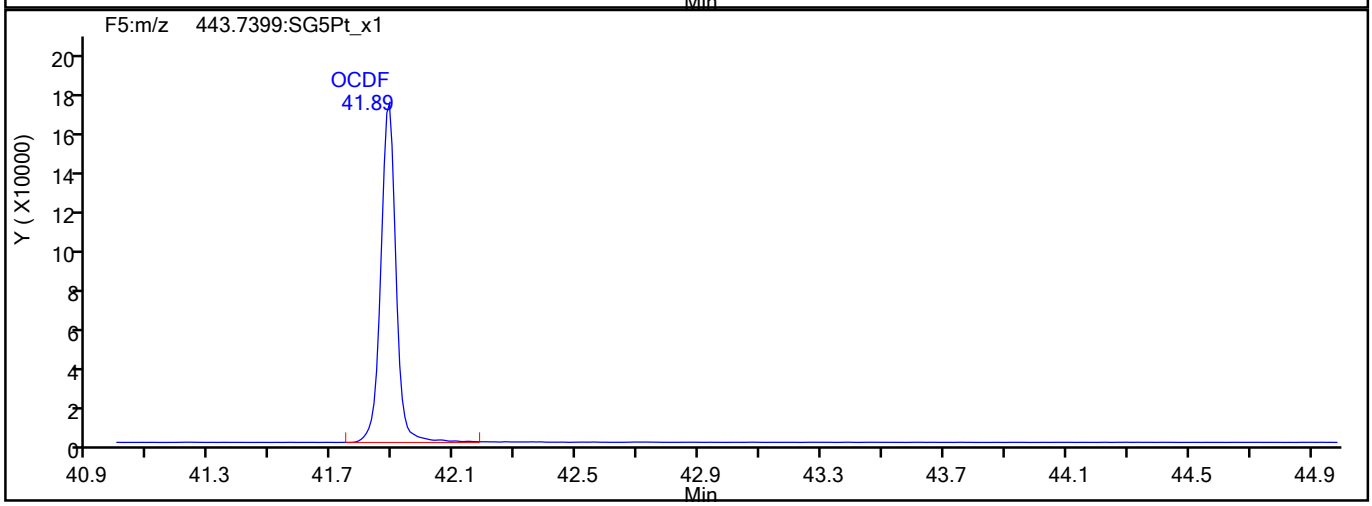

OCDF Interference Mass

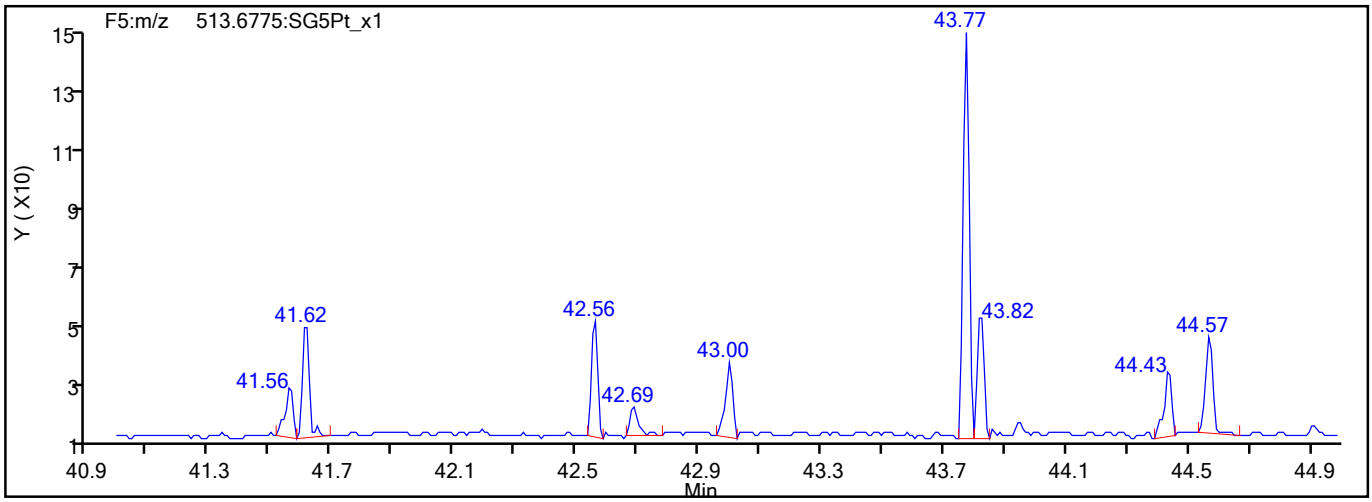

773572

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

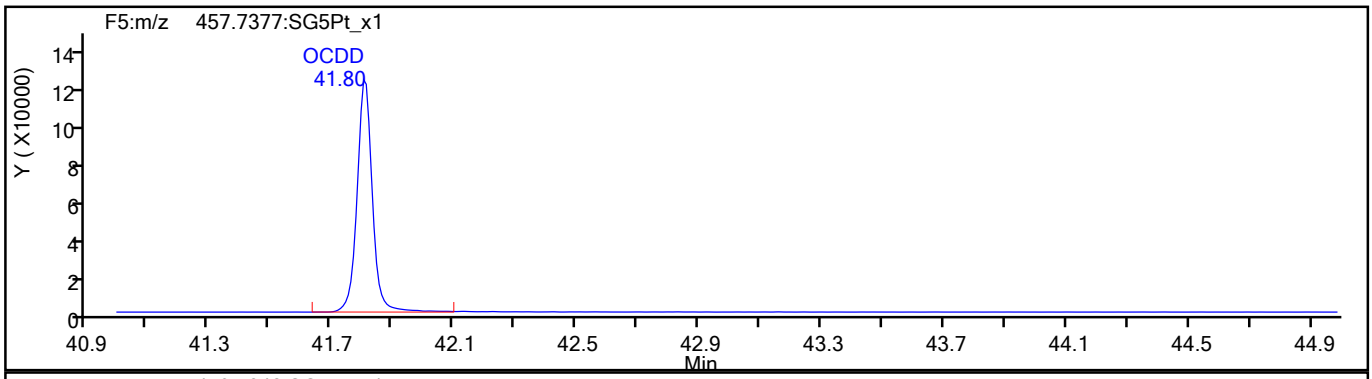

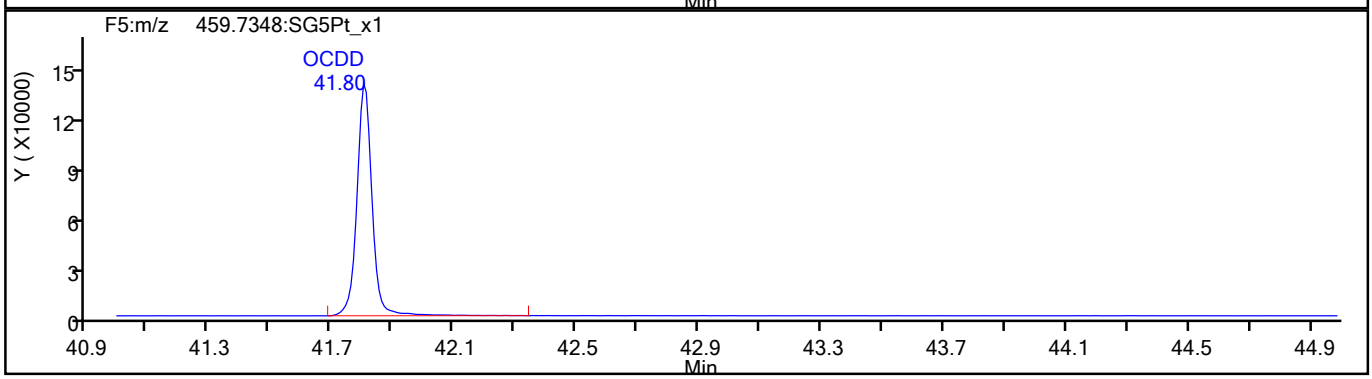

OCDD Standards

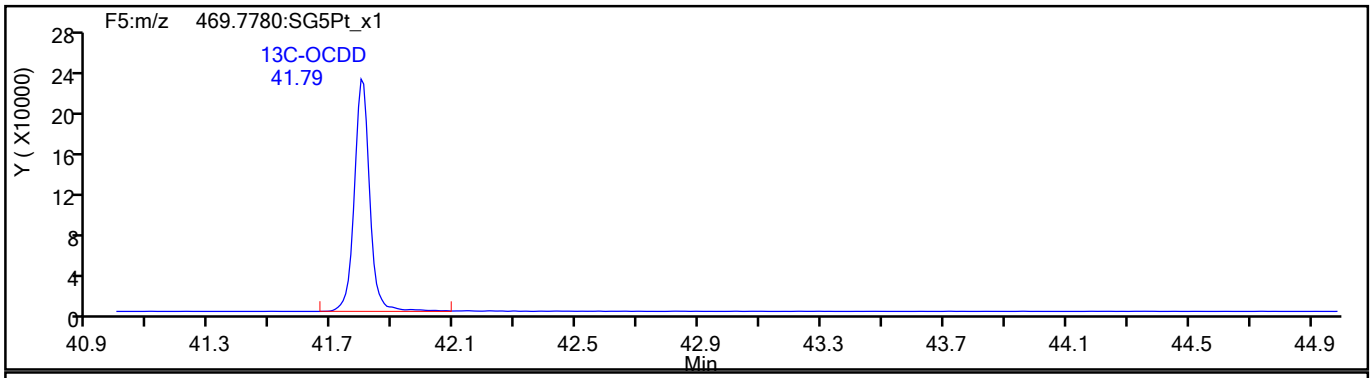

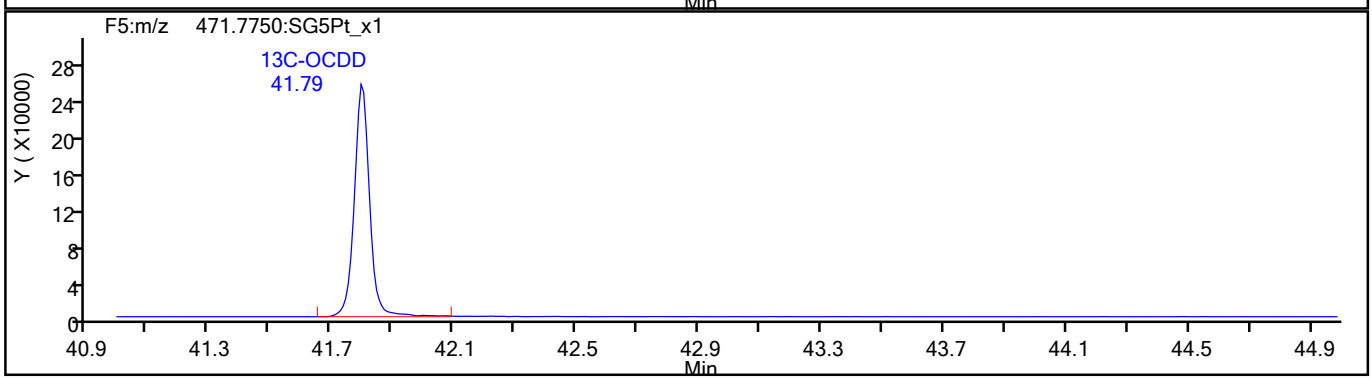

773573

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

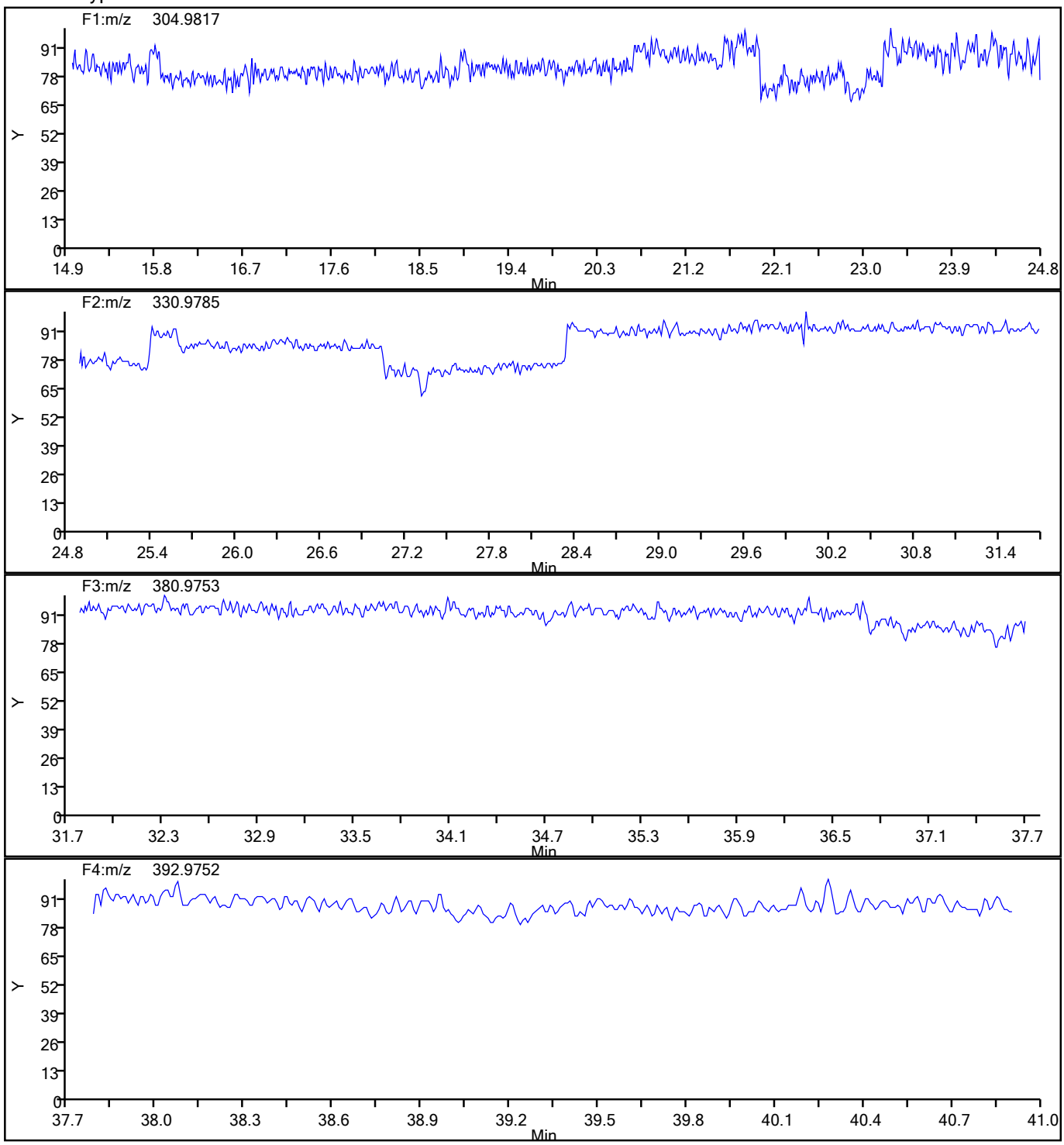

773574

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

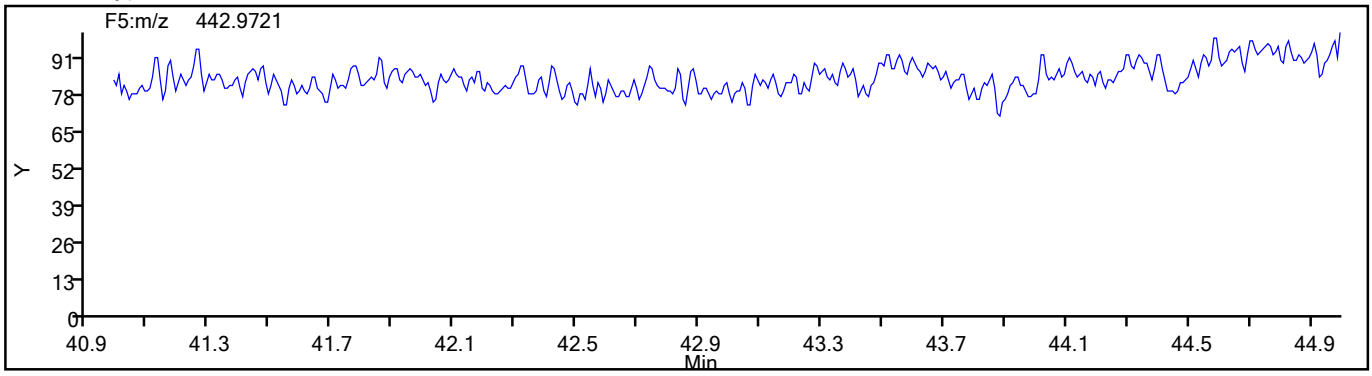

773575

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.548	2105852	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.612	2839435	0.79	1.3459	100.2	100.2	0.1786	0.1786	100	
2,3,7,8-TCDF	19.638	1274052	0.79	1.0802	41.5	41.5	0.0460	0.0460	104	
S Total TCDF					41.5	41.5	0.0460	0.0460		
D 13C-2,3,7,8-TCDD	20.909	1948011	0.81	0.9317	99.3	99.3	0.1662	0.1662	99.29	
$ 37Cl4-2,3,7,8-TCDD	20.935	848616		1.0083	40.0	40.0	0.0168	0.0168	99.92	
2,3,7,8-TCDD	20.935	875630	0.79	1.0753	41.8	41.8	0.0546	0.0546	105	
S Total TCDD					41.8	41.8	0.0546	0.0546		
D 13C-1,2,3,7,8-PeCDF	26.564	2432949	1.58	1.1405	101.3	101.3	0.3082	0.3082	101	
1,2,3,7,8-PeCDF	26.589	5302236	1.57	1.0543	206.7	206.7	0.5886	0.5886	103	
D 13C-2,3,4,7,8-PeCDF	28.023	2374722	1.60	1.1253	100.2	100.2	0.3123	0.3123	100	
2,3,4,7,8-PeCDF	28.048	5051373	1.58	1.0079	211.1	211.1	0.6756	0.6756	106	
S Total PeCDF					417.8	417.8	0.6321	0.6321		
D 13C-1,2,3,7,8-PeCDD	28.806	1521254	1.60	0.7165	100.8	100.8	0.1214	0.1214	101	
1,2,3,7,8-PeCDD	28.832	3351337	1.58	1.0465	210.5	210.5	0.1088	0.1088	105	
S Total PeCDD					210.5	210.5	0.1088	0.1088		
D 13C-1,2,3,4,7,8-HxCDF	34.391	1778238	0.53	0.9648	100.0	100.0	0.3266	0.3266	100	
1,2,3,4,7,8-HxCDF	34.407	4293581	1.24	1.1474	210.4	210.4	0.7958	0.7958	105	
D 13C-1,2,3,6,7,8-HxCDF	34.568	1995567	0.54	1.0708	101.1	101.1	0.2943	0.2943	101	
1,2,3,6,7,8-HxCDF	34.584	4991420	1.25	1.2178	205.4	205.4	0.6778	0.6778	103	
D 13C-2,3,4,6,7,8-HxCDF	35.444	2042874	0.53	1.0413	106.5	106.5	0.3026	0.3026	106	
2,3,4,6,7,8-HxCDF	35.461	5157631	1.25	1.2145	207.9	207.9	0.5811	0.5811	104	
D 13C-1,2,3,7,8,9-HxCDF	36.388	1742331	0.52	0.9731	97.2	97.2	0.3238	0.3238	97.17	
1,2,3,7,8,9-HxCDF	36.397	4445357	1.26	1.2401	205.7	205.7	0.6020	0.6020	103	
S Total HxCDF					829.5	829.5	0.6642	0.6642		
* 13C-1,2,3,7,8,9-HxCDD	36.194	1842630	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.680	1432215	1.28	0.7587	102.4	102.4	0.1598	0.1598	102	
1,2,3,4,7,8-HxCDD	35.697	3222329	1.26	1.0608	212.1	212.1	0.2911	0.2911	106	
D 13C-1,2,3,6,7,8-HxCDD	35.806	1669337	1.24	0.8593	105.4	105.4	0.1411	0.1411	105	
1,2,3,6,7,8-HxCDD	35.815	3426727	1.26	0.9933	206.7	206.7	0.2773	0.2773	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.203	3436144	1.26	1.1094	199.7	199.7	0.2625	0.2625	99.86	
S Total HxCDD					618.5	618.5	0.2770	0.2770		
D 13C-1,2,3,4,6,7,8-HpCDF	38.305	1392194	0.46	0.7359	102.7	102.7	0.3327	0.3327	103	
1,2,3,4,6,7,8-HpCDF	38.314	4243438	1.05	1.4421	211.4	211.4	0.6211	0.6211	106	
D 13C-1,2,3,4,7,8,9-HpCDF	39.595	1337573	0.45	0.6854	105.9	105.9	0.3573	0.3573	106	
1,2,3,4,7,8,9-HpCDF	39.603	3728415	1.05	1.3092	212.9	212.9	0.6974	0.6974	106	
S Total HpCDF					424.3	424.3	0.6592	0.6592		
D 13C-1,2,3,4,6,7,8-HpCDD	39.291	1337869	1.09	0.6745	107.6	107.6	0.2398	0.2398	108	
1,2,3,4,6,7,8-HpCDD	39.300	2935203	1.04	1.0503	208.9	208.9	0.3525	0.3525	104	
S Total HpCDD					208.9	208.9	0.3525	0.3525		
D 13C-OCDD	41.782	2177938	0.90	0.5446	217.0	217.0	0.3019	0.3019	109	
OCDF	41.866	6082696	0.91	1.3168	424.2	424.2	0.3916	0.3916	106	
OCDD	41.790	4803166	0.89	1.0620	415.3	415.3	0.3872	0.3872	104	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.548	20.547	0		944131	150571	127	317	1186		
333.9338	20.548	20.547	0		1161721	185169	81	202	2286	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.612	19.616	0	0.954	1253649	203983	215	537	949		
317.9389	19.621	19.616	0	0.955	1585786	258903	108	270	2397	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.638	19.646	0	1.001	561539	89311	44	110	2030		
305.8987	19.638	19.646	0	1.001	712513	111913	48	120	2332	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.909	20.910	0	1.018	869542	131887	127	317	1038		
333.9338	20.909	20.910	0	1.018	1078469	161266	81	202	1991	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.935	20.935	0	1.019	848616	126683	23	57	5508		
2,3,7,8-TCDD											
319.8965	20.935	20.939	0	1.001	385954	58537	36	90	1626		
321.8936	20.935	20.939	0	1.001	489676	72800	33	82	2206	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.564	26.560	0	1.293	1489826	258263	302	755	855		
353.8970	26.564	26.560	0	1.293	943123	164307	170	425	967	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.589	26.584	0	1.001	3241988	556504	638	1595	872		
341.8567	26.589	26.584	0	1.001	2060248	355863	411	1027	866	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.023	28.014	1	1.364	1460304	235761	302	755	781		
353.8970	28.023	28.014	1	1.364	914418	149333	170	425	878	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.048	28.039	1	1.001	3094556	515182	638	1595	807		
341.8567	28.048	28.039	1	1.001	1956817	323488	411	1027	787	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.806	28.801	0	1.402	936578	147383	82	205	1797		
369.8919	28.806	28.801	0	1.402	584676	95987	35	87	2742	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.832	28.828	0	1.001	2051590	320770	72	180	4455		
357.8516	28.832	28.828	0	1.001	1299747	208335	39	97	5342	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.391	34.384	0	0.950	617675	123602	191	477	647		
385.8610	34.382	34.384	0	0.950	1160563	234726	378	945	621	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.407	34.405	0	1.000	2381065	482843	745	1862	648		
375.8178	34.407	34.405	0	1.000	1912516	389022	564	1410	690	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.568	34.562	0	0.955	696940	140400	191	477	735		
385.8610	34.568	34.562	0	0.955	1298627	255987	378	945	677	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.584	34.582	0	1.000	2775629	556827	745	1862	747		
375.8178	34.584	34.582	0	1.000	2215791	440544	564	1410	781	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.444	35.444	0	0.979	707399	160237	191	477	839		
385.8610	35.444	35.444	0	0.979	1335475	303406	378	945	803	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.461	35.461	0	1.000	2866027	647502	745	1862	869		
375.8178	35.461	35.461	0	1.000	2291604	520419	564	1410	923	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.388	36.388	0	1.005	598306	148820	191	477	779		
385.8610	36.388	36.388	0	1.005	1144025	289476	378	945	766	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.397	36.402	0	1.000	2476452	605954	745	1862	813		
375.8178	36.397	36.402	0	1.000	1968905	483719	564	1410	858	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.194	36.192	0		1026134	250783	116	290	2162		
403.8529	36.186	36.192	0		816496	200495	103	257	1947	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.680	35.680	0	0.986	804332	193336	116	290	1667		
403.8529	35.680	35.680	0	0.986	627883	151493	103	257	1471	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.697	35.695	0	1.000	1795969	436602	241	602	1812		
391.8127	35.697	35.695	0	1.000	1426360	347066	185	462	1876	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.806	35.805	0	0.989	925744	214247	116	290	1847		
403.8529	35.806	35.805	0	0.989	743593	172424	103	257	1674	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.815	35.820	0	1.000	1911971	434863	241	602	1804		
391.8127	35.815	35.820	0	1.000	1514756	347831	185	462	1880	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.203	36.208	0	1.015	1913013	474198	241	602	1968		
391.8127	36.203	36.208	0	1.015	1523131	377483	185	462	2040	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.305	38.305	0	1.058	436356	136587	154	385	887		
419.8220	38.305	38.305	0	1.058	955838	295474	288	720	1026	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.314	38.317	0	1.000	2176116	664265	789	1972	842		
409.7788	38.314	38.317	0	1.000	2067322	632606	759	1897	833	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.595	39.600	0	1.094	416057	129213	154	385	839		
419.8220	39.595	39.600	0	1.094	921516	294690	288	720	1023	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.603	39.608	0	1.000	1911190	607125	789	1972	769		
409.7788	39.603	39.608	0	1.000	1817225	579552	759	1897	764	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.291	39.293	0	1.086	696483	219725	150	375	1465		
437.8140	39.291	39.293	0	1.086	641386	202177	142	355	1424	1.09(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.300	39.301	0	1.000	1499524	478443	315	787	1519		
425.7737	39.300	39.301	0	1.000	1435679	451932	310	775	1458	1.04(0.88-1.20)	
13C-OCDD											
469.7780	41.782	41.785	0	1.154	1033665	317462	144	360	2205		
471.7750	41.782	41.785	0	1.154	1144273	352280	153	382	2302	0.90(0.76-1.02)	
OCDF											
441.7428	41.866	41.875	-1	1.002	2905097	900371	326	815	2762		
443.7399	41.866	41.875	-1	1.002	3177599	981356	365	912	2689	0.91(0.76-1.02)	
OCDD											
457.7377	41.790	41.794	0	1.000	2268006	705330	257	642	2744		
459.7348	41.790	41.794	0	1.000	2535160	785518	294	735	2672	0.89(0.76-1.02)	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

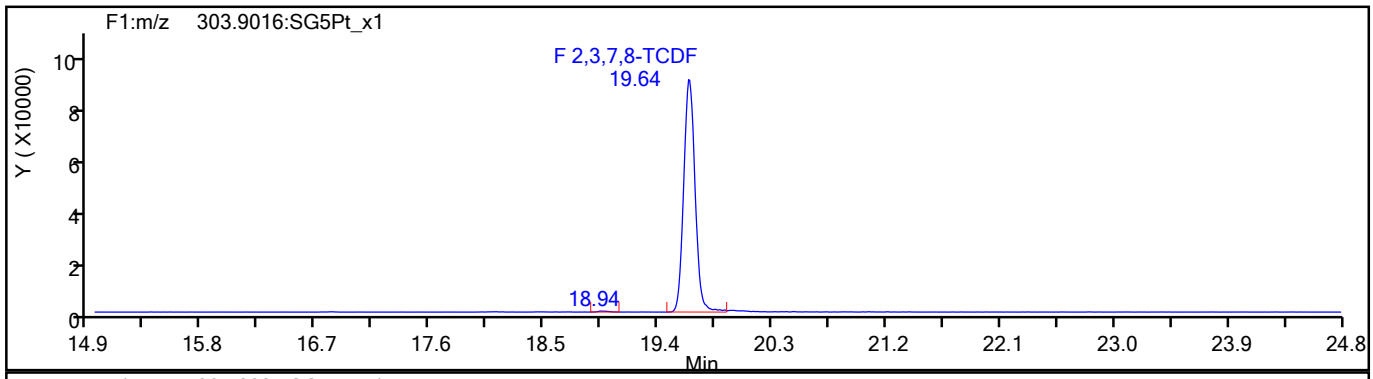

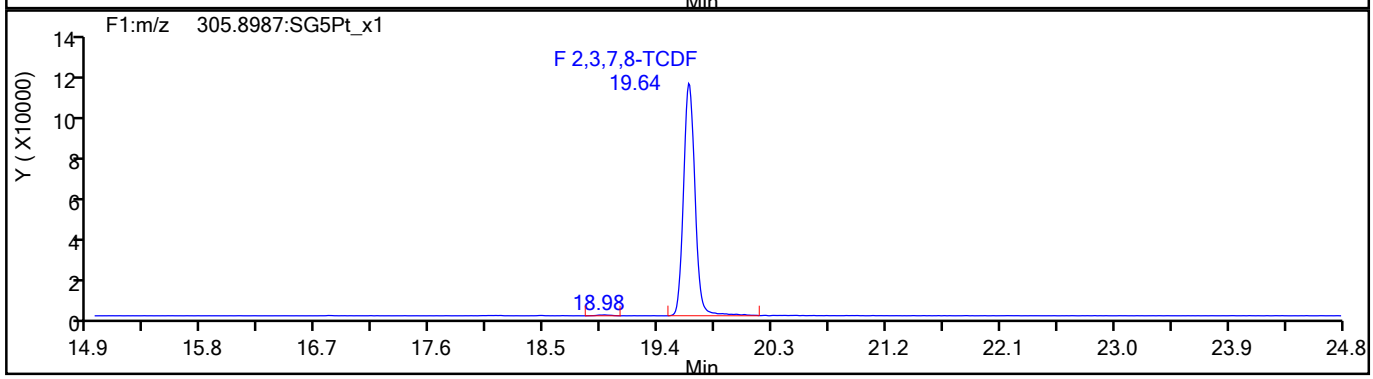

TCDF Standards

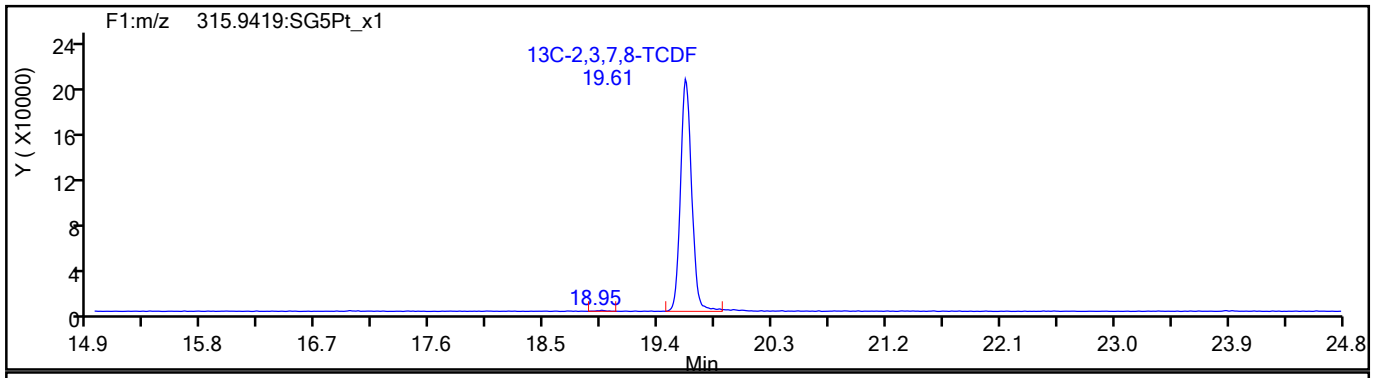

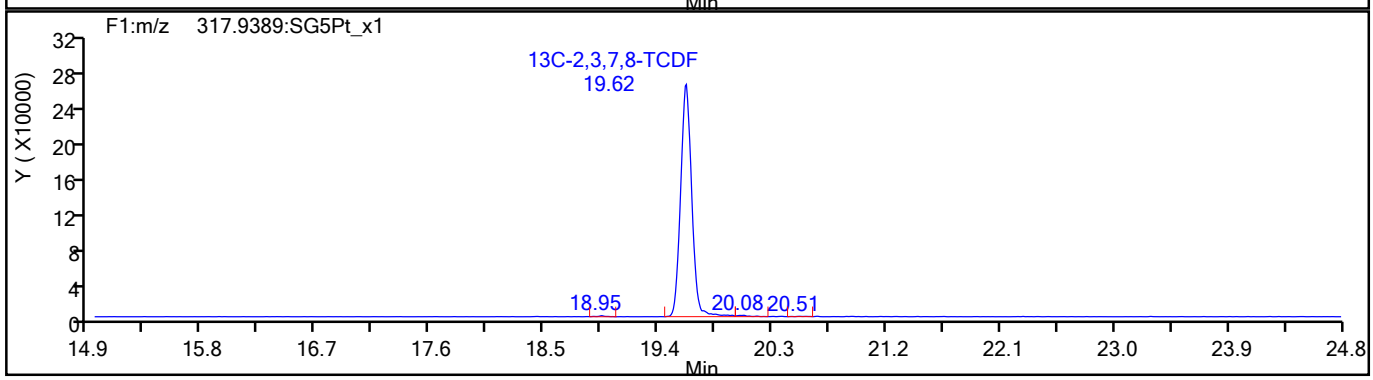

773581

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

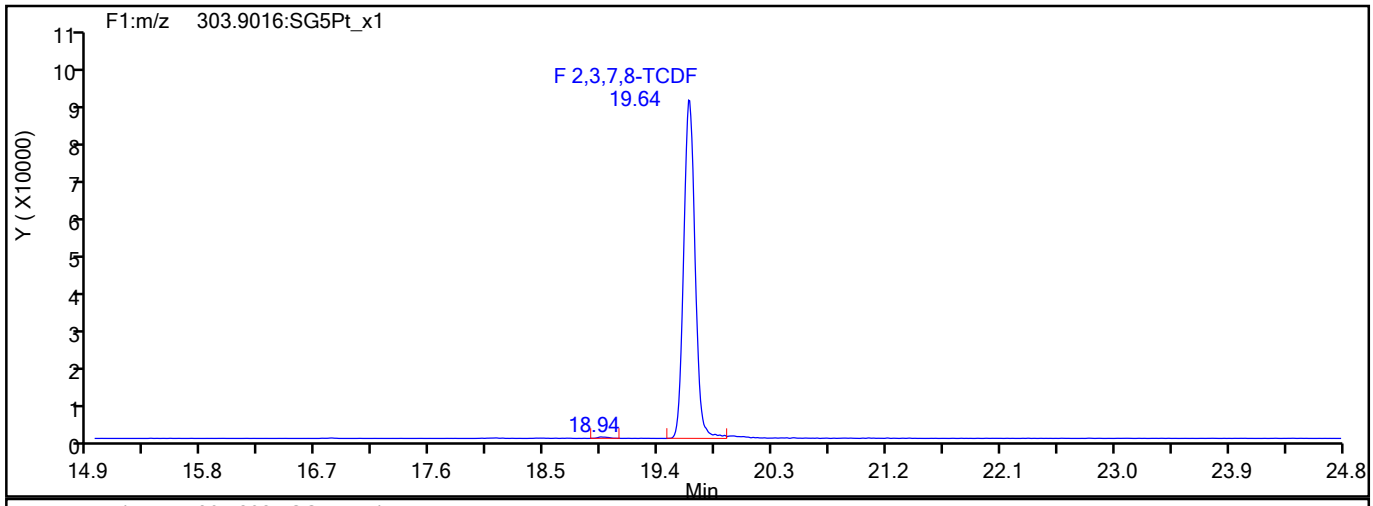

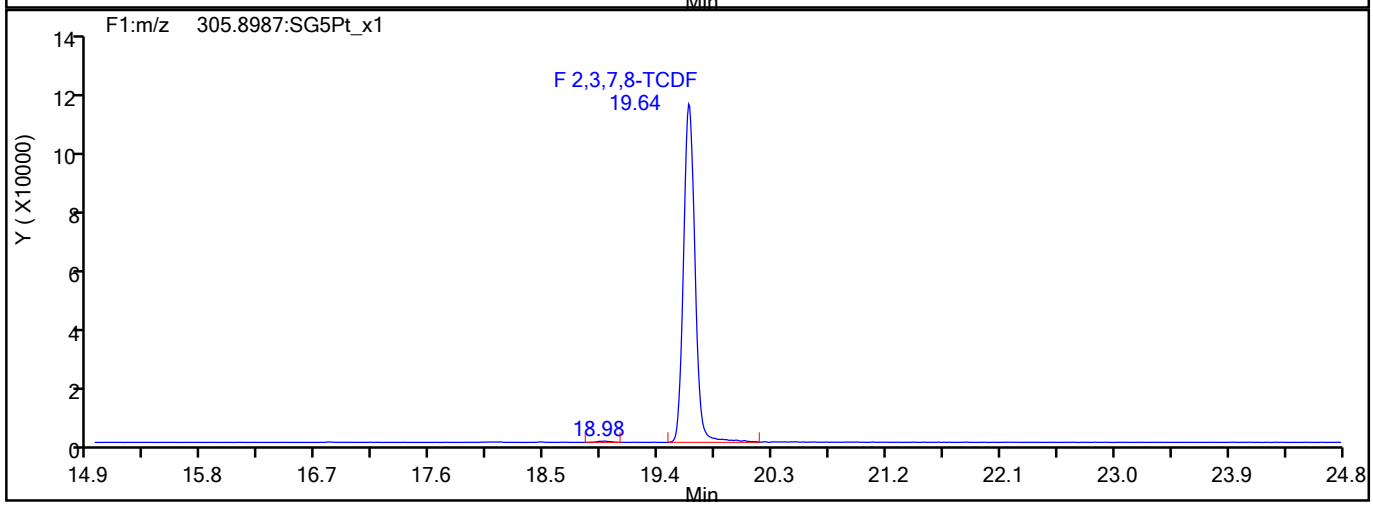

TCDF Interference Mass

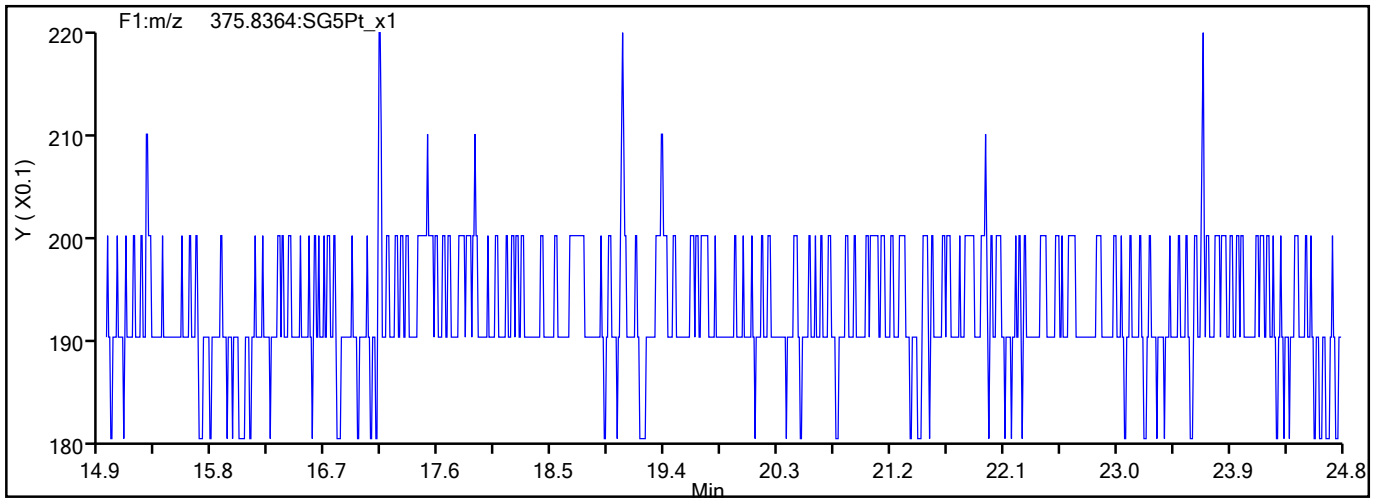

773582

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

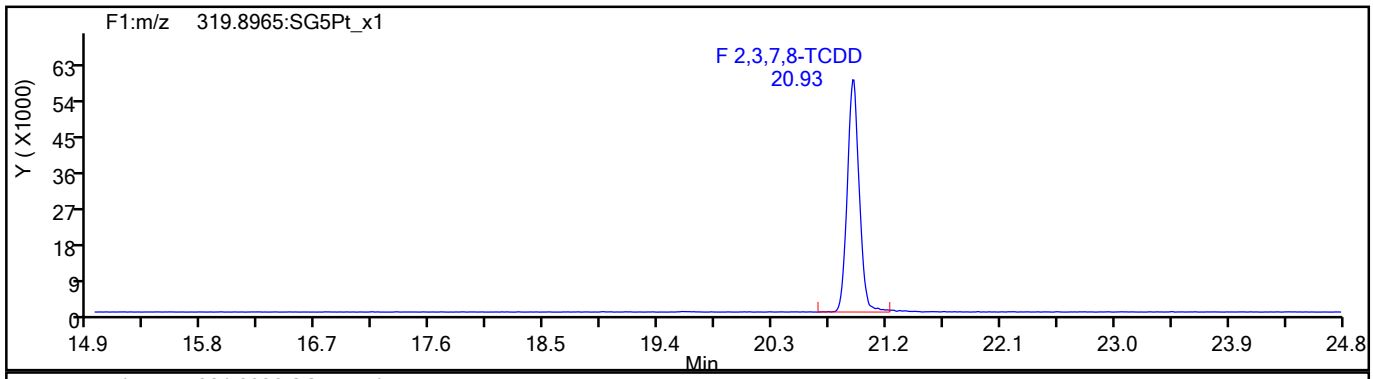

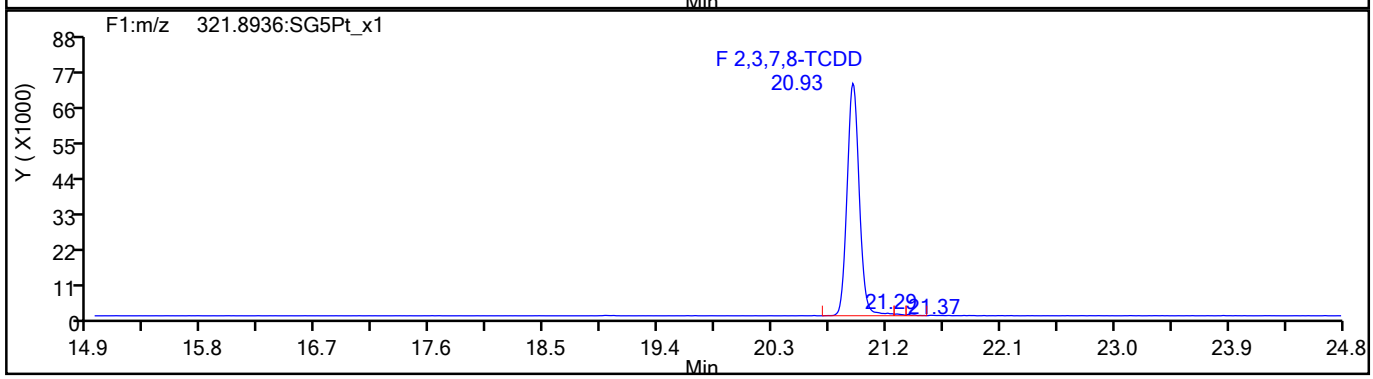

TCDD Standards

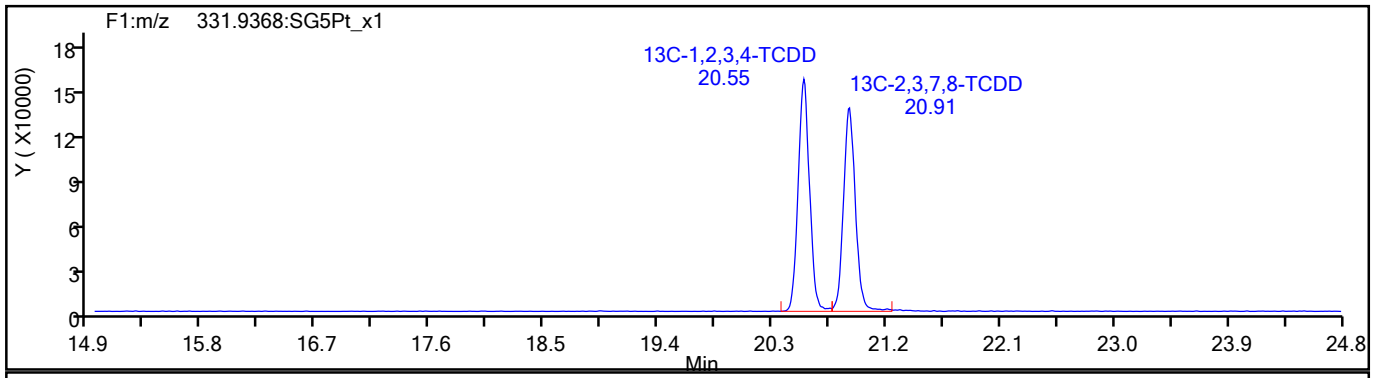

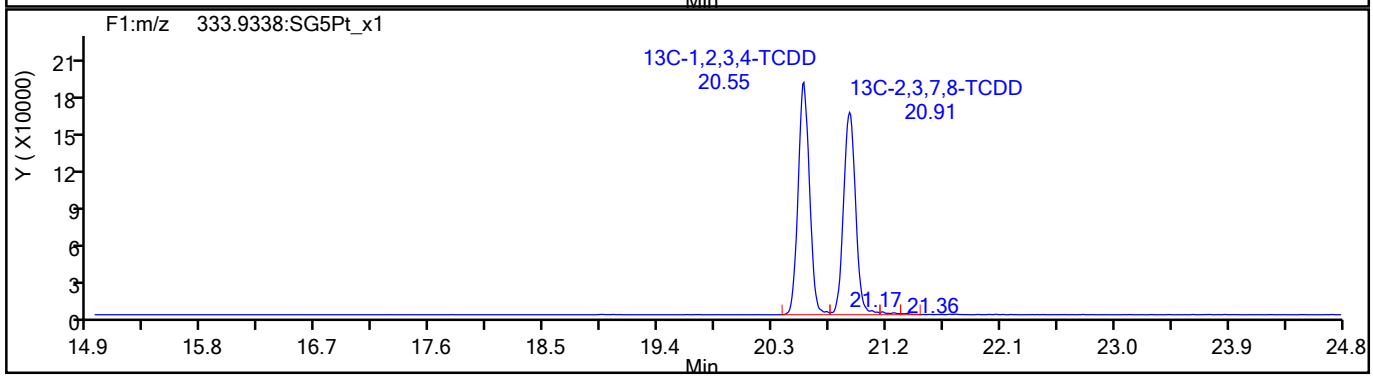

773583

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

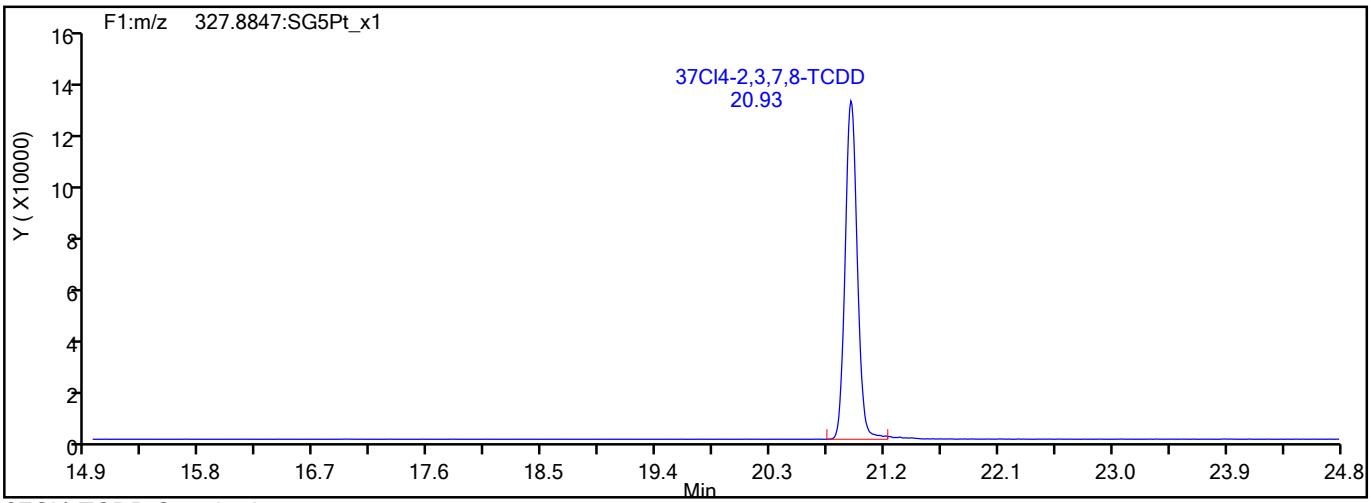

37Cl4-TCDD Standards

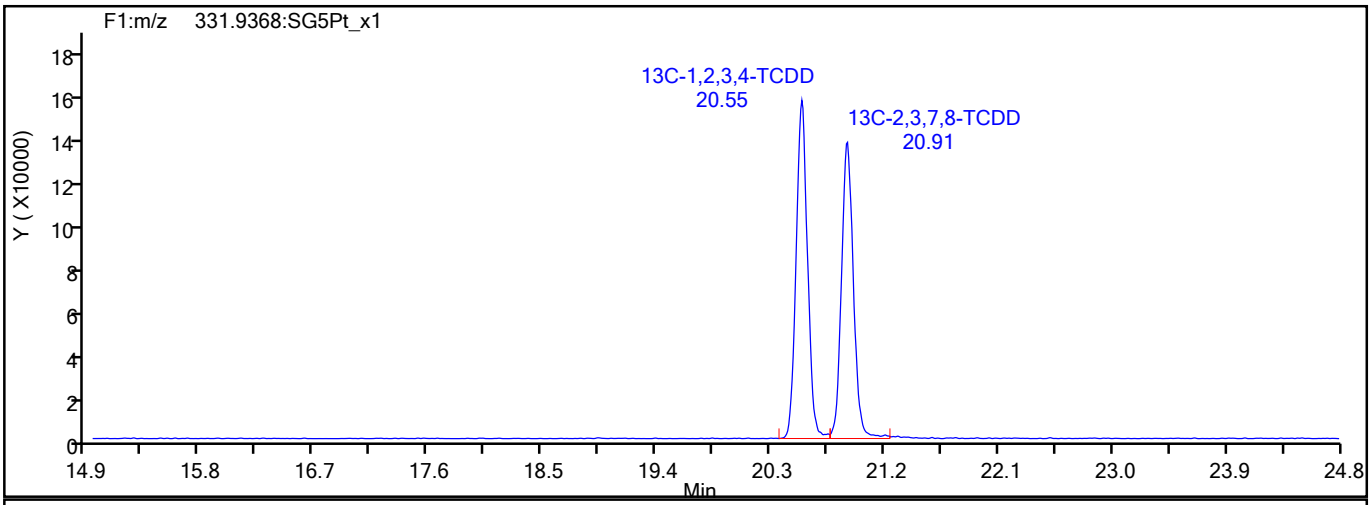

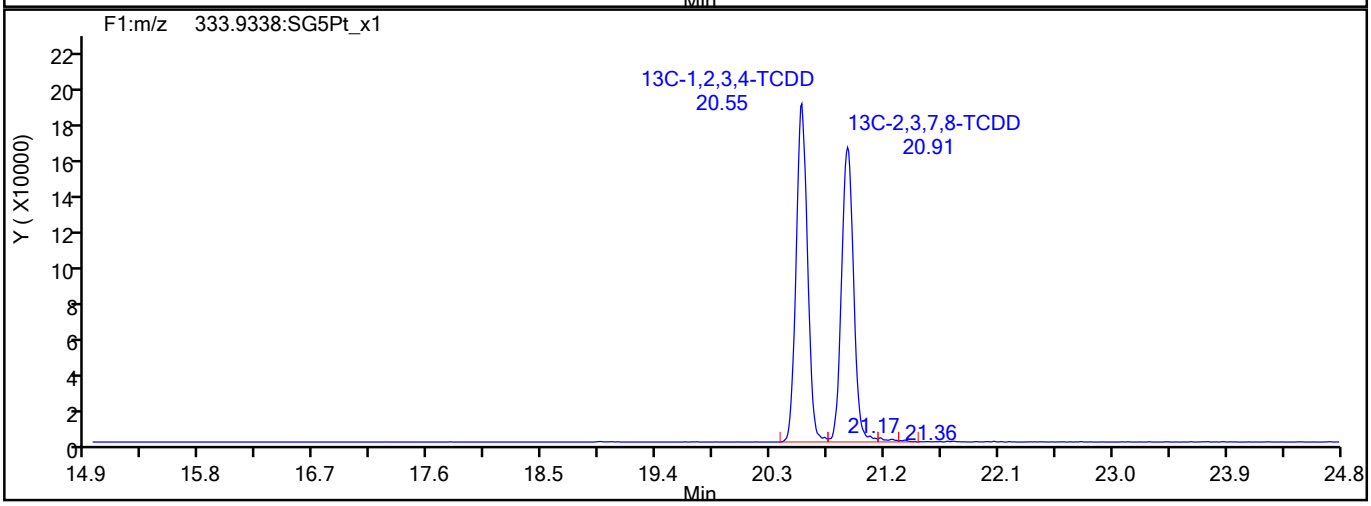

773584

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

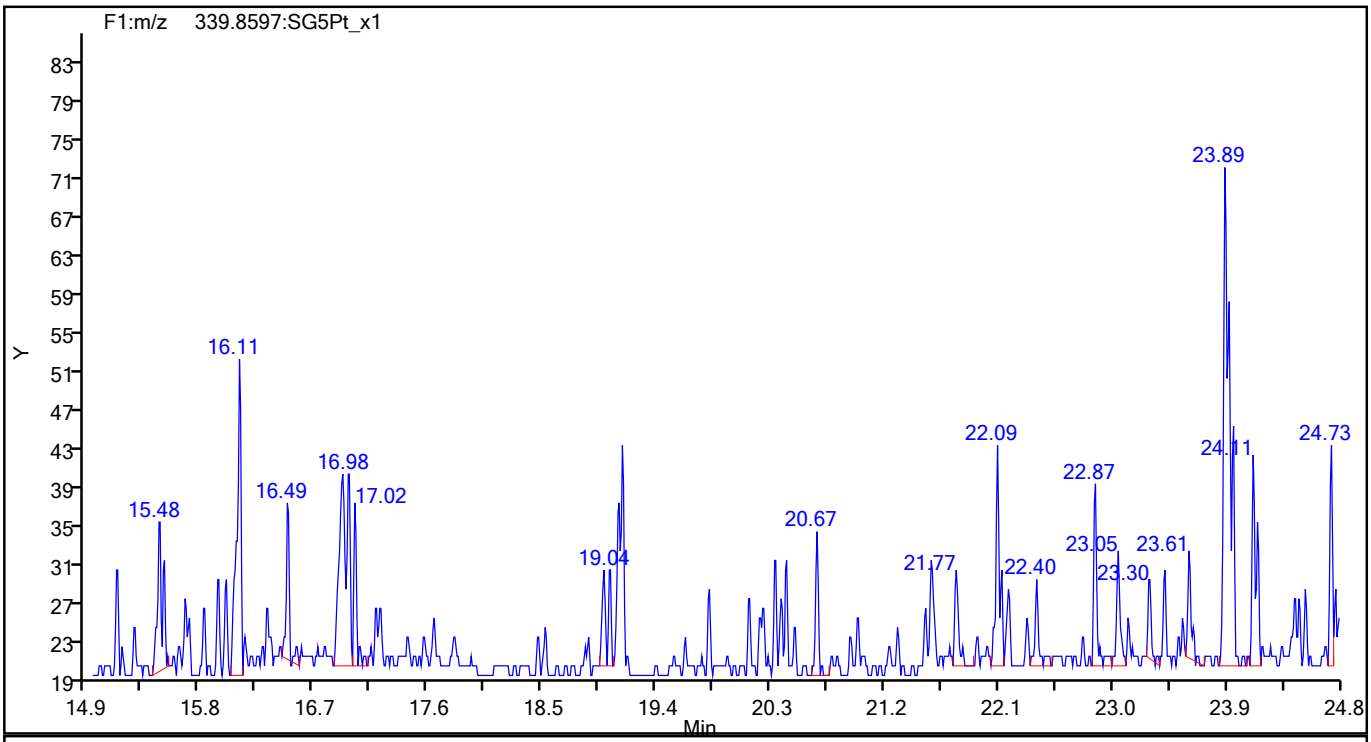

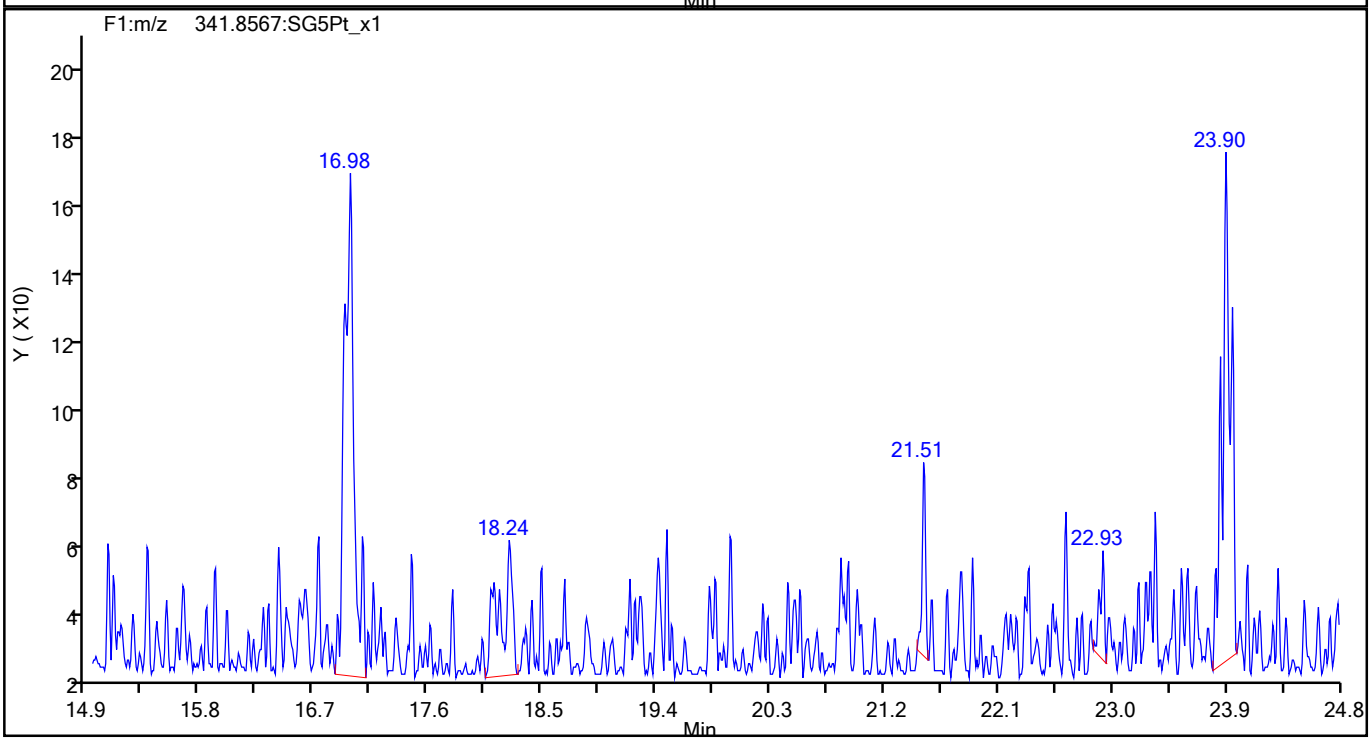

773585

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

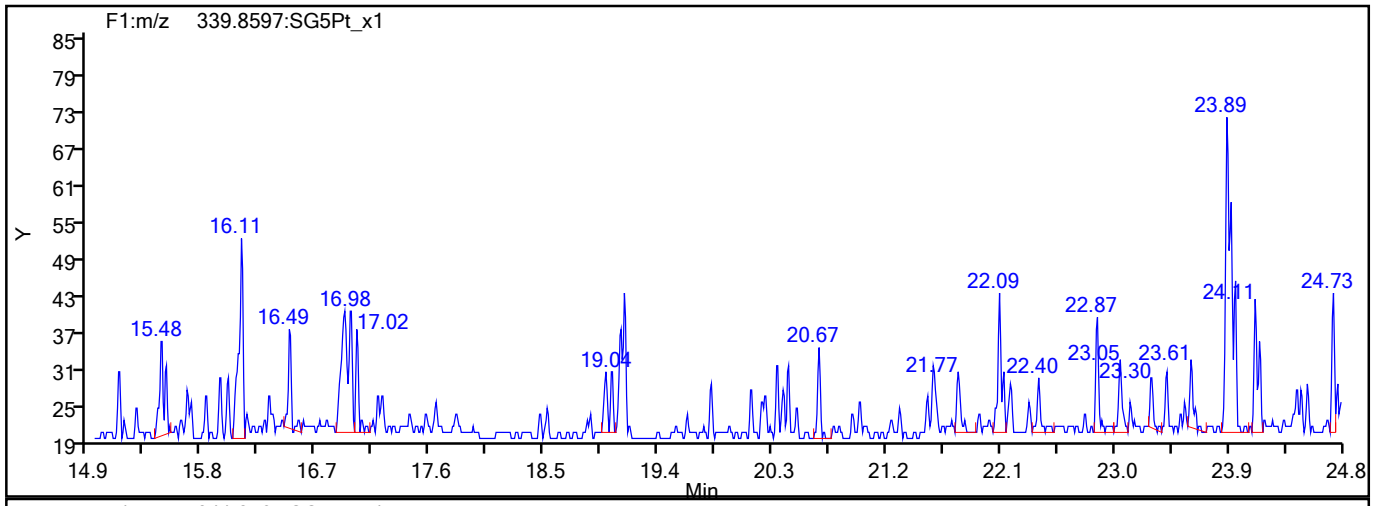

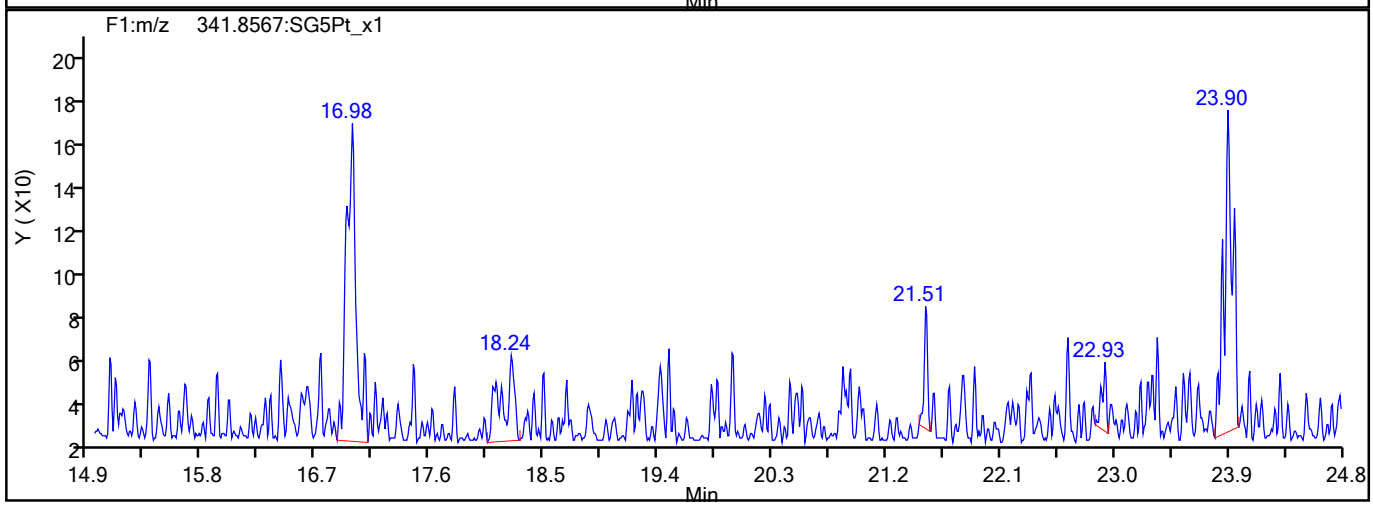

F1 PeCDFs Interference Mass

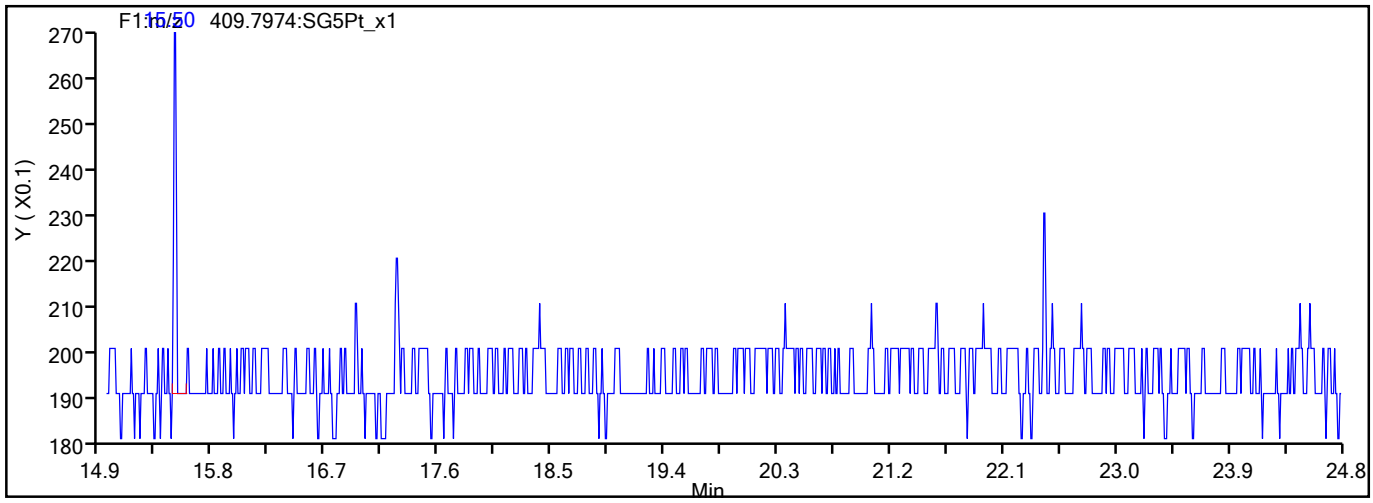

773586

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

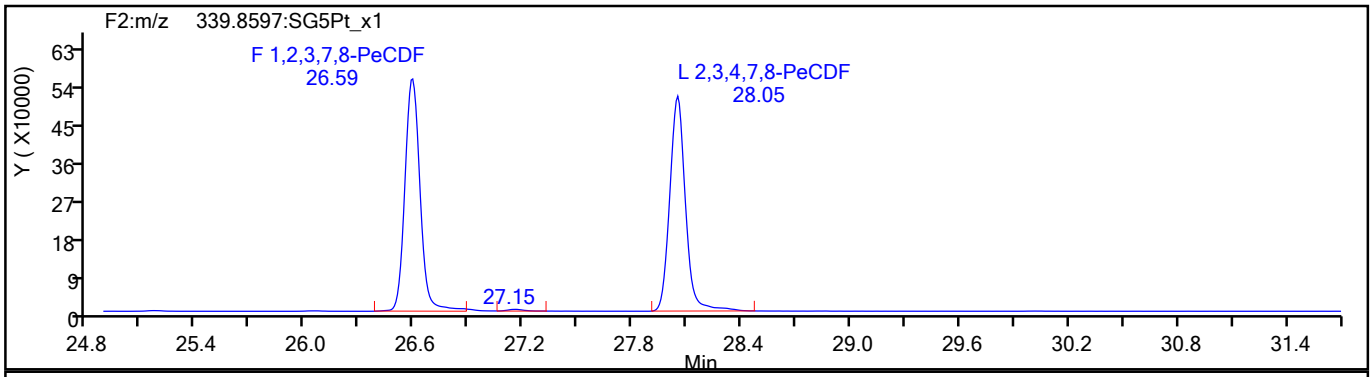

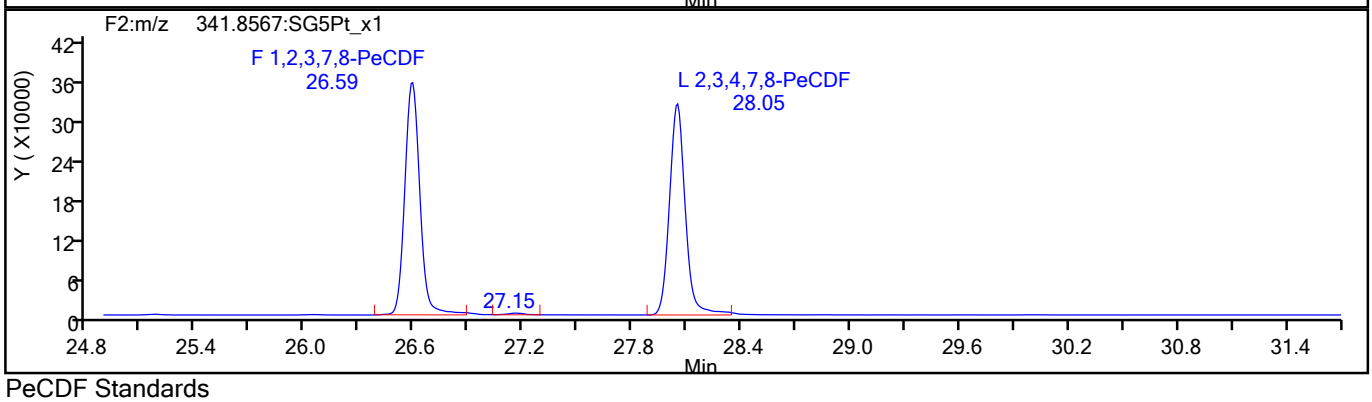

PeCDF Standards

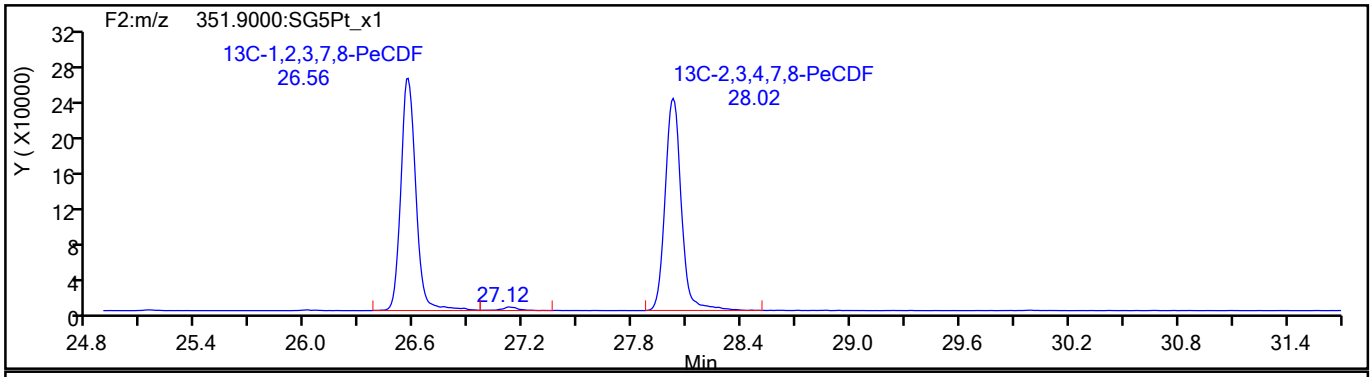

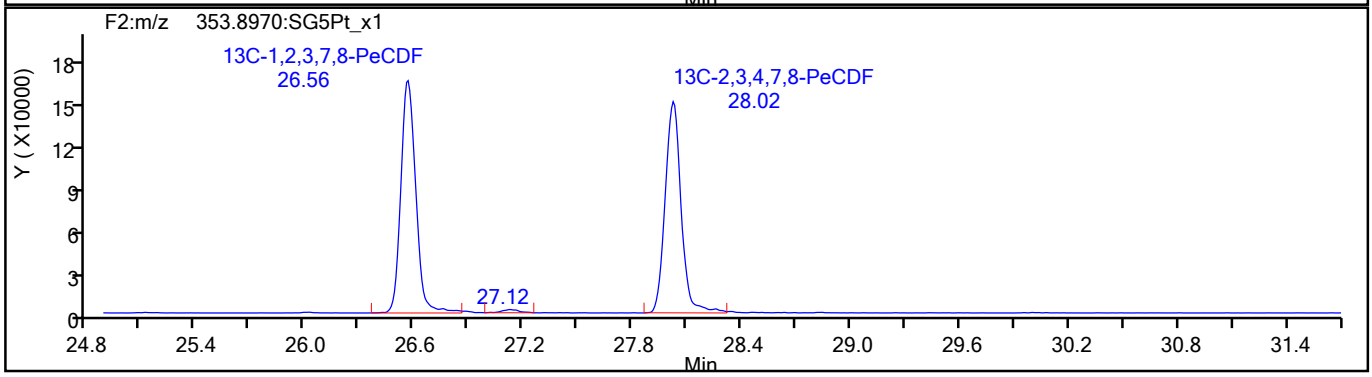

773587

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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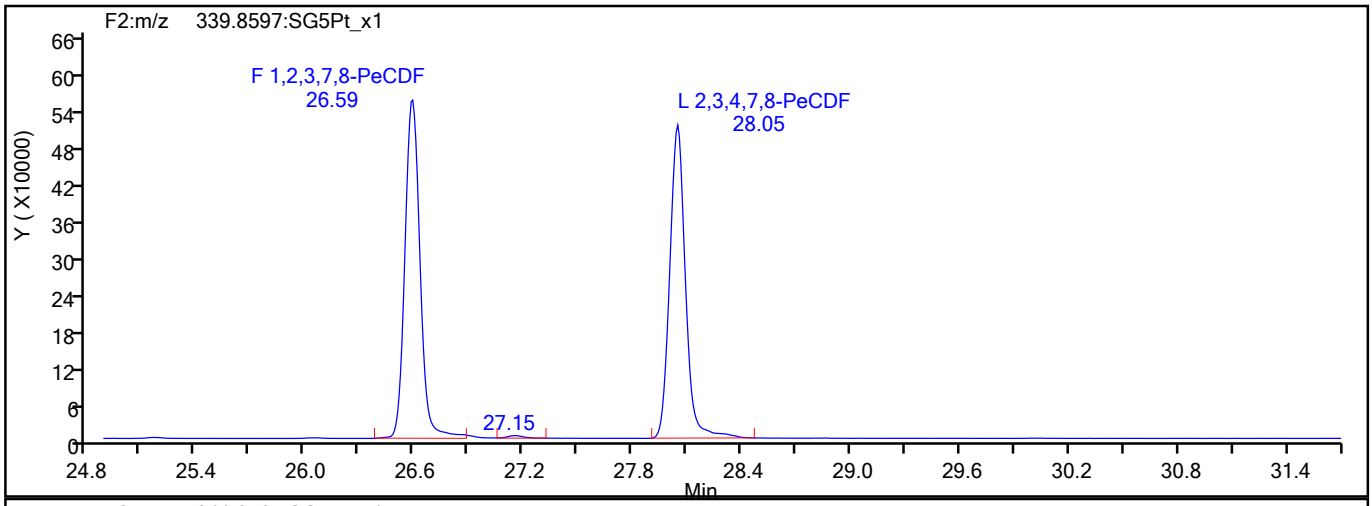

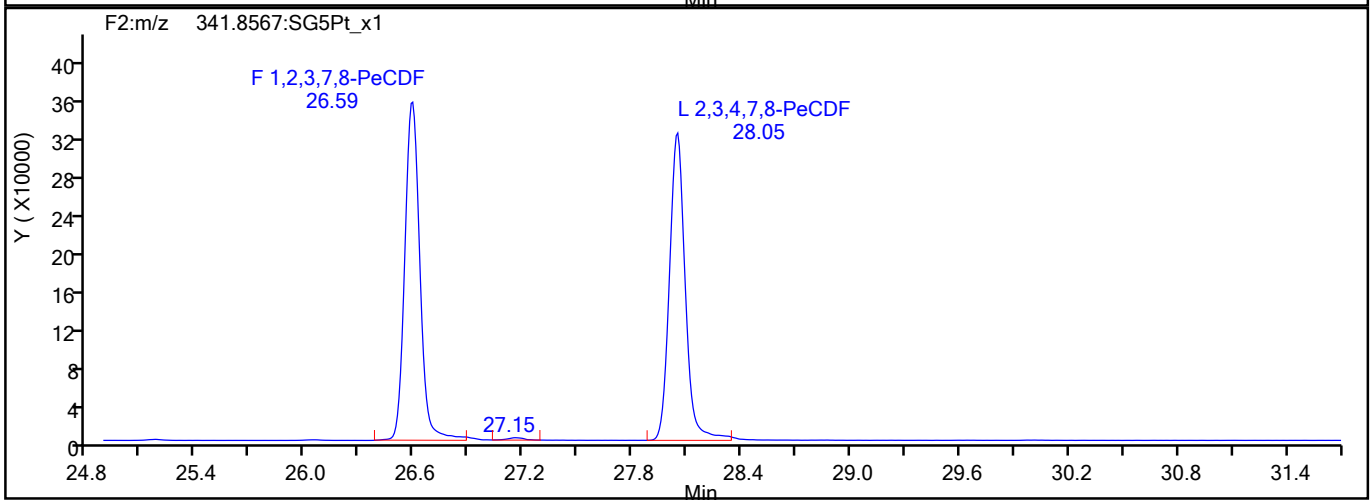

PeCDF Interference Mass

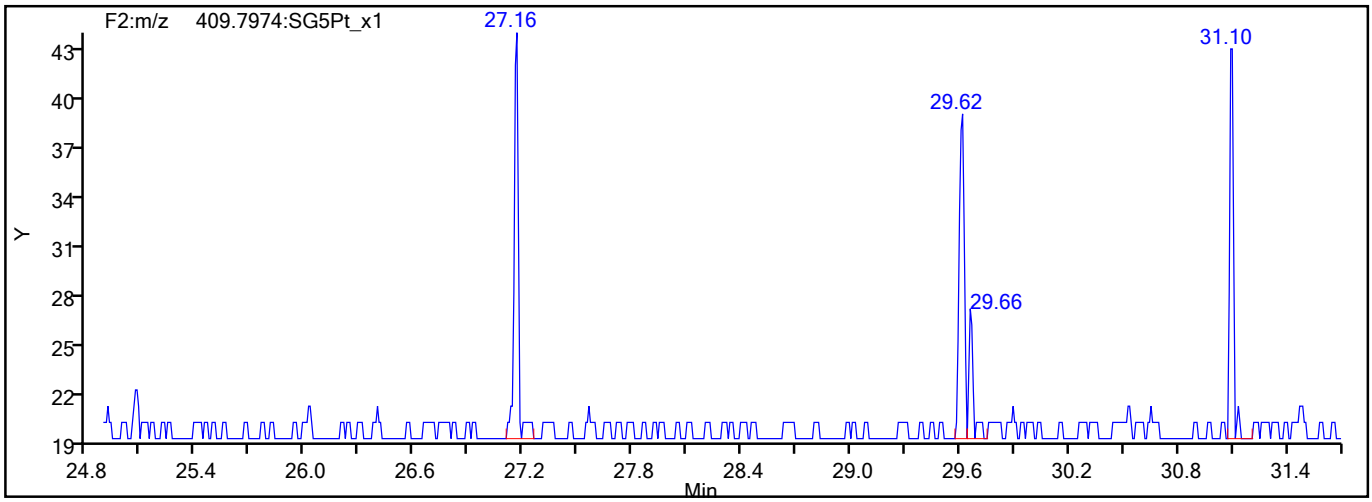

773588

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDD

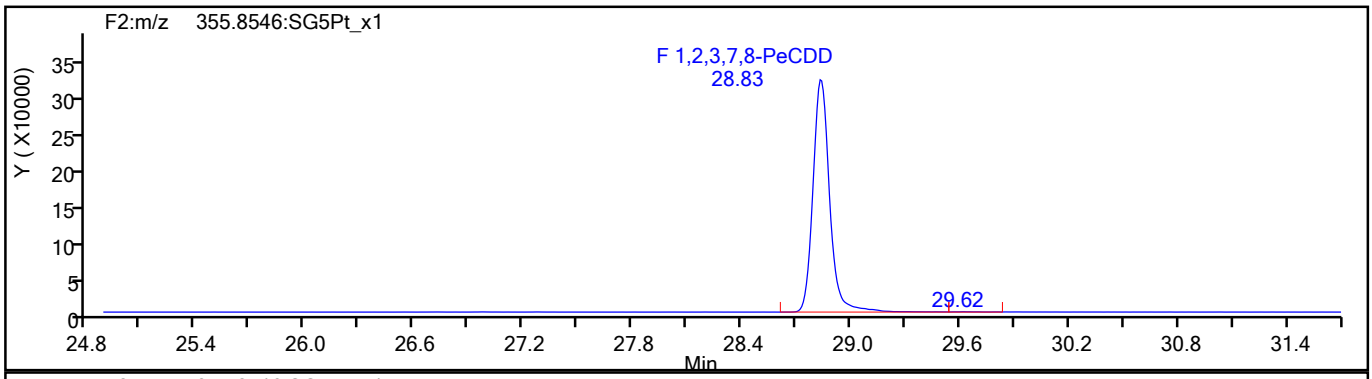

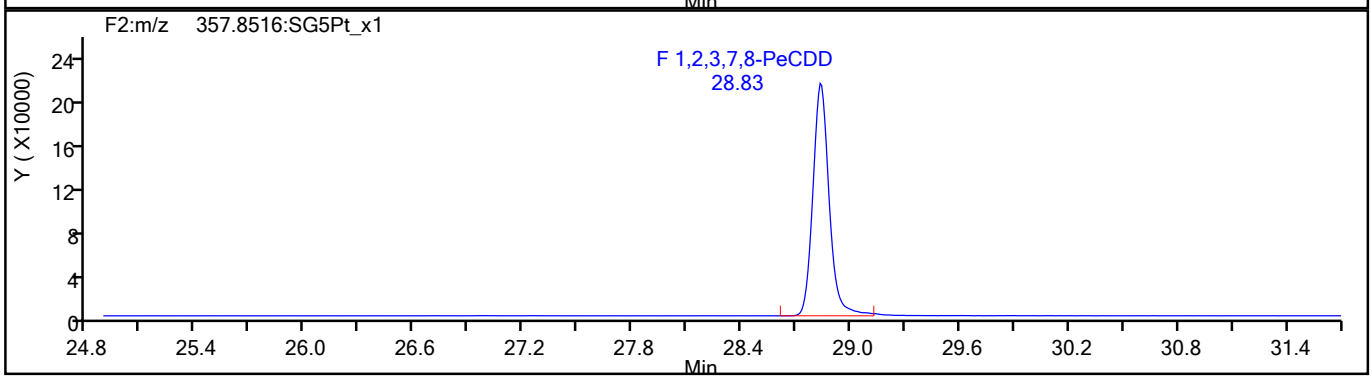

PeCDD Standards

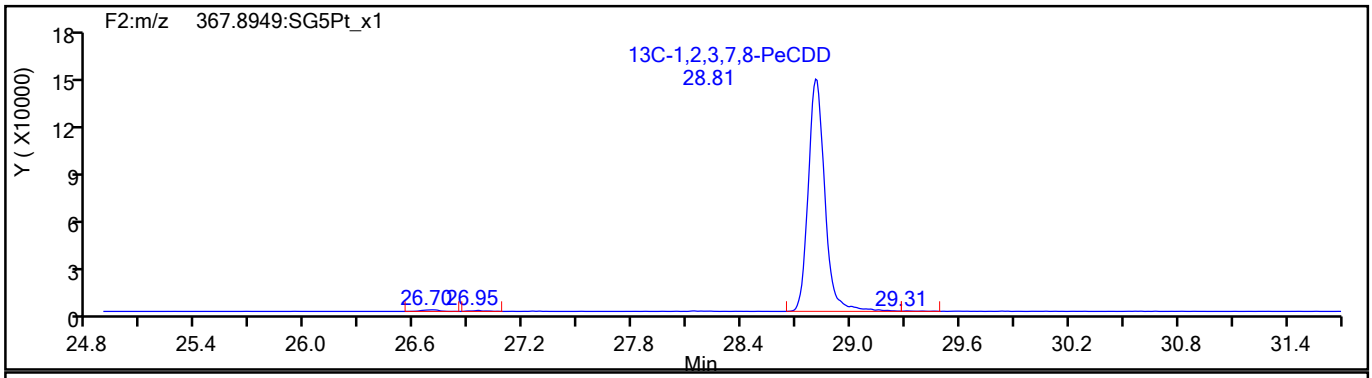

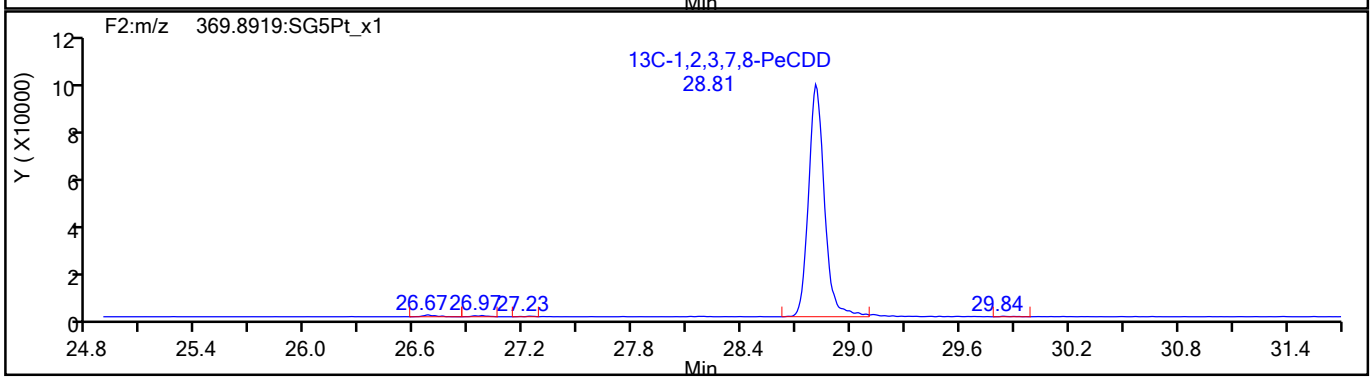

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Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

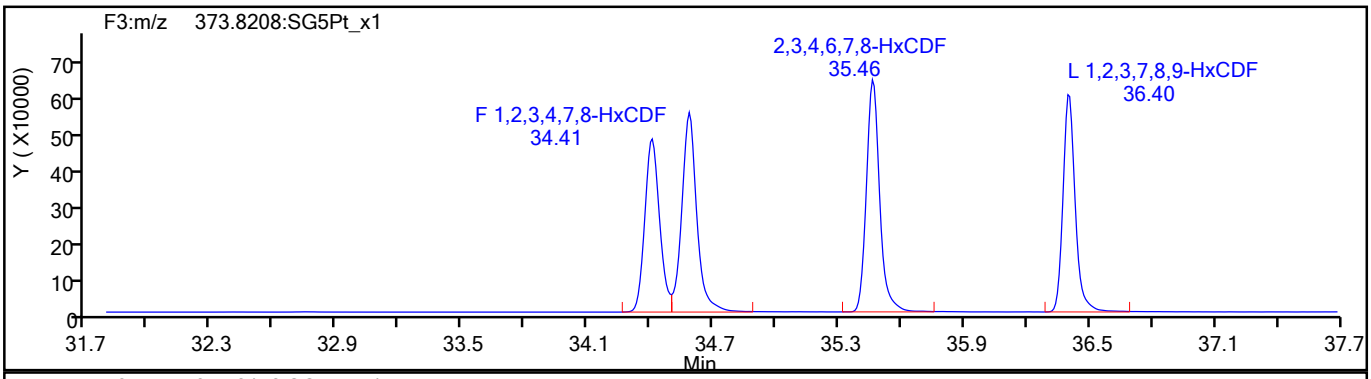

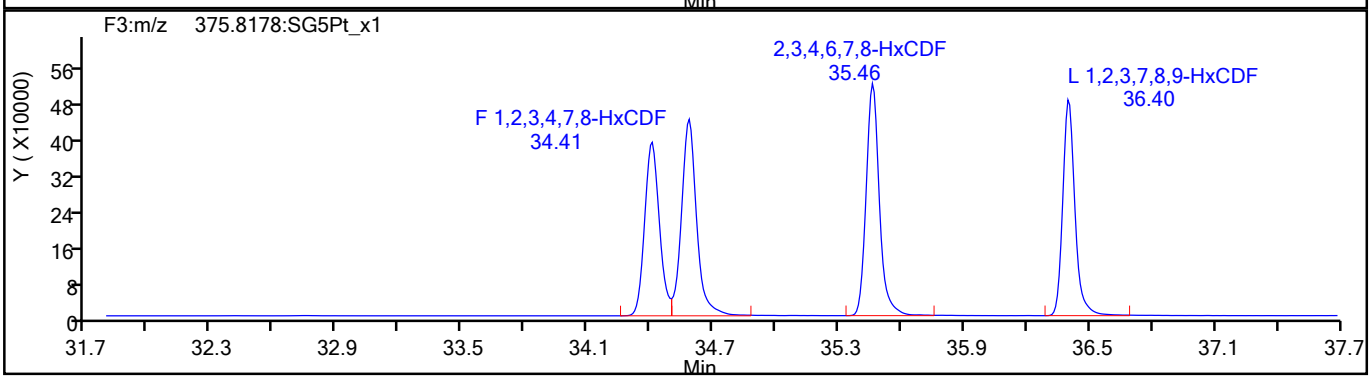

HxCDF Standards

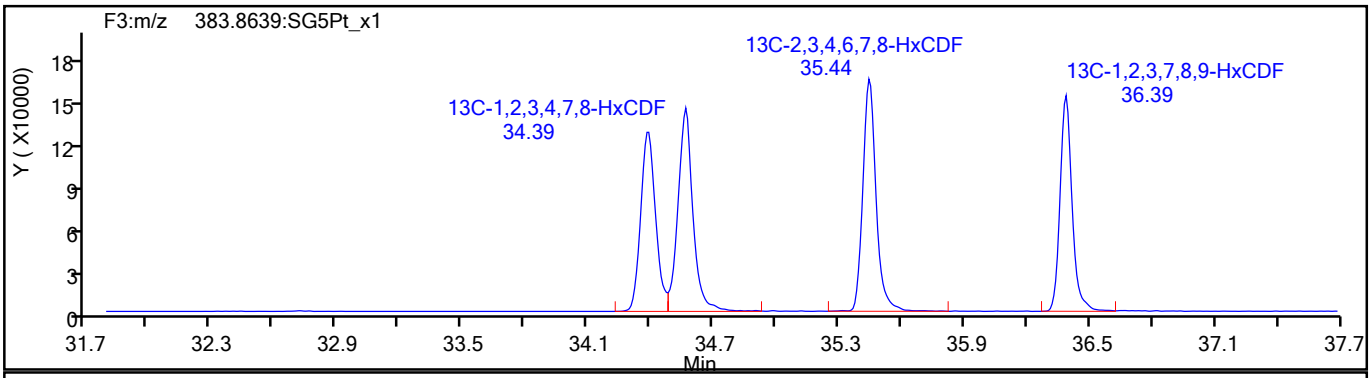

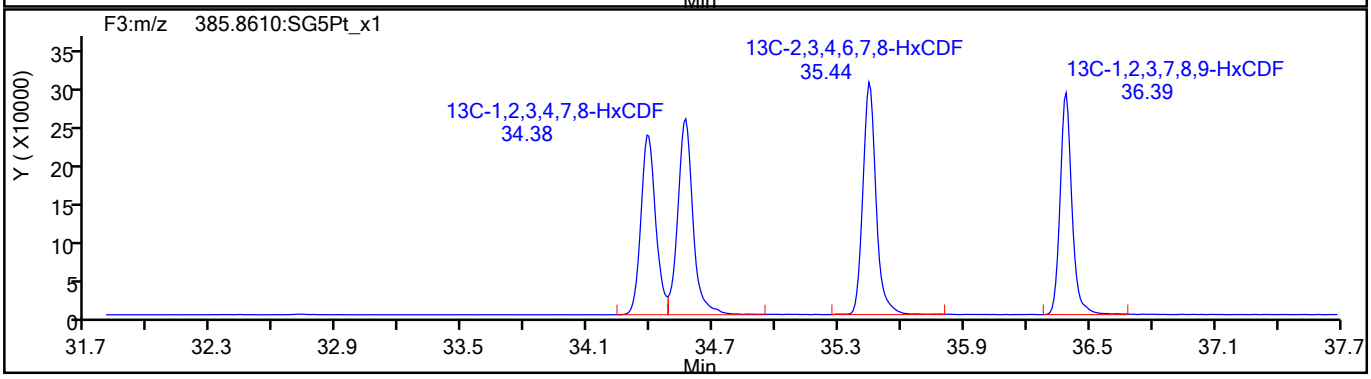

773590

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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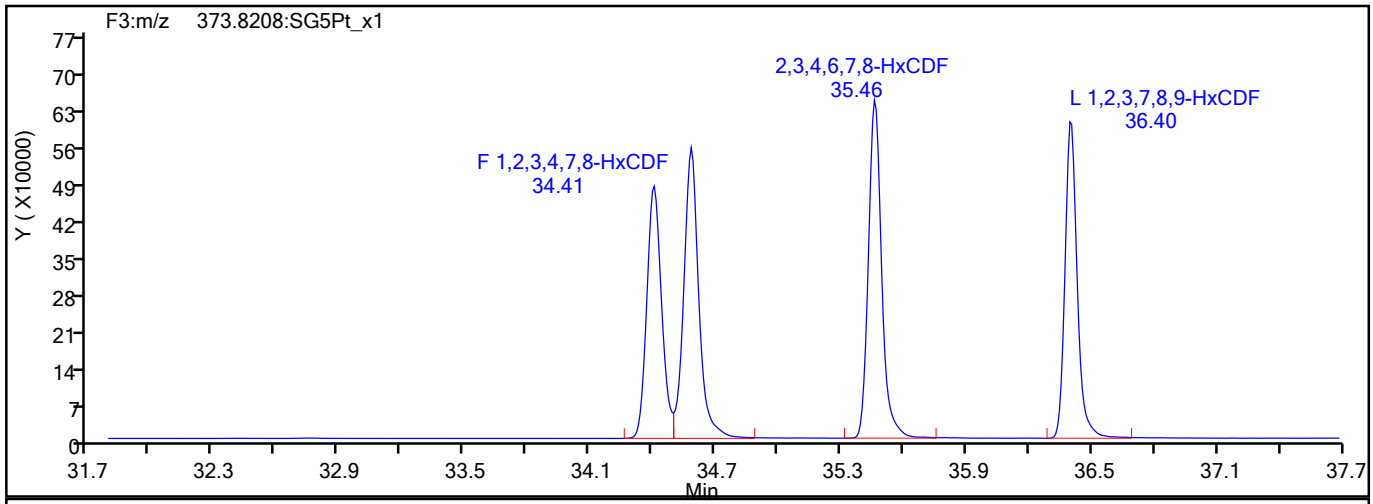

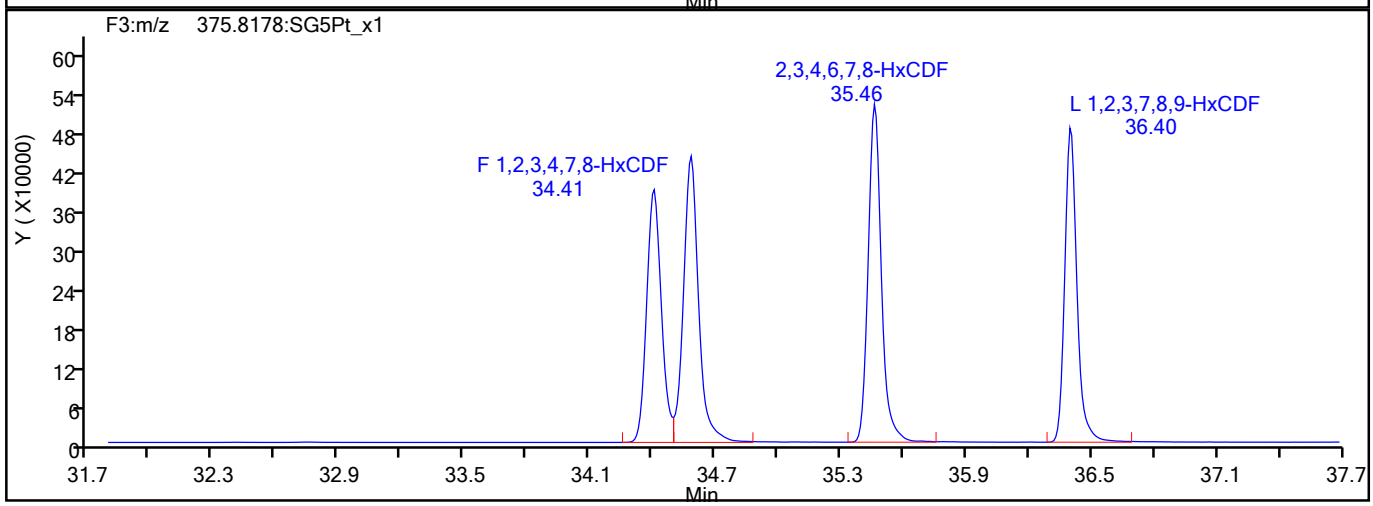

HxCDF Interference Mass

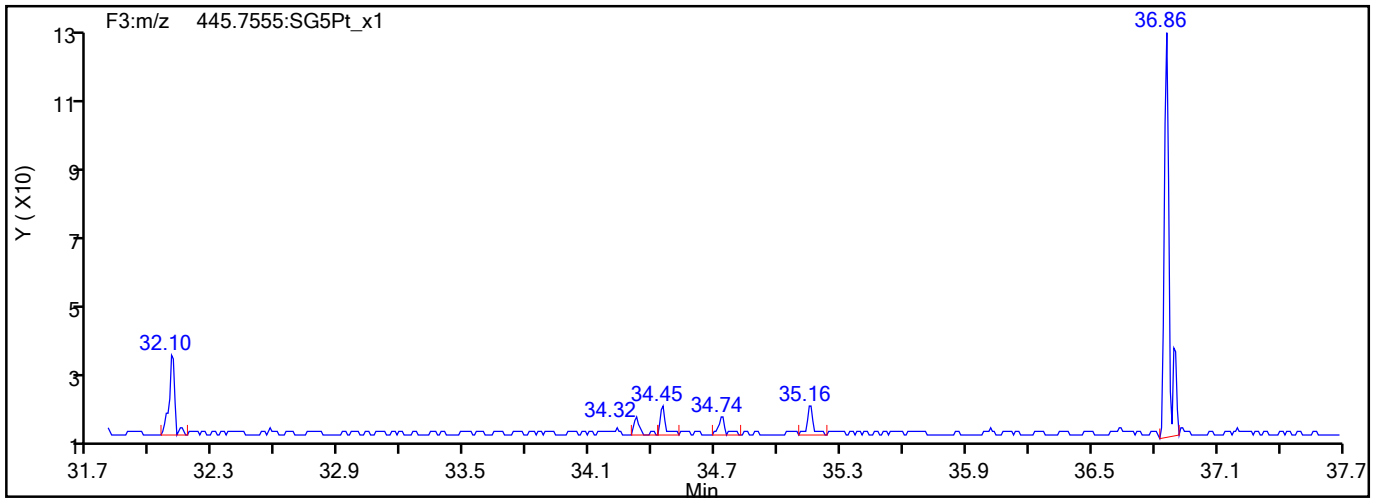

773591

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

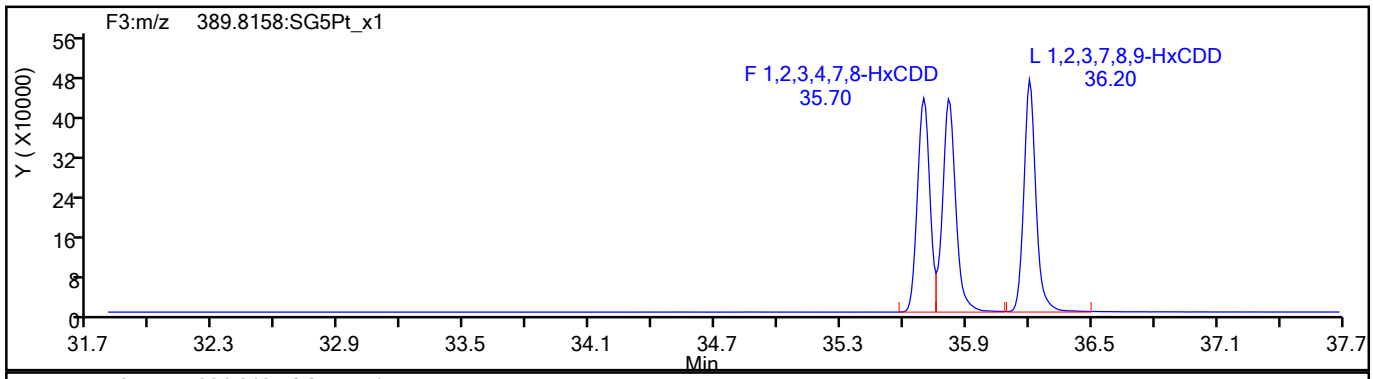

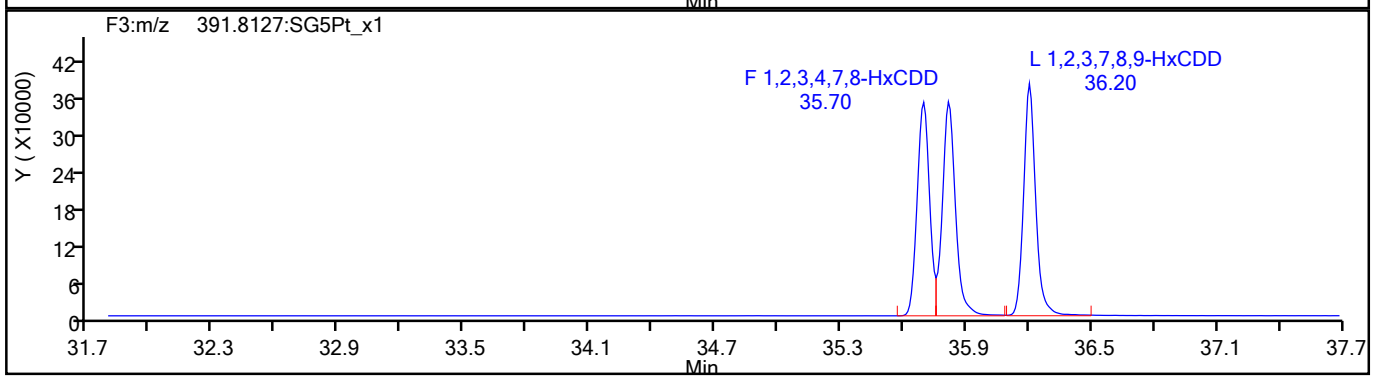

HxCDD Standards

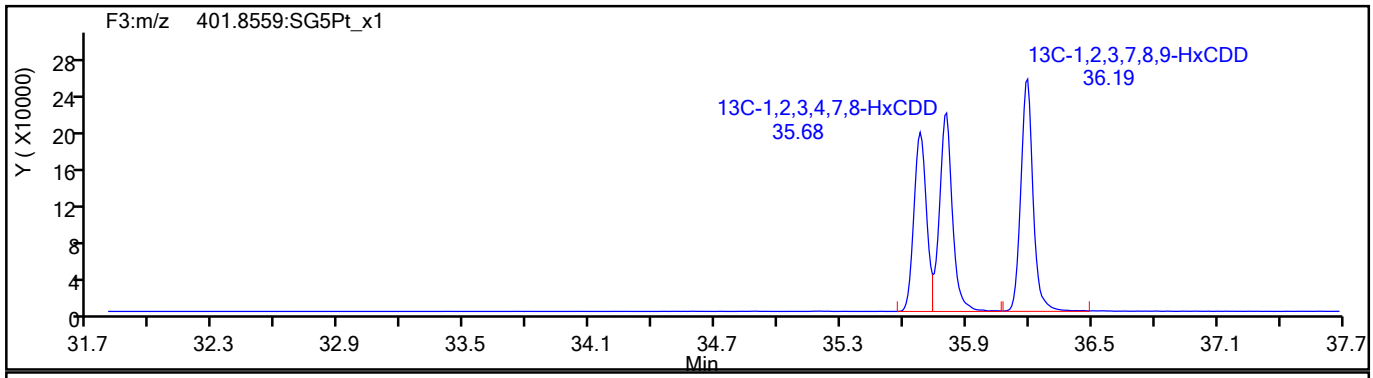

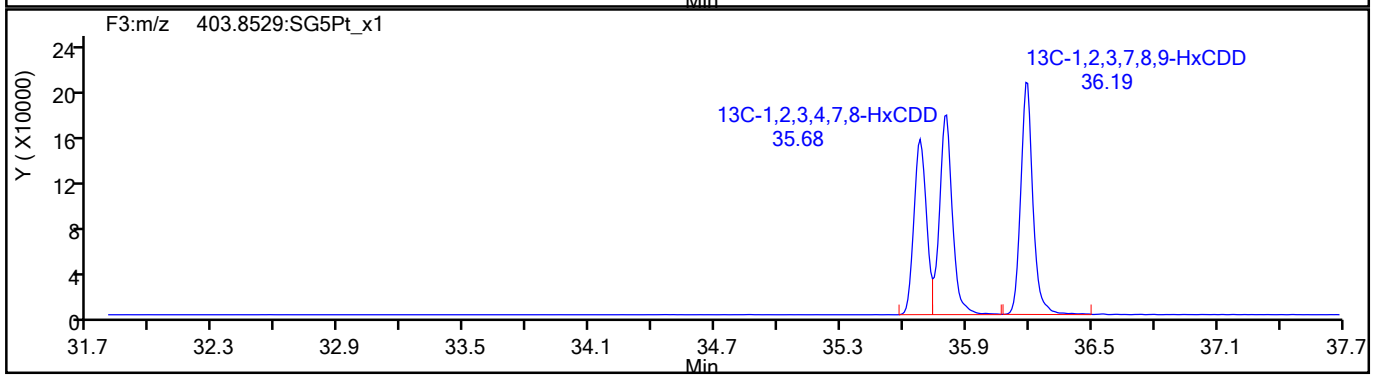

773592

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
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HpCDF

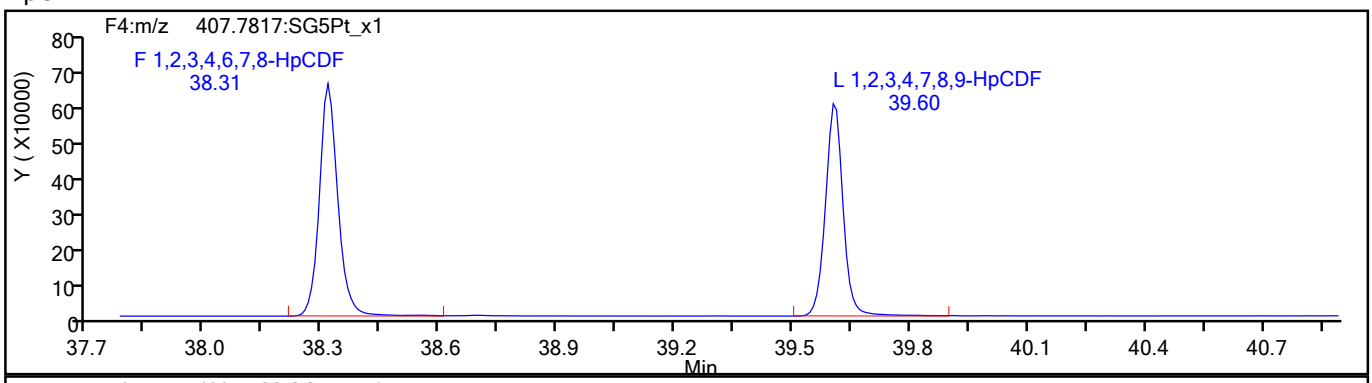

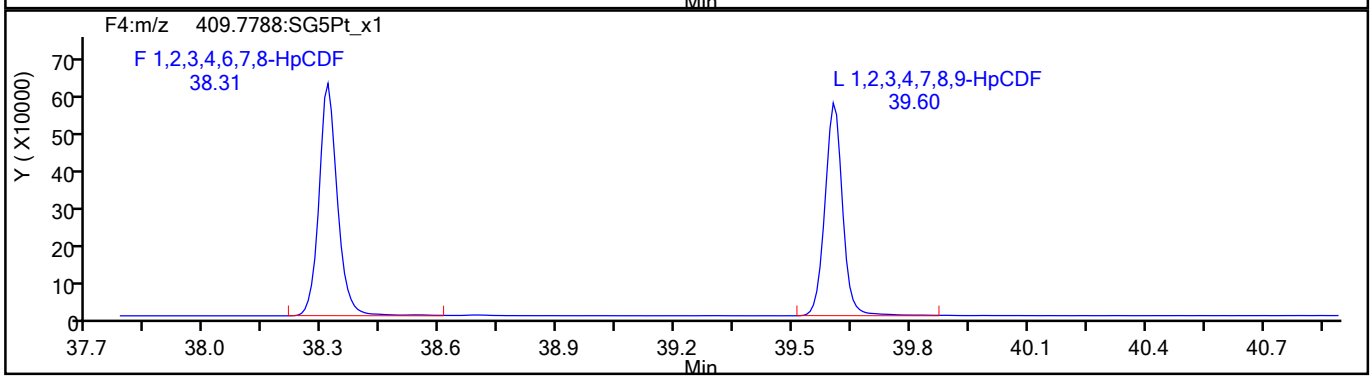

HpCDF Standards

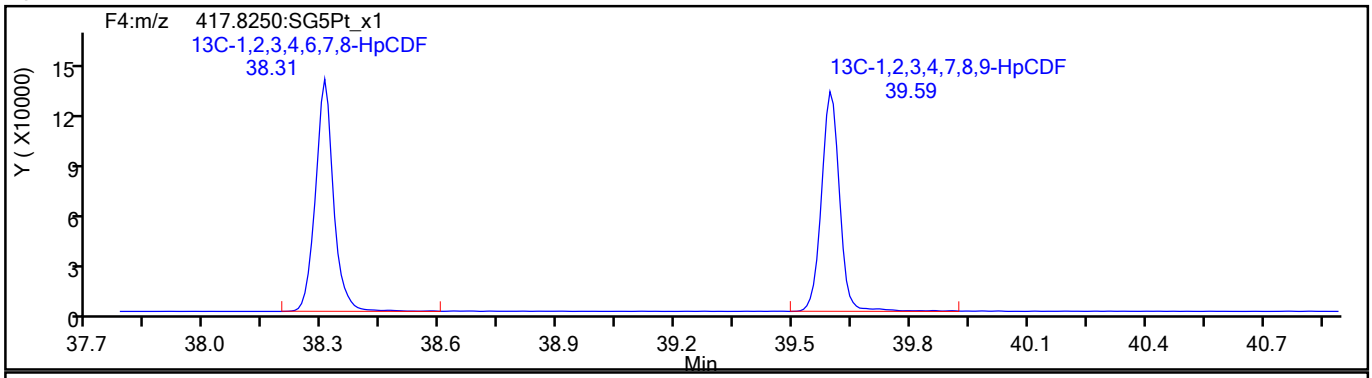

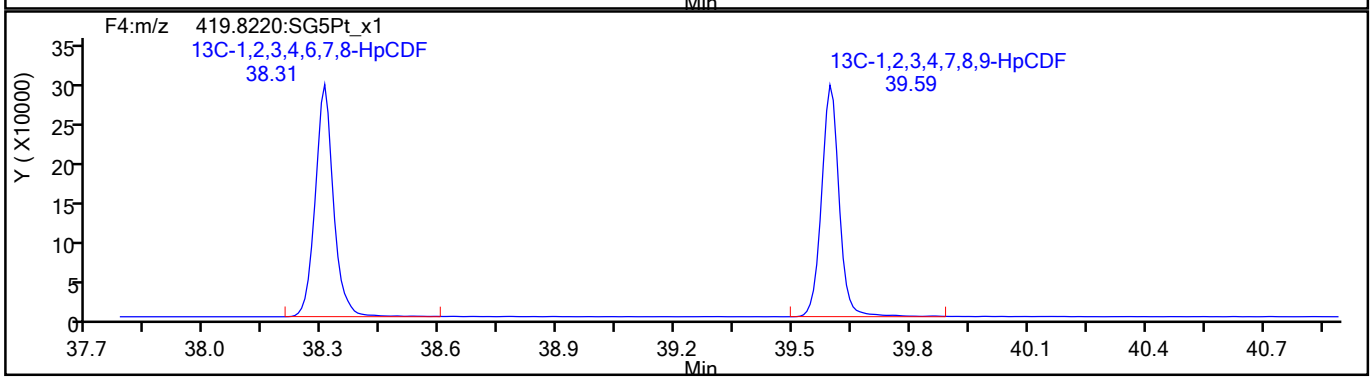

773593

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

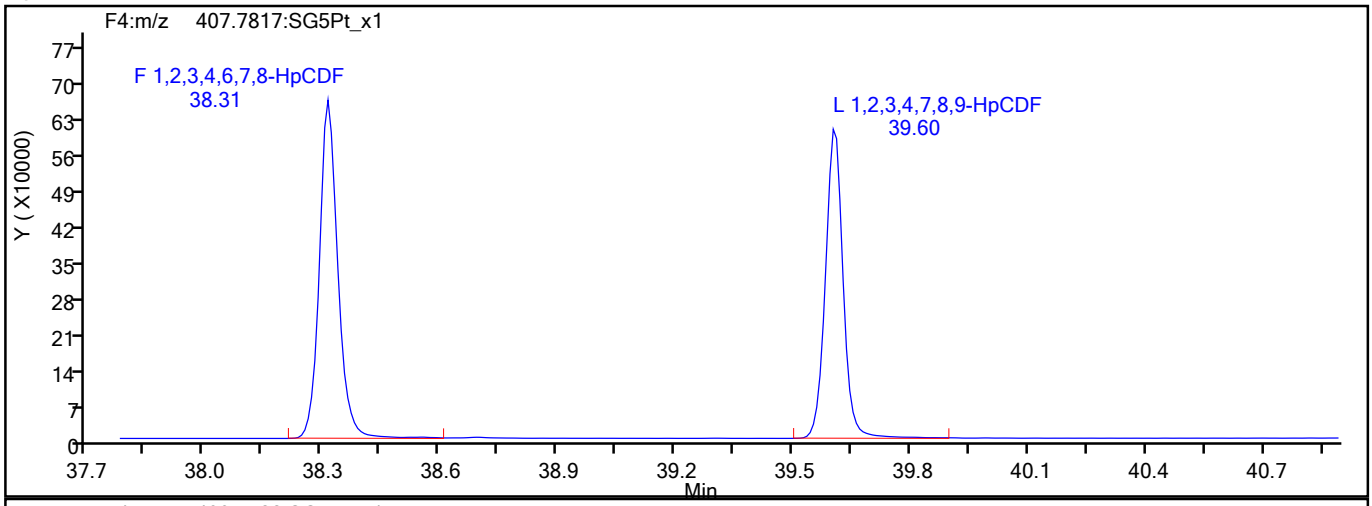

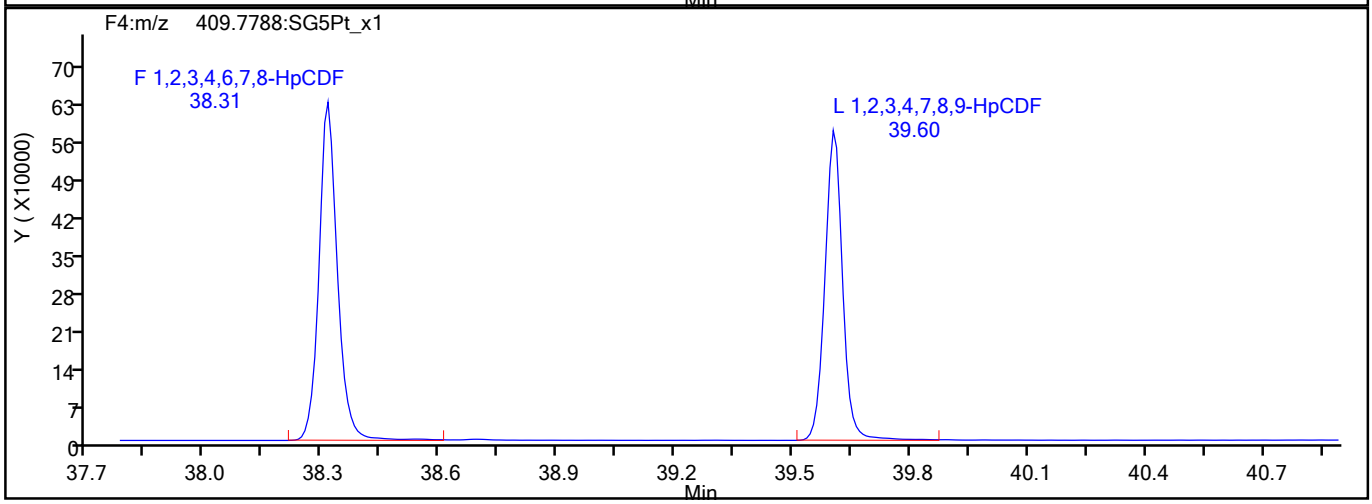

HpCDF Interference Mass

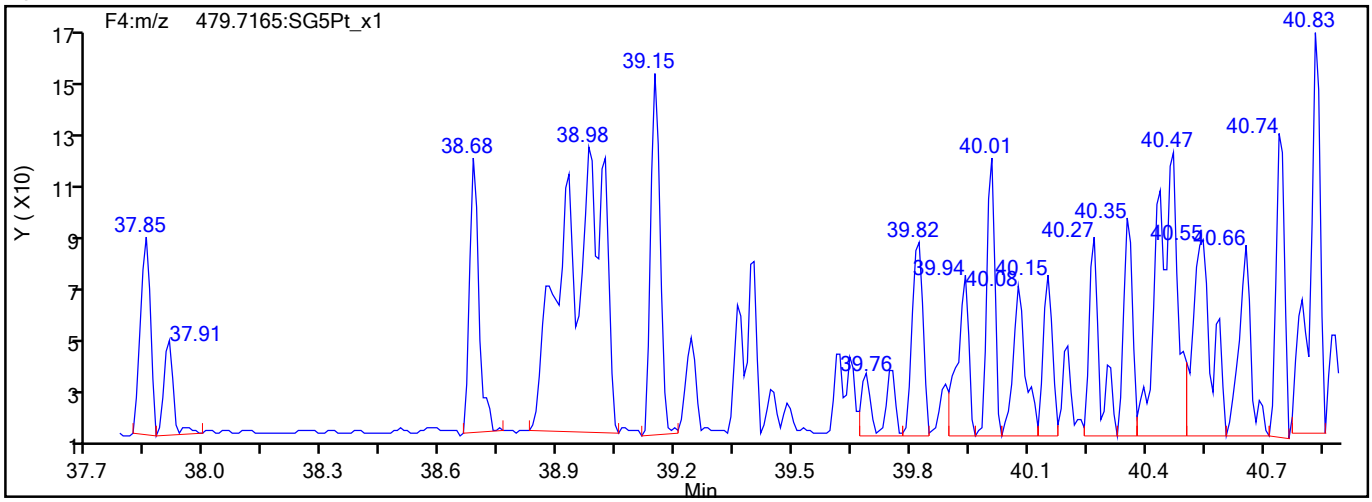

773594

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

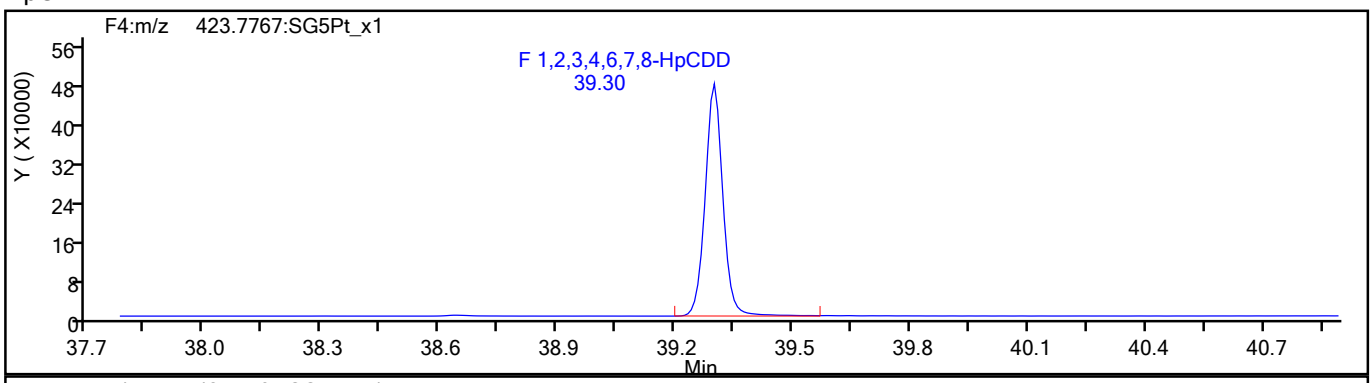

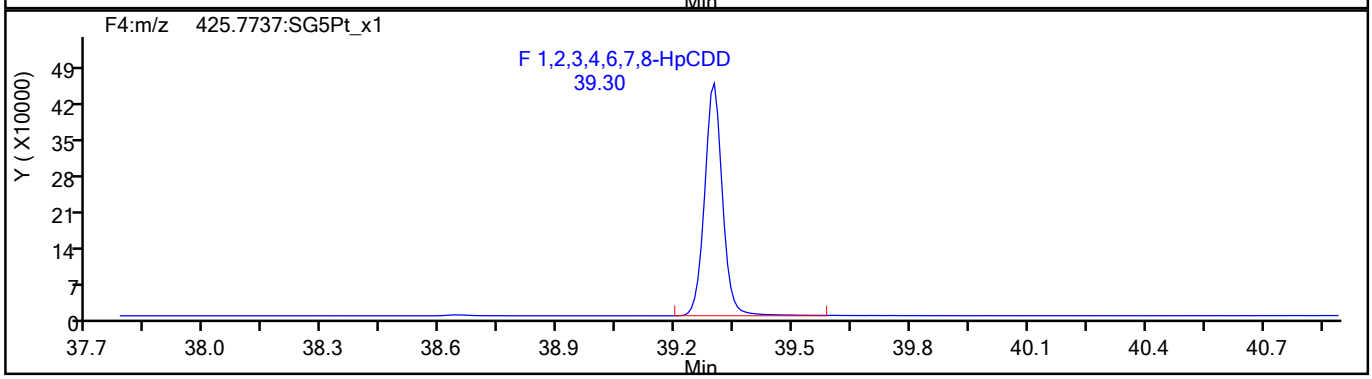

HpCDD Standards

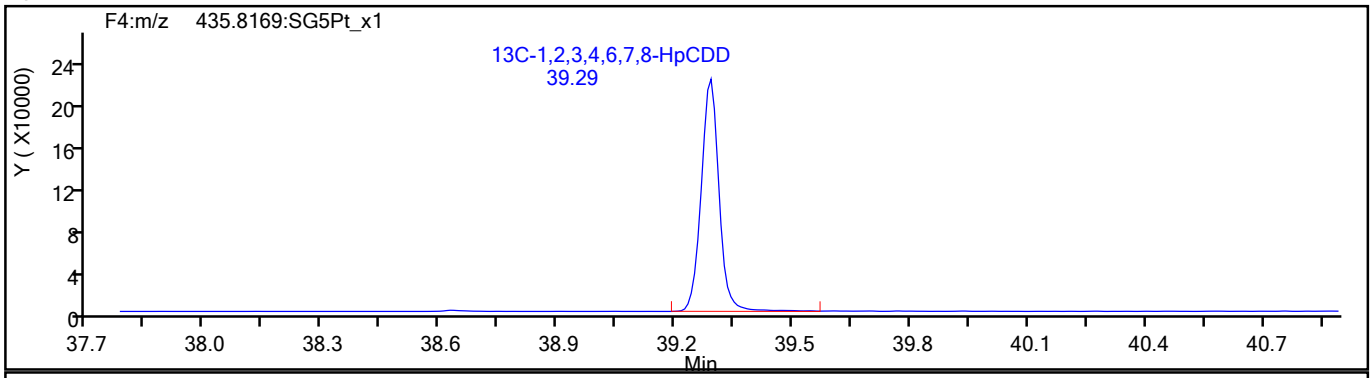

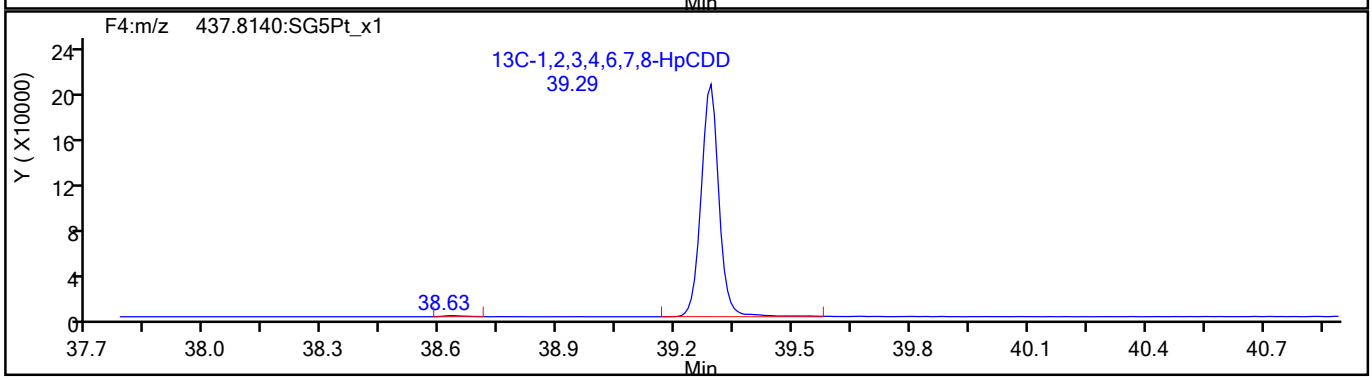

773595

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

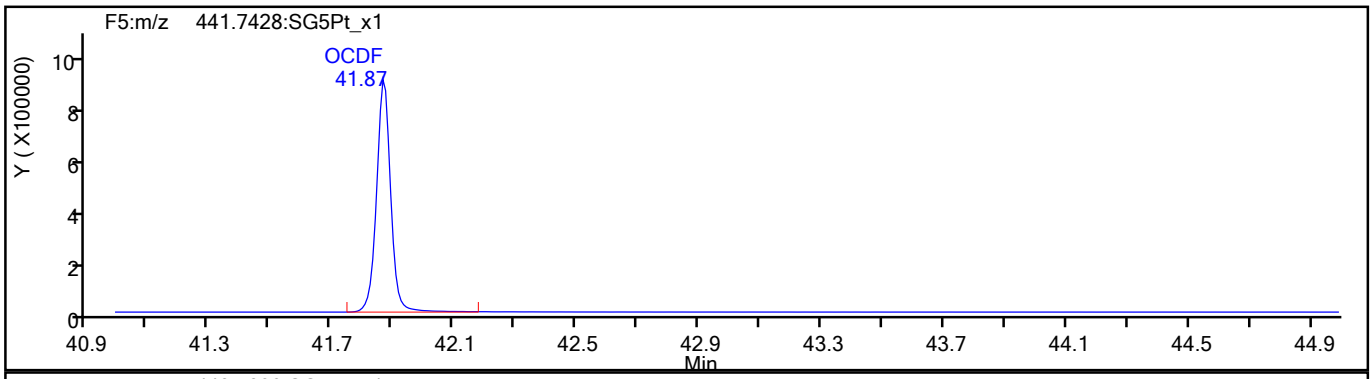

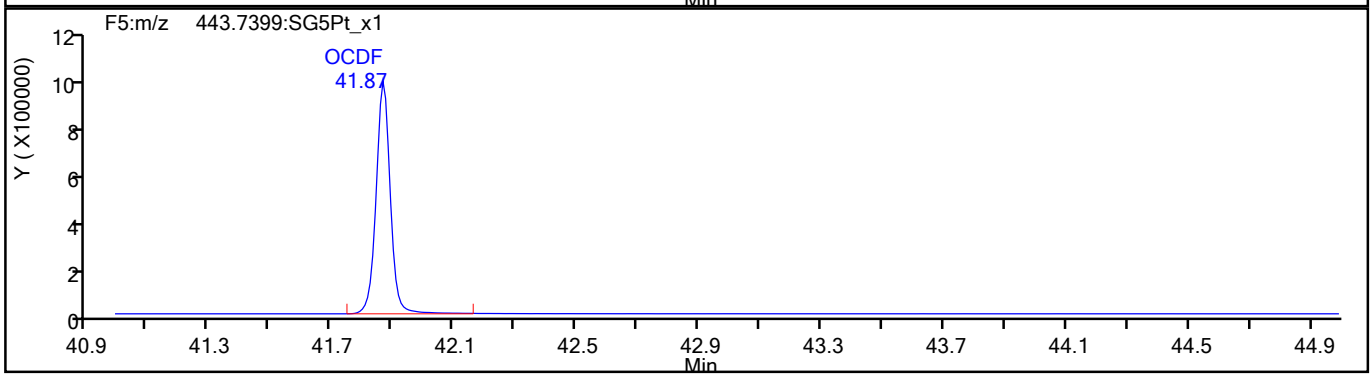

OCDF Standards

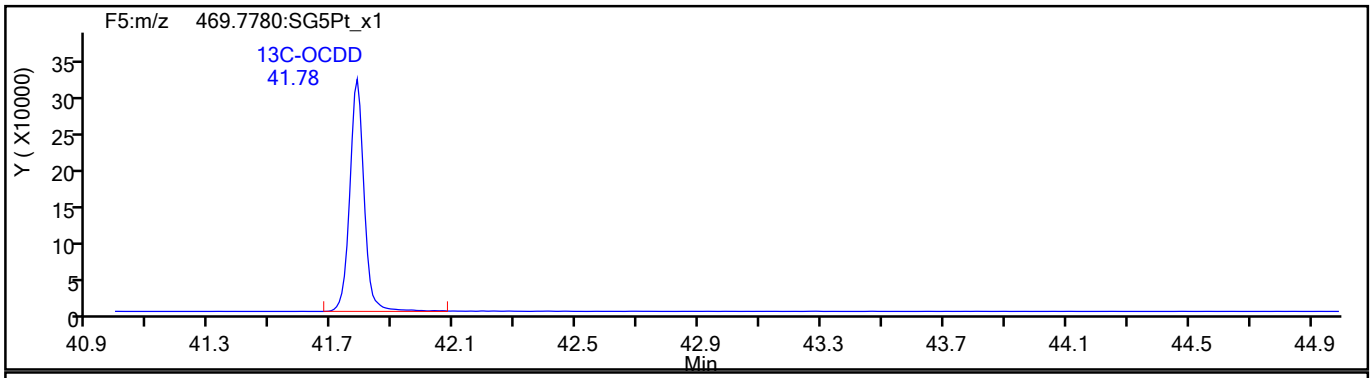

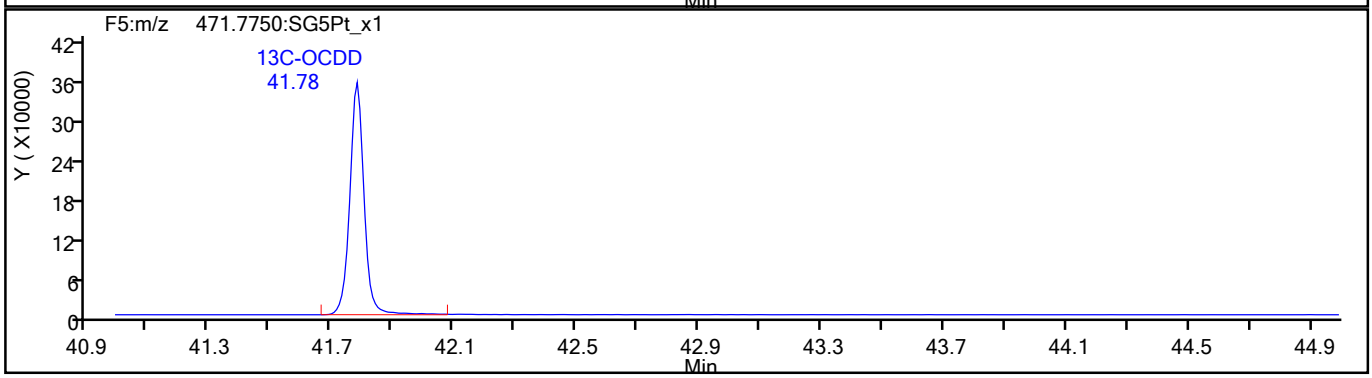

773596

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

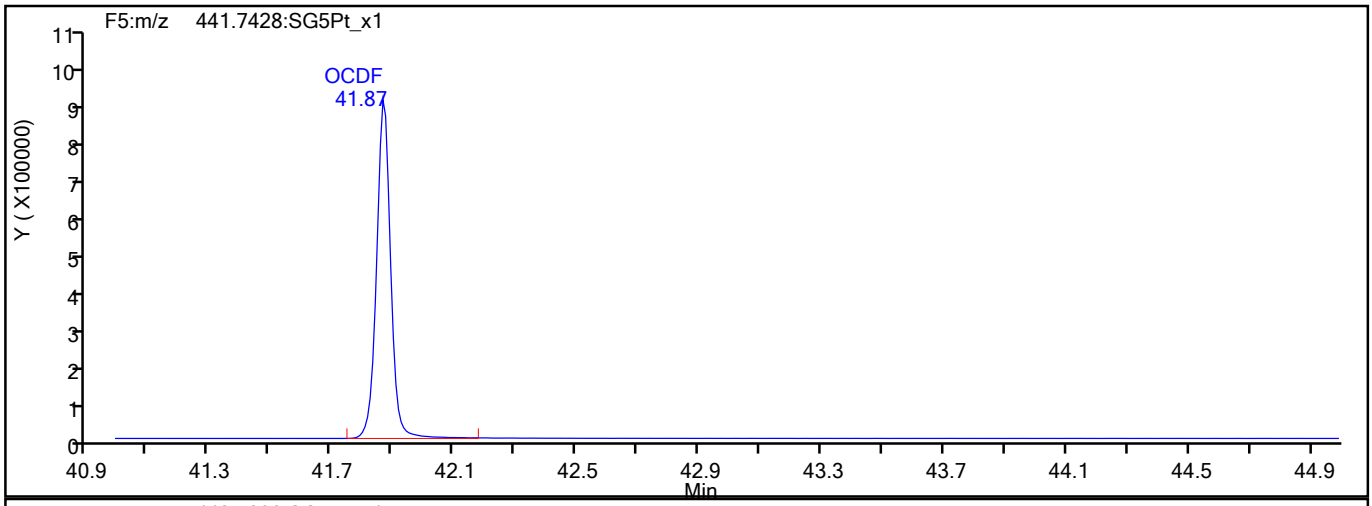

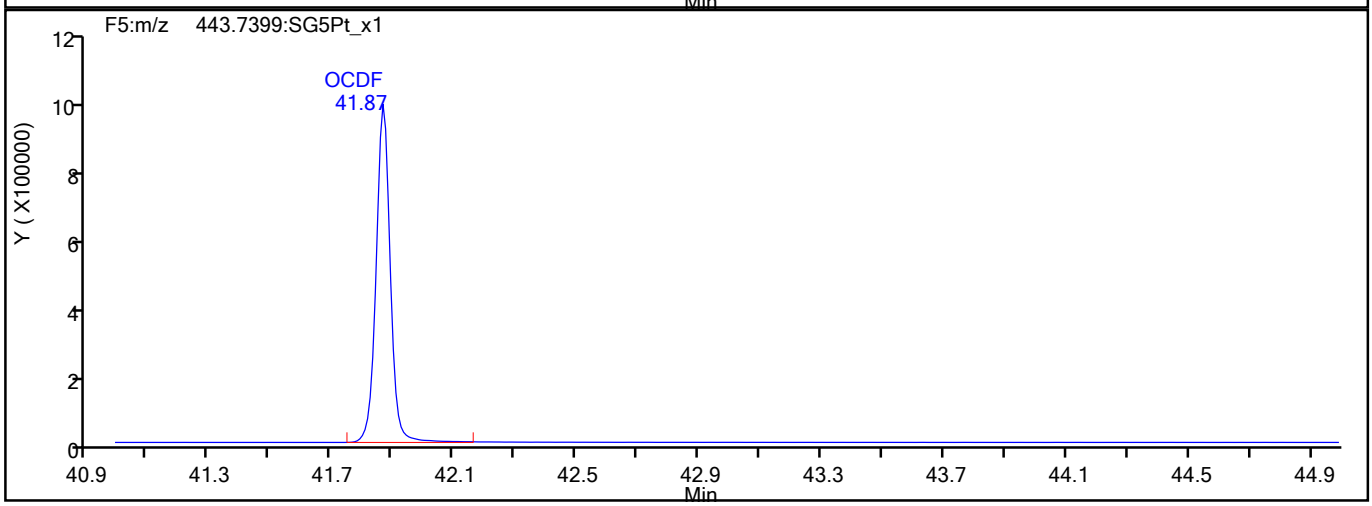

OCDF Interference Mass

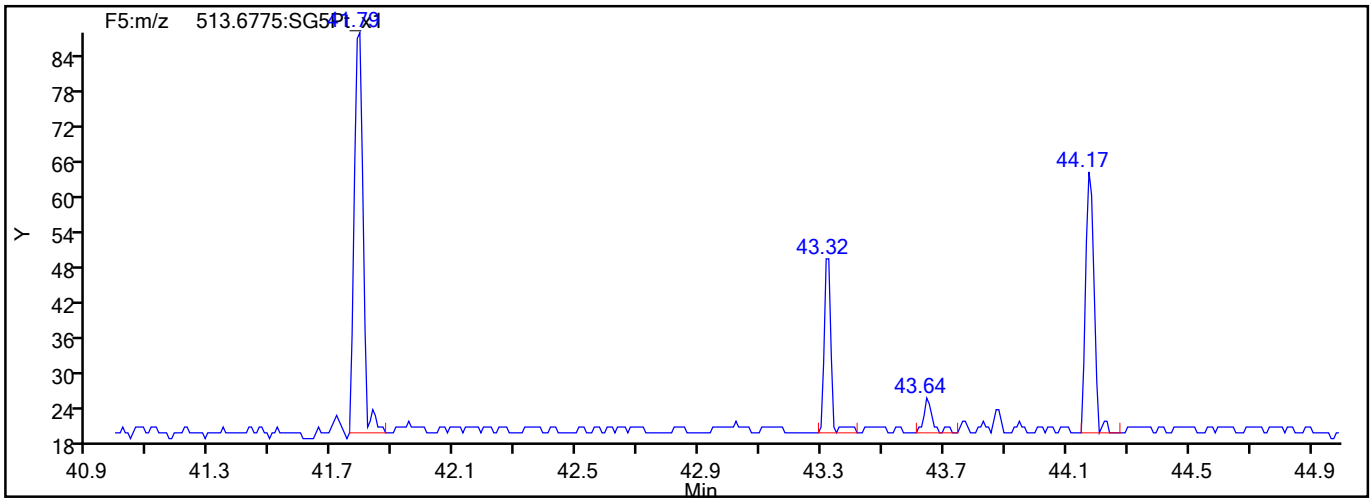

773597

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

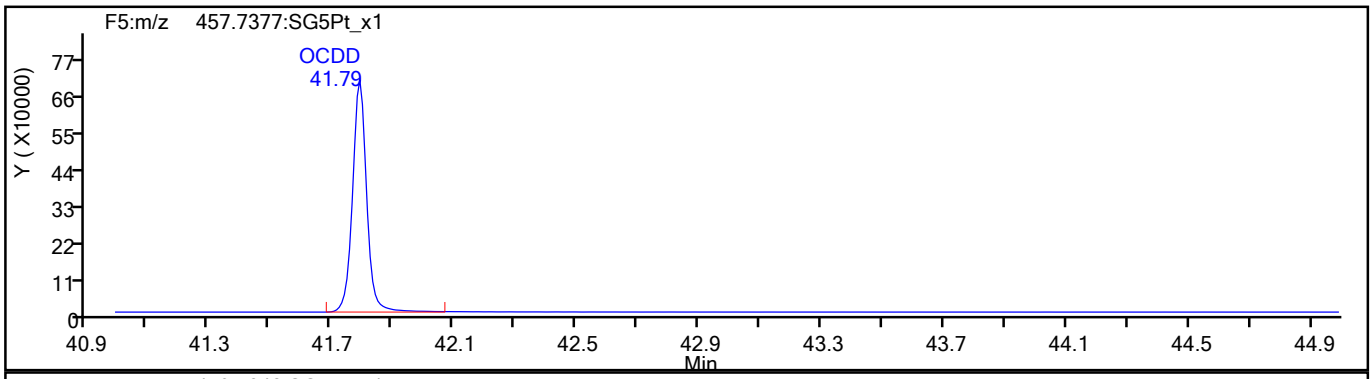

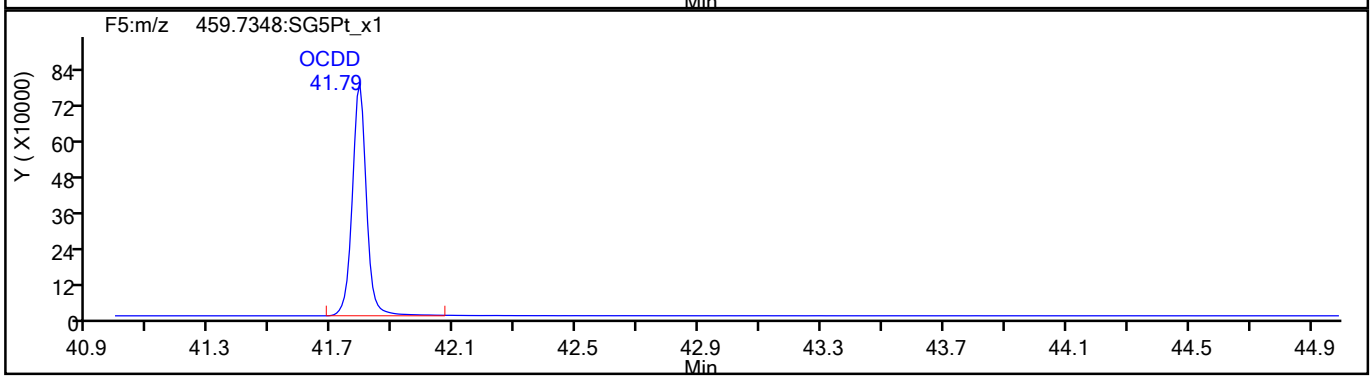

OCDD Standards

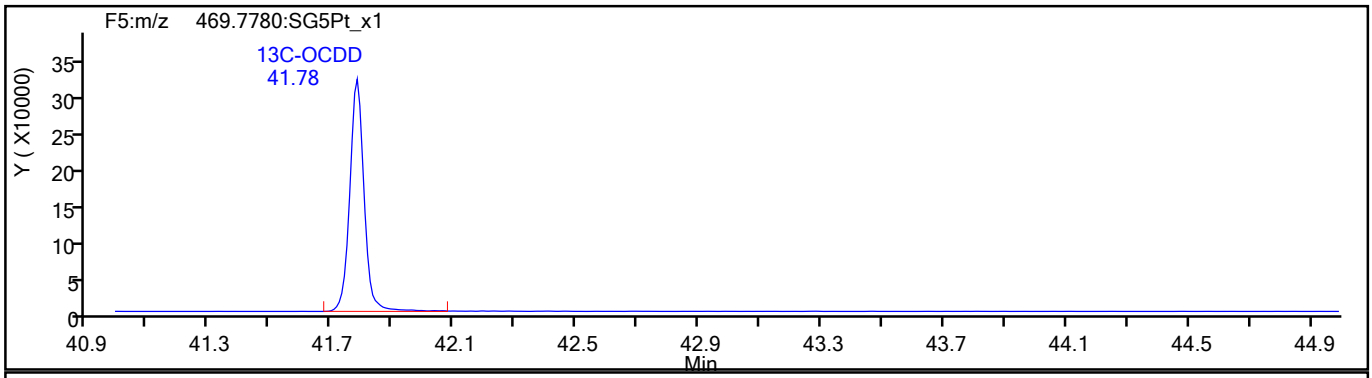

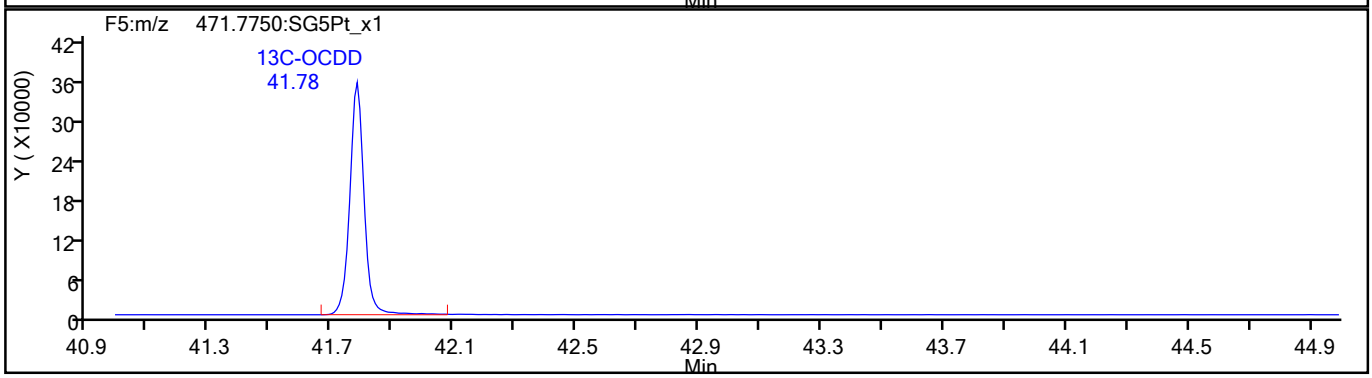

773598

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

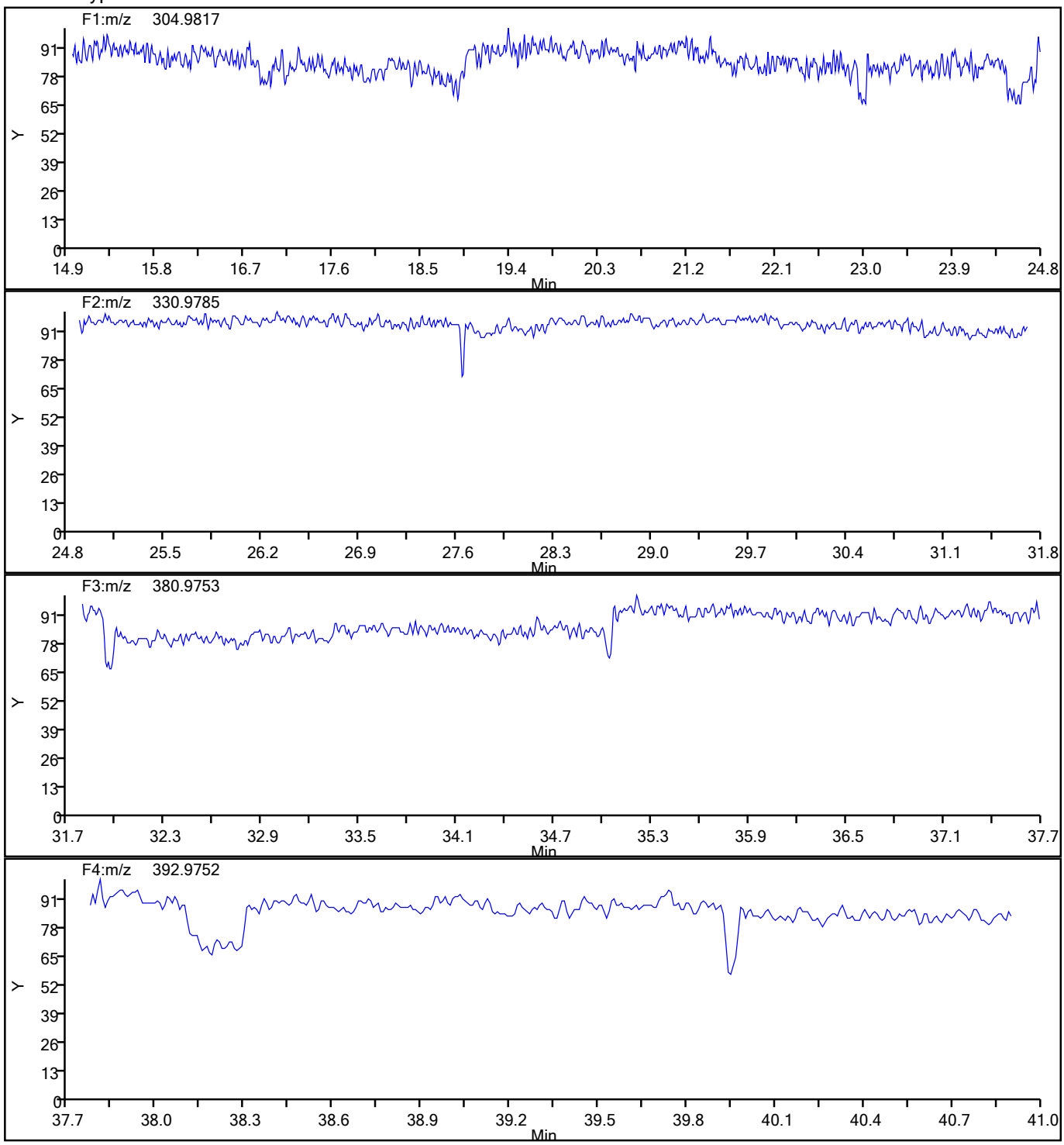

773599

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

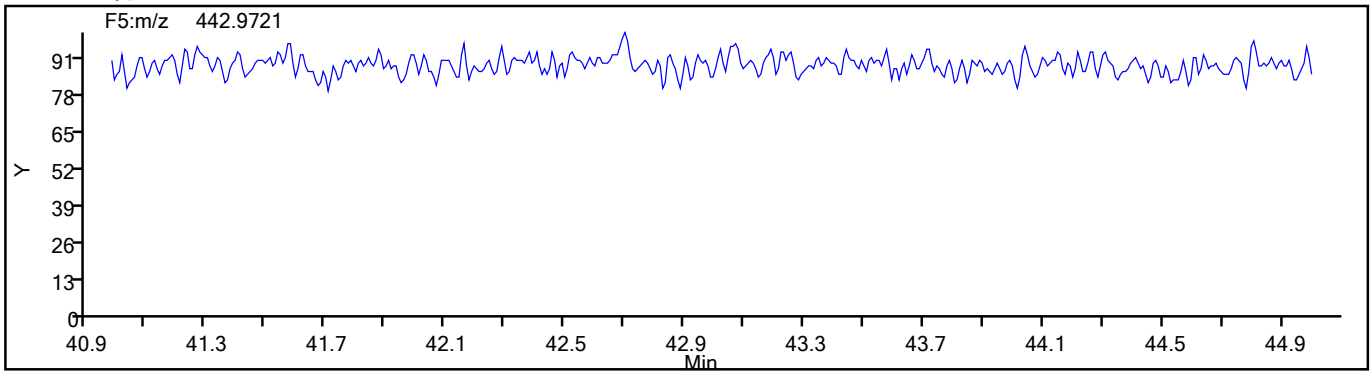

773600

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.544	2066088	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.616	2962515	0.80	1.3459	106.5	106.5	0.1844	0.1844	107	
2,3,7,8-TCDF	19.642	6137031	0.79	1.0802	191.8	191.8	0.1493	0.1493	95.89	
S Total TCDF					191.8	191.8	0.1493	0.1493		
D 13C-2,3,7,8-TCDD	20.913	2014532	0.80	0.9317	104.7	104.7	0.1455	0.1455	105	
$ 37Cl4-2,3,7,8-TCDD	20.939	4287059		1.0083	205.8	205.8	0.0958	0.0958	103	
2,3,7,8-TCDD	20.939	4286034	0.79	1.0753	197.8	197.8	0.1041	0.1041	98.92	
S Total TCDD					197.8	197.8	0.1041	0.1041		
D 13C-1,2,3,7,8-PeCDF	26.552	2574521	1.60	1.1405	109.3	109.3	0.2956	0.2956	109	
1,2,3,7,8-PeCDF	26.578	26032333	1.55	1.0543	959.1	959.1	2.101	2.101	95.91	
D 13C-2,3,4,7,8-PeCDF	28.002	2584740	1.63	1.1253	111.2	111.2	0.2996	0.2996	111	
2,3,4,7,8-PeCDF	28.028	24861382	1.54	1.0079	954.4	954.4	2.393	2.393	95.44	
S Total PeCDF					1913.5	1913.5	2.247	2.247		
D 13C-1,2,3,7,8-PeCDD	28.795	1602880	1.57	0.7165	108.3	108.3	0.1169	0.1169	108	
1,2,3,7,8-PeCDD	28.820	16645947	1.55	1.0465	992.4	992.4	0.3154	0.3154	99.24	
S Total PeCDD					992.4	992.4	0.3154	0.3154		
D 13C-1,2,3,4,7,8-HxCDF	34.370	1968615	0.53	0.9648	104.2	104.2	0.2764	0.2764	104	
1,2,3,4,7,8-HxCDF	34.404	21902419	1.26	1.1474	969.7	969.7	2.964	2.964	96.97	
D 13C-1,2,3,6,7,8-HxCDF	34.555	2283961	0.53	1.0708	109.0	109.0	0.2490	0.2490	109	
1,2,3,6,7,8-HxCDF	34.572	26721257	1.24	1.2178	960.7	960.7	2.280	2.280	96.07	
D 13C-2,3,4,6,7,8-HxCDF	35.432	2190509	0.53	1.0413	107.5	107.5	0.2561	0.2561	107	
2,3,4,6,7,8-HxCDF	35.449	25388405	1.26	1.2145	954.3	954.3	2.195	2.195	95.43	
D 13C-1,2,3,7,8,9-HxCDF	36.376	1895740	0.54	0.9731	99.5	99.5	0.2741	0.2741	99.52	
1,2,3,7,8,9-HxCDF	36.393	22553786	1.25	1.2401	959.4	959.4	2.206	2.206	95.94	
S Total HxCDF					3844.1	3844.1	2.411	2.411		
* 13C-1,2,3,7,8,9-HxCDD	36.182	1957513	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.668	1539784	1.30	0.7587	103.7	103.7	0.1260	0.1260	104	
1,2,3,4,7,8-HxCDD	35.685	15558498	1.24	1.0608	952.5	952.5	0.9710	0.9710	95.25	
D 13C-1,2,3,6,7,8-HxCDD	35.794	1741498	1.29	0.8593	103.5	103.5	0.1112	0.1112	104	
1,2,3,6,7,8-HxCDD	35.811	16661405	1.25	0.9933	963.1	963.1	0.9604	0.9604	96.31	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.198	17279185	1.24	1.1094	949.3	949.3	0.8929	0.8929	94.93	
S Total HxCDD					2865.0	2865.0	0.9414	0.9414		
D 13C-1,2,3,4,6,7,8-HpCDF	38.292	1546113	0.45	0.7359	107.3	107.3	0.2883	0.2883	107	
1,2,3,4,6,7,8-HpCDF	38.309	21181967	1.05	1.4421	950.0	950.0	2.277	2.277	95.00	
D 13C-1,2,3,4,7,8,9-HpCDF	39.591	1455766	0.46	0.6854	108.5	108.5	0.3095	0.3095	109	
1,2,3,4,7,8,9-HpCDF	39.600	17812004	1.04	1.3092	934.6	934.6	2.410	2.410	93.46	
S Total HpCDF					1884.6	1884.6	2.344	2.344		
D 13C-1,2,3,4,6,7,8-HpCDD	39.279	1355803	1.07	0.6745	102.7	102.7	0.1997	0.1997	103	
1,2,3,4,6,7,8-HpCDD	39.287	13800004	1.05	1.0503	969.1	969.1	1.263	1.263	96.91	
S Total HpCDD					969.1	969.1	1.263	1.263		
D 13C-OCDD	41.778	2298668	0.91	0.5446	215.6	215.6	0.2297	0.2297	108	
OCDF	41.862	30505464	0.91	1.3168	2015.6	2015.6	1.318	1.318	101	
OCDD	41.786	22803823	0.89	1.0620	1868.3	1868.3	1.408	1.408	93.41	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.544	20.547	0		920603	150087	115	287	1305		
333.9338	20.544	20.547	0		1145485	178229	63	157	2829	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.616	19.616	0	0.955	1315625	222528	203	507	1096		
317.9389	19.625	19.616	1	0.955	1646890	273662	123	307	2225	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.642	19.646	0	1.001	2713655	446561	138	345	3236		
305.8987	19.642	19.646	0	1.001	3423376	567597	182	455	3119	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.913	20.910	0	1.018	893612	134635	115	287	1171		
333.9338	20.913	20.910	0	1.018	1120920	170916	63	157	2713	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.939	20.935	0	1.019	4287059	670067	127	317	5276		
2,3,7,8-TCDD											
319.8965	20.939	20.939	0	1.001	1891754	292983	63	157	4651		
321.8936	20.939	20.939	0	1.001	2394280	370217	74	185	5003	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.552	26.560	0	1.292	1583459	282119	248	620	1138		
353.8970	26.552	26.560	0	1.292	991062	177690	195	487	911	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.578	26.584	0	1.001	15809872	2840843	2484	6210	1144		
341.8567	26.578	26.584	0	1.001	10222461	1821485	1590	3975	1146	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.002	28.014	-1	1.363	1602860	260320	248	620	1050		
353.8970	28.002	28.014	-1	1.363	981880	162024	195	487	831	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.028	28.039	-1	1.001	15085675	2478093	2484	6210	998		
341.8567	28.028	28.039	-1	1.001	9775707	1618127	1590	3975	1018	1.54(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.795	28.801	0	1.402	978472	153717	62	155	2479		
369.8919	28.795	28.801	0	1.402	624408	97747	48	120	2036	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.820	28.828	0	1.001	10130500	1566899	211	527	7426		
357.8516	28.820	28.828	0	1.001	6515447	1012500	121	302	8368	1.55(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.370	34.384	-1	0.950	681535	131177	206	515	637		
385.8610	34.370	34.384	-1	0.950	1287080	241920	293	732	826	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.404	34.405	0	1.001	12221224	2429393	2850	7125	852		
375.8178	34.404	34.405	0	1.001	9681195	1938109	2226	5565	871	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.555	34.562	0	0.955	787279	159086	206	515	772		
385.8610	34.555	34.562	0	0.955	1496682	297889	293	732	1017	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.572	34.582	-1	1.000	14789206	2955884	2850	7125	1037		
375.8178	34.572	34.582	-1	1.000	11932051	2355841	2226	5565	1058	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.432	35.444	-1	0.979	755749	165004	206	515	801		
385.8610	35.432	35.444	-1	0.979	1434760	311089	293	732	1062	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.449	35.461	-1	1.000	14140079	3143736	2850	7125	1103		
375.8178	35.449	35.461	-1	1.000	11248326	2509936	2226	5565	1128	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.376	36.388	-1	1.005	661276	161798	206	515	785		
385.8610	36.376	36.388	-1	1.005	1234464	302164	293	732	1031	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.393	36.402	-1	1.000	12520528	3053286	2850	7125	1071		
375.8178	36.393	36.402	-1	1.000	10033258	2435227	2226	5565	1094	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.182	36.192	-1		1094886	260943	101	252	2584		
403.8529	36.182	36.192	-1		862627	206665	78	195	2650	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.668	35.680	-1	0.986	871516	210376	101	252	2083		
403.8529	35.668	35.680	-1	0.986	668268	161161	78	195	2066	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.685	35.695	-1	1.000	8624435	2104573	873	2182	2411		
391.8127	35.685	35.695	-1	1.000	6934063	1696812	658	1645	2579	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.794	35.805	-1	0.989	980230	223296	101	252	2211		
403.8529	35.794	35.805	-1	0.989	761268	177860	78	195	2280	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.811	35.820	-1	1.000	9246987	2090881	873	2182	2395		
391.8127	35.811	35.820	-1	1.000	7414418	1678531	658	1645	2551	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.198	36.208	-1	1.015	9564246	2295203	873	2182	2629		
391.8127	36.198	36.208	-1	1.015	7714939	1845750	658	1645	2805	1.24(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.292	38.305	-1	1.058	482843	137759	141	352	977		
419.8220	38.292	38.305	-1	1.058	1063270	304088	256	640	1188	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	10831802	3065791	3002	7505	1021		
409.7788	38.309	38.317	0	1.000	10350165	2906390	2802	7005	1037	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.591	39.600	-1	1.094	458518	146875	141	352	1042		
419.8220	39.591	39.600	-1	1.094	997248	313009	256	640	1223	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.600	39.608	-1	1.000	9086557	2852631	3002	7505	950		
409.7788	39.600	39.608	-1	1.000	8725447	2728020	2802	7005	974	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.279	39.293	-1	1.086	700550	219811	138	345	1593		
437.8140	39.279	39.293	-1	1.086	655253	202475	114	285	1776	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.287	39.301	-1	1.000	7071387	2141109	1133	2832	1890		
425.7737	39.287	39.301	-1	1.000	6728617	2063900	1107	2767	1864	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.778	41.785	0	1.155	1096060	330168	115	287	2871		
471.7750	41.778	41.785	0	1.155	1202608	365220	119	297	3069	0.91(0.76-1.02)	
OCDF											
441.7428	41.862	41.875	-1	1.002	14551716	4304688	1153	2882	3733		
443.7399	41.862	41.875	-1	1.002	15953748	4798066	1261	3152	3805	0.91(0.76-1.02)	
OCDD											
457.7377	41.786	41.794	0	1.000	10735225	3226535	983	2457	3282		
459.7348	41.786	41.794	0	1.000	12068598	3663774	1097	2742	3340	0.89(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

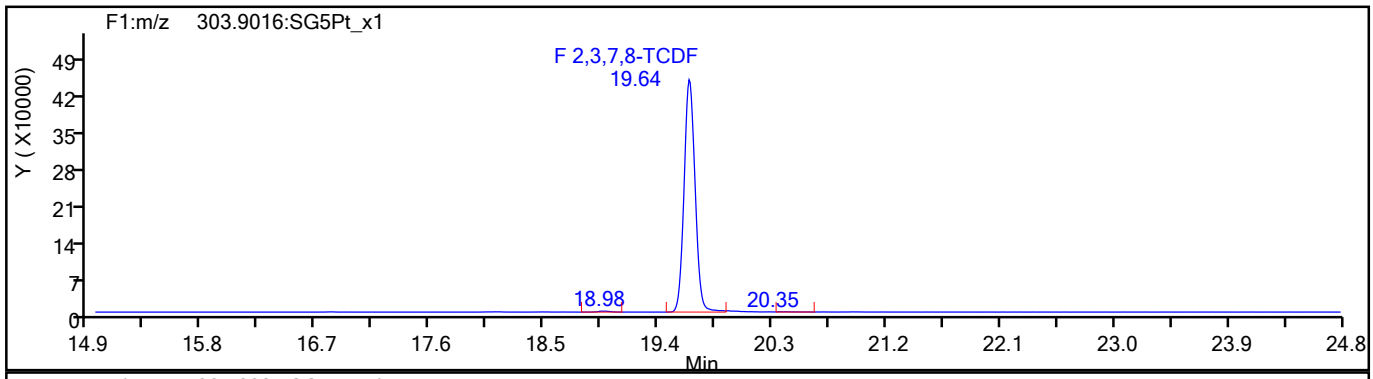

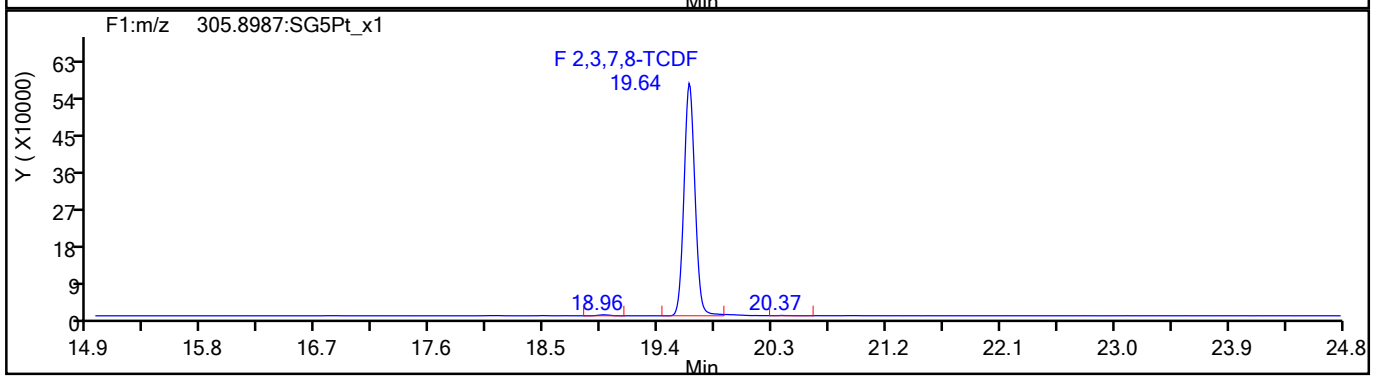

TCDF Standards

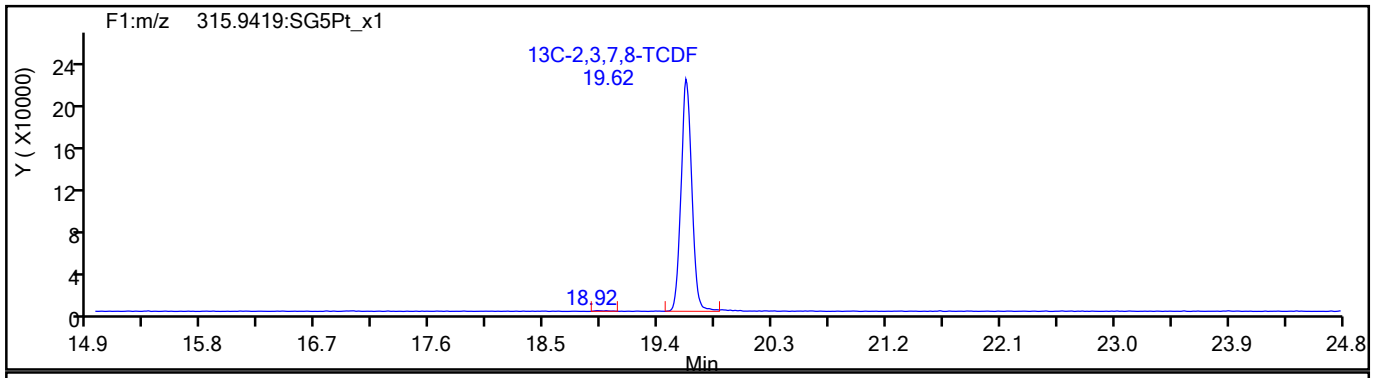

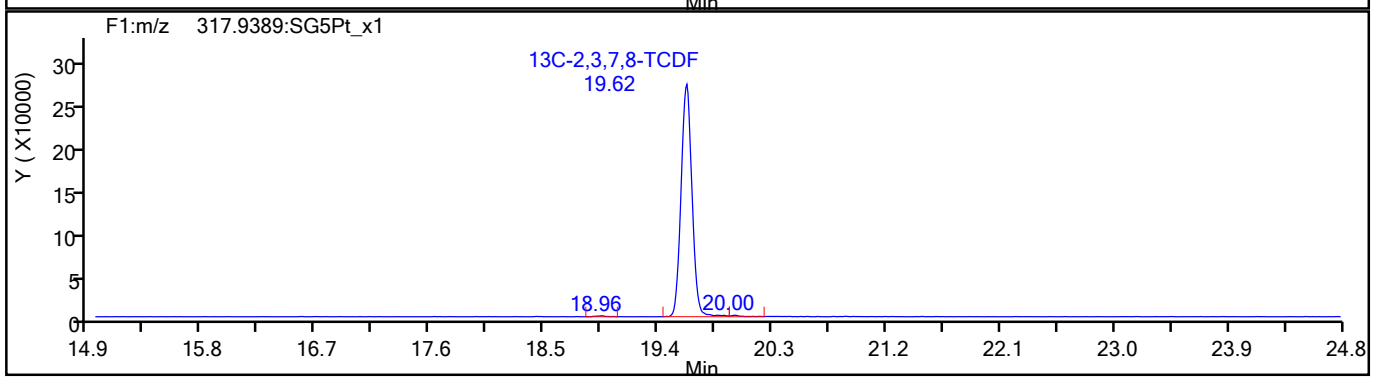

773606

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

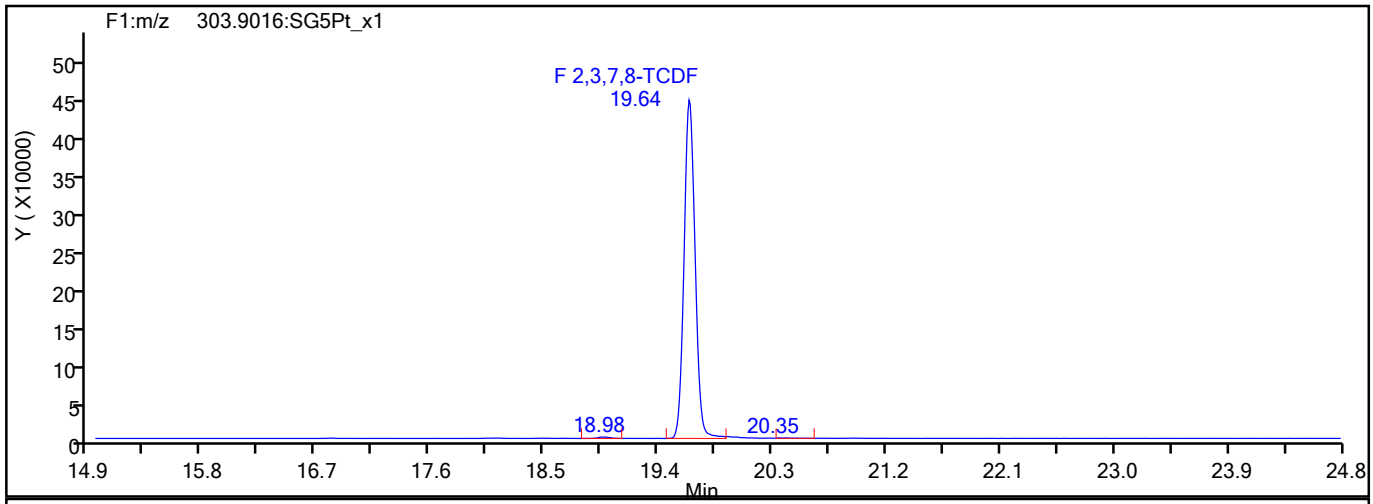

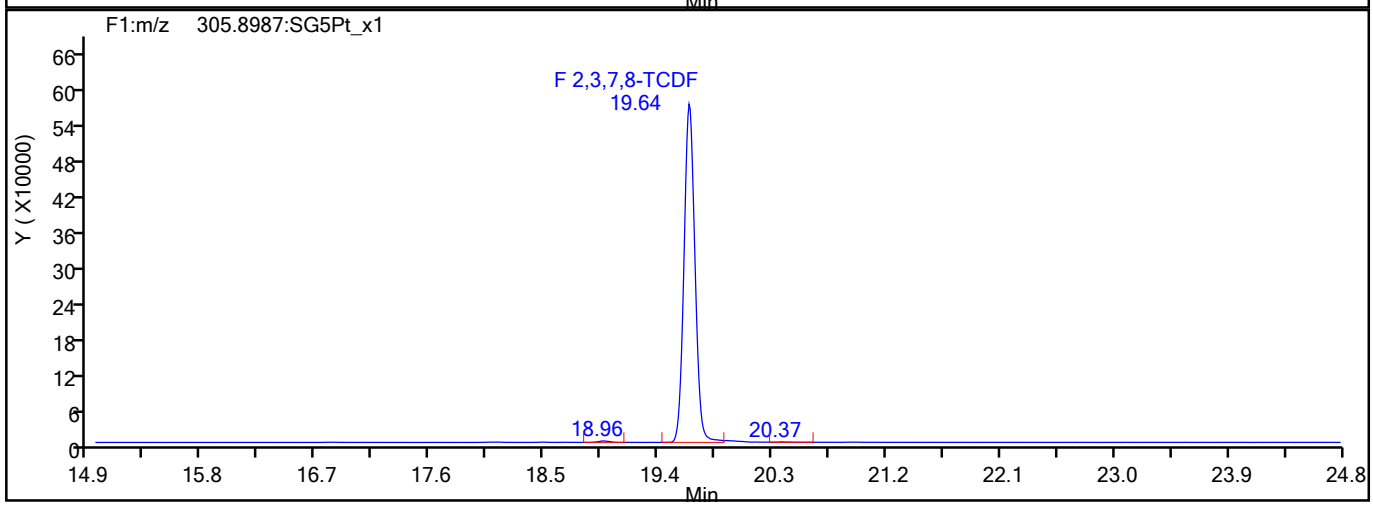

TCDF Interference Mass

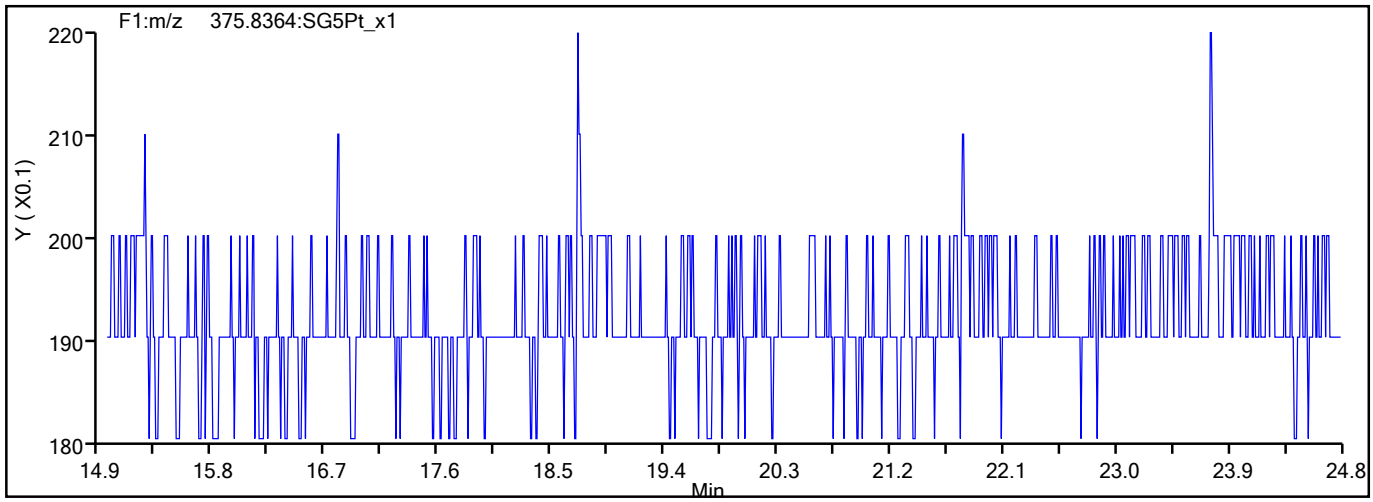

773607

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

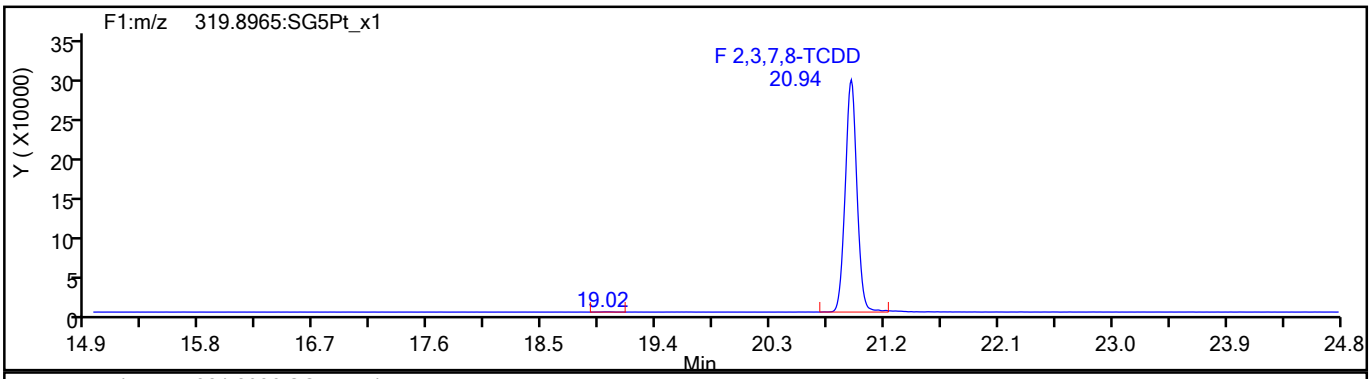

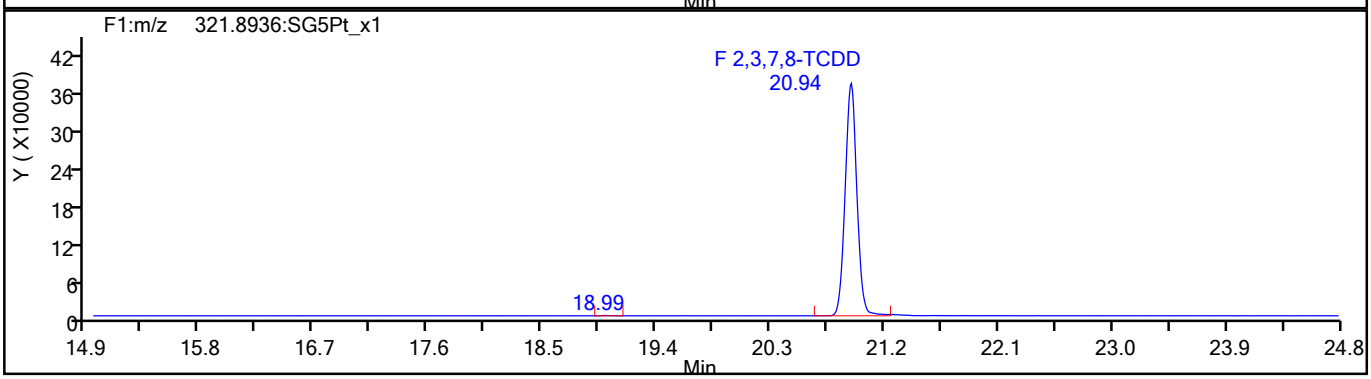

TCDD Standards

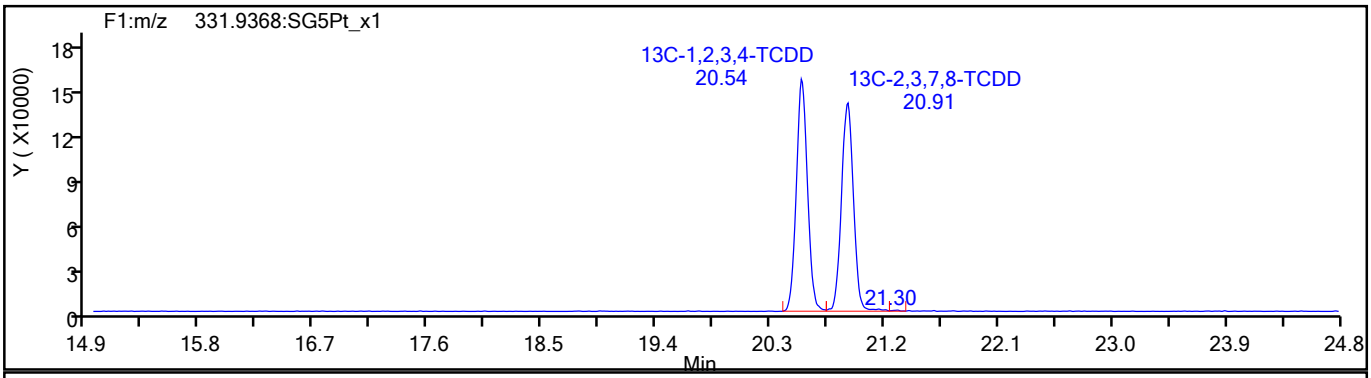

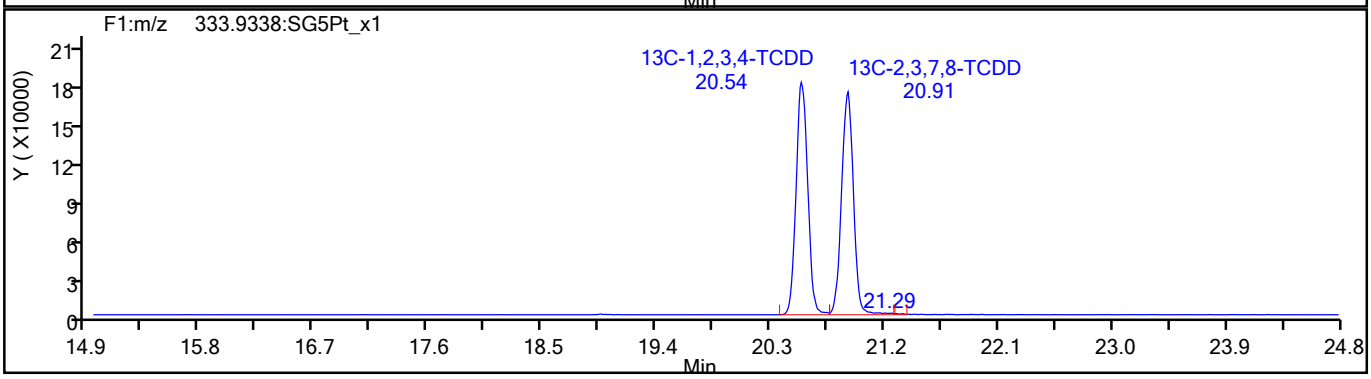

773608

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

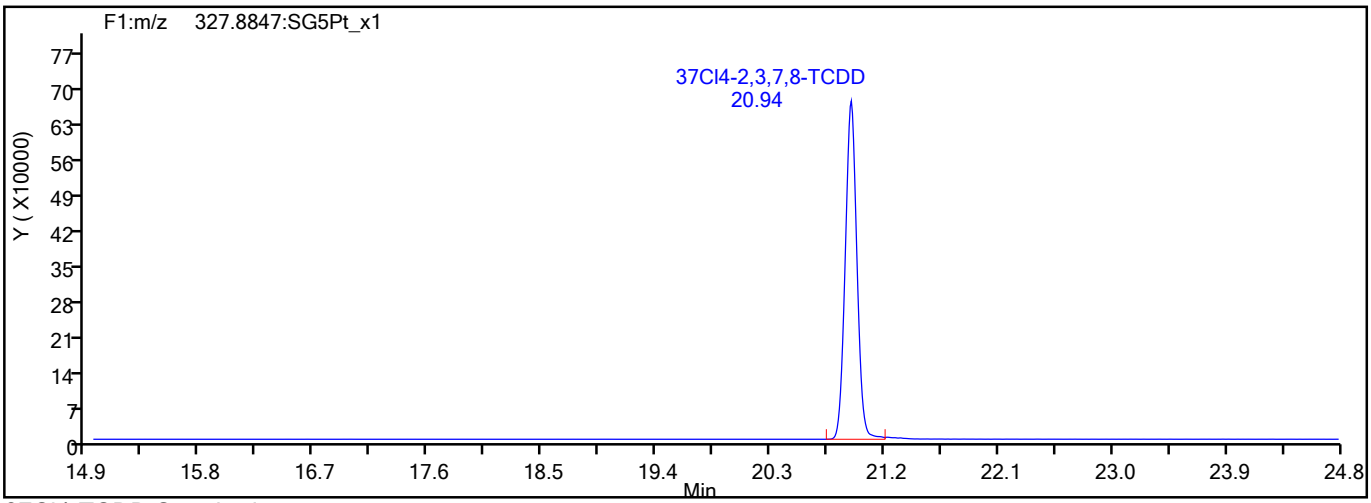

37Cl4-TCDD Standards

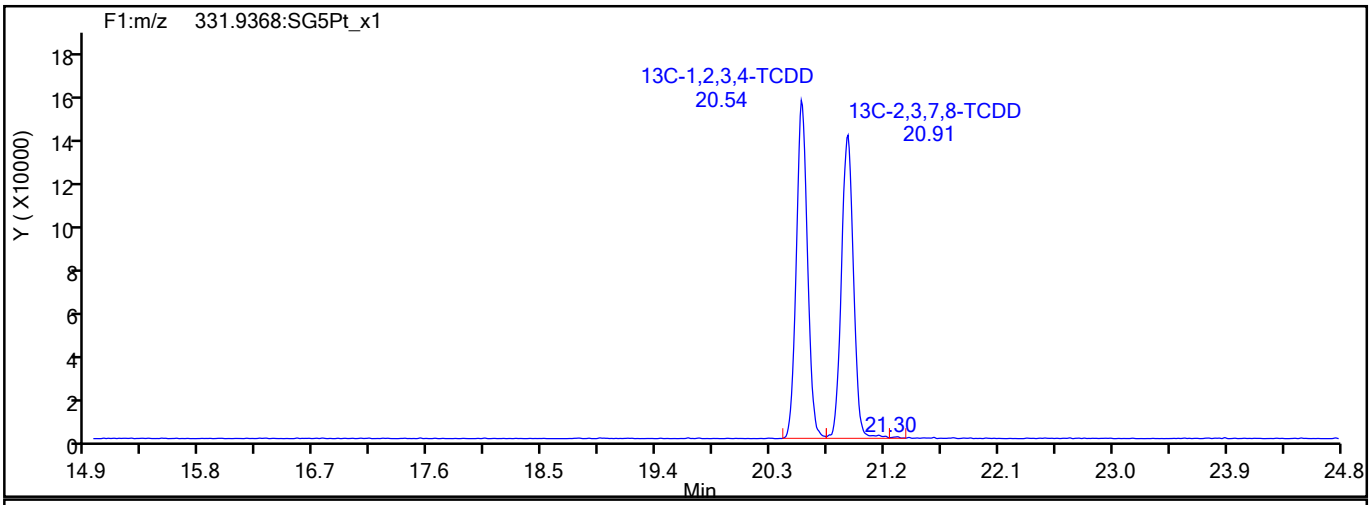

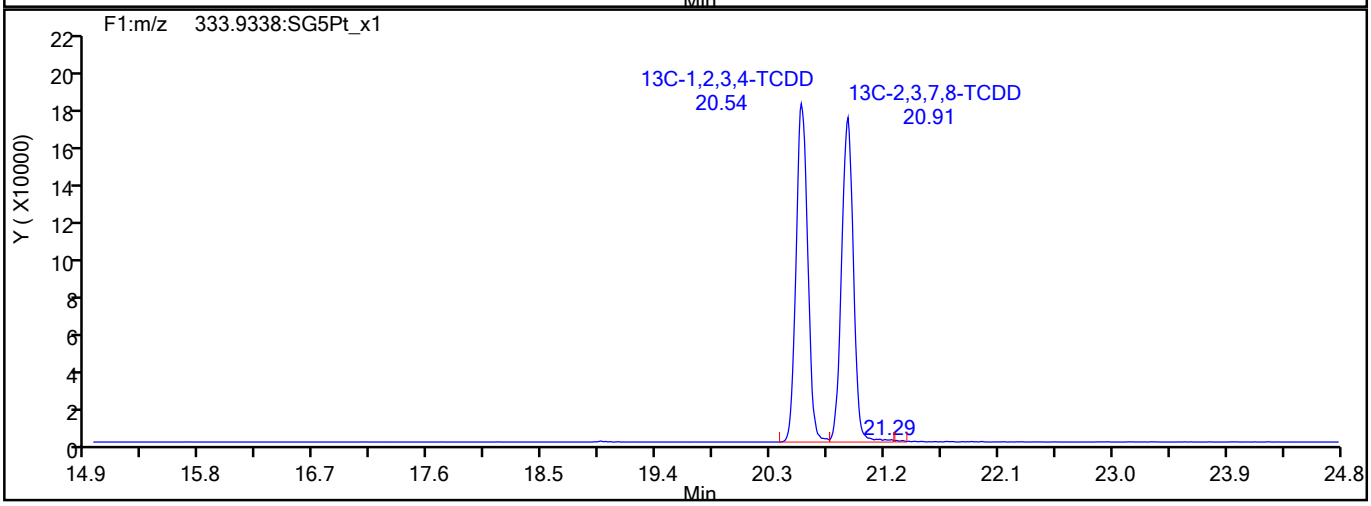

773609

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

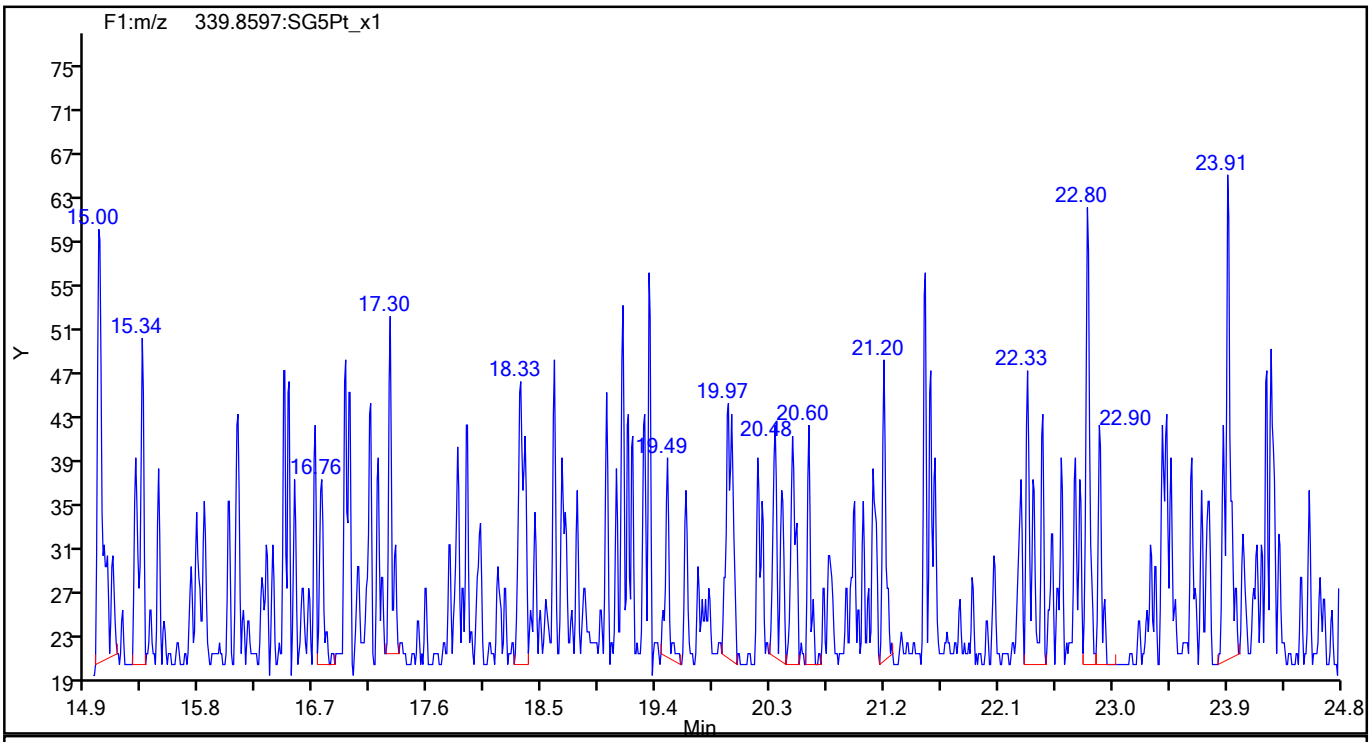

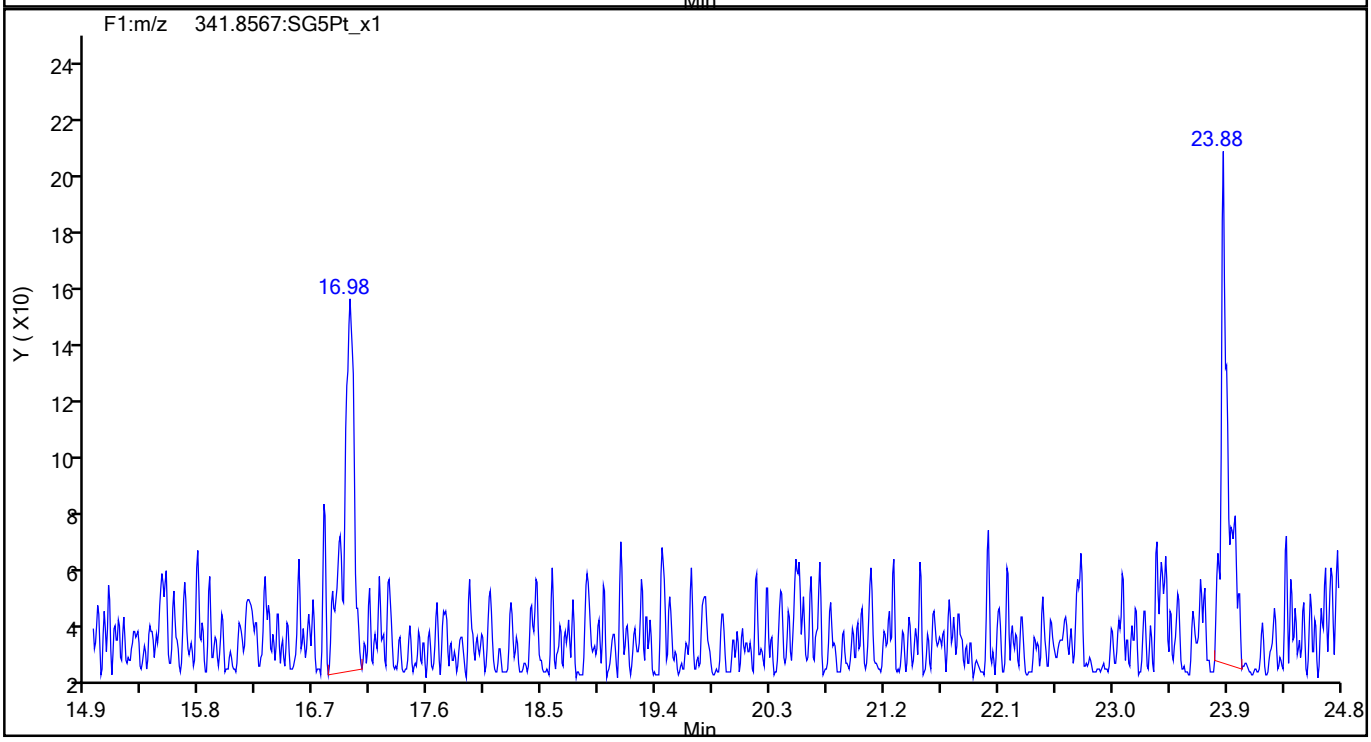

773610

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

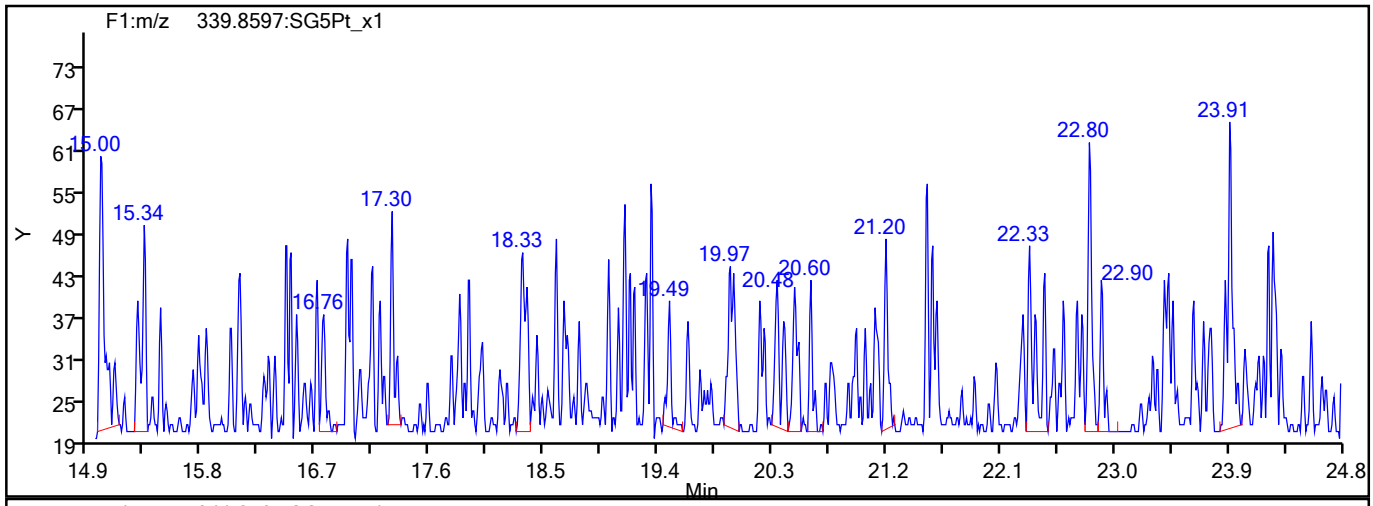

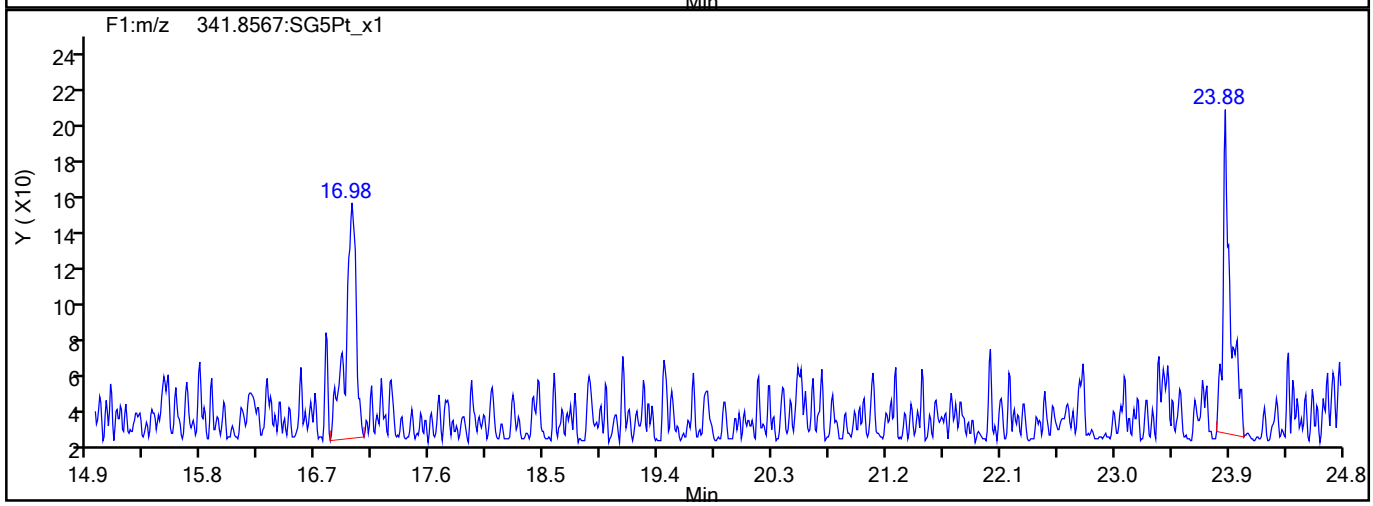

F1 PeCDFs Interference Mass

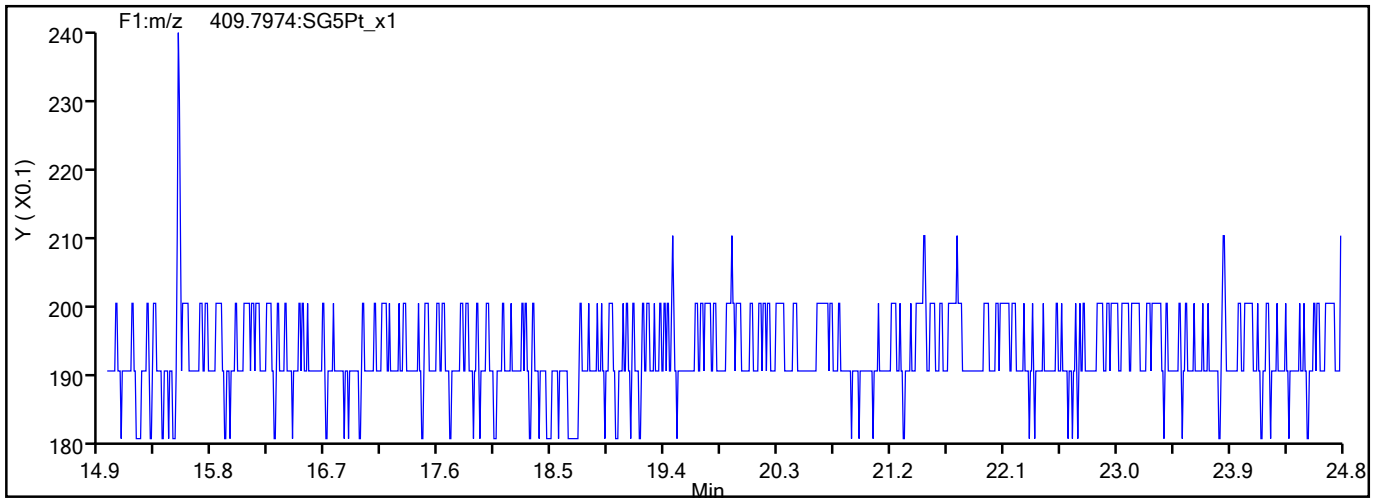

773611

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

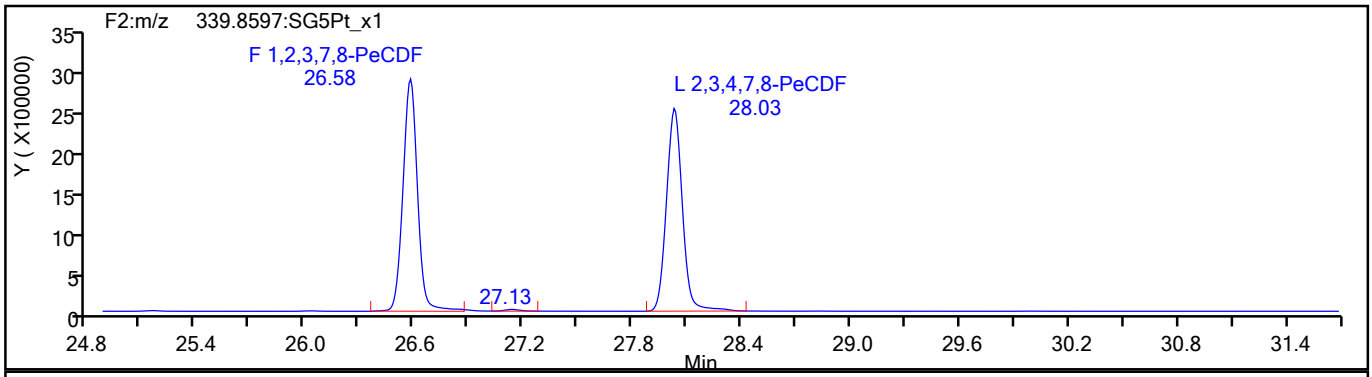

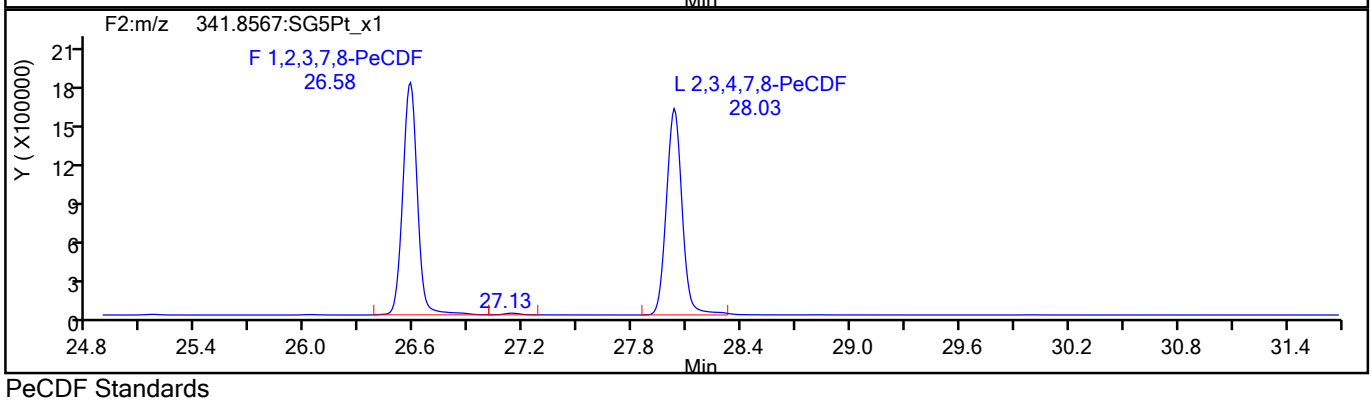

PeCDF Standards

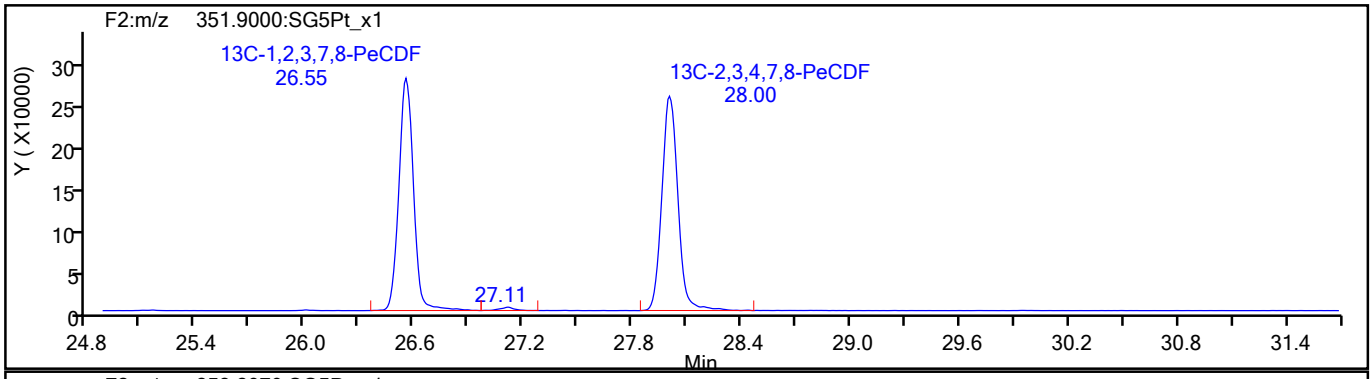

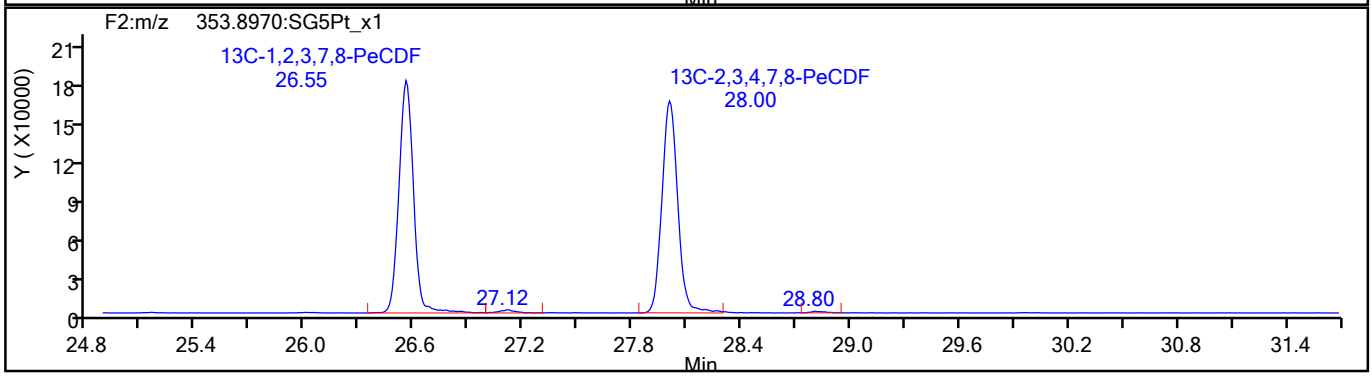

773612

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

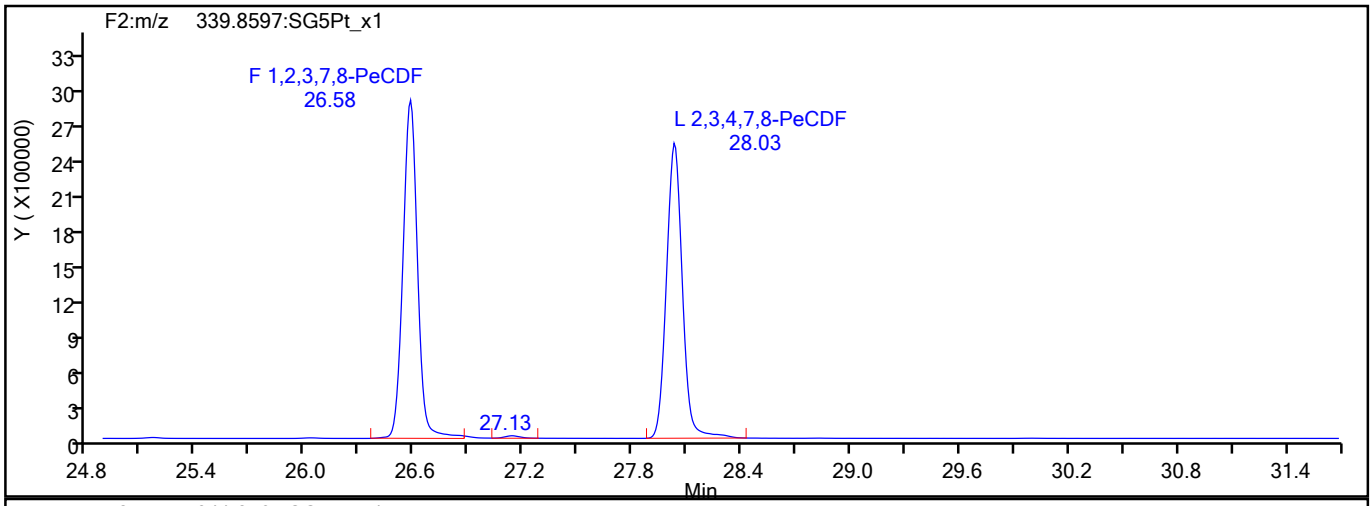

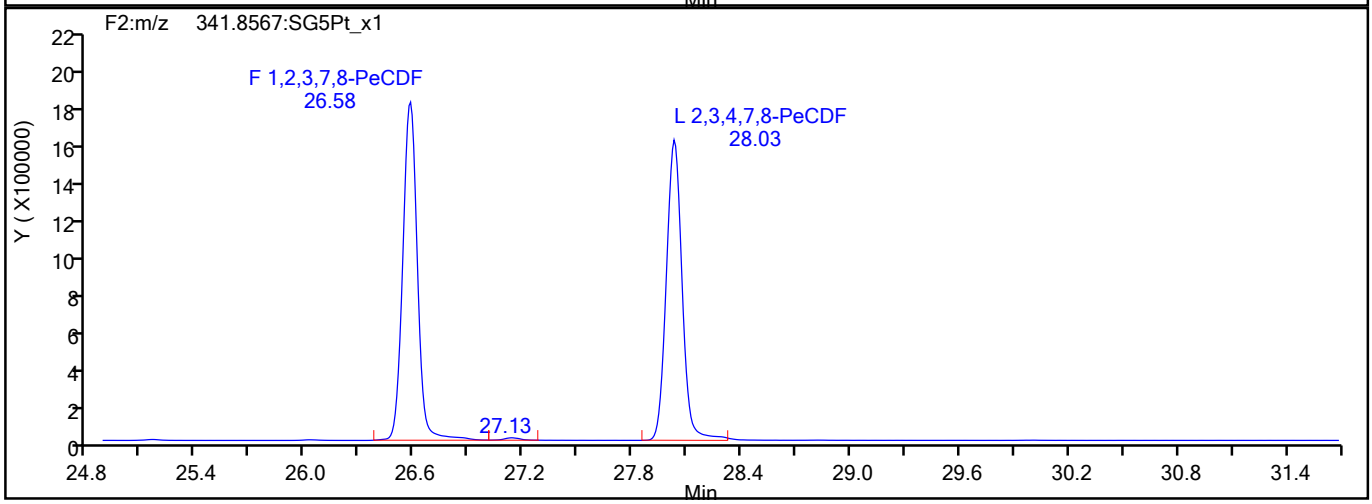

PeCDF Interference Mass

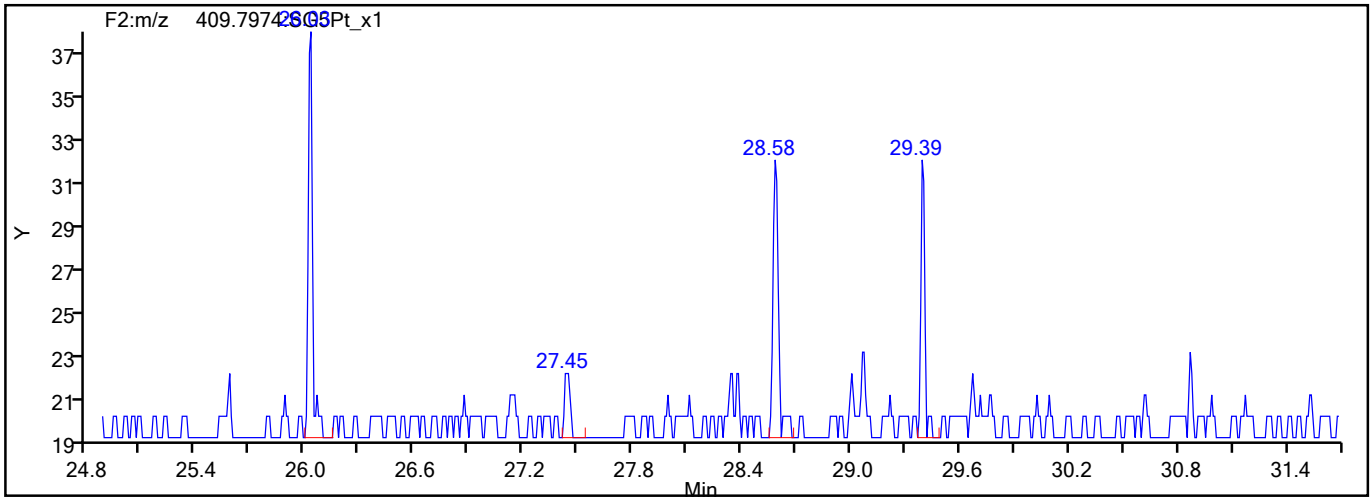

773613

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

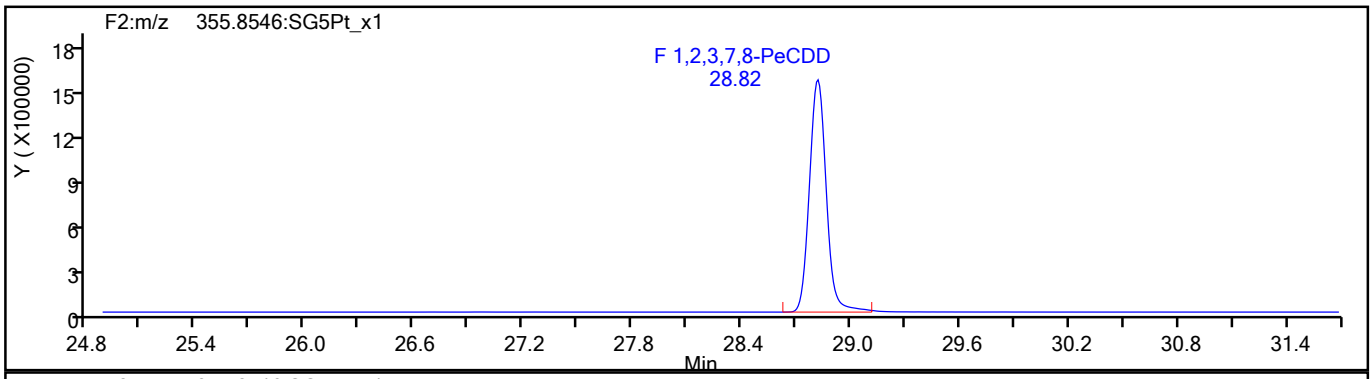

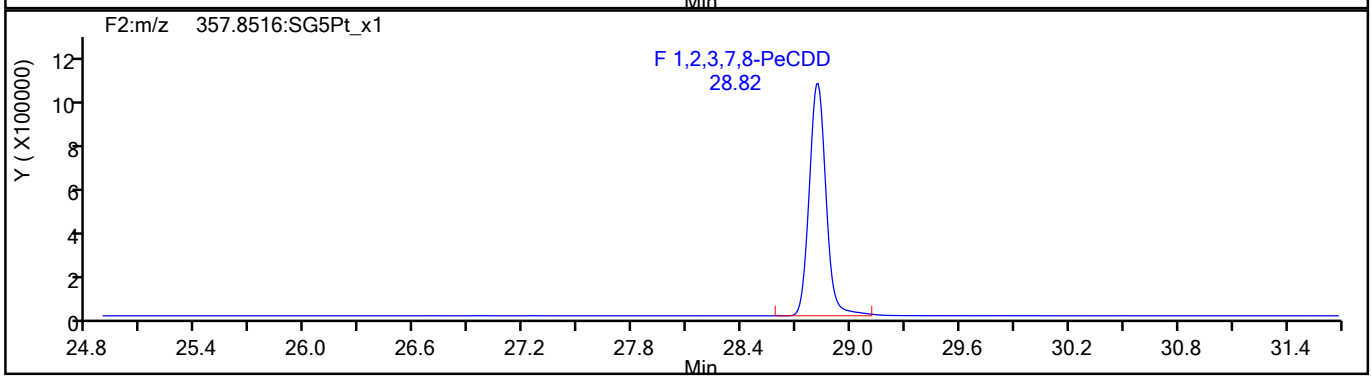

PeCDD Standards

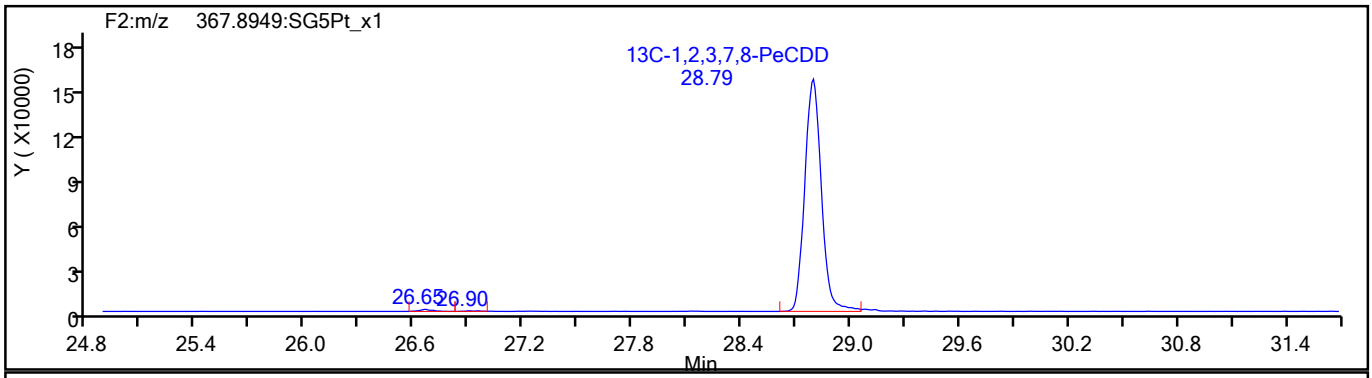

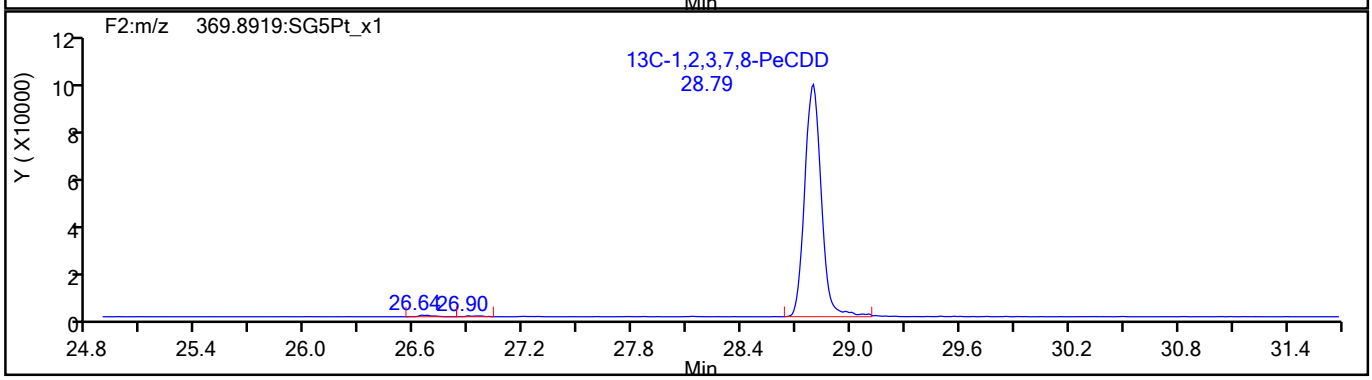

773614

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

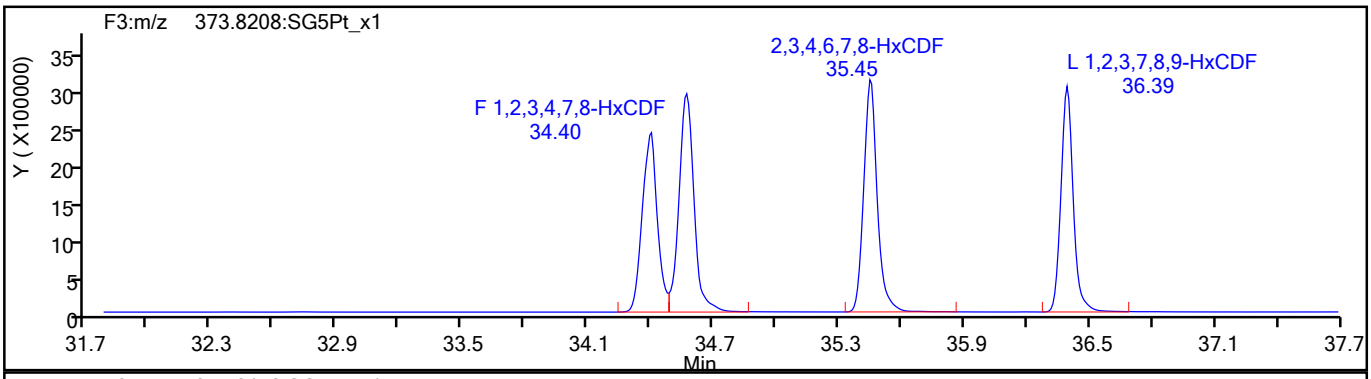

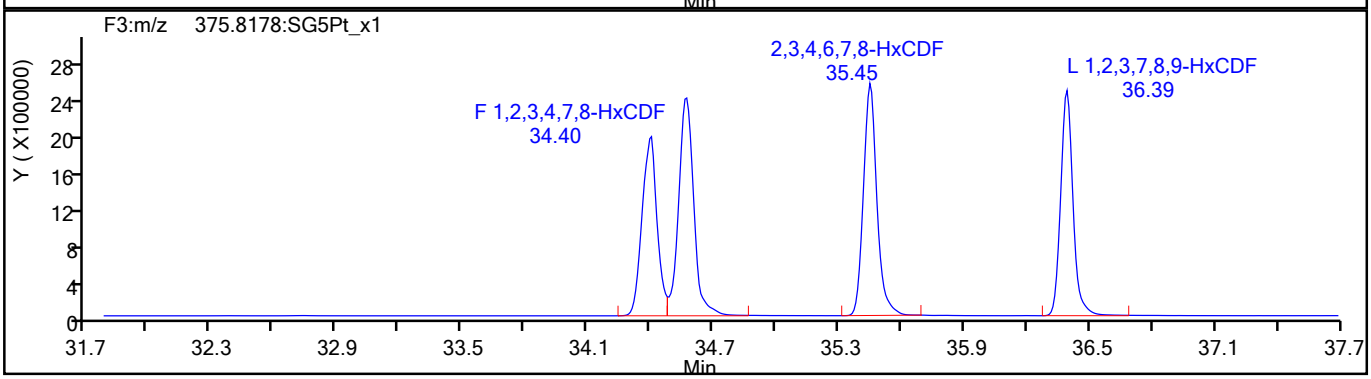

HxCDF Standards

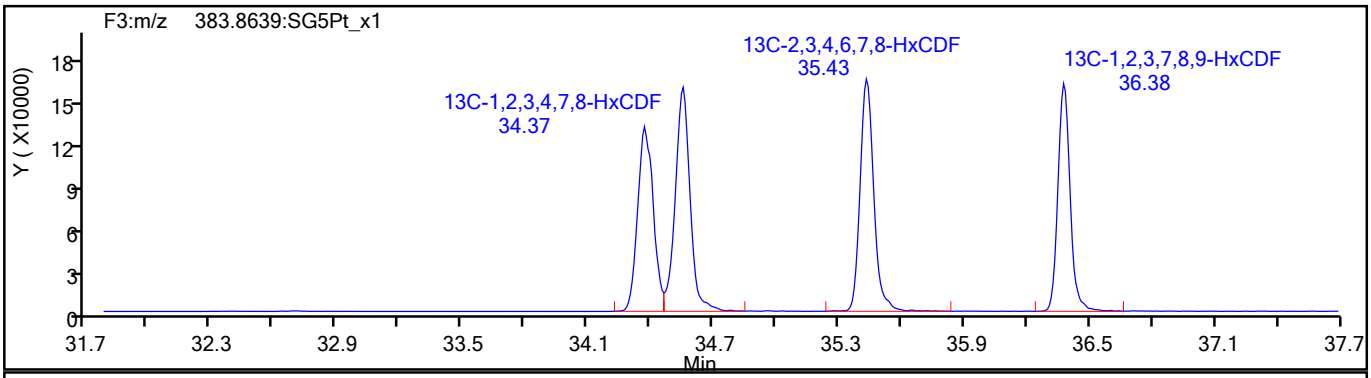

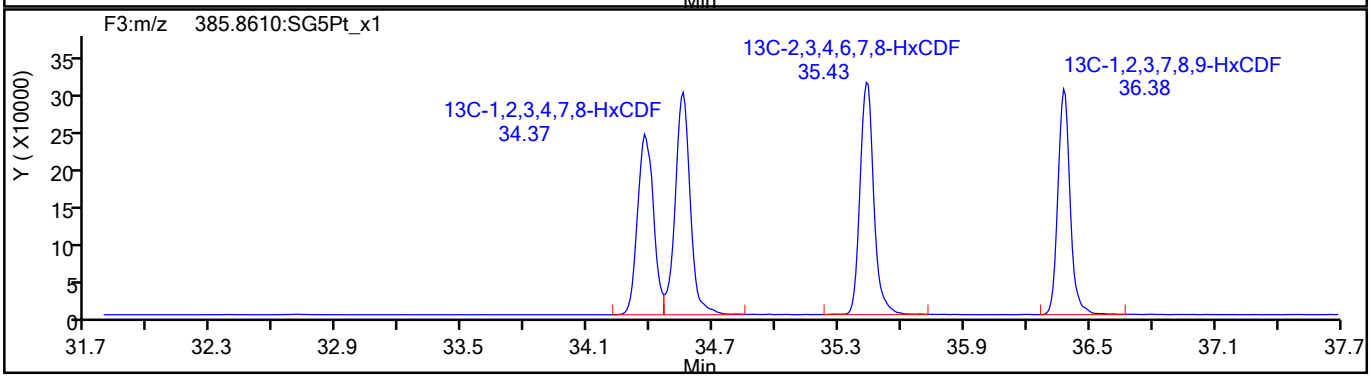

773615

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

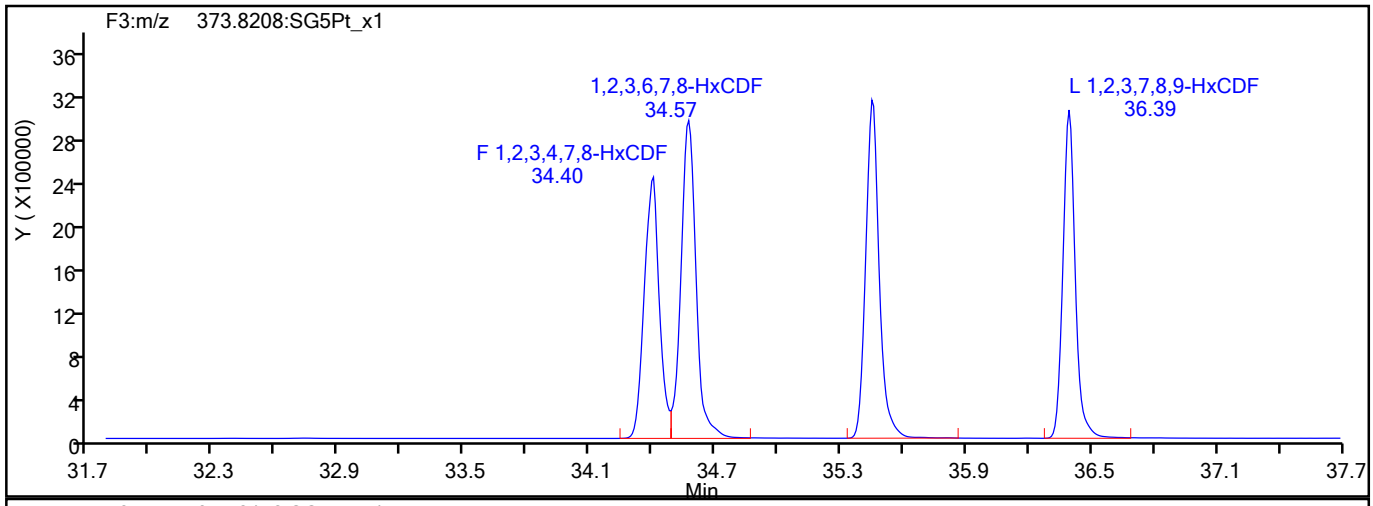

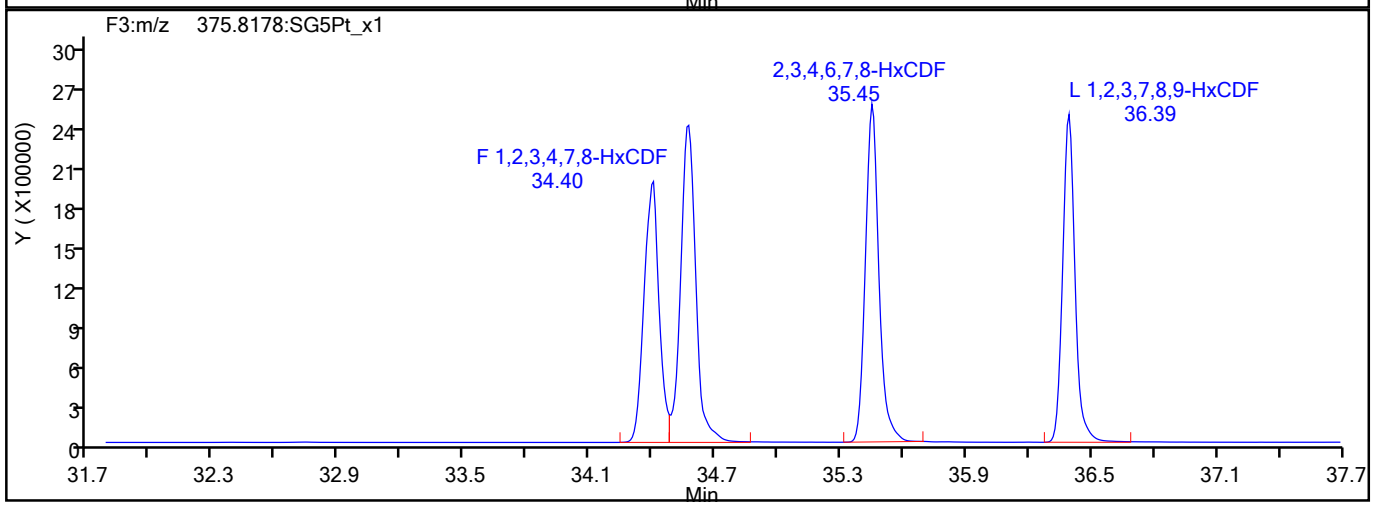

HxCDF Interference Mass

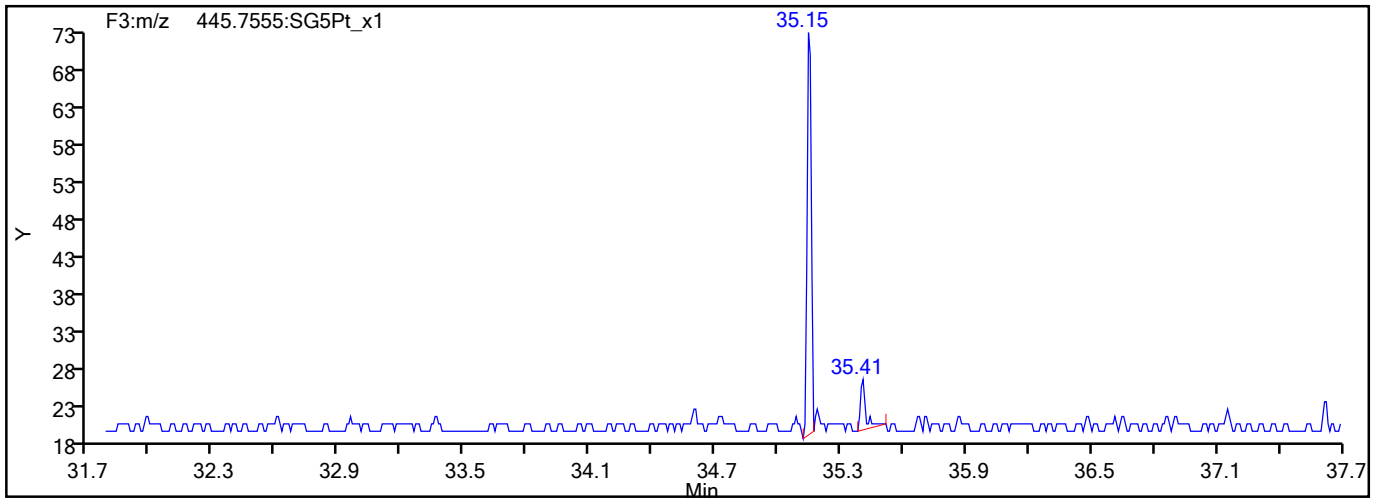

773616

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

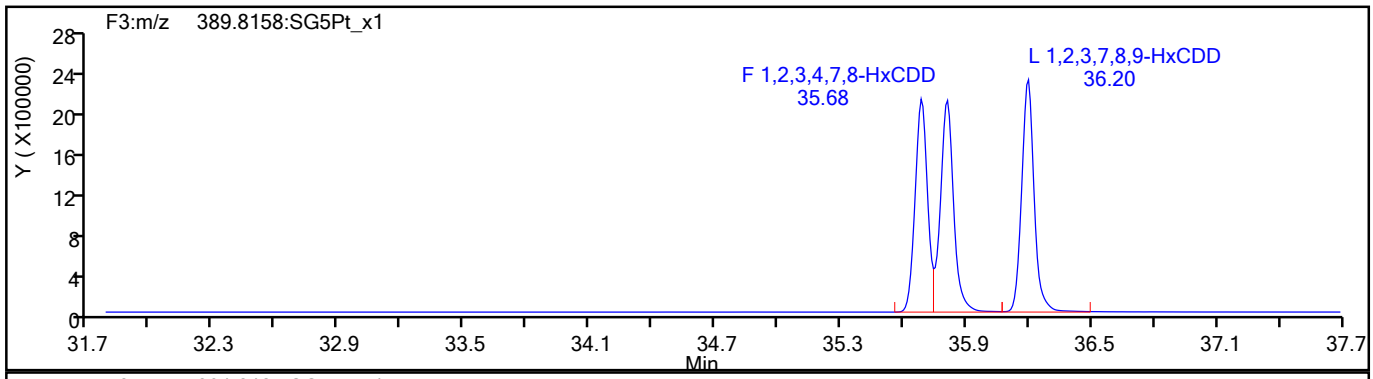

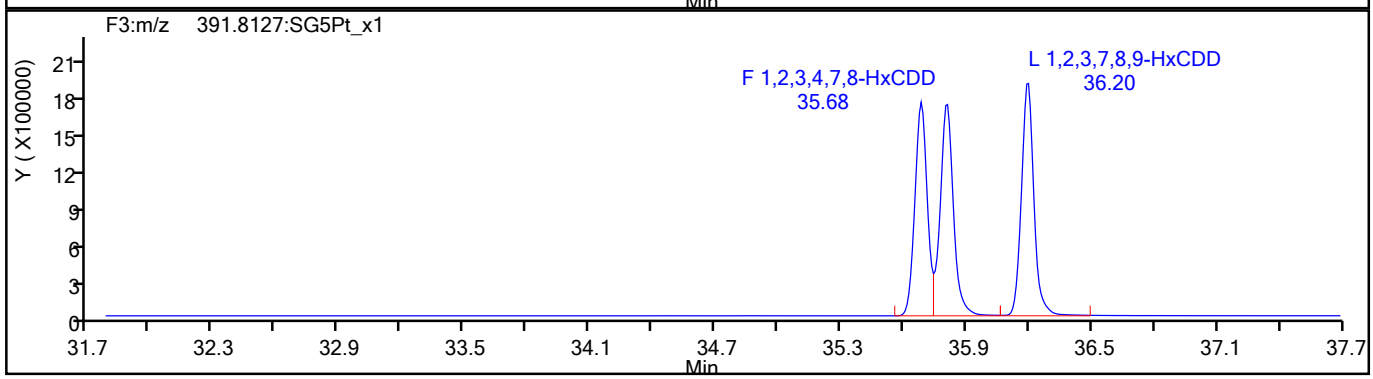

HxCDD Standards

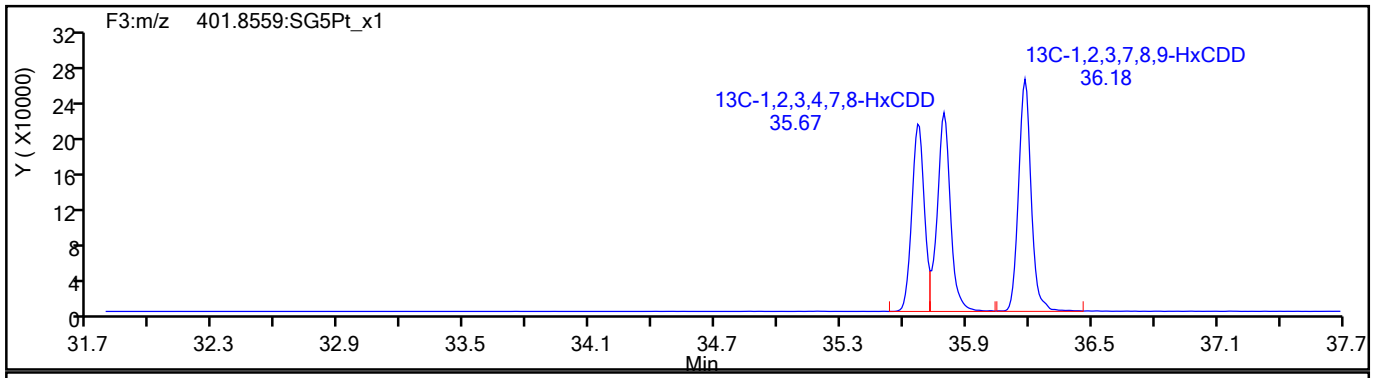

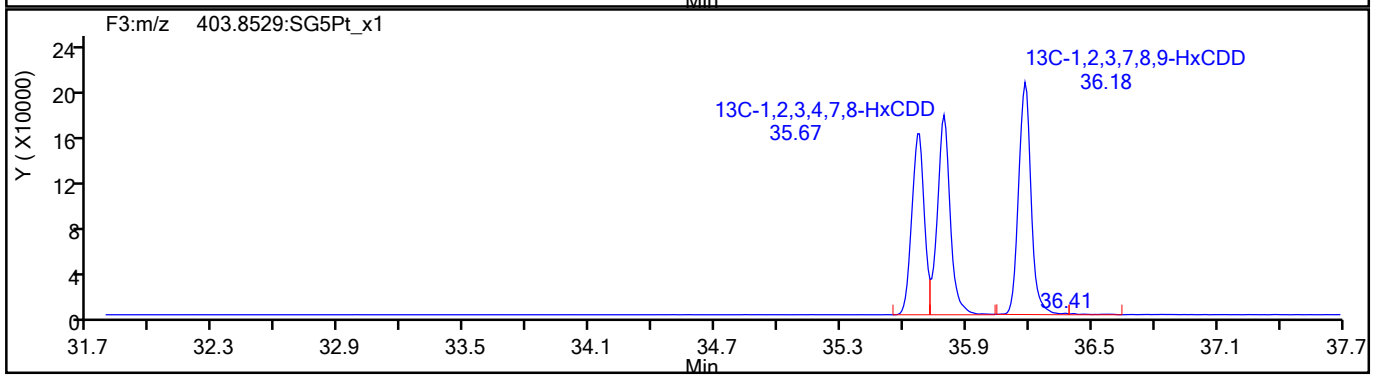

773617

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

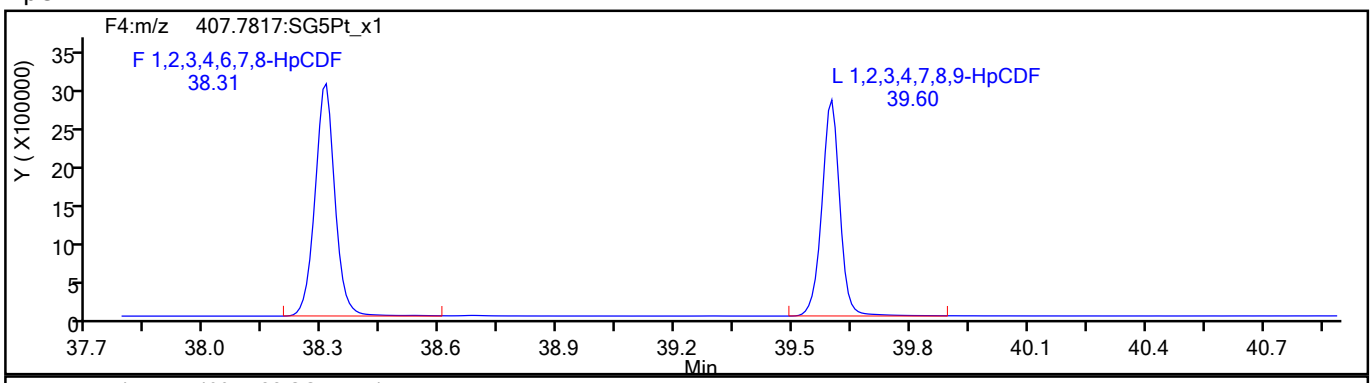

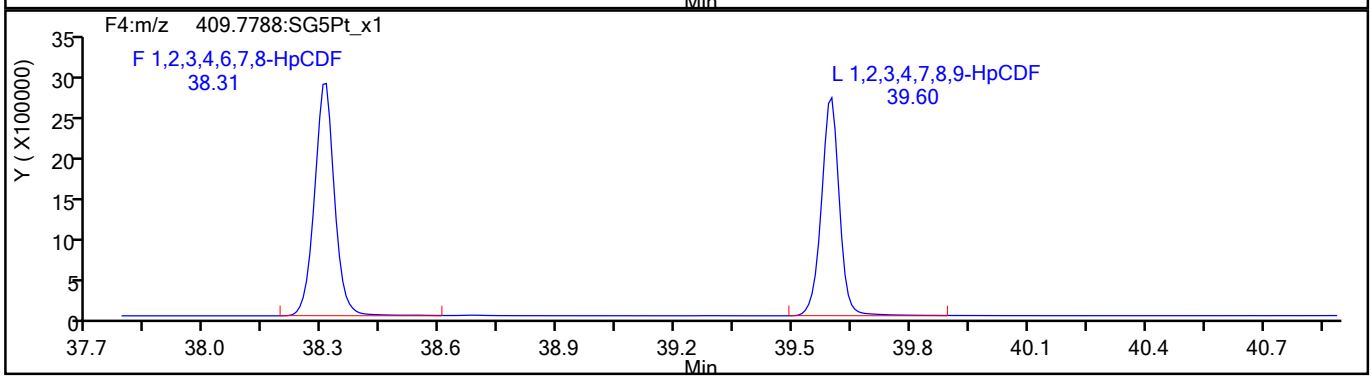

HpCDF Standards

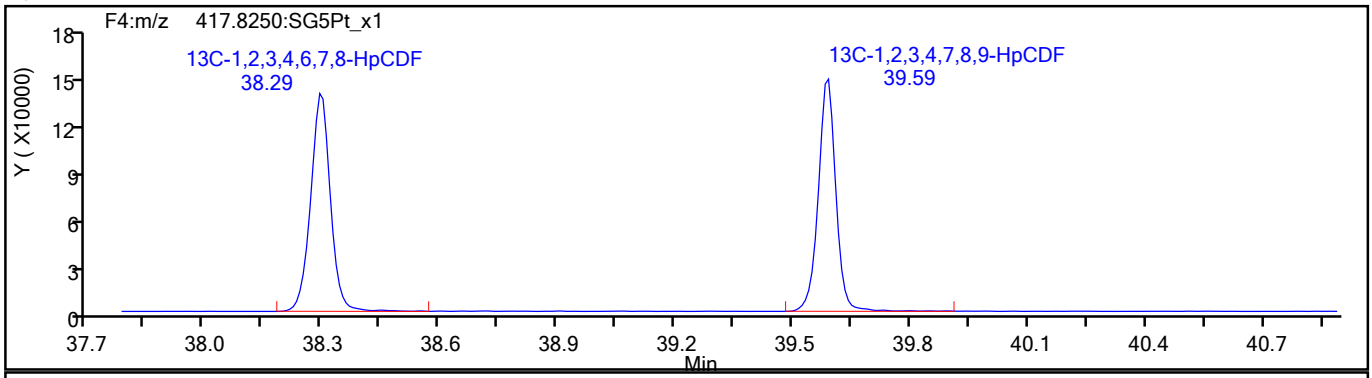

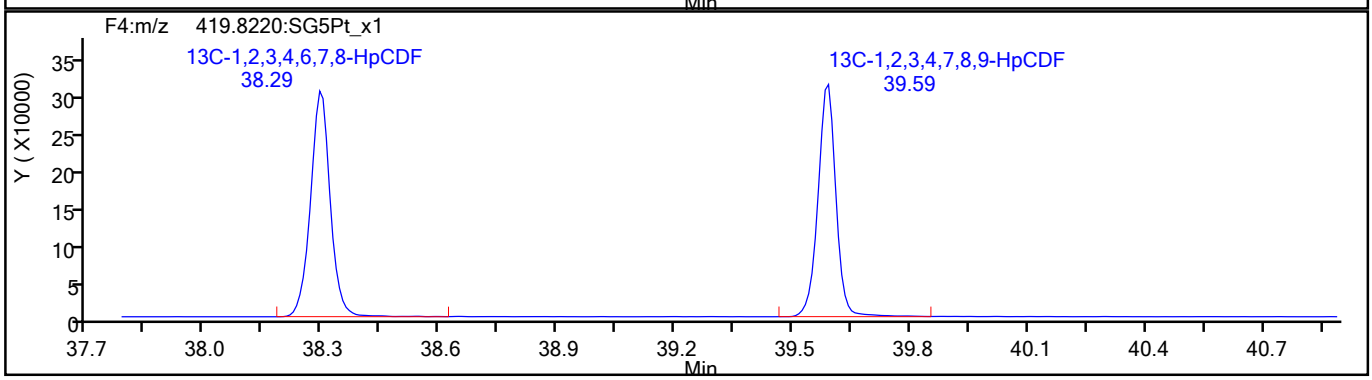

773618

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

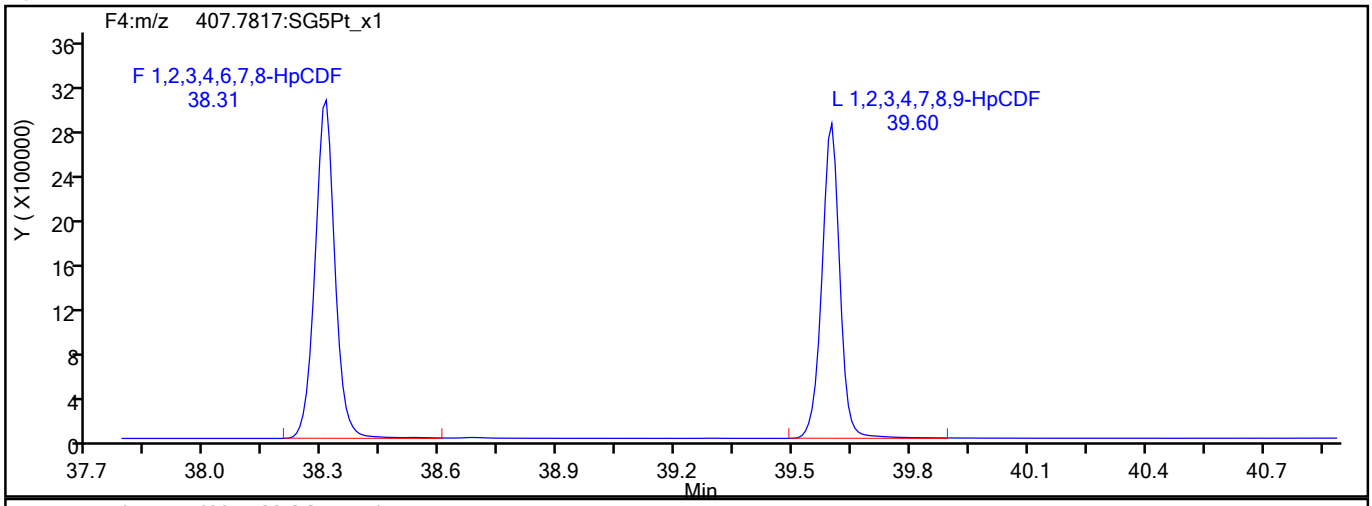

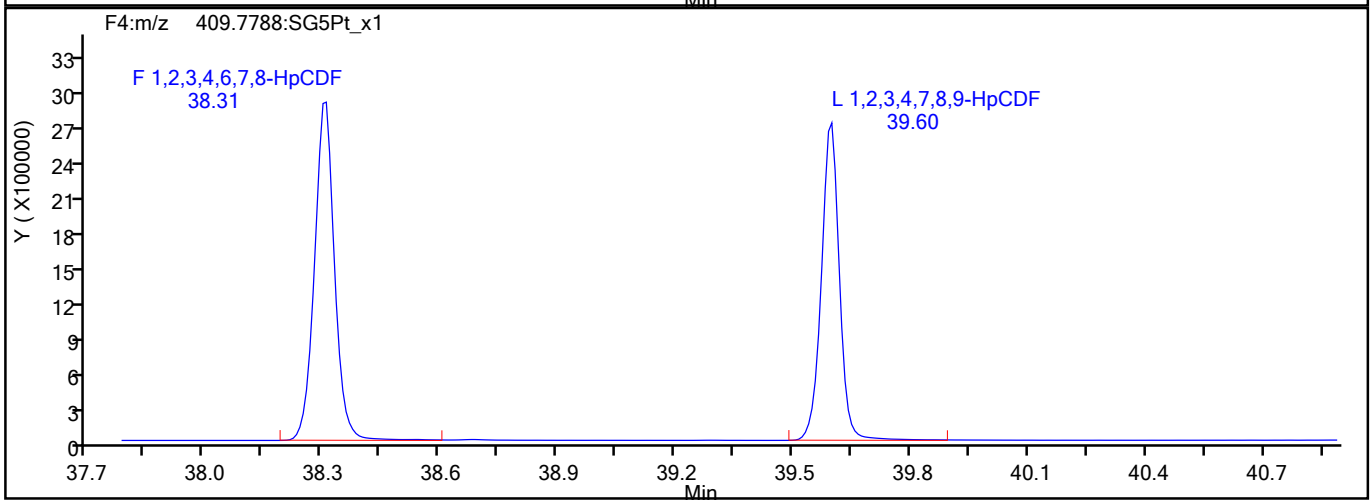

HpCDF Interference Mass

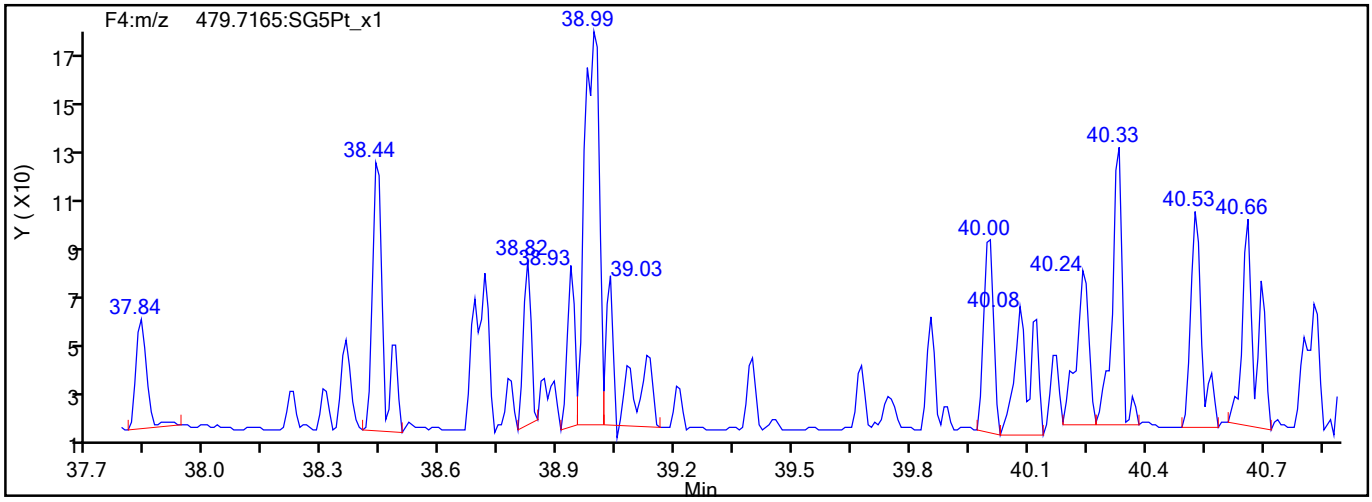

773619

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

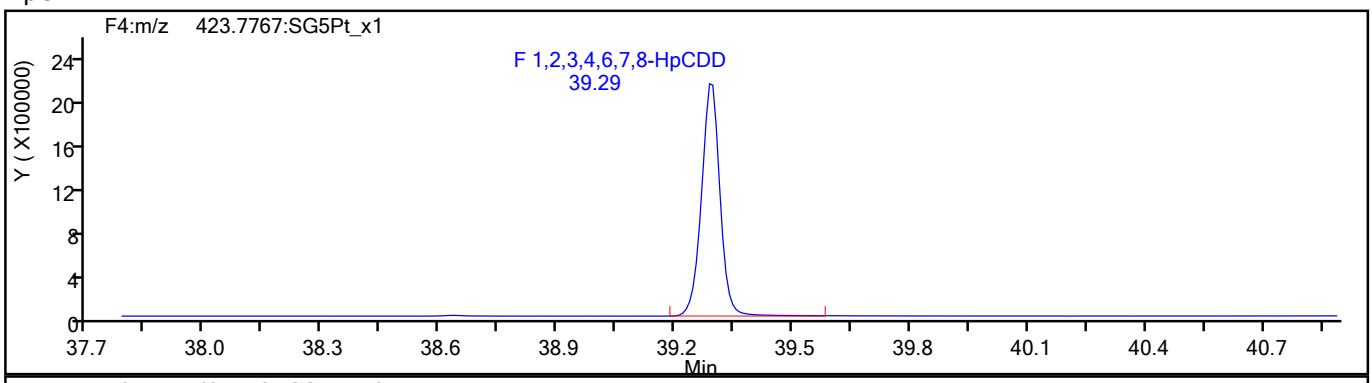

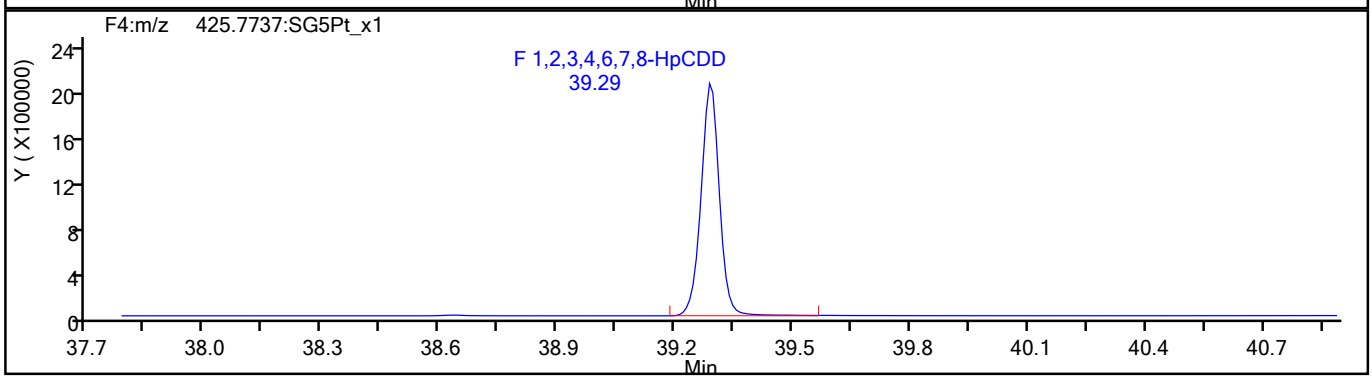

HpCDD Standards

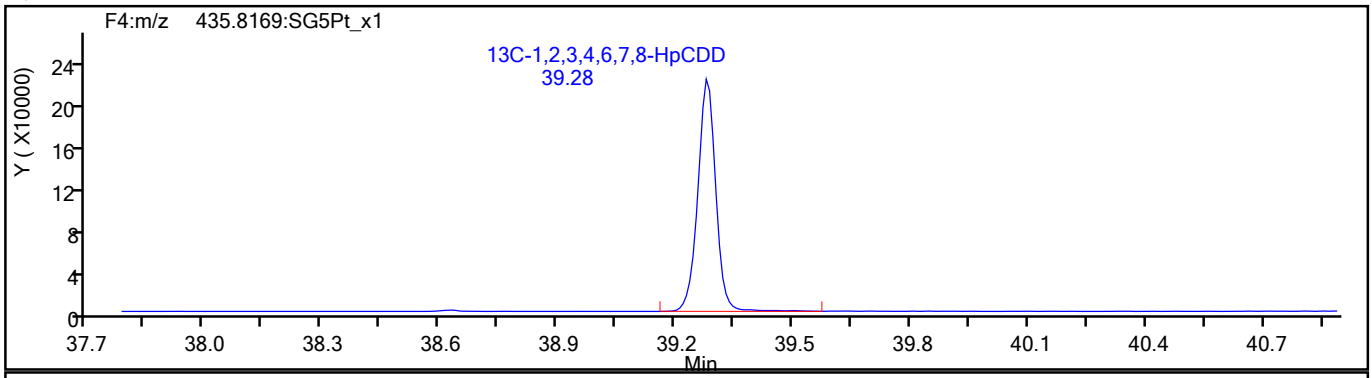

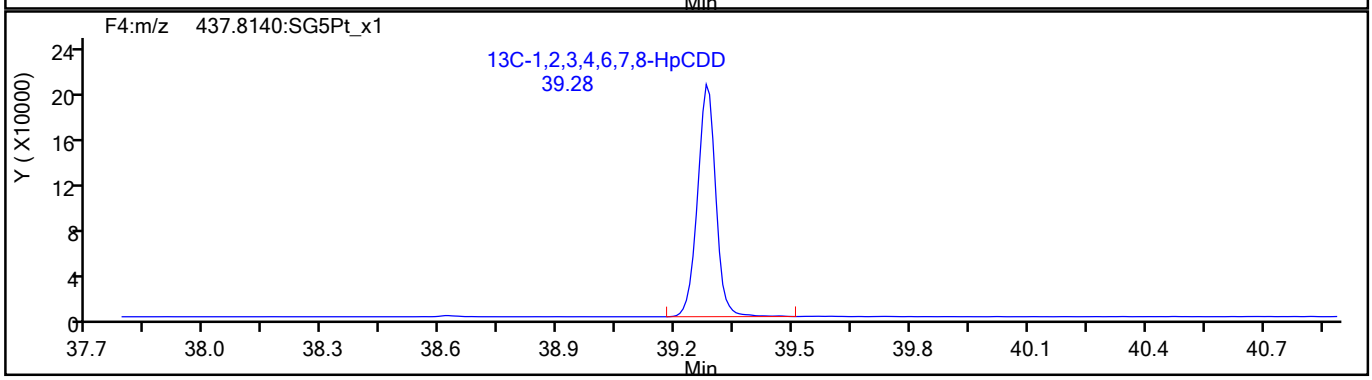

773620

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

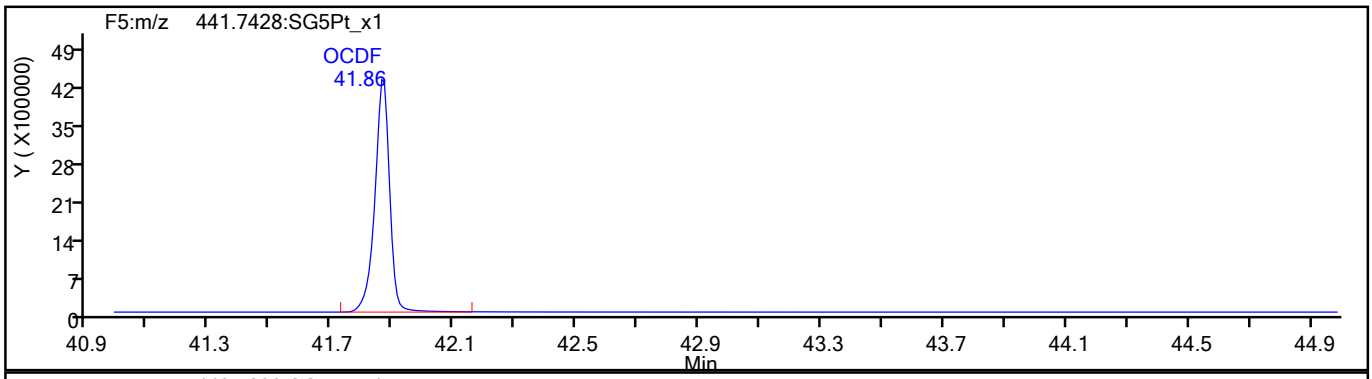

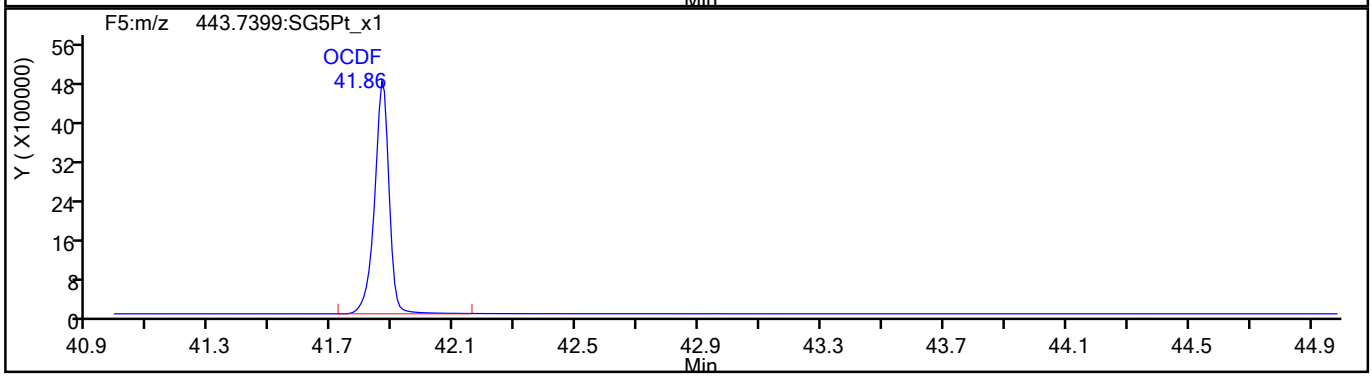

OCDF Standards

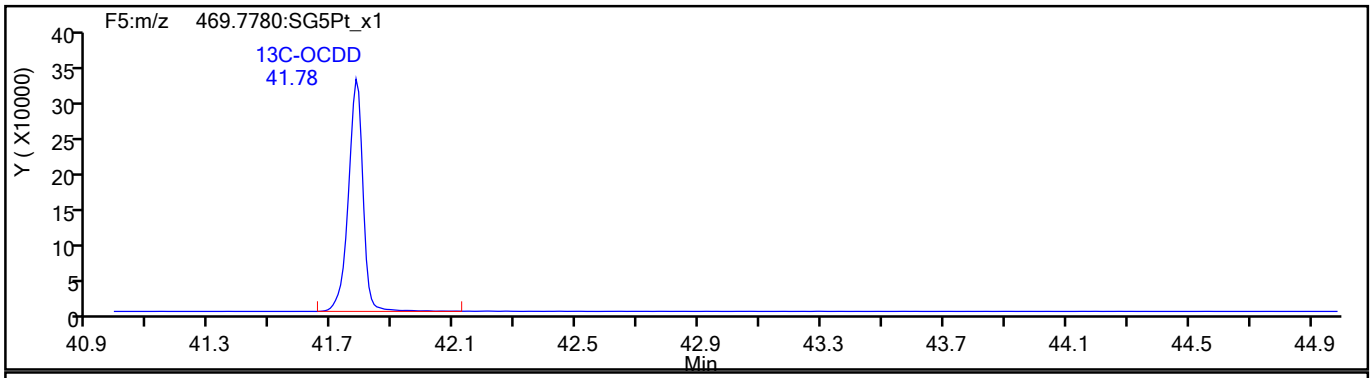

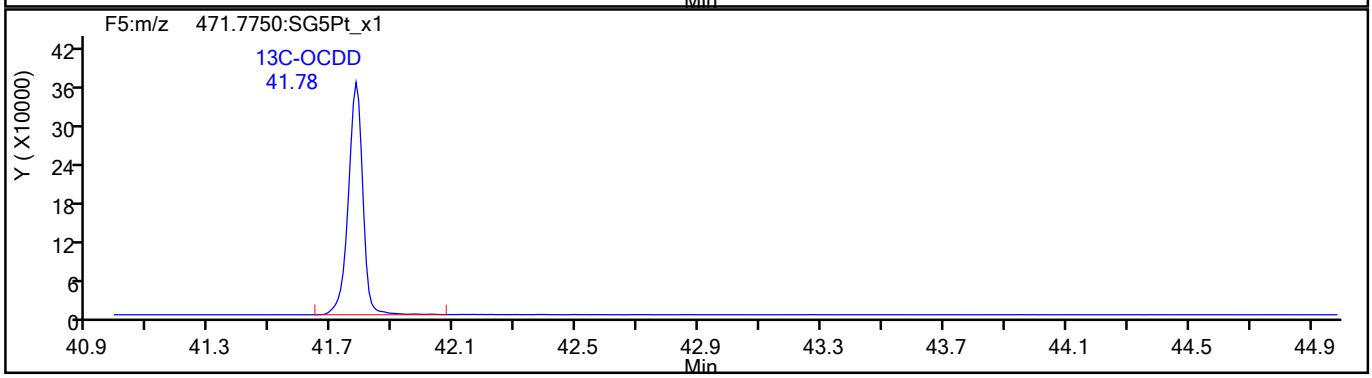

773621

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

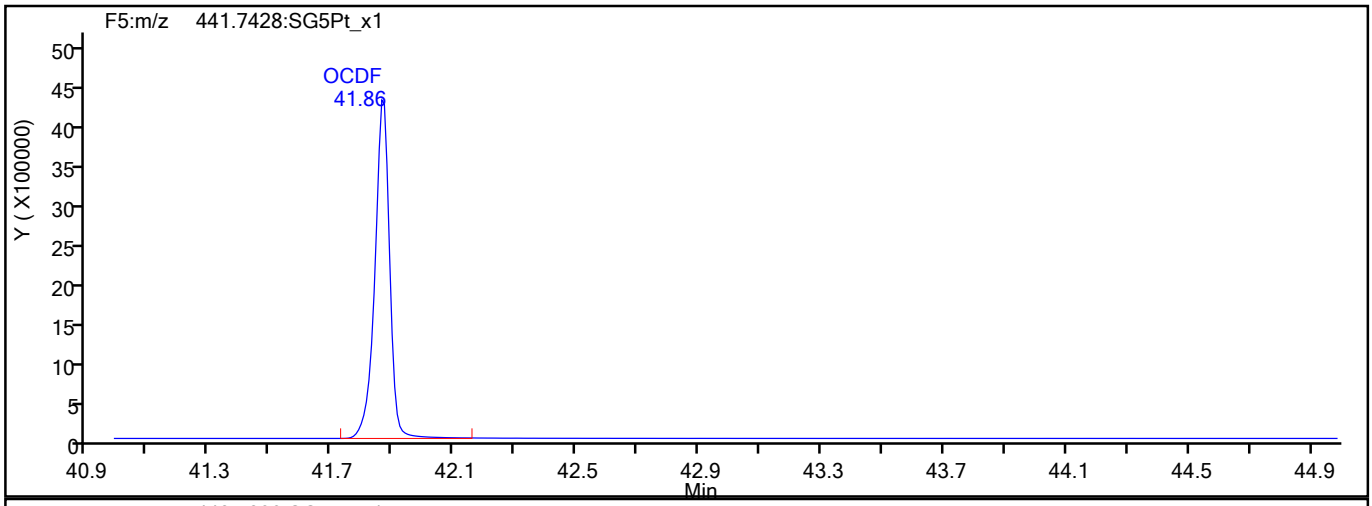

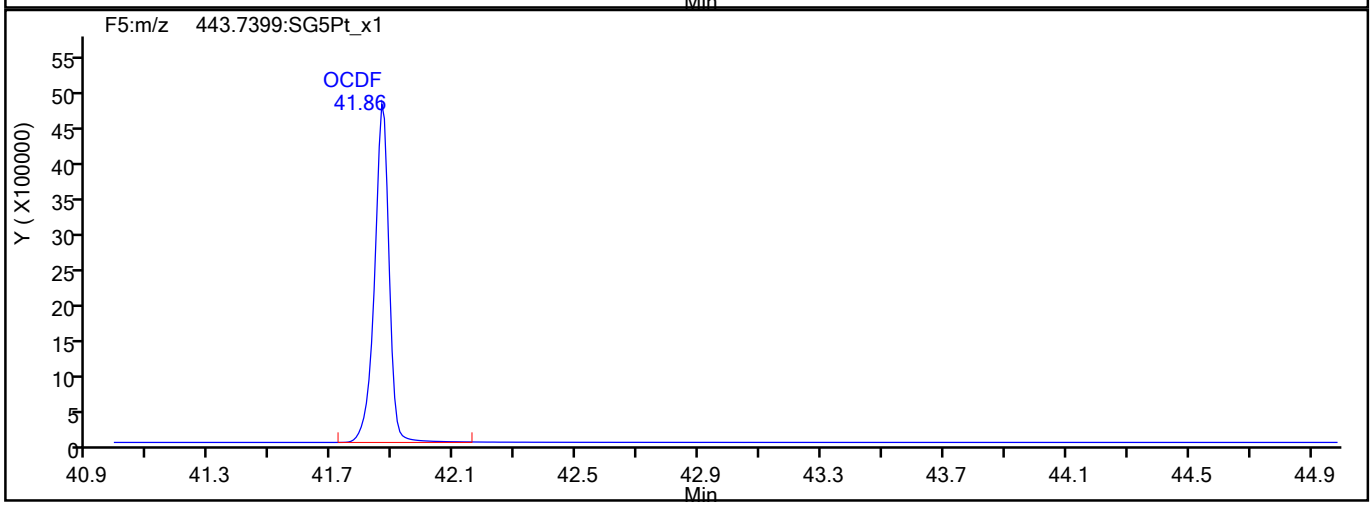

OCDF Interference Mass

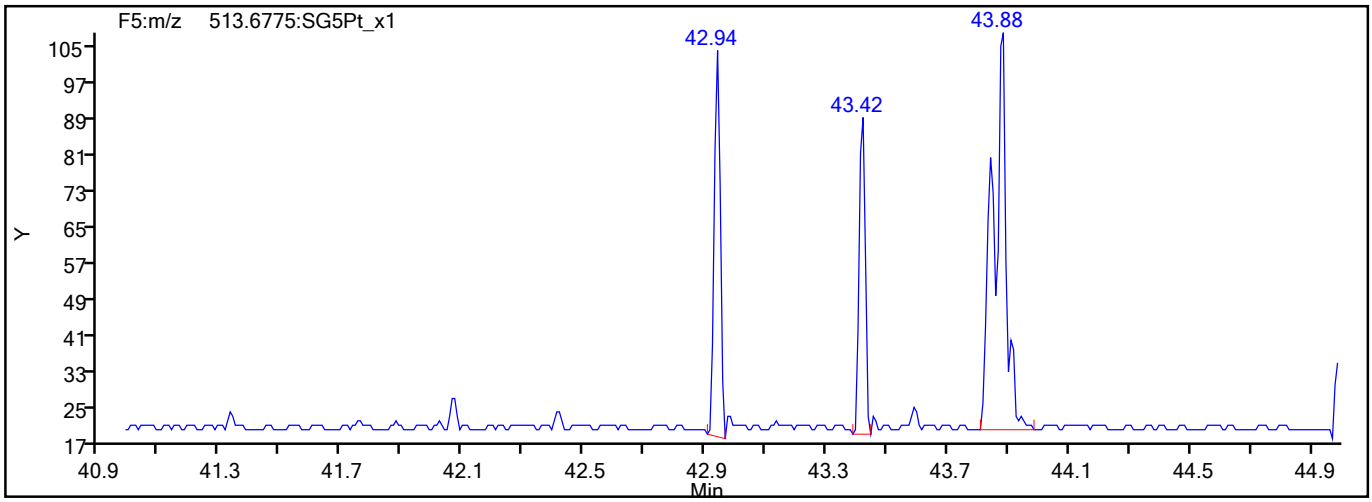

773622

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

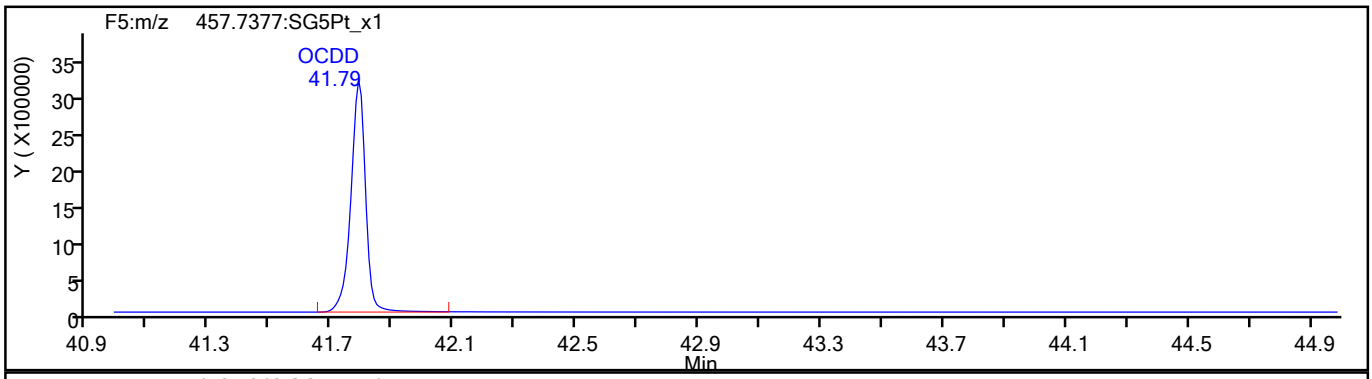

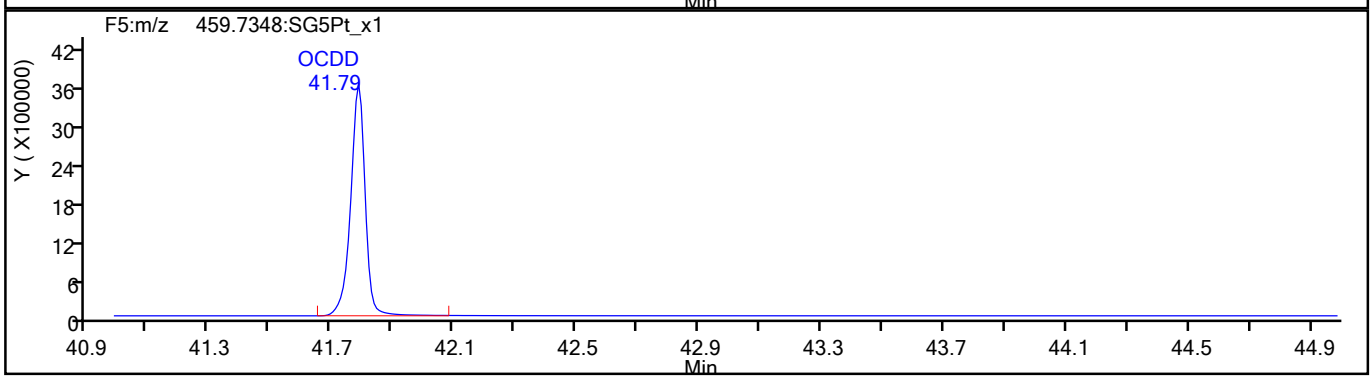

OCDD Standards

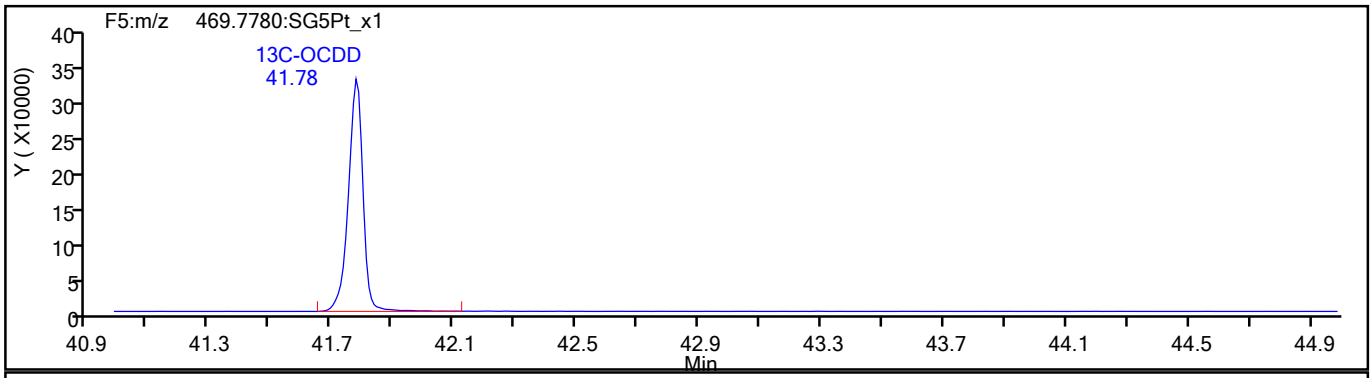

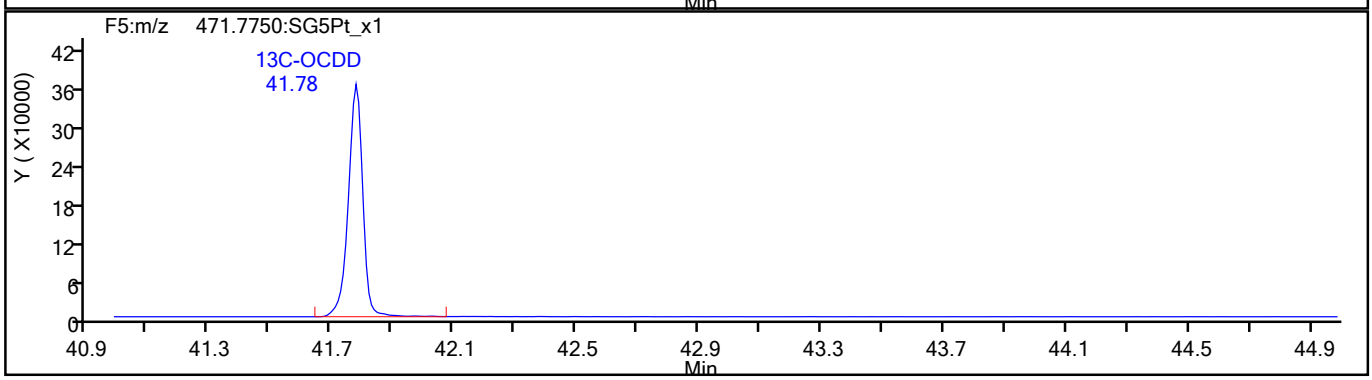

773623

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

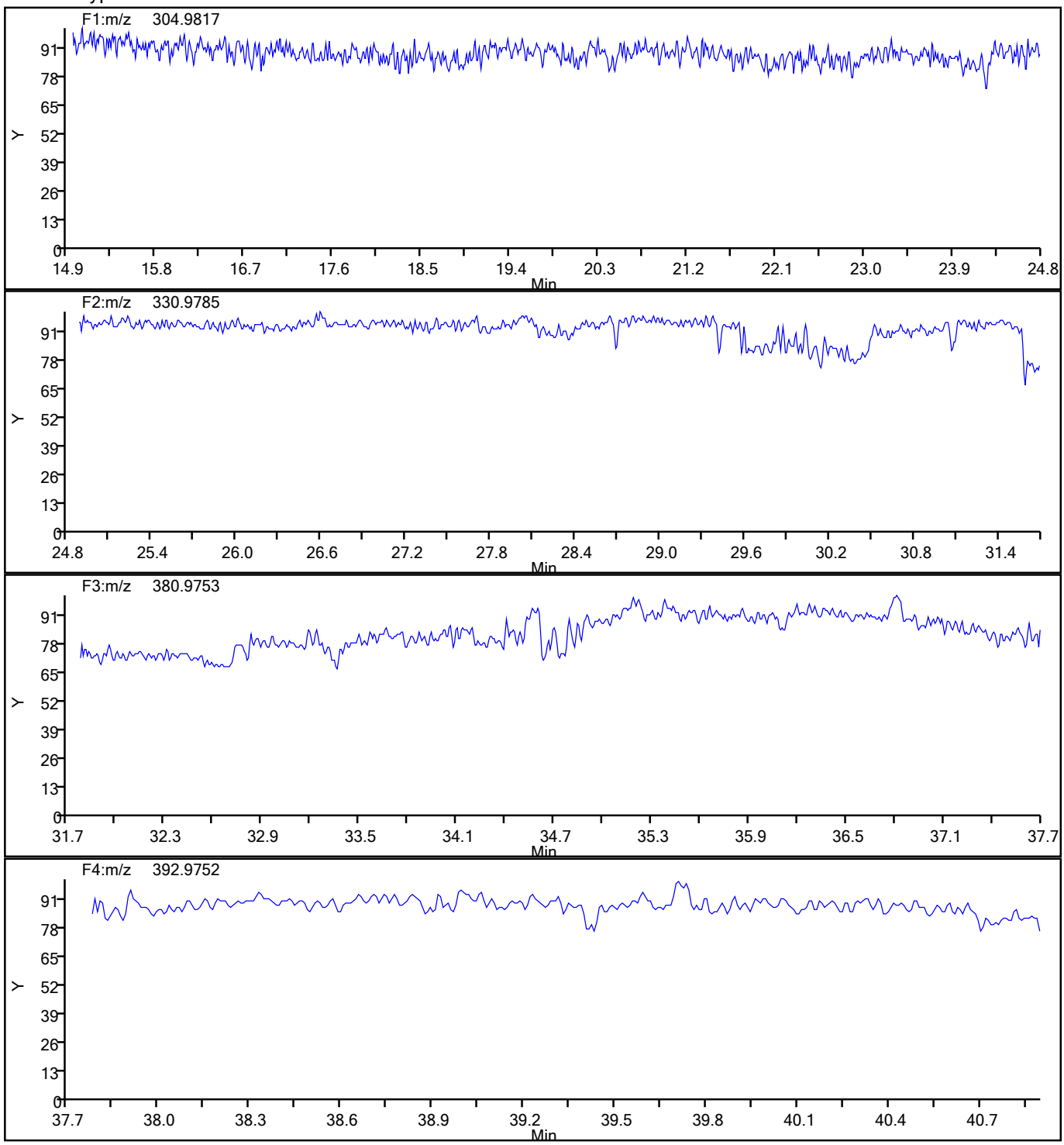

773624

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

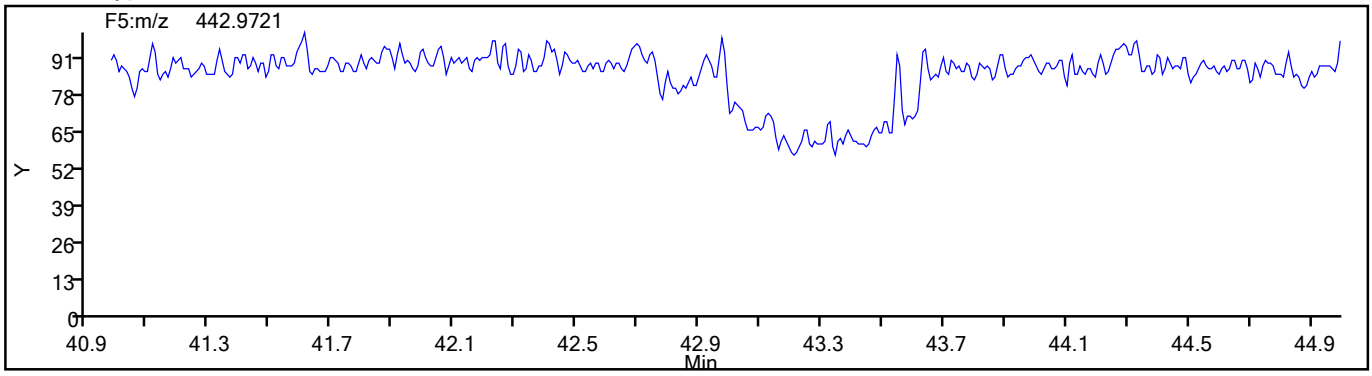

773625

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.05

Error Coefficients

Standard Error:	7060000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.844284	100.0	1113145.0	1.137713	Y
2	IC 320-496688/4	10.0	9.530968	100.0	1162117.0	0.953097	Y
3	IC 320-496688/5	50.0	52.293706	100.0	1094713.0	1.045874	Y
4	IC 320-496688/6	200.0	219.393902	100.0	1337869.0	1.09697	Y
5	IC 320-496688/7	1000.0	1017.847283	100.0	1355803.0	1.017847	Y

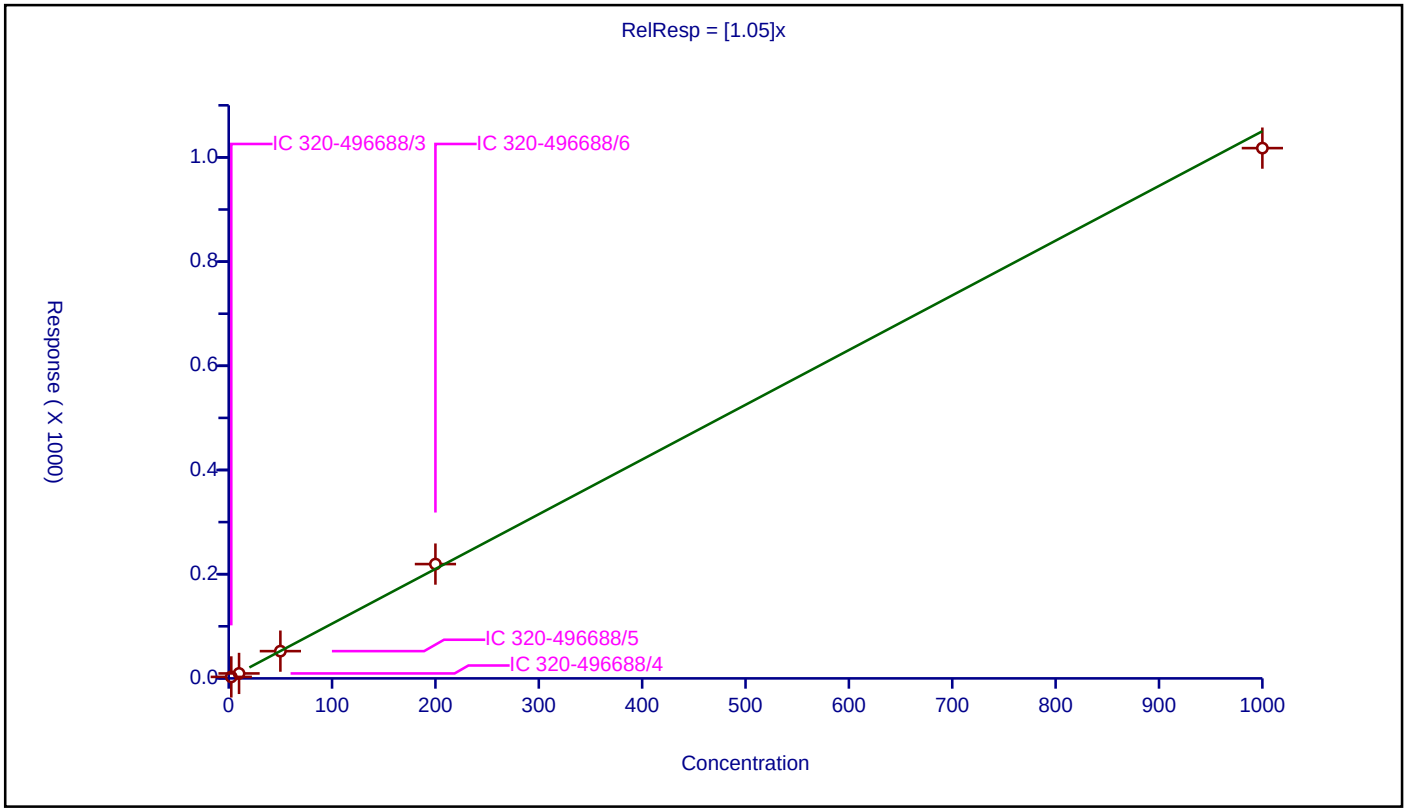

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.442

Error Coefficients

Standard Error:	10800000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.852995	100.0	1227279.0	1.541198	Y
2	IC 320-496688/4	10.0	12.896239	100.0	1272526.0	1.289624	Y
3	IC 320-496688/5	50.0	74.275022	100.0	1182209.0	1.4855	Y
4	IC 320-496688/6	200.0	304.802204	100.0	1392194.0	1.524011	Y
5	IC 320-496688/7	1000.0	1370.014158	100.0	1546113.0	1.370014	Y

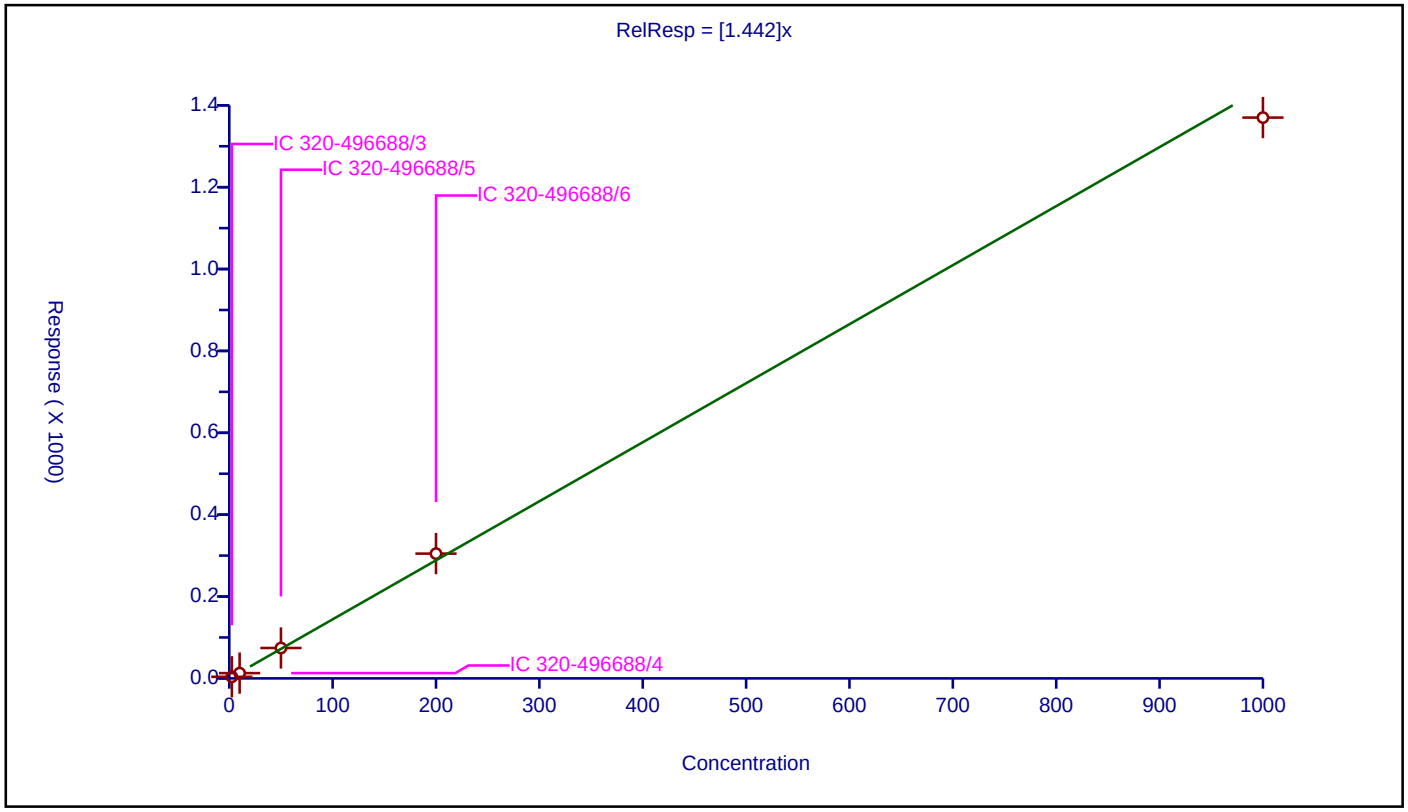

773627

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.309

Error Coefficients

Standard Error:	9110000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.51417	100.0	1120663.0	1.405668	Y
2	IC 320-496688/4	10.0	11.769676	100.0	1175351.0	1.176968	Y
3	IC 320-496688/5	50.0	67.293315	100.0	1080883.0	1.345866	Y
4	IC 320-496688/6	200.0	278.744786	100.0	1337573.0	1.393724	Y
5	IC 320-496688/7	1000.0	1223.548565	100.0	1455766.0	1.223549	Y

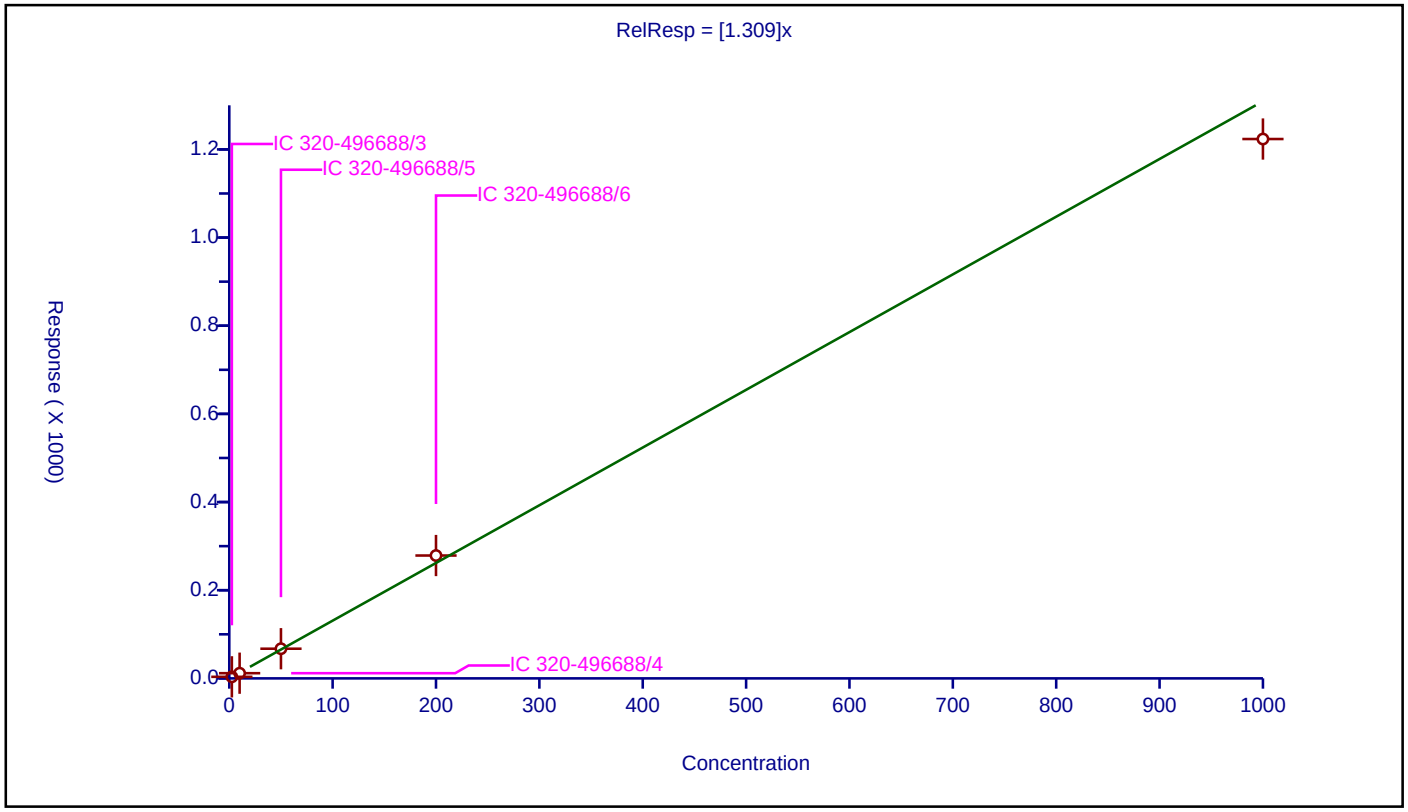

773628

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	7950000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808772	100.0	1127895.0	1.123509	Y
2	IC 320-496688/4	10.0	9.701688	100.0	1363103.0	0.970169	Y
3	IC 320-496688/5	50.0	53.7445	100.0	1348471.0	1.07489	Y
4	IC 320-496688/6	200.0	224.989195	100.0	1432215.0	1.124946	Y
5	IC 320-496688/7	1000.0	1010.433801	100.0	1539784.0	1.010434	Y

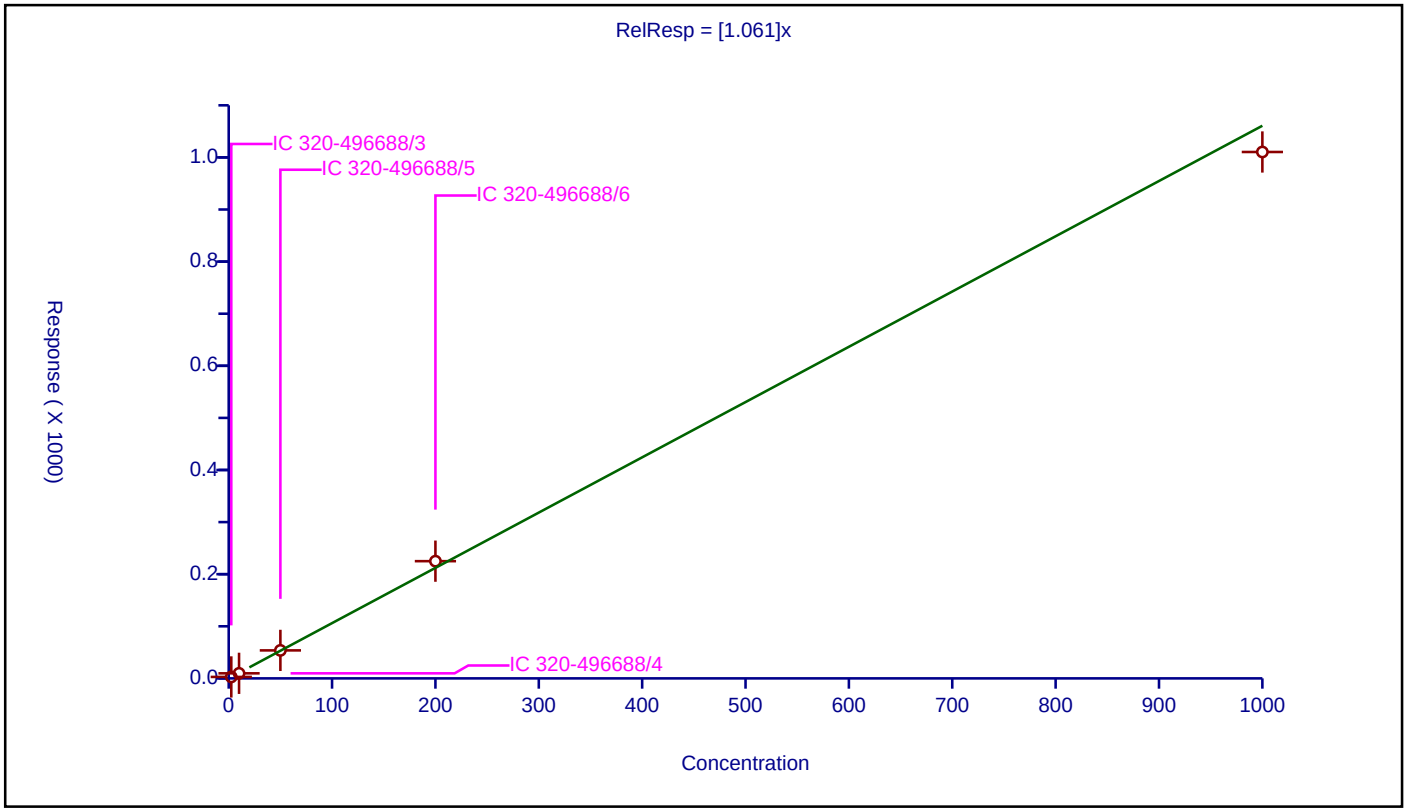

773629

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.147

Error Coefficients

Standard Error:	11200000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.056507	100.0	1517222.0	1.222603	Y
2	IC 320-496688/4	10.0	10.071694	100.0	1545033.0	1.007169	Y
3	IC 320-496688/5	50.0	59.364869	100.0	1841825.0	1.187297	Y
4	IC 320-496688/6	200.0	241.451426	100.0	1778238.0	1.207257	Y
5	IC 320-496688/7	1000.0	1112.580113	100.0	1968615.0	1.11258	Y

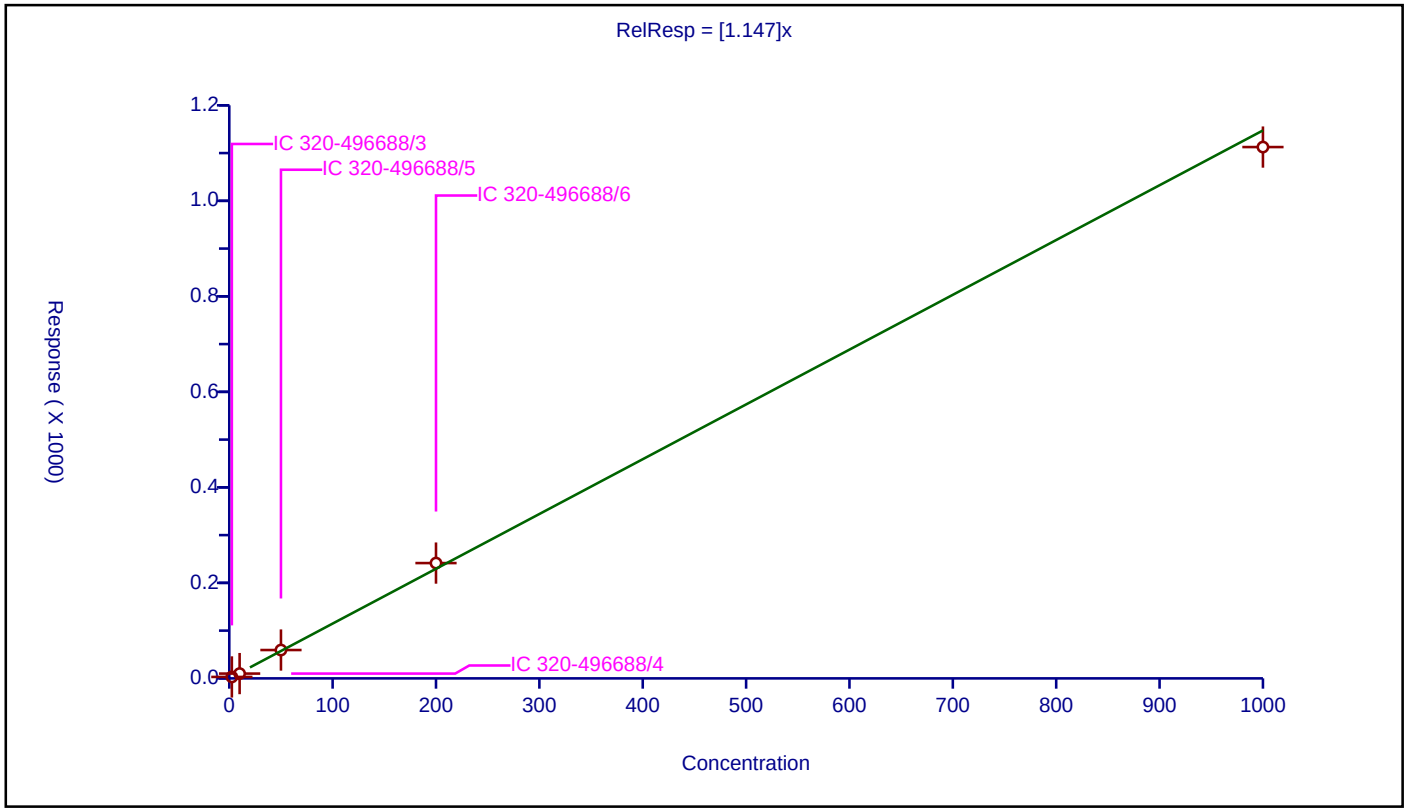

773630

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9933

Error Coefficients

Standard Error:	8510000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.639223	100.0	1291365.0	1.055689	Y
2	IC 320-496688/4	10.0	8.862824	100.0	1558668.0	0.886282	Y
3	IC 320-496688/5	50.0	52.081775	100.0	1460100.0	1.041636	Y
4	IC 320-496688/6	200.0	205.274729	100.0	1669337.0	1.026374	Y
5	IC 320-496688/7	1000.0	956.728345	100.0	1741498.0	0.956728	Y

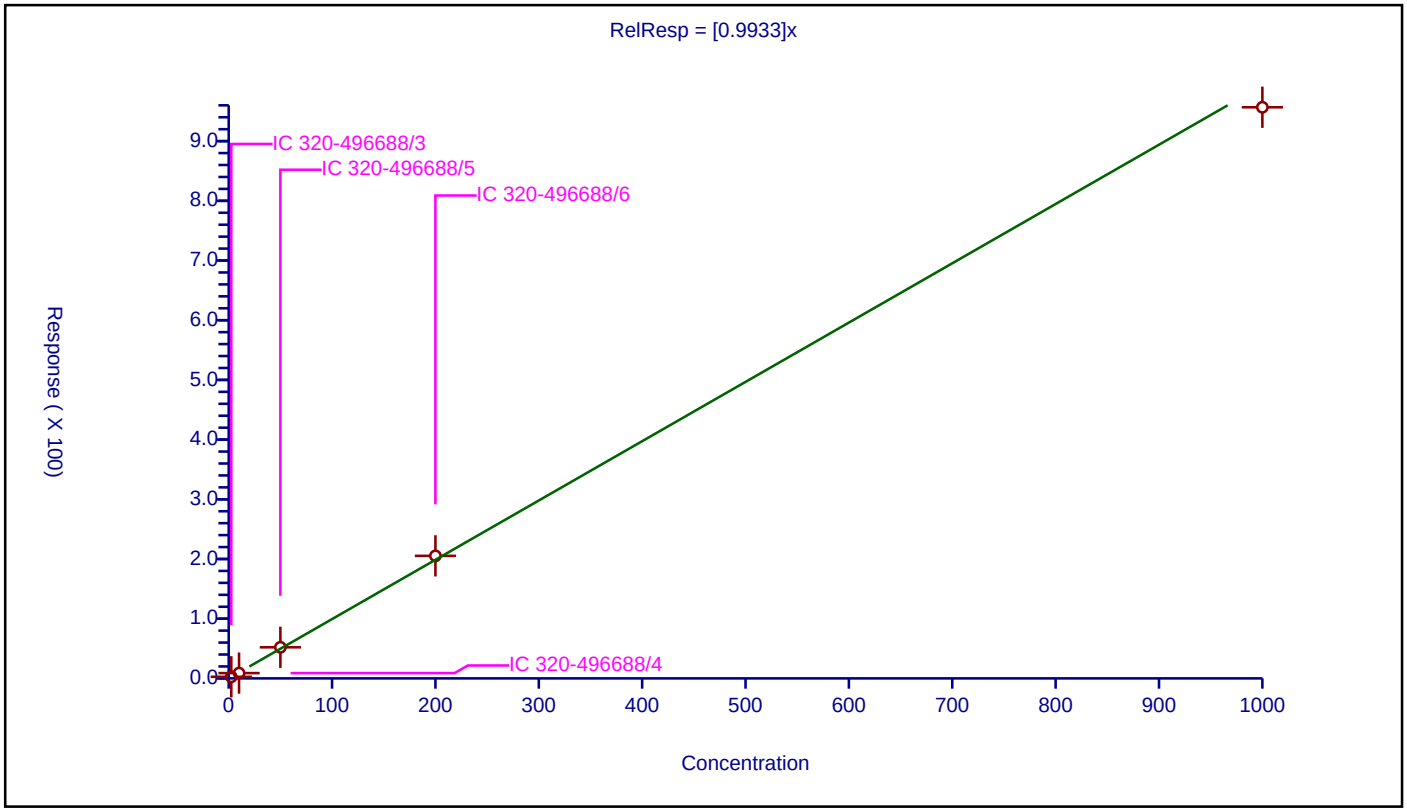

773631

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.218

Error Coefficients

Standard Error:	13600000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.343553	100.0	1626653.0	1.337421	Y
2	IC 320-496688/4	10.0	10.950603	100.0	1692336.0	1.09506	Y
3	IC 320-496688/5	50.0	61.795629	100.0	2015594.0	1.235913	Y
4	IC 320-496688/6	200.0	250.125403	100.0	1995567.0	1.250627	Y
5	IC 320-496688/7	1000.0	1169.95242	100.0	2283961.0	1.169952	Y

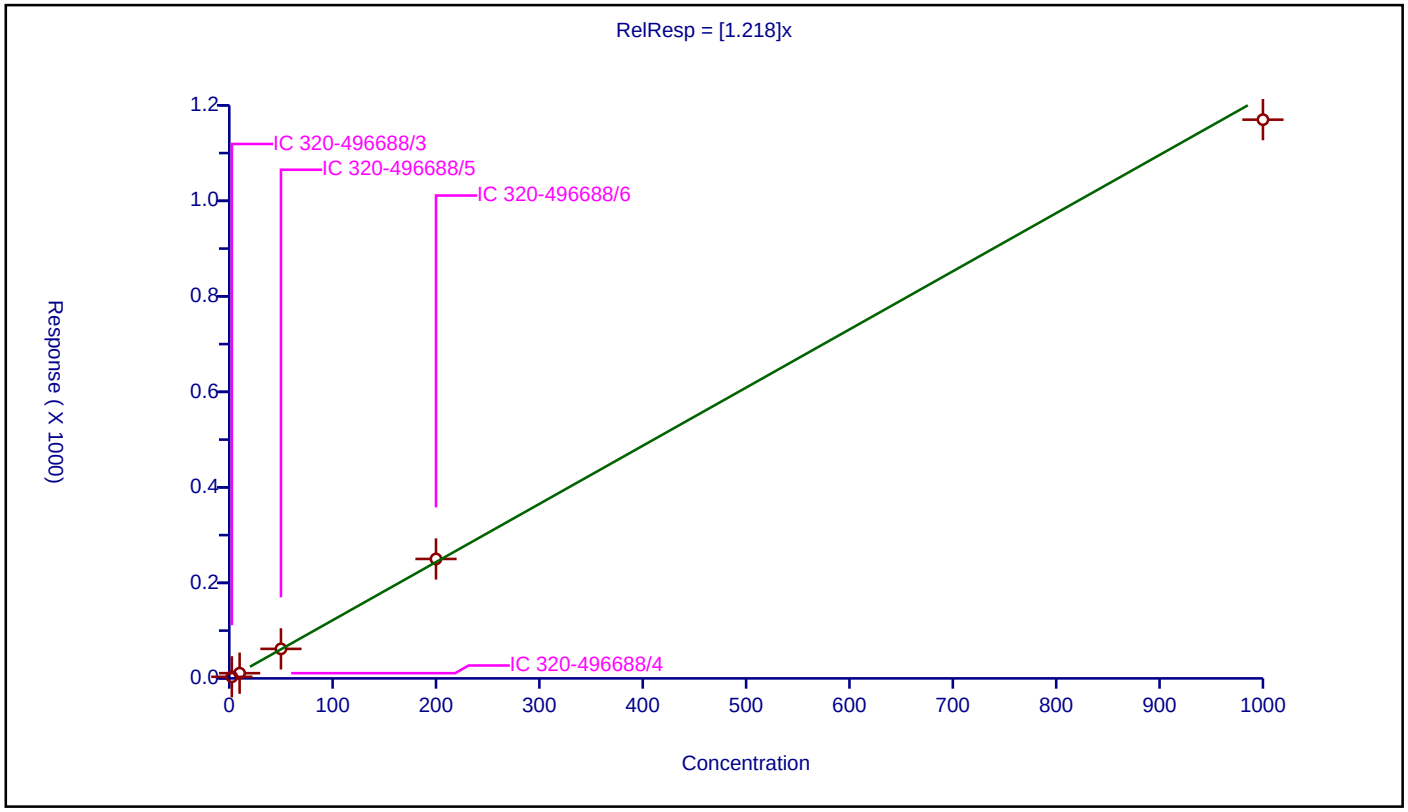

773632

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.184

Error Coefficients

Standard Error:	8820000
Relative Standard Error:	11.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.510522	100.0	1127895.0	1.404209	Y
2	IC 320-496688/4	10.0	10.251683	100.0	1363103.0	1.025168	Y
3	IC 320-496688/5	50.0	58.326134	100.0	1348471.0	1.166523	Y
4	IC 320-496688/6	200.0	239.918169	100.0	1432215.0	1.199591	Y
5	IC 320-496688/7	1000.0	1122.182397	100.0	1539784.0	1.122182	Y

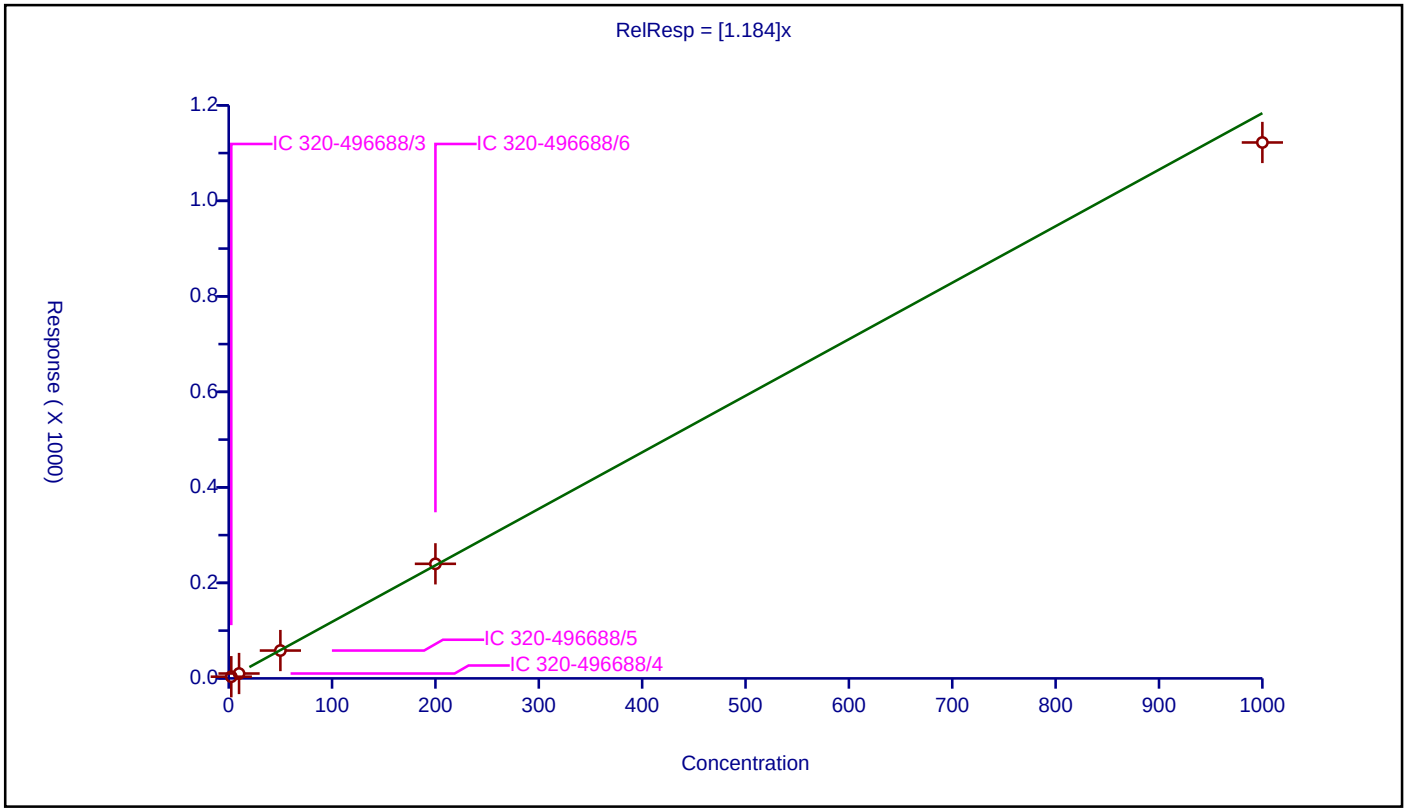

773633

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.24

Error Coefficients

Standard Error:	11500000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.395229	100.0	1696557.0	1.358092	Y
2	IC 320-496688/4	10.0	11.238546	100.0	1735785.0	1.123855	Y
3	IC 320-496688/5	50.0	62.662354	100.0	1657413.0	1.253247	Y
4	IC 320-496688/6	200.0	255.13849	100.0	1742331.0	1.275692	Y
5	IC 320-496688/7	1000.0	1189.708821	100.0	1895740.0	1.189709	Y

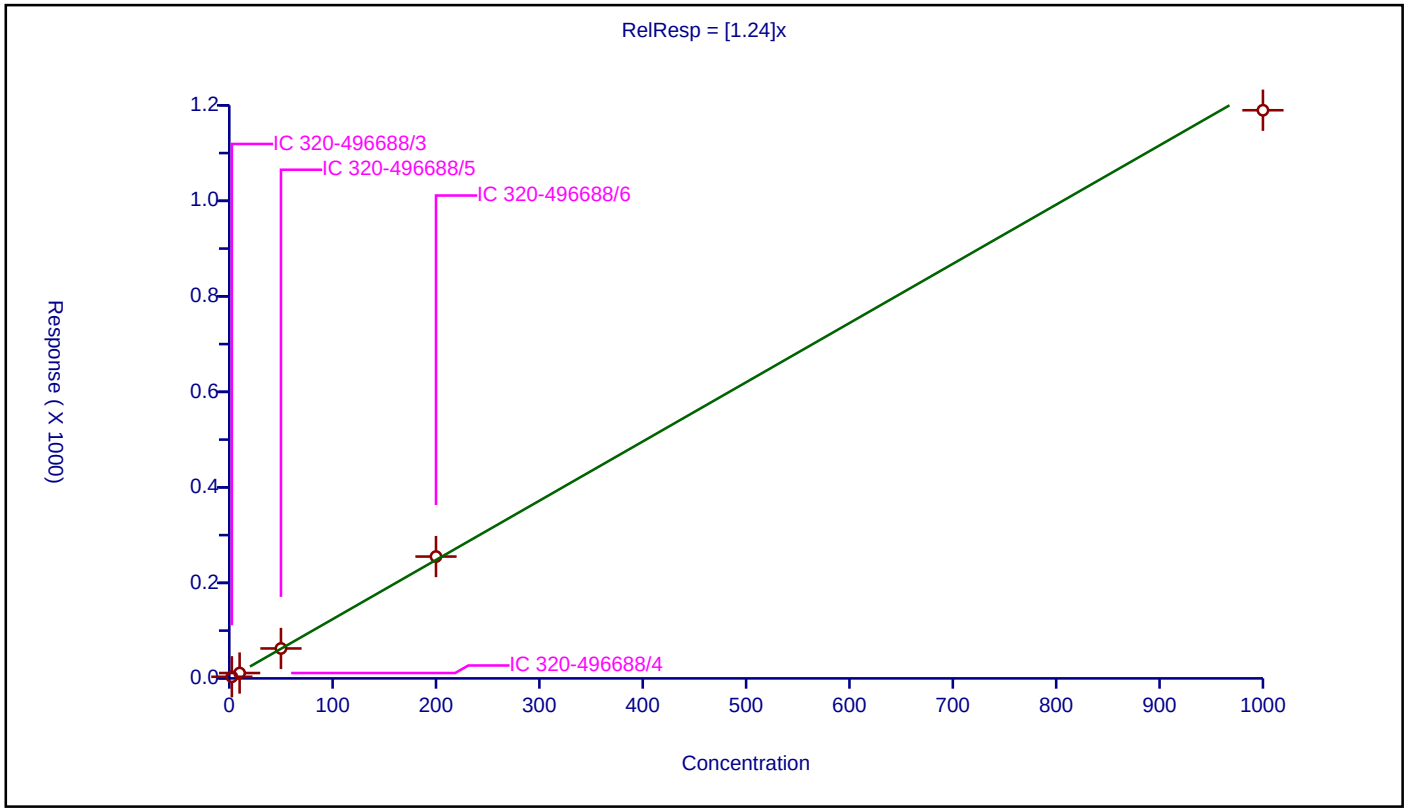

773634

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.046

Error Coefficients

Standard Error:	8500000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.679791	100.0	1602476.0	1.071916	Y
2	IC 320-496688/4	10.0	9.520403	100.0	1364144.0	0.95204	Y
3	IC 320-496688/5	50.0	53.426119	100.0	1388641.0	1.068522	Y
4	IC 320-496688/6	200.0	220.300949	100.0	1521254.0	1.101505	Y
5	IC 320-496688/7	1000.0	1038.502383	100.0	1602880.0	1.038502	Y

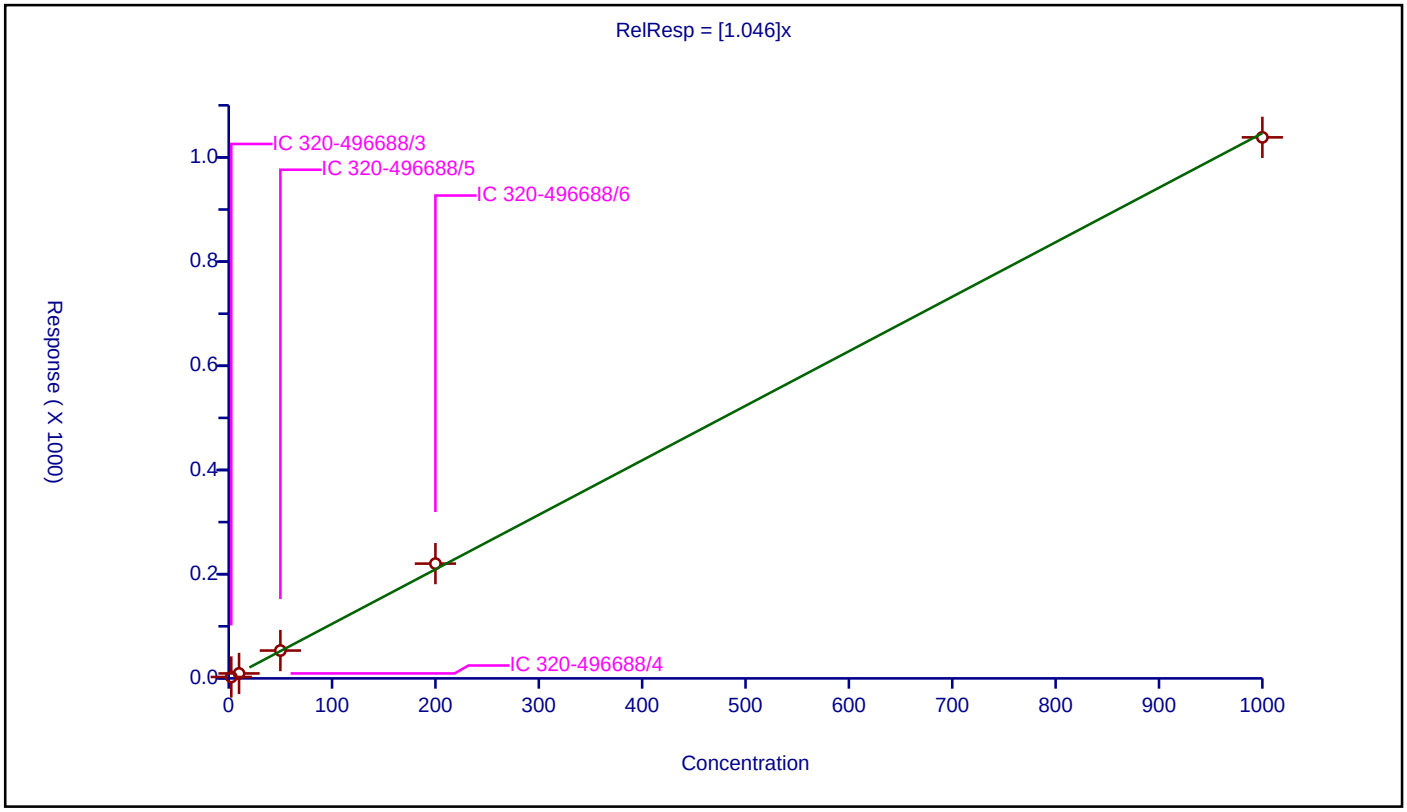

773635

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.054

Error Coefficients

Standard Error:	13300000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.980089	100.0	2514489.0	1.192035	Y
2	IC 320-496688/4	10.0	9.411606	100.0	2234847.0	0.941161	Y
3	IC 320-496688/5	50.0	51.86467	100.0	2149791.0	1.037293	Y
4	IC 320-496688/6	200.0	217.934531	100.0	2432949.0	1.089673	Y
5	IC 320-496688/7	1000.0	1011.152482	100.0	2574521.0	1.011152	Y

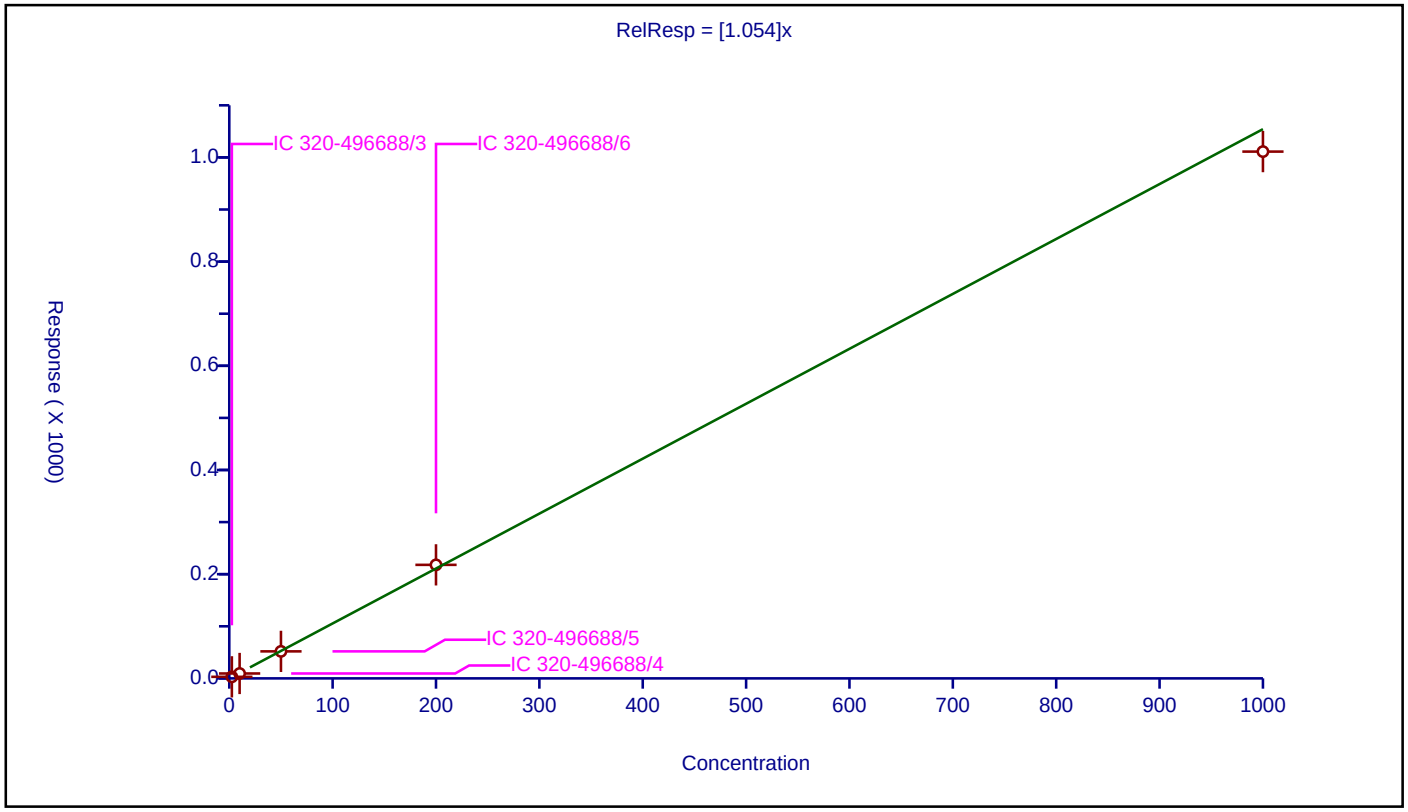

773636

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.214

Error Coefficients

Standard Error:	13000000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.283761	100.0	1523436.0	1.313504	Y
2	IC 320-496688/4	10.0	11.007204	100.0	1740015.0	1.10072	Y
3	IC 320-496688/5	50.0	61.8379	100.0	1861559.0	1.236758	Y
4	IC 320-496688/6	200.0	252.469364	100.0	2042874.0	1.262347	Y
5	IC 320-496688/7	1000.0	1159.01852	100.0	2190509.0	1.159019	Y

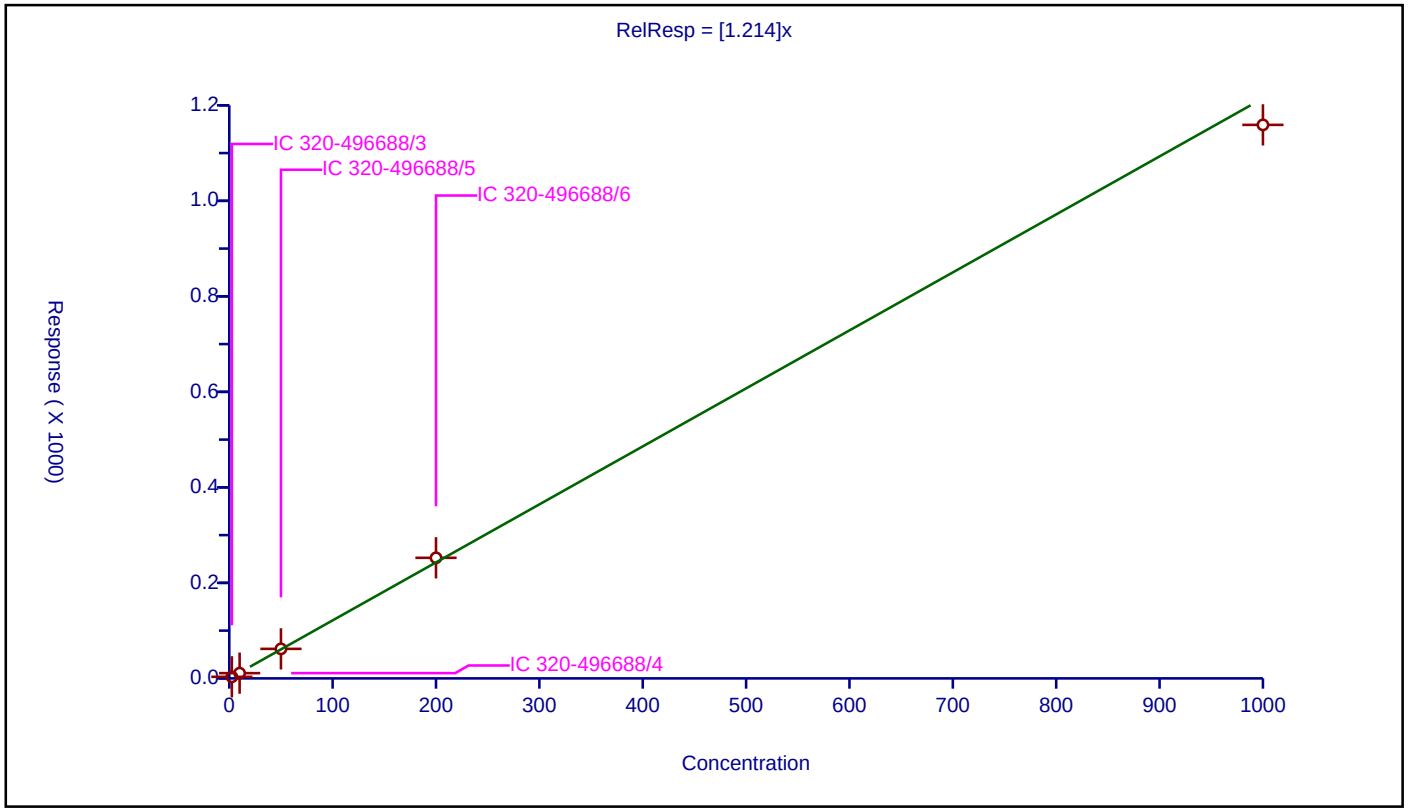

773637

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	12700000
Relative Standard Error:	8.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808272	100.0	2592947.0	1.123309	Y
2	IC 320-496688/4	10.0	8.984414	100.0	2228025.0	0.898441	Y
3	IC 320-496688/5	50.0	49.606313	100.0	1991303.0	0.992126	Y
4	IC 320-496688/6	200.0	212.714288	100.0	2374722.0	1.063571	Y
5	IC 320-496688/7	1000.0	961.852333	100.0	2584740.0	0.961852	Y

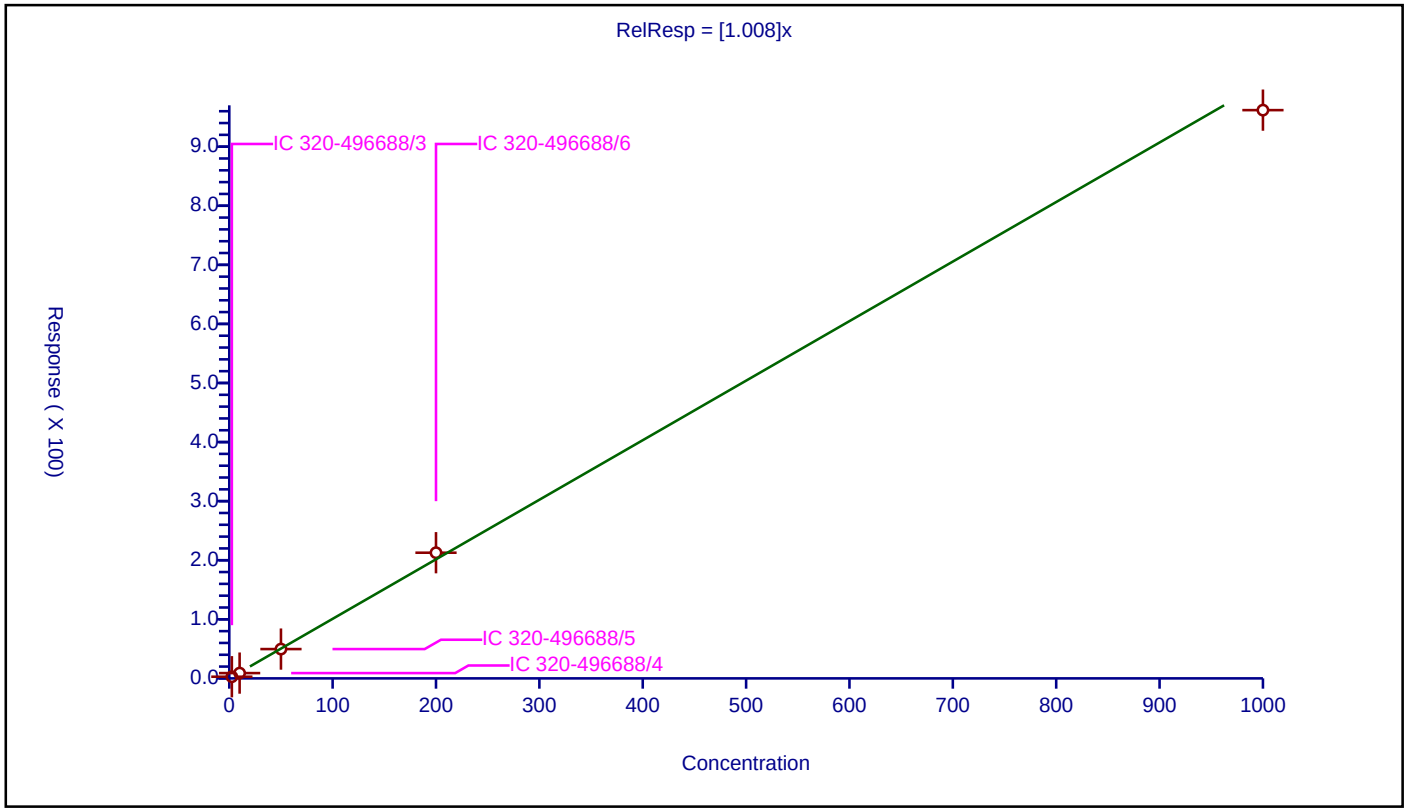

773638

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.075

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.566752	100.0	2138853.0	1.133505	Y
2	IC 320-496688/4	2.0	1.911764	100.0	1829253.0	0.955882	Y
3	IC 320-496688/5	10.0	10.998165	100.0	1800864.0	1.099817	Y
4	IC 320-496688/6	40.0	44.949952	100.0	1948011.0	1.123749	Y
5	IC 320-496688/7	200.0	212.755816	100.0	2014532.0	1.063779	Y

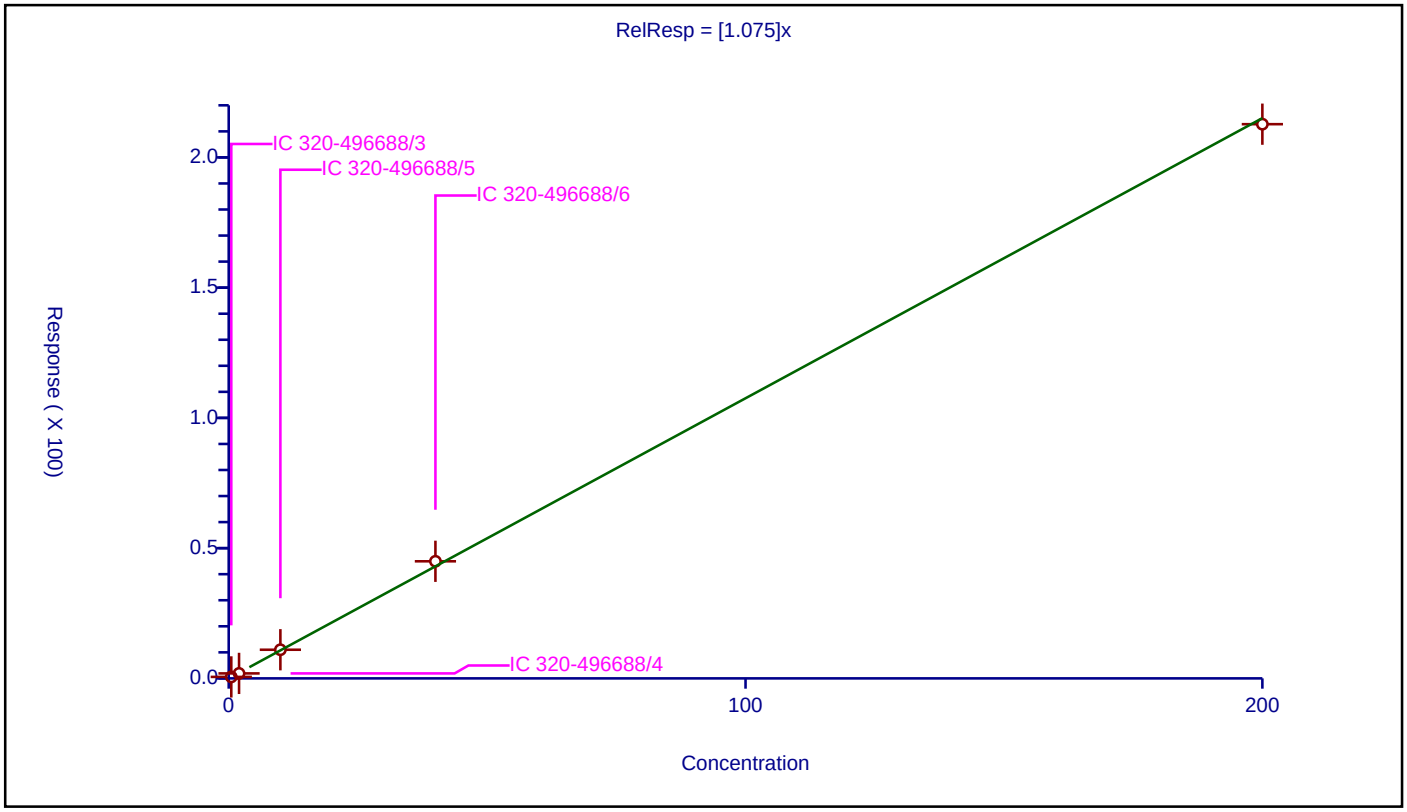

773639

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.08

Error Coefficients

Standard Error:	3140000
Relative Standard Error:	9.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.616764	100.0	3167014.0	1.233528	Y
2	IC 320-496688/4	2.0	1.926948	100.0	2644389.0	0.963474	Y
3	IC 320-496688/5	10.0	10.464342	100.0	2465726.0	1.046434	Y
4	IC 320-496688/6	40.0	44.869913	100.0	2839435.0	1.121748	Y
5	IC 320-496688/7	200.0	207.156116	100.0	2962515.0	1.035781	Y

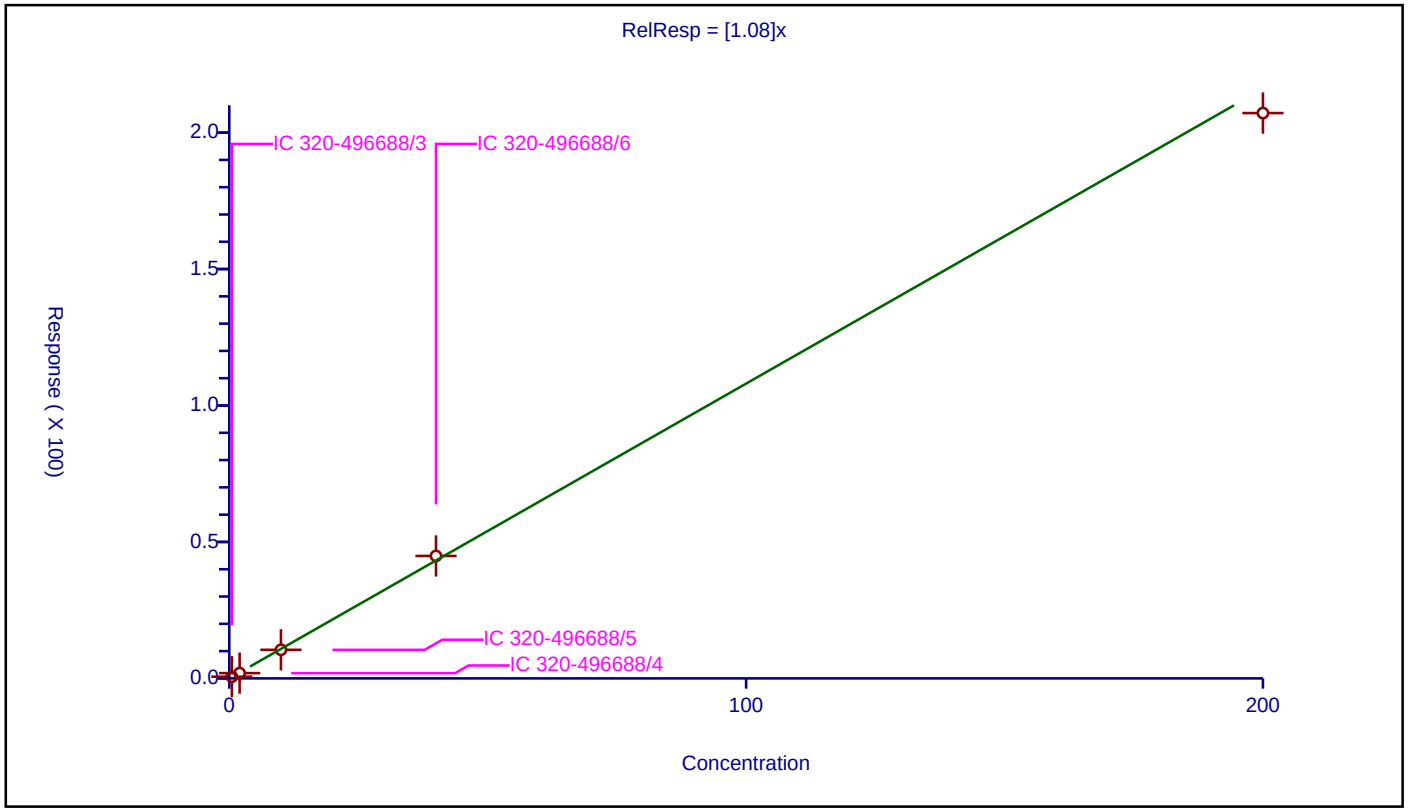

773640

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.482683	100.0	2334037.0	0.965366	Y
2	IC 320-496688/4	2.0	1.917995	100.0	2045939.0	0.958997	Y
3	IC 320-496688/5	10.0	10.721795	100.0	1900111.0	1.072179	Y
4	IC 320-496688/6	40.0	40.297989	100.0	2105852.0	1.00745	Y
5	IC 320-496688/7	200.0	207.496438	100.0	2066088.0	1.037482	Y

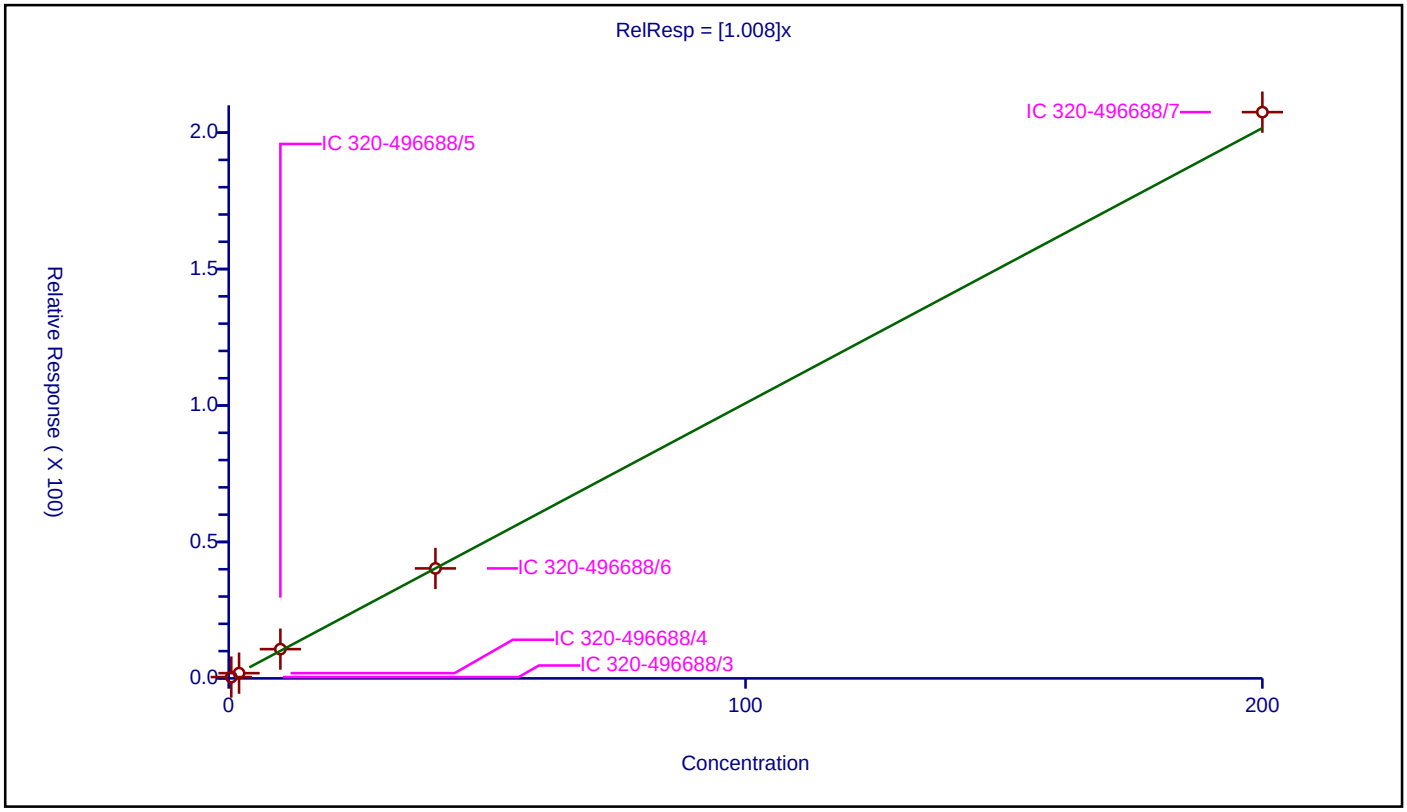

773641

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.062

Error Coefficients

Standard Error:	11700000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	5.664077	200.0	1823492.0	1.132815	Y
2	IC 320-496688/4	20.0	19.907928	200.0	1833139.0	0.995396	Y
3	IC 320-496688/5	100.0	108.699815	200.0	1676139.0	1.086998	Y
4	IC 320-496688/6	400.0	441.074631	200.0	2177938.0	1.102687	Y
5	IC 320-496688/7	2000.0	1984.090177	200.0	2298668.0	0.992045	Y

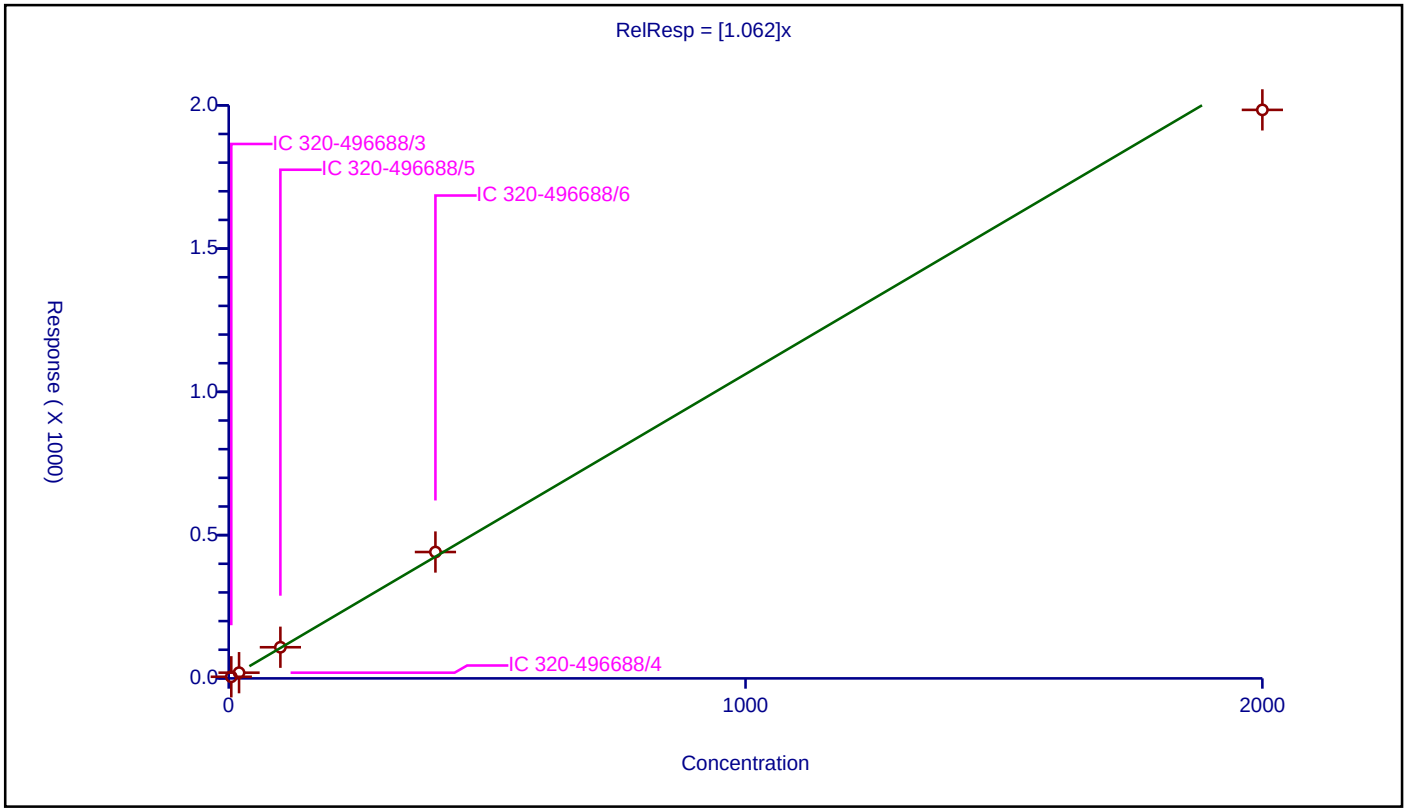

773642

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	15600000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	6.696054	200.0	1823492.0	1.339211	Y
2	IC 320-496688/4	20.0	23.726842	200.0	1833139.0	1.186342	Y
3	IC 320-496688/5	100.0	133.490122	200.0	1676139.0	1.334901	Y
4	IC 320-496688/6	400.0	558.573844	200.0	2177938.0	1.396435	Y
5	IC 320-496688/7	2000.0	2654.186163	200.0	2298668.0	1.327093	Y

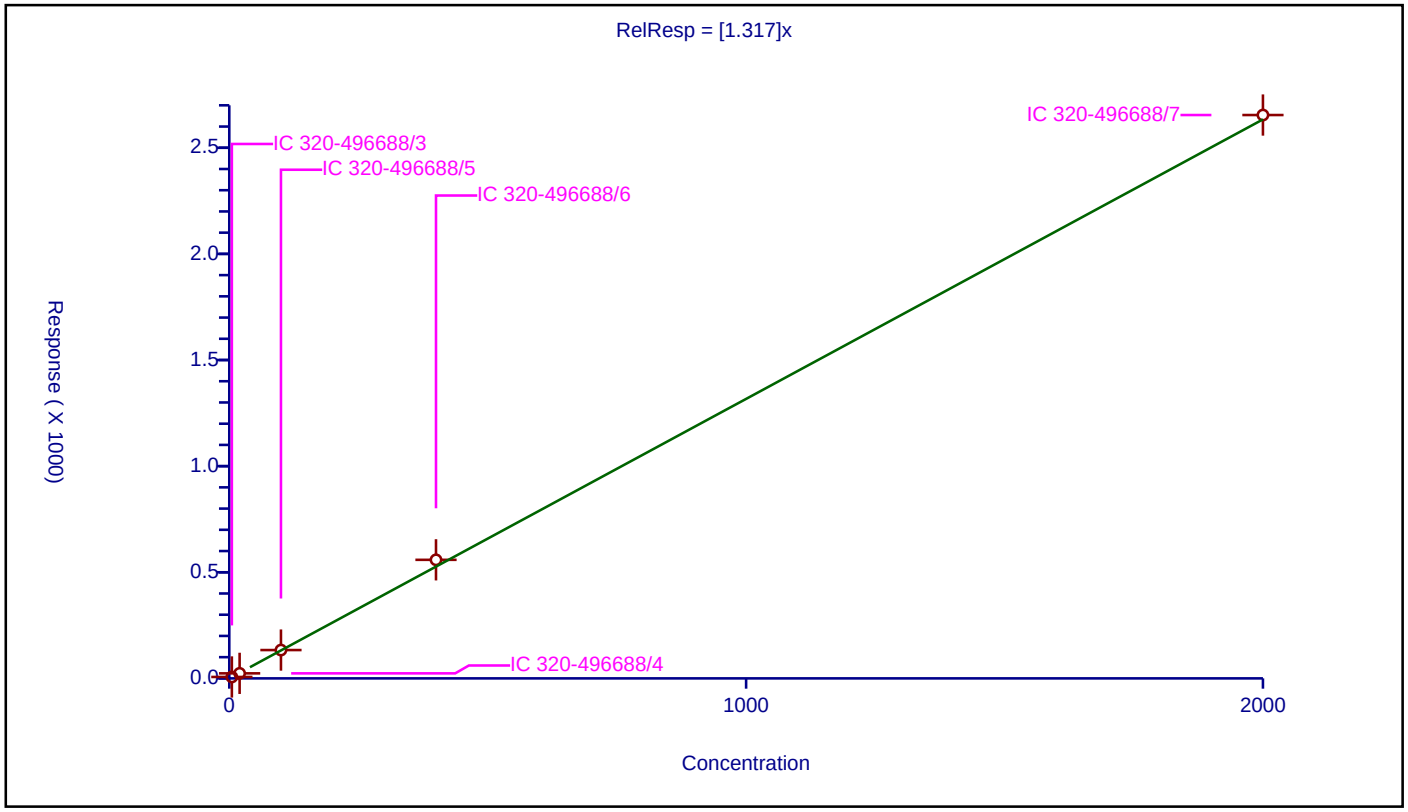

773643

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID (1): WDM 320-496688/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 06/08/2021 12:40

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	20.95	13

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d				
Injection Date:	08-Jun-2021 12:40:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 7095
H (Peak Height) = 55991

%R = 13 <= 25
Passed

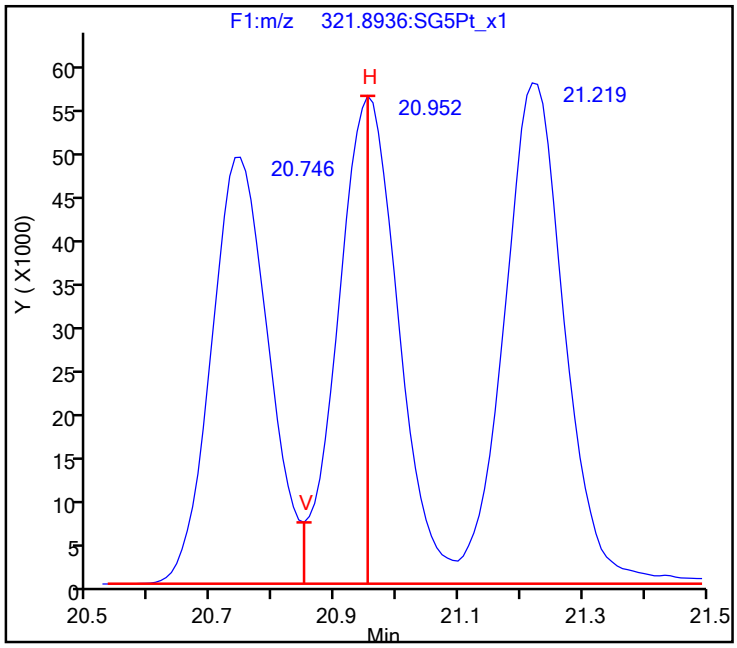

773645

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

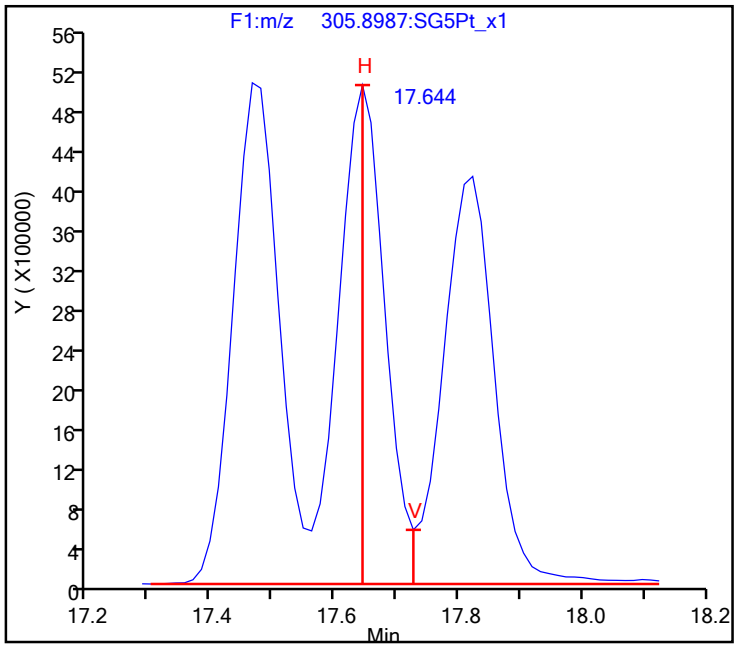

773647

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID (1): WDM 320-510264/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 07/26/2021 09:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.34	18

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d				
Injection Date:	26-Jul-2021 09:21:58	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 725696
H (Peak Height) = 4136533

%R = 18 <= 25
Passed

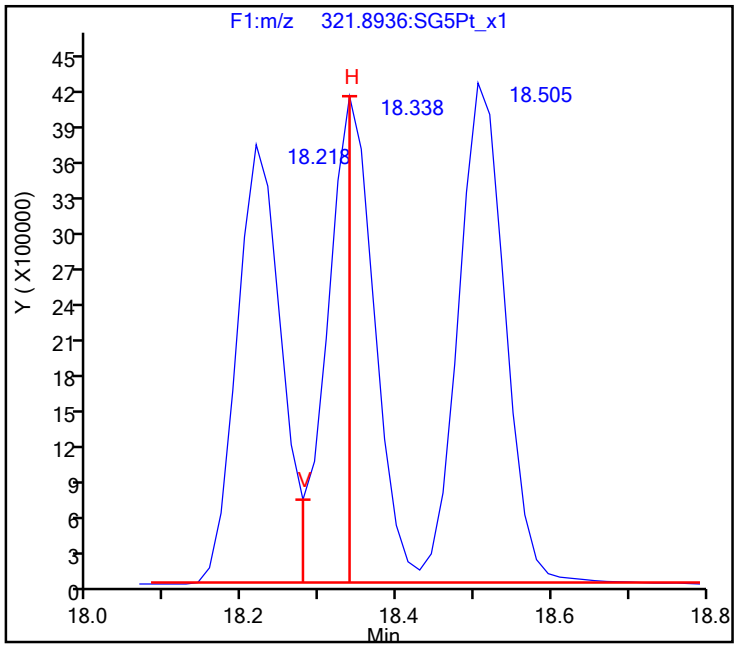

773649

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID (1): WDM 320-515770/2 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/13/2021 05:48

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.08	22

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d

Injection Date: 13-Aug-2021 05:48:08 Instrument ID: 10D5

Lims ID: WDM

Client ID:

Operator ID: DB ALS Bottle#: 1 Worklist Smp#: 2

Injection Vol: 2.0 ul Column: DB-5 (0.32 mm)

Method: Dioxin_10D5 Limit Group: HR - 1613B - ICAL

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1528085

H (Peak Height) = 6916562

%R = 22 <= 25

Passed

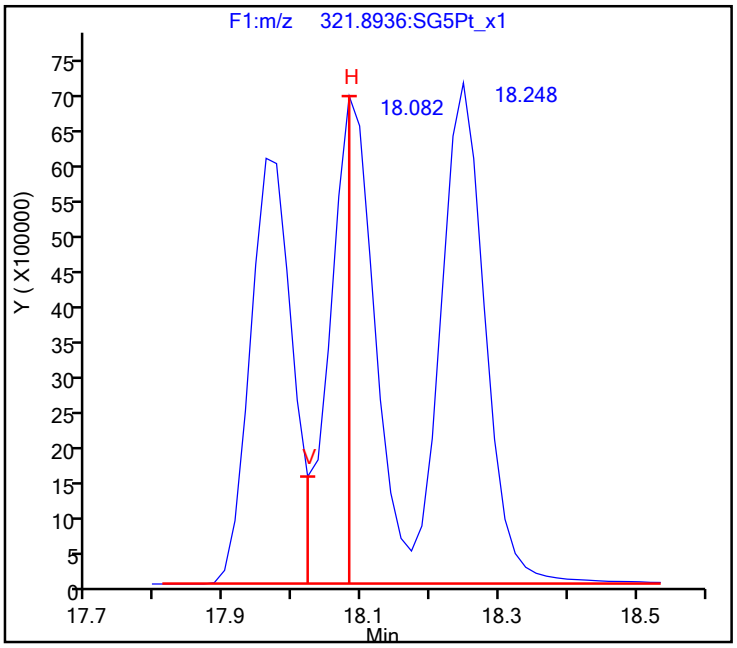

773651

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID (1): WDM 320-516133/2 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/13/2021 14:58

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.95	18

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d				
Injection Date:	13-Aug-2021 14:58:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 2443
H (Peak Height) = 13671

%R = 18 <= 25
Passed

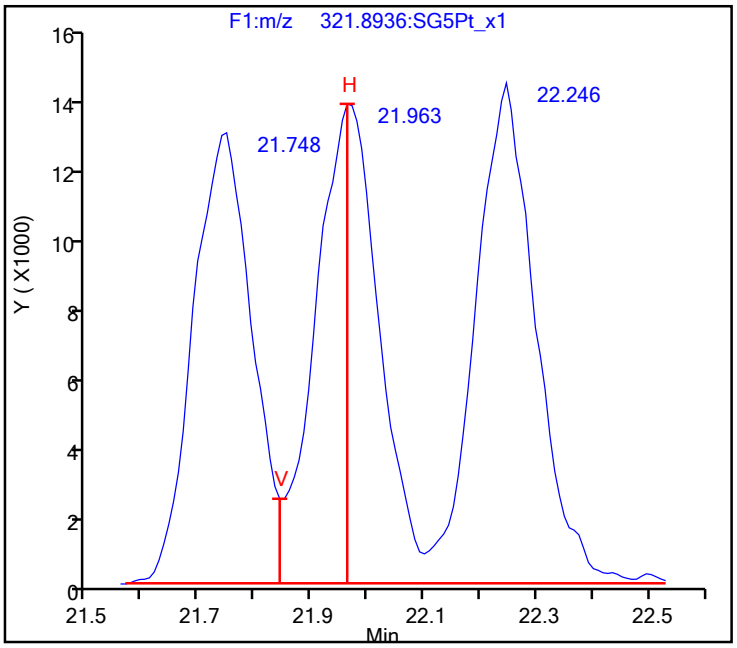

773653

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID (1): WDM 320-516475/15 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/14/2021 01:40

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.92	15

Report Date: 16-Aug-2021 12:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d				
Injection Date:	14-Aug-2021 01:40:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 2213
H (Peak Height) = 14364

%R = 15 <= 25
Passed

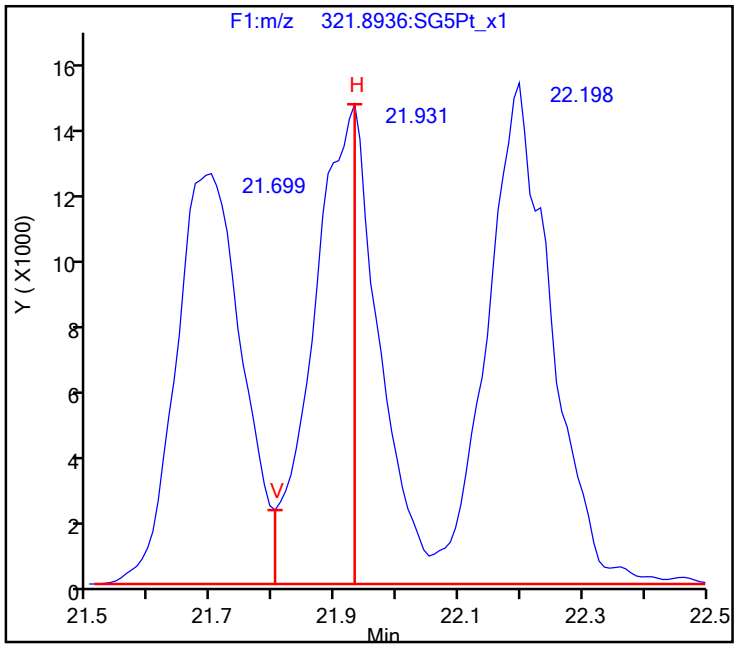

773655

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID (1): CPS 320-518850/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/21/2021 13:54

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	12

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d				
Injection Date:	21-Aug-2021 13:54:29	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 280107
H (Peak Height) = 2376962

%R = 12 <= 25
Passed

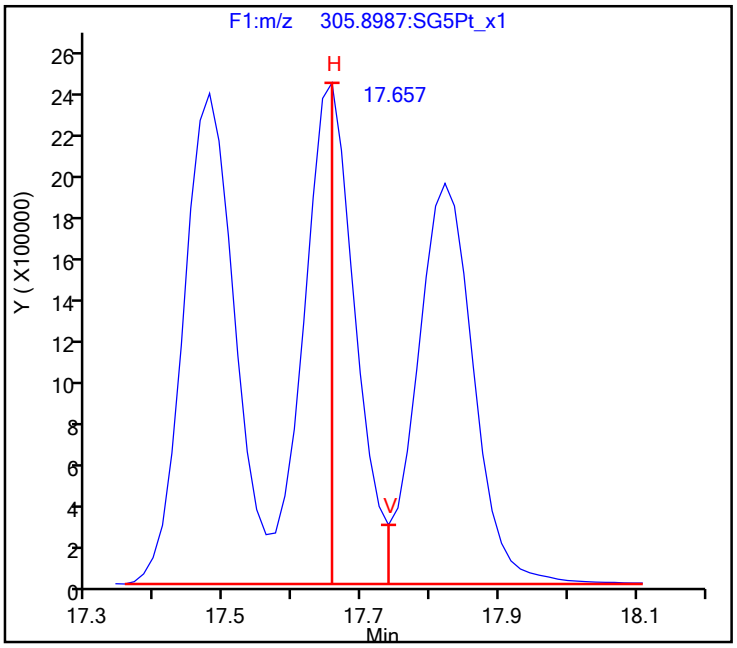

773657

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID: ICV 320-510264/9 Calibration Date: 07/26/2021 15:31

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 26JL2110D5_9.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.105		43.2	40.0	108	70-130
2,3,7,8-TCDD	AveID	1.254	1.380		44.0	40.0	110	70-130
1,2,3,7,8-PeCDF	AveID	1.061	1.081		204	200	102	70-130
2,3,4,7,8-PeCDF	AveID	1.018	1.151		226	200	113	70-130
1,2,3,7,8-PeCDD	AveID	1.048	1.044		199	200	100	70-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.128		208	200	104	70-130
1,2,3,6,7,8-HxCDF	AveID	1.126	1.227		218	200	109	70-130
2,3,4,6,7,8-HxCDF	AveID	1.168	1.283		220	200	110	70-130
1,2,3,4,7,8-HxCDD	AveID	1.064	1.151		216	200	108	70-130
1,2,3,6,7,8-HxCDD	AveID	1.000	1.082		216	200	108	70-130
1,2,3,7,8,9-HxCDD	AveID	1.133	1.182		209	200	104	70-130
1,2,3,7,8,9-HxCDF	AveID	1.166	1.200		206	200	103	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.576		219	200	109	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.167		213	200	107	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.373		209	200	104	70-130
OCDD	AveID	1.107	1.211		438	400	109	70-130
OCDF	AveID	1.438	1.574		438	400	109	70-130
13C-2,3,7,8-TCDF	Ave	1.625	1.611		99.2	100	99	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9123		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.236		102	100	102	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.300		105	100	105	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7764		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.089		101	100	101	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.093		96.9	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.036		97.4	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7216		98.4	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8697		98.8	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9447		97.6	100	98	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7492		96.9	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6354		98.2	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7065		101	100	101	77-129
13C-OCDD	Ave	0.4472	0.4464		200	200	100	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.177		42.5	40.0	106	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	55225241	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.598	88976883	0.79	1.6249	99.2	99.2	0.1479	0.1479	99.15	
2,3,7,8-TCDF	17.613	39324874	0.78	1.0239	43.2	43.2	0.0666	0.0666	108	
A Non-2,3,7,8-sub-TCDF	17.311	524958	0.77	1.0239	0.6411	0.5762	0.0666	0.3057		RQ
S Total TCDF					43.8	43.7	0.0666	0.0666		RQ
D 13C-2,3,7,8-TCDD	18.323	50383801	0.80	0.8993	101.4	101.4	0.1314	0.1314	101	
2,3,7,8-TCDD	18.338	27801852	0.78	1.2541	44.0	44.0	0.0443	0.0443	110	
$ 37Cl4-2,3,7,8-TCDD	18.338	26006351		1.1071	42.5	42.5	0.0388	0.0388	106	
A Non-2,3,7,8-sub-TCDD	17.772	551726	0.77	1.2541	0.8732	0.8732	0.0443	0.8732		
S Total TCDD					44.9	44.9	0.0443	0.0443		
D 13C-1,2,3,7,8-PeCDF	22.749	68252478	1.57	1.2101	102.1	102.1	0.2097	0.2097	102	
1,2,3,7,8-PeCDF	22.762	147560573	1.57	1.0611	203.7	203.7	0.7454	0.7454	102	
D 13C-2,3,4,7,8-PeCDF	24.126	71797373	1.60	1.2395	104.9	104.9	0.2047	0.2047	105	
2,3,4,7,8-PeCDF	24.153	165293469	1.59	1.0184	226.1	226.1	0.7930	0.7930	113	
A F1 PeCDFs	20.244						0.0162	0.0162		
A Non-2,3,7,8-sub-PeCDF	23.473	3443801	1.55	1.0398	4.730	4.730	0.7686	4.730		
S Total PeCDF					434.5	434.5	0.7692	0.7692		
D 13C-1,2,3,7,8-PeCDD	24.862	42878117	1.62	0.7612	102.0	102.0	0.1090	0.1090	102	
1,2,3,7,8-PeCDD	24.889	89555111	1.58	1.0484	199.2	199.2	0.2271	0.2271	99.61	
A Non-2,3,7,8-sub-PeCDD	23.744						0.2271	0.2271		
S Total PeCDD					199.2	199.2	0.2271	0.2271		
D 13C-1,2,3,4,7,8-HxCDF	30.836	62488487	0.52	1.0837	100.5	100.5	0.4386	0.4386	101	
1,2,3,4,7,8-HxCDF	30.849	141029922	1.22	1.0851	208.0	208.0	1.073	1.073	104	
D 13C-1,2,3,6,7,8-HxCDF	30.995	62719524	0.52	1.1279	96.9	96.9	0.4214	0.4214	96.91	
1,2,3,6,7,8-HxCDF	31.008	153925065	1.22	1.1260	218.0	218.0	1.035	1.035	109	
D 13C-2,3,4,6,7,8-HxCDF	31.754	59440166	0.52	1.0637	97.4	97.4	0.4468	0.4468	97.39	
2,3,4,6,7,8-HxCDF	31.767	152499923	1.22	1.1675	219.7	219.7	0.8510	0.8510	110	
D 13C-1,2,3,7,8,9-HxCDF	32.513	54205090	0.51	0.9676	97.6	97.6	0.4912	0.4912	97.64	
1,2,3,7,8,9-HxCDF	32.526	130040433	1.23	1.1664	205.7	205.7	0.8755	0.8755	103	

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
A Non-2,3,7,8-sub-HxCDF	30.542						0.9509	0.9509		
S Total HxCDF					851.4	851.4	0.9587	0.9587		
* 13C-1,2,3,7,8,9-HxCDD	32.340	57376962	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	41405543	1.26	0.7334	98.4	98.4	0.3599	0.3599	98.39	
1,2,3,4,7,8-HxCDD	31.940	95311816	1.31	1.0640	216.3	216.3	0.7396	0.7396	108	
D 13C-1,2,3,6,7,8-HxCDD	32.020	49899921	1.25	0.8802	98.8	98.8	0.2999	0.2999	98.81	
1,2,3,6,7,8-HxCDD	32.034	107959577	1.21	1.0001	216.3	216.3	0.7456	0.7456	108	
1,2,3,7,8,9-HxCDD	32.340	107964188	1.26	1.1325	208.8	208.8	0.6762	0.6762	104	
A Non-2,3,7,8-sub-HxCDD	31.215						0.7187	0.7187		
S Total HxCDD					641.5	641.5	0.7205	0.7205		
1,2,3,4,6,7,8-HpCDF	33.912	135529943	1.05	1.4413	218.8	218.8	2.088	2.088	109	
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	42985413	0.44	0.7730	96.9	96.9	0.9749	0.9749	96.91	
D 13C-1,2,3,4,7,8,9-HpCDF	35.006	40537577	0.44	0.7008	100.8	100.8	1.075	1.075	101	
1,2,3,4,7,8,9-HpCDF	35.018	111348980	1.06	1.3174	208.5	208.5	2.580	2.580	104	
A Non-2,3,7,8-sub-HpCDF	34.458						2.314	2.314		
S Total HpCDF					427.3	427.3	2.334	2.334		
D 13C-1,2,3,4,6,7,8-HpCDD	34.702	36455330	1.02	0.6472	98.2	98.2	0.5132	0.5132	98.17	
1,2,3,4,6,7,8-HpCDD	34.714	85115851	1.05	1.0943	213.4	213.4	1.044	1.044	107	
A Non-2,3,7,8-sub-HpCDD	33.504						1.044	1.044		
S Total HpCDD					213.4	213.4	1.044	1.044		
D 13C-OCDD	37.082	51228940	0.89	0.4472	199.7	199.7	0.2232	0.2232	99.84	
OCDF	37.189	161294219	0.91	1.4382	437.9	437.9	0.4409	0.4409	109	
OCDD	37.094	124067491	0.90	1.1070	437.5	437.5	0.5859	0.5859	109	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.127	18.142	-1		24811260	6334063	3297	8242	1921		
333.9339	18.127	18.142	-1		30413981	7612051	3296	8240	2309	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	0.971	39276583	9941961	7868	19670	1264		
317.9389	17.598	17.598	0	0.971	49700300	12596795	5536	13840	2275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.613	17.628	-1	1.001	17265923	4373947	2358	5895	1855		
305.8987	17.613	17.628	-1	1.001	22058951	5573170	3788	9470	1471	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.933	17.311	-23	0.962	161517	37808	2358	5895	16		
	Empc Correction				121157	34090	2358	5895	14		
305.8987	16.933	17.311	-23	0.962	157347	44274	3788	9470	12	1.03(0.65-0.89)	
303.9016	17.235	17.311	-5	0.979	125955	28258	2358	5895	12		
	Empc Correction				107214	28155	2358	5895	12		
305.8987	17.220	17.311	-5	0.979	139240	36566	3788	9470	10	0.90(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.011	22418240	5434734	3297	8242	1648		
333.9339	18.323	18.323	0	1.011	27965561	6697610	3296	8240	2032	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.338	0	1.001	12170563	2933733	1303	3257	2252		
321.8936	18.338	18.338	0	1.001	15631289	3775919	1394	3485	2709	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.012	26006351	6295077	2398	5995	2625		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											
319.8965	18.233	17.772	28	0.995	239239	60004	1303	3257	46		
321.8936	18.233	17.772	28	0.995	312487	80578	1394	3485	58	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.749	0	1.255	41668599	7333690	8485	21212	864		
353.8970	22.749	22.749	0	1.255	26583879	4652625	5670	14175	821	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.762	22.776	-1	1.001	90206138	15696498	23147	57867	678		
341.8567	22.762	22.776	-1	1.001	57354435	10012296	14777	36942	678	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.126	0	1.331	44217600	7271382	8485	21212	857		
353.8970	24.126	24.126	0	1.331	27579773	4468756	5670	14175	788	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.153	0	1.001	101392394	16526277	23147	57867	714		
341.8567	24.153	24.153	0	1.001	63901075	10428415	14777	36942	706	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.244						338	845			
341.8567	20.244						462	1155			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.308	23.473	-10	1.025	2092429	352488	23147	57867	15		
341.8567	23.308	23.473	-10	1.025	1351372	223195	14777	36942	15	1.55(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.862	0	1.372	26514155	4045355	2631	6577	1538		
369.8919	24.862	24.862	0	1.372	16363962	2537743	2000	5000	1269	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.889	0	1.001	54803563	8416527	3860	9650	2180		
357.8516	24.889	24.889	0	1.001	34751548	5423049	2410	6025	2250	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.744						3860	9650			
357.8516	23.744						2410	6025			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.836	30.835	0	0.953	21423741	4602993	10138	25345	454		
385.8610	30.836	30.835	0	0.953	41064746	8805011	18904	47260	466	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.862	-1	1.000	77446041	17056861	34028	85070	501		
375.8178	30.849	30.862	-1	1.000	63583881	14029731	28421	71052	494	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.008	-1	0.958	21527343	4645676	10138	25345	458		
385.8610	30.995	31.008	-1	0.958	41192181	8744916	18904	47260	463	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.008	31.021	-1	1.000	84458486	18178004	34028	85070	534		
375.8178	31.008	31.021	-1	1.000	69466579	15063201	28421	71052	530	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.754	0	0.982	20418672	5425134	10138	25345	535		
385.8610	31.754	31.754	0	0.982	39021494	10287607	18904	47260	544	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.767	0	1.000	83657687	22340712	34028	85070	657		
375.8178	31.767	31.767	0	1.000	68842236	18269489	28421	71052	643	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.513	32.526	-1	1.005	18351639	5227320	10138	25345	516		
385.8610	32.513	32.526	-1	1.005	35853451	10061715	18904	47260	532	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.539	-1	1.000	71665418	20282625	34028	85070	596		
375.8178	32.526	32.539	-1	1.000	58375015	16239209	28421	71052	571	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.542						34028	85070			
375.8178	30.542						28421	71052			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.340	32.339	0		32156760	8544429	8352	20880	1023		
403.8529	32.326	32.339	-1		25220202	6731682	7778	19445	865	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.927	0	0.987	23052563	6987052	8352	20880	837		
403.8529	31.927	31.927	0	0.987	18352980	5468630	7778	19445	703	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.940	0	1.000	54057818	15589077	22398	55995	696		
391.8127	31.940	31.940	0	1.000	41253998	12285721	16811	42027	731	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.020	32.033	-1	0.990	27736555	7273068	8352	20880	871		
403.8529	32.020	32.033	-1	0.990	22163366	5871752	7778	19445	755	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.034	32.047	-1	1.000	59116629	16185483	22398	55995	723		
391.8127	32.034	32.047	-1	1.000	48842948	13061351	16811	42027	777	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.340	32.353	-1	1.013	60106510	15800454	22398	55995	705		
391.8127	32.340	32.353	-1	1.013	47857678	12979231	16811	42027	772	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	31.215						22398	55995			
391.8127	31.215						16811	42027			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.912	33.911	0	1.000	69518297	21985720	82461	206152	267		
409.7789	33.912	33.911	0	1.000	66011646	21358881	78734	196835	271	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.912	0	1.049	13138473	4149229	14216	35540	292		
419.8220	33.900	33.912	-1	1.048	29846940	9243997	31835	79587	290	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.006	35.005	0	1.082	12375038	3705586	14216	35540	261		
419.8220	35.006	35.005	0	1.082	28162539	8151296	31835	79587	256	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.018	35.005	1	1.000	57298984	16523888	82461	206152	200		
409.7789	35.006	35.005	0	1.000	54049996	15559126	78734	196835	198	1.06(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						82461	206152			
409.7789	34.458						78734	196835			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.702	34.714	-1	1.073	18400619	5331850	10315	25787	517		
437.8140	34.702	34.714	-1	1.073	18054711	5313047	9982	24955	532	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.714	0	1.000	43603241	12970820	24860	62150	522		
425.7737	34.714	34.714	0	1.000	41512610	12528364	23796	59490	526	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						24860	62150			
425.7737	33.504						23796	59490			
13C-OCDD											
469.7779	37.082	37.093	-1	1.147	24118371	6015882	2552	6380	2357		
471.7750	37.082	37.093	-1	1.147	27110569	6692443	3547	8867	1887	0.89(0.76-1.02)	
OCDF											
441.7428	37.189	37.201	-1	1.003	76746145	20468133	7616	19040	2688		
443.7399	37.189	37.201	-1	1.003	84548074	22394214	8501	21252	2634	0.91(0.76-1.02)	
OCDD											
457.7377	37.094	37.105	-1	1.000	58682484	14688537	7599	18997	1933		
459.7348	37.094	37.105	-1	1.000	65385007	16510536	8885	22212	1858	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	88976883	22538756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	88976883	22538756

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.933	161517	37808	157347	44274	0.3500	1.03	RQ
16.933	121157	34090	157347	44274	0.3057		Empc Correction
17.235	125955	28258	139240	36566	0.2911	0.90	RnQ
17.235	107214	28155	139240	36566	0.2705		Empc Correction
Signal Totals:							
	228371	62245	296587	80840			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	584059	146906				0.97	RQ
	524958	143085					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6411 = (584059 * 100.000) / (88976883 * 1.024)
Empc Amount: 0.5762 = (524958 * 100.000) / (88976883 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50383801	12132344

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50383801	12132344

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.233	239239	60004	312487	80578	0.8732	0.77	
Signal Totals:							
	239239	60004	312487	80578			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	551726	140582				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8732 = (551726 * 100.000) / (50383801 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68252478	11986315
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71797373	11740138

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70024925	11863226

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
23.308	2092429	352488	1351372	223195	4.73	1.55	
Signal Totals:							
	2092429	352488	1351372	223195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3443801	575683				1.55	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.730 = (3443801 * 100.000) / (70024925 * 1.040)

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

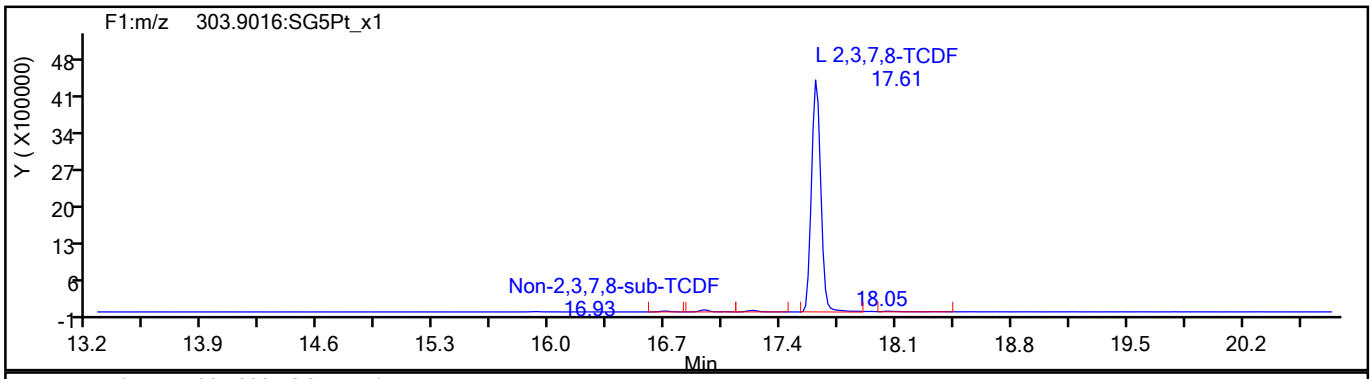

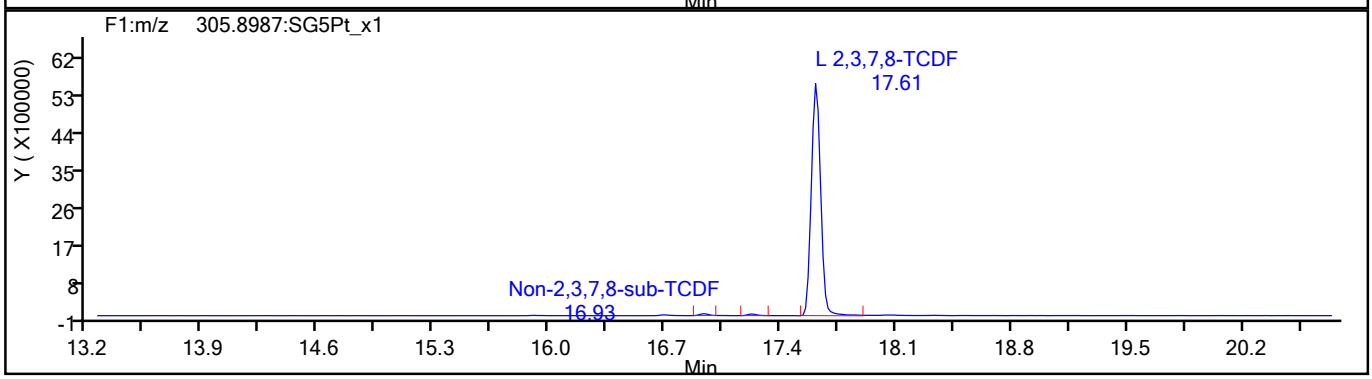

TCDF Standards

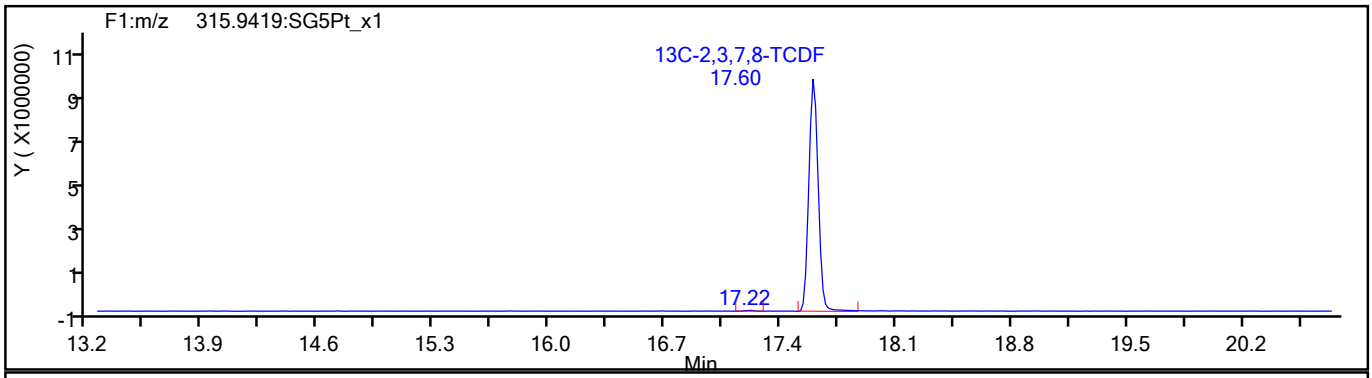

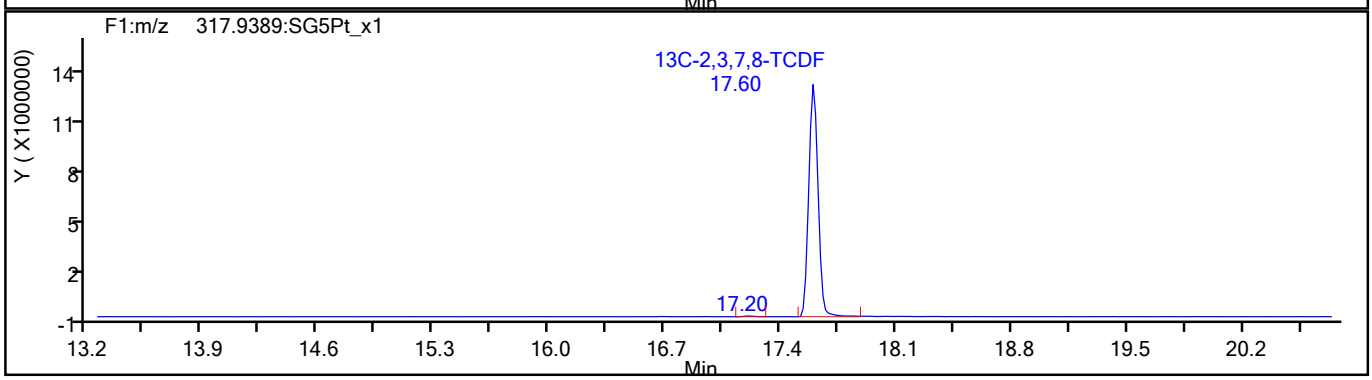

773668

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

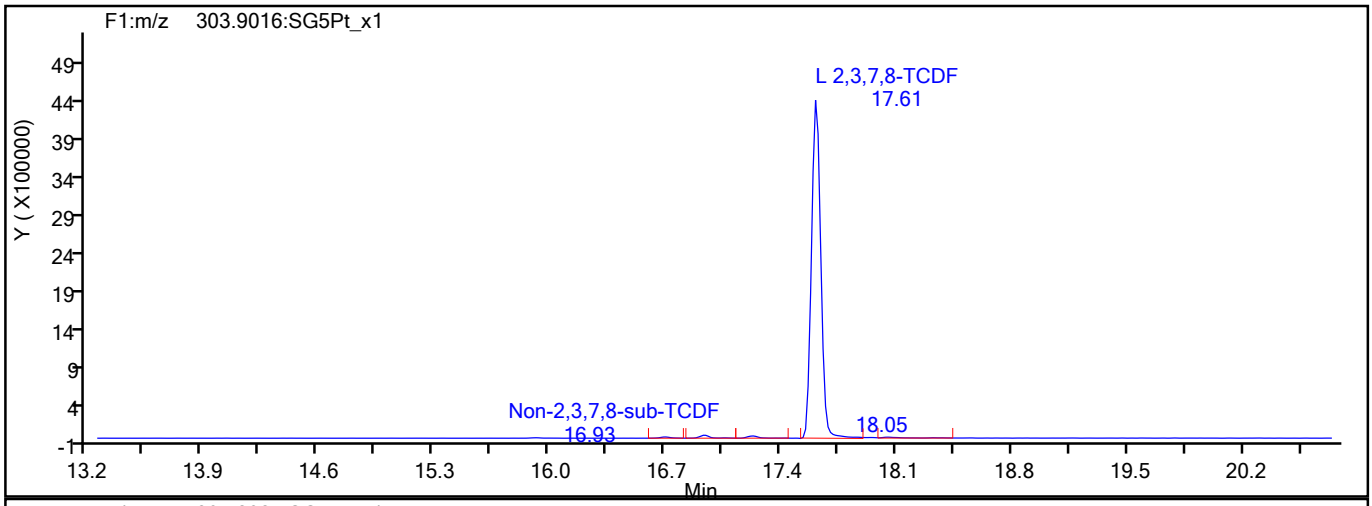

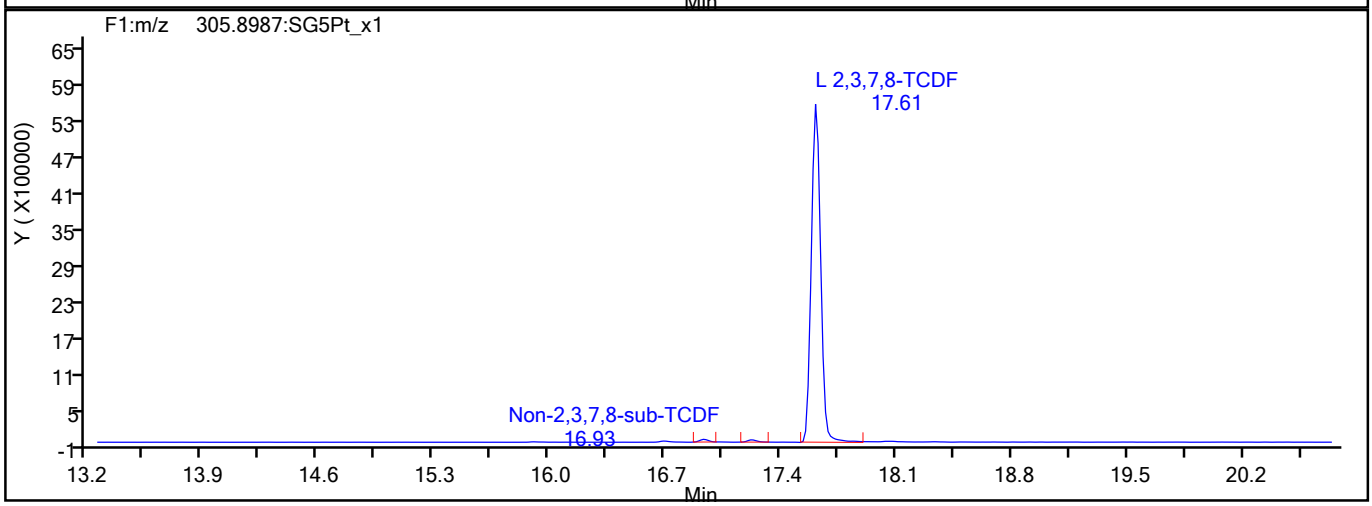

TCDF Interference Mass

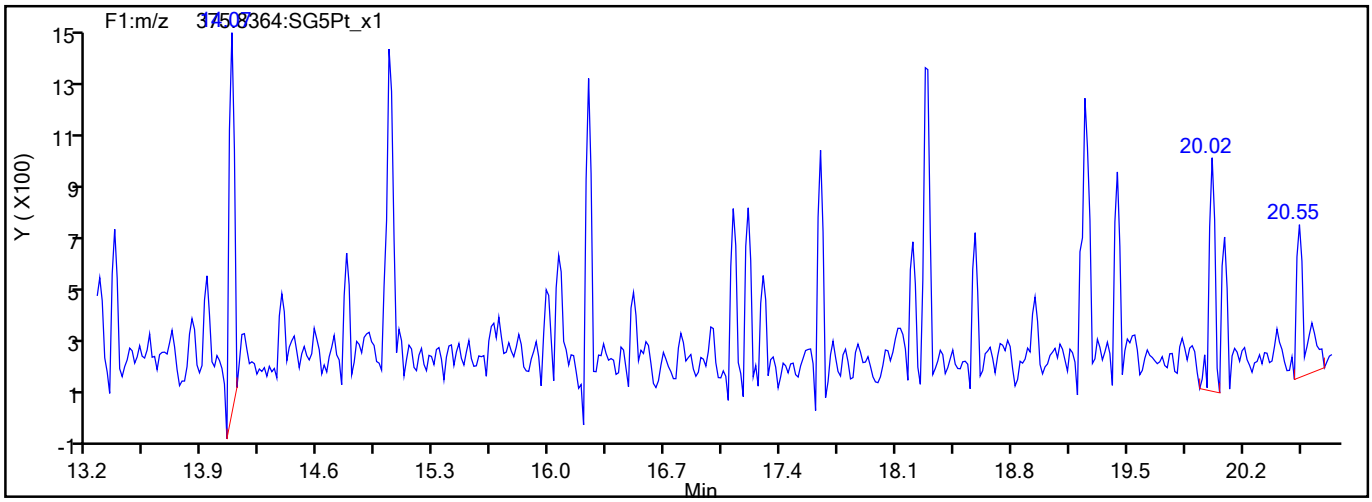

773669

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

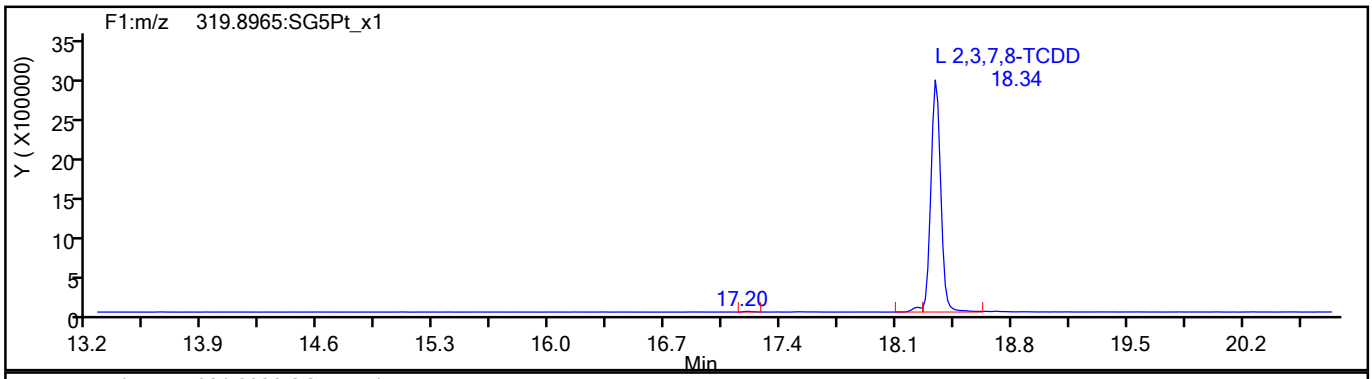

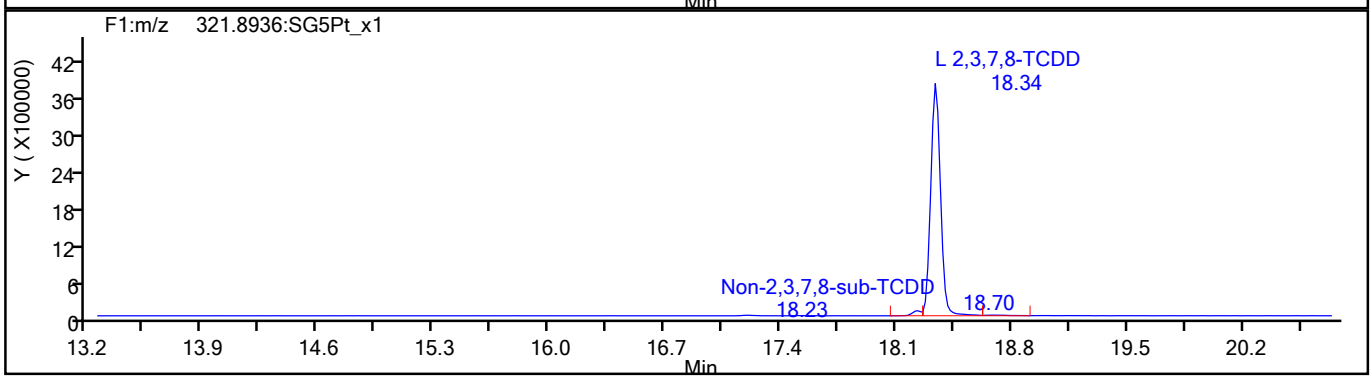

TCDD Standards

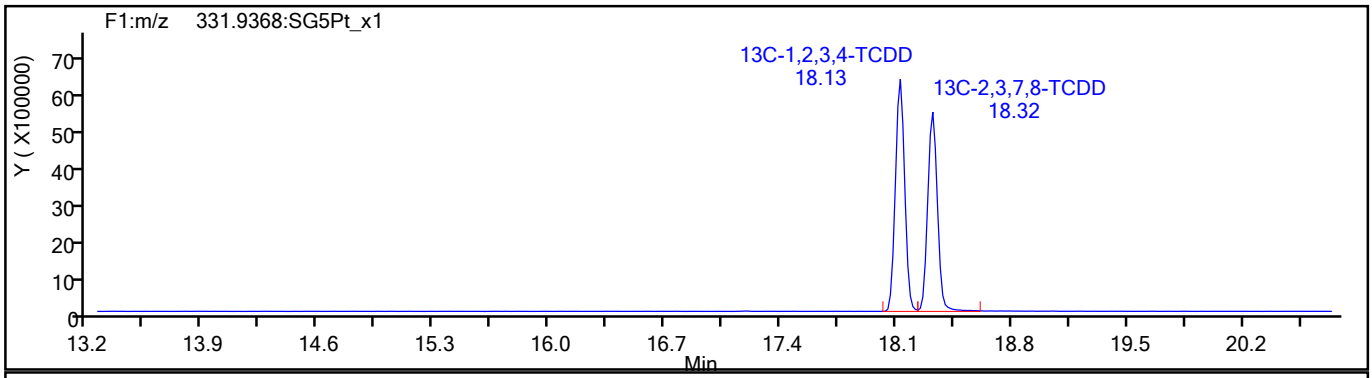

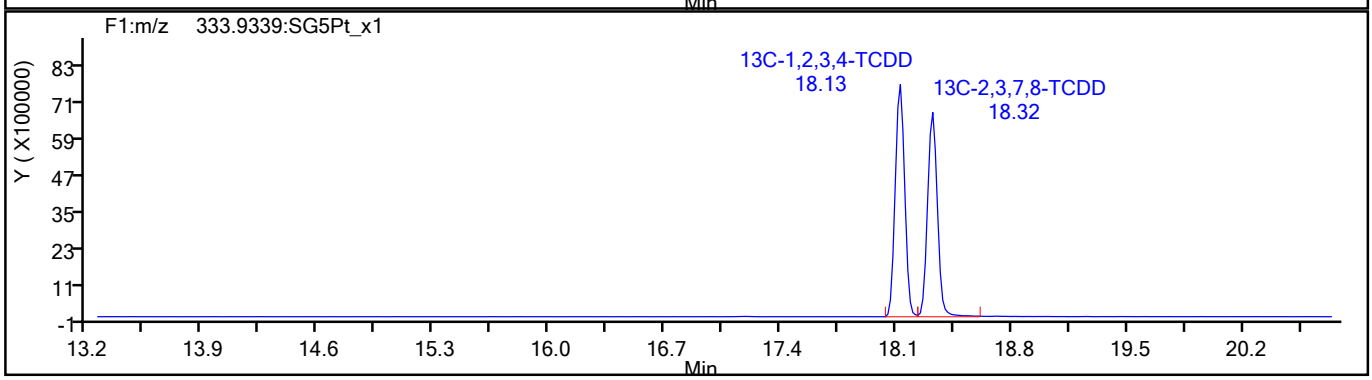

773670

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

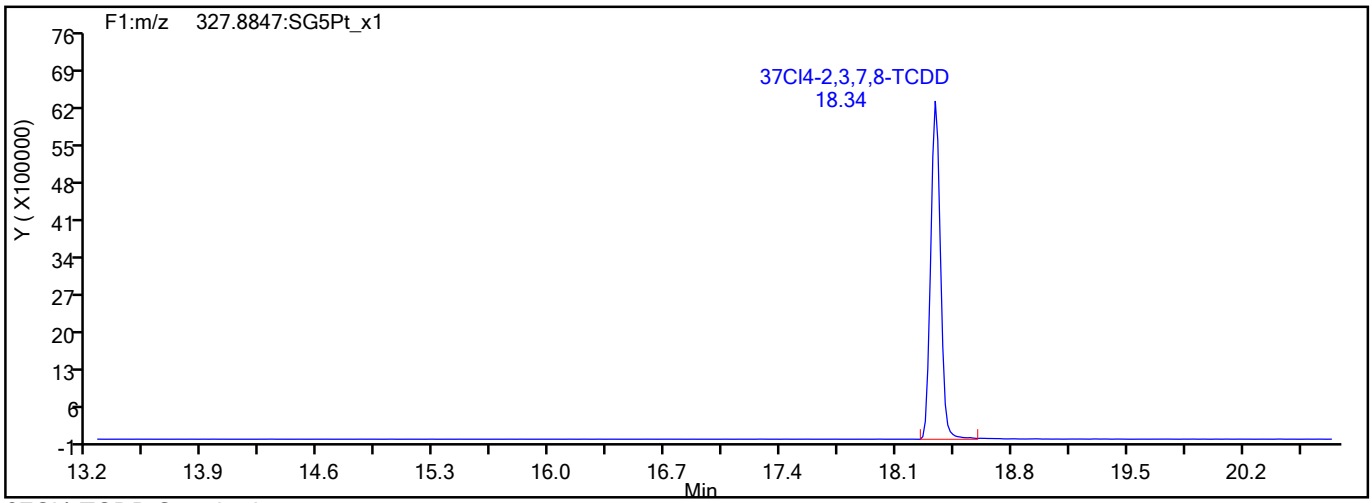

37Cl4-TCDD Standards

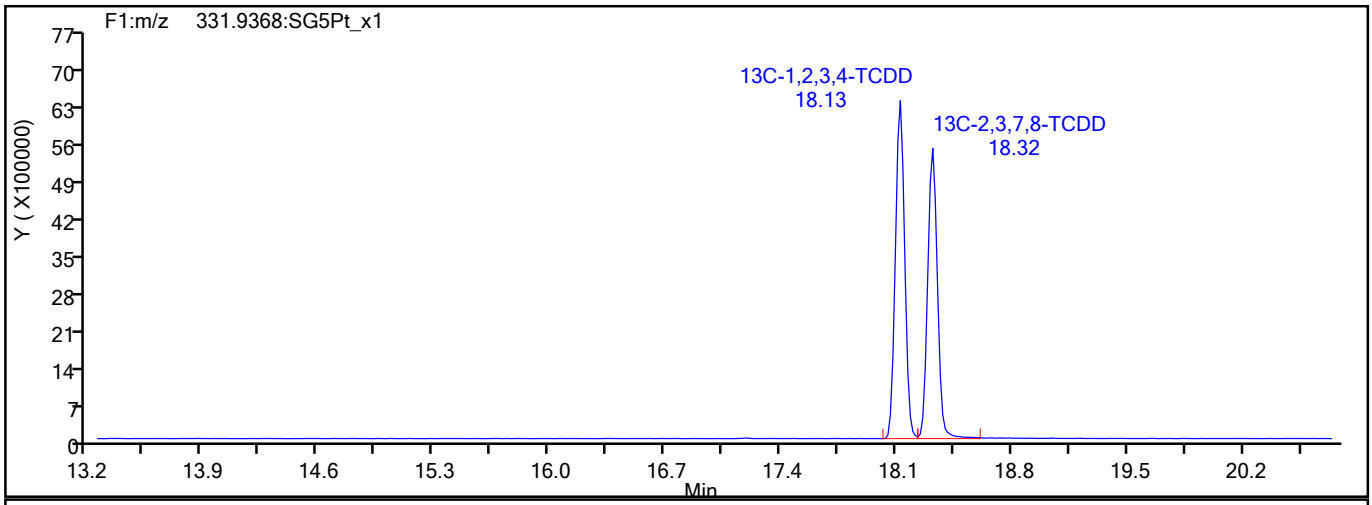

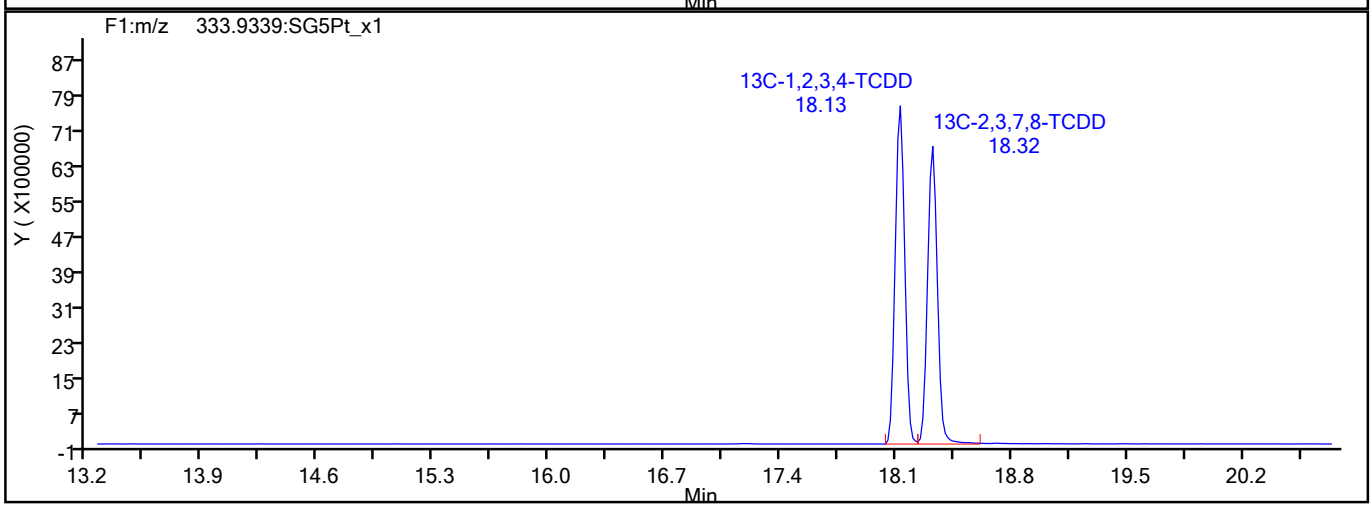

773671

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

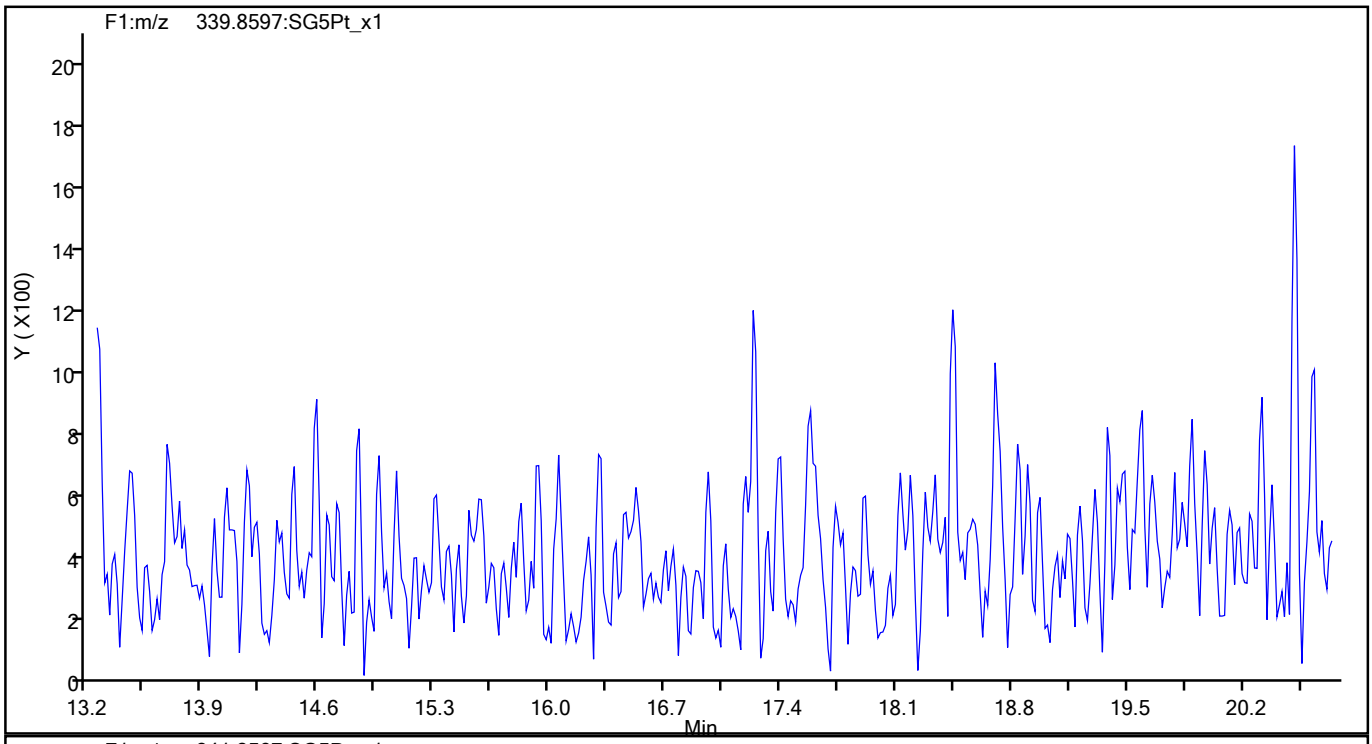

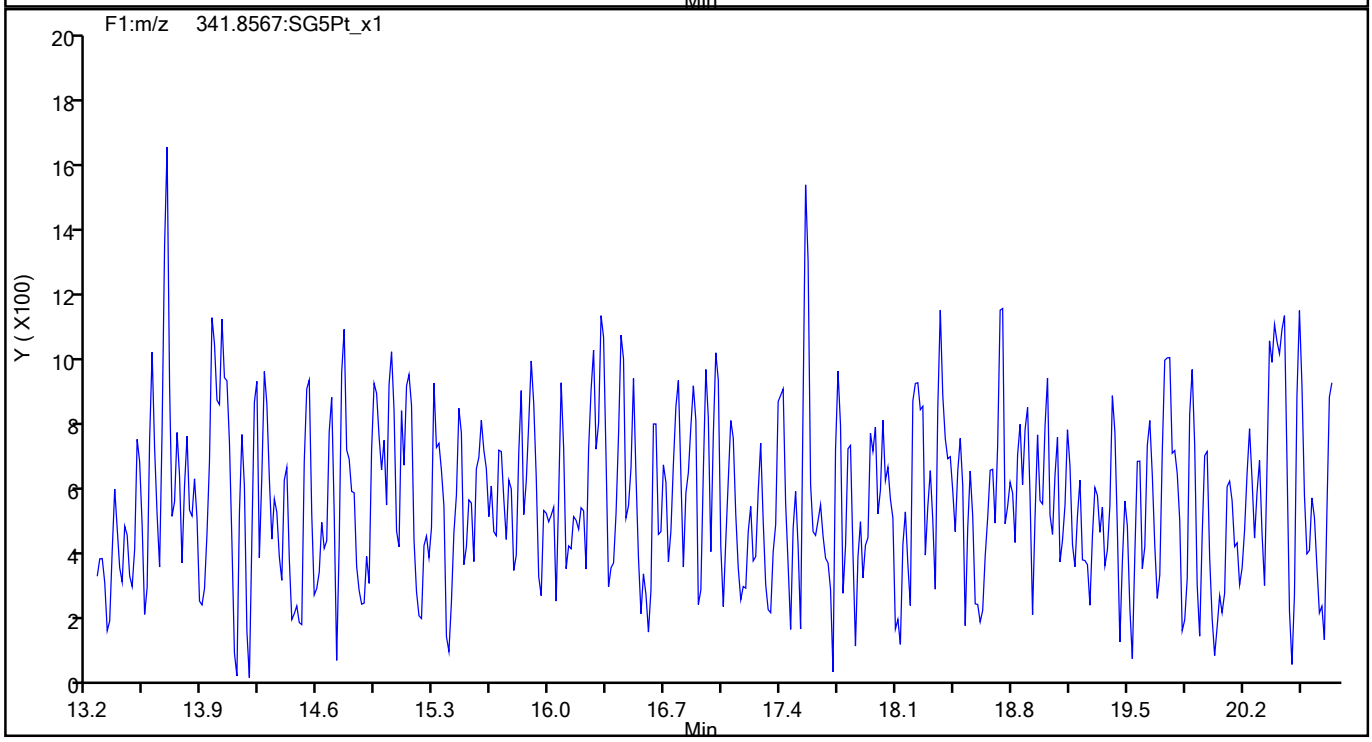

773672

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

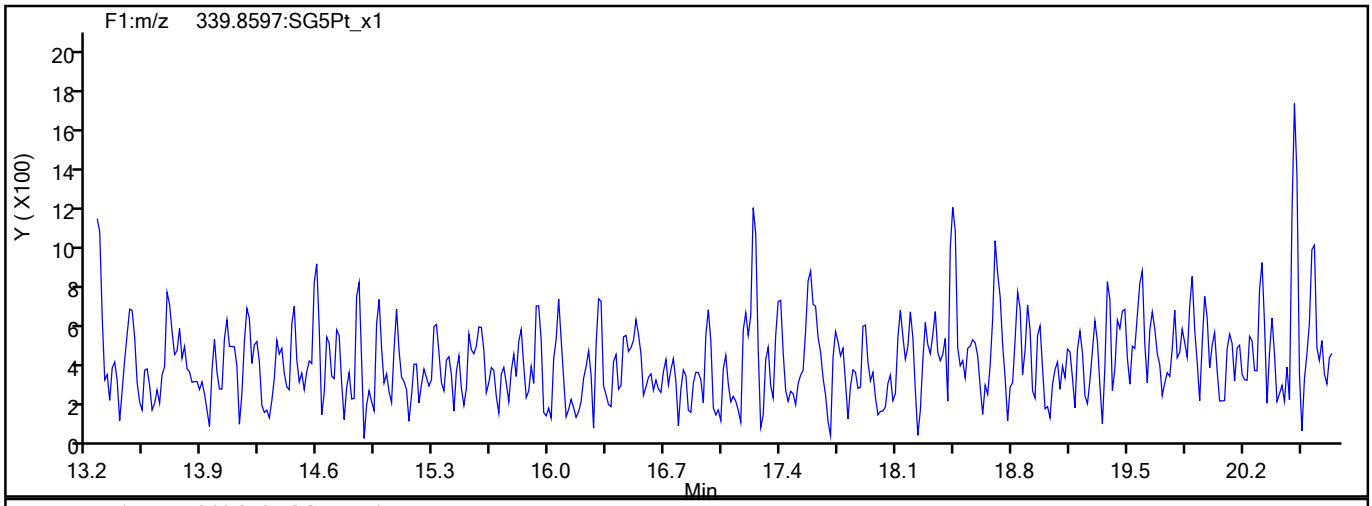

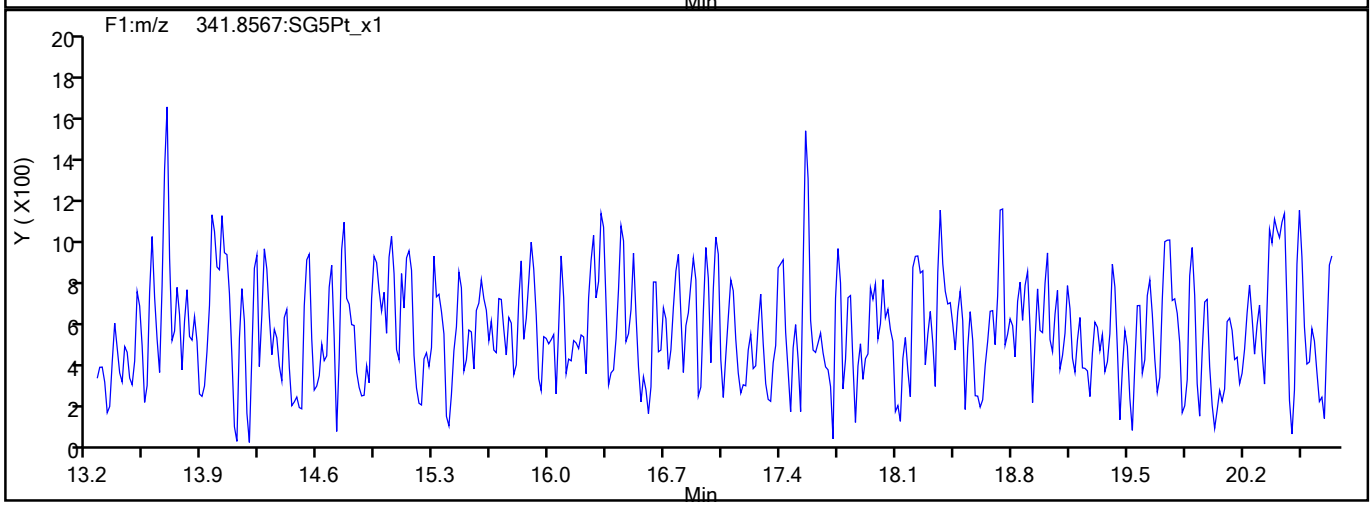

F1 PeCDFs Interference Mass

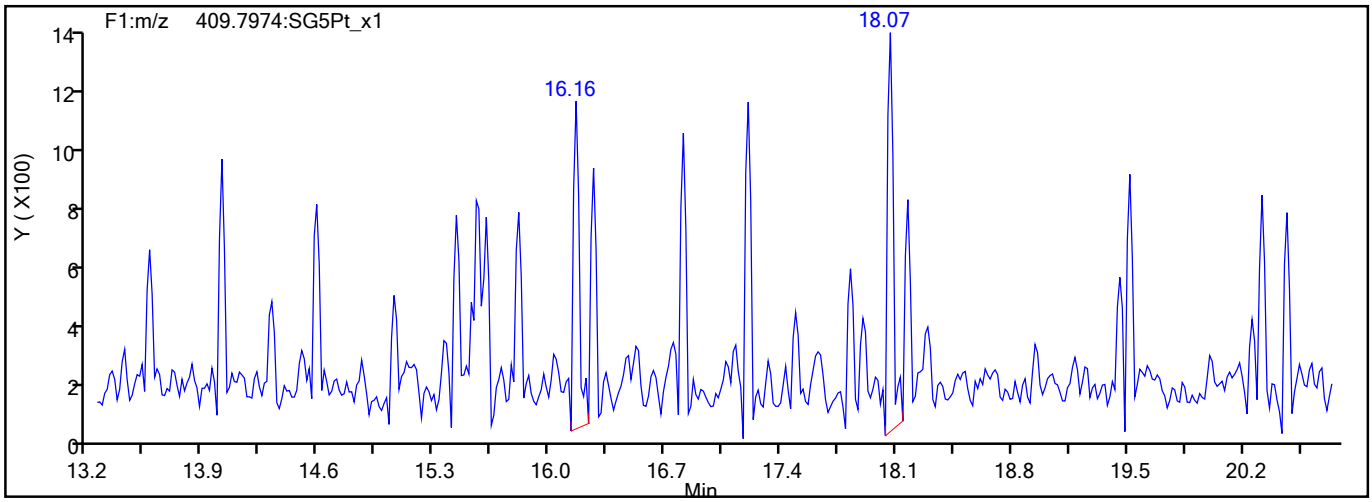

773673

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

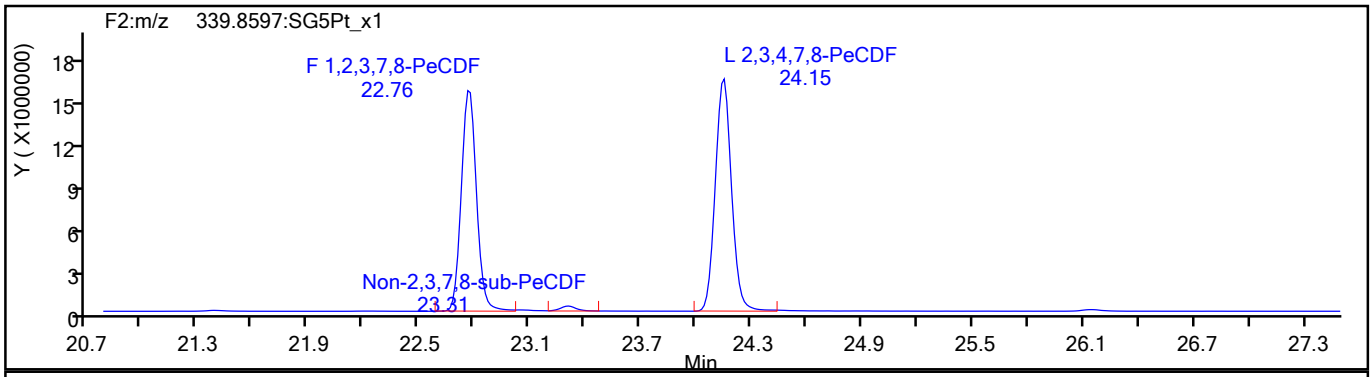

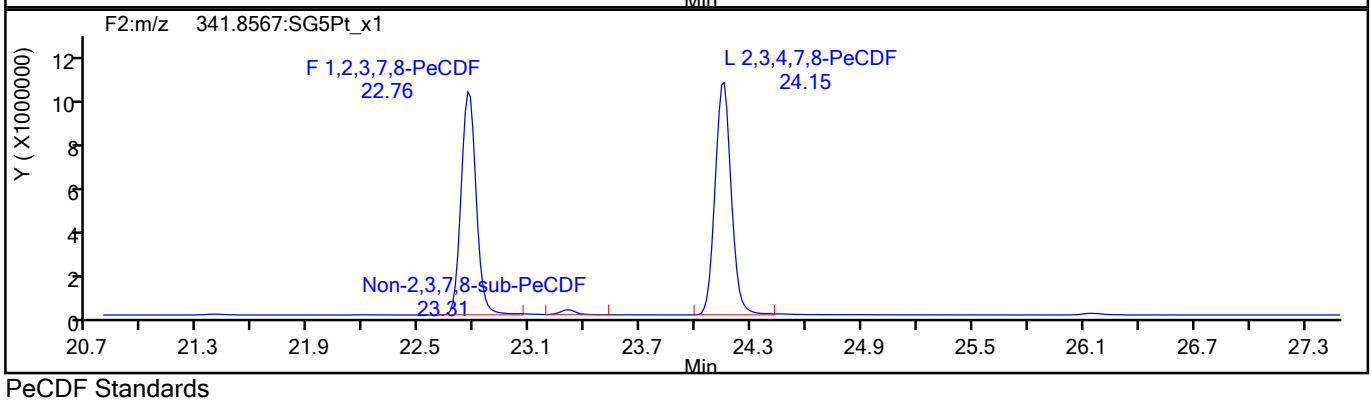

PeCDF Standards

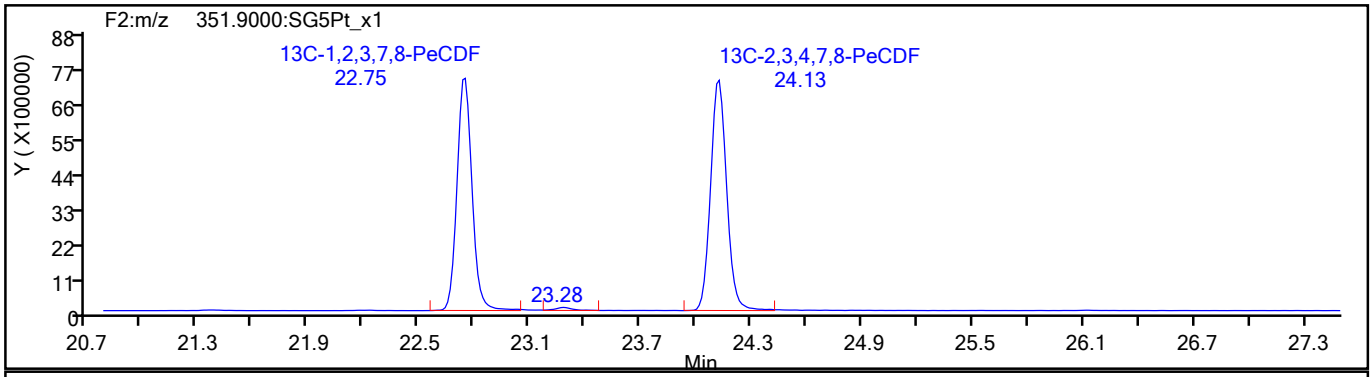

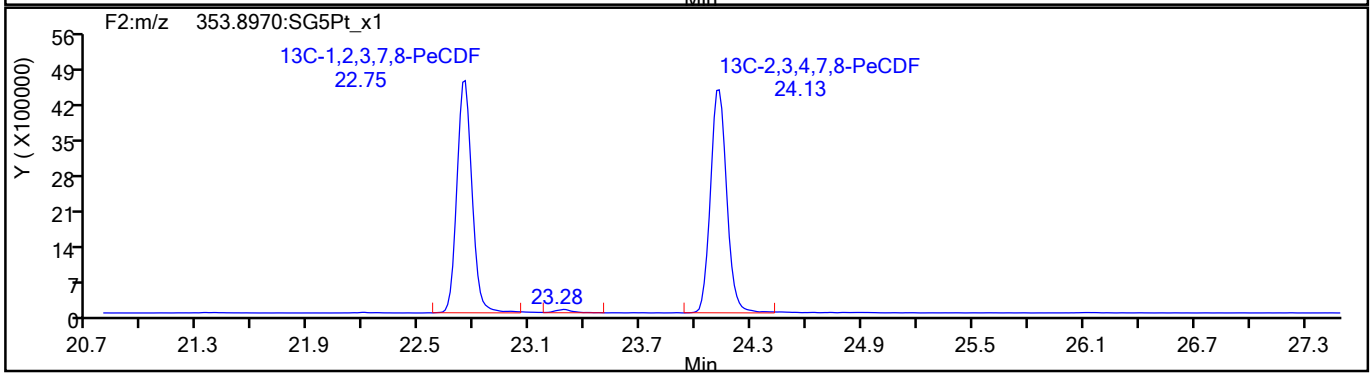

773674

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

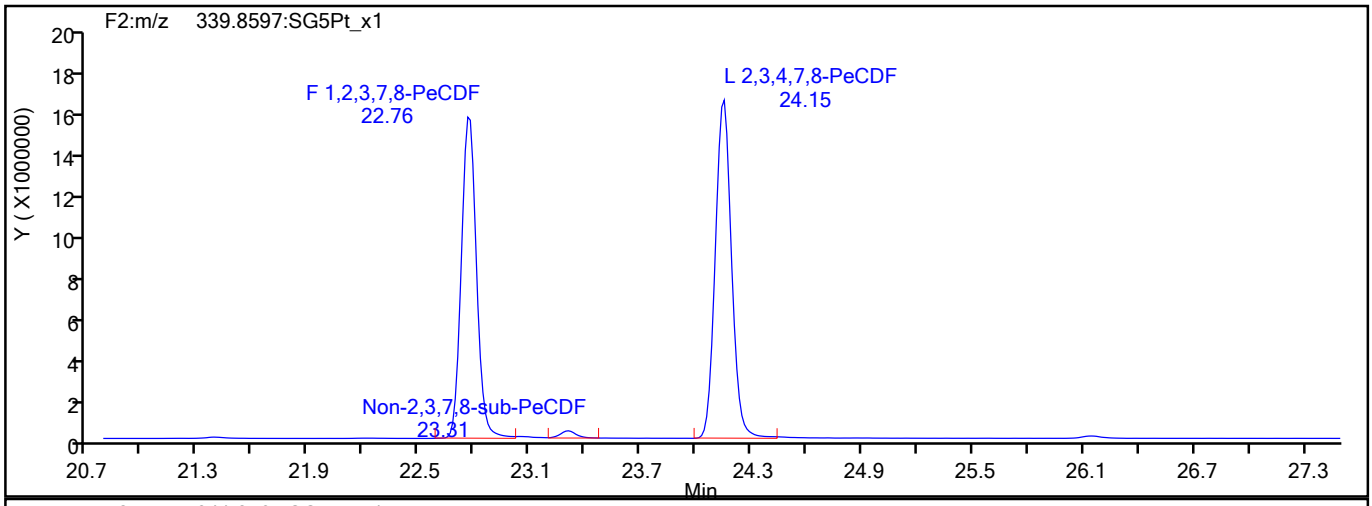

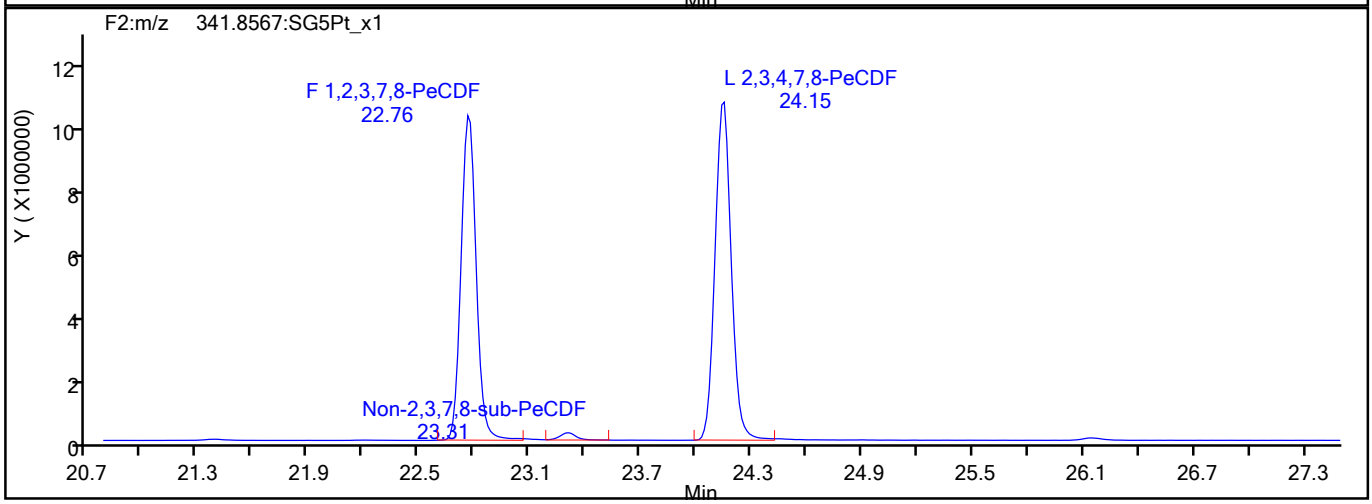

PeCDF Interference Mass

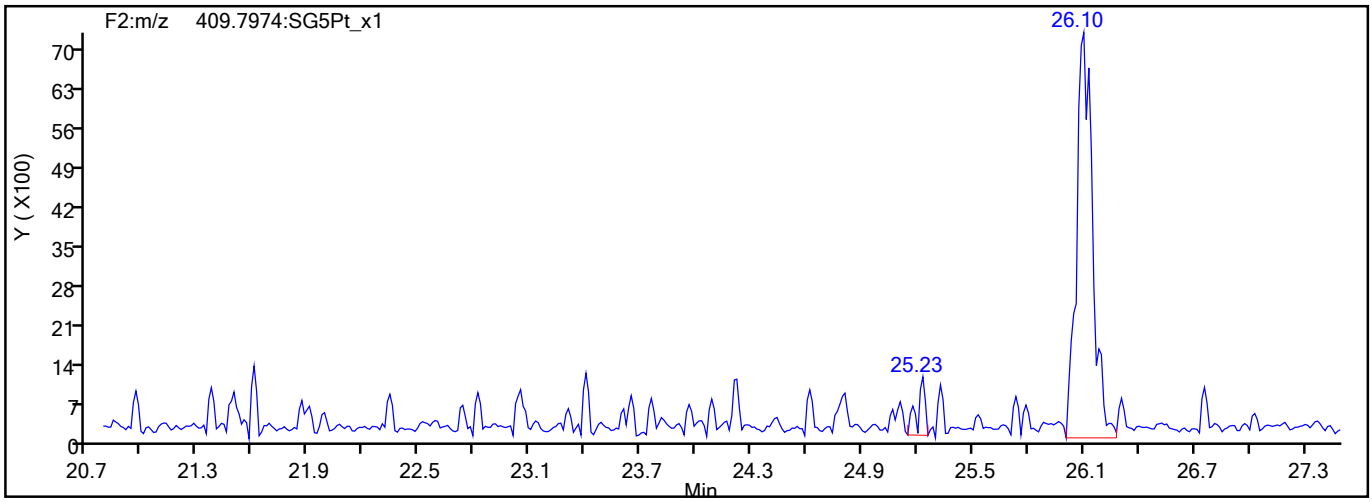

773675

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

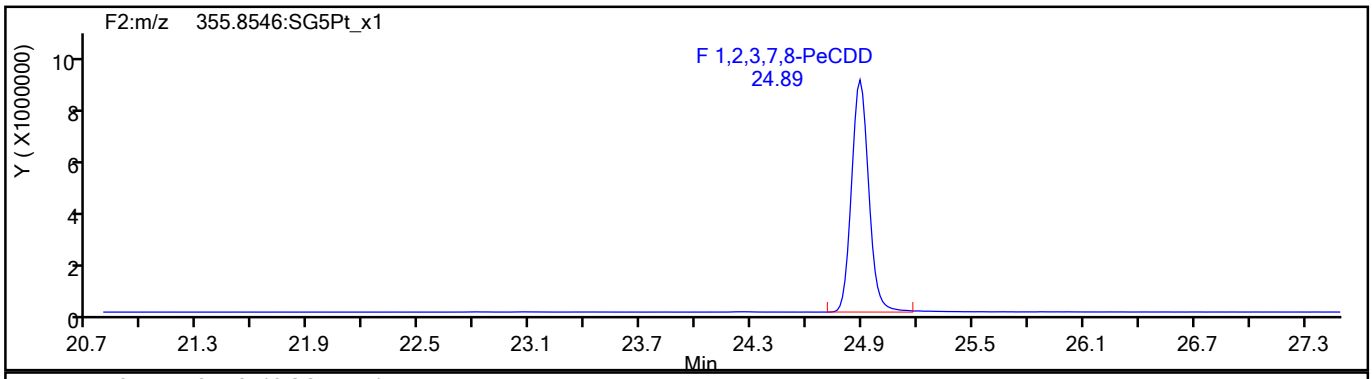

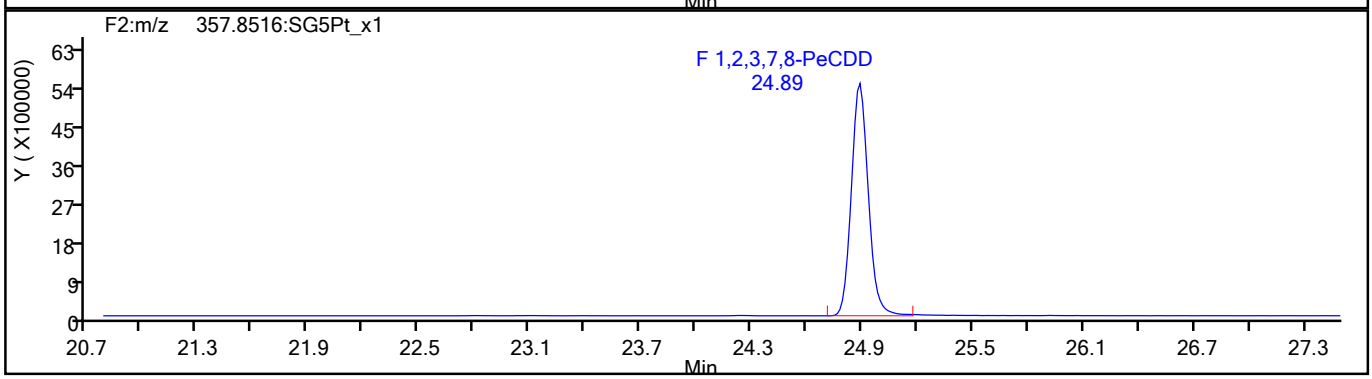

PeCDD Standards

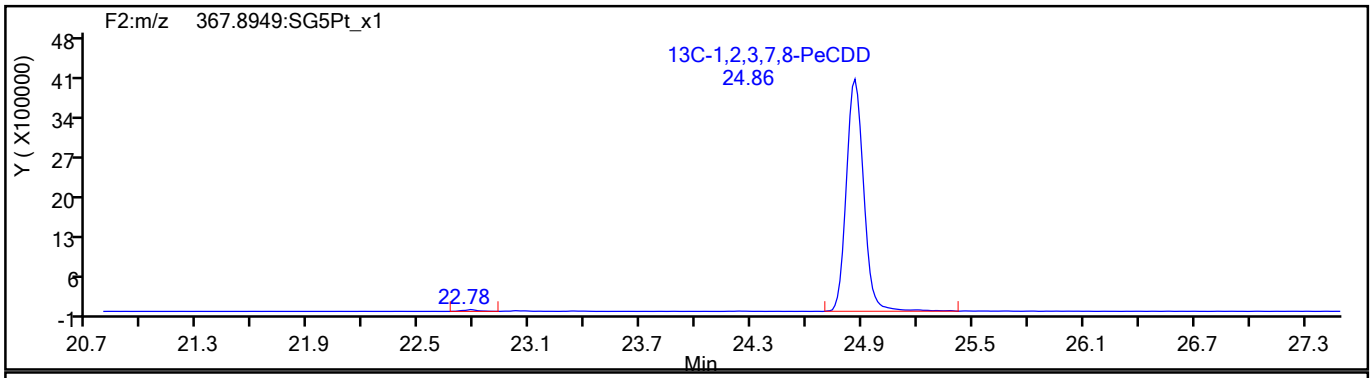

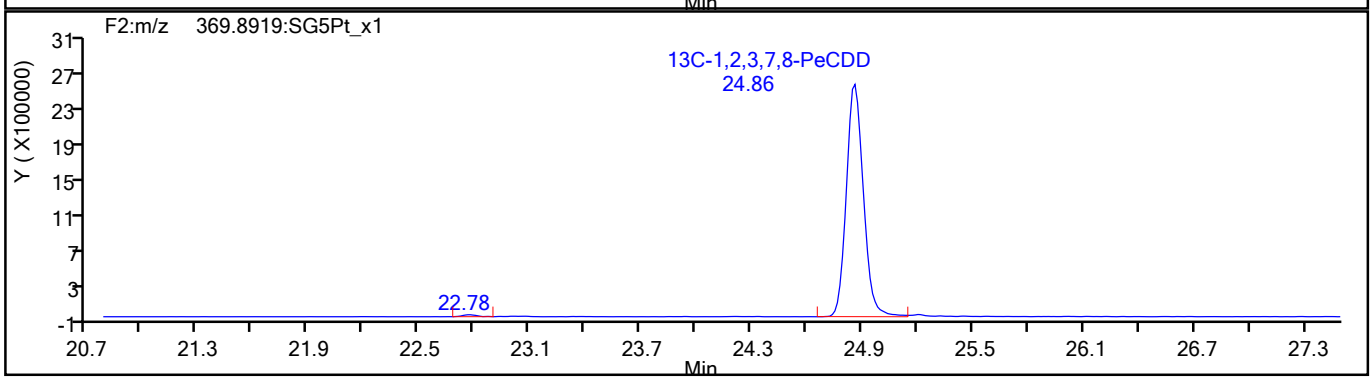

773676

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
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HxCDF

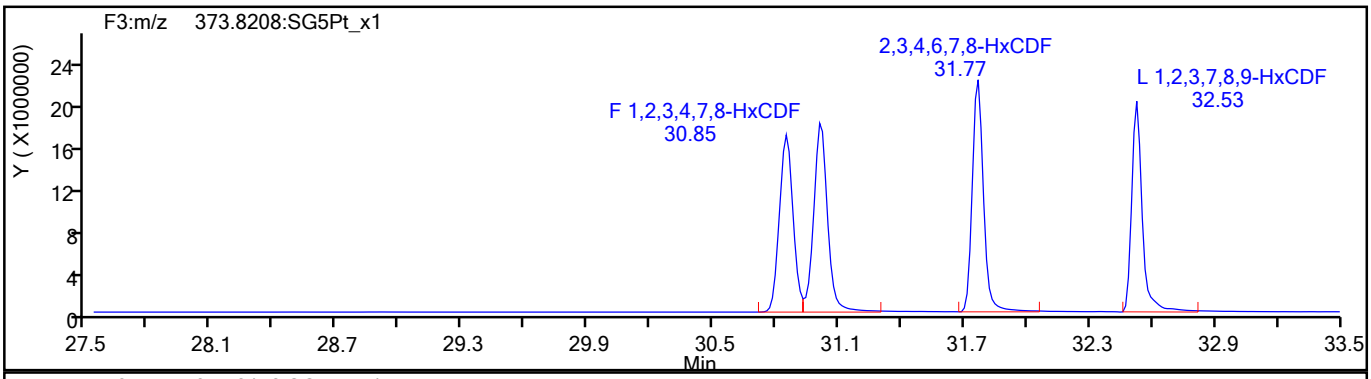

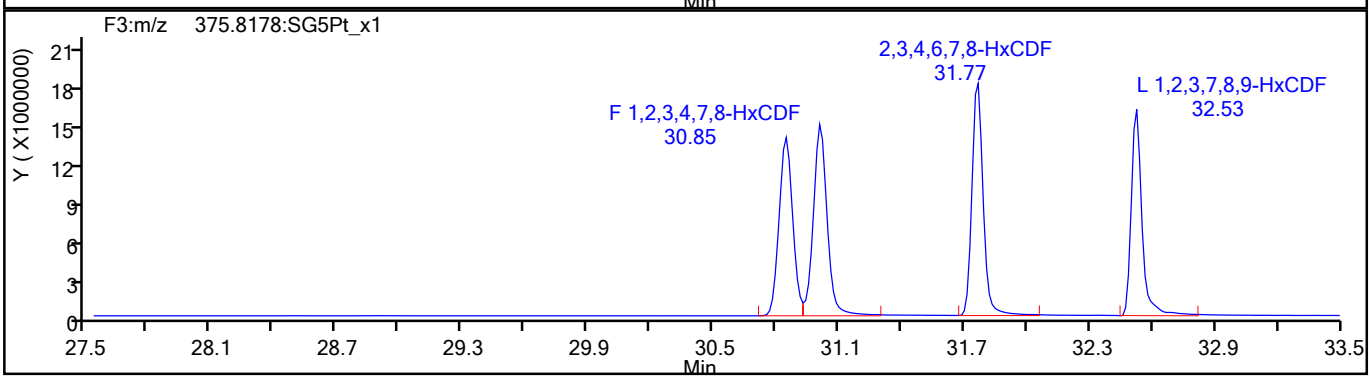

HxCDF Standards

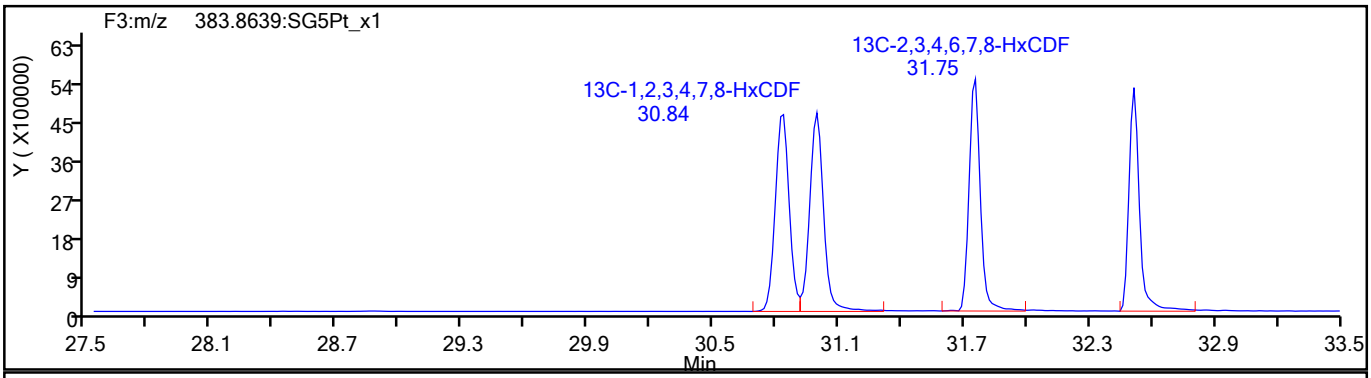

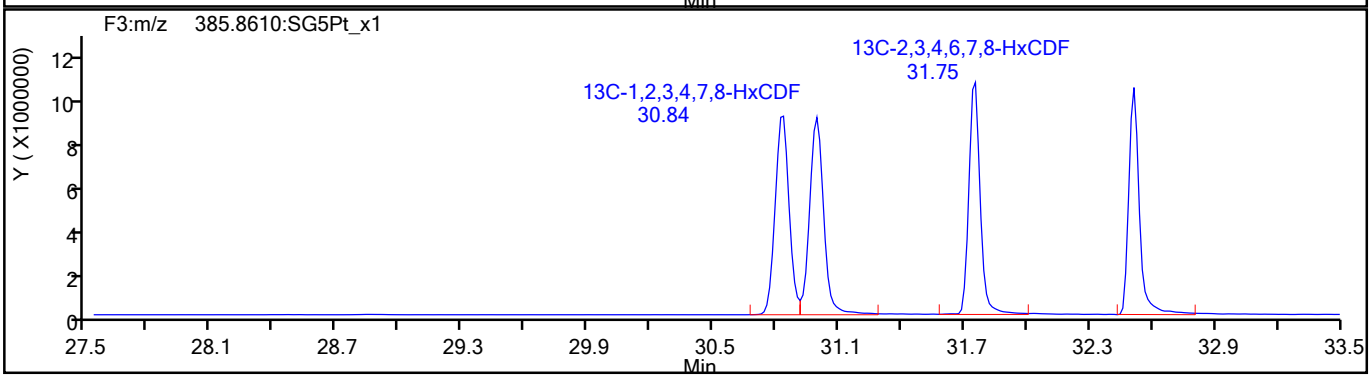

773677

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

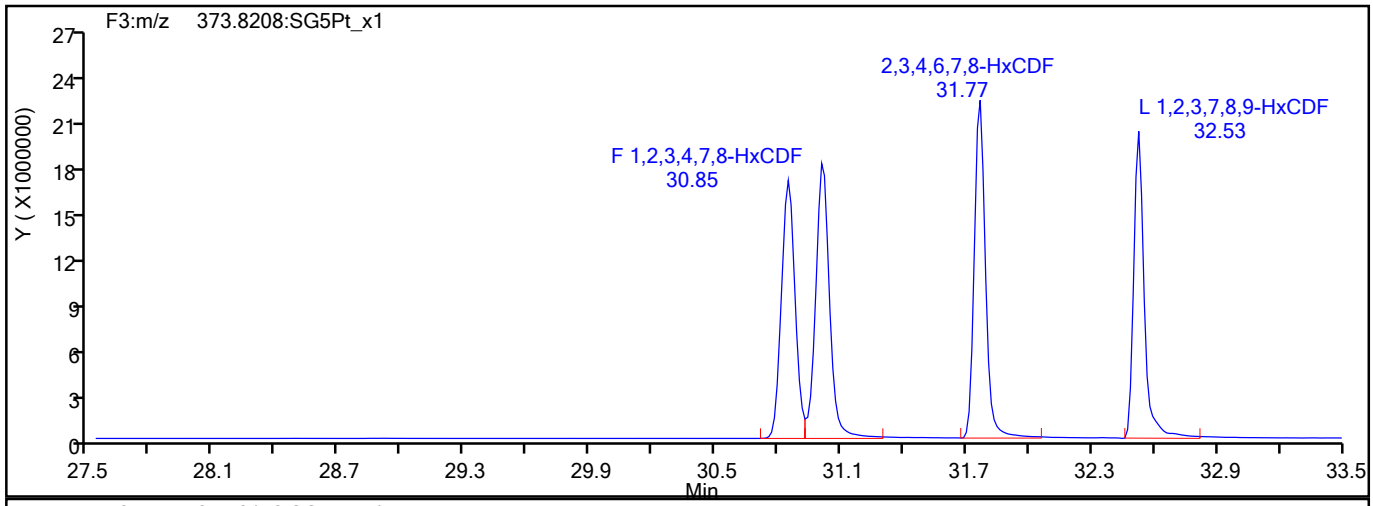

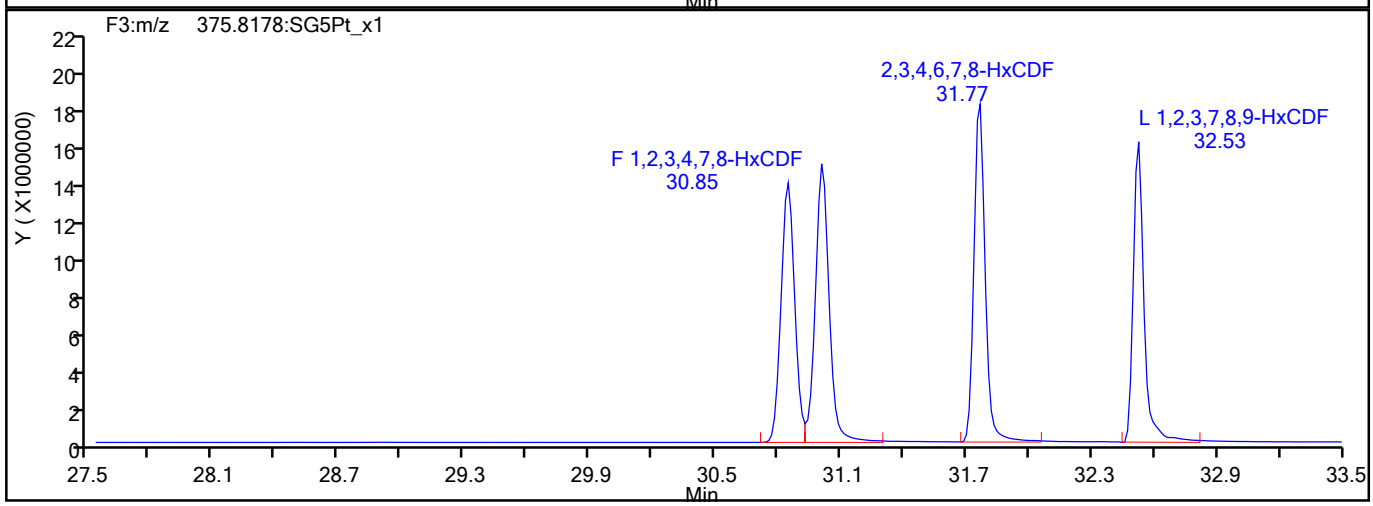

HxCDF Interference Mass

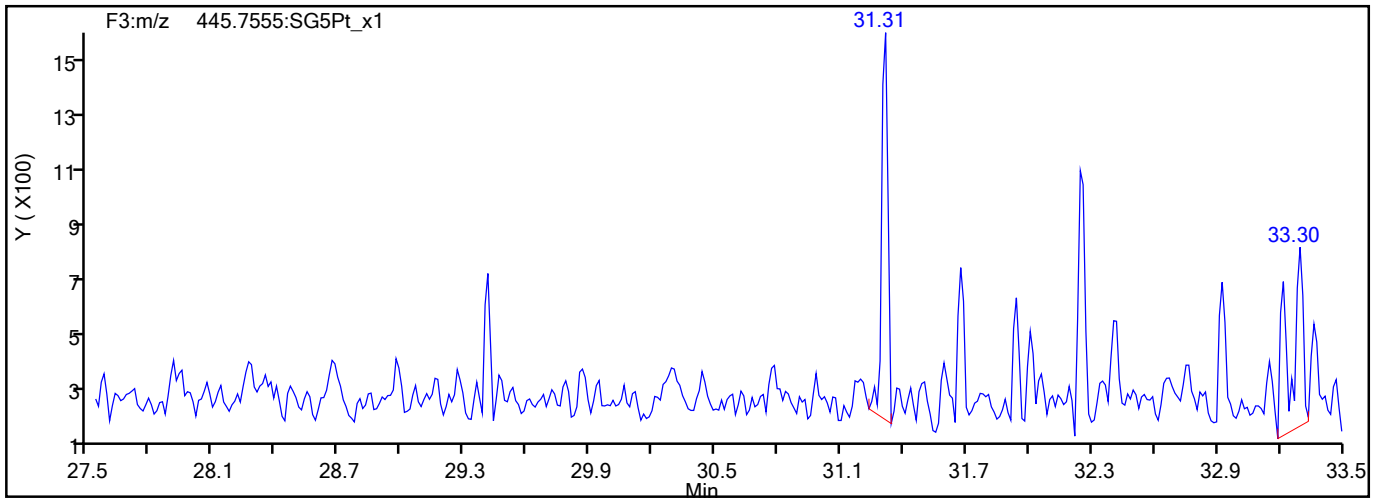

773678

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

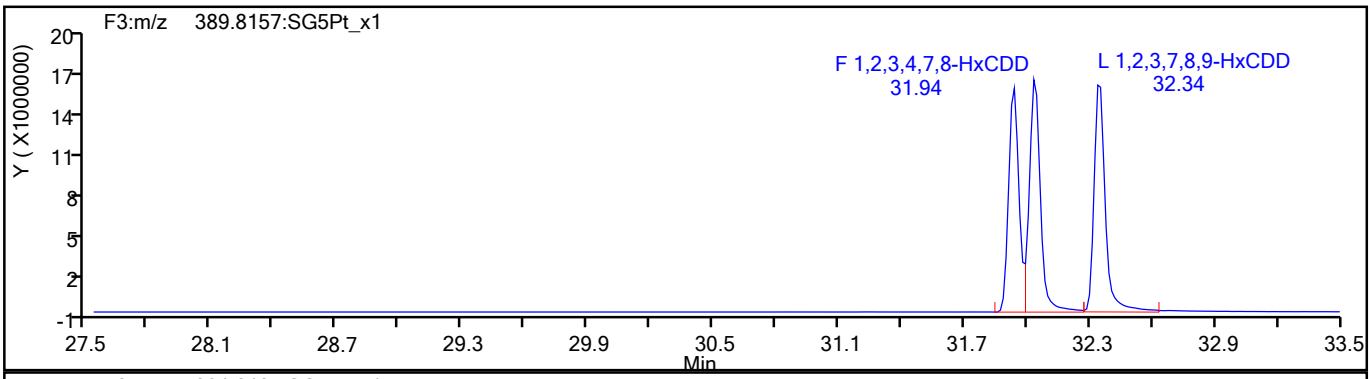

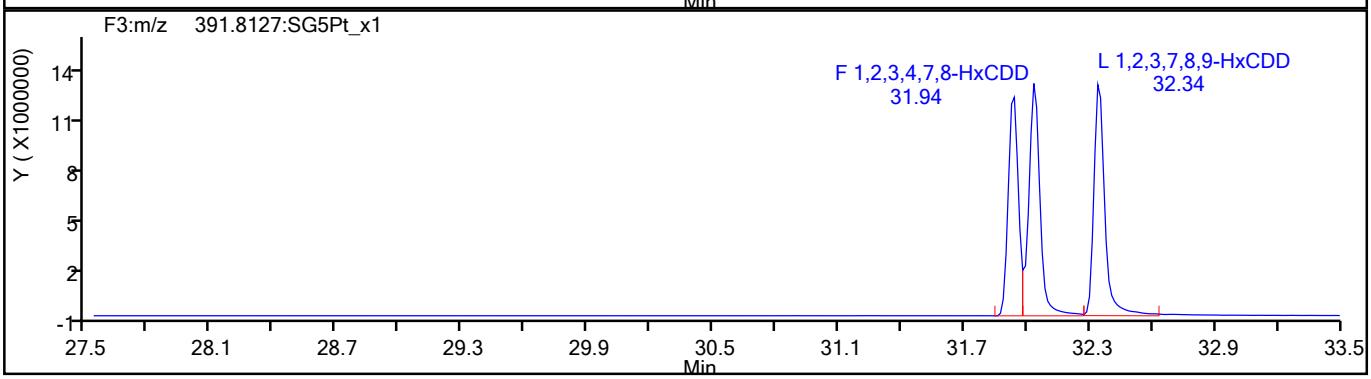

HxCDD Standards

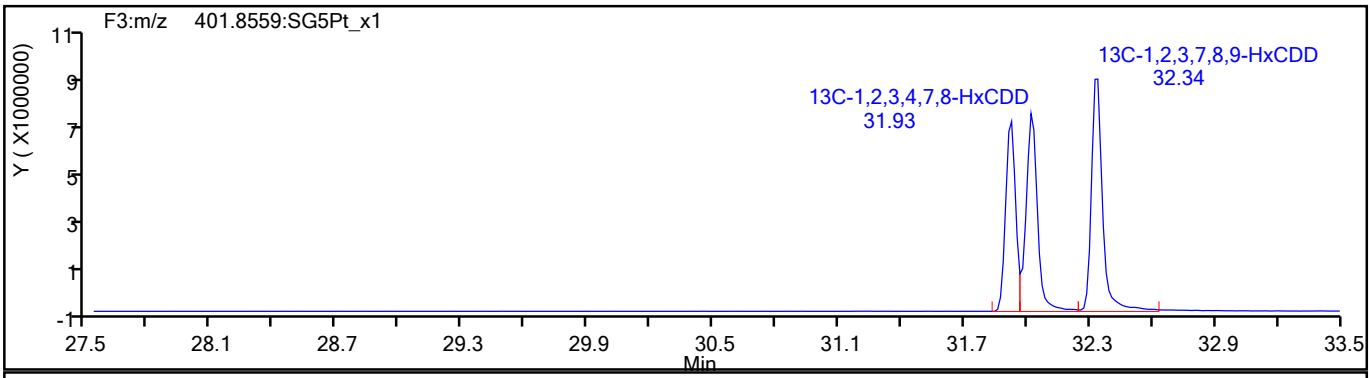

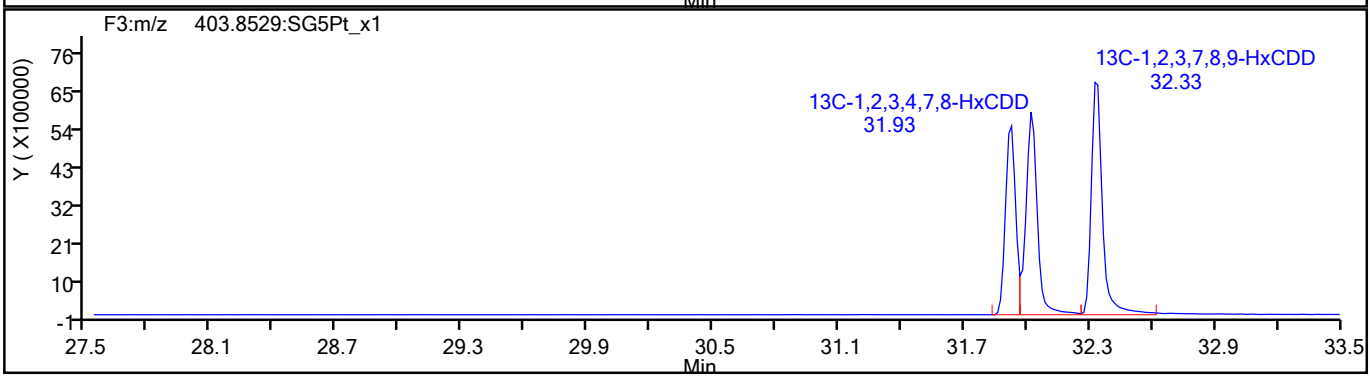

773679

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

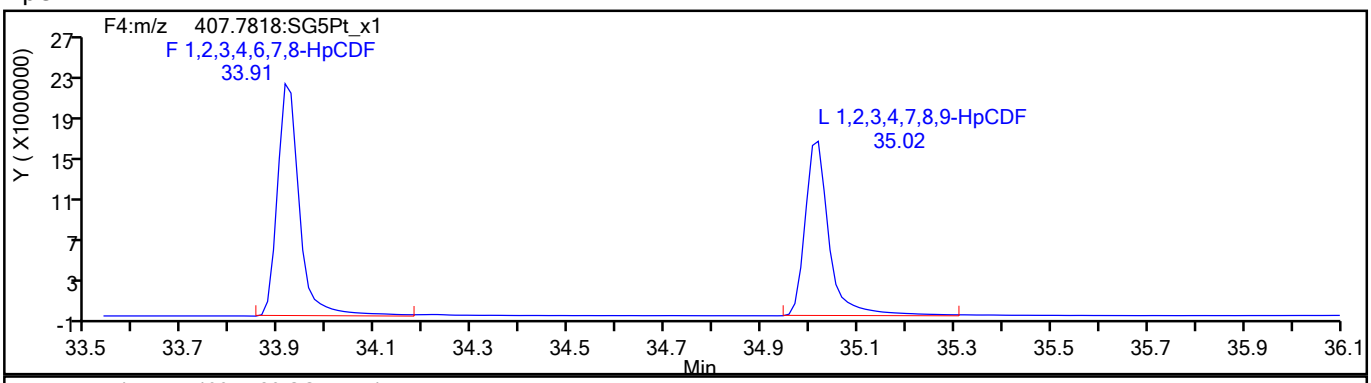

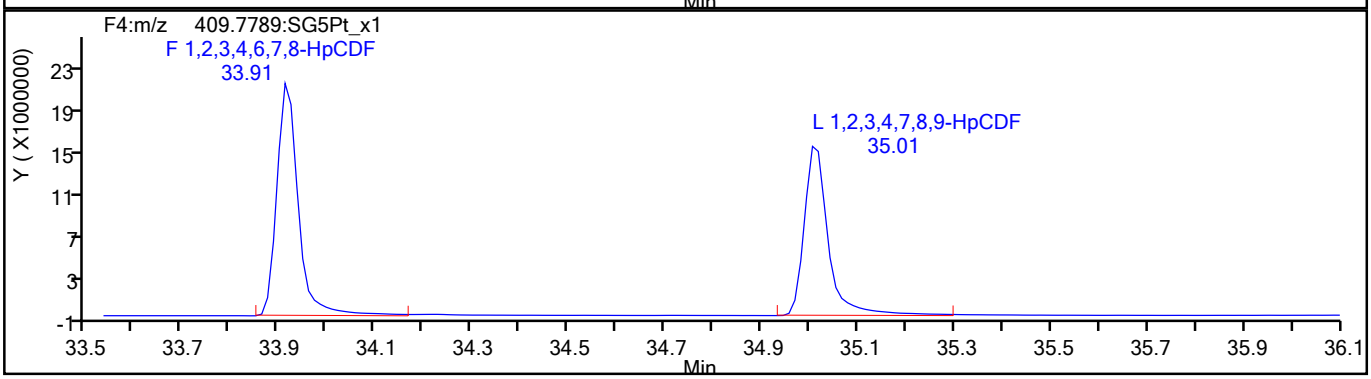

HpCDF Standards

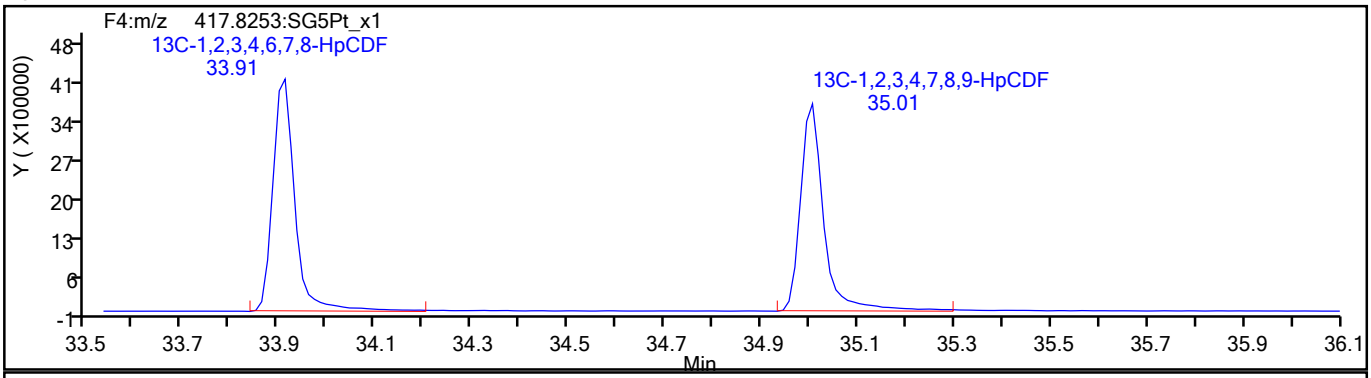

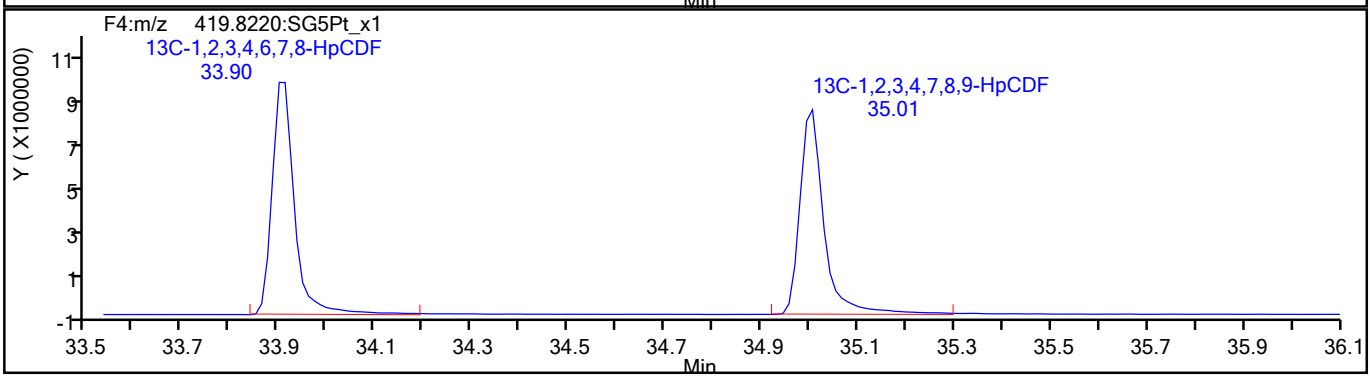

773680

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

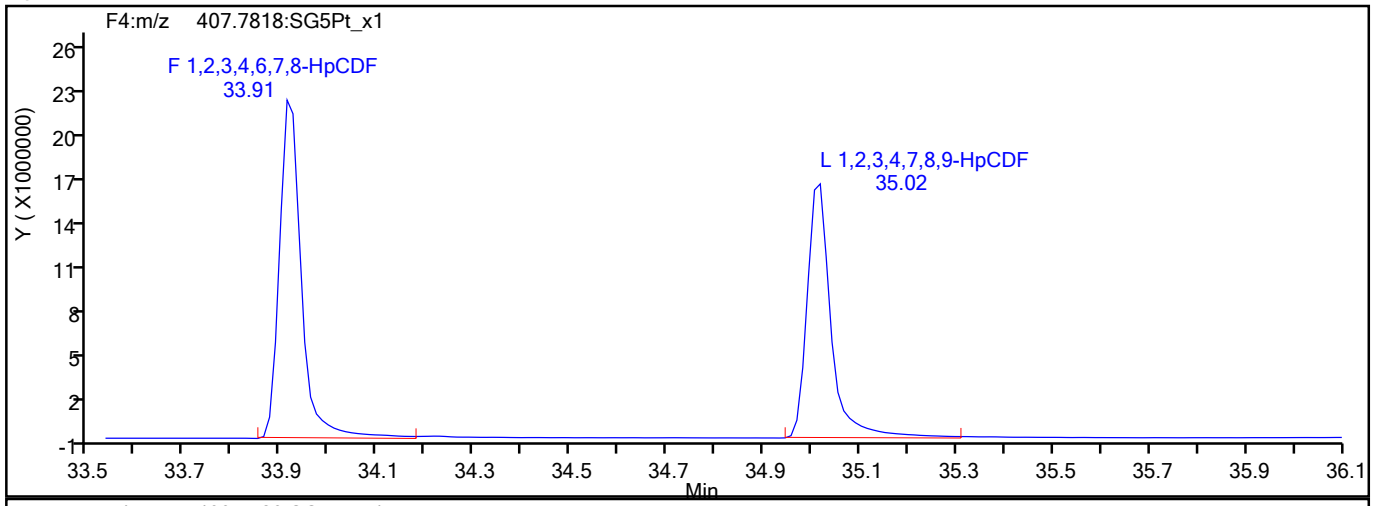

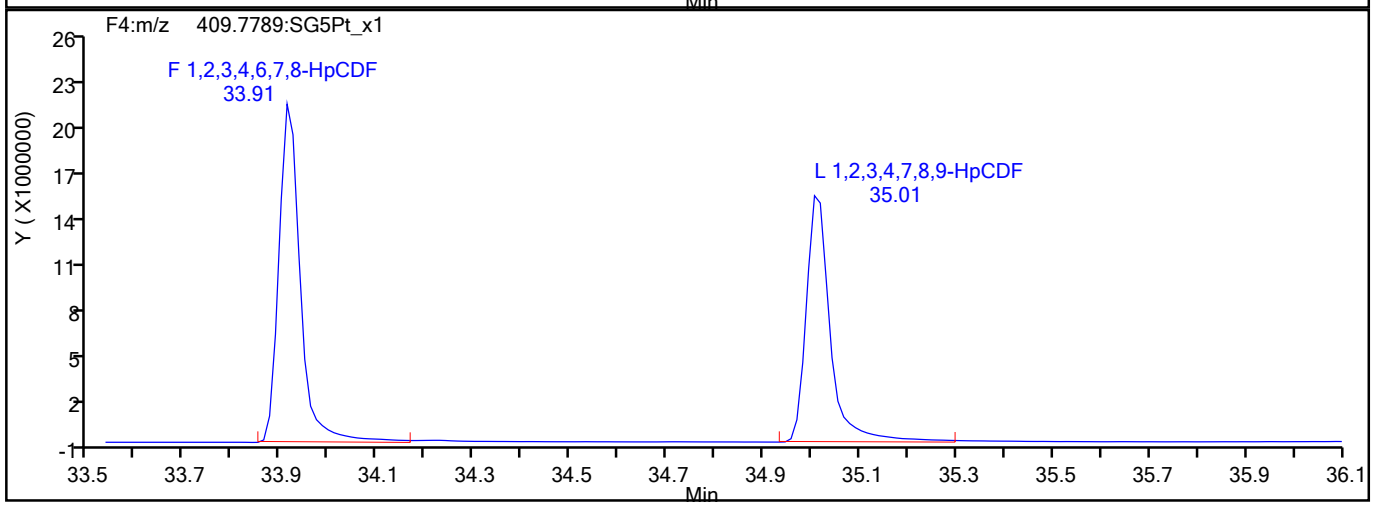

HpCDF Interference Mass

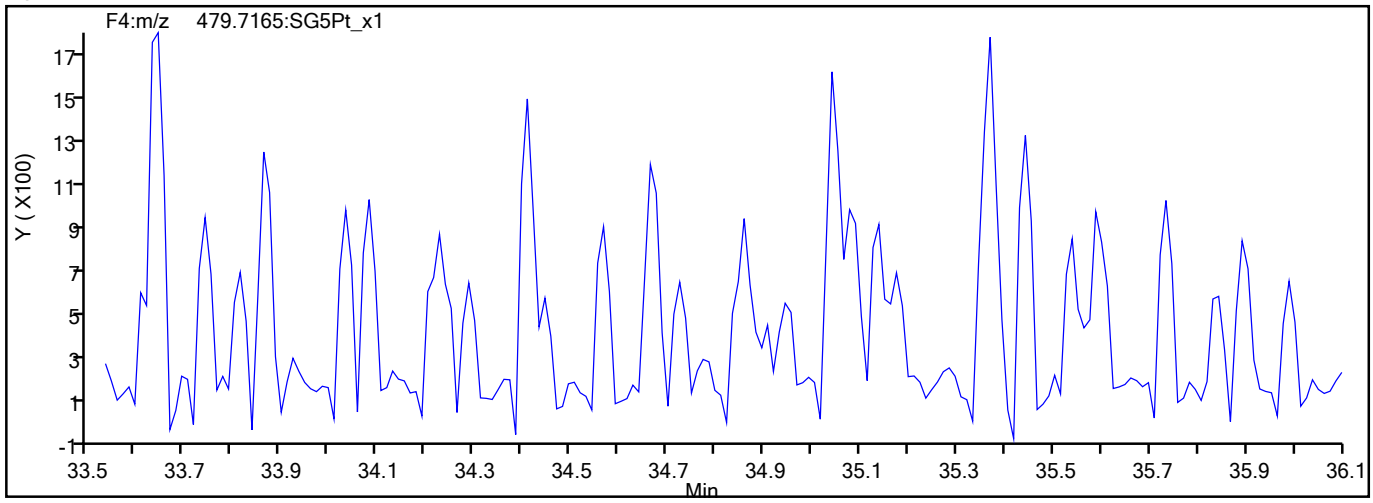

773681

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

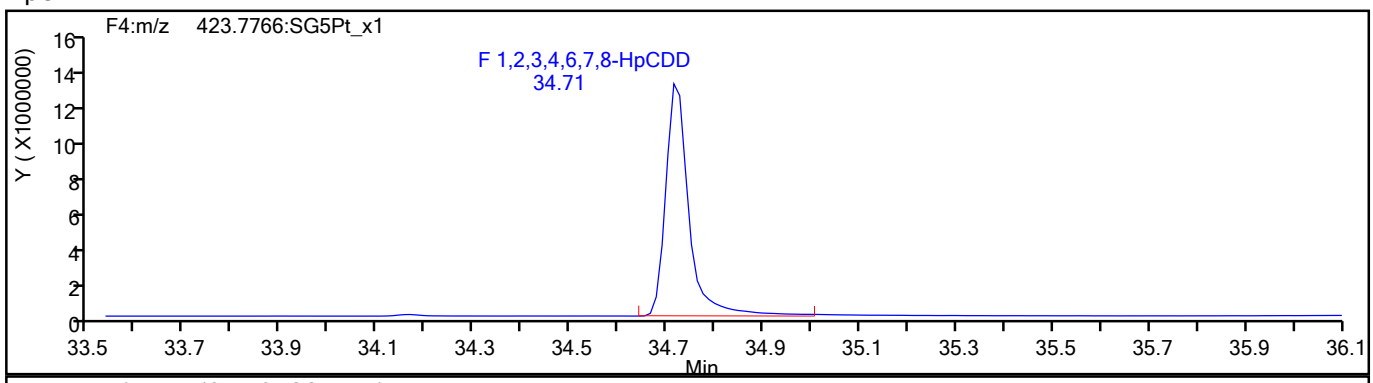

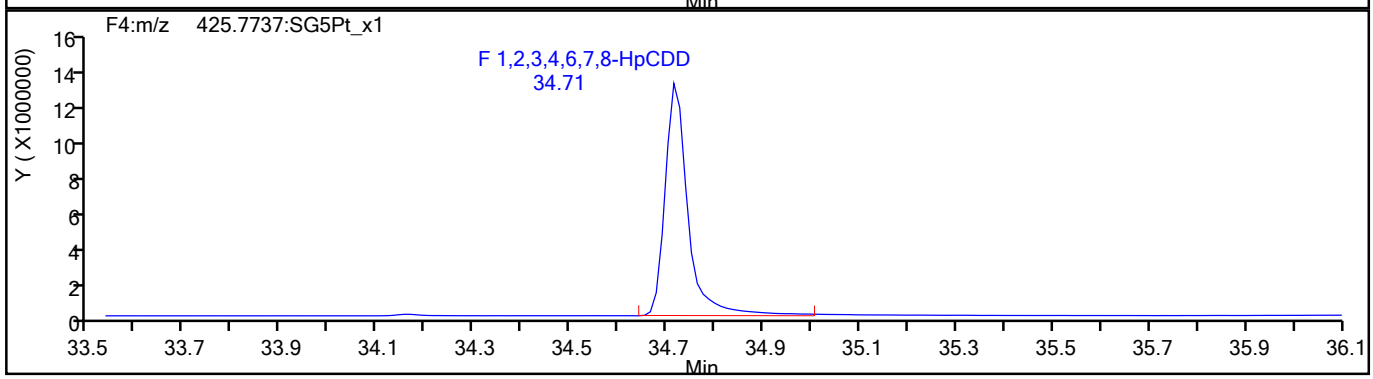

HpCDD Standards

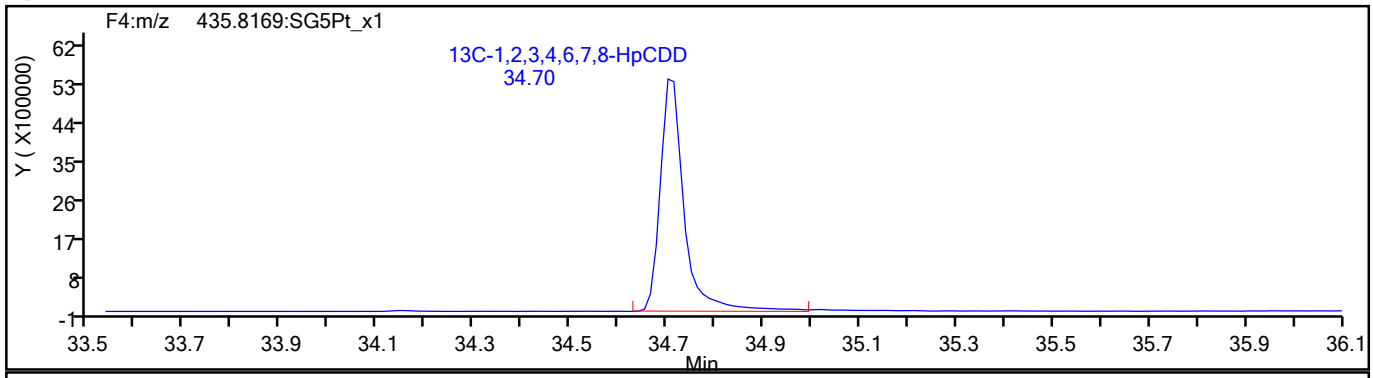

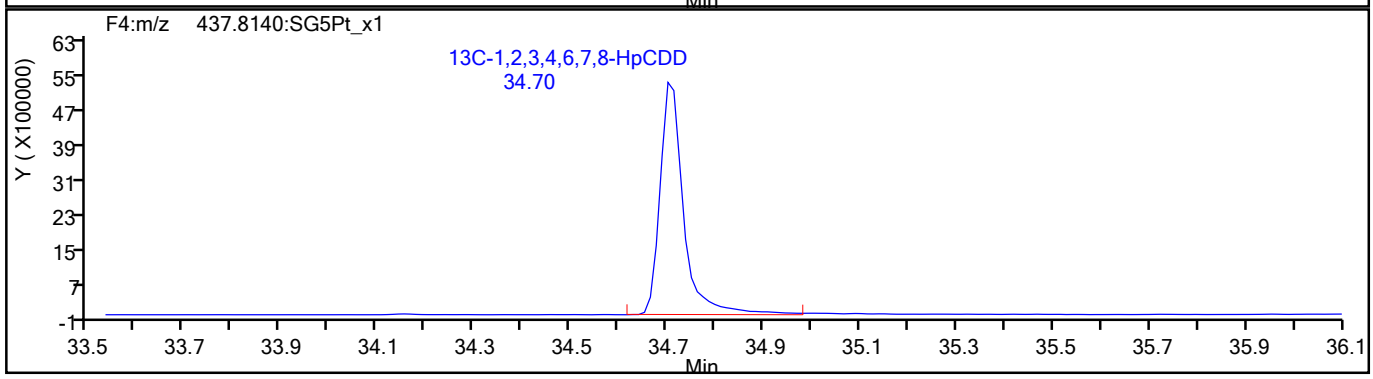

773682

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

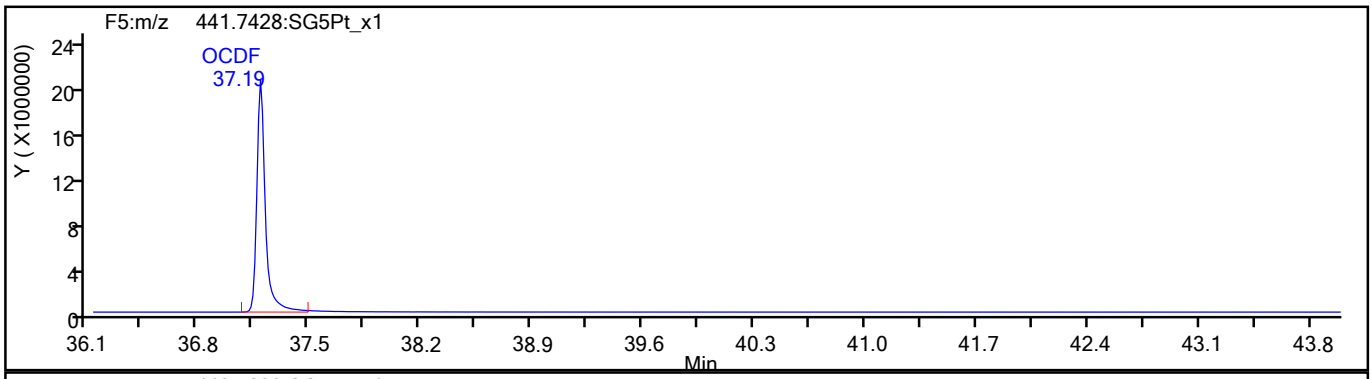

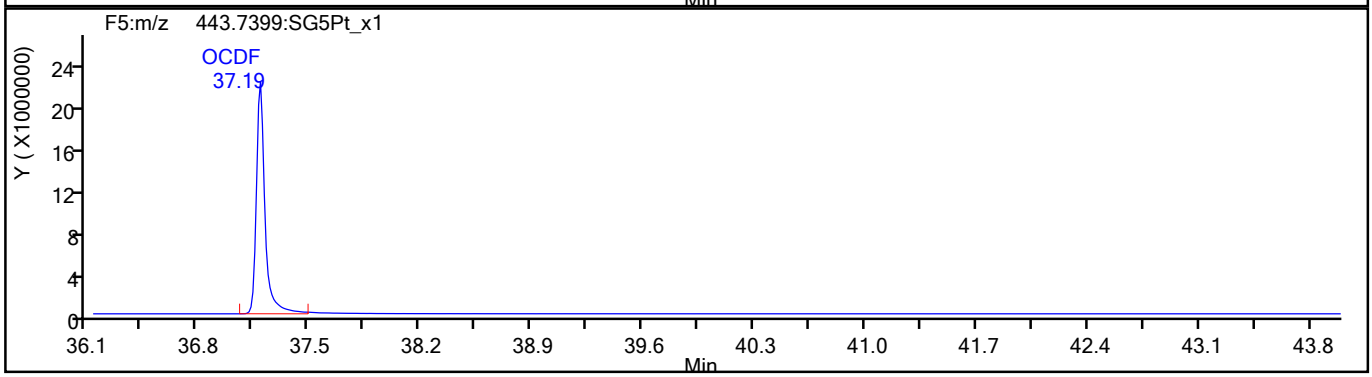

OCDF Standards

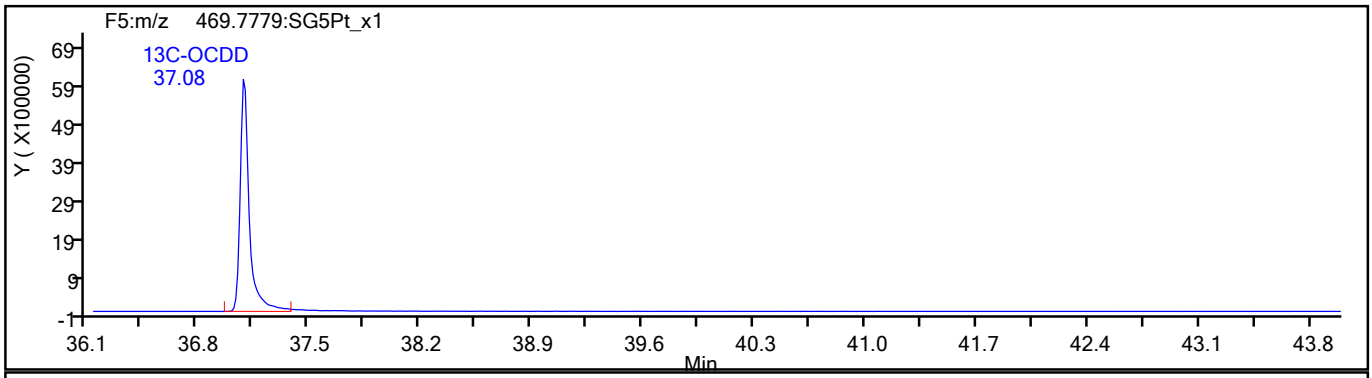

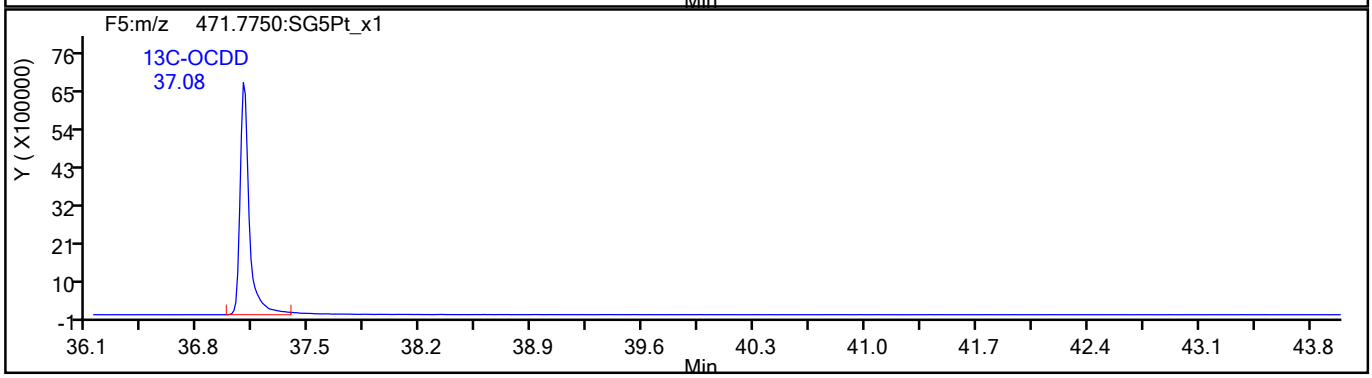

773683

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

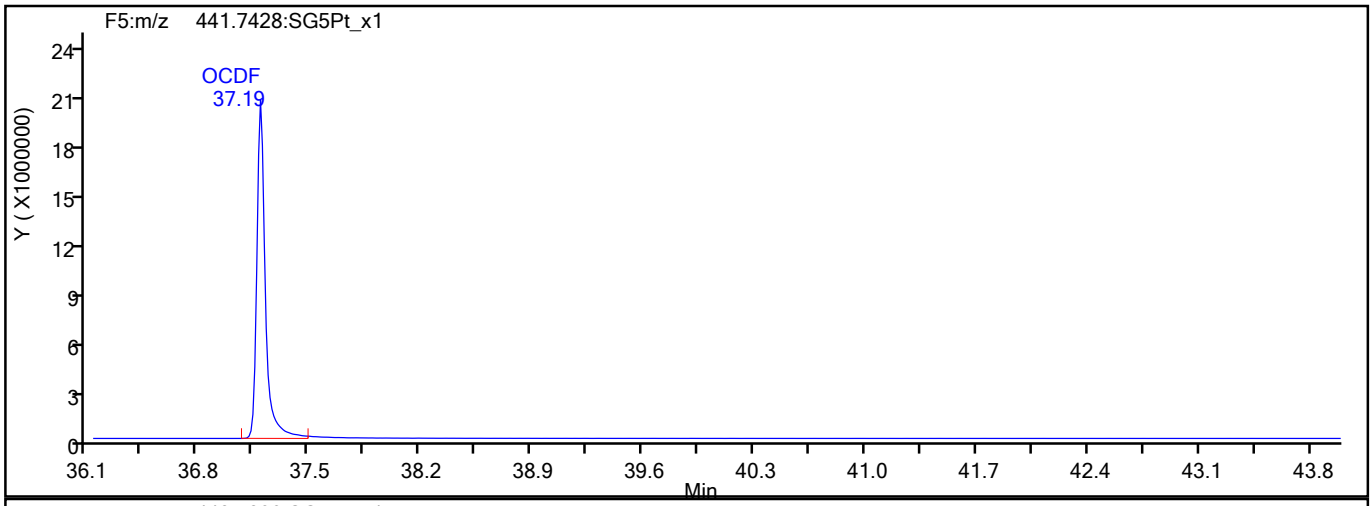

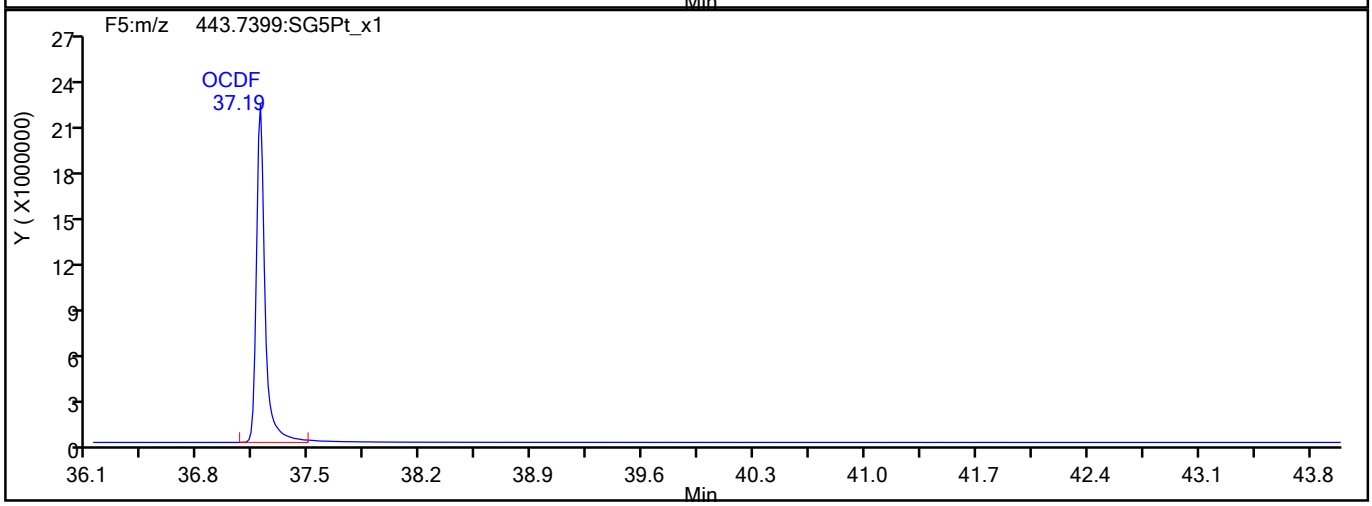

OCDF Interference Mass

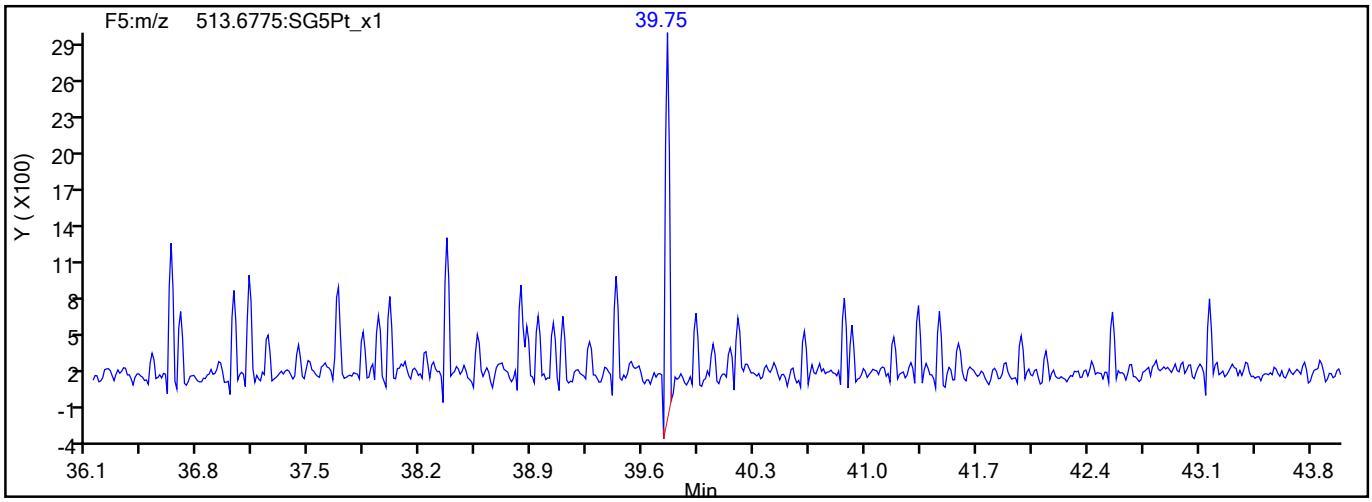

773684

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

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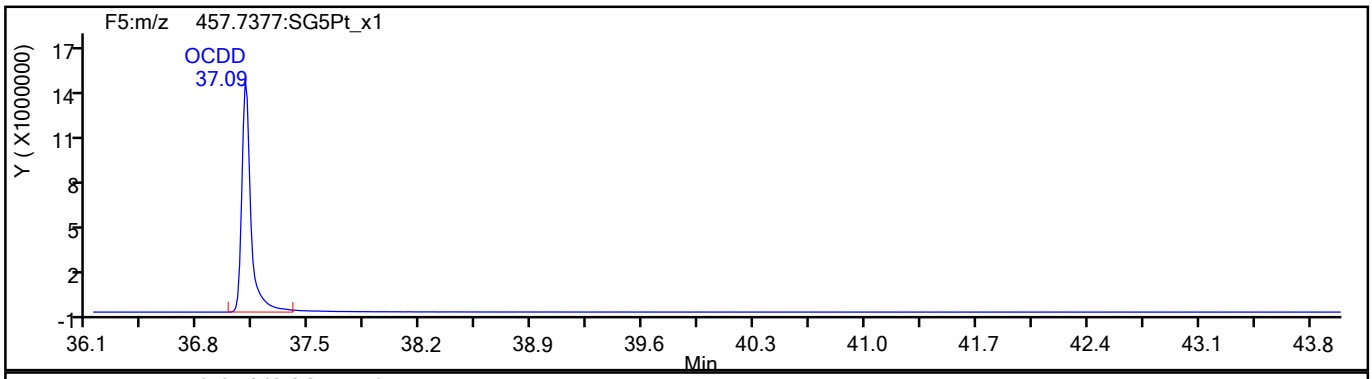

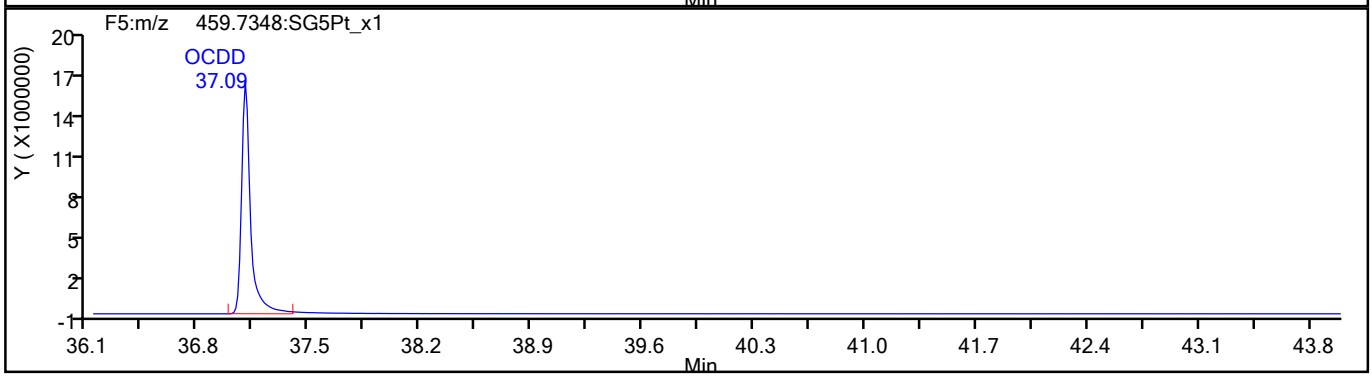

OCDD Standards

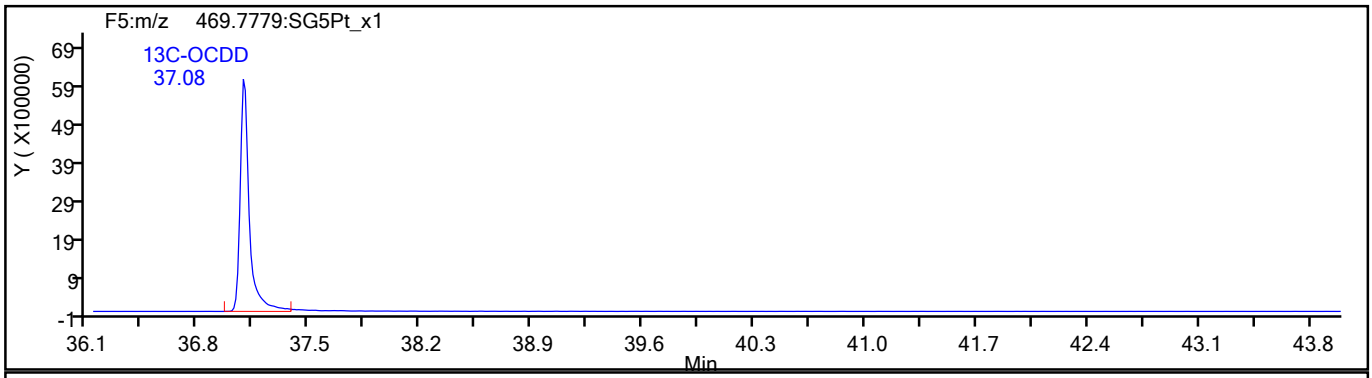

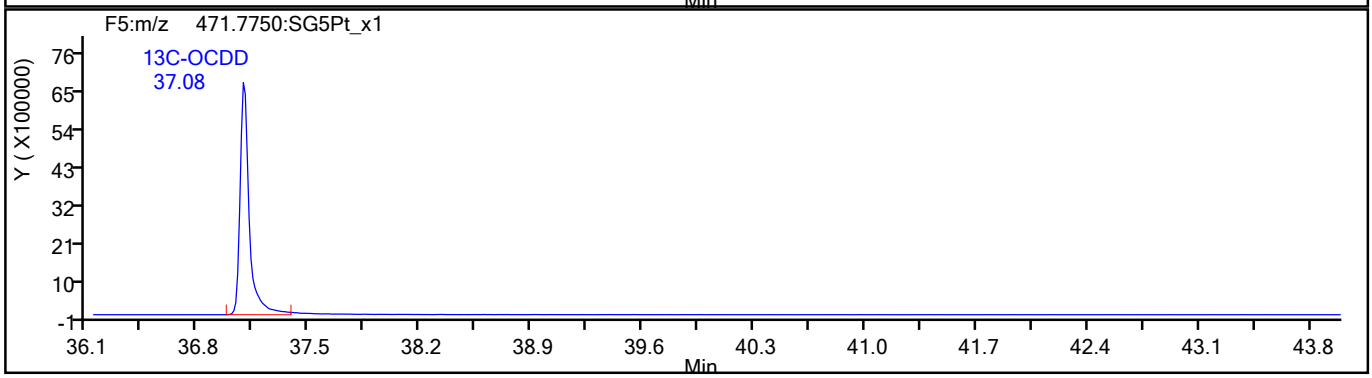

773685

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

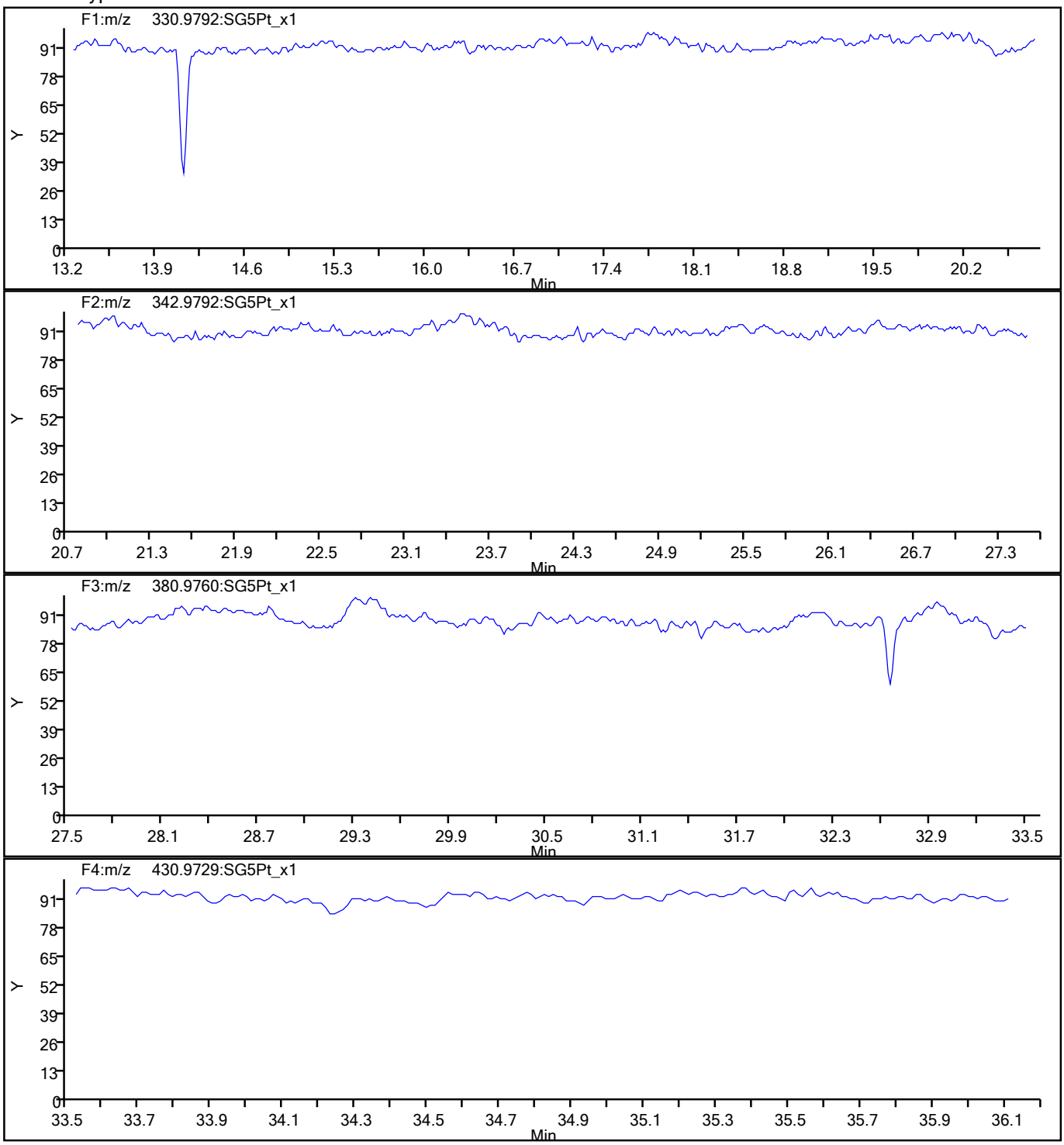

773686

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

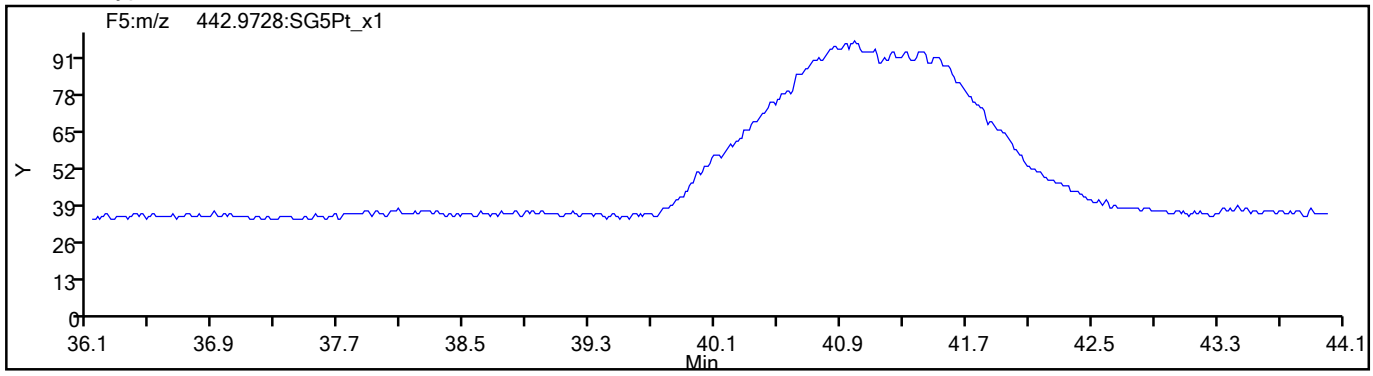

773687

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID: CCV 320-515770/1 Calibration Date: 08/13/2021 04:53

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 12AU2110D5_23.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.030		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.276		10.2	10.0	102	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.063		50.1	50.0	100	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.025		50.3	50.0	101	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.045		49.8	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.087		50.1	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.117		49.6	50.0	99	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.163		49.8	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.067		50.1	50.0	100	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.023		51.1	50.0	102	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.190		52.5	50.0	105	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.167		50.0	50.0	100	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.465		50.8	50.0	102	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.130		51.6	50.0	103	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.331		50.5	50.0	101	86-116
OCDD	AveID	1.107	1.143		103	100	103	79-126
OCDF	AveID	1.438	1.423		98.9	100	99	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.588		97.7	100	98	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9177		102	100	102	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.201		99.2	100	99	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.237		99.8	100	100	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8084		106	100	106	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	0.9921		91.6	100	92	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.013		89.8	100	90	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	0.9653		90.7	100	91	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7254		98.9	100	99	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8021		91.1	100	91	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.8978		92.8	100	93	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7724		99.9	100	100	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6963		108	100	108	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7329		105	100	105	77-129
13C-OCDD	Ave	0.4472	0.5166		231	200	116	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.232		11.1	10.0	111	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\12AU2110D5.SPL
Last Modified: Friday, August 13, 2021 13:56:47 Pacific Daylight Time
Printed: Friday, August 13, 2021 13:57:00 Pacific Daylight Time

Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #
1	12AU2110D5_1	WDM HRDXNCP_00044	WDM 081221	Tray01:1	Dioxin	
2	12AU2110D5_2	CS-4 HRDXNL4_00099	CCV 081221	Tray01:2	Dioxin	
3	12AU2110D5_3	SB Solvent Blank C-14	SB 081221	Tray01:3		
4	12AU2110D5_4	320-76576-A-28-B 50x	320-76576-A-28-B 50x	Tray01:4	1613B/Solid	D264
5	12AU2110D5_5	320-76576-A-29-D 50x	320-76576-A-29-D 50x	Tray01:5	1613B/Solid	
6	12AU2110D5_6	320-76576-A-29-E MS 50x	320-76576-A-29-E MS 50x	Tray01:6	1613B/Solid	
7	12AU2110D5_7	320-76576-A-29-F MSD 50x	320-76576-A-29-F MSD 50x	Tray01:7	1613B/Solid	
8	12AU2110D5_8	320-76576-a-37-a 100X	320-76576-a-37-a 100X	Tray01:8	1613B/Solid	D258
9	12AU2110D5_9	SB Solvent Blank C-14	SB 081221A	Tray01:3		
10	12AU2110D5_10	WDM HRDXNCP_00044	WDM 081221A	Tray01:1	Dioxin	
11	12AU2110D5_11	CS-4 HRDXNL4_00099	CCV 081221A	Tray01:2	Dioxin	
12	12AU2110D5_12	SB Solvent Blank C-14	SB 081221B	Tray01:3		
13	12AU2110D5_13	240-153593-b-1-a	240-153593-b-1-a	Tray01:15	8290A/Solid	D260
14	12AU2110D5_14	240-153593-b-3-a	240-153593-b-3-a	Tray01:16	8290A/Solid	
15	12AU2110D5_15	240-153593-b-5-a	240-153593-b-5-a	Tray01:17	8290A/Solid	
16	12AU2110D5_16	240-153593-b-7-a	240-153593-b-7-a	Tray01:18	8290A/Solid	
17	12AU2110D5_17	240-153593-b-9-a	240-153593-b-9-a	Tray01:19	8290A/Solid	
18	12AU2110D5_18	240-153593-b-11-a	240-153593-b-11-a	Tray01:20	8290A/Solid	
19	12AU2110D5_19	280-150979-b-1-a 5X	280-150979-b-1-a 5X	Tray01:21	8290A_D5/Solid	D258
20	12AU2110D5_20	280-150979-b-3-a 5X	280-150979-b-3-a 5X	Tray01:22	8290A_D5/Solid	
21	12AU2110D5_21	280-150979-b-5-a 5X	280-150979-b-5-a 5X	Tray01:23	8290A_D5/Solid	
22	12AU2110D5_22	SB Solvent Blank C-14	SB 081221C	Tray01:3		
23	12AU2110D5_23	CS-4 HRDXNL4_00099	CCV 081221B	Tray01:2	Dioxin	
24	12AU2110D5_24	WDM HRDXNCP_00044	WDM 081221B	Tray01:1	Dioxin	
25	12AU2110D5_25	mb 320-513227/1-a	mb 320-513227/1-a	Tray01:29	1613B/Solid	D264
26	12AU2110D5_26	lcs 320-513227/2-a	lcs 320-513227/2-a	Tray01:30	1613B/Solid	
27	12AU2110D5_27	lcsd 320-513227/3-a	lcsd 320-513227/3-a	Tray01:31	1613B/Solid	
28	12AU2110D5_28	320-76769-a-9-a	320-76769-a-9-a	Tray01:32	1613B/Solid	
29	12AU2110D5_29	320-76769-a-21-a	320-76769-a-21-a	Tray01:33	1613B/Solid	
30	12AU2110D5_30	320-76769-a-35-a	320-76769-a-35-a	Tray01:34	1613B/Solid	
31	12AU2110D5_31	320-76765-a-1-a	320-76765-a-1-a	Tray01:35	1613B/Solid	
32	12AU2110D5_32	320-76765-a-2-a	320-76765-a-2-a	Tray01:36	1613B/Solid	
33	12AU2110D5_33	320-76765-a-3-a	320-76765-a-3-a	Tray01:37	1613B/Solid	
34	12AU2110D5_34	320-76765-a-4-a	320-76765-a-4-a	Tray01:38	1613B/Solid	
35	12AU2110D5_35	320-76765-a-5-a	320-76765-a-5-a	Tray01:39	1613B/Solid	
36	12AU2110D5_36	SB Solvent Blank C-14	SB 081221D	Tray01:3		

Log file checked
08/13/21 SMA

User	Sample Size	Units	MS File	Inlet File	Inject Volume	Process
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
---	---	C:\CHROM
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
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---	---	C:\CHROM
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---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---

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M 292.9824 R 11580

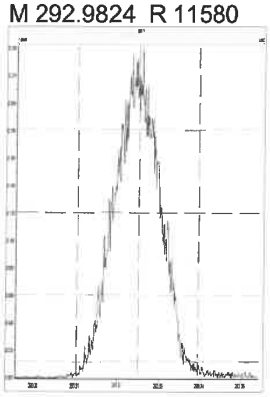

M 304.9824 R 12136

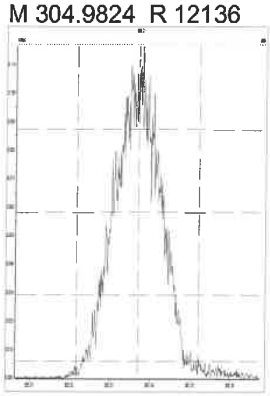

M 318.9792 R 12114

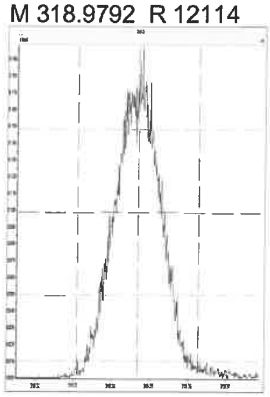

M 330.9792 R 11753

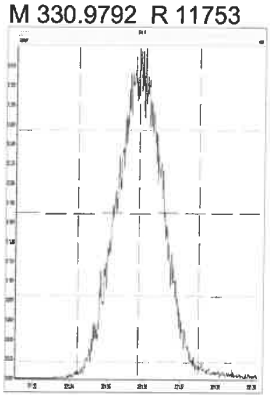

M 342.9792 R 11312

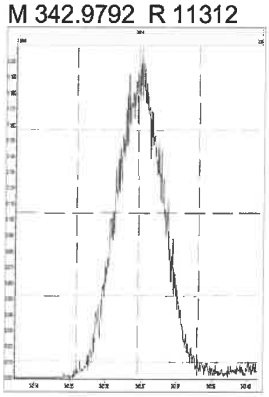

M 354.9792 R 11600

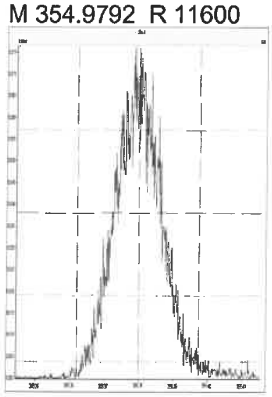

M 366.9792 R 12224

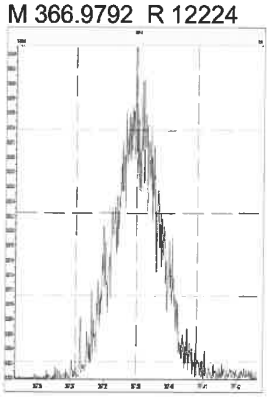

M 380.9760 R 10690

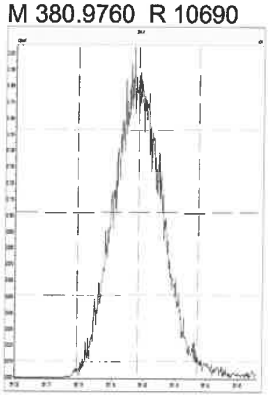

M 392.9760 R 10946

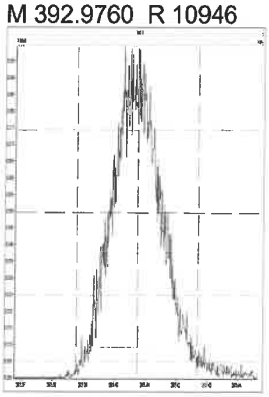

M 404.9760 R 10682

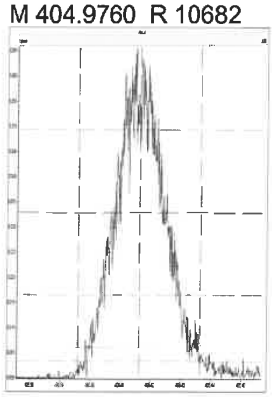

M 416.9760 R 12107

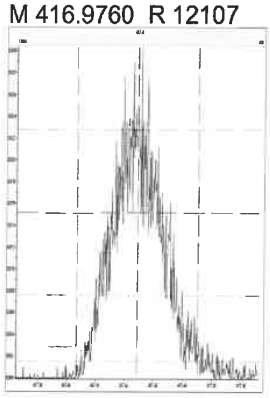

M 318.9792 R 12165

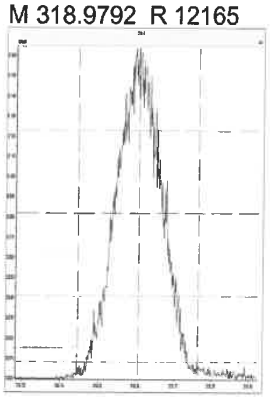

M 330.9792 R 11547

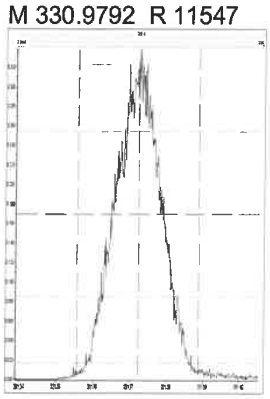

M 342.9792 R 12210

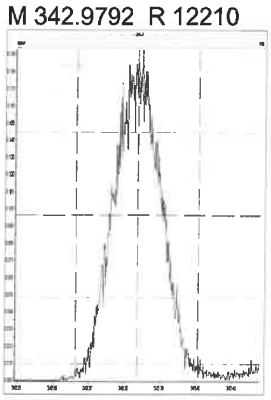

M 354.9792 R 12167

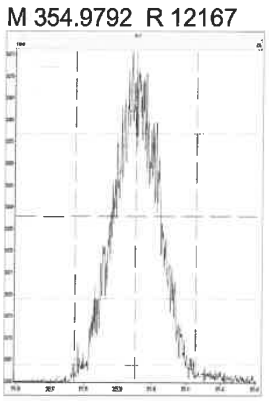

M 366.9792 R 12209

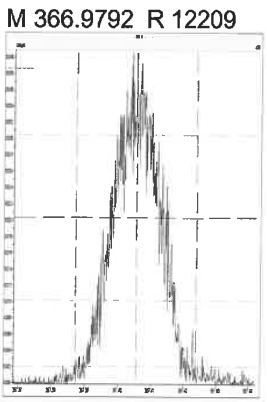

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M 380.9760 R 11848

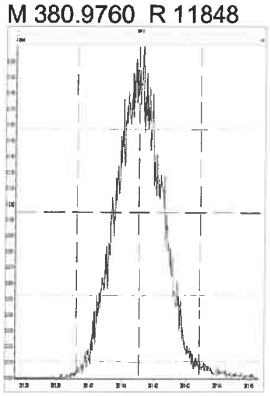

M 392.9760 R 11594

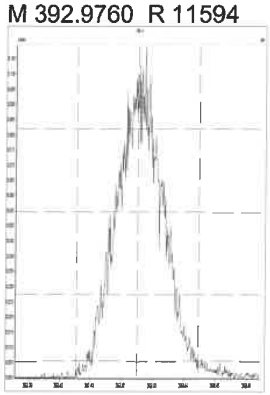

M 404.9760 R 11684

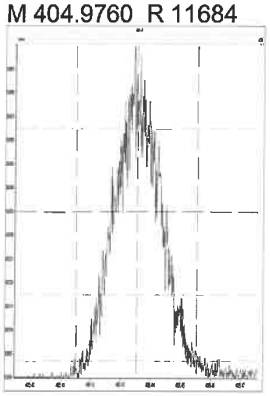

M 416.9760 R 12660

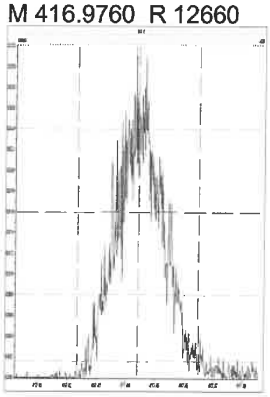

M 366.9792 R 12595

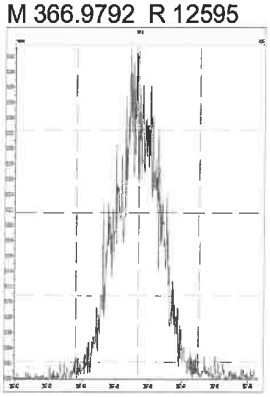

M 380.9760 R 12126

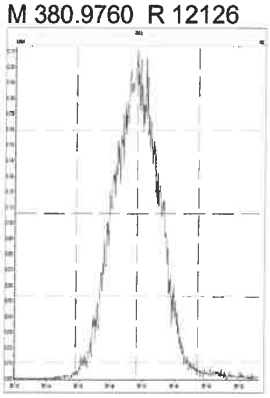

M 392.9760 R 12319

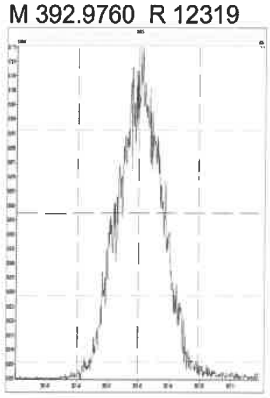

M 404.9760 R 12565

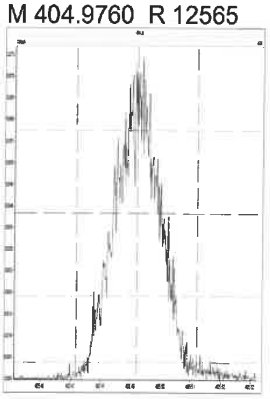

M 416.9760 R 12988

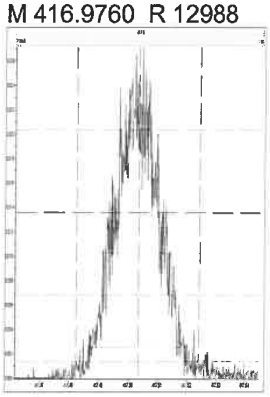

M 430.9728 R 11211

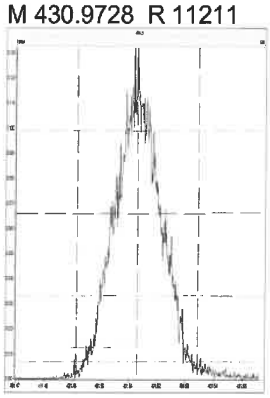

M 442.9728 R 12165

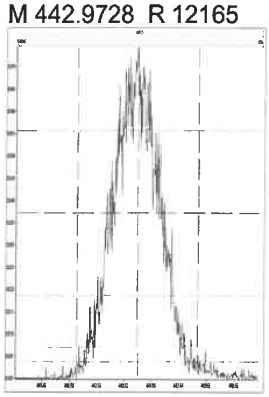

M 454.9728 R 11932

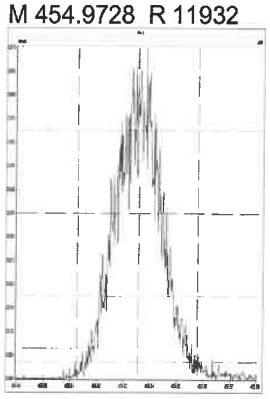

M 380.9760 R 12019

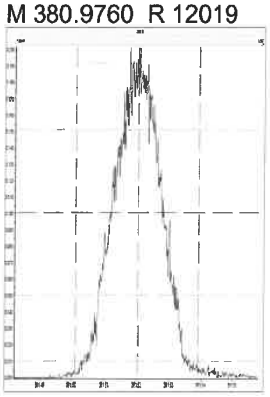

M 392.9760 R 12165

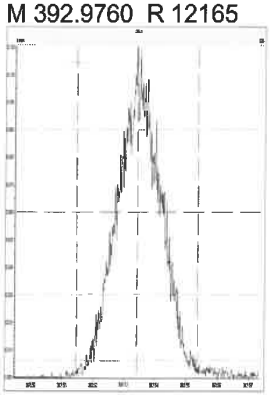

M 404.9760 R 12661

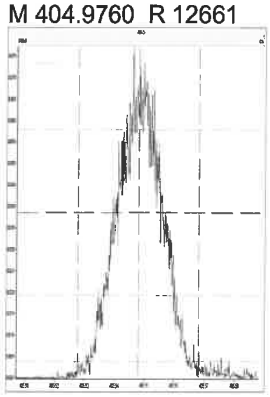

M 416.9760 R 11940

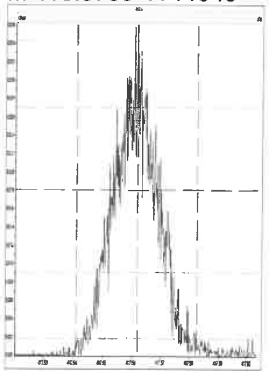

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M 430.9728 R 11881

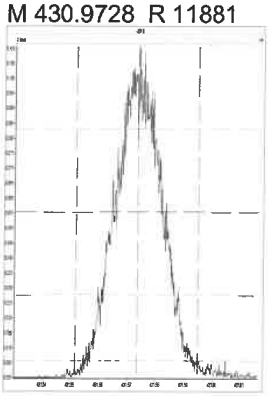

M 442.9728 R 12145

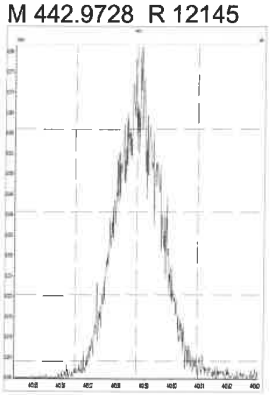

M 454.9728 R 12197

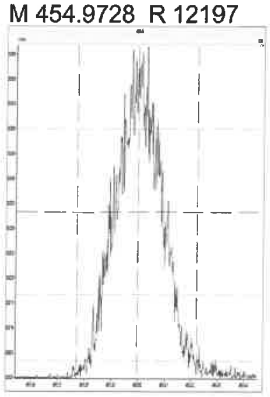

M 466.9728 R 12667

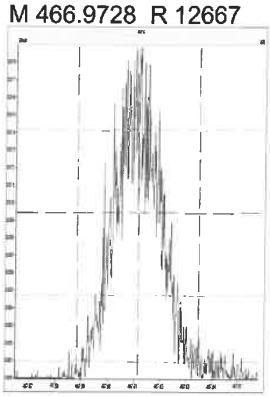

M 480.9696 R 11631

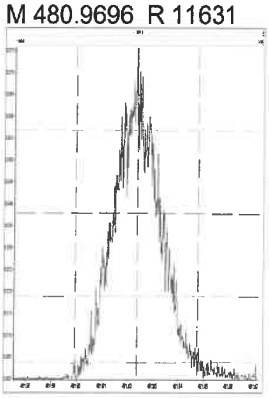

M 380.9760 R 12316

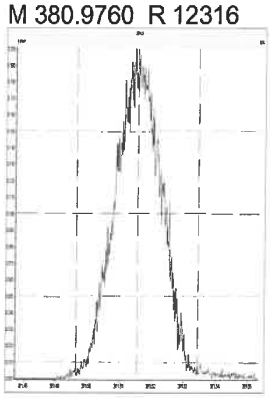

M 392.9760 R 12265

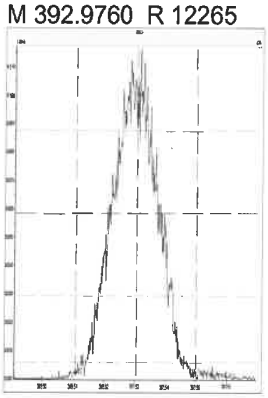

M 404.9760 R 12600

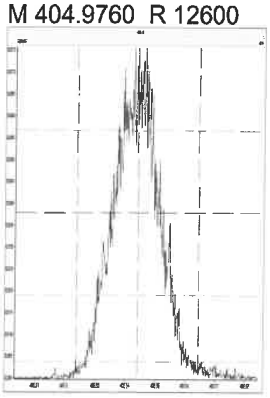

M 416.9760 R 12954

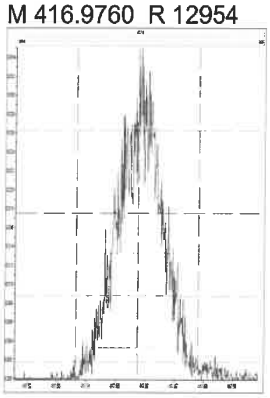

M 430.9728 R 11961

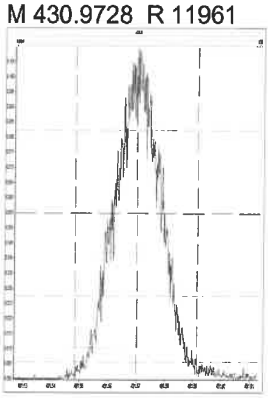

M 442.9728 R 12246

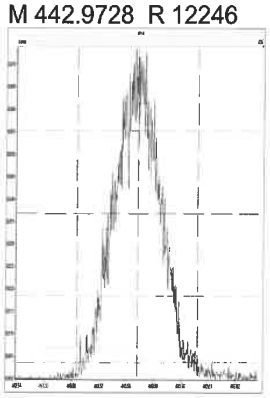

M 454.9728 R 12502

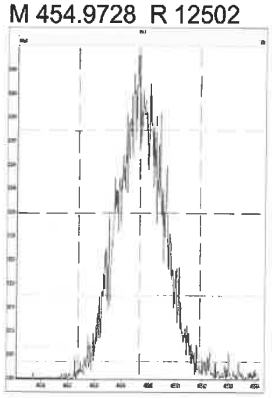

M 466.9728 R 13018

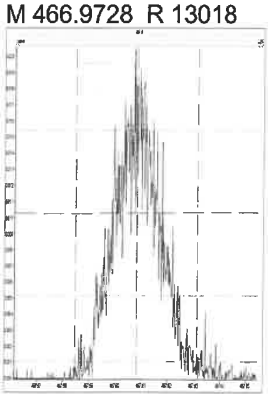

M 480.9696 R 11709

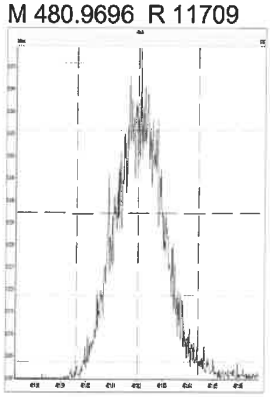

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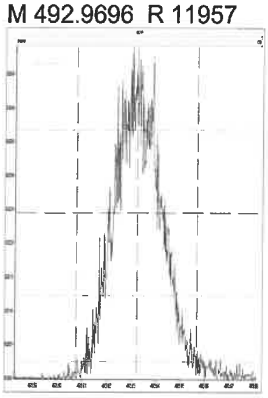

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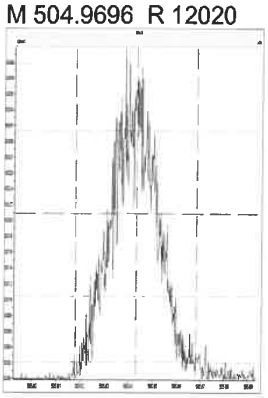

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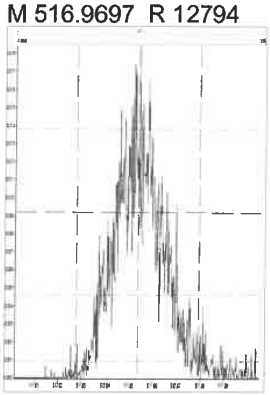

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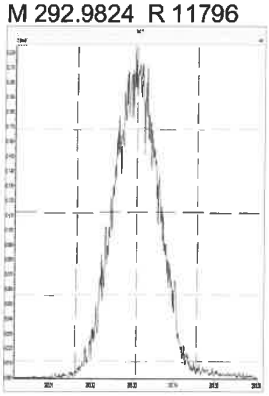

M 304.9824 R 12723

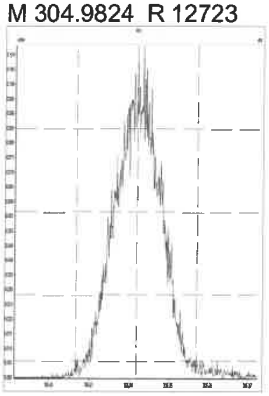

M 318.9792 R 12194

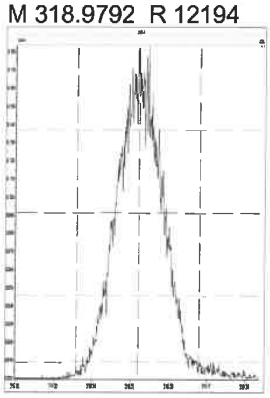

M 330.9792 R 11792

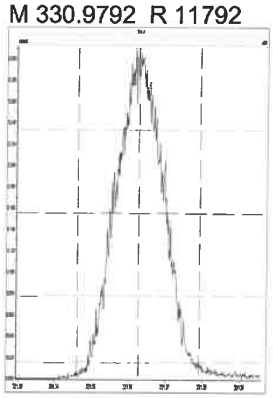

M 342.9792 R 11647

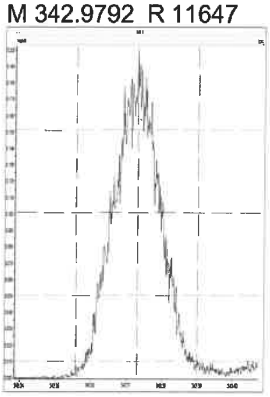

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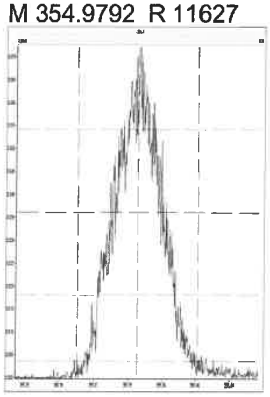

M 366.9792 R 12407

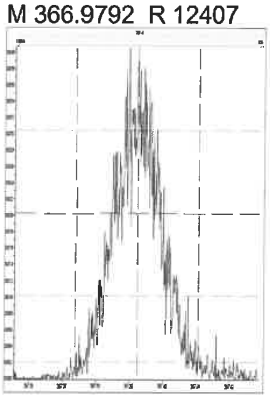

M 380.9760 R 10526

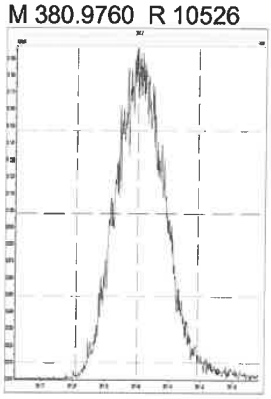

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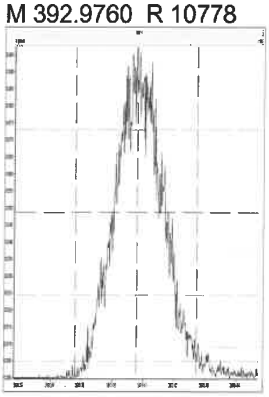

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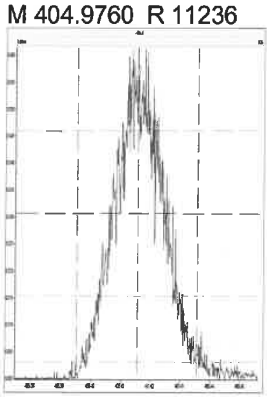

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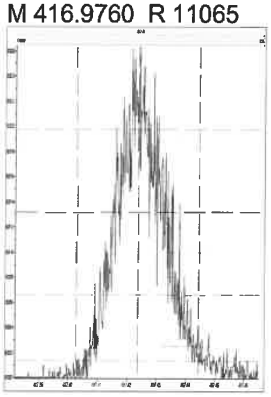

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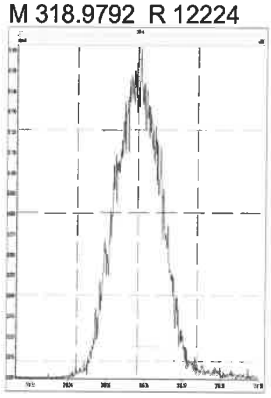

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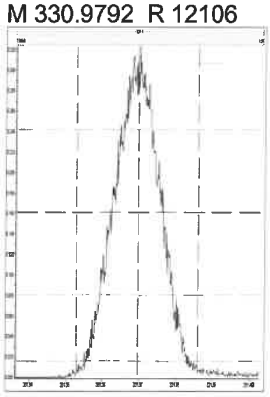

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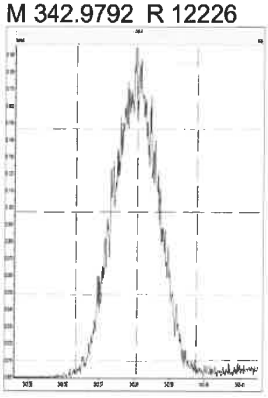

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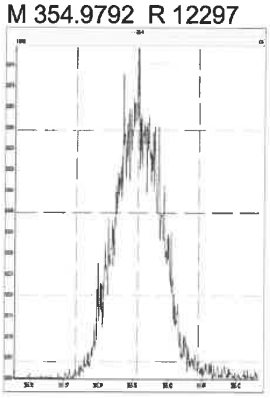

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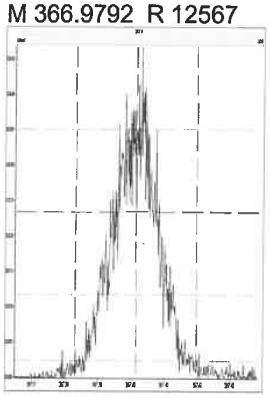

M 380.9760 R 11317

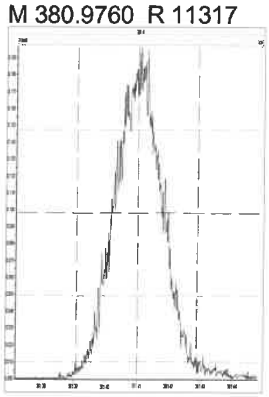

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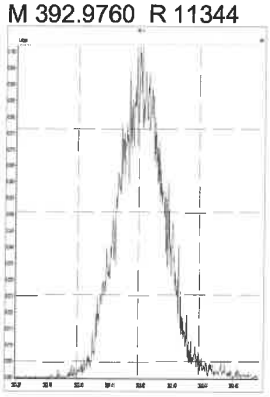

M 404.9760 R 11908

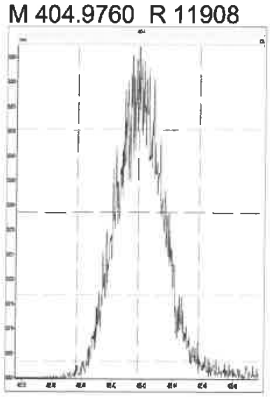

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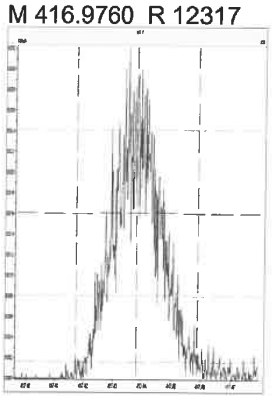

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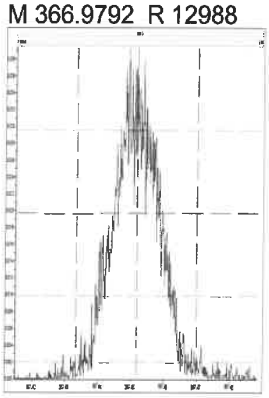

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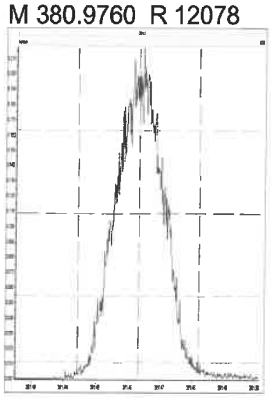

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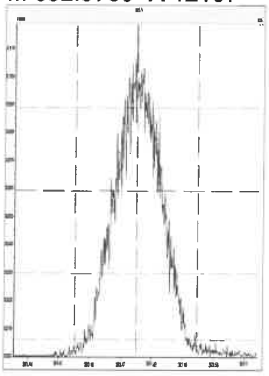

M 404.9760 R 12407

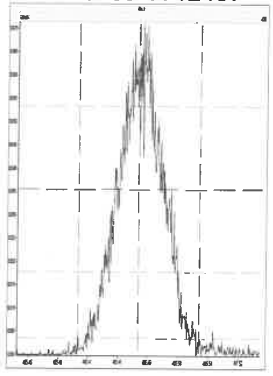

M 416.9760 R 13181

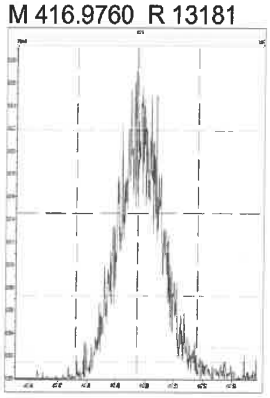

M 430.9728 R 11765

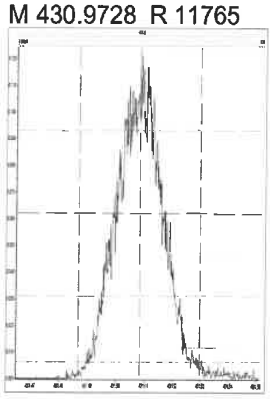

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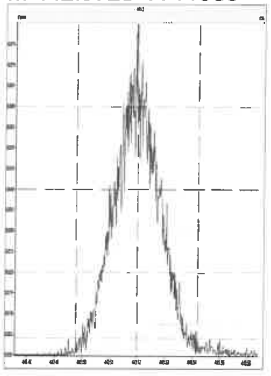

M 454.9728 R 12109

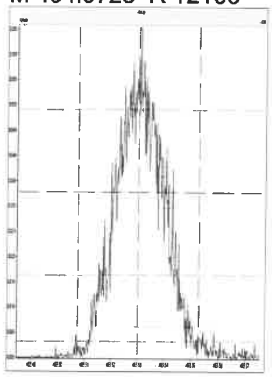

M 380.9760 R 12078

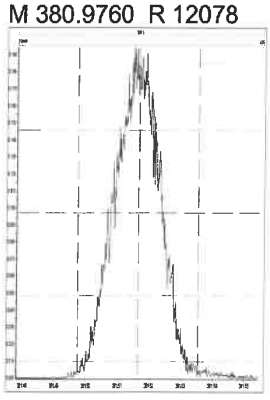

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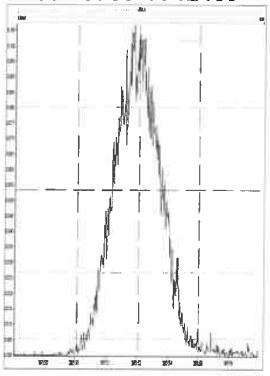

M 404.9760 R 12533

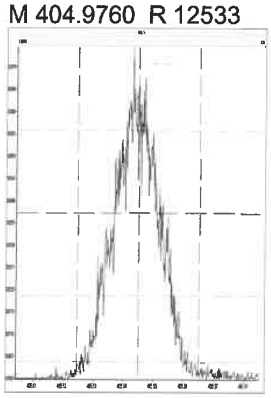

M 416.9760 R 12919

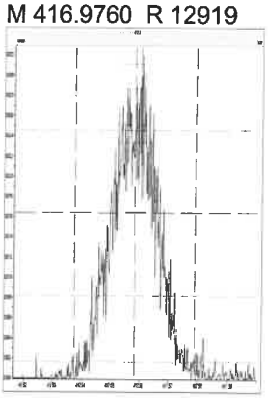

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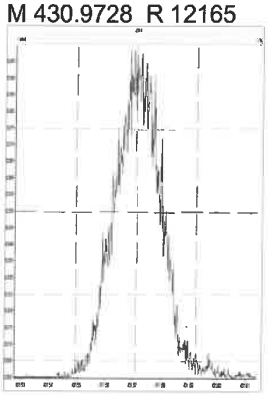

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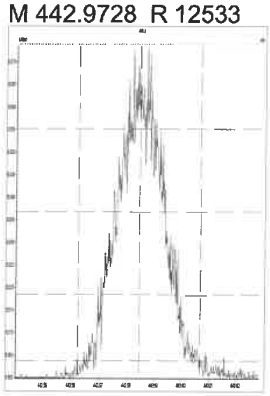

M 454.9728 R 12676

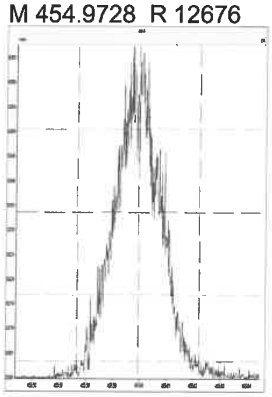

M 466.9728 R 12470

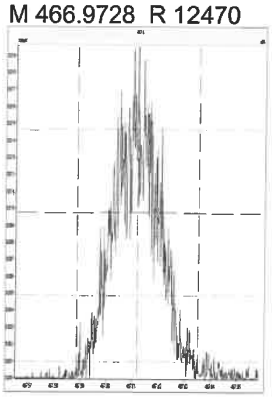

M 480.9696 R 11039

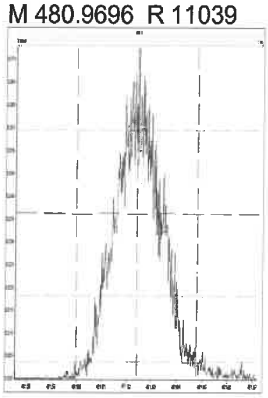

M 380.9760 R 12136

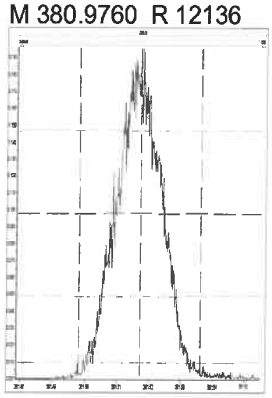

M 392.9760 R 12486

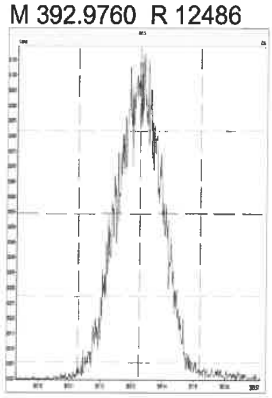

M 404.9760 R 12237

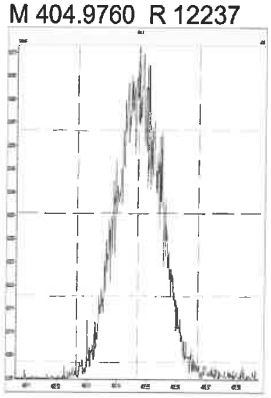

M 416.9760 R 13405

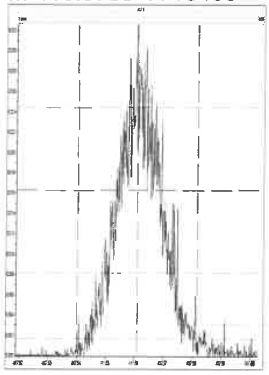

M 430.9728 R 11978

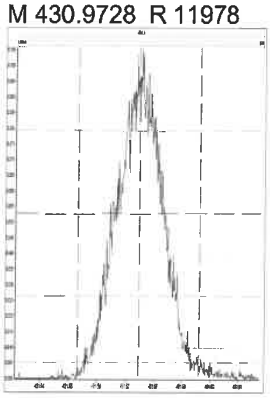

M 442.9728 R 12828

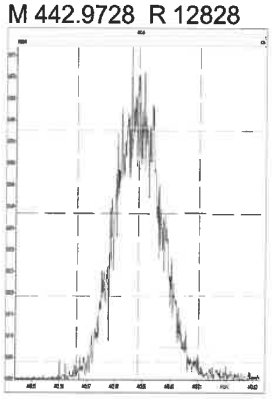

M 454.9728 R 12617

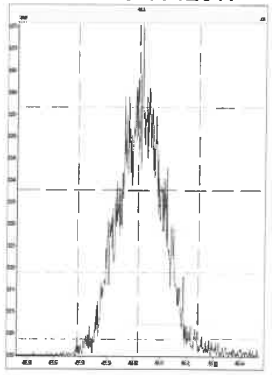

M 466.9728 R 12565

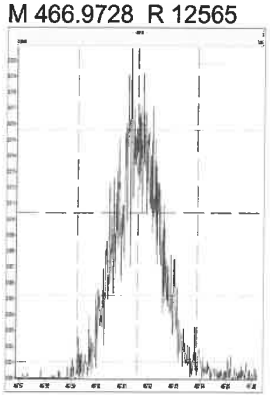

M 480.9696 R 11521

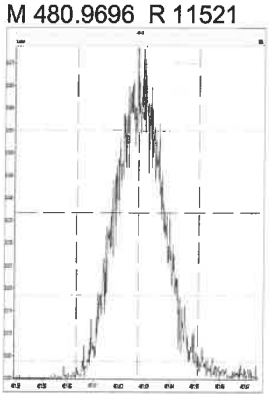

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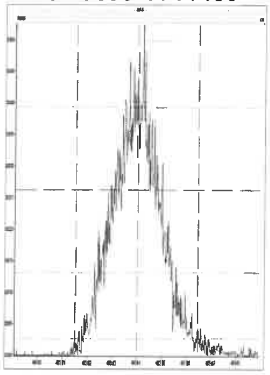

M 504.9696 R 12191

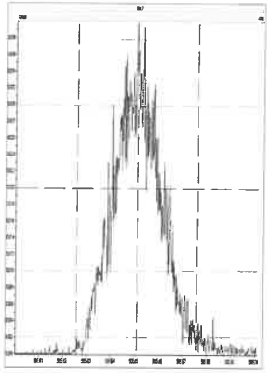

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M 516.9697 R 12224

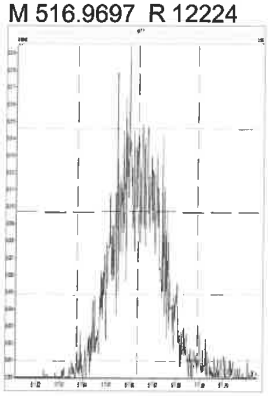

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M 292.9824 R 12378

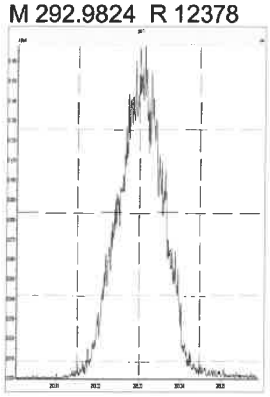

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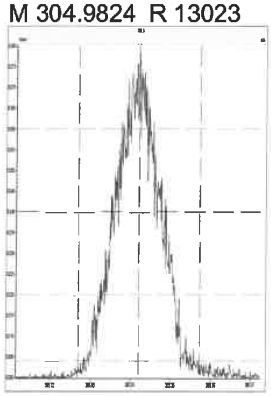

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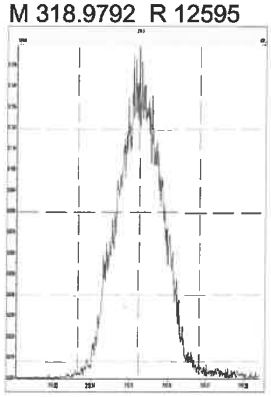

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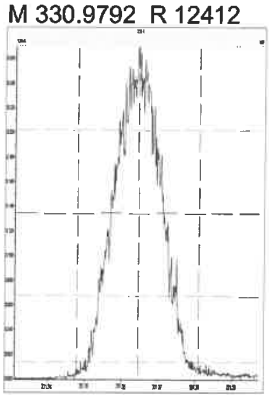

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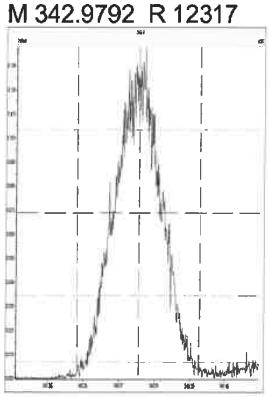

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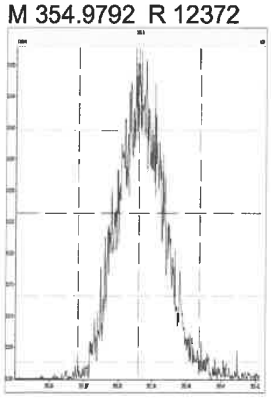

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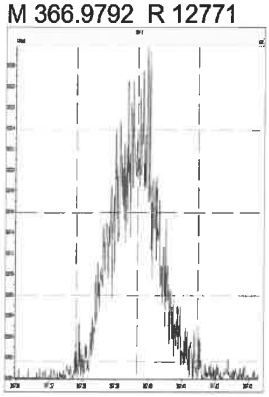

M 380.9760 R 11065

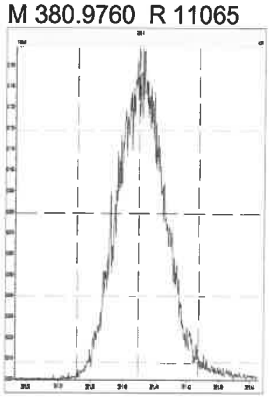

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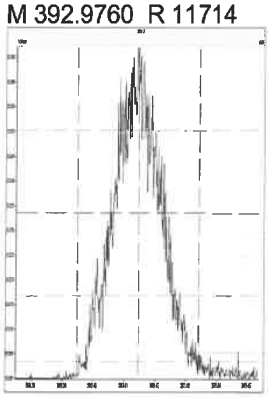

M 404.9760 R 11315

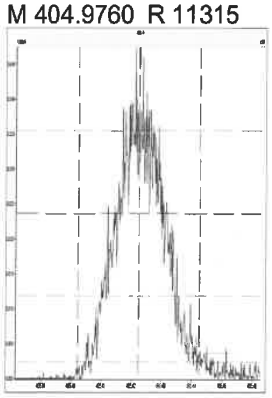

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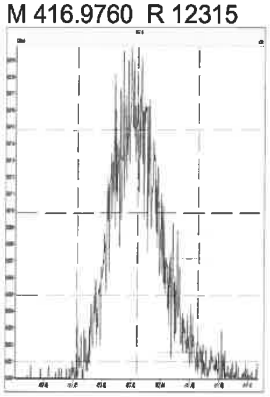

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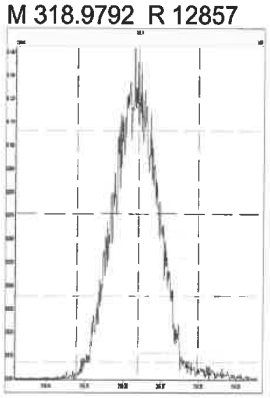

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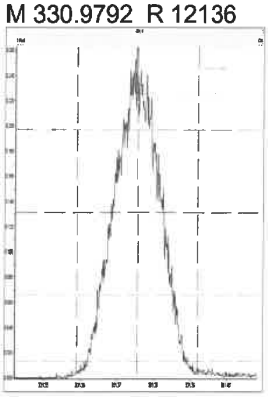

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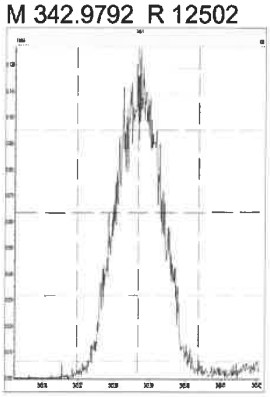

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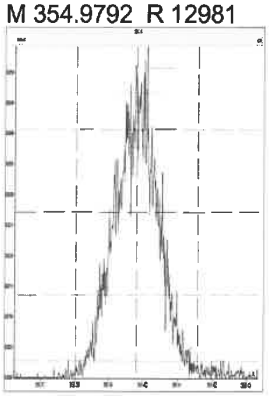

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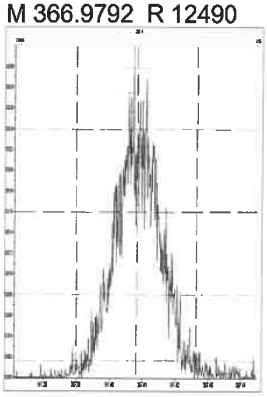

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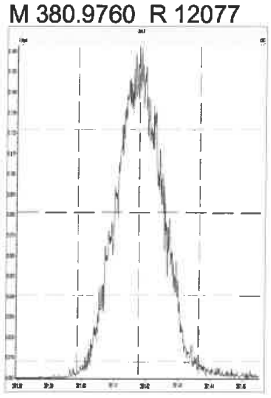

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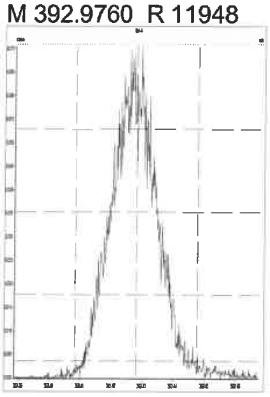

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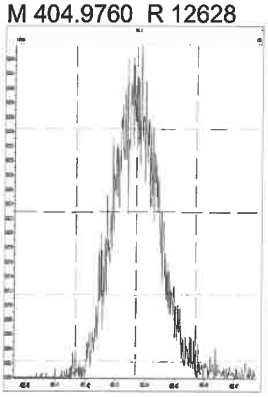

M 416.9760_R 13021

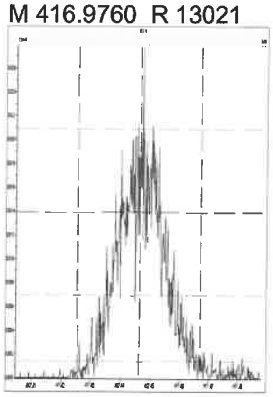

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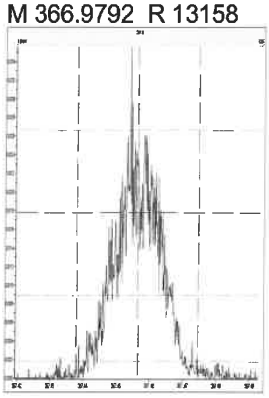

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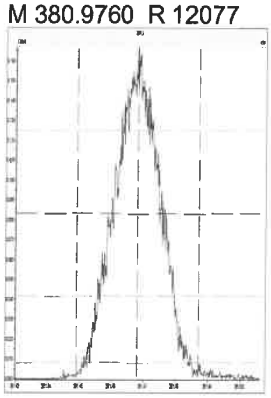

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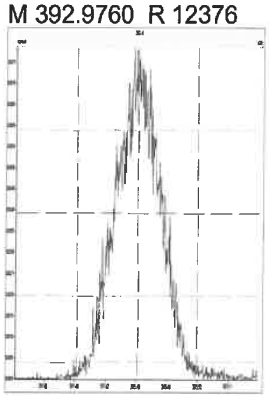

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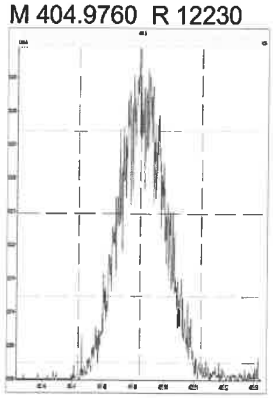

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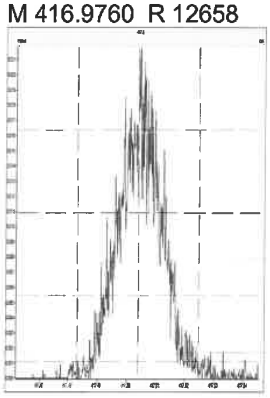

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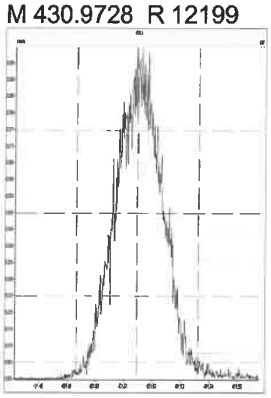

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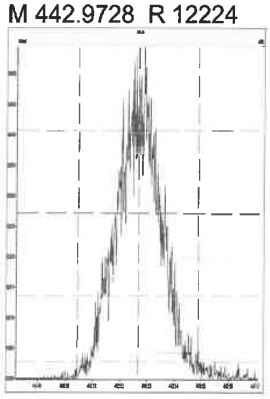

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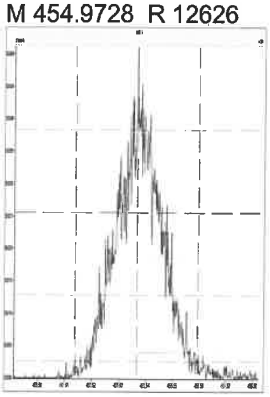

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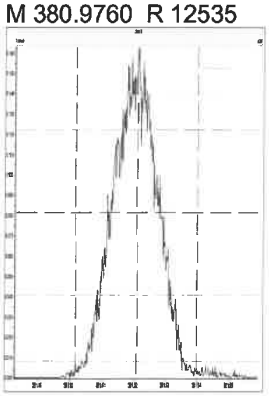

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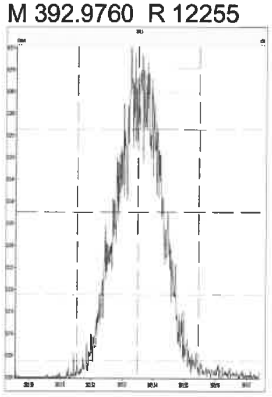

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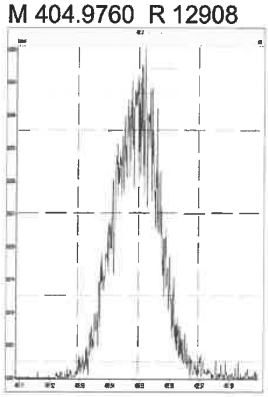

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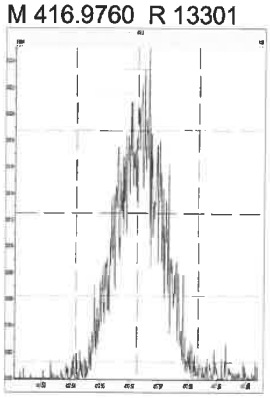

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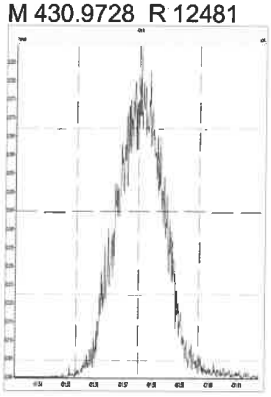

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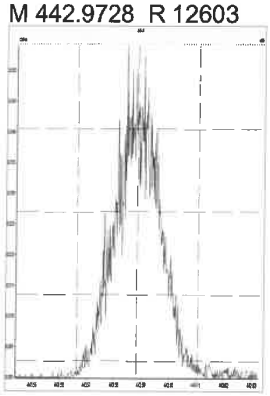

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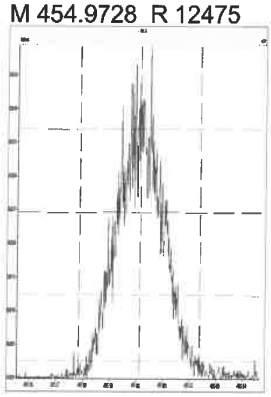

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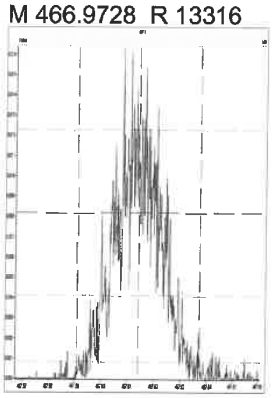

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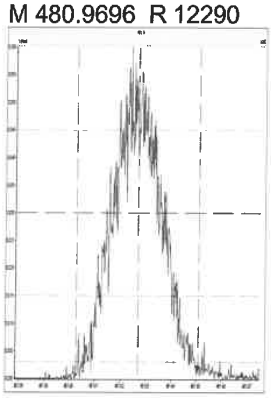

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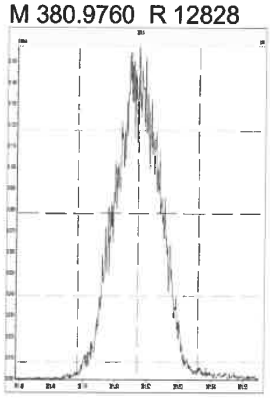

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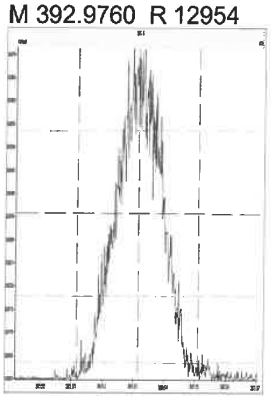

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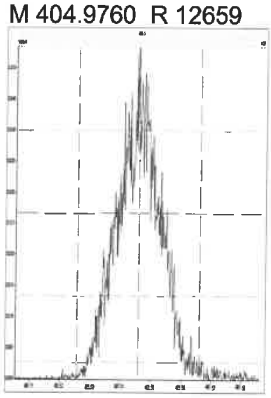

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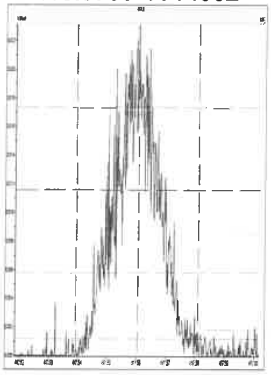

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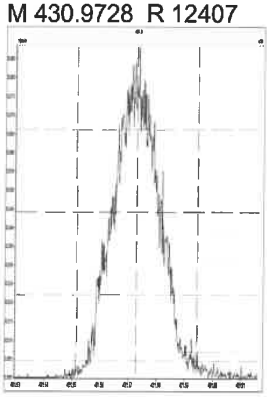

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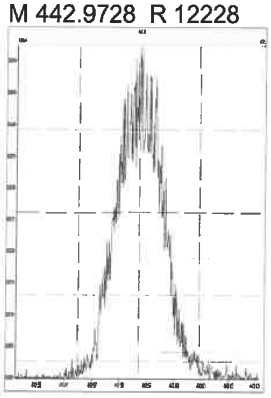

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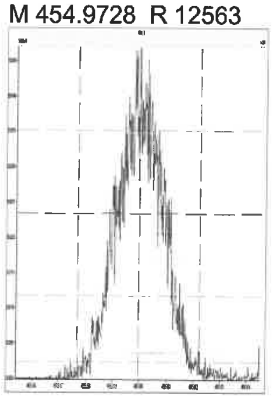

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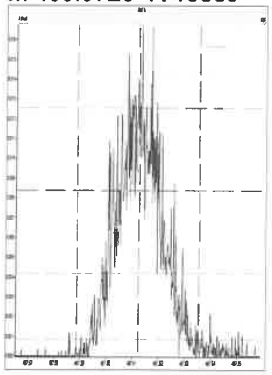

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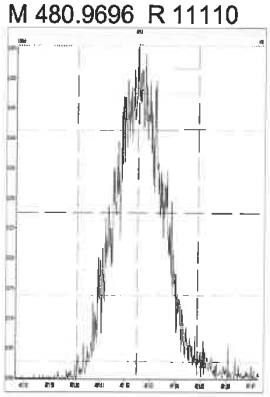

M 492.9696_R 12345

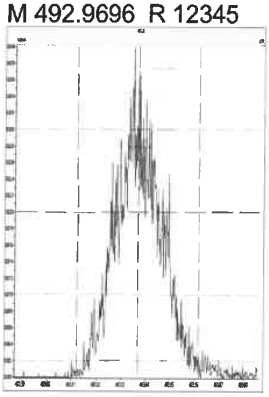

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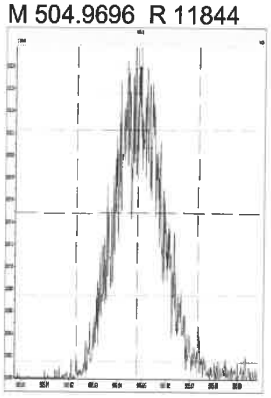

773702

M 516.9697 R 13171

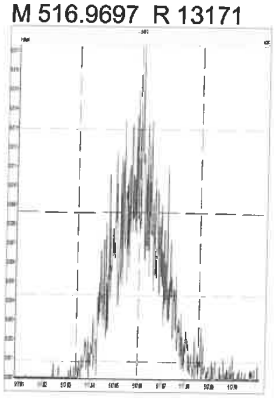

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 13-Aug-2021 04:53:01 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081221B CS-4 HRDXNL4_00099
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 13-Aug-2021 15:47:54 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1625

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.885	120823080	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.371	191807766	0.78	1.6249	97.7	97.7	0.1444	0.1444	97.70	
2,3,7,8-TCDF	17.386	19758137	0.76	1.0239	10.1	10.1	0.0122	0.0122	101	
A Non-2,3,7,8-sub-TCDF	17.076						0.0122	0.0122		Rn
S Total TCDF					10.1	10.1	0.0122	0.0122		
D 13C-2,3,7,8-TCDD	18.082	110882880	0.82	0.8993	102.0	102.0	0.1488	0.1488	102	
2,3,7,8-TCDD	18.097	14148941	0.78	1.2541	10.2	10.2	0.0164	0.0164	102	
$ 37Cl4-2,3,7,8-TCDD	18.097	14882170		1.1071	11.1	11.1	0.0198	0.0198	111	
A Non-2,3,7,8-sub-TCDD	17.530						0.0164	0.0164		
S Total TCDD					10.2	10.2	0.0164	0.0164		
D 13C-1,2,3,7,8-PeCDF	22.408	145077088	1.54	1.2101	99.2	99.2	0.2151	0.2151	99.23	
1,2,3,7,8-PeCDF	22.435	77076800	1.61	1.0611	50.1	50.1	0.1452	0.1452	100	
D 13C-2,3,4,7,8-PeCDF	23.758	149459427	1.57	1.2395	99.8	99.8	0.2100	0.2100	99.80	
2,3,4,7,8-PeCDF	23.785	76612617	1.57	1.0184	50.3	50.3	0.1565	0.1565	101	
A F1 PeCDFs	20.108						0.006702	0.006702		
A Non-2,3,7,8-sub-PeCDF	23.282						0.1507	0.1507		n
S Total PeCDF					100.4	100.4	0.1509	0.1509		
D 13C-1,2,3,7,8-PeCDD	24.481	97674279	1.60	0.7612	106.2	106.2	0.0875	0.0875	106	
1,2,3,7,8-PeCDD	24.508	51028954	1.60	1.0484	49.8	49.8	0.0467	0.0467	99.66	
A Non-2,3,7,8-sub-PeCDD	23.376						0.0467	0.0467		
S Total PeCDD					49.8	49.8	0.0467	0.0467		
D 13C-1,2,3,4,7,8-HxCDF	30.543	123407878	0.52	1.0837	91.6	91.6	0.3219	0.3219	91.55	
1,2,3,4,7,8-HxCDF	30.569	67054395	1.22	1.0851	50.1	50.1	0.3373	0.3373	100	
D 13C-1,2,3,6,7,8-HxCDF	30.716	125968167	0.52	1.1279	89.8	89.8	0.3093	0.3093	89.79	
1,2,3,6,7,8-HxCDF	30.743	70367219	1.21	1.1260	49.6	49.6	0.3155	0.3155	99.22	
D 13C-2,3,4,6,7,8-HxCDF	31.541	120065431	0.52	1.0637	90.7	90.7	0.3280	0.3280	90.74	
2,3,4,6,7,8-HxCDF	31.554	69816459	1.21	1.1675	49.8	49.8	0.2497	0.2497	99.61	
D 13C-1,2,3,7,8,9-HxCDF	32.340	111670370	0.52	0.9676	92.8	92.8	0.3605	0.3605	92.79	
1,2,3,7,8,9-HxCDF	32.353	65137917	1.22	1.1664	50.0	50.0	0.2452	0.2452	100	
A Non-2,3,7,8-sub-HxCDF	30.223						0.2822	0.2822		
S Total HxCDF					199.5	199.5	0.2869	0.2869		

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.153	124385583	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.727	90232648	1.25	0.7334	98.9	98.9	0.2663	0.2663	98.91	
1,2,3,4,7,8-HxCDD	31.741	48130592	1.26	1.0640	50.1	50.1	0.1747	0.1747	100	
D 13C-1,2,3,6,7,8-HxCDD	31.834	99764737	1.24	0.8802	91.1	91.1	0.2219	0.2219	91.12	
1,2,3,6,7,8-HxCDD	31.847	51012002	1.27	1.0001	51.1	51.1	0.1735	0.1735	102	
1,2,3,7,8,9-HxCDD	32.167	56517282	1.27	1.1325	52.5	52.5	0.1585	0.1585	105	
A Non-2,3,7,8-sub-HxCDD	30.895						0.1685	0.1685		
S Total HxCDD					153.8	153.8	0.1689	0.1689		
D 13C-1,2,3,4,6,7,8-HpCDF	33.778	96075007	0.44	0.7730	99.9	99.9	1.175	1.175	99.92	
1,2,3,4,6,7,8-HpCDF	33.778	70375103	1.06	1.4413	50.8	50.8	0.5576	0.5576	102	
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	91163008	0.45	0.7008	104.6	104.6	1.296	1.296	105	
1,2,3,4,7,8,9-HpCDF	34.872	60670603	1.04	1.3174	50.5	50.5	0.6867	0.6867	101	
A Non-2,3,7,8-sub-HpCDF	34.325						0.6171	0.6171		
S Total HpCDF					101.3	101.3	0.6222	0.6222		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	86615276	1.00	0.6472	107.6	107.6	0.5013	0.5013	108	
1,2,3,4,6,7,8-HpCDD	34.580	48919191	1.06	1.0943	51.6	51.6	0.3648	0.3648	103	
A Non-2,3,7,8-sub-HpCDD	34.301						0.3648	0.3648		
S Total HpCDD					51.6	51.6	0.3648	0.3648		
D 13C-OCDD	36.926	128524659	0.89	0.4472	231.1	231.1	0.2552	0.2552	116	
OCDF	37.034	91420397	0.91	1.4382	98.9	98.9	0.0984	0.0984	98.92	
OCDD	36.938	73424281	0.89	1.1070	103.2	103.2	0.1311	0.1311	103	

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 13-Aug-2021 04:53:01 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081221B CS-4 HRDXNL4_00099
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 13-Aug-2021 15:47:54 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1625

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.885	17.885	0		54686806	12897206	6870	17175	1877		
333.9339	17.885	17.885	0		66136274	15544069	8355	20887	1860	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.371	17.371	0	0.971	83900850	20122737	10170	25425	1979		
317.9389	17.371	17.371	0	0.971	107906916	25667779	16527	41317	1553	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.386	17.386	0	1.001	8506234	2069593	996	2490	2078		
305.8987	17.386	17.386	0	1.001	11251903	2708293	1299	3247	2085	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.008	17.069	-4	0.979	32777	7988	996	2490	8		
305.8987	17.008	17.069	-4	0.979	36206	8566	1299	3247	7	0.91(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.082	18.082	0	1.011	49983142	11176956	6870	17175	1627		
333.9339	18.082	18.082	0	1.011	60899738	13724882	8355	20887	1643	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.097	18.097	0	1.001	6209560	1443993	1032	2580	1399		
321.8936	18.097	18.097	0	1.001	7939381	1769626	1014	2535	1745	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.097	18.097	0	1.012	14882170	3415139	2495	6237	1369		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.530						1032	2580			
321.8936	17.530						1014	2535			
13C-1,2,3,7,8-PeCDF											
351.9000	22.408	22.408	0	1.253	88015615	14866618	18082	45205	822		
353.8970	22.408	22.408	0	1.253	57061473	9684838	11528	28820	840	1.54(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.435	22.435	0	1.001	47503999	8029165	9099	22747	882		
341.8567	22.435	22.435	0	1.001	29572801	5043685	6028	15070	837	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.758	23.758	0	1.328	91330484	14492670	18082	45205	801		
353.8970	23.758	23.758	0	1.328	58128943	9227332	11528	28820	800	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.785	23.785	0	1.001	46804975	7290852	9099	22747	801		
341.8567	23.785	23.785	0	1.001	29807642	4633424	6028	15070	769	1.57(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.108						293	732			
341.8567	20.108						380	950			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.953	23.261	-18	1.024	445520	51770	9099	22747	6		
341.8567	22.967	23.261	-18	1.025	303687	40130	6028	15070	7	1.47(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.481	24.481	0	1.369	60134840	9024707	4348	10870	2076		
369.8919	24.481	24.481	0	1.369	37539439	5739550	3230	8075	1777	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.508	24.508	0	1.001	31373727	4724152	1887	4717	2504		
357.8516	24.508	24.508	0	1.001	19655227	2975792	1004	2510	2964	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.376						1887	4717			
357.8516	23.376						1004	2510			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.543	30.543	0	0.950	42443323	8222274	16863	42157	488		
385.8610	30.543	30.543	0	0.950	80964555	15611387	31396	78490	497	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.569	30.569	0	1.001	36858720	7045492	17736	44340	397		
375.8178	30.556	30.569	-1	1.000	30195675	5775040	17161	42902	337	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.716	30.716	0	0.955	42986227	8377426	16863	42157	497		
385.8610	30.716	30.716	0	0.955	82981940	16181278	31396	78490	515	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.743	30.743	0	1.001	38540297	7596282	17736	44340	428		
375.8178	30.743	30.743	0	1.001	31826922	6267425	17161	42902	365	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.541	31.541	0	0.981	41217000	10265979	16863	42157	609		
385.8610	31.541	31.541	0	0.981	78848431	19661655	31396	78490	626	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.554	31.554	0	1.000	38296321	9720741	17736	44340	548		
375.8178	31.554	31.554	0	1.000	31520138	8001693	17161	42902	466	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.340	32.340	0	1.006	38048544	10568134	16863	42157	627		
385.8610	32.340	32.340	0	1.006	73621826	19936024	31396	78490	635	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.353	32.353	0	1.000	35817543	9816189	17736	44340	553		
375.8178	32.353	32.353	0	1.000	29320374	8019511	17161	42902	467	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.223						17736	44340			
375.8178	30.223						17161	42902			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.153	0		69092333	19302303	15554	38885	1241		
403.8529	32.153	32.153	0		55293250	15281718	11469	28672	1332	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.727	31.727	0	0.987	50124335	13390510	15554	38885	861		
403.8529	31.727	31.727	0	0.987	40108313	10750642	11469	28672	937	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.741	31.741	0	1.000	26841113	7441919	8942	22355	832		
391.8127	31.741	31.741	0	1.000	21289479	5899564	9012	22530	655	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.834	31.834	0	0.990	55214396	14257616	15554	38885	917		
403.8529	31.820	31.834	-1	0.990	44550341	11608320	11469	28672	1012	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.847	31.847	0	1.000	28532222	7492220	8942	22355	838		
391.8127	31.847	31.847	0	1.000	22479780	5803550	9012	22530	644	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.167	32.167	0	1.014	31631163	8659553	8942	22355	968		
391.8127	32.167	32.167	0	1.014	24886119	6887391	9012	22530	764	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.895						8942	22355			
391.8127	30.895						9012	22530			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.778	33.778	0	1.051	29360736	9502846	36428	91070	261		
419.8220	33.778	33.778	0	1.051	66714271	21238861	89188	222970	238	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	36146038	11741817	47121	117802	249		
409.7789	33.778	33.778	0	1.000	34229065	11422730	51701	129252	221	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.860	0	1.084	28141326	8534393	36428	91070	234		
419.8220	34.860	34.860	0	1.084	63021682	18774346	89188	222970	211	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.872	0	1.000	30956677	9218562	47121	117802	196		
409.7789	34.872	34.872	0	1.000	29713926	8762276	51701	129252	169	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						47121	117802			
409.7789	34.325						51701	129252			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.075	43264839	13587353	19752	49380	688		
437.8140	34.568	34.568	0	1.075	43350437	13578932	25134	62835	540	1.00(0.88-1.20)	

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	25153860	7699978	23089	57722	333		
425.7737	34.580	34.580	0	1.000	23765331	7342031	20289	50722	362	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						23089	57722			
425.7737	34.301						20289	50722			
13C-OCDD											
469.7779	36.926	36.926	0	1.148	60345859	15339076	7091	17727	2163		
471.7750	36.926	36.926	0	1.148	68178800	17301990	8693	21732	1990	0.89(0.76-1.02)	
OCDF											
441.7428	37.034	37.034	0	1.003	43464132	11290082	4445	11112	2540		
443.7399	37.022	37.034	-1	1.003	47956265	12196264	4790	11975	2546	0.91(0.76-1.02)	
OCDD											
457.7377	36.938	36.938	0	1.000	34651085	8945453	4659	11647	1920		
459.7348	36.938	36.938	0	1.000	38773196	10079357	4818	12045	2092	0.89(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

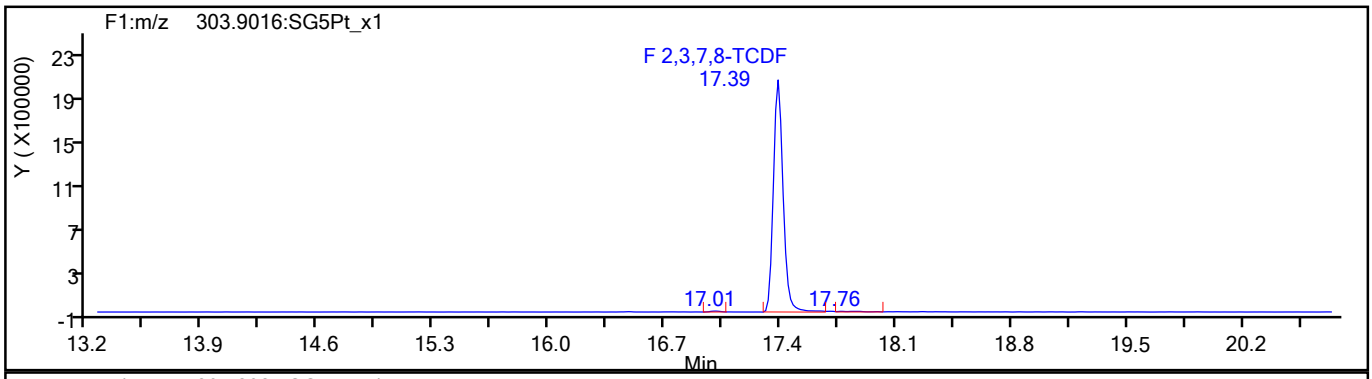

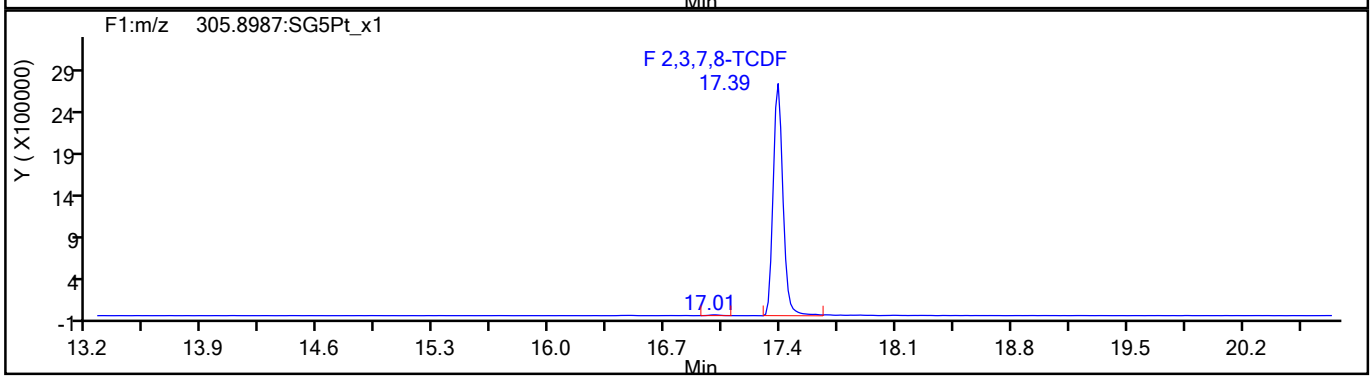

TCDF Standards

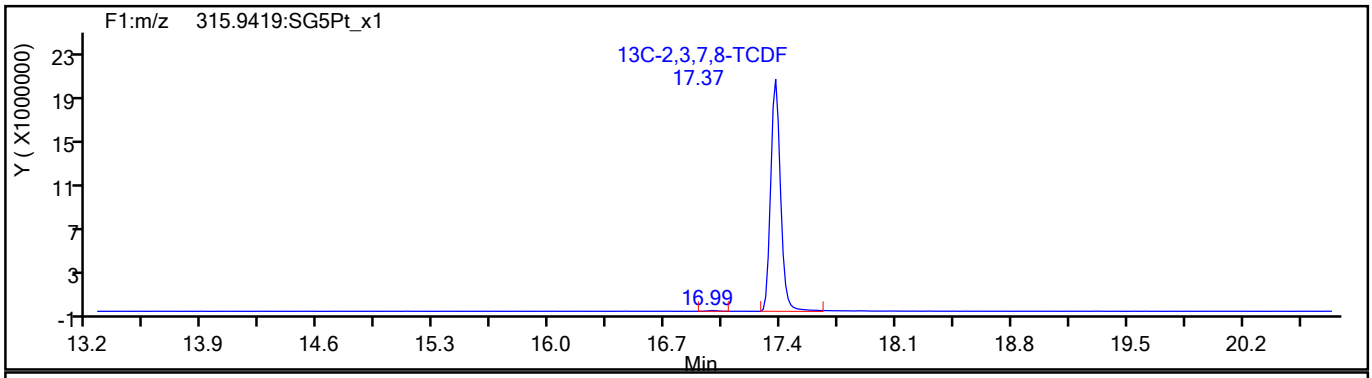

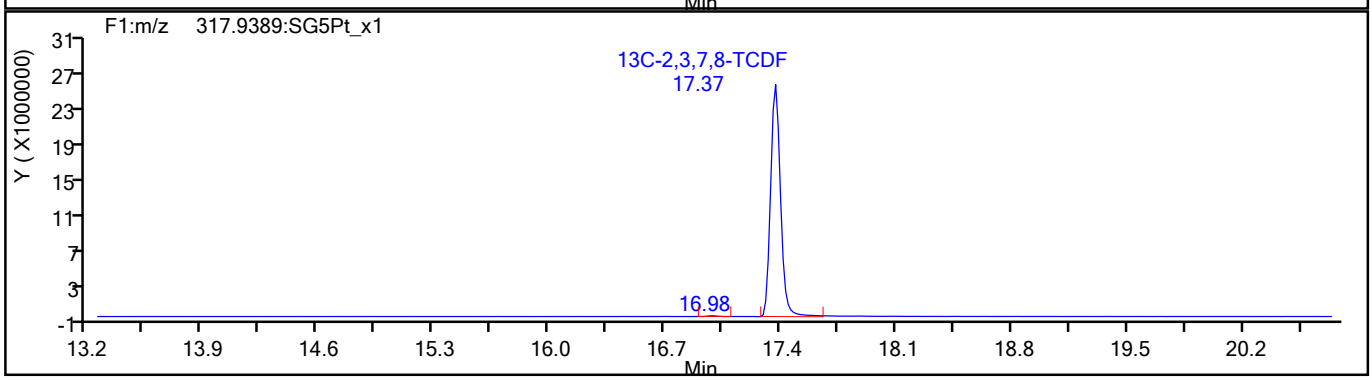

773710

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

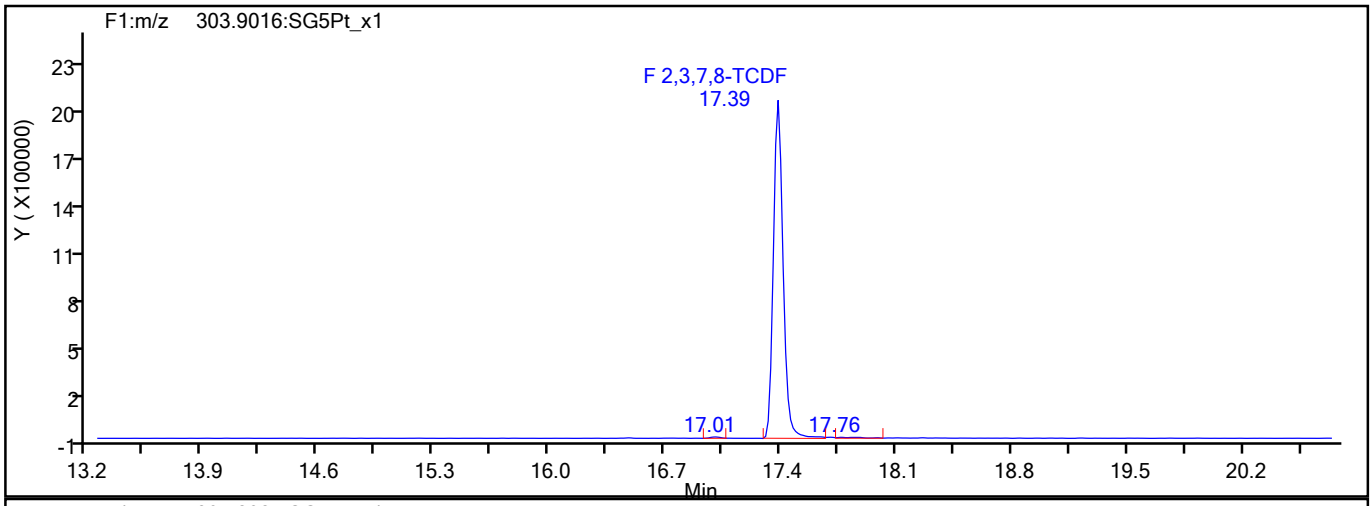

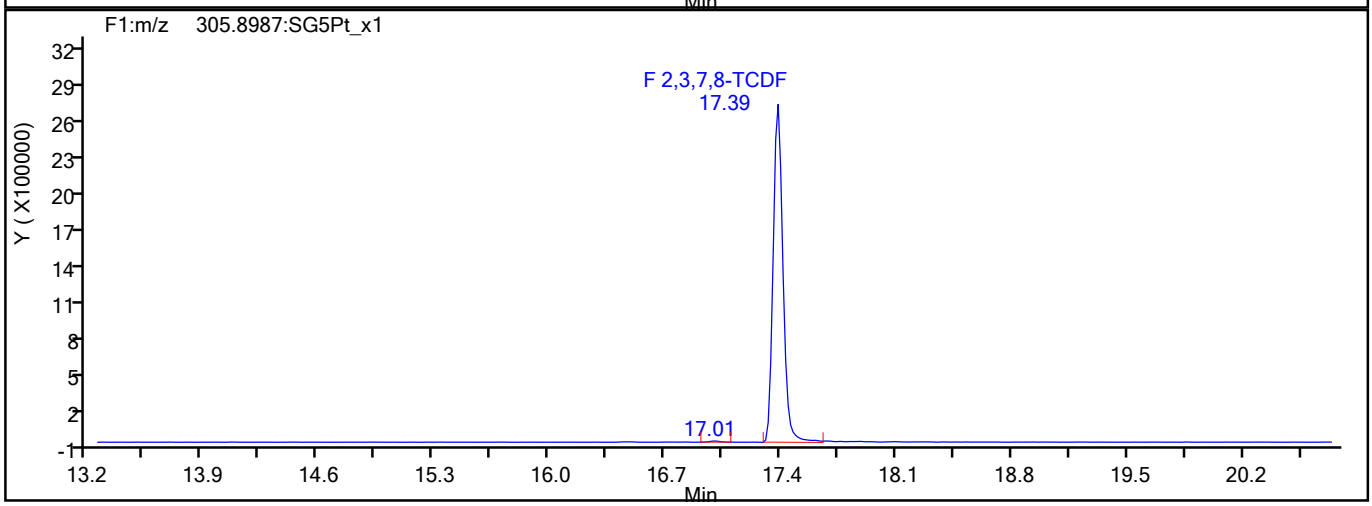

TCDF Interference Mass

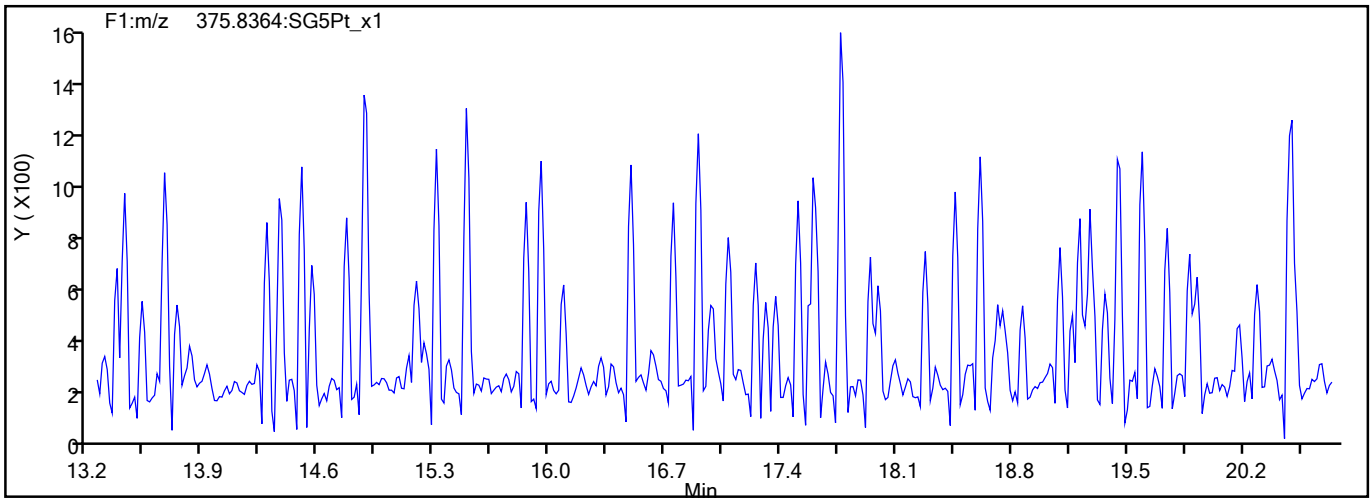

773711

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

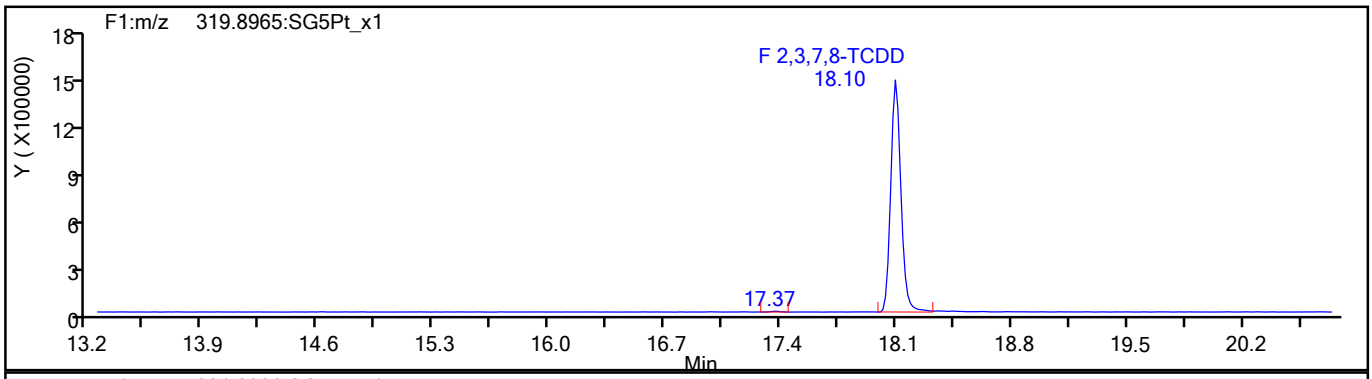

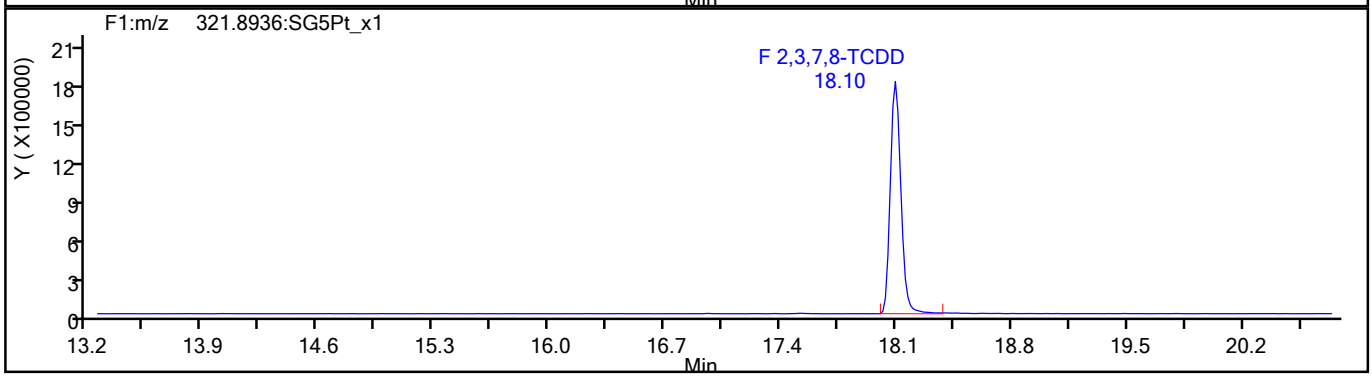

TCDD Standards

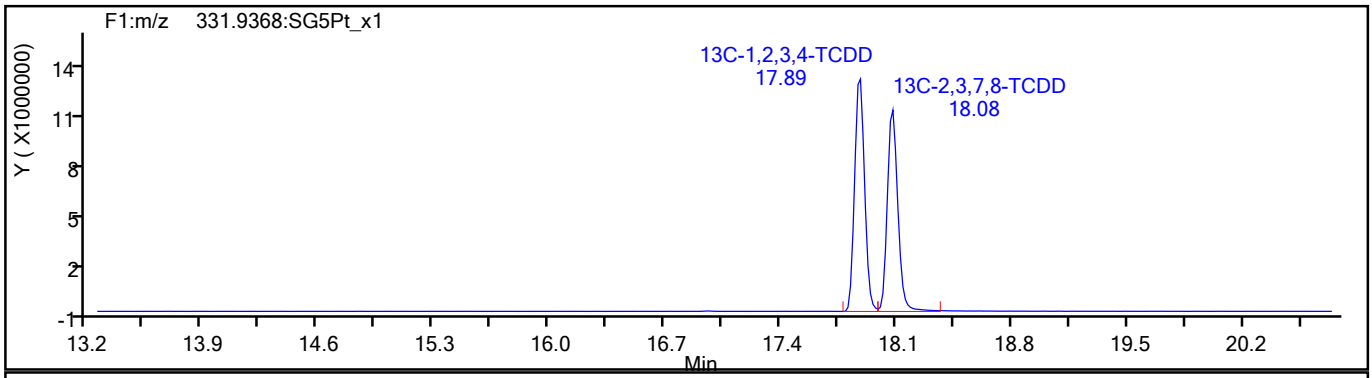

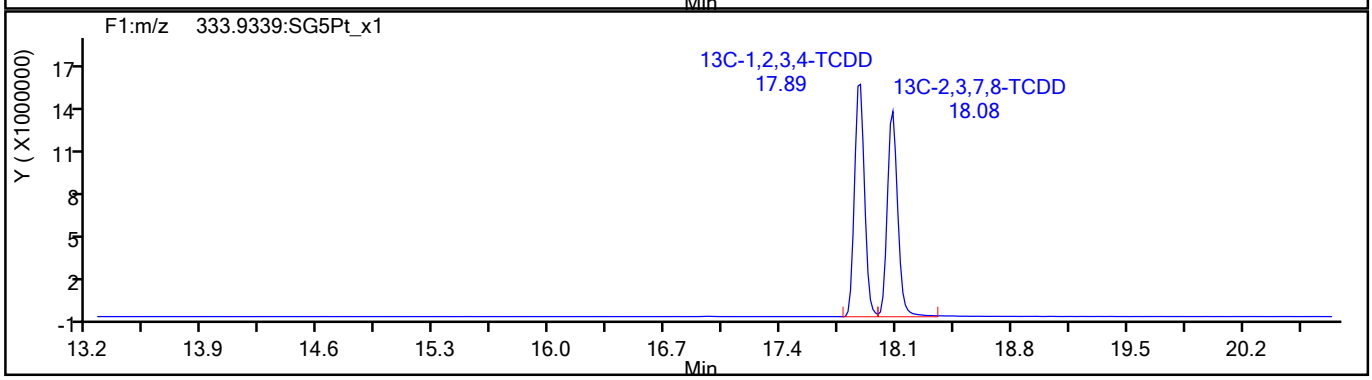

773712

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

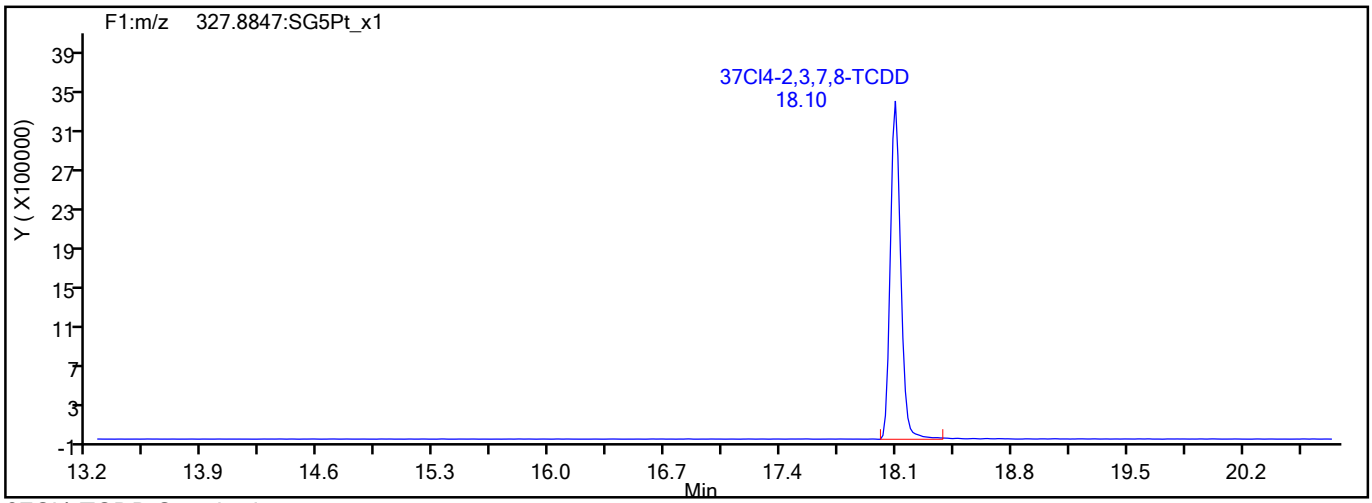

37Cl4-TCDD Standards

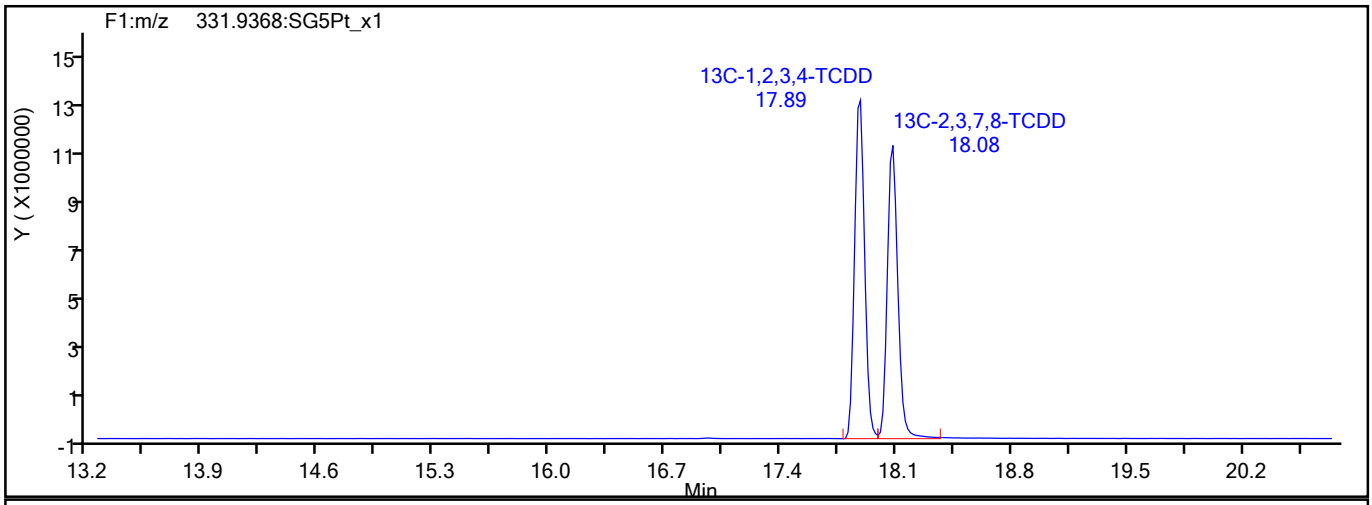

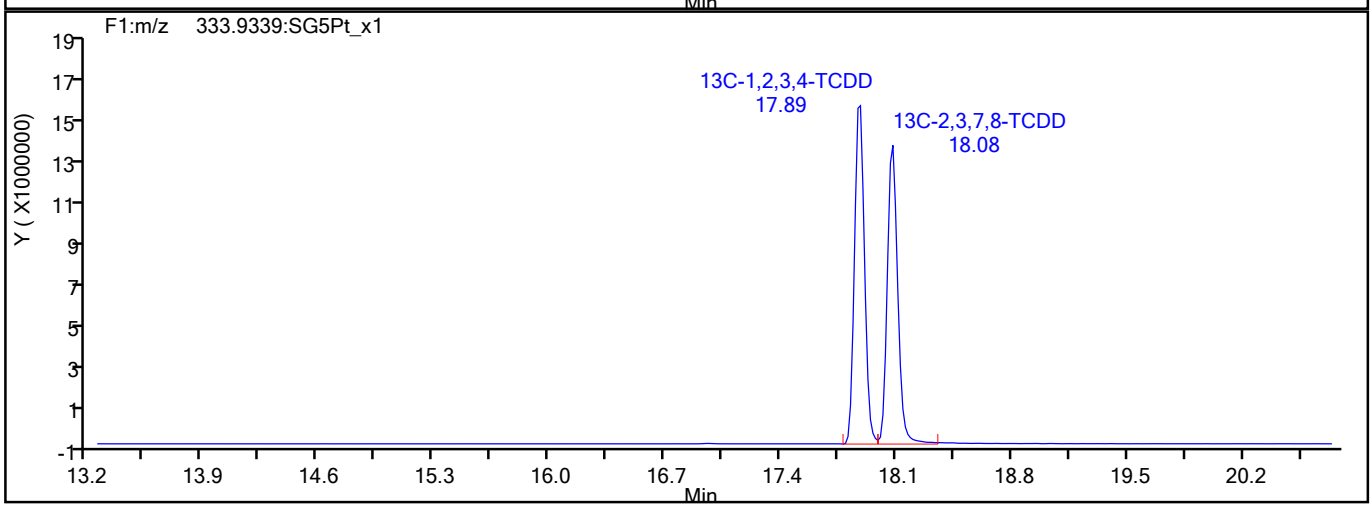

773713

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

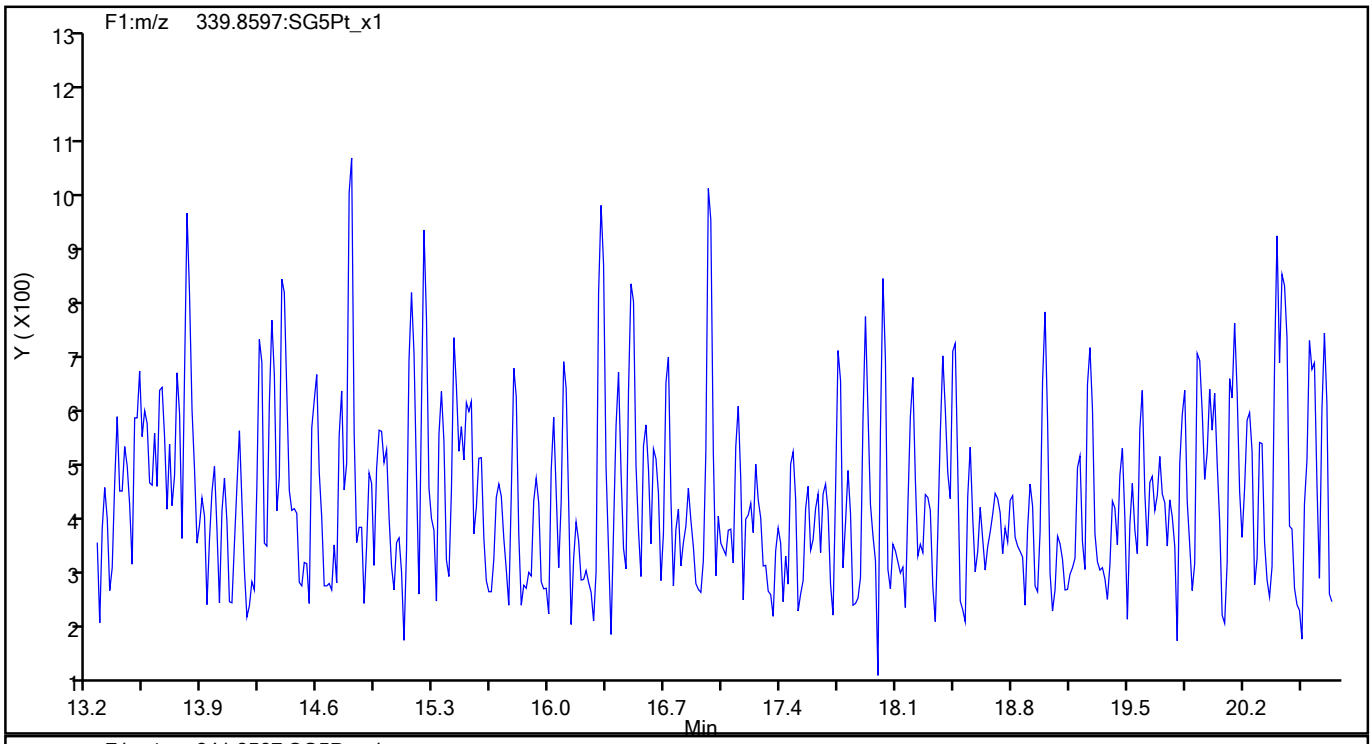

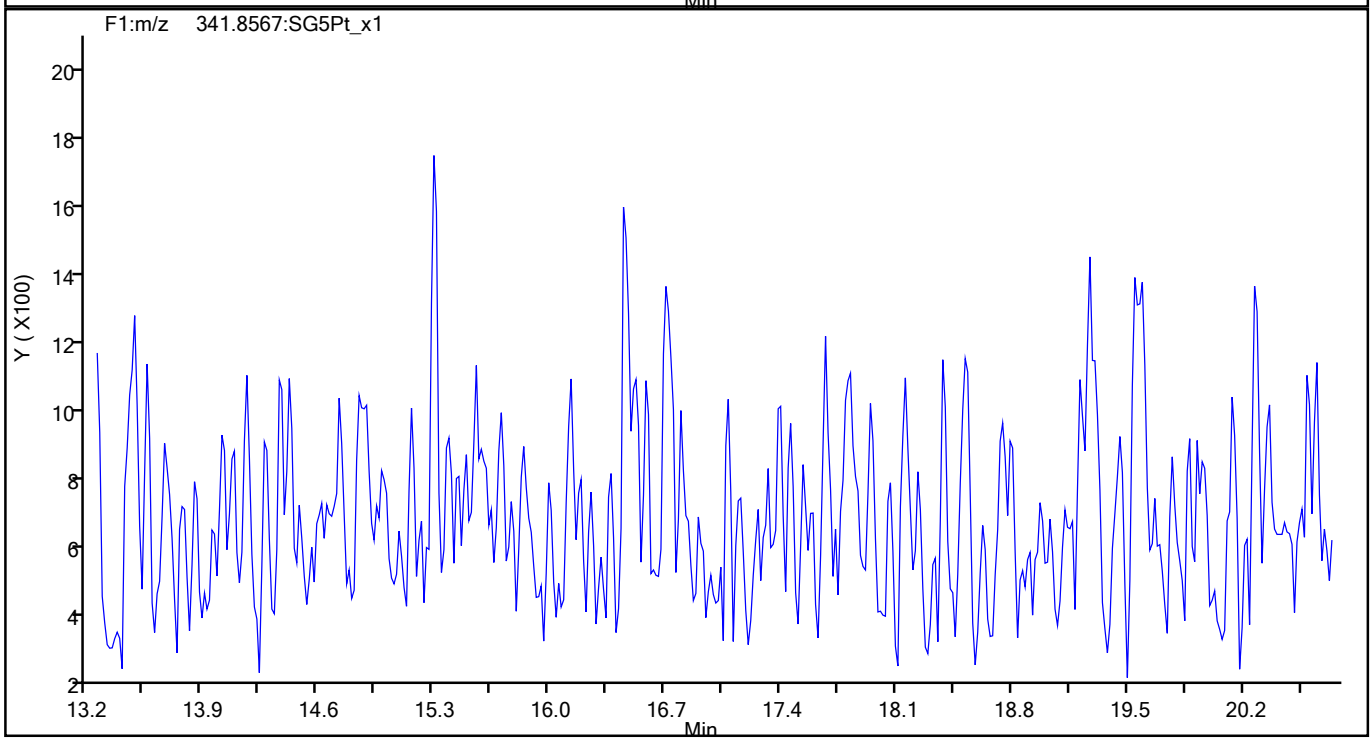

773714

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

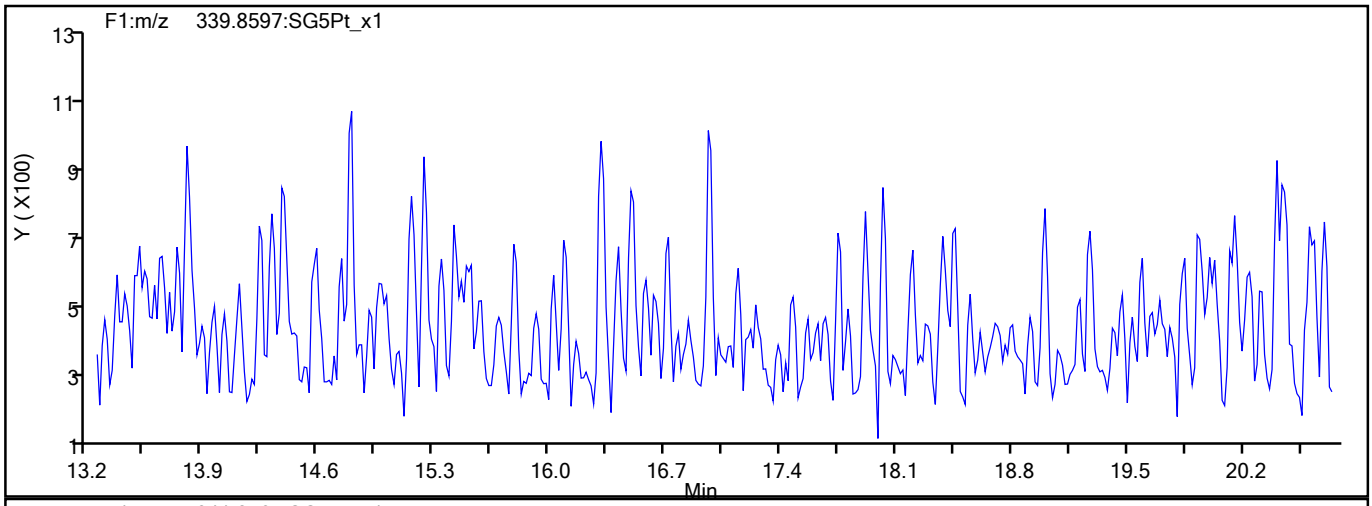

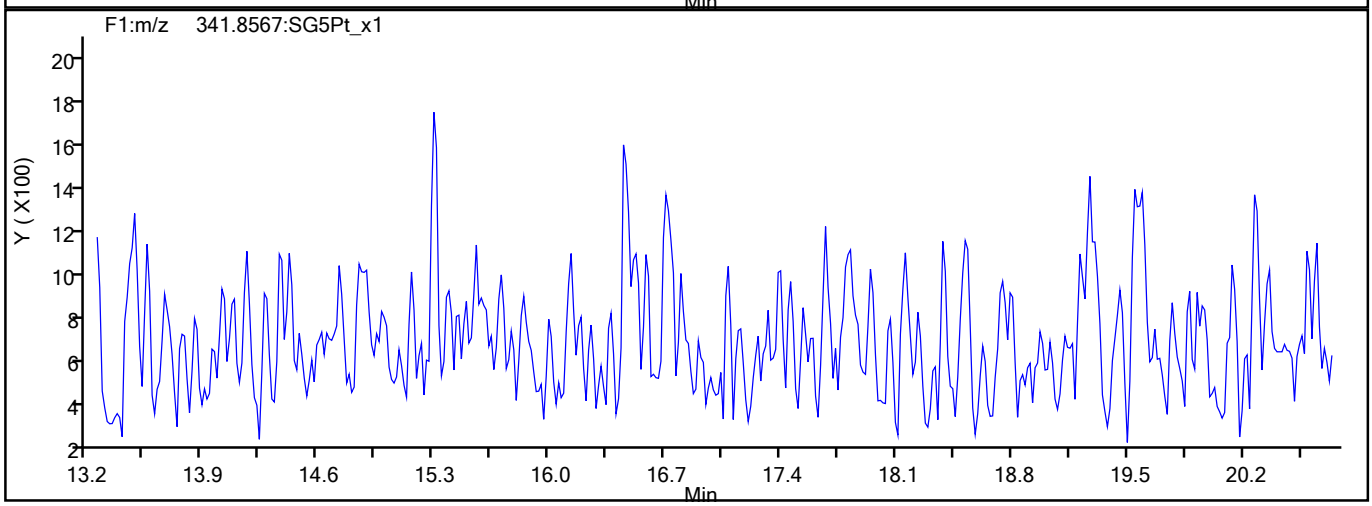

F1 PeCDFs Interference Mass

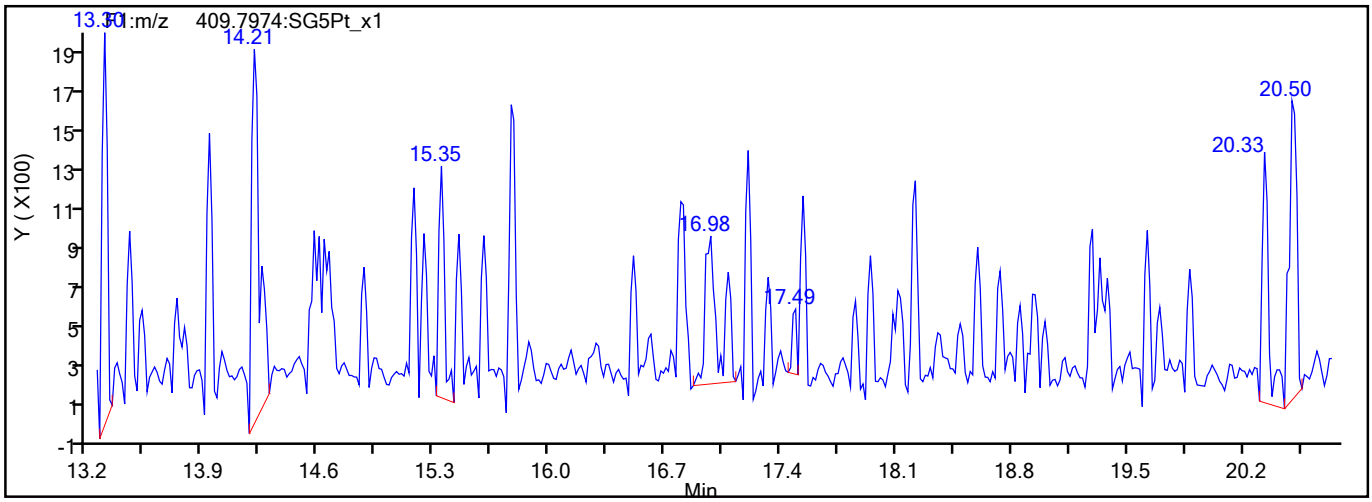

773715

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

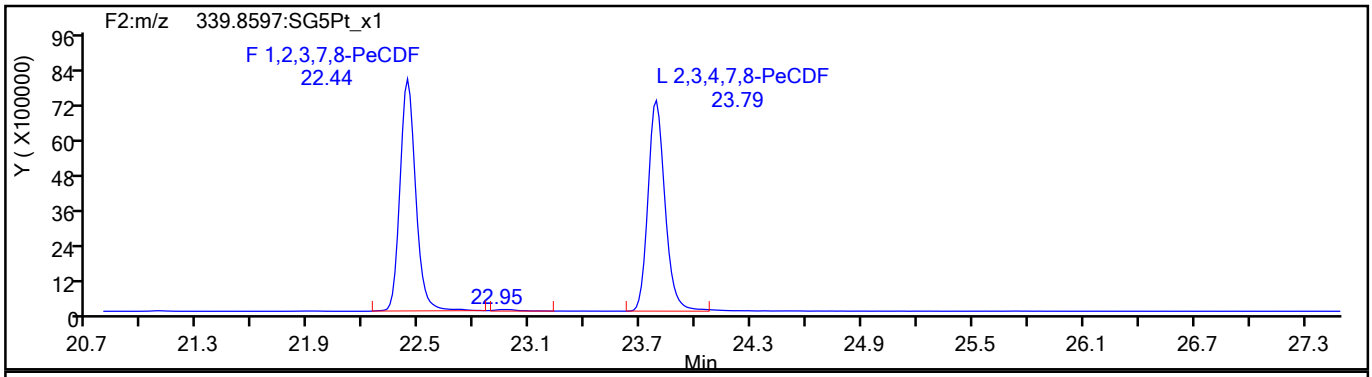

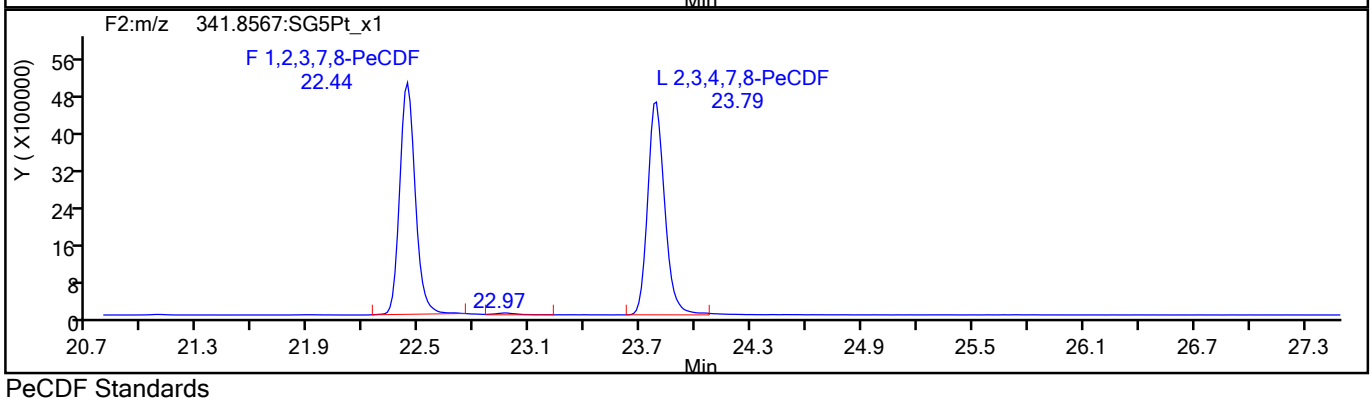

PeCDF Standards

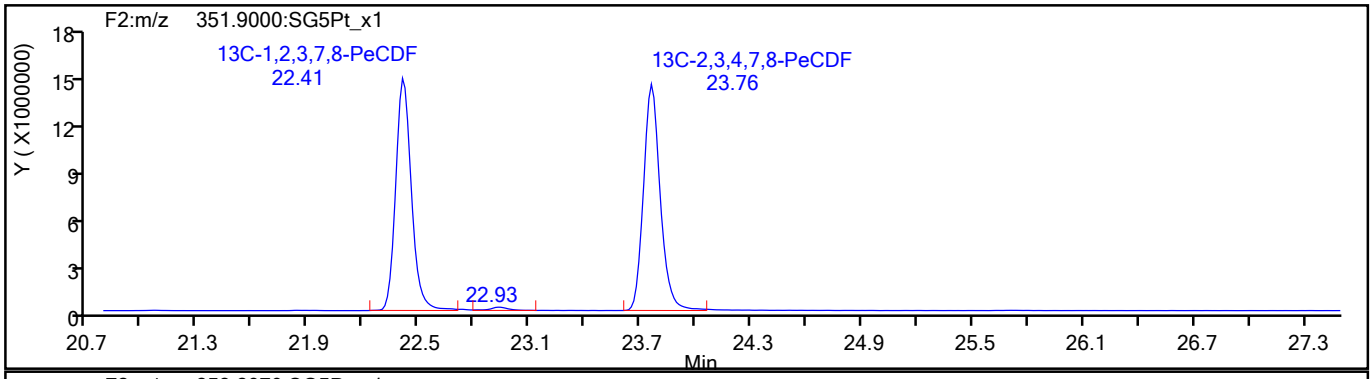

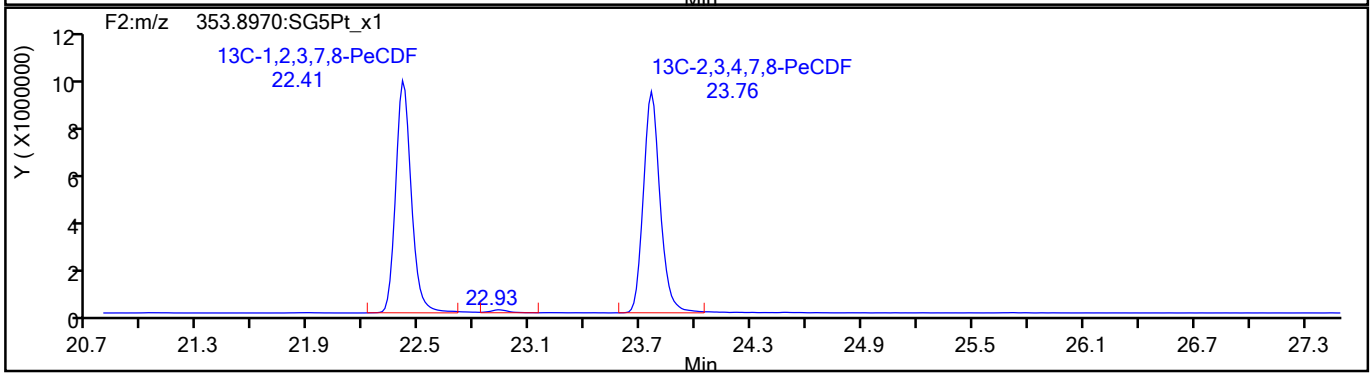

773716

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

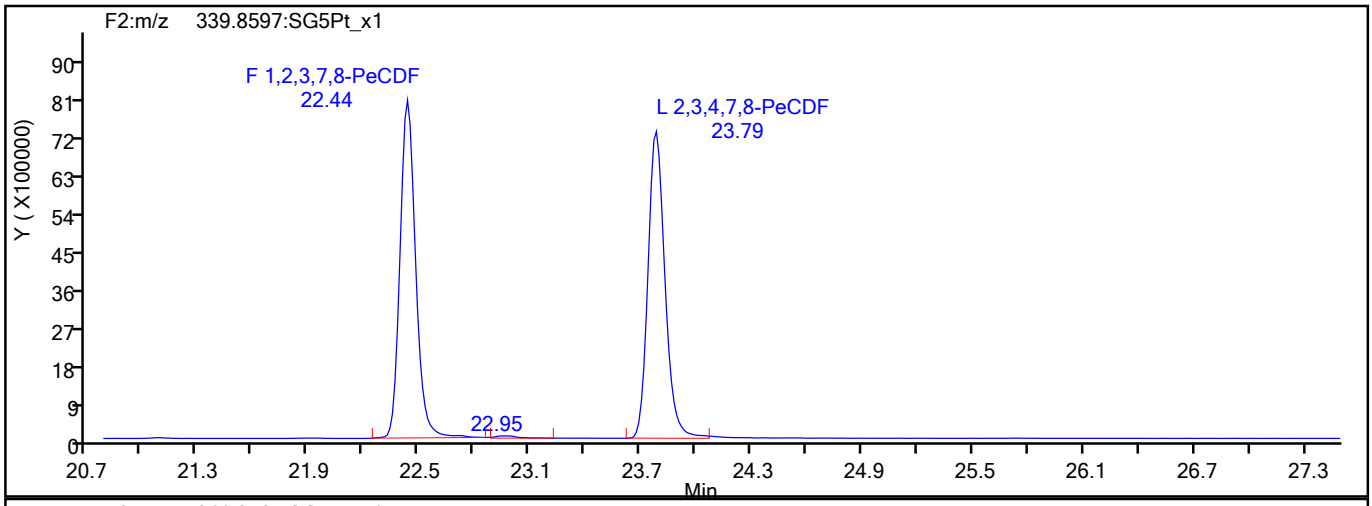

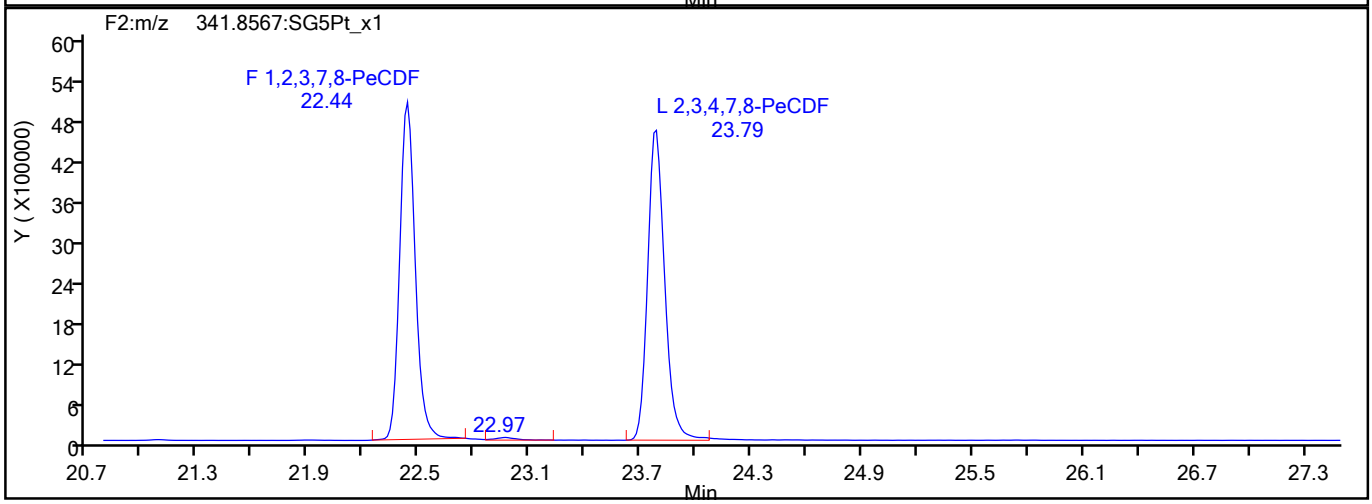

PeCDF Interference Mass

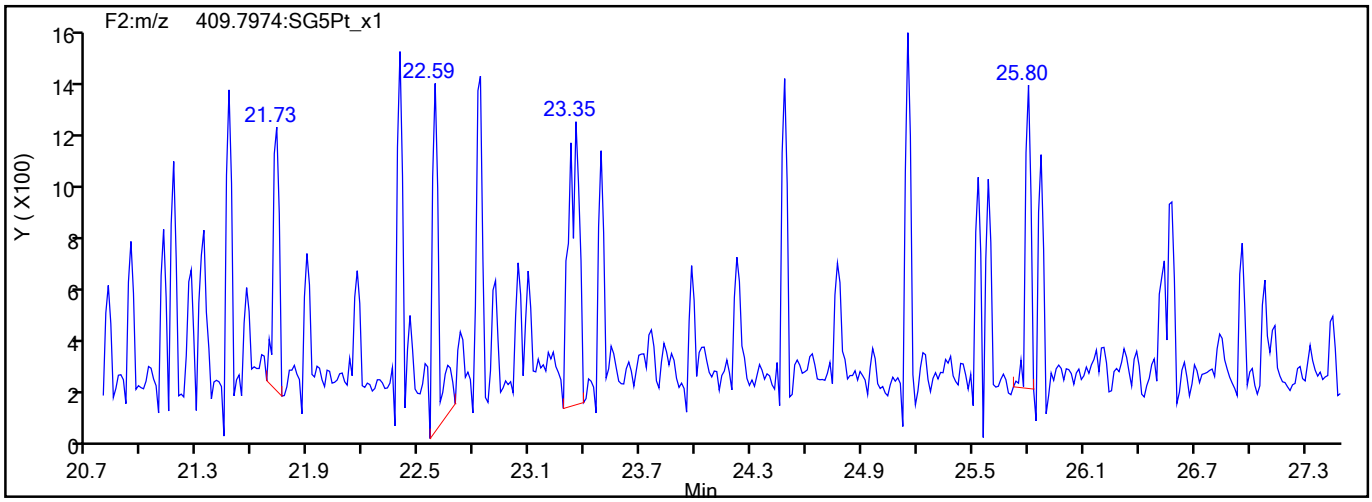

773717

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

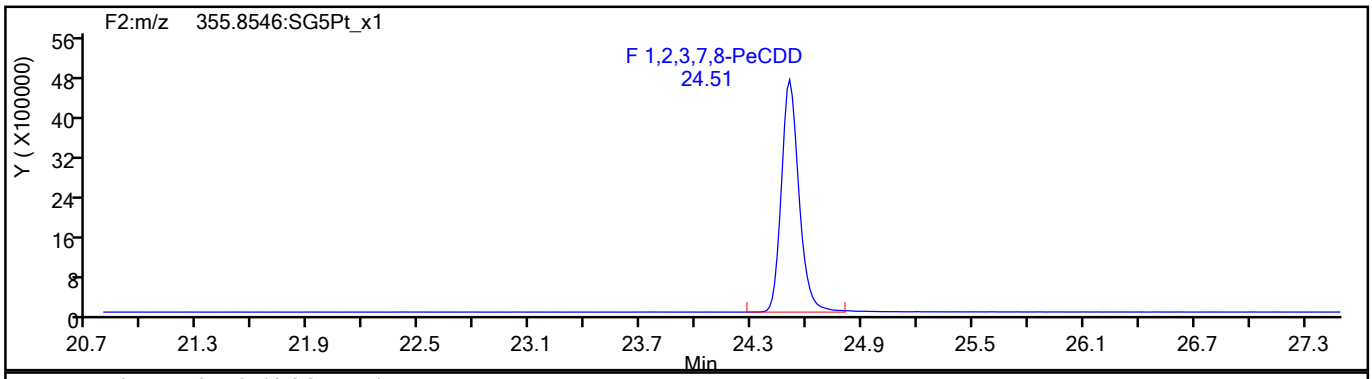

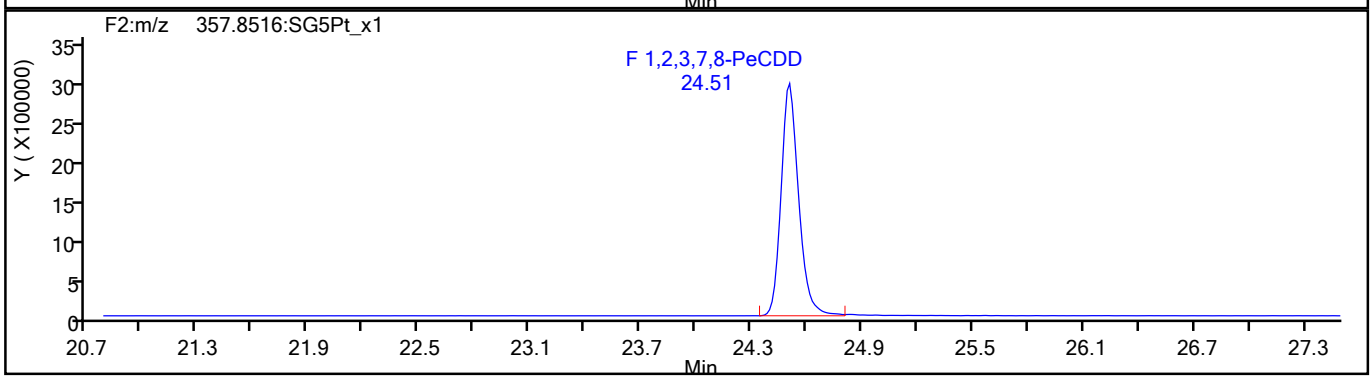

PeCDD Standards

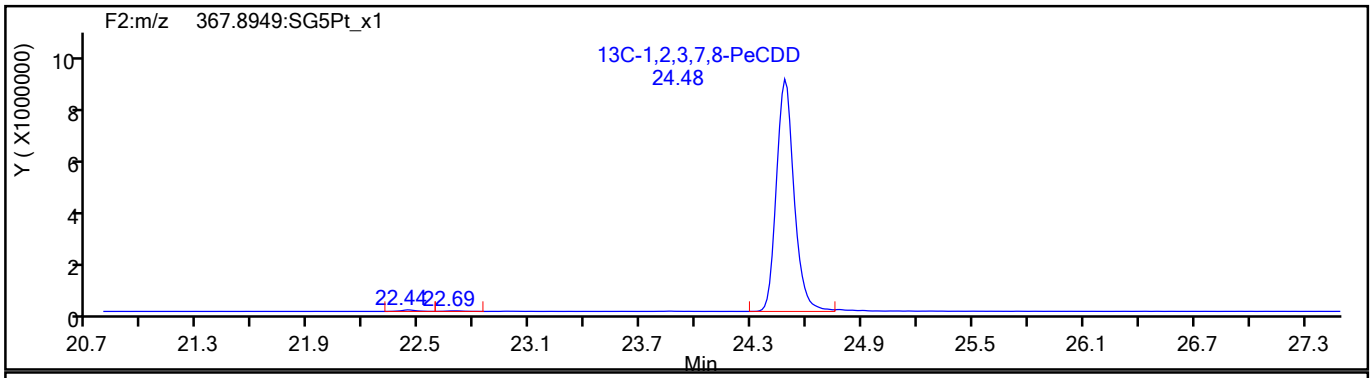

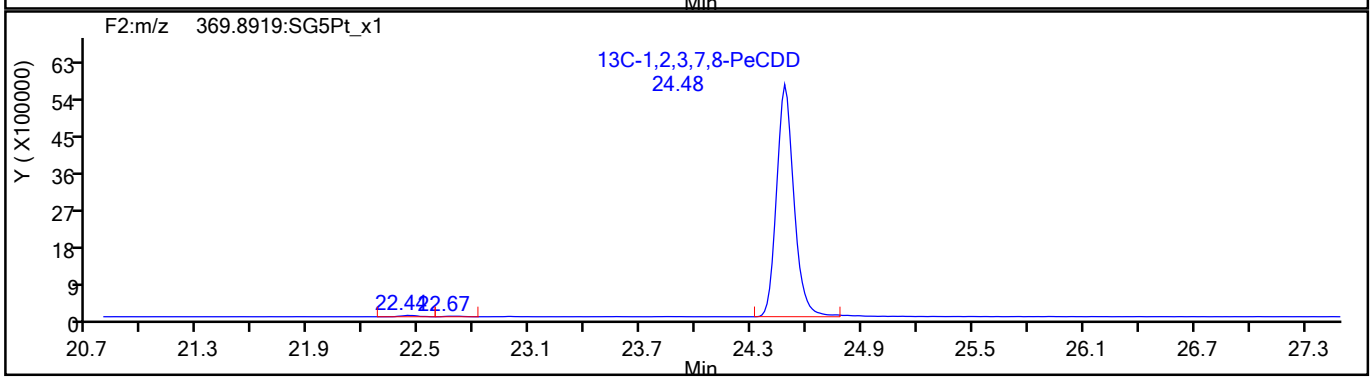

773718

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

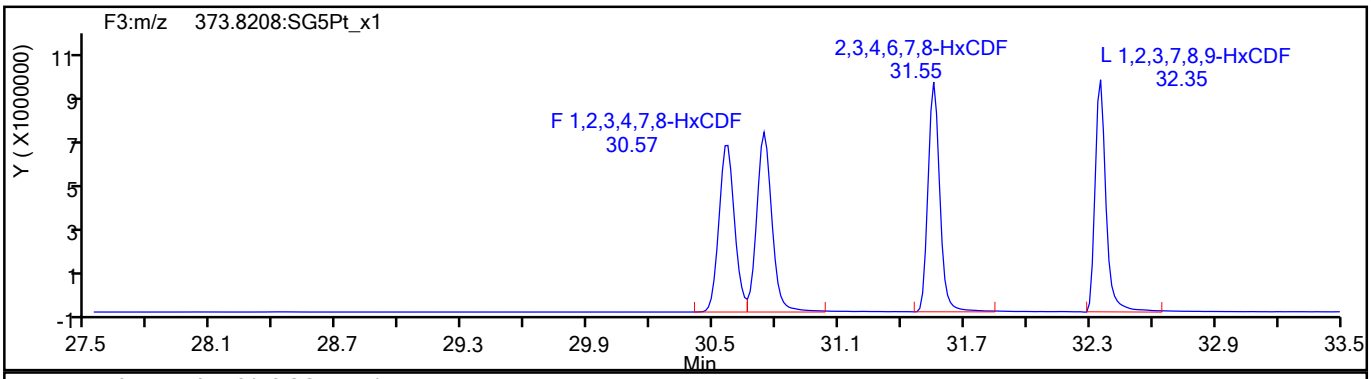

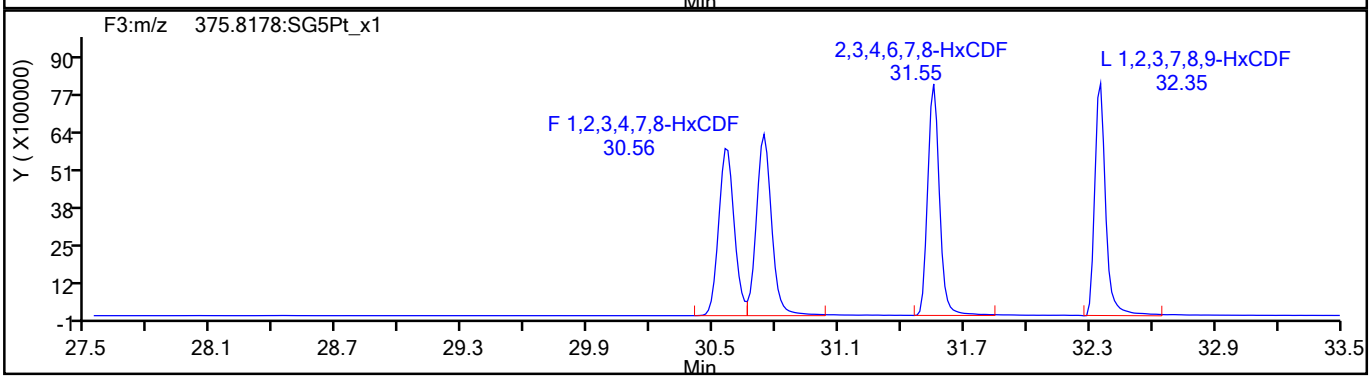

HxCDF Standards

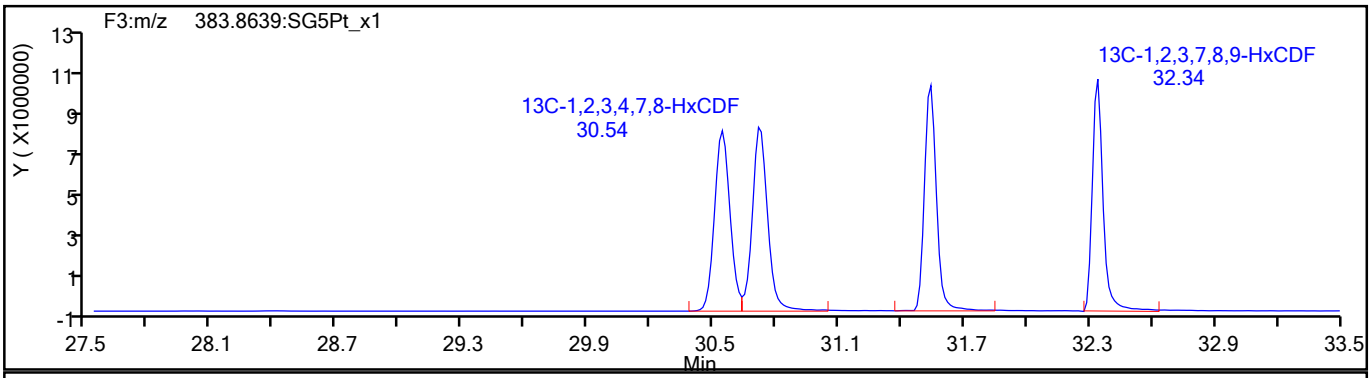

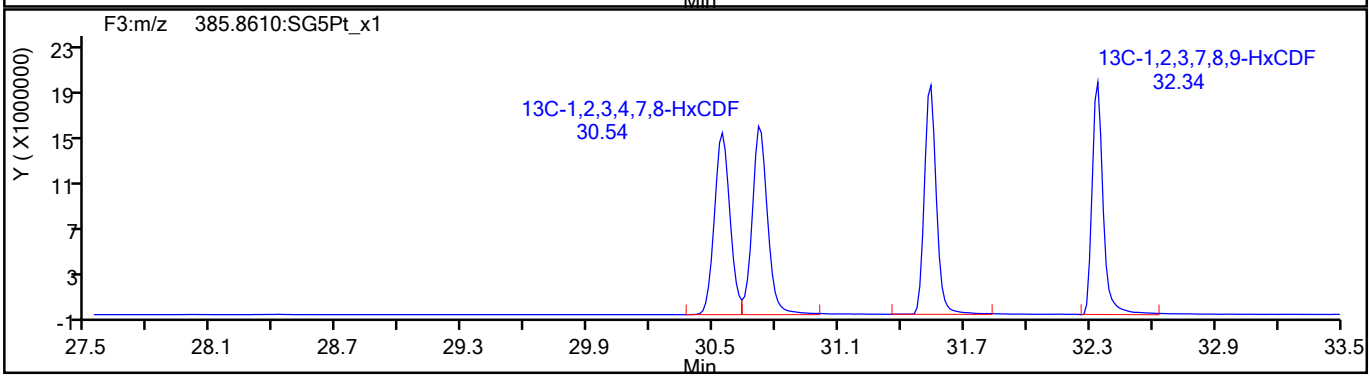

773719

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

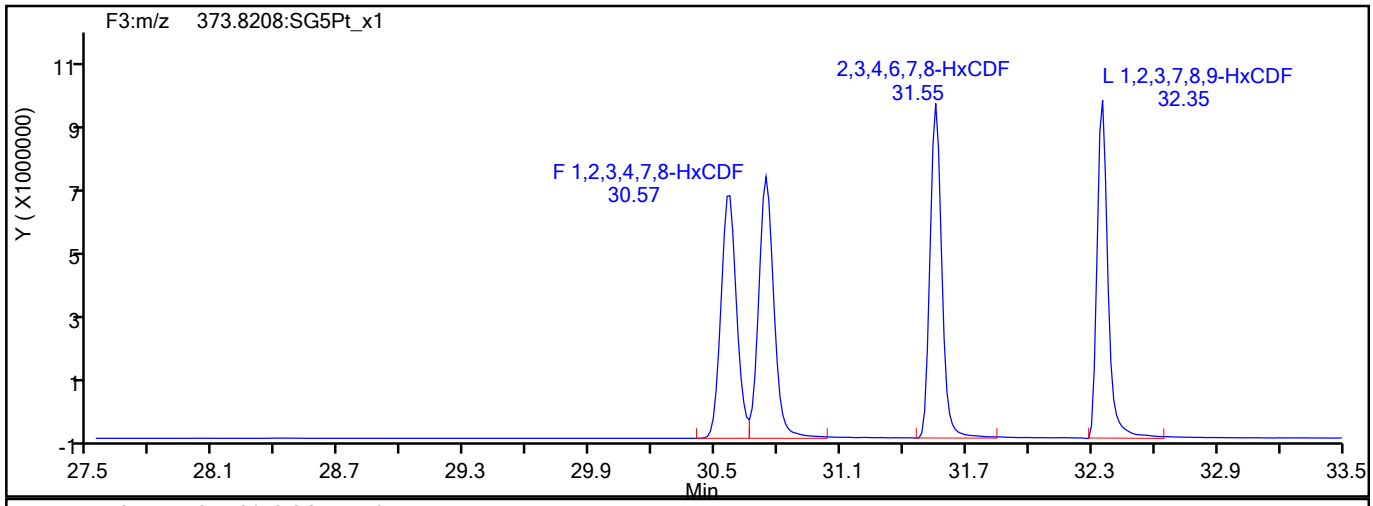

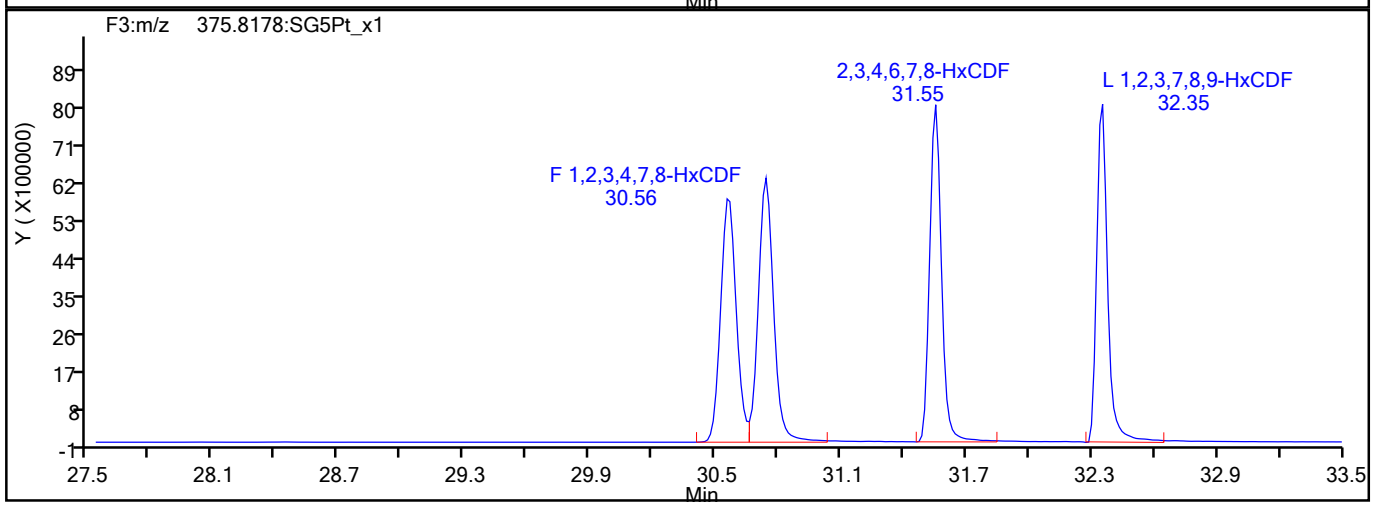

HxCDF Interference Mass

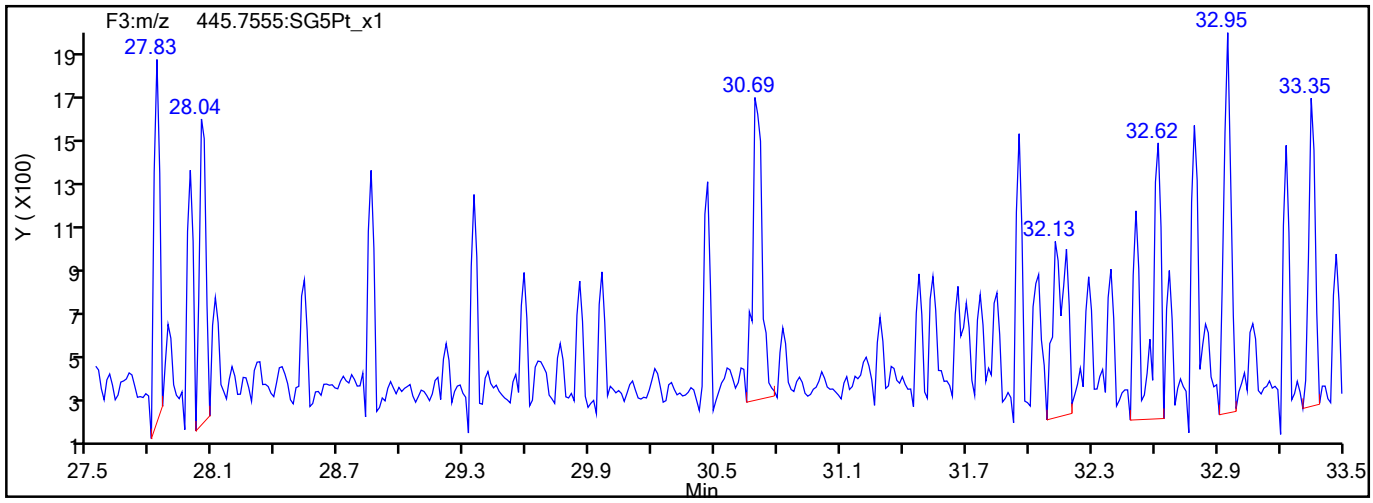

773720

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

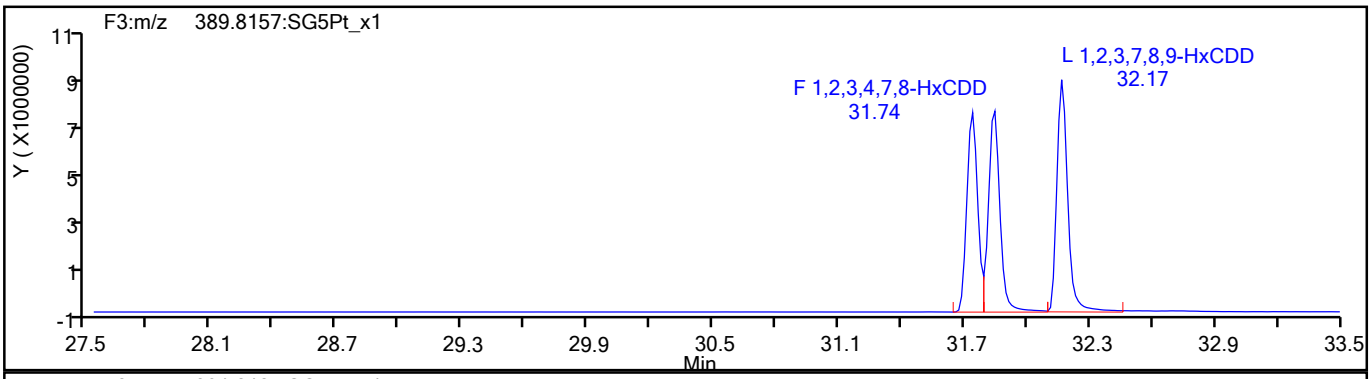

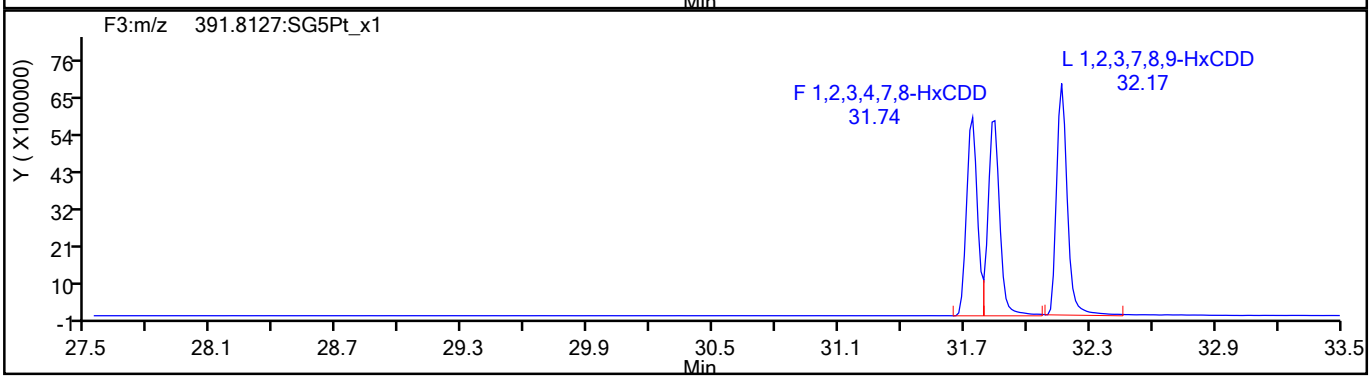

HxCDD Standards

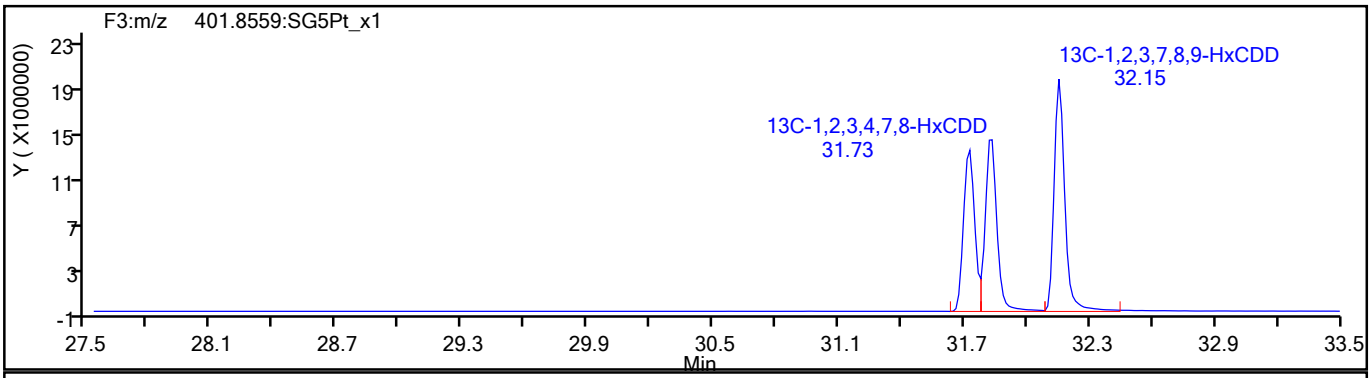

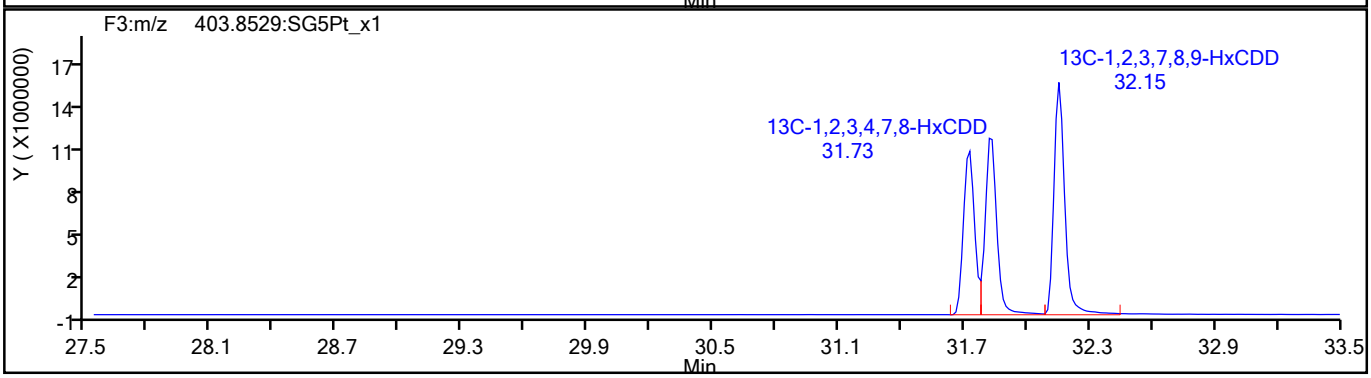

773721

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

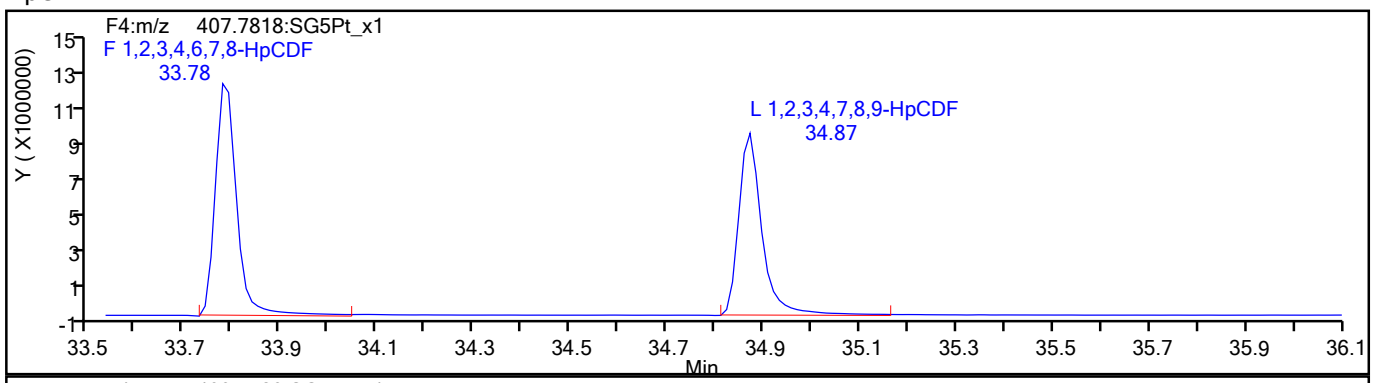

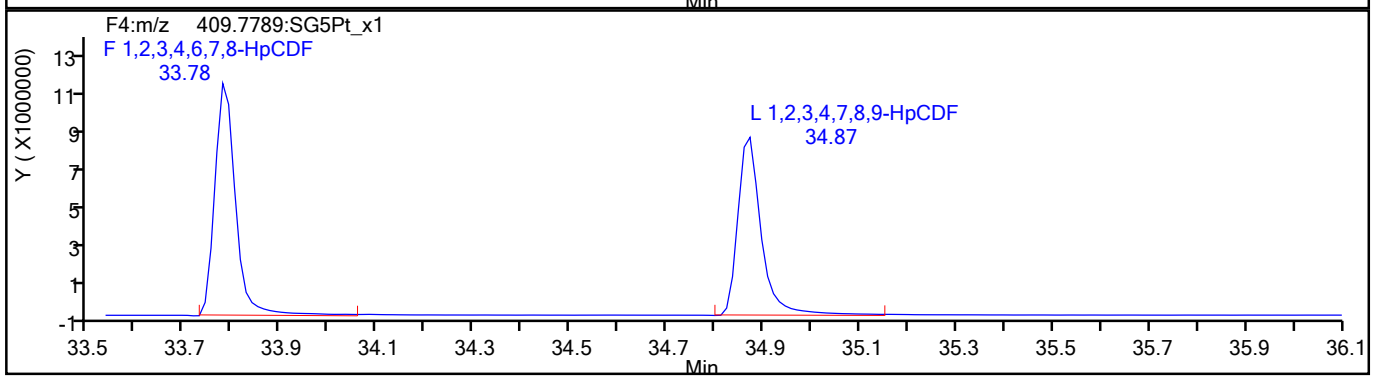

HpCDF Standards

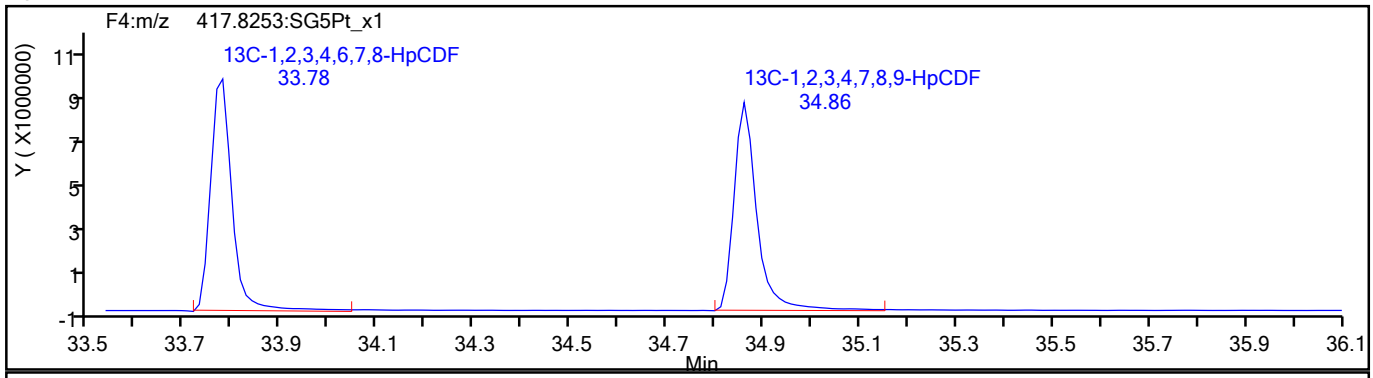

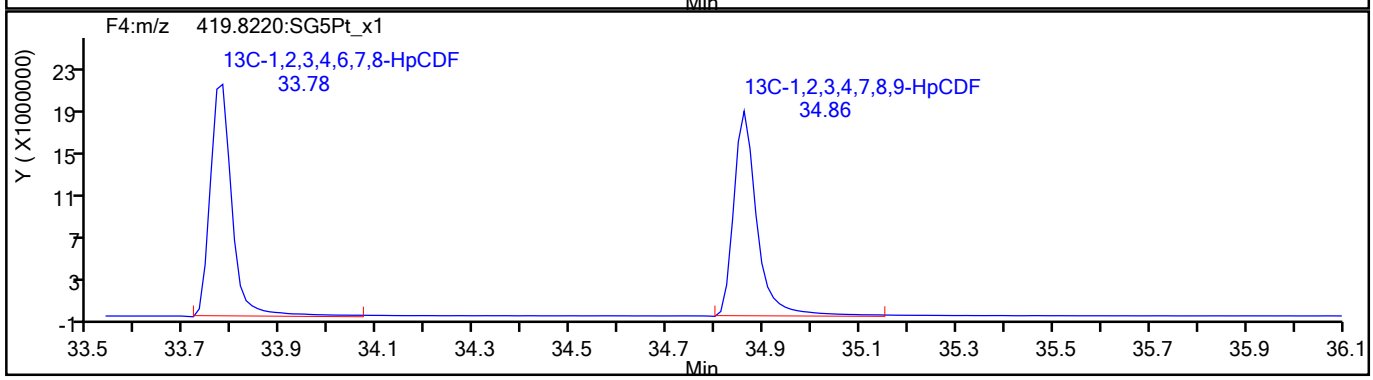

773722

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

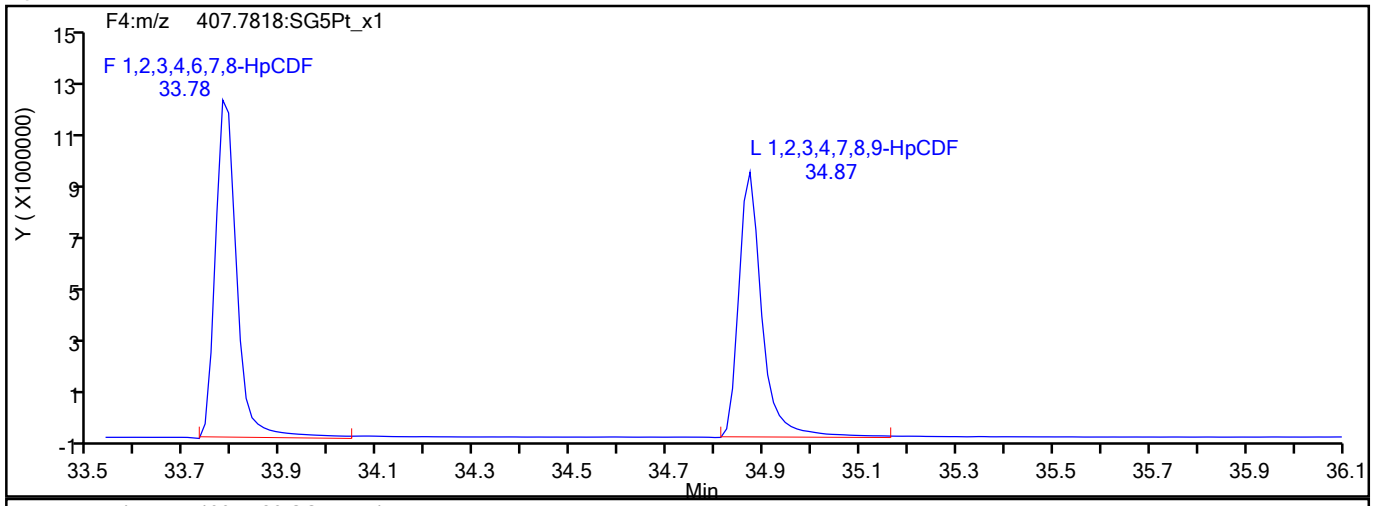

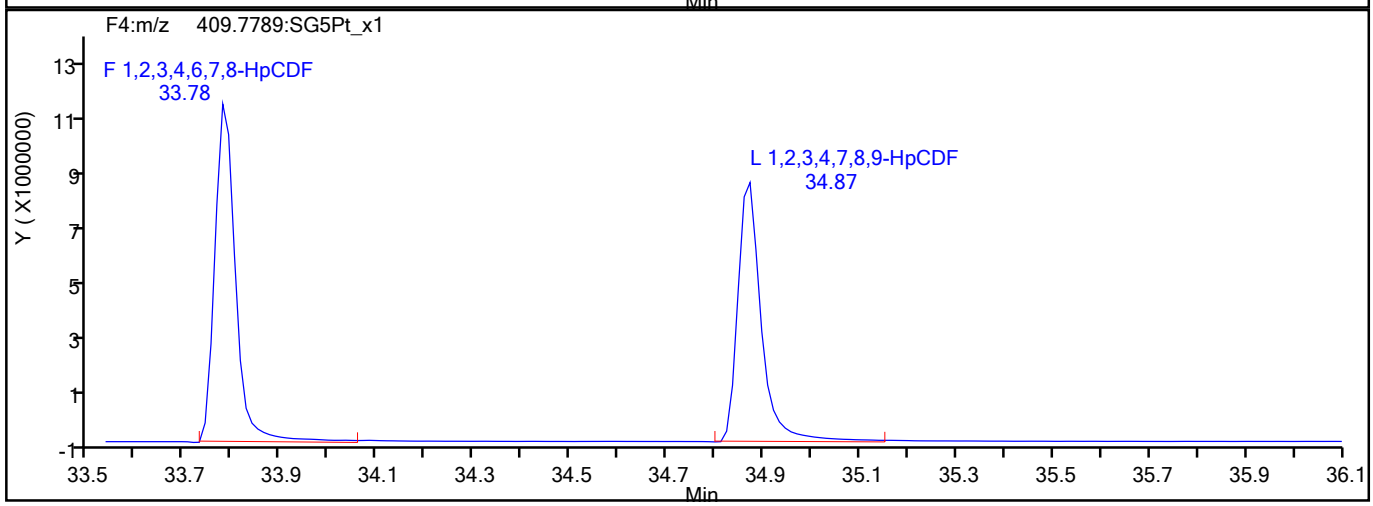

HpCDF Interference Mass

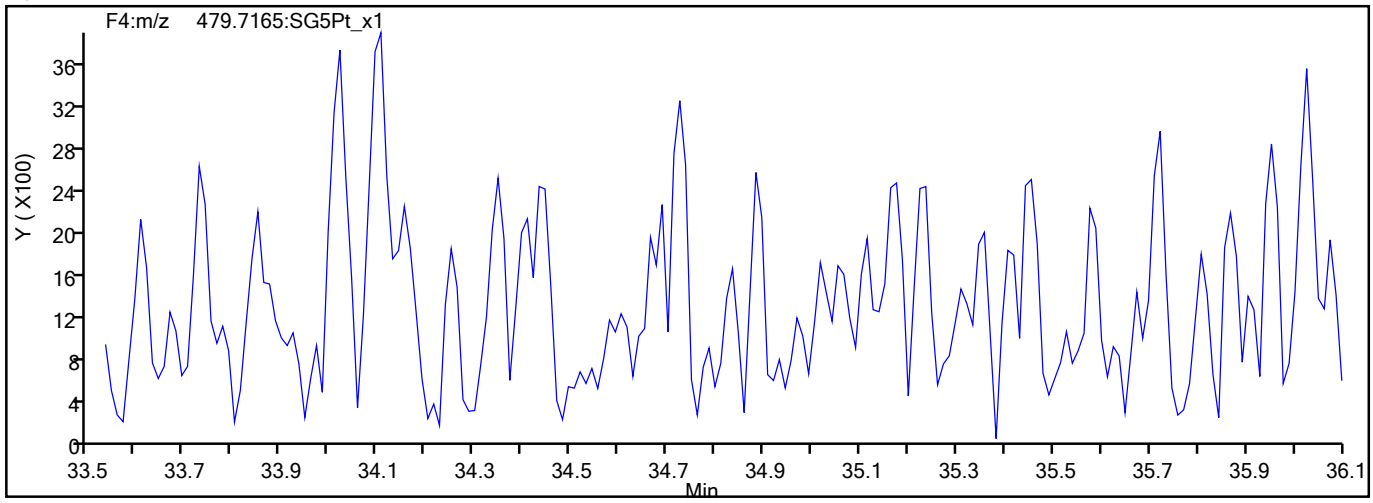

773723

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

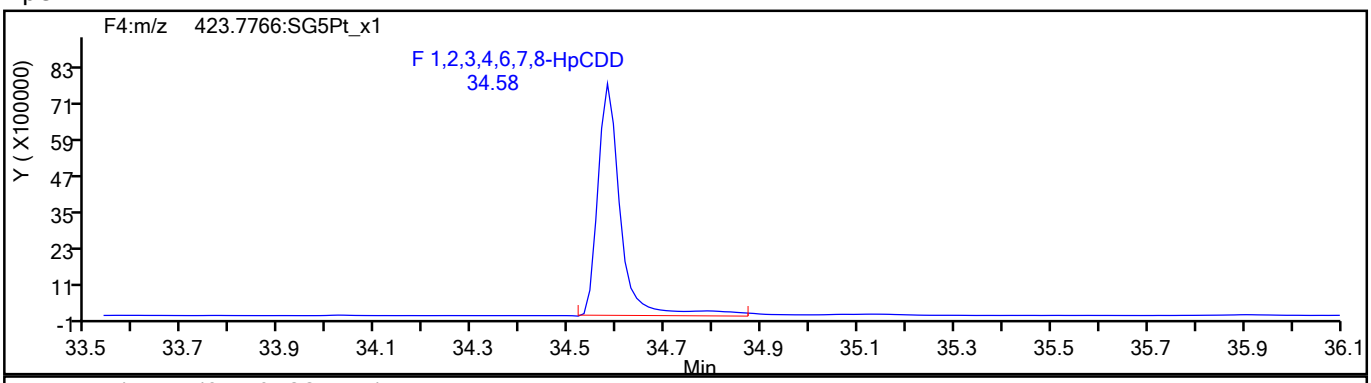

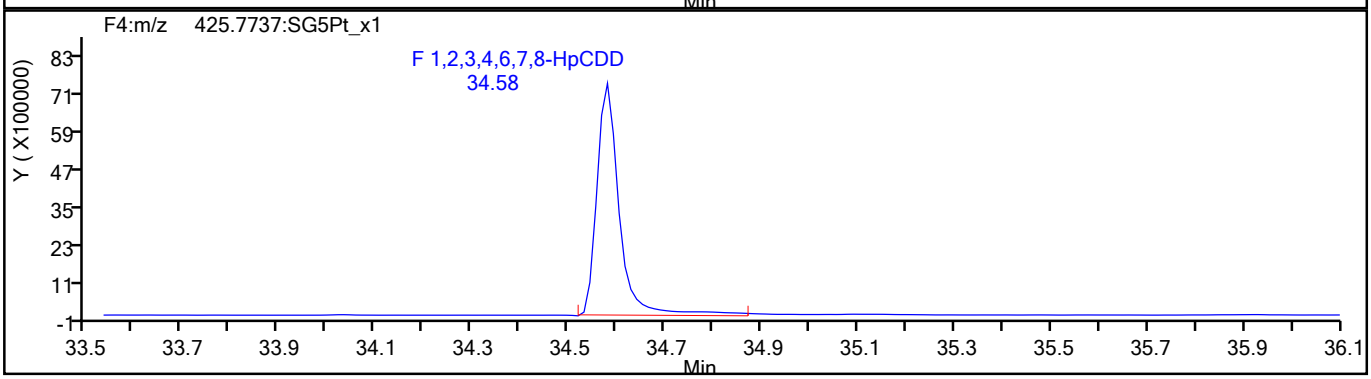

HpCDD Standards

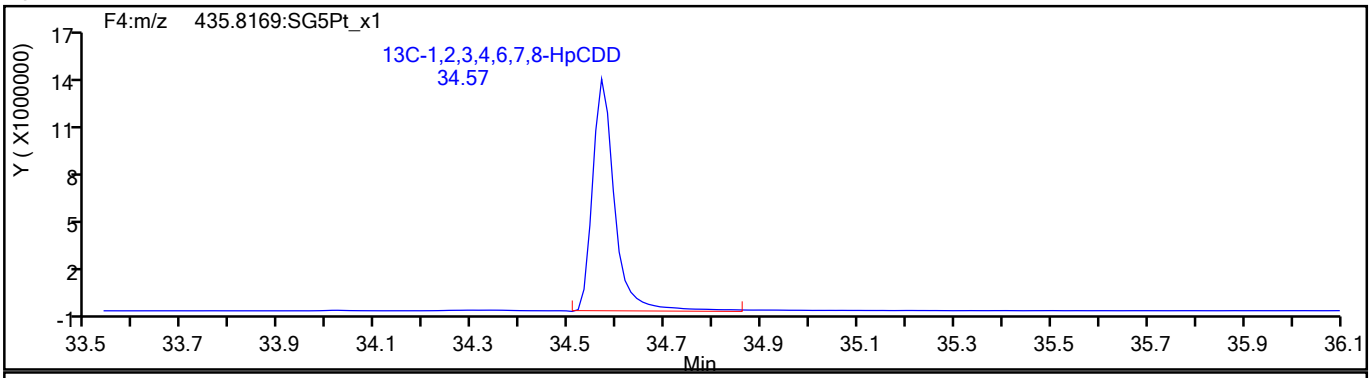

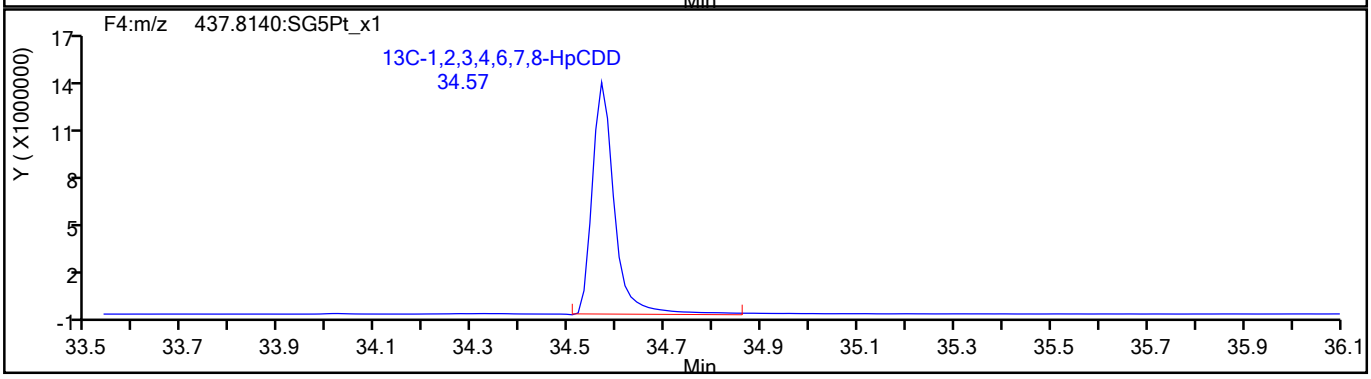

773724

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

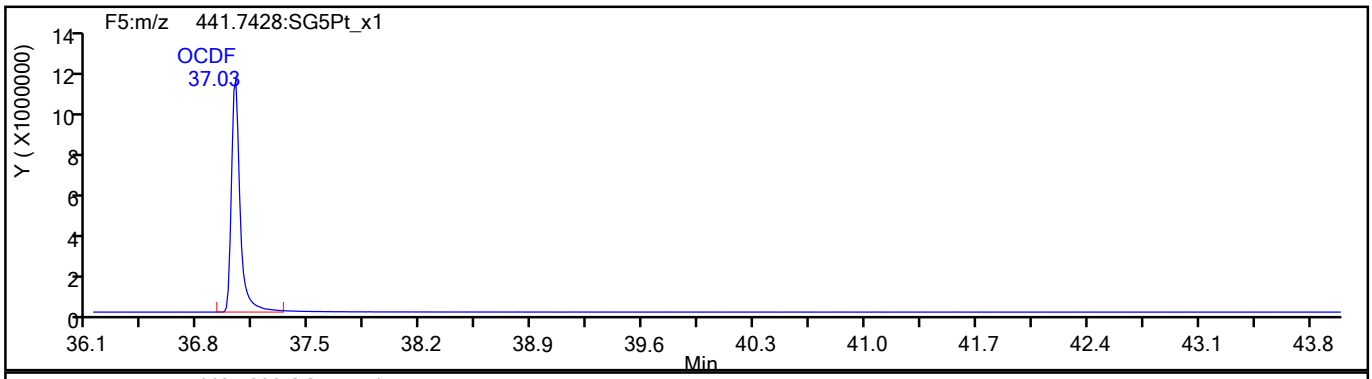

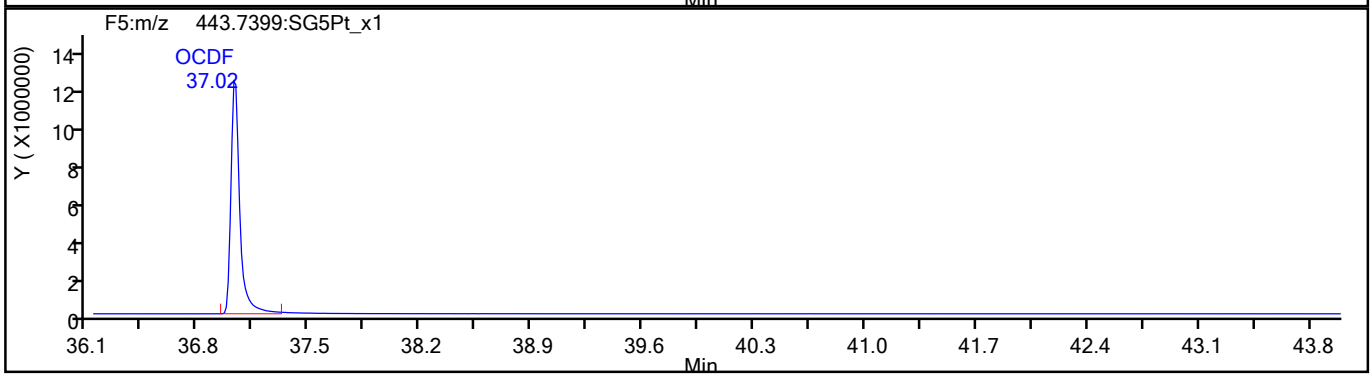

OCDF Standards

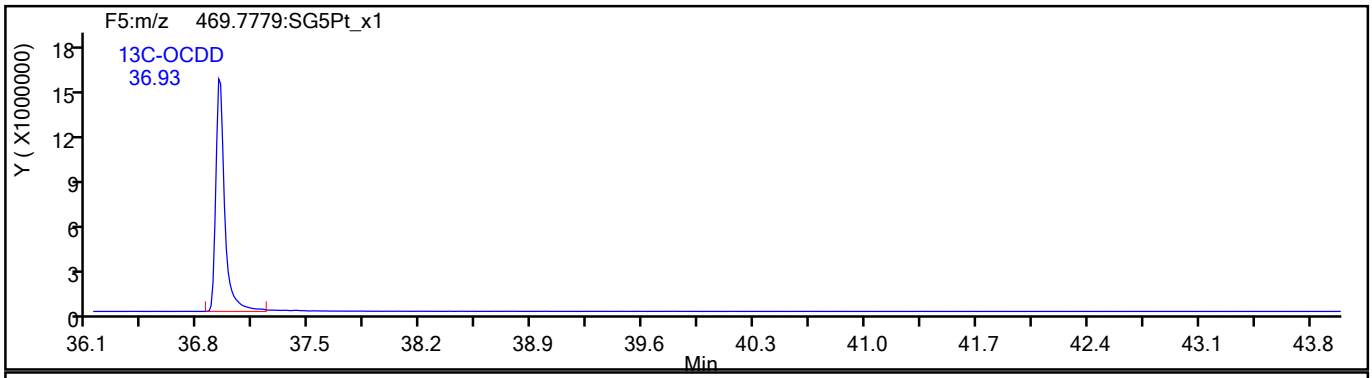

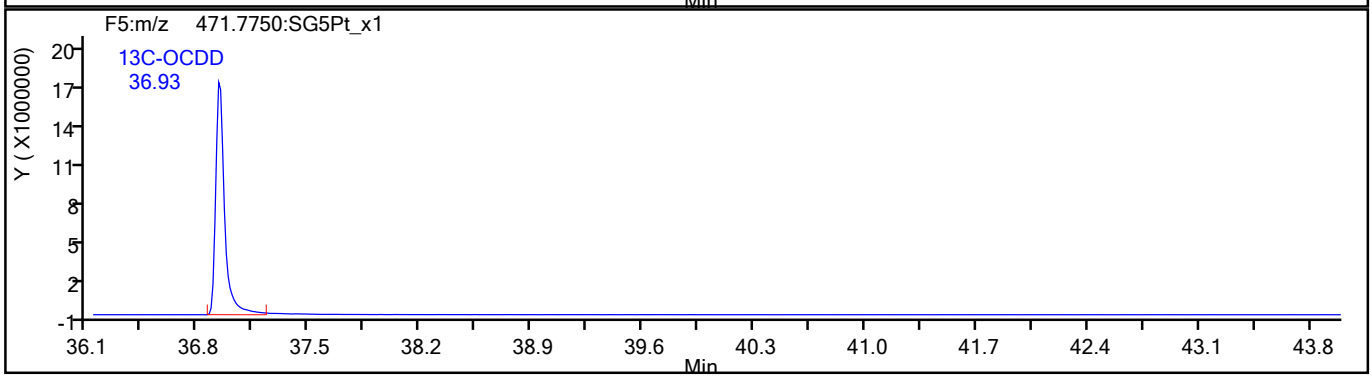

773725

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

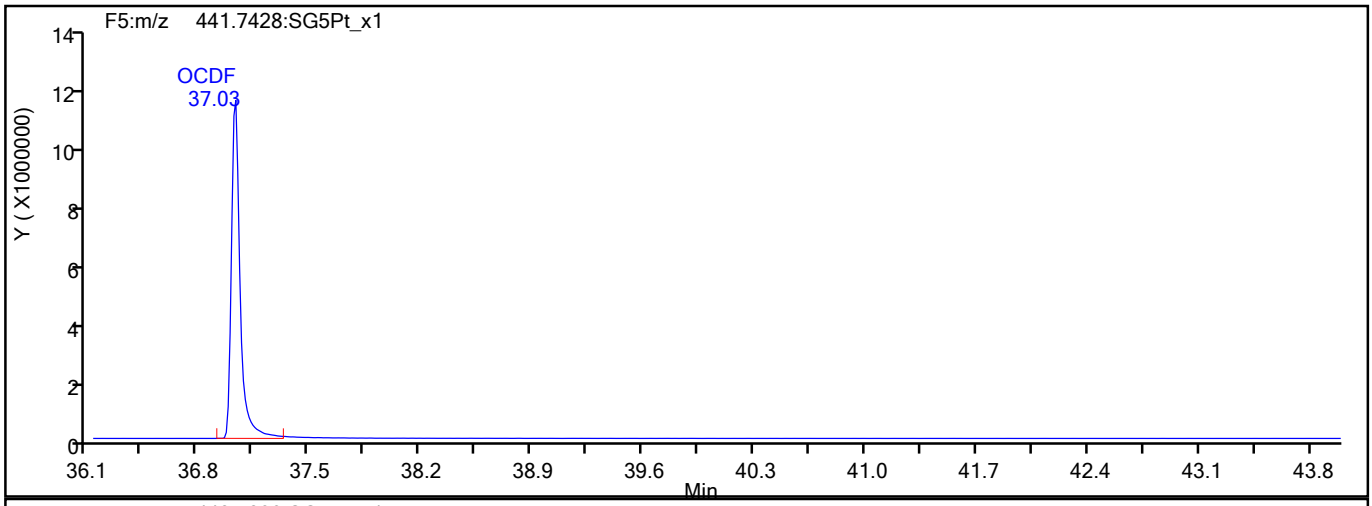

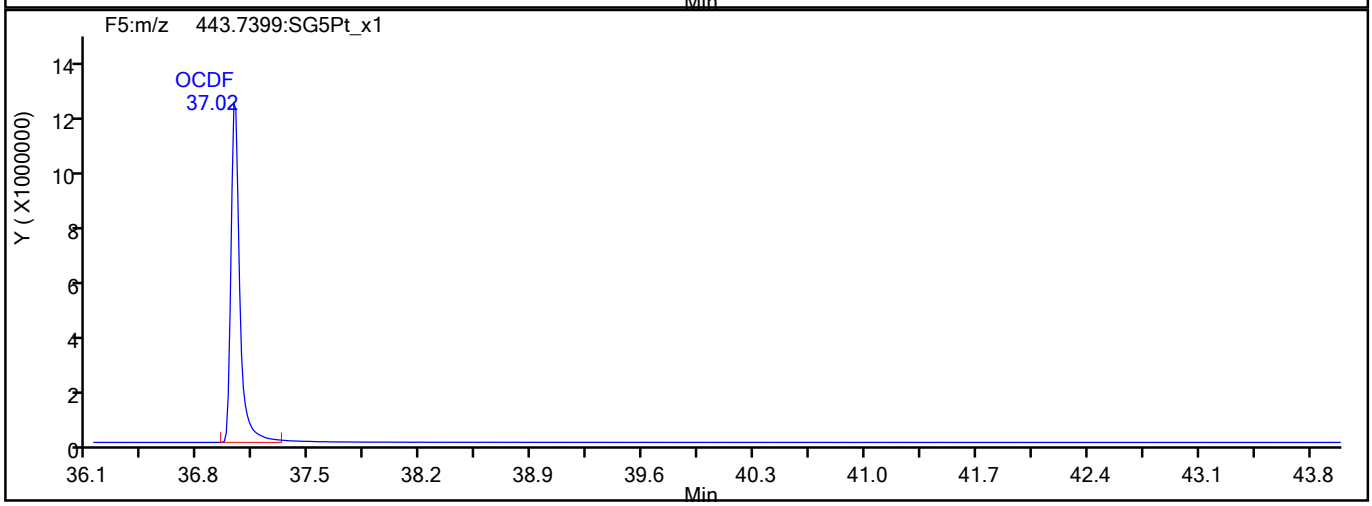

OCDF Interference Mass

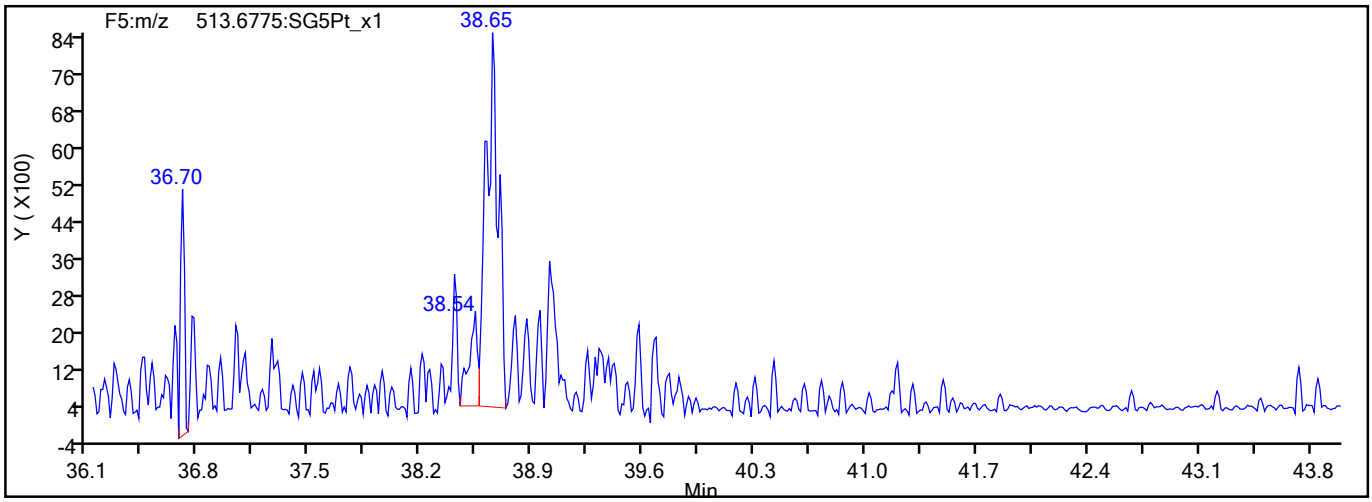

773726

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

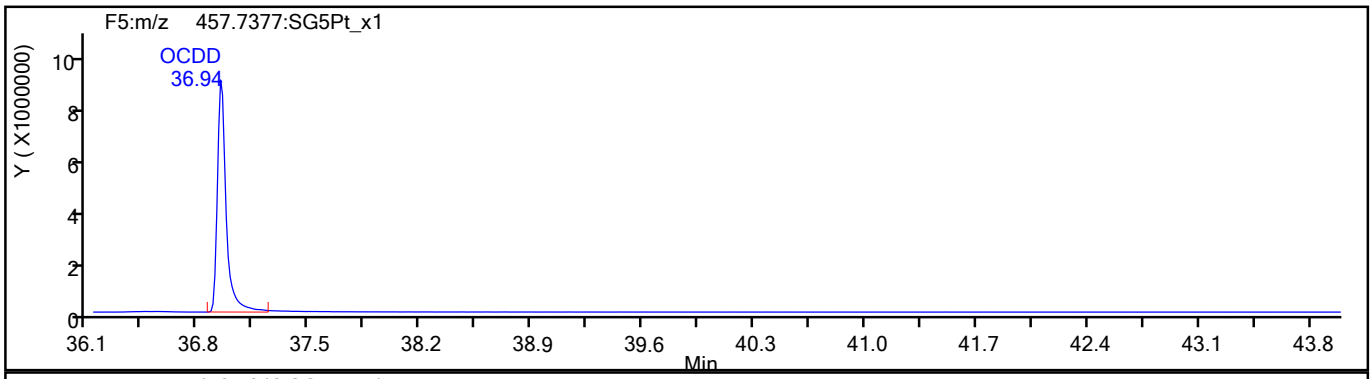

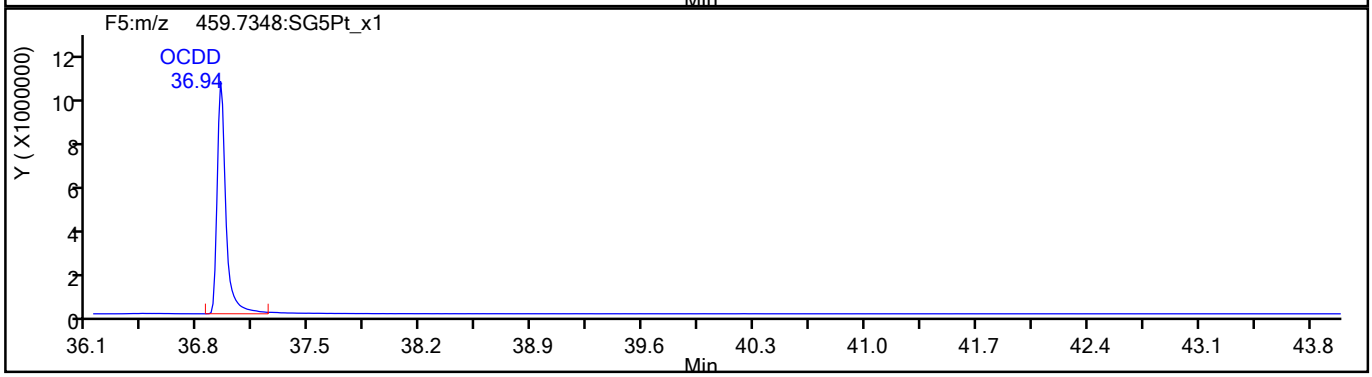

OCDD Standards

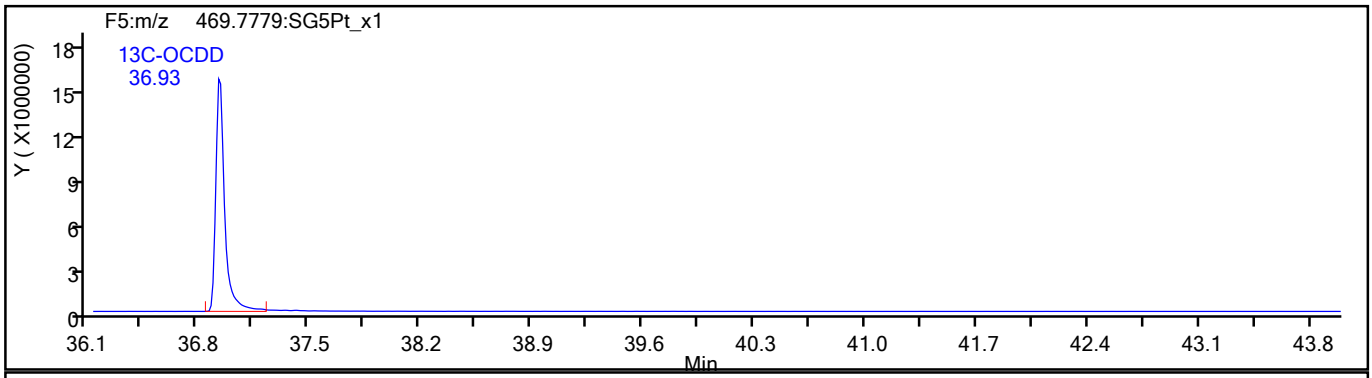

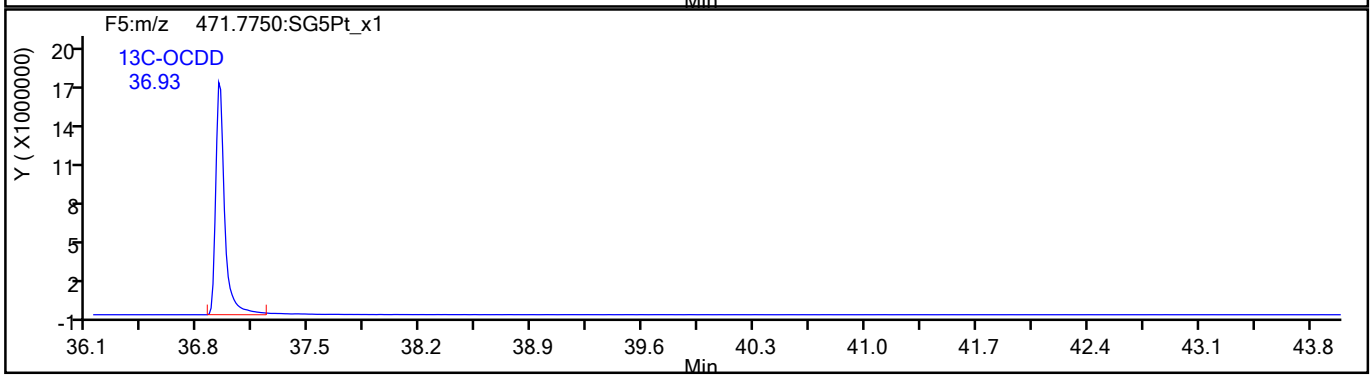

773727

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

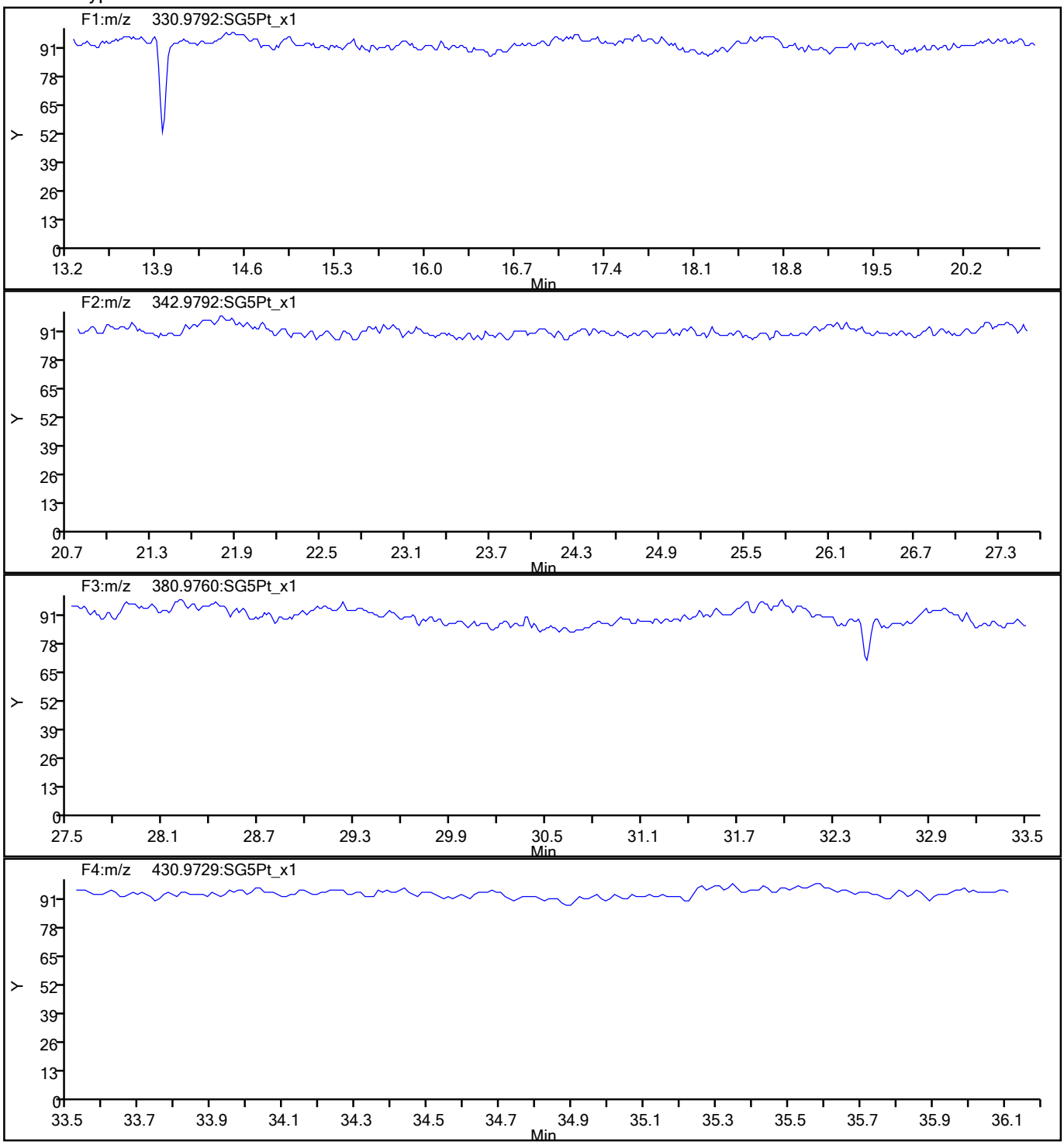

773728

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

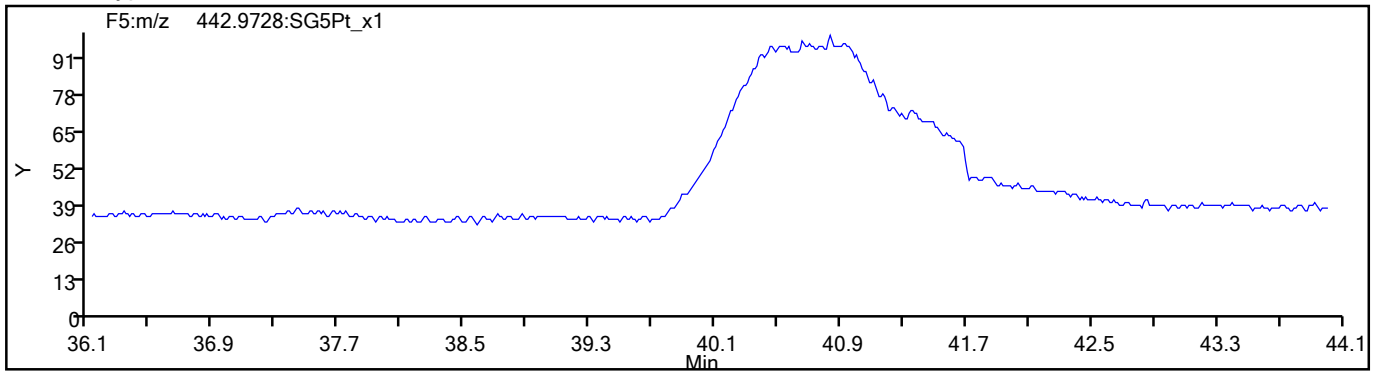

773729

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

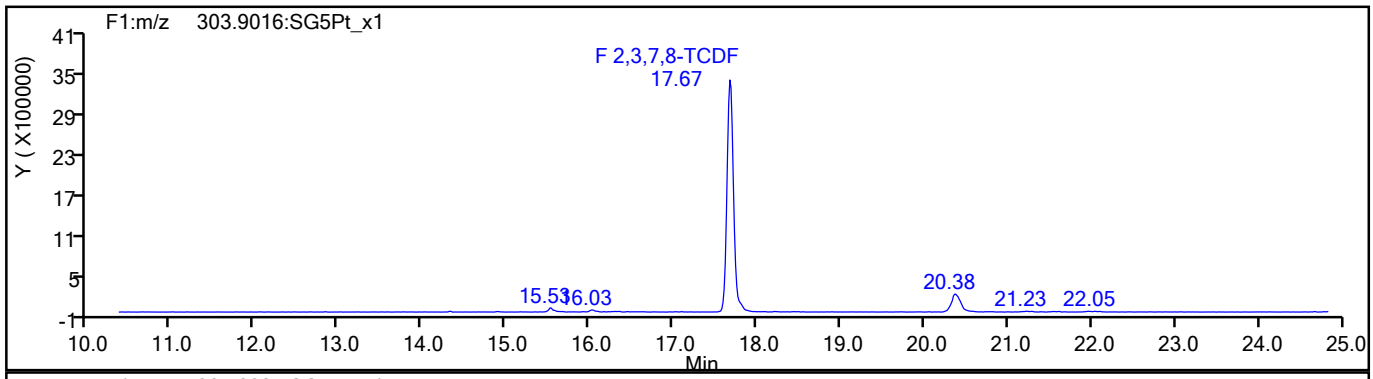

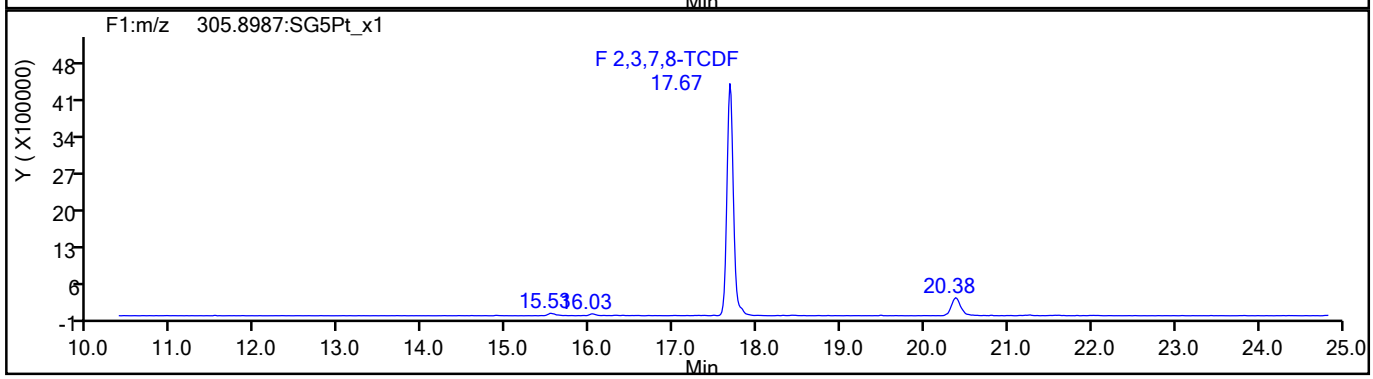

TCDF Standards

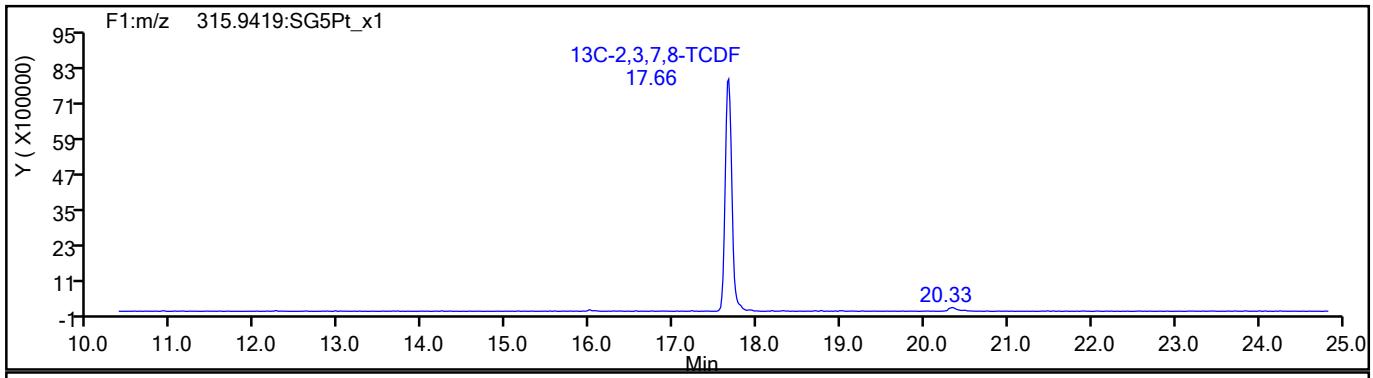

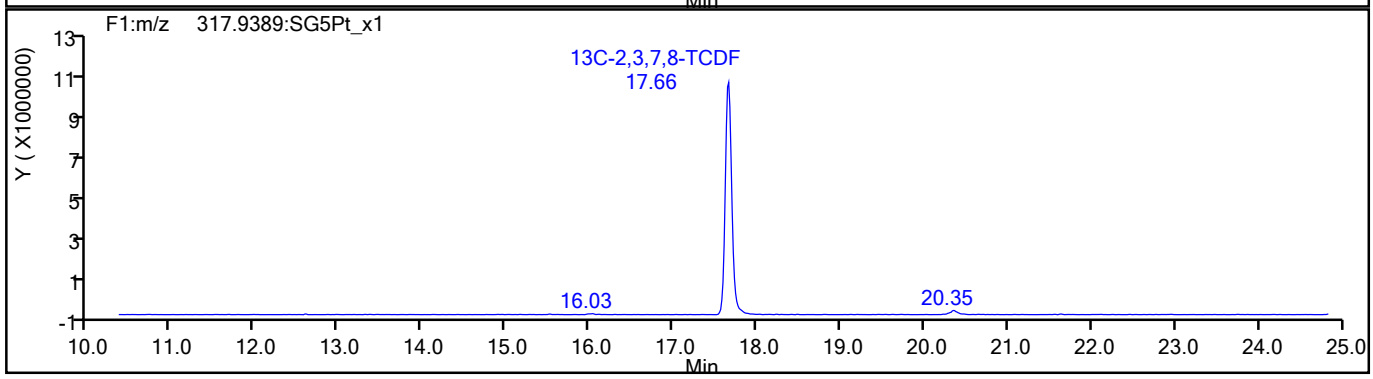

773733

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

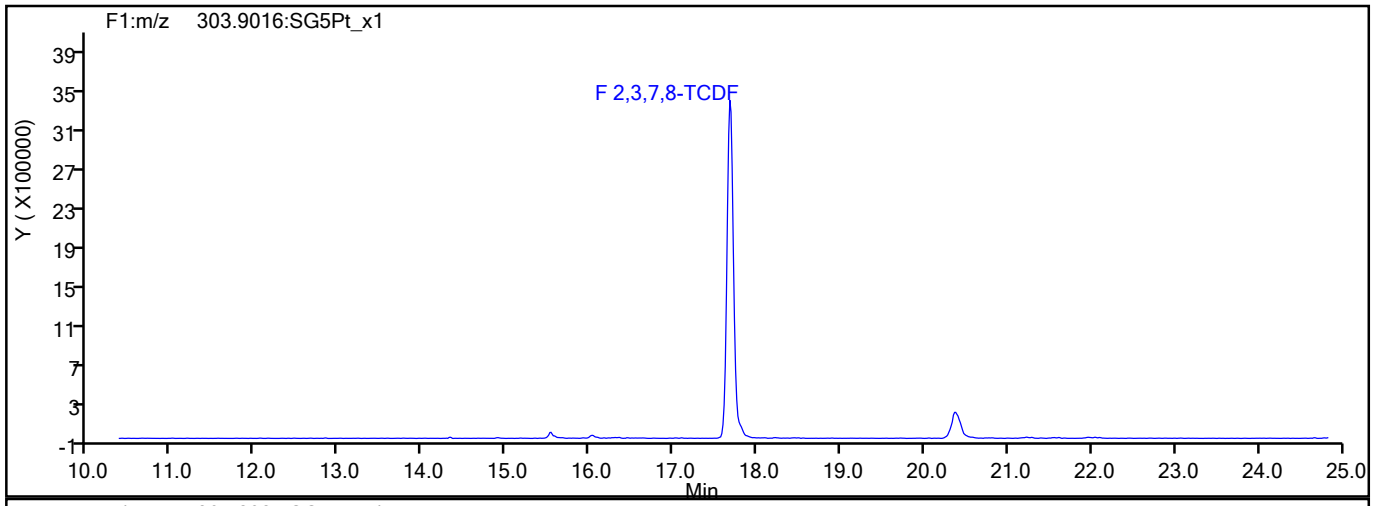

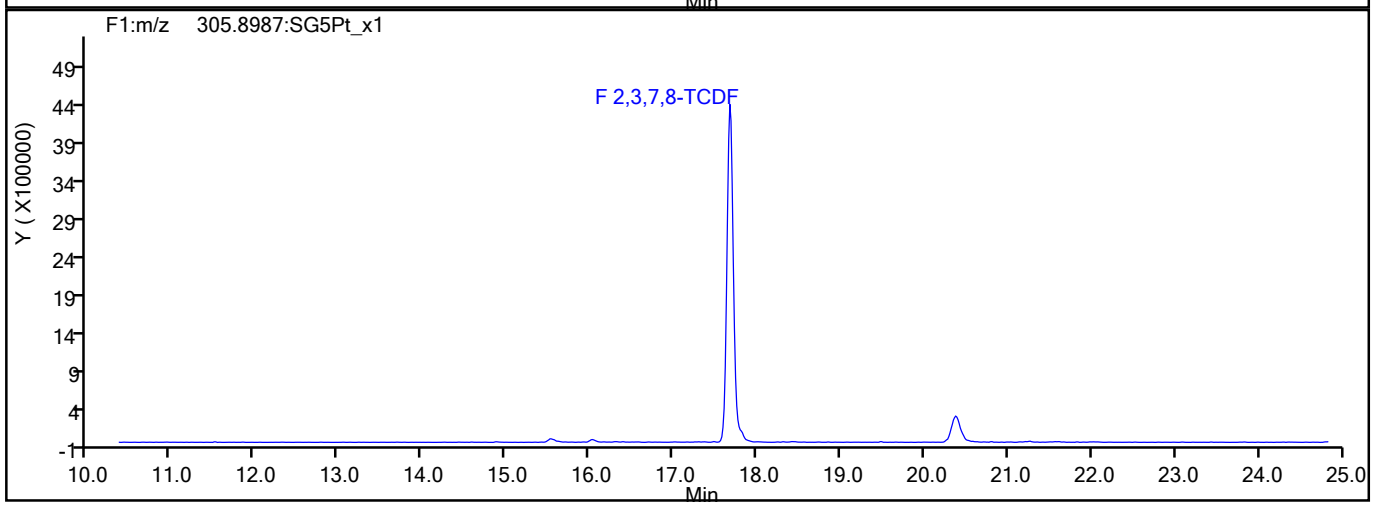

TCDF Interference Mass

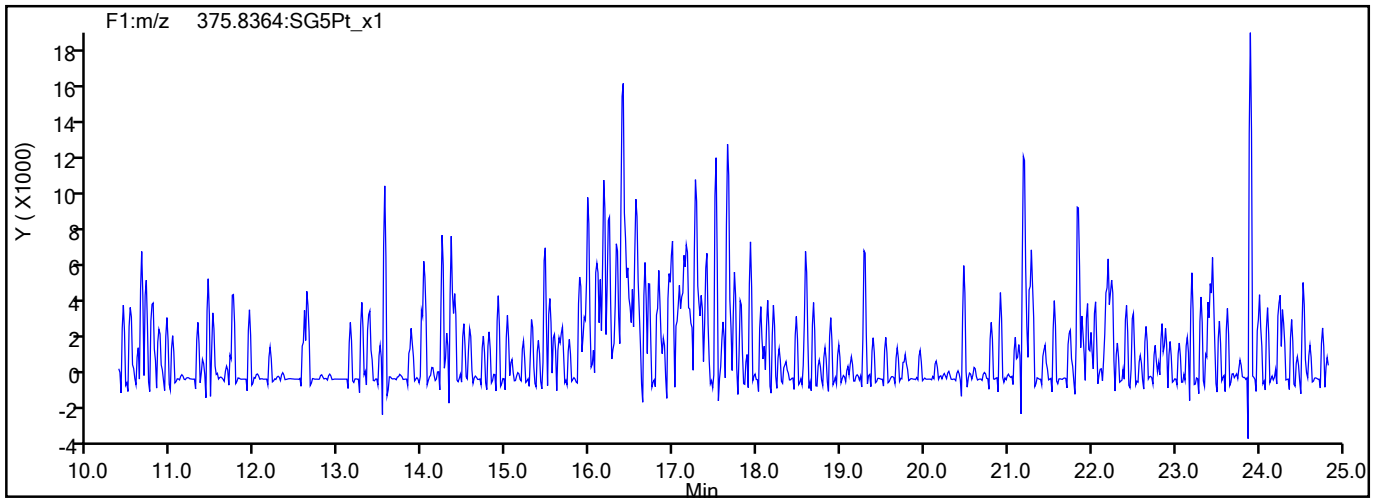

773734

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

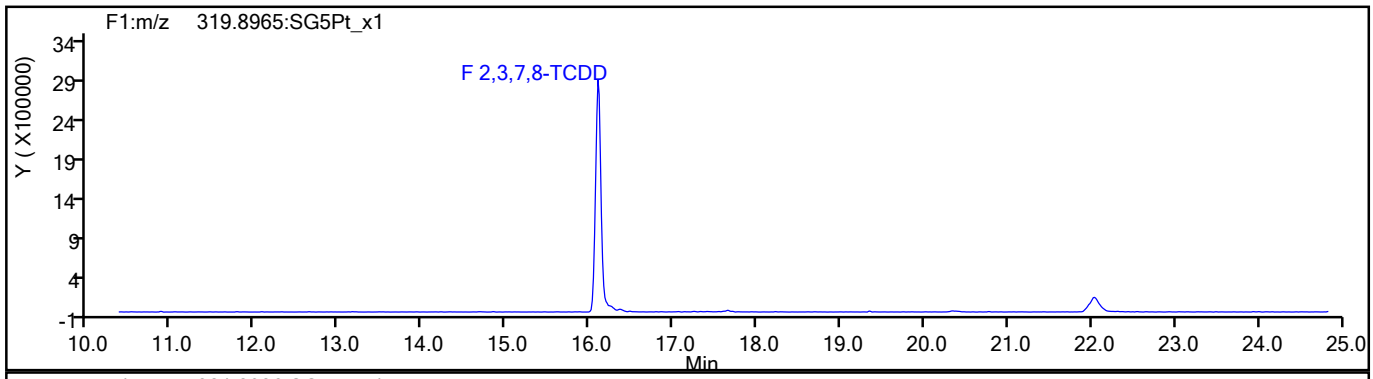

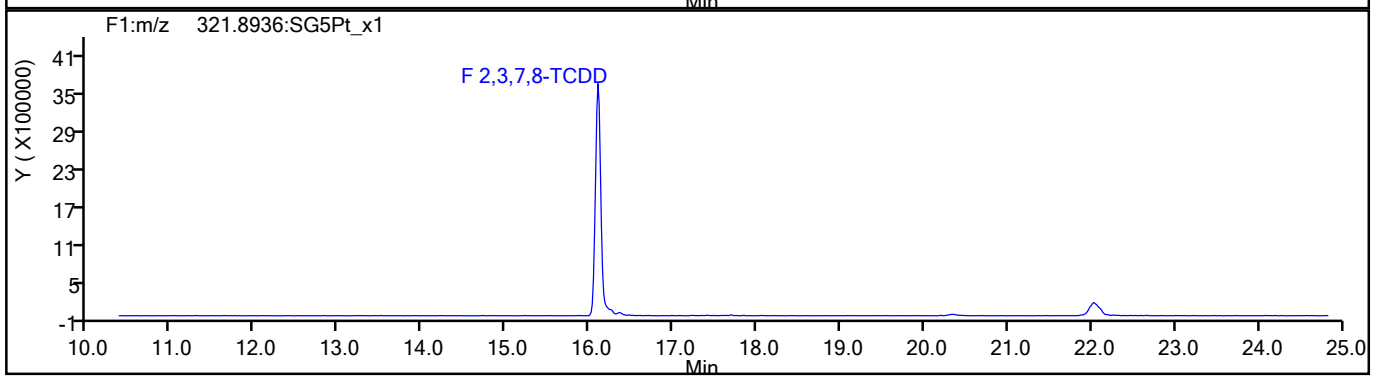

TCDD Standards

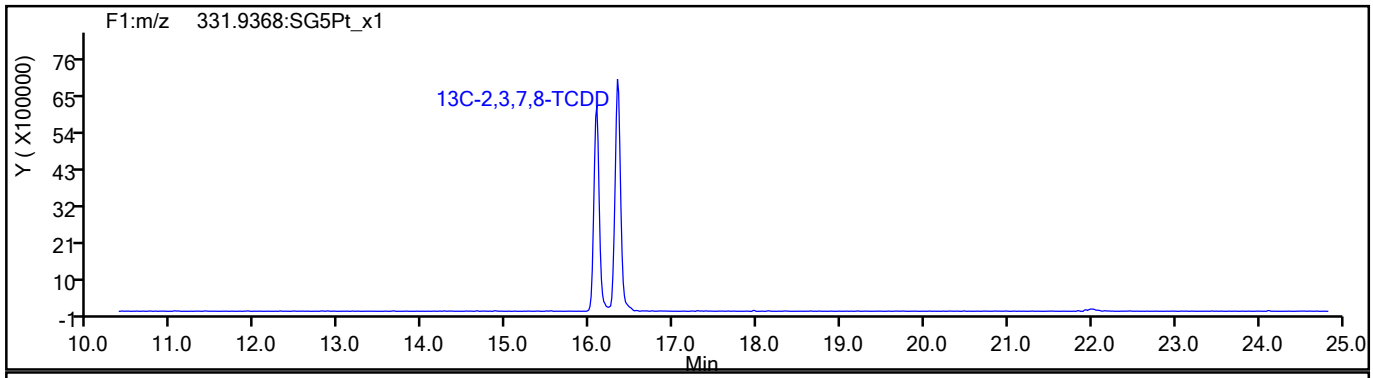

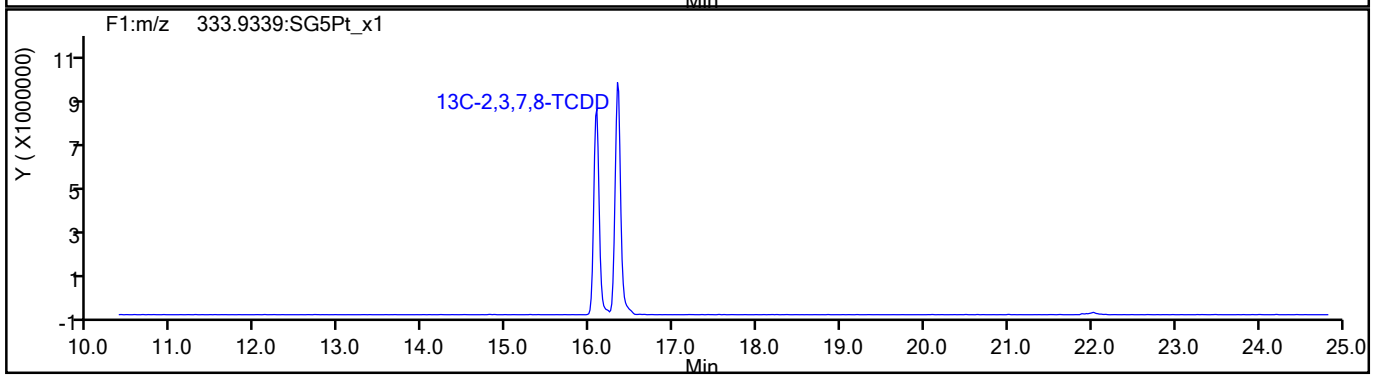

773735

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

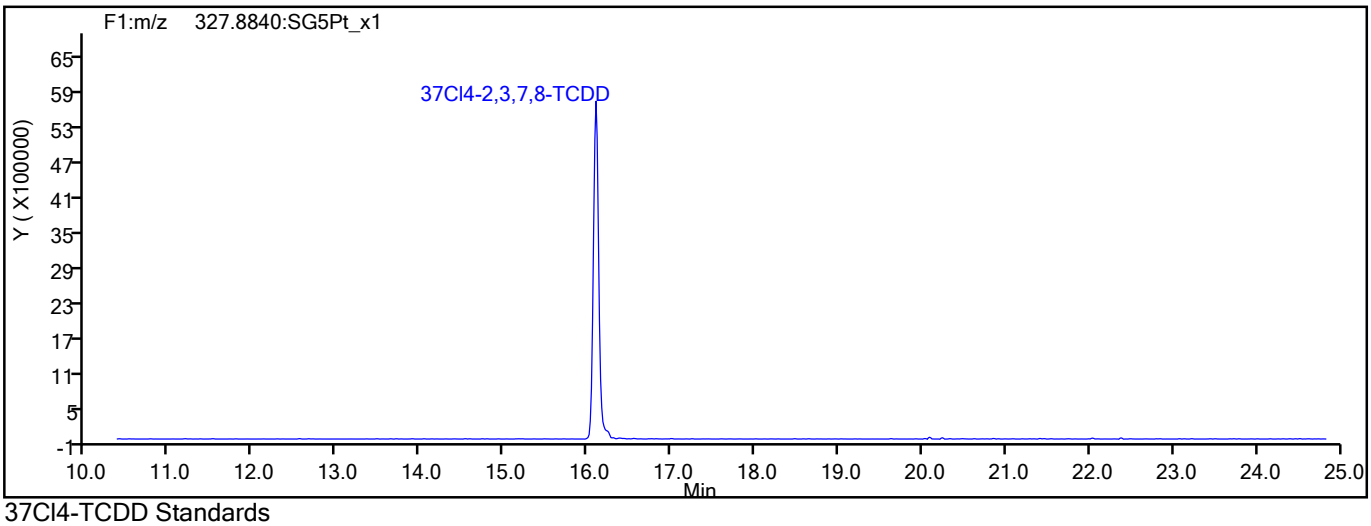

37Cl4-TCDD Standards

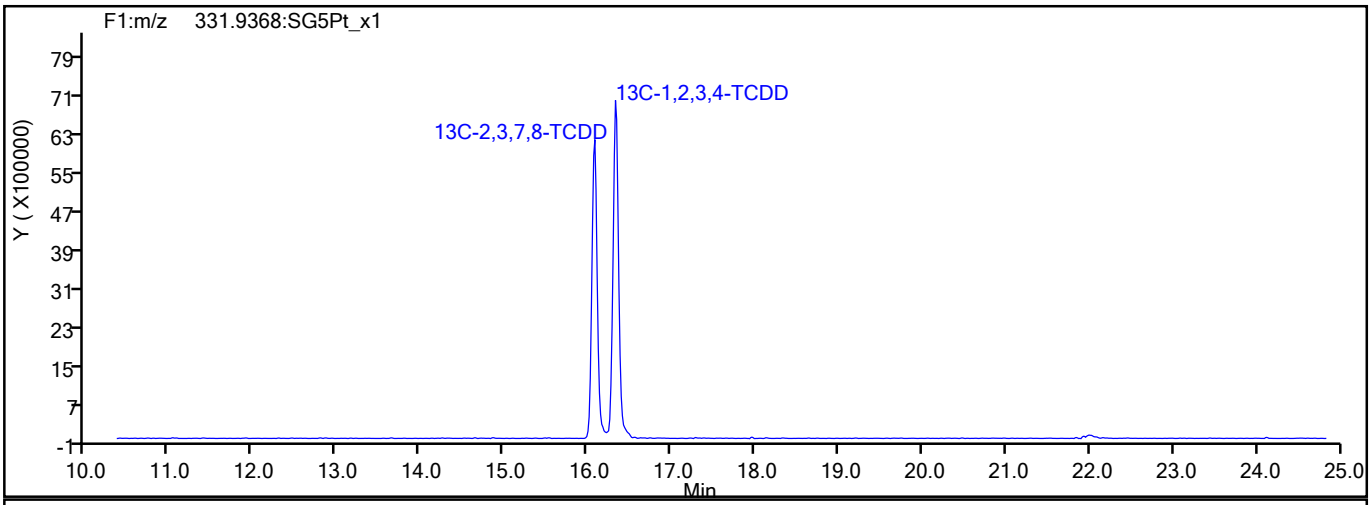

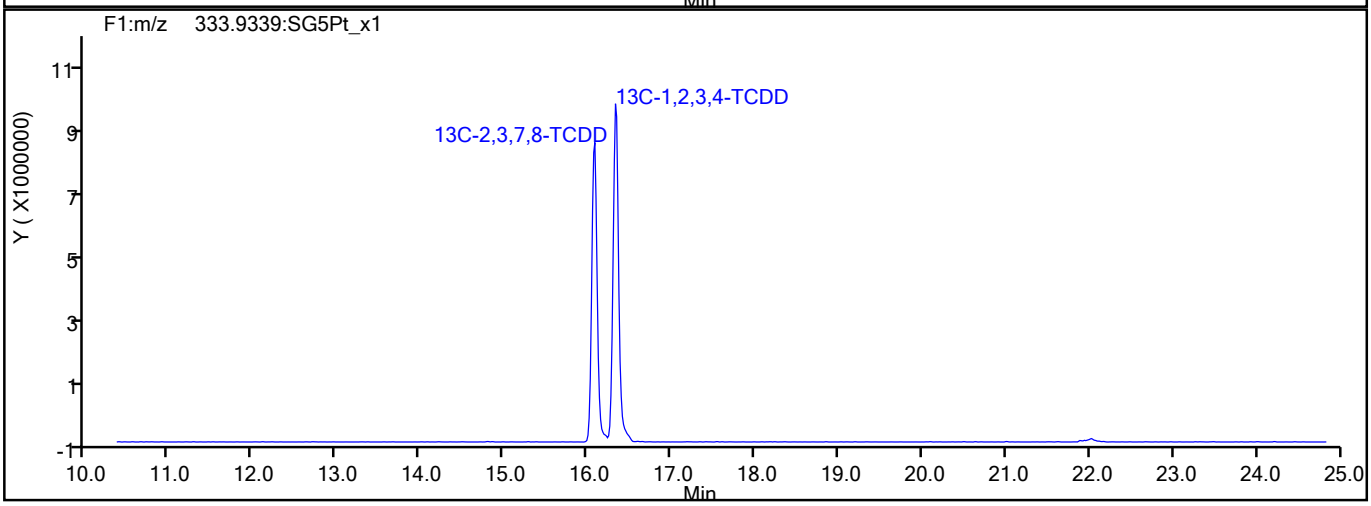

773736

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

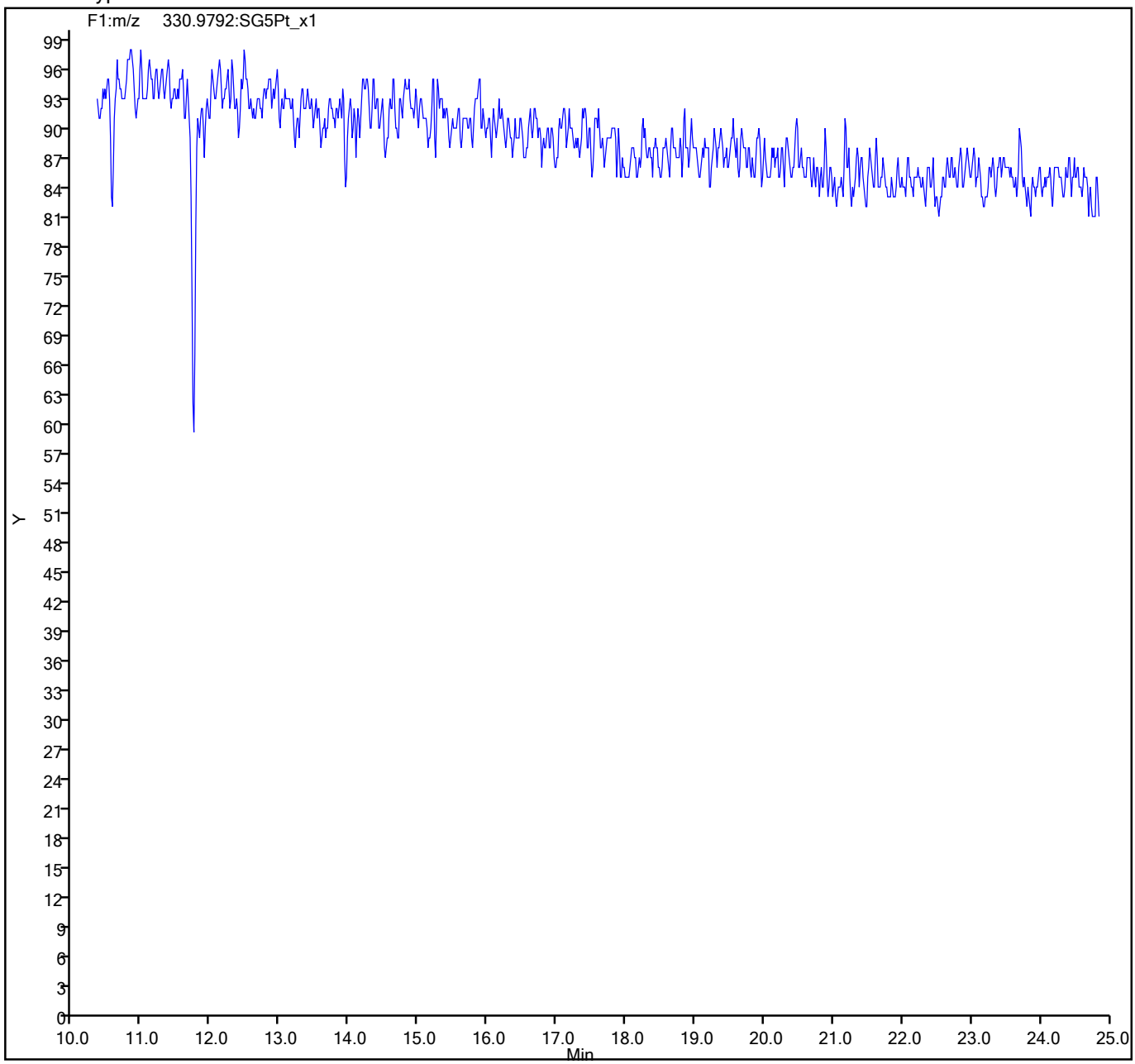

773737

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID: CCV 320-518850/2 Calibration Date: 08/21/2021 14:32

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 21AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	0.996		9.42	10.0	94	78-129
2,3,7,8-TCDF	AveID	0.998	0.9211		9.23	10.0	92	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9393		107	100	107	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.446		109	100	109	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8798		10.2	10.0	102	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
21AU2111D2	1	CPS 082121	CPS HRDXNCP_00044				1.00000	
21AU2111D2	2	CCV 082121	CCV CS-4 HRDXNL4_00100				1.00000	
21AU2111D2	3	SB 082121	Solvent Blank C-14				1.00000	
21AU2111D2	4	320-513227	320-76769-A-9-A	20	1613B/Solid	D264	10.00000	g
21AU2111D2	5	320-513227	320-76769-A-35-A	20	1613B/Solid		10.00000	g
21AU2111D2	6	320-513585	320-76765-A-18-A RI	20	1613B/Solid	D265	10.00000	g
21AU2111D2	7	320-513227	320-76765-A-14-A RI	20	1613B/Solid	D264	10.00000	g
21AU2111D2	8	320-513227	320-76765-A-19-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	9	320-513227	320-76765-A-15-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	10	320-513227	320-76765-A-16-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	11	320-513227	320-76765-A-13-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	12	320-513585	320-76769-A-5-A RI	20	1613B/Solid	D265	10.00000	g
21AU2111D2	13	320-513585	320-76769-A-3-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	14	320-513585	320-76769-A-13-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	15	320-513585	320-76769-A-15-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	16	320-513227	320-76765-A-17-A RI	20	1613B/Solid	D264	10.00000	g
21AU2111D2	17	320-513227	320-76765-A-11-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	18	320-513227	320-76765-A-12-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	19						1.00000	
21AU2111D2	20						1.00000	
21AU2111D2	21						1.00000	
21AU2111D2	22						1.00000	
21AU2111D2	23						1.00000	
21AU2111D2	24		KSS 08-21-21				1.00000	
21AU2111D2	25						1.00000	

Logfile checked
08/23/21 SMA

Peak Locate Examination:21-AUG-2021:13:53 File:21AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

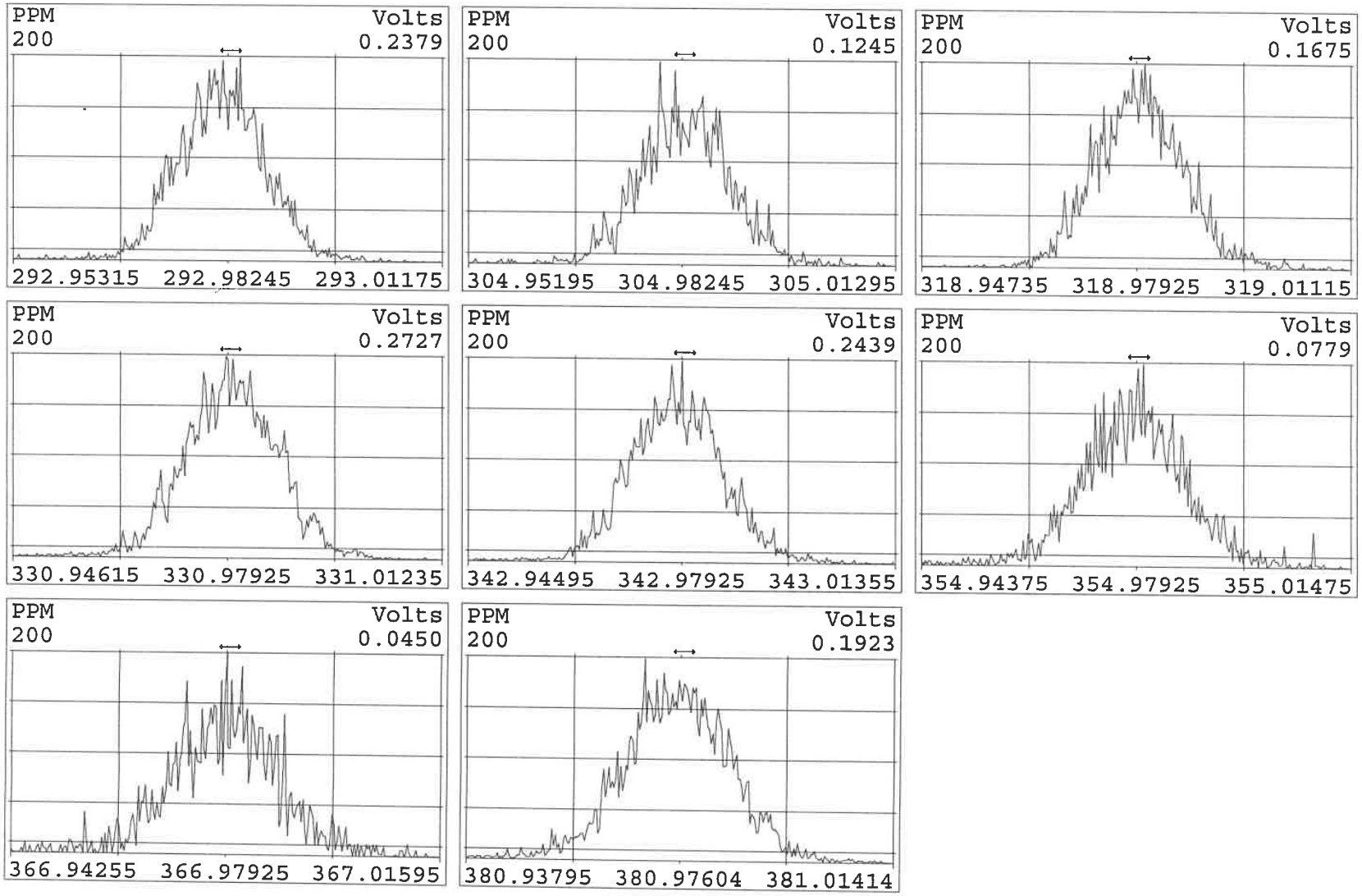

Peak Locate Examination:22-AUG-2021:01:45 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

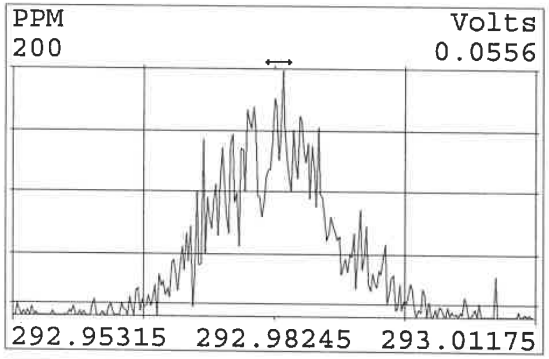

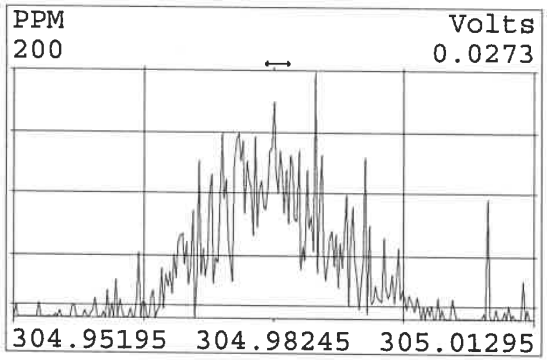

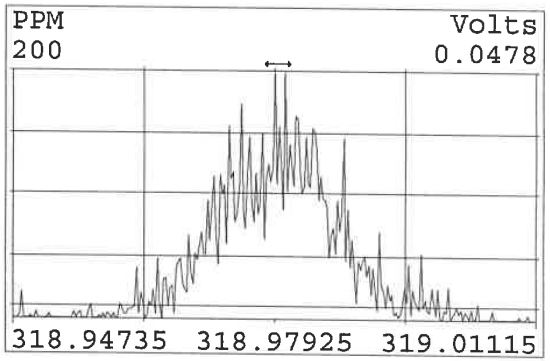

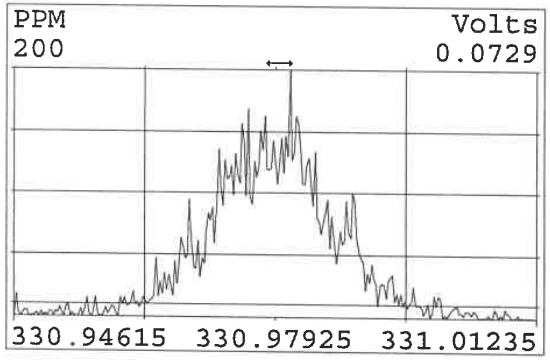

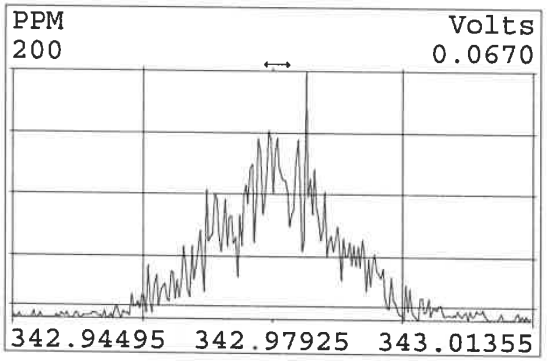

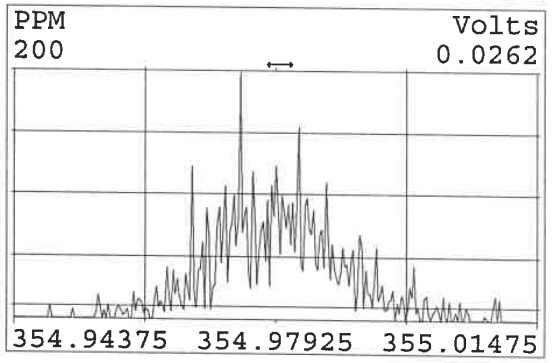

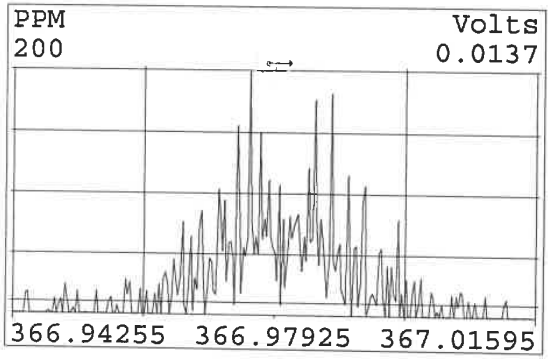

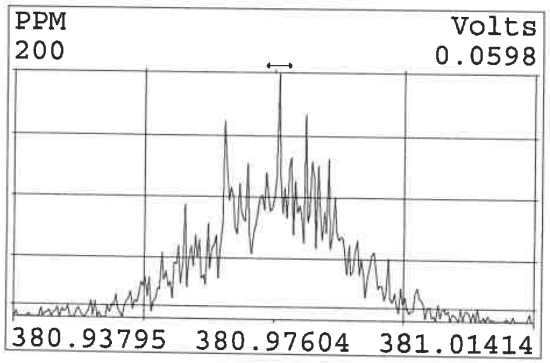

773741

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 21-Aug-2021 14:32:47 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:00:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.309	35877129	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.640	51880975	0.80	1.3327	108.5	108.5	0.3223	0.3223	109	
2,3,7,8-TCDF	17.653	4778531	0.78	0.9978	9.231	9.231	0.0574	0.0574	92.31	
D 13C-2,3,7,8-TCDD	16.076	33700268	0.78	0.8749	107.4	107.4	0.5104	0.5104	107	
2,3,7,8-TCDD	16.103	3356985	0.75	1.0570	9.424	9.424	0.0671	0.0671	94.24	
$ 37Cl4-2,3,7,8-TCDD	16.103	3156320		0.8648	10.2	10.2	0.0484	0.0484	102	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

773742

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 21-Aug-2021 14:32:47 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:00:31

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.309	16.309	0		15319895	3302032	8200	20500	403		
333.9339	16.323	16.309	1		20557234	4490659	5721	14302	785	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.640	17.640	0	1.082	23088836	4268597	6976	17440	612		
317.9389	17.640	17.640	0	1.082	28792139	5365670	6414	16035	837	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.653	17.653	0	1.001	2100550	398770	942	2355	423		
305.8987	17.653	17.653	0	1.001	2677981	509298	1267	3167	402	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.076	16.076	0	0.986	14763429	3298250	8200	20500	402		
333.9339	16.076	16.076	0	0.986	18936839	4307338	5721	14302	753	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.103	16.103	0	1.002	1436306	299691	1100	2750	272		
321.8936	16.103	16.103	0	1.002	1920679	388921	1059	2647	367	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.103	16.103	0	0.987	3156320	679381	1304	3260	521		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

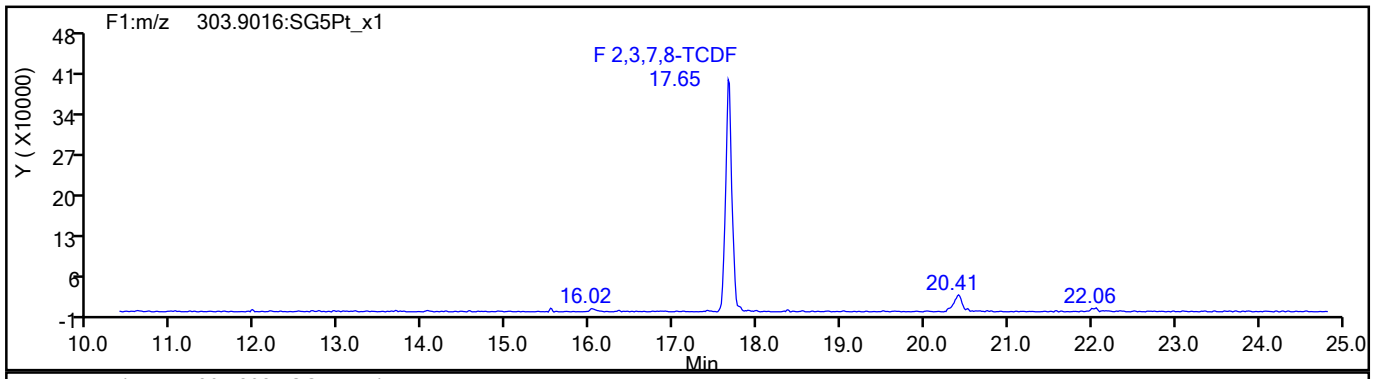

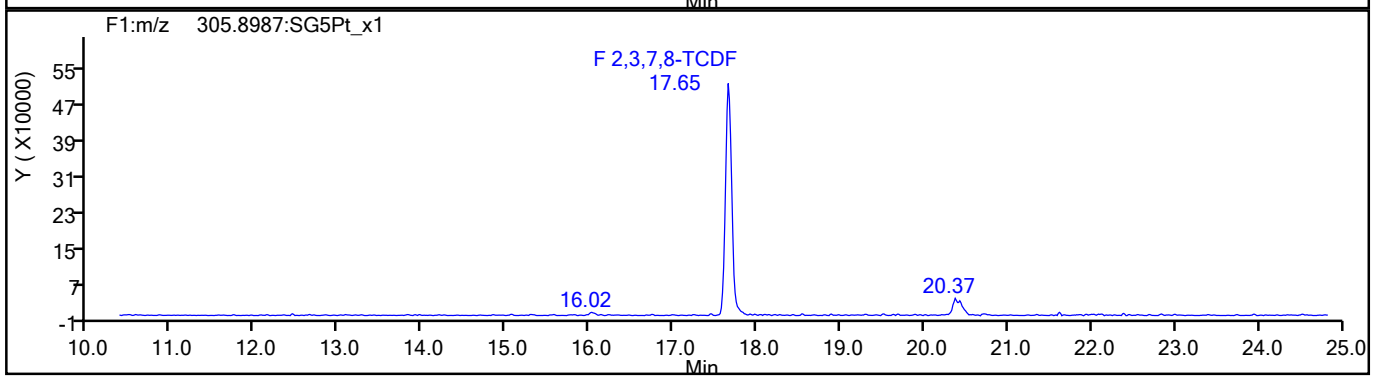

TCDF Standards

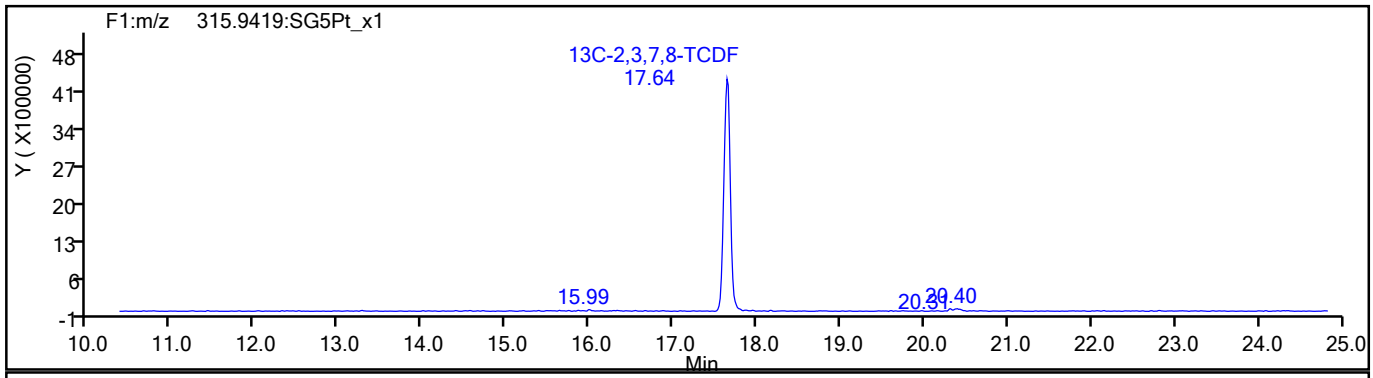

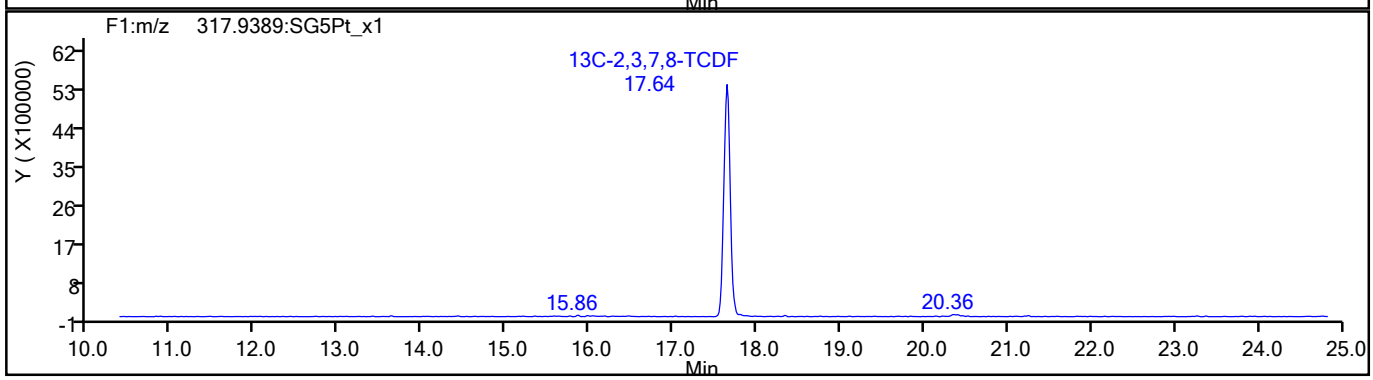

773744

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

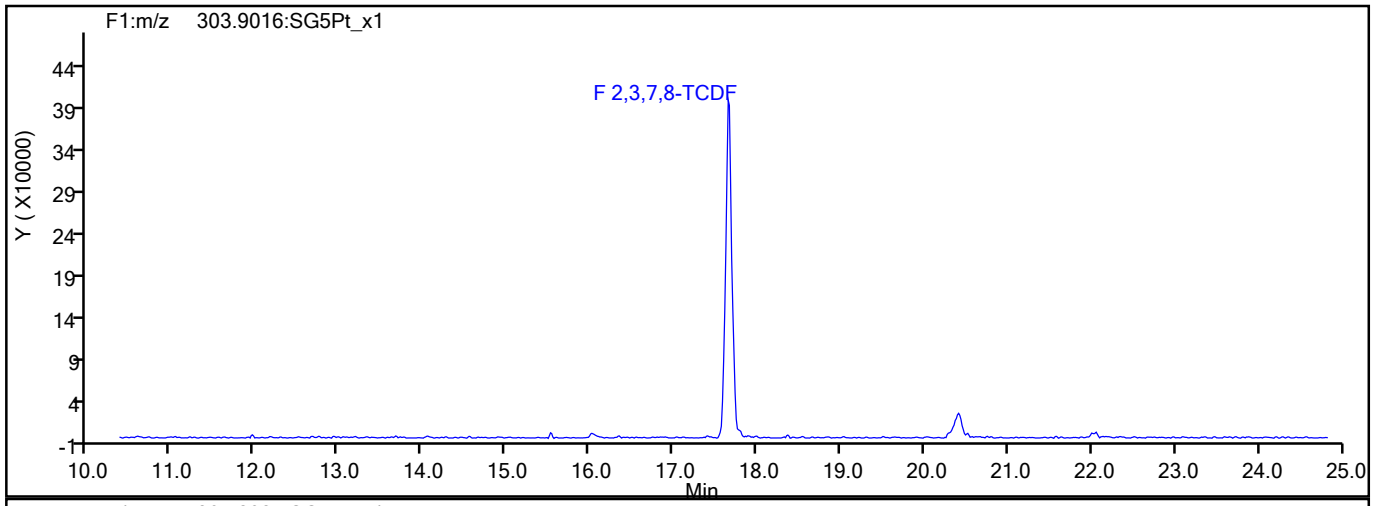

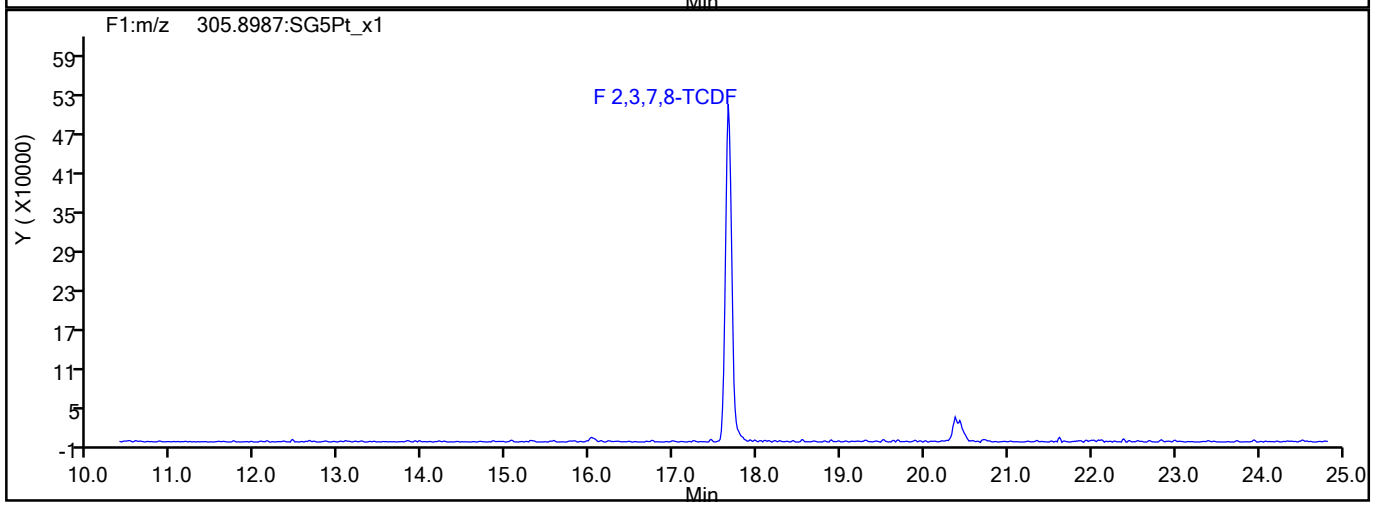

TCDF Interference Mass

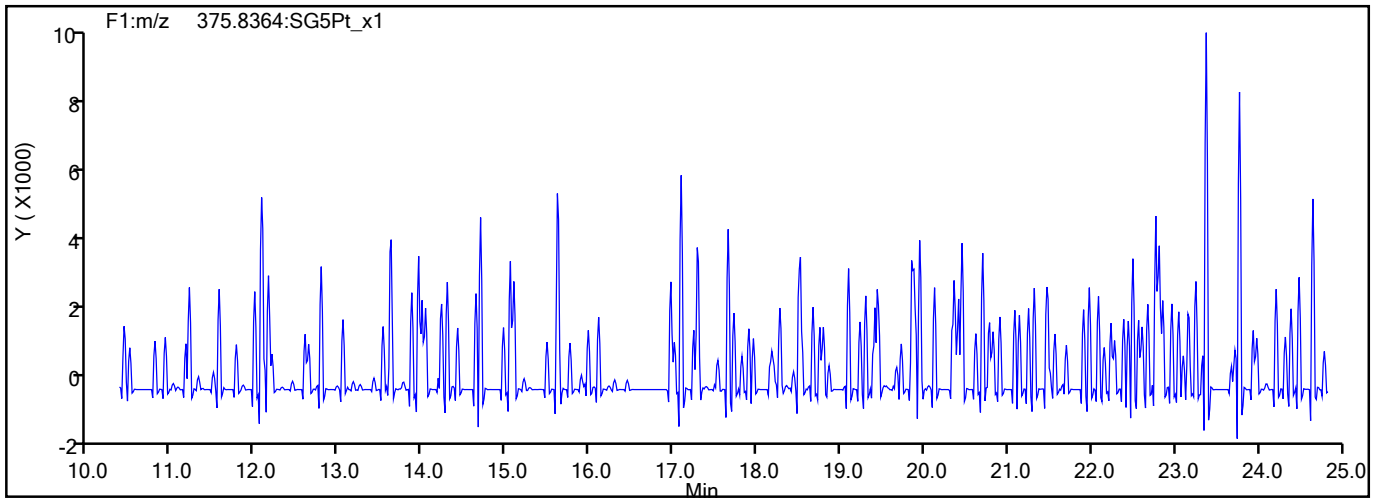

773745

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

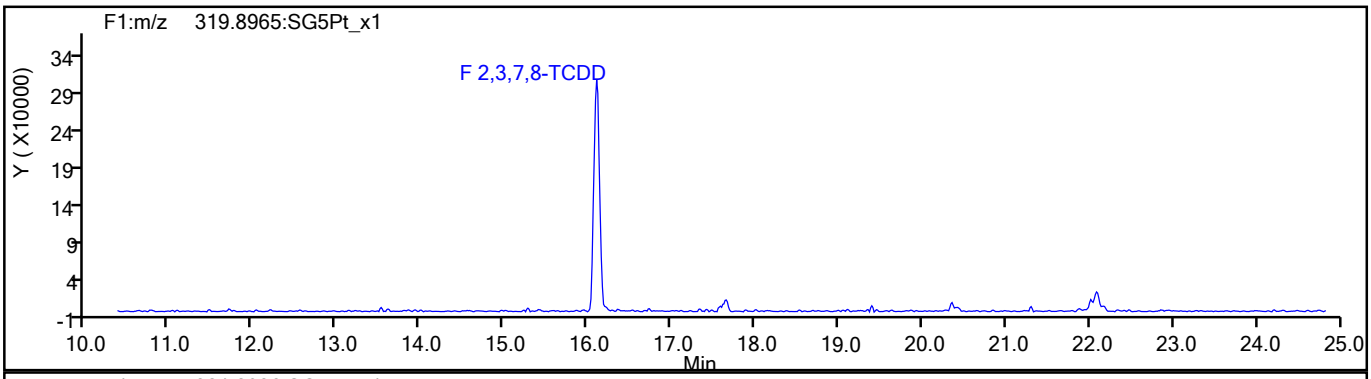

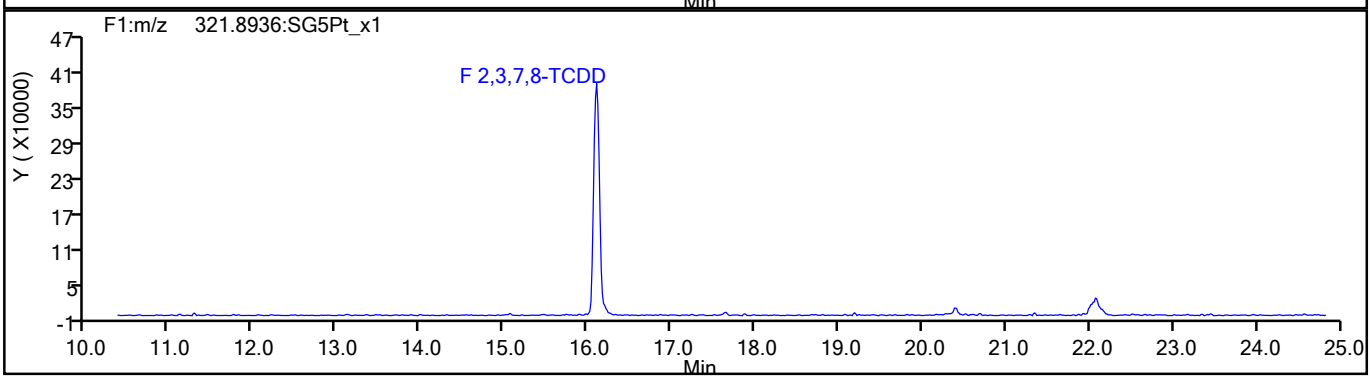

TCDD Standards

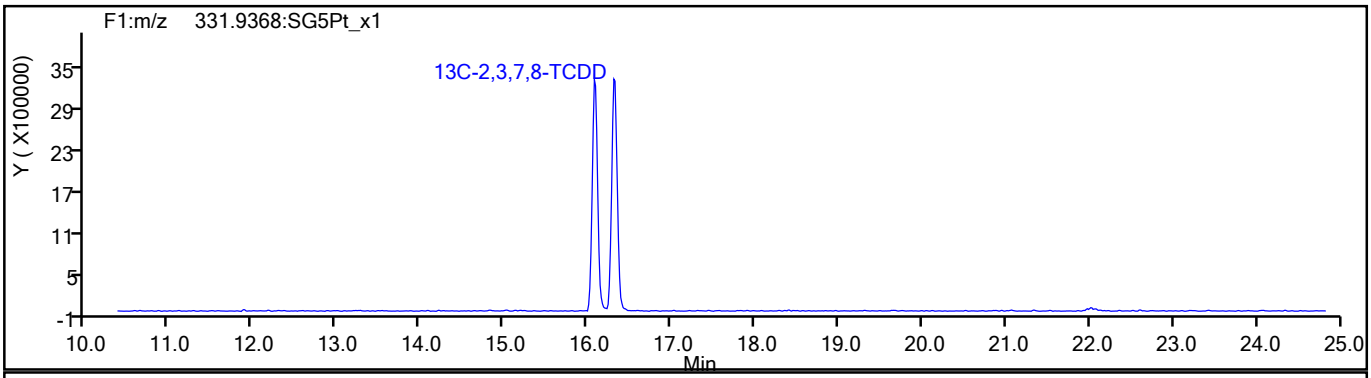

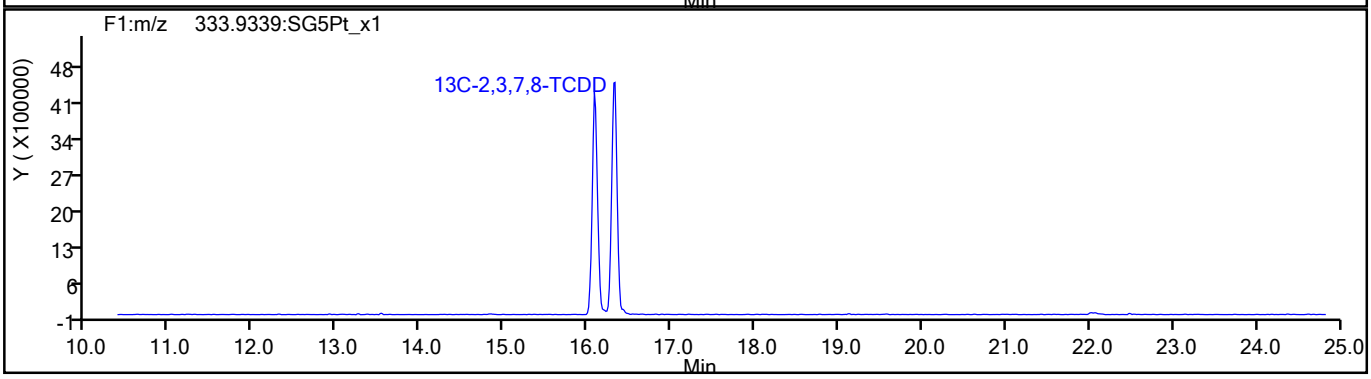

773746

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

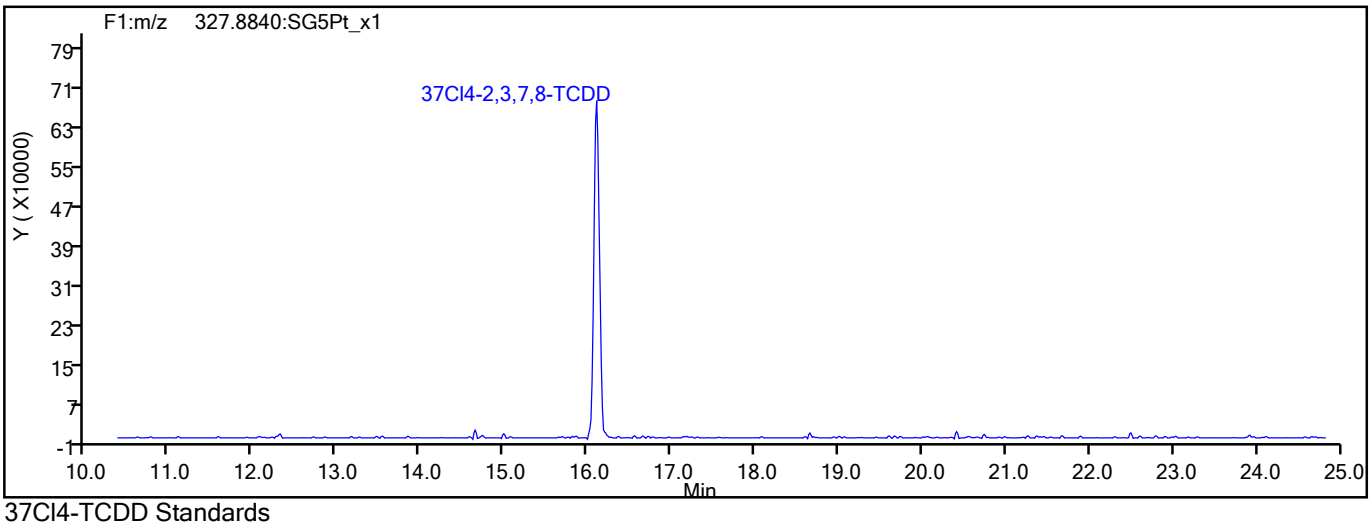

37Cl4-TCDD Standards

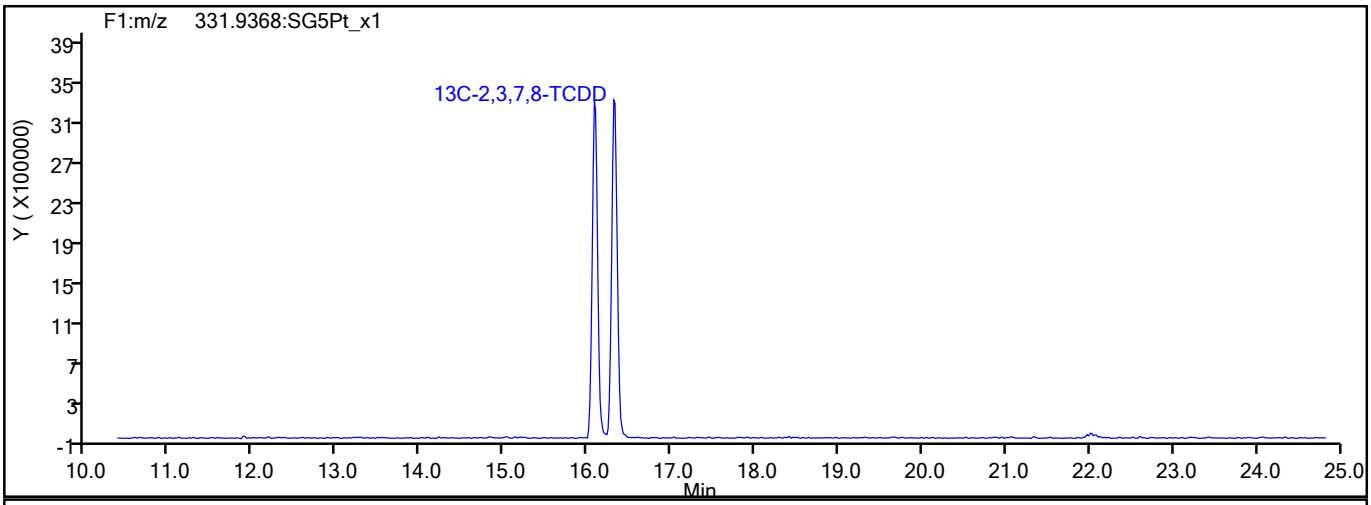

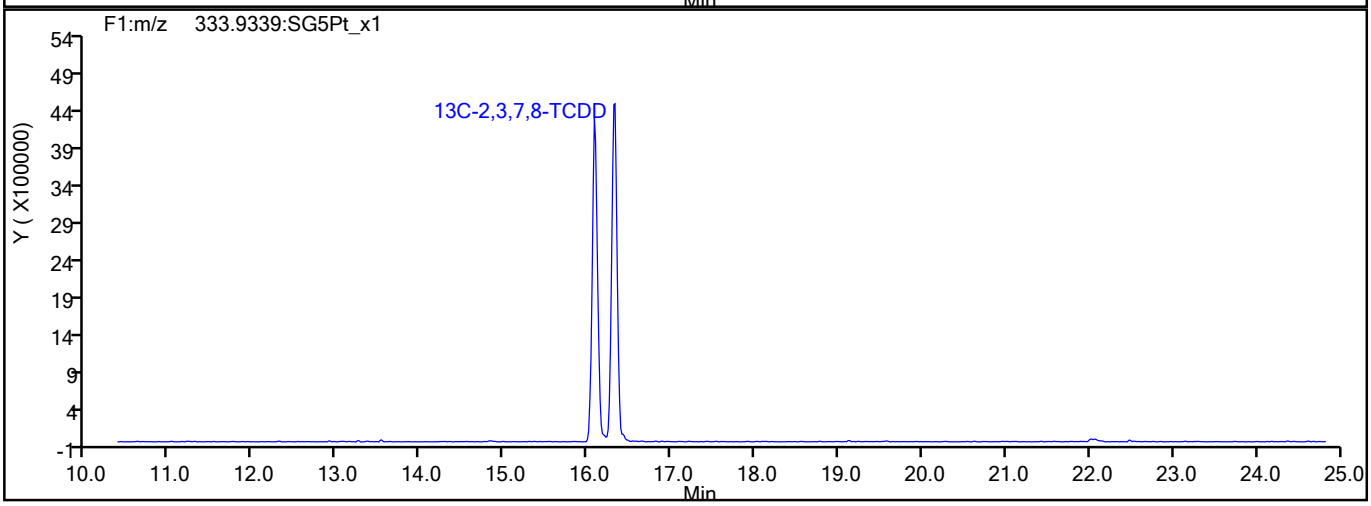

773747

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

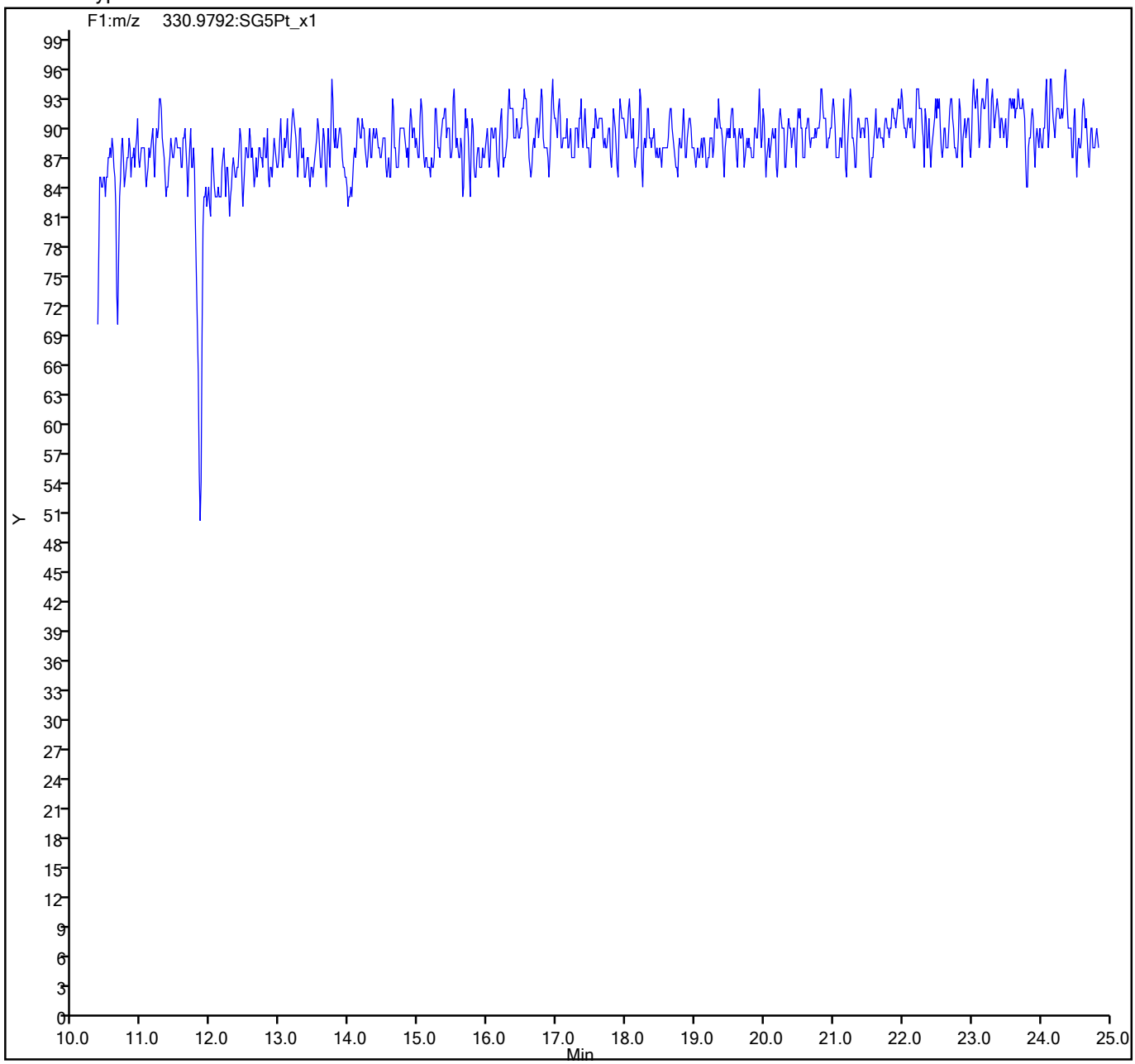

773748

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID: ICV 320-496688/9 Calibration Date: 06/08/2021 19:25

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 08jn21adfs1_11.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.086		40.2	40.0	101	70-130
2,3,7,8-TCDD	AveID	1.075	1.121		41.7	40.0	104	70-130
1,2,3,7,8-PeCDF	AveID	1.054	1.024		194	200	97	70-130
2,3,4,7,8-PeCDF	AveID	1.008	1.118		222	200	111	70-130
1,2,3,7,8-PeCDD	AveID	1.046	1.030		197	200	98	70-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.173		204	200	102	70-130
1,2,3,6,7,8-HxCDF	AveID	1.218	1.270		209	200	104	70-130
2,3,4,6,7,8-HxCDF	AveID	1.214	1.289		212	200	106	70-130
1,2,3,4,7,8-HxCDD	AveID	1.061	1.071		202	200	101	70-130
1,2,3,6,7,8-HxCDD	AveID	0.9933	1.055		212	200	106	70-130
1,2,3,7,8,9-HxCDD	AveID	1.109	1.001		180	200	90	70-130
1,2,3,7,8,9-HxCDF	AveID	1.240	1.220		197	200	98	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.505		209	200	104	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.076		205	200	102	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.299		198	200	99	70-130
OCDD	AveID	1.062	1.116		420	400	105	70-130
OCDF	AveID	1.317	1.367		415	400	104	70-130
13C-2,3,7,8-TCDF	Ave	1.346	1.311		97.4	100	97	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9331		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.095		96.0	100	96	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.137		101	100	101	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7038		98.2	100	98	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.080		112	100	112	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.244		116	100	116	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.134		109	100	109	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8428		111	100	111	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9479		110	100	110	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9309		95.7	100	96	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7732		105	100	105	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7344		109	100	109	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7385		108	100	108	77-129
13C-OCDD	Ave	0.5446	0.5501		202	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.000		39.7	40.0	99	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.559	1125768	0.79	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.623	1476391	0.81	1.3459	97.4	97.4	0.3116	0.3116	97.44	
2,3,7,8-TCDF	19.648	641186	0.78	1.0802	40.2	40.2	0.0827	0.0827	101	
A Non-2,3,7,8-sub-TCDF	19.213	10768	0.77	1.0802	0.7248	0.6752	0.0827	0.3523		RQ
S Total TCDF					40.9	40.9	0.0827	0.0827		RQ
D 13C-2,3,7,8-TCDD	20.928	1050504	0.81	0.9317	100.2	100.2	0.3032	0.3032	100	
$ 37Cl4-2,3,7,8-TCDD	20.946	450121		1.0083	39.7	39.7	0.0185	0.0185	99.14	
2,3,7,8-TCDD	20.946	471118	0.76	1.0753	41.7	41.7	0.1073	0.1073	104	
A Non-2,3,7,8-sub-TCDD	20.025	9415	0.75	1.0753	0.8334	0.8334	0.1073	0.8334		
S Total TCDD					42.5	42.5	0.1073	0.1073		
D 13C-1,2,3,7,8-PeCDF	26.596	1232285	1.59	1.1405	96.0	96.0	0.3457	0.3457	95.98	
1,2,3,7,8-PeCDF	26.612	2524406	1.56	1.0543	194.3	194.3	0.8579	0.8579	97.16	
D 13C-2,3,4,7,8-PeCDF	28.053	1280265	1.57	1.1253	101.1	101.1	0.3504	0.3504	101	
2,3,4,7,8-PeCDF	28.079	2861521	1.56	1.0079	221.8	221.8	0.9445	0.9445	111	
A F1 PeCDFs	24.098						0.0158	0.0158		
A Non-2,3,7,8-sub-PeCDF	27.473	63446	1.59	1.0311	4.898	4.898	0.8996	4.898		
S Total PeCDF					421.0	421.0	0.9012	0.9012		
D 13C-1,2,3,7,8-PeCDD	28.846	792316	1.60	0.7165	98.2	98.2	0.1154	0.1154	98.23	
1,2,3,7,8-PeCDD	28.871	1631677	1.56	1.0465	196.8	196.8	0.1550	0.1550	98.39	
A Non-2,3,7,8-sub-PeCDD	27.656						0.1550	0.1550		n
S Total PeCDD					196.8	196.8	0.1550	0.1550		
D 13C-1,2,3,4,7,8-HxCDF	34.420	999392	0.53	0.9648	111.9	111.9	0.3215	0.3215	112	
1,2,3,4,7,8-HxCDF	34.437	2343900	1.24	1.1474	204.4	204.4	0.8372	0.8372	102	
D 13C-1,2,3,6,7,8-HxCDF	34.597	1151145	0.54	1.0708	116.1	116.1	0.2896	0.2896	116	
1,2,3,6,7,8-HxCDF	34.614	2923094	1.25	1.2178	208.5	208.5	0.6918	0.6918	104	
D 13C-2,3,4,6,7,8-HxCDF	35.473	1049318	0.52	1.0413	108.9	108.9	0.2978	0.2978	109	
2,3,4,6,7,8-HxCDF	35.490	2704850	1.25	1.2145	212.3	212.3	0.6697	0.6697	106	
D 13C-1,2,3,7,8,9-HxCDF	36.409	861729	0.52	0.9731	95.7	95.7	0.3187	0.3187	95.67	
1,2,3,7,8,9-HxCDF	36.425	2103282	1.26	1.2401	196.8	196.8	0.7295	0.7295	98.41	
A Non-2,3,7,8-sub-HxCDF	34.470						0.7275	0.7275		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					822.0	822.0	0.7320	0.7320		
* 13C-1,2,3,7,8,9-HxCDD	36.215	925657	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.709	780111	1.25	0.7587	111.1	111.1	0.1965	0.1965	111	
1,2,3,4,7,8-HxCDD	35.726	1671580	1.25	1.0608	202.0	202.0	0.2912	0.2912	101	
D 13C-1,2,3,6,7,8-HxCDD	35.827	877428	1.29	0.8593	110.3	110.3	0.1735	0.1735	110	
1,2,3,6,7,8-HxCDD	35.844	1852033	1.25	0.9933	212.5	212.5	0.2936	0.2936	106	
1,2,3,7,8,9-HxCDD	36.232	1658680	1.25	1.1094	180.4	180.4	0.2704	0.2704	90.20	
A Non-2,3,7,8-sub-HxCDD	34.896						0.2845	0.2845		
S Total HxCDD					594.9	594.9	0.2851	0.2851		
D 13C-1,2,3,4,6,7,8-HpCDF	38.325	715749	0.46	0.7359	105.1	105.1	0.4232	0.4232	105	
1,2,3,4,6,7,8-HpCDF	38.334	2154882	1.05	1.4421	208.8	208.8	0.7056	0.7056	104	
D 13C-1,2,3,4,7,8,9-HpCDF	39.615	683594	0.46	0.6854	107.8	107.8	0.4545	0.4545	108	
1,2,3,4,7,8,9-HpCDF	39.623	1775948	1.06	1.3092	198.4	198.4	0.7773	0.7773	99.22	
A Non-2,3,7,8-sub-HpCDF	38.954						0.7397	0.7397		
S Total HpCDF					407.2	407.2	0.7415	0.7415		
D 13C-1,2,3,4,6,7,8-HpCDD	39.311	679765	1.07	0.6745	108.9	108.9	0.3101	0.3101	109	
1,2,3,4,6,7,8-HpCDD	39.320	1462615	1.05	1.0503	204.9	204.9	0.4465	0.4465	102	
A Non-2,3,7,8-sub-HpCDD	38.962						0.4465	0.4465		n
S Total HpCDD					204.9	204.9	0.4465	0.4465		
D 13C-OCDD	41.801	1018443	0.90	0.5446	202.0	202.0	0.2655	0.2655	101	
OCDF	41.885	2784055	0.91	1.3168	415.2	415.2	0.4728	0.4728	104	
OCDD	41.809	2272994	0.89	1.0620	420.3	420.3	0.4613	0.4613	105	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.559	20.544	1		497786	76231	115	287	663		
333.9338	20.550	20.544	0		627982	95455	79	197	1208	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.623	19.630	0	0.954	658944	105750	176	440	601		
317.9389	19.623	19.630	0	0.954	817447	135001	112	280	1205	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.648	19.673	-1	1.001	281905	45248	31	77	1460		
305.8987	19.648	19.673	-1	1.001	359281	56056	55	137	1019	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.489	19.213	-43	0.942	2444	489	31	77	16		
305.8987	18.489	19.213	-43	0.942	3965	647	55	137	12	0.62(0.65-0.89)	
	Empc Correction				3174	635	55	137	12		
303.9016	18.961	19.213	-15	0.966	2103	355	31	77	11		
305.8987	18.961	19.213	-15	0.966	3047	540	55	137	10	0.69(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.928	20.918	1	1.018	469892	68601	115	287	597		
333.9338	20.920	20.918	0	1.018	580612	84734	79	197	1073	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.946	20.939	0	1.019	450121	64795	13	32	4984		
2,3,7,8-TCDD											
319.8965	20.946	20.952	0	1.001	203710	30841	43	107	717		
321.8936	20.946	20.952	0	1.001	267408	39251	28	70	1402	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	20.748	20.025	43	0.991	4027	748	43	107	17		
321.8936	20.748	20.025	43	0.991	5388	912	28	70	33	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.596	26.552	3	1.294	756622	134257	176	440	763		
353.8970	26.596	26.552	3	1.294	475663	85437	95	237	899	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.612	26.578	2	1.001	1538811	266495	482	1205	553		
341.8567	26.612	26.578	2	1.001	985595	170105	313	782	543	1.56(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.053	28.002	3	1.365	781677	129402	176	440	735		
353.8970	28.062	28.002	4	1.365	498588	79335	95	237	835	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.079	28.028	3	1.001	1744490	280566	482	1205	582		
341.8567	28.079	28.028	3	1.001	1117031	182233	313	782	582	1.56(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.098						3	7			
341.8567	24.098						11	27			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.186	27.473	-17	1.022	38961	6595	482	1205	14		
341.8567	27.177	27.473	-18	1.022	24485	4217	313	782	13	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.846	28.795	3	1.403	487930	72898	31	77	2352		
369.8919	28.846	28.795	3	1.403	304386	45466	26	65	1749	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.871	28.820	3	1.001	995242	153111	50	125	3062		
357.8516	28.871	28.820	3	1.001	636435	96130	27	67	3560	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.214	27.656	33	0.978	1514	293	50	125	6		
357.8516	28.197	27.656	32	0.978	953	151	27	67	6	1.59(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.420	34.370	3	0.950	347982	68430	100	250	684		
385.8610	34.411	34.370	2	0.950	651410	129057	179	447	721	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.437	34.404	2	1.000	1299118	260435	435	1087	599		
375.8178	34.437	34.404	2	1.000	1044782	207176	324	810	639	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.597	34.555	2	0.955	402116	75630	100	250	756		
385.8610	34.597	34.555	2	0.955	749029	149555	179	447	836	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.614	34.572	2	1.000	1625084	318250	435	1087	732		
375.8178	34.614	34.572	2	1.000	1298010	254878	324	810	787	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.473	35.432	2	0.980	359196	80141	100	250	801		
385.8610	35.473	35.432	2	0.980	690122	153108	179	447	855	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.490	35.449	2	1.000	1504442	338765	435	1087	779		
375.8178	35.490	35.449	2	1.000	1200408	271192	324	810	837	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.409	36.376	2	1.005	295983	71192	100	250	712		
385.8610	36.409	36.376	2	1.005	565746	138504	179	447	774	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.425	36.393	2	1.000	1172455	286668	435	1087	659		
375.8178	36.425	36.393	2	1.000	930827	227290	324	810	702	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						435	1087			
375.8178	34.470						324	810			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.215	36.182	2		517474	125327	80	200	1567		
403.8529	36.215	36.182	2		408183	99401	54	135	1841	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.709	35.668	2	0.986	434094	107490	80	200	1344		
403.8529	35.709	35.668	2	0.986	346017	85806	54	135	1589	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.726	35.685	2	1.000	928783	231750	132	330	1756		
391.8127	35.726	35.685	2	1.000	742797	185332	107	267	1732	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.827	35.794	2	0.989	493784	113946	80	200	1424		
403.8529	35.827	35.794	2	0.989	383644	90754	54	135	1681	1.29(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	35.844	35.811	2	1.000	1030480	241468	132	330	1829		
391.8127	35.844	35.811	2	1.000	821553	192627	107	267	1800	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.232	36.198	2	1.015	920944	222717	132	330	1687		
391.8127	36.223	36.198	1	1.014	737736	175856	107	267	1644	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.896						132	330			
391.8127	34.896						107	267			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.325	38.292	2	1.058	225843	65327	102	255	640		
419.8220	38.325	38.292	2	1.058	489906	143703	178	445	807	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.334	38.309	1	1.000	1104308	315033	437	1092	721		
409.7788	38.334	38.309	1	1.000	1050574	298985	414	1035	722	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.615	39.591	1	1.094	215253	65848	102	255	646		
419.8220	39.615	39.591	1	1.094	468341	143162	178	445	804	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.623	39.598	1	1.000	914515	283964	437	1092	650		
409.7788	39.623	39.598	1	1.000	861433	268143	414	1035	648	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						437	1092			
409.7788	38.954						414	1035			

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.311	39.279	2	1.086	351100	106957	105	262	1019		
437.8140	39.311	39.279	2	1.086	328665	103097	83	207	1242	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.320	39.295	1	1.000	749316	235728	209	522	1128		
425.7737	39.320	39.295	1	1.000	713299	221333	185	462	1196	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.662	38.962	-18	0.983	5341	1580	209	522	8		
425.7737	38.662	38.962	-18	0.983	5423	1624	185	462	9	0.98(0.88-1.20)	
13C-OCDD											
469.7780	41.801	41.778	1	1.154	483015	136908	66	165	2074		
471.7750	41.801	41.778	1	1.154	535428	149653	64	160	2338	0.90(0.76-1.02)	
OCDF											
441.7428	41.885	41.862	1	1.002	1324086	386680	165	412	2344		
443.7399	41.885	41.862	1	1.002	1459969	425131	192	480	2214	0.91(0.76-1.02)	
OCDD											
457.7377	41.809	41.786	1	1.000	1072812	307543	147	367	2092		
459.7348	41.809	41.786	1	1.000	1200182	343135	134	335	2561	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1476391	240751

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1476391	240751

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.489	2444	489	3965	647	0.4019	0.62	RQ
18.489	2444	489	3174	635	0.3523		Empc Correction
18.961	2103	355	3047	540	0.3229	0.69	n
Signal Totals:							
	4547	844	6221	1175			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11559	2031				0.65	RQ
	10768	2019					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7248 = (11559 * 100.000) / (1476391 * 1.080)
Empc Amount: 0.6752 = (10768 * 100.000) / (1476391 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDD, RT: 20.025

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	1050504	153335

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	1050504	153335

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
20.748	4027	748	5388	912	0.8334	0.75	
Signal Totals:							
	4027	748	5388	912			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9415	1660				0.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8334 = (9415 * 100.000) / (1050504 * 1.075)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1232285	219694
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1280265	208737

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1256275	214215

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.186	38961	6595	24485	4217	4.90	1.59	
Signal Totals:							
	38961	6595	24485	4217			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63446	10812				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.898 = (63446 * 100.000) / (1256275 * 1.031)

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

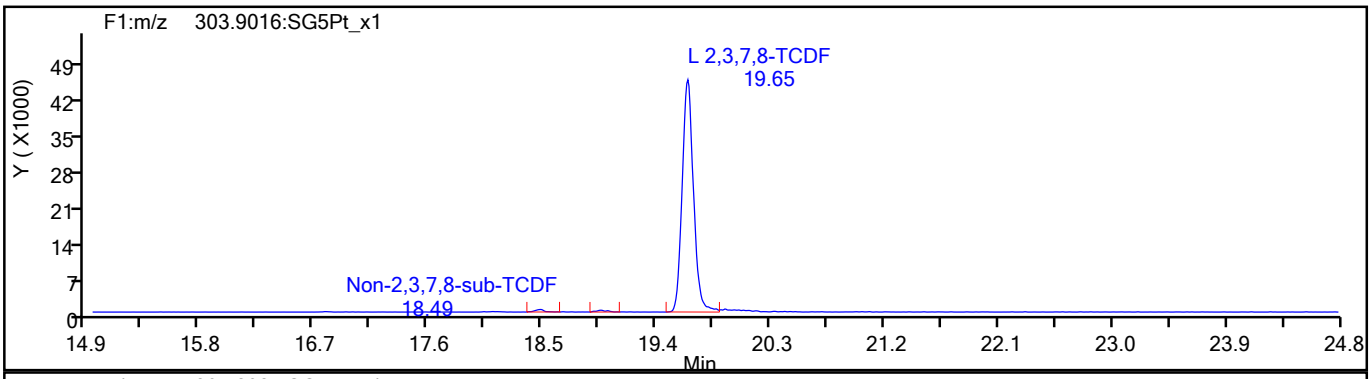

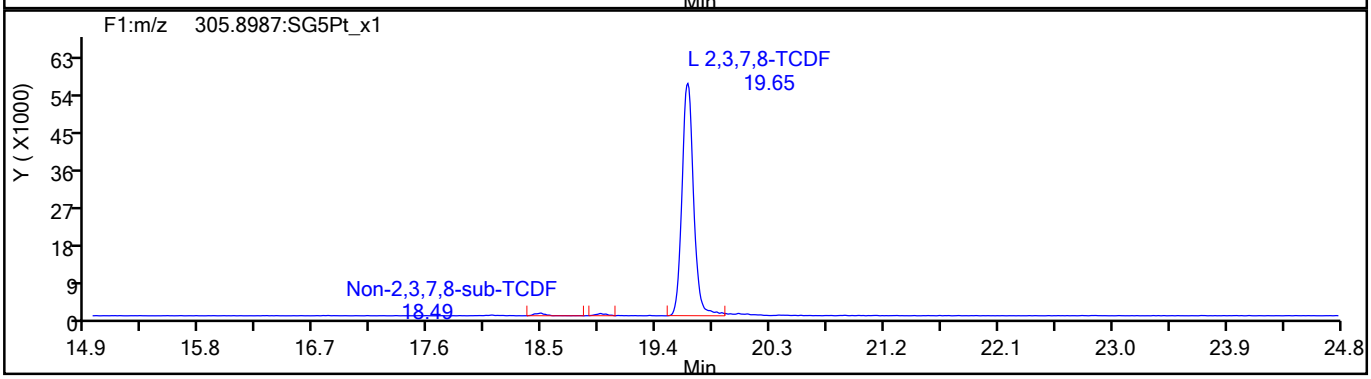

TCDF Standards

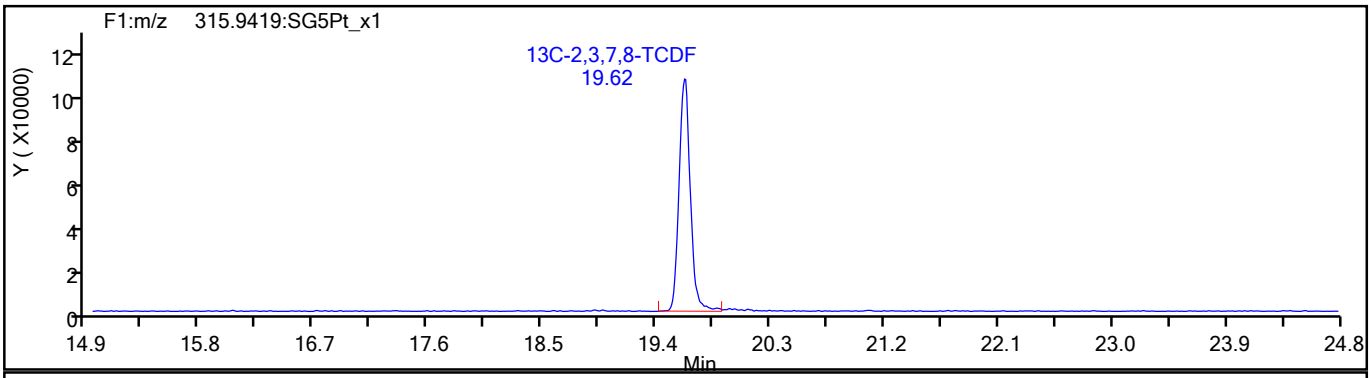

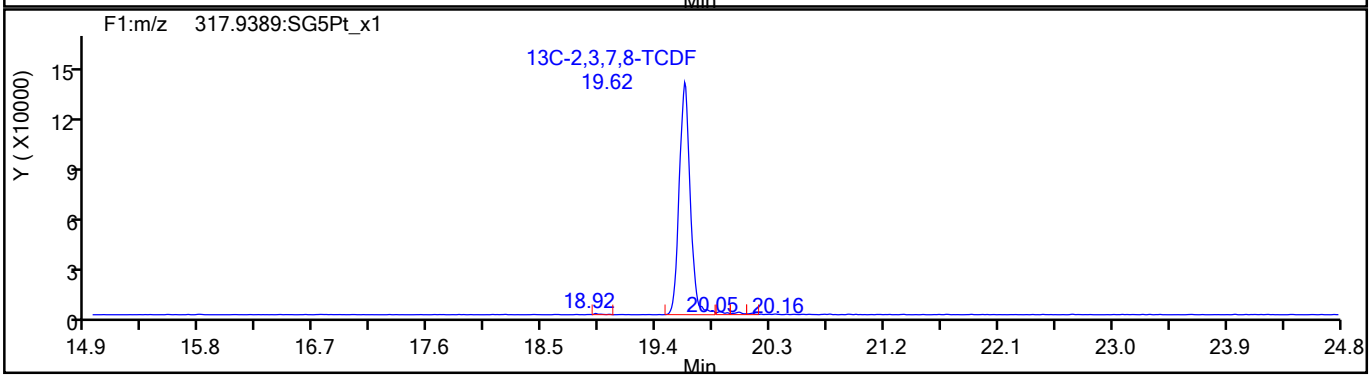

773759

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

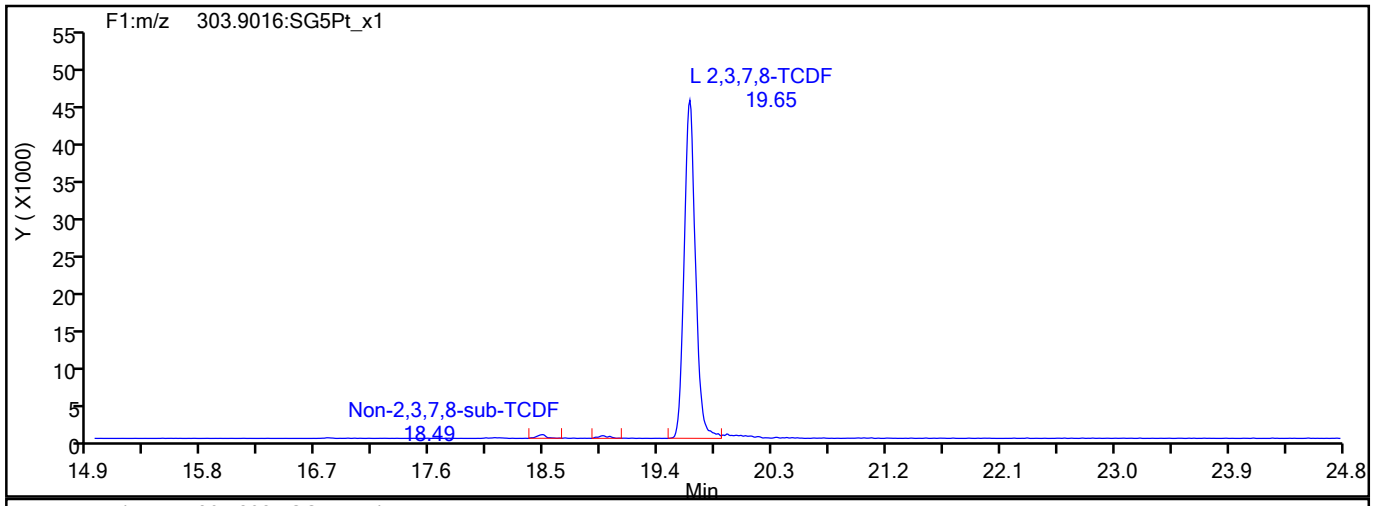

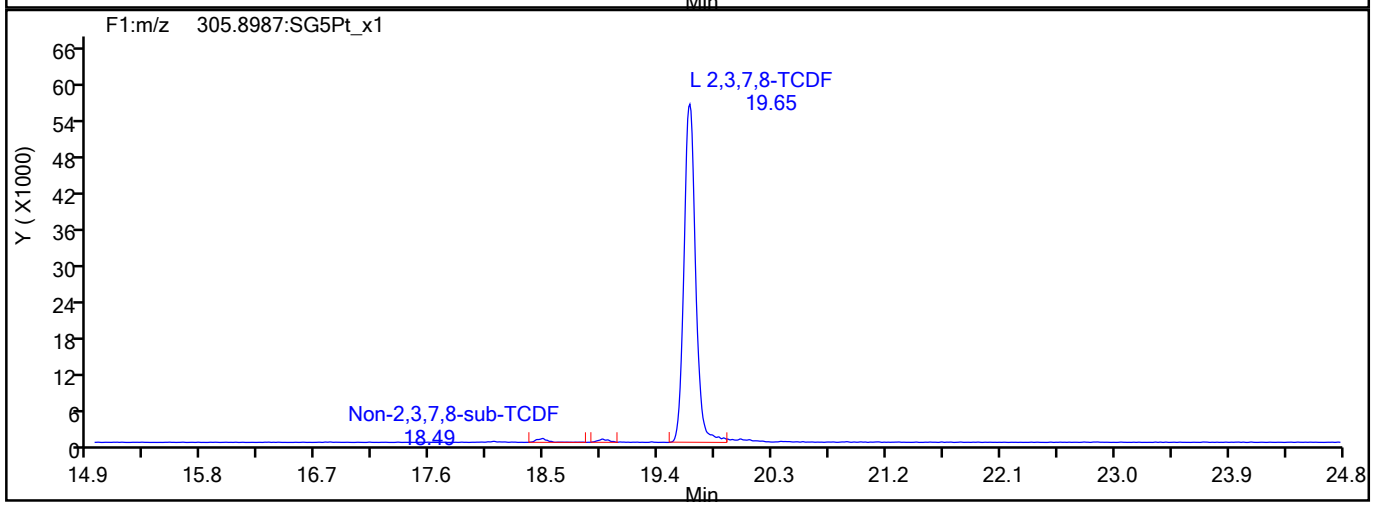

TCDF Interference Mass

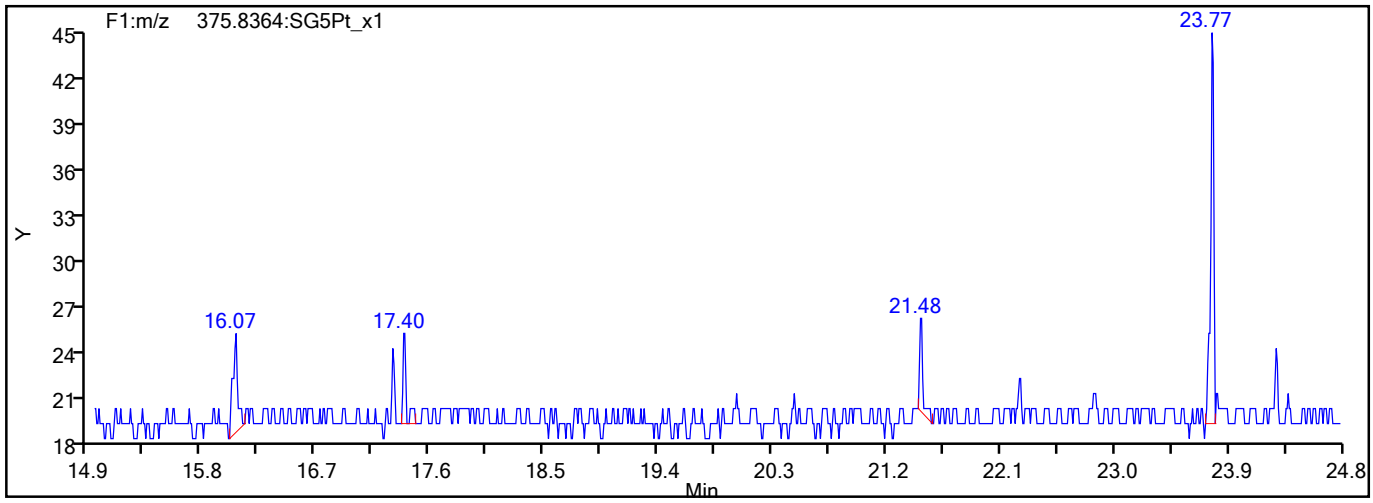

773760

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

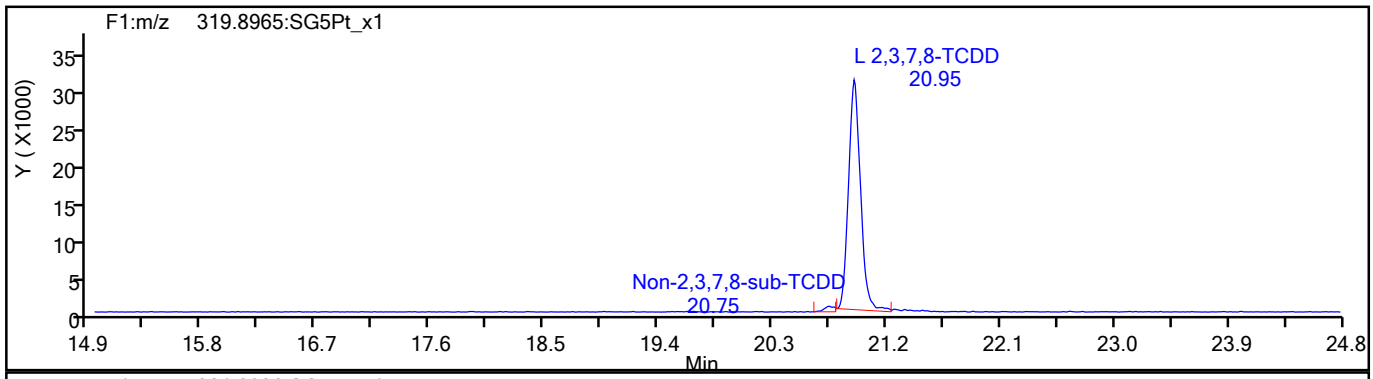

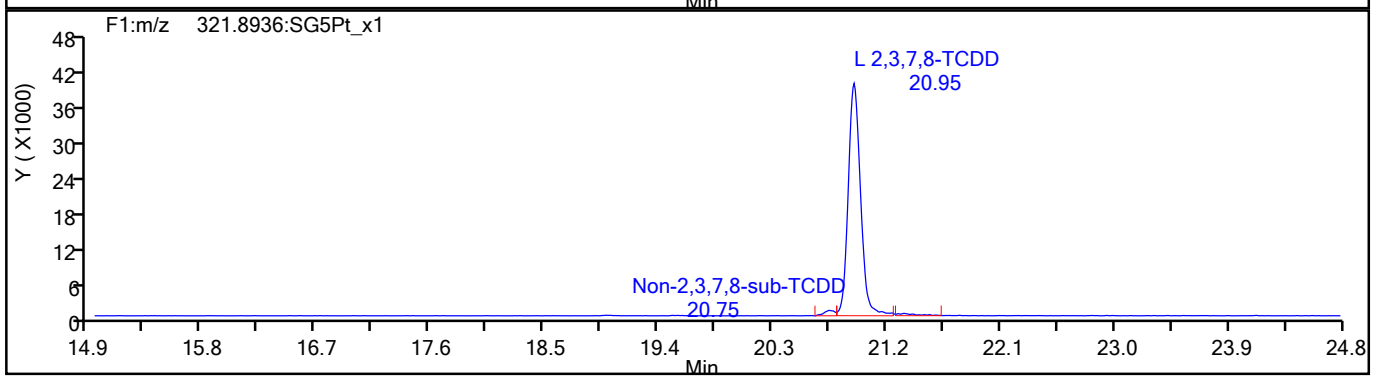

TCDD Standards

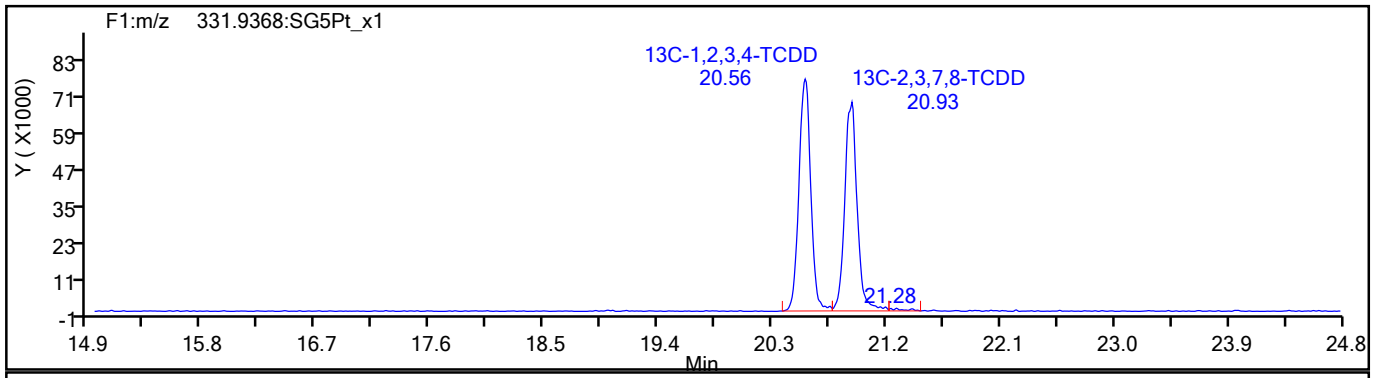

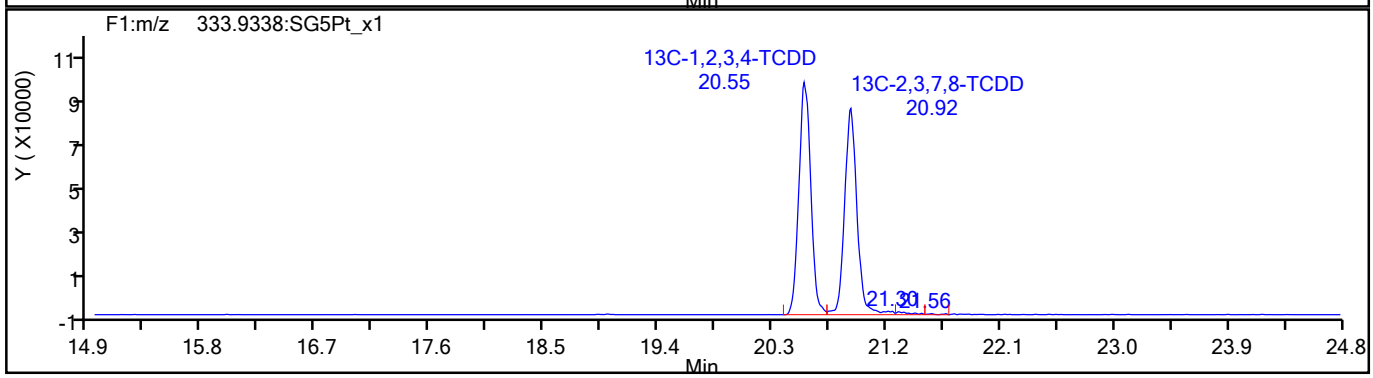

773761

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

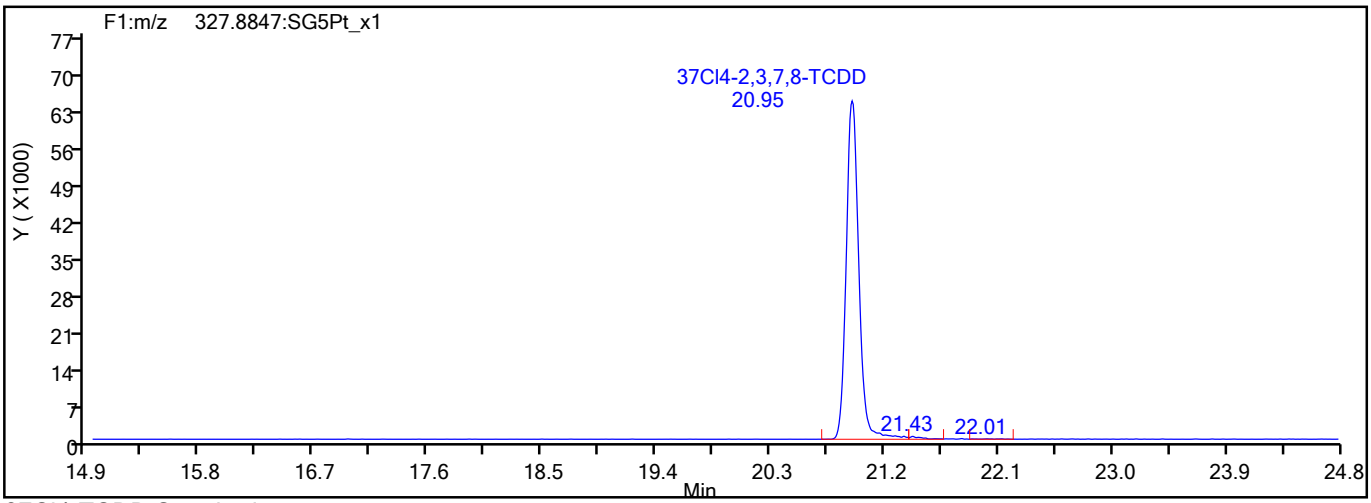

37Cl4-TCDD Standards

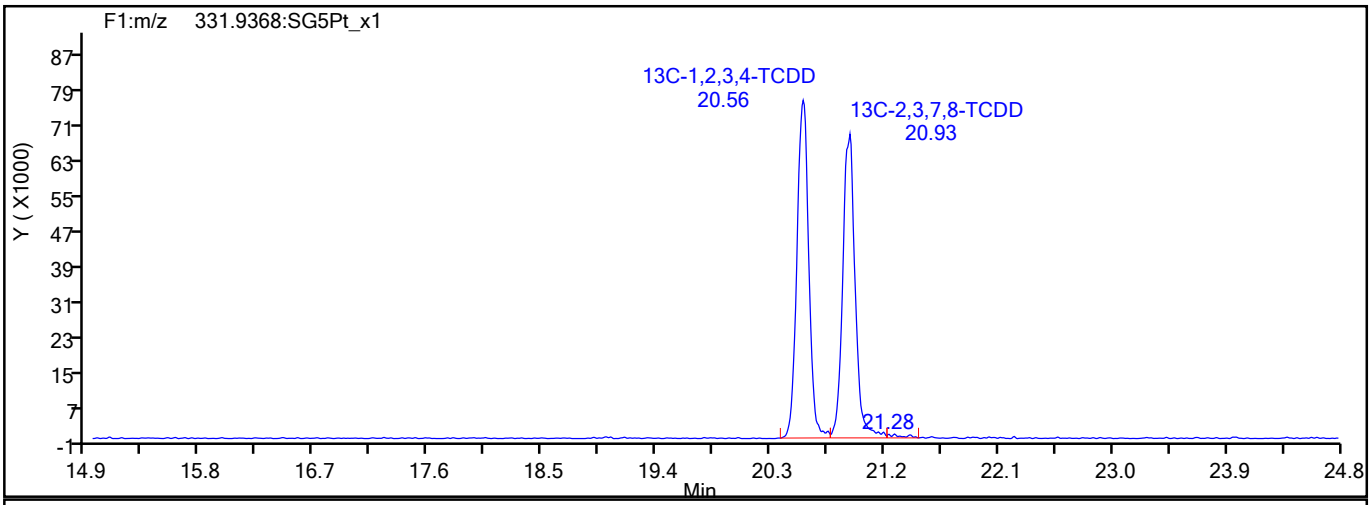

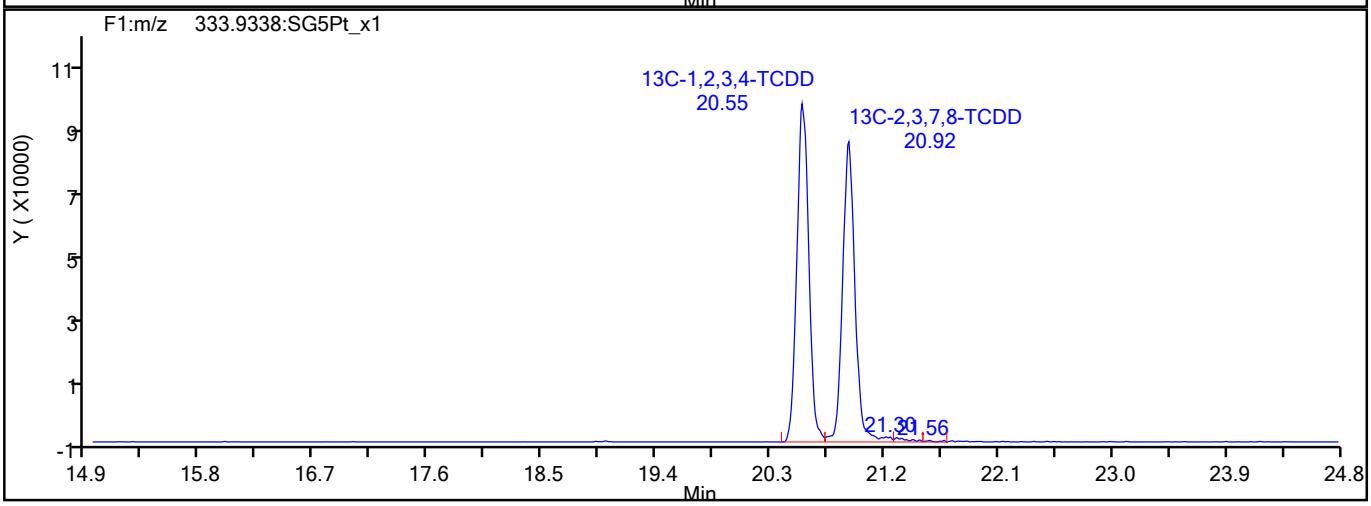

773762

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

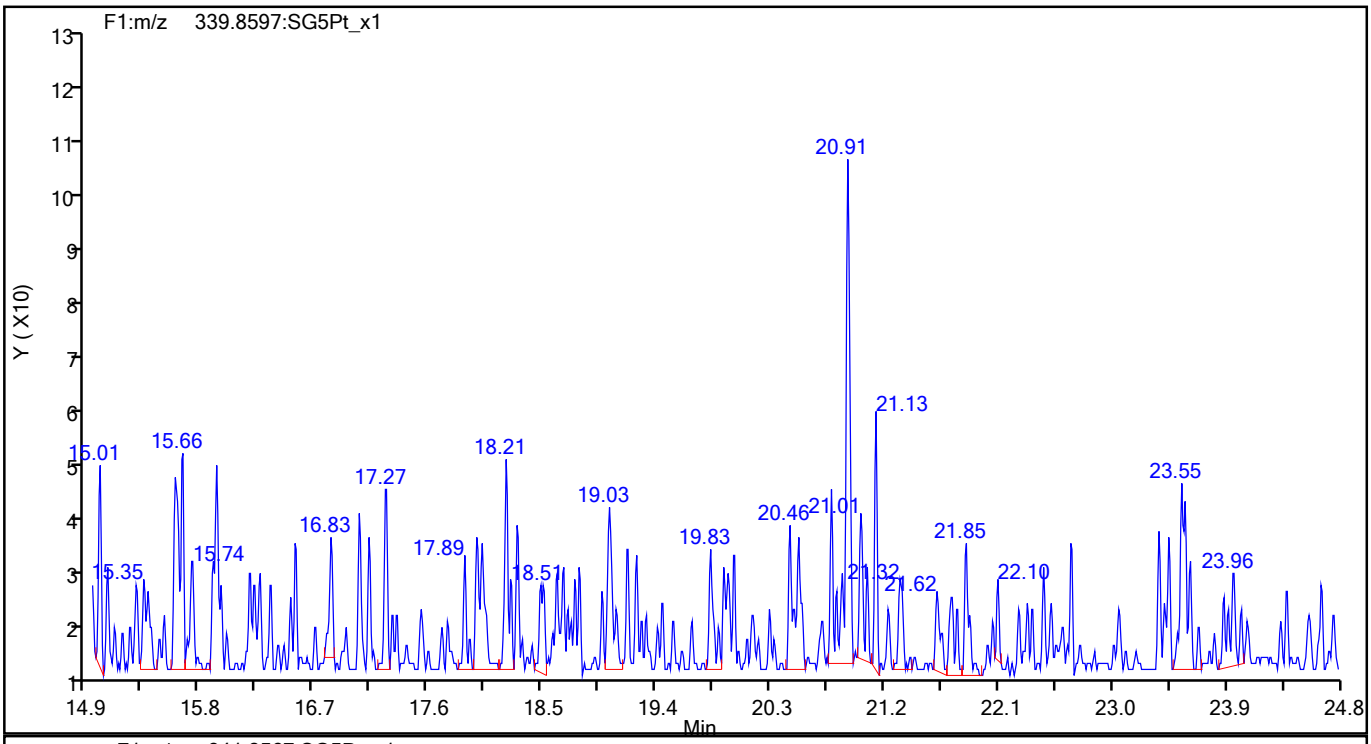

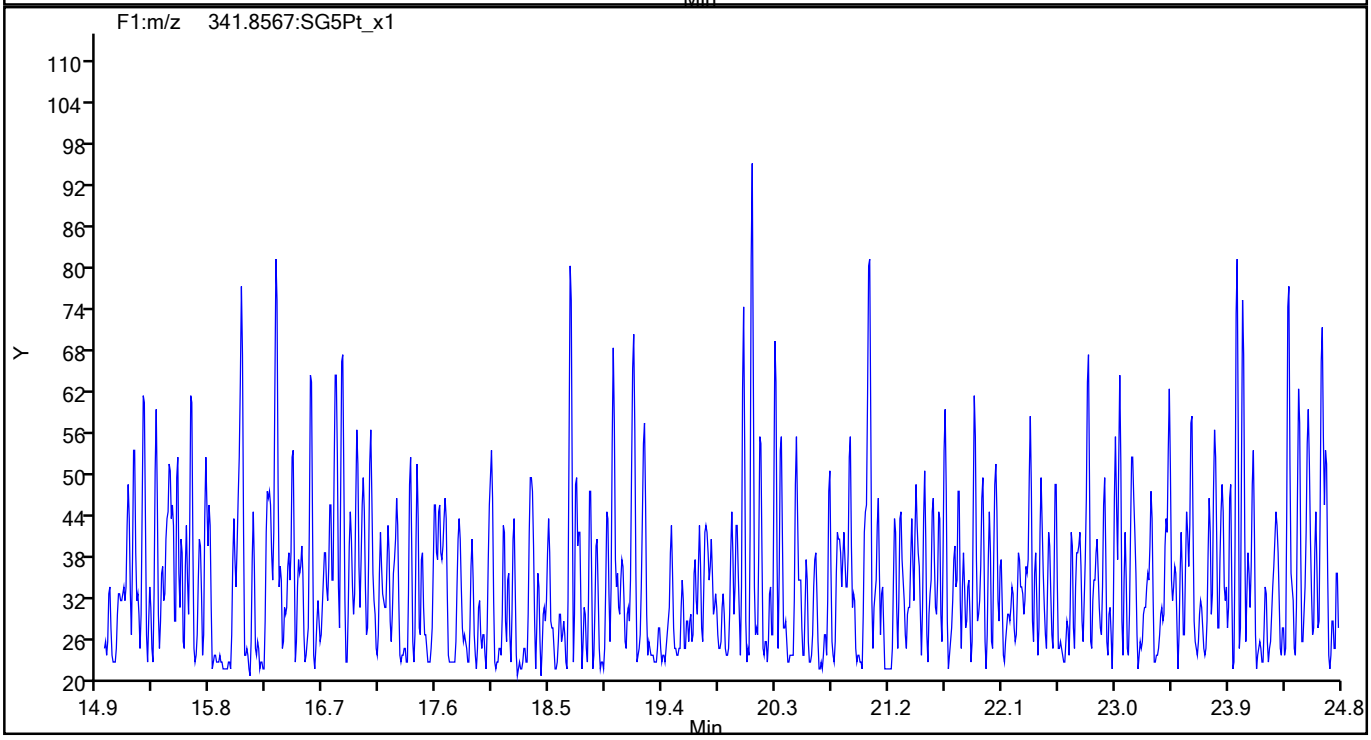

773763

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

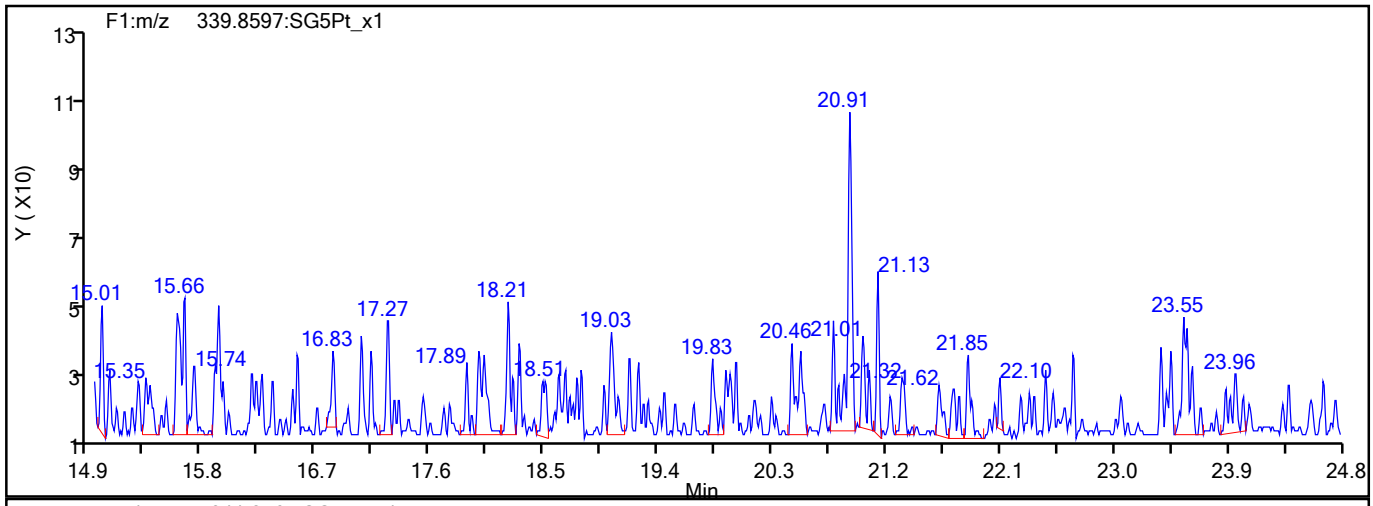

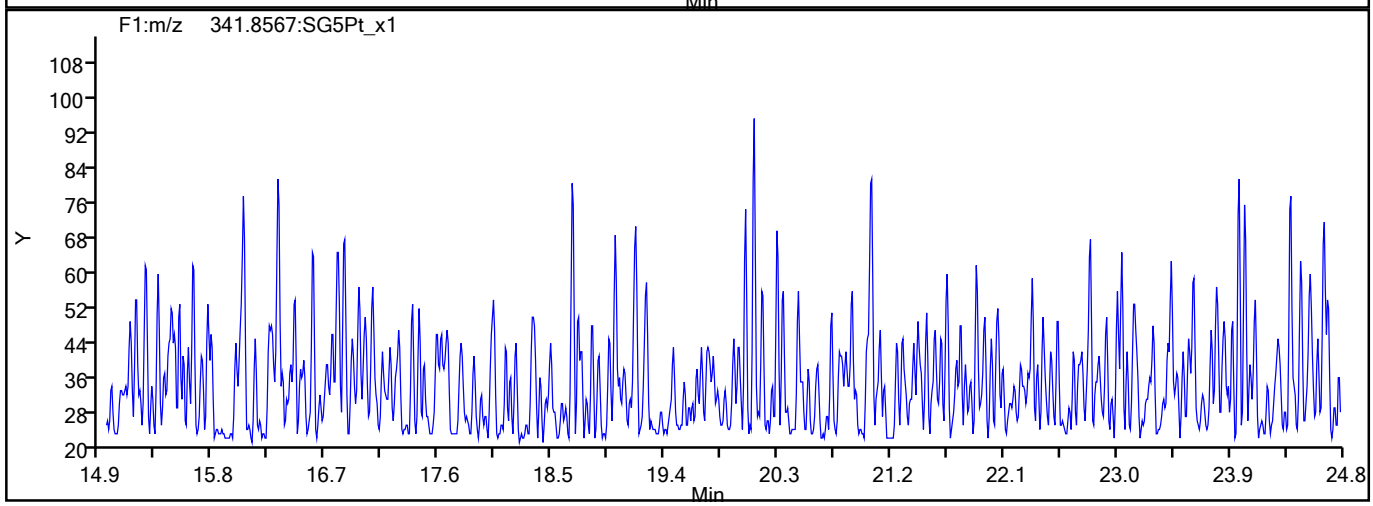

F1 PeCDFs Interference Mass

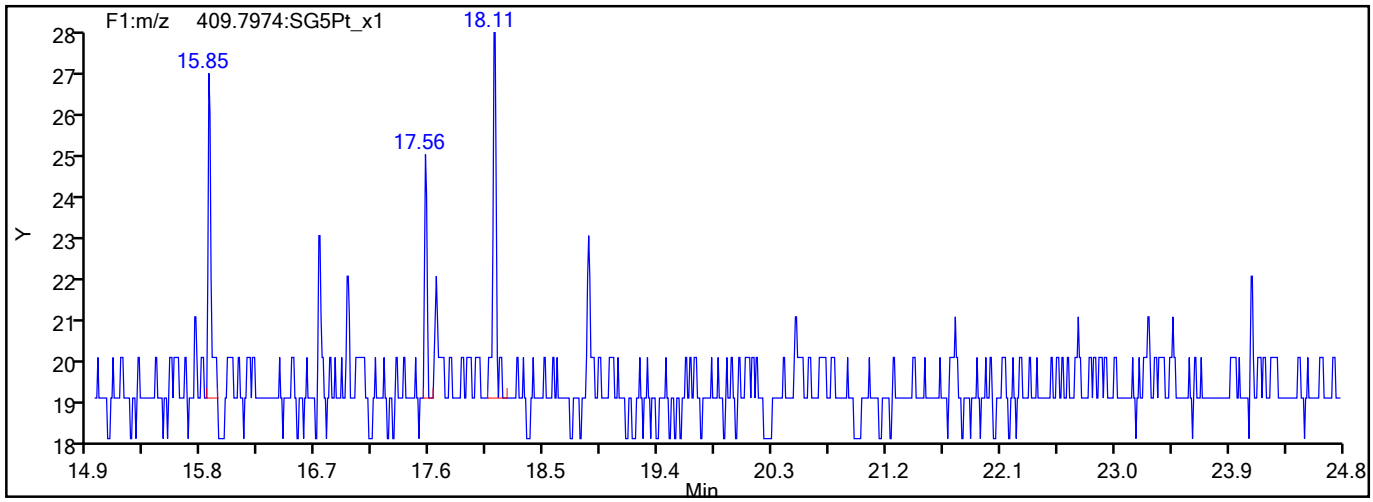

773764

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

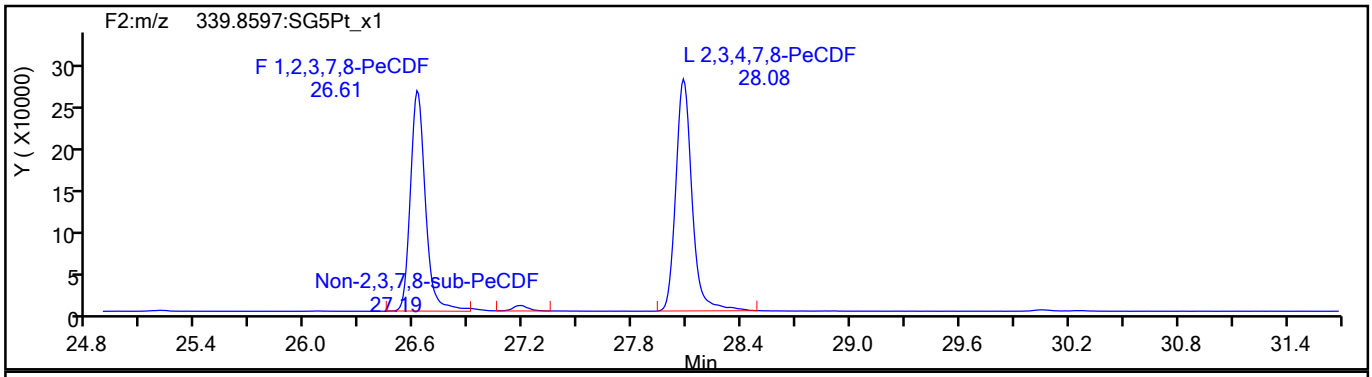

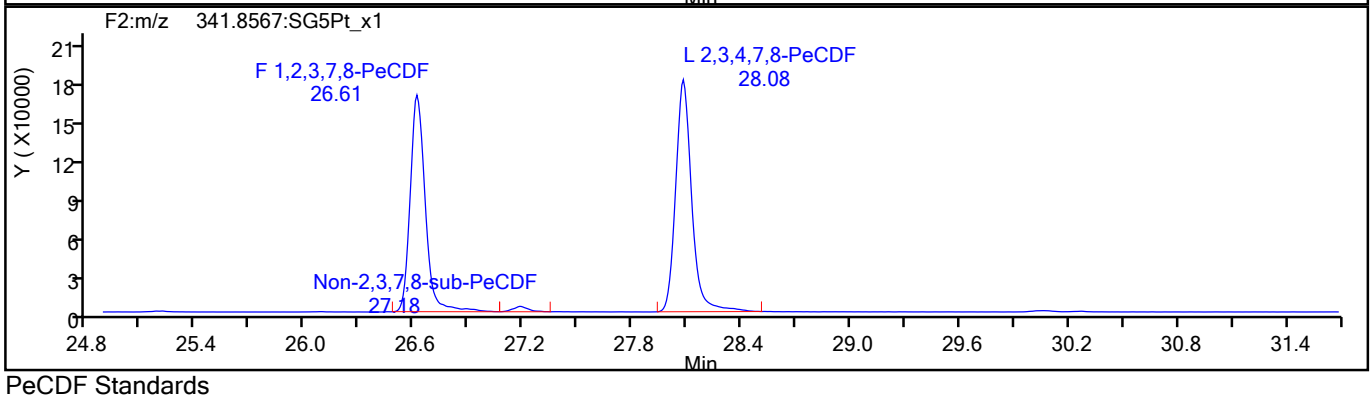

PeCDF Standards

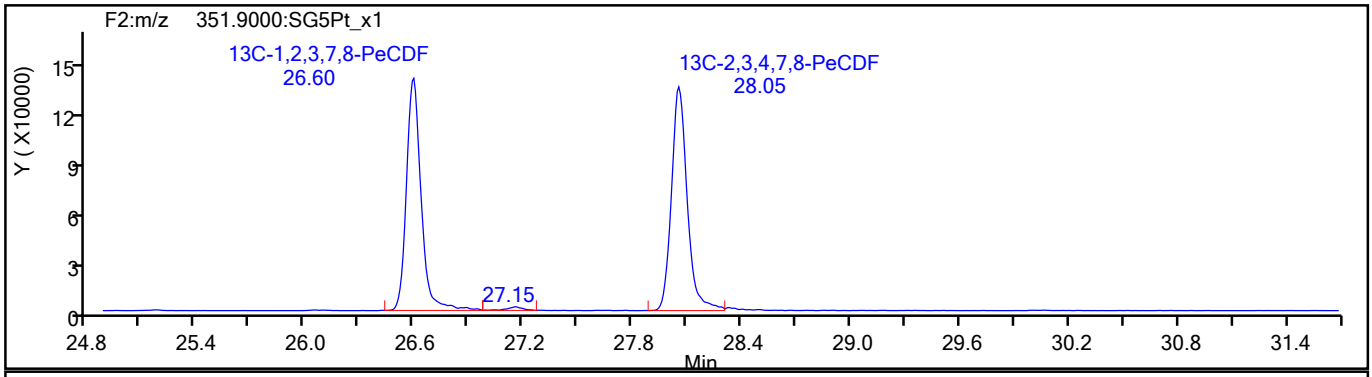

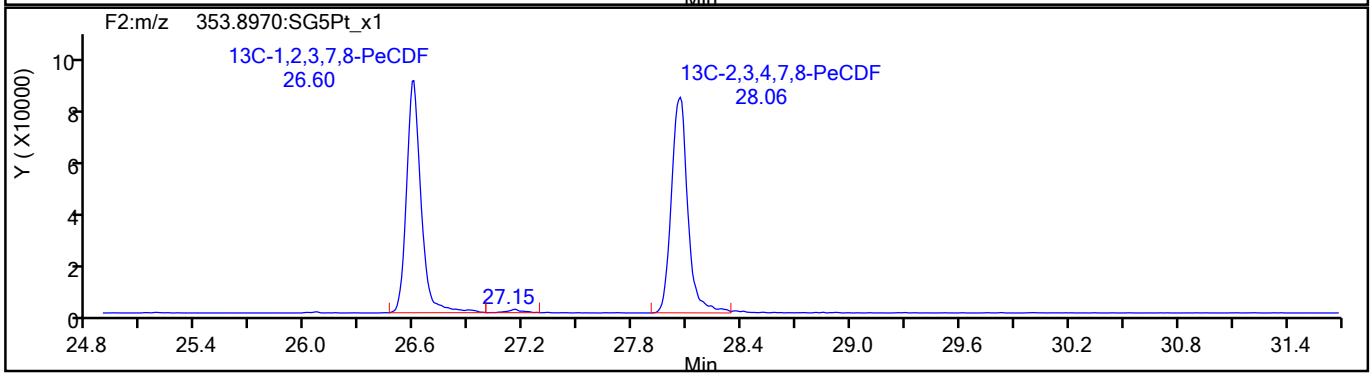

773765

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

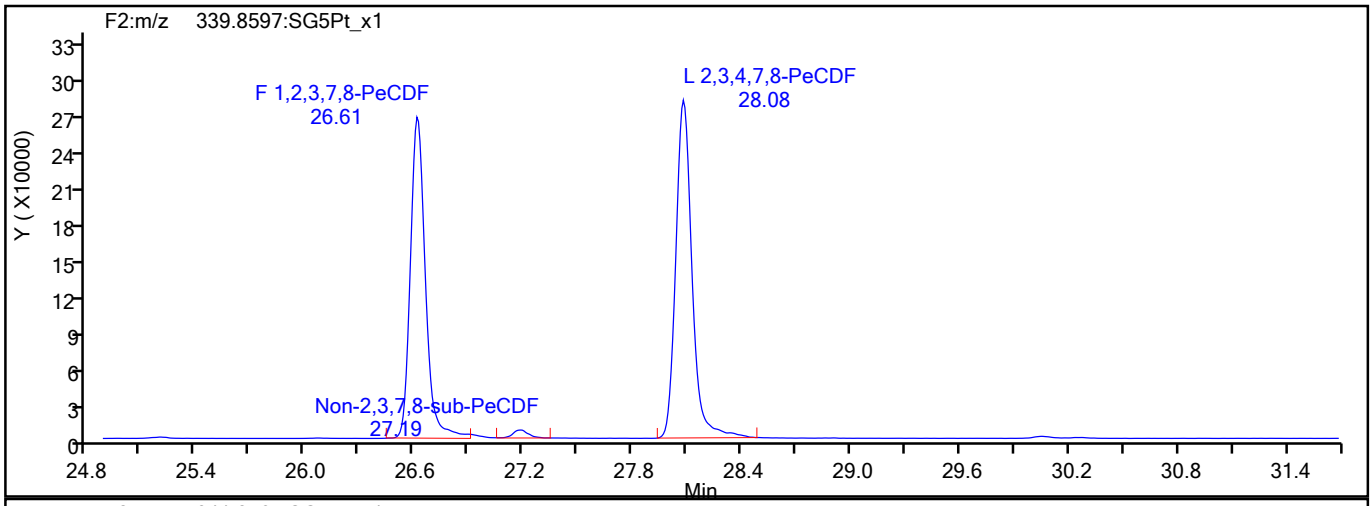

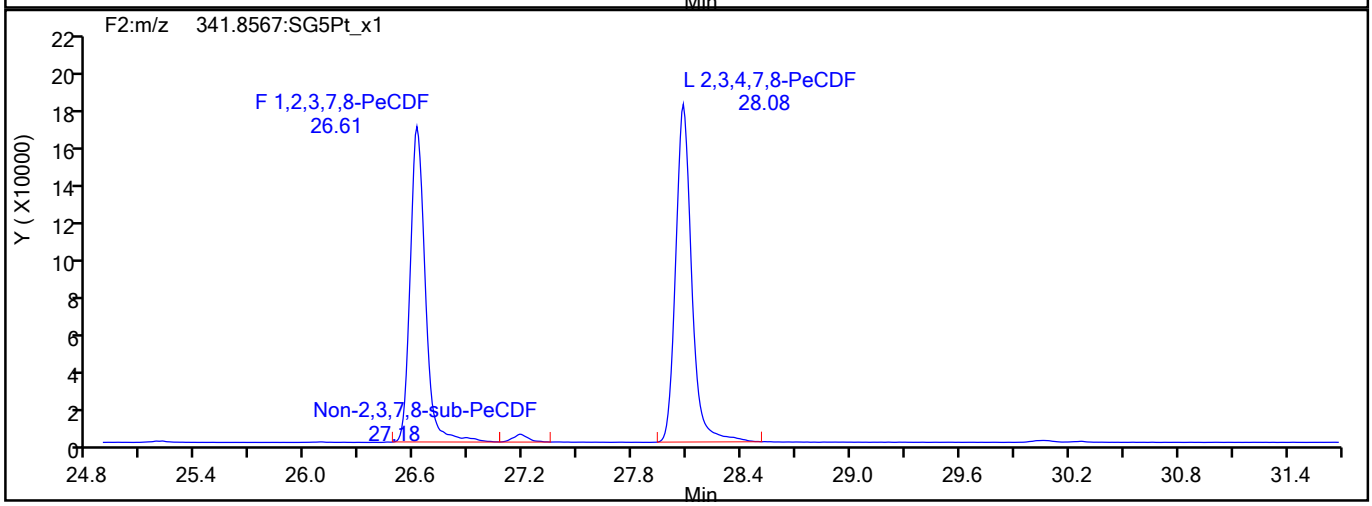

PeCDF Interference Mass

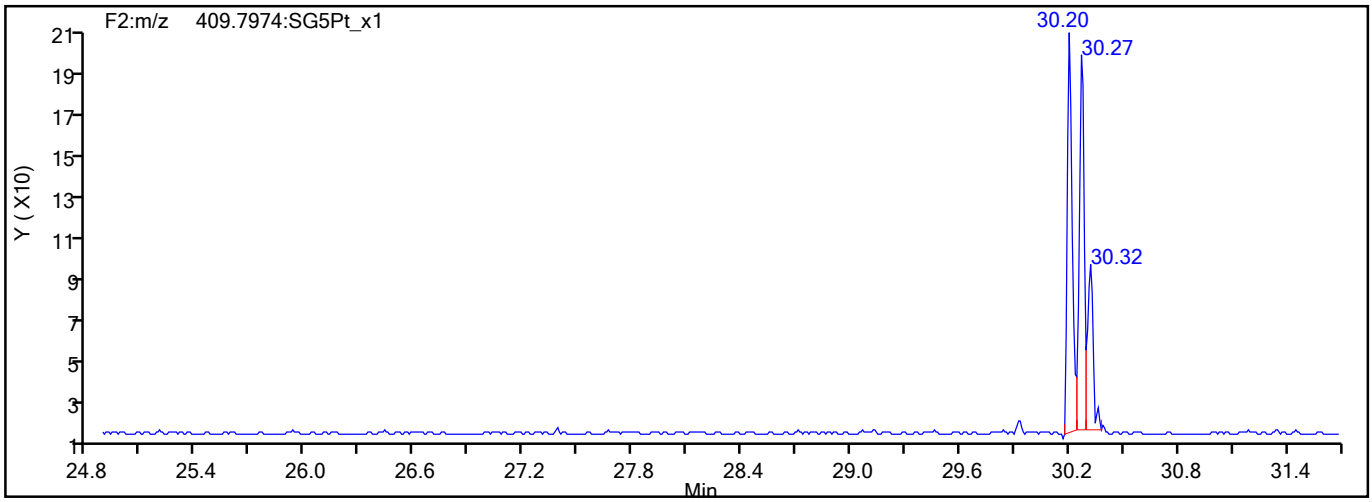

773766

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDD

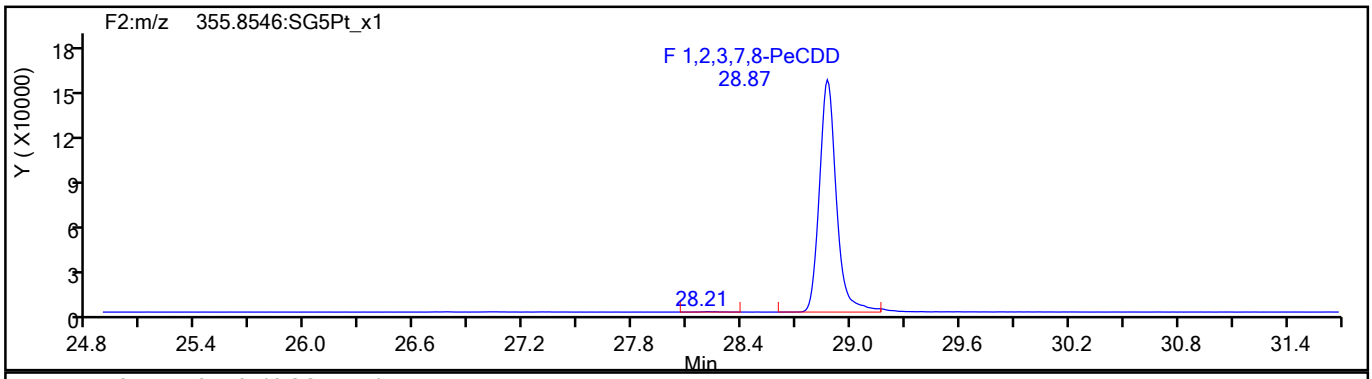

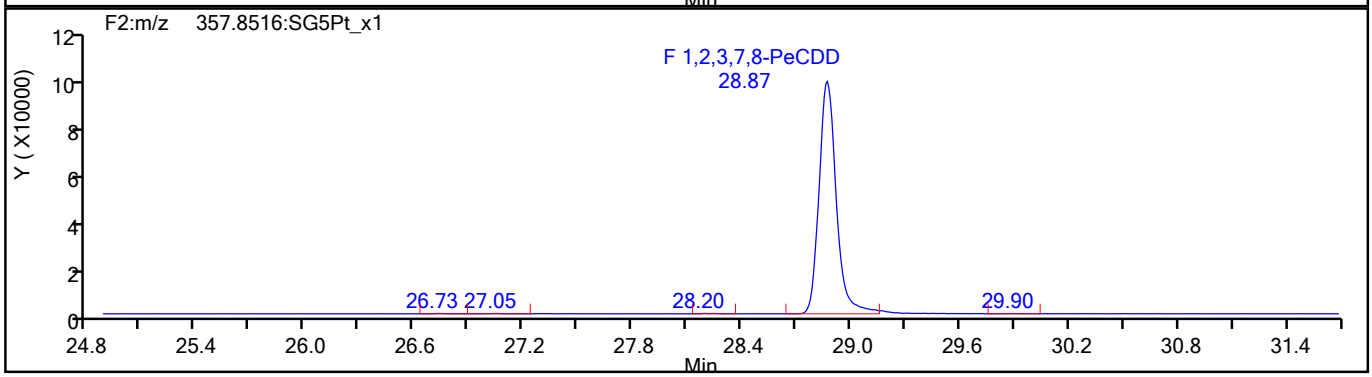

PeCDD Standards

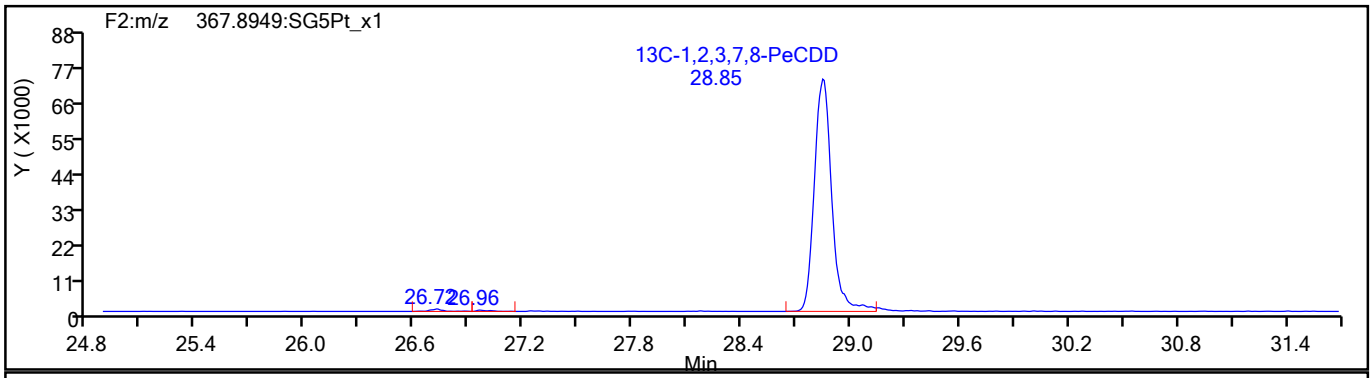

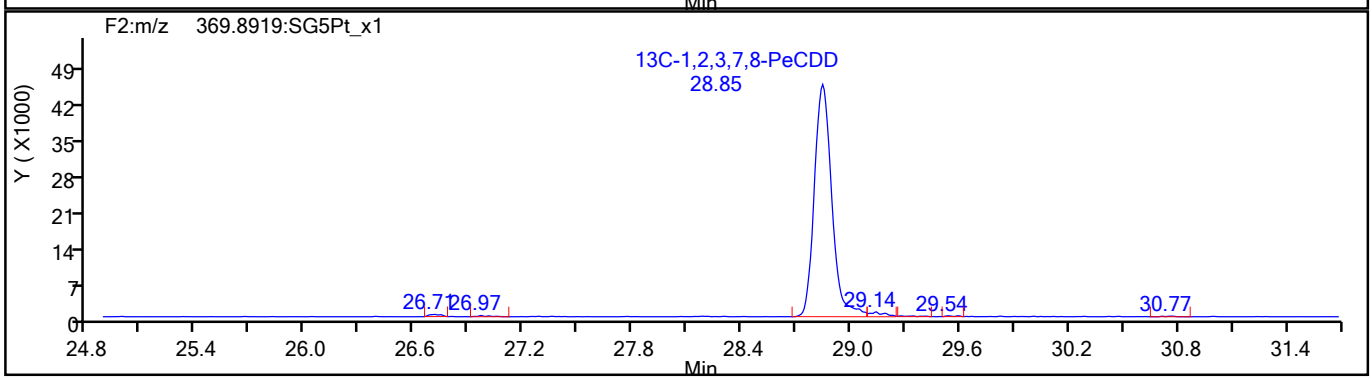

773767

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

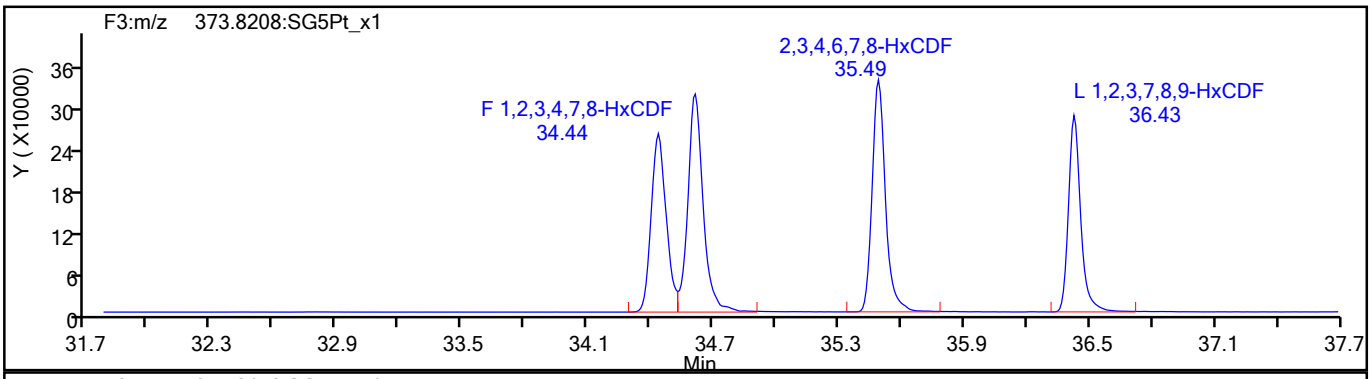

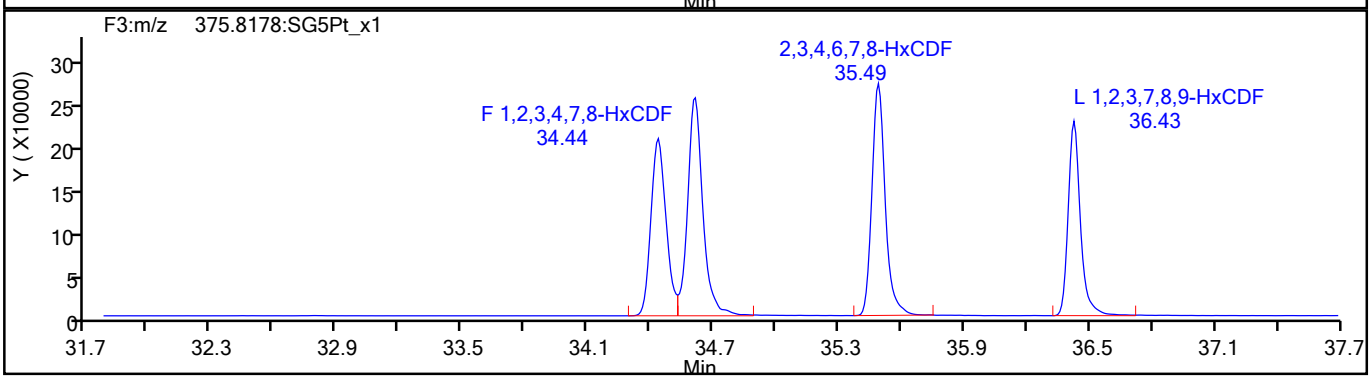

HxCDF Standards

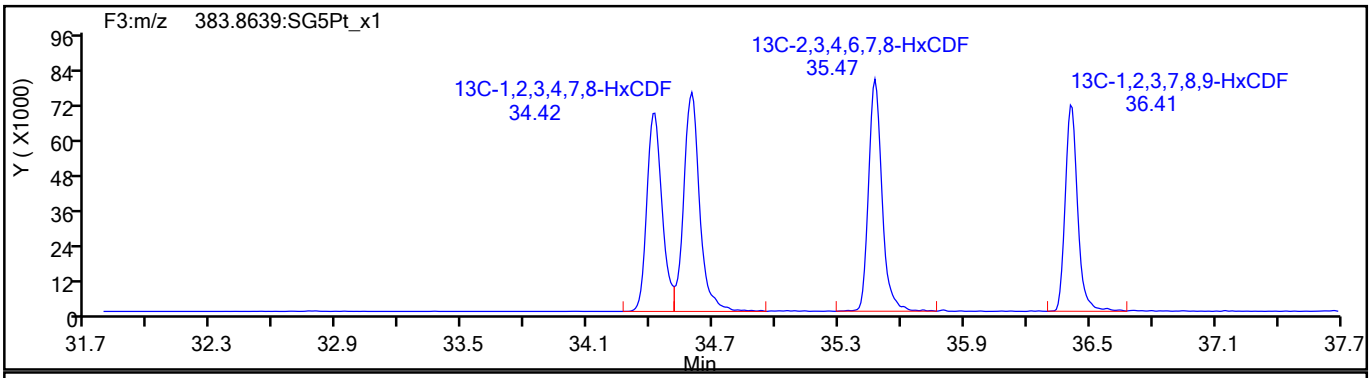

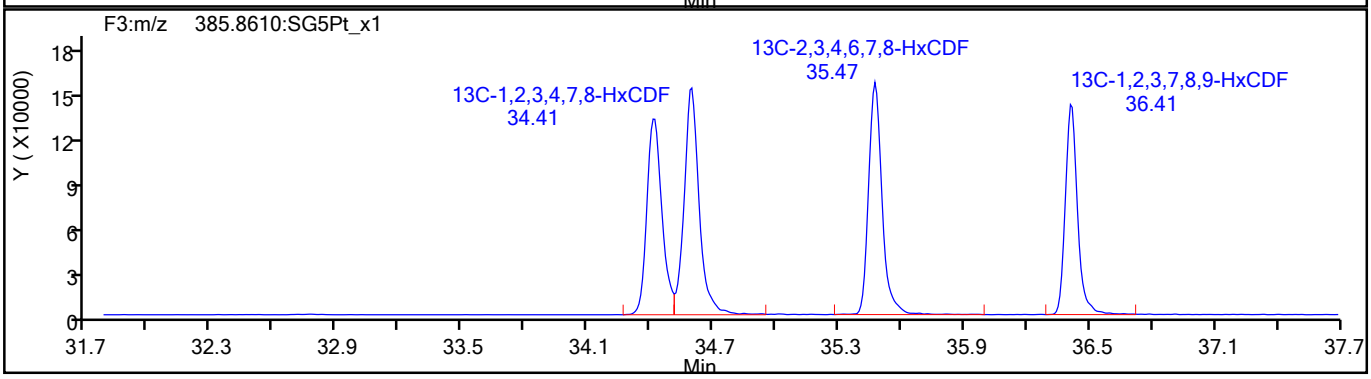

773768

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

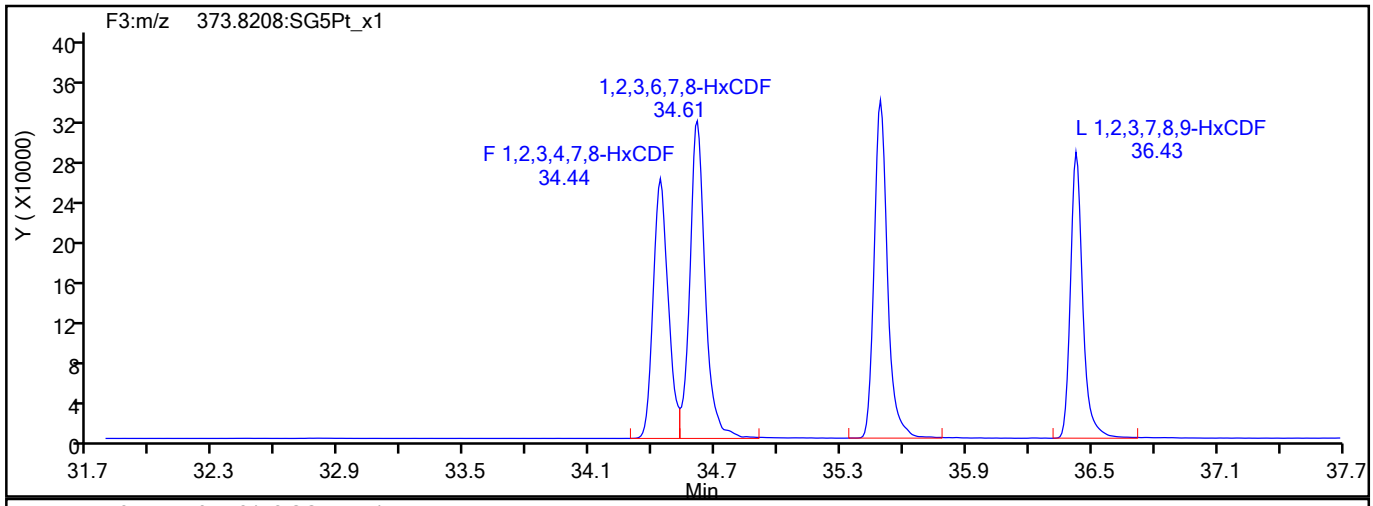

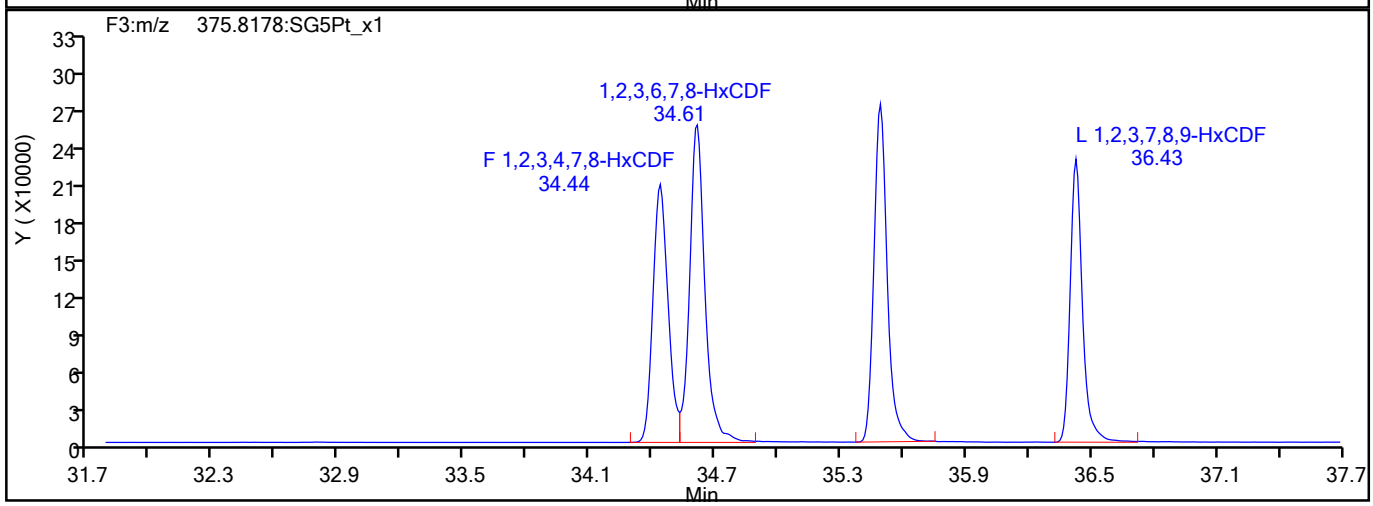

HxCDF Interference Mass

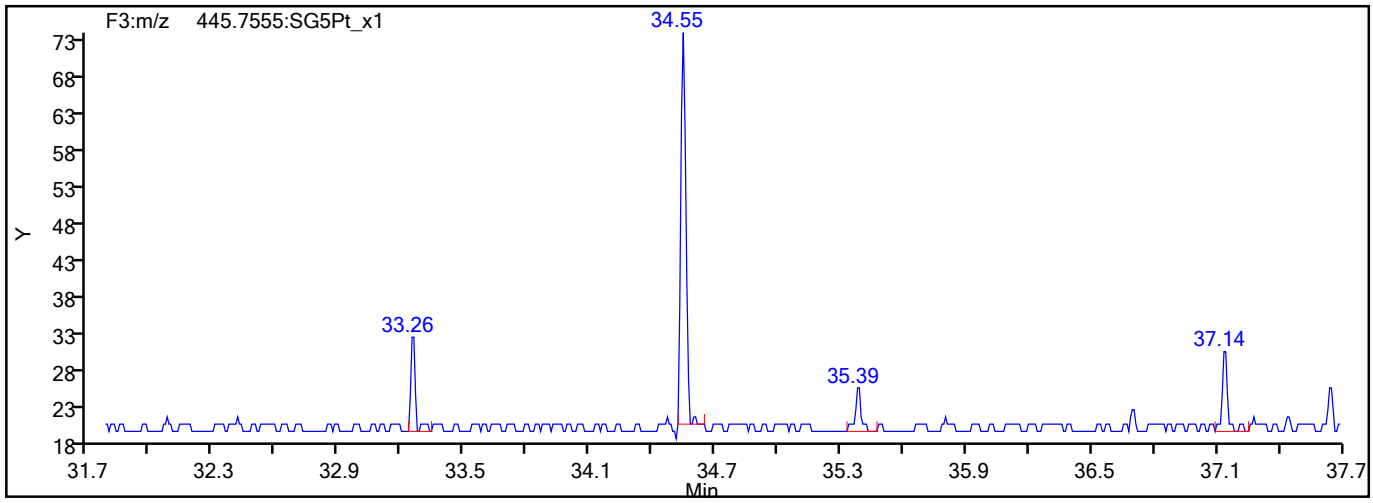

773769

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDD

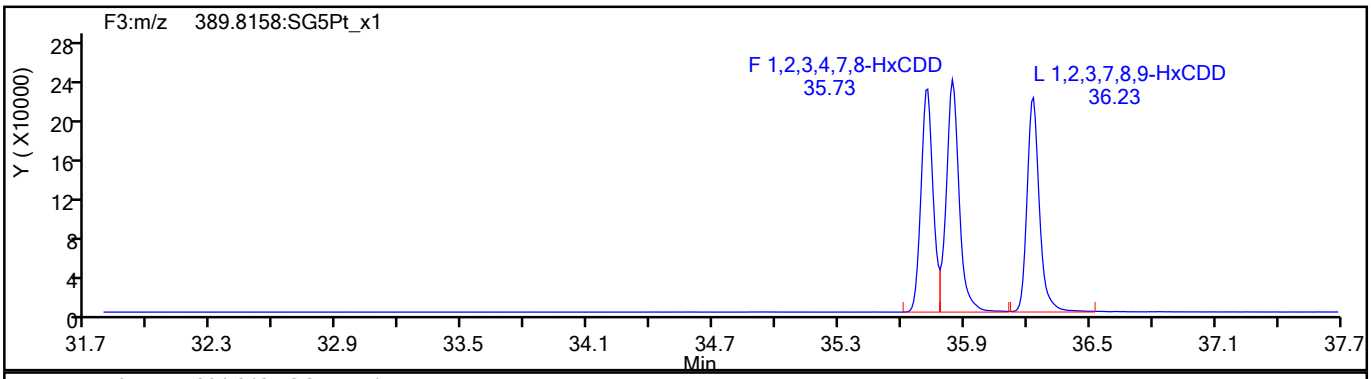

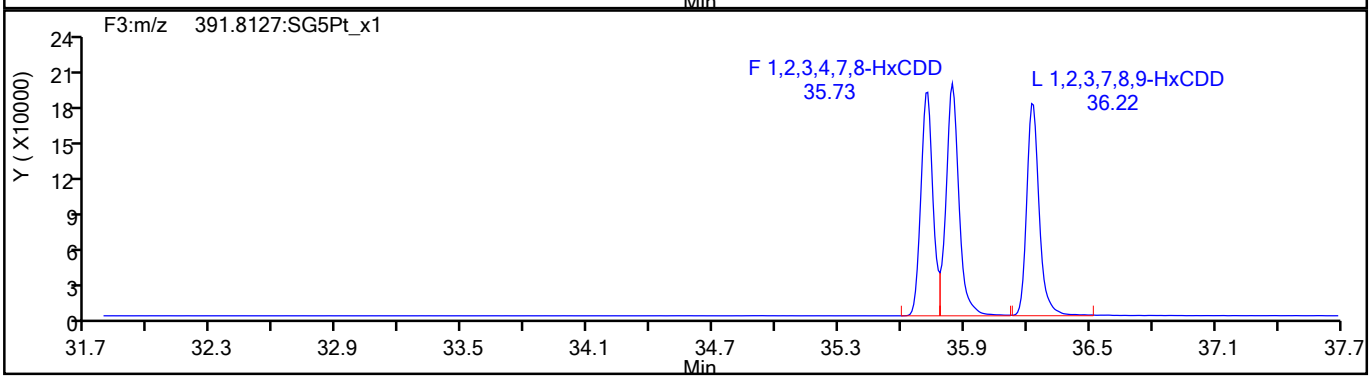

HxCDD Standards

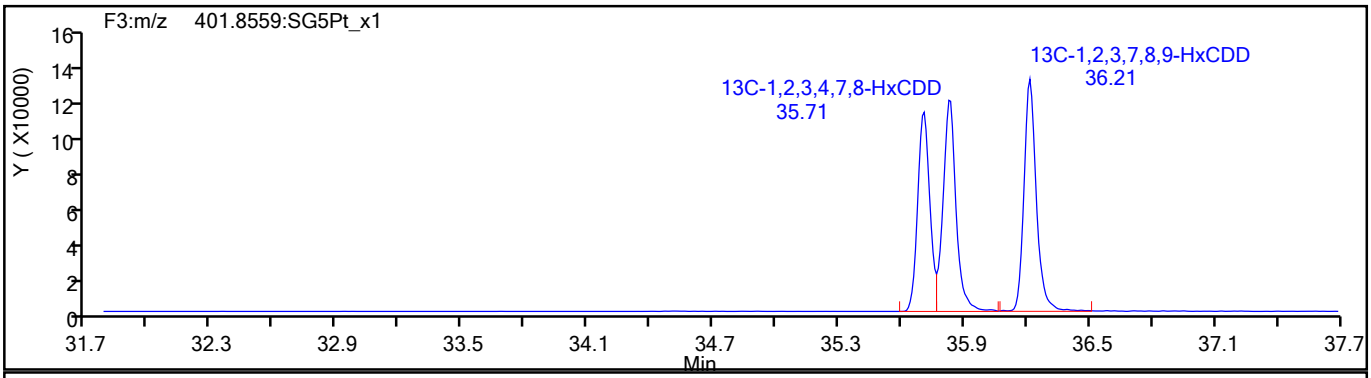

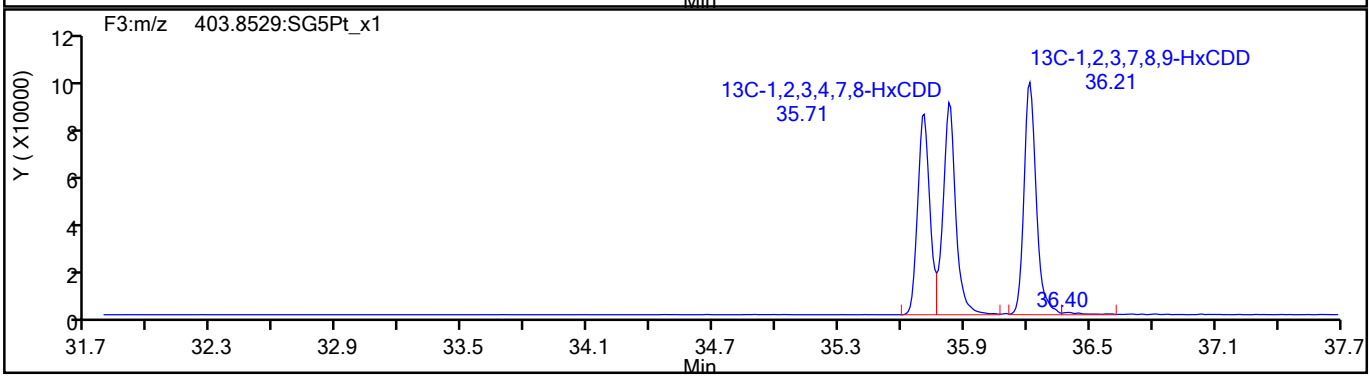

773770

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

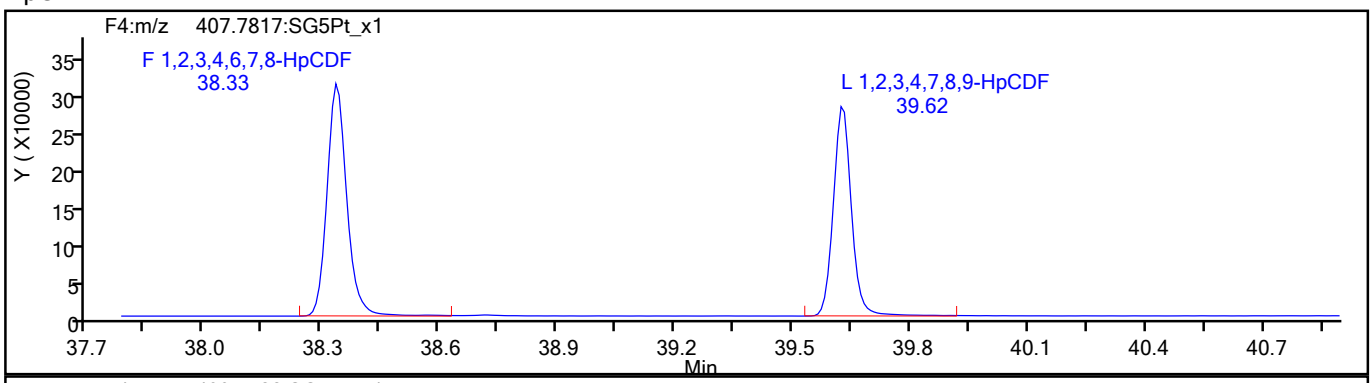

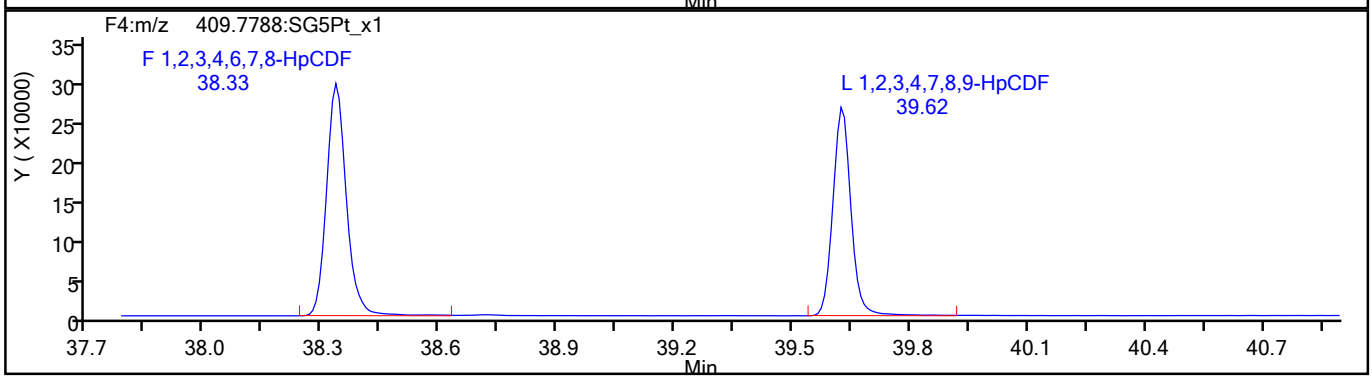

HpCDF Standards

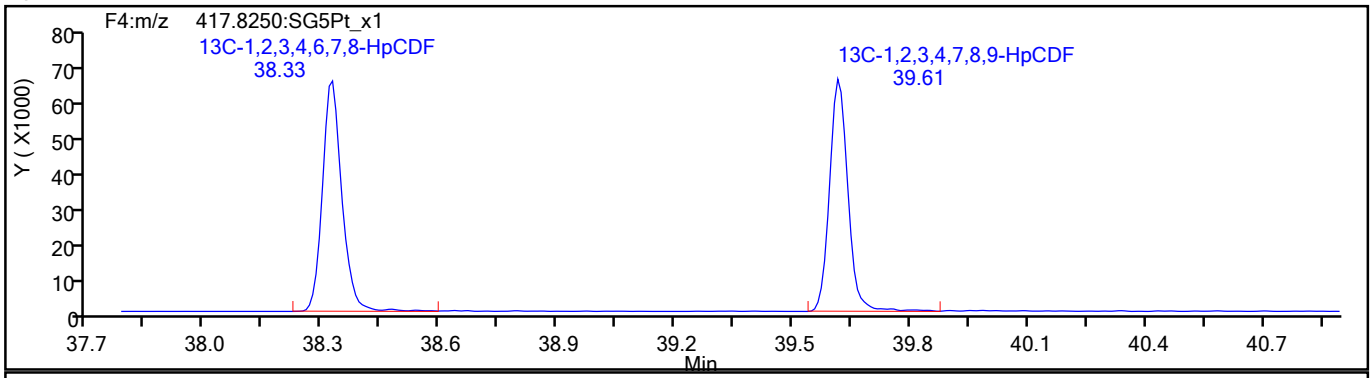

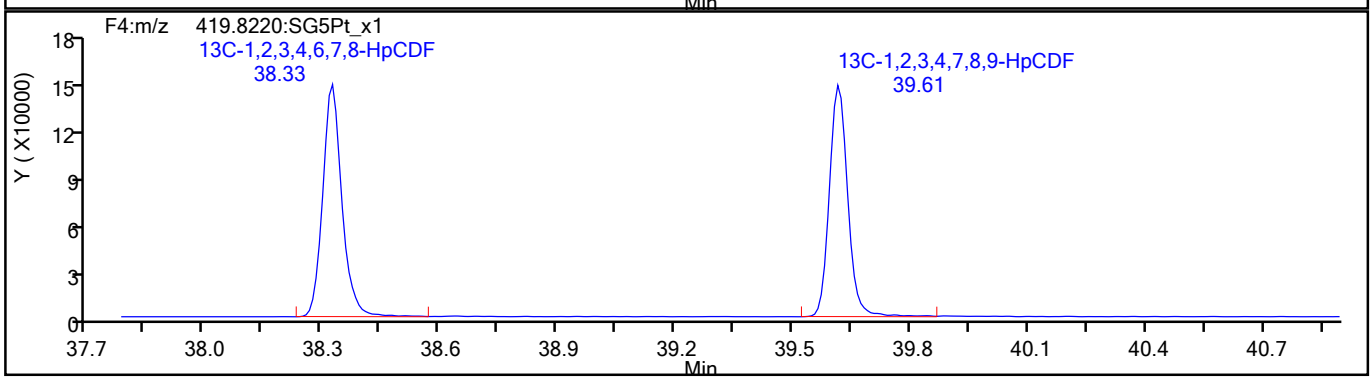

773771

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

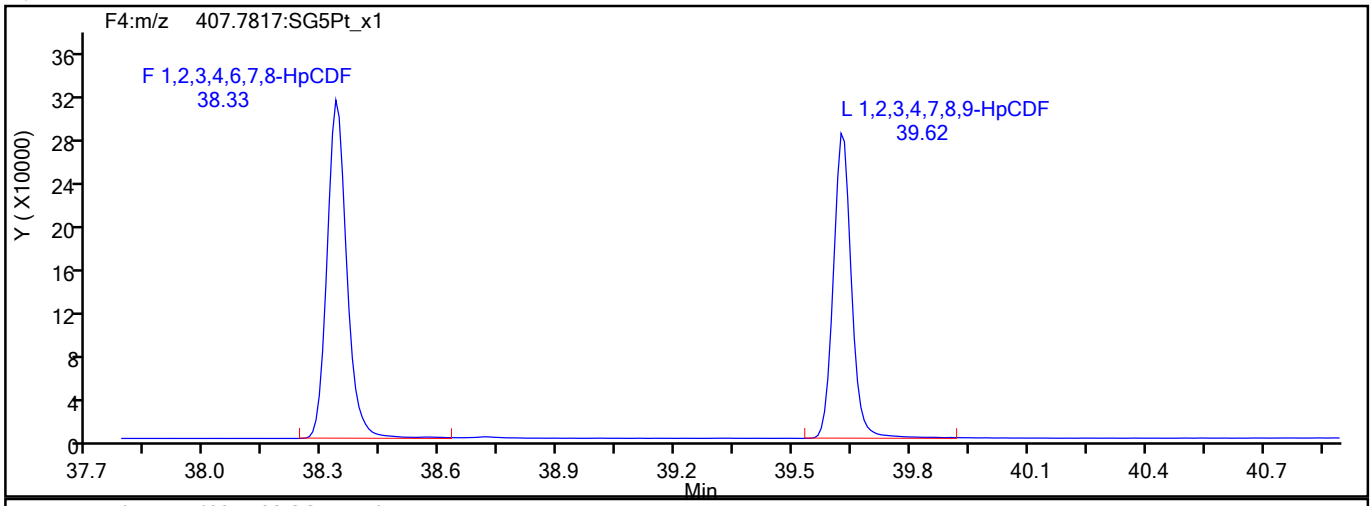

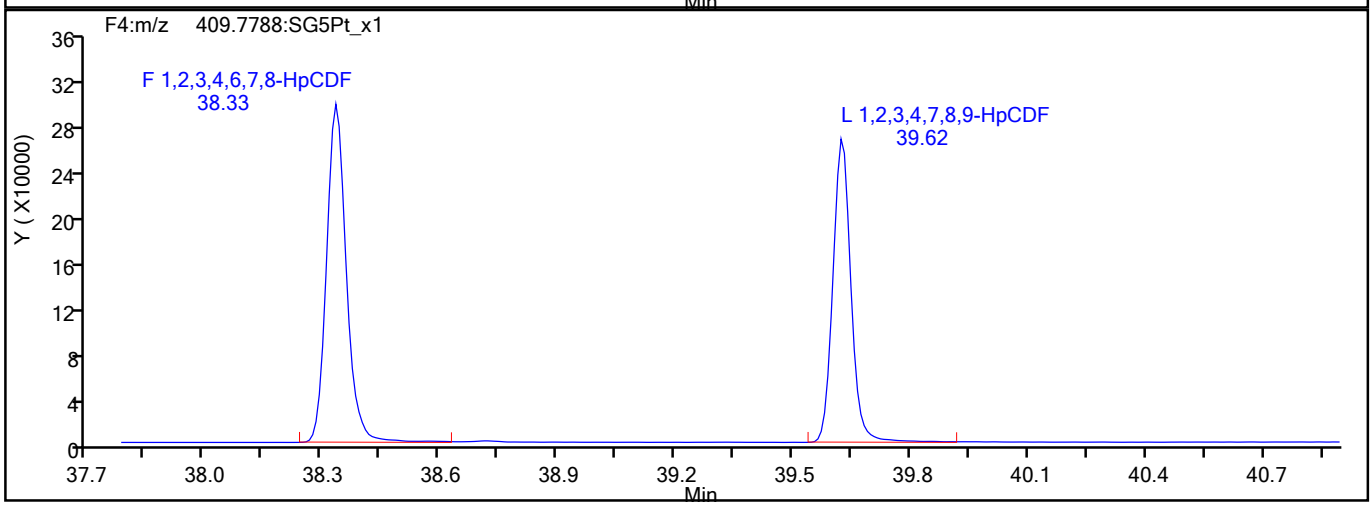

HpCDF Interference Mass

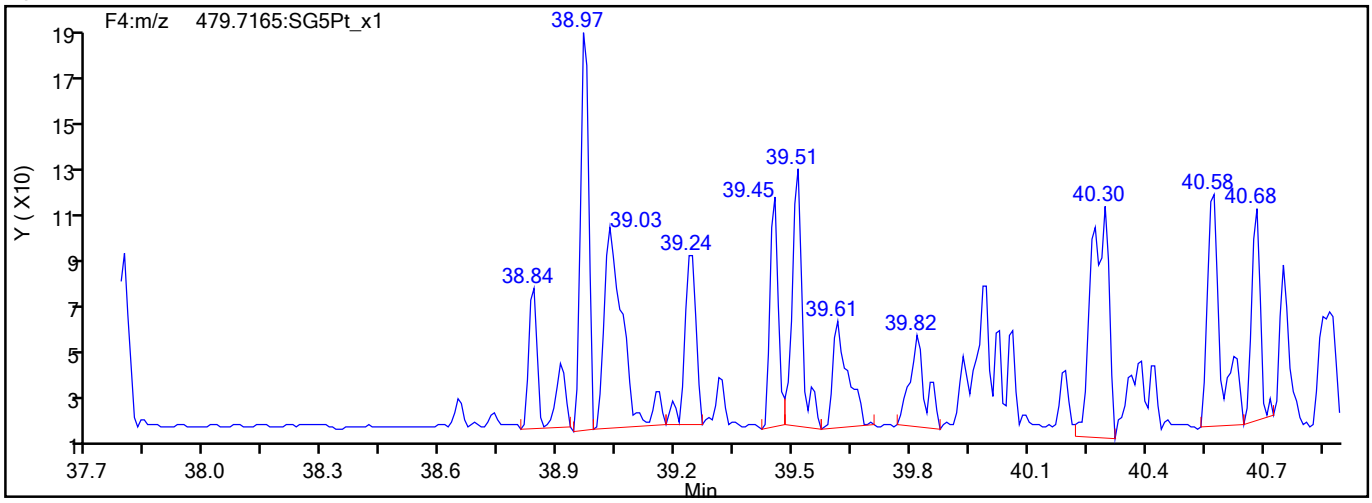

773772

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

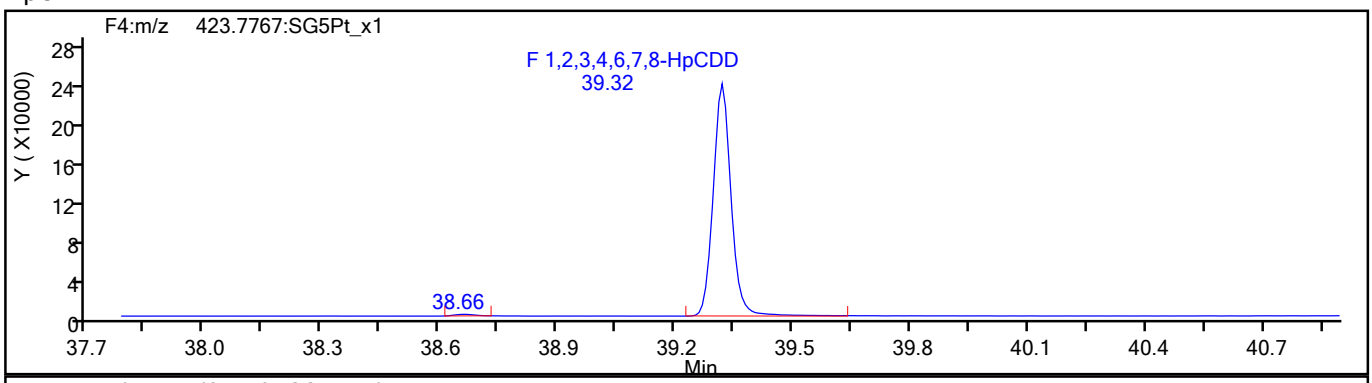

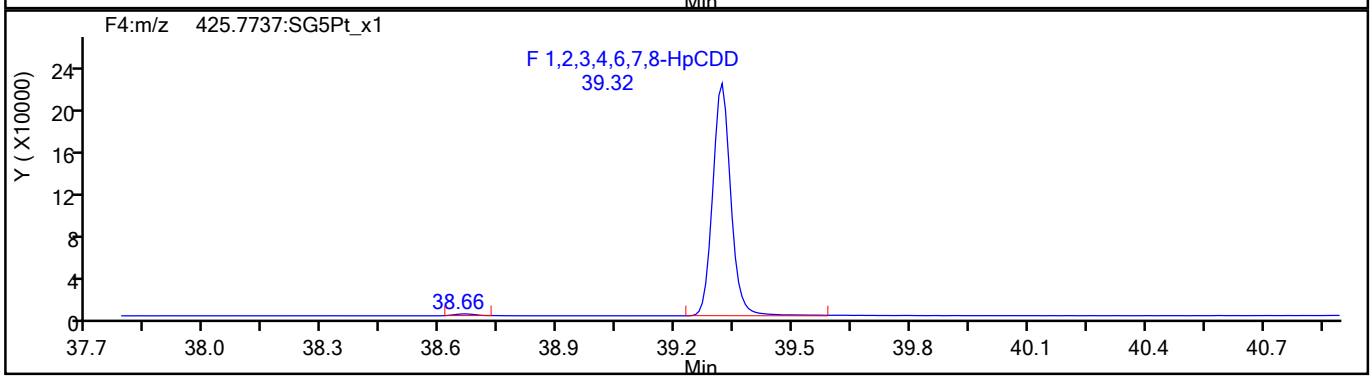

HpCDD Standards

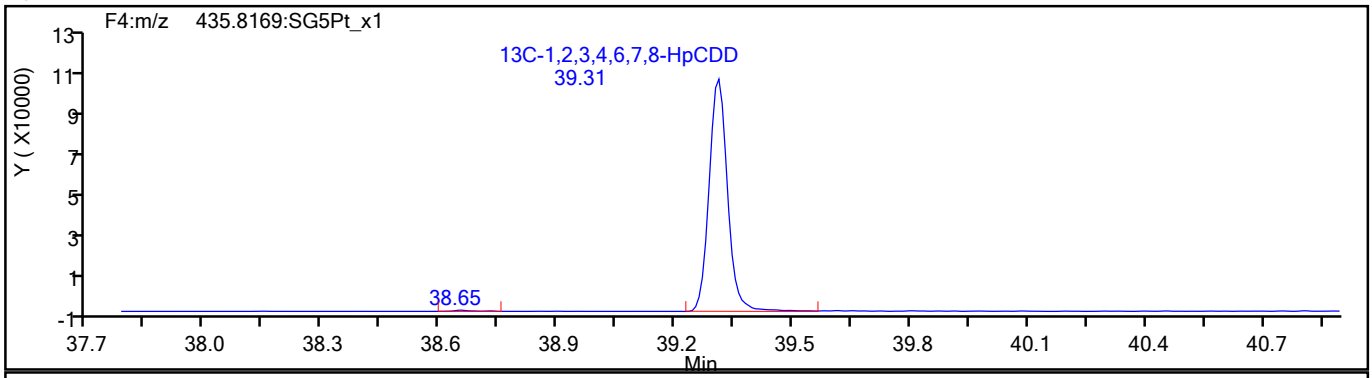

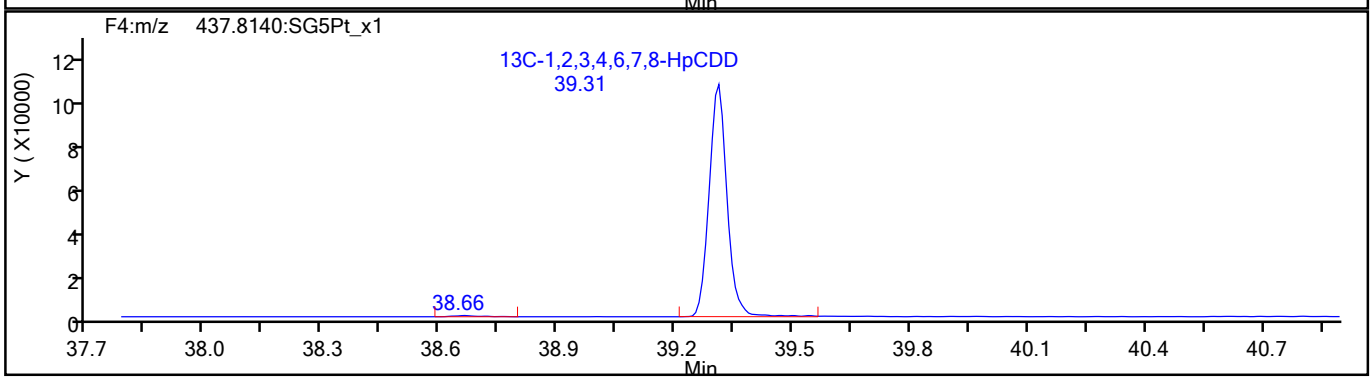

773773

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

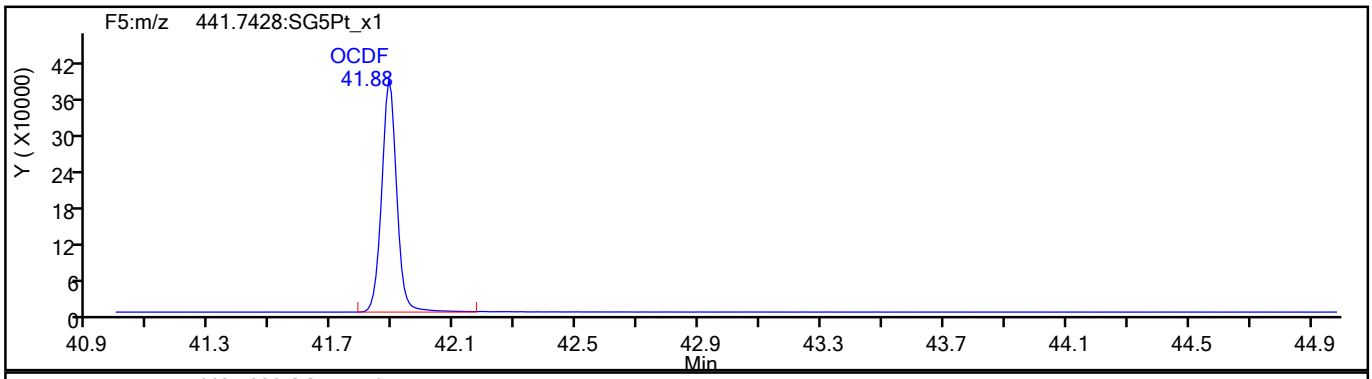

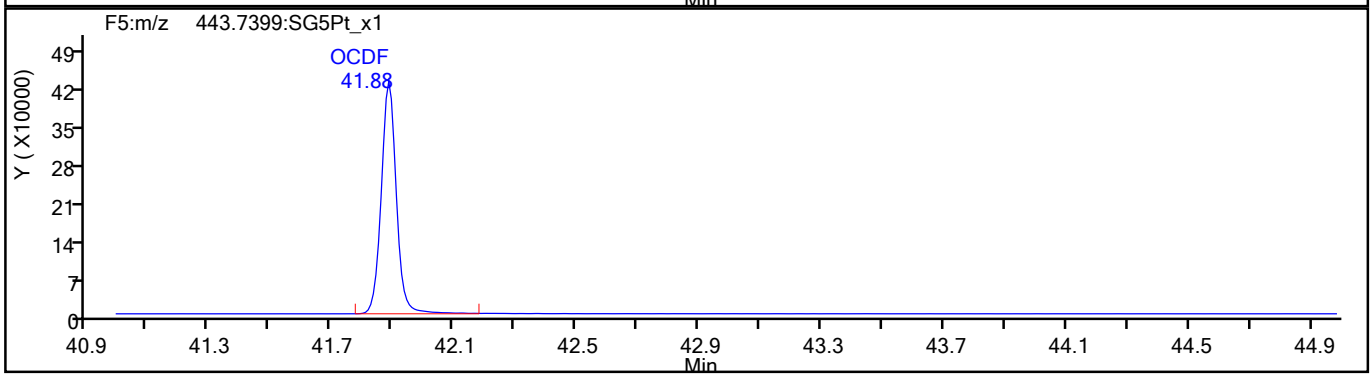

OCDF Standards

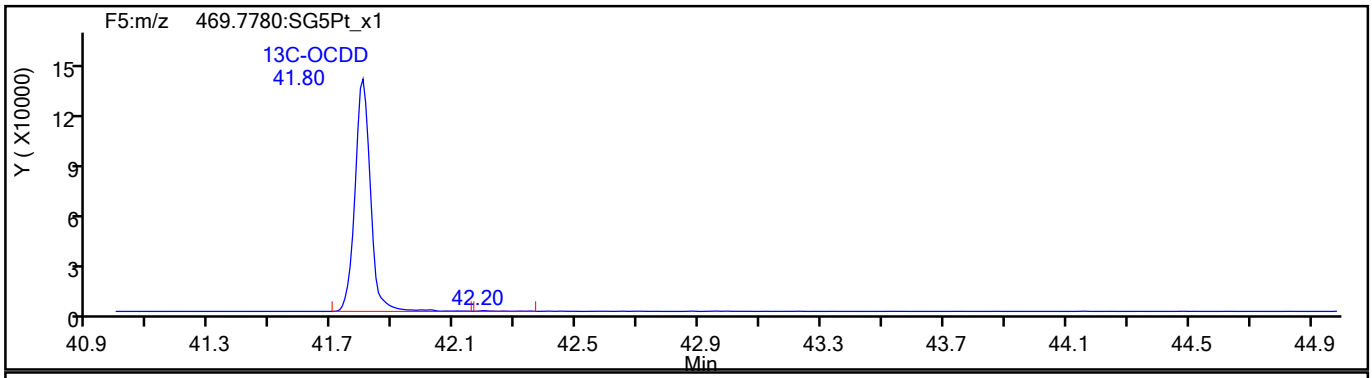

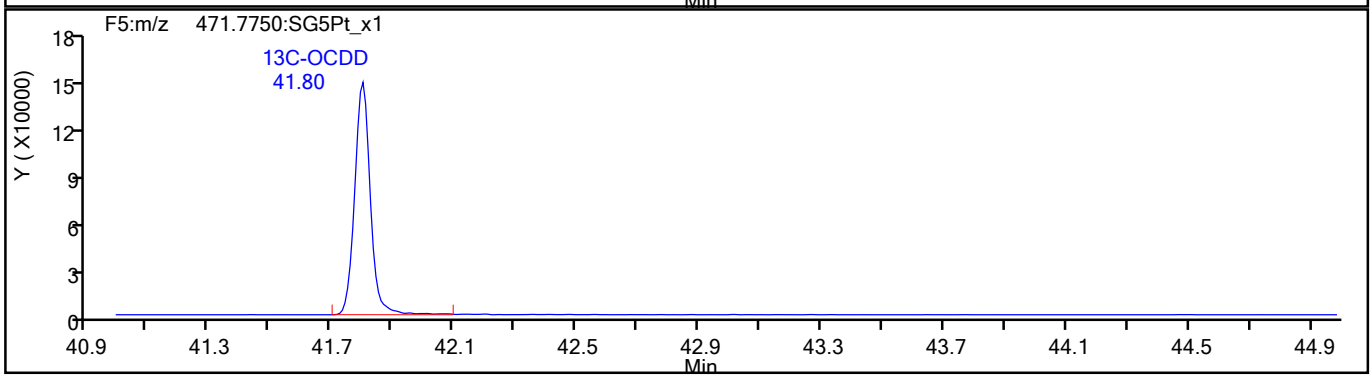

773774

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

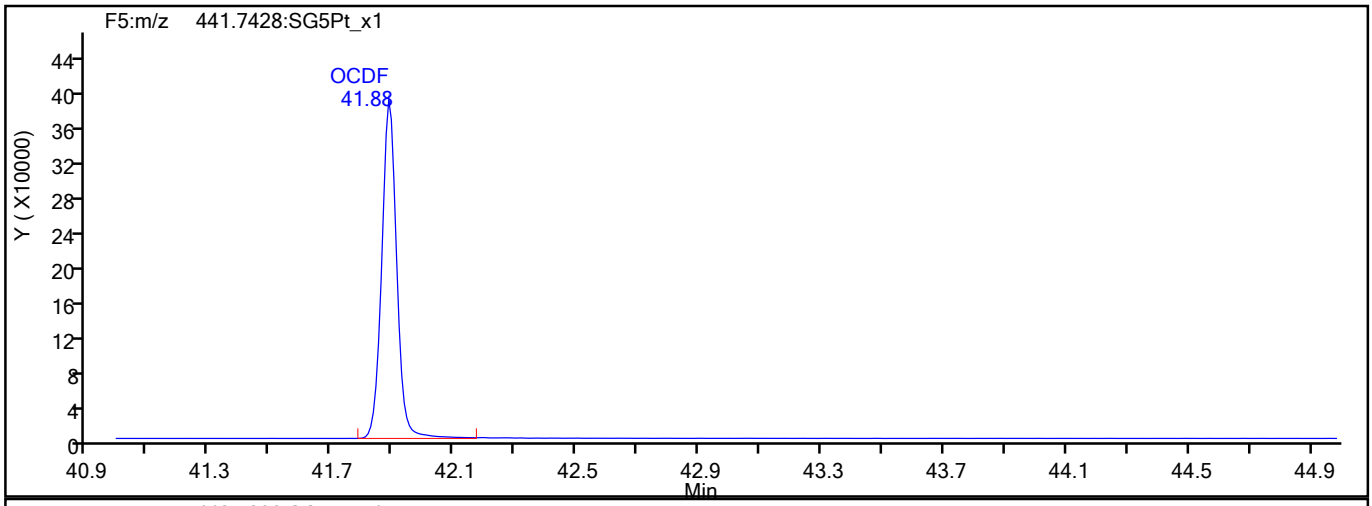

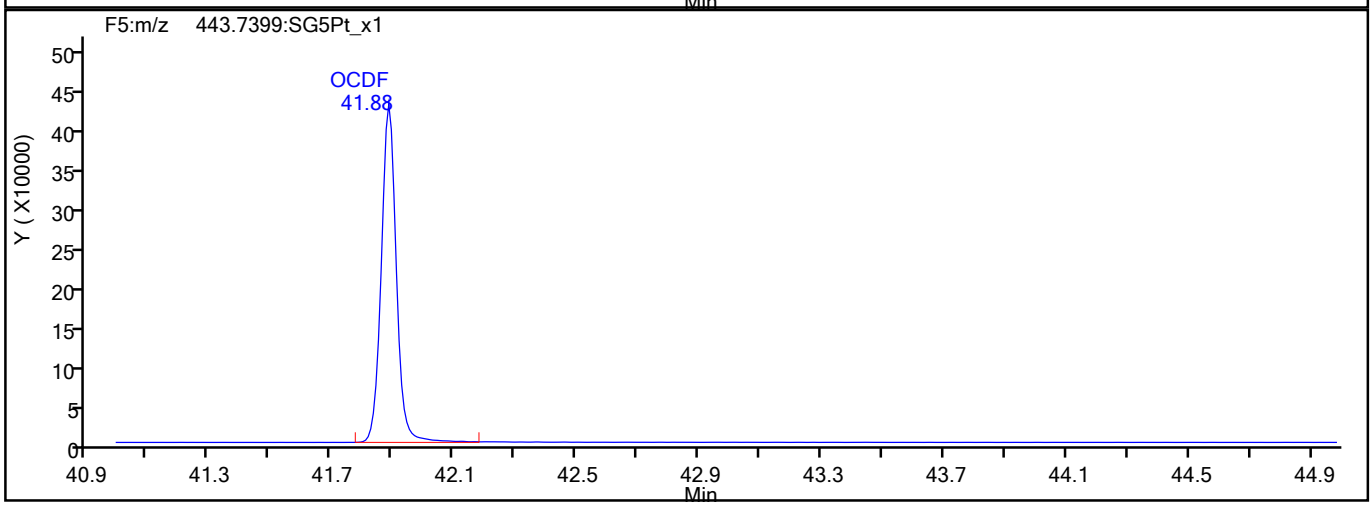

OCDF Interference Mass

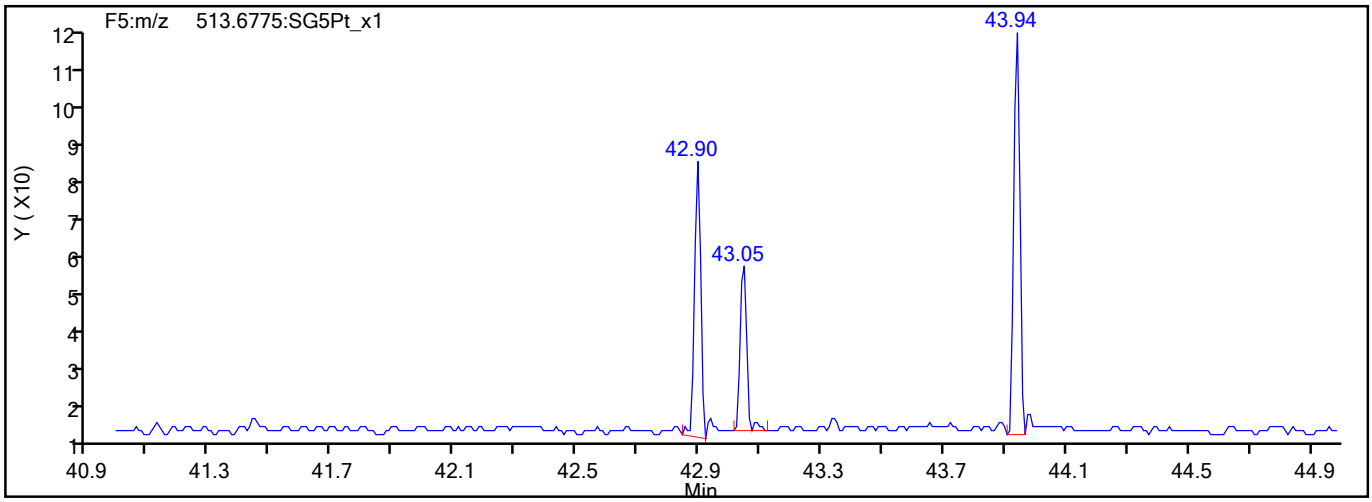

773775

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

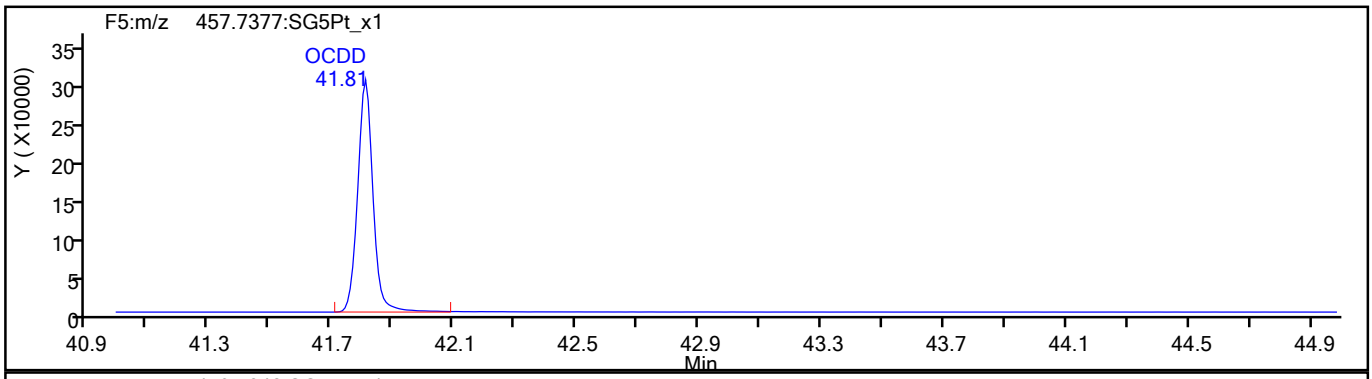

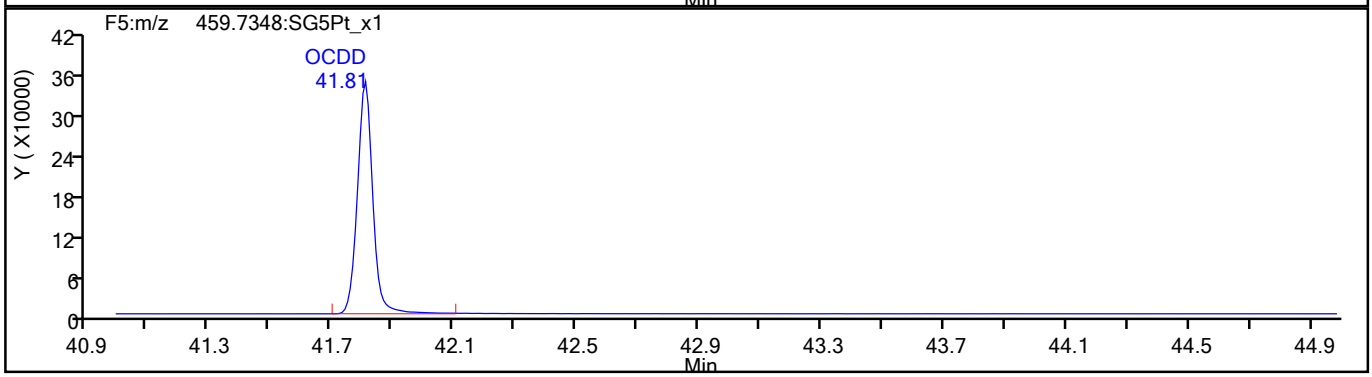

OCDD Standards

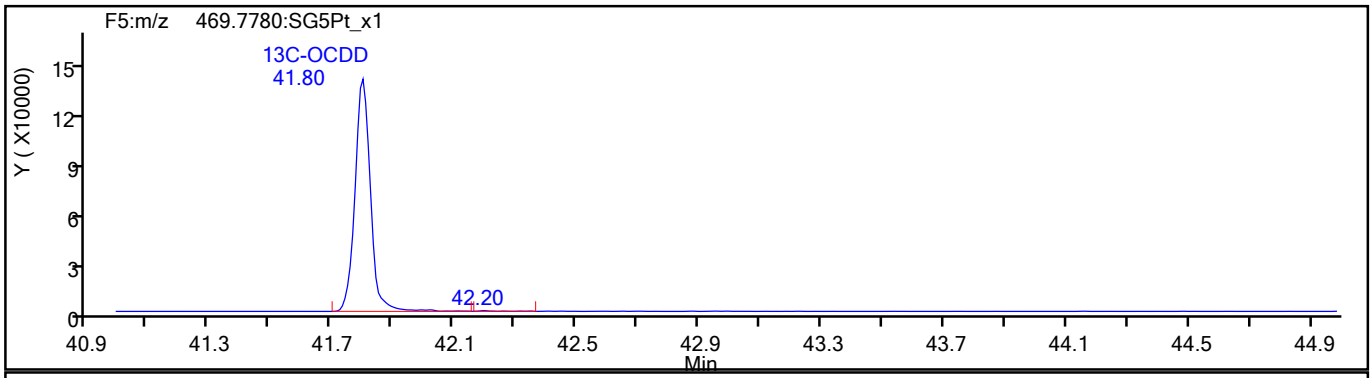

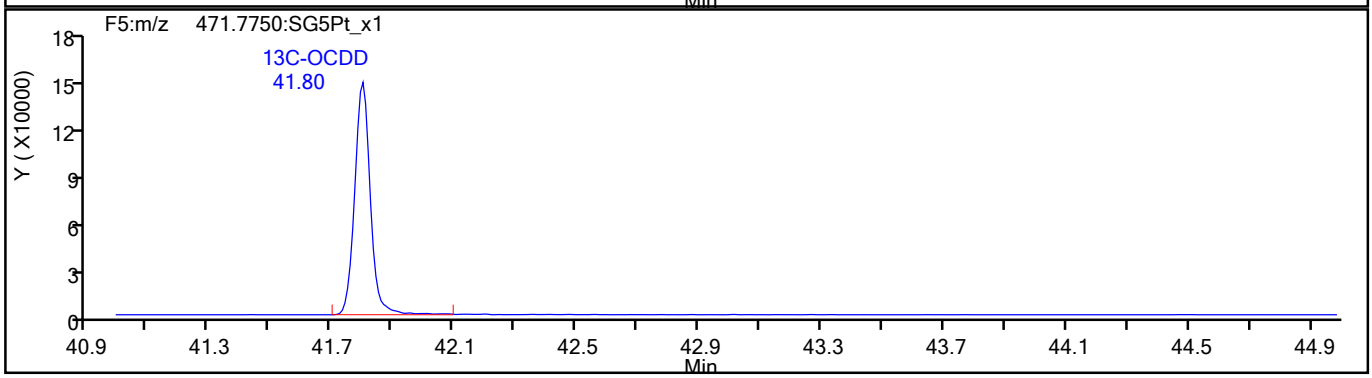

773776

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

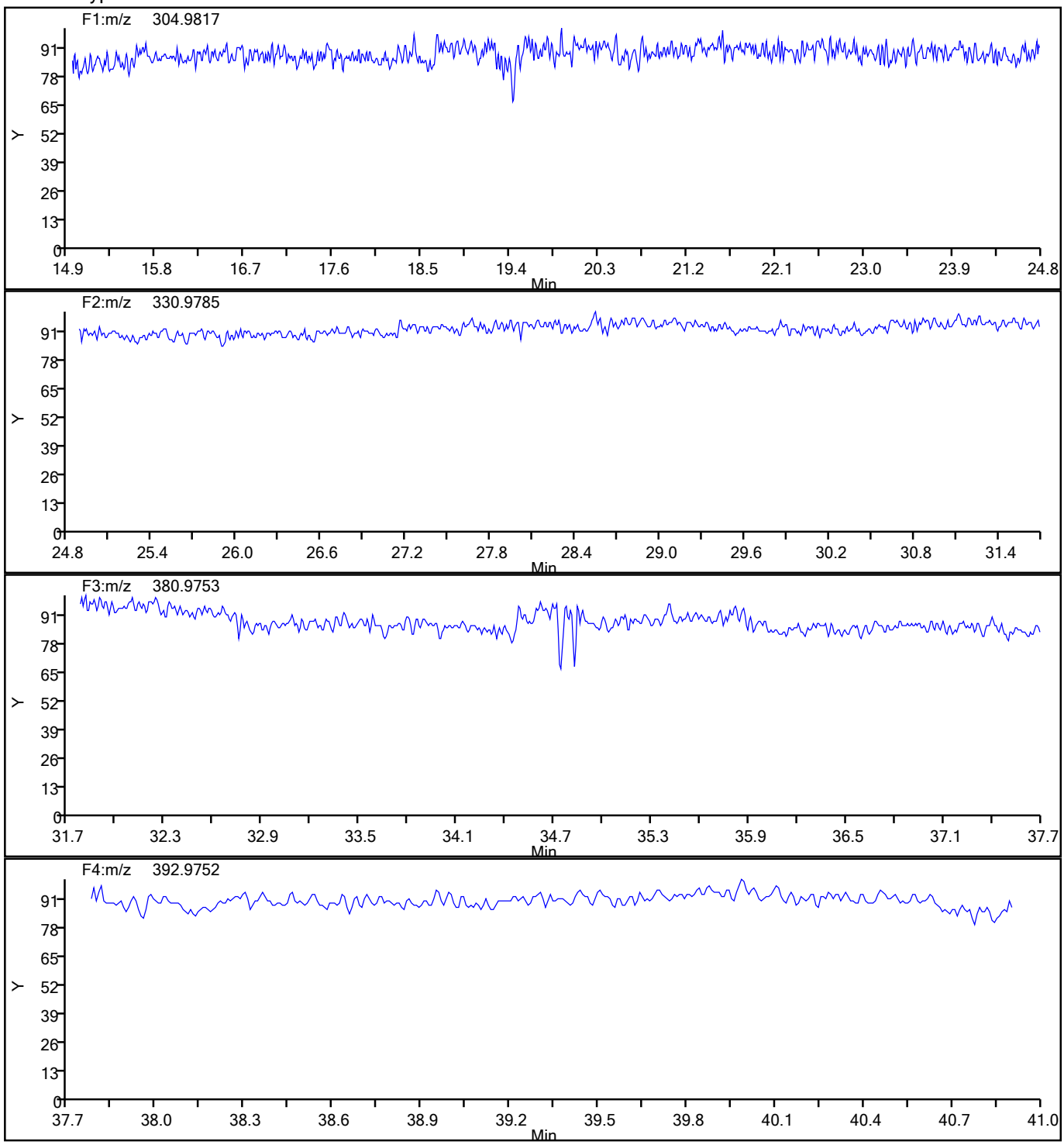

773777

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

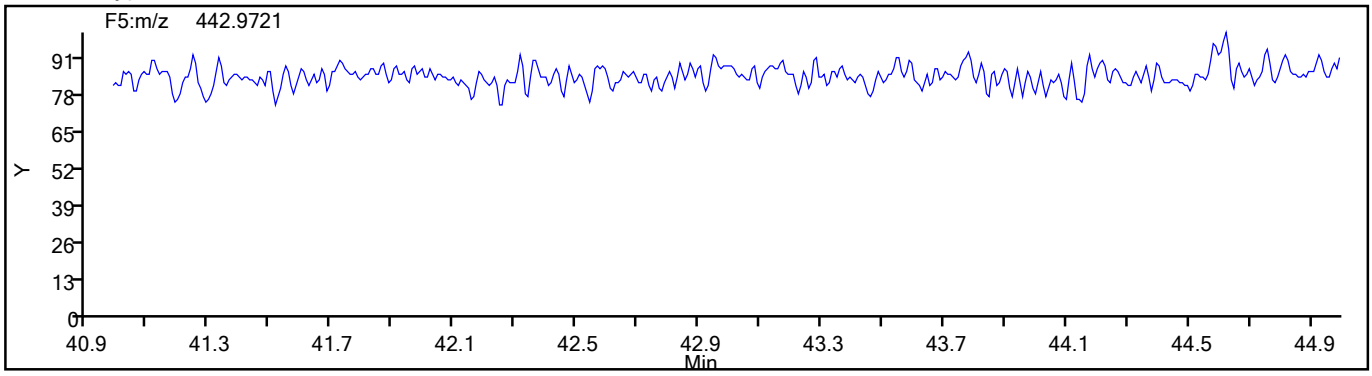

773778

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID: CCV 320-516133/1 Calibration Date: 08/13/2021 14:02

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 13au21dfs1_2.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.078		9.98	10.0	100	84-120
2,3,7,8-TCDD	AveID	1.075	1.062		9.88	10.0	99	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.085		51.4	50.0	103	82-120
2,3,4,7,8-PeCDF	AveID	1.008	1.001		49.7	50.0	99	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.044		49.9	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.169		50.9	50.0	102	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.283		52.7	50.0	105	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.291		53.2	50.0	106	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9625		45.4	50.0	91	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9178		46.2	50.0	92	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.107		49.9	50.0	100	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.308		52.7	50.0	105	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.395		48.4	50.0	97	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.031		49.1	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.248		47.7	50.0	95	86-116
OCDD	AveID	1.062	1.041		98.0	100	98	79-126
OCDF	AveID	1.317	1.460		111	100	111	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.468		109	100	109	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9862		106	100	106	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.182		104	100	104	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.251		111	100	111	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7125		99.4	100	99	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.185		123	100	123	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.121		105	100	105	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.033		99.2	100	99	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8000		105	100	105	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.8496		98.9	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.002		103	100	103	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.8590		117	100	117	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7499		111	100	111	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.8873		129	100	129	77-129
13C-OCDD	Ave	0.5446	0.7048		259	200	129	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.060		10.5	10.0	105	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	13AU21DFS1_1	Resolution Check	RC 081321	46			KSS	1.000	
2	13AU21DFS1_2	CCV CS-4 HRDXNL4_00100	CCV 081321	2	Dioxin		KSS	1.000	
3	13AU21DFS1_3	WDM HRDXNCP_00044	WDM 081321	1	Dioxin		KSS	1.000	
4	13AU21DFS1_4	SB Solvent Blank C14	SB 081321	3	Dioxin		KSS	1.000	
5	13AU21DFS1_5	320-76764-a-33-a	320-76764-a-33-a	4	1613B/Solid	D263	KSS	10.000	g
6	13AU21DFS1_6	320-76764-a-34-a	320-76764-a-34-a	5	1613B/Solid		KSS	10.000	g
7	13AU21DFS1_7	320-76765-a-6-a	320-76765-a-6-a	6	1613B/Solid	D264	KSS	10.000	g
8	13AU21DFS1_8	320-76765-a-7-a	320-76765-a-7-a	7	1613B/Solid		KSS	10.000	g
9	13AU21DFS1_9	320-76765-a-8-a	320-76765-a-8-a	8	1613B/Solid		KSS	10.000	g
10	13AU21DFS1_10	320-76765-a-9-a	320-76765-a-9-a	9	1613B/Solid		KSS	10.000	g
11	13AU21DFS1_11	320-76765-a-13-a	320-76765-a-13-a	10	1613B/Solid		KSS	10.000	g
12	13AU21DFS1_12	320-76765-a-14-a	320-76765-a-14-a	11	1613B/Solid		KSS	10.000	g
13	13AU21DFS1_13	320-76765-a-15-a	320-76765-a-15-a	12	1613B/Solid		KSS	10.000	g
14	13AU21DFS1_14	320-76765-a-16-a	320-76765-a-16-a	13	1613B/Solid		KSS	10.000	g
15	13AU21DFS1_15	SB Solvent Blank C14	SB 081321A	3	Dioxin		KSS	1.000	
16	13AU21DFS1_16	Resolution Check	RC 081321A	46			KSS	1.000	
17	13AU21DFS1_17	WDM HRDXNCP_00044	WDM 081321A	1	Dioxin		KSS	1.000	
18	13AU21DFS1_18	CCV CS-4 HRDXNL4_00100	CCV 081321A	2	Dioxin		KSS	1.000	
19	13AU21DFS1_19	SB Solvent Blank C14	SB 081321B	3	Dioxin		KSS	1.000	
20	13AU21DFS1_20	mb 320-515104/1-a	mb 320-515104/1-a	14	8290/Waste	105	KSS	0.100	g
21	13AU21DFS1_21	lcs 320-515104/2-a	lcs 320-515104/2-a	15	8290/Waste		KSS	0.100	g
22	13AU21DFS1_22	lcsd 320-515104/3-a	lcsd 320-515104/3-a	16	8290/Waste		KSS	0.100	g
23	13AU21DFS1_23	320-77349-a-1-a	320-77349-a-1-a	17	8290/Waste		KSS	0.100	g
24	13AU21DFS1_24	320-76765-a-19-a	320-76765-a-19-a	18	1613B/Solid	D264	KSS	10.000	g
25	13AU21DFS1_25	320-76765-a-4-a	320-76765-a-4-a	19	1613B/Solid		KSS	10.000	g
26	13AU21DFS1_26	320-76765-a-11-a 10X	320-76765-a-11-a	20	1613B/Solid		KSS	10.000	g
27	13AU21DFS1_27	320-76765-a-12-a 10X	320-76765-a-12-a	21	1613B/Solid		KSS	10.000	g
28	13AU21DFS1_28	320-76765-a-17-a 5X	320-76765-a-17-a	22	1613B/Solid		KSS	10.000	g
29	13AU21DFS1_29	SB Solvent Blank C14	SB 081321C	3	Dioxin		KSS	1.000	
30	13AU21DFS1_30	Resolution Check	RC 081321B	46			KSS	1.000	
31	13AU21DFS1_31	CCV CS-4 HRDXNL4_00100	CCV 081321B	2	Dioxin		KSS	1.000	
32	13AU21DFS1_32	Resolution Check	RC 081321C	46			KSS	1.000	

LOGFILE CHECKED
DB 8/13/21

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	13 Aug 2021 13:42
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11590 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10762 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11581 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11298 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11559 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10515 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10926 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10782 [5%height]

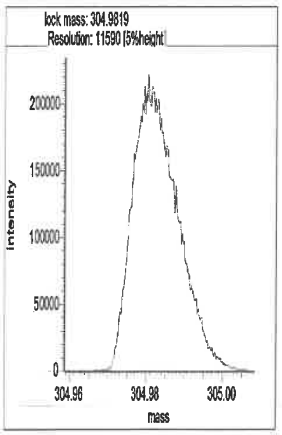

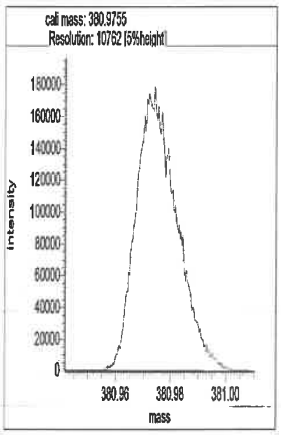

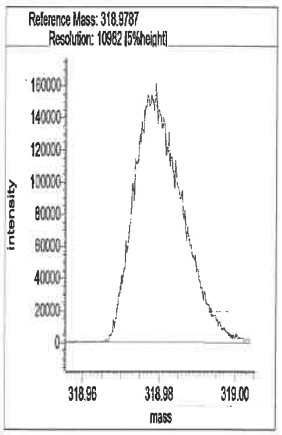

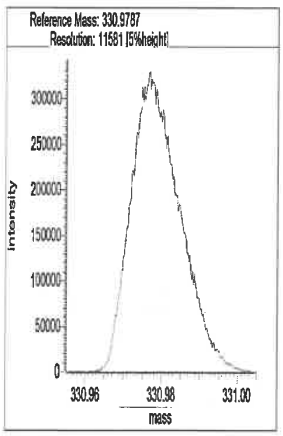

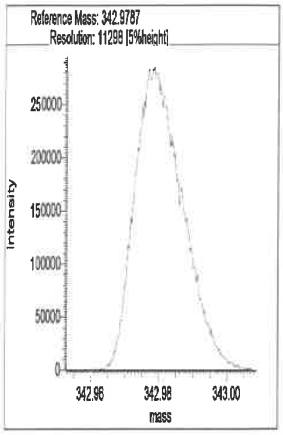

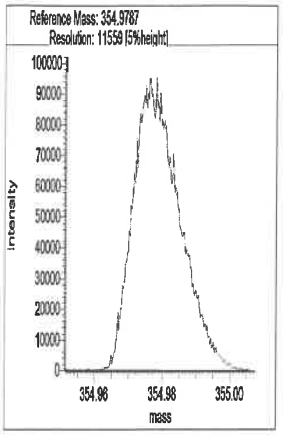

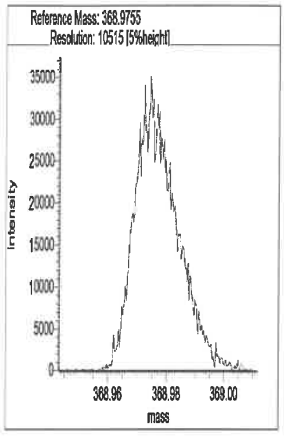

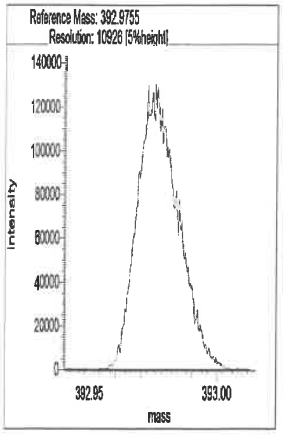

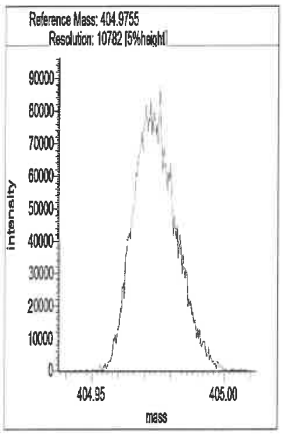

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11614 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11350 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11463 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11495 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11308 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11143 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10836 [5%height]

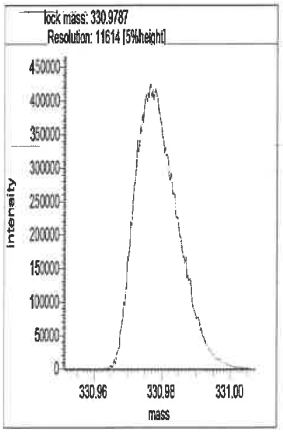

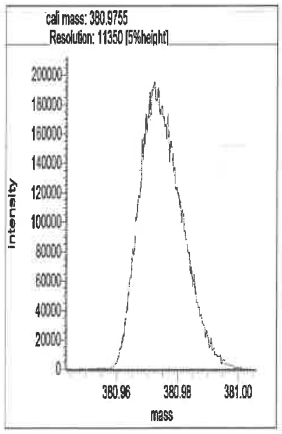

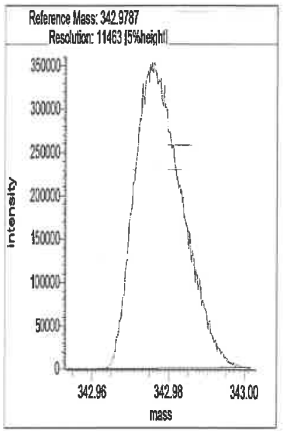

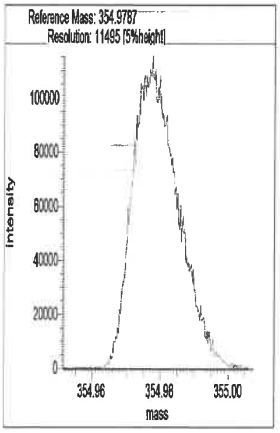

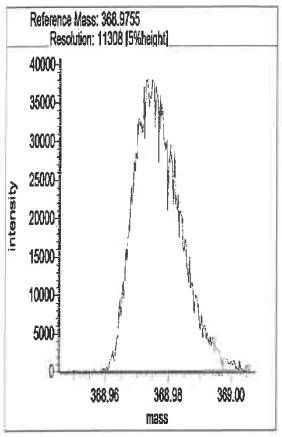

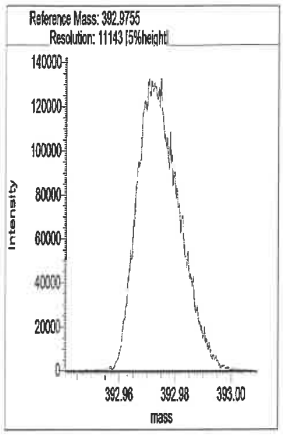

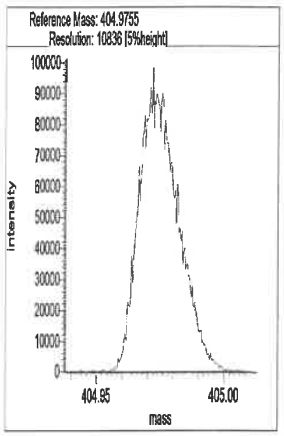

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11895 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11408 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11283 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11777 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11989 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10952 [5%height]

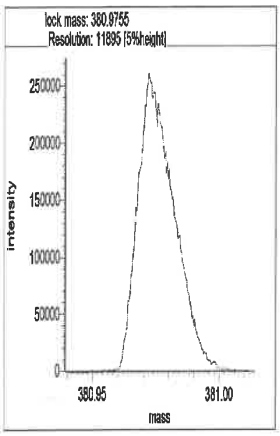

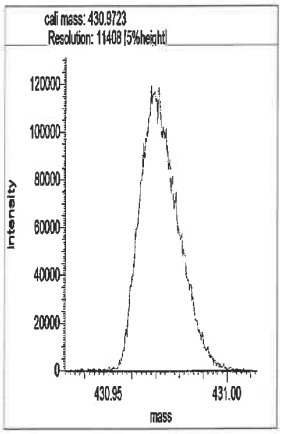

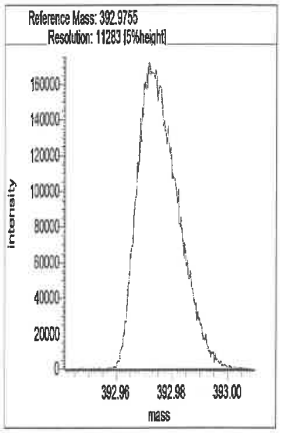

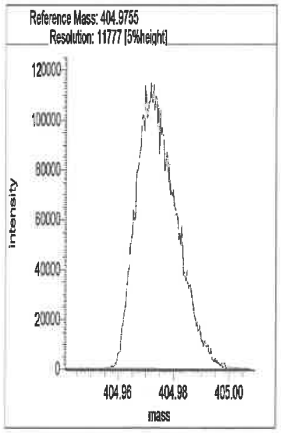

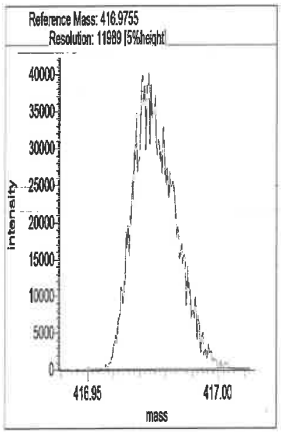

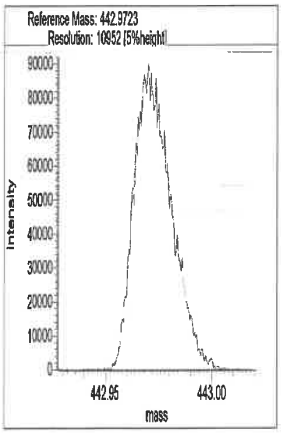

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11793 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10863 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 12020 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12223 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11538 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10991 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11188 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11785 [5%height]

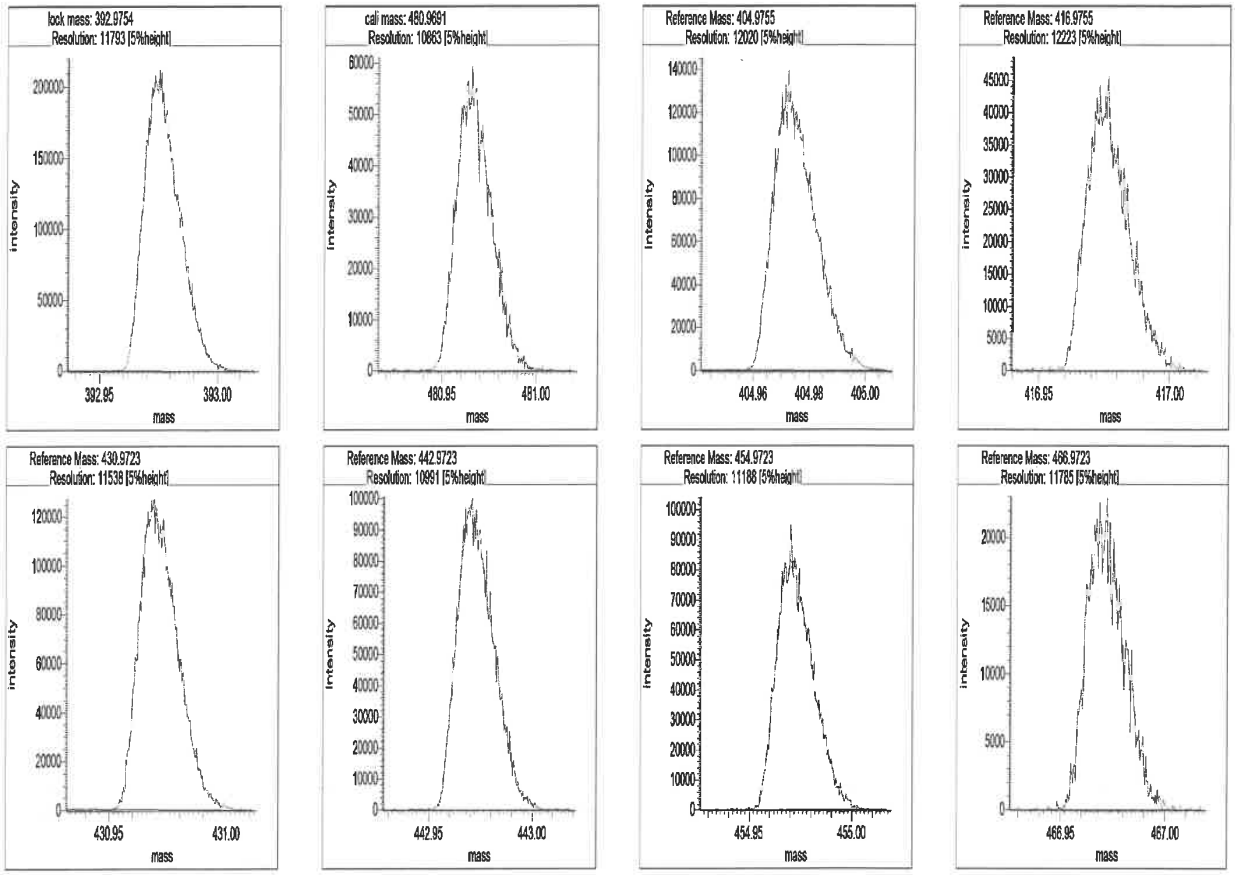

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11528 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11406 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11627 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12564 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11505 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10732 [5%height]

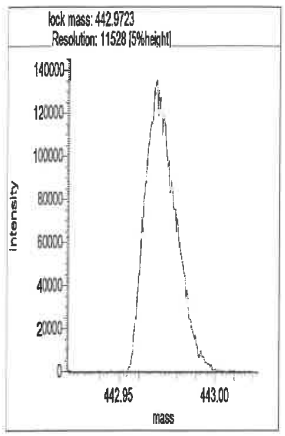
lock mass: 442.9723
Resolution: 11528 [5%height]
intensity
mass

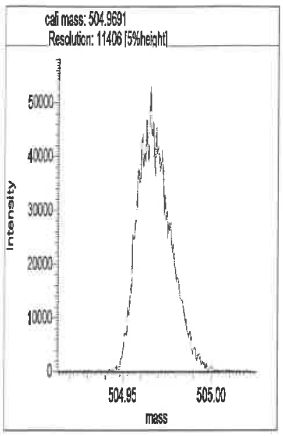
cali mass: 504.9691
Resolution: 11406 [5%height]
intensity
mass

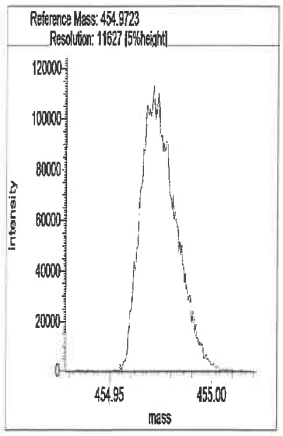
Reference Mass: 454.9723
Resolution: 11627 [5%height]
intensity
mass

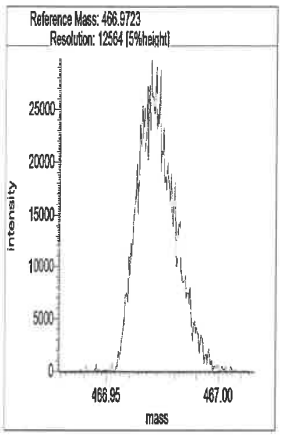
Reference Mass: 466.9723
Resolution: 12564 [5%height]
intensity
mass

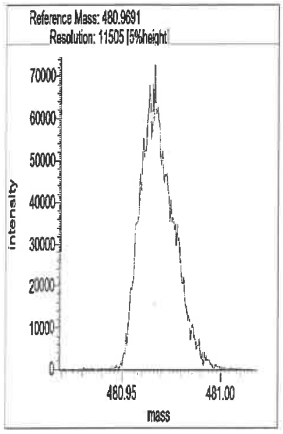
Reference Mass: 480.9691
Resolution: 11505 [5%height]
intensity
mass

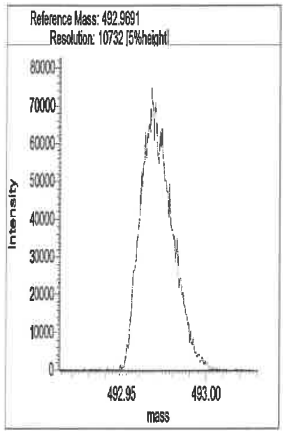
Reference Mass: 492.9691
Resolution: 10732 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	14 Aug 2021 01:20
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11594 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10845 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11632 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11497 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11262 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11083 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 9879 [5%height] ✓ ok 8/14/21 xw
Ref. mass 392.9755 [m/z] Resolution: 10569 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10879 [5%height]

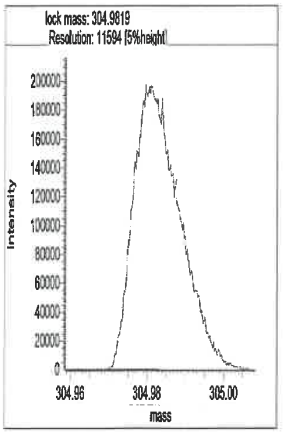

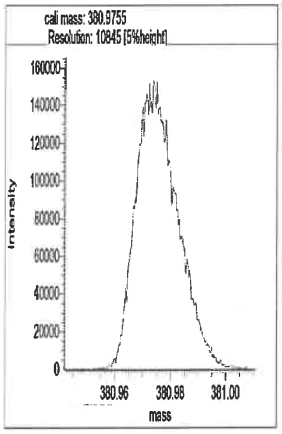

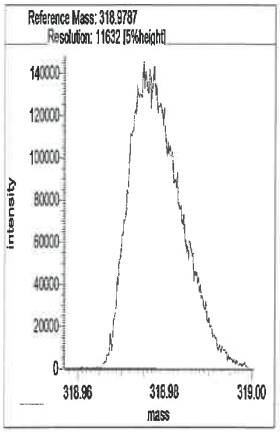

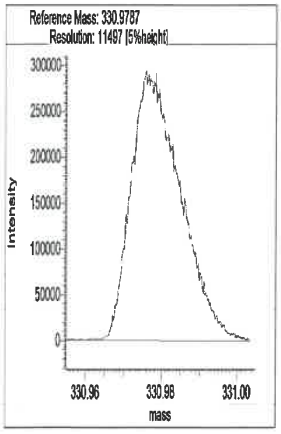

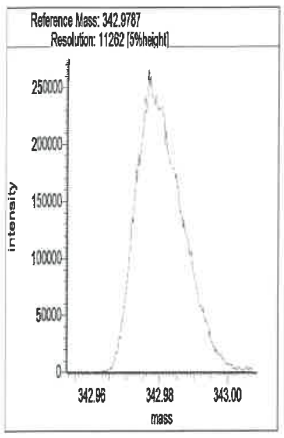

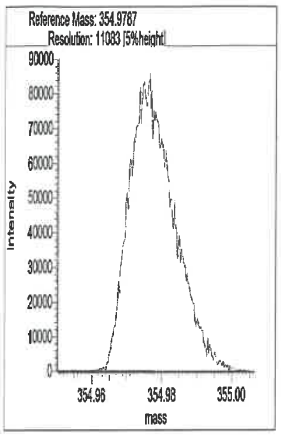

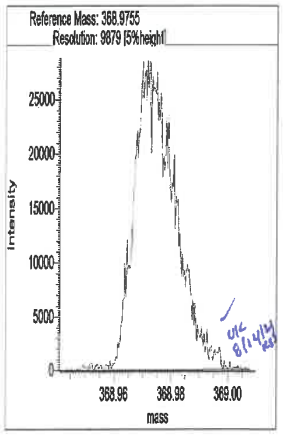

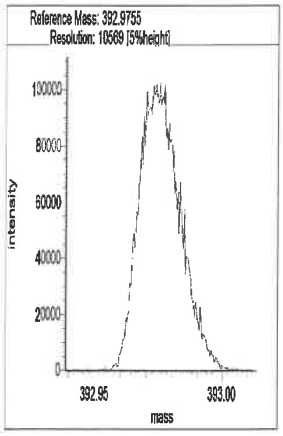

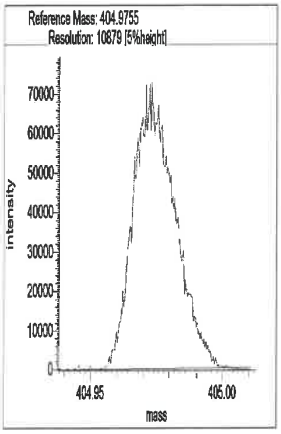

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11897 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11447 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11696 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 12080 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11441 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11004 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10940 [5%height]

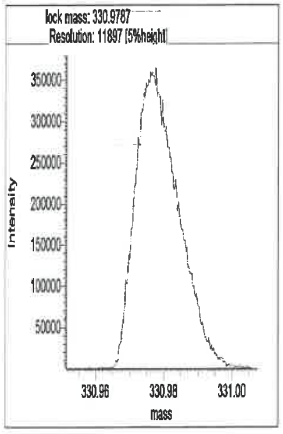

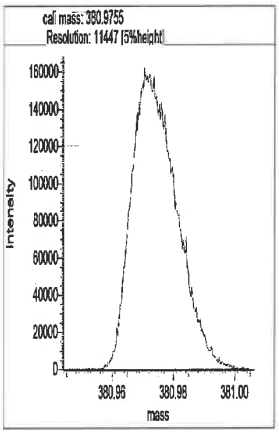

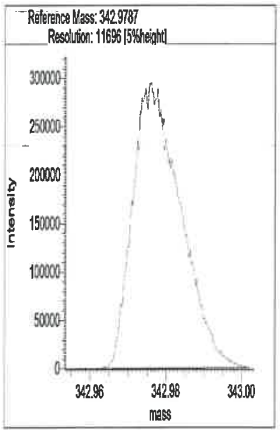

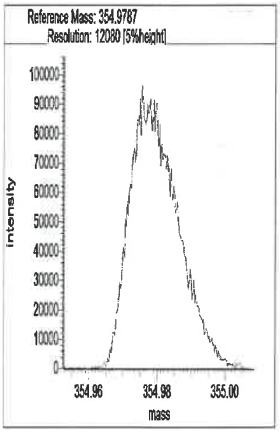

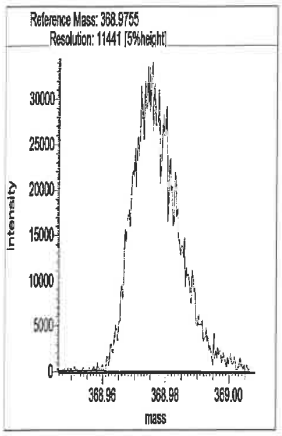

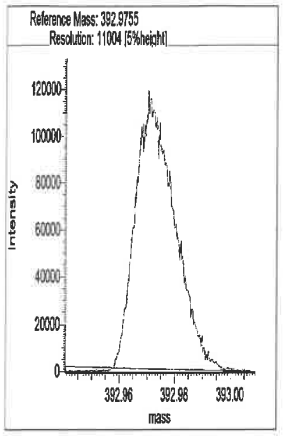

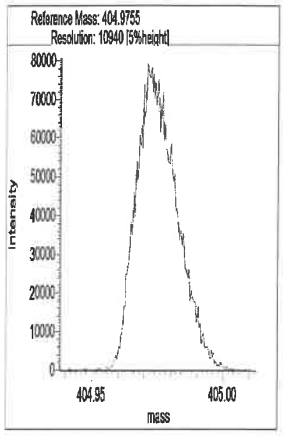

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11852 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11240 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11440 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11125 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11015 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11347 [5%height]

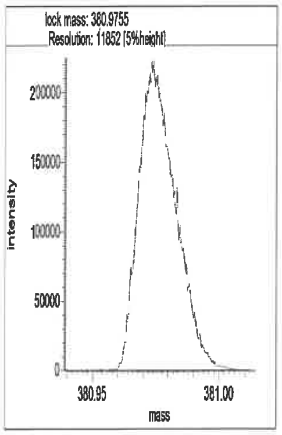

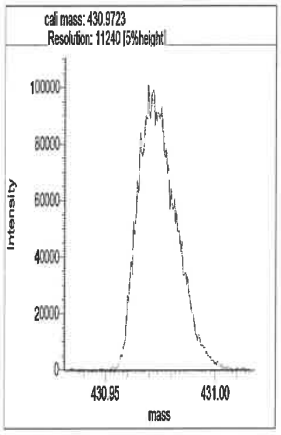

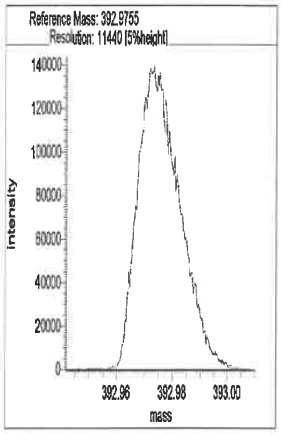

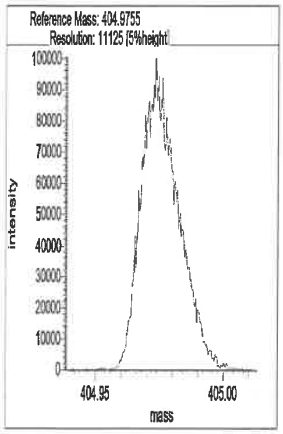

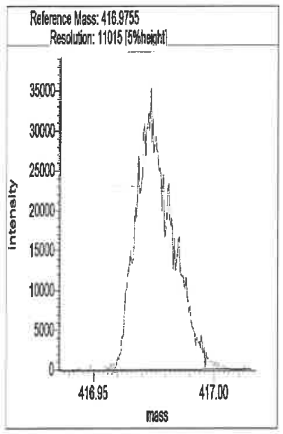

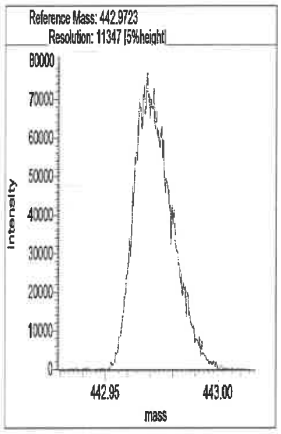

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11606 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10661 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11780 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11640 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10982 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11310 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11482 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12265 [5%height]

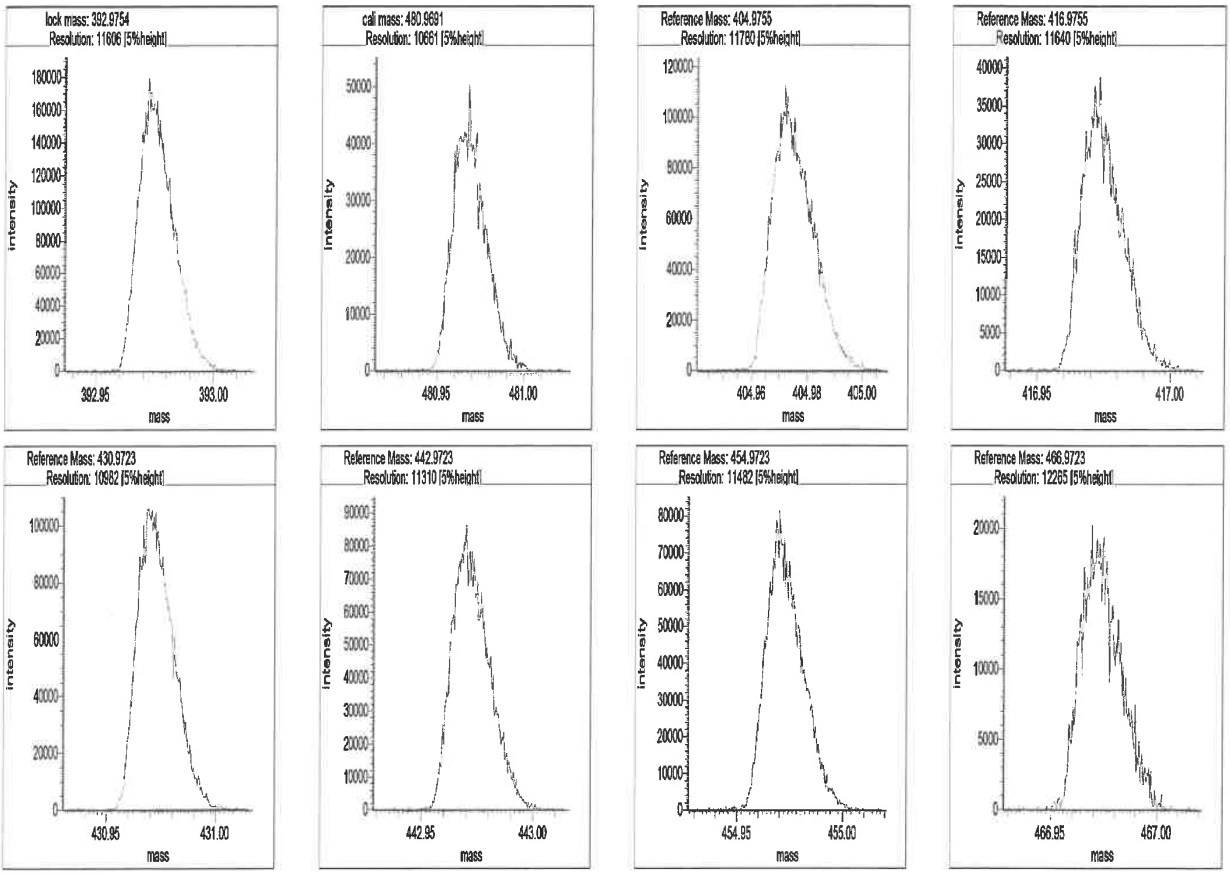

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11616 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11622 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 12003 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11968 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 12148 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11392 [5%height]

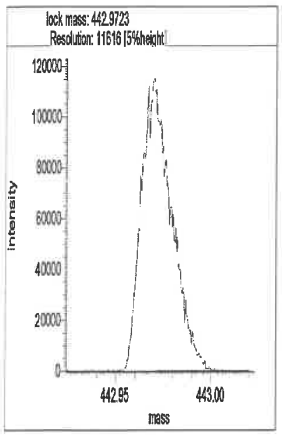
lock mass: 442.9723
Resolution: 11616 [5%height]
Intensity
mass

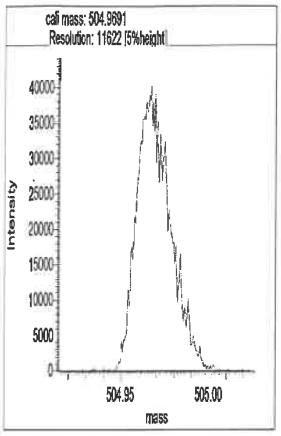
call mass: 504.9691
Resolution: 11622 [5%height]
Intensity
mass

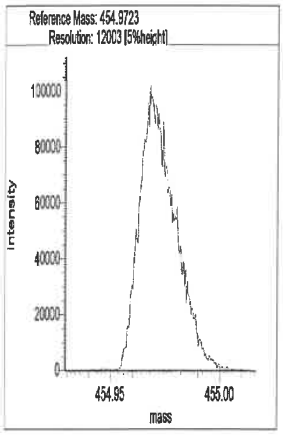
Reference Mass: 454.9723
Resolution: 12003 [5%height]
Intensity
mass

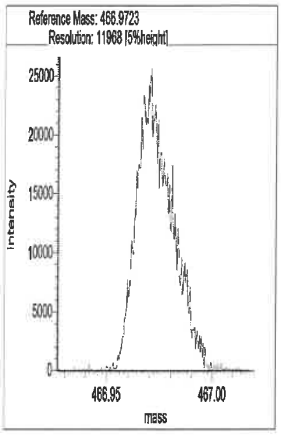
Reference Mass: 466.9723
Resolution: 11968 [5%height]
Intensity
mass

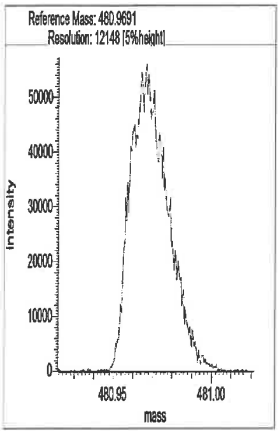
Reference Mass: 480.9691
Resolution: 12148 [5%height]
Intensity
mass

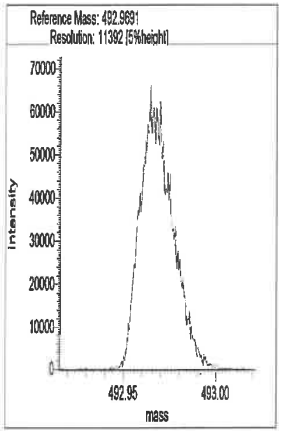
Reference Mass: 492.9691
Resolution: 11392 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	14 Aug 2021 12:02
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11391 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10552 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11168 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11019 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11387 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10855 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10214 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10194 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10269 [5%height]

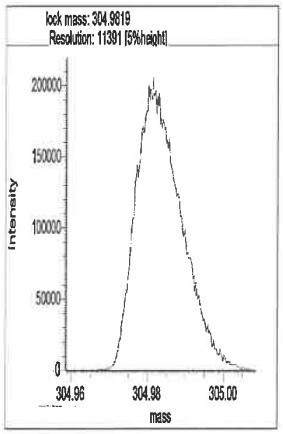

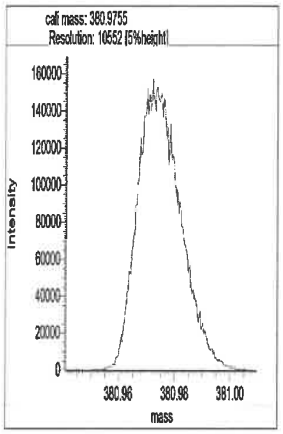

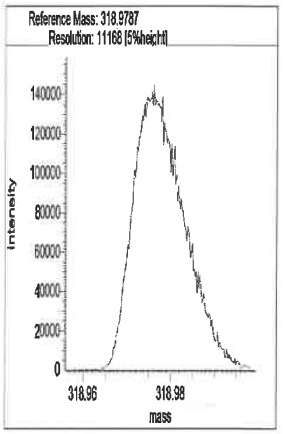

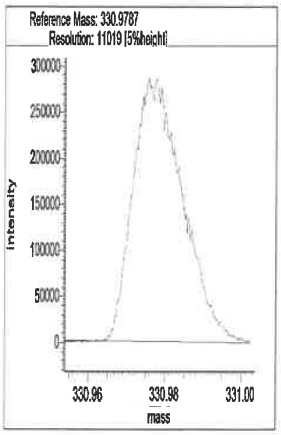

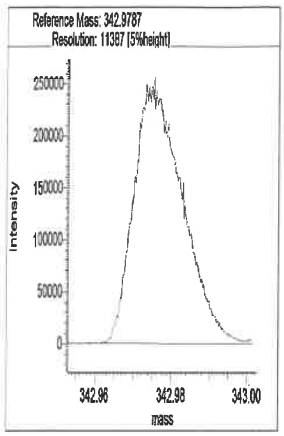

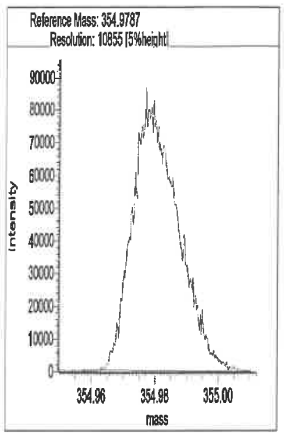

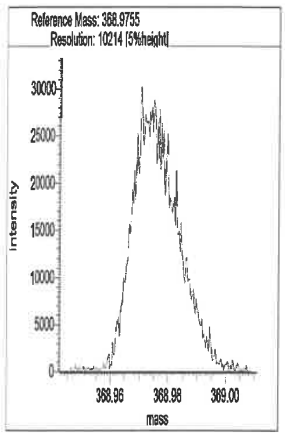

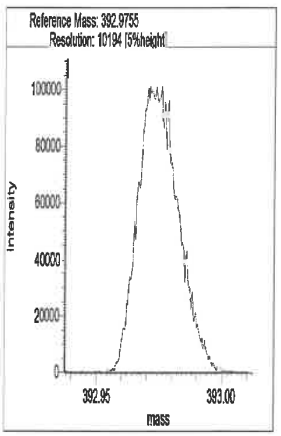

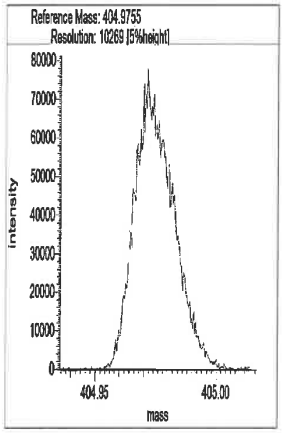

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11434 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11264 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11415 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11032 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10432 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10530 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10672 [5%height]

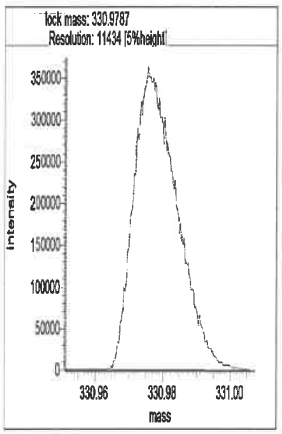

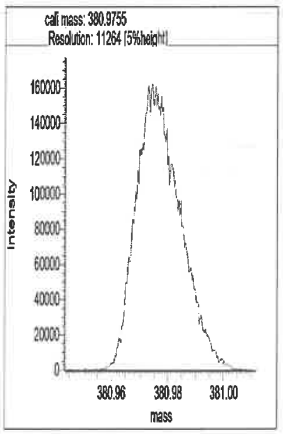

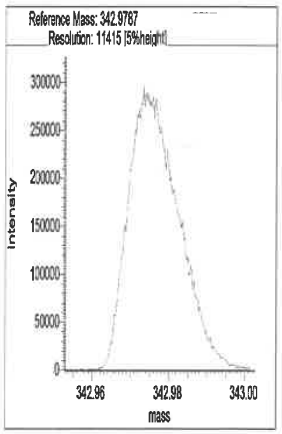

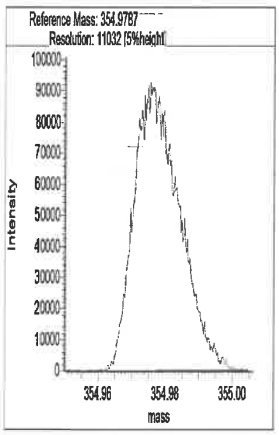

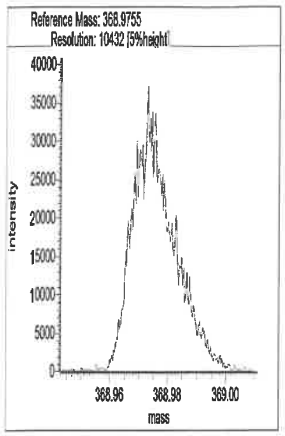

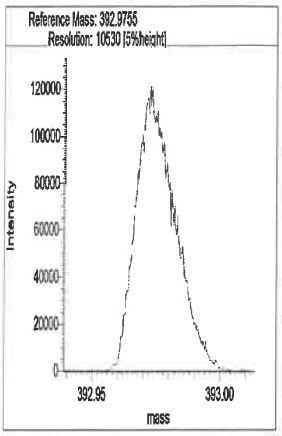

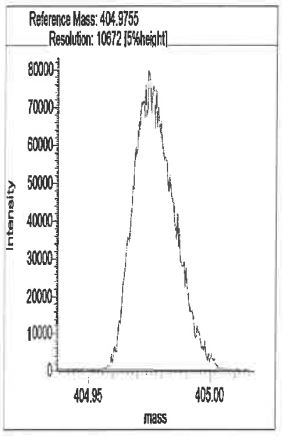

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11181 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11292 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10983 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11148 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11398 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11132 [5%height]

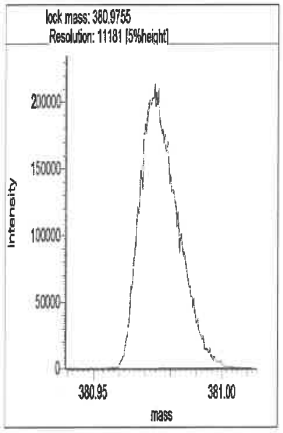

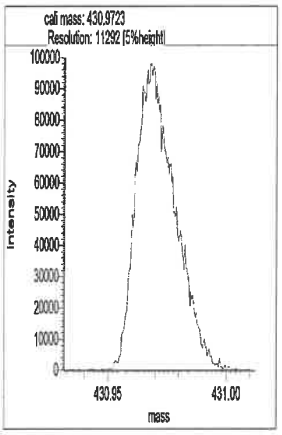

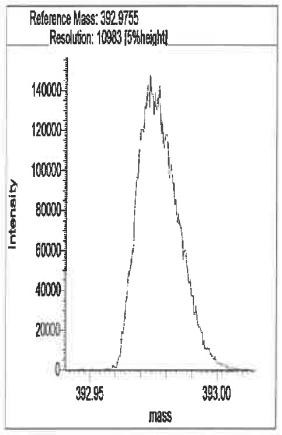

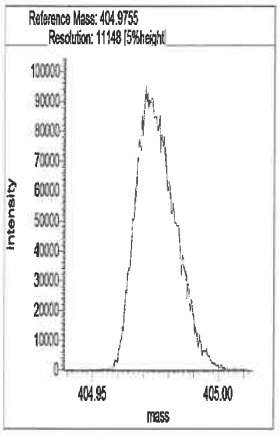

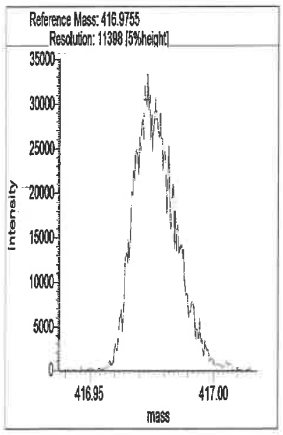

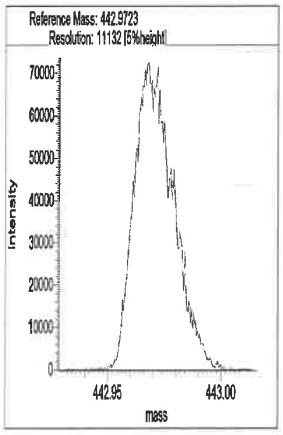

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11581 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10732 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11450 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11176 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11088 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10760 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10948 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12379 [5%height]

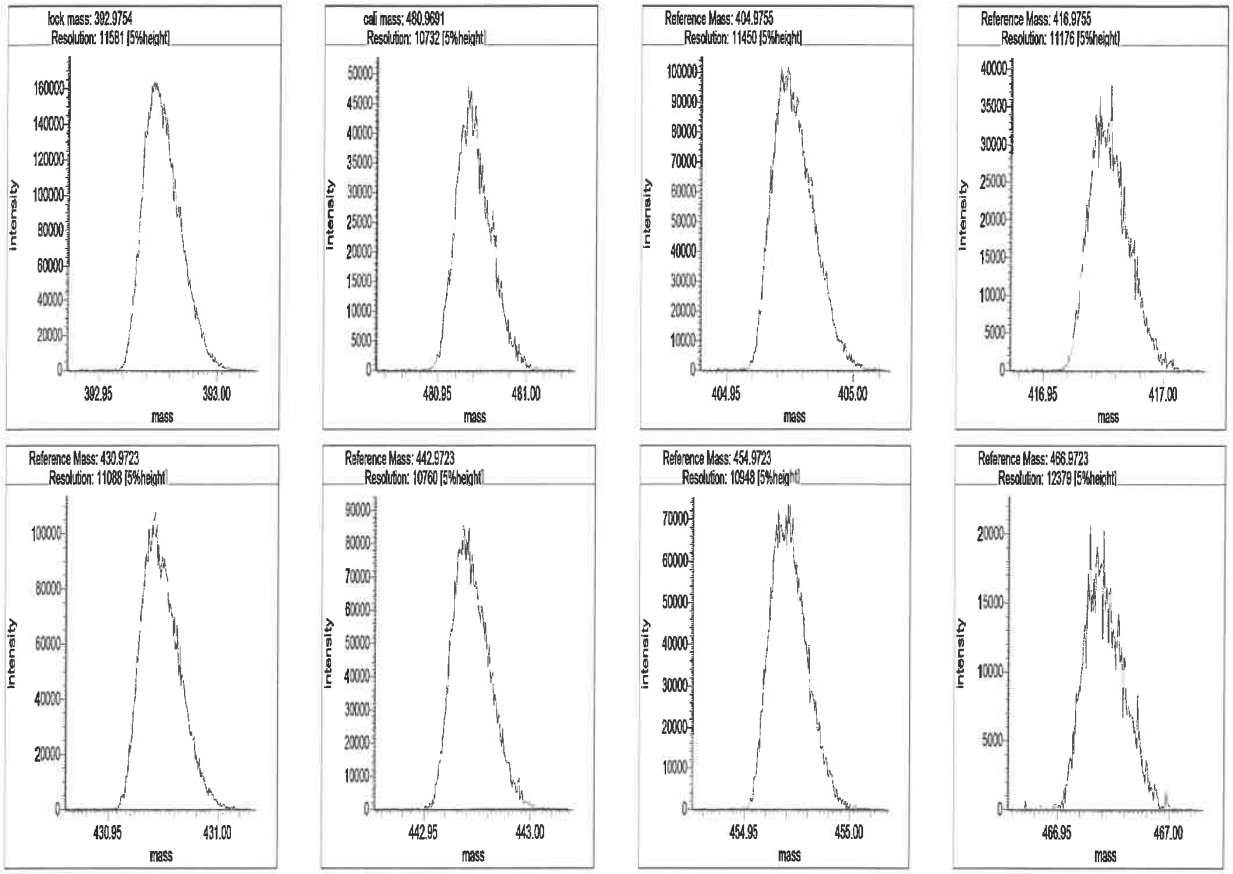

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11291 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10881 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11575 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12062 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11619 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10569 [5%height]

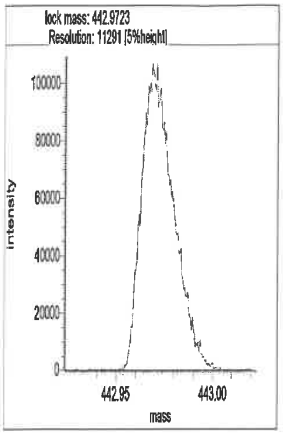
lock mass: 442.9723
Resolution: 11291 [5%height]
intensity
mass

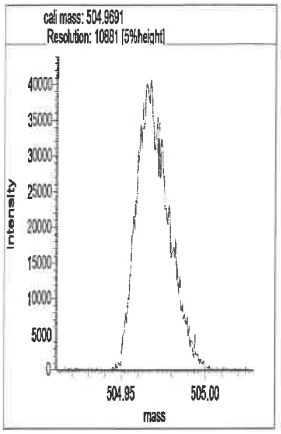
cali mass: 504.9691
Resolution: 10881 [5%height]
intensity
mass

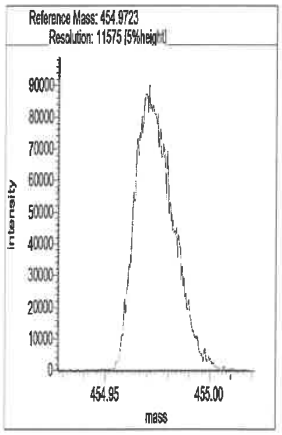
Reference Mass: 454.9723
Resolution: 11575 [5%height]
intensity
mass

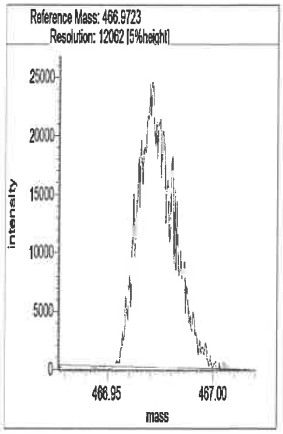
Reference Mass: 466.9723
Resolution: 12062 [5%height]
intensity
mass

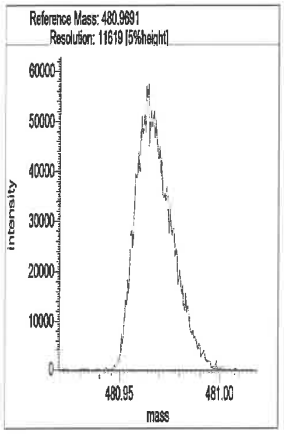
Reference Mass: 480.9691
Resolution: 11619 [5%height]
intensity
mass

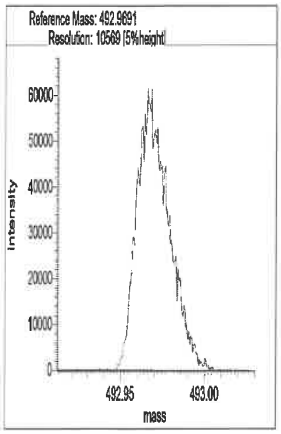
Reference Mass: 492.9691
Resolution: 10569 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	14 Aug 2021 13:09
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11541 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10587 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11415 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10983 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10927 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11086 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10425 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10313 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10618 [5%height]

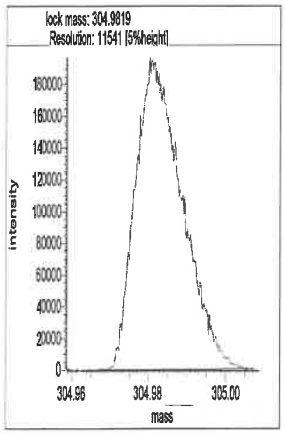

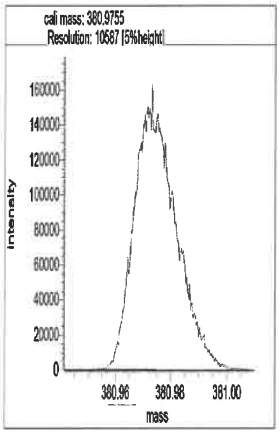

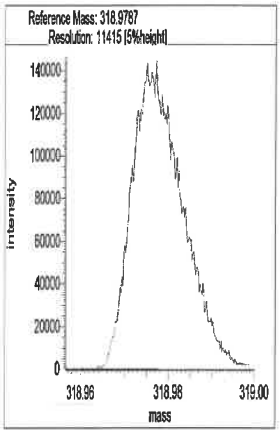

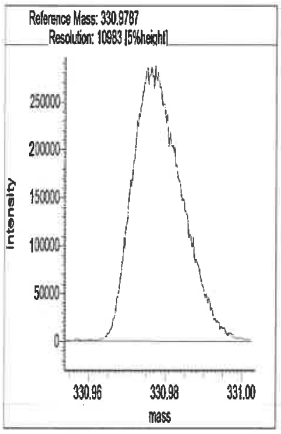

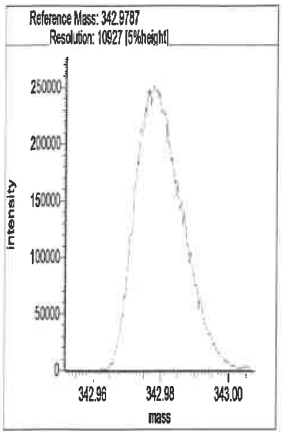

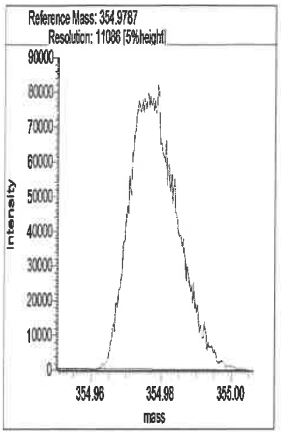

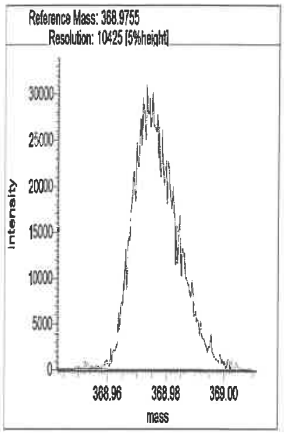

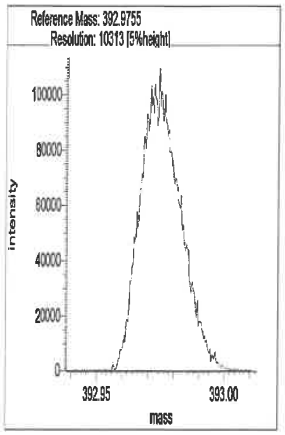

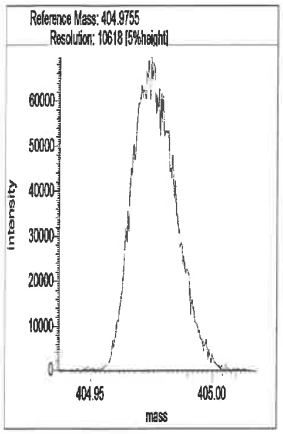

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11039 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10777 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11271 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11178 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10969 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10924 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10583 [5%height]

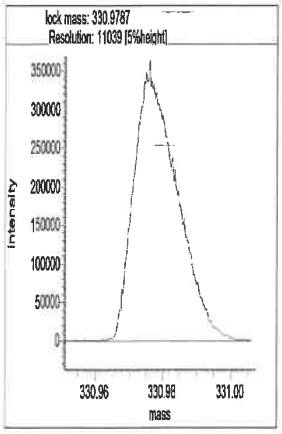

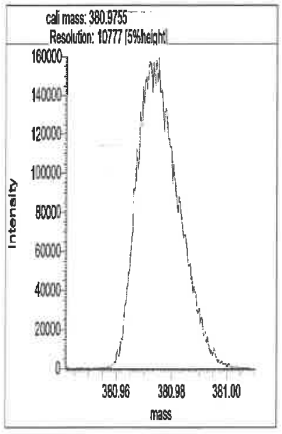

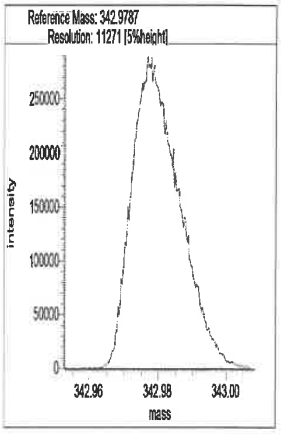

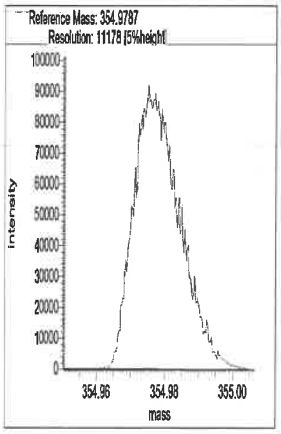

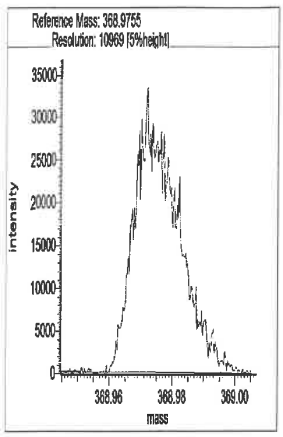

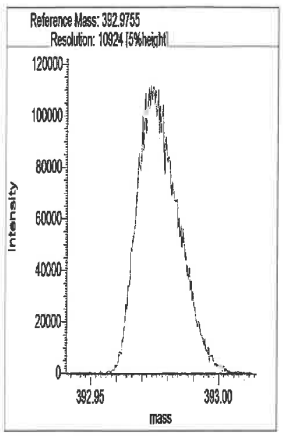

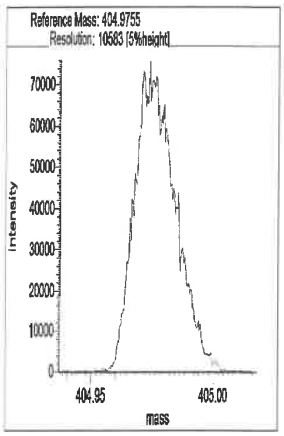

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11279 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10919 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11166 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10622 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11800 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11086 [5%height]

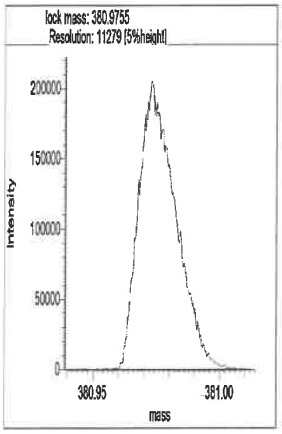

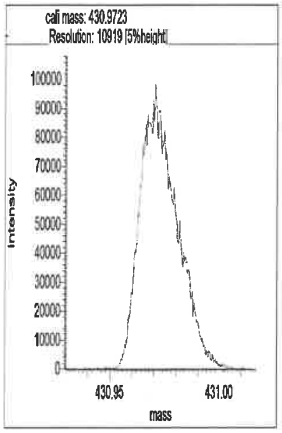

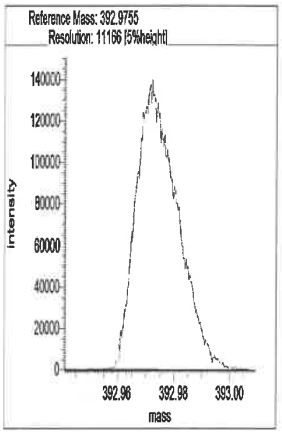

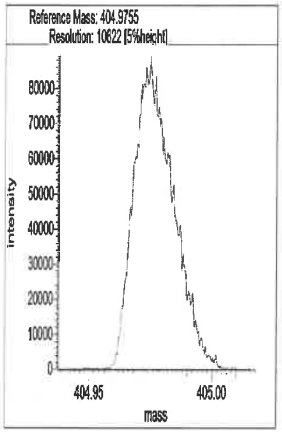

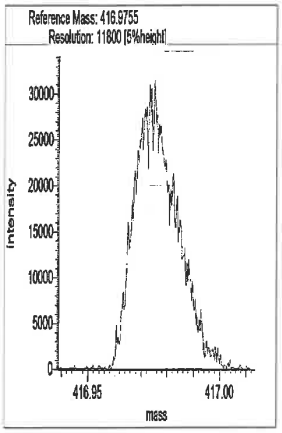

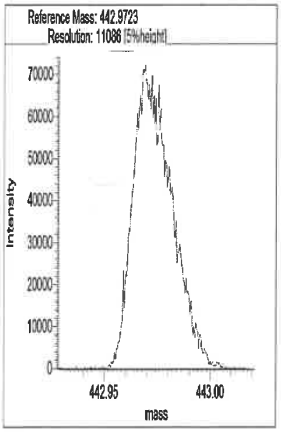

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11097 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11253 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11315 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11475 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10529 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10975 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10572 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11196 [5%height]

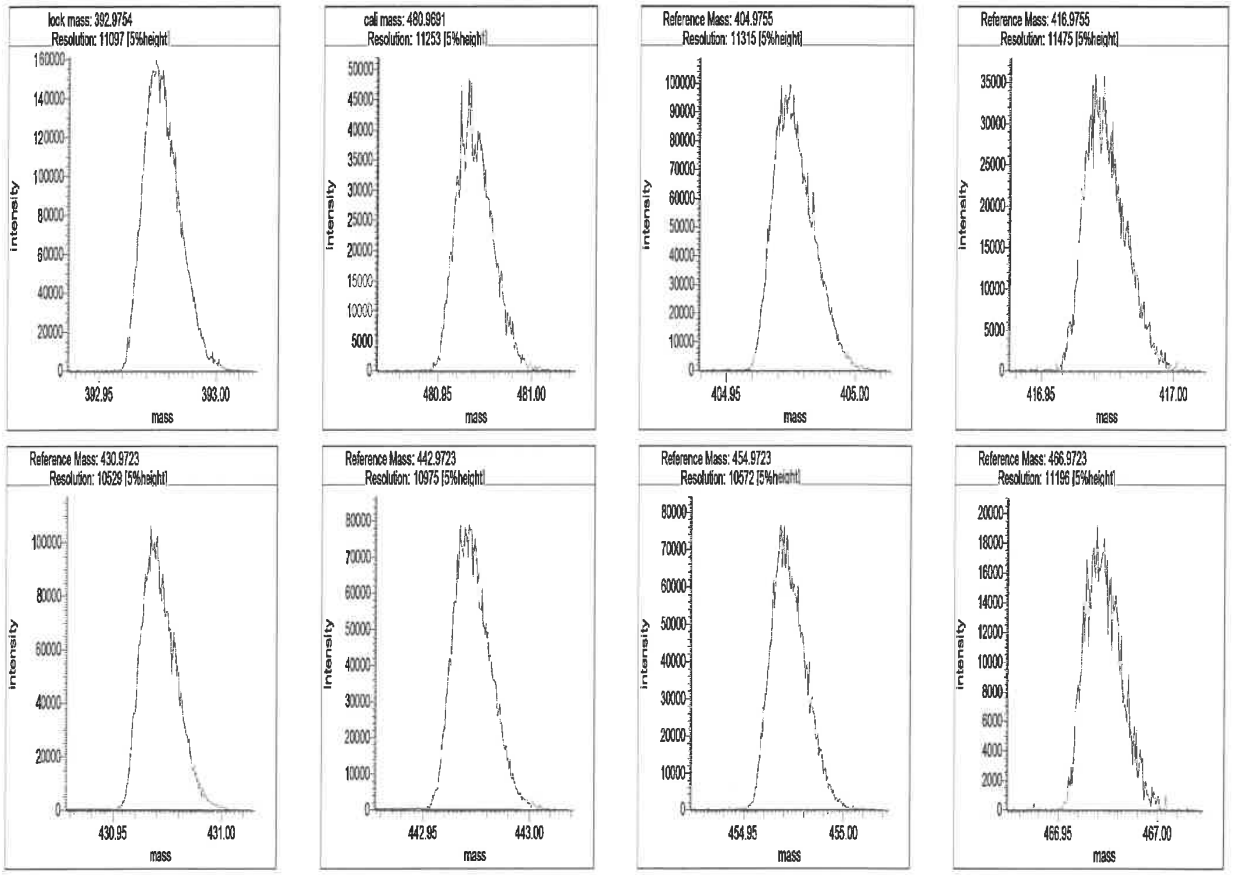

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11161 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11914 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11529 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12288 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10738 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11236 [5%height]

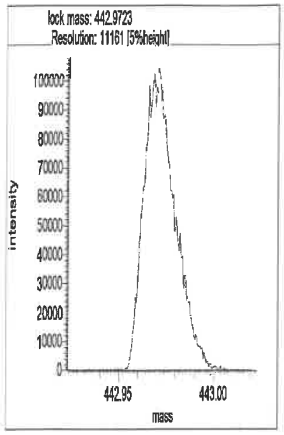
lock mass: 442.9723
Resolution: 11161 [5%height]
intensity
mass
442.95
443.00

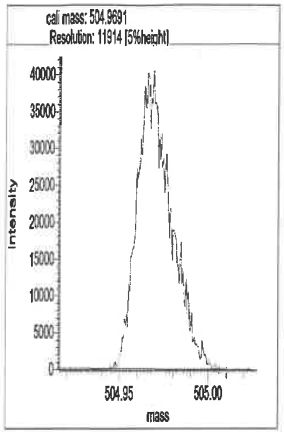
cali mass: 504.9691
Resolution: 11914 [5%height]
intensity
mass
504.95
505.00

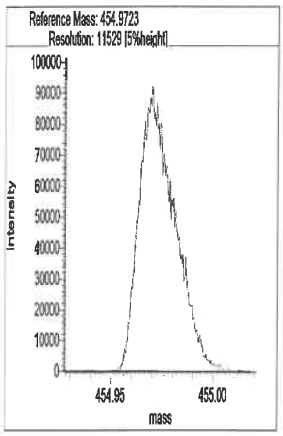
Reference Mass: 454.9723
Resolution: 11529 [5%height]
intensity
mass
454.95
455.00

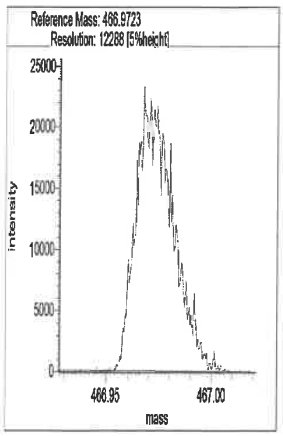
Reference Mass: 466.9723
Resolution: 12088 [5%height]
intensity
mass
466.95
467.00

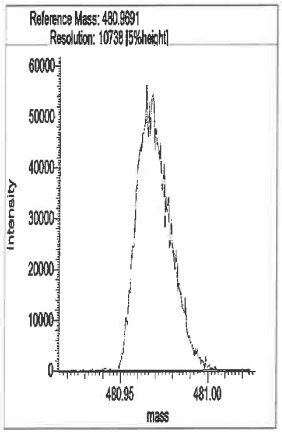
Reference Mass: 480.9691
Resolution: 10738 [5%height]
intensity
mass
480.95
481.00

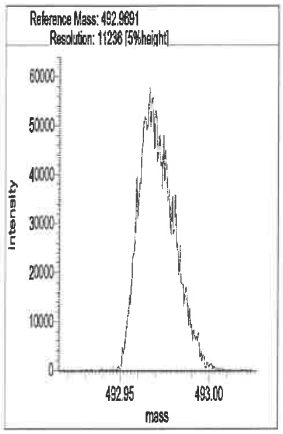
Reference Mass: 492.9691
Resolution: 11236 [5%height]
intensity
mass
492.95
493.00

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 13-Aug-2021 14:02:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 12:23:14 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1655

First Level Reviewer: stephensk Date: 13-Aug-2021 15:38:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.581	483202	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.611	709261	0.83	1.3459	109.1	109.1	0.3316	0.3316	109	
2,3,7,8-TCDF	20.628	76452	0.78	1.0802	9.979	9.979	0.0267	0.0267	99.79	
A Non-2,3,7,8-sub-TCDF	19.948	957	0.77	1.0802	0.1908	0.1249	0.0267	0.0647	0.00	RQ
S Total TCDF					10.2	10.1	0.0267	0.0267		RQ
D 13C-2,3,7,8-TCDD	21.959	476513	0.79	0.9317	105.8	105.8	0.2794	0.2794	106	
2,3,7,8-TCDD	22.002	50616	0.82	1.0753	9.878	9.878	0.0578	0.0578	98.78	M
$ 37Cl4-2,3,7,8-TCDD	22.010	51219		1.0083	10.5	10.5	0.0170	0.0170	105	
A Non-2,3,7,8-sub-TCDD	20.790						0.0578	0.0578		
S Total TCDD					9.878	9.878	0.0578	0.0578		
D 13C-1,2,3,7,8-PeCDF	27.411	571257	1.56	1.1405	103.7	103.7	0.2383	0.2383	104	
1,2,3,7,8-PeCDF	27.436	309819	1.61	1.0543	51.4	51.4	0.1524	0.1524	103	
D 13C-2,3,4,7,8-PeCDF	28.936	604331	1.60	1.1253	111.1	111.1	0.2415	0.2415	111	
2,3,4,7,8-PeCDF	28.952	302418	1.57	1.0079	49.7	49.7	0.1583	0.1583	99.30	
A F1 PeCDFs	24.692	200	1.55	1.0311	0.1109	0.0330	0.005354	0.0330	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.208						0.1553	0.1553		Rn
S Total PeCDF					101.2	101.1	0.1553	0.1553		RQ
D 13C-1,2,3,7,8-PeCDD	29.753	344264	1.60	0.7165	99.4	99.4	0.1737	0.1737	99.44	M
1,2,3,7,8-PeCDD	29.778	179630	1.61	1.0465	49.9	49.9	0.1138	0.1138	99.72	M
A Non-2,3,7,8-sub-PeCDD	28.575						0.1138	0.1138		Rn
S Total PeCDD					49.9	49.9	0.1138	0.1138		
D 13C-1,2,3,4,7,8-HxCDF	35.029	602652	0.54	0.9648	122.8	122.8	0.4323	0.4323	123	
1,2,3,4,7,8-HxCDF	35.046	352303	1.26	1.1474	50.9	50.9	0.1993	0.1993	102	
D 13C-1,2,3,6,7,8-HxCDF	35.189	569967	0.57	1.0708	104.7	104.7	0.3895	0.3895	105	
1,2,3,6,7,8-HxCDF	35.206	365550	1.27	1.2178	52.7	52.7	0.2024	0.2024	105	
D 13C-2,3,4,6,7,8-HxCDF	35.998	525181	0.55	1.0413	99.2	99.2	0.4006	0.4006	99.17	
2,3,4,6,7,8-HxCDF	36.015	339029	1.27	1.2145	53.2	53.2	0.1936	0.1936	106	
D 13C-1,2,3,7,8,9-HxCDF	36.883	509448	0.54	0.9731	102.9	102.9	0.4286	0.4286	103	
1,2,3,7,8,9-HxCDF	36.900	333219	1.30	1.2401	52.7	52.7	0.1841	0.1841	105	
A Non-2,3,7,8-sub-HxCDF	35.087						0.1946	0.1946		
S Total HxCDF					209.5	209.5	0.1949	0.1949		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.681	508561	1.28	1.8E+04	100.0	100.0				M
D 13C-1,2,3,4,7,8-HxCDD	36.200	406860	1.28	0.7587	105.4	105.4	0.2795	0.2795	105	
1,2,3,4,7,8-HxCDD	36.217	195805	1.24	1.0608	45.4	45.4	0.1078	0.1078	90.74	
D 13C-1,2,3,6,7,8-HxCDD	36.327	432063	1.29	0.8593	98.9	98.9	0.2468	0.2468	98.87	
1,2,3,6,7,8-HxCDD	36.335	198266	1.27	0.9933	46.2	46.2	0.1122	0.1122	92.39	
1,2,3,7,8,9-HxCDD	36.697	232251	1.24	1.1094	49.9	49.9	0.1018	0.1018	99.82	
A Non-2,3,7,8-sub-HxCDD	35.441						0.1071	0.1071		
S Total HxCDD					141.5	141.5	0.1073	0.1073		
D 13C-1,2,3,4,6,7,8-HpCDF	38.688	436841	0.42	0.7359	116.7	116.7	0.3782	0.3782	117	
1,2,3,4,6,7,8-HpCDF	38.697	304590	1.07	1.4421	48.4	48.4	0.1701	0.1701	96.70	
D 13C-1,2,3,4,7,8,9-HpCDF	39.927	451244	0.48	0.6854	129.5	129.5	0.4061	0.4061	129	
1,2,3,4,7,8,9-HpCDF	39.935	281548	1.08	1.3092	47.7	47.7	0.1663	0.1663	95.32	
A Non-2,3,7,8-sub-HpCDF	39.272						0.1677	0.1677		
S Total HpCDF					96.0	96.0	0.1682	0.1682		
D 13C-1,2,3,4,6,7,8-HpCDD	39.624	381359	1.05	0.6745	111.2	111.2	0.3013	0.3013	111	
1,2,3,4,6,7,8-HpCDD	39.632	196561	1.02	1.0503	49.1	49.1	0.1261	0.1261	98.15	
A Non-2,3,7,8-sub-HpCDD	39.272						0.1261	0.1261		
S Total HpCDD					49.1	49.1	0.1261	0.1261		
D 13C-OCDD	42.123	716854	0.90	0.5446	258.8	258.8	0.3164	0.3164	129	
OCDF	42.224	523440	0.92	1.3168	110.9	110.9	0.1414	0.1414	111	
OCDD	42.131	372999	0.89	1.0620	98.0	98.0	0.1049	0.1049	97.99	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 16-Aug-2021 12:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 13-Aug-2021 14:02:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 12:23:14 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1655

First Level Reviewer: stephensk Date: 13-Aug-2021 15:38:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.581	21.581	0		214981	30271	53	132	571		a
333.9338	21.581	21.581	0		268221	39640	20	50	1982	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.611	20.611	0	0.955	322185	47729	93	232	513		
317.9389	20.620	20.611	1	0.955	387076	56438	32	80	1764	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.628	20.628	0	1.001	33407	5359	3	7	1786		
305.8987	20.645	20.628	1	1.002	43045	5936	9	22	660	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.967	19.948	1	0.969	372	73	3	7	24		
	Empc Correction				200	75	3	7	25		
305.8987	19.976	19.948	2	0.969	261	98	9	22	11	1.43(0.65-0.89)	
303.9016	20.937	19.948	59	1.016	216	133	3	7	44		
305.8987	20.937	19.948	59	1.016	613	107	9	22	12	0.35(0.65-0.89)	
	Empc Correction				280	172	9	22	19		
13C-2,3,7,8-TCDD											
331.9368	21.959	21.959	0	1.018	210262	29846	53	132	563		
333.9338	21.959	21.959	0	1.018	266251	37682	20	50	1884	0.79(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	22.002	22.002	0	1.002	22747	3134	15	37	209		
321.8936	21.984	22.002	-1	1.001	27869	3917	2	5	1959	0.82(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	22.010	22.010	0	1.020	51219	6994	5	12	1399		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											
319.8965	20.790						15	37			
321.8936	20.790						2	5			
13C-1,2,3,7,8-PeCDF											
351.9000	27.411	27.411	0	1.270	347911	54776	52	130	1053		
353.8970	27.419	27.411	1	1.271	223346	35495	24	60	1479	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.436	27.436	0	1.001	191327	30421	30	75	1014		
341.8567	27.428	27.436	-1	1.001	118492	18318	28	70	654	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.936	28.936	0	1.341	371510	55460	52	130	1067		
353.8970	28.936	28.936	0	1.341	232821	35431	24	60	1476	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.952	28.952	0	1.001	184595	27389	30	75	913		
341.8567	28.944	28.952	-1	1.000	117823	17634	28	70	630	1.57(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.483	24.692	-13	0.893	122	43	1	2	43		
341.8567	24.474	24.692	-13	0.893	550	100	1	2	100	0.22(1.32-1.78)	
	Empc Correction				78	27	1	2	27		
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.017	28.186	-10	1.022	1362	230	30	75	8		
341.8567	28.026	28.186	-10	1.022	1204	195	28	70	7	1.13(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											M
367.8949	29.753	29.753	0	1.379	211668	29179	20	50	1459		
369.8919	29.761	29.753	1	1.379	132596	18665	15	37	1244	1.60(1.32-1.78)	M
1,2,3,7,8-PeCDD											M
355.8546	29.778	29.778	0	1.001	110840	15076	14	35	1077		
357.8516	29.778	29.778	0	1.001	68790	9315	9	22	1035	1.61(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDD											
355.8546	30.393	29.966	26	1.022	848	127	14	35	9		
357.8516	30.334	29.966	22	1.020	380	65	9	22	7	2.23(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	35.029	35.029	0	0.955	211596	40021	69	172	580		
385.8610	35.021	35.029	-1	0.955	391056	78036	120	300	650	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.046	35.046	0	1.000	196121	38148	55	137	694		
375.8178	35.046	35.046	0	1.000	156182	31406	53	132	593	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.189	35.189	0	0.959	206011	40253	69	172	583		
385.8610	35.181	35.189	-1	0.959	363956	69265	120	300	577	0.57(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.206	35.206	0	1.000	204401	38773	55	137	705		
375.8178	35.198	35.206	-1	1.000	161149	30857	53	132	582	1.27(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.998	35.998	0	0.981	185644	41847	69	172	606		
385.8610	35.998	35.998	0	0.981	339537	72987	120	300	608	0.55(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	36.015	36.015	0	1.000	189782	40024	55	137	728		
375.8178	36.007	36.015	-1	1.000	149247	31588	53	132	596	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.883	36.883	0	1.006	178960	41858	69	172	607		
385.8610	36.883	36.883	0	1.006	330488	76435	120	300	637	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.900	36.900	0	1.000	188380	42299	55	137	769		
375.8178	36.891	36.900	-1	1.000	144839	33454	53	132	631	1.30(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.087						55	137			
375.8178	35.087						53	132			
13C-1,2,3,7,8,9-HxCDD											M
401.8559	36.681	36.681	0		285812	63784	60	150	1063		M
403.8529	36.689	36.681	1		222749	49378	36	90	1372	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.200	36.200	0	0.987	228662	51773	60	150	863		
403.8529	36.200	36.200	0	0.987	178198	40036	36	90	1112	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.217	36.217	0	1.000	108583	23762	22	55	1080		
391.8127	36.217	36.217	0	1.000	87222	18523	20	50	926	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.327	36.327	0	0.990	243765	51750	60	150	863		
403.8529	36.318	36.327	-1	0.990	188298	42424	36	90	1178	1.29(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.335	36.335	0	1.000	111089	24893	22	55	1132		
391.8127	36.335	36.335	0	1.000	87177	19428	20	50	971	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.697	36.697	0	1.014	128732	28405	22	55	1291		
391.8127	36.697	36.697	0	1.014	103519	23566	20	50	1178	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.441						22	55			
391.8127	35.441						20	50			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.688	38.688	0	1.055	129379	32965	44	110	749		
419.8220	38.680	38.688	-1	1.055	307462	77080	82	205	940	0.42(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.697	38.697	0	1.000	157616	41744	57	142	732		
409.7788	38.697	38.697	0	1.000	146974	37162	51	127	729	1.07(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.927	39.927	0	1.089	145625	39267	44	110	892		
419.8220	39.927	39.927	0	1.089	305619	84715	82	205	1033	0.48(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.935	39.935	0	1.000	146165	40586	57	142	712		
409.7788	39.935	39.935	0	1.000	135383	37708	51	127	739	1.08(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.272						57	142			
409.7788	39.272						51	127			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.624	39.624	0	1.080	195330	54494	48	120	1135		
437.8140	39.624	39.624	0	1.080	186029	51243	44	110	1165	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.632	39.632	0	1.000	99148	27922	32	80	873		
425.7737	39.632	39.632	0	1.000	97413	26706	24	60	1113	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.272						32	80			
425.7737	39.272						24	60			
13C-OCDD											
469.7780	42.123	42.123	0	1.148	340492	84743	43	107	1971		
471.7750	42.123	42.123	0	1.148	376362	89322	35	87	2552	0.90(0.76-1.02)	
OCDF											
441.7428	42.224	42.224	0	1.002	250604	57060	28	70	2038		
443.7399	42.216	42.224	-1	1.002	272836	65391	37	92	1767	0.92(0.76-1.02)	
OCDD											
457.7377	42.131	42.131	0	1.000	175969	43488	14	35	3106		
459.7348	42.131	42.131	0	1.000	197030	47906	25	62	1916	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 16-Aug-2021 12:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	13-Aug-2021 14:02:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	1
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-TCDF, RT: 19.948

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	709261	104167

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	709261	104167

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.967	372	73	261	98	0.0826	1.43	RQ
19.967	200	75	261	98	0.0602		Empc Correction
20.937	216	133	613	107	0.1082	0.35	RQ
20.937	216	133	280	172	0.0647		Empc Correction
Signal Totals:							
	416	208	541	270			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1462	411				0.67	RQ
	957	478					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.1908 = (1462 * 100.000) / (709261 * 1.080)

Empc Amount: 0.1249 = (957 * 100.000) / (709261 * 1.080)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 16-Aug-2021 12:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	13-Aug-2021 14:02:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	1
Sublist:	chrom-Dioxin_DFS1*sub1		

F1 PeCDFs, RT: 24.692

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	571257	90271
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	604331	90891

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	587794	90581

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.483	122	43	550	100	0.1109	0.22	RQ
24.483	122	43	78	27	0.0330		Empc Correction
Signal Totals:							
	122	43	78	27			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	672	143				0.22	RQ
	200	70					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.1109 = (672 * 100.000) / (587794 * 1.031)

Empc Amount: 0.0330 = (200 * 100.000) / (587794 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d				
Injection Date:	13-Aug-2021 14:02:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.58

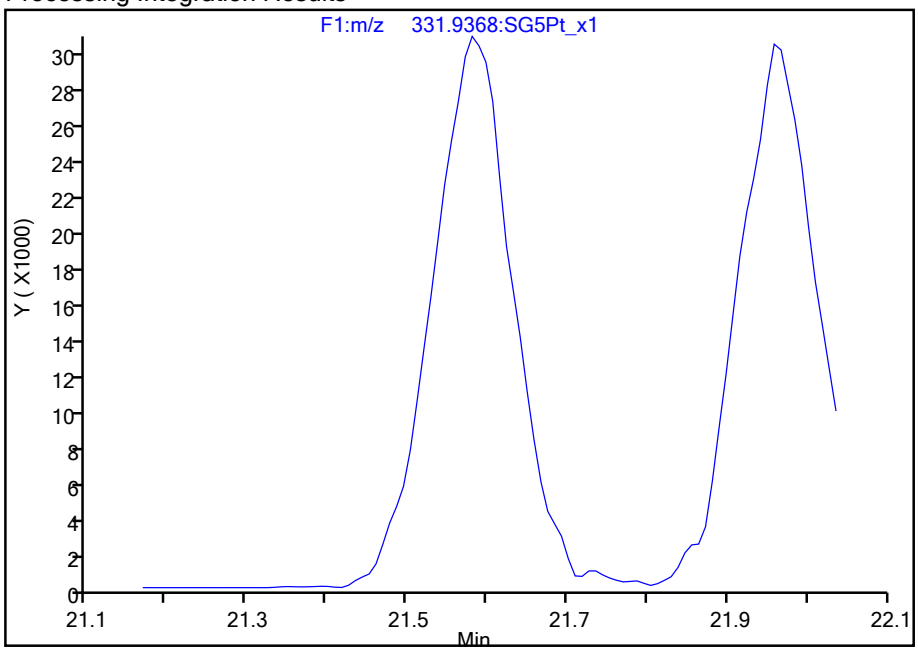

Manual Integration Results

RT: 21.58
Area: 214981
Amount: 100.0000
Amount Units: pg/ul

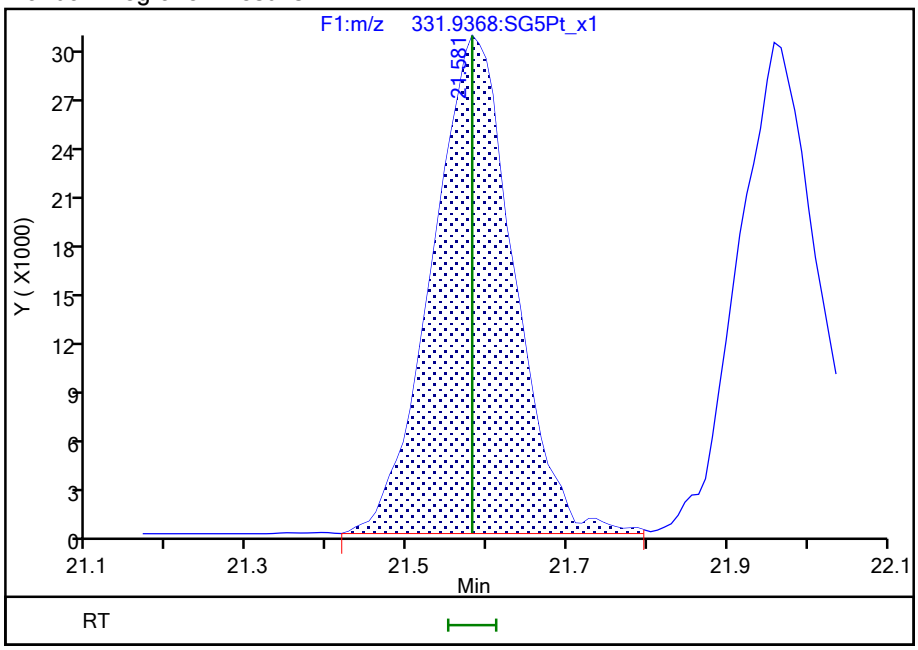

Reviewer: stephensk, 13-Aug-2021 14:53:44
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d				
Injection Date:	13-Aug-2021 14:02:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 21.98
Area: 26756
Amount: 9.660697
Amount Units: pg/ul

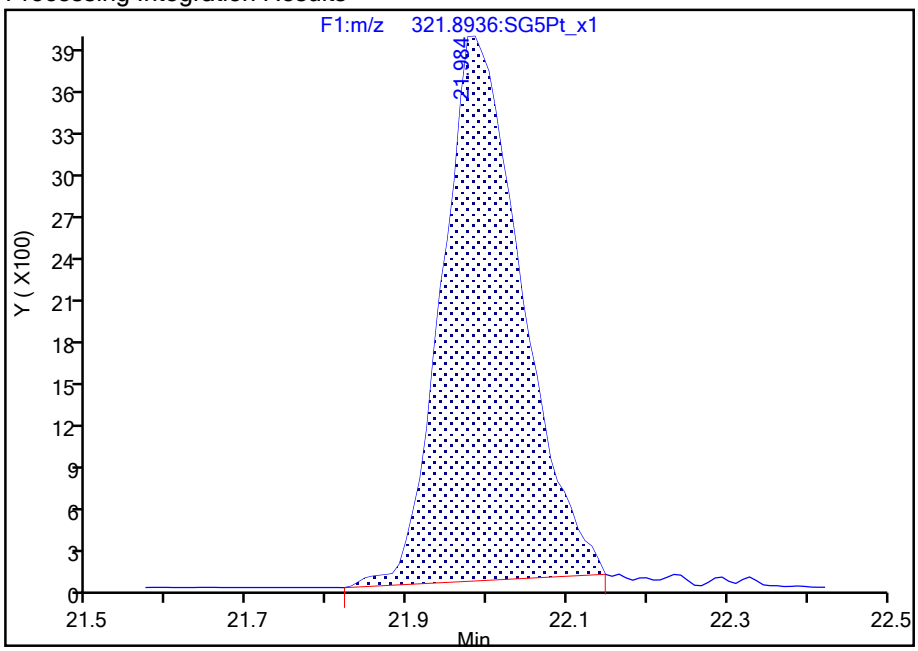

Manual Integration Results

RT: 21.98
Area: 27869
Amount: 9.877903
Amount Units: pg/ul

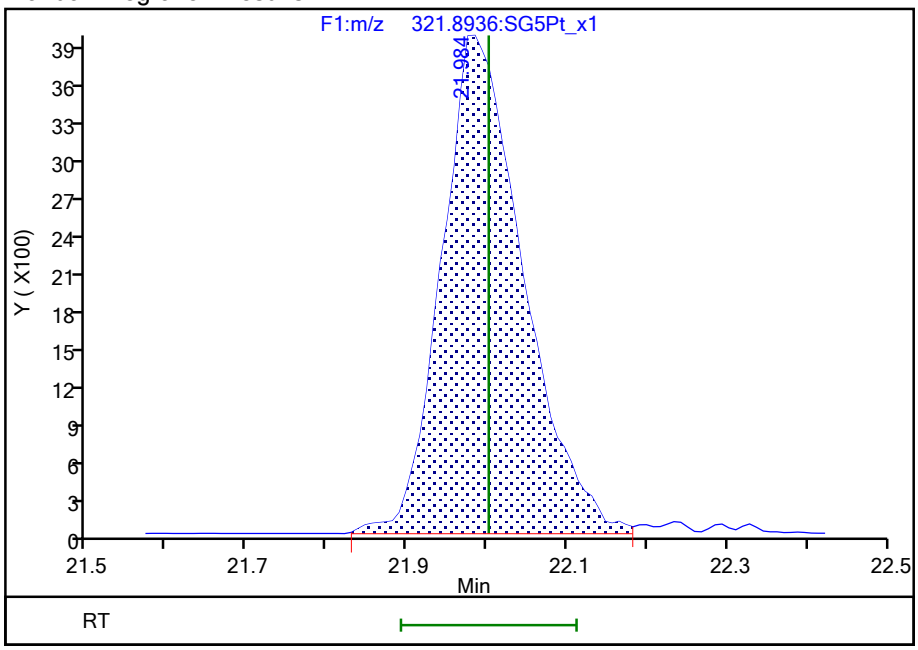

Reviewer: stephensk, 13-Aug-2021 14:54:11

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d				
Injection Date:	13-Aug-2021 14:02:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 2

Processing Integration Results

RT: 29.76
Area: 126569
Amount: 97.700117
Amount Units: pg/ul

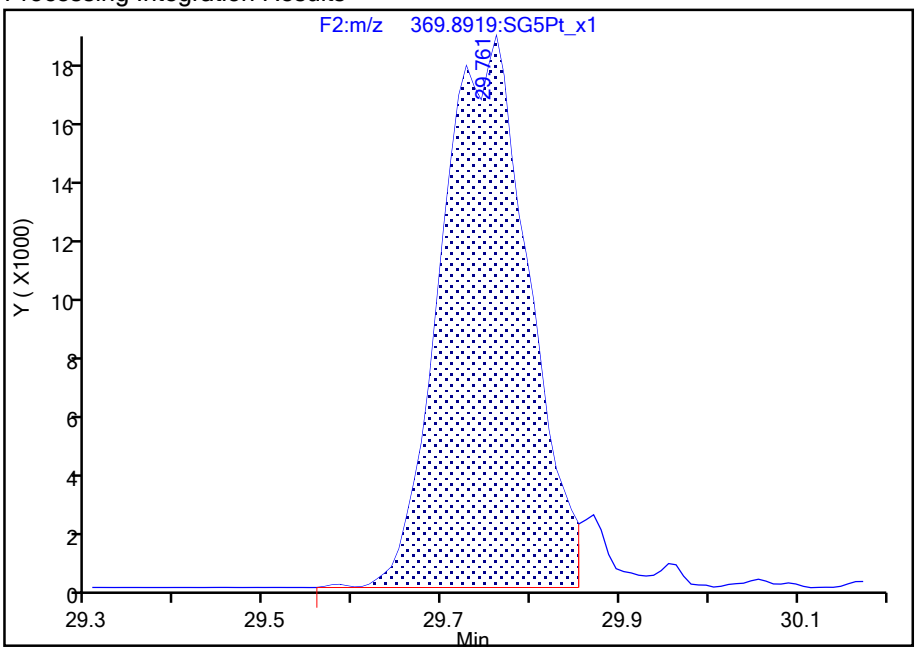

Manual Integration Results

RT: 29.76
Area: 132596
Amount: 99.441022
Amount Units: pg/ul

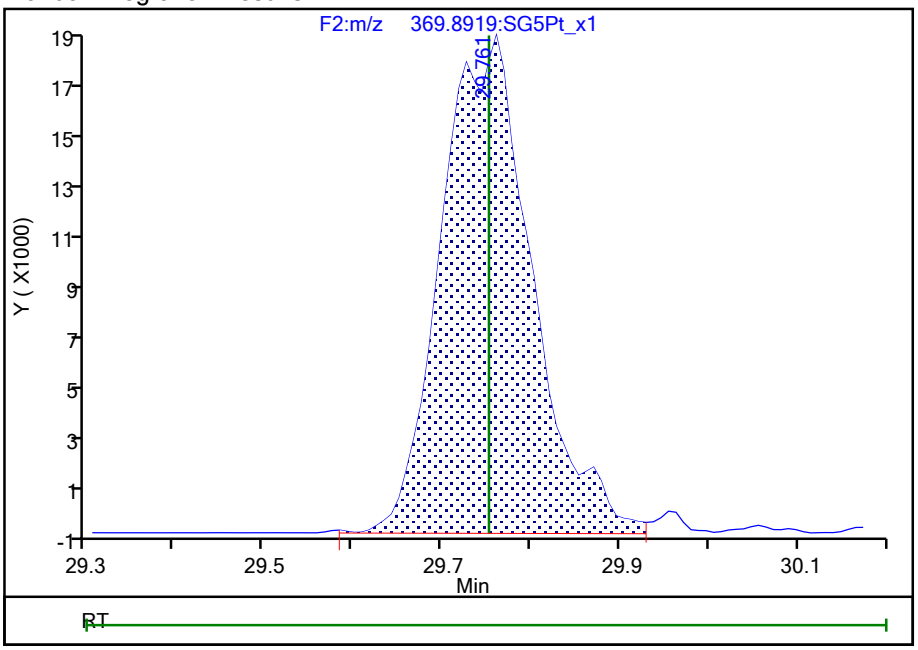

Reviewer: stephensk, 13-Aug-2021 14:54:35

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d				
Injection Date:	13-Aug-2021 14:02:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 2

Processing Integration Results

RT: 29.78
Area: 67753
Amount: 49.571807
Amount Units: pg/ul

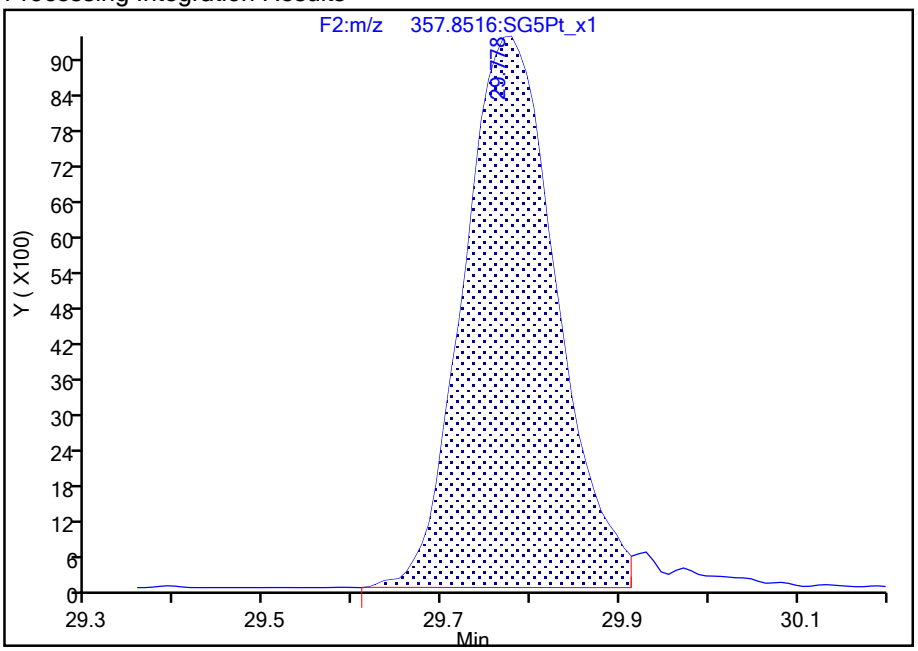

Manual Integration Results

RT: 29.78
Area: 68790
Amount: 49.859646
Amount Units: pg/ul

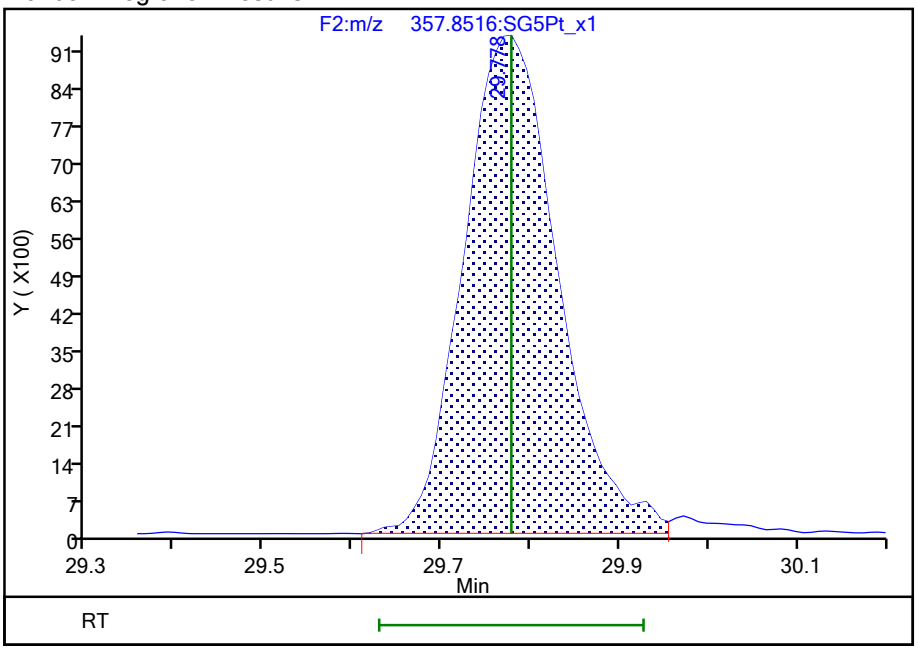

Reviewer: stephensk, 13-Aug-2021 14:54:50

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d				
Injection Date:	13-Aug-2021 14:02:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 1

Processing Integration Results

RT: 36.68
Area: 283178
Amount: 100.0000
Amount Units: pg/ul

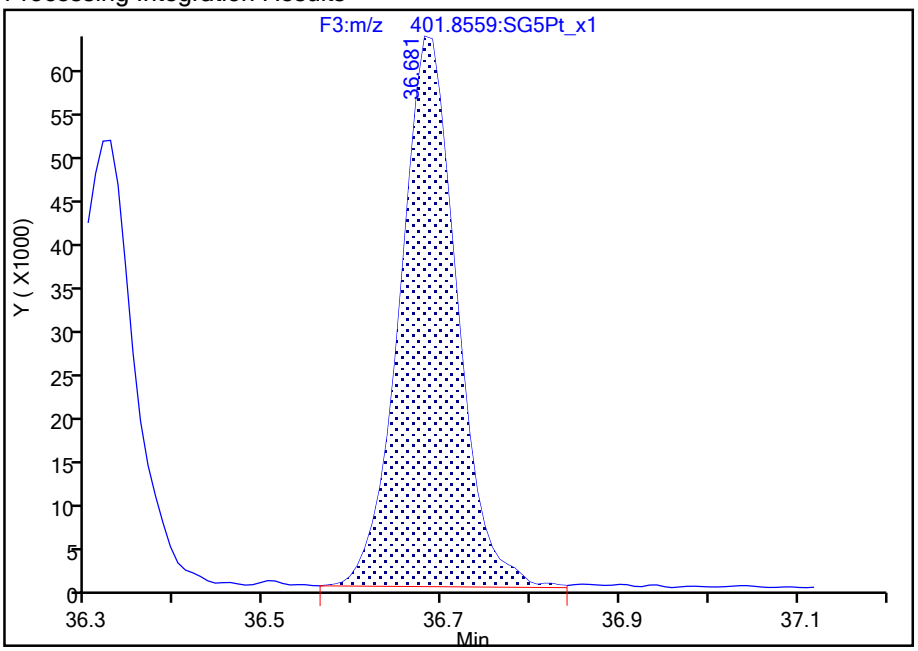

Manual Integration Results

RT: 36.68
Area: 285812
Amount: 100.0000
Amount Units: pg/ul

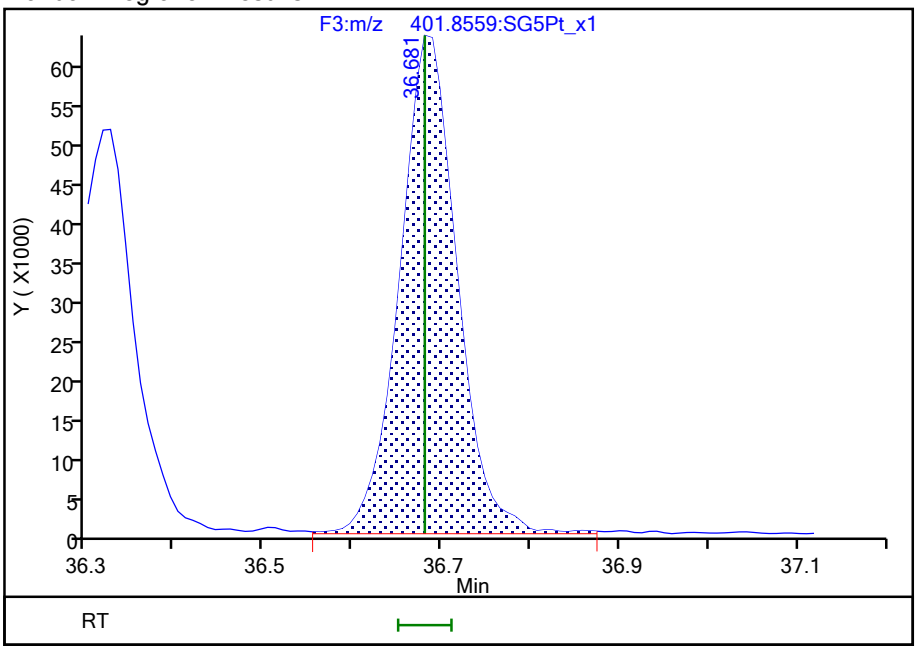

Reviewer: stephensk, 13-Aug-2021 14:56:57

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 16-Aug-2021 12:23:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

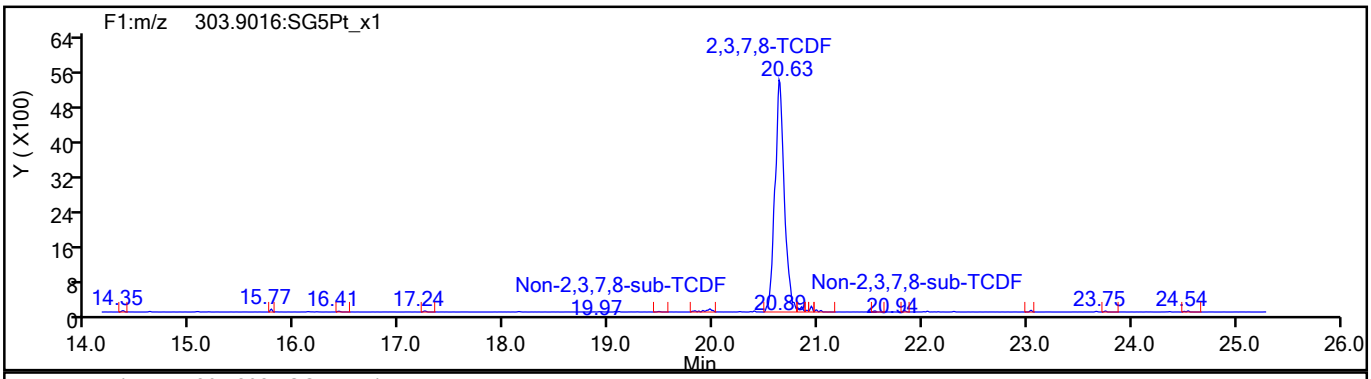

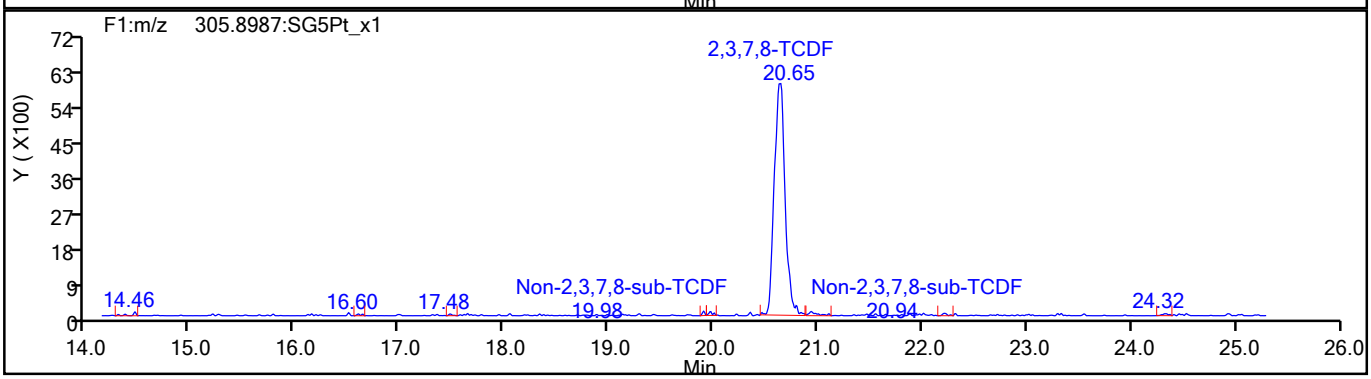

TCDF Standards

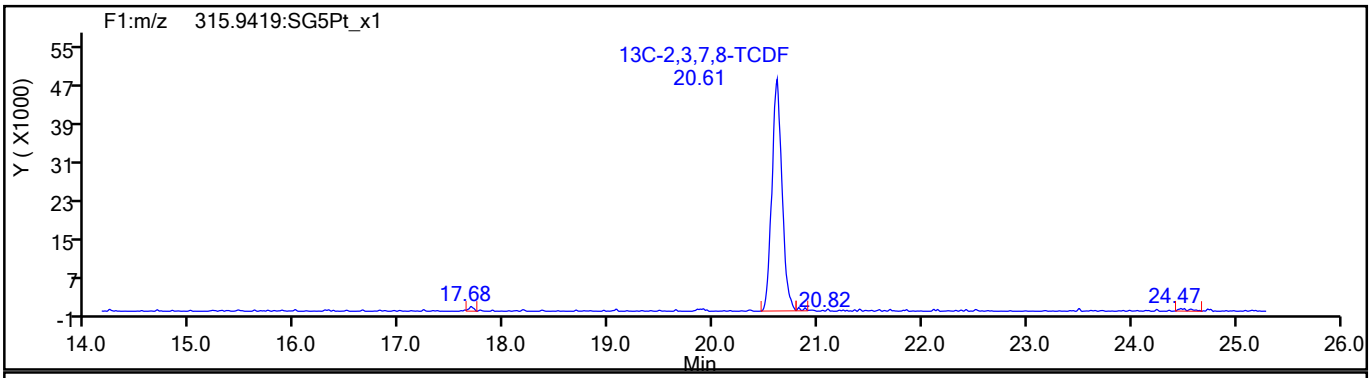

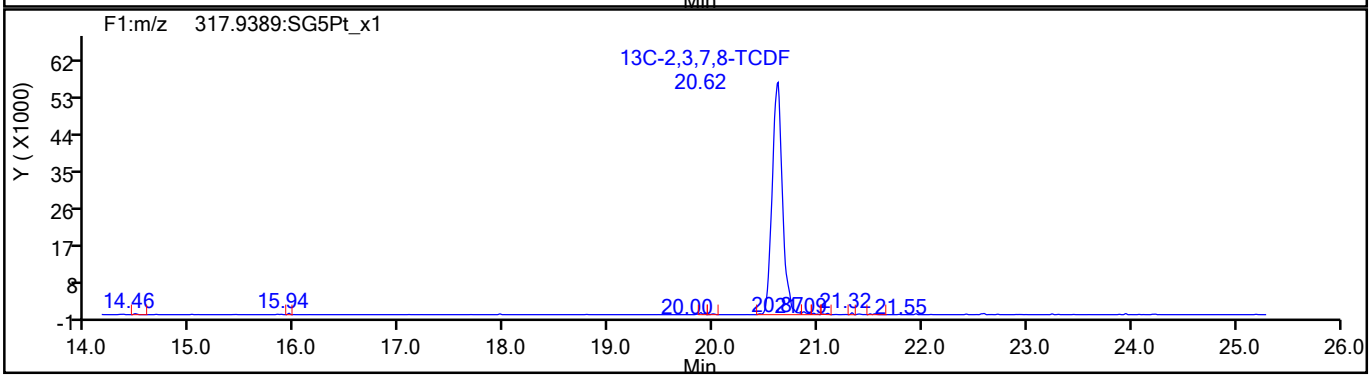

773814

Report Date: 16-Aug-2021 12:23:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

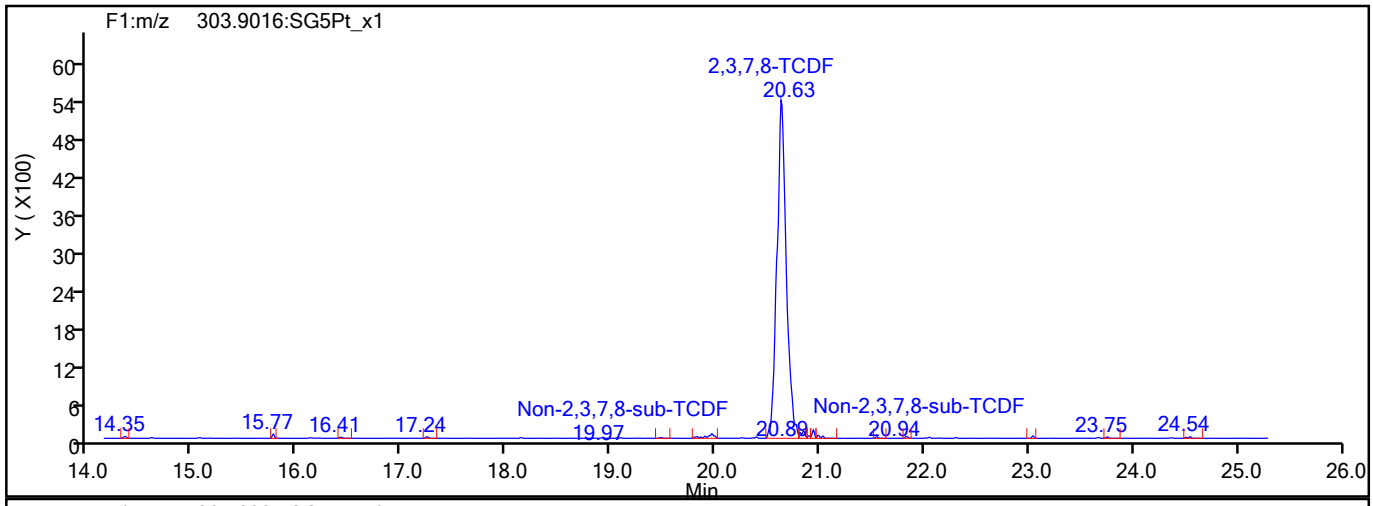

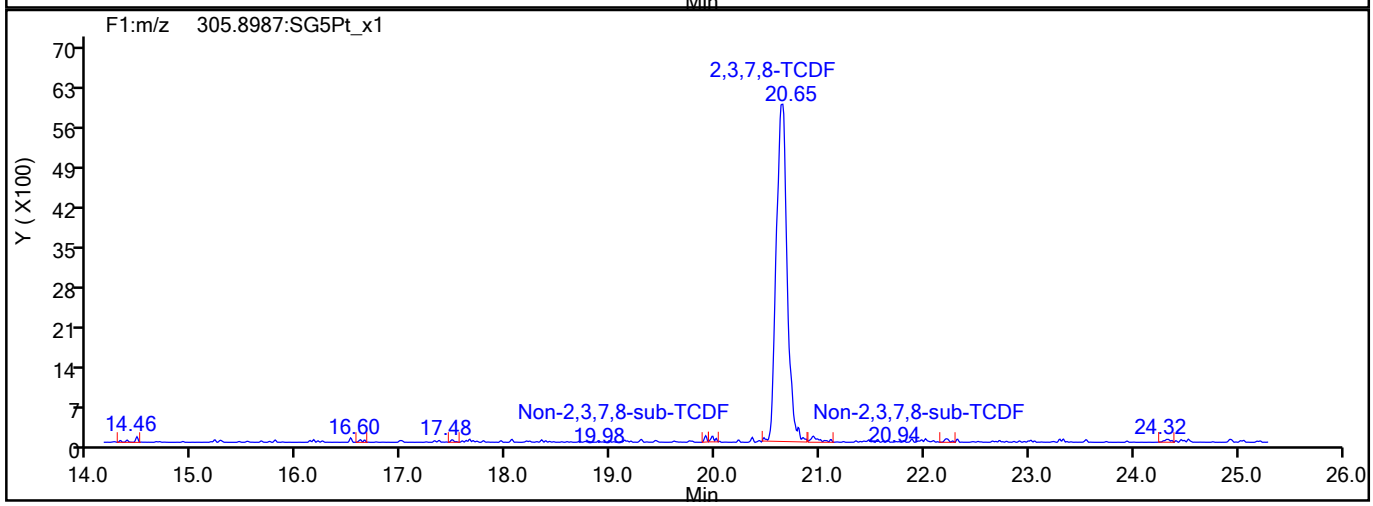

TCDF Interference Mass

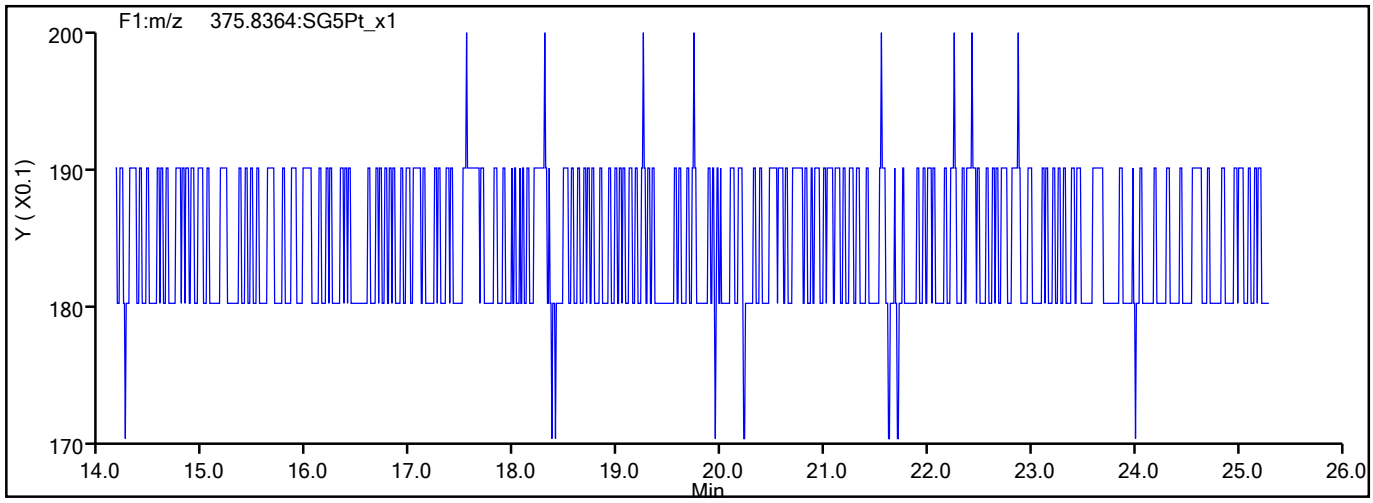

773815

Report Date: 16-Aug-2021 12:23:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

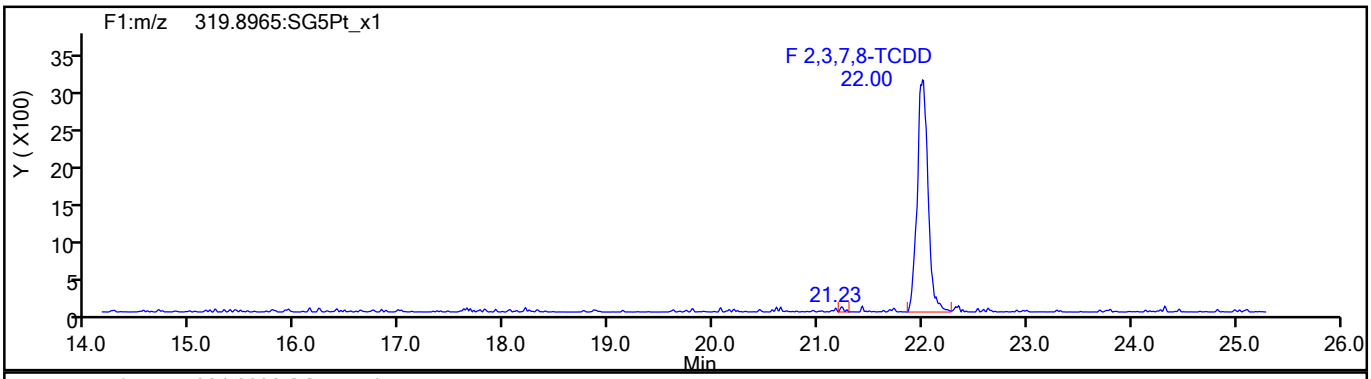

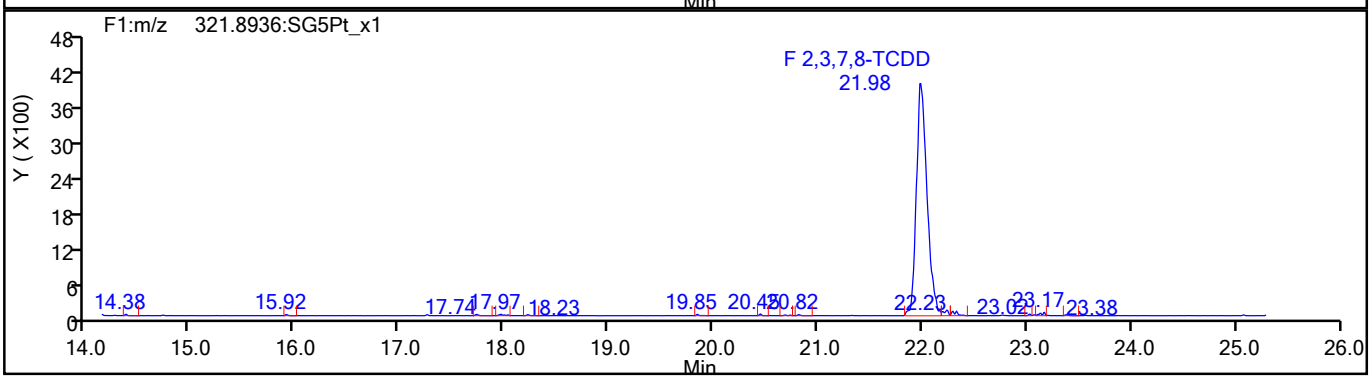

TCDD Standards

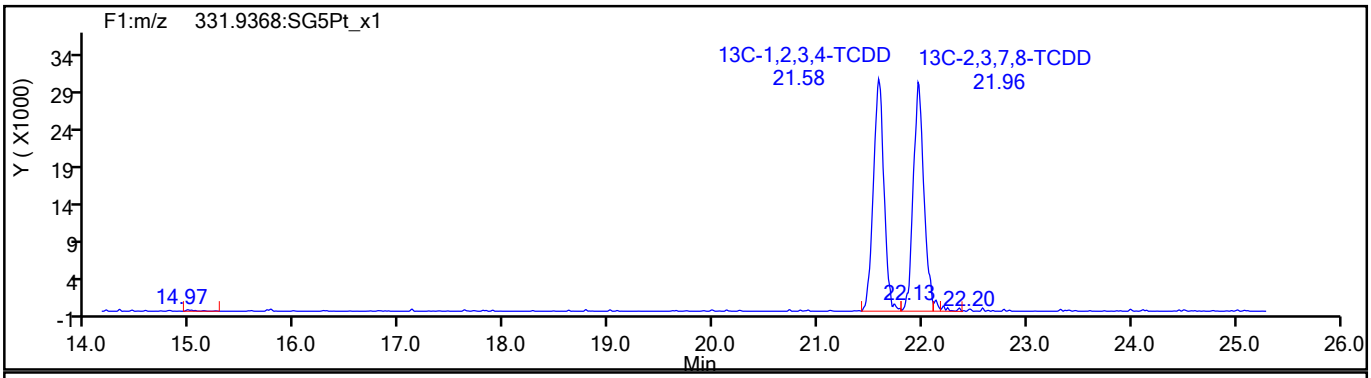

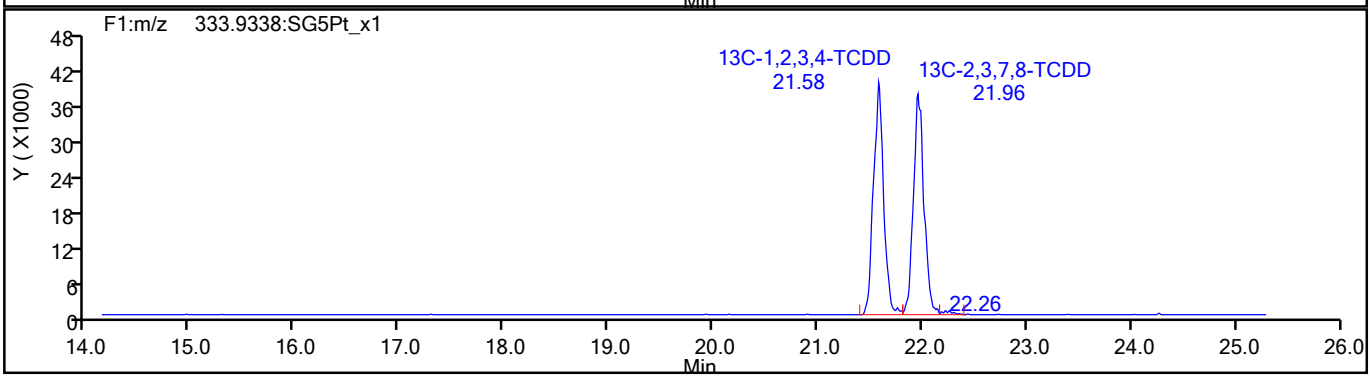

773816

Report Date: 16-Aug-2021 12:23:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

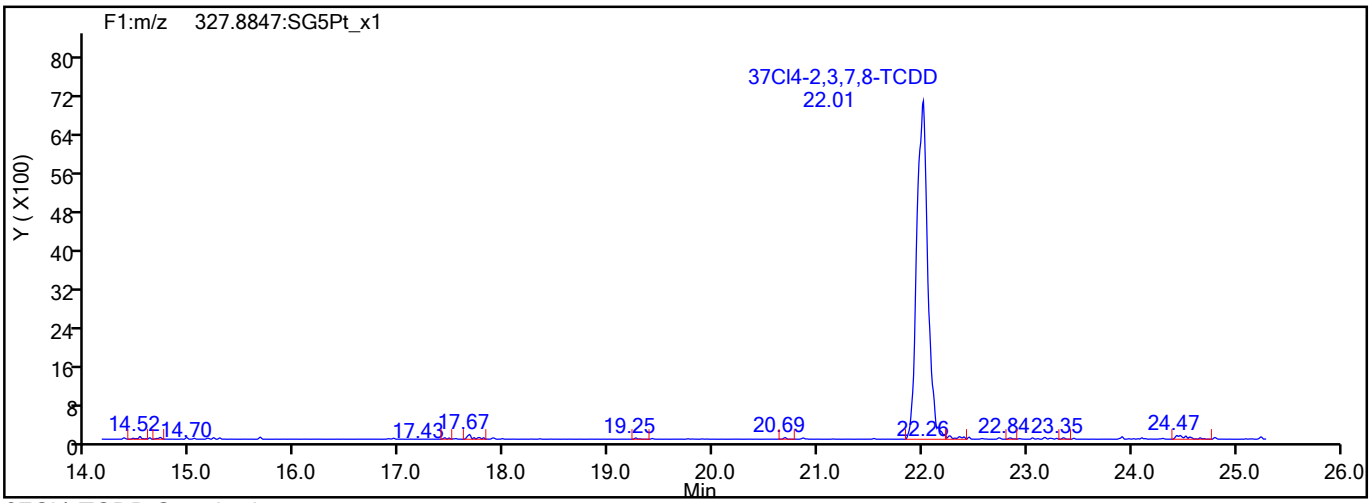

37Cl4-TCDD Standards

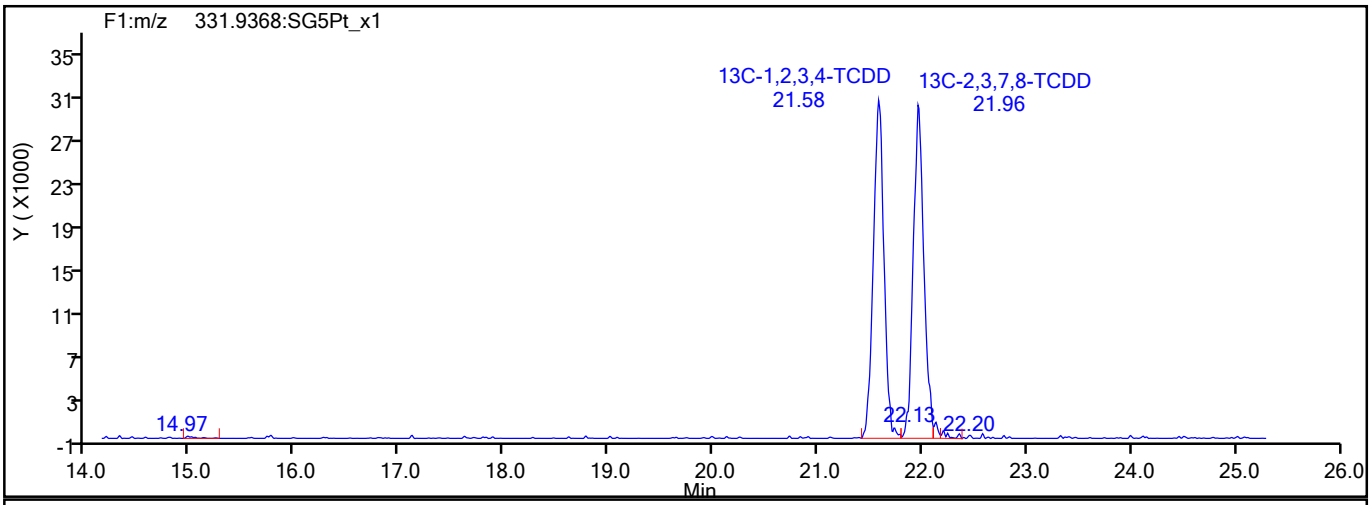

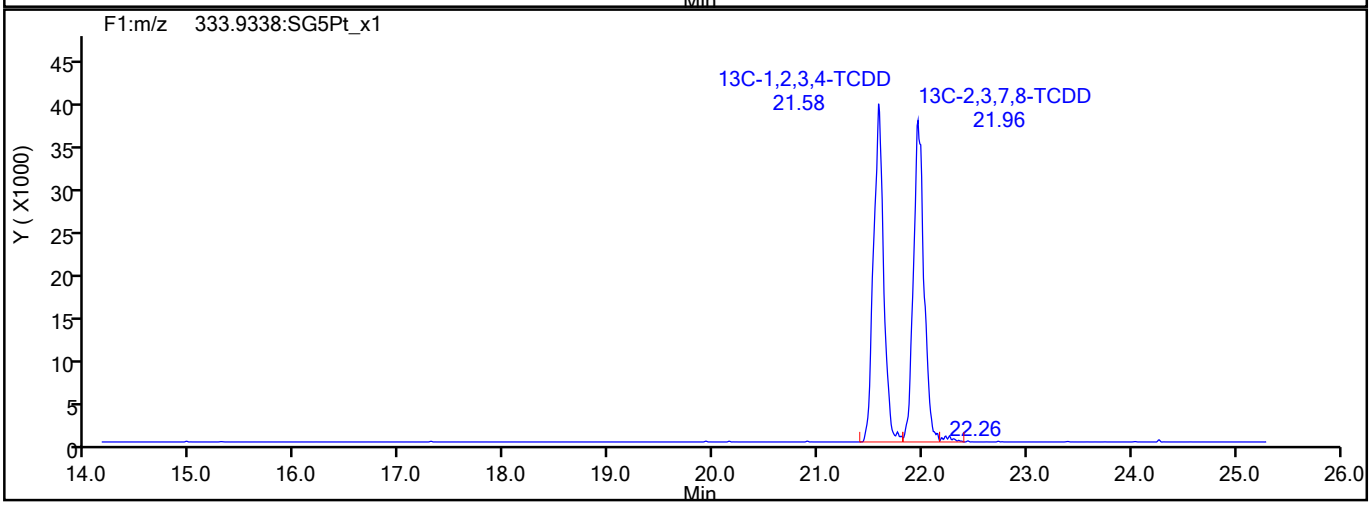

773817

Report Date: 16-Aug-2021 12:23:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

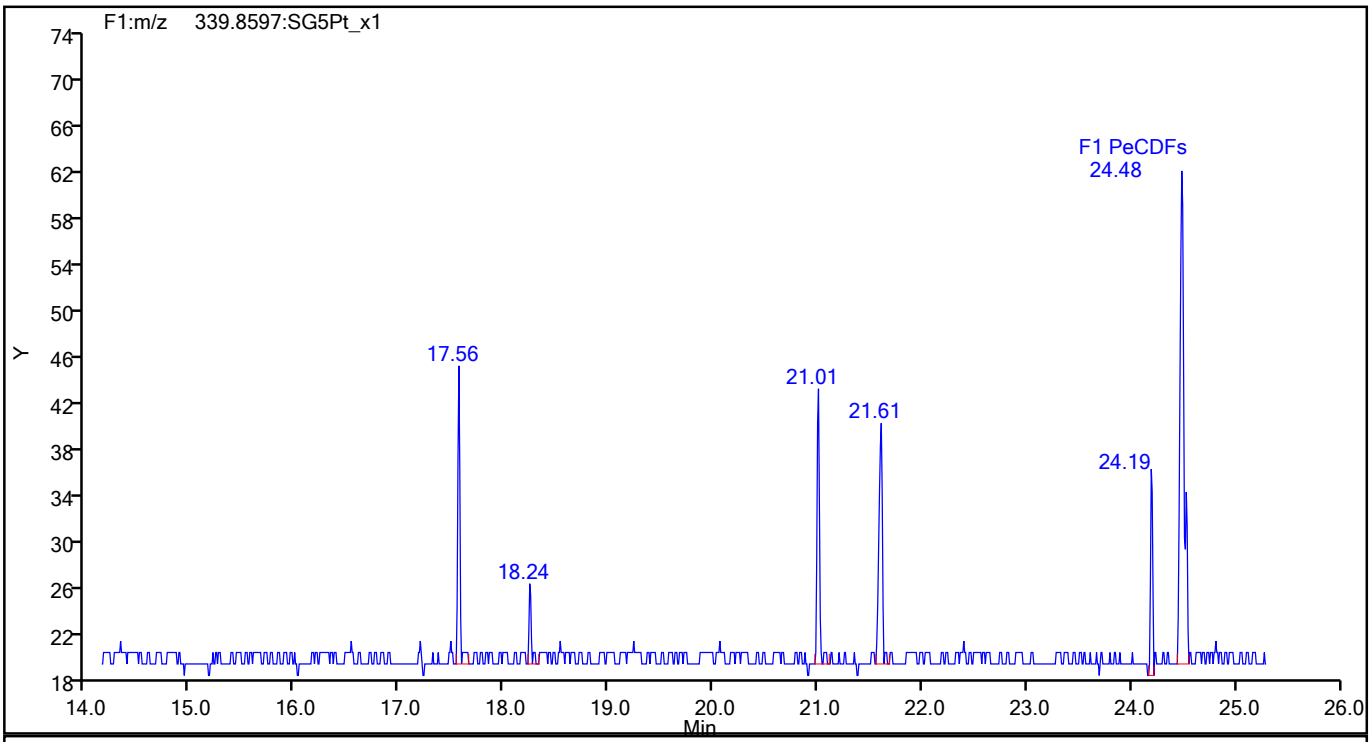

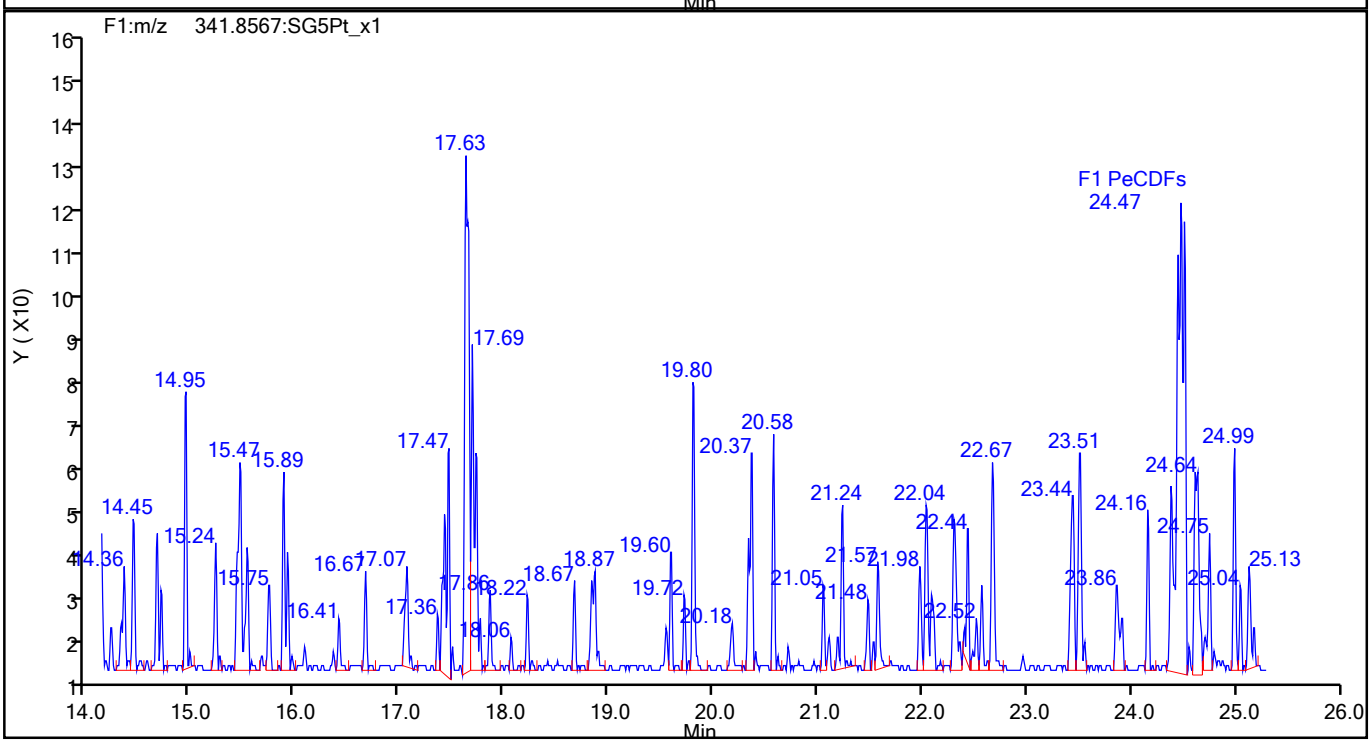

773818

Report Date: 16-Aug-2021 12:23:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

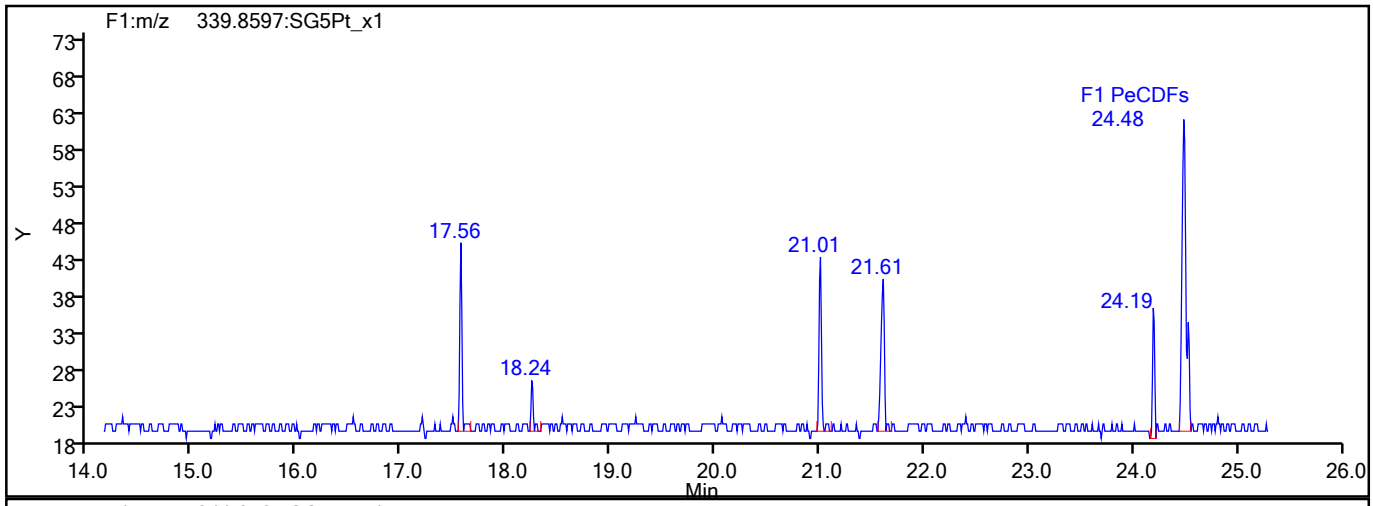

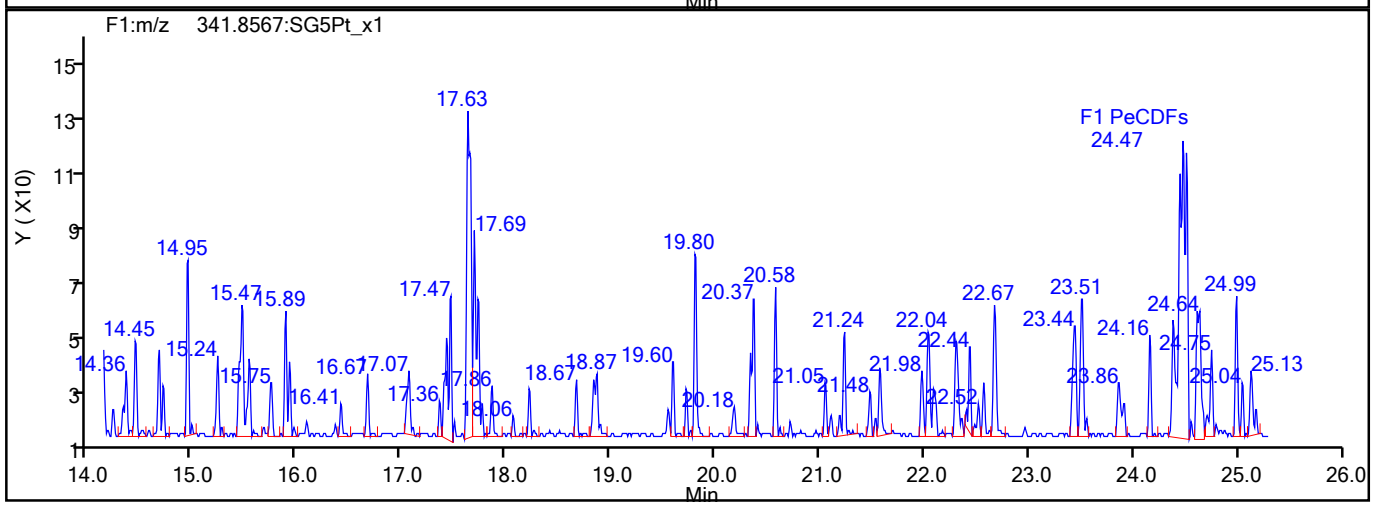

F1 PeCDFs Interference Mass

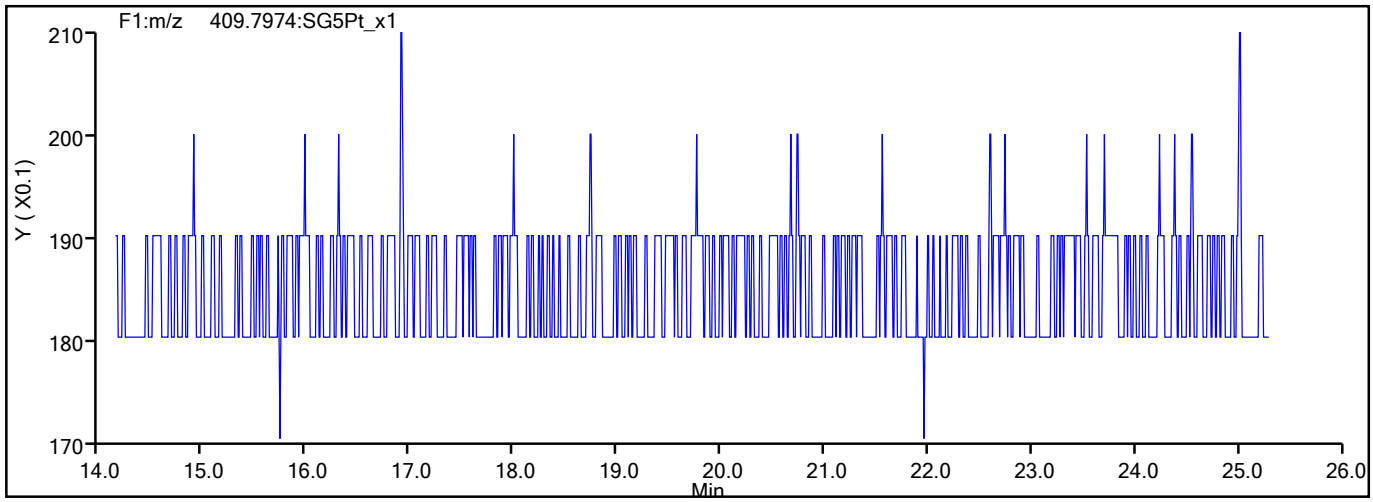

773819

Report Date: 16-Aug-2021 12:23:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

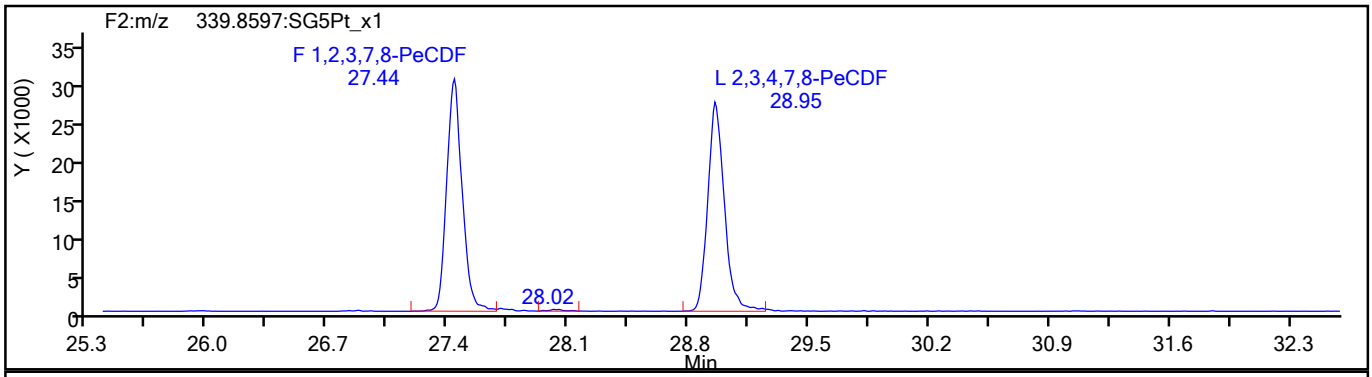

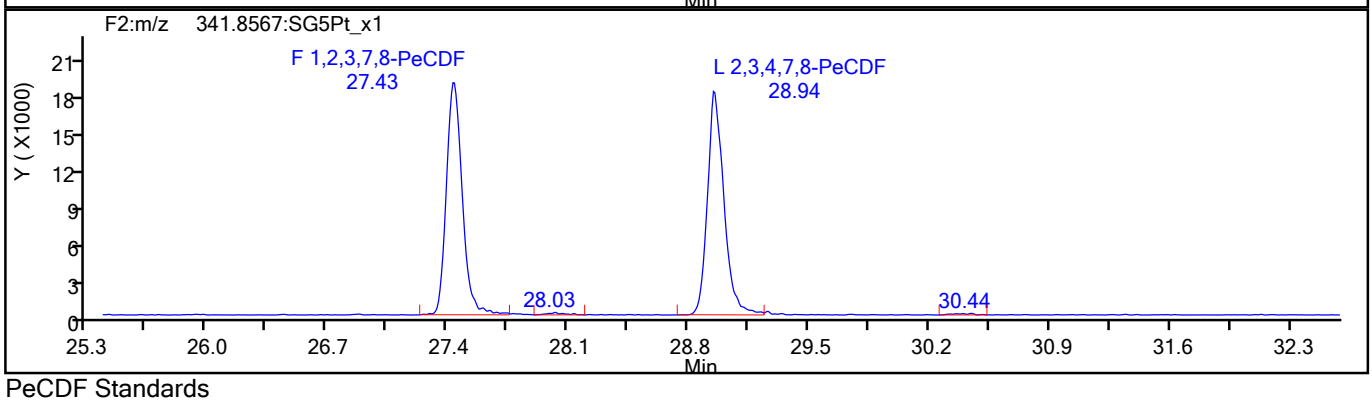

PeCDF Standards

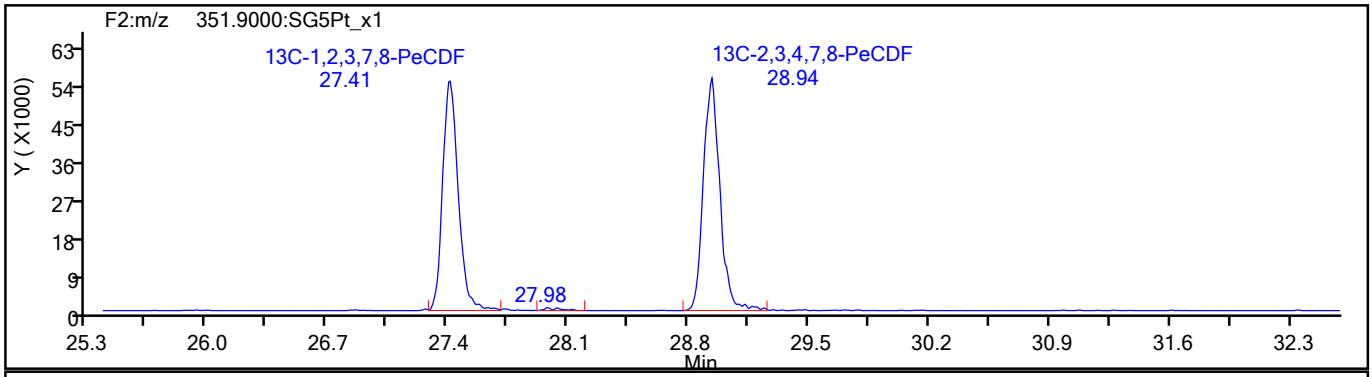

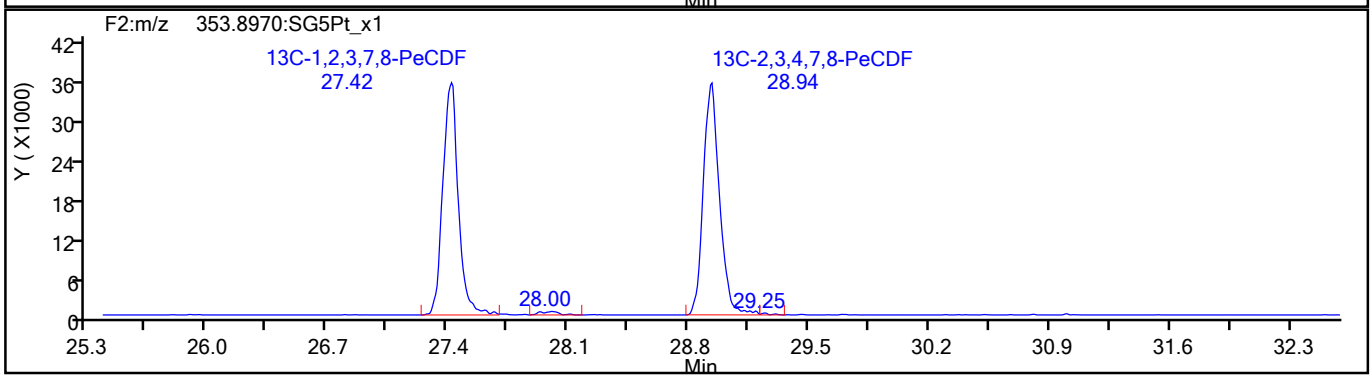

773820

Report Date: 16-Aug-2021 12:23:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

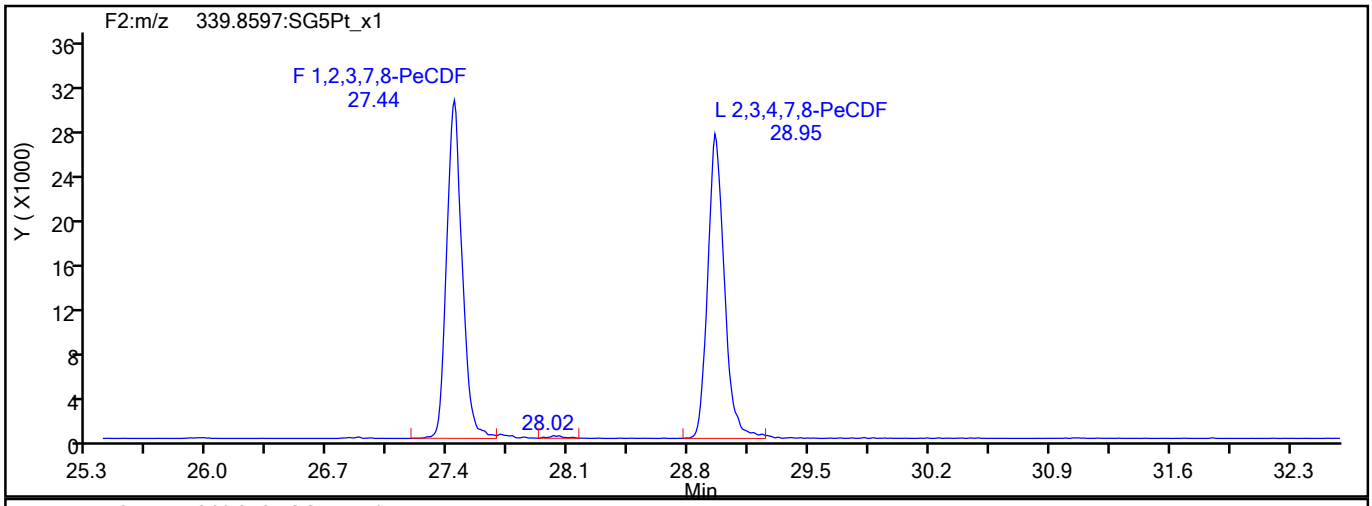

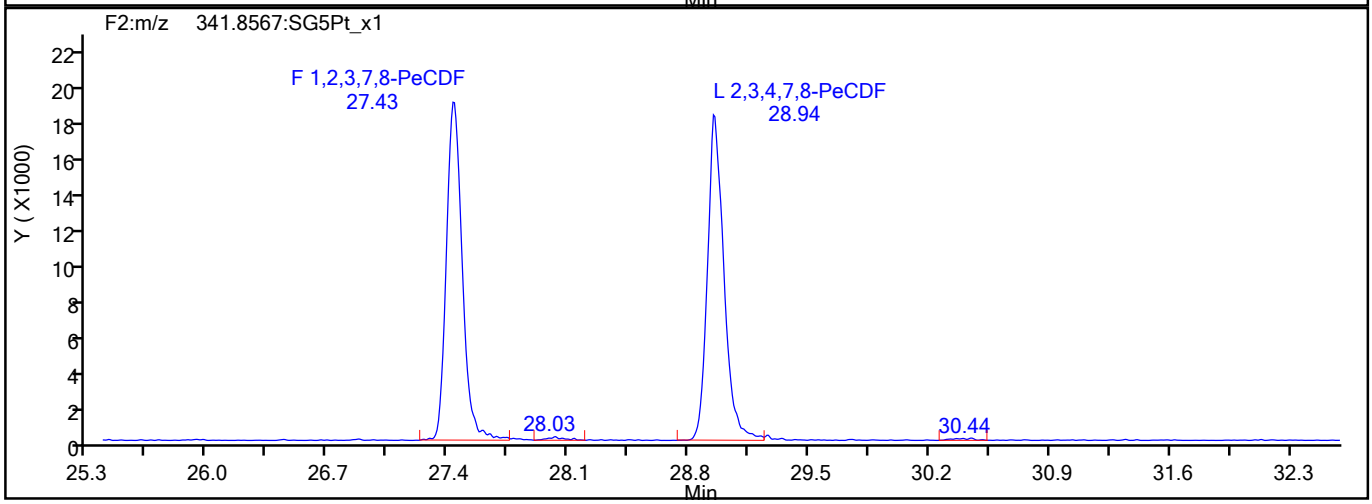

PeCDF Interference Mass

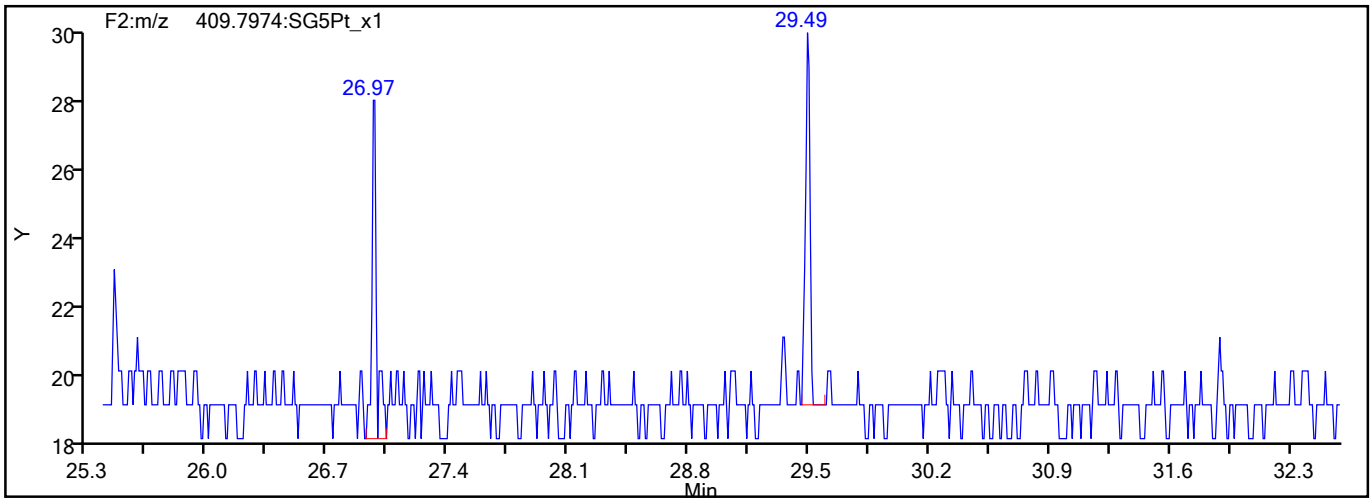

773821

Report Date: 16-Aug-2021 12:23:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

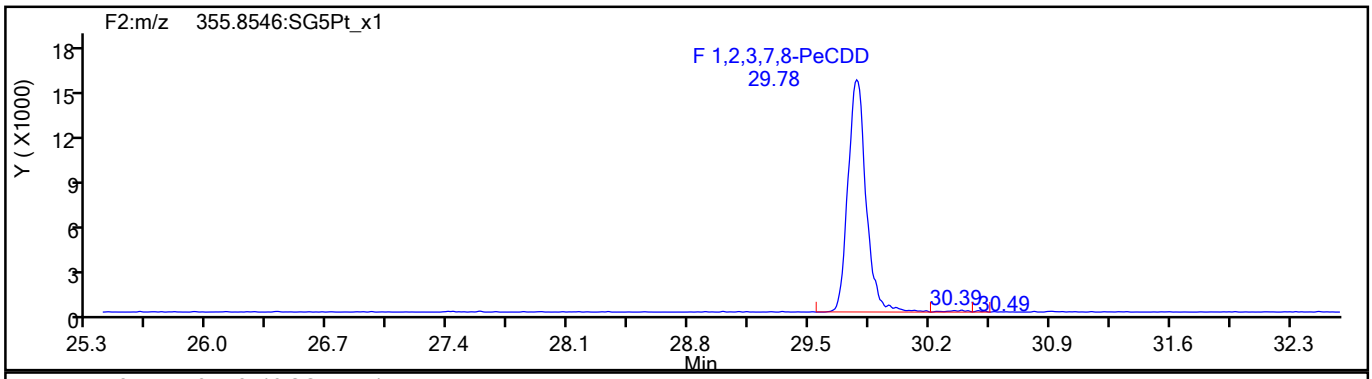

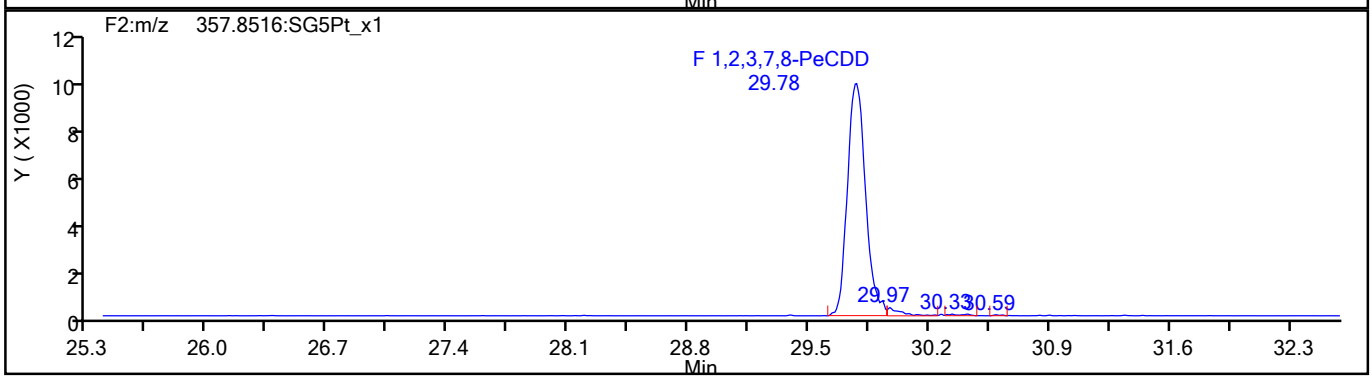

PeCDD Standards

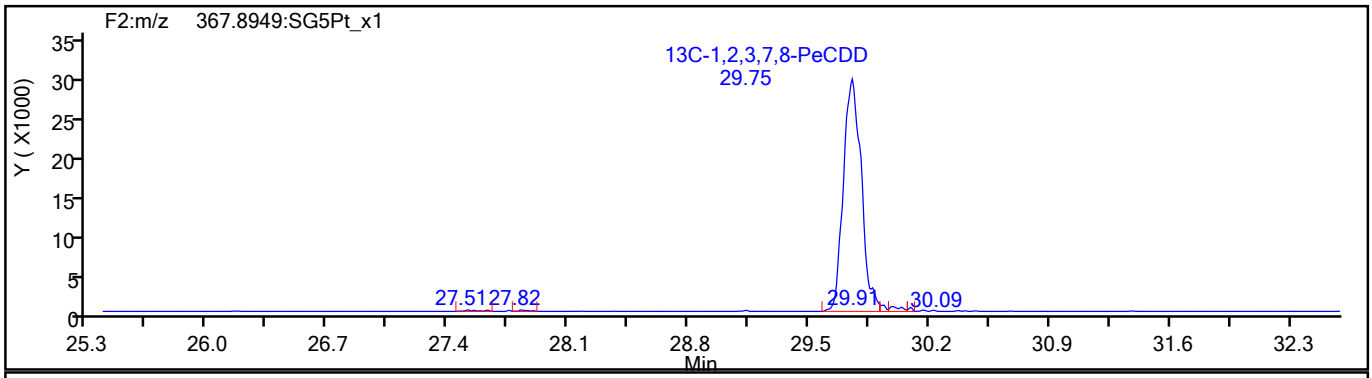

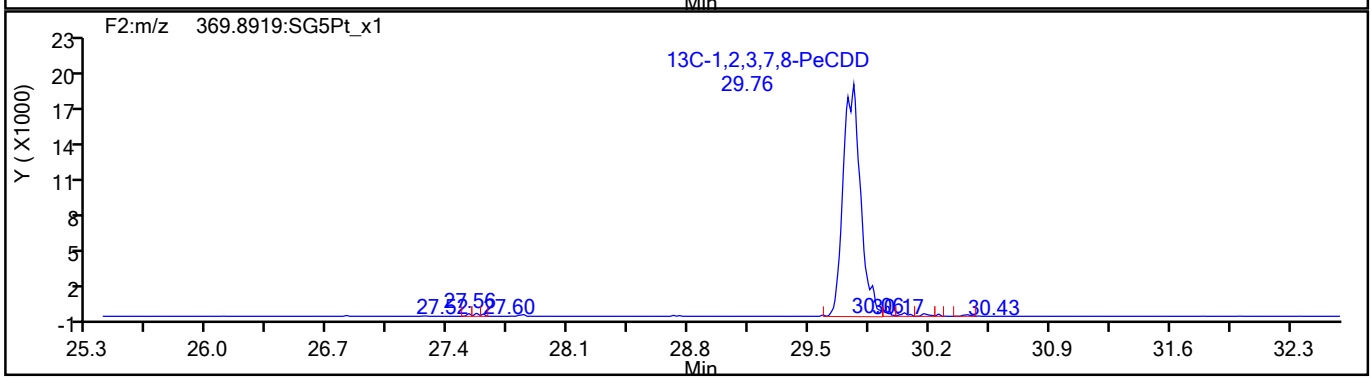

773822

Report Date: 16-Aug-2021 12:23:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

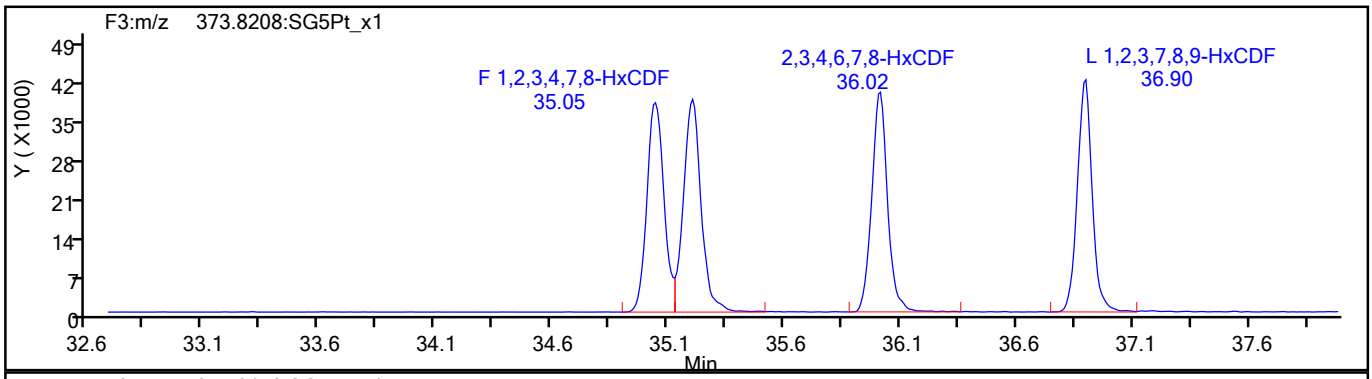

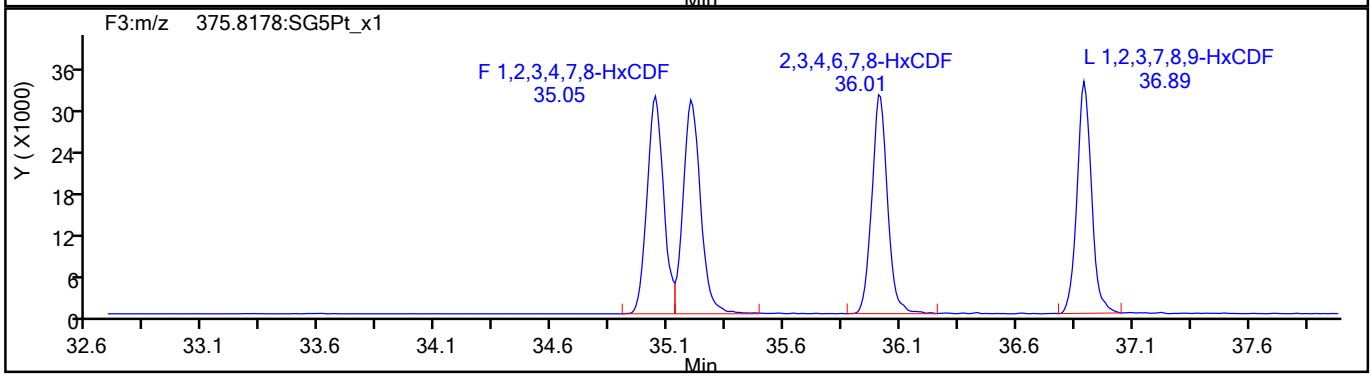

HxCDF Standards

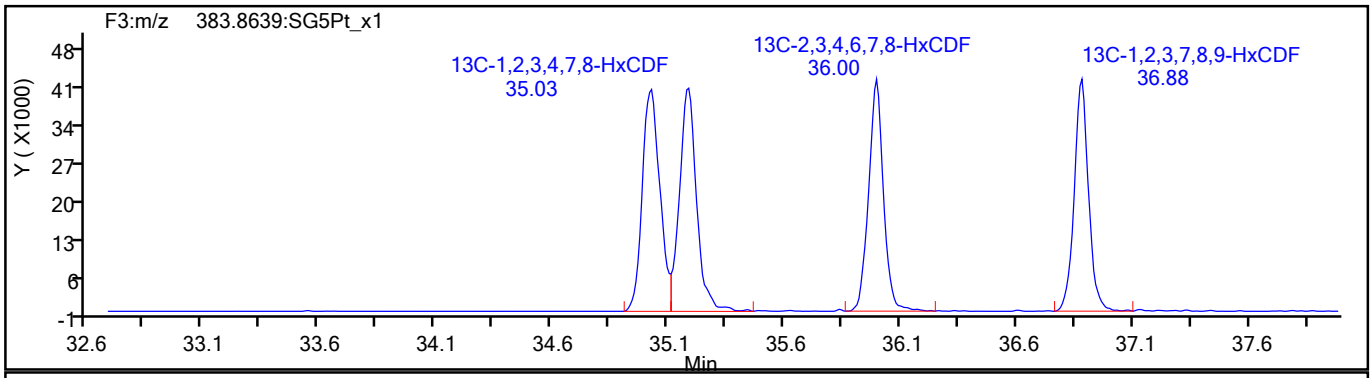

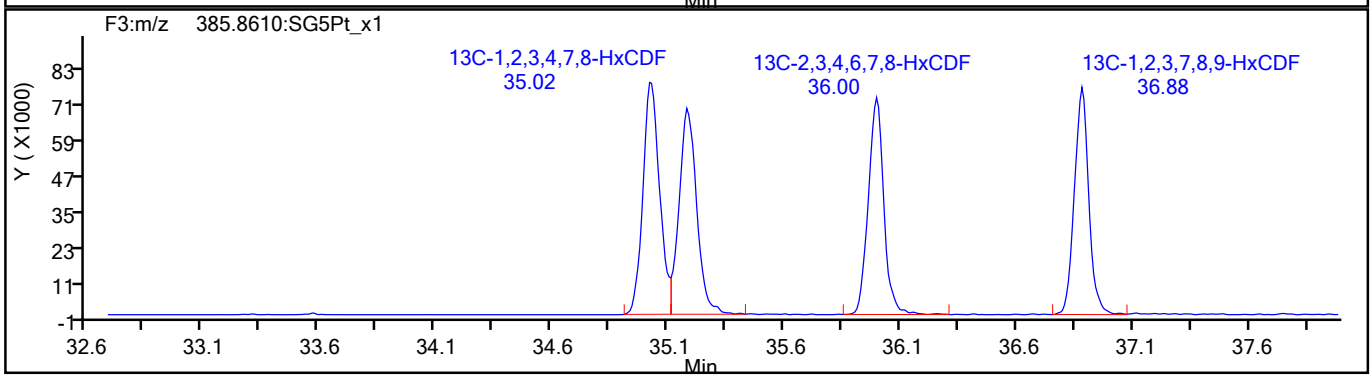

773823

Report Date: 16-Aug-2021 12:23:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

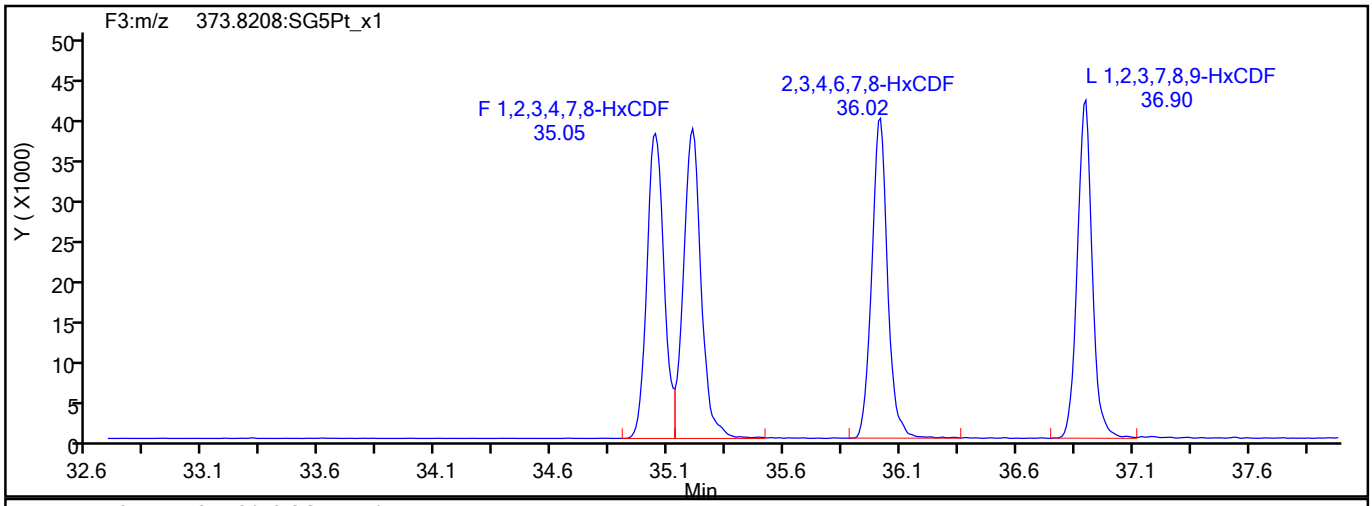

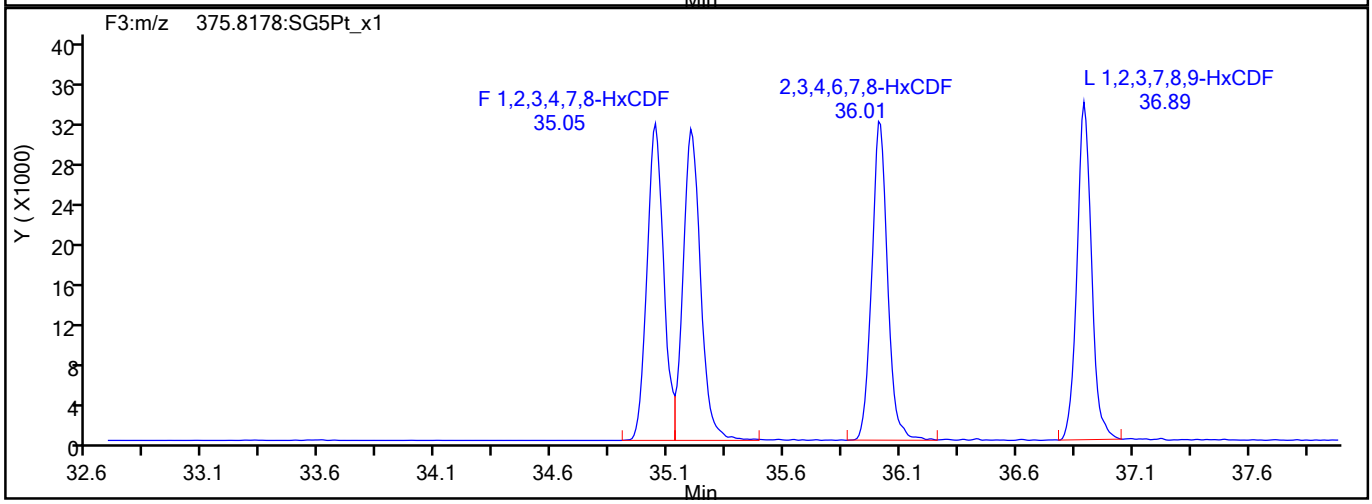

HxCDF Interference Mass

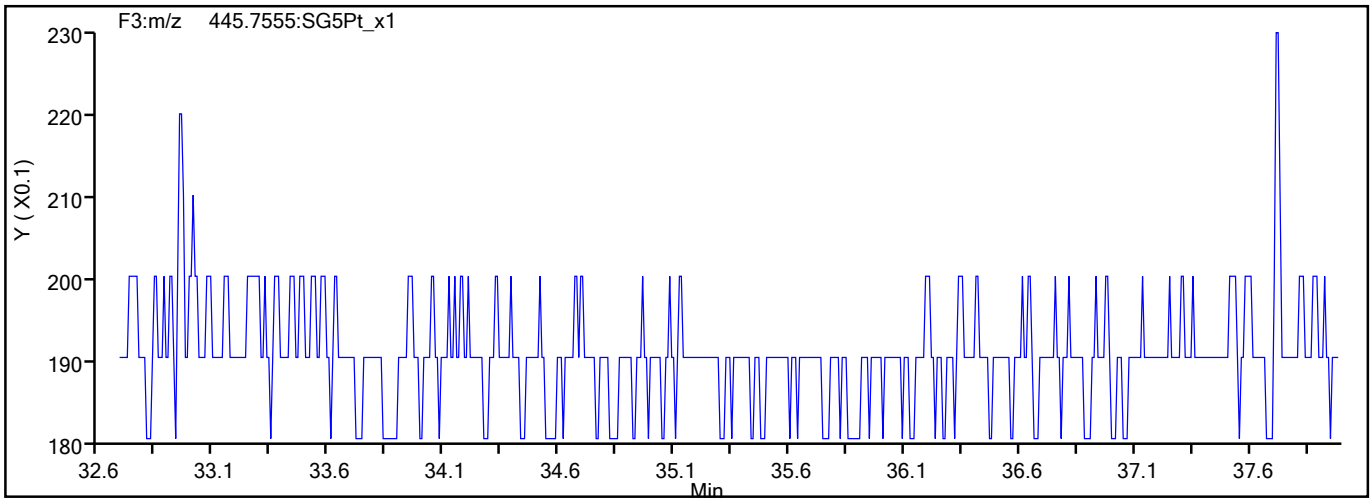

773824

Report Date: 16-Aug-2021 12:23:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

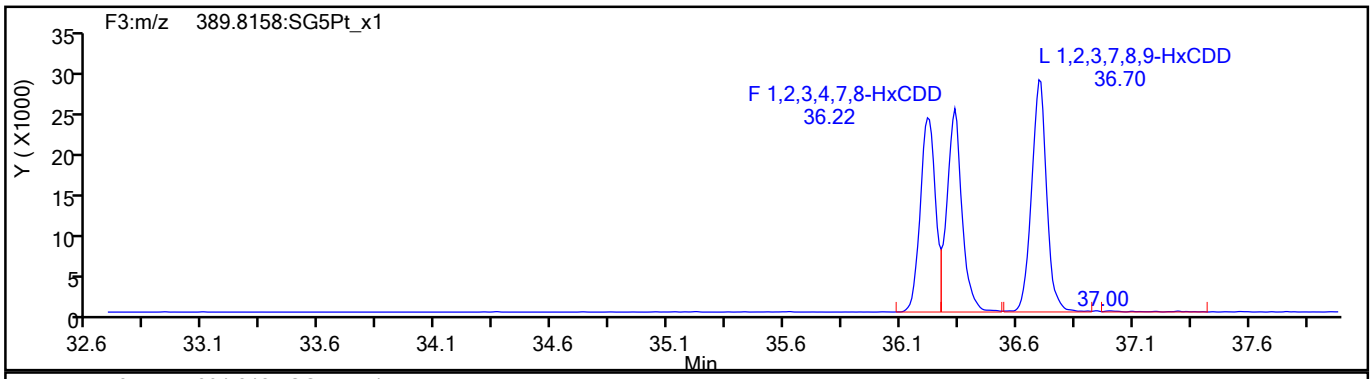

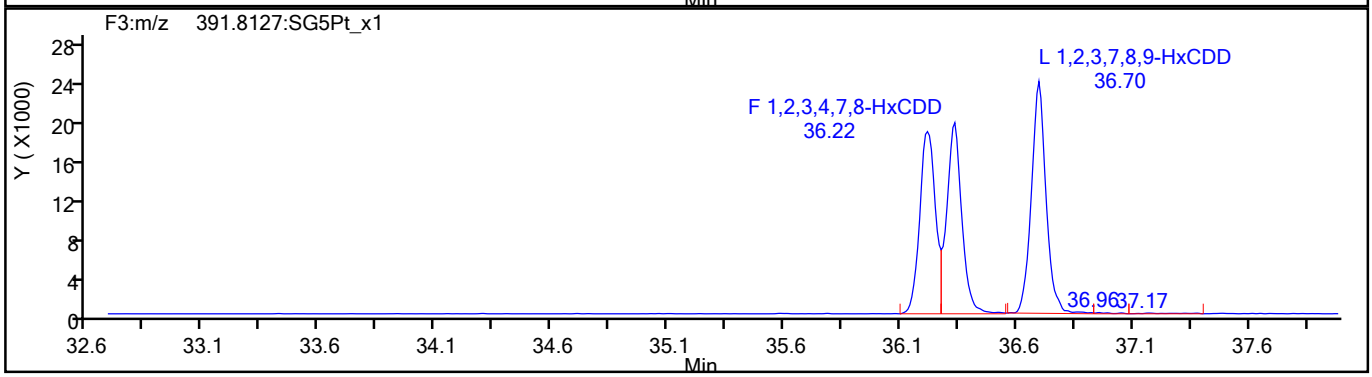

HxCDD Standards

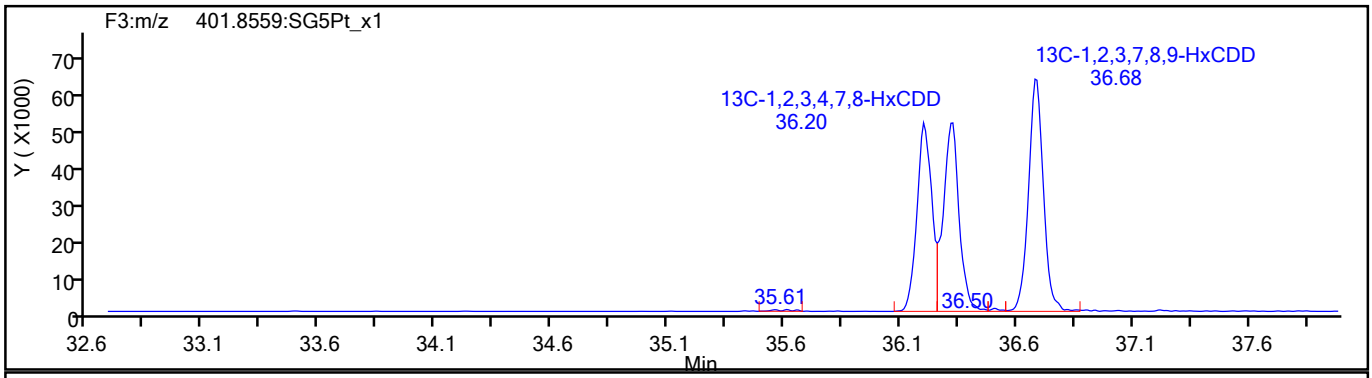

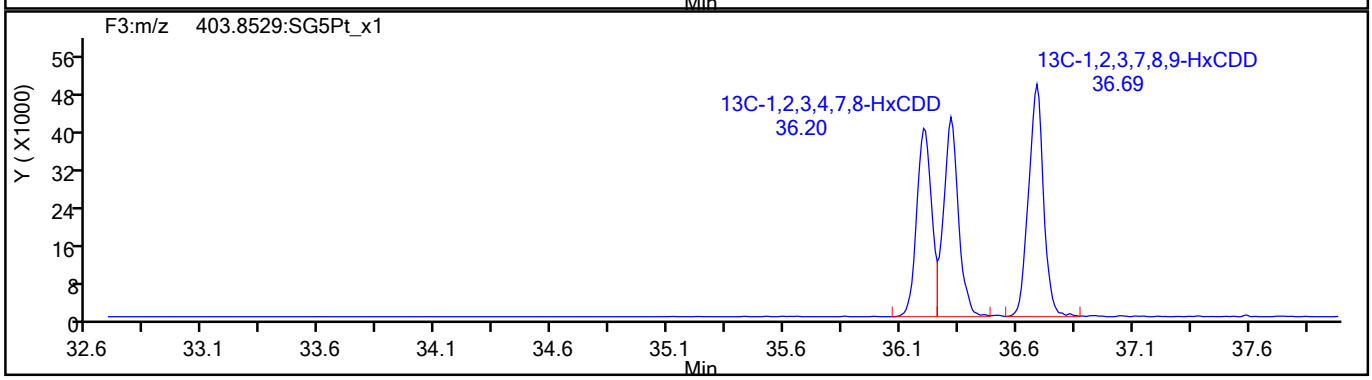

773825

Report Date: 16-Aug-2021 12:23:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

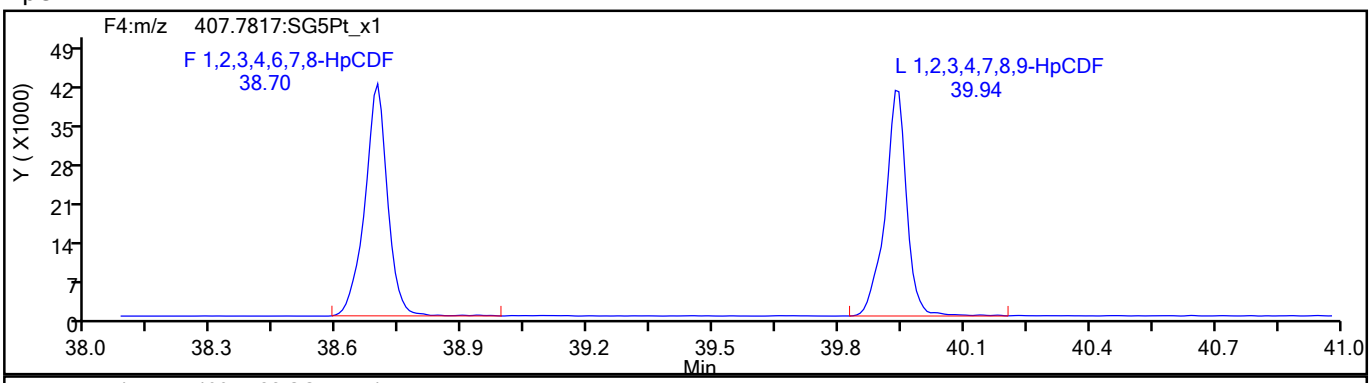

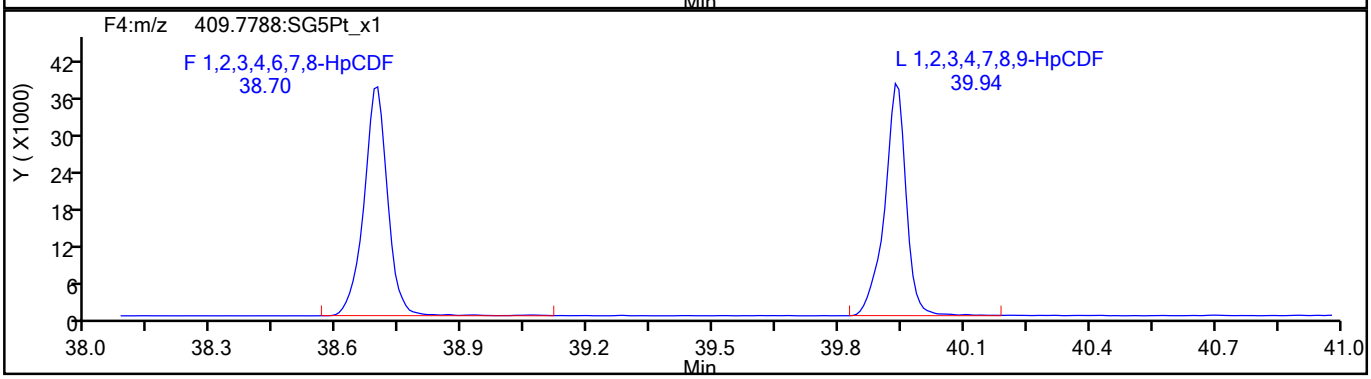

HpCDF Standards

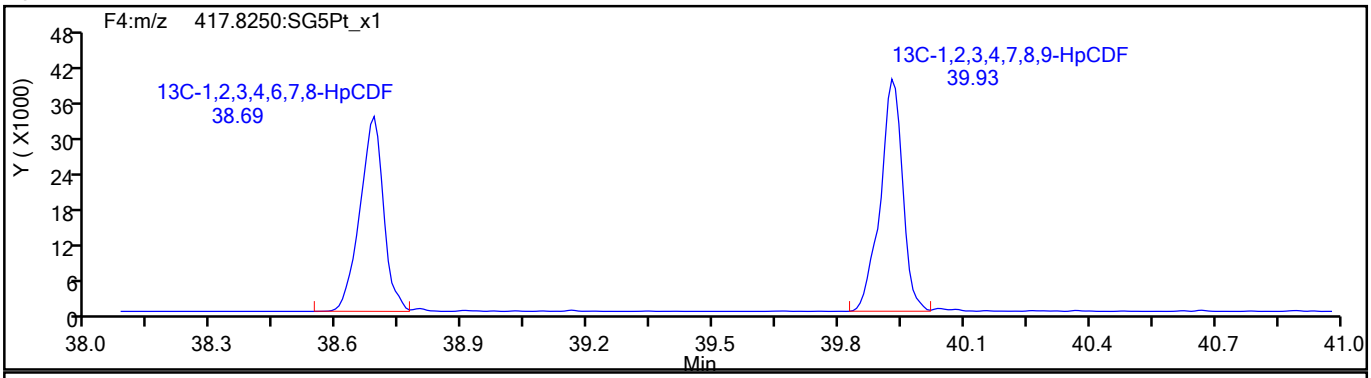

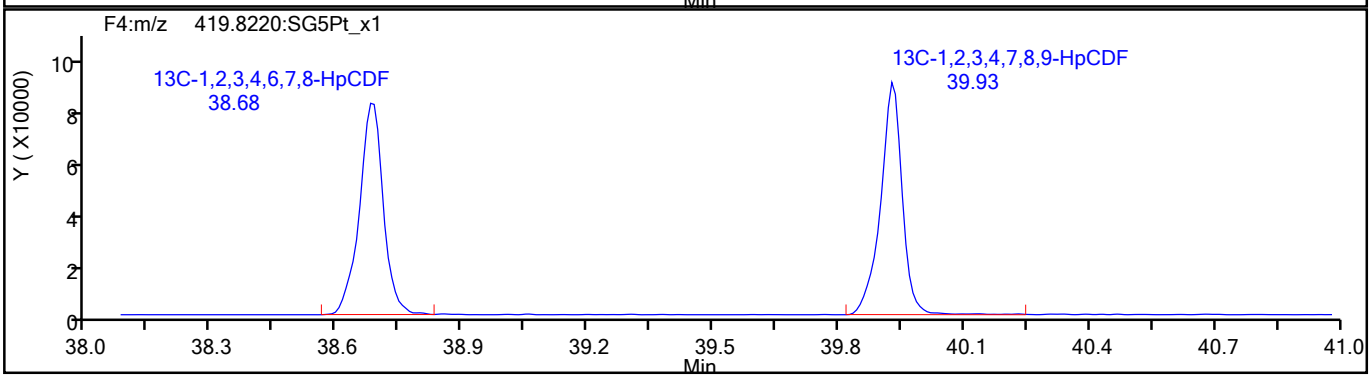

773826

Report Date: 16-Aug-2021 12:23:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

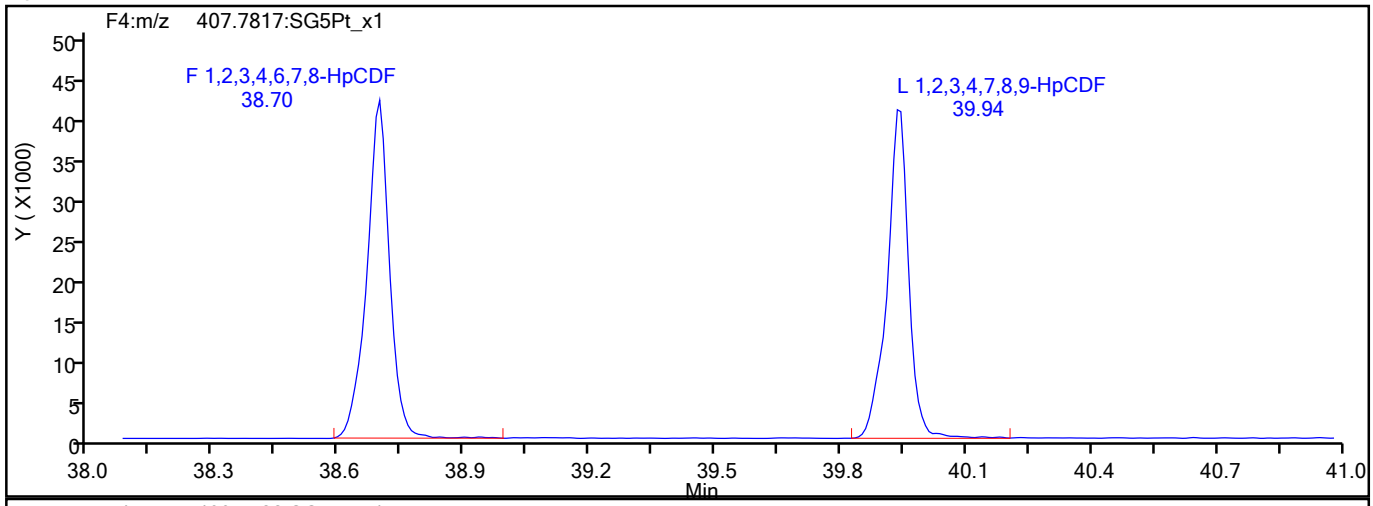

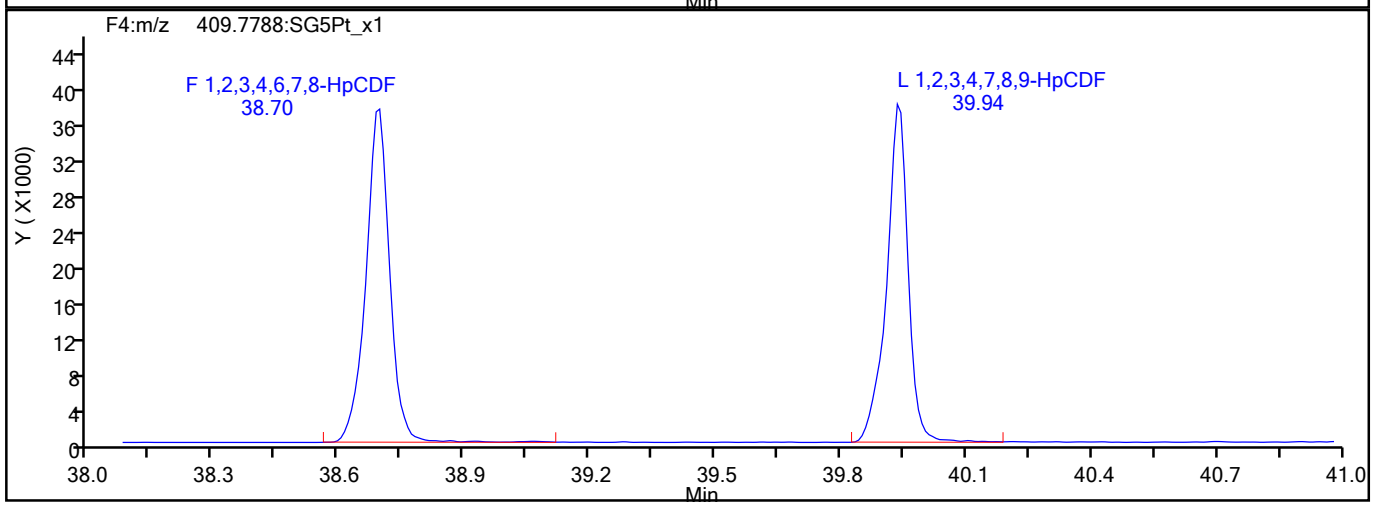

HpCDF Interference Mass

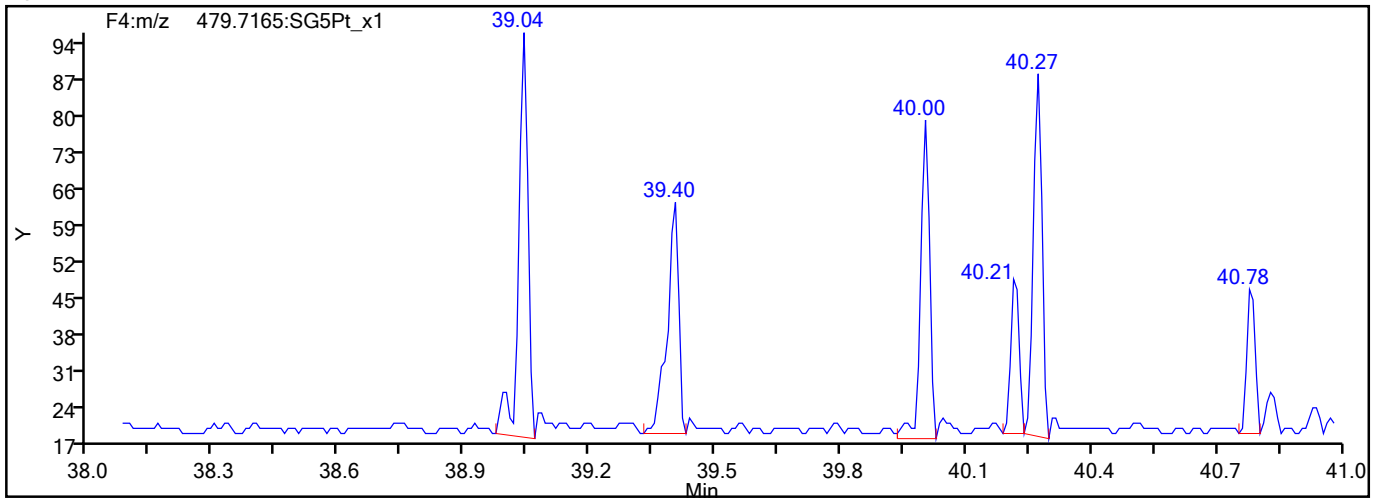

773827

Report Date: 16-Aug-2021 12:23:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

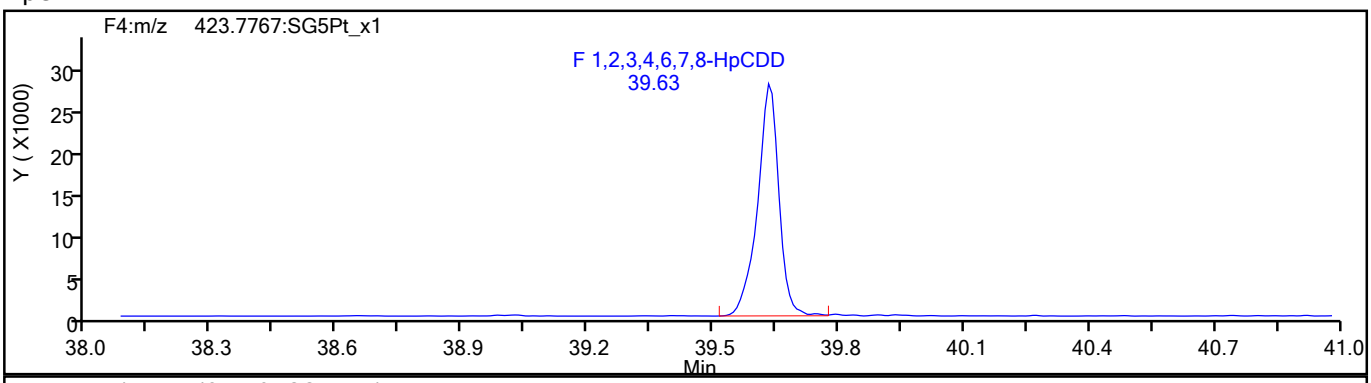

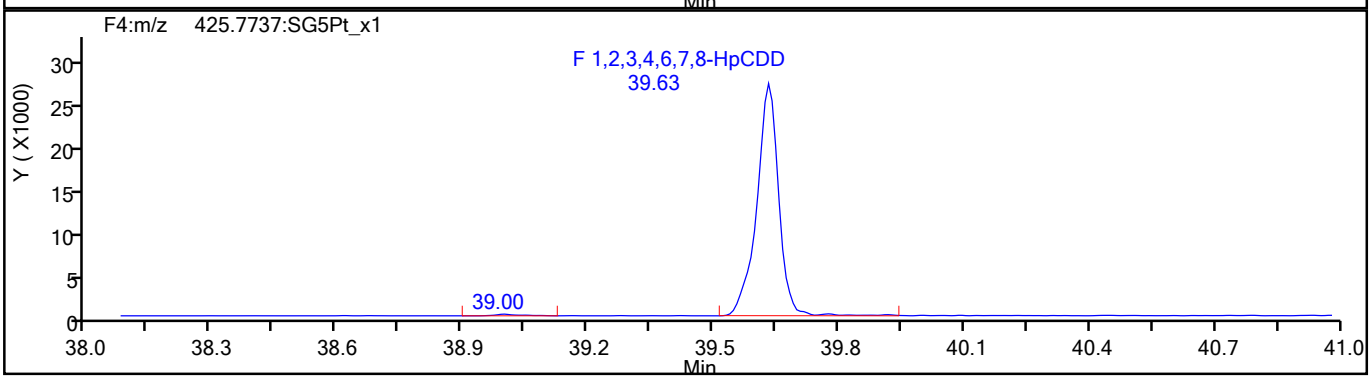

HpCDD Standards

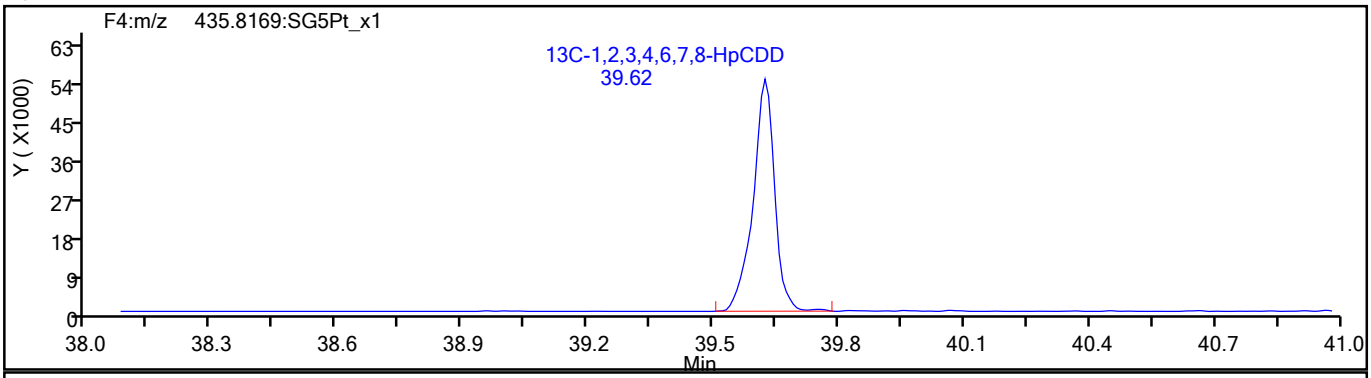

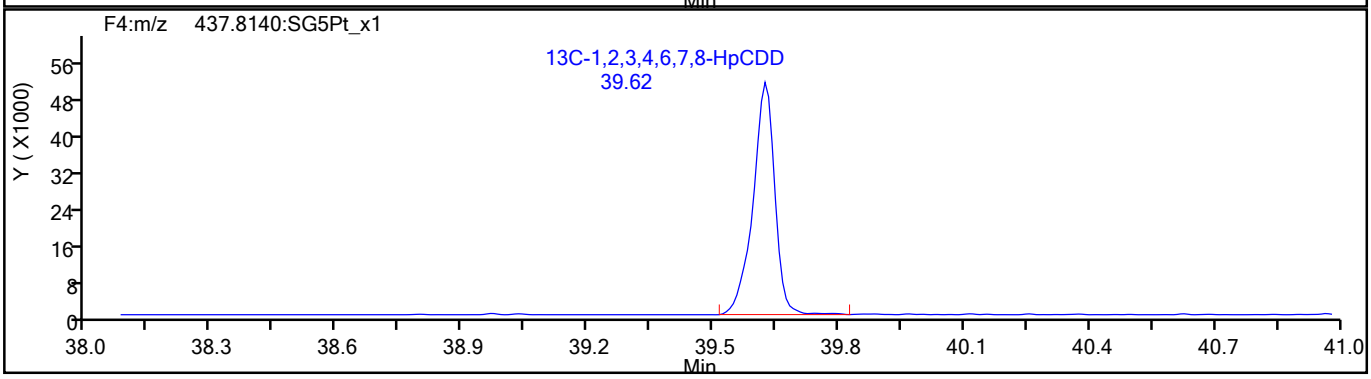

773828

Report Date: 16-Aug-2021 12:23:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

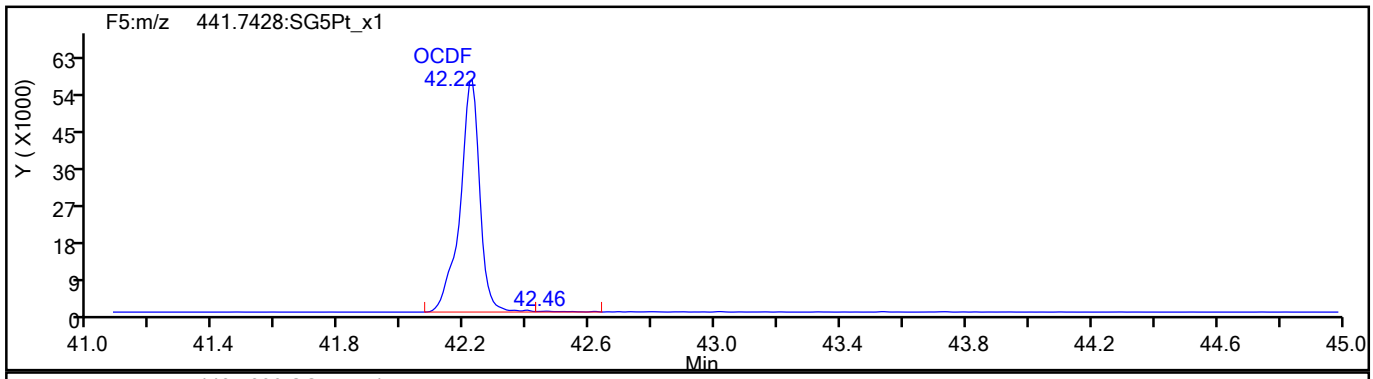

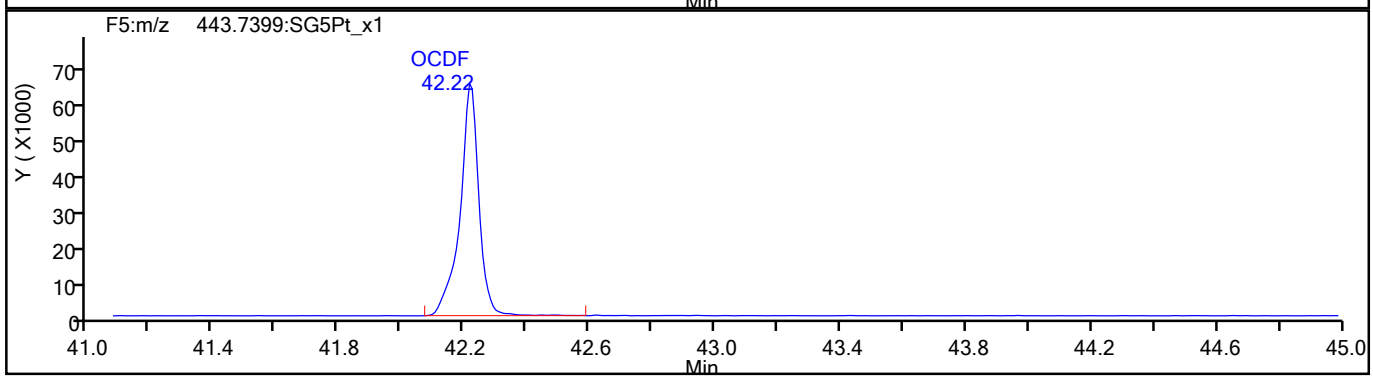

OCDF Standards

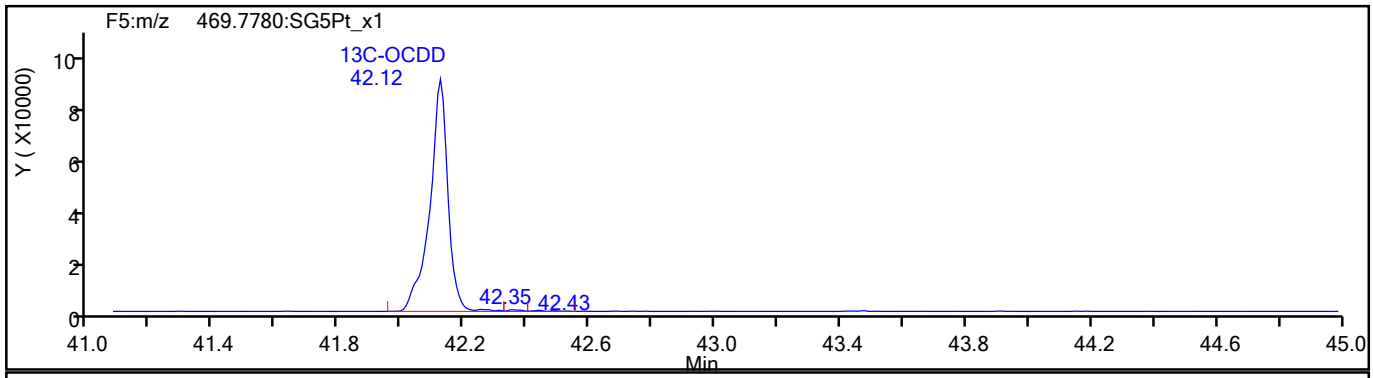

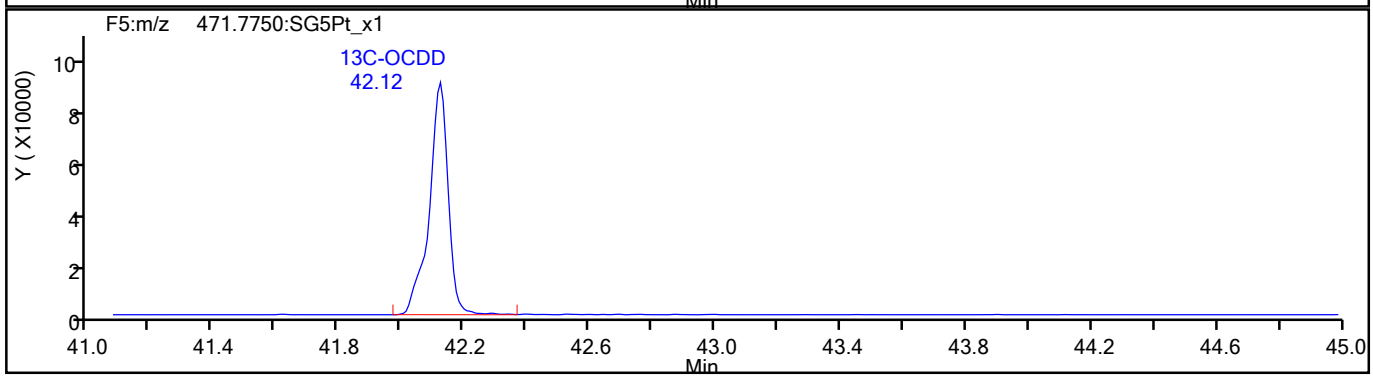

773829

Report Date: 16-Aug-2021 12:23:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

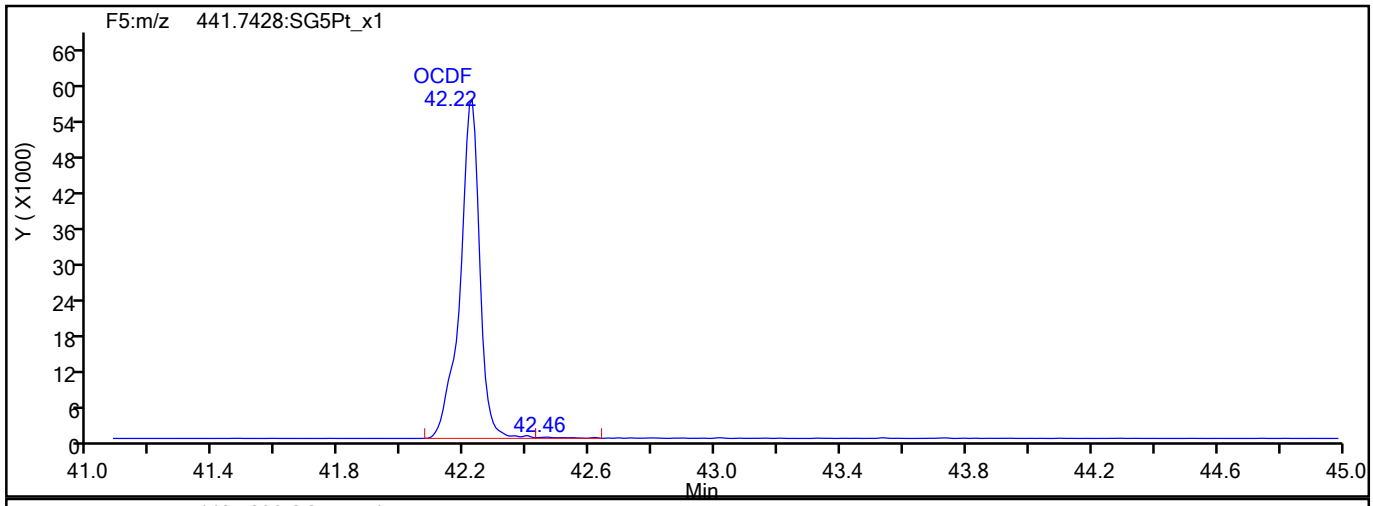

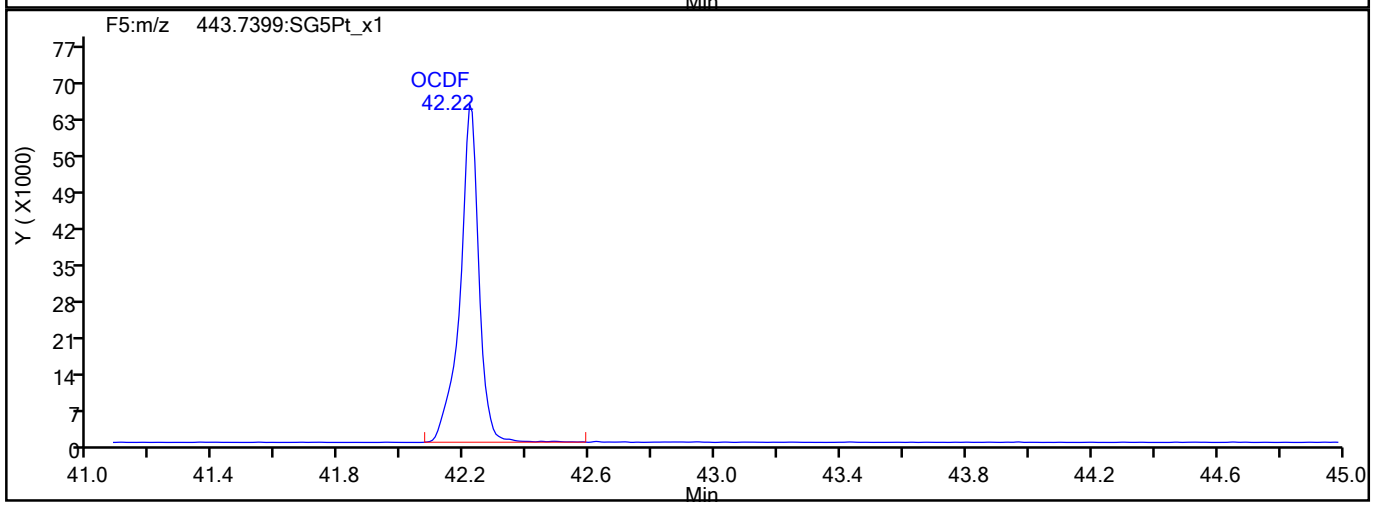

OCDF Interference Mass

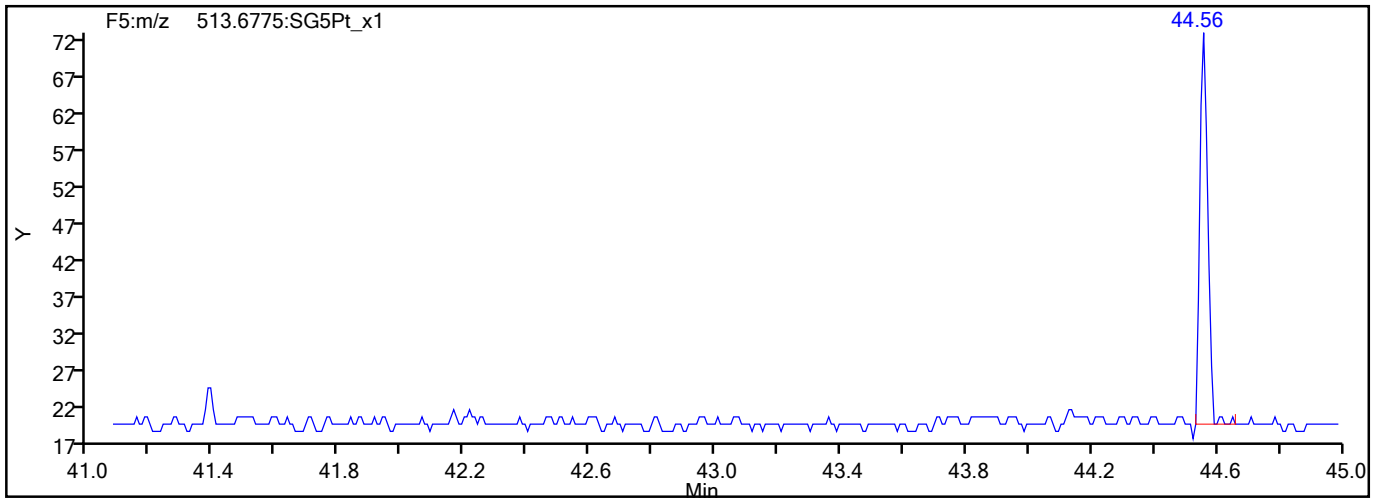

773830

Report Date: 16-Aug-2021 12:23:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

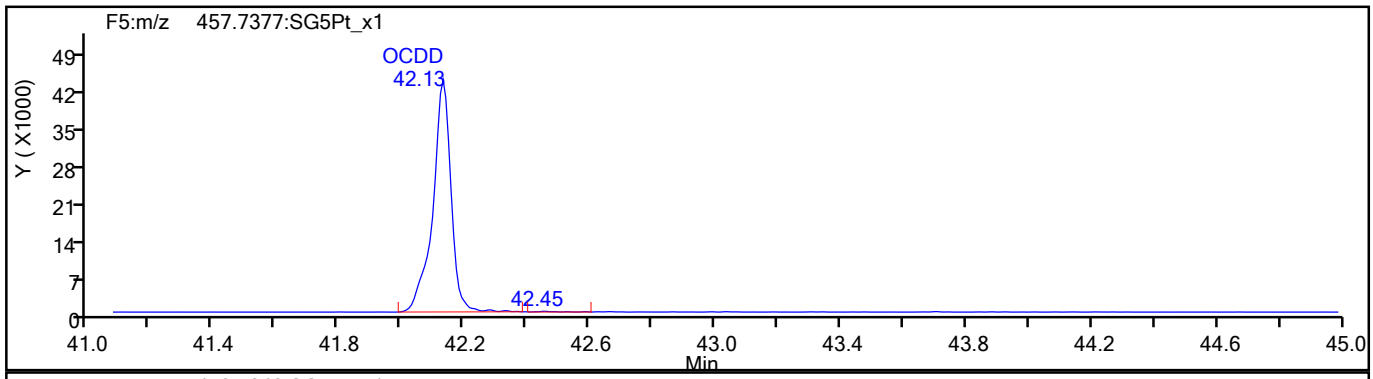

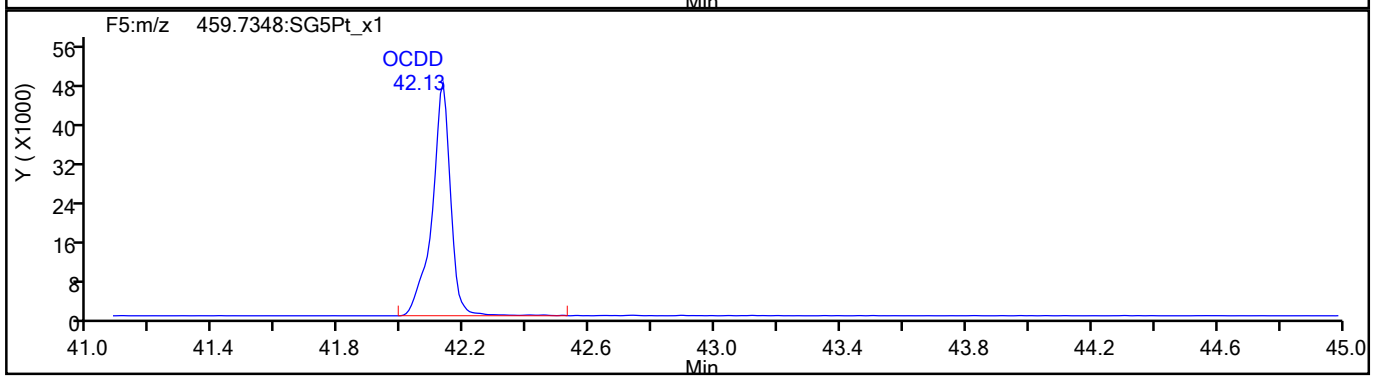

OCDD Standards

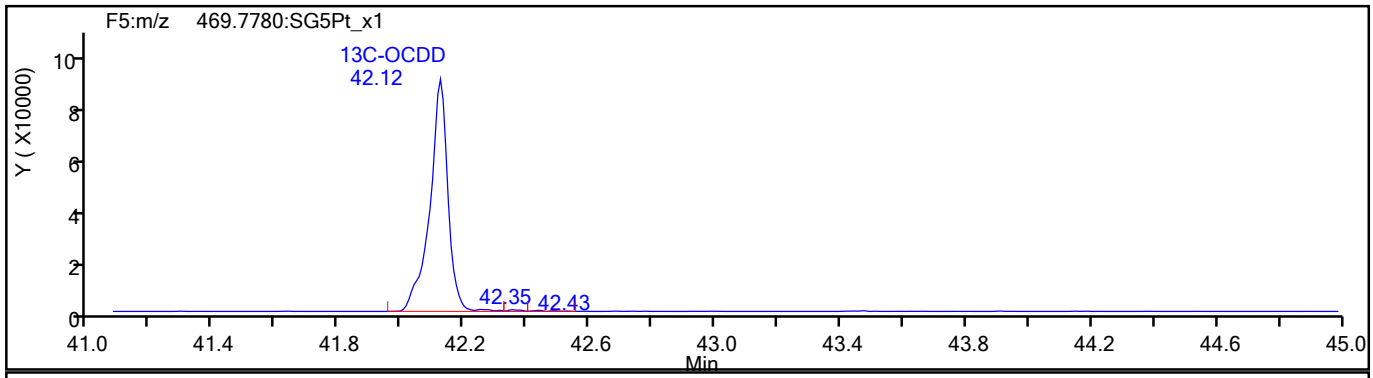

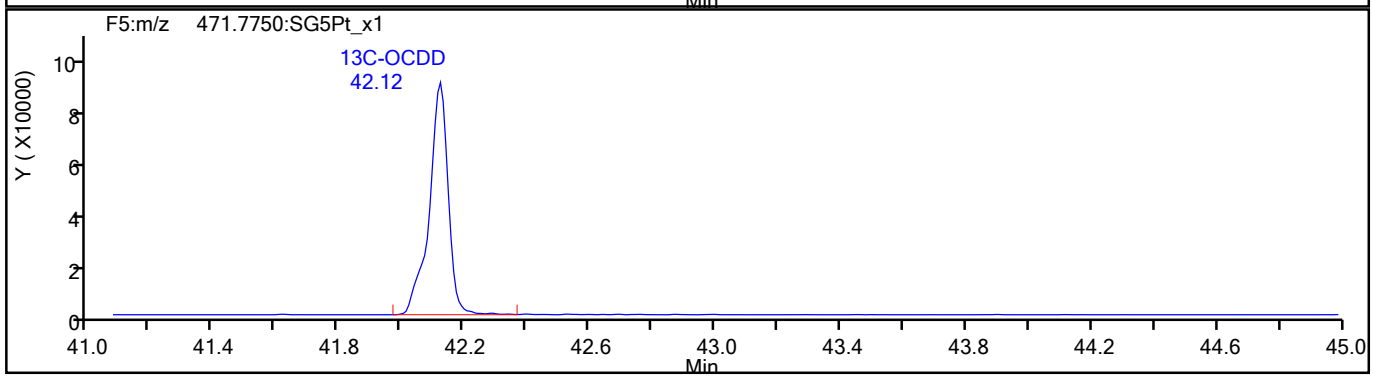

773831

Report Date: 16-Aug-2021 12:23:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

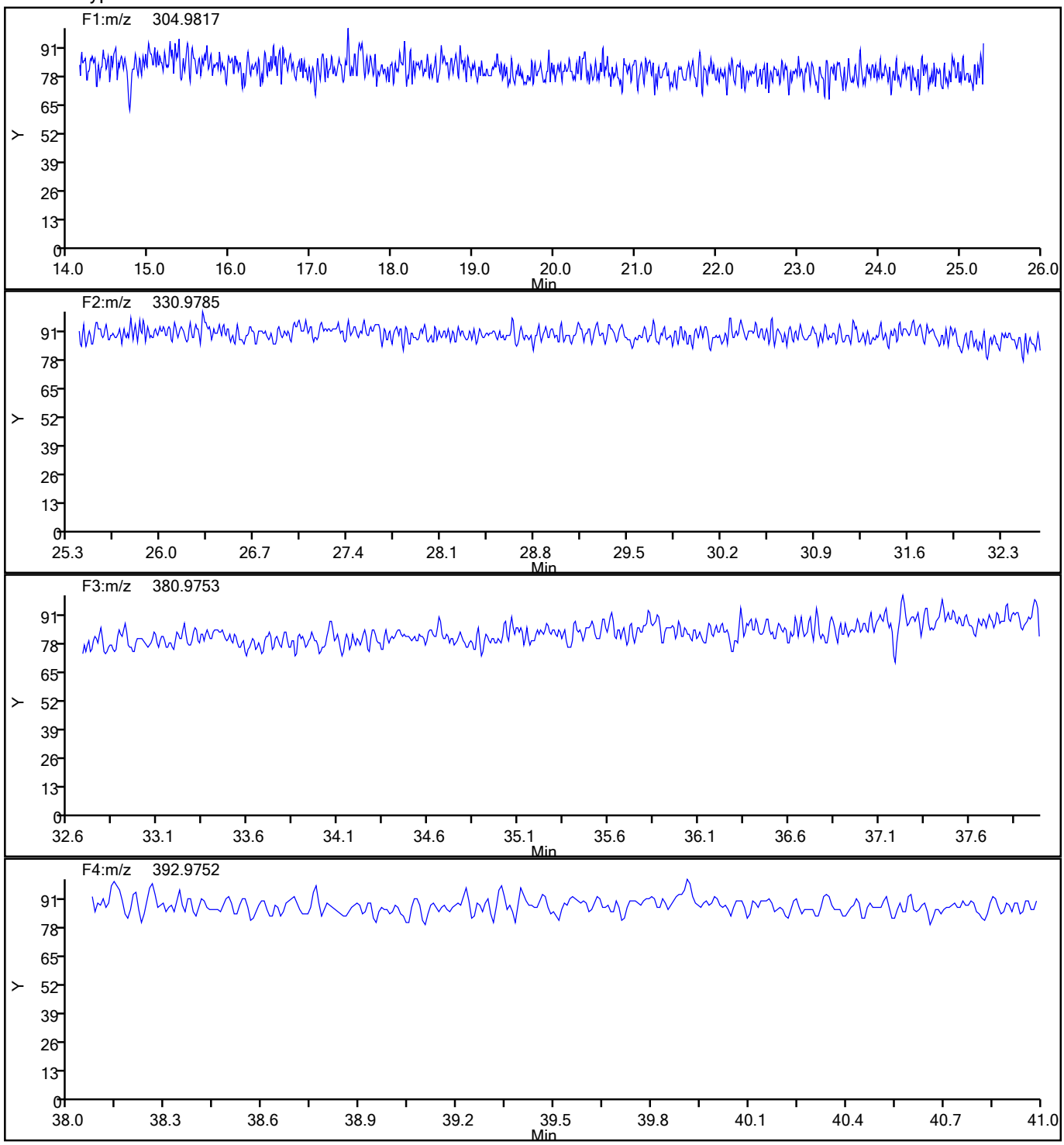

773832

Report Date: 16-Aug-2021 12:23:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_2.d		
Injection Date:	13-Aug-2021 14:02:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

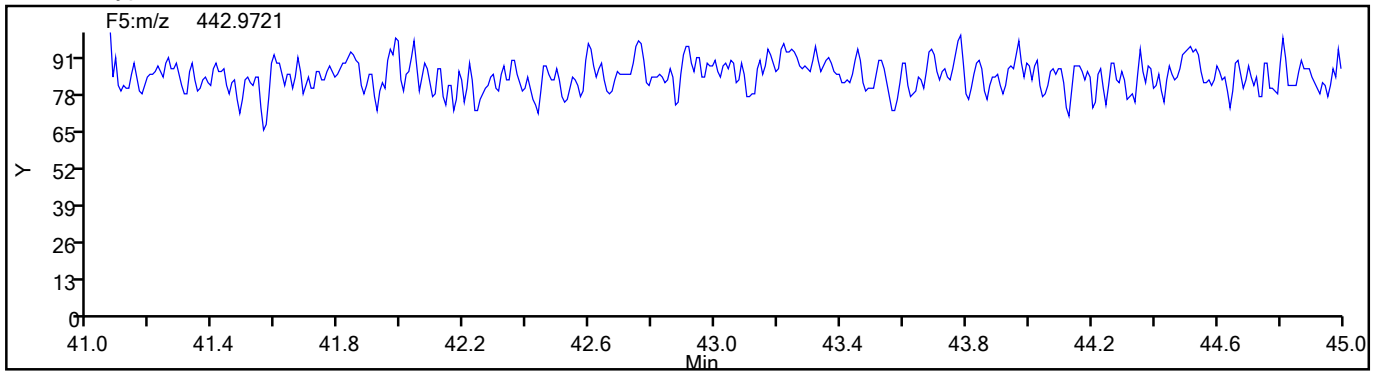

773833

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Lab Sample ID: CCV 320-516475/16 Calibration Date: 08/14/2021 02:27

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 13au21dfs1_18.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.108		10.3	10.0	103	84-120
2,3,7,8-TCDD	AveID	1.075	1.050		9.77	10.0	98	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.110		52.6	50.0	105	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9706		48.2	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.080		51.6	50.0	103	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.166		50.8	50.0	102	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.309		53.7	50.0	107	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.311		54.0	50.0	108	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9701		45.7	50.0	91	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9717		48.9	50.0	98	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.153		52.0	50.0	104	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.367		55.1	50.0	110	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.381		47.9	50.0	96	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.078		51.3	50.0	103	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.232		47.1	50.0	94	86-116
OCDD	AveID	1.062	1.062		100	100	100	79-126
OCDF	AveID	1.317	1.519		115	100	115	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.469		109	100	109	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9710		104	100	104	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.115		97.7	100	98	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.254		111	100	111	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6937		96.8	100	97	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.162		120	100	120	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.098		103	100	103	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.053		101	100	101	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8114		107	100	107	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.8155		94.9	100	95	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.007		104	100	104	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.8447		115	100	115	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7579		112	100	112	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.8860		129	100	129	77-129
13C-OCDD	Ave	0.5446	0.7078		260	200	130	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.048		10.4	10.0	104	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	13AU21DFS1_1	Resolution Check	RC 081321	46			KSS	1.000	
2	13AU21DFS1_2	CCV CS-4 HRDXNL4_00100	CCV 081321	2	Dioxin		KSS	1.000	
3	13AU21DFS1_3	WDM HRDXNCP_00044	WDM 081321	1	Dioxin		KSS	1.000	
4	13AU21DFS1_4	SB Solvent Blank C14	SB 081321	3	Dioxin		KSS	1.000	
5	13AU21DFS1_5	320-76764-a-33-a	320-76764-a-33-a	4	1613B/Solid	D263	KSS	10.000	g
6	13AU21DFS1_6	320-76764-a-34-a	320-76764-a-34-a	5	1613B/Solid		KSS	10.000	g
7	13AU21DFS1_7	320-76765-a-6-a	320-76765-a-6-a	6	1613B/Solid	D264	KSS	10.000	g
8	13AU21DFS1_8	320-76765-a-7-a	320-76765-a-7-a	7	1613B/Solid		KSS	10.000	g
9	13AU21DFS1_9	320-76765-a-8-a	320-76765-a-8-a	8	1613B/Solid		KSS	10.000	g
10	13AU21DFS1_10	320-76765-a-9-a	320-76765-a-9-a	9	1613B/Solid		KSS	10.000	g
11	13AU21DFS1_11	320-76765-a-13-a	320-76765-a-13-a	10	1613B/Solid		KSS	10.000	g
12	13AU21DFS1_12	320-76765-a-14-a	320-76765-a-14-a	11	1613B/Solid		KSS	10.000	g
13	13AU21DFS1_13	320-76765-a-15-a	320-76765-a-15-a	12	1613B/Solid		KSS	10.000	g
14	13AU21DFS1_14	320-76765-a-16-a	320-76765-a-16-a	13	1613B/Solid		KSS	10.000	g
15	13AU21DFS1_15	SB Solvent Blank C14	SB 081321A	3	Dioxin		KSS	1.000	
16	13AU21DFS1_16	Resolution Check	RC 081321A	46			KSS	1.000	
17	13AU21DFS1_17	WDM HRDXNCP_00044	WDM 081321A	1	Dioxin		KSS	1.000	
18	13AU21DFS1_18	CCV CS-4 HRDXNL4_00100	CCV 081321A	2	Dioxin		KSS	1.000	
19	13AU21DFS1_19	SB Solvent Blank C14	SB 081321B	3	Dioxin		KSS	1.000	
20	13AU21DFS1_20	mb 320-515104/1-a	mb 320-515104/1-a	14	8290/Waste	105	KSS	0.100	g
21	13AU21DFS1_21	lcs 320-515104/2-a	lcs 320-515104/2-a	15	8290/Waste		KSS	0.100	g
22	13AU21DFS1_22	lcsd 320-515104/3-a	lcsd 320-515104/3-a	16	8290/Waste		KSS	0.100	g
23	13AU21DFS1_23	320-77349-a-1-a	320-77349-a-1-a	17	8290/Waste		KSS	0.100	g
24	13AU21DFS1_24	320-76765-a-19-a	320-76765-a-19-a	18	1613B/Solid	D264	KSS	10.000	g
25	13AU21DFS1_25	320-76765-a-4-a	320-76765-a-4-a	19	1613B/Solid		KSS	10.000	g
26	13AU21DFS1_26	320-76765-a-11-a 10X	320-76765-a-11-a	20	1613B/Solid		KSS	10.000	g
27	13AU21DFS1_27	320-76765-a-12-a 10X	320-76765-a-12-a	21	1613B/Solid		KSS	10.000	g
28	13AU21DFS1_28	320-76765-a-17-a 5X	320-76765-a-17-a	22	1613B/Solid		KSS	10.000	g
29	13AU21DFS1_29	SB Solvent Blank C14	SB 081321C	3	Dioxin		KSS	1.000	
30	13AU21DFS1_30	Resolution Check	RC 081321B	46			KSS	1.000	
31	13AU21DFS1_31	CCV CS-4 HRDXNL4_00100	CCV 081321B	2	Dioxin		KSS	1.000	
32	13AU21DFS1_32	Resolution Check	RC 081321C	46			KSS	1.000	

LOGFILE CHECKED
DB 8/13/21

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	13 Aug 2021 13:42
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11590 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10762 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11581 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11298 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11559 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10515 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10926 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10782 [5%height]

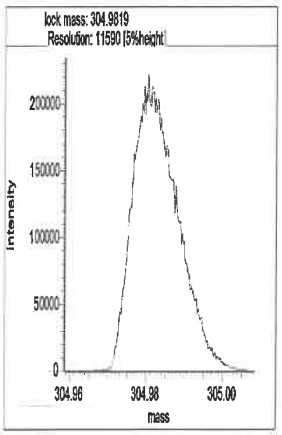

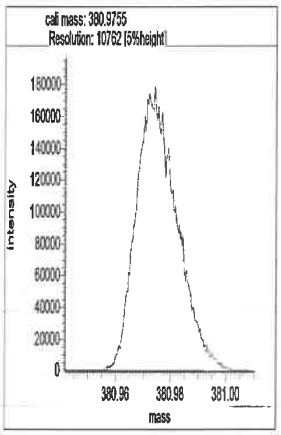

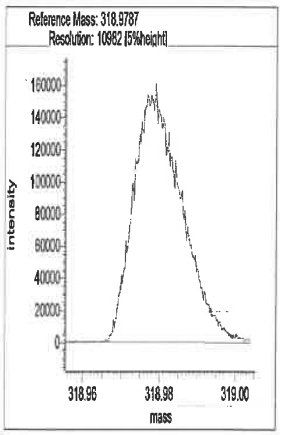

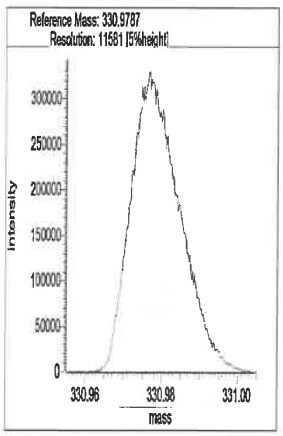

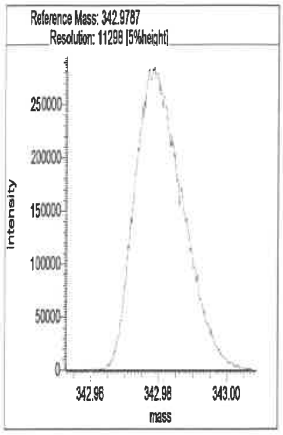

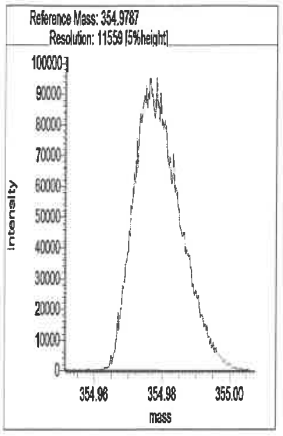

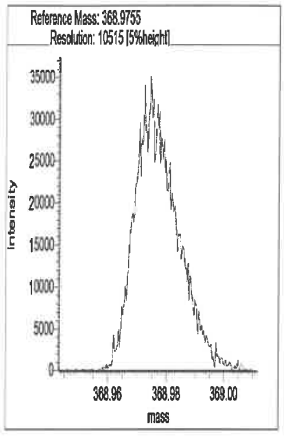

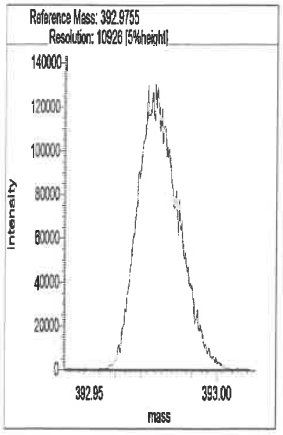

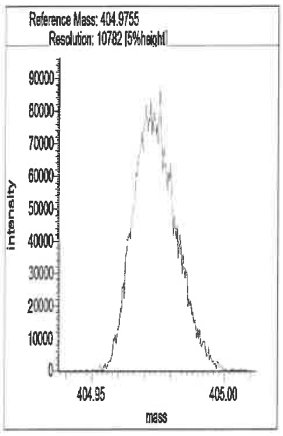

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11614 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11350 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11463 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11495 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11308 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11143 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10836 [5%height]

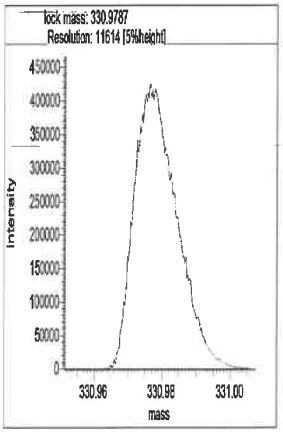

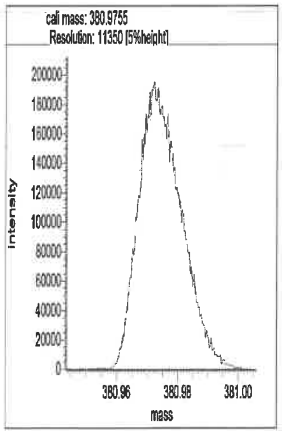

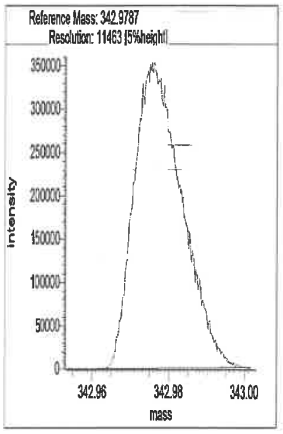

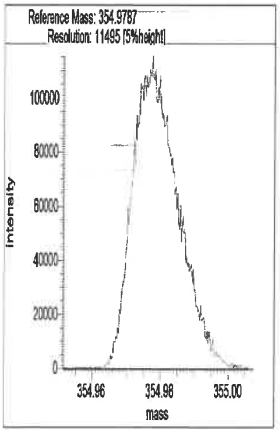

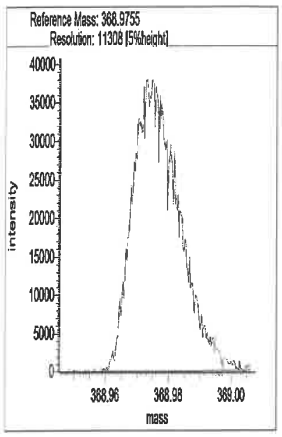

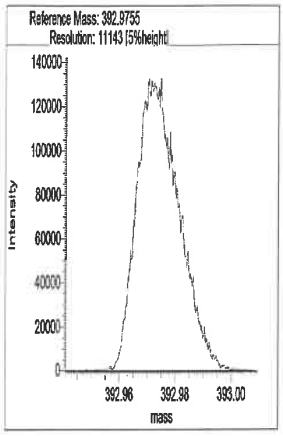

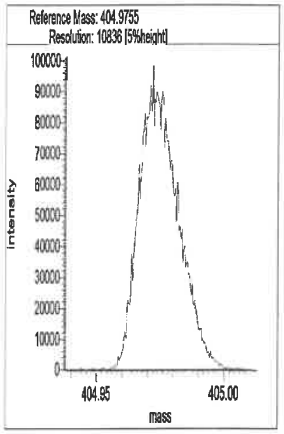

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11895 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11408 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11283 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11777 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11989 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10952 [5%height]

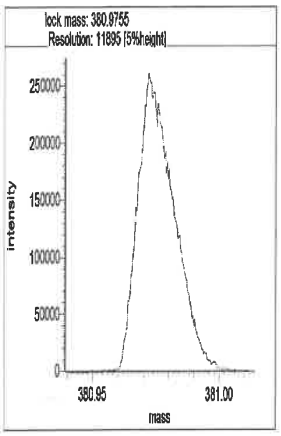

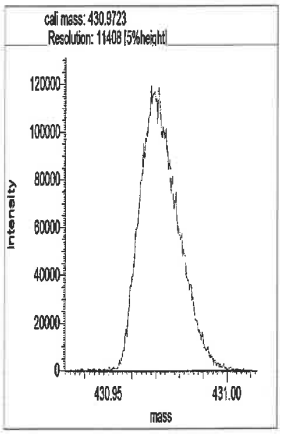

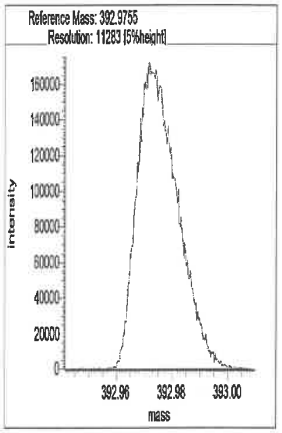

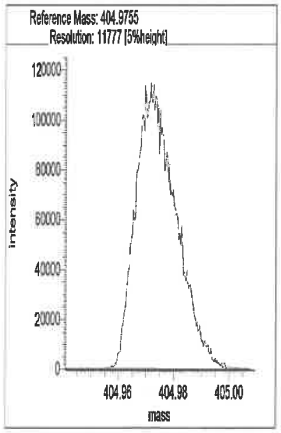

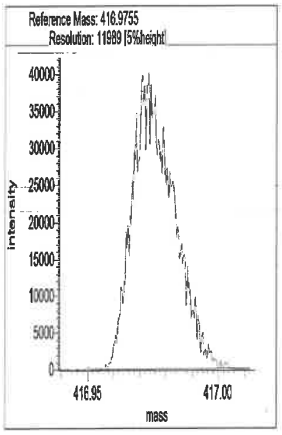

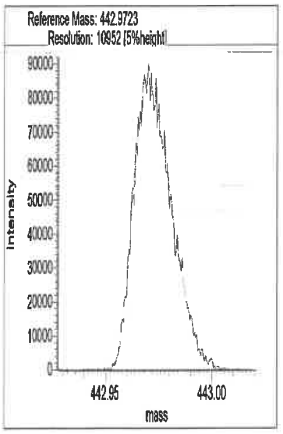

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11793 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10863 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 12020 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12223 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11538 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10991 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11188 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11785 [5%height]

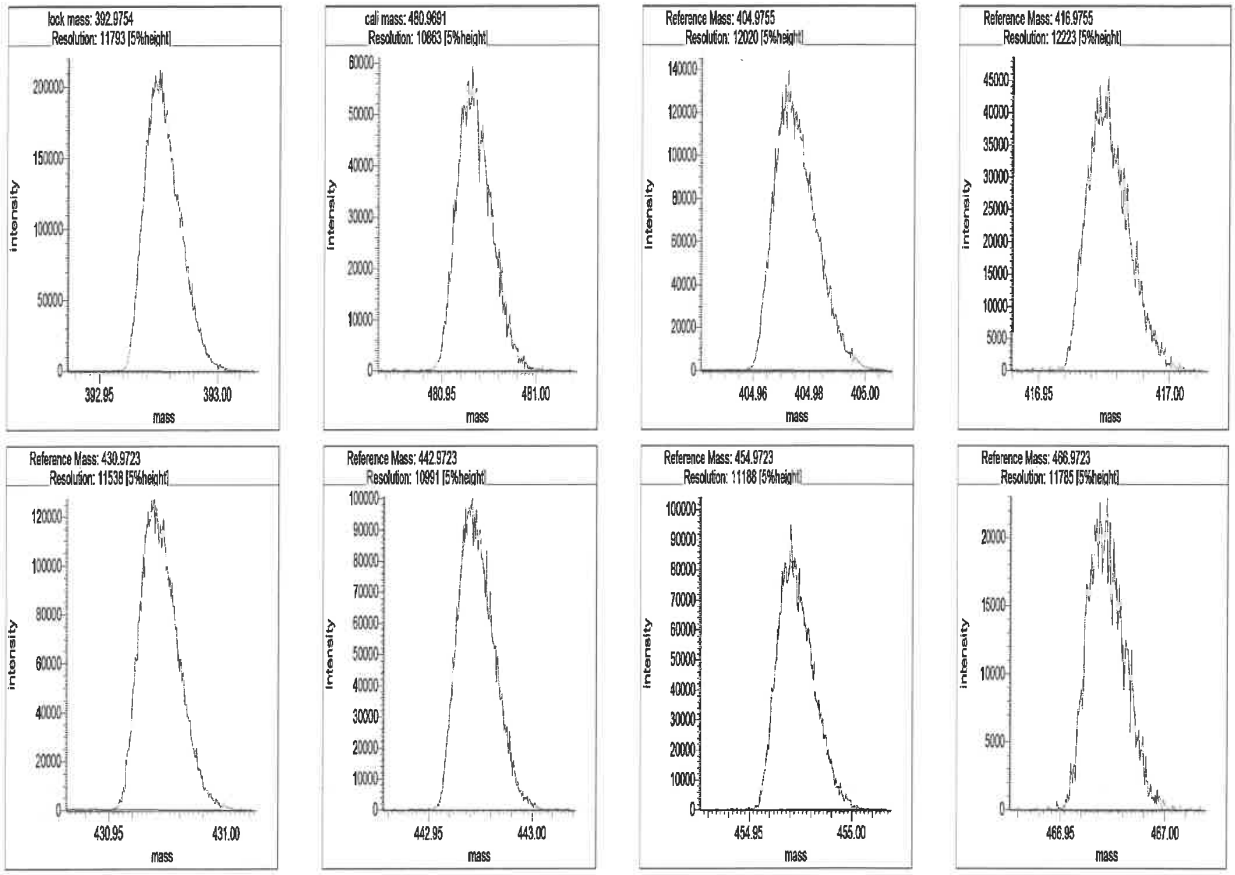

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11528 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11406 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11627 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12564 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11505 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10732 [5%height]

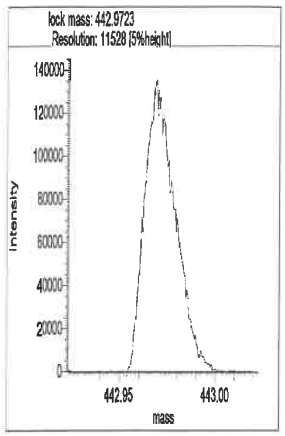
lock mass: 442.9723
Resolution: 11528 [5%height]
intensity
mass

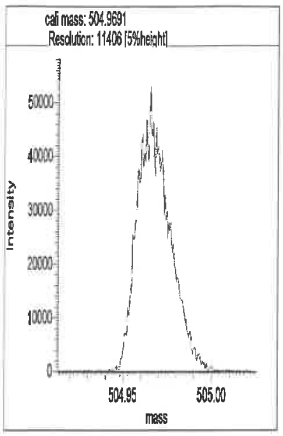
cali mass: 504.9691
Resolution: 11406 [5%height]
intensity
mass

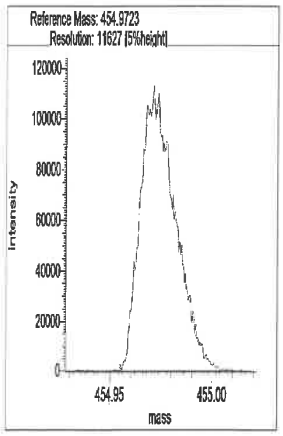
Reference Mass: 454.9723
Resolution: 11627 [5%height]
intensity
mass

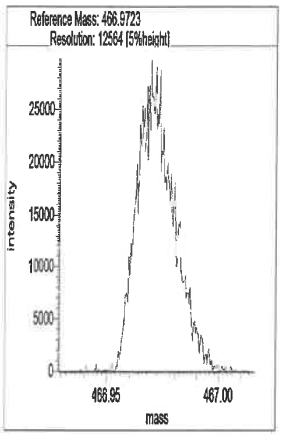
Reference Mass: 466.9723
Resolution: 12564 [5%height]
intensity
mass

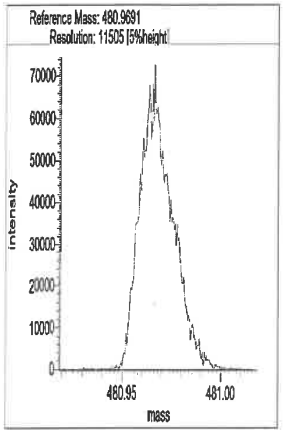
Reference Mass: 480.9691
Resolution: 11505 [5%height]
intensity
mass

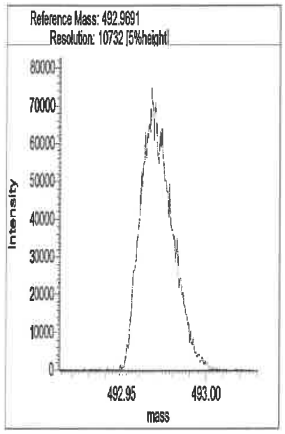
Reference Mass: 492.9691
Resolution: 10732 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	14 Aug 2021 01:20
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11594 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10845 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11632 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11497 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11262 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11083 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 9879 [5%height] ✓ ok 8/14/21 xw
Ref. mass 392.9755 [m/z] Resolution: 10569 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10879 [5%height]

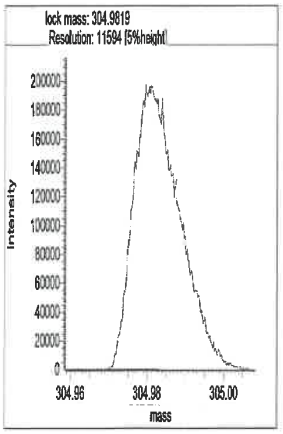

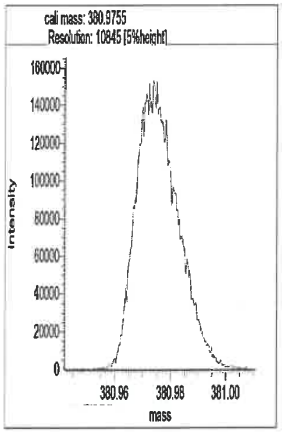

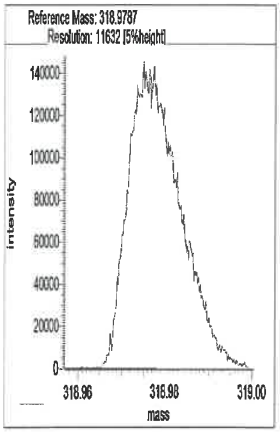

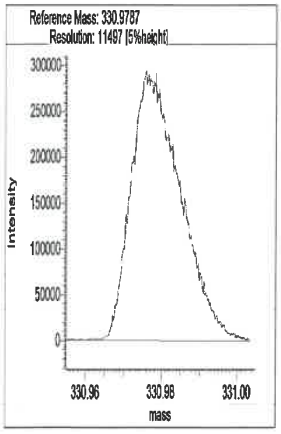

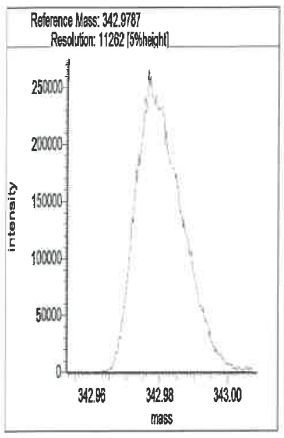

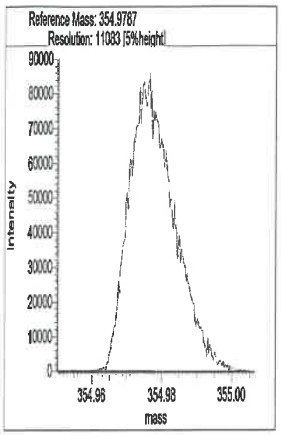

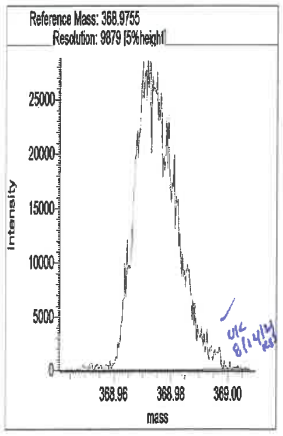

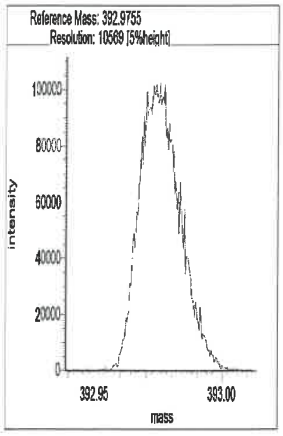

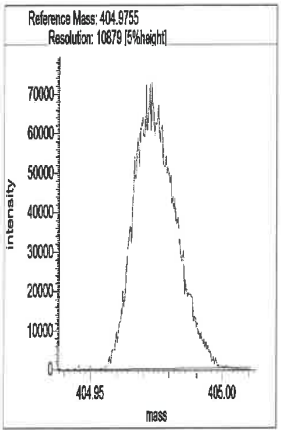

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11897 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11447 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11696 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 12080 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11441 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11004 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10940 [5%height]

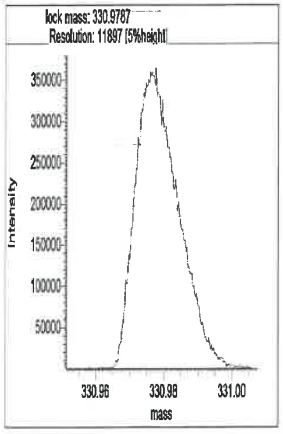

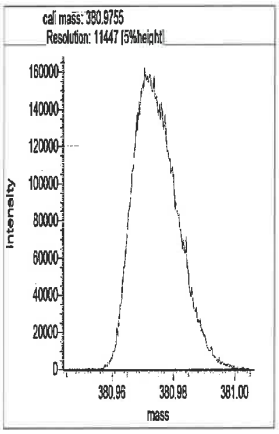

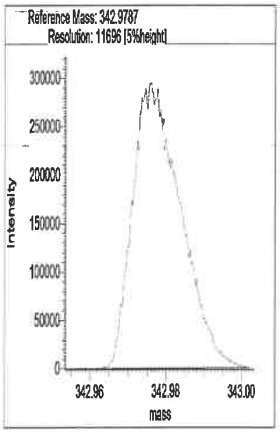

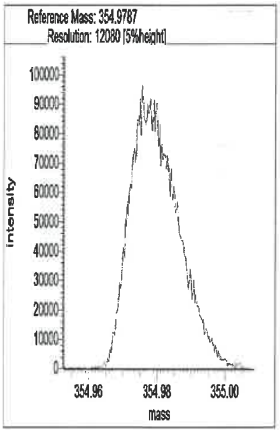

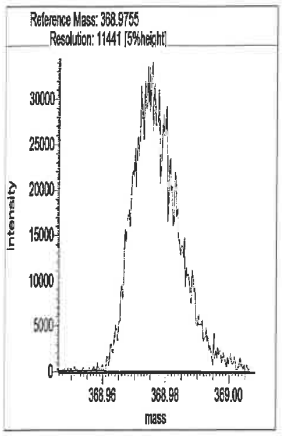

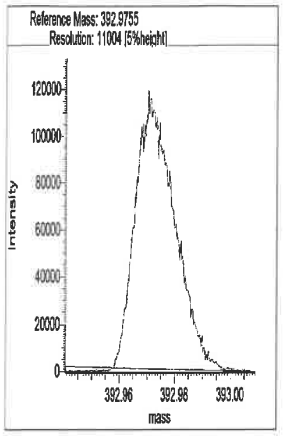

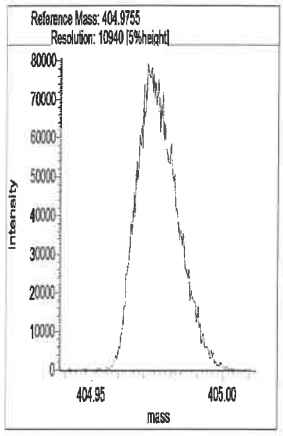

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11852 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11240 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11440 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11125 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11015 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11347 [5%height]

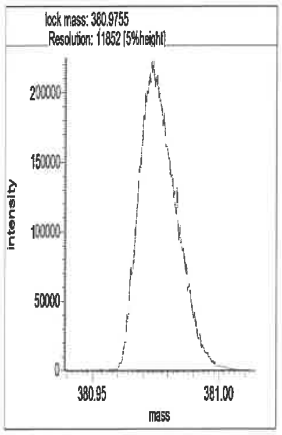

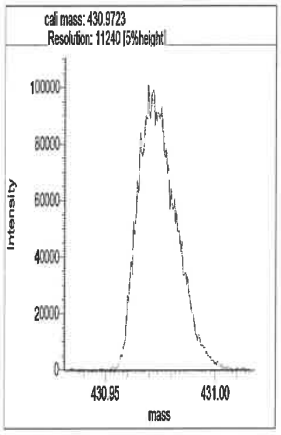

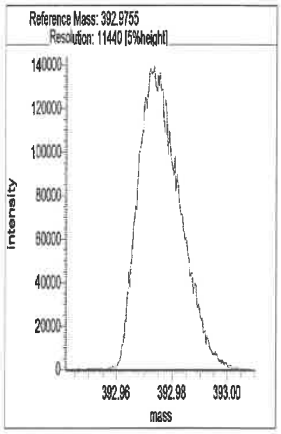

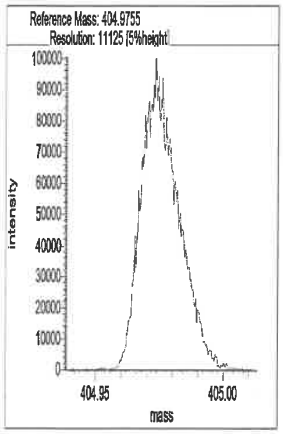

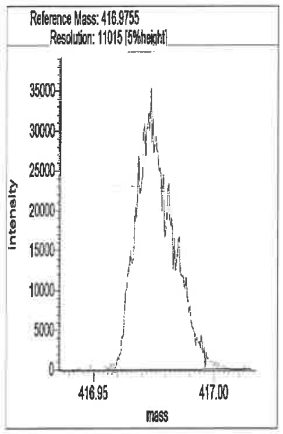

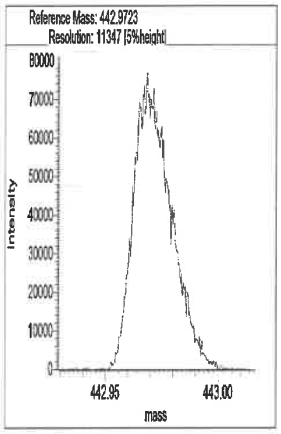

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11606 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10661 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11780 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11640 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10982 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11310 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11482 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12265 [5%height]

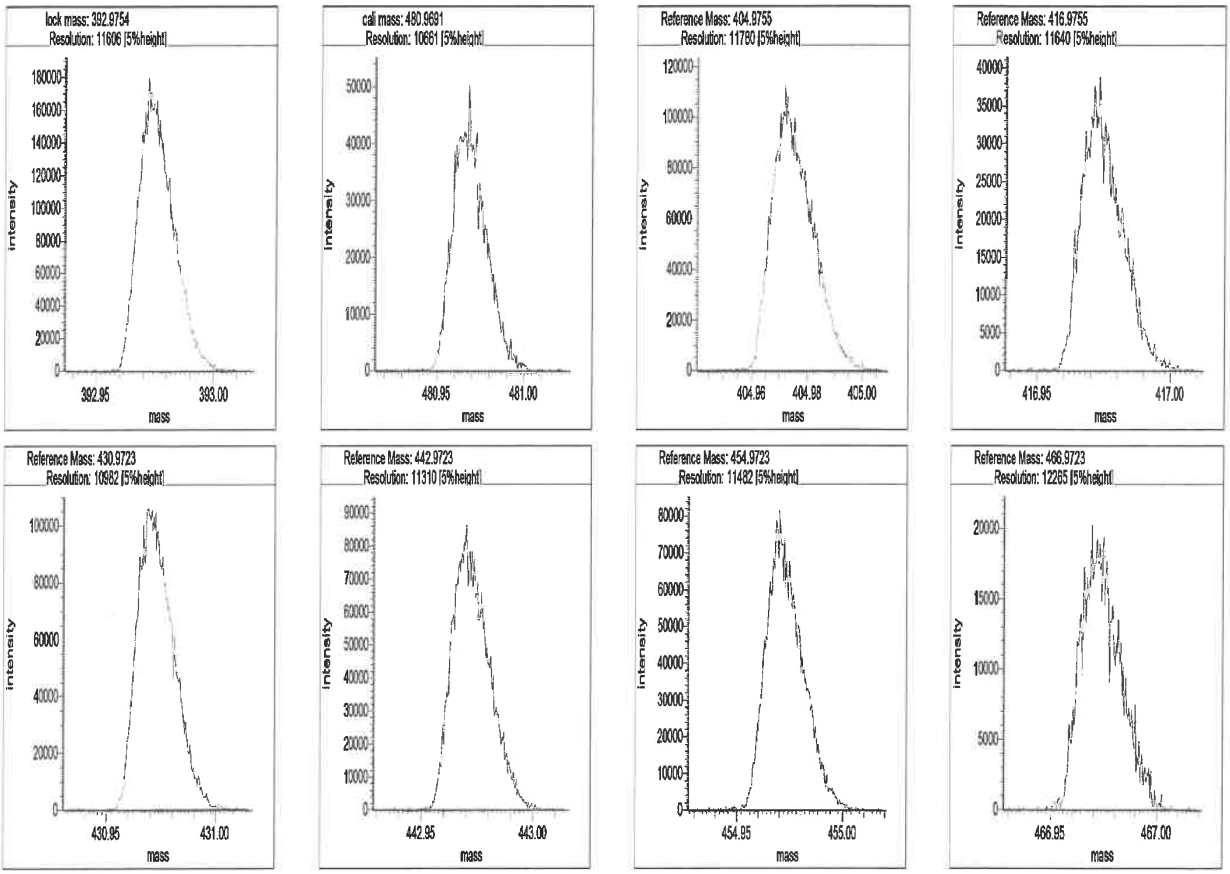

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11616 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11622 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 12003 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11968 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 12148 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11392 [5%height]

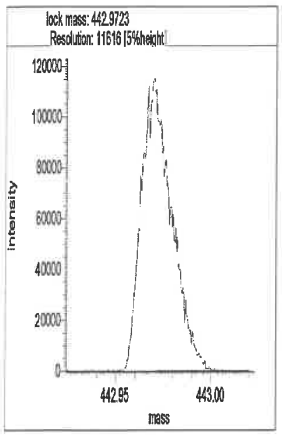
lock mass: 442.9723
Resolution: 11616 [5%height]
Intensity
mass

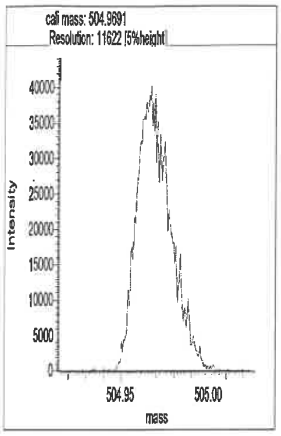
cali mass: 504.9691
Resolution: 11622 [5%height]
Intensity
mass

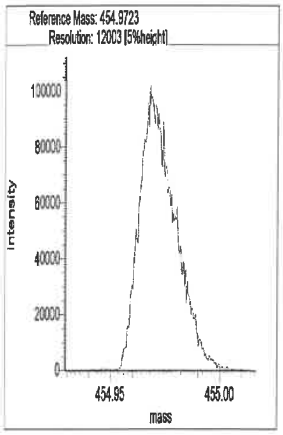
Reference Mass: 454.9723
Resolution: 12003 [5%height]
Intensity
mass

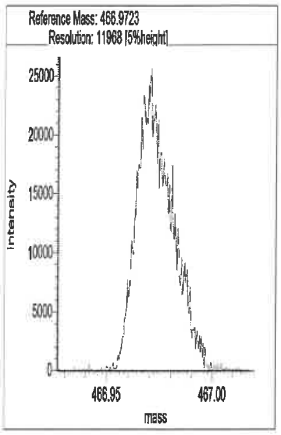
Reference Mass: 466.9723
Resolution: 11968 [5%height]
Intensity
mass

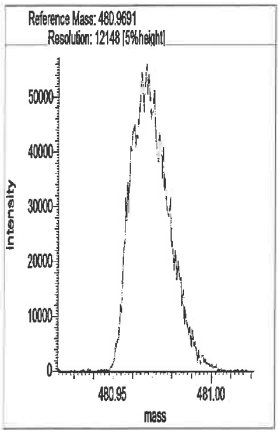
Reference Mass: 480.9691
Resolution: 12148 [5%height]
Intensity
mass

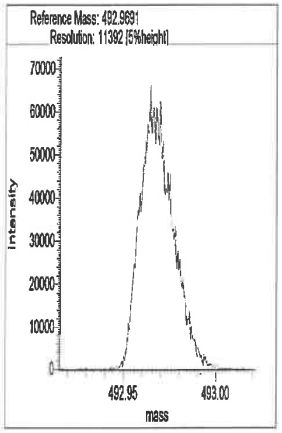
Reference Mass: 492.9691
Resolution: 11392 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	14 Aug 2021 12:02
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11391 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10552 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11168 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11019 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11387 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10855 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10214 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10194 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10269 [5%height]

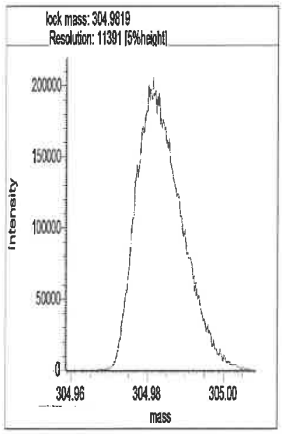

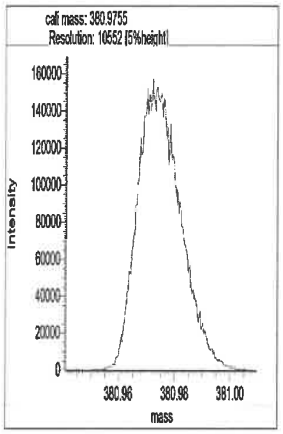

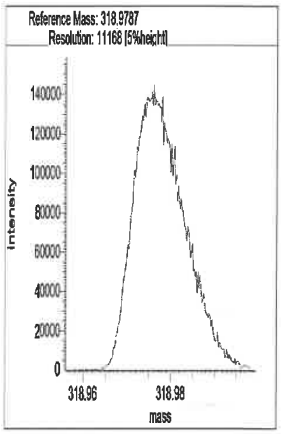

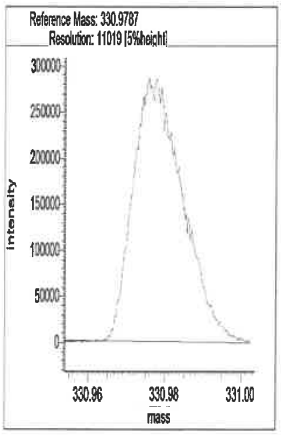

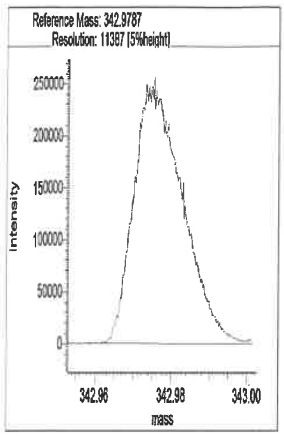

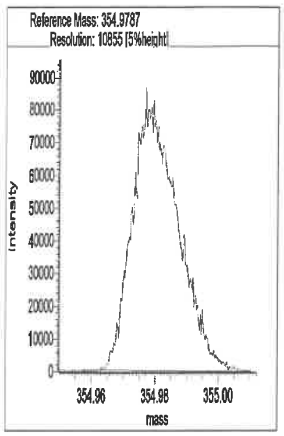

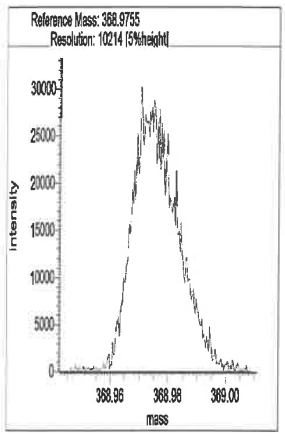

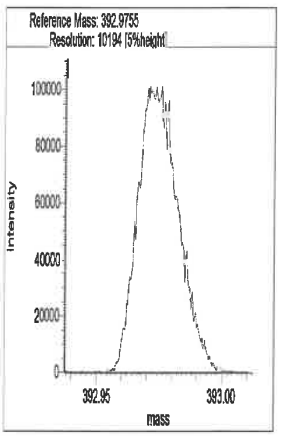

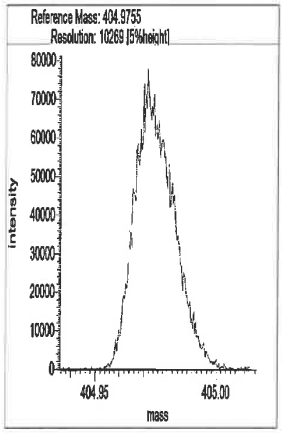

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11434 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11264 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11415 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11032 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10432 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10530 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10672 [5%height]

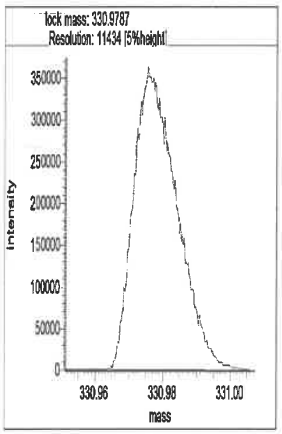

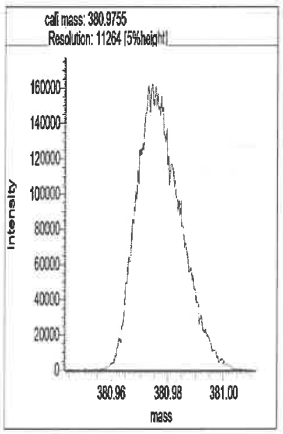

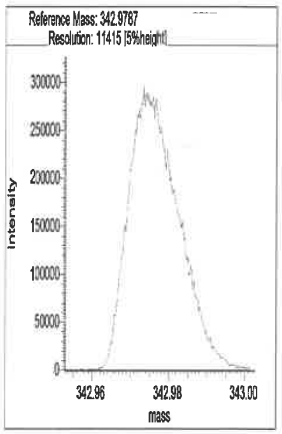

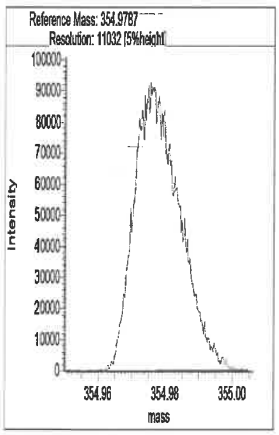

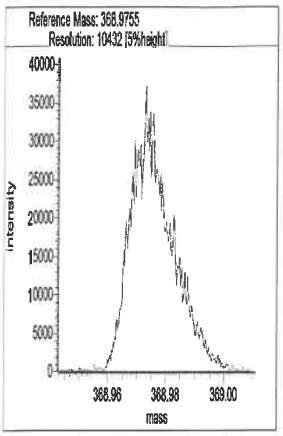

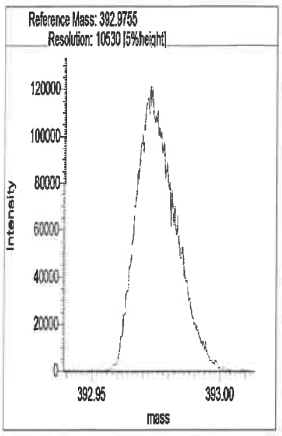

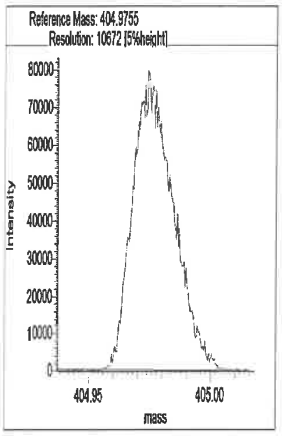

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11181 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11292 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10983 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11148 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11398 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11132 [5%height]

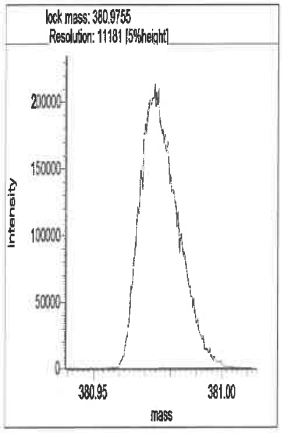

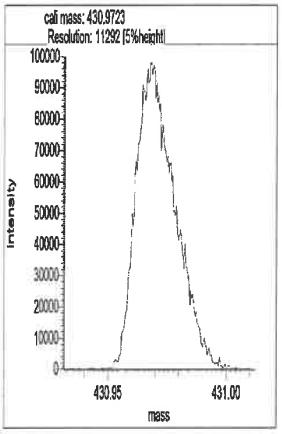

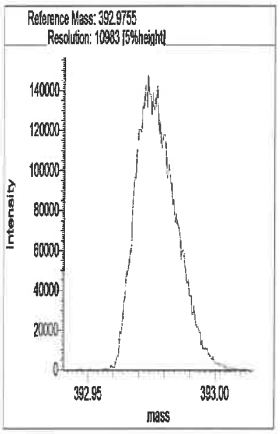

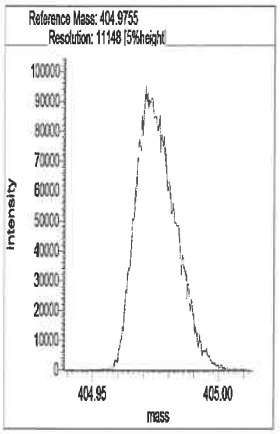

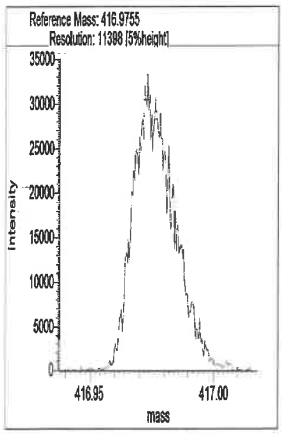

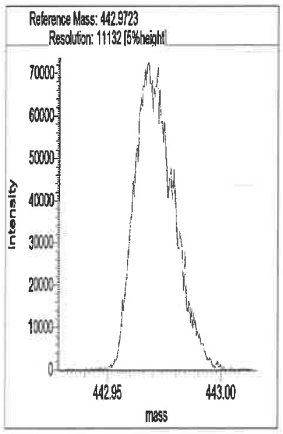

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11581 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10732 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11450 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11176 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11088 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10760 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10948 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12379 [5%height]

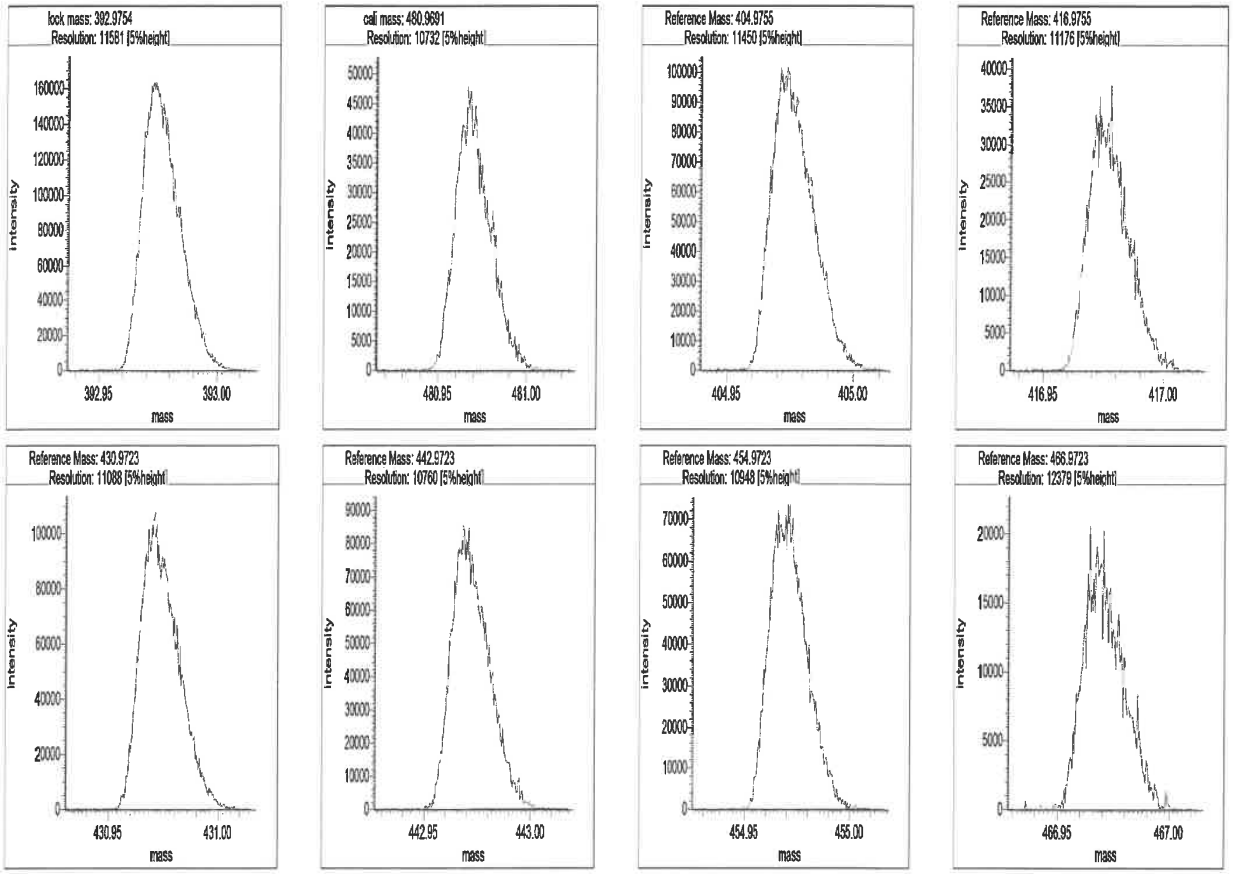

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11291 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10881 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11575 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12062 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11619 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10569 [5%height]

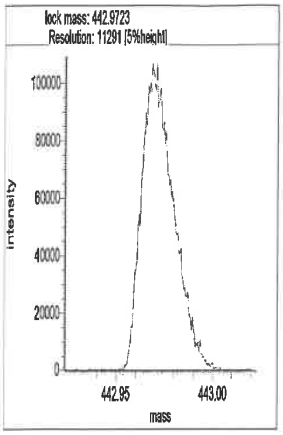
lock mass: 442.9723
Resolution: 11291 [5%height]
intensity
mass

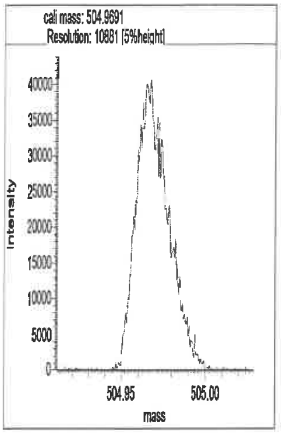
cali mass: 504.9691
Resolution: 10881 [5%height]
intensity
mass

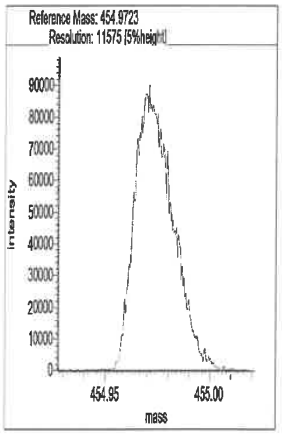
Reference Mass: 454.9723
Resolution: 11575 [5%height]
intensity
mass

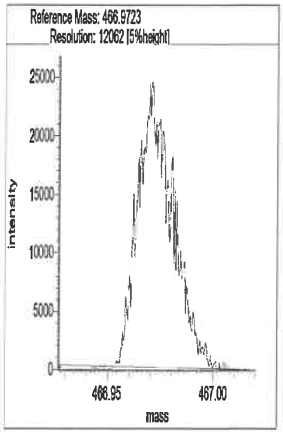
Reference Mass: 466.9723
Resolution: 12062 [5%height]
intensity
mass

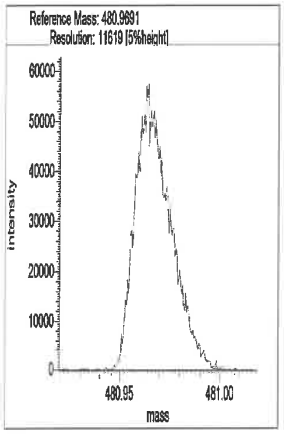
Reference Mass: 480.9691
Resolution: 11619 [5%height]
intensity
mass

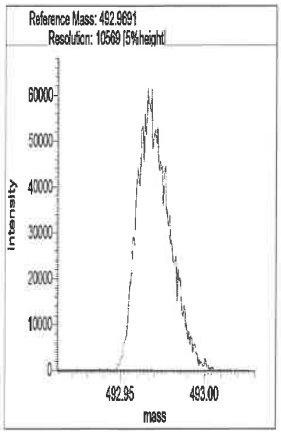
Reference Mass: 492.9691
Resolution: 10569 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	14 Aug 2021 13:09
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11541 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10587 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11415 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10983 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10927 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11086 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10425 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10313 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10618 [5%height]

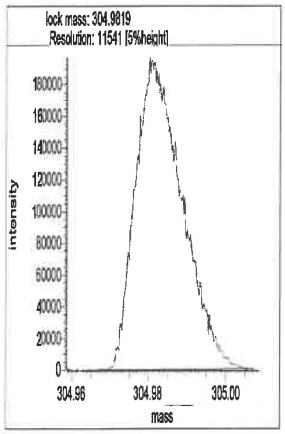

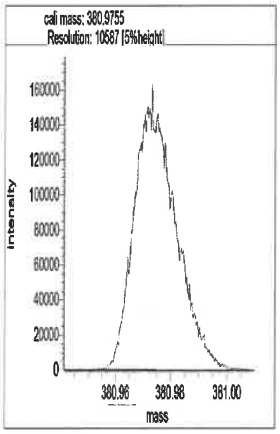

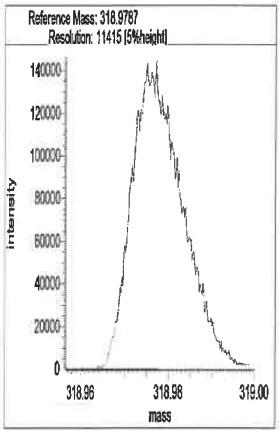

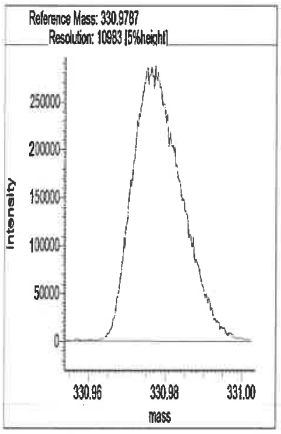

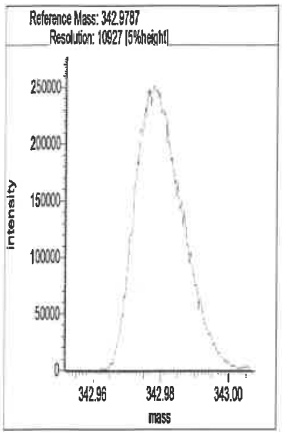

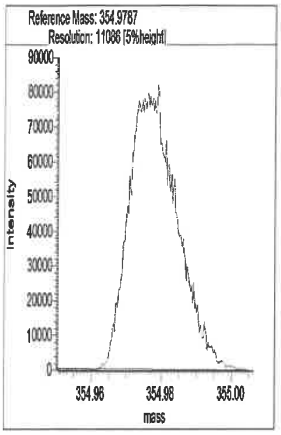

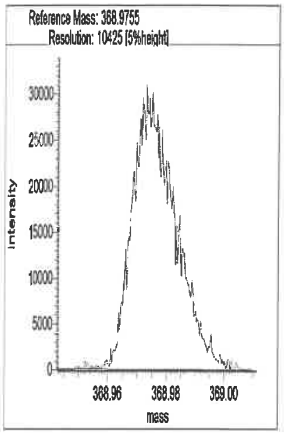

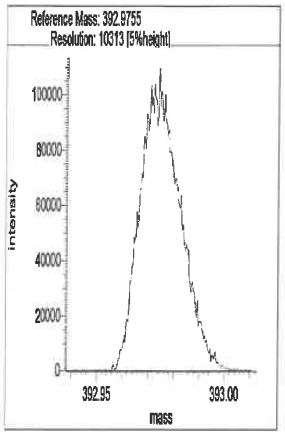

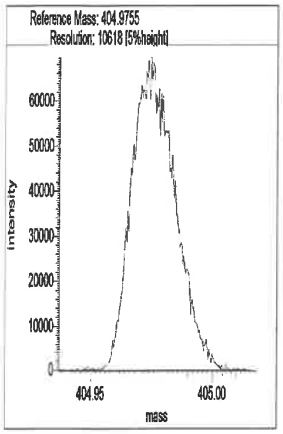

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11039 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10777 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11271 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11178 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10969 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10924 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10583 [5%height]

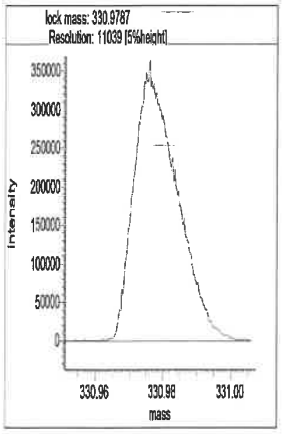

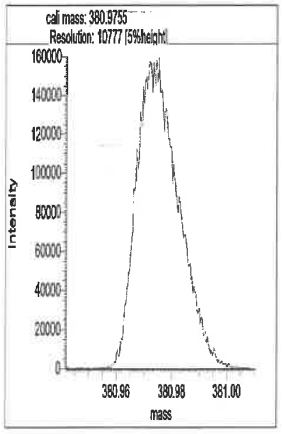

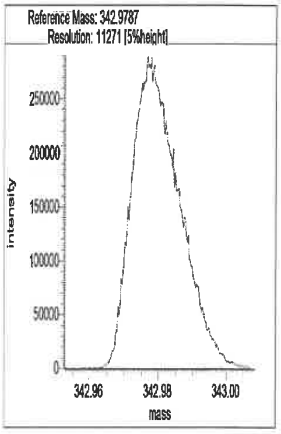

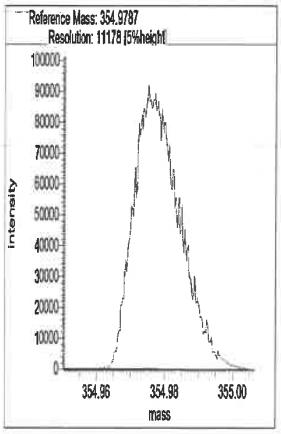

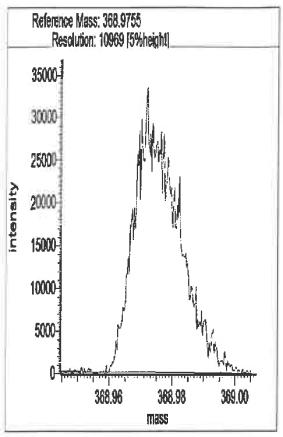

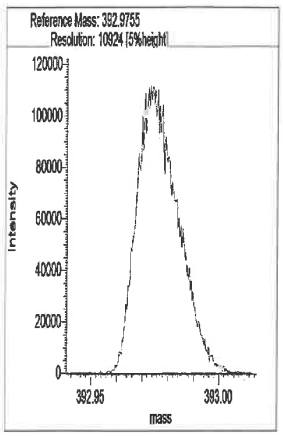

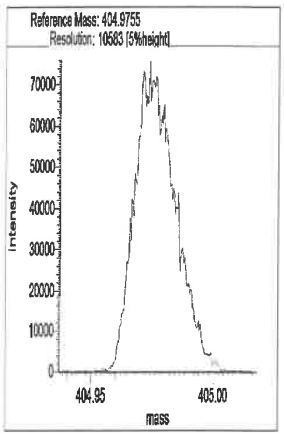

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11279 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10919 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11166 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10622 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11800 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11086 [5%height]

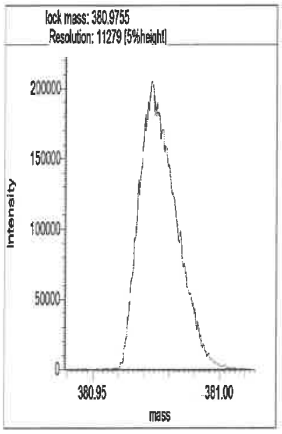

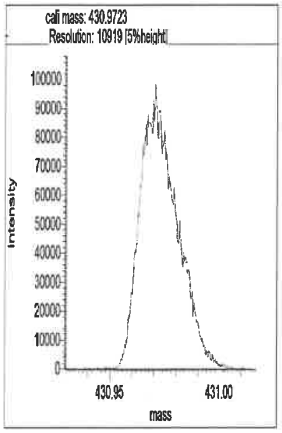

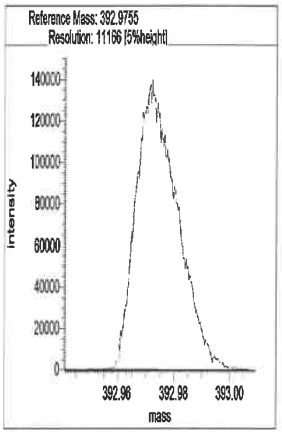

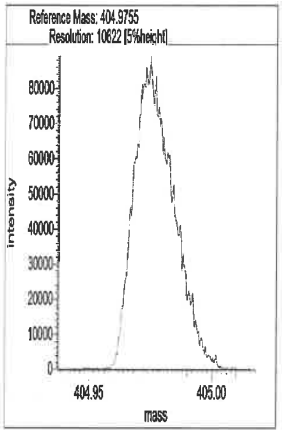

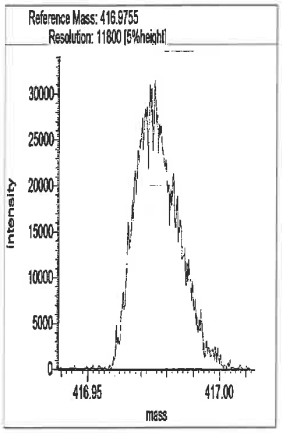

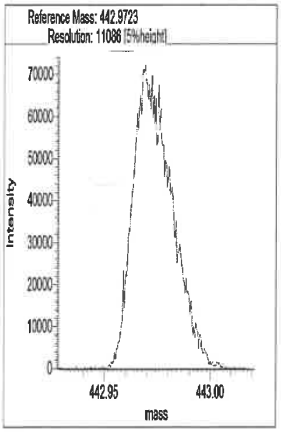

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11097 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11253 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11315 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11475 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10529 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10975 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10572 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11196 [5%height]

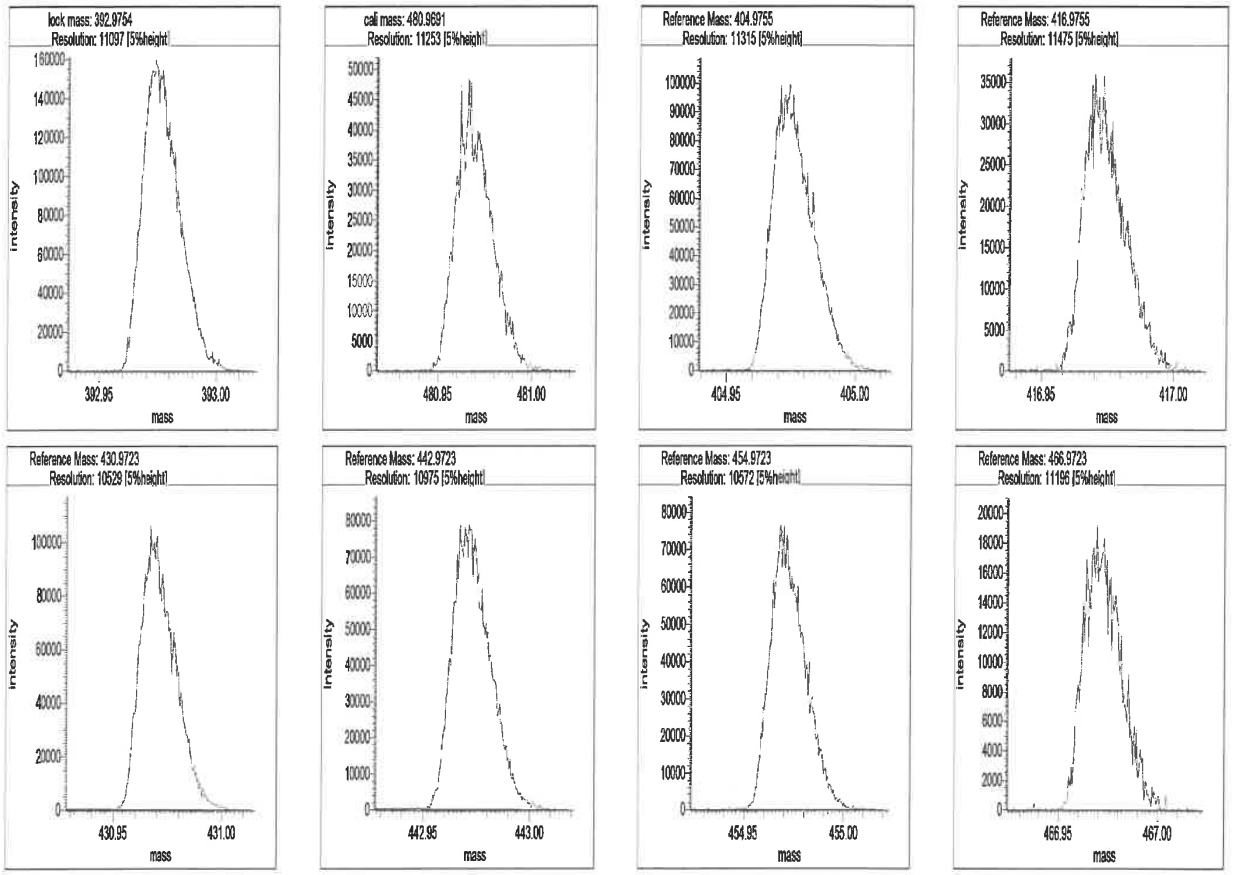

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11161 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11914 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11529 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12288 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10738 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11236 [5%height]

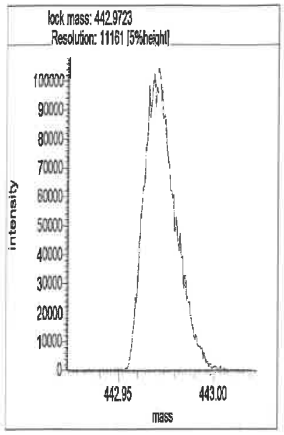
lock mass: 442.9723
Resolution: 11161 [5%height]
intensity
mass
442.95
443.00

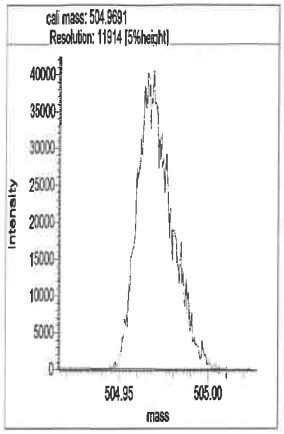
cali mass: 504.9691
Resolution: 11914 [5%height]
intensity
mass
504.95
505.00

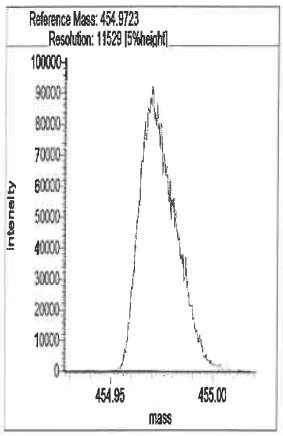
Reference Mass: 454.9723
Resolution: 11529 [5%height]
intensity
mass
454.95
455.00

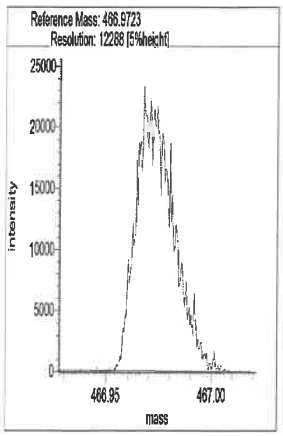
Reference Mass: 466.9723
Resolution: 12088 [5%height]
intensity
mass
466.95
467.00

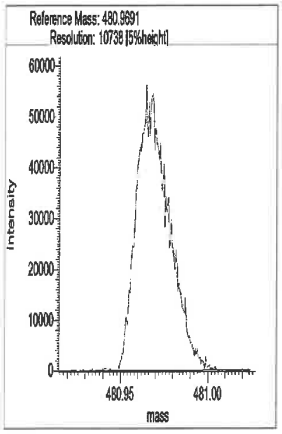
Reference Mass: 480.9691
Resolution: 10738 [5%height]
intensity
mass
480.95
481.00

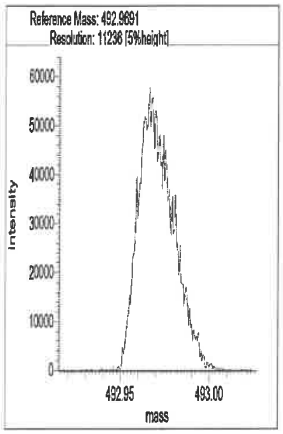
Reference Mass: 492.9691
Resolution: 11236 [5%height]
intensity
mass
492.95
493.00

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 14-Aug-2021 02:27:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 12:24:33 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1655

First Level Reviewer: stephensk Date: 14-Aug-2021 17:25:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.459	582413	0.82	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.479	855281	0.85	1.3459	109.1	109.1	0.2762	0.2762	109	
2,3,7,8-TCDF	20.513	94801	0.79	1.0802	10.3	10.3	0.0283	0.0283	103	M
A Non-2,3,7,8-sub-TCDF	19.983	1114	0.77	1.0802	0.1641	0.1206	0.0283	0.0447	0.00	RQ
S Total TCDF					10.4	10.4	0.0283	0.0283		RQ
D 13C-2,3,7,8-TCDD	21.838	565534	0.79	0.9317	104.2	104.2	0.2119	0.2119	104	
2,3,7,8-TCDD	21.838	59395	0.82	1.0753	9.767	9.767	0.0762	0.0762	97.67	
$ 37Cl4-2,3,7,8-TCDD	21.872	61045		1.0083	10.4	10.4	0.0145	0.0145	104	a
A Non-2,3,7,8-sub-TCDD	20.818						0.0762	0.0762		
S Total TCDD					9.767	9.767	0.0762	0.0762		
D 13C-1,2,3,7,8-PeCDF	27.320	649169	1.61	1.1405	97.7	97.7	0.2725	0.2725	97.73	
1,2,3,7,8-PeCDF	27.337	360127	1.55	1.0543	52.6	52.6	0.1304	0.1304	105	
D 13C-2,3,4,7,8-PeCDF	28.828	730231	1.59	1.1253	111.4	111.4	0.2761	0.2761	111	
2,3,4,7,8-PeCDF	28.853	354381	1.58	1.0079	48.2	48.2	0.1304	0.1304	96.30	
A F1 PeCDFs	24.692						0.006519	0.006519		
A Non-2,3,7,8-sub-PeCDF	28.190	2910	1.61	1.0311	0.4092	0.4092	0.1304	0.4092	0.00	
S Total PeCDF					101.2	101.2	0.1304	0.1304		
D 13C-1,2,3,7,8-PeCDD	29.661	403997	1.57	0.7165	96.8	96.8	0.0680	0.0680	96.82	
1,2,3,7,8-PeCDD	29.670	218255	1.58	1.0465	51.6	51.6	0.0610	0.0610	103	
A Non-2,3,7,8-sub-PeCDD	29.966						0.0610	0.0610		
S Total PeCDD					51.6	51.6	0.0610	0.0610		
D 13C-1,2,3,4,7,8-HxCDF	34.955	698330	0.54	0.9648	120.5	120.5	0.3754	0.3754	120	
1,2,3,4,7,8-HxCDF	34.972	406983	1.29	1.1474	50.8	50.8	0.1878	0.1878	102	
D 13C-1,2,3,6,7,8-HxCDF	35.107	659881	0.53	1.0708	102.6	102.6	0.3382	0.3382	103	
1,2,3,6,7,8-HxCDF	35.132	431829	1.25	1.2178	53.7	53.7	0.1838	0.1838	107	
D 13C-2,3,4,6,7,8-HxCDF	35.932	632531	0.54	1.0413	101.1	101.1	0.3478	0.3478	101	
2,3,4,6,7,8-HxCDF	35.941	414617	1.26	1.2145	54.0	54.0	0.1804	0.1804	108	
D 13C-1,2,3,7,8,9-HxCDF	36.817	605072	0.54	0.9731	103.5	103.5	0.3722	0.3722	104	
1,2,3,7,8,9-HxCDF	36.834	413467	1.26	1.2401	55.1	55.1	0.1718	0.1718	110	
A Non-2,3,7,8-sub-HxCDF	35.105						0.1808	0.1808		
S Total HxCDF					213.6	213.6	0.1810	0.1810		

Report Date: 16-Aug-2021 12:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.623	600743	1.23	1.8E+04	100.0	100.0				M
D 13C-1,2,3,4,7,8-HxCDD	36.143	487432	1.20	0.7587	106.9	106.9	0.3186	0.3186	107	
1,2,3,4,7,8-HxCDD	36.151	236417	1.26	1.0608	45.7	45.7	0.0928	0.0928	91.45	
D 13C-1,2,3,6,7,8-HxCDD	36.261	489878	1.29	0.8593	94.9	94.9	0.2813	0.2813	94.90	
1,2,3,6,7,8-HxCDD	36.269	237997	1.31	0.9933	48.9	48.9	0.1004	0.1004	97.82	
1,2,3,7,8,9-HxCDD	36.640	281638	1.27	1.1094	52.0	52.0	0.0893	0.0893	104	
A Non-2,3,7,8-sub-HxCDD	35.459						0.0940	0.0940		
S Total HxCDD					146.6	146.6	0.0942	0.0942		
D 13C-1,2,3,4,6,7,8-HpCDF	38.627	507437	0.46	0.7359	114.8	114.8	0.4191	0.4191	115	
1,2,3,4,6,7,8-HpCDF	38.644	350400	1.05	1.4421	47.9	47.9	0.1666	0.1666	95.77	
D 13C-1,2,3,4,7,8,9-HpCDF	39.881	532235	0.47	0.6854	129.3	129.3	0.4500	0.4500	129	M
1,2,3,4,7,8,9-HpCDF	39.890	327962	1.04	1.3092	47.1	47.1	0.1522	0.1522	94.14	
A Non-2,3,7,8-sub-HpCDF	39.287						0.1583	0.1583		
S Total HpCDF					95.0	95.0	0.1594	0.1594		
D 13C-1,2,3,4,6,7,8-HpCDD	39.570	455287	1.10	0.6745	112.4	112.4	0.2867	0.2867	112	
1,2,3,4,6,7,8-HpCDD	39.578	245484	1.07	1.0503	51.3	51.3	0.1113	0.1113	103	
A Non-2,3,7,8-sub-HpCDD	39.283						0.1113	0.1113		
S Total HpCDD					51.3	51.3	0.1113	0.1113		
D 13C-OCDD	42.075	850430	0.90	0.5446	259.9	259.9	0.2916	0.2916	130	M
OCDF	42.168	645786	0.93	1.3168	115.3	115.3	0.1158	0.1158	115	
OCDD	42.083	451522	0.89	1.0620	100.0	100.0	0.1105	0.1105	99.99	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 16-Aug-2021 12:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 14-Aug-2021 02:27:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 12:24:33 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1655

First Level Reviewer: stephensk Date: 14-Aug-2021 17:25:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.459	21.581	-7		261867	37857	41	102	923		
333.9338	21.468	21.581	-7		320546	44205	24	60	1842	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.479	20.479	0	0.954	393823	57157	94	235	608		
317.9389	20.479	20.479	0	0.954	461458	63782	28	70	2278	0.85(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.513	20.565	-3	1.002	41940	5987	5	12	1197		M
305.8987	20.513	20.565	-3	1.002	52861	7418	10	25	742	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	17.847	19.983	-128	0.871	157	60	5	12	12		
	Empc Correction				97	51	5	12	10		
305.8987	17.726	19.983	-135	0.866	126	67	10	25	7	1.25(0.65-0.89)	
303.9016	19.782	19.983	-12	0.966	78	53	5	12	11		
305.8987	19.791	19.983	-12	0.966	289	103	10	25	10	0.27(0.65-0.89)	
	Empc Correction				101	68	10	25	7		
303.9016	20.823	19.983	50	1.017	164	65	5	12	13		
305.8987	20.831	19.983	51	1.017	249	113	10	25	11	0.66(0.65-0.89)	
303.9016	20.883	19.983	54	1.020	284	74	5	12	15		
	Empc Correction				130	84	5	12	17		
305.8987	20.892	19.983	54	1.020	169	110	10	25	11	1.68(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.838	21.838	0	1.018	248924	34654	41	102	845		
333.9338	21.829	21.838	-1	1.017	316610	40992	24	60	1708	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.838	21.923	-5	1.000	26822	3479	22	55	158		
321.8936	21.838	21.923	-5	1.000	32573	4047	3	7	1349	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											a
327.8847	21.872	22.010	-8	1.019	61045	8079	5	12	1616		a
A Non-2,3,7,8-sub-TCDD											
319.8965	20.818						22	55			
321.8936	20.818						3	7			
13C-1,2,3,7,8-PeCDF											
351.9000	27.320	27.320	0	1.273	400233	62073	74	185	839		
353.8970	27.320	27.320	0	1.273	248936	39726	28	70	1419	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.337	27.337	0	1.001	218983	35844	27	67	1328		
341.8567	27.345	27.337	1	1.001	141144	22477	29	72	775	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.828	28.828	0	1.343	448495	65366	74	185	883		
353.8970	28.828	28.828	0	1.343	281736	41125	28	70	1469	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.853	28.853	0	1.001	216967	31975	27	67	1184		
341.8567	28.853	28.853	0	1.001	137414	19847	29	72	684	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.692						1	2			
341.8567	24.692						2	5			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.918	28.190	-16	1.022	1793	310	27	67	11		
341.8567	27.918	28.190	-16	1.022	1117	227	29	72	8	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.661	29.661	0	1.382	246731	35313	8	20	4414		
369.8919	29.645	29.661	-1	1.381	157266	22673	8	20	2834	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.670	29.670	0	1.000	133551	18376	11	27	1671		
357.8516	29.678	29.670	1	1.001	84704	11954	4	10	2989	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	29.966						11	27			
357.8516	29.966						4	10			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.955	34.955	0	0.954	244958	46306	62	155	747		
385.8610	34.955	34.955	0	0.954	453372	89171	127	317	702	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.972	34.972	0	1.000	229510	46639	67	167	696		
375.8178	34.972	34.972	0	1.000	177473	36041	50	125	721	1.29(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.107	35.107	0	0.959	228853	45248	62	155	730		
385.8610	35.116	35.107	1	0.959	431028	85219	127	317	671	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.132	35.132	0	1.001	239946	45614	67	167	681		
375.8178	35.132	35.132	0	1.001	191883	35857	50	125	717	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.932	35.932	0	0.981	220803	46087	62	155	743		
385.8610	35.924	35.932	-1	0.981	411728	87182	127	317	686	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.941	35.941	0	1.000	231225	46919	67	167	700		
375.8178	35.941	35.941	0	1.000	183392	37892	50	125	758	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.817	36.817	0	1.005	212605	49264	62	155	795		
385.8610	36.817	36.817	0	1.005	392467	87807	127	317	691	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.834	36.834	0	1.000	230150	51922	67	167	775		
375.8178	36.834	36.834	0	1.000	183317	40485	50	125	810	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.105						67	167			
375.8178	35.105						50	125			
13C-1,2,3,7,8,9-HxCDD											M
401.8559	36.623	36.623	0		330988	72583	67	167	1083		M
403.8529	36.623	36.623	0		269755	57748	59	147	979	1.23(1.05-1.43)	M
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.143	36.143	0	0.987	265507	59837	67	167	893		
403.8529	36.143	36.143	0	0.987	221925	46814	59	147	793	1.20(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.151	36.151	0	1.000	131990	30873	24	60	1286		
391.8127	36.151	36.151	0	1.000	104427	23023	18	45	1279	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.261	36.261	0	0.990	275493	59015	67	167	881		
403.8529	36.252	36.261	-1	0.990	214385	46298	59	147	785	1.29(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.269	36.269	0	1.000	134765	28856	24	60	1202		
391.8127	36.269	36.269	0	1.000	103232	21523	18	45	1196	1.31(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.640	36.640	0	1.014	157798	34621	24	60	1443		
391.8127	36.640	36.640	0	1.014	123840	27340	18	45	1519	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.459						24	60			
391.8127	35.459						18	45			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.627	38.627	0	1.055	159844	38823	66	165	588		
419.8220	38.627	38.627	0	1.055	347593	86037	95	237	906	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.644	38.644	0	1.000	179785	44608	68	170	656		
409.7788	38.635	38.644	-1	1.000	170615	41558	52	130	799	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											M
417.8250	39.881	39.881	0	1.089	169964	48064	66	165	728		M
419.8220	39.881	39.881	0	1.089	362271	102527	95	237	1079	0.47(0.37-0.51)	M

Report Date: 16-Aug-2021 12:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8,9-HpCDF											
407.7817	39.890	39.890	0	1.000	167296	46905	68	170	690		
409.7788	39.890	39.890	0	1.000	160666	44346	52	130	853	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.287						68	170			
409.7788	39.287						52	130			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.570	39.570	0	1.080	238378	63775	52	130	1226		
437.8140	39.570	39.570	0	1.080	216909	57691	49	122	1177	1.10(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.578	39.578	0	1.000	126729	33163	34	85	975		
425.7737	39.587	39.578	1	1.000	118755	31569	23	57	1373	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.283						34	85			
425.7737	39.283						23	57			
13C-OCDD											M
469.7780	42.075	42.075	0	1.149	402300	93910	33	82	2846		M
471.7750	42.075	42.075	0	1.149	448130	105534	50	125	2111	0.90(0.76-1.02)	M
OCDF											
441.7428	42.168	42.168	0	1.002	311012	69843	25	62	2794		
443.7399	42.168	42.168	0	1.002	334774	75826	36	90	2106	0.93(0.76-1.02)	
OCDD											
457.7377	42.083	42.083	0	1.000	212205	48745	24	60	2031		
459.7348	42.083	42.083	0	1.000	239317	54370	23	57	2364	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 16-Aug-2021 12:24:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d
Lims ID: CCV
Client ID:
Inject. Date: 14-Aug-2021 02:27:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 516475 Lims Sample ID: 16
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.983

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	855281	120939

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	855281	120939

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.847	157	60	126	67	0.0306	1.25	RnQ
17.847	97	51	126	67	0.0241		Empc Correction
19.782	78	53	289	103	0.0397	0.27	RQ
19.782	78	53	101	68	0.0194		Empc Correction
20.823	164	65	249	113	0.0447	0.66	
20.883	284	74	169	110	0.0490	1.68	RQ
20.883	130	84	169	110	0.0324		Empc Correction
Signal Totals:							
	469	253	645	358			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1516	645				0.82	RQ
	1114	611					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1641 = (1516 * 100.000) / (855281 * 1.080)
Empc Amount: 0.1206 = (1114 * 100.000) / (855281 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d
Lims ID: CCV
Client ID:
Inject. Date: 14-Aug-2021 02:27:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 516475 Lims Sample ID: 16
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.190

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	649169	101799
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	730231	106491

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	689700	104145

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.918	1793	310	1117	227	0.4092	1.61	n
Signal Totals:							
	1793	310	1117	227			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2910	537				1.61	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4092 = (2910 * 100.000) / (689700 * 1.031)

QC Flag Legend

Processing Flags
n - Failed Sig-To-Noise Test

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d				
Injection Date:	14-Aug-2021 02:27:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.51
Area: 37326
Amount: 9.761888
Amount Units: pg/ul

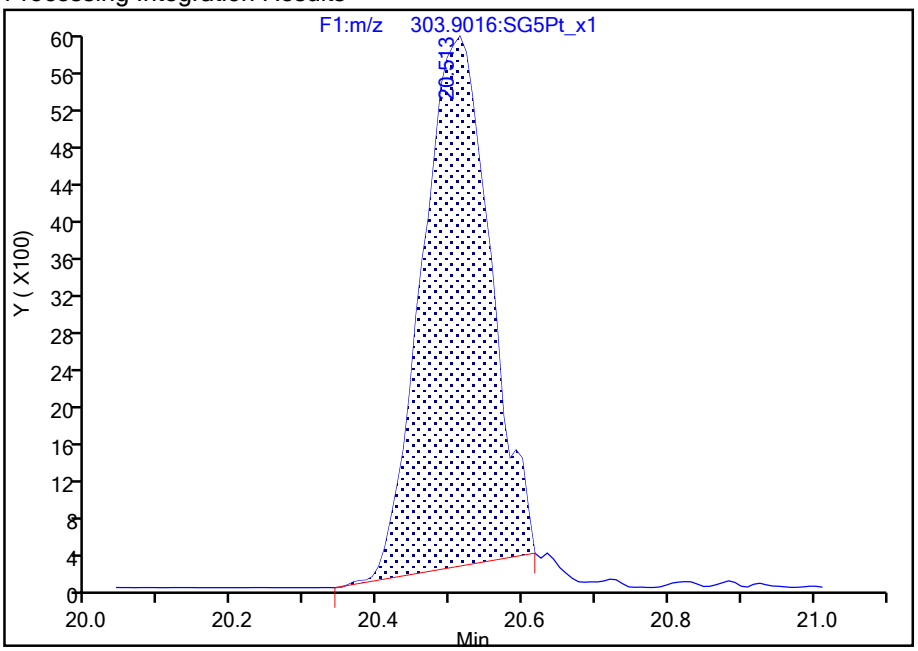

Manual Integration Results

RT: 20.51
Area: 41940
Amount: 10.261309
Amount Units: pg/ul

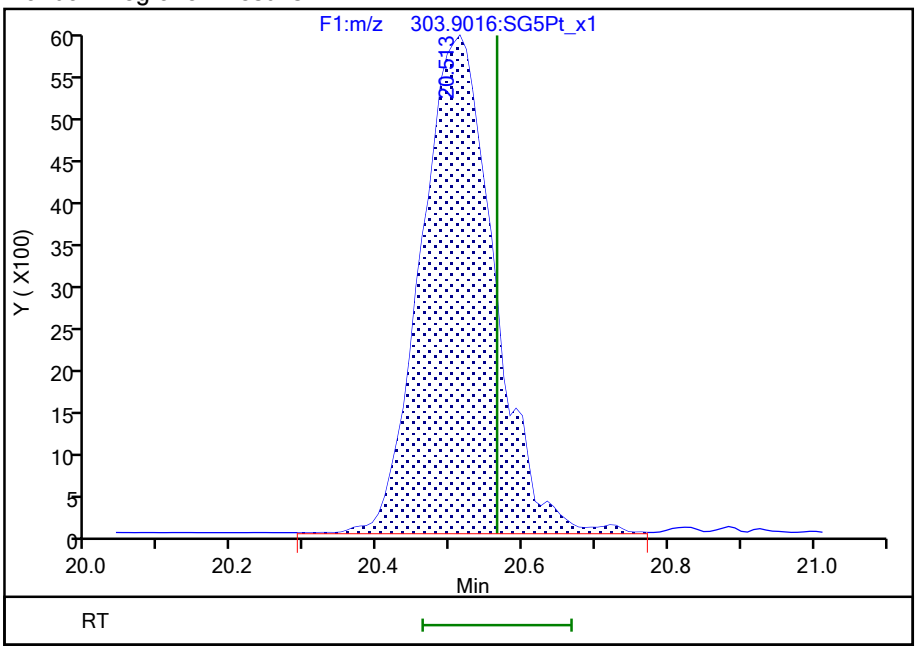

Reviewer: stephensk, 14-Aug-2021 17:26:57

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d				
Injection Date:	14-Aug-2021 02:27:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

RT: 22.10
Area: 567
Amount: 0.096553
Amount Units: pg/ul

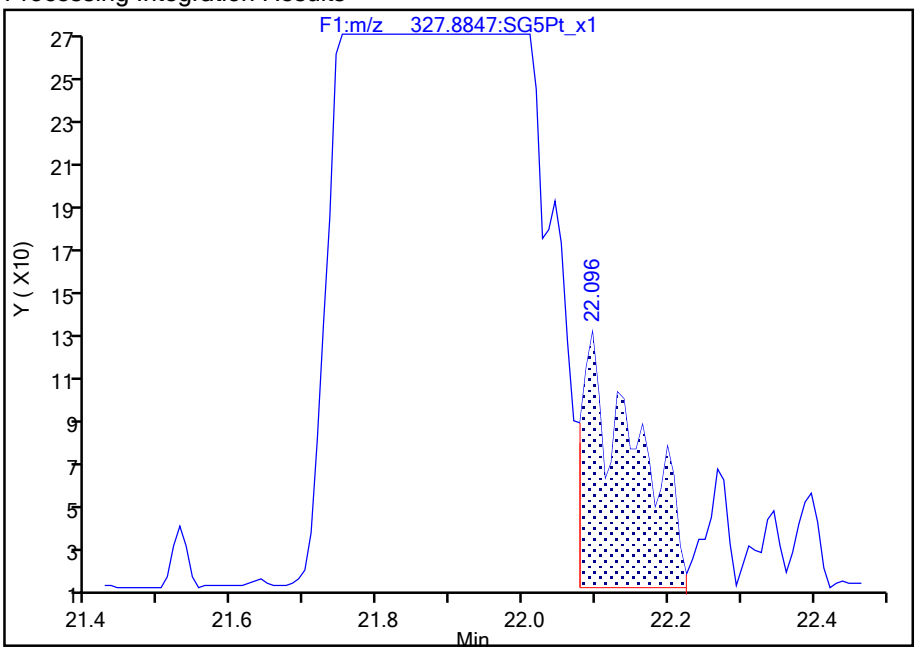

Manual Integration Results

RT: 21.87
Area: 61045
Amount: 10.395167
Amount Units: pg/ul

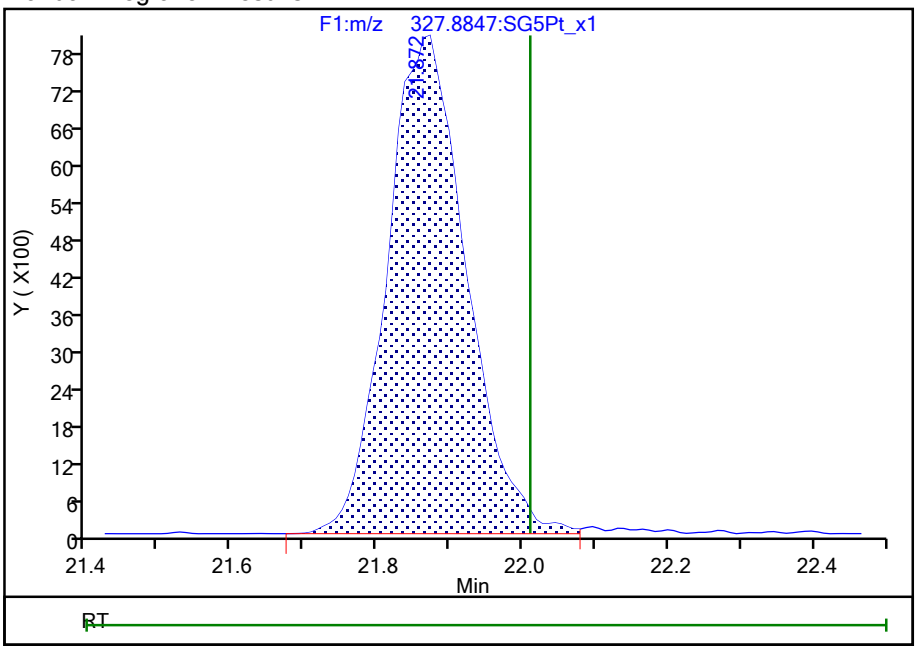

Reviewer: stephensk, 14-Aug-2021 17:26:24

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d				
Injection Date:	14-Aug-2021 02:27:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 1

Processing Integration Results

RT: 36.62
Area: 328740
Amount: 100.0000
Amount Units: pg/ul

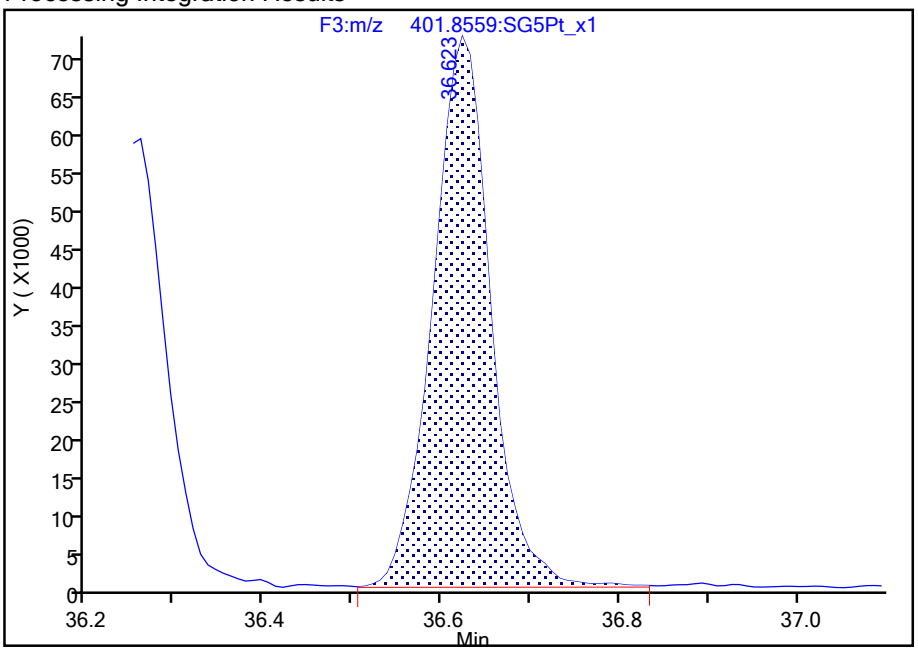

Manual Integration Results

RT: 36.62
Area: 330988
Amount: 100.0000
Amount Units: pg/ul

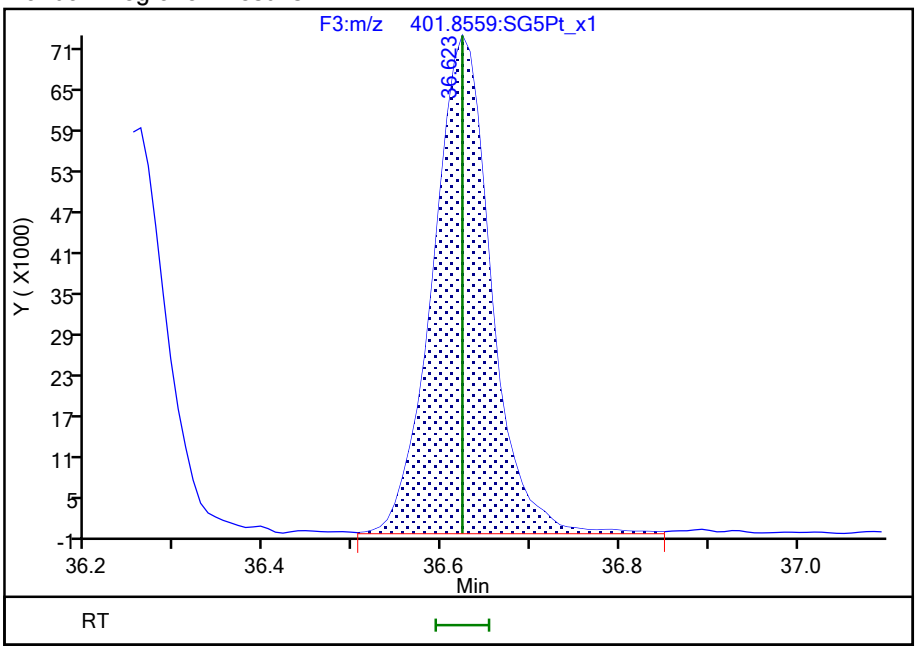

Reviewer: stephensk, 14-Aug-2021 17:29:07

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d				
Injection Date:	14-Aug-2021 02:27:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 2

Processing Integration Results

RT: 36.62
Area: 267939
Amount: 100.0000
Amount Units: pg/ul

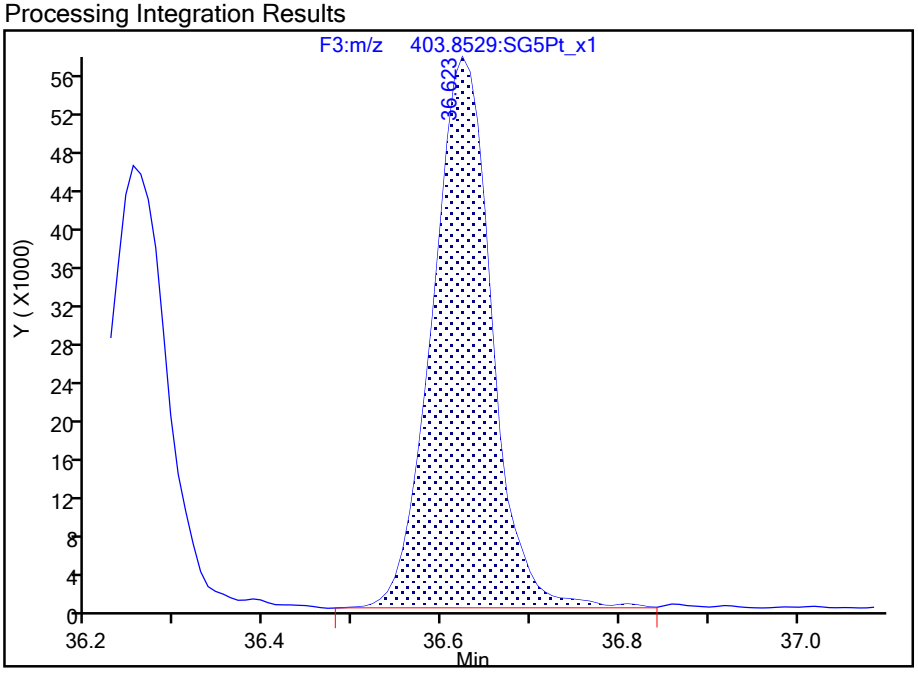

Manual Integration Results

RT: 36.62
Area: 269755
Amount: 100.0000
Amount Units: pg/ul

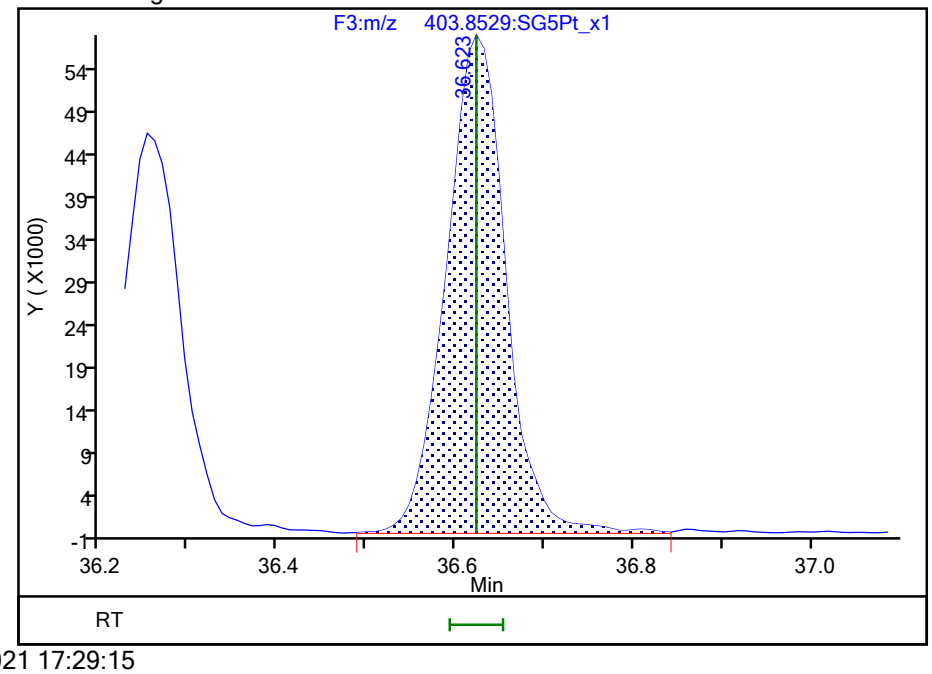

Reviewer: stephensk, 14-Aug-2021 17:29:15

Audit Action: Manually Integrated Audit Reason: Baseline

773868

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d				
Injection Date:	14-Aug-2021 02:27:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

RT: 39.88
Area: 173740
Amount: 131.9198
Amount Units: pg/ul

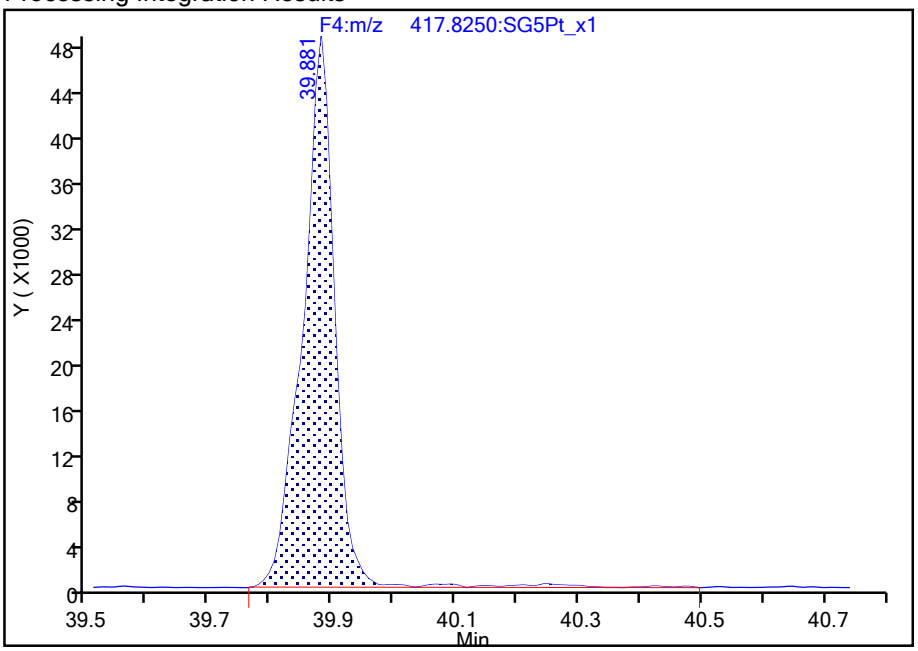

Manual Integration Results

RT: 39.88
Area: 169964
Amount: 129.2660
Amount Units: pg/ul

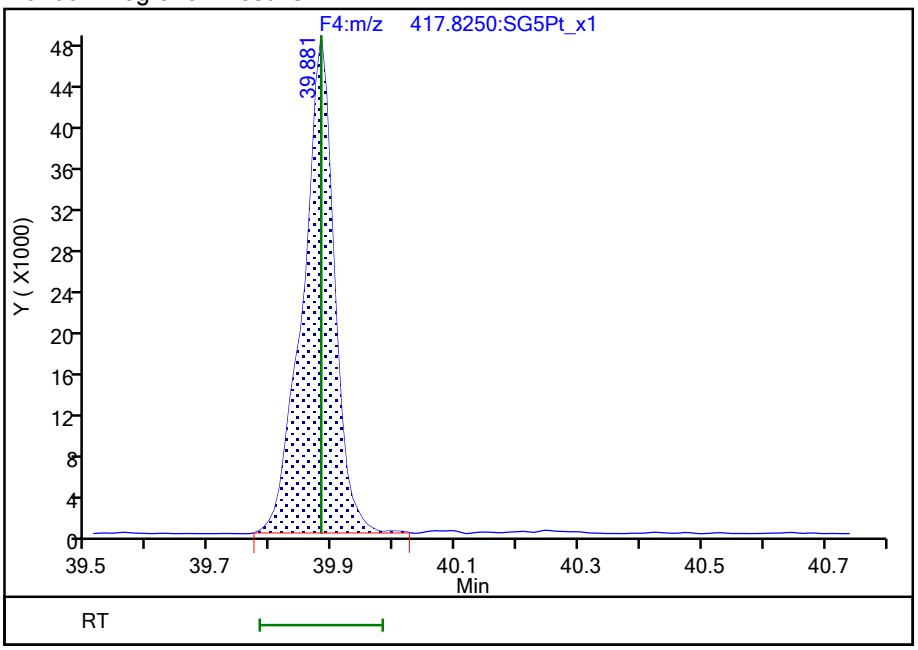

Reviewer: stephensk, 14-Aug-2021 17:28:23

Audit Action: Manually Integrated Audit Reason: Baseline

773869

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d				
Injection Date:	14-Aug-2021 02:27:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 2

Processing Integration Results

RT: 39.88
Area: 365747
Amount: 131.9198
Amount Units: pg/ul

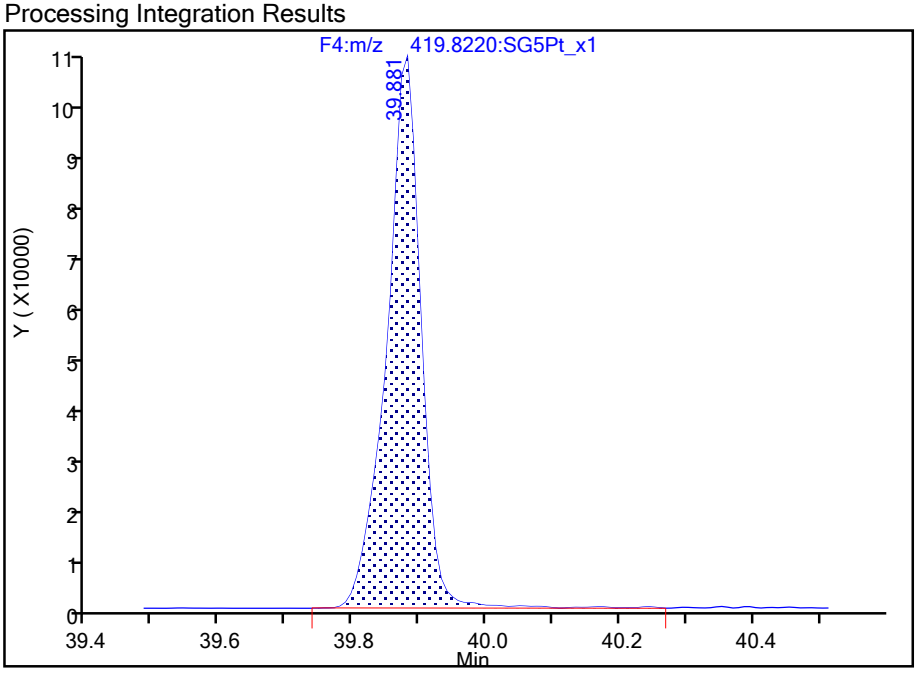

Manual Integration Results

RT: 39.88
Area: 362271
Amount: 129.2660
Amount Units: pg/ul

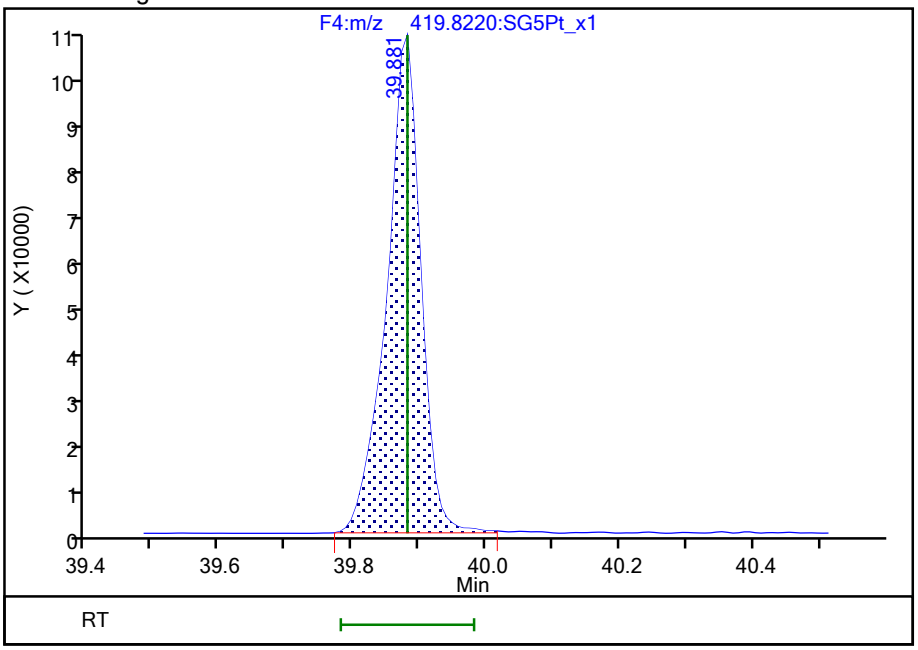

Reviewer: stephensk, 14-Aug-2021 17:28:33

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d				
Injection Date:	14-Aug-2021 02:27:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

13C-OCDD, CAS: 114423-97-1

Signal: 1

Processing Integration Results

RT: 42.08
Area: 408164
Amount: 263.4163
Amount Units: pg/ul

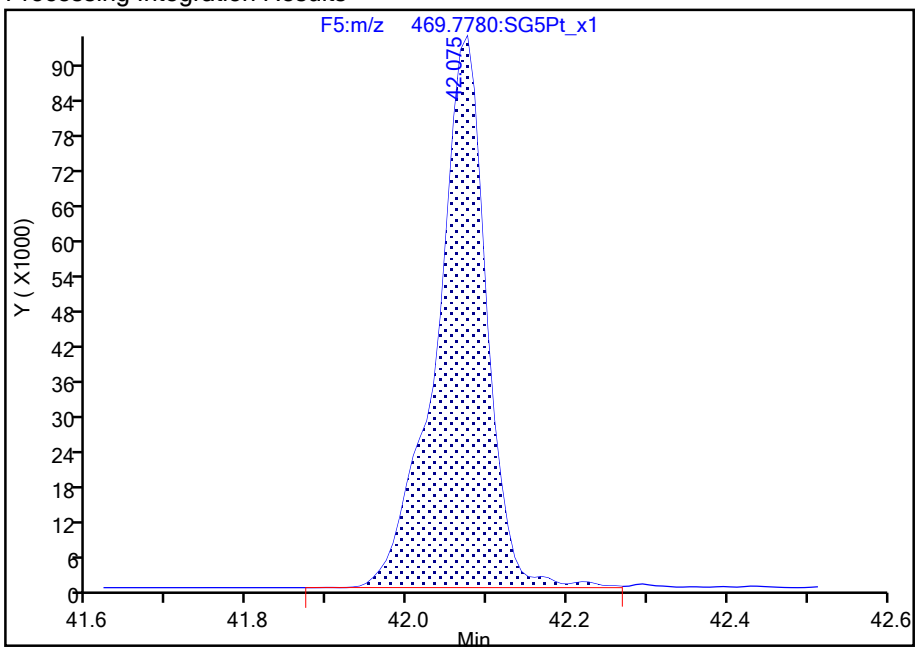

Manual Integration Results

RT: 42.08
Area: 402300
Amount: 259.9268
Amount Units: pg/ul

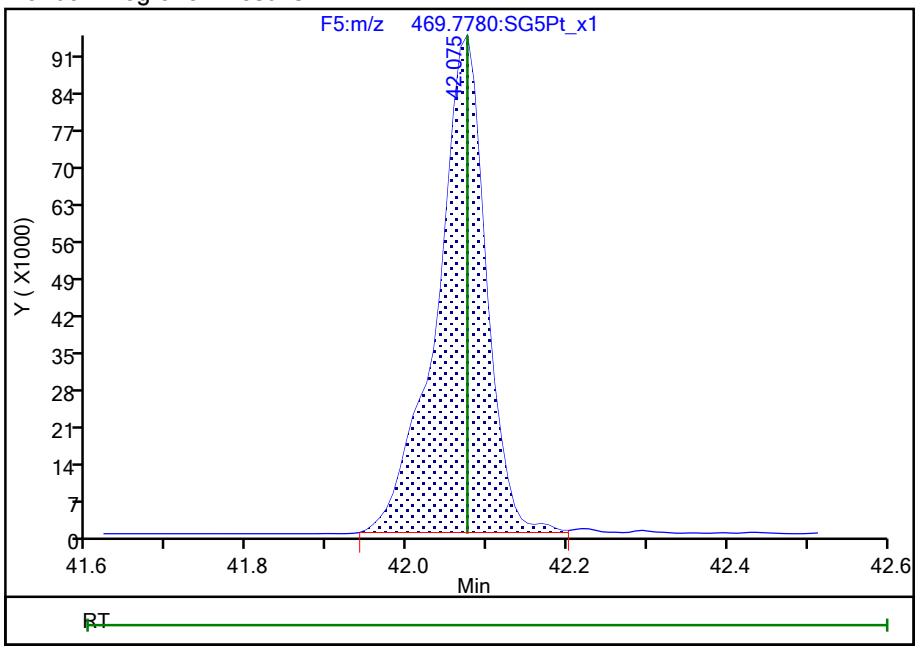

Reviewer: stephensk, 14-Aug-2021 17:30:41

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d				
Injection Date:	14-Aug-2021 02:27:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

13C-OCDD, CAS: 114423-97-1

Signal: 2

Processing Integration Results

RT: 42.08
Area: 453683
Amount: 263.4163
Amount Units: pg/ul

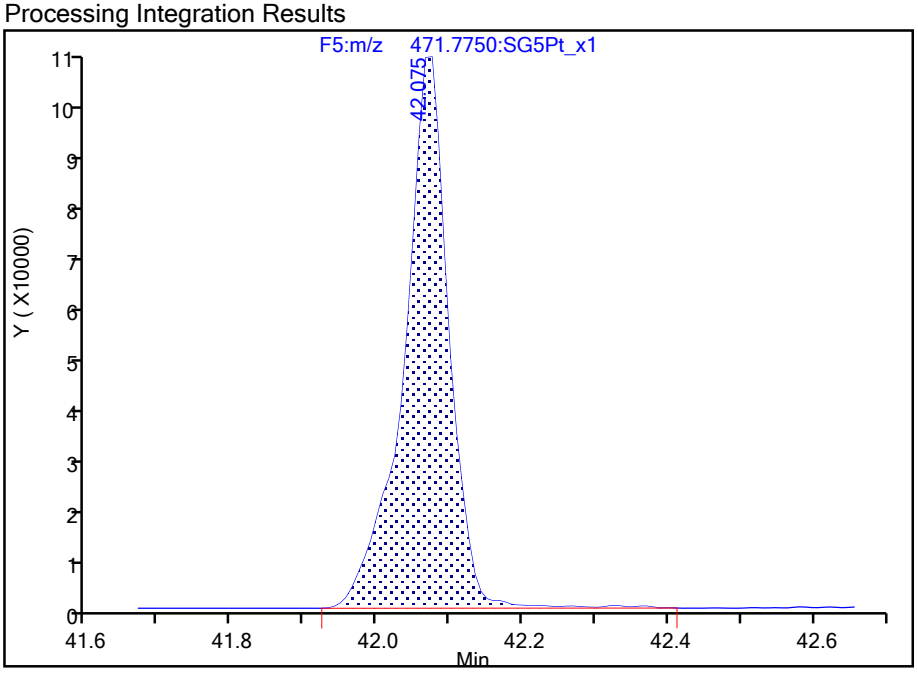

Manual Integration Results

RT: 42.08
Area: 448130
Amount: 259.9268
Amount Units: pg/ul

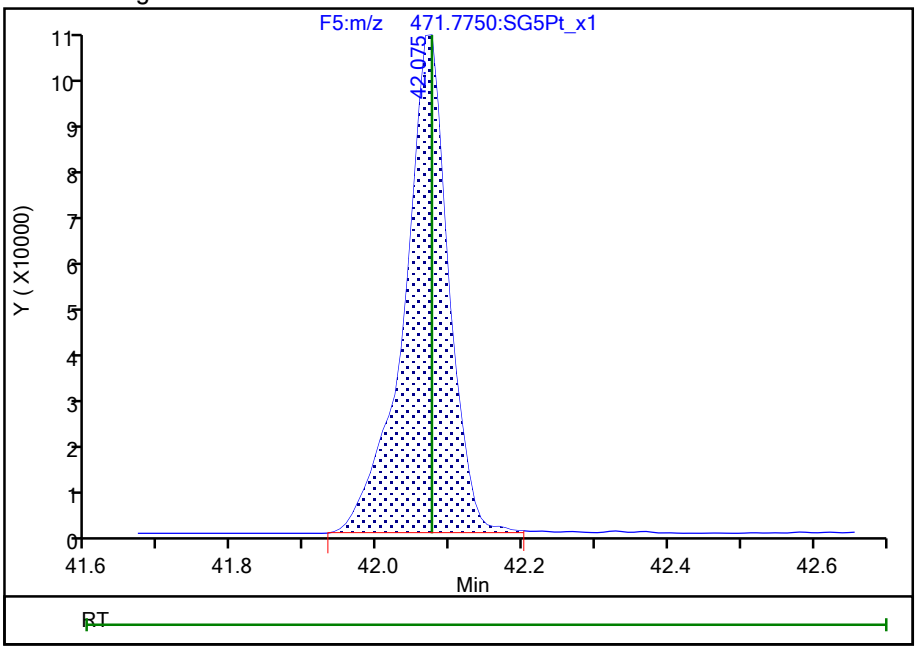

Reviewer: stephensk, 14-Aug-2021 17:30:55

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 16-Aug-2021 12:24:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
Injection Date:	14-Aug-2021 02:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

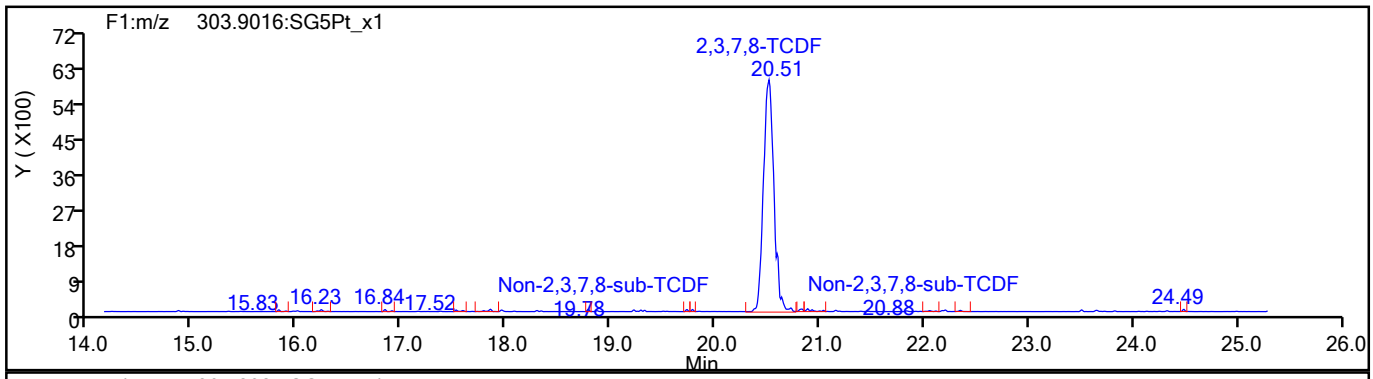

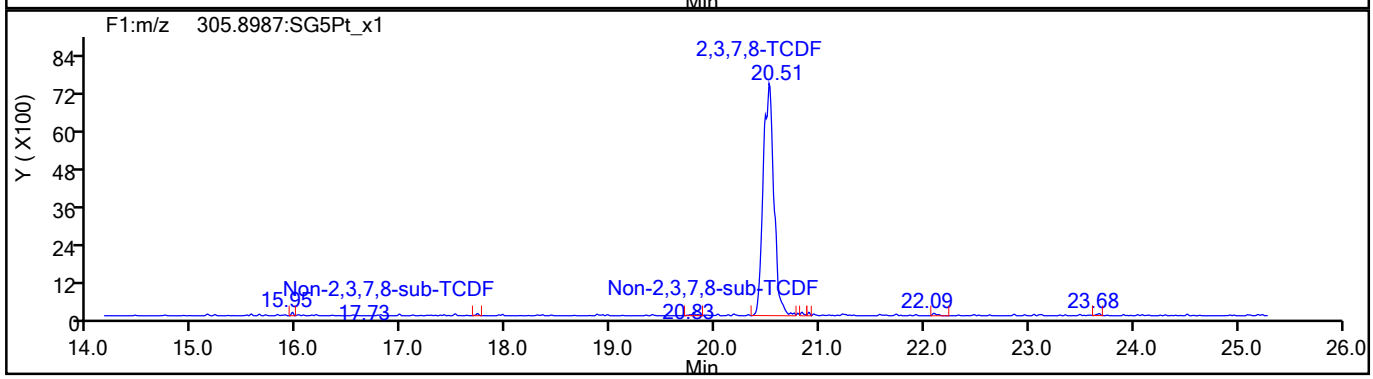

TCDF Standards

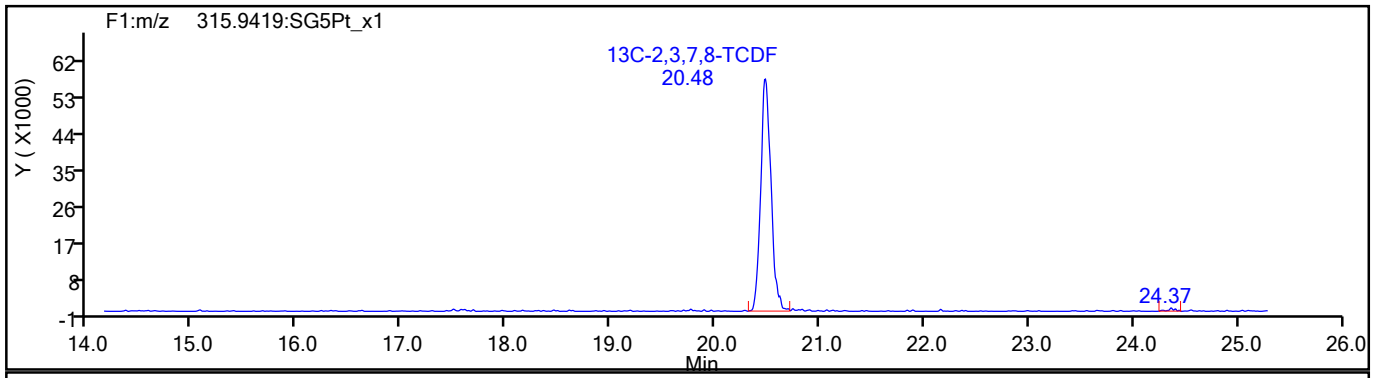

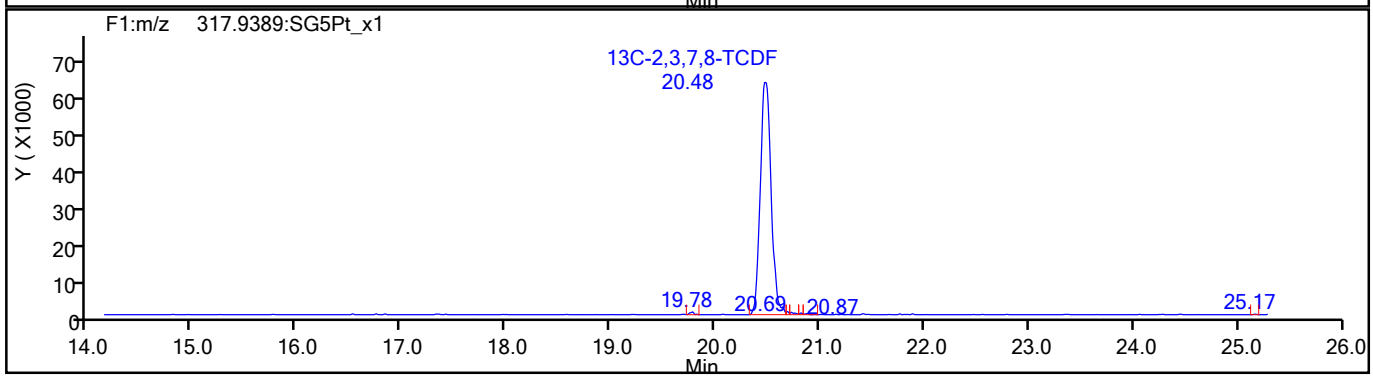

773873

Report Date: 16-Aug-2021 12:24:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
Injection Date:	14-Aug-2021 02:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

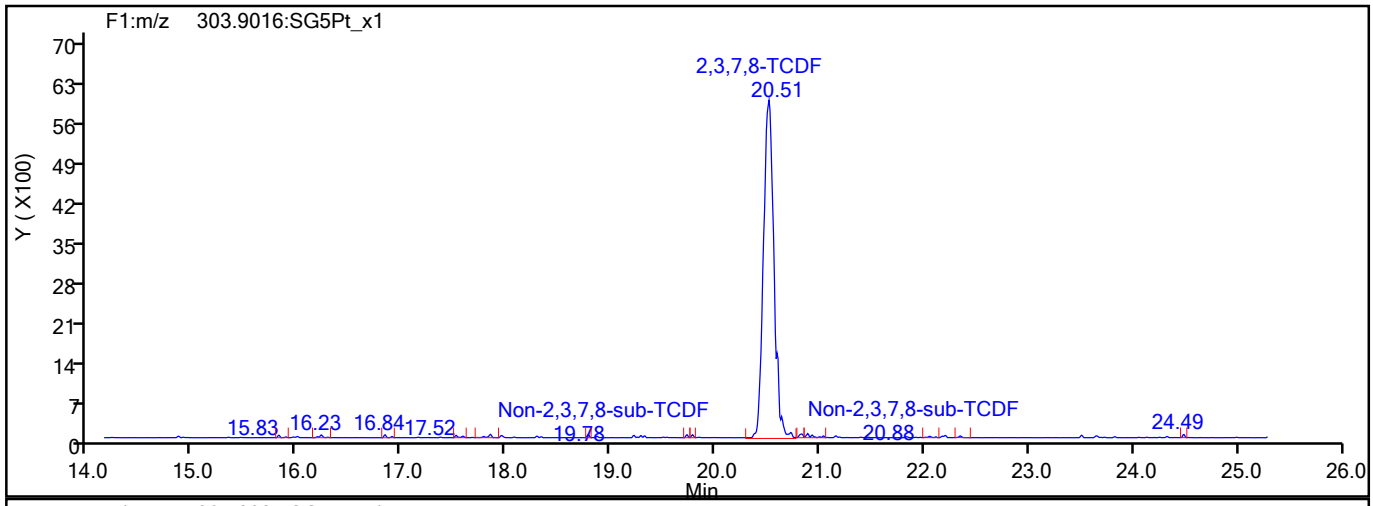

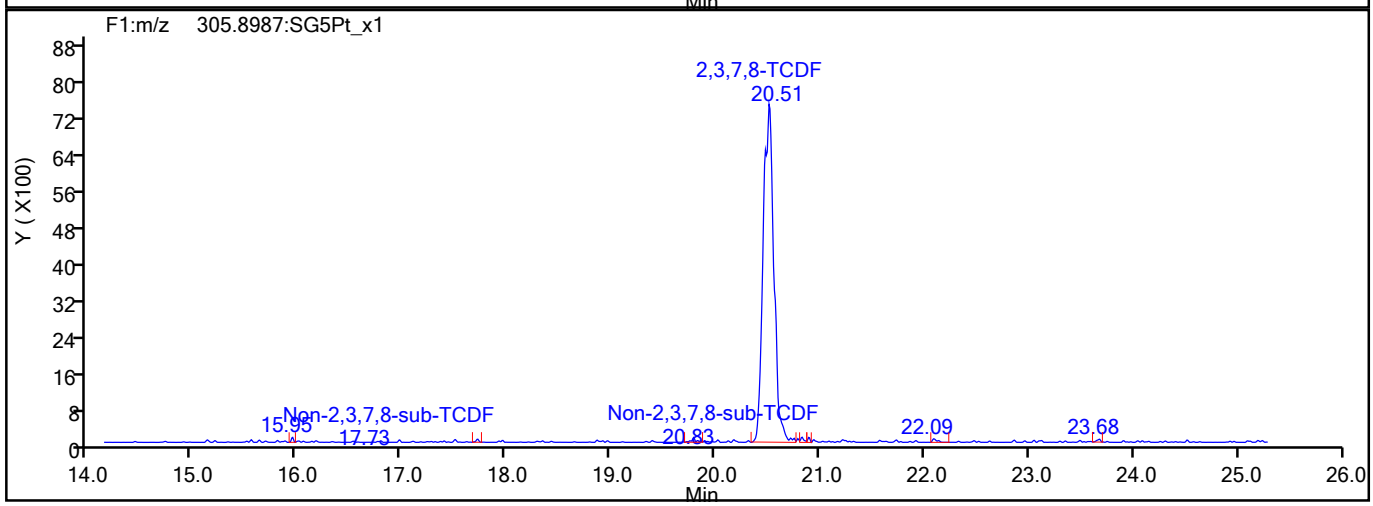

TCDF Interference Mass

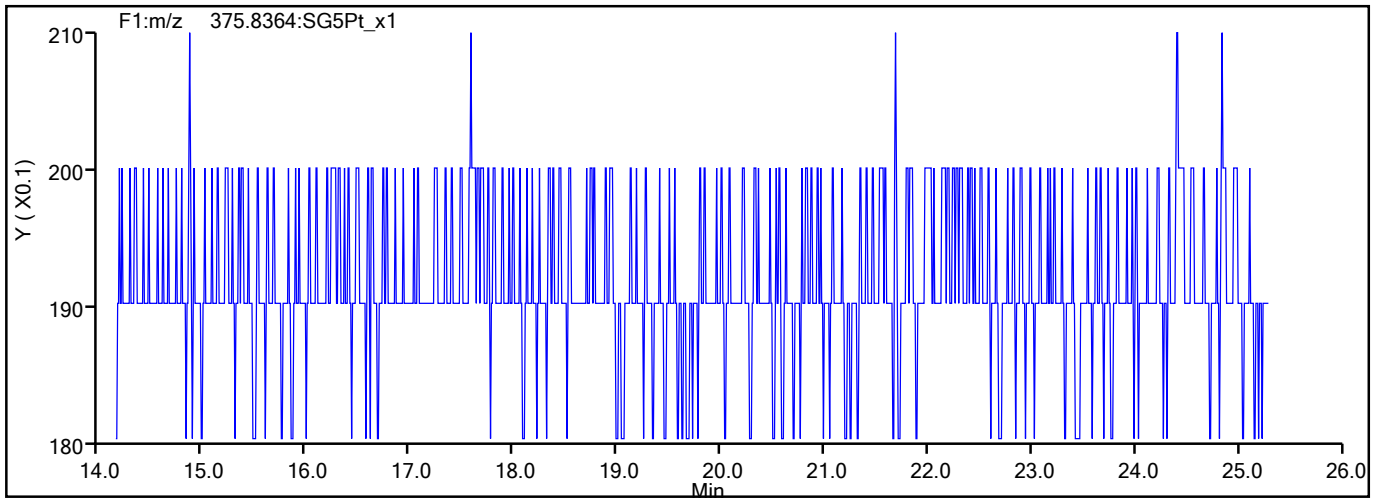

773874

Report Date: 16-Aug-2021 12:24:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
Injection Date:	14-Aug-2021 02:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

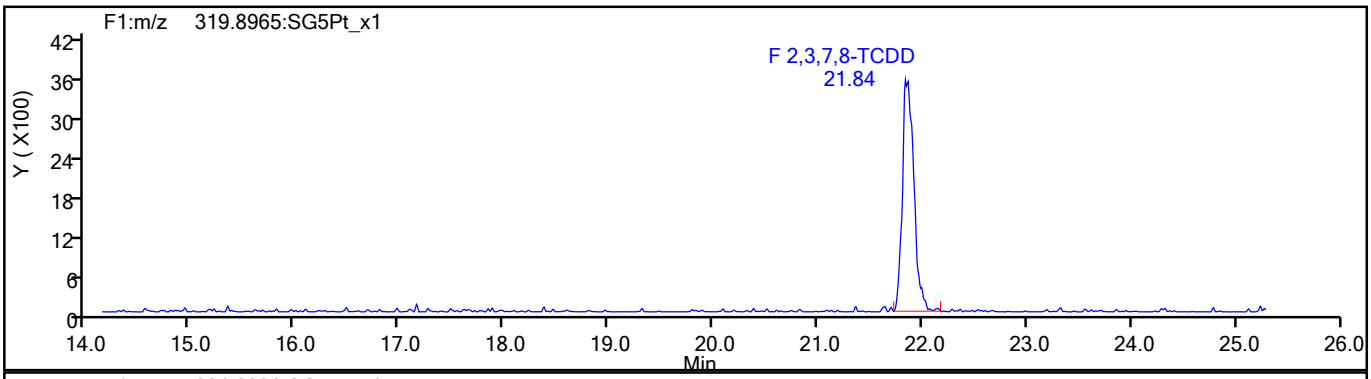

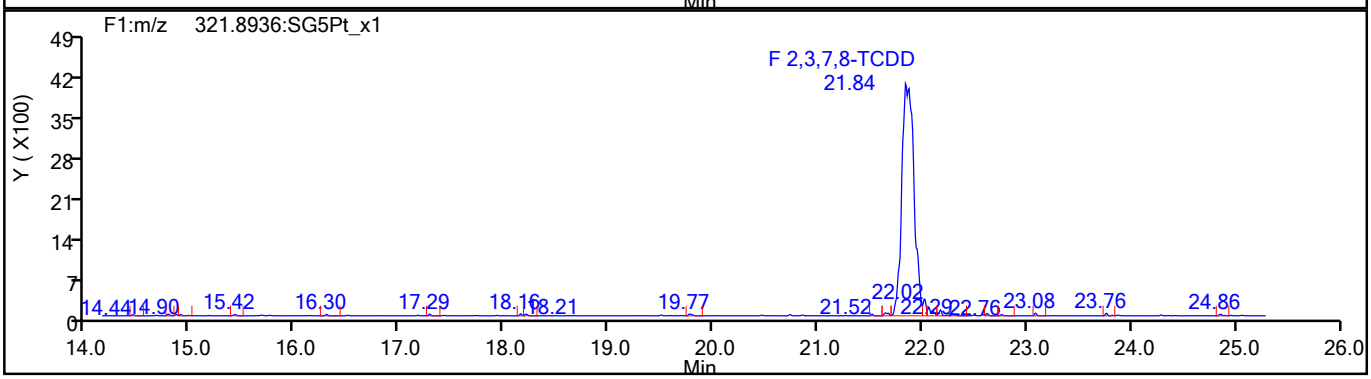

TCDD Standards

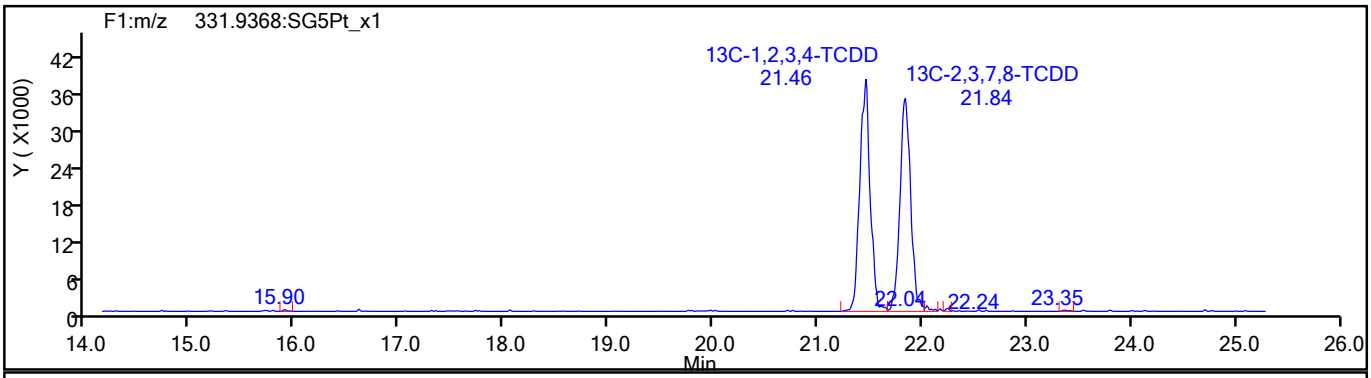

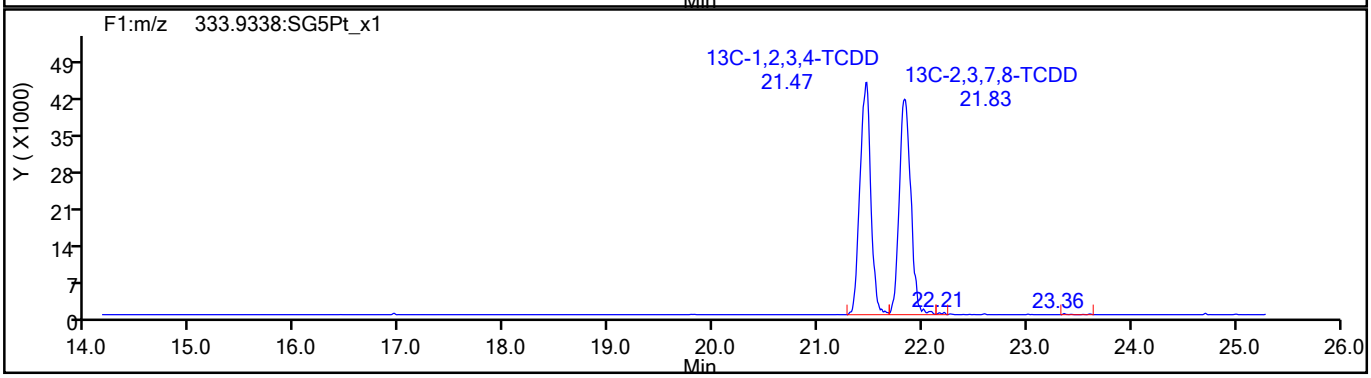

773875

Report Date: 16-Aug-2021 12:24:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
Injection Date:	14-Aug-2021 02:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

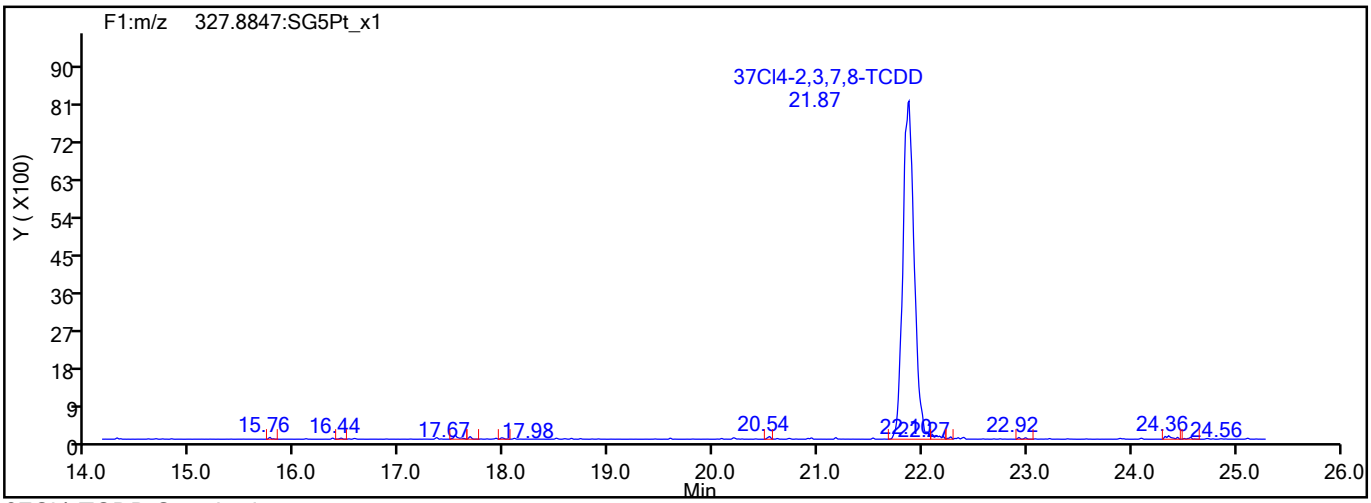

37Cl4-TCDD Standards

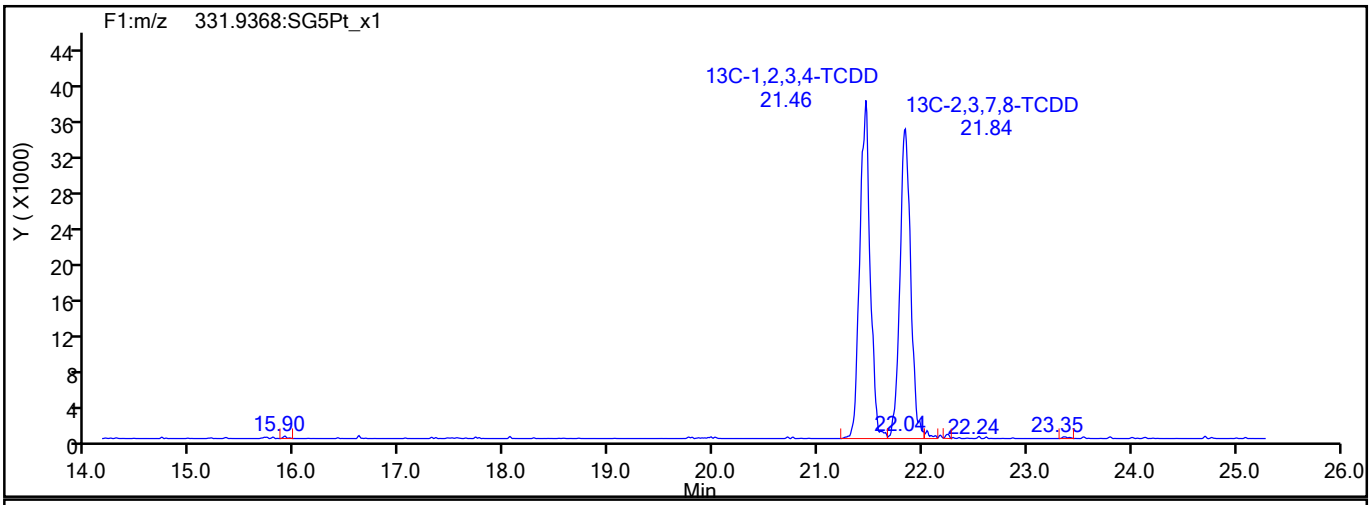

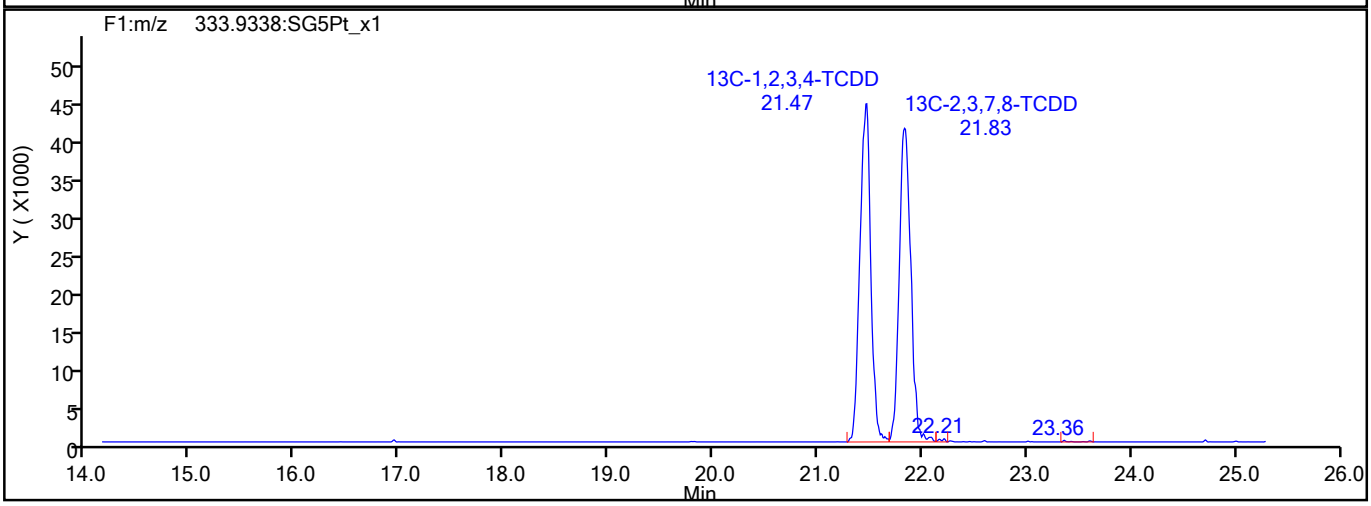

773876

Report Date: 16-Aug-2021 12:24:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
Injection Date:	14-Aug-2021 02:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

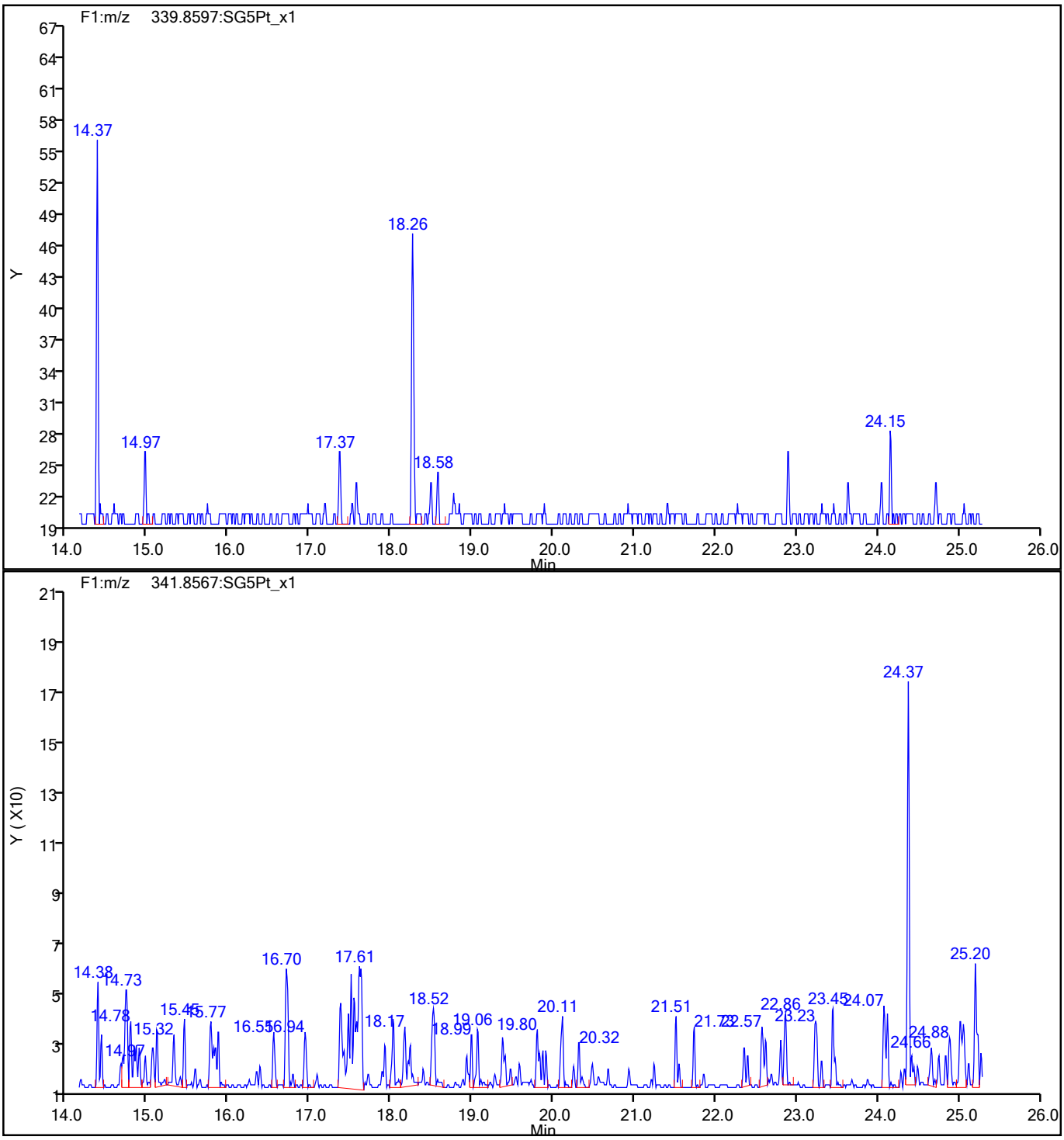

773877

Report Date: 16-Aug-2021 12:24:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
Injection Date:	14-Aug-2021 02:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

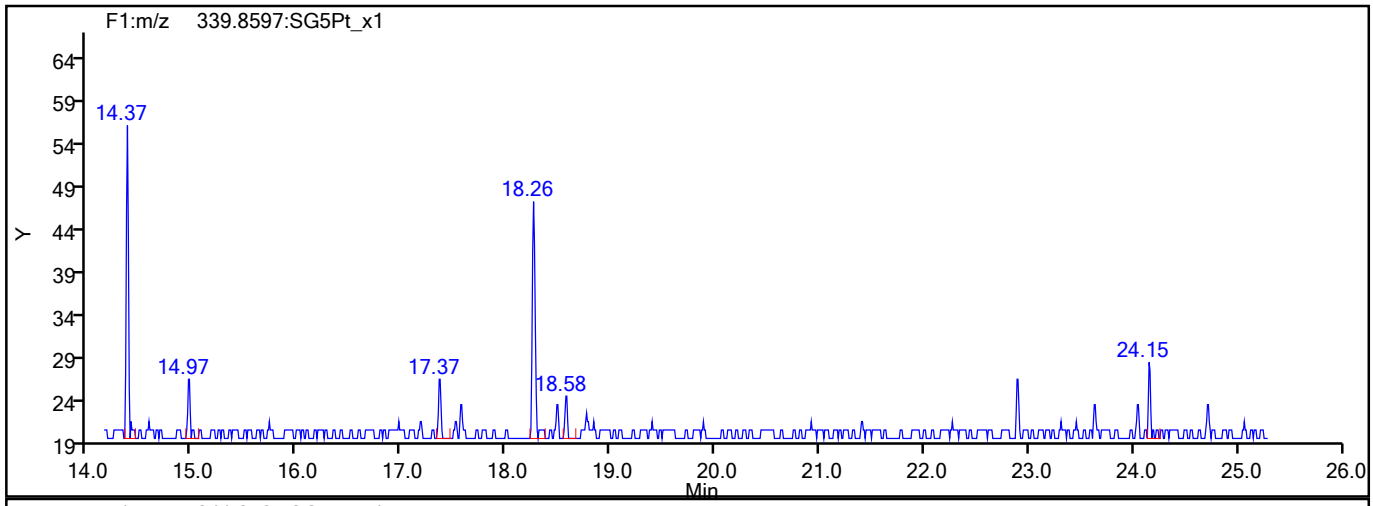

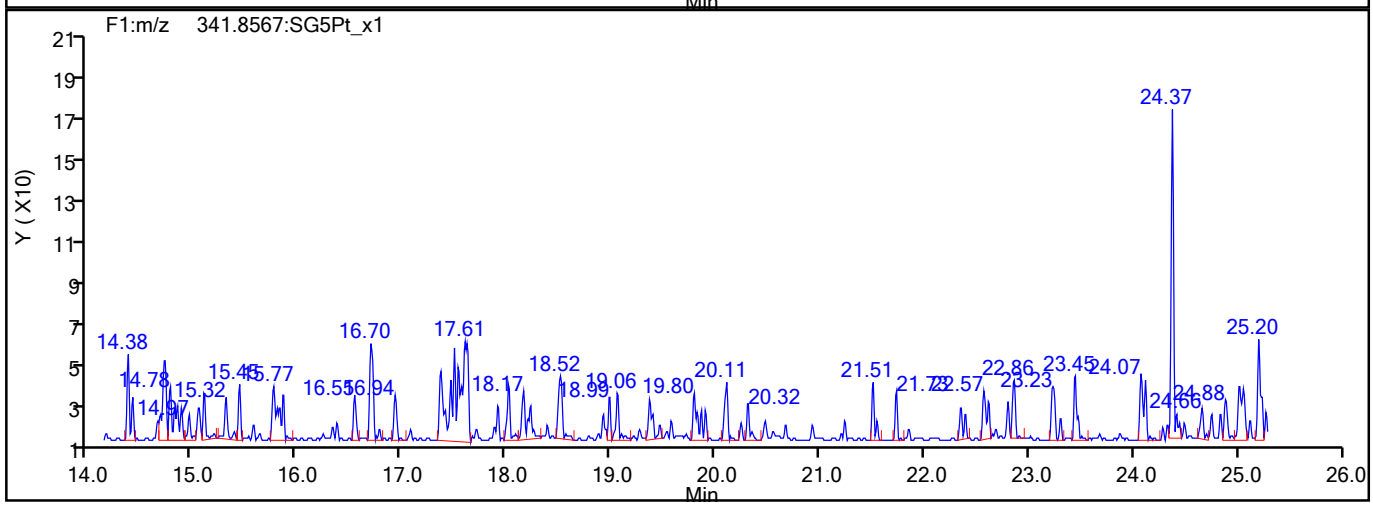

F1 PeCDFs Interference Mass

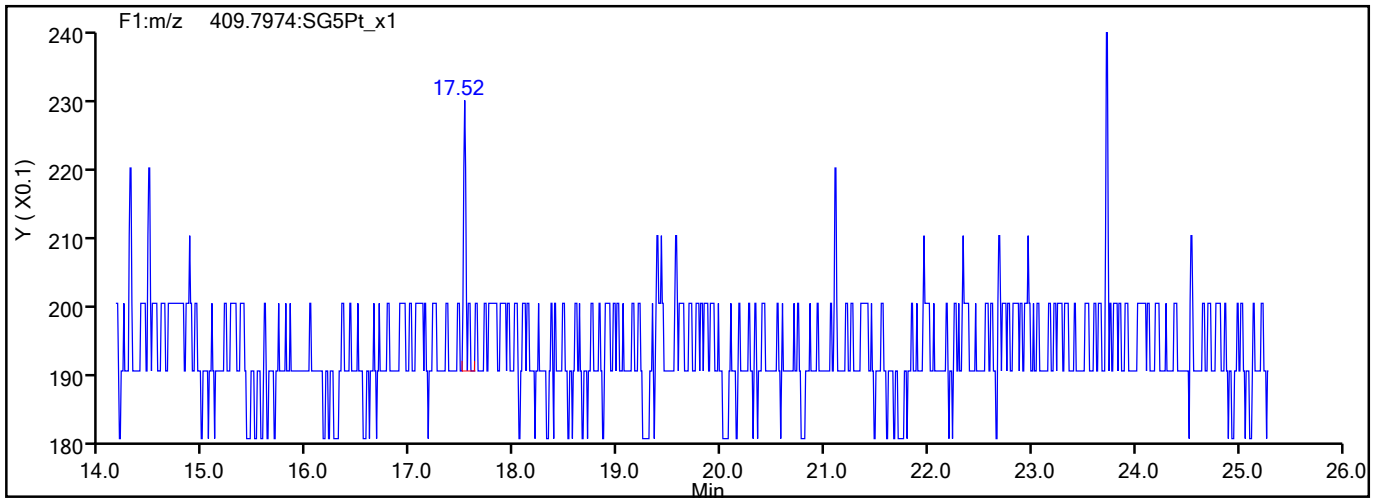

773878

Report Date: 16-Aug-2021 12:24:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

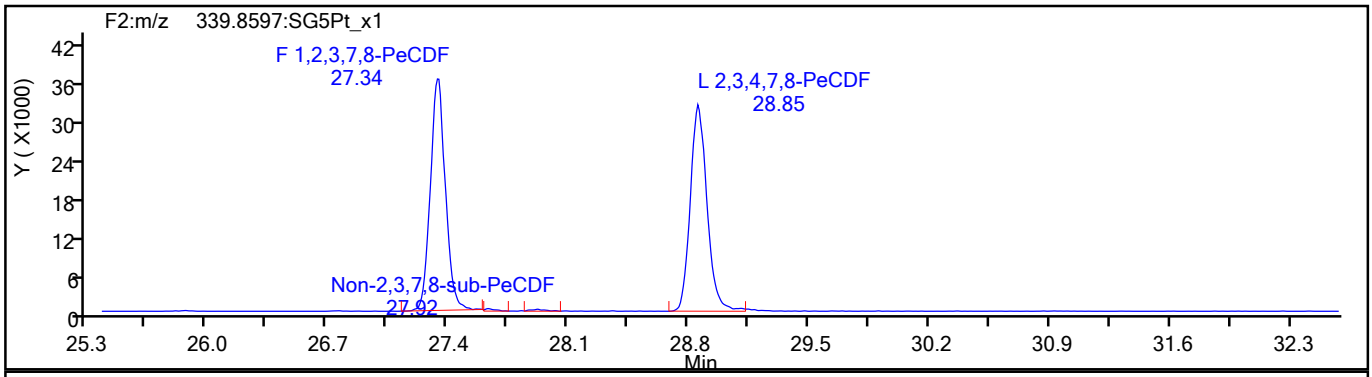

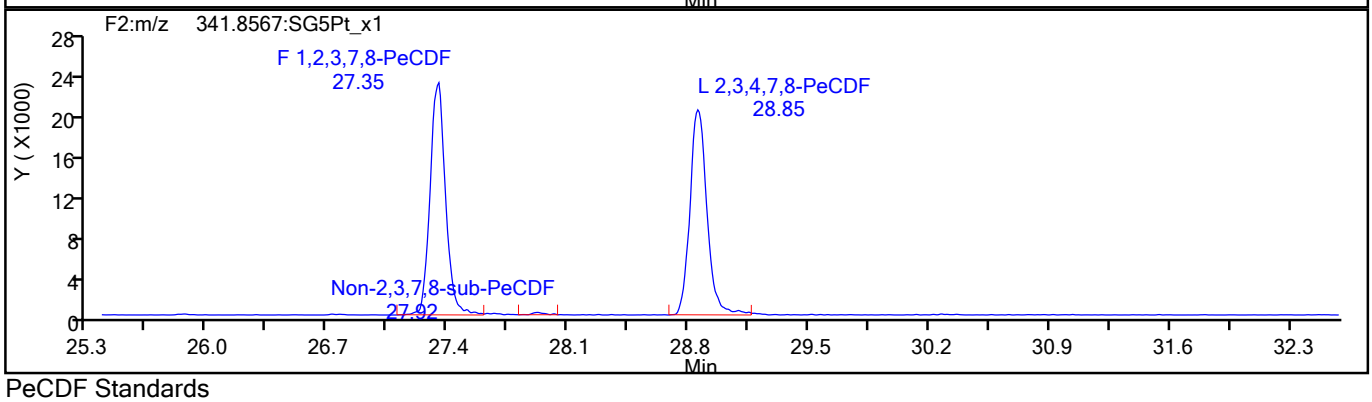

PeCDF Standards

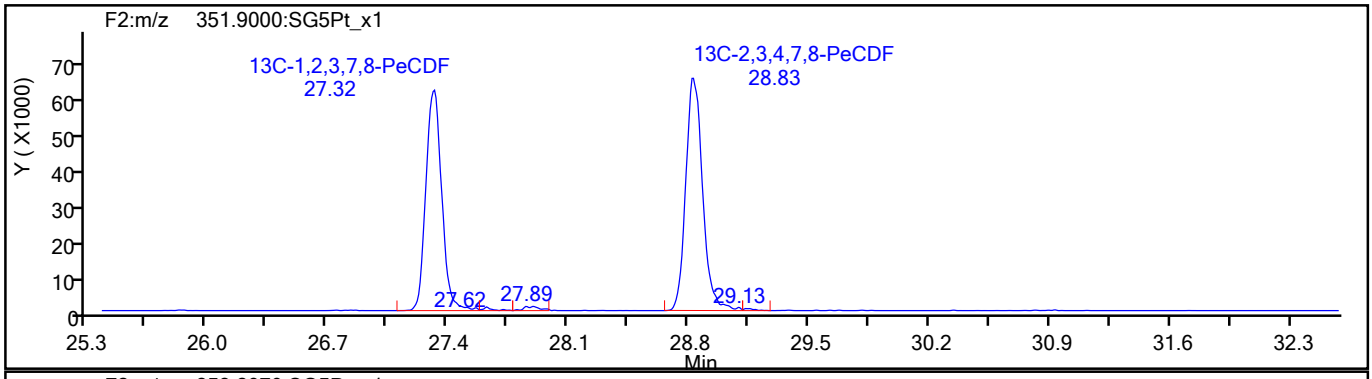

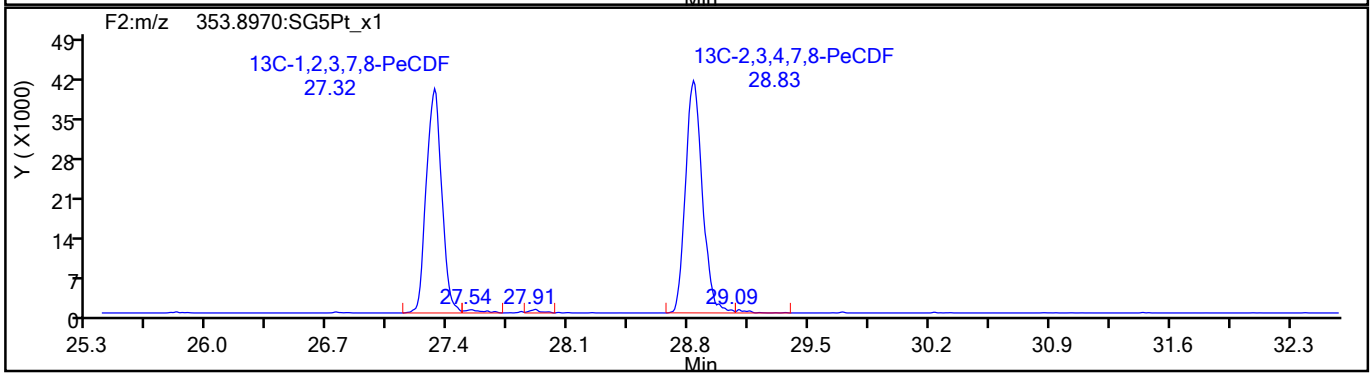

773879

Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

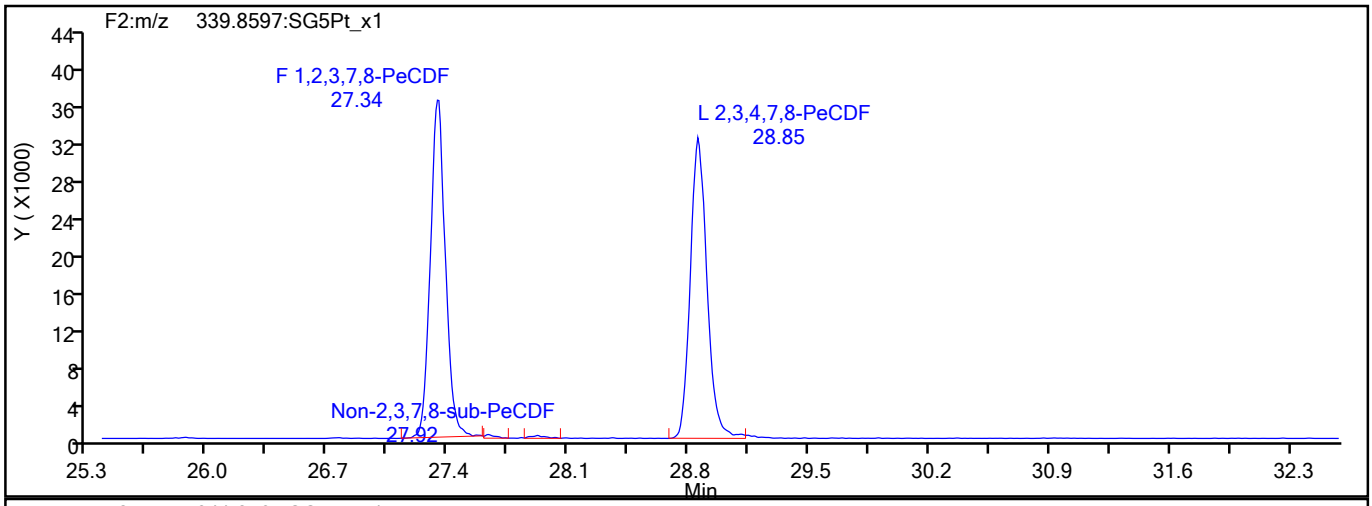

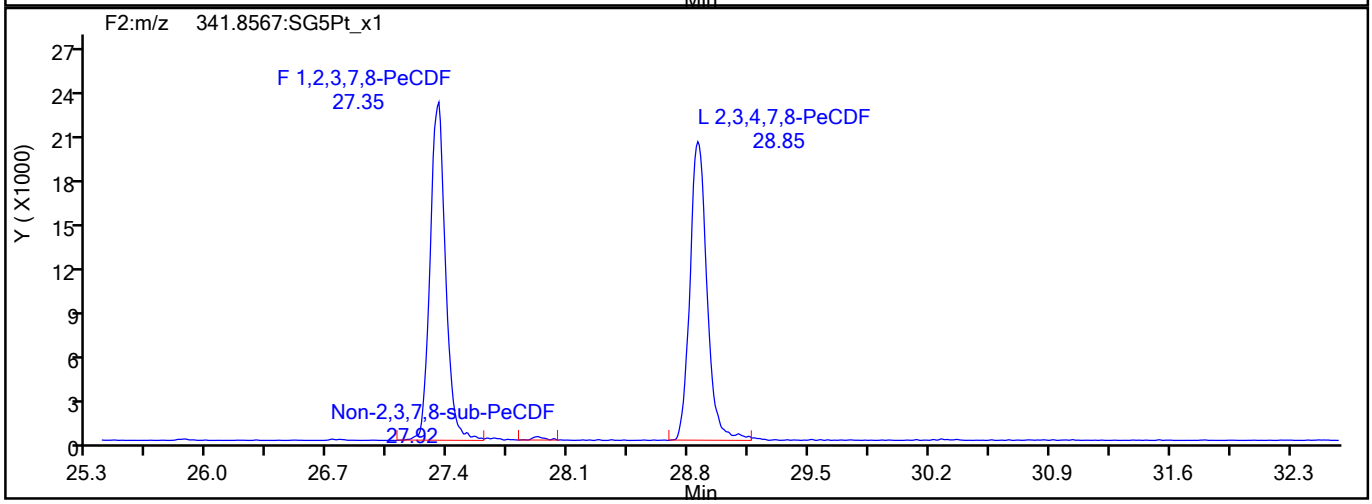

PeCDF Interference Mass

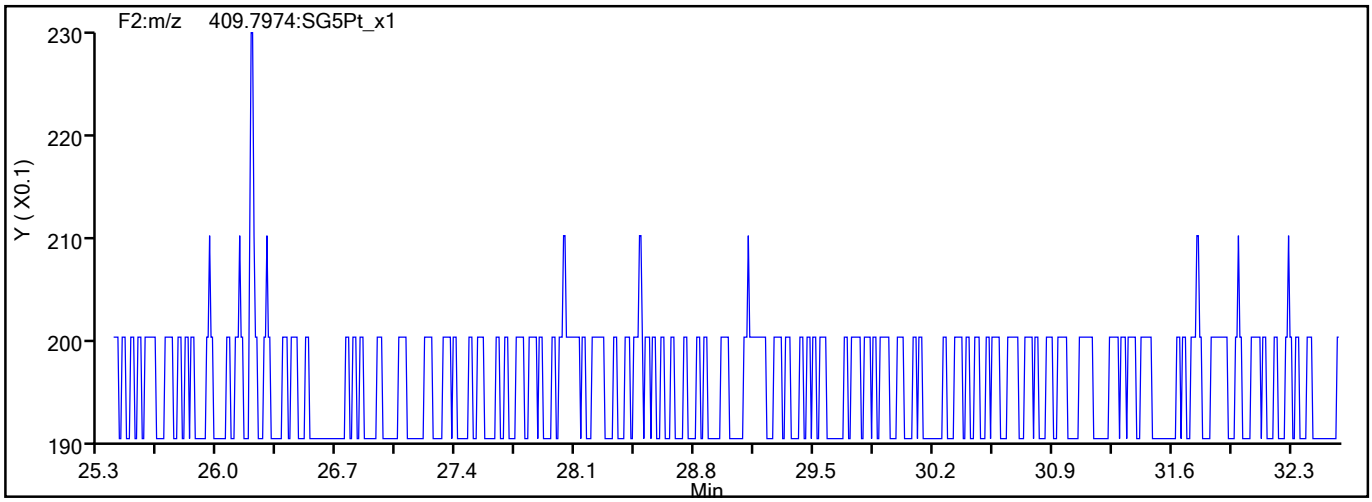

773880

Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

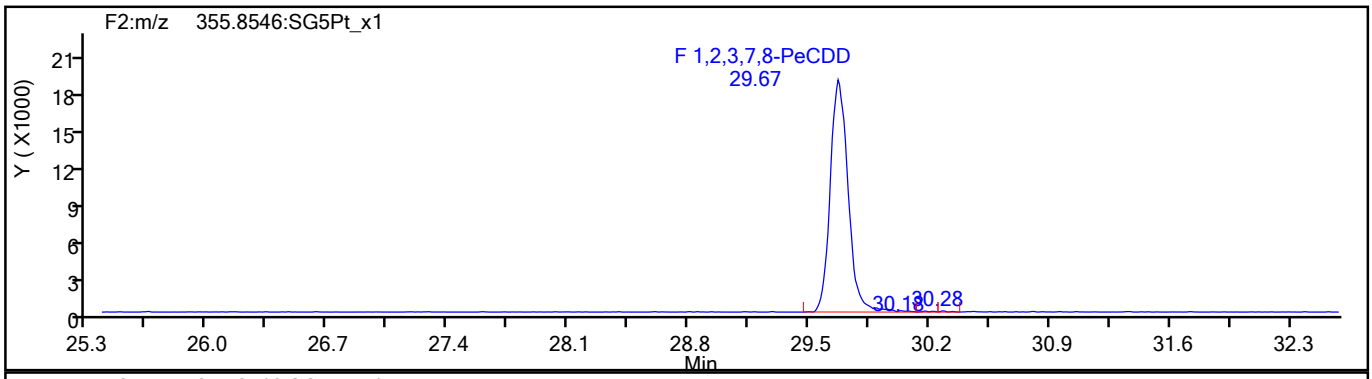

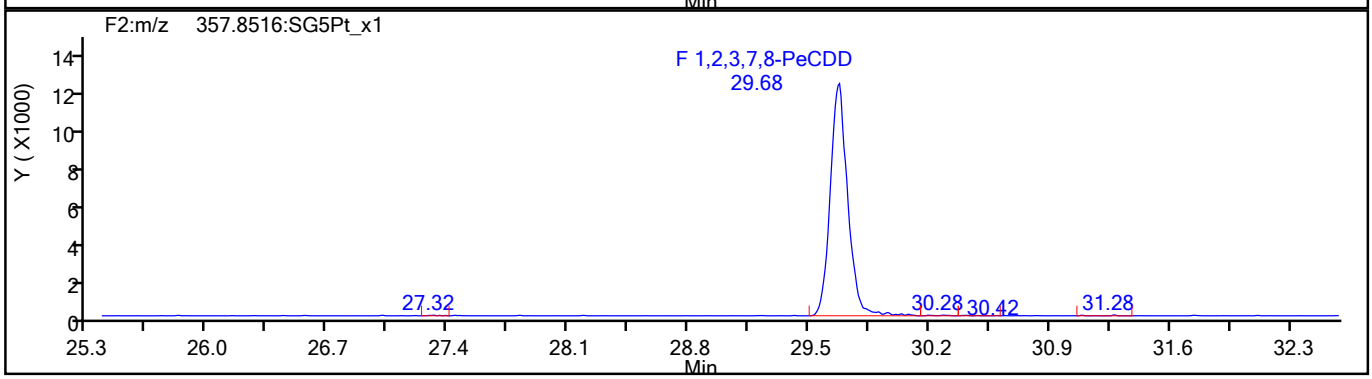

PeCDD Standards

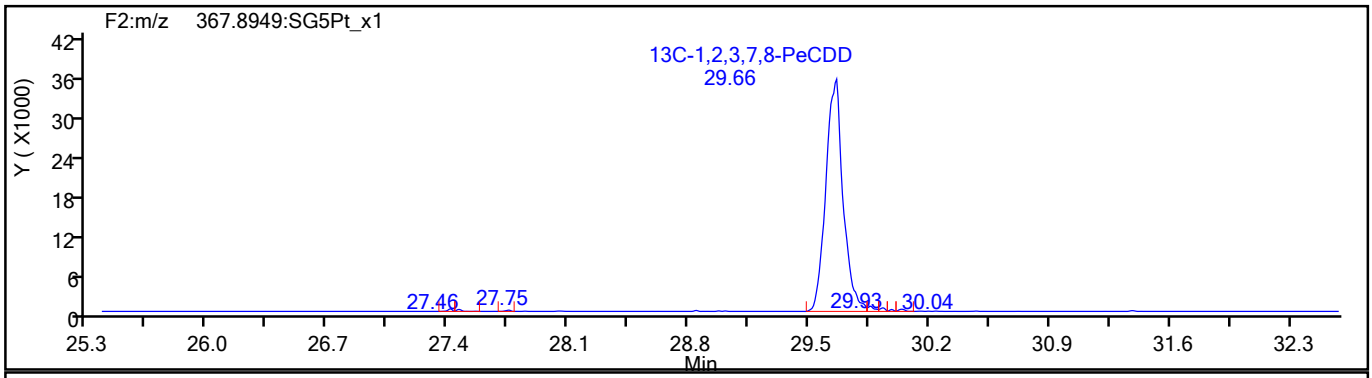

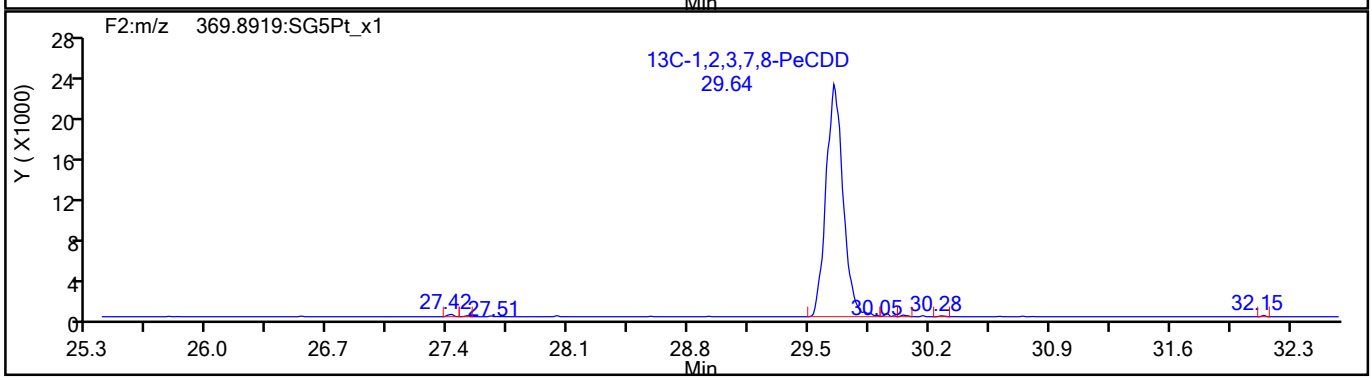

773881

Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

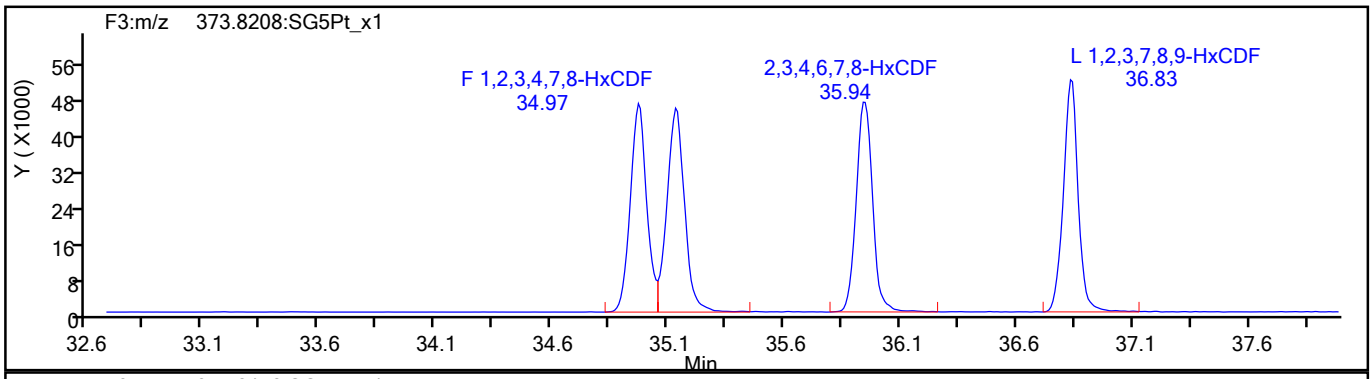

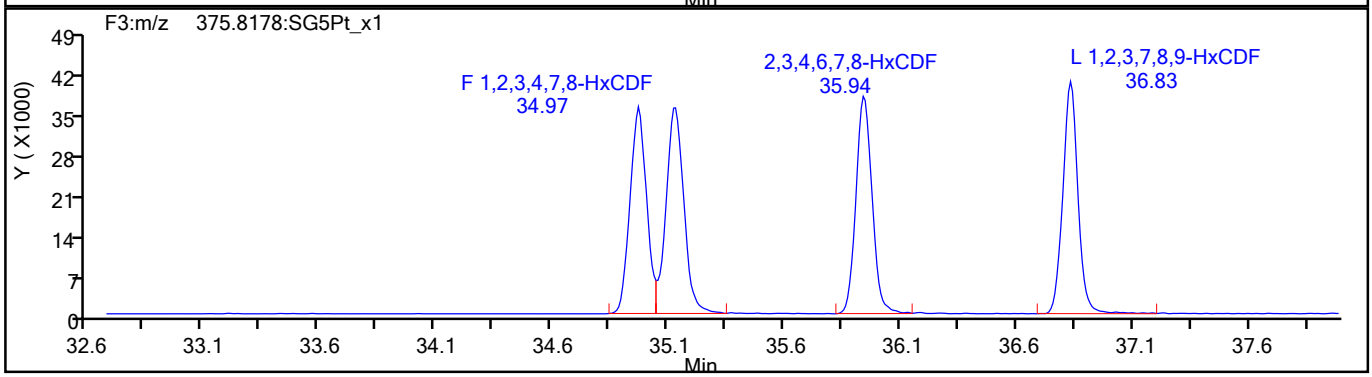

HxCDF Standards

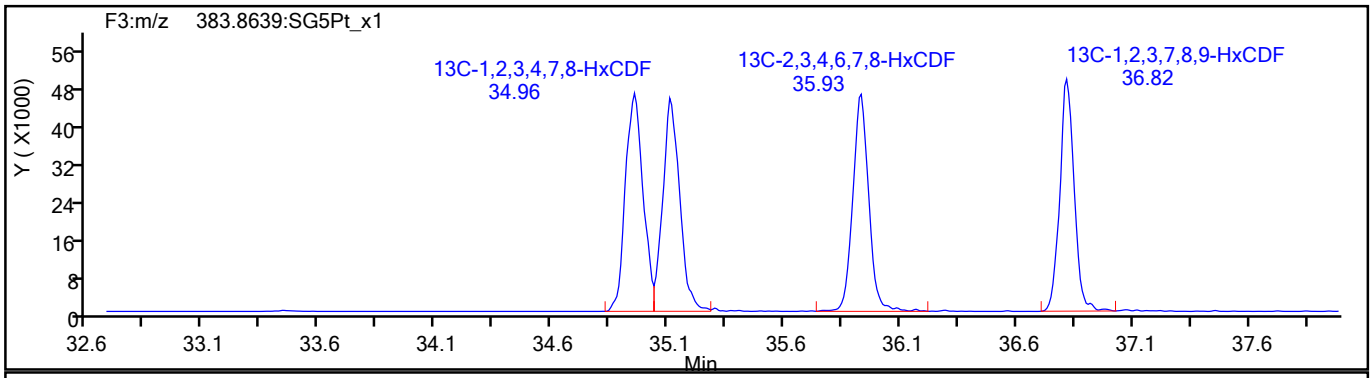

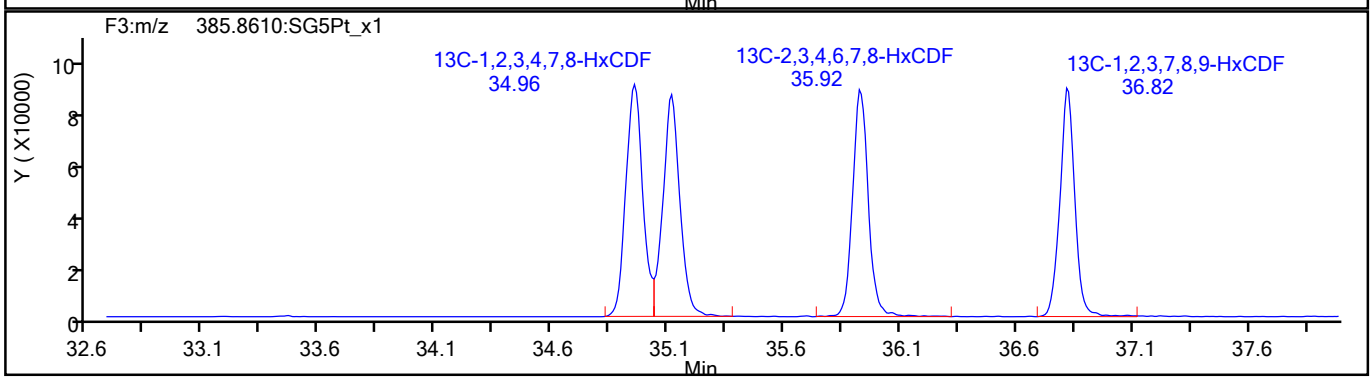

773882

Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

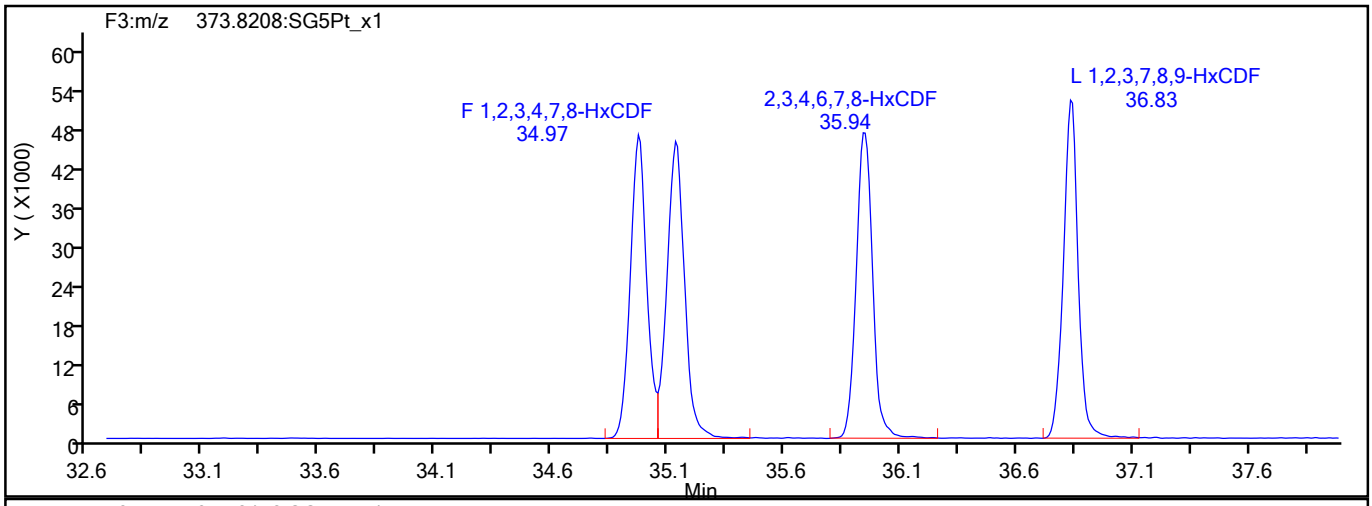

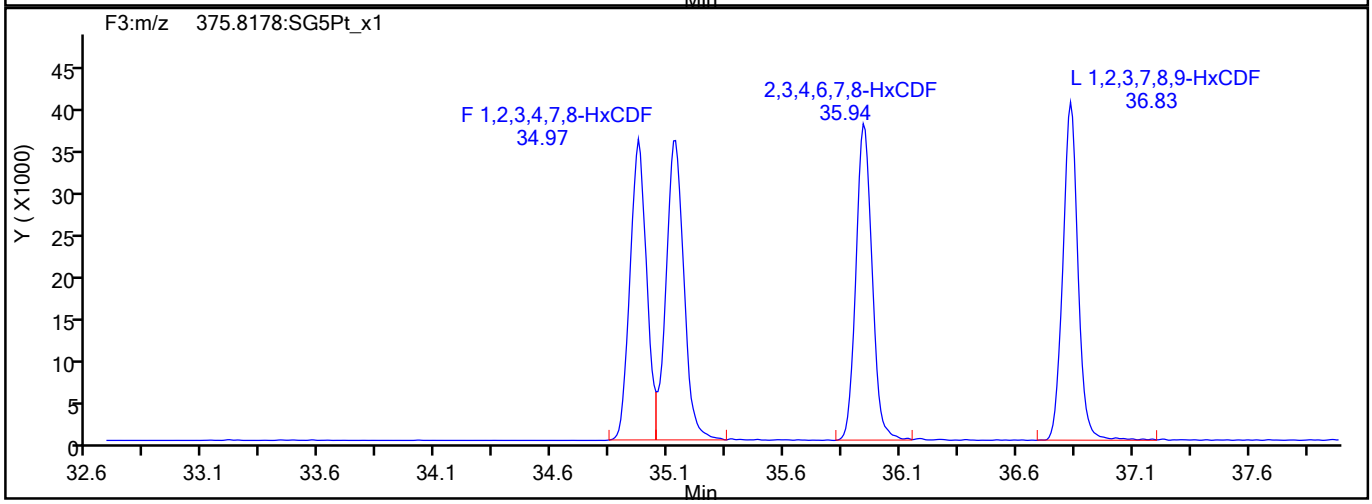

HxCDF Interference Mass

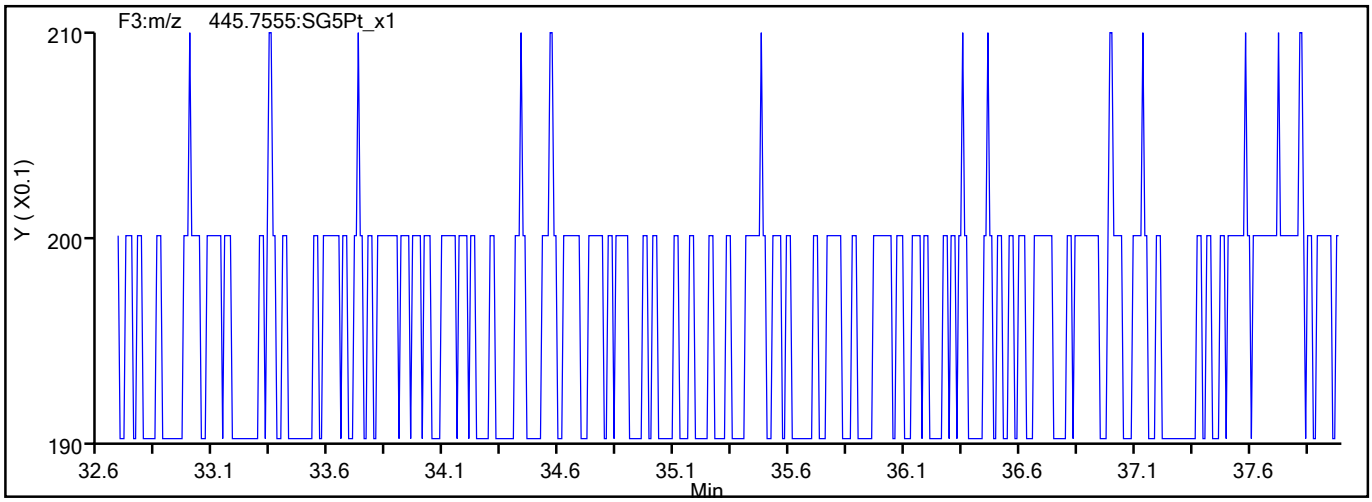

773883

Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

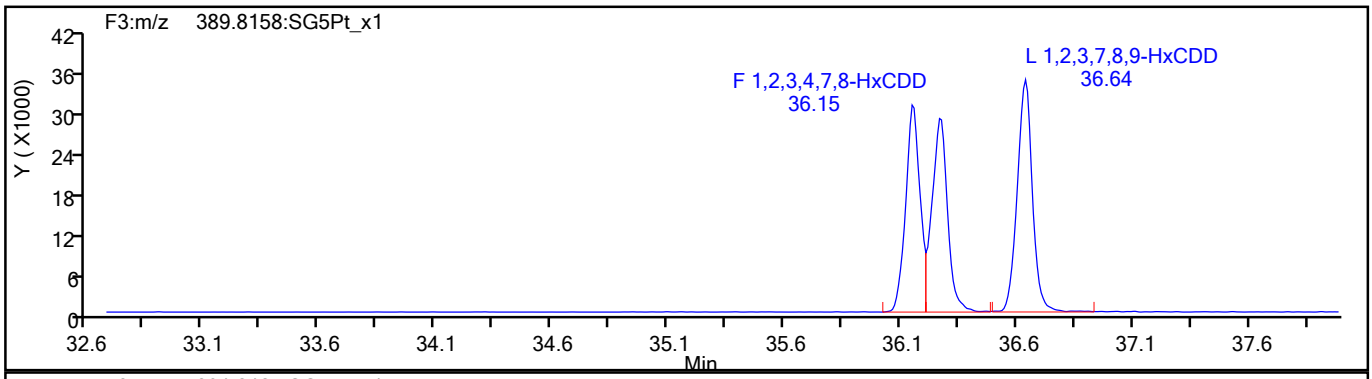

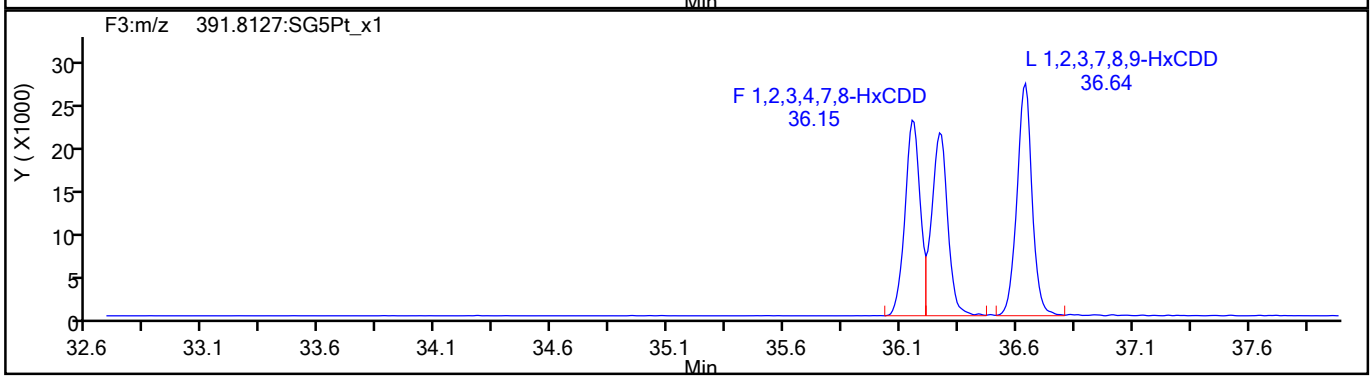

HxCDD Standards

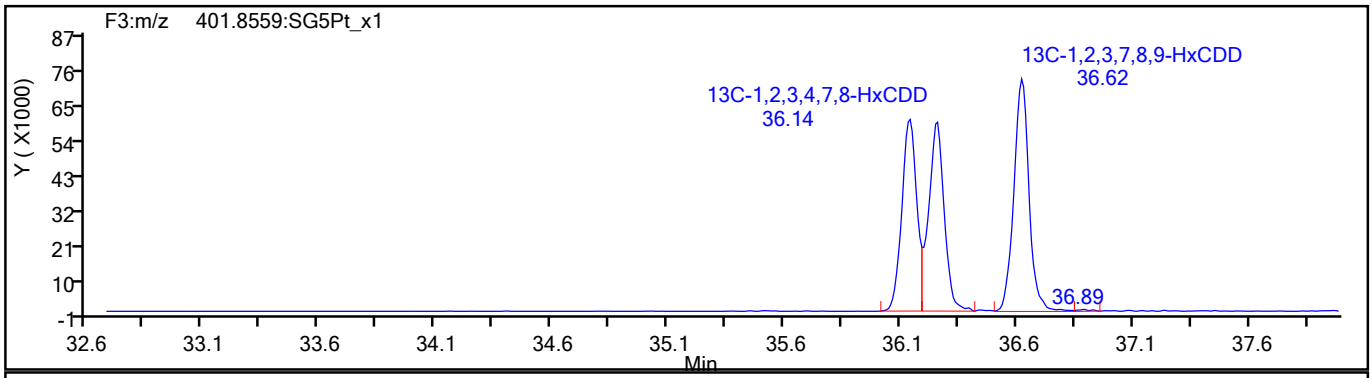

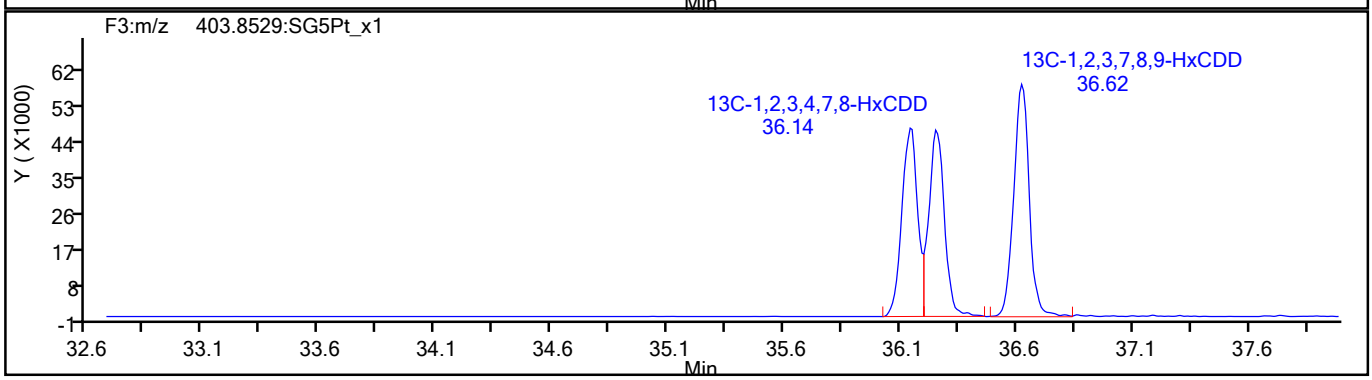

773884

Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

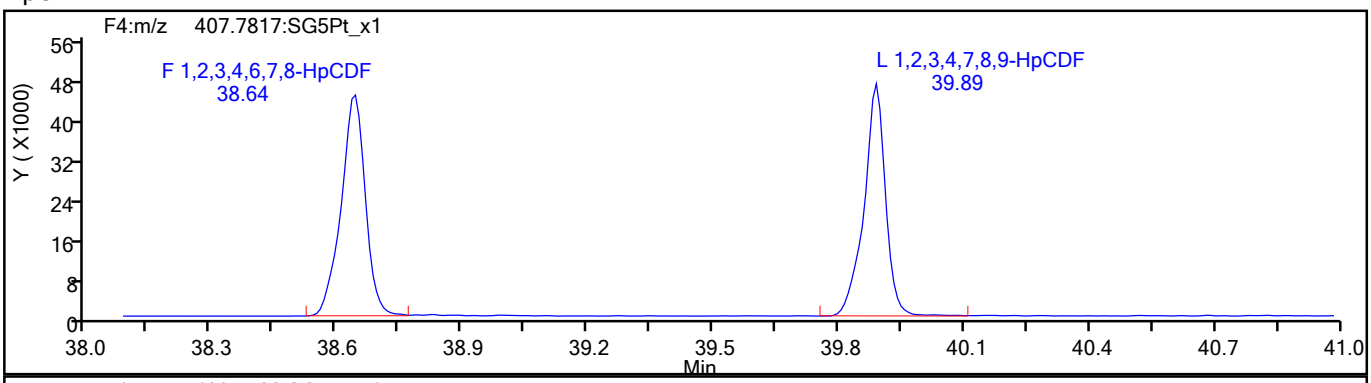

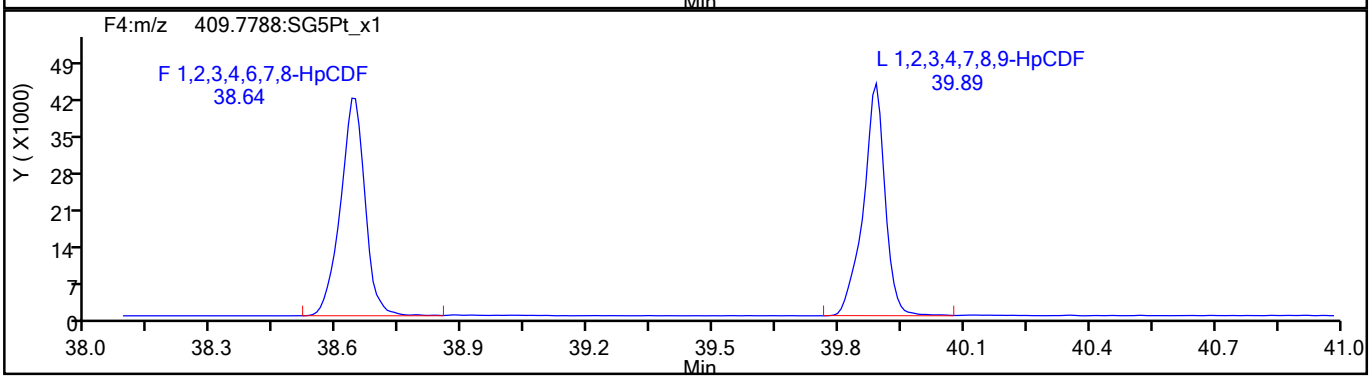

HpCDF Standards

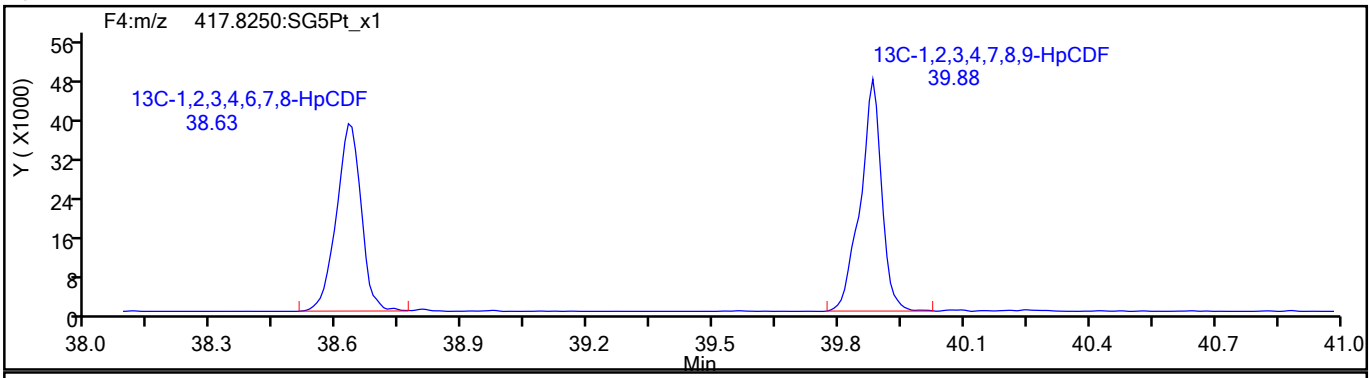

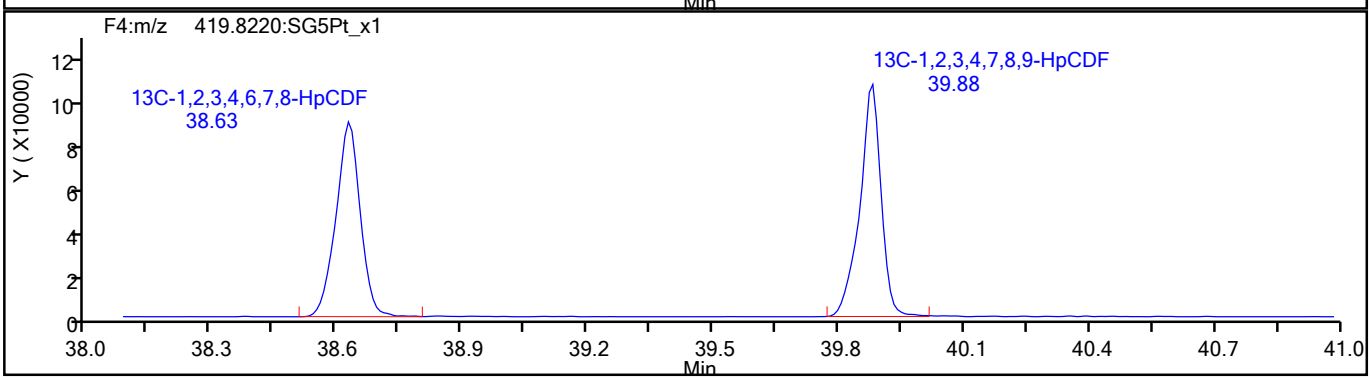

773885

Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

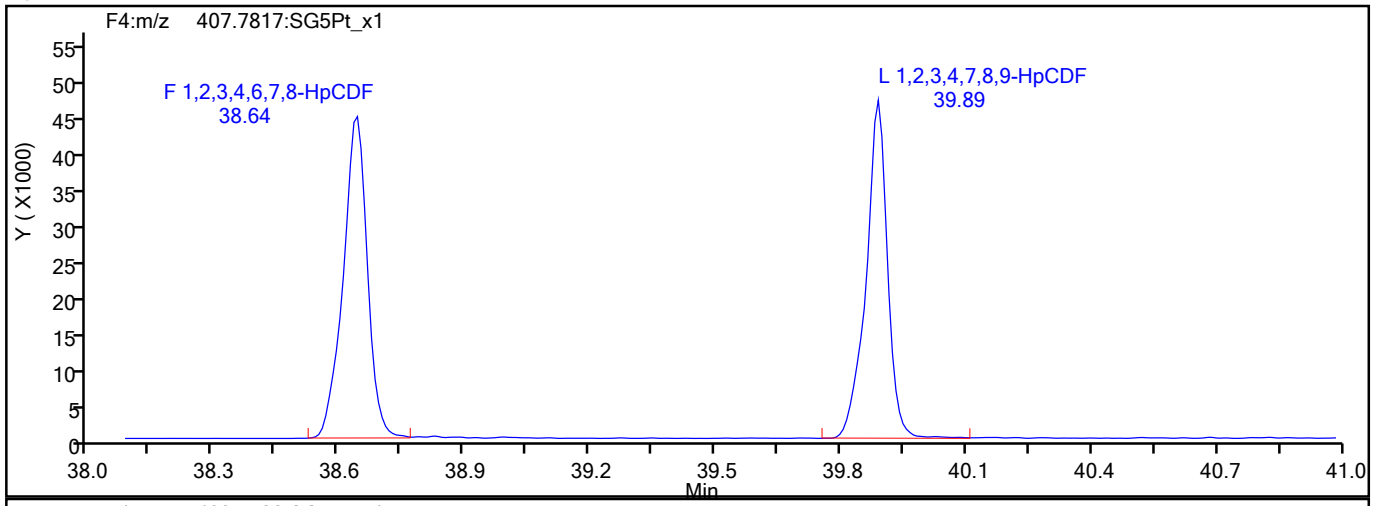

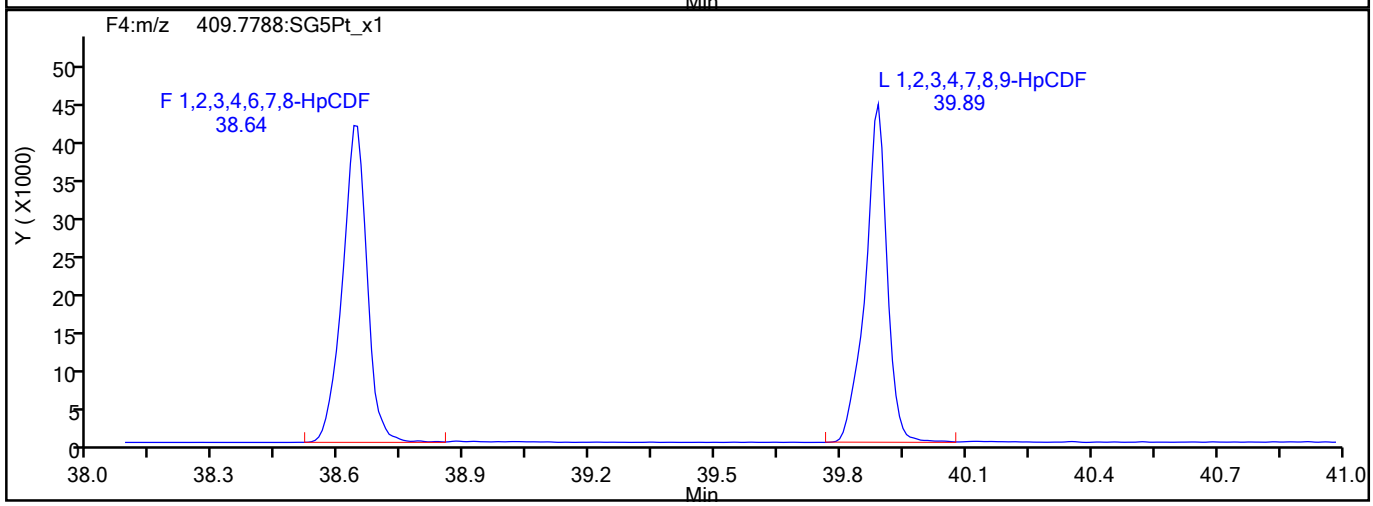

HpCDF Interference Mass

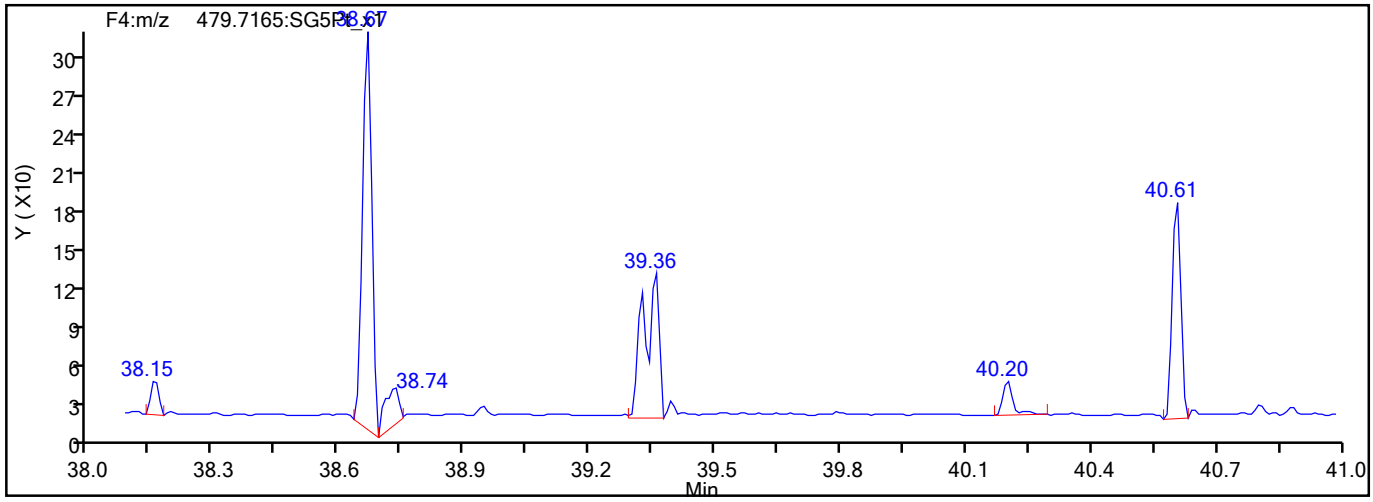

773886

Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDD

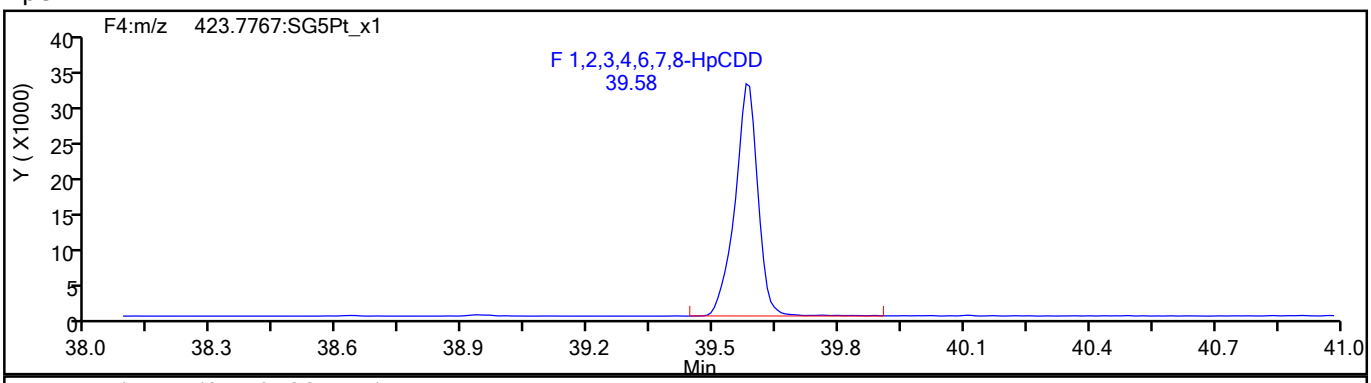

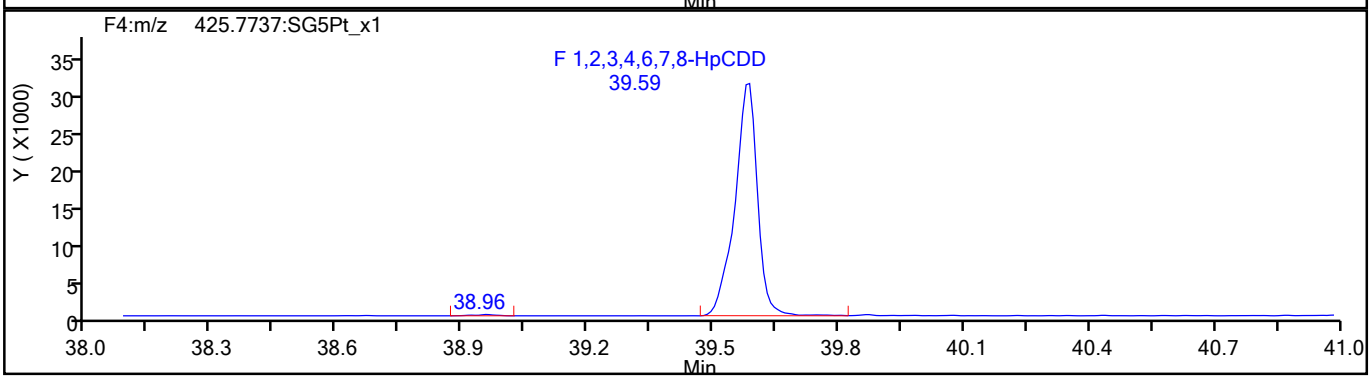

HpCDD Standards

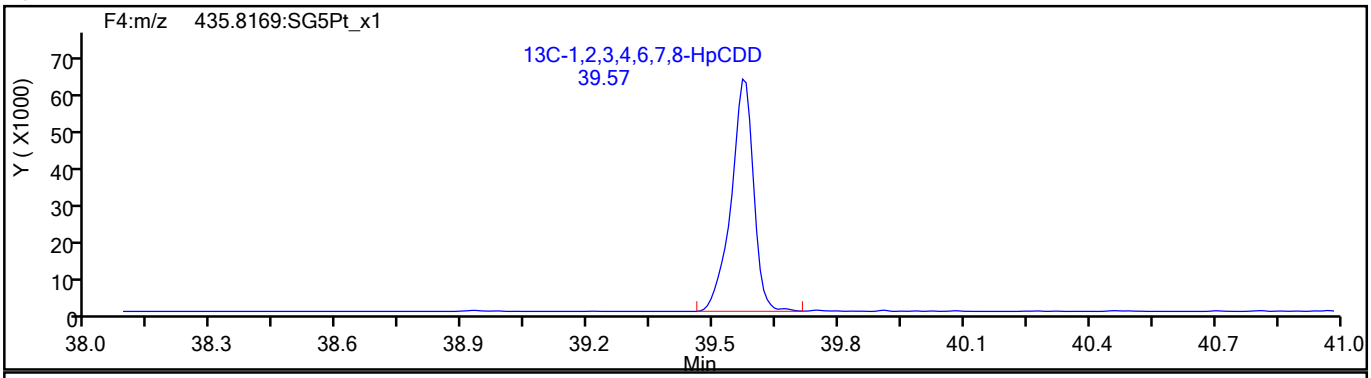

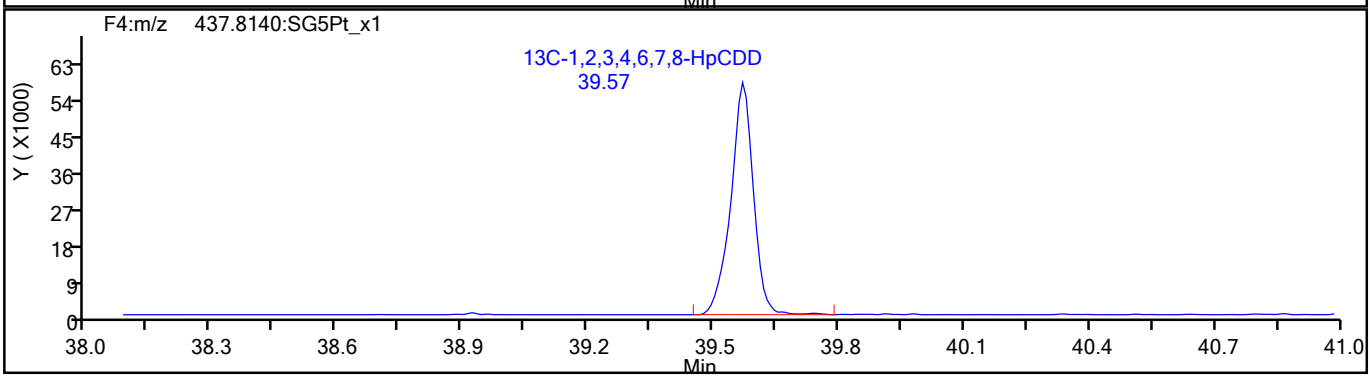

773887

Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
Injection Date:	14-Aug-2021 02:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

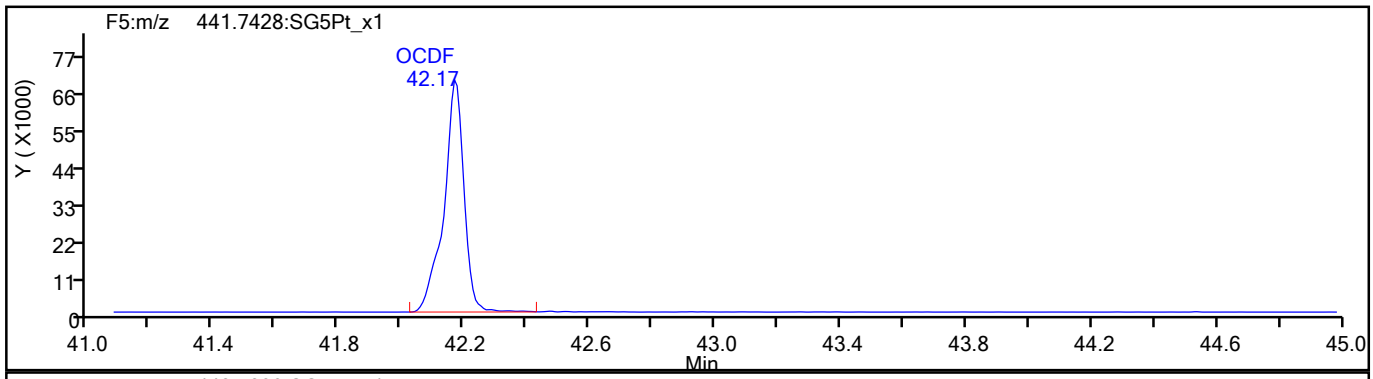

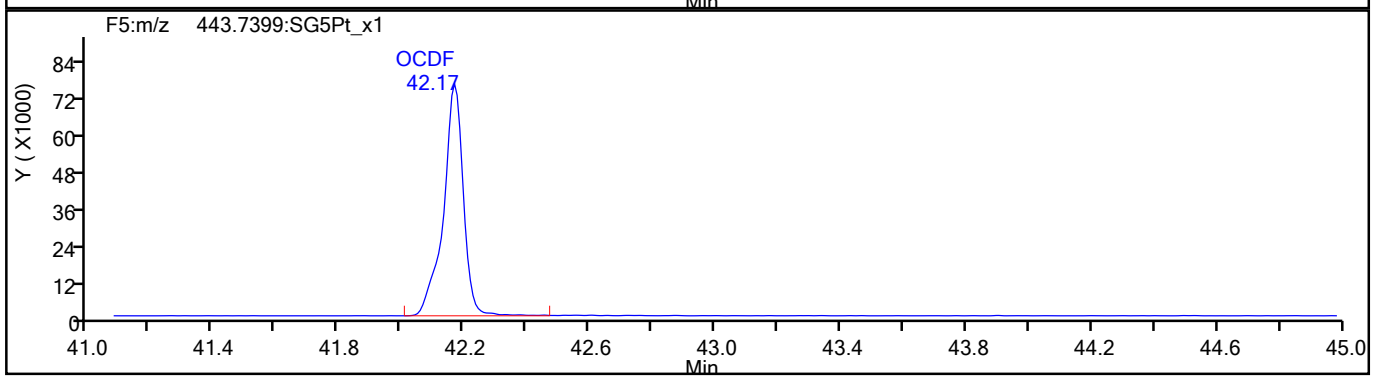

OCDF Standards

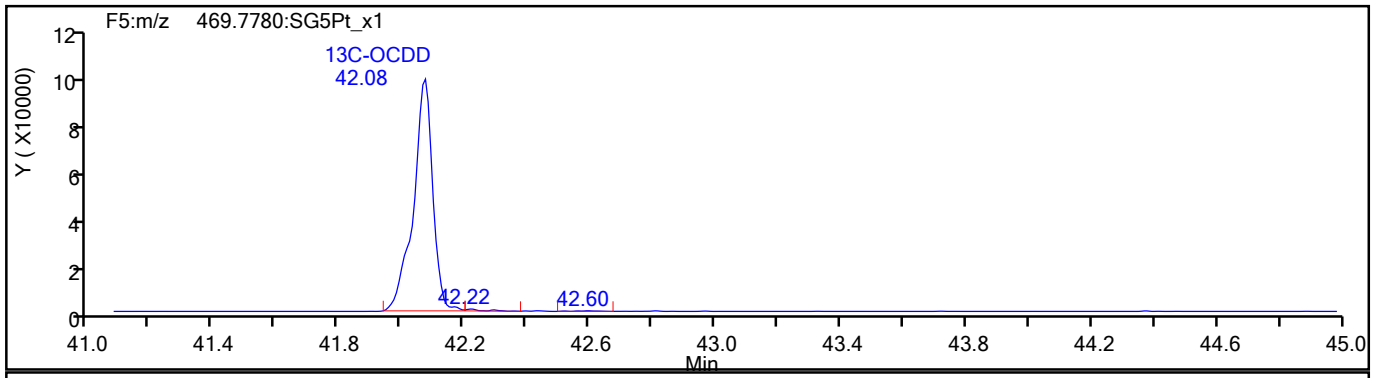

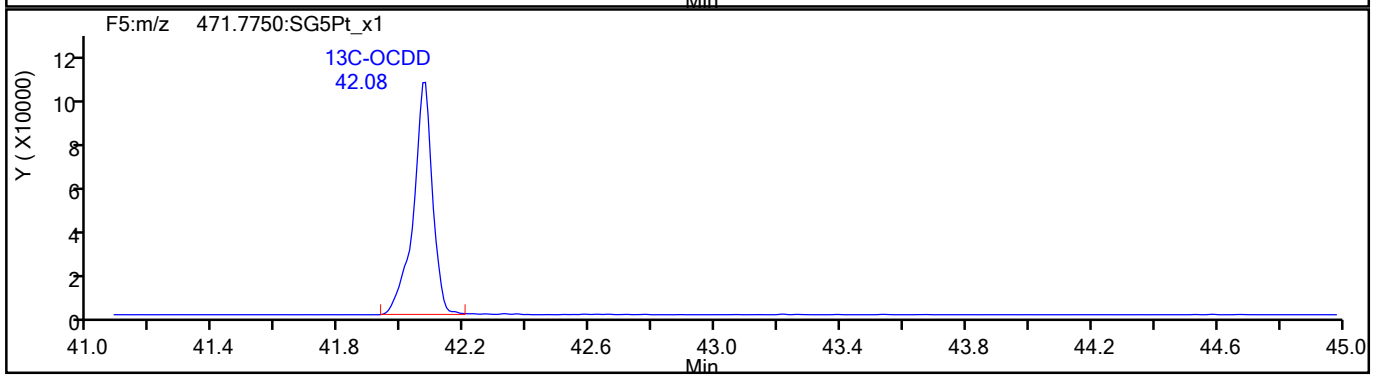

773888

Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
Injection Date:	14-Aug-2021 02:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

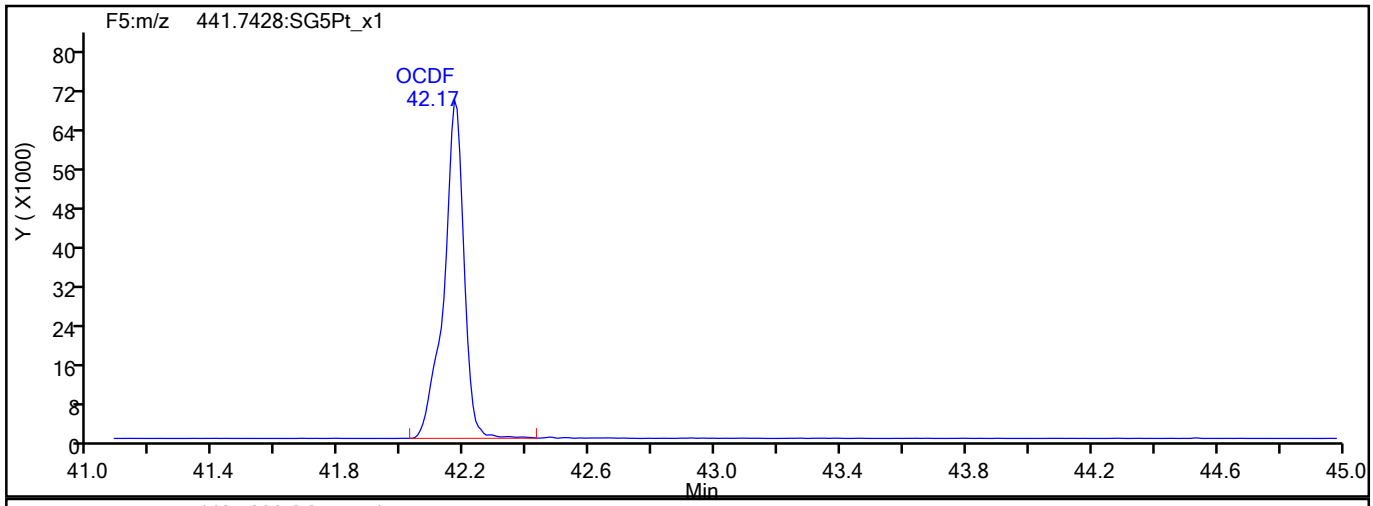

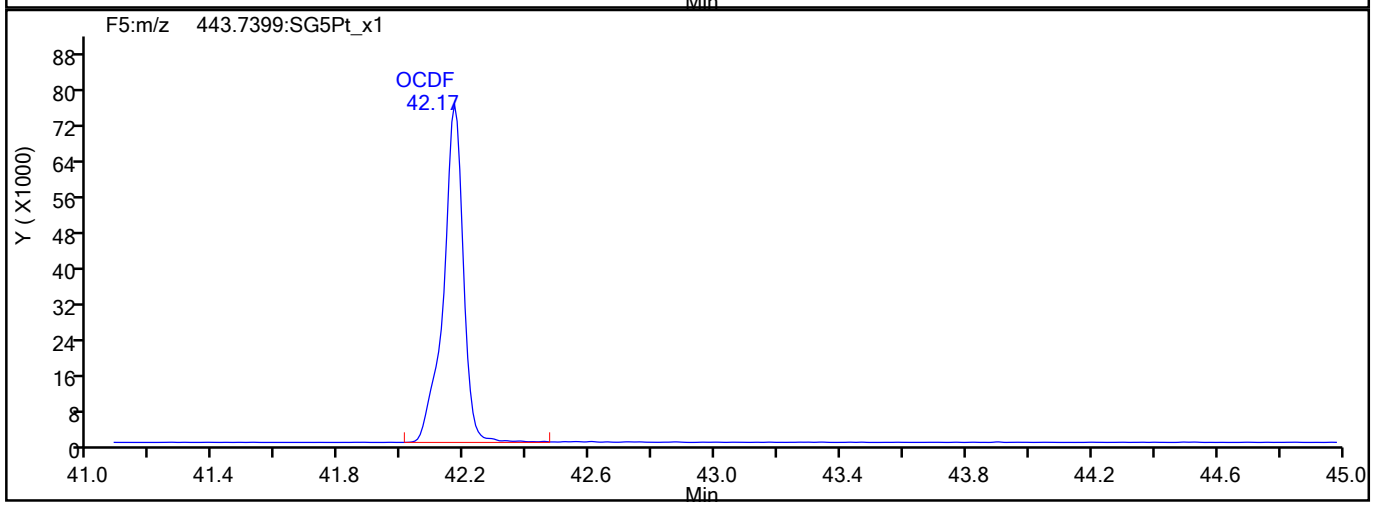

OCDF Interference Mass

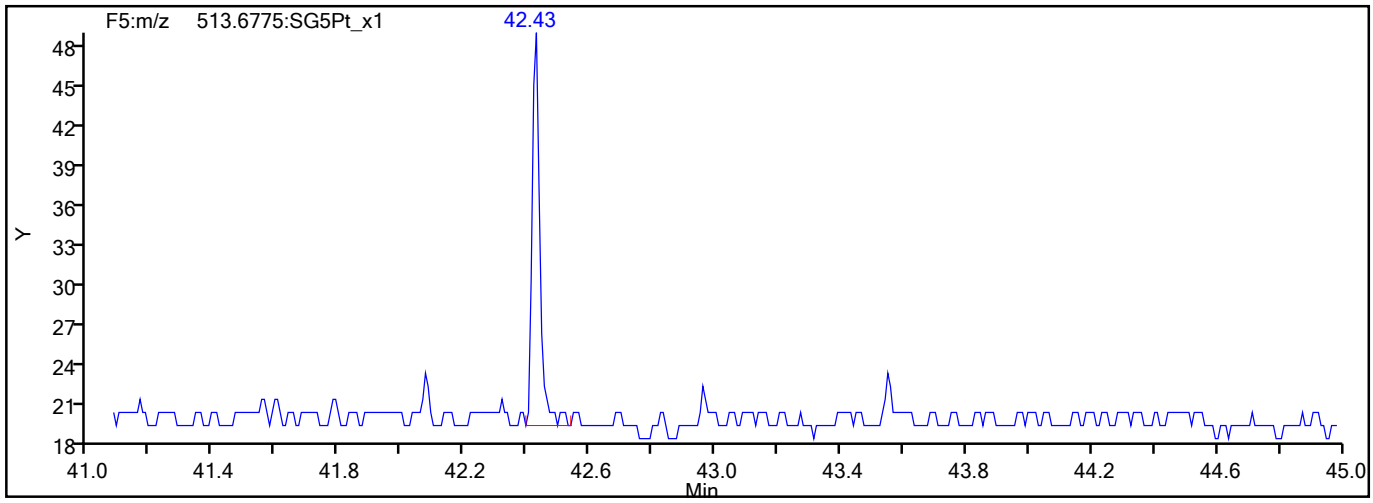

773889

Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
Injection Date:	14-Aug-2021 02:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

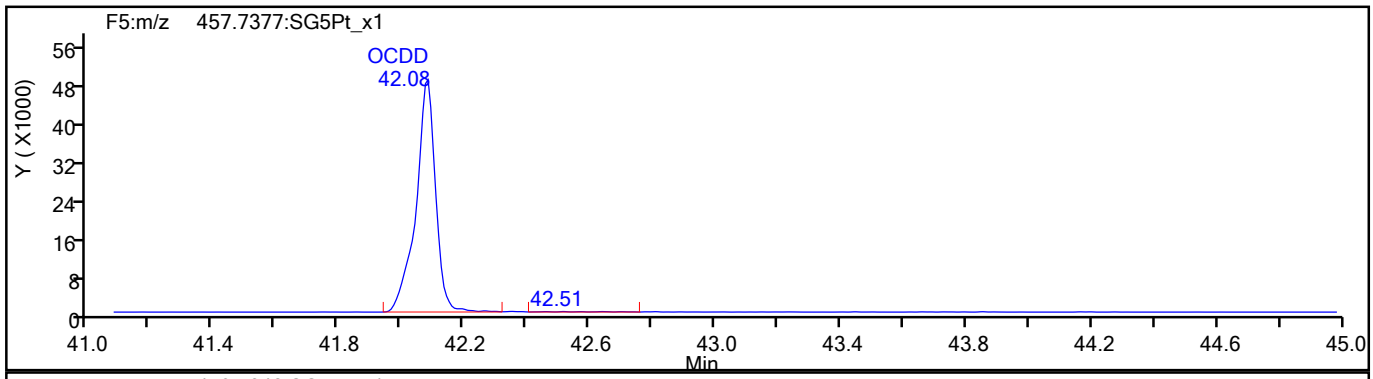

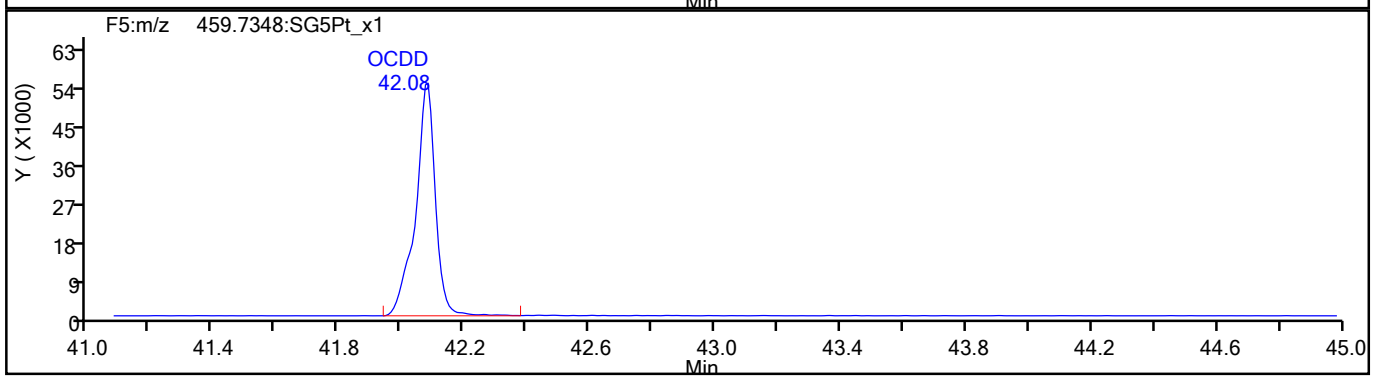

OCDD Standards

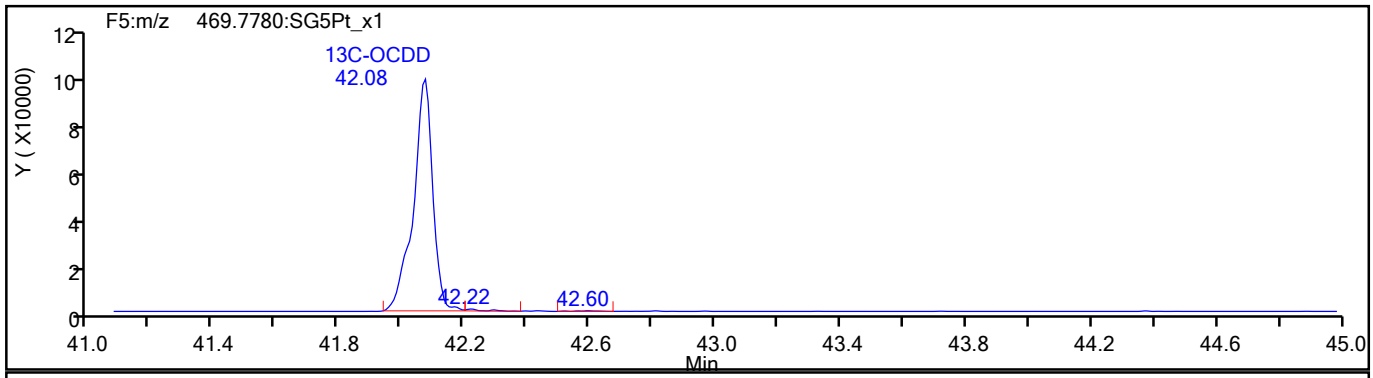

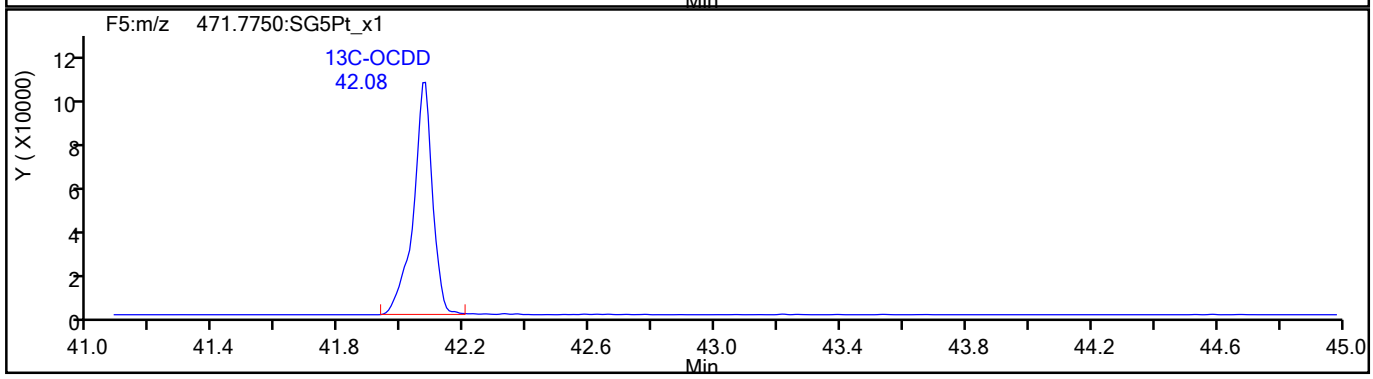

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Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
Injection Date:	14-Aug-2021 02:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

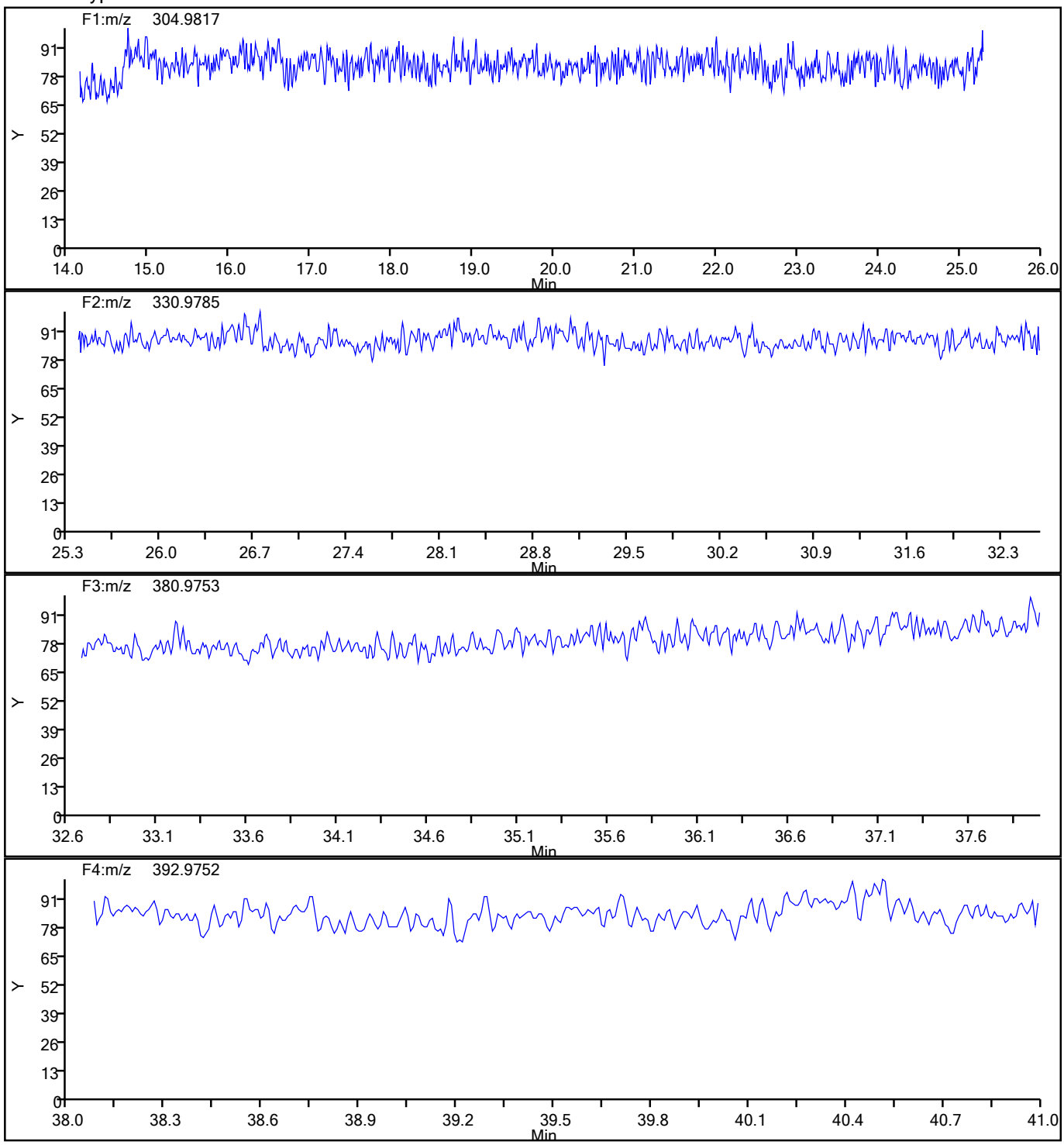

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Report Date: 16-Aug-2021 12:24:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_18.d		
Injection Date:	14-Aug-2021 02:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

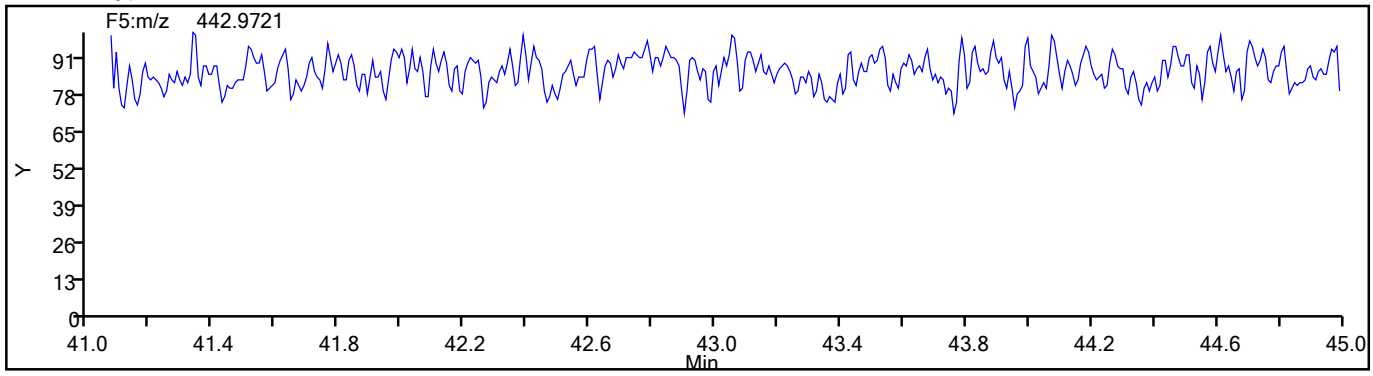

773892

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.598	43192451	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.628	95812265	0.77	1.0239	86.7	86.7	0.4368	0.4368		
A Non-2,3,7,8-sub-TCDF	17.311	141340622	0.77	1.0239	127.8	127.8	0.4368	50.4		
S Total TCDF					214.5	214.5	0.4368	0.4368		
D 13C-2,3,7,8-TCDD	18.323	22643725	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.338	31002300	0.78	1.2541	43.7	43.7	0.2199	0.2199		
A Non-2,3,7,8-sub-TCDD	17.772	120319254	0.78	1.2541	169.5	169.5	0.2199	46.0		
S Total TCDD					213.1	213.1	0.2199	0.2199		
A F1 PeCDFs	20.244	36548211	1.59	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.473	28699153	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.744	44367204	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.542	988216341	1.23	0.0000						
A Non-2,3,7,8-sub-HxCDF	30.542	1016402527	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	31.215	43254937	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.911	28490431	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	35.005	21744380	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.458						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.714	17168827	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.133	55744963	0.78							a
1,3,6,8-TCDD	16.071	32157911	0.78							a
2,3,4,7-TCDF	17.628	95812265	0.77							a
1,2,3,7-TCDD	18.218	26254918	0.77							a
1,2,3,9-TCDF	18.505	41465019	0.77							a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,9-TCDD	18.505	32677146	0.79							a
1,2,8,9-TCDD	19.472	12707183								a
1,2,8,9-TCDF	19.488	41982512	0.76							a
1,3,4,6,8-PeCDF	19.760	36548211	1.59							a
1,2,4,7,9-PeCDD	21.576	23369968	1.58							a
1,2,3,8,9-PeCDD	25.912	20997236	1.59							a
1,2,3,8,9-PeCDF	26.144	28026312	1.61							a
1,2,3,4,6,8-HxCDF	28.479	29886017	1.22							a
1,2,4,6,7,9-HxCDD	30.023	21768457	1.27							a
1,2,3,4,6,7-HxCDD	32.299	21486480	1.24							a
1,2,3,4,8,9-HxCDF	32.605	28186186	1.23							a
1,2,3,4,6,7,9-HpCDD	34.154						0.0	0.0		U

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	1.000	18796968	4666881	8168	20420	571		
317.9389	17.598	17.598	0	1.000	24395483	6066397	3473	8682	1747	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.002	41629702	9682578	19585	48962	494		
305.8987	17.628	17.631	0	1.002	54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.133	17.311	-130	0.860	24509538	7569037	19585	48962	386		
305.8987	15.133	17.311	-130	0.860	31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
303.9016	18.505	17.311	72	1.052	18061189	4195885	19585	48962	214		
305.8987	18.505	17.311	72	1.052	23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
303.9016	19.488	17.311	130	1.107	18098944	4035450	19585	48962	206		
305.8987	19.488	17.311	130	1.107	23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
303.9016	19.775	17.311	148	1.124	944774	152570	19585	48962	8		
305.8987	19.775	17.311	148	1.124	1203354	204203	28414	71035	7	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.000	10063481	2396990	3086	7715	777		
333.9339	18.323	18.323	0	1.000	12580244	3018588	1527	3817	1977	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.357	-1	1.001	13597515	3193209	6116	15290	522		
321.8936	18.338	18.357	-1	1.001	17404785	4135946	8817	22042	469	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	16.071	17.772	-102	0.877	14103074	4061475	6116	15290	664		
321.8936	16.071	17.772	-102	0.877	18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
319.8965	18.218	17.772	27	0.994	11446127	2829889	6116	15290	463		
321.8936	18.218	17.772	27	0.994	14808791	3726958	8817	22042	423	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	18.505	17.772	44	1.010	14439496	3301963	6116	15290	540		
321.8936	18.505	17.772	44	1.010	18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
319.8965	19.472	17.772	102	1.063	12707183	2751784	6116	15290	450		
321.8936	19.472	17.772	102	1.063	16522096	3661962	8817	22042	415	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.760	20.244	-29	1.000	22414023	4920048	649	1622	7581		
341.8567	19.760	20.244	-29	1.000	14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.344	23.473	-127	1.000	84191	14080	2633	6582	5		
341.8567	21.344	23.473	-127	1.000	53909	7615	1950	4875	4	1.56(1.32-1.78)	
339.8597	22.176	23.473	-78	1.000	88076	13805	2633	6582	5		
341.8567	22.190	23.473	-77	1.000	48170	9635	1950	4875	5	1.83(1.32-1.78)	
339.8597	22.749	23.473	-43	1.000	168309	20506	2633	6582	8		
341.8567	22.762	23.473	-43	1.000	82177	12827	1950	4875	7	2.05(1.32-1.78)	
339.8597	23.321	23.473	-9	1.000	142716	22963	2633	6582	9		
341.8567	23.321	23.473	-9	1.000	79356	11480	1950	4875	6	1.80(1.32-1.78)	
339.8597	26.144	23.473	160	1.000	17301746	2425915	2633	6582	921		
341.8567	26.144	23.473	160	1.000	10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.576	23.744	-130	1.000	14314296	2552271	2414	6035	1057		
357.8516	21.576	23.744	-130	1.000	9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
355.8546	25.912	23.744	130	1.000	12881489	1801570	2414	6035	746		
357.8516	25.912	23.744	130	1.000	8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	32.605	30.542	124	1.000	15534015	4607321	4603	11507	1001		
375.8178	32.605	30.542	124	1.000	12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.023	31.215	-71	1.000	12175655	1922535	6506	16265	296		
391.8127	30.023	31.215	-71	1.000	9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
389.8157	32.299	31.215	65	1.000	11903453	3254284	6506	16265	500		
391.8127	32.299	31.215	65	1.000	9583027	2649988	5715	14287	464	1.24(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.911	33.926	-1	1.000	14581587	4505694	20273	50682	222		
409.7789	33.911	33.926	-1	1.000	13908844	4348275	17441	43602	249	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.005	35.020	-1	1.000	11106344	3153936	20273	50682	156		
409.7789	35.005	35.020	-1	1.000	10638036	3040493	17441	43602	174	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						20273	50682			
409.7789	34.458						17441	43602			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.726	-1	1.000	8809155	2526480	13831	34577	183		
425.7737	34.714	34.726	-1	1.000	8359672	2427581	13744	34360	177	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						13831	34577			
425.7737	33.504						13744	34360			
1,3,6,8-TCDF											a
303.9016	15.133	15.133	0		24509538	7569037	19585	48962	386		a
305.8987	15.133	15.133	0		31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
1,3,6,8-TCDD											a
319.8965	16.071	16.071	0		14103074	4061475	6116	15290	664		a
321.8936	16.071	16.071	0		18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
2,3,4,7-TCDF											a
303.9016	17.628	17.628	0		41629702	9682578	19585	48962	494		a
305.8987	17.628	17.628	0		54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
1,2,3,7-TCDD											a
319.8965	18.218	18.218	0		11446127	2829889	6116	15290	463		a
321.8936	18.218	18.218	0		14808791	3726958	8817	22042	423	0.77(0.65-0.89)	
1,2,3,9-TCDF											a
303.9016	18.505	18.505	0		18061189	4195885	19585	48962	214		a
305.8987	18.505	18.505	0		23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
1,2,3,9-TCDD											a
319.8965	18.505	18.505	0		14439496	3301963	6116	15290	540		a
321.8936	18.505	18.505	0		18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
1,2,8,9-TCDD											a
319.8965	19.472	19.472	0		12707183	2751784	6116	15290	450		a
1,2,8,9-TCDF											a
303.9016	19.488	19.488	0		18098944	4035450	19585	48962	206		a
305.8987	19.488	19.488	0		23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
1,3,4,6,8-PeCDF											a
339.8597	19.760	19.760	0		22414023	4920048	649	1622	7581		a
341.8567	19.760	19.760	0		14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	21.576	21.576	0		14314296	2552271	2414	6035	1057		a
357.8516	21.576	21.576	0		9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											a
355.8546	25.912	25.912	0		12881489	1801570	2414	6035	746		a
357.8516	25.912	25.912	0		8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	26.144	26.144	0		17301746	2425915	2633	6582	921		a
341.8567	26.144	26.144	0		10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											a
373.8208	28.479	28.479	0		16406487	2121744	4603	11507	461		a
375.8178	28.479	28.479	0		13479530	1752621	3729	9322	470	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											a
389.8157	30.023	30.023	0		12175655	1922535	6506	16265	296		a
391.8127	30.023	30.023	0		9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											a
389.8157	32.299	32.299	0		11903453	3254284	6506	16265	500		a
391.8127	32.299	32.299	0		9583027	2649988	5715	14287	464	1.24(1.05-1.43)	

Report Date: 27-Jul-2021 15:09:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,8,9-HxCDF											a
373.8208	32.605	32.605	0		15534015	4607321	4603	11507	1001		a
375.8178	32.605	32.605	0		12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.154						13831	34577			
425.7737	34.154						13744	34360			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	43192451	10733278

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	43192451	10733278

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.133	24509538	7569037	31235425	9722736	50.4	0.78	
18.505	18061189	4195885	23403830	5509968	37.5	0.77	
19.488	18098944	4035450	23883568	5304928	38.0	0.76	
19.775	944774	152570	1203354	204203	1.94	0.79	
Signal Totals:	61614445	15952942	79726177	20741835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141340622	36694777				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 127.837 = (141340622 * 40.000) / (43192451 * 1.024)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	22643725	5415578

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	22643725	5415578

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.071	14103074	4061475	18054837	5166402	45.3	0.78	
18.218	11446127	2829889	14808791	3726958	37.0	0.77	
18.505	14439496	3301963	18237650	4248308	46.0	0.79	
19.472	12707183	2751784	16522096	3661962	41.2	0.77	
Signal Totals:							
	52695880	12945111	67623374	16803630			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	120319254	29748741				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 169.476 = (120319254 * 40.000) / (22643725 * 1.254)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

F1 PeCDFs, RT: 20.244

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.760	22414023	4920048	14134188	3116108		1.59	
Signal Totals:							
	22414023	4920048	14134188	3116108			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	36548211	8036156				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (36548211 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.344	84191	14080	53909	7615		1.56	
22.176	88076	13805	48170	9635		1.83	R
22.749	168309	20506	82177	12827		2.05	R
23.321	142716	22963	79356	11480		1.80	R
26.144	17301746	2425915	10724566	1530575		1.61	
Signal Totals:							
	17785038	2497269	10988178	1572132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28773216	4069401				1.62	RQ
	28699153	4064735					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (28773216 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (28699153 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.744

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.576	14314296	2552271	9055672	1599456		1.58	
25.912	12881489	1801570	8115747	1169053		1.59	
Signal Totals:							
	27195785	4353841	17171419	2768509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	44367204	7122350				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (44367204 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.542

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
32.605	15534015	4607321	12652171	3734547		1.23	
Signal Totals:							
	15534015	4607321	12652171	3734547			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	988216341	287497877				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (988216341 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 31.215

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.023	12175655	1922535	9592802	1497827		1.27	
32.299	11903453	3254284	9583027	2649988		1.24	
Signal Totals:							
	24079108	5176819	19175829	4147815			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43254937	9324634				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43254937 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

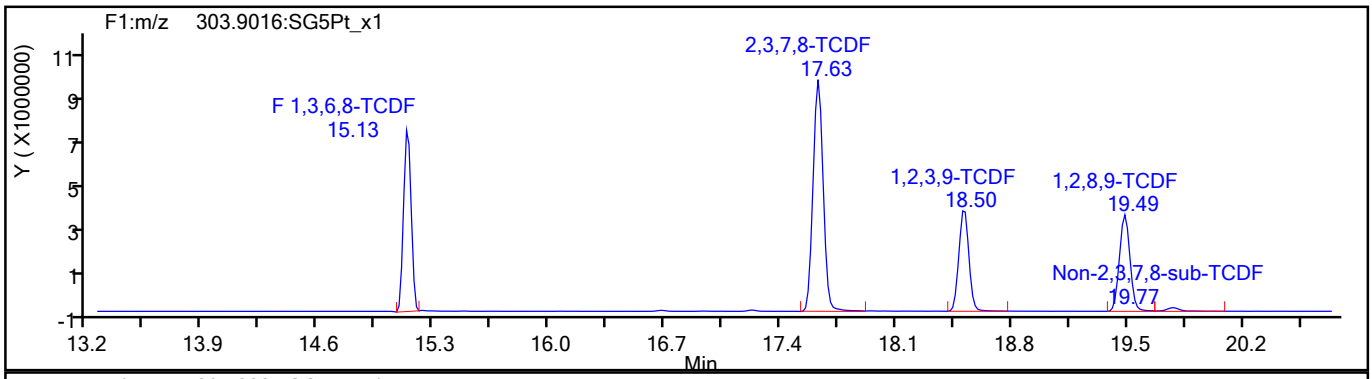

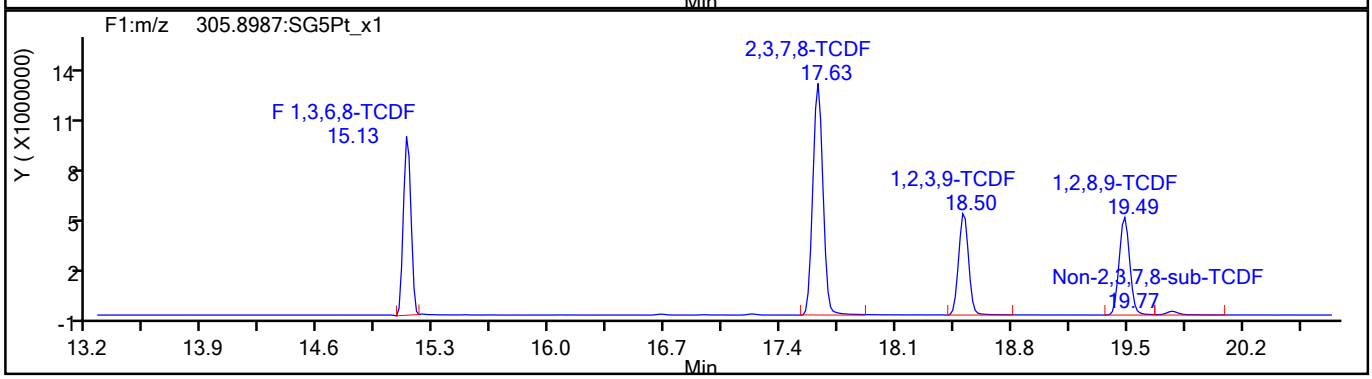

TCDF Standards

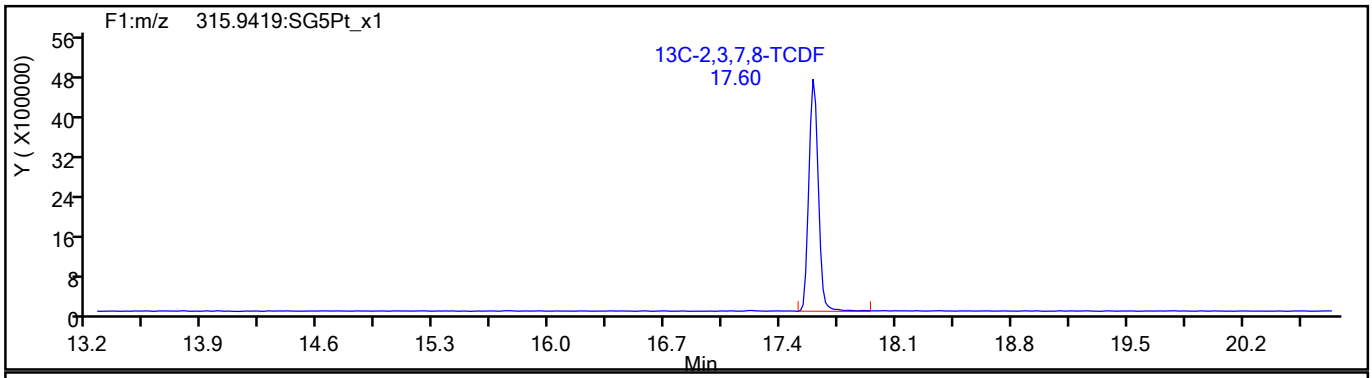

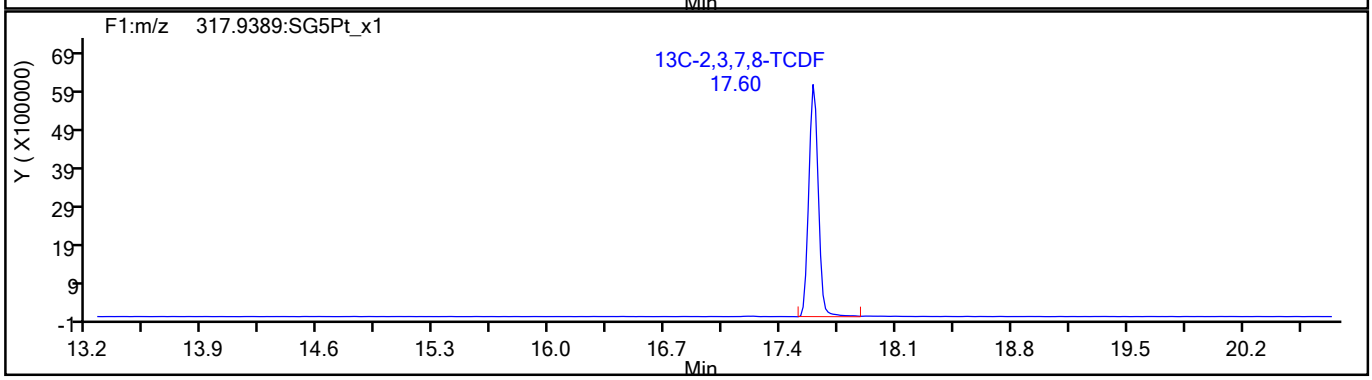

773907

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

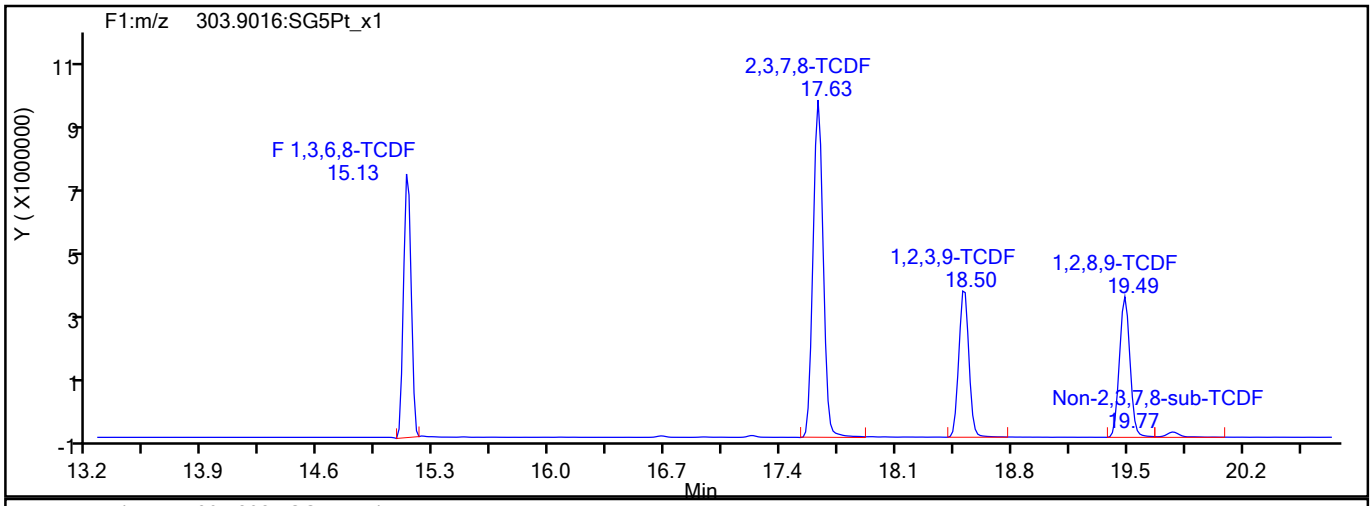

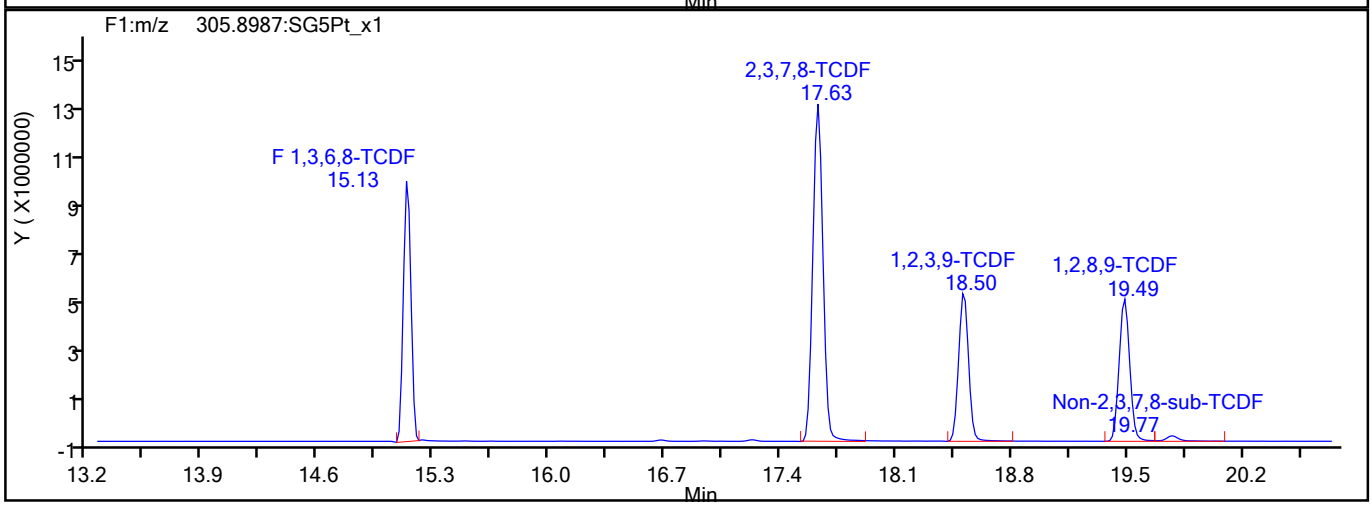

TCDF Interference Mass

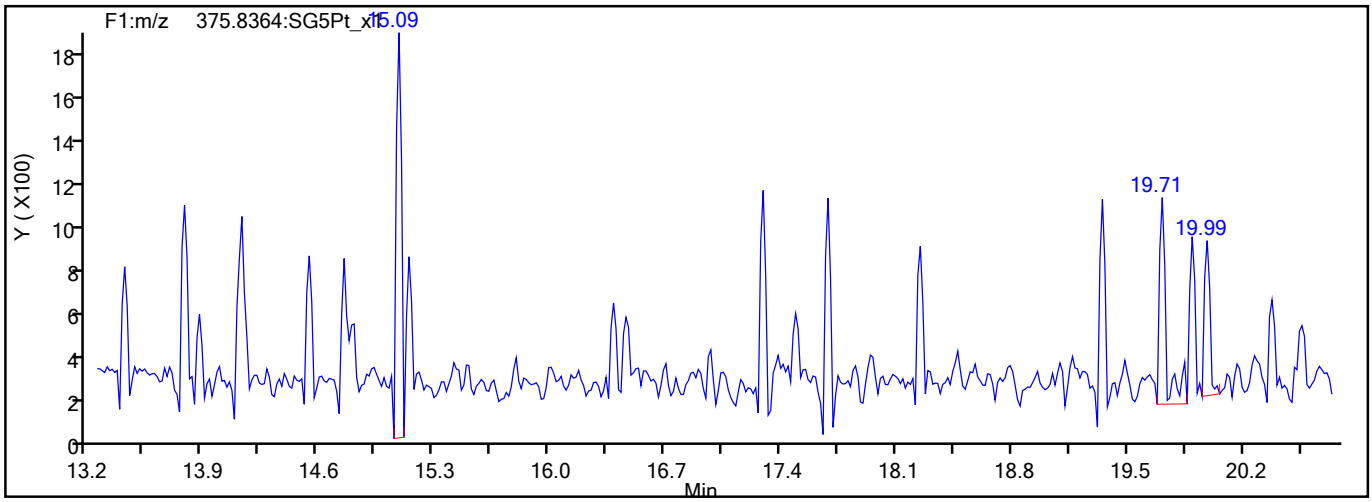

773908

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

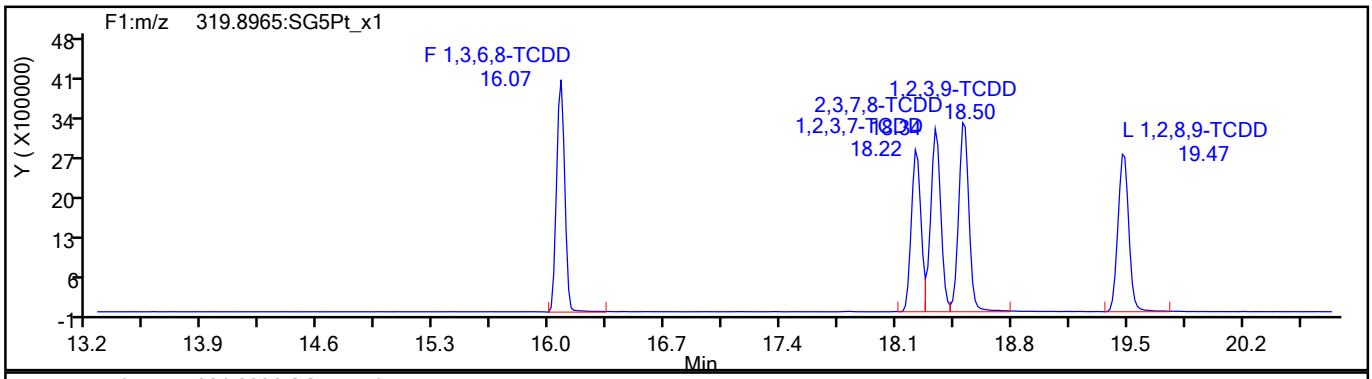

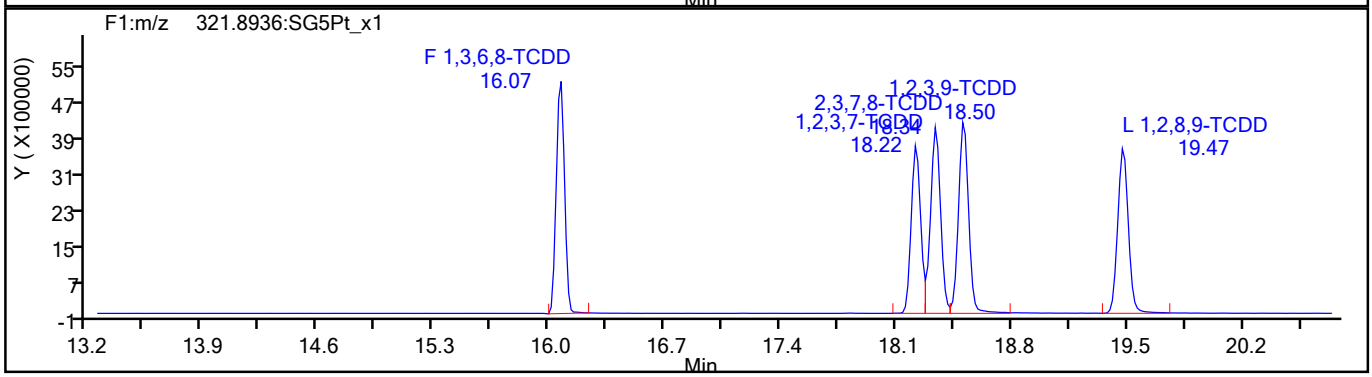

TCDD Standards

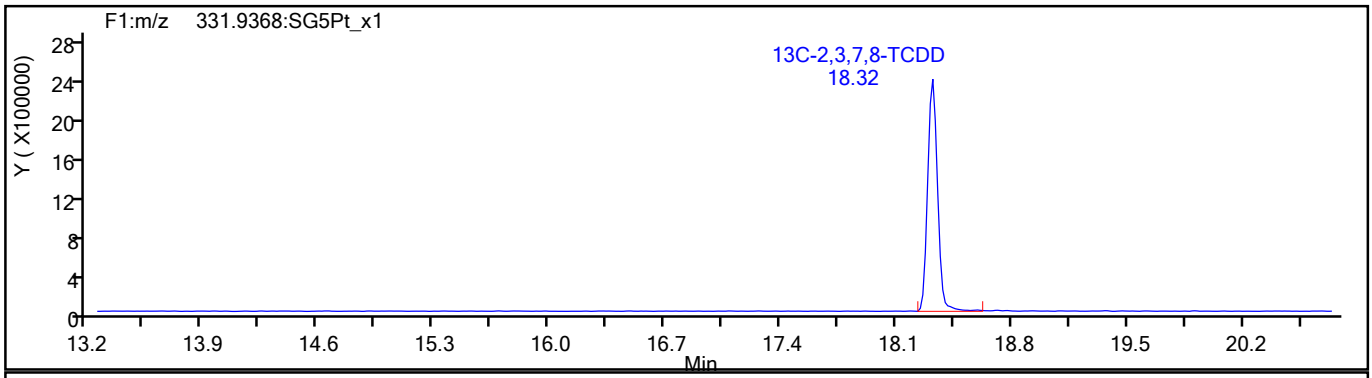

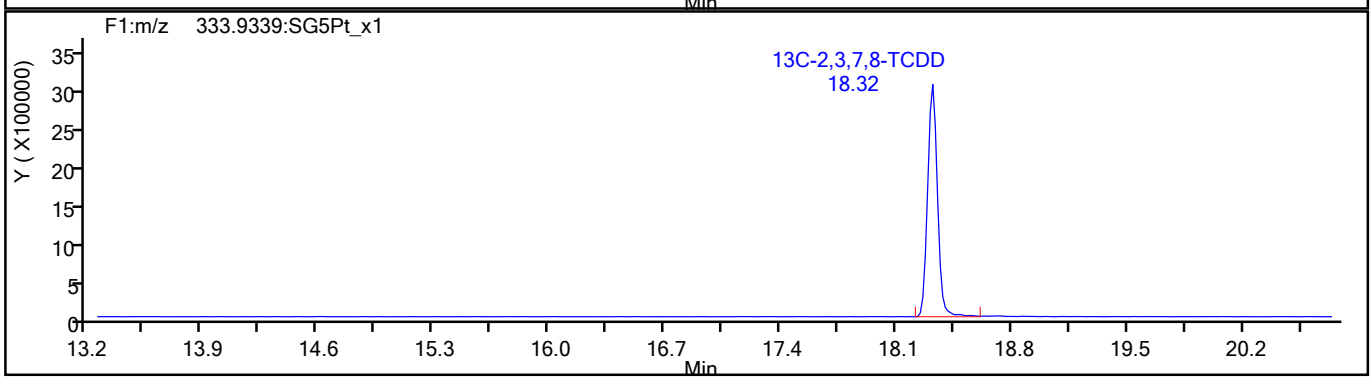

773909

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

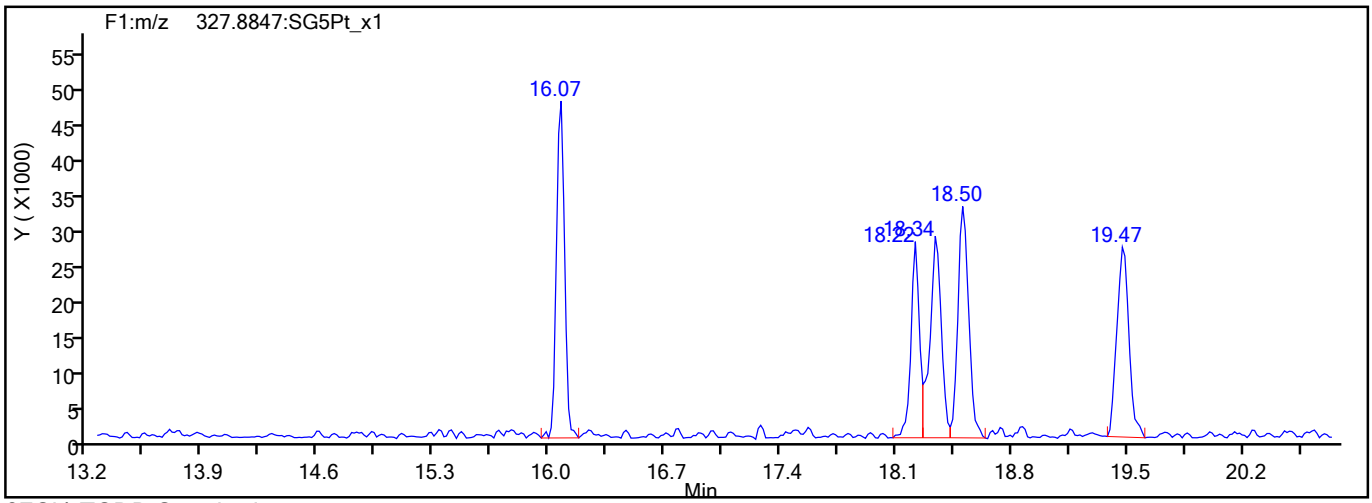

37Cl4-TCDD Standards

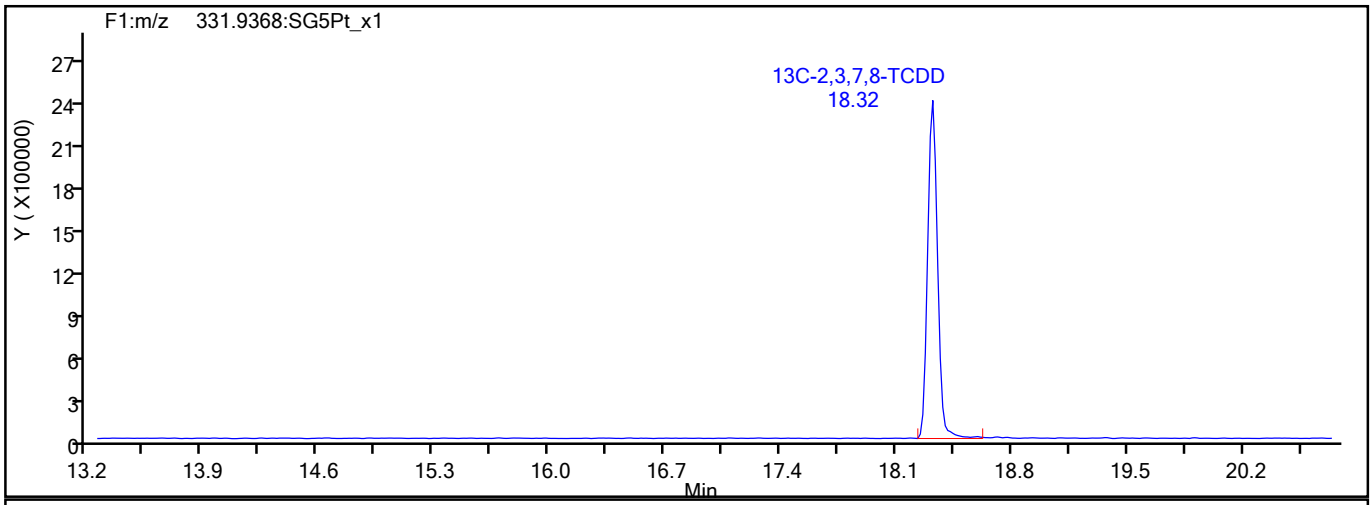

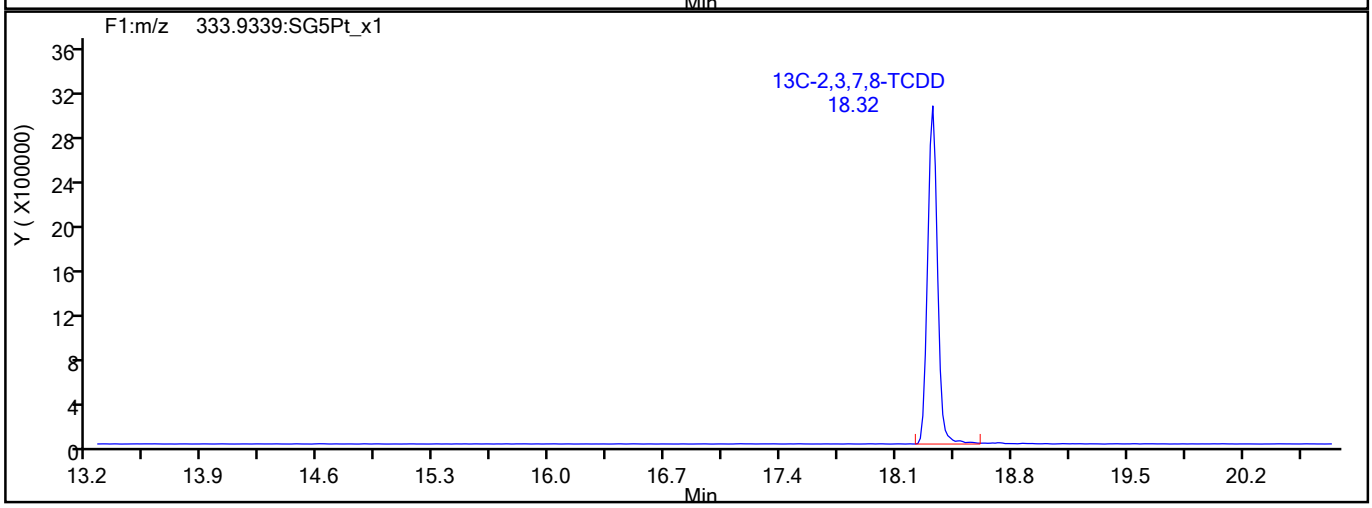

773910

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

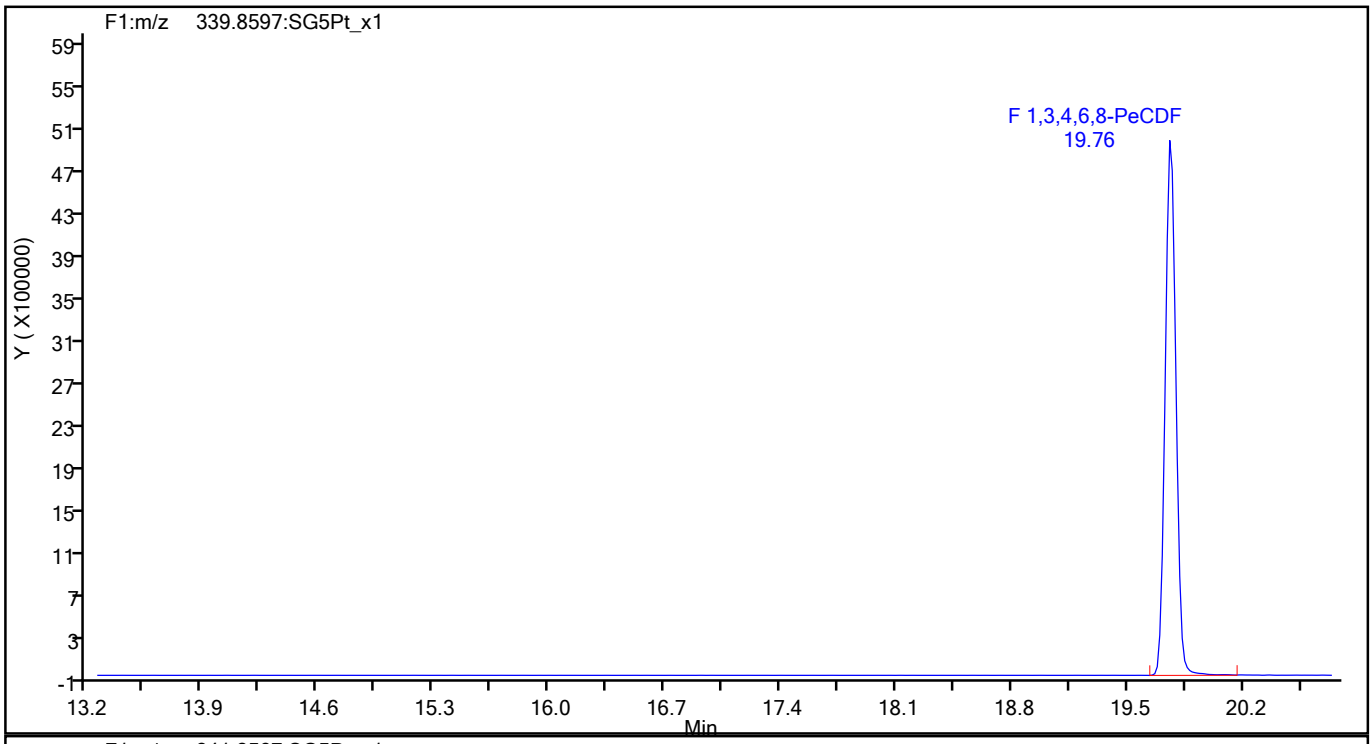

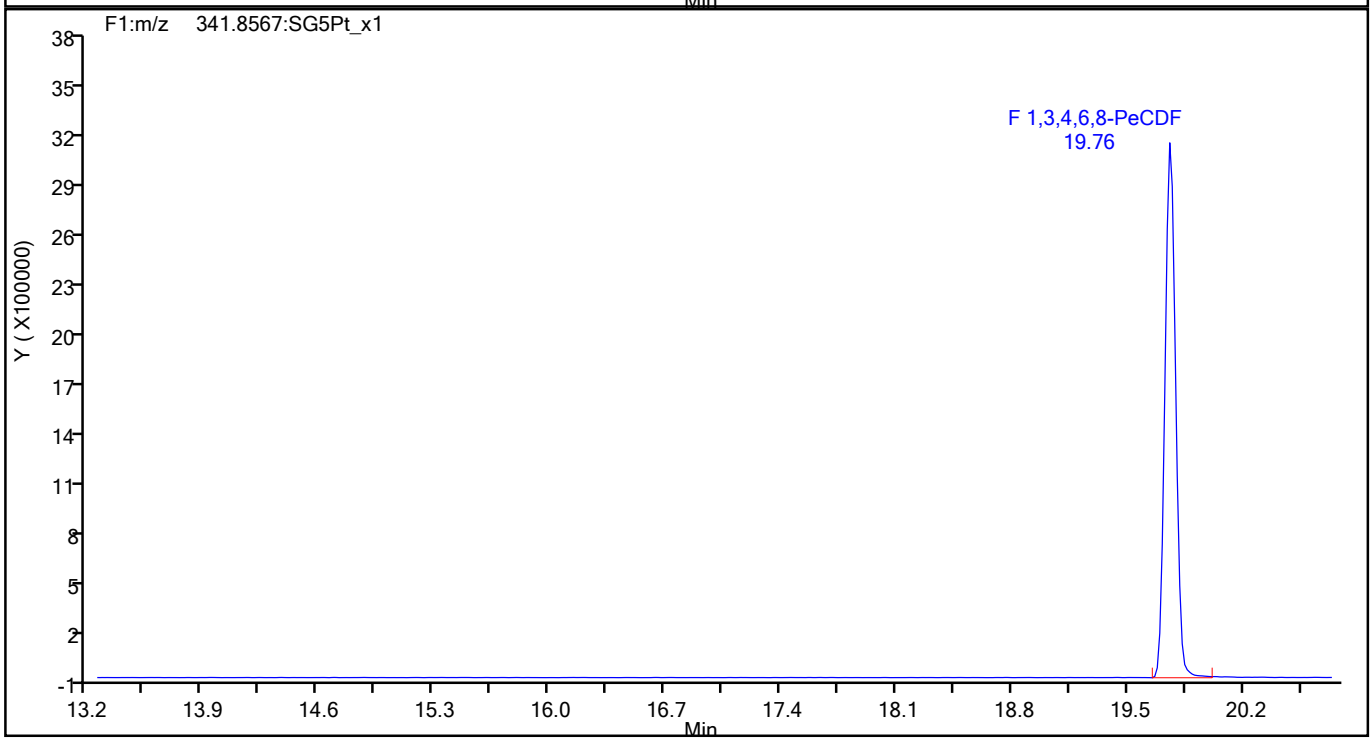

773911

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

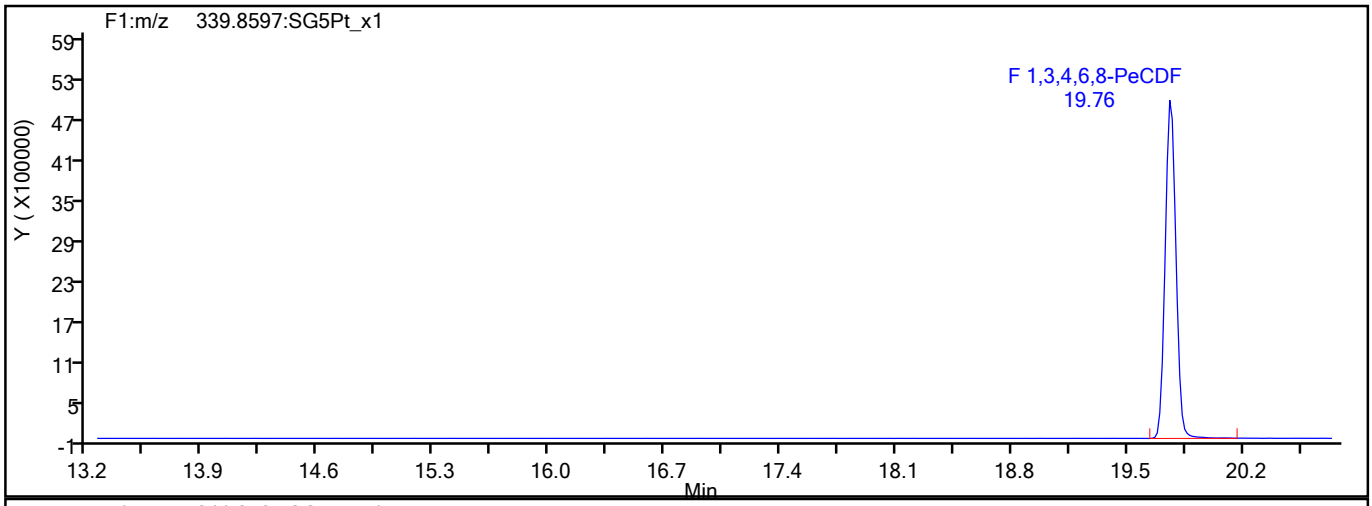

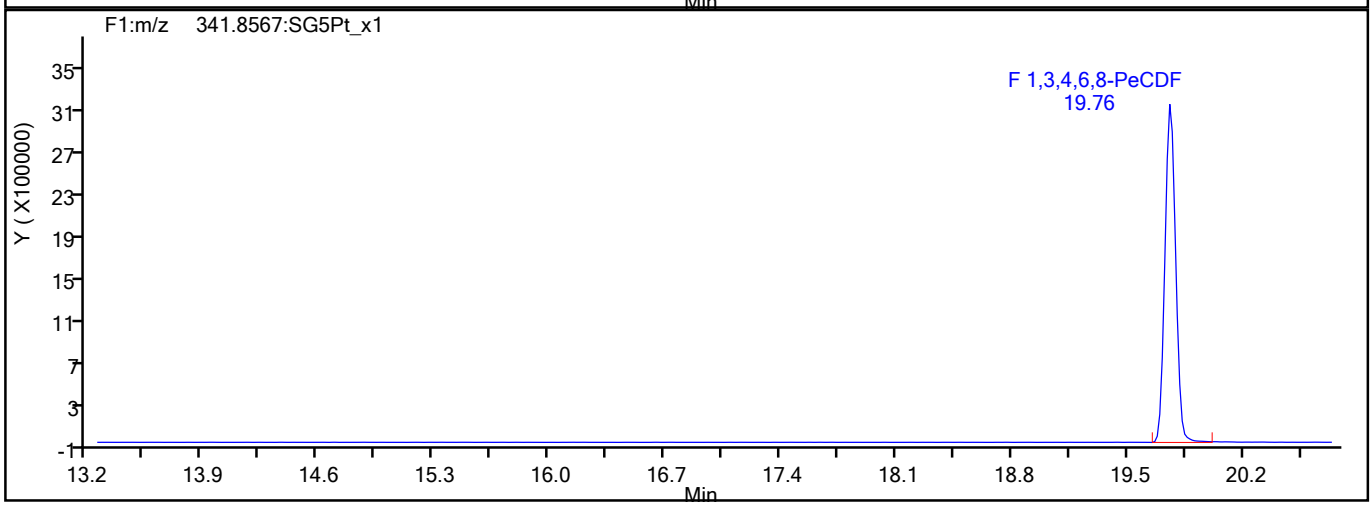

F1 PeCDFs Interference Mass

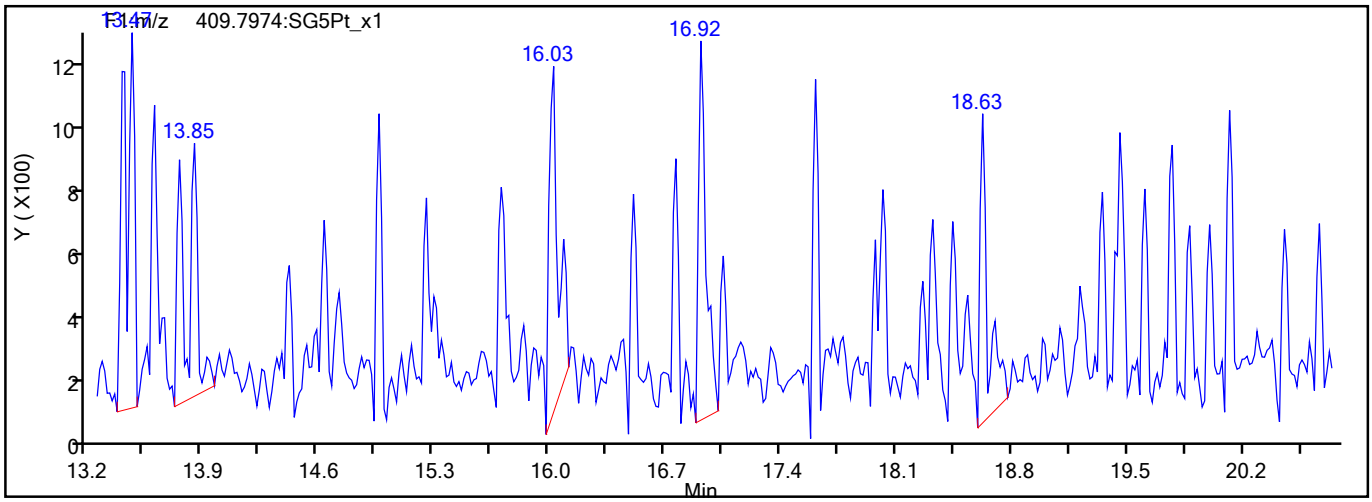

773912

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

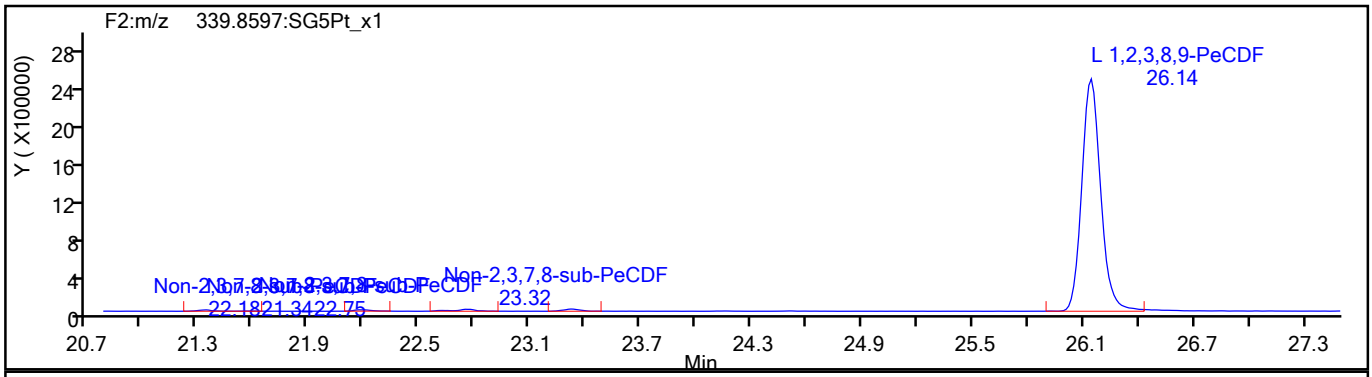

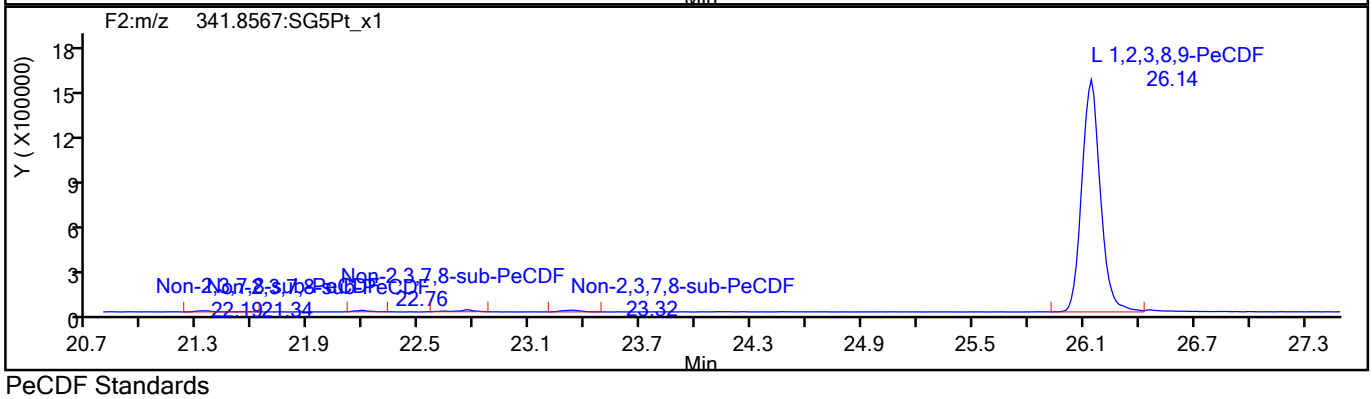

PeCDF Standards

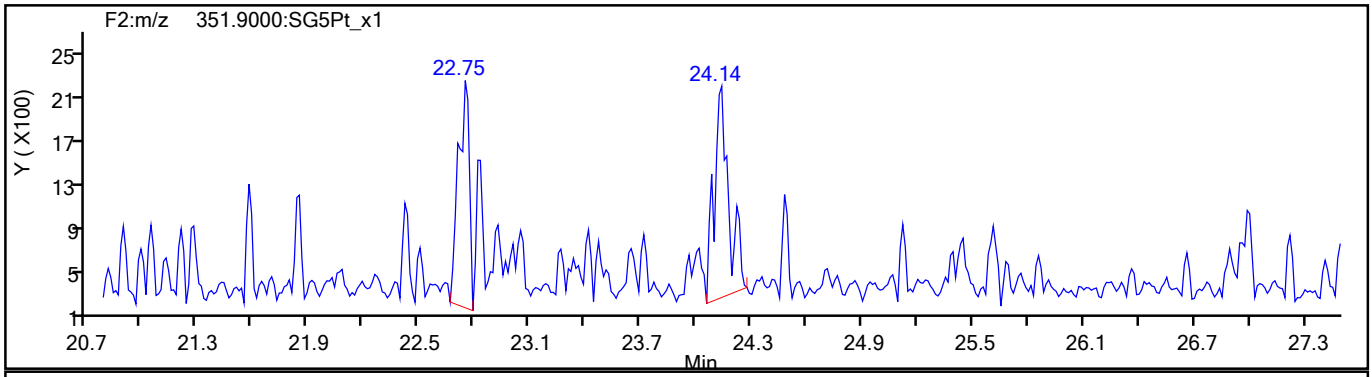

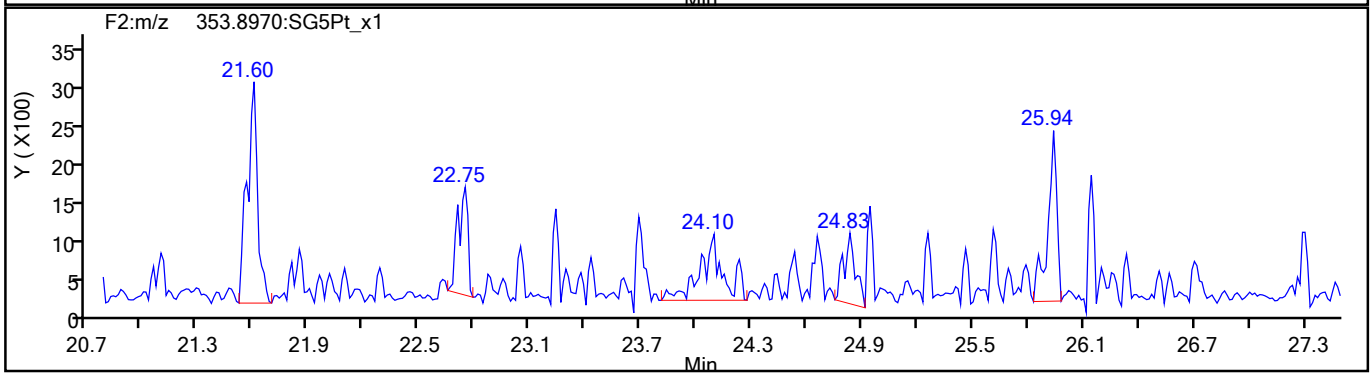

773913

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

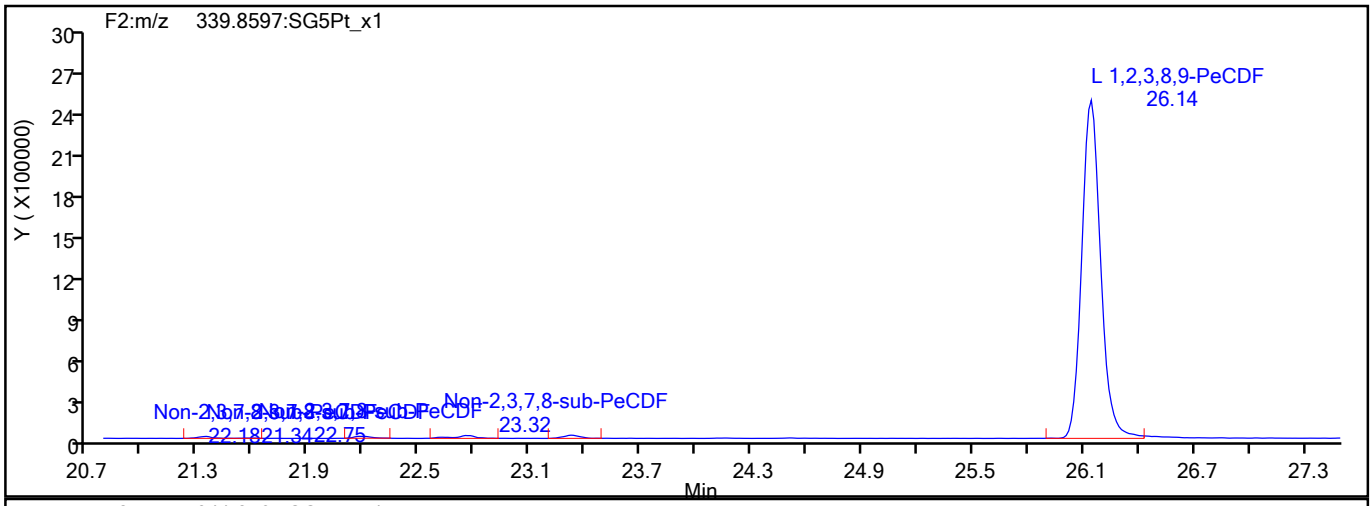

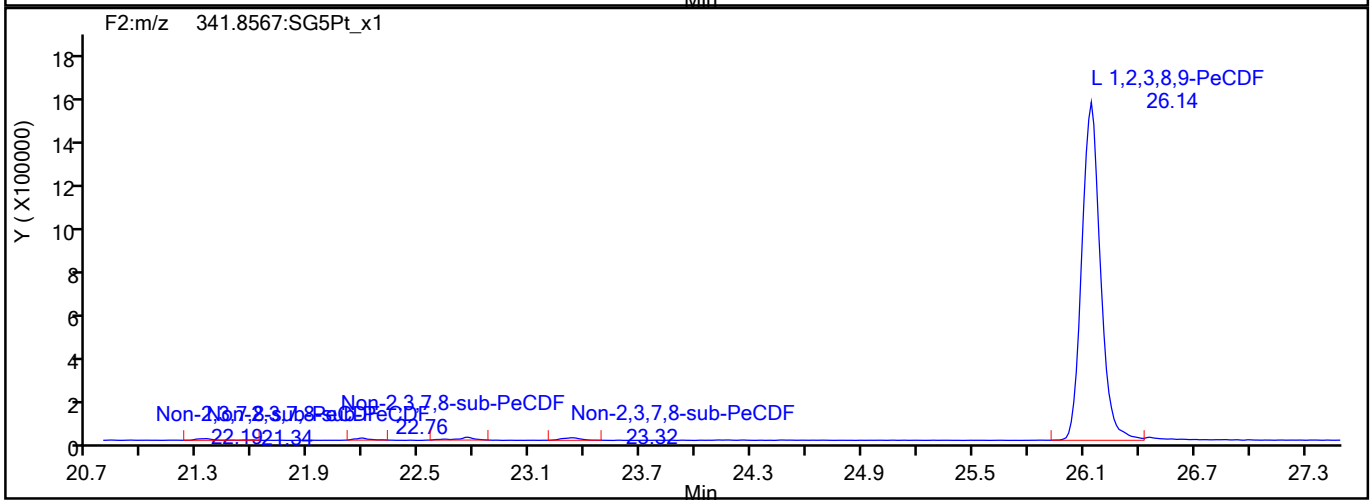

PeCDF Interference Mass

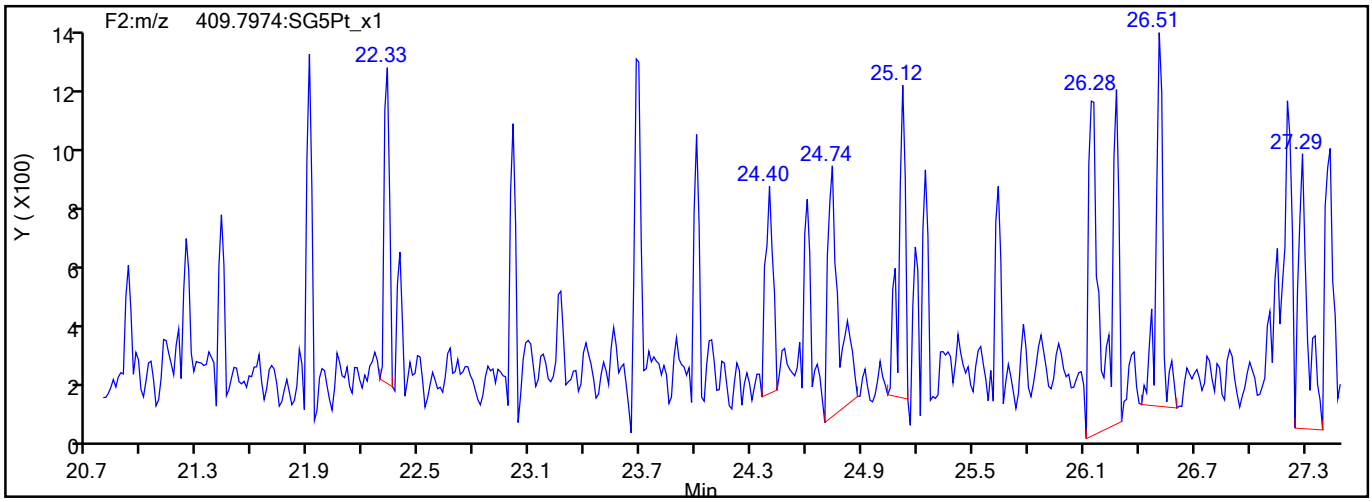

773914

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

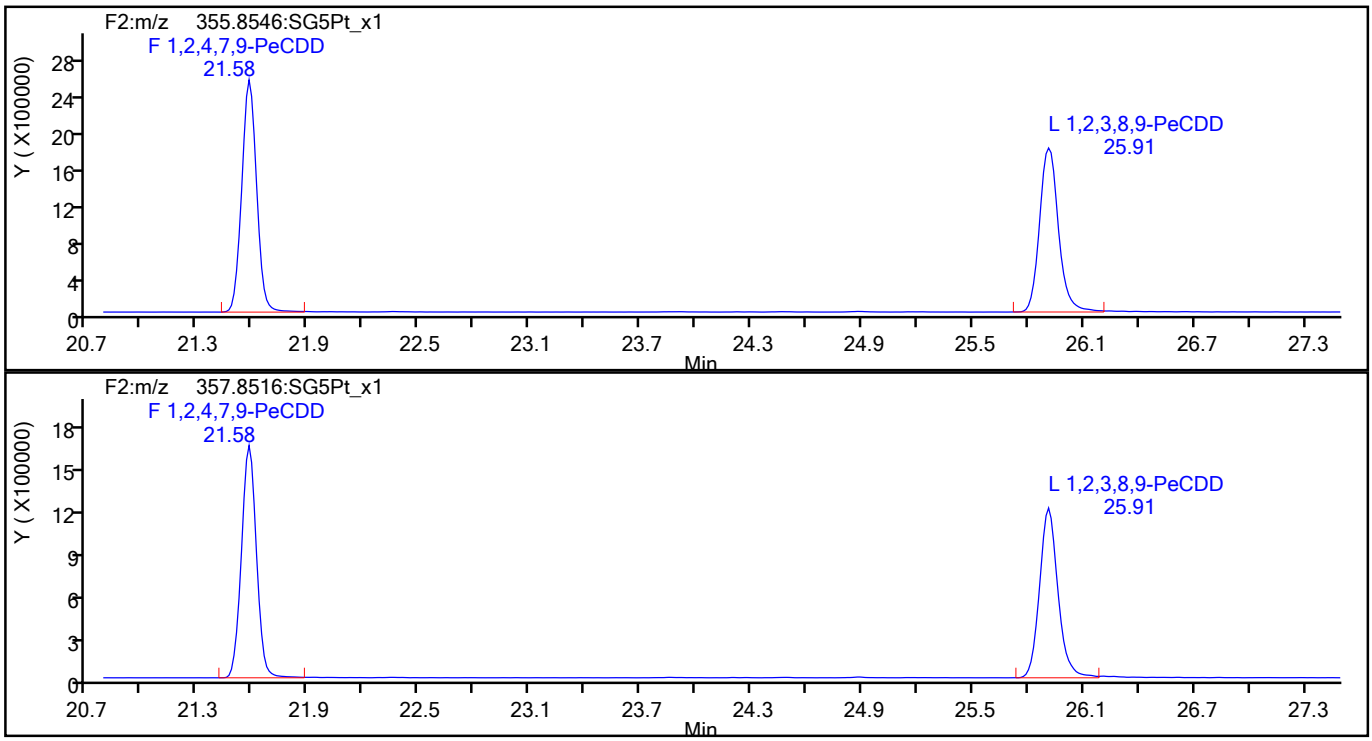

PeCDD Standards

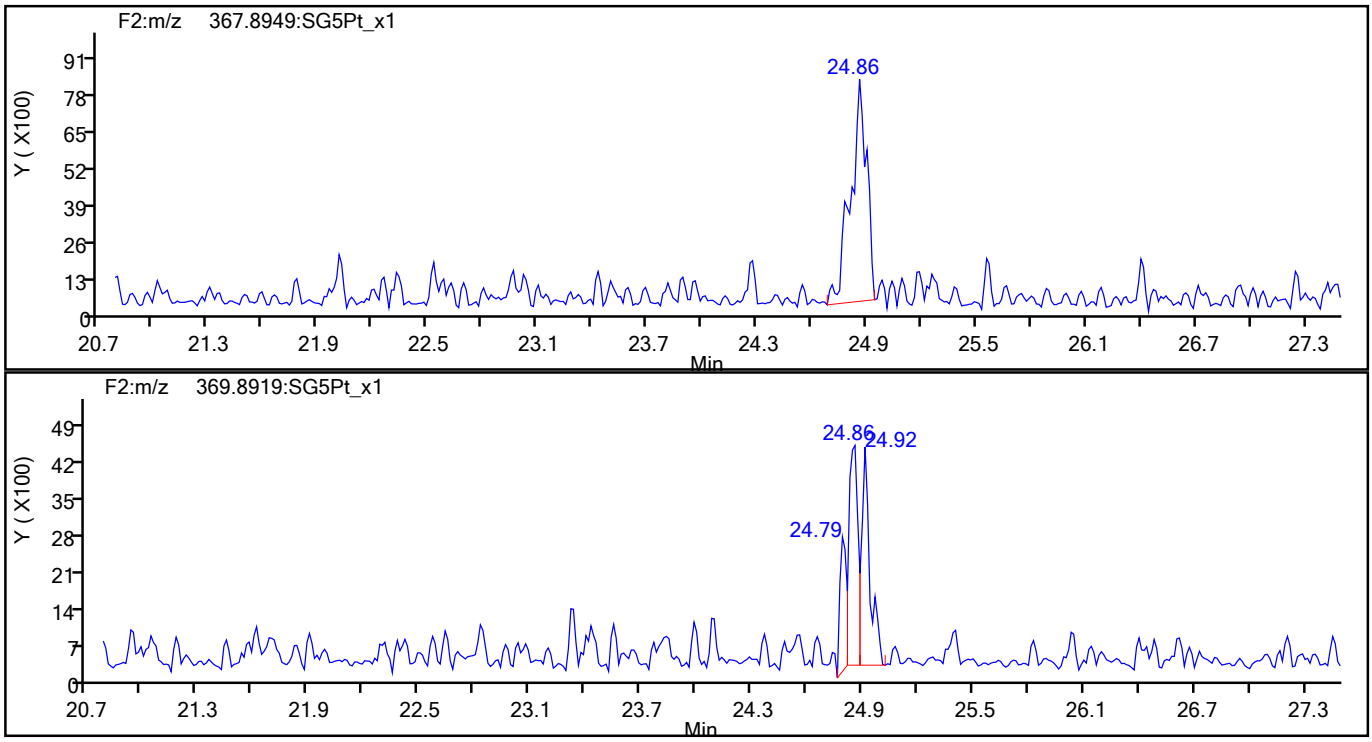

773915

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

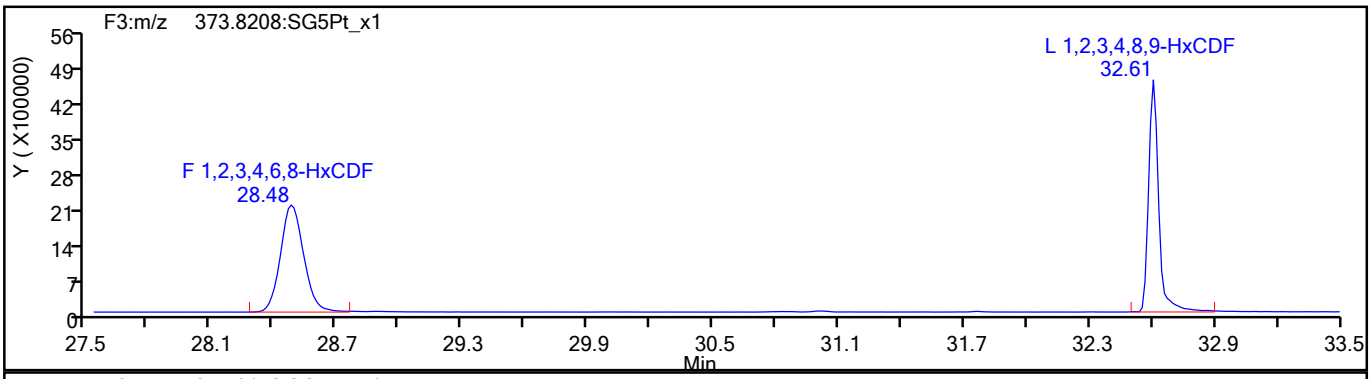

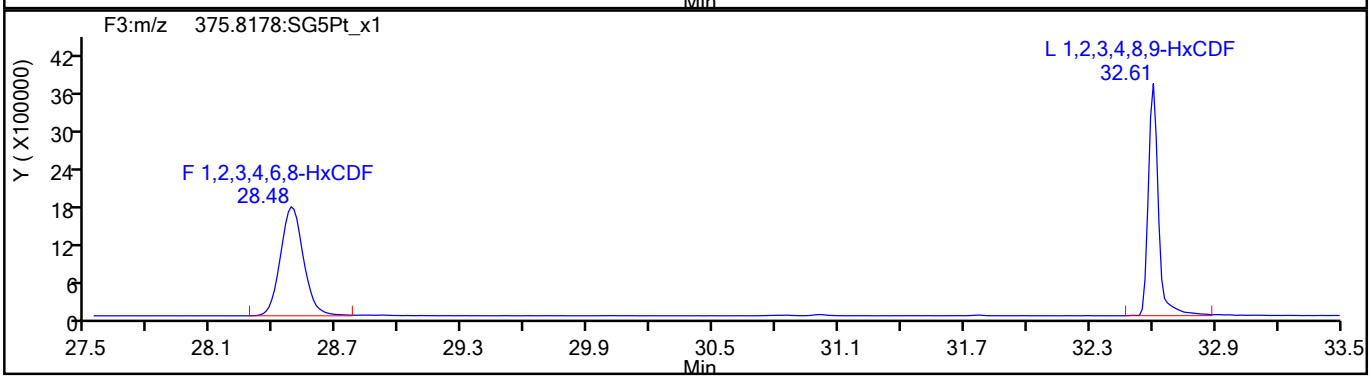

HxCDF Standards

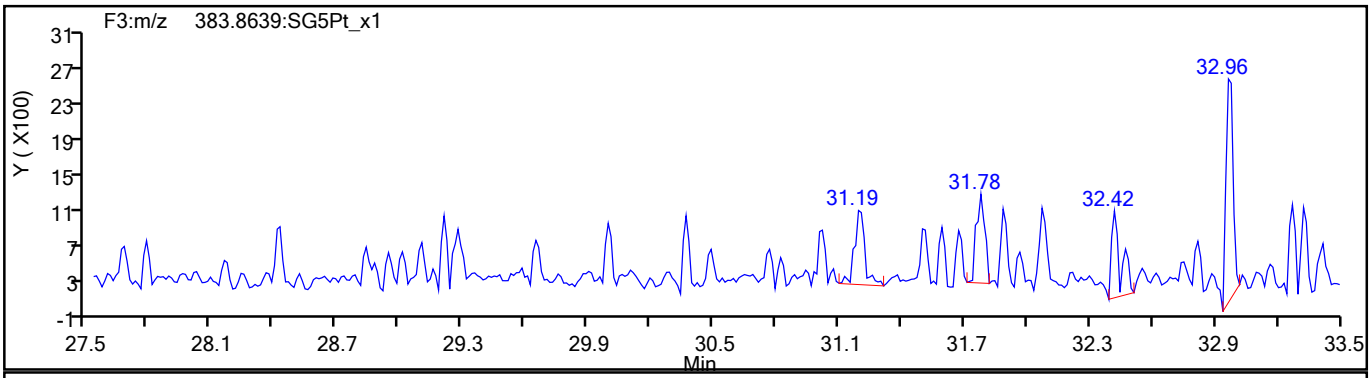

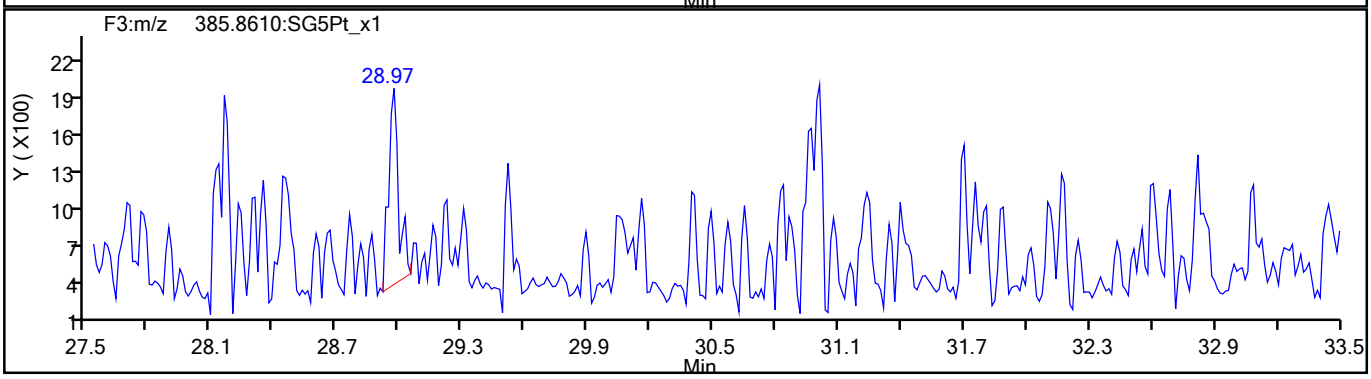

773916

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

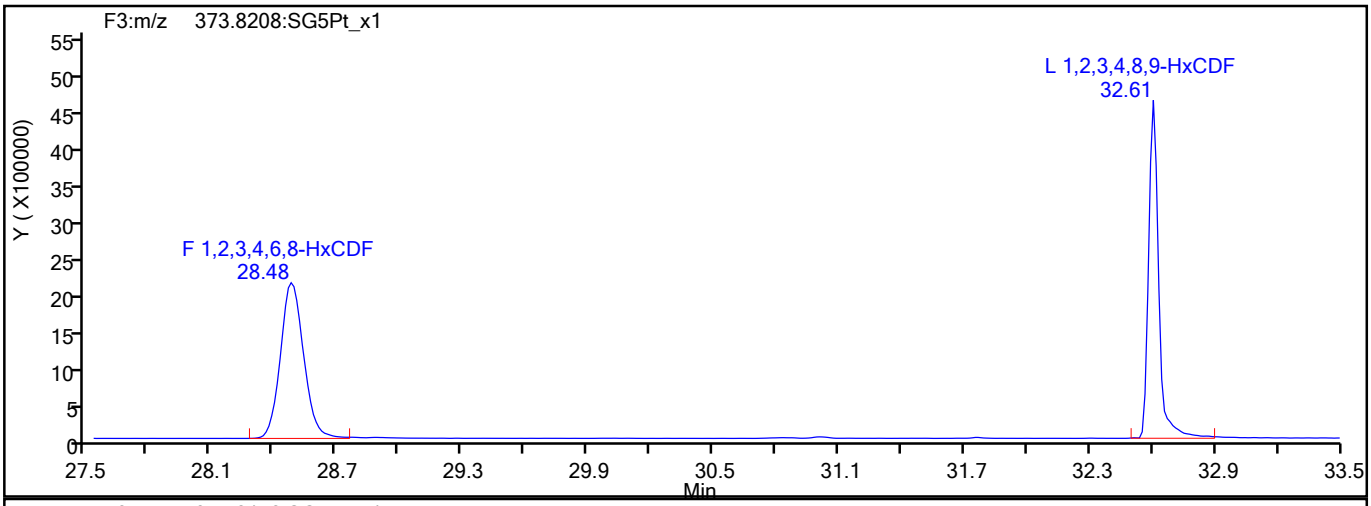

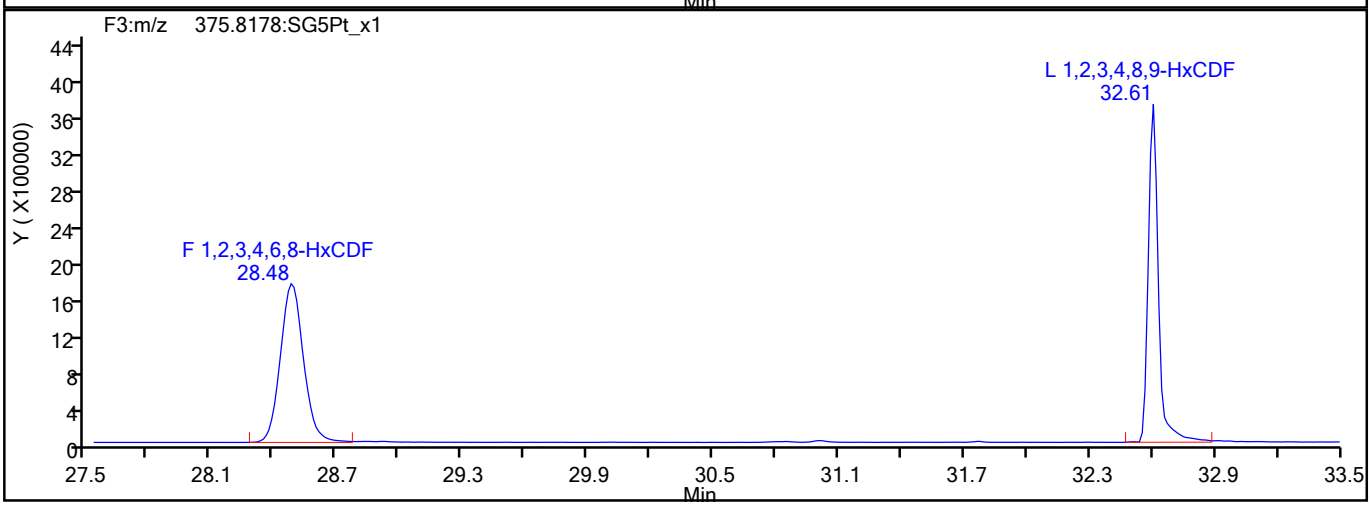

HxCDF Interference Mass

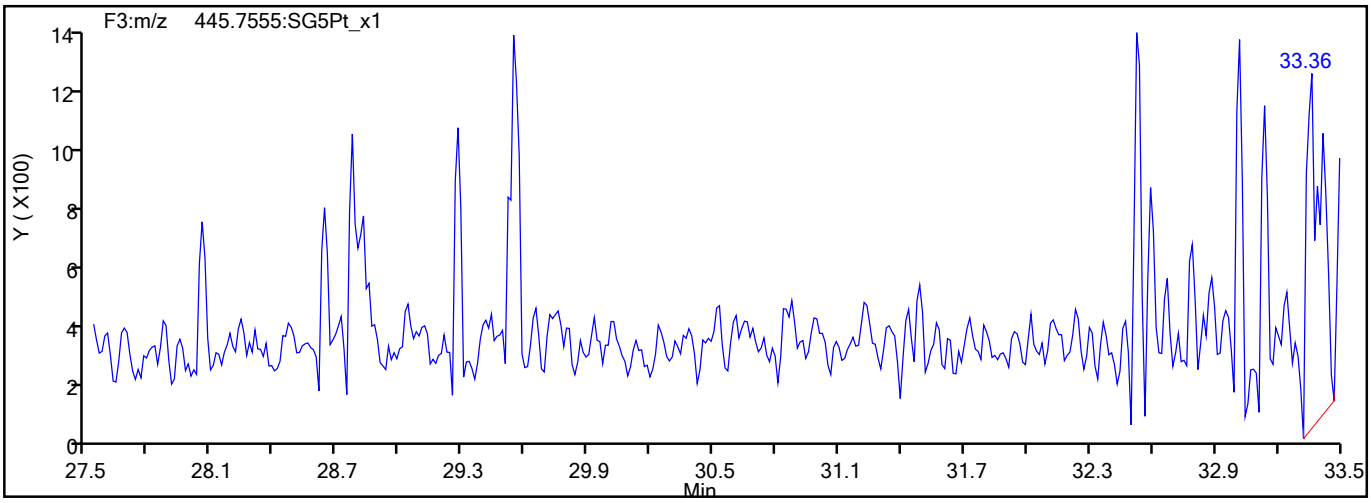

773917

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
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HpCDF

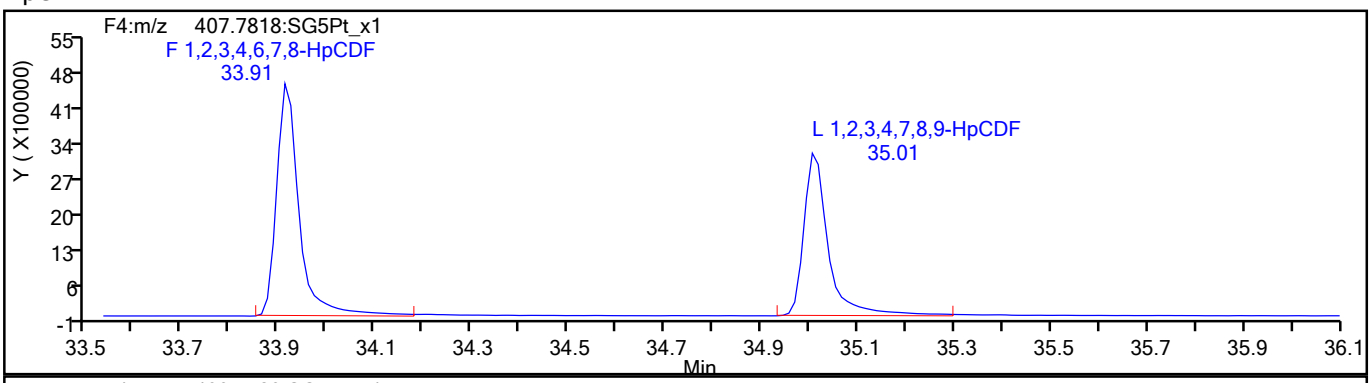

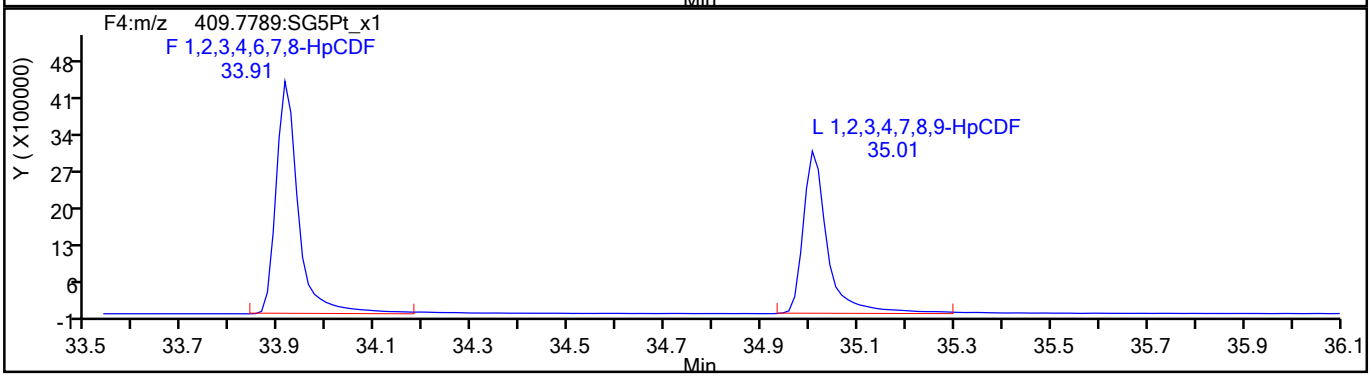

HpCDF Standards

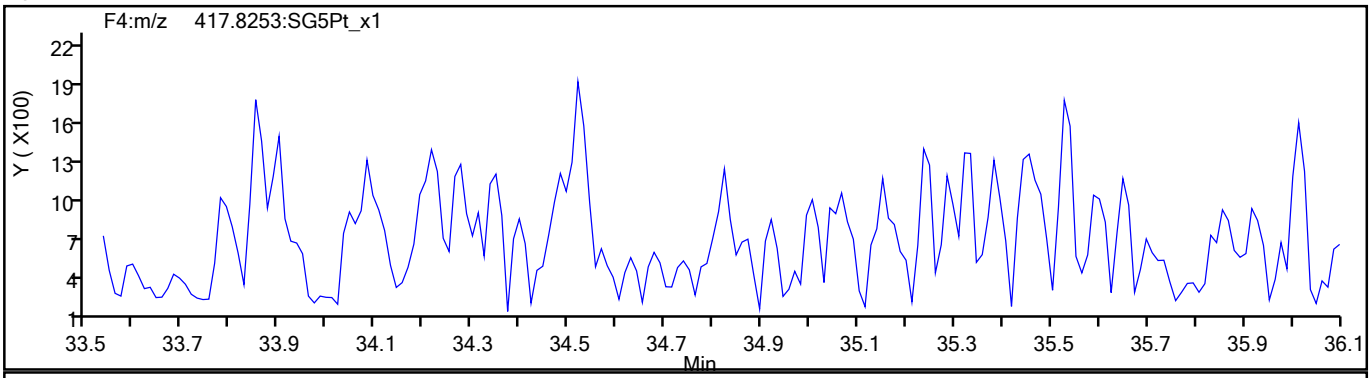

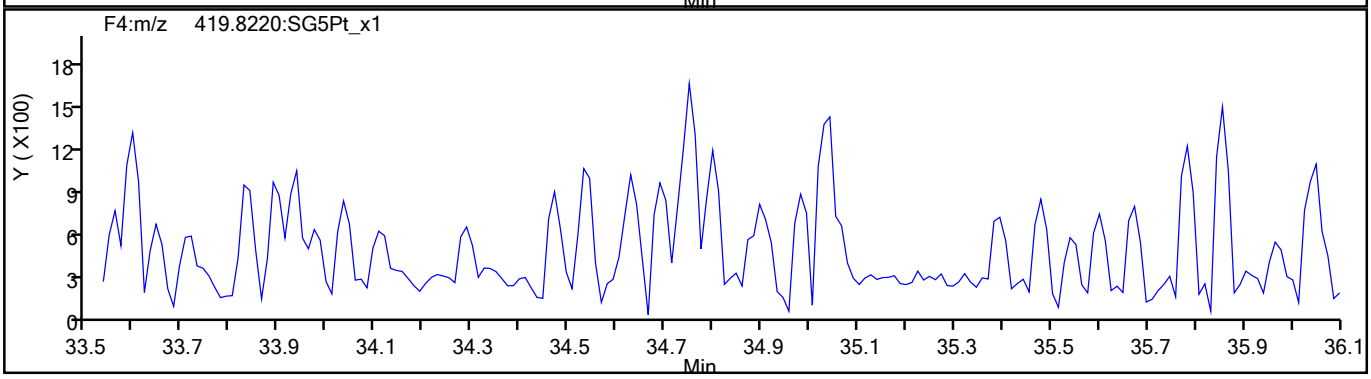

773918

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

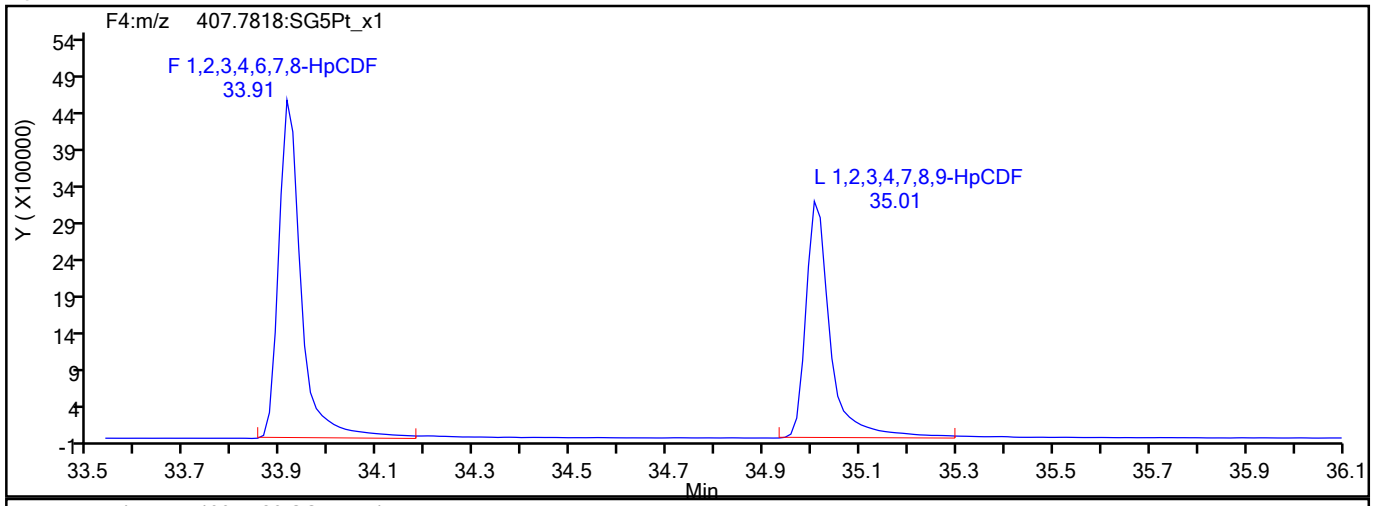

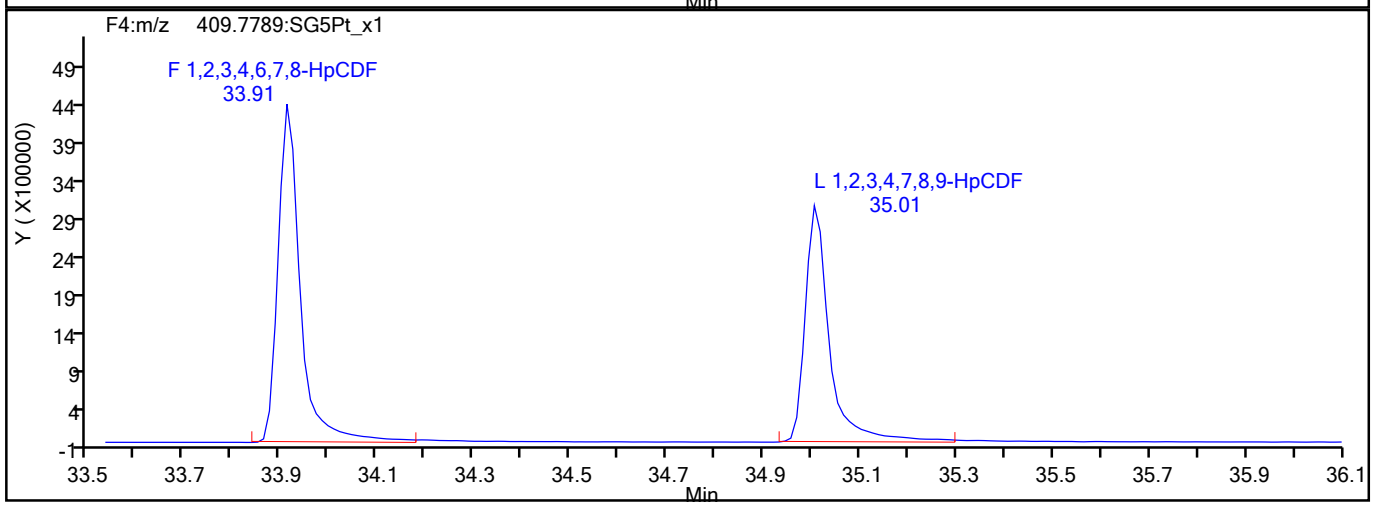

HpCDF Interference Mass

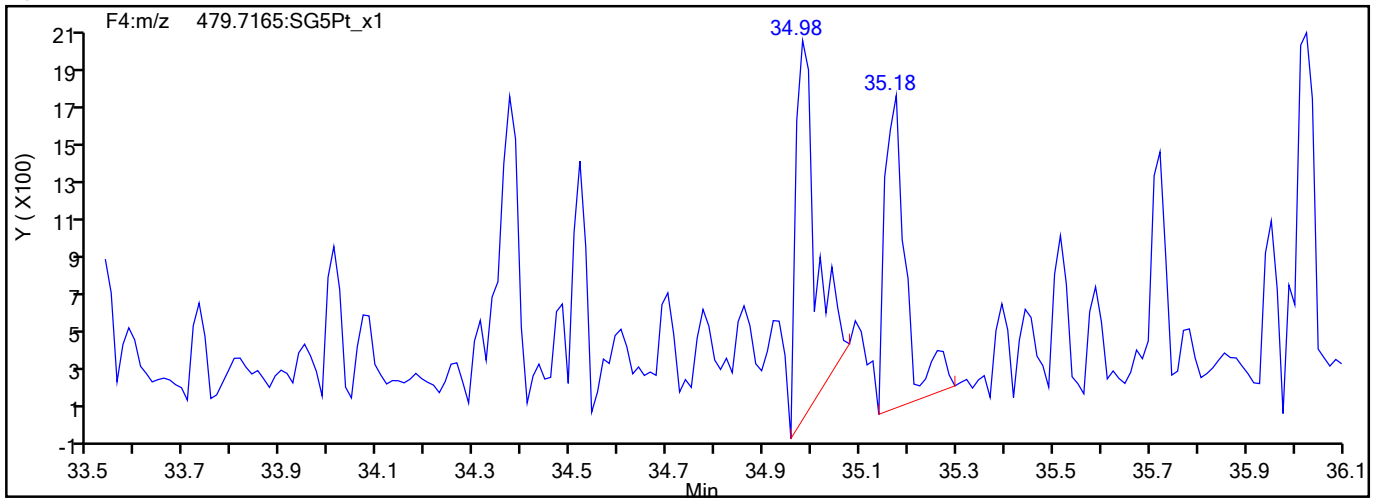

773919

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

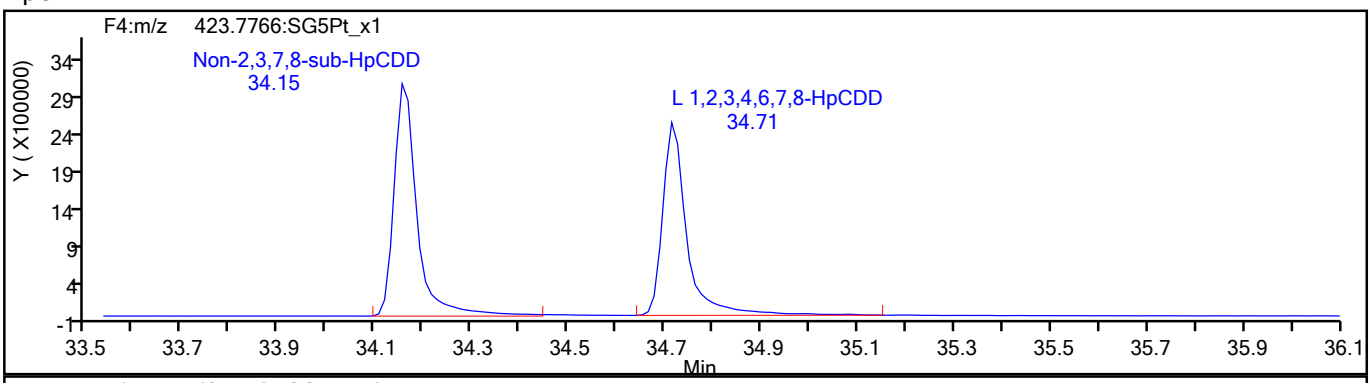

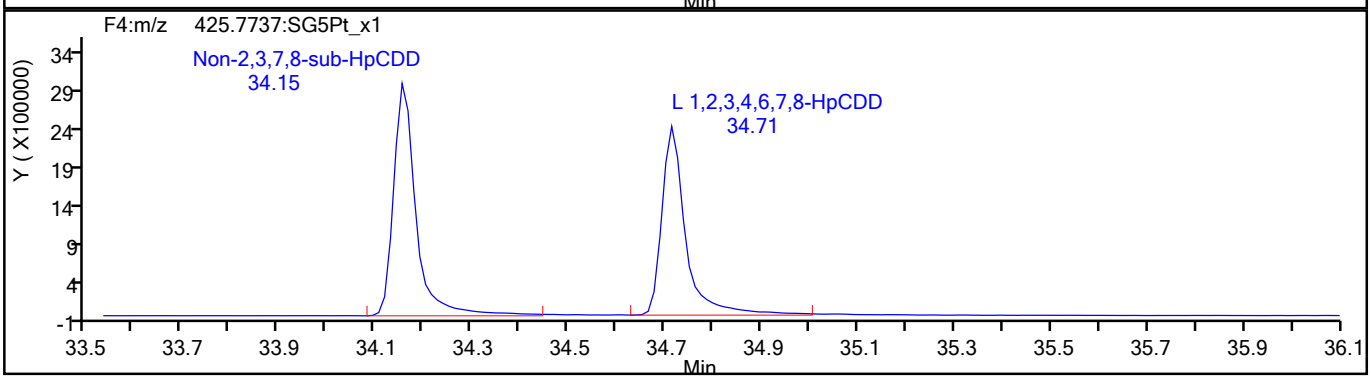

HpCDD Standards

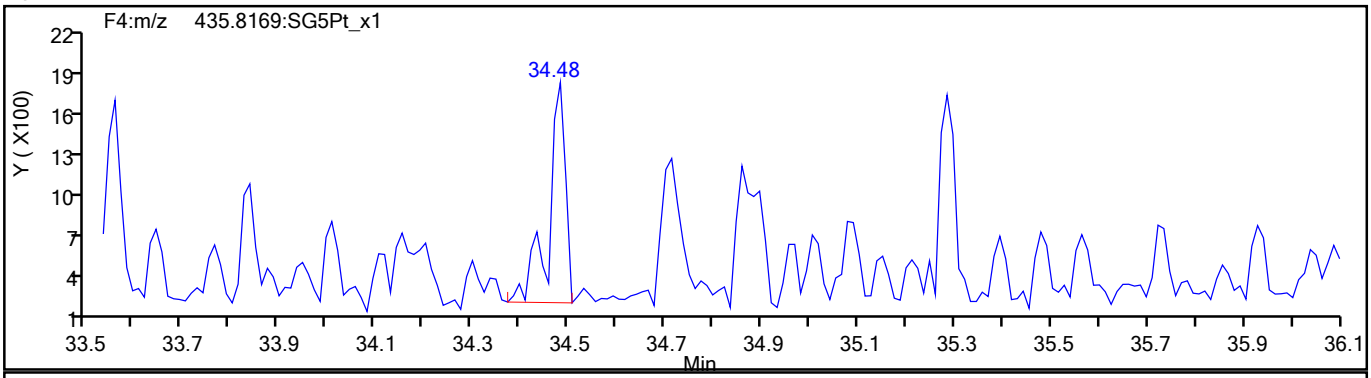

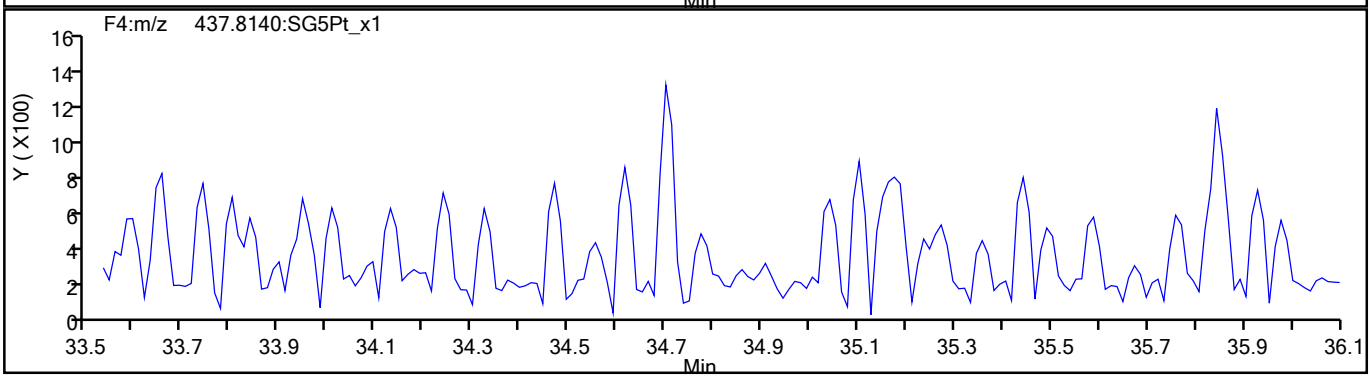

773920

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

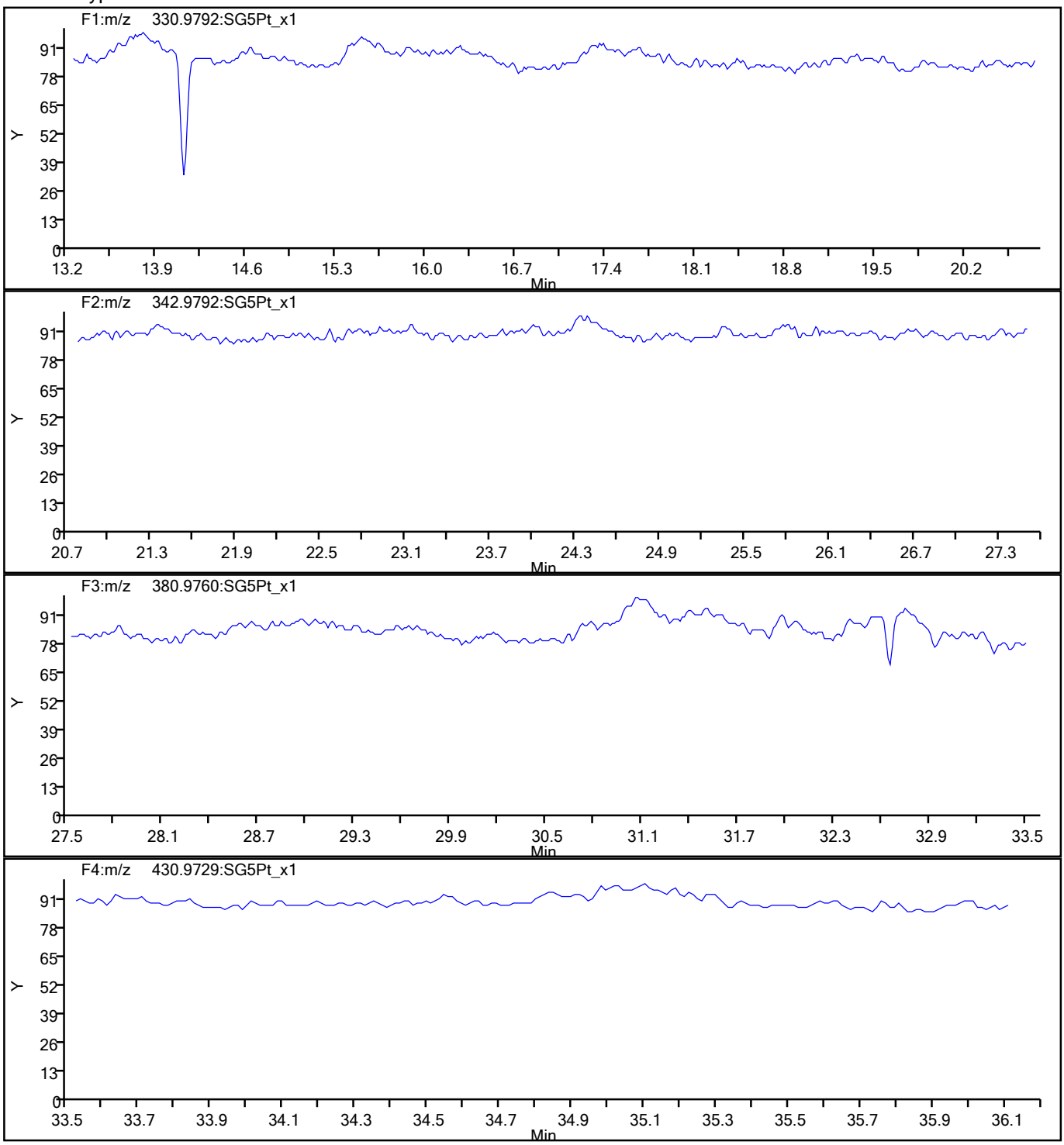

773921

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

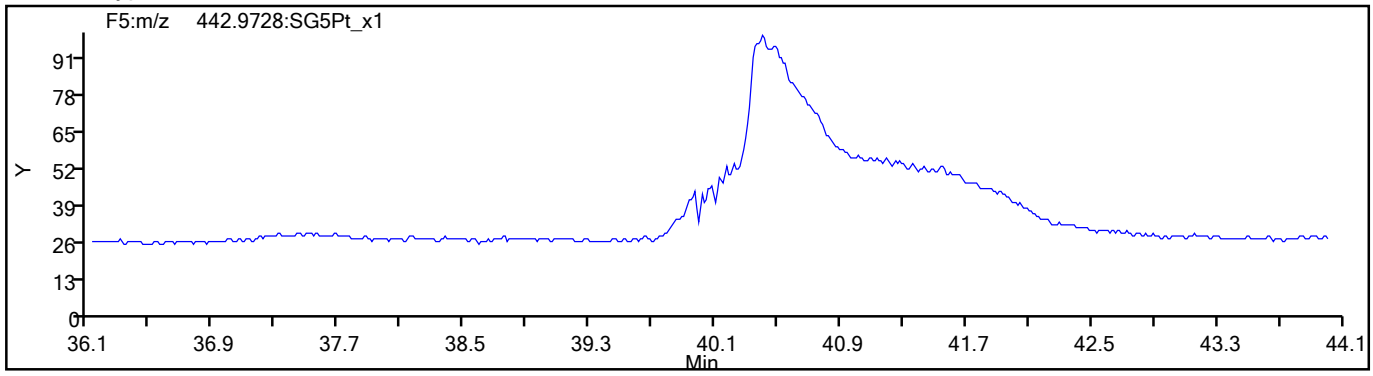

773922

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 13-Aug-2021 05:48:08 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081221B WDM HRDXNCP_00044
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 13-Aug-2021 15:47:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1625

First Level Reviewer: arghestanis Date: 13-Aug-2021 15:38:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.356	72818839	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.386	157301205	0.78	1.0239	84.4	84.4	0.2703	0.2703		
A Non-2,3,7,8-sub-TCDF	17.069	2244849	0.78	1.0239	1.204	1.204	0.2703	1.204		
S Total TCDF					85.6	85.6	0.2703	0.2703		
D 13C-2,3,7,8-TCDD	18.066	38743011	0.81	0.8993					0.00	
2,3,7,8-TCDD	18.082	55302037	0.78	1.2541	45.5	45.5	0.2065	0.2065		
A Non-2,3,7,8-sub-TCDD	17.530	45023464	0.78	1.2541	37.1	37.1	0.2065	37.1		
S Total TCDD					82.6	82.6	0.2065	0.2065		
A F1 PeCDFs	20.108						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	23.261	815836	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.376						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.223						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.895						0.0	0.0		
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.778	49722365	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	34.872	42114641	1.05	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.325						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.580	33412792	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.301						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.937	88948153	0.77							
1,3,6,8-TCDD	15.859	55255187	0.79							
2,3,4,7-TCDF	17.386	157301205	0.78							
1,2,3,7-TCDD	18.082	55313982	0.78							
1,2,3,9-TCDF	18.248	68358014	0.77							
1,2,3,9-TCDD	18.248	56992167	0.78							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.201	22626788								
1,2,8,9-TCDF	19.201	70710814	0.77							
1,3,4,6,8-PeCDF	19.488	63602968	1.56							
1,2,4,7,9-PeCDD	21.262	41208080	1.58							
1,2,3,8,9-PeCDD	25.490	38113948	1.60							
1,2,3,8,9-PeCDF	25.721	49409531	1.60							
1,2,3,4,6,8-HxCDF	28.014	49570766	1.22							
1,2,4,6,7,9-HxCDD	29.598	37861672	1.26							
1,2,3,4,6,7-HxCDD	32.127	38360034	1.25							
1,2,3,4,8,9-HxCDF	32.433	46856048	1.22							
1,2,3,4,6,7,9-HpCDD	34.021	37207105	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 13-Aug-2021 05:48:08 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081221B WDM HRDXNCP_00044
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 13-Aug-2021 15:47:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1625

First Level Reviewer: arghestanis Date: 13-Aug-2021 15:38:11

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	1.000	31746941	7628051	6362	15905	1199		
317.9389	17.356	17.356	0	1.000	41071898	9886722	4506	11265	2194	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.386	17.386	0	1.002	68794393	15448889	21370	53425	723		
305.8987	17.386	17.386	0	1.002	88506812	19705686	27106	67765	727	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	19.488	17.069	145	1.123	984329	148365	21370	53425	7		
305.8987	19.488	17.069	145	1.123	1260520	193374	27106	67765	7	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.066	0	1.000	17364424	3919192	2695	6737	1454		
333.9339	18.066	18.066	0	1.000	21378587	4821701	2170	5425	2222	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.082	18.082	0	1.001	24254173	5317405	13610	34025	391		
321.8936	18.082	18.082	0	1.001	31047864	6915010	9031	22577	766	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.976	17.530	27	0.995	19670217	4712360	13610	34025	346		
321.8936	17.961	17.530	26	0.994	25353247	6035371	9031	22577	668	0.78(0.65-0.89)	
A F1 PeCDFs											
339.8597	20.108						1453	3632			
341.8567	20.108						1188	2970			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.849	23.261	-85	1.000	91224	17008	3990	9975	4		
341.8567	21.849	23.261	-85	1.000	79740	11893	2798	6995	4	1.14(1.32-1.78)	
339.8597	22.421	23.261	-50	1.000	251888	31370	3990	9975	8		
341.8567	22.435	23.261	-49	1.000	147687	21362	2798	6995	8	1.71(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	23.008	23.261	-15	1.000	158604	19771	3990	9975	5		
341.8567	22.994	23.261	-16	1.000	107579	15835	2798	6995	6	1.47(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.376						4531	11327			
357.8516	23.376						2940	7350			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.223						6916	17290			
375.8178	30.223						5920	14800			
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.895						11681	29202			
391.8127	30.895						7880	19700			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	25523585	7968730	35492	88730	225		
409.7789	33.778	33.778	0	1.000	24198780	7694470	25695	64237	299	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.872	0	1.000	21554877	5862804	35492	88730	165		
409.7789	34.872	34.872	0	1.000	20559764	5602169	25695	64237	218	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						35492	88730			
409.7789	34.325						25695	64237			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	17057279	4965315	19809	49522	251		
425.7737	34.580	34.580	0	1.000	16355513	4794426	18601	46502	258	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						19809	49522			
425.7737	34.301						18601	46502			
1,3,6,8-TCDF											
303.9016	14.937	14.937	0		38708737	11814348	21370	53425	553		
305.8987	14.937	14.937	0		50239416	15154655	27106	67765	559	0.77(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.859	15.859	0		24360195	6692305	13610	34025	492		
321.8936	15.859	15.859	0		30894992	8451352	9031	22577	936	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.386	17.386	0		68794393	15448889	21370	53425	723		
305.8987	17.386	17.386	0		88506812	19705686	27106	67765	727	0.78(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.082	18.082	0		24254382	5317432	13610	34025	391		
321.8936	18.082	18.082	0		31059600	6916562	9031	22577	766	0.78(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	18.248	18.248	0		29819511	6821347	21370	53425	319		
305.8987	18.248	18.248	0		38538503	8726469	27106	67765	322	0.77(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.248	18.248	0		25011575	5577949	13610	34025	410		
321.8936	18.248	18.248	0		31980592	7103780	9031	22577	787	0.78(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.201	19.201	0		22626788	4636809	13610	34025	341		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	19.201	19.201	0		30809170	6428779	21370	53425	301		
305.8987	19.201	19.201	0		39901644	8265899	27106	67765	305	0.77(0.65-0.89)	
1,3,4,6,8-PeCDF											
339.8597	19.488	19.488	0		38803422	8186085	1453	3632	5634		
341.8567	19.488	19.488	0		24799546	5231196	1188	2970	4403	1.56(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	21.262	21.262	0		25214724	4228101	4531	11327	933		
357.8516	21.262	21.262	0		15993356	2663160	2940	7350	906	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	25.490	25.490	0		23463915	3053488	4531	11327	674		
357.8516	25.490	25.490	0		14650033	1925494	2940	7350	655	1.60(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	25.721	25.721	0		30369449	3926613	3990	9975	984		
341.8567	25.721	25.721	0		19040082	2465521	2798	6995	881	1.60(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	28.014	28.014	0		27229091	3256202	6916	17290	471		
375.8178	28.014	28.014	0		22341675	2687993	5920	14800	454	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.598	29.598	0		21108766	2497963	11681	29202	214		
391.8127	29.598	29.598	0		16752906	1991488	7880	19700	253	1.26(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8157	32.127	32.127	0		21346180	5731722	11681	29202	491		
391.8127	32.127	32.127	0		17013854	4496434	7880	19700	571	1.25(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.433	32.433	0		25741793	7011741	6916	17290	1014		
375.8178	32.433	32.433	0		21114255	5694024	5920	14800	962	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	34.021	34.021	0		18936097	5759245	19809	49522	291		
425.7737	34.021	34.021	0		18271008	5658552	18601	46502	304	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d
Lims ID: WDM
Client ID:
Inject. Date: 13-Aug-2021 05:48:08 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	72818839	17514773

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	72818839	17514773

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.488	984329	148365	1260520	193374	1.20	0.78	
Signal Totals:							
	984329	148365	1260520	193374			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2244849	341739				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.204 = (2244849 * 40.000) / (72818839 * 1.024)

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d
Lims ID: WDM
Client ID:
Inject. Date: 13-Aug-2021 05:48:08 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	38743011	8740893

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	38743011	8740893

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.976	19670217	4712360	25353247	6035371	37.1	0.78	
Signal Totals:							
	19670217	4712360	25353247	6035371			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	45023464	10747731				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 37.065 = (45023464 * 40.000) / (38743011 * 1.254)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d
Lims ID: WDM
Client ID:
Inject. Date: 13-Aug-2021 05:48:08 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDF, RT: 23.261

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.849	91224	17008	79740	11893		1.14	R
22.421	251888	31370	147687	21362		1.71	
23.008	158604	19771	107579	15835		1.47	
Signal Totals:							
	501716	68149	335006	49090			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	836722	117239				1.50	RQ
	815836	116318					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (836722 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (815836 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

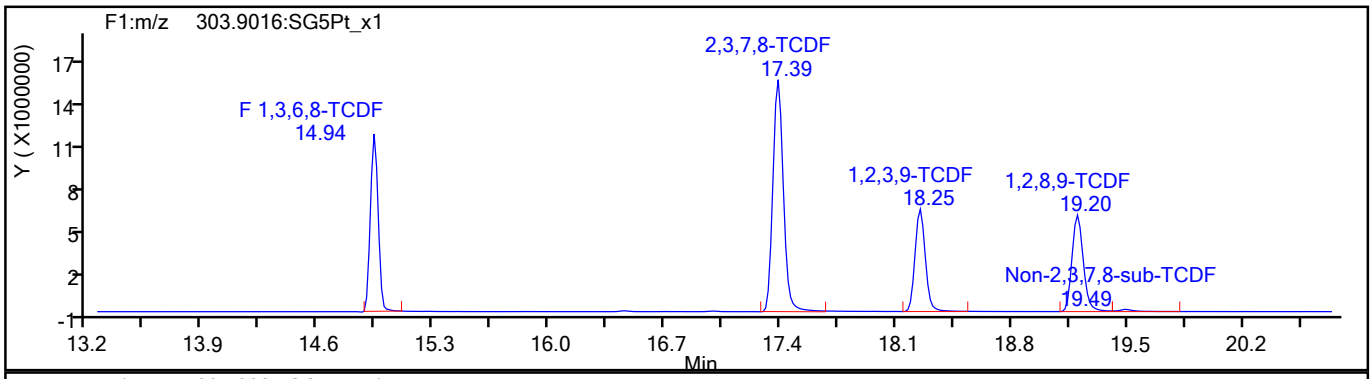

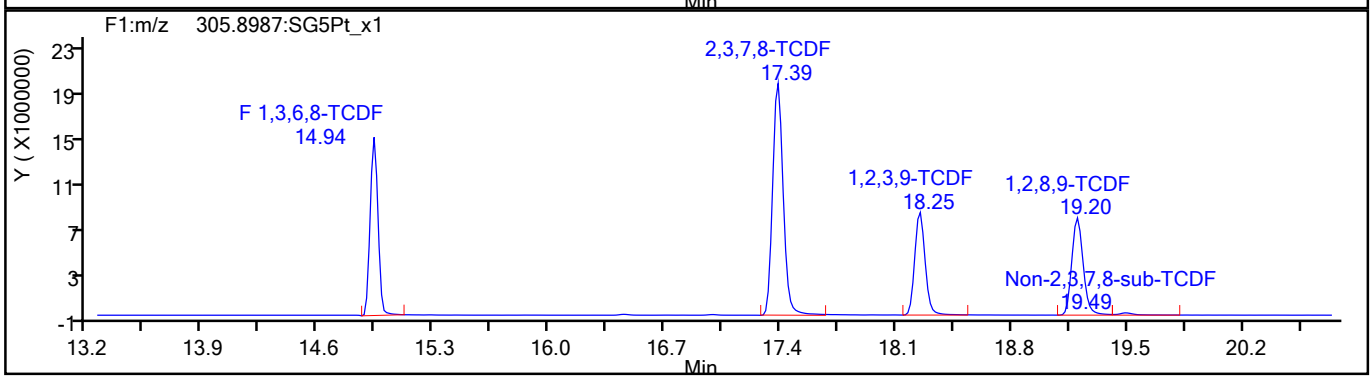

TCDF Standards

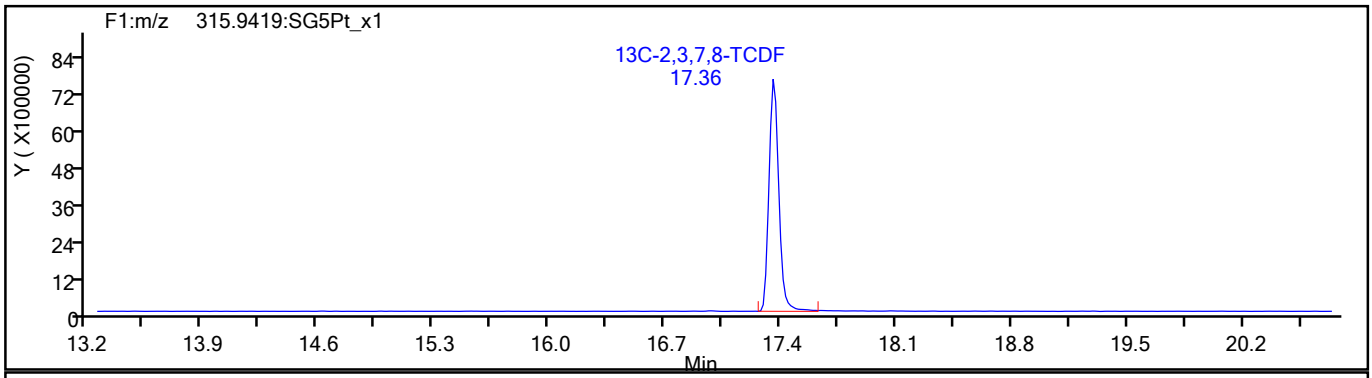

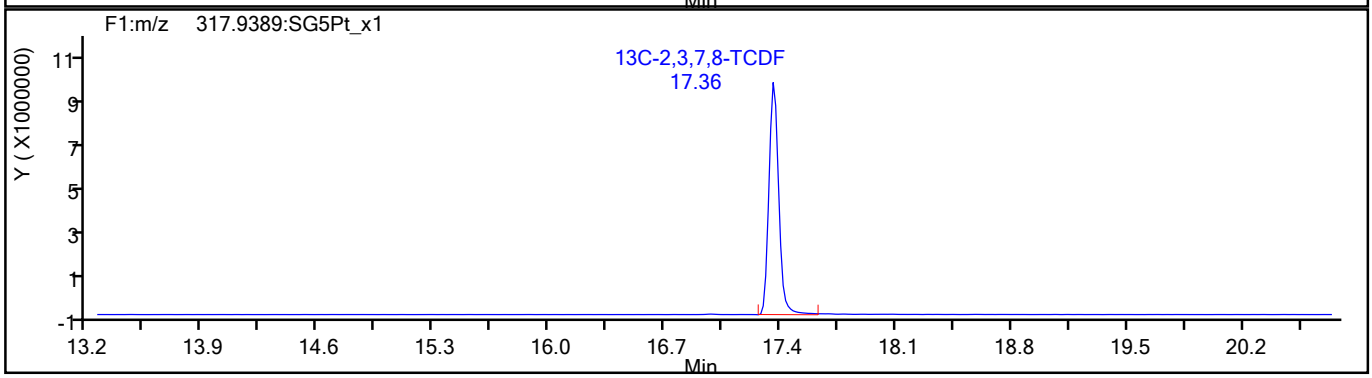

773931

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

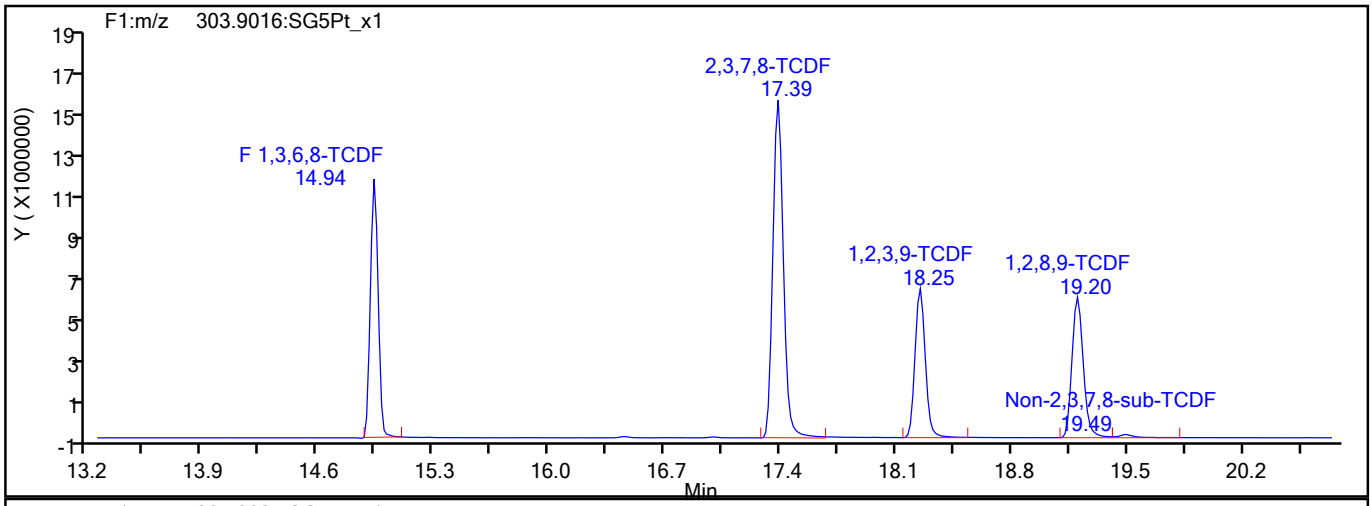

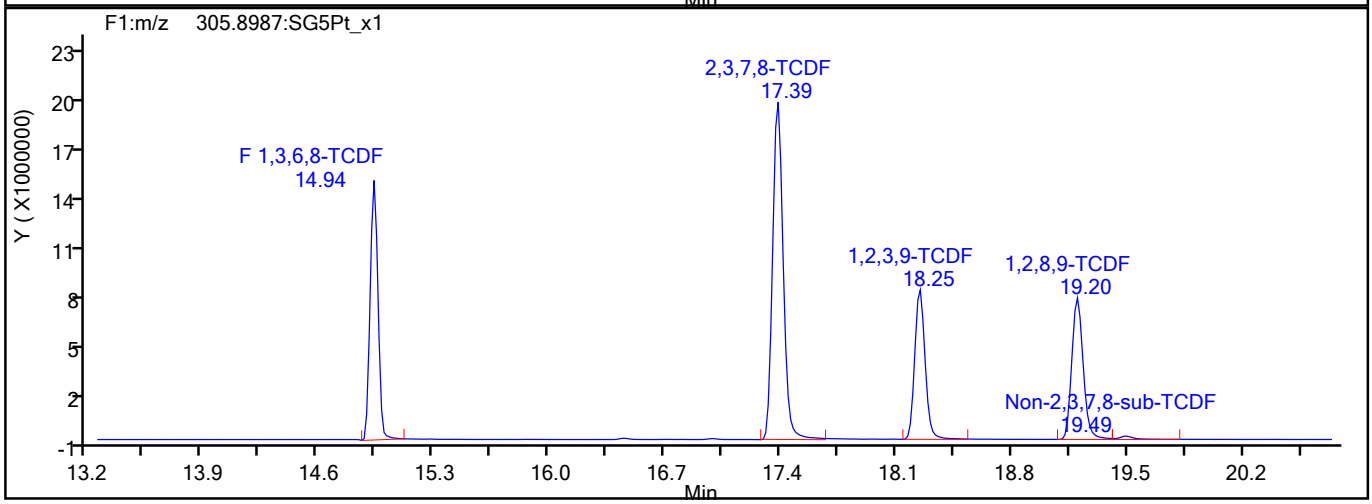

TCDF Interference Mass

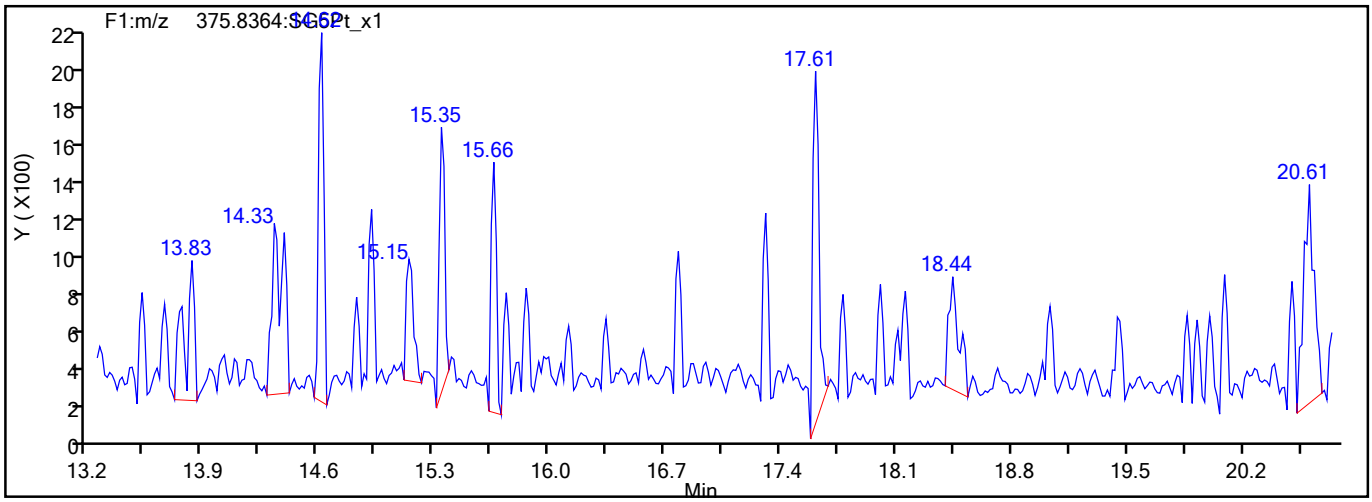

773932

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

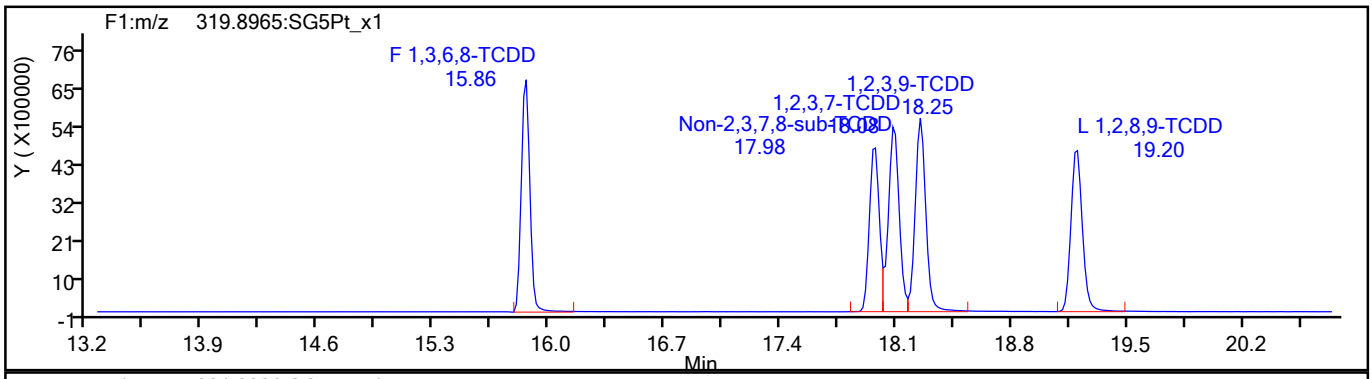

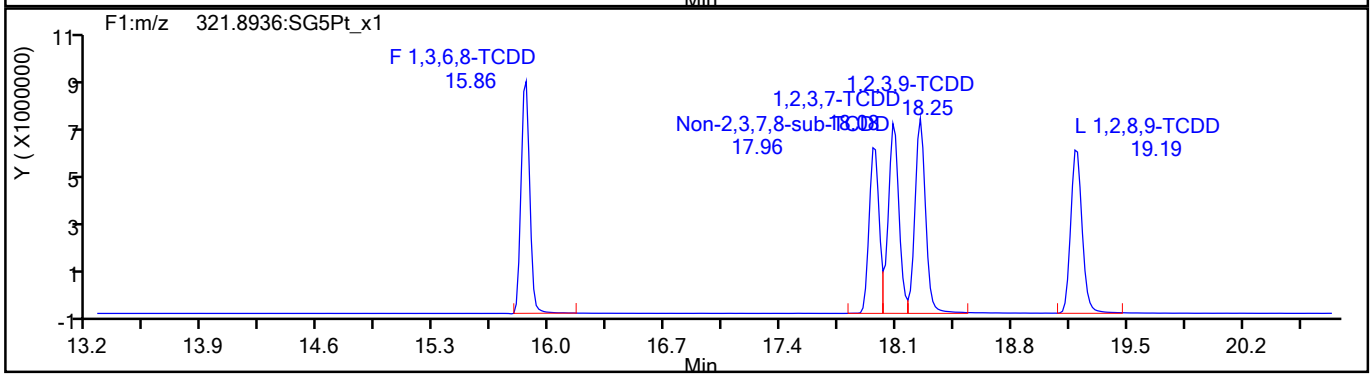

TCDD Standards

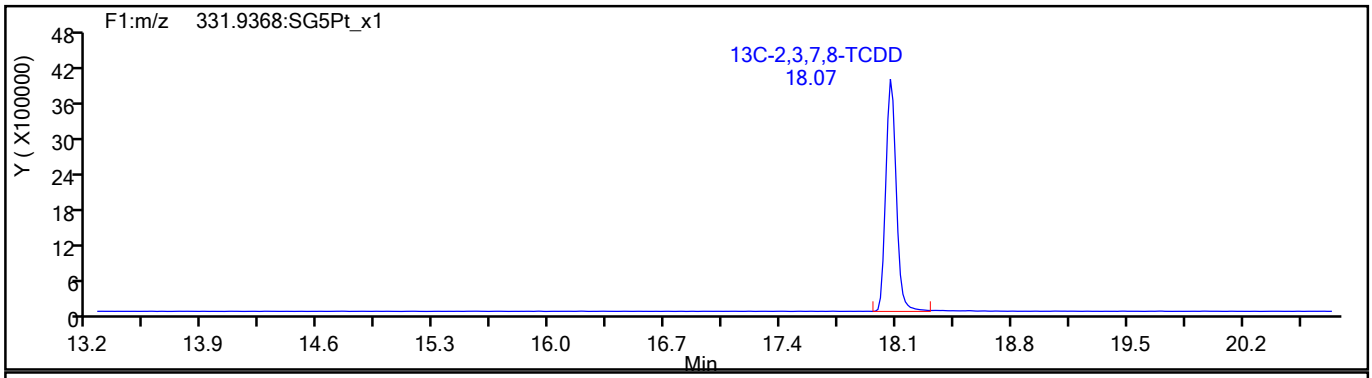

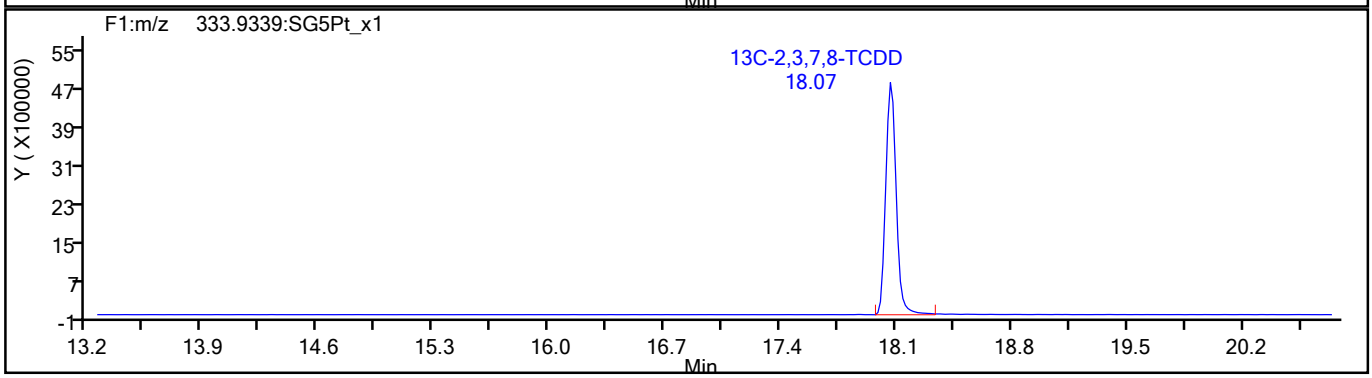

773933

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

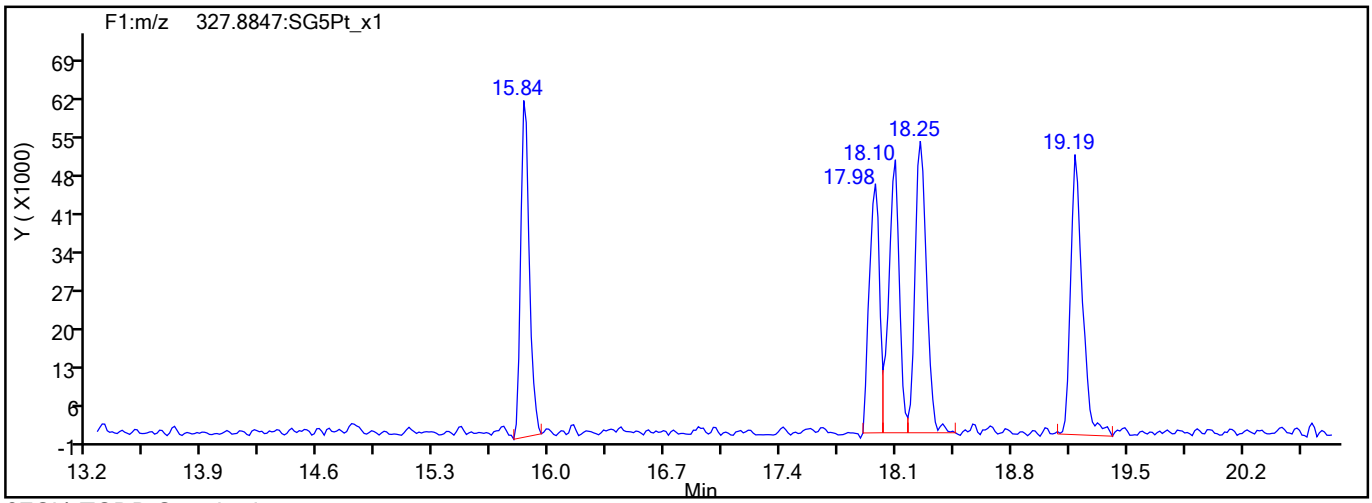

37Cl4-TCDD Standards

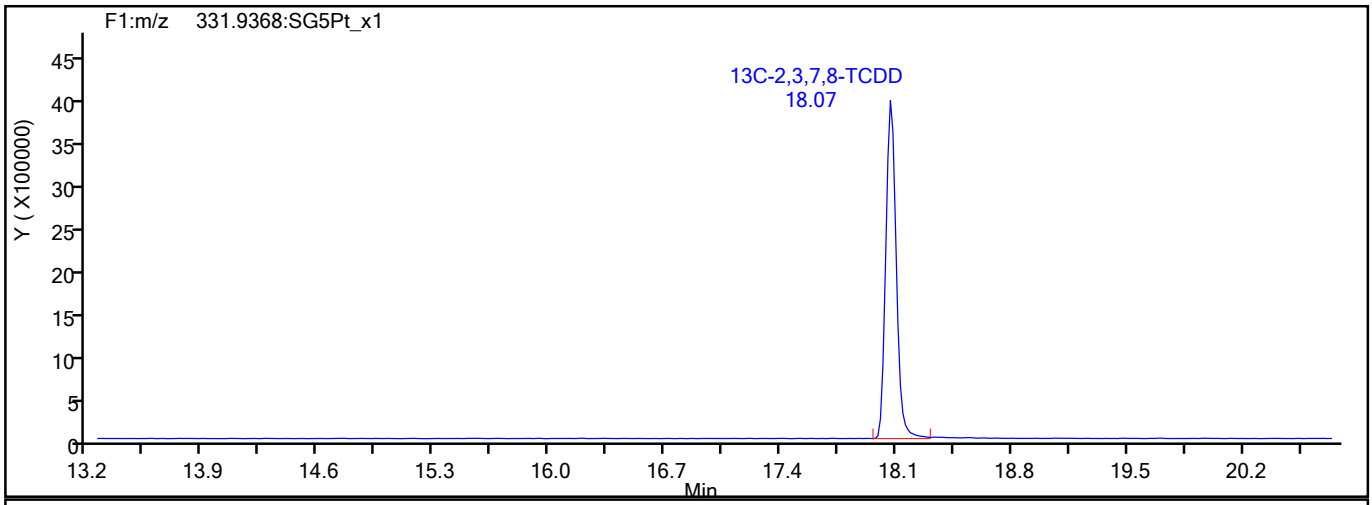

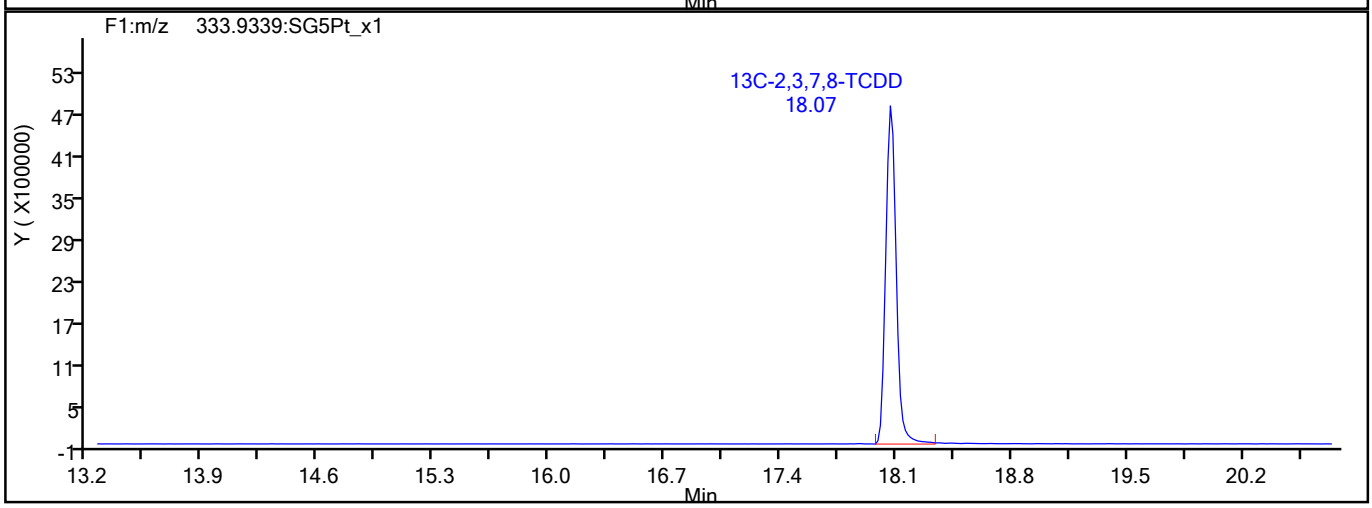

773934

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

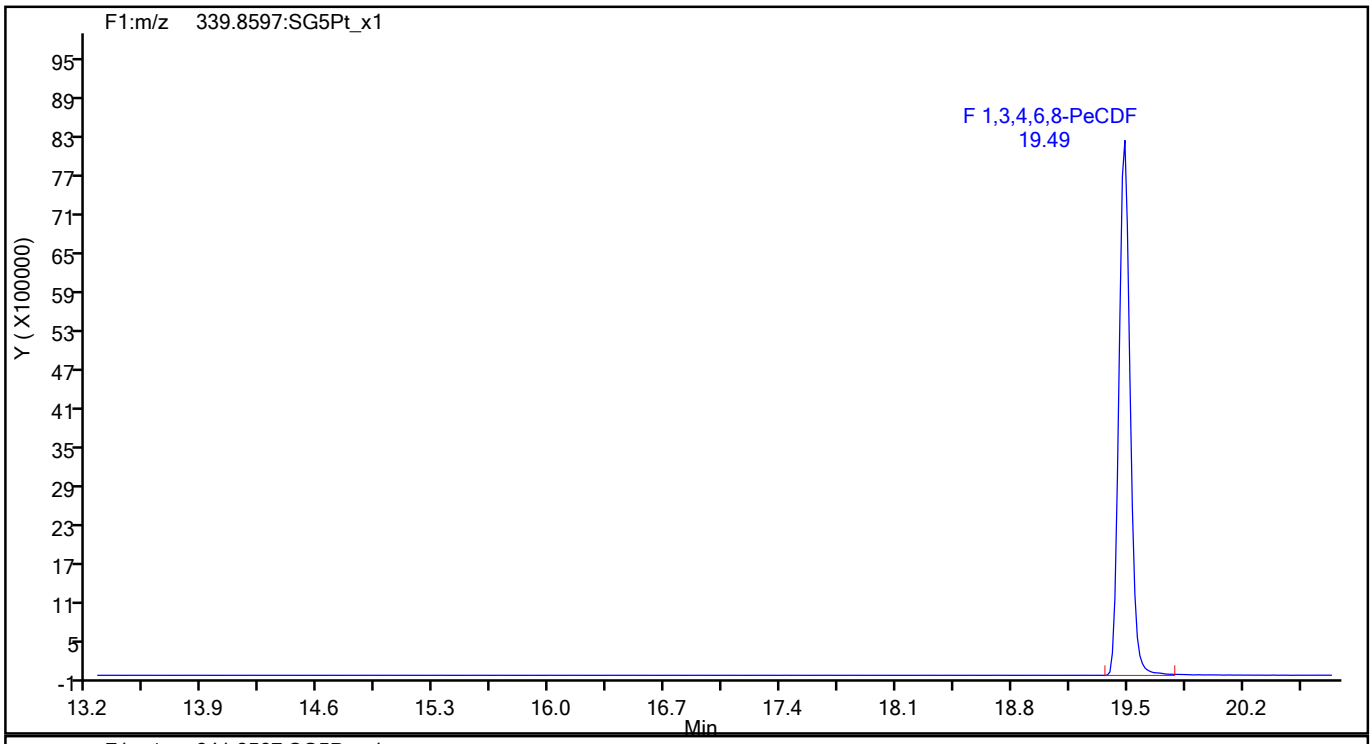

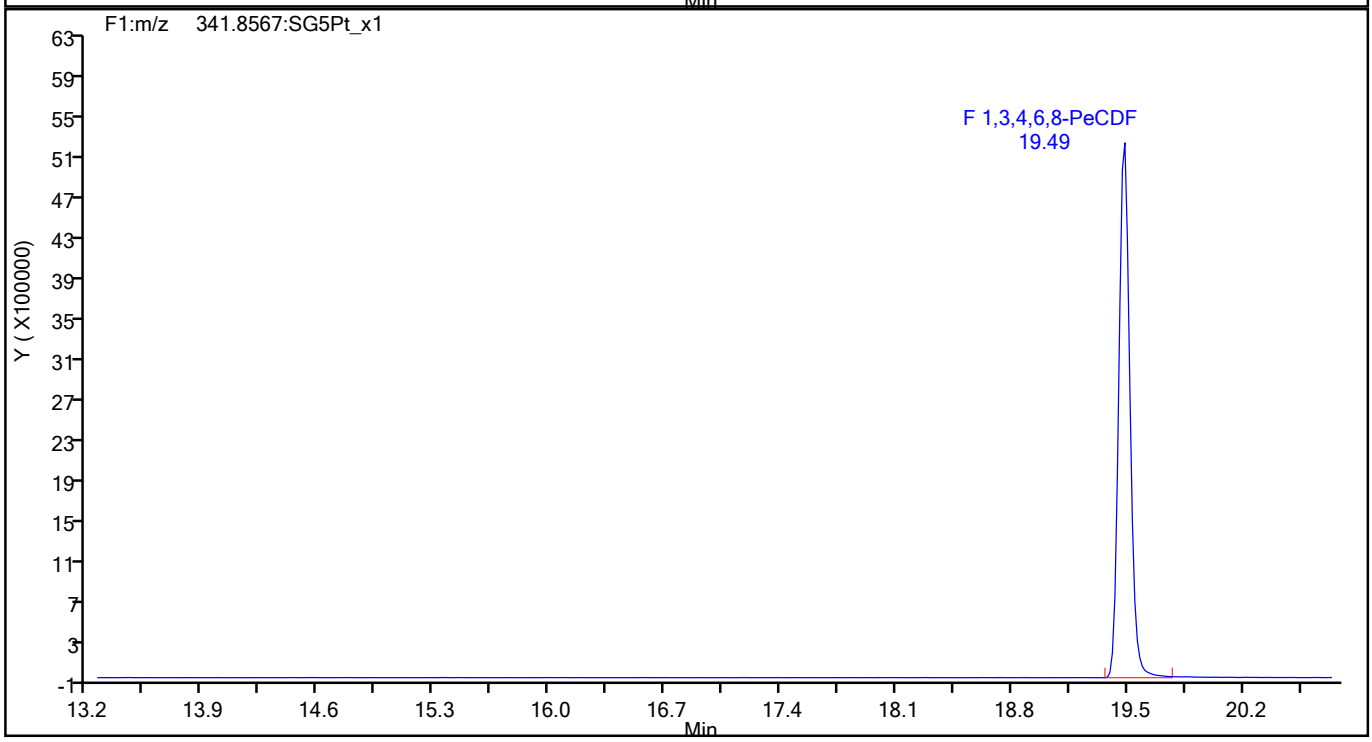

773935

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

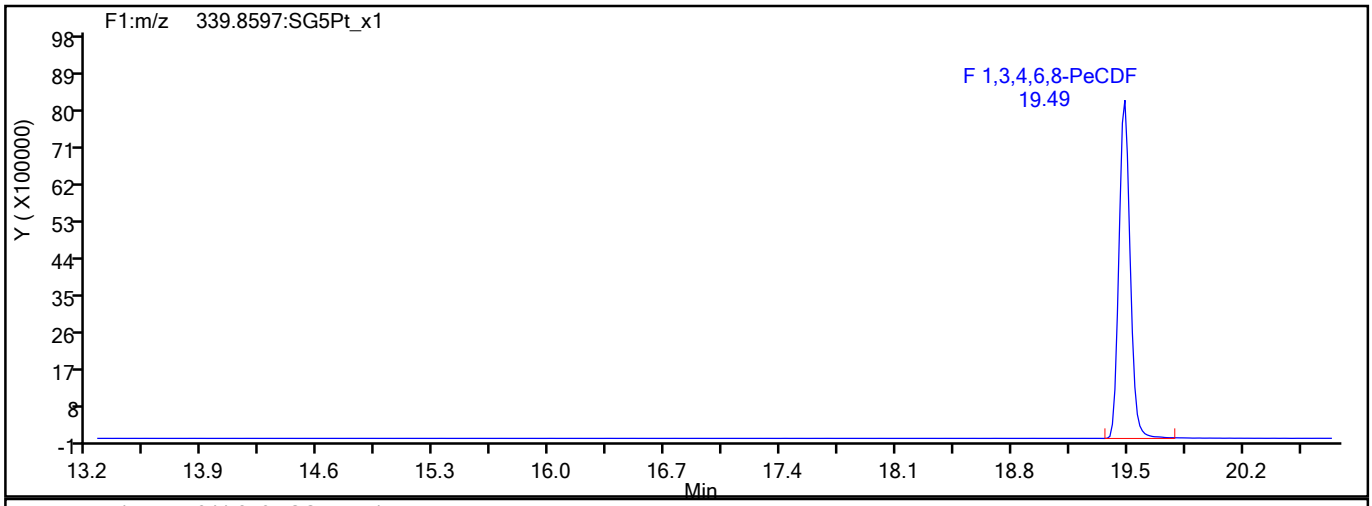

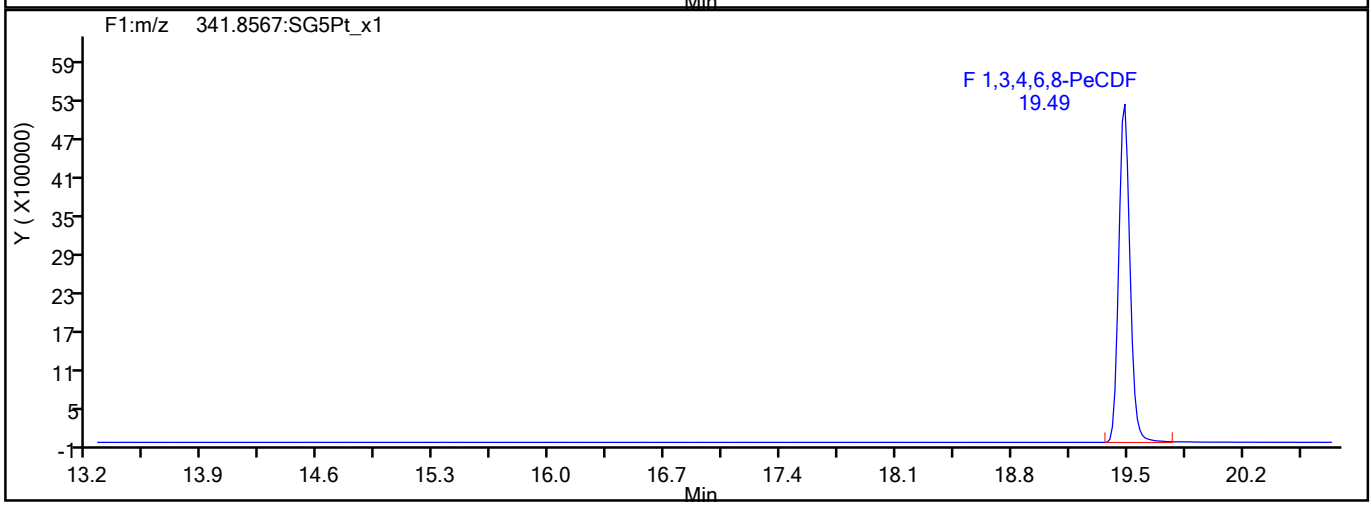

F1 PeCDFs Interference Mass

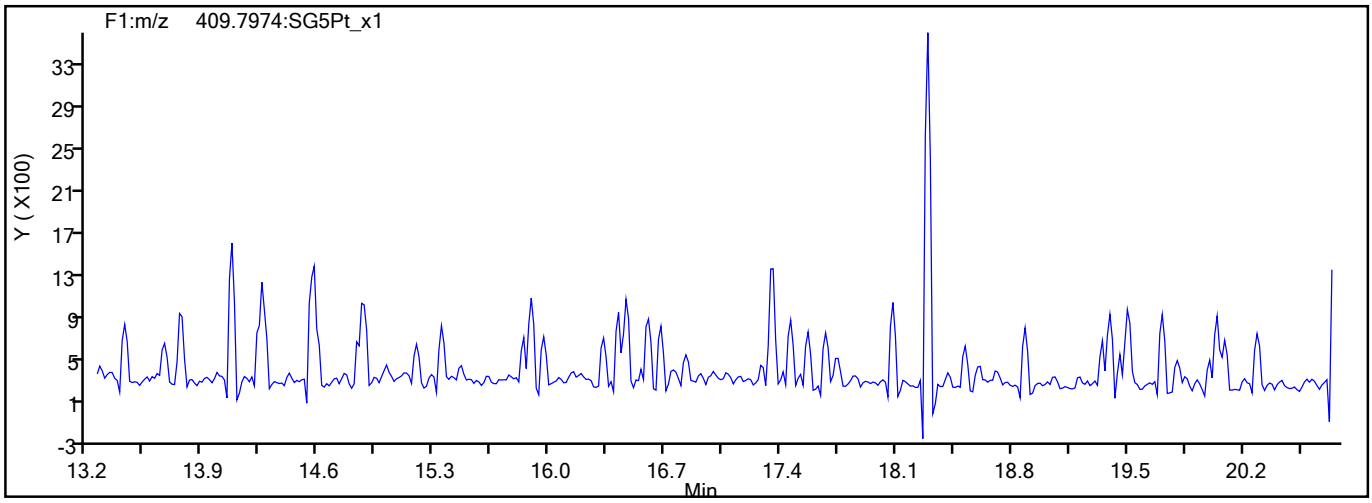

773936

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

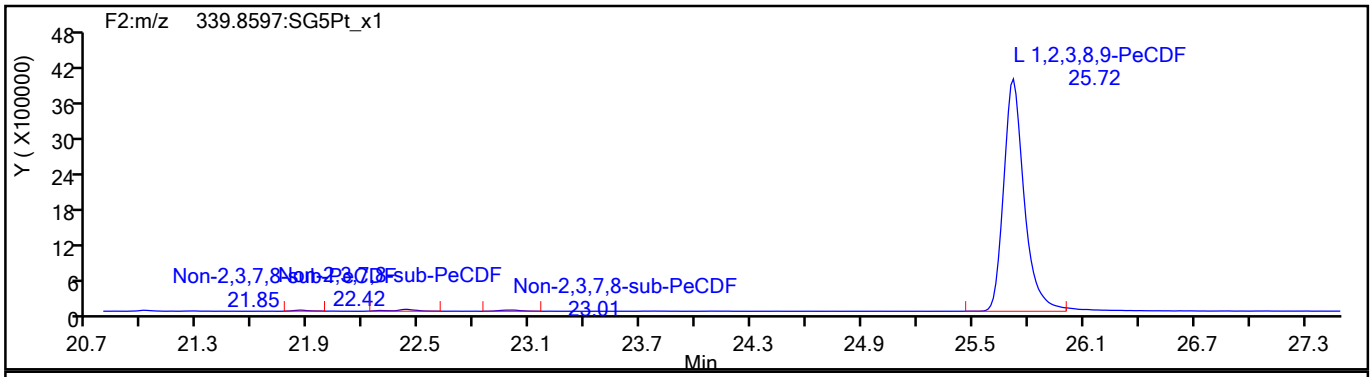

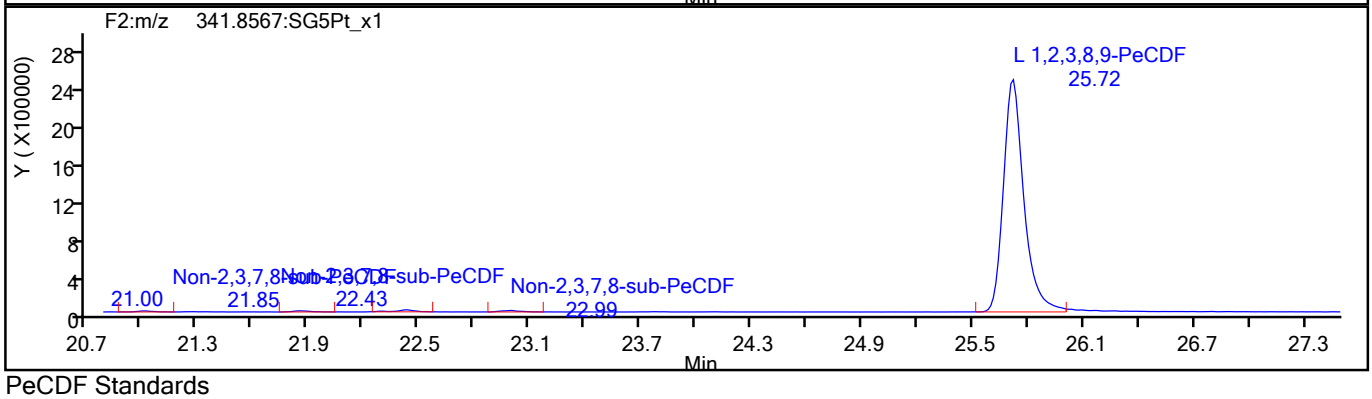

PeCDF Standards

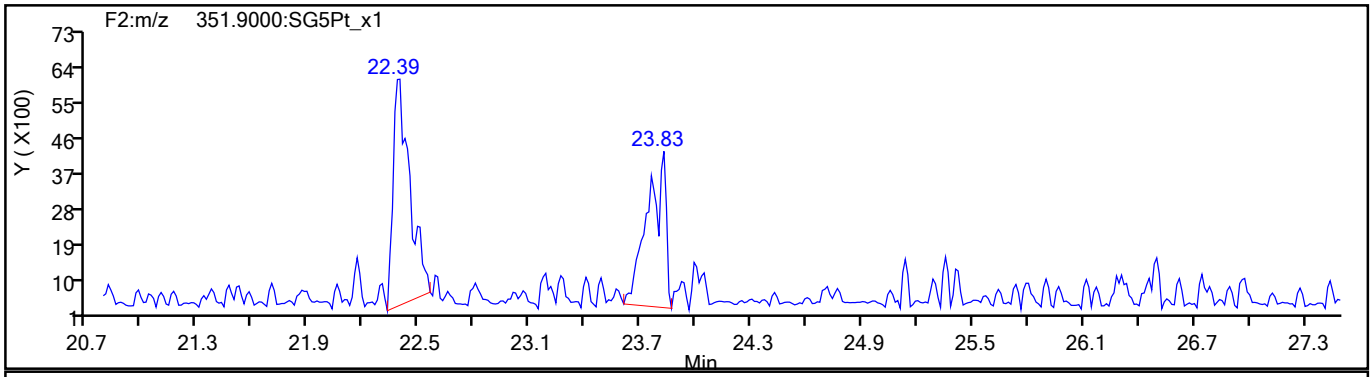

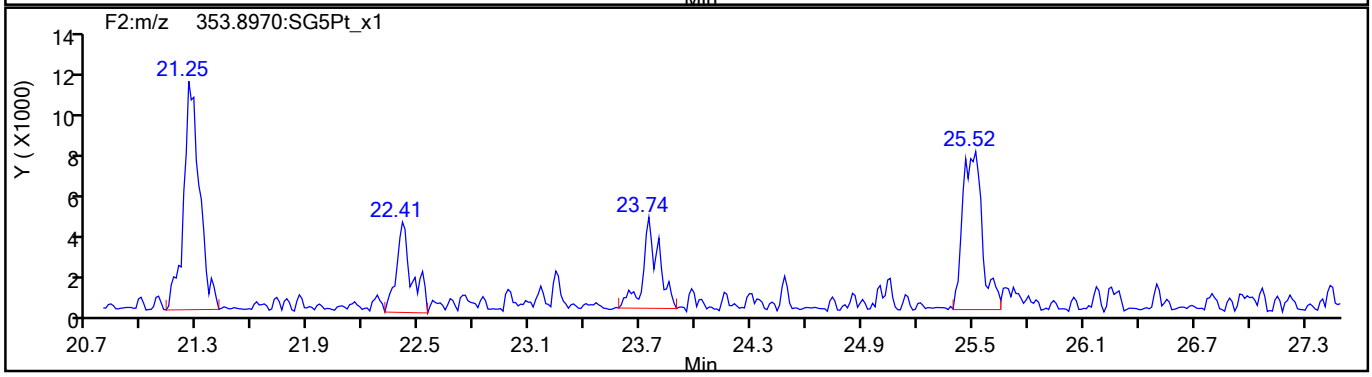

773937

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

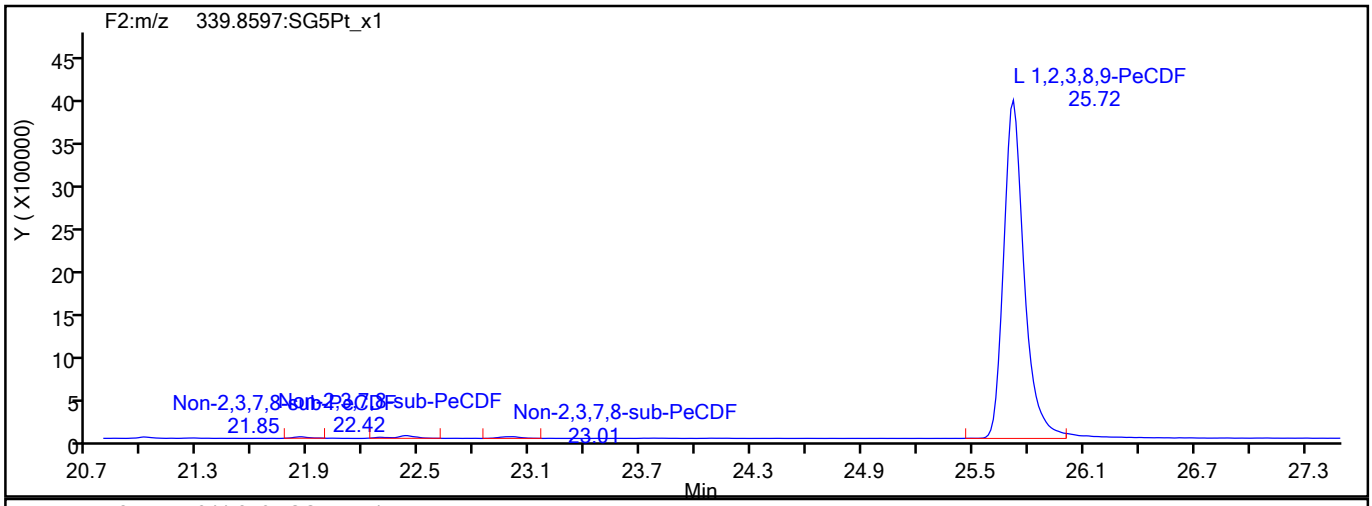

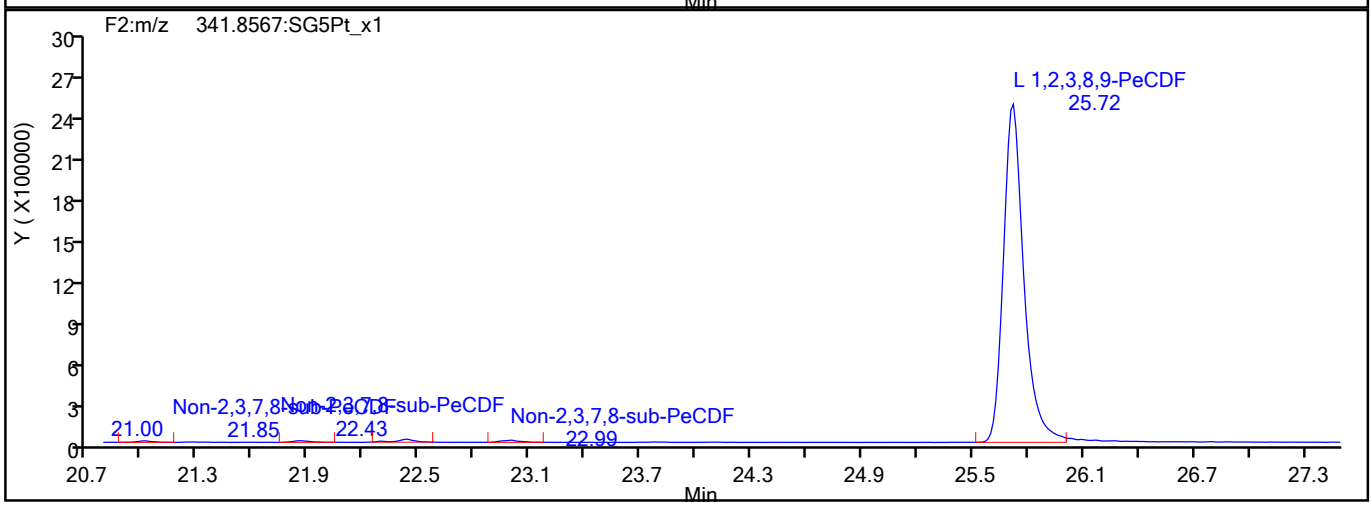

PeCDF Interference Mass

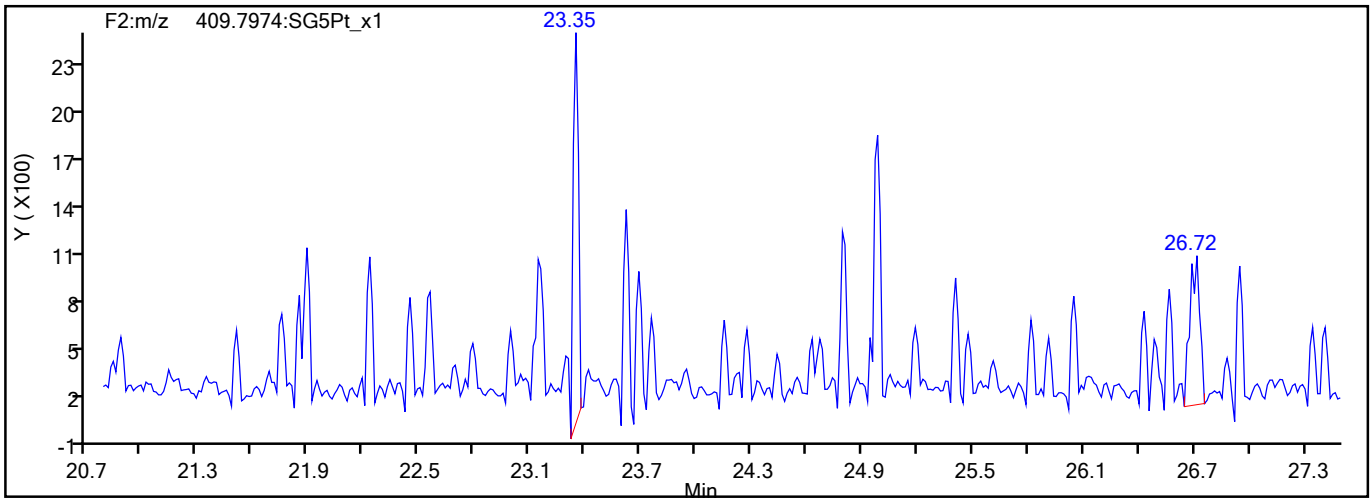

773938

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

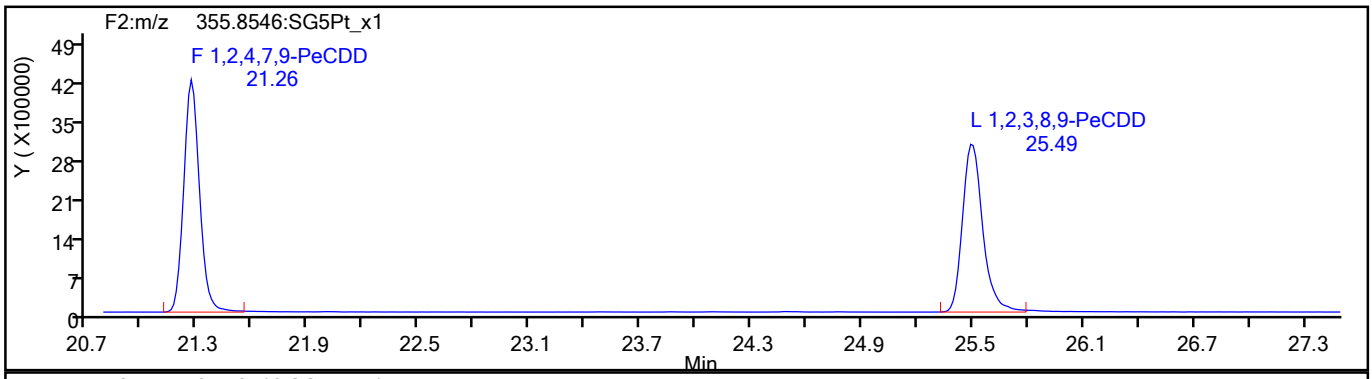

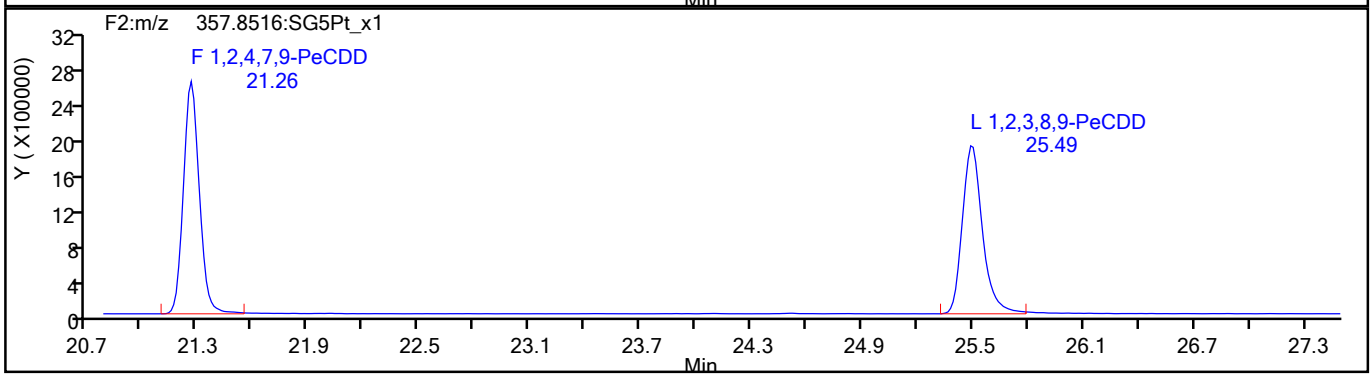

PeCDD Standards

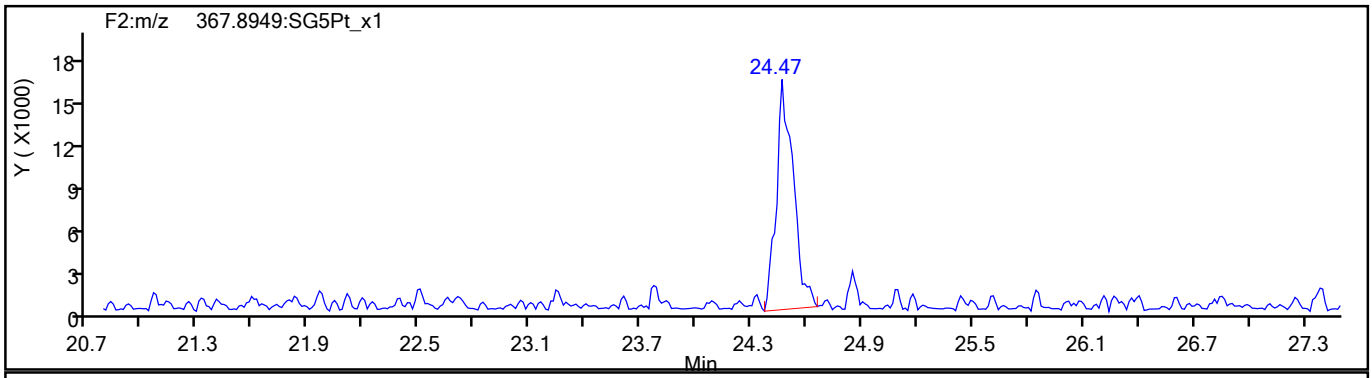

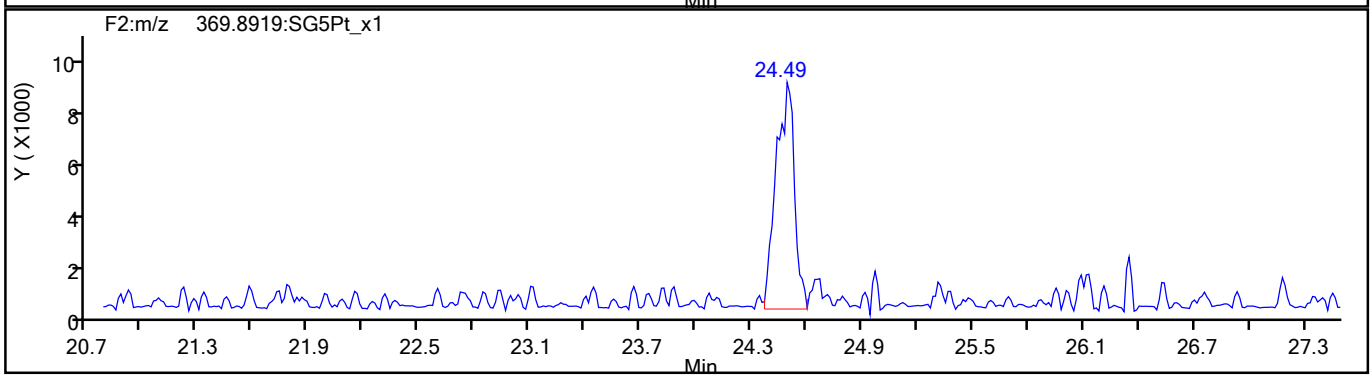

773939

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

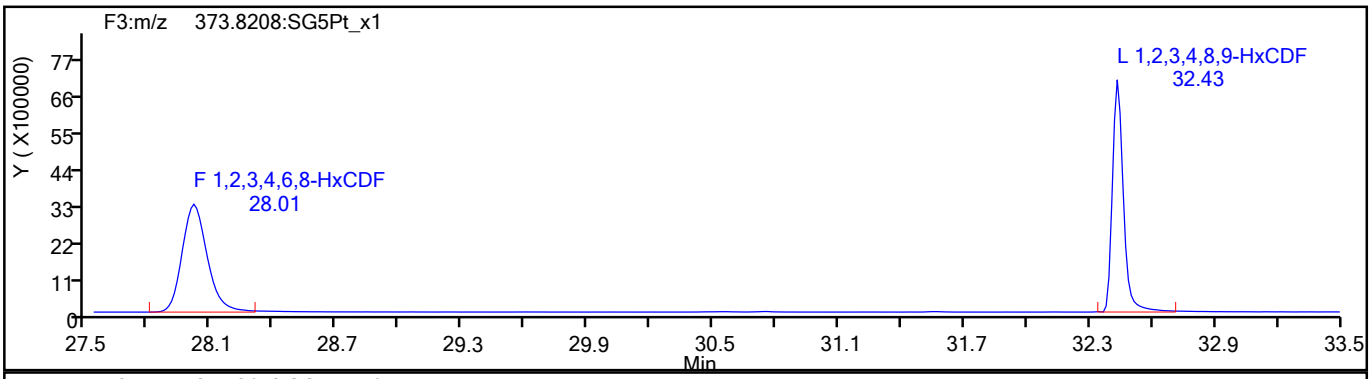

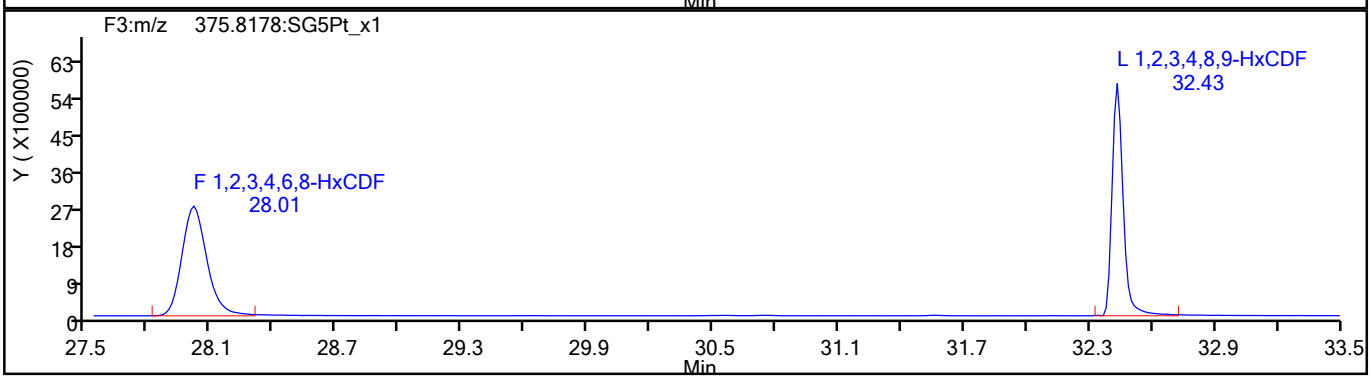

HxCDF Standards

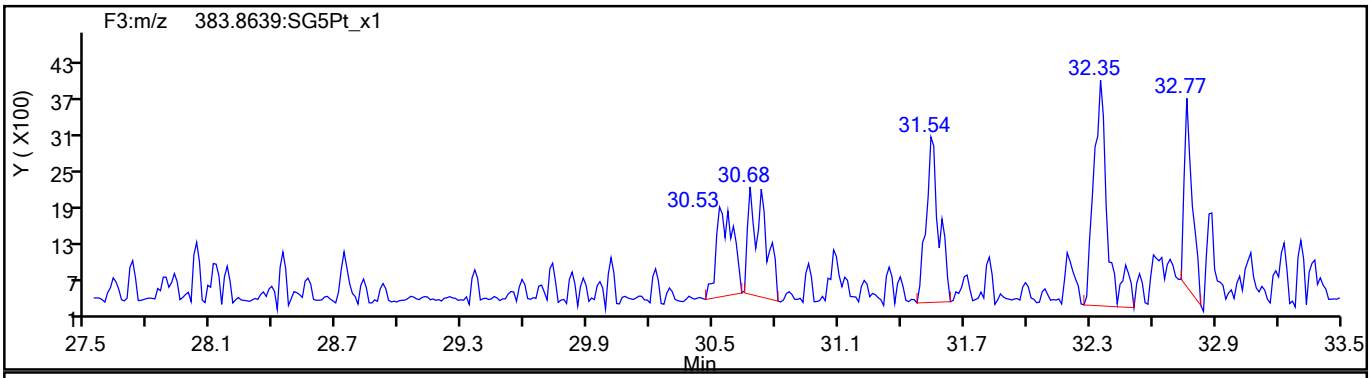

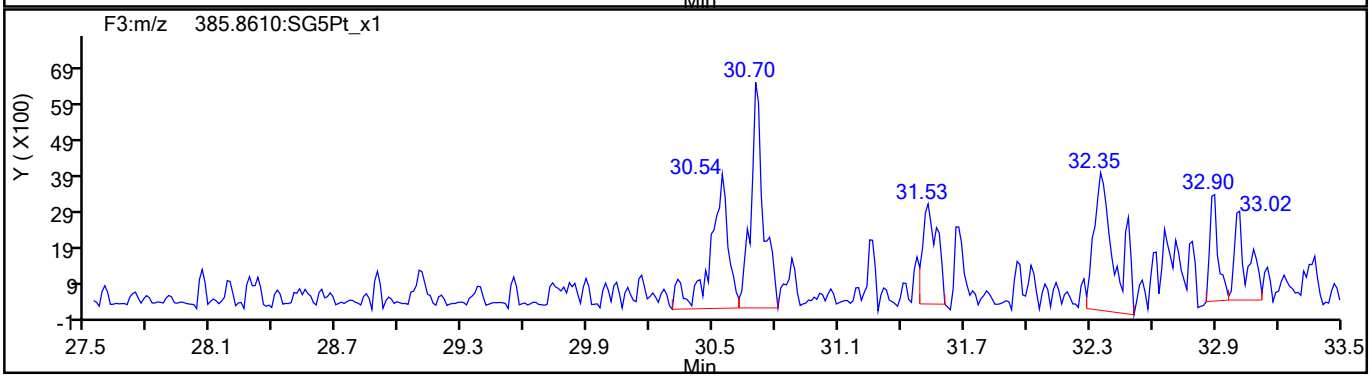

773940

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

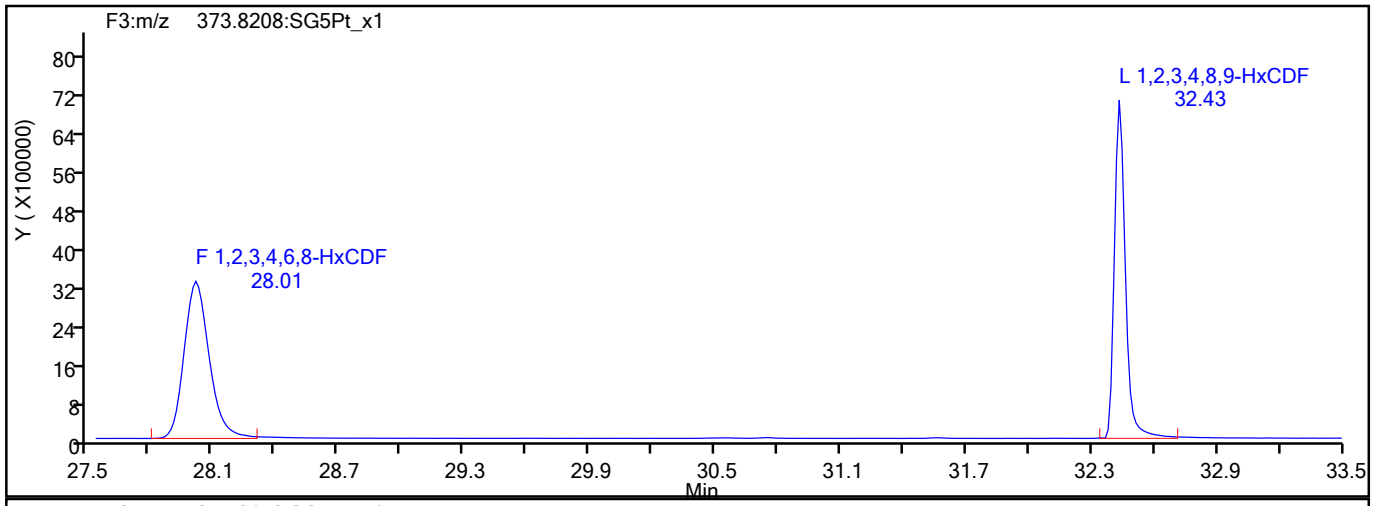

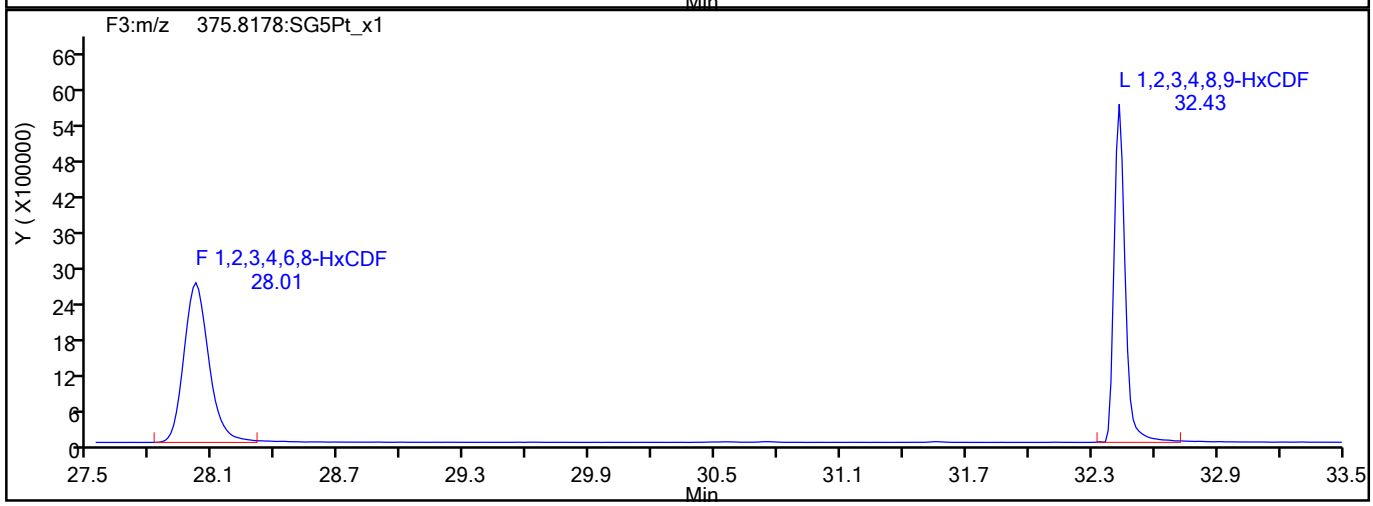

HxCDF Interference Mass

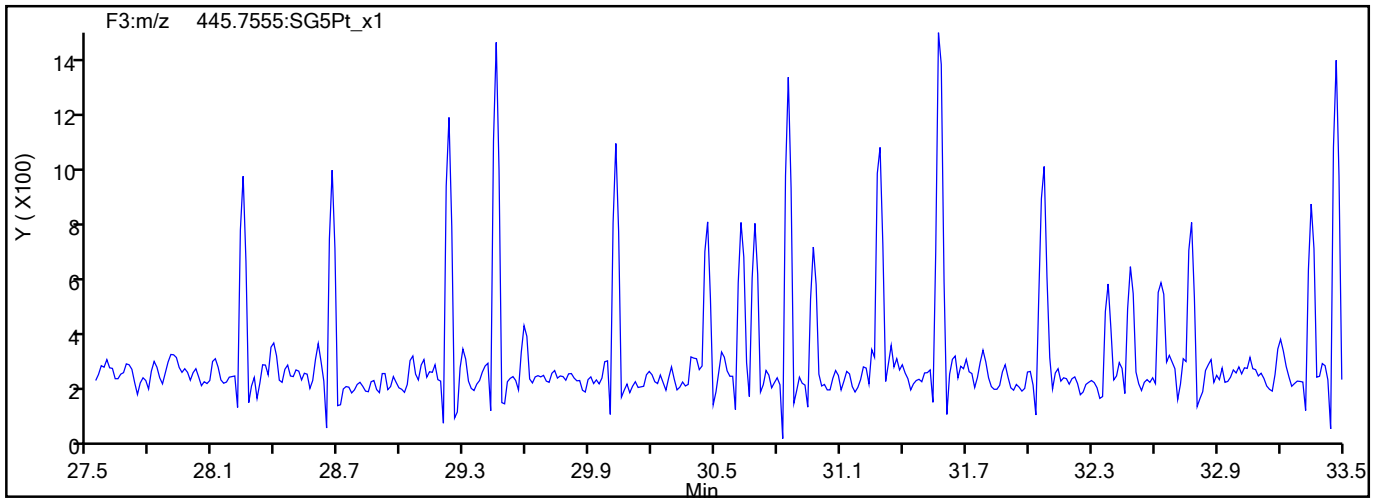

773941

Report Date: 13-Aug-2021 15:47:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

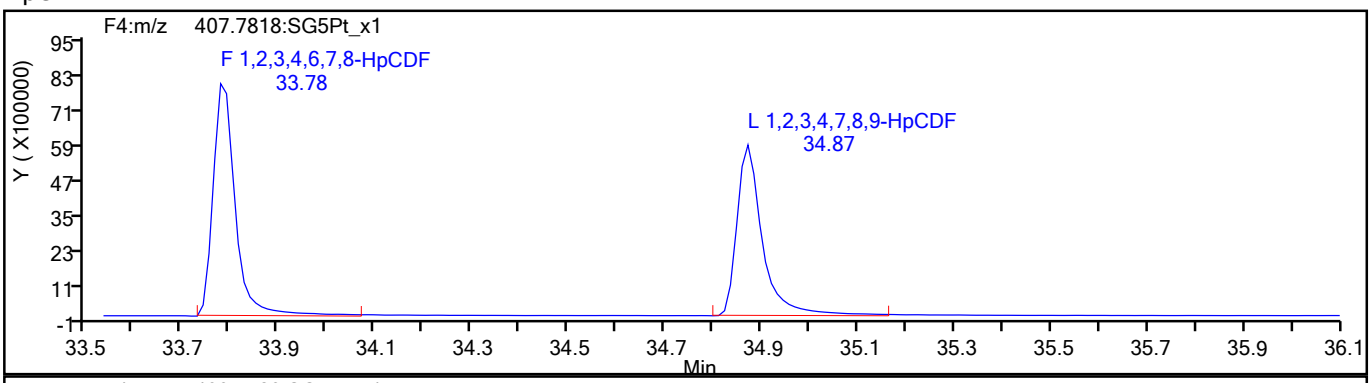

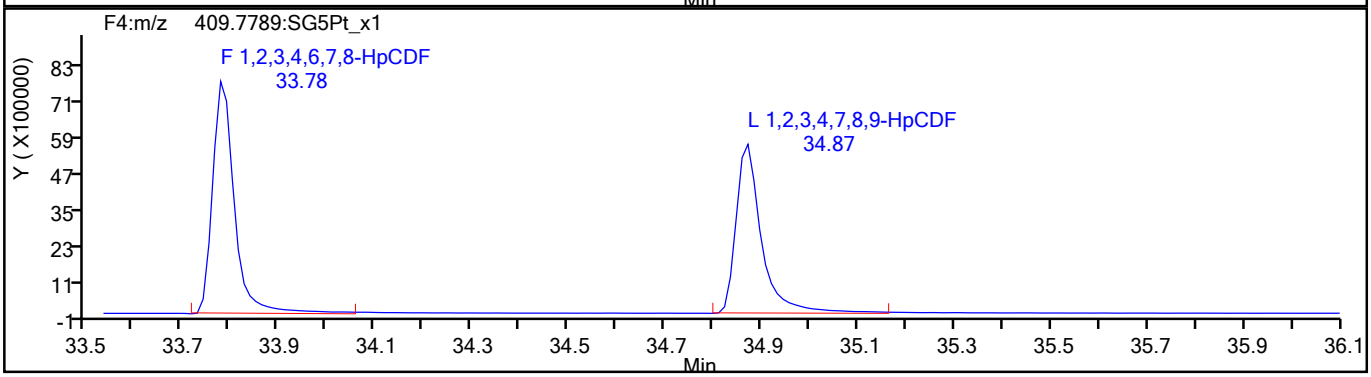

HpCDF Standards

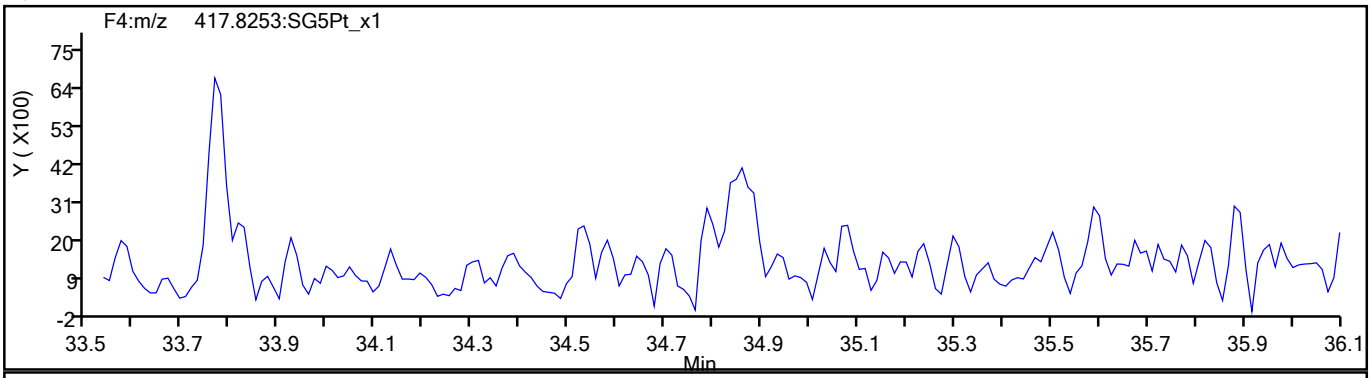

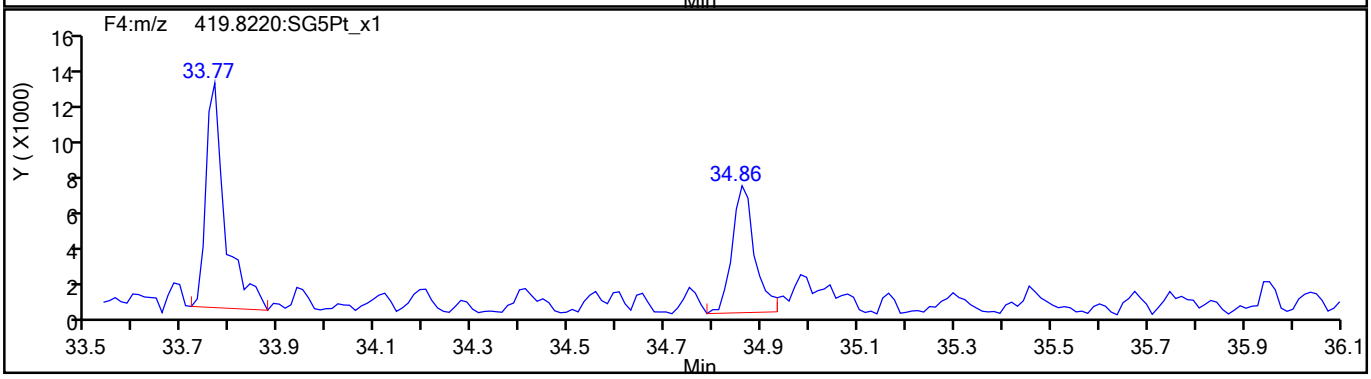

773942

Report Date: 13-Aug-2021 15:47:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

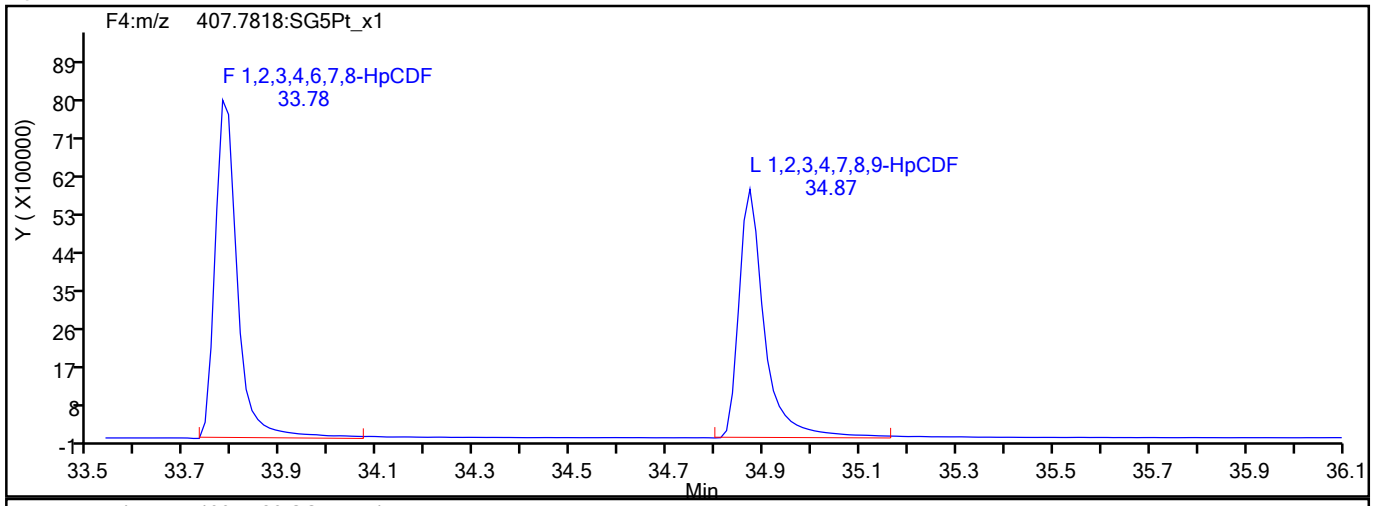

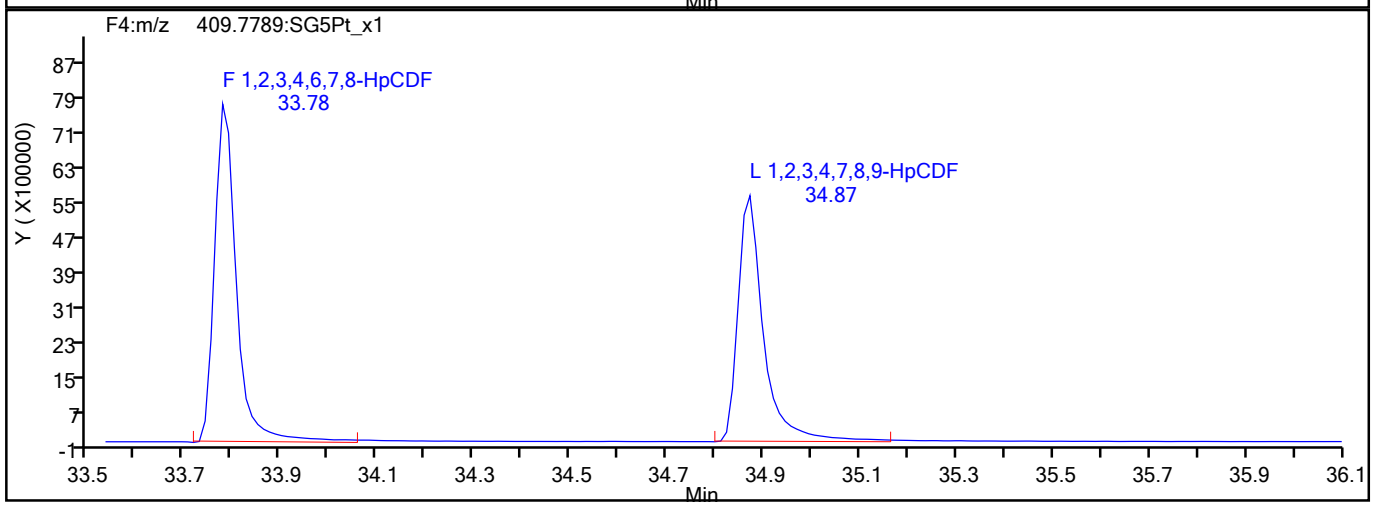

HpCDF Interference Mass

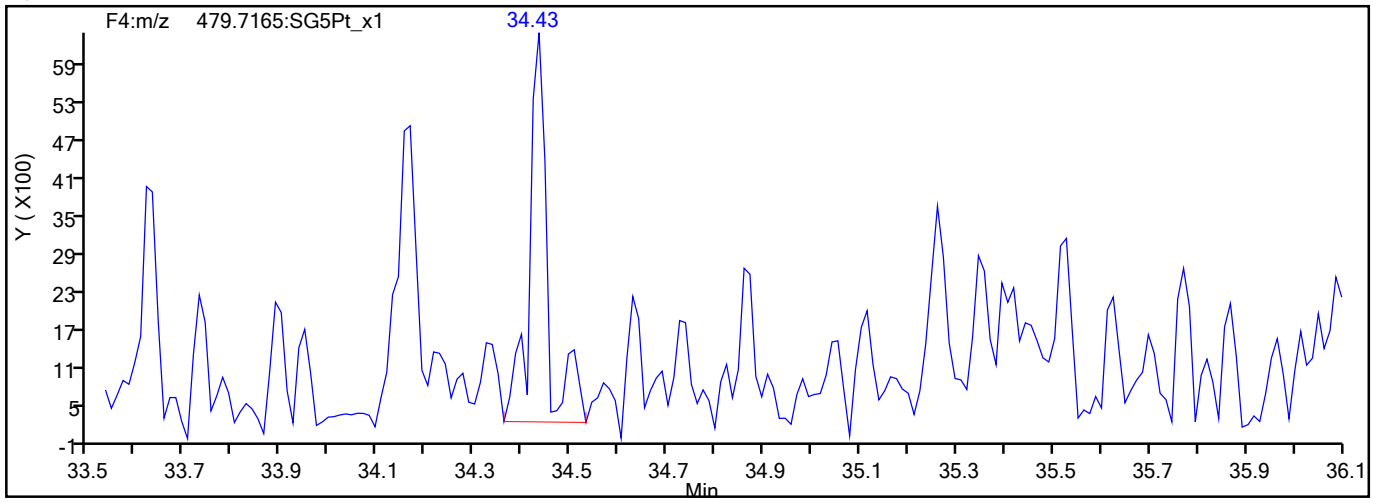

773943

Report Date: 13-Aug-2021 15:47:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

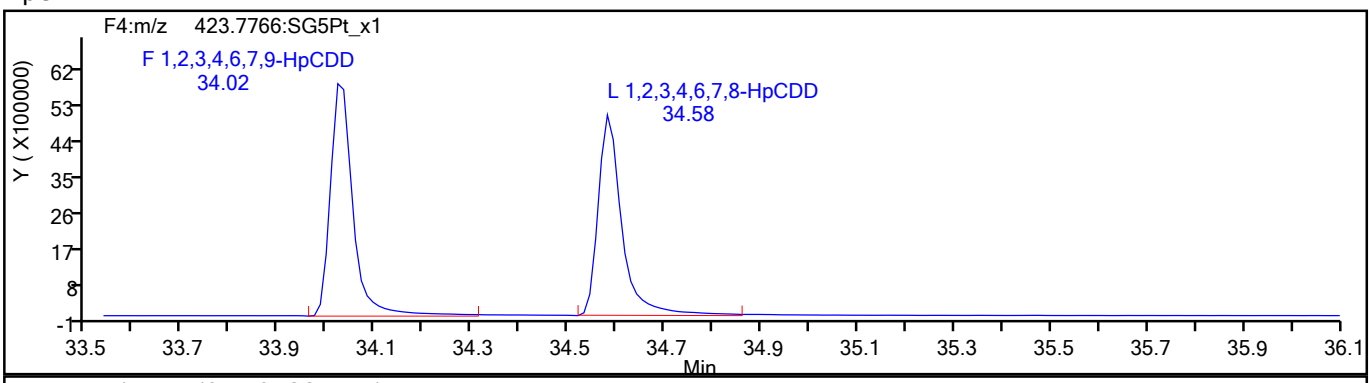

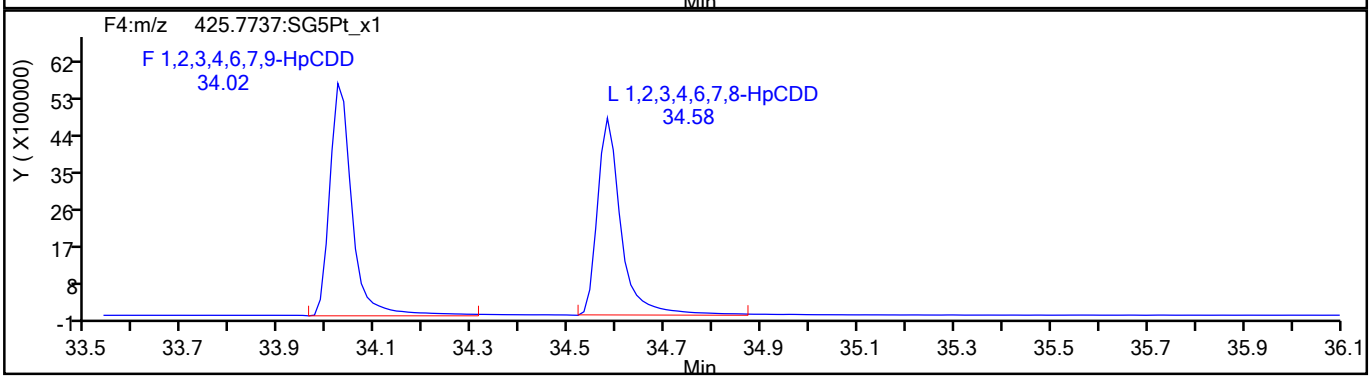

HpCDD Standards

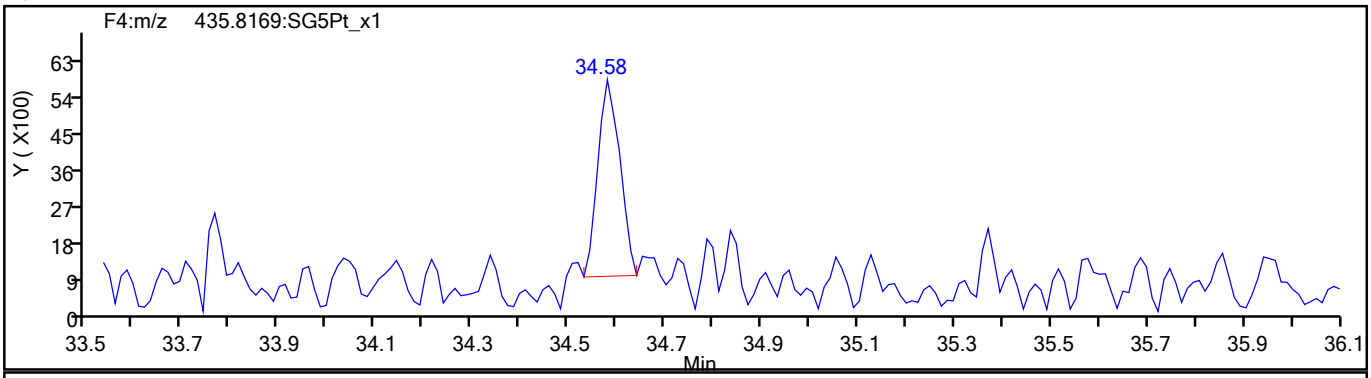

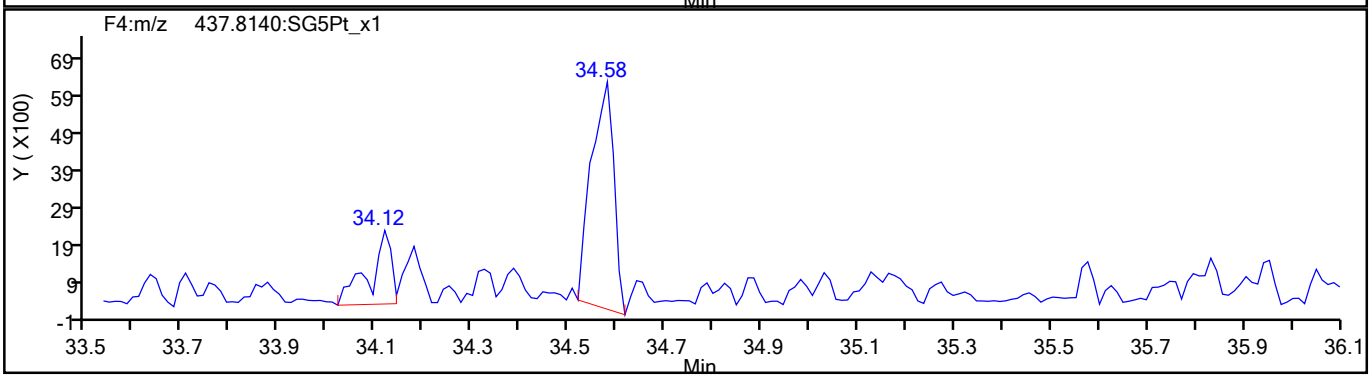

773944

Report Date: 13-Aug-2021 15:47:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

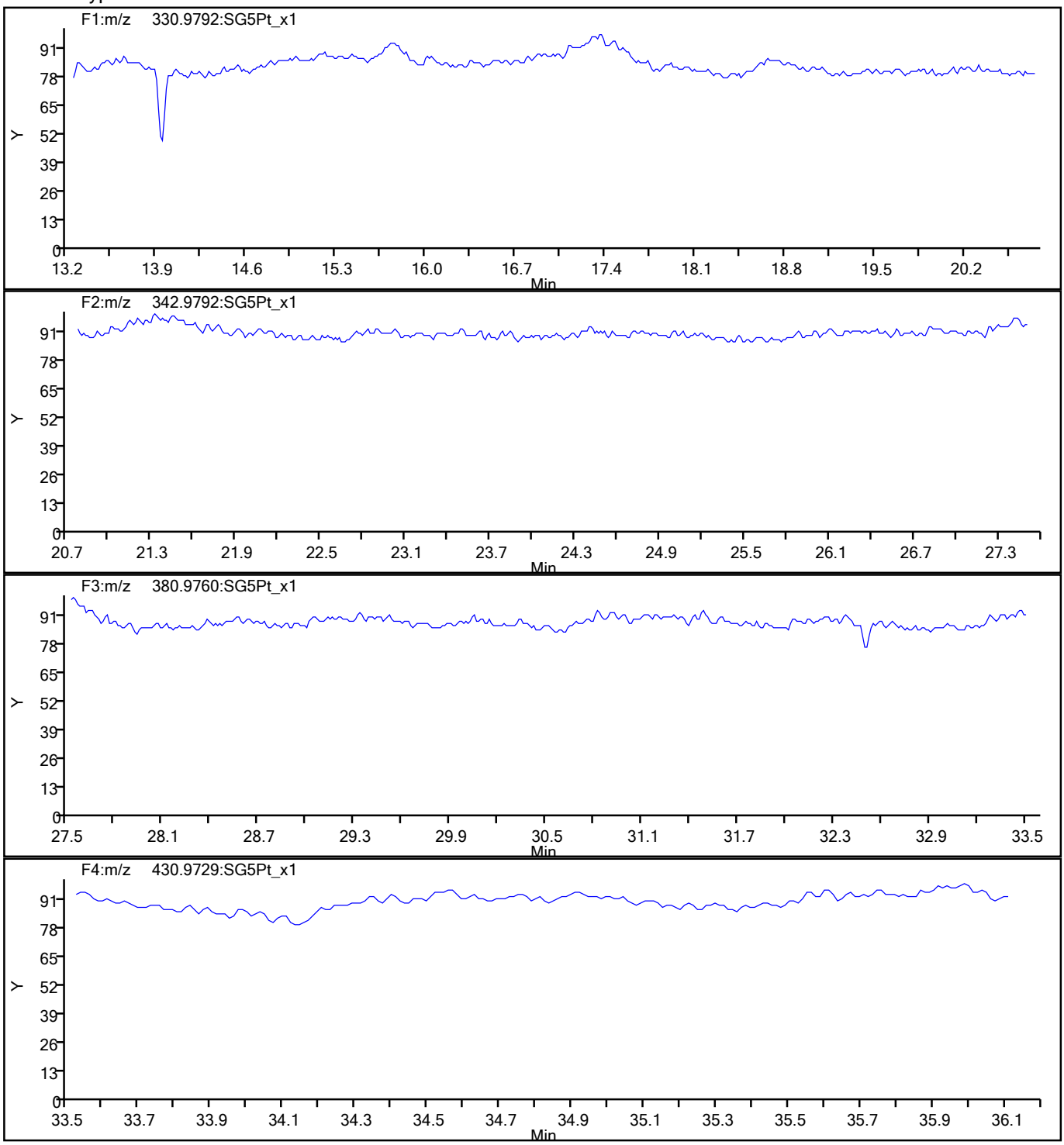

773945

Report Date: 13-Aug-2021 15:47:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

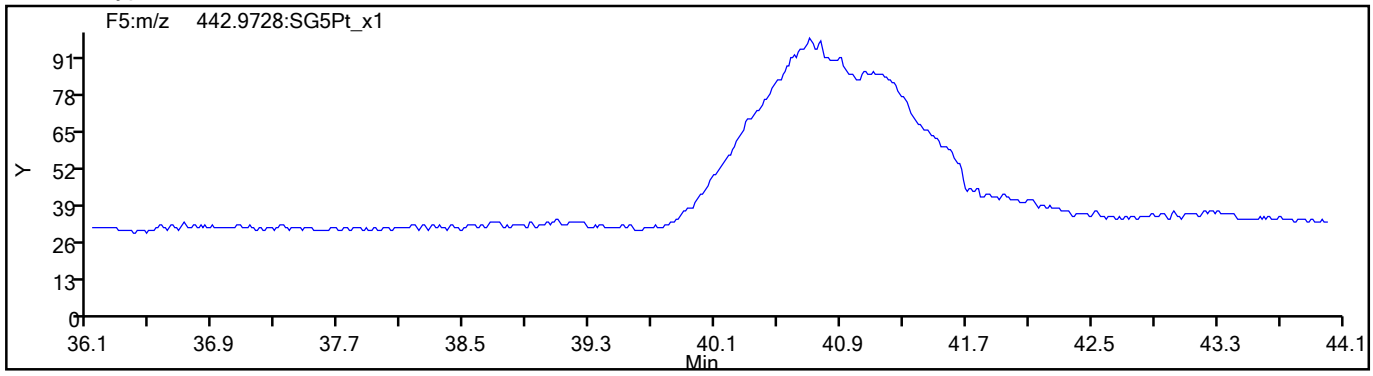

773946

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

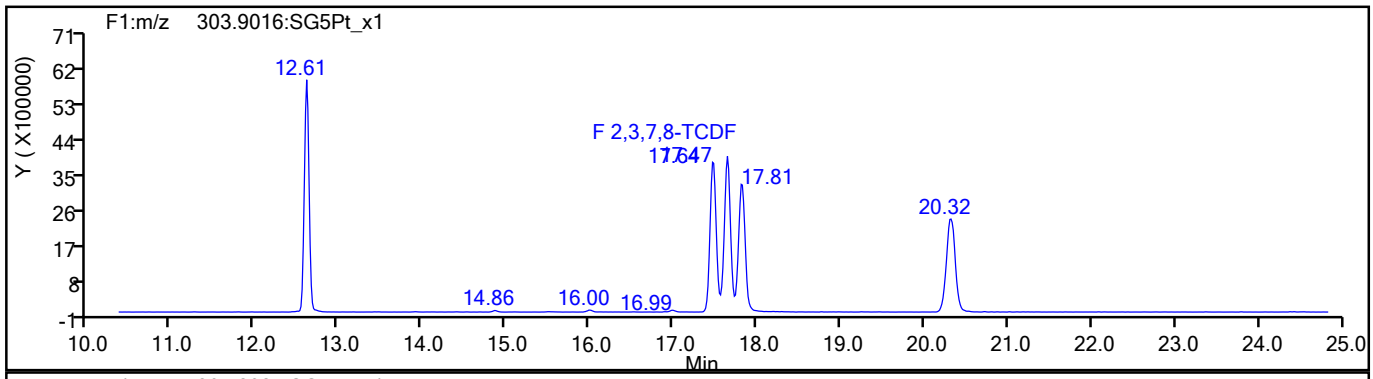

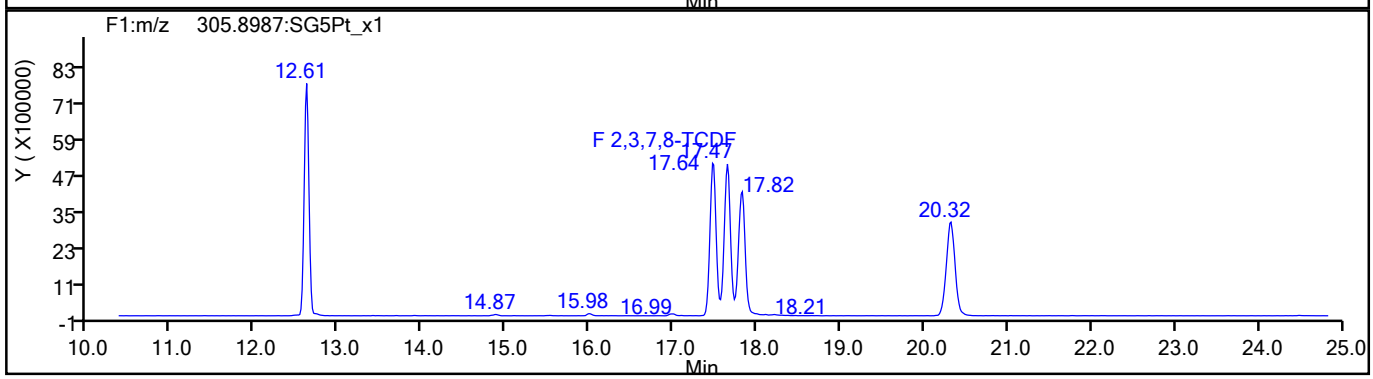

TCDF Standards

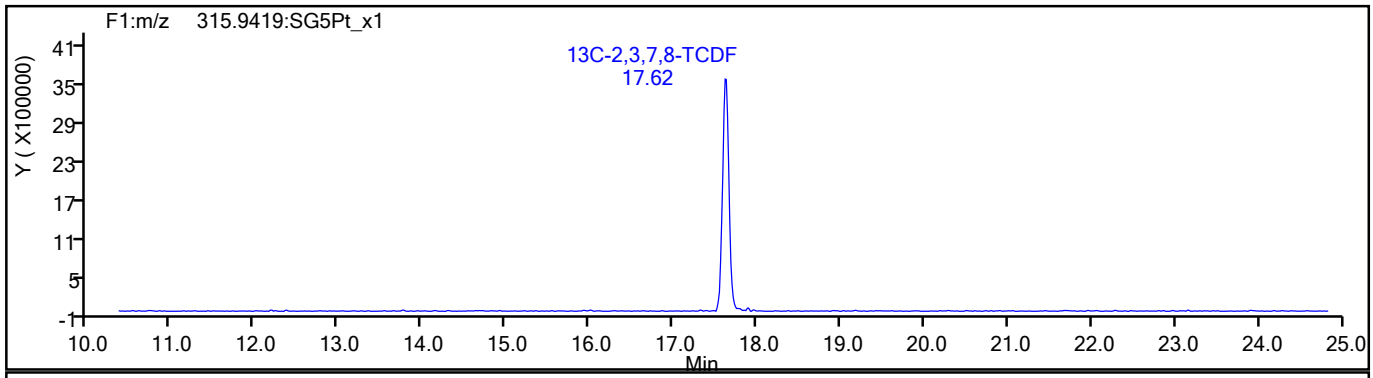

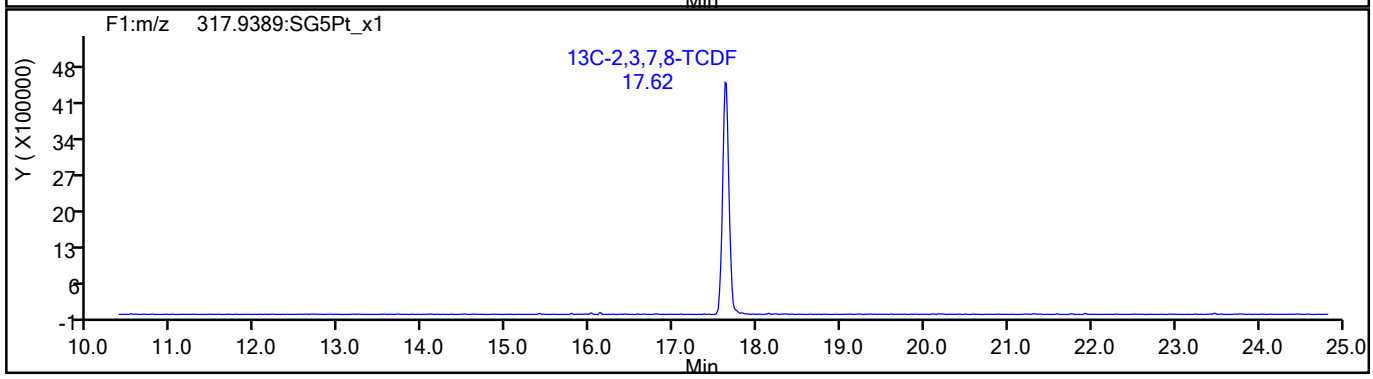

773949

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

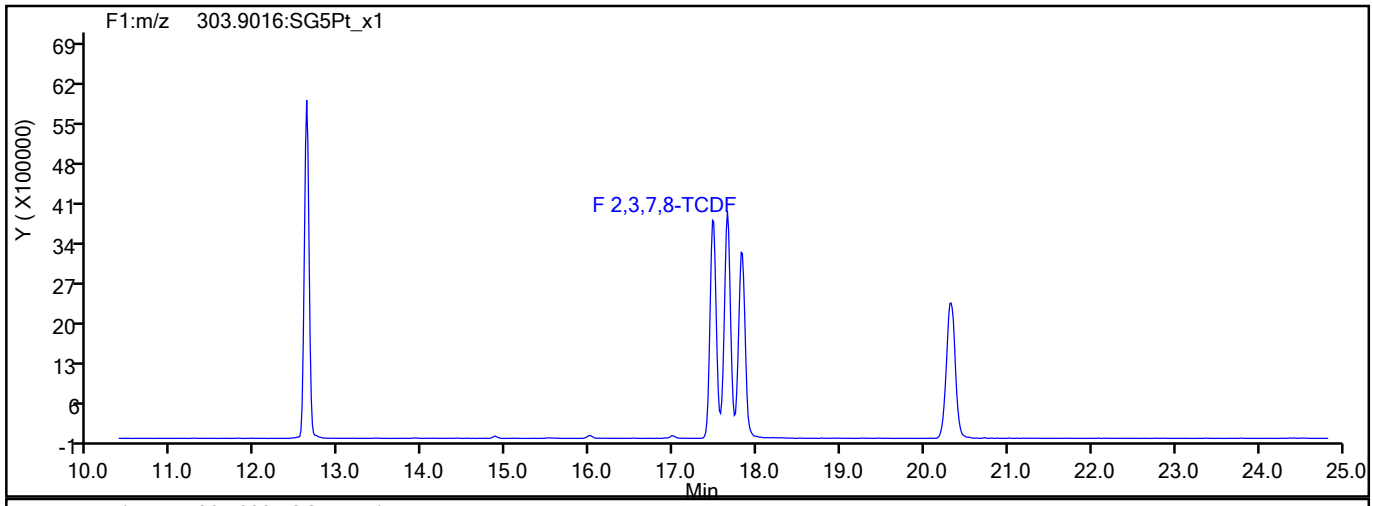

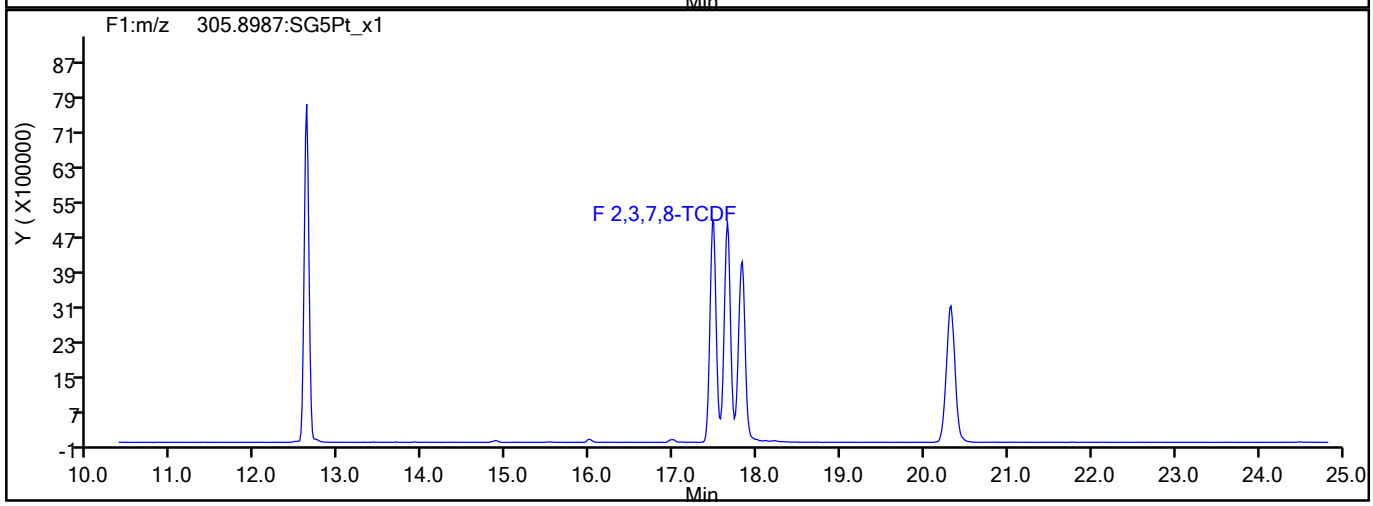

TCDF Interference Mass

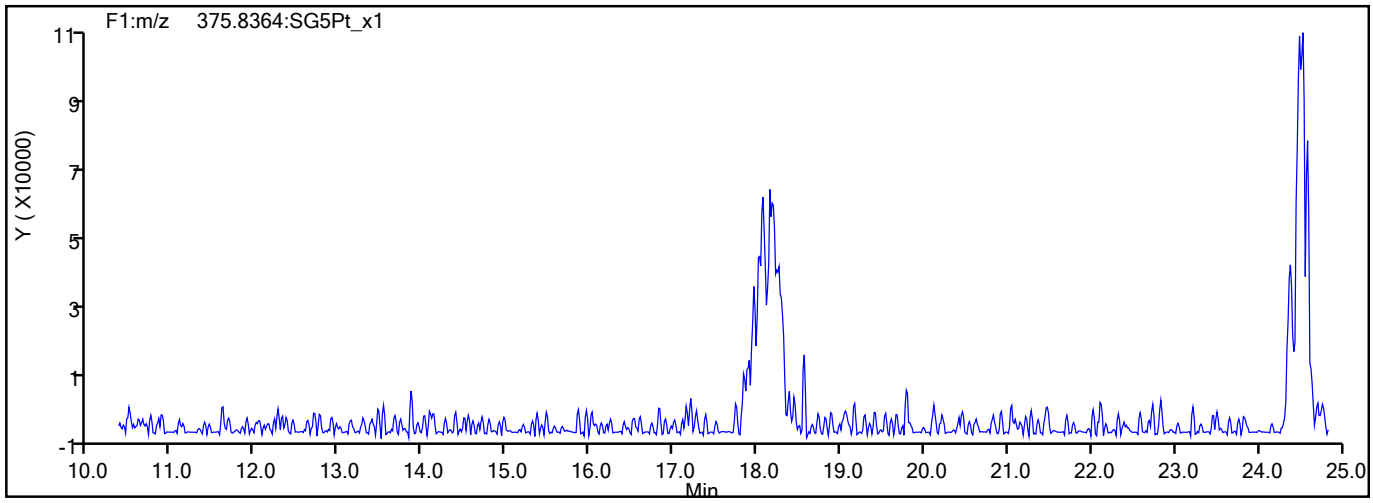

773950

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

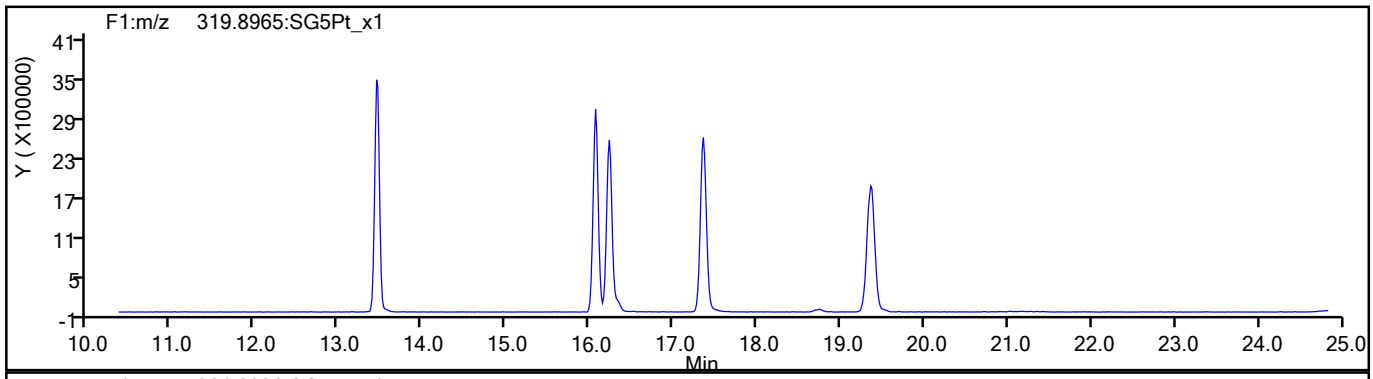

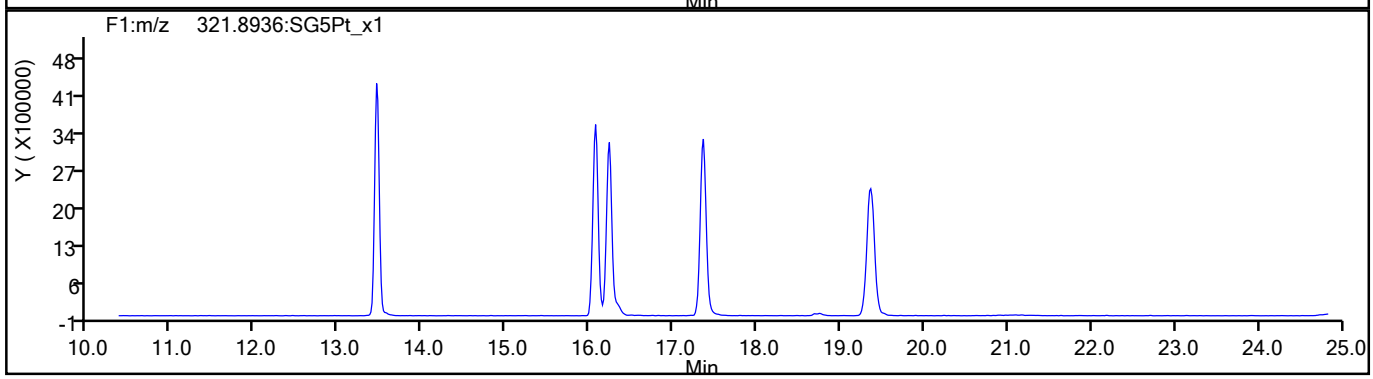

TCDD Standards

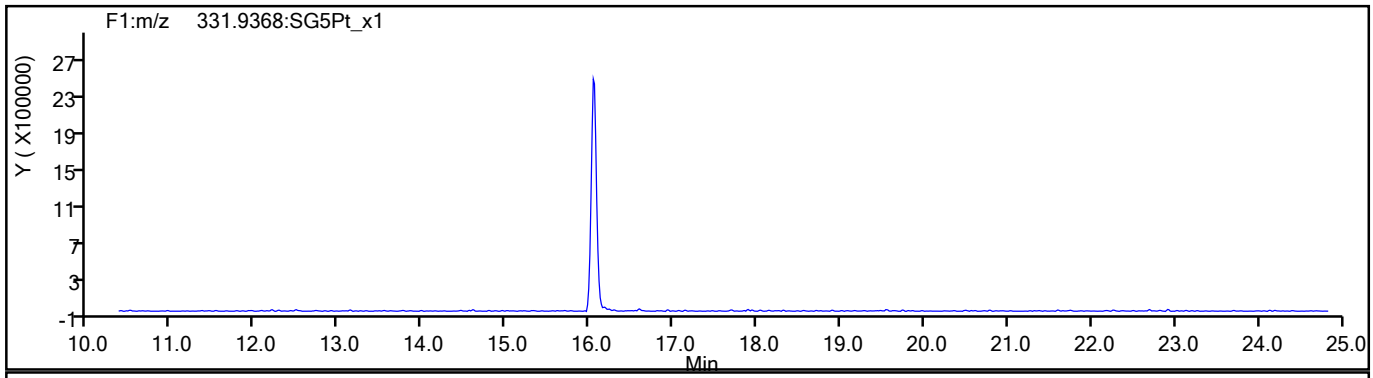

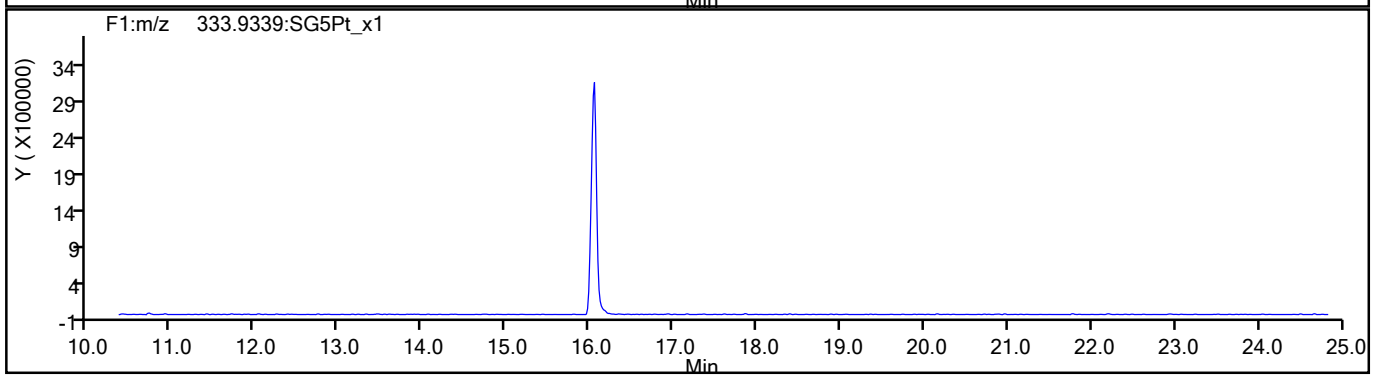

773951

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

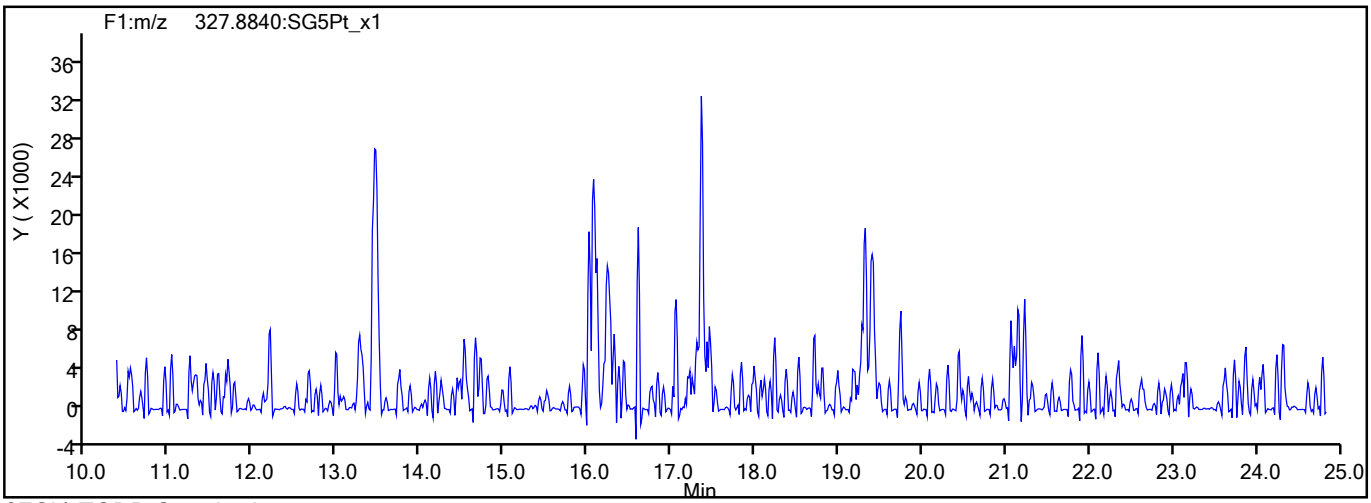

37Cl4-TCDD Standards

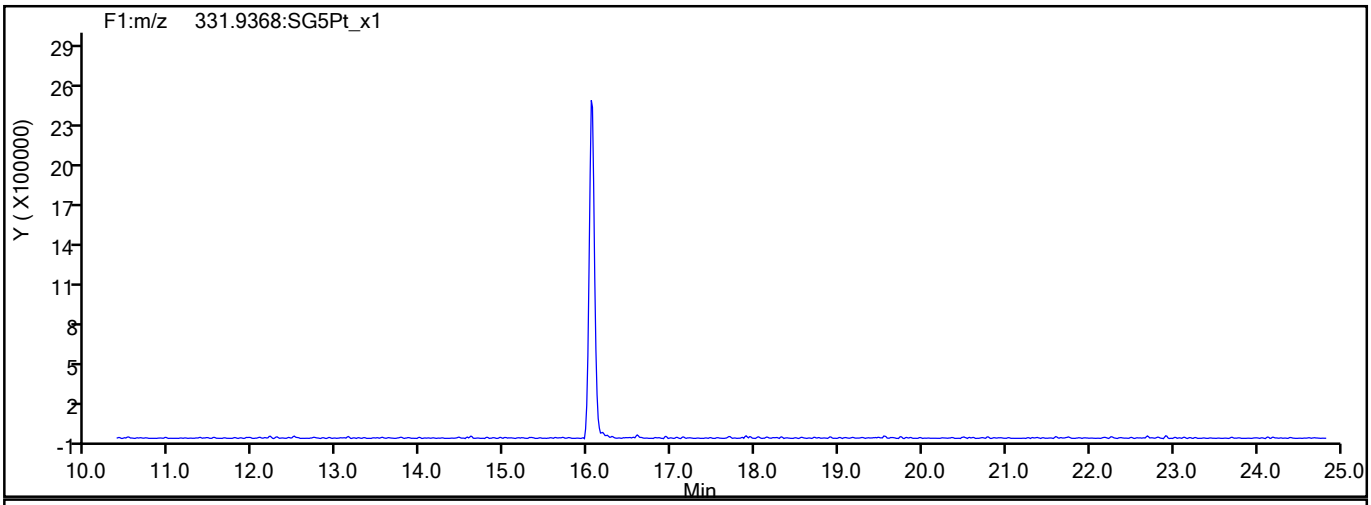

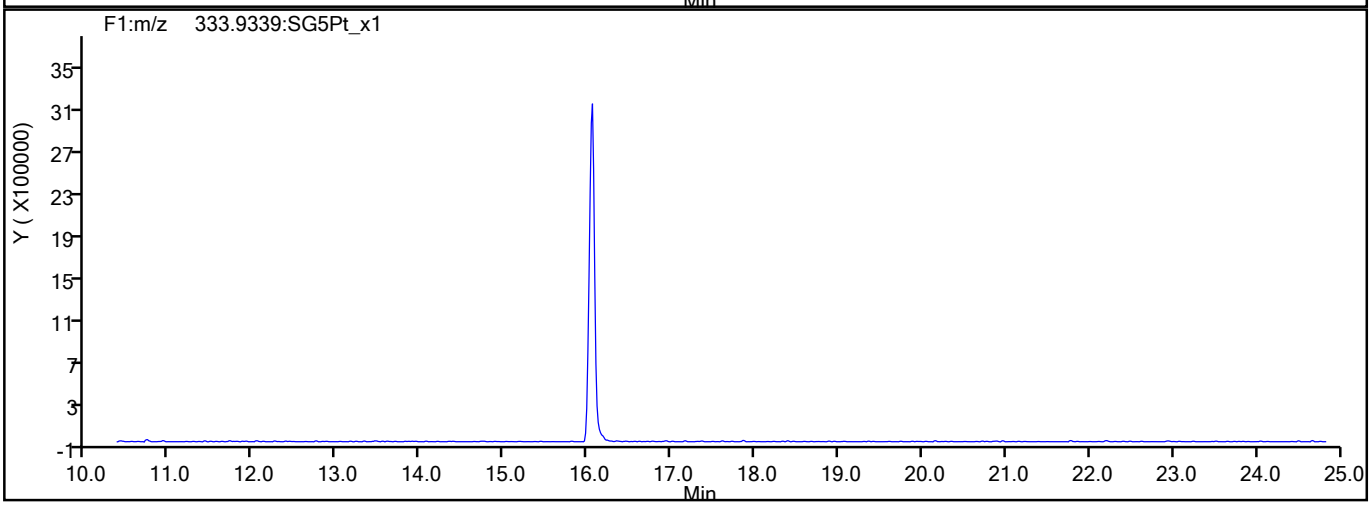

773952

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

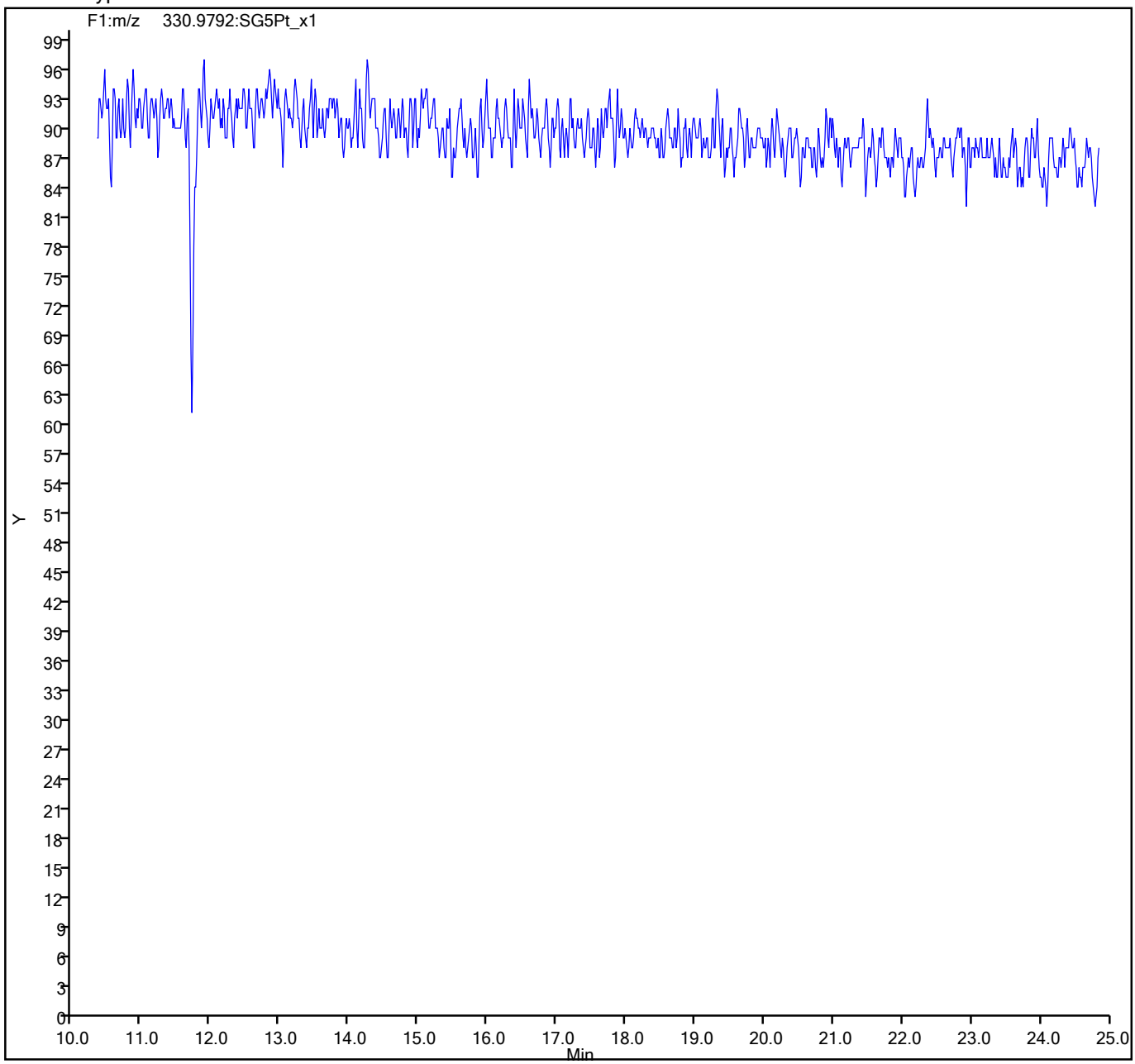

773953

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 21-Aug-2021 13:54:29 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:20 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:00:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.643	21183677	0.78	1.3327					0.00	
2,3,7,8-TCDF	17.657	21670362	0.76	0.9978	41.0	41.0	0.1237	0.1237		
D 13C-2,3,7,8-TCDD	16.079	12627140	0.77	0.8749					0.00	
2,3,7,8-TCDD	16.093	12110737	0.77	1.0570	40.5	36.3	0.1198	0.1198		RQ
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 23-Aug-2021 10:28:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 21-Aug-2021 13:54:29 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:20 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:00:10

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.643	17.643	0	1.000	9282695	1757658	6824	17060	258		
317.9389	17.629	17.643	-1	1.000	11900982	2236315	6448	16120	347	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.657	17.657	0	1.001	9366824	1823436	1677	4192	1087		
305.8987	17.657	17.657	0	1.001	12303538	2377115	3254	8135	731	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.079	16.079	0	1.000	5487617	1115956	6201	15502	180		
333.9339	16.079	16.079	0	1.000	7139523	1649666	3914	9785	421	0.77(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.093	16.093	0	1.001	5268513	1295383	1820	4550	712		
321.8936	16.093	16.093	0	1.001	8236540	1869801	1682	4205	1112	0.64(0.65-0.89)	
	Empc Correction				6842224	1682315	1682	4205	1000		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d		
Injection Date:	21-Aug-2021 13:54:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

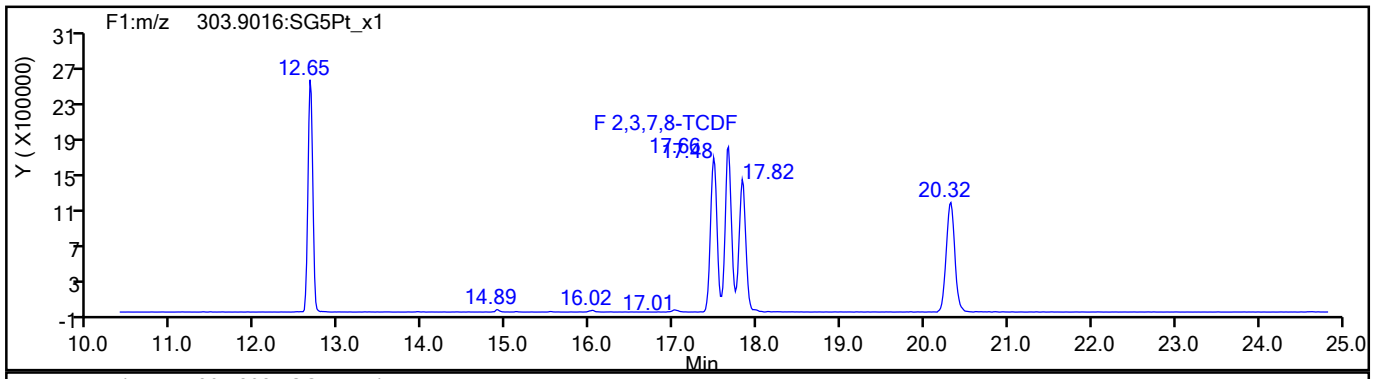

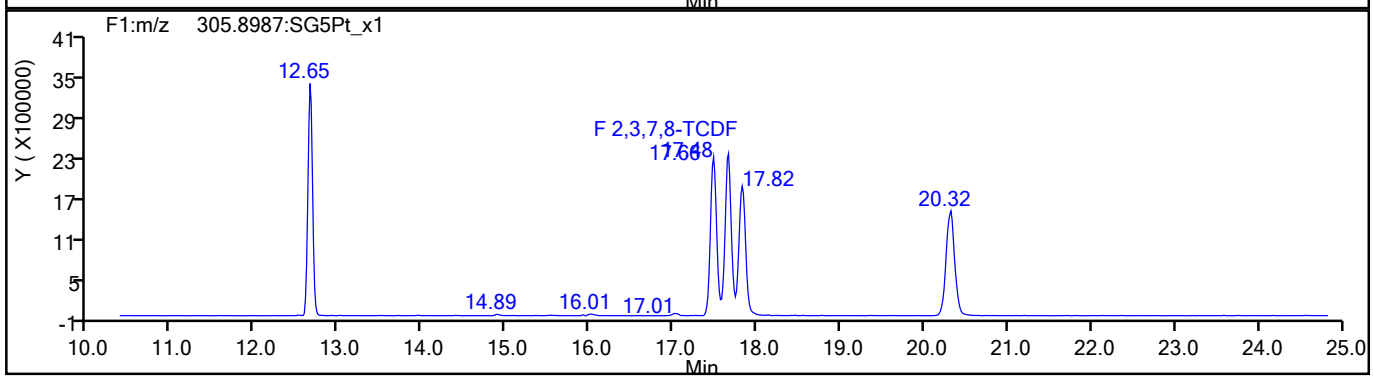

TCDF Standards

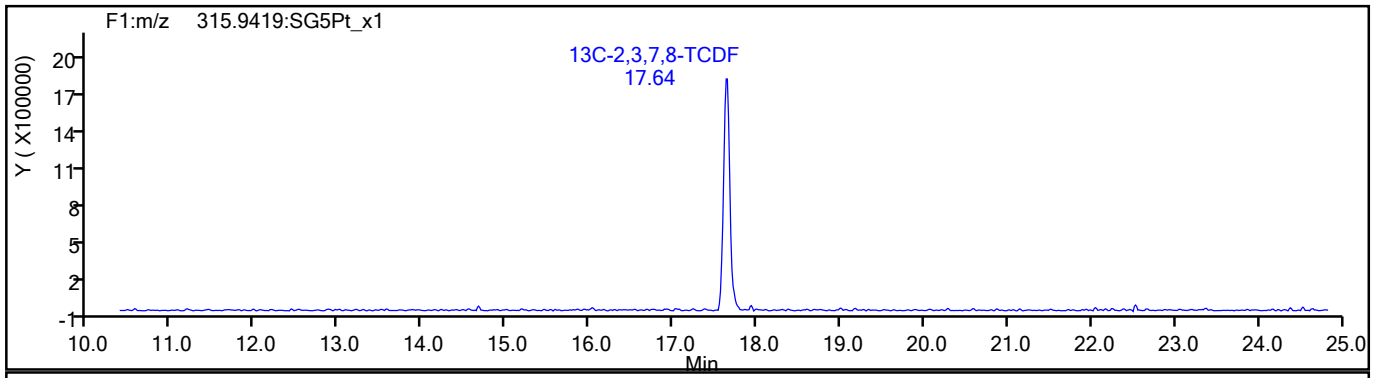

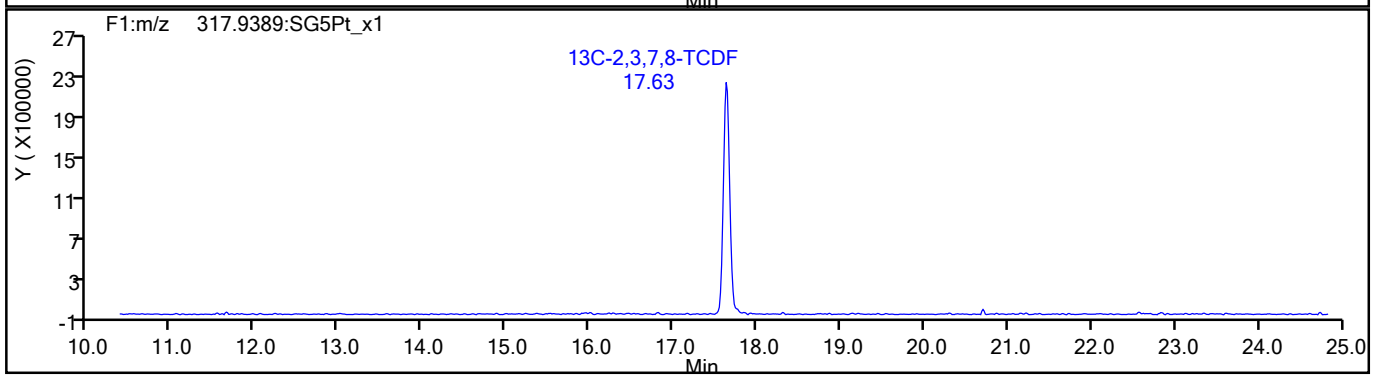

773956

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d		
Injection Date:	21-Aug-2021 13:54:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

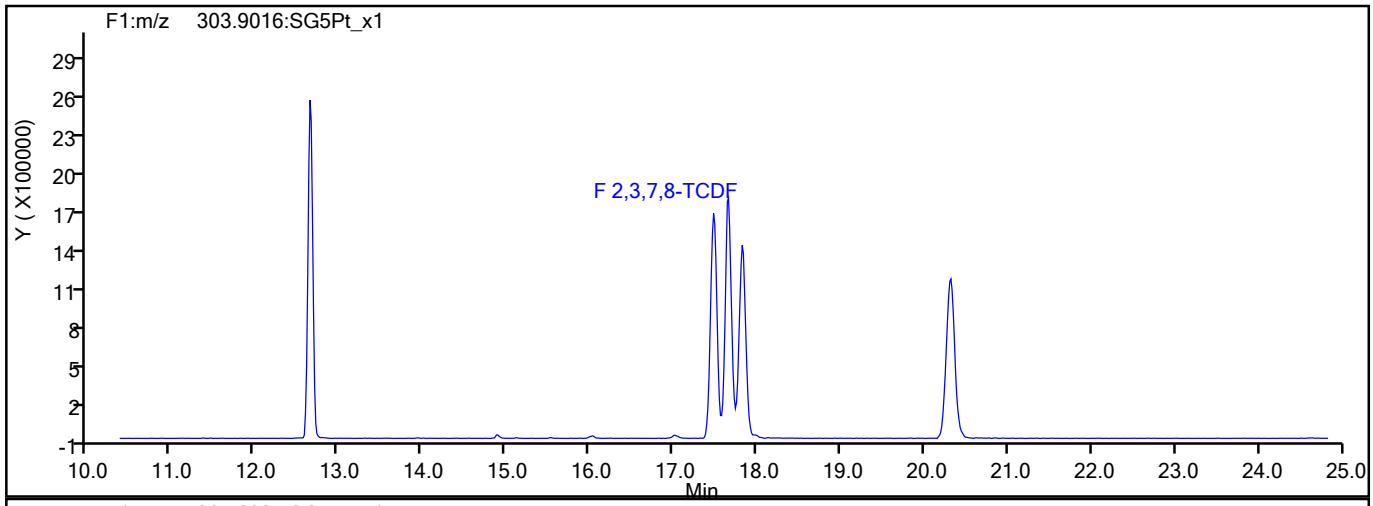

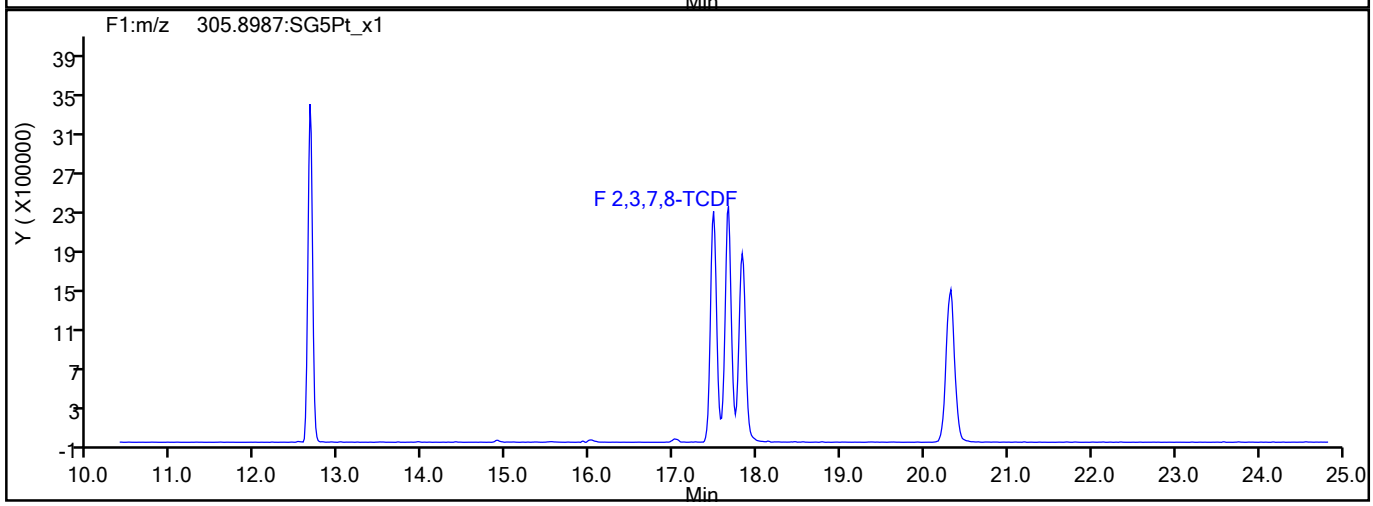

TCDF Interference Mass

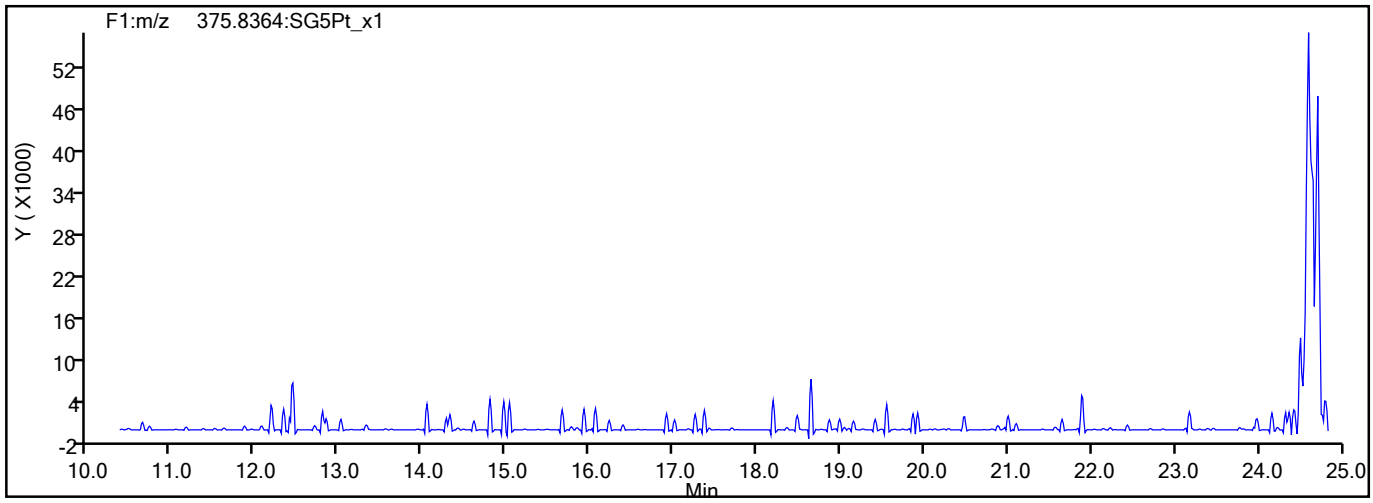

773957

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d		
Injection Date:	21-Aug-2021 13:54:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

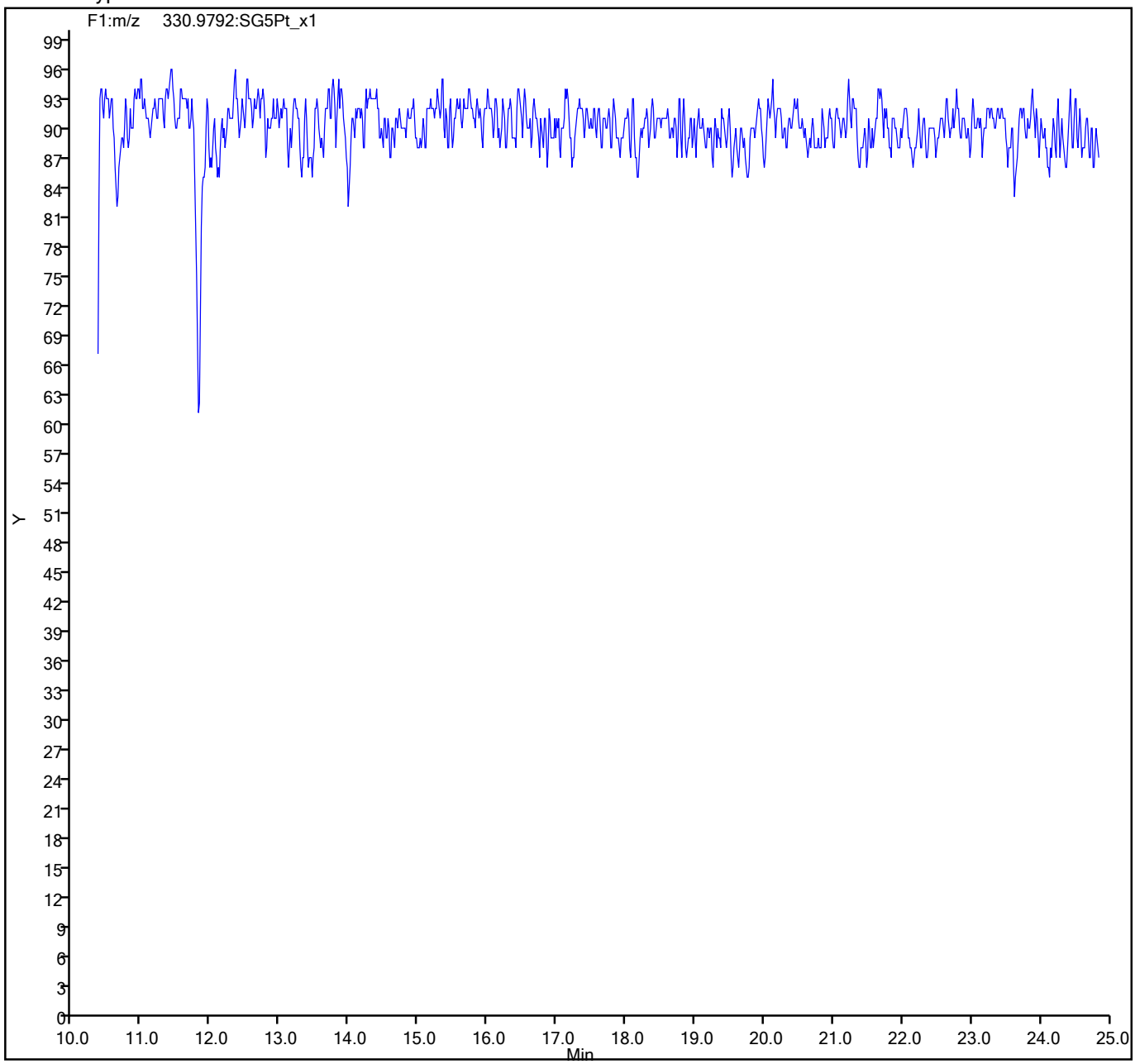

773958

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	19.630	956054	0.80	1.3459					0.00	
2,3,7,8-TCDF	19.673	1998250	0.78	1.0802	77.4	77.4	0.2129	0.2129		
A Non-2,3,7,8-sub-TCDF	19.213	12503	0.80	1.0802	0.4843	0.4843	0.2129	0.4843		
S Total TCDF					77.9	77.9	0.2129	0.2129		
D 13C-2,3,7,8-TCDD	20.918	596833	0.84	0.9317					0.00	
2,3,7,8-TCDD	20.952	682873	0.80	1.0753	42.6	42.6	0.1742	0.1742		
A Non-2,3,7,8-sub-TCDD	20.025						0.1742	0.1742		
S Total TCDD					42.6	42.6	0.1742	0.1742		
A F1 PeCDFs	24.098						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	27.473	14452	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	27.656						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	34.470						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	34.896	7360	1.11	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.309	643675	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.598	537364	1.05	1.3092						
A Non-2,3,7,8-sub-HpCDF	38.954						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.295	435480	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	38.962						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.592	1199920	0.78							
1,3,6,8-TCDD	17.122	706482	0.80							
2,3,4,7-TCDF	19.673	1998250	0.78							
1,2,3,7-TCDD	20.746	567957	0.79							
1,2,3,9-TCDF	21.124	860286	0.78							
1,2,3,9-TCDD	21.227	705730	0.80							
1,2,8,9-TCDF	22.833	906629	0.79							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	22.927	290535								
1,3,4,6,8-PeCDF	23.417	833719	1.57							
1,2,4,7,9-PeCDD	25.443	580592	1.56							
1,2,3,8,9-PeCDD	29.870	532099	1.58							
1,2,3,8,9-PeCDF	30.030	680377	1.58							
1,2,3,4,6,8-HxCDF	32.430	811785	1.23							
1,2,4,6,7,9-HxCDD	33.644	577087	1.25							
1,2,3,4,6,7-HxCDD	36.148	580699	1.24							
1,2,3,4,8,9-HxCDF	36.510	710754	1.25							
1,2,3,4,6,7,9-HpCDD	38.629	486479	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	19.630	19.630	0	1.000	423520	68874	224	560	307		
317.9389	19.639	19.630	1	1.000	532534	85912	93	232	924	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.673	19.646	2	1.002	874984	129163	148	370	873		
305.8987	19.673	19.646	2	1.002	1123266	166698	208	520	801	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	23.417	19.213	252	1.193	5547	1019	148	370	7		
305.8987	23.417	19.213	252	1.193	6956	1132	208	520	5	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.918	20.918	0	1.000	272607	40247	106	265	380		
333.9338	20.927	20.918	1	1.000	324226	50518	46	115	1098	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	20.952	20.939	1	1.002	302613	44836	90	225	498		
321.8936	20.952	20.939	1	1.002	380260	55991	80	200	700	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.025						90	225			
321.8936	20.025						80	200			
A F1 PeCDFs											
339.8597	24.098						6	15			
341.8567	24.098						22	55			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.114	27.473	-141	1.000	1272	231	55	137	4		
341.8567	25.123	27.473	-141	1.000	842	169	40	100	4	1.51(1.32-1.78)	
339.8597	26.033	27.473	-86	1.000	1834	347	55	137	6		
341.8567	26.067	27.473	-84	1.000	1408	247	40	100	6	1.30(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	26.623	27.473	-51	1.000	3412	452	55	137	8		
341.8567	26.606	27.473	-52	1.000	2424	350	40	100	9	1.41(1.32-1.78)	
339.8597	27.205	27.473	-16	1.000	2495	380	55	137	7		
341.8567	27.188	27.473	-17	1.000	1367	235	40	100	6	1.83(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	27.656						71	177			
357.8516	27.656						35	87			
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						89	222			
375.8178	34.470						66	165			
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.875	34.896	-1	1.000	3879	711	57	142	12		
391.8127	34.866	34.896	-2	1.000	3481	707	48	120	15	1.11(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	330574	91984	132	330	697		
409.7788	38.309	38.317	0	1.000	313101	85674	117	292	732	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	275340	83564	132	330	633		
409.7788	39.598	39.608	-1	1.000	262024	79894	117	292	683	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						132	330			
409.7788	38.954						117	292			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.295	39.301	0	1.000	225083	68745	95	237	724		
425.7737	39.295	39.301	0	1.000	210397	63713	87	217	732	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.962						95	237			
425.7737	38.962						87	217			
1,3,6,8-TCDF											
303.9016	15.592	15.592	0		526894	111834	148	370	756		
305.8987	15.583	15.592	-1		673026	142703	208	520	686	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.122	17.122	0		313043	59426	90	225	660		
321.8936	17.122	17.122	0		393439	76022	80	200	950	0.80(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	19.673	19.673	0		874984	129163	148	370	873		
305.8987	19.673	19.673	0		1123266	166698	208	520	801	0.78(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	20.746	20.746	0		250988	38559	90	225	428		
321.8936	20.746	20.746	0		316969	48950	80	200	612	0.79(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.124	21.124	0		377767	55151	148	370	373		
305.8987	21.124	21.124	0		482519	70000	208	520	337	0.78(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	21.227	21.227	0		313060	44546	90	225	495		
321.8936	21.219	21.227	-1		392670	57474	80	200	718	0.80(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	22.833	22.833	0		399193	52133	148	370	352		
305.8987	22.833	22.833	0		507436	68524	208	520	329	0.79(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	22.927	22.927	0		290535	38894	90	225	432		
1,3,4,6,8-PeCDF											
339.8597	23.417	23.417	0		509034	87286	6	15	14548		
341.8567	23.417	23.417	0		324685	55380	22	55	2517	1.57(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	25.443	25.443	0		354036	58724	71	177	827		
357.8516	25.443	25.443	0		226556	37367	35	87	1068	1.56(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	29.870	29.870	0		325767	47119	71	177	664		
357.8516	29.870	29.870	0		206332	29856	35	87	853	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.030	30.030	0		416382	57063	55	137	1038		
341.8567	30.030	30.030	0		263995	36391	40	100	910	1.58(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	32.430	32.430	0		447956	61361	89	222	689		
375.8178	32.421	32.430	-1		363829	50870	66	165	771	1.23(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	33.644	33.644	0		320872	55052	57	142	966		
391.8127	33.644	33.644	0		256215	45045	48	120	938	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.148	36.148	0		321739	75271	57	142	1321		
391.8127	36.148	36.148	0		258960	61340	48	120	1278	1.24(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.510	36.510	0		394836	96545	89	222	1085		
375.8178	36.510	36.510	0		315918	78144	66	165	1184	1.25(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.629	38.629	0		248662	72309	95	237	761		
425.7737	38.629	38.629	0		237817	69783	87	217	802	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	956054	154786

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	956054	154786

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
23.417	5547	1019	6956	1132	0.4843	0.80	
Signal Totals:							
	5547	1019	6956	1132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12503	2151				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4843 = (12503 * 40.000) / (956054 * 1.080)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	08-Jun-2021 12:40:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	496688	Lims Sample ID:	1

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.114	1272	231	842	169		1.51	
26.033	1834	347	1408	247		1.30	R
26.623	3412	452	2424	350		1.41	
27.205	2495	380	1367	235		1.83	R
Signal Totals:							
	9013	1410	6041	1001			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15054	2411				1.49	RQ
	14452	2371					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (15054 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (14452 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 34.896

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.875	3879	711	3481	707		1.11	
Signal Totals:							
	3879	711	3481	707			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7360	1418				1.11	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (7360 * 0.0) / (0 * 0.000)

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

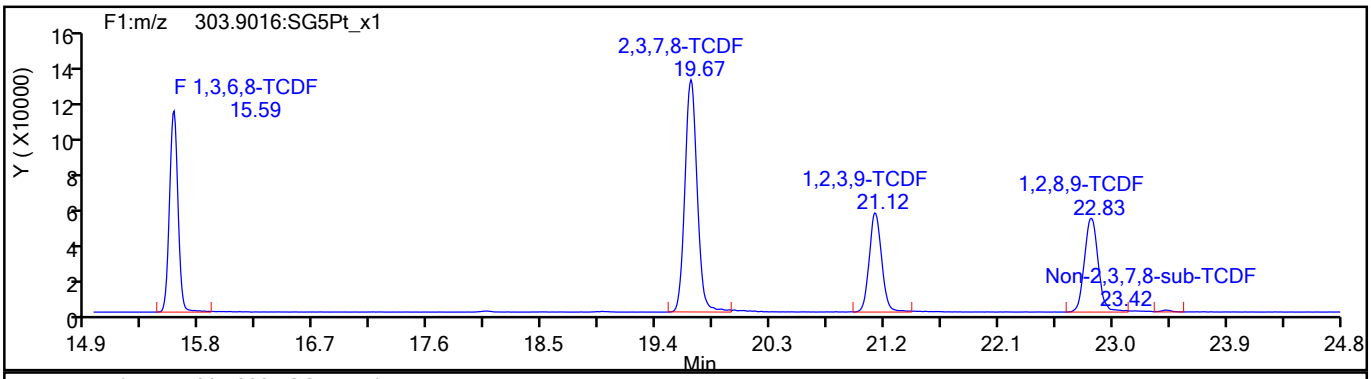

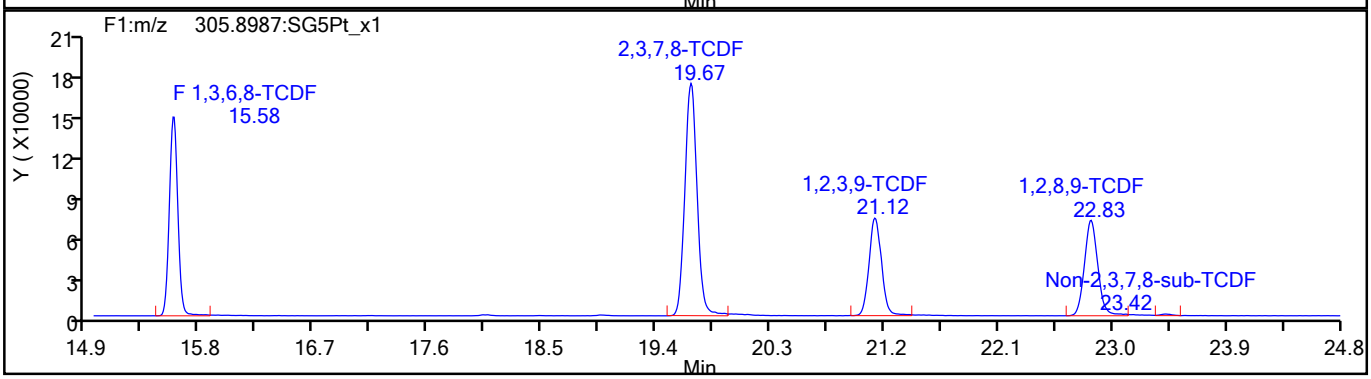

TCDF Standards

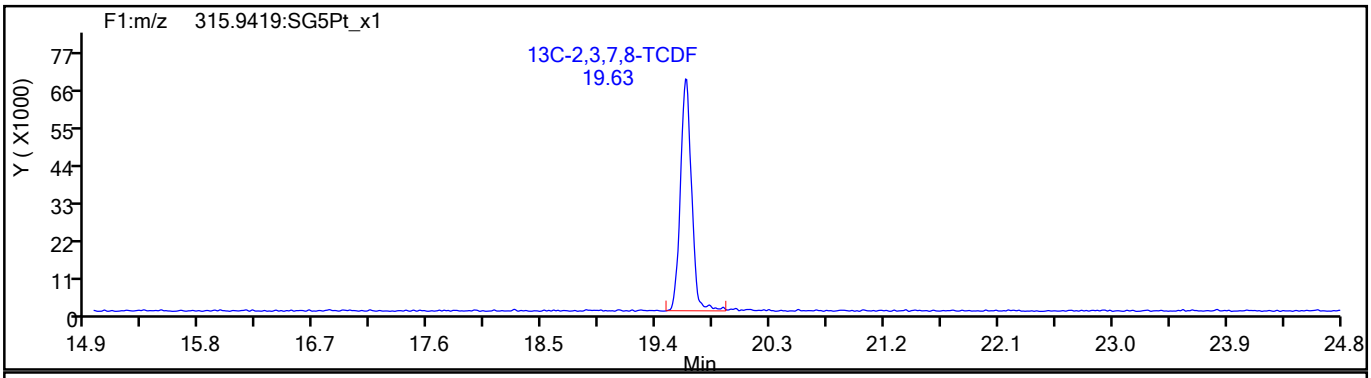

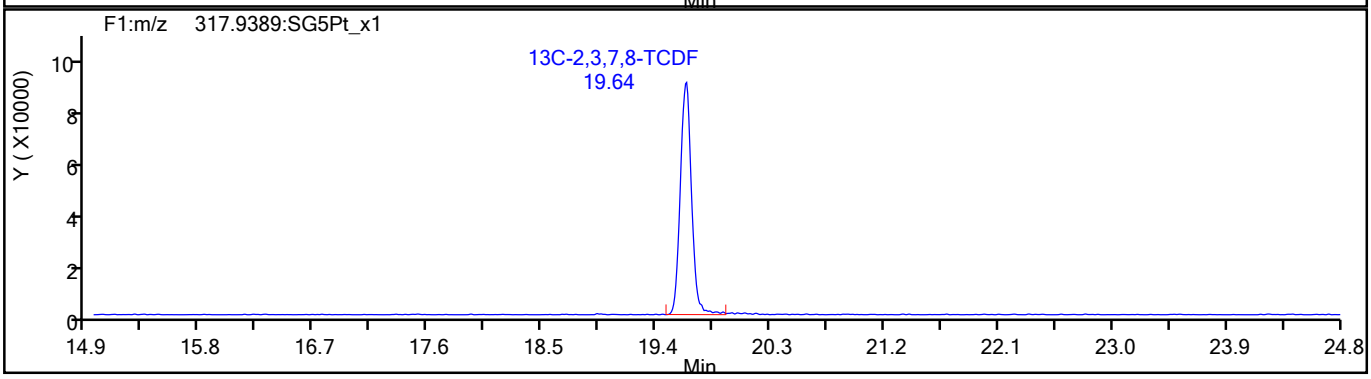

773967

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

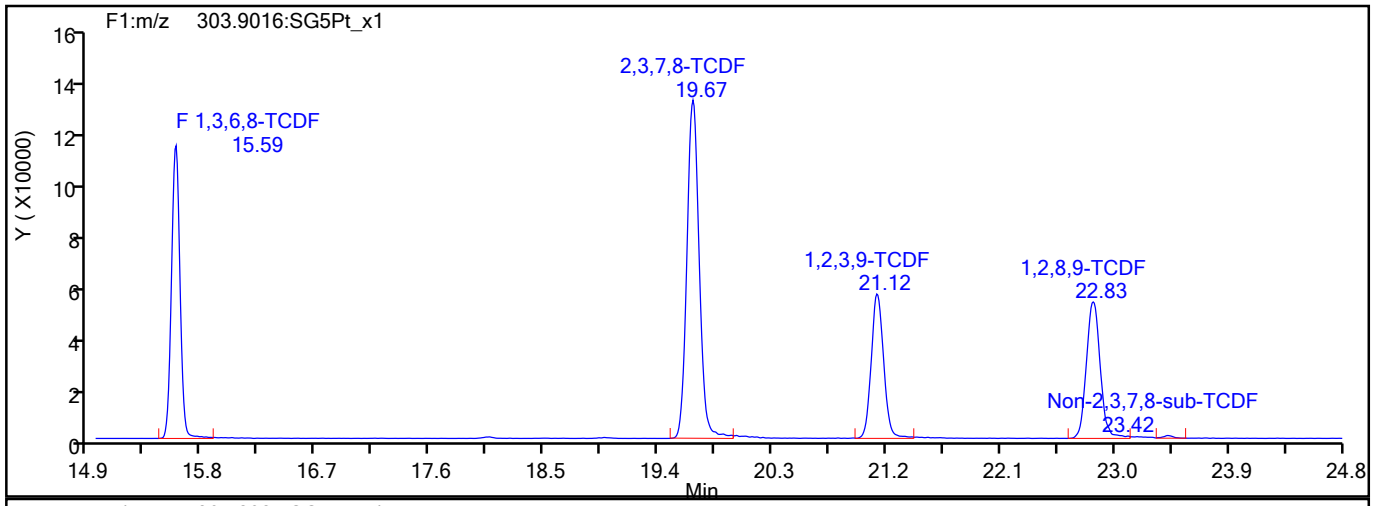

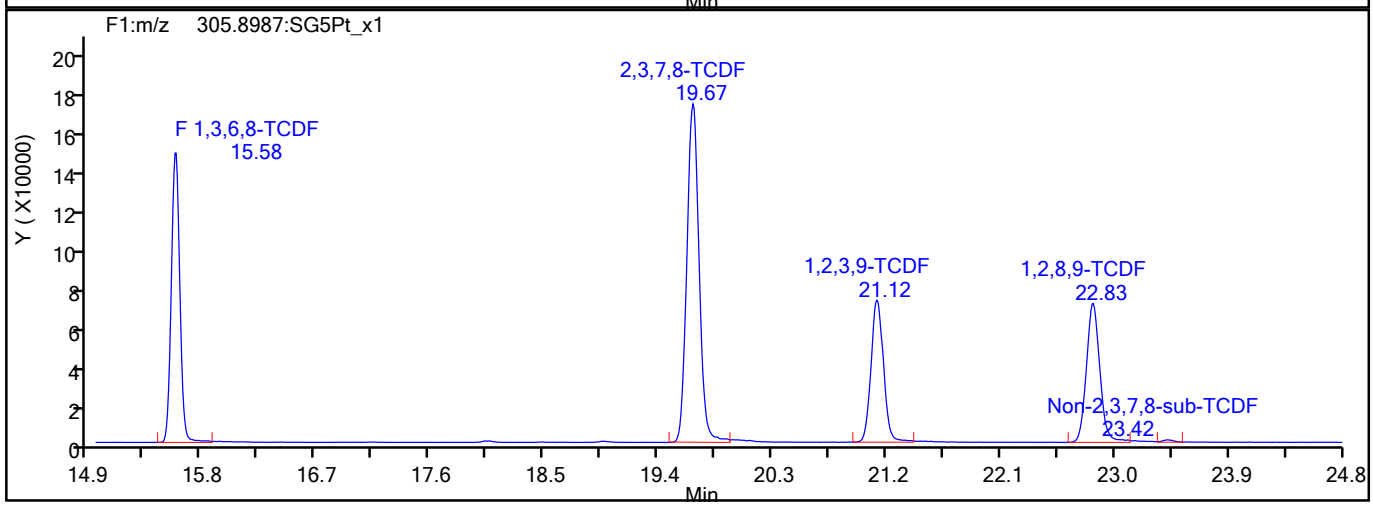

TCDF Interference Mass

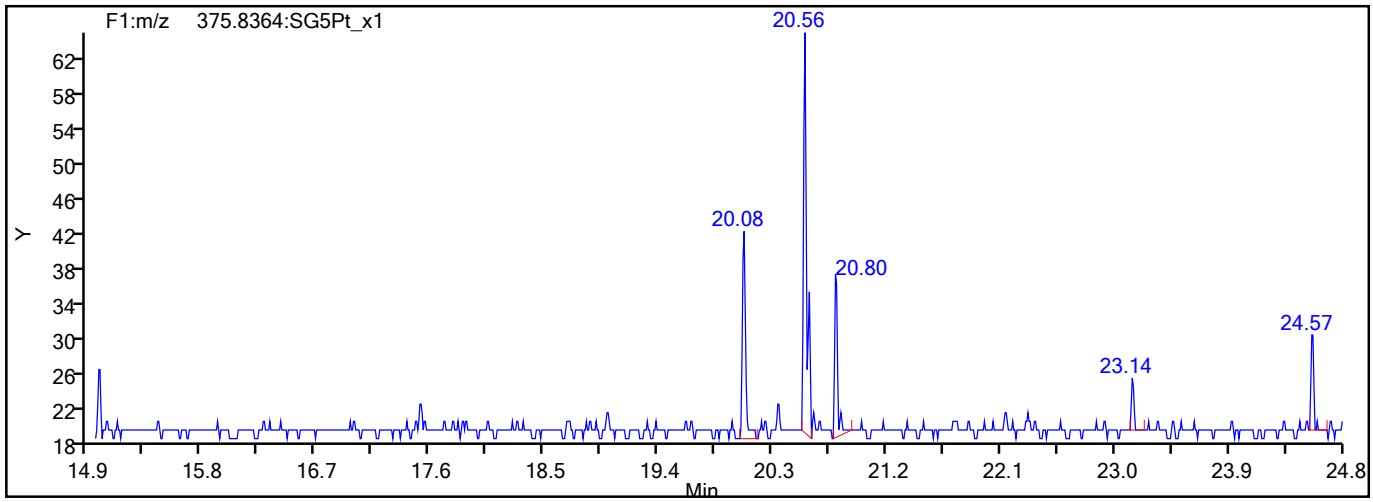

773968

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

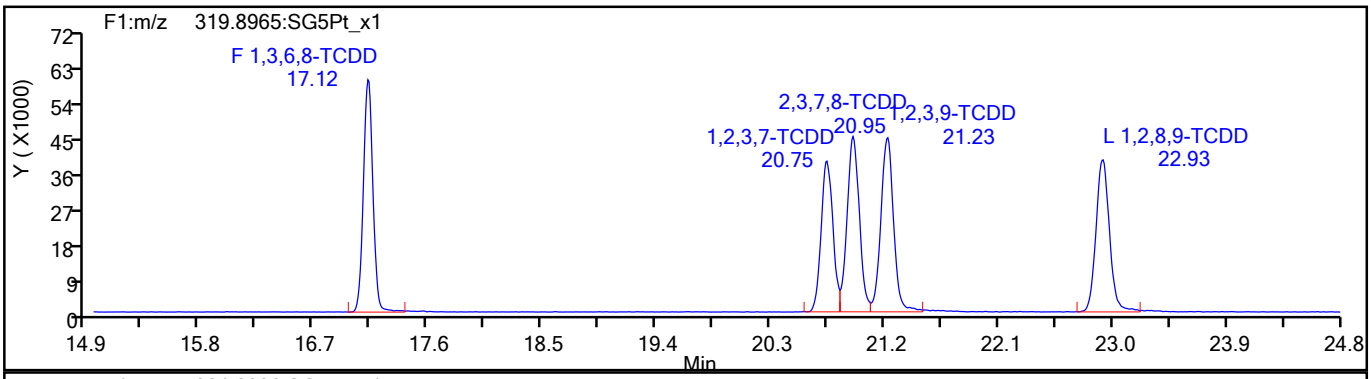

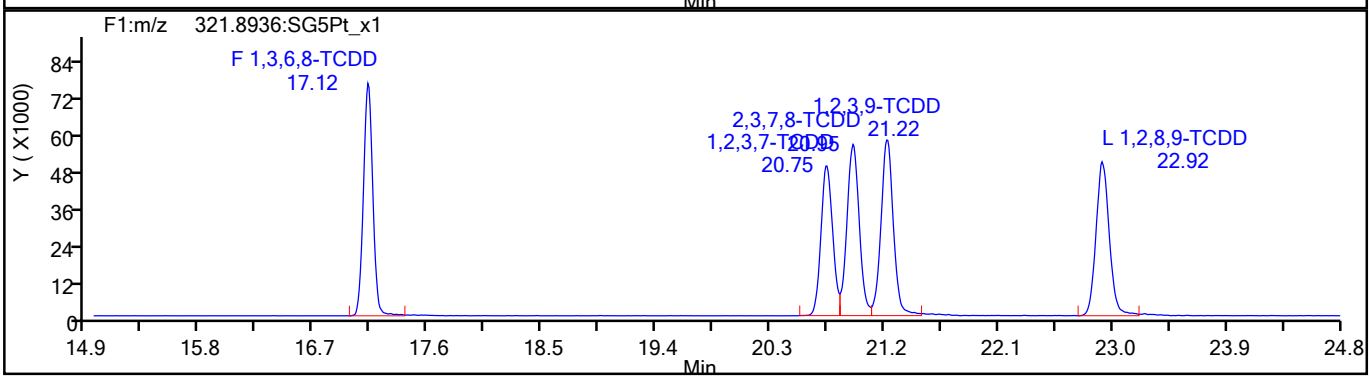

TCDD Standards

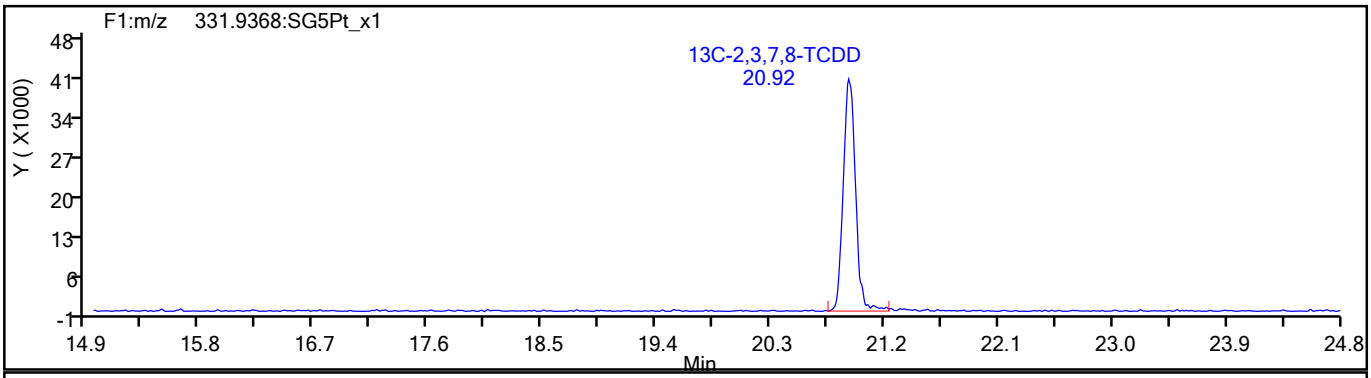

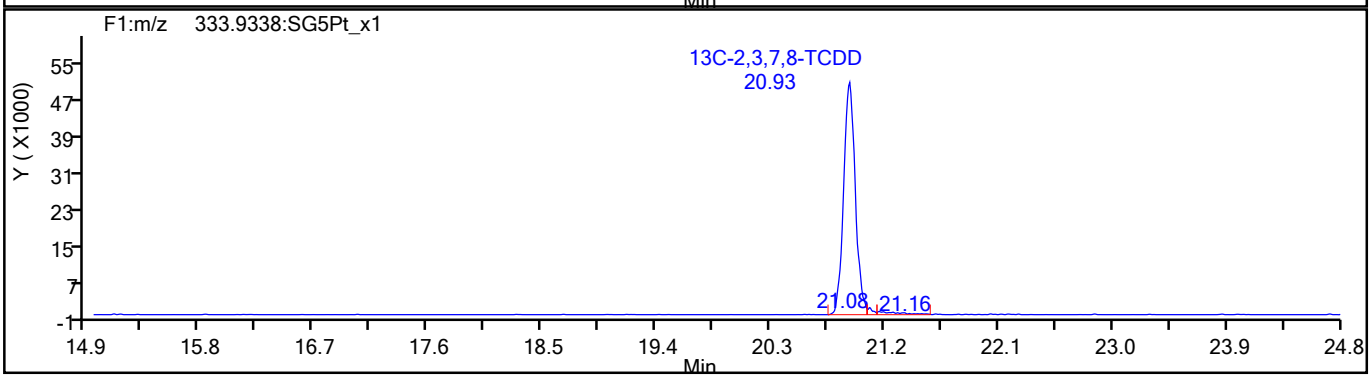

773969

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

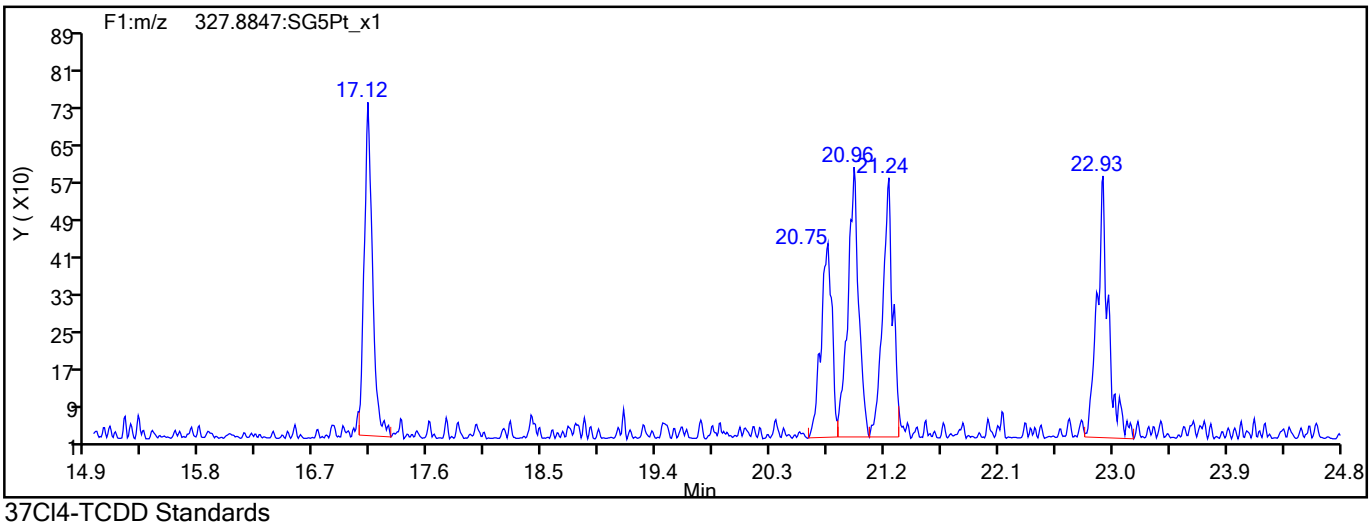

37Cl4-TCDD Standards

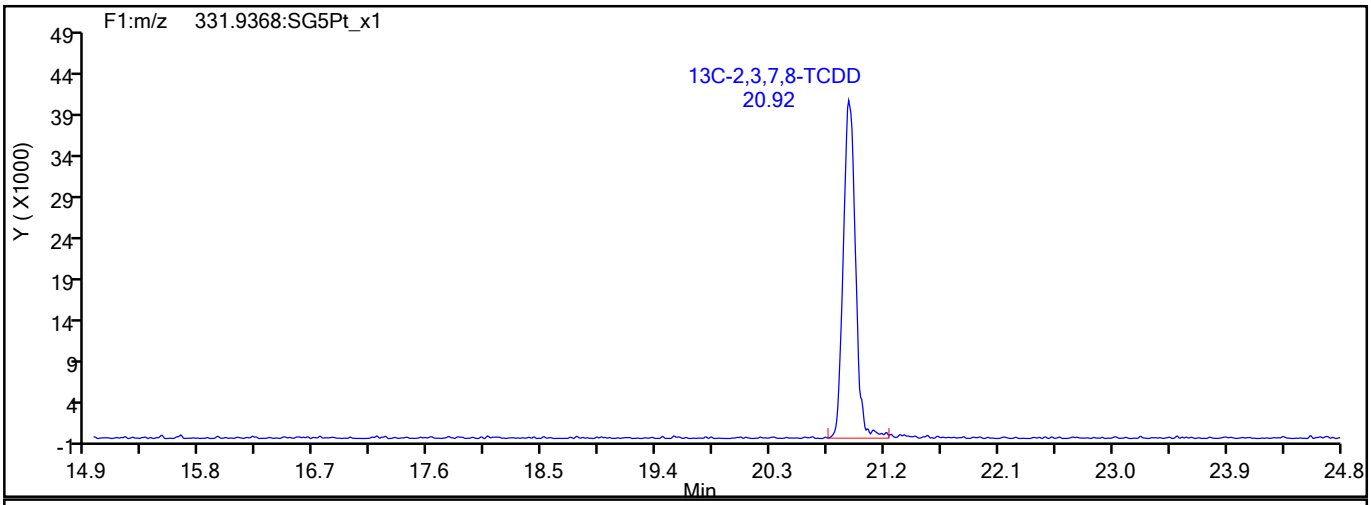

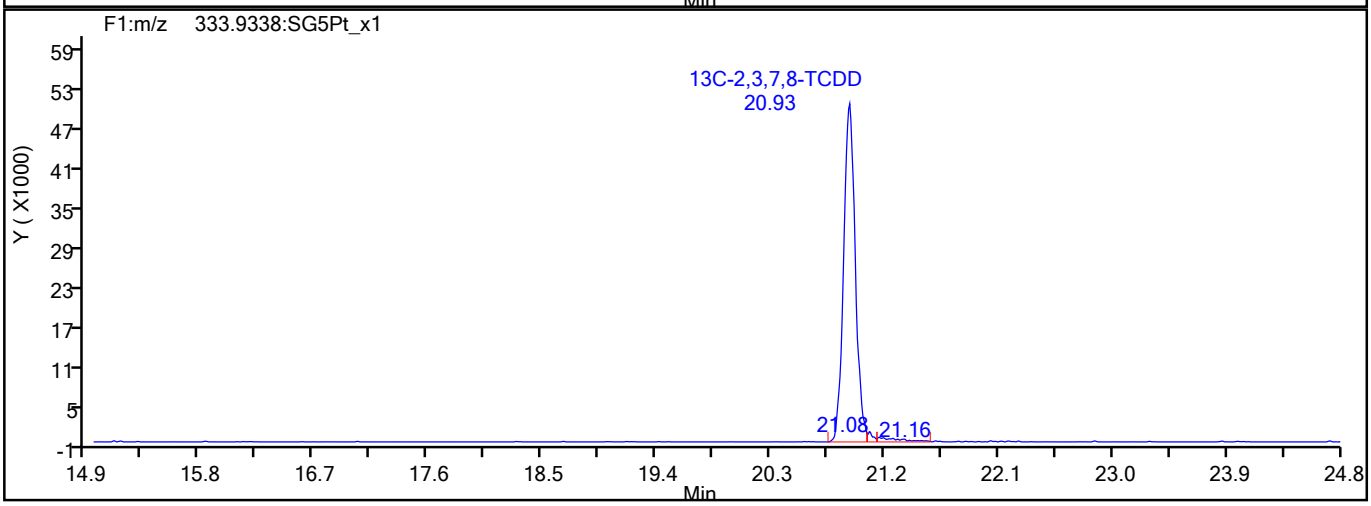

773970

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

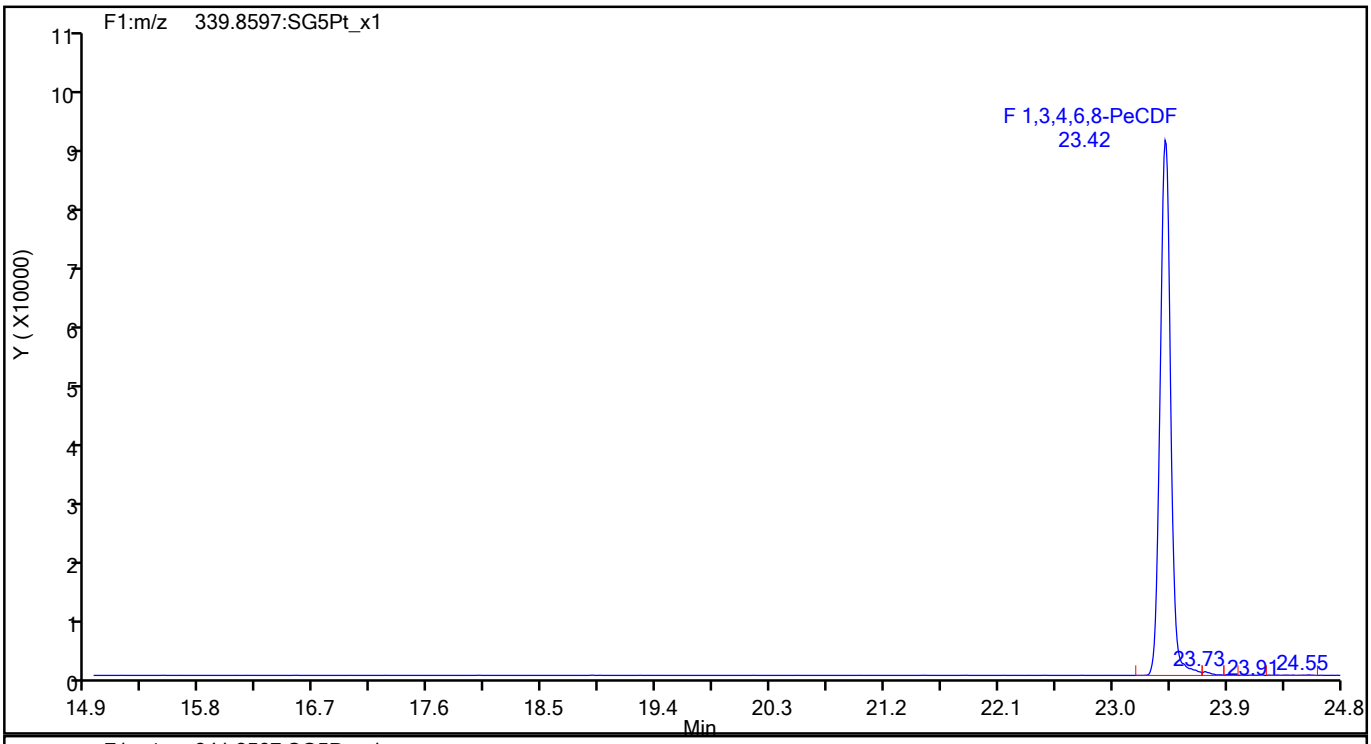

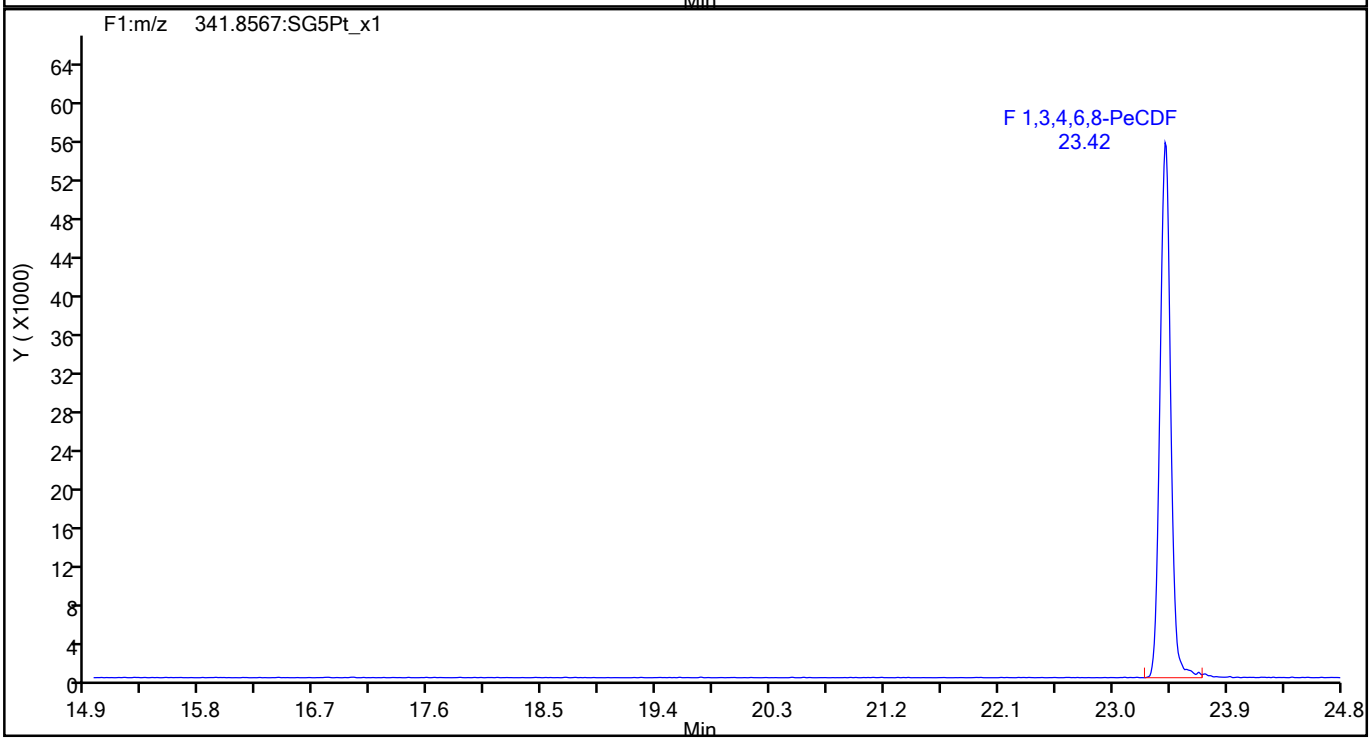

773971

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

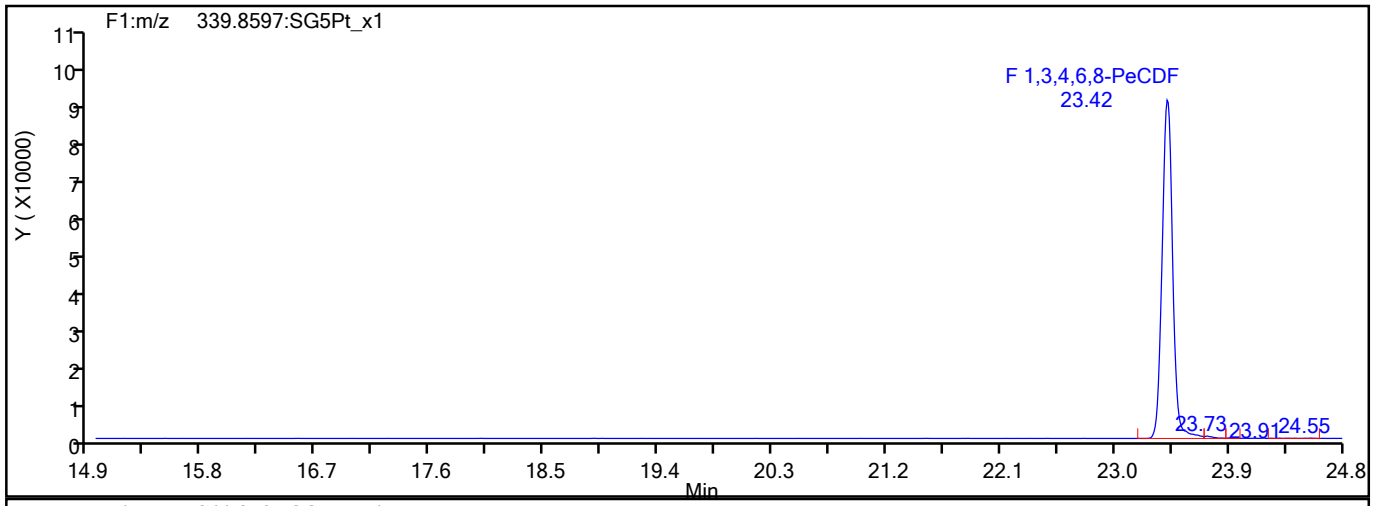

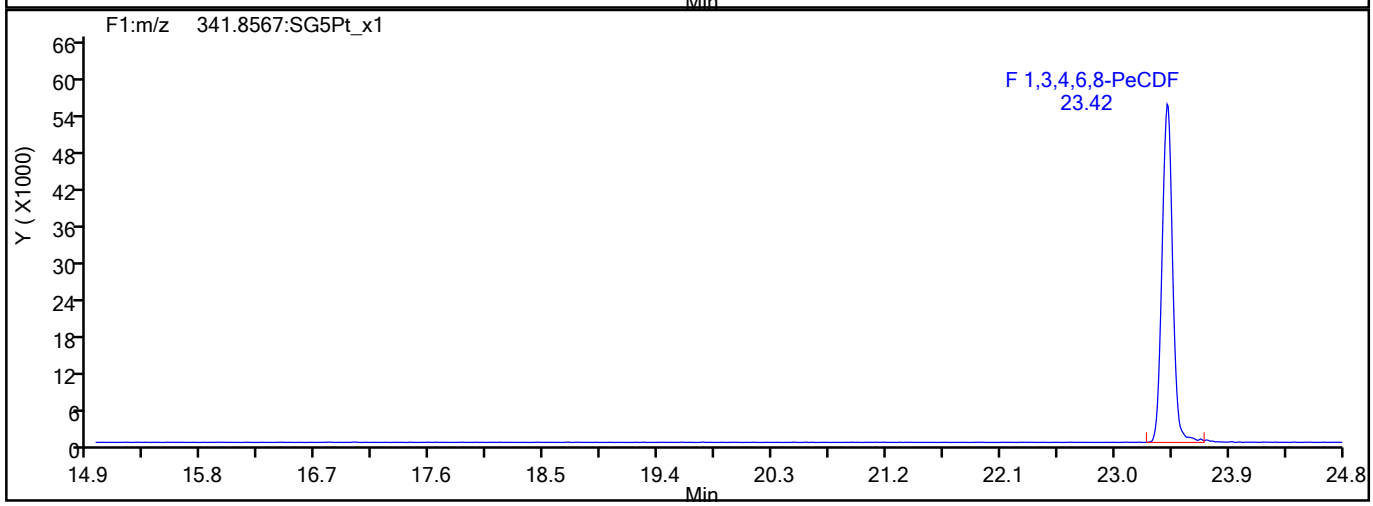

F1 PeCDFs Interference Mass

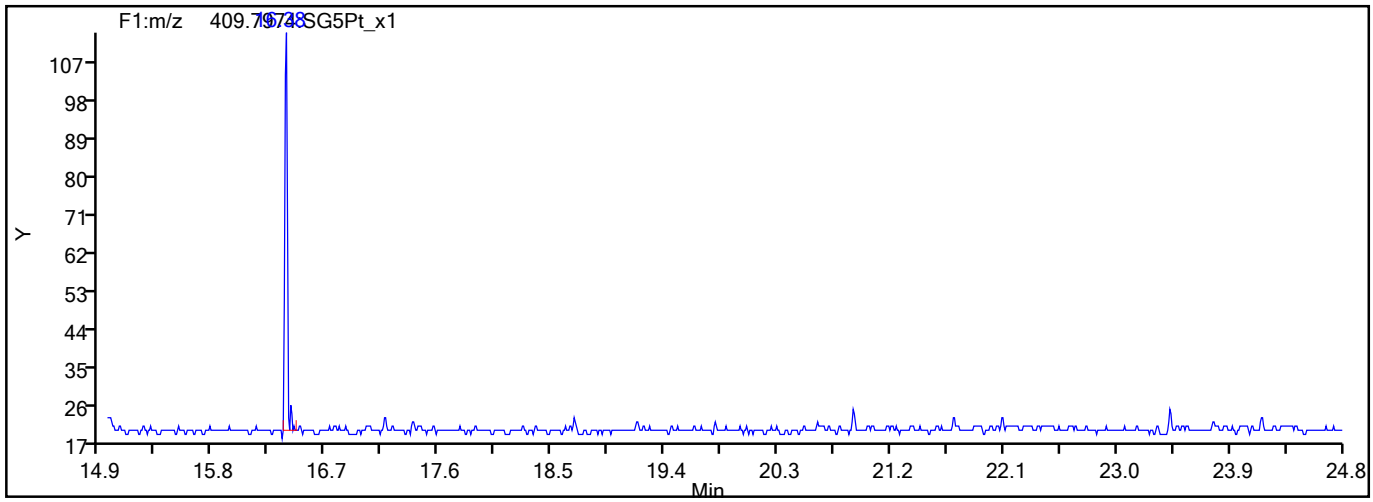

773972

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

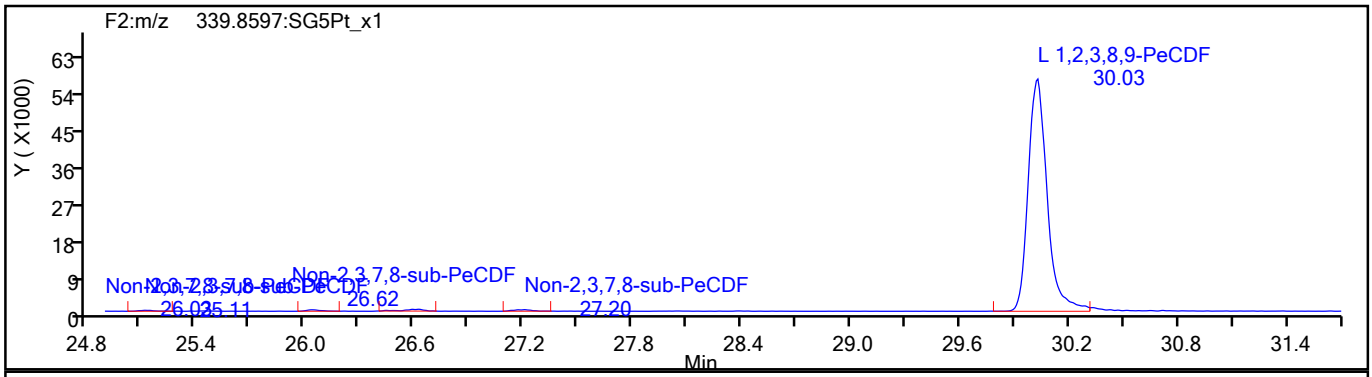

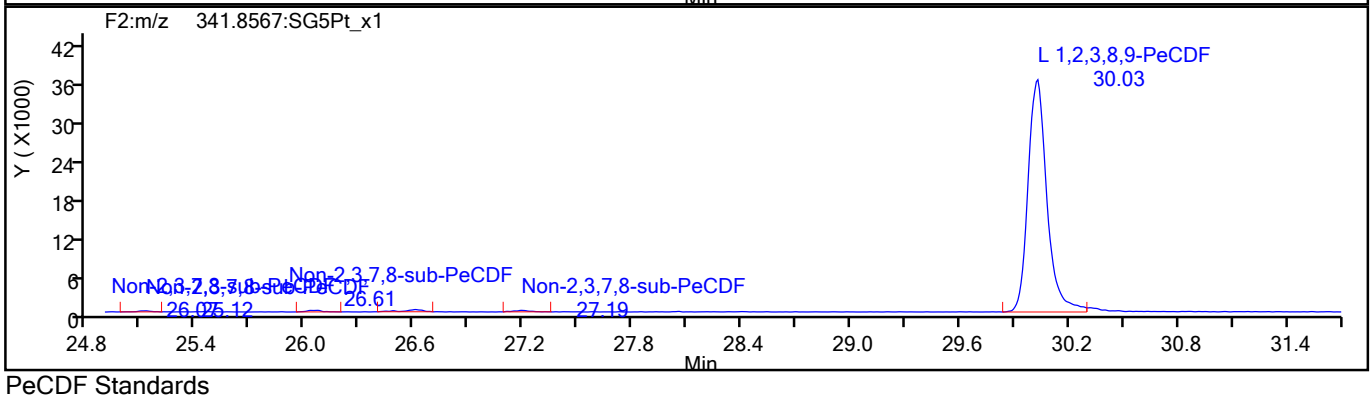

PeCDF Standards

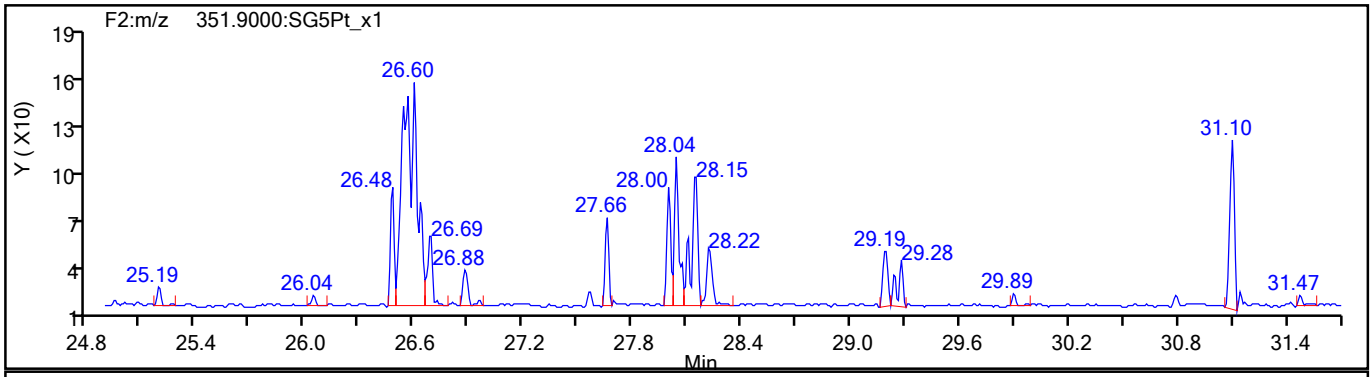

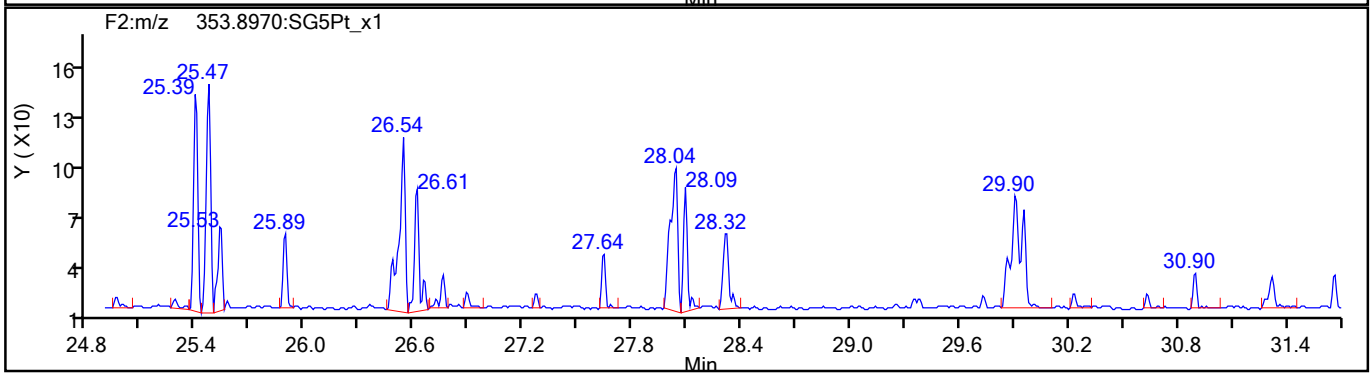

773973

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

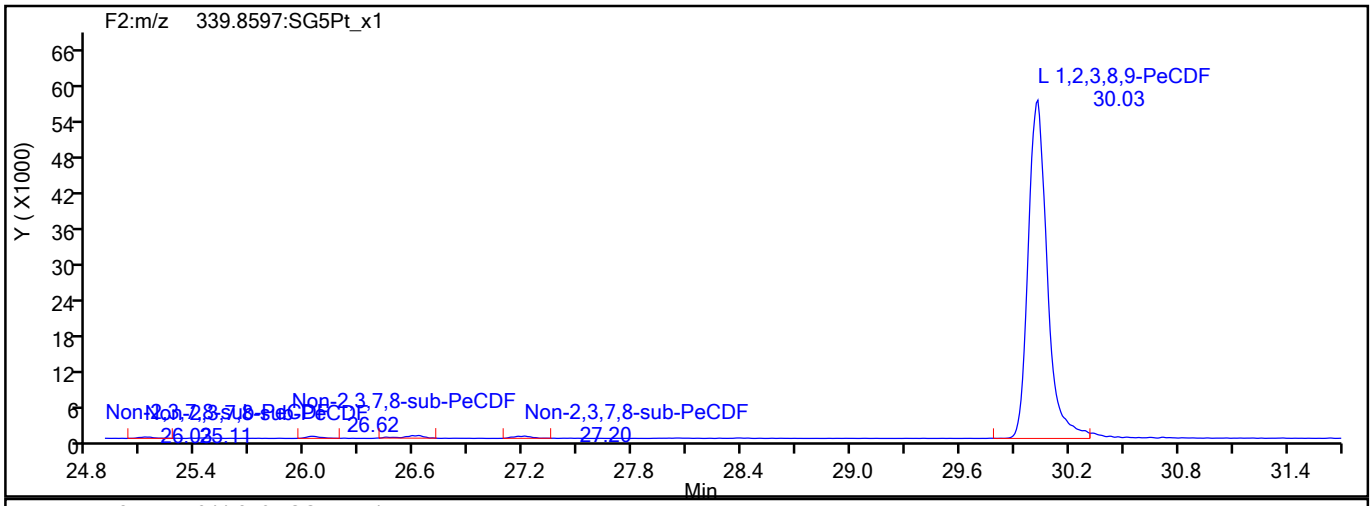

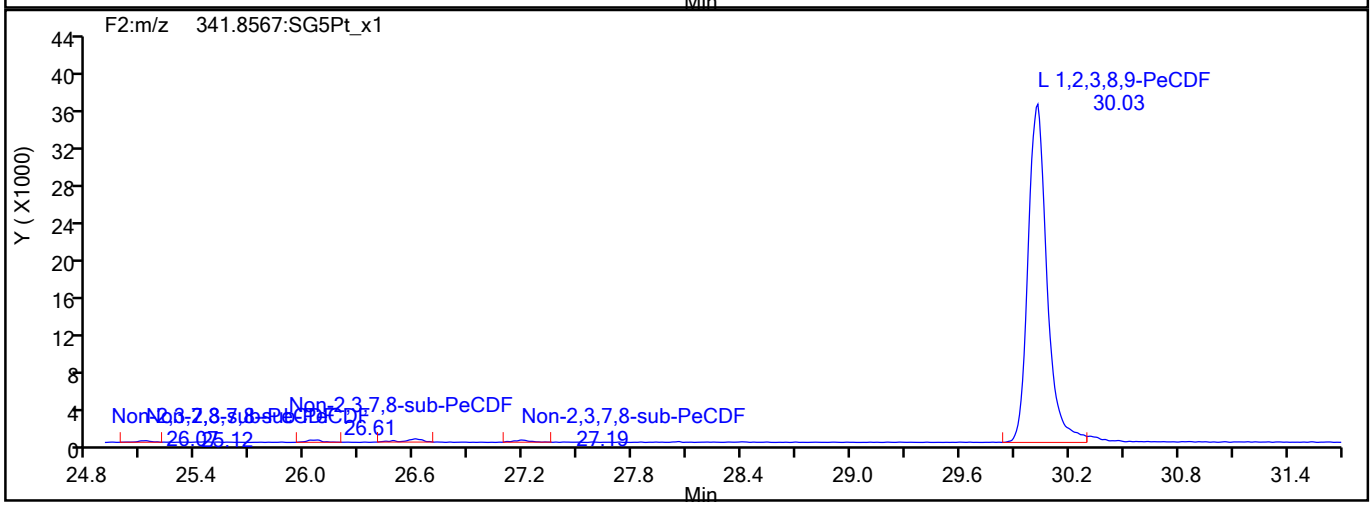

PeCDF Interference Mass

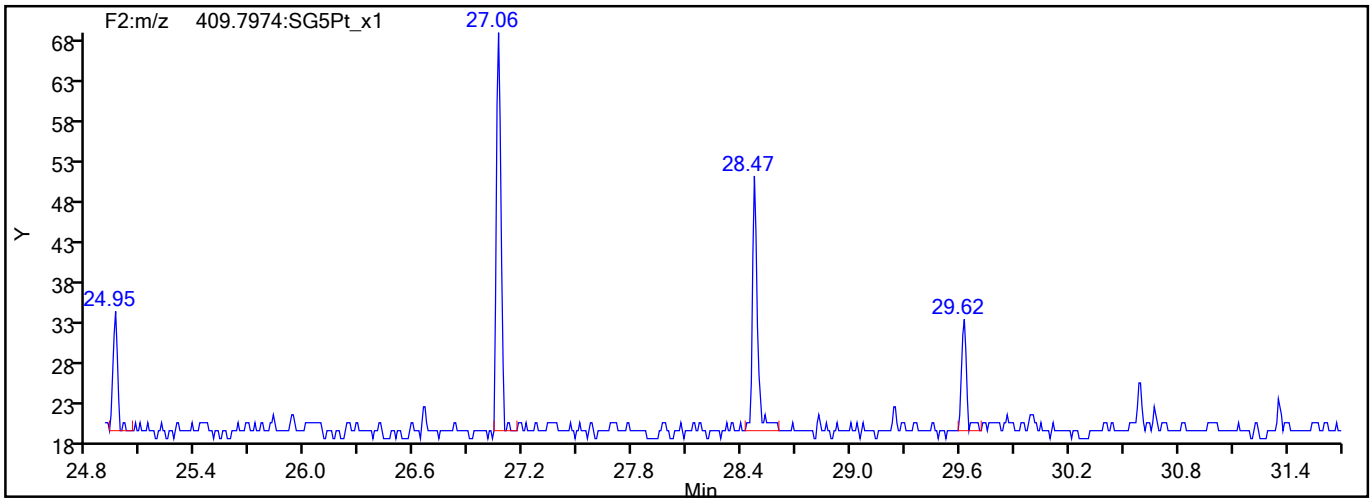

773974

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

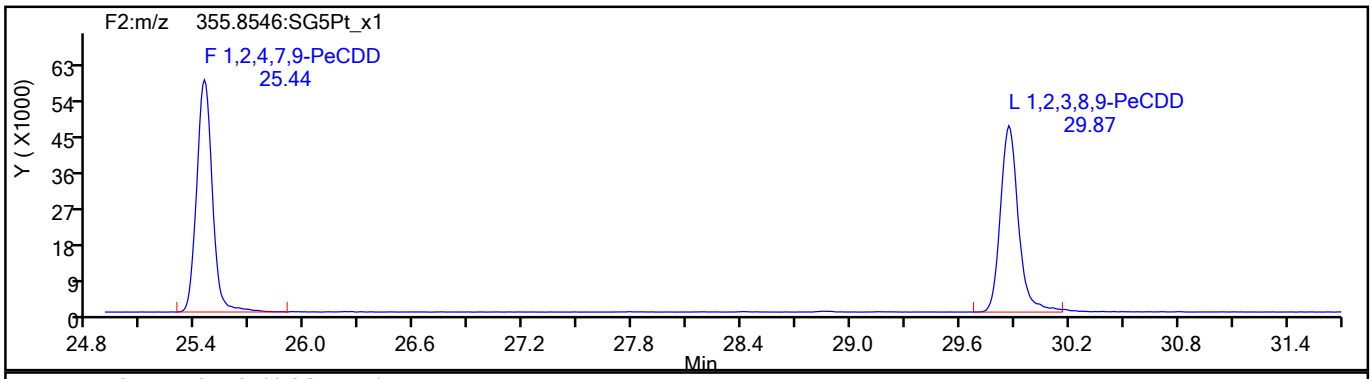

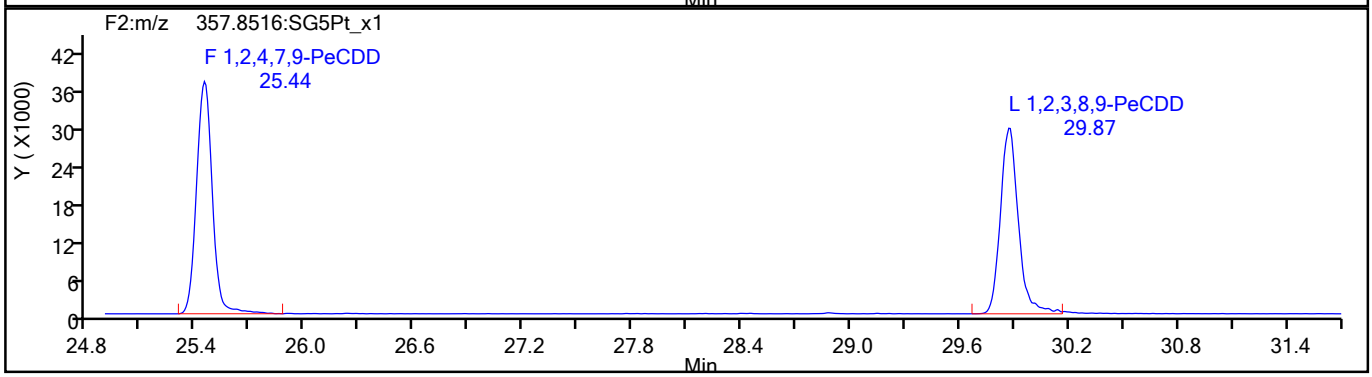

PeCDD Standards

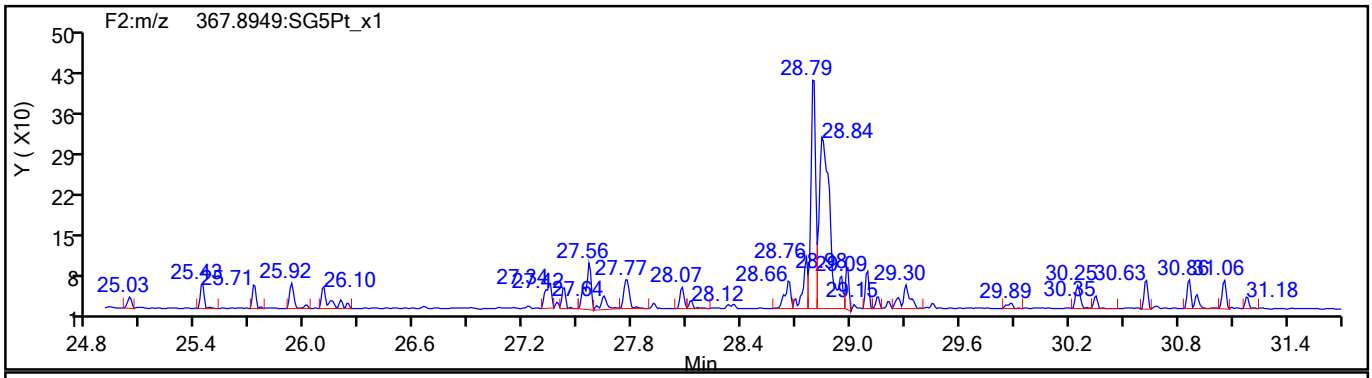

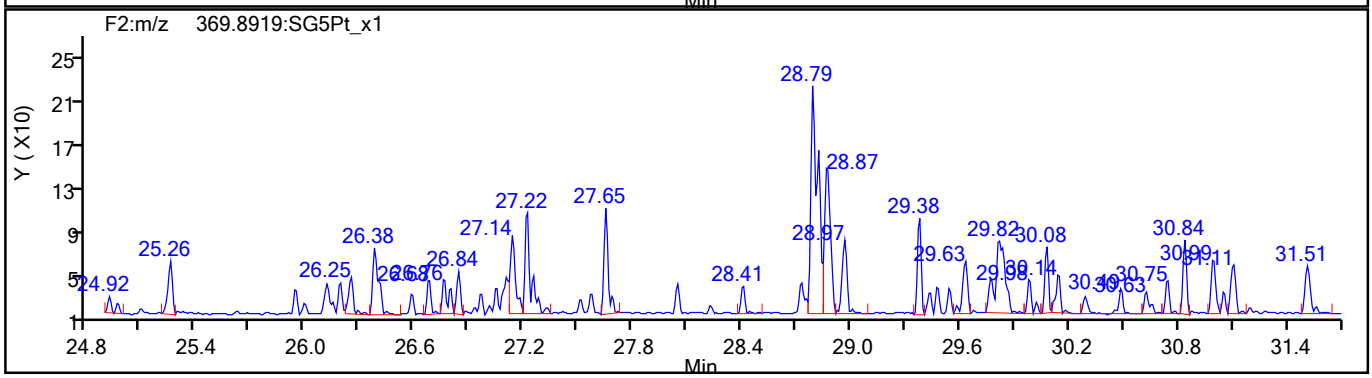

773975

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

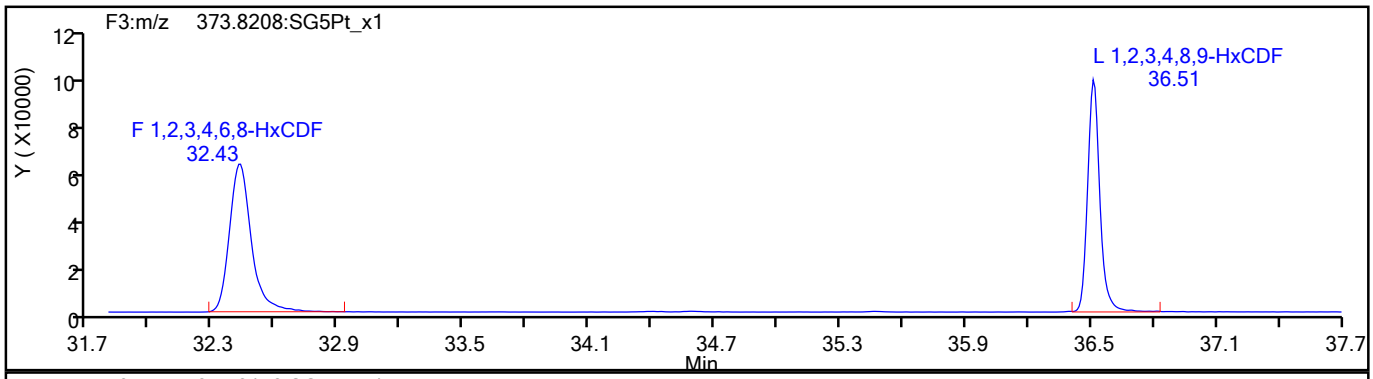

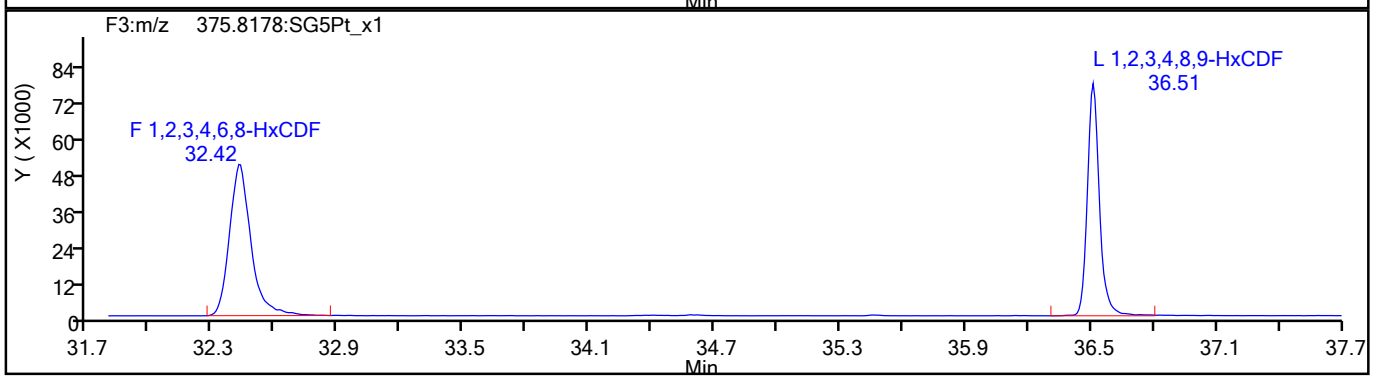

HxCDF Standards

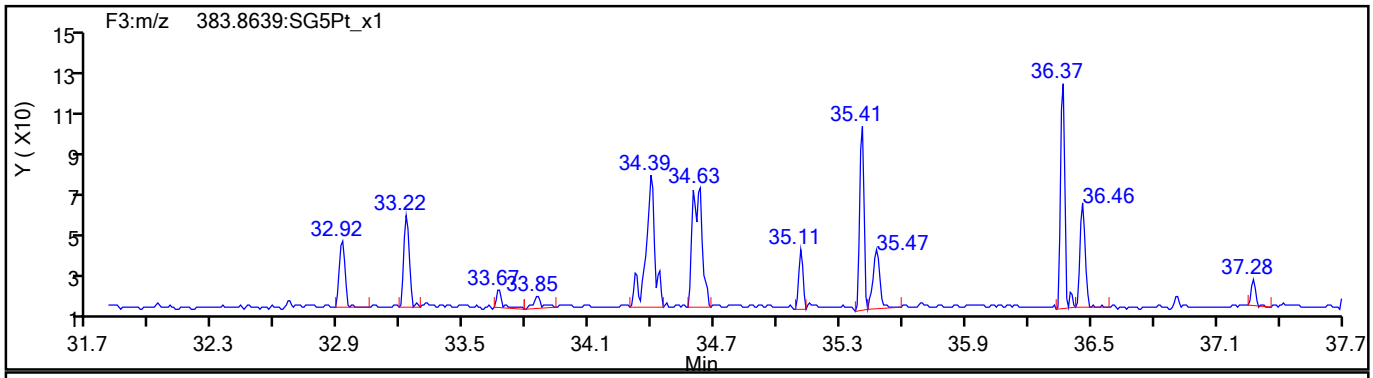

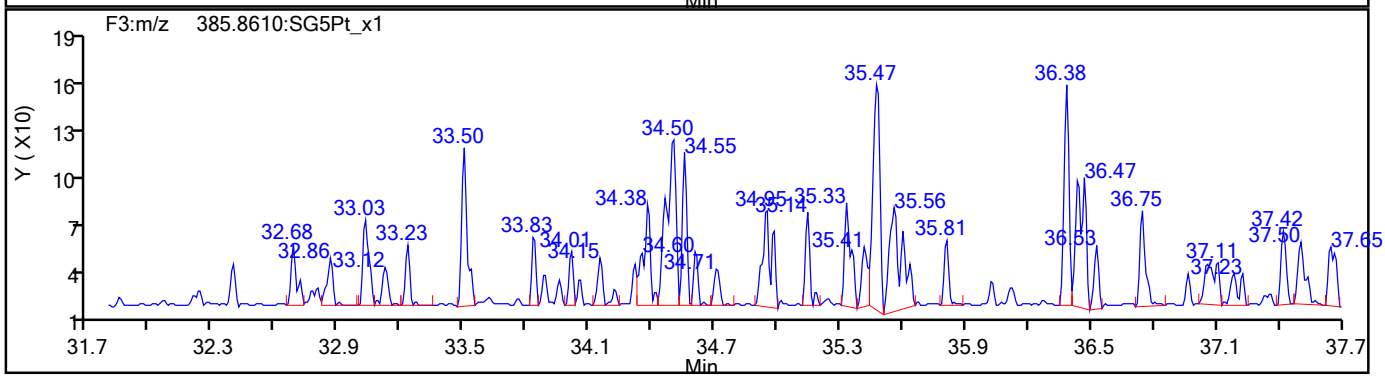

773976

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

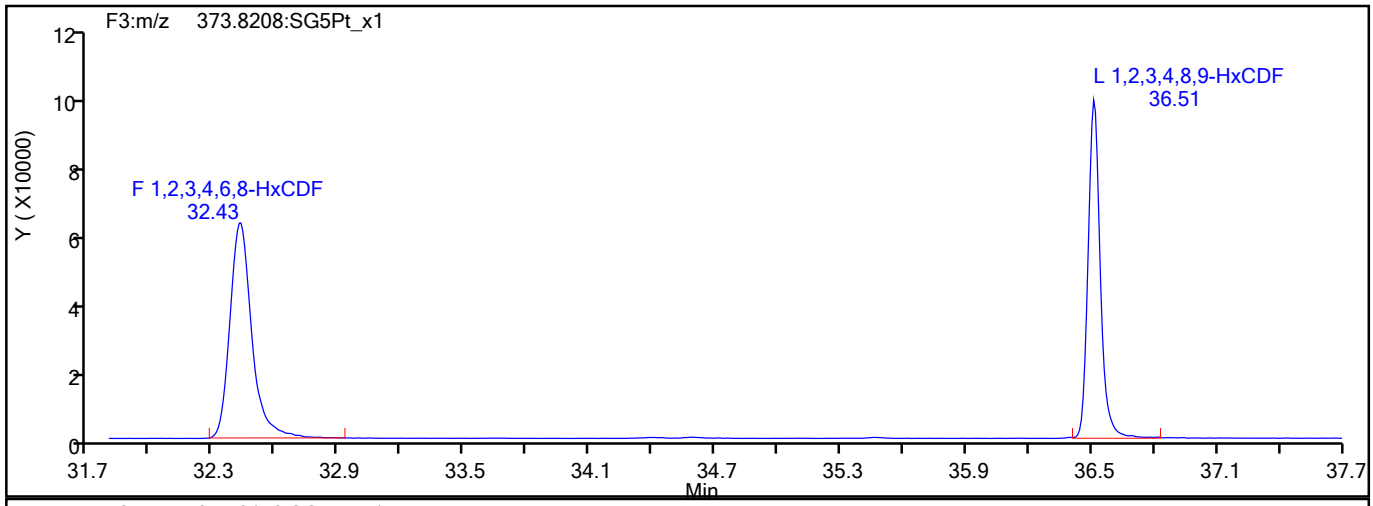

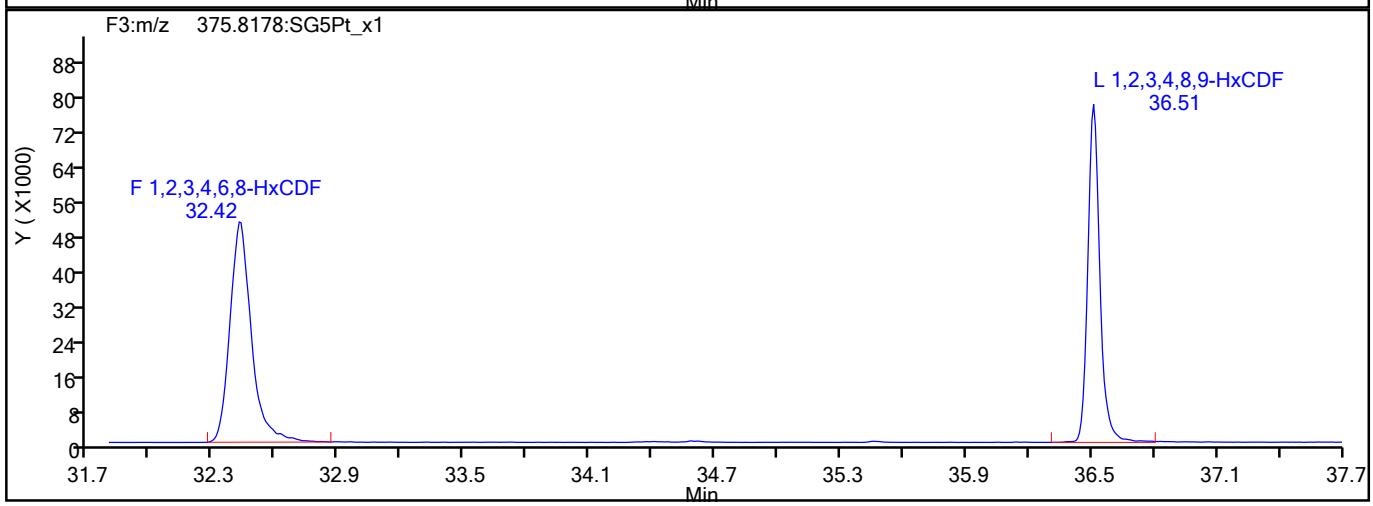

HxCDF Interference Mass

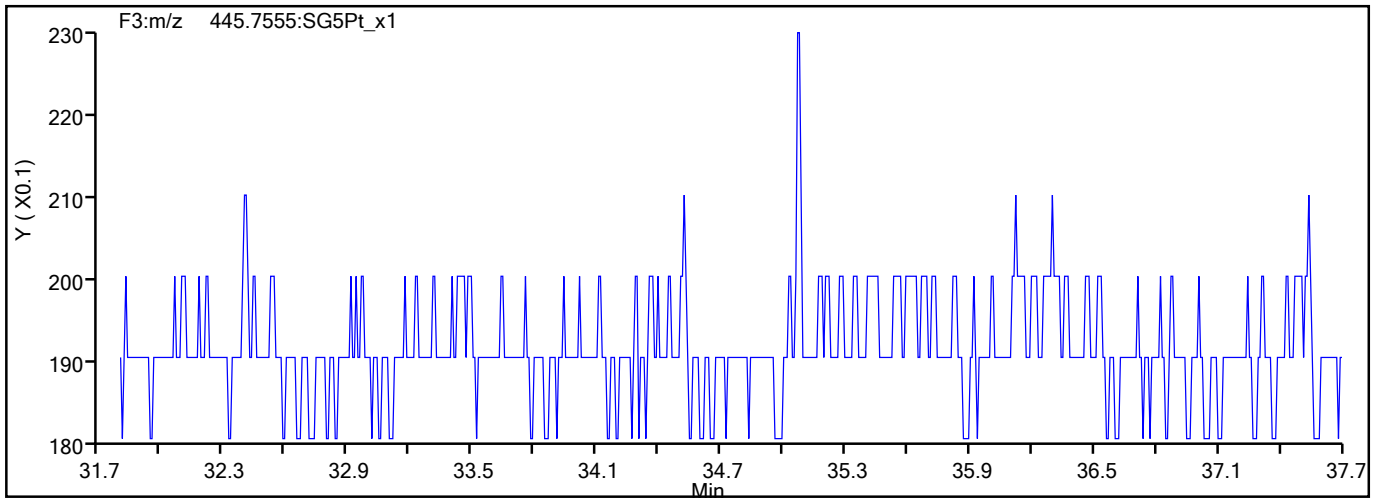

773977

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

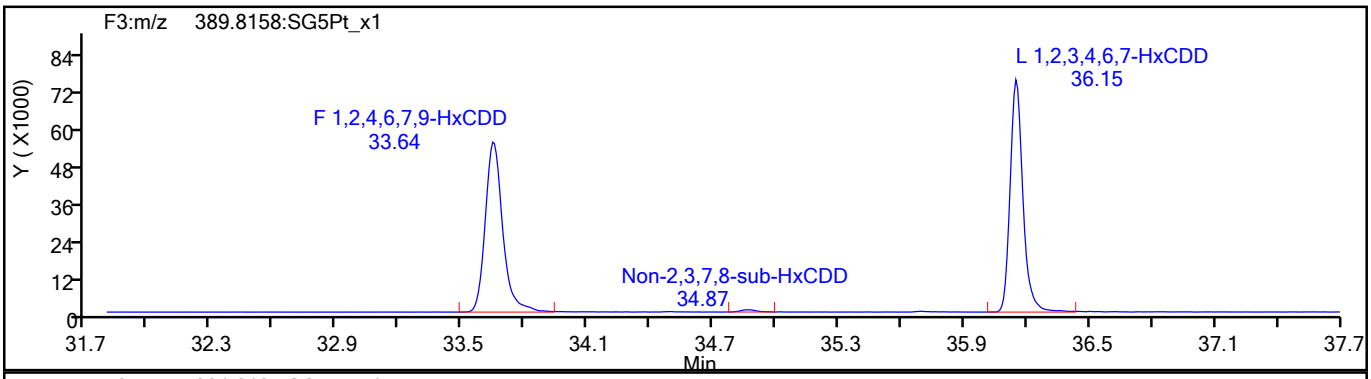

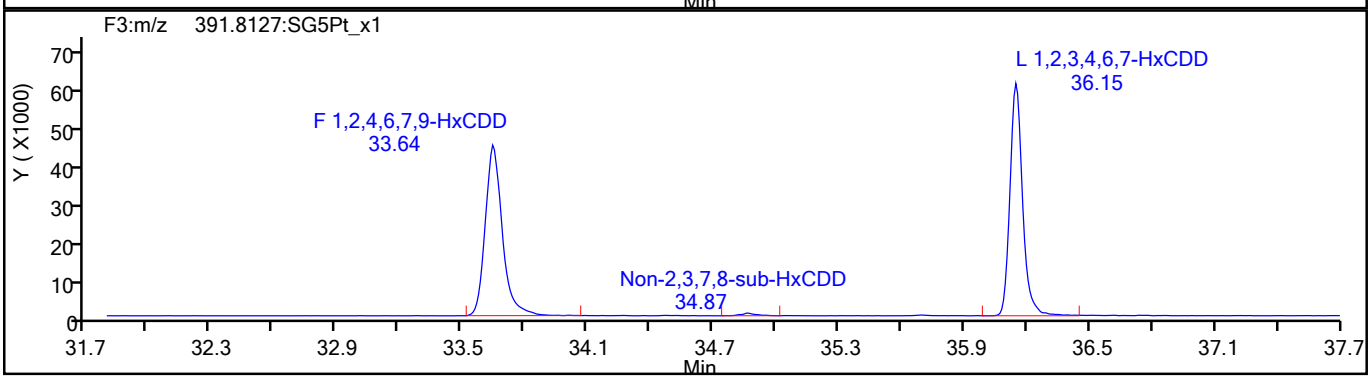

HxCDD Standards

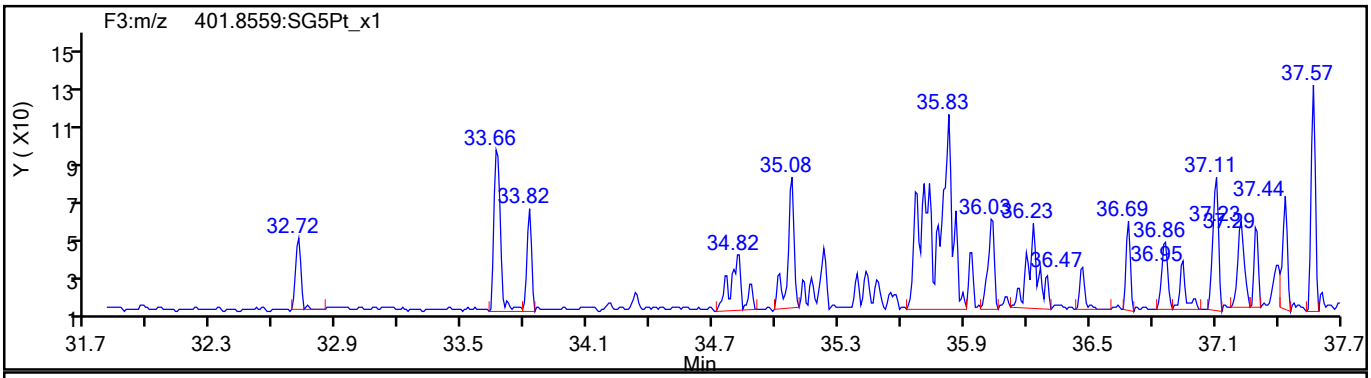

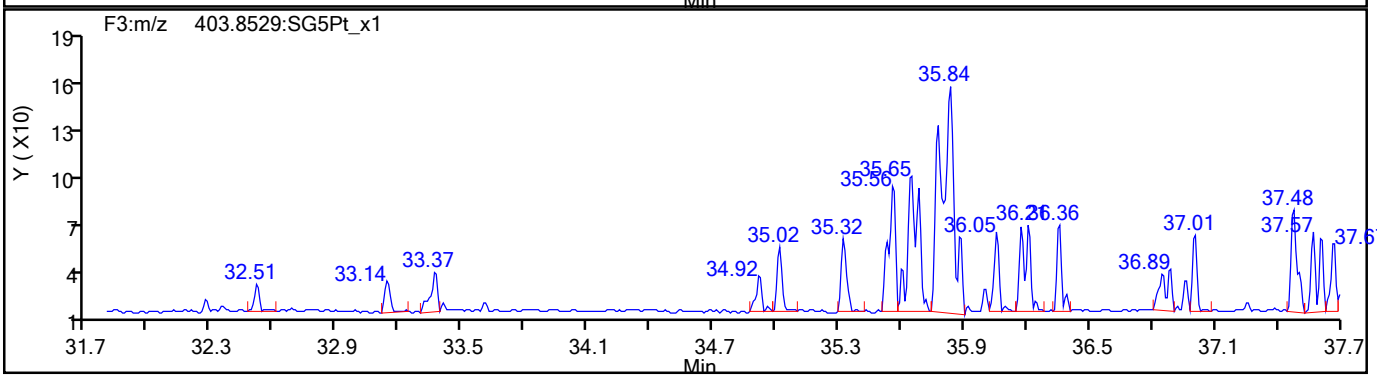

773978

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

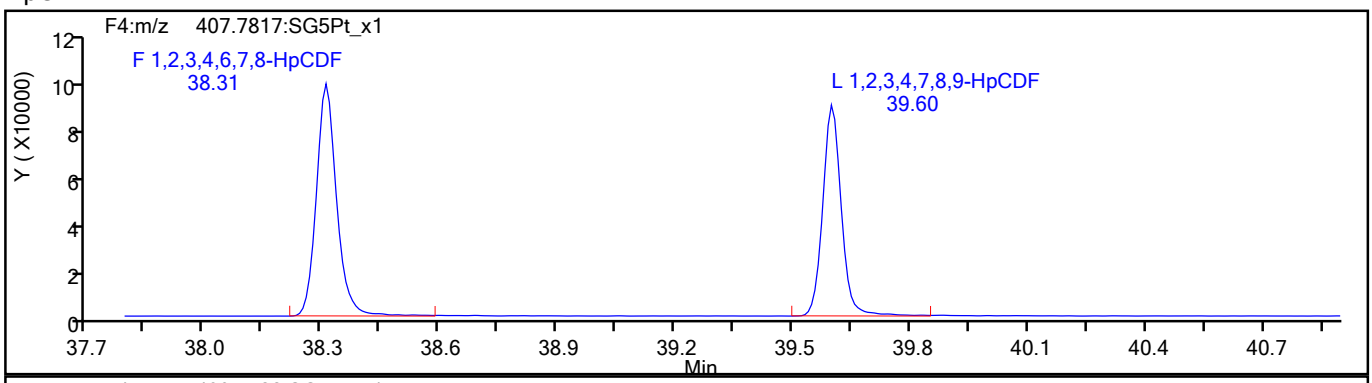

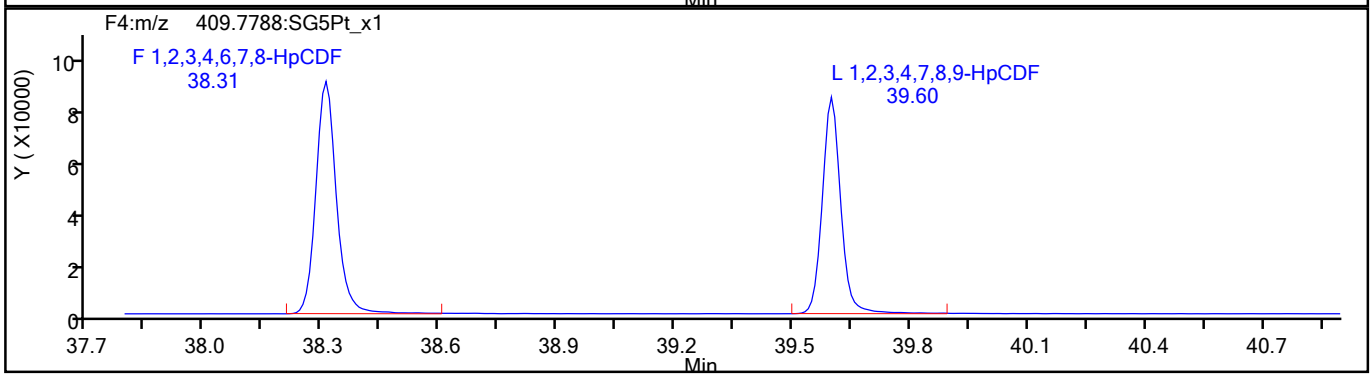

HpCDF Standards

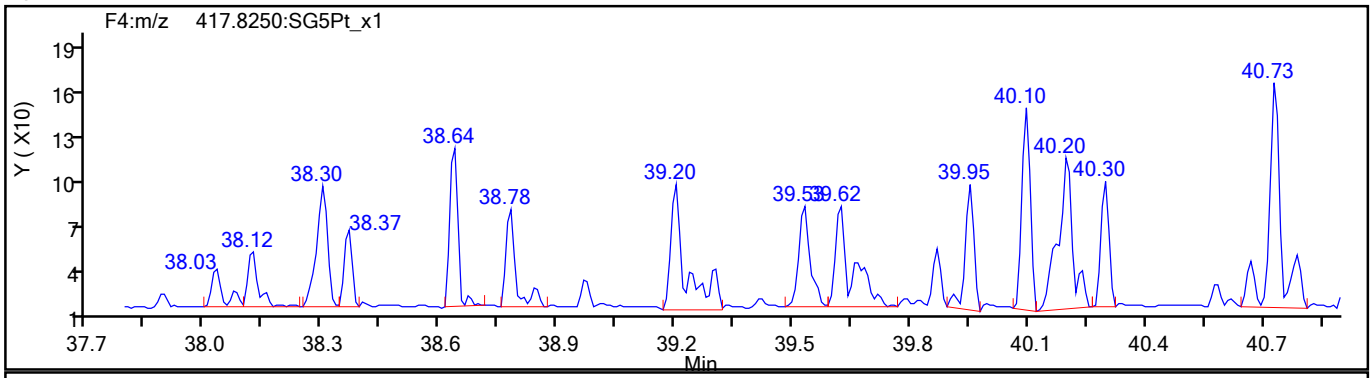

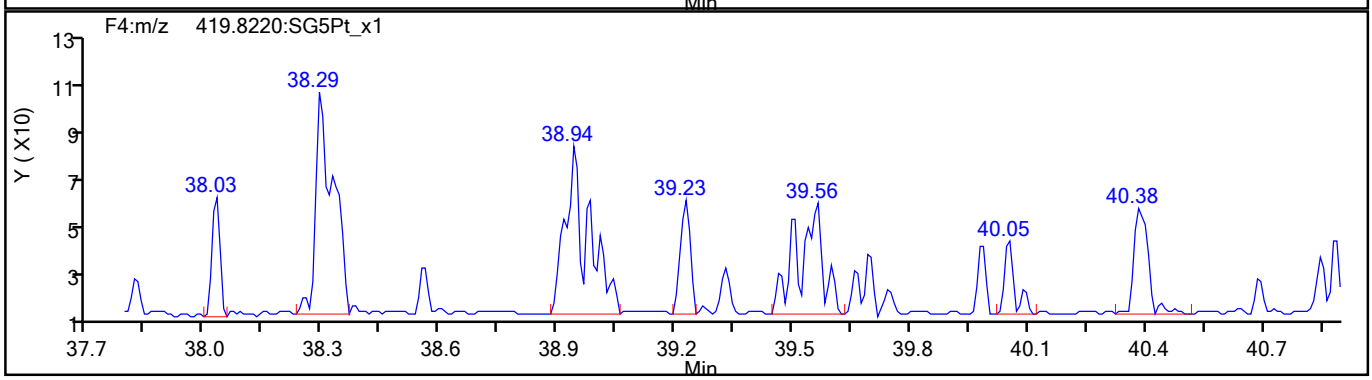

773979

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

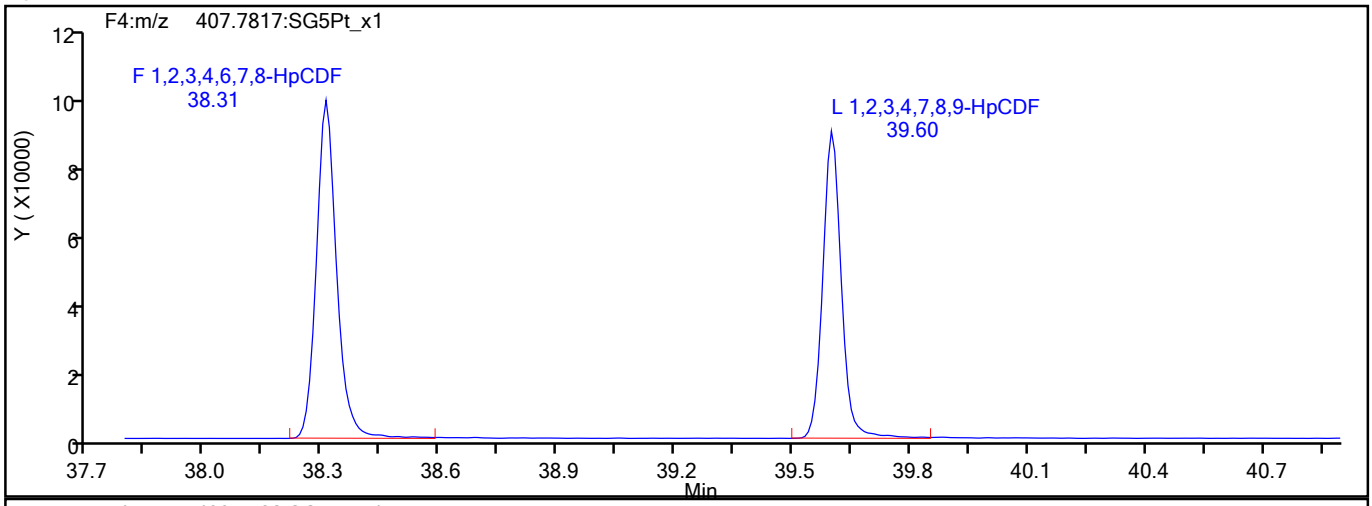

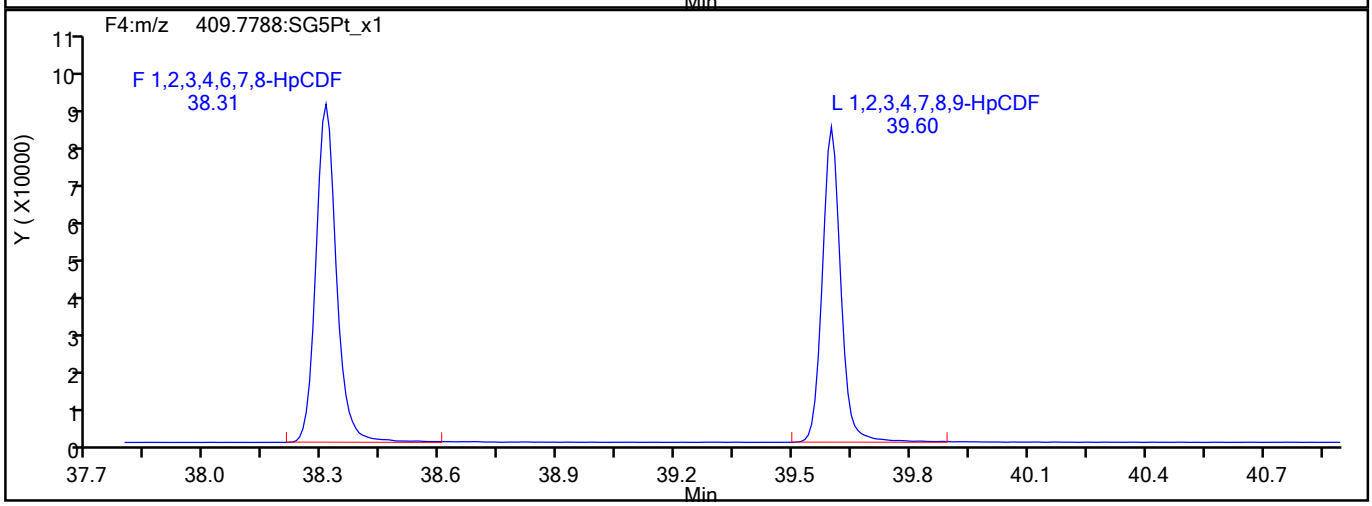

HpCDF Interference Mass

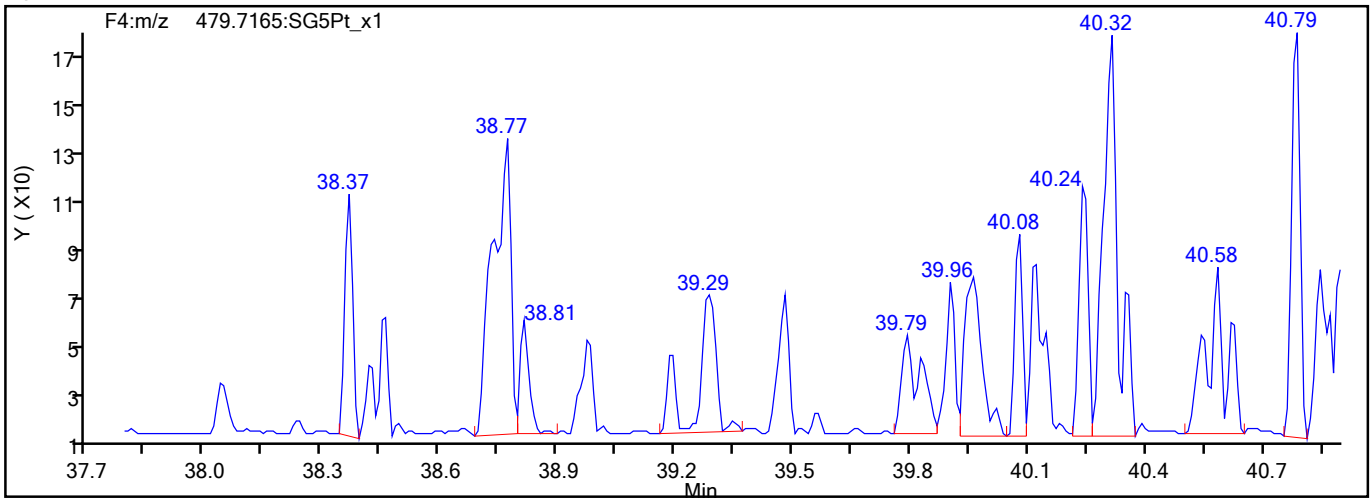

773980

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

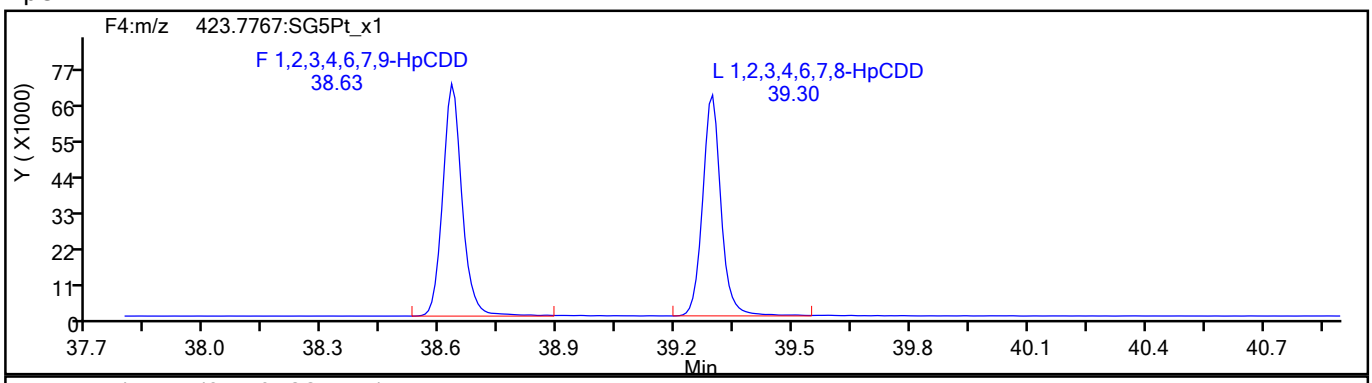

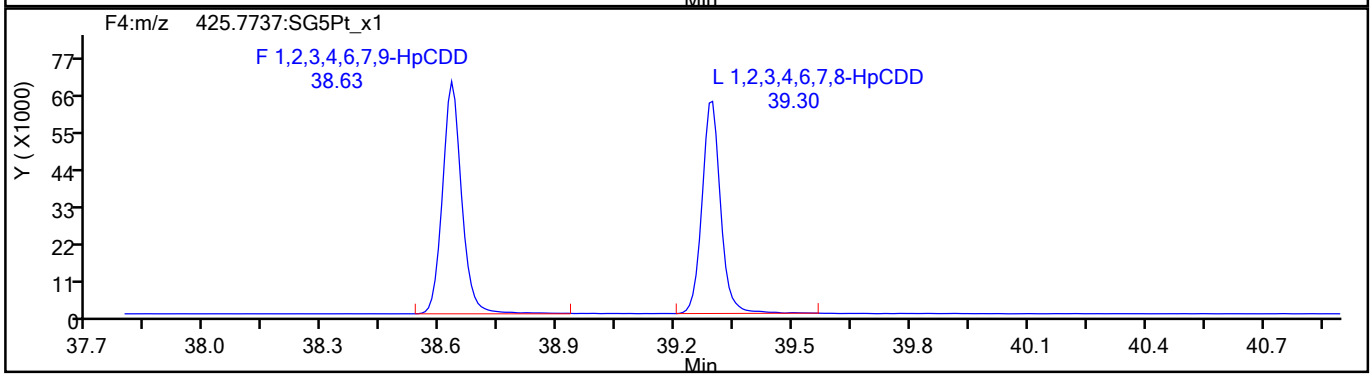

HpCDD Standards

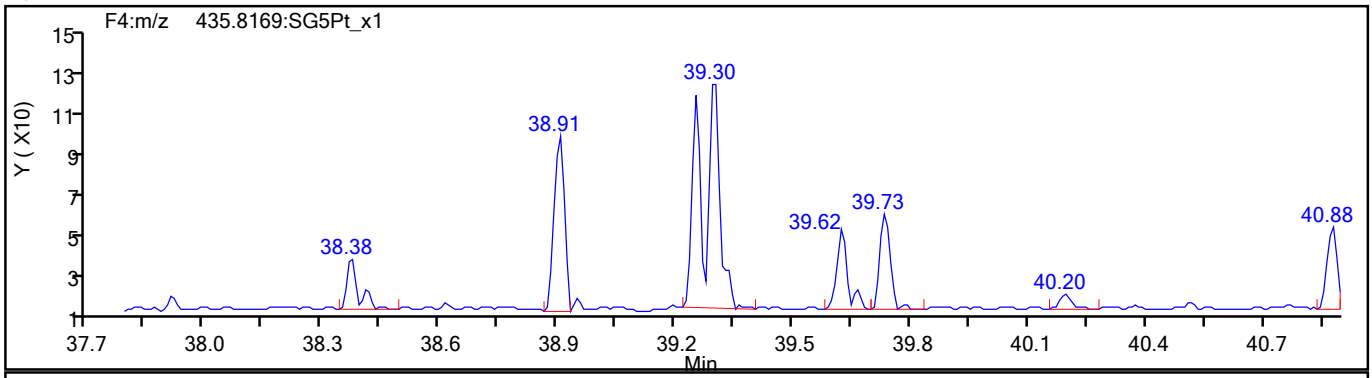

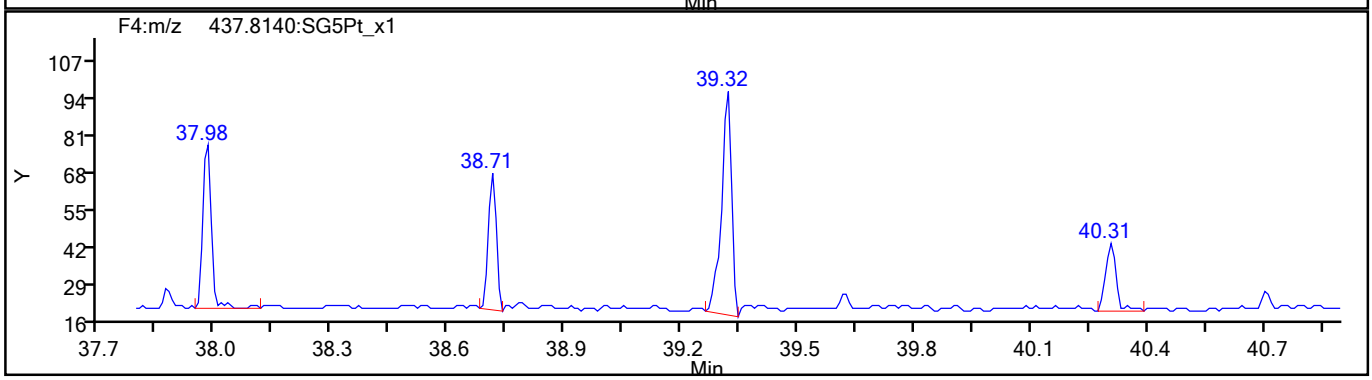

773981

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

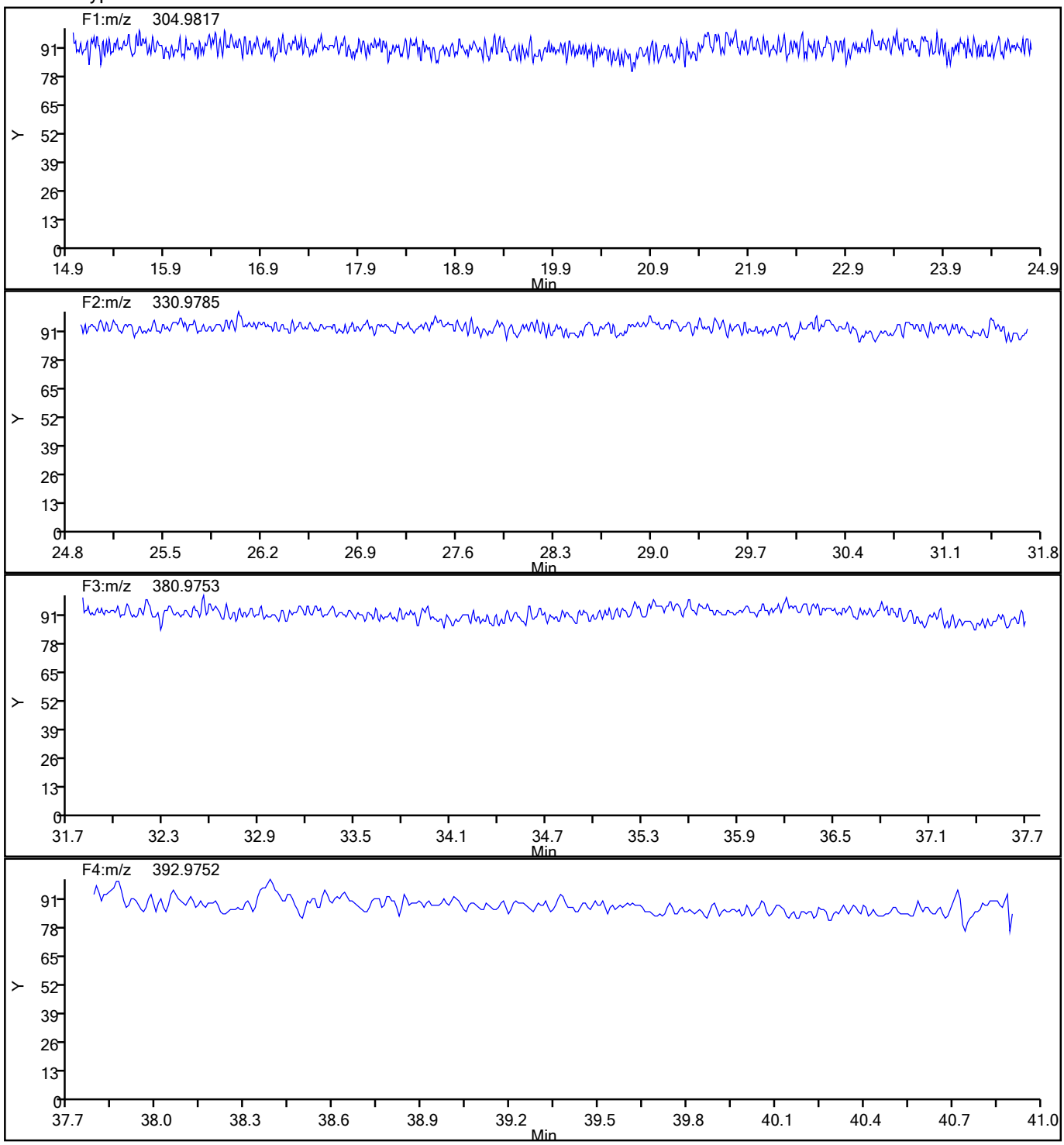

773982

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

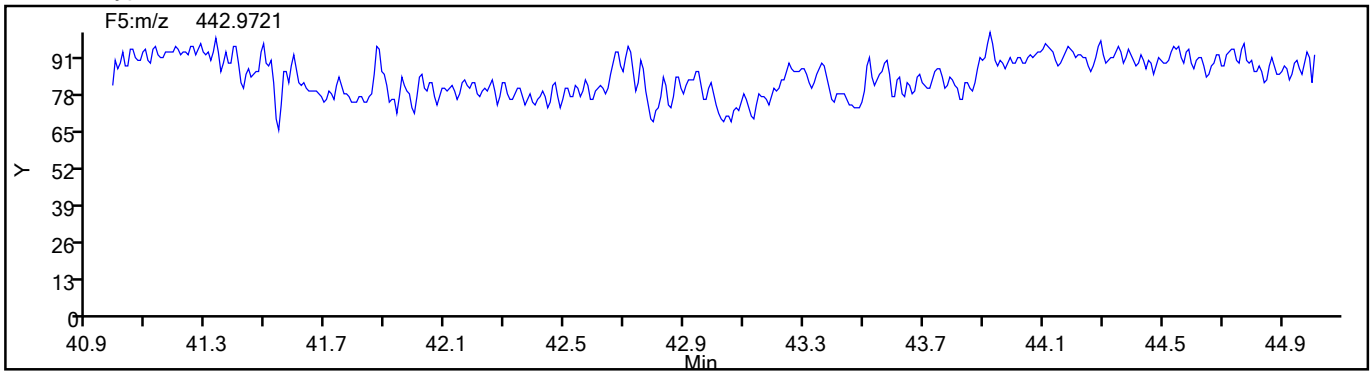

773983

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 13-Aug-2021 14:58:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 12:23:18 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1655

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.554	266125	0.81	1.3459					0.00	
2,3,7,8-TCDF	20.614	645231	0.79	1.0802	89.8	89.8	0.1912	0.1912		
A Non-2,3,7,8-sub-TCDF	20.022	10253	0.77	1.0802	1.776	1.427	0.1912	0.6327		RQ
S Total TCDF					91.6	91.2	0.1912	0.1912		RQ
D 13C-2,3,7,8-TCDD	21.920	167979	0.82	0.9317					0.00	
2,3,7,8-TCDD	21.954	191980	0.78	1.0753	42.5	42.5	0.1577	0.1577		
A Non-2,3,7,8-sub-TCDD	20.855						0.1577	0.1577		
S Total TCDD					42.5	42.5	0.1577	0.1577		
A F1 PeCDFs	24.718	955	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.221	1316	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	29.966						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.144	3444	1.25	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.494	2053	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.689	227551	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.936	206877	1.05	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.313						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.633	160676	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.313						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.295	372314	0.81							
1,3,6,8-TCDD	17.909	199013	0.78							
2,3,4,7-TCDF	20.614	645231	0.79							
1,2,3,7-TCDD	21.740	171562	0.84							
1,2,3,9-TCDF	22.161	275365	0.78							
1,2,3,9-TCDD	22.238	194765	0.80							
1,2,8,9-TCDF	23.749	286420	0.83							
1,2,8,9-TCDD	23.801	79420								

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,3,4,6,8-PeCDF	24.153	245640	1.60							
1,2,3,8,9-PeCDD	26.200	162088	1.60							
1,2,4,7,9-PeCDD	30.834	151444	1.56							
1,2,3,8,9-PeCDF	31.019	212380	1.56							
1,2,3,4,6,8-HxCDF	33.289	260448	1.27							
1,2,4,6,7,9-HxCDD	34.343	174101	1.28							
1,2,3,4,6,7-HxCDD	36.644	169579	1.31							
1,2,3,4,8,9-HxCDF	36.998	242161	1.24							
1,2,3,4,6,7,9-HpCDD	38.993	157813	1.03							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 13-Aug-2021 14:58:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 12:23:18 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1655

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.554	20.554	0	1.000	119310	18207	66	165	276		
317.9389	20.546	20.554	-1	1.000	146815	21893	37	92	592	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.614	20.628	-1	1.003	285369	39168	36	90	1088		
305.8987	20.606	20.628	-1	1.003	359862	49732	47	117	1058	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.879	20.022	-68	0.919	1618	326	36	90	9		
	Empc Correction				844	184	36	90	5		
305.8987	18.948	20.022	-64	0.922	1097	240	47	117	5	1.47(0.65-0.89)	
303.9016	19.893	20.022	-8	0.968	1638	275	36	90	8		
305.8987	19.867	20.022	-9	0.967	3408	511	47	117	11	0.48(0.65-0.89)	
	Empc Correction				2127	357	47	117	8		
303.9016	24.153	20.022	247	1.175	2430	368	36	90	10		
	Empc Correction				1978	364	36	90	10		
305.8987	24.144	20.022	247	1.175	2569	473	47	117	10	0.95(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.920	21.920	0	1.000	75737	10251	14	35	732		
333.9338	21.937	21.920	1	1.000	92242	12635	4	10	3159	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.954	22.002	-3	1.002	84008	10941	23	57	476		
321.8936	21.963	22.002	-2	1.002	107972	13669	16	40	854	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.855						23	57			
321.8936	20.855						16	40			
A F1 PeCDFs											RQ
339.8597	24.462	24.718	-15	1.000	581	127	7	17	18		
341.8567	24.471	24.718	-15	1.000	874	180	6	15	30	0.66(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.906	28.221	-139	1.000	431	107	18	45	6		
341.8567	25.855	28.221	-142	1.000	557	86	18	45	5	0.77(1.32-1.78)	
339.8597	26.841	28.221	-83	1.000	369	103	18	45	6		
341.8567	26.841	28.221	-83	1.000	800	123	18	45	7	0.46(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	29.966						19	47			
357.8516	29.966						9	22			
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.194	35.144	3	1.000	1916	379	43	107	9		
375.8178	35.211	35.144	4	1.000	1528	302	31	77	10	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.472	35.494	-1	1.000	1137	211	21	52	10		
391.8127	35.439	35.494	-3	1.000	1129	246	18	45	14	1.01(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.689	38.697	0	1.000	116870	31930	44	110	726		
409.7788	38.698	38.697	0	1.000	110681	30607	37	92	827	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.936	39.935	0	1.000	105964	31700	44	110	720		
409.7788	39.936	39.935	0	1.000	100913	30614	37	92	827	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.313						44	110			
409.7788	39.313						37	92			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.633	39.632	0	1.000	82928	24833	32	80	776		
425.7737	39.633	39.632	0	1.000	77748	23324	28	70	833	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.313						32	80			
425.7737	39.313						28	70			
1,3,6,8-TCDF											
303.9016	16.295	16.295	0		166362	30751	36	90	854		
305.8987	16.286	16.295	-1		205952	39368	47	117	838	0.81(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.909	17.909	0		86894	15421	23	57	670		
321.8936	17.909	17.909	0		112119	18674	16	40	1167	0.78(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.614	20.614	0		285369	39168	36	90	1088		
305.8987	20.606	20.614	-1		359862	49732	47	117	1058	0.79(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.740	21.740	0		78124	10371	23	57	451		
321.8936	21.748	21.740	1		93438	12848	16	40	803	0.84(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.161	22.161	0		120521	16884	36	90	469		
305.8987	22.152	22.161	-1		154844	21252	47	117	452	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,9-TCDD											
319.8965	22.238	22.238	0		86524	10977	23	57	477		
321.8936	22.246	22.238	1		108241	14265	16	40	892	0.80(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.749	23.749	0		129508	23993	36	90	666		
305.8987	23.741	23.749	-1		156912	28449	47	117	605	0.83(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.801	23.801	0		79420	15583	23	57	678		
1,3,4,6,8-PeCDF											
339.8597	24.153	24.153	0		151134	28690	7	17	4099		
341.8567	24.153	24.153	0		94506	17424	6	15	2904	1.60(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.200	26.200	0		99802	15593	19	47	821		
357.8516	26.209	26.200	1		62286	9249	9	22	1028	1.60(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.834	30.834	0		92318	11559	19	47	608		
357.8516	30.842	30.834	1		59126	7961	9	22	885	1.56(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	31.019	31.019	0		129274	16074	18	45	893		
341.8567	31.019	31.019	0		83106	10646	18	45	591	1.56(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.289	33.289	0		145901	23269	43	107	541		
375.8178	33.289	33.289	0		114547	17830	31	77	575	1.27(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.343	34.343	0		97644	17477	21	52	832		
391.8127	34.343	34.343	0		76457	13888	18	45	772	1.28(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.644	36.644	0		96262	22853	21	52	1088		
391.8127	36.644	36.644	0		73317	17053	18	45	947	1.31(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.998	36.998	0		134105	32658	43	107	759		
375.8178	36.998	36.998	0		108056	26517	31	77	855	1.24(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.993	38.993	0		80133	23152	32	80	724		
425.7737	38.993	38.993	0		77680	21835	28	70	780	1.03(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 16-Aug-2021 12:23:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d
Lims ID: WDM
Client ID:
Inject. Date: 13-Aug-2021 14:58:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 516133 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDF, RT: 20.022

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	266125	40100

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	266125	40100

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.879	1618	326	1097	240	0.3778	1.47	RQ
18.879	844	184	1097	240	0.2701		Empc Correction
19.893	1638	275	3408	511	0.7021	0.48	RQ
19.893	1638	275	2127	357	0.5239		Empc Correction
24.153	2430	368	2569	473	0.6956	0.95	RQ
24.153	1978	364	2569	473	0.6327		Empc Correction
Signal Totals:							
	4460	823	5793	1070			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12760	2193				0.80	RQ
	10253	1893					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.776 = (12760 * 40.000) / (266125 * 1.080)
Empc Amount: 1.427 = (10253 * 40.000) / (266125 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d
Lims ID: WDM
Client ID:
Inject. Date: 13-Aug-2021 14:58:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 516133 Lims Sample ID: 2

F1 PeCDFs, RT: 24.718

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.462	581	127	874	180		0.66	R
Signal Totals:							
	581	127	874	180			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1455	307				0.66	RQ
	955	208					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1455 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (955 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 16-Aug-2021 12:23:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	13-Aug-2021 14:58:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	2

Non-2,3,7,8-sub-PeCDF, RT: 28.221

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.906	431	107	557	86		0.77	R
26.841	369	103	800	123		0.46	R
Signal Totals:							
	800	210	1357	209			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2157	419				0.59	RQ
	1316	345					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (2157 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (1316 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d
Lims ID: WDM
Client ID:
Inject. Date: 13-Aug-2021 14:58:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 516133 Lims Sample ID: 2

Non-2,3,7,8-sub-HxCDF, RT: 35.144

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
35.194	1916	379	1528	302		1.25	
Signal Totals:							
	1916	379	1528	302			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3444	681				1.25	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (3444 * 0.0) / (0 * 0.000)

Report Date: 16-Aug-2021 12:23:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	13-Aug-2021 14:58:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516133	Lims Sample ID:	2

Non-2,3,7,8-sub-HxCDD, RT: 35.494

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.472	1137	211	1129	246		1.01	R
Signal Totals:							
	1137	211	1129	246			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2266	457				1.01	RQ
	2053	381					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (2266 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (2053 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 16-Aug-2021 12:23:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

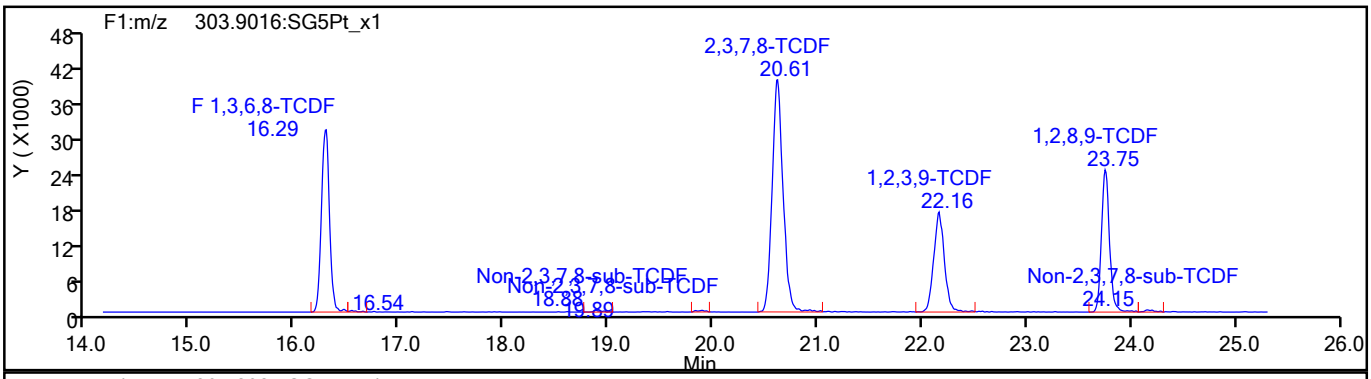

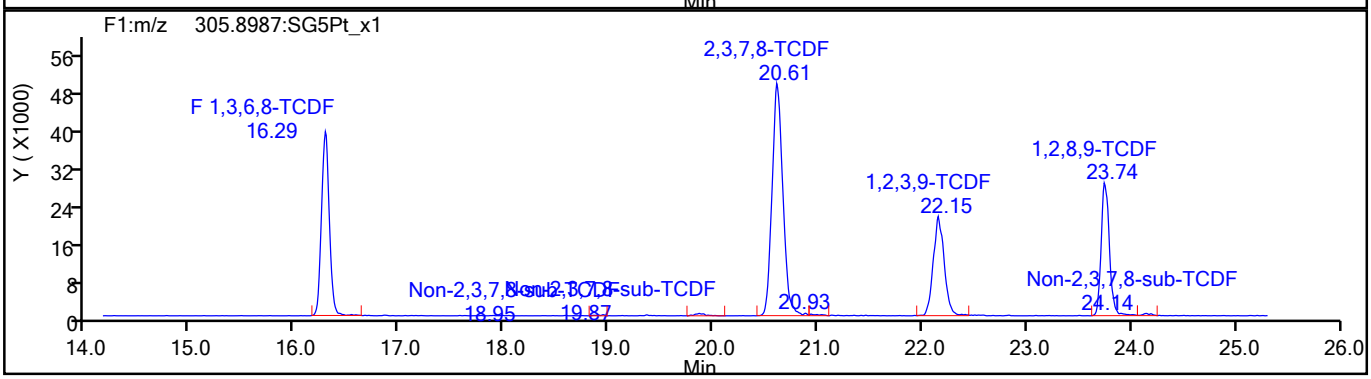

TCDF Standards

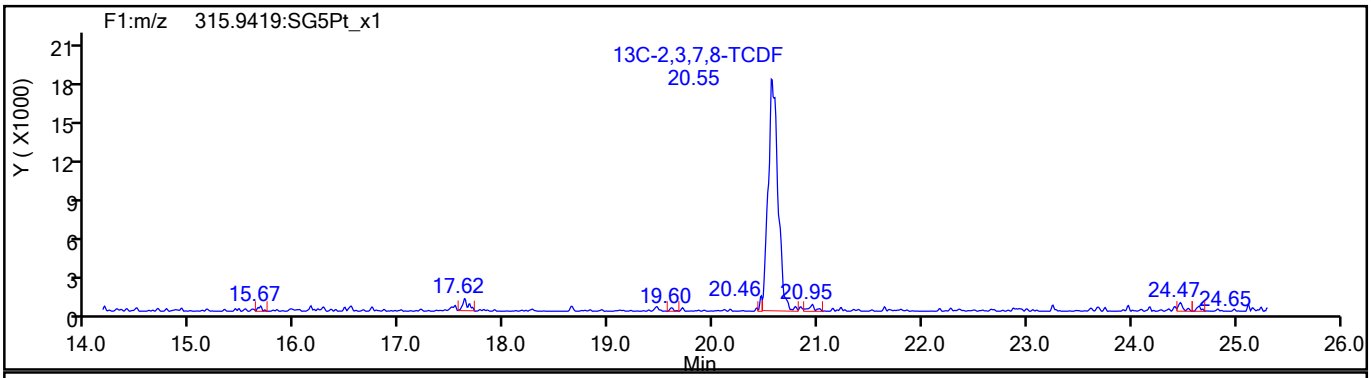

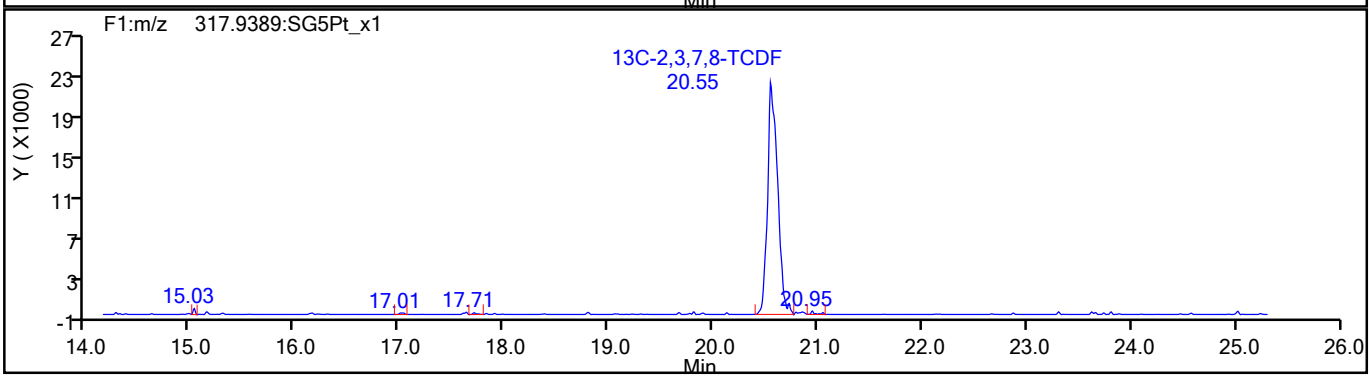

773994

Report Date: 16-Aug-2021 12:23:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

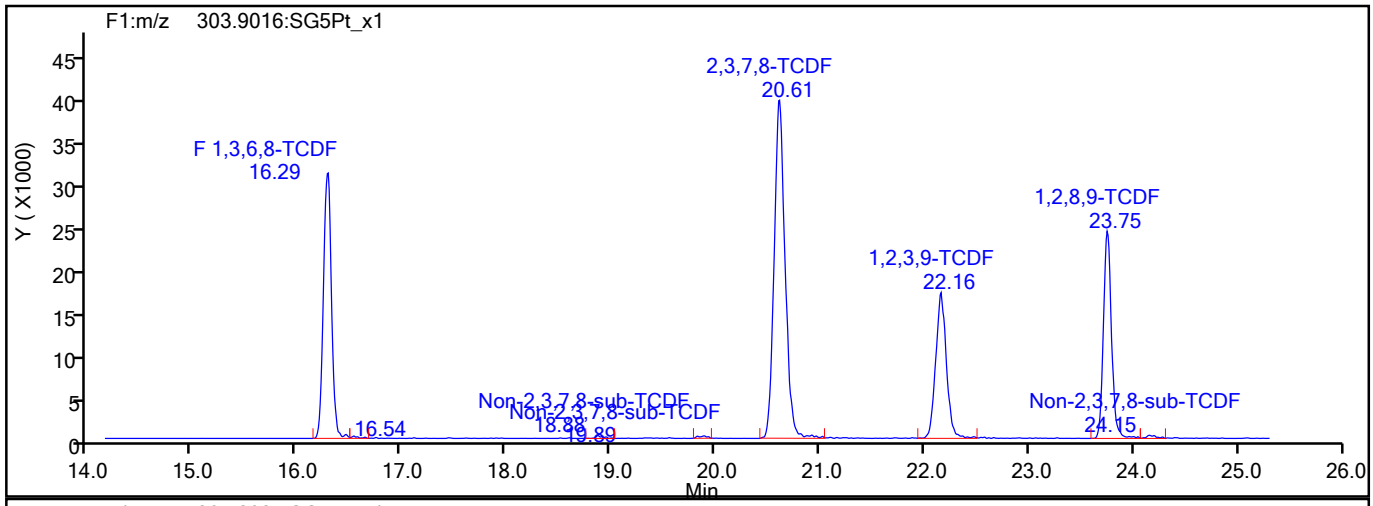

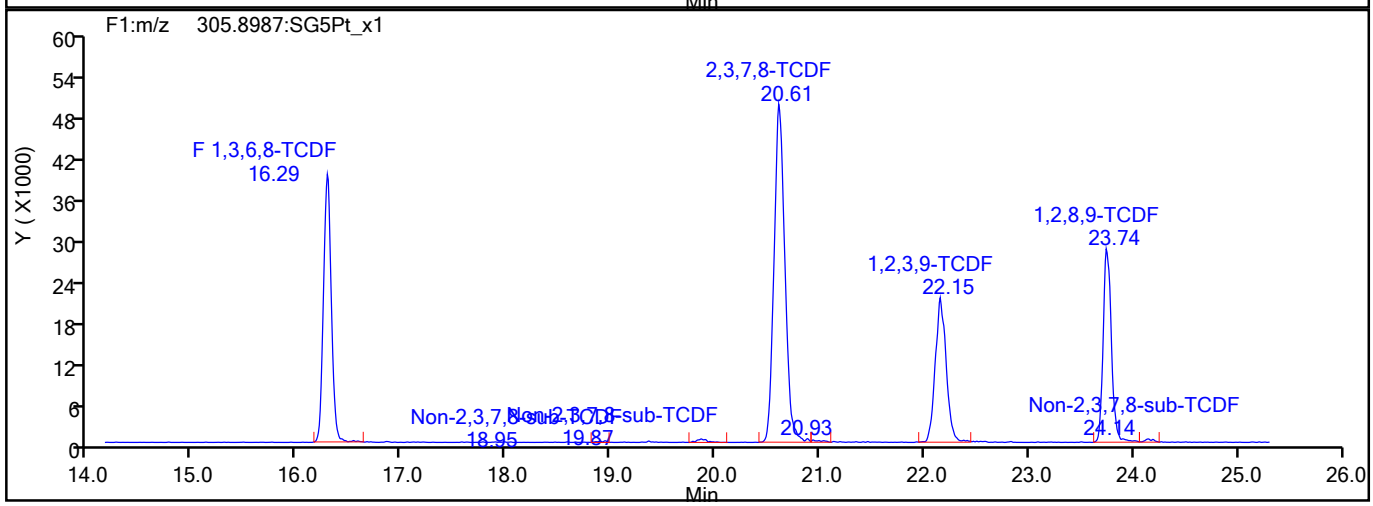

TCDF Interference Mass

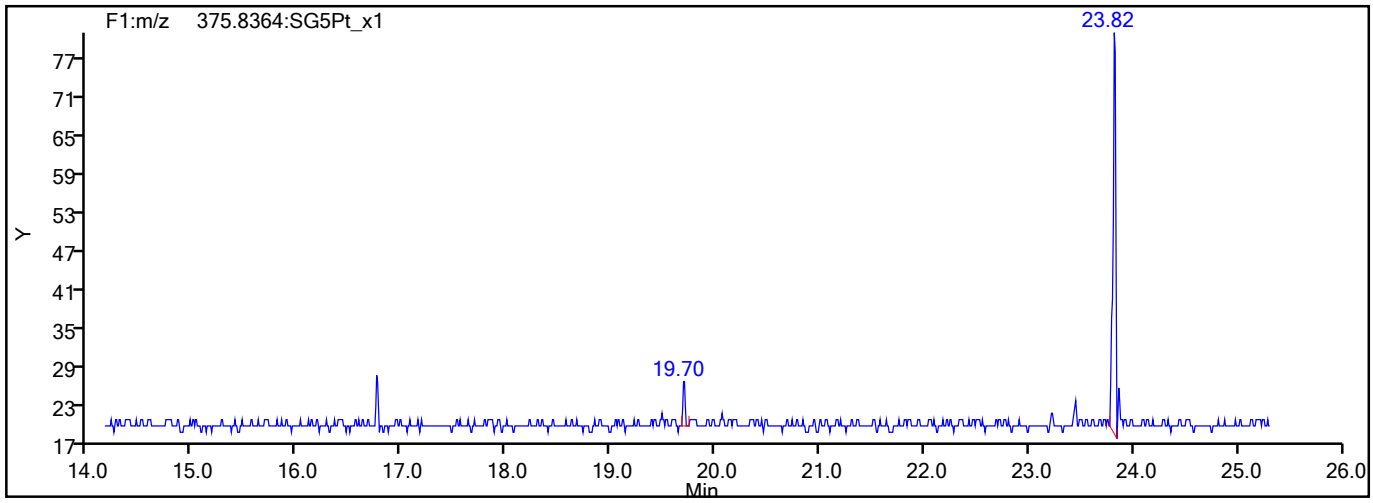

773995

Report Date: 16-Aug-2021 12:23:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

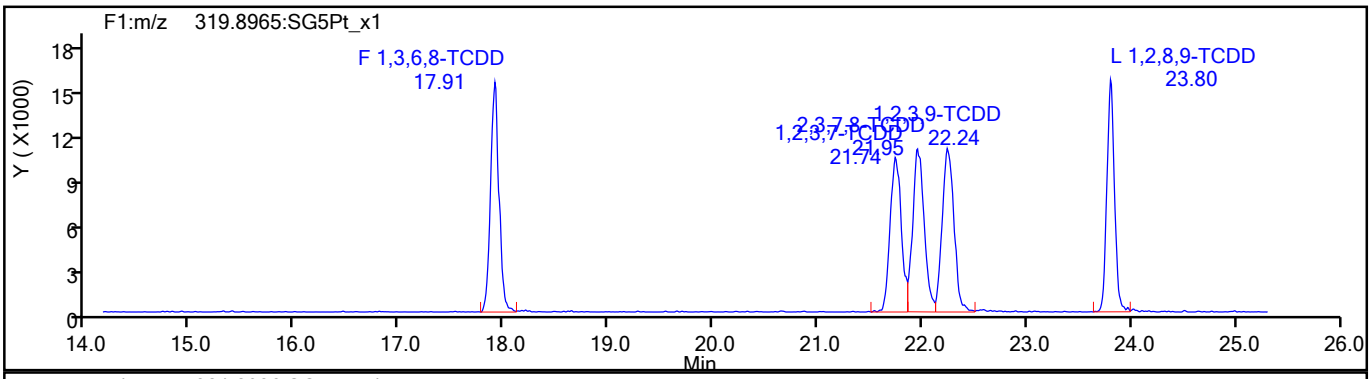

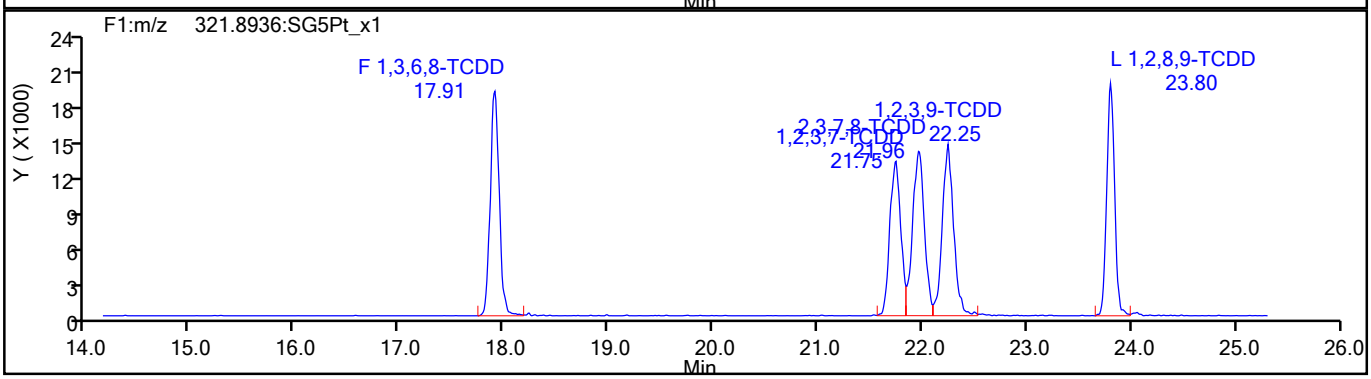

TCDD Standards

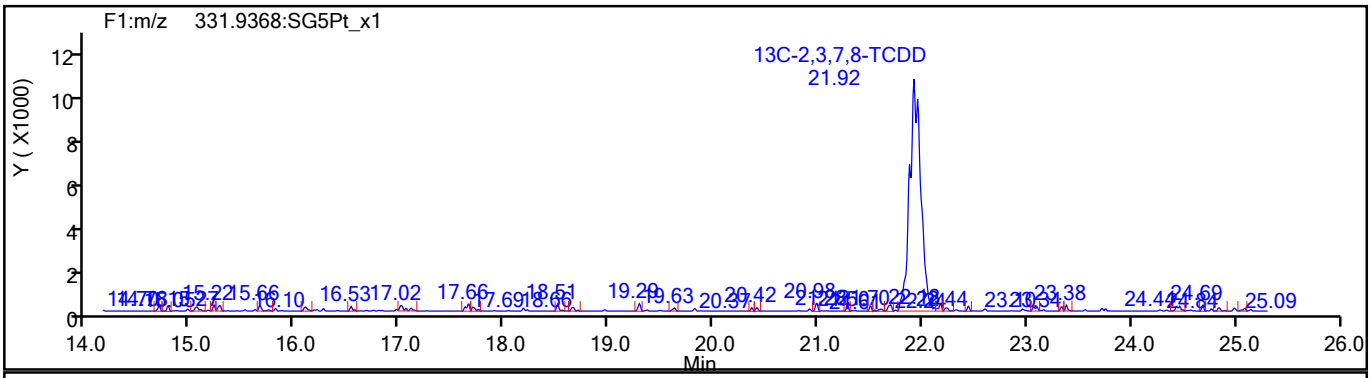

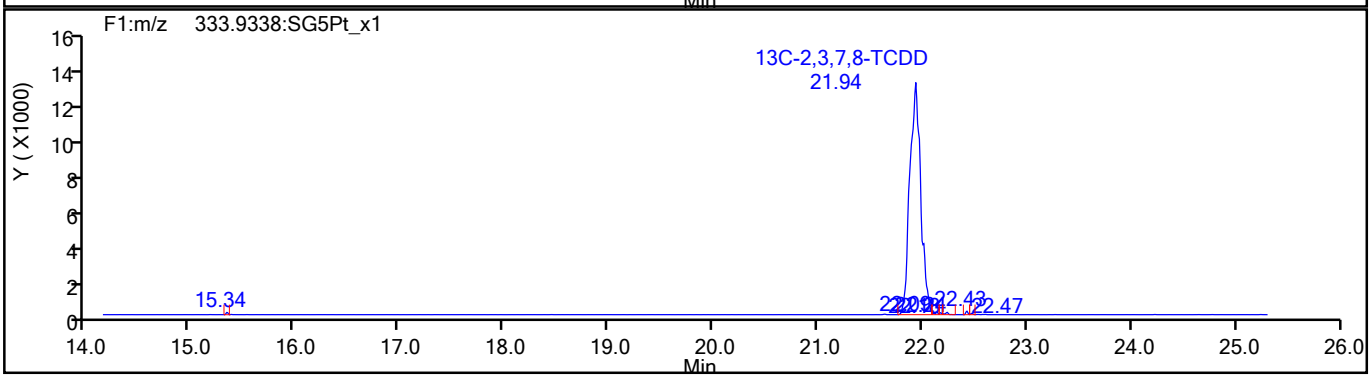

773996

Report Date: 16-Aug-2021 12:23:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

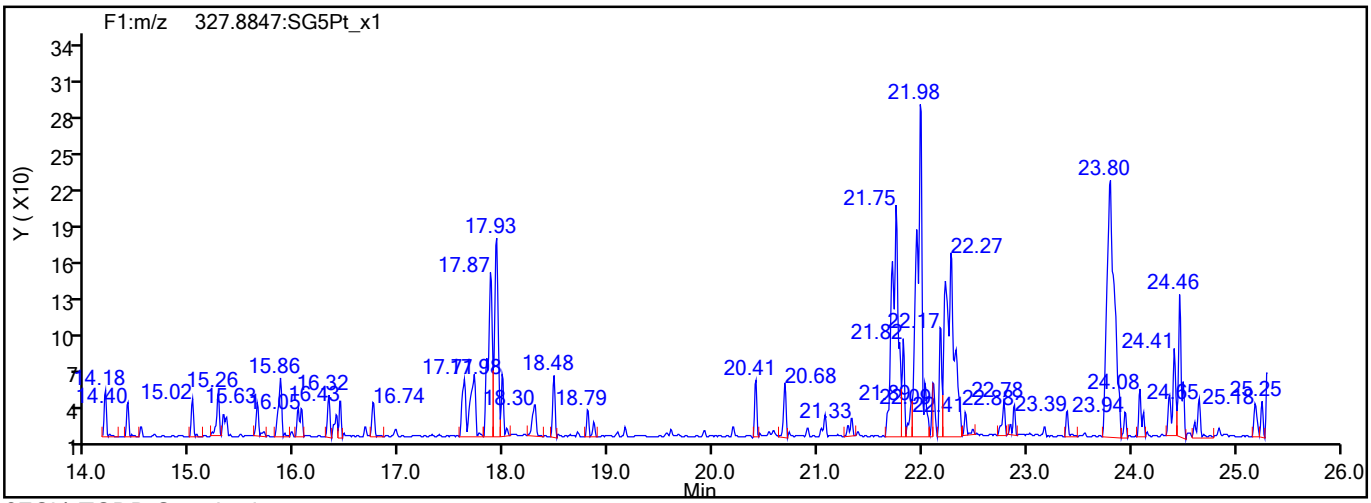

37Cl4-TCDD Standards

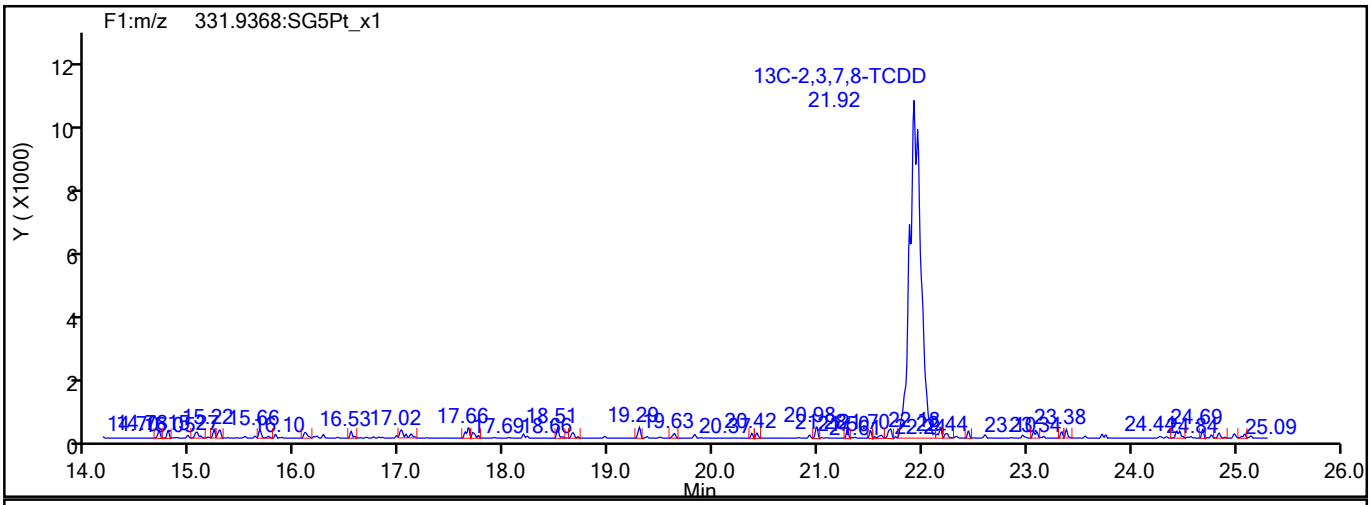

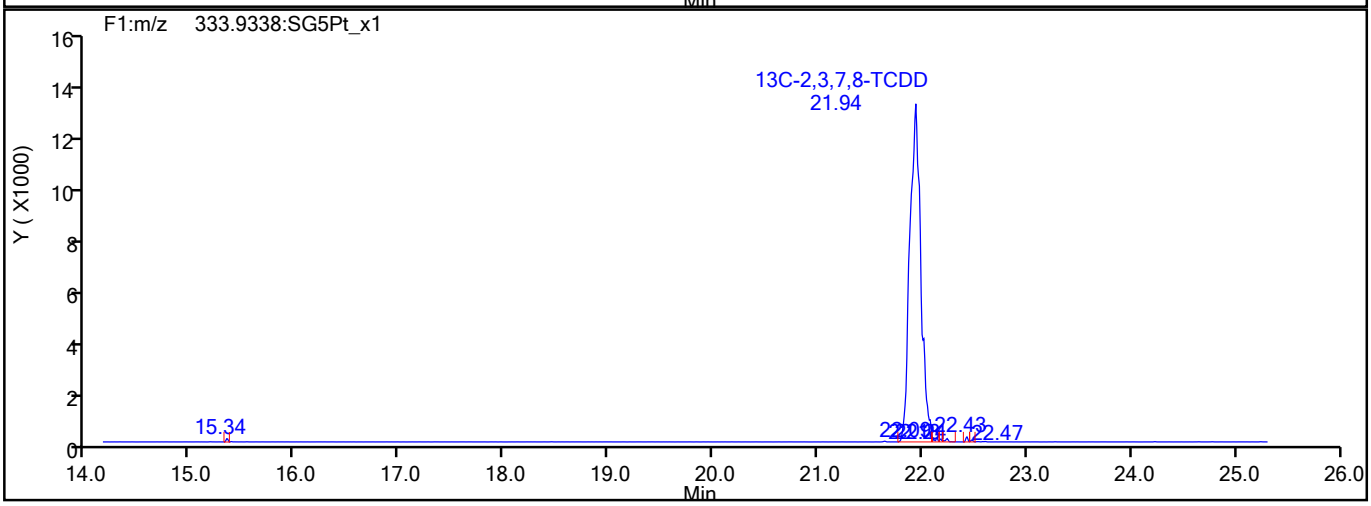

773997

Report Date: 16-Aug-2021 12:23:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

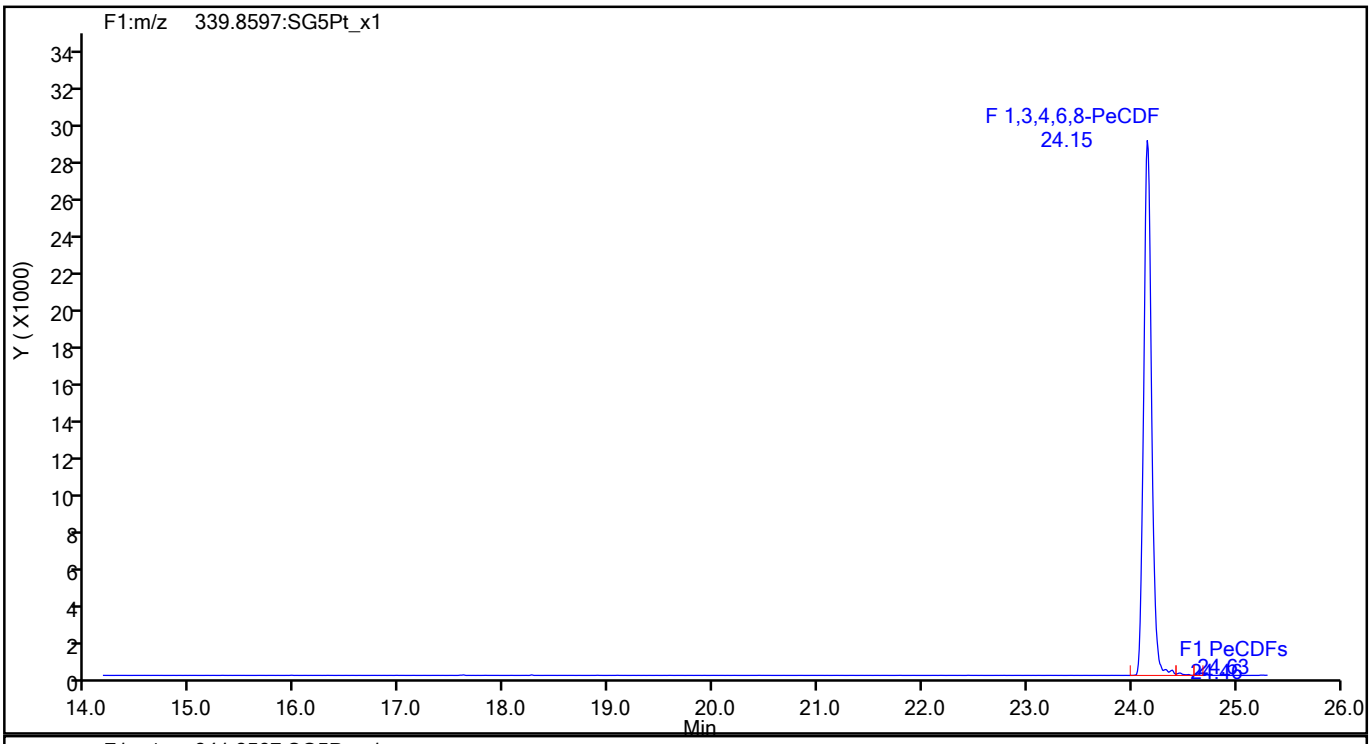

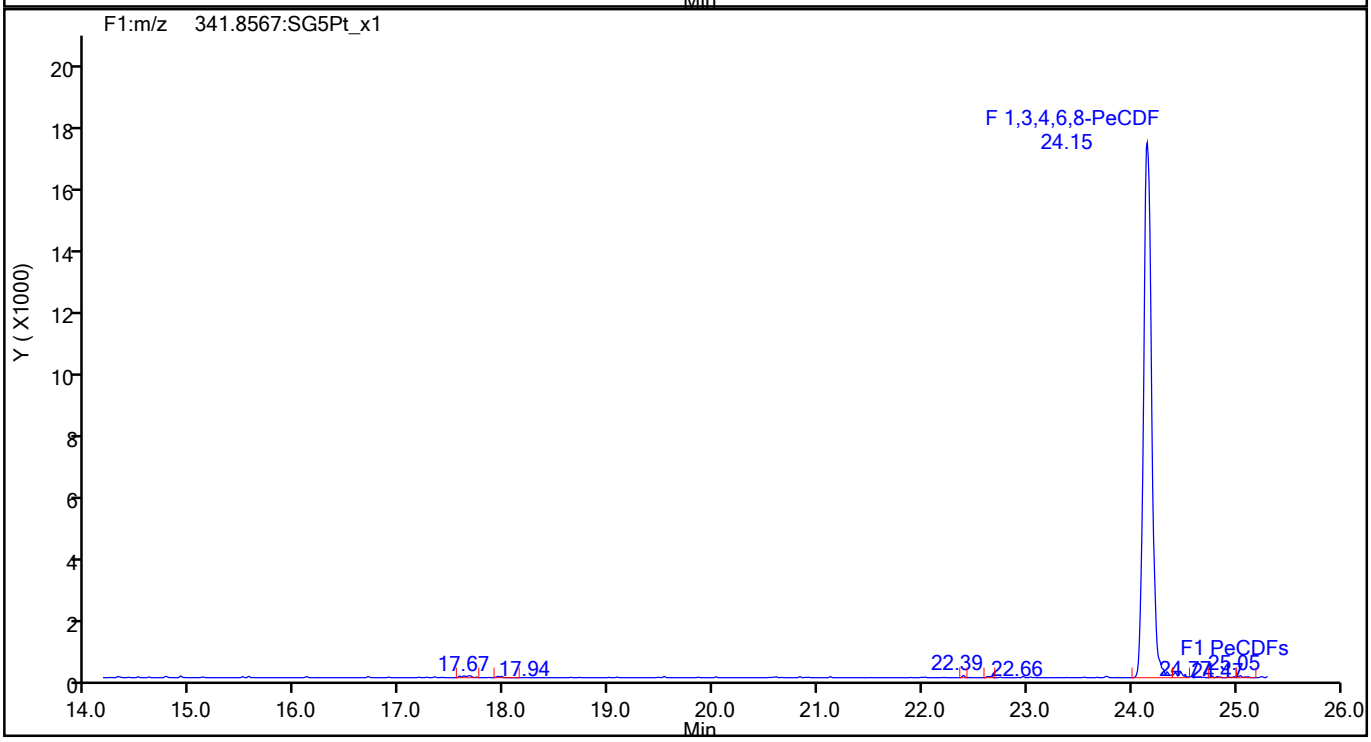

773998

Report Date: 16-Aug-2021 12:23:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

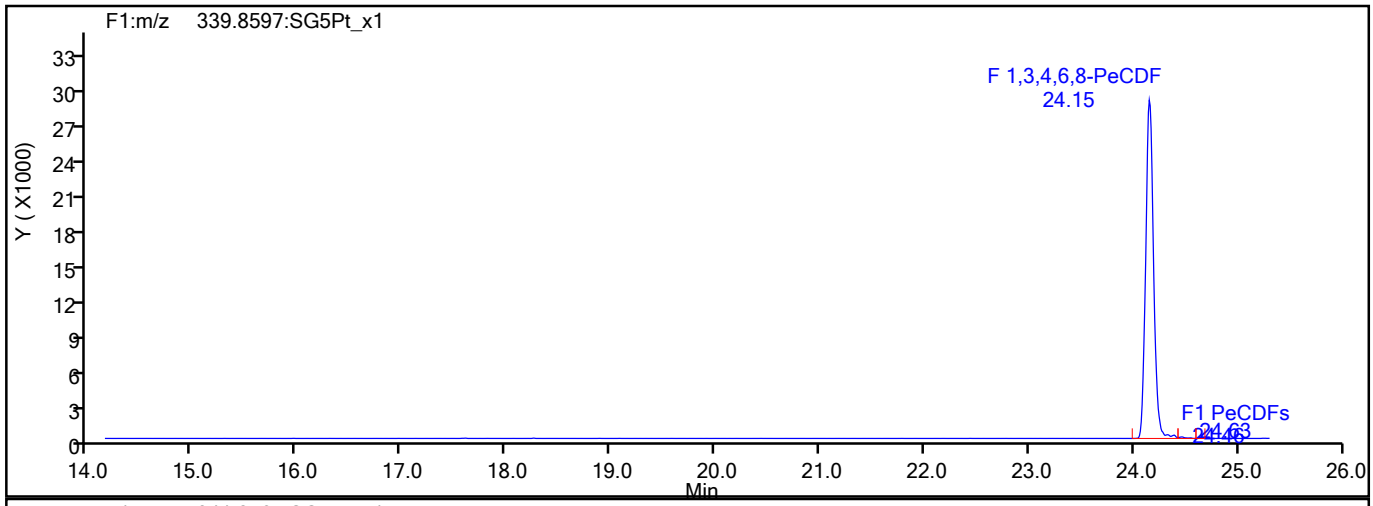

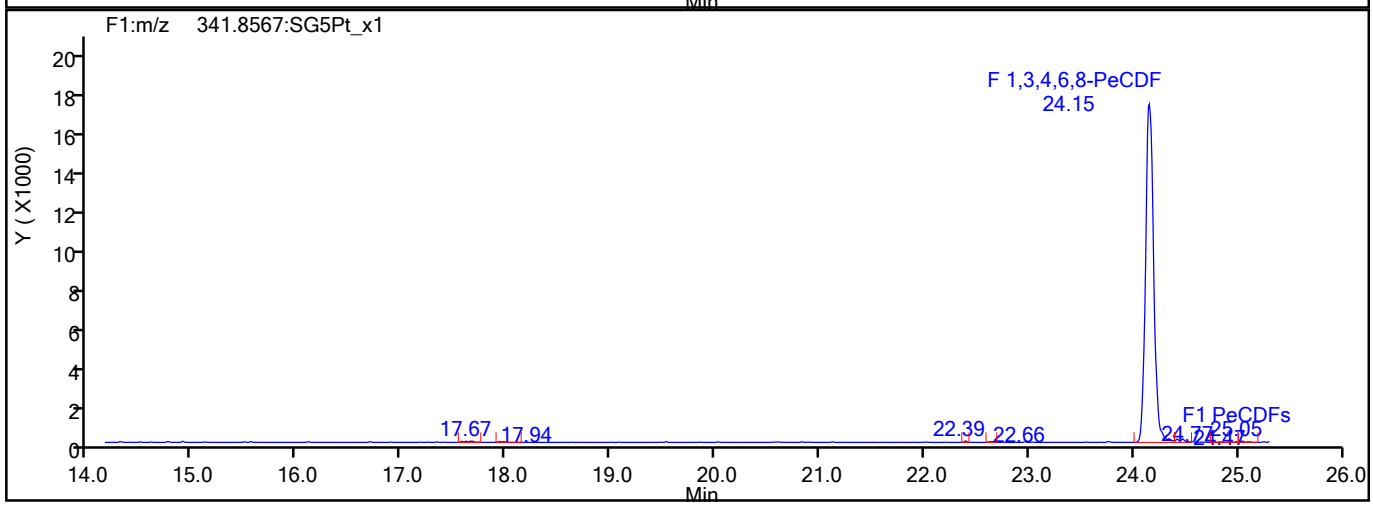

F1 PeCDFs Interference Mass

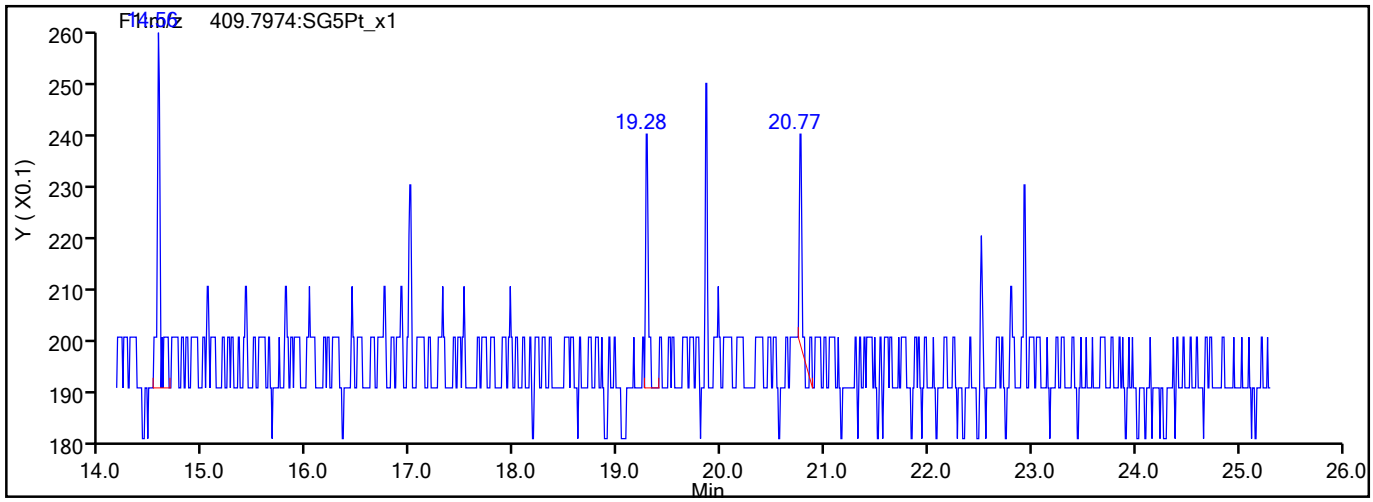

773999

Report Date: 16-Aug-2021 12:23:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

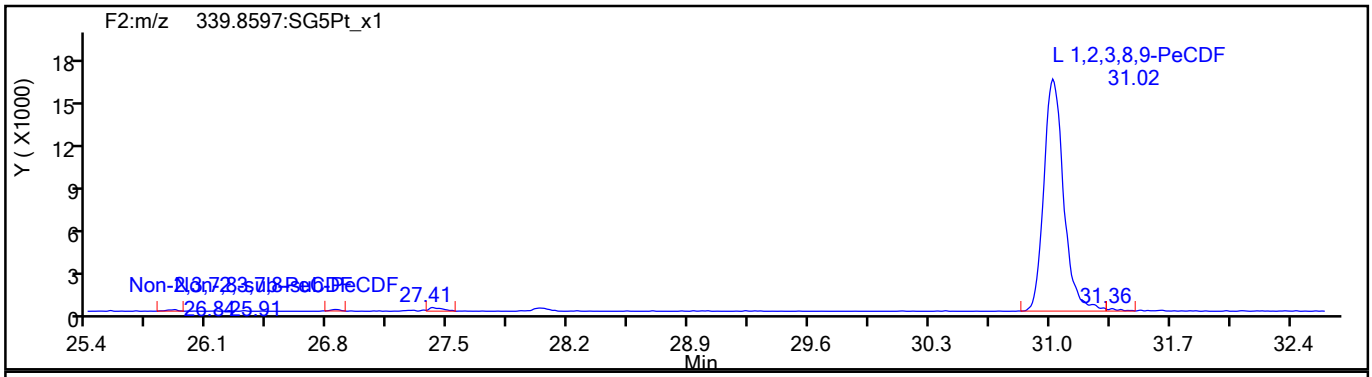

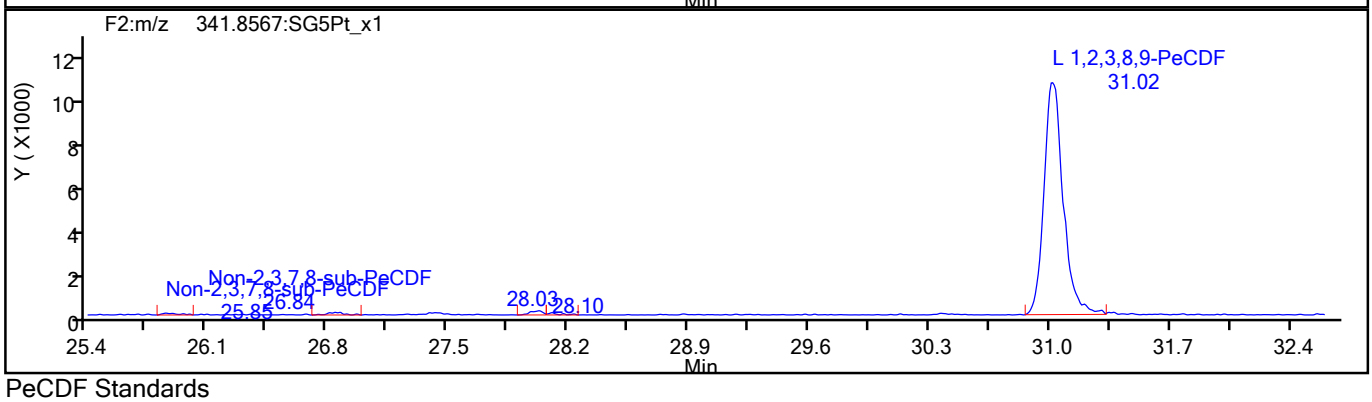

PeCDF Standards

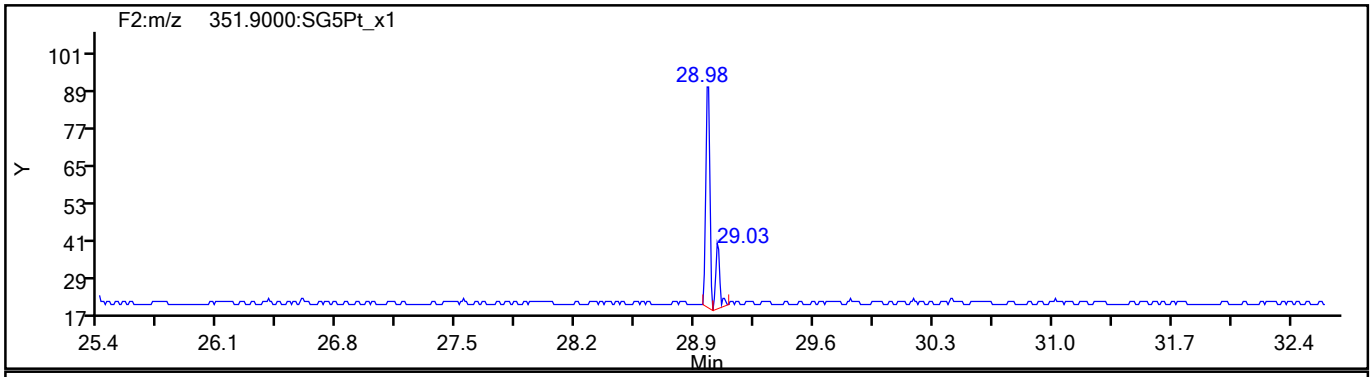

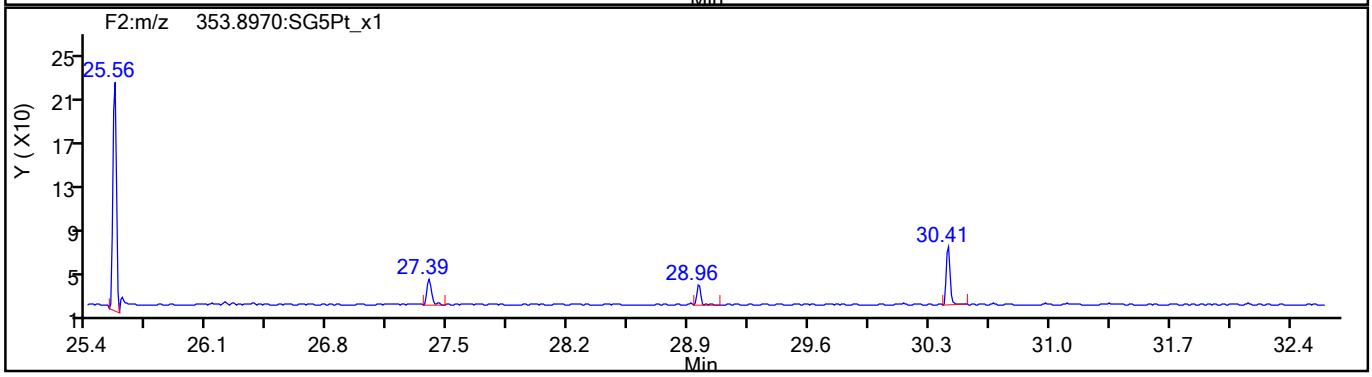

774000

Report Date: 16-Aug-2021 12:23:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

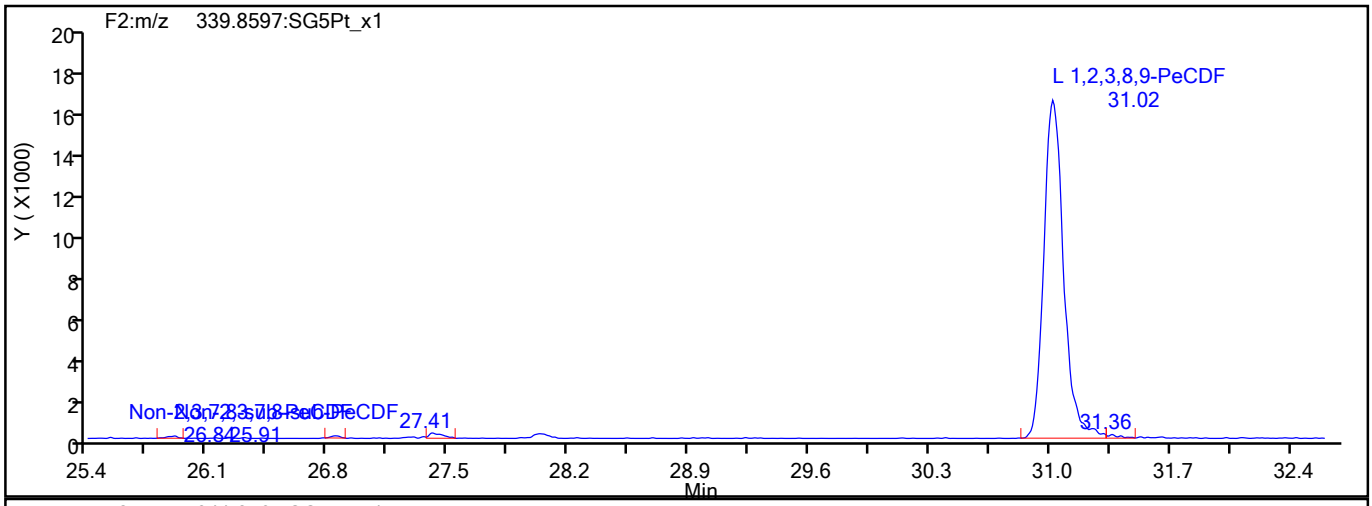

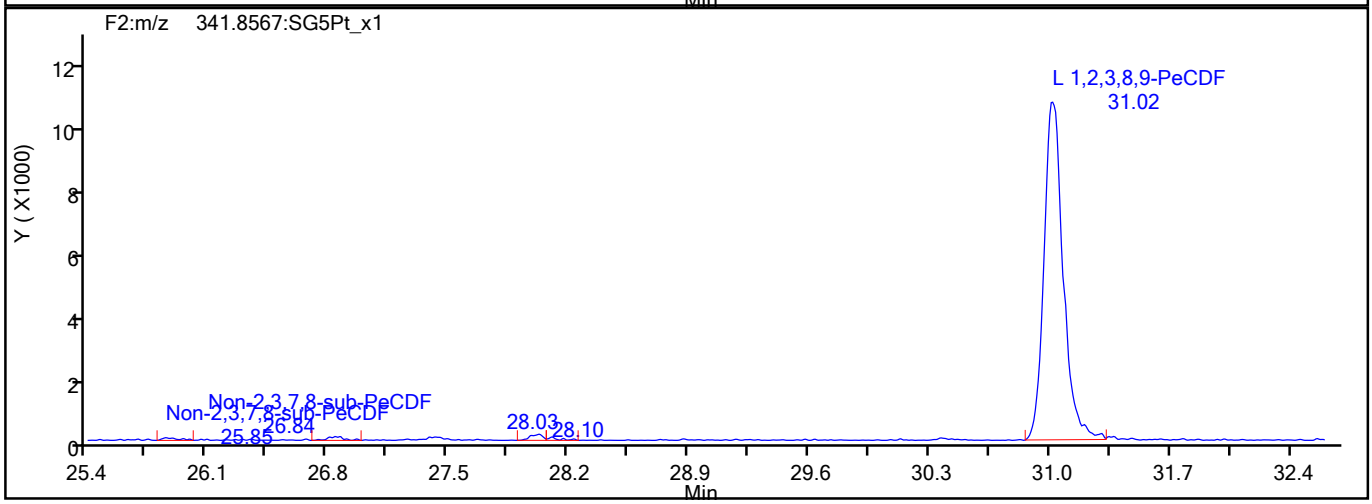

PeCDF Interference Mass

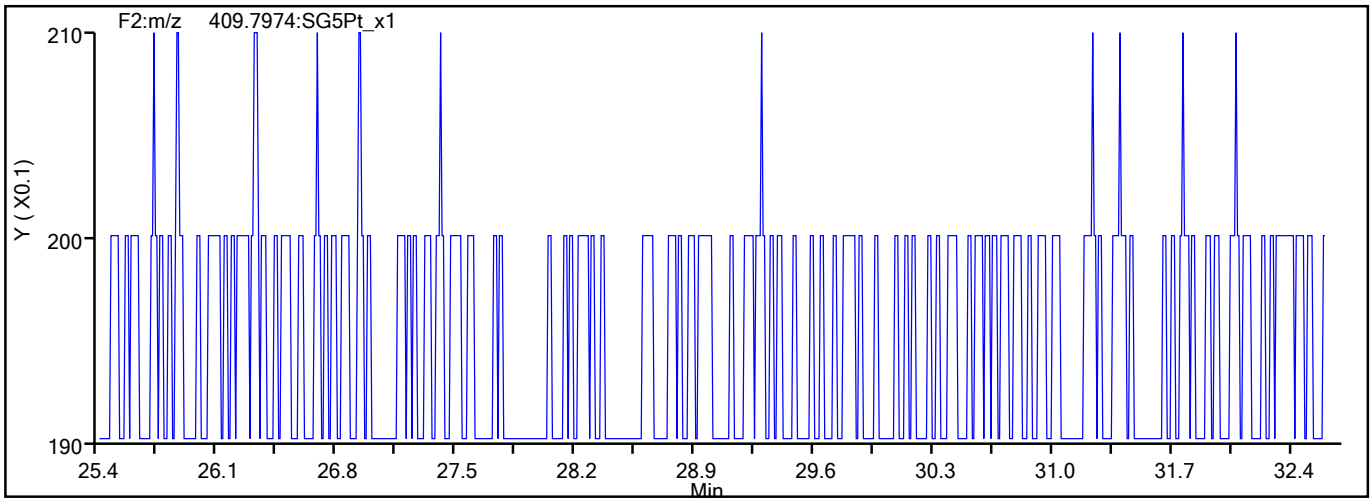

774001

Report Date: 16-Aug-2021 12:23:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

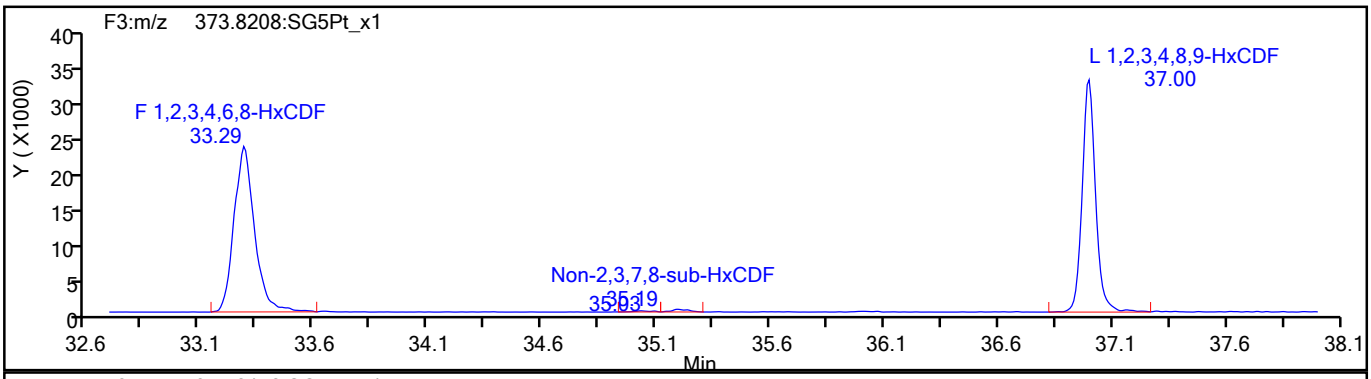

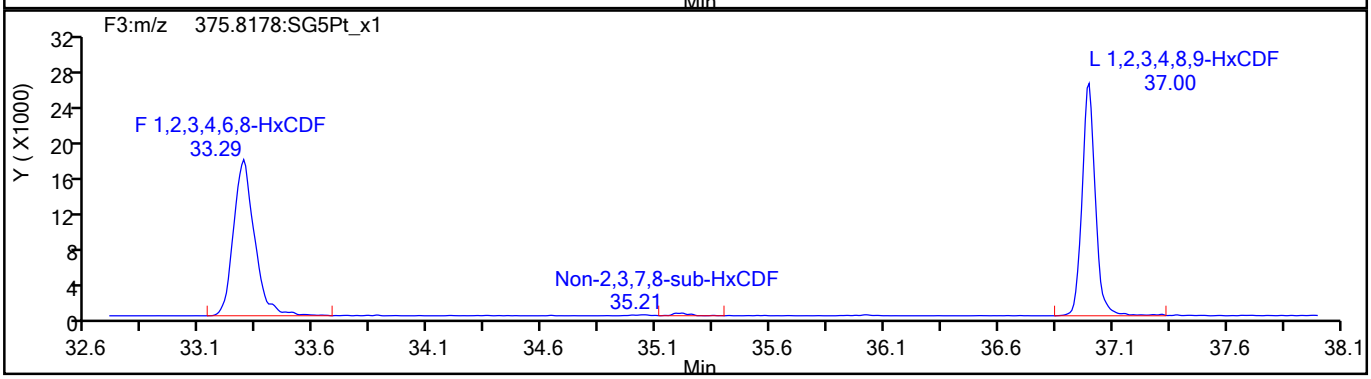

HxCDF Standards

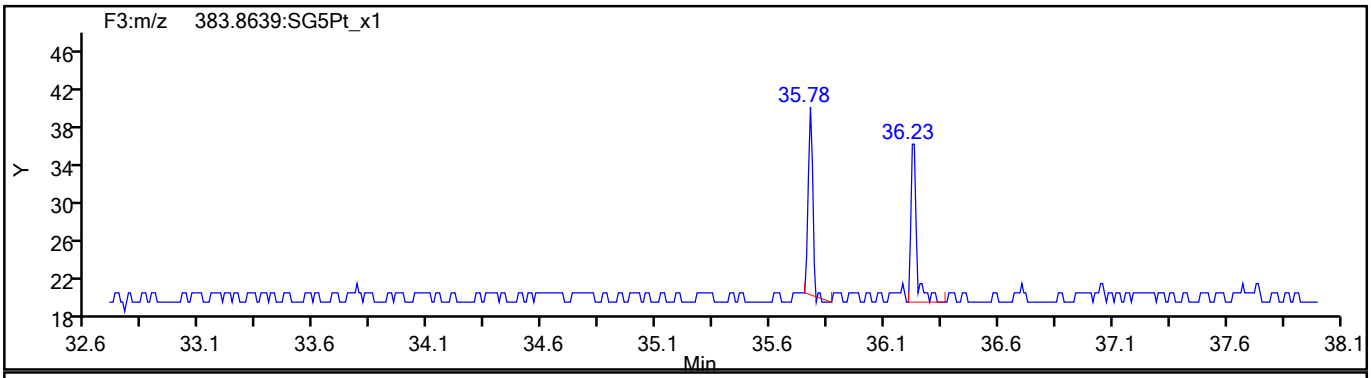

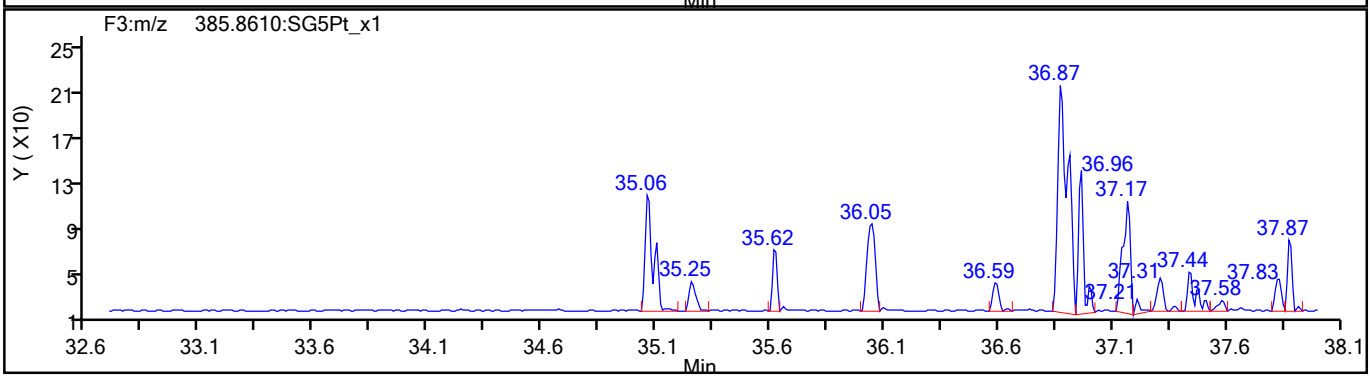

774002

Report Date: 16-Aug-2021 12:23:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

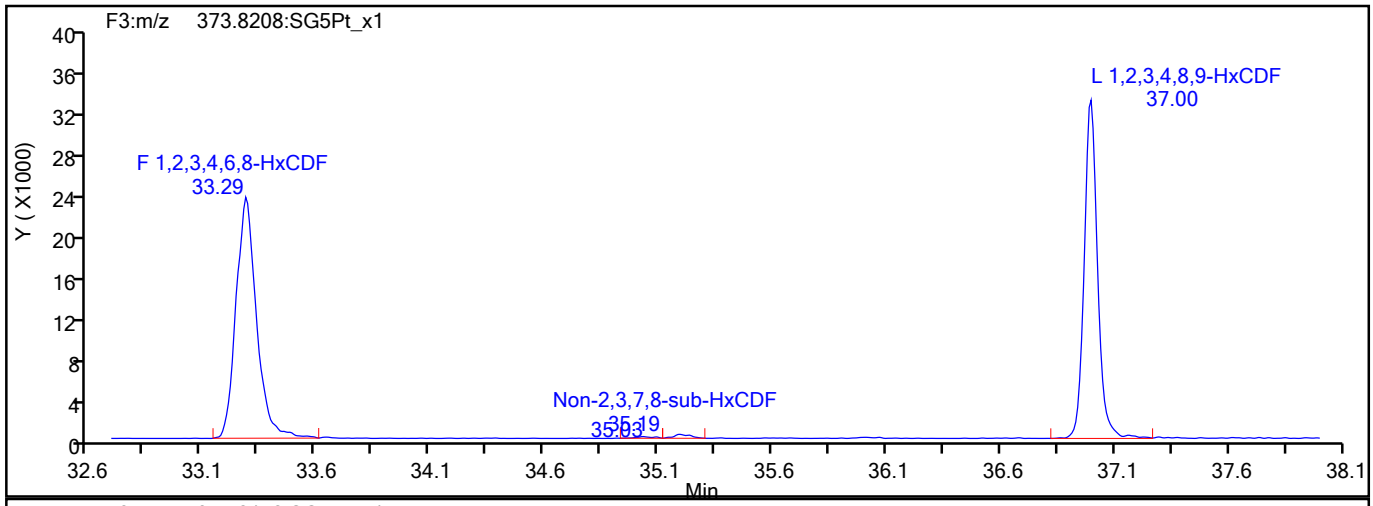

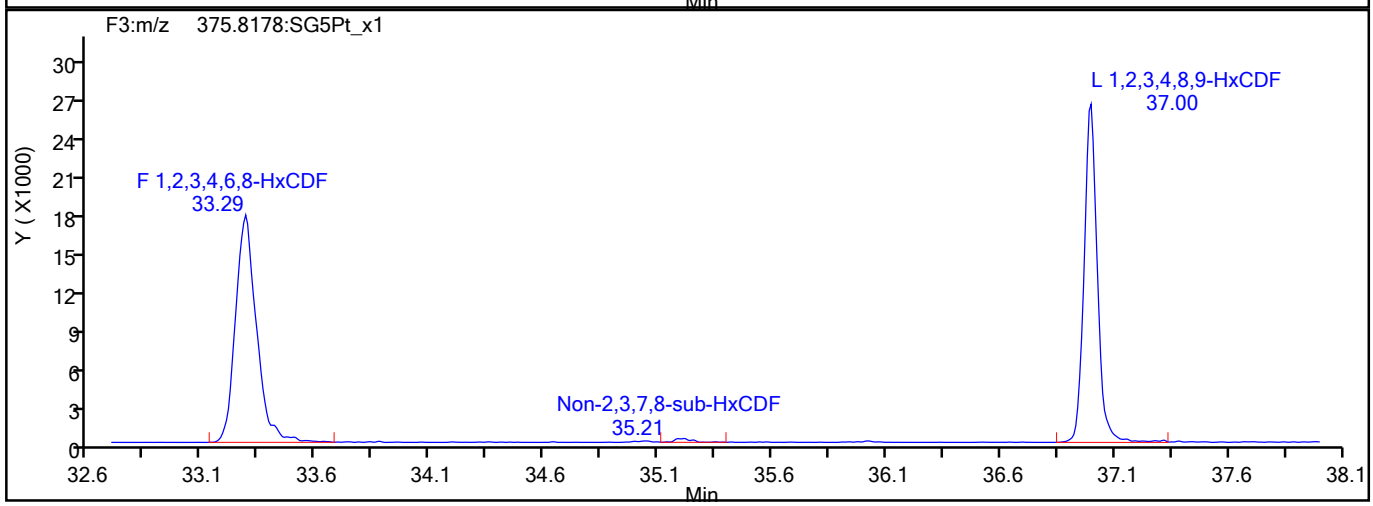

HxCDF Interference Mass

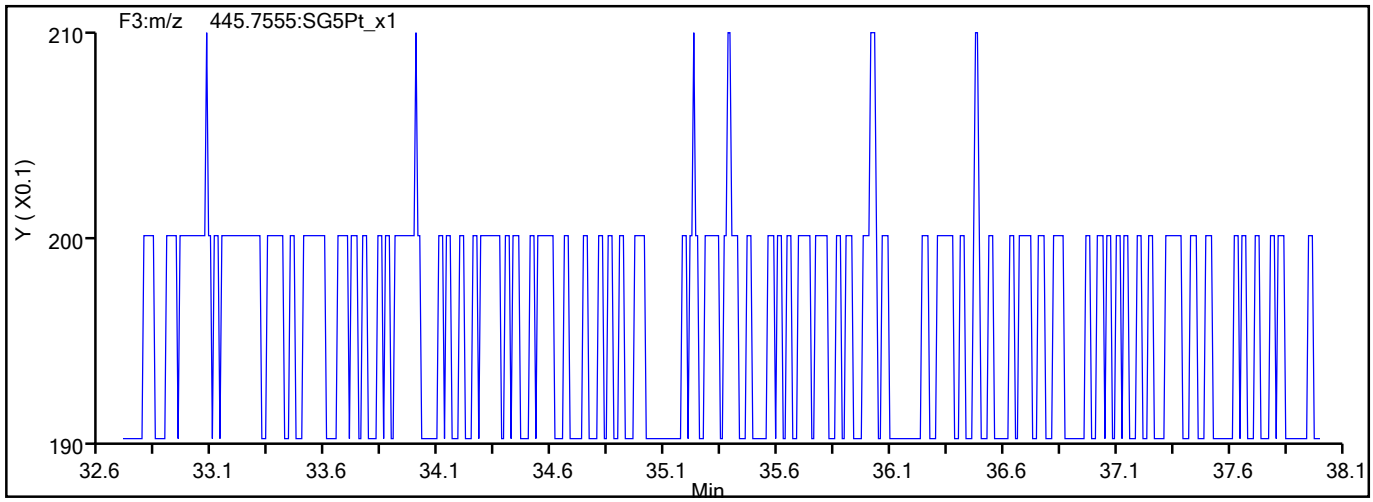

774003

Report Date: 16-Aug-2021 12:23:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

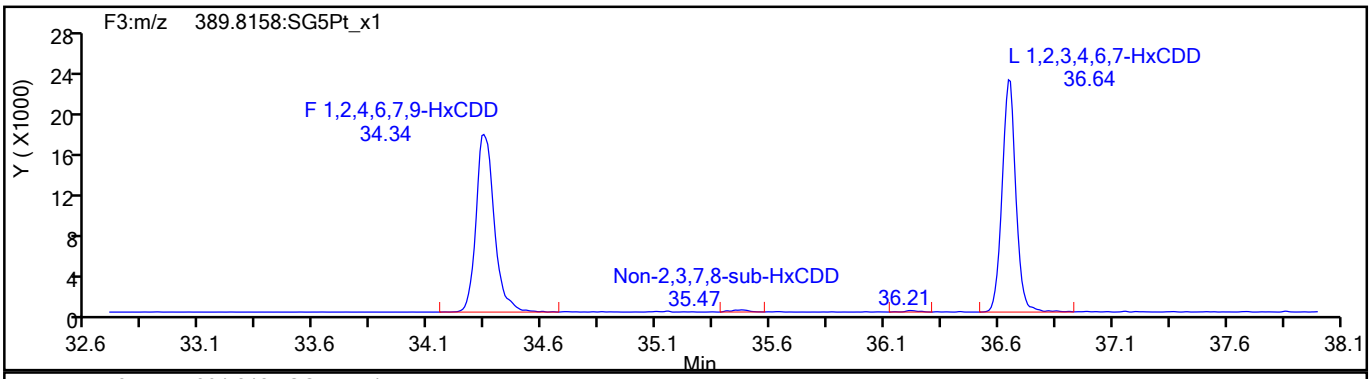

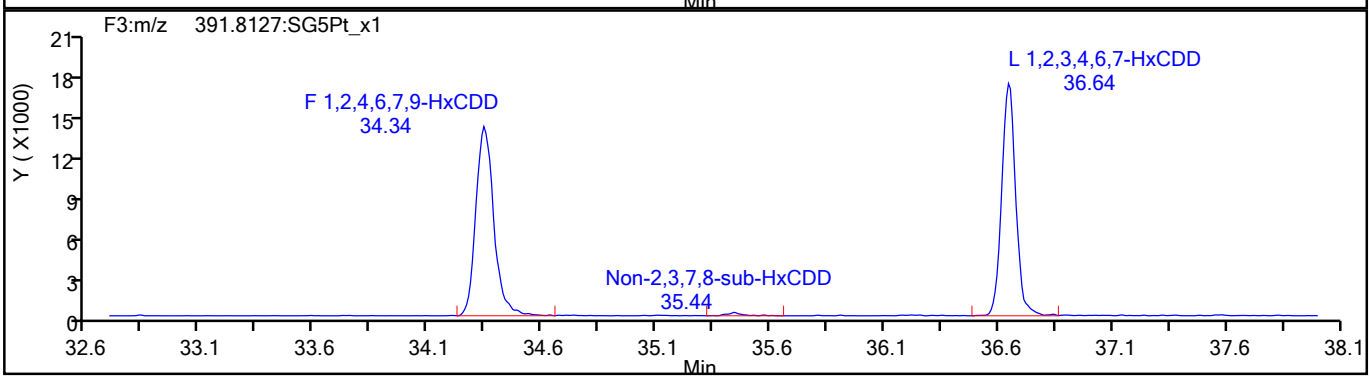

HxCDD Standards

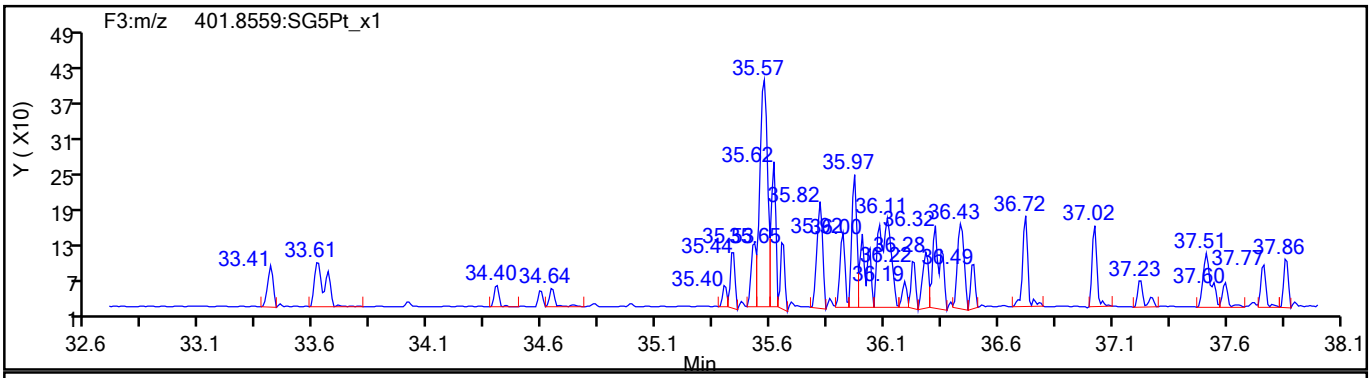

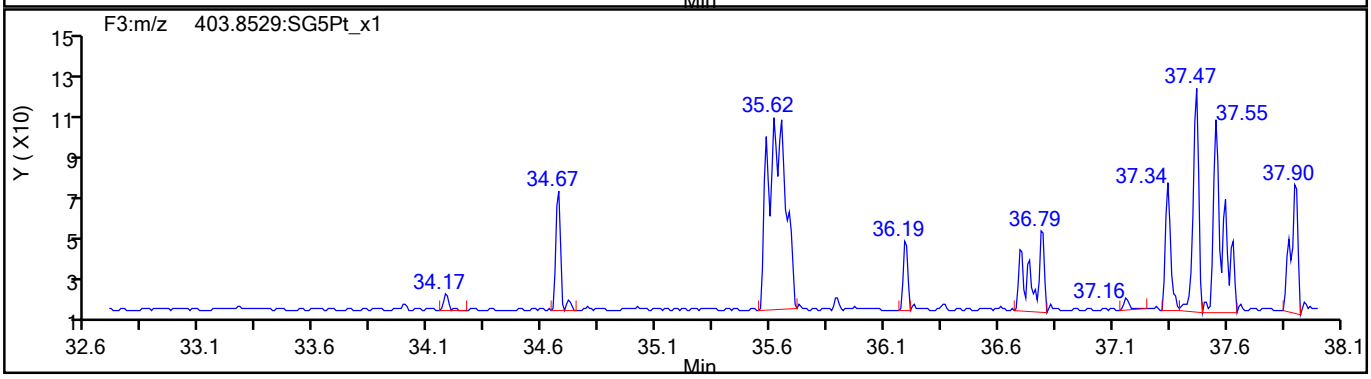

774004

Report Date: 16-Aug-2021 12:23:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

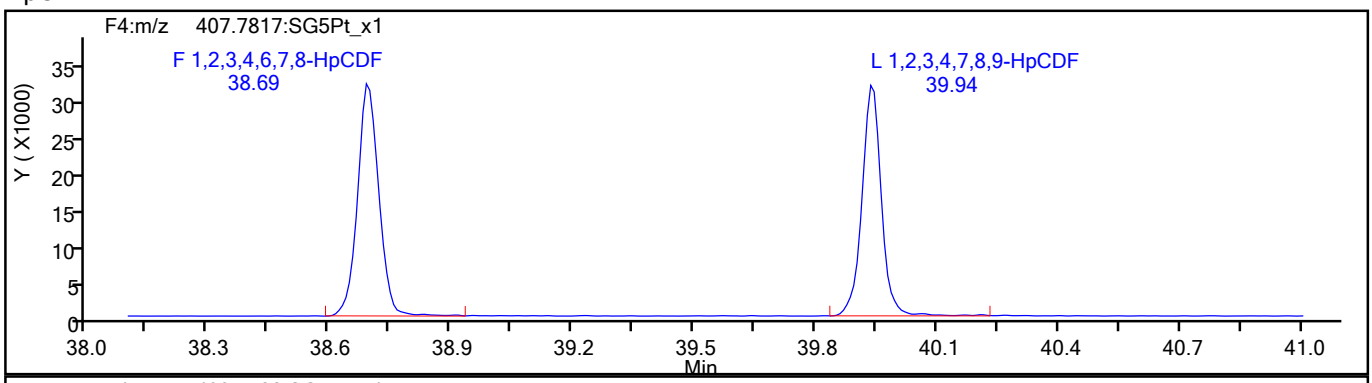

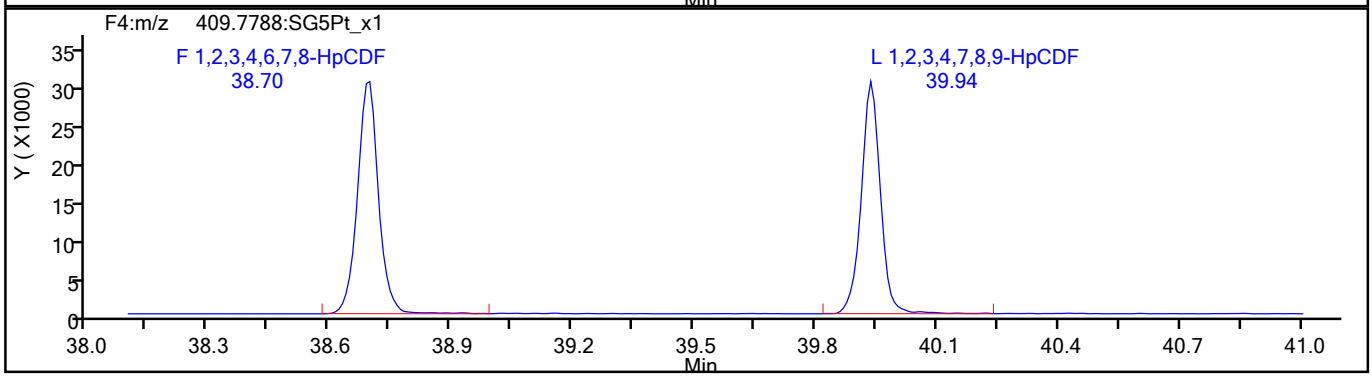

HpCDF Standards

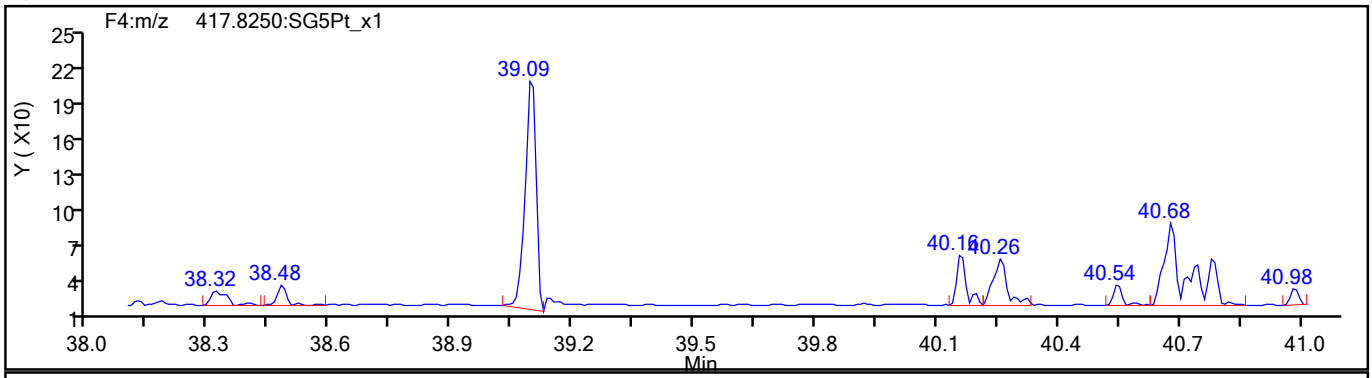

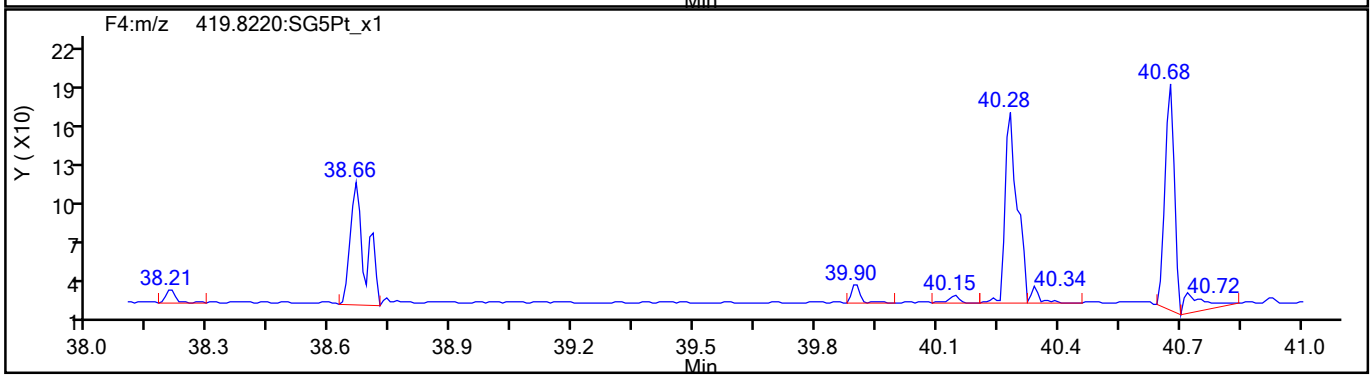

774005

Report Date: 16-Aug-2021 12:23:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

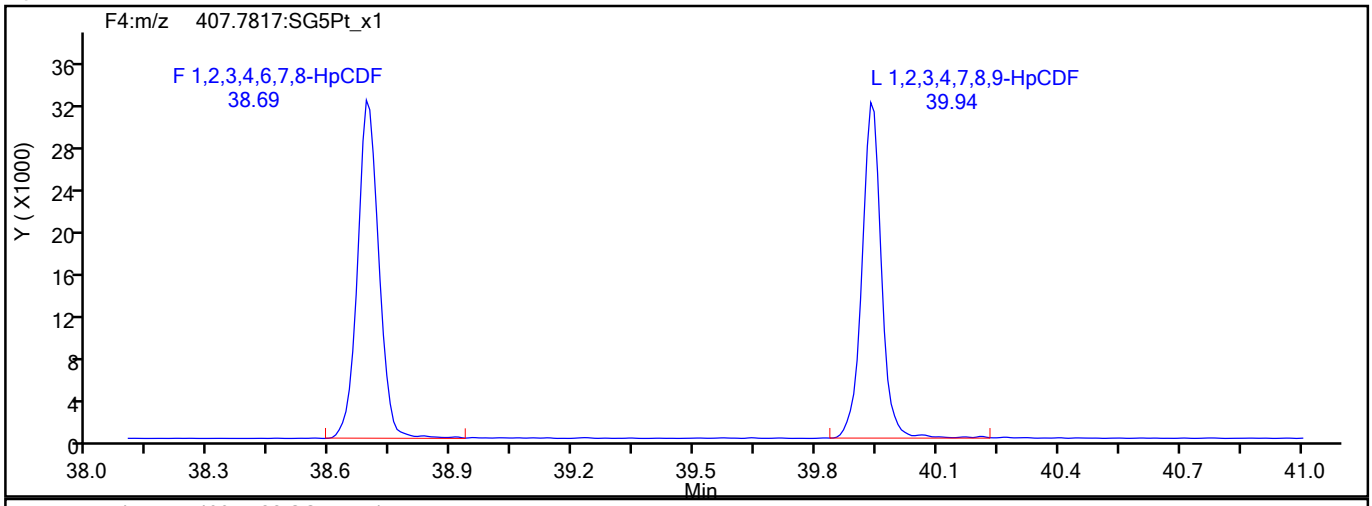

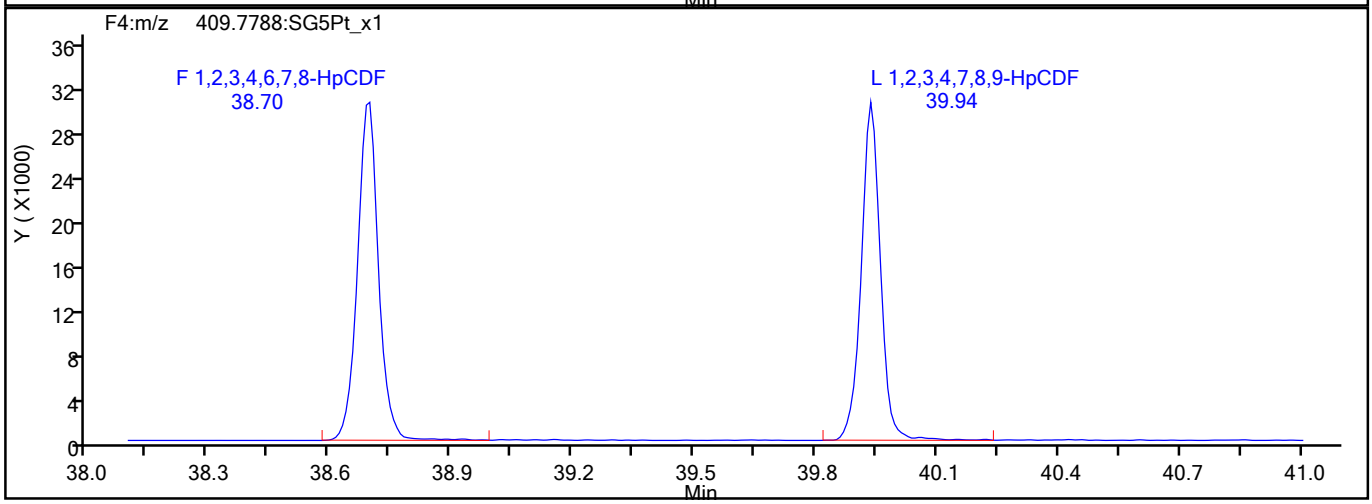

HpCDF Interference Mass

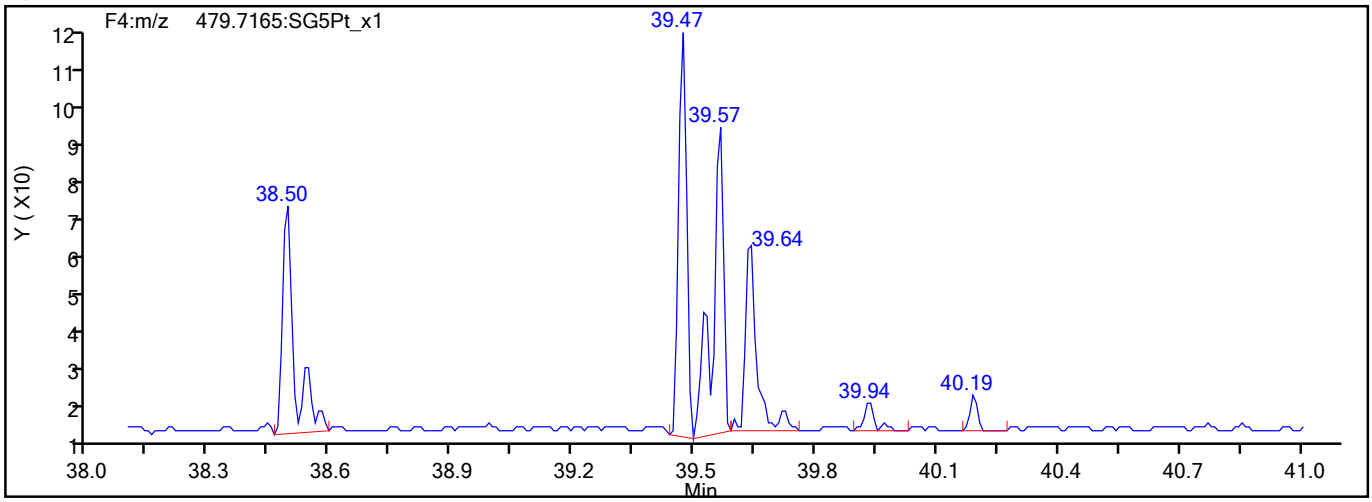

774006

Report Date: 16-Aug-2021 12:23:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

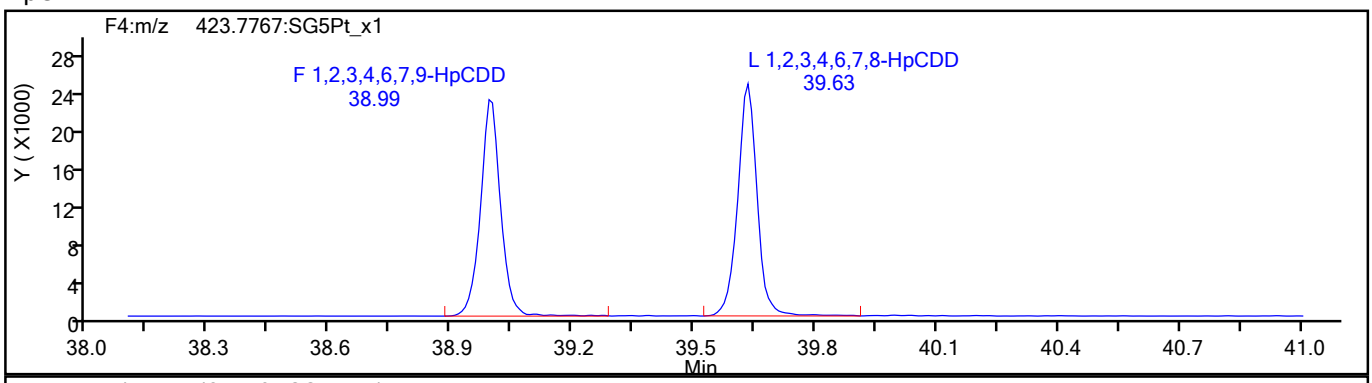

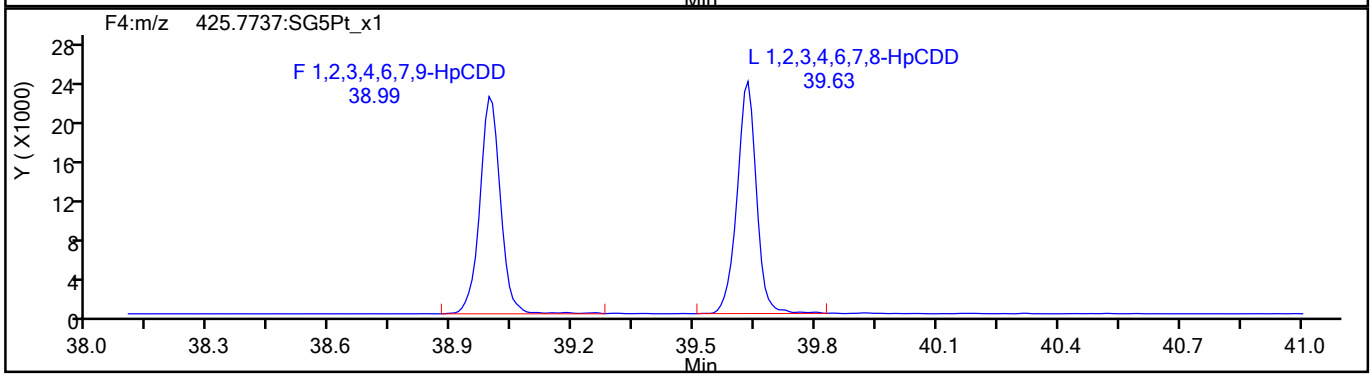

HpCDD Standards

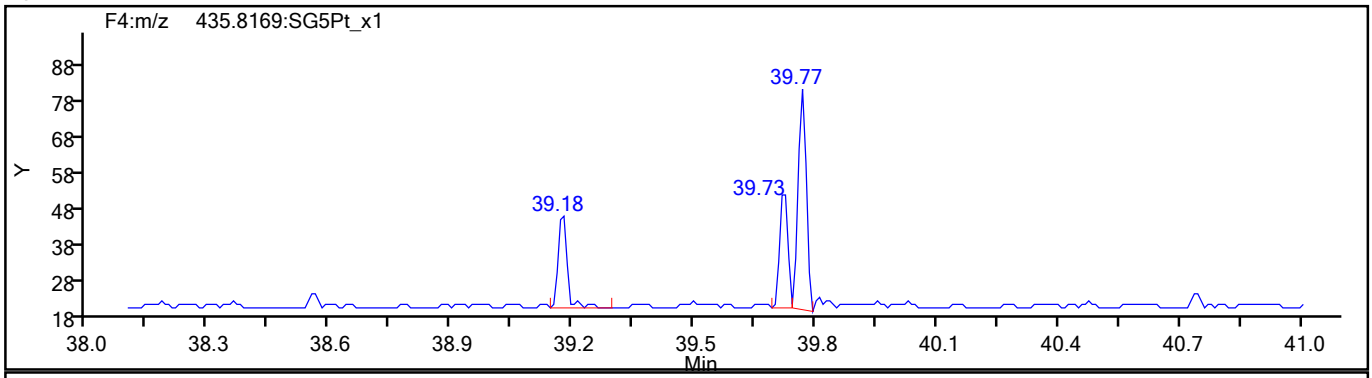

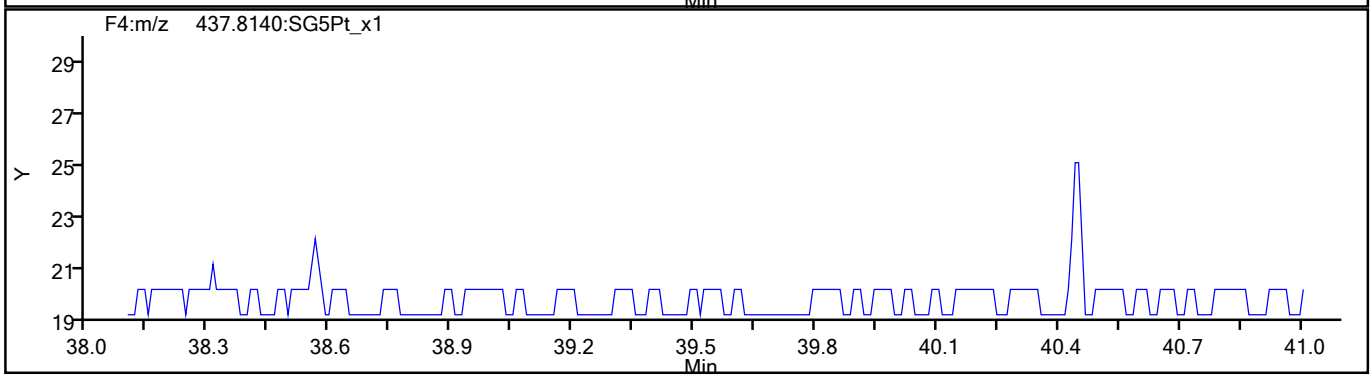

774007

Report Date: 16-Aug-2021 12:23:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

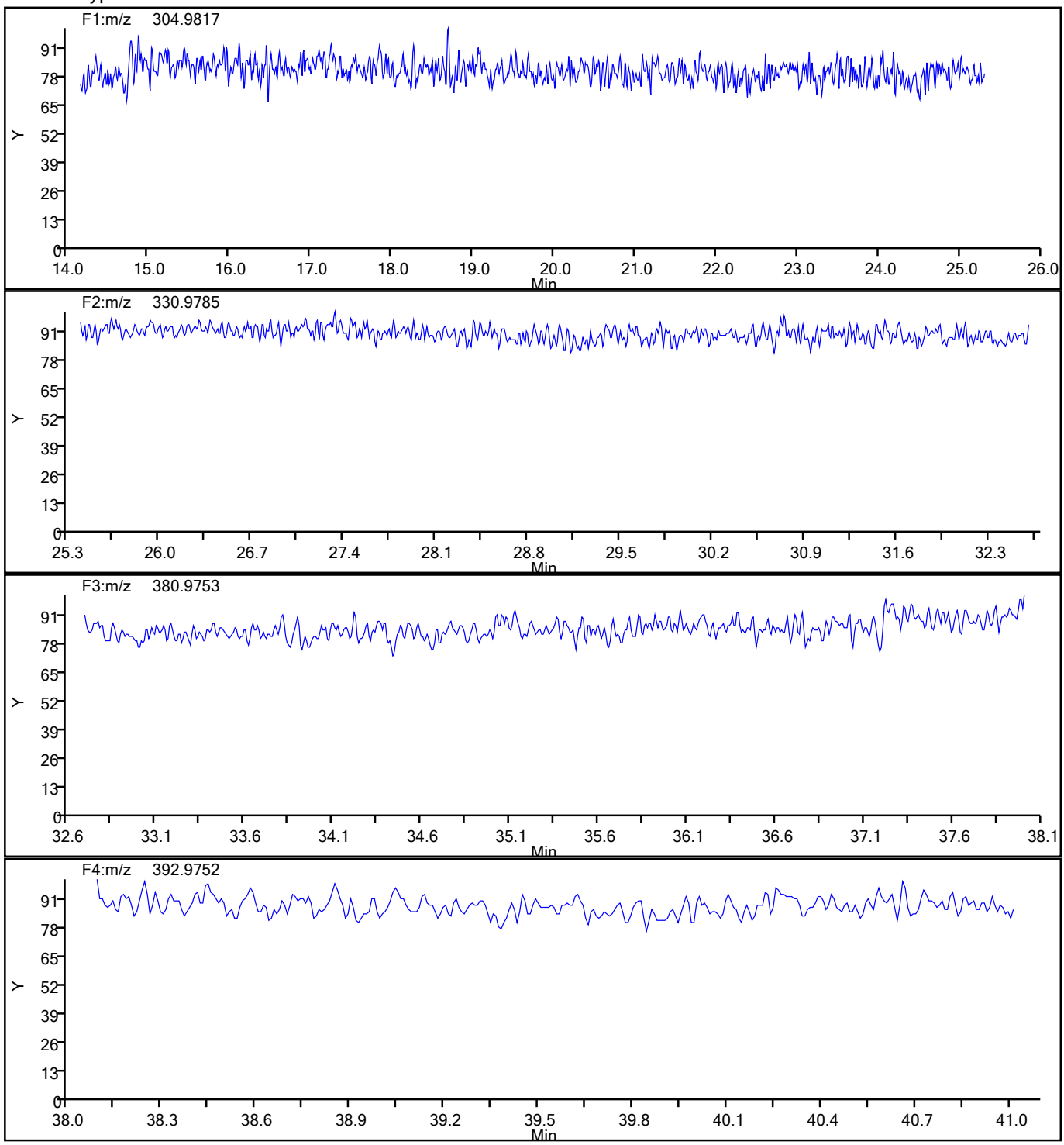

774008

Report Date: 16-Aug-2021 12:23:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_3.d		
Injection Date:	13-Aug-2021 14:58:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516133	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

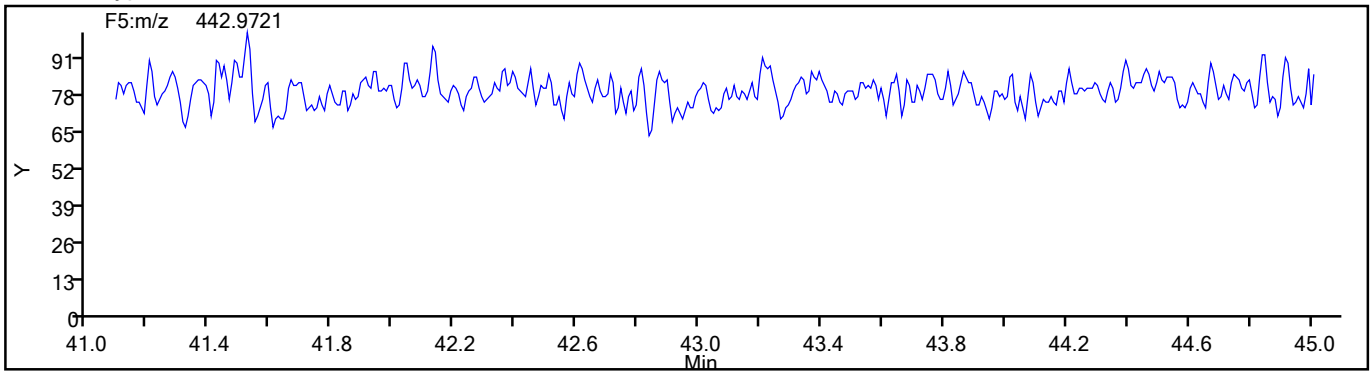

774009

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 14-Aug-2021 01:40:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 12:24:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1655

First Level Reviewer: stephensk Date: 14-Aug-2021 17:26:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.513	280913	0.80	1.3459					0.00	
2,3,7,8-TCDF	20.565	636319	0.78	1.0802	83.9	83.9	0.1824	0.1824		
A Non-2,3,7,8-sub-TCDF	19.983	8973	0.77	1.0802	1.234	1.183	0.1824	0.6188		RQ
S Total TCDF					85.1	85.1	0.1824	0.1824		RQ
D 13C-2,3,7,8-TCDD	21.880	158428	0.79	0.9317					0.00	
2,3,7,8-TCDD	21.923	188106	0.80	1.0753	44.2	44.2	0.1182	0.1182		
A Non-2,3,7,8-sub-TCDD	20.818						0.1182	0.1182		
S Total TCDD					44.2	44.2	0.1182	0.1182		
A F1 PeCDFs	24.692						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	28.190	3721	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	29.966						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.105	3795	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.459	1821	1.28	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.663	245255	1.07	1.4421						
1,2,3,4,7,8,9-HpCDF	39.910	217475	1.07	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.287						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.598	155023	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.283						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.255	376384	0.79							
1,3,6,8-TCDD	17.864	200224	0.78							
2,3,4,7-TCDF	20.565	636319	0.78							
1,2,3,7-TCDD	21.699	165545	0.81							
1,2,3,9-TCDF	22.103	270082	0.81							
1,2,3,9-TCDD	22.189	195872	0.79							
1,2,8,9-TCDF	23.711	290672	0.77							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.771	82408								
1,3,4,6,8-PeCDF	24.115	240261	1.55							
1,2,3,8,9-PeCDD	26.162	160037	1.52							
1,2,4,7,9-PeCDD	30.795	151839	1.61							
1,2,3,8,9-PeCDF	30.972	212486	1.57							
1,2,3,4,6,8-HxCDF	33.243	272518	1.23							
1,2,4,6,7,9-HxCDD	34.304	173526	1.23							
1,2,3,4,6,7-HxCDD	36.613	177783	1.27							
1,2,3,4,8,9-HxCDF	36.967	259517	1.24							
1,2,3,4,6,7,9-HpCDD	38.967	166012	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 16-Aug-2021 12:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 14-Aug-2021 01:40:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 12:24:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1655

First Level Reviewer: stephensk Date: 14-Aug-2021 17:26:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.513	20.513	0	1.000	125248	18441	86	215	214		
317.9389	20.539	20.513	2	1.000	155665	21550	9	22	2394	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.565	20.614	-3	1.003	278966	37474	30	75	1249		
305.8987	20.565	20.614	-3	1.003	357353	47471	49	122	969	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.851	19.983	-8	0.968	2427	365	30	75	12		
	Empc Correction				2042	356	30	75	12		
305.8987	19.825	19.983	-9	0.966	2652	463	49	122	9	0.92(0.65-0.89)	
303.9016	24.140	19.983	249	1.177	1928	390	30	75	13		
305.8987	24.140	19.983	249	1.177	2351	420	49	122	9	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.880	21.880	0	1.000	69955	10342	9	22	1149		
333.9338	21.880	21.880	0	1.000	88473	12320	18	45	684	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.923	21.954	-2	1.002	83483	10928	18	45	607		
321.8936	21.931	21.954	-1	1.002	104623	14361	11	27	1306	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.818						18	45			
321.8936	20.818						11	27			
A F1 PeCDFs											
339.8597	24.692						3	7			
341.8567	24.692						6	15			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	26.794	28.190	-84	1.000	900	182	14	35	13		
341.8567	26.811	28.190	-83	1.000	794	145	19	47	8	1.13(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	28.007	28.190	-11	1.000	1305	226	14	35	16		
341.8567	27.998	28.190	-11	1.000	936	197	19	47	10	1.39(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	29.966						20	50			
357.8516	29.966						7	17			
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.155	35.105	3	1.000	2095	375	38	95	10		
375.8178	35.164	35.105	4	1.000	1700	291	27	67	11	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.434	35.459	-2	1.000	1024	212	20	50	11		
391.8127	35.425	35.459	-2	1.000	797	188	16	40	12	1.28(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.663	38.689	-2	1.000	126824	33492	37	92	905		
409.7788	38.663	38.689	-2	1.000	118431	30749	32	80	961	1.07(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.910	39.936	-2	1.000	112222	32314	37	92	873		
409.7788	39.910	39.936	-2	1.000	105253	30149	32	80	942	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.287						37	92			
409.7788	39.287						32	80			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.598	39.633	-2	1.000	80083	21739	32	80	679		
425.7737	39.598	39.633	-2	1.000	74940	21179	26	65	815	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.283						32	80			
425.7737	39.283						26	65			
1,3,6,8-TCDF											
303.9016	16.255	16.255	0		166338	31972	30	75	1066		
305.8987	16.247	16.255	-1		210046	41905	49	122	855	0.79(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.864	17.864	0		87607	15099	18	45	839		
321.8936	17.864	17.864	0		112617	19078	11	27	1734	0.78(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.565	20.565	0		278966	37474	30	75	1249		
305.8987	20.565	20.565	0		357353	47471	49	122	969	0.78(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.699	21.699	0		74116	10640	18	45	591		
321.8936	21.699	21.699	0		91429	12285	11	27	1117	0.81(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.103	22.103	0		121073	15957	30	75	532		
305.8987	22.103	22.103	0		149009	21197	49	122	433	0.81(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.189	22.189	0		86660	11500	18	45	639		
321.8936	22.198	22.189	1		109212	15004	11	27	1364	0.79(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.711	23.711	0		126792	23391	30	75	780		
305.8987	23.702	23.711	-1		163880	30180	49	122	616	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDD											
319.8965	23.771	23.771	0		82408	15012	18	45	834		
1,3,4,6,8-PeCDF											
339.8597	24.115	24.115	0		146025	27063	3	7	9021		
341.8567	24.123	24.115	1		94236	17512	6	15	2919	1.55(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.162	26.162	0		96641	14273	20	50	714		
357.8516	26.170	26.162	1		63396	10044	7	17	1435	1.52(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.795	30.795	0		93767	12479	20	50	624		
357.8516	30.787	30.795	-1		58072	7565	7	17	1081	1.61(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.972	30.972	0		129874	17250	14	35	1232		
341.8567	30.964	30.972	-1		82612	10735	19	47	565	1.57(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.243	33.243	0		150518	22866	38	95	602		
375.8178	33.243	33.243	0		122000	18369	27	67	680	1.23(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.304	34.304	0		95694	17710	20	50	886		
391.8127	34.304	34.304	0		77832	13463	16	40	841	1.23(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.613	36.613	0		99571	22425	20	50	1121		
391.8127	36.613	36.613	0		78212	17372	16	40	1086	1.27(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.967	36.967	0		143629	34387	38	95	905		
375.8178	36.967	36.967	0		115888	27133	27	67	1005	1.24(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.967	38.967	0		85149	24037	32	80	751		
425.7737	38.967	38.967	0		80863	22279	26	65	857	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 16-Aug-2021 12:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	14-Aug-2021 01:40:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516475	Lims Sample ID:	15

Non-2,3,7,8-sub-TCDF, RT: 19.983

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	280913	39991

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	280913	39991

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.851	2427	365	2652	463	0.6695	0.92	RQ
19.851	2042	356	2652	463	0.6188		Empc Correction
24.140	1928	390	2351	420	0.5641	0.82	
Signal Totals:							
	3970	746	5003	883			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9358	1638				0.87	RQ
	8973	1629					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.234 = (9358 * 40.000) / (280913 * 1.080)

Empc Amount: 1.183 = (8973 * 40.000) / (280913 * 1.080)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 16-Aug-2021 12:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	14-Aug-2021 01:40:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516475	Lims Sample ID:	15

Non-2,3,7,8-sub-PeCDF, RT: 28.190

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
26.794	900	182	794	145		1.13	R
28.007	1305	226	936	197		1.39	
Signal Totals:							
	2205	408	1730	342			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3935	750				1.27	RQ
	3721	722					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (3935 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (3721 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d
Lims ID: WDM
Client ID:
Inject. Date: 14-Aug-2021 01:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 516475 Lims Sample ID: 15

Non-2,3,7,8-sub-HxCDF, RT: 35.105

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
35.155	2095	375	1700	291		1.23	
Signal Totals:							
	2095	375	1700	291			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3795	666				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (3795 * 0.0) / (0 * 0.000)

Report Date: 16-Aug-2021 12:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	14-Aug-2021 01:40:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	516475	Lims Sample ID:	15

Non-2,3,7,8-sub-HxCDD, RT: 35.459

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.434	1024	212	797	188		1.28	
Signal Totals:							
	1024	212	797	188			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1821	400				1.28	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (1821 * 0.0) / (0 * 0.000)

Report Date: 16-Aug-2021 12:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

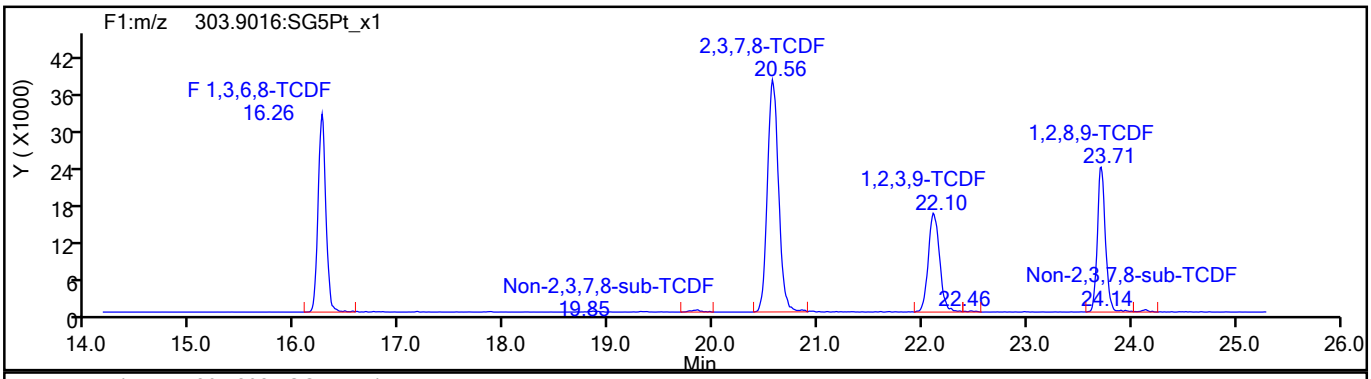

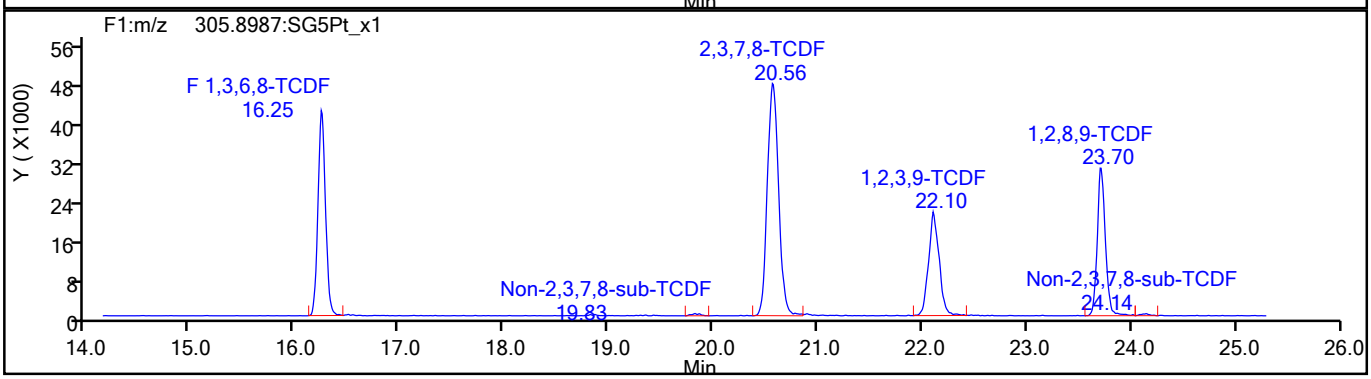

TCDF Standards

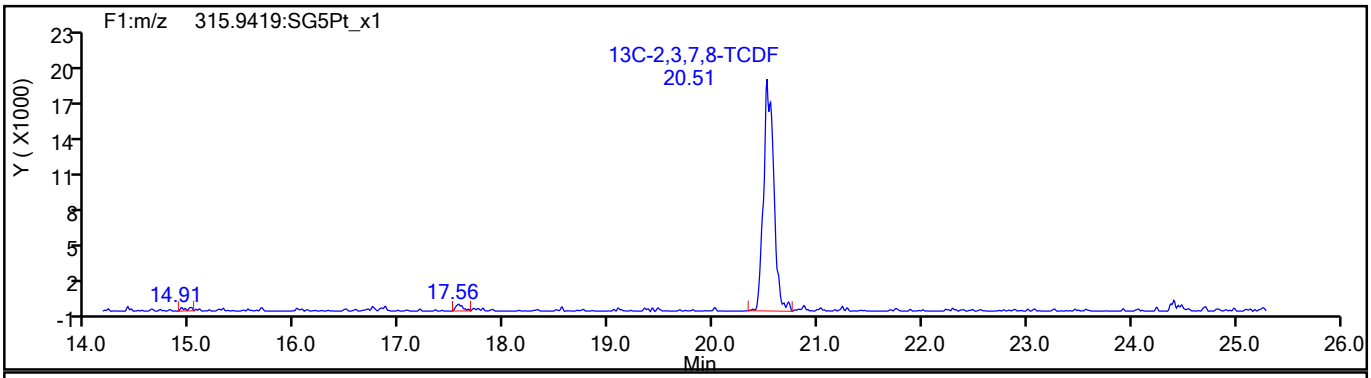

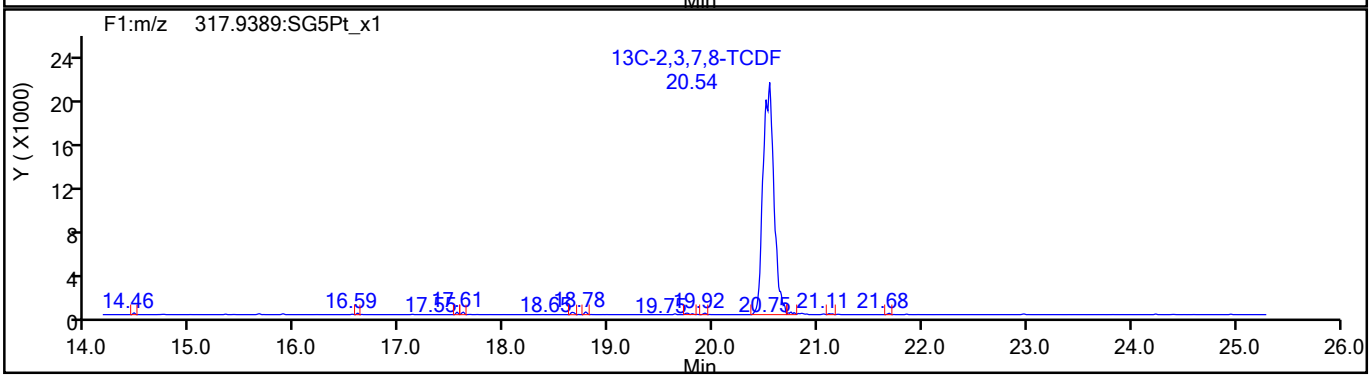

774019

Report Date: 16-Aug-2021 12:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

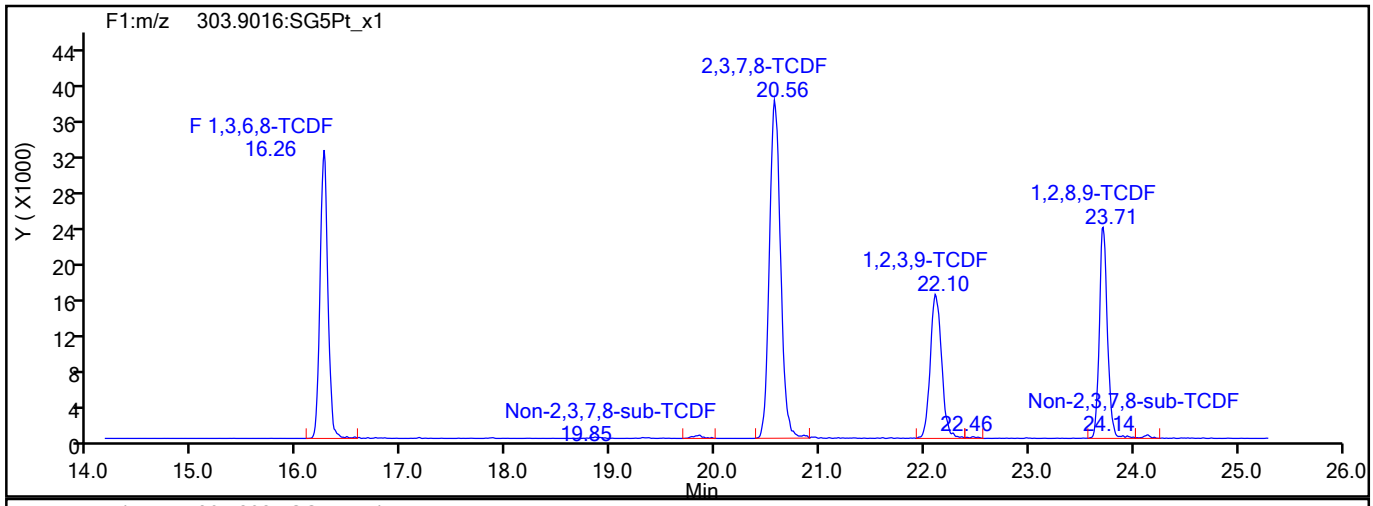

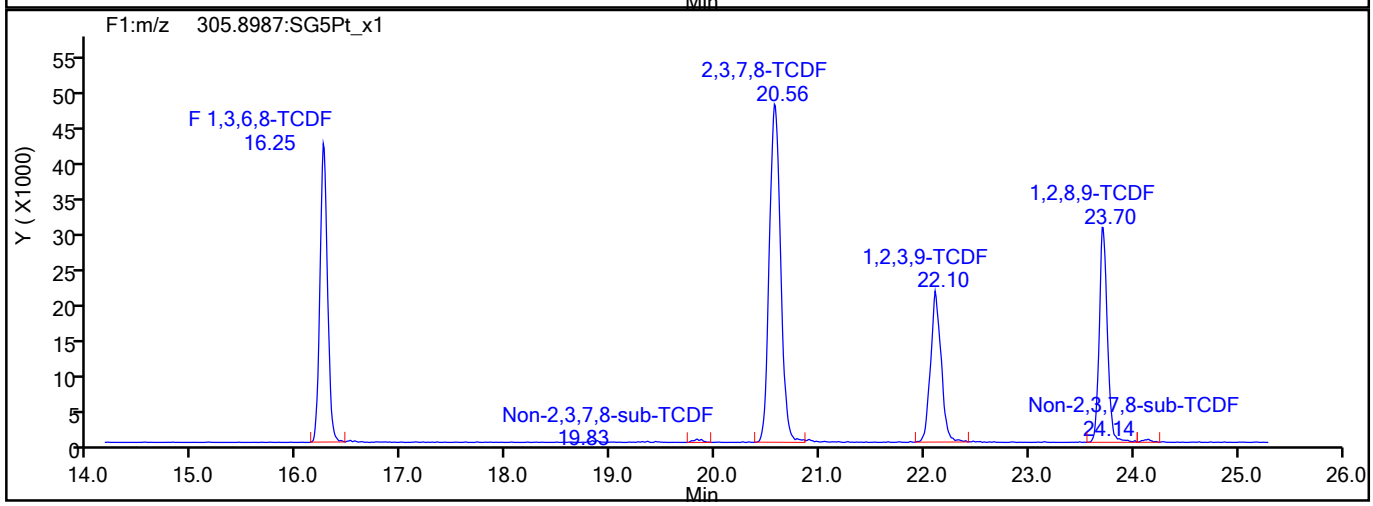

TCDF Interference Mass

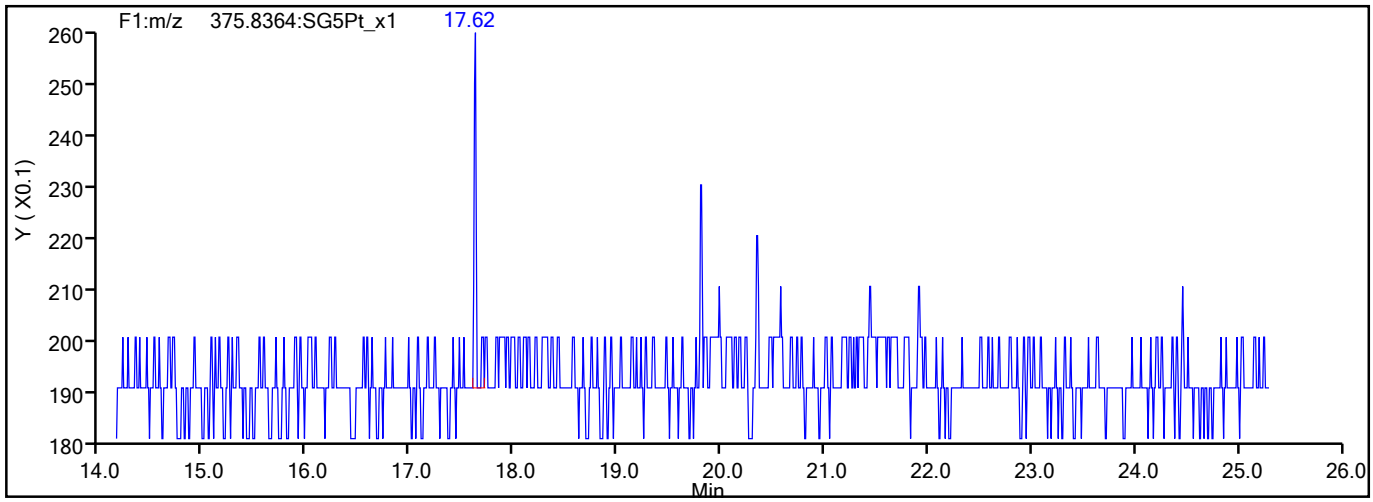

774020

Report Date: 16-Aug-2021 12:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

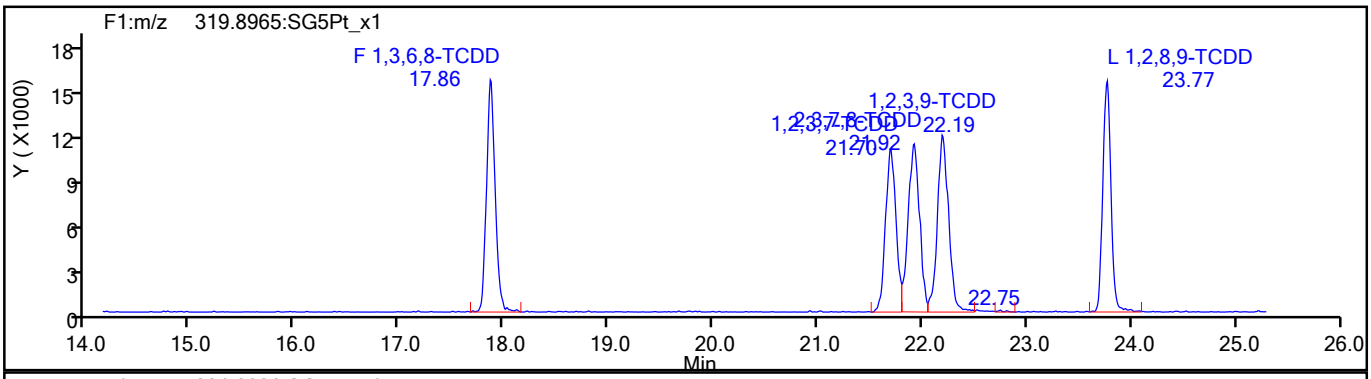

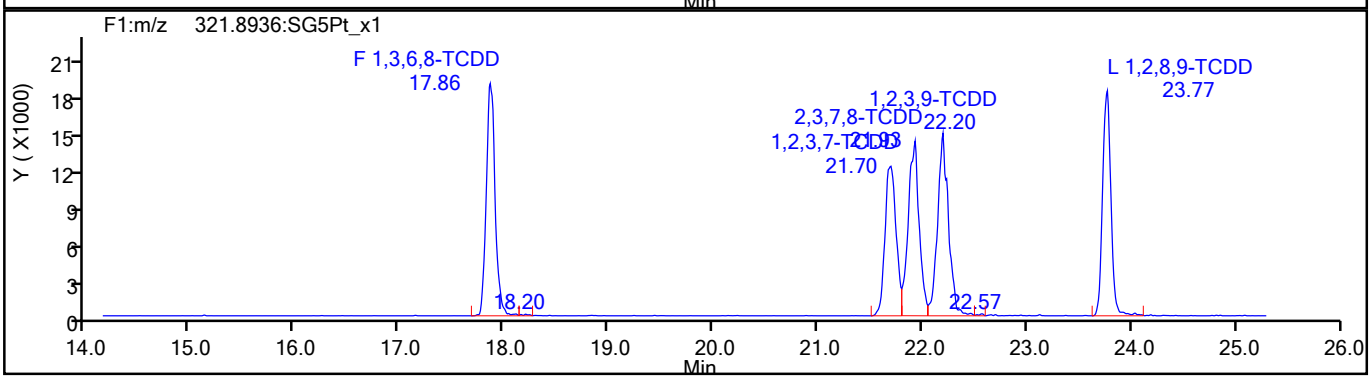

TCDD Standards

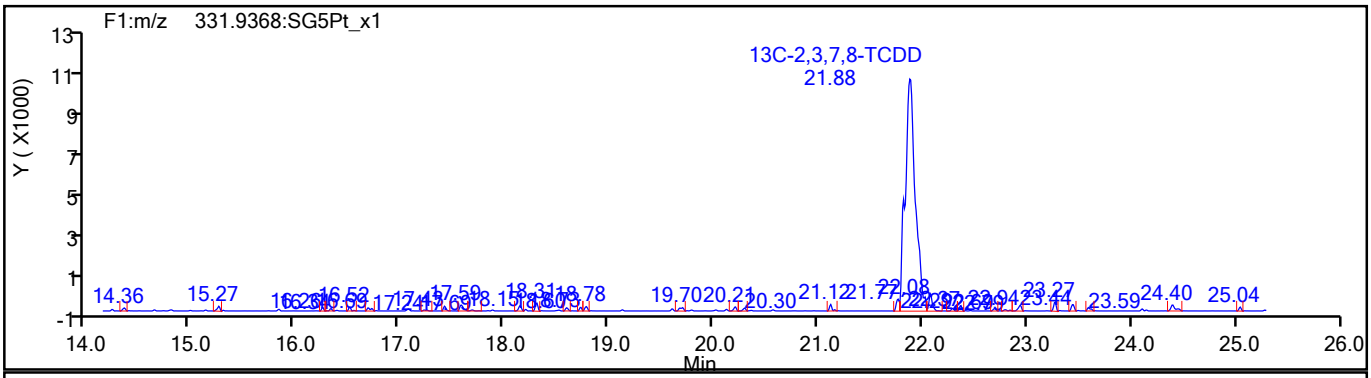

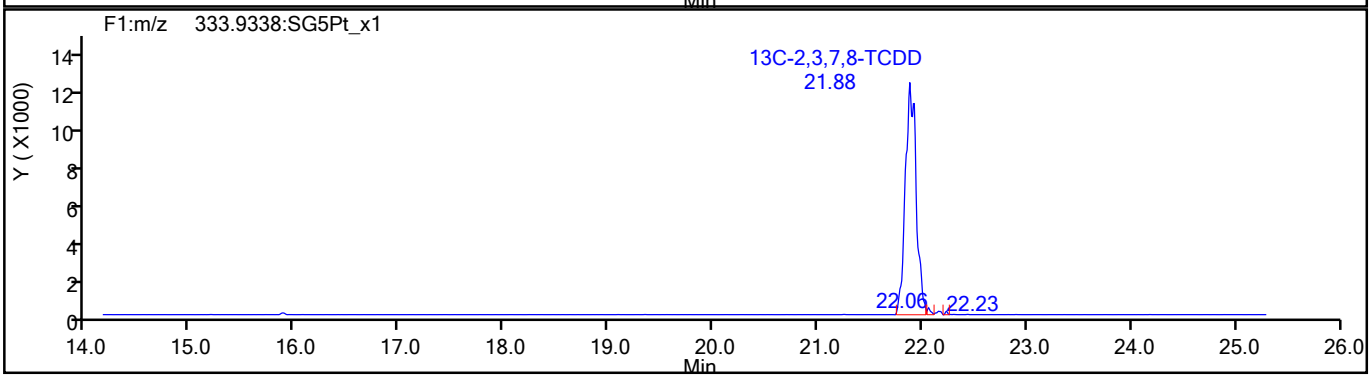

774021

Report Date: 16-Aug-2021 12:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

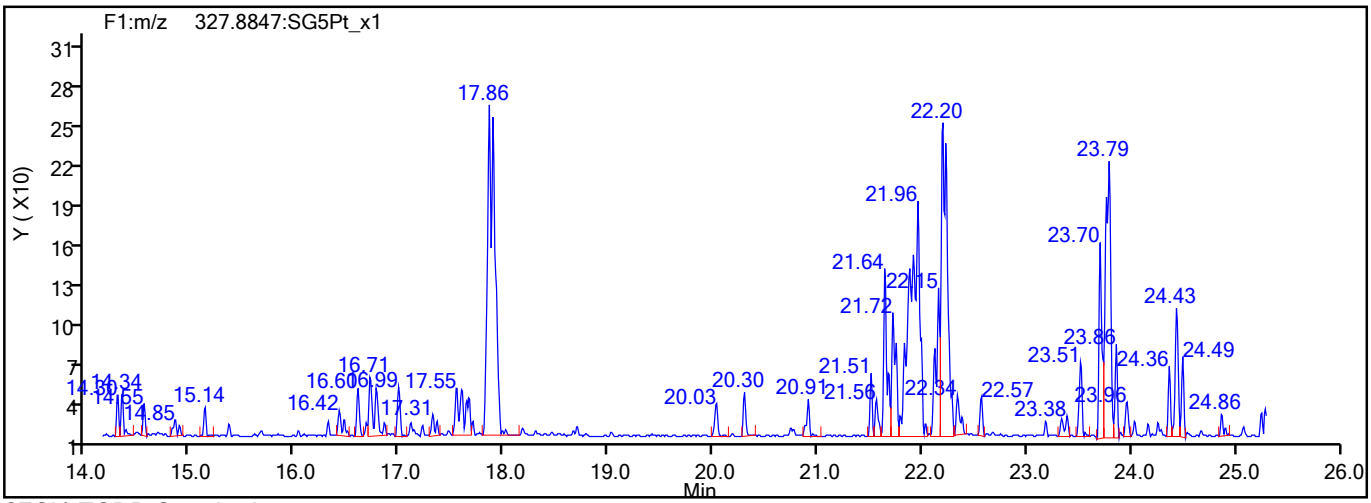

37Cl4-TCDD Standards

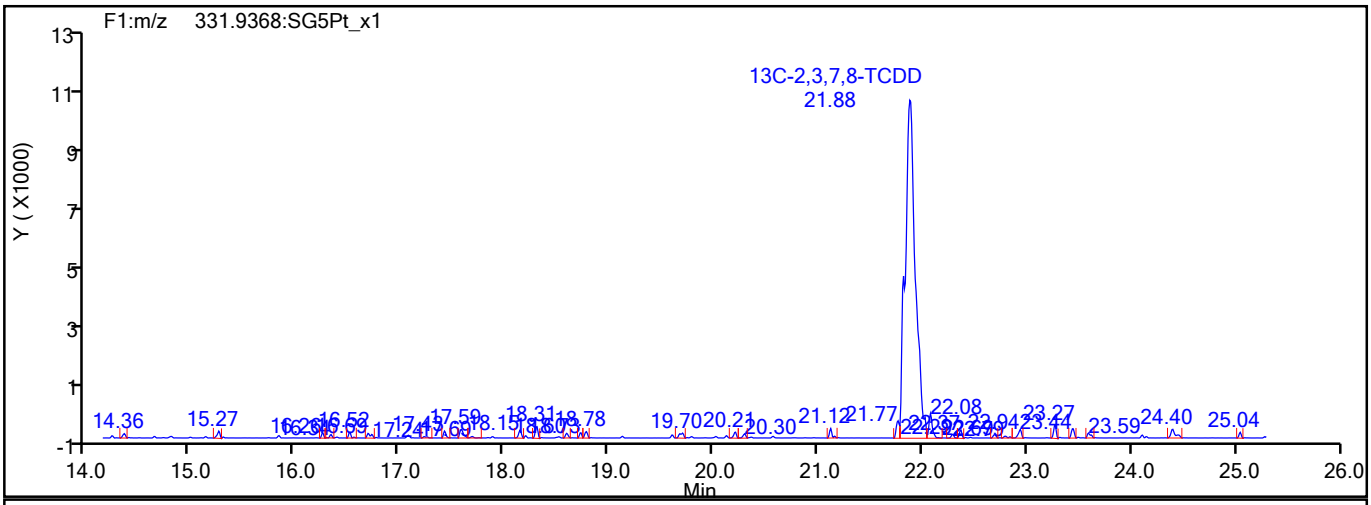

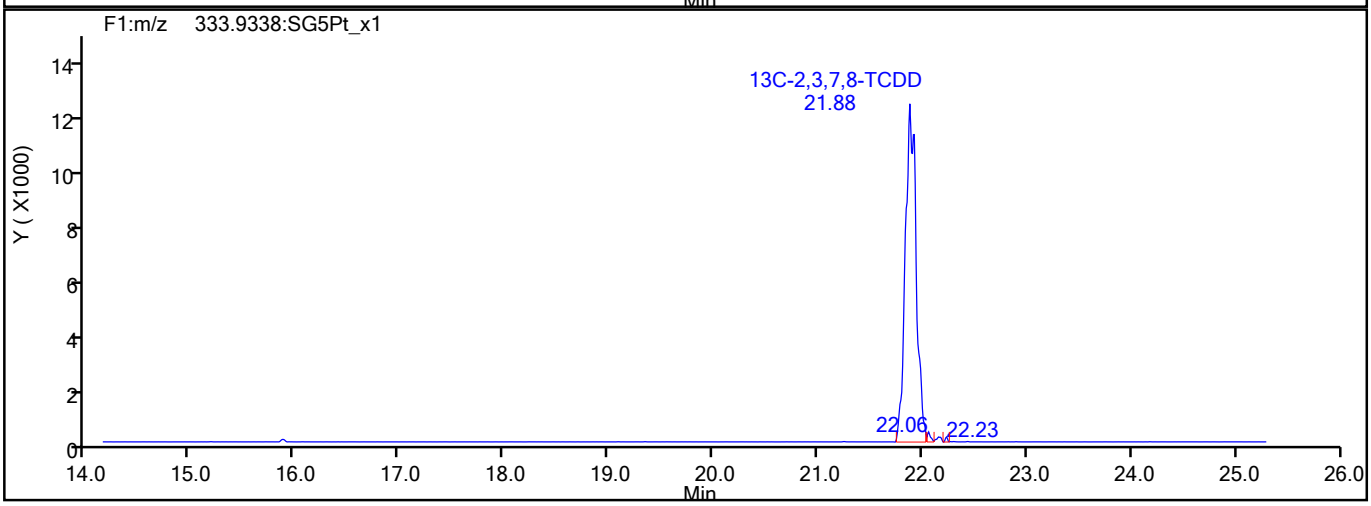

774022

Report Date: 16-Aug-2021 12:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

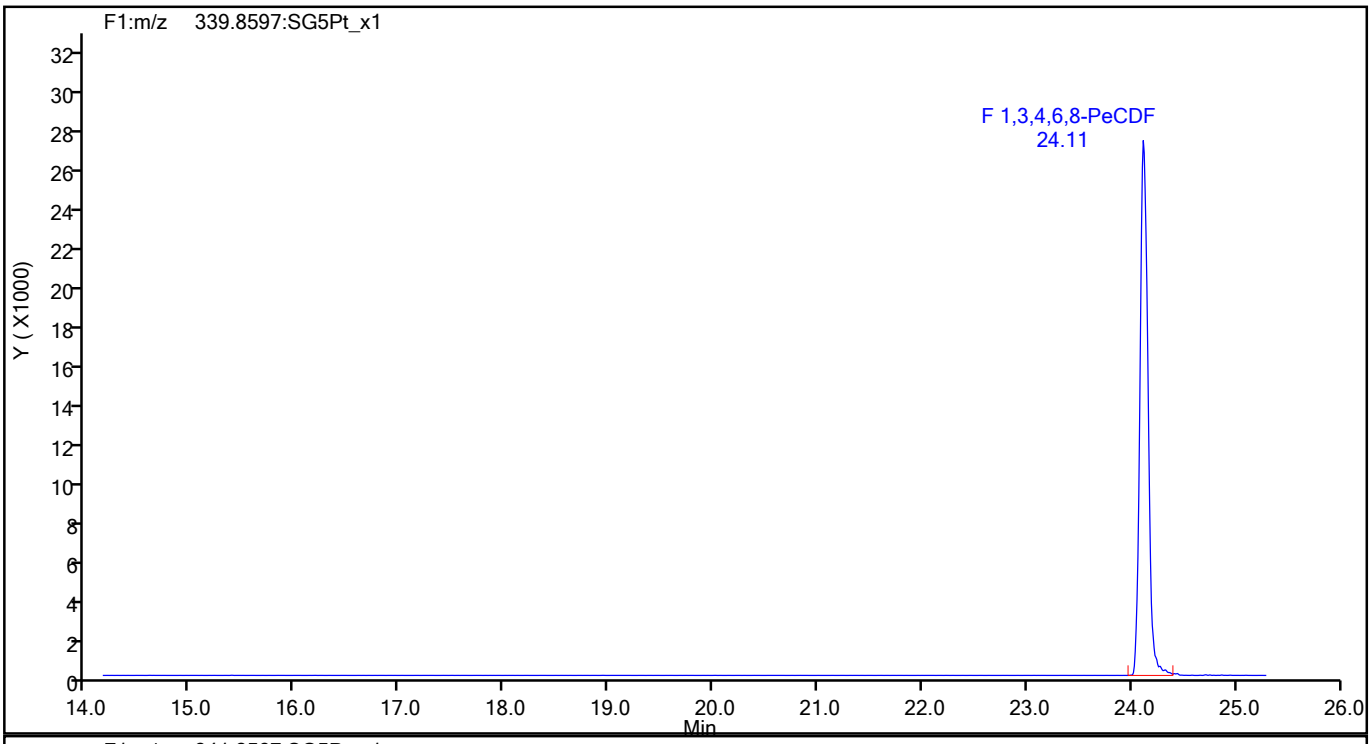

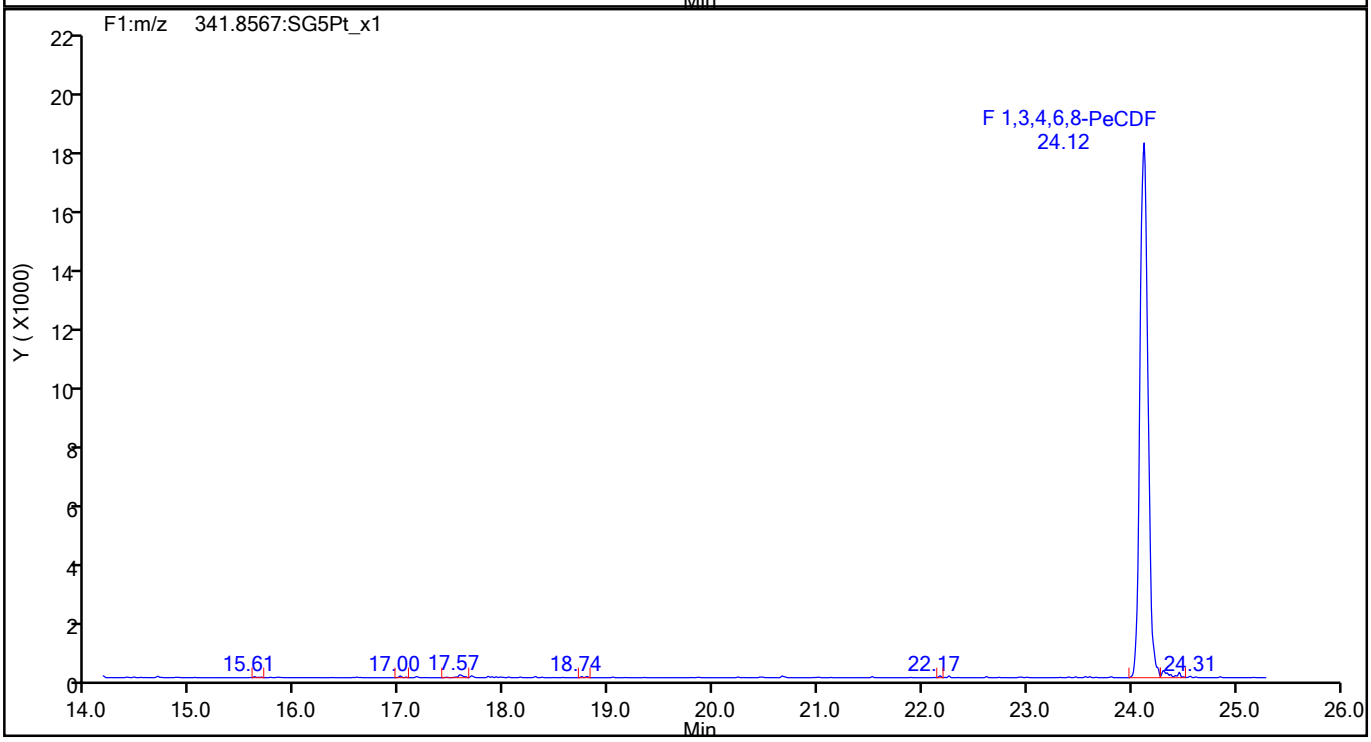

774023

Report Date: 16-Aug-2021 12:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

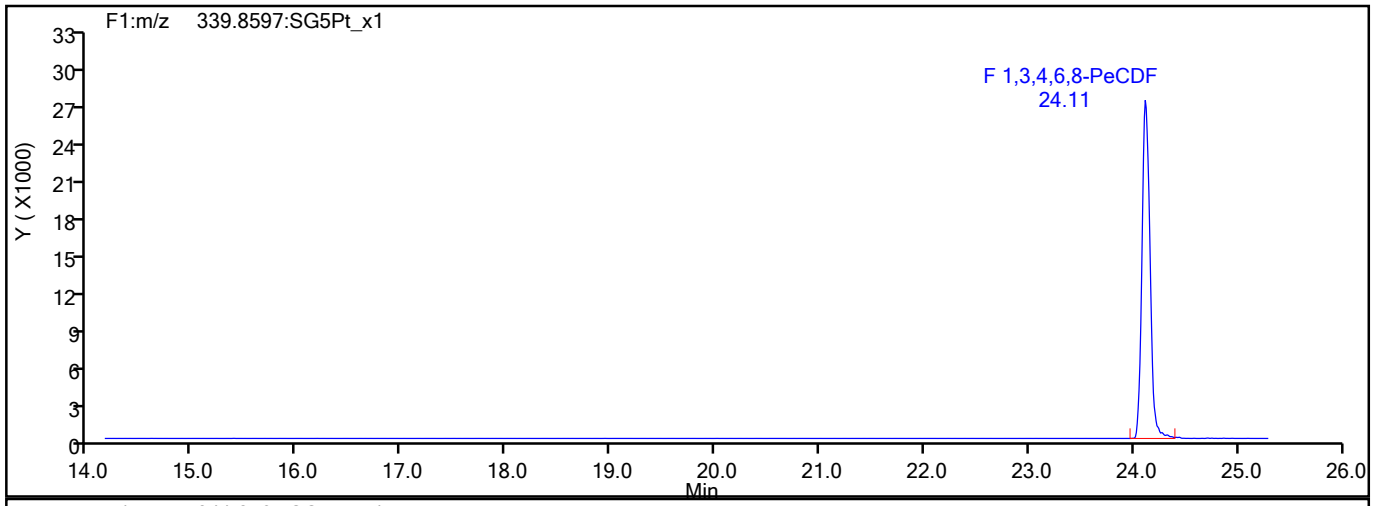

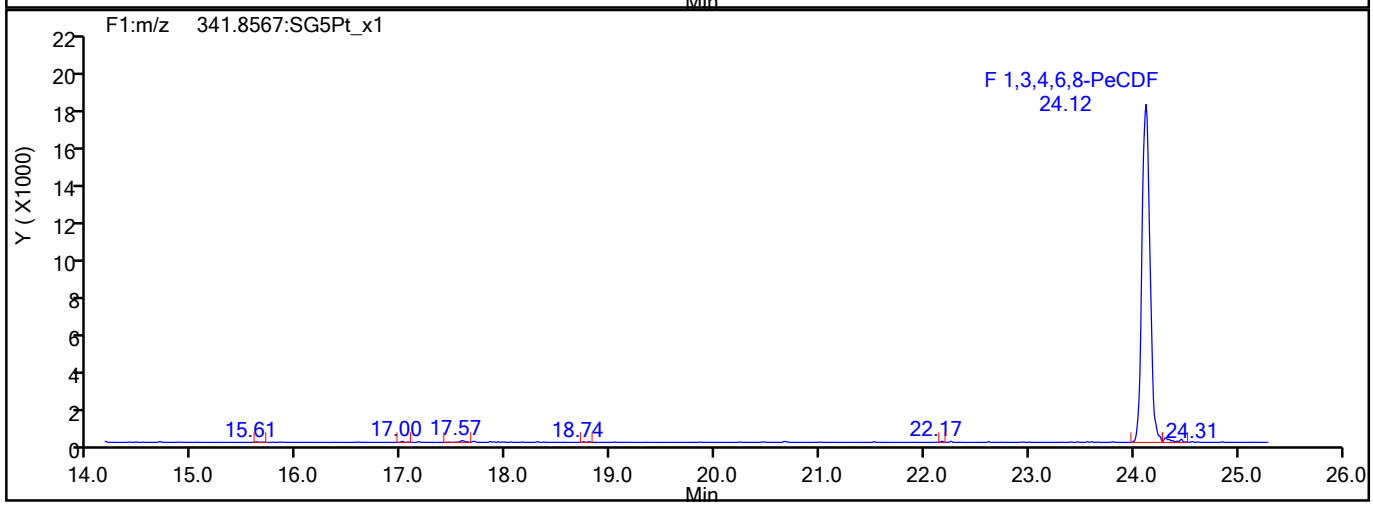

F1 PeCDFs Interference Mass

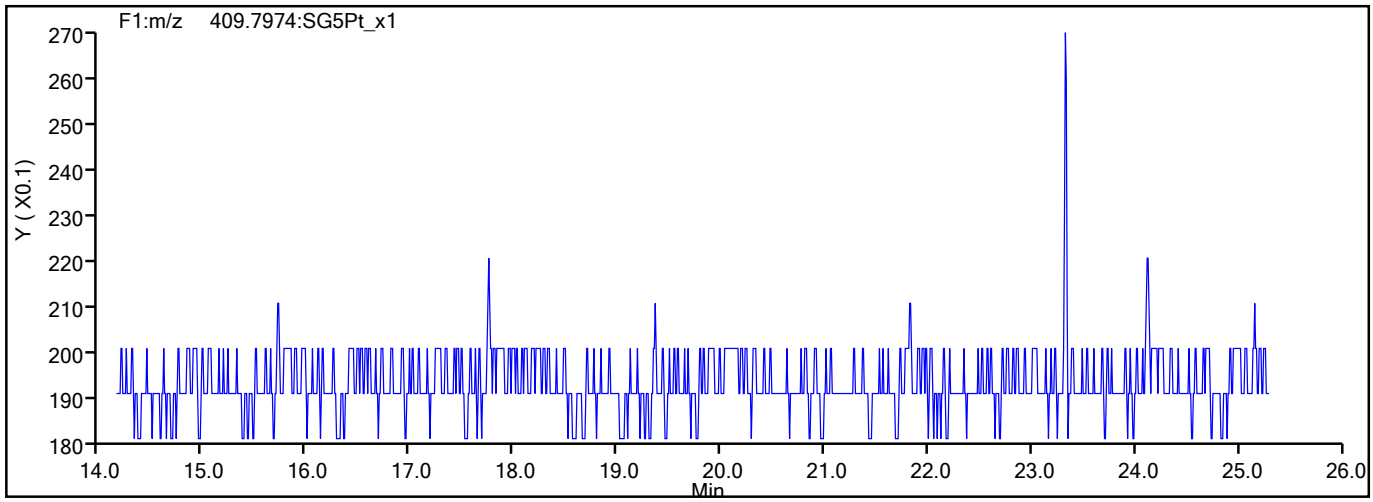

774024

Report Date: 16-Aug-2021 12:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

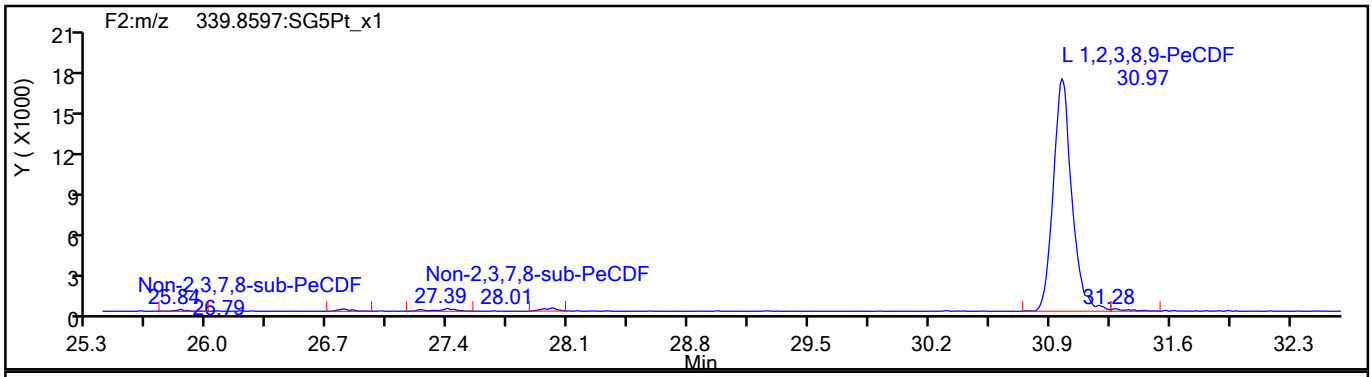

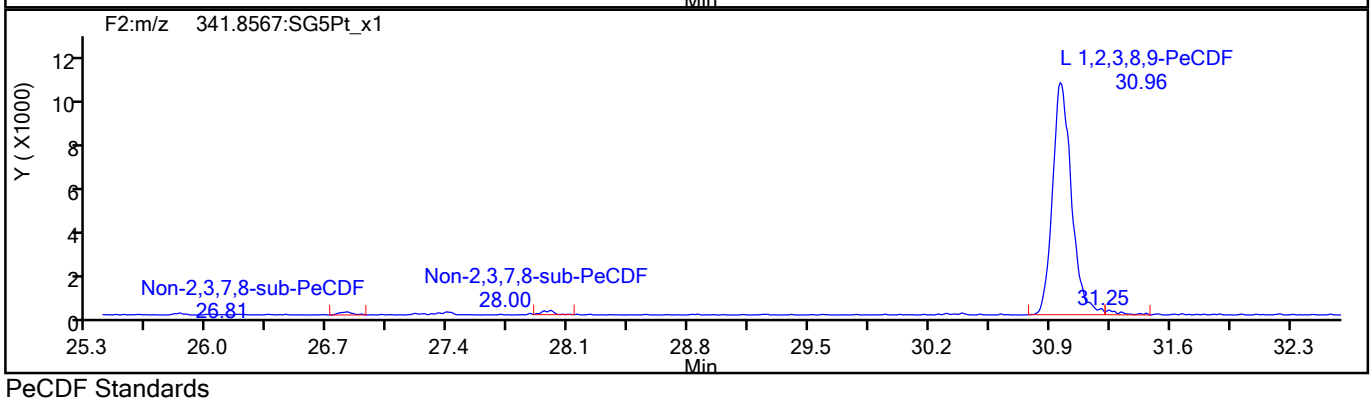

PeCDF Standards

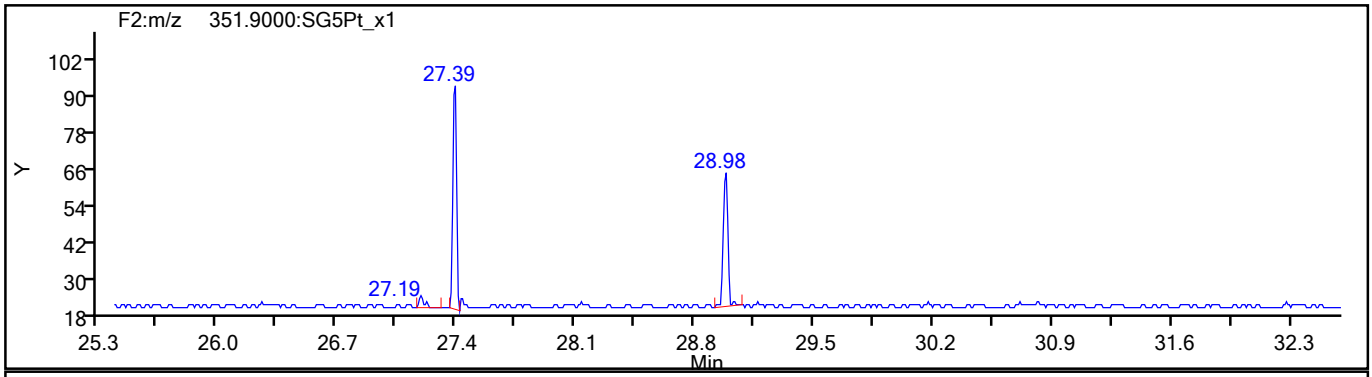

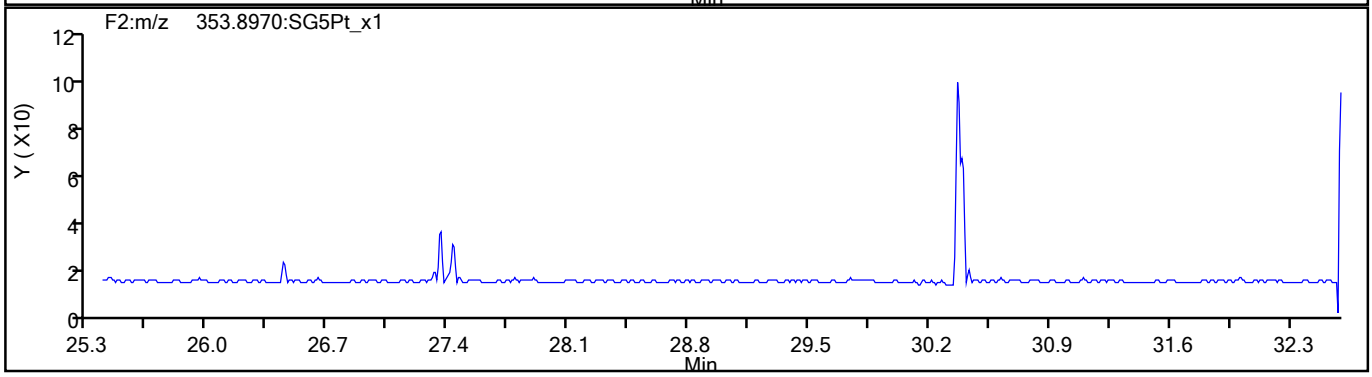

774025

Report Date: 16-Aug-2021 12:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

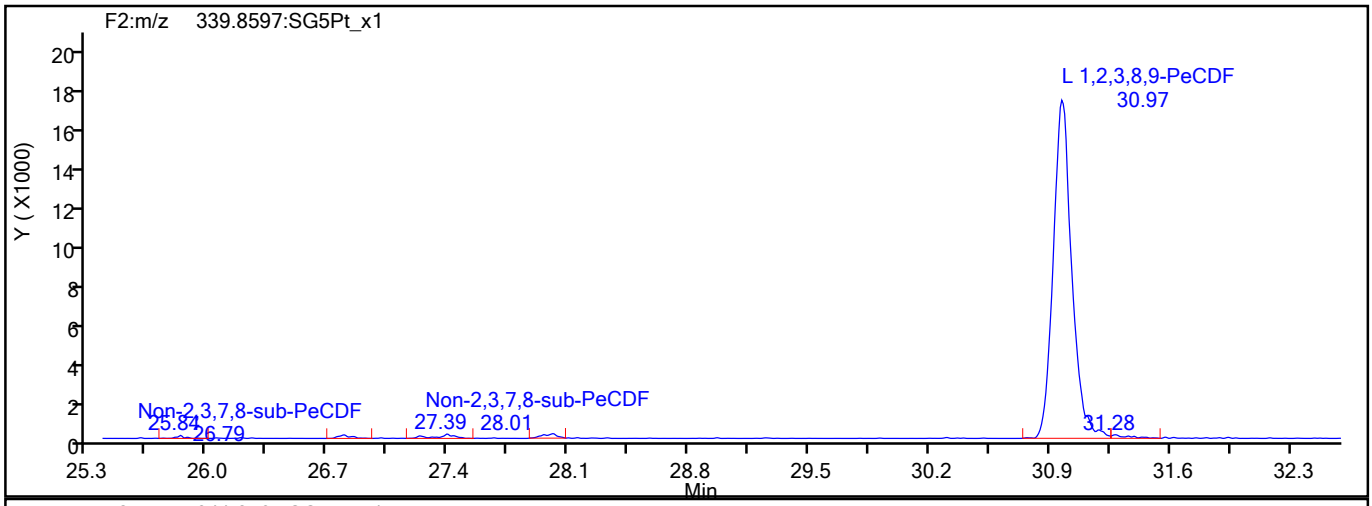

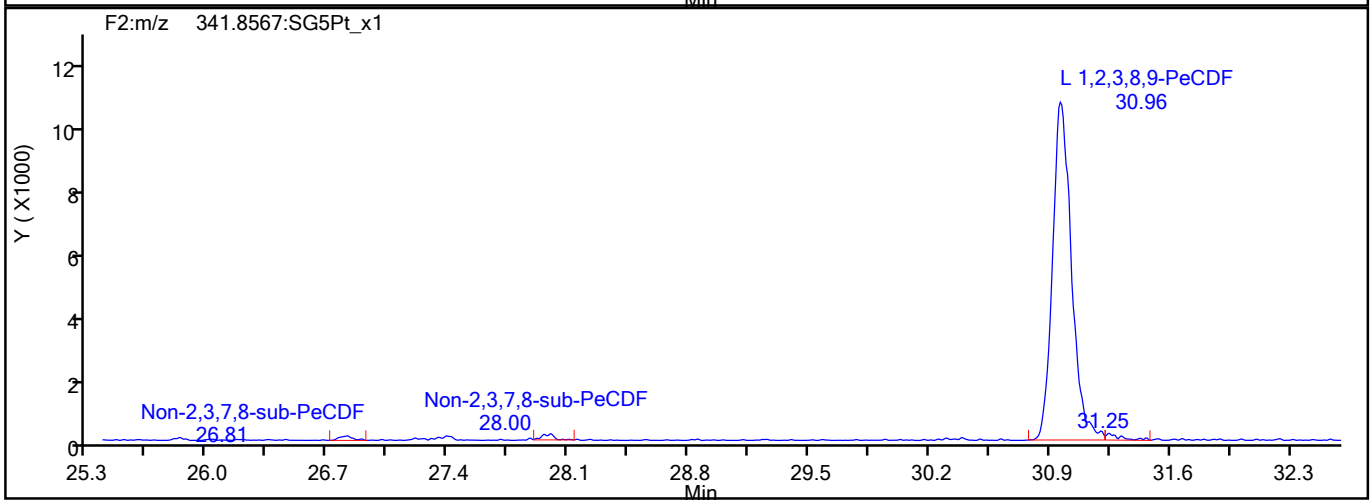

PeCDF Interference Mass

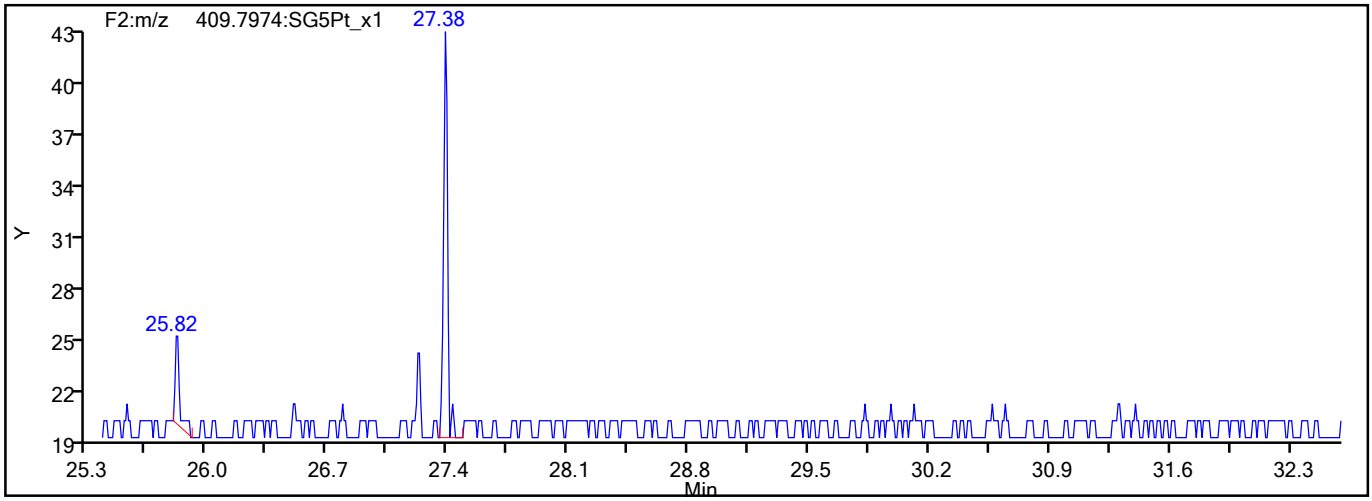

774026

Report Date: 16-Aug-2021 12:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

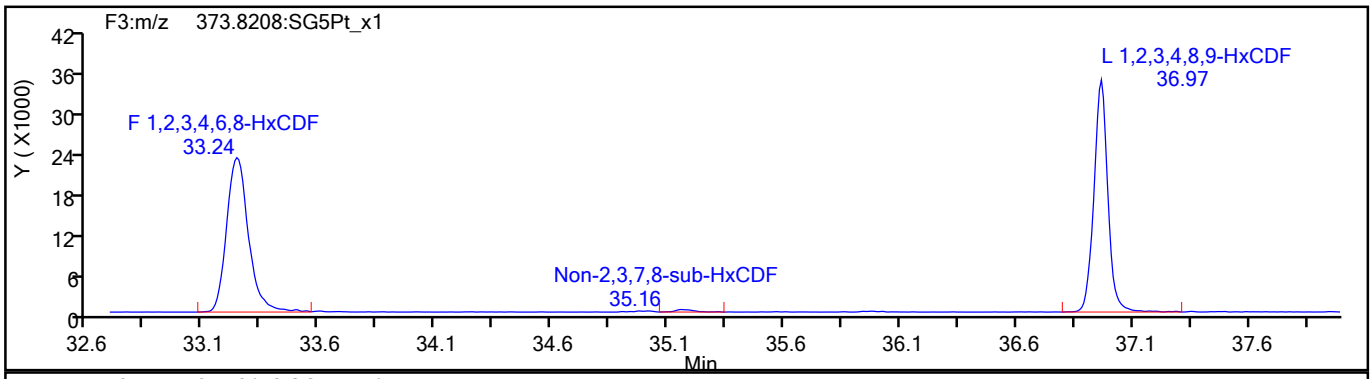

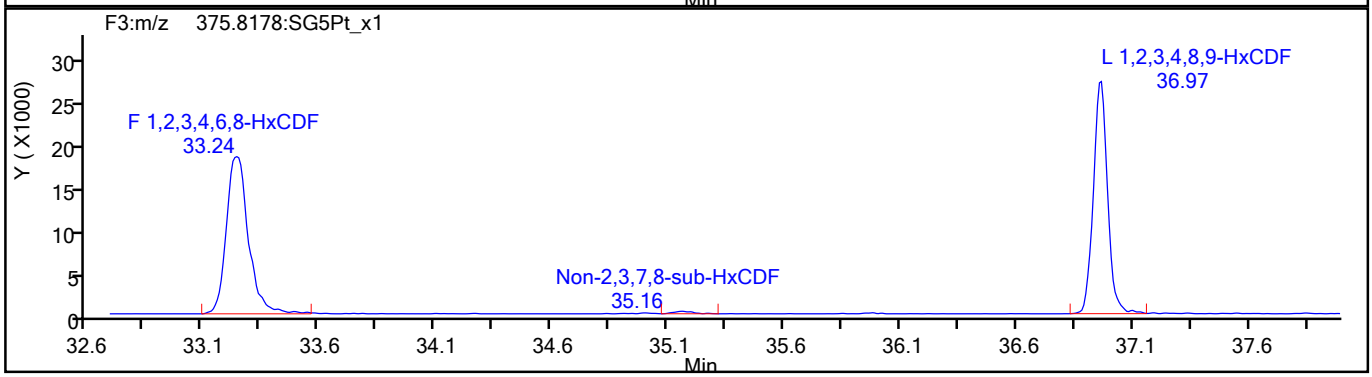

HxCDF Standards

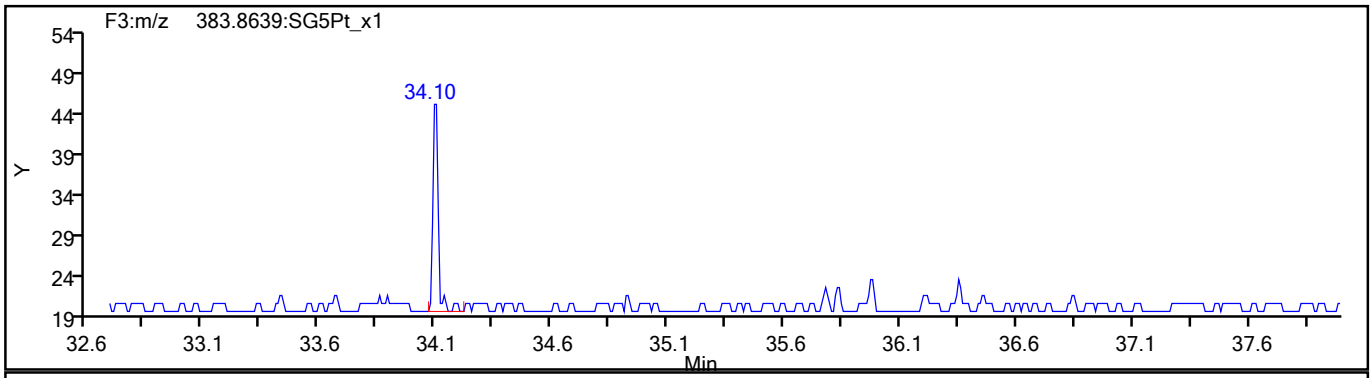

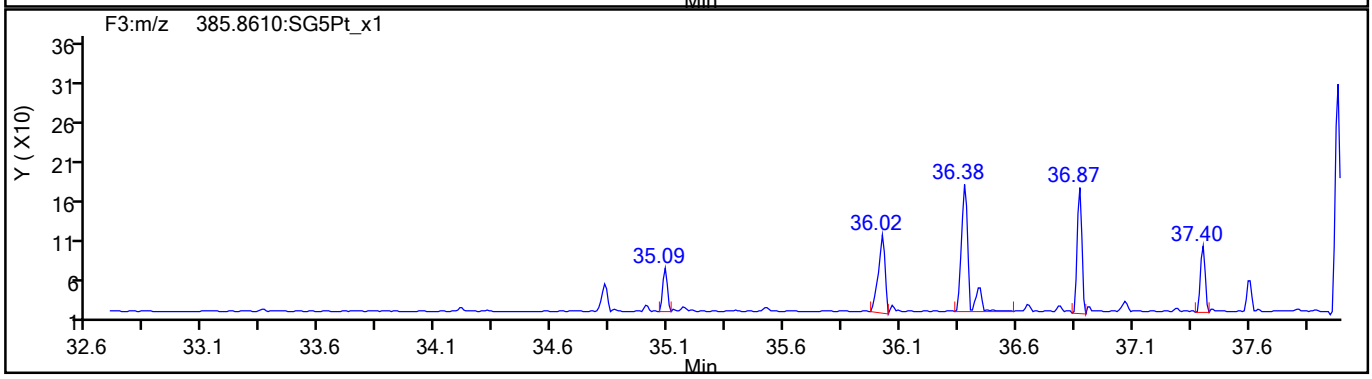

774027

Report Date: 16-Aug-2021 12:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

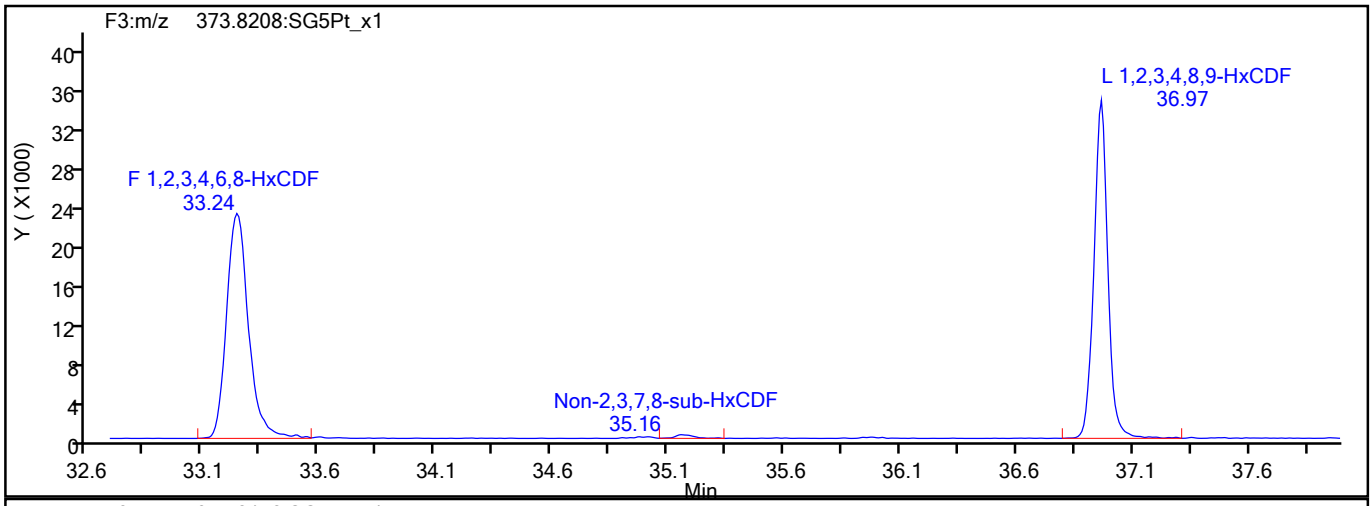

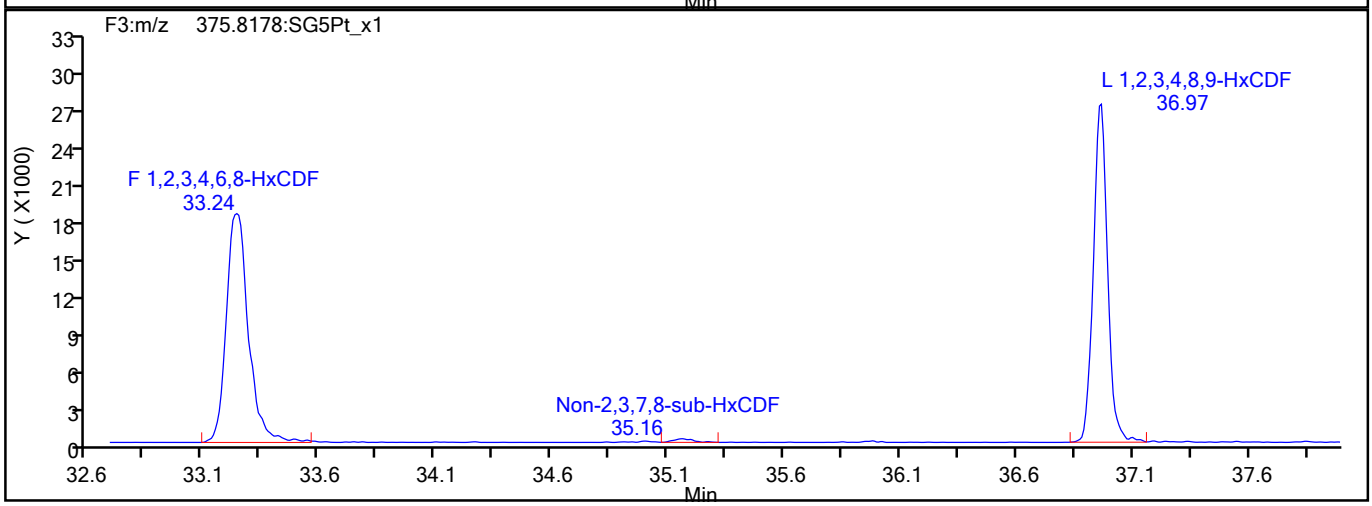

HxCDF Interference Mass

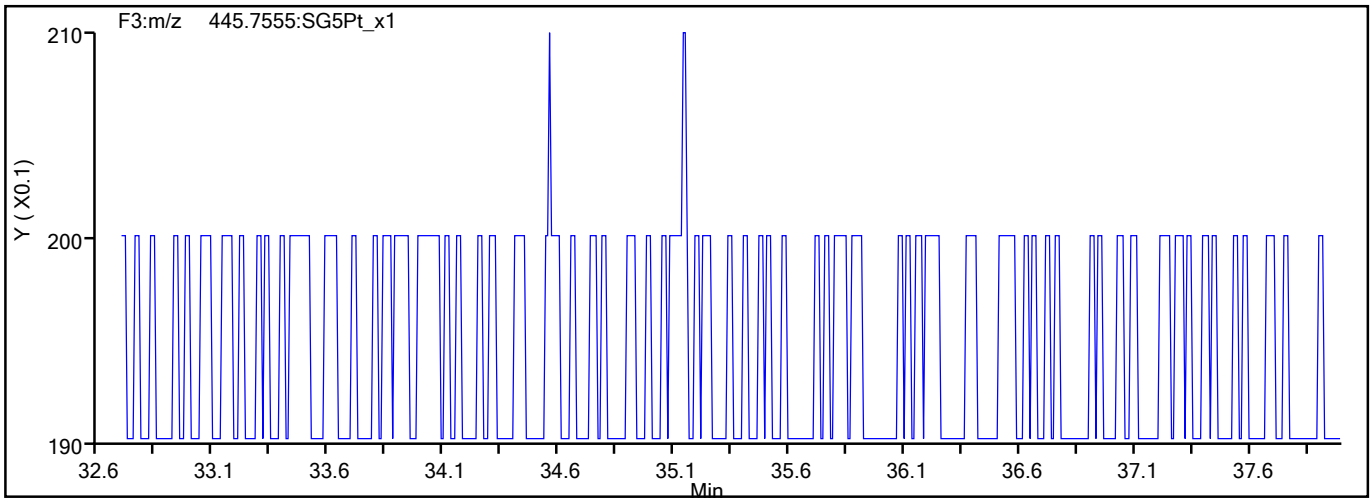

774028

Report Date: 16-Aug-2021 12:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

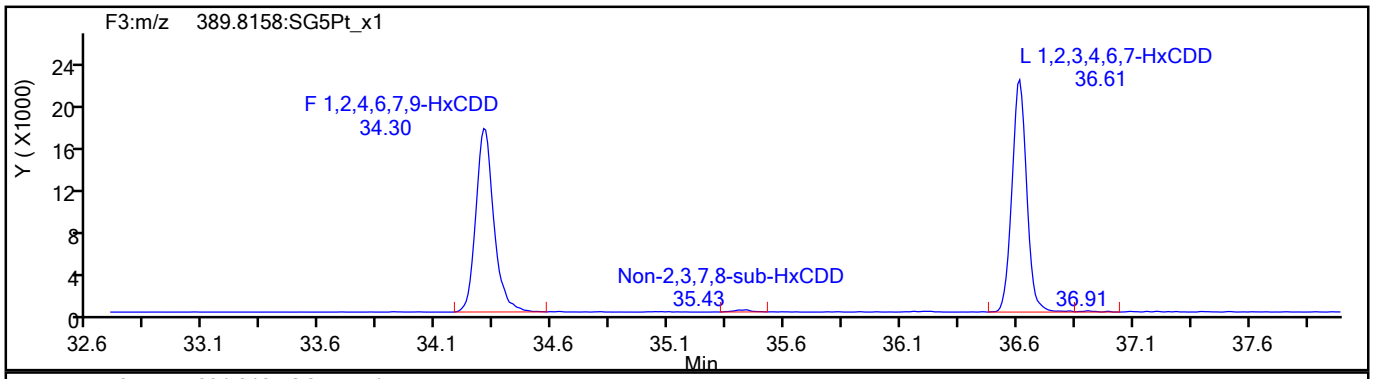

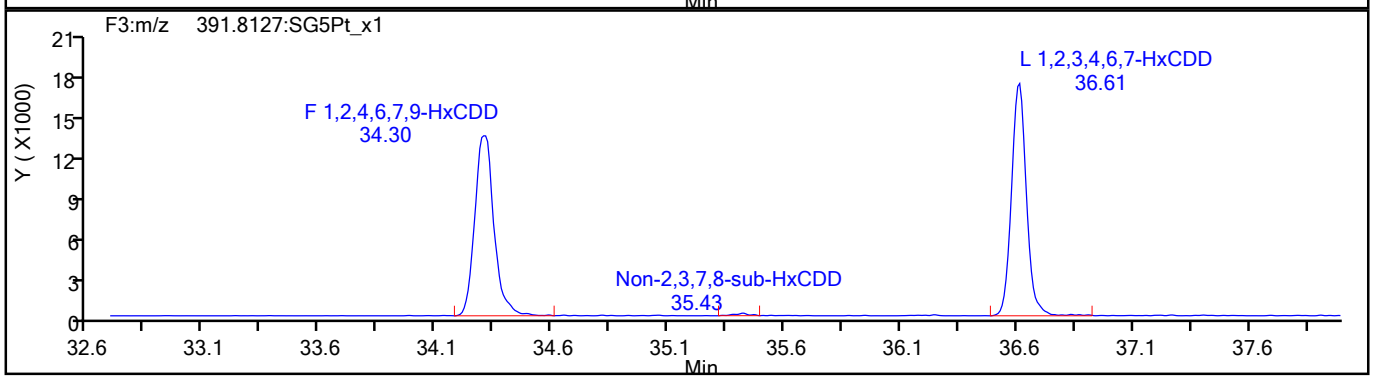

HxCDD Standards

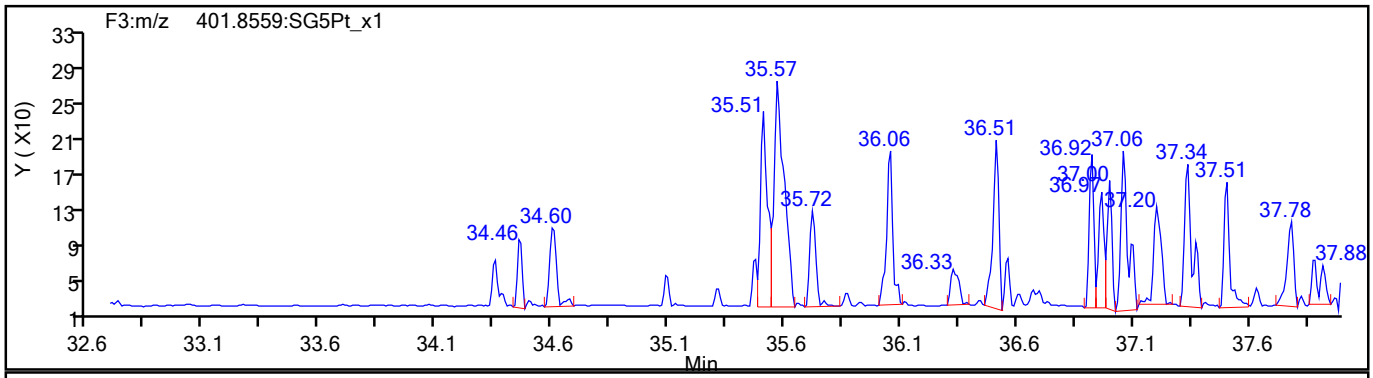

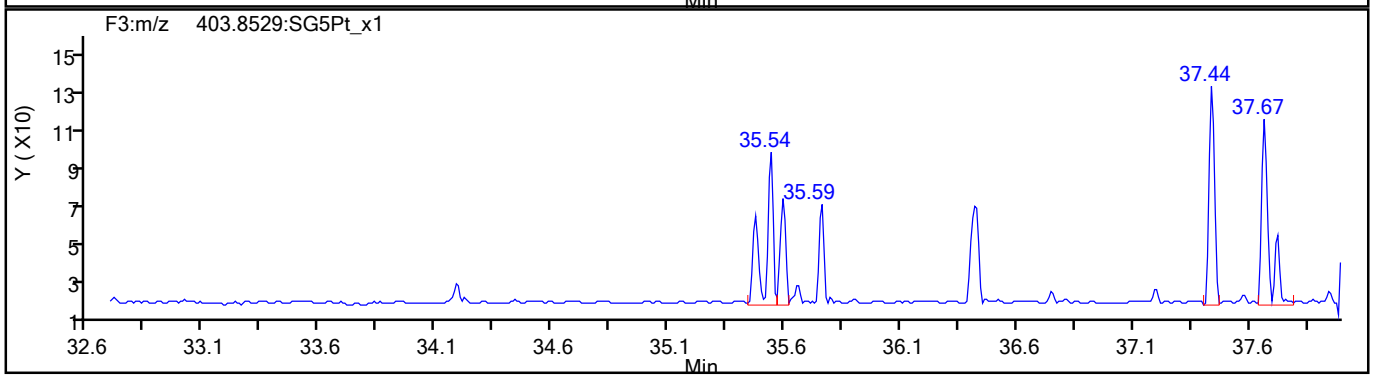

774029

Report Date: 16-Aug-2021 12:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

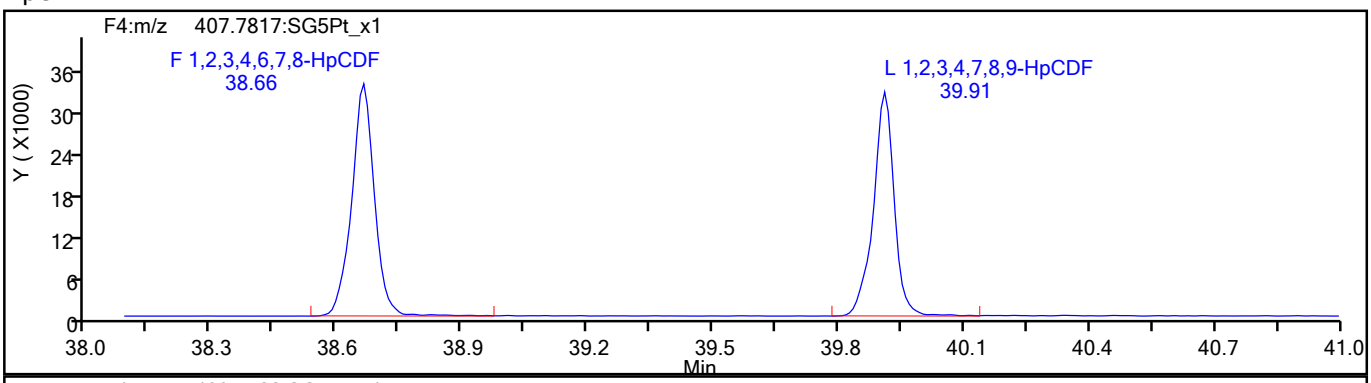

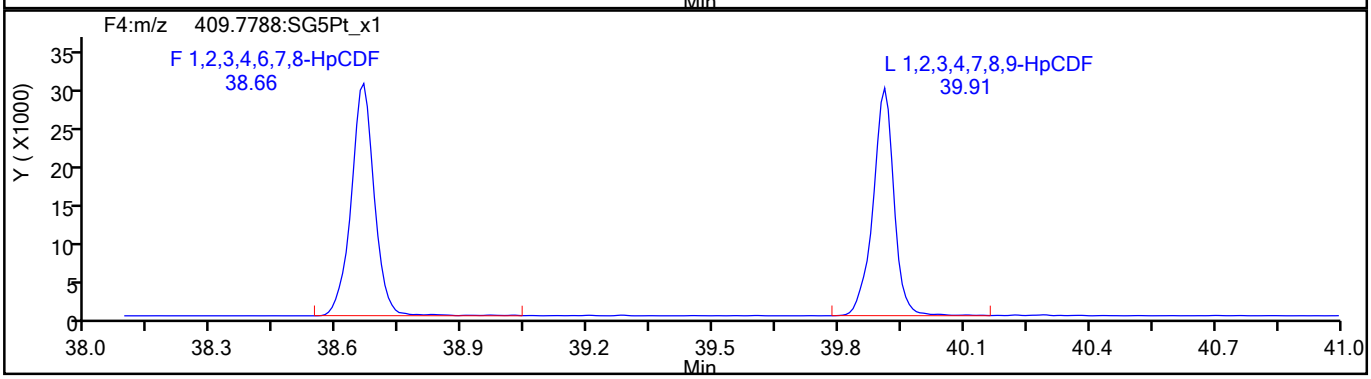

HpCDF Standards

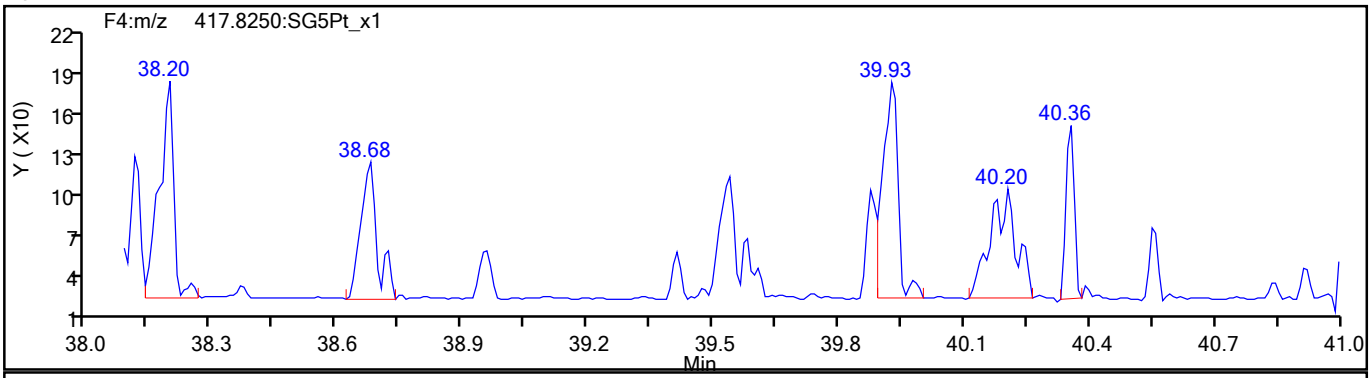

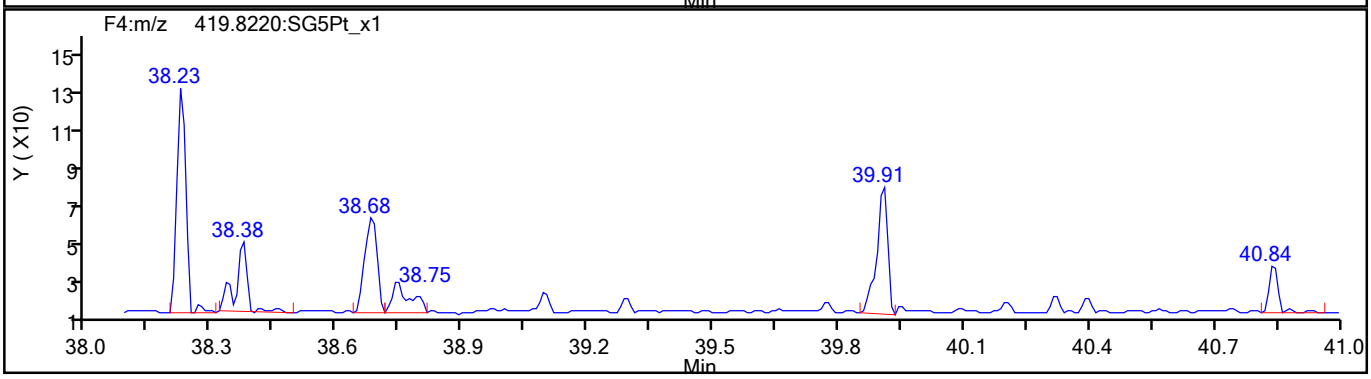

774030

Report Date: 16-Aug-2021 12:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

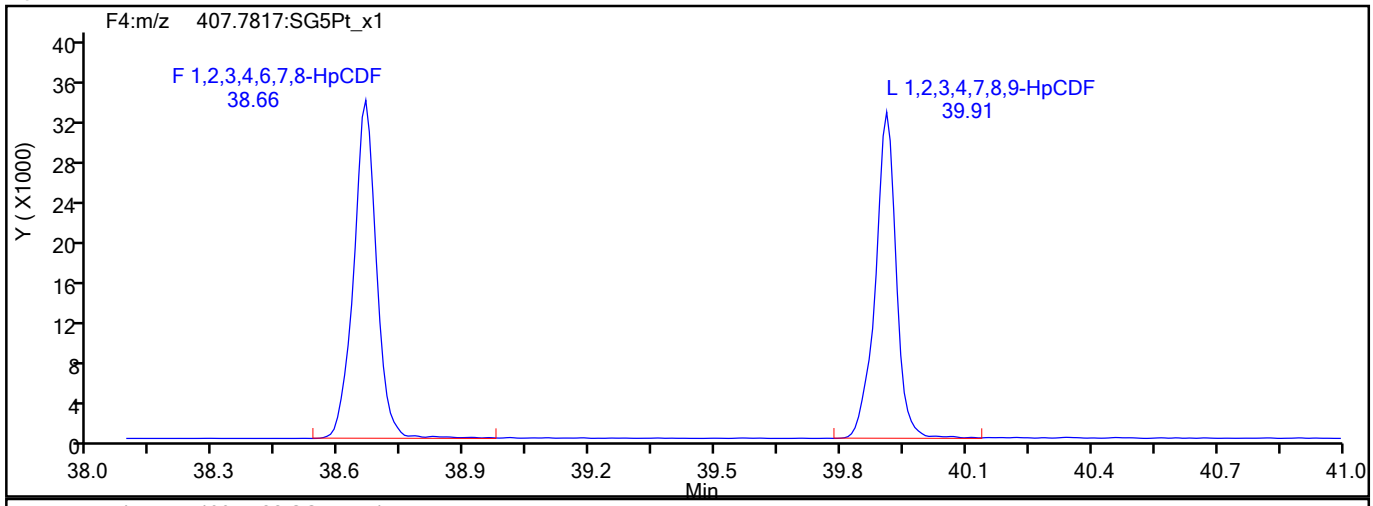

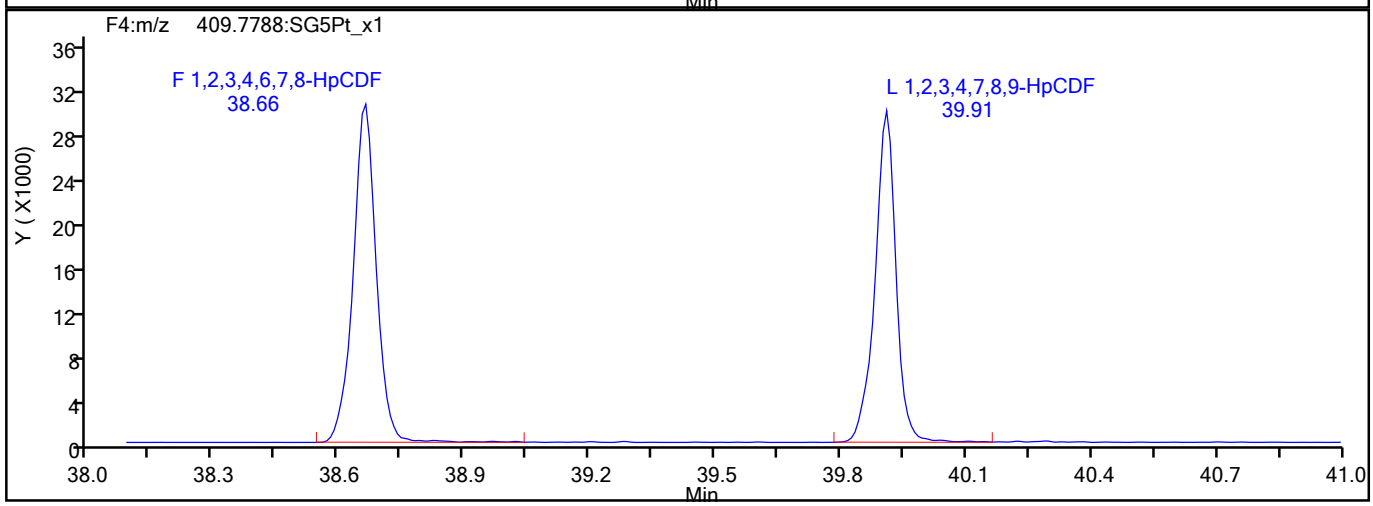

HpCDF Interference Mass

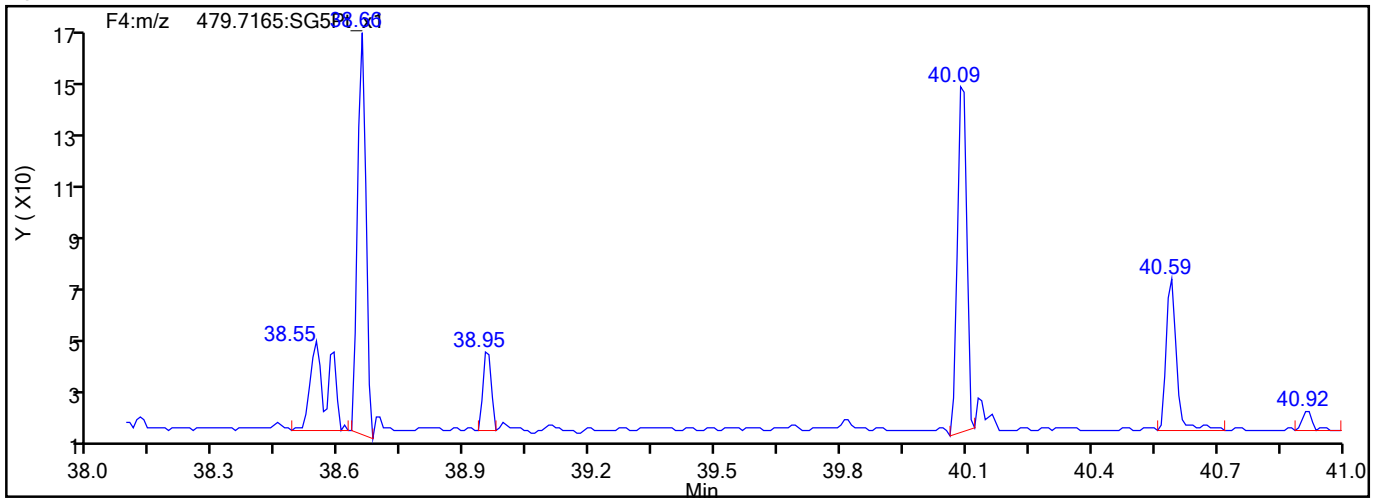

774031

Report Date: 16-Aug-2021 12:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

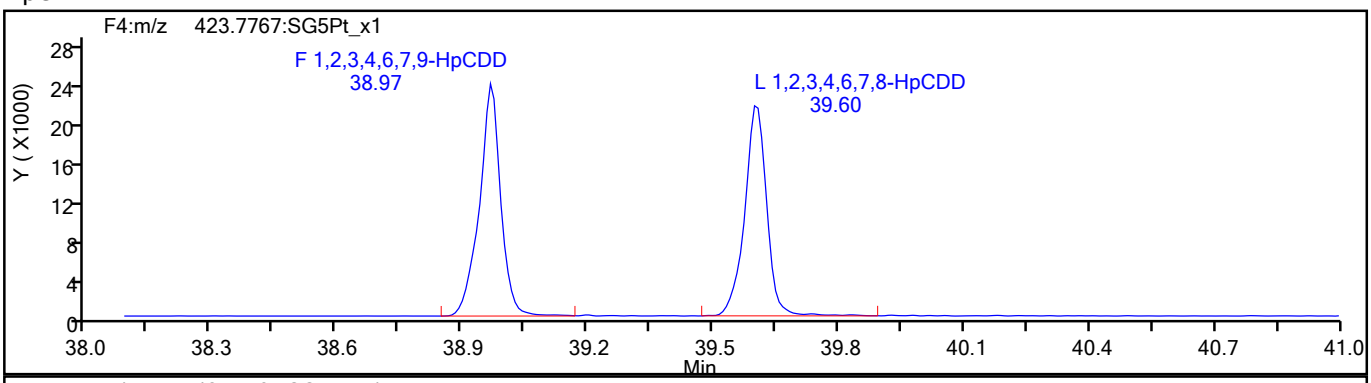

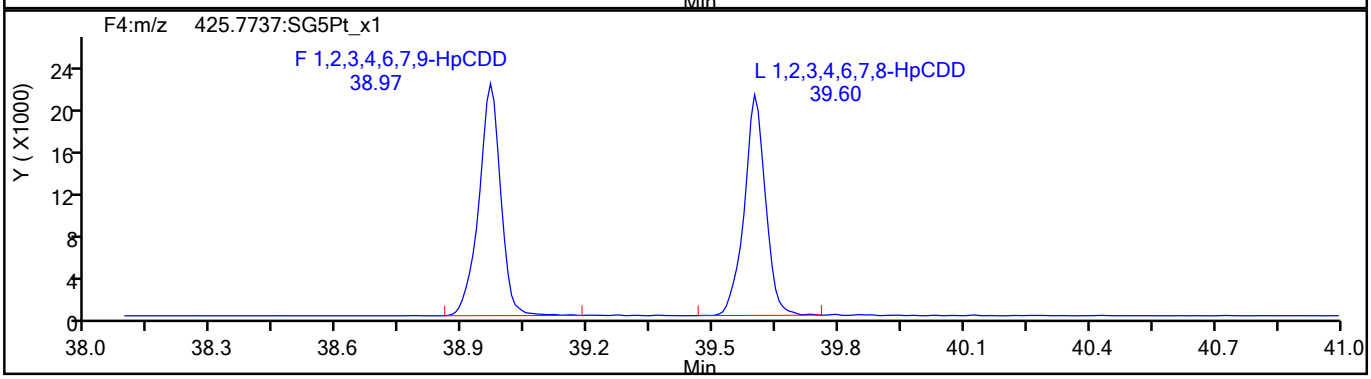

HpCDD Standards

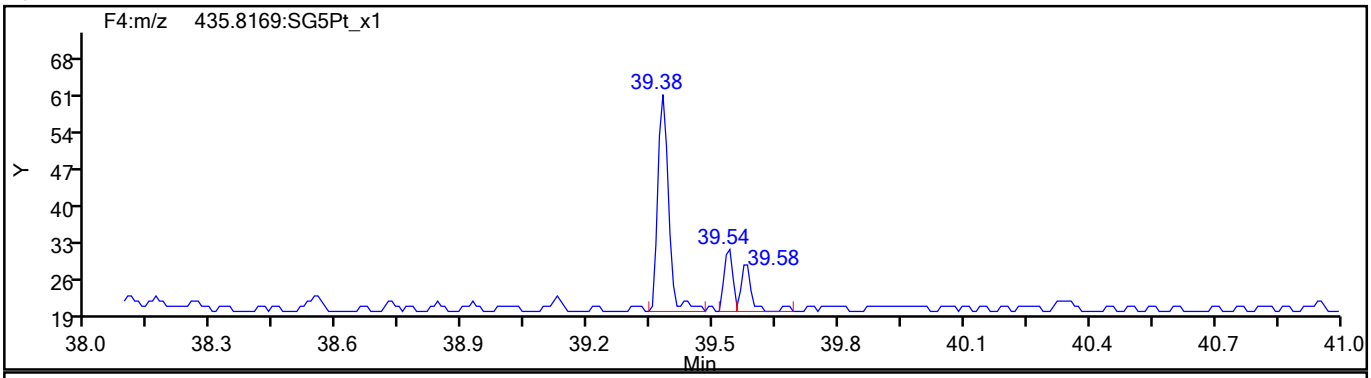

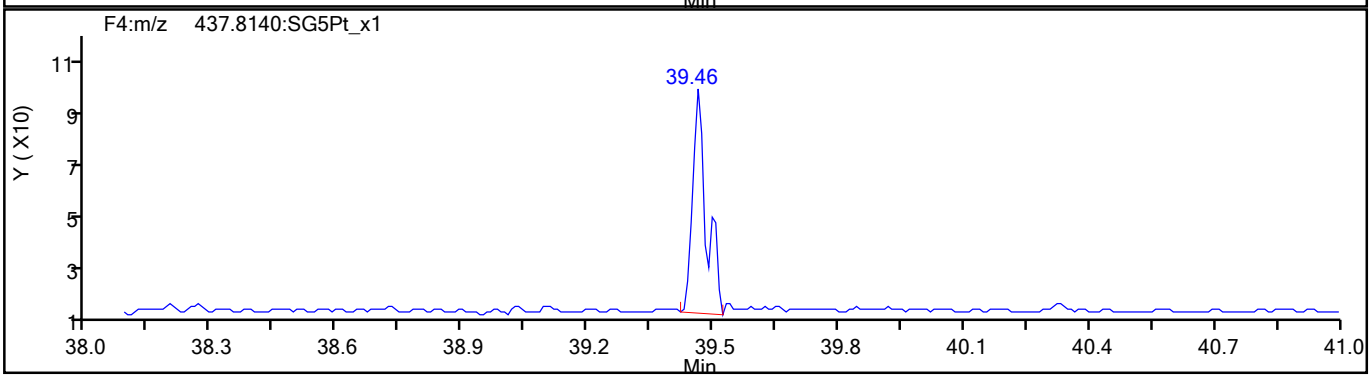

774032

Report Date: 16-Aug-2021 12:24:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

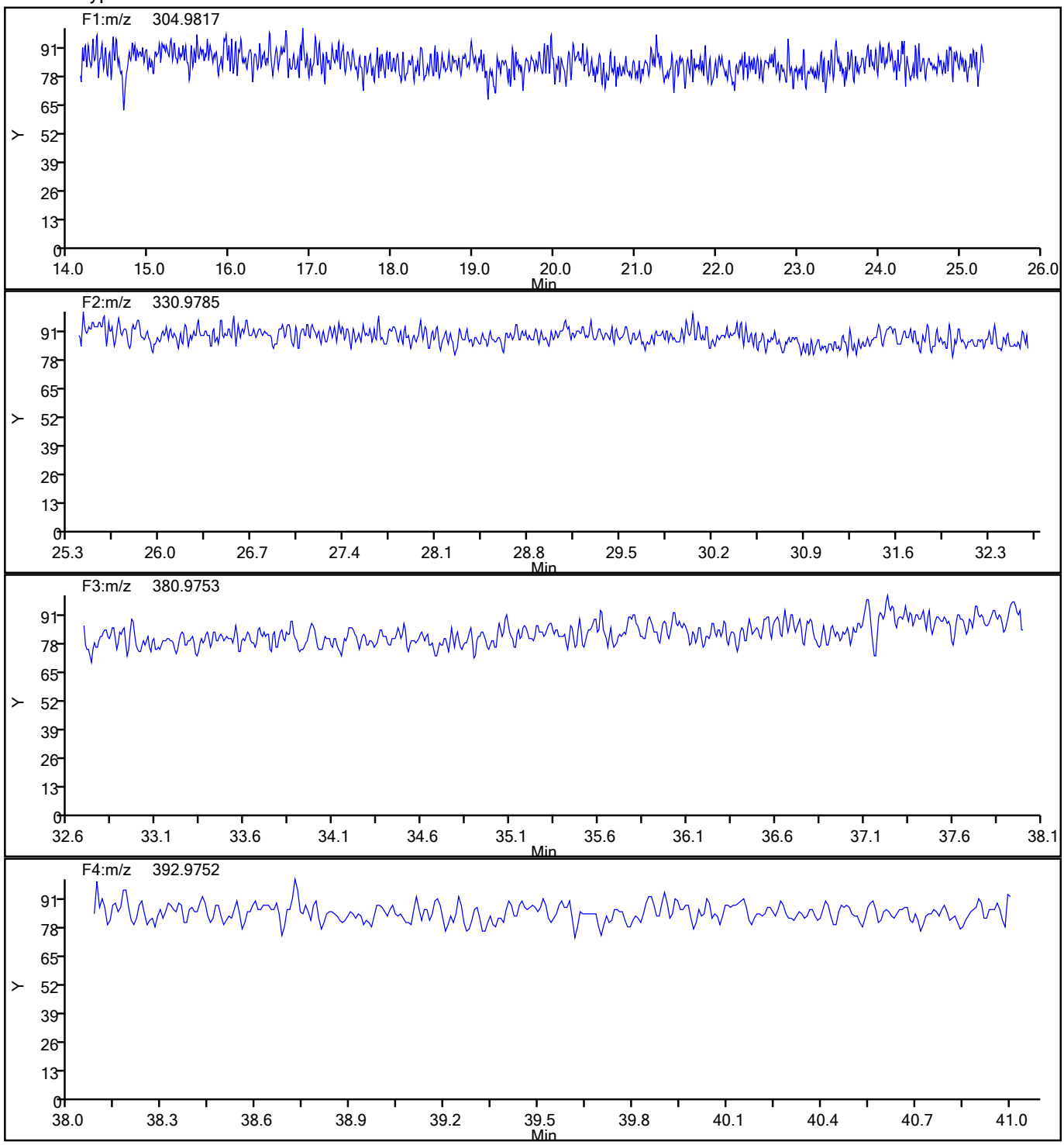

774033

Report Date: 16-Aug-2021 12:24:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210813-124906.b\13au21dfs1_17.d		
Injection Date:	14-Aug-2021 01:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516475	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

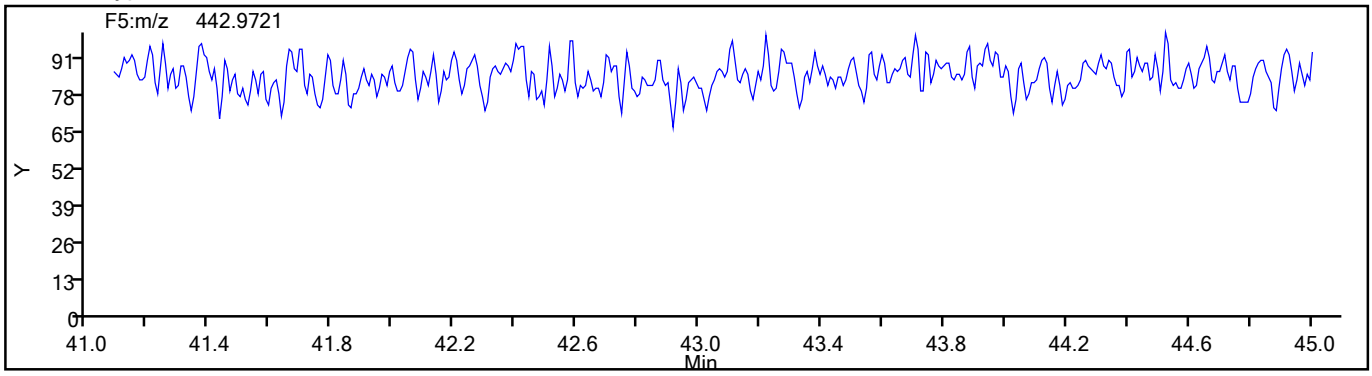

774034

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513227/1-A

Matrix: Sediment Lab File ID: 12AU2110D5_25.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/05/2021 06:41

Sample wt/vol: 10(g) Date Analyzed: 08/13/2021 06:33

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 515770 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.038
51207-31-9	2,3,7,8-TCDF	0.113	J	1.0	0.021
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.051
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.035
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.035
39227-28-6	1,2,3,4,7,8-HxCDD	0.175	J	5.0	0.030
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.032
19408-74-3	1,2,3,7,8,9-HxCDD	0.0808	J	5.0	0.028
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.026
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.026
72918-21-9	1,2,3,7,8,9-HxCDF	0.150	J	5.0	0.021
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.021
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.227	J	5.0	0.044
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.143	J	5.0	0.029
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.036
3268-87-9	OCDD	0.685	J	10	0.042
39001-02-0	OCDF	0.144	J	10	0.023
41903-57-5	Total TCDD	0.0948	J	1.0	0.038
30402-14-3	Total TCDF	0.210	J	1.0	0.021
36088-22-9	Total PeCDD	ND		5.0	0.051
30402-15-4	Total PeCDF	ND		5.0	0.035
34465-46-8	Total HxCDD	0.451	J	5.0	0.030
55684-94-1	Total HxCDF	0.150	J	5.0	0.023
37871-00-4	Total HpCDD	0.472	J	5.0	0.044
38998-75-3	Total HpCDF	0.143	J	5.0	0.032

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513227/1-A

Matrix: Sediment Lab File ID: 12AU2110D5_25.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/05/2021 06:41

Sample wt/vol: 10(g) Date Analyzed: 08/13/2021 06:33

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 515770 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	62		25-164
89059-46-1	13C-2,3,7,8-TCDF	58		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	63		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	59		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	64		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	64		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	58		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	61		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	56		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	57		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	56		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	69		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	65		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	73		26-138
114423-97-1	13C-OCDD	79		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	80		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Sample Type: MB
Inject. Date: 13-Aug-2021 06:33:12 ALS Bottle#: 29 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513227/1-a mb 320-513227/1-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:38:33 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: arghestanis Date: 13-Aug-2021 15:39:03

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	90453078	0.81	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.341	85218486	0.78	1.6249	58.0	58.0	0.0748	0.0748	57.98	
2,3,7,8-TCDF	17.356	49197	0.77	1.0239	0.0635	0.0564	0.0106	0.0106		RQM
A Non-2,3,7,8-sub-TCDF	17.069	42477	0.77	1.0239	0.0527	0.0487	0.0106	0.0280		RQM
S Total TCDF					0.1162	0.1051	0.0106	0.0106		RQ
D 13C-2,3,7,8-TCDD	18.051	50509663	0.80	0.8993	62.1	62.1	0.1061	0.1061	62.09	
2,3,7,8-TCDD	18.082						0.0192	0.0192		
$ 37Cl4-2,3,7,8-TCDD	18.082	31903597		1.1071	31.9	31.9	0.0398	0.0398	79.64	
A Non-2,3,7,8-sub-TCDD	17.530	30012	0.77	1.2541	0.0562	0.0474	0.0192	0.0474		RQM
S Total TCDD					0.0562	0.0474	0.0192	0.0192		RQ
D 13C-1,2,3,7,8-PeCDF	22.394	65069343	1.58	1.2101	59.4	59.4	0.1631	0.1631	59.45	
1,2,3,7,8-PeCDF	22.435						0.0174	0.0174		
D 13C-2,3,4,7,8-PeCDF	23.744	71308997	1.55	1.2395	63.6	63.6	0.1592	0.1592	63.60	
2,3,4,7,8-PeCDF	23.785						0.0177	0.0177		
A F1 PeCDFs	20.108						0.0151	0.0151		
A Non-2,3,7,8-sub-PeCDF	23.261						0.0176	0.0176		
S Total PeCDF							0.0177	0.0177		
D 13C-1,2,3,7,8-PeCDD	24.467	43274763	1.62	0.7612	62.8	62.8	0.0728	0.0728	62.85	
1,2,3,7,8-PeCDD	24.508						0.0255	0.0255		
A Non-2,3,7,8-sub-PeCDD	23.376						0.0255	0.0255		
S Total PeCDD							0.0255	0.0255		
D 13C-1,2,3,4,7,8-HxCDF	30.543	60441115	0.52	1.0837	61.2	61.2	0.2454	0.2454	61.18	
1,2,3,4,7,8-HxCDF	30.569						0.0129	0.0129		
D 13C-1,2,3,6,7,8-HxCDF	30.716	57997430	0.52	1.1279	56.4	56.4	0.2357	0.2357	56.40	
1,2,3,6,7,8-HxCDF	30.743						0.0132	0.0132		
D 13C-2,3,4,6,7,8-HxCDF	31.541	54230740	0.52	1.0637	55.9	55.9	0.2500	0.2500	55.92	
2,3,4,6,7,8-HxCDF	31.554						0.0105	0.0105		
D 13C-1,2,3,7,8,9-HxCDF	32.340	50175822	0.51	0.9676	56.9	56.9	0.2748	0.2748	56.88	
1,2,3,7,8,9-HxCDF	32.353	43785	1.22	1.1664	0.0748	0.0748	0.0103	0.0103		M
A Non-2,3,7,8-sub-HxCDF	30.223						0.0116	0.0116		U
S Total HxCDF					0.0748	0.0748	0.0117	0.0117		

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.153	91169991	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.727	43060275	1.25	0.7334	64.4	64.4	0.3022	0.3022	64.40	
1,2,3,4,7,8-HxCDD	31.727	40086	1.15	1.0640	0.0875	0.0875	0.0149	0.0149		M
D 13C-1,2,3,6,7,8-HxCDD	31.834	46827760	1.25	0.8802	58.4	58.4	0.2518	0.2518	58.36	
1,2,3,6,7,8-HxCDD	31.727						0.0158	0.0158		MU
1,2,3,7,8,9-HxCDD	32.153	20562	1.30	1.1325	0.0404	0.0404	0.0140	0.0140		M
A Non-2,3,7,8-sub-HxCDD	30.895	46691	1.35	1.0655	0.0975	0.0975	0.0149	0.0975		
S Total HxCDD					0.2254	0.2254	0.0149	0.0149		
1,2,3,4,6,7,8-HpCDF	33.790	47374	1.04	1.4413	0.0785	0.0714	0.0144	0.0144		RQM
D 13C-1,2,3,4,6,7,8-HpCDF	33.778	46022090	0.44	0.7730	65.3	65.3	0.6494	0.6494	65.30	
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	46899704	0.43	0.7008	73.4	73.4	0.7164	0.7164	73.40	
1,2,3,4,7,8,9-HpCDF	34.872						0.0178	0.0178		
A Non-2,3,7,8-sub-HpCDF	34.325						0.0160	0.0160		
S Total HpCDF					0.0785	0.0714	0.0161	0.0161		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	40478510	1.01	0.6472	68.6	68.6	0.5696	0.5696	68.60	
1,2,3,4,6,7,8-HpCDD	34.580	50331	0.91	1.0943	0.1136	0.1136	0.0221	0.0221		M
A Non-2,3,7,8-sub-HpCDD	34.301	54127	1.17	1.0943	0.1222	0.1222	0.0221	0.1222		M
S Total HpCDD					0.2358	0.2358	0.0221	0.0221		
D 13C-OCDD	36.938	64195397	0.88	0.4472	157.5	157.5	0.2117	0.2117	78.73	
OCDF	37.022	33267	0.80	1.4382	0.0721	0.0721	0.0114	0.0114		M
OCDD	36.950	121729	0.94	1.1070	0.3426	0.3426	0.0208	0.0208		M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Sample Type: MB
Inject. Date: 13-Aug-2021 06:33:12 ALS Bottle#: 29 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513227/1-a mb 320-513227/1-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:38:33 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: arghestanis Date: 13-Aug-2021 15:39:03

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.855	17.885	-2		40541582	9681927	4212	10530	2299		a
333.9339	17.855	17.885	-2		49911496	11983288	4057	10142	2954	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.356	-1	0.971	37272505	8496775	6038	15095	1407		
317.9389	17.341	17.356	-1	0.971	47945981	10892393	4500	11250	2421	0.78(0.65-0.89)	
2,3,7,8-TCDF											RQM
303.9016	17.356	17.386	-2	1.001	27656	4988	322	805	15		
	Empc Correction				21402	4063	322	805	13		
305.8987	17.356	17.386	-2	1.001	27795	5277	520	1300	10	0.99(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	16.207	17.069	-52	0.935	10281	2816	322	805	9		
305.8987	16.222	17.069	-51	0.935	14124	3469	520	1300	7	0.73(0.65-0.89)	M
303.9016	16.978	17.069	-5	0.979	7862	1620	322	805	5		
305.8987	16.993	17.069	-5	0.980	13686	2377	520	1300	5	0.57(0.65-0.89)	
	Empc Correction				10210	2103	520	1300	4		
13C-2,3,7,8-TCDD											
331.9368	18.051	18.066	-1	1.011	22485679	4832185	4212	10530	1147		
333.9339	18.051	18.066	-1	1.011	28023984	5971223	4057	10142	1472	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.082						554	1385			
321.8936	18.082						489	1222			
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.097	-1	1.013	31903597	7091102	3822	9555	1855		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											RQM
319.8965	15.829	17.530	-102	0.877	18623	4626	554	1385	8		M
	Empc Correction				13056	4135	554	1385	7		
321.8936	15.844	17.530	-101	0.878	16956	5371	489	1222	11	1.10(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.394	22.408	-1	1.254	39822424	6340893	10015	25037	633		
353.8970	22.408	22.408	0	1.255	25246919	4018427	7088	17720	567	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.435						274	685			
341.8567	22.435						493	1232			
13C-2,3,4,7,8-PeCDF											
351.9000	23.744	23.758	-1	1.330	43396772	6394267	10015	25037	638		
353.8970	23.744	23.758	-1	1.330	27912225	4224405	7088	17720	596	1.55(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.785						274	685			
341.8567	23.785						493	1232			
A F1 PeCDFs											
339.8597	20.108						197	492			
341.8567	20.108						464	1160			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.261						274	685			
341.8567	23.261						493	1232			
13C-1,2,3,7,8-PeCDD											
367.8949	24.467	24.481	-1	1.370	26741295	3836678	2698	6745	1422		
369.8919	24.480	24.481	0	1.371	16533468	2381262	2102	5255	1133	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.508						470	1175			
357.8516	24.508						194	485			
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.376						470	1175			
357.8516	23.376						194	485			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.543	30.543	0	0.950	20620868	3857780	8836	22090	437		
385.8610	30.543	30.543	0	0.950	39820247	7441660	17081	42702	436	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.569						376	940			
375.8178	30.569						258	645			
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.716	30.716	0	0.955	19839438	3609360	8836	22090	408		
385.8610	30.716	30.716	0	0.955	38157992	7031345	17081	42702	412	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.743						376	940			
375.8178	30.743						258	645			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.541	31.541	0	0.981	18609402	4518056	8836	22090	511		
385.8610	31.541	31.541	0	0.981	35621338	8420974	17081	42702	493	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.554						376	940			
375.8178	31.554						258	645			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.340	32.340	0	1.006	16937650	4420201	8836	22090	500		
385.8610	32.340	32.340	0	1.006	33238172	8710845	17081	42702	510	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.353	32.353	0	1.000	24026	6689	376	940	18		M
375.8178	32.353	32.353	0	1.000	19759	5147	258	645	20	1.22(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.223						376	940			
375.8178	30.223						258	645			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.153	0		50710568	13477079	12948	32370	1041		
403.8529	32.153	32.153	0		40459423	10891510	8658	21645	1258	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.727	31.727	0	0.987	23908974	6551480	12948	32370	506		
403.8529	31.727	31.727	0	0.987	19151301	5249812	8658	21645	606	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.727	31.741	-1	1.000	21452	6596	461	1152	14		M
391.8127	31.740	31.741	0	1.000	18634	5168	288	720	18	1.15(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.834	31.834	0	0.990	25991842	6590940	12948	32370	509		
403.8529	31.834	31.834	0	0.990	20835918	5225164	8658	21645	604	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											MU
389.8157	31.847						461	1152			
391.8127	31.847						288	720			
1,2,3,7,8,9-HxCDD											M
389.8157	32.153	32.167	-1	1.013	11606	2791	461	1152	6		M
391.8127	32.140	32.167	-2	1.013	8956	1774	288	720	6	1.30(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.609	30.895	-17	0.962	26839	3964	461	1152	9		
391.8127	30.609	30.895	-17	0.962	19852	2733	288	720	9	1.35(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7818	33.790	33.778	1	1.000	28845	11180	877	2192	13		M
	Empc Correction				24151	7325	877	2192	8		
409.7789	33.790	33.778	1	1.000	23223	7044	358	895	20	1.24(0.88-1.20)	M
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.778	33.778	0	1.051	14093307	4611356	16510	41275	279		
419.8220	33.778	33.778	0	1.051	31928783	10278091	32426	81065	317	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.860	0	1.084	14011456	3934673	16510	41275	238		
419.8220	34.860	34.860	0	1.084	32888248	9213516	32426	81065	284	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872						877	2192			
409.7789	34.872						358	895			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						877	2192			
409.7789	34.325						358	895			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.075	20356779	6160846	16762	41905	368		
437.8140	34.568	34.568	0	1.075	20121731	6036944	19173	47932	315	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											M
423.7766	34.580	34.580	0	1.000	23972	6891	638	1595	11		M
425.7737	34.580	34.580	0	1.000	26359	7174	541	1352	13	0.91(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											M
423.7766	34.033	34.301	-16	0.985	29228	8957	638	1595	14		M
425.7737	34.021	34.301	-17	0.984	24899	9095	541	1352	17	1.17(0.88-1.20)	
13C-OCDD											
469.7779	36.938	36.926	1	1.149	29967782	7349230	3754	9385	1958		
471.7750	36.938	36.926	1	1.149	34227615	8271888	5473	13682	1511	0.88(0.76-1.02)	
OCDF											M
441.7428	37.022	37.034	-1	1.002	14811	3420	233	582	15		M
443.7399	37.034	37.034	0	1.003	18456	4674	278	695	17	0.80(0.76-1.02)	M
OCDD											M
457.7377	36.950	36.938	1	1.000	59137	14677	345	862	43		M
459.7348	36.938	36.938	0	1.000	62592	14992	376	940	40	0.94(0.76-1.02)	M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Inject. Date: 13-Aug-2021 06:33:12 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 3

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	85218486	19389168

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	85218486	19389168

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.207	10281	2816	14124	3469	0.0280	0.73	M
16.978	7862	1620	13686	2377	0.0247	0.57	RQ
16.978	7862	1620	10210	2103	0.0207		Empc Correction
Signal Totals:							
	18143	4436	24334	5572			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	45953	10282				0.65	RQM
	42477	10008					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0527 = (45953 * 100.000) / (85218486 * 1.024)
Empc Amount: 0.0487 = (42477 * 100.000) / (85218486 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Inject. Date: 13-Aug-2021 06:33:12 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 3

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50509663	10803408

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50509663	10803408

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.829	18623	4626	16956	5371	0.0562	1.10	RQM
15.829	13056	4135	16956	5371	0.0474		Empc Correction
Signal Totals:							
	13056	4135	16956	5371			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	35579	9997				1.10	RQM
	30012	9506					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0562 = (35579 * 100.000) / (50509663 * 1.254)
Empc Amount: 0.0474 = (30012 * 100.000) / (50509663 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Inject. Date: 13-Aug-2021 06:33:12 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDF, RT: 30.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	60441115	11299440
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	57997430	10640705
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	54230740	12939030
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	50175822	13131046

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	55711276	12002555

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Inject. Date: 13-Aug-2021 06:33:12 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDD, RT: 30.895

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	43060275	11801292
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	46827760	11816104
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	44944017	11808698

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.609	26839	3964	19852	2733	0.0975	1.35	
Signal Totals:							
	26839	3964	19852	2733			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	46691	6697				1.35	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0975 = (46691 * 100.000) / (44944017 * 1.066)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Inject. Date: 13-Aug-2021 06:33:12 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 3

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	40478510	12197790

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	40478510	12197790

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.033	29228	8957	24899	9095	0.1222	1.17	M
Signal Totals:							
	29228	8957	24899	9095			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	54127	18052				1.17	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1222 = (54127 * 100.000) / (40478510 * 1.094)

QC Flag Legend

Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.36
Area: 26224
Amount: 0.061749
Amount Units: pg/ul

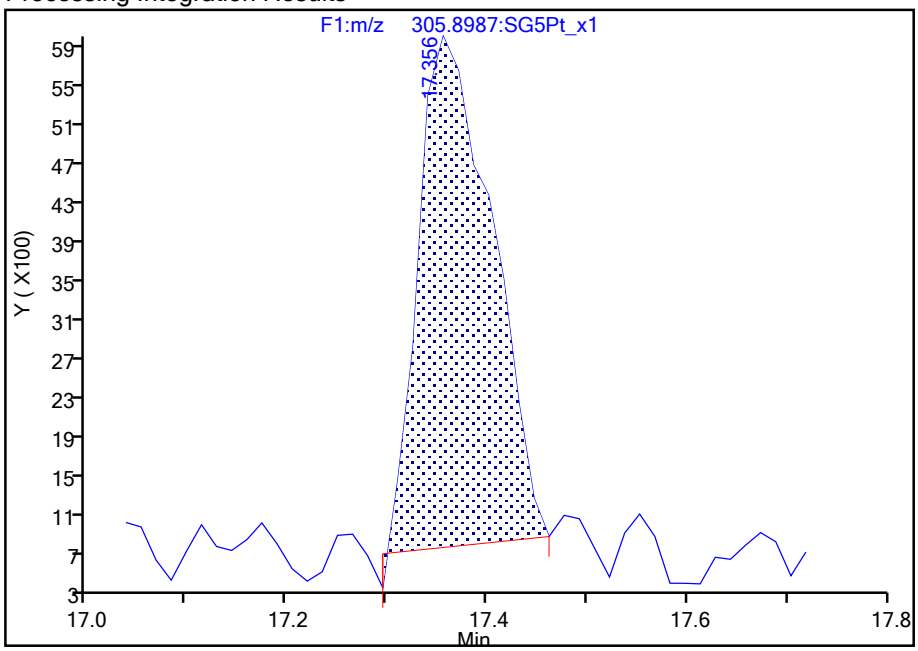

Manual Integration Results

RT: 17.36
Area: 27795
Amount: 0.063550
Amount Units: pg/ul

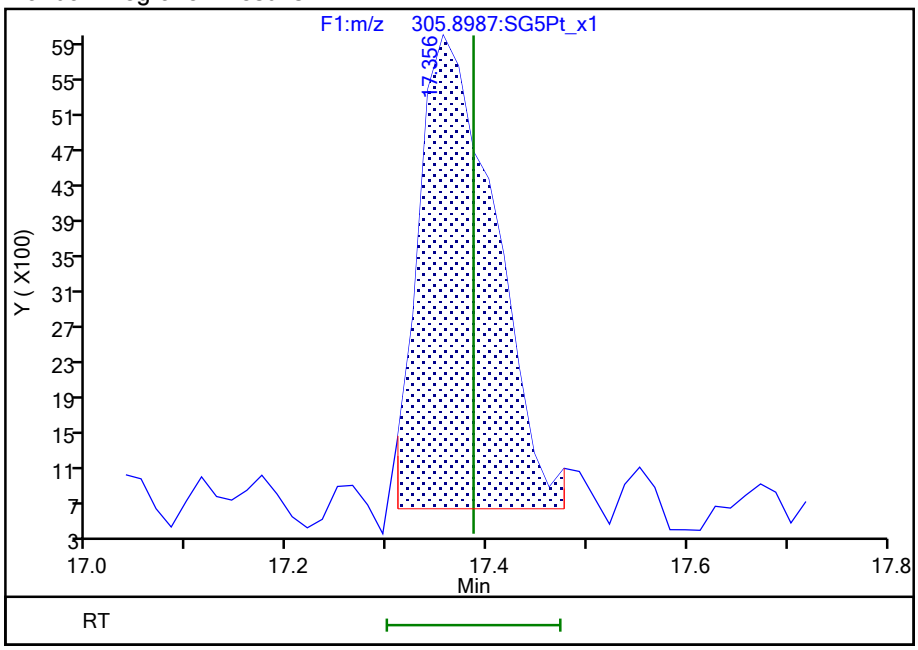

Reviewer: dadunj, 16-Aug-2021 13:35:47

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.91- 19.23)

Signal: 2

Processing Integration Results

RT = 16.222 Area = 16995

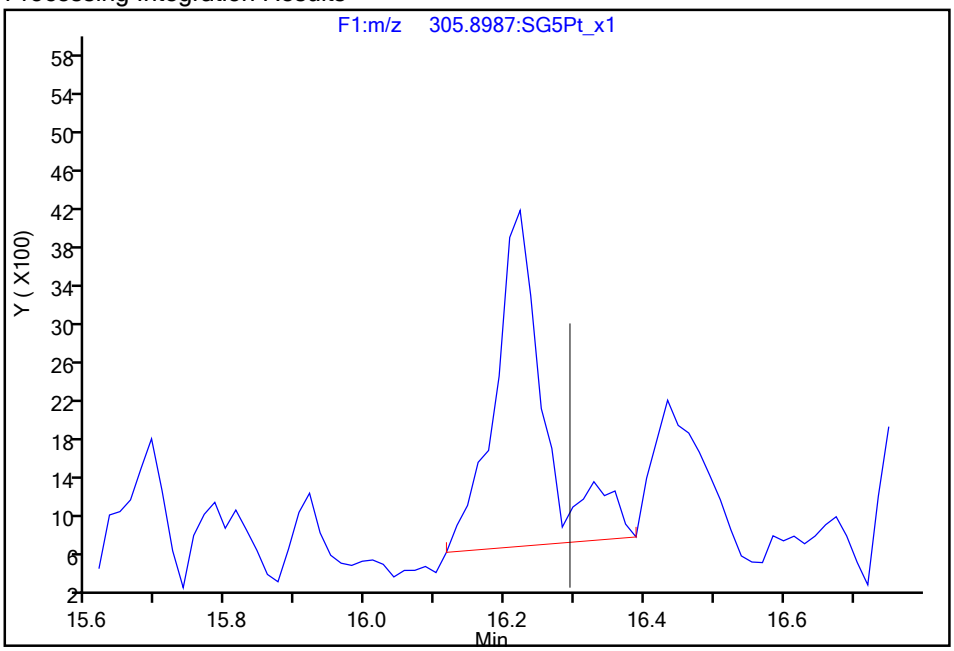

Manual Integration Results

RT = 16.222 Area = 14124 M

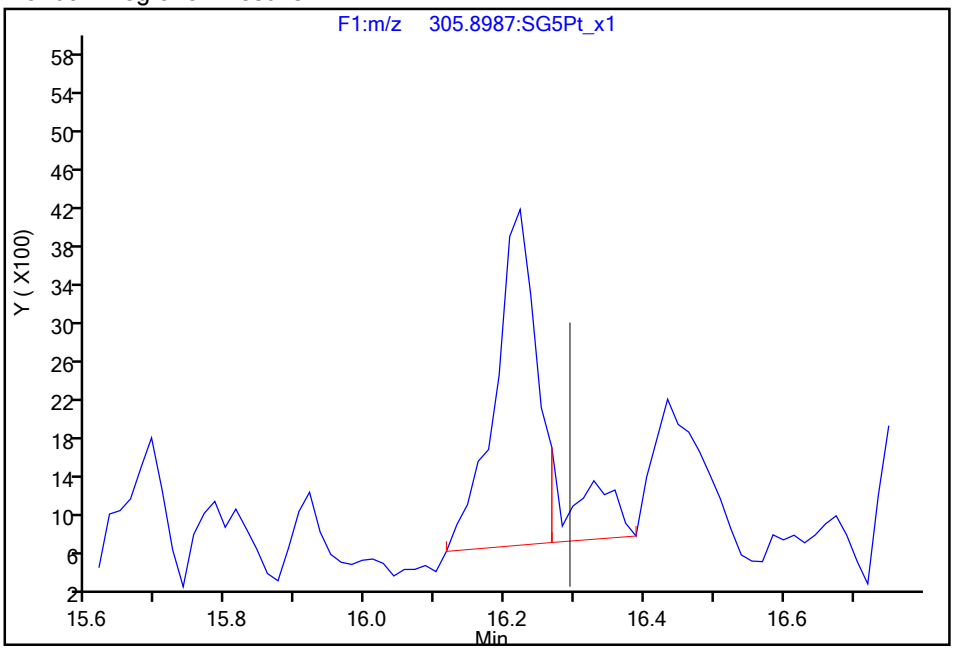

Reviewer: dadunj, 16-Aug-2021 13:35:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.83- 19.23)

Signal: 1

Processing Integration Results

RT = 15.829 Area = 35927

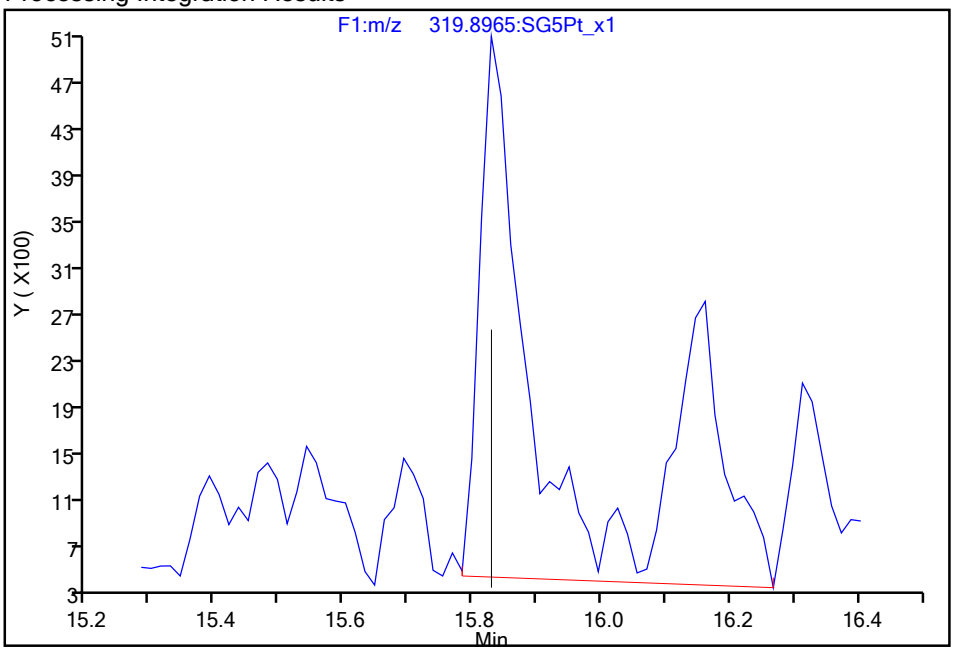

Manual Integration Results

RT = 15.829 Area = 18623 M

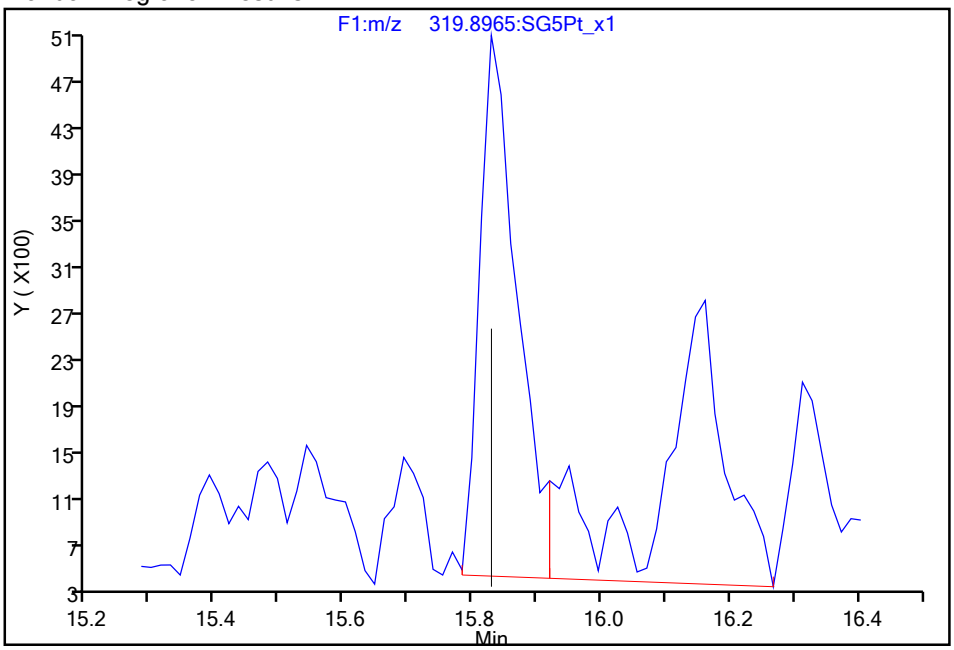

Reviewer: dadunj, 16-Aug-2021 13:36:05

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.35
Area: 34695
Amount: 0.104148
Amount Units: pg/ul

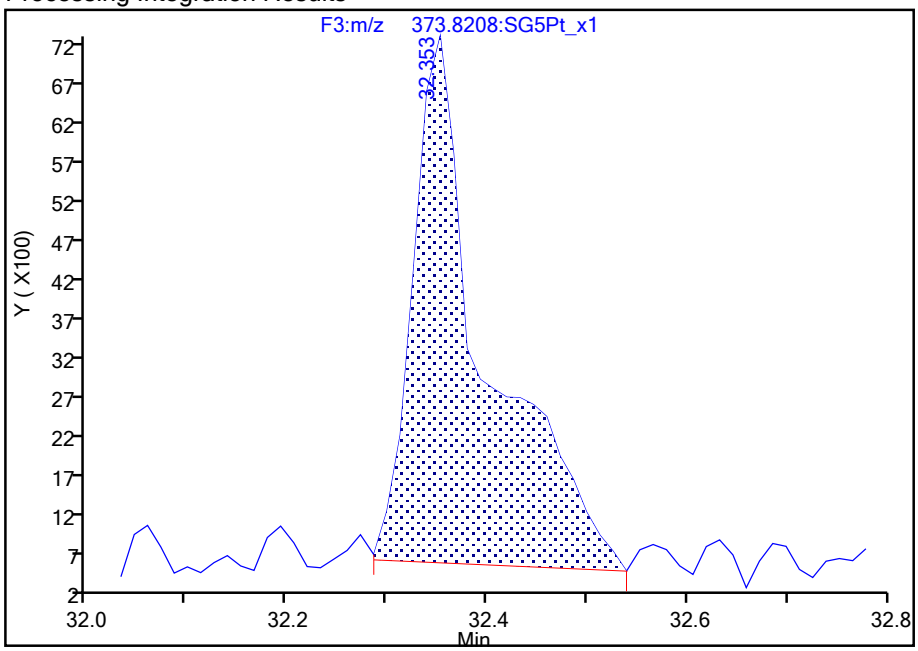

Manual Integration Results

RT: 32.35
Area: 24026
Amount: 0.074817
Amount Units: pg/ul

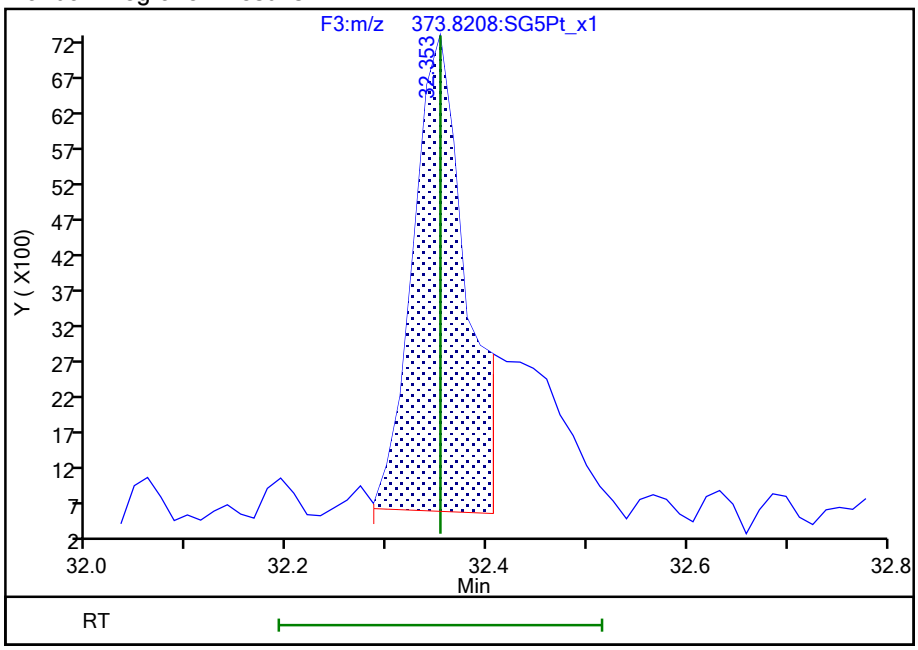

Reviewer: dadunj, 16-Aug-2021 13:36:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.35
Area: 26255
Amount: 0.104148
Amount Units: pg/ul

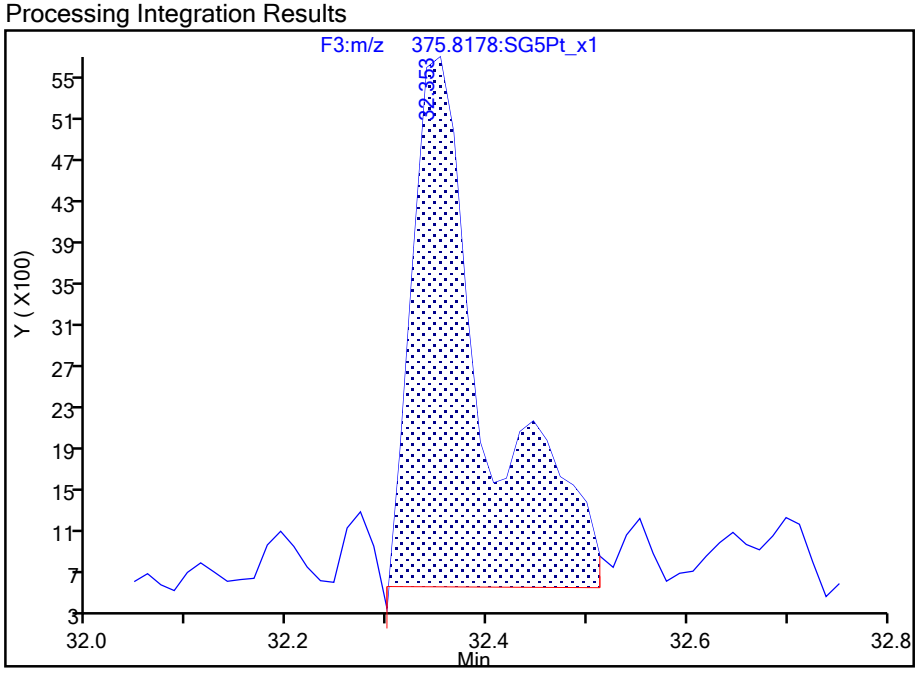

Manual Integration Results

RT: 32.35
Area: 19759
Amount: 0.074817
Amount Units: pg/ul

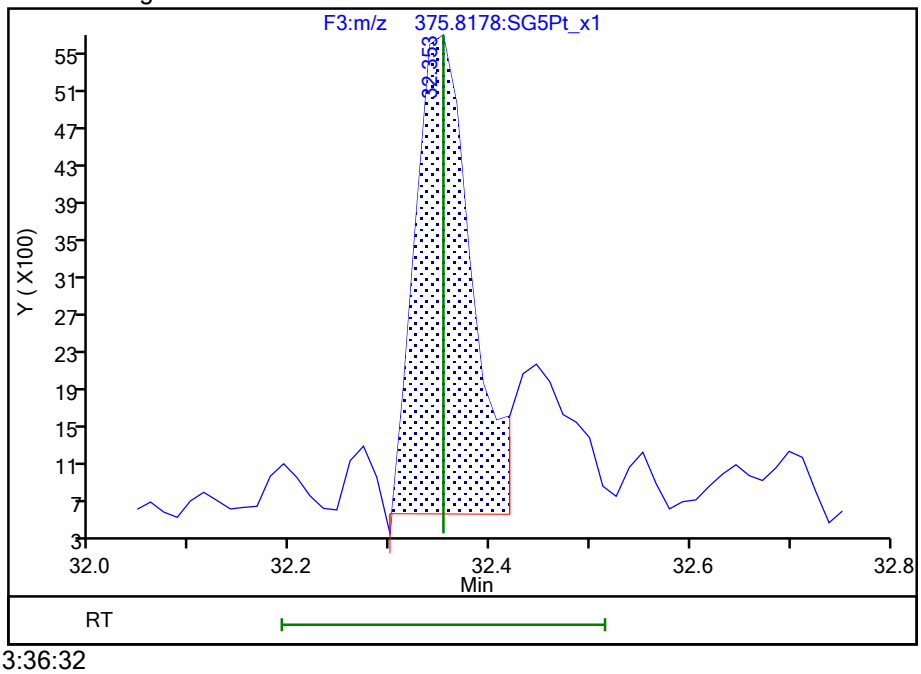

Reviewer: dadunj, 16-Aug-2021 13:36:32

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.74
Area: 23011
Amount: 0.099780
Amount Units: pg/ul

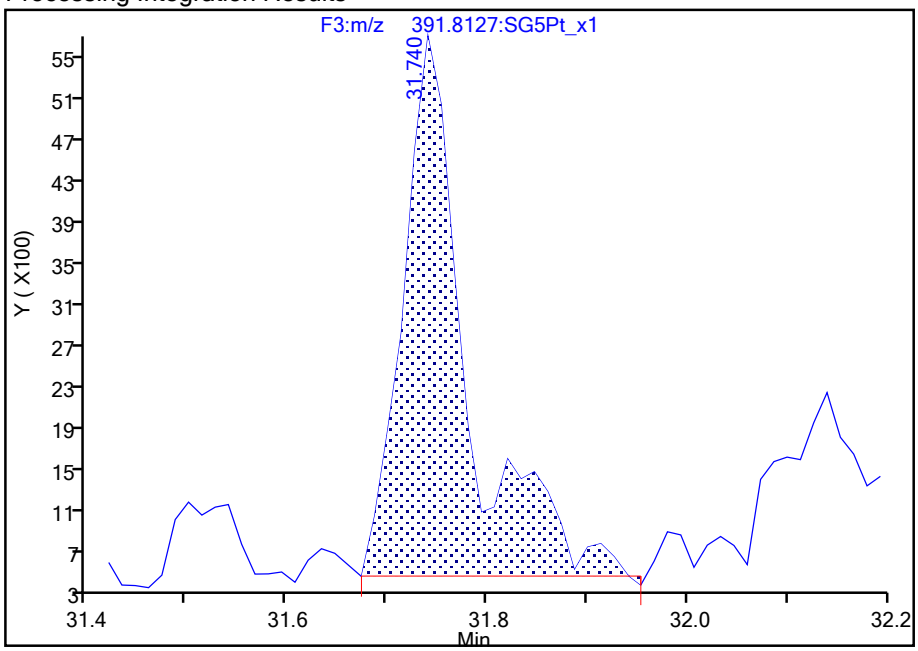

Manual Integration Results

RT: 31.74
Area: 18634
Amount: 0.087490
Amount Units: pg/ul

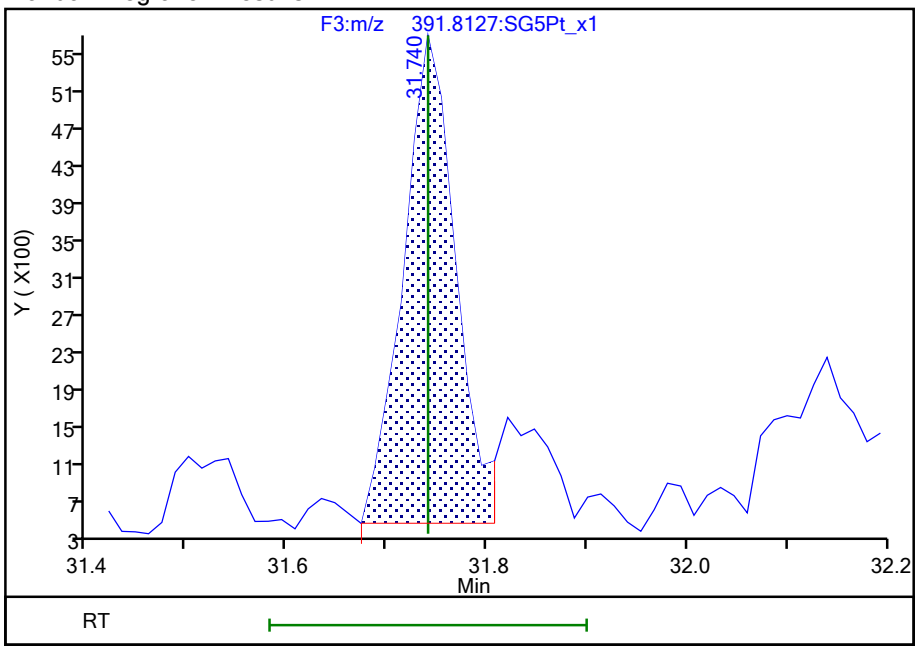

Reviewer: dadunj, 16-Aug-2021 13:36:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.73
Area: 22706
Amount: 0.099780
Amount Units: pg/ul

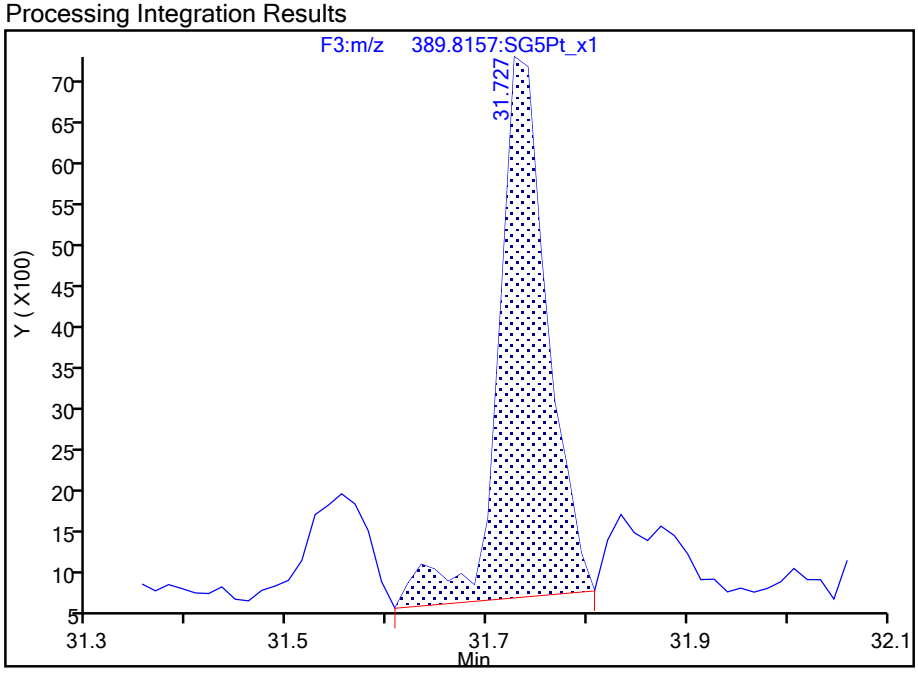

Manual Integration Results

RT: 31.73
Area: 21452
Amount: 0.087490
Amount Units: pg/ul

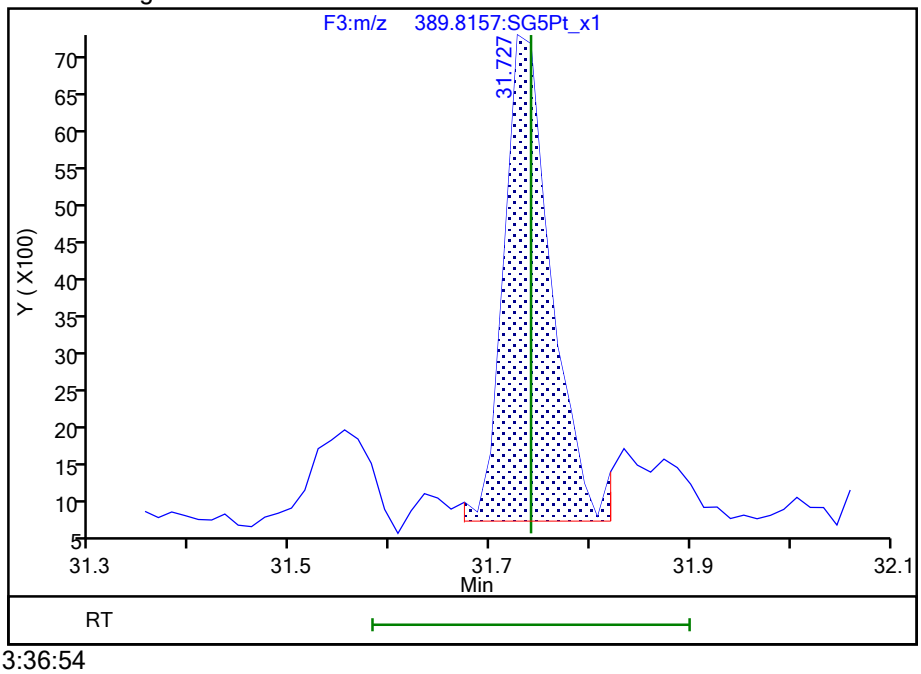

Reviewer: dadunj, 16-Aug-2021 13:36:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 32.15
Area: 15022
Amount: 0.051650
Amount Units: pg/ul

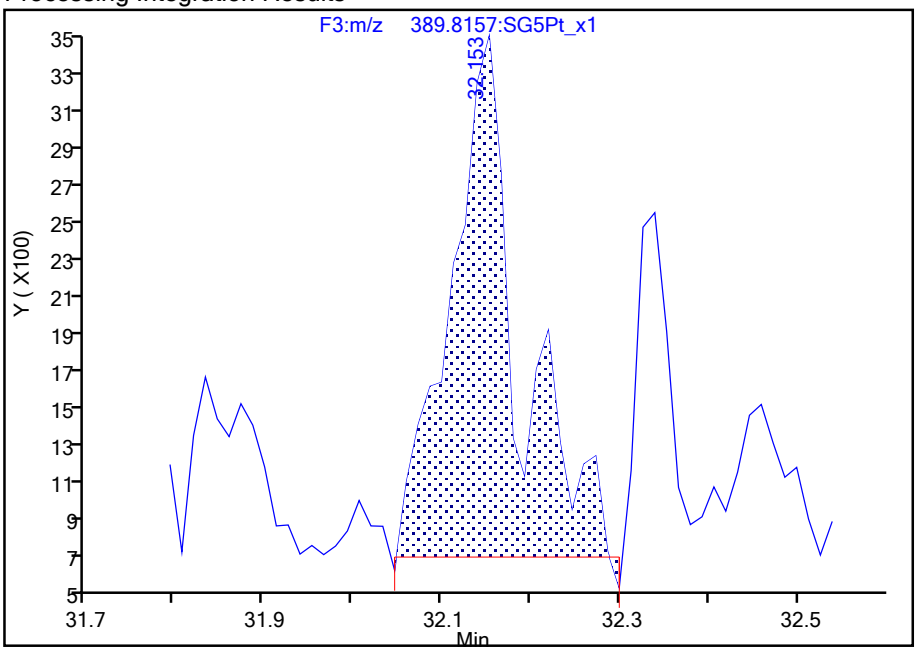

Manual Integration Results

RT: 32.15
Area: 11606
Amount: 0.040397
Amount Units: pg/ul

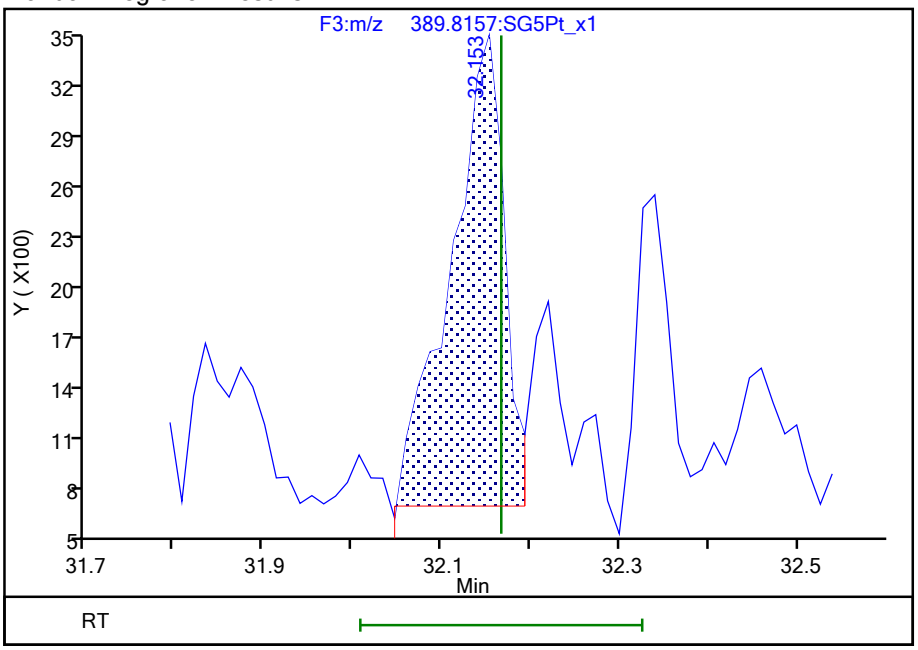

Reviewer: dadunj, 16-Aug-2021 13:37:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 32.14
Area: 11268
Amount: 0.051650
Amount Units: pg/ul

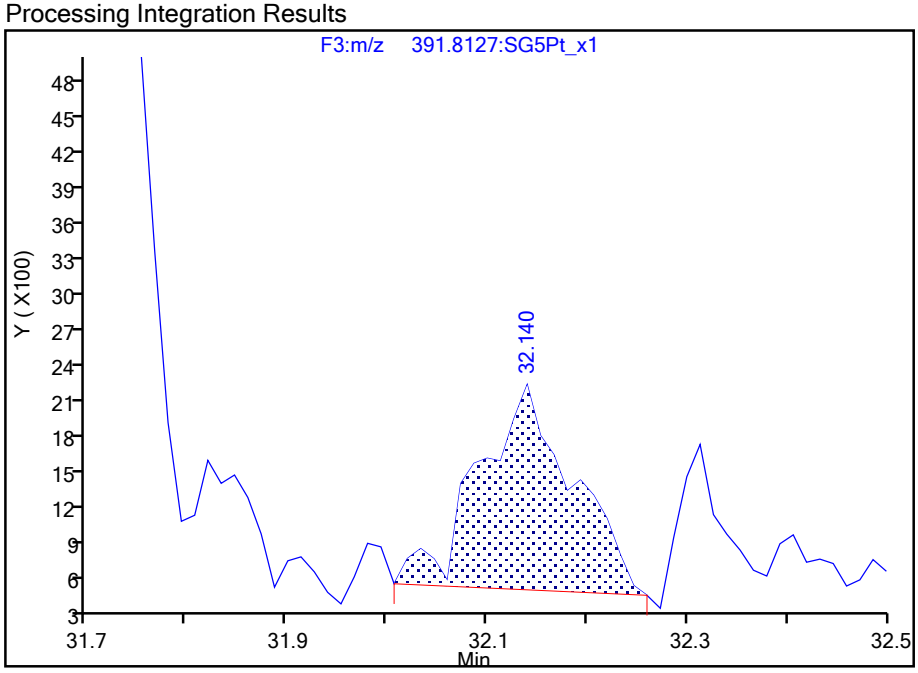

Manual Integration Results

RT: 32.14
Area: 8956
Amount: 0.040397
Amount Units: pg/ul

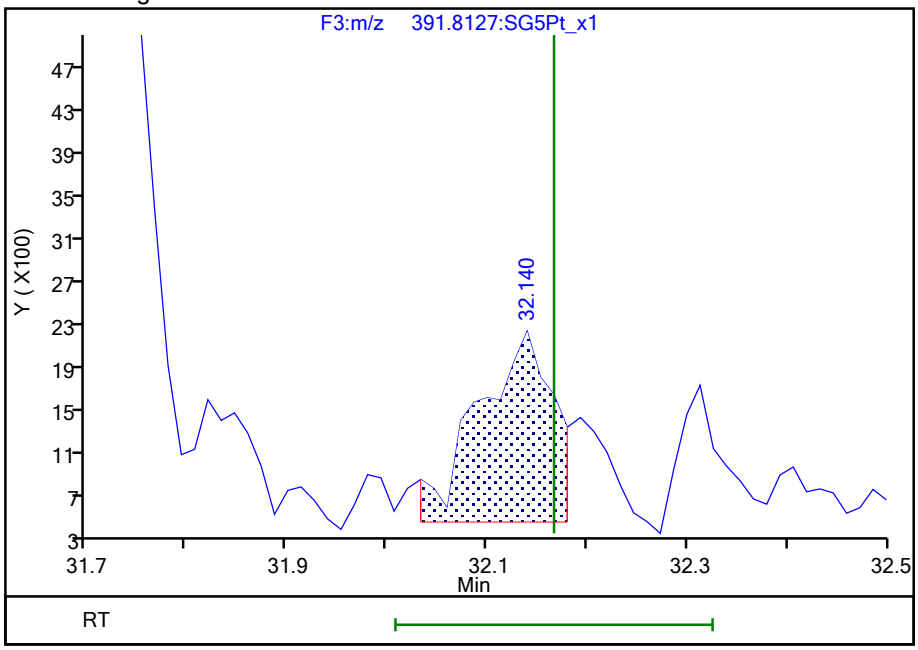

Reviewer: dadunj, 16-Aug-2021 13:37:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.79
Area: 35383
Amount: 0.090402
Amount Units: pg/ul

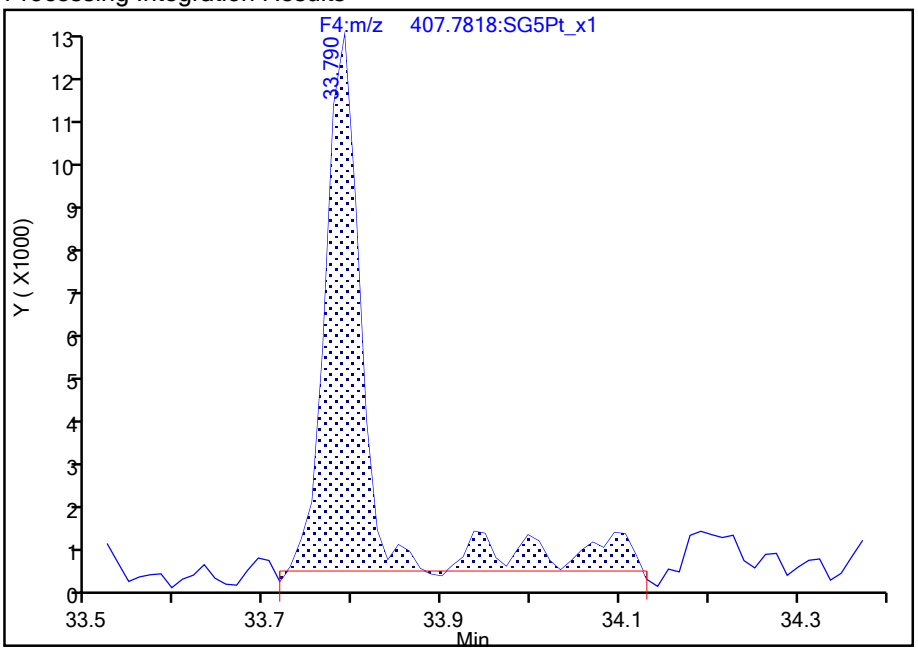

Manual Integration Results

RT: 33.79
Area: 28845
Amount: 0.078497
Amount Units: pg/ul

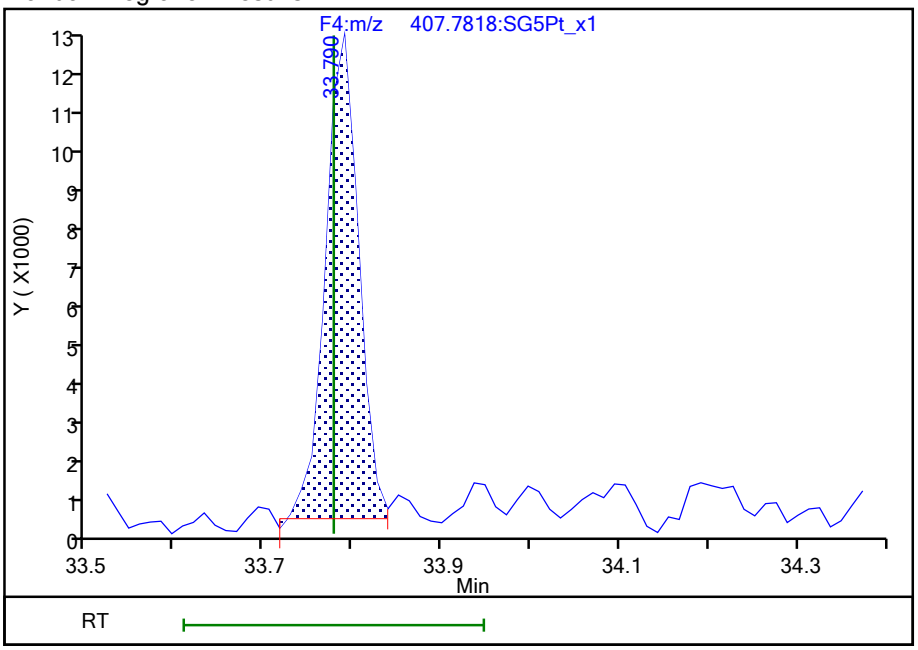

Reviewer: dadunj, 16-Aug-2021 13:37:25

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.79
Area: 24582
Amount: 0.090402
Amount Units: pg/ul

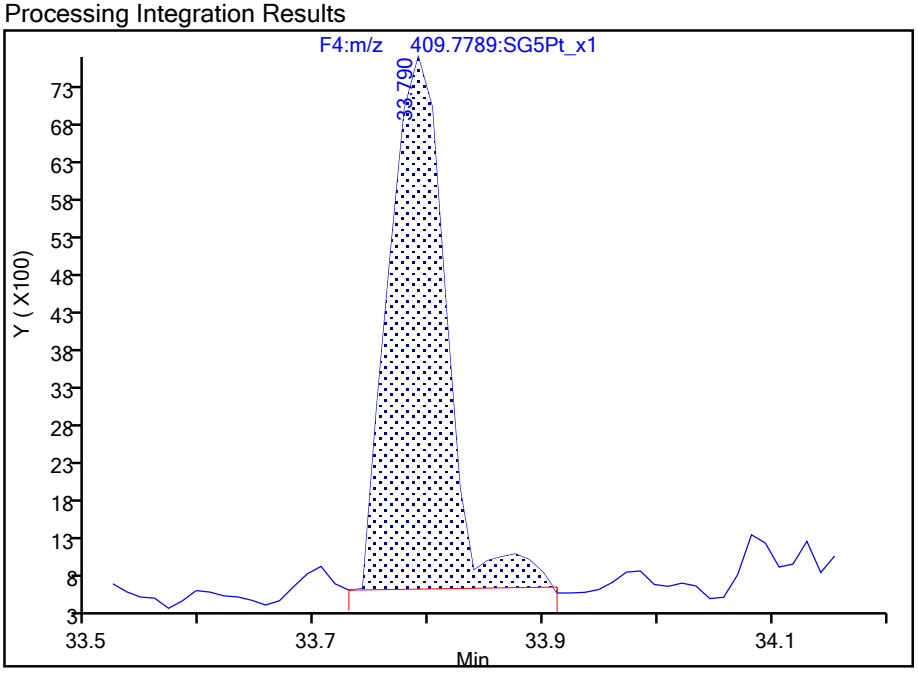

Manual Integration Results

RT: 33.79
Area: 23223
Amount: 0.078497
Amount Units: pg/ul

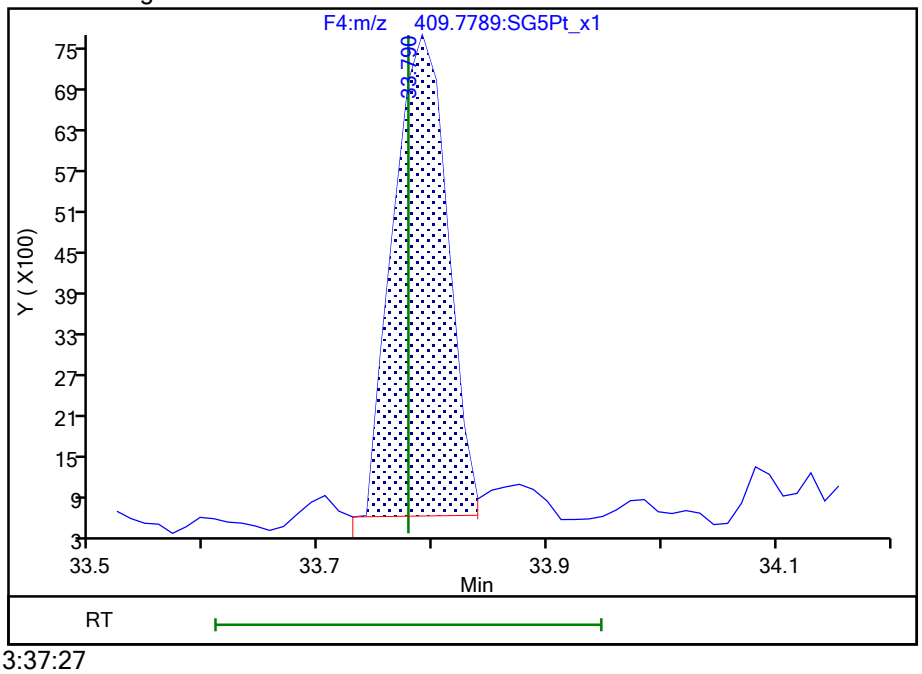

Reviewer: dadunj, 16-Aug-2021 13:37:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 34.58
Area: 27707
Amount: 0.125184
Amount Units: pg/ul

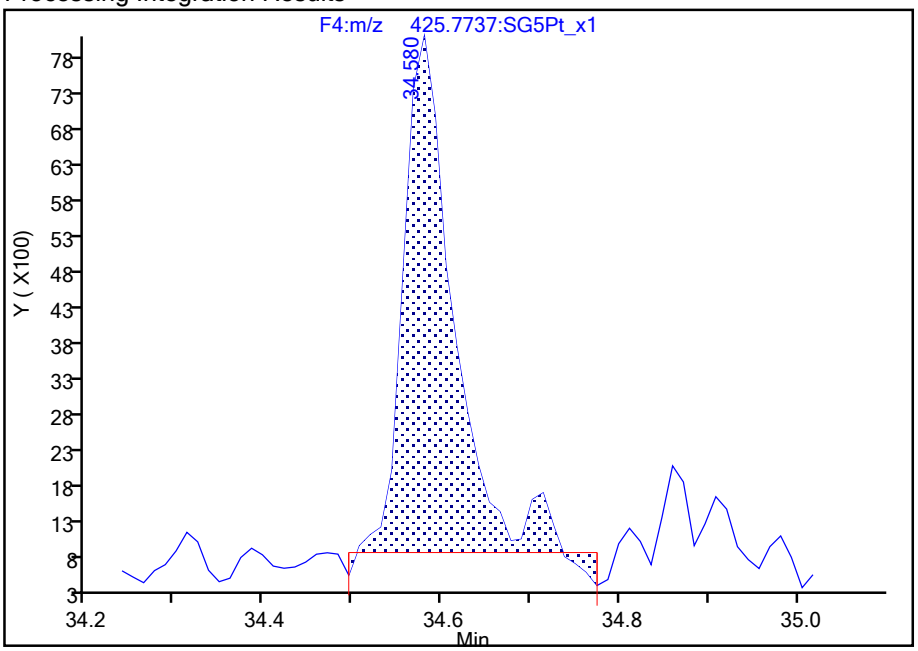

Manual Integration Results

RT: 34.58
Area: 26359
Amount: 0.113625
Amount Units: pg/ul

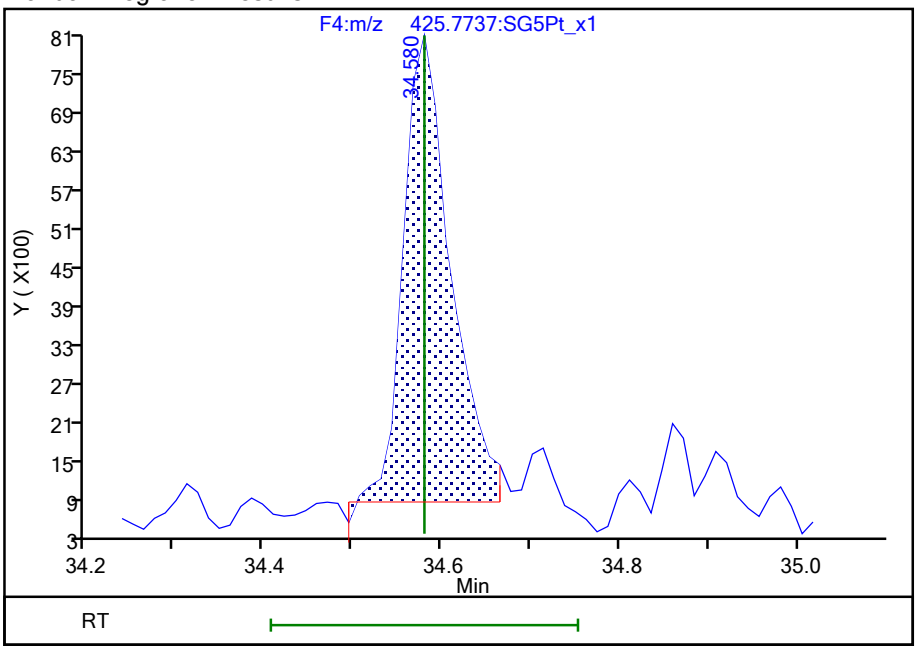

Reviewer: dadunj, 16-Aug-2021 13:37:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 34.58
Area: 27744
Amount: 0.125184
Amount Units: pg/ul

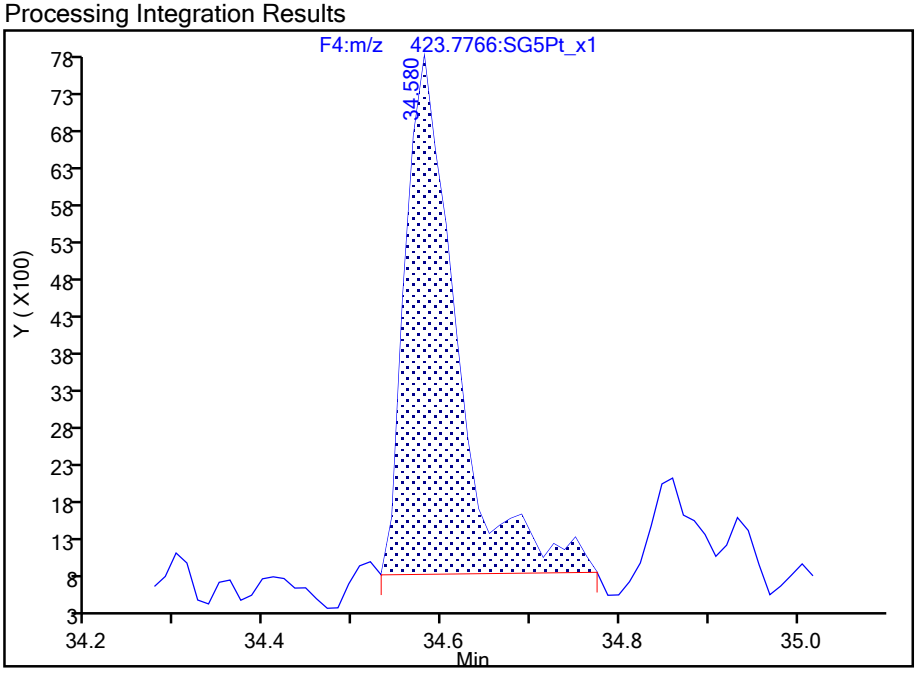

Manual Integration Results

RT: 34.58
Area: 23972
Amount: 0.113625
Amount Units: pg/ul

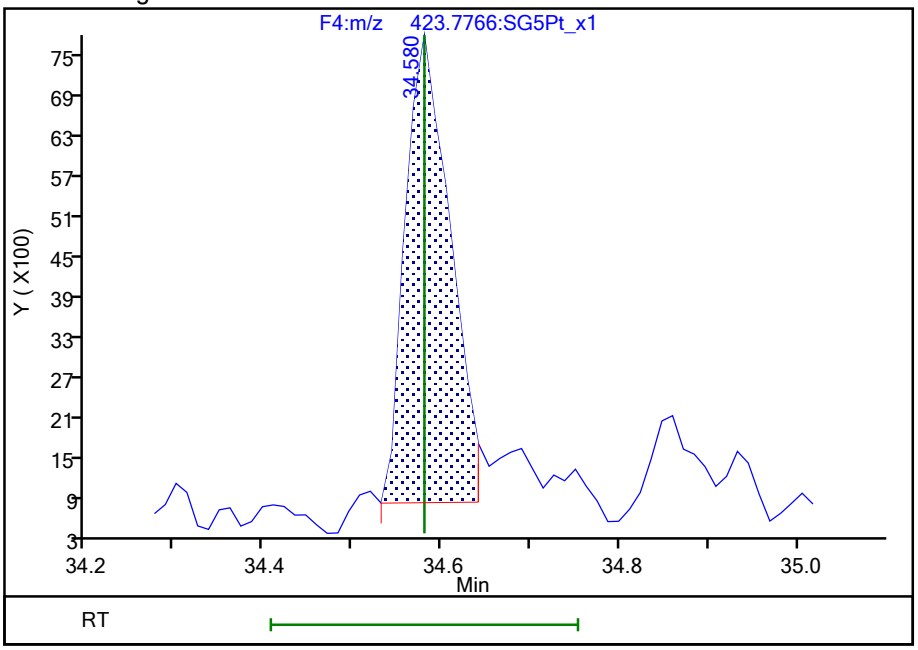

Reviewer: dadunj, 16-Aug-2021 13:37:38

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

774060

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 1, m/z: 423.7766, RT: (33.99- 34.61)

Signal: 1

Processing Integration Results

RT = 34.033 Area = 35409

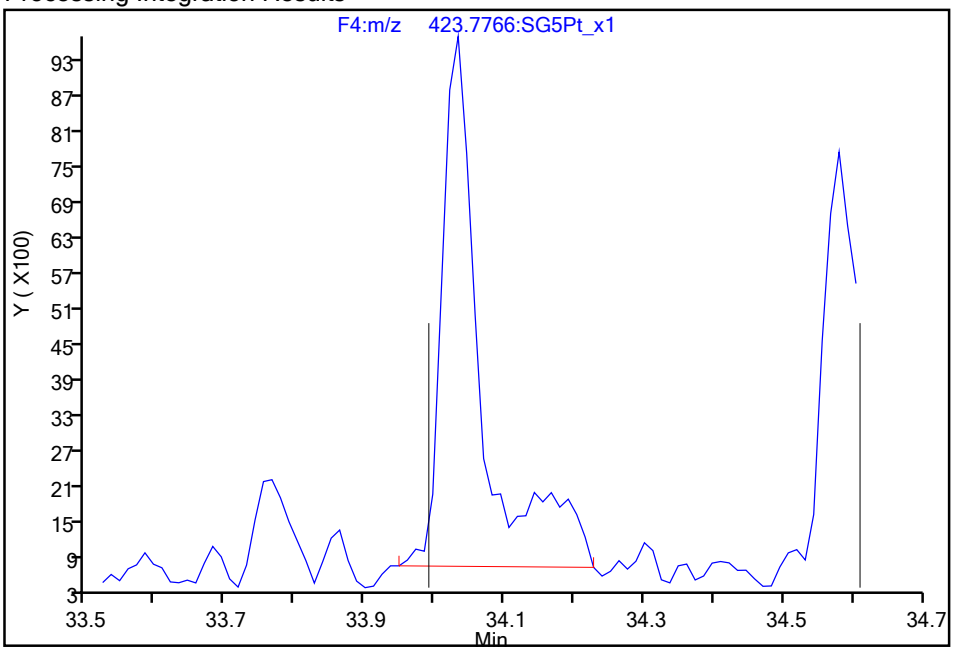

Manual Integration Results

RT = 34.033 Area = 29228 M

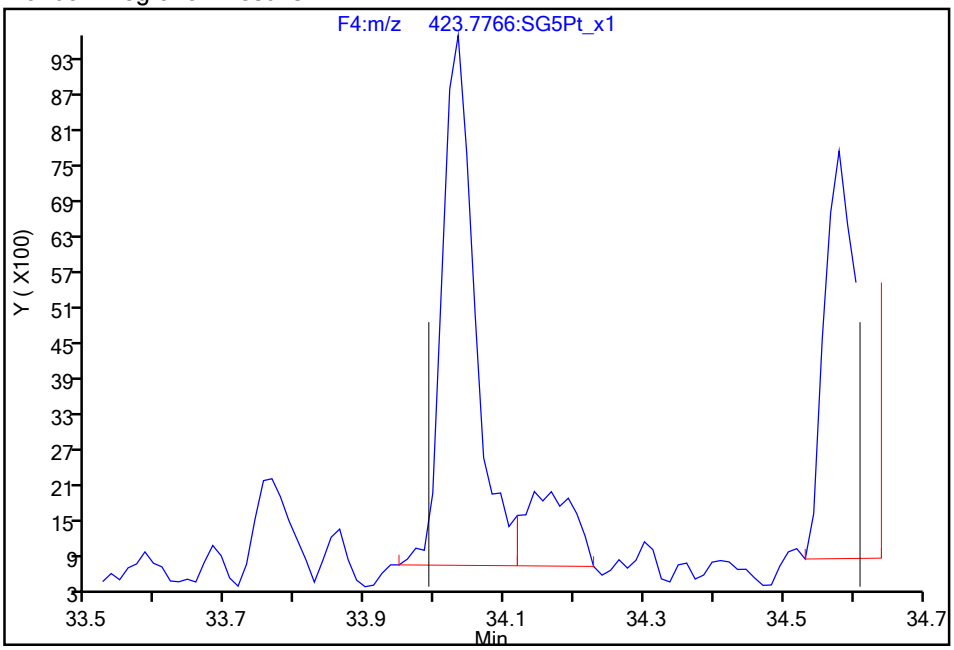

Reviewer: dadunj, 16-Aug-2021 13:37:40

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 18492
Amount: 0.086487
Amount Units: pg/ul

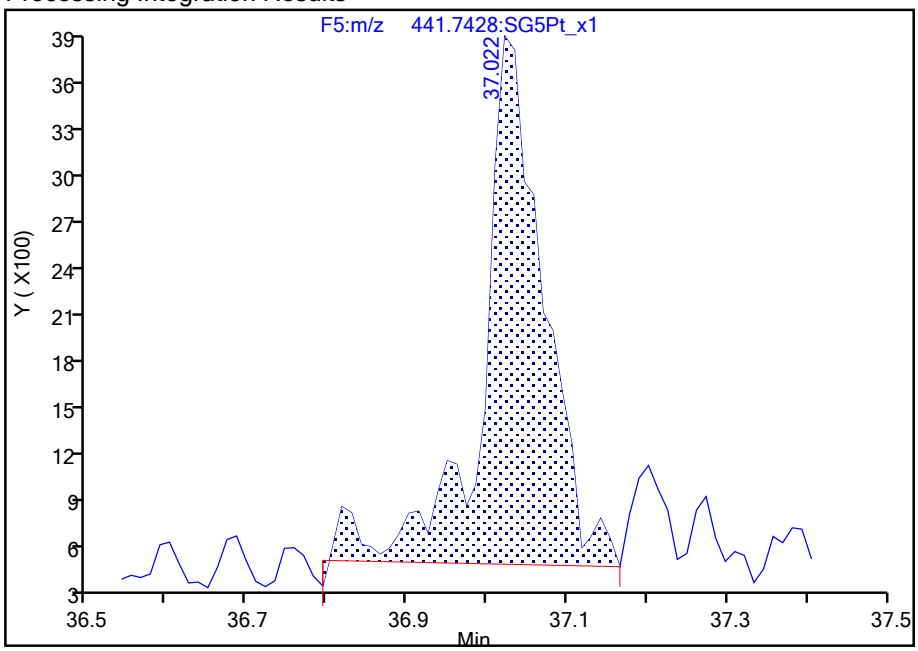

Manual Integration Results

RT: 37.02
Area: 14811
Amount: 0.072066
Amount Units: pg/ul

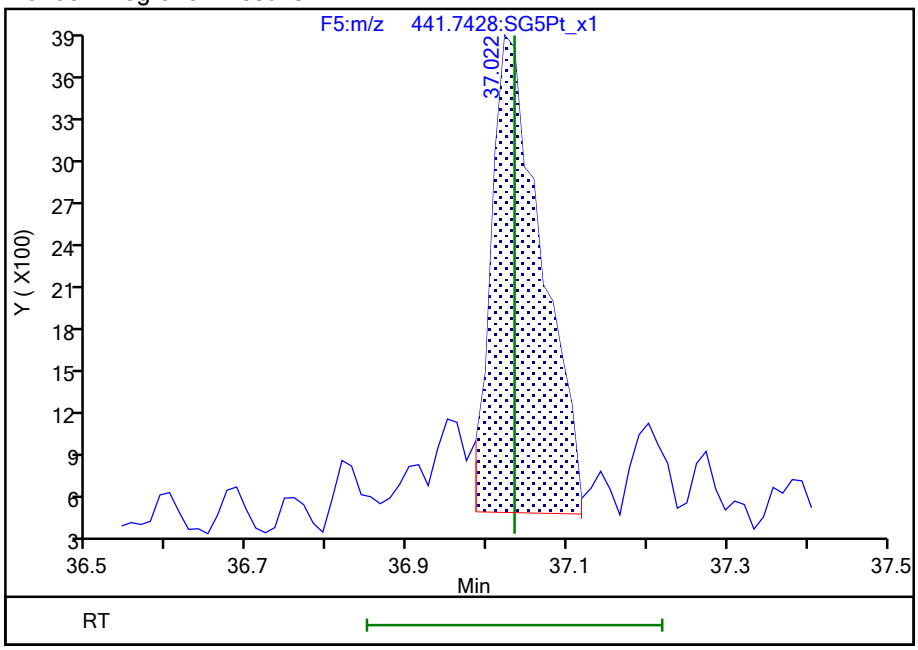

Reviewer: dadunj, 16-Aug-2021 13:37:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.03
Area: 21432
Amount: 0.086487
Amount Units: pg/ul

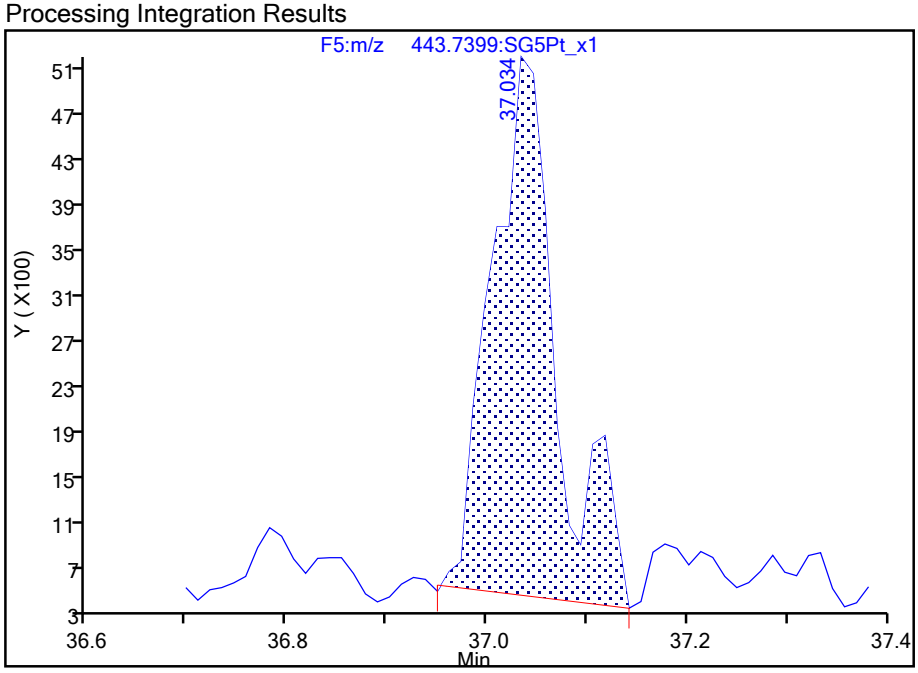

Manual Integration Results

RT: 37.03
Area: 18456
Amount: 0.072066
Amount Units: pg/ul

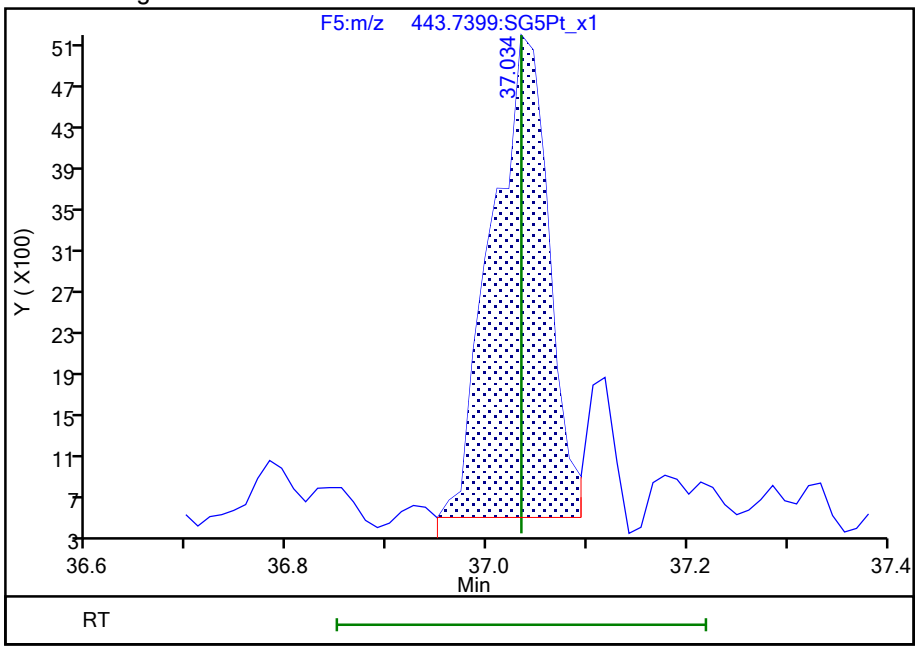

Reviewer: dadunj, 16-Aug-2021 13:37:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 36.95
Area: 67392
Amount: 0.377631
Amount Units: pg/ul

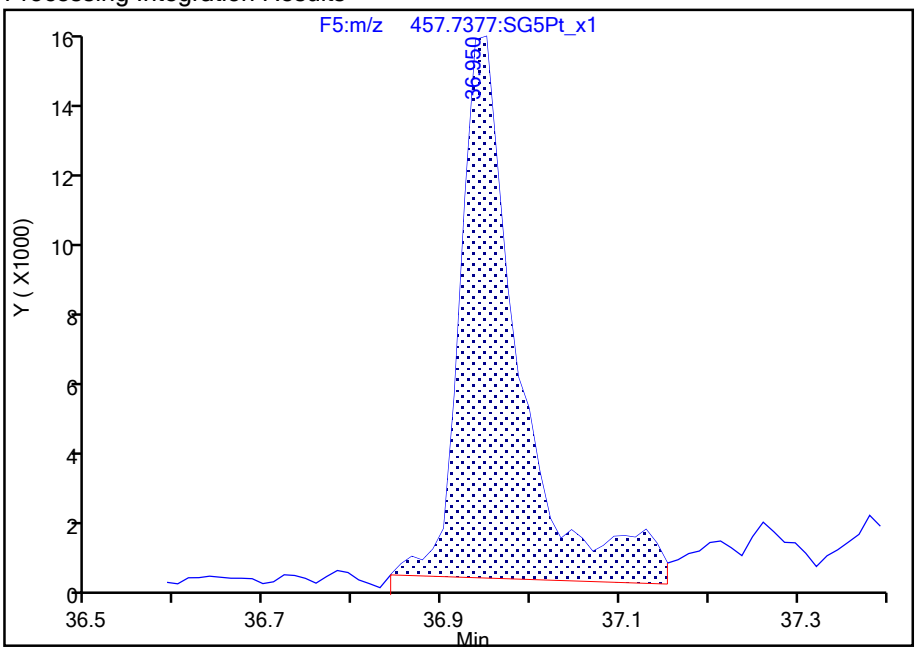

Manual Integration Results

RT: 36.95
Area: 59137
Amount: 0.342584
Amount Units: pg/ul

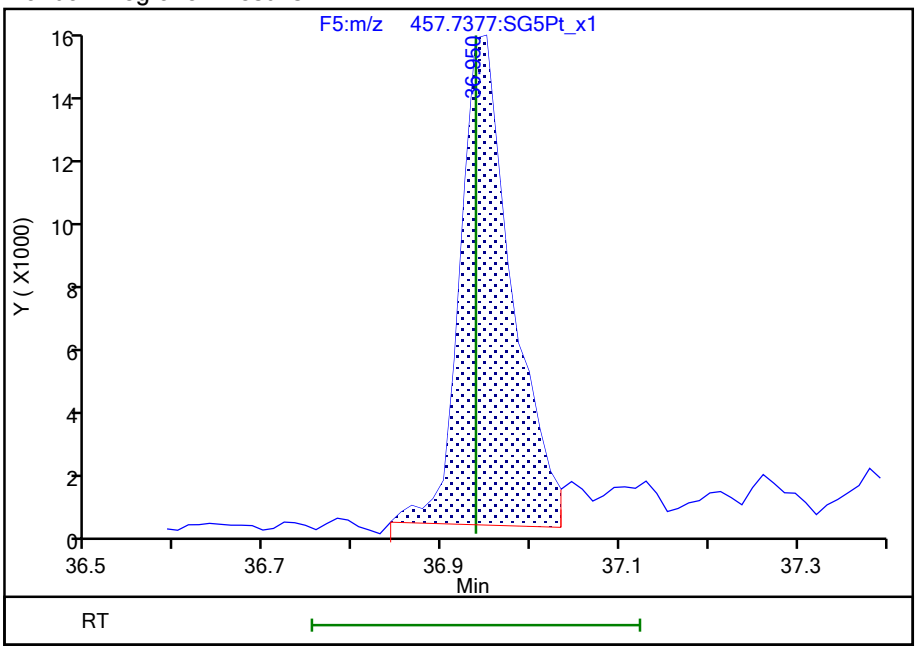

Reviewer: dadunj, 16-Aug-2021 13:38:00

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 2

Processing Integration Results

RT: 36.94
Area: 66790
Amount: 0.377631
Amount Units: pg/ul

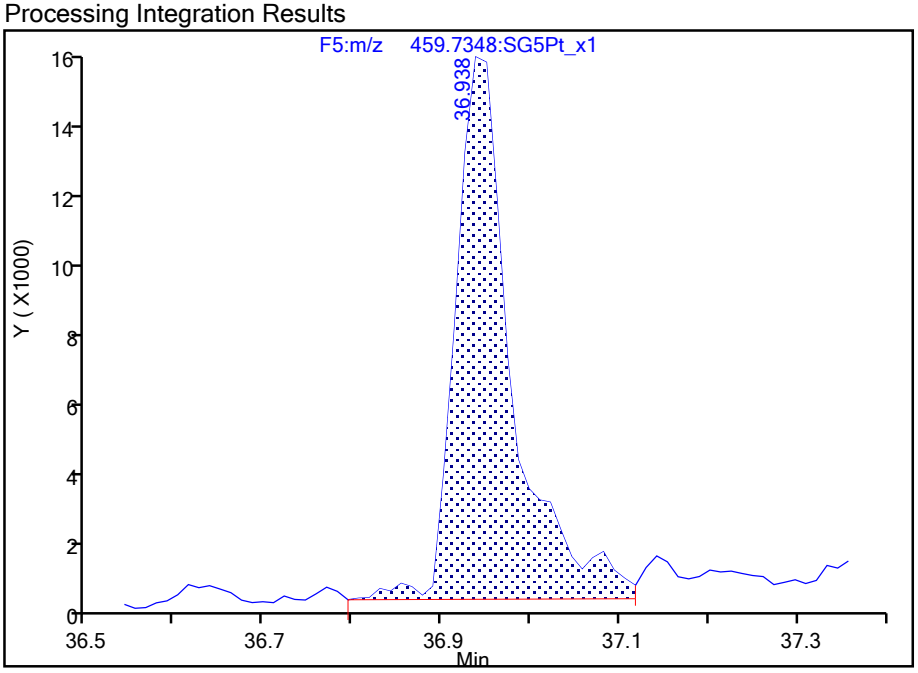

Manual Integration Results

RT: 36.94
Area: 62592
Amount: 0.342584
Amount Units: pg/ul

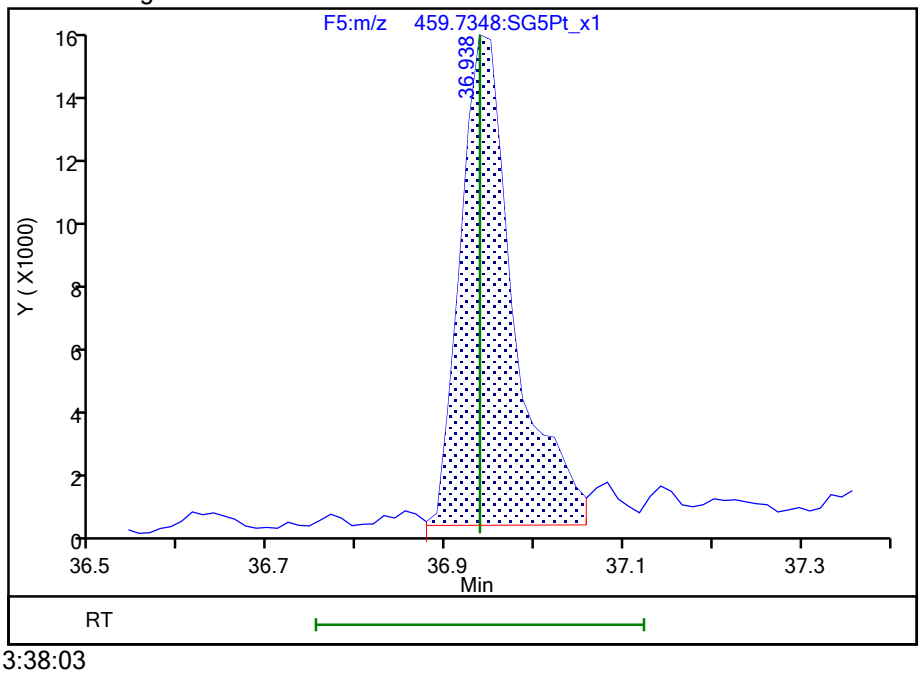

Reviewer: dadunj, 16-Aug-2021 13:38:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

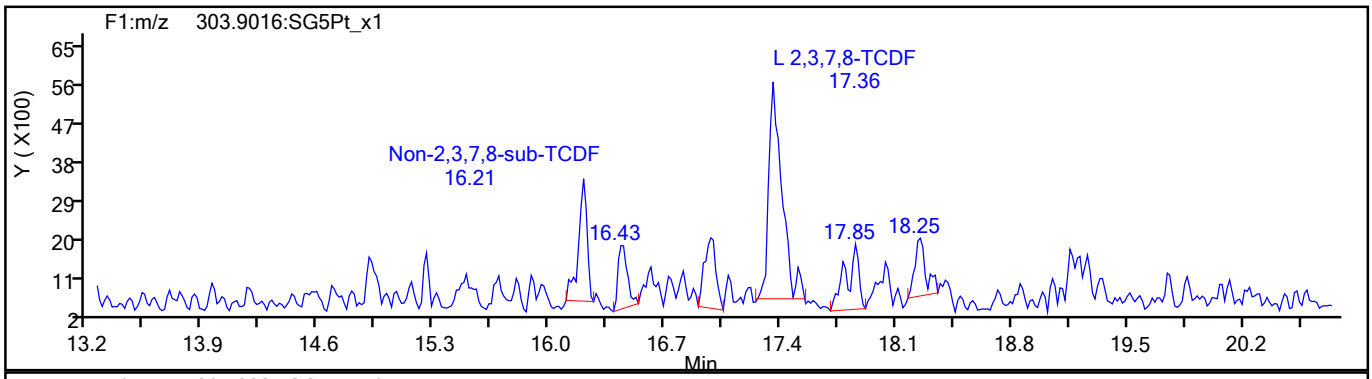

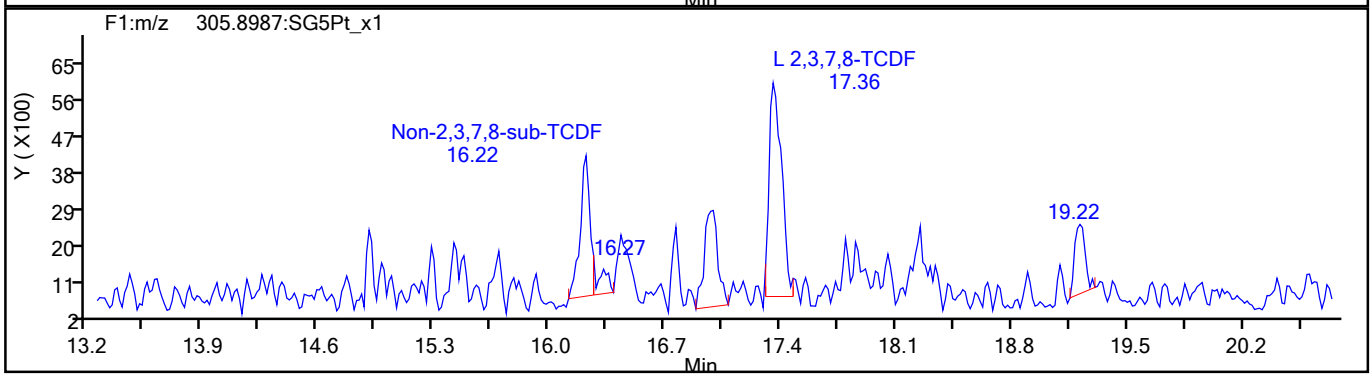

TCDF Standards

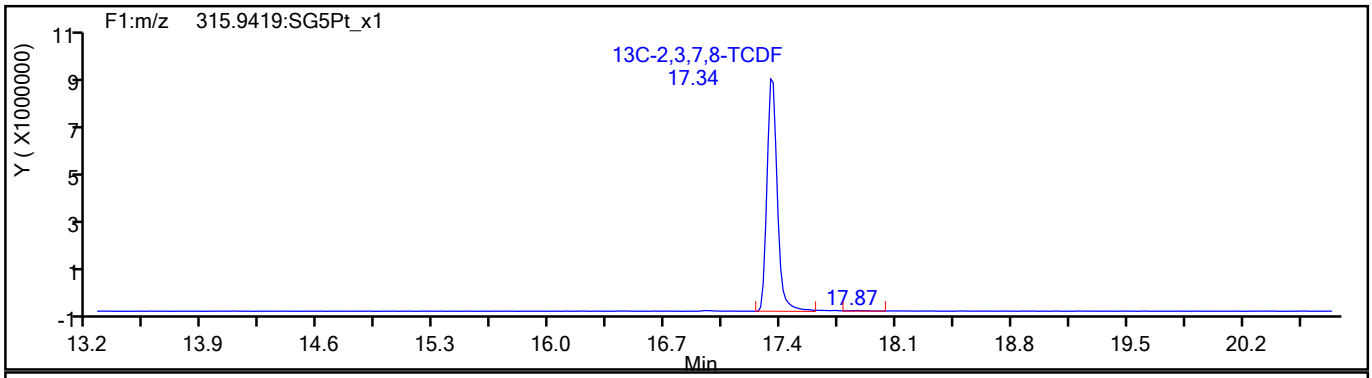

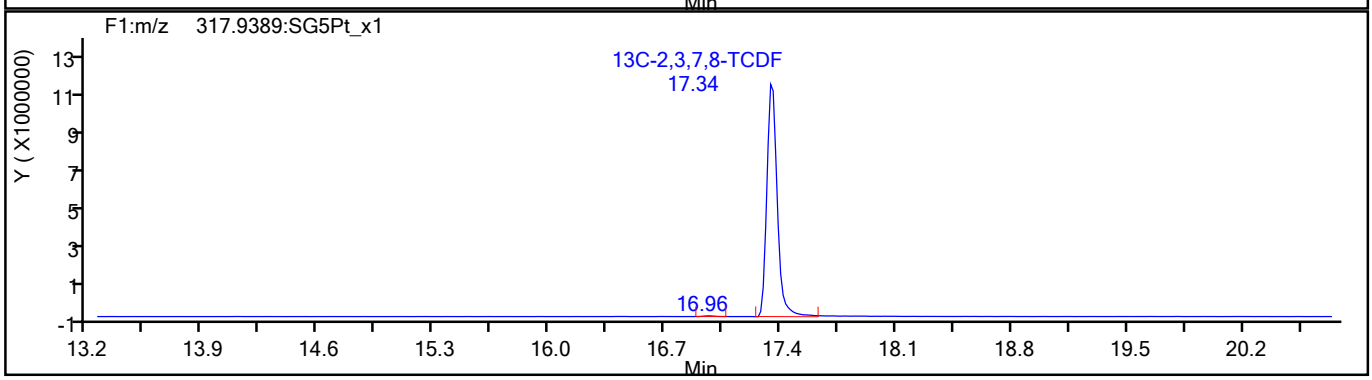

774066

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

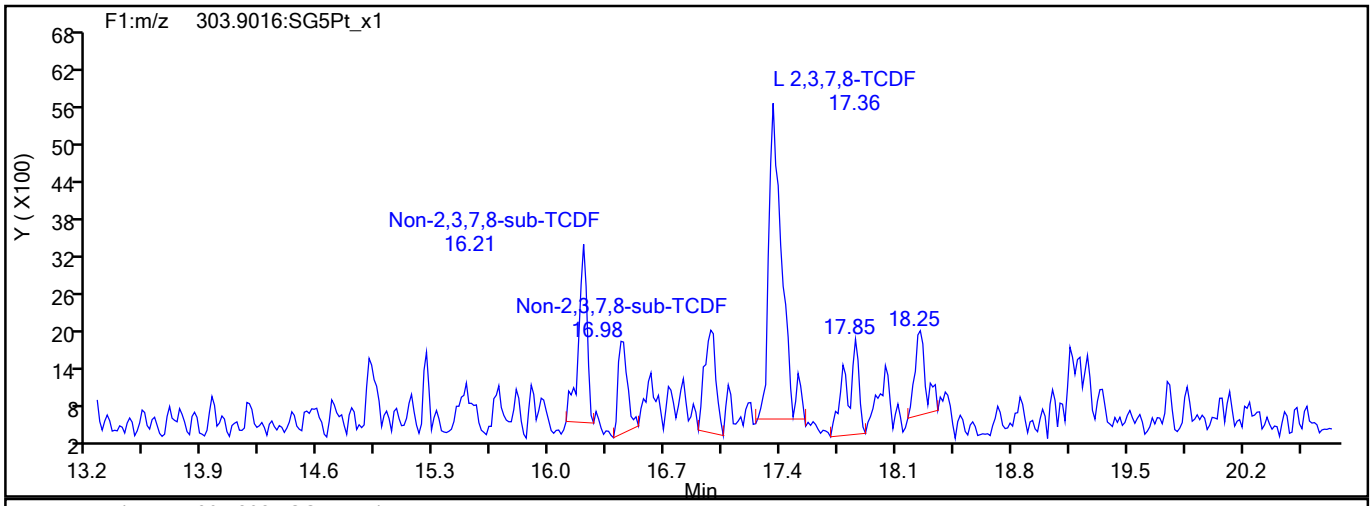

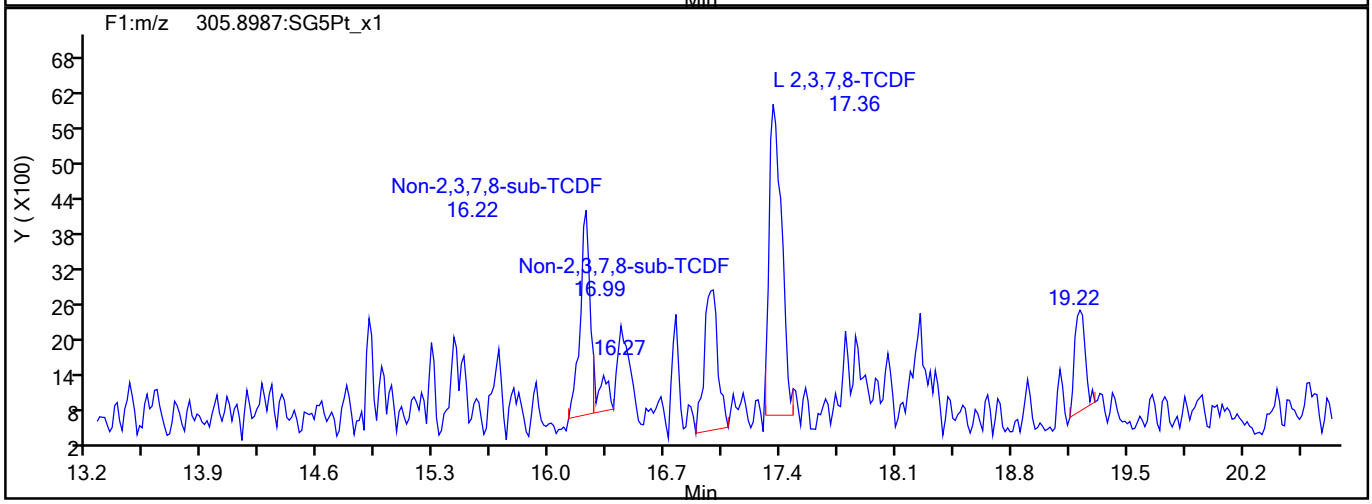

TCDF Interference Mass

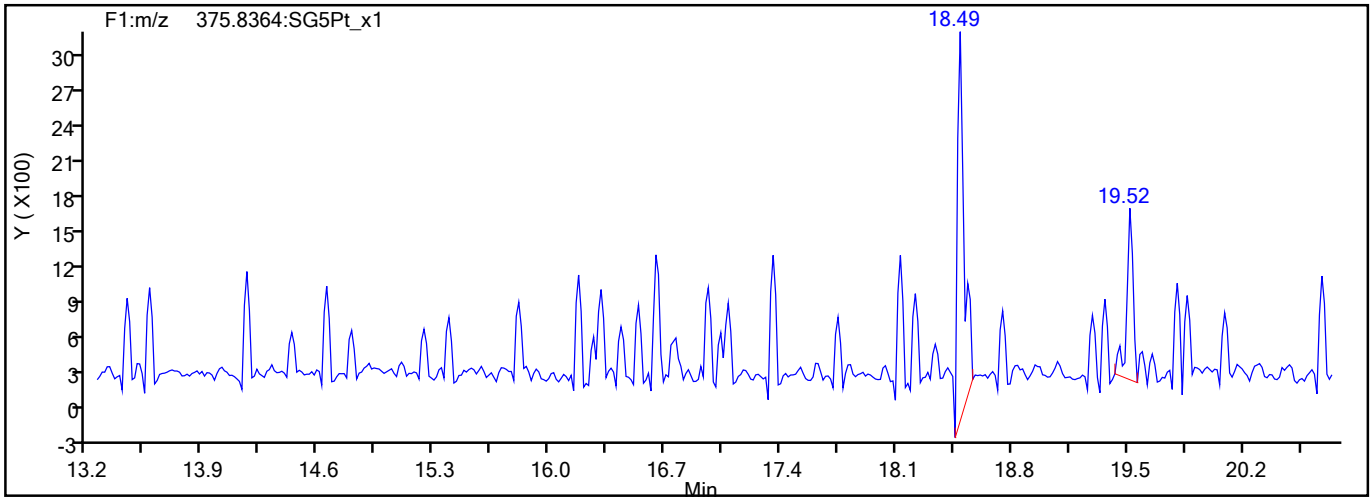

774067

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

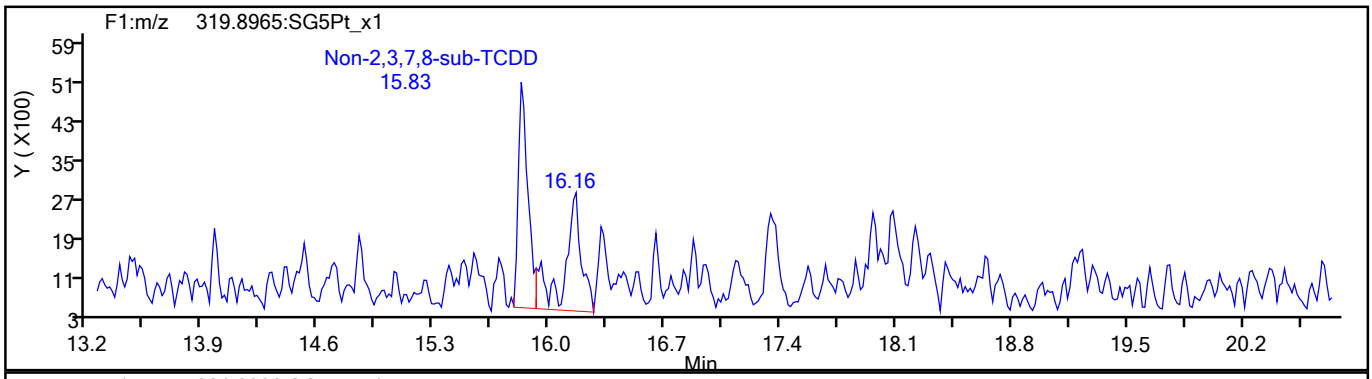

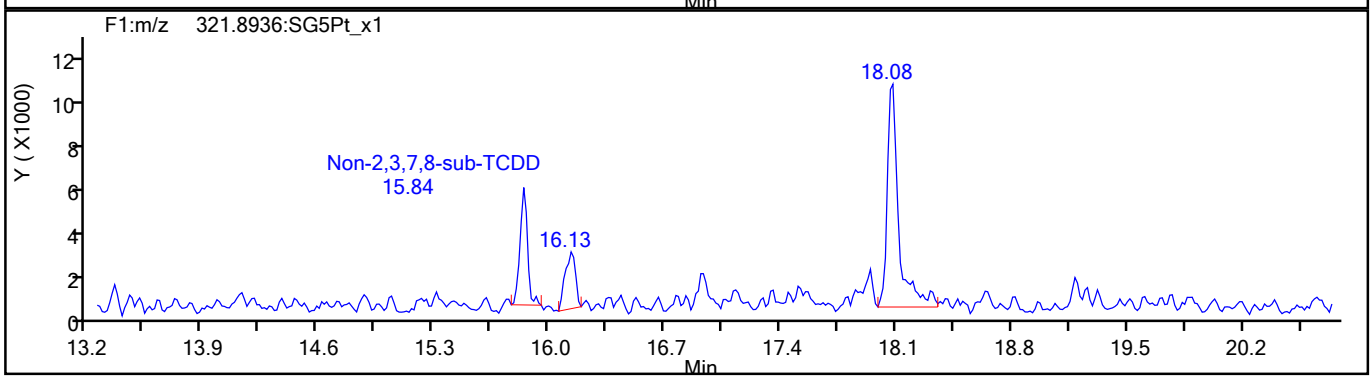

TCDD Standards

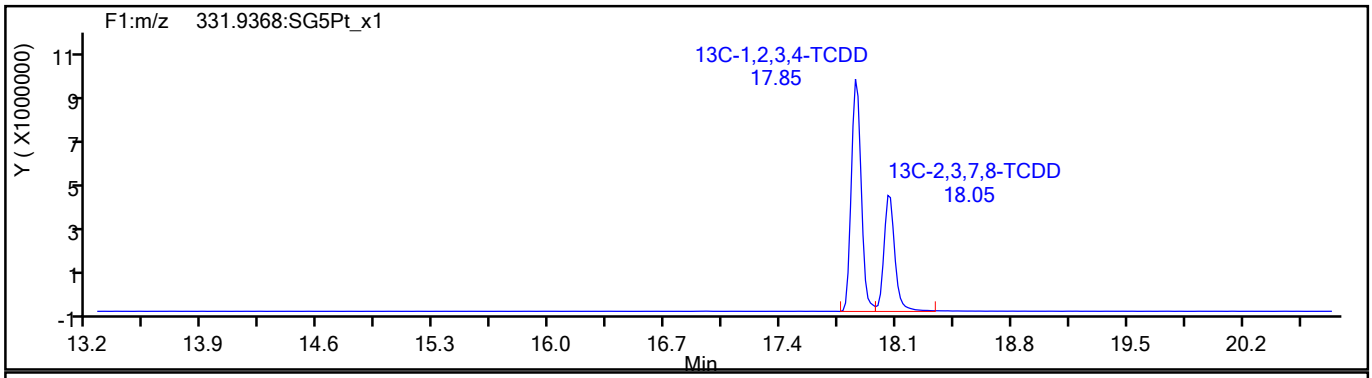

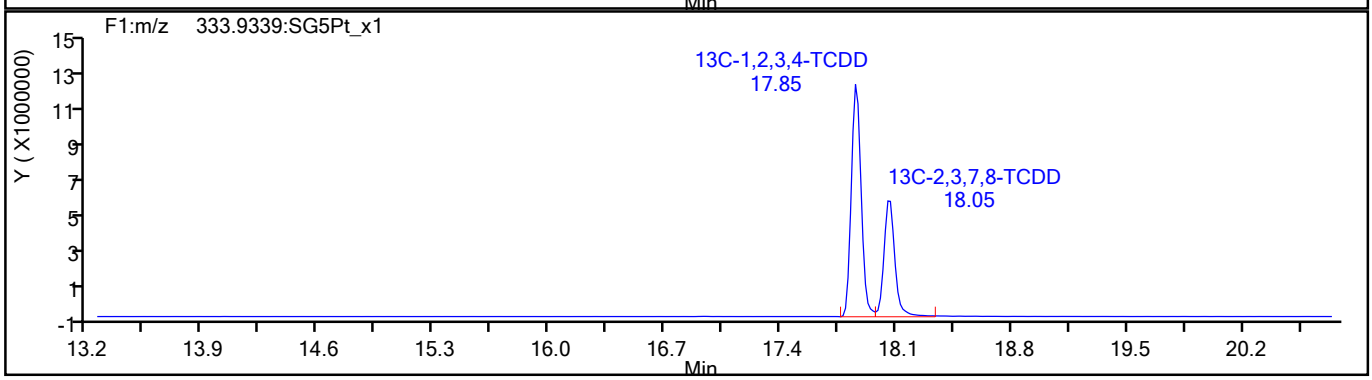

774068

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

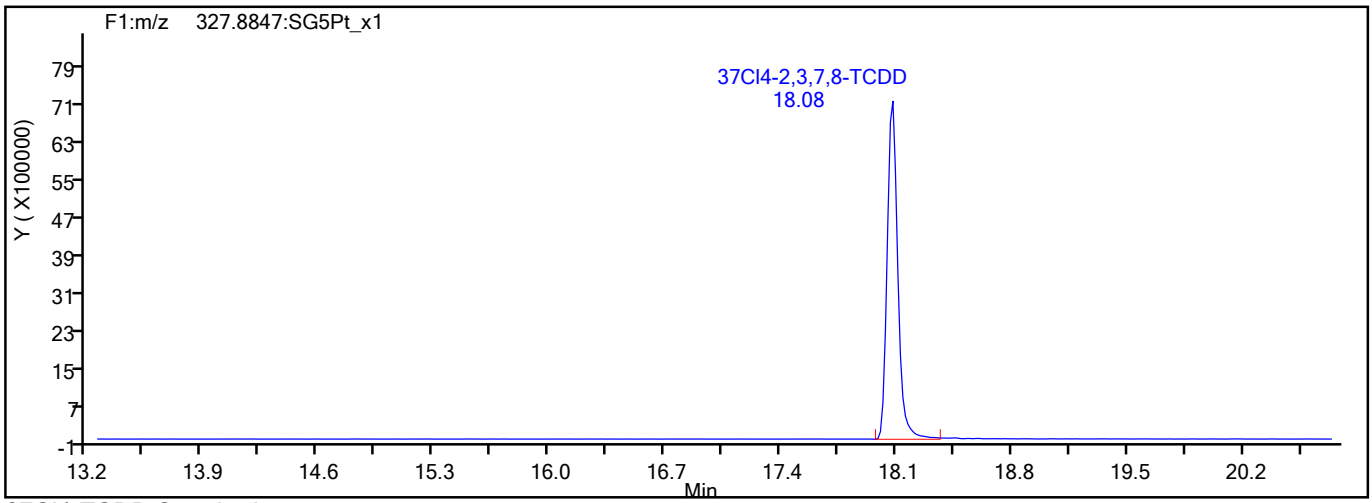

37Cl4-TCDD Standards

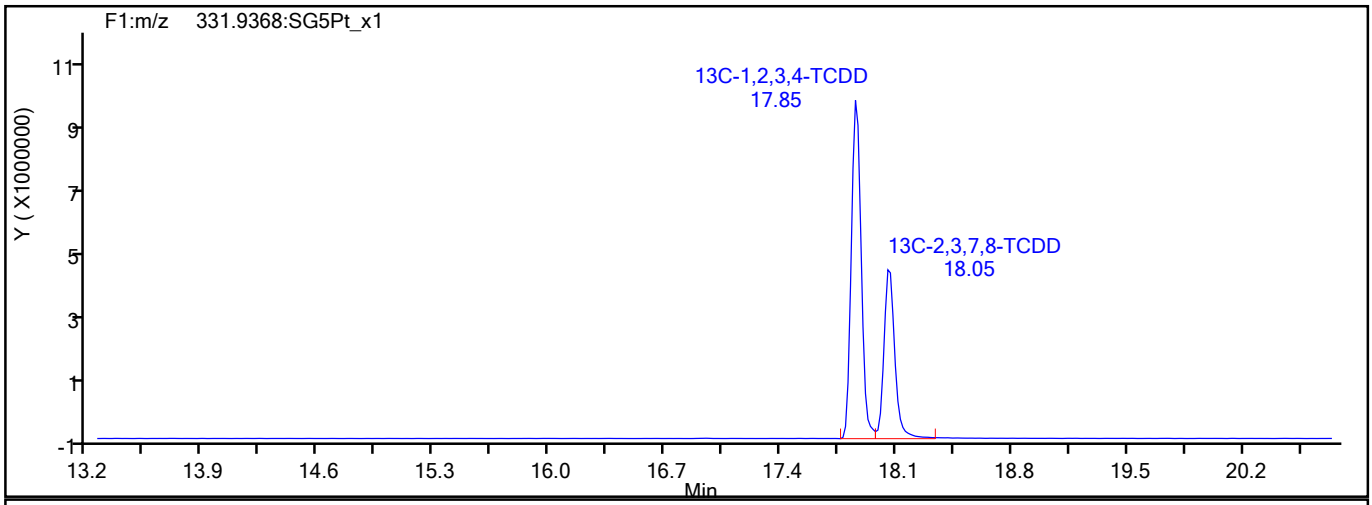

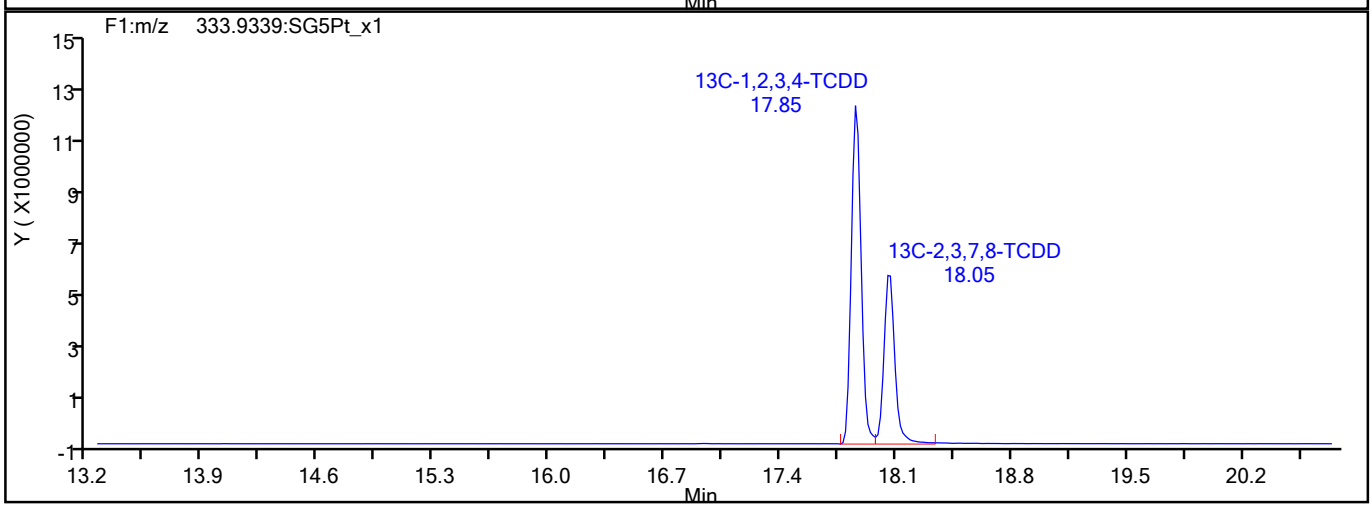

774069

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

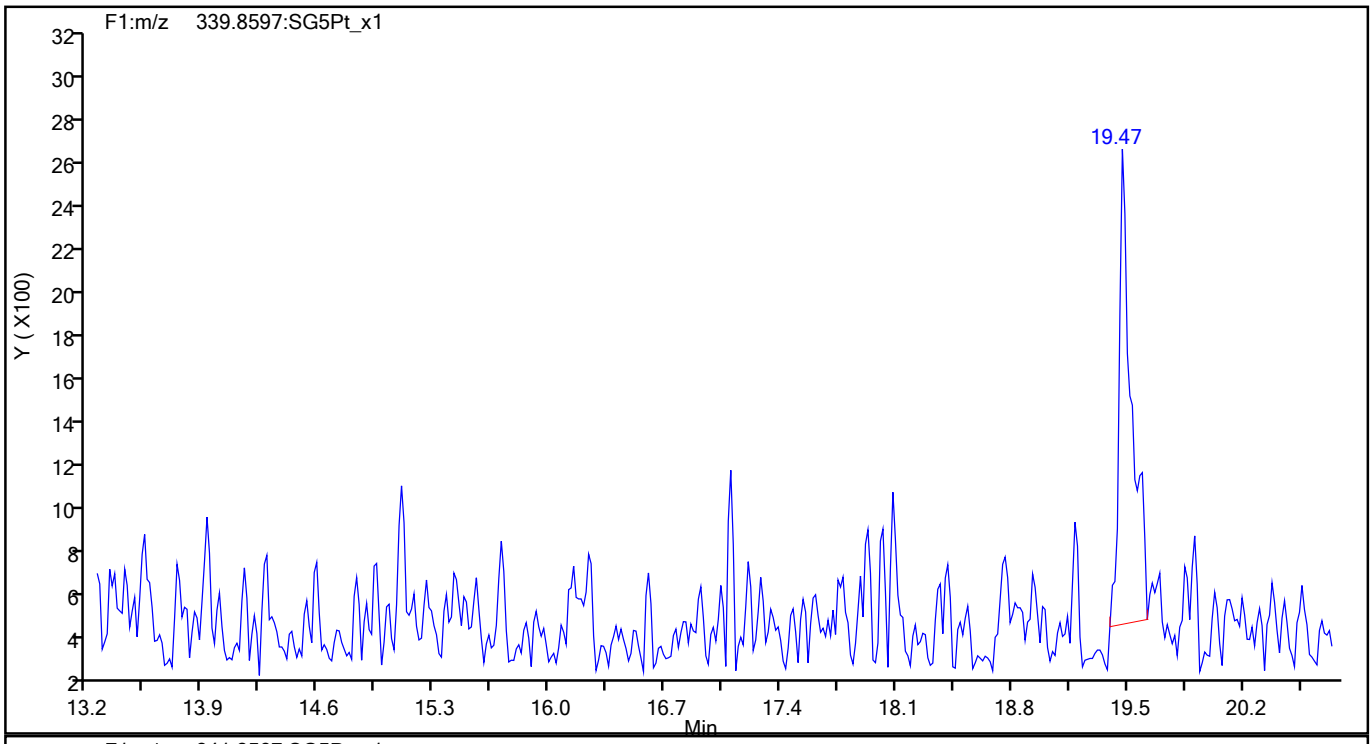

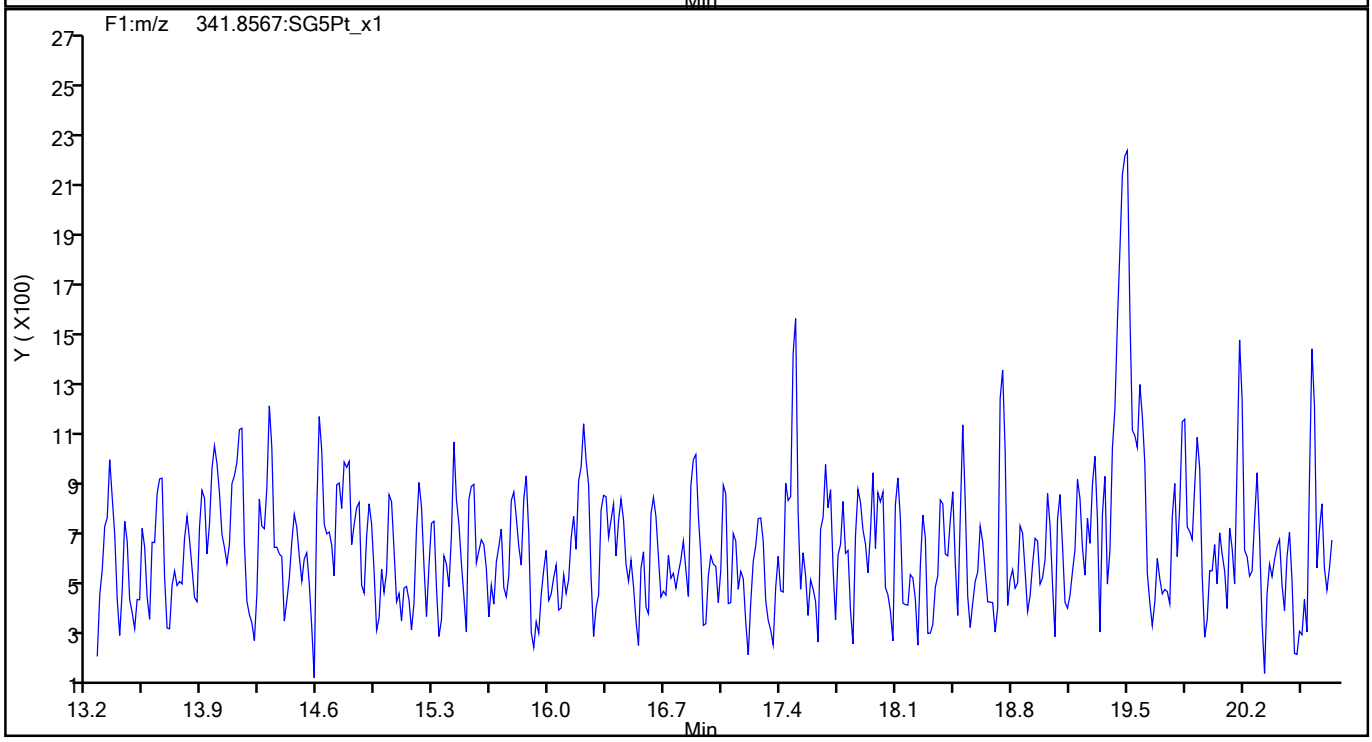

774070

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

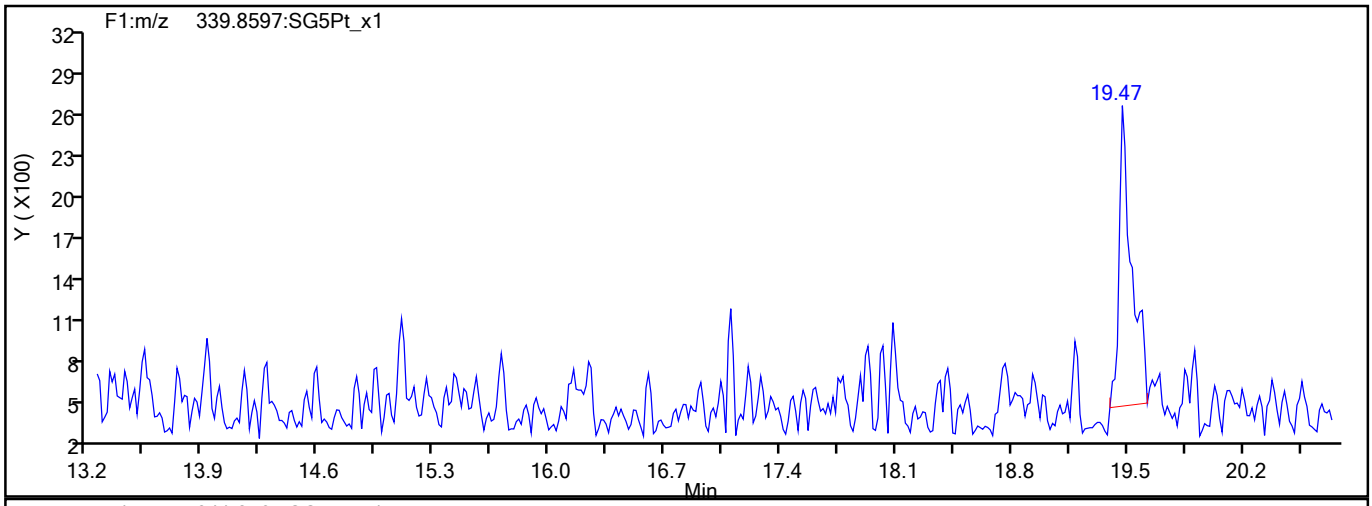

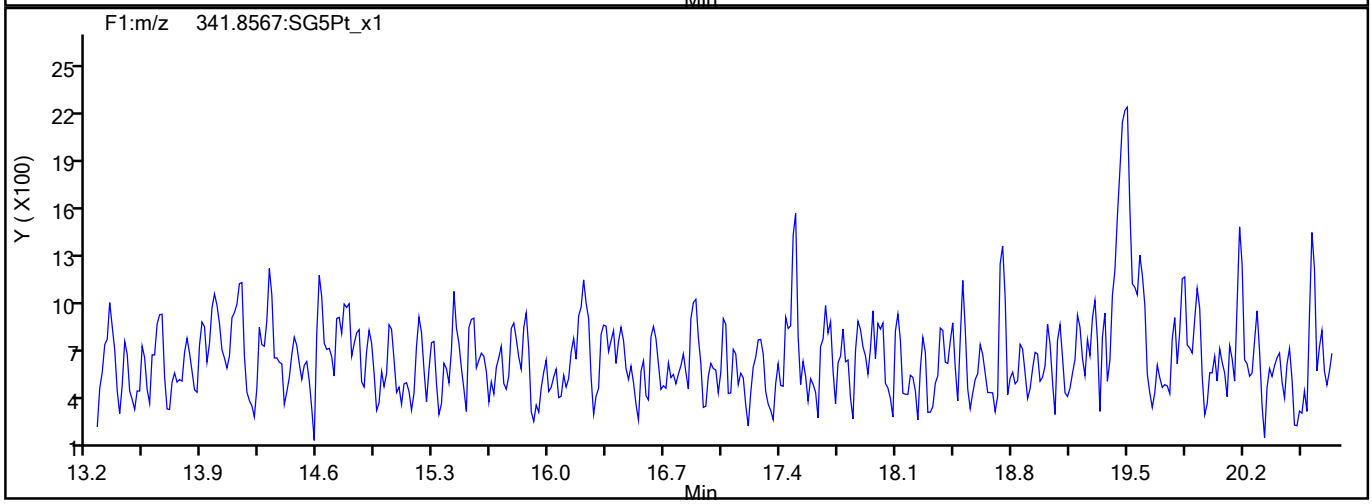

F1 PeCDFs Interference Mass

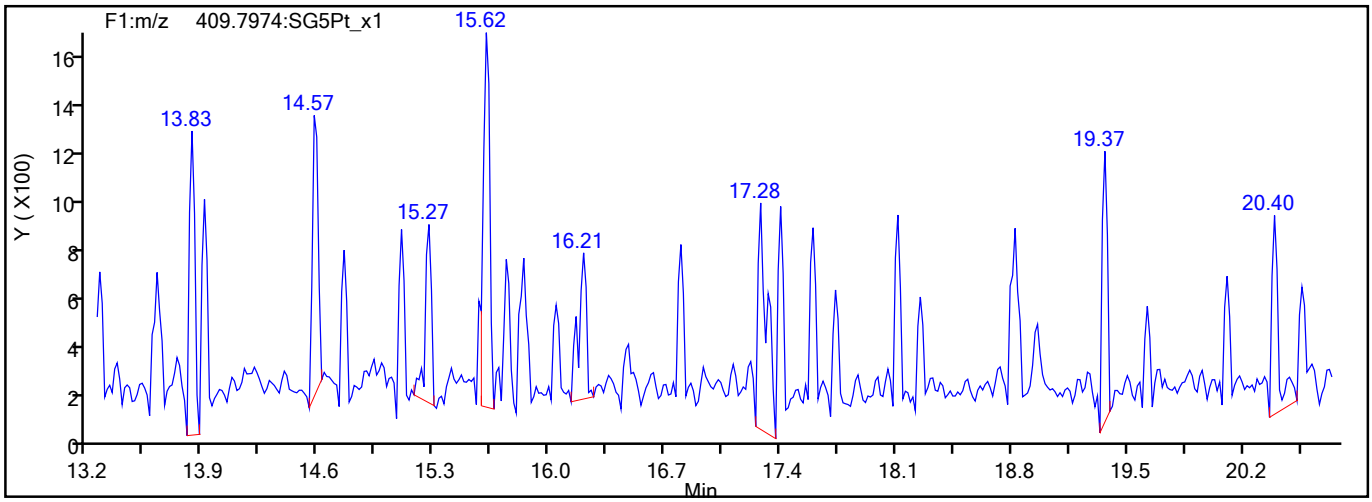

774071

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

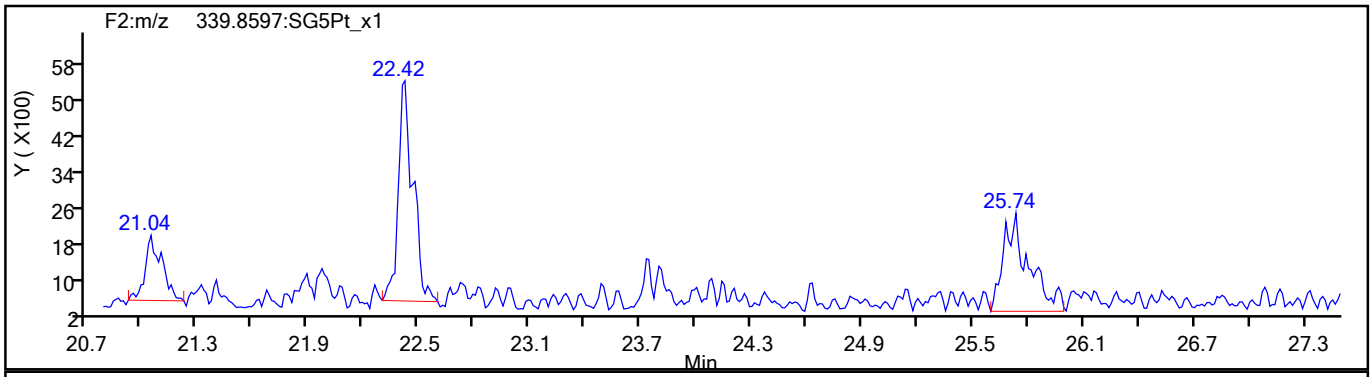

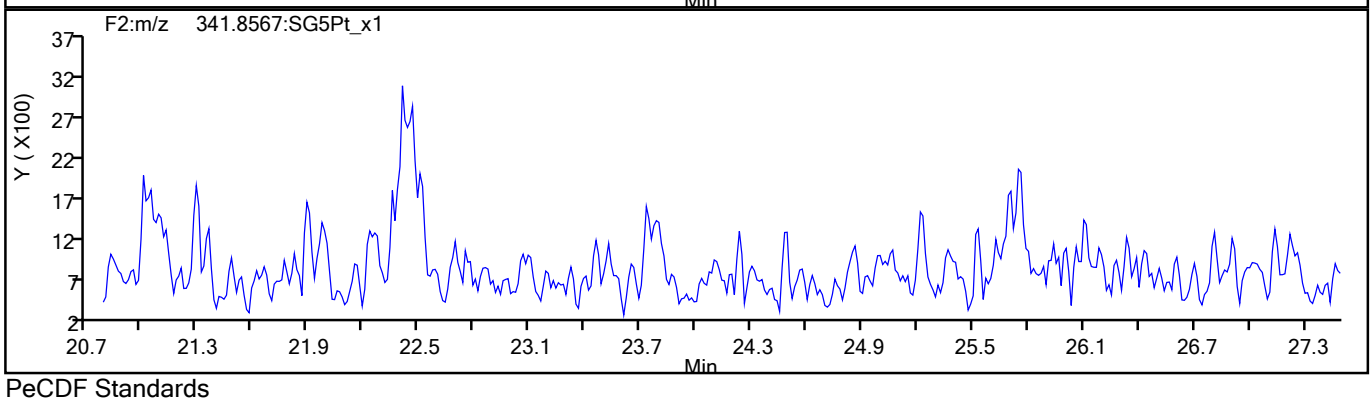

PeCDF Standards

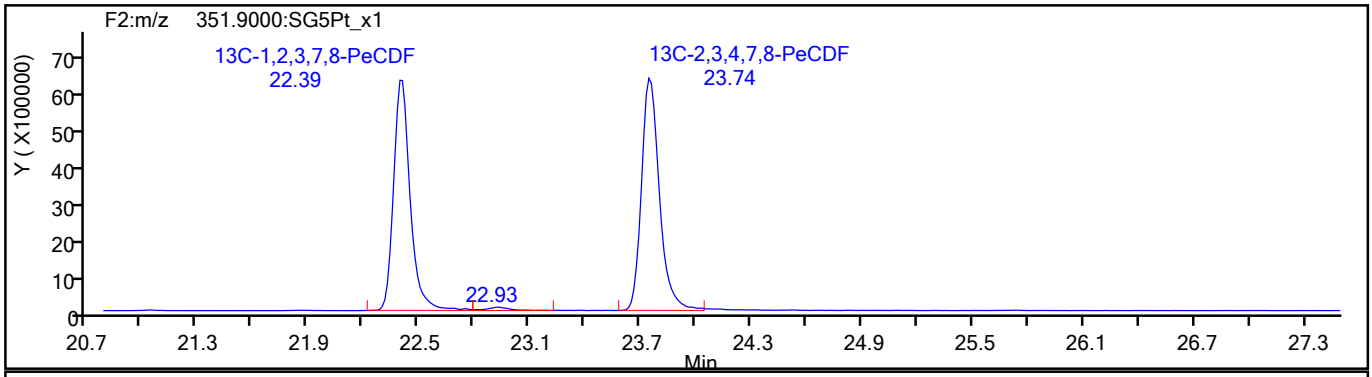

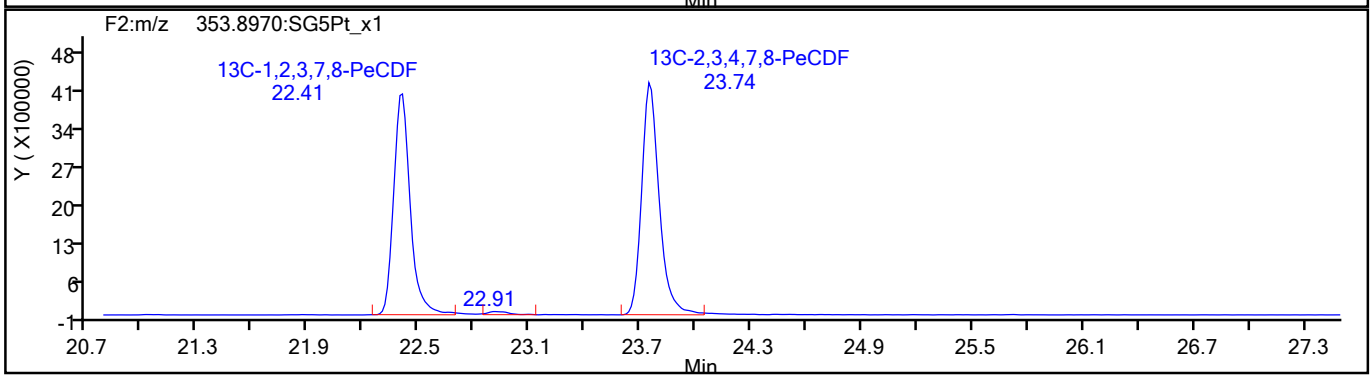

774072

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

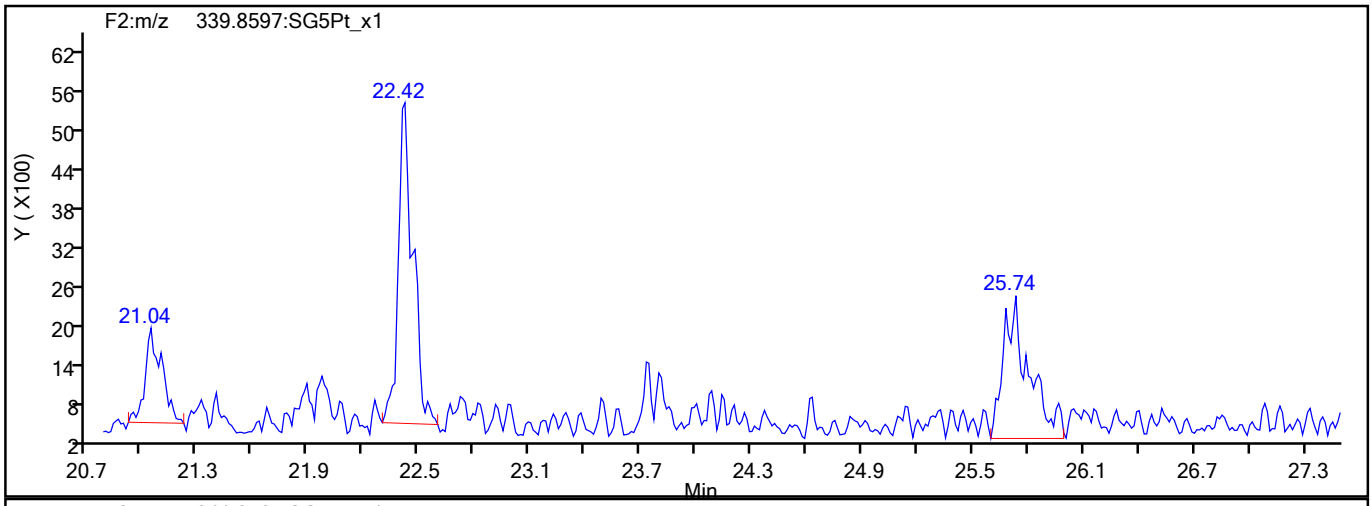

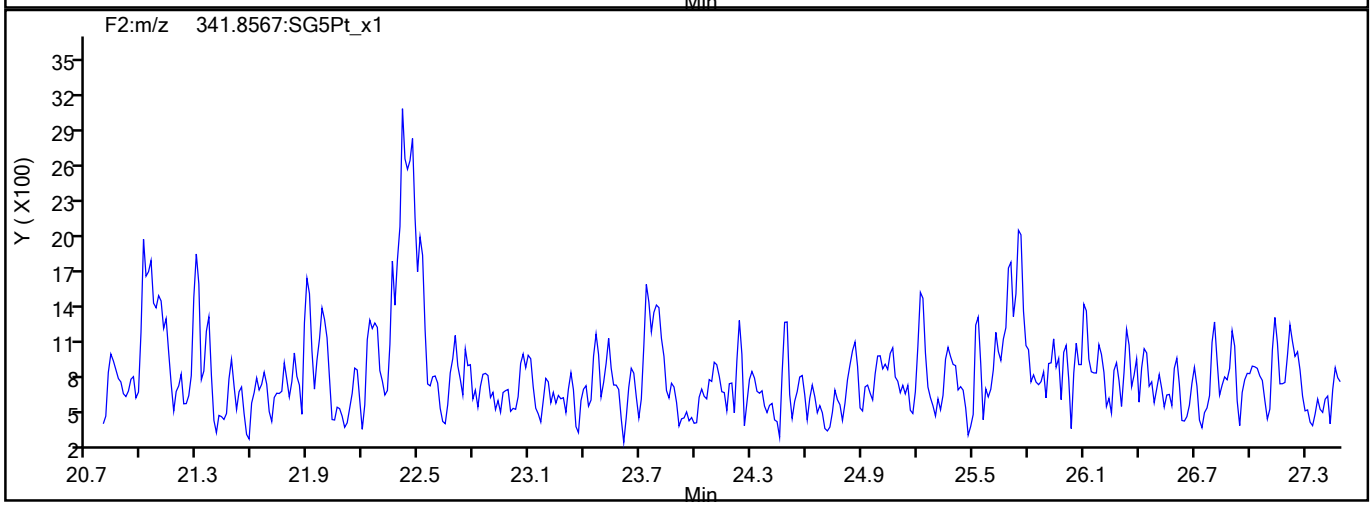

PeCDF Interference Mass

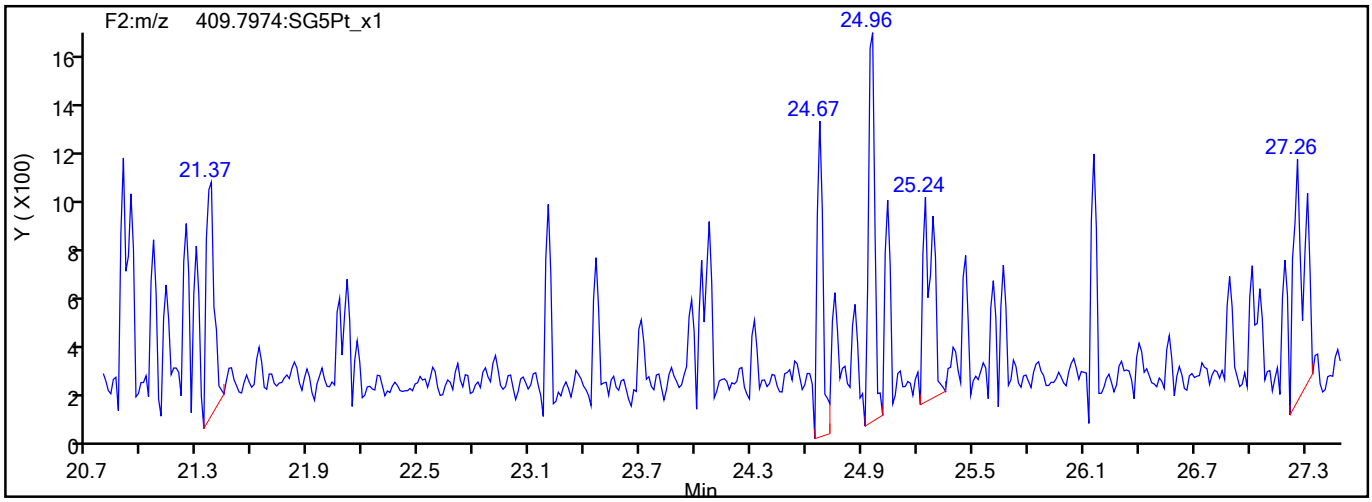

774073

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

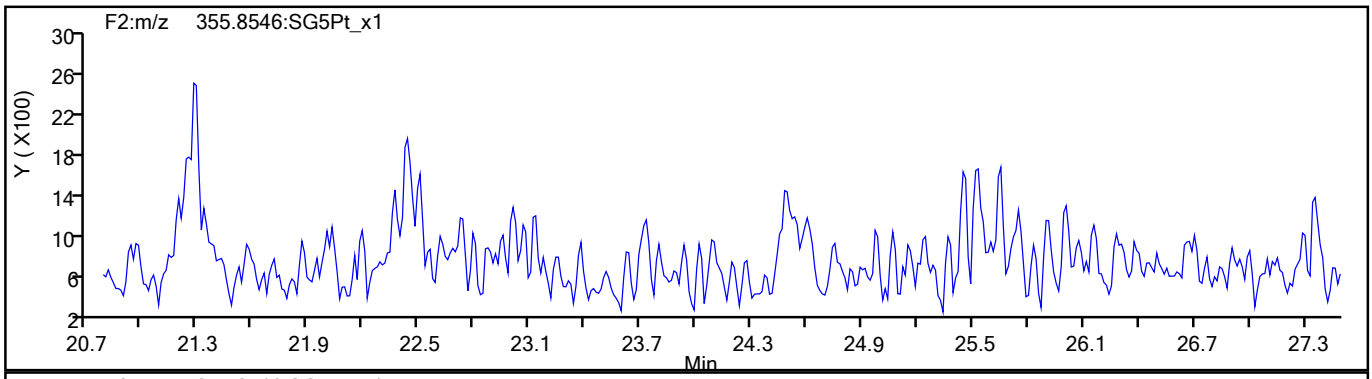

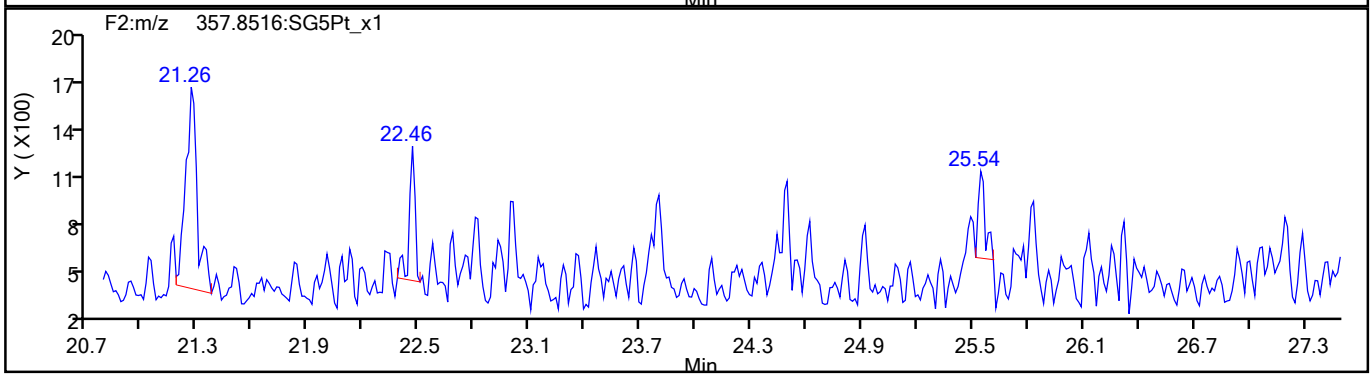

PeCDD Standards

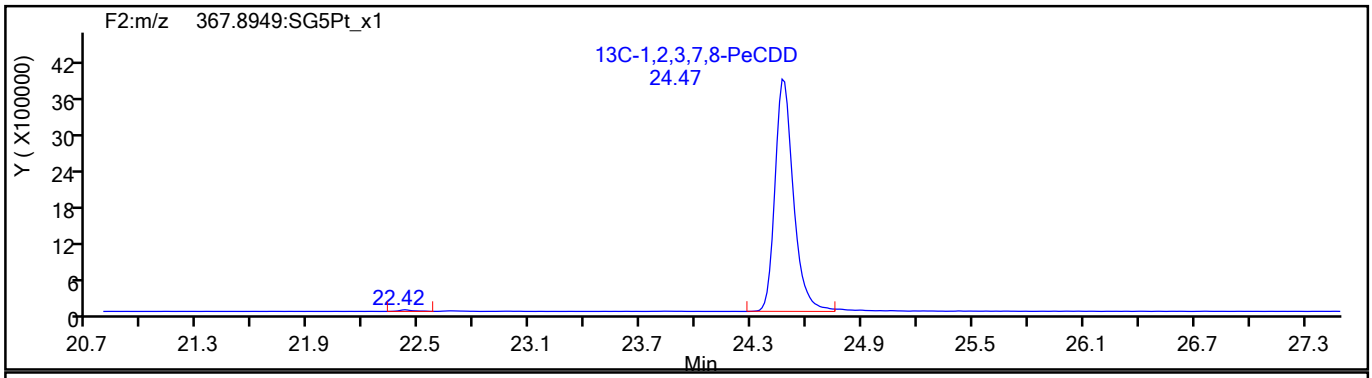

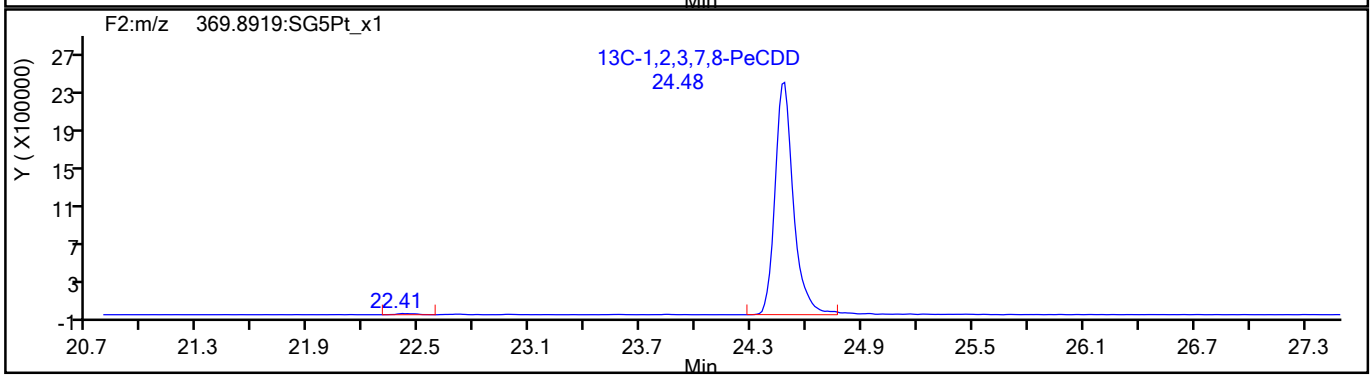

774074

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

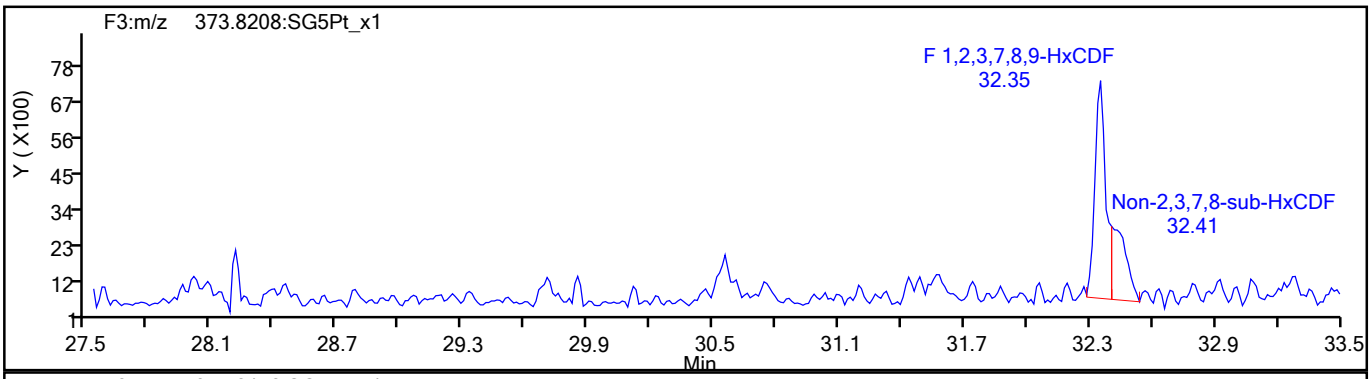

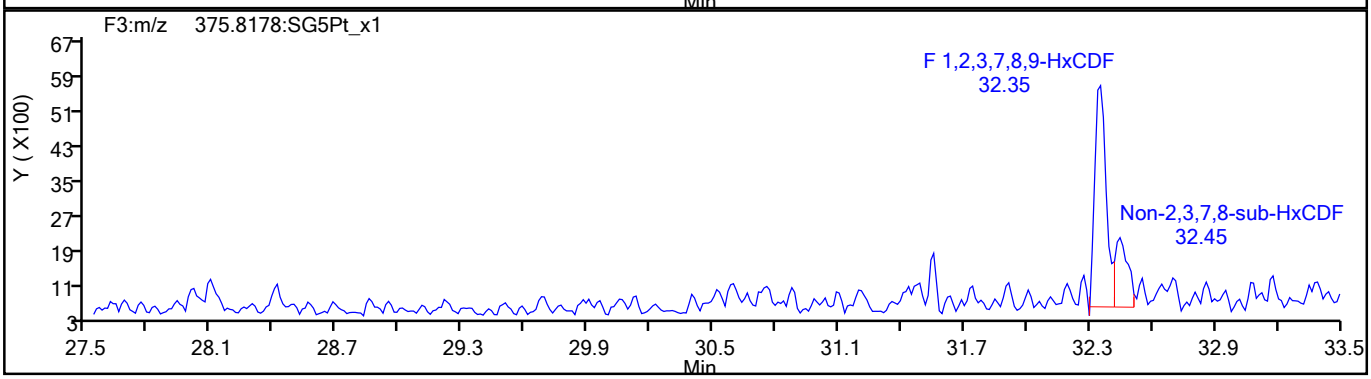

HxCDF Standards

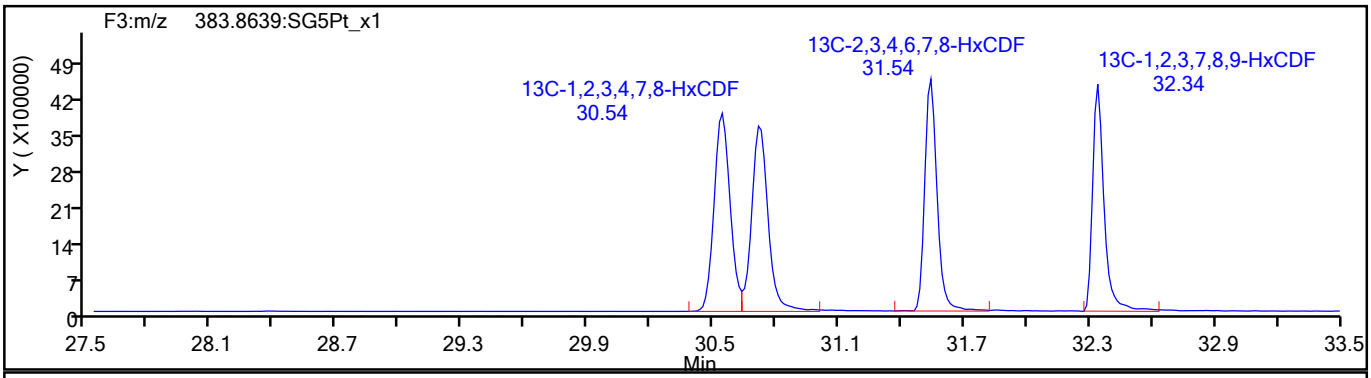

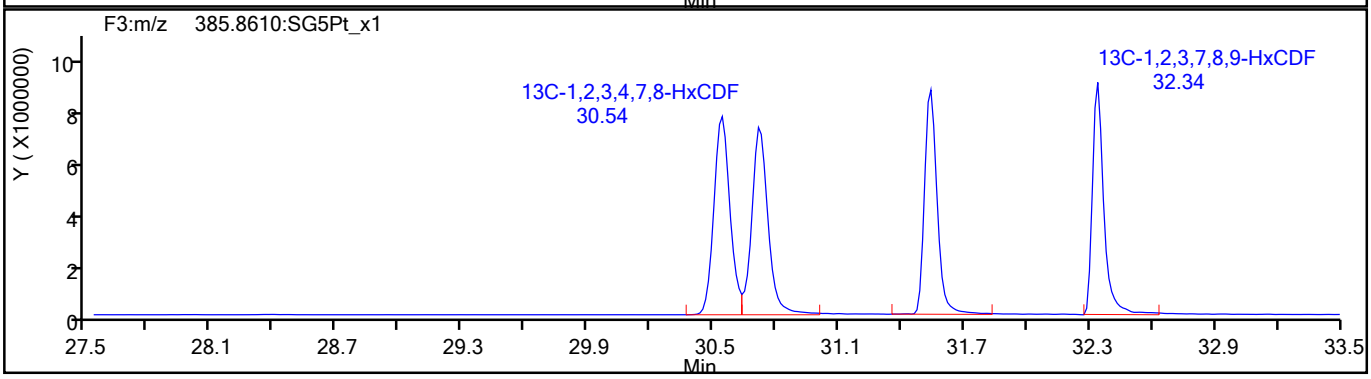

774075

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

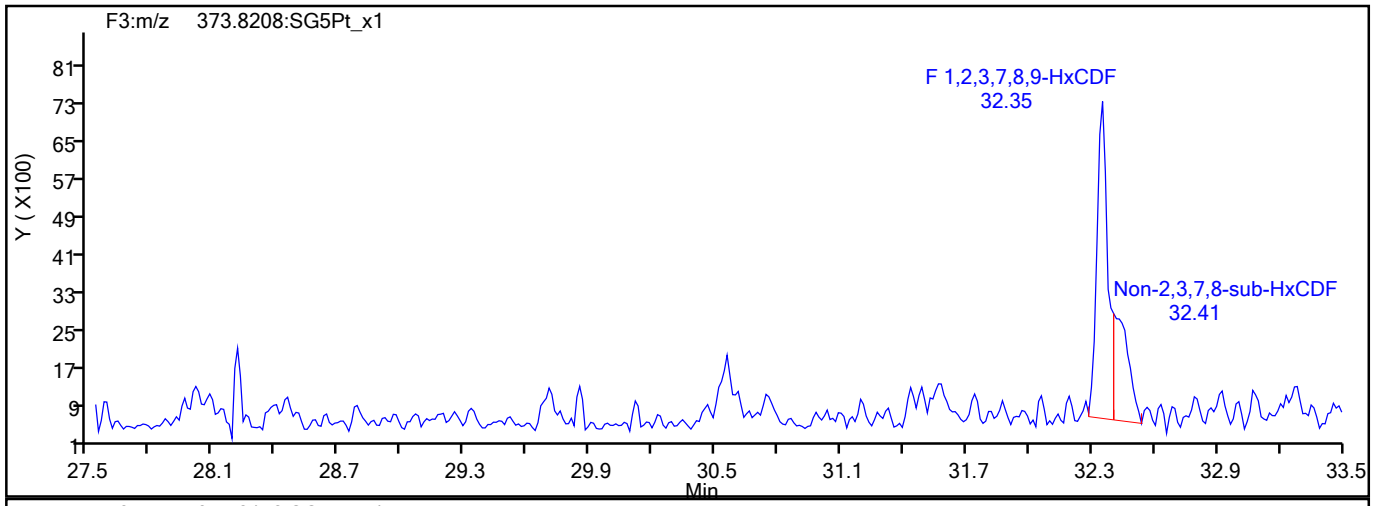

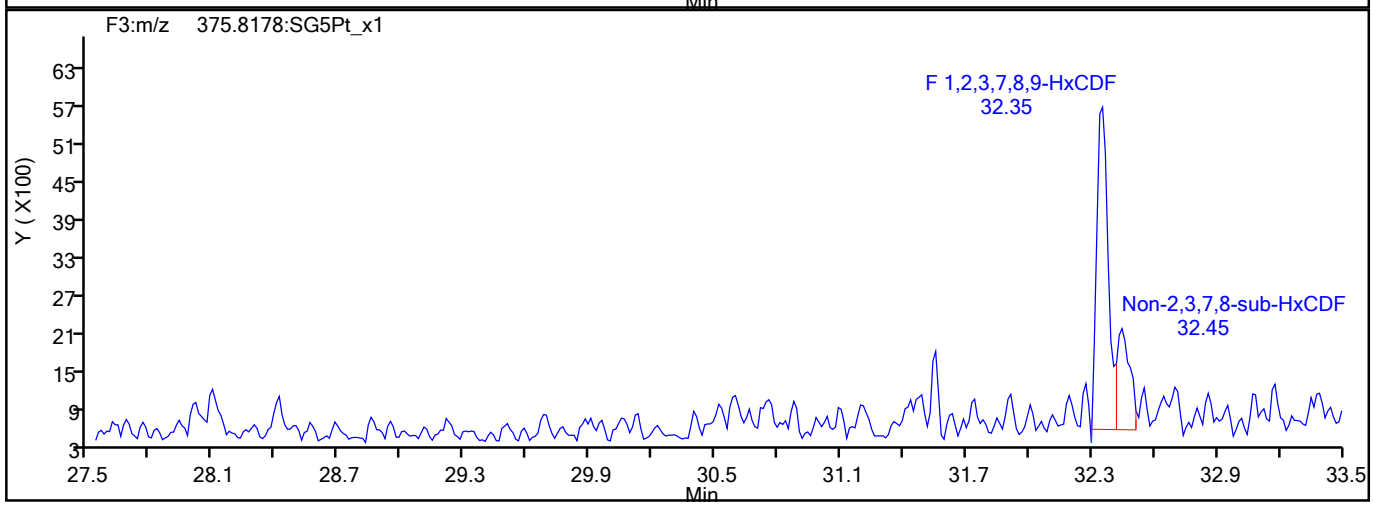

HxCDF Interference Mass

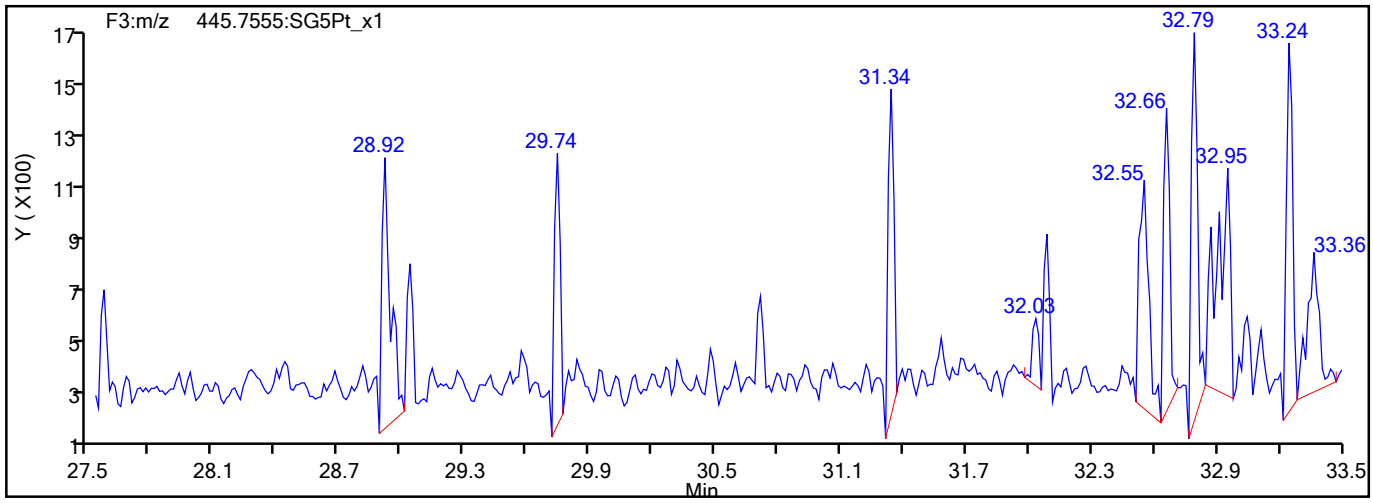

774076

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

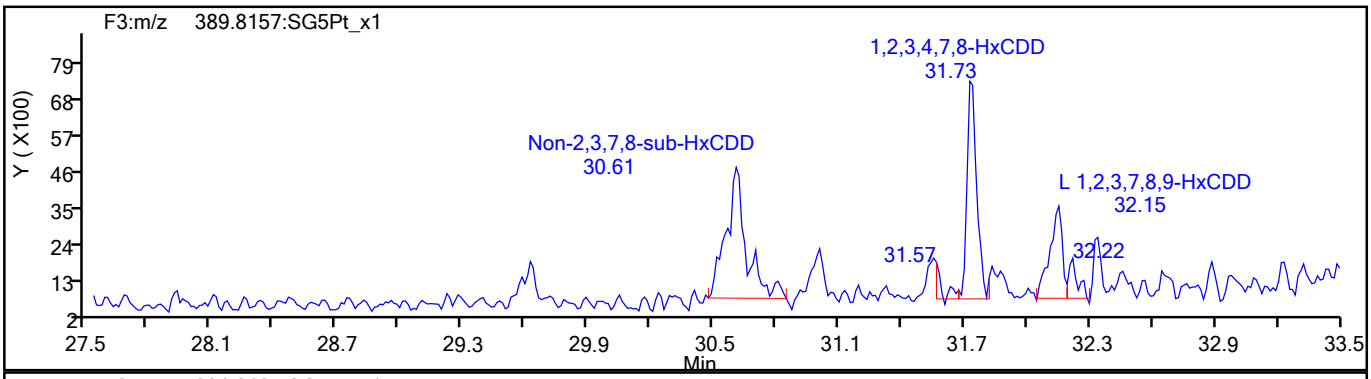

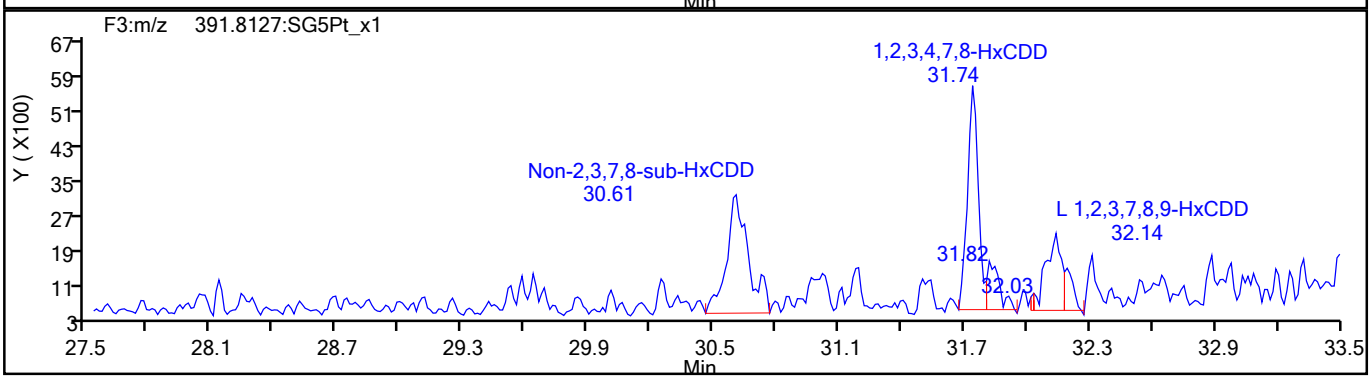

HxCDD Standards

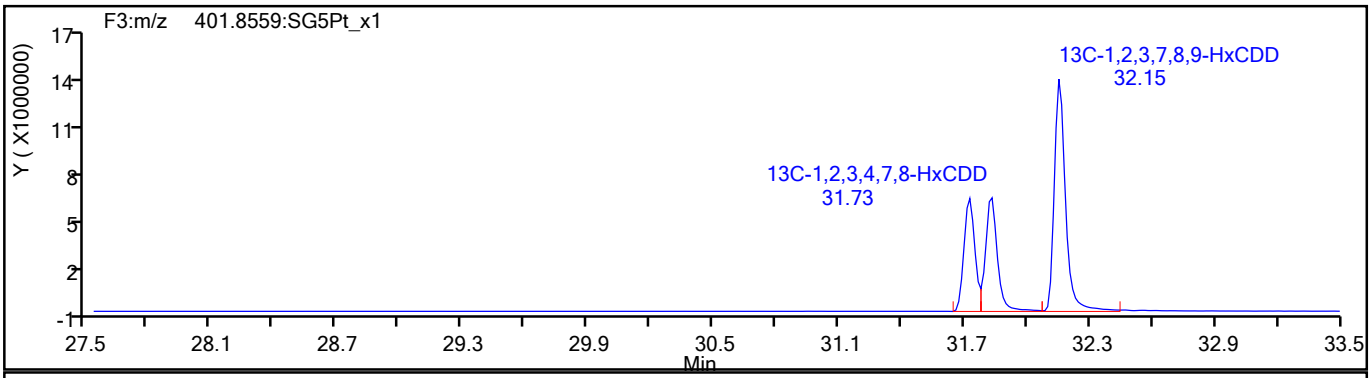

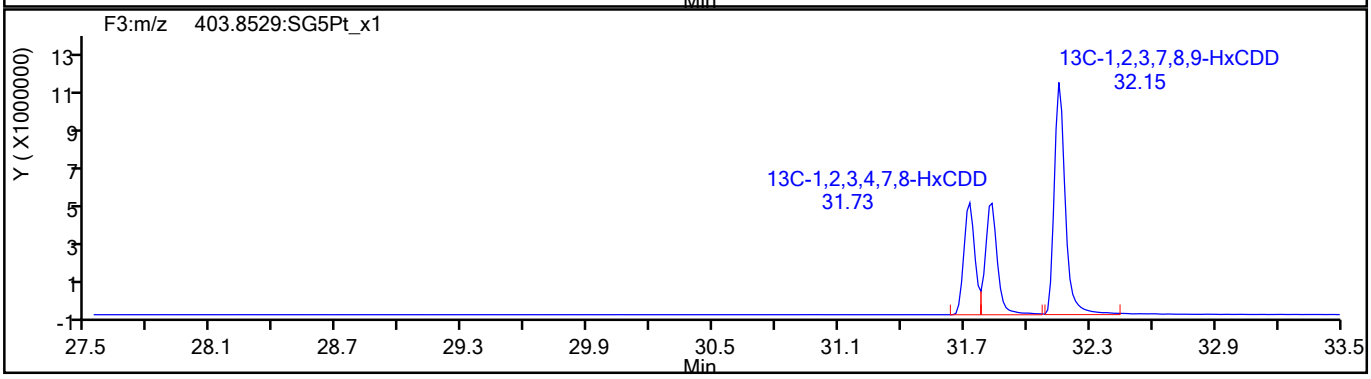

774077

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

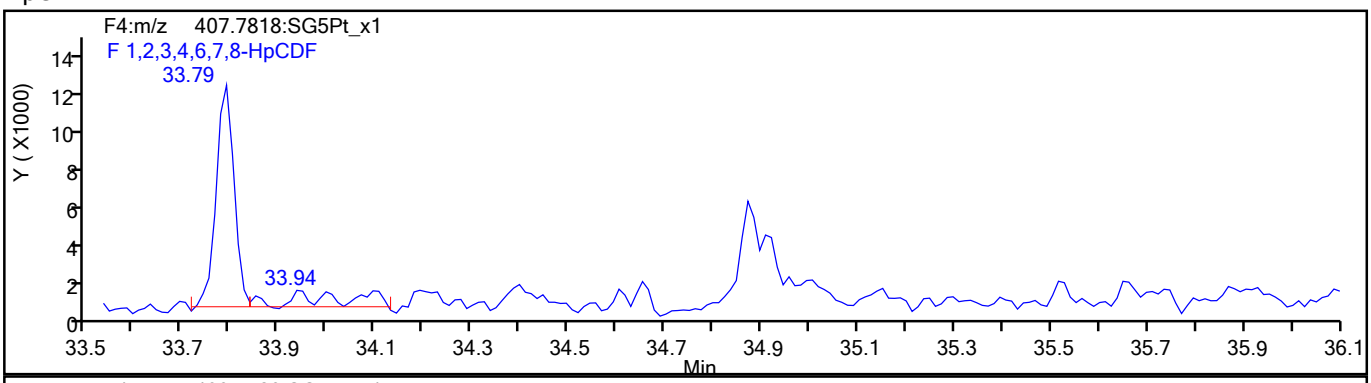

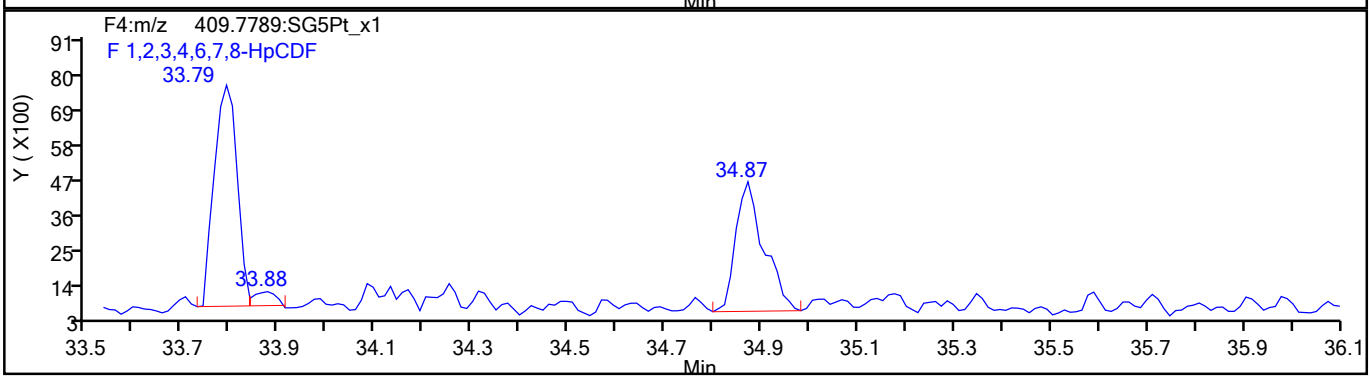

HpCDF Standards

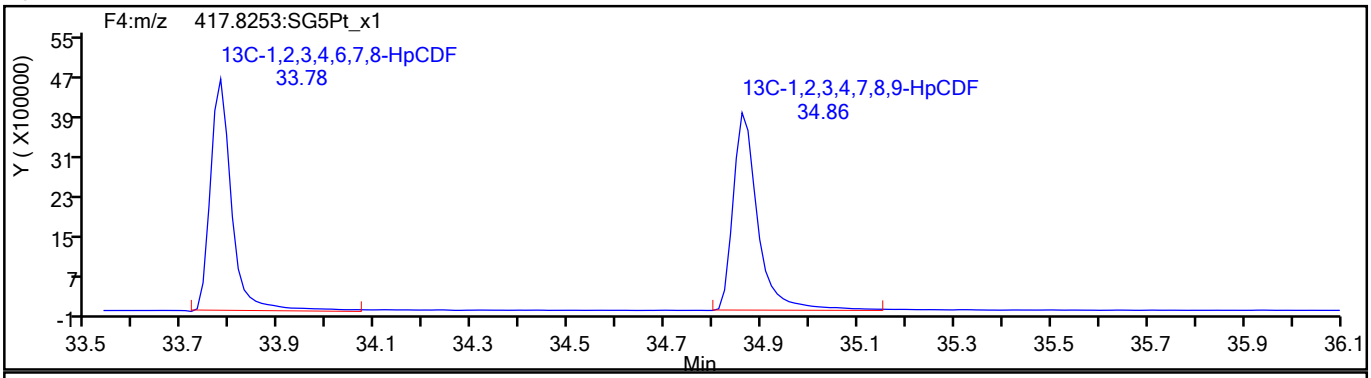

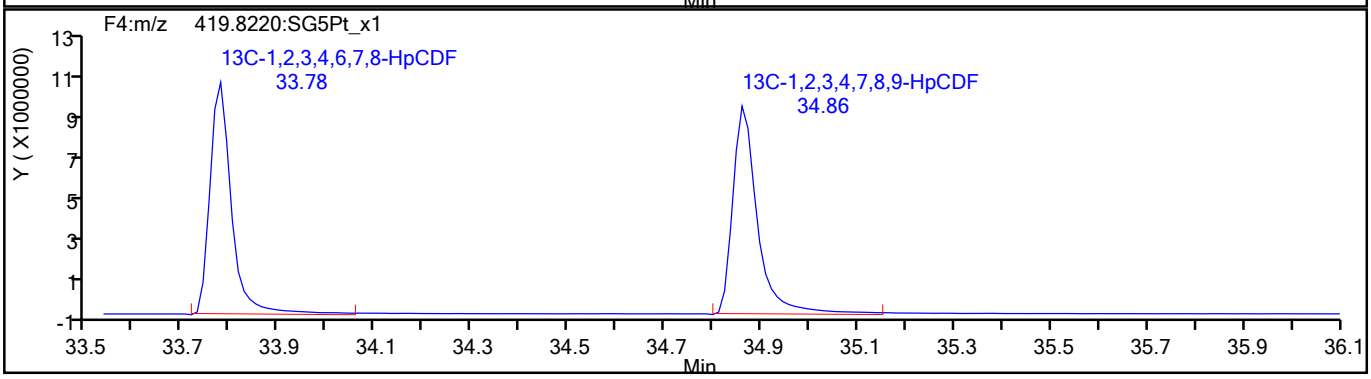

774078

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

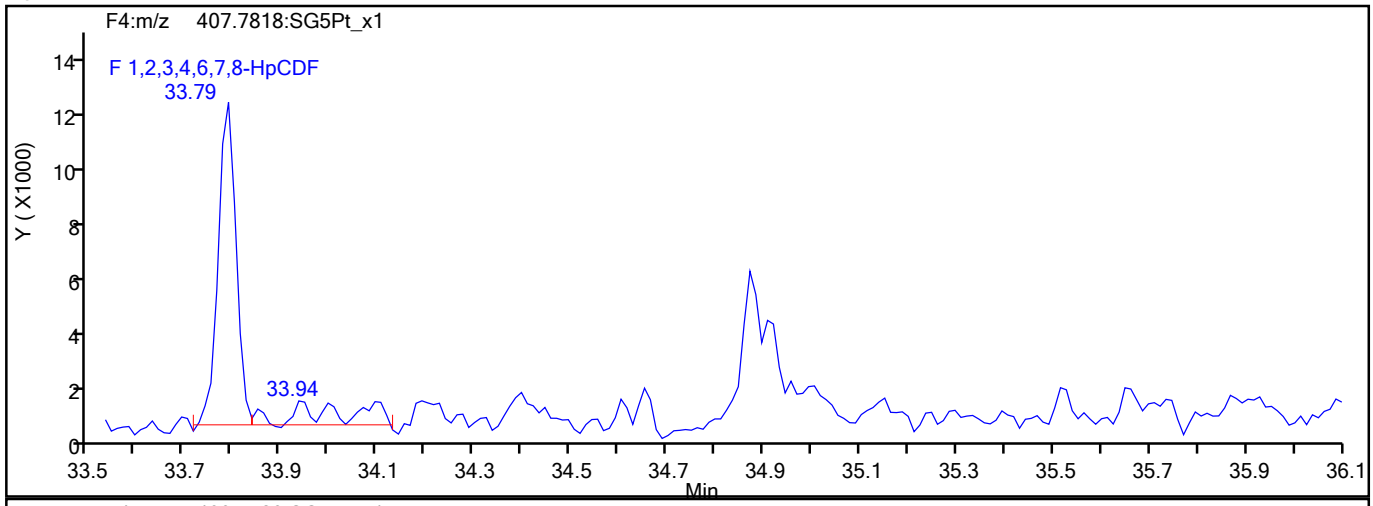

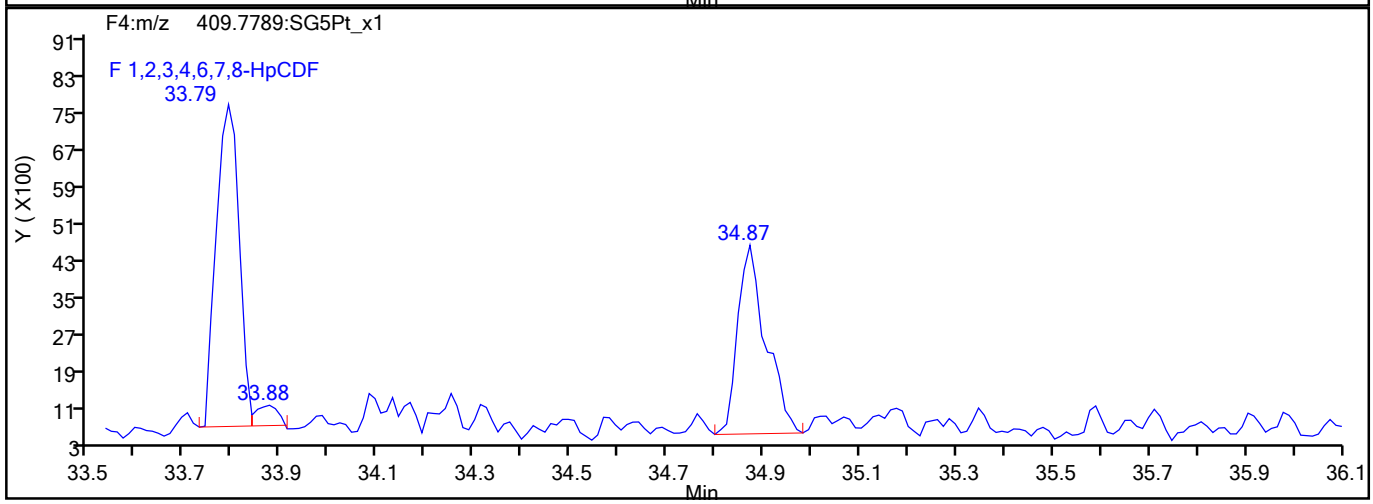

HpCDF Interference Mass

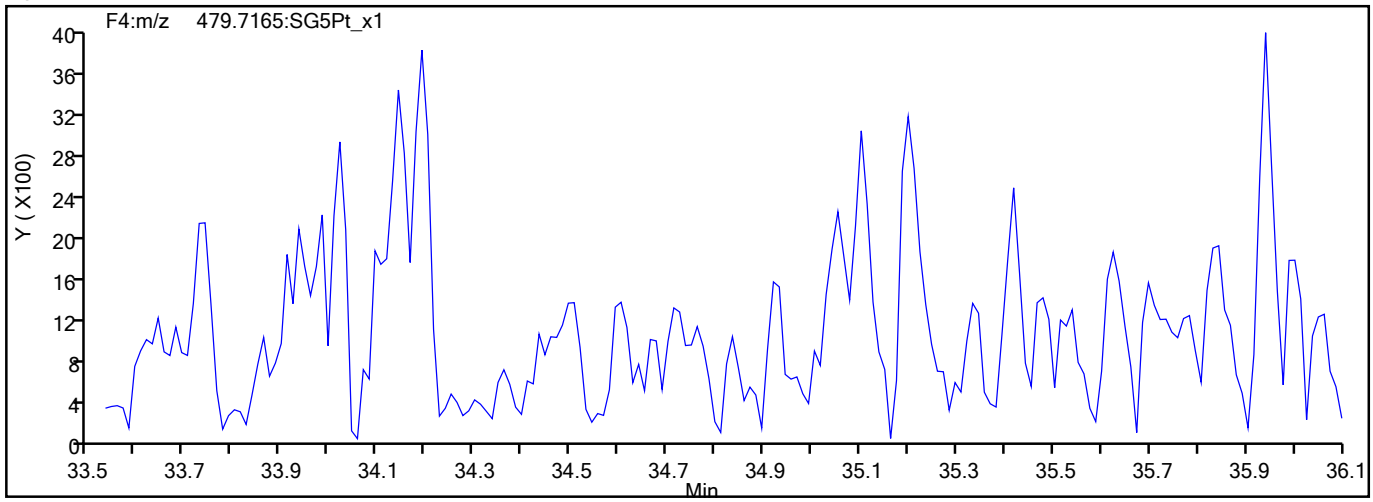

774079

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

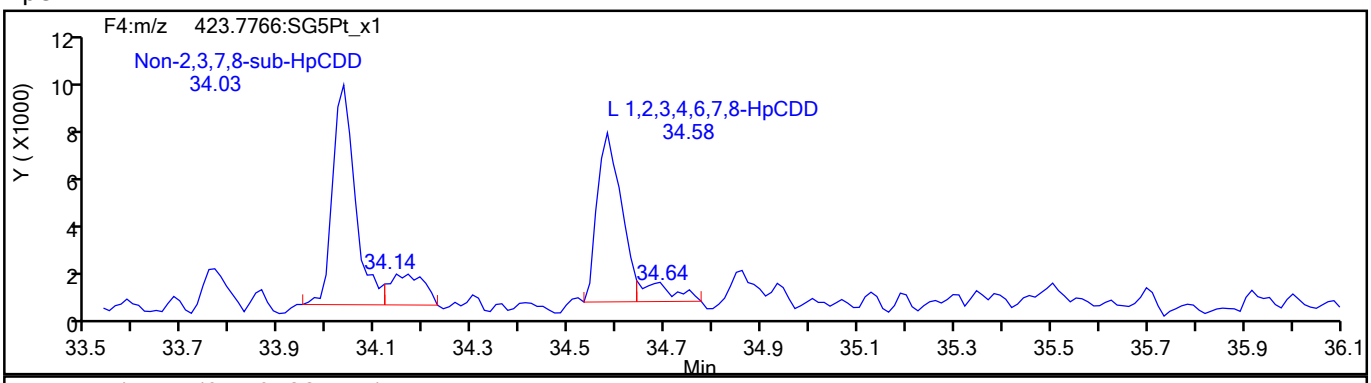

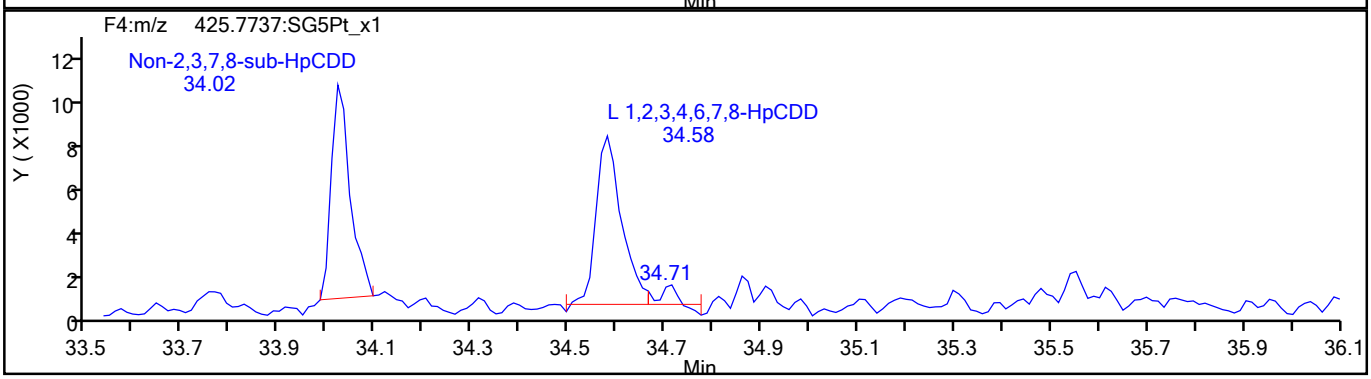

HpCDD Standards

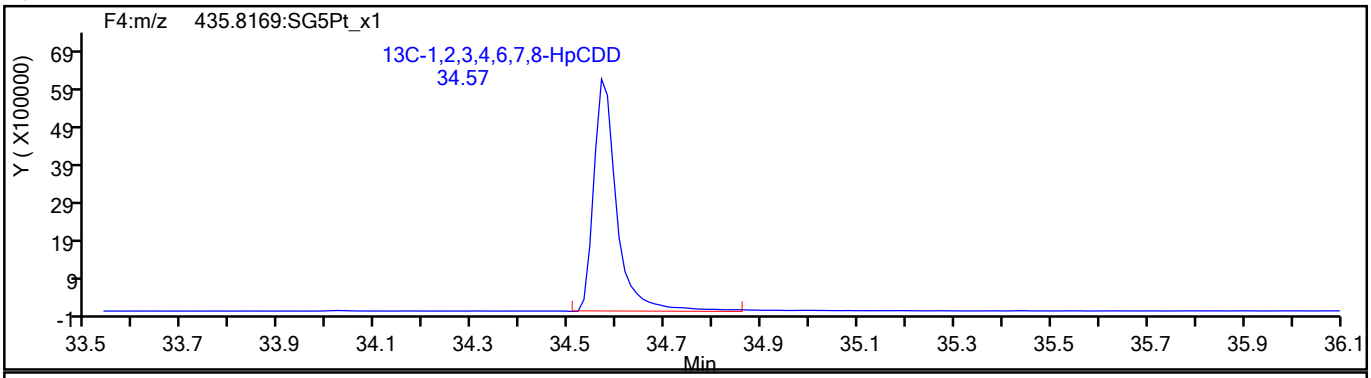

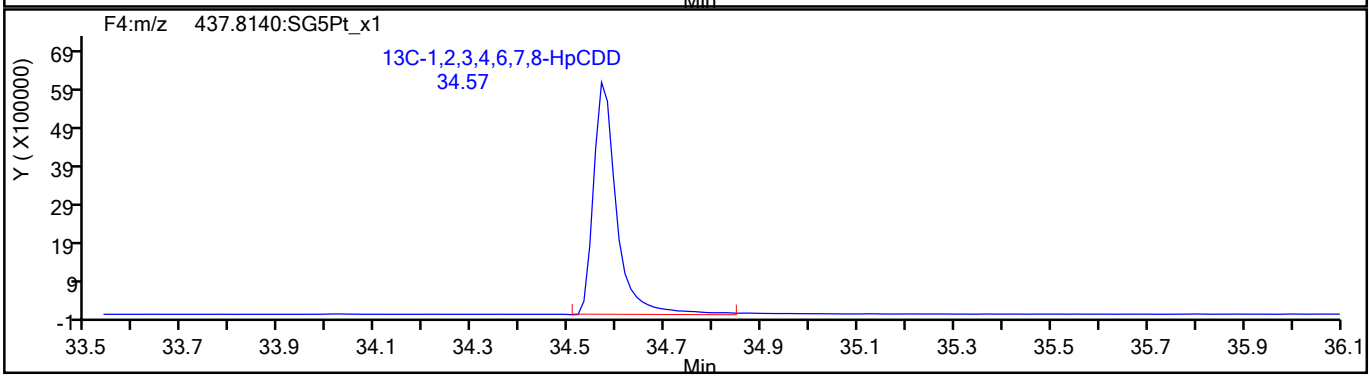

774080

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

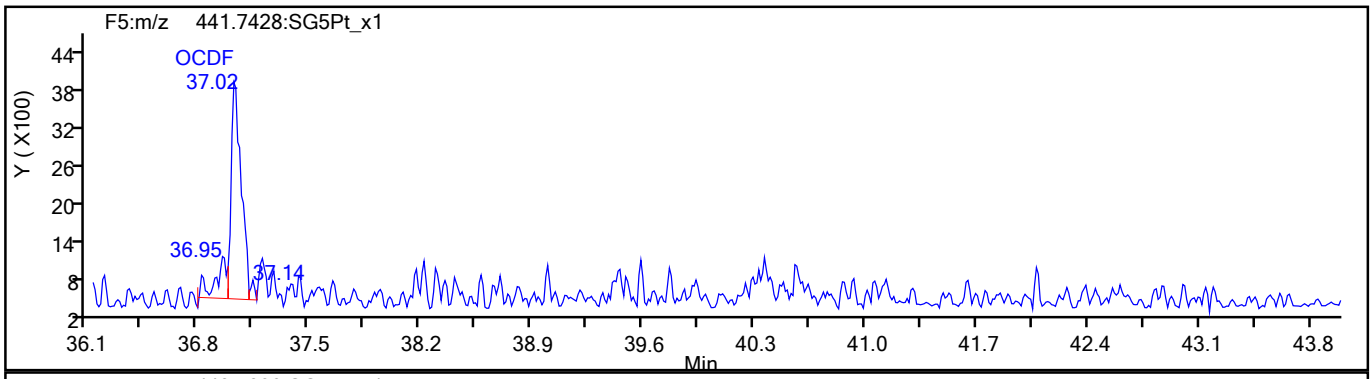

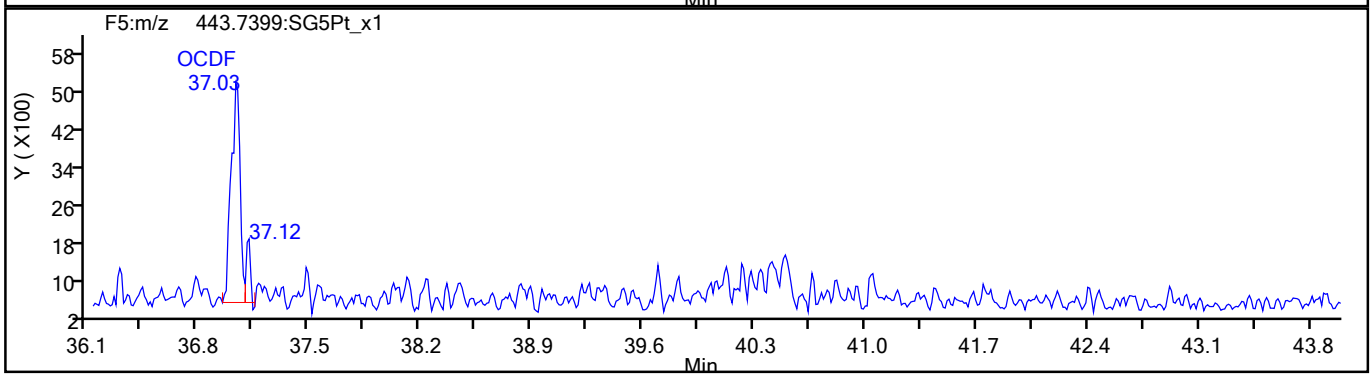

OCDF Standards

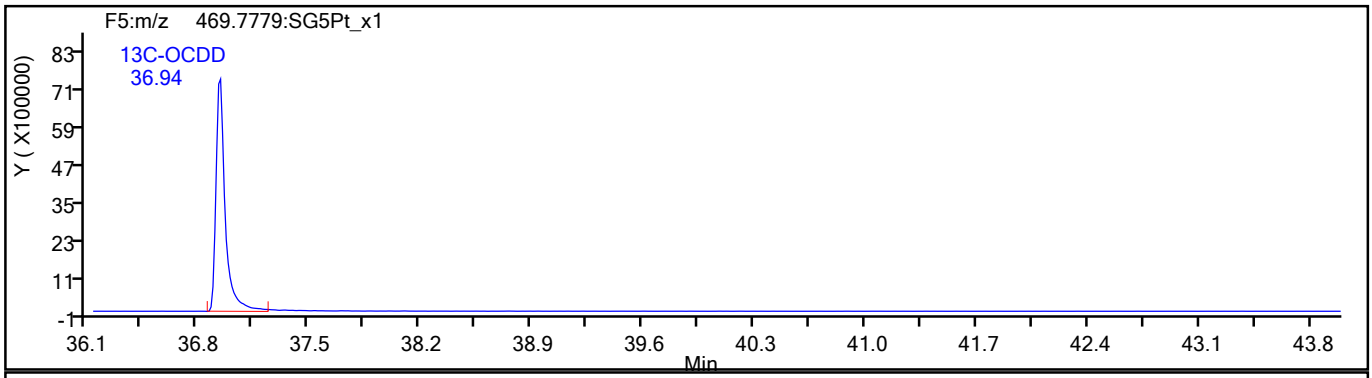

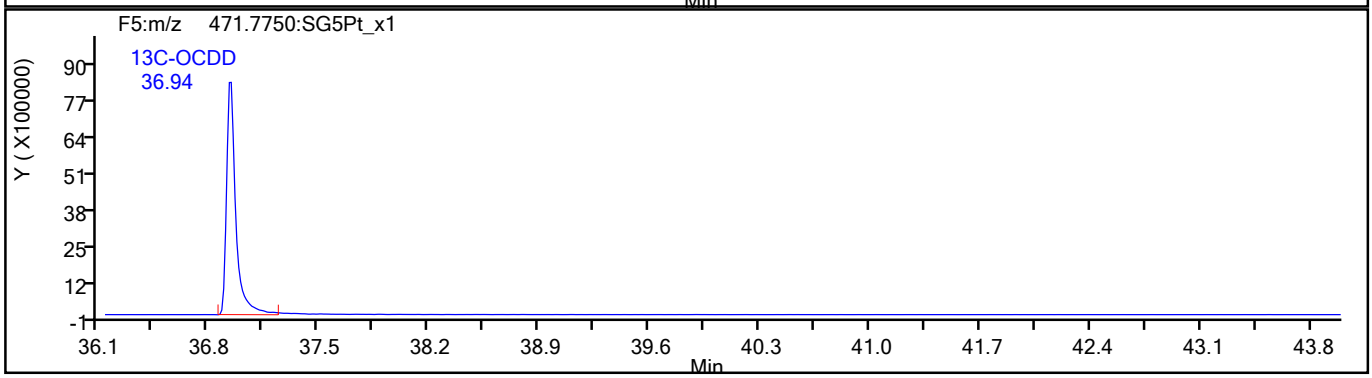

774081

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

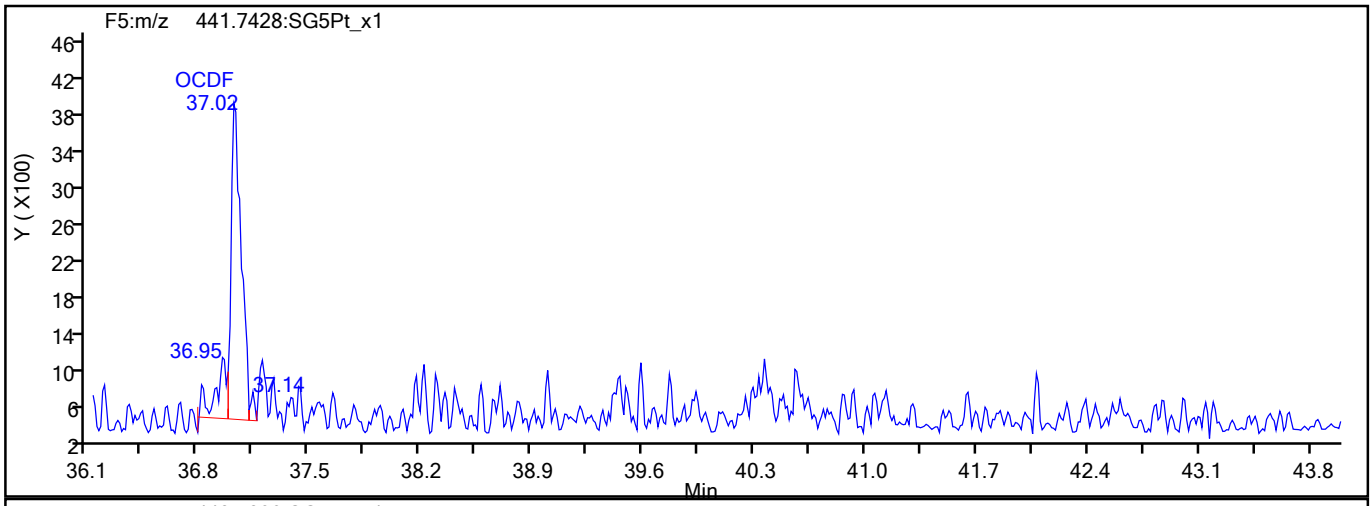

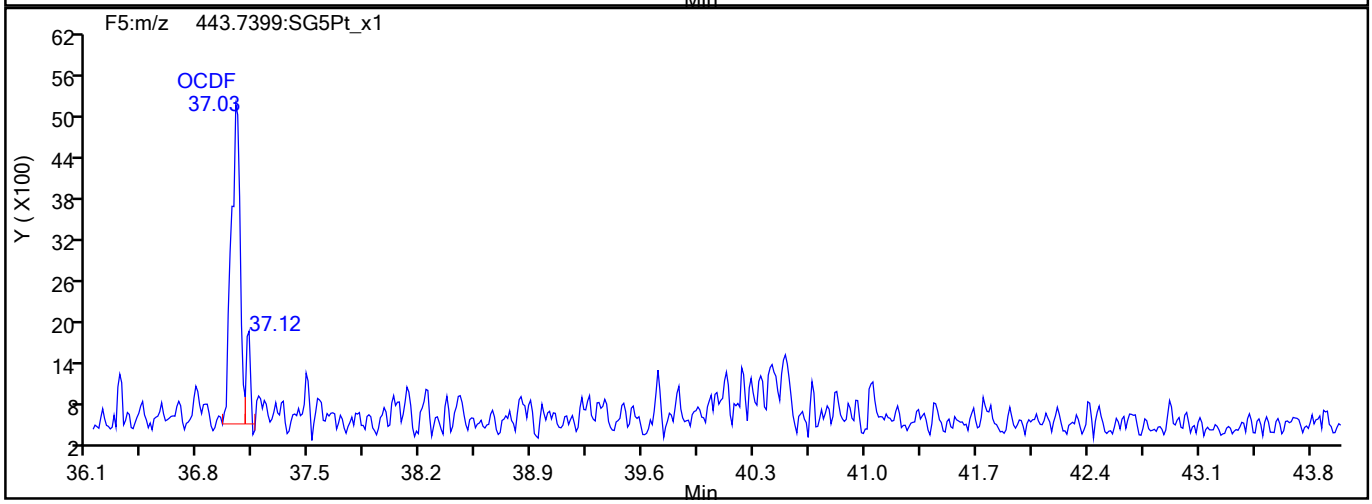

OCDF Interference Mass

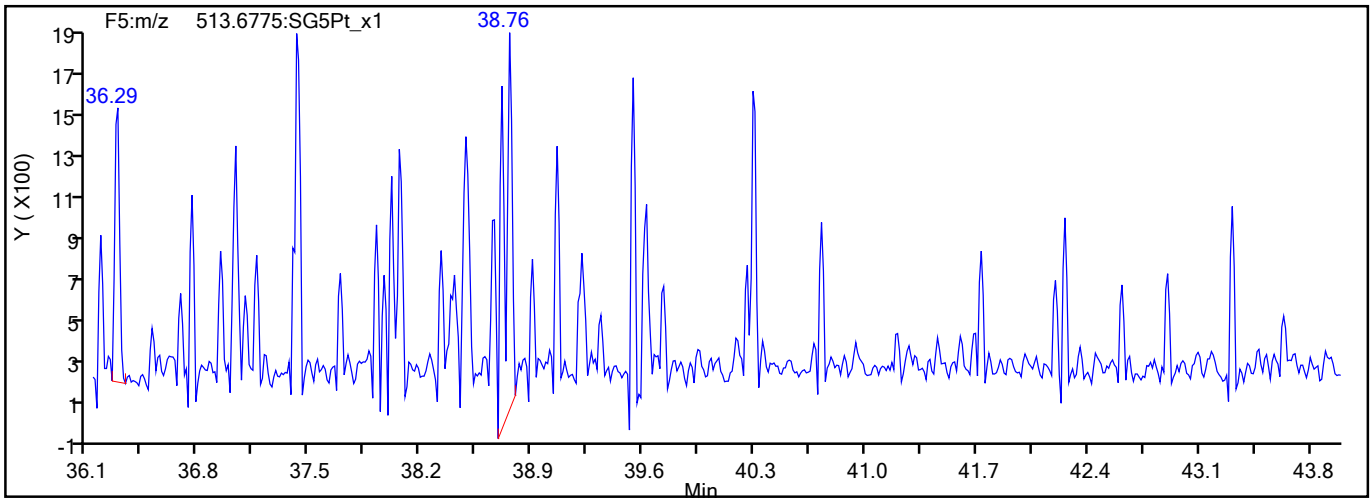

774082

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

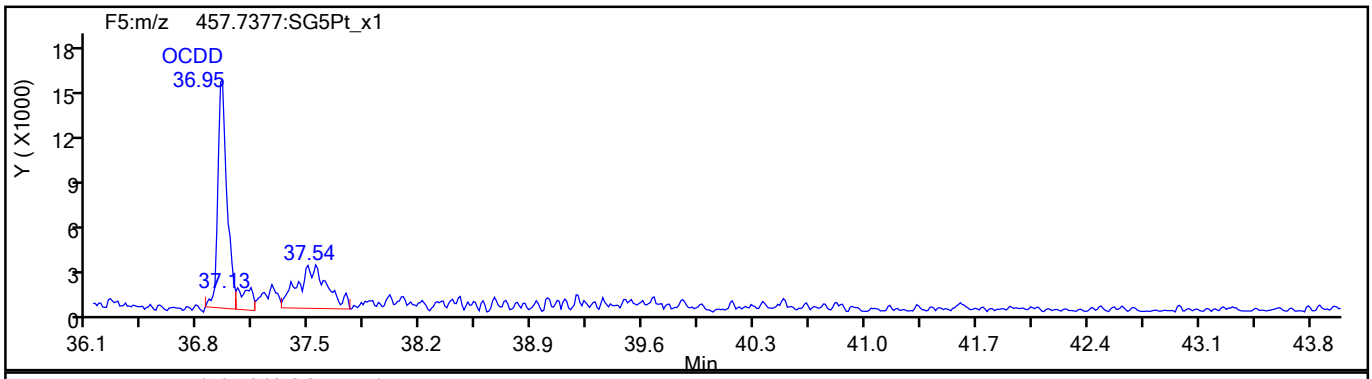

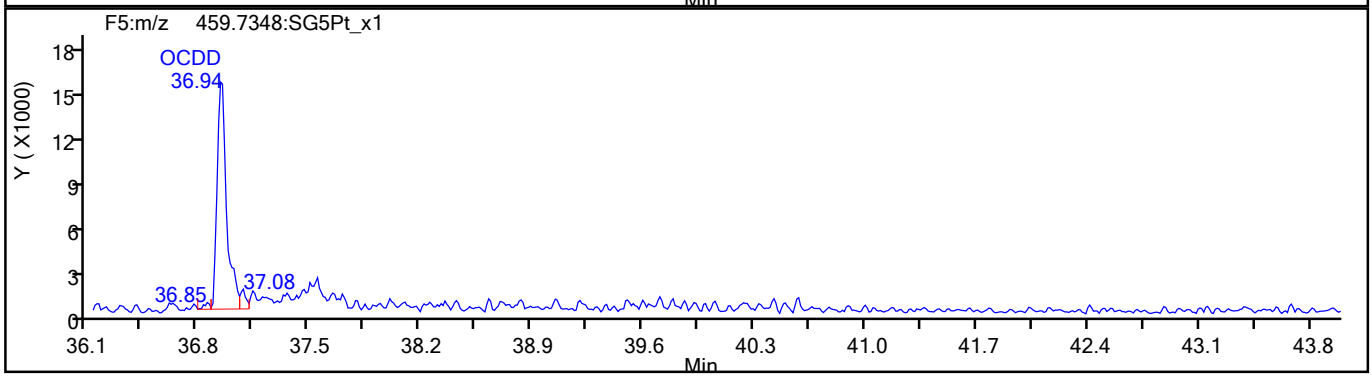

OCDD Standards

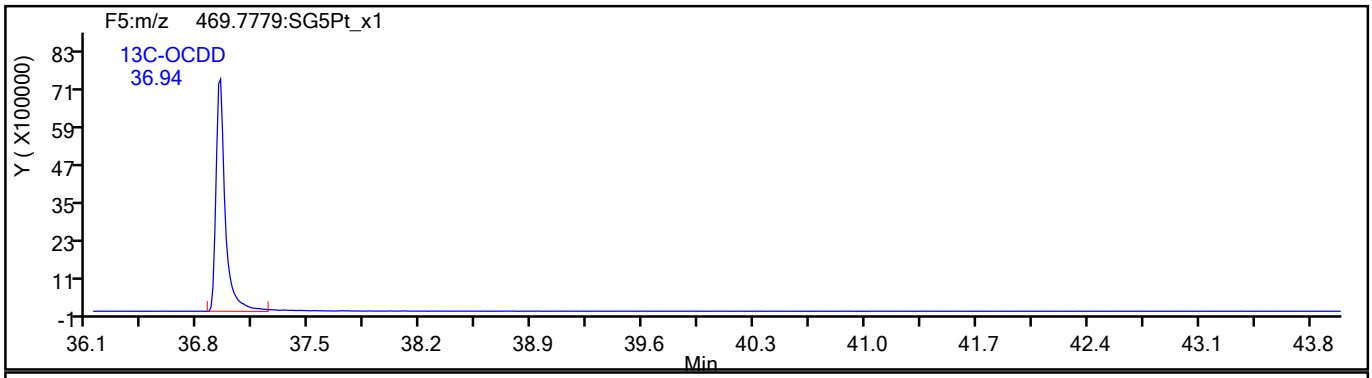

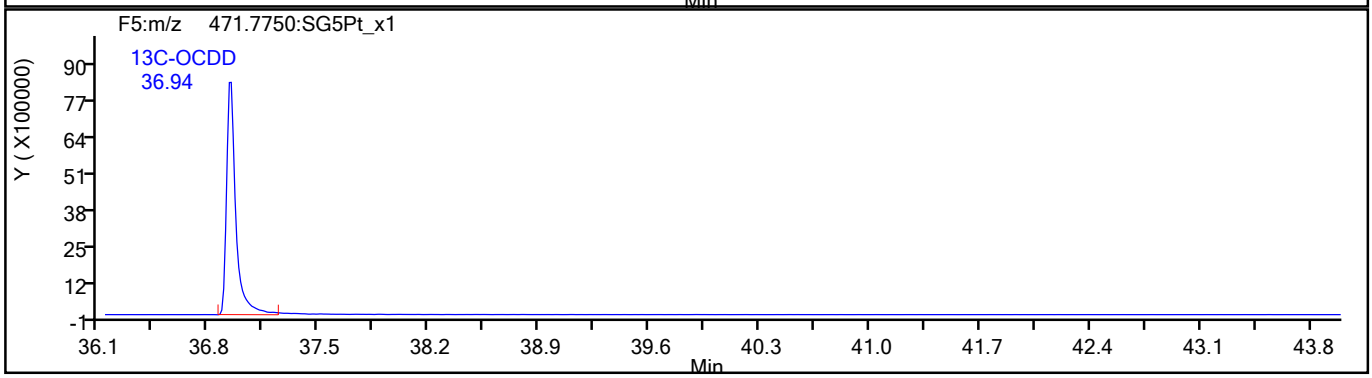

774083

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

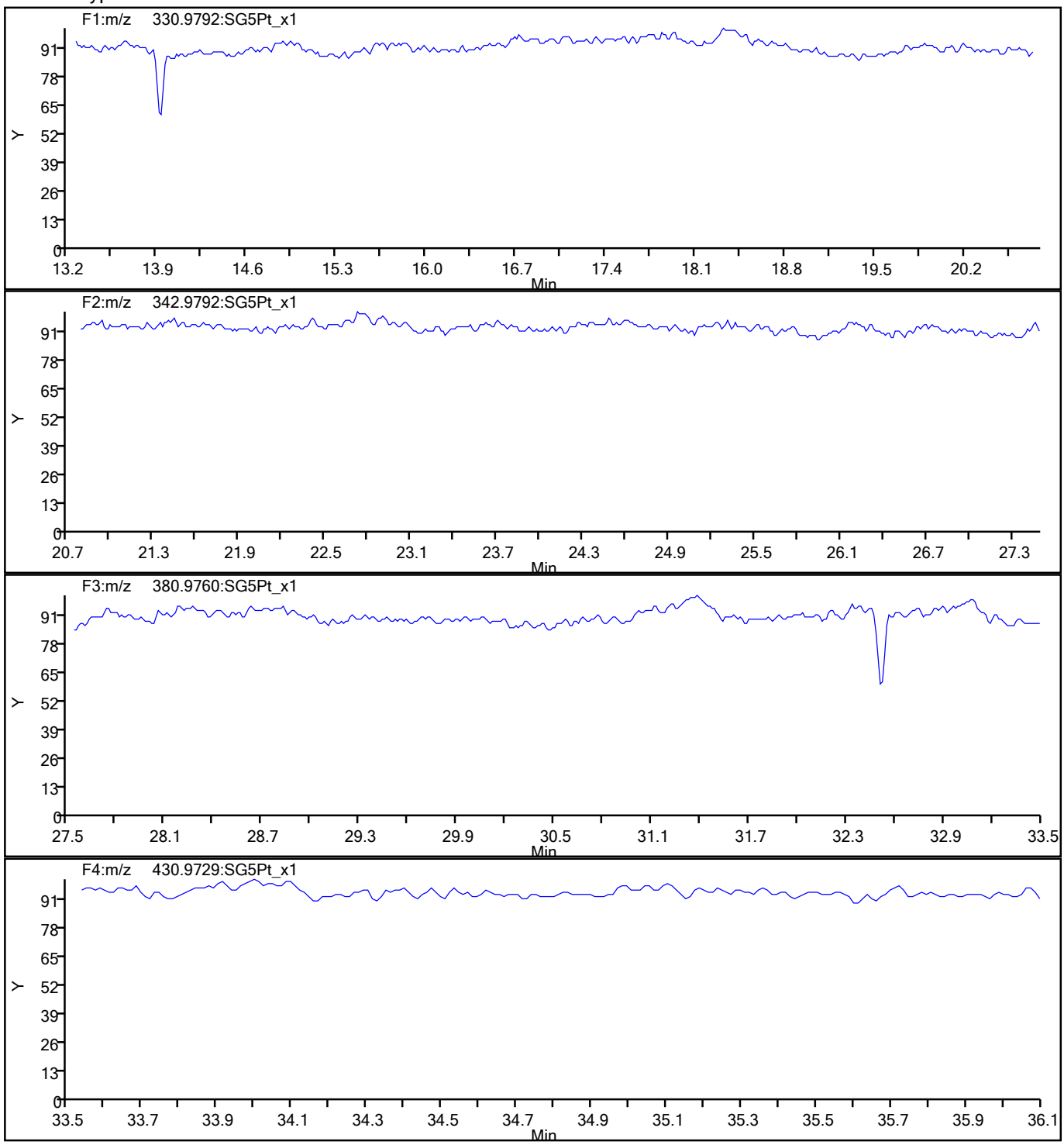

774084

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

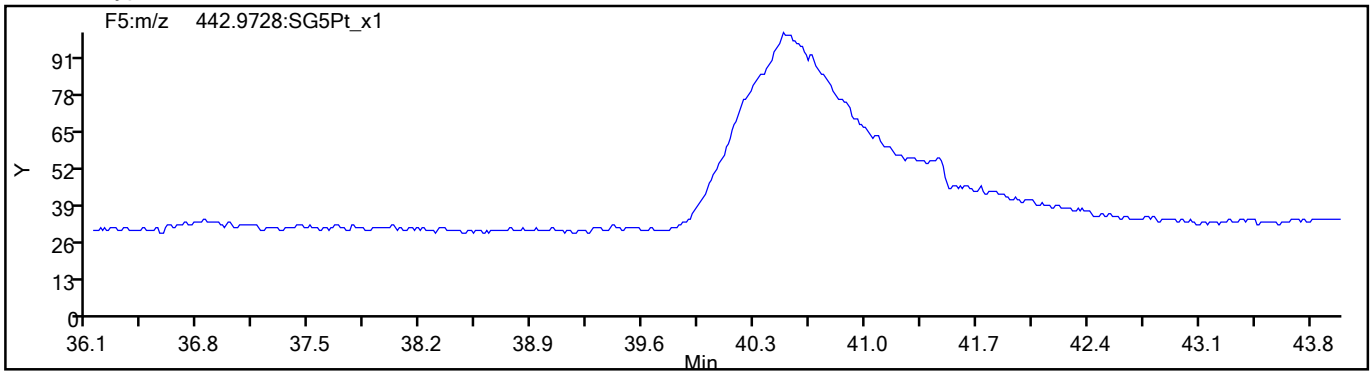

774085

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513227/2-A

Matrix: Sediment Lab File ID: 12AU2110D5_26.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/05/2021 06:41

Sample wt/vol: 10(g) Date Analyzed: 08/13/2021 07:18

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 515770 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	20.2		1.0	0.043
51207-31-9	2,3,7,8-TCDF	20.9		1.0	0.062
40321-76-4	1,2,3,7,8-PeCDD	107		5.0	0.14
57117-41-6	1,2,3,7,8-PeCDF	108		5.0	0.35
57117-31-4	2,3,4,7,8-PeCDF	97.4		5.0	0.35
39227-28-6	1,2,3,4,7,8-HxCDD	97.1		5.0	0.35
57653-85-7	1,2,3,6,7,8-HxCDD	106		5.0	0.36
19408-74-3	1,2,3,7,8,9-HxCDD	105		5.0	0.32
70648-26-9	1,2,3,4,7,8-HxCDF	96.7		5.0	0.52
57117-44-9	1,2,3,6,7,8-HxCDF	107		5.0	0.55
72918-21-9	1,2,3,7,8,9-HxCDF	106		5.0	0.44
60851-34-5	2,3,4,6,7,8-HxCDF	105		5.0	0.42
35822-46-9	1,2,3,4,6,7,8-HpCDD	107		5.0	0.59
67562-39-4	1,2,3,4,6,7,8-HpCDF	106		5.0	1.0
55673-89-7	1,2,3,4,7,8,9-HpCDF	98.8		5.0	1.2
3268-87-9	OCDD	214		10	0.25
39001-02-0	OCDF	205		10	0.19
41903-57-5	Total TCDD	20.2		1.0	0.043
30402-14-3	Total TCDF	21.0		1.0	0.062
36088-22-9	Total PeCDD	107		5.0	0.14
30402-15-4	Total PeCDF	207		5.0	0.35
34465-46-8	Total HxCDD	309		5.0	0.34
55684-94-1	Total HxCDF	415		5.0	0.48
37871-00-4	Total HpCDD	107		5.0	0.59
38998-75-3	Total HpCDF	205		5.0	1.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513227/2-A

Matrix: Sediment Lab File ID: 12AU2110D5_26.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/05/2021 06:41

Sample wt/vol: 10(g) Date Analyzed: 08/13/2021 07:18

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 515770 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		20-175
89059-46-1	13C-2,3,7,8-TCDF	54		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	58		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	55		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	61		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	61		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	59		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	53		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	52		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	53		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	62		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	67		20-186
114423-97-1	13C-OCDD	69		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	79		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d
Lims ID: LCS 320-513227/2-A
Client ID:
Sample Type: LCS
Inject. Date: 13-Aug-2021 07:18:13 ALS Bottle#: 30 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513227/2-a lcs 320-513227/2-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:39:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: dadunj Date: 16-Aug-2021 13:39:50

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	140949085	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	124668118	0.77	1.6249	54.4	54.4	0.0747	0.0747	54.43	
2,3,7,8-TCDF	17.371	13308465	0.77	1.0239	10.4	10.4	0.0308	0.0308	104	
A Non-2,3,7,8-sub-TCDF	17.069	107618	0.88	1.0239	0.0843	0.0843	0.0308	0.0843	0.00	
S Total TCDF					10.5	10.5	0.0308	0.0308		
D 13C-2,3,7,8-TCDD	18.066	72851242	0.81	0.8993	57.5	57.5	0.1134	0.1134	57.47	
2,3,7,8-TCDD	18.097	9224854	0.77	1.2541	10.1	10.1	0.0213	0.0213	101	
$ 37Cl4-2,3,7,8-TCDD	18.082	49175155		1.1071	31.5	31.5	0.0344	0.0344	78.78	
A Non-2,3,7,8-sub-TCDD	17.530						0.0213	0.0213		
S Total TCDD					10.1	10.1	0.0213	0.0213		
D 13C-1,2,3,7,8-PeCDF	22.394	94111889	1.56	1.2101	55.2	55.2	0.1250	0.1250	55.18	
1,2,3,7,8-PeCDF	22.421	53928677	1.63	1.0611	54.0	54.0	0.1729	0.1729	108	
D 13C-2,3,4,7,8-PeCDF	23.744	105762248	1.57	1.2395	60.5	60.5	0.1220	0.1220	60.54	
2,3,4,7,8-PeCDF	23.758	52464762	1.59	1.0184	48.7	48.7	0.1742	0.1742	97.42	
A F1 PeCDFs	20.108	33025	1.57	1.0398	0.0318	0.0318	0.008940	0.0318	0.00	M
A Non-2,3,7,8-sub-PeCDF	23.261	598488	1.44	1.0398	0.5760	0.5760	0.1735	0.5760	0.00	
S Total PeCDF					103.3	103.3	0.1735	0.1735		
D 13C-1,2,3,7,8-PeCDD	24.467	62759962	1.61	0.7612	58.5	58.5	0.0595	0.0595	58.49	
1,2,3,7,8-PeCDD	24.494	35329499	1.59	1.0484	53.7	53.7	0.0710	0.0710	107	
A Non-2,3,7,8-sub-PeCDD	23.376						0.0710	0.0710		
S Total PeCDD					53.7	53.7	0.0710	0.0710		
D 13C-1,2,3,4,7,8-HxCDF	30.529	88472053	0.52	1.0837	59.2	59.2	0.2070	0.2070	59.19	
1,2,3,4,7,8-HxCDF	30.543	46438177	1.21	1.0851	48.4	48.4	0.2609	0.2609	96.74	
D 13C-1,2,3,6,7,8-HxCDF	30.716	82695933	0.52	1.1279	53.2	53.2	0.1989	0.1989	53.15	
1,2,3,6,7,8-HxCDF	30.729	49797457	1.21	1.1260	53.5	53.5	0.2759	0.2759	107	
D 13C-2,3,4,6,7,8-HxCDF	31.528	77238969	0.52	1.0637	52.6	52.6	0.2109	0.2109	52.64	
2,3,4,6,7,8-HxCDF	31.541	47394036	1.21	1.1675	52.6	52.6	0.2112	0.2112	105	
D 13C-1,2,3,7,8,9-HxCDF	32.326	69935872	0.53	0.9676	52.4	52.4	0.2318	0.2318	52.40	
1,2,3,7,8,9-HxCDF	32.340	43281782	1.21	1.1664	53.1	53.1	0.2185	0.2185	106	
A Non-2,3,7,8-sub-HxCDF	30.223						0.2390	0.2390		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					207.5	207.5	0.2416	0.2416		
* 13C-1,2,3,7,8,9-HxCDD	32.153	137940362	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	61560528	1.24	0.7334	60.8	60.8	0.2432	0.2432	60.85	
1,2,3,4,7,8-HxCDD	31.728	31785175	1.27	1.0640	48.5	48.5	0.1750	0.1750	97.05	
D 13C-1,2,3,6,7,8-HxCDD	31.821	68261127	1.24	0.8802	56.2	56.2	0.2026	0.2026	56.22	
1,2,3,6,7,8-HxCDD	31.834	36313008	1.26	1.0001	53.2	53.2	0.1795	0.1795	106	
1,2,3,7,8,9-HxCDD	32.167	38618454	1.26	1.1325	52.5	52.5	0.1614	0.1614	105	
A Non-2,3,7,8-sub-HxCDD	30.895						0.1715	0.1715		
S Total HxCDD					154.3	154.3	0.1720	0.1720		
1,2,3,4,6,7,8-HpCDF	33.778	48750055	1.05	1.4413	53.2	53.2	0.4994	0.4994	106	
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	63595666	0.44	0.7730	59.6	59.6	0.6988	0.6988	59.64	
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	65003176	0.44	0.7008	67.2	67.2	0.7708	0.7708	67.24	
1,2,3,4,7,8,9-HpCDF	34.872	42282543	1.05	1.3174	49.4	49.4	0.5884	0.5884	98.75	
A Non-2,3,7,8-sub-HpCDF	34.325						0.5411	0.5411		
S Total HpCDF					102.6	102.6	0.5439	0.5439		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	55638701	0.99	0.6472	62.3	62.3	0.3728	0.3728	62.32	
1,2,3,4,6,7,8-HpCDD	34.580	32446978	1.04	1.0943	53.3	53.3	0.2926	0.2926	107	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2926	0.2926		
S Total HpCDD					53.3	53.3	0.2926	0.2926		
D 13C-OCDD	36.926	85262558	0.88	0.4472	138.2	138.2	0.1605	0.1605	69.12	
OCDF	37.022	62891604	0.90	1.4382	102.6	102.6	0.0936	0.0936	103	
OCDD	36.938	50414041	0.89	1.1070	106.8	106.8	0.1273	0.1273	107	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d
Lims ID: LCS 320-513227/2-A
Client ID:
Sample Type: LCS
Inject. Date: 13-Aug-2021 07:18:13 ALS Bottle#: 30 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513227/2-a lcs 320-513227/2-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:39:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: dadunj Date: 16-Aug-2021 13:39:50

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.885	-1		63059376	15387887	9916	24790	1552		
333.9339	17.870	17.885	-1		77889709	19358117	4263	10657	4541	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.971	54399394	12761646	7892	19730	1617		
317.9389	17.356	17.356	0	0.971	70268724	16517794	8975	22437	1840	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.386	-1	1.001	5797744	1375685	1270	3175	1083		
305.8987	17.371	17.386	-1	1.001	7510721	1756194	2428	6070	723	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.993	17.069	-5	0.979	50443	13132	1270	3175	10		
305.8987	16.993	17.069	-5	0.979	57175	15129	2428	6070	6	0.88(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.066	0	1.011	32651048	7363606	9916	24790	743		
333.9339	18.066	18.066	0	1.011	40200194	9082480	4263	10657	2131	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.097	18.082	1	1.002	4014028	902255	881	2202	1024		
321.8936	18.082	18.082	0	1.001	5210826	1177842	879	2197	1340	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.097	-1	1.012	49175155	10917312	5292	13230	2063		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.530						881	2202			
321.8936	17.530						879	2197			
13C-1,2,3,7,8-PeCDF											
351.9000	22.394	22.408	-1	1.253	57314120	9683486	12591	31477	769		
353.8970	22.394	22.408	-1	1.253	36797769	6237027	8432	21080	740	1.56(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.421	22.435	-1	1.001	33385509	5512924	7056	17640	781		
341.8567	22.421	22.435	-1	1.001	20543168	3416885	4625	11562	739	1.63(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.744	23.758	-1	1.329	64688511	10076177	12591	31477	800		
353.8970	23.744	23.758	-1	1.329	41073737	6383113	8432	21080	757	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.758	23.785	-2	1.001	32218516	4958688	7056	17640	703		
341.8567	23.758	23.785	-2	1.001	20246246	3157135	4625	11562	683	1.59(1.32-1.78)	
A F1 PeCDFs											M
339.8597	19.488	20.108	-37	0.870	20171	4126	206	515	20		M
341.8567	19.533	20.108	-34	0.872	12854	2213	396	990	6	1.57(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.940	23.261	-19	1.024	353277	44510	7056	17640	6		
341.8567	22.926	23.261	-20	1.024	245211	34985	4625	11562	8	1.44(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.467	24.481	-1	1.369	38737495	5745805	3409	8522	1685		
369.8919	24.467	24.481	-1	1.369	24022467	3571775	2883	7207	1239	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.494	24.508	-1	1.001	21689374	3141255	1848	4620	1700		
357.8516	24.480	24.508	-2	1.001	13640125	2012888	925	2312	2176	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.376						1848	4620			
357.8516	23.376						925	2312			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.529	30.543	-1	0.949	30279313	5719317	11720	29300	488		
385.8610	30.529	30.543	-1	0.949	58192740	11084755	21387	53467	518	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.543	30.569	-2	1.000	25450691	4731048	10412	26030	454		
375.8178	30.543	30.569	-2	1.000	20987486	3943446	8614	21535	458	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.716	30.716	0	0.955	28294647	5268876	11720	29300	450		
385.8610	30.716	30.716	0	0.955	54401286	10041370	21387	53467	470	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.729	30.743	-1	1.000	27283767	5207812	10412	26030	500		
375.8178	30.729	30.743	-1	1.000	22513690	4298023	8614	21535	499	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.528	31.541	-1	0.981	26545069	6662033	11720	29300	568		
385.8610	31.528	31.541	-1	0.981	50693900	12629870	21387	53467	591	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.541	31.554	-1	1.000	25961350	6302985	10412	26030	605		
375.8178	31.541	31.554	-1	1.000	21432686	5320666	8614	21535	618	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.340	-1	1.005	24130264	6475820	11720	29300	553		
385.8610	32.326	32.340	-1	1.005	45805608	12190236	21387	53467	570	0.53(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.340	32.353	-1	1.000	23730481	6286195	10412	26030	604		
375.8178	32.340	32.353	-1	1.000	19551301	5245600	8614	21535	609	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.223						10412	26030			
375.8178	30.223						8614	21535			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.153	0		76367266	20432665	14215	35537	1437		
403.8529	32.153	32.153	0		61573096	16463729	12107	30267	1360	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.727	-1	0.986	34138718	9451236	14215	35537	665		
403.8529	31.714	31.727	-1	0.986	27421810	7568518	12107	30267	625	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.728	31.741	-1	1.000	17792811	4964511	7117	17792	698		
391.8127	31.728	31.741	-1	1.000	13992364	3992679	5557	13892	718	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.821	31.834	-1	0.990	37735292	9792882	14215	35537	689		
403.8529	31.821	31.834	-1	0.990	30525835	7856191	12107	30267	649	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.834	31.847	-1	1.000	20229036	5173646	7117	17792	727		
391.8127	31.834	31.847	-1	1.000	16083972	4185690	5557	13892	753	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.167	32.167	0	1.014	21523113	5717698	7117	17792	803		
391.8127	32.167	32.167	0	1.014	17095341	4522648	5557	13892	814	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.895						7117	17792			
391.8127	30.895						5557	13892			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	24930987	8128708	34589	86472	235		
409.7789	33.778	33.778	0	1.000	23819068	7872766	24369	60922	323	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.778	-1	1.050	19373131	6256436	21860	54650	286		
419.8220	33.766	33.778	-1	1.050	44222535	14222420	57864	144660	246	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.860	0	1.084	20001267	5910031	21860	54650	270		
419.8220	34.860	34.860	0	1.084	45001909	13105742	57864	144660	226	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.872	0	1.000	21628117	6178130	34589	86472	179		
409.7789	34.860	34.872	-1	1.000	20654426	5962943	24369	60922	245	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						34589	86472			
409.7789	34.325						24369	60922			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.075	27696820	8478572	19269	48172	440		
437.8140	34.568	34.568	0	1.075	27941881	8478160	16337	40842	519	0.99(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	16539575	5040946	11124	27810	453		
425.7737	34.580	34.580	0	1.000	15907403	4786754	10596	26490	452	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						11124	27810			
425.7737	34.301						10596	26490			
13C-OCDD											
469.7779	36.926	36.926	0	1.148	39825065	10536809	4705	11762	2239		
471.7750	36.926	36.926	0	1.148	45437493	11978167	5887	14717	2035	0.88(0.76-1.02)	
OCDF											
441.7428	37.022	37.034	-1	1.003	29786502	7702633	2862	7155	2691		
443.7399	37.022	37.034	-1	1.003	33105102	8614280	3197	7992	2694	0.90(0.76-1.02)	
OCDD											
457.7377	36.938	36.938	0	1.000	23738835	6266839	2927	7317	2141		
459.7348	36.938	36.938	0	1.000	26675206	7003482	3417	8542	2050	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d
Lims ID: LCS 320-513227/2-A
Client ID:
Inject. Date: 13-Aug-2021 07:18:13 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	124668118	29279440

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	124668118	29279440

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.993	50443	13132	57175	15129	0.0843	0.88	
Signal Totals:							
	50443	13132	57175	15129			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	107618	28261				0.88	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0843 = (107618 * 100.000) / (124668118 * 1.024)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d
Lims ID: LCS 320-513227/2-A
Client ID:
Inject. Date: 13-Aug-2021 07:18:13 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 4

F1 PeCDFs, RT: 20.108

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	94111889	15920513
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	105762248	16459290

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	99937068	16189901

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.488	20171	4126	12854	2213	0.0318	1.57	M
Signal Totals:							
	20171	4126	12854	2213			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	33025	6339				1.57	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0318 = (33025 * 100.000) / (99937068 * 1.040)

QC Flag Legend

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d
Lims ID: LCS 320-513227/2-A
Client ID:
Inject. Date: 13-Aug-2021 07:18:13 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 4

Non-2,3,7,8-sub-PeCDF, RT: 23.261

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	94111889	15920513
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	105762248	16459290

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	99937068	16189901

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.940	353277	44510	245211	34985	0.5760	1.44	
Signal Totals:							
	353277	44510	245211	34985			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	598488	79495				1.44	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5760 = (598488 * 100.000) / (99937068 * 1.040)

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d				
Injection Date:	13-Aug-2021 07:18:13	Instrument ID:	10D5		
Lims ID:	LCS 320-513227/2-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

F1 PeCDFs, Signal: 1, m/z: 339.8597, RT: (19.46- 20.76)

Signal: 1

Processing Integration Results

RT = 19.488 Area = 20627

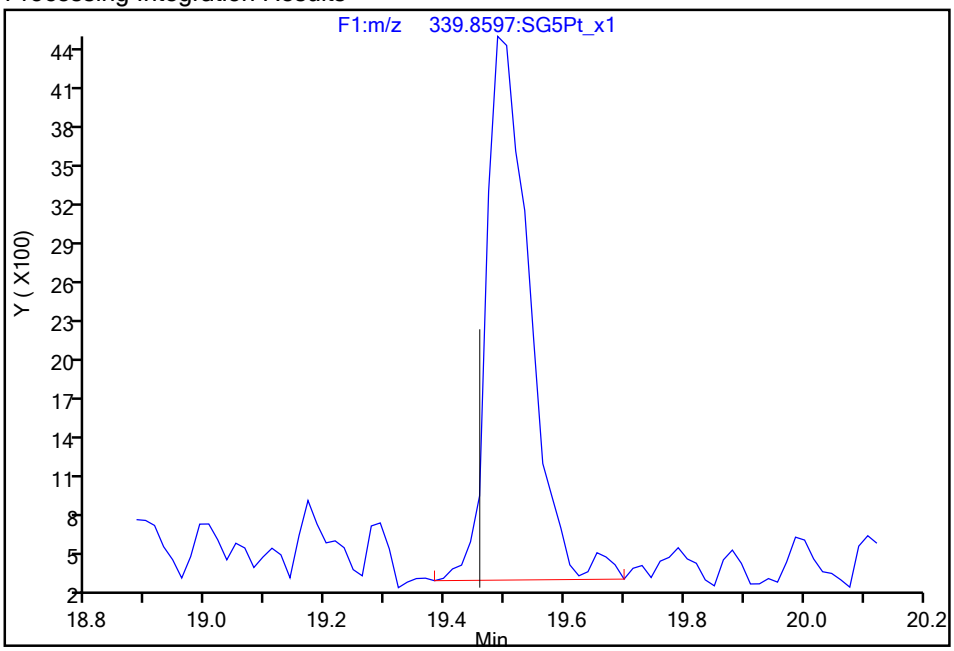

Manual Integration Results

RT = 19.488 Area = 20171 M

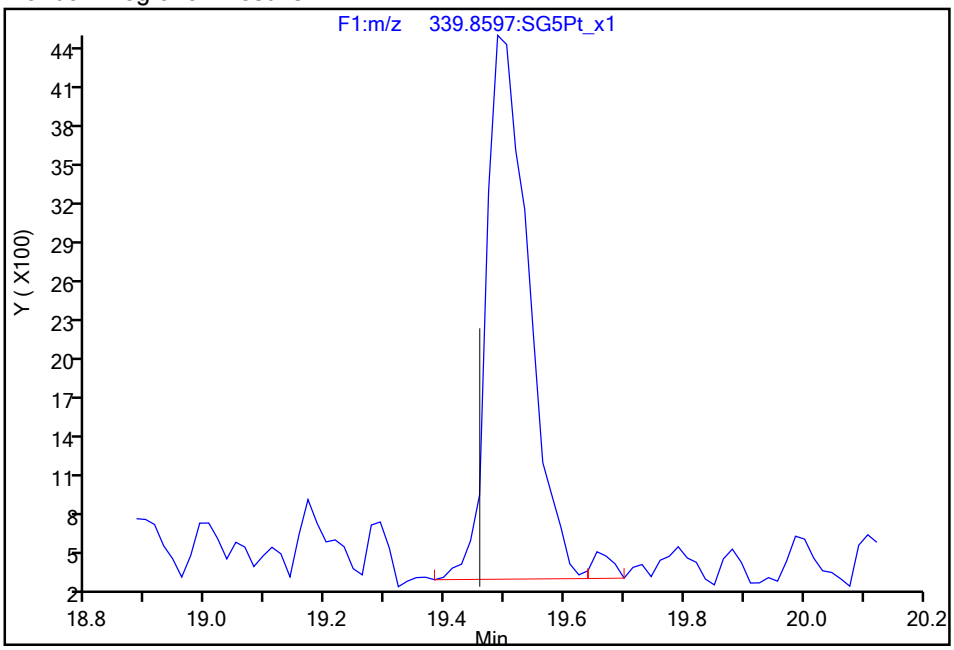

Reviewer: dadunj, 16-Aug-2021 13:39:28

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d				
Injection Date:	13-Aug-2021 07:18:13	Instrument ID:	10D5		
Lims ID:	LCS 320-513227/2-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

F1 PeCDFs, Signal: 2, m/z: 341.8567, RT: (19.46- 20.76)

Signal: 2

Processing Integration Results

RT = 19.533 Area = 11811

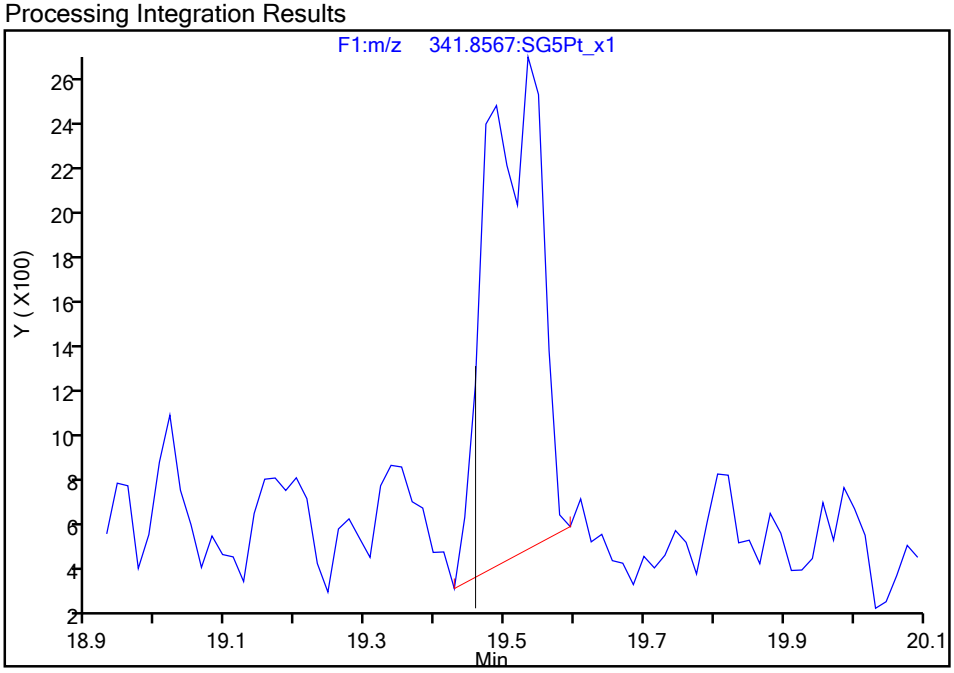

Manual Integration Results

RT = 19.533 Area = 12854 M

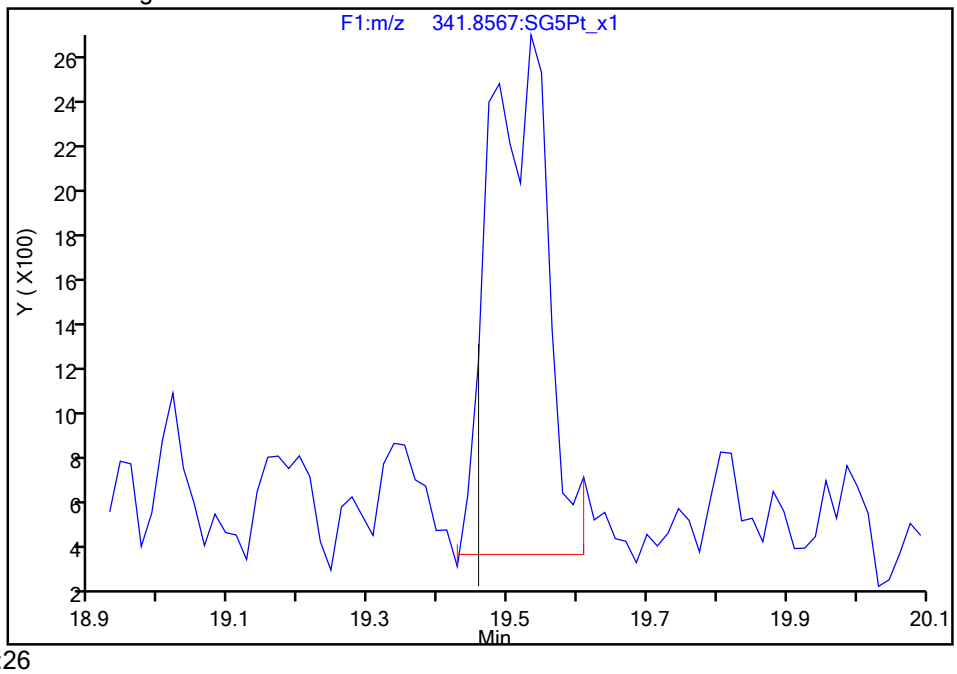

Reviewer: dadunj, 16-Aug-2021 13:39:26

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

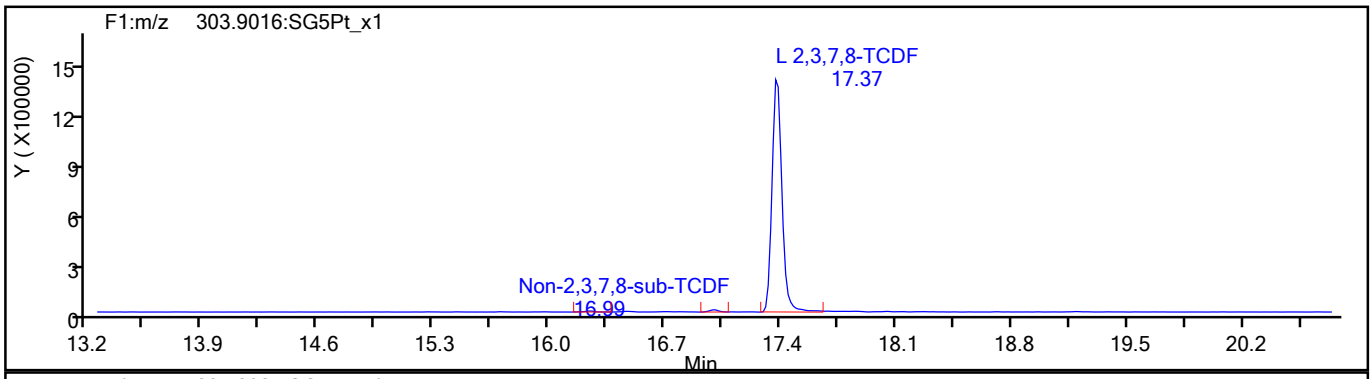

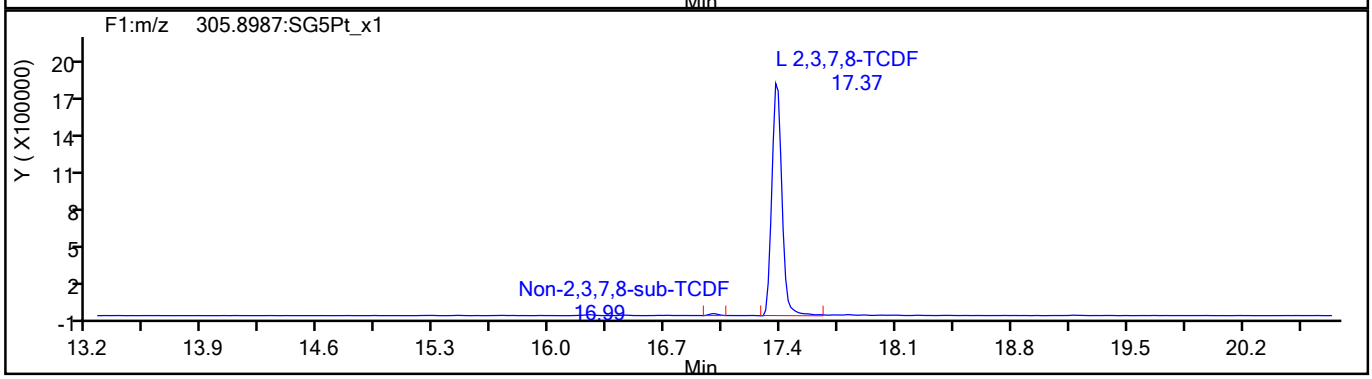

TCDF Standards

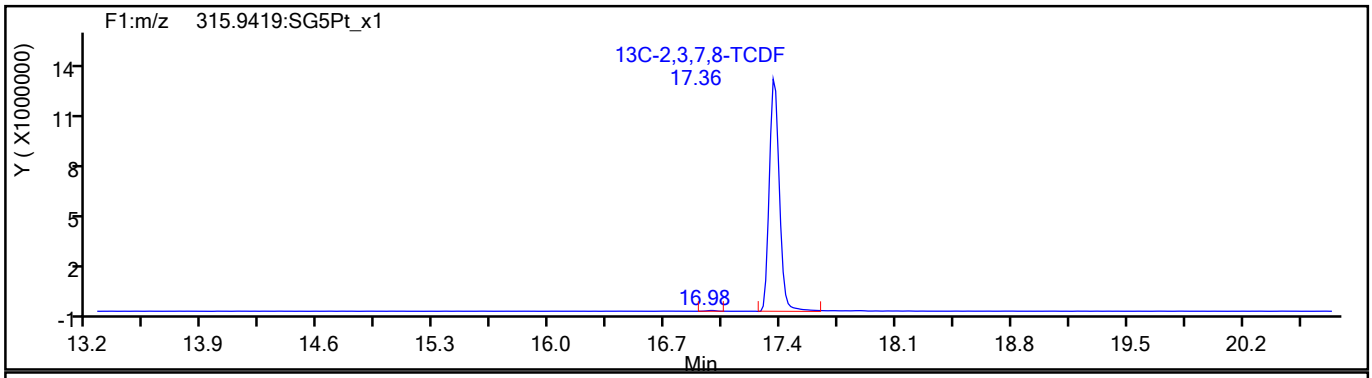

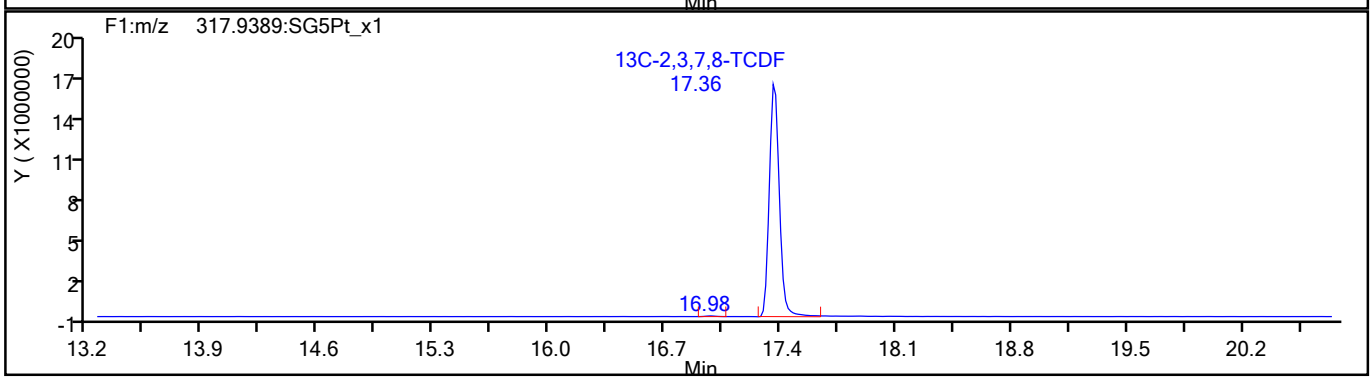

774099

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

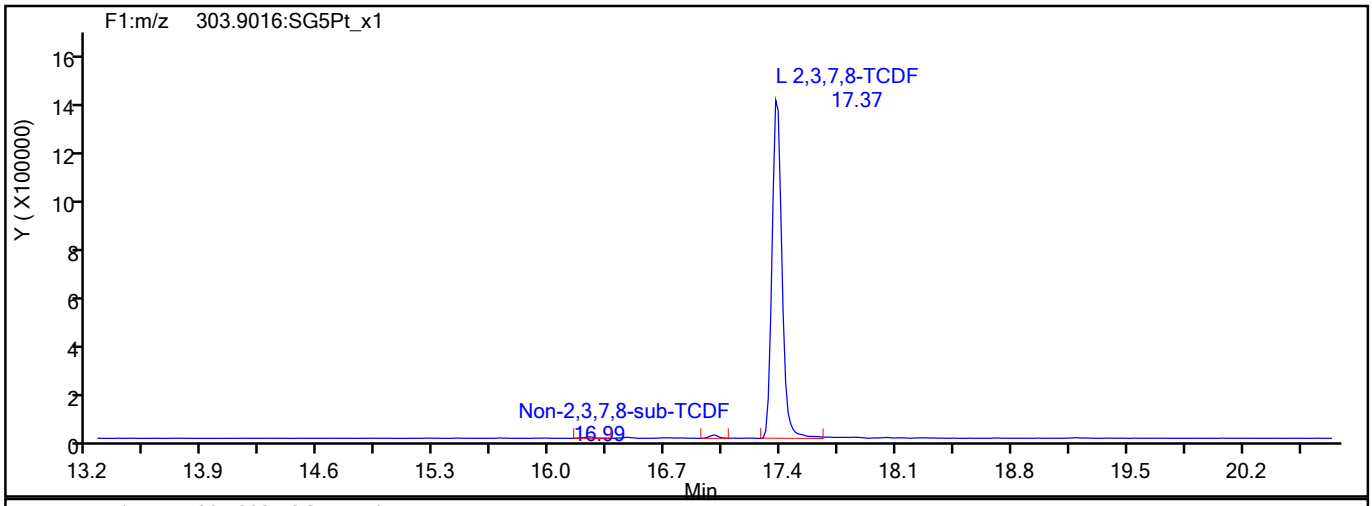

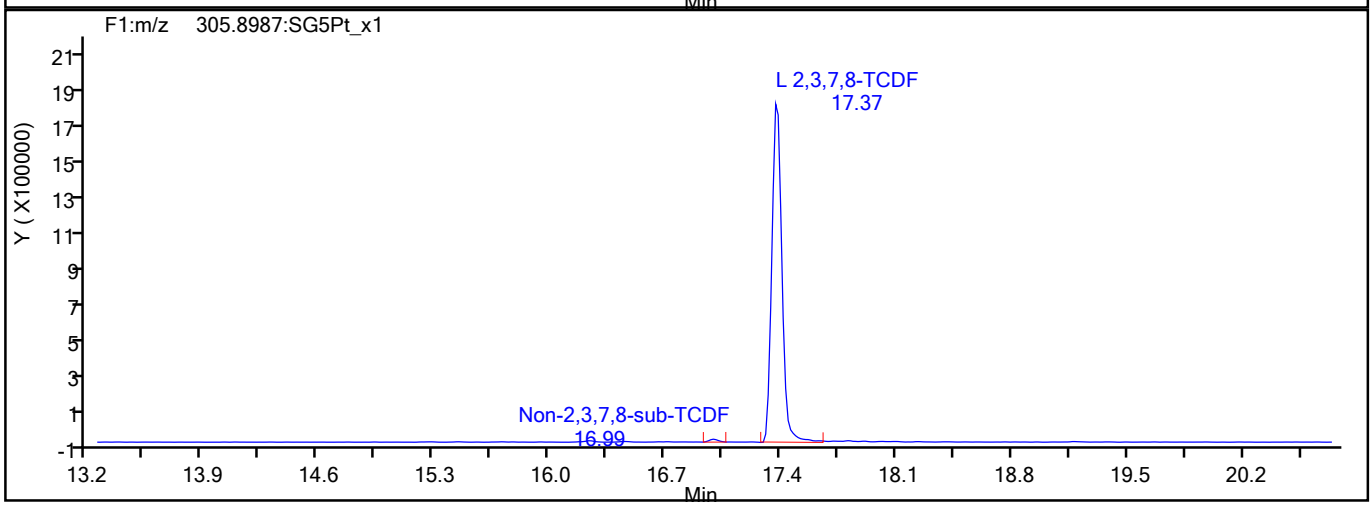

TCDF Interference Mass

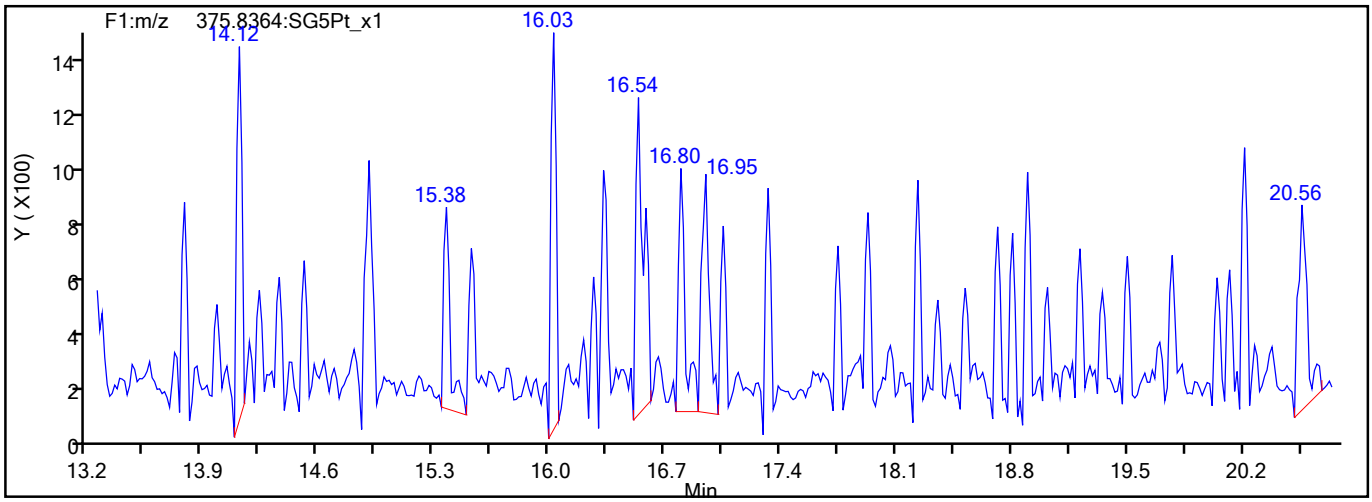

774100

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

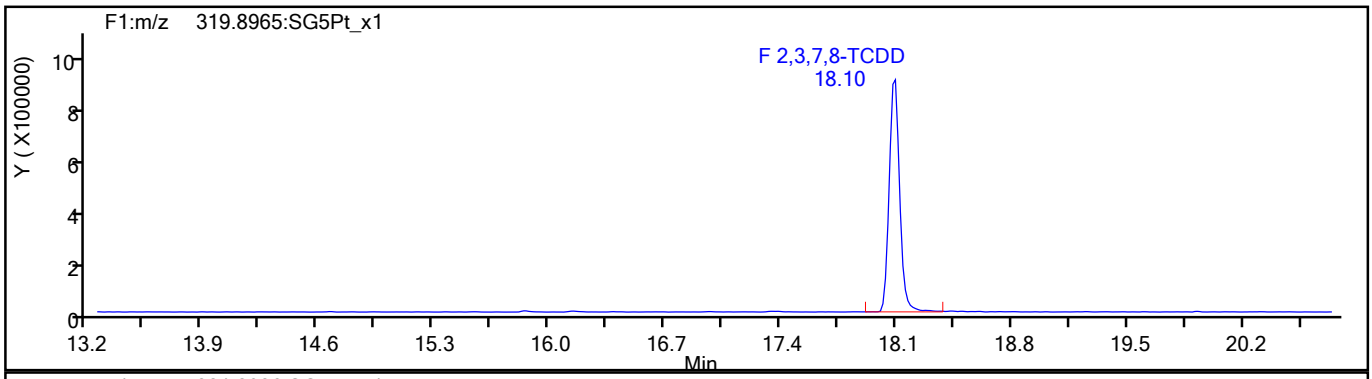

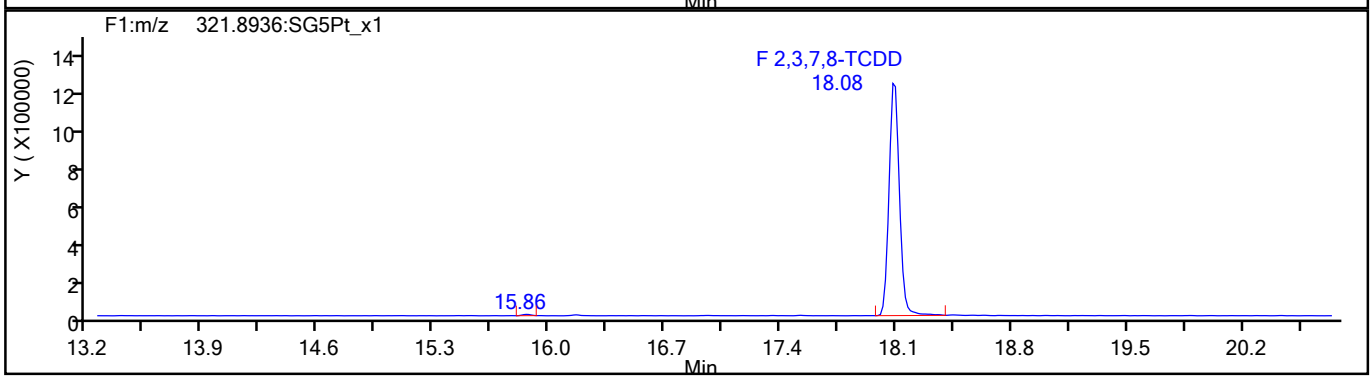

TCDD Standards

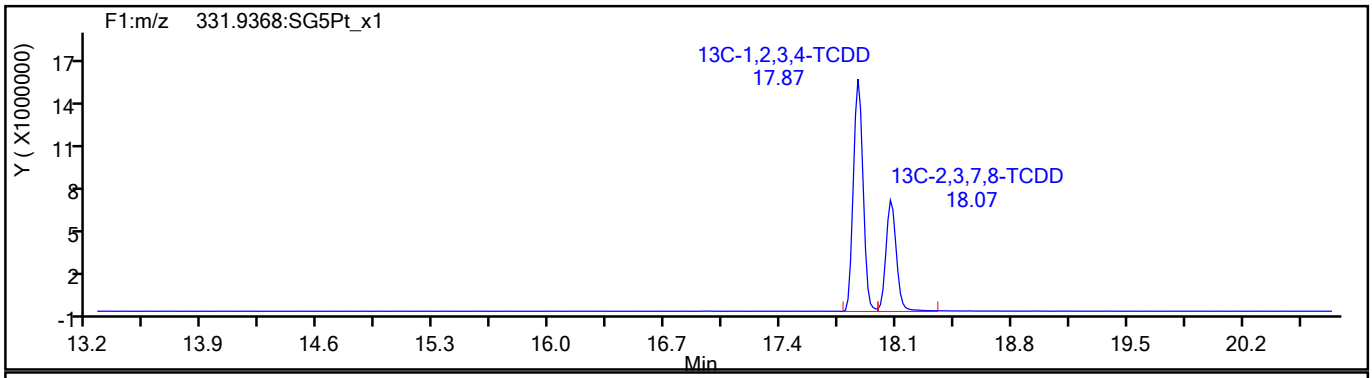

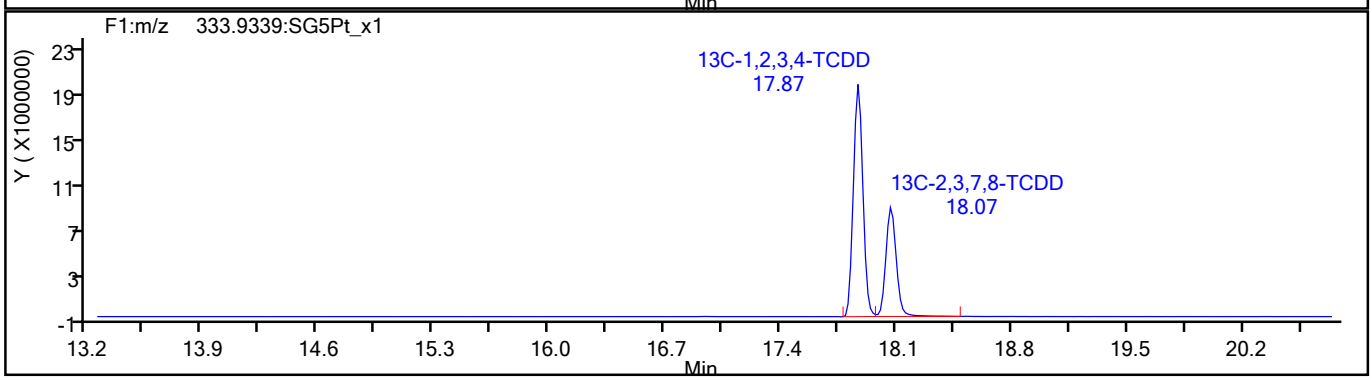

774101

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

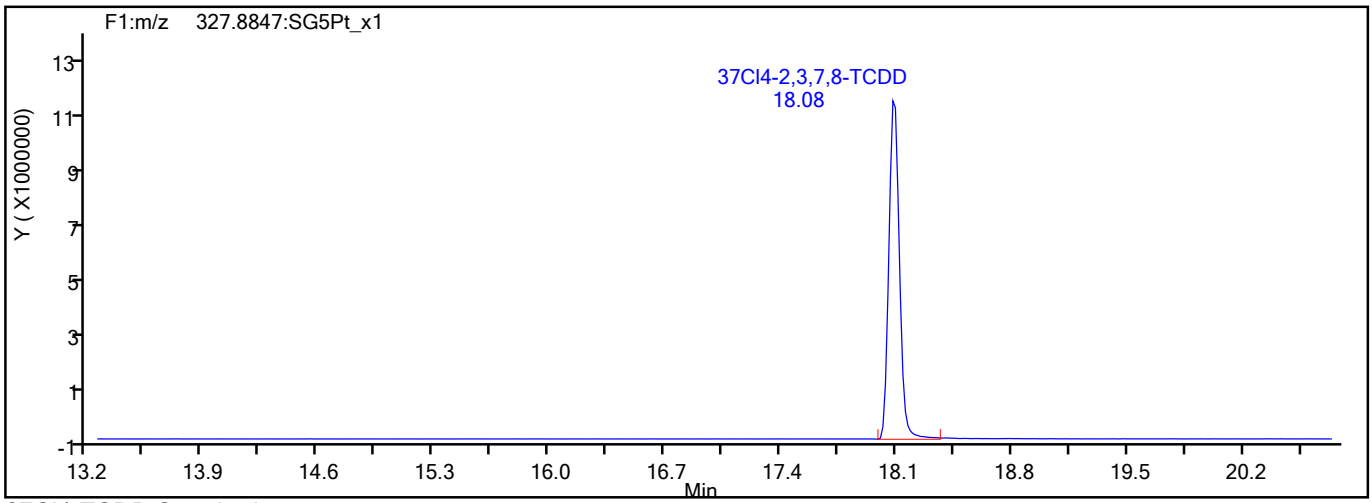

37Cl4-TCDD Standards

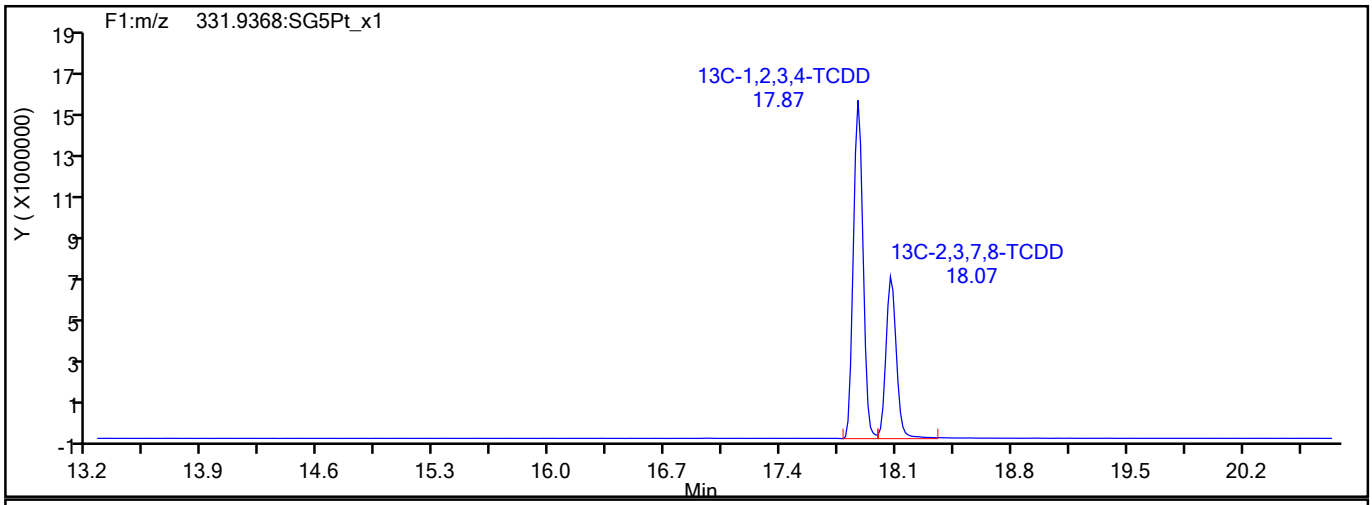

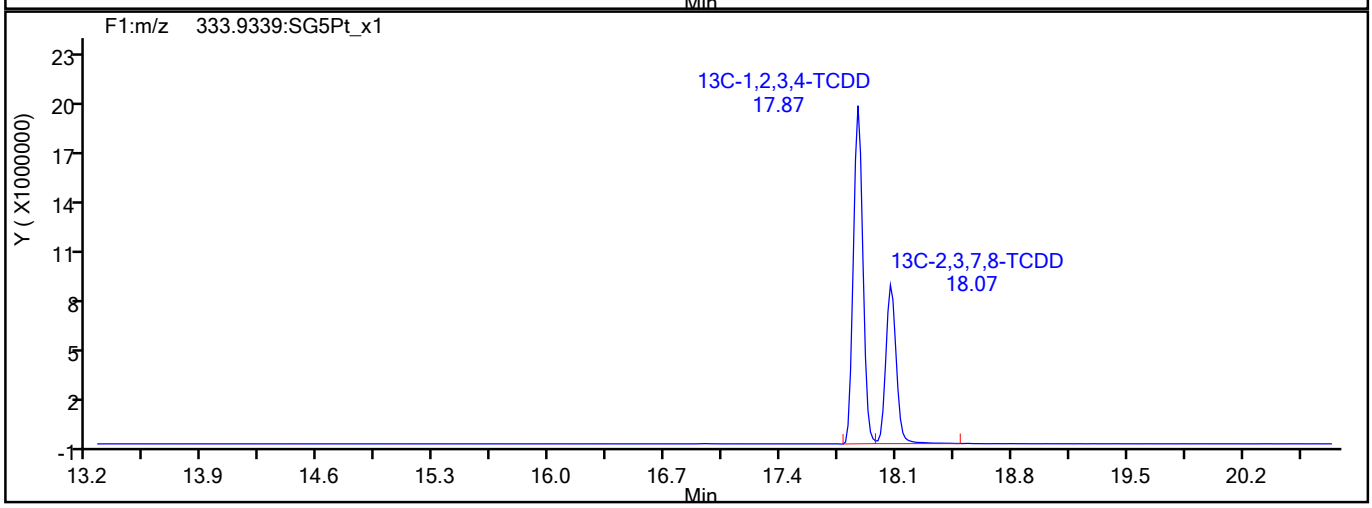

774102

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

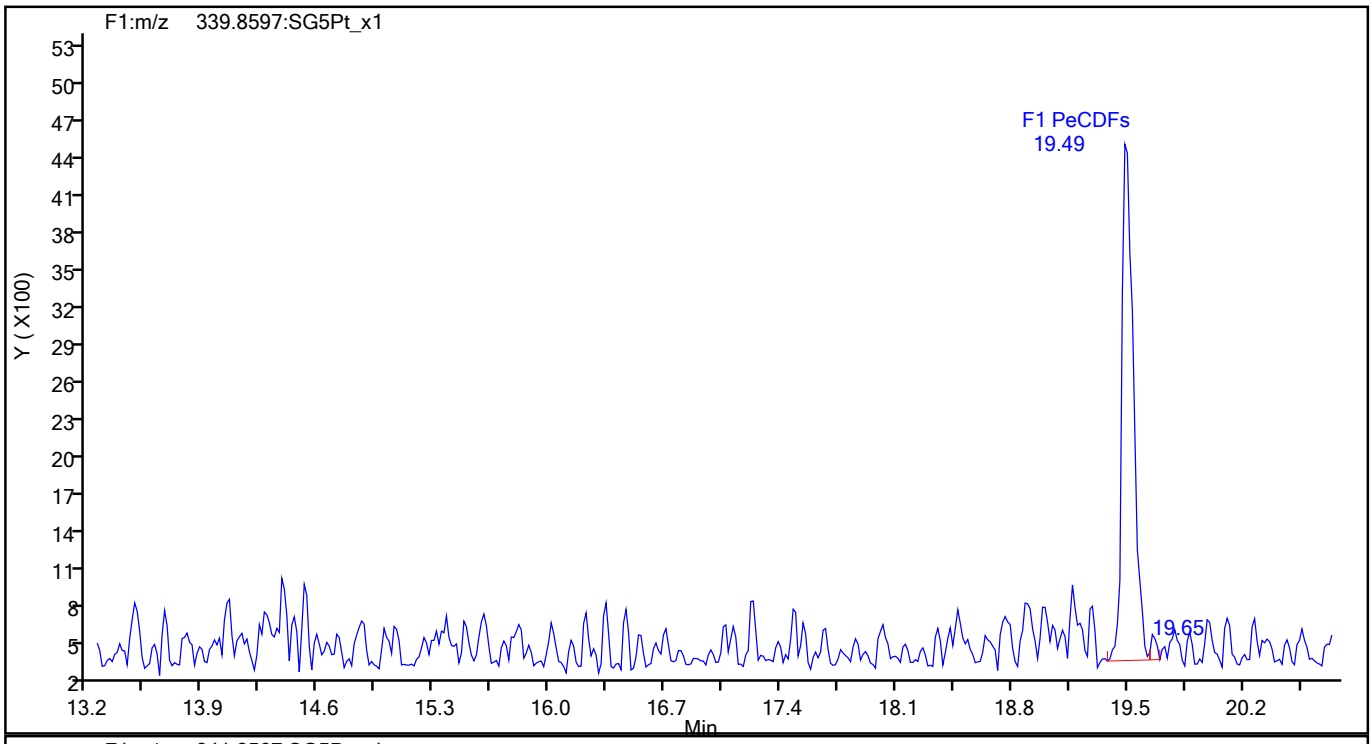

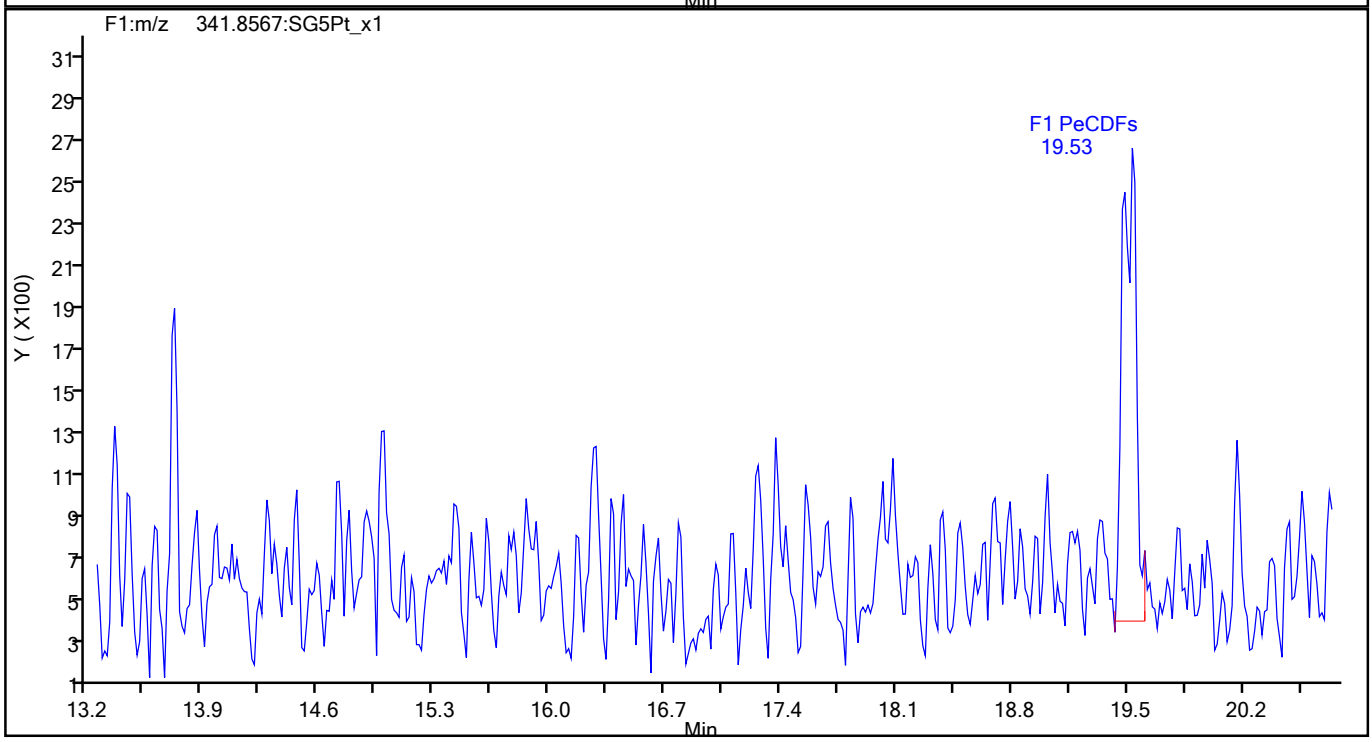

774103

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

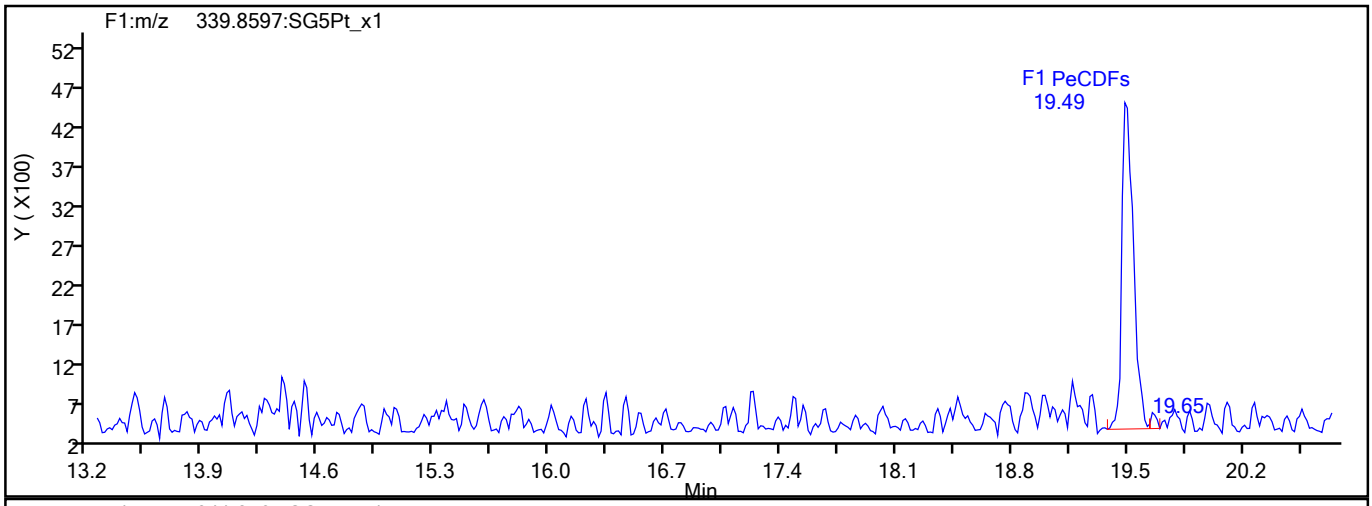

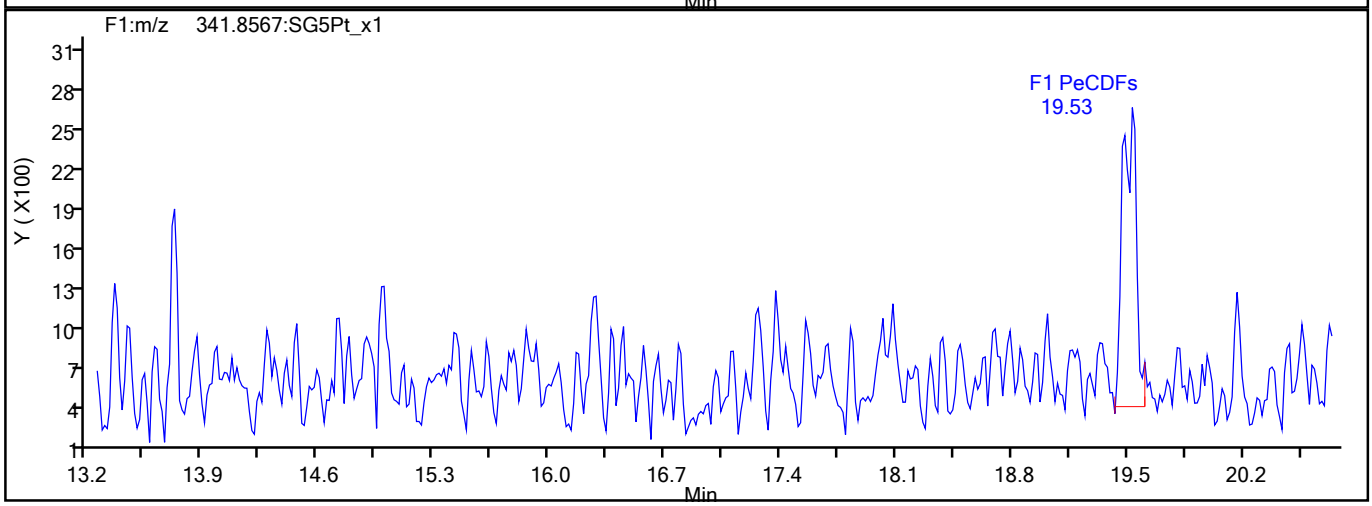

F1 PeCDFs Interference Mass

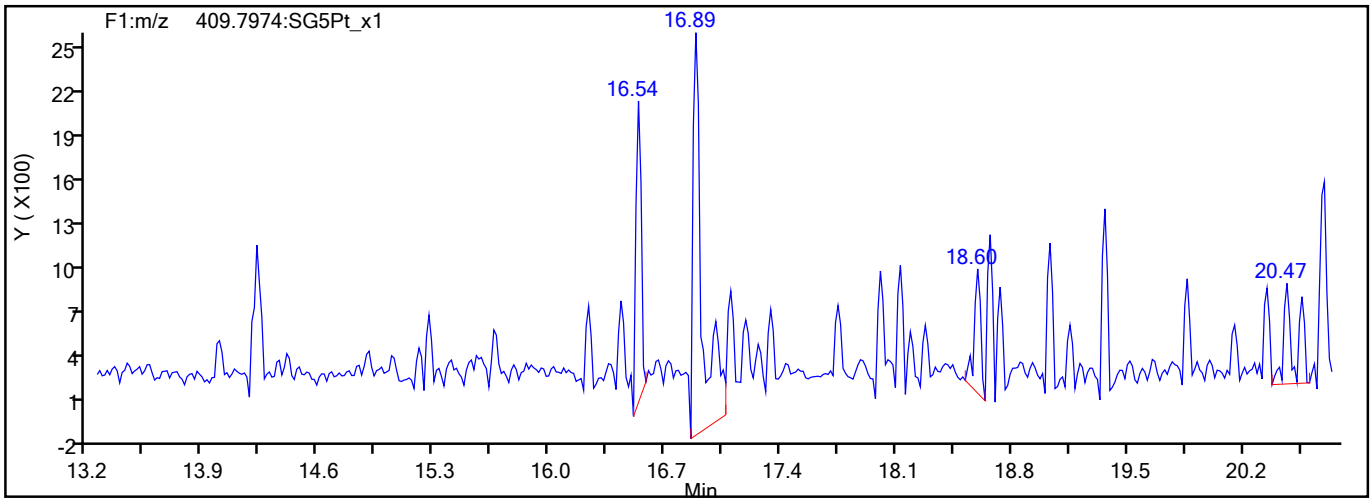

774104

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

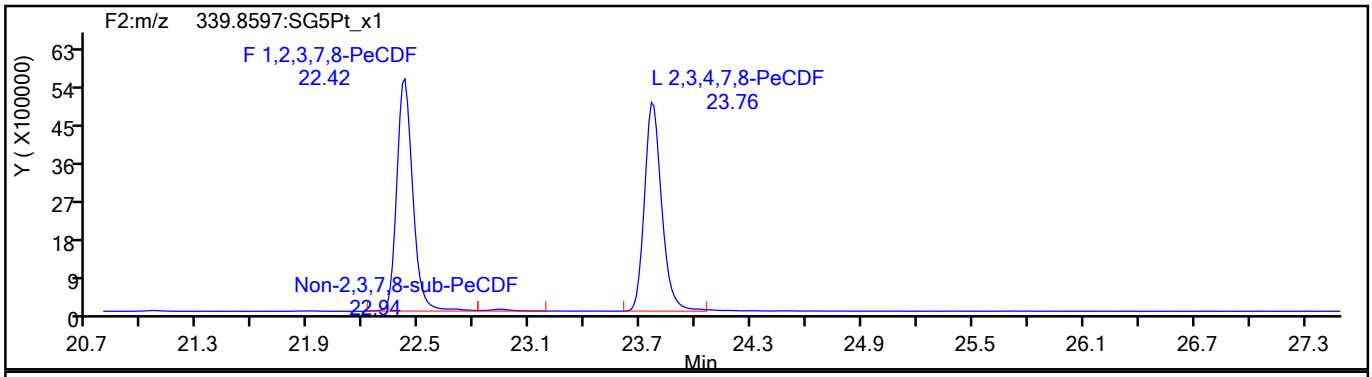

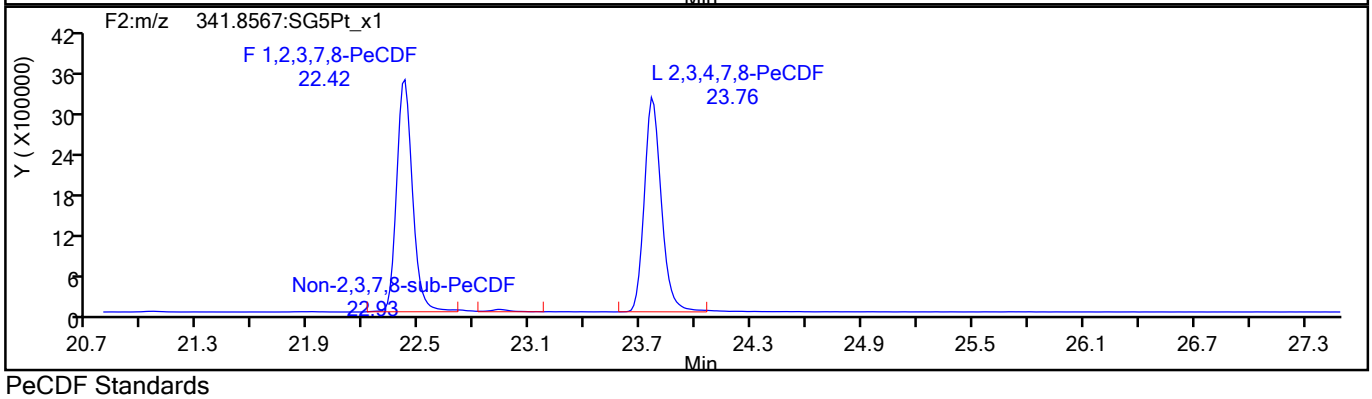

PeCDF Standards

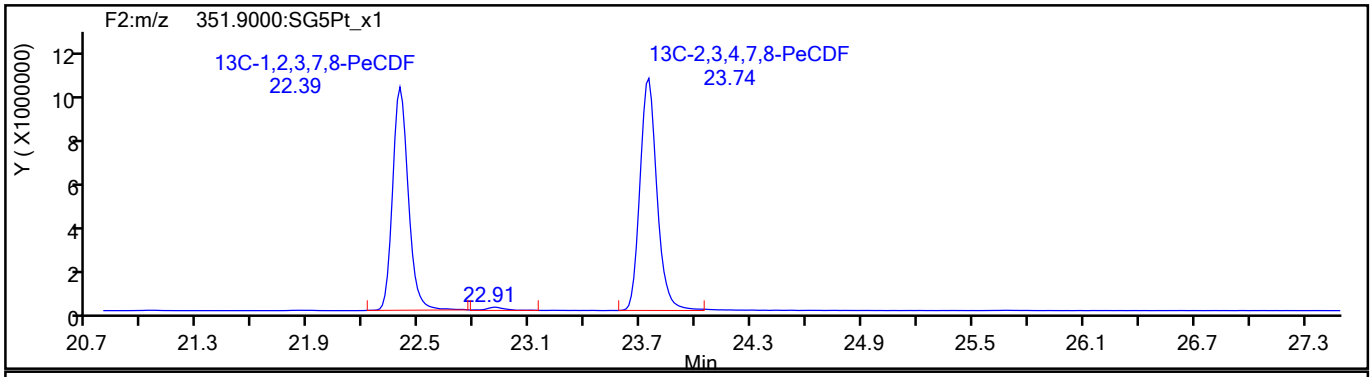

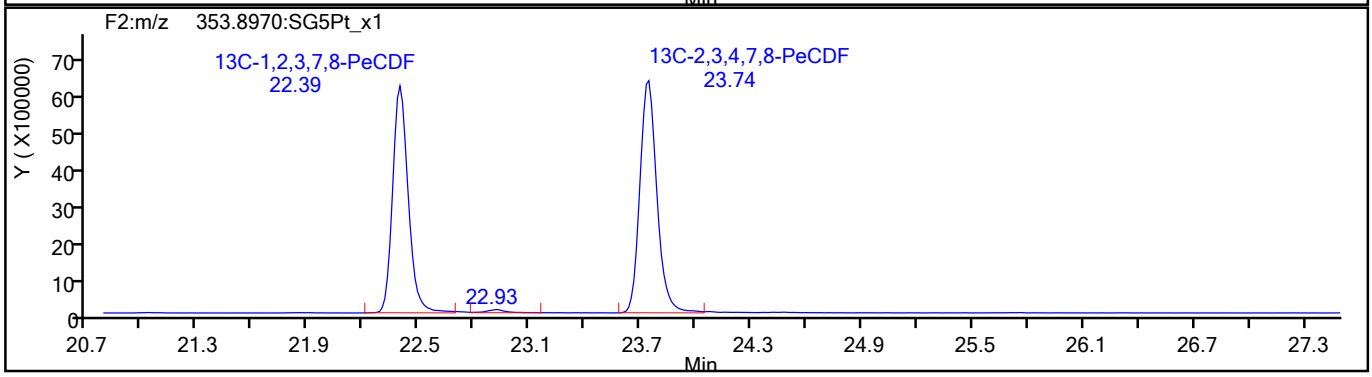

774105

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

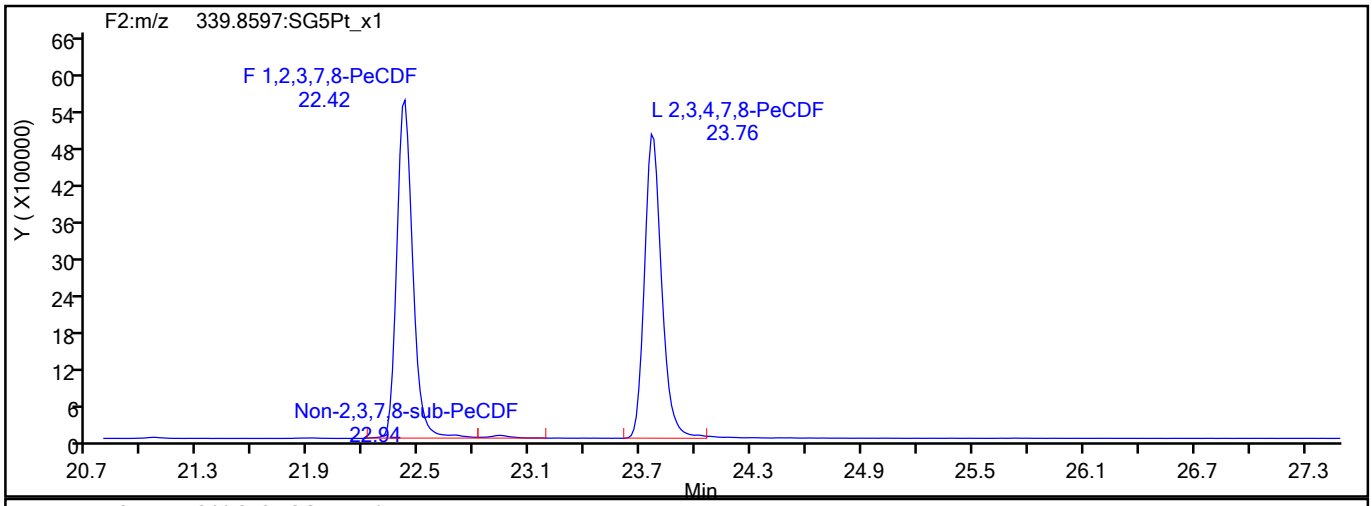

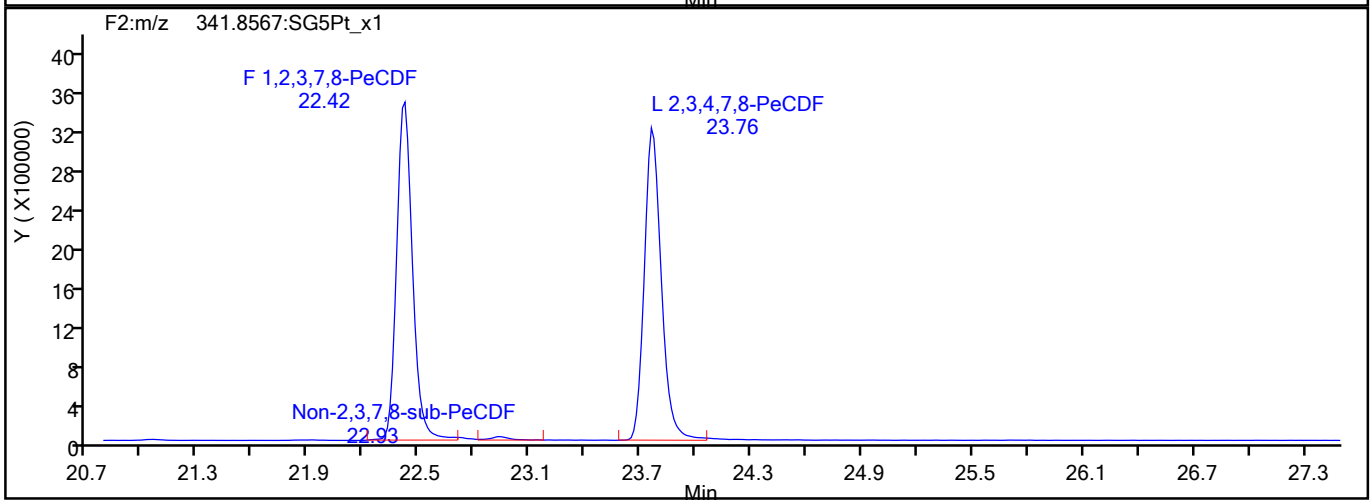

PeCDF Interference Mass

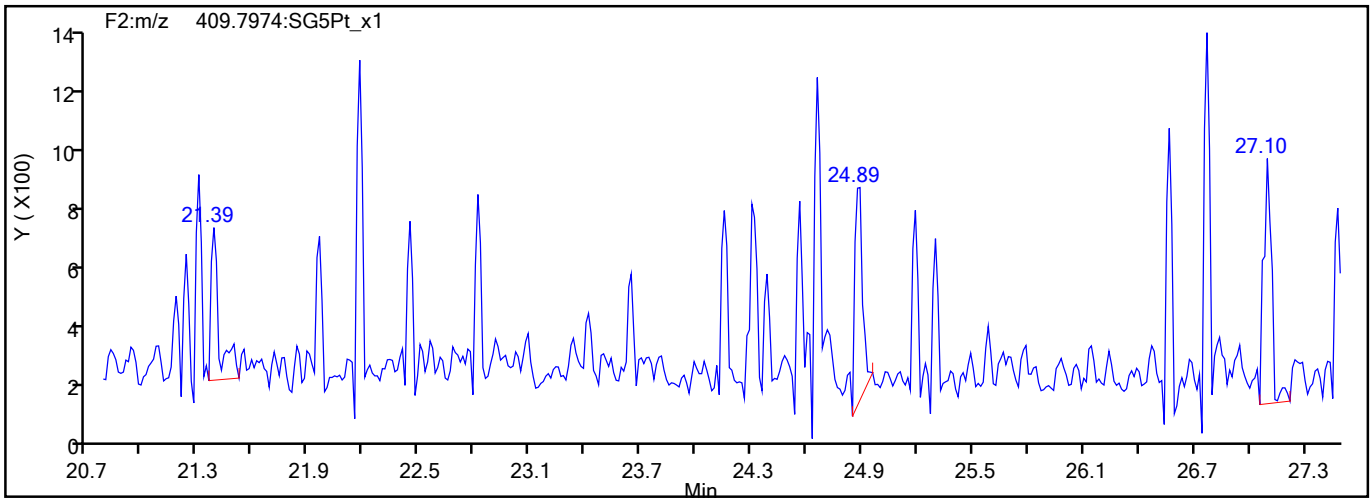

774106

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

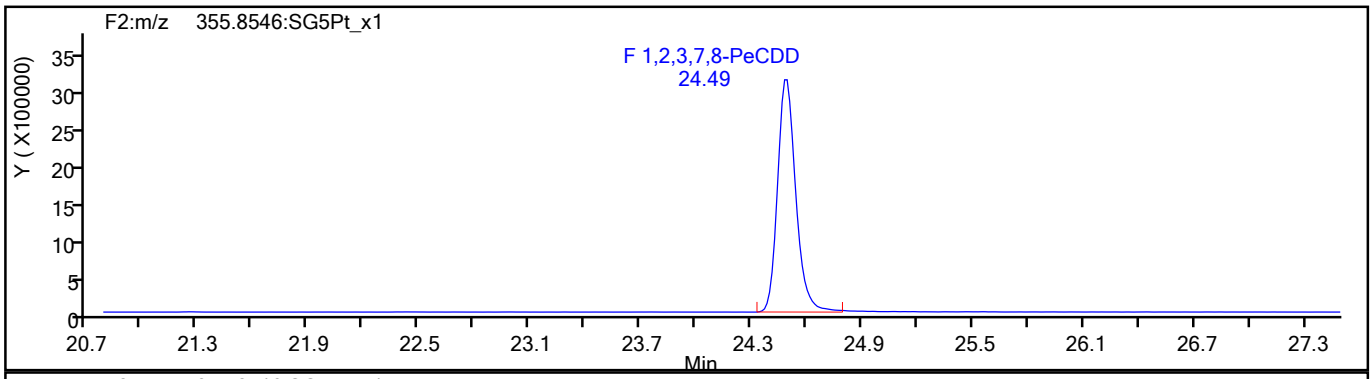

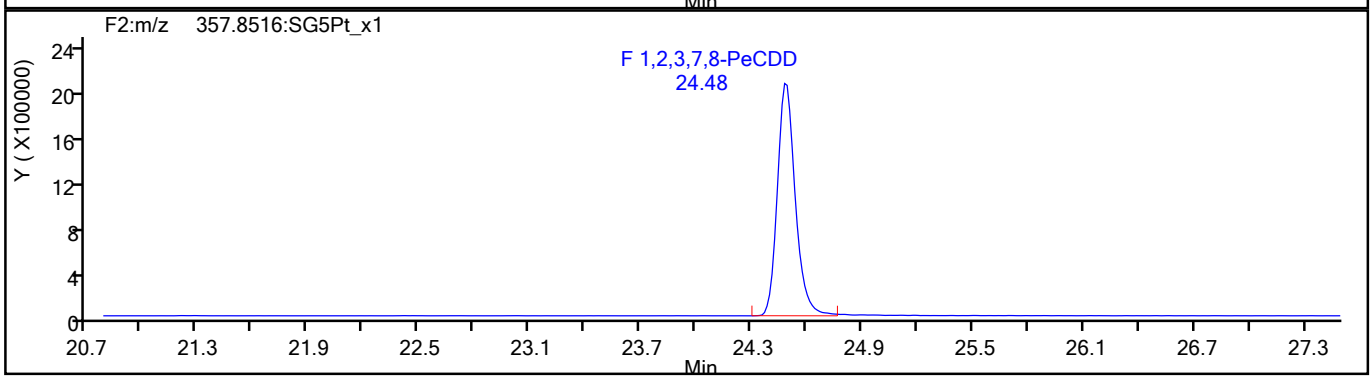

PeCDD Standards

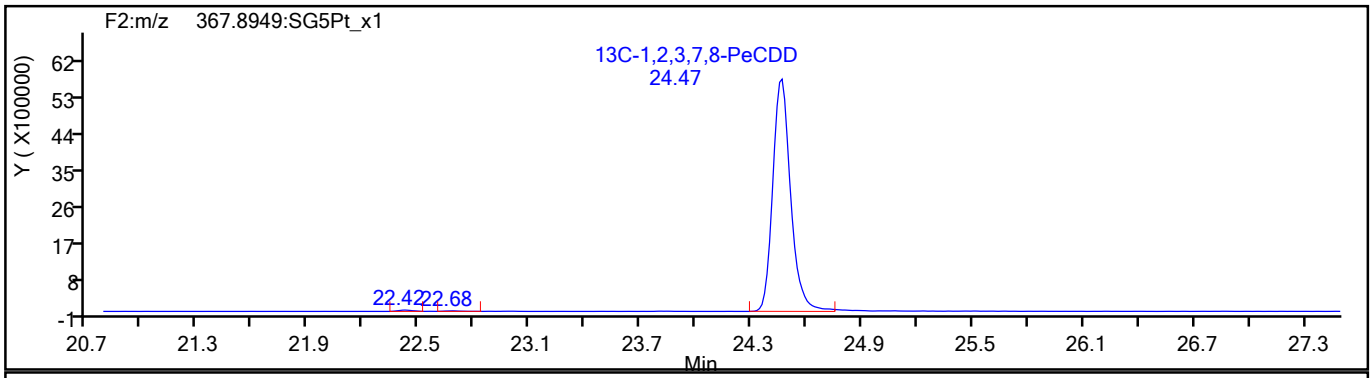

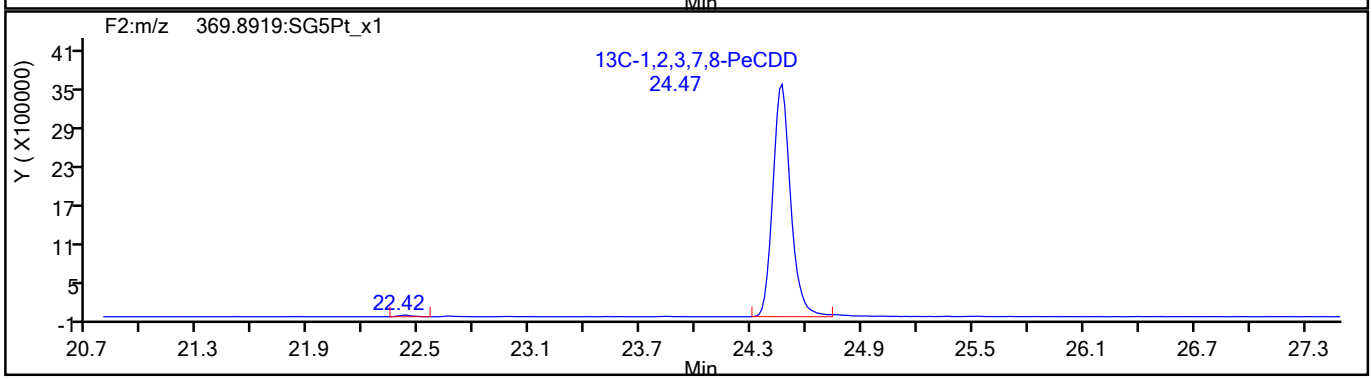

774107

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

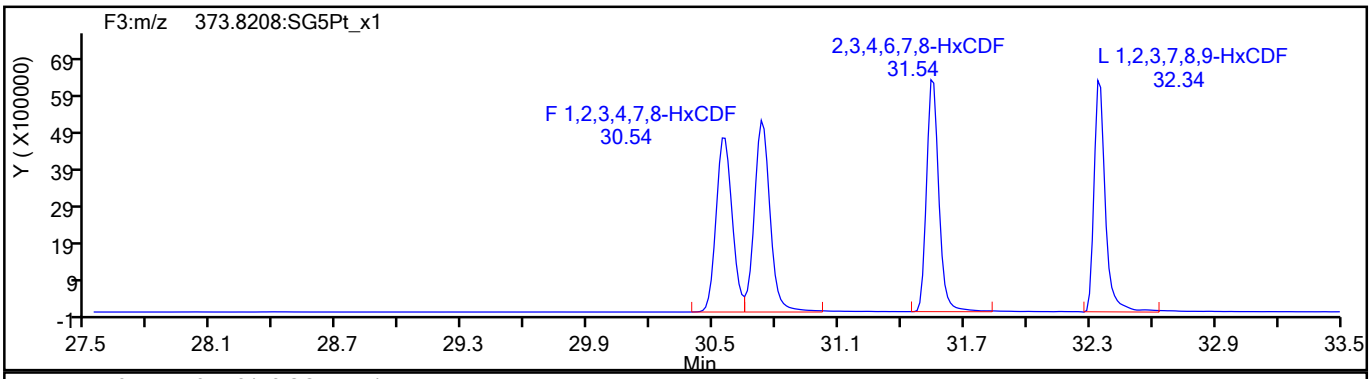

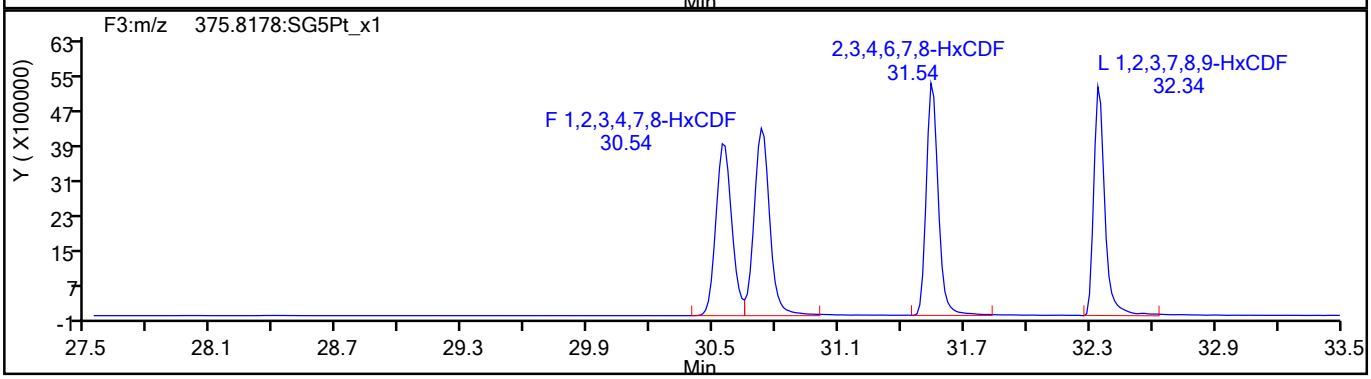

HxCDF Standards

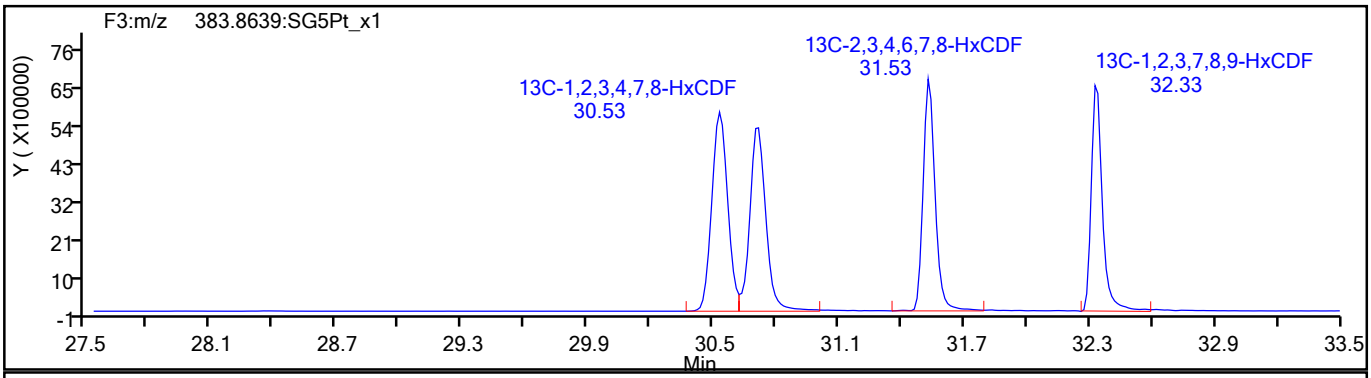

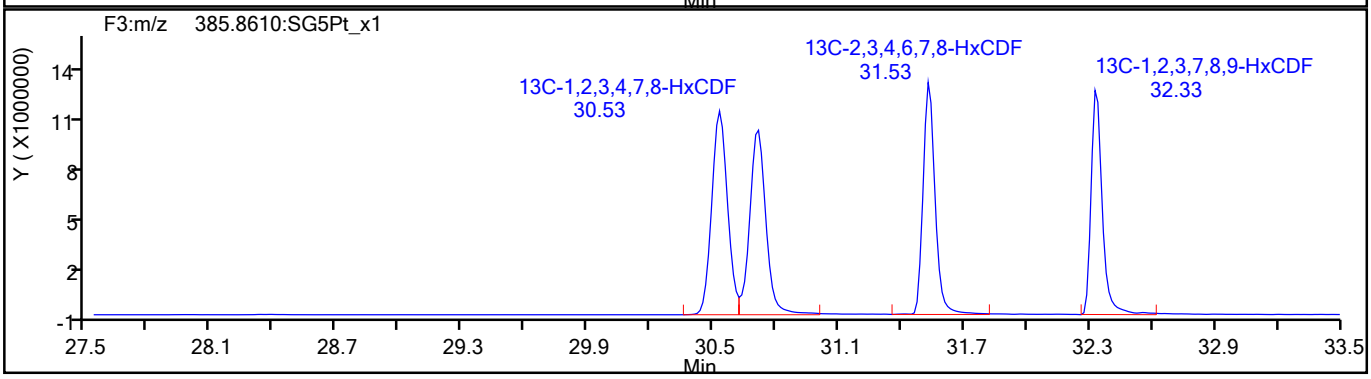

774108

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

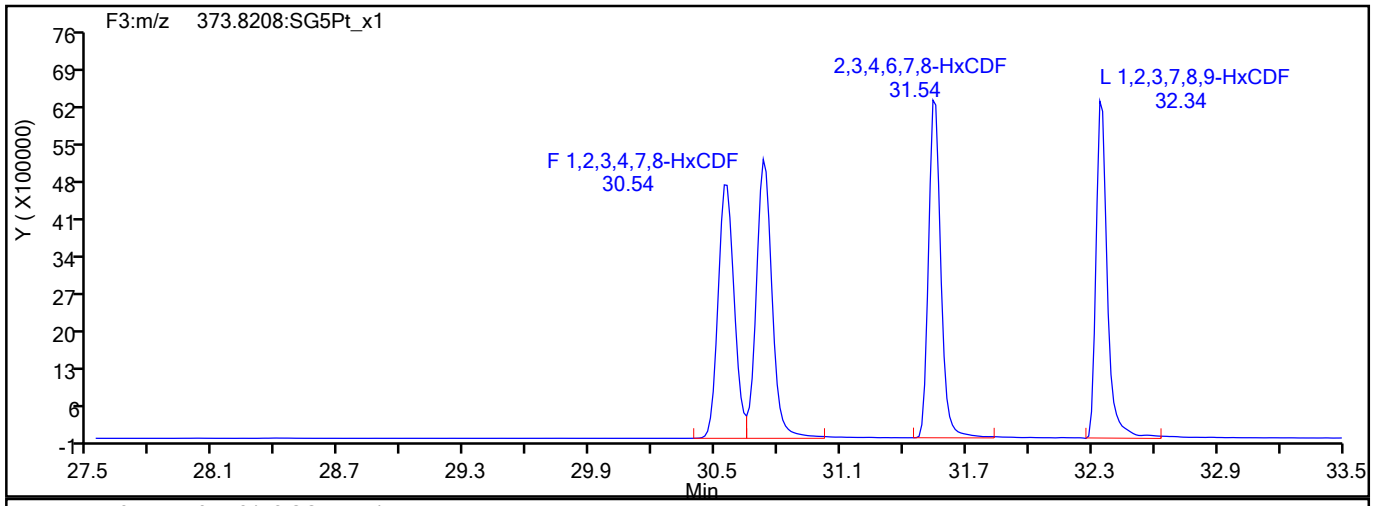

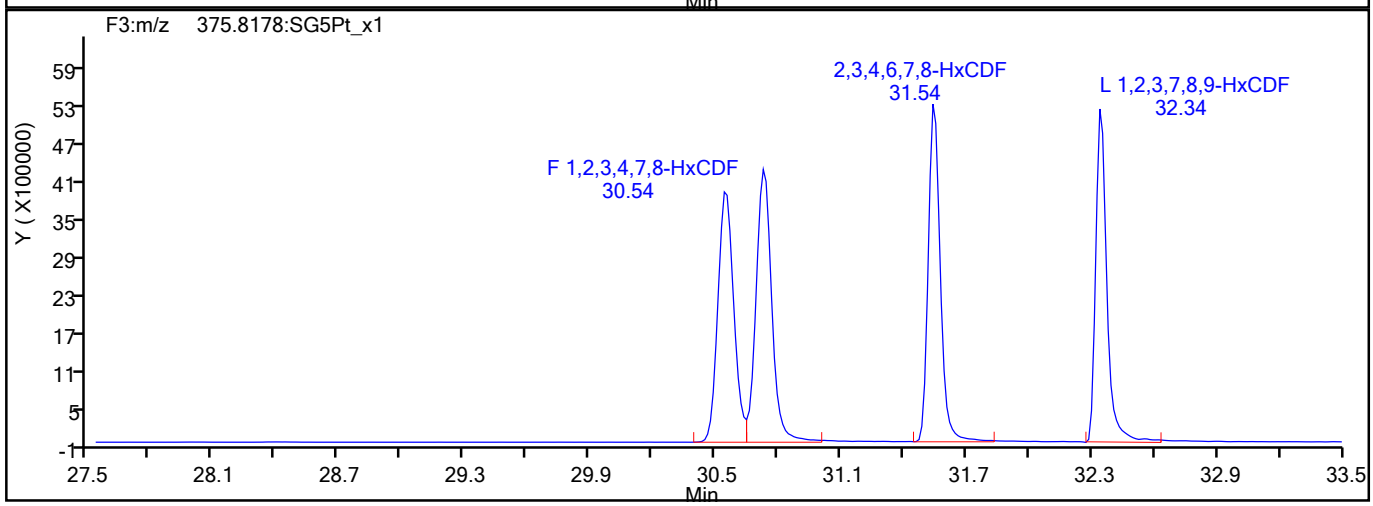

HxCDF Interference Mass

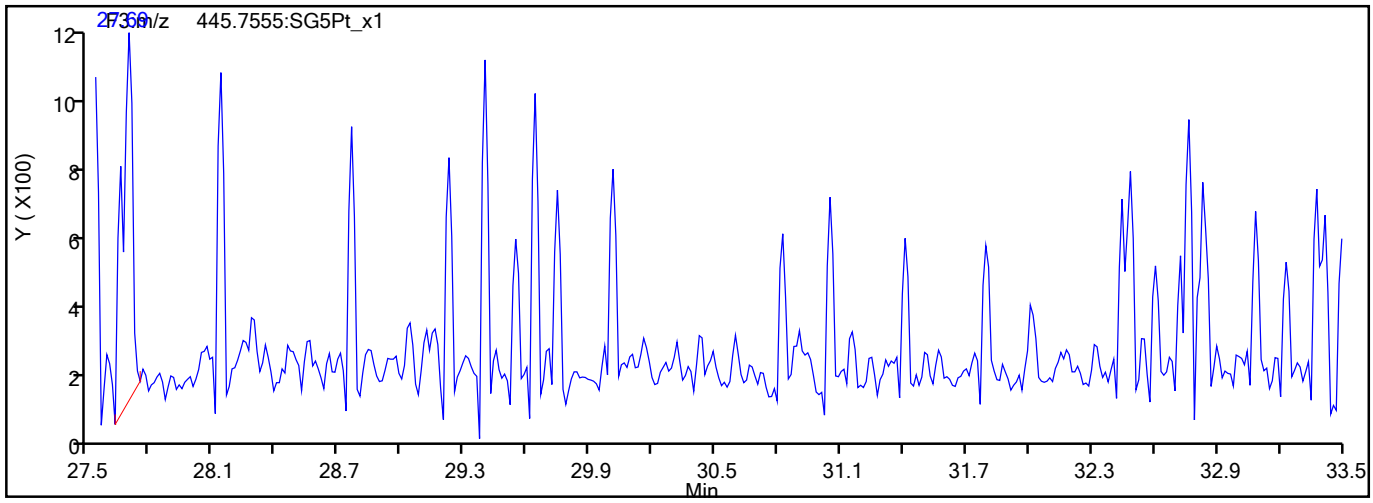

774109

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

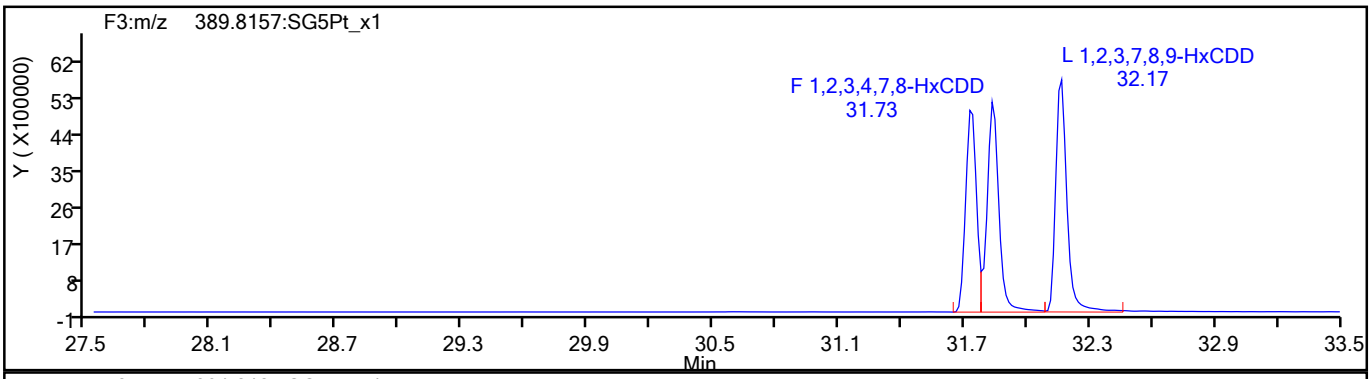

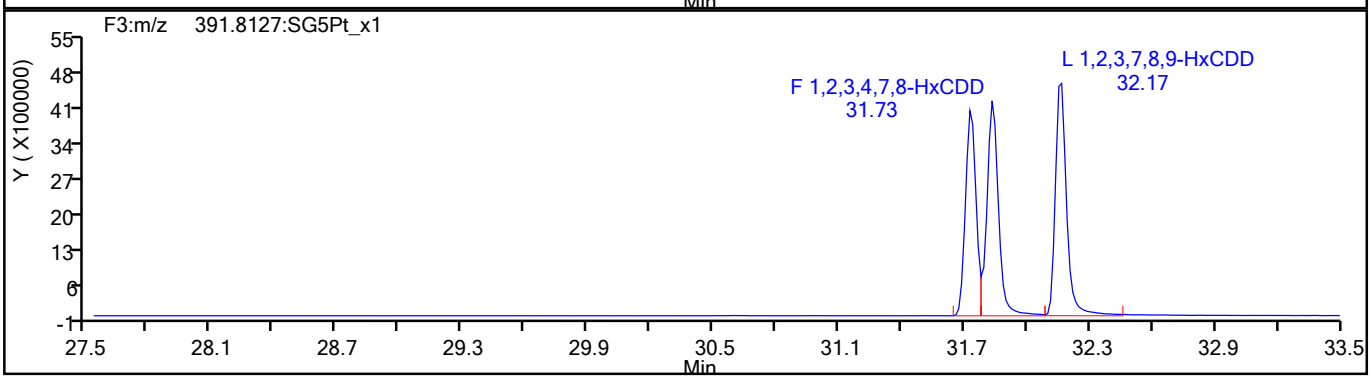

HxCDD Standards

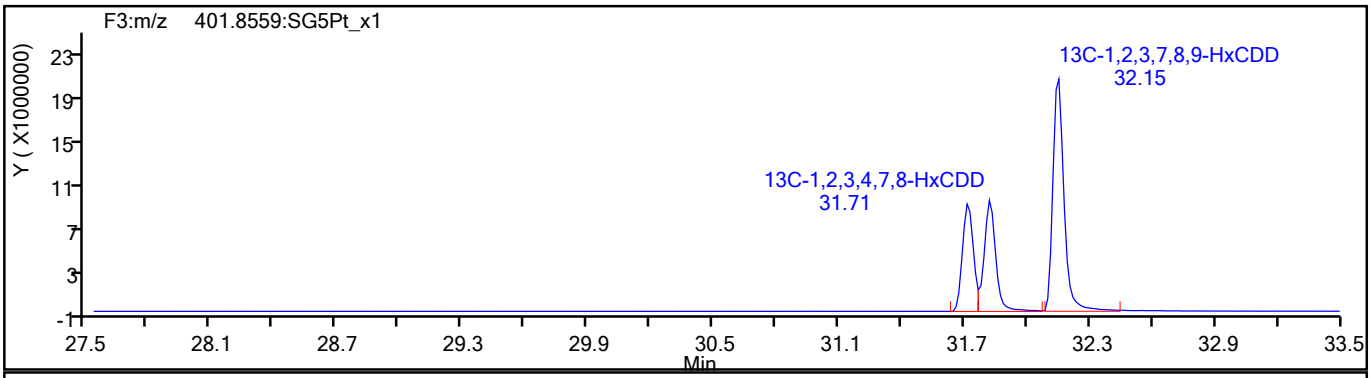

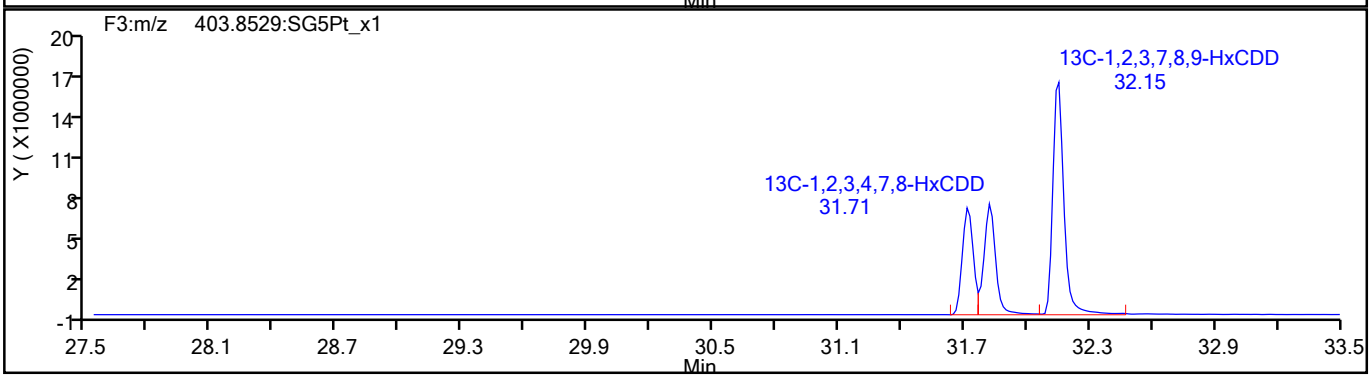

774110

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

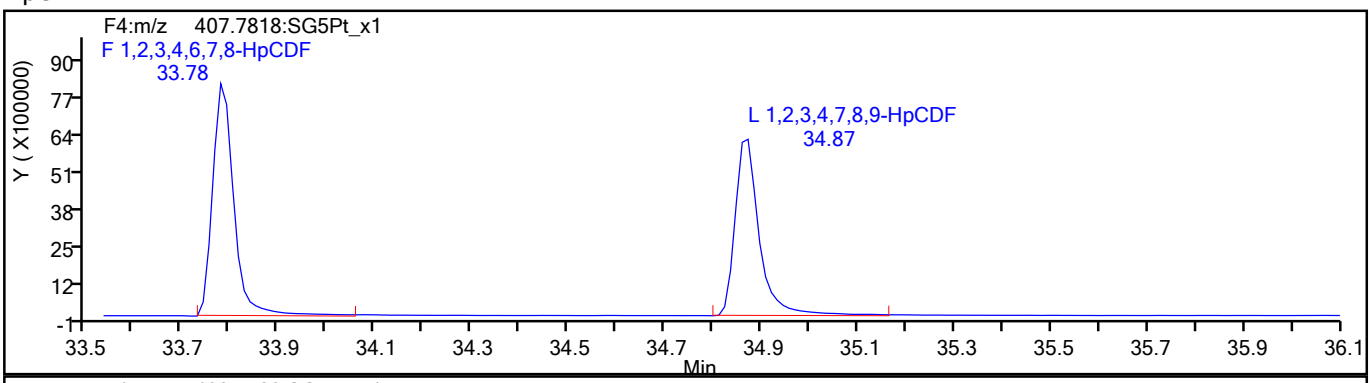

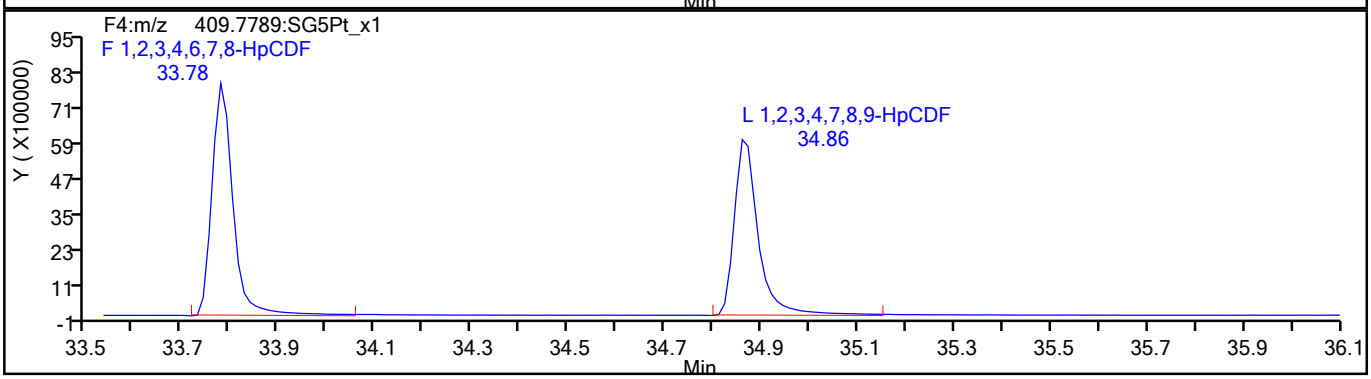

HpCDF Standards

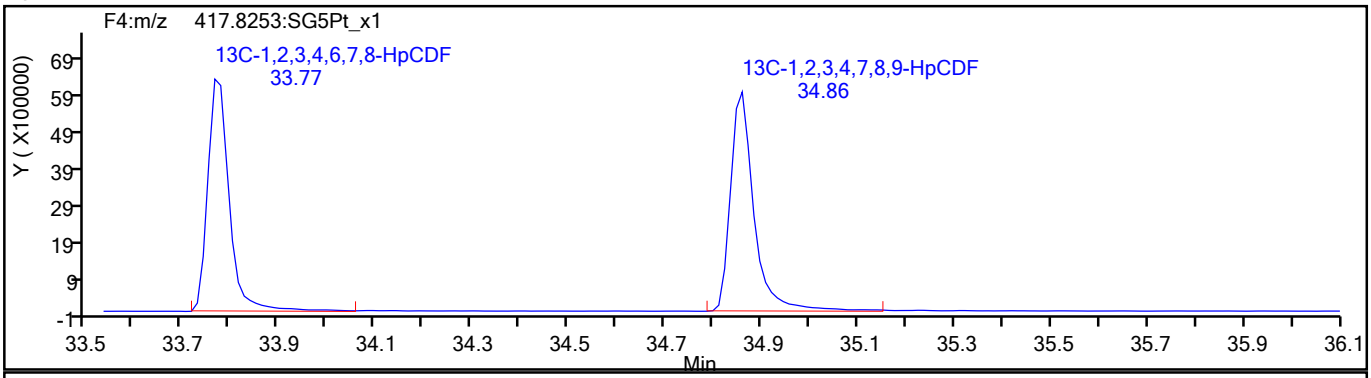

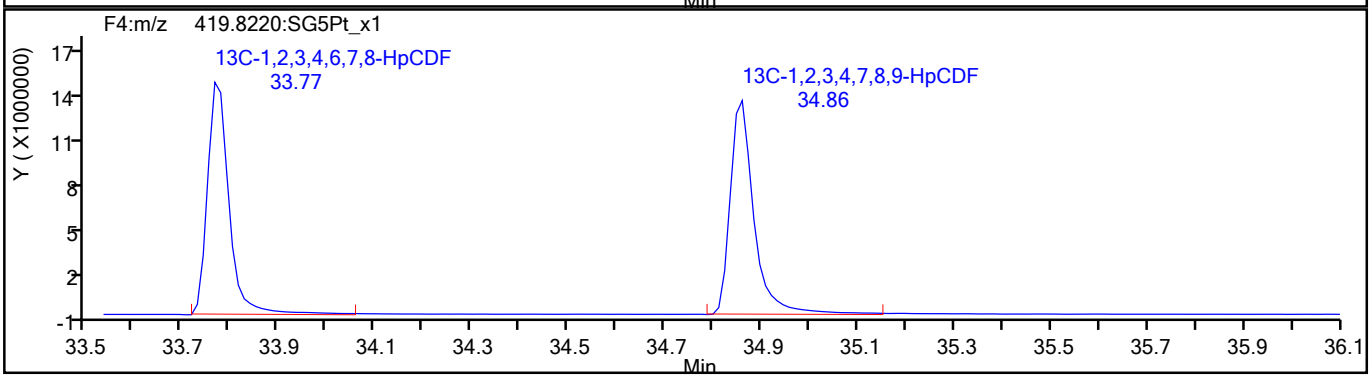

774111

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

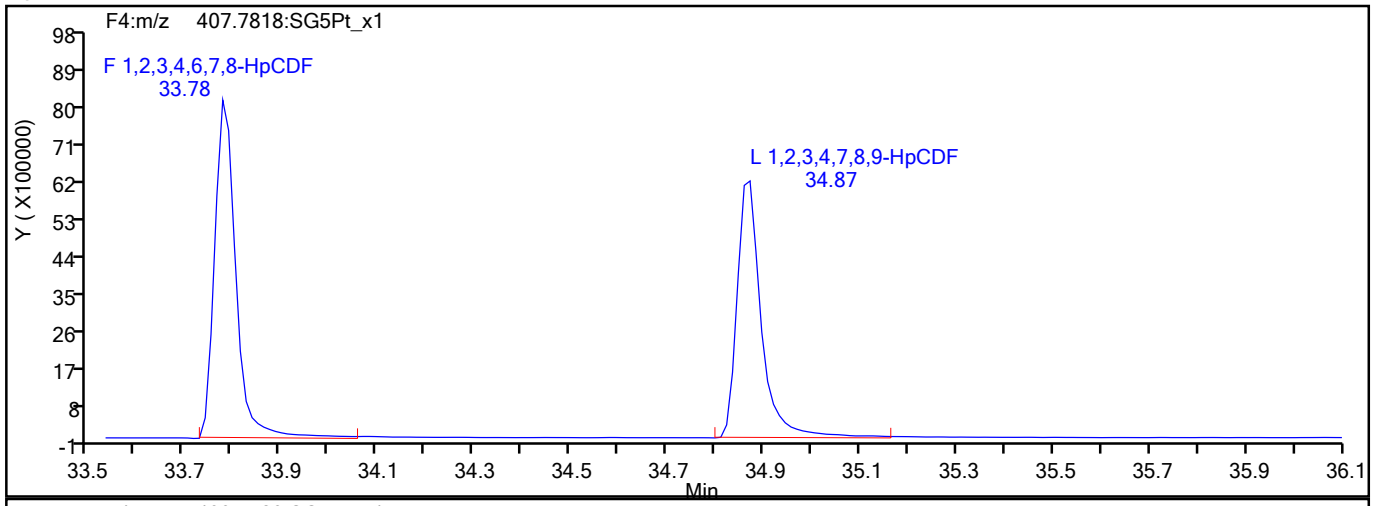

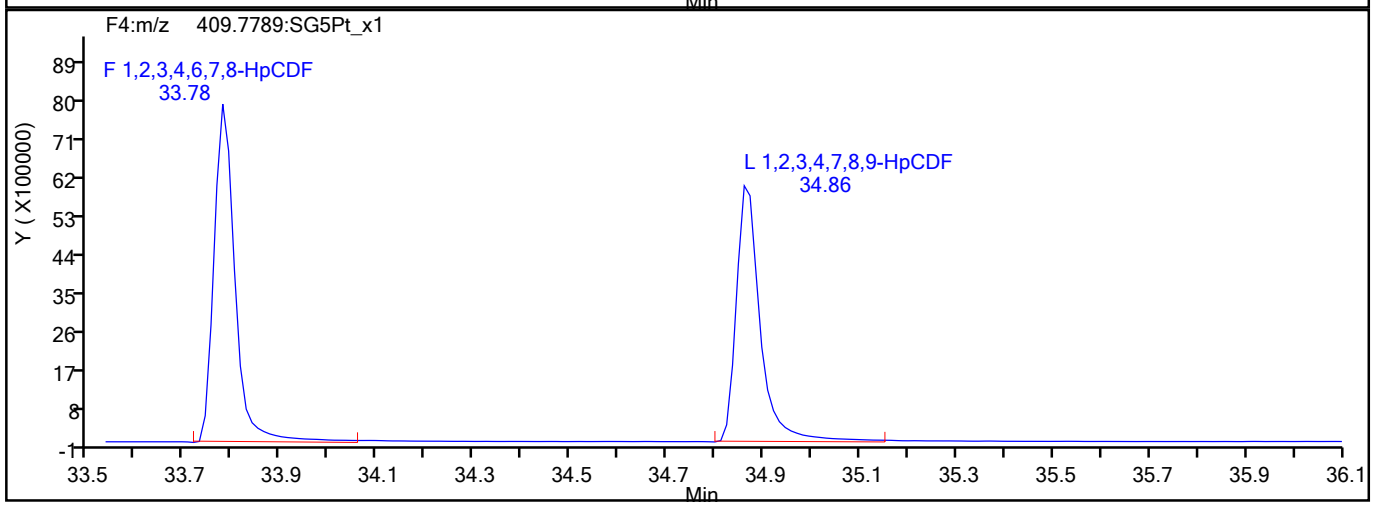

HpCDF Interference Mass

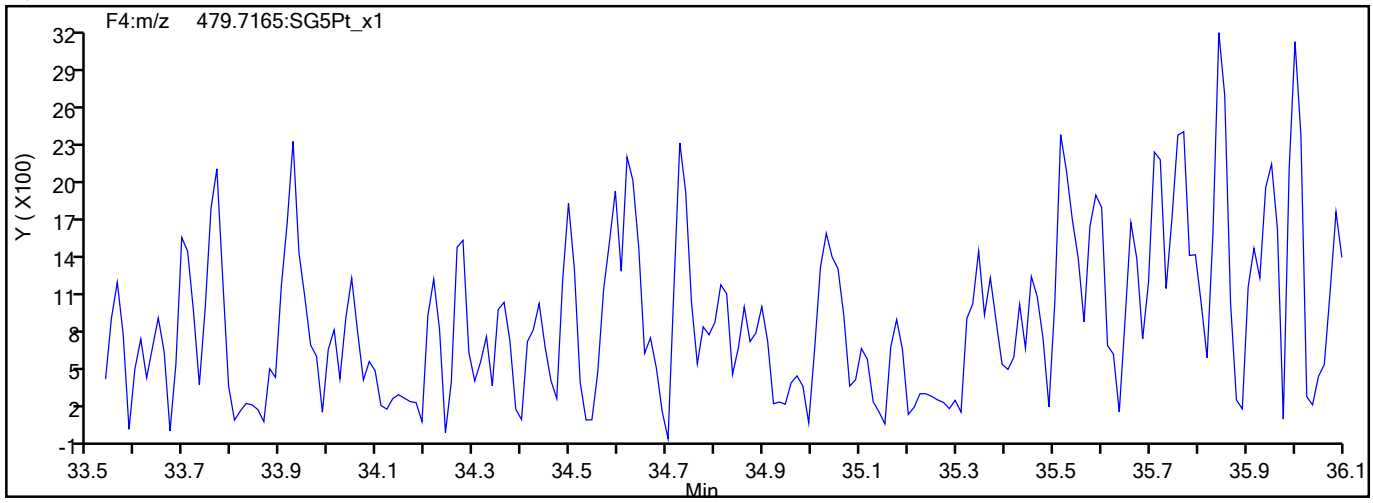

774112

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

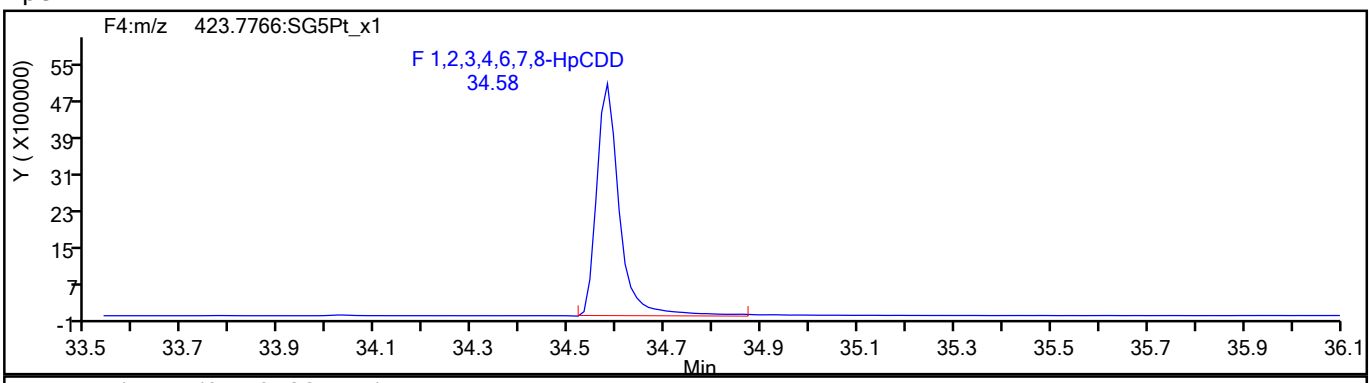

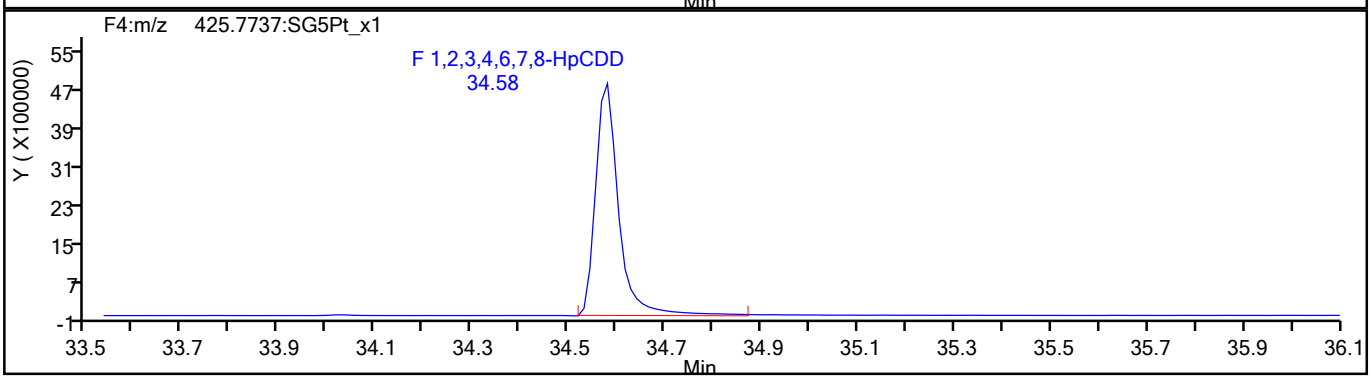

HpCDD Standards

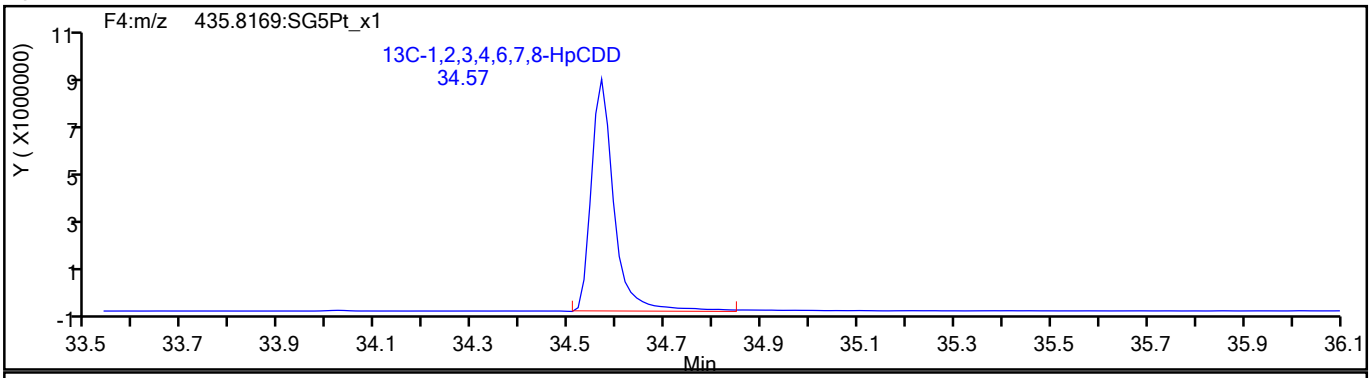

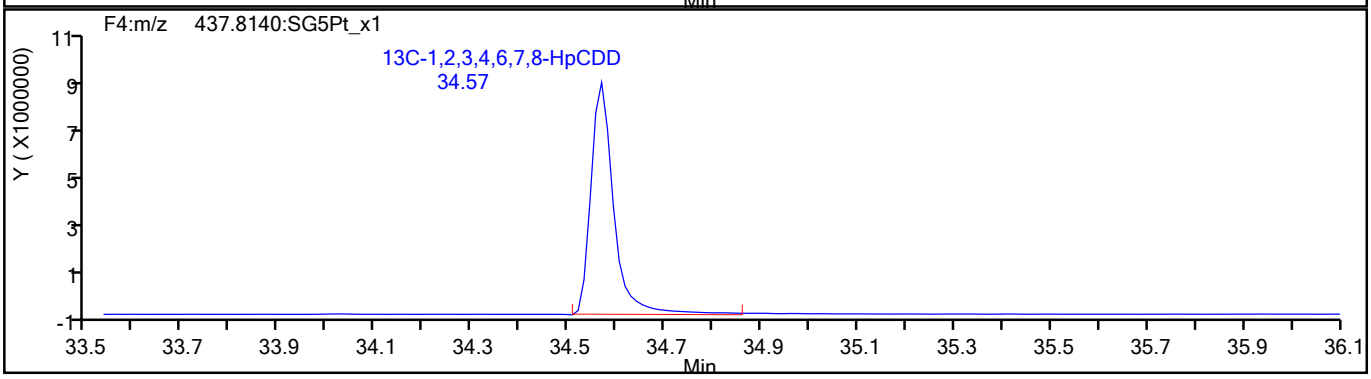

774113

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

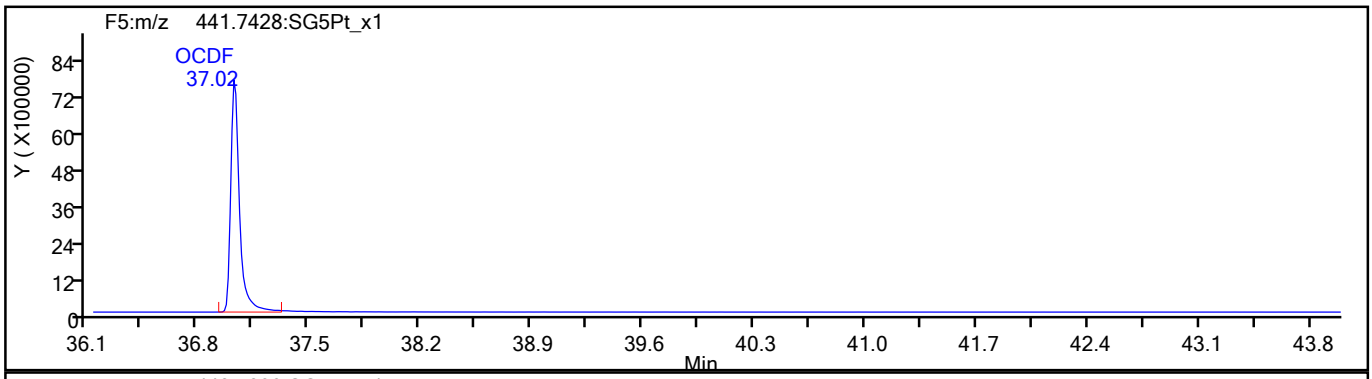

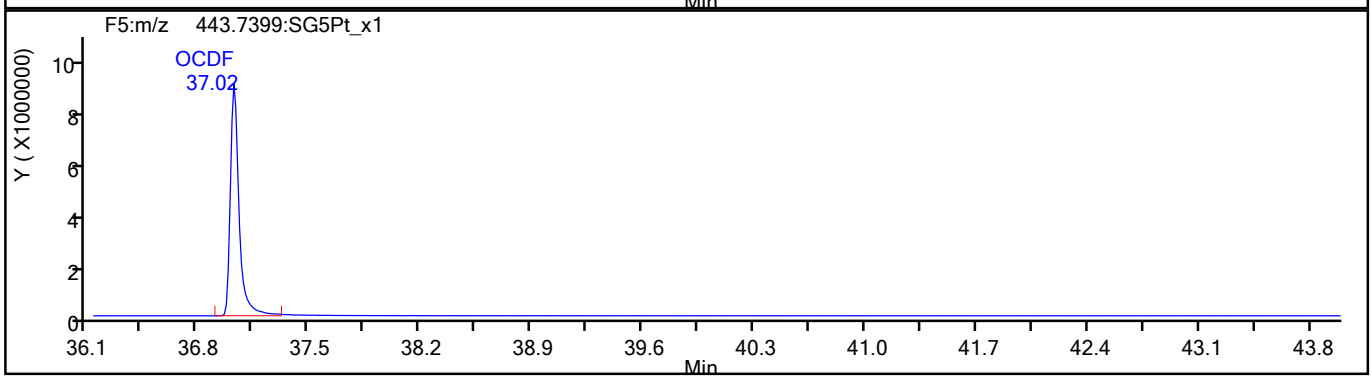

OCDF Standards

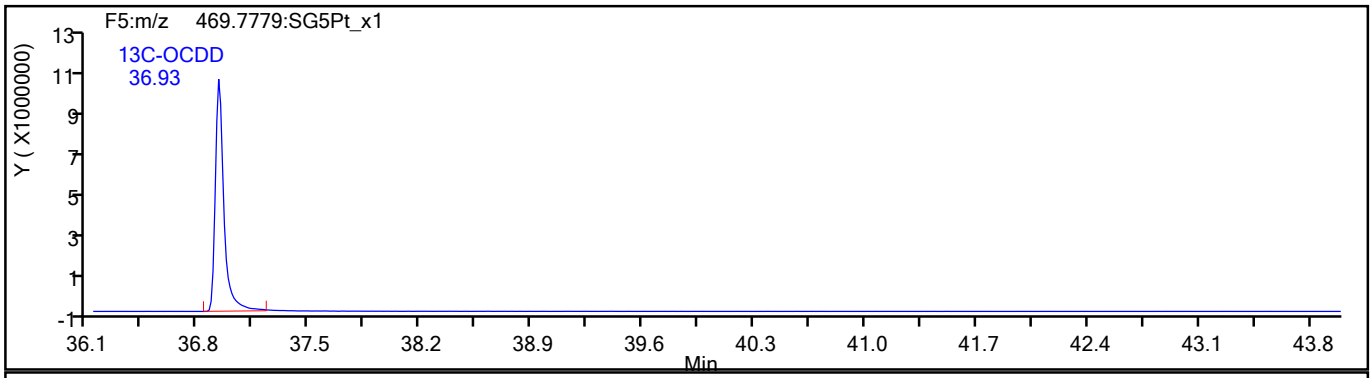

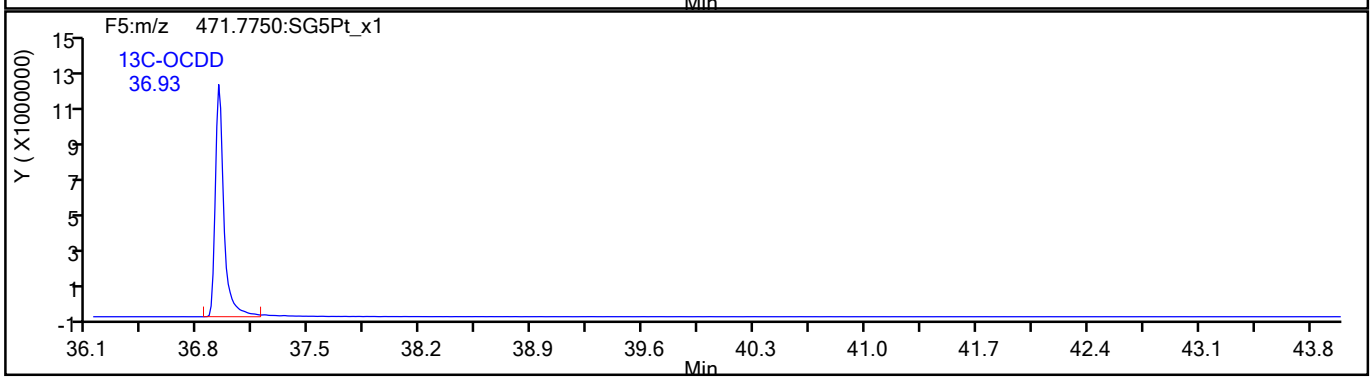

774114

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

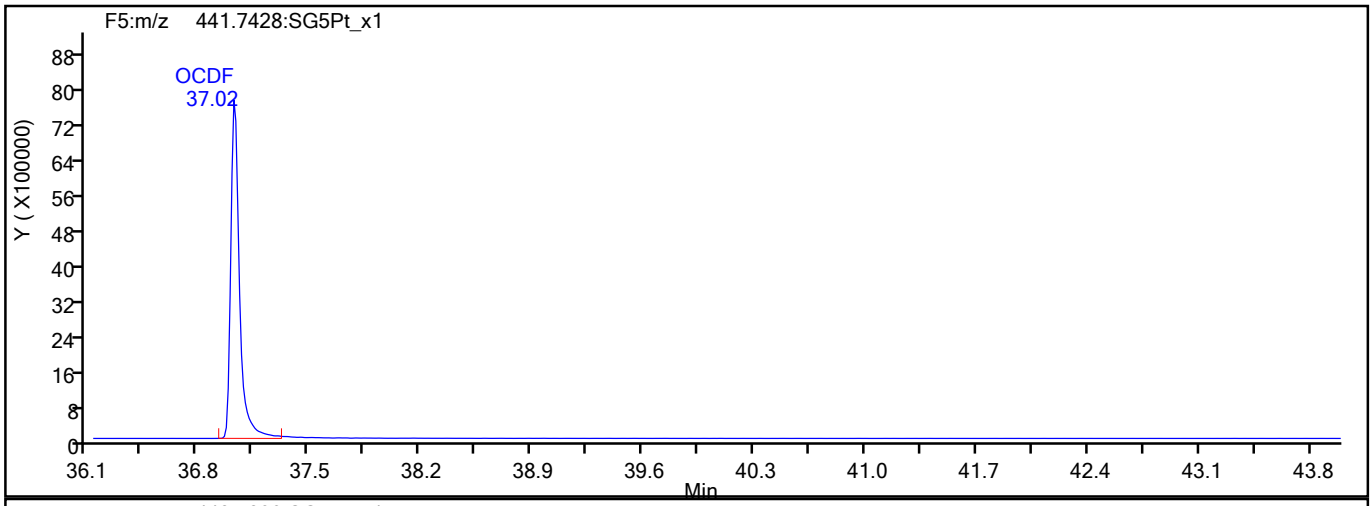

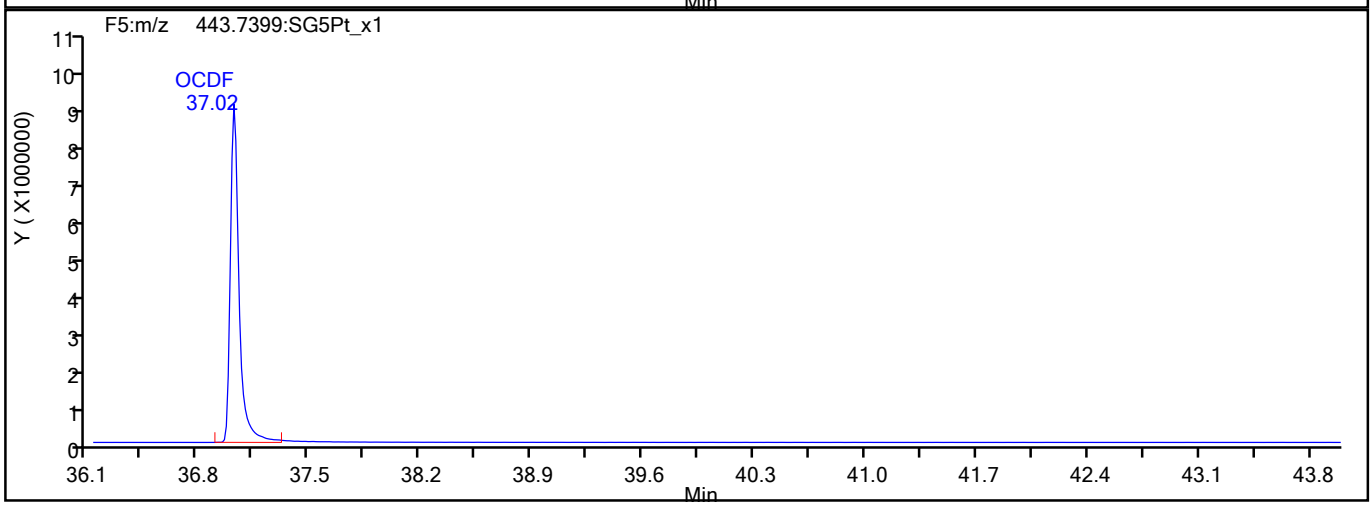

OCDF Interference Mass

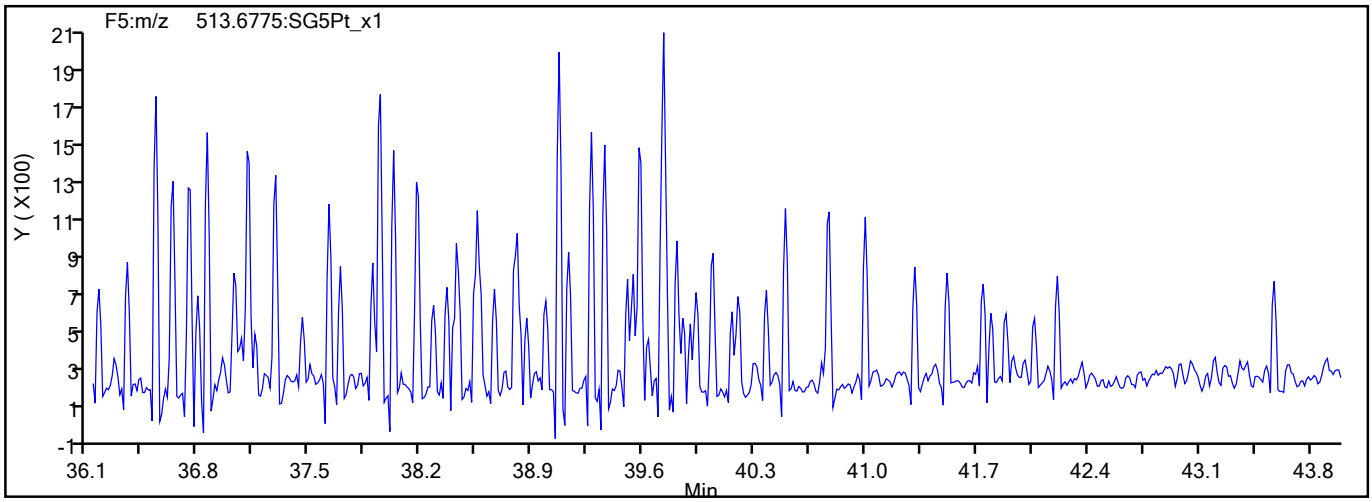

774115

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

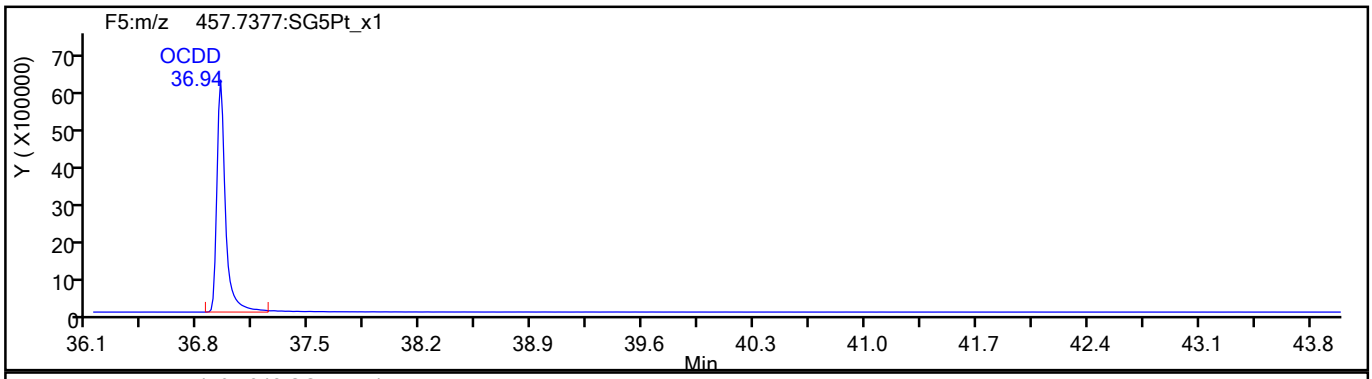

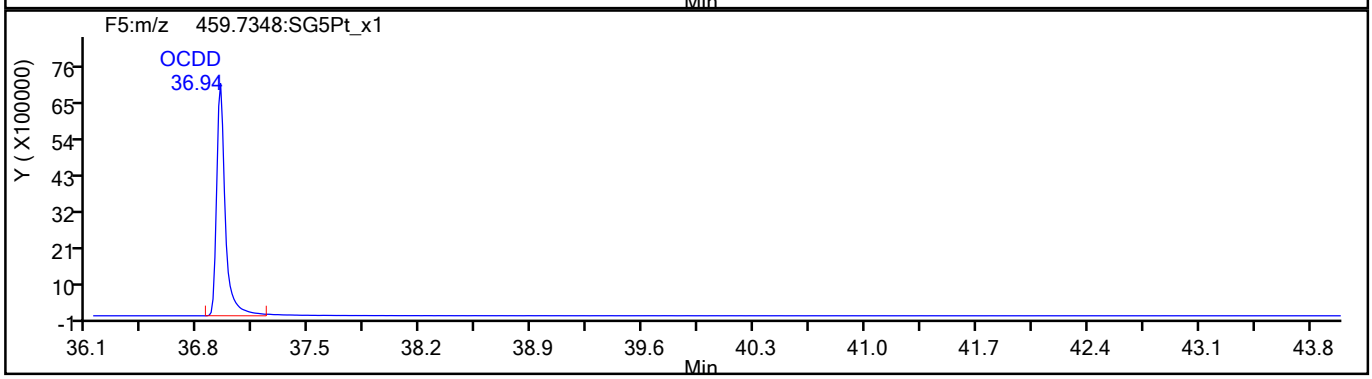

OCDD Standards

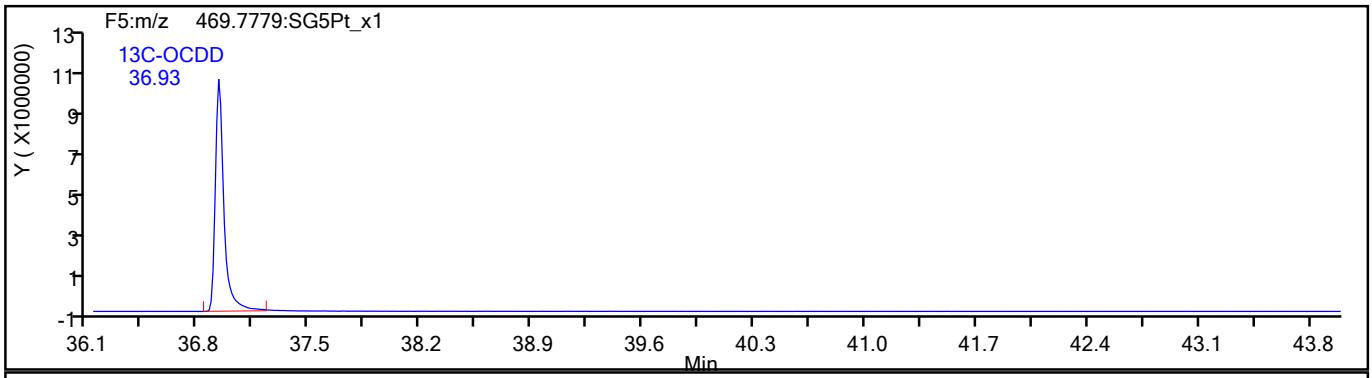

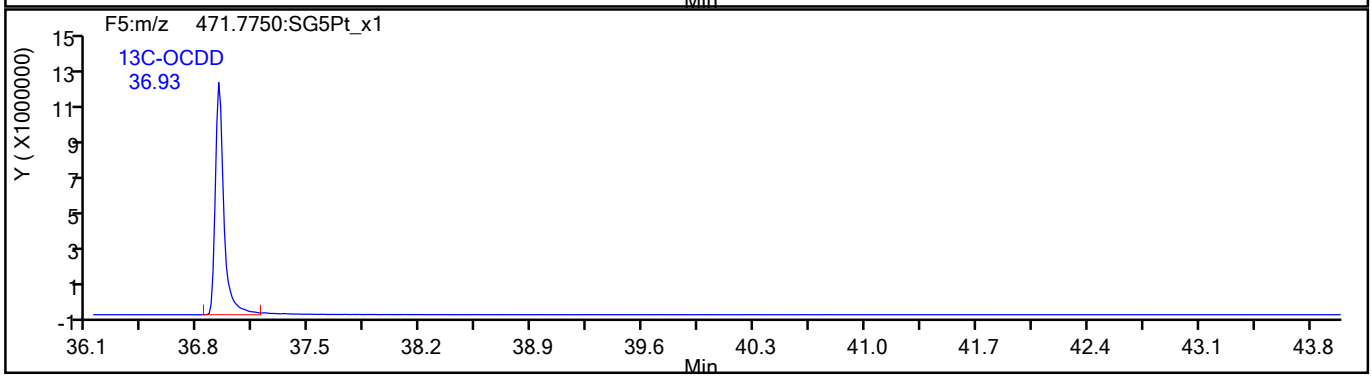

774116

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

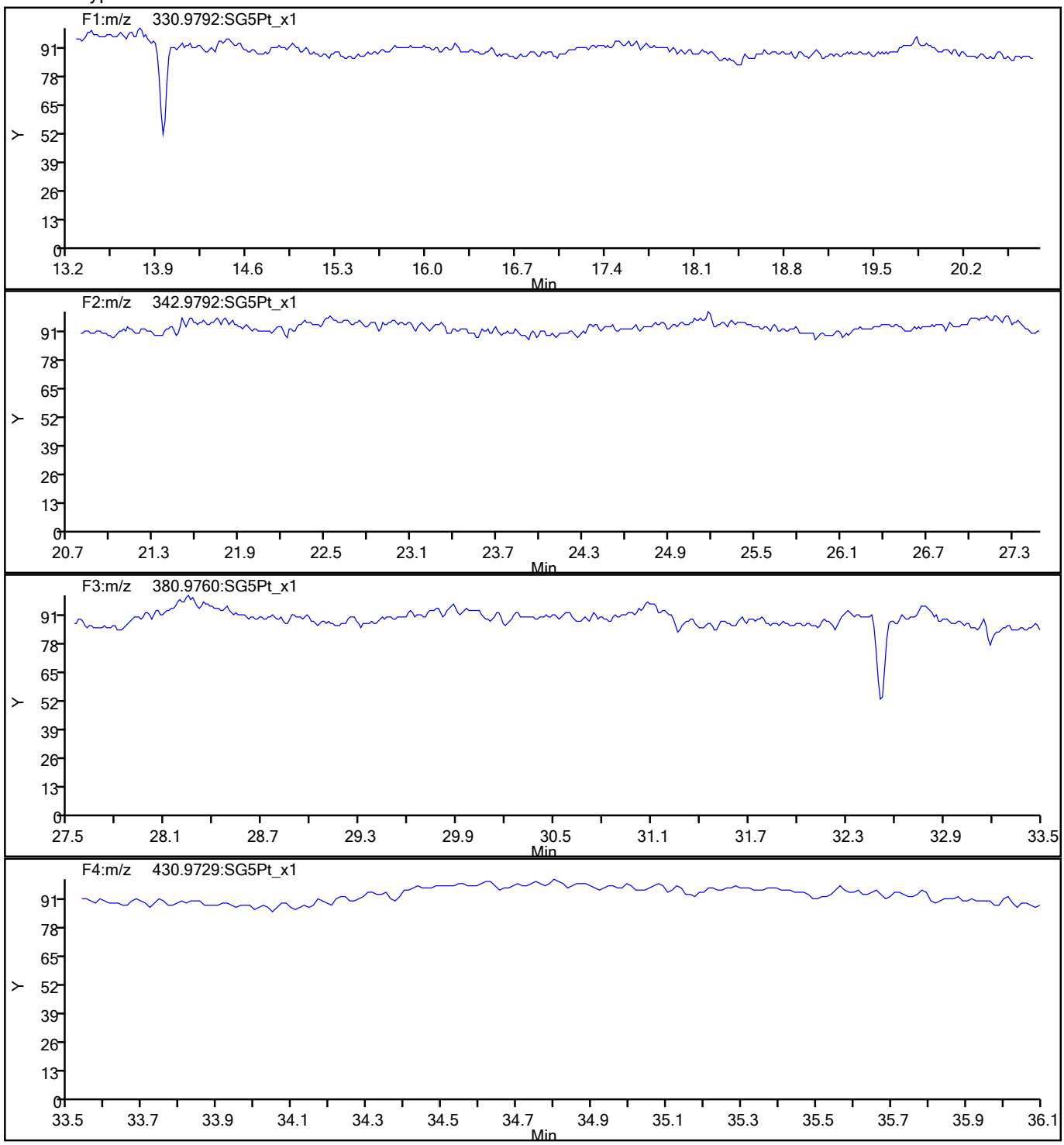

774117

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

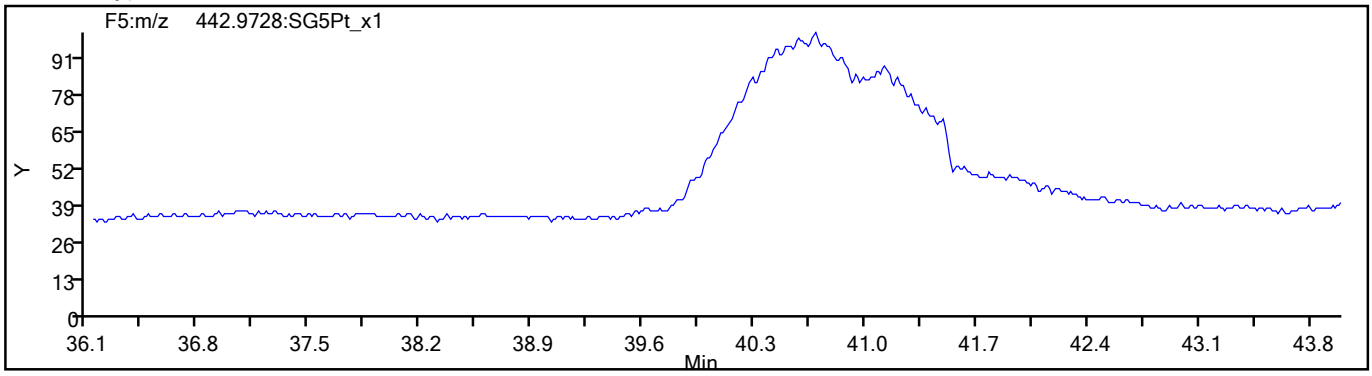

774118

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 320-513227/3-A

Matrix: Sediment Lab File ID: 12AU2110D5_27.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/05/2021 06:41

Sample wt/vol: 10(g) Date Analyzed: 08/13/2021 08:03

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 515770 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	20.2		1.0	0.040
51207-31-9	2,3,7,8-TCDF	20.9		1.0	0.039
40321-76-4	1,2,3,7,8-PeCDD	107		5.0	0.12
57117-41-6	1,2,3,7,8-PeCDF	107		5.0	0.35
57117-31-4	2,3,4,7,8-PeCDF	97.4		5.0	0.36
39227-28-6	1,2,3,4,7,8-HxCDD	98.2		5.0	0.31
57653-85-7	1,2,3,6,7,8-HxCDD	104		5.0	0.32
19408-74-3	1,2,3,7,8,9-HxCDD	103		5.0	0.29
70648-26-9	1,2,3,4,7,8-HxCDF	96.6		5.0	0.54
57117-44-9	1,2,3,6,7,8-HxCDF	105		5.0	0.56
72918-21-9	1,2,3,7,8,9-HxCDF	104		5.0	0.44
60851-34-5	2,3,4,6,7,8-HxCDF	106		5.0	0.45
35822-46-9	1,2,3,4,6,7,8-HpCDD	108		5.0	0.44
67562-39-4	1,2,3,4,6,7,8-HpCDF	107		5.0	0.93
55673-89-7	1,2,3,4,7,8,9-HpCDF	98.1		5.0	1.1
3268-87-9	OCDD	212		10	0.24
39001-02-0	OCDF	204		10	0.18
41903-57-5	Total TCDD	20.2		1.0	0.040
30402-14-3	Total TCDF	21.1		1.0	0.039
36088-22-9	Total PeCDD	107		5.0	0.12
30402-15-4	Total PeCDF	206		5.0	0.35
34465-46-8	Total HxCDD	305		5.0	0.31
55684-94-1	Total HxCDF	412		5.0	0.50
37871-00-4	Total HpCDD	108		5.0	0.44
38998-75-3	Total HpCDF	205		5.0	1.0

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76765-2
SDG No.:
Client Sample ID:
Lab Sample ID: LCSD 320-513227/3-A
Matrix: Sediment
Lab File ID: 12AU2110D5_27.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 10(g)
Date Analyzed: 08/13/2021 08:03
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 515770
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		20-175
89059-46-1	13C-2,3,7,8-TCDF	54		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	57		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	54		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	59		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	62		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	60		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	54		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	54		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	53		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	62		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	68		20-186
114423-97-1	13C-OCDD	69		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	81		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d
Lims ID: LCSD 320-513227/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 13-Aug-2021 08:03:13 ALS Bottle#: 31 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-513227/3-a lcsd 320-513227/3-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:40:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: dadunj Date: 16-Aug-2021 13:40:34

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	145963949	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.371	127613770	0.78	1.6249	53.8	53.8	0.1078	0.1078	53.81	
2,3,7,8-TCDF	17.386	13682429	0.76	1.0239	10.5	10.5	0.0193	0.0193	105	
A Non-2,3,7,8-sub-TCDF	17.069	116223	0.68	1.0239	0.0889	0.0889	0.0193	0.0889	0.00	
S Total TCDF					10.6	10.6	0.0193	0.0193		
D 13C-2,3,7,8-TCDD	18.081	74822203	0.81	0.8993	57.0	57.0	0.0857	0.0857	57.00	
2,3,7,8-TCDD	18.097	9461478	0.80	1.2541	10.1	10.1	0.0200	0.0200	101	
$ 37Cl4-2,3,7,8-TCDD	18.097	52138035		1.1071	32.3	32.3	0.0275	0.0275	80.66	
A Non-2,3,7,8-sub-TCDD	17.530	37813	0.72	1.2541	0.0403	0.0403	0.0200	0.0403	0.00	
S Total TCDD					10.1	10.1	0.0200	0.0200		
D 13C-1,2,3,7,8-PeCDF	22.394	96016186	1.57	1.2101	54.4	54.4	0.1271	0.1271	54.36	
1,2,3,7,8-PeCDF	22.421	54475962	1.59	1.0611	53.5	53.5	0.1730	0.1730	107	
D 13C-2,3,4,7,8-PeCDF	23.730	106902427	1.60	1.2395	59.1	59.1	0.1241	0.1241	59.09	
2,3,4,7,8-PeCDF	23.758	53019538	1.60	1.0184	48.7	48.7	0.1811	0.1811	97.40	
A F1 PeCDFs	20.108	30331	1.52	1.0398	0.0288	0.0288	0.009396	0.0288	0.00	M
A Non-2,3,7,8-sub-PeCDF	23.261	593606	1.64	1.0398	0.5627	0.5627	0.1769	0.5627	0.00	
S Total PeCDF					102.8	102.8	0.1770	0.1770		
D 13C-1,2,3,7,8-PeCDD	24.453	63494450	1.61	0.7612	57.1	57.1	0.0578	0.0578	57.14	
1,2,3,7,8-PeCDD	24.480	35512861	1.59	1.0484	53.3	53.3	0.0613	0.0613	107	
A Non-2,3,7,8-sub-PeCDD	23.376						0.0613	0.0613		
S Total PeCDD					53.3	53.3	0.0613	0.0613		
D 13C-1,2,3,4,7,8-HxCDF	30.529	87627530	0.52	1.0837	59.5	59.5	0.2062	0.2062	59.50	
1,2,3,4,7,8-HxCDF	30.556	45931412	1.22	1.0851	48.3	48.3	0.2688	0.2688	96.61	
D 13C-1,2,3,6,7,8-HxCDF	30.715	82928683	0.52	1.1279	54.1	54.1	0.1981	0.1981	54.10	
1,2,3,6,7,8-HxCDF	30.729	49000474	1.22	1.1260	52.5	52.5	0.2811	0.2811	105	
D 13C-2,3,4,6,7,8-HxCDF	31.527	76887599	0.52	1.0637	53.2	53.2	0.2101	0.2101	53.19	
2,3,4,6,7,8-HxCDF	31.554	47693558	1.20	1.1675	53.1	53.1	0.2259	0.2259	106	
D 13C-1,2,3,7,8,9-HxCDF	32.339	70930637	0.52	0.9676	53.9	53.9	0.2309	0.2309	53.94	
1,2,3,7,8,9-HxCDF	32.353	43223884	1.21	1.1664	52.2	52.2	0.2216	0.2216	104	
A Non-2,3,7,8-sub-HxCDF	30.223						0.2471	0.2471		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					206.2	206.2	0.2494	0.2494		
* 13C-1,2,3,7,8,9-HxCDD	32.153	135895297	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	62032232	1.32	0.7334	62.2	62.2	0.2376	0.2376	62.24	
1,2,3,4,7,8-HxCDD	31.740	32392302	1.26	1.0640	49.1	49.1	0.1552	0.1552	98.15	
D 13C-1,2,3,6,7,8-HxCDD	31.820	67089580	1.18	0.8802	56.1	56.1	0.1980	0.1980	56.09	
1,2,3,6,7,8-HxCDD	31.833	34751436	1.27	1.0001	51.8	51.8	0.1619	0.1619	104	
1,2,3,7,8,9-HxCDD	32.166	37789661	1.27	1.1325	51.7	51.7	0.1444	0.1444	103	
A Non-2,3,7,8-sub-HxCDD	30.895						0.1535	0.1535		
S Total HxCDD					152.6	152.6	0.1538	0.1538		
1,2,3,4,6,7,8-HpCDF	33.790	48625955	1.05	1.4413	53.5	53.5	0.4647	0.4647	107	
D 13C-1,2,3,4,6,7,8-HpCDF	33.778	63075335	0.44	0.7730	60.0	60.0	0.6106	0.6106	60.04	
D 13C-1,2,3,4,7,8,9-HpCDF	34.859	64670628	0.44	0.7008	67.9	67.9	0.6735	0.6735	67.90	
1,2,3,4,7,8,9-HpCDF	34.871	41784276	1.05	1.3174	49.0	49.0	0.5742	0.5742	98.09	
A Non-2,3,7,8-sub-HpCDF	34.325						0.5151	0.5151		
S Total HpCDF					102.5	102.5	0.5194	0.5194		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	54336261	1.01	0.6472	61.8	61.8	0.3360	0.3360	61.78	
1,2,3,4,6,7,8-HpCDD	34.580	31981224	1.05	1.0943	53.8	53.8	0.2215	0.2215	108	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2215	0.2215		
S Total HpCDD					53.8	53.8	0.2215	0.2215		
D 13C-OCDD	36.938	83662133	0.87	0.4472	137.7	137.7	0.1218	0.1218	68.84	
OCDF	37.034	61369727	0.89	1.4382	102.0	102.0	0.0904	0.0904	102	
OCDD	36.950	49024379	0.90	1.1070	105.9	105.9	0.1187	0.1187	106	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d
Lims ID: LCSD 320-513227/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 13-Aug-2021 08:03:13 ALS Bottle#: 31 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-513227/3-a lcsd 320-513227/3-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:40:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: dadunj Date: 16-Aug-2021 13:40:34

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.885	-1		65462077	15745820	6362	15905	2475		
333.9339	17.870	17.885	-1		80501872	19256940	4424	11060	4353	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.371	17.356	1	0.972	55834469	13335035	9744	24360	1369		
317.9389	17.371	17.356	1	0.972	71779301	17202622	14776	36940	1164	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.386	17.386	0	1.001	5923418	1425751	1075	2687	1326		
305.8987	17.386	17.386	0	1.001	7759011	1887590	1341	3352	1408	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.993	17.069	-5	0.978	46982	13921	1075	2687	13		
305.8987	17.008	17.069	-4	0.979	69241	16438	1341	3352	12	0.68(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.081	18.066	1	1.012	33377822	7455805	6362	15905	1172		
333.9339	18.081	18.066	1	1.012	41444381	9237177	4424	11060	2088	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.097	18.082	1	1.001	4190694	994713	818	2045	1216		
321.8936	18.097	18.082	1	1.001	5270784	1215085	861	2152	1411	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.097	18.097	0	1.013	52138035	12016909	4264	10660	2818		
A Non-2,3,7,8-sub-TCDD											
319.8965	15.859	17.530	-100	0.877	15834	5460	818	2045	7		
321.8936	15.859	17.530	-100	0.877	21979	6955	861	2152	8	0.72(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.394	22.408	-1	1.253	58587306	10138181	13103	32757	774		
353.8970	22.394	22.408	-1	1.253	37428880	6400889	8426	21065	760	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.421	22.435	-1	1.001	33423005	5636249	7217	18042	781		
341.8567	22.421	22.435	-1	1.001	21052957	3575061	4925	12312	726	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.730	23.758	-2	1.328	65792148	10123696	13103	32757	773		
353.8970	23.730	23.758	-2	1.328	41110279	6337647	8426	21065	752	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.758	23.785	-2	1.001	32607652	4961592	7217	18042	687		
341.8567	23.758	23.785	-2	1.001	20411886	3120318	4925	12312	634	1.60(1.32-1.78)	
A F1 PeCDFs											M
339.8597	19.518	20.108	-35	0.872	18296	5066	201	502	25		M
341.8567	19.518	20.108	-35	0.872	12035	2678	444	1110	6	1.52(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.940	23.261	-19	1.024	368715	49270	7217	18042	7		
341.8567	22.940	23.261	-19	1.024	224891	30339	4925	12312	6	1.64(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.481	-2	1.368	39182644	5710170	3316	8290	1722		
369.8919	24.467	24.481	-1	1.369	24311806	3551012	2848	7120	1247	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.480	24.508	-2	1.001	21789196	3156617	1465	3662	2155		
357.8516	24.480	24.508	-2	1.001	13723665	1980064	916	2290	2162	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.376						1465	3662			
357.8516	23.376						916	2290			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.529	30.543	-1	0.949	30078983	5820719	11179	27947	521		
385.8610	30.529	30.543	-1	0.949	57548547	10971412	22112	55280	496	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.556	30.569	-1	1.001	25206338	4779684	10711	26777	446		
375.8178	30.556	30.569	-1	1.001	20725074	3937772	8884	22210	443	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.715	30.716	0	0.955	28380026	5310831	11179	27947	475		
385.8610	30.715	30.716	0	0.955	54548657	10163106	22112	55280	460	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.729	30.743	-1	1.000	26974366	5171231	10711	26777	483		
375.8178	30.729	30.743	-1	1.000	22026108	4262642	8884	22210	480	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.527	31.541	-1	0.981	26306841	6311959	11179	27947	565		
385.8610	31.527	31.541	-1	0.981	50580758	12260348	22112	55280	554	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.554	31.554	0	1.001	25986466	6398667	10711	26777	597		
375.8178	31.554	31.554	0	1.001	21707092	5314261	8884	22210	598	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.339	32.340	0	1.006	24294453	6581850	11179	27947	589		
385.8610	32.339	32.340	0	1.006	46636184	12368778	22112	55280	559	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.353	32.353	0	1.000	23669547	6347926	10711	26777	593		
375.8178	32.353	32.353	0	1.000	19554337	5222254	8884	22210	588	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.223						10711	26777			
375.8178	30.223						8884	22210			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.153	0		75030110	20512174	14985	37462	1369		
403.8529	32.153	32.153	0		60865187	16736014	10980	27450	1524	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.727	-1	0.986	35243916	9366960	14985	37462	625		
403.8529	31.714	31.727	-1	0.986	26788316	7510016	10980	27450	684	1.32(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.740	31.741	0	1.001	18090631	4917169	6672	16680	737		
391.8127	31.740	31.741	0	1.001	14301671	3800438	4476	11190	849	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.834	-1	0.990	36287543	9488925	14985	37462	633		
403.8529	31.820	31.834	-1	0.990	30802037	7723126	10980	27450	703	1.18(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.833	31.847	-1	1.000	19473381	4990513	6672	16680	748		
391.8127	31.833	31.847	-1	1.000	15278055	4001669	4476	11190	894	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.166	32.167	0	1.014	21160586	5815769	6672	16680	872		
391.8127	32.166	32.167	0	1.014	16629075	4597155	4476	11190	1027	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.895						6672	16680			
391.8127	30.895						4476	11190			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.790	33.778	1	1.000	24894362	8235895	28805	72012	286		
409.7789	33.790	33.778	1	1.000	23731593	7697000	27552	68880	279	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.778	33.778	0	1.051	19362976	6464439	21107	52767	306		
419.8220	33.778	33.778	0	1.051	43712359	14572078	49217	123042	296	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.859	34.860	0	1.084	19665379	5654721	21107	52767	268		
419.8220	34.859	34.860	0	1.084	45005249	12971158	49217	123042	264	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.871	34.872	0	1.000	21405085	6235468	28805	72012	216		
409.7789	34.871	34.872	0	1.000	20379191	5927929	27552	68880	215	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						28805	72012			
409.7789	34.325						27552	68880			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.075	27316561	8216164	12277	30692	669		
437.8140	34.568	34.568	0	1.075	27019700	8164210	20121	50302	406	1.01(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	16376459	4948271	8162	20405	606		
425.7737	34.580	34.580	0	1.000	15604765	4807854	7721	19302	623	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						8162	20405			
425.7737	34.301						7721	19302			
13C-OCDD											
469.7779	36.938	36.926	1	1.149	38997905	10196432	3304	8260	3086		
471.7750	36.938	36.926	1	1.149	44664228	11550584	4812	12030	2400	0.87(0.76-1.02)	
OCDF											
441.7428	37.034	37.034	0	1.003	28938332	7605166	2725	6812	2791		
443.7399	37.034	37.034	0	1.003	32431395	8415021	2928	7320	2874	0.89(0.76-1.02)	
OCDD											
457.7377	36.950	36.938	1	1.000	23184776	5867790	2504	6260	2343		
459.7348	36.938	36.938	0	1.000	25839603	6587798	3213	8032	2050	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d
Lims ID: LCSD 320-513227/3-A
Client ID:
Inject. Date: 13-Aug-2021 08:03:13 Dil. Factor: 1.0000
Sample Type: LCSD, LCS Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	127613770	30537657

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	127613770	30537657

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.993	46982	13921	69241	16438	0.0889	0.68	
Signal Totals:							
	46982	13921	69241	16438			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	116223	30359				0.68	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0889 = (116223 * 100.000) / (127613770 * 1.024)

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d
Lims ID: LCSD 320-513227/3-A
Client ID:
Inject. Date: 13-Aug-2021 08:03:13 Dil. Factor: 1.0000
Sample Type: LCSD, LCS Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	74822203	16692982

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	74822203	16692982

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.859	15834	5460	21979	6955	0.0403	0.72	
Signal Totals:							
	15834	5460	21979	6955			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	37813	12415				0.72	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0403 = (37813 * 100.000) / (74822203 * 1.254)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d
Lims ID: LCSD 320-513227/3-A
Client ID:
Inject. Date: 13-Aug-2021 08:03:13 Dil. Factor: 1.0000
Sample Type: LCSD, LCS Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 5

F1 PeCDFs, RT: 20.108

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	96016186	16539070
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	106902427	16461343

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	101459306	16500206

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.518	18296	5066	12035	2678	0.0288	1.52	M
Signal Totals:							
	18296	5066	12035	2678			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	30331	7744				1.52	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0288 = (30331 * 100.000) / (101459306 * 1.040)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d
Lims ID: LCSD 320-513227/3-A
Client ID:
Inject. Date: 13-Aug-2021 08:03:13 Dil. Factor: 1.0000
Sample Type: LCSD, LCS Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 5

Non-2,3,7,8-sub-PeCDF, RT: 23.261

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	96016186	16539070
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	106902427	16461343

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	101459306	16500206

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.940	368715	49270	224891	30339	0.5627	1.64	
Signal Totals:							
	368715	49270	224891	30339			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	593606	79609				1.64	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5627 = (593606 * 100.000) / (101459306 * 1.040)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d				
Injection Date:	13-Aug-2021 08:03:13	Instrument ID:	10D5		
Lims ID:	LCSD 320-513227/3-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

F1 PeCDFs, Signal: 1, m/z: 339.8597, RT: (19.46- 20.76)

Signal: 1

Processing Integration Results

RT = 19.518 Area = 19868

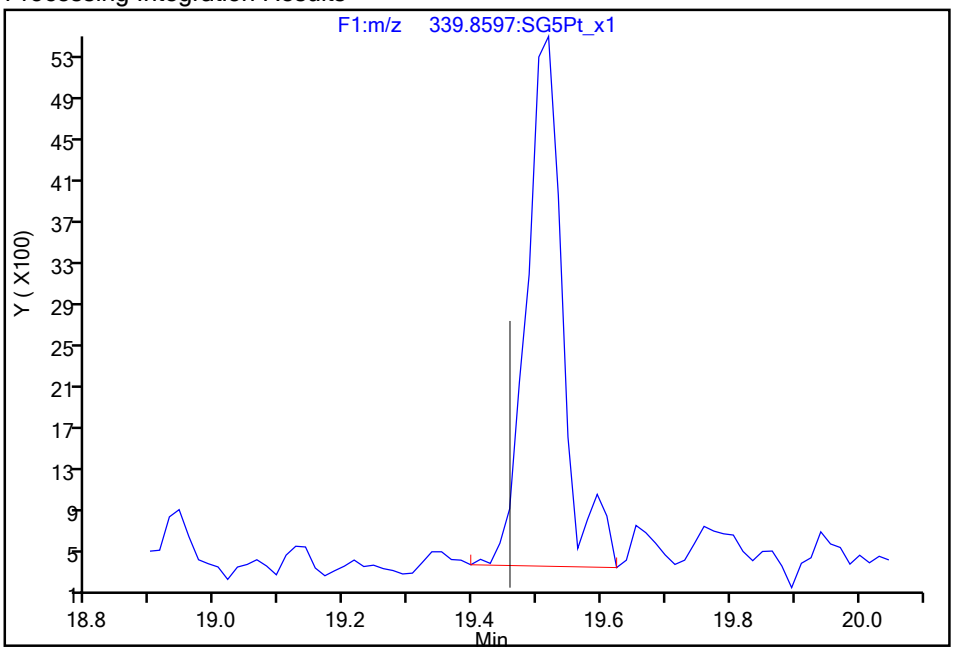

Manual Integration Results

RT = 19.518 Area = 18296 M

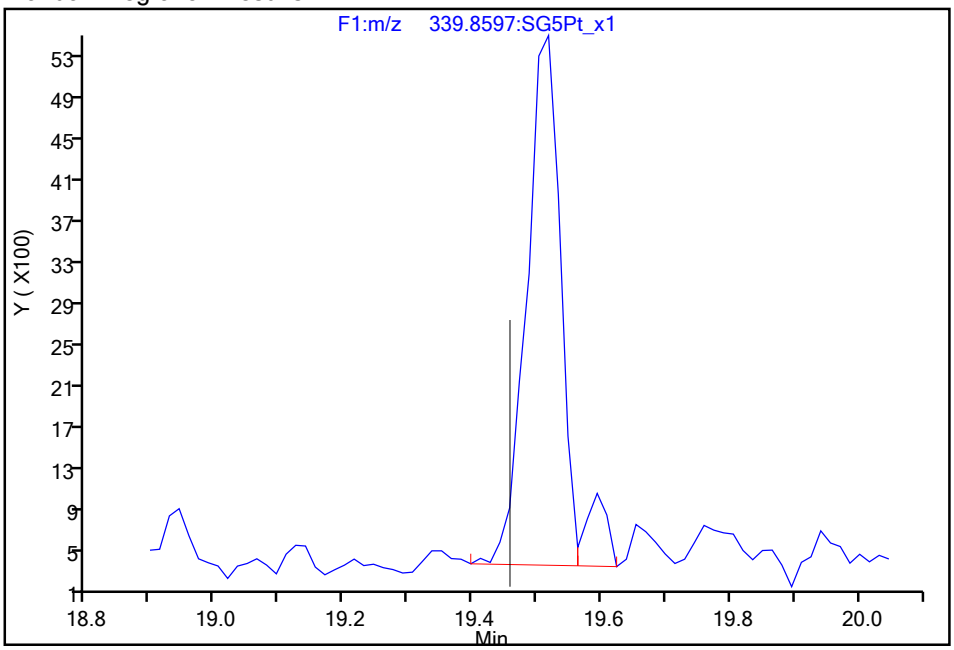

Reviewer: dadunj, 16-Aug-2021 13:40:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d				
Injection Date:	13-Aug-2021 08:03:13	Instrument ID:	10D5		
Lims ID:	LCSD 320-513227/3-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

F1 PeCDFs, Signal: 2, m/z: 341.8567, RT: (19.46- 20.76)

Signal: 2

Processing Integration Results

RT = 19.518 Area = 15691

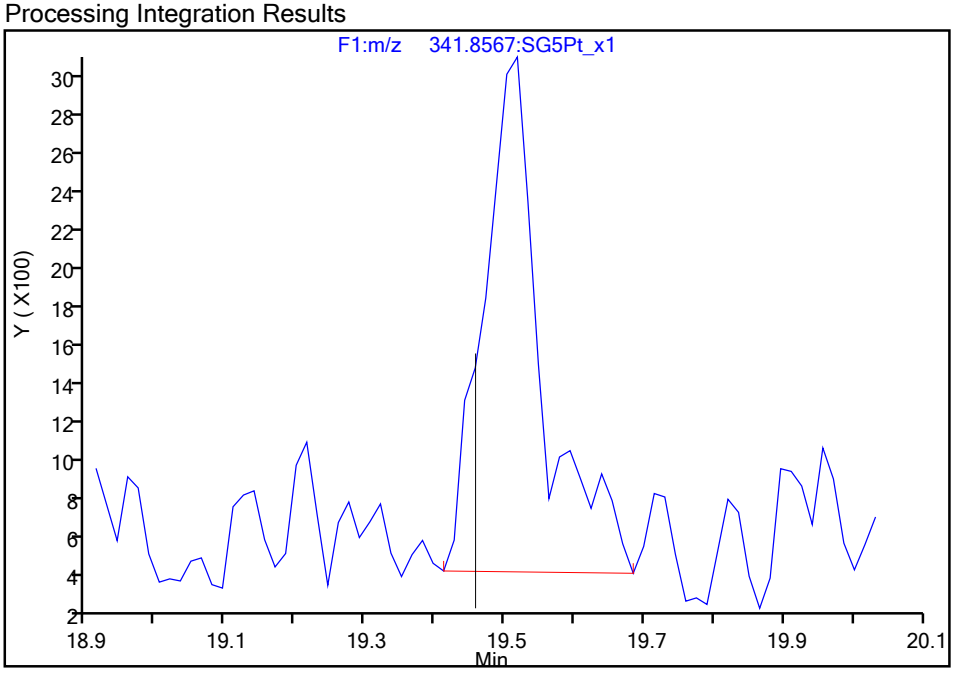

Manual Integration Results

RT = 19.518 Area = 12035 M

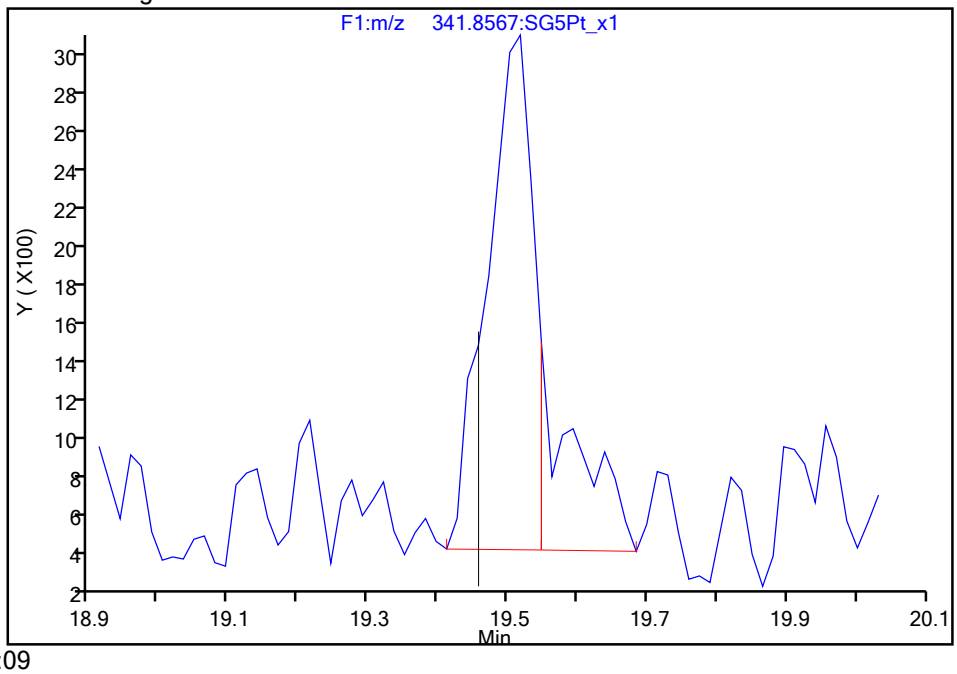

Reviewer: dadunj, 16-Aug-2021 13:40:09

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

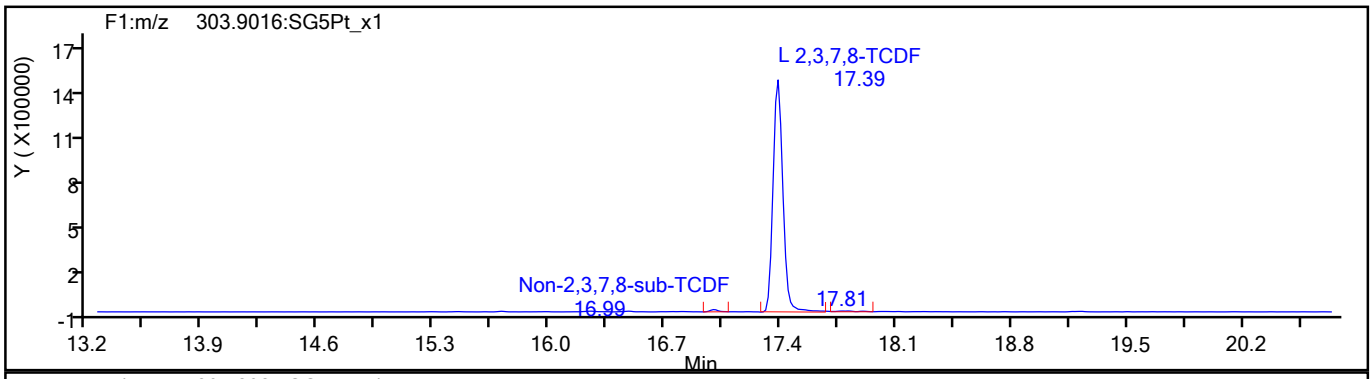

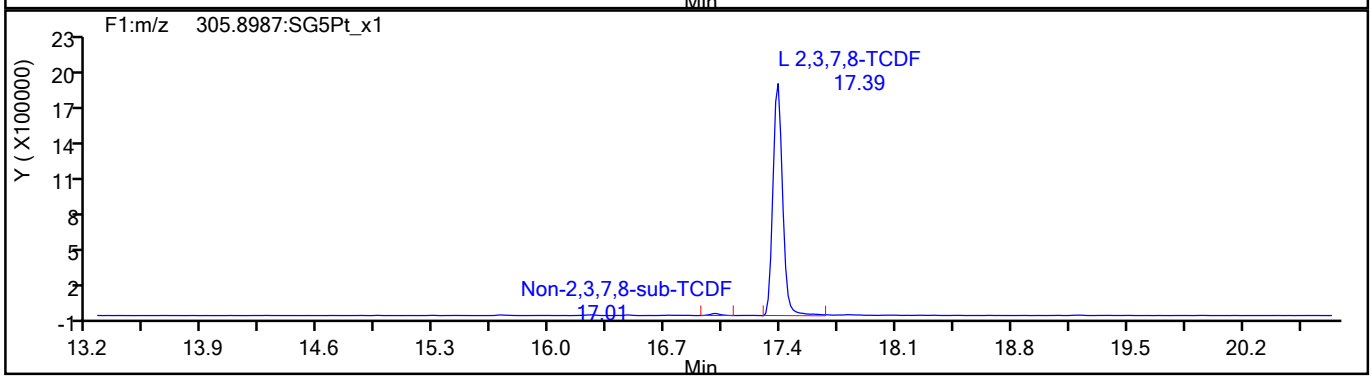

TCDF Standards

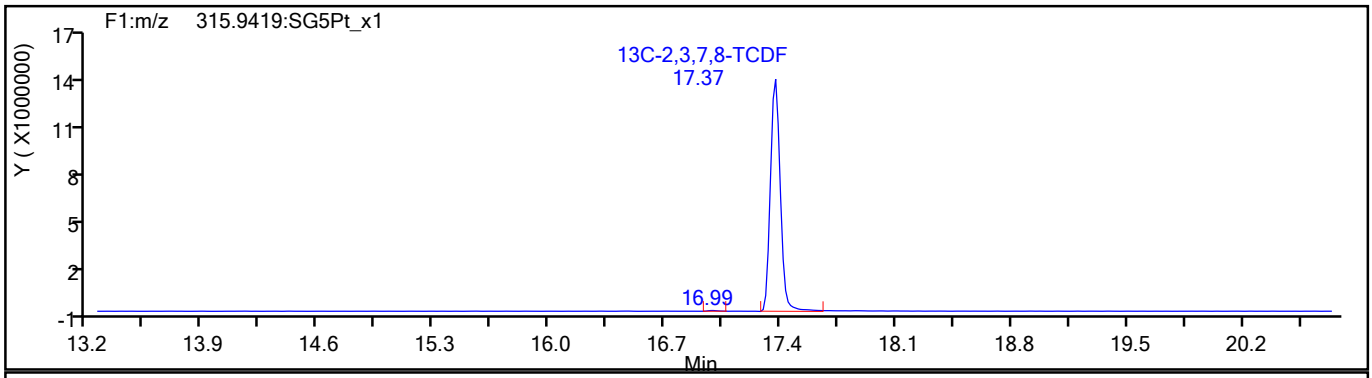

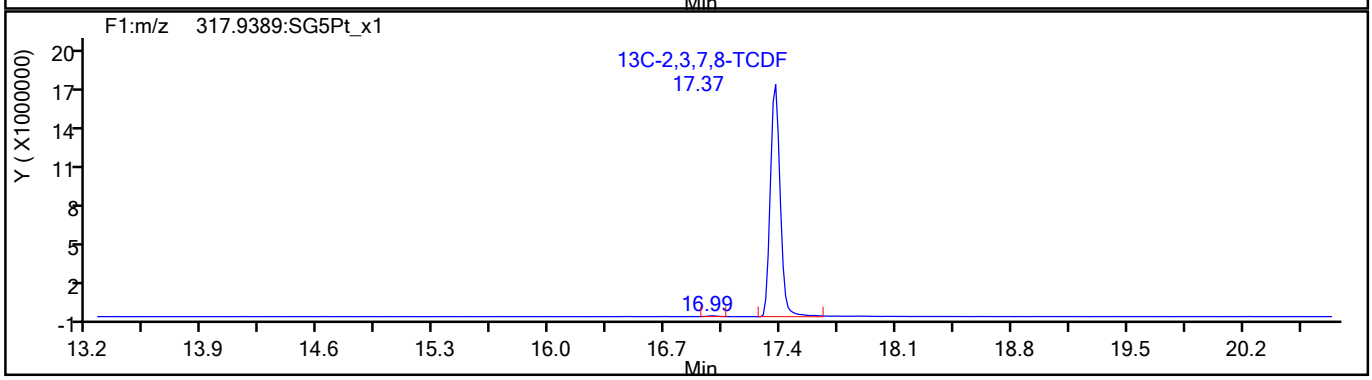

774133

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

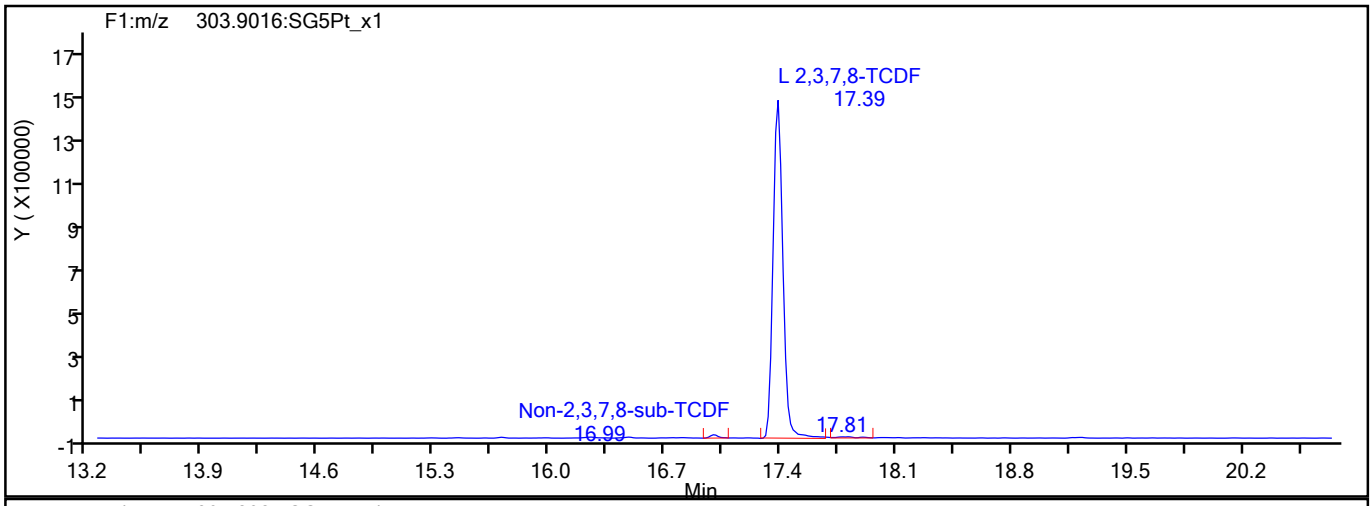

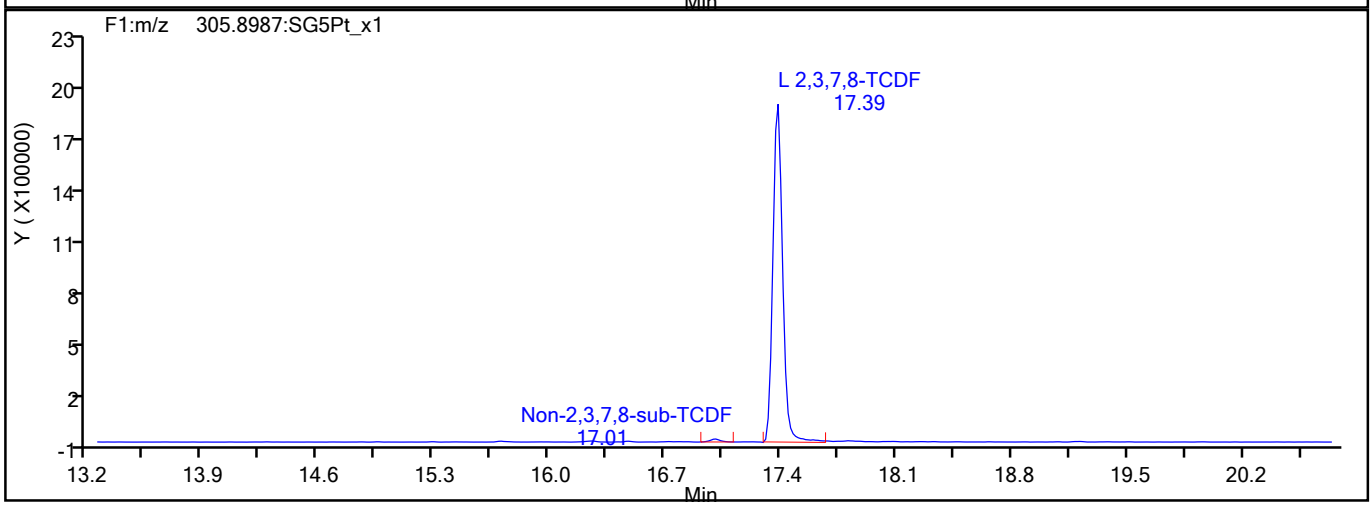

TCDF Interference Mass

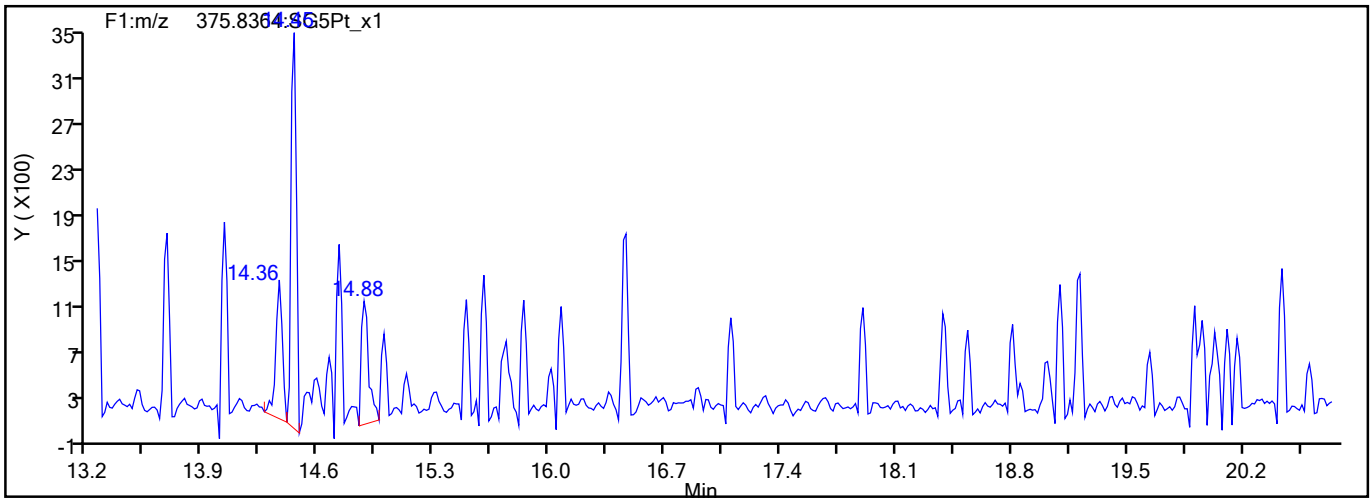

774134

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

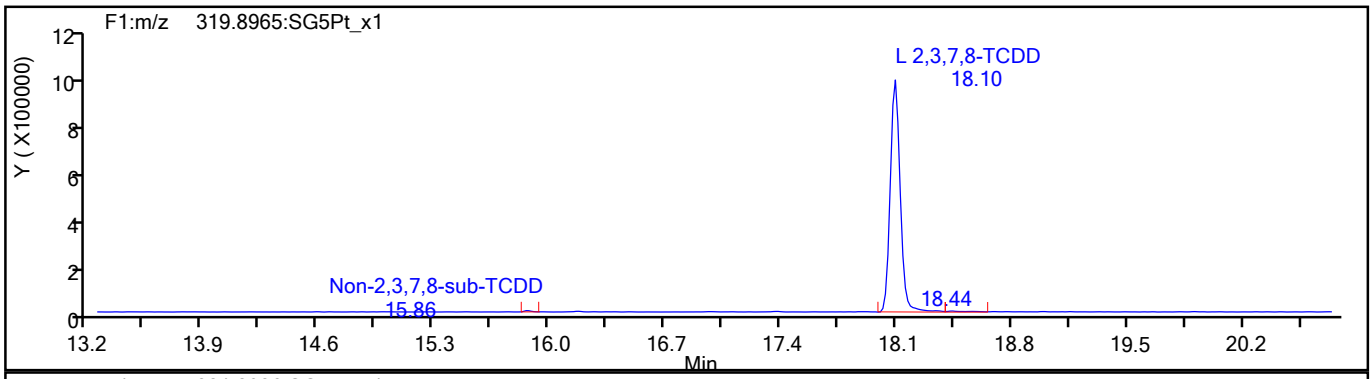

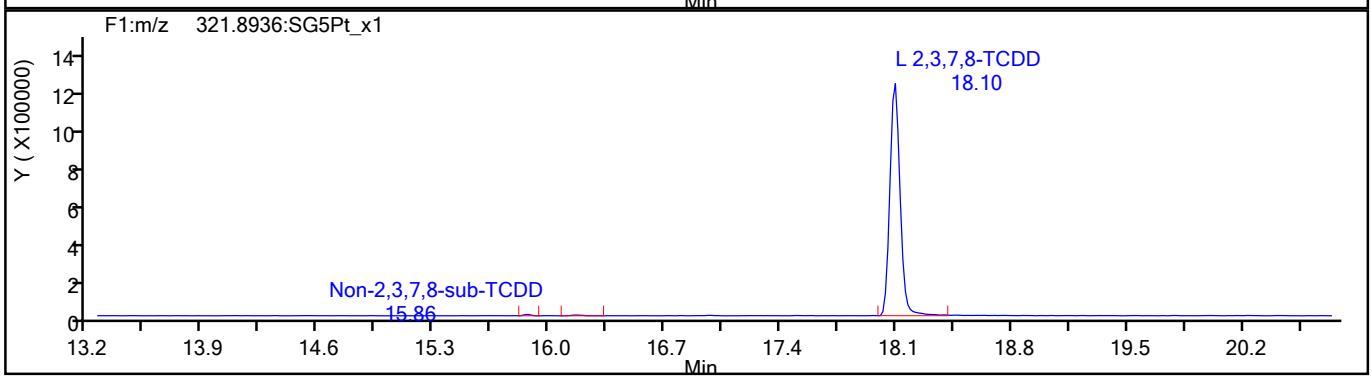

TCDD Standards

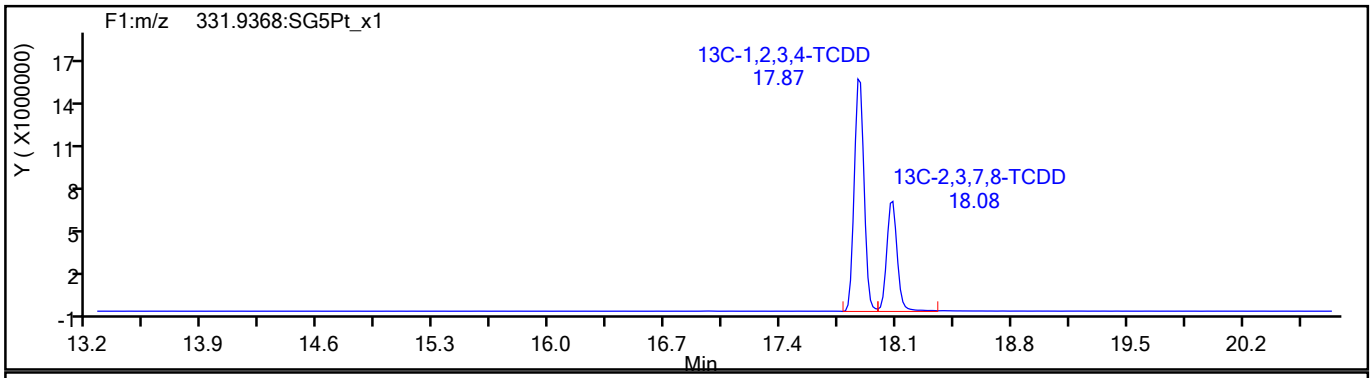

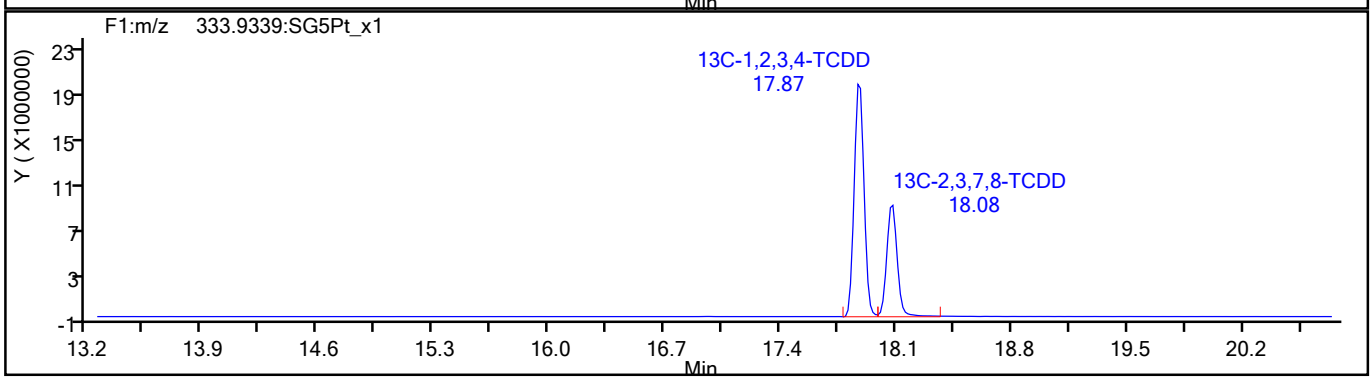

774135

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

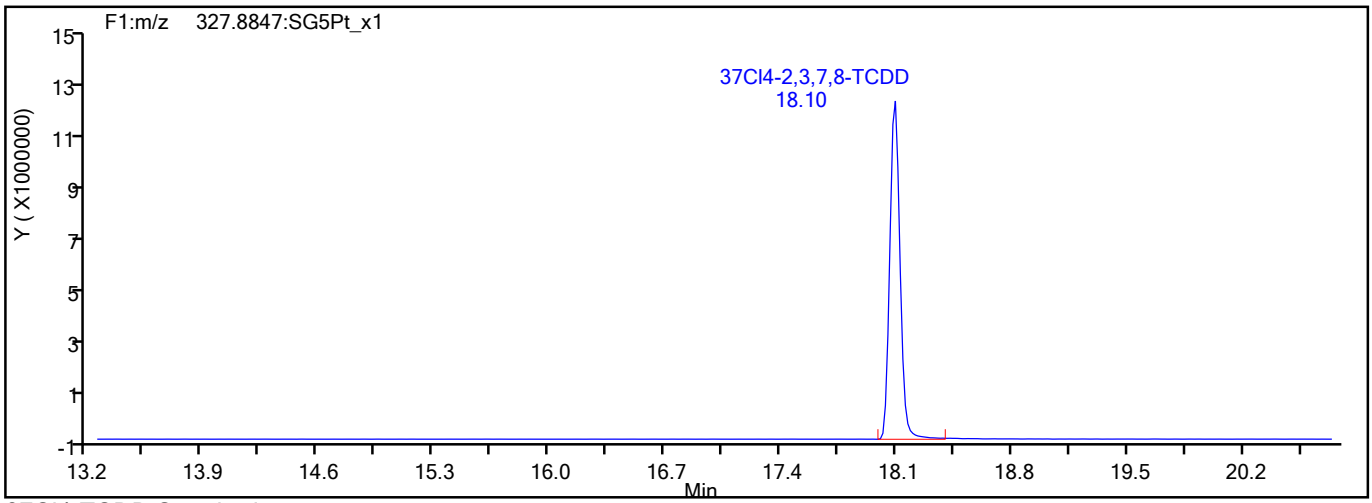

37Cl4-TCDD Standards

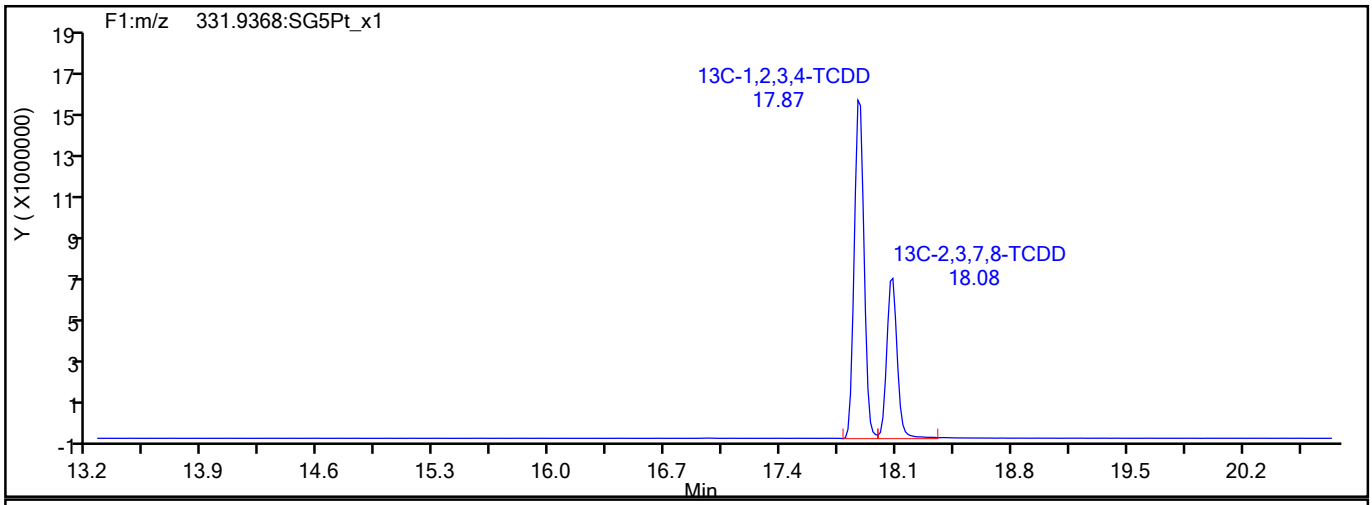

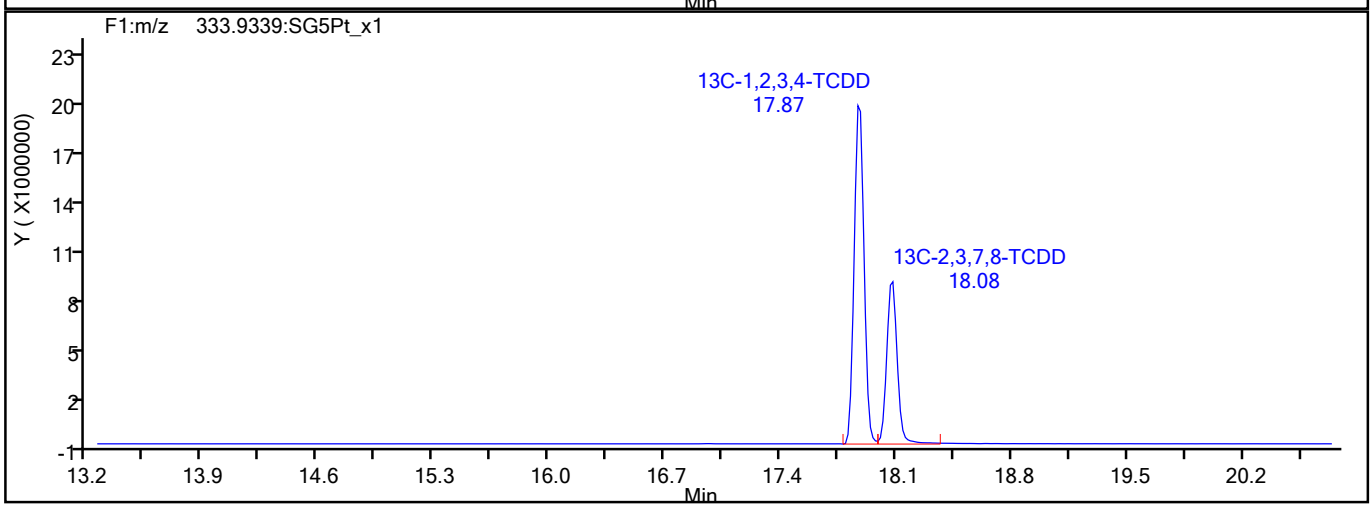

774136

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

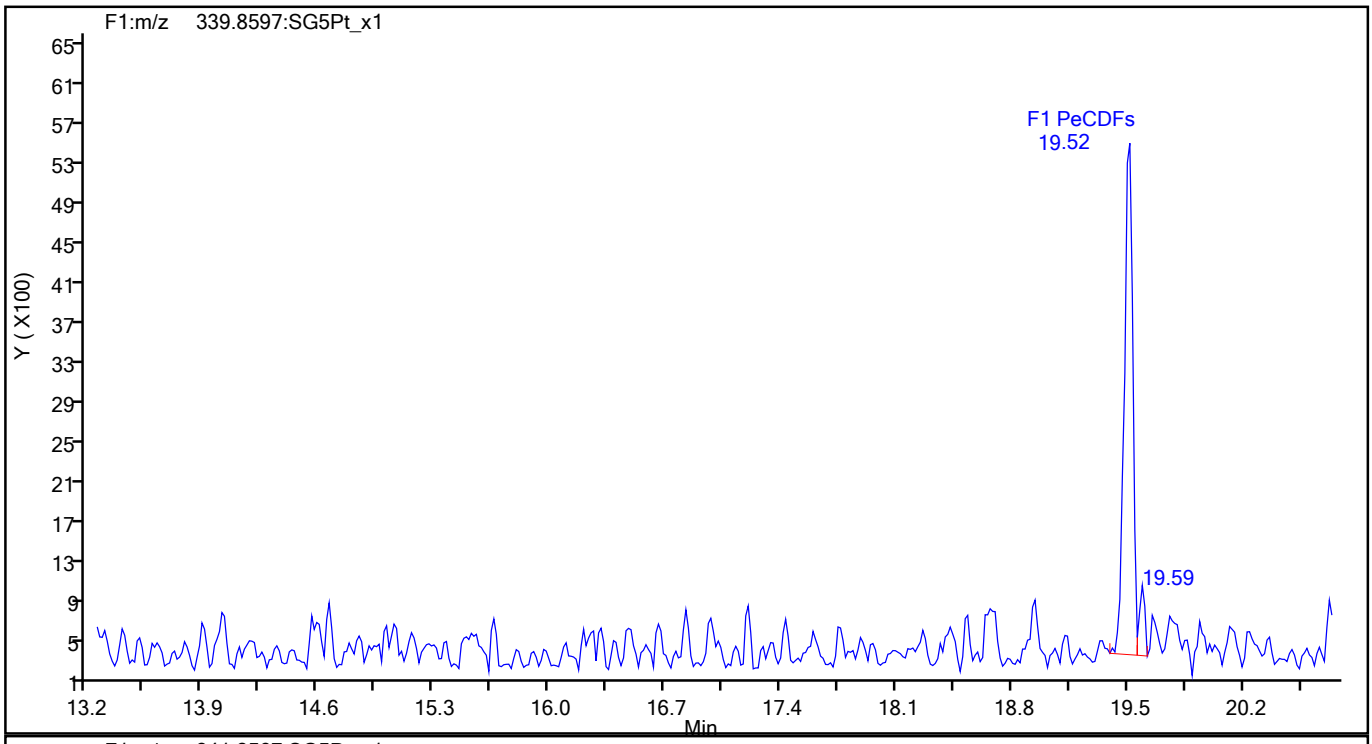

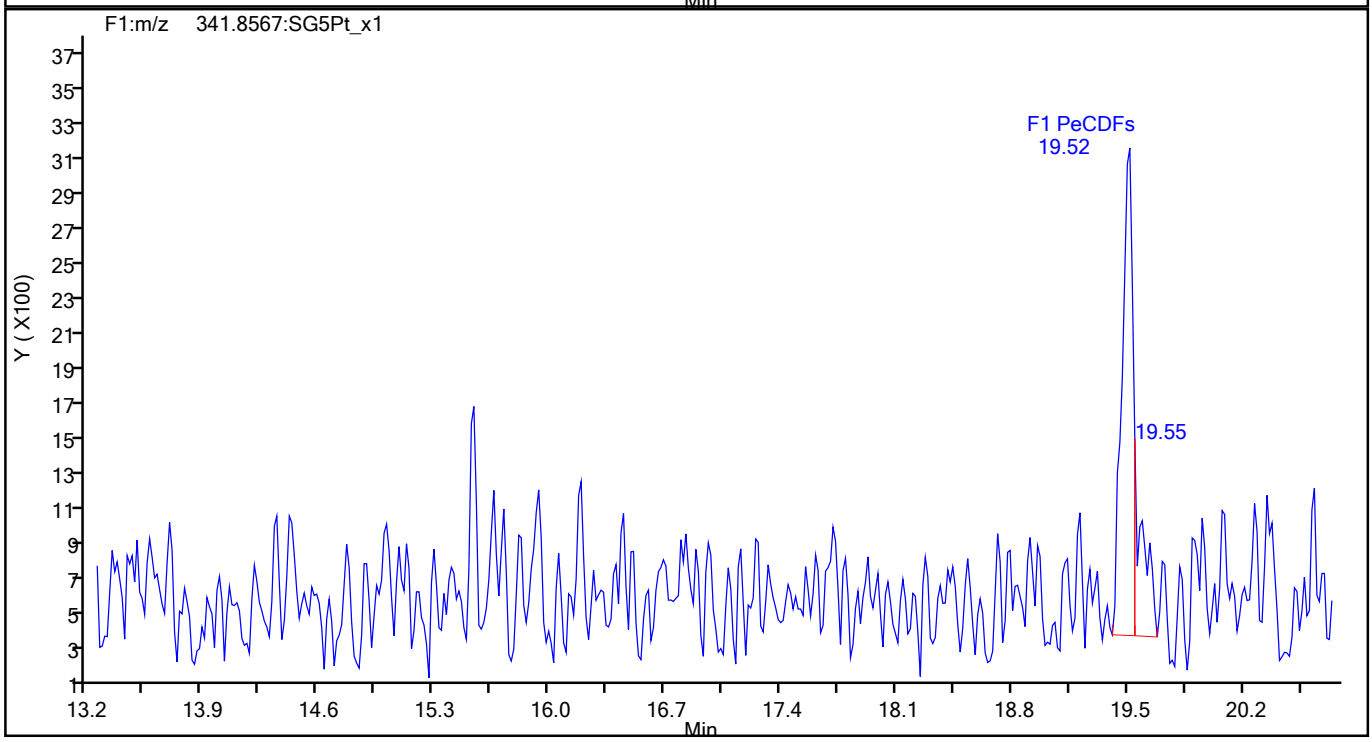

774137

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

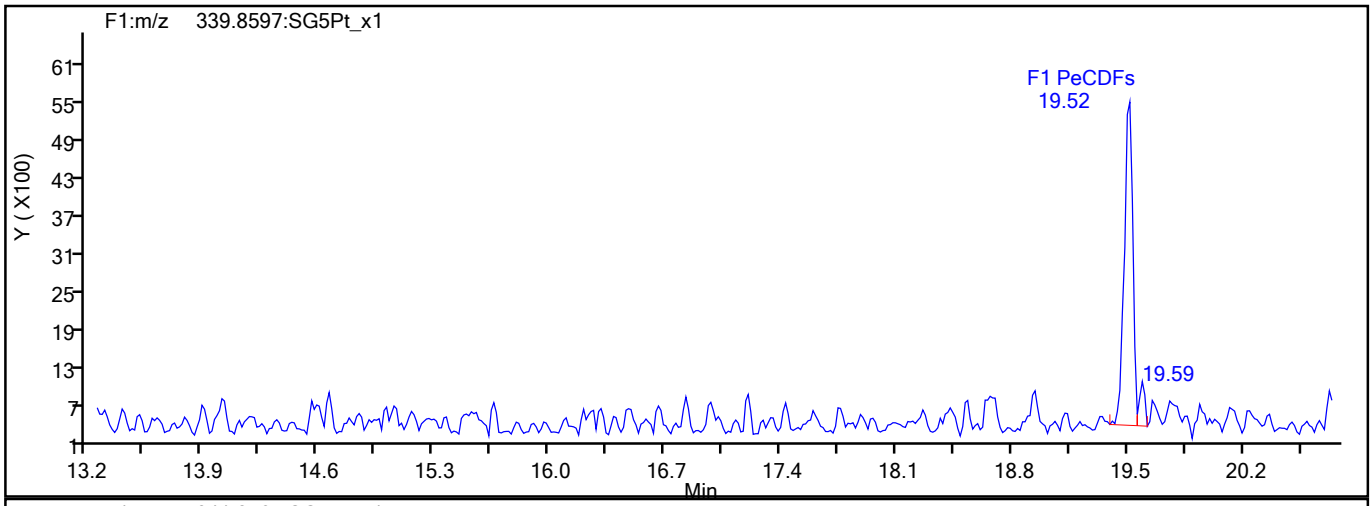

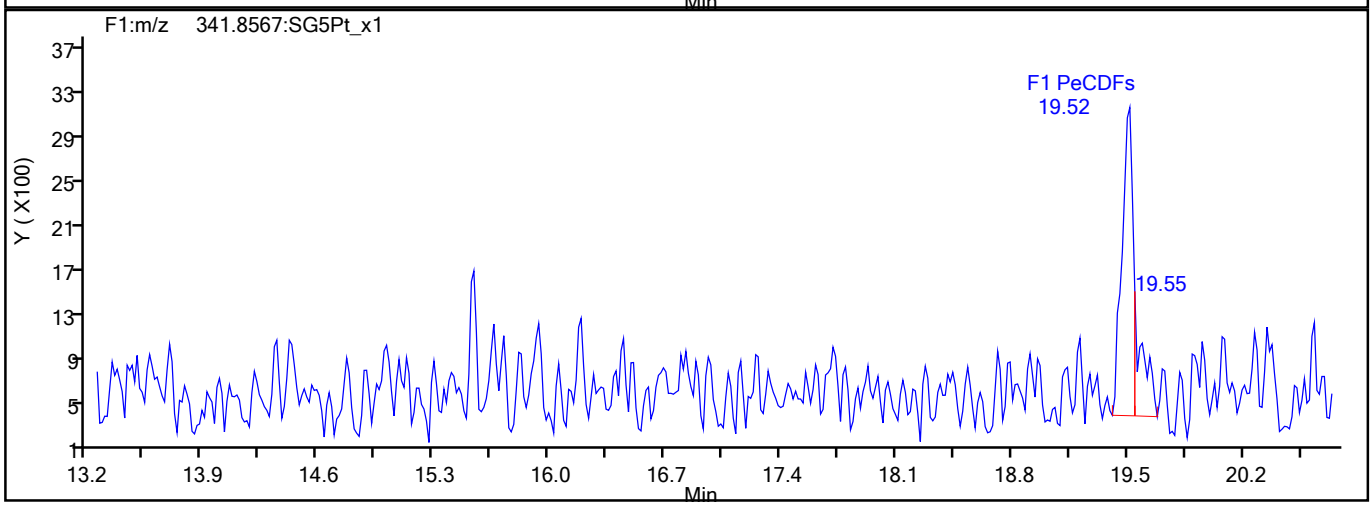

F1 PeCDFs Interference Mass

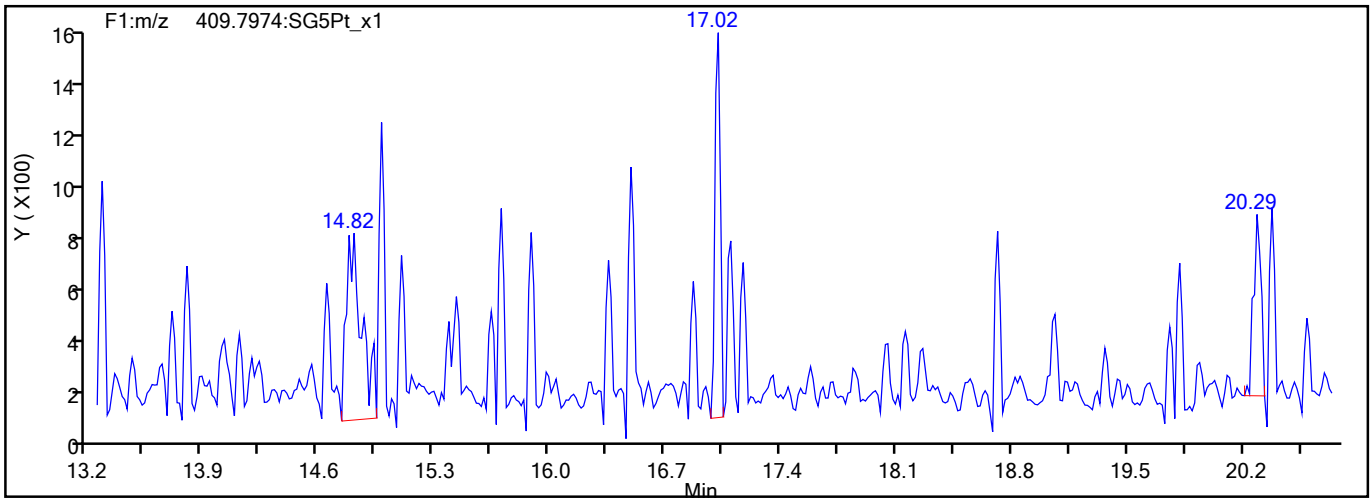

774138

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

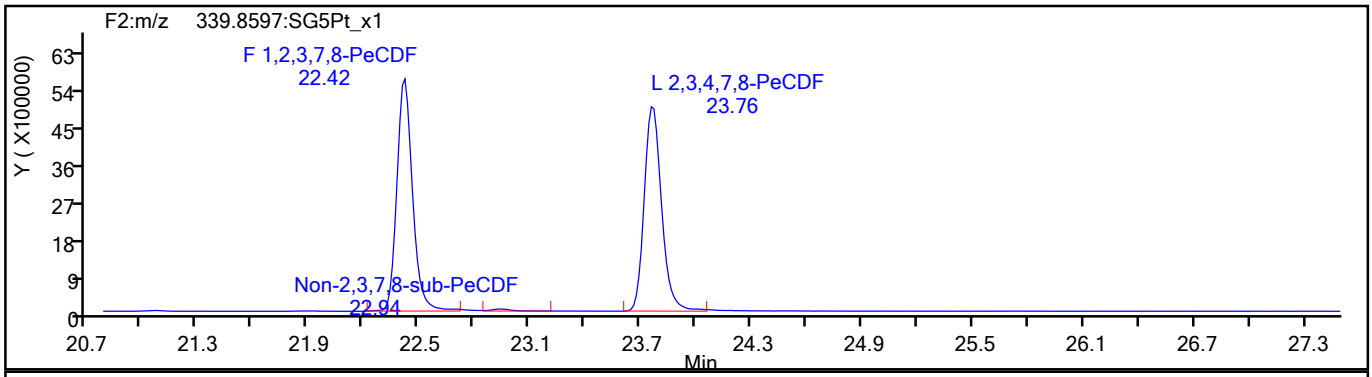

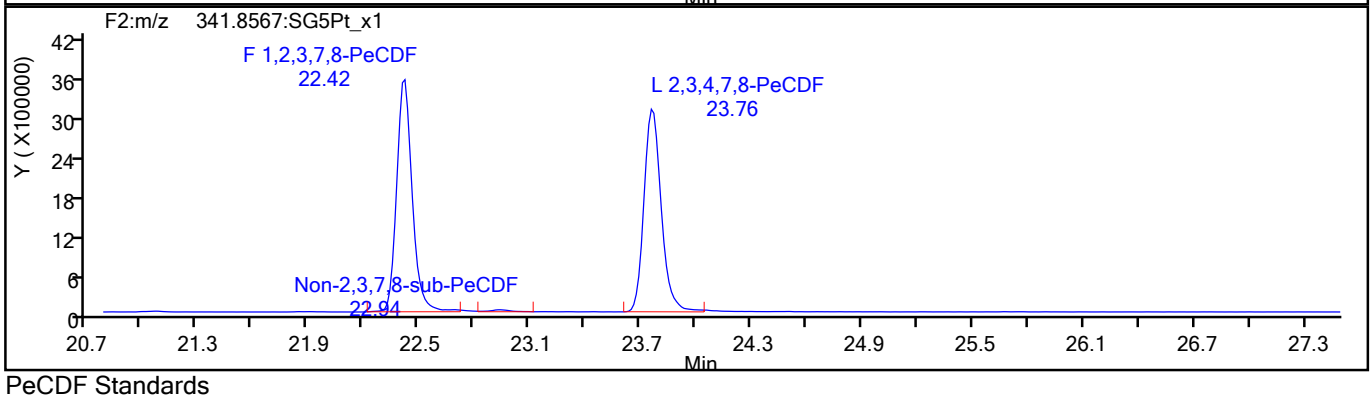

PeCDF Standards

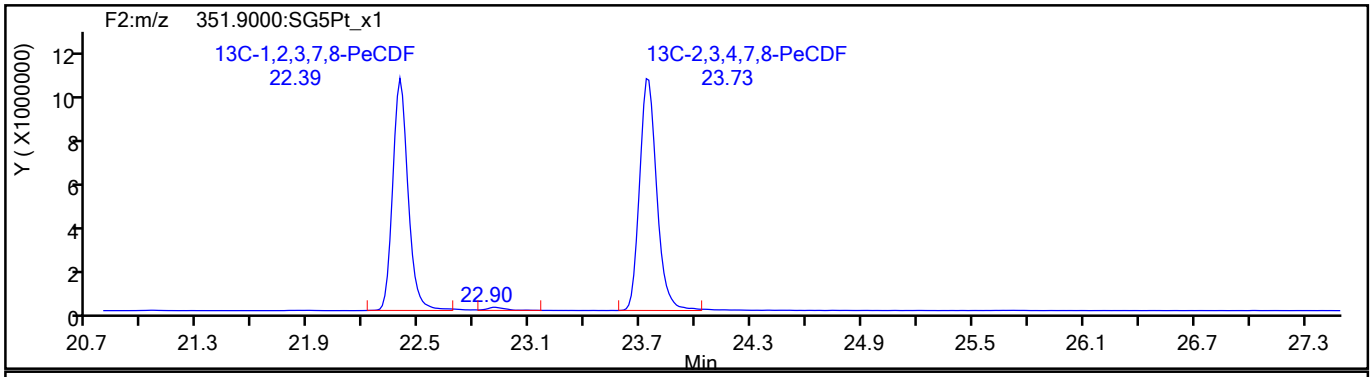

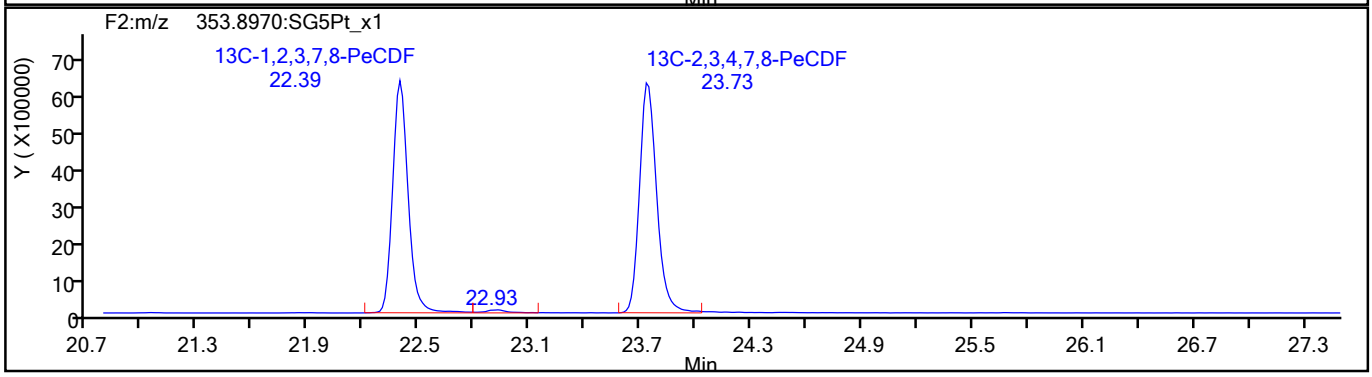

774139

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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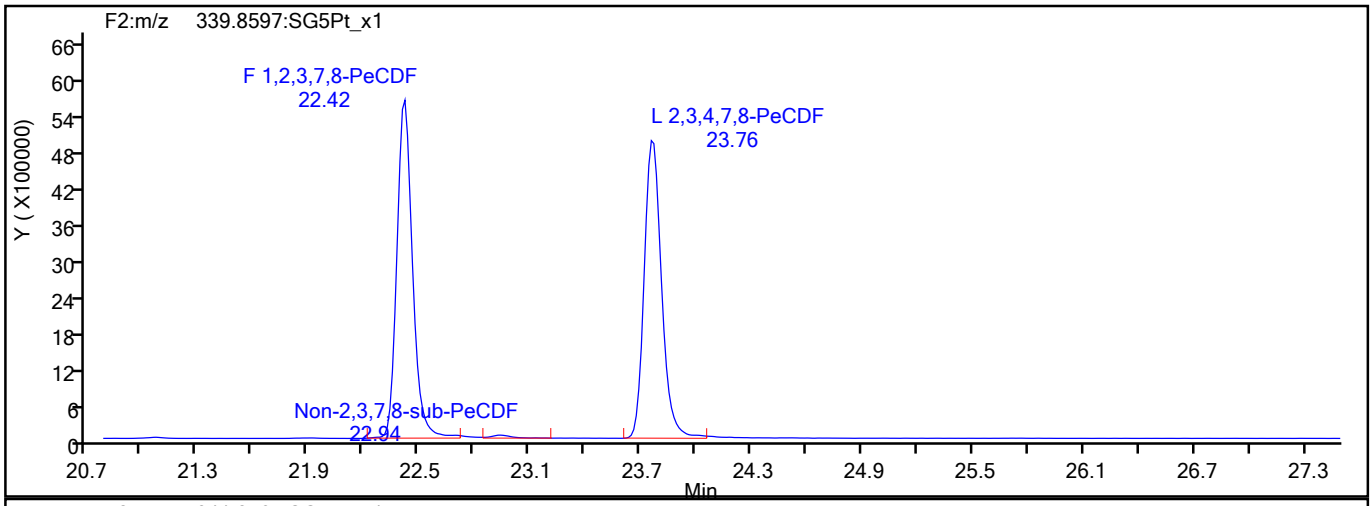

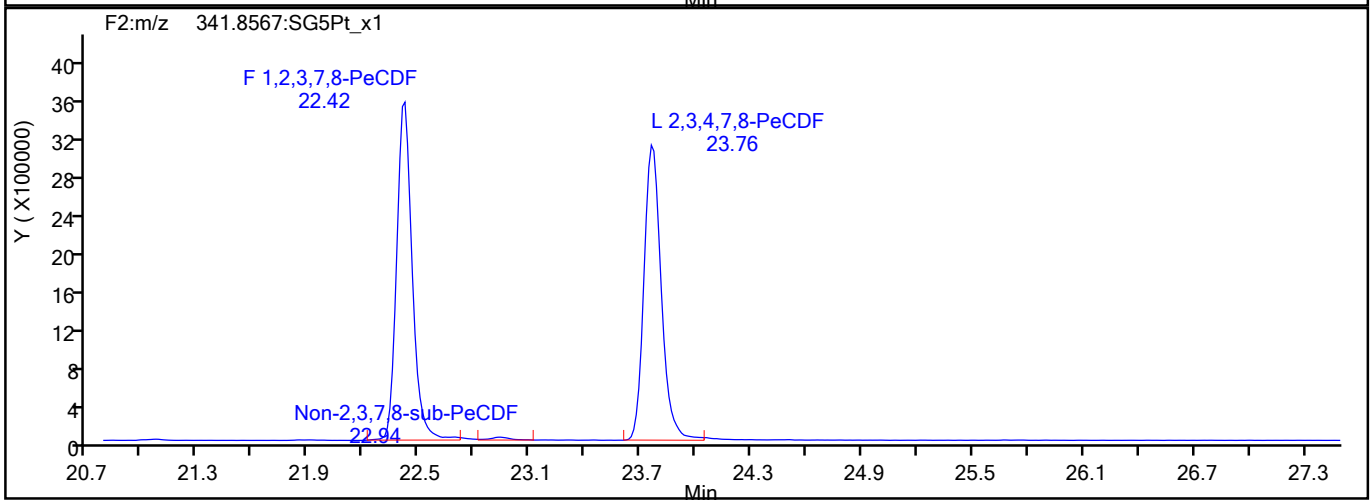

PeCDF Interference Mass

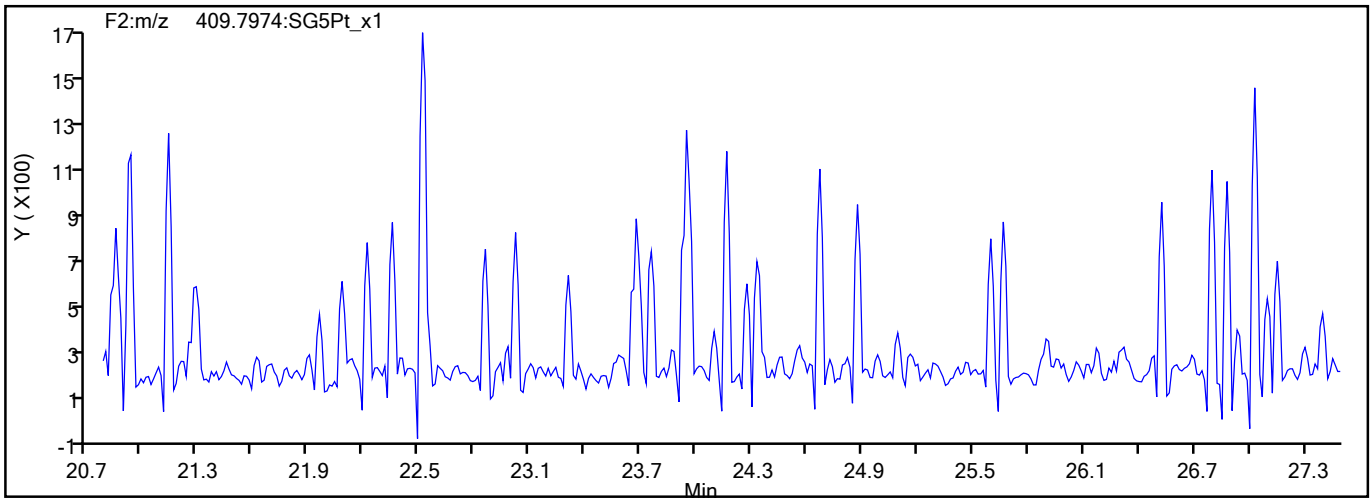

774140

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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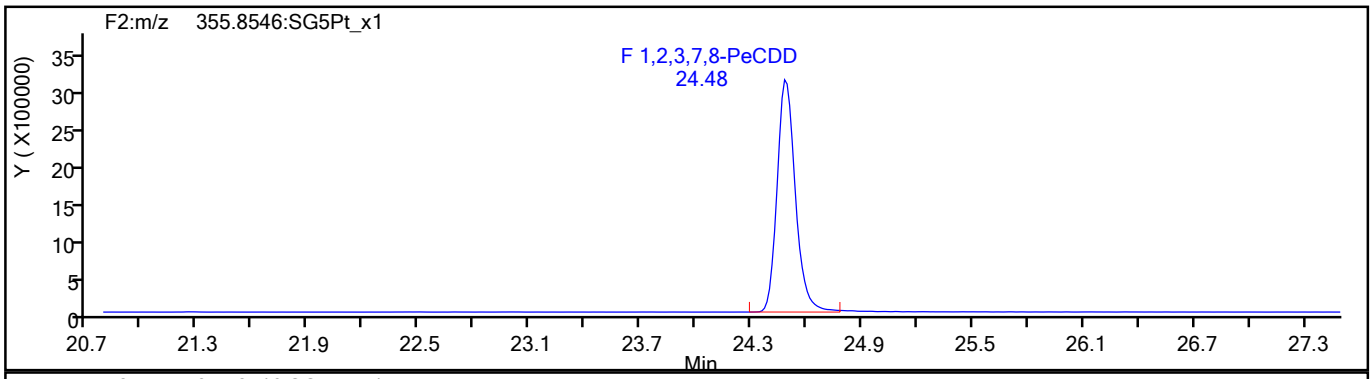

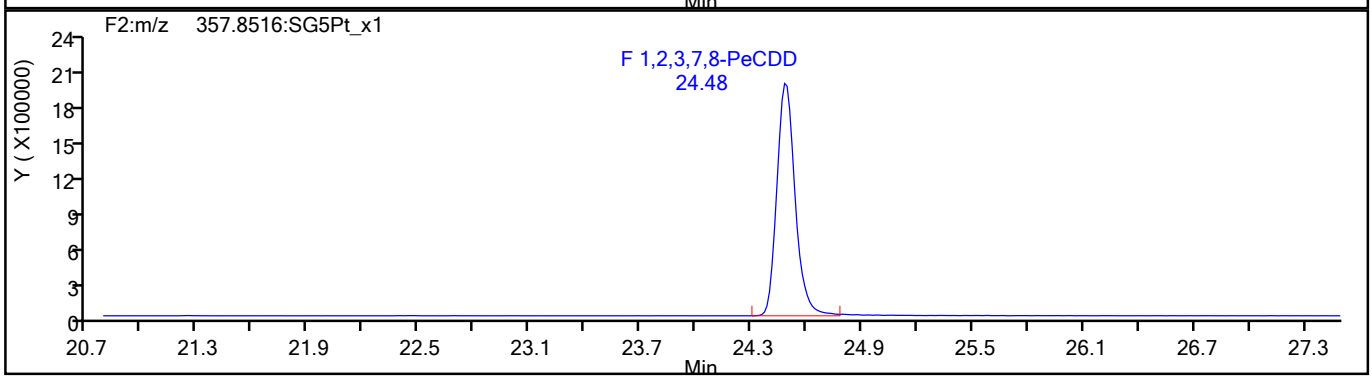

PeCDD Standards

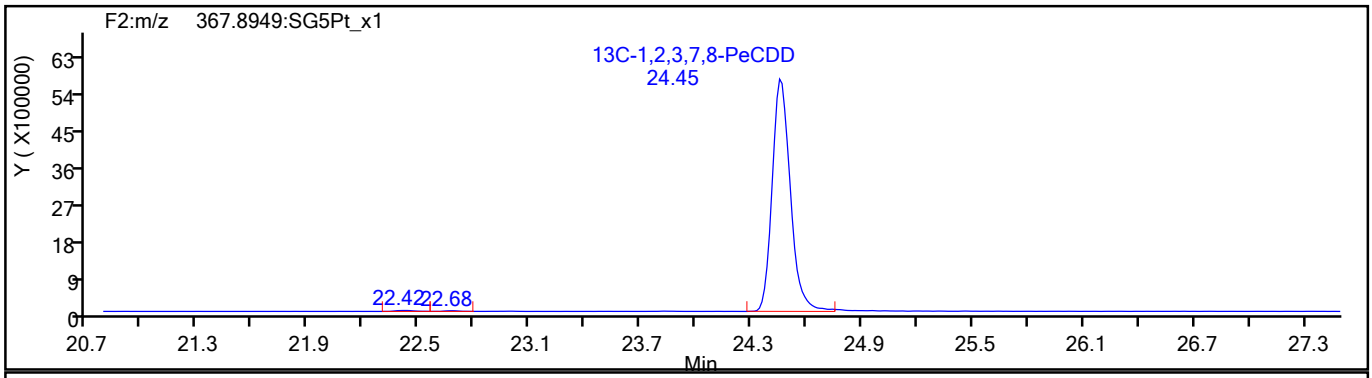

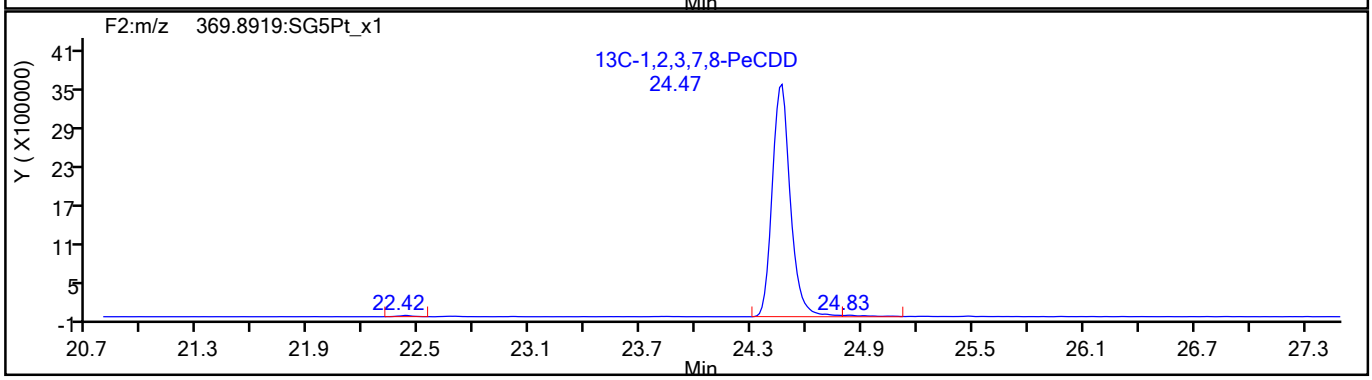

774141

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

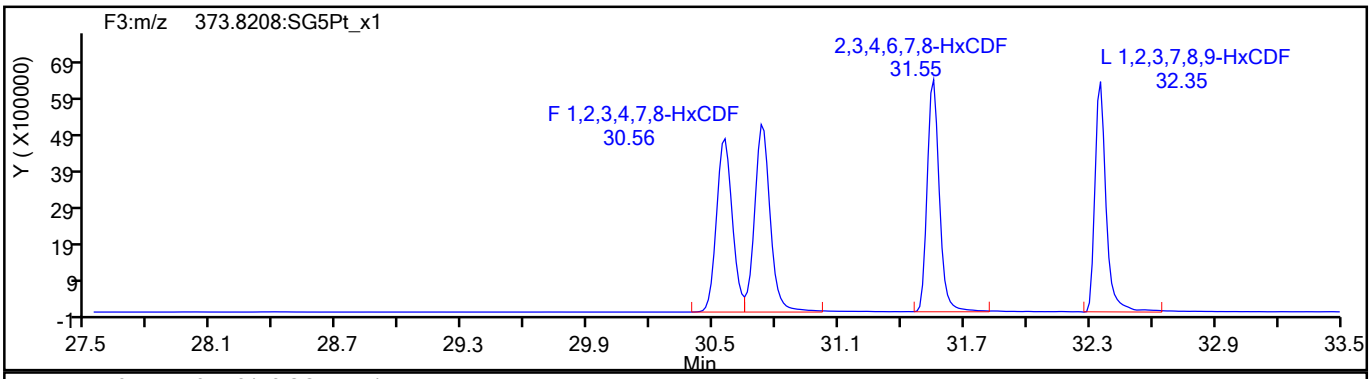

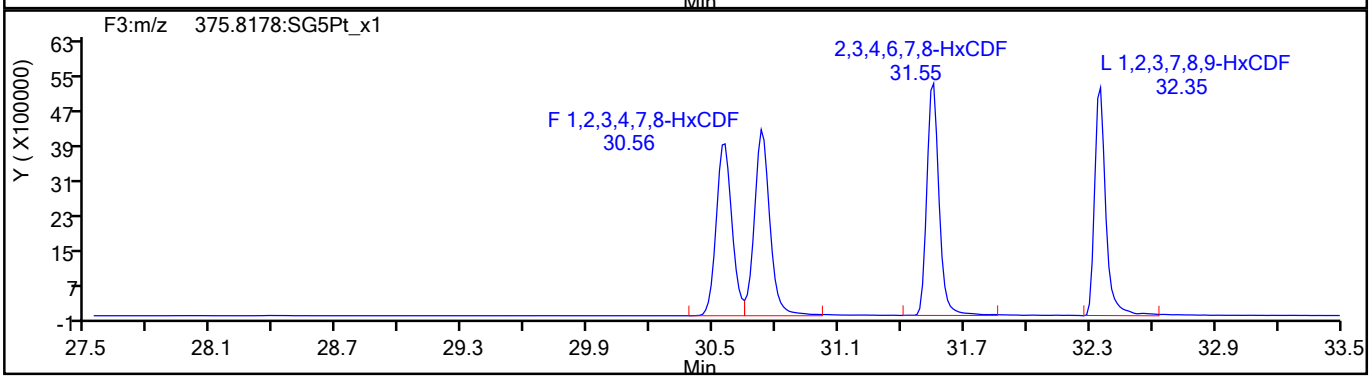

HxCDF Standards

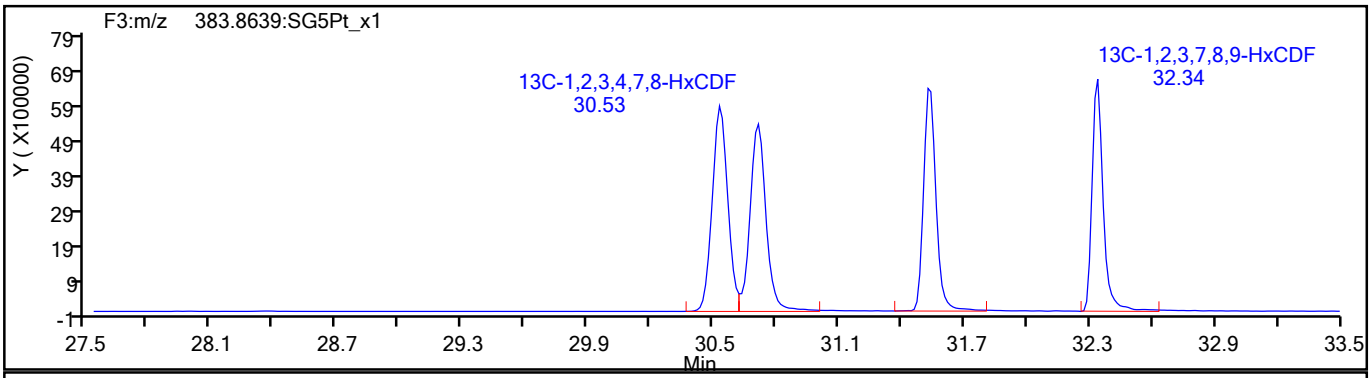

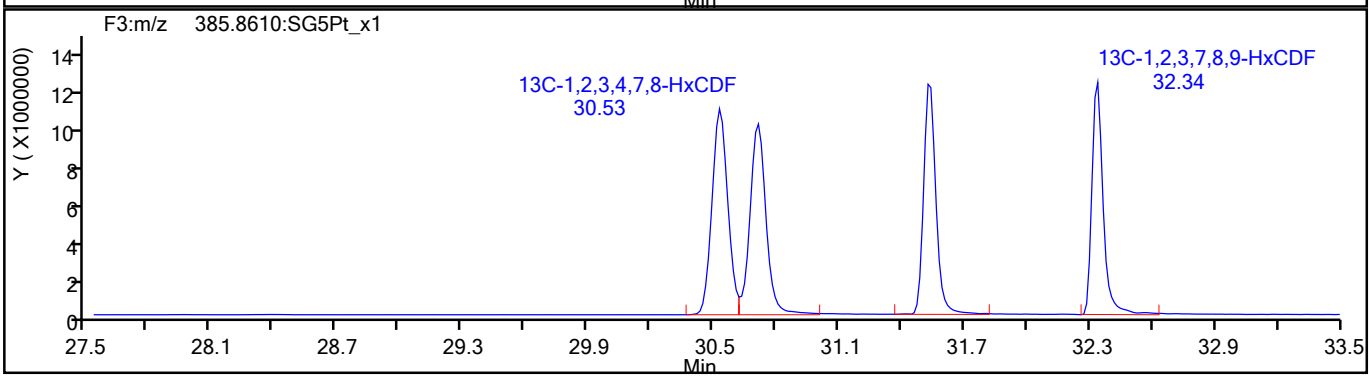

774142

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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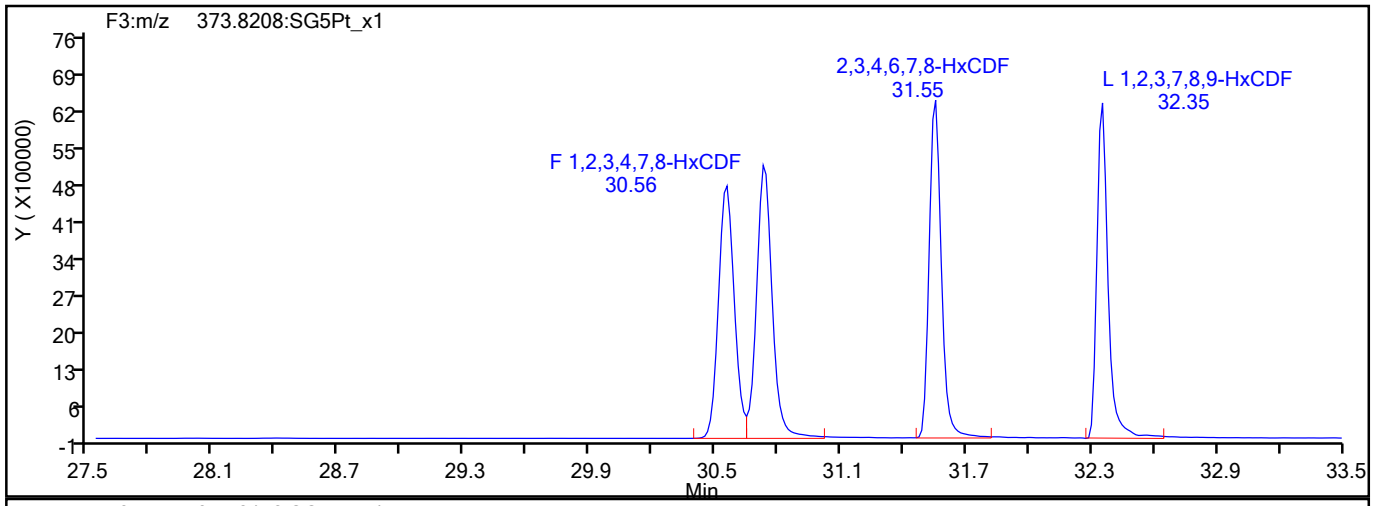

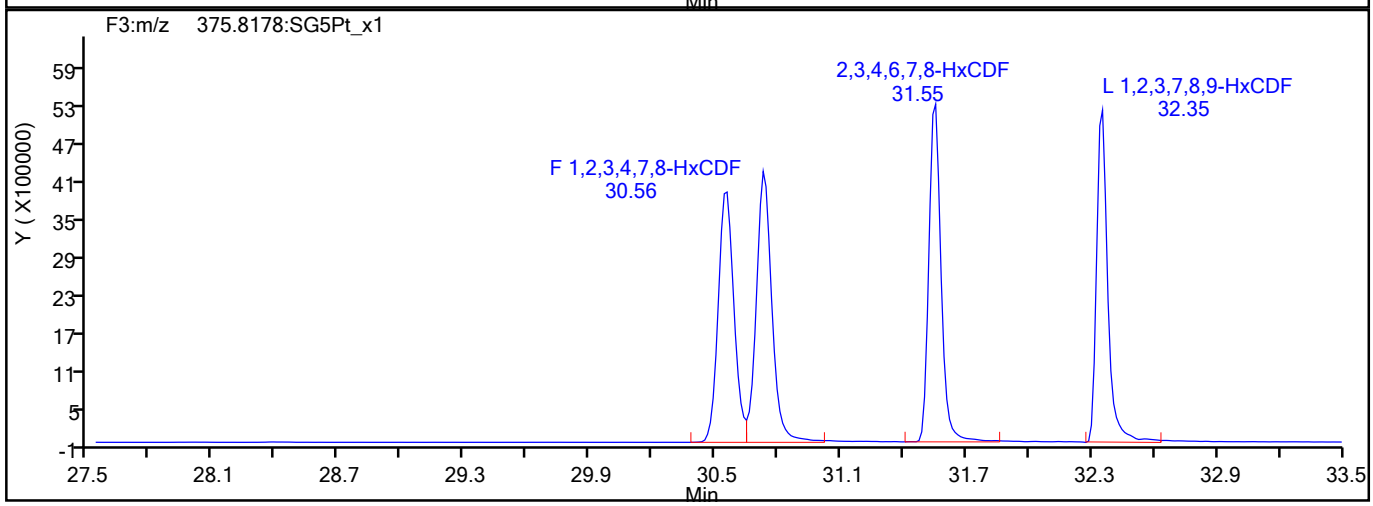

HxCDF Interference Mass

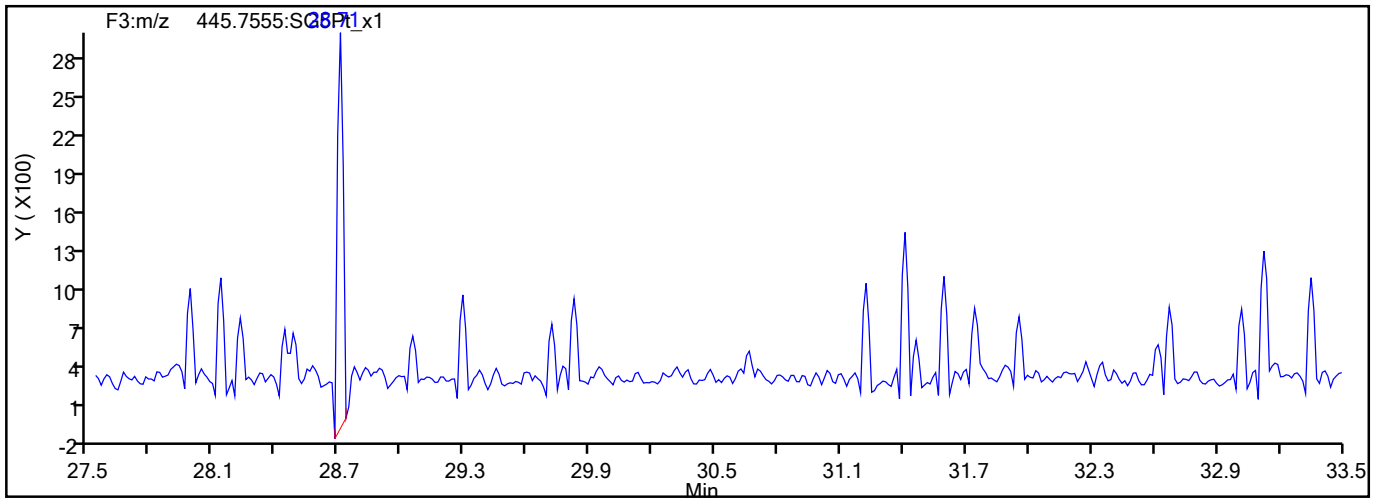

774143

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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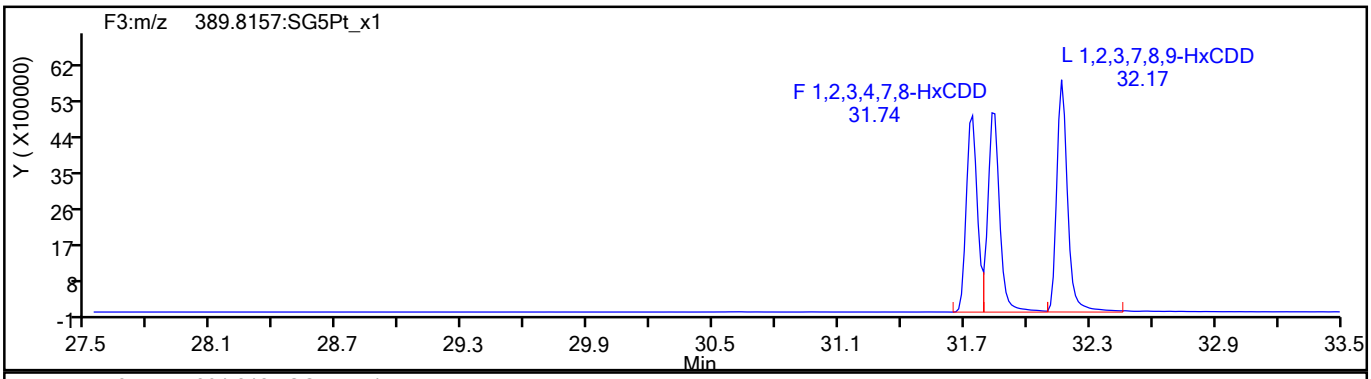

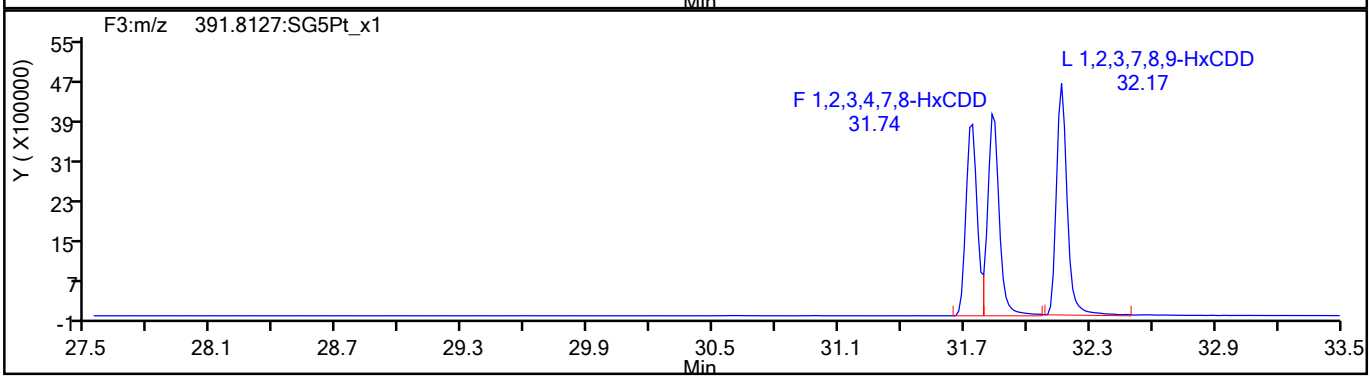

HxCDD Standards

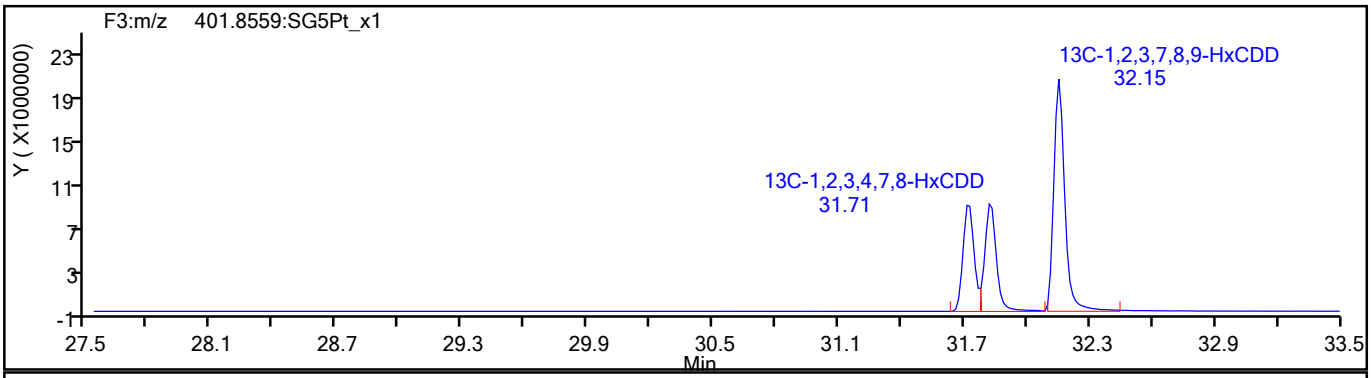

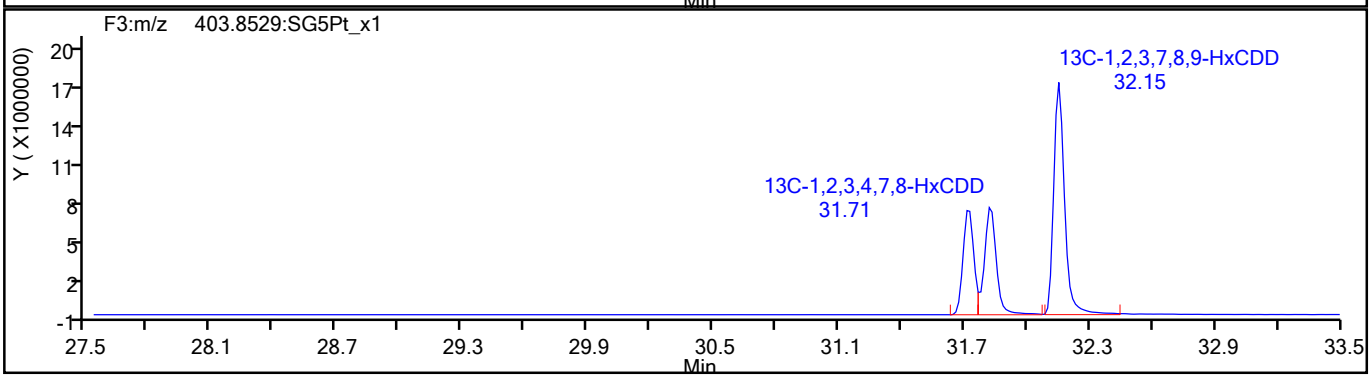

774144

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

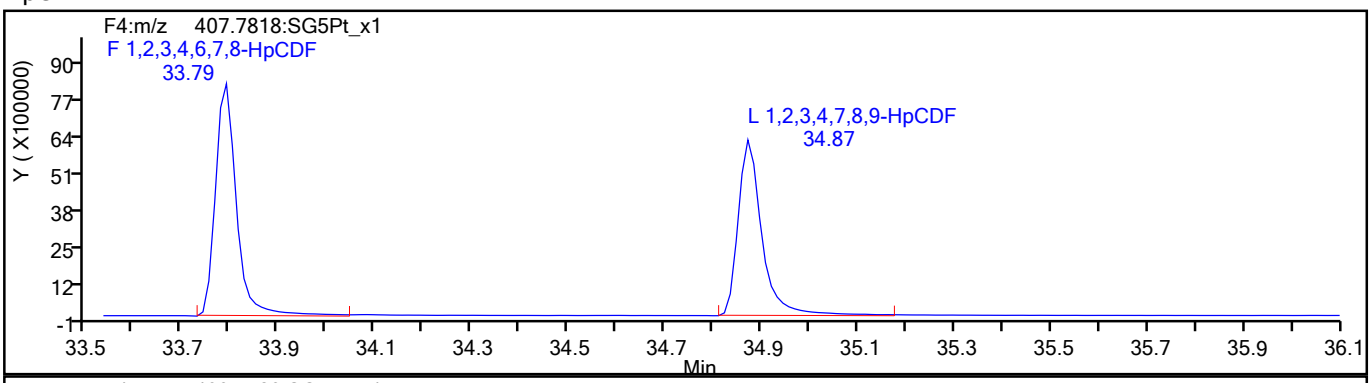

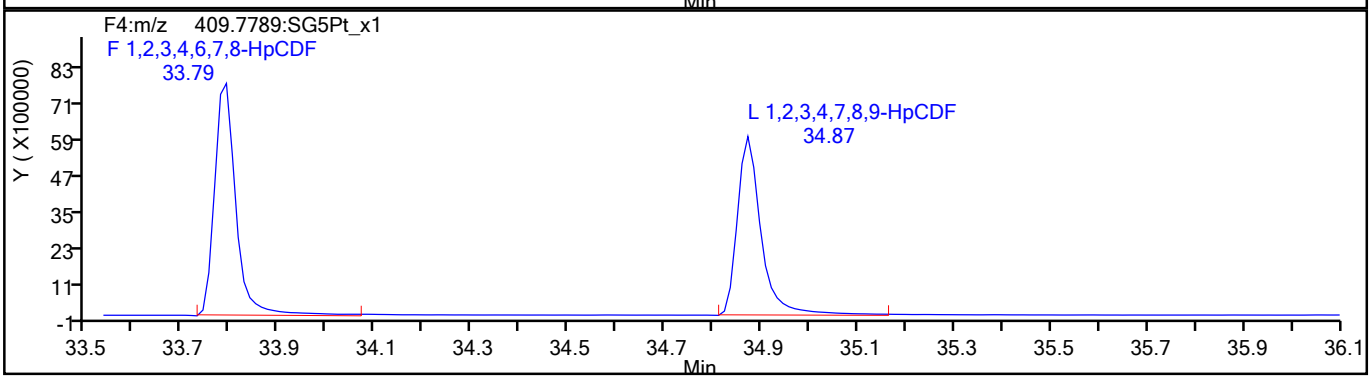

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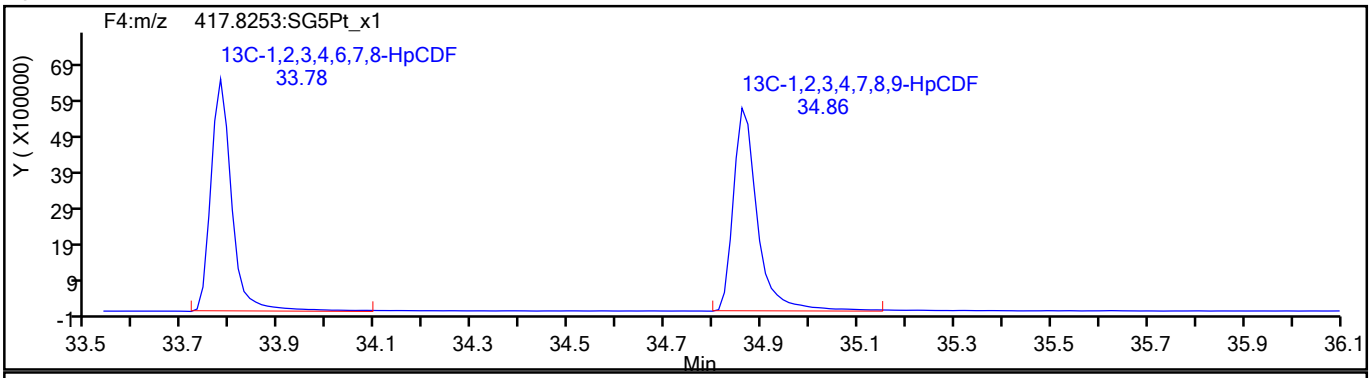

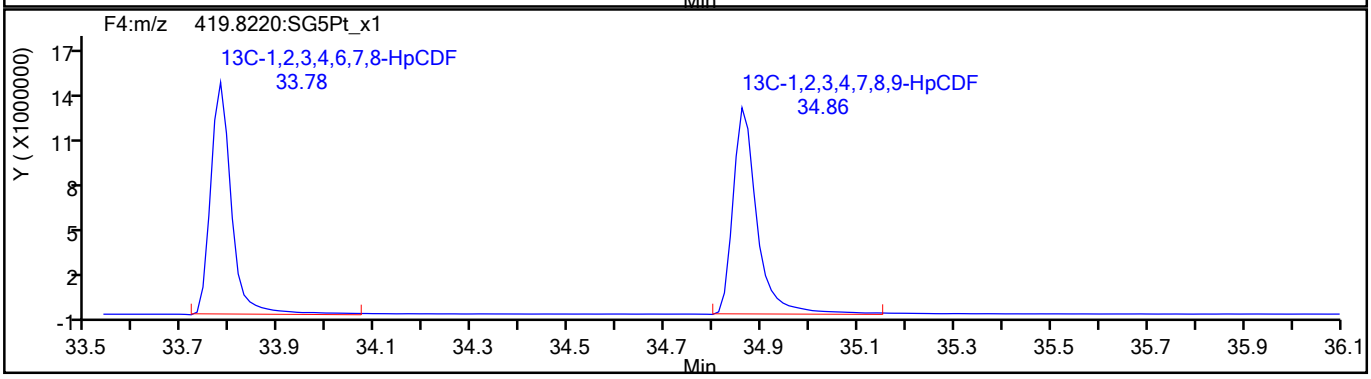

774145

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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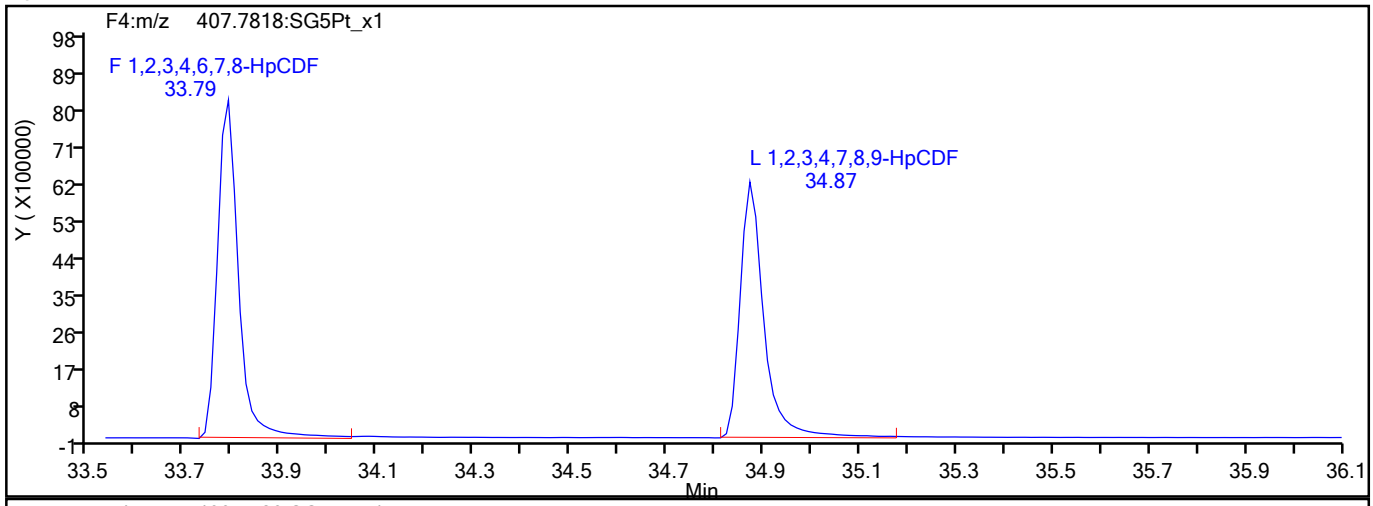

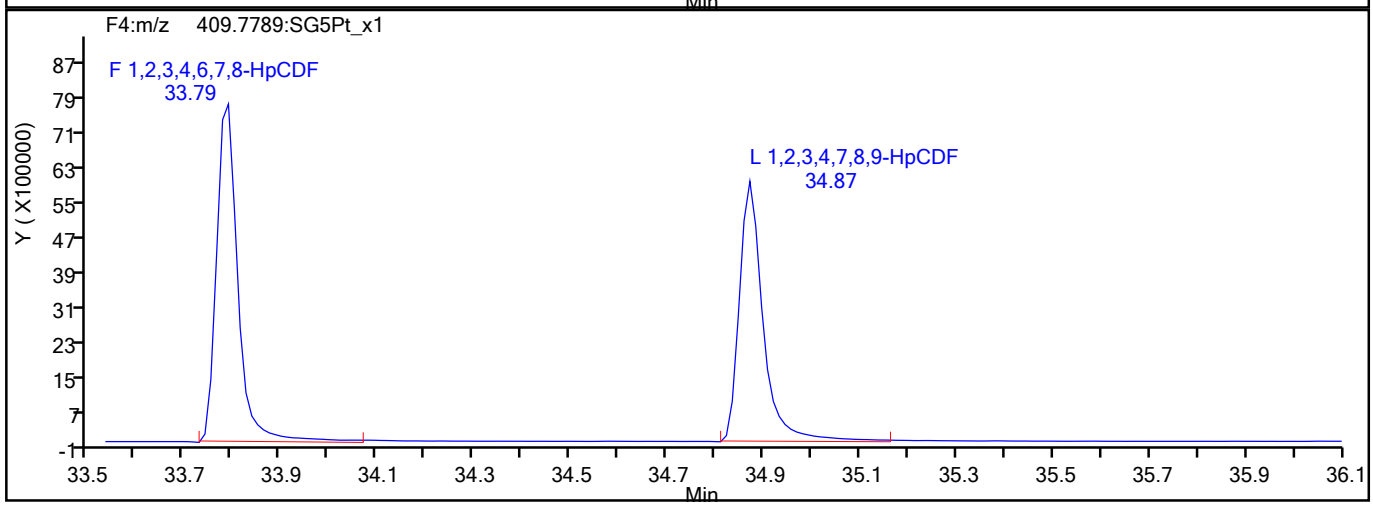

HpCDF Interference Mass

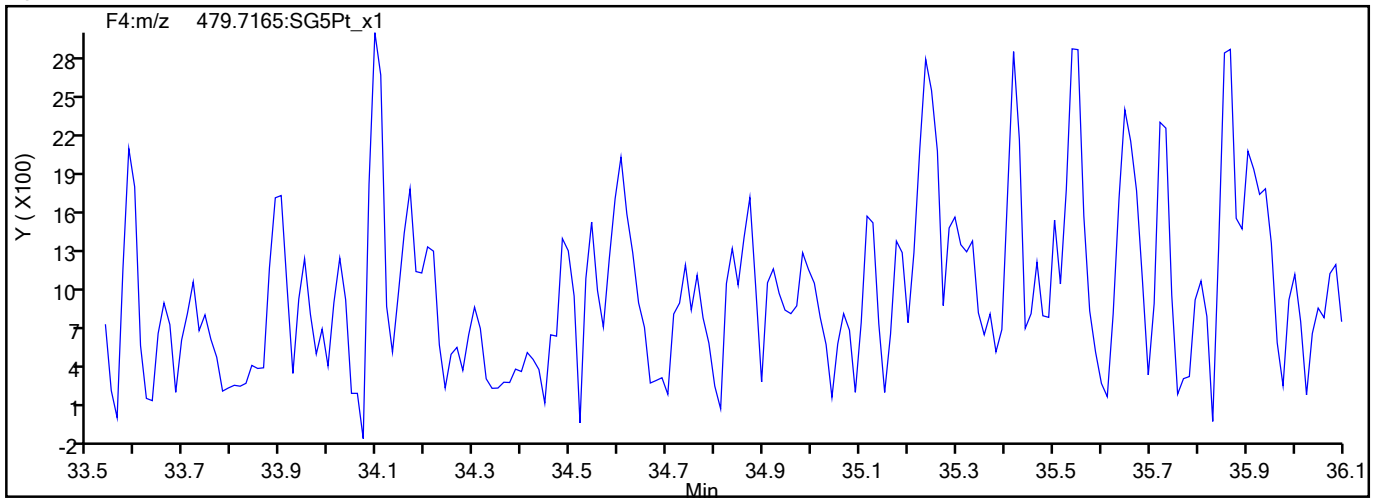

774146

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Eurofins TestAmerica, Sacramento

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HpCDD

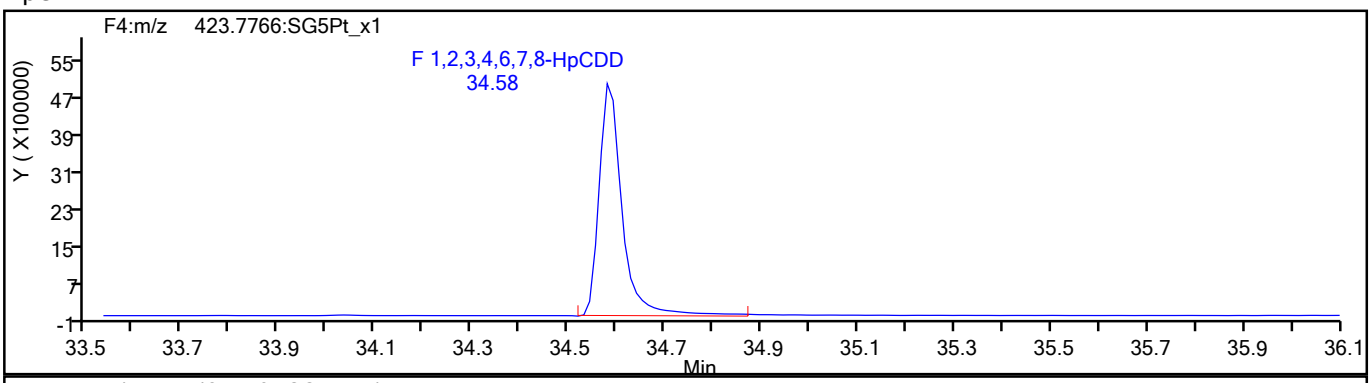

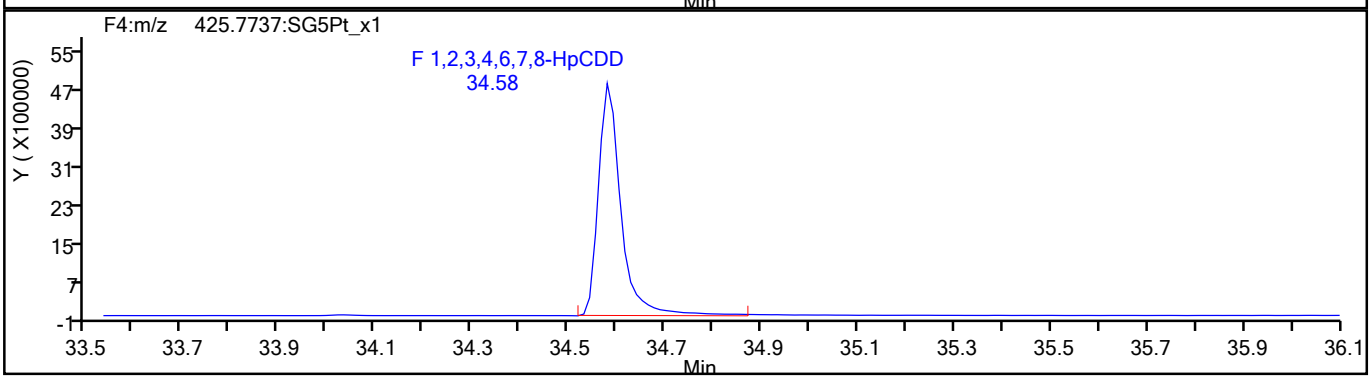

HpCDD Standards

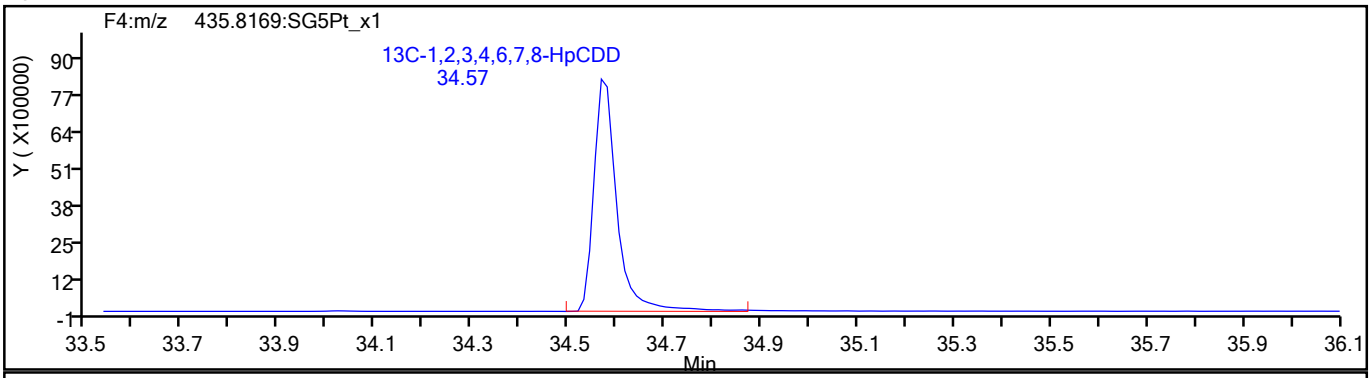

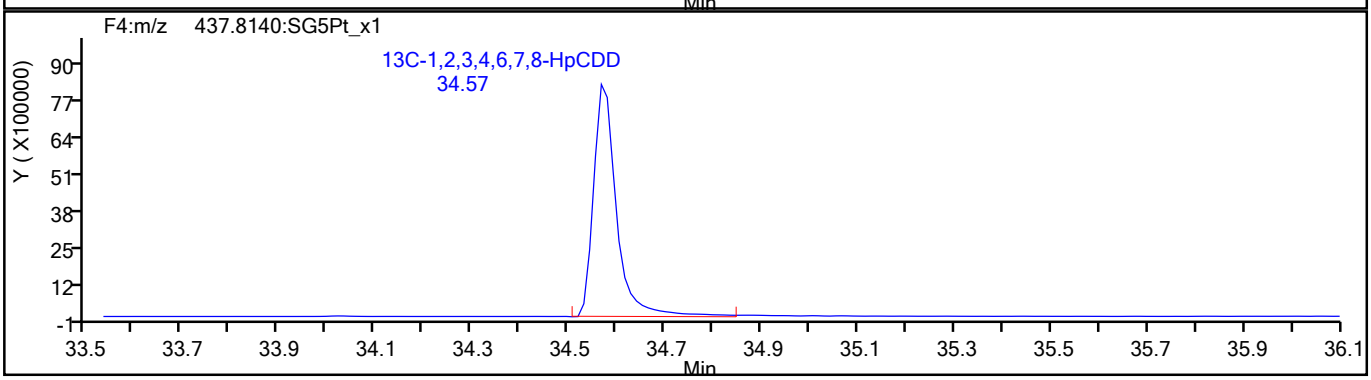

774147

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDF

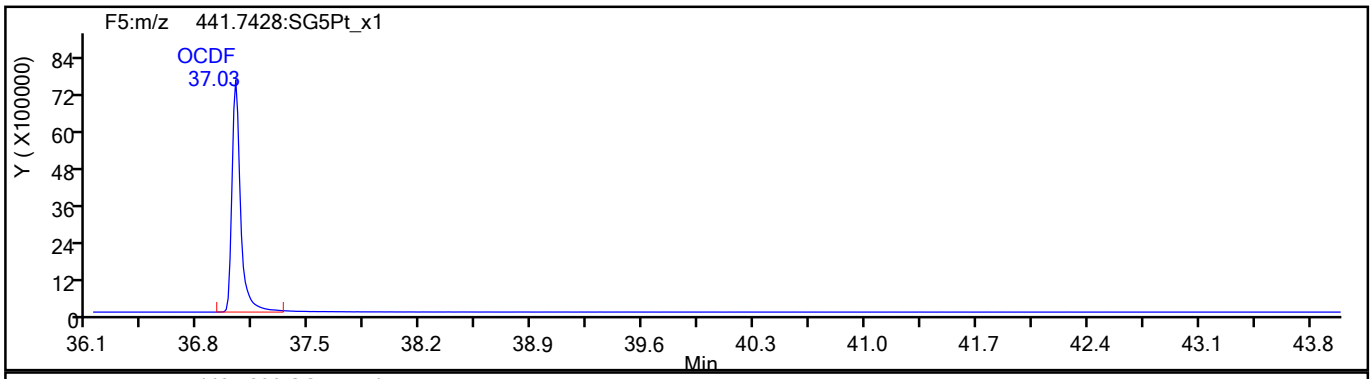

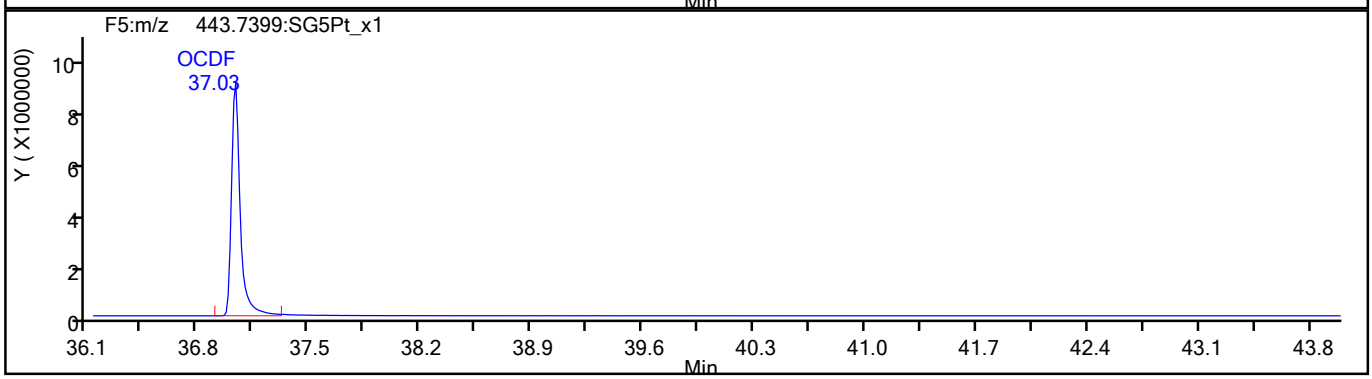

OCDF Standards

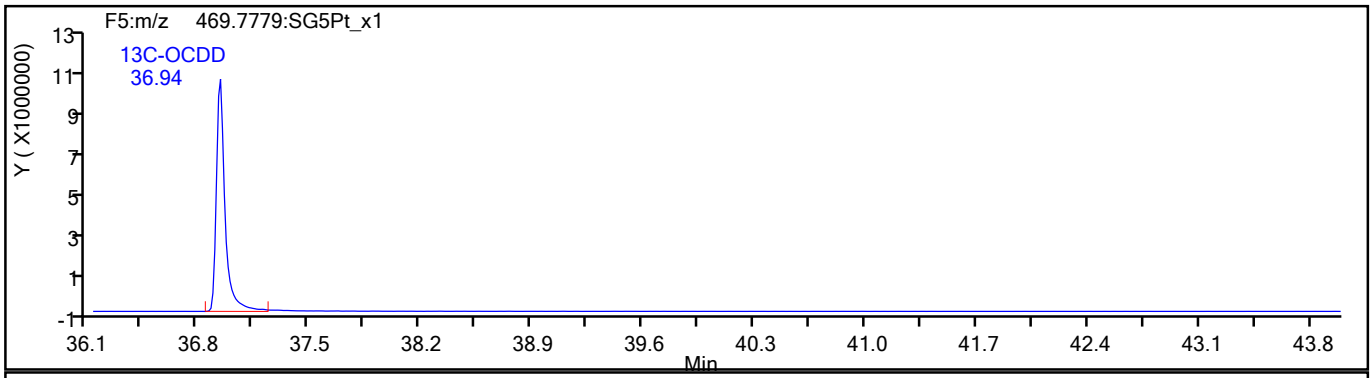

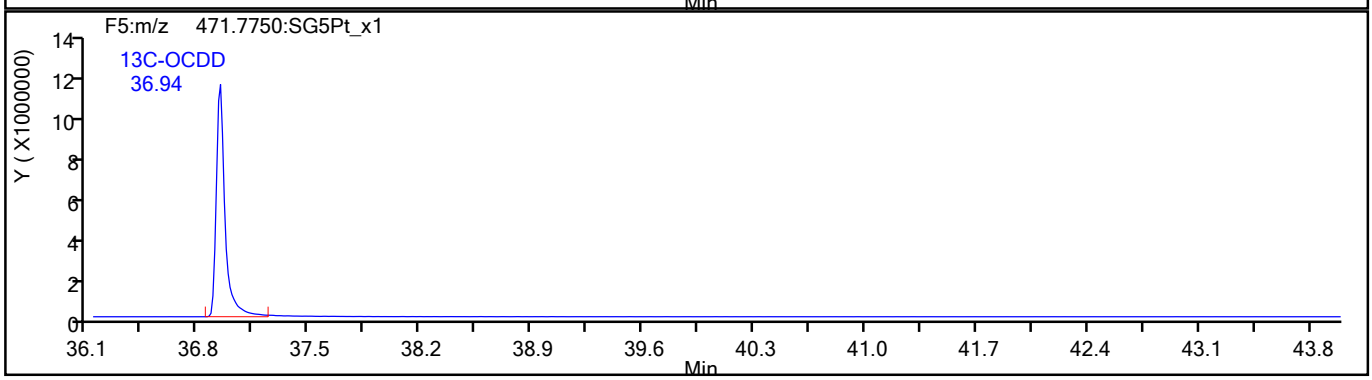

774148

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

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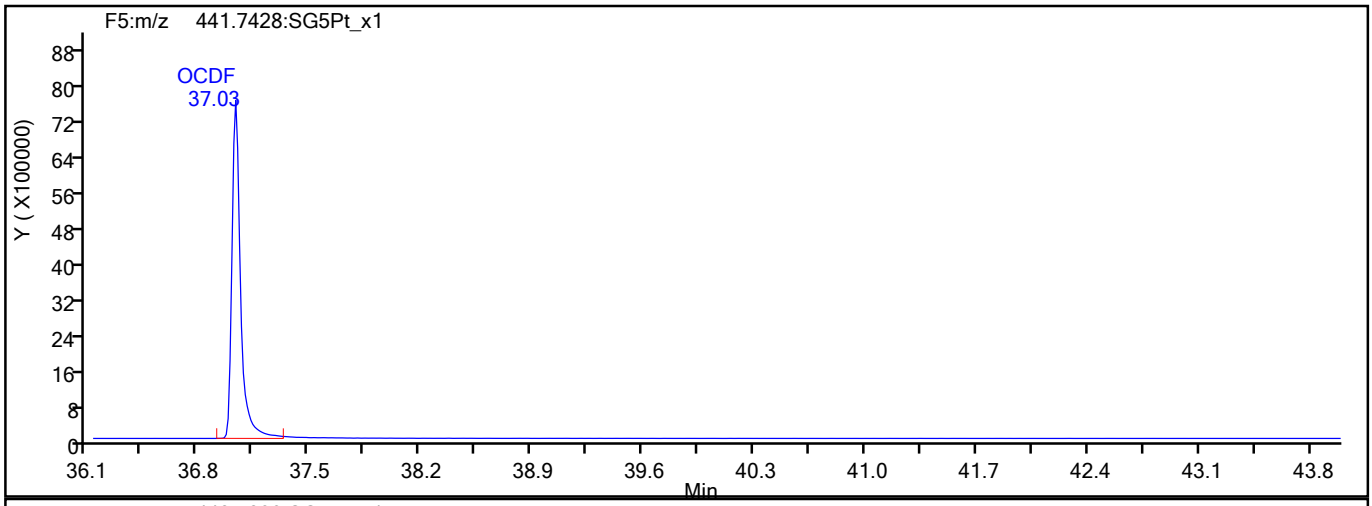

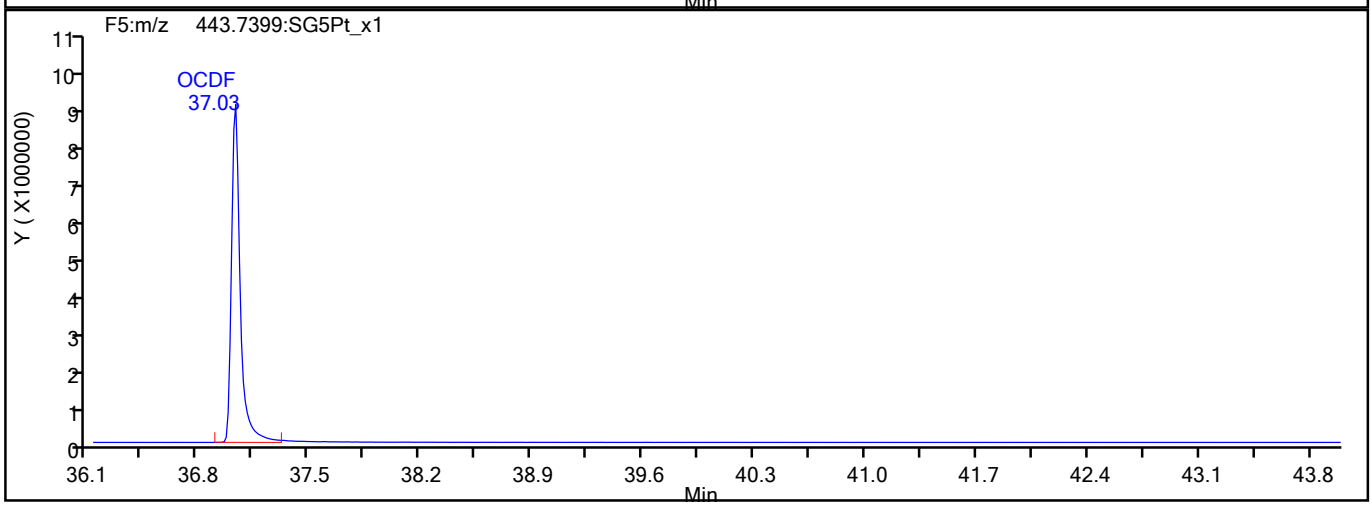

OCDF Interference Mass

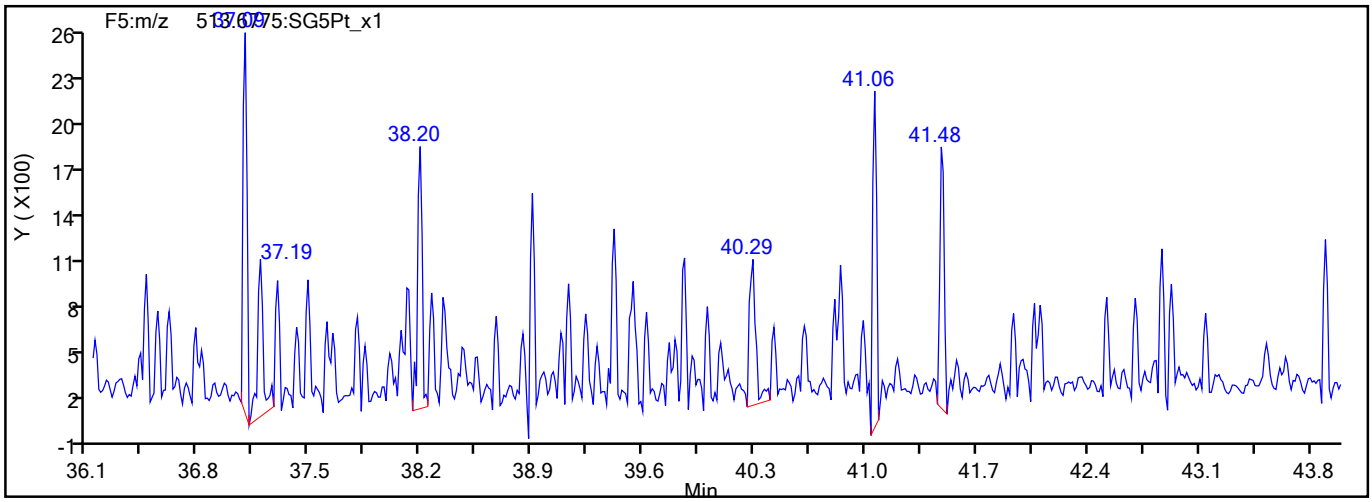

774149

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

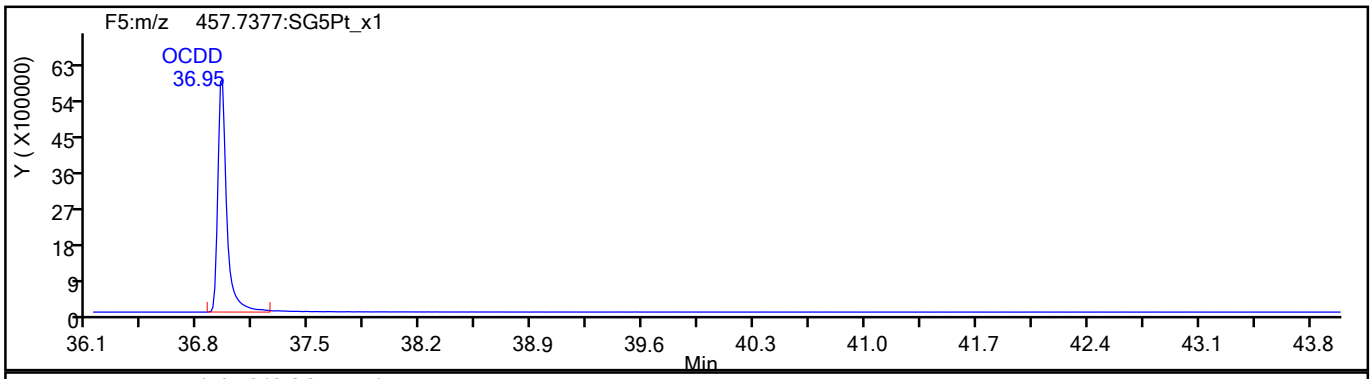

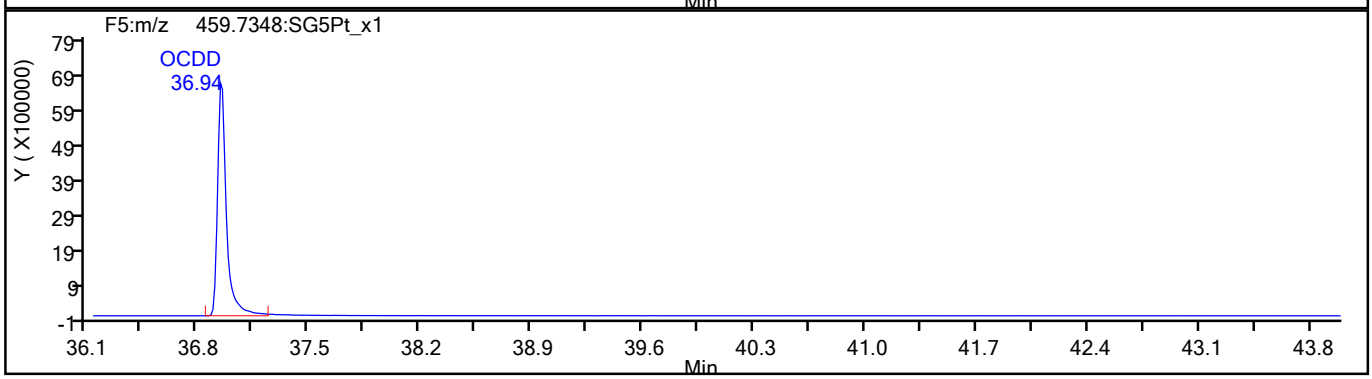

OCDD Standards

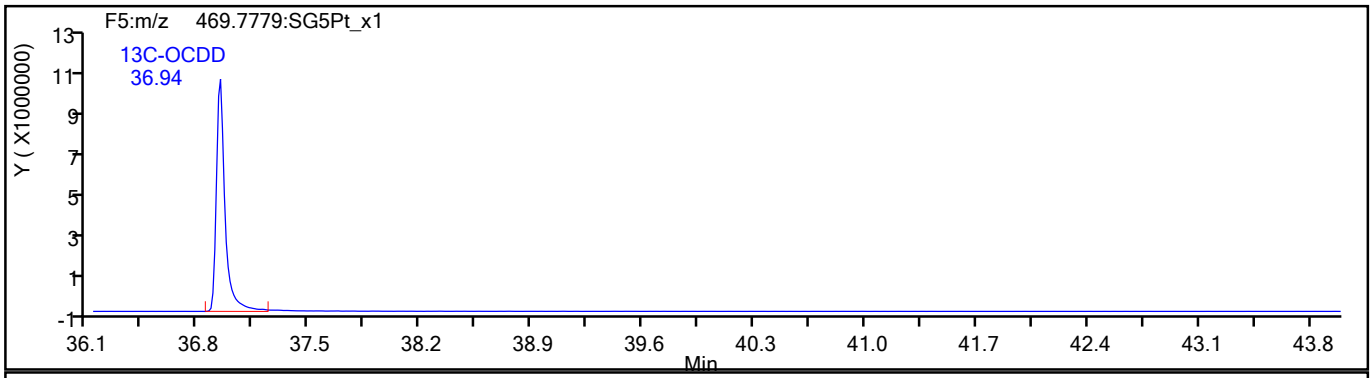

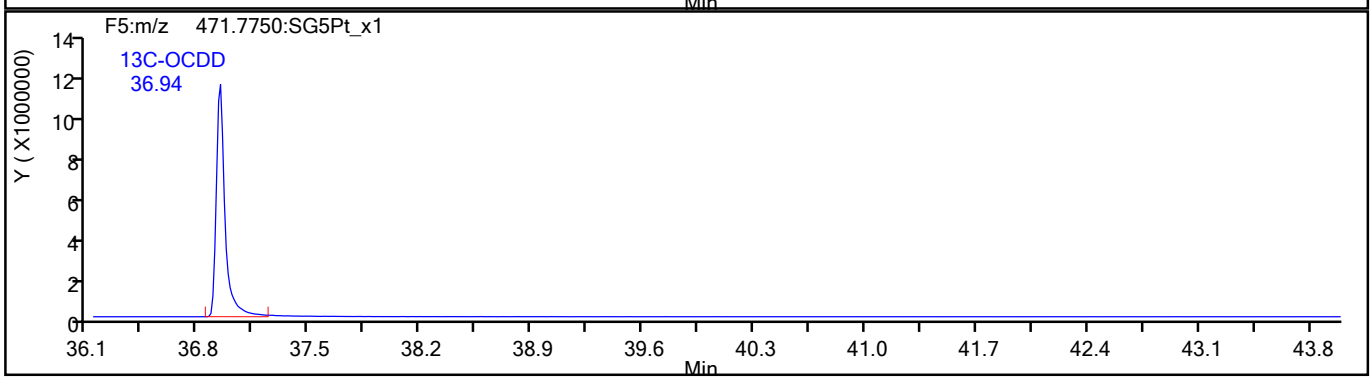

774150

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

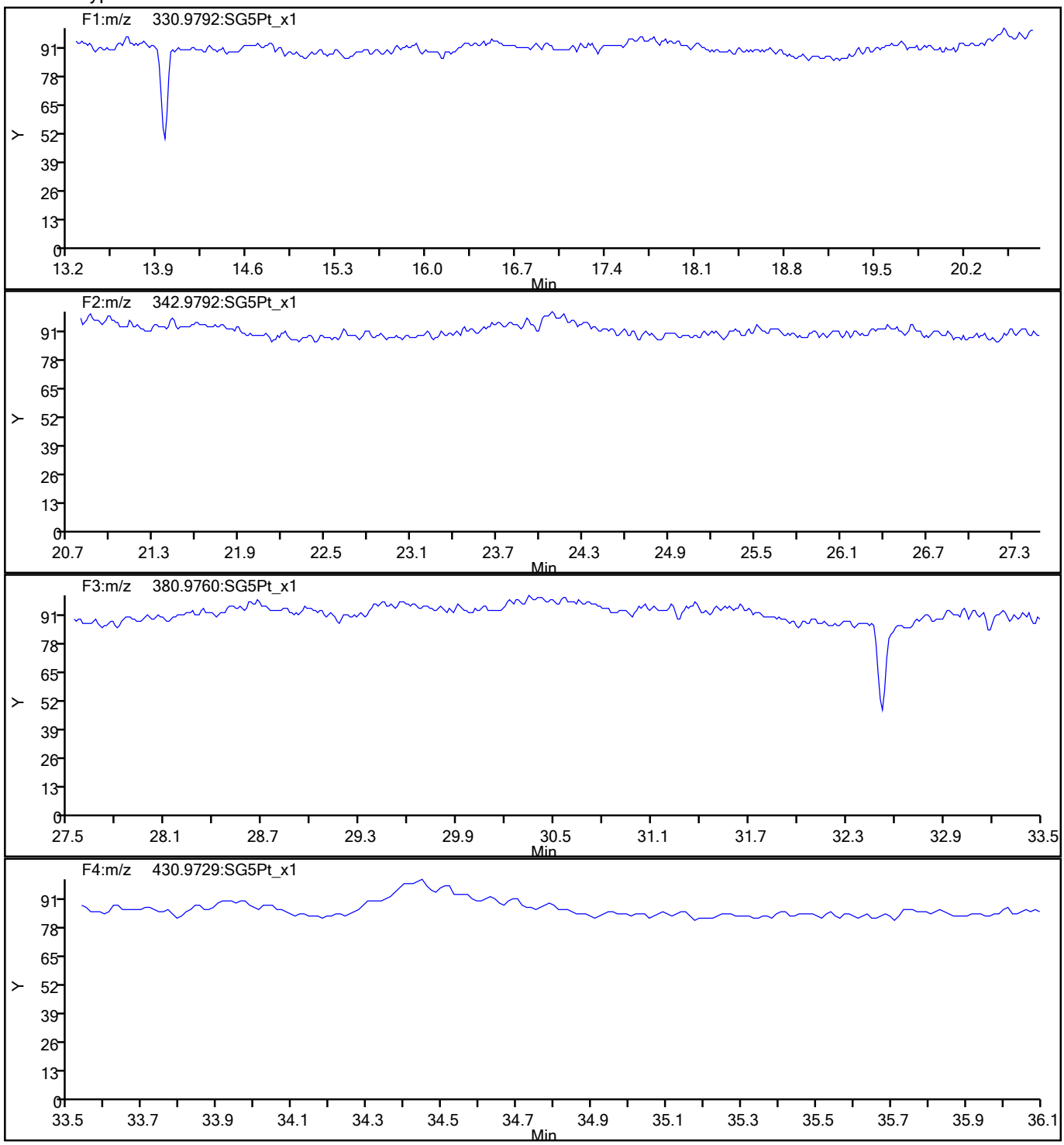

774151

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

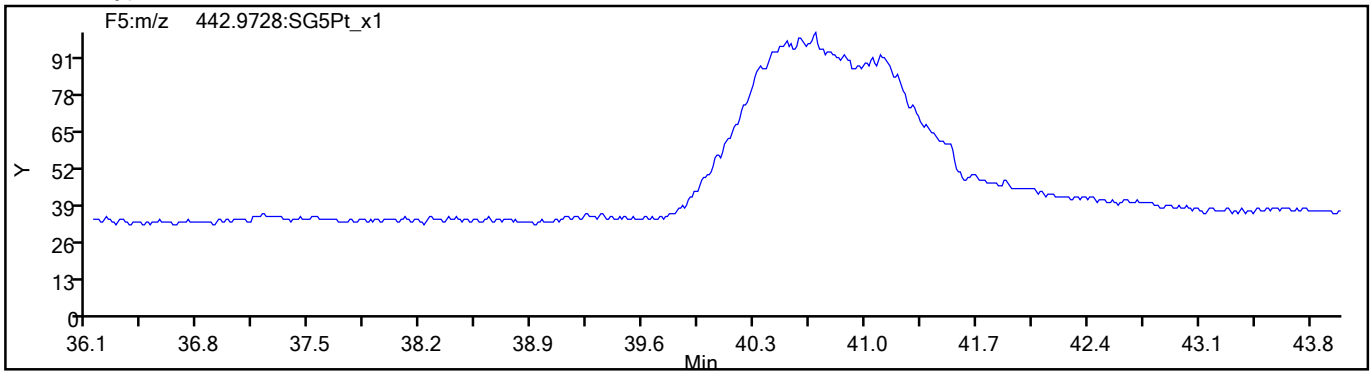

774152

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Instrument ID: DFS 1 Start Date: 06/08/2021 12:40

Analysis Batch Number: 496688 End Date: 06/08/2021 19:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-496688/1		06/08/2021 12:40	1	08jn21adfs1_2.d	DB-5 0.32(mm)
IC 320-496688/3		06/08/2021 14:18	1	08jn21adfs1_4.d	DB-5 0.32(mm)
IC 320-496688/4		06/08/2021 15:06	1	08jn21adfs1_5.d	DB-5 0.32(mm)
IC 320-496688/5		06/08/2021 15:54	1	08jn21adfs1_6.d	DB-5 0.32(mm)
IC 320-496688/6		06/08/2021 16:42	1	08jn21adfs1_7.d	DB-5 0.32(mm)
IC 320-496688/7		06/08/2021 17:30	1	08jn21adfs1_8.d	DB-5 0.32(mm)
ICV 320-496688/9		06/08/2021 19:25	1	08jn21adfs1_11.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Instrument ID: 10D5 Start Date: 07/26/2021 09:21

Analysis Batch Number: 510264 End Date: 07/26/2021 15:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-510264/1		07/26/2021 09:21	1	26JL2110D5_1.d	DB-5 0.32(mm)
IC 320-510264/3		07/26/2021 10:51	1	26JL2110D5_3.d	DB-5 0.32(mm)
IC 320-510264/4		07/26/2021 11:36	1	26JL2110D5_4.d	DB-5 0.32(mm)
IC 320-510264/5		07/26/2021 12:21	1	26JL2110D5_5.d	DB-5 0.32(mm)
IC 320-510264/6		07/26/2021 13:06	1	26JL2110D5_6.d	DB-5 0.32(mm)
IC 320-510264/7		07/26/2021 13:51	1	26JL2110D5_7.d	DB-5 0.32(mm)
ICV 320-510264/9		07/26/2021 15:31	1	26JL2110D5_9.d	DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Instrument ID: 10D5 Start Date: 08/13/2021 04:53

Analysis Batch Number: 515770 End Date: 08/13/2021 14:48

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-515770/1		08/13/2021 04:53	1	12AU2110D5_23.d	DB-5 0.32(mm)
WDM 320-515770/2		08/13/2021 05:48	1	12AU2110D5_24.d	DB-5 0.32(mm)
MB 320-513227/1-A		08/13/2021 06:33	1	12AU2110D5_25.d	DB-5 0.32(mm)
LCS 320-513227/2-A		08/13/2021 07:18	1	12AU2110D5_26.d	DB-5 0.32(mm)
LCSD 320-513227/3-A		08/13/2021 08:03	1	12AU2110D5_27.d	DB-5 0.32(mm)
ZZZZZ		08/13/2021 08:48	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 09:33	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 10:18	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 11:03	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 11:48	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 12:33	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 13:18	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 14:03	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 14:48	1		DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Instrument ID: DFS 1 Start Date: 08/13/2021 14:02

Analysis Batch Number: 516133 End Date: 08/13/2021 23:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-516133/1		08/13/2021 14:02	1	13au21dfs1_2.d	DB-5 0.32(mm)
WDM 320-516133/2		08/13/2021 14:58	1	13au21dfs1_3.d	DB-5 0.32(mm)
ZZZZZ		08/13/2021 16:33	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 17:21	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 18:09	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 18:57	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 19:45	1		DB-5 0.32(mm)
320-76765-9	11215702-072421-BN-SJ SB104 (16-18)	08/13/2021 20:33	1	13au21dfs1_10.d	DB-5 0.32(mm)
ZZZZZ		08/13/2021 21:21	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 22:09	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 22:57	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 23:45	1		DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Instrument ID: DFS 1 Start Date: 08/14/2021 01:40

Analysis Batch Number: 516475 End Date: 08/14/2021 10:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-516475/15		08/14/2021 01:40	1	13au21dfs1_17.d	DB-5 0.32(mm)
CCV 320-516475/16		08/14/2021 02:27	1	13au21dfs1_18.d	DB-5 0.32(mm)
320-76765-19	11215702-072521-BN-SJ SB092 (16-18)	08/14/2021 07:15	1	13au21dfs1_24.d	DB-5 0.32(mm)
ZZZZZ		08/14/2021 08:03	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 08:50	10		DB-5 0.32(mm)
ZZZZZ		08/14/2021 09:38	10		DB-5 0.32(mm)
ZZZZZ		08/14/2021 10:26	5		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/21/2021 13:54

Analysis Batch Number: 518850 End Date: 08/22/2021 00:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-518850/1		08/21/2021 13:54	1	21AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-518850/2		08/21/2021 14:32	1	21AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/21/2021 15:49	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 16:27	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 17:06	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 17:44	1		DB-225 0.32(mm)
320-76765-19 RA	11215702-072521-BN-SJSB092 (16-18) RA	08/21/2021 18:23	1	21AU2111D2_008.d	DB-225 0.32(mm)
ZZZZZ		08/21/2021 19:01	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 19:39	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 20:18	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 20:56	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 21:34	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 22:13	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 22:51	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 23:30	1		DB-225 0.32(mm)
ZZZZZ		08/22/2021 00:08	1		DB-225 0.32(mm)
ZZZZZ		08/22/2021 00:46	1		DB-225 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76765-2

SDG No.:

Batch Number: 513227 Batch Start Date: 08/05/21 06:40 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/09/21 18:55

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-513227/1		HRMS-Sox, 1613B		10 g	20.0 uL	G1	100	1	1 mL
LCS 320-513227/2		HRMS-Sox, 1613B		10 g	20.0 uL	G2	103	3	1 mL
LCSD 320-513227/3		HRMS-Sox, 1613B		10 g	20.0 uL	G3	70	1	1 mL
320-76765-A-9	11215702-072421-BN-SJSB104 (16-18)	HRMS-Sox, 1613B	T	10.32 g	20.0 uL	I3	82	1	1 mL
320-76765-A-19	11215702-072521-BN-SJSB092 (16-18)	HRMS-Sox, 1613B	T	10.50 g	20.0 uL	J5	47	1	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-513227/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-513227/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
LCSD 320-513227/3		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76765-A-9	11215702-072421-BN-SJSB104 (16-18)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76765-A-19	11215702-072521-BN-SJSB092 (16-18)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76765-2

SDG No.:

Batch Number: 513227 Batch Start Date: 08/05/21 06:40 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/09/21 18:55

Batch Notes	
20% DCM:Hexane ID	DH28_00192 mL
65% DCM:Hexane ID	DH6535_00545
Acid Silica Gel ID	SA5644_00730
Acid Alumina ID	Acid_Alumina_00018
Balance ID	QA-074
Hexane ID	Hexane_00287
IFB Clean Up	SR 08/09/2021
Na2SO4 ID	SodiumSulfate_00165
Analyst ID - IDA Reagent Drop	FC 8/5/21 HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	CB 08/05/21
Analyst ID - IS Reagent Drop	SR 08/09/21 DB15270 HRDXNIS_00137 B-1/4 20.0 uL
Analyst ID - IS Reagent Drop Witness	CB 08/09/21
Analyst ID - SU Reagent Drop	SR 08/09/21 HD05018 HRDXNSU_00255 B-2/5 1.0 mL
Analyst ID - SU Reagent Drop Witness	RCR 08/09/21
Analyst ID - TA Reagent Drop	FC 8/5/21 DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	CB 08/05/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/5/21 11:30
Soxhlet/Soxtherm Start	8/5/21 8:30
Storage Box ID	DXN - 264
Toluene ID	Toluene_00110

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-76765-2

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-072421-BN-SJSB104 (16-18)	320-76765-9
11215702-072521-BN-SJSB092 (16-18)	320-76765-19

Comments:

774163

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76765-2

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76765-2

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76765-2

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/29/2021 12:04 End Date: 07/29/2021 12:04

Lab Sample Id	D/F	Type	Time	Analytes																							
				% Sol	Moist																						
ZZZZZZ			12:04																								
320-76765-A-1 DU	1	T	12:04	X	X																						
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
320-76765-9	1	T	12:04	X	X																						
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
320-76765-19	1	T	12:04	X	X																						

Prep Types:
T = Total/NA

FORM XIII-IN

774166

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76765-2

SDG No.:

Batch Number: 511304 Batch Start Date: 07/29/21 12:04 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 07/30/21 08:54

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76765-A-1 DU		D 2216	T	2	1.03 g	8.78 g	6.59 g	28.258064516129 %	71.741935483871 %
320-76765-A-9	11215702-072421-BN-SJSB104 (16-18)	D 2216	T	10	1.04 g	8.61 g	6.97 g	21.664464993395 %	78.335535006605 %
320-76765-A-19	11215702-072521-BN-SJSB092 (16-18)	D 2216	T	19	1.00 g	9.21 g	7.82 g	16.9305724725944 %	83.0694275274056 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	07/30/2021 08:00
Date and Time Samples out of Desiccator	07/30/2021 08:54
Date samples were placed in the oven	07/29/2021
Oven Temp In	111 Degrees C
Time samples were place in the oven	12:04
Date samples were removed from oven	07/30/2021
Oven Temp Out	111 Degrees C
Time Samples were removed from oven	08:00
Oven ID	Soil Prep #2
Thermometer ID	151969607

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-76765-2

Batch: 511304
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76765-A-1 DU

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	28.258064516129	%
Percent Solids	None	1	71.741935483871	%

Lab Sample ID: 320-76765-A-9

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	21.664464993395	%
Percent Solids	None	1	78.335535006605	%

Lab Sample ID: 320-76765-A-19

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	16.9305724725944	%
Percent Solids	None	1	83.0694275274056	%

eurofins | Environment Testing TestAmerica

Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

774171

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

Client Information
Client Contact: Janie Smith
Company: GHD Services Inc.
Address: 5551 Corporate Boulevard Suite 200
City: Baton Rouge
State, Zip: LA, 70808
Phone: 225-292-9007(Tel)
Email: janie.smith@ghd.com
Project Name: SJRWP Supplemental Design Investigation
Site: San Jacinto Waste Pits

Sampler: Breanna North
Phone: 501-454-9966
Due Date Requested:
TAT Requested (days): 15 business days
PO #: Purchase Order Requested
WO #:
Project #: 11215702
SSOW#: 11215702-2021-001

Lab PM: Karen Dahl
E-Mail:
Carrier Tracking No(s):
COC No:
Page: 1 of 3
Job #:

320-76765 Chain of Custody

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072421-BN-SJSB104 (0-2)	7-24-21	1530	G	S	N	N	X	X	X		
(2-4)		1535			N	N	X	X	X		
(4-6)		1540			N	N	X	X	X		
(6-8)		1545			N	N	X	X	X		
(8-10)		1550			N	N	X	X	X		
(10-12)		1555			N	N	X	X	X		
(12-14)		1600			N	N	X	X	X		
(14-16)		1605			N	N	X	X	X		
(16-18)		1610			N	N	X	X	X		PRIORITY
(18-20)		1615			N	N	X	X	X		HOLD

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)
Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: Fed Ex

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Breanna North	7-26-21 1400	GHD	[signature]	7/27/21 - 945	EZASA

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 5.3

Ver: 01/16/2019

* Broken lid. Replace lid but may be compromise

774172

~~Eurofins TestAmerica, Sacramento~~

880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

eurofins

Chain of Custody Record

Client Information			
Client Contact: Janie Smith	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):
Company: GHD Services Inc.	Phone: 501-454-9966	E-Mail:	COC No:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:		Page: 2 of 3
City: Baton Rouge	TAT Requested (days): 15 business days		Job #:
State, Zip: LA, 70808			
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested		
Email: janie.smith@ghd.com	WO #:		
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702		
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001		

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	% moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072521-BN-SJSB092 (0-2)	7-25-21	1400	G	S	N	N	X	X	X	1	
(2-4)		1405			N	N	X	X	X	1	
(4-6)		1410			N	N	X	X	X	1	
(6-8)		1415			N	N	X	X	X	1	
(8-10)		1420			N	N	X	X	X	1	
(10-12)		1425			N	N	X	X	X	1	
(12-14)		1430			N	N	X	X	X	1	
(14-16)		1435			N	N	X	X	X	1	
(16-18)		1440			N	N	X	X	X	1	Priority
(18-20)		1445			N	N	X	X	X	1	HOLD
(20-22)		1450			N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FedEx

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Breanna North	7-26-21 1400	GHD	[signature]	7/27/21-945	EYAL

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

774173

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

Client Information
Client Contact: Janie Smith
Company: GHD Services Inc.
Address: 5551 Corporate Boulevard Suite 200
City: Baton Rouge
State, Zip: LA, 70808
Phone: 225-292-9007(Tel)
Email: janie.smith@ghd.com
Project Name: SJRWP Supplemental Design Investigation
Site: San Jacinto Waste Pits

Sampler: Breanna North
Phone: 501-454-9966
Due Date Requested:
TAT Requested (days): 15 business days
PO #: Purchase Order Requested
WO #:
Project #: 11215702
SSOW#: 11215702-2021-001

Lab PM: Karen Dahl
E-Mail:
Carrier Tracking No(s):
COC No:
Page: 3 of 3
Job #:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072521-BN-SJSB (22-24)	7-25-21	1455	G	S	N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: FedEx

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Breanna North	7-26-21 1400	GHD	[signature]	7/27/21-945	EFASK

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-76765-2

Login Number: 76765
List Number: 1
Creator: Guzman, Juan

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1519357
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Refer to Job Narrative for details.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Job Number: 320-76769-1

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
8/25/2021 5:18 PM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
08/25/2021

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager or designee who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 320-76769-1
Project/Site: SJRWP Supplemental Design Investigation

Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 7/27/2021 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.1º C.

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

Method 1613B: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the estimated detection limit (EDL): 11215702-072221-SS-SJSB080 (0-2) (320-76769-1), 11215702-072221-SS-SJSB080 (0-2) (320-76769-1[MS]), 11215702-072221-SS-SJSB080 (0-2) (320-76769-1[MSD]), 11215702-072221-SS-SJSB080 (2-4) (320-76769-2), 11215702-072221-SS-SJSB080 (4-6) (320-76769-3), 11215702-072221-SS-SJSB080 (6-8) (320-76769-4), 11215702-072221-SS-SJSB080 (8-10) (320-76769-5), 11215702-072221-SS-SJSB074 (0-2) (320-76769-13), 11215702-072221-SS-SJSB074 (2-4) (320-76769-14), 11215702-072221-SS-SJSB074 (4-6) (320-76769-15), 11215702-072221-DUP-5 (320-76769-26), 11215702-072221-SS-SJSB076 (0-2) (320-76769-27), 11215702-072221-SS-SJSB076 (0-2), (320-76769-27[MS]), 11215702-072221-SS-SJSB076 (0-2) (320-76769-27[MSD]), 11215702-072221-SS-SJSB076 (2-4) (320-76769-28), & 11215702-072221-SS-SJSB076 (4-6) (320-76769-29). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method 1613B: The concentration of one or more analytes associated with the following samples exceeded the instrument calibration range: 11215702-072221-SS-SJSB080 (0-2) (320-76769-1), 11215702-072221-SS-SJSB080 (0-2) (320-76769-1[MS]), 11215702-072221-SS-SJSB080 (0-2) (320-76769-1[MSD]), 11215702-072221-SS-SJSB080 (2-4) (320-76769-2), 11215702-072221-SS-SJSB080 (4-6) (320-76769-3), 11215702-072221-SS-SJSB080 (6-8) (320-76769-4), 11215702-072221-SS-SJSB080 (8-10) (320-76769-5), 11215702-072221-SS-SJSB074 (0-2) (320-76769-13), 11215702-072221-SS-SJSB074 (2-4) (320-76769-14), 11215702-072221-SS-SJSB074 (4-6) (320-76769-15), 11215702-072221-DUP-5 (320-76769-26), 11215702-072221-SS-SJSB076 (0-2) (320-76769-27), 11215702-072221-SS-SJSB076 (0-2) (320-76769-27[MS]), 11215702-072221-SS-SJSB076 (0-2) (320-76769-27[MSD]), 11215702-072221-SS-SJSB076 (2-4) (320-76769-28), & 11215702-072221-SS-SJSB076 (4-6) (320-76769-29). These analytes have been qualified with and 'E' flag; however, the peaks did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Method 1613B: Due to the high concentration of multiple analytes, some of the matrix spike / matrix spike duplicate (MS/MSD) recoveries & RPDs for preparation batches 320-513585, 320-513586, & 320-513879 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 1613B: Some of matrix spike / matrix spike duplicate (MS/MSD) recoveries and RPDs for preparation batches 320-513586 & 320-513879 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 1613B: The method blank for preparation batch 320-513879 contained 2,3,7,8-TCDF above the reporting limit (RL). Associated samples were not re-extracted and/or re-analyzed because their results were greater than 10X the amount found in the method blank.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: 11215702-072221-SS-SJSB076 (8-10) (320-76769-31), 11215702-072221-SS-SJSB076 (14-16) (320-76769-34), (CCV 320-517729/2). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD associated with the following samples run on instrument 10D5 exceeded this criteria: 11215702-072221-SS-SJSB080 (0-2) (320-76769-1), 11215702-072221-SS-SJSB080 (0-2) (320-76769-1[MS]), 11215702-072221-SS-SJSB080 (0-2) (320-76769-1[MSD]), 11215702-072221-SS-SJSB080 (2-4) (320-76769-2), 11215702-072221-SS-SJSB080 (4-6) (320-76769-3), 11215702-072221-SS-SJSB080 (8-10) (320-76769-5), 11215702-072221-SS-SJSB080 (10-12) (320-76769-6), 11215702-072221-SS-SJSB080 (12-14) (320-76769-7), 11215702-072221-SS-SJSB080 (14-16) (320-76769-8), (CCV 320-516847/2), (LCS 320-513585/2-A) and (MB 320-513585/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution,

sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument DFS 1 exceeded this criteria: (CCV 320-517891/2), (CCV 320-518043/15), (MB 320-513879/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) — Lab Sample ID: 320-76769-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	17000	E B G	40	40	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	140		8.2	1.6	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	1900	G	14	14	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	1000	G	15	15	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	3.0	J B	8.2	0.30	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	14		8.2	0.35	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	6.3	J B	8.2	0.29	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	3100	B G	8.4	8.4	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	840	B	8.2	7.7	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	45	B	8.2	6.3	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	92		8.2	6.2	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	530	B	8.2	4.9	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	990	B	8.2	6.2	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	300	B	8.2	7.0	pg/g	1	☼	1613B	Total/NA
OCDD	7000	E B	16	6.2	pg/g	1	☼	1613B	Total/NA
OCDF	370	B	16	0.34	pg/g	1	☼	1613B	Total/NA
Total TCDD	19000	B q G	40	40	pg/g	1	☼	1613B	Total/NA
Total TCDF	71000	B q G	120	120	pg/g	1	☼	1613B	Total/NA
Total PeCDD	170	q	8.2	1.6	pg/g	1	☼	1613B	Total/NA
Total PeCDF	4500	G	14	14	pg/g	1	☼	1613B	Total/NA
Total HxCDD	99	B	8.2	0.31	pg/g	1	☼	1613B	Total/NA
Total HxCDF	4600	B	8.2	7.2	pg/g	1	☼	1613B	Total/NA
Total HpCDD	1000	B	8.2	4.9	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1500	B	8.2	6.6	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	47000	E B G	63	63	pg/g	5	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB080 (2-4) — Lab Sample ID: 320-76769-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	11000	E B G	23	23	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	94		8.3	1.5	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	1300	G	9.5	9.5	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	690	G	9.4	9.4	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	2.0	J B	8.3	0.29	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	8.0	J	8.3	0.32	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	4.3	J B	8.3	0.28	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	2100	B	8.3	5.8	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	590	B	8.3	5.7	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	32	B	8.3	4.4	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	66		8.3	4.5	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	280	B	8.3	2.7	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	710	B	8.3	3.2	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	210	B	8.3	3.6	pg/g	1	☼	1613B	Total/NA
OCDD	3900	B	17	3.7	pg/g	1	☼	1613B	Total/NA
OCDF	370	B	17	0.32	pg/g	1	☼	1613B	Total/NA
Total TCDD	12000	B G	23	23	pg/g	1	☼	1613B	Total/NA
Total TCDF	51000	B G	78	78	pg/g	1	☼	1613B	Total/NA
Total PeCDD	110	q	8.3	1.5	pg/g	1	☼	1613B	Total/NA
Total PeCDF	3000	G	9.4	9.4	pg/g	1	☼	1613B	Total/NA
Total HxCDD	58	B q	8.3	0.30	pg/g	1	☼	1613B	Total/NA
Total HxCDF	3200	B q	8.3	5.1	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-SS-SJSB080 (2-4) (Continued) Lab Sample ID: 320-76769-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HpCDD	540	B	8.3	2.7	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1100	B	8.3	3.4	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	28000	E B G	29	29	pg/g	5	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB080 (4-6) Lab Sample ID: 320-76769-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	6900	E B G	13	13	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	58		7.6	0.84	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	810		7.6	5.5	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	420		7.6	5.5	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	1.3	J B q	7.6	0.22	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	5.7	J	7.6	0.24	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.3	J B	7.6	0.21	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	1700	B G	8.6	8.6	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	460	B G	8.6	8.6	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	21	B	7.6	6.6	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	38		7.6	6.5	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	210	B	7.6	1.8	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	660	B	7.6	3.4	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	170	B	7.6	4.0	pg/g	1	☼	1613B	Total/NA
OCDD	3100	B	15	3.4	pg/g	1	☼	1613B	Total/NA
OCDF	220	B	15	0.26	pg/g	1	☼	1613B	Total/NA
Total TCDD	7600	B G	13	13	pg/g	1	☼	1613B	Total/NA
Total TCDF	33000	B G	45	45	pg/g	1	☼	1613B	Total/NA
Total PeCDD	67	q	7.6	0.84	pg/g	1	☼	1613B	Total/NA
Total PeCDF	1900		7.6	5.5	pg/g	1	☼	1613B	Total/NA
Total HxCDD	44	B q	7.6	0.22	pg/g	1	☼	1613B	Total/NA
Total HxCDF	2500	B	7.6	7.6	pg/g	1	☼	1613B	Total/NA
Total HpCDD	420	B	7.6	1.8	pg/g	1	☼	1613B	Total/NA
Total HpCDF	930	B	7.6	3.7	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	19000	G E B	15	15	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB080 (6-8) Lab Sample ID: 320-76769-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	2300	E G	2.7	2.7	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	23		7.2	0.91	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	360		7.2	2.4	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	180		7.2	2.4	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.79	J q	7.2	0.24	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	3.3	J	7.2	0.28	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	610		7.2	3.3	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	150		7.2	3.1	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	10		7.2	3.2	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	19		7.2	3.0	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	120		7.2	0.50	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	150		7.2	0.67	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	50		7.2	0.60	pg/g	1	☼	1613B	Total/NA
OCDD	1500		14	1.2	pg/g	1	☼	1613B	Total/NA
OCDF	68		14	0.38	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-SS-SJSB080 (6-8) (Continued) Lab Sample ID: 320-76769-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total TCDD	2500	G	2.7	2.7	pg/g	1	☼	1613B	Total/NA
Total TCDF	13000	G	10	10	pg/g	1	☼	1613B	Total/NA
Total PeCDD	27		7.2	0.91	pg/g	1	☼	1613B	Total/NA
Total PeCDF	830		7.2	2.4	pg/g	1	☼	1613B	Total/NA
Total HxCDD	25	q	7.2	0.25	pg/g	1	☼	1613B	Total/NA
Total HxCDF	900	q	7.2	3.2	pg/g	1	☼	1613B	Total/NA
Total HpCDD	230		7.2	0.50	pg/g	1	☼	1613B	Total/NA
Total HpCDF	240		7.2	0.64	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	7500	E G	7.0	7.0	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB080 (8-10) Lab Sample ID: 320-76769-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1100	E B G	3.5	3.5	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	9.0		6.6	0.19	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	110		6.6	0.72	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	59		6.6	0.72	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.49	J B	6.6	0.070	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.4	J	6.6	0.078	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.81	J B	6.6	0.067	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	160	B	6.6	0.77	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	44	B	6.6	0.78	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	2.4	J B	6.6	0.60	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	4.7	J	6.6	0.62	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	57	B	6.6	0.70	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	57	B	6.6	0.47	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	16	B	6.6	0.53	pg/g	1	☼	1613B	Total/NA
OCDD	750	B	13	0.77	pg/g	1	☼	1613B	Total/NA
OCDF	25	B	13	0.078	pg/g	1	☼	1613B	Total/NA
Total TCDD	1300	B G	3.5	3.5	pg/g	1	☼	1613B	Total/NA
Total TCDF	6200	B G	11	11	pg/g	1	☼	1613B	Total/NA
Total PeCDD	12	q	6.6	0.19	pg/g	1	☼	1613B	Total/NA
Total PeCDF	260		6.6	0.72	pg/g	1	☼	1613B	Total/NA
Total HxCDD	19	B q	6.6	0.072	pg/g	1	☼	1613B	Total/NA
Total HxCDF	240	B	6.6	0.69	pg/g	1	☼	1613B	Total/NA
Total HpCDD	140	B	6.6	0.70	pg/g	1	☼	1613B	Total/NA
Total HpCDF	90	B	6.6	0.50	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	3300	G E B	3.6	3.6	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB080 (10-12) Lab Sample ID: 320-76769-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	9.0	B	1.2	0.093	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.98	J	6.2	0.057	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.46	J	6.2	0.059	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.20	J B	6.2	0.067	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	1.5	J B	6.2	0.048	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.42	J B	6.2	0.049	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.082	J B q	6.2	0.041	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	1.9	J B	6.2	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.58	J B	6.2	0.051	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB080 (10-12) (Continued) — Lab Sample ID: 320-76769-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8,9-HpCDF	0.13	J B q	6.2	0.059	pg/g	1	☼	1613B	Total/NA
OCDD	57	B	12	0.16	pg/g	1	☼	1613B	Total/NA
OCDF	0.37	J B	12	0.039	pg/g	1	☼	1613B	Total/NA
Total TCDD	14	B	1.2	0.093	pg/g	1	☼	1613B	Total/NA
Total TCDF	48	B q	1.2	0.19	pg/g	1	☼	1613B	Total/NA
Total PeCDD	1.6	J	6.2	0.055	pg/g	1	☼	1613B	Total/NA
Total PeCDF	2.2	J	6.2	0.058	pg/g	1	☼	1613B	Total/NA
Total HxCDD	6.0	J B	6.2	0.066	pg/g	1	☼	1613B	Total/NA
Total HxCDF	2.2	J B q	6.2	0.044	pg/g	1	☼	1613B	Total/NA
Total HpCDD	8.9	B	6.2	0.11	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.89	J B q	6.2	0.055	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	26	B	1.2	0.23	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB080 (12-14) — Lab Sample ID: 320-76769-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1.1	J B	1.2	0.056	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.13	J q	6.2	0.041	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.17	J B	6.2	0.069	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.22	J B	6.2	0.065	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.23	J B	6.2	0.035	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.092	J B	6.2	0.035	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	2.9	J B	6.2	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.16	J B q	6.2	0.050	pg/g	1	☼	1613B	Total/NA
OCDD	58	B	12	0.14	pg/g	1	☼	1613B	Total/NA
OCDF	0.22	J B q	12	0.036	pg/g	1	☼	1613B	Total/NA
Total TCDD	2.2	B q	1.2	0.056	pg/g	1	☼	1613B	Total/NA
Total TCDF	4.5	B q	1.2	0.087	pg/g	1	☼	1613B	Total/NA
Total PeCDD	1.3	J q	6.2	0.055	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.13	J q	6.2	0.042	pg/g	1	☼	1613B	Total/NA
Total HxCDD	5.8	J B	6.2	0.069	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.32	J B	6.2	0.031	pg/g	1	☼	1613B	Total/NA
Total HpCDD	11	B	6.2	0.11	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.16	J B q	6.2	0.055	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	2.7	B	1.2	0.15	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB080 (14-16) — Lab Sample ID: 320-76769-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.34	J B q	1.2	0.059	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.46	J B	5.9	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.096	J B	5.9	0.034	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.077	J B	5.9	0.029	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	6.4	B	5.9	0.17	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.095	J B q	5.9	0.048	pg/g	1	☼	1613B	Total/NA
OCDD	120	B	12	0.24	pg/g	1	☼	1613B	Total/NA
OCDF	0.21	J B	12	0.034	pg/g	1	☼	1613B	Total/NA
Total TCDD	2.6	B q	1.2	0.059	pg/g	1	☼	1613B	Total/NA
Total TCDF	1.9	B	1.2	0.082	pg/g	1	☼	1613B	Total/NA
Total PeCDD	2.1	J q	5.9	0.073	pg/g	1	☼	1613B	Total/NA
Total HxCDD	8.7	B	5.9	0.12	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-SS-SJSB080 (14-16) (Continued) Lab Sample ID: 320-76769-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HxCDF	0.17	J B	5.9	0.032	pg/g	1	☼	1613B	Total/NA
Total HpCDD	24	B	5.9	0.17	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.095	J B q	5.9	0.051	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	1.1	J B	1.2	0.16	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB074 (0-2) Lab Sample ID: 320-76769-13

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	5600	E B G	8.5	8.5	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	49		6.7	0.70	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	680		6.7	5.2	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	370		6.7	5.3	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	1.3	J B	6.7	0.16	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	3.6	J	6.7	0.17	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.7	J B	6.7	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	910	B	6.7	5.4	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	240	B	6.7	5.8	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	13	B	6.7	4.6	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	28		6.7	4.6	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	110	B	6.7	1.5	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	280	B	6.7	2.0	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	85	B	6.7	2.4	pg/g	1	☼	1613B	Total/NA
OCDD	2200	B	13	2.8	pg/g	1	☼	1613B	Total/NA
OCDF	140	B	13	0.15	pg/g	1	☼	1613B	Total/NA
Total TCDD	6100	B q G	8.5	8.5	pg/g	1	☼	1613B	Total/NA
Total TCDF	34000	B G	53	53	pg/g	1	☼	1613B	Total/NA
Total PeCDD	52	q	6.7	0.70	pg/g	1	☼	1613B	Total/NA
Total PeCDF	1600		6.7	5.2	pg/g	1	☼	1613B	Total/NA
Total HxCDD	32	B q	6.7	0.16	pg/g	1	☼	1613B	Total/NA
Total HxCDF	1300	B	6.7	5.1	pg/g	1	☼	1613B	Total/NA
Total HpCDD	230	B	6.7	1.5	pg/g	1	☼	1613B	Total/NA
Total HpCDF	440	B	6.7	2.2	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	19000	G E B	14	14	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB074 (2-4) Lab Sample ID: 320-76769-14

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	49000	E B G	76	76	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	480		9.6	5.7	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	5300	E G	31	31	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	3300	G	34	34	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	8.7	J B	9.6	1.0	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	80		9.6	1.1	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	25	B	9.6	0.97	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	9900	E B G	33	33	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	2700	B G	27	27	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	130	B G	23	23	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	250	G	22	22	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	4000	E B G	25	25	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	4200	E B G	19	19	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	1100	B G	20	20	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-SS-SJSB074 (2-4) (Continued) Lab Sample ID: 320-76769-14

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
OCDD	41000	E B G	29	29	pg/g	1	☼	1613B	Total/NA
OCDF	1600	B	19	1.2	pg/g	1	☼	1613B	Total/NA
Total TCDD	54000	B G	76	76	pg/g	1	☼	1613B	Total/NA
Total TCDF	210000	B q G	360	360	pg/g	1	☼	1613B	Total/NA
Total PeCDD	600		9.6	5.7	pg/g	1	☼	1613B	Total/NA
Total PeCDF	13000	G	33	33	pg/g	1	☼	1613B	Total/NA
Total HxCDD	450	B	9.6	1.0	pg/g	1	☼	1613B	Total/NA
Total HxCDF	15000	B G	26	26	pg/g	1	☼	1613B	Total/NA
Total HpCDD	6600	B G	25	25	pg/g	1	☼	1613B	Total/NA
Total HpCDF	6300	B G	19	19	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	180000	E B G	150	150	pg/g	5	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB074 (4-6) Lab Sample ID: 320-76769-15

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	22000	E B G	42	42	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	190		9.0	2.0	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	3600	E G	22	22	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	1500	G	19	19	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	4.0	J B	9.0	1.1	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	32		9.0	1.0	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	8.6	J B	9.0	0.95	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	5100	E B G	20	20	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	1400	B G	18	18	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	110	B G	14	14	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	160	G	17	17	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	1700	B G	14	14	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1200	B	9.0	7.6	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	420	B	9.0	8.3	pg/g	1	☼	1613B	Total/NA
OCDD	17000	E B	18	18	pg/g	1	☼	1613B	Total/NA
OCDF	600	B	18	0.63	pg/g	1	☼	1613B	Total/NA
Total TCDD	24000	B G	42	42	pg/g	1	☼	1613B	Total/NA
Total TCDF	110000	B G	250	250	pg/g	1	☼	1613B	Total/NA
Total PeCDD	240	q	9.0	2.0	pg/g	1	☼	1613B	Total/NA
Total PeCDF	7600	q G	21	21	pg/g	1	☼	1613B	Total/NA
Total HxCDD	350	B	9.0	1.0	pg/g	1	☼	1613B	Total/NA
Total HxCDF	7800	B G	17	17	pg/g	1	☼	1613B	Total/NA
Total HpCDD	2700	B G	14	14	pg/g	1	☼	1613B	Total/NA
Total HpCDF	2000	B	9.0	7.9	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	63000	G E B	82	82	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB074 (6-8) Lab Sample ID: 320-76769-16

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	63	B	1.2	0.30	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.64	J q	6.2	0.10	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	5.6	J	6.2	0.13	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	3.6	J	6.2	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.55	J B	6.2	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.98	J	6.2	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.4	J B	6.2	0.13	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-SS-SJSB074 (6-8) (Continued) Lab Sample ID: 320-76769-16

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDF	7.8	B	6.2	0.10	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	2.3	J B	6.2	0.10	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.32	J q	6.2	0.083	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	34	B	6.2	0.79	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	4.3	J B	6.2	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.87	J B	6.2	0.16	pg/g	1	☼	1613B	Total/NA
OCDD	1200	B	12	1.7	pg/g	1	☼	1613B	Total/NA
OCDF	7.1	J B	12	0.059	pg/g	1	☼	1613B	Total/NA
Total TCDD	69	B q	1.2	0.30	pg/g	1	☼	1613B	Total/NA
Total TCDF	370	B	1.2	0.83	pg/g	1	☼	1613B	Total/NA
Total PeCDD	4.1	J q	6.2	0.10	pg/g	1	☼	1613B	Total/NA
Total PeCDF	17		6.2	0.13	pg/g	1	☼	1613B	Total/NA
Total HxCDD	21	B q	6.2	0.14	pg/g	1	☼	1613B	Total/NA
Total HxCDF	14	B q	6.2	0.092	pg/g	1	☼	1613B	Total/NA
Total HpCDD	110	B	6.2	0.79	pg/g	1	☼	1613B	Total/NA
Total HpCDF	7.3	B	6.2	0.15	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	200	B	1.2	0.42	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB074 (8-10) Lab Sample ID: 320-76769-17

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	3.7	B	1.2	0.099	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.33	J	6.0	0.060	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.20	J	6.0	0.061	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.20	J B q	6.0	0.080	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.19	J B q	6.0	0.074	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.44	J B q	6.0	0.043	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.12	J B	6.0	0.045	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	2.9	J B	6.0	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.22	J B	6.0	0.049	pg/g	1	☼	1613B	Total/NA
OCDD	82	B	12	0.21	pg/g	1	☼	1613B	Total/NA
OCDF	0.38	J B q	12	0.033	pg/g	1	☼	1613B	Total/NA
Total TCDD	4.0	B	1.2	0.099	pg/g	1	☼	1613B	Total/NA
Total TCDF	22	B q	1.2	0.15	pg/g	1	☼	1613B	Total/NA
Total PeCDD	0.17	J q	6.0	0.065	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.69	J q	6.0	0.060	pg/g	1	☼	1613B	Total/NA
Total HxCDD	2.7	J B q	6.0	0.078	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.56	J B q	6.0	0.040	pg/g	1	☼	1613B	Total/NA
Total HpCDD	13	B	6.0	0.14	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.35	J B q	6.0	0.056	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	12	B	1.2	0.20	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB074 (10-12) Lab Sample ID: 320-76769-18

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	2.3	B	1.2	0.059	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.17	J q	5.9	0.043	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.12	J q	5.9	0.043	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.19	J B	5.9	0.065	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.074	J q	5.9	0.068	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.28	J B q	5.9	0.029	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-SS-SJSB074 (10-12) (Continued) Lab Sample ID: 320-76769-18

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,6,7,8-HxCDF	0.13	J B	5.9	0.030	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.067	J B q	5.9	0.025	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	1.8	J B	5.9	0.083	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.16	J B	5.9	0.048	pg/g	1	☼	1613B	Total/NA
OCDD	58	B	12	0.13	pg/g	1	☼	1613B	Total/NA
OCDF	0.16	J B q	12	0.040	pg/g	1	☼	1613B	Total/NA
Total TCDD	2.7	B q	1.2	0.059	pg/g	1	☼	1613B	Total/NA
Total TCDF	10	B q	1.2	0.092	pg/g	1	☼	1613B	Total/NA
Total PeCDD	0.18	J q	5.9	0.043	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.36	J q	5.9	0.043	pg/g	1	☼	1613B	Total/NA
Total HxCDD	1.4	J B q	5.9	0.065	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.47	J B q	5.9	0.027	pg/g	1	☼	1613B	Total/NA
Total HpCDD	7.1	B	5.9	0.083	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.16	J B	5.9	0.053	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	6.2	B	1.2	0.23	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB074 (12-14) Lab Sample ID: 320-76769-19

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.26	J B q	1.1	0.063	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF	0.76	J B	1.1	0.055	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.11	J q	5.6	0.063	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.22	J B q	5.6	0.098	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.13	J B q	5.6	0.030	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.054	J B q	5.6	0.032	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.11	J B q	5.6	0.027	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.056	J	5.6	0.024	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	2.2	J B	5.6	0.097	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.13	J B	5.6	0.038	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.093	J B	5.6	0.046	pg/g	1	☼	1613B	Total/NA
OCDD	55	B	11	0.15	pg/g	1	☼	1613B	Total/NA
OCDF	0.28	J B	11	0.033	pg/g	1	☼	1613B	Total/NA
Total TCDD	7.9	B q	1.1	0.063	pg/g	1	☼	1613B	Total/NA
Total TCDF	1.1	B	1.1	0.055	pg/g	1	☼	1613B	Total/NA
Total PeCDD	2.9	J q	5.6	0.063	pg/g	1	☼	1613B	Total/NA
Total HxCDD	7.9	B q	5.6	0.10	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.35	J B q	5.6	0.028	pg/g	1	☼	1613B	Total/NA
Total HpCDD	9.6	B	5.6	0.097	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.34	J B	5.6	0.042	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB074 (14-16) Lab Sample ID: 320-76769-20

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1.8	B	1.2	0.071	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.30	J	5.9	0.039	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.16	J q	5.9	0.040	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.25	J B	5.9	0.065	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.19	J q	5.9	0.068	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.24	J B q	5.9	0.061	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.38	J B q	5.9	0.033	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.20	J B	5.9	0.034	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-SS-SJSB074 (14-16) (Continued) Lab Sample ID: 320-76769-20

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8,9-HxCDF	0.19	J B	5.9	0.028	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.10	J	5.9	0.028	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	2.2	J B	5.9	0.070	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.42	J B	5.9	0.041	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.12	J B	5.9	0.053	pg/g	1	☼	1613B	Total/NA
OCDD	51	B	12	0.097	pg/g	1	☼	1613B	Total/NA
OCDF	0.34	J B q	12	0.028	pg/g	1	☼	1613B	Total/NA
Total TCDD	4.6	B	1.2	0.071	pg/g	1	☼	1613B	Total/NA
Total TCDF	7.7	B q	1.2	0.073	pg/g	1	☼	1613B	Total/NA
Total PeCDD	1.8	J q	5.9	0.054	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.55	J q	5.9	0.039	pg/g	1	☼	1613B	Total/NA
Total HxCDD	6.8	B q	5.9	0.065	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.88	J B q	5.9	0.031	pg/g	1	☼	1613B	Total/NA
Total HpCDD	7.6	B	5.9	0.070	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.74	J B	5.9	0.047	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	5.7	B	1.2	0.82	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-DUP-4 Lab Sample ID: 320-76769-25

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	2.1	B	1.2	0.064	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.27	J	6.0	0.040	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.10	J q	6.0	0.039	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.22	J B	6.0	0.074	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.27	J B	6.0	0.069	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.35	J B	6.0	0.027	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.10	J B q	6.0	0.028	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	3.5	J B	6.0	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.18	J B q	6.0	0.038	pg/g	1	☼	1613B	Total/NA
OCDD	72	B	12	0.13	pg/g	1	☼	1613B	Total/NA
OCDF	0.26	J B	12	0.026	pg/g	1	☼	1613B	Total/NA
Total TCDD	2.6	B	1.2	0.064	pg/g	1	☼	1613B	Total/NA
Total TCDF	11	B q	1.2	0.081	pg/g	1	☼	1613B	Total/NA
Total PeCDD	0.93	J q	6.0	0.055	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.49	J q	6.0	0.039	pg/g	1	☼	1613B	Total/NA
Total HxCDD	4.5	J B	6.0	0.073	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.45	J B q	6.0	0.025	pg/g	1	☼	1613B	Total/NA
Total HpCDD	13	B	6.0	0.13	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.29	J B q	6.0	0.045	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	6.3	B	1.2	0.18	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-DUP-5 Lab Sample ID: 320-76769-26

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	41000	E B G	72	72	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	390		8.2	4.3	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	3900	E G	28	28	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	2600	G	27	27	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	6.5	J B	8.2	0.68	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	45		8.2	0.77	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	16	B	8.2	0.66	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-DUP-5 (Continued) Lab Sample ID: 320-76769-26

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDF	5900	E B G	18	18	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	1600	B G	17	17	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	86	B G	14	14	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	160	G	14	14	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	1800	B G	14	14	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1900	B G	11	11	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	610	B G	12	12	pg/g	1	☼	1613B	Total/NA
OCDD	21000	E B G	18	18	pg/g	1	☼	1613B	Total/NA
OCDF	950	B	16	0.64	pg/g	1	☼	1613B	Total/NA
Total TCDD	46000	B G	72	72	pg/g	1	☼	1613B	Total/NA
Total TCDF	160000	B q G	260	260	pg/g	1	☼	1613B	Total/NA
Total PeCDD	480	q	8.2	4.3	pg/g	1	☼	1613B	Total/NA
Total PeCDF	10000	G	27	27	pg/g	1	☼	1613B	Total/NA
Total HxCDD	250	B	8.2	0.70	pg/g	1	☼	1613B	Total/NA
Total HxCDF	8800	B G	16	16	pg/g	1	☼	1613B	Total/NA
Total HpCDD	3200	B G	14	14	pg/g	1	☼	1613B	Total/NA
Total HpCDF	3200	B G	12	12	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	160000	E B G	120	120	pg/g	5	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) Lab Sample ID: 320-76769-27

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	2100	E G	1.9	1.9	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	20		6.2	0.56	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	310		6.2	1.9	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	160		6.2	2.0	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.96	J	6.2	0.19	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.8	J	6.2	0.21	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.0	J	6.2	0.19	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	500	F1	6.2	1.5	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	130		6.2	1.6	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	8.1		6.2	1.6	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	16		6.2	1.5	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	51	B F1 F2	6.2	0.31	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	150		6.2	0.51	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	46		6.2	0.51	pg/g	1	☼	1613B	Total/NA
OCDD	1200	B F2	12	0.92	pg/g	1	☼	1613B	Total/NA
OCDF	72		12	0.19	pg/g	1	☼	1613B	Total/NA
Total TCDD	2300	G	1.9	1.9	pg/g	1	☼	1613B	Total/NA
Total TCDF	13000	G	5.8	5.8	pg/g	1	☼	1613B	Total/NA
Total PeCDD	22	q	6.2	0.56	pg/g	1	☼	1613B	Total/NA
Total PeCDF	720	q	6.2	1.9	pg/g	1	☼	1613B	Total/NA
Total HxCDD	22	q	6.2	0.20	pg/g	1	☼	1613B	Total/NA
Total HxCDF	740		6.2	1.5	pg/g	1	☼	1613B	Total/NA
Total HpCDD	120	B	6.2	0.31	pg/g	1	☼	1613B	Total/NA
Total HpCDF	230		6.2	0.51	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	7600	E G	6.4	6.4	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB076 (2-4) Lab Sample ID: 320-76769-28

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	36000	E B G	82	82	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-SS-SJSB076 (2-4) (Continued) Lab Sample ID: 320-76769-28

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDD	270		9.6	4.1	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	6000	E G	36	36	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	2600	G	38	38	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	3.6	J B	9.6	0.44	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	18		9.6	0.49	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	9.1	J B	9.6	0.42	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	8400	E B G	21	21	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	2300	B G	18	18	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	140	B G	15	15	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	260	G	15	15	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	350	B	9.6	3.3	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	2300	B G	13	13	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	780	B G	14	14	pg/g	1	☼	1613B	Total/NA
OCDD	4500	B	19	3.9	pg/g	1	☼	1613B	Total/NA
OCDF	910	B	19	0.77	pg/g	1	☼	1613B	Total/NA
Total TCDD	40000	B G	82	82	pg/g	1	☼	1613B	Total/NA
Total TCDF	160000	B q G	210	210	pg/g	1	☼	1613B	Total/NA
Total PeCDD	300	q	9.6	4.1	pg/g	1	☼	1613B	Total/NA
Total PeCDF	13000	q G	37	37	pg/g	1	☼	1613B	Total/NA
Total HxCDD	110	B	9.6	0.45	pg/g	1	☼	1613B	Total/NA
Total HxCDF	13000	B G	17	17	pg/g	1	☼	1613B	Total/NA
Total HpCDD	690	B	9.6	3.3	pg/g	1	☼	1613B	Total/NA
Total HpCDF	3600	B G	13	13	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	110000	E B G	92	92	pg/g	5	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB076 (4-6) Lab Sample ID: 320-76769-29

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	45000	E G	41	41	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	420		11	5.1	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	6400	E G	27	27	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	3200	G	19	19	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	7.0	J	11	1.0	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	35		11	1.1	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	13		11	1.0	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	11000	E G	21	21	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	3000	G	16	16	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	210	G	15	15	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	360	G	18	18	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	1200	B	11	2.6	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	2900		11	5.5	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	1000		11	5.1	pg/g	1	☼	1613B	Total/NA
OCDD	16000	E B	23	7.5	pg/g	1	☼	1613B	Total/NA
OCDF	1400		23	1.7	pg/g	1	☼	1613B	Total/NA
Total TCDD	50000	G	41	41	pg/g	1	☼	1613B	Total/NA
Total TCDF	230000	q G	320	320	pg/g	1	☼	1613B	Total/NA
Total PeCDD	420		11	5.1	pg/g	1	☼	1613B	Total/NA
Total PeCDF	16000	G	23	23	pg/g	1	☼	1613B	Total/NA
Total HxCDD	260		11	1.1	pg/g	1	☼	1613B	Total/NA
Total HxCDF	16000	G	17	17	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-SS-SJSB076 (4-6) (Continued) Lab Sample ID: 320-76769-29

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HpCDD	2200	B	11	2.6	pg/g	1	☼	1613B	Total/NA
Total HpCDF	4600		11	5.3	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	150000	G E	140	140	pg/g	5	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB076 (6-8) Lab Sample ID: 320-76769-30

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	150		1.3	0.29	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	1.5	J	6.7	0.073	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	17		6.7	0.24	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	9.7		6.7	0.26	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.24	J q	6.7	0.049	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	24		6.7	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	6.8		6.7	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	6.4	J B	6.7	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	6.6	J	6.7	0.086	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	2.5	J	6.7	0.083	pg/g	1	☼	1613B	Total/NA
OCDD	150	B	13	0.26	pg/g	1	☼	1613B	Total/NA
OCDF	3.6	J q	13	0.083	pg/g	1	☼	1613B	Total/NA
Total TCDD	160	q	1.3	0.29	pg/g	1	☼	1613B	Total/NA
Total TCDF	930		1.3	1.2	pg/g	1	☼	1613B	Total/NA
Total PeCDD	1.5	J	6.7	0.073	pg/g	1	☼	1613B	Total/NA
Total PeCDF	38		6.7	0.25	pg/g	1	☼	1613B	Total/NA
Total HxCDD	3.6	J q	6.7	0.051	pg/g	1	☼	1613B	Total/NA
Total HxCDF	31		6.7	0.15	pg/g	1	☼	1613B	Total/NA
Total HpCDD	19	B	6.7	0.11	pg/g	1	☼	1613B	Total/NA
Total HpCDF	11		6.7	0.084	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	540		1.3	0.71	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB076 (8-10) Lab Sample ID: 320-76769-31

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	7.9		1.2	0.086	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.19	J	6.0	0.073	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.96	J	6.0	0.049	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.54	J	6.0	0.051	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.28	J	6.0	0.098	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.19	J q	6.0	0.10	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.28	J q	6.0	0.092	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	1.1	J	6.0	0.087	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.30	J q	6.0	0.085	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.13	J	6.0	0.082	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	3.4	J B	6.0	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.43	J q	6.0	0.070	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.16	J	6.0	0.082	pg/g	1	☼	1613B	Total/NA
OCDD	84	B	12	0.19	pg/g	1	☼	1613B	Total/NA
OCDF	0.35	J	12	0.083	pg/g	1	☼	1613B	Total/NA
Total TCDD	8.8		1.2	0.086	pg/g	1	☼	1613B	Total/NA
Total TCDF	51	q	1.2	0.13	pg/g	1	☼	1613B	Total/NA
Total PeCDD	0.40	J	6.0	0.073	pg/g	1	☼	1613B	Total/NA
Total PeCDF	2.1	J	6.0	0.050	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-SS-SJSB076 (8-10) (Continued) Lab Sample ID: 320-76769-31

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HxCDD	3.9	J q	6.0	0.098	pg/g	1	☼	1613B	Total/NA
Total HxCDF	1.5	J q	6.0	0.082	pg/g	1	☼	1613B	Total/NA
Total HpCDD	12	B	6.0	0.14	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.72	J q	6.0	0.076	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	28		1.2	0.26	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB076 (10-12) Lab Sample ID: 320-76769-32

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	110		1.3	0.57	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.98	J q	6.4	0.070	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	14		6.4	0.17	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	7.5		6.4	0.18	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.29	J q	6.4	0.071	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	19		6.4	0.090	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	4.4	J	6.4	0.093	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.35	J q	6.4	0.085	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.59	J q	6.4	0.083	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	8.9	B	6.4	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	5.2	J	6.4	0.097	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	1.8	J	6.4	0.092	pg/g	1	☼	1613B	Total/NA
OCDD	200	B	13	0.28	pg/g	1	☼	1613B	Total/NA
OCDF	2.7	J q	13	0.078	pg/g	1	☼	1613B	Total/NA
Total TCDD	120	q	1.3	0.57	pg/g	1	☼	1613B	Total/NA
Total TCDF	640	q	1.3	1.2	pg/g	1	☼	1613B	Total/NA
Total PeCDD	0.98	J q	6.4	0.070	pg/g	1	☼	1613B	Total/NA
Total PeCDF	32		6.4	0.17	pg/g	1	☼	1613B	Total/NA
Total HxCDD	3.4	J q	6.4	0.075	pg/g	1	☼	1613B	Total/NA
Total HxCDF	27	q	6.4	0.088	pg/g	1	☼	1613B	Total/NA
Total HpCDD	24	B	6.4	0.11	pg/g	1	☼	1613B	Total/NA
Total HpCDF	8.5	q	6.4	0.095	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	360		1.3	0.65	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB076 (12-14) Lab Sample ID: 320-76769-33

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	15		1.5	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	2.1	J	7.3	0.064	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.95	J	7.3	0.074	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.61	J q	7.3	0.10	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.85	J	7.3	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.5	J q	7.3	0.098	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	3.0	J	7.3	0.049	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.87	J	7.3	0.050	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	19	B	7.3	0.19	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1.0	J	7.3	0.069	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.42	J	7.3	0.060	pg/g	1	☼	1613B	Total/NA
OCDD	350	B	15	0.45	pg/g	1	☼	1613B	Total/NA
OCDF	0.58	J	15	0.11	pg/g	1	☼	1613B	Total/NA
Total TCDD	17	q	1.5	0.12	pg/g	1	☼	1613B	Total/NA
Total TCDF	78	q	1.5	0.23	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-SS-SJSB076 (12-14) (Continued) Lab Sample ID: 320-76769-33

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total PeCDD	0.68	J q	7.3	0.21	pg/g	1	☼	1613B	Total/NA
Total PeCDF	4.0	J q	7.3	0.069	pg/g	1	☼	1613B	Total/NA
Total HxCDD	17	q	7.3	0.10	pg/g	1	☼	1613B	Total/NA
Total HxCDF	3.8	J	7.3	0.047	pg/g	1	☼	1613B	Total/NA
Total HpCDD	69	B	7.3	0.19	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1.7	J q	7.3	0.065	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	43		1.5	0.29	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB076 (14-16) Lab Sample ID: 320-76769-34

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	3.5		1.3	0.069	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.15	J q	6.7	0.061	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.72	J	6.7	0.038	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.31	J	6.7	0.038	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.31	J	6.7	0.050	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.34	J q	6.7	0.053	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.56	J	6.7	0.047	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	1.1	J	6.7	0.038	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.31	J	6.7	0.038	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.065	J q	6.7	0.030	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	10	B	6.7	0.16	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.70	J	6.7	0.036	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.084	J q	6.7	0.044	pg/g	1	☼	1613B	Total/NA
OCDD	130	B	13	0.21	pg/g	1	☼	1613B	Total/NA
OCDF	0.81	J	13	0.053	pg/g	1	☼	1613B	Total/NA
Total TCDD	4.5	q	1.3	0.069	pg/g	1	☼	1613B	Total/NA
Total TCDF	19	q	1.3	0.071	pg/g	1	☼	1613B	Total/NA
Total PeCDD	0.66	J q	6.7	0.061	pg/g	1	☼	1613B	Total/NA
Total PeCDF	1.5	J q	6.7	0.038	pg/g	1	☼	1613B	Total/NA
Total HxCDD	7.5	q	6.7	0.050	pg/g	1	☼	1613B	Total/NA
Total HxCDF	1.7	J q	6.7	0.034	pg/g	1	☼	1613B	Total/NA
Total HpCDD	26	B	6.7	0.16	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.90	J q	6.7	0.040	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	9.8		1.3	0.19	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)

Lab Sample ID: 320-76769-1
Date Collected: 07/22/21 08:40
Matrix: Sediment
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	38.5		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	61.5		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)

Lab Sample ID: 320-76769-1
Date Collected: 07/22/21 08:40
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 61.5

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	17000	E B G	40	40	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
1,2,3,7,8-PeCDD	140		8.2	1.6	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
1,2,3,7,8-PeCDF	1900	G	14	14	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
2,3,4,7,8-PeCDF	1000	G	15	15	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
1,2,3,4,7,8-HxCDD	3.0	J B	8.2	0.30	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
1,2,3,6,7,8-HxCDD	14		8.2	0.35	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
1,2,3,7,8,9-HxCDD	6.3	J B	8.2	0.29	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
1,2,3,4,7,8-HxCDF	3100	B G	8.4	8.4	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
1,2,3,6,7,8-HxCDF	840	B	8.2	7.7	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
1,2,3,7,8,9-HxCDF	45	B	8.2	6.3	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
2,3,4,6,7,8-HxCDF	92		8.2	6.2	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
1,2,3,4,6,7,8-HpCDD	530	B	8.2	4.9	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
1,2,3,4,6,7,8-HpCDF	990	B	8.2	6.2	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
1,2,3,4,7,8,9-HpCDF	300	B	8.2	7.0	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
OCDD	7000	E B	16	6.2	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
OCDF	370	B	16	0.34	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
Total TCDD	19000	B q G	40	40	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
Total TCDF	71000	B q G	120	120	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
Total PeCDD	170	q	8.2	1.6	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
Total PeCDF	4500	G	14	14	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
Total HxCDD	99	B	8.2	0.31	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
Total HxCDF	4600	B	8.2	7.2	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
Total HpCDD	1000	B	8.2	4.9	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1
Total HpCDF	1500	B	8.2	6.6	pg/g	☼	08/06/21 05:22	08/15/21 04:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*72*		*25 - 164*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-2,3,7,8-TCDF	*60*		*24 - 169*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-1,2,3,7,8-PeCDD	*87*		*25 - 181*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-1,2,3,7,8-PeCDF	*76*		*24 - 185*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-2,3,4,7,8-PeCDF	*86*		*21 - 178*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-1,2,3,4,7,8-HxCDD	*76*		*32 - 141*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-1,2,3,6,7,8-HxCDD	*63*		*28 - 130*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-1,2,3,4,7,8-HxCDF	*70*		*26 - 152*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-1,2,3,6,7,8-HxCDF	*61*		*26 - 123*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-1,2,3,7,8,9-HxCDF	*63*		*29 - 147*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-2,3,4,6,7,8-HxCDF	*62*		*28 - 136*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*73*		*23 - 140*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*68*		*28 - 143*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*79*		*26 - 138*	*08/06/21 05:22*	*08/15/21 04:21*	*1*
13C-OCDD	*90*		*17 - 157*	*08/06/21 05:22*	*08/15/21 04:21*	*1*

Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) — Lab Sample ID: 320-76769-1

Date Collected: 07/22/21 08:40 — **Matrix: Sediment**
Date Received: 07/27/21 09:45 — **Percent Solids: 61.5**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	129		35 - 197	08/06/21 05:22	08/15/21 04:21	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	47000	E B G	63	63	pg/g	☼	08/06/21 05:22	08/23/21 13:22	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	63		24 - 169	08/06/21 05:22	08/23/21 13:22	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	117		35 - 197	08/06/21 05:22	08/23/21 13:22	5

Client Sample ID: 11215702-072221-SS-SJSB080 (2-4) — Lab Sample ID: 320-76769-2

Date Collected: 07/22/21 08:45 — **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	37.9		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	62.1		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB080 (2-4) — Lab Sample ID: 320-76769-2

Date Collected: 07/22/21 08:45 — **Matrix: Sediment**
Date Received: 07/27/21 09:45 — **Percent Solids: 62.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	11000	E B G	23	23	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
1,2,3,7,8-PeCDD	94		8.3	1.5	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
1,2,3,7,8-PeCDF	1300	G	9.5	9.5	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
2,3,4,7,8-PeCDF	690	G	9.4	9.4	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
1,2,3,4,7,8-HxCDD	2.0	J B	8.3	0.29	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
1,2,3,6,7,8-HxCDD	8.0	J	8.3	0.32	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
1,2,3,7,8,9-HxCDD	4.3	J B	8.3	0.28	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
1,2,3,4,7,8-HxCDF	2100	B	8.3	5.8	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
1,2,3,6,7,8-HxCDF	590	B	8.3	5.7	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
1,2,3,7,8,9-HxCDF	32	B	8.3	4.4	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
2,3,4,6,7,8-HxCDF	66		8.3	4.5	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
1,2,3,4,6,7,8-HpCDD	280	B	8.3	2.7	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
1,2,3,4,6,7,8-HpCDF	710	B	8.3	3.2	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
1,2,3,4,7,8,9-HpCDF	210	B	8.3	3.6	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
OCDD	3900	B	17	3.7	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
OCDF	370	B	17	0.32	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
Total TCDD	12000	B G	23	23	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
Total TCDF	51000	B G	78	78	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
Total PeCDD	110	q	8.3	1.5	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
Total PeCDF	3000	G	9.4	9.4	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
Total HxCDD	58	B q	8.3	0.30	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
Total HxCDF	3200	B q	8.3	5.1	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
Total HpCDD	540	B	8.3	2.7	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1
Total HpCDF	1100	B	8.3	3.4	pg/g	☼	08/06/21 05:22	08/15/21 06:36	1

Client Sample ID: 11215702-072221-SS-SJSB080 (2-4) Lab Sample ID: 320-76769-2

Date Collected: 07/22/21 08:45 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 62.1**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	65		25 - 164	08/06/21 05:22	08/15/21 06:36	1
13C-2,3,7,8-TCDF	62		24 - 169	08/06/21 05:22	08/15/21 06:36	1
13C-1,2,3,7,8-PeCDD	76		25 - 181	08/06/21 05:22	08/15/21 06:36	1
13C-1,2,3,7,8-PeCDF	68		24 - 185	08/06/21 05:22	08/15/21 06:36	1
13C-2,3,4,7,8-PeCDF	75		21 - 178	08/06/21 05:22	08/15/21 06:36	1
13C-1,2,3,4,7,8-HxCDD	70		32 - 141	08/06/21 05:22	08/15/21 06:36	1
13C-1,2,3,6,7,8-HxCDD	63		28 - 130	08/06/21 05:22	08/15/21 06:36	1
13C-1,2,3,4,7,8-HxCDF	68		26 - 152	08/06/21 05:22	08/15/21 06:36	1
13C-1,2,3,6,7,8-HxCDF	59		26 - 123	08/06/21 05:22	08/15/21 06:36	1
13C-1,2,3,7,8,9-HxCDF	62		29 - 147	08/06/21 05:22	08/15/21 06:36	1
13C-2,3,4,6,7,8-HxCDF	60		28 - 136	08/06/21 05:22	08/15/21 06:36	1
13C-1,2,3,4,6,7,8-HpCDD	73		23 - 140	08/06/21 05:22	08/15/21 06:36	1
13C-1,2,3,4,6,7,8-HpCDF	68		28 - 143	08/06/21 05:22	08/15/21 06:36	1
13C-1,2,3,4,7,8,9-HpCDF	80		26 - 138	08/06/21 05:22	08/15/21 06:36	1
13C-OCDD	86		17 - 157	08/06/21 05:22	08/15/21 06:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	106		35 - 197	08/06/21 05:22	08/15/21 06:36	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	28000	E B G	29	29	pg/g	☼	08/06/21 05:22	08/24/21 11:40	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	80		24 - 169	08/06/21 05:22	08/24/21 11:40	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	106		35 - 197	08/06/21 05:22	08/24/21 11:40	5

Client Sample ID: 11215702-072221-SS-SJSB080 (4-6) Lab Sample ID: 320-76769-3

Date Collected: 07/22/21 08:50 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	33.1		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	66.9		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB080 (4-6) Lab Sample ID: 320-76769-3

Date Collected: 07/22/21 08:50 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 66.9**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	6900	E B G	13	13	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
1,2,3,7,8-PeCDD	58		7.6	0.84	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
1,2,3,7,8-PeCDF	810		7.6	5.5	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
2,3,4,7,8-PeCDF	420		7.6	5.5	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
1,2,3,4,7,8-HxCDD	1.3	J B q	7.6	0.22	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
1,2,3,6,7,8-HxCDD	5.7	J	7.6	0.24	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
1,2,3,7,8,9-HxCDD	3.3	J B	7.6	0.21	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
1,2,3,4,7,8-HxCDF	1700	B G	8.6	8.6	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
1,2,3,6,7,8-HxCDF	460	B G	8.6	8.6	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1

Client Sample ID: 11215702-072221-SS-SJSB080 (4-6) Lab Sample ID: 320-76769-3

Date Collected: 07/22/21 08:50 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 66.9**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	21	B	7.6	6.6	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
2,3,4,6,7,8-HxCDF	38		7.6	6.5	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
1,2,3,4,6,7,8-HpCDD	210	B	7.6	1.8	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
1,2,3,4,6,7,8-HpCDF	660	B	7.6	3.4	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
1,2,3,4,7,8,9-HpCDF	170	B	7.6	4.0	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
OCDD	3100	B	15	3.4	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
OCDF	220	B	15	0.26	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
Total TCDD	7600	B G	13	13	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
Total TCDF	33000	B G	45	45	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
Total PeCDD	67	q	7.6	0.84	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
Total PeCDF	1900		7.6	5.5	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
Total HxCDD	44	B q	7.6	0.22	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
Total HxCDF	2500	B	7.6	7.6	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
Total HpCDD	420	B	7.6	1.8	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1
Total HpCDF	930	B	7.6	3.7	pg/g	☼	08/06/21 05:22	08/15/21 07:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*56*		*25 - 164*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-2,3,7,8-TCDF	*54*		*24 - 169*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-1,2,3,7,8-PeCDD	*65*		*25 - 181*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-1,2,3,7,8-PeCDF	*59*		*24 - 185*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-2,3,4,7,8-PeCDF	*65*		*21 - 178*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-1,2,3,4,7,8-HxCDD	*61*		*32 - 141*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-1,2,3,6,7,8-HxCDD	*54*		*28 - 130*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-1,2,3,4,7,8-HxCDF	*58*		*26 - 152*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-1,2,3,6,7,8-HxCDF	*51*		*26 - 123*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-1,2,3,7,8,9-HxCDF	*54*		*29 - 147*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-2,3,4,6,7,8-HxCDF	*54*		*28 - 136*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*66*		*23 - 140*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*59*		*28 - 143*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*71*		*26 - 138*	*08/06/21 05:22*	*08/15/21 07:21*	*1*
13C-OCDD	*78*		*17 - 157*	*08/06/21 05:22*	*08/15/21 07:21*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*88*		*35 - 197*	*08/06/21 05:22*	*08/15/21 07:21*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	19000	G E B	15	15	pg/g	☼	08/06/21 05:22	08/21/21 21:34	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*67*		*24 - 169*	*08/06/21 05:22*	*08/21/21 21:34*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*94*		*35 - 197*	*08/06/21 05:22*	*08/21/21 21:34*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB080 (6-8)

Lab Sample ID: 320-76769-4
Date Collected: 07/22/21 08:55
Matrix: Sediment
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	30.7		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	69.3		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB080 (6-8)

Lab Sample ID: 320-76769-4
Date Collected: 07/22/21 08:55
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 69.3

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	2300	E G	2.7	2.7	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
1,2,3,7,8-PeCDD	23		7.2	0.91	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
1,2,3,7,8-PeCDF	360		7.2	2.4	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
2,3,4,7,8-PeCDF	180		7.2	2.4	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
1,2,3,4,7,8-HxCDD	0.79	J q	7.2	0.24	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
1,2,3,6,7,8-HxCDD	3.3	J	7.2	0.28	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
1,2,3,7,8,9-HxCDD	ND		7.2	0.24	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
1,2,3,4,7,8-HxCDF	610		7.2	3.3	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
1,2,3,6,7,8-HxCDF	150		7.2	3.1	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
1,2,3,7,8,9-HxCDF	10		7.2	3.2	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
2,3,4,6,7,8-HxCDF	19		7.2	3.0	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
1,2,3,4,6,7,8-HpCDD	120		7.2	0.50	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
1,2,3,4,6,7,8-HpCDF	150		7.2	0.67	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
1,2,3,4,7,8,9-HpCDF	50		7.2	0.60	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
OCDD	1500		14	1.2	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
OCDF	68		14	0.38	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
Total TCDD	2500	G	2.7	2.7	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
Total TCDF	13000	G	10	10	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
Total PeCDD	27		7.2	0.91	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
Total PeCDF	830		7.2	2.4	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
Total HxCDD	25	q	7.2	0.25	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
Total HxCDF	900	q	7.2	3.2	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
Total HpCDD	230		7.2	0.50	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1
Total HpCDF	240		7.2	0.64	pg/g	☼	08/06/21 12:58	08/19/21 07:54	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*31*		*25 - 164*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-2,3,7,8-TCDF	*31*		*24 - 169*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-1,2,3,7,8-PeCDD	*28*		*25 - 181*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-1,2,3,7,8-PeCDF	*30*		*24 - 185*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-2,3,4,7,8-PeCDF	*34*		*21 - 178*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-1,2,3,4,7,8-HxCDD	*39*		*32 - 141*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-1,2,3,6,7,8-HxCDD	*34*		*28 - 130*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-1,2,3,4,7,8-HxCDF	*38*		*26 - 152*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-1,2,3,6,7,8-HxCDF	*33*		*26 - 123*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-1,2,3,7,8,9-HxCDF	*30*		*29 - 147*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-2,3,4,6,7,8-HxCDF	*31*		*28 - 136*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*39*		*23 - 140*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*35*		*28 - 143*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*40*		*26 - 138*	*08/06/21 12:58*	*08/19/21 07:54*	*1*
13C-OCDD	*37*		*17 - 157*	*08/06/21 12:58*	*08/19/21 07:54*	*1*

Client Sample ID: 11215702-072221-SS-SJSB080 (6-8) Lab Sample ID: 320-76769-4

Date Collected: 07/22/21 08:55 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 69.3**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	44		35 - 197	08/06/21 12:58	08/19/21 07:54	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	7500	E G	7.0	7.0	pg/g	☼	08/06/21 12:58	08/24/21 02:26	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	35		24 - 169	08/06/21 12:58	08/24/21 02:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	45		35 - 197	08/06/21 12:58	08/24/21 02:26	1

Client Sample ID: 11215702-072221-SS-SJSB080 (8-10) Lab Sample ID: 320-76769-5

Date Collected: 07/22/21 09:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21.5		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	78.5		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB080 (8-10) Lab Sample ID: 320-76769-5

Date Collected: 07/22/21 09:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 78.5**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	1100	E B G	3.5	3.5	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
1,2,3,7,8-PeCDD	9.0		6.6	0.19	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
1,2,3,7,8-PeCDF	110		6.6	0.72	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
2,3,4,7,8-PeCDF	59		6.6	0.72	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
1,2,3,4,7,8-HxCDD	0.49	J B	6.6	0.070	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
1,2,3,6,7,8-HxCDD	1.4	J	6.6	0.078	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
1,2,3,7,8,9-HxCDD	0.81	J B	6.6	0.067	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
1,2,3,4,7,8-HxCDF	160	B	6.6	0.77	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
1,2,3,6,7,8-HxCDF	44	B	6.6	0.78	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
1,2,3,7,8,9-HxCDF	2.4	J B	6.6	0.60	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
2,3,4,6,7,8-HxCDF	4.7	J	6.6	0.62	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
1,2,3,4,6,7,8-HpCDD	57	B	6.6	0.70	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
1,2,3,4,6,7,8-HpCDF	57	B	6.6	0.47	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
1,2,3,4,7,8,9-HpCDF	16	B	6.6	0.53	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
OCDD	750	B	13	0.77	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
OCDF	25	B	13	0.078	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
Total TCDD	1300	B G	3.5	3.5	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
Total TCDF	6200	B G	11	11	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
Total PeCDD	12	q	6.6	0.19	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
Total PeCDF	260		6.6	0.72	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
Total HxCDD	19	B q	6.6	0.072	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
Total HxCDF	240	B	6.6	0.69	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
Total HpCDD	140	B	6.6	0.70	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1
Total HpCDF	90	B	6.6	0.50	pg/g	☼	08/06/21 05:22	08/15/21 08:06	1

Client Sample ID: 11215702-072221-SS-SJSB080 (8-10) Lab Sample ID: 320-76769-5

Date Collected: 07/22/21 09:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 78.5**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	57		25 - 164	08/06/21 05:22	08/15/21 08:06	1
13C-2,3,7,8-TCDF	53		24 - 169	08/06/21 05:22	08/15/21 08:06	1
13C-1,2,3,7,8-PeCDD	65		25 - 181	08/06/21 05:22	08/15/21 08:06	1
13C-1,2,3,7,8-PeCDF	60		24 - 185	08/06/21 05:22	08/15/21 08:06	1
13C-2,3,4,7,8-PeCDF	66		21 - 178	08/06/21 05:22	08/15/21 08:06	1
13C-1,2,3,4,7,8-HxCDD	64		32 - 141	08/06/21 05:22	08/15/21 08:06	1
13C-1,2,3,6,7,8-HxCDD	56		28 - 130	08/06/21 05:22	08/15/21 08:06	1
13C-1,2,3,4,7,8-HxCDF	59		26 - 152	08/06/21 05:22	08/15/21 08:06	1
13C-1,2,3,6,7,8-HxCDF	53		26 - 123	08/06/21 05:22	08/15/21 08:06	1
13C-1,2,3,7,8,9-HxCDF	55		29 - 147	08/06/21 05:22	08/15/21 08:06	1
13C-2,3,4,6,7,8-HxCDF	54		28 - 136	08/06/21 05:22	08/15/21 08:06	1
13C-1,2,3,4,6,7,8-HpCDD	63		23 - 140	08/06/21 05:22	08/15/21 08:06	1
13C-1,2,3,4,6,7,8-HpCDF	60		28 - 143	08/06/21 05:22	08/15/21 08:06	1
13C-1,2,3,4,7,8,9-HpCDF	69		26 - 138	08/06/21 05:22	08/15/21 08:06	1
13C-OCDD	75		17 - 157	08/06/21 05:22	08/15/21 08:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	74		35 - 197	08/06/21 05:22	08/15/21 08:06	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**3300**	**G E B**	3.6	3.6	pg/g	☼	08/06/21 05:22	08/21/21 20:56	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	58		24 - 169	08/06/21 05:22	08/21/21 20:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	71		35 - 197	08/06/21 05:22	08/21/21 20:56	1

Client Sample ID: 11215702-072221-SS-SJSB080 (10-12) Lab Sample ID: 320-76769-6

Date Collected: 07/22/21 09:05 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**17.9**		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	**82.1**		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB080 (10-12) Lab Sample ID: 320-76769-6

Date Collected: 07/22/21 09:05 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 82.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**9.0**	**B**	1.2	0.093	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
1,2,3,7,8-PeCDD	ND		6.2	0.055	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
1,2,3,7,8-PeCDF	**0.98**	**J**	6.2	0.057	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
2,3,4,7,8-PeCDF	**0.46**	**J**	6.2	0.059	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
1,2,3,4,7,8-HxCDD	**0.20**	**J B**	6.2	0.067	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
1,2,3,6,7,8-HxCDD	ND		6.2	0.070	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
1,2,3,7,8,9-HxCDD	ND		6.2	0.062	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
1,2,3,4,7,8-HxCDF	**1.5**	**J B**	6.2	0.048	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
1,2,3,6,7,8-HxCDF	**0.42**	**J B**	6.2	0.049	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1

Client Sample Results

Client: GHD Services Inc. Job ID: 320-76769-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072221-SS-SJSB080 (10-12) Lab Sample ID: 320-76769-6

Date Collected: 07/22/21 09:05 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 82.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	**0.082**	**J B q**	6.2	0.041	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
2,3,4,6,7,8-HxCDF	ND		6.2	0.038	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
1,2,3,4,6,7,8-HpCDD	**1.9**	**J B**	6.2	0.11	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
1,2,3,4,6,7,8-HpCDF	**0.58**	**J B**	6.2	0.051	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
1,2,3,4,7,8,9-HpCDF	**0.13**	**J B q**	6.2	0.059	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
OCDD	**57**	**B**	12	0.16	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
OCDF	**0.37**	**J B**	12	0.039	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
Total TCDD	**14**	**B**	1.2	0.093	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
Total TCDF	**48**	**B q**	1.2	0.19	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
Total PeCDD	**1.6**	**J**	6.2	0.055	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
Total PeCDF	**2.2**	**J**	6.2	0.058	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
Total HxCDD	**6.0**	**J B**	6.2	0.066	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
Total HxCDF	**2.2**	**J B q**	6.2	0.044	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
Total HpCDD	**8.9**	**B**	6.2	0.11	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1
Total HpCDF	**0.89**	**J B q**	6.2	0.055	pg/g	☼	08/06/21 05:22	08/15/21 08:51	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*62*		*25 - 164*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-2,3,7,8-TCDF	*57*		*24 - 169*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-1,2,3,7,8-PeCDD	*62*		*25 - 181*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-1,2,3,7,8-PeCDF	*57*		*24 - 185*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-2,3,4,7,8-PeCDF	*62*		*21 - 178*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-1,2,3,4,7,8-HxCDD	*67*		*32 - 141*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-1,2,3,6,7,8-HxCDD	*64*		*28 - 130*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-1,2,3,4,7,8-HxCDF	*62*		*26 - 152*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-1,2,3,6,7,8-HxCDF	*59*		*26 - 123*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-1,2,3,7,8,9-HxCDF	*58*		*29 - 147*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-2,3,4,6,7,8-HxCDF	*58*		*28 - 136*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*66*		*23 - 140*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*28 - 143*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*69*		*26 - 138*	*08/06/21 05:22*	*08/15/21 08:51*	*1*
13C-OCDD	*71*		*17 - 157*	*08/06/21 05:22*	*08/15/21 08:51*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*72*		*35 - 197*	*08/06/21 05:22*	*08/15/21 08:51*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**26**	**B**	1.2	0.23	pg/g	☼	08/06/21 05:22	08/23/21 19:24	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*62*		*24 - 169*	*08/06/21 05:22*	*08/23/21 19:24*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*73*		*35 - 197*	*08/06/21 05:22*	*08/23/21 19:24*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB080 (12-14)

Lab Sample ID: 320-76769-7

Date Collected: 07/22/21 09:10
Matrix: Sediment
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18.5		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	81.5		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB080 (12-14)

Lab Sample ID: 320-76769-7

Date Collected: 07/22/21 09:10
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 81.5

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	1.1	J B	1.2	0.056	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
1,2,3,7,8-PeCDD	ND		6.2	0.055	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
1,2,3,7,8-PeCDF	0.13	J q	6.2	0.041	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
2,3,4,7,8-PeCDF	ND		6.2	0.042	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
1,2,3,4,7,8-HxCDD	0.17	J B	6.2	0.069	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
1,2,3,6,7,8-HxCDD	ND		6.2	0.073	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
1,2,3,7,8,9-HxCDD	0.22	J B	6.2	0.065	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
1,2,3,4,7,8-HxCDF	0.23	J B	6.2	0.035	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
1,2,3,6,7,8-HxCDF	0.092	J B	6.2	0.035	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
1,2,3,7,8,9-HxCDF	ND		6.2	0.028	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
2,3,4,6,7,8-HxCDF	ND		6.2	0.027	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
1,2,3,4,6,7,8-HpCDD	2.9	J B	6.2	0.11	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
1,2,3,4,6,7,8-HpCDF	0.16	J B q	6.2	0.050	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
1,2,3,4,7,8,9-HpCDF	ND		6.2	0.061	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
OCDD	58	B	12	0.14	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
OCDF	0.22	J B q	12	0.036	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
Total TCDD	2.2	B q	1.2	0.056	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
Total TCDF	4.5	B q	1.2	0.087	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
Total PeCDD	1.3	J q	6.2	0.055	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
Total PeCDF	0.13	J q	6.2	0.042	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
Total HxCDD	5.8	J B	6.2	0.069	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
Total HxCDF	0.32	J B	6.2	0.031	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
Total HpCDD	11	B	6.2	0.11	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1
Total HpCDF	0.16	J B q	6.2	0.055	pg/g	☼	08/06/21 05:22	08/15/21 09:36	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*56*		*25 - 164*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-2,3,7,8-TCDF	*50*		*24 - 169*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-1,2,3,7,8-PeCDD	*55*		*25 - 181*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-1,2,3,7,8-PeCDF	*50*		*24 - 185*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-2,3,4,7,8-PeCDF	*55*		*21 - 178*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-1,2,3,4,7,8-HxCDD	*60*		*32 - 141*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-1,2,3,6,7,8-HxCDD	*56*		*28 - 130*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-1,2,3,4,7,8-HxCDF	*56*		*26 - 152*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-1,2,3,6,7,8-HxCDF	*52*		*26 - 123*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-1,2,3,7,8,9-HxCDF	*52*		*29 - 147*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-2,3,4,6,7,8-HxCDF	*52*		*28 - 136*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*57*		*23 - 140*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*52*		*28 - 143*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*60*		*26 - 138*	*08/06/21 05:22*	*08/15/21 09:36*	*1*
13C-OCDD	*61*		*17 - 157*	*08/06/21 05:22*	*08/15/21 09:36*	*1*

Client Sample ID: 11215702-072221-SS-SJSB080 (12-14) Lab Sample ID: 320-76769-7

Date Collected: 07/22/21 09:10 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 81.5**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	67		35 - 197	08/06/21 05:22	08/15/21 09:36	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	2.7	B	1.2	0.15	pg/g	☼	08/06/21 05:22	08/23/21 20:02	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	57		24 - 169	08/06/21 05:22	08/23/21 20:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	70		35 - 197	08/06/21 05:22	08/23/21 20:02	1

Client Sample ID: 11215702-072221-SS-SJSB080 (14-16) Lab Sample ID: 320-76769-8

Date Collected: 07/22/21 09:15 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18.4		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	81.6		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB080 (14-16) Lab Sample ID: 320-76769-8

Date Collected: 07/22/21 09:15 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 81.6**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.34	J B q	1.2	0.059	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
1,2,3,7,8-PeCDD	ND		5.9	0.073	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
1,2,3,7,8-PeCDF	ND		5.9	0.038	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
2,3,4,7,8-PeCDF	ND		5.9	0.038	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
1,2,3,4,7,8-HxCDD	ND		5.9	0.12	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
1,2,3,6,7,8-HxCDD	ND		5.9	0.12	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
1,2,3,7,8,9-HxCDD	0.46	J B	5.9	0.11	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
1,2,3,4,7,8-HxCDF	0.096	J B	5.9	0.034	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
1,2,3,6,7,8-HxCDF	ND		5.9	0.035	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
1,2,3,7,8,9-HxCDF	0.077	J B	5.9	0.029	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
2,3,4,6,7,8-HxCDF	ND		5.9	0.028	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
1,2,3,4,6,7,8-HpCDD	6.4	B	5.9	0.17	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
1,2,3,4,6,7,8-HpCDF	0.095	J B q	5.9	0.048	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
1,2,3,4,7,8,9-HpCDF	ND		5.9	0.055	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
OCDD	120	B	12	0.24	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
OCDF	0.21	J B	12	0.034	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
Total TCDD	2.6	B q	1.2	0.059	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
Total TCDF	1.9	B	1.2	0.082	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
Total PeCDD	2.1	J q	5.9	0.073	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
Total PeCDF	ND		5.9	0.038	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
Total HxCDD	8.7	B	5.9	0.12	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
Total HxCDF	0.17	J B	5.9	0.032	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
Total HpCDD	24	B	5.9	0.17	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1
Total HpCDF	0.095	J B q	5.9	0.051	pg/g	☼	08/06/21 05:22	08/15/21 10:21	1

Client Sample ID: 11215702-072221-SS-SJSB080 (14-16) Lab Sample ID: 320-76769-8

Date Collected: 07/22/21 09:15 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 81.6**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	54		25 - 164	08/06/21 05:22	08/15/21 10:21	1
13C-2,3,7,8-TCDF	49		24 - 169	08/06/21 05:22	08/15/21 10:21	1
13C-1,2,3,7,8-PeCDD	56		25 - 181	08/06/21 05:22	08/15/21 10:21	1
13C-1,2,3,7,8-PeCDF	51		24 - 185	08/06/21 05:22	08/15/21 10:21	1
13C-2,3,4,7,8-PeCDF	56		21 - 178	08/06/21 05:22	08/15/21 10:21	1
13C-1,2,3,4,7,8-HxCDD	60		32 - 141	08/06/21 05:22	08/15/21 10:21	1
13C-1,2,3,6,7,8-HxCDD	56		28 - 130	08/06/21 05:22	08/15/21 10:21	1
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	08/06/21 05:22	08/15/21 10:21	1
13C-1,2,3,6,7,8-HxCDF	53		26 - 123	08/06/21 05:22	08/15/21 10:21	1
13C-1,2,3,7,8,9-HxCDF	51		29 - 147	08/06/21 05:22	08/15/21 10:21	1
13C-2,3,4,6,7,8-HxCDF	51		28 - 136	08/06/21 05:22	08/15/21 10:21	1
13C-1,2,3,4,6,7,8-HpCDD	57		23 - 140	08/06/21 05:22	08/15/21 10:21	1
13C-1,2,3,4,6,7,8-HpCDF	51		28 - 143	08/06/21 05:22	08/15/21 10:21	1
13C-1,2,3,4,7,8,9-HpCDF	59		26 - 138	08/06/21 05:22	08/15/21 10:21	1
13C-OCDD	59		17 - 157	08/06/21 05:22	08/15/21 10:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	68		35 - 197	08/06/21 05:22	08/15/21 10:21	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	1.1	J B	1.2	0.16	pg/g	☼	08/06/21 05:22	08/23/21 18:46	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	56		24 - 169	08/06/21 05:22	08/23/21 18:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	74		35 - 197	08/06/21 05:22	08/23/21 18:46	1

Client Sample ID: 11215702-072221-SS-SJSB074 (0-2) Lab Sample ID: 320-76769-13

Date Collected: 07/22/21 13:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25.7		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	74.3		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB074 (0-2) Lab Sample ID: 320-76769-13

Date Collected: 07/22/21 13:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 74.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	5600	E B G	8.5	8.5	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
1,2,3,7,8-PeCDD	49		6.7	0.70	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
1,2,3,7,8-PeCDF	680		6.7	5.2	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
2,3,4,7,8-PeCDF	370		6.7	5.3	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
1,2,3,4,7,8-HxCDD	1.3	J B	6.7	0.16	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
1,2,3,6,7,8-HxCDD	3.6	J	6.7	0.17	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
1,2,3,7,8,9-HxCDD	2.7	J B	6.7	0.15	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
1,2,3,4,7,8-HxCDF	910	B	6.7	5.4	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
1,2,3,6,7,8-HxCDF	240	B	6.7	5.8	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1

Client Sample ID: 11215702-072221-SS-SJSB074 (0-2) Lab Sample ID: 320-76769-13

Date Collected: 07/22/21 13:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 74.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	13	B	6.7	4.6	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
2,3,4,6,7,8-HxCDF	28		6.7	4.6	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
1,2,3,4,6,7,8-HpCDD	110	B	6.7	1.5	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
1,2,3,4,6,7,8-HpCDF	280	B	6.7	2.0	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
1,2,3,4,7,8,9-HpCDF	85	B	6.7	2.4	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
OCDD	2200	B	13	2.8	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
OCDF	140	B	13	0.15	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
Total TCDD	6100	B q G	8.5	8.5	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
Total TCDF	34000	B G	53	53	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
Total PeCDD	52	q	6.7	0.70	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
Total PeCDF	1600		6.7	5.2	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
Total HxCDD	32	B q	6.7	0.16	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
Total HxCDF	1300	B	6.7	5.1	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
Total HpCDD	230	B	6.7	1.5	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1
Total HpCDF	440	B	6.7	2.2	pg/g	☼	08/06/21 05:22	08/15/21 13:42	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*54*		*25 - 164*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-2,3,7,8-TCDF	*44*		*24 - 169*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-1,2,3,7,8-PeCDD	*52*		*25 - 181*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-1,2,3,7,8-PeCDF	*50*		*24 - 185*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-2,3,4,7,8-PeCDF	*53*		*21 - 178*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-1,2,3,4,7,8-HxCDD	*60*		*32 - 141*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-1,2,3,6,7,8-HxCDD	*54*		*28 - 130*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-1,2,3,4,7,8-HxCDF	*57*		*26 - 152*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-1,2,3,6,7,8-HxCDF	*50*		*26 - 123*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-1,2,3,7,8,9-HxCDF	*50*		*29 - 147*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-2,3,4,6,7,8-HxCDF	*50*		*28 - 136*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*59*		*23 - 140*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*54*		*28 - 143*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*62*		*26 - 138*	*08/06/21 05:22*	*08/15/21 13:42*	*1*
13C-OCDD	*68*		*17 - 157*	*08/06/21 05:22*	*08/15/21 13:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*84*		*35 - 197*	*08/06/21 05:22*	*08/15/21 13:42*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	19000	G E B	14	14	pg/g	☼	08/06/21 05:22	08/21/21 22:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*64*		*24 - 169*	*08/06/21 05:22*	*08/21/21 22:13*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*94*		*35 - 197*	*08/06/21 05:22*	*08/21/21 22:13*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB074 (2-4)

Lab Sample ID: 320-76769-14

Date Collected: 07/22/21 13:05
Matrix: Sediment
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	48.5		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	51.5		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB074 (2-4)

Lab Sample ID: 320-76769-14

Date Collected: 07/22/21 13:05
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 51.5

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	49000	E B G	76	76	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
1,2,3,7,8-PeCDD	480		9.6	5.7	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
1,2,3,7,8-PeCDF	5300	E G	31	31	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
2,3,4,7,8-PeCDF	3300	G	34	34	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
1,2,3,4,7,8-HxCDD	8.7	J B	9.6	1.0	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
1,2,3,6,7,8-HxCDD	80		9.6	1.1	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
1,2,3,7,8,9-HxCDD	25	B	9.6	0.97	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
1,2,3,4,7,8-HxCDF	9900	E B G	33	33	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
1,2,3,6,7,8-HxCDF	2700	B G	27	27	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
1,2,3,7,8,9-HxCDF	130	B G	23	23	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
2,3,4,6,7,8-HxCDF	250	G	22	22	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
1,2,3,4,6,7,8-HpCDD	4000	E B G	25	25	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
1,2,3,4,6,7,8-HpCDF	4200	E B G	19	19	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
1,2,3,4,7,8,9-HpCDF	1100	B G	20	20	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
OCDD	41000	E B G	29	29	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
OCDF	1600	B	19	1.2	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
Total TCDD	54000	B G	76	76	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
Total TCDF	210000	B q G	360	360	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
Total PeCDD	600		9.6	5.7	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
Total PeCDF	13000	G	33	33	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
Total HxCDD	450	B	9.6	1.0	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
Total HxCDF	15000	B G	26	26	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
Total HpCDD	6600	B G	25	25	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1
Total HpCDF	6300	B G	19	19	pg/g	☼	08/06/21 05:22	08/15/21 21:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*68*		*25 - 164*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-2,3,7,8-TCDF	*52*		*24 - 169*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-1,2,3,7,8-PeCDD	*68*		*25 - 181*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-1,2,3,7,8-PeCDF	*63*		*24 - 185*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-2,3,4,7,8-PeCDF	*71*		*21 - 178*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-1,2,3,4,7,8-HxCDD	*62*		*32 - 141*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-1,2,3,6,7,8-HxCDD	*54*		*28 - 130*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-1,2,3,4,7,8-HxCDF	*58*		*26 - 152*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-1,2,3,6,7,8-HxCDF	*51*		*26 - 123*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-1,2,3,7,8,9-HxCDF	*55*		*29 - 147*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-2,3,4,6,7,8-HxCDF	*54*		*28 - 136*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*66*		*23 - 140*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*61*		*28 - 143*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*72*		*26 - 138*	*08/06/21 05:22*	*08/15/21 21:12*	*1*
13C-OCDD	*86*		*17 - 157*	*08/06/21 05:22*	*08/15/21 21:12*	*1*

Client Sample ID: 11215702-072221-SS-SJSB074 (2-4) Lab Sample ID: 320-76769-14

Date Collected: 07/22/21 13:05 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 51.5**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	185		35 - 197	08/06/21 05:22	08/15/21 21:12	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	180000	E B G	150	150	pg/g	☼	08/06/21 05:22	08/24/21 12:18	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	51		24 - 169	08/06/21 05:22	08/24/21 12:18	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	144		35 - 197	08/06/21 05:22	08/24/21 12:18	5

Client Sample ID: 11215702-072221-SS-SJSB074 (4-6) Lab Sample ID: 320-76769-15

Date Collected: 07/22/21 13:10 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	42.4		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	57.6		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB074 (4-6) Lab Sample ID: 320-76769-15

Date Collected: 07/22/21 13:10 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 57.6**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	22000	E B G	42	42	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
1,2,3,7,8-PeCDD	190		9.0	2.0	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
1,2,3,7,8-PeCDF	3600	E G	22	22	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
2,3,4,7,8-PeCDF	1500	G	19	19	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
1,2,3,4,7,8-HxCDD	4.0	J B	9.0	1.1	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
1,2,3,6,7,8-HxCDD	32		9.0	1.0	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
1,2,3,7,8,9-HxCDD	8.6	J B	9.0	0.95	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
1,2,3,4,7,8-HxCDF	5100	E B G	20	20	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
1,2,3,6,7,8-HxCDF	1400	B G	18	18	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
1,2,3,7,8,9-HxCDF	110	B G	14	14	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
2,3,4,6,7,8-HxCDF	160	G	17	17	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
1,2,3,4,6,7,8-HpCDD	1700	B G	14	14	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
1,2,3,4,6,7,8-HpCDF	1200	B	9.0	7.6	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
1,2,3,4,7,8,9-HpCDF	420	B	9.0	8.3	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
OCDD	17000	E B	18	18	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
OCDF	600	B	18	0.63	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
Total TCDD	24000	B G	42	42	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
Total TCDF	110000	B G	250	250	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
Total PeCDD	240	q	9.0	2.0	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
Total PeCDF	7600	q G	21	21	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
Total HxCDD	350	B	9.0	1.0	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
Total HxCDF	7800	B G	17	17	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
Total HpCDD	2700	B G	14	14	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1
Total HpCDF	2000	B	9.0	7.9	pg/g	☼	08/06/21 05:22	08/15/21 14:27	1

Client Sample ID: 11215702-072221-SS-SJSB074 (4-6) Lab Sample ID: 320-76769-15

Date Collected: 07/22/21 13:10 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 57.6**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	52		25 - 164	08/06/21 05:22	08/15/21 14:27	1
13C-2,3,7,8-TCDF	48		24 - 169	08/06/21 05:22	08/15/21 14:27	1
13C-1,2,3,7,8-PeCDD	84		25 - 181	08/06/21 05:22	08/15/21 14:27	1
13C-1,2,3,7,8-PeCDF	53		24 - 185	08/06/21 05:22	08/15/21 14:27	1
13C-2,3,4,7,8-PeCDF	67		21 - 178	08/06/21 05:22	08/15/21 14:27	1
13C-1,2,3,4,7,8-HxCDD	59		32 - 141	08/06/21 05:22	08/15/21 14:27	1
13C-1,2,3,6,7,8-HxCDD	57		28 - 130	08/06/21 05:22	08/15/21 14:27	1
13C-1,2,3,4,7,8-HxCDF	58		26 - 152	08/06/21 05:22	08/15/21 14:27	1
13C-1,2,3,6,7,8-HxCDF	52		26 - 123	08/06/21 05:22	08/15/21 14:27	1
13C-1,2,3,7,8,9-HxCDF	55		29 - 147	08/06/21 05:22	08/15/21 14:27	1
13C-2,3,4,6,7,8-HxCDF	45		28 - 136	08/06/21 05:22	08/15/21 14:27	1
13C-1,2,3,4,6,7,8-HpCDD	52		23 - 140	08/06/21 05:22	08/15/21 14:27	1
13C-1,2,3,4,6,7,8-HpCDF	45		28 - 143	08/06/21 05:22	08/15/21 14:27	1
13C-1,2,3,4,7,8,9-HpCDF	52		26 - 138	08/06/21 05:22	08/15/21 14:27	1
13C-OCDD	58		17 - 157	08/06/21 05:22	08/15/21 14:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	106		35 - 197	08/06/21 05:22	08/15/21 14:27	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	63000	G E B	82	82	pg/g	☼	08/06/21 05:22	08/21/21 22:51	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	56		24 - 169	08/06/21 05:22	08/21/21 22:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	114		35 - 197	08/06/21 05:22	08/21/21 22:51	1

Client Sample ID: 11215702-072221-SS-SJSB074 (6-8) Lab Sample ID: 320-76769-16

Date Collected: 07/22/21 13:15 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19.7		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	80.3		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB074 (6-8) Lab Sample ID: 320-76769-16

Date Collected: 07/22/21 13:15 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 80.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	63	B	1.2	0.30	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
1,2,3,7,8-PeCDD	0.64	J q	6.2	0.10	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
1,2,3,7,8-PeCDF	5.6	J	6.2	0.13	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
2,3,4,7,8-PeCDF	3.6	J	6.2	0.13	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
1,2,3,4,7,8-HxCDD	0.55	J B	6.2	0.14	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
1,2,3,6,7,8-HxCDD	0.98	J	6.2	0.14	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
1,2,3,7,8,9-HxCDD	1.4	J B	6.2	0.13	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
1,2,3,4,7,8-HxCDF	7.8	B	6.2	0.10	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
1,2,3,6,7,8-HxCDF	2.3	J B	6.2	0.10	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1

Client Sample ID: 11215702-072221-SS-SJSB074 (6-8) Lab Sample ID: 320-76769-16

Date Collected: 07/22/21 13:15 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 80.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	ND		6.2	0.085	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
2,3,4,6,7,8-HxCDF	**0.32**	**J q**	6.2	0.083	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
1,2,3,4,6,7,8-HpCDD	**34**	**B**	6.2	0.79	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
1,2,3,4,6,7,8-HpCDF	**4.3**	**J B**	6.2	0.14	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
1,2,3,4,7,8,9-HpCDF	**0.87**	**J B**	6.2	0.16	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
OCDD	**1200**	**B**	12	1.7	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
OCDF	**7.1**	**J B**	12	0.059	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
Total TCDD	**69**	**B q**	1.2	0.30	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
Total TCDF	**370**	**B**	1.2	0.83	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
Total PeCDD	**4.1**	**J q**	6.2	0.10	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
Total PeCDF	**17**		6.2	0.13	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
Total HxCDD	**21**	**B q**	6.2	0.14	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
Total HxCDF	**14**	**B q**	6.2	0.092	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
Total HpCDD	**110**	**B**	6.2	0.79	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1
Total HpCDF	**7.3**	**B**	6.2	0.15	pg/g	☼	08/06/21 05:22	08/15/21 15:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*51*		*25 - 164*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-2,3,7,8-TCDF	*45*		*24 - 169*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-1,2,3,7,8-PeCDD	*54*		*25 - 181*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-1,2,3,7,8-PeCDF	*48*		*24 - 185*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-2,3,4,7,8-PeCDF	*52*		*21 - 178*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-1,2,3,4,7,8-HxCDD	*58*		*32 - 141*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-1,2,3,6,7,8-HxCDD	*51*		*28 - 130*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-1,2,3,4,7,8-HxCDF	*52*		*26 - 152*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-1,2,3,6,7,8-HxCDF	*49*		*26 - 123*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-1,2,3,7,8,9-HxCDF	*47*		*29 - 147*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-2,3,4,6,7,8-HxCDF	*47*		*28 - 136*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*47*		*23 - 140*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*41*		*28 - 143*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*49*		*26 - 138*	*08/06/21 05:22*	*08/15/21 15:12*	*1*
13C-OCDD	*50*		*17 - 157*	*08/06/21 05:22*	*08/15/21 15:12*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*64*		*35 - 197*	*08/06/21 05:22*	*08/15/21 15:12*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**200**	**B**	1.2	0.42	pg/g	☼	08/06/21 05:22	08/24/21 00:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*51*		*24 - 169*	*08/06/21 05:22*	*08/24/21 00:31*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*70*		*35 - 197*	*08/06/21 05:22*	*08/24/21 00:31*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB074 (8-10)

Lab Sample ID: 320-76769-17

Date Collected: 07/22/21 13:20
Matrix: Sediment
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16.3		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	83.7		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB074 (8-10)

Lab Sample ID: 320-76769-17

Date Collected: 07/22/21 13:20
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 83.7

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	3.7	B	1.2	0.099	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
1,2,3,7,8-PeCDD	ND		6.0	0.065	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
1,2,3,7,8-PeCDF	0.33	J	6.0	0.060	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
2,3,4,7,8-PeCDF	0.20	J	6.0	0.061	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
1,2,3,4,7,8-HxCDD	0.20	J B q	6.0	0.080	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
1,2,3,6,7,8-HxCDD	ND		6.0	0.082	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
1,2,3,7,8,9-HxCDD	0.19	J B q	6.0	0.074	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
1,2,3,4,7,8-HxCDF	0.44	J B q	6.0	0.043	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
1,2,3,6,7,8-HxCDF	0.12	J B	6.0	0.045	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
1,2,3,7,8,9-HxCDF	ND		6.0	0.036	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
2,3,4,6,7,8-HxCDF	ND		6.0	0.035	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
1,2,3,4,6,7,8-HpCDD	2.9	J B	6.0	0.14	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
1,2,3,4,6,7,8-HpCDF	0.22	J B	6.0	0.049	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
1,2,3,4,7,8,9-HpCDF	ND		6.0	0.063	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
OCDD	82	B	12	0.21	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
OCDF	0.38	J B q	12	0.033	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
Total TCDD	4.0	B	1.2	0.099	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
Total TCDF	22	B q	1.2	0.15	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
Total PeCDD	0.17	J q	6.0	0.065	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
Total PeCDF	0.69	J q	6.0	0.060	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
Total HxCDD	2.7	J B q	6.0	0.078	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
Total HxCDF	0.56	J B q	6.0	0.040	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
Total HpCDD	13	B	6.0	0.14	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1
Total HpCDF	0.35	J B q	6.0	0.056	pg/g	☼	08/06/21 05:22	08/15/21 15:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*48*		*25 - 164*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-2,3,7,8-TCDF	*43*		*24 - 169*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-1,2,3,7,8-PeCDD	*48*		*25 - 181*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-1,2,3,7,8-PeCDF	*44*		*24 - 185*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-2,3,4,7,8-PeCDF	*48*		*21 - 178*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-1,2,3,4,7,8-HxCDD	*49*		*32 - 141*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-1,2,3,6,7,8-HxCDD	*49*		*28 - 130*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-1,2,3,4,7,8-HxCDF	*48*		*26 - 152*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-1,2,3,6,7,8-HxCDF	*45*		*26 - 123*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-1,2,3,7,8,9-HxCDF	*44*		*29 - 147*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-2,3,4,6,7,8-HxCDF	*43*		*28 - 136*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*48*		*23 - 140*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*44*		*28 - 143*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*50*		*26 - 138*	*08/06/21 05:22*	*08/15/21 15:57*	*1*
13C-OCDD	*52*		*17 - 157*	*08/06/21 05:22*	*08/15/21 15:57*	*1*

Client Sample ID: 11215702-072221-SS-SJSB074 (8-10) Lab Sample ID: 320-76769-17

Date Collected: 07/22/21 13:20 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 83.7**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	61		35 - 197	08/06/21 05:22	08/15/21 15:57	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	12	B	1.2	0.20	pg/g	☼	08/06/21 05:22	08/23/21 22:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	48		24 - 169	08/06/21 05:22	08/23/21 22:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	63		35 - 197	08/06/21 05:22	08/23/21 22:36	1

Client Sample ID: 11215702-072221-SS-SJSB074 (10-12) Lab Sample ID: 320-76769-18

Date Collected: 07/22/21 13:25 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16.2		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	83.8		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB074 (10-12) Lab Sample ID: 320-76769-18

Date Collected: 07/22/21 13:25 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 83.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	2.3	B	1.2	0.059	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
1,2,3,7,8-PeCDD	ND		5.9	0.043	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
1,2,3,7,8-PeCDF	0.17	J q	5.9	0.043	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
2,3,4,7,8-PeCDF	0.12	J q	5.9	0.043	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
1,2,3,4,7,8-HxCDD	0.19	J B	5.9	0.065	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
1,2,3,6,7,8-HxCDD	0.074	J q	5.9	0.068	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
1,2,3,7,8,9-HxCDD	ND		5.9	0.061	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
1,2,3,4,7,8-HxCDF	0.28	J B q	5.9	0.029	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
1,2,3,6,7,8-HxCDF	0.13	J B	5.9	0.030	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
1,2,3,7,8,9-HxCDF	0.067	J B q	5.9	0.025	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
2,3,4,6,7,8-HxCDF	ND		5.9	0.024	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
1,2,3,4,6,7,8-HpCDD	1.8	J B	5.9	0.083	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
1,2,3,4,6,7,8-HpCDF	0.16	J B	5.9	0.048	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
1,2,3,4,7,8,9-HpCDF	ND		5.9	0.059	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
OCDD	58	B	12	0.13	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
OCDF	0.16	J B q	12	0.040	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
Total TCDD	2.7	B q	1.2	0.059	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
Total TCDF	10	B q	1.2	0.092	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
Total PeCDD	0.18	J q	5.9	0.043	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
Total PeCDF	0.36	J q	5.9	0.043	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
Total HxCDD	1.4	J B q	5.9	0.065	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
Total HxCDF	0.47	J B q	5.9	0.027	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
Total HpCDD	7.1	B	5.9	0.083	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1
Total HpCDF	0.16	J B	5.9	0.053	pg/g	☼	08/06/21 05:22	08/15/21 16:42	1

Client Sample ID: 11215702-072221-SS-SJSB074 (10-12) Lab Sample ID: 320-76769-18

Date Collected: 07/22/21 13:25 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 83.8**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	52		25 - 164	08/06/21 05:22	08/15/21 16:42	1
13C-2,3,7,8-TCDF	47		24 - 169	08/06/21 05:22	08/15/21 16:42	1
13C-1,2,3,7,8-PeCDD	55		25 - 181	08/06/21 05:22	08/15/21 16:42	1
13C-1,2,3,7,8-PeCDF	49		24 - 185	08/06/21 05:22	08/15/21 16:42	1
13C-2,3,4,7,8-PeCDF	54		21 - 178	08/06/21 05:22	08/15/21 16:42	1
13C-1,2,3,4,7,8-HxCDD	55		32 - 141	08/06/21 05:22	08/15/21 16:42	1
13C-1,2,3,6,7,8-HxCDD	54		28 - 130	08/06/21 05:22	08/15/21 16:42	1
13C-1,2,3,4,7,8-HxCDF	53		26 - 152	08/06/21 05:22	08/15/21 16:42	1
13C-1,2,3,6,7,8-HxCDF	50		26 - 123	08/06/21 05:22	08/15/21 16:42	1
13C-1,2,3,7,8,9-HxCDF	49		29 - 147	08/06/21 05:22	08/15/21 16:42	1
13C-2,3,4,6,7,8-HxCDF	49		28 - 136	08/06/21 05:22	08/15/21 16:42	1
13C-1,2,3,4,6,7,8-HpCDD	55		23 - 140	08/06/21 05:22	08/15/21 16:42	1
13C-1,2,3,4,6,7,8-HpCDF	51		28 - 143	08/06/21 05:22	08/15/21 16:42	1
13C-1,2,3,4,7,8,9-HpCDF	59		26 - 138	08/06/21 05:22	08/15/21 16:42	1
13C-OCDD	60		17 - 157	08/06/21 05:22	08/15/21 16:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	65		35 - 197	08/06/21 05:22	08/15/21 16:42	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**6.2**	**B**	1.2	0.23	pg/g	☼	08/06/21 05:22	08/24/21 11:02	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	54		24 - 169	08/06/21 05:22	08/24/21 11:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	64		35 - 197	08/06/21 05:22	08/24/21 11:02	1

Client Sample ID: 11215702-072221-SS-SJSB074 (12-14) Lab Sample ID: 320-76769-19

Date Collected: 07/22/21 13:30 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**16.9**		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	**83.1**		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB074 (12-14) Lab Sample ID: 320-76769-19

Date Collected: 07/22/21 13:30 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 83.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**0.26**	**J B q**	1.1	0.063	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
2,3,7,8-TCDF	**0.76**	**J B**	1.1	0.055	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
1,2,3,7,8-PeCDD	**0.11**	**J q**	5.6	0.063	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
1,2,3,7,8-PeCDF	ND		5.6	0.033	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
2,3,4,7,8-PeCDF	ND		5.6	0.032	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
1,2,3,4,7,8-HxCDD	ND		5.6	0.11	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
1,2,3,6,7,8-HxCDD	ND		5.6	0.11	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
1,2,3,7,8,9-HxCDD	**0.22**	**J B q**	5.6	0.098	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
1,2,3,4,7,8-HxCDF	**0.13**	**J B q**	5.6	0.030	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1

Client Sample ID: 11215702-072221-SS-SJSB074 (12-14) Lab Sample ID: 320-76769-19

Date Collected: 07/22/21 13:30 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 83.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,6,7,8-HxCDF	0.054	J B q	5.6	0.032	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
1,2,3,7,8,9-HxCDF	0.11	J B q	5.6	0.027	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
2,3,4,6,7,8-HxCDF	0.056	J	5.6	0.024	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
1,2,3,4,6,7,8-HpCDD	2.2	J B	5.6	0.097	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
1,2,3,4,6,7,8-HpCDF	0.13	J B	5.6	0.038	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
1,2,3,4,7,8,9-HpCDF	0.093	J B	5.6	0.046	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
OCDD	55	B	11	0.15	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
OCDF	0.28	J B	11	0.033	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
Total TCDD	7.9	B q	1.1	0.063	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
Total TCDF	1.1	B	1.1	0.055	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
Total PeCDD	2.9	J q	5.6	0.063	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
Total PeCDF	ND		5.6	0.033	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
Total HxCDD	7.9	B q	5.6	0.10	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
Total HxCDF	0.35	J B q	5.6	0.028	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
Total HpCDD	9.6	B	5.6	0.097	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1
Total HpCDF	0.34	J B	5.6	0.042	pg/g	☼	08/06/21 05:22	08/15/21 17:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*49*		*25 - 164*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-2,3,7,8-TCDF	*44*		*24 - 169*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-1,2,3,7,8-PeCDD	*51*		*25 - 181*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-1,2,3,7,8-PeCDF	*46*		*24 - 185*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-2,3,4,7,8-PeCDF	*51*		*21 - 178*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-1,2,3,4,7,8-HxCDD	*51*		*32 - 141*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-1,2,3,6,7,8-HxCDD	*49*		*28 - 130*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-1,2,3,4,7,8-HxCDF	*50*		*26 - 152*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-1,2,3,6,7,8-HxCDF	*46*		*26 - 123*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-1,2,3,7,8,9-HxCDF	*45*		*29 - 147*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-2,3,4,6,7,8-HxCDF	*45*		*28 - 136*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*51*		*23 - 140*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*49*		*28 - 143*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*55*		*26 - 138*	*08/06/21 05:22*	*08/15/21 17:27*	*1*
13C-OCDD	*55*		*17 - 157*	*08/06/21 05:22*	*08/15/21 17:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*63*		*35 - 197*	*08/06/21 05:22*	*08/15/21 17:27*	*1*

Client Sample ID: 11215702-072221-SS-SJSB074 (14-16) Lab Sample ID: 320-76769-20

Date Collected: 07/22/21 13:35 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17.1		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	82.9		0.1	0.1	%			07/29/21 14:17	1

Client Sample Results

Client: GHD Services Inc. Job ID: 320-76769-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072221-SS-SJSB074 (14-16) Lab Sample ID: 320-76769-20

Date Collected: 07/22/21 13:35 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 82.9**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	1.8	B	1.2	0.071	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
1,2,3,7,8-PeCDD	ND		5.9	0.054	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
1,2,3,7,8-PeCDF	0.30	J	5.9	0.039	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
2,3,4,7,8-PeCDF	0.16	J q	5.9	0.040	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
1,2,3,4,7,8-HxCDD	0.25	J B	5.9	0.065	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
1,2,3,6,7,8-HxCDD	0.19	J q	5.9	0.068	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
1,2,3,7,8,9-HxCDD	0.24	J B q	5.9	0.061	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
1,2,3,4,7,8-HxCDF	0.38	J B q	5.9	0.033	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
1,2,3,6,7,8-HxCDF	0.20	J B	5.9	0.034	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
1,2,3,7,8,9-HxCDF	0.19	J B	5.9	0.028	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
2,3,4,6,7,8-HxCDF	0.10	J	5.9	0.028	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
1,2,3,4,6,7,8-HpCDD	2.2	J B	5.9	0.070	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
1,2,3,4,6,7,8-HpCDF	0.42	J B	5.9	0.041	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
1,2,3,4,7,8,9-HpCDF	0.12	J B	5.9	0.053	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
OCDD	51	B	12	0.097	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
OCDF	0.34	J B q	12	0.028	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
Total TCDD	4.6	B	1.2	0.071	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
Total TCDF	7.7	B q	1.2	0.073	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
Total PeCDD	1.8	J q	5.9	0.054	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
Total PeCDF	0.55	J q	5.9	0.039	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
Total HxCDD	6.8	B q	5.9	0.065	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
Total HxCDF	0.88	J B q	5.9	0.031	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
Total HpCDD	7.6	B	5.9	0.070	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1
Total HpCDF	0.74	J B	5.9	0.047	pg/g	☼	08/06/21 05:22	08/15/21 18:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*54*		*25 - 164*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-2,3,7,8-TCDF	*49*		*24 - 169*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-1,2,3,7,8-PeCDD	*58*		*25 - 181*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-1,2,3,7,8-PeCDF	*52*		*24 - 185*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-2,3,4,7,8-PeCDF	*56*		*21 - 178*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-1,2,3,4,7,8-HxCDD	*58*		*32 - 141*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-1,2,3,6,7,8-HxCDD	*52*		*28 - 130*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-1,2,3,4,7,8-HxCDF	*55*		*26 - 152*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-1,2,3,6,7,8-HxCDF	*51*		*26 - 123*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-1,2,3,7,8,9-HxCDF	*49*		*29 - 147*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-2,3,4,6,7,8-HxCDF	*50*		*28 - 136*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*57*		*23 - 140*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*54*		*28 - 143*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*61*		*26 - 138*	*08/06/21 05:22*	*08/15/21 18:12*	*1*
13C-OCDD	*62*		*17 - 157*	*08/06/21 05:22*	*08/15/21 18:12*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*67*		*35 - 197*	*08/06/21 05:22*	*08/15/21 18:12*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	5.7	B	1.2	0.82	pg/g	☼	08/06/21 05:22	08/23/21 12:43	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*48*		*24 - 169*	*08/06/21 05:22*	*08/23/21 12:43*	*1*

Client Sample ID: 11215702-072221-SS-SJSB074 (14-16) Lab Sample ID: 320-76769-20

Date Collected: 07/22/21 13:35 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 82.9**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	63		35 - 197	08/06/21 05:22	08/23/21 12:43	1

Client Sample ID: 11215702-072221-DUP-4 Lab Sample ID: 320-76769-25

Date Collected: 07/22/21 00:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19.1		0.1	0.1	%			07/29/21 11:22	1
Percent Solids	80.9		0.1	0.1	%			07/29/21 11:22	1

Client Sample ID: 11215702-072221-DUP-4 Lab Sample ID: 320-76769-25

Date Collected: 07/22/21 00:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 80.9**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	2.1	B	1.2	0.064	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
1,2,3,7,8-PeCDD	ND		6.0	0.055	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
1,2,3,7,8-PeCDF	0.27	J	6.0	0.040	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
2,3,4,7,8-PeCDF	0.10	J q	6.0	0.039	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
1,2,3,4,7,8-HxCDD	0.22	J B	6.0	0.074	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
1,2,3,6,7,8-HxCDD	ND		6.0	0.077	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
1,2,3,7,8,9-HxCDD	0.27	J B	6.0	0.069	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
1,2,3,4,7,8-HxCDF	0.35	J B	6.0	0.027	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
1,2,3,6,7,8-HxCDF	0.10	J B q	6.0	0.028	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
1,2,3,7,8,9-HxCDF	ND		6.0	0.023	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
2,3,4,6,7,8-HxCDF	ND		6.0	0.022	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
1,2,3,4,6,7,8-HpCDD	3.5	J B	6.0	0.13	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
1,2,3,4,6,7,8-HpCDF	0.18	J B q	6.0	0.038	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
1,2,3,4,7,8,9-HpCDF	ND		6.0	0.051	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
OCDD	72	B	12	0.13	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
OCDF	0.26	J B	12	0.026	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
Total TCDD	2.6	B	1.2	0.064	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
Total TCDF	11	B q	1.2	0.081	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
Total PeCDD	0.93	J q	6.0	0.055	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
Total PeCDF	0.49	J q	6.0	0.039	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
Total HxCDD	4.5	J B	6.0	0.073	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
Total HxCDF	0.45	J B q	6.0	0.025	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
Total HpCDD	13	B	6.0	0.13	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1
Total HpCDF	0.29	J B q	6.0	0.045	pg/g	☼	08/06/21 05:22	08/15/21 18:57	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	44		25 - 164	08/06/21 05:22	08/15/21 18:57	1
13C-2,3,7,8-TCDF	40		24 - 169	08/06/21 05:22	08/15/21 18:57	1
13C-1,2,3,7,8-PeCDD	46		25 - 181	08/06/21 05:22	08/15/21 18:57	1
13C-1,2,3,7,8-PeCDF	42		24 - 185	08/06/21 05:22	08/15/21 18:57	1
13C-2,3,4,7,8-PeCDF	47		21 - 178	08/06/21 05:22	08/15/21 18:57	1
13C-1,2,3,4,7,8-HxCDD	48		32 - 141	08/06/21 05:22	08/15/21 18:57	1
13C-1,2,3,6,7,8-HxCDD	43		28 - 130	08/06/21 05:22	08/15/21 18:57	1
13C-1,2,3,4,7,8-HxCDF	45		26 - 152	08/06/21 05:22	08/15/21 18:57	1
13C-1,2,3,6,7,8-HxCDF	42		26 - 123	08/06/21 05:22	08/15/21 18:57	1

Client Sample ID: 11215702-072221-DUP-4 — Lab Sample ID: 320-76769-25

Date Collected: 07/22/21 00:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 80.9**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,7,8,9-HxCDF	*41*		*29 - 147*	*08/06/21 05:22*	*08/15/21 18:57*	*1*
13C-2,3,4,6,7,8-HxCDF	*42*		*28 - 136*	*08/06/21 05:22*	*08/15/21 18:57*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*49*		*23 - 140*	*08/06/21 05:22*	*08/15/21 18:57*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*47*		*28 - 143*	*08/06/21 05:22*	*08/15/21 18:57*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*52*		*26 - 138*	*08/06/21 05:22*	*08/15/21 18:57*	*1*
13C-OCDD	*55*		*17 - 157*	*08/06/21 05:22*	*08/15/21 18:57*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*54*		*35 - 197*	*08/06/21 05:22*	*08/15/21 18:57*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**6.3**	**B**	1.2	0.18	pg/g	☼	08/06/21 05:22	08/23/21 20:41	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*43*		*24 - 169*	*08/06/21 05:22*	*08/23/21 20:41*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*55*		*35 - 197*	*08/06/21 05:22*	*08/23/21 20:41*	*1*

Client Sample ID: 11215702-072221-DUP-5 — Lab Sample ID: 320-76769-26

Date Collected: 07/22/21 00:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**41.9**		0.1	0.1	%			07/29/21 11:22	1
Percent Solids	**58.1**		0.1	0.1	%			07/29/21 11:22	1

Client Sample ID: 11215702-072221-DUP-5 — Lab Sample ID: 320-76769-26

Date Collected: 07/22/21 00:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 58.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**41000**	**E B G**	72	72	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
1,2,3,7,8-PeCDD	**390**		8.2	4.3	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
1,2,3,7,8-PeCDF	**3900**	**E G**	28	28	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
2,3,4,7,8-PeCDF	**2600**	**G**	27	27	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
1,2,3,4,7,8-HxCDD	**6.5**	**J B**	8.2	0.68	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
1,2,3,6,7,8-HxCDD	**45**		8.2	0.77	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
1,2,3,7,8,9-HxCDD	**16**	**B**	8.2	0.66	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
1,2,3,4,7,8-HxCDF	**5900**	**E B G**	18	18	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
1,2,3,6,7,8-HxCDF	**1600**	**B G**	17	17	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
1,2,3,7,8,9-HxCDF	**86**	**B G**	14	14	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
2,3,4,6,7,8-HxCDF	**160**	**G**	14	14	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
1,2,3,4,6,7,8-HpCDD	**1800**	**B G**	14	14	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
1,2,3,4,6,7,8-HpCDF	**1900**	**B G**	11	11	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
1,2,3,4,7,8,9-HpCDF	**610**	**B G**	12	12	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
OCDD	**21000**	**E B G**	18	18	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
OCDF	**950**	**B**	16	0.64	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
Total TCDD	**46000**	**B G**	72	72	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1

Client Sample ID: 11215702-072221-DUP-5 — Lab Sample ID: 320-76769-26

Date Collected: 07/22/21 00:00 — **Matrix: Sediment**
Date Received: 07/27/21 09:45 — **Percent Solids: 58.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	160000	B q G	260	260	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
Total PeCDD	480	q	8.2	4.3	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
Total PeCDF	10000	G	27	27	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
Total HxCDD	250	B	8.2	0.70	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
Total HxCDF	8800	B G	16	16	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
Total HpCDD	3200	B G	14	14	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1
Total HpCDF	3200	B G	12	12	pg/g	☼	08/06/21 05:22	08/15/21 19:42	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*63*		*25 - 164*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-2,3,7,8-TCDF	*55*		*24 - 169*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-1,2,3,7,8-PeCDD	*74*		*25 - 181*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-1,2,3,7,8-PeCDF	*65*		*24 - 185*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-2,3,4,7,8-PeCDF	*71*		*21 - 178*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-1,2,3,4,7,8-HxCDD	*68*		*32 - 141*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-1,2,3,6,7,8-HxCDD	*57*		*28 - 130*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-1,2,3,4,7,8-HxCDF	*63*		*26 - 152*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-1,2,3,6,7,8-HxCDF	*54*		*26 - 123*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-1,2,3,7,8,9-HxCDF	*56*		*29 - 147*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-2,3,4,6,7,8-HxCDF	*56*		*28 - 136*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*66*		*23 - 140*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*28 - 143*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*71*		*26 - 138*	*08/06/21 05:22*	*08/15/21 19:42*	*1*
13C-OCDD	*79*		*17 - 157*	*08/06/21 05:22*	*08/15/21 19:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*174*		*35 - 197*	*08/06/21 05:22*	*08/15/21 19:42*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	160000	E B G	120	120	pg/g	☼	08/06/21 05:22	08/24/21 12:57	5

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*59*		*24 - 169*	*08/06/21 05:22*	*08/24/21 12:57*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*152*		*35 - 197*	*08/06/21 05:22*	*08/24/21 12:57*	*5*

Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) — Lab Sample ID: 320-76769-27

Date Collected: 07/22/21 15:50 — **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24.0		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	76.0		0.1	0.1	%			07/29/21 14:17	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB076 (0-2)

Lab Sample ID: 320-76769-27

Date Collected: 07/22/21 15:50
Date Received: 07/27/21 09:45

Matrix: Sediment
Percent Solids: 76.0

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	2100	E G	1.9	1.9	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
1,2,3,7,8-PeCDD	20		6.2	0.56	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
1,2,3,7,8-PeCDF	310		6.2	1.9	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
2,3,4,7,8-PeCDF	160		6.2	2.0	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
1,2,3,4,7,8-HxCDD	0.96	J	6.2	0.19	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
1,2,3,6,7,8-HxCDD	1.8	J	6.2	0.21	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
1,2,3,7,8,9-HxCDD	2.0	J	6.2	0.19	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
1,2,3,4,7,8-HxCDF	500	F1	6.2	1.5	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
1,2,3,6,7,8-HxCDF	130		6.2	1.6	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
1,2,3,7,8,9-HxCDF	8.1		6.2	1.6	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
2,3,4,6,7,8-HxCDF	16		6.2	1.5	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
1,2,3,4,6,7,8-HpCDD	51	B F1 F2	6.2	0.31	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
1,2,3,4,6,7,8-HpCDF	150		6.2	0.51	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
1,2,3,4,7,8,9-HpCDF	46		6.2	0.51	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
OCDD	1200	B F2	12	0.92	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
OCDF	72		12	0.19	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
Total TCDD	2300	G	1.9	1.9	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
Total TCDF	13000	G	5.8	5.8	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
Total PeCDD	22	q	6.2	0.56	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
Total PeCDF	720	q	6.2	1.9	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
Total HxCDD	22	q	6.2	0.20	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
Total HxCDF	740		6.2	1.5	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
Total HpCDD	120	B	6.2	0.31	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1
Total HpCDF	230		6.2	0.51	pg/g	☼	08/06/21 05:28	08/18/21 20:24	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*52*		*25 - 164*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-2,3,7,8-TCDF	*54*		*24 - 169*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-1,2,3,7,8-PeCDD	*50*		*25 - 181*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-1,2,3,7,8-PeCDF	*50*		*24 - 185*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-2,3,4,7,8-PeCDF	*52*		*21 - 178*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-1,2,3,4,7,8-HxCDD	*58*		*32 - 141*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-1,2,3,6,7,8-HxCDD	*54*		*28 - 130*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-1,2,3,4,7,8-HxCDF	*67*		*26 - 152*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-1,2,3,6,7,8-HxCDF	*58*		*26 - 123*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-1,2,3,7,8,9-HxCDF	*53*		*29 - 147*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-2,3,4,6,7,8-HxCDF	*54*		*28 - 136*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*58*		*23 - 140*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*57*		*28 - 143*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*63*		*26 - 138*	*08/06/21 05:28*	*08/18/21 20:24*	*1*
13C-OCDD	*64*		*17 - 157*	*08/06/21 05:28*	*08/18/21 20:24*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*70*		*35 - 197*	*08/06/21 05:28*	*08/18/21 20:24*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	7600	E G	6.4	6.4	pg/g	☼	08/06/21 05:28	08/24/21 14:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*59*		*24 - 169*	*08/06/21 05:28*	*08/24/21 14:13*	*1*

Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) Lab Sample ID: 320-76769-27

Date Collected: 07/22/21 15:50 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 76.0**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	76		35 - 197	08/06/21 05:28	08/24/21 14:13	1

Client Sample ID: 11215702-072221-SS-SJSB076 (2-4) Lab Sample ID: 320-76769-28

Date Collected: 07/22/21 15:55 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	49.2		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	50.8		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB076 (2-4) Lab Sample ID: 320-76769-28

Date Collected: 07/22/21 15:55 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 50.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	36000	E B G	82	82	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
1,2,3,7,8-PeCDD	270		9.6	4.1	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
1,2,3,7,8-PeCDF	6000	E G	36	36	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
2,3,4,7,8-PeCDF	2600	G	38	38	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
1,2,3,4,7,8-HxCDD	3.6	J B	9.6	0.44	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
1,2,3,6,7,8-HxCDD	18		9.6	0.49	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
1,2,3,7,8,9-HxCDD	9.1	J B	9.6	0.42	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
1,2,3,4,7,8-HxCDF	8400	E B G	21	21	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
1,2,3,6,7,8-HxCDF	2300	B G	18	18	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
1,2,3,7,8,9-HxCDF	140	B G	15	15	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
2,3,4,6,7,8-HxCDF	260	G	15	15	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
1,2,3,4,6,7,8-HpCDD	350	B	9.6	3.3	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
1,2,3,4,6,7,8-HpCDF	2300	B G	13	13	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
1,2,3,4,7,8,9-HpCDF	780	B G	14	14	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
OCDD	4500	B	19	3.9	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
OCDF	910	B	19	0.77	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
Total TCDD	40000	B G	82	82	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
Total TCDF	160000	B q G	210	210	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
Total PeCDD	300	q	9.6	4.1	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
Total PeCDF	13000	q G	37	37	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
Total HxCDD	110	B	9.6	0.45	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
Total HxCDF	13000	B G	17	17	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
Total HpCDD	690	B	9.6	3.3	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1
Total HpCDF	3600	B G	13	13	pg/g	☼	08/06/21 05:22	08/15/21 20:27	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	53		25 - 164	08/06/21 05:22	08/15/21 20:27	1
13C-2,3,7,8-TCDF	42		24 - 169	08/06/21 05:22	08/15/21 20:27	1
13C-1,2,3,7,8-PeCDD	57		25 - 181	08/06/21 05:22	08/15/21 20:27	1
13C-1,2,3,7,8-PeCDF	52		24 - 185	08/06/21 05:22	08/15/21 20:27	1
13C-2,3,4,7,8-PeCDF	57		21 - 178	08/06/21 05:22	08/15/21 20:27	1
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	08/06/21 05:22	08/15/21 20:27	1
13C-1,2,3,6,7,8-HxCDD	45		28 - 130	08/06/21 05:22	08/15/21 20:27	1
13C-1,2,3,4,7,8-HxCDF	49		26 - 152	08/06/21 05:22	08/15/21 20:27	1
13C-1,2,3,6,7,8-HxCDF	43		26 - 123	08/06/21 05:22	08/15/21 20:27	1

Client Sample ID: 11215702-072221-SS-SJSB076 (2-4) Lab Sample ID: 320-76769-28

Date Collected: 07/22/21 15:55 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 50.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	46		29 - 147	08/06/21 05:22	08/15/21 20:27	1
13C-2,3,4,6,7,8-HxCDF	44		28 - 136	08/06/21 05:22	08/15/21 20:27	1
13C-1,2,3,4,6,7,8-HpCDD	53		23 - 140	08/06/21 05:22	08/15/21 20:27	1
13C-1,2,3,4,6,7,8-HpCDF	48		28 - 143	08/06/21 05:22	08/15/21 20:27	1
13C-1,2,3,4,7,8,9-HpCDF	57		26 - 138	08/06/21 05:22	08/15/21 20:27	1
13C-OCDD	61		17 - 157	08/06/21 05:22	08/15/21 20:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	128		35 - 197	08/06/21 05:22	08/15/21 20:27	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	110000	E B G	92	92	pg/g	☼	08/06/21 05:22	08/24/21 13:35	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	47		24 - 169	08/06/21 05:22	08/24/21 13:35	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	129		35 - 197	08/06/21 05:22	08/24/21 13:35	5

Client Sample ID: 11215702-072221-SS-SJSB076 (4-6) Lab Sample ID: 320-76769-29

Date Collected: 07/22/21 16:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	56.4		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	43.6		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB076 (4-6) Lab Sample ID: 320-76769-29

Date Collected: 07/22/21 16:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 43.6**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	45000	E G	41	41	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
1,2,3,7,8-PeCDD	420		11	5.1	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
1,2,3,7,8-PeCDF	6400	E G	27	27	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
2,3,4,7,8-PeCDF	3200	G	19	19	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
1,2,3,4,7,8-HxCDD	7.0	J	11	1.0	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
1,2,3,6,7,8-HxCDD	35		11	1.1	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
1,2,3,7,8,9-HxCDD	13		11	1.0	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
1,2,3,4,7,8-HxCDF	11000	E G	21	21	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
1,2,3,6,7,8-HxCDF	3000	G	16	16	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
1,2,3,7,8,9-HxCDF	210	G	15	15	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
2,3,4,6,7,8-HxCDF	360	G	18	18	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
1,2,3,4,6,7,8-HpCDD	1200	B	11	2.6	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
1,2,3,4,6,7,8-HpCDF	2900		11	5.5	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
1,2,3,4,7,8,9-HpCDF	1000		11	5.1	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
OCDD	16000	E B	23	7.5	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
OCDF	1400		23	1.7	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
Total TCDD	50000	G	41	41	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1

Client Sample ID: 11215702-072221-SS-SJSB076 (4-6) Lab Sample ID: 320-76769-29

Date Collected: 07/22/21 16:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 43.6**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	230000	q G	320	320	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
Total PeCDD	420		11	5.1	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
Total PeCDF	16000	G	23	23	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
Total HxCDD	260		11	1.1	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
Total HxCDF	16000	G	17	17	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
Total HpCDD	2200	B	11	2.6	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1
Total HpCDF	4600		11	5.3	pg/g	☼	08/06/21 05:28	08/18/21 22:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*55*		*25 - 164*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-2,3,7,8-TCDF	*52*		*24 - 169*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-1,2,3,7,8-PeCDD	*67*		*25 - 181*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-1,2,3,7,8-PeCDF	*42*		*24 - 185*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-2,3,4,7,8-PeCDF	*54*		*21 - 178*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-1,2,3,4,7,8-HxCDD	*60*		*32 - 141*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-1,2,3,6,7,8-HxCDD	*54*		*28 - 130*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-1,2,3,4,7,8-HxCDF	*68*		*26 - 152*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-1,2,3,6,7,8-HxCDF	*56*		*26 - 123*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-1,2,3,7,8,9-HxCDF	*61*		*29 - 147*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-2,3,4,6,7,8-HxCDF	*53*		*28 - 136*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*61*		*23 - 140*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*53*		*28 - 143*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*59*		*26 - 138*	*08/06/21 05:28*	*08/18/21 22:48*	*1*
13C-OCDD	*64*		*17 - 157*	*08/06/21 05:28*	*08/18/21 22:48*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*125*		*35 - 197*	*08/06/21 05:28*	*08/18/21 22:48*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	150000	G E	140	140	pg/g	☼	08/06/21 05:28	08/25/21 02:50	5

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*44*		*24 - 169*	*08/06/21 05:28*	*08/25/21 02:50*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*114*		*35 - 197*	*08/06/21 05:28*	*08/25/21 02:50*	*5*

Client Sample ID: 11215702-072221-SS-SJSB076 (6-8) Lab Sample ID: 320-76769-30

Date Collected: 07/22/21 16:05 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23.3		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	76.7		0.1	0.1	%			07/29/21 14:17	1

Client Sample Results

Client: GHD Services Inc. Job ID: 320-76769-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072221-SS-SJSB076 (6-8) Lab Sample ID: 320-76769-30

Date Collected: 07/22/21 16:05 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 76.7**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	150		1.3	0.29	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
1,2,3,7,8-PeCDD	1.5	J	6.7	0.073	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
1,2,3,7,8-PeCDF	17		6.7	0.24	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
2,3,4,7,8-PeCDF	9.7		6.7	0.26	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
1,2,3,4,7,8-HxCDD	ND		6.7	0.051	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
1,2,3,6,7,8-HxCDD	ND		6.7	0.054	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
1,2,3,7,8,9-HxCDD	0.24	J q	6.7	0.049	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
1,2,3,4,7,8-HxCDF	24		6.7	0.15	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
1,2,3,6,7,8-HxCDF	6.8		6.7	0.15	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
1,2,3,7,8,9-HxCDF	ND		6.7	0.14	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
2,3,4,6,7,8-HxCDF	ND		6.7	0.15	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
1,2,3,4,6,7,8-HpCDD	6.4	J B	6.7	0.11	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
1,2,3,4,6,7,8-HpCDF	6.6	J	6.7	0.086	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
1,2,3,4,7,8,9-HpCDF	2.5	J	6.7	0.083	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
OCDD	150	B	13	0.26	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
OCDF	3.6	J q	13	0.083	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
Total TCDD	160	q	1.3	0.29	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
Total TCDF	930		1.3	1.2	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
Total PeCDD	1.5	J	6.7	0.073	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
Total PeCDF	38		6.7	0.25	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
Total HxCDD	3.6	J q	6.7	0.051	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
Total HxCDF	31		6.7	0.15	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
Total HpCDD	19	B	6.7	0.11	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1
Total HpCDF	11		6.7	0.084	pg/g	☼	08/06/21 05:28	08/17/21 22:36	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*61*		*25 - 164*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-2,3,7,8-TCDF	*60*		*24 - 169*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-1,2,3,7,8-PeCDD	*60*		*25 - 181*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-1,2,3,7,8-PeCDF	*59*		*24 - 185*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-2,3,4,7,8-PeCDF	*64*		*21 - 178*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-1,2,3,4,7,8-HxCDD	*68*		*32 - 141*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-1,2,3,6,7,8-HxCDD	*64*		*28 - 130*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-1,2,3,4,7,8-HxCDF	*74*		*26 - 152*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-1,2,3,6,7,8-HxCDF	*63*		*26 - 123*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-1,2,3,7,8,9-HxCDF	*62*		*29 - 147*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-2,3,4,6,7,8-HxCDF	*61*		*28 - 136*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*74*		*23 - 140*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*69*		*28 - 143*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*77*		*26 - 138*	*08/06/21 05:28*	*08/17/21 22:36*	*1*
13C-OCDD	*74*		*17 - 157*	*08/06/21 05:28*	*08/17/21 22:36*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*70*		*35 - 197*	*08/06/21 05:28*	*08/17/21 22:36*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	540		1.3	0.71	pg/g	☼	08/06/21 05:28	08/24/21 01:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*69*		*24 - 169*	*08/06/21 05:28*	*08/24/21 01:48*	*1*

Client Sample ID: 11215702-072221-SS-SJSB076 (6-8) Lab Sample ID: 320-76769-30

Date Collected: 07/22/21 16:05 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 76.7**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	76		35 - 197	08/06/21 05:28	08/24/21 01:48	1

Client Sample ID: 11215702-072221-SS-SJSB076 (8-10) Lab Sample ID: 320-76769-31

Date Collected: 07/22/21 16:10 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18.6		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	81.4		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB076 (8-10) Lab Sample ID: 320-76769-31

Date Collected: 07/22/21 16:10 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 81.4**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	7.9		1.2	0.086	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
1,2,3,7,8-PeCDD	0.19	J	6.0	0.073	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
1,2,3,7,8-PeCDF	0.96	J	6.0	0.049	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
2,3,4,7,8-PeCDF	0.54	J	6.0	0.051	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
1,2,3,4,7,8-HxCDD	0.28	J	6.0	0.098	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
1,2,3,6,7,8-HxCDD	0.19	J q	6.0	0.10	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
1,2,3,7,8,9-HxCDD	0.28	J q	6.0	0.092	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
1,2,3,4,7,8-HxCDF	1.1	J	6.0	0.087	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
1,2,3,6,7,8-HxCDF	0.30	J q	6.0	0.085	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
1,2,3,7,8,9-HxCDF	0.13	J	6.0	0.082	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
2,3,4,6,7,8-HxCDF	ND		6.0	0.073	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
1,2,3,4,6,7,8-HpCDD	3.4	J B	6.0	0.14	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
1,2,3,4,6,7,8-HpCDF	0.43	J q	6.0	0.070	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
1,2,3,4,7,8,9-HpCDF	0.16	J	6.0	0.082	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
OCDD	84	B	12	0.19	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
OCDF	0.35	J	12	0.083	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
Total TCDD	8.8		1.2	0.086	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
Total TCDF	51	q	1.2	0.13	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
Total PeCDD	0.40	J	6.0	0.073	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
Total PeCDF	2.1	J	6.0	0.050	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
Total HxCDD	3.9	J q	6.0	0.098	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
Total HxCDF	1.5	J q	6.0	0.082	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
Total HpCDD	12	B	6.0	0.14	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1
Total HpCDF	0.72	J q	6.0	0.076	pg/g	☼	08/06/21 05:28	08/18/21 17:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	62		25 - 164	08/06/21 05:28	08/18/21 17:19	1
13C-2,3,7,8-TCDF	58		24 - 169	08/06/21 05:28	08/18/21 17:19	1
13C-1,2,3,7,8-PeCDD	64		25 - 181	08/06/21 05:28	08/18/21 17:19	1
13C-1,2,3,7,8-PeCDF	60		24 - 185	08/06/21 05:28	08/18/21 17:19	1
13C-2,3,4,7,8-PeCDF	65		21 - 178	08/06/21 05:28	08/18/21 17:19	1
13C-1,2,3,4,7,8-HxCDD	70		32 - 141	08/06/21 05:28	08/18/21 17:19	1
13C-1,2,3,6,7,8-HxCDD	63		28 - 130	08/06/21 05:28	08/18/21 17:19	1
13C-1,2,3,4,7,8-HxCDF	78		26 - 152	08/06/21 05:28	08/18/21 17:19	1
13C-1,2,3,6,7,8-HxCDF	71		26 - 123	08/06/21 05:28	08/18/21 17:19	1

Client Sample ID: 11215702-072221-SS-SJSB076 (8-10) Lab Sample ID: 320-76769-31

Date Collected: 07/22/21 16:10 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 81.4**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	60		29 - 147	08/06/21 05:28	08/18/21 17:19	1
13C-2,3,4,6,7,8-HxCDF	66		28 - 136	08/06/21 05:28	08/18/21 17:19	1
13C-1,2,3,4,6,7,8-HpCDD	56		23 - 140	08/06/21 05:28	08/18/21 17:19	1
13C-1,2,3,4,6,7,8-HpCDF	51		28 - 143	08/06/21 05:28	08/18/21 17:19	1
13C-1,2,3,4,7,8,9-HpCDF	61		26 - 138	08/06/21 05:28	08/18/21 17:19	1
13C-OCDD	62		17 - 157	08/06/21 05:28	08/18/21 17:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	73		35 - 197	08/06/21 05:28	08/18/21 17:19	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	28		1.2	0.26	pg/g	☼	08/06/21 05:28	08/23/21 23:14	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	66		24 - 169	08/06/21 05:28	08/23/21 23:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	75		35 - 197	08/06/21 05:28	08/23/21 23:14	1

Client Sample ID: 11215702-072221-SS-SJSB076 (10-12) Lab Sample ID: 320-76769-32

Date Collected: 07/22/21 16:15 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18.3		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	81.7		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB076 (10-12) Lab Sample ID: 320-76769-32

Date Collected: 07/22/21 16:15 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 81.7**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	110		1.3	0.57	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
1,2,3,7,8-PeCDD	0.98	J q	6.4	0.070	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
1,2,3,7,8-PeCDF	14		6.4	0.17	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
2,3,4,7,8-PeCDF	7.5		6.4	0.18	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
1,2,3,4,7,8-HxCDD	ND		6.4	0.071	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
1,2,3,6,7,8-HxCDD	ND		6.4	0.082	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
1,2,3,7,8,9-HxCDD	0.29	J q	6.4	0.071	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
1,2,3,4,7,8-HxCDF	19		6.4	0.090	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
1,2,3,6,7,8-HxCDF	4.4	J	6.4	0.093	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
1,2,3,7,8,9-HxCDF	0.35	J q	6.4	0.085	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
2,3,4,6,7,8-HxCDF	0.59	J q	6.4	0.083	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
1,2,3,4,6,7,8-HpCDD	8.9	B	6.4	0.11	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
1,2,3,4,6,7,8-HpCDF	5.2	J	6.4	0.097	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
1,2,3,4,7,8,9-HpCDF	1.8	J	6.4	0.092	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
OCDD	200	B	13	0.28	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
OCDF	2.7	J q	13	0.078	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
Total TCDD	120	q	1.3	0.57	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1

Client Sample ID: 11215702-072221-SS-SJSB076 (10-12) Lab Sample ID: 320-76769-32

Date Collected: 07/22/21 16:15 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 81.7**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	640	q	1.3	1.2	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
Total PeCDD	0.98	J q	6.4	0.070	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
Total PeCDF	32		6.4	0.17	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
Total HxCDD	3.4	J q	6.4	0.075	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
Total HxCDF	27	q	6.4	0.088	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
Total HpCDD	24	B	6.4	0.11	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1
Total HpCDF	8.5	q	6.4	0.095	pg/g	☼	08/06/21 05:28	08/18/21 00:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*56*		*25 - 164*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-2,3,7,8-TCDF	*53*		*24 - 169*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-1,2,3,7,8-PeCDD	*55*		*25 - 181*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-1,2,3,7,8-PeCDF	*54*		*24 - 185*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-2,3,4,7,8-PeCDF	*59*		*21 - 178*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-1,2,3,4,7,8-HxCDD	*61*		*32 - 141*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-1,2,3,6,7,8-HxCDD	*54*		*28 - 130*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-1,2,3,4,7,8-HxCDF	*65*		*26 - 152*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-1,2,3,6,7,8-HxCDF	*56*		*26 - 123*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-1,2,3,7,8,9-HxCDF	*56*		*29 - 147*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-2,3,4,6,7,8-HxCDF	*56*		*28 - 136*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*62*		*23 - 140*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*28 - 143*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*73*		*26 - 138*	*08/06/21 05:28*	*08/18/21 00:12*	*1*
13C-OCDD	*71*		*17 - 157*	*08/06/21 05:28*	*08/18/21 00:12*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*72*		*35 - 197*	*08/06/21 05:28*	*08/18/21 00:12*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	360		1.3	0.65	pg/g	☼	08/06/21 05:28	08/24/21 01:09	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*57*		*24 - 169*	*08/06/21 05:28*	*08/24/21 01:09*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*77*		*35 - 197*	*08/06/21 05:28*	*08/24/21 01:09*	*1*

Client Sample ID: 11215702-072221-SS-SJSB076 (12-14) Lab Sample ID: 320-76769-33

Date Collected: 07/22/21 16:20 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	33.0		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	67.0		0.1	0.1	%			07/29/21 14:17	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB076 (12-14)

Lab Sample ID: 320-76769-33

Date Collected: 07/22/21 16:20
Date Received: 07/27/21 09:45

Matrix: Sediment
Percent Solids: 67.0

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**15**		1.5	0.12	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
1,2,3,7,8-PeCDD	ND		7.3	0.21	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
1,2,3,7,8-PeCDF	**2.1**	**J**	7.3	0.064	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
2,3,4,7,8-PeCDF	**0.95**	**J**	7.3	0.074	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
1,2,3,4,7,8-HxCDD	**0.61**	**J q**	7.3	0.10	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
1,2,3,6,7,8-HxCDD	**0.85**	**J**	7.3	0.11	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
1,2,3,7,8,9-HxCDD	**1.5**	**J q**	7.3	0.098	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
1,2,3,4,7,8-HxCDF	**3.0**	**J**	7.3	0.049	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
1,2,3,6,7,8-HxCDF	**0.87**	**J**	7.3	0.050	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
1,2,3,7,8,9-HxCDF	ND		7.3	0.046	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
2,3,4,6,7,8-HxCDF	ND		7.3	0.044	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
1,2,3,4,6,7,8-HpCDD	**19**	**B**	7.3	0.19	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
1,2,3,4,6,7,8-HpCDF	**1.0**	**J**	7.3	0.069	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
1,2,3,4,7,8,9-HpCDF	**0.42**	**J**	7.3	0.060	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
OCDD	**350**	**B**	15	0.45	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
OCDF	**0.58**	**J**	15	0.11	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
Total TCDD	**17**	**q**	1.5	0.12	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
Total TCDF	**78**	**q**	1.5	0.23	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
Total PeCDD	**0.68**	**J q**	7.3	0.21	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
Total PeCDF	**4.0**	**J q**	7.3	0.069	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
Total HxCDD	**17**	**q**	7.3	0.10	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
Total HxCDF	**3.8**	**J**	7.3	0.047	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
Total HpCDD	**69**	**B**	7.3	0.19	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1
Total HpCDF	**1.7**	**J q**	7.3	0.065	pg/g	☼	08/06/21 05:28	08/18/21 04:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*55*		*25 - 164*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-2,3,7,8-TCDF	*53*		*24 - 169*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-1,2,3,7,8-PeCDD	*51*		*25 - 181*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-1,2,3,7,8-PeCDF	*52*		*24 - 185*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-2,3,4,7,8-PeCDF	*52*		*21 - 178*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-1,2,3,4,7,8-HxCDD	*56*		*32 - 141*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-1,2,3,6,7,8-HxCDD	*52*		*28 - 130*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-1,2,3,4,7,8-HxCDF	*62*		*26 - 152*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-1,2,3,6,7,8-HxCDF	*55*		*26 - 123*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-1,2,3,7,8,9-HxCDF	*53*		*29 - 147*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-2,3,4,6,7,8-HxCDF	*53*		*28 - 136*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*65*		*23 - 140*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*58*		*28 - 143*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*72*		*26 - 138*	*08/06/21 05:28*	*08/18/21 04:31*	*1*
13C-OCDD	*65*		*17 - 157*	*08/06/21 05:28*	*08/18/21 04:31*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*71*		*35 - 197*	*08/06/21 05:28*	*08/18/21 04:31*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**43**		1.5	0.29	pg/g	☼	08/06/21 05:28	08/23/21 23:53	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*57*		*24 - 169*	*08/06/21 05:28*	*08/23/21 23:53*	*1*

Client Sample ID: 11215702-072221-SS-SJSB076 (12-14) Lab Sample ID: 320-76769-33

Date Collected: 07/22/21 16:20 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 67.0**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	75		35 - 197	08/06/21 05:28	08/23/21 23:53	1

Client Sample ID: 11215702-072221-SS-SJSB076 (14-16) Lab Sample ID: 320-76769-34

Date Collected: 07/22/21 16:25 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25.2		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	74.8		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB076 (14-16) Lab Sample ID: 320-76769-34

Date Collected: 07/22/21 16:25 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 74.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	3.5		1.3	0.069	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
1,2,3,7,8-PeCDD	0.15	J q	6.7	0.061	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
1,2,3,7,8-PeCDF	0.72	J	6.7	0.038	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
2,3,4,7,8-PeCDF	0.31	J	6.7	0.038	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
1,2,3,4,7,8-HxCDD	0.31	J	6.7	0.050	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
1,2,3,6,7,8-HxCDD	0.34	J q	6.7	0.053	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
1,2,3,7,8,9-HxCDD	0.56	J	6.7	0.047	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
1,2,3,4,7,8-HxCDF	1.1	J	6.7	0.038	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
1,2,3,6,7,8-HxCDF	0.31	J	6.7	0.038	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
1,2,3,7,8,9-HxCDF	0.065	J q	6.7	0.030	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
2,3,4,6,7,8-HxCDF	ND		6.7	0.029	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
1,2,3,4,6,7,8-HpCDD	10	B	6.7	0.16	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
1,2,3,4,6,7,8-HpCDF	0.70	J	6.7	0.036	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
1,2,3,4,7,8,9-HpCDF	0.084	J q	6.7	0.044	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
OCDD	130	B	13	0.21	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
OCDF	0.81	J	13	0.053	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
Total TCDD	4.5	q	1.3	0.069	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
Total TCDF	19	q	1.3	0.071	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
Total PeCDD	0.66	J q	6.7	0.061	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
Total PeCDF	1.5	J q	6.7	0.038	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
Total HxCDD	7.5	q	6.7	0.050	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
Total HxCDF	1.7	J q	6.7	0.034	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
Total HpCDD	26	B	6.7	0.16	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1
Total HpCDF	0.90	J q	6.7	0.040	pg/g	☼	08/06/21 05:28	08/18/21 18:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	59		25 - 164	08/06/21 05:28	08/18/21 18:04	1
13C-2,3,7,8-TCDF	55		24 - 169	08/06/21 05:28	08/18/21 18:04	1
13C-1,2,3,7,8-PeCDD	59		25 - 181	08/06/21 05:28	08/18/21 18:04	1
13C-1,2,3,7,8-PeCDF	56		24 - 185	08/06/21 05:28	08/18/21 18:04	1
13C-2,3,4,7,8-PeCDF	61		21 - 178	08/06/21 05:28	08/18/21 18:04	1
13C-1,2,3,4,7,8-HxCDD	64		32 - 141	08/06/21 05:28	08/18/21 18:04	1
13C-1,2,3,6,7,8-HxCDD	59		28 - 130	08/06/21 05:28	08/18/21 18:04	1
13C-1,2,3,4,7,8-HxCDF	65		26 - 152	08/06/21 05:28	08/18/21 18:04	1
13C-1,2,3,6,7,8-HxCDF	58		26 - 123	08/06/21 05:28	08/18/21 18:04	1

Client Sample ID: 11215702-072221-SS-SJSB076 (14-16) Lab Sample ID: 320-76769-34

Date Collected: 07/22/21 16:25 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 74.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	58		29 - 147	08/06/21 05:28	08/18/21 18:04	1
13C-2,3,4,6,7,8-HxCDF	59		28 - 136	08/06/21 05:28	08/18/21 18:04	1
13C-1,2,3,4,6,7,8-HpCDD	59		23 - 140	08/06/21 05:28	08/18/21 18:04	1
13C-1,2,3,4,6,7,8-HpCDF	54		28 - 143	08/06/21 05:28	08/18/21 18:04	1
13C-1,2,3,4,7,8,9-HpCDF	62		26 - 138	08/06/21 05:28	08/18/21 18:04	1
13C-OCDD	60		17 - 157	08/06/21 05:28	08/18/21 18:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	76		35 - 197	08/06/21 05:28	08/18/21 18:04	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**9.8**		1.3	0.19	pg/g	☼	08/06/21 05:28	08/23/21 21:58	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	57		24 - 169	08/06/21 05:28	08/23/21 21:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	75		35 - 197	08/06/21 05:28	08/23/21 21:58	1

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) — Lab Sample ID: 320-76769-1

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	17000	E B G	40	40	pg/g	1	17000	1613B
1,2,3,7,8-PeCDD	140		8.2	1.6	pg/g	1	140	1613B
1,2,3,7,8-PeCDF	1900	G	14	14	pg/g	0.03	57	1613B
2,3,4,7,8-PeCDF	1000	G	15	15	pg/g	0.3	300	1613B
1,2,3,4,7,8-HxCDD	3.0	J B	8.2	0.30	pg/g	0.1	0.30	1613B
1,2,3,6,7,8-HxCDD	14		8.2	0.35	pg/g	0.1	1.4	1613B
1,2,3,7,8,9-HxCDD	6.3	J B	8.2	0.29	pg/g	0.1	0.63	1613B
1,2,3,4,7,8-HxCDF	3100	B G	8.4	8.4	pg/g	0.1	310	1613B
1,2,3,6,7,8-HxCDF	840	B	8.2	7.7	pg/g	0.1	84	1613B
1,2,3,7,8,9-HxCDF	45	B	8.2	6.3	pg/g	0.1	4.5	1613B
2,3,4,6,7,8-HxCDF	92		8.2	6.2	pg/g	0.1	9.2	1613B
1,2,3,4,6,7,8-HpCDD	530	B	8.2	4.9	pg/g	0.01	5.3	1613B
1,2,3,4,6,7,8-HpCDF	990	B	8.2	6.2	pg/g	0.01	9.9	1613B
1,2,3,4,7,8,9-HpCDF	300	B	8.2	7.0	pg/g	0.01	3.0	1613B
OCDD	7000	E B	16	6.2	pg/g	0.0003	2.1	1613B
OCDF	370	B	16	0.34	pg/g	0.0003	0.11	1613B
2,3,7,8-TCDF - RA	47000	E B G	63	63	pg/g	0.1	4700	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		23000	TEQ

Client Sample ID: 11215702-072221-SS-SJSB080 (2-4) — Lab Sample ID: 320-76769-2

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	11000	E B G	23	23	pg/g	1	11000	1613B
1,2,3,7,8-PeCDD	94		8.3	1.5	pg/g	1	94	1613B
1,2,3,7,8-PeCDF	1300	G	9.5	9.5	pg/g	0.03	39	1613B
2,3,4,7,8-PeCDF	690	G	9.4	9.4	pg/g	0.3	210	1613B
1,2,3,4,7,8-HxCDD	2.0	J B	8.3	0.29	pg/g	0.1	0.20	1613B
1,2,3,6,7,8-HxCDD	8.0	J	8.3	0.32	pg/g	0.1	0.80	1613B
1,2,3,7,8,9-HxCDD	4.3	J B	8.3	0.28	pg/g	0.1	0.43	1613B
1,2,3,4,7,8-HxCDF	2100	B	8.3	5.8	pg/g	0.1	210	1613B
1,2,3,6,7,8-HxCDF	590	B	8.3	5.7	pg/g	0.1	59	1613B
1,2,3,7,8,9-HxCDF	32	B	8.3	4.4	pg/g	0.1	3.2	1613B
2,3,4,6,7,8-HxCDF	66		8.3	4.5	pg/g	0.1	6.6	1613B
1,2,3,4,6,7,8-HpCDD	280	B	8.3	2.7	pg/g	0.01	2.8	1613B
1,2,3,4,6,7,8-HpCDF	710	B	8.3	3.2	pg/g	0.01	7.1	1613B
1,2,3,4,7,8,9-HpCDF	210	B	8.3	3.6	pg/g	0.01	2.1	1613B
OCDD	3900	B	17	3.7	pg/g	0.0003	1.2	1613B
OCDF	370	B	17	0.32	pg/g	0.0003	0.11	1613B
2,3,7,8-TCDF - RA	28000	E B G	29	29	pg/g	0.1	2800	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB080 (2-4) (Continued) — Lab Sample ID: 320-76769-2

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		14000	TEQ

Client Sample ID: 11215702-072221-SS-SJSB080 (4-6) — Lab Sample ID: 320-76769-3

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	6900	E B G	13	13	pg/g	1	6900	1613B
1,2,3,7,8-PeCDD	58		7.6	0.84	pg/g	1	58	1613B
1,2,3,7,8-PeCDF	810		7.6	5.5	pg/g	0.03	24	1613B
2,3,4,7,8-PeCDF	420		7.6	5.5	pg/g	0.3	130	1613B
1,2,3,4,7,8-HxCDD	1.3	J B q	7.6	0.22	pg/g	0.1	0.13	1613B
1,2,3,6,7,8-HxCDD	5.7	J	7.6	0.24	pg/g	0.1	0.57	1613B
1,2,3,7,8,9-HxCDD	3.3	J B	7.6	0.21	pg/g	0.1	0.33	1613B
1,2,3,4,7,8-HxCDF	1700	B G	8.6	8.6	pg/g	0.1	170	1613B
1,2,3,6,7,8-HxCDF	460	B G	8.6	8.6	pg/g	0.1	46	1613B
1,2,3,7,8,9-HxCDF	21	B	7.6	6.6	pg/g	0.1	2.1	1613B
2,3,4,6,7,8-HxCDF	38		7.6	6.5	pg/g	0.1	3.8	1613B
1,2,3,4,6,7,8-HpCDD	210	B	7.6	1.8	pg/g	0.01	2.1	1613B
1,2,3,4,6,7,8-HpCDF	660	B	7.6	3.4	pg/g	0.01	6.6	1613B
1,2,3,4,7,8,9-HpCDF	170	B	7.6	4.0	pg/g	0.01	1.7	1613B
OCDD	3100	B	15	3.4	pg/g	0.0003	0.93	1613B
OCDF	220	B	15	0.26	pg/g	0.0003	0.066	1613B
2,3,7,8-TCDF - RA	19000	G E B	15	15	pg/g	0.1	1900	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		9200	TEQ

Client Sample ID: 11215702-072221-SS-SJSB080 (6-8) — Lab Sample ID: 320-76769-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	2300	E G	2.7	2.7	pg/g	1	2300	1613B
1,2,3,7,8-PeCDD	23		7.2	0.91	pg/g	1	23	1613B
1,2,3,7,8-PeCDF	360		7.2	2.4	pg/g	0.03	11	1613B
2,3,4,7,8-PeCDF	180		7.2	2.4	pg/g	0.3	54	1613B
1,2,3,4,7,8-HxCDD	0.79	J q	7.2	0.24	pg/g	0.1	0.079	1613B
1,2,3,6,7,8-HxCDD	3.3	J	7.2	0.28	pg/g	0.1	0.33	1613B
1,2,3,7,8,9-HxCDD	ND		7.2	0.24	pg/g	0.1	0.012	1613B
1,2,3,4,7,8-HxCDF	610		7.2	3.3	pg/g	0.1	61	1613B
1,2,3,6,7,8-HxCDF	150		7.2	3.1	pg/g	0.1	15	1613B
1,2,3,7,8,9-HxCDF	10		7.2	3.2	pg/g	0.1	1.0	1613B
2,3,4,6,7,8-HxCDF	19		7.2	3.0	pg/g	0.1	1.9	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB080 (6-8) (Continued) — Lab Sample ID: 320-76769-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDD	120		7.2	0.50	pg/g	0.01	1.2	1613B
1,2,3,4,6,7,8-HpCDF	150		7.2	0.67	pg/g	0.01	1.5	1613B
1,2,3,4,7,8,9-HpCDF	50		7.2	0.60	pg/g	0.01	0.50	1613B
OCDD	1500		14	1.2	pg/g	0.0003	0.45	1613B
OCDF	68		14	0.38	pg/g	0.0003	0.020	1613B
2,3,7,8-TCDF - RA	7500	E G	7.0	7.0	pg/g	0.1	750	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		3200	TEQ

Client Sample ID: 11215702-072221-SS-SJSB080 (8-10) — Lab Sample ID: 320-76769-5

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	1100	E B G	3.5	3.5	pg/g	1	1100	1613B
1,2,3,7,8-PeCDD	9.0		6.6	0.19	pg/g	1	9.0	1613B
1,2,3,7,8-PeCDF	110		6.6	0.72	pg/g	0.03	3.3	1613B
2,3,4,7,8-PeCDF	59		6.6	0.72	pg/g	0.3	18	1613B
1,2,3,4,7,8-HxCDD	0.49	J B	6.6	0.070	pg/g	0.1	0.049	1613B
1,2,3,6,7,8-HxCDD	1.4	J	6.6	0.078	pg/g	0.1	0.14	1613B
1,2,3,7,8,9-HxCDD	0.81	J B	6.6	0.067	pg/g	0.1	0.081	1613B
1,2,3,4,7,8-HxCDF	160	B	6.6	0.77	pg/g	0.1	16	1613B
1,2,3,6,7,8-HxCDF	44	B	6.6	0.78	pg/g	0.1	4.4	1613B
1,2,3,7,8,9-HxCDF	2.4	J B	6.6	0.60	pg/g	0.1	0.24	1613B
2,3,4,6,7,8-HxCDF	4.7	J	6.6	0.62	pg/g	0.1	0.47	1613B
1,2,3,4,6,7,8-HpCDD	57	B	6.6	0.70	pg/g	0.01	0.57	1613B
1,2,3,4,6,7,8-HpCDF	57	B	6.6	0.47	pg/g	0.01	0.57	1613B
1,2,3,4,7,8,9-HpCDF	16	B	6.6	0.53	pg/g	0.01	0.16	1613B
OCDD	750	B	13	0.77	pg/g	0.0003	0.23	1613B
OCDF	25	B	13	0.078	pg/g	0.0003	0.0075	1613B
2,3,7,8-TCDF - RA	3300	G E B	3.6	3.6	pg/g	0.1	330	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		1500	TEQ

Client Sample ID: 11215702-072221-SS-SJSB080 (10-12) — Lab Sample ID: 320-76769-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	9.0	B	1.2	0.093	pg/g	1	9.0	1613B
1,2,3,7,8-PeCDD	ND		6.2	0.055	pg/g	1	0.028	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB080 (10-12) (Continued)

Lab Sample ID: 320-76769-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDF	**0.98**	**J**	6.2	0.057	pg/g	0.03	**0.029**	1613B
2,3,4,7,8-PeCDF	**0.46**	**J**	6.2	0.059	pg/g	0.3	**0.14**	1613B
1,2,3,4,7,8-HxCDD	**0.20**	**J B**	6.2	0.067	pg/g	0.1	**0.020**	1613B
1,2,3,6,7,8-HxCDD	ND		6.2	0.070	pg/g	0.1	0.0035	1613B
1,2,3,7,8,9-HxCDD	ND		6.2	0.062	pg/g	0.1	0.0031	1613B
1,2,3,4,7,8-HxCDF	**1.5**	**J B**	6.2	0.048	pg/g	0.1	**0.15**	1613B
1,2,3,6,7,8-HxCDF	**0.42**	**J B**	6.2	0.049	pg/g	0.1	**0.042**	1613B
1,2,3,7,8,9-HxCDF	**0.082**	**J B q**	6.2	0.041	pg/g	0.1	**0.0082**	1613B
2,3,4,6,7,8-HxCDF	ND		6.2	0.038	pg/g	0.1	0.0019	1613B
1,2,3,4,6,7,8-HpCDD	**1.9**	**J B**	6.2	0.11	pg/g	0.01	**0.019**	1613B
1,2,3,4,6,7,8-HpCDF	**0.58**	**J B**	6.2	0.051	pg/g	0.01	**0.0058**	1613B
1,2,3,4,7,8,9-HpCDF	**0.13**	**J B q**	6.2	0.059	pg/g	0.01	**0.0013**	1613B
OCDD	**57**	**B**	12	0.16	pg/g	0.0003	**0.017**	1613B
OCDF	**0.37**	**J B**	12	0.039	pg/g	0.0003	**0.00011**	1613B
2,3,7,8-TCDF - RA	**26**	**B**	1.2	0.23	pg/g	0.1	**2.6**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		12	TEQ

Client Sample ID: 11215702-072221-SS-SJSB080 (12-14)

Lab Sample ID: 320-76769-7

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**1.1**	**J B**	1.2	0.056	pg/g	1	**1.1**	1613B
1,2,3,7,8-PeCDD	ND		6.2	0.055	pg/g	1	0.028	1613B
1,2,3,7,8-PeCDF	**0.13**	**J q**	6.2	0.041	pg/g	0.03	**0.0039**	1613B
2,3,4,7,8-PeCDF	ND		6.2	0.042	pg/g	0.3	0.0063	1613B
1,2,3,4,7,8-HxCDD	**0.17**	**J B**	6.2	0.069	pg/g	0.1	**0.017**	1613B
1,2,3,6,7,8-HxCDD	ND		6.2	0.073	pg/g	0.1	0.0037	1613B
1,2,3,7,8,9-HxCDD	**0.22**	**J B**	6.2	0.065	pg/g	0.1	**0.022**	1613B
1,2,3,4,7,8-HxCDF	**0.23**	**J B**	6.2	0.035	pg/g	0.1	**0.023**	1613B
1,2,3,6,7,8-HxCDF	**0.092**	**J B**	6.2	0.035	pg/g	0.1	**0.0092**	1613B
1,2,3,7,8,9-HxCDF	ND		6.2	0.028	pg/g	0.1	0.0014	1613B
2,3,4,6,7,8-HxCDF	ND		6.2	0.027	pg/g	0.1	0.0014	1613B
1,2,3,4,6,7,8-HpCDD	**2.9**	**J B**	6.2	0.11	pg/g	0.01	**0.029**	1613B
1,2,3,4,6,7,8-HpCDF	**0.16**	**J B q**	6.2	0.050	pg/g	0.01	**0.0016**	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.2	0.061	pg/g	0.01	0.00031	1613B
OCDD	**58**	**B**	12	0.14	pg/g	0.0003	**0.017**	1613B
OCDF	**0.22**	**J B q**	12	0.036	pg/g	0.0003	**0.000066**	1613B
2,3,7,8-TCDF - RA	**2.7**	**B**	1.2	0.15	pg/g	0.1	**0.27**	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB080 (12-14) (Continued) — Lab Sample ID: 320-76769-7

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		1.5	TEQ

Client Sample ID: 11215702-072221-SS-SJSB080 (14-16) — Lab Sample ID: 320-76769-8

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**0.34**	**J B q**	1.2	0.059	pg/g	1	**0.34**	1613B
1,2,3,7,8-PeCDD	ND		5.9	0.073	pg/g	1	0.037	1613B
1,2,3,7,8-PeCDF	ND		5.9	0.038	pg/g	0.03	0.00057	1613B
2,3,4,7,8-PeCDF	ND		5.9	0.038	pg/g	0.3	0.0057	1613B
1,2,3,4,7,8-HxCDD	ND		5.9	0.12	pg/g	0.1	0.0060	1613B
1,2,3,6,7,8-HxCDD	ND		5.9	0.12	pg/g	0.1	0.0060	1613B
1,2,3,7,8,9-HxCDD	**0.46**	**J B**	5.9	0.11	pg/g	0.1	**0.046**	1613B
1,2,3,4,7,8-HxCDF	**0.096**	**J B**	5.9	0.034	pg/g	0.1	**0.0096**	1613B
1,2,3,6,7,8-HxCDF	ND		5.9	0.035	pg/g	0.1	0.0018	1613B
1,2,3,7,8,9-HxCDF	**0.077**	**J B**	5.9	0.029	pg/g	0.1	**0.0077**	1613B
2,3,4,6,7,8-HxCDF	ND		5.9	0.028	pg/g	0.1	0.0014	1613B
1,2,3,4,6,7,8-HpCDD	**6.4**	**B**	5.9	0.17	pg/g	0.01	**0.064**	1613B
1,2,3,4,6,7,8-HpCDF	**0.095**	**J B q**	5.9	0.048	pg/g	0.01	**0.00095**	1613B
1,2,3,4,7,8,9-HpCDF	ND		5.9	0.055	pg/g	0.01	0.00028	1613B
OCDD	**120**	**B**	12	0.24	pg/g	0.0003	**0.036**	1613B
OCDF	**0.21**	**J B**	12	0.034	pg/g	0.0003	**0.000063**	1613B
2,3,7,8-TCDF - RA	**1.1**	**J B**	1.2	0.16	pg/g	0.1	**0.11**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		0.67	TEQ

Client Sample ID: 11215702-072221-SS-SJSB074 (0-2) — Lab Sample ID: 320-76769-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**5600**	**E B G**	8.5	8.5	pg/g	1	**5600**	1613B
1,2,3,7,8-PeCDD	**49**		6.7	0.70	pg/g	1	**49**	1613B
1,2,3,7,8-PeCDF	**680**		6.7	5.2	pg/g	0.03	**20**	1613B
2,3,4,7,8-PeCDF	**370**		6.7	5.3	pg/g	0.3	**110**	1613B
1,2,3,4,7,8-HxCDD	**1.3**	**J B**	6.7	0.16	pg/g	0.1	**0.13**	1613B
1,2,3,6,7,8-HxCDD	**3.6**	**J**	6.7	0.17	pg/g	0.1	**0.36**	1613B
1,2,3,7,8,9-HxCDD	**2.7**	**J B**	6.7	0.15	pg/g	0.1	**0.27**	1613B
1,2,3,4,7,8-HxCDF	**910**	**B**	6.7	5.4	pg/g	0.1	**91**	1613B
1,2,3,6,7,8-HxCDF	**240**	**B**	6.7	5.8	pg/g	0.1	**24**	1613B
1,2,3,7,8,9-HxCDF	**13**	**B**	6.7	4.6	pg/g	0.1	**1.3**	1613B
2,3,4,6,7,8-HxCDF	**28**		6.7	4.6	pg/g	0.1	**2.8**	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB074 (0-2) (Continued) — Lab Sample ID: 320-76769-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDD	110	B	6.7	1.5	pg/g	0.01	1.1	1613B
1,2,3,4,6,7,8-HpCDF	280	B	6.7	2.0	pg/g	0.01	2.8	1613B
1,2,3,4,7,8,9-HpCDF	85	B	6.7	2.4	pg/g	0.01	0.85	1613B
OCDD	2200	B	13	2.8	pg/g	0.0003	0.66	1613B
OCDF	140	B	13	0.15	pg/g	0.0003	0.042	1613B
2,3,7,8-TCDF - RA	19000	G E B	14	14	pg/g	0.1	1900	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		7800	TEQ

Client Sample ID: 11215702-072221-SS-SJSB074 (2-4) — Lab Sample ID: 320-76769-14

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	49000	E B G	76	76	pg/g	1	49000	1613B
1,2,3,7,8-PeCDD	480		9.6	5.7	pg/g	1	480	1613B
1,2,3,7,8-PeCDF	5300	E G	31	31	pg/g	0.03	160	1613B
2,3,4,7,8-PeCDF	3300	G	34	34	pg/g	0.3	990	1613B
1,2,3,4,7,8-HxCDD	8.7	J B	9.6	1.0	pg/g	0.1	0.87	1613B
1,2,3,6,7,8-HxCDD	80		9.6	1.1	pg/g	0.1	8.0	1613B
1,2,3,7,8,9-HxCDD	25	B	9.6	0.97	pg/g	0.1	2.5	1613B
1,2,3,4,7,8-HxCDF	9900	E B G	33	33	pg/g	0.1	990	1613B
1,2,3,6,7,8-HxCDF	2700	B G	27	27	pg/g	0.1	270	1613B
1,2,3,7,8,9-HxCDF	130	B G	23	23	pg/g	0.1	13	1613B
2,3,4,6,7,8-HxCDF	250	G	22	22	pg/g	0.1	25	1613B
1,2,3,4,6,7,8-HpCDD	4000	E B G	25	25	pg/g	0.01	40	1613B
1,2,3,4,6,7,8-HpCDF	4200	E B G	19	19	pg/g	0.01	42	1613B
1,2,3,4,7,8,9-HpCDF	1100	B G	20	20	pg/g	0.01	11	1613B
OCDD	41000	E B G	29	29	pg/g	0.0003	12	1613B
OCDF	1600	B	19	1.2	pg/g	0.0003	0.48	1613B
2,3,7,8-TCDF - RA	180000	E B G	150	150	pg/g	0.1	18000	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		70000	TEQ

Client Sample ID: 11215702-072221-SS-SJSB074 (4-6) — Lab Sample ID: 320-76769-15

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	22000	E B G	42	42	pg/g	1	22000	1613B
1,2,3,7,8-PeCDD	190		9.0	2.0	pg/g	1	190	1613B

TEF Reference:
WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB074 (4-6) (Continued)

Lab Sample ID: 320-76769-15

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
1,2,3,7,8-PeCDF	3600	E G	22	22	pg/g	0.03	110	1613B
2,3,4,7,8-PeCDF	1500	G	19	19	pg/g	0.3	450	1613B
1,2,3,4,7,8-HxCDD	4.0	J B	9.0	1.1	pg/g	0.1	0.40	1613B
1,2,3,6,7,8-HxCDD	32		9.0	1.0	pg/g	0.1	3.2	1613B
1,2,3,7,8,9-HxCDD	8.6	J B	9.0	0.95	pg/g	0.1	0.86	1613B
1,2,3,4,7,8-HxCDF	5100	E B G	20	20	pg/g	0.1	510	1613B
1,2,3,6,7,8-HxCDF	1400	B G	18	18	pg/g	0.1	140	1613B
1,2,3,7,8,9-HxCDF	110	B G	14	14	pg/g	0.1	11	1613B
2,3,4,6,7,8-HxCDF	160	G	17	17	pg/g	0.1	16	1613B
1,2,3,4,6,7,8-HpCDD	1700	B G	14	14	pg/g	0.01	17	1613B
1,2,3,4,6,7,8-HpCDF	1200	B	9.0	7.6	pg/g	0.01	12	1613B
1,2,3,4,7,8,9-HpCDF	420	B	9.0	8.3	pg/g	0.01	4.2	1613B
OCDD	17000	E B	18	18	pg/g	0.0003	5.1	1613B
OCDF	600	B	18	0.63	pg/g	0.0003	0.18	1613B
2,3,7,8-TCDF - RA	63000	G E B	82	82	pg/g	0.1	6300	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
Total Dioxin/Furan TEQ					pg/g		30000	TEQ

Client Sample ID: 11215702-072221-SS-SJSB074 (6-8)

Lab Sample ID: 320-76769-16

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
2,3,7,8-TCDD	63	B	1.2	0.30	pg/g	1	63	1613B
1,2,3,7,8-PeCDD	0.64	J q	6.2	0.10	pg/g	1	0.64	1613B
1,2,3,7,8-PeCDF	5.6	J	6.2	0.13	pg/g	0.03	0.17	1613B
2,3,4,7,8-PeCDF	3.6	J	6.2	0.13	pg/g	0.3	1.1	1613B
1,2,3,4,7,8-HxCDD	0.55	J B	6.2	0.14	pg/g	0.1	0.055	1613B
1,2,3,6,7,8-HxCDD	0.98	J	6.2	0.14	pg/g	0.1	0.098	1613B
1,2,3,7,8,9-HxCDD	1.4	J B	6.2	0.13	pg/g	0.1	0.14	1613B
1,2,3,4,7,8-HxCDF	7.8	B	6.2	0.10	pg/g	0.1	0.78	1613B
1,2,3,6,7,8-HxCDF	2.3	J B	6.2	0.10	pg/g	0.1	0.23	1613B
1,2,3,7,8,9-HxCDF	ND		6.2	0.085	pg/g	0.1	0.0043	1613B
2,3,4,6,7,8-HxCDF	0.32	J q	6.2	0.083	pg/g	0.1	0.032	1613B
1,2,3,4,6,7,8-HpCDD	34	B	6.2	0.79	pg/g	0.01	0.34	1613B
1,2,3,4,6,7,8-HpCDF	4.3	J B	6.2	0.14	pg/g	0.01	0.043	1613B
1,2,3,4,7,8,9-HpCDF	0.87	J B	6.2	0.16	pg/g	0.01	0.0087	1613B
OCDD	1200	B	12	1.7	pg/g	0.0003	0.36	1613B
OCDF	7.1	J B	12	0.059	pg/g	0.0003	0.0021	1613B
2,3,7,8-TCDF - RA	200	B	1.2	0.42	pg/g	0.1	20	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB074 (6-8) (Continued) — Lab Sample ID: 320-76769-16

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		87	TEQ

Client Sample ID: 11215702-072221-SS-SJSB074 (8-10) — Lab Sample ID: 320-76769-17

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**3.7**	**B**	1.2	0.099	pg/g	1	**3.7**	1613B
1,2,3,7,8-PeCDD	ND		6.0	0.065	pg/g	1	0.033	1613B
1,2,3,7,8-PeCDF	**0.33**	**J**	6.0	0.060	pg/g	0.03	**0.0099**	1613B
2,3,4,7,8-PeCDF	**0.20**	**J**	6.0	0.061	pg/g	0.3	**0.060**	1613B
1,2,3,4,7,8-HxCDD	**0.20**	**J B q**	6.0	0.080	pg/g	0.1	**0.020**	1613B
1,2,3,6,7,8-HxCDD	ND		6.0	0.082	pg/g	0.1	0.0041	1613B
1,2,3,7,8,9-HxCDD	**0.19**	**J B q**	6.0	0.074	pg/g	0.1	**0.019**	1613B
1,2,3,4,7,8-HxCDF	**0.44**	**J B q**	6.0	0.043	pg/g	0.1	**0.044**	1613B
1,2,3,6,7,8-HxCDF	**0.12**	**J B**	6.0	0.045	pg/g	0.1	**0.012**	1613B
1,2,3,7,8,9-HxCDF	ND		6.0	0.036	pg/g	0.1	0.0018	1613B
2,3,4,6,7,8-HxCDF	ND		6.0	0.035	pg/g	0.1	0.0018	1613B
1,2,3,4,6,7,8-HpCDD	**2.9**	**J B**	6.0	0.14	pg/g	0.01	**0.029**	1613B
1,2,3,4,6,7,8-HpCDF	**0.22**	**J B**	6.0	0.049	pg/g	0.01	**0.0022**	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.0	0.063	pg/g	0.01	0.00032	1613B
OCDD	**82**	**B**	12	0.21	pg/g	0.0003	**0.025**	1613B
OCDF	**0.38**	**J B q**	12	0.033	pg/g	0.0003	**0.00011**	1613B
2,3,7,8-TCDF - RA	**12**	**B**	1.2	0.20	pg/g	0.1	**1.2**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		5.2	TEQ

Client Sample ID: 11215702-072221-SS-SJSB074 (10-12) — Lab Sample ID: 320-76769-18

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**2.3**	**B**	1.2	0.059	pg/g	1	**2.3**	1613B
1,2,3,7,8-PeCDD	ND		5.9	0.043	pg/g	1	0.022	1613B
1,2,3,7,8-PeCDF	**0.17**	**J q**	5.9	0.043	pg/g	0.03	**0.0051**	1613B
2,3,4,7,8-PeCDF	**0.12**	**J q**	5.9	0.043	pg/g	0.3	**0.036**	1613B
1,2,3,4,7,8-HxCDD	**0.19**	**J B**	5.9	0.065	pg/g	0.1	**0.019**	1613B
1,2,3,6,7,8-HxCDD	**0.074**	**J q**	5.9	0.068	pg/g	0.1	**0.0074**	1613B
1,2,3,7,8,9-HxCDD	ND		5.9	0.061	pg/g	0.1	0.0031	1613B
1,2,3,4,7,8-HxCDF	**0.28**	**J B q**	5.9	0.029	pg/g	0.1	**0.028**	1613B
1,2,3,6,7,8-HxCDF	**0.13**	**J B**	5.9	0.030	pg/g	0.1	**0.013**	1613B
1,2,3,7,8,9-HxCDF	**0.067**	**J B q**	5.9	0.025	pg/g	0.1	**0.0067**	1613B
2,3,4,6,7,8-HxCDF	ND		5.9	0.024	pg/g	0.1	0.0012	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB074 (10-12) (Continued)

Lab Sample ID: 320-76769-18

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDD	1.8	J B	5.9	0.083	pg/g	0.01	0.018	1613B
1,2,3,4,6,7,8-HpCDF	0.16	J B	5.9	0.048	pg/g	0.01	0.0016	1613B
1,2,3,4,7,8,9-HpCDF	ND		5.9	0.059	pg/g	0.01	0.00030	1613B
OCDD	58	B	12	0.13	pg/g	0.0003	0.017	1613B
OCDF	0.16	J B q	12	0.040	pg/g	0.0003	0.000048	1613B
2,3,7,8-TCDF - RA	6.2	B	1.2	0.23	pg/g	0.1	0.62	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		3.1	TEQ

Client Sample ID: 11215702-072221-SS-SJSB074 (12-14)

Lab Sample ID: 320-76769-19

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	0.26	J B q	1.1	0.063	pg/g	1	0.26	1613B
2,3,7,8-TCDF	0.76	J B	1.1	0.055	pg/g	0.1	0.076	1613B
1,2,3,7,8-PeCDD	0.11	J q	5.6	0.063	pg/g	1	0.11	1613B
1,2,3,7,8-PeCDF	ND		5.6	0.033	pg/g	0.03	0.00050	1613B
2,3,4,7,8-PeCDF	ND		5.6	0.032	pg/g	0.3	0.0048	1613B
1,2,3,4,7,8-HxCDD	ND		5.6	0.11	pg/g	0.1	0.0055	1613B
1,2,3,6,7,8-HxCDD	ND		5.6	0.11	pg/g	0.1	0.0055	1613B
1,2,3,7,8,9-HxCDD	0.22	J B q	5.6	0.098	pg/g	0.1	0.022	1613B
1,2,3,4,7,8-HxCDF	0.13	J B q	5.6	0.030	pg/g	0.1	0.013	1613B
1,2,3,6,7,8-HxCDF	0.054	J B q	5.6	0.032	pg/g	0.1	0.0054	1613B
1,2,3,7,8,9-HxCDF	0.11	J B q	5.6	0.027	pg/g	0.1	0.011	1613B
2,3,4,6,7,8-HxCDF	0.056	J	5.6	0.024	pg/g	0.1	0.0056	1613B
1,2,3,4,6,7,8-HpCDD	2.2	J B	5.6	0.097	pg/g	0.01	0.022	1613B
1,2,3,4,6,7,8-HpCDF	0.13	J B	5.6	0.038	pg/g	0.01	0.0013	1613B
1,2,3,4,7,8,9-HpCDF	0.093	J B	5.6	0.046	pg/g	0.01	0.00093	1613B
OCDD	55	B	11	0.15	pg/g	0.0003	0.017	1613B
OCDF	0.28	J B	11	0.033	pg/g	0.0003	0.000084	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		0.56	TEQ

Client Sample ID: 11215702-072221-SS-SJSB074 (14-16)

Lab Sample ID: 320-76769-20

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	1.8	B	1.2	0.071	pg/g	1	1.8	1613B
1,2,3,7,8-PeCDD	ND		5.9	0.054	pg/g	1	0.027	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB074 (14-16) (Continued)

Lab Sample ID: 320-76769-20

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDF	0.30	J	5.9	0.039	pg/g	0.03	0.0090	1613B
2,3,4,7,8-PeCDF	0.16	J q	5.9	0.040	pg/g	0.3	0.048	1613B
1,2,3,4,7,8-HxCDD	0.25	J B	5.9	0.065	pg/g	0.1	0.025	1613B
1,2,3,6,7,8-HxCDD	0.19	J q	5.9	0.068	pg/g	0.1	0.019	1613B
1,2,3,7,8,9-HxCDD	0.24	J B q	5.9	0.061	pg/g	0.1	0.024	1613B
1,2,3,4,7,8-HxCDF	0.38	J B q	5.9	0.033	pg/g	0.1	0.038	1613B
1,2,3,6,7,8-HxCDF	0.20	J B	5.9	0.034	pg/g	0.1	0.020	1613B
1,2,3,7,8,9-HxCDF	0.19	J B	5.9	0.028	pg/g	0.1	0.019	1613B
2,3,4,6,7,8-HxCDF	0.10	J	5.9	0.028	pg/g	0.1	0.010	1613B
1,2,3,4,6,7,8-HpCDD	2.2	J B	5.9	0.070	pg/g	0.01	0.022	1613B
1,2,3,4,6,7,8-HpCDF	0.42	J B	5.9	0.041	pg/g	0.01	0.0042	1613B
1,2,3,4,7,8,9-HpCDF	0.12	J B	5.9	0.053	pg/g	0.01	0.0012	1613B
OCDD	51	B	12	0.097	pg/g	0.0003	0.015	1613B
OCDF	0.34	J B q	12	0.028	pg/g	0.0003	0.00010	1613B
2,3,7,8-TCDF - RA	5.7	B	1.2	0.82	pg/g	0.1	0.57	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2.7	TEQ

Client Sample ID: 11215702-072221-DUP-4

Lab Sample ID: 320-76769-25

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	2.1	B	1.2	0.064	pg/g	1	2.1	1613B
1,2,3,7,8-PeCDD	ND		6.0	0.055	pg/g	1	0.028	1613B
1,2,3,7,8-PeCDF	0.27	J	6.0	0.040	pg/g	0.03	0.0081	1613B
2,3,4,7,8-PeCDF	0.10	J q	6.0	0.039	pg/g	0.3	0.030	1613B
1,2,3,4,7,8-HxCDD	0.22	J B	6.0	0.074	pg/g	0.1	0.022	1613B
1,2,3,6,7,8-HxCDD	ND		6.0	0.077	pg/g	0.1	0.0039	1613B
1,2,3,7,8,9-HxCDD	0.27	J B	6.0	0.069	pg/g	0.1	0.027	1613B
1,2,3,4,7,8-HxCDF	0.35	J B	6.0	0.027	pg/g	0.1	0.035	1613B
1,2,3,6,7,8-HxCDF	0.10	J B q	6.0	0.028	pg/g	0.1	0.010	1613B
1,2,3,7,8,9-HxCDF	ND		6.0	0.023	pg/g	0.1	0.0012	1613B
2,3,4,6,7,8-HxCDF	ND		6.0	0.022	pg/g	0.1	0.0011	1613B
1,2,3,4,6,7,8-HpCDD	3.5	J B	6.0	0.13	pg/g	0.01	0.035	1613B
1,2,3,4,6,7,8-HpCDF	0.18	J B q	6.0	0.038	pg/g	0.01	0.0018	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.0	0.051	pg/g	0.01	0.00026	1613B
OCDD	72	B	12	0.13	pg/g	0.0003	0.022	1613B
OCDF	0.26	J B	12	0.026	pg/g	0.0003	0.000078	1613B
2,3,7,8-TCDF - RA	6.3	B	1.2	0.18	pg/g	0.1	0.63	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Client Sample ID: 11215702-072221-DUP-4 (Continued) — Lab Sample ID: 320-76769-25

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		3.0	TEQ

Client Sample ID: 11215702-072221-DUP-5 — Lab Sample ID: 320-76769-26

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	41000	E B G	72	72	pg/g	1	41000	1613B
1,2,3,7,8-PeCDD	390		8.2	4.3	pg/g	1	390	1613B
1,2,3,7,8-PeCDF	3900	E G	28	28	pg/g	0.03	120	1613B
2,3,4,7,8-PeCDF	2600	G	27	27	pg/g	0.3	780	1613B
1,2,3,4,7,8-HxCDD	6.5	J B	8.2	0.68	pg/g	0.1	0.65	1613B
1,2,3,6,7,8-HxCDD	45		8.2	0.77	pg/g	0.1	4.5	1613B
1,2,3,7,8,9-HxCDD	16	B	8.2	0.66	pg/g	0.1	1.6	1613B
1,2,3,4,7,8-HxCDF	5900	E B G	18	18	pg/g	0.1	590	1613B
1,2,3,6,7,8-HxCDF	1600	B G	17	17	pg/g	0.1	160	1613B
1,2,3,7,8,9-HxCDF	86	B G	14	14	pg/g	0.1	8.6	1613B
2,3,4,6,7,8-HxCDF	160	G	14	14	pg/g	0.1	16	1613B
1,2,3,4,6,7,8-HpCDD	1800	B G	14	14	pg/g	0.01	18	1613B
1,2,3,4,6,7,8-HpCDF	1900	B G	11	11	pg/g	0.01	19	1613B
1,2,3,4,7,8,9-HpCDF	610	B G	12	12	pg/g	0.01	6.1	1613B
OCDD	21000	E B G	18	18	pg/g	0.0003	6.3	1613B
OCDF	950	B	16	0.64	pg/g	0.0003	0.29	1613B
2,3,7,8-TCDF - RA	160000	E B G	120	120	pg/g	0.1	16000	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		59000	TEQ

Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) — Lab Sample ID: 320-76769-27

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	2100	E G	1.9	1.9	pg/g	1	2100	1613B
1,2,3,7,8-PeCDD	20		6.2	0.56	pg/g	1	20	1613B
1,2,3,7,8-PeCDF	310		6.2	1.9	pg/g	0.03	9.3	1613B
2,3,4,7,8-PeCDF	160		6.2	2.0	pg/g	0.3	48	1613B
1,2,3,4,7,8-HxCDD	0.96	J	6.2	0.19	pg/g	0.1	0.096	1613B
1,2,3,6,7,8-HxCDD	1.8	J	6.2	0.21	pg/g	0.1	0.18	1613B
1,2,3,7,8,9-HxCDD	2.0	J	6.2	0.19	pg/g	0.1	0.20	1613B
1,2,3,4,7,8-HxCDF	500	F1	6.2	1.5	pg/g	0.1	50	1613B
1,2,3,6,7,8-HxCDF	130		6.2	1.6	pg/g	0.1	13	1613B
1,2,3,7,8,9-HxCDF	8.1		6.2	1.6	pg/g	0.1	0.81	1613B
2,3,4,6,7,8-HxCDF	16		6.2	1.5	pg/g	0.1	1.6	1613B
1,2,3,4,6,7,8-HpCDD	51	B F1 F2	6.2	0.31	pg/g	0.01	0.51	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) (Continued) — Lab Sample ID: 320-76769-27

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDF	150		6.2	0.51	pg/g	0.01	1.5	1613B
1,2,3,4,7,8,9-HpCDF	46		6.2	0.51	pg/g	0.01	0.46	1613B
OCDD	1200	B F2	12	0.92	pg/g	0.0003	0.36	1613B
OCDF	72		12	0.19	pg/g	0.0003	0.022	1613B
2,3,7,8-TCDF - RA	7600	E G	6.4	6.4	pg/g	0.1	760	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		3000	TEQ

Client Sample ID: 11215702-072221-SS-SJSB076 (2-4) — Lab Sample ID: 320-76769-28

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	36000	E B G	82	82	pg/g	1	36000	1613B
1,2,3,7,8-PeCDD	270		9.6	4.1	pg/g	1	270	1613B
1,2,3,7,8-PeCDF	6000	E G	36	36	pg/g	0.03	180	1613B
2,3,4,7,8-PeCDF	2600	G	38	38	pg/g	0.3	780	1613B
1,2,3,4,7,8-HxCDD	3.6	J B	9.6	0.44	pg/g	0.1	0.36	1613B
1,2,3,6,7,8-HxCDD	18		9.6	0.49	pg/g	0.1	1.8	1613B
1,2,3,7,8,9-HxCDD	9.1	J B	9.6	0.42	pg/g	0.1	0.91	1613B
1,2,3,4,7,8-HxCDF	8400	E B G	21	21	pg/g	0.1	840	1613B
1,2,3,6,7,8-HxCDF	2300	B G	18	18	pg/g	0.1	230	1613B
1,2,3,7,8,9-HxCDF	140	B G	15	15	pg/g	0.1	14	1613B
2,3,4,6,7,8-HxCDF	260	G	15	15	pg/g	0.1	26	1613B
1,2,3,4,6,7,8-HpCDD	350	B	9.6	3.3	pg/g	0.01	3.5	1613B
1,2,3,4,6,7,8-HpCDF	2300	B G	13	13	pg/g	0.01	23	1613B
1,2,3,4,7,8,9-HpCDF	780	B G	14	14	pg/g	0.01	7.8	1613B
OCDD	4500	B	19	3.9	pg/g	0.0003	1.4	1613B
OCDF	910	B	19	0.77	pg/g	0.0003	0.27	1613B
2,3,7,8-TCDF - RA	110000	E B G	92	92	pg/g	0.1	11000	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		49000	TEQ

Client Sample ID: 11215702-072221-SS-SJSB076 (4-6) — Lab Sample ID: 320-76769-29

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	45000	E G	41	41	pg/g	1	45000	1613B
1,2,3,7,8-PeCDD	420		11	5.1	pg/g	1	420	1613B
1,2,3,7,8-PeCDF	6400	E G	27	27	pg/g	0.03	190	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB076 (4-6) (Continued)

Lab Sample ID: 320-76769-29

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,4,7,8-PeCDF	3200	G	19	19	pg/g	0.3	960	1613B
1,2,3,4,7,8-HxCDD	7.0	J	11	1.0	pg/g	0.1	0.70	1613B
1,2,3,6,7,8-HxCDD	35		11	1.1	pg/g	0.1	3.5	1613B
1,2,3,7,8,9-HxCDD	13		11	1.0	pg/g	0.1	1.3	1613B
1,2,3,4,7,8-HxCDF	11000	E G	21	21	pg/g	0.1	1100	1613B
1,2,3,6,7,8-HxCDF	3000	G	16	16	pg/g	0.1	300	1613B
1,2,3,7,8,9-HxCDF	210	G	15	15	pg/g	0.1	21	1613B
2,3,4,6,7,8-HxCDF	360	G	18	18	pg/g	0.1	36	1613B
1,2,3,4,6,7,8-HpCDD	1200	B	11	2.6	pg/g	0.01	12	1613B
1,2,3,4,6,7,8-HpCDF	2900		11	5.5	pg/g	0.01	29	1613B
1,2,3,4,7,8,9-HpCDF	1000		11	5.1	pg/g	0.01	10	1613B
OCDD	16000	E B	23	7.5	pg/g	0.0003	4.8	1613B
OCDF	1400		23	1.7	pg/g	0.0003	0.42	1613B
2,3,7,8-TCDF - RA	150000	G E	140	140	pg/g	0.1	15000	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		63000	TEQ

Client Sample ID: 11215702-072221-SS-SJSB076 (6-8)

Lab Sample ID: 320-76769-30

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	150		1.3	0.29	pg/g	1	150	1613B
1,2,3,7,8-PeCDD	1.5	J	6.7	0.073	pg/g	1	1.5	1613B
1,2,3,7,8-PeCDF	17		6.7	0.24	pg/g	0.03	0.51	1613B
2,3,4,7,8-PeCDF	9.7		6.7	0.26	pg/g	0.3	2.9	1613B
1,2,3,4,7,8-HxCDD	ND		6.7	0.051	pg/g	0.1	0.0026	1613B
1,2,3,6,7,8-HxCDD	ND		6.7	0.054	pg/g	0.1	0.0027	1613B
1,2,3,7,8,9-HxCDD	0.24	J q	6.7	0.049	pg/g	0.1	0.024	1613B
1,2,3,4,7,8-HxCDF	24		6.7	0.15	pg/g	0.1	2.4	1613B
1,2,3,6,7,8-HxCDF	6.8		6.7	0.15	pg/g	0.1	0.68	1613B
1,2,3,7,8,9-HxCDF	ND		6.7	0.14	pg/g	0.1	0.0070	1613B
2,3,4,6,7,8-HxCDF	ND		6.7	0.15	pg/g	0.1	0.0075	1613B
1,2,3,4,6,7,8-HpCDD	6.4	J B	6.7	0.11	pg/g	0.01	0.064	1613B
1,2,3,4,6,7,8-HpCDF	6.6	J	6.7	0.086	pg/g	0.01	0.066	1613B
1,2,3,4,7,8,9-HpCDF	2.5	J	6.7	0.083	pg/g	0.01	0.025	1613B
OCDD	150	B	13	0.26	pg/g	0.0003	0.045	1613B
OCDF	3.6	J q	13	0.083	pg/g	0.0003	0.0011	1613B
2,3,7,8-TCDF - RA	540		1.3	0.71	pg/g	0.1	54	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB076 (6-8) (Continued) — Lab Sample ID: 320-76769-30

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		210	TEQ

Client Sample ID: 11215702-072221-SS-SJSB076 (8-10) — Lab Sample ID: 320-76769-31

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	7.9		1.2	0.086	pg/g	1	7.9	1613B
1,2,3,7,8-PeCDD	0.19	J	6.0	0.073	pg/g	1	0.19	1613B
1,2,3,7,8-PeCDF	0.96	J	6.0	0.049	pg/g	0.03	0.029	1613B
2,3,4,7,8-PeCDF	0.54	J	6.0	0.051	pg/g	0.3	0.16	1613B
1,2,3,4,7,8-HxCDD	0.28	J	6.0	0.098	pg/g	0.1	0.028	1613B
1,2,3,6,7,8-HxCDD	0.19	J q	6.0	0.10	pg/g	0.1	0.019	1613B
1,2,3,7,8,9-HxCDD	0.28	J q	6.0	0.092	pg/g	0.1	0.028	1613B
1,2,3,4,7,8-HxCDF	1.1	J	6.0	0.087	pg/g	0.1	0.11	1613B
1,2,3,6,7,8-HxCDF	0.30	J q	6.0	0.085	pg/g	0.1	0.030	1613B
1,2,3,7,8,9-HxCDF	0.13	J	6.0	0.082	pg/g	0.1	0.013	1613B
2,3,4,6,7,8-HxCDF	ND		6.0	0.073	pg/g	0.1	0.0037	1613B
1,2,3,4,6,7,8-HpCDD	3.4	J B	6.0	0.14	pg/g	0.01	0.034	1613B
1,2,3,4,6,7,8-HpCDF	0.43	J q	6.0	0.070	pg/g	0.01	0.0043	1613B
1,2,3,4,7,8,9-HpCDF	0.16	J	6.0	0.082	pg/g	0.01	0.0016	1613B
OCDD	84	B	12	0.19	pg/g	0.0003	0.025	1613B
OCDF	0.35	J	12	0.083	pg/g	0.0003	0.00011	1613B
2,3,7,8-TCDF - RA	28		1.2	0.26	pg/g	0.1	2.8	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		11	TEQ

Client Sample ID: 11215702-072221-SS-SJSB076 (10-12) — Lab Sample ID: 320-76769-32

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	110		1.3	0.57	pg/g	1	110	1613B
1,2,3,7,8-PeCDD	0.98	J q	6.4	0.070	pg/g	1	0.98	1613B
1,2,3,7,8-PeCDF	14		6.4	0.17	pg/g	0.03	0.42	1613B
2,3,4,7,8-PeCDF	7.5		6.4	0.18	pg/g	0.3	2.3	1613B
1,2,3,4,7,8-HxCDD	ND		6.4	0.071	pg/g	0.1	0.0036	1613B
1,2,3,6,7,8-HxCDD	ND		6.4	0.082	pg/g	0.1	0.0041	1613B
1,2,3,7,8,9-HxCDD	0.29	J q	6.4	0.071	pg/g	0.1	0.029	1613B
1,2,3,4,7,8-HxCDF	19		6.4	0.090	pg/g	0.1	1.9	1613B
1,2,3,6,7,8-HxCDF	4.4	J	6.4	0.093	pg/g	0.1	0.44	1613B
1,2,3,7,8,9-HxCDF	0.35	J q	6.4	0.085	pg/g	0.1	0.035	1613B
2,3,4,6,7,8-HxCDF	0.59	J q	6.4	0.083	pg/g	0.1	0.059	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Client Sample ID: 11215702-072221-SS-SJSB076 (10-12) (Continued) — Lab Sample ID: 320-76769-32

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDD	8.9	B	6.4	0.11	pg/g	0.01	0.089	1613B
1,2,3,4,6,7,8-HpCDF	5.2	J	6.4	0.097	pg/g	0.01	0.052	1613B
1,2,3,4,7,8,9-HpCDF	1.8	J	6.4	0.092	pg/g	0.01	0.018	1613B
OCDD	200	B	13	0.28	pg/g	0.0003	0.060	1613B
OCDF	2.7	J q	13	0.078	pg/g	0.0003	0.00081	1613B
2,3,7,8-TCDF - RA	360		1.3	0.65	pg/g	0.1	36	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		150	TEQ

Client Sample ID: 11215702-072221-SS-SJSB076 (12-14) — Lab Sample ID: 320-76769-33

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	15		1.5	0.12	pg/g	1	15	1613B
1,2,3,7,8-PeCDD	ND		7.3	0.21	pg/g	1	0.11	1613B
1,2,3,7,8-PeCDF	2.1	J	7.3	0.064	pg/g	0.03	0.063	1613B
2,3,4,7,8-PeCDF	0.95	J	7.3	0.074	pg/g	0.3	0.29	1613B
1,2,3,4,7,8-HxCDD	0.61	J q	7.3	0.10	pg/g	0.1	0.061	1613B
1,2,3,6,7,8-HxCDD	0.85	J	7.3	0.11	pg/g	0.1	0.085	1613B
1,2,3,7,8,9-HxCDD	1.5	J q	7.3	0.098	pg/g	0.1	0.15	1613B
1,2,3,4,7,8-HxCDF	3.0	J	7.3	0.049	pg/g	0.1	0.30	1613B
1,2,3,6,7,8-HxCDF	0.87	J	7.3	0.050	pg/g	0.1	0.087	1613B
1,2,3,7,8,9-HxCDF	ND		7.3	0.046	pg/g	0.1	0.0023	1613B
2,3,4,6,7,8-HxCDF	ND		7.3	0.044	pg/g	0.1	0.0022	1613B
1,2,3,4,6,7,8-HpCDD	19	B	7.3	0.19	pg/g	0.01	0.19	1613B
1,2,3,4,6,7,8-HpCDF	1.0	J	7.3	0.069	pg/g	0.01	0.010	1613B
1,2,3,4,7,8,9-HpCDF	0.42	J	7.3	0.060	pg/g	0.01	0.0042	1613B
OCDD	350	B	15	0.45	pg/g	0.0003	0.11	1613B
OCDF	0.58	J	15	0.11	pg/g	0.0003	0.00017	1613B
2,3,7,8-TCDF - RA	43		1.5	0.29	pg/g	0.1	4.3	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		21	TEQ

Client Sample ID: 11215702-072221-SS-SJSB076 (14-16) — Lab Sample ID: 320-76769-34

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	3.5		1.3	0.069	pg/g	1	3.5	1613B
1,2,3,7,8-PeCDD	0.15	J q	6.7	0.061	pg/g	1	0.15	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB076 (14-16) (Continued)

Lab Sample ID: 320-76769-34

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDF	0.72	J	6.7	0.038	pg/g	0.03	0.022	1613B
2,3,4,7,8-PeCDF	0.31	J	6.7	0.038	pg/g	0.3	0.093	1613B
1,2,3,4,7,8-HxCDD	0.31	J	6.7	0.050	pg/g	0.1	0.031	1613B
1,2,3,6,7,8-HxCDD	0.34	J q	6.7	0.053	pg/g	0.1	0.034	1613B
1,2,3,7,8,9-HxCDD	0.56	J	6.7	0.047	pg/g	0.1	0.056	1613B
1,2,3,4,7,8-HxCDF	1.1	J	6.7	0.038	pg/g	0.1	0.11	1613B
1,2,3,6,7,8-HxCDF	0.31	J	6.7	0.038	pg/g	0.1	0.031	1613B
1,2,3,7,8,9-HxCDF	0.065	J q	6.7	0.030	pg/g	0.1	0.0065	1613B
2,3,4,6,7,8-HxCDF	ND		6.7	0.029	pg/g	0.1	0.0015	1613B
1,2,3,4,6,7,8-HpCDD	10	B	6.7	0.16	pg/g	0.01	0.10	1613B
1,2,3,4,6,7,8-HpCDF	0.70	J	6.7	0.036	pg/g	0.01	0.0070	1613B
1,2,3,4,7,8,9-HpCDF	0.084	J q	6.7	0.044	pg/g	0.01	0.00084	1613B
OCDD	130	B	13	0.21	pg/g	0.0003	0.039	1613B
OCDF	0.81	J	13	0.053	pg/g	0.0003	0.00024	1613B
2,3,7,8-TCDF - RA	9.8		1.3	0.19	pg/g	0.1	0.98	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		5.2	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-76769-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-76769-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (35-197)							
320-76769-1	11215702-072221-SS-SJSB080	129							
320-76769-1 - RA	11215702-072221-SS-SJSB080 (0-2)	117							
320-76769-1 MS	11215702-072221-SS-SJSB080 (0-2)	124							
320-76769-1 MS - RA	11215702-072221-SS-SJSB080 (0-2)	98							
320-76769-1 MSD	11215702-072221-SS-SJSB080 (0-2)	119							
320-76769-1 MSD - RA	11215702-072221-SS-SJSB080 (0-2)	96							
320-76769-2	11215702-072221-SS-SJSB080 (2-4)	106							
320-76769-2 - RA	11215702-072221-SS-SJSB080 (2-4)	106							
320-76769-3	11215702-072221-SS-SJSB080 (4-6)	88							
320-76769-3 - RA	11215702-072221-SS-SJSB080 (4-6)	94							
320-76769-4	11215702-072221-SS-SJSB080 (6-8)	44							
320-76769-4 - RA	11215702-072221-SS-SJSB080 (6-8)	45							
320-76769-5	11215702-072221-SS-SJSB080 (8-10)	74							
320-76769-5 - RA	11215702-072221-SS-SJSB080 (8-10)	71							
320-76769-6	11215702-072221-SS-SJSB080 (10-12)	72							
320-76769-6 - RA	11215702-072221-SS-SJSB080 (10-12)	73							
320-76769-7	11215702-072221-SS-SJSB080 (12-14)	67							
320-76769-7 - RA	11215702-072221-SS-SJSB080 (12-14)	70							
320-76769-8	11215702-072221-SS-SJSB080 (14-16)	68							
320-76769-8 - RA	11215702-072221-SS-SJSB080 (14-16)	74							
320-76769-13	11215702-072221-SS-SJSB074 (0-2)	84							
320-76769-13 - RA	11215702-072221-SS-SJSB074 (0-2)	94							
320-76769-14	11215702-072221-SS-SJSB074 (2-4)	185							
320-76769-14 - RA	11215702-072221-SS-SJSB074 (2-4)	144							
320-76769-15	11215702-072221-SS-SJSB074 (4-6)	106							
320-76769-15 - RA	11215702-072221-SS-SJSB074 (4-6)	114							
320-76769-16	11215702-072221-SS-SJSB074 (6-8)	64							
320-76769-16 - RA	11215702-072221-SS-SJSB074 (6-8)	70							

Surrogate Summary

Client: GHD Services Inc. Job ID: 320-76769-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	37TCDD (35-197)						
320-76769-17	11215702-072221-SS-SJSB074	61						
320-76769-17 - RA	11215702-072221-SS-SJSB074 (8-10)	63						
320-76769-18	11215702-072221-SS-SJSB074 (10-12)	65						
320-76769-18 - RA	11215702-072221-SS-SJSB074 (10-12)	64						
320-76769-19	11215702-072221-SS-SJSB074 (12-14)	63						
320-76769-20	11215702-072221-SS-SJSB074 (14-16)	67						
320-76769-20 - RA	11215702-072221-SS-SJSB074 (14-16)	63						
320-76769-25	11215702-072221-DUP-4	54						
320-76769-25 - RA	11215702-072221-DUP-4	55						
320-76769-26	11215702-072221-DUP-5	174						
320-76769-26 - RA	11215702-072221-DUP-5	152						
320-76769-27	11215702-072221-SS-SJSB076 (0-2)	70						
320-76769-27 - RA	11215702-072221-SS-SJSB076 (0-2)	76						
320-76769-27 MS	11215702-072221-SS-SJSB076 (0-2)	69						
320-76769-27 MS - RA	11215702-072221-SS-SJSB076 (0-2)	86						
320-76769-27 MSD	11215702-072221-SS-SJSB076 (0-2)	77						
320-76769-27 MSD - RA	11215702-072221-SS-SJSB076 (0-2)	90						
320-76769-28	11215702-072221-SS-SJSB076 (2-4)	128						
320-76769-28 - RA	11215702-072221-SS-SJSB076 (2-4)	129						
320-76769-29	11215702-072221-SS-SJSB076 (4-6)	125						
320-76769-29 - RA	11215702-072221-SS-SJSB076 (4-6)	114						
320-76769-30	11215702-072221-SS-SJSB076 (6-8)	70						
320-76769-30 - RA	11215702-072221-SS-SJSB076 (6-8)	76						
320-76769-31	11215702-072221-SS-SJSB076 (8-10)	73						
320-76769-31 - RA	11215702-072221-SS-SJSB076 (8-10)	75						
320-76769-32	11215702-072221-SS-SJSB076 (10-12)	72						
320-76769-32 - RA	11215702-072221-SS-SJSB076 (10-12)	77						
320-76769-33	11215702-072221-SS-SJSB076 (12-14)	71						
320-76769-33 - RA	11215702-072221-SS-SJSB076 (12-14)	75						
320-76769-34	11215702-072221-SS-SJSB076 (14-16)	76						

Surrogate Summary

Client: GHD Services Inc. Job ID: 320-76769-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (35-197)							
320-76769-34 - RA	11215702-072221-SS-SJSB076	75							
320-76888-A-1-B MS	Matrix Spike	90							
320-76888-A-1-B MS - RA	Matrix Spike	56							
320-76888-A-1-C MSD	Matrix Spike Duplicate	123							
320-76888-A-1-C MSD - RA	Matrix Spike Duplicate	61							
MB 320-513585/1-A	Method Blank	72							
MB 320-513586/1-A	Method Blank	68							
MB 320-513879/1-A	Method Blank	46							
MB 320-513879/1-A	Method Blank	50							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (31-191)							
LCS 320-513585/2-A	Lab Control Sample	73							
LCS 320-513586/2-A	Lab Control Sample	69							
LCS 320-513879/2-A	Lab Control Sample	47							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76769-1	11215702-072221-SS-SJSB080	72	60	87	76	86	76	63	70
320-76769-1 - RA	11215702-072221-SS-SJSB080 (0-2)		63						
320-76769-1 MS	11215702-072221-SS-SJSB080 (0-2)	65	54	76	68	75	68	57	64
320-76769-1 MS - RA	11215702-072221-SS-SJSB080 (0-2)		54						
320-76769-1 MSD	11215702-072221-SS-SJSB080 (0-2)	61	51	72	64	70	63	56	61
320-76769-1 MSD - RA	11215702-072221-SS-SJSB080 (0-2)		47						
320-76769-2	11215702-072221-SS-SJSB080 (2-4)	65	62	76	68	75	70	63	68
320-76769-2 - RA	11215702-072221-SS-SJSB080 (2-4)		80						
320-76769-3	11215702-072221-SS-SJSB080 (4-6)	56	54	65	59	65	61	54	58
320-76769-3 - RA	11215702-072221-SS-SJSB080 (4-6)		67						
320-76769-4	11215702-072221-SS-SJSB080 (6-8)	31	31	28	30	34	39	34	38
320-76769-4 - RA	11215702-072221-SS-SJSB080 (6-8)		35						
320-76769-5	11215702-072221-SS-SJSB080 (8-10)	57	53	65	60	66	64	56	59
320-76769-5 - RA	11215702-072221-SS-SJSB080 (8-10)		58						
320-76769-6	11215702-072221-SS-SJSB080 (10-12)	62	57	62	57	62	67	64	62
320-76769-6 - RA	11215702-072221-SS-SJSB080 (10-12)		62						
320-76769-7	11215702-072221-SS-SJSB080 (12-14)	56	50	55	50	55	60	56	56
320-76769-7 - RA	11215702-072221-SS-SJSB080 (12-14)		57						
320-76769-8	11215702-072221-SS-SJSB080 (14-16)	54	49	56	51	56	60	56	57
320-76769-8 - RA	11215702-072221-SS-SJSB080 (14-16)		56						
320-76769-13	11215702-072221-SS-SJSB074 (0-2)	54	44	52	50	53	60	54	57
320-76769-13 - RA	11215702-072221-SS-SJSB074 (0-2)		64						
320-76769-14	11215702-072221-SS-SJSB074 (2-4)	68	52	68	63	71	62	54	58
320-76769-14 - RA	11215702-072221-SS-SJSB074 (2-4)		51						
320-76769-15	11215702-072221-SS-SJSB074 (4-6)	52	48	84	53	67	59	57	58
320-76769-15 - RA	11215702-072221-SS-SJSB074 (4-6)		56						
320-76769-16	11215702-072221-SS-SJSB074 (6-8)	51	45	54	48	52	58	51	52
320-76769-16 - RA	11215702-072221-SS-SJSB074 (6-8)		51						

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76769-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76769-17	11215702-072221-SS-SJSB074	48	43	48	44	48	49	49	48
320-76769-17 - RA	11215702-072221-SS-SJSB074 (8-10)		48						
320-76769-18	11215702-072221-SS-SJSB074 (10-12)	52	47	55	49	54	55	54	53
320-76769-18 - RA	11215702-072221-SS-SJSB074 (10-12)		54						
320-76769-19	11215702-072221-SS-SJSB074 (12-14)	49	44	51	46	51	51	49	50
320-76769-20	11215702-072221-SS-SJSB074 (14-16)	54	49	58	52	56	58	52	55
320-76769-20 - RA	11215702-072221-SS-SJSB074 (14-16)		48						
320-76769-25	11215702-072221-DUP-4	44	40	46	42	47	48	43	45
320-76769-25 - RA	11215702-072221-DUP-4		43						
320-76769-26	11215702-072221-DUP-5	63	55	74	65	71	68	57	63
320-76769-26 - RA	11215702-072221-DUP-5		59						
320-76769-27	11215702-072221-SS-SJSB076 (0-2)	52	54	50	50	52	58	54	67
320-76769-27 - RA	11215702-072221-SS-SJSB076 (0-2)		59						
320-76769-27 MS	11215702-072221-SS-SJSB076 (0-2)	53	56	51	53	53	58	56	65
320-76769-27 MS - RA	11215702-072221-SS-SJSB076 (0-2)		65						
320-76769-27 MSD	11215702-072221-SS-SJSB076 (0-2)	60	61	61	52	60	72	63	69
320-76769-27 MSD - RA	11215702-072221-SS-SJSB076 (0-2)		70						
320-76769-28	11215702-072221-SS-SJSB076 (2-4)	53	42	57	52	57	53	45	49
320-76769-28 - RA	11215702-072221-SS-SJSB076 (2-4)		47						
320-76769-29	11215702-072221-SS-SJSB076 (4-6)	55	52	67	42	54	60	54	68
320-76769-29 - RA	11215702-072221-SS-SJSB076 (4-6)		44						
320-76769-30	11215702-072221-SS-SJSB076 (6-8)	61	60	60	59	64	68	64	74
320-76769-30 - RA	11215702-072221-SS-SJSB076 (6-8)		69						
320-76769-31	11215702-072221-SS-SJSB076 (8-10)	62	58	64	60	65	70	63	78
320-76769-31 - RA	11215702-072221-SS-SJSB076 (8-10)		66						
320-76769-32	11215702-072221-SS-SJSB076 (10-12)	56	53	55	54	59	61	54	65
320-76769-32 - RA	11215702-072221-SS-SJSB076 (10-12)		57						
320-76769-33	11215702-072221-SS-SJSB076 (12-14)	55	53	51	52	52	56	52	62
320-76769-33 - RA	11215702-072221-SS-SJSB076 (12-14)		57						
320-76769-34	11215702-072221-SS-SJSB076 (14-16)	59	55	59	56	61	64	59	65

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76769-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76769-34 - RA	11215702-072221-SS-SJSB076		57						
320-76888-A-1-B MS	Matrix Spike	44	41	39 q	38	46	41	42	51
320-76888-A-1-B MS - RA	Matrix Spike		29						
320-76888-A-1-C MSD	Matrix Spike Duplicate	40	37	38	36	40	37	34 q	44
320-76888-A-1-C MSD - RA	Matrix Spike Duplicate		23 *5-						
MB 320-513585/1-A	Method Blank	57	53	63	57	63	58	56	57
MB 320-513586/1-A	Method Blank	59	57	58	61	65	65	60	74
MB 320-513879/1-A	Method Blank	36	36	35	36	40	40	39	47
MB 320-513879/1-A	Method Blank		37						

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76769-1	11215702-072221-SS-SJSB080	61	63	62	73	68	79	90
320-76769-1 - RA	11215702-072221-SS-SJSB080 (0-2)							
320-76769-1 MS	11215702-072221-SS-SJSB080 (0-2)	55	58	57	66	61	72	79
320-76769-1 MS - RA	11215702-072221-SS-SJSB080 (0-2)							
320-76769-1 MSD	11215702-072221-SS-SJSB080 (0-2)	53	56	55	64	60	71	77
320-76769-1 MSD - RA	11215702-072221-SS-SJSB080 (0-2)							
320-76769-2	11215702-072221-SS-SJSB080 (2-4)	59	62	60	73	68	80	86
320-76769-2 - RA	11215702-072221-SS-SJSB080 (2-4)							
320-76769-3	11215702-072221-SS-SJSB080 (4-6)	51	54	54	66	59	71	78
320-76769-3 - RA	11215702-072221-SS-SJSB080 (4-6)							
320-76769-4	11215702-072221-SS-SJSB080 (6-8)	33	30	31	39	35	40	37
320-76769-4 - RA	11215702-072221-SS-SJSB080 (6-8)							
320-76769-5	11215702-072221-SS-SJSB080 (8-10)	53	55	54	63	60	69	75
320-76769-5 - RA	11215702-072221-SS-SJSB080 (8-10)							
320-76769-6	11215702-072221-SS-SJSB080 (10-12)	59	58	58	66	60	69	71
320-76769-6 - RA	11215702-072221-SS-SJSB080 (10-12)							
320-76769-7	11215702-072221-SS-SJSB080 (12-14)	52	52	52	57	52	60	61
320-76769-7 - RA	11215702-072221-SS-SJSB080 (12-14)							
320-76769-8	11215702-072221-SS-SJSB080 (14-16)	53	51	51	57	51	59	59
320-76769-8 - RA	11215702-072221-SS-SJSB080 (14-16)							
320-76769-13	11215702-072221-SS-SJSB074 (0-2)	50	50	50	59	54	62	68
320-76769-13 - RA	11215702-072221-SS-SJSB074 (0-2)							

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76769-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76769-14	11215702-072221-SS-SJSB074	51	55	54	66	61	72	86
320-76769-14 - RA	11215702-072221-SS-SJSB074 (2-4)							
320-76769-15	11215702-072221-SS-SJSB074 (4-6)	52	55	45	52	45	52	58
320-76769-15 - RA	11215702-072221-SS-SJSB074 (4-6)							
320-76769-16	11215702-072221-SS-SJSB074 (6-8)	49	47	47	47	41	49	50
320-76769-16 - RA	11215702-072221-SS-SJSB074 (6-8)							
320-76769-17	11215702-072221-SS-SJSB074 (8-10)	45	44	43	48	44	50	52
320-76769-17 - RA	11215702-072221-SS-SJSB074 (8-10)							
320-76769-18	11215702-072221-SS-SJSB074 (10-12)	50	49	49	55	51	59	60
320-76769-18 - RA	11215702-072221-SS-SJSB074 (10-12)							
320-76769-19	11215702-072221-SS-SJSB074 (12-14)	46	45	45	51	49	55	55
320-76769-20	11215702-072221-SS-SJSB074 (14-16)	51	49	50	57	54	61	62
320-76769-20 - RA	11215702-072221-SS-SJSB074 (14-16)							
320-76769-25	11215702-072221-DUP-4	42	41	42	49	47	52	55
320-76769-25 - RA	11215702-072221-DUP-4							
320-76769-26	11215702-072221-DUP-5	54	56	56	66	60	71	79
320-76769-26 - RA	11215702-072221-DUP-5							
320-76769-27	11215702-072221-SS-SJSB076 (0-2)	58	53	54	58	57	63	64
320-76769-27 - RA	11215702-072221-SS-SJSB076 (0-2)							
320-76769-27 MS	11215702-072221-SS-SJSB076 (0-2)	58	53	57	61	60	65	63
320-76769-27 MS - RA	11215702-072221-SS-SJSB076 (0-2)							
320-76769-27 MSD	11215702-072221-SS-SJSB076 (0-2)	61	55	63	60	60	57	53
320-76769-27 MSD - RA	11215702-072221-SS-SJSB076 (0-2)							
320-76769-28	11215702-072221-SS-SJSB076 (2-4)	43	46	44	53	48	57	61
320-76769-28 - RA	11215702-072221-SS-SJSB076 (2-4)							
320-76769-29	11215702-072221-SS-SJSB076 (4-6)	56	61	53	61	53	59	64
320-76769-29 - RA	11215702-072221-SS-SJSB076 (4-6)							
320-76769-30	11215702-072221-SS-SJSB076 (6-8)	63	62	61	74	69	77	74
320-76769-30 - RA	11215702-072221-SS-SJSB076 (6-8)							
320-76769-31	11215702-072221-SS-SJSB076 (8-10)	71	60	66	56	51	61	62

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76769-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76769-31 - RA	11215702-072221-SS-SJSB076							
320-76769-32	11215702-072221-SS-SJSB076 (10-12)	56	56	56	62	60	73	71
320-76769-32 - RA	11215702-072221-SS-SJSB076 (10-12)							
320-76769-33	11215702-072221-SS-SJSB076 (12-14)	55	53	53	65	58	72	65
320-76769-33 - RA	11215702-072221-SS-SJSB076 (12-14)							
320-76769-34	11215702-072221-SS-SJSB076 (14-16)	58	58	59	59	54	62	60
320-76769-34 - RA	11215702-072221-SS-SJSB076 (14-16)							
320-76888-A-1-B MS	Matrix Spike	41	38	35	41	39	44	41
320-76888-A-1-B MS - RA	Matrix Spike							
320-76888-A-1-C MSD	Matrix Spike Duplicate	37	35	34	38	39	44	37 q
320-76888-A-1-C MSD - RA	Matrix Spike Duplicate							
MB 320-513585/1-A	Method Blank	52	52	52	61	59	65	72
MB 320-513586/1-A	Method Blank	64	61	61	72	65	78	76
MB 320-513879/1-A	Method Blank	43	39	38	41	41	42	36
MB 320-513879/1-A	Method Blank							

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-513585/2-A	Lab Control Sample	57	53	63	57	63	59	54	57
LCS 320-513586/2-A	Lab Control Sample	54	54	59	56	63	60	54	67
LCS 320-513879/2-A	Lab Control Sample	34	36	34	31	36	37	35	42

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-513585/2-A	Lab Control Sample	51	52	52	62	59	68	71

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76769-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-513586/2-A	Lab Control Sample	58	53	54	67	63	72	71
LCS 320-513879/2-A	Lab Control Sample	37	32	33	36	35	40	39

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-513585/1-A
Matrix: Sediment
Analysis Batch: 516847

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513585

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.138	J q	1.0	0.051	pg/g		08/06/21 05:22	08/15/21 02:06	1
2,3,7,8-TCDF	0.212	J q	1.0	0.058	pg/g		08/06/21 05:22	08/15/21 02:06	1
1,2,3,7,8-PeCDD	ND		5.0	0.048	pg/g		08/06/21 05:22	08/15/21 02:06	1
1,2,3,7,8-PeCDF	ND		5.0	0.036	pg/g		08/06/21 05:22	08/15/21 02:06	1
2,3,4,7,8-PeCDF	ND		5.0	0.037	pg/g		08/06/21 05:22	08/15/21 02:06	1
1,2,3,4,7,8-HxCDD	0.154	J q	5.0	0.031	pg/g		08/06/21 05:22	08/15/21 02:06	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.032	pg/g		08/06/21 05:22	08/15/21 02:06	1
1,2,3,7,8,9-HxCDD	0.0515	J q	5.0	0.028	pg/g		08/06/21 05:22	08/15/21 02:06	1
1,2,3,4,7,8-HxCDF	0.0458	J	5.0	0.030	pg/g		08/06/21 05:22	08/15/21 02:06	1
1,2,3,6,7,8-HxCDF	0.0416	J q	5.0	0.031	pg/g		08/06/21 05:22	08/15/21 02:06	1
1,2,3,7,8,9-HxCDF	0.114	J	5.0	0.025	pg/g		08/06/21 05:22	08/15/21 02:06	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.024	pg/g		08/06/21 05:22	08/15/21 02:06	1
1,2,3,4,6,7,8-HpCDD	0.176	J q	5.0	0.025	pg/g		08/06/21 05:22	08/15/21 02:06	1
1,2,3,4,6,7,8-HpCDF	0.132	J	5.0	0.030	pg/g		08/06/21 05:22	08/15/21 02:06	1
1,2,3,4,7,8,9-HpCDF	0.0991	J	5.0	0.038	pg/g		08/06/21 05:22	08/15/21 02:06	1
OCDD	1.05	J	10	0.049	pg/g		08/06/21 05:22	08/15/21 02:06	1
OCDF	0.316	J q	10	0.035	pg/g		08/06/21 05:22	08/15/21 02:06	1
Total TCDD	0.138	J q	1.0	0.051	pg/g		08/06/21 05:22	08/15/21 02:06	1
Total TCDF	0.212	J q	1.0	0.058	pg/g		08/06/21 05:22	08/15/21 02:06	1
Total PeCDD	ND		5.0	0.048	pg/g		08/06/21 05:22	08/15/21 02:06	1
Total PeCDF	ND		5.0	0.037	pg/g		08/06/21 05:22	08/15/21 02:06	1
Total HxCDD	0.205	J q	5.0	0.030	pg/g		08/06/21 05:22	08/15/21 02:06	1
Total HxCDF	0.202	J q	5.0	0.028	pg/g		08/06/21 05:22	08/15/21 02:06	1
Total HpCDD	0.300	J q	5.0	0.025	pg/g		08/06/21 05:22	08/15/21 02:06	1
Total HpCDF	0.231	J	5.0	0.034	pg/g		08/06/21 05:22	08/15/21 02:06	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*57*		*25 - 164*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-2,3,7,8-TCDF	*53*		*24 - 169*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-1,2,3,7,8-PeCDD	*63*		*25 - 181*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-1,2,3,7,8-PeCDF	*57*		*24 - 185*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-2,3,4,7,8-PeCDF	*63*		*21 - 178*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-1,2,3,4,7,8-HxCDD	*58*		*32 - 141*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-1,2,3,6,7,8-HxCDD	*56*		*28 - 130*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-1,2,3,4,7,8-HxCDF	*57*		*26 - 152*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-1,2,3,6,7,8-HxCDF	*52*		*26 - 123*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-1,2,3,7,8,9-HxCDF	*52*		*29 - 147*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-2,3,4,6,7,8-HxCDF	*52*		*28 - 136*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*61*		*23 - 140*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*59*		*28 - 143*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*65*		*26 - 138*	*08/06/21 05:22*	*08/15/21 02:06*	*1*
13C-OCDD	*72*		*17 - 157*	*08/06/21 05:22*	*08/15/21 02:06*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*72*		*35 - 197*	*08/06/21 05:22*	*08/15/21 02:06*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-513585/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 516847 **Prep Batch: 513585**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	19.8		pg/g		99	67 - 158
2,3,7,8-TCDF	20.0	20.7		pg/g		104	75 - 158
1,2,3,7,8-PeCDD	100	105		pg/g		105	70 - 142
1,2,3,7,8-PeCDF	100	105		pg/g		105	80 - 134
2,3,4,7,8-PeCDF	100	97.0		pg/g		97	68 - 160
1,2,3,4,7,8-HxCDD	100	95.8		pg/g		96	70 - 164
1,2,3,6,7,8-HxCDD	100	107		pg/g		107	76 - 134
1,2,3,7,8,9-HxCDD	100	107		pg/g		107	64 - 162
1,2,3,4,7,8-HxCDF	100	92.9		pg/g		93	72 - 134
1,2,3,6,7,8-HxCDF	100	106		pg/g		106	84 - 130
1,2,3,7,8,9-HxCDF	100	103		pg/g		103	78 - 130
2,3,4,6,7,8-HxCDF	100	104		pg/g		104	70 - 156
1,2,3,4,6,7,8-HpCDD	100	107		pg/g		107	70 - 140
1,2,3,4,6,7,8-HpCDF	100	106		pg/g		106	82 - 122
1,2,3,4,7,8,9-HpCDF	100	97.7		pg/g		98	78 - 138
OCDD	200	206		pg/g		103	78 - 144
OCDF	200	200		pg/g		100	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*57*		*20 - 175*
13C-2,3,7,8-TCDF	*53*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*63*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*57*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*63*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*59*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*54*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*57*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*51*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*52*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*52*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*62*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*59*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*68*		*20 - 186*
13C-OCDD	*71*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*73*		*31 - 191*

Lab Sample ID: 320-76769-1 MS **Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 516847 **Prep Batch: 513585**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	17000	E B G	34.1	18000	E 4 G	pg/g	☼	1825	67 - 158
1,2,3,7,8-PeCDD	140		170	337		pg/g	☼	113	70 - 142
1,2,3,7,8-PeCDF	1900	G	170	2170	4 G	pg/g	☼	129	80 - 134
2,3,4,7,8-PeCDF	1000	G	170	1200	4 G	pg/g	☼	117	68 - 160
1,2,3,4,7,8-HxCDD	3.0	J B	170	170		pg/g	☼	98	70 - 164

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76769-1 MS **Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 516847 **Prep Batch: 513585**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	14		170	199		pg/g	☼	109	76 - 134
1,2,3,7,8,9-HxCDD	6.3	J B	170	178		pg/g	☼	101	64 - 162
1,2,3,4,7,8-HxCDF	3100	B G	170	3560	E 4 G	pg/g	☼	294	72 - 134
1,2,3,6,7,8-HxCDF	840	B	170	1100	4 G	pg/g	☼	154	84 - 130
1,2,3,7,8,9-HxCDF	45	B	170	234	G	pg/g	☼	111	78 - 130
2,3,4,6,7,8-HxCDF	92		170	276	G	pg/g	☼	108	70 - 156
1,2,3,4,6,7,8-HpCDD	530	B	170	748		pg/g	☼	126	70 - 140
1,2,3,4,6,7,8-HpCDF	990	B	170	1310	4	pg/g	☼	187	82 - 122
1,2,3,4,7,8,9-HpCDF	300	B	170	518	G	pg/g	☼	128	78 - 138
OCDD	7000	E B	341	7670	E 4	pg/g	☼	190	78 - 144
OCDF	370	B	341	781		pg/g	☼	119	63 - 170

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*65*		*25 - 164*
13C-2,3,7,8-TCDF	*54*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*76*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*68*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*75*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*68*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*57*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*64*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*55*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*58*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*57*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*66*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*61*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*72*		*26 - 138*
13C-OCDD	*79*		*17 - 157*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*124*		*35 - 197*

Lab Sample ID: 320-76769-1 MSD **Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 516847 **Prep Batch: 513585**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	17000	E B G	31.5	16400	E 4 G	pg/g	☼	-3082	67 - 158	9	50
1,2,3,7,8-PeCDD	140		157	313		pg/g	☼	107	70 - 142	7	50
1,2,3,7,8-PeCDF	1900	G	157	2140	4 G	pg/g	☼	124	80 - 134	1	50
2,3,4,7,8-PeCDF	1000	G	157	1170	4 G	pg/g	☼	102	68 - 160	3	50
1,2,3,4,7,8-HxCDD	3.0	J B	157	162		pg/g	☼	101	70 - 164	5	50
1,2,3,6,7,8-HxCDD	14		157	185		pg/g	☼	109	76 - 134	7	50
1,2,3,7,8,9-HxCDD	6.3	J B	157	166		pg/g	☼	101	64 - 162	7	50
1,2,3,4,7,8-HxCDF	3100	B G	157	3390	E 4 G	pg/g	☼	212	72 - 134	5	50
1,2,3,6,7,8-HxCDF	840	B	157	1040	4 G	pg/g	☼	124	84 - 130	6	50
1,2,3,7,8,9-HxCDF	45	B	157	205	G	pg/g	☼	102	78 - 130	13	50
2,3,4,6,7,8-HxCDF	92		157	256	G	pg/g	☼	104	70 - 156	8	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76769-1 MSD **Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 516847 **Prep Batch: 513585**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	530	B	157	666		pg/g	☼	84	70 - 140	12	50
1,2,3,4,6,7,8-HpCDF	990	B	157	1200	4	pg/g	☼	134	82 - 122	9	50
1,2,3,4,7,8,9-HpCDF	300	B	157	481		pg/g	☼	115	78 - 138	7	50
OCDD	7000	E B	315	7020	E 4	pg/g	☼	-0.6	78 - 144	9	50
OCDF	370	B	315	735		pg/g	☼	114	63 - 170	6	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*61*		*25 - 164*
13C-2,3,7,8-TCDF	*51*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*72*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*64*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*70*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*63*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*56*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*61*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*53*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*56*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*55*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*64*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*71*		*26 - 138*
13C-OCDD	*77*		*17 - 157*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*119*		*35 - 197*

Lab Sample ID: MB 320-513586/1-A **Client Sample ID: Method Blank**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517196 **Prep Batch: 513586**

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.031	pg/g		08/06/21 05:28	08/17/21 17:01	1
2,3,7,8-TCDF	ND		1.0	0.011	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8-PeCDD	ND		5.0	0.041	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8-PeCDF	ND		5.0	0.026	pg/g		08/06/21 05:28	08/17/21 17:01	1
2,3,4,7,8-PeCDF	ND		5.0	0.028	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.034	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.034	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.031	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.015	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.016	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.015	pg/g		08/06/21 05:28	08/17/21 17:01	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.015	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,6,7,8-HpCDD	0.198	J q	5.0	0.021	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	0.039	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.037	pg/g		08/06/21 05:28	08/17/21 17:01	1
OCDD	0.435	J q	10	0.035	pg/g		08/06/21 05:28	08/17/21 17:01	1
OCDF	ND		10	0.061	pg/g		08/06/21 05:28	08/17/21 17:01	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-513586/1-A **Client Sample ID: Method Blank**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517196 **Prep Batch: 513586**

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDD	ND		1.0	0.031	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total TCDF	ND		1.0	0.13	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total PeCDD	ND		5.0	0.16	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total PeCDF	ND		5.0	0.028	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HxCDD	ND		5.0	0.16	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HxCDF	ND		5.0	0.036	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HpCDD	0.357	J q	5.0	0.021	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HpCDF	ND		5.0	0.039	pg/g		08/06/21 05:28	08/17/21 17:01	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*59*		*25 - 164*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-2,3,7,8-TCDF	*57*		*24 - 169*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,7,8-PeCDD	*58*		*25 - 181*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,7,8-PeCDF	*61*		*24 - 185*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-2,3,4,7,8-PeCDF	*65*		*21 - 178*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,7,8-HxCDD	*65*		*32 - 141*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,6,7,8-HxCDD	*60*		*28 - 130*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,7,8-HxCDF	*74*		*26 - 152*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,6,7,8-HxCDF	*64*		*26 - 123*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,7,8,9-HxCDF	*61*		*29 - 147*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-2,3,4,6,7,8-HxCDF	*61*		*28 - 136*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*72*		*23 - 140*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*65*		*28 - 143*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*78*		*26 - 138*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-OCDD	*76*		*17 - 157*	*08/06/21 05:28*	*08/17/21 17:01*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*68*		*35 - 197*	*08/06/21 05:28*	*08/17/21 17:01*	*1*

Lab Sample ID: LCS 320-513586/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517196 **Prep Batch: 513586**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	21.3		pg/g		107	67 - 158
2,3,7,8-TCDF	20.0	21.8		pg/g		109	75 - 158
1,2,3,7,8-PeCDD	100	112		pg/g		112	70 - 142
1,2,3,7,8-PeCDF	100	114		pg/g		114	80 - 134
2,3,4,7,8-PeCDF	100	105		pg/g		105	68 - 160
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	70 - 164
1,2,3,6,7,8-HxCDD	100	111		pg/g		111	76 - 134
1,2,3,7,8,9-HxCDD	100	110		pg/g		110	64 - 162
1,2,3,4,7,8-HxCDF	100	107		pg/g		107	72 - 134
1,2,3,6,7,8-HxCDF	100	112		pg/g		112	84 - 130
1,2,3,7,8,9-HxCDF	100	116		pg/g		116	78 - 130
2,3,4,6,7,8-HxCDF	100	117		pg/g		117	70 - 156
1,2,3,4,6,7,8-HpCDD	100	108		pg/g		108	70 - 140
1,2,3,4,6,7,8-HpCDF	100	112		pg/g		112	82 - 122

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-513586/2-A
Client Sample ID: Lab Control Sample
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 517196
Prep Batch: 513586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,4,7,8,9-HpCDF	100	105		pg/g		105	78 - 138
OCDD	200	228		pg/g		114	78 - 144
OCDF	200	248		pg/g		124	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*54*		*20 - 175*
13C-2,3,7,8-TCDF	*54*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*59*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*56*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*63*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*60*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*54*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*67*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*58*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*53*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*54*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*67*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*63*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*72*		*20 - 186*
13C-OCDD	*71*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*69*		*31 - 191*

Lab Sample ID: 320-76769-27 MS
Client Sample ID: 11215702-072221-SS-SJSB076 (0-2)
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 517461
Prep Batch: 513586

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	2100	E G	26.4	2320	E G 4	pg/g	☼	871	67 - 158
1,2,3,7,8-PeCDD	20		132	169		pg/g	☼	112	70 - 142
1,2,3,7,8-PeCDF	310		132	478		pg/g	☼	127	80 - 134
2,3,4,7,8-PeCDF	160		132	321		pg/g	☼	123	68 - 160
1,2,3,4,7,8-HxCDD	0.96	J	132	128		pg/g	☼	97	70 - 164
1,2,3,6,7,8-HxCDD	1.8	J	132	154		pg/g	☼	115	76 - 134
1,2,3,7,8,9-HxCDD	2.0	J	132	150		pg/g	☼	112	64 - 162
1,2,3,4,7,8-HxCDF	500	F1	132	639		pg/g	☼	104	72 - 134
1,2,3,6,7,8-HxCDF	130		132	277		pg/g	☼	112	84 - 130
1,2,3,7,8,9-HxCDF	8.1		132	158		pg/g	☼	114	78 - 130
2,3,4,6,7,8-HxCDF	16		132	172		pg/g	☼	118	70 - 156
1,2,3,4,6,7,8-HpCDD	51	B F1 F2	132	796	F1	pg/g	☼	564	70 - 140
1,2,3,4,6,7,8-HpCDF	150		132	291		pg/g	☼	110	82 - 122
1,2,3,4,7,8,9-HpCDF	46		132	179		pg/g	☼	101	78 - 138
OCDD	1200	B F2	264	12800	E 4	pg/g	☼	4403	78 - 144
OCDF	72		264	415		pg/g	☼	130	63 - 170

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*53*		*25 - 164*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76769-27 MS
Client Sample ID: 11215702-072221-SS-SJSB076 (0-2)
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 517461
Prep Batch: 513586

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C-2,3,7,8-TCDF	56		24 - 169
13C-1,2,3,7,8-PeCDD	51		25 - 181
13C-1,2,3,7,8-PeCDF	53		24 - 185
13C-2,3,4,7,8-PeCDF	53		21 - 178
13C-1,2,3,4,7,8-HxCDD	58		32 - 141
13C-1,2,3,6,7,8-HxCDD	56		28 - 130
13C-1,2,3,4,7,8-HxCDF	65		26 - 152
13C-1,2,3,6,7,8-HxCDF	58		26 - 123
13C-1,2,3,7,8,9-HxCDF	53		29 - 147
13C-2,3,4,6,7,8-HxCDF	57		28 - 136
13C-1,2,3,4,6,7,8-HpCDD	61		23 - 140
13C-1,2,3,4,6,7,8-HpCDF	60		28 - 143
13C-1,2,3,4,7,8,9-HpCDF	65		26 - 138
13C-OCDD	63		17 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	69		35 - 197

Lab Sample ID: 320-76769-27 MSD
Client Sample ID: 11215702-072221-SS-SJSB076 (0-2)
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 517461
Prep Batch: 513586

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	2100	E G	26.2	1820	G E 4	pg/g	☼	-1013	67 - 158	24	50
1,2,3,7,8-PeCDD	20		131	163		pg/g	☼	109	70 - 142	4	50
1,2,3,7,8-PeCDF	310		131	426		pg/g	☼	89	80 - 134	11	50
2,3,4,7,8-PeCDF	160		131	280		pg/g	☼	93	68 - 160	14	50
1,2,3,4,7,8-HxCDD	0.96	J	131	121		pg/g	☼	92	70 - 164	6	50
1,2,3,6,7,8-HxCDD	1.8	J	131	148		pg/g	☼	112	76 - 134	4	50
1,2,3,7,8,9-HxCDD	2.0	J	131	131		pg/g	☼	99	64 - 162	13	50
1,2,3,4,7,8-HxCDF	500	F1	131	581	F1	pg/g	☼	61	72 - 134	10	50
1,2,3,6,7,8-HxCDF	130		131	251		pg/g	☼	93	84 - 130	10	50
1,2,3,7,8,9-HxCDF	8.1		131	159		pg/g	☼	116	78 - 130	1	50
2,3,4,6,7,8-HxCDF	16		131	183		pg/g	☼	127	70 - 156	6	50
1,2,3,4,6,7,8-HpCDD	51	B F1 F2	131	204	F2	pg/g	☼	116	70 - 140	119	50
1,2,3,4,6,7,8-HpCDF	150		131	275		pg/g	☼	99	82 - 122	6	50
1,2,3,4,7,8,9-HpCDF	46		131	178		pg/g	☼	101	78 - 138	1	50
OCDD	1200	B F2	262	1410	4 F2	pg/g	☼	98	78 - 144	160	50
OCDF	72		262	353		pg/g	☼	108	63 - 170	16	50

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDD	60		25 - 164
13C-2,3,7,8-TCDF	61		24 - 169
13C-1,2,3,7,8-PeCDD	61		25 - 181
13C-1,2,3,7,8-PeCDF	52		24 - 185
13C-2,3,4,7,8-PeCDF	60		21 - 178
13C-1,2,3,4,7,8-HxCDD	72		32 - 141
13C-1,2,3,6,7,8-HxCDD	63		28 - 130

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76769-27 MSD
Matrix: Sediment
Analysis Batch: 517461

Client Sample ID: 11215702-072221-SS-SJSB076 (0-2)
Prep Type: Total/NA
Prep Batch: 513586

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-1,2,3,4,7,8-HxCDF	*69*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*61*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*55*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*63*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*60*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*57*		*26 - 138*
13C-OCDD	*53*		*17 - 157*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*77*		*35 - 197*

Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Analysis Batch: 517891

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513879

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.073	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8-PeCDD	ND		5.0	0.067	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8-PeCDF	ND		5.0	0.052	pg/g		08/06/21 12:58	08/19/21 16:27	1
2,3,4,7,8-PeCDF	ND		5.0	0.055	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.042	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.046	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.041	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.021	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.020	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.020	pg/g		08/06/21 12:58	08/19/21 16:27	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.022	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,6,7,8-HpCDD	0.338	J	5.0	0.032	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,6,7,8-HpCDF	0.177	J	5.0	0.038	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.041	pg/g		08/06/21 12:58	08/19/21 16:27	1
OCDD	1.21	J	10	0.029	pg/g		08/06/21 12:58	08/19/21 16:27	1
OCDF	ND		10	0.12	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total TCDD	ND		1.0	0.14	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total TCDF	4.06		1.0	0.047	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total PeCDD	ND		5.0	0.21	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total PeCDF	ND		5.0	0.055	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HxCDD	ND		5.0	0.19	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HxCDF	ND		5.0	0.040	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HpCDD	0.546	J	5.0	0.032	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HpCDF	0.177	J	5.0	0.039	pg/g		08/06/21 12:58	08/19/21 16:27	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*36*		*25 - 164*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,7,8-TCDF	*36*		*24 - 169*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8-PeCDD	*35*		*25 - 181*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8-PeCDF	*36*		*24 - 185*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,4,7,8-PeCDF	*40*		*21 - 178*	*08/06/21 12:58*	*08/19/21 16:27*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Analysis Batch: 517891

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513879

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8-HxCDD	40		32 - 141	08/06/21 12:58	08/19/21 16:27	1
13C-1,2,3,6,7,8-HxCDD	39		28 - 130	08/06/21 12:58	08/19/21 16:27	1
13C-1,2,3,4,7,8-HxCDF	47		26 - 152	08/06/21 12:58	08/19/21 16:27	1
13C-1,2,3,6,7,8-HxCDF	43		26 - 123	08/06/21 12:58	08/19/21 16:27	1
13C-1,2,3,7,8,9-HxCDF	39		29 - 147	08/06/21 12:58	08/19/21 16:27	1
13C-2,3,4,6,7,8-HxCDF	38		28 - 136	08/06/21 12:58	08/19/21 16:27	1
13C-1,2,3,4,6,7,8-HpCDD	41		23 - 140	08/06/21 12:58	08/19/21 16:27	1
13C-1,2,3,4,6,7,8-HpCDF	41		28 - 143	08/06/21 12:58	08/19/21 16:27	1
13C-1,2,3,4,7,8,9-HpCDF	42		26 - 138	08/06/21 12:58	08/19/21 16:27	1
13C-OCDD	36		17 - 157	08/06/21 12:58	08/19/21 16:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	46		35 - 197	08/06/21 12:58	08/19/21 16:27	1

Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Analysis Batch: 519438

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513879

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	2.39		1.0	0.22	pg/g		08/06/21 12:58	08/24/21 10:23	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	37		24 - 169	08/06/21 12:58	08/24/21 10:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	50		35 - 197	08/06/21 12:58	08/24/21 10:23	1

Lab Sample ID: LCS 320-513879/2-A
Matrix: Sediment
Analysis Batch: 517462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 513879

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	22.3		pg/g		111	67 - 158
2,3,7,8-TCDF	20.0	23.1		pg/g		115	75 - 158
1,2,3,7,8-PeCDD	100	113		pg/g		113	70 - 142
1,2,3,7,8-PeCDF	100	117		pg/g		117	80 - 134
2,3,4,7,8-PeCDF	100	109		pg/g		109	68 - 160
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	70 - 164
1,2,3,6,7,8-HxCDD	100	112		pg/g		112	76 - 134
1,2,3,7,8,9-HxCDD	100	109		pg/g		109	64 - 162
1,2,3,4,7,8-HxCDF	100	114		pg/g		114	72 - 134
1,2,3,6,7,8-HxCDF	100	120		pg/g		120	84 - 130
1,2,3,7,8,9-HxCDF	100	118		pg/g		118	78 - 130
2,3,4,6,7,8-HxCDF	100	121		pg/g		121	70 - 156
1,2,3,4,6,7,8-HpCDD	100	111		pg/g		111	70 - 140
1,2,3,4,6,7,8-HpCDF	100	118		pg/g		118	82 - 122
1,2,3,4,7,8,9-HpCDF	100	108		pg/g		108	78 - 138
OCDD	200	232		pg/g		116	78 - 144

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-513879/2-A
Client Sample ID: Lab Control Sample
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 517462
Prep Batch: 513879

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
OCDF	200	243		pg/g		122	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*34*		*20 - 175*
13C-2,3,7,8-TCDF	*36*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*34*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*31*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*36*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*37*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*35*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*42*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*37*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*32*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*33*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*36*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*35*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*40*		*20 - 186*
13C-OCDD	*39*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*47*		*31 - 191*

Lab Sample ID: 320-76888-A-1-B MS
Client Sample ID: Matrix Spike
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 518043
Prep Batch: 513879

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	24000	G E	36.1	22000	G E 4	pg/g	☼	-4439	67 - 158
2,3,7,8-TCDF	110000	G E B	36.1	115000	G E 4	pg/g	☼	321	75 - 158
1,2,3,7,8-PeCDD	290		181	470		pg/g	☼	102	70 - 142
1,2,3,7,8-PeCDF	2200		181	2670	4	pg/g	☼	247	80 - 134
2,3,4,7,8-PeCDF	1600		181	1900	4	pg/g	☼	144	68 - 160
1,2,3,4,7,8-HxCDD	3.6	J	181	196		pg/g	☼	106	70 - 164
1,2,3,6,7,8-HxCDD	7.0	J q	181	203		pg/g	☼	108	76 - 134
1,2,3,7,8,9-HxCDD	5.6	J q	181	201		pg/g	☼	108	64 - 162
1,2,3,4,7,8-HxCDF	3200		181	3130	4	pg/g	☼	-21	72 - 134
1,2,3,6,7,8-HxCDF	740		181	1040	4	pg/g	☼	165	84 - 130
1,2,3,7,8,9-HxCDF	42	J	181	251		pg/g	☼	116	78 - 130
2,3,4,6,7,8-HxCDF	100		181	367		pg/g	☼	148	70 - 156
1,2,3,4,6,7,8-HpCDD	68	J B	181	265		pg/g	☼	109	70 - 140
1,2,3,4,6,7,8-HpCDF	1100	B	181	1100	4	pg/g	☼	14	82 - 122
1,2,3,4,7,8,9-HpCDF	280		181	495		pg/g	☼	118	78 - 138
OCDD	720	B F1	361	1050		pg/g	☼	91	78 - 144
OCDF	460		361	890		pg/g	☼	118	63 - 170

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*44*		*25 - 164*
13C-2,3,7,8-TCDF	*41*		*24 - 169*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76888-A-1-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 518043 **Prep Batch: 513879**

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C-1,2,3,7,8-PeCDD	39	q	25 - 181
13C-1,2,3,7,8-PeCDF	38		24 - 185
13C-2,3,4,7,8-PeCDF	46		21 - 178
13C-1,2,3,4,7,8-HxCDD	41		32 - 141
13C-1,2,3,6,7,8-HxCDD	42		28 - 130
13C-1,2,3,4,7,8-HxCDF	51		26 - 152
13C-1,2,3,6,7,8-HxCDF	41		26 - 123
13C-1,2,3,7,8,9-HxCDF	38		29 - 147
13C-2,3,4,6,7,8-HxCDF	35		28 - 136
13C-1,2,3,4,6,7,8-HpCDD	41		23 - 140
13C-1,2,3,4,6,7,8-HpCDF	39		28 - 143
13C-1,2,3,4,7,8,9-HpCDF	44		26 - 138
13C-OCDD	41		17 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	90		35 - 197

Lab Sample ID: 320-76888-A-1-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 518043 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	24000	G E	35.9	25300	G E 4	pg/g	☼	4754	67 - 158	14	50
2,3,7,8-TCDF	110000	G E B	35.9	138000	G E 4	pg/g	☼	65418	75 - 158	19	50
1,2,3,7,8-PeCDD	290		180	508		pg/g	☼	124	70 - 142	8	50
1,2,3,7,8-PeCDF	2200		180	2550	4	pg/g	☼	181	80 - 134	5	50
2,3,4,7,8-PeCDF	1600		180	2150	4	pg/g	☼	281	68 - 160	12	50
1,2,3,4,7,8-HxCDD	3.6	J	180	199		pg/g	☼	109	70 - 164	2	50
1,2,3,6,7,8-HxCDD	7.0	J q	180	202		pg/g	☼	108	76 - 134	1	50
1,2,3,7,8,9-HxCDD	5.6	J q	180	188		pg/g	☼	101	64 - 162	7	50
1,2,3,4,7,8-HxCDF	3200		180	3640	4	pg/g	☼	261	72 - 134	15	50
1,2,3,6,7,8-HxCDF	740		180	1130	4	pg/g	☼	214	84 - 130	8	50
1,2,3,7,8,9-HxCDF	42	J	180	238		pg/g	☼	110	78 - 130	5	50
2,3,4,6,7,8-HxCDF	100		180	342		pg/g	☼	134	70 - 156	7	50
1,2,3,4,6,7,8-HpCDD	68	J B	180	262		pg/g	☼	108	70 - 140	1	50
1,2,3,4,6,7,8-HpCDF	1100	B	180	1310	4	pg/g	☼	132	82 - 122	18	50
1,2,3,4,7,8,9-HpCDF	280		180	474		pg/g	☼	107	78 - 138	4	50
OCDD	720	B F1	359	921	F1	pg/g	☼	56	78 - 144	13	50
OCDF	460		359	925		pg/g	☼	128	63 - 170	4	50

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDD	40		25 - 164
13C-2,3,7,8-TCDF	37		24 - 169
13C-1,2,3,7,8-PeCDD	38		25 - 181
13C-1,2,3,7,8-PeCDF	36		24 - 185
13C-2,3,4,7,8-PeCDF	40		21 - 178
13C-1,2,3,4,7,8-HxCDD	37		32 - 141
13C-1,2,3,6,7,8-HxCDD	34	q	28 - 130

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76888-A-1-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 518043 **Prep Batch: 513879**

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-1,2,3,4,7,8-HxCDF	44		26 - 152
13C-1,2,3,6,7,8-HxCDF	37		26 - 123
13C-1,2,3,7,8,9-HxCDF	35		29 - 147
13C-2,3,4,6,7,8-HxCDF	34		28 - 136
13C-1,2,3,4,6,7,8-HpCDD	38		23 - 140
13C-1,2,3,4,6,7,8-HpCDF	39		28 - 143
13C-1,2,3,4,7,8,9-HpCDF	44		26 - 138
13C-OCDD	37	q	17 - 157

Surrogate	MSD %Recovery	MSD Qualifier	Limits
37Cl4-2,3,7,8-TCDD	123		35 - 197

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: 320-76769-1 MS **Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 518958 **Prep Batch: 513585**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDF - RA	47000	E B G	34.1	43300	E 4 G	pg/g	☼	-11327	75 - 158		

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C-2,3,7,8-TCDF - RA	54		24 - 169

Surrogate	MS %Recovery	MS Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	98		35 - 197

Lab Sample ID: 320-76769-1 MSD **Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 518958 **Prep Batch: 513585**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	47000	E B G	31.5	43100	E 4 G	pg/g	☼	-12790	75 - 158	0	50

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDF - RA	47		24 - 169

Surrogate	MSD %Recovery	MSD Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	96		35 - 197

Lab Sample ID: 320-76769-27 MS **Client Sample ID: 11215702-072221-SS-SJSB076 (0-2)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519438 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDF - RA	7600	E G	26.4	8400	E 4 G	pg/g	☼	3068	75 - 158		

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA (Continued)

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C-2,3,7,8-TCDF - RA	65		24 - 169

Surrogate	MS %Recovery	MS Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	86		35 - 197

Lab Sample ID: 320-76769-27 MSD **Client Sample ID: 11215702-072221-SS-SJSB076 (0-2)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519438 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	7600	E G	26.2	6770	E 4 G	pg/g	☼	-3151	75 - 158	22	50

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDF - RA	70		24 - 169

Surrogate	MSD %Recovery	MSD Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	90		35 - 197

Lab Sample ID: 320-76888-A-1-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519650 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDF - RA	110000	G E B	36.1	121000	G E 4	pg/g	☼	25826	75 - 158		

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C-2,3,7,8-TCDF - RA	29		24 - 169

Surrogate	MS %Recovery	MS Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	56		35 - 197

Lab Sample ID: 320-76888-A-1-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519650 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	110000	G E B	35.9	127000	G E 4	pg/g	☼	43390	75 - 158	5	50

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDF - RA	23	*5-	24 - 169

Surrogate	MSD %Recovery	MSD Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	61		35 - 197

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-76769-25 DU **Client Sample ID: 11215702-072221-DUP-4**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 511281

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	19.1			20.0		%				4	20
Percent Solids	80.9			80.0		%				1	20

Lab Sample ID: 320-76769-26 DU **Client Sample ID: 11215702-072221-DUP-5**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 511294

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	41.9			40.4		%				4	20
Percent Solids	58.1			59.6		%				3	20

Lab Sample ID: 320-76864-A-1 DU **Client Sample ID: Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 511355

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	4.3			4.9		%				12	20
Percent Solids	95.7			95.1		%				0.6	20

Lab Sample ID: 320-76769-1 DU **Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 511356

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	38.5			40.6		%				5	20
Percent Solids	61.5			59.4		%				3	20

Specialty Organics

Prep Batch: 513585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-1	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76769-1 - RA	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76769-2	11215702-072221-SS-SJSB080 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76769-2 - RA	11215702-072221-SS-SJSB080 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76769-3	11215702-072221-SS-SJSB080 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-76769-3 - RA	11215702-072221-SS-SJSB080 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-76769-5	11215702-072221-SS-SJSB080 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-76769-5 - RA	11215702-072221-SS-SJSB080 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-76769-6	11215702-072221-SS-SJSB080 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-76769-6 - RA	11215702-072221-SS-SJSB080 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-76769-7	11215702-072221-SS-SJSB080 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-76769-7 - RA	11215702-072221-SS-SJSB080 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-76769-8	11215702-072221-SS-SJSB080 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-76769-8 - RA	11215702-072221-SS-SJSB080 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-76769-13	11215702-072221-SS-SJSB074 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76769-13 - RA	11215702-072221-SS-SJSB074 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76769-14	11215702-072221-SS-SJSB074 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76769-14 - RA	11215702-072221-SS-SJSB074 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76769-15	11215702-072221-SS-SJSB074 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-76769-15 - RA	11215702-072221-SS-SJSB074 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-76769-16	11215702-072221-SS-SJSB074 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-76769-16 - RA	11215702-072221-SS-SJSB074 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-76769-17	11215702-072221-SS-SJSB074 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-76769-17 - RA	11215702-072221-SS-SJSB074 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-76769-18	11215702-072221-SS-SJSB074 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-76769-18 - RA	11215702-072221-SS-SJSB074 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-76769-19	11215702-072221-SS-SJSB074 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-76769-20	11215702-072221-SS-SJSB074 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-76769-20 - RA	11215702-072221-SS-SJSB074 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-76769-25	11215702-072221-DUP-4	Total/NA	Sediment	HRMS-Sox	
320-76769-25 - RA	11215702-072221-DUP-4	Total/NA	Sediment	HRMS-Sox	
320-76769-26	11215702-072221-DUP-5	Total/NA	Sediment	HRMS-Sox	
320-76769-26 - RA	11215702-072221-DUP-5	Total/NA	Sediment	HRMS-Sox	
320-76769-28	11215702-072221-SS-SJSB076 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76769-28 - RA	11215702-072221-SS-SJSB076 (2-4)	Total/NA	Sediment	HRMS-Sox	
MB 320-513585/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-513585/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-76769-1 MS	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76769-1 MS - RA	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76769-1 MSD	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76769-1 MSD - RA	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	HRMS-Sox	

Prep Batch: 513586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-27 - RA	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76769-27	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76769-29 - RA	11215702-072221-SS-SJSB076 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-76769-29	11215702-072221-SS-SJSB076 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-76769-30 - RA	11215702-072221-SS-SJSB076 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-76769-30	11215702-072221-SS-SJSB076 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-76769-31	11215702-072221-SS-SJSB076 (8-10)	Total/NA	Sediment	HRMS-Sox	

Specialty Organics (Continued)

Prep Batch: 513586 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-31 - RA	11215702-072221-SS-SJSB076 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-76769-32 - RA	11215702-072221-SS-SJSB076 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-76769-32	11215702-072221-SS-SJSB076 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-76769-33 - RA	11215702-072221-SS-SJSB076 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-76769-33	11215702-072221-SS-SJSB076 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-76769-34	11215702-072221-SS-SJSB076 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-76769-34 - RA	11215702-072221-SS-SJSB076 (14-16)	Total/NA	Sediment	HRMS-Sox	
MB 320-513586/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-513586/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-76769-27 MS - RA	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76769-27 MS	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76769-27 MSD - RA	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76769-27 MSD	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	HRMS-Sox	

Prep Batch: 513879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-4 - RA	11215702-072221-SS-SJSB080 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-76769-4	11215702-072221-SS-SJSB080 (6-8)	Total/NA	Sediment	HRMS-Sox	
MB 320-513879/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-513879/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-76888-A-1-B MS - RA	Matrix Spike	Total/NA	Sediment	HRMS-Sox	
320-76888-A-1-B MS	Matrix Spike	Total/NA	Sediment	HRMS-Sox	
320-76888-A-1-C MSD - RA	Matrix Spike Duplicate	Total/NA	Sediment	HRMS-Sox	
320-76888-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	HRMS-Sox	

Analysis Batch: 516847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-1	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	1613B	513585
320-76769-2	11215702-072221-SS-SJSB080 (2-4)	Total/NA	Sediment	1613B	513585
320-76769-3	11215702-072221-SS-SJSB080 (4-6)	Total/NA	Sediment	1613B	513585
320-76769-5	11215702-072221-SS-SJSB080 (8-10)	Total/NA	Sediment	1613B	513585
320-76769-6	11215702-072221-SS-SJSB080 (10-12)	Total/NA	Sediment	1613B	513585
320-76769-7	11215702-072221-SS-SJSB080 (12-14)	Total/NA	Sediment	1613B	513585
320-76769-8	11215702-072221-SS-SJSB080 (14-16)	Total/NA	Sediment	1613B	513585
MB 320-513585/1-A	Method Blank	Total/NA	Sediment	1613B	513585
LCS 320-513585/2-A	Lab Control Sample	Total/NA	Sediment	1613B	513585
320-76769-1 MS	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	1613B	513585
320-76769-1 MSD	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	1613B	513585

Analysis Batch: 516848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-13	11215702-072221-SS-SJSB074 (0-2)	Total/NA	Sediment	1613B	513585
320-76769-14	11215702-072221-SS-SJSB074 (2-4)	Total/NA	Sediment	1613B	513585
320-76769-15	11215702-072221-SS-SJSB074 (4-6)	Total/NA	Sediment	1613B	513585
320-76769-16	11215702-072221-SS-SJSB074 (6-8)	Total/NA	Sediment	1613B	513585
320-76769-17	11215702-072221-SS-SJSB074 (8-10)	Total/NA	Sediment	1613B	513585
320-76769-18	11215702-072221-SS-SJSB074 (10-12)	Total/NA	Sediment	1613B	513585
320-76769-19	11215702-072221-SS-SJSB074 (12-14)	Total/NA	Sediment	1613B	513585
320-76769-20	11215702-072221-SS-SJSB074 (14-16)	Total/NA	Sediment	1613B	513585
320-76769-25	11215702-072221-DUP-4	Total/NA	Sediment	1613B	513585
320-76769-26	11215702-072221-DUP-5	Total/NA	Sediment	1613B	513585

Specialty Organics (Continued)

Analysis Batch: 516848 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-28	11215702-072221-SS-SJSB076 (2-4)	Total/NA	Sediment	1613B	513585

Analysis Batch: 517196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-30	11215702-072221-SS-SJSB076 (6-8)	Total/NA	Sediment	1613B	513586
320-76769-32	11215702-072221-SS-SJSB076 (10-12)	Total/NA	Sediment	1613B	513586
MB 320-513586/1-A	Method Blank	Total/NA	Sediment	1613B	513586
LCS 320-513586/2-A	Lab Control Sample	Total/NA	Sediment	1613B	513586

Analysis Batch: 517281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-33	11215702-072221-SS-SJSB076 (12-14)	Total/NA	Sediment	1613B	513586

Analysis Batch: 517461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-27	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	1613B	513586
320-76769-29	11215702-072221-SS-SJSB076 (4-6)	Total/NA	Sediment	1613B	513586
320-76769-27 MS	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	1613B	513586
320-76769-27 MSD	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	1613B	513586

Analysis Batch: 517462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-4	11215702-072221-SS-SJSB080 (6-8)	Total/NA	Sediment	1613B	513879
LCS 320-513879/2-A	Lab Control Sample	Total/NA	Sediment	1613B	513879

Analysis Batch: 517729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-31	11215702-072221-SS-SJSB076 (8-10)	Total/NA	Sediment	1613B	513586
320-76769-34	11215702-072221-SS-SJSB076 (14-16)	Total/NA	Sediment	1613B	513586

Analysis Batch: 517891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-513879/1-A	Method Blank	Total/NA	Sediment	1613B	513879

Analysis Batch: 518043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-A-1-B MS	Matrix Spike	Total/NA	Sediment	1613B	513879
320-76888-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	1613B	513879

Analysis Batch: 518850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-3 - RA	11215702-072221-SS-SJSB080 (4-6)	Total/NA	Sediment	1613B	513585
320-76769-5 - RA	11215702-072221-SS-SJSB080 (8-10)	Total/NA	Sediment	1613B	513585
320-76769-13 - RA	11215702-072221-SS-SJSB074 (0-2)	Total/NA	Sediment	1613B	513585
320-76769-15 - RA	11215702-072221-SS-SJSB074 (4-6)	Total/NA	Sediment	1613B	513585

Analysis Batch: 518958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-1 - RA	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	1613B	513585
320-76769-20 - RA	11215702-072221-SS-SJSB074 (14-16)	Total/NA	Sediment	1613B	513585
320-76769-1 MS - RA	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	1613B	513585

Specialty Organics (Continued)

Analysis Batch: 518958 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-1 MSD - RA	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	1613B	513585

Analysis Batch: 518979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-4 - RA	11215702-072221-SS-SJSB080 (6-8)	Total/NA	Sediment	1613B	513879
320-76769-6 - RA	11215702-072221-SS-SJSB080 (10-12)	Total/NA	Sediment	1613B	513585
320-76769-7 - RA	11215702-072221-SS-SJSB080 (12-14)	Total/NA	Sediment	1613B	513585
320-76769-8 - RA	11215702-072221-SS-SJSB080 (14-16)	Total/NA	Sediment	1613B	513585
320-76769-16 - RA	11215702-072221-SS-SJSB074 (6-8)	Total/NA	Sediment	1613B	513585
320-76769-17 - RA	11215702-072221-SS-SJSB074 (8-10)	Total/NA	Sediment	1613B	513585
320-76769-25 - RA	11215702-072221-DUP-4	Total/NA	Sediment	1613B	513585
320-76769-30 - RA	11215702-072221-SS-SJSB076 (6-8)	Total/NA	Sediment	1613B	513586
320-76769-31 - RA	11215702-072221-SS-SJSB076 (8-10)	Total/NA	Sediment	1613B	513586
320-76769-32 - RA	11215702-072221-SS-SJSB076 (10-12)	Total/NA	Sediment	1613B	513586
320-76769-33 - RA	11215702-072221-SS-SJSB076 (12-14)	Total/NA	Sediment	1613B	513586
320-76769-34 - RA	11215702-072221-SS-SJSB076 (14-16)	Total/NA	Sediment	1613B	513586

Analysis Batch: 519438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-2 - RA	11215702-072221-SS-SJSB080 (2-4)	Total/NA	Sediment	1613B	513585
320-76769-14 - RA	11215702-072221-SS-SJSB074 (2-4)	Total/NA	Sediment	1613B	513585
320-76769-18 - RA	11215702-072221-SS-SJSB074 (10-12)	Total/NA	Sediment	1613B	513585
320-76769-26 - RA	11215702-072221-DUP-5	Total/NA	Sediment	1613B	513585
320-76769-27 - RA	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	1613B	513586
320-76769-28 - RA	11215702-072221-SS-SJSB076 (2-4)	Total/NA	Sediment	1613B	513585
MB 320-513879/1-A	Method Blank	Total/NA	Sediment	1613B	513879
320-76769-27 MS - RA	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	1613B	513586
320-76769-27 MSD - RA	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	1613B	513586

Analysis Batch: 519540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-29 - RA	11215702-072221-SS-SJSB076 (4-6)	Total/NA	Sediment	1613B	513586

Analysis Batch: 519650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-A-1-B MS - RA	Matrix Spike	Total/NA	Sediment	1613B	513879
320-76888-A-1-C MSD - RA	Matrix Spike Duplicate	Total/NA	Sediment	1613B	513879

General Chemistry

Analysis Batch: 511281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-25	11215702-072221-DUP-4	Total/NA	Sediment	D 2216	
320-76769-25 DU	11215702-072221-DUP-4	Total/NA	Sediment	D 2216	

Analysis Batch: 511294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-26	11215702-072221-DUP-5	Total/NA	Sediment	D 2216	
320-76769-26 DU	11215702-072221-DUP-5	Total/NA	Sediment	D 2216	

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-76769-1
Project/Site: SJRWP Supplemental Design Investigation

General Chemistry

Analysis Batch: 511355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-27	11215702-072221-SS-SJSB076 (0-2)	Total/NA	Sediment	D 2216	
320-76769-28	11215702-072221-SS-SJSB076 (2-4)	Total/NA	Sediment	D 2216	
320-76769-29	11215702-072221-SS-SJSB076 (4-6)	Total/NA	Sediment	D 2216	
320-76769-30	11215702-072221-SS-SJSB076 (6-8)	Total/NA	Sediment	D 2216	
320-76769-31	11215702-072221-SS-SJSB076 (8-10)	Total/NA	Sediment	D 2216	
320-76769-32	11215702-072221-SS-SJSB076 (10-12)	Total/NA	Sediment	D 2216	
320-76769-33	11215702-072221-SS-SJSB076 (12-14)	Total/NA	Sediment	D 2216	
320-76769-34	11215702-072221-SS-SJSB076 (14-16)	Total/NA	Sediment	D 2216	
320-76864-A-1 DU	Duplicate	Total/NA	Sediment	D 2216	

Analysis Batch: 511356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-1	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	D 2216	
320-76769-2	11215702-072221-SS-SJSB080 (2-4)	Total/NA	Sediment	D 2216	
320-76769-3	11215702-072221-SS-SJSB080 (4-6)	Total/NA	Sediment	D 2216	
320-76769-4	11215702-072221-SS-SJSB080 (6-8)	Total/NA	Sediment	D 2216	
320-76769-5	11215702-072221-SS-SJSB080 (8-10)	Total/NA	Sediment	D 2216	
320-76769-6	11215702-072221-SS-SJSB080 (10-12)	Total/NA	Sediment	D 2216	
320-76769-7	11215702-072221-SS-SJSB080 (12-14)	Total/NA	Sediment	D 2216	
320-76769-8	11215702-072221-SS-SJSB080 (14-16)	Total/NA	Sediment	D 2216	
320-76769-13	11215702-072221-SS-SJSB074 (0-2)	Total/NA	Sediment	D 2216	
320-76769-14	11215702-072221-SS-SJSB074 (2-4)	Total/NA	Sediment	D 2216	
320-76769-15	11215702-072221-SS-SJSB074 (4-6)	Total/NA	Sediment	D 2216	
320-76769-16	11215702-072221-SS-SJSB074 (6-8)	Total/NA	Sediment	D 2216	
320-76769-17	11215702-072221-SS-SJSB074 (8-10)	Total/NA	Sediment	D 2216	
320-76769-18	11215702-072221-SS-SJSB074 (10-12)	Total/NA	Sediment	D 2216	
320-76769-19	11215702-072221-SS-SJSB074 (12-14)	Total/NA	Sediment	D 2216	
320-76769-20	11215702-072221-SS-SJSB074 (14-16)	Total/NA	Sediment	D 2216	
320-76769-1 DU	11215702-072221-SS-SJSB080 (0-2)	Total/NA	Sediment	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)
Lab Sample ID: 320-76769-1
Date Collected: 07/22/21 08:40
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)
Lab Sample ID: 320-76769-1
Date Collected: 07/22/21 08:40
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 61.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516847	08/15/21 04:21	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	5	518958	08/23/21 13:22	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (2-4)
Lab Sample ID: 320-76769-2
Date Collected: 07/22/21 08:45
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (2-4)
Lab Sample ID: 320-76769-2
Date Collected: 07/22/21 08:45
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 62.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516847	08/15/21 06:36	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	5	519438	08/24/21 11:40	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (4-6)
Lab Sample ID: 320-76769-3
Date Collected: 07/22/21 08:50
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (4-6)
Lab Sample ID: 320-76769-3
Date Collected: 07/22/21 08:50
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 66.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516847	08/15/21 07:21	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518850	08/21/21 21:34	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (6-8) Lab Sample ID: 320-76769-4

Date Collected: 07/22/21 08:55 **Matrix: Sediment**
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (6-8) Lab Sample ID: 320-76769-4

Date Collected: 07/22/21 08:55 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 69.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/24/21 02:26	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517462	08/19/21 07:54	KSS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (8-10) Lab Sample ID: 320-76769-5

Date Collected: 07/22/21 09:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (8-10) Lab Sample ID: 320-76769-5

Date Collected: 07/22/21 09:00 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 78.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516847	08/15/21 08:06	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518850	08/21/21 20:56	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (10-12) Lab Sample ID: 320-76769-6

Date Collected: 07/22/21 09:05 **Matrix: Sediment**
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (10-12) Lab Sample ID: 320-76769-6

Date Collected: 07/22/21 09:05 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 82.1**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516847	08/15/21 08:51	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/23/21 19:24	DB	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB080 (12-14)
Lab Sample ID: 320-76769-7
Date Collected: 07/22/21 09:10
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (12-14)
Lab Sample ID: 320-76769-7
Date Collected: 07/22/21 09:10
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 81.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516847	08/15/21 09:36	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/23/21 20:02	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (14-16)
Lab Sample ID: 320-76769-8
Date Collected: 07/22/21 09:15
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (14-16)
Lab Sample ID: 320-76769-8
Date Collected: 07/22/21 09:15
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 81.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516847	08/15/21 10:21	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/23/21 18:46	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (0-2)
Lab Sample ID: 320-76769-13
Date Collected: 07/22/21 13:00
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (0-2)
Lab Sample ID: 320-76769-13
Date Collected: 07/22/21 13:00
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 74.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516848	08/15/21 13:42	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518850	08/21/21 22:13	DB	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB074 (2-4)
Lab Sample ID: 320-76769-14
Date Collected: 07/22/21 13:05
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (2-4)
Lab Sample ID: 320-76769-14
Date Collected: 07/22/21 13:05
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 51.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516848	08/15/21 21:12	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	5	519438	08/24/21 12:18	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (4-6)
Lab Sample ID: 320-76769-15
Date Collected: 07/22/21 13:10
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (4-6)
Lab Sample ID: 320-76769-15
Date Collected: 07/22/21 13:10
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 57.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516848	08/15/21 14:27	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518850	08/21/21 22:51	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (6-8)
Lab Sample ID: 320-76769-16
Date Collected: 07/22/21 13:15
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (6-8)
Lab Sample ID: 320-76769-16
Date Collected: 07/22/21 13:15
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516848	08/15/21 15:12	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/24/21 00:31	DB	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB074 (8-10)
Lab Sample ID: 320-76769-17

Date Collected: 07/22/21 13:20
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (8-10)
Lab Sample ID: 320-76769-17

Date Collected: 07/22/21 13:20
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 83.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516848	08/15/21 15:57	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/23/21 22:36	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (10-12)
Lab Sample ID: 320-76769-18

Date Collected: 07/22/21 13:25
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (10-12)
Lab Sample ID: 320-76769-18

Date Collected: 07/22/21 13:25
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 83.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516848	08/15/21 16:42	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519438	08/24/21 11:02	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (12-14)
Lab Sample ID: 320-76769-19

Date Collected: 07/22/21 13:30
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (12-14)
Lab Sample ID: 320-76769-19

Date Collected: 07/22/21 13:30
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 83.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516848	08/15/21 17:27	DB	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB074 (14-16)
Lab Sample ID: 320-76769-20
Date Collected: 07/22/21 13:35
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (14-16)
Lab Sample ID: 320-76769-20
Date Collected: 07/22/21 13:35
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 82.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516848	08/15/21 18:12	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518958	08/23/21 12:43	DB	TAL SAC

Client Sample ID: 11215702-072221-DUP-4
Lab Sample ID: 320-76769-25
Date Collected: 07/22/21 00:00
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511281	07/29/21 11:22	KDB	TAL SAC

Client Sample ID: 11215702-072221-DUP-4
Lab Sample ID: 320-76769-25
Date Collected: 07/22/21 00:00
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 80.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516848	08/15/21 18:57	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/23/21 20:41	DB	TAL SAC

Client Sample ID: 11215702-072221-DUP-5
Lab Sample ID: 320-76769-26
Date Collected: 07/22/21 00:00
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511294	07/29/21 11:22	KDB	TAL SAC

Client Sample ID: 11215702-072221-DUP-5
Lab Sample ID: 320-76769-26
Date Collected: 07/22/21 00:00
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 58.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516848	08/15/21 19:42	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	5	519438	08/24/21 12:57	DB	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB076 (0-2)
Lab Sample ID: 320-76769-27

Date Collected: 07/22/21 15:50
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511355	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (0-2)
Lab Sample ID: 320-76769-27

Date Collected: 07/22/21 15:50
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 76.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519438	08/24/21 14:13	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517461	08/18/21 20:24	KSS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (2-4)
Lab Sample ID: 320-76769-28

Date Collected: 07/22/21 15:55
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511355	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (2-4)
Lab Sample ID: 320-76769-28

Date Collected: 07/22/21 15:55
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 50.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B		1	516848	08/15/21 20:27	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513585	08/06/21 05:22	FC	TAL SAC
Total/NA	Analysis	1613B	RA	5	519438	08/24/21 13:35	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (4-6)
Lab Sample ID: 320-76769-29

Date Collected: 07/22/21 16:00
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511355	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (4-6)
Lab Sample ID: 320-76769-29

Date Collected: 07/22/21 16:00
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 43.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	5	519540	08/25/21 02:50	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517461	08/18/21 22:48	KSS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB076 (6-8)
Lab Sample ID: 320-76769-30

Date Collected: 07/22/21 16:05
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511355	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (6-8)
Lab Sample ID: 320-76769-30

Date Collected: 07/22/21 16:05
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 76.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/24/21 01:48	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517196	08/17/21 22:36	KSS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (8-10)
Lab Sample ID: 320-76769-31

Date Collected: 07/22/21 16:10
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511355	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (8-10)
Lab Sample ID: 320-76769-31

Date Collected: 07/22/21 16:10
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517729	08/18/21 17:19	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/23/21 23:14	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (10-12)
Lab Sample ID: 320-76769-32

Date Collected: 07/22/21 16:15
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511355	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (10-12)
Lab Sample ID: 320-76769-32

Date Collected: 07/22/21 16:15
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 81.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/24/21 01:09	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517196	08/18/21 00:12	KSS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Client Sample ID: 11215702-072221-SS-SJSB076 (12-14)

Lab Sample ID: 320-76769-33
Date Collected: 07/22/21 16:20
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511355	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (12-14)

Lab Sample ID: 320-76769-33
Date Collected: 07/22/21 16:20
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 67.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/23/21 23:53	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517281	08/18/21 04:31	KSS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (14-16)

Lab Sample ID: 320-76769-34
Date Collected: 07/22/21 16:25
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511355	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (14-16)

Lab Sample ID: 320-76769-34
Date Collected: 07/22/21 16:25
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 74.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517729	08/18/21 18:04	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/23/21 21:58	DB	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-76769-1
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDD
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDF
1613B	HRMS-Sox	Sediment	OCDD
1613B	HRMS-Sox	Sediment	OCDF
1613B	HRMS-Sox	Sediment	Total HpCDD
1613B	HRMS-Sox	Sediment	Total HpCDF
1613B	HRMS-Sox	Sediment	Total HxCDD
1613B	HRMS-Sox	Sediment	Total HxCDF
1613B	HRMS-Sox	Sediment	Total PeCDD
1613B	HRMS-Sox	Sediment	Total PeCDF
1613B	HRMS-Sox	Sediment	Total TCDD
1613B	HRMS-Sox	Sediment	Total TCDF
D 2216		Sediment	Percent Moisture
D 2216		Sediment	Percent Solids
TEQ		Sediment	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76769-1	11215702-072221-SS-SJSB080 (0-2)	Sediment	07/22/21 08:40	07/27/21 09:45
320-76769-2	11215702-072221-SS-SJSB080 (2-4)	Sediment	07/22/21 08:45	07/27/21 09:45
320-76769-3	11215702-072221-SS-SJSB080 (4-6)	Sediment	07/22/21 08:50	07/27/21 09:45
320-76769-4	11215702-072221-SS-SJSB080 (6-8)	Sediment	07/22/21 08:55	07/27/21 09:45
320-76769-5	11215702-072221-SS-SJSB080 (8-10)	Sediment	07/22/21 09:00	07/27/21 09:45
320-76769-6	11215702-072221-SS-SJSB080 (10-12)	Sediment	07/22/21 09:05	07/27/21 09:45
320-76769-7	11215702-072221-SS-SJSB080 (12-14)	Sediment	07/22/21 09:10	07/27/21 09:45
320-76769-8	11215702-072221-SS-SJSB080 (14-16)	Sediment	07/22/21 09:15	07/27/21 09:45
320-76769-13	11215702-072221-SS-SJSB074 (0-2)	Sediment	07/22/21 13:00	07/27/21 09:45
320-76769-14	11215702-072221-SS-SJSB074 (2-4)	Sediment	07/22/21 13:05	07/27/21 09:45
320-76769-15	11215702-072221-SS-SJSB074 (4-6)	Sediment	07/22/21 13:10	07/27/21 09:45
320-76769-16	11215702-072221-SS-SJSB074 (6-8)	Sediment	07/22/21 13:15	07/27/21 09:45
320-76769-17	11215702-072221-SS-SJSB074 (8-10)	Sediment	07/22/21 13:20	07/27/21 09:45
320-76769-18	11215702-072221-SS-SJSB074 (10-12)	Sediment	07/22/21 13:25	07/27/21 09:45
320-76769-19	11215702-072221-SS-SJSB074 (12-14)	Sediment	07/22/21 13:30	07/27/21 09:45
320-76769-20	11215702-072221-SS-SJSB074 (14-16)	Sediment	07/22/21 13:35	07/27/21 09:45
320-76769-25	11215702-072221-DUP-4	Sediment	07/22/21 00:00	07/27/21 09:45
320-76769-26	11215702-072221-DUP-5	Sediment	07/22/21 00:00	07/27/21 09:45
320-76769-27	11215702-072221-SS-SJSB076 (0-2)	Sediment	07/22/21 15:50	07/27/21 09:45
320-76769-28	11215702-072221-SS-SJSB076 (2-4)	Sediment	07/22/21 15:55	07/27/21 09:45
320-76769-29	11215702-072221-SS-SJSB076 (4-6)	Sediment	07/22/21 16:00	07/27/21 09:45
320-76769-30	11215702-072221-SS-SJSB076 (6-8)	Sediment	07/22/21 16:05	07/27/21 09:45
320-76769-31	11215702-072221-SS-SJSB076 (8-10)	Sediment	07/22/21 16:10	07/27/21 09:45
320-76769-32	11215702-072221-SS-SJSB076 (10-12)	Sediment	07/22/21 16:15	07/27/21 09:45
320-76769-33	11215702-072221-SS-SJSB076 (12-14)	Sediment	07/22/21 16:20	07/27/21 09:45
320-76769-34	11215702-072221-SS-SJSB076 (14-16)	Sediment	07/22/21 16:25	07/27/21 09:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: WDM 320-510264/1 Client Sample ID:

Date Analyzed: 07/26/21 09:21 Lab File ID: 26JL2110D5_1.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,6,8-TCDF	15.13	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,6,8-TCDD	16.07	Peak assignment corrected	arghestanis	07/26/21 12:21
2,3,4,7-TCDF	17.63	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,7-TCDD	18.22	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDD	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDF	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,8,9-TCDD	19.47	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,8,9-TCDF	19.49	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,4,6,8-PeCDF	19.76	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,4,7,9-PeCDD	21.58	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDD	25.91	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDF	26.14	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,8-HxCDF	28.48	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,4,6,7,9-HxCDD	30.02	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,7-HxCDD	32.30	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,3,4,8,9-HxCDF	32.61	Peak assignment corrected	arghestanis	07/26/21 12:23

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: IC 320-510264/3 Client Sample ID:

Date Analyzed: 07/26/21 10:51 Lab File ID: 26JL2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.35	Invalid Compound ID	stephensk	07/27/21 08:15

Lab Sample ID: IC 320-510264/4 Client Sample ID:

Date Analyzed: 07/26/21 11:36 Lab File ID: 26JL2110D5_4.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,4,7,8-PeCDF	24.13	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDF	30.84	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDD	31.93	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8,9-HpCDF	35.01	Peak assignment corrected	arghestanis	07/26/21 12:31

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516847

Lab Sample ID: MB 320-513585/1-A Client Sample ID:

Date Analyzed: 08/15/21 02:06 Lab File ID: 13AU2110D5_44.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/18/21 10:45
2,3,4,7,8-PeCDF		Invalid Compound ID	dadunj	08/18/21 10:45
2,3,7,8-TCDF	17.37	Split Peak	dadunj	08/18/21 10:45
1,2,3,4,7,8-HxCDD	31.71	Split Peak	dadunj	08/18/21 10:45
1,2,3,7,8,9-HxCDD	32.15	Split Peak	dadunj	08/18/21 10:45
1,2,3,7,8,9-HxCDF	32.34	Split Peak	dadunj	08/18/21 10:45
1,2,3,4,6,7,8-HpCDF	33.78	Split Peak	dadunj	08/18/21 10:46
1,2,3,4,6,7,8-HpCDD	34.57	Split Peak	dadunj	08/18/21 10:46
1,2,3,4,7,8,9-HpCDF	34.86	Split Peak	dadunj	08/18/21 10:46
OCDD	36.93	Split Peak	dadunj	08/18/21 10:46
OCDF	37.01	Split Peak	dadunj	08/18/21 10:46

Lab Sample ID: 320-76769-1 Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)

Date Analyzed: 08/15/21 04:21 Lab File ID: 13AU2110D5_47.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.52	Invalid Compound ID	dadunj	08/18/21 10:51
13C-2,3,7,8-TCDD	18.19	Invalid Compound ID	dadunj	08/18/21 12:10
2,3,7,8-TCDD	18.20	Peak assignment corrected	bennettd	08/17/21 16:41
37Cl4-2,3,7,8-TCDD	18.20	Peak assignment corrected	dadunj	08/18/21 12:17
1,2,3,7,8-PeCDF	22.60	Invalid Compound ID	dadunj	08/18/21 10:51
2,3,4,7,8-PeCDF	23.92	Peak assignment corrected	bennettd	08/17/21 16:42
1,2,3,7,8-PeCDD	24.62	Peak assignment corrected	dadunj	08/18/21 10:52
2,3,4,6,7,8-HxCDF	31.58	Split Peak	dadunj	08/18/21 10:52
13C-1,2,3,7,8,9-HxCDF	32.35	Split Peak	dadunj	08/18/21 10:53
1,2,3,7,8,9-HxCDF	32.37	Split Peak	dadunj	08/18/21 10:53
1,2,3,4,6,7,8-HpCDF	33.80	Split Peak	dadunj	08/18/21 10:53

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516847

Lab Sample ID: 320-76769-1 MS Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) MS

Date Analyzed: 08/15/21 05:06 Lab File ID: 13AU2110D5_48.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.51	Invalid Compound ID	dadunj	08/18/21 10:54
13C-2,3,7,8-TCDD	18.17	Peak assignment corrected	bennettd	08/17/21 16:44
2,3,7,8-TCDD	18.19	Peak assignment corrected	bennettd	08/17/21 16:44
1,2,3,7,8-PeCDF	22.57	Invalid Compound ID	dadunj	08/18/21 10:55
2,3,4,7,8-PeCDF	23.89	Peak assignment corrected	dadunj	08/18/21 10:55
1,2,3,7,8-PeCDD	24.59	Peak assignment corrected	dadunj	08/18/21 10:56
1,2,3,7,8,9-HxCDF	32.35	Split Peak	dadunj	08/18/21 10:56

Lab Sample ID: 320-76769-1 MSD Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) MSD

Date Analyzed: 08/15/21 05:51 Lab File ID: 13AU2110D5_49.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.51	Invalid Compound ID	dadunj	08/18/21 10:58
13C-2,3,7,8-TCDD	18.17	Peak assignment corrected	bennettd	08/17/21 16:45
2,3,7,8-TCDD	18.19	Peak assignment corrected	bennettd	08/17/21 16:45
1,2,3,7,8-PeCDF	22.57	Invalid Compound ID	dadunj	08/18/21 10:59
2,3,4,7,8-PeCDF	23.91	Incomplete Integration	dadunj	08/18/21 10:59
1,2,3,7,8-PeCDD	24.60	Incomplete Integration	dadunj	08/18/21 11:00
2,3,4,6,7,8-HxCDF	31.58	Invalid Compound ID	dadunj	08/18/21 11:00
1,2,3,7,8,9-HxCDF	32.37	Split Peak	dadunj	08/18/21 11:00

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516847

Lab Sample ID: 320-76769-2 Client Sample ID: 11215702-072221-SS-SJSB080 (2-4)

Date Analyzed: 08/15/21 06:36 Lab File ID: 13AU2110D5_50.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.45	Peak assignment corrected	bennettd	08/17/21 16:46
2,3,7,8-TCDD	18.13	Peak assignment corrected	bennettd	08/17/21 16:47
1,2,3,7,8-PeCDF	22.49	Invalid Compound ID	dadunj	08/18/21 11:03
2,3,4,6,7,8-HxCDF	31.55	Split Peak	dadunj	08/18/21 11:03
1,2,3,4,7,8-HxCDD	31.74	Invalid Compound ID	dadunj	08/18/21 11:04
1,2,3,6,7,8-HxCDD	31.83	Split Peak	dadunj	08/18/21 11:04
1,2,3,7,8,9-HxCDF	32.34	Split Peak	dadunj	08/18/21 11:04

Lab Sample ID: 320-76769-3 Client Sample ID: 11215702-072221-SS-SJSB080 (4-6)

Date Analyzed: 08/15/21 07:21 Lab File ID: 13AU2110D5_51.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,4,6,7,8-HxCDF	31.53	Split Peak	dadunj	08/18/21 11:06
1,2,3,7,8,9-HxCDF	32.33	Invalid Compound ID	dadunj	08/18/21 11:06

Lab Sample ID: 320-76769-5 Client Sample ID: 11215702-072221-SS-SJSB080 (8-10)

Date Analyzed: 08/15/21 08:06 Lab File ID: 13AU2110D5_52.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.39	Split Peak	dadunj	08/18/21 11:07
1,2,3,4,7,8-HxCDD	31.71	Invalid Compound ID	dadunj	08/18/21 11:07
1,2,3,6,7,8-HxCDD	31.82	Split Peak	dadunj	08/18/21 11:07
1,2,3,7,8,9-HxCDD	32.14	Split Peak	dadunj	08/18/21 11:07

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516847

Lab Sample ID: 320-76769-6 Client Sample ID: 11215702-072221-SS-SJSB080 (10-12)

Date Analyzed: 08/15/21 08:51 Lab File ID: 13AU2110D5_53.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/18/21 11:10
1,2,3,7,8-PeCDF	22.39	Split Peak	dadunj	08/18/21 11:09
2,3,4,7,8-PeCDF	23.72	Split Peak	dadunj	08/18/21 11:09
1,2,3,4,7,8-HxCDF	30.52	Split Peak	dadunj	08/18/21 11:10
1,2,3,6,7,8-HxCDF	30.69	Split Peak	dadunj	08/18/21 11:10
1,2,3,4,7,8-HxCDD	31.71	Split Peak	dadunj	08/18/21 11:10
1,2,3,4,6,7,8-HpCDF	33.78	Split Peak	dadunj	08/18/21 11:10
1,2,3,4,7,8,9-HpCDF	34.86	Split Peak	dadunj	08/18/21 11:11
OCDF	37.02	Split Peak	dadunj	08/18/21 11:11

Lab Sample ID: 320-76769-7 Client Sample ID: 11215702-072221-SS-SJSB080 (12-14)

Date Analyzed: 08/15/21 09:36 Lab File ID: 13AU2110D5_54.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/18/21 11:17
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/18/21 11:17
2,3,7,8-TCDD	18.05	Baseline	dadunj	08/18/21 11:16
1,2,3,7,8-PeCDF	22.38	Split Peak	dadunj	08/18/21 11:17
1,2,3,4,7,8-HxCDF	30.53	Split Peak	dadunj	08/18/21 11:17
1,2,3,6,7,8-HxCDF	30.69	Split Peak	dadunj	08/18/21 11:17
1,2,3,4,7,8-HxCDD	31.71	Split Peak	dadunj	08/18/21 11:17
1,2,3,7,8,9-HxCDD	32.13	Split Peak	dadunj	08/18/21 11:17
1,2,3,4,6,7,8-HpCDF	33.78	Split Peak	dadunj	08/18/21 11:17
OCDF	37.02	Split Peak	dadunj	08/18/21 11:18

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516847

Lab Sample ID: 320-76769-8 Client Sample ID: 11215702-072221-SS-SJSB080 (14-16)

Date Analyzed: 08/15/21 10:21 Lab File ID: 13AU2110D5_55.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.36	Baseline	dadunj	08/18/21 11:20
1,2,3,4,7,8-HxCDF	30.52	Split Peak	dadunj	08/18/21 11:20
1,2,3,7,8,9-HxCDF	32.31	Split Peak	dadunj	08/18/21 11:21
OCDF	37.02	Split Peak	dadunj	08/18/21 11:21

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516848

Lab Sample ID: 320-76769-13 Client Sample ID: 11215702-072221-SS-SJSB074 (0-2)

Date Analyzed: 08/15/21 13:42 Lab File ID: 13AU2110D5_59.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDD	24.47	Split Peak	dadunj	08/18/21 11:23
1,2,3,4,7,8-HxCDD	31.71	Invalid Compound ID	dadunj	08/18/21 11:23
1,2,3,6,7,8-HxCDD	31.82	Split Peak	dadunj	08/18/21 11:23

Lab Sample ID: 320-76769-15 Client Sample ID: 11215702-072221-SS-SJSB074 (4-6)

Date Analyzed: 08/15/21 14:27 Lab File ID: 13AU2110D5_60.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.55	Peak assignment corrected	bennettd	08/17/21 16:53
13C-2,3,7,8-TCDD	18.22	Peak assignment corrected	bennettd	08/17/21 16:53
2,3,7,8-TCDD	18.23	Peak assignment corrected	bennettd	08/17/21 16:53
1,2,3,7,8-PeCDF	22.63	Invalid Compound ID	dadunj	08/18/21 11:25
2,3,4,7,8-PeCDF	23.95	Peak assignment corrected	dadunj	08/18/21 11:25
1,2,3,7,8-PeCDD	24.64	Peak assignment corrected	dadunj	08/18/21 11:25
2,3,4,6,7,8-HxCDF	31.61	Split Peak	dadunj	08/18/21 11:26
13C-1,2,3,7,8,9-HxCDF	32.37	Split Peak	dadunj	08/18/21 11:26
1,2,3,7,8,9-HxCDF	32.38	Split Peak	dadunj	08/18/21 11:26

Lab Sample ID: 320-76769-16 Client Sample ID: 11215702-072221-SS-SJSB074 (6-8)

Date Analyzed: 08/15/21 15:12 Lab File ID: 13AU2110D5_61.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/18/21 11:28
1,2,3,7,8-PeCDF	22.42	Split Peak	dadunj	08/18/21 11:28
1,2,3,4,6,7,8-HpCDF	33.79	Split Peak	dadunj	08/18/21 11:29
OCDF	37.03	Split Peak	dadunj	08/18/21 11:29

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516848

Lab Sample ID: 320-76769-17 Client Sample ID: 11215702-072221-SS-SJSB074 (8-10)

Date Analyzed: 08/15/21 15:57 Lab File ID: 13AU2110D5_62.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/18/21 11:31
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/18/21 11:31
1,2,3,7,8-PeCDF	22.41	Split Peak	dadunj	08/18/21 11:30
2,3,4,7,8-PeCDF	23.74	Split Peak	dadunj	08/18/21 11:31
1,2,3,6,7,8-HxCDF	30.72	Split Peak	dadunj	08/18/21 11:31
1,2,3,4,7,8-HxCDD	31.71	Split Peak	dadunj	08/18/21 11:31
1,2,3,4,6,7,8-HpCDF	33.78	Split Peak	dadunj	08/18/21 11:31
OCDF	37.01	Split Peak	dadunj	08/18/21 11:32

Lab Sample ID: 320-76769-18 Client Sample ID: 11215702-072221-SS-SJSB074 (10-12)

Date Analyzed: 08/15/21 16:42 Lab File ID: 13AU2110D5_63.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/18/21 11:34
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/18/21 11:33
2,3,7,8-TCDD	18.08	Split Peak	dadunj	08/18/21 11:33
1,2,3,7,8-PeCDF	22.42	Split Peak	dadunj	08/18/21 11:33
1,2,3,6,7,8-HxCDF	30.72	Split Peak	dadunj	08/18/21 11:33
1,2,3,4,7,8-HxCDD	31.71	Split Peak	dadunj	08/18/21 11:34
1,2,3,6,7,8-HxCDD	31.83	Invalid Compound ID	dadunj	08/18/21 11:35
1,2,3,7,8,9-HxCDF	32.34	Split Peak	dadunj	08/18/21 11:33
1,2,3,4,6,7,8-HpCDD	34.57	Split Peak	dadunj	08/18/21 11:34
OCDF	37.02	Split Peak	dadunj	08/18/21 11:34

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516848

Lab Sample ID: 320-76769-19 Client Sample ID: 11215702-072221-SS-SJSB074 (12-14)

Date Analyzed: 08/15/21 17:27 Lab File ID: 13AU2110D5_64.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDF	30.52	Split Peak	dadunj	08/18/21 11:35
1,2,3,6,7,8-HxCDF	30.72	Split Peak	dadunj	08/18/21 11:35
1,2,3,7,8,9-HxCDD	32.15	Split Peak	dadunj	08/18/21 11:36
1,2,3,7,8,9-HxCDF	32.34	Split Peak	dadunj	08/18/21 11:36
1,2,3,4,7,8,9-HpCDF	34.86	Split Peak	dadunj	08/18/21 11:36
OCDF	37.02	Split Peak	dadunj	08/18/21 11:36

Lab Sample ID: 320-76769-20 Client Sample ID: 11215702-072221-SS-SJSB074 (14-16)

Date Analyzed: 08/15/21 18:12 Lab File ID: 13AU2110D5_65.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/18/21 11:38
1,2,3,7,8-PeCDF	22.41	Split Peak	dadunj	08/18/21 11:37
2,3,4,7,8-PeCDF	23.73	Split Peak	dadunj	08/18/21 11:37
2,3,4,6,7,8-HxCDF	31.53	Split Peak	dadunj	08/18/21 11:38
1,2,3,4,7,8-HxCDD	31.73	Split Peak	dadunj	08/18/21 11:38
1,2,3,6,7,8-HxCDD	31.83	Split Peak	dadunj	08/18/21 11:38
1,2,3,7,8,9-HxCDF	32.33	Split Peak	dadunj	08/18/21 11:38
1,2,3,4,6,7,8-HpCDF	33.78	Split Peak	dadunj	08/18/21 11:38
OCDF	37.01	Split Peak	dadunj	08/18/21 11:39

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516848

Lab Sample ID: 320-76769-25 Client Sample ID: 11215702-072221-DUP-4

Date Analyzed: 08/15/21 18:57 Lab File ID: 13AU2110D5_66.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/18/21 11:41
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/18/21 11:41
2,3,7,8-TCDD	18.08	Split Peak	dadunj	08/18/21 11:40
1,2,3,7,8-PeCDF	22.39	Split Peak	dadunj	08/18/21 11:40
2,3,4,7,8-PeCDF	23.74	Split Peak	dadunj	08/18/21 11:40
OCDF	37.02	Split Peak	dadunj	08/18/21 11:41

Lab Sample ID: 320-76769-26 Client Sample ID: 11215702-072221-DUP-5

Date Analyzed: 08/15/21 19:42 Lab File ID: 13AU2110D5_67.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.60	Peak assignment corrected	bennettd	08/17/21 16:57
13C-2,3,7,8-TCDD	18.22	Invalid Compound ID	dadunj	08/18/21 12:52
2,3,7,8-TCDD	18.23	Invalid Compound ID	dadunj	08/18/21 11:43
37Cl4-2,3,7,8-TCDD	18.23	Peak assignment corrected	dadunj	08/18/21 12:52
1,2,3,7,8-PeCDF	22.65	Invalid Compound ID	dadunj	08/18/21 11:44
2,3,4,7,8-PeCDF	23.96	Peak assignment corrected	dadunj	08/18/21 11:44
1,2,3,7,8-PeCDD	24.66	Peak assignment corrected	dadunj	08/18/21 11:45
1,2,3,6,7,8-HxCDF	30.80	Split Peak	dadunj	08/18/21 11:45
2,3,4,6,7,8-HxCDF	31.59	Split Peak	dadunj	08/18/21 11:45
13C-1,2,3,7,8,9-HxCDF	32.35	Split Peak	dadunj	08/18/21 11:46
1,2,3,7,8,9-HxCDF	32.37	Split Peak	dadunj	08/18/21 11:46

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516848

Lab Sample ID: 320-76769-28 Client Sample ID: 11215702-072221-SS-SJSB076 (2-4)

Date Analyzed: 08/15/21 20:27 Lab File ID: 13AU2110D5_68.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.67	Peak assignment corrected	bennettd	08/17/21 16:58
13C-2,3,7,8-TCDD	18.32	Split Peak	dadunj	08/18/21 12:22
2,3,7,8-TCDD	18.35	Peak assignment corrected	bennettd	08/17/21 16:58
1,2,3,7,8-PeCDF	22.78	Peak assignment corrected	dadunj	08/18/21 11:48
2,3,4,7,8-PeCDF	24.09	Peak assignment corrected	dadunj	08/18/21 11:48
1,2,3,7,8-PeCDD	24.77	Peak assignment corrected	dadunj	08/18/21 11:49
1,2,3,4,7,8-HxCDF	30.70	Peak assignment corrected	dadunj	08/18/21 11:49
1,2,3,6,7,8-HxCDF	30.86	Peak assignment corrected	dadunj	08/18/21 11:49
13C-2,3,4,6,7,8-HxCDF	31.62	Peak assignment corrected	dadunj	08/18/21 11:49
2,3,4,6,7,8-HxCDF	31.63	Invalid Compound ID	dadunj	08/18/21 11:49
13C-1,2,3,7,8,9-HxCDF	32.39	Peak assignment corrected	dadunj	08/18/21 11:49

Lab Sample ID: 320-76769-14 Client Sample ID: 11215702-072221-SS-SJSB074 (2-4)

Date Analyzed: 08/15/21 21:12 Lab File ID: 13AU2110D5_69.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.63	Peak assignment corrected	bennettd	08/17/21 16:52
13C-2,3,7,8-TCDD	18.29	Peak assignment corrected	bennettd	08/17/21 16:52
2,3,7,8-TCDD	18.31	Peak assignment corrected	bennettd	08/17/21 16:52
1,2,3,7,8-PeCDF	22.75	Peak assignment corrected	dadunj	08/18/21 11:52
2,3,4,7,8-PeCDF	24.06	Peak assignment corrected	dadunj	08/18/21 11:52
1,2,3,7,8-PeCDD	24.75	Peak assignment corrected	dadunj	08/18/21 11:53
1,2,3,4,7,8-HxCDF	30.70	Peak assignment corrected	dadunj	08/18/21 11:53
1,2,3,6,7,8-HxCDF	30.86	Peak assignment corrected	dadunj	08/18/21 11:53
13C-2,3,4,6,7,8-HxCDF	31.62	Peak assignment corrected	dadunj	08/18/21 11:53
2,3,4,6,7,8-HxCDF	31.63	Invalid Compound ID	dadunj	08/18/21 11:55
13C-1,2,3,7,8,9-HxCDF	32.39	Peak assignment corrected	dadunj	08/18/21 11:53
1,2,3,7,8,9-HxCDF	32.41	Split Peak	dadunj	08/18/21 11:54

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 517729

Lab Sample ID: 320-76769-31 Client Sample ID: 11215702-072221-SS-SJSB076 (8-10)

Date Analyzed: 08/18/21 17:19 Lab File ID: 18AU2110D5_5.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,6,7,8-HxCDF	30.69	Peak Tail	bennettd	08/19/21 12:31
1,2,3,4,7,8-HxCDD	31.70	Poor chromatography	bennettd	08/19/21 12:32
1,2,3,6,7,8-HxCDD	31.79	Poor chromatography	bennettd	08/19/21 12:32
1,2,3,7,8,9-HxCDD	32.14	Poor chromatography	bennettd	08/19/21 12:33
1,2,3,7,8,9-HxCDF	32.33	Poor chromatography	bennettd	08/19/21 12:32
1,2,3,4,6,7,8-HpCDF	33.77	Peak Tail	bennettd	08/19/21 12:35
1,2,3,4,7,8,9-HpCDF	34.85	Peak Tail	bennettd	08/19/21 12:35
OCDF	36.99	Peak Tail	bennettd	08/19/21 12:36

Lab Sample ID: 320-76769-34 Client Sample ID: 11215702-072221-SS-SJSB076 (14-16)

Date Analyzed: 08/18/21 18:04 Lab File ID: 18AU2110D5_6.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDD	24.37	Missed Peak	bennettd	08/19/21 12:40
1,2,3,6,7,8-HxCDD	31.79	Peak Tail	bennettd	08/19/21 12:41
1,2,3,7,8,9-HxCDD	32.13	Peak Tail	bennettd	08/19/21 12:41
1,2,3,7,8,9-HxCDF	32.31	Split Peak	bennettd	08/19/21 12:40
1,2,3,4,6,7,8-HpCDF	33.75	Peak Tail	bennettd	08/19/21 12:42
OCDF	36.99	Peak Tail	bennettd	08/19/21 12:42

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 518850

Lab Sample ID: 320-76769-5 RA Client Sample ID: 11215702-072221-SS-SJSB080 (8-10) RA

Date Analyzed: 08/21/21 20:56 Lab File ID: 21AU2111D2_012.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.66	Peak Tail	bennettd	08/23/21 10:04

Lab Sample ID: 320-76769-13 RA Client Sample ID: 11215702-072221-SS-SJSB074 (0-2) RA

Date Analyzed: 08/21/21 22:13 Lab File ID: 21AU2111D2_014.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.65	Peak Tail	bennettd	08/23/21 10:05

Lab Sample ID: 320-76769-15 RA Client Sample ID: 11215702-072221-SS-SJSB074 (4-6) RA

Date Analyzed: 08/21/21 22:51 Lab File ID: 21AU2111D2_015.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.79	Peak Tail	bennettd	08/23/21 10:06

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 518958

Lab Sample ID: 320-76769-20 RA Client Sample ID: 11215702-072221-SS-SJSB074 (14-16) RA

Date Analyzed: 08/23/21 12:43 Lab File ID: 23AU2111D2_006.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.70	Incomplete Integration	bennettd	08/23/21 15:46

Lab Sample ID: 320-76769-1 RA Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) RA

Date Analyzed: 08/23/21 13:22 Lab File ID: 23AU2111D2_007.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.13	Missed Peak	bennettd	08/23/21 15:50
13C-2,3,7,8-TCDF	17.68	Wrong peak	bennettd	08/23/21 15:50
2,3,7,8-TCDF	17.70	Missed Peak	bennettd	08/23/21 15:50

Lab Sample ID: 320-76769-1 MS RA Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) MS RA

Date Analyzed: 08/23/21 14:00 Lab File ID: 23AU2111D2_008.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.12	Missed Peak	bennettd	08/23/21 15:52
13C-2,3,7,8-TCDF	17.67	Peak Tail	bennettd	08/23/21 15:53

Lab Sample ID: 320-76769-1 MSD RA Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) MSD RA

Date Analyzed: 08/23/21 14:38 Lab File ID: 23AU2111D2_009.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.12	Missed Peak	bennettd	08/23/21 15:55
13C-2,3,7,8-TCDF	17.66	Peak Tail	bennettd	08/23/21 15:55

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 518979

Lab Sample ID: 320-76769-8 RA Client Sample ID: 11215702-072221-SS-SJSB080 (14-16) RA

Date Analyzed: 08/23/21 18:46 Lab File ID: 23AU21A11D2_006.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.65	Peak Tail	bennettd	08/24/21 09:15

Lab Sample ID: 320-76769-31 RA Client Sample ID: 11215702-072221-SS-SJSB076 (8-10) RA

Date Analyzed: 08/23/21 23:14 Lab File ID: 23AU21A11D2_013.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.64	Peak Tail	bennettd	08/24/21 09:18

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 519438

Lab Sample ID: 320-76769-18 RA Client Sample ID: 11215702-072221-SS-SJSB074 (10-12) RA

Date Analyzed: 08/24/21 11:02 Lab File ID: 24AU2111D2_005.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.67	Peak Tail	bennettd	08/24/21 16:45

Lab Sample ID: 320-76769-2 RA Client Sample ID: 11215702-072221-SS-SJSB080 (2-4) RA

Date Analyzed: 08/24/21 11:40 Lab File ID: 24AU2111D2_006.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.11	Wrong peak	bennettd	08/24/21 16:48
13C-2,3,7,8-TCDF	17.63	Peak Tail	bennettd	08/24/21 16:49

Lab Sample ID: 320-76769-14 RA Client Sample ID: 11215702-072221-SS-SJSB074 (2-4) RA

Date Analyzed: 08/24/21 12:18 Lab File ID: 24AU2111D2_007.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.14	Wrong peak	bennettd	08/24/21 16:50
13C-2,3,7,8-TCDF	17.69	Poor chromatography	bennettd	08/24/21 16:52
2,3,7,8-TCDF	17.70	Poor chromatography	bennettd	08/24/21 16:52

Lab Sample ID: 320-76769-26 RA Client Sample ID: 11215702-072221-DUP-5 RA

Date Analyzed: 08/24/21 12:57 Lab File ID: 24AU2111D2_008.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.12	Wrong peak	bennettd	08/24/21 16:57
13C-2,3,7,8-TCDF	17.67	Poor chromatography	bennettd	08/24/21 16:58

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 519438

Lab Sample ID: 320-76769-28 RA Client Sample ID: 11215702-072221-SS-SJSB076 (2-4) RA

Date Analyzed: 08/24/21 13:35 Lab File ID: 24AU2111D2_009.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.15	Wrong peak	bennettd	08/24/21 17:01
13C-2,3,7,8-TCDF	17.70	Wrong peak	bennettd	08/24/21 17:05

Lab Sample ID: 320-76769-27 RA Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) RA

Date Analyzed: 08/24/21 14:13 Lab File ID: 24AU2111D2_010.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.64	Peak Tail	bennettd	08/24/21 17:06

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 519540

Lab Sample ID: 320-76769-29 RA Client Sample ID: 11215702-072221-SS-SJSB076 (4-6) RA

Date Analyzed: 08/25/21 02:50 Lab File ID: 24AU21A11D2_017.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.16	Retention Time Shift	stephensk	08/25/21 08:57
13C-2,3,7,8-TCDF	17.70	Peak assignment corrected	stephensk	08/25/21 08:33
2,3,7,8-TCDF	17.74	Peak assignment corrected	stephensk	08/25/21 08:34

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 519650

Lab Sample ID: 320-76888-A-1-B MS RA Client Sample ID:

Date Analyzed: 08/25/21 11:28 Lab File ID: 25AU2111D2_005.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.15	Missed Peak	bennettd	08/25/21 13:16
13C-2,3,7,8-TCDF	17.69	Wrong peak	bennettd	08/25/21 13:16
2,3,7,8-TCDF	17.70	Missed Peak	bennettd	08/25/21 13:17

Lab Sample ID: 320-76888-A-1-C MSD RA Client Sample ID:

Date Analyzed: 08/25/21 12:07 Lab File ID: 25AU2111D2_006.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.11	Missed Peak	bennettd	08/25/21 13:21
13C-2,3,7,8-TCDF	17.66	Poor chromatography	bennettd	08/25/21 13:22
2,3,7,8-TCDF	17.67	Missed Peak	bennettd	08/25/21 13:22

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517196

Lab Sample ID: CCV 320-517196/2 Client Sample ID:

Date Analyzed: 08/17/21 15:14 Lab File ID: 17au21dfs1_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.54	Baseline	stephensk	08/17/21 16:07
13C-1,2,3,4-TCDD	21.51	Peak assignment corrected	stephensk	08/17/21 16:07
13C-1,2,3,7,8,9-HxCDD	36.67	Baseline	stephensk	08/17/21 16:09
13C-1,2,3,4,7,8,9-HpCDF	39.92	Baseline	stephensk	08/17/21 16:09

Lab Sample ID: MB 320-513586/1-A Client Sample ID:

Date Analyzed: 08/17/21 17:01 Lab File ID: 17au21dfs1_5.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,6,7,8-HpCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,4,7,8,9-HpCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/19/21 12:06
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
2,3,7,8-TCDD		Invalid Compound ID	stephensk	08/17/21 18:31
2,3,7,8-TCDF		Invalid Compound ID	dadunj	08/19/21 12:06
OCDF		Invalid Compound ID	dadunj	08/19/21 12:07
1,2,3,4,6,7,8-HpCDD	39.61	Invalid Compound ID	dadunj	08/19/21 12:07
OCDD	42.12	Baseline	dadunj	08/19/21 12:07

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517196

Lab Sample ID: 320-76769-30 Client Sample ID: 11215702-072221-SS-SJSB076 (6-8)

Date Analyzed: 08/17/21 22:36 Lab File ID: 17au21dfs1_12.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 12:32
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 12:32
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:32
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:32
1,2,3,7,8-PeCDF	27.34	Incomplete Integration	dadunj	08/19/21 12:32
1,2,3,7,8-PeCDD	29.69	Incomplete Integration	dadunj	08/19/21 12:32
1,2,3,4,7,8,9-HpCDF	39.90	Split Peak	dadunj	08/19/21 12:33
OCDF	42.18	Split Peak	dadunj	08/19/21 12:36

Lab Sample ID: 320-76769-32 Client Sample ID: 11215702-072221-SS-SJSB076 (10-12)

Date Analyzed: 08/18/21 00:12 Lab File ID: 17au21dfs1_14.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 12:38
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 12:38
1,2,3,7,8-PeCDD	29.70	Baseline	dadunj	08/19/21 12:37
1,2,3,7,8,9-HxCDD	36.65	Split Peak	dadunj	08/19/21 12:38
OCDF	42.20	Split Peak	dadunj	08/19/21 12:39

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517281

Lab Sample ID: CCV 320-517281/15 Client Sample ID:

Date Analyzed: 08/18/21 02:07 Lab File ID: 17au21dfs1_17.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.54	Baseline	stephensk	08/18/21 08:26
2,3,7,8-TCDD	21.91	Baseline	stephensk	08/18/21 08:26

Lab Sample ID: 320-76769-33 Client Sample ID: 11215702-072221-SS-SJSB076 (12-14)

Date Analyzed: 08/18/21 04:31 Lab File ID: 17au21dfs1_20.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	20.47	Peak assignment corrected	stephensk	08/18/21 14:01
2,3,4,7,8-PeCDF	28.82	Incomplete Integration	dadunj	08/19/21 12:40
1,2,3,4,6,7,8-HpCDF	38.65	Baseline	dadunj	08/19/21 12:41
OCDF	42.16	Split Peak	dadunj	08/19/21 12:41

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517461

Lab Sample ID: CCV 320-517461/29 Client Sample ID:

Date Analyzed: 08/18/21 13:48 Lab File ID: 17au21dfs1_32.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.52	Baseline	stephensk	08/18/21 14:38
13C-1,2,3,4-TCDD	21.44	Peak assignment corrected	stephensk	08/18/21 14:37
2,3,7,8-TCDD	21.88	Incomplete Integration	stephensk	08/18/21 14:38
13C-1,2,3,7,8,9-HxCDD	36.62	Baseline	stephensk	08/18/21 15:08
13C-1,2,3,4,7,8,9-HpCDF	39.88	Baseline	stephensk	08/18/21 14:43

Lab Sample ID: 320-76769-27 Client Sample ID: 11215702-072221-SS-SJSB076 (0-2)

Date Analyzed: 08/18/21 20:24 Lab File ID: 17au21dfs1_40.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,4,7,8-PeCDF	28.82	Baseline	dadunj	08/20/21 09:19

Lab Sample ID: 320-76769-27 MS Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) MS

Date Analyzed: 08/18/21 21:12 Lab File ID: 17au21dfs1_41.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	27.31	Split Peak	dadunj	08/20/21 09:21
2,3,4,6,7,8-HxCDF	35.93	Split Peak	dadunj	08/20/21 09:22
1,2,3,7,8,9-HxCDF	36.83	Split Peak	dadunj	08/20/21 09:23

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517461

Lab Sample ID: 320-76769-27 MSD Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) MSD

Date Analyzed: 08/18/21 22:00 Lab File ID: 17au21dfs1_42.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	27.36	Split Peak	dadunj	08/20/21 09:25
13C-2,3,4,7,8-PeCDF	28.85	Split Peak	dadunj	08/20/21 09:26
1,2,3,7,8,9-HxCDF	36.88	Split Peak	dadunj	08/20/21 09:27
13C-1,2,3,4,7,8,9-HpCDF	39.94	Baseline	dadunj	08/20/21 09:28
13C-OCDD	42.17	Peak assignment corrected	krenns	08/24/21 12:00

Lab Sample ID: 320-76769-29 Client Sample ID: 11215702-072221-SS-SJSB076 (4-6)

Date Analyzed: 08/18/21 22:48 Lab File ID: 17au21dfs1_43.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	21.43	Peak assignment corrected	stephensk	08/19/21 11:07
13C-2,3,7,8-TCDD	22.89	Poor chromatography	stephensk	08/19/21 11:07
37Cl4-2,3,7,8-TCDD	22.91	Poor chromatography	stephensk	08/19/21 11:08
2,3,7,8-TCDD	22.92	Poor chromatography	stephensk	08/19/21 11:08
1,2,3,7,8-PeCDF	28.12	Split Peak	dadunj	08/20/21 09:33
2,3,4,7,8-PeCDF	29.53	Poor chromatography	stephensk	08/19/21 11:09
1,2,3,7,8-PeCDD	30.33	Poor chromatography	stephensk	08/19/21 11:09
1,2,3,4,7,8-HxCDF	35.27	Poor chromatography	stephensk	08/19/21 11:09
1,2,3,6,7,8-HxCDF	35.40	Poor chromatography	stephensk	08/19/21 11:09
13C-2,3,4,6,7,8-HxCDF	36.15	Poor chromatography	stephensk	08/19/21 11:10
2,3,4,6,7,8-HxCDF	36.16	Poor chromatography	stephensk	08/19/21 11:10
1,2,3,4,7,8-HxCDD	36.36	Poor chromatography	stephensk	08/19/21 11:10
1,2,3,6,7,8-HxCDD	36.46	Poor chromatography	stephensk	08/19/21 11:10
1,2,3,7,8,9-HxCDD	36.82	Poor chromatography	stephensk	08/19/21 11:10
13C-1,2,3,7,8,9-HxCDF	36.99	Poor chromatography	stephensk	08/19/21 11:10

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517462

Lab Sample ID: CCV 320-517462/43 Client Sample ID:

Date Analyzed: 08/19/21 01:32 Lab File ID: 17au21dfs1_47.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.49	Baseline	stephensk	08/19/21 09:20
2,3,7,8-TCDD	21.84	Baseline	stephensk	08/19/21 09:21
13C-1,2,3,7,8-PeCDD	29.61	Baseline	stephensk	08/19/21 09:21

Lab Sample ID: 320-76769-4 Client Sample ID: 11215702-072221-SS-SJSB080 (6-8)

Date Analyzed: 08/19/21 07:54 Lab File ID: 17au21dfs1_55.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,4,6,7,8-HxCDF	35.89	Split Peak	dadunj	08/20/21 10:21
1,2,3,4,7,8-HxCDD	36.13	Split Peak	dadunj	08/20/21 10:22
1,2,3,6,7,8-HxCDD	36.25	Split Peak	dadunj	08/20/21 10:22
1,2,3,7,8,9-HxCDF	36.80	Invalid Compound ID	dadunj	08/20/21 10:21

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517891

Lab Sample ID: WDM 320-517891/1 Client Sample ID:

Date Analyzed: 08/19/21 13:59 Lab File ID: 19au21dfs1_2.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,4,7,9-PeCDD	30.78	Peak assignment corrected	stephensk	08/19/21 15:00
1,2,3,8,9-PeCDF	30.94	Peak assignment corrected	stephensk	08/19/21 15:00

Lab Sample ID: CCV 320-517891/2 Client Sample ID:

Date Analyzed: 08/19/21 14:46 Lab File ID: 19au21dfs1_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,4-TCDD	21.35	Peak assignment corrected	stephensk	08/19/21 15:37
2,3,7,8-TCDD	21.75	Baseline	stephensk	08/19/21 15:38

Lab Sample ID: MB 320-513879/1-A Client Sample ID:

Date Analyzed: 08/19/21 16:27 Lab File ID: 19au21dfs1_5.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 08:54
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 08:54
1,2,3,7,8,9-HxCDD		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,4,7,8-PeCDF		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,7,8-TCDD		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,7,8-TCDF	20.42	Baseline	dadunj	08/23/21 08:53
1,2,3,4,6,7,8-HpCDF	38.62	Split Peak	dadunj	08/23/21 08:55
1,2,3,4,6,7,8-HpCDD	39.57	Split Peak	dadunj	08/23/21 08:55
OCDD	42.07	Baseline	dadunj	08/23/21 08:55

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 518043

Lab Sample ID: CCV 320-518043/15 Client Sample ID:

Date Analyzed: 08/20/21 01:34 Lab File ID: 19au21dfs1_17.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,4-TCDD	21.40	Peak assignment corrected	arghestan is	08/20/21 09:08

Lab Sample ID: 320-76888-A-1-B MS Client Sample ID:

Date Analyzed: 08/20/21 05:33 Lab File ID: 19au21dfs1_22.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDD	21.82	Baseline	krenns	08/25/21 15:21
2,3,7,8-TCDD	21.85	Baseline	krenns	08/25/21 15:22
1,2,3,7,8-PeCDF	27.31	Split Peak	dadunj	08/23/21 09:39
13C-2,3,4,7,8-PeCDF	28.76	Baseline	dadunj	08/23/21 09:42
13C-1,2,3,7,8-PeCDD	29.57	Baseline	dadunj	08/23/21 09:42
2,3,4,6,7,8-HxCDF	35.91	Split Peak	dadunj	08/23/21 09:40
1,2,3,7,8,9-HxCDF	36.80	Split Peak	dadunj	08/23/21 09:40
13C-OCDD	42.04	Split Peak	dadunj	08/23/21 09:41

Lab Sample ID: 320-76888-A-1-C MSD Client Sample ID:

Date Analyzed: 08/20/21 06:21 Lab File ID: 19au21dfs1_23.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDD	21.84	Baseline	dadunj	08/23/21 09:45
37Cl4-2,3,7,8-TCDD	21.86	Assign Peak	dadunj	08/23/21 09:45
2,3,7,8-TCDD	21.87	Invalid Compound ID	dadunj	08/23/21 09:45
1,2,3,7,8-PeCDF	27.32	Split Peak	dadunj	08/23/21 09:46
2,3,4,6,7,8-HxCDF	35.91	Split Peak	dadunj	08/23/21 09:46
1,2,3,7,8,9-HxCDF	36.79	Split Peak	dadunj	08/23/21 09:46

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30		CIL, Lot ER09031903		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

774336

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

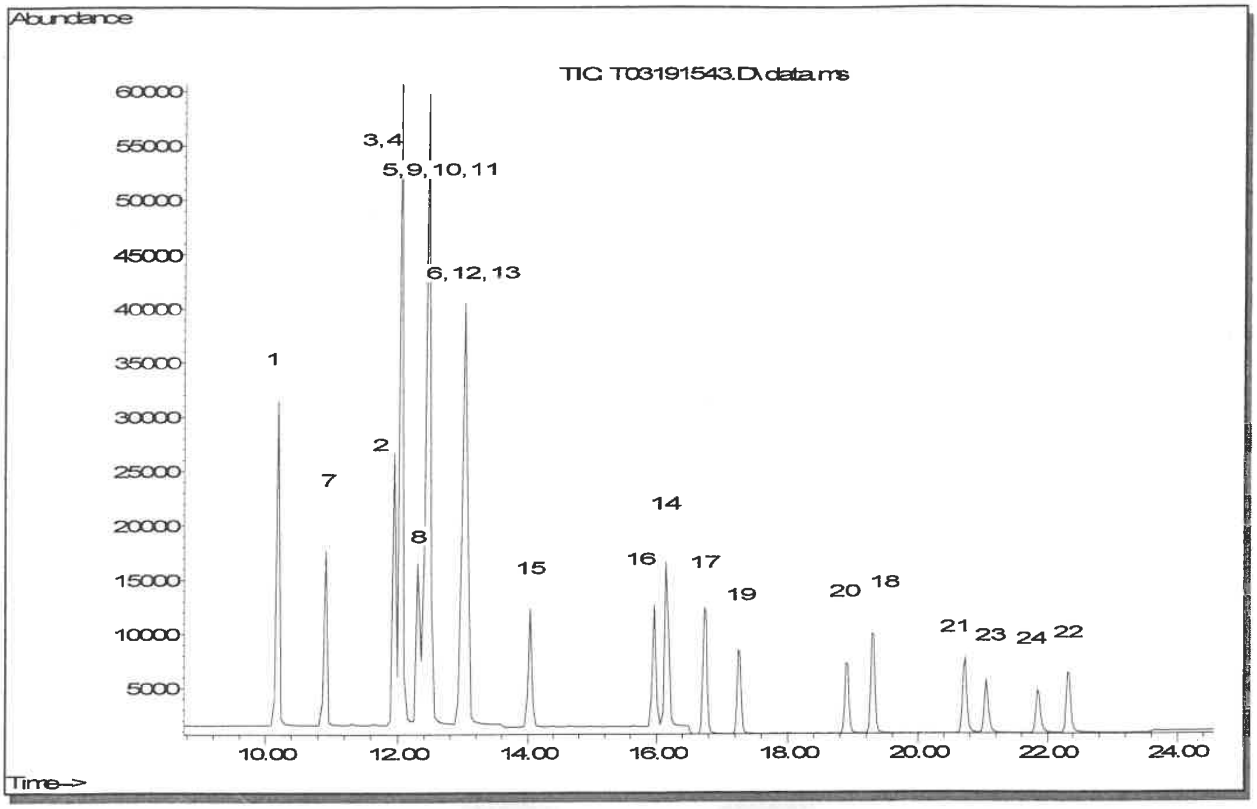

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

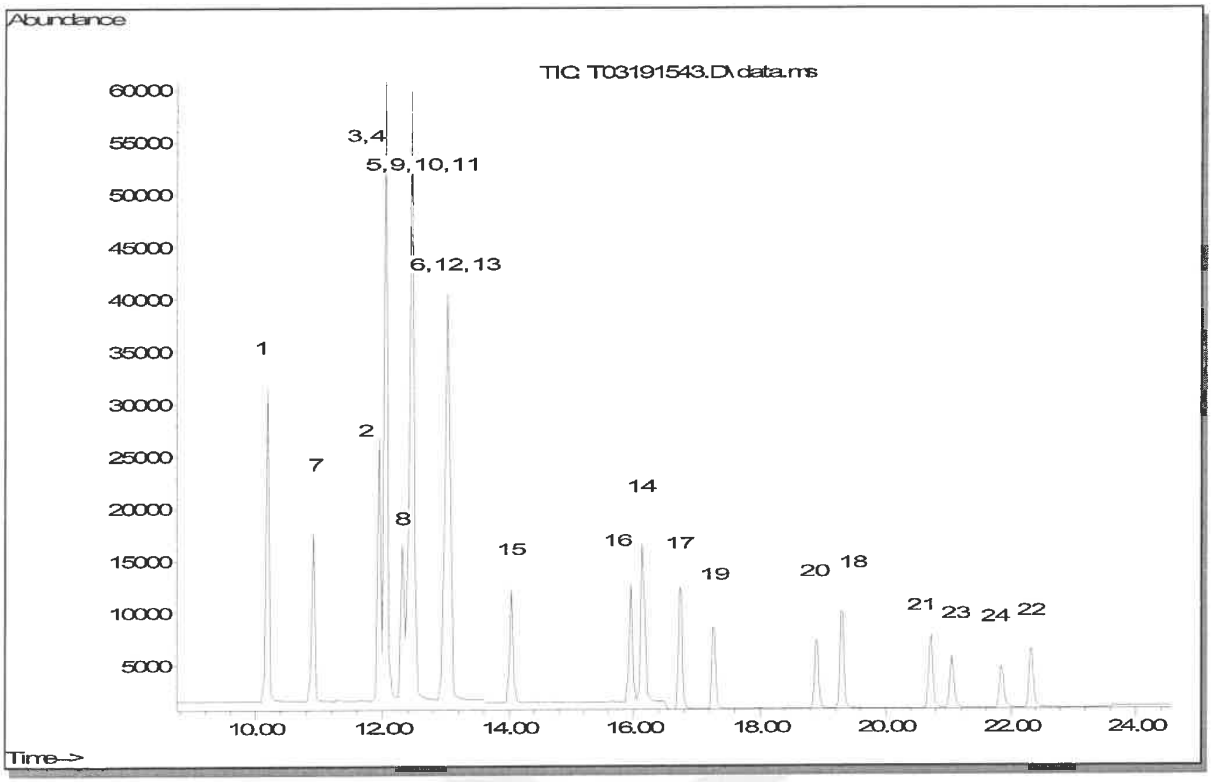

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r. 3/30/20

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

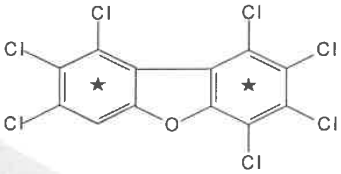

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

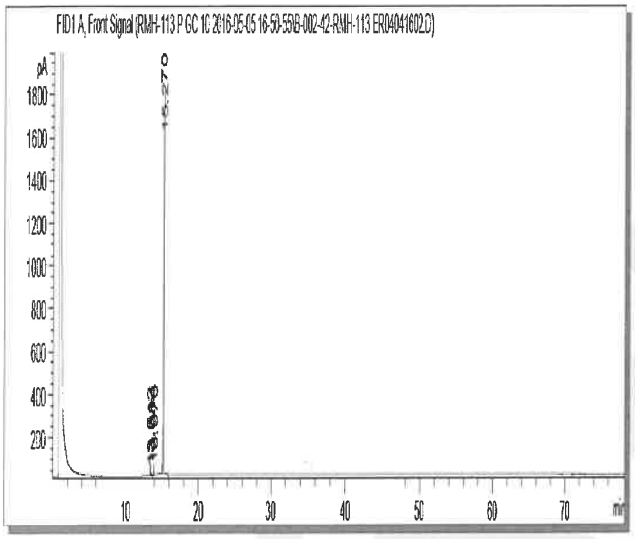

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

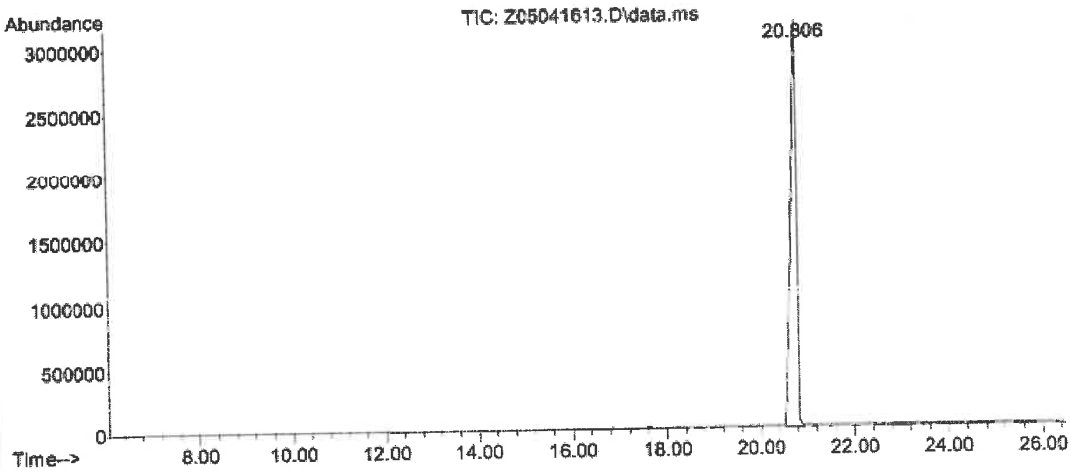

Mass Spectrum

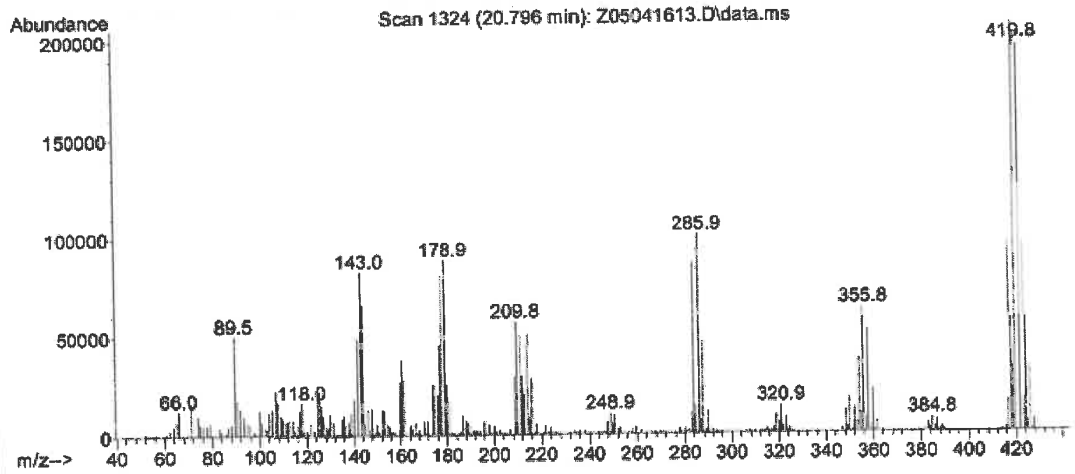

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 [illegible]

Cerilliant
Analytical Reference Standards
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CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

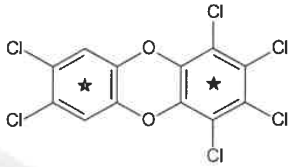

Catalog Number:	ED-946
Solution Lot:	ER04211601
Expiration Date:	June 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

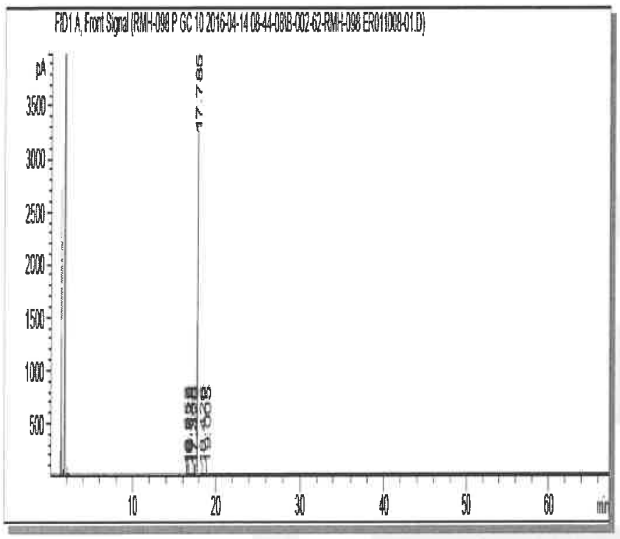

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument:	GC#10
Sample Name:	ER011008-01
Acquired:	April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

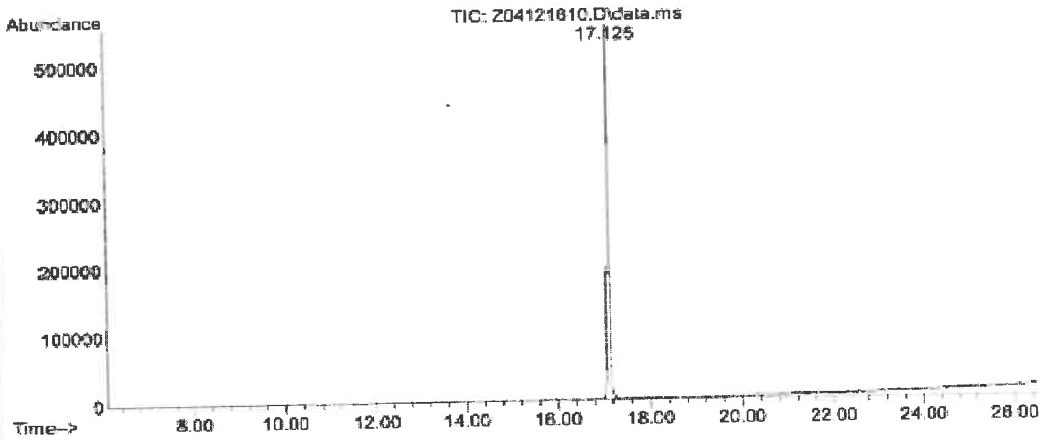

Mass Spectrum

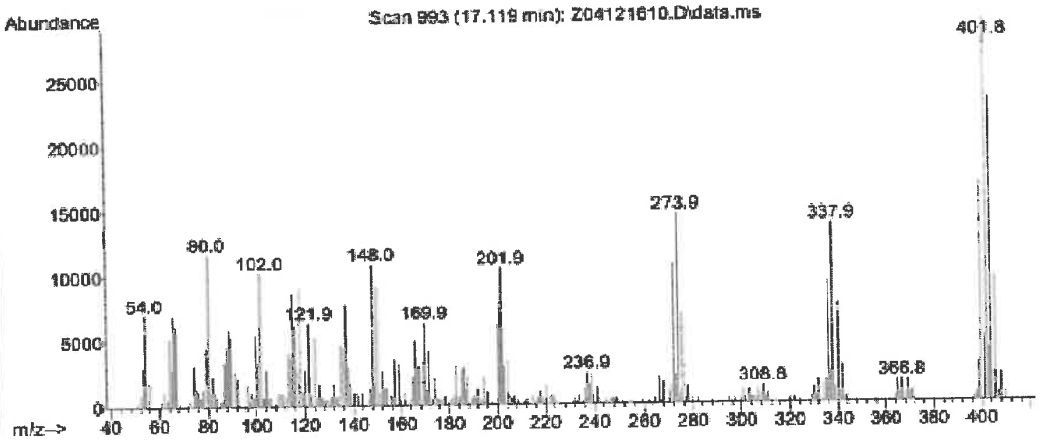

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

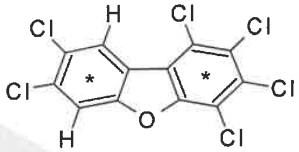

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot:	ER11281601

Chemical Formula:	$^{13}C_{12}Cl_6H_2O$
CAS Number:	114423-98-2
Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

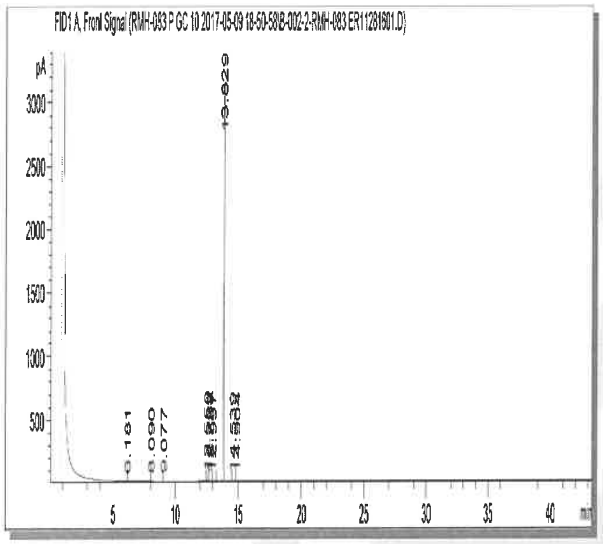

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

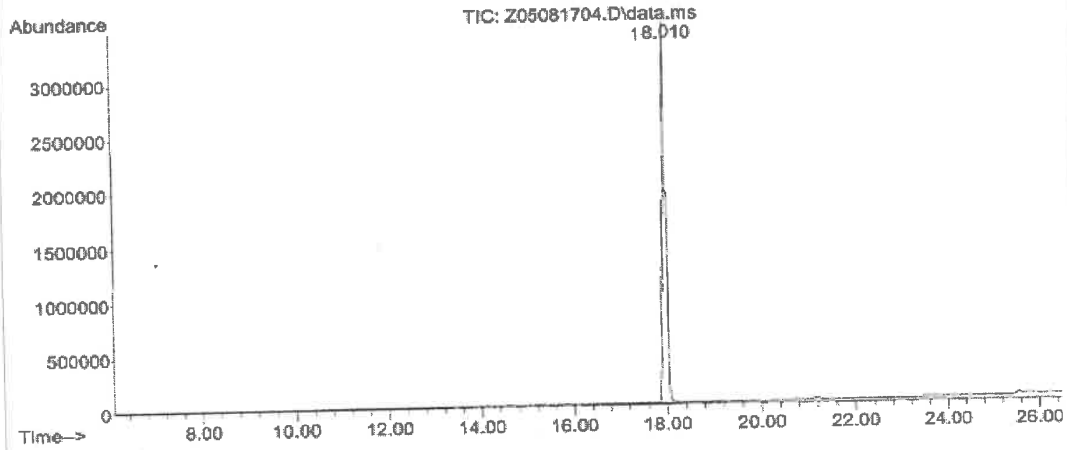

Mass Spectrum

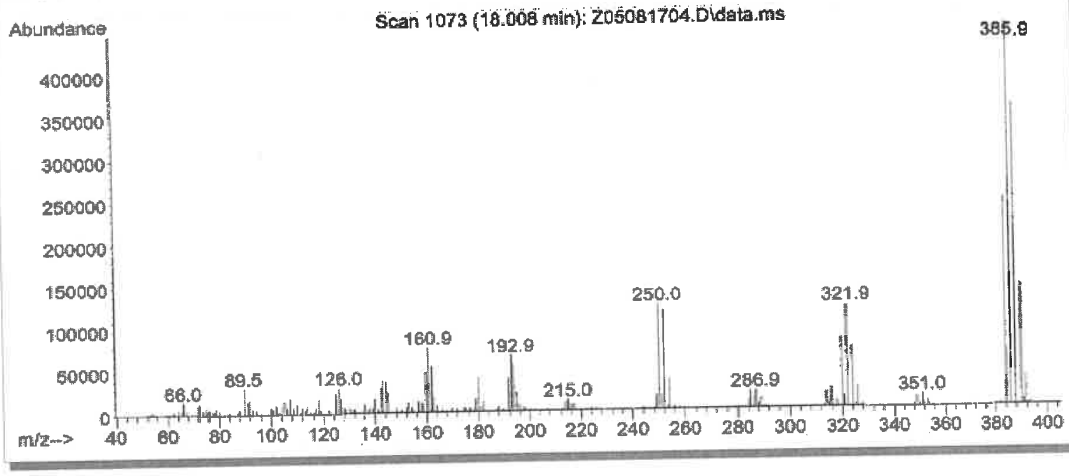

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

Cerilliant
Analytical Reference Standards
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CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

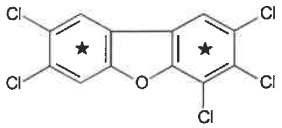

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

774367

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

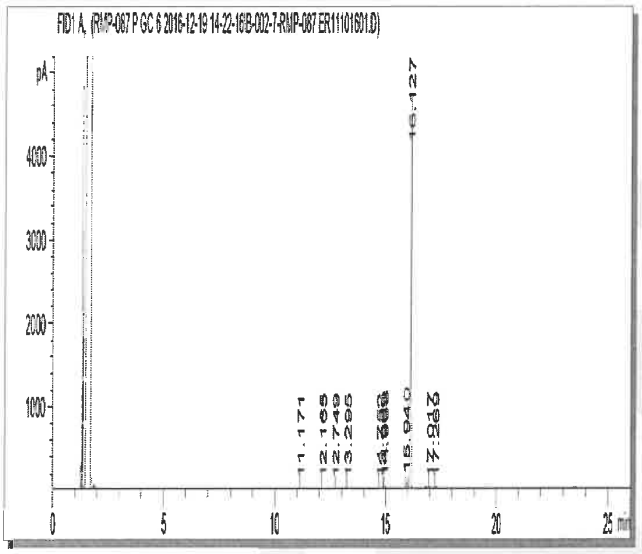

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

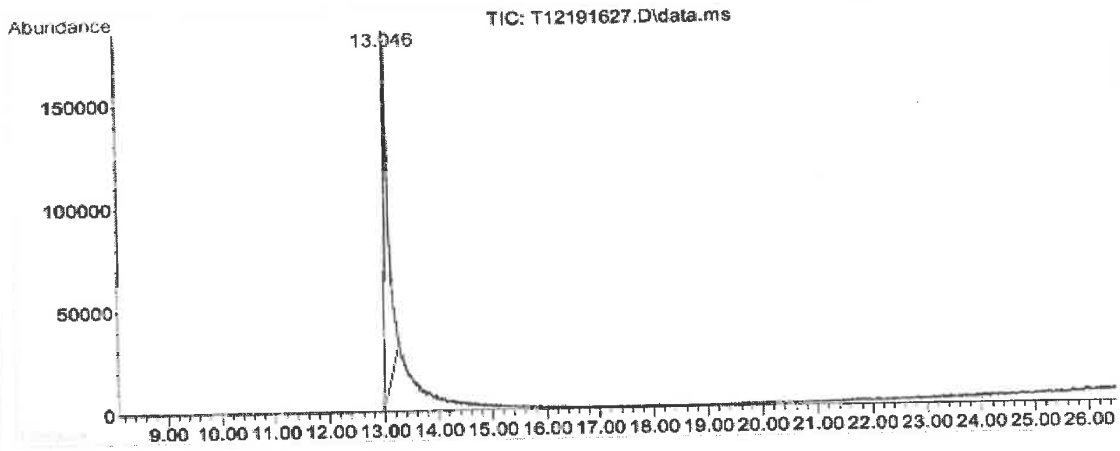

Mass Spectrum

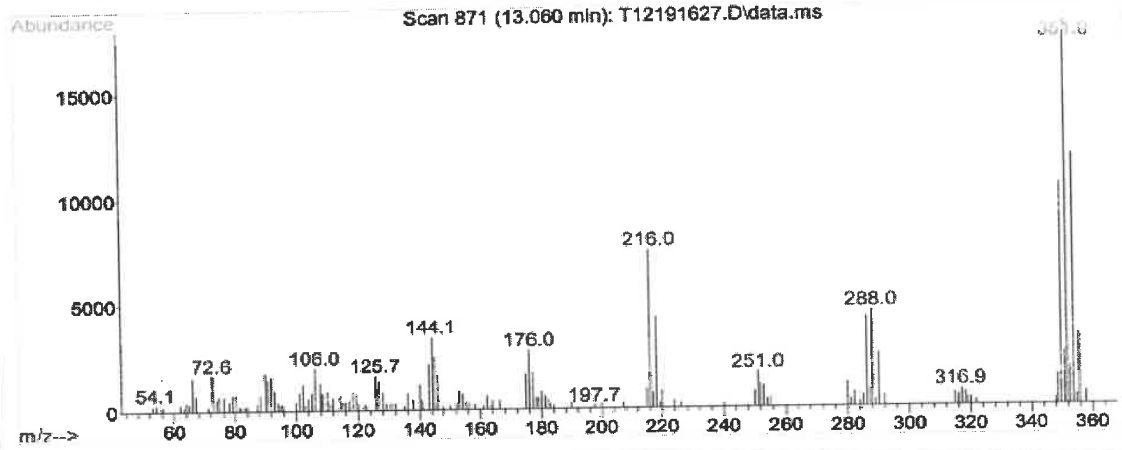

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

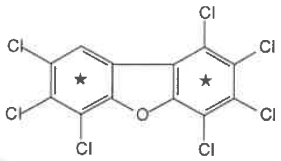

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

774372

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER020507-02

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-84-8
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

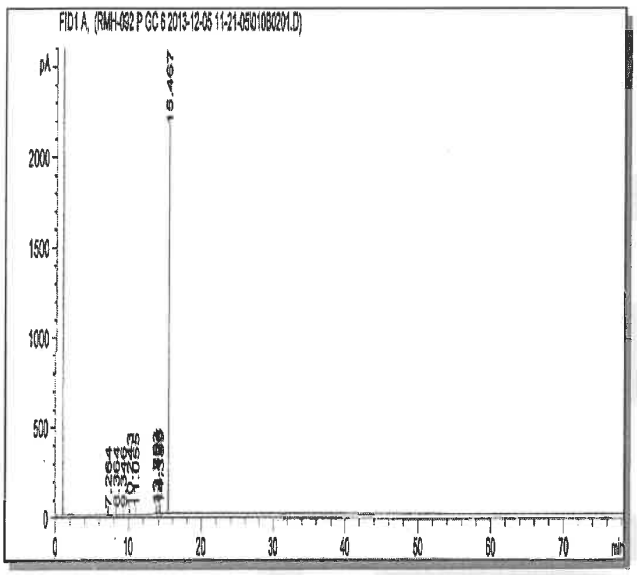

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Data File Name: RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument: GC#6
Sample Name: ER020507-02
Acquired: December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

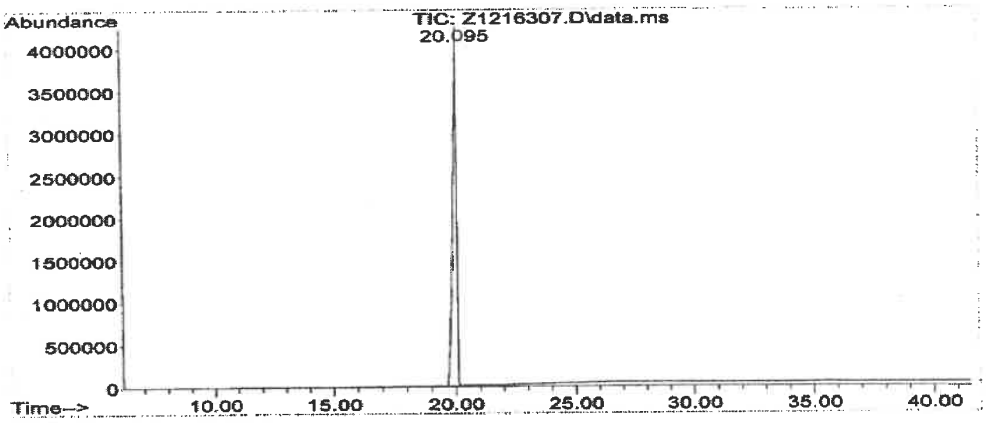

Mass Spectrum

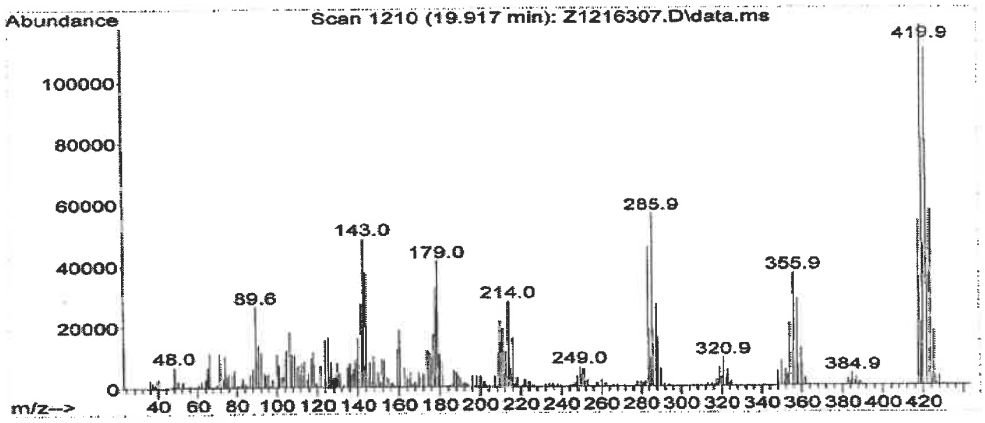

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

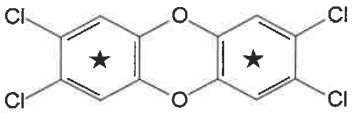

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

774379

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

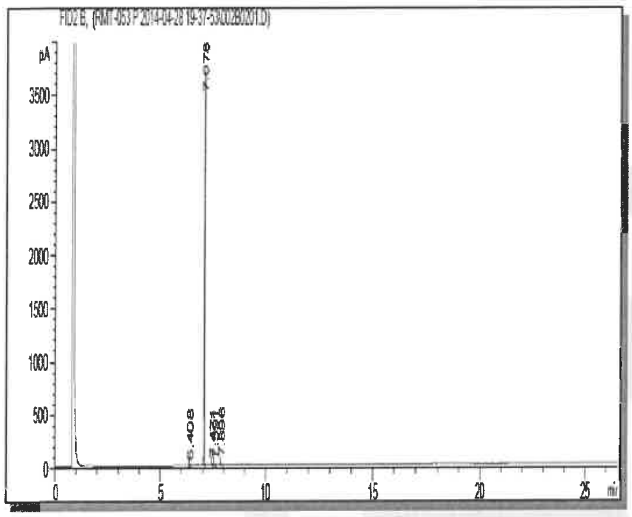

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

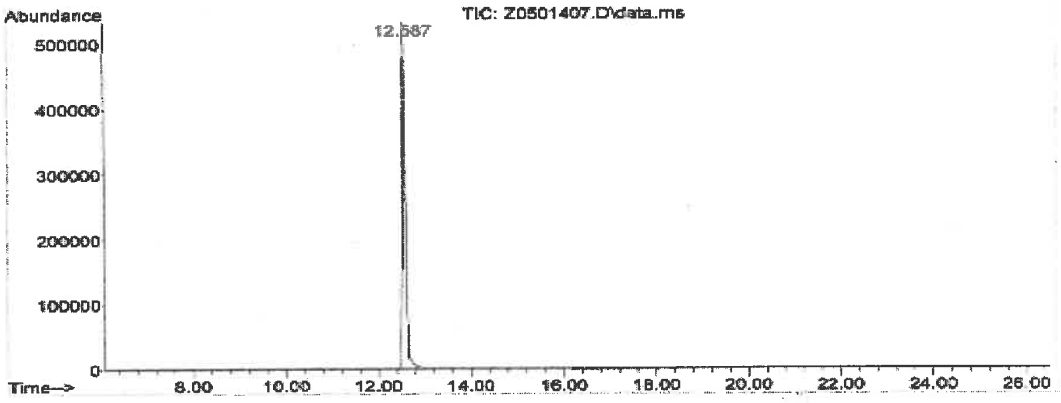

Mass Spectrum

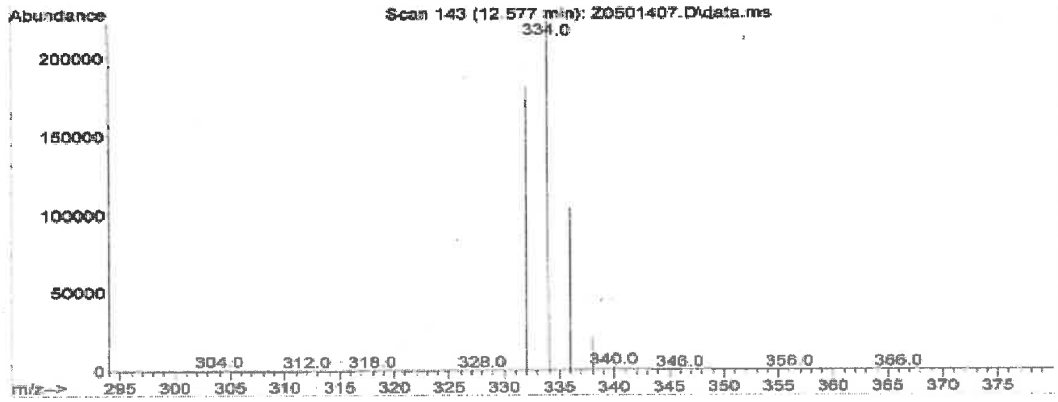

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

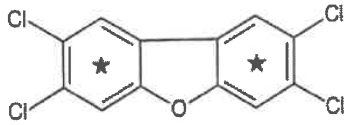

Catalog Number: EF-904
Solution Lot: ER09131601
Expiration Date: September 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

774384

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/FID

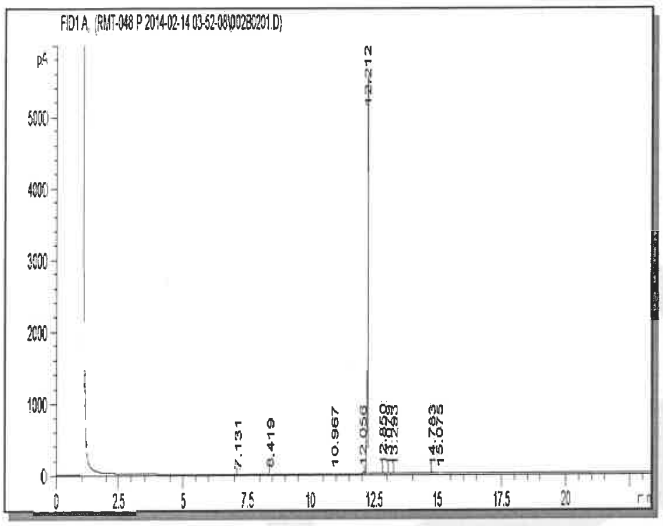

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

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GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

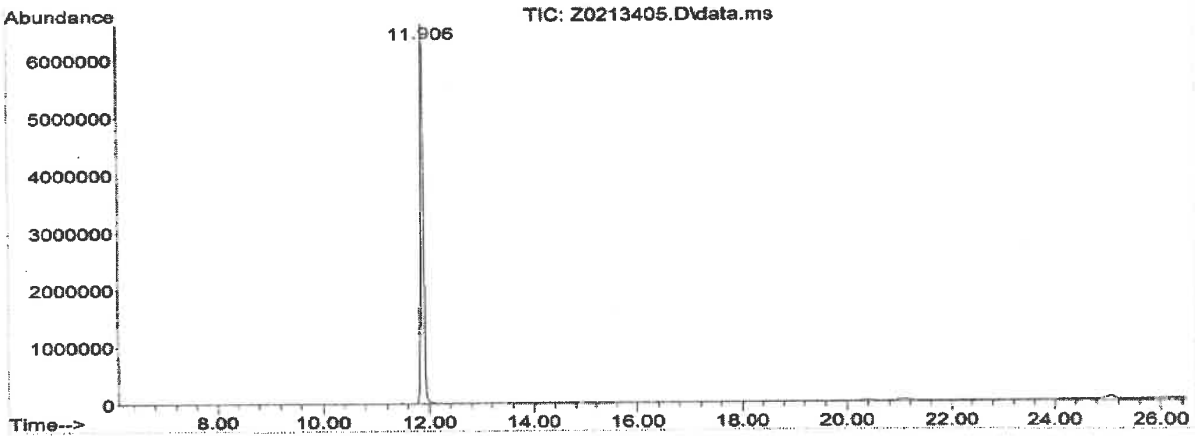

Mass Spectrum

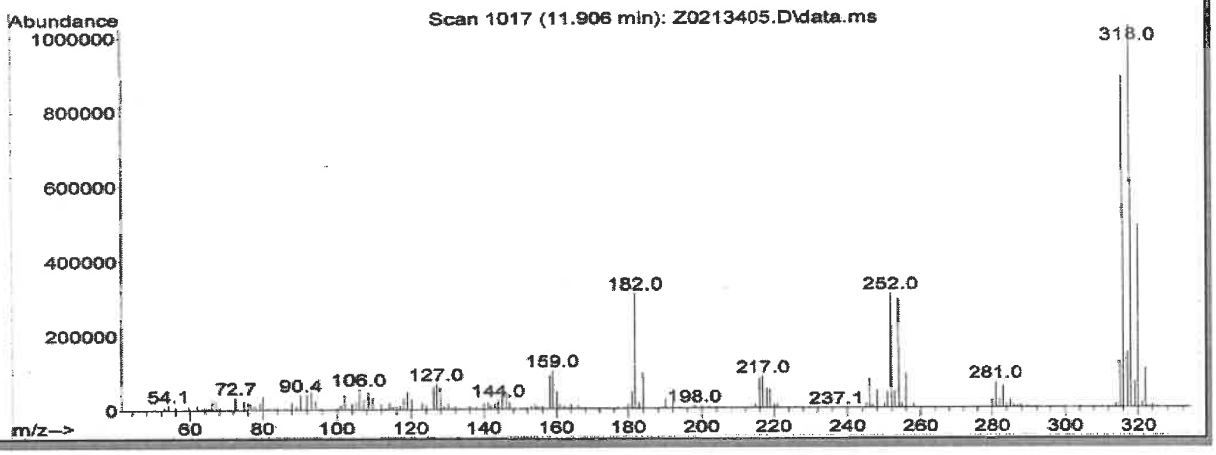

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Reagent

HRDXNIDA_00443

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

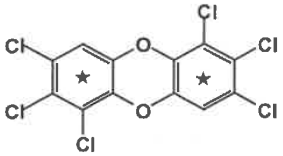

Catalog Number: ED-966
Solution Lot: ER03151801
Expiration Date: March 2028
Solvent: n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

774389

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

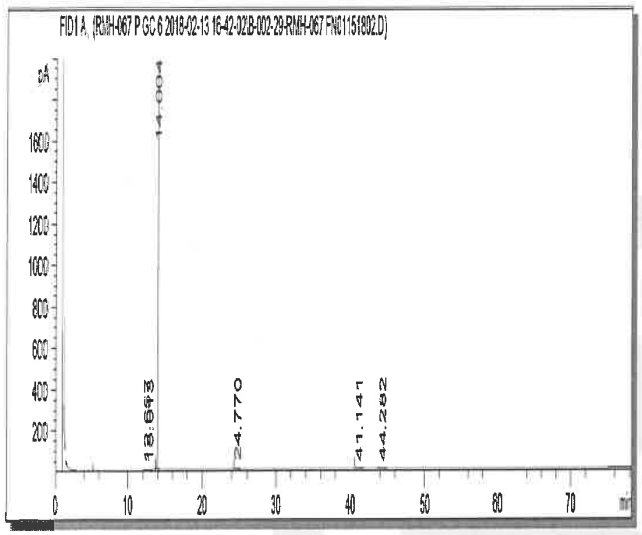

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

```
Compound Name          : 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number             : FN01151802
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Mon Mar 05 10:17:33 2018
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

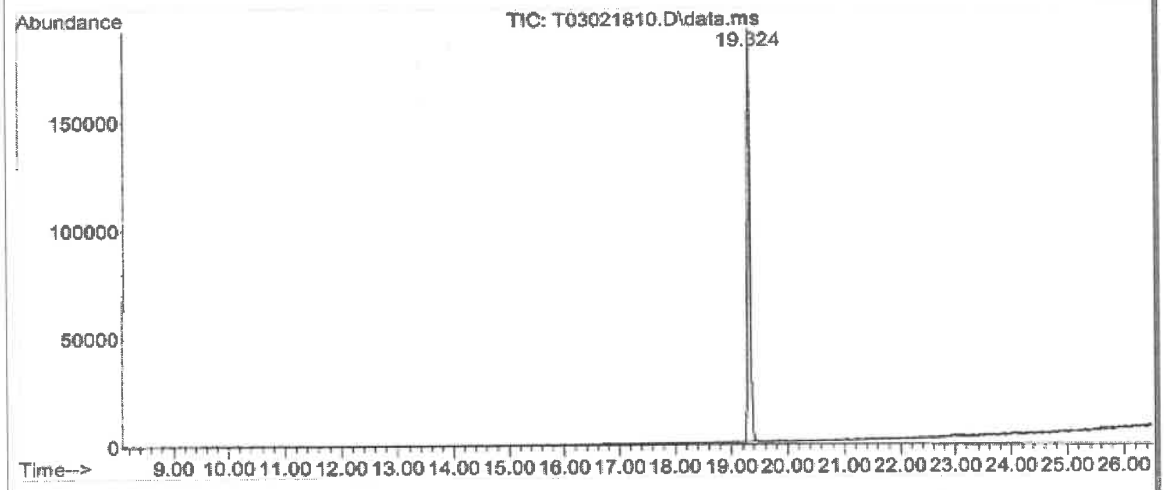

Mass Spectrum

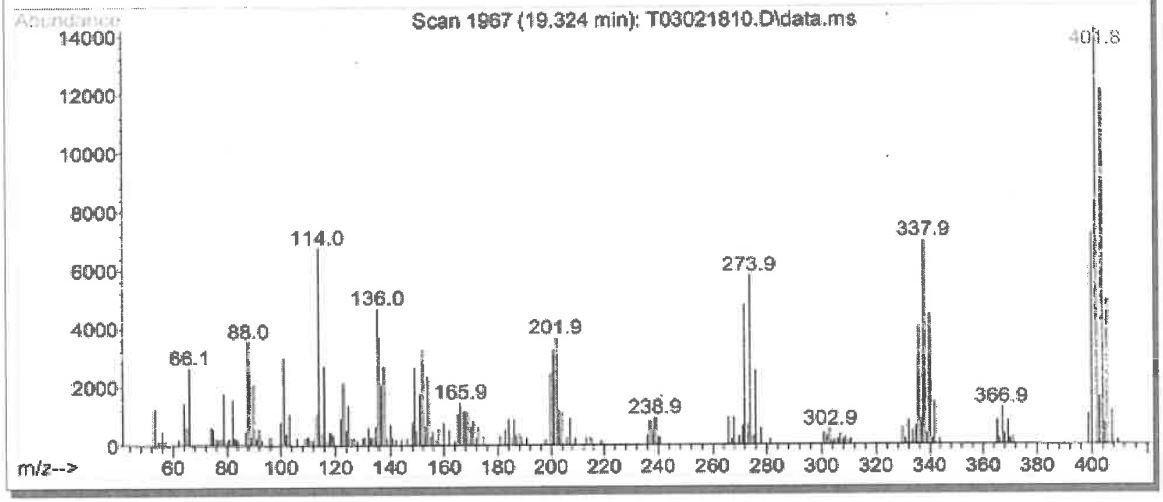

Reagent

HRDXNIDA_00457

r: 1/18/21 SW

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

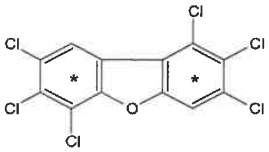

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

774394

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

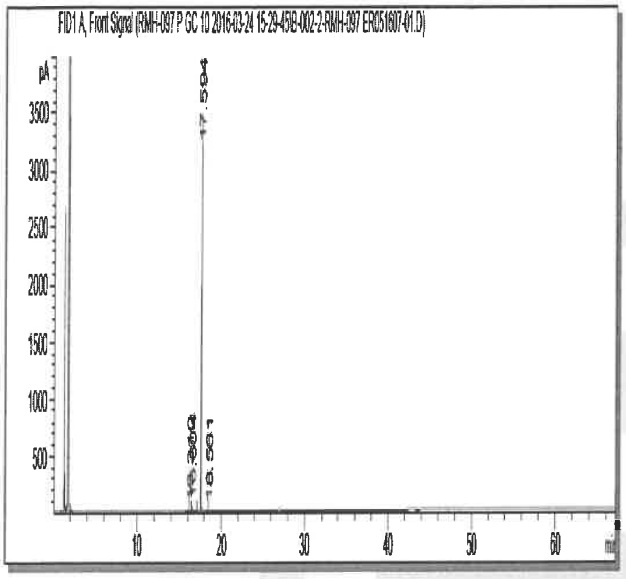

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

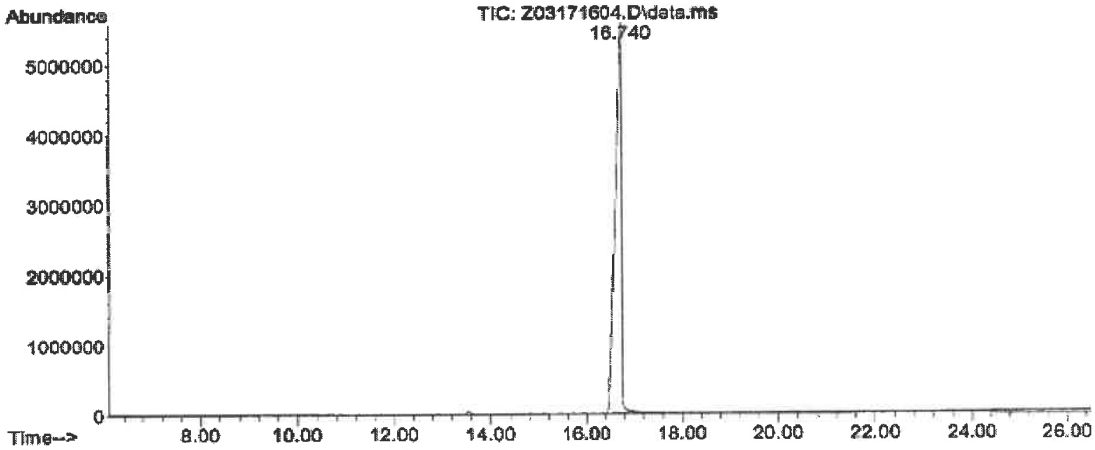

Mass Spectrum

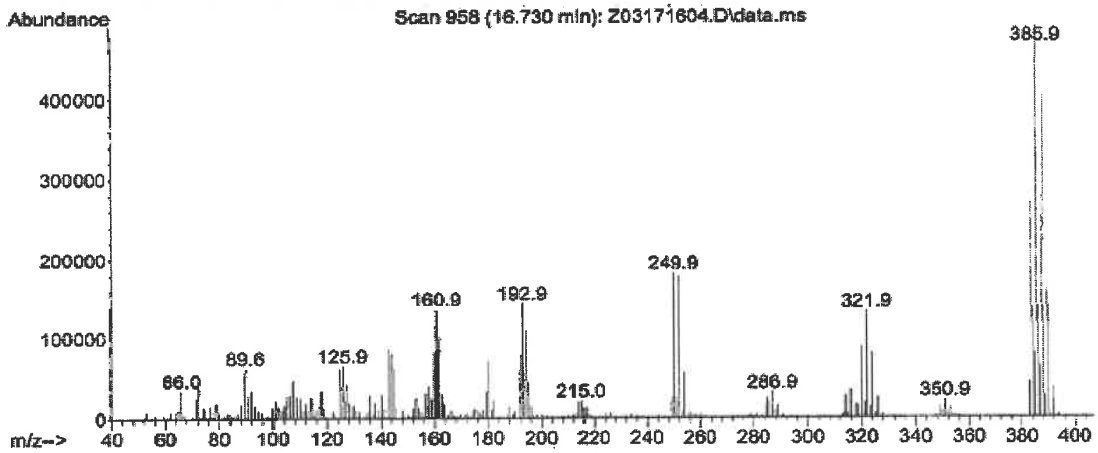

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

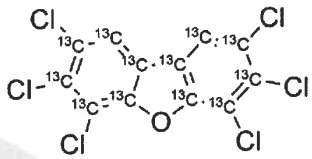

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

774401

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER09051801

Chemical Formula: $^{13}C_{12}H_2Cl_6O$
CAS Number: 116843-05-1
Molecular Weight: 386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

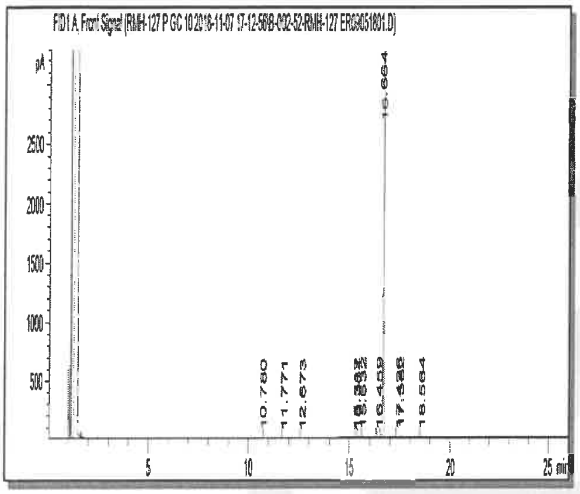

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

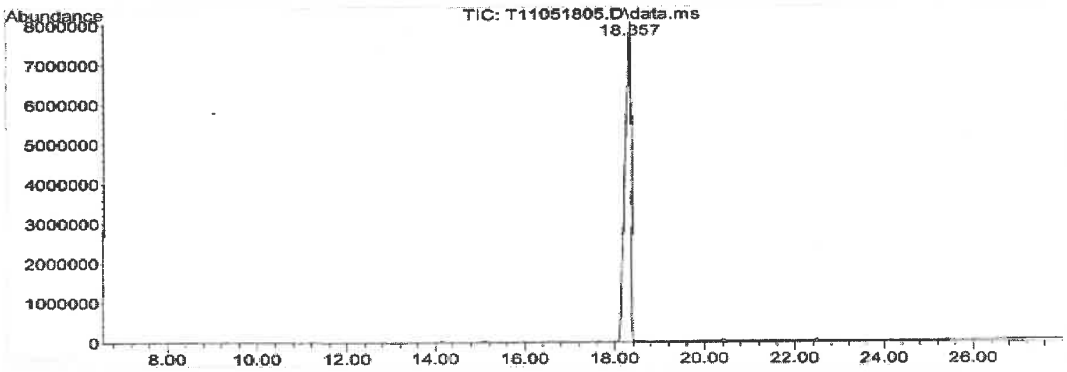

Mass Spectrum

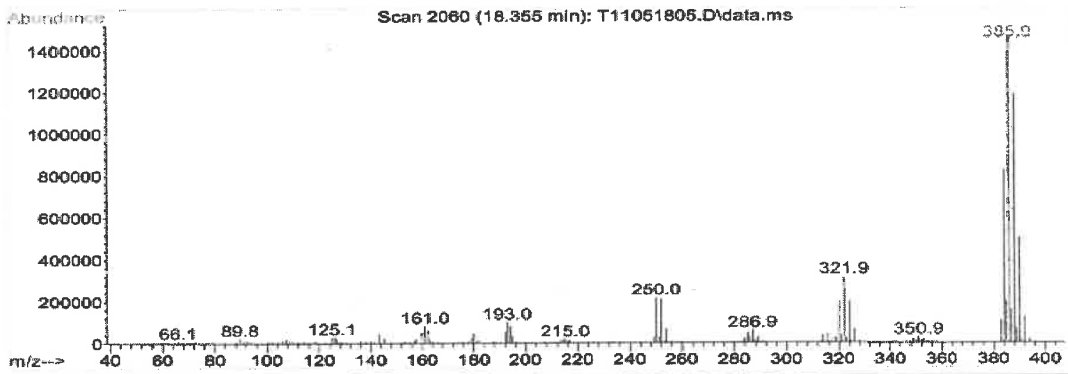

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

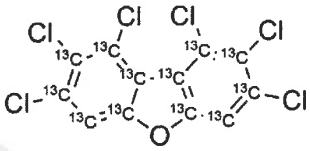

Catalog Number: EF-986
Solution Lot: ER01062016
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

774408

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

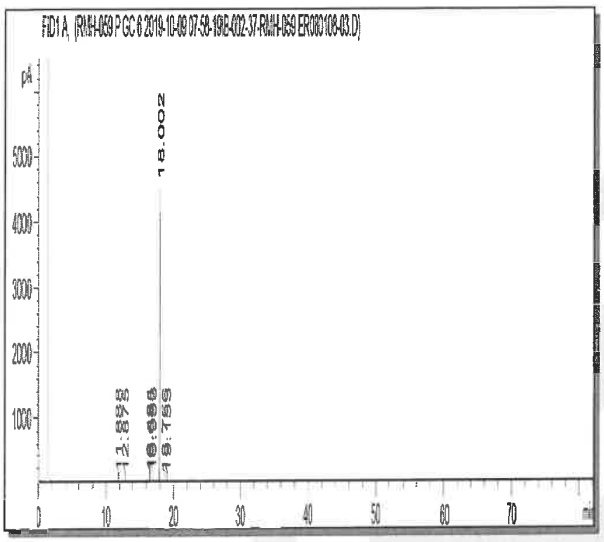

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

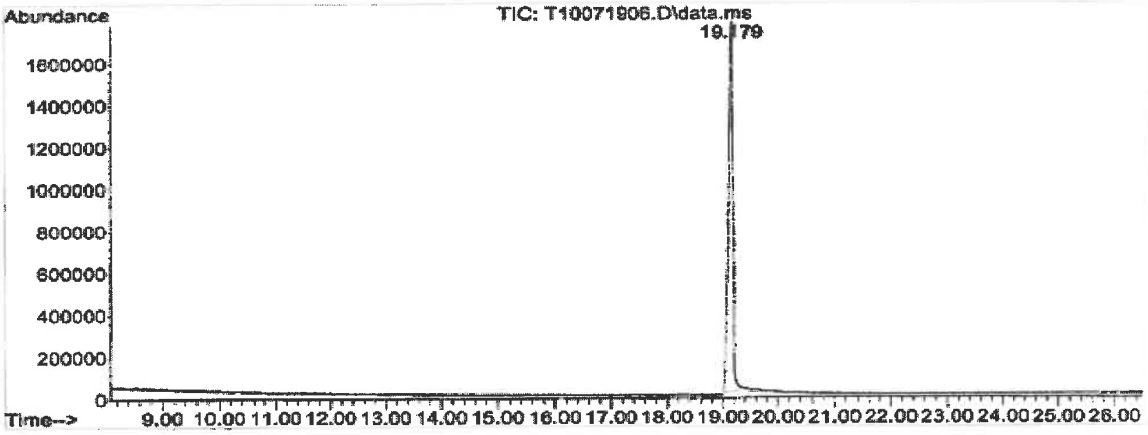

Mass Spectrum

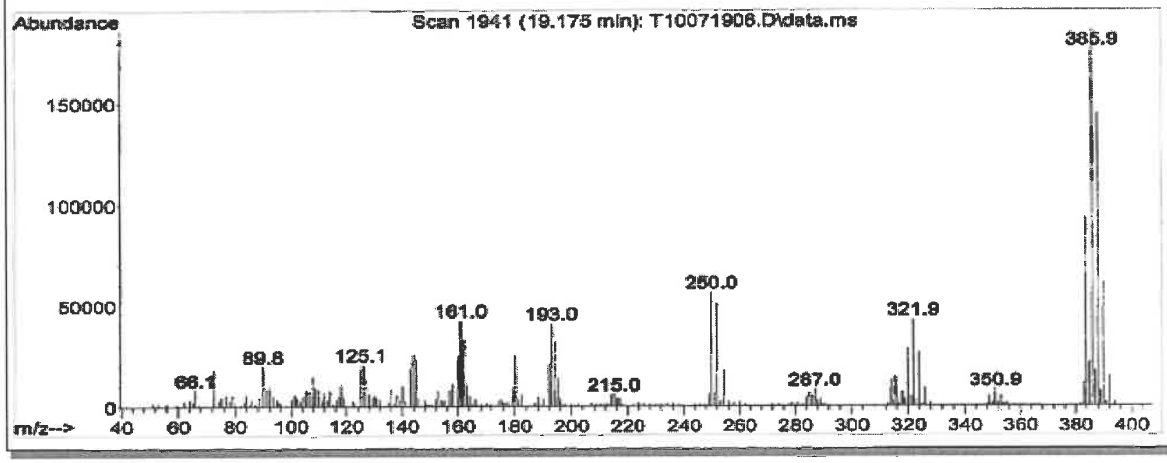

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

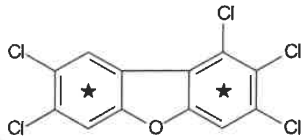

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O$
Compound Lot:	ER090110-01	**CAS Number:**	109719-77-9
		Molecular Weight:	352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

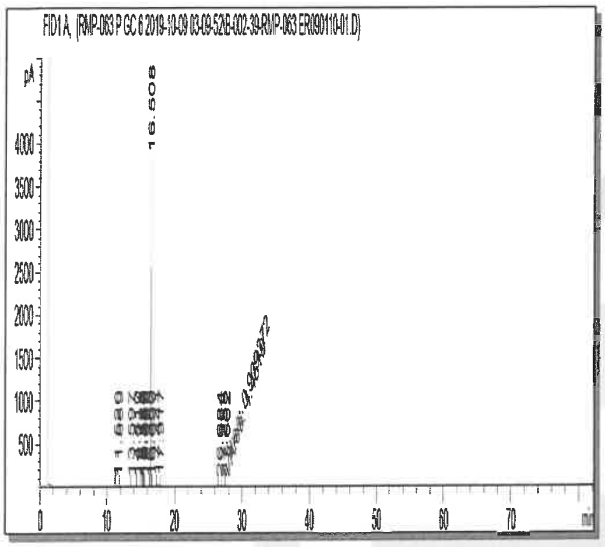

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Sample Name: ER090110-01
Acquired: October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

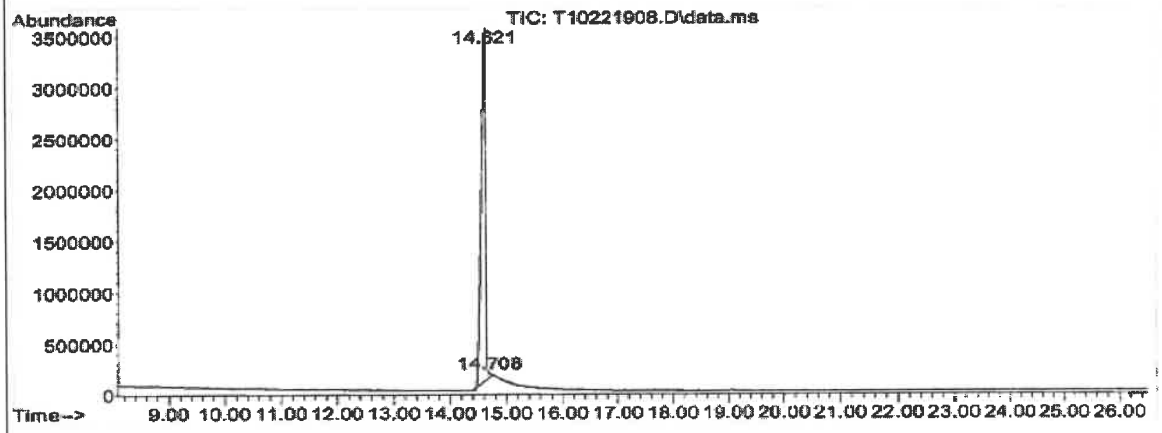

Mass Spectrum

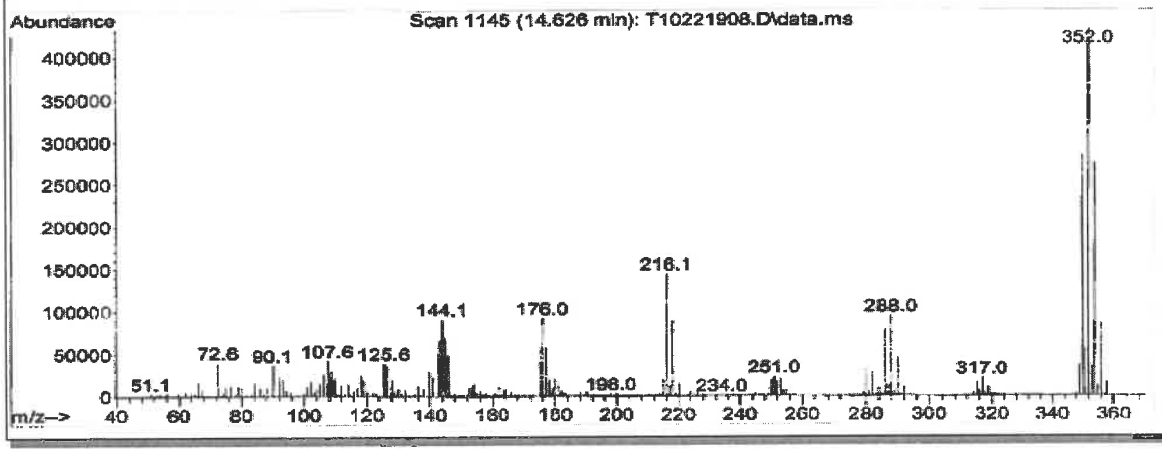

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

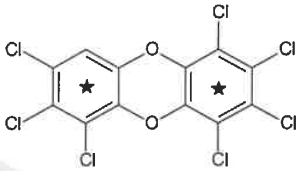

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

774422

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 0.999

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER100110-01

Chemical Formula: $^{13}C_{12}HCl_7O_2$
CAS Number: 109719-83-7
Molecular Weight: 437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

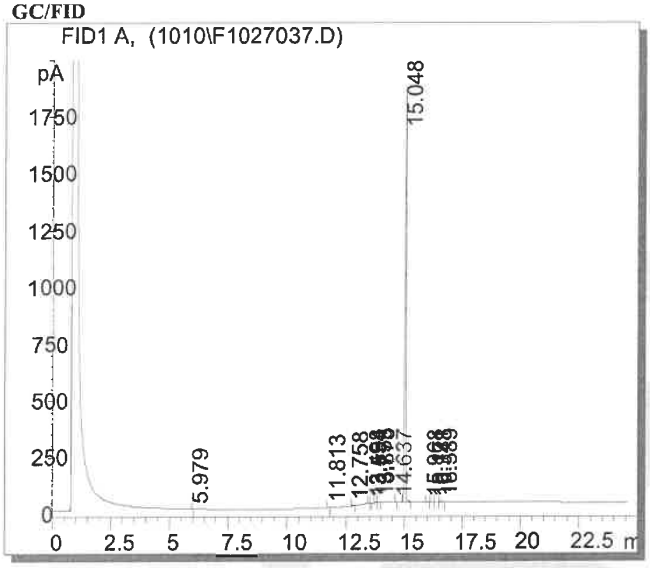

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

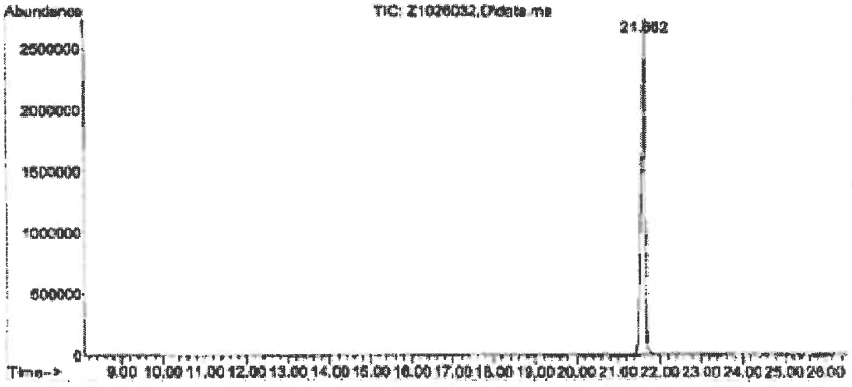

Mass Spectrum

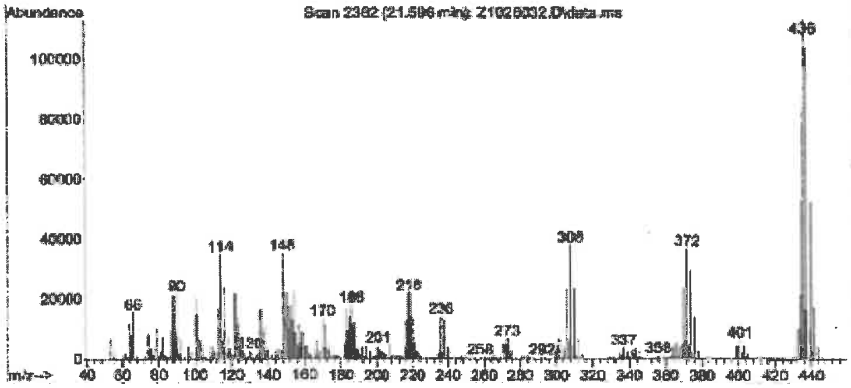

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

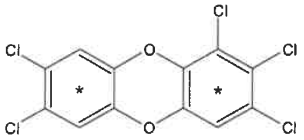

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

774427

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O_2$
Compound Lot:	ER06241403	**CAS Number:**	109719-79-1
		Molecular Weight:	368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

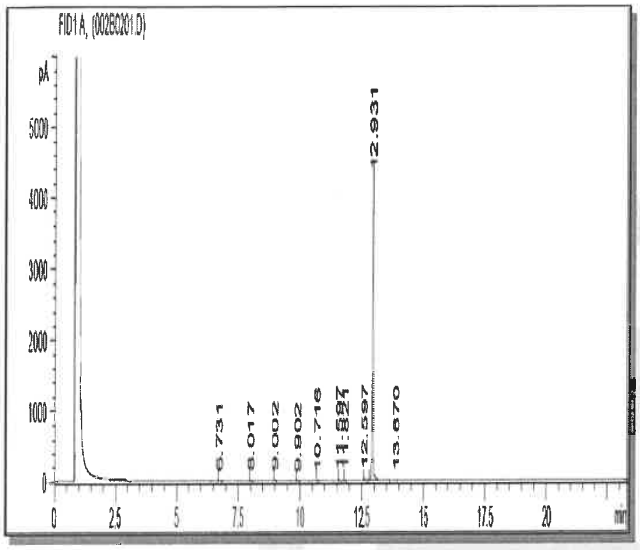

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

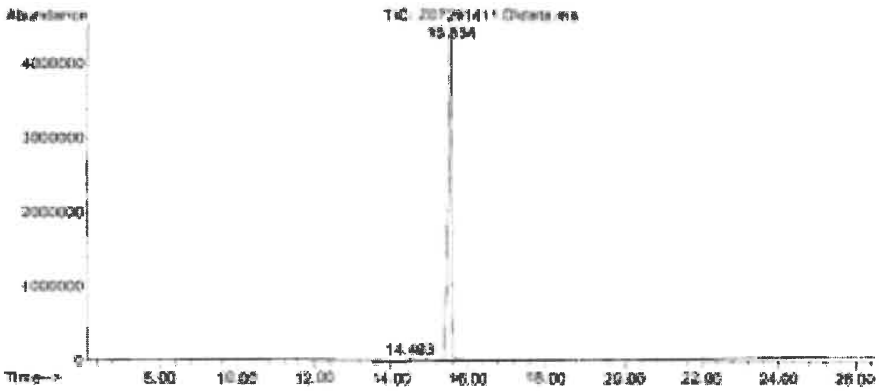

Mass Spectrum

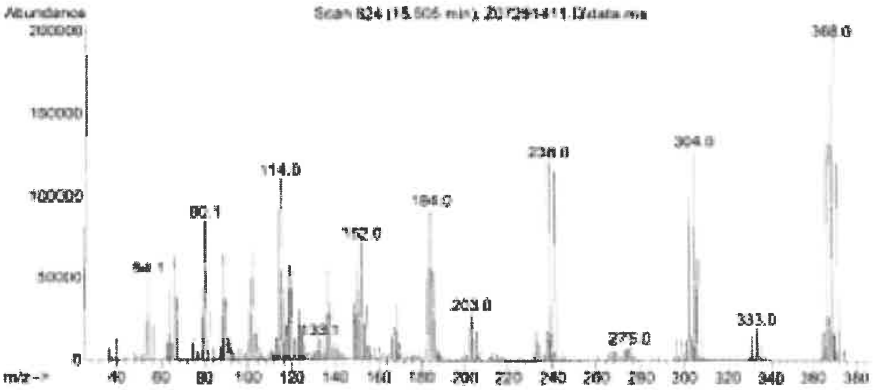

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

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Certificate of Analysis

ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

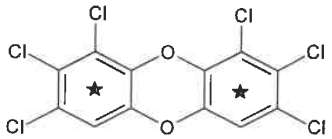

Catalog Number: ED-996
Solution Lot: ER08221601
Expiration Date: September 2026
Solvent: n-Nonane:Toluene (80:20)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

774434

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

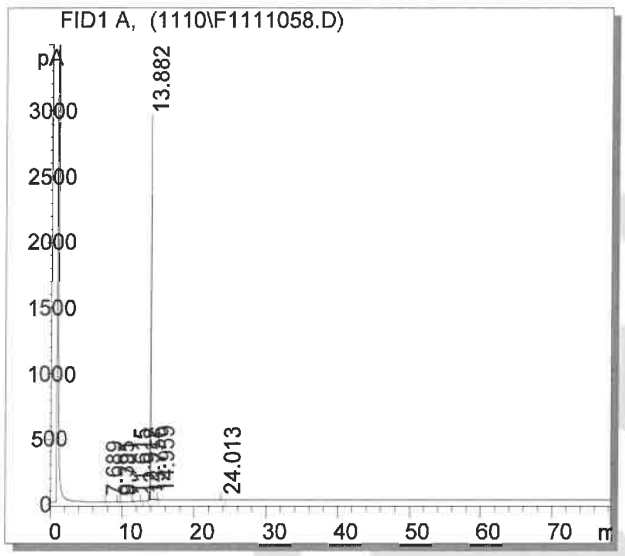

Column:	DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1110\F1111058.D
Instrument:	GC#6
Sample Name:	ER110510-01
Acquired:	November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

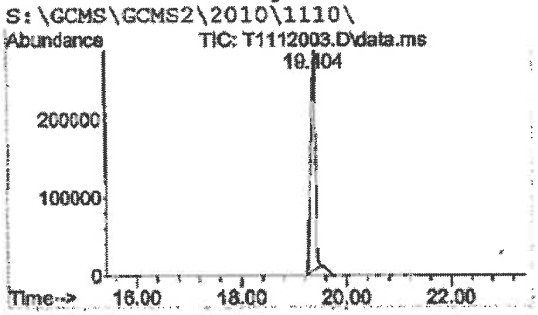

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

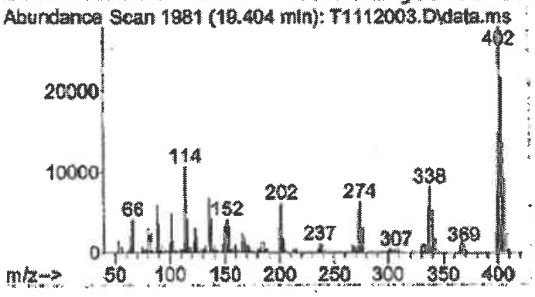

SIM Ion Chromatogram 1

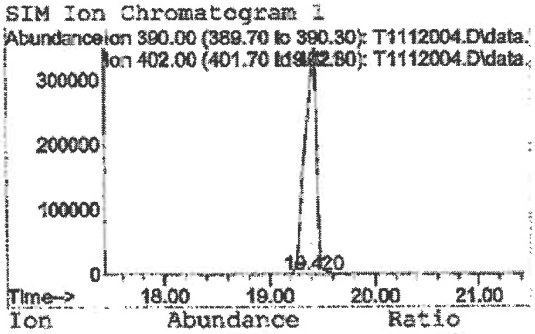

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

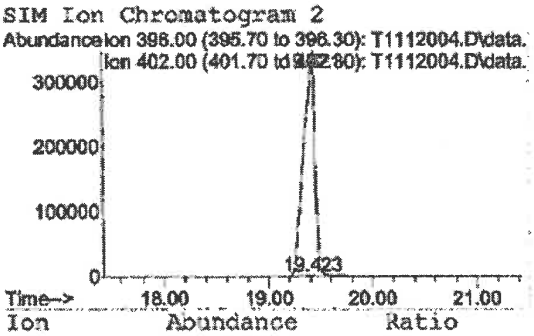

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

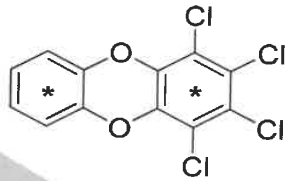

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 13194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

774441

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

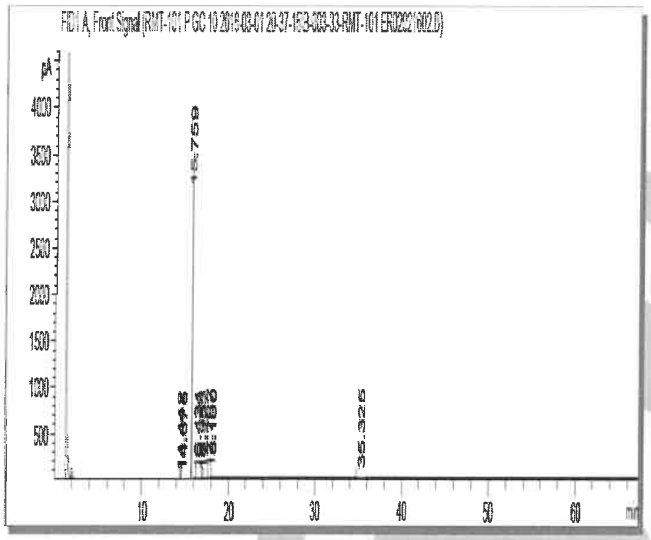

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

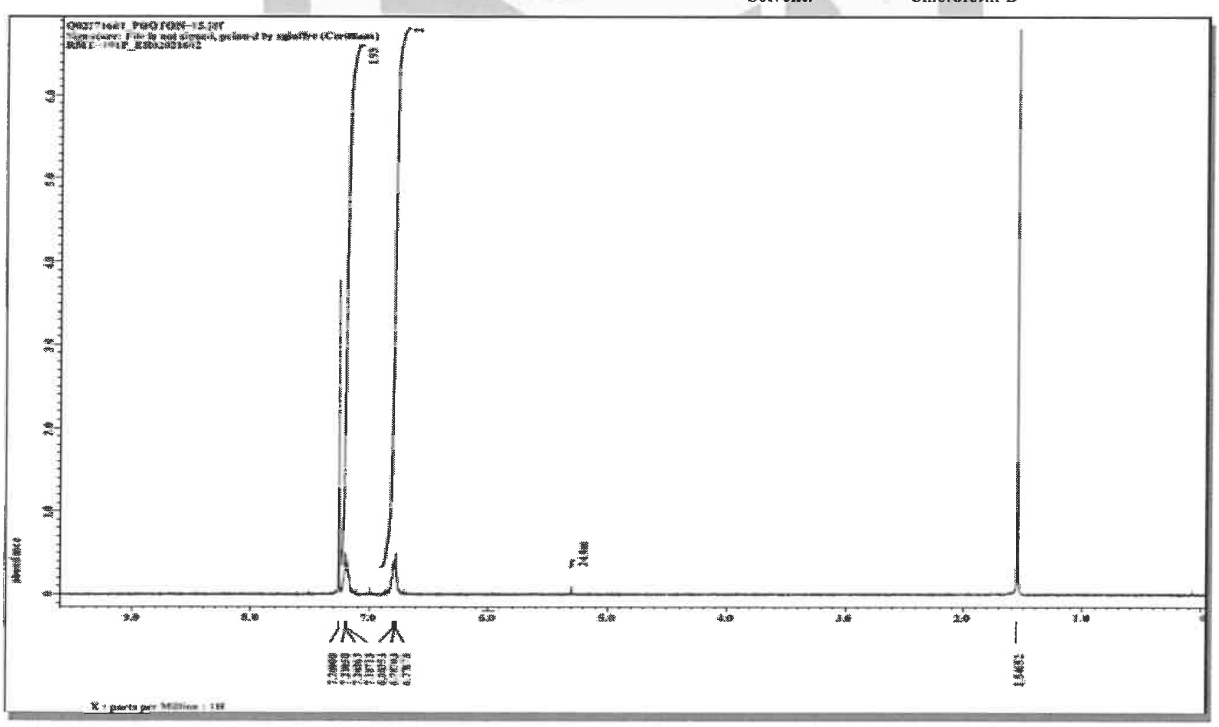

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER02021602
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Fri Feb 19 12:55:12 2016
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

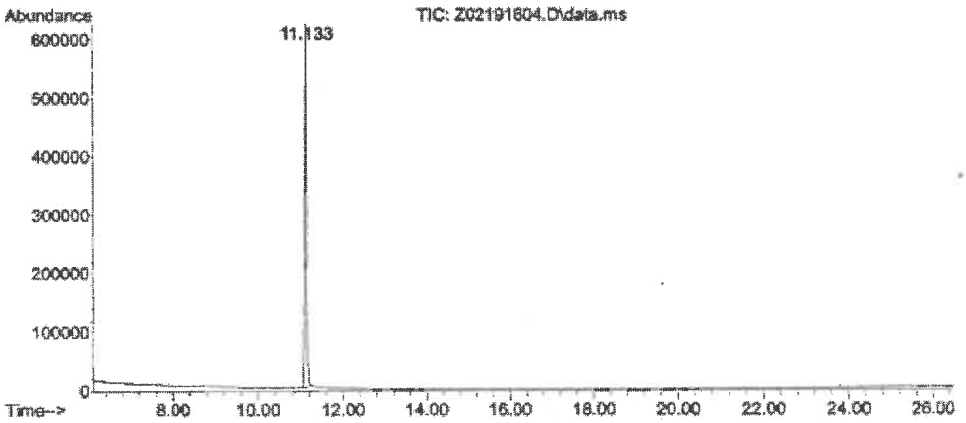

Mass Spectrum

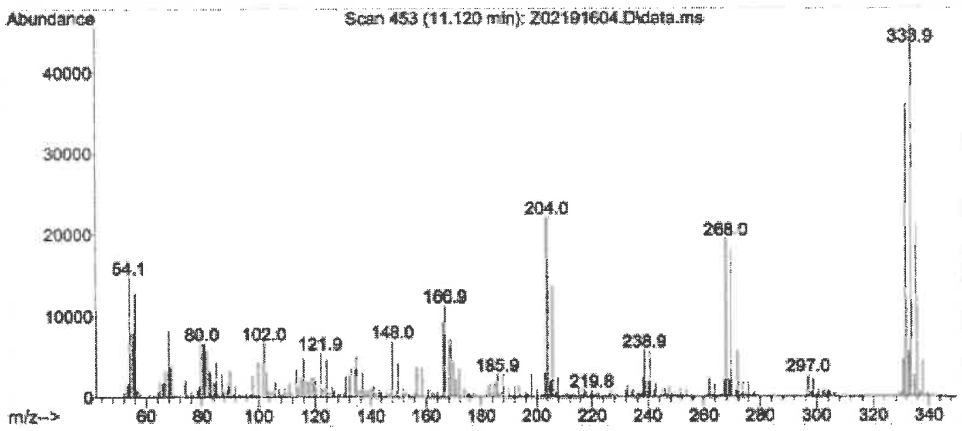

Reagent

HRDXNTA_00108

(2) P: 4ba/19 SKJ

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

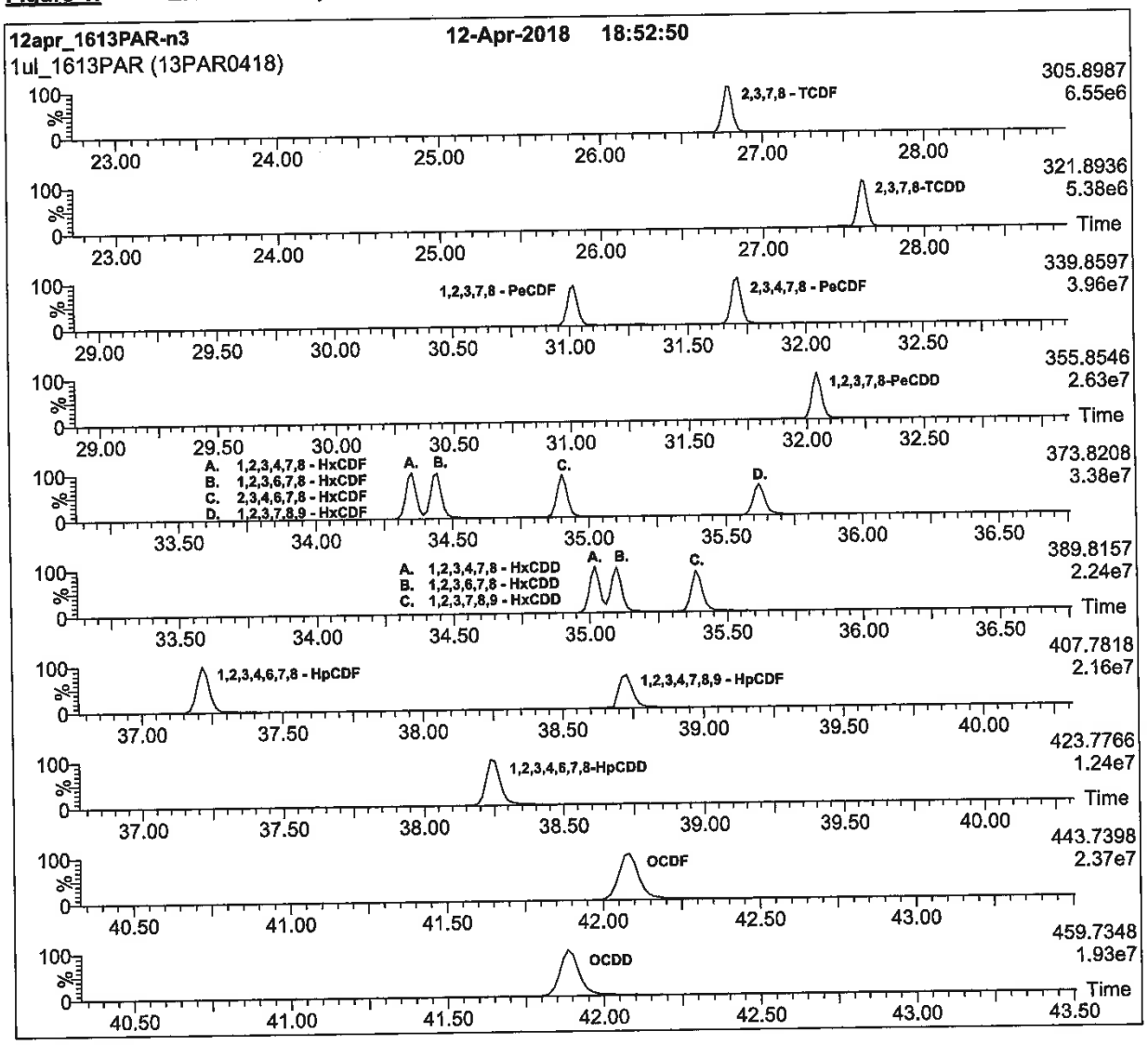

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

(3)

P: 4/3dic SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

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Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number: EDF-7999-10X
Solution Lot: ER02241602
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

774451

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/ECD
Column:	DB-5ms, 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min, 200°C to 300°C at 4°C/min hold 3 min
Injector Temp:	Cool on-column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

	Verified Concentration		%RSD - Homogeneity	
Compound	**ng/mL**	**Acceptance Criteria**	**%**	**Acceptance Criteria**
2,3,7,8-TeCDD	397.1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386.6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0.8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0.7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

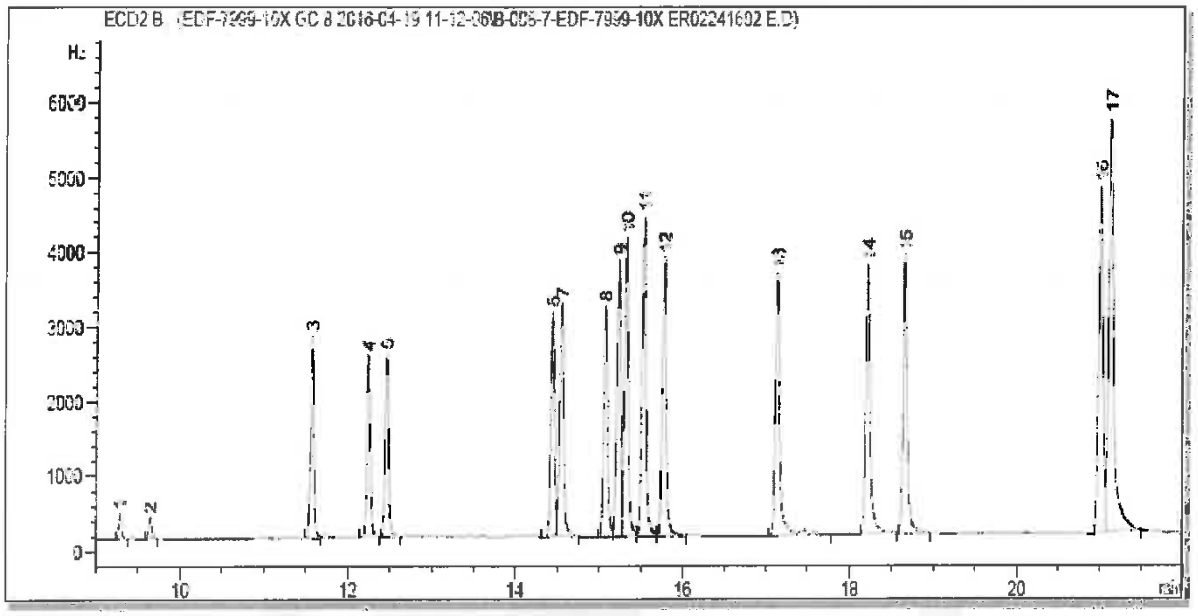

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

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Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Method 1613 PAR Stock Solution

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

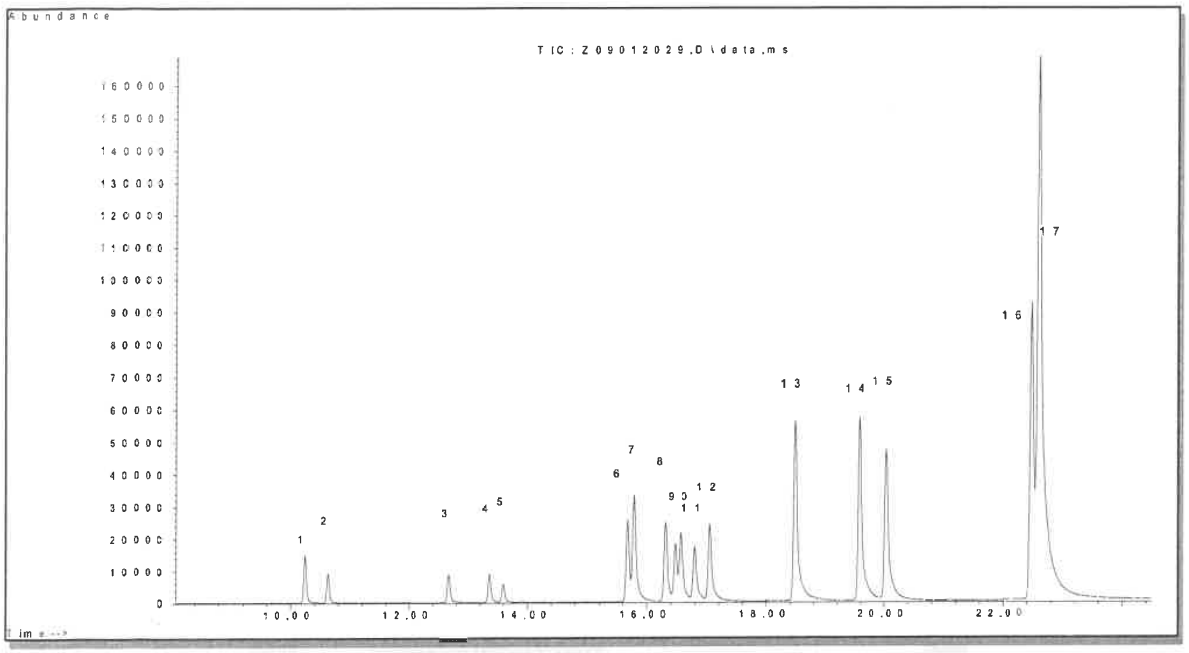

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	37TCDD #	TCDF #
11215702-072221-SS -SJSB080 (6-8) RA	320-76769-4 RA	45	35
	MB 320-513879/1-A	50	37
	320-76888-A-1-B MS RA	56	29
	320-76888-A-1-C MSD RA	61	23 *5-

	QC LIMITS
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
TCDF = 13C-2,3,7,8-TCDF	24-169

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-513585/2-A	53	57	73	57	63	63	57	51
	LCS 320-513586/2-A	54	54	69	56	63	59	67	58
	LCS 320-513879/2-A	36	34	47	31	36	34	42	37

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-513585/2-A	52	59	54	52	59	62	68	71
	LCS 320-513586/2-A	54	60	54	53	63	67	72	71
	LCS 320-513879/2-A	33	37	35	32	35	36	40	39

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-072221-SS -SJSB080 (0-2) RA	320-76769-1 RA	63	117
11215702-072221-SS -SJSB080 (2-4) RA	320-76769-2 RA	80	106
11215702-072221-SS -SJSB080 (4-6) RA	320-76769-3 RA	67	94
11215702-072221-SS -SJSB080 (8-10) RA	320-76769-5 RA	58	71
11215702-072221-SS -SJSB080 (10-12) RA	320-76769-6 RA	62	73
11215702-072221-SS -SJSB080 (12-14) RA	320-76769-7 RA	57	70
11215702-072221-SS -SJSB080 (14-16) RA	320-76769-8 RA	56	74
11215702-072221-SS -SJSB074 (0-2) RA	320-76769-13 RA	64	94
11215702-072221-SS -SJSB074 (2-4) RA	320-76769-14 RA	51	144
11215702-072221-SS -SJSB074 (4-6) RA	320-76769-15 RA	56	114
11215702-072221-SS -SJSB074 (6-8) RA	320-76769-16 RA	51	70
11215702-072221-SS -SJSB074 (8-10) RA	320-76769-17 RA	48	63
11215702-072221-SS -SJSB074 (10-12) RA	320-76769-18 RA	54	64
11215702-072221-SS -SJSB074 (14-16) RA	320-76769-20 RA	48	63
11215702-072221-DU P-4 RA	320-76769-25 RA	43	55
11215702-072221-DU P-5 RA	320-76769-26 RA	59	152
11215702-072221-SS -SJSB076 (0-2) RA	320-76769-27 RA	59	76
11215702-072221-SS -SJSB076 (2-4) RA	320-76769-28 RA	47	129
11215702-072221-SS -SJSB076 (4-6) RA	320-76769-29 RA	44	114
11215702-072221-SS -SJSB076 (6-8) RA	320-76769-30 RA	69	76
11215702-072221-SS -SJSB076 (8-10) RA	320-76769-31 RA	66	75

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-072221-SS -SJSB076 (10-12) RA	320-76769-32 RA	57	77
11215702-072221-SS -SJSB076 (12-14) RA	320-76769-33 RA	57	75
11215702-072221-SS -SJSB076 (14-16) RA	320-76769-34 RA	57	75
11215702-072221-SS -SJSB080 (0-2) MS RA	320-76769-1 MS RA	54	98
11215702-072221-SS -SJSB076 (0-2) MS RA	320-76769-27 MS RA	65	86
11215702-072221-SS -SJSB080 (0-2) MSD RA	320-76769-1 MSD RA	47	96
11215702-072221-SS -SJSB076 (0-2) MSD RA	320-76769-27 MSD RA	70	90

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-072221-SS -SJSB080 (0-2)	320-76769-1	60	72	129	76	86	87	70	61
11215702-072221-SS -SJSB080 (2-4)	320-76769-2	62	65	106	68	75	76	68	59
11215702-072221-SS -SJSB080 (4-6)	320-76769-3	54	56	88	59	65	65	58	51
11215702-072221-SS -SJSB080 (6-8)	320-76769-4	31	31	44	30	34	28	38	33
11215702-072221-SS -SJSB080 (8-10)	320-76769-5	53	57	74	60	66	65	59	53
11215702-072221-SS -SJSB080 (10-12)	320-76769-6	57	62	72	57	62	62	62	59
11215702-072221-SS -SJSB080 (12-14)	320-76769-7	50	56	67	50	55	55	56	52
11215702-072221-SS -SJSB080 (14-16)	320-76769-8	49	54	68	51	56	56	57	53
11215702-072221-SS -SJSB074 (0-2)	320-76769-13	44	54	84	50	53	52	57	50
11215702-072221-SS -SJSB074 (2-4)	320-76769-14	52	68	185	63	71	68	58	51
11215702-072221-SS -SJSB074 (4-6)	320-76769-15	48	52	106	53	67	84	58	52
11215702-072221-SS -SJSB074 (6-8)	320-76769-16	45	51	64	48	52	54	52	49
11215702-072221-SS -SJSB074 (8-10)	320-76769-17	43	48	61	44	48	48	48	45
11215702-072221-SS -SJSB074 (10-12)	320-76769-18	47	52	65	49	54	55	53	50
11215702-072221-SS -SJSB074 (12-14)	320-76769-19	44	49	63	46	51	51	50	46
11215702-072221-SS -SJSB074 (14-16)	320-76769-20	49	54	67	52	56	58	55	51
11215702-072221-DU P-4	320-76769-25	40	44	54	42	47	46	45	42
11215702-072221-DU P-5	320-76769-26	55	63	174	65	71	74	63	54
11215702-072221-SS -SJSB076 (0-2)	320-76769-27	54	52	70	50	52	50	67	58
11215702-072221-SS -SJSB076 (2-4)	320-76769-28	42	53	128	52	57	57	49	43
11215702-072221-SS -SJSB076 (4-6)	320-76769-29	52	55	125	42	54	67	68	56
11215702-072221-SS -SJSB076 (6-8)	320-76769-30	60	61	70	59	64	60	74	63
11215702-072221-SS -SJSB076 (8-10)	320-76769-31	58	62	73	60	65	64	78	71
11215702-072221-SS -SJSB076 (10-12)	320-76769-32	53	56	72	54	59	55	65	56

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-072221-SS -SJSB076 (12-14)	320-76769-33	53	55	71	52	52	51	62	55
11215702-072221-SS -SJSB076 (14-16)	320-76769-34	55	59	76	56	61	59	65	58
	MB 320-513585/1-A	53	57	72	57	63	63	57	52
	MB 320-513586/1-A	57	59	68	61	65	58	74	64
	MB 320-513879/1-A	36	36	46	36	40	35	47	43
11215702-072221-SS -SJSB080 (0-2) MS	320-76769-1 MS	54	65	124	68	75	76	64	55
11215702-072221-SS -SJSB076 (0-2) MS	320-76769-27 MS	56	53	69	53	53	51	65	58
	320-76888-A-1-B MS	41	44	90	38	46	39 q	51	41
11215702-072221-SS -SJSB080 (0-2) MSD	320-76769-1 MSD	51	61	119	64	70	72	61	53
11215702-072221-SS -SJSB076 (0-2) MSD	320-76769-27 MSD	61	60	77	52	60	61	69	61
	320-76888-A-1-C MSD	37	40	123	36	40	38	44	37

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072221-SS -SJSB080 (0-2)	320-76769-1	62	76	63	63	68	73	79	90
11215702-072221-SS -SJSB080 (2-4)	320-76769-2	60	70	63	62	68	73	80	86
11215702-072221-SS -SJSB080 (4-6)	320-76769-3	54	61	54	54	59	66	71	78
11215702-072221-SS -SJSB080 (6-8)	320-76769-4	31	39	34	30	35	39	40	37
11215702-072221-SS -SJSB080 (8-10)	320-76769-5	54	64	56	55	60	63	69	75
11215702-072221-SS -SJSB080 (10-12)	320-76769-6	58	67	64	58	60	66	69	71
11215702-072221-SS -SJSB080 (12-14)	320-76769-7	52	60	56	52	52	57	60	61
11215702-072221-SS -SJSB080 (14-16)	320-76769-8	51	60	56	51	51	57	59	59
11215702-072221-SS -SJSB074 (0-2)	320-76769-13	50	60	54	50	54	59	62	68
11215702-072221-SS -SJSB074 (2-4)	320-76769-14	54	62	54	55	61	66	72	86
11215702-072221-SS -SJSB074 (4-6)	320-76769-15	45	59	57	55	45	52	52	58
11215702-072221-SS -SJSB074 (6-8)	320-76769-16	47	58	51	47	41	47	49	50
11215702-072221-SS -SJSB074 (8-10)	320-76769-17	43	49	49	44	44	48	50	52
11215702-072221-SS -SJSB074 (10-12)	320-76769-18	49	55	54	49	51	55	59	60
11215702-072221-SS -SJSB074 (12-14)	320-76769-19	45	51	49	45	49	51	55	55
11215702-072221-SS -SJSB074 (14-16)	320-76769-20	50	58	52	49	54	57	61	62
11215702-072221-DU P-4	320-76769-25	42	48	43	41	47	49	52	55
11215702-072221-DU P-5	320-76769-26	56	68	57	56	60	66	71	79
11215702-072221-SS -SJSB076 (0-2)	320-76769-27	54	58	54	53	57	58	63	64
11215702-072221-SS -SJSB076 (2-4)	320-76769-28	44	53	45	46	48	53	57	61
11215702-072221-SS -SJSB076 (4-6)	320-76769-29	53	60	54	61	53	61	59	64
11215702-072221-SS -SJSB076 (6-8)	320-76769-30	61	68	64	62	69	74	77	74
11215702-072221-SS -SJSB076 (8-10)	320-76769-31	66	70	63	60	51	56	61	62
11215702-072221-SS -SJSB076 (10-12)	320-76769-32	56	61	54	56	60	62	73	71

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072221-SS -SJSB076 (12-14)	320-76769-33	53	56	52	53	58	65	72	65
11215702-072221-SS -SJSB076 (14-16)	320-76769-34	59	64	59	58	54	59	62	60
	MB 320-513585/1-A	52	58	56	52	59	61	65	72
	MB 320-513586/1-A	61	65	60	61	65	72	78	76
	MB 320-513879/1-A	38	40	39	39	41	41	42	36
11215702-072221-SS -SJSB080 (0-2) MS	320-76769-1 MS	57	68	57	58	61	66	72	79
11215702-072221-SS -SJSB076 (0-2) MS	320-76769-27 MS	57	58	56	53	60	61	65	63
	320-76888-A-1-B MS	35	41	42	38	39	41	44	41
11215702-072221-SS -SJSB080 (0-2) MSD	320-76769-1 MSD	55	63	56	56	60	64	71	77
11215702-072221-SS -SJSB076 (0-2) MSD	320-76769-27 MSD	63	72	63	55	60	60	57	53
	320-76888-A-1-C MSD	34	37	34 q	35	39	38	44	37 q

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 13AU2110D5_45.d

Lab ID: LCS 320-513585/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	19.8	99	67-158	
2,3,7,8-TCDF	20.0	20.7	104	75-158	
1,2,3,7,8-PeCDD	100	105	105	70-142	
1,2,3,7,8-PeCDF	100	105	105	80-134	
2,3,4,7,8-PeCDF	100	97.0	97	68-160	
1,2,3,4,7,8-HxCDD	100	95.8	96	70-164	
1,2,3,6,7,8-HxCDD	100	107	107	76-134	
1,2,3,7,8,9-HxCDD	100	107	107	64-162	
1,2,3,4,7,8-HxCDF	100	92.9	93	72-134	
1,2,3,6,7,8-HxCDF	100	106	106	84-130	
1,2,3,7,8,9-HxCDF	100	103	103	78-130	
2,3,4,6,7,8-HxCDF	100	104	104	70-156	
1,2,3,4,6,7,8-HpCDD	100	107	107	70-140	
1,2,3,4,6,7,8-HpCDF	100	106	106	82-122	
1,2,3,4,7,8,9-HpCDF	100	97.7	98	78-138	
OCDD	200	206	103	78-144	
OCDF	200	200	100	63-170	
13C-2,3,7,8-TCDD	200	115	57	20-175	
13C-2,3,7,8-TCDF	200	106	53	22-152	
13C-1,2,3,7,8-PeCDD	200	127	63	21-227	
13C-1,2,3,7,8-PeCDF	200	115	57	21-192	
13C-2,3,4,7,8-PeCDF	200	126	63	13-328	
13C-1,2,3,4,7,8-HxCDD	200	117	59	21-193	
13C-1,2,3,6,7,8-HxCDD	200	108	54	25-163	
13C-1,2,3,4,7,8-HxCDF	200	114	57	19-202	
13C-1,2,3,6,7,8-HxCDF	200	102	51	21-159	
13C-1,2,3,7,8,9-HxCDF	200	104	52	17-205	
13C-2,3,4,6,7,8-HxCDF	200	104	52	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	125	62	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	118	59	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	136	68	20-186	
13C-OCDD	400	285	71	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_6.d

Lab ID: LCS 320-513586/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	21.3	107	67-158	
2,3,7,8-TCDF	20.0	21.8	109	75-158	
1,2,3,7,8-PeCDD	100	112	112	70-142	
1,2,3,7,8-PeCDF	100	114	114	80-134	
2,3,4,7,8-PeCDF	100	105	105	68-160	
1,2,3,4,7,8-HxCDD	100	101	101	70-164	
1,2,3,6,7,8-HxCDD	100	111	111	76-134	
1,2,3,7,8,9-HxCDD	100	110	110	64-162	
1,2,3,4,7,8-HxCDF	100	107	107	72-134	
1,2,3,6,7,8-HxCDF	100	112	112	84-130	
1,2,3,7,8,9-HxCDF	100	116	116	78-130	
2,3,4,6,7,8-HxCDF	100	117	117	70-156	
1,2,3,4,6,7,8-HpCDD	100	108	108	70-140	
1,2,3,4,6,7,8-HpCDF	100	112	112	82-122	
1,2,3,4,7,8,9-HpCDF	100	105	105	78-138	
OCDD	200	228	114	78-144	
OCDF	200	248	124	63-170	
13C-2,3,7,8-TCDD	200	109	54	20-175	
13C-2,3,7,8-TCDF	200	108	54	22-152	
13C-1,2,3,7,8-PeCDD	200	117	59	21-227	
13C-1,2,3,7,8-PeCDF	200	113	56	21-192	
13C-2,3,4,7,8-PeCDF	200	127	63	13-328	
13C-1,2,3,4,7,8-HxCDD	200	121	60	21-193	
13C-1,2,3,6,7,8-HxCDD	200	108	54	25-163	
13C-1,2,3,4,7,8-HxCDF	200	133	67	19-202	
13C-1,2,3,6,7,8-HxCDF	200	117	58	21-159	
13C-1,2,3,7,8,9-HxCDF	200	107	53	17-205	
13C-2,3,4,6,7,8-HxCDF	200	107	54	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	133	67	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	126	63	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	143	72	20-186	
13C-OCDD	400	283	71	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_51.d

Lab ID: LCS 320-513879/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	22.3	111	67-158	
2,3,7,8-TCDF	20.0	23.1	115	75-158	
1,2,3,7,8-PeCDD	100	113	113	70-142	
1,2,3,7,8-PeCDF	100	117	117	80-134	
2,3,4,7,8-PeCDF	100	109	109	68-160	
1,2,3,4,7,8-HxCDD	100	101	101	70-164	
1,2,3,6,7,8-HxCDD	100	112	112	76-134	
1,2,3,7,8,9-HxCDD	100	109	109	64-162	
1,2,3,4,7,8-HxCDF	100	114	114	72-134	
1,2,3,6,7,8-HxCDF	100	120	120	84-130	
1,2,3,7,8,9-HxCDF	100	118	118	78-130	
2,3,4,6,7,8-HxCDF	100	121	121	70-156	
1,2,3,4,6,7,8-HpCDD	100	111	111	70-140	
1,2,3,4,6,7,8-HpCDF	100	118	118	82-122	
1,2,3,4,7,8,9-HpCDF	100	108	108	78-138	
OCDD	200	232	116	78-144	
OCDF	200	243	122	63-170	
13C-2,3,7,8-TCDD	200	68.6	34	20-175	
13C-2,3,7,8-TCDF	200	71.2	36	22-152	
13C-1,2,3,7,8-PeCDD	200	68.3	34	21-227	
13C-1,2,3,7,8-PeCDF	200	61.5	31	21-192	
13C-2,3,4,7,8-PeCDF	200	72.0	36	13-328	
13C-1,2,3,4,7,8-HxCDD	200	73.9	37	21-193	
13C-1,2,3,6,7,8-HxCDD	200	69.3	35	25-163	
13C-1,2,3,4,7,8-HxCDF	200	83.0	42	19-202	
13C-1,2,3,6,7,8-HxCDF	200	74.3	37	21-159	
13C-1,2,3,7,8,9-HxCDF	200	65.0	32	17-205	
13C-2,3,4,6,7,8-HxCDF	200	66.5	33	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	72.5	36	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	70.5	35	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	80.3	40	20-186	
13C-OCDD	400	155	39	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 13AU2110D5_48.d

Lab ID: 320-76769-1 MS Client ID: 11215702-072221-SS-SJSB080 (0-2

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	34.1	17000	18000	1825	67-158	E 4 G
1,2,3,7,8-PeCDD	170	140	337	113	70-142	
1,2,3,7,8-PeCDF	170	1900	2170	129	80-134	4 G
2,3,4,7,8-PeCDF	170	1000	1200	117	68-160	4 G
1,2,3,4,7,8-HxCDD	170	3.0 J	170	98	70-164	
1,2,3,6,7,8-HxCDD	170	14	199	109	76-134	
1,2,3,7,8,9-HxCDD	170	6.3 J	178	101	64-162	
1,2,3,4,7,8-HxCDF	170	3100	3560	294	72-134	E 4 G
1,2,3,6,7,8-HxCDF	170	840	1100	154	84-130	4 G
1,2,3,7,8,9-HxCDF	170	45	234	111	78-130	G
2,3,4,6,7,8-HxCDF	170	92	276	108	70-156	G
1,2,3,4,6,7,8-HpCDD	170	530	748	126	70-140	
1,2,3,4,6,7,8-HpCDF	170	990	1310	187	82-122	4
1,2,3,4,7,8,9-HpCDF	170	300	518	128	78-138	G
OCDD	341	7000	7670	190	78-144	E 4
OCDF	341	370	781	119	63-170	
13C-2,3,7,8-TCDD	341	240	221	65	25-164	
13C-2,3,7,8-TCDF	341	190	183	54	24-169	
13C-1,2,3,7,8-PeCDD	341	290	261	76	25-181	
13C-1,2,3,7,8-PeCDF	341	250	232	68	24-185	
13C-2,3,4,7,8-PeCDF	341	280	255	75	21-178	
13C-1,2,3,4,7,8-HxCDD	341	250	230	68	32-141	
13C-1,2,3,6,7,8-HxCDD	341	210	195	57	28-130	
13C-1,2,3,4,7,8-HxCDF	341	230	216	64	26-152	
13C-1,2,3,6,7,8-HxCDF	341	200	187	55	26-123	
13C-1,2,3,7,8,9-HxCDF	341	210	196	58	29-147	
13C-2,3,4,6,7,8-HxCDF	341	200	193	57	28-136	
13C-1,2,3,4,6,7,8-HpCDD	341	240	226	66	23-140	
13C-1,2,3,4,6,7,8-HpCDF	341	220	209	61	28-143	
13C-1,2,3,4,7,8,9-HpCDF	341	260	246	72	26-138	
13C-OCDD	681	590	539	79	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 23AU2111D2_008.d

Lab ID: 320-76769-1 MS RA Client ID: 11215702-072221-SS-SJSB080 (0-2

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	34.1	47000	43300	-11327	75-158	E 4 G
13C-2,3,7,8-TCDF	341	210	184	54	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_41.d

Lab ID: 320-76769-27 MS Client ID: 11215702-072221-SS-SJSB076 (0-2

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	26.4	2100	2320	871	67-158	E G 4
1,2,3,7,8-PeCDD	132	20	169	112	70-142	
1,2,3,7,8-PeCDF	132	310	478	127	80-134	
2,3,4,7,8-PeCDF	132	160	321	123	68-160	
1,2,3,4,7,8-HxCDD	132	0.96 J	128	97	70-164	
1,2,3,6,7,8-HxCDD	132	1.8 J	154	115	76-134	
1,2,3,7,8,9-HxCDD	132	2.0 J	150	112	64-162	
1,2,3,4,7,8-HxCDF	132	500	639	104	72-134	
1,2,3,6,7,8-HxCDF	132	130	277	112	84-130	
1,2,3,7,8,9-HxCDF	132	8.1	158	114	78-130	
2,3,4,6,7,8-HxCDF	132	16	172	118	70-156	
1,2,3,4,6,7,8-HpCDD	132	51	796	564	70-140	F1
1,2,3,4,6,7,8-HpCDF	132	150	291	110	82-122	
1,2,3,4,7,8,9-HpCDF	132	46	179	101	78-138	
OCDD	264	1200	12800	4403	78-144	E 4
OCDF	264	72	415	130	63-170	
13C-2,3,7,8-TCDD	264	130	141	53	25-164	
13C-2,3,7,8-TCDF	264	130	149	56	24-169	
13C-1,2,3,7,8-PeCDD	264	120	134	51	25-181	
13C-1,2,3,7,8-PeCDF	264	120	139	53	24-185	
13C-2,3,4,7,8-PeCDF	264	130	139	53	21-178	
13C-1,2,3,4,7,8-HxCDD	264	140	154	58	32-141	
13C-1,2,3,6,7,8-HxCDD	264	130	147	56	28-130	
13C-1,2,3,4,7,8-HxCDF	264	170	172	65	26-152	
13C-1,2,3,6,7,8-HxCDF	264	140	154	58	26-123	
13C-1,2,3,7,8,9-HxCDF	264	130	140	53	29-147	
13C-2,3,4,6,7,8-HxCDF	264	130	149	57	28-136	
13C-1,2,3,4,6,7,8-HpCDD	264	140	160	61	23-140	
13C-1,2,3,4,6,7,8-HpCDF	264	140	159	60	28-143	
13C-1,2,3,4,7,8,9-HpCDF	264	150	171	65	26-138	
13C-OCDD	528	320	332	63	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 24AU2111D2_011.d

Lab ID: 320-76769-27 MS RA Client ID: 11215702-072221-SS-SJSB076 (0-2

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	26.4	7600	8400	3068	75-158	E 4 G
13C-2,3,7,8-TCDF	264	150	172	65	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 19au21dfs1_22.d

Lab ID: 320-76888-A-1-B MS Client ID:

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	36.1	24000	22000	-4439	67-158	G E 4
2,3,7,8-TCDF	36.1	110000	115000	321	75-158	G E 4
1,2,3,7,8-PeCDD	181	290	470	102	70-142	
1,2,3,7,8-PeCDF	181	2200	2670	247	80-134	4
2,3,4,7,8-PeCDF	181	1600	1900	144	68-160	4
1,2,3,4,7,8-HxCDD	181	3.6 J	196	106	70-164	
1,2,3,6,7,8-HxCDD	181	7.0 J	203	108	76-134	
1,2,3,7,8,9-HxCDD	181	5.6 J	201	108	64-162	
1,2,3,4,7,8-HxCDF	181	3200	3130	-21	72-134	4
1,2,3,6,7,8-HxCDF	181	740	1040	165	84-130	4
1,2,3,7,8,9-HxCDF	181	42 J	251	116	78-130	
2,3,4,6,7,8-HxCDF	181	100	367	148	70-156	
1,2,3,4,6,7,8-HpCDD	181	68 J	265	109	70-140	
1,2,3,4,6,7,8-HpCDF	181	1100	1100	14	82-122	4
1,2,3,4,7,8,9-HpCDF	181	280	495	118	78-138	
OCDD	361	720	1050	91	78-144	
OCDF	361	460	890	118	63-170	
13C-2,3,7,8-TCDD	361	120	160	44	25-164	
13C-2,3,7,8-TCDF	361	130	149	41	24-169	
13C-1,2,3,7,8-PeCDD	361	120	139	39	25-181	q
13C-1,2,3,7,8-PeCDF	361	130	138	38	24-185	
13C-2,3,4,7,8-PeCDF	361	150	165	46	21-178	
13C-1,2,3,4,7,8-HxCDD	361	160	146	41	32-141	
13C-1,2,3,6,7,8-HxCDD	361	130	152	42	28-130	
13C-1,2,3,4,7,8-HxCDF	361	160	184	51	26-152	
13C-1,2,3,6,7,8-HxCDF	361	150	147	41	26-123	
13C-1,2,3,7,8,9-HxCDF	361	130	136	38	29-147	
13C-2,3,4,6,7,8-HxCDF	361	140	125	35	28-136	
13C-1,2,3,4,6,7,8-HpCDD	361	140	147	41	23-140	
13C-1,2,3,4,6,7,8-HpCDF	361	120	143	39	28-143	
13C-1,2,3,4,7,8,9-HpCDF	361	150	158	44	26-138	
13C-OCDD	723	250	300	41	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2111D2_005.d

Lab ID: 320-76888-A-1-B MS RA Client ID:

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	36.1	110000	121000	25826	75-158	G E 4
13C-2,3,7,8-TCDF	361	130	105	29	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 13AU2110D5_49.d

Lab ID: 320-76769-1 MSD Client ID: 11215702-072221-SS-SJSB080 (0-2

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	31.5	16400	-3082	9	50	67-158	E 4 G
1,2,3,7,8-PeCDD	157	313	107	7	50	70-142	
1,2,3,7,8-PeCDF	157	2140	124	1	50	80-134	4 G
2,3,4,7,8-PeCDF	157	1170	102	3	50	68-160	4 G
1,2,3,4,7,8-HxCDD	157	162	101	5	50	70-164	
1,2,3,6,7,8-HxCDD	157	185	109	7	50	76-134	
1,2,3,7,8,9-HxCDD	157	166	101	7	50	64-162	
1,2,3,4,7,8-HxCDF	157	3390	212	5	50	72-134	E 4 G
1,2,3,6,7,8-HxCDF	157	1040	124	6	50	84-130	4 G
1,2,3,7,8,9-HxCDF	157	205	102	13	50	78-130	G
2,3,4,6,7,8-HxCDF	157	256	104	8	50	70-156	G
1,2,3,4,6,7,8-HpCDD	157	666	84	12	50	70-140	
1,2,3,4,6,7,8-HpCDF	157	1200	134	9	50	82-122	4
1,2,3,4,7,8,9-HpCDF	157	481	115	7	50	78-138	
OCDD	315	7020	-0.6	9	50	78-144	E 4
OCDF	315	735	114	6	50	63-170	
13C-2,3,7,8-TCDD	315	191	61			25-164	
13C-2,3,7,8-TCDF	315	161	51			24-169	
13C-1,2,3,7,8-PeCDD	315	226	72			25-181	
13C-1,2,3,7,8-PeCDF	315	203	64			24-185	
13C-2,3,4,7,8-PeCDF	315	221	70			21-178	
13C-1,2,3,4,7,8-HxCDD	315	199	63			32-141	
13C-1,2,3,6,7,8-HxCDD	315	175	56			28-130	
13C-1,2,3,4,7,8-HxCDF	315	191	61			26-152	
13C-1,2,3,6,7,8-HxCDF	315	168	53			26-123	
13C-1,2,3,7,8,9-HxCDF	315	177	56			29-147	
13C-2,3,4,6,7,8-HxCDF	315	173	55			28-136	
13C-1,2,3,4,6,7,8-HpCDD	315	202	64			23-140	
13C-1,2,3,4,6,7,8-HpCDF	315	190	60			28-143	
13C-1,2,3,4,7,8,9-HpCDF	315	223	71			26-138	
13C-OCDD	629	486	77			17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 23AU2111D2_009.d

Lab ID: 320-76769-1 MSD RA Client ID: 11215702-072221-SS-SJSB080 (0-2

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDF	31.5	43100	-12790	0	50	75-158	E 4 G
13C-2,3,7,8-TCDF	315	147	47			24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_42.d

Lab ID: 320-76769-27 MSD Client ID: 11215702-072221-SS-SJSB076 (0-2

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	26.2	1820	-1013	24	50	67-158	G E 4
1,2,3,7,8-PeCDD	131	163	109	4	50	70-142	
1,2,3,7,8-PeCDF	131	426	89	11	50	80-134	
2,3,4,7,8-PeCDF	131	280	93	14	50	68-160	
1,2,3,4,7,8-HxCDD	131	121	92	6	50	70-164	
1,2,3,6,7,8-HxCDD	131	148	112	4	50	76-134	
1,2,3,7,8,9-HxCDD	131	131	99	13	50	64-162	
1,2,3,4,7,8-HxCDF	131	581	61	10	50	72-134	F1
1,2,3,6,7,8-HxCDF	131	251	93	10	50	84-130	
1,2,3,7,8,9-HxCDF	131	159	116	1	50	78-130	
2,3,4,6,7,8-HxCDF	131	183	127	6	50	70-156	
1,2,3,4,6,7,8-HpCDD	131	204	116	119	50	70-140	F2
1,2,3,4,6,7,8-HpCDF	131	275	99	6	50	82-122	
1,2,3,4,7,8,9-HpCDF	131	178	101	1	50	78-138	
OCDD	262	1410	98	160	50	78-144	4 F2
OCDF	262	353	108	16	50	63-170	
13C-2,3,7,8-TCDD	262	157	60			25-164	
13C-2,3,7,8-TCDF	262	160	61			24-169	
13C-1,2,3,7,8-PeCDD	262	160	61			25-181	
13C-1,2,3,7,8-PeCDF	262	136	52			24-185	
13C-2,3,4,7,8-PeCDF	262	156	60			21-178	
13C-1,2,3,4,7,8-HxCDD	262	188	72			32-141	
13C-1,2,3,6,7,8-HxCDD	262	164	63			28-130	
13C-1,2,3,4,7,8-HxCDF	262	180	69			26-152	
13C-1,2,3,6,7,8-HxCDF	262	161	61			26-123	
13C-1,2,3,7,8,9-HxCDF	262	143	55			29-147	
13C-2,3,4,6,7,8-HxCDF	262	164	63			28-136	
13C-1,2,3,4,6,7,8-HpCDD	262	158	60			23-140	
13C-1,2,3,4,6,7,8-HpCDF	262	158	60			28-143	
13C-1,2,3,4,7,8,9-HpCDF	262	148	57			26-138	
13C-OCDD	523	275	53			17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 24AU2111D2_012.d

Lab ID: 320-76769-27 MSD RA Client ID: 11215702-072221-SS-SJSB076 (0-2

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDF	26.2	6770	-3151	22	50	75-158	E 4 G
13C-2,3,7,8-TCDF	262	183	70			24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 19au21dfs1_23.d

Lab ID: 320-76888-A-1-C MSD Client ID:

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	35.9	25300	4754	14	50	67-158	G E 4
2,3,7,8-TCDF	35.9	138000	65418	19	50	75-158	G E 4
1,2,3,7,8-PeCDD	180	508	124	8	50	70-142	
1,2,3,7,8-PeCDF	180	2550	181	5	50	80-134	4
2,3,4,7,8-PeCDF	180	2150	281	12	50	68-160	4
1,2,3,4,7,8-HxCDD	180	199	109	2	50	70-164	
1,2,3,6,7,8-HxCDD	180	202	108	1	50	76-134	
1,2,3,7,8,9-HxCDD	180	188	101	7	50	64-162	
1,2,3,4,7,8-HxCDF	180	3640	261	15	50	72-134	4
1,2,3,6,7,8-HxCDF	180	1130	214	8	50	84-130	4
1,2,3,7,8,9-HxCDF	180	238	110	5	50	78-130	
2,3,4,6,7,8-HxCDF	180	342	134	7	50	70-156	
1,2,3,4,6,7,8-HpCDD	180	262	108	1	50	70-140	
1,2,3,4,6,7,8-HpCDF	180	1310	132	18	50	82-122	4
1,2,3,4,7,8,9-HpCDF	180	474	107	4	50	78-138	
OCDD	359	921	56	13	50	78-144	F1
OCDF	359	925	128	4	50	63-170	
13C-2,3,7,8-TCDD	359	143	40			25-164	
13C-2,3,7,8-TCDF	359	132	37			24-169	
13C-1,2,3,7,8-PeCDD	359	135	38			25-181	
13C-1,2,3,7,8-PeCDF	359	128	36			24-185	
13C-2,3,4,7,8-PeCDF	359	143	40			21-178	
13C-1,2,3,4,7,8-HxCDD	359	133	37			32-141	
13C-1,2,3,6,7,8-HxCDD	359	122	34			28-130	q
13C-1,2,3,4,7,8-HxCDF	359	159	44			26-152	
13C-1,2,3,6,7,8-HxCDF	359	133	37			26-123	
13C-1,2,3,7,8,9-HxCDF	359	125	35			29-147	
13C-2,3,4,6,7,8-HxCDF	359	123	34			28-136	
13C-1,2,3,4,6,7,8-HpCDD	359	136	38			23-140	
13C-1,2,3,4,6,7,8-HpCDF	359	139	39			28-143	
13C-1,2,3,4,7,8,9-HpCDF	359	160	44			26-138	
13C-OCDD	719	265	37			17-157	q

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2111D2_006.d

Lab ID: 320-76888-A-1-C MSD RA Client ID:

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDF	35.9	127000	43390	5	50	75-158	G E 4
13C-2,3,7,8-TCDF	359	83.3	23			24-169	*5-

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab File ID: 13AU2110D5_44.d Lab Sample ID: MB 320-513585/1-A

Matrix: Sediment Date Extracted: 08/06/2021 05:22

Instrument ID: 10D5 Date Analyzed: 08/15/2021 02:06

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-513585/2-A	13AU2110D5_45.d	08/15/2021 02:51
11215702-072221-SS-SJSB080 (0-2)	320-76769-1	13AU2110D5_47.d	08/15/2021 04:21
11215702-072221-SS-SJSB080 (0-2) MS	320-76769-1 MS	13AU2110D5_48.d	08/15/2021 05:06
11215702-072221-SS-SJSB080 (0-2) MSD	320-76769-1 MSD	13AU2110D5_49.d	08/15/2021 05:51
11215702-072221-SS-SJSB080 (2-4)	320-76769-2	13AU2110D5_50.d	08/15/2021 06:36
11215702-072221-SS-SJSB080 (4-6)	320-76769-3	13AU2110D5_51.d	08/15/2021 07:21
11215702-072221-SS-SJSB080 (8-10)	320-76769-5	13AU2110D5_52.d	08/15/2021 08:06
11215702-072221-SS-SJSB080 (10-12)	320-76769-6	13AU2110D5_53.d	08/15/2021 08:51
11215702-072221-SS-SJSB080 (12-14)	320-76769-7	13AU2110D5_54.d	08/15/2021 09:36
11215702-072221-SS-SJSB080 (14-16)	320-76769-8	13AU2110D5_55.d	08/15/2021 10:21
11215702-072221-SS-SJSB074 (0-2)	320-76769-13	13AU2110D5_59.d	08/15/2021 13:42
11215702-072221-SS-SJSB074 (4-6)	320-76769-15	13AU2110D5_60.d	08/15/2021 14:27
11215702-072221-SS-SJSB074 (6-8)	320-76769-16	13AU2110D5_61.d	08/15/2021 15:12
11215702-072221-SS-SJSB074 (8-10)	320-76769-17	13AU2110D5_62.d	08/15/2021 15:57
11215702-072221-SS-SJSB074 (10-12)	320-76769-18	13AU2110D5_63.d	08/15/2021 16:42
11215702-072221-SS-SJSB074 (12-14)	320-76769-19	13AU2110D5_64.d	08/15/2021 17:27
11215702-072221-SS-SJSB074 (14-16)	320-76769-20	13AU2110D5_65.d	08/15/2021 18:12
11215702-072221-DUP-4	320-76769-25	13AU2110D5_66.d	08/15/2021 18:57
11215702-072221-DUP-5	320-76769-26	13AU2110D5_67.d	08/15/2021 19:42
11215702-072221-SS-SJSB076 (2-4)	320-76769-28	13AU2110D5_68.d	08/15/2021 20:27
11215702-072221-SS-SJSB074 (2-4)	320-76769-14	13AU2110D5_69.d	08/15/2021 21:12
11215702-072221-SS-SJSB080 (8-10) RA	320-76769-5 RA	21AU2111D2_012.d	08/21/2021 20:56

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab File ID: 13AU2110D5_44.d Lab Sample ID: MB 320-513585/1-A

Matrix: Sediment Date Extracted: 08/06/2021 05:22

Instrument ID: 10D5 Date Analyzed: 08/15/2021 02:06

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
11215702-072221-SS-SJSB080 (4-6) RA	320-76769-3 RA	21AU2111D2_013.d	08/21/2021 21:34
11215702-072221-SS-SJSB074 (0-2) RA	320-76769-13 RA	21AU2111D2_014.d	08/21/2021 22:13
11215702-072221-SS-SJSB074 (4-6) RA	320-76769-15 RA	21AU2111D2_015.d	08/21/2021 22:51
11215702-072221-SS-SJSB074 (14-16) RA	320-76769-20 RA	23AU2111D2_006.d	08/23/2021 12:43
11215702-072221-SS-SJSB080 (0-2) RA	320-76769-1 RA	23AU2111D2_007.d	08/23/2021 13:22
11215702-072221-SS-SJSB080 (0-2) MS RA	320-76769-1 MS RA	23AU2111D2_008.d	08/23/2021 14:00
11215702-072221-SS-SJSB080 (0-2) MSD RA	320-76769-1 MSD RA	23AU2111D2_009.d	08/23/2021 14:38
11215702-072221-SS-SJSB080 (14-16) RA	320-76769-8 RA	23AU21A11D2_006.d	08/23/2021 18:46
11215702-072221-SS-SJSB080 (10-12) RA	320-76769-6 RA	23AU21A11D2_007.d	08/23/2021 19:24
11215702-072221-SS-SJSB080 (12-14) RA	320-76769-7 RA	23AU21A11D2_008.d	08/23/2021 20:02
11215702-072221-DUP-4 RA	320-76769-25 RA	23AU21A11D2_009.d	08/23/2021 20:41
11215702-072221-SS-SJSB074 (8-10) RA	320-76769-17 RA	23AU21A11D2_012.d	08/23/2021 22:36
11215702-072221-SS-SJSB074 (6-8) RA	320-76769-16 RA	23AU21A11D2_015.d	08/24/2021 00:31
11215702-072221-SS-SJSB074 (10-12) RA	320-76769-18 RA	24AU2111D2_005.d	08/24/2021 11:02
11215702-072221-SS-SJSB080 (2-4) RA	320-76769-2 RA	24AU2111D2_006.d	08/24/2021 11:40
11215702-072221-SS-SJSB074 (2-4) RA	320-76769-14 RA	24AU2111D2_007.d	08/24/2021 12:18
11215702-072221-DUP-5 RA	320-76769-26 RA	24AU2111D2_008.d	08/24/2021 12:57
11215702-072221-SS-SJSB076 (2-4) RA	320-76769-28 RA	24AU2111D2_009.d	08/24/2021 13:35

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab File ID: 17au21dfs1_5.d Lab Sample ID: MB 320-513586/1-A

Matrix: Sediment Date Extracted: 08/06/2021 05:28

Instrument ID: DFS 1 Date Analyzed: 08/17/2021 17:01

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-513586/2-A	17au21dfs1_6.d	08/17/2021 17:49
11215702-072221-SS-SJSB076 (6-8)	320-76769-30	17au21dfs1_12.d	08/17/2021 22:36
11215702-072221-SS-SJSB076 (10-12)	320-76769-32	17au21dfs1_14.d	08/18/2021 00:12
11215702-072221-SS-SJSB076 (12-14)	320-76769-33	17au21dfs1_20.d	08/18/2021 04:31
11215702-072221-SS-SJSB076 (8-10)	320-76769-31	18AU2110D5_5.d	08/18/2021 17:19
11215702-072221-SS-SJSB076 (14-16)	320-76769-34	18AU2110D5_6.d	08/18/2021 18:04
11215702-072221-SS-SJSB076 (0-2)	320-76769-27	17au21dfs1_40.d	08/18/2021 20:24
11215702-072221-SS-SJSB076 (0-2) MS	320-76769-27 MS	17au21dfs1_41.d	08/18/2021 21:12
11215702-072221-SS-SJSB076 (0-2) MSD	320-76769-27 MSD	17au21dfs1_42.d	08/18/2021 22:00
11215702-072221-SS-SJSB076 (4-6)	320-76769-29	17au21dfs1_43.d	08/18/2021 22:48
11215702-072221-SS-SJSB076 (14-16) RA	320-76769-34 RA	23AU21A11D2_011.d	08/23/2021 21:58
11215702-072221-SS-SJSB076 (8-10) RA	320-76769-31 RA	23AU21A11D2_013.d	08/23/2021 23:14
11215702-072221-SS-SJSB076 (12-14) RA	320-76769-33 RA	23AU21A11D2_014.d	08/23/2021 23:53
11215702-072221-SS-SJSB076 (10-12) RA	320-76769-32 RA	23AU21A11D2_016.d	08/24/2021 01:09
11215702-072221-SS-SJSB076 (6-8) RA	320-76769-30 RA	23AU21A11D2_017.d	08/24/2021 01:48
11215702-072221-SS-SJSB076 (0-2) RA	320-76769-27 RA	24AU2111D2_010.d	08/24/2021 14:13
11215702-072221-SS-SJSB076 (0-2) MS RA	320-76769-27 MS RA	24AU2111D2_011.d	08/24/2021 14:51
11215702-072221-SS-SJSB076 (0-2) MSD RA	320-76769-27 MSD RA	24AU2111D2_012.d	08/24/2021 15:30
11215702-072221-SS-SJSB076 (4-6) RA	320-76769-29 RA	24AU21A11D2_017.d	08/25/2021 02:50

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab File ID: 24AU2111D2_004.d Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Date Extracted: 08/06/2021 12:58

Instrument ID: 11D2 Date Analyzed: 08/24/2021 10:23

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
11215702-072221-SS-SJSB080 (6-8) RA	320-76769-4 RA	23AU21A11D2_018.d	08/24/2021 02:26
	320-76888-A-1-B MS RA	25AU2111D2_005.d	08/25/2021 11:28
	320-76888-A-1-C MSD RA	25AU2111D2_006.d	08/25/2021 12:07

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab File ID: 19au21dfs1_5.d Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Date Extracted: 08/06/2021 12:58

Instrument ID: DFS 1 Date Analyzed: 08/19/2021 16:27

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
11215702-072221-SS-SJSB080 (6-8)	320-76769-4	17au21dfs1_55.d	08/19/2021 07:54
	320-76888-A-1-B MS	19au21dfs1_22.d	08/20/2021 05:33
	320-76888-A-1-C MSD	19au21dfs1_23.d	08/20/2021 06:21

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)
Lab Sample ID: 320-76769-1
Matrix: Sediment
Lab File ID: 13AU2110D5_47.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.94(g)
Date Analyzed: 08/15/2021 04:21
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	17000	E B G	40	40
40321-76-4	1,2,3,7,8-PeCDD	140		8.2	1.6
57117-41-6	1,2,3,7,8-PeCDF	1900	G	14	14
57117-31-4	2,3,4,7,8-PeCDF	1000	G	15	15
39227-28-6	1,2,3,4,7,8-HxCDD	3.0	J B	8.2	0.30
57653-85-7	1,2,3,6,7,8-HxCDD	14		8.2	0.35
19408-74-3	1,2,3,7,8,9-HxCDD	6.3	J B	8.2	0.29
70648-26-9	1,2,3,4,7,8-HxCDF	3100	B G	8.4	8.4
57117-44-9	1,2,3,6,7,8-HxCDF	840	B	8.2	7.7
72918-21-9	1,2,3,7,8,9-HxCDF	45	B	8.2	6.3
60851-34-5	2,3,4,6,7,8-HxCDF	92		8.2	6.2
35822-46-9	1,2,3,4,6,7,8-HpCDD	530	B	8.2	4.9
67562-39-4	1,2,3,4,6,7,8-HpCDF	990	B	8.2	6.2
55673-89-7	1,2,3,4,7,8,9-HpCDF	300	B	8.2	7.0
3268-87-9	OCDD	7000	E B	16	6.2
39001-02-0	OCDF	370	B	16	0.34
41903-57-5	Total TCDD	19000	B q G	40	40
30402-14-3	Total TCDF	71000	B q G	120	120
36088-22-9	Total PeCDD	170	q	8.2	1.6
30402-15-4	Total PeCDF	4500	G	14	14
34465-46-8	Total HxCDD	99	B	8.2	0.31
55684-94-1	Total HxCDF	4600	B	8.2	7.2
37871-00-4	Total HpCDD	1000	B	8.2	4.9
38998-75-3	Total HpCDF	1500	B	8.2	6.6

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (0-2)
Lab Sample ID: 320-76769-1
Matrix: Sediment
Lab File ID: 13AU2110D5_47.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.94(g)
Date Analyzed: 08/15/2021 04:21
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	72		25-164
89059-46-1	13C-2,3,7,8-TCDF	60		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	87		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	76		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	86		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	76		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	63		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	70		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	61		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	63		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	62		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	73		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	68		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	79		26-138
114423-97-1	13C-OCDD	90		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	129		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d
Lims ID: 320-76769-A-1-A
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Sample Type: Client
Inject. Date: 15-Aug-2021 04:21:52 ALS Bottle#: 46 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-1-a 320-76769-a-1-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 12:20:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:43:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.021	80493941	0.80	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.507	77845695	0.80	1.6249	59.5	59.5	0.7825	0.7825	59.52	
2,3,7,8-TCDF	17.522	8984352828	0.77	1.0239	12140	11272	37.6	37.6		REQa
A Non-2,3,7,8-sub-TCDF	17.046	8203830916	0.78	1.0239	10292	10292	37.6	7084.9		
S Total TCDF					22432	21564	37.6	37.6		RQ
D 13C-2,3,7,8-TCDD	18.187	52245695	0.83	0.8993	72.2	72.2	0.5981	0.5981	72.17	a
2,3,7,8-TCDD	18.202	3477508783	0.79	1.2541	5307.4	5307.4	12.4	12.4		Ea
$ 37Cl4-2,3,7,8-TCDD	18.202	45859903		1.1071	51.5	51.5	0.3569	0.3569	129	a
A Non-2,3,7,8-sub-TCDD	17.500	300622246	0.77	1.2541	476.9	458.8	12.4	443.8		RQa
S Total TCDD					5784.3	5766.2	12.4	12.4		RQ
D 13C-1,2,3,7,8-PeCDF	22.585	74151161	1.60	1.2101	76.1	76.1	0.3317	0.3317	76.13	
1,2,3,7,8-PeCDF	22.599	468416716	1.58	1.0611	595.3	595.3	4.323	4.323		a
D 13C-2,3,4,7,8-PeCDF	23.894	85346671	1.56	1.2395	85.5	85.5	0.3238	0.3238	85.54	
2,3,4,7,8-PeCDF	23.921	266551750	1.58	1.0184	306.7	306.7	4.526	4.526		a
A F1 PeCDFs	20.093	1702699	1.53	1.0398	2.053	2.053	0.0315	2.053		
A Non-2,3,7,8-sub-PeCDF	23.241	389672872	1.58	1.0398	469.9	469.9	4.422	208.2		a
S Total PeCDF					1374.0	1374.0	4.425	4.425		
D 13C-1,2,3,7,8-PeCDD	24.603	53491597	1.64	0.7612	87.3	87.3	0.2332	0.2332	87.30	
1,2,3,7,8-PeCDD	24.617	24754581	1.64	1.0484	44.1	44.1	0.4855	0.4855		a
A Non-2,3,7,8-sub-PeCDD	23.349	4593853	1.55	1.0484	14.4	8.191	0.4855	2.496		RQM
S Total PeCDD					58.5	52.3	0.4855	0.4855		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.609	78998447	0.52	1.0837	69.8	69.8	0.2699	0.2699	69.77	
1,2,3,4,7,8-HxCDF	30.622	800839037	1.21	1.0851	934.2	934.2	2.579	2.579		
D 13C-1,2,3,6,7,8-HxCDF	30.769	71942908	0.51	1.1279	61.0	61.0	0.2594	0.2594	61.05	
1,2,3,6,7,8-HxCDF	30.795	208141250	1.21	1.1260	256.9	256.9	2.360	2.360		
D 13C-2,3,4,6,7,8-HxCDF	31.567	68544528	0.52	1.0637	61.7	61.7	0.2750	0.2750	61.67	
2,3,4,6,7,8-HxCDF	31.581	22445771	1.22	1.1675	28.0	28.0	1.879	1.879		M
D 13C-1,2,3,7,8,9-HxCDF	32.353	64087151	0.51	0.9676	63.4	63.4	0.3023	0.3023	63.39	a
1,2,3,7,8,9-HxCDF	32.366	10232274	1.35	1.1664	13.7	13.7	1.929	1.929		M
A Non-2,3,7,8-sub-HxCDF	30.197	128730843	1.21	1.1363	159.8	159.8	2.155	63.9		Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					1392.7	1392.7	2.187	2.187		
* 13C-1,2,3,7,8,9-HxCDD	32.180	104481309	1.22	6.2E+05	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	31.754	58148034	1.22	0.7334	75.9	75.9	0.3042	0.3042	75.88	
1,2,3,4,7,8-HxCDD	31.767	557841	1.23	1.0640	0.9016	0.9016	0.0914	0.0914		
D 13C-1,2,3,6,7,8-HxCDD	31.847	58079527	1.23	0.8802	63.2	63.2	0.2535	0.2535	63.16	
1,2,3,6,7,8-HxCDD	31.874	2498232	1.27	1.0001	4.301	4.301	0.1067	0.1067		
1,2,3,7,8,9-HxCDD	32.193	1269992	1.27	1.1325	1.930	1.930	0.0899	0.0899		
A Non-2,3,7,8-sub-HxCDD	30.882	14297821	1.24	1.0655	23.1	23.1	0.0955	12.8		M
S Total HxCDD					30.2	30.2	0.0960	0.0960		
D 13C-1,2,3,4,6,7,8-HpCDF	33.790	54855636	0.44	0.7730	67.9	67.9	0.6497	0.6497	67.92	
1,2,3,4,6,7,8-HpCDF	33.802	239950239	1.05	1.4413	303.5	303.5	1.902	1.902		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.859	58103225	0.43	0.7008	79.4	79.4	0.7166	0.7166	79.35	
1,2,3,4,7,8,9-HpCDF	34.871	70151161	1.05	1.3174	91.6	91.6	2.150	2.150		
A Non-2,3,7,8-sub-HpCDF	34.319	58123314	1.07	1.3793	74.6	74.6	2.020	74.6		
S Total HpCDF					469.7	469.7	2.026	2.026		
D 13C-1,2,3,4,6,7,8-HpCDD	34.580	49676178	0.99	0.6472	73.5	73.5	0.3584	0.3584	73.46	
1,2,3,4,6,7,8-HpCDD	34.592	88653515	1.03	1.0943	163.1	163.1	1.500	1.500		
A Non-2,3,7,8-sub-HpCDD	34.301	80492114	1.04	1.0943	148.1	148.1	1.500	148.1		
S Total HpCDD					311.2	311.2	1.500	1.500		
D 13C-OCDD	36.938	83761458	0.88	0.4472	179.3	179.3	0.1807	0.1807	89.64	
OCDF	37.034	68963223	0.88	1.4382	114.5	114.5	0.1031	0.1031		
OCDD	36.950	995025793	0.90	1.1070	2146.2	2146.2	1.887	1.887		E

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d
Lims ID: 320-76769-A-1-A
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Sample Type: Client
Inject. Date: 15-Aug-2021 04:21:52 ALS Bottle#: 46 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-1-a 320-76769-a-1-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 12:20:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:43:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	18.021	17.855	10		35805860	9745528	15593	38982	625		a
333.9339	18.021	17.855	10		44688081	11997471	31191	77977	385	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.507	17.356	9	0.971	34505977	10195611	34710	86775	294		
317.9389	17.507	17.356	9	0.971	43339718	12755070	75876	189690	168	0.80(0.65-0.89)	
2,3,7,8-TCDF											REQa
303.9016	17.522	17.371	9	1.001	4600217039	1150077074	14182763545690		811		ae
	Empc Correction				3908447165	874673950	14182763545690		617		
305.8987	17.522	17.371	9	1.001	5075905663	1135940215	21172685293170		537	0.91(0.65-0.89)	e
A Non-2,3,7,8-sub-TCDF											
303.9016	15.829	17.046	-73	0.904	25257802	8580073	14182763545690		6		
305.8987	15.829	17.046	-73	0.904	32146329	10988184	21172685293170		5	0.79(0.65-0.89)	
303.9016	16.086	17.046	-57	0.919	64136024	16054638	14182763545690		11		
305.8987	16.086	17.046	-57	0.919	82855271	20661521	21172685293170		10	0.77(0.65-0.89)	
303.9016	16.388	17.046	-39	0.936	134071979	26735749	14182763545690		19		
305.8987	16.373	17.046	-40	0.935	171681629	34288228	21172685293170		16	0.78(0.65-0.89)	
303.9016	16.600	17.046	-27	0.948	165881552	44672823	14182763545690		31		
305.8987	16.600	17.046	-27	0.948	215087155	58548378	21172685293170		28	0.77(0.65-0.89)	
303.9016	16.827	17.046	-13	0.961	265974540	70266453	14182763545690		50		
305.8987	16.827	17.046	-13	0.961	342942485	89627291	21172685293170		42	0.78(0.65-0.89)	
303.9016	17.099	17.046	3	0.977	2472541494	544656362	14182763545690		384		
305.8987	17.099	17.046	3	0.977	3174593210	695631038	21172685293170		329	0.78(0.65-0.89)	
303.9016	17.945	17.046	54	1.025	381941317	112195142	14182763545690		79		
305.8987	17.945	17.046	54	1.025	489317077	144442874	21172685293170		68	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.172	17.046	67	1.038	80964200	18201057	14182763545690		13		
305.8987	18.172	17.046	67	1.038	104438852	23841925	21172685293170		11	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	18.187	18.051	8	1.009	23686934	5783978	15593	38982	371		a
333.9339	18.187	18.051	8	1.009	28558761	7196092	31191	77977	231	0.83(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	18.202	18.081	7	1.001	1538280859	363333978	410471	1026177	885		a
321.8936	18.202	18.081	7	1.001	1939227924	459686474	394706	986765	1165	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8847	18.202	18.081	7	1.010	45859903	10882728	34370	85925	317		a
A Non-2,3,7,8-sub-TCDD											RQa
319.8965	18.097	17.500	36	0.995	16131965	4870378	410471	1026177	12		a
	Empc Correction				4276110	1671936	410471	1026177	4		
321.8936	18.097	17.500	36	0.995	5553391	2171346	394706	986765	6	2.90(0.65-0.89)	
319.8965	18.550	17.500	63	1.020	127268043	26165514	410471	1026177	64		
321.8936	18.550	17.500	63	1.020	163524702	33671486	394706	986765	85	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.585	22.367	13	1.253	45620526	8201128	19963	49907	411		
353.8970	22.585	22.367	13	1.253	28530635	5207721	14942	37355	349	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.599	22.394	12	1.001	286920048	54062756	150922	377305	358		a
341.8567	22.599	22.394	12	1.001	181496668	34285006	95122	237805	360	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.894	23.703	11	1.326	52069073	8157216	19963	49907	409		
353.8970	23.894	23.703	11	1.326	33277598	5187553	14942	37355	347	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	23.921	23.730	11	1.001	163399711	25794552	150922	377305	171		a
341.8567	23.921	23.730	11	1.001	103152039	16446727	95122	237805	173	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.669	20.093	-25	0.871	1028895	232058	766	1915	303		
341.8567	19.669	20.093	-25	0.871	673804	160191	986	2465	162	1.53(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											a
339.8597	21.235	23.241	-120	0.940	105862553	25922102	150922	377305	172		
341.8567	21.235	23.241	-120	0.940	66745912	16561512	95122	237805	174	1.59(1.32-1.78)	
339.8597	22.108	23.241	-68	0.979	8110184	925506	150922	377305	6		
341.8567	22.094	23.241	-69	0.978	5098290	592757	95122	237805	6	1.59(1.32-1.78)	
339.8597	22.462	23.241	-47	0.995	15212457	3467557	150922	377305	23		a
341.8567	22.462	23.241	-47	0.995	9674372	2153157	95122	237805	23	1.57(1.32-1.78)	
339.8597	23.117	23.241	-7	1.024	68650961	12748045	150922	377305	84		
341.8567	23.117	23.241	-7	1.024	43310830	8009433	95122	237805	84	1.59(1.32-1.78)	
339.8597	24.262	23.241	61	1.074	41076696	5896598	150922	377305	39		
341.8567	24.249	23.241	60	1.074	25930617	3737821	95122	237805	39	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.603	24.426	11	1.365	33206780	6099550	9234	23085	661		
369.8919	24.603	24.426	11	1.365	20284817	3707009	6202	15505	598	1.64(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											a
355.8546	24.617	24.453	10	1.001	15391663	2751284	11206	28015	246		a
357.8516	24.617	24.453	10	1.001	9362918	1718738	8759	21897	196	1.64(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	21.412	23.349	-116	0.870	470908	82680	11206	28015	7		
357.8516	21.358	23.349	-119	0.868	3267857	595551	8759	21897	68	0.14(1.32-1.78)	
	Empc Correction				303811	53341	8759	21897	6		
355.8546	22.612	23.349	-44	0.919	851001	180297	11206	28015	16		
357.8516	22.599	23.349	-45	0.919	678907	137186	8759	21897	16	1.25(1.32-1.78)	
	Empc Correction				549032	116320	8759	21897	13		
355.8546	22.844	23.349	-30	0.929	559031	109101	11206	28015	10		
357.8516	22.844	23.349	-30	0.929	348877	58285	8759	21897	7	1.60(1.32-1.78)	
355.8546	23.171	23.349	-11	0.942	423734	72586	11206	28015	6		
	Empc Correction				365031	67786	11206	28015	6		
357.8516	23.171	23.349	-11	0.942	235504	43733	8759	21897	5	1.80(1.32-1.78)	
355.8546	25.149	23.349	108	1.022	874797	101684	11206	28015	9		M
	Empc Correction				553537	65003	11206	28015	6		
357.8516	25.121	23.349	106	1.021	357121	41938	8759	21897	5	2.45(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.609	30.503	6	0.951	27189176	5327361	14345	35862	371		
385.8610	30.609	30.503	6	0.951	51809271	10050935	19162	47905	525	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.622	30.529	6	1.000	438692214	88850919	94407	236017	941		
375.8178	30.622	30.529	6	1.000	362146823	73216810	77743	194357	942	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.769	30.689	5	0.956	24409960	5616111	14345	35862	392		
385.8610	30.769	30.689	5	0.956	47532948	10576352	19162	47905	552	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.795	30.716	5	1.001	113926859	25453800	94407	236017	270		
375.8178	30.795	30.716	5	1.001	94214391	20840534	77743	194357	268	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.567	31.514	3	0.981	23538323	6746906	14345	35862	470		
385.8610	31.567	31.514	3	0.981	45006205	12868607	19162	47905	672	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.581	31.528	3	1.000	12337703	3543354	94407	236017	38		M
375.8178	31.581	31.528	3	1.000	10108068	2968206	77743	194357	38	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											a
383.8639	32.353	32.326	2	1.005	21701595	6491986	14345	35862	453		a
385.8610	32.353	32.326	2	1.005	42385556	12633423	19162	47905	659	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.366	32.340	2	1.000	5880455	2011529	94407	236017	21		M
375.8178	32.366	32.340	2	1.000	4351819	1688128	77743	194357	22	1.35(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	28.546	30.197	-99	0.933	28196897	4521931	94407	236017	48		
375.8178	28.546	30.197	-99	0.933	23242997	3716766	77743	194357	48	1.21(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	29.864	30.197	-20	0.976	12588745	2228301	94407	236017	24		
375.8178	29.864	30.197	-20	0.976	10406518	1823537	77743	194357	23	1.21(1.05-1.43)	
373.8208	31.487	30.197	77	1.029	7065231	1993529	94407	236017	21		M
375.8178	31.487	30.197	77	1.029	5532207	1559430	77743	194357	20	1.28(1.05-1.43)	
373.8208	32.446	30.197	135	1.060	22541744	7120663	94407	236017	75		M
375.8178	32.446	30.197	135	1.060	19156504	6032957	77743	194357	78	1.18(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	32.180	32.140	2		57314274	15644514	13254	33135	1180		a
403.8529	32.180	32.140	2		47167035	12990539	12300	30750	1056	1.22(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.754	31.701	3	0.987	31983427	9760726	13254	33135	736		
403.8529	31.754	31.701	3	0.987	26164607	7954071	12300	30750	647	1.22(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.767	31.714	3	1.000	307274	95750	3417	8542	28		
391.8127	31.767	31.714	3	1.000	250567	78696	3475	8687	23	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.847	31.807	2	0.990	32087226	8918513	13254	33135	673		
403.8529	31.847	31.807	2	0.990	25992301	7226787	12300	30750	588	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.874	31.820	3	1.001	1395624	381719	3417	8542	112		
391.8127	31.860	31.820	2	1.000	1102608	305696	3475	8687	88	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.193	32.153	2	1.014	710850	174020	3417	8542	51		
391.8127	32.193	32.153	2	1.014	559142	128458	3475	8687	37	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											M
389.8157	29.717	30.882	-70	0.933	2913693	376333	3417	8542	110		
391.8127	29.717	30.882	-70	0.933	2368353	313314	3475	8687	90	1.23(1.05-1.43)	
389.8157	30.676	30.882	-12	0.963	635232	138606	3417	8542	41		
391.8127	30.676	30.882	-12	0.963	460169	99101	3475	8687	29	1.38(1.05-1.43)	
389.8157	31.035	30.882	9	0.975	4364767	921165	3417	8542	270		
391.8127	31.035	30.882	9	0.975	3555607	751301	3475	8687	216	1.23(1.05-1.43)	M
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.790	33.766	1	1.050	16661363	5912406	17492	43730	338		
419.8220	33.790	33.766	1	1.050	38194273	13348810	40034	100085	333	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.802	33.778	1	1.000	122683024	42676232	108932	272330	392		M
409.7789	33.802	33.778	1	1.000	117267215	39885721	102316	255790	390	1.05(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.859	34.847	1	1.083	17575970	5671841	17492	43730	324		
419.8220	34.859	34.847	1	1.083	40527255	12970897	40034	100085	324	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.871	34.860	1	1.000	35886593	11698061	108932	272330	107		
409.7789	34.871	34.860	1	1.000	34264568	11242293	102316	255790	110	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
407.7818	34.094	34.319	-13	1.009	29989923	10437562	108932	272330	96		
409.7789	34.094	34.319	-13	1.009	28133391	9944550	102316	255790	97	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.580	34.568	1	1.075	24663592	8067298	16100	40250	501		
437.8140	34.580	34.568	1	1.075	25012586	8098171	10471	26177	773	0.99(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.592	34.580	1	1.000	45033400	14423026	51768	129420	279		
425.7737	34.592	34.580	1	1.000	43620115	13723796	54365	135912	252	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.045	34.301	-15	0.985	40959040	14133343	51768	129420	273		
425.7737	34.033	34.301	-16	0.984	39533074	13907620	54365	135912	256	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.938	36.926	1	1.148	39150424	11518577	4385	10962	2627		
471.7750	36.938	36.926	1	1.148	44611034	12987074	4870	12175	2667	0.88(0.76-1.02)	
OCDF											
441.7428	37.034	37.022	1	1.003	32294899	9191828	3516	8790	2614		
443.7399	37.034	37.022	1	1.003	36668324	10309011	3750	9375	2749	0.88(0.76-1.02)	
OCDD											E
457.7377	36.950	36.938	1	1.000	470112316	135922272	46937	117342	2896		
459.7348	36.950	36.938	1	1.000	524913477	149364711	55464	138660	2693	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d
Lims ID: 320-76769-A-1-A
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 04:21:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	77845695	22950681

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	77845695	22950681

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.829	25257802	8580073	32146329	10988184	72.0	0.79	
16.086	64136024	16054638	82855271	20661521	184.4	0.77	
16.388	134071979	26735749	171681629	34288228	383.6	0.78	
16.600	165881552	44672823	215087155	58548378	478.0	0.77	
16.827	265974540	70266453	342942485	89627291	763.9	0.78	
17.099	2472541494	544656362	3174593210	695631038	7084.9	0.78	
17.945	381941317	112195142	489317077	144442874	1093.1	0.78	
18.172	80964200	18201057	104438852	23841925	232.6	0.78	
Signal Totals:							
	3590768908	841362297	4613062008	1078029439			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8203830916	1919391736				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 10292 = (8203830916 * 100.000) / (77845695 * 1.024)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d
Lims ID: 320-76769-A-1-A
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 04:21:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	52245695	12980070

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	52245695	12980070

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.097	16131965	4870378	5553391	2171346	33.1	2.90	RQa
18.097	4276110	1671936	5553391	2171346	15.0		Empc Correction
18.550	127268043	26165514	163524702	33671486	443.8	0.78	
Signal Totals:							
	131544153	27837450	169078093	35842832			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	312478101	66878724				0.85	RQa
	300622246	63680282					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 476.903 = (312478101 * 100.000) / (52245695 * 1.254)
Empc Amount: 458.809 = (300622246 * 100.000) / (52245695 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d
Lims ID: 320-76769-A-1-A
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 04:21:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 6

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	74151161	13408849
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	85346671	13344769

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	79748916	13376809

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.669	1028895	232058	673804	160191	2.05	1.53	
Signal Totals:							
	1028895	232058	673804	160191			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1702699	392249				1.53	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.053 = (1702699 * 100.000) / (79748916 * 1.040)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d
Lims ID: 320-76769-A-1-A
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 04:21:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 6

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	74151161	13408849
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	85346671	13344769

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	79748916	13376809

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.235	105862553	25922102	66745912	16561512	208.2	1.59	
22.108	8110184	925506	5098290	592757	15.9	1.59	
22.462	15212457	3467557	9674372	2153157	30.0	1.57	a
23.117	68650961	12748045	43310830	8009433	135.0	1.59	
24.262	41076696	5896598	25930617	3737821	80.8	1.58	
Signal Totals:							
	238912851	48959808	150760021	31054680			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	389672872	80014488				1.58	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 469.932 = (389672872 * 100.000) / (79748916 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Lims ID:	320-76769-A-1-A		
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Inject. Date:	15-Aug-2021 04:21:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	6

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	53491597	9806559

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	53491597	9806559

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.412	470908	82680	3267857	595551	6.67	0.14	RQ
21.412	470908	82680	303811	53341	1.38		Empc Correction
22.612	851001	180297	678907	137186	2.73	1.25	RQ
22.612	851001	180297	549032	116320	2.50		Empc Correction
22.844	559031	109101	348877	58285	1.62	1.60	
23.171	423734	72586	235504	43733	1.18	1.80	RQ
23.171	365031	67786	235504	43733	1.07		Empc Correction
25.149	874797	101684	357121	41938	2.20	2.45	RQM
25.149	553537	65003	357121	41938	1.62		Empc Correction
Signal Totals:							
	2799508	504867	1794345	313617			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8067737	1423041				0.65	RQM
	4593853	818484					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 14.386 = (8067737 * 100.000) / (53491597 * 1.048)

Empc Amount: 8.191 = (4593853 * 100.000) / (53491597 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d
Lims ID: 320-76769-A-1-A
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 04:21:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 6

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	78998447	15378296
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	71942908	16192463
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	68544528	19615513
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	64087151	19125409

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	70893258	17577920

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.546	28196897	4521931	23242997	3716766	63.9	1.21	
29.864	12588745	2228301	10406518	1823537	28.5	1.21	
31.487	7065231	1993529	5532207	1559430	15.6	1.28	Ma
32.446	22541744	7120663	19156504	6032957	51.8	1.18	Ma
Signal Totals:							
	70392617	15864424	58338226	13132690			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	128730843	28997114				1.21	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 159.809 = (128730843 * 100.000) / (70893258 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d
Lims ID: 320-76769-A-1-A
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 04:21:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 6

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	58148034	17714797
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	58079527	16145300
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	58113780	16930048

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.717	2913693	376333	2368353	313314	8.53	1.23	
30.676	635232	138606	460169	99101	1.77	1.38	
31.035	4364767	921165	3555607	751301	12.8	1.23	M
Signal Totals:							
	7913692	1436104	6384129	1163716			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	14297821	2599820				1.24	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 23.090 = (14297821 * 100.000) / (58113780 * 1.066)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d
Lims ID: 320-76769-A-1-A
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 04:21:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 6

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	54855636	19261216
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	58103225	18642738

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	56479430	18951977

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.094	29989923	10437562	28133391	9944550	74.6	1.07	
Signal Totals:							
	29989923	10437562	28133391	9944550			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	58123314	20382112				1.07	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 74.609 = (58123314 * 100.000) / (56479430 * 1.379)

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d
Lims ID: 320-76769-A-1-A
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 04:21:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 6

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	49676178	16165469

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	49676178	16165469

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.045	40959040	14133343	39533074	13907620	148.1	1.04	
Signal Totals:							
	40959040	14133343	39533074	13907620			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	80492114	28040963				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 148.070 = (80492114 * 100.000) / (49676178 * 1.094)

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.34
Area: 124018143
Amount: 276.2983
Amount Units: pg/ul

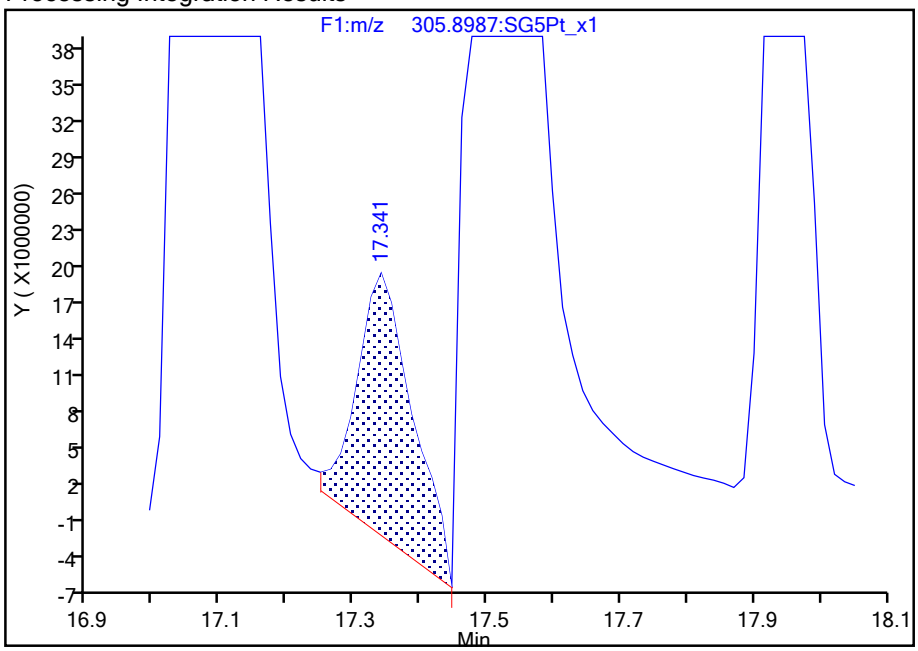

Manual Integration Results

RT: 17.52
Area: 5075905663
Amount: 12140
Amount Units: pg/ul

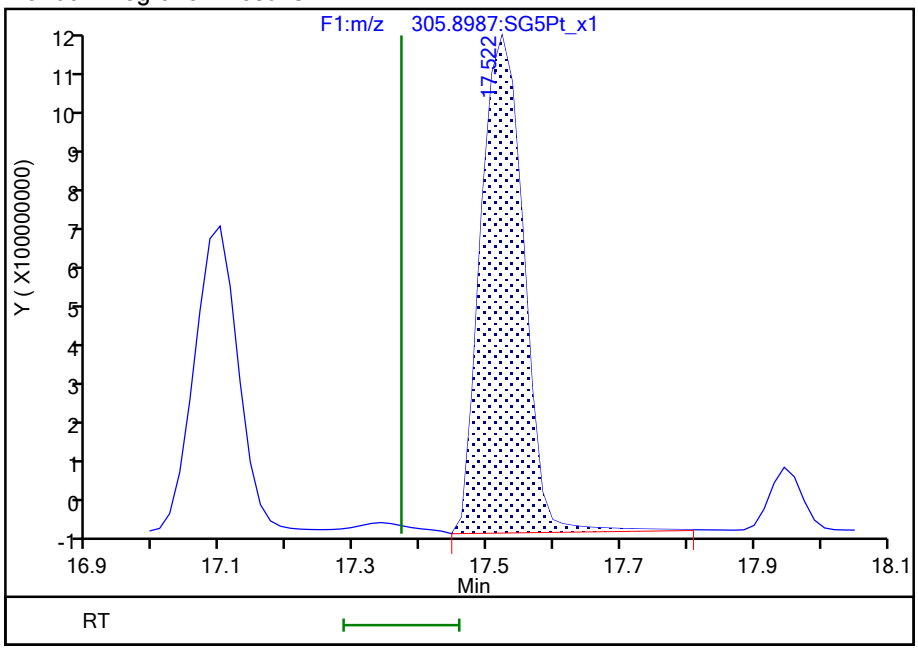

Reviewer: dadunj, 18-Aug-2021 10:51:13
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 3

RT: 17.34
Area: 220229128
Amount: 276.2983
Amount Units: pg/ul

Processing Integration Results

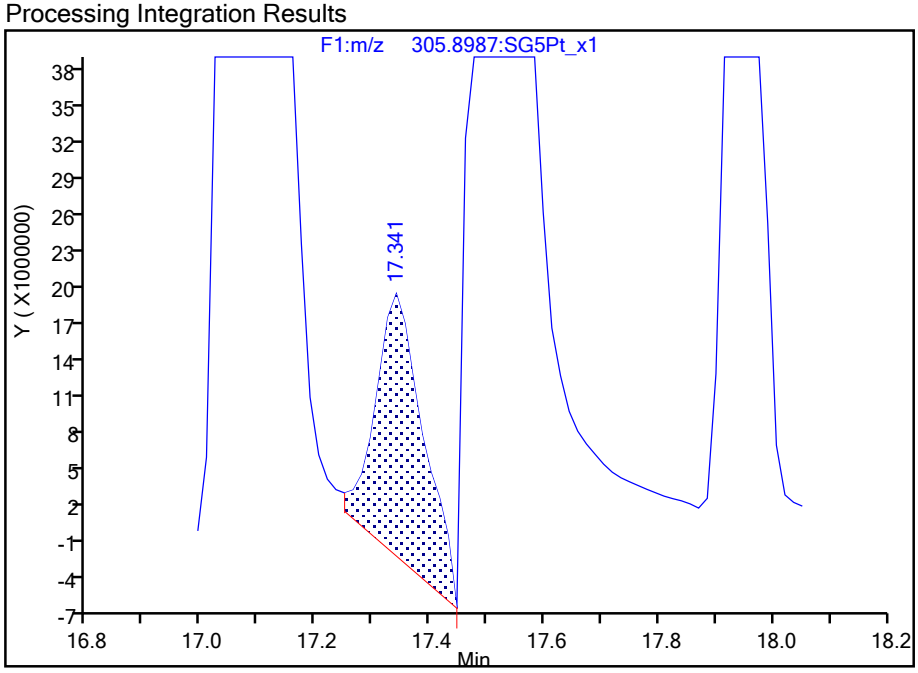

Manual Integration Results

RT: 17.52
Area: 9676122702
Amount: 12140
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 10:51:13
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.34
Area: 96210985
Amount: 276.2983
Amount Units: pg/ul

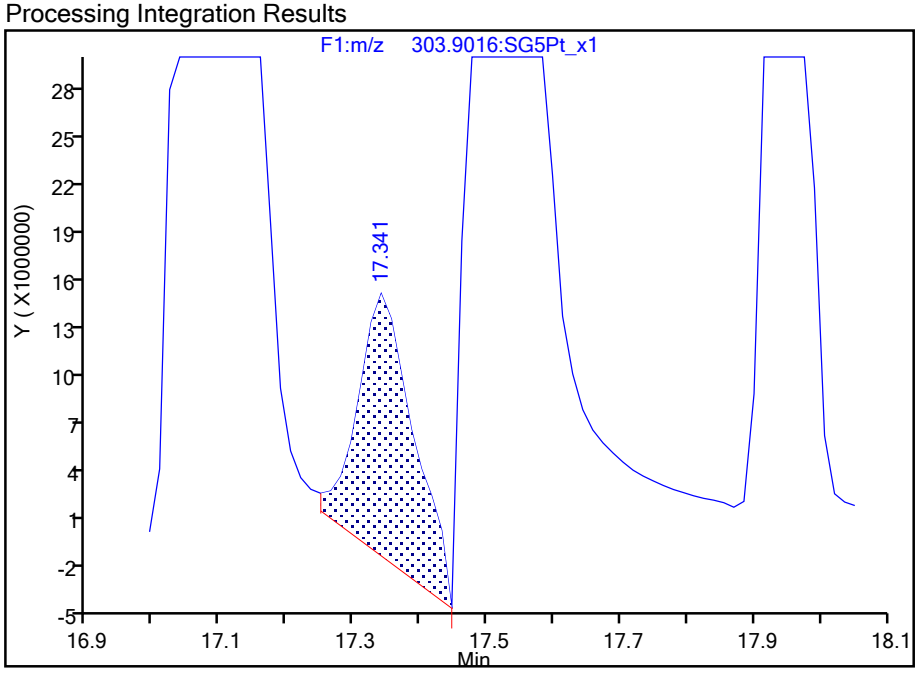

Manual Integration Results

RT: 17.52
Area: 4600217039
Amount: 12140
Amount Units: pg/ul

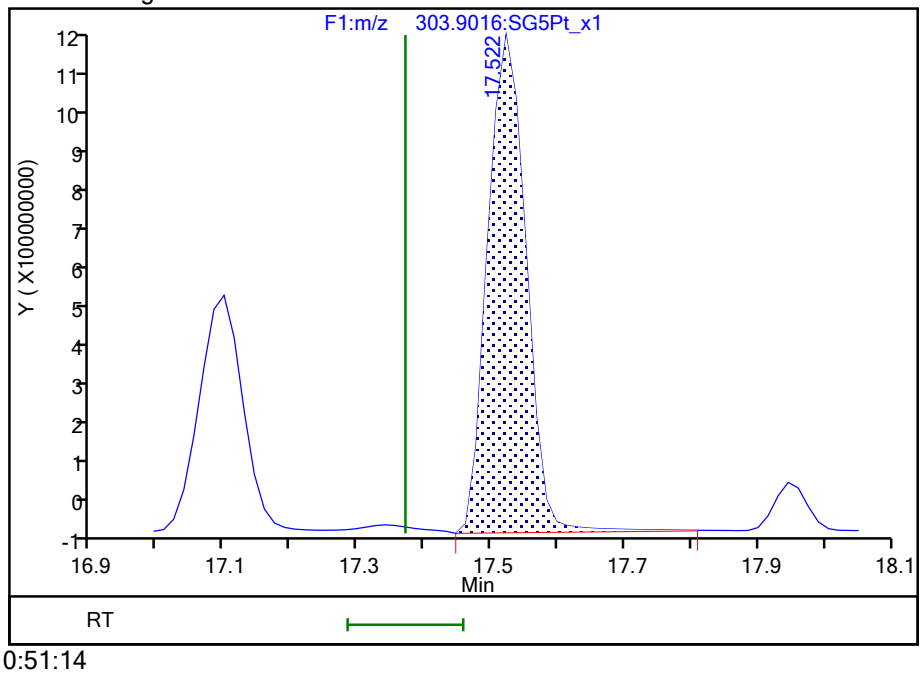

Reviewer: dadunj, 18-Aug-2021 10:51:14

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 2

Processing Integration Results

RT: 18.02
Area: 44688081
Amount: 111.1955
Amount Units: pg/ul

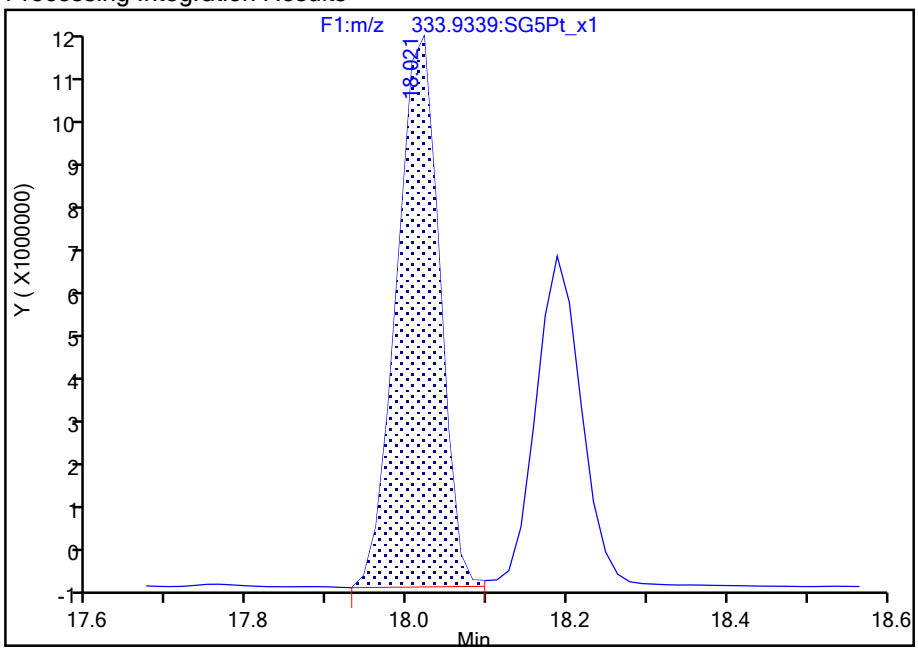

Manual Integration Results

RT: 18.19
Area: 28558761
Amount: 72.172990
Amount Units: pg/ul

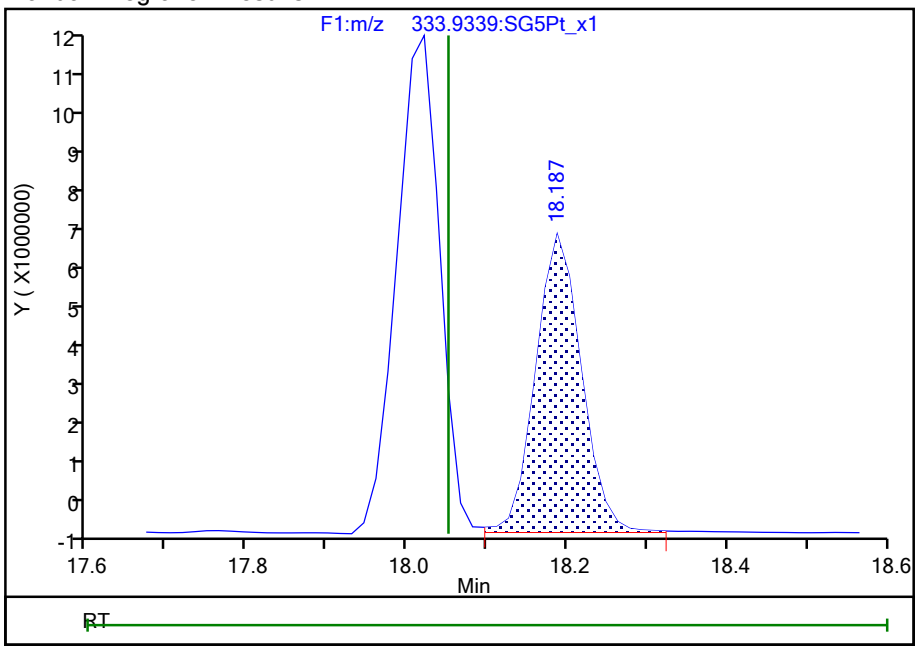

Reviewer: dadunj, 18-Aug-2021 12:10:48
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 3

RT: 18.02
Area: 80493941
Amount: 111.1955
Amount Units: pg/ul

Processing Integration Results

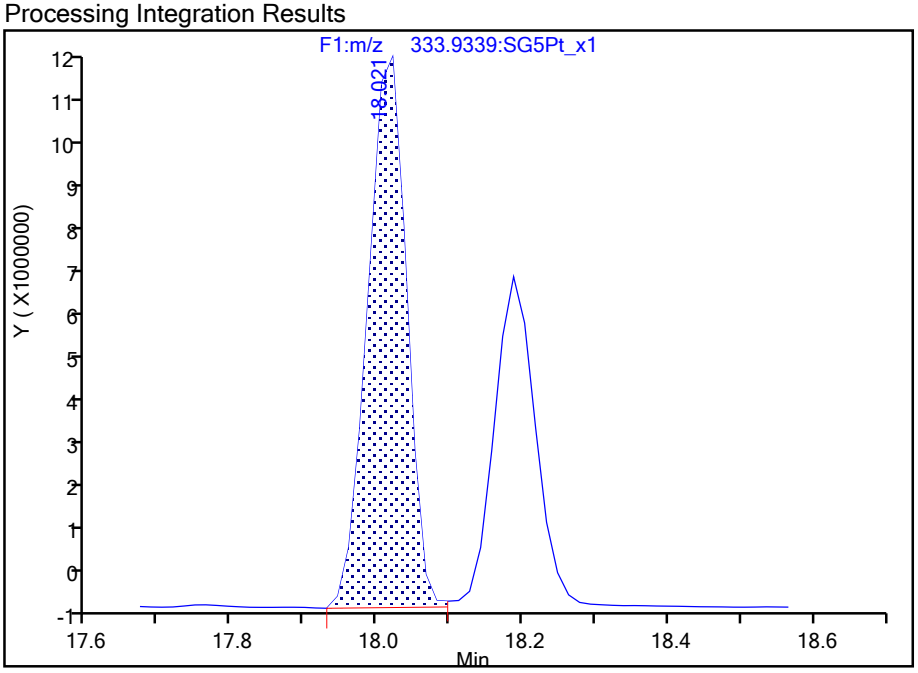

Manual Integration Results

RT: 18.19
Area: 52245695
Amount: 72.172990
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 12:10:48
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 18.02
Area: 35805860
Amount: 111.1955
Amount Units: pg/ul

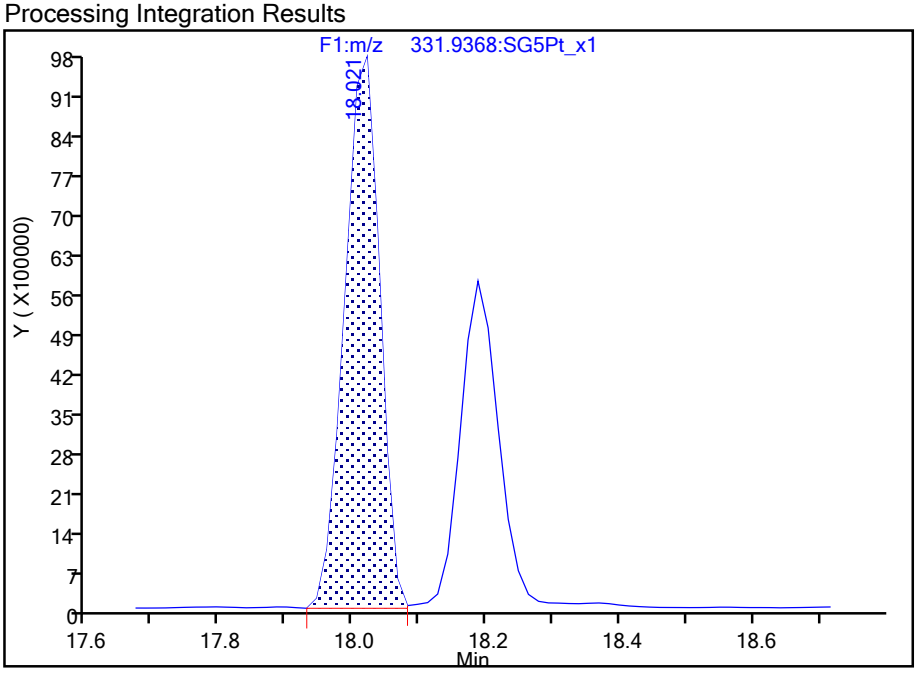

Manual Integration Results

RT: 18.19
Area: 23686934
Amount: 72.172990
Amount Units: pg/ul

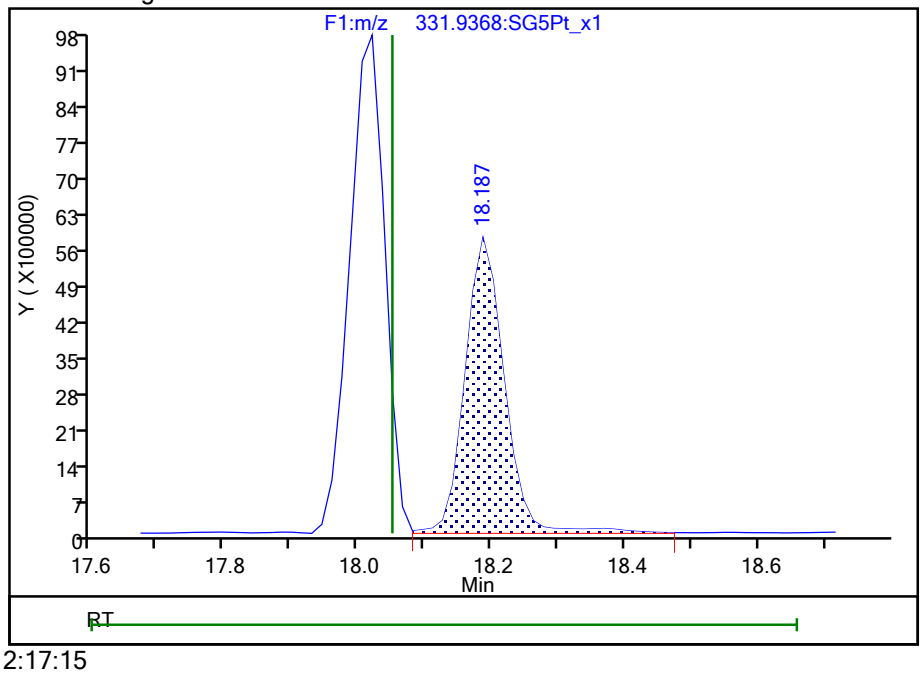

Reviewer: dadunj, 18-Aug-2021 12:17:15
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.10
Area: 16131965
Amount: 33.096115
Amount Units: pg/ul

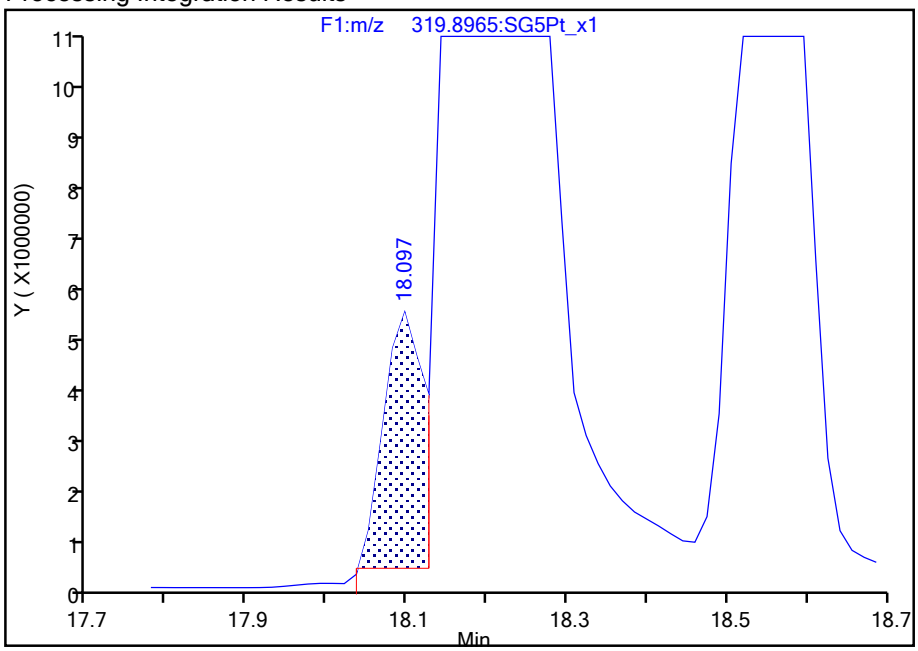

Manual Integration Results

RT: 18.20
Area: 1538280859
Amount: 5307.3618
Amount Units: pg/ul

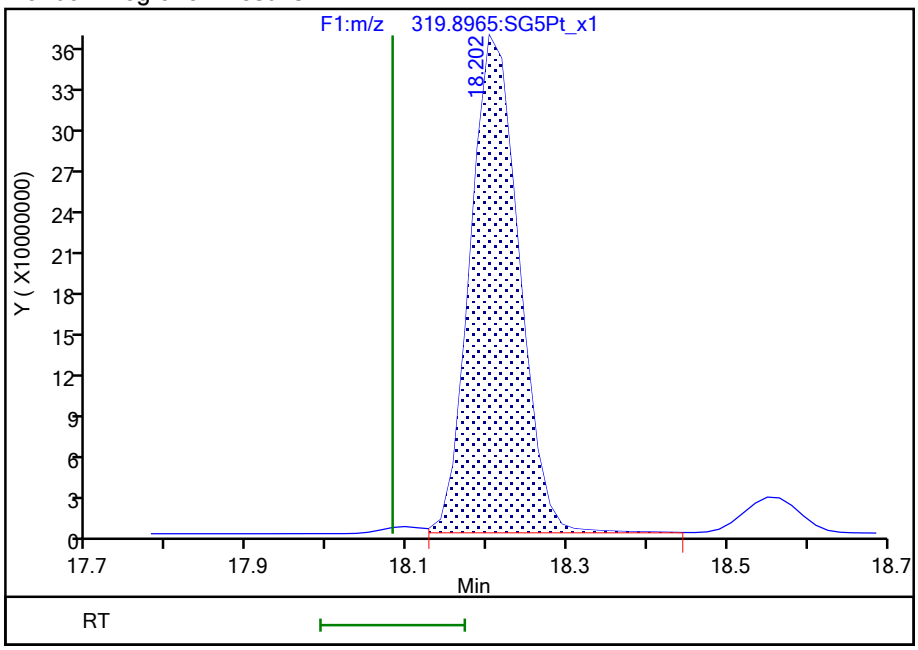

Reviewer: bennettd, 17-Aug-2021 16:41:51

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

RT: 18.10
Area: 560150
Amount: 0.628545
Amount Units: pg/ul

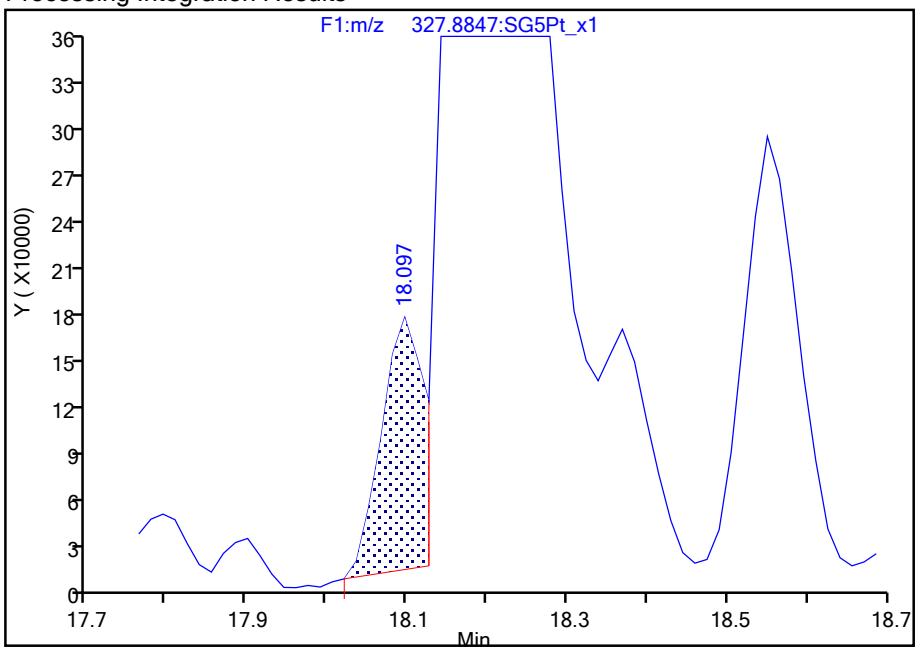

Manual Integration Results

RT: 18.20
Area: 45859903
Amount: 51.459424
Amount Units: pg/ul

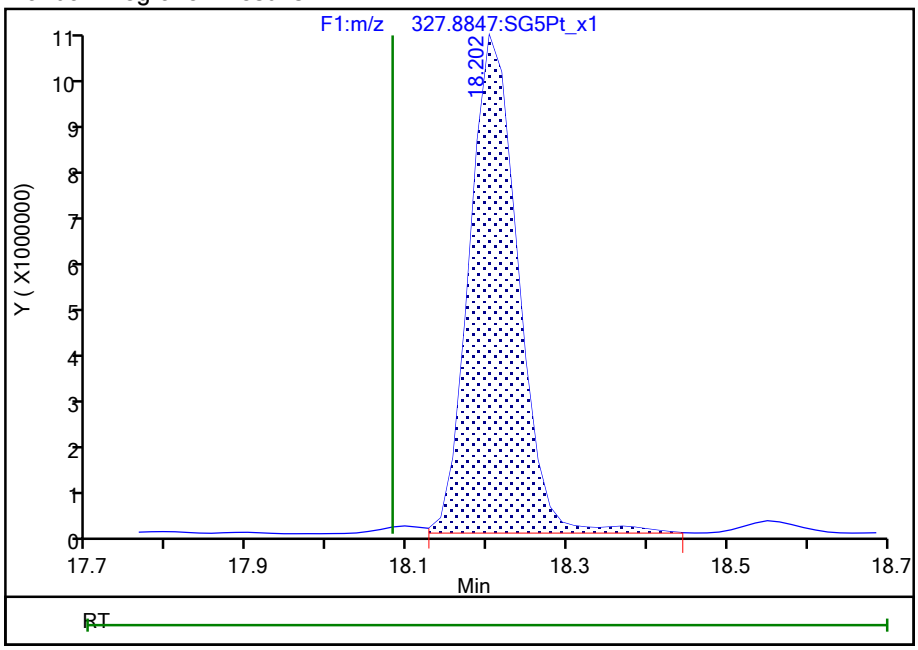

Reviewer: dadunj, 18-Aug-2021 12:17:26

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.46
Area: 9674372
Amount: 31.628682
Amount Units: pg/ul

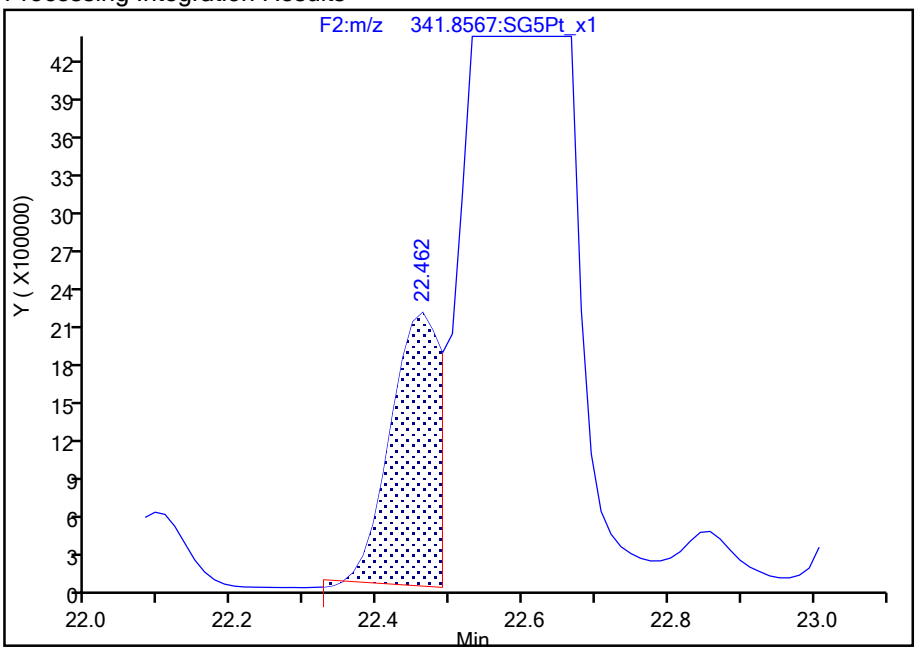

Manual Integration Results

RT: 22.60
Area: 181496668
Amount: 595.3110
Amount Units: pg/ul

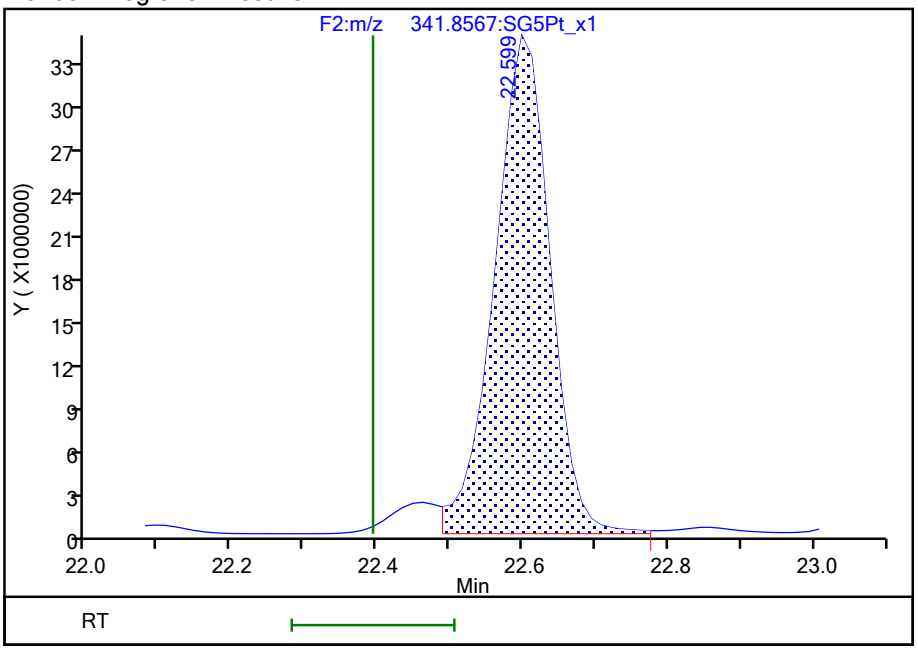

Reviewer: dadunj, 18-Aug-2021 10:51:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

RT: 22.46
Area: 24886829
Amount: 31.628682
Amount Units: pg/ul

Processing Integration Results

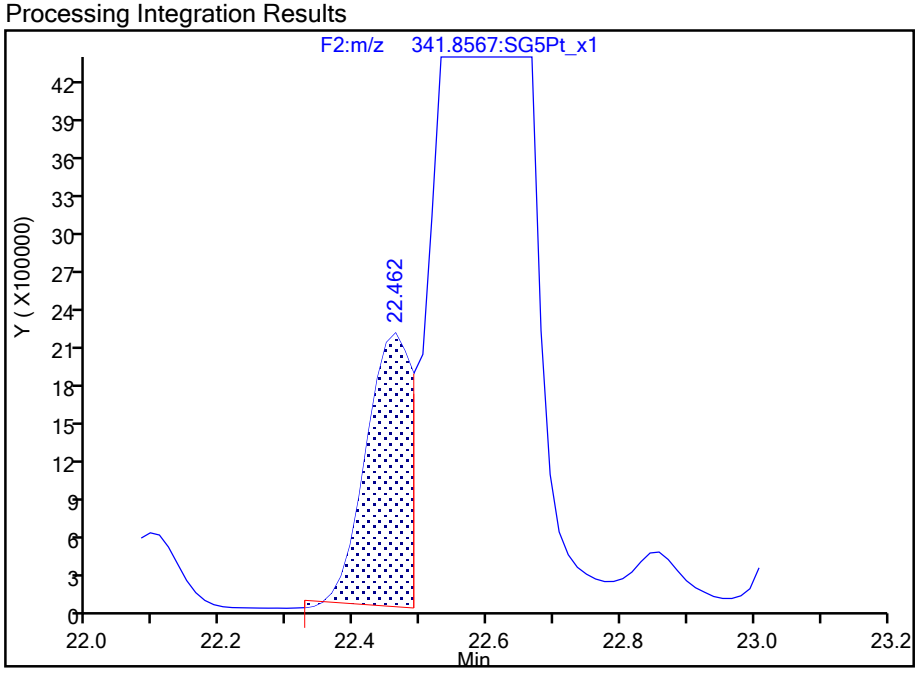

Manual Integration Results

RT: 22.60
Area: 468416716
Amount: 595.3110
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 10:51:52
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

774518

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.46
Area: 15212457
Amount: 31.628682
Amount Units: pg/ul

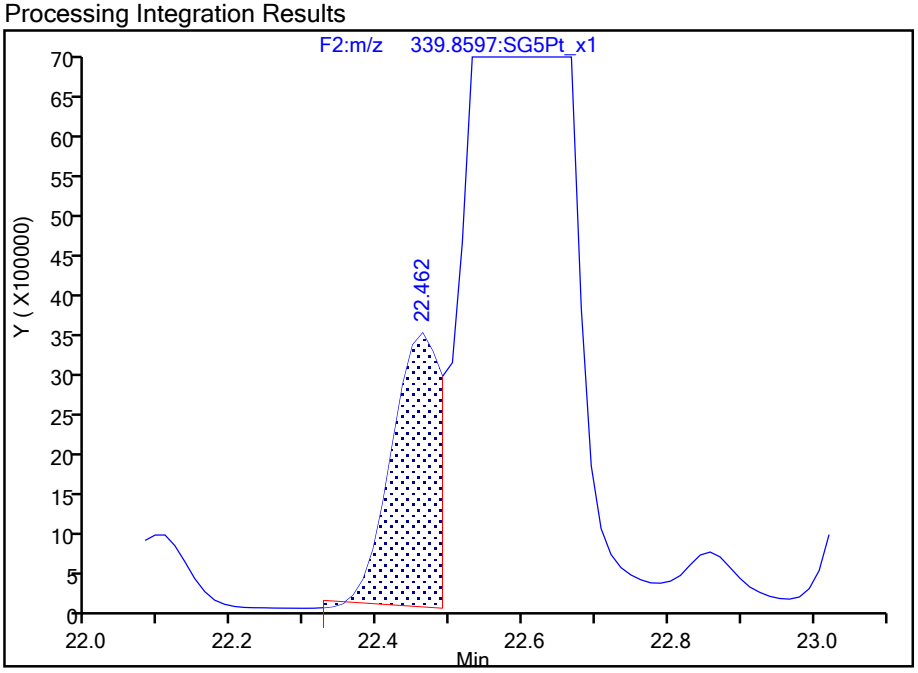

Manual Integration Results

RT: 22.60
Area: 286920048
Amount: 595.3110
Amount Units: pg/ul

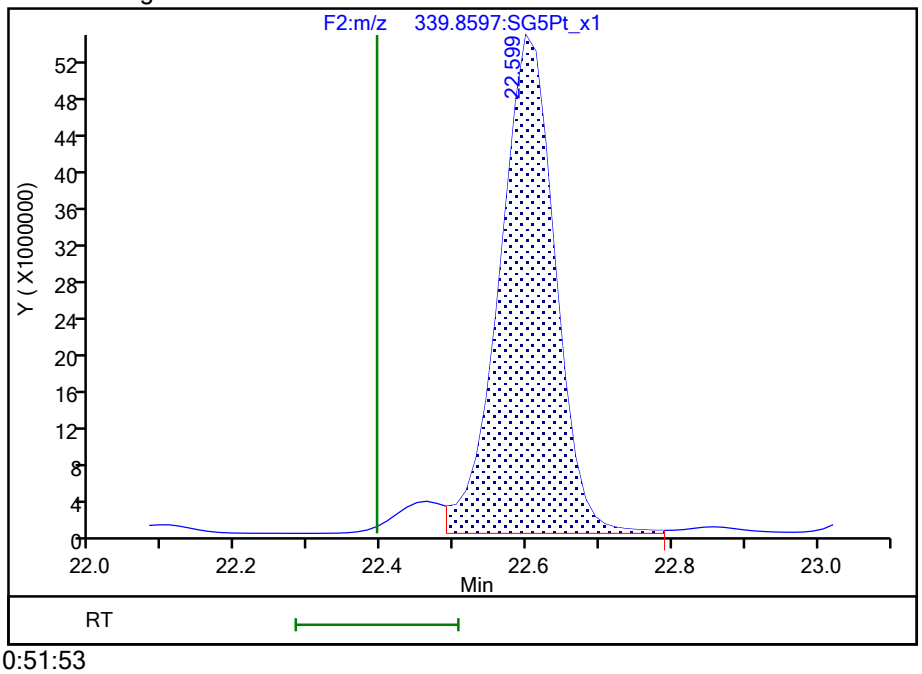

Reviewer: dadunj, 18-Aug-2021 10:51:53
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 23.73

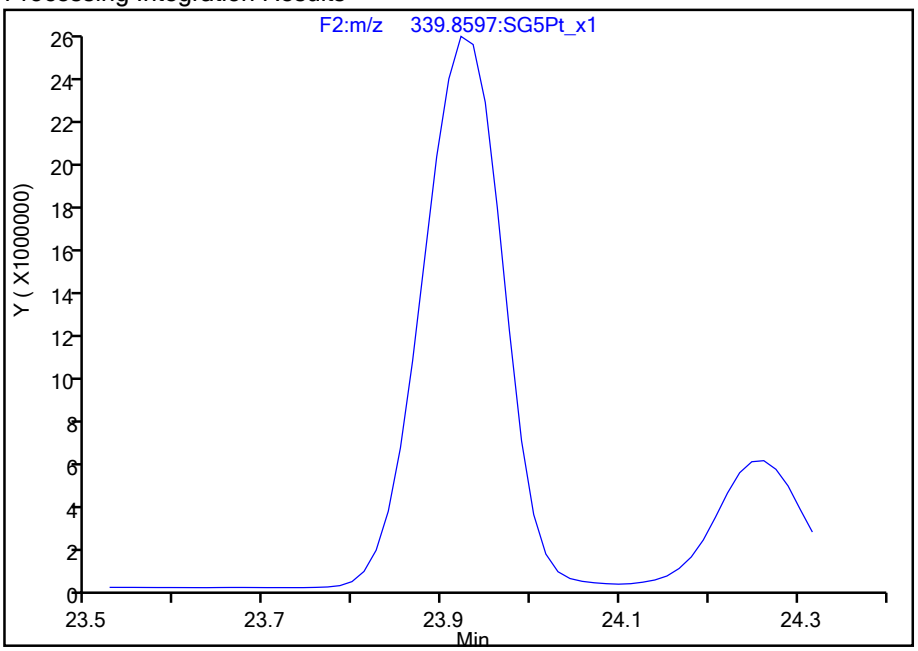

Manual Integration Results

RT: 23.92
Area: 163399711
Amount: 306.6683
Amount Units: pg/ul

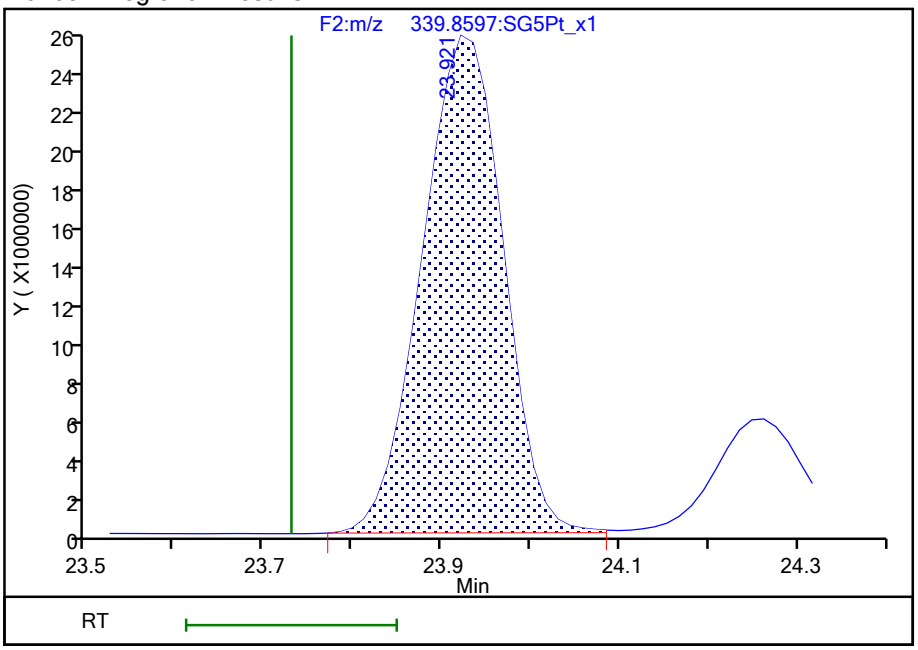

Reviewer: bennettd, 17-Aug-2021 16:42:49
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

774520

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.45

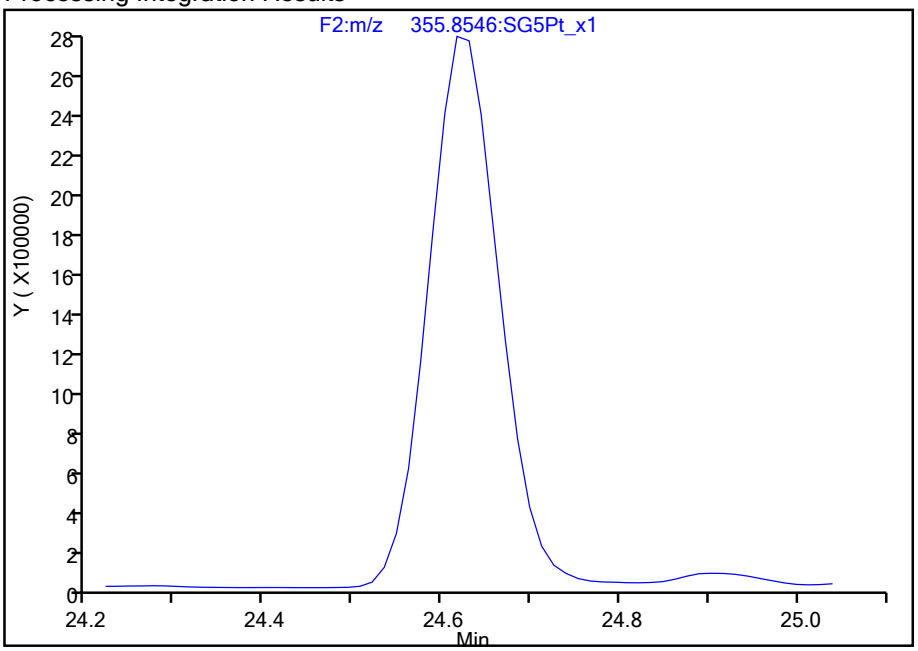

Manual Integration Results

RT: 24.62
Area: 15391663
Amount: 44.139801
Amount Units: pg/ul

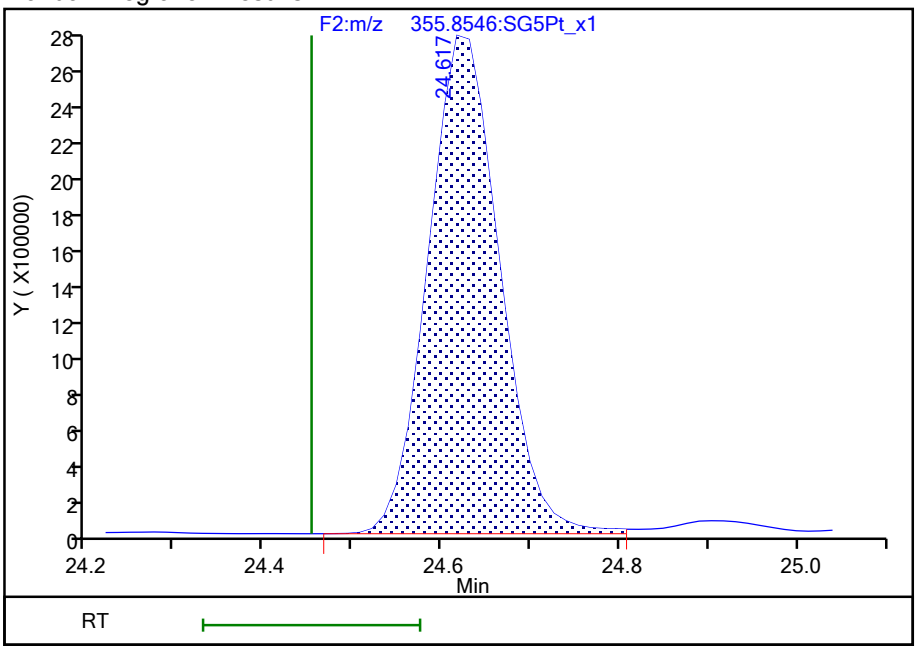

Reviewer: dadunj, 18-Aug-2021 10:52:28
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.21- 25.49)

Signal: 1

Processing Integration Results

RT = 25.149 Area = 1230813

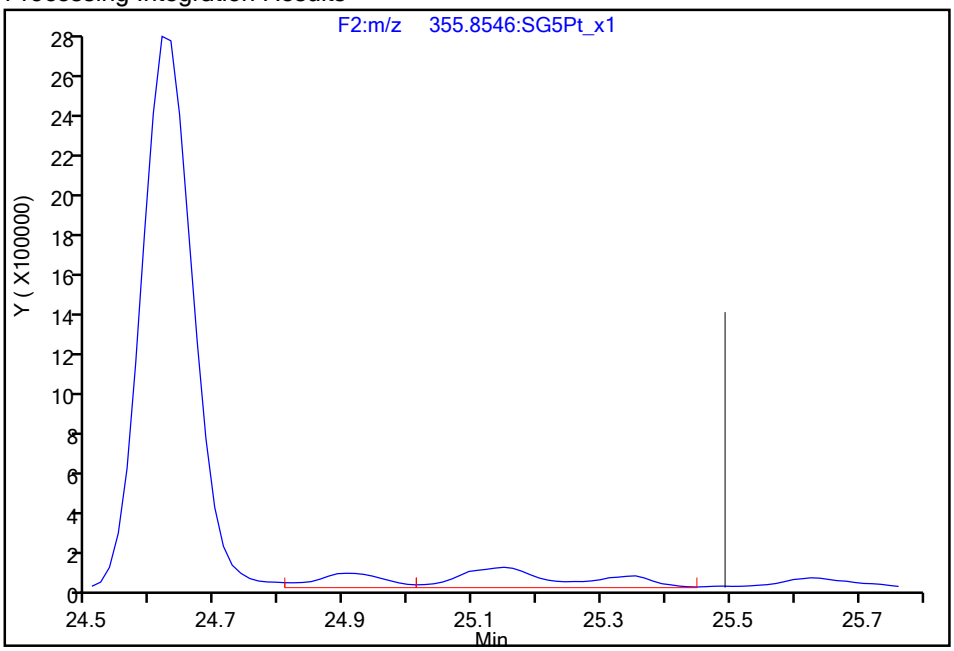

Manual Integration Results

RT = 25.149 Area = 874797 M

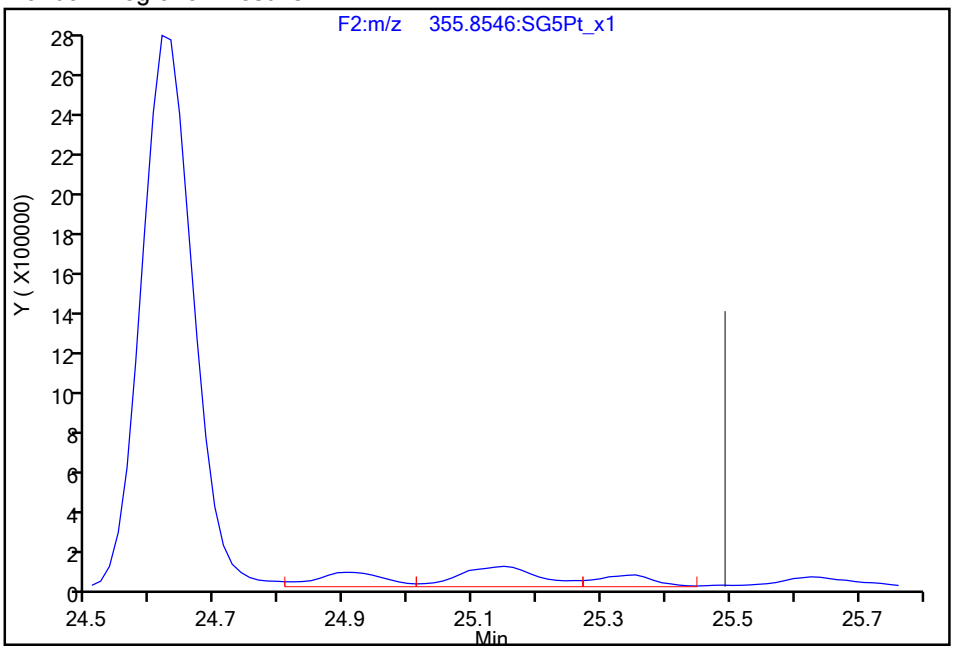

Reviewer: dadunj, 18-Aug-2021 10:52:40

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.58
Area: 19402935
Amount: 36.875654
Amount Units: pg/ul

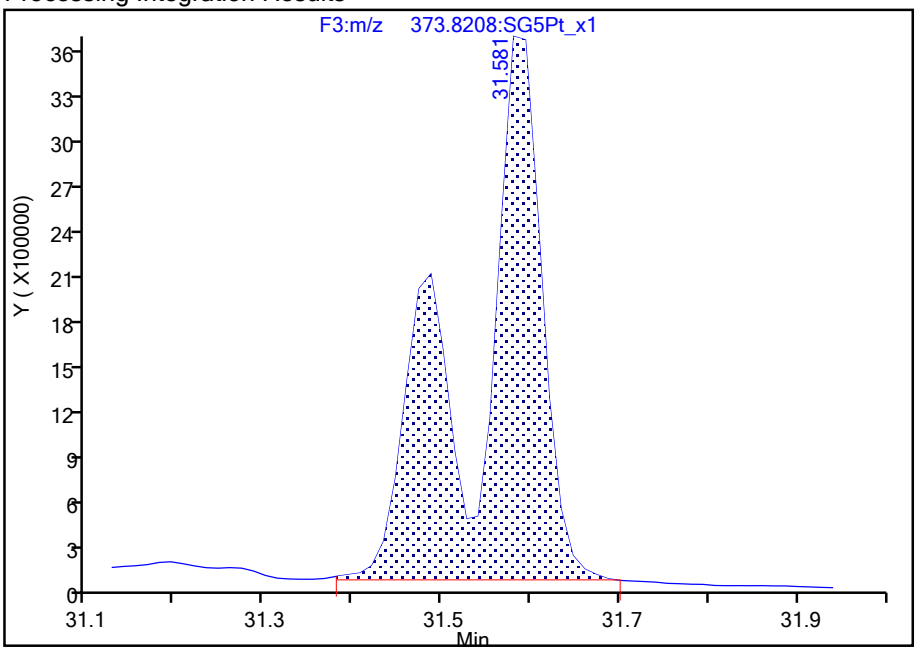

Manual Integration Results

RT: 31.58
Area: 12337703
Amount: 28.047250
Amount Units: pg/ul

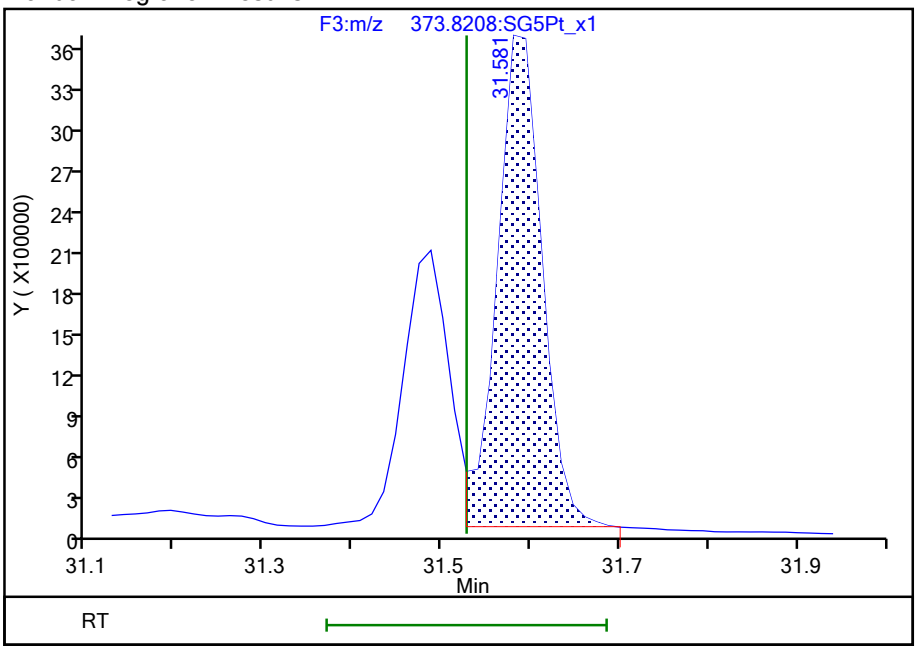

Reviewer: dadunj, 18-Aug-2021 10:52:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,7,8,9-HxCDF, CAS: 116843-04-0

Signal: 1

Processing Integration Results

RT: 31.57
Area: 23538323
Amount: 67.803613
Amount Units: pg/ul

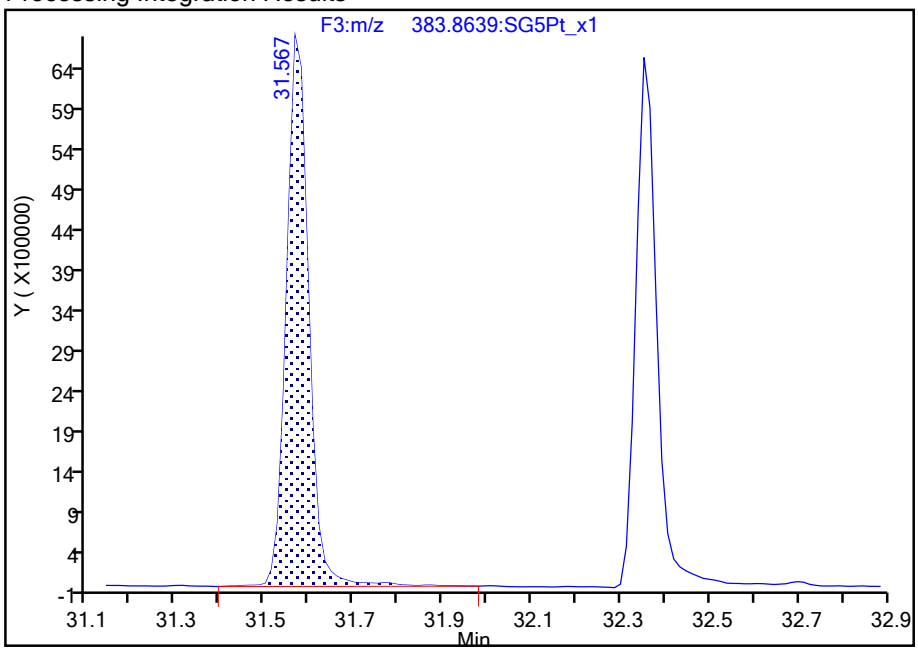

Manual Integration Results

RT: 32.35
Area: 21701595
Amount: 63.394417
Amount Units: pg/ul

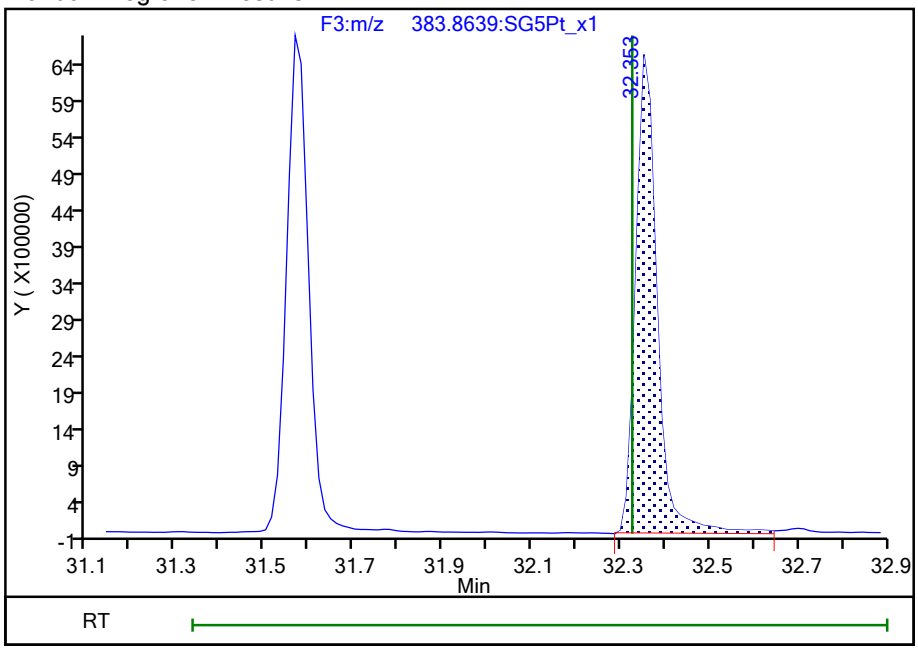

Reviewer: dadunj, 18-Aug-2021 10:53:17

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.45
Area: 28423346
Amount: 64.958127
Amount Units: pg/ul

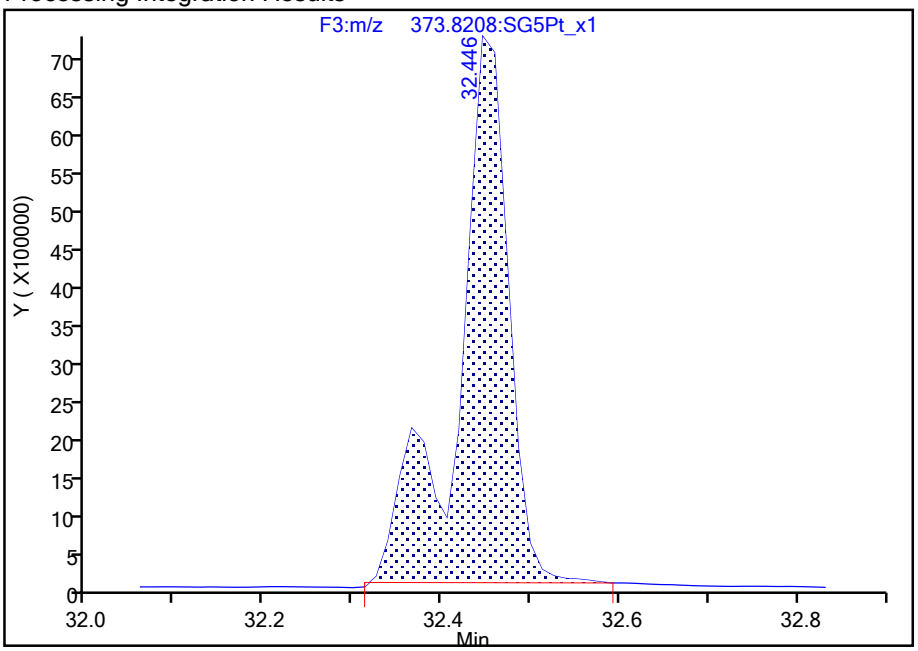

Manual Integration Results

RT: 32.37
Area: 5880455
Amount: 13.689002
Amount Units: pg/ul

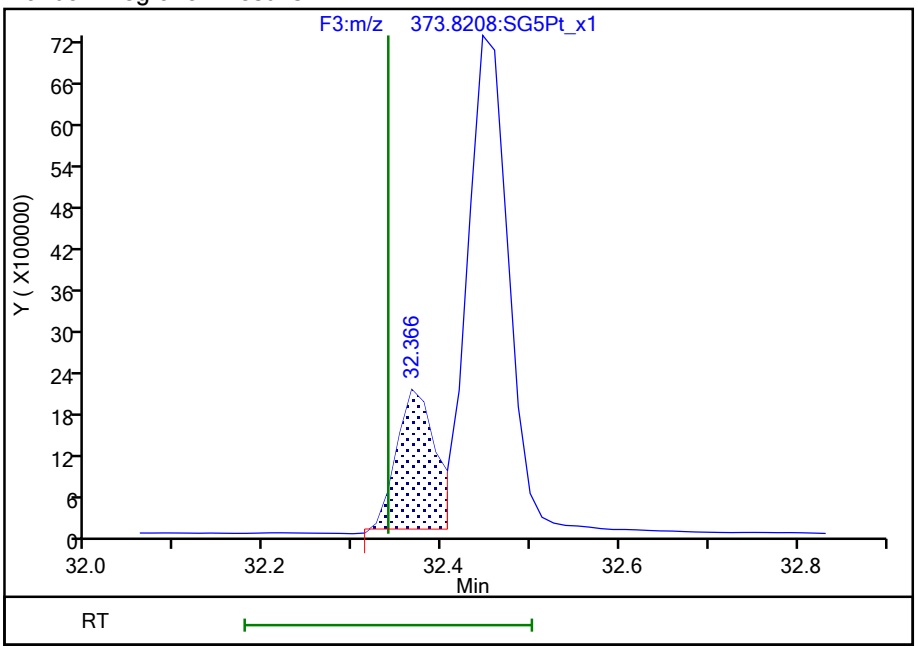

Reviewer: dadunj, 18-Aug-2021 10:53:04

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.45
Area: 23508730
Amount: 64.958127
Amount Units: pg/ul

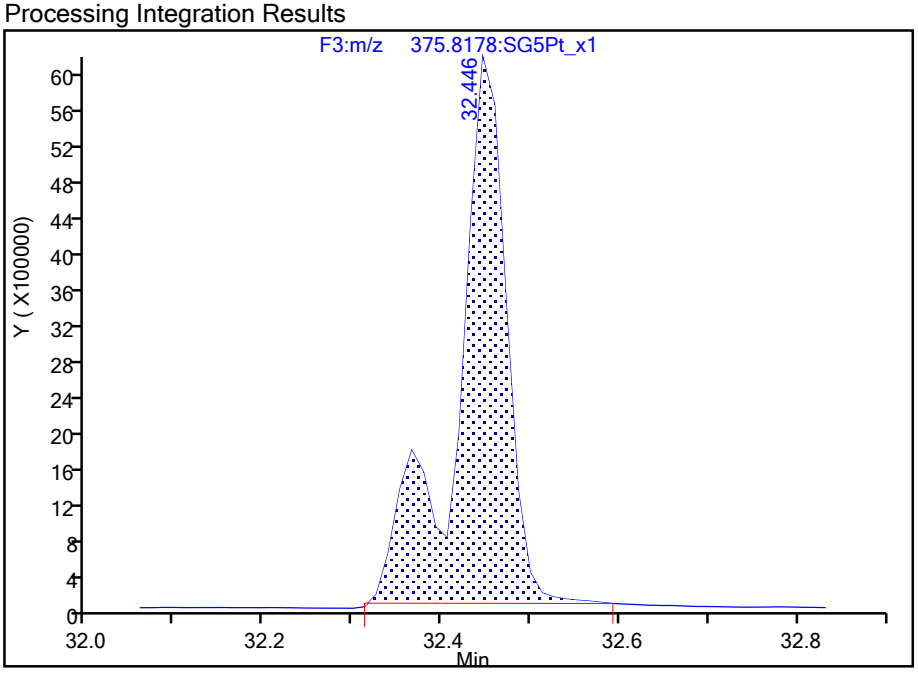

Manual Integration Results

RT: 32.37
Area: 4351819
Amount: 13.689002
Amount Units: pg/ul

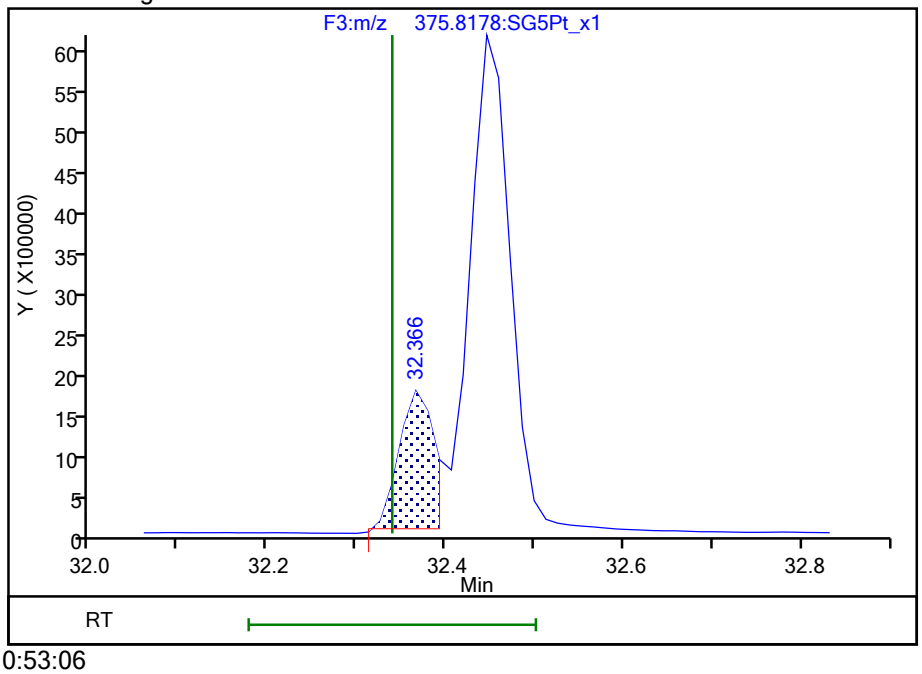

Reviewer: dadunj, 18-Aug-2021 10:53:06
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

774526

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

Not Detected
RT: 27.94- 32.45

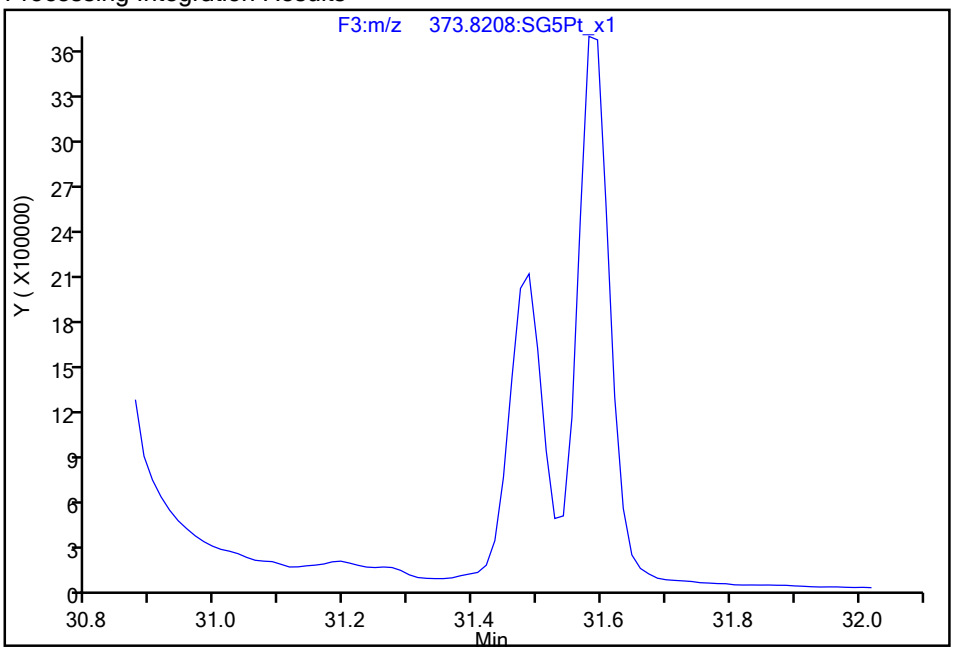

Manual Integration Results

RT = 31.487 Area = 7065231 M

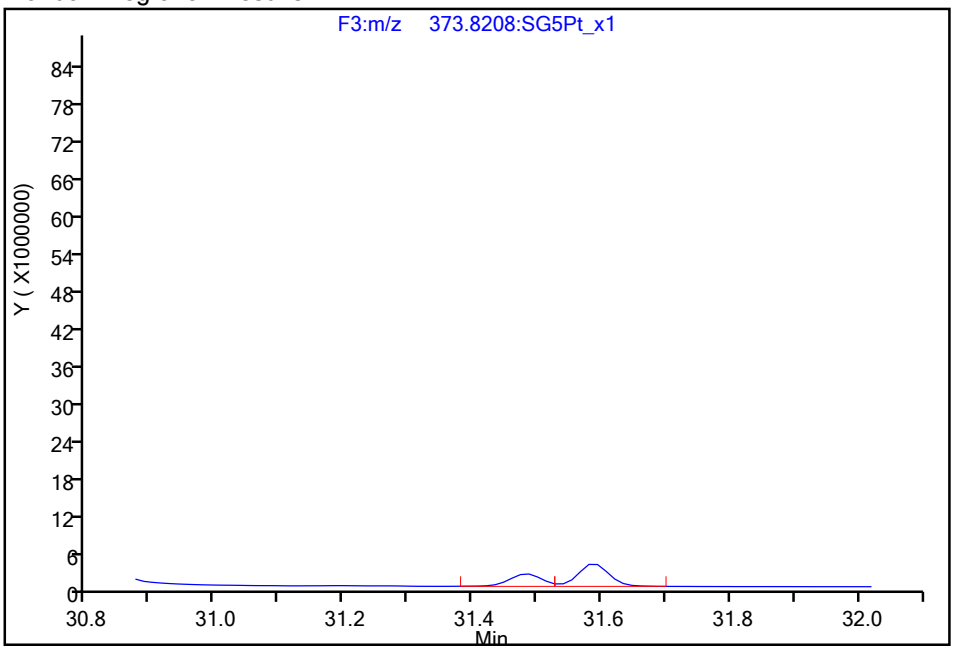

Reviewer: dadunj, 18-Aug-2021 10:53:27

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.446 Area = 28423346

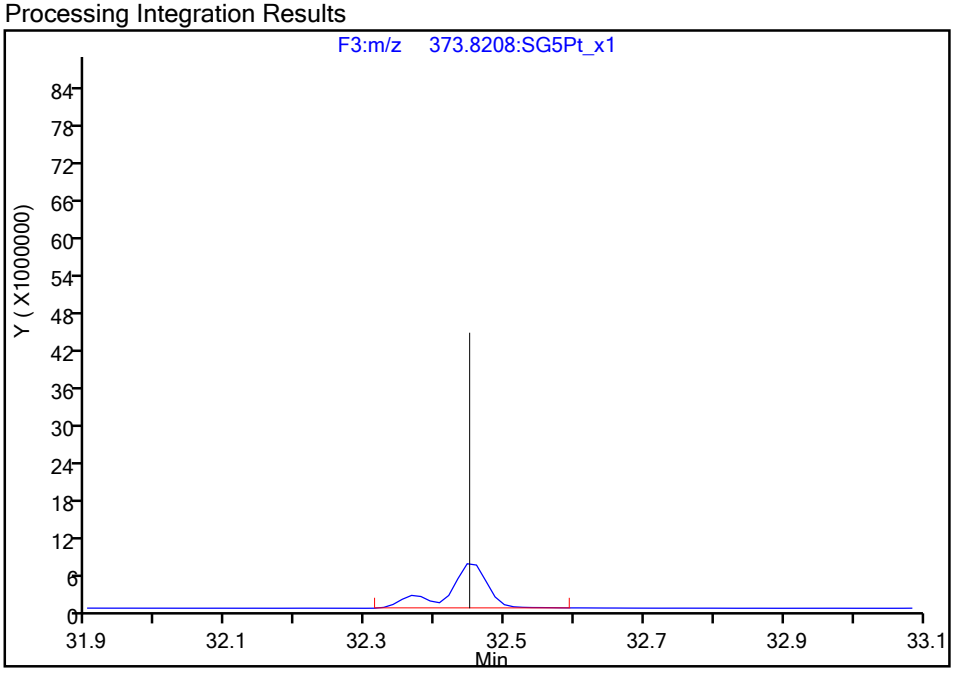

Manual Integration Results

RT = 32.446 Area = 22541744 M

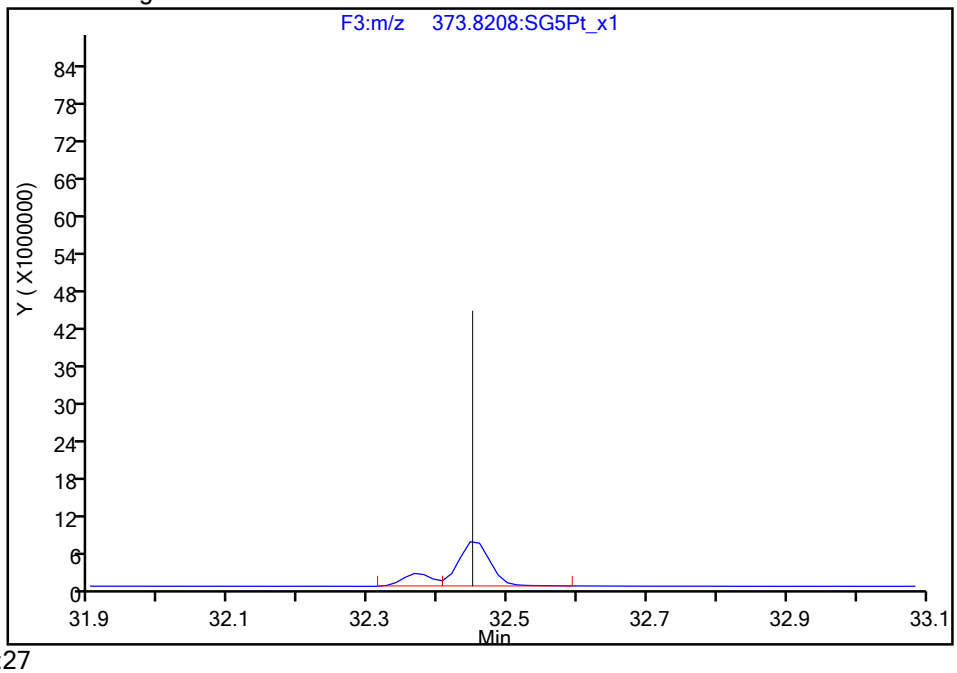

Reviewer: dadunj, 18-Aug-2021 10:53:27

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (29.36- 32.41)

Signal: 2

Processing Integration Results

RT = 31.035 Area = 3686619

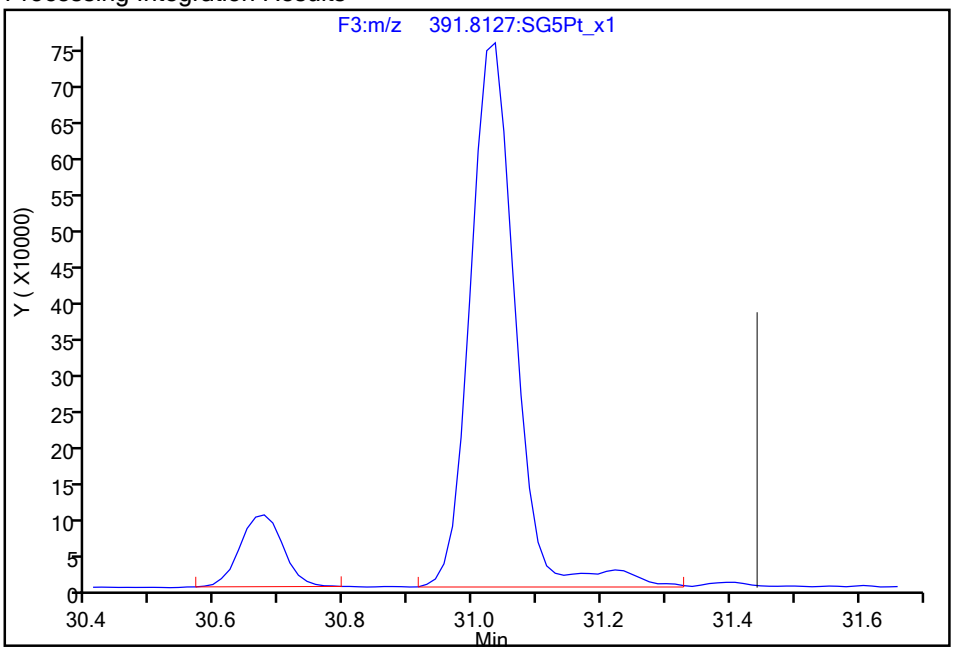

Manual Integration Results

RT = 31.035 Area = 3555607 M

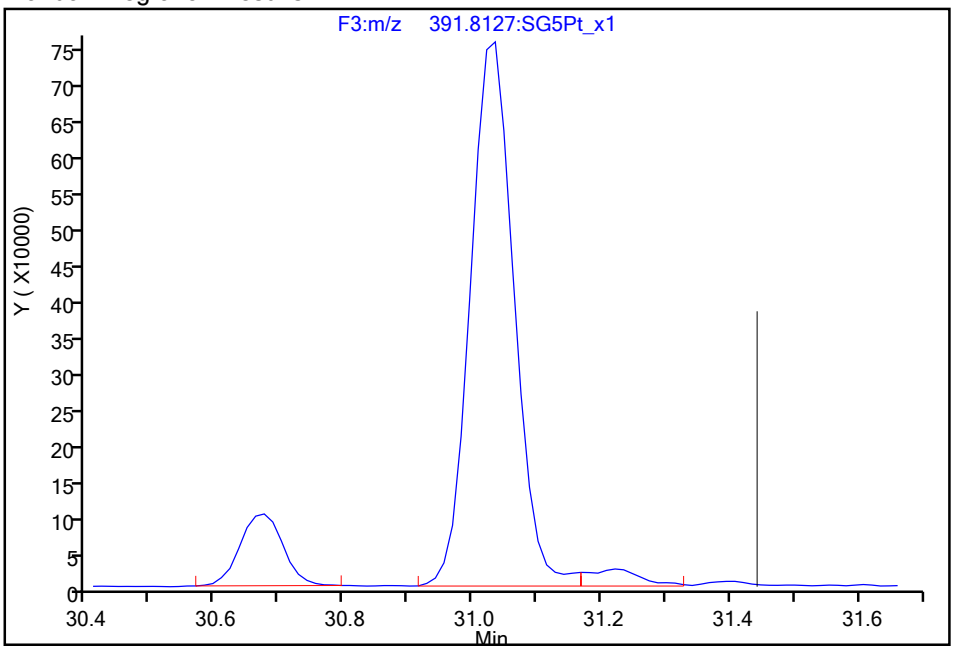

Reviewer: dadunj, 18-Aug-2021 10:53:39

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.80
Area: 124981156
Amount: 309.4248
Amount Units: pg/ul

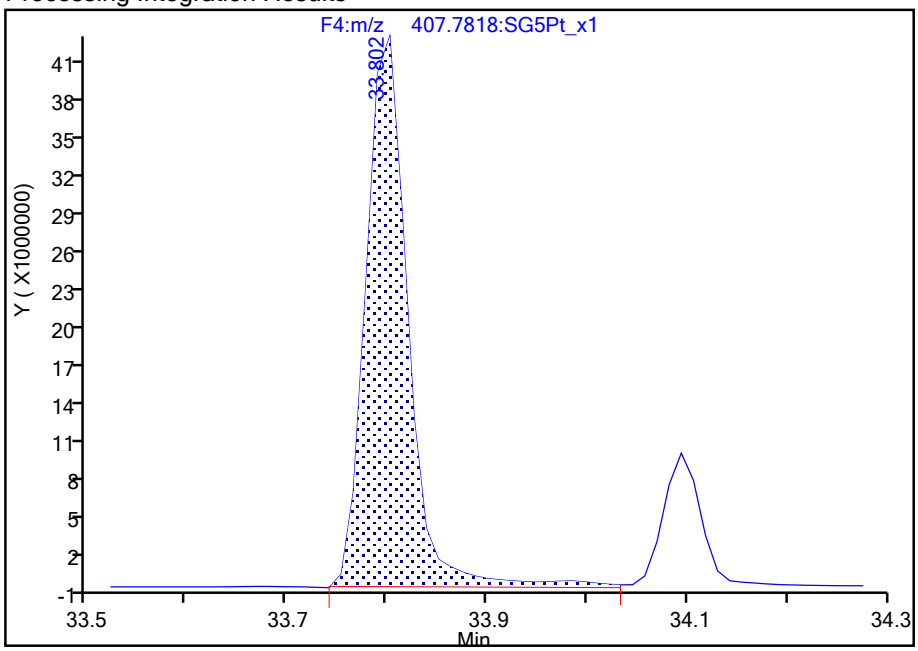

Manual Integration Results

RT: 33.80
Area: 122683024
Amount: 303.4926
Amount Units: pg/ul

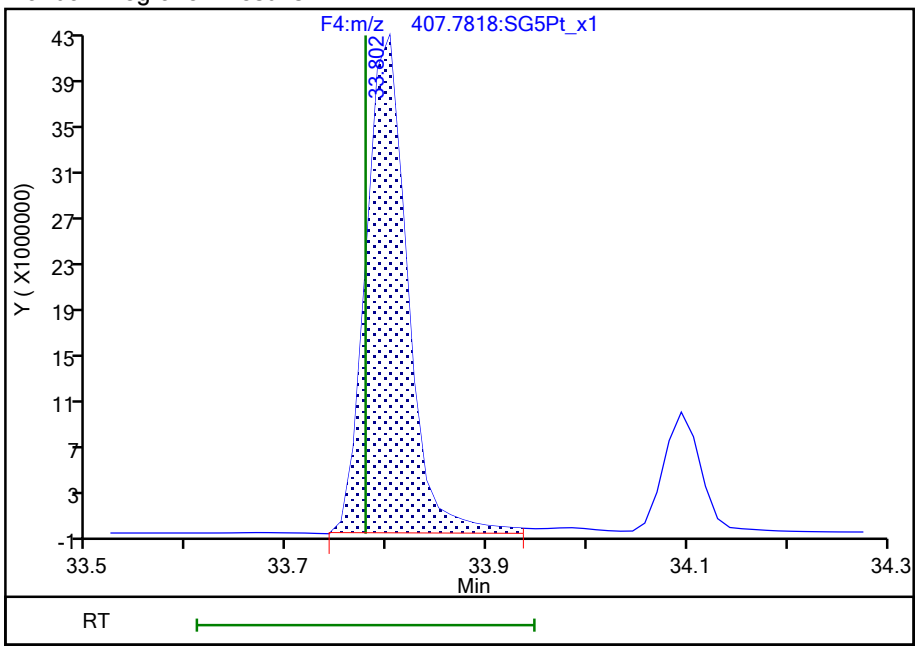

Reviewer: dadunj, 18-Aug-2021 10:53:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d				
Injection Date:	15-Aug-2021 04:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	46	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.80
Area: 119659233
Amount: 309.4248
Amount Units: pg/ul

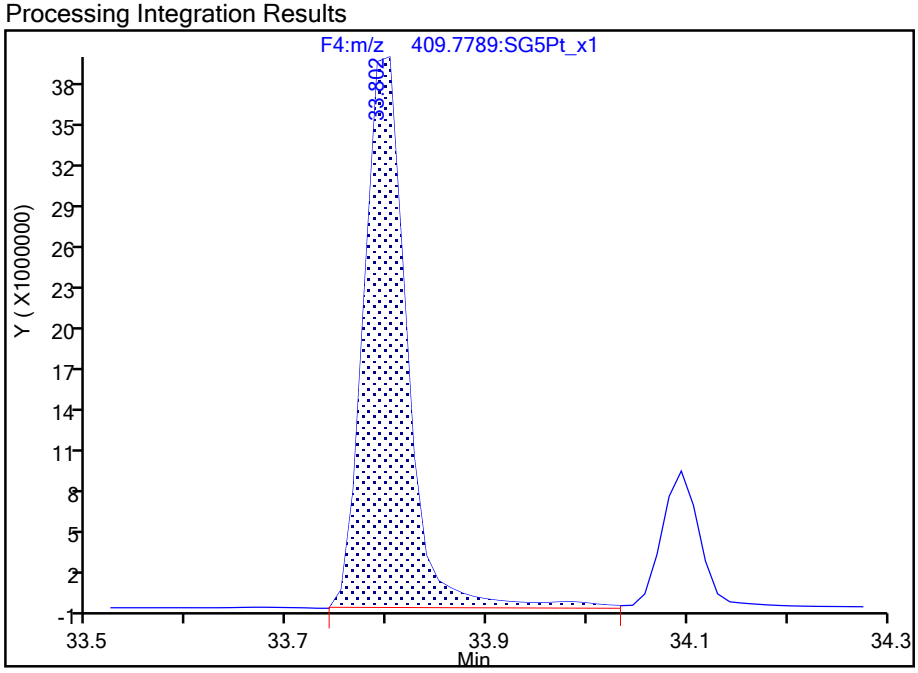

Manual Integration Results

RT: 33.80
Area: 117267215
Amount: 303.4926
Amount Units: pg/ul

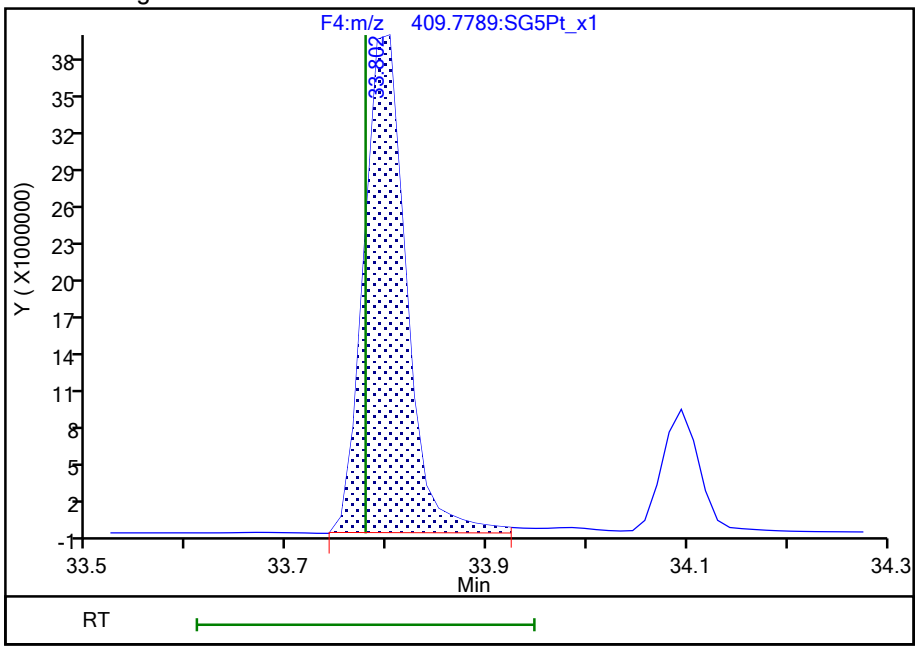

Reviewer: dadunj, 18-Aug-2021 10:53:45

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

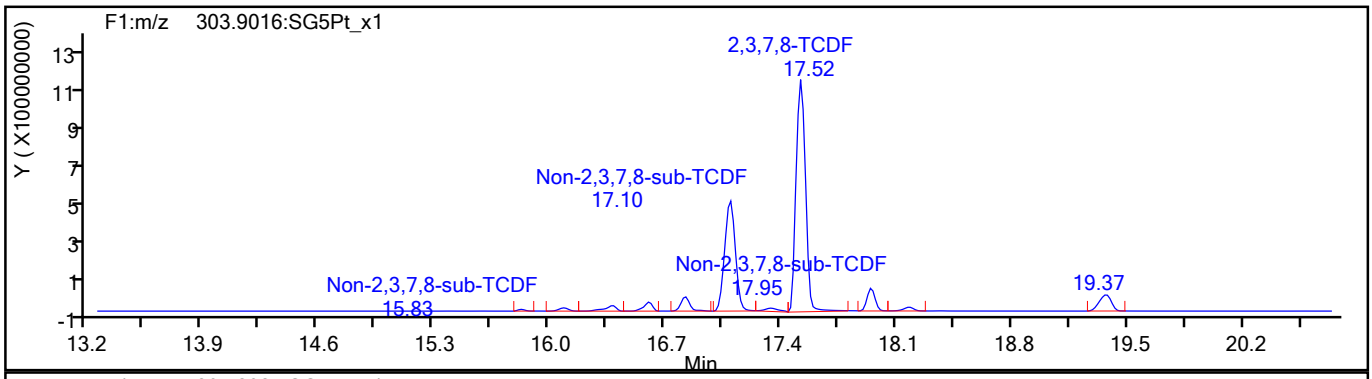

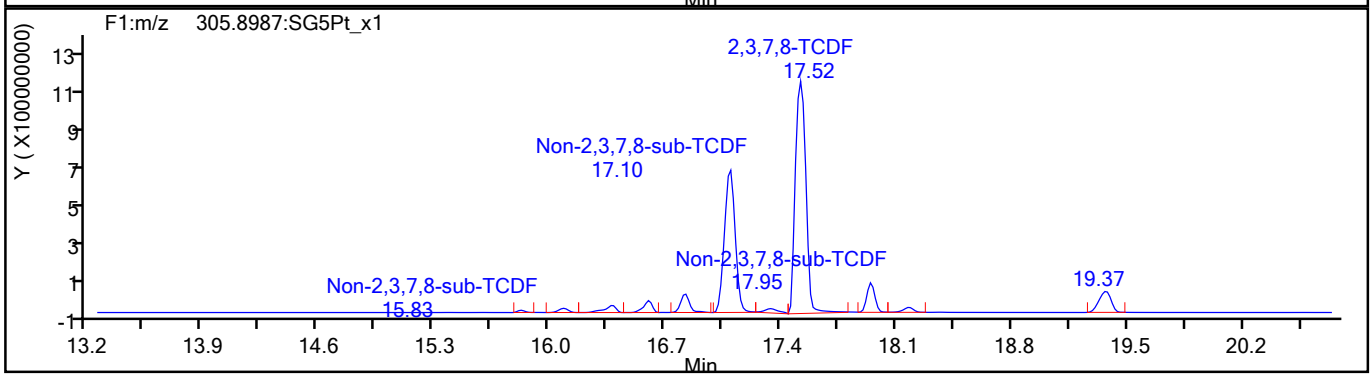

TCDF Standards

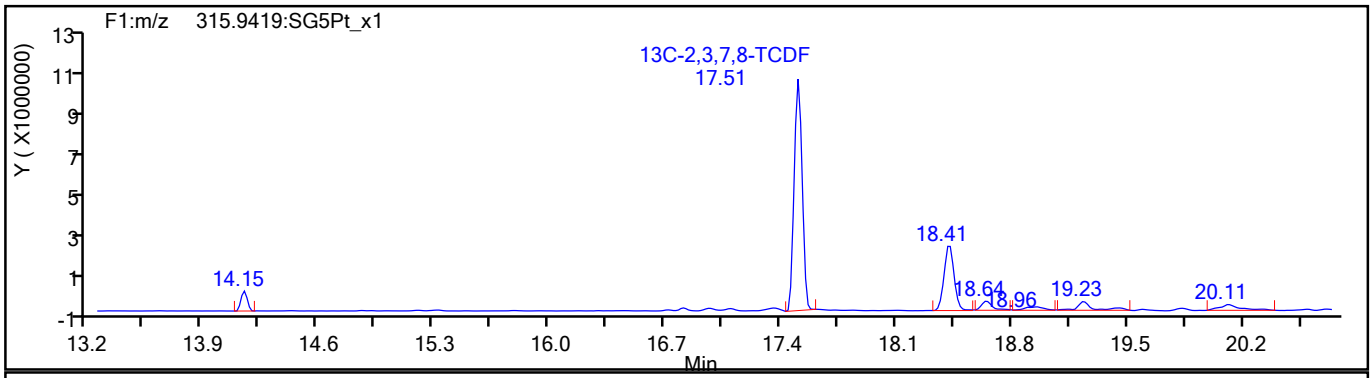

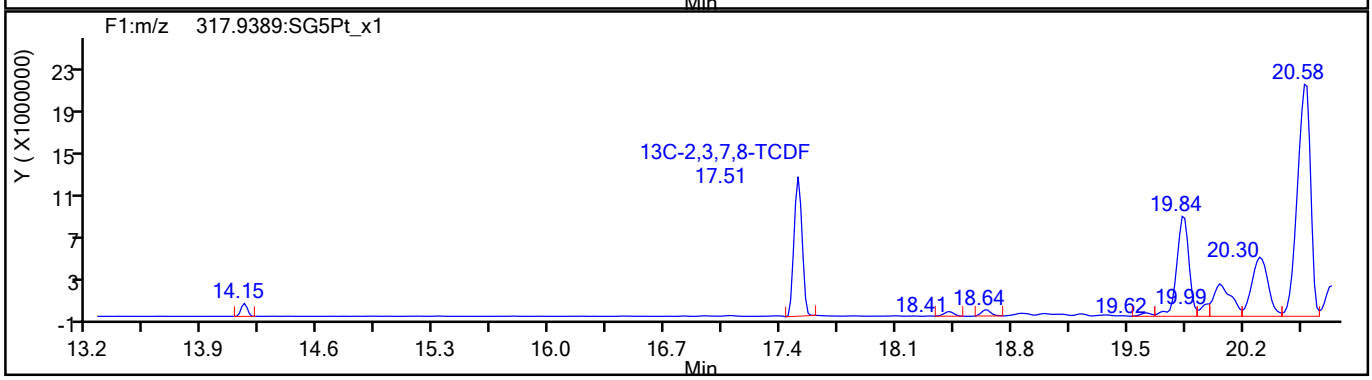

774532

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

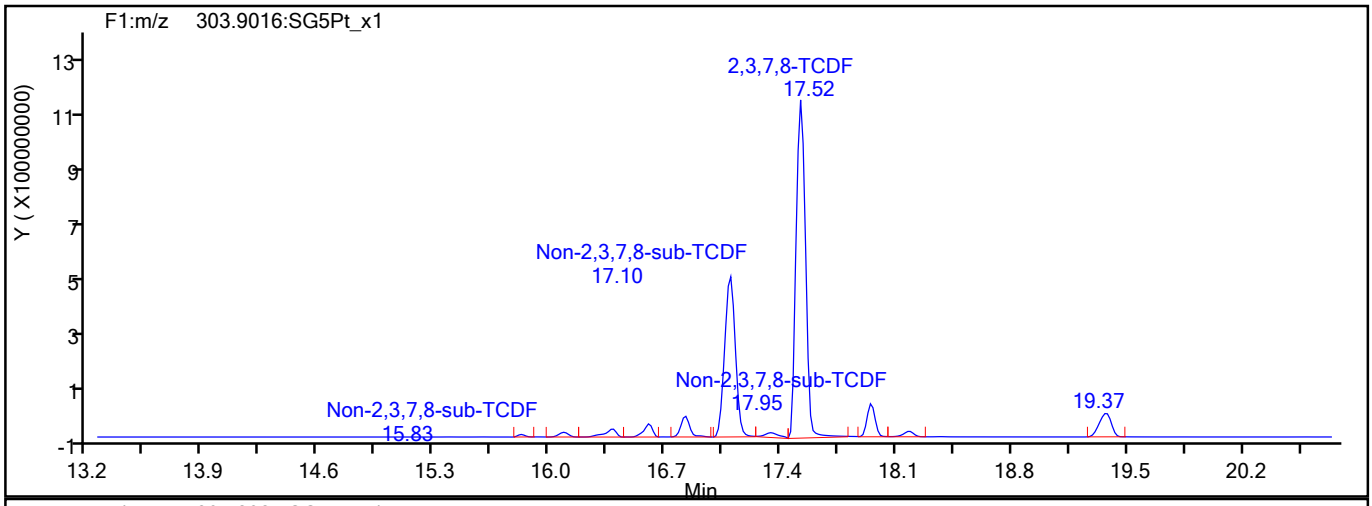

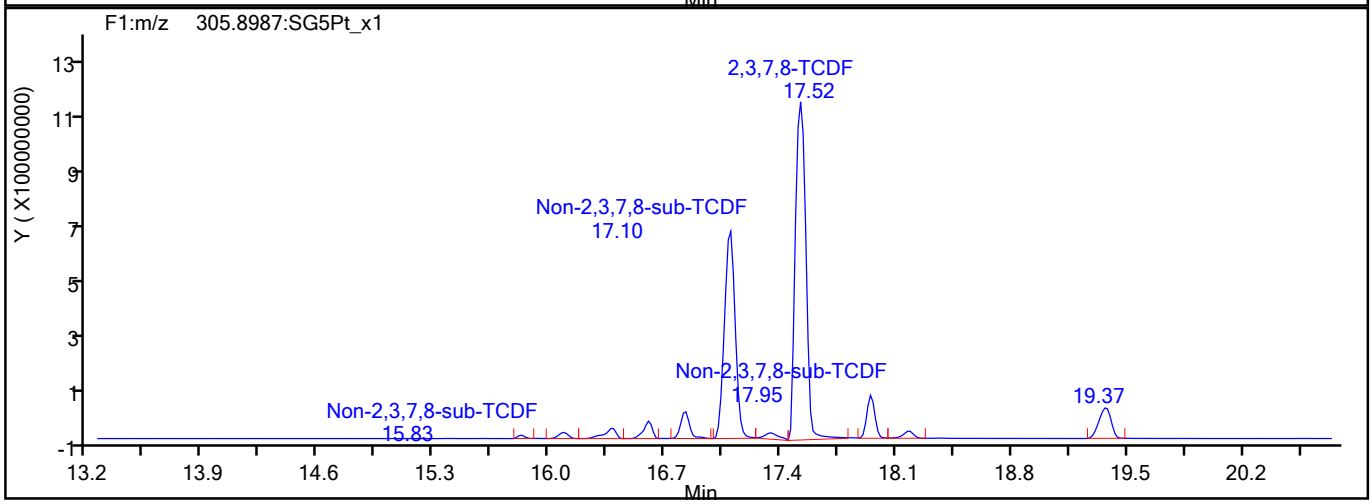

TCDF Interference Mass

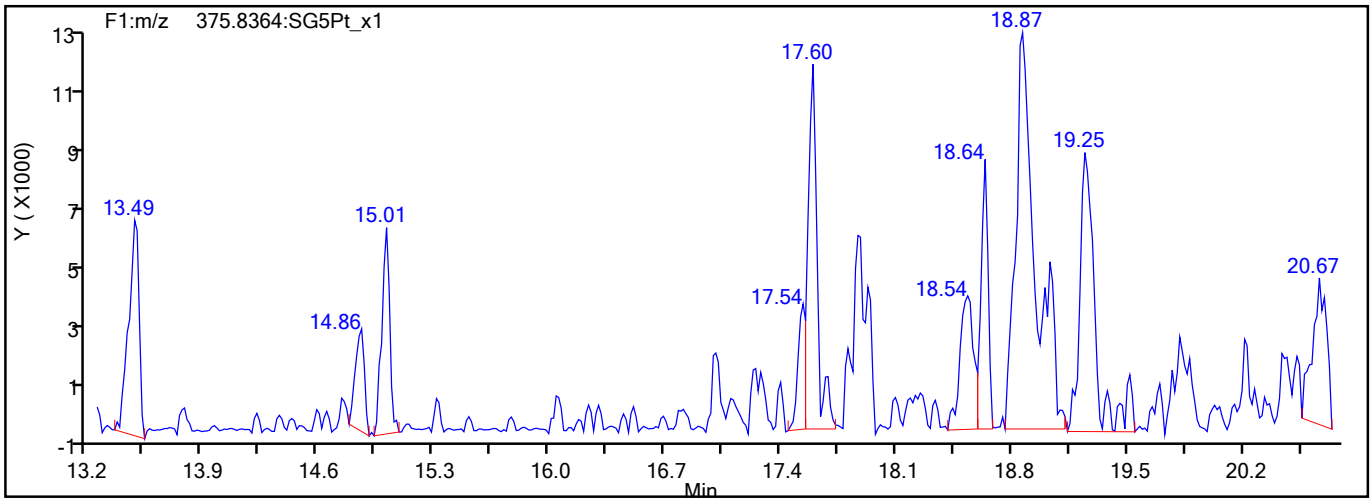

774533

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

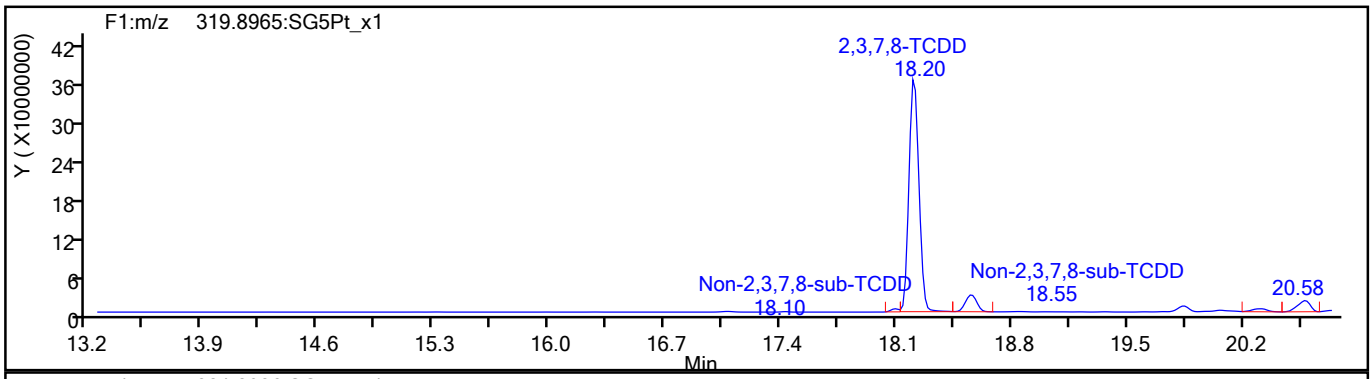

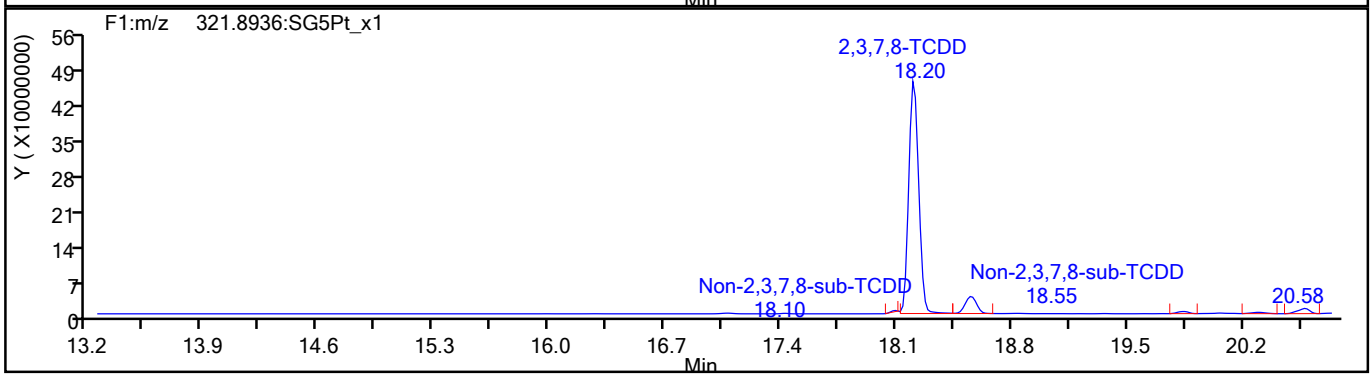

TCDD Standards

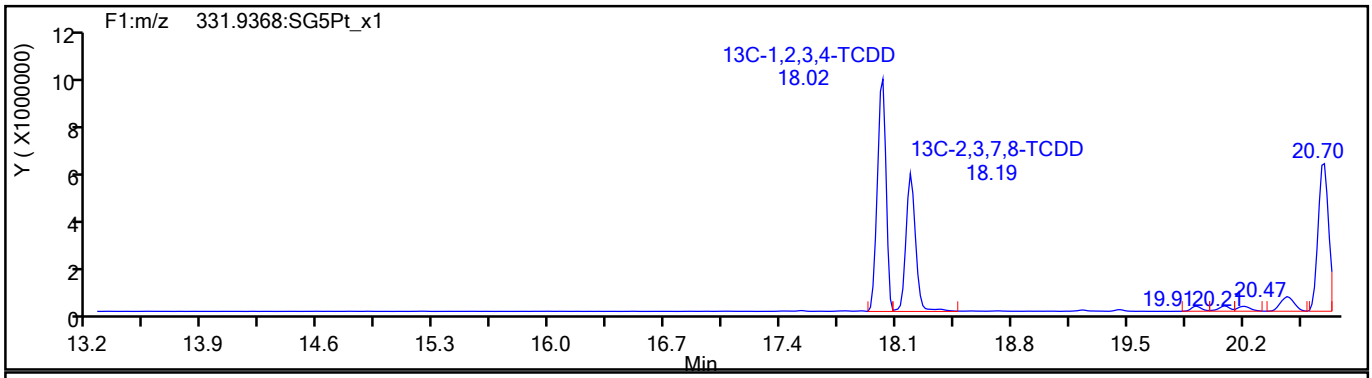

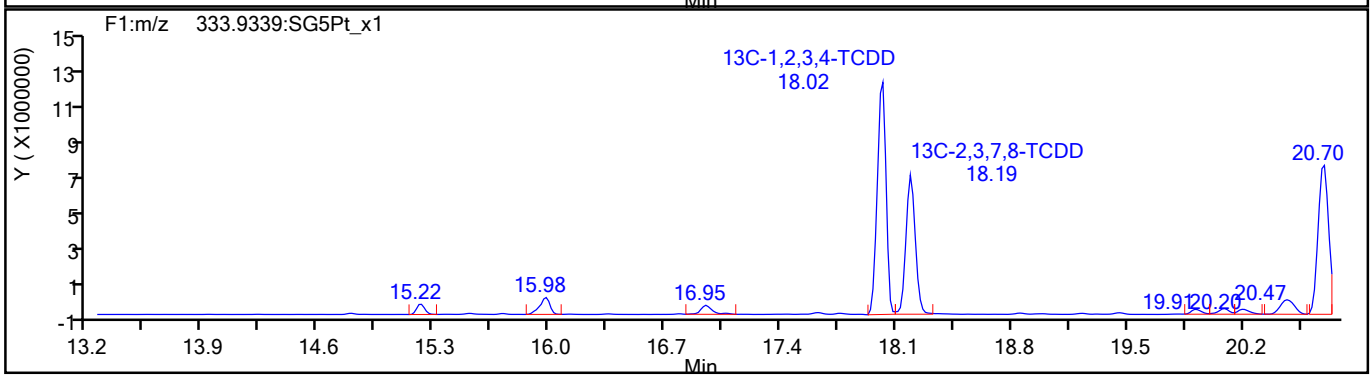

774534

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

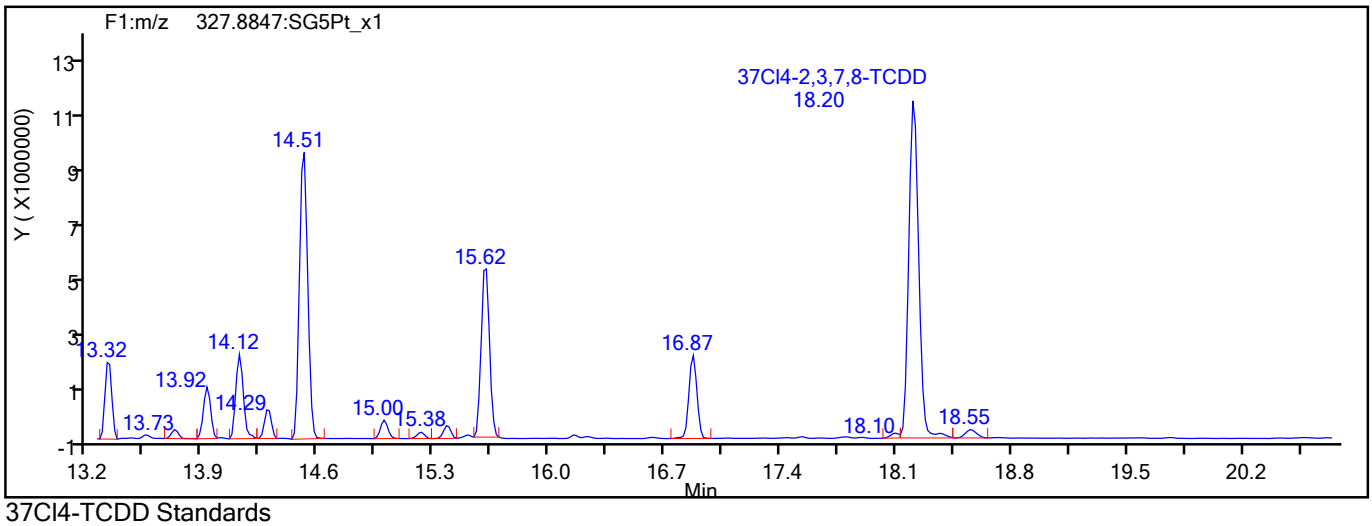

37Cl4-TCDD Standards

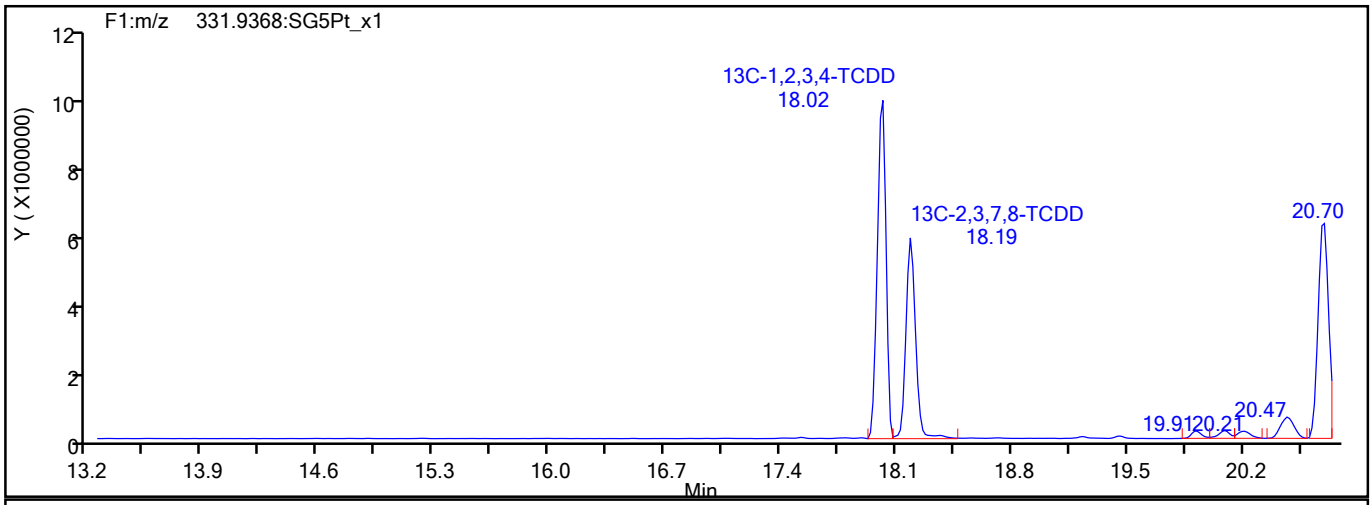

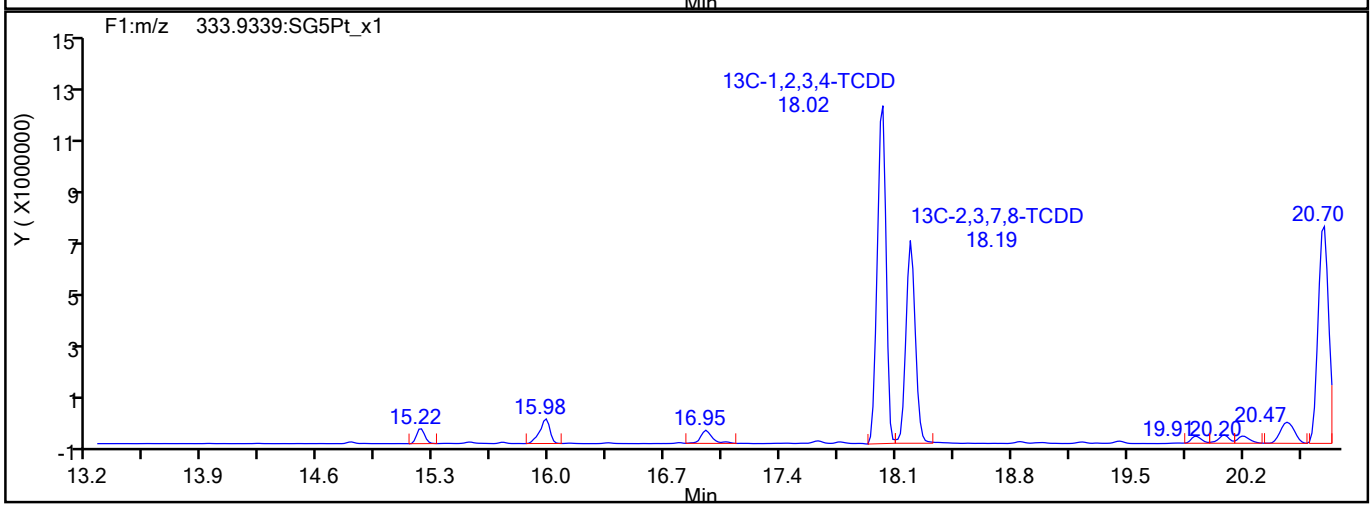

774535

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

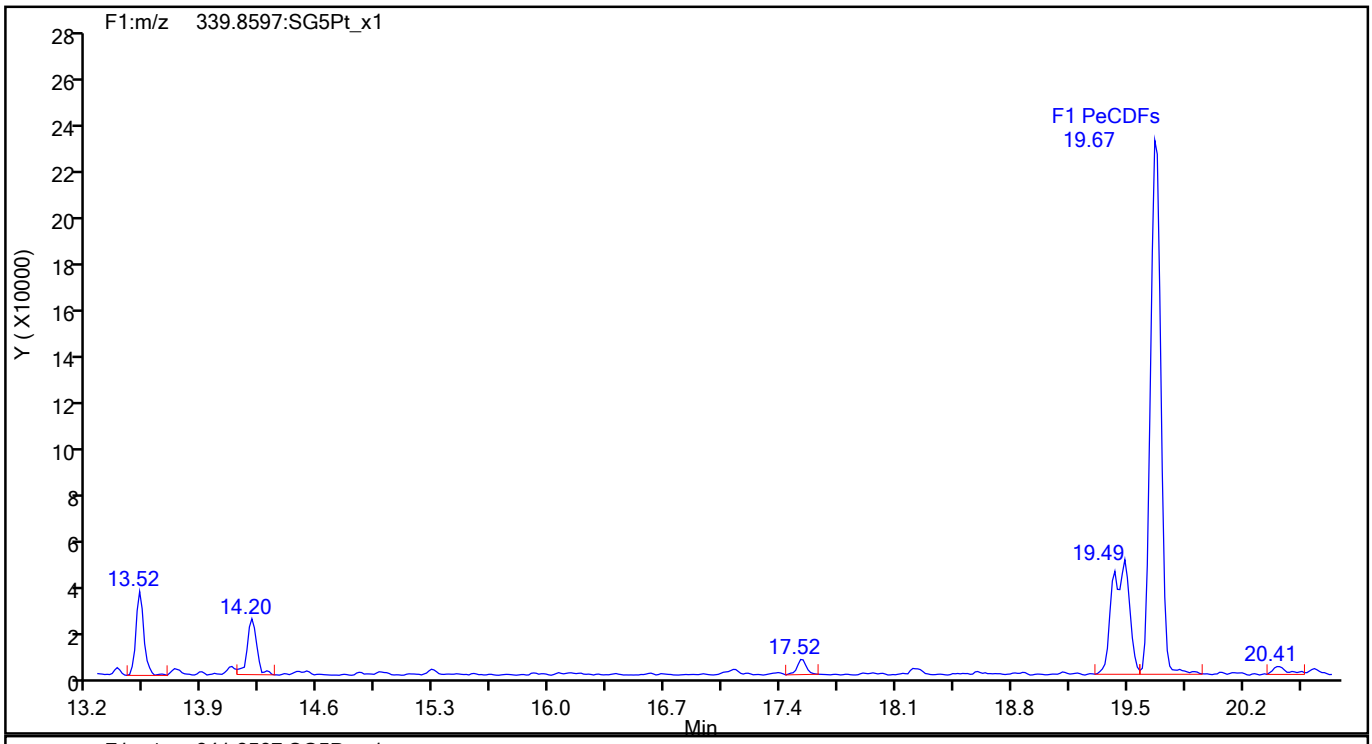

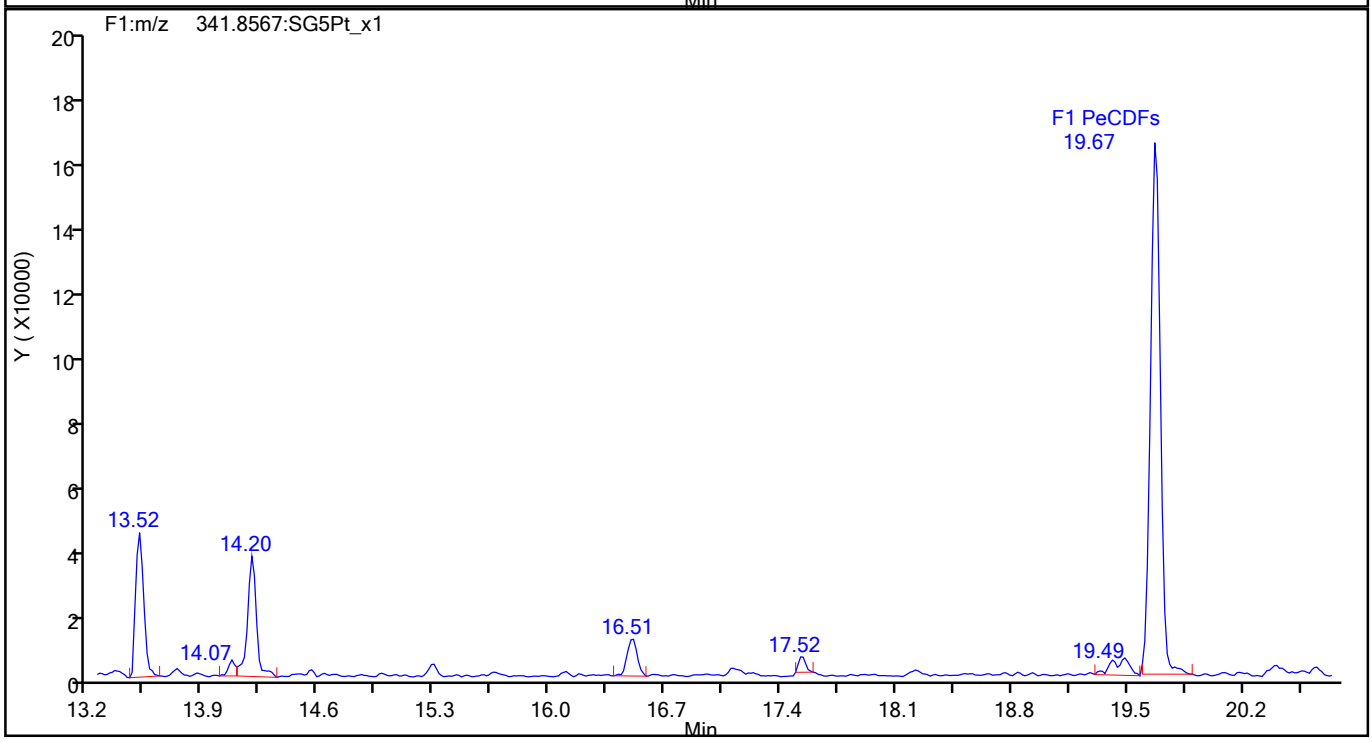

774536

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

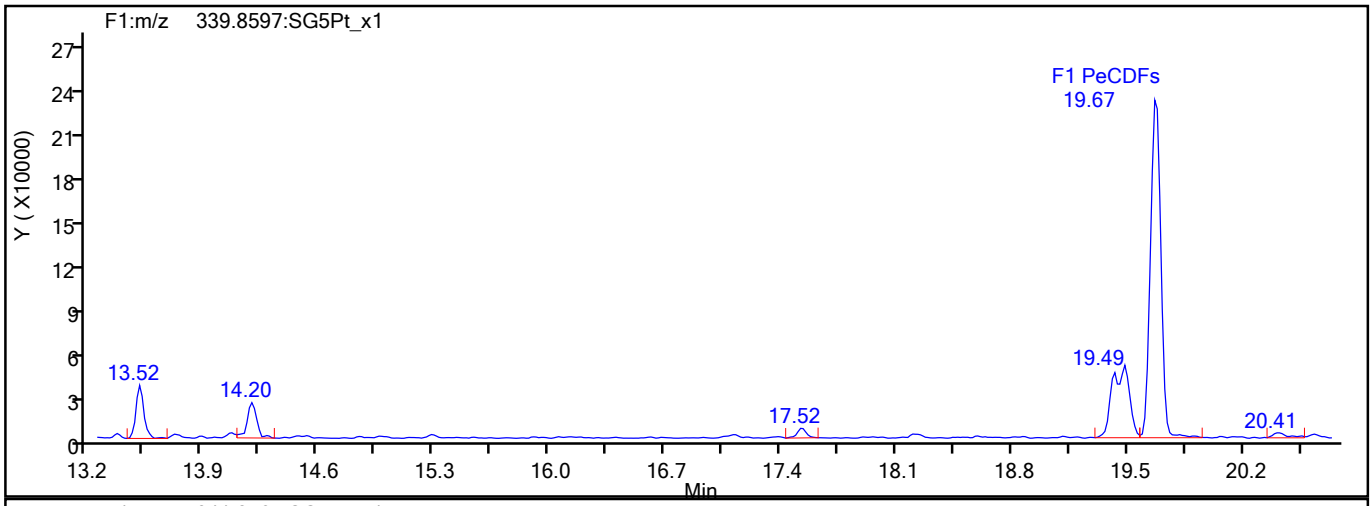

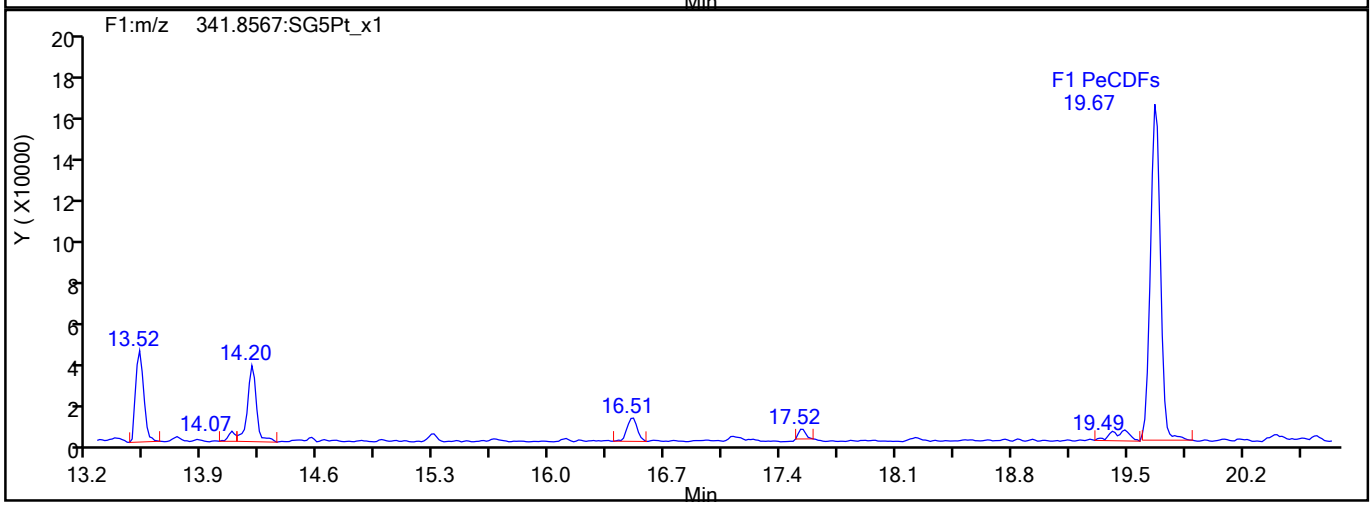

F1 PeCDFs Interference Mass

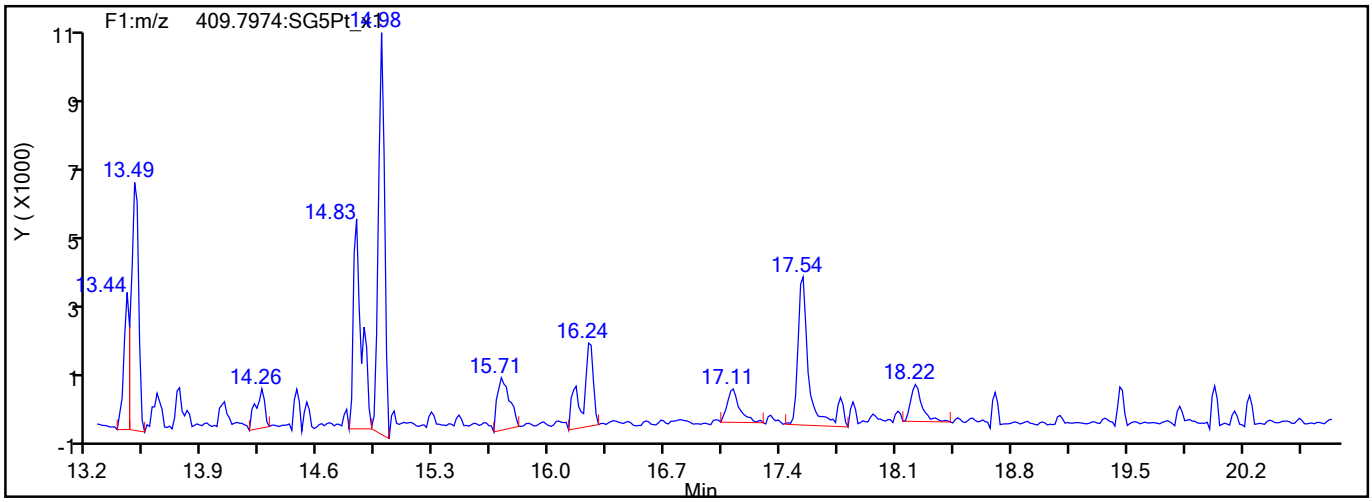

774537

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

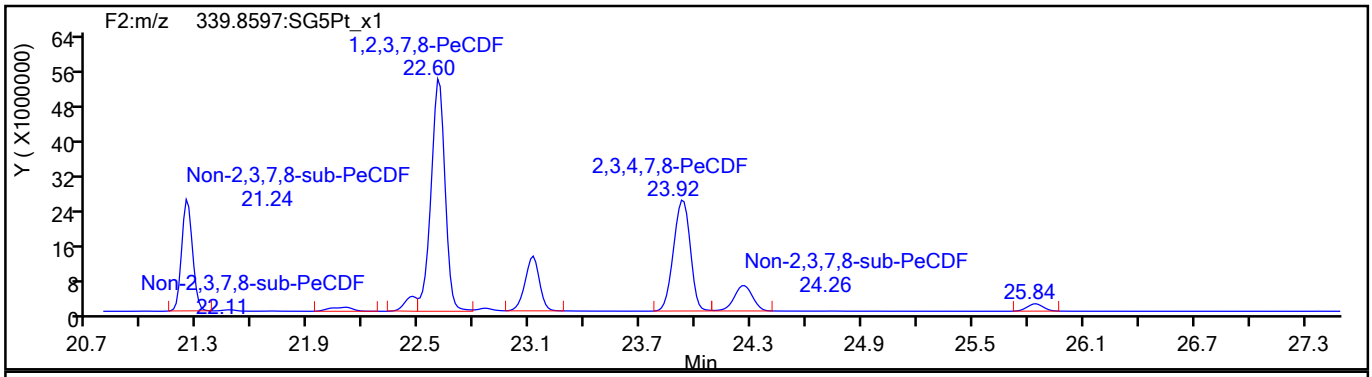

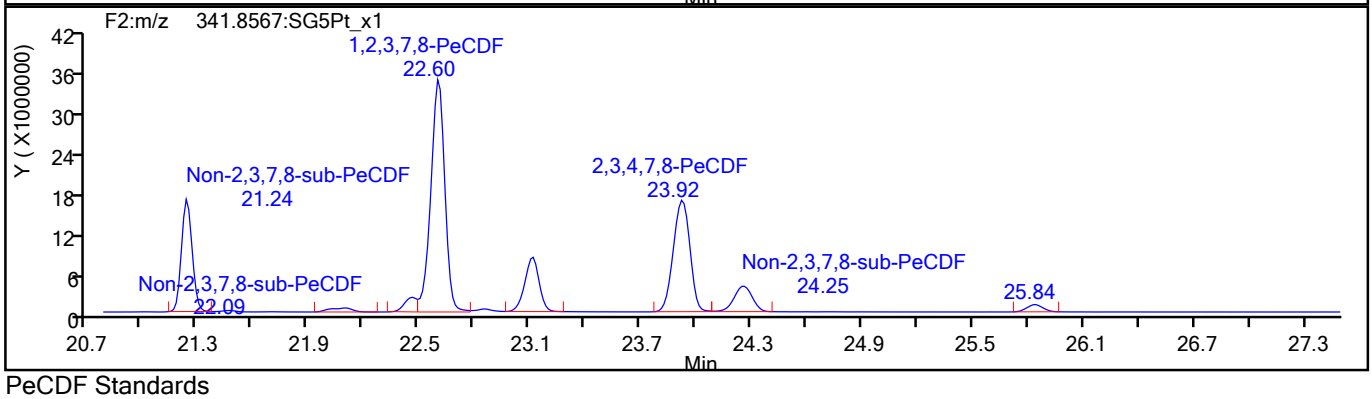

PeCDF Standards

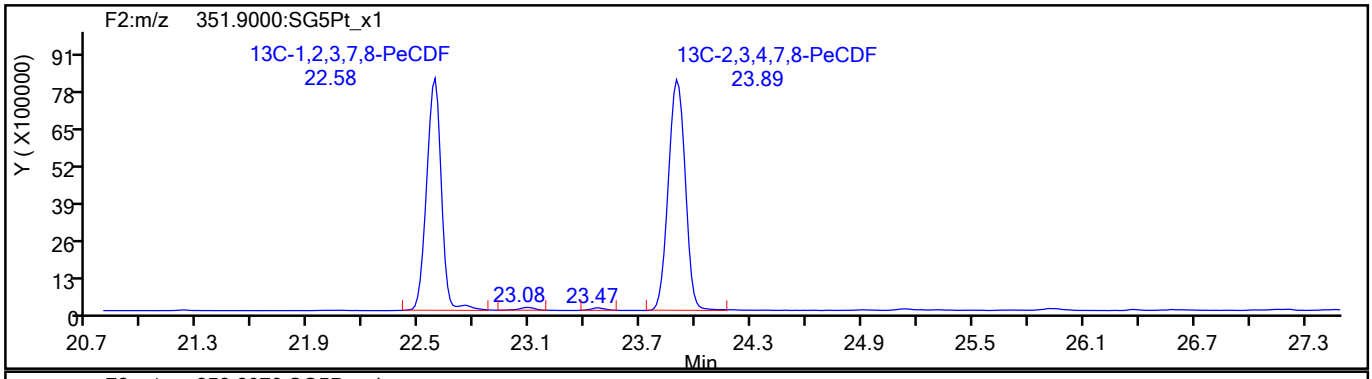

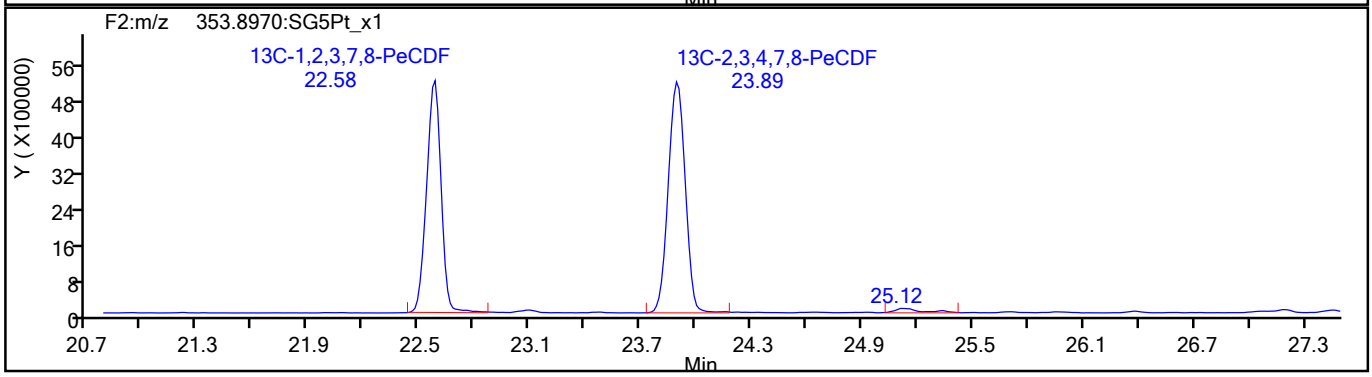

774538

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
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PeCDF

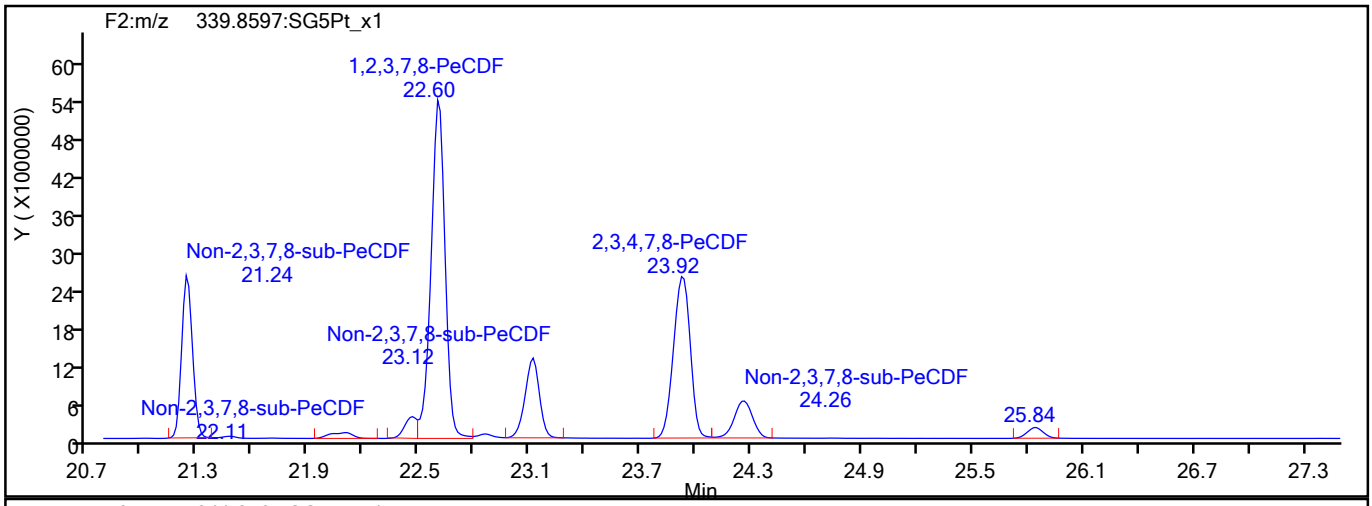

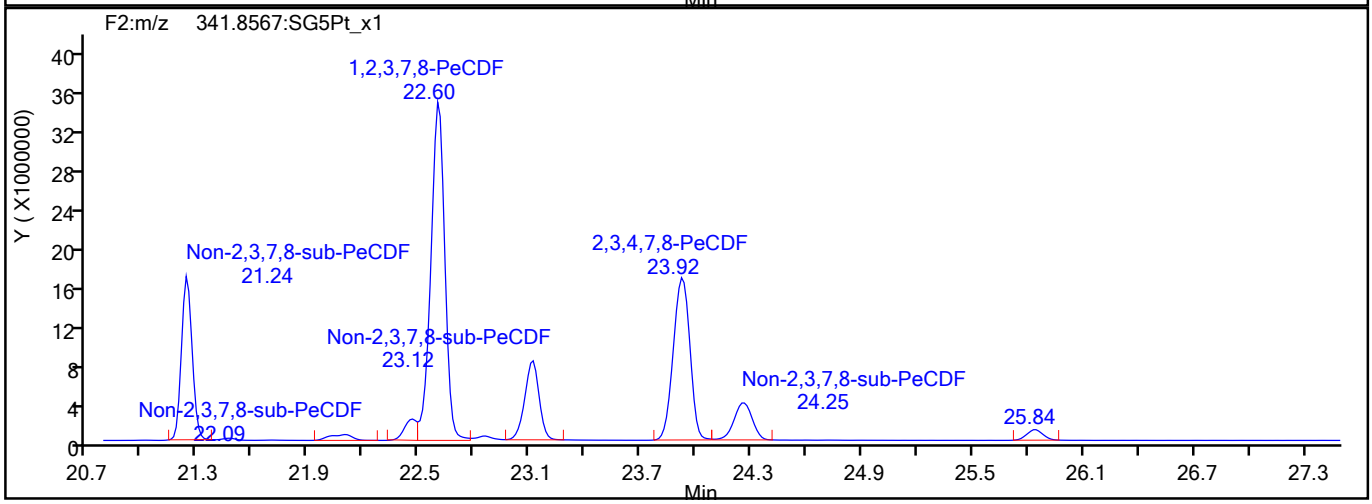

PeCDF Interference Mass

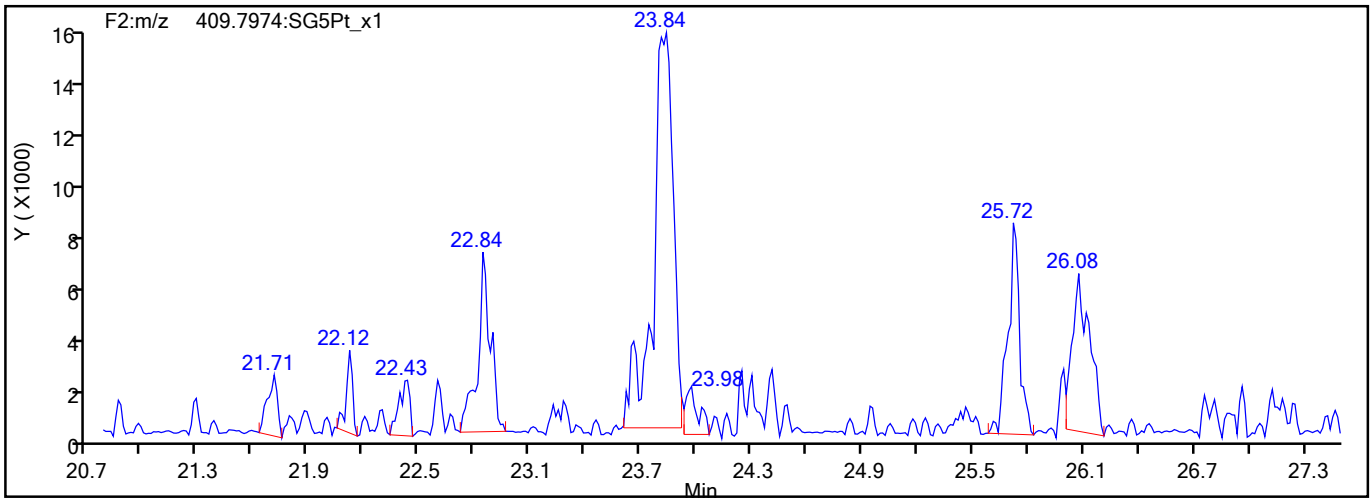

774539

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

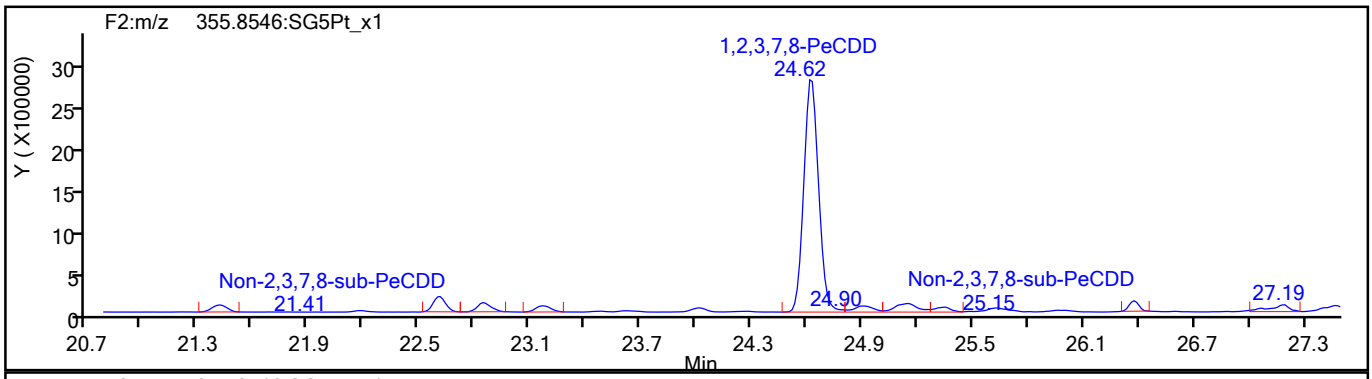

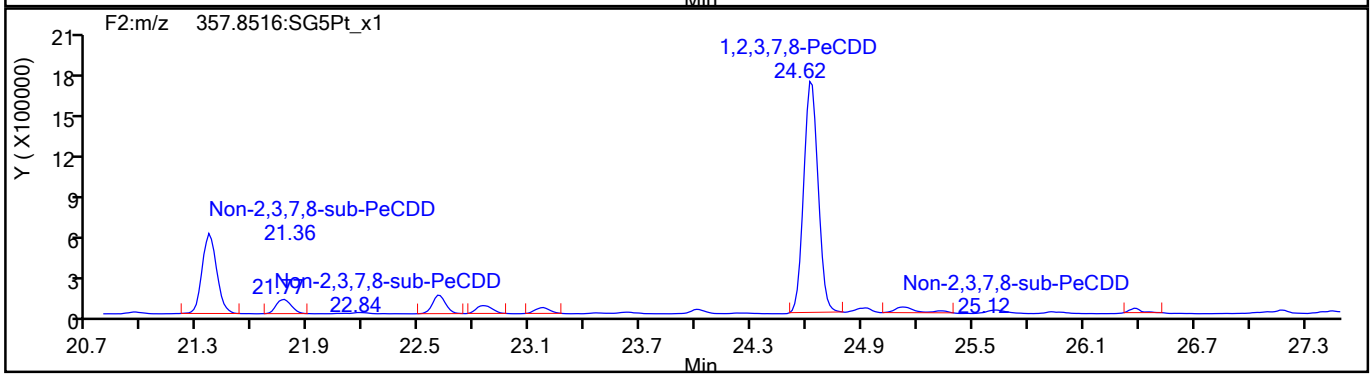

PeCDD Standards

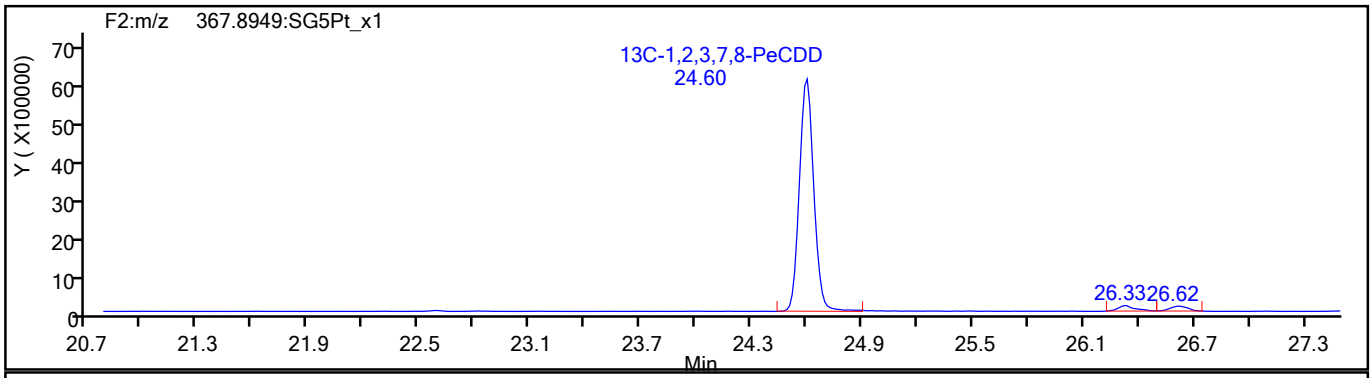

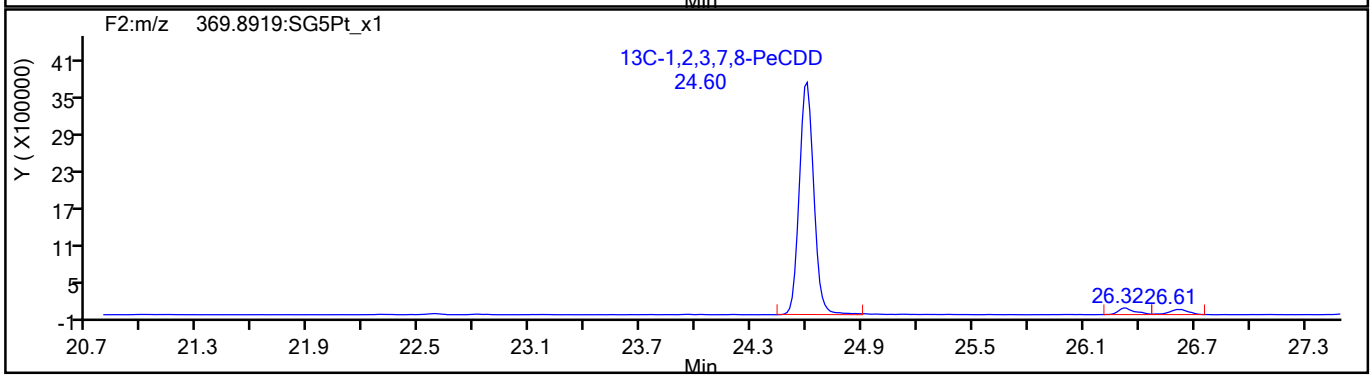

774540

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

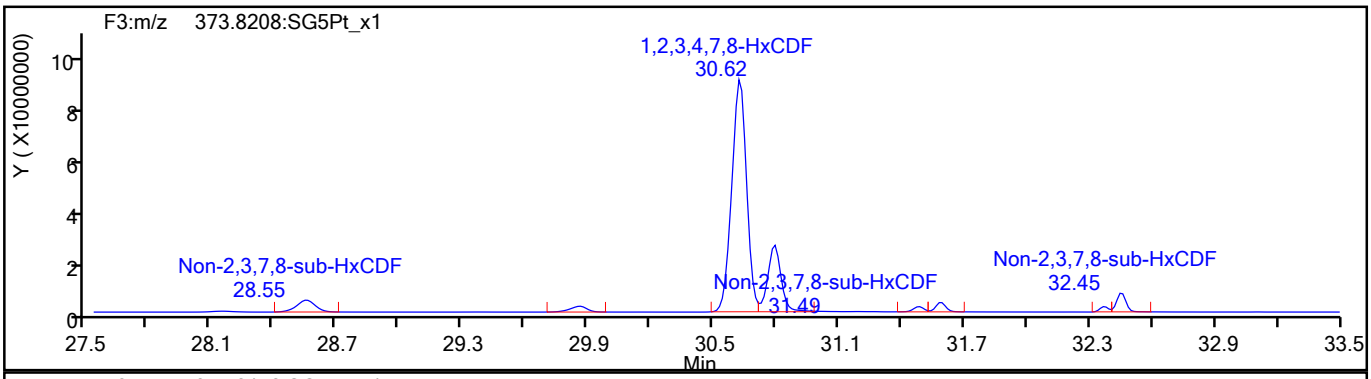

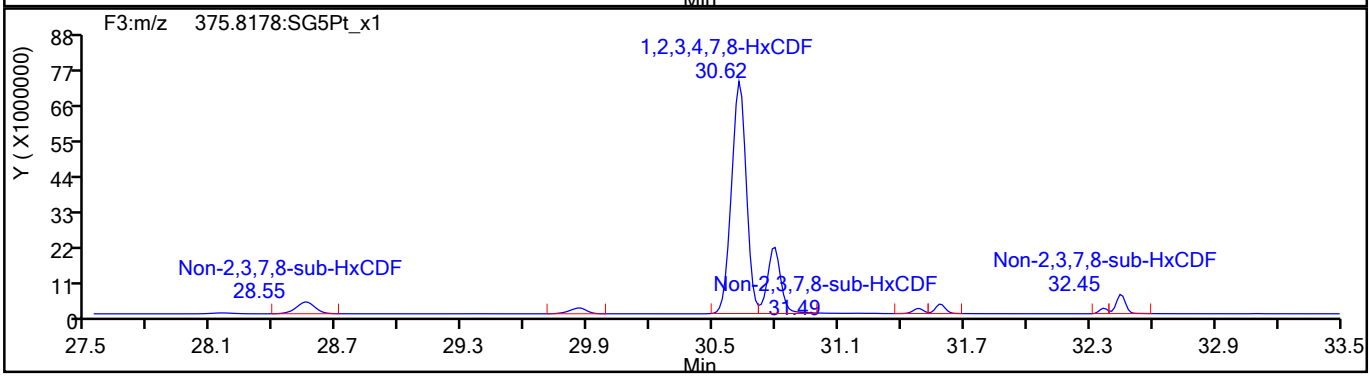

HxCDF Standards

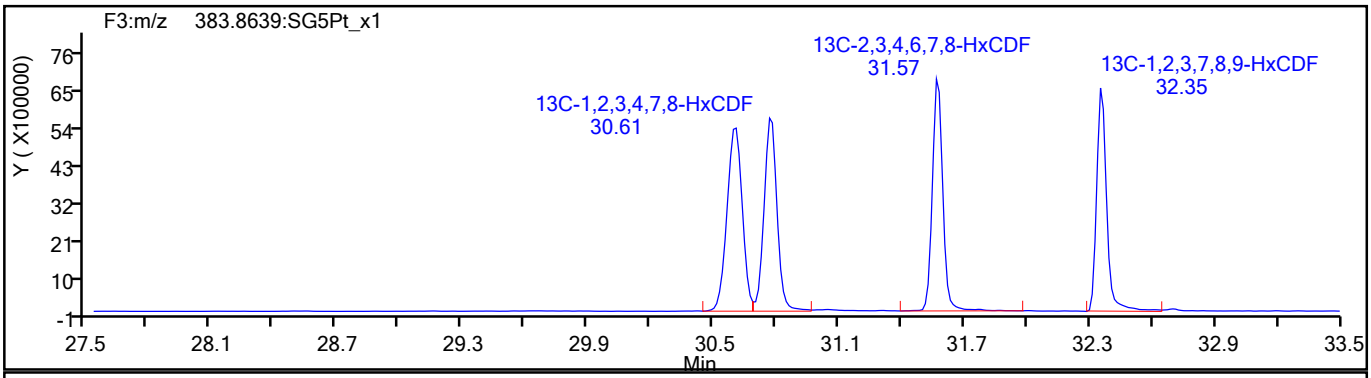

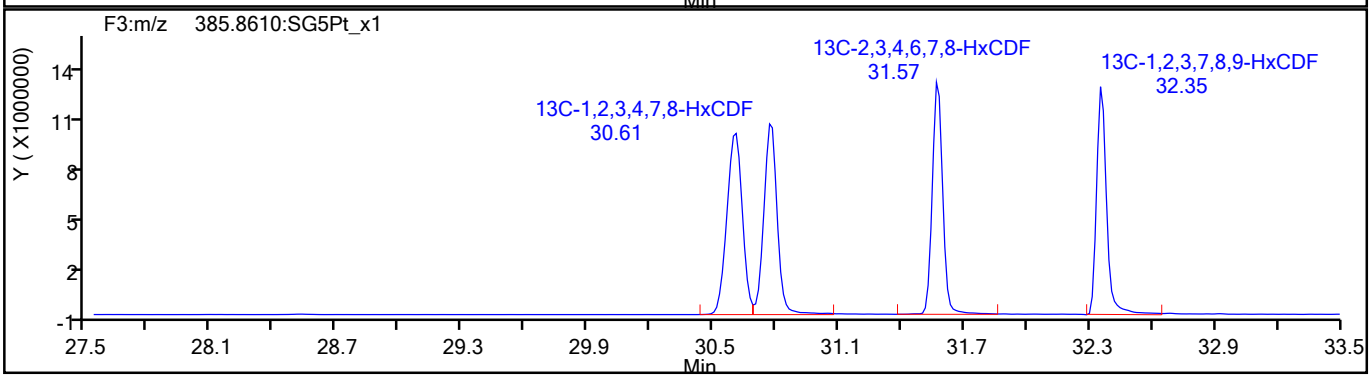

774541

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

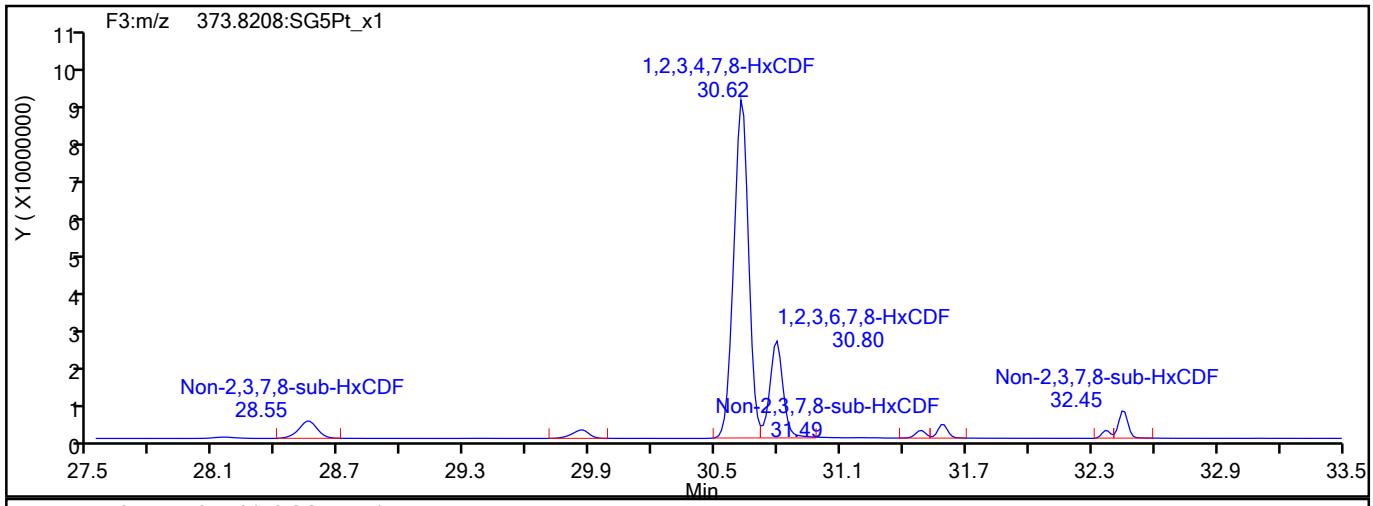

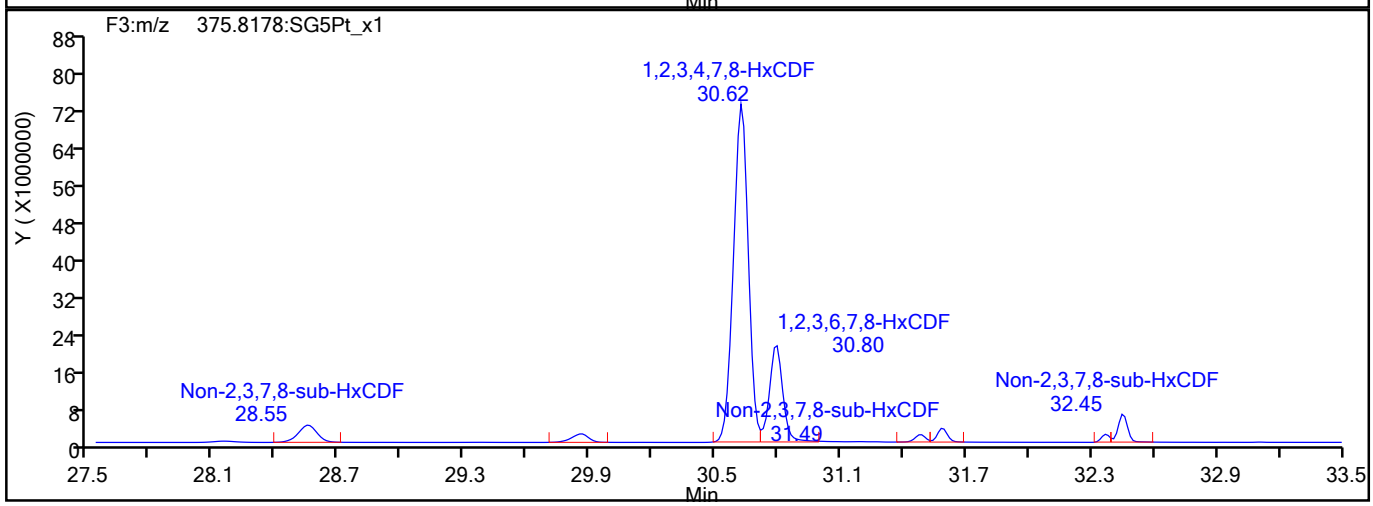

HxCDF Interference Mass

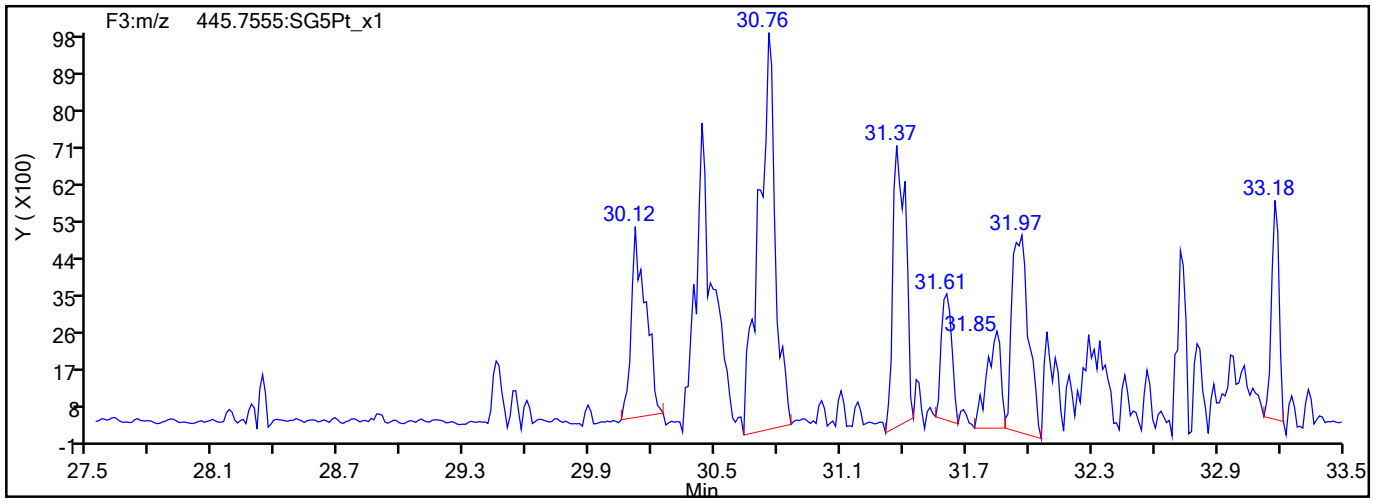

774542

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

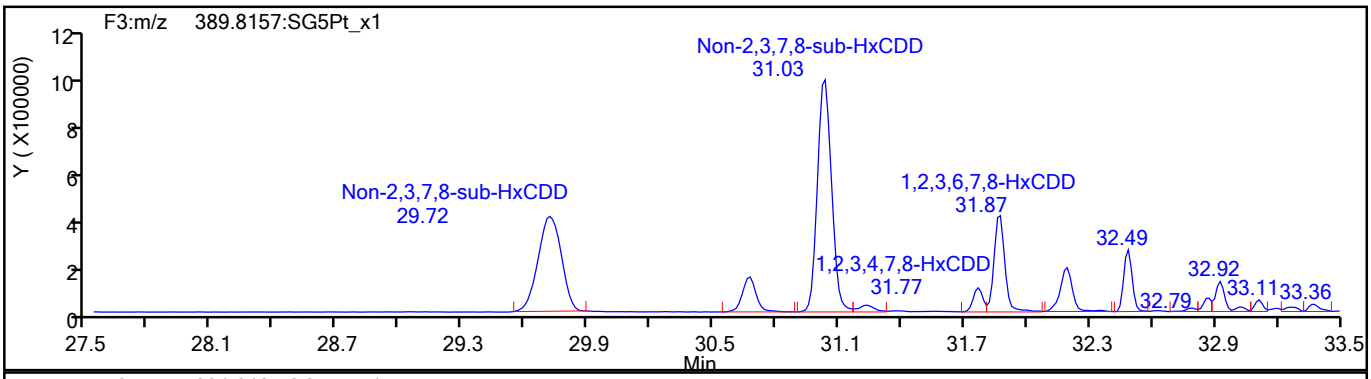

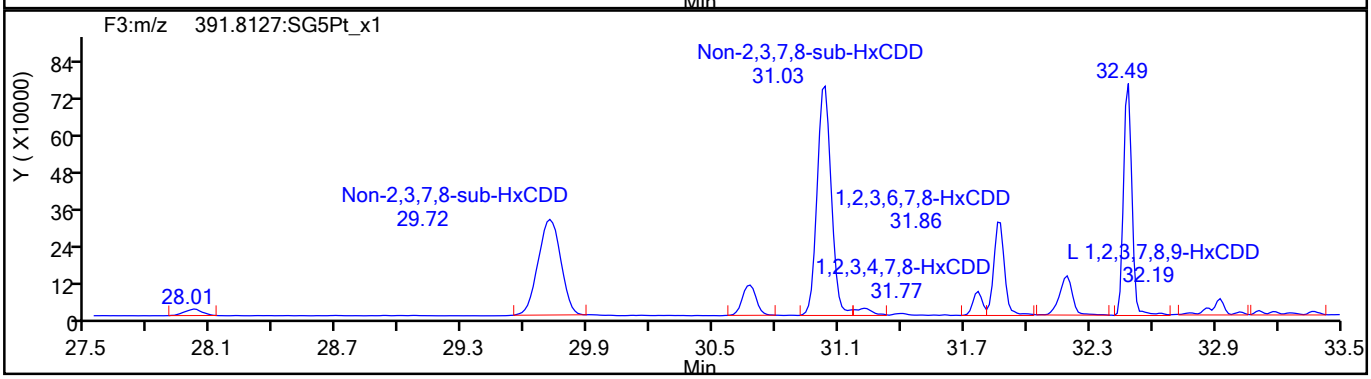

HxCDD Standards

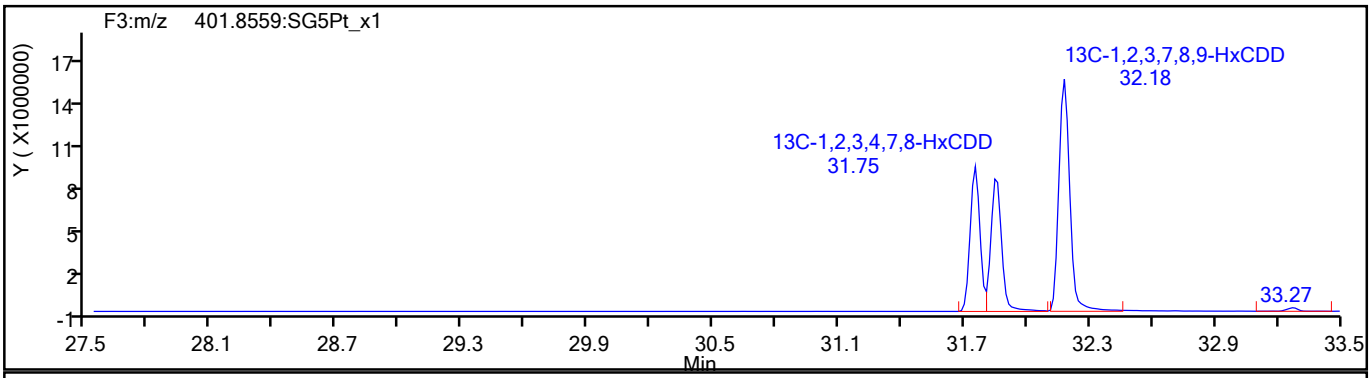

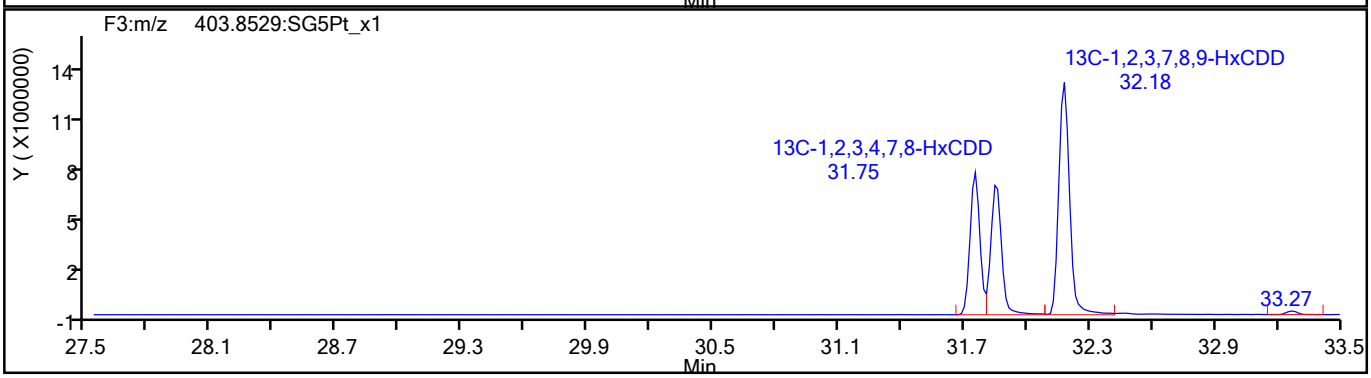

774543

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

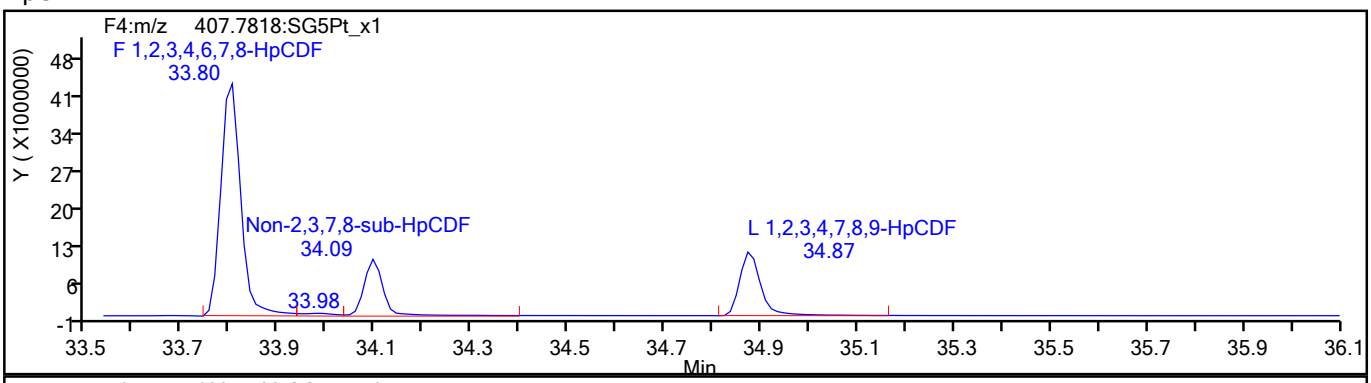

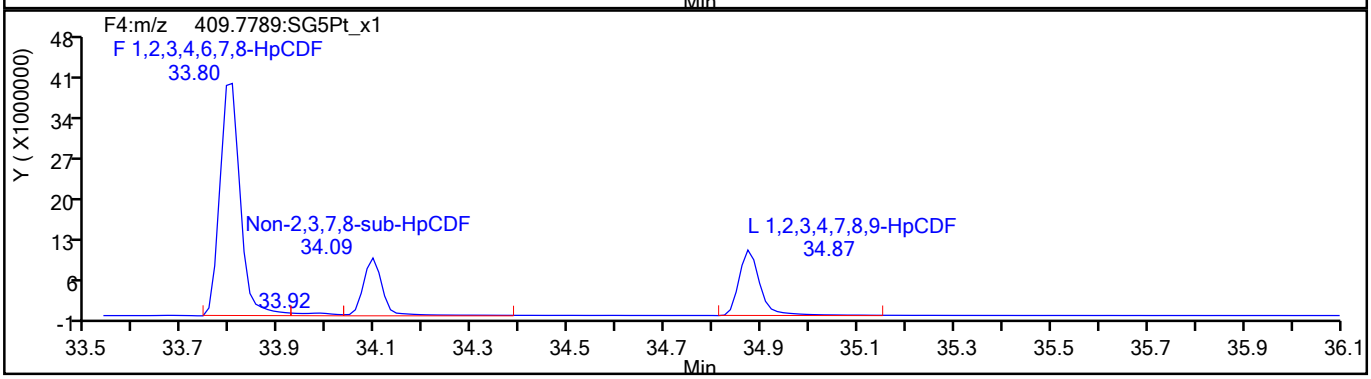

HpCDF Standards

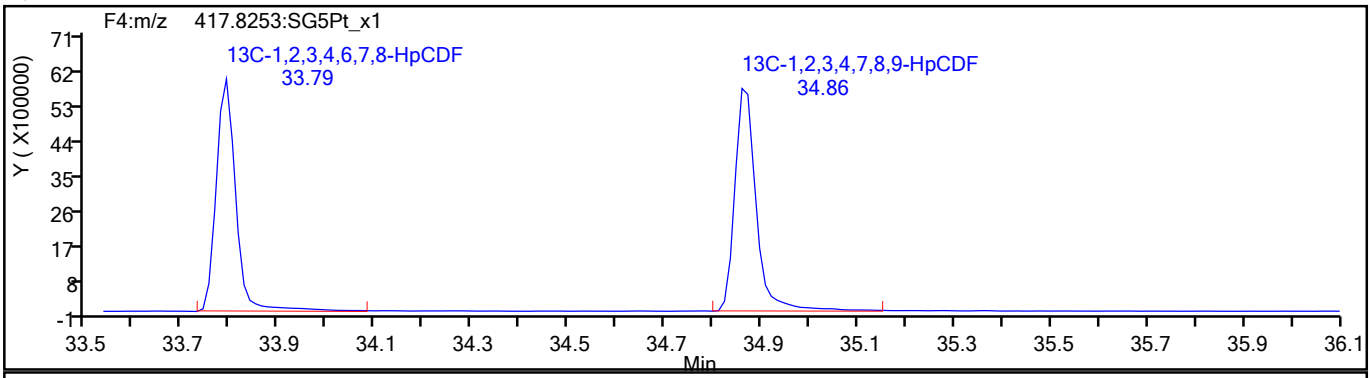

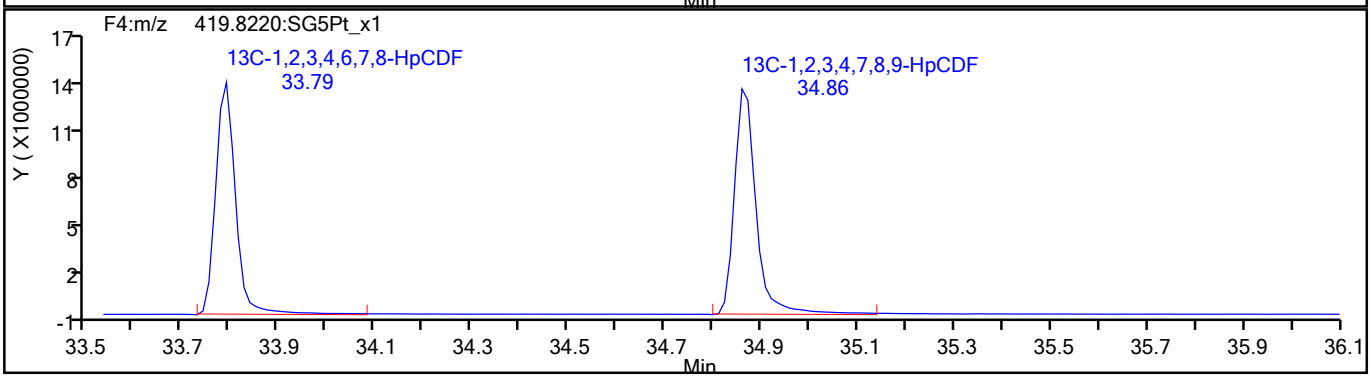

774544

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

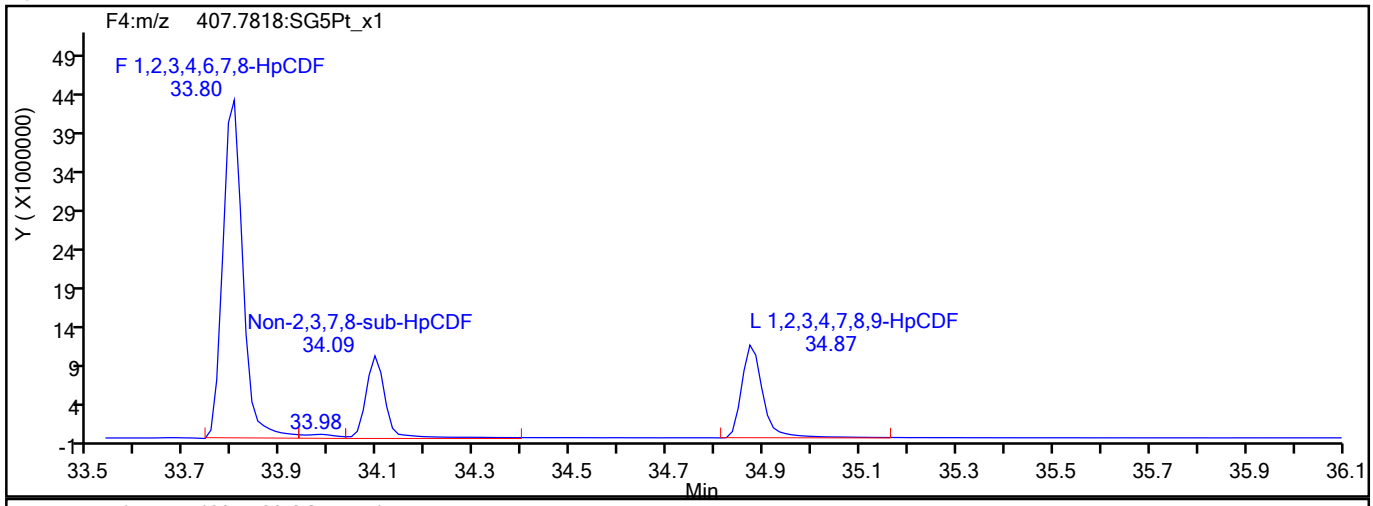

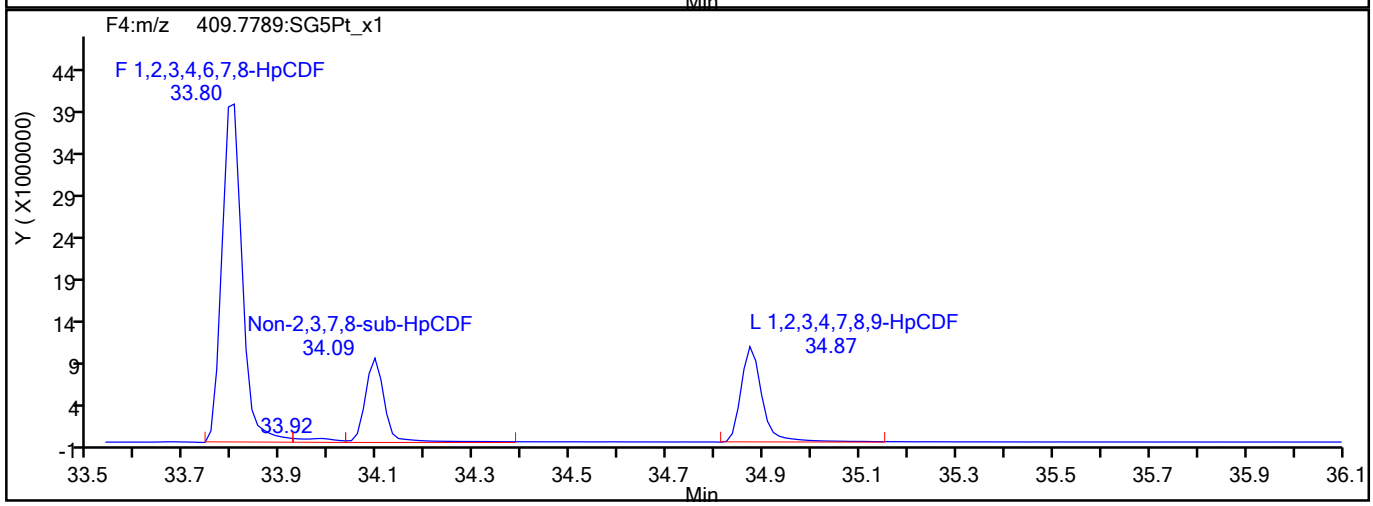

HpCDF Interference Mass

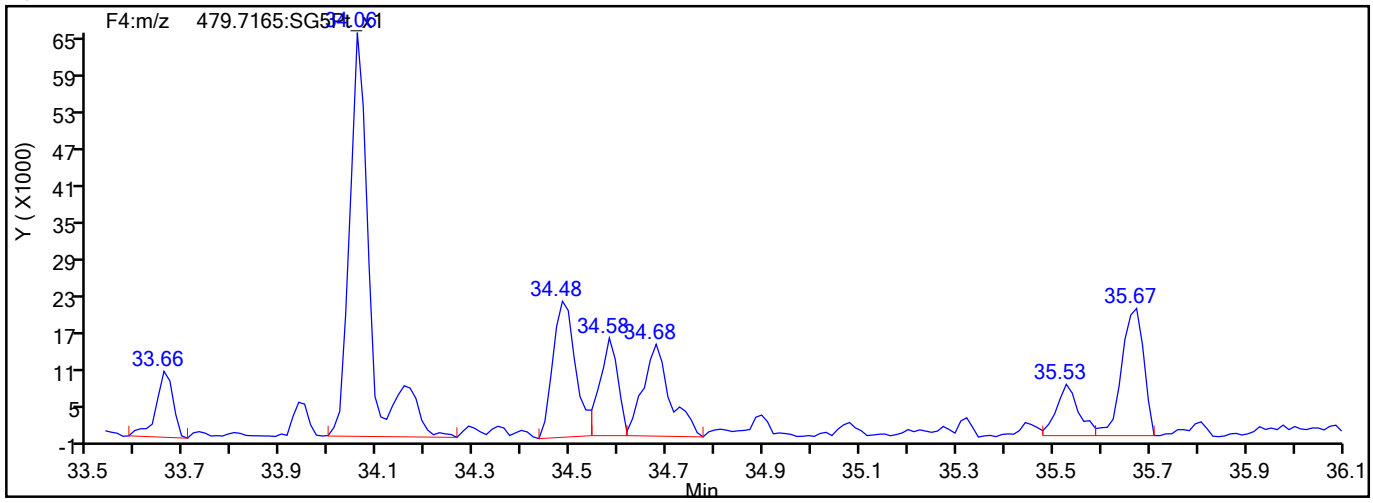

774545

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

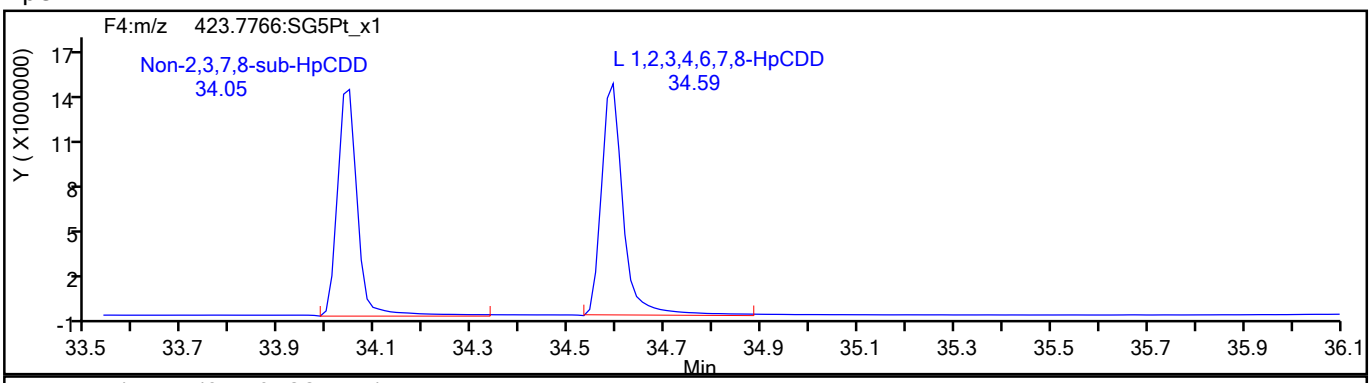

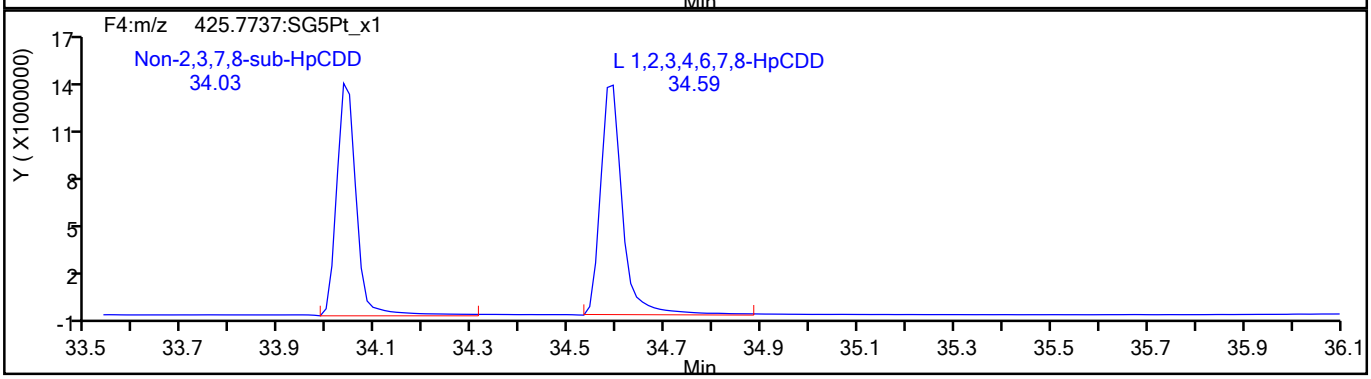

HpCDD Standards

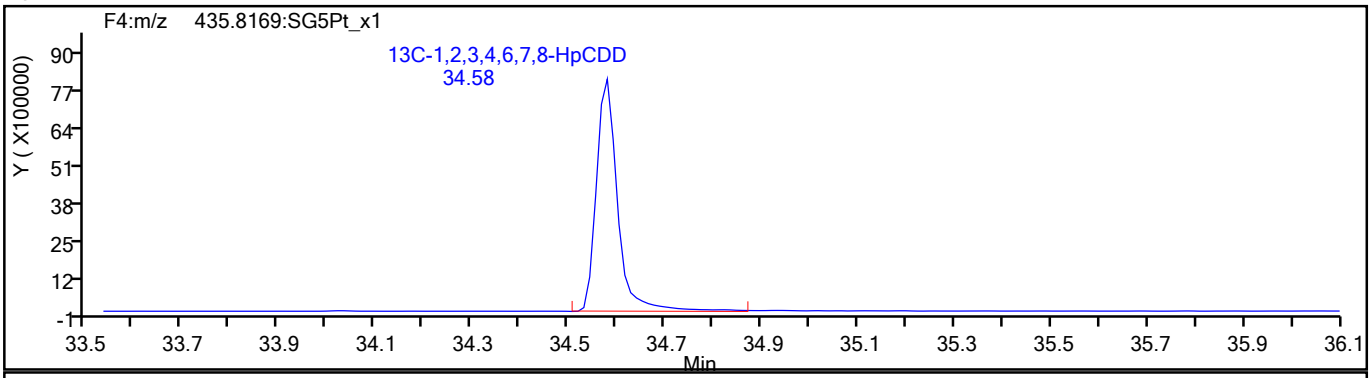

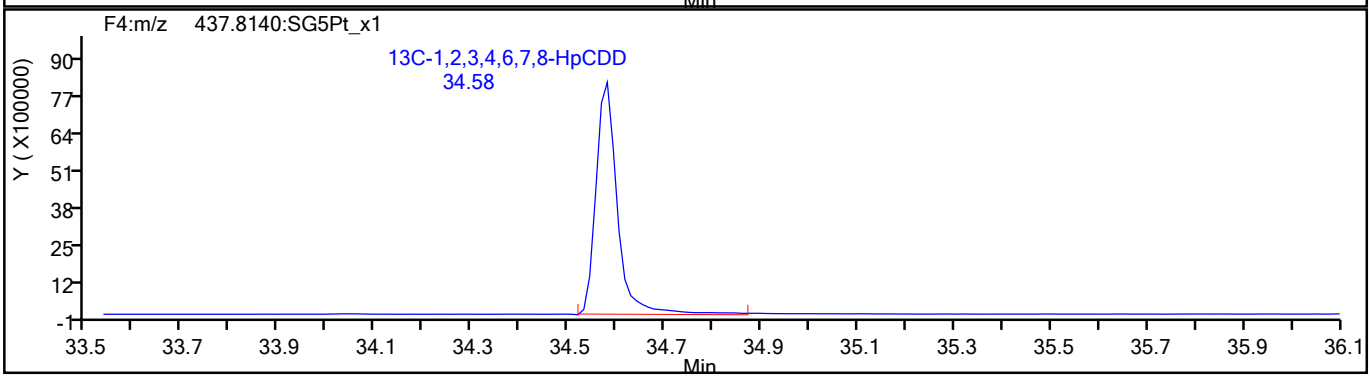

774546

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

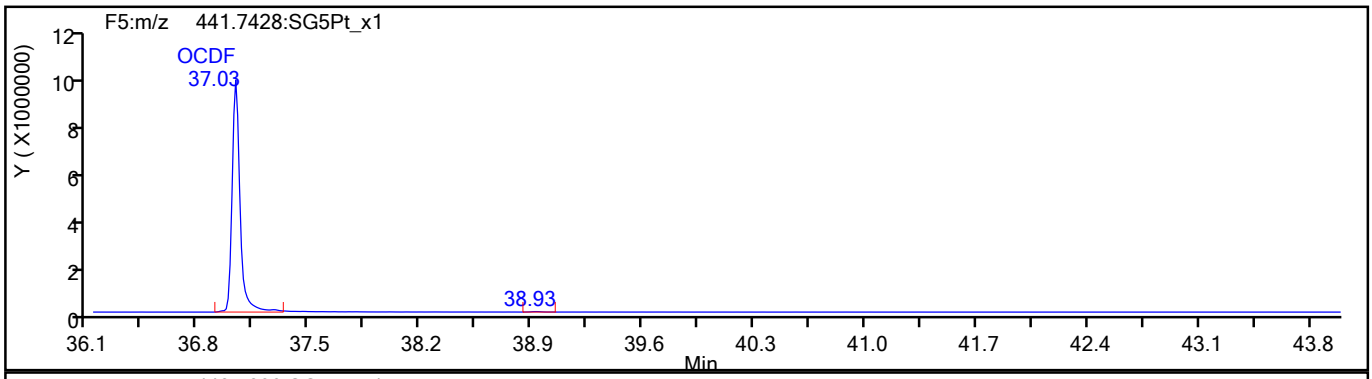

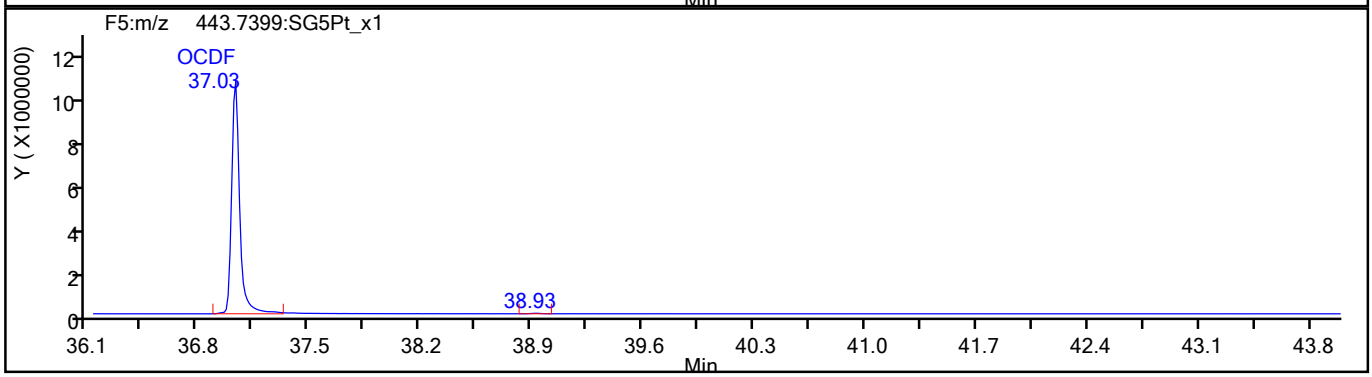

OCDF Standards

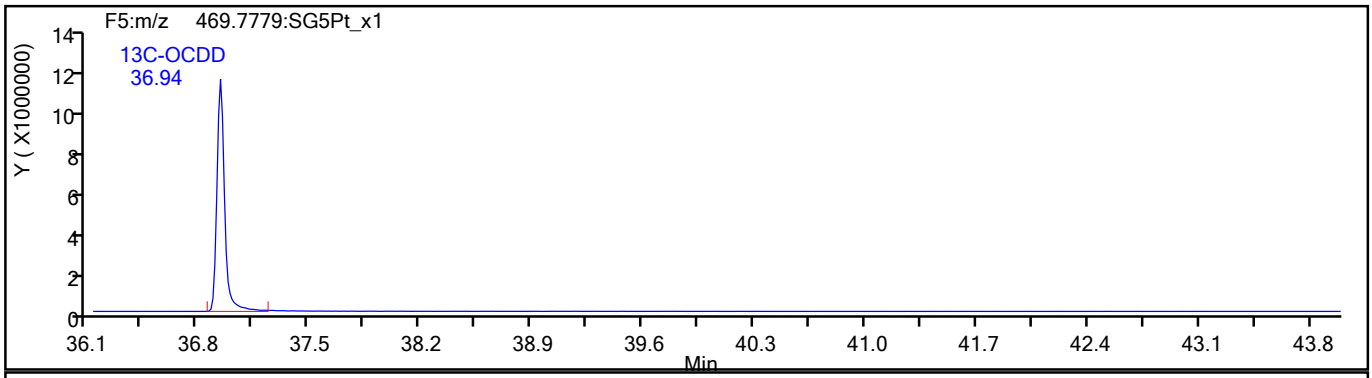

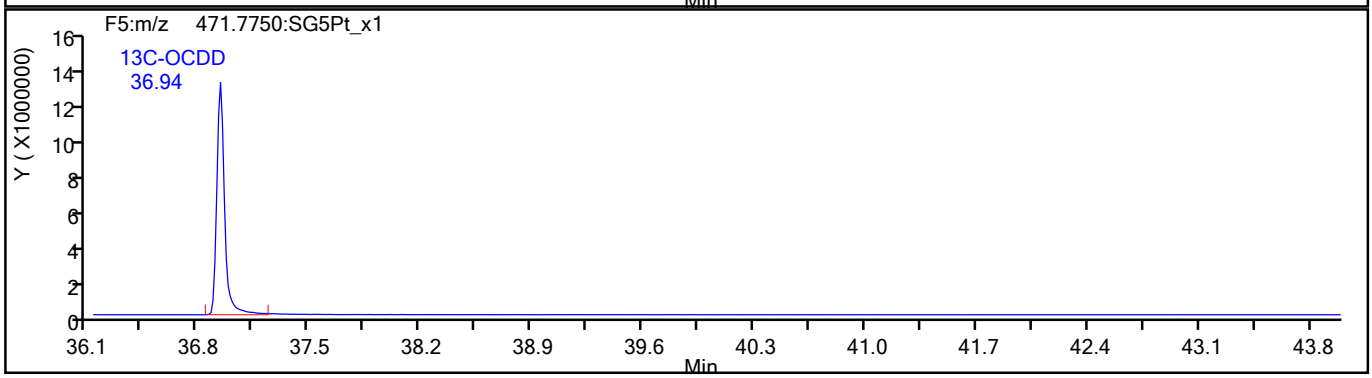

774547

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

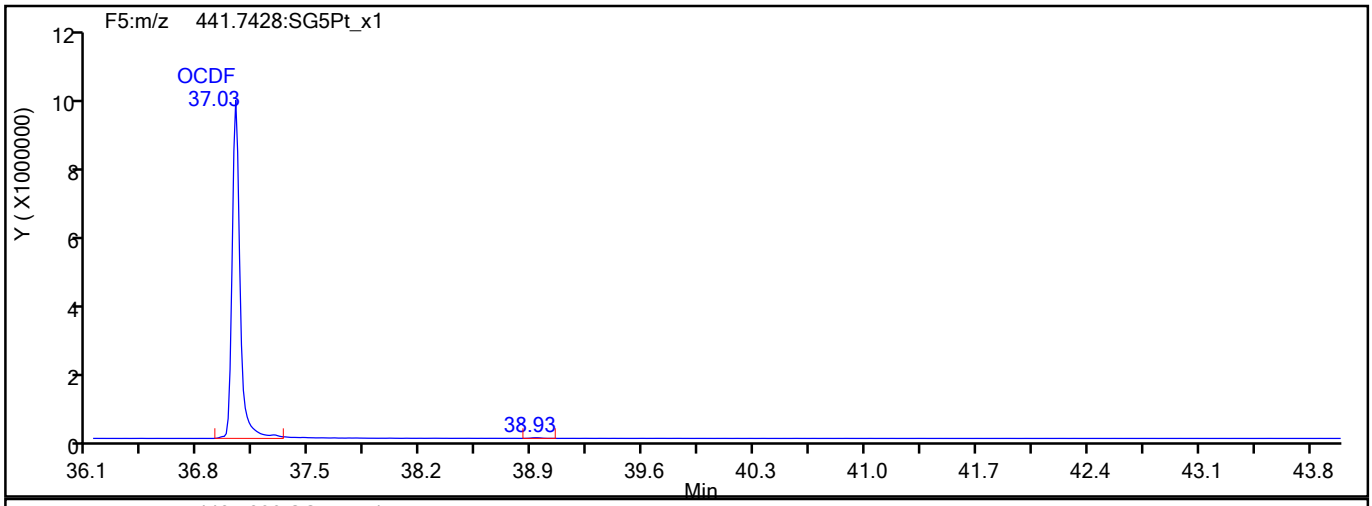

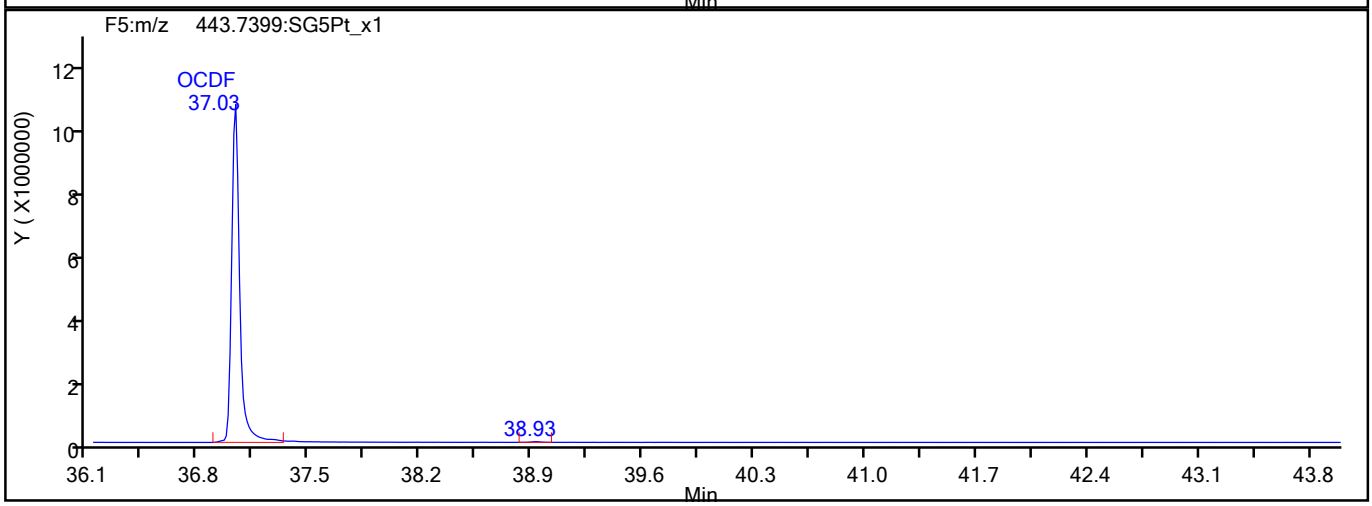

OCDF Interference Mass

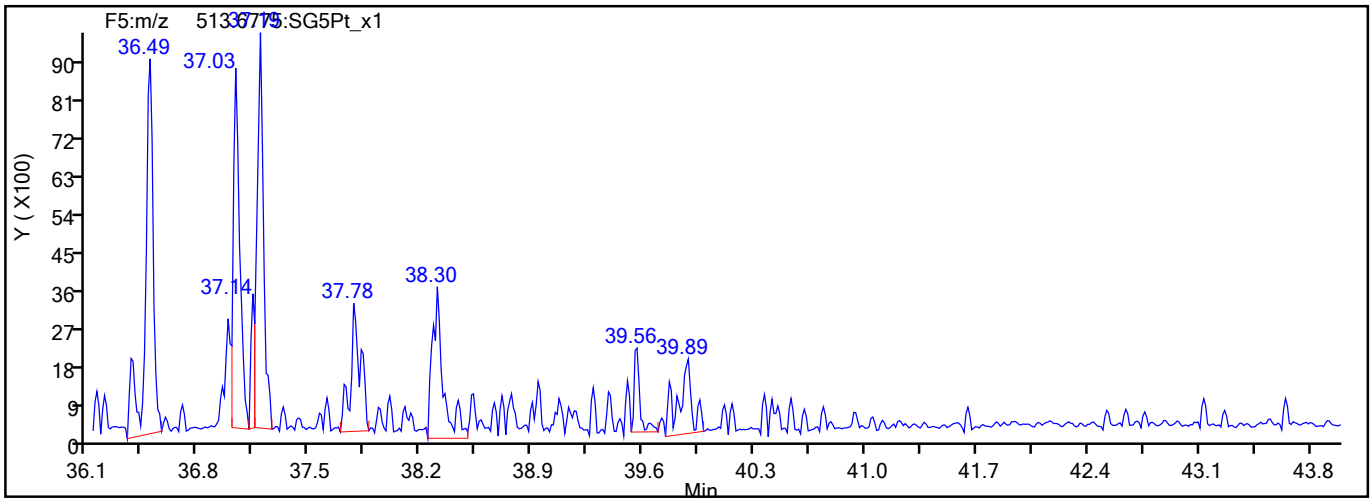

774548

Report Date: 18-Aug-2021 12:20:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

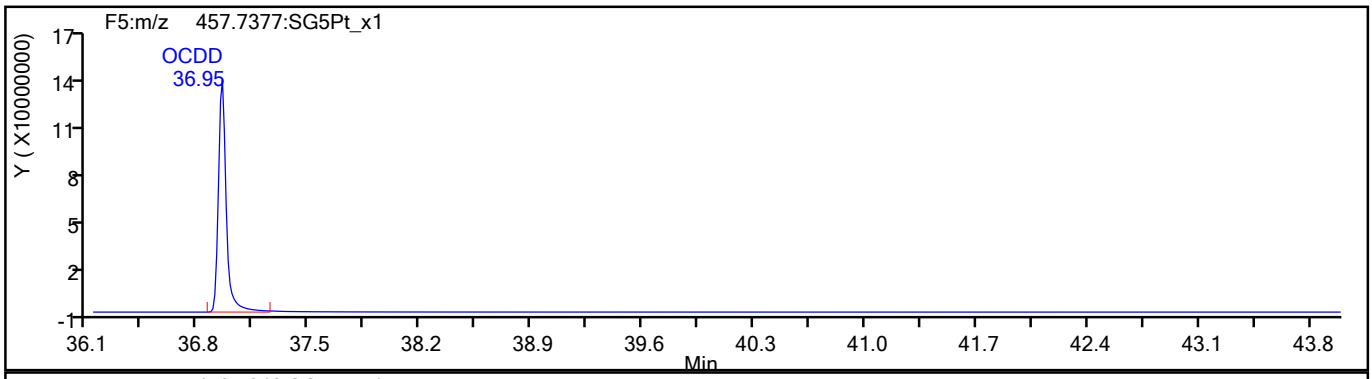

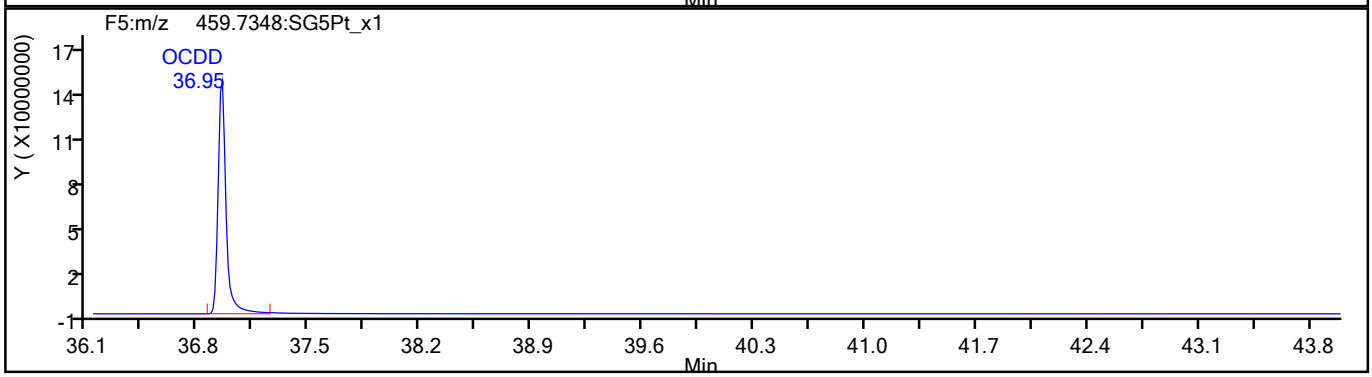

OCDD Standards

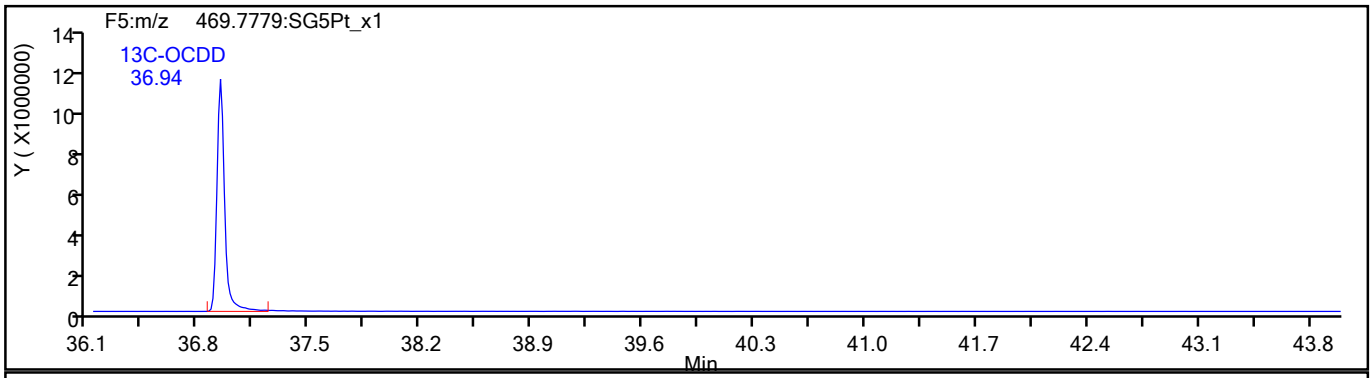

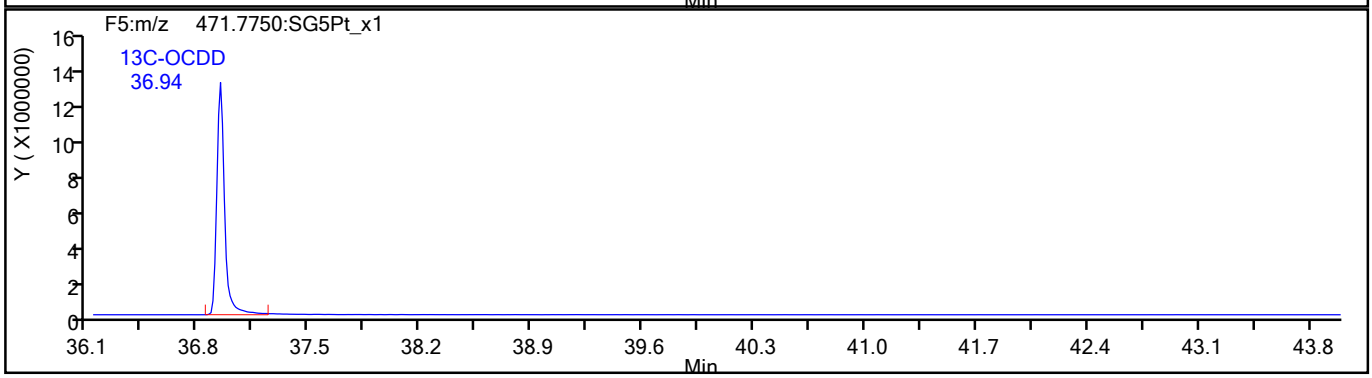

774549

Report Date: 18-Aug-2021 12:20:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

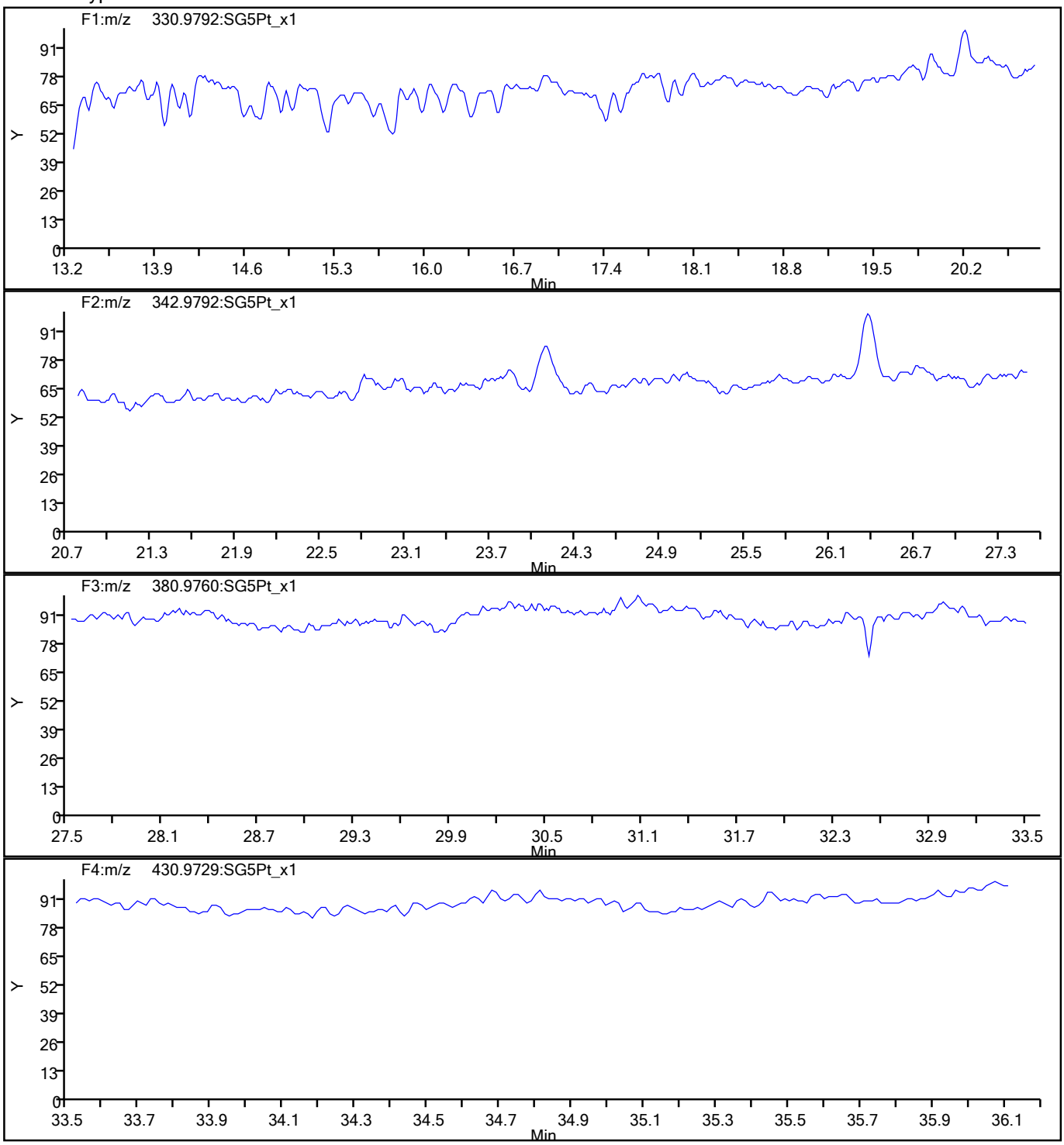

774550

Report Date: 18-Aug-2021 12:20:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_47.d		
Injection Date:	15-Aug-2021 04:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

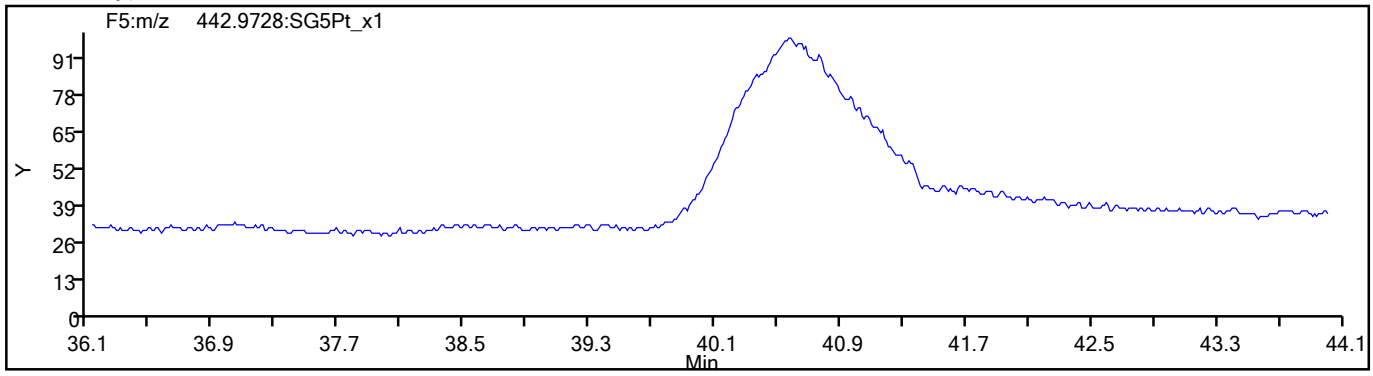

774551

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) RA
Lab Sample ID: 320-76769-1 RA
Matrix: Sediment
Lab File ID: 23AU2111D2_007.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.94(g)
Date Analyzed: 08/23/2021 13:22
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518958
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	47000	E B G	63	63

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	63		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	117		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_007.d
Lims ID: 320-76769-A-1-A
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Sample Type: Client
Inject. Date: 23-Aug-2021 13:22:02 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-1-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:50:56

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.353	3921285	0.67	7.2E+05	20.0	20.0				M
D 13C-2,3,7,8-TCDF	17.683	3301884	0.85	1.3327	12.6	12.6	0.7091	0.7091	63.18	Ma
2,3,7,8-TCDF	17.697	474214123	0.74	0.9978	2878.7	2878.7	3.823	3.823		Ea
D 13C-2,3,7,8-TCDD	16.134	2658081	0.84	0.8749	15.5	15.5	14.7	14.7	77.48	nMa
2,3,7,8-TCDD	16.134	135166208	0.80	1.0570	962.2	962.2	3.432	3.432		Ea
$ 37Cl4-2,3,7,8-TCDD	16.134	1584493		0.8648	9.345	9.345	0.1787	0.1787	117	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_007.d
Lims ID: 320-76769-A-1-A
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Sample Type: Client
Inject. Date: 23-Aug-2021 13:22:02 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-1-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:50:56

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.353	16.312	2		1575064	388077	114728	286820	3		M
333.9339	16.353	16.312	2		2346221	523812	119388	298470	4	0.67(0.65-0.89)	M
13C-2,3,7,8-TCDF											Ma
315.9419	17.683	17.615	4	1.081	1518643	278016	10294	25735	27		a
317.9389	17.683	17.615	4	1.081	1783241	301778	6940	17350	43	0.85(0.65-0.89)	M
2,3,7,8-TCDF											Ea
303.9016	17.697	17.643	3	1.001	201747216	37595572	19059	47647	1973		a
305.8987	17.697	17.643	3	1.001	272466907	50836786	25170	62925	2020	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											nMa
331.9368	16.134	16.065	4	0.987	1216052	209990	114728	286820	2		M
333.9339	16.106	16.065	2	0.985	1442029	246115	119388	298470	2	0.84(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	16.134	16.093	2	1.000	60152543	13526131	19559	48897	692		a
321.8936	16.134	16.093	2	1.000	75013665	16575717	13535	33837	1225	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.134	16.093	2	0.987	1584493	370797	2819	7047	132		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_007.d				
Injection Date:	23-Aug-2021 13:22:02	Instrument ID:	11D2		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 18.59
Area: 282186
Amount: 2.230707
Amount Units: pg/ul

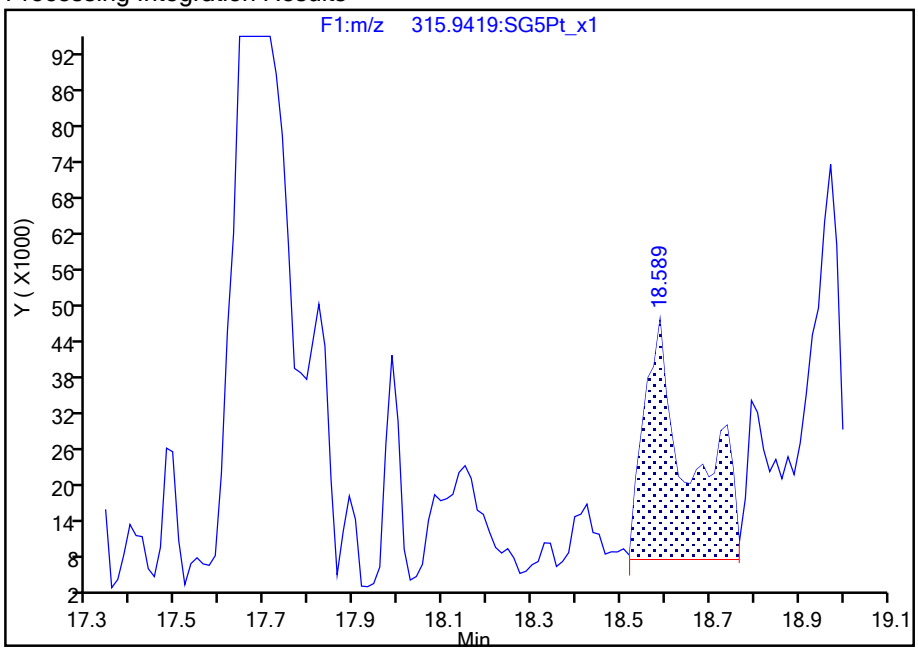

Manual Integration Results

RT: 17.68
Area: 1518643
Amount: 12.636755
Amount Units: pg/ul

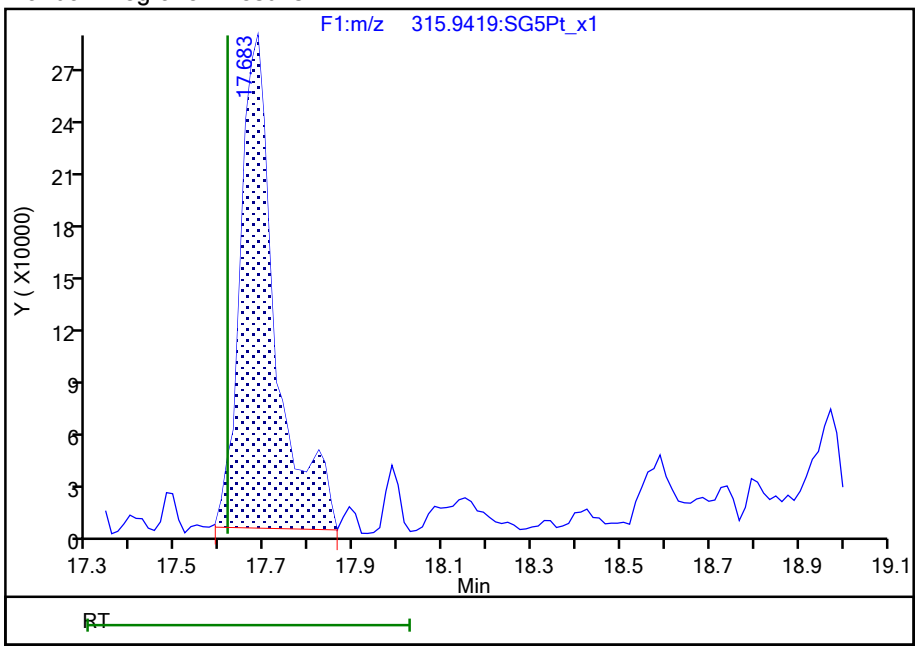

Reviewer: bennettd, 23-Aug-2021 15:50:23

Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_007.d				
Injection Date:	23-Aug-2021 13:22:02	Instrument ID:	11D2		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 18.62
Area: 300680
Amount: 2.230707
Amount Units: pg/ul

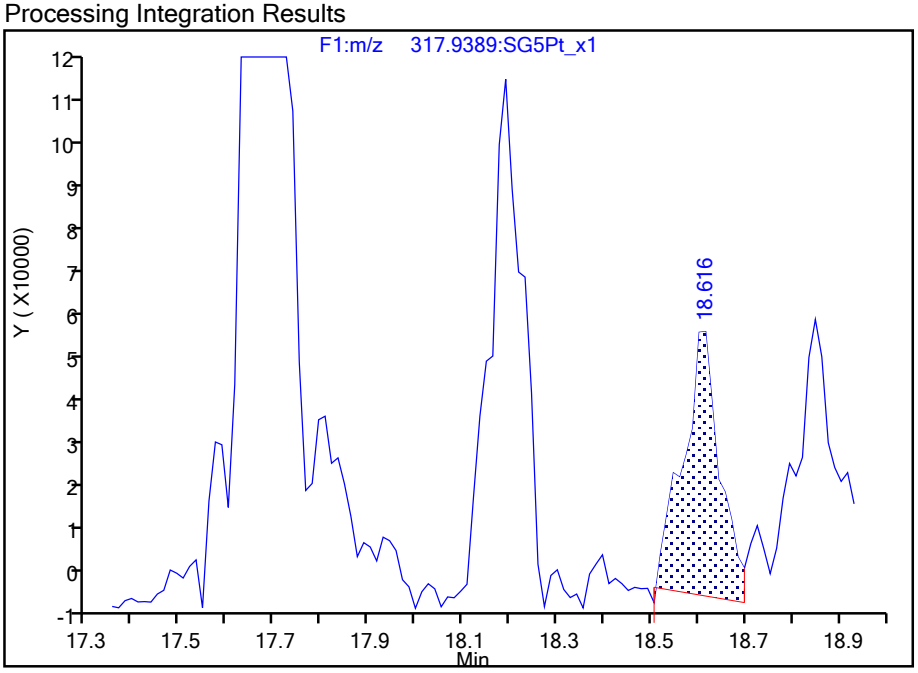

Manual Integration Results

RT: 17.68
Area: 1783241
Amount: 12.636755
Amount Units: pg/ul

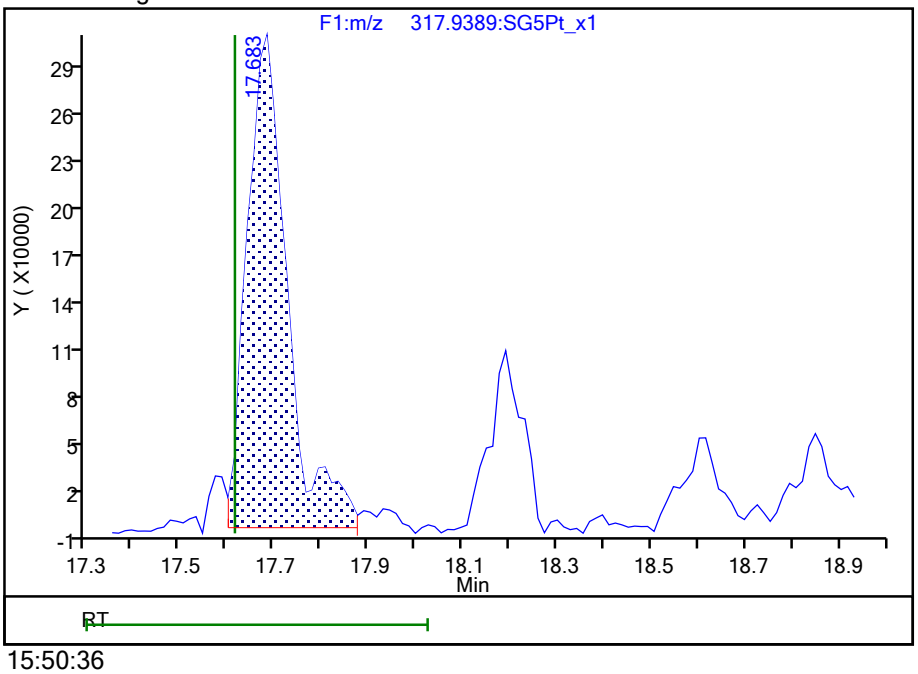

Reviewer: bennettd, 23-Aug-2021 15:50:36
Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

774556

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_007.d				
Injection Date:	23-Aug-2021 13:22:02	Instrument ID:	11D2		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.64

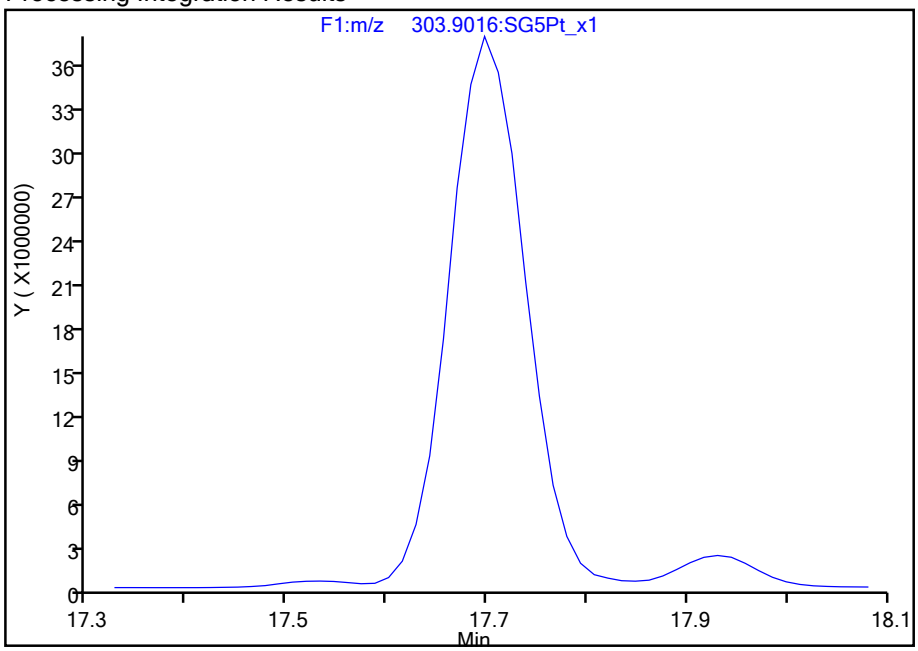

Manual Integration Results

RT: 17.70
Area: 201747216
Amount: 2878.6987
Amount Units: pg/ul

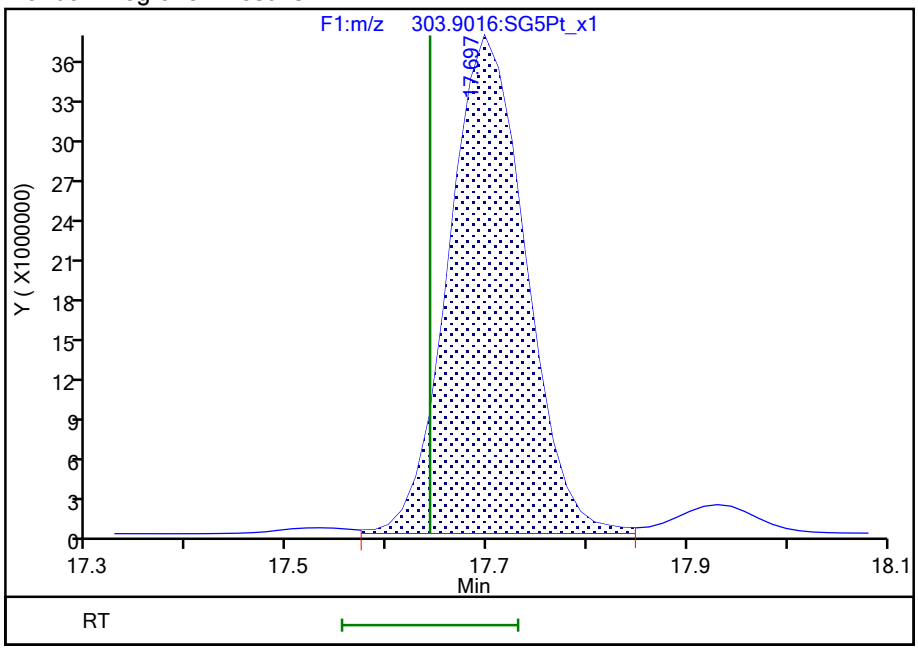

Reviewer: bennettd, 23-Aug-2021 15:50:47
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_007.d				
Injection Date:	23-Aug-2021 13:22:02	Instrument ID:	11D2		
Lims ID:	320-76769-A-1-A	Lab Sample ID:	320-76769-1		
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.09

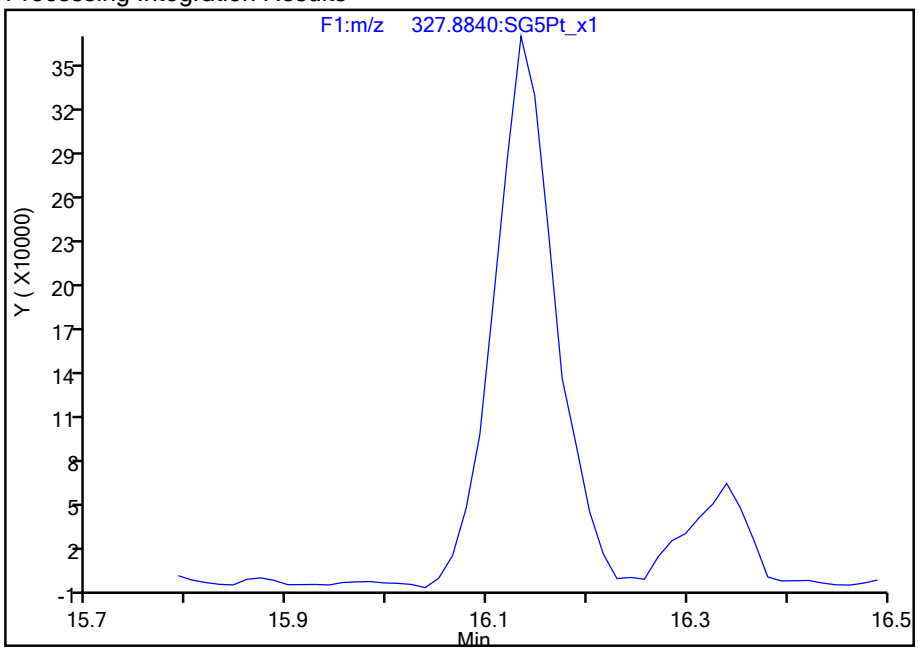

Manual Integration Results

RT: 16.13
Area: 1584493
Amount: 9.344759
Amount Units: pg/ul

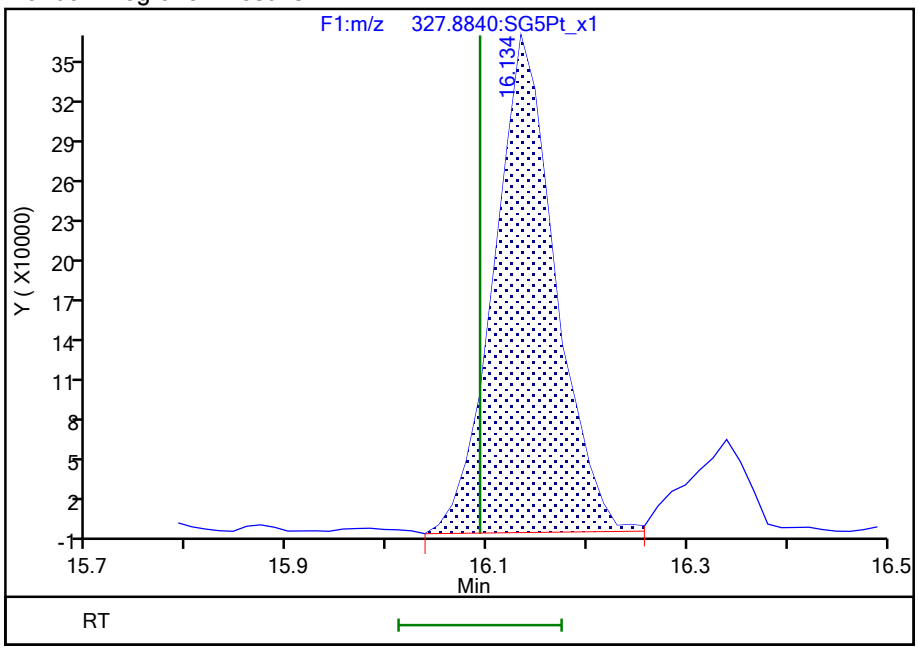

Reviewer: bennettd, 23-Aug-2021 15:50:07
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

774558

Report Date: 23-Aug-2021 15:56:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_007.d		
Injection Date:	23-Aug-2021 13:22:02	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	518958	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

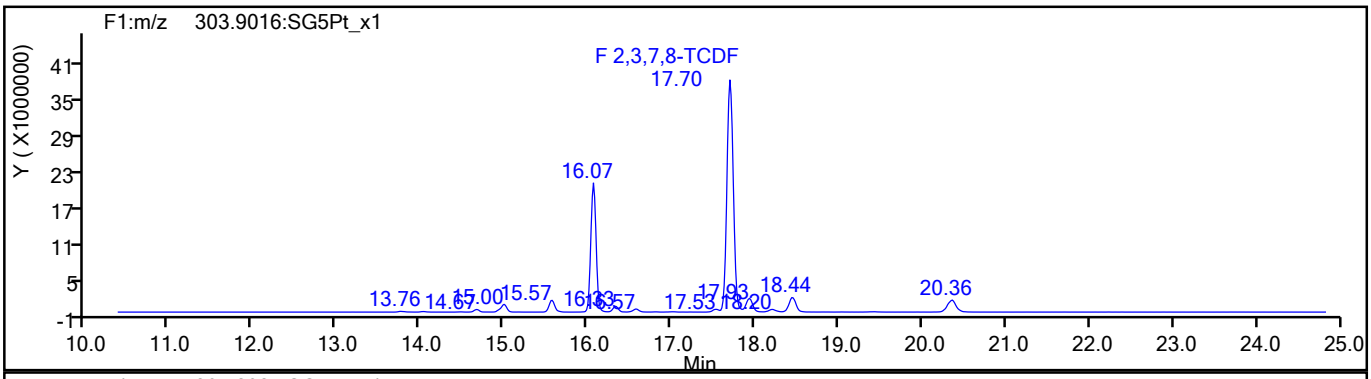

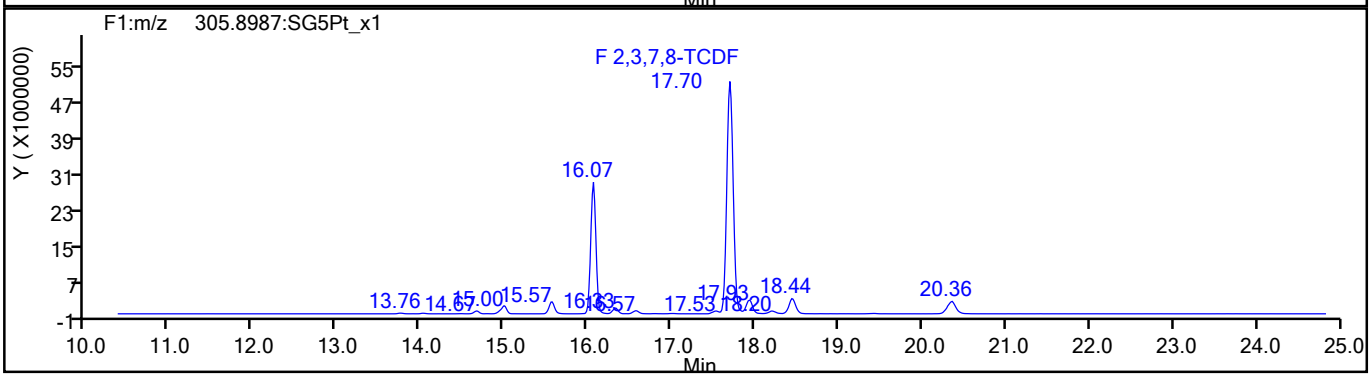

TCDF Standards

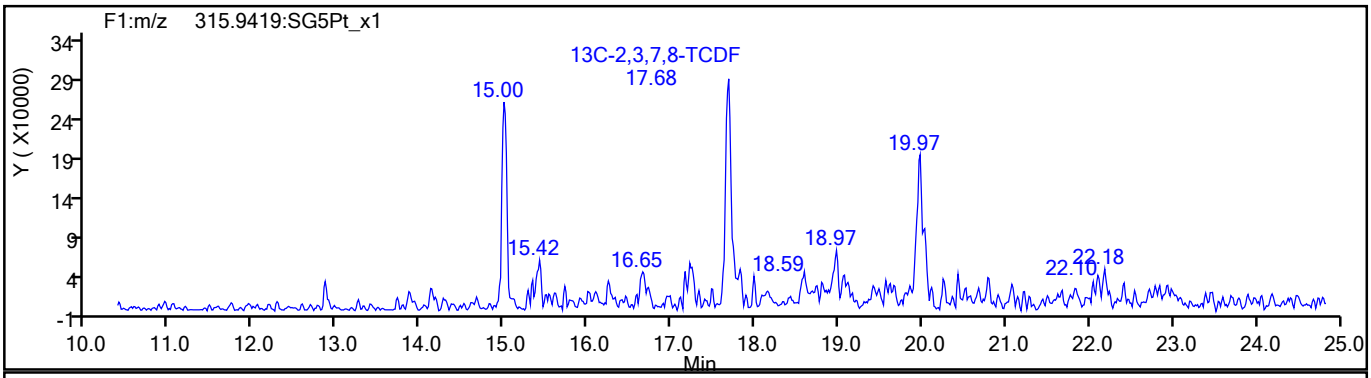

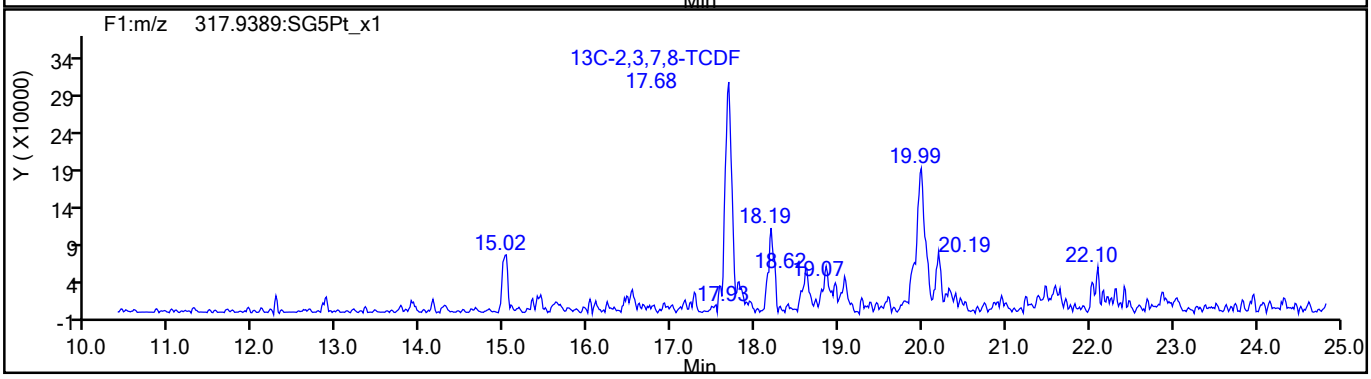

774559

Report Date: 23-Aug-2021 15:56:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_007.d		
Injection Date:	23-Aug-2021 13:22:02	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	518958	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

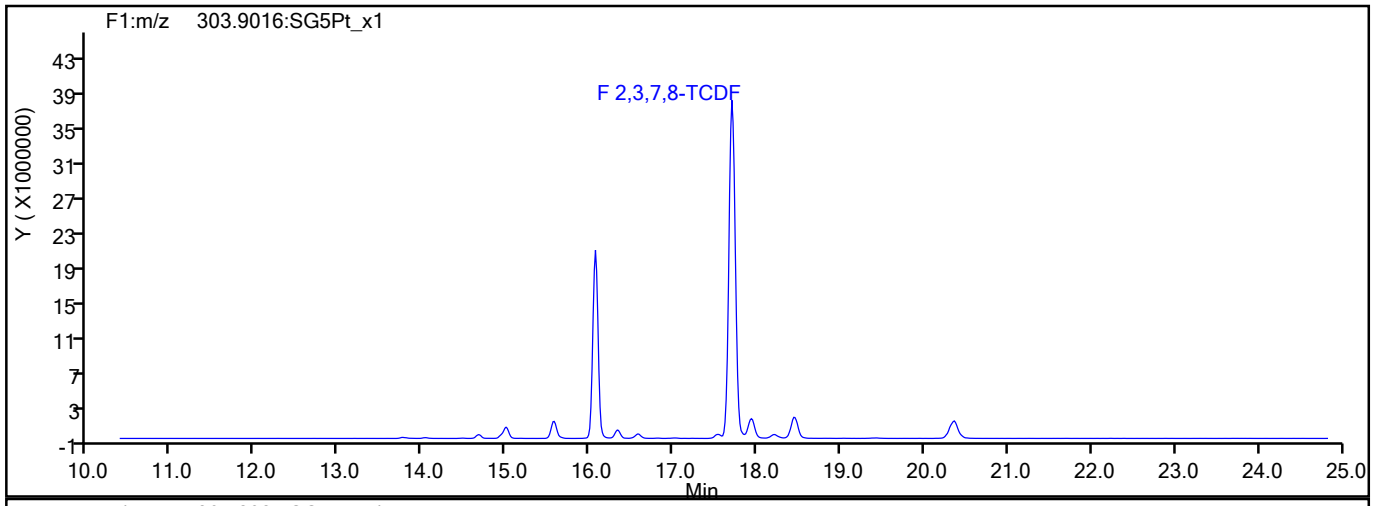

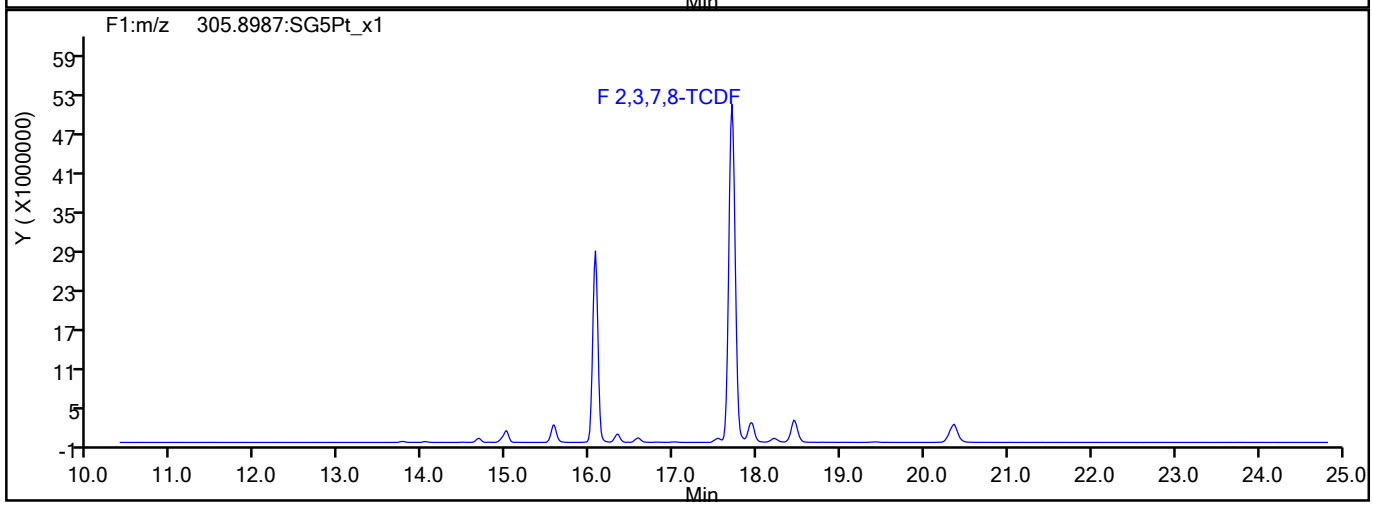

TCDF Interference Mass

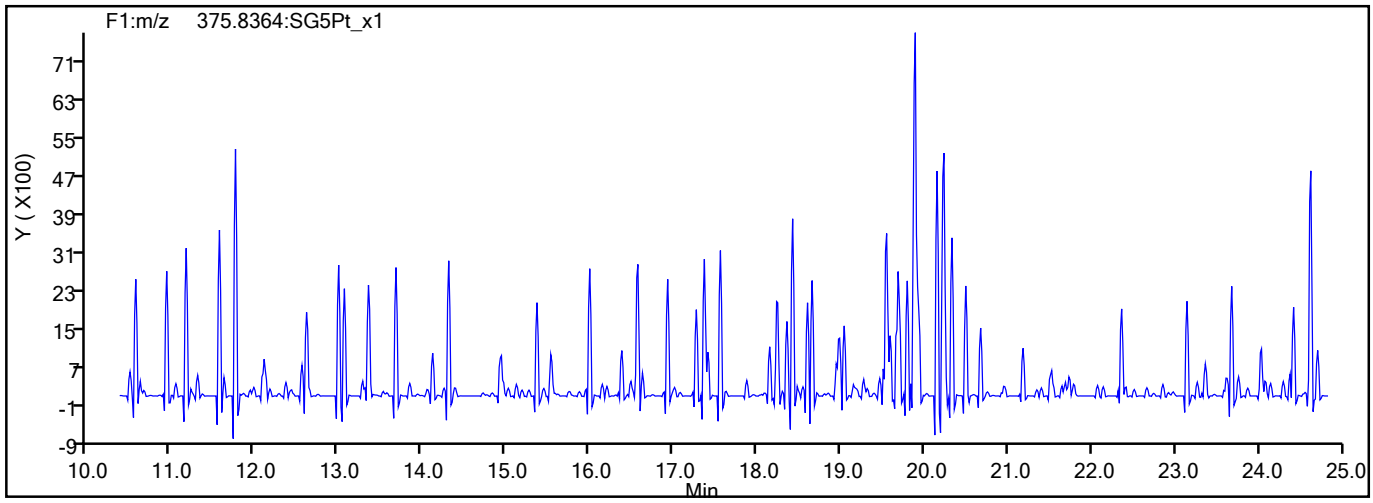

774560

Report Date: 23-Aug-2021 15:56:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_007.d		
Injection Date:	23-Aug-2021 13:22:02	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	518958	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

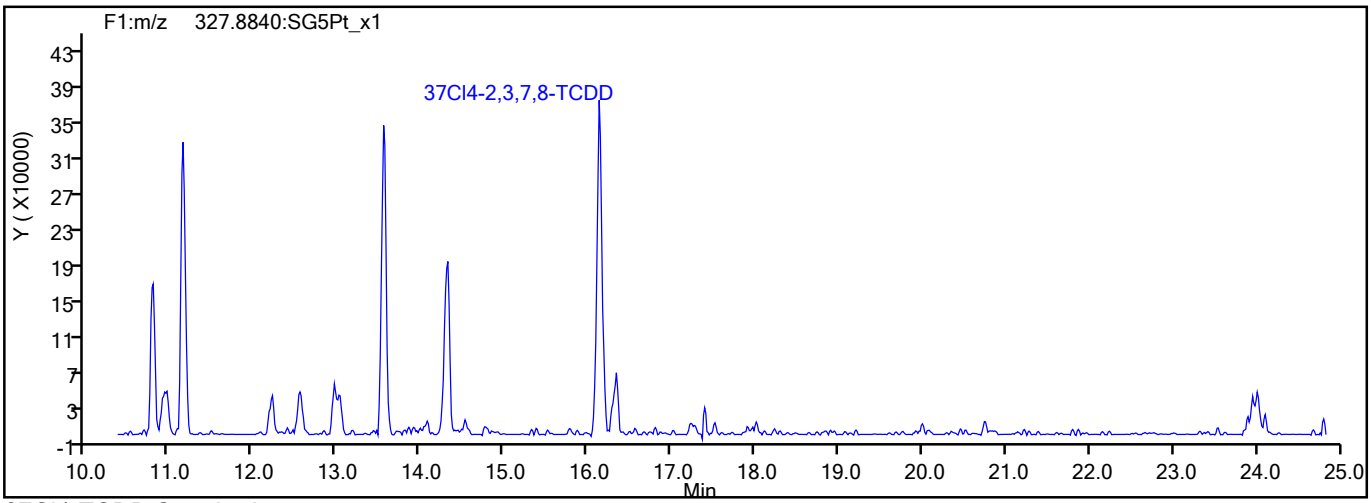

37Cl4-TCDD Standards

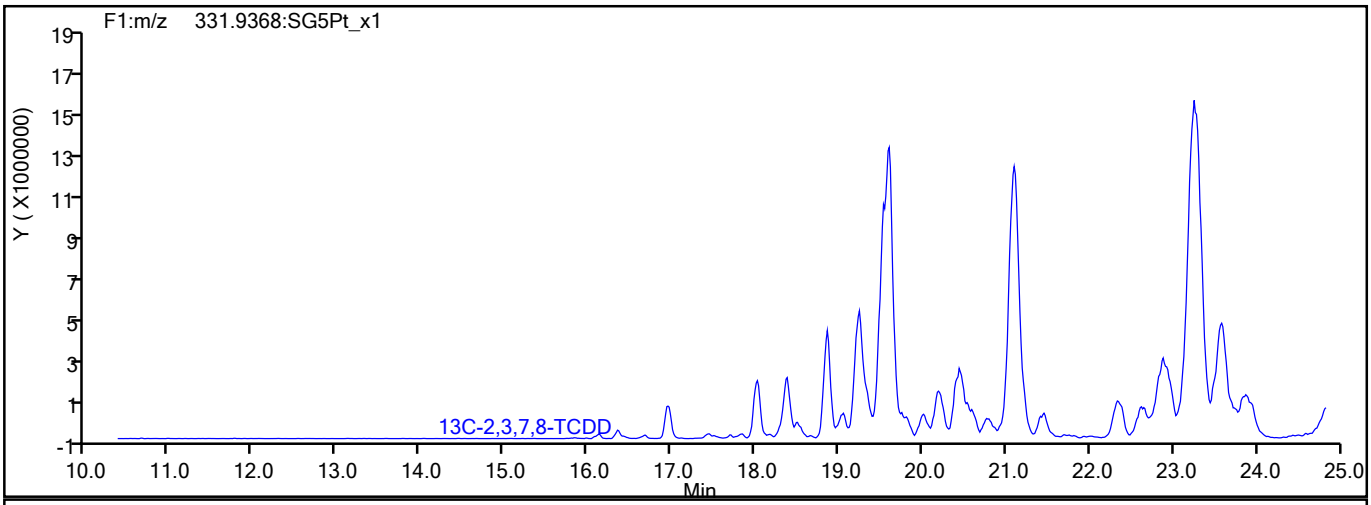

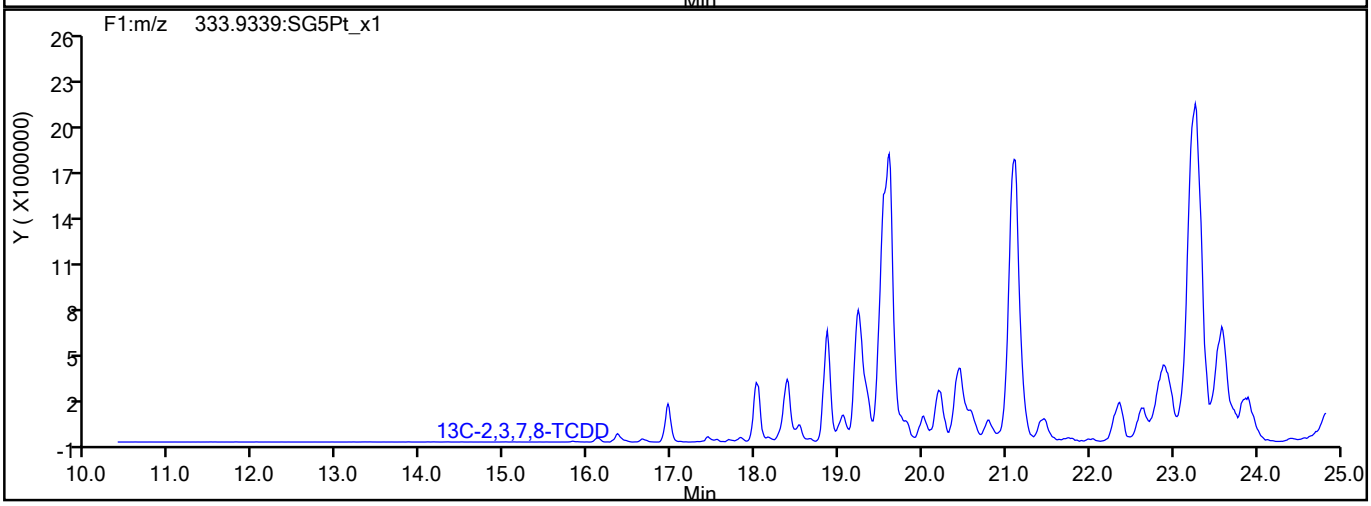

774561

Report Date: 23-Aug-2021 15:56:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_007.d		
Injection Date:	23-Aug-2021 13:22:02	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	518958	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

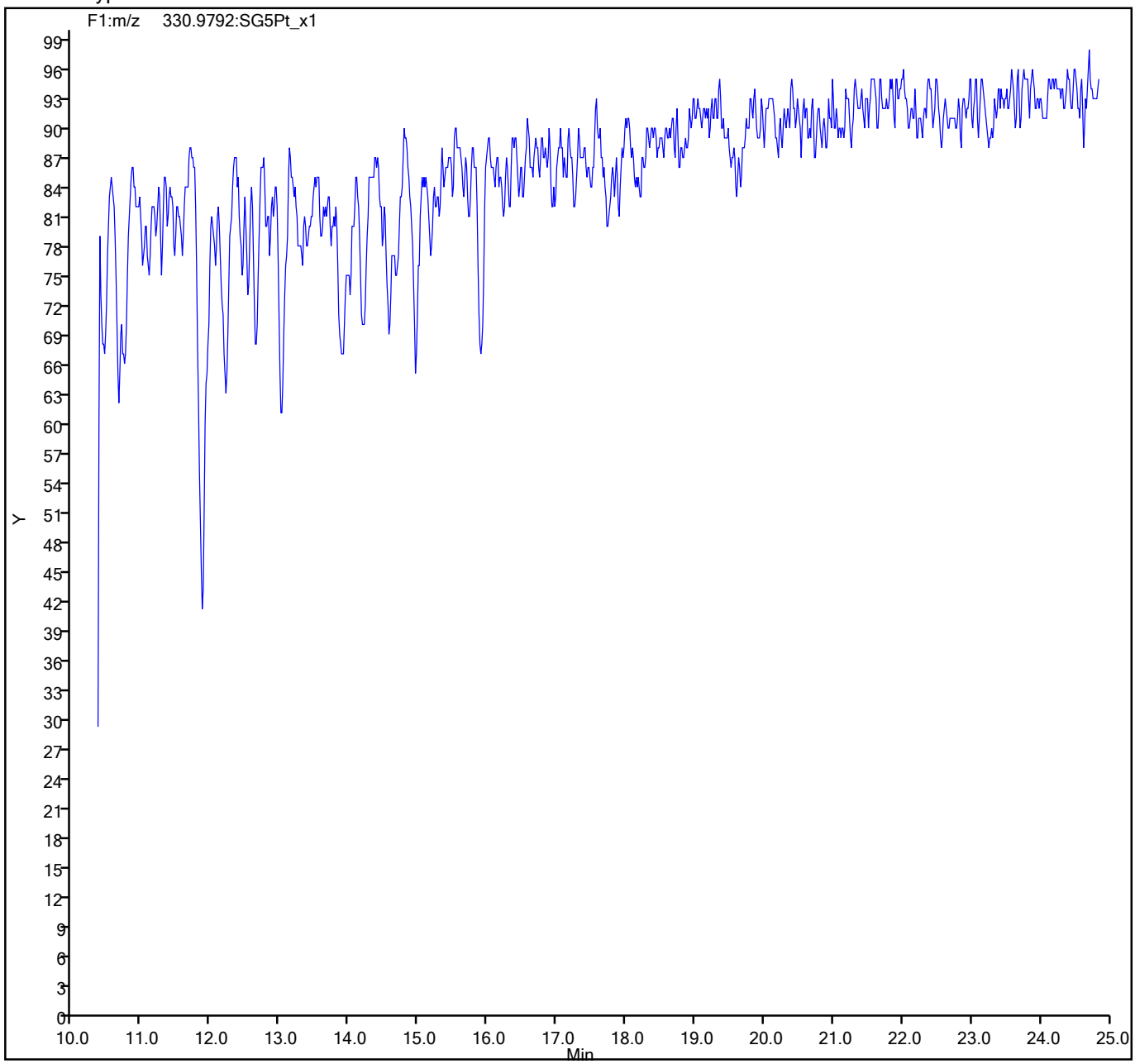

774562

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (2-4)
Lab Sample ID: 320-76769-2
Matrix: Sediment
Lab File ID: 13AU2110D5_50.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:45
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.73(g)
Date Analyzed: 08/15/2021 06:36
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 37.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	11000	E B G	23	23
40321-76-4	1,2,3,7,8-PeCDD	94		8.3	1.5
57117-41-6	1,2,3,7,8-PeCDF	1300	G	9.5	9.5
57117-31-4	2,3,4,7,8-PeCDF	690	G	9.4	9.4
39227-28-6	1,2,3,4,7,8-HxCDD	2.0	J B	8.3	0.29
57653-85-7	1,2,3,6,7,8-HxCDD	8.0	J	8.3	0.32
19408-74-3	1,2,3,7,8,9-HxCDD	4.3	J B	8.3	0.28
70648-26-9	1,2,3,4,7,8-HxCDF	2100	B	8.3	5.8
57117-44-9	1,2,3,6,7,8-HxCDF	590	B	8.3	5.7
72918-21-9	1,2,3,7,8,9-HxCDF	32	B	8.3	4.4
60851-34-5	2,3,4,6,7,8-HxCDF	66		8.3	4.5
35822-46-9	1,2,3,4,6,7,8-HpCDD	280	B	8.3	2.7
67562-39-4	1,2,3,4,6,7,8-HpCDF	710	B	8.3	3.2
55673-89-7	1,2,3,4,7,8,9-HpCDF	210	B	8.3	3.6
3268-87-9	OCDD	3900	B	17	3.7
39001-02-0	OCDF	370	B	17	0.32
41903-57-5	Total TCDD	12000	B G	23	23
30402-14-3	Total TCDF	51000	B G	78	78
36088-22-9	Total PeCDD	110	q	8.3	1.5
30402-15-4	Total PeCDF	3000	G	9.4	9.4
34465-46-8	Total HxCDD	58	B q	8.3	0.30
55684-94-1	Total HxCDF	3200	B q	8.3	5.1
37871-00-4	Total HpCDD	540	B	8.3	2.7
38998-75-3	Total HpCDF	1100	B	8.3	3.4

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (2-4)
Lab Sample ID: 320-76769-2
Matrix: Sediment
Lab File ID: 13AU2110D5_50.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:45
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.73(g)
Date Analyzed: 08/15/2021 06:36
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 37.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	65		25-164
89059-46-1	13C-2,3,7,8-TCDF	62		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	76		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	68		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	75		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	70		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	63		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	68		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	59		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	62		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	60		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	73		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	68		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	80		26-138
114423-97-1	13C-OCDD	86		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	106		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Sample Type: Client
Inject. Date: 15-Aug-2021 06:36:55 ALS Bottle#: 49 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-2-a 320-76769-a-2-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:05:04 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:47:16

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.930	95635440	0.82	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.431	95598521	0.78	1.6249	61.5	61.5	0.5913	0.5913	61.52	
2,3,7,8-TCDF	17.447	8772221218	0.87	1.0239	8961.8	8961.8	23.6	23.6		Ea
A Non-2,3,7,8-sub-TCDF	17.046	6219438924	0.78	1.0239	6353.9	6353.9	23.6	4246.8		
S Total TCDF					15316	15316	23.6	23.6		
D 13C-2,3,7,8-TCDD	18.112	55599405	0.83	0.8993	64.6	64.6	0.7629	0.7629	64.65	
2,3,7,8-TCDD	18.127	2345816470	0.79	1.2541	3364.2	3364.2	6.864	6.864		Ea
$ 37Cl4-2,3,7,8-TCDD	18.127	44745819		1.1071	42.3	42.3	0.2255	0.2255	106	
A Non-2,3,7,8-sub-TCDD	17.500	218646340	0.74	1.2541	313.6	313.6	6.864	284.0		M
S Total TCDD					3677.8	3677.8	6.864	6.864		
D 13C-1,2,3,7,8-PeCDF	22.476	79113085	1.57	1.2101	68.4	68.4	0.2385	0.2385	68.36	
1,2,3,7,8-PeCDF	22.490	331469945	1.57	1.0611	394.8	394.8	2.856	2.856		a
D 13C-2,3,4,7,8-PeCDF	23.799	89194398	1.58	1.2395	75.2	75.2	0.2328	0.2328	75.24	
2,3,4,7,8-PeCDF	23.826	190621519	1.58	1.0184	209.8	209.8	2.827	2.827		
A F1 PeCDFs	20.093	1402041	1.61	1.0398	1.602	1.602	0.0382	1.602		
A Non-2,3,7,8-sub-PeCDF	23.241	265808705	1.59	1.0398	303.8	303.8	2.840	134.8		a
S Total PeCDF					910.1	910.1	2.841	2.841		
D 13C-1,2,3,7,8-PeCDD	24.508	55014246	1.66	0.7612	75.6	75.6	0.2147	0.2147	75.57	
1,2,3,7,8-PeCDD	24.535	16386117	1.64	1.0484	28.4	28.4	0.4561	0.4561		
A Non-2,3,7,8-sub-PeCDD	23.349	2660620	1.55	1.0484	8.729	4.613	0.4561	1.665		RQ
S Total PeCDD					37.1	33.0	0.4561	0.4561		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.542	80639704	0.53	1.0837	67.9	67.9	0.2348	0.2348	67.92	
1,2,3,4,7,8-HxCDF	30.569	564461197	1.21	1.0851	645.1	645.1	1.753	1.753		
D 13C-1,2,3,6,7,8-HxCDF	30.729	73117135	0.53	1.1279	59.2	59.2	0.2256	0.2256	59.17	
1,2,3,6,7,8-HxCDF	30.742	146870704	1.22	1.1260	178.4	178.4	1.714	1.714		
D 13C-2,3,4,6,7,8-HxCDF	31.541	70482635	0.53	1.0637	60.5	60.5	0.2392	0.2392	60.48	
2,3,4,6,7,8-HxCDF	31.554	16373921	1.38	1.1675	19.9	19.9	1.347	1.347		M
D 13C-1,2,3,7,8,9-HxCDF	32.326	65786051	0.52	0.9676	62.1	62.1	0.2630	0.2630	62.06	
1,2,3,7,8,9-HxCDF	32.340	7406748	1.23	1.1664	9.653	9.653	1.340	1.340		M
A Non-2,3,7,8-sub-HxCDF	30.197	87147880	1.24	1.1363	107.1	105.8	1.518	40.7		RQMa

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					960.1	958.8	1.538	1.538		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.153	109556773	1.21	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	56616670	1.24	0.7334	70.5	70.5	0.2802	0.2802	70.46	
1,2,3,4,7,8-HxCDD	31.740	372153	1.24	1.0640	0.6178	0.6178	0.0884	0.0884		Ma
D 13C-1,2,3,6,7,8-HxCDD	31.820	60931385	1.25	0.8802	63.2	63.2	0.2335	0.2335	63.19	
1,2,3,6,7,8-HxCDD	31.834	1469562	1.38	1.0001	2.412	2.412	0.0955	0.0955		M
1,2,3,7,8,9-HxCDD	32.166	857689	1.23	1.1325	1.289	1.289	0.0837	0.0837		
A Non-2,3,7,8-sub-HxCDD	30.882	8323503	1.24	1.0655	13.4	13.3	0.0889	6.961		RQ
S Total HxCDD					17.7	17.6	0.0892	0.0892		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	57271130	0.44	0.7730	67.6	67.6	0.7954	0.7954	67.62	
1,2,3,4,6,7,8-HpCDF	33.778	176690194	1.04	1.4413	214.1	214.1	0.9772	0.9772		
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	61304972	0.43	0.7008	79.8	79.8	0.8773	0.8773	79.85	
1,2,3,4,7,8,9-HpCDF	34.859	51761679	1.04	1.3174	64.1	64.1	1.073	1.073		
A Non-2,3,7,8-sub-HpCDF	34.319	34249520	0.98	1.3793	41.9	41.9	1.023	41.9		
S Total HpCDF					320.0	320.0	1.025	1.025		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	51631985	1.00	0.6472	72.8	72.8	0.4775	0.4775	72.82	
1,2,3,4,6,7,8-HpCDD	34.568	48108437	1.03	1.0943	85.1	85.1	0.8194	0.8194		
A Non-2,3,7,8-sub-HpCDD	34.301	43720413	1.07	1.0943	77.4	77.4	0.8194	77.4		
S Total HpCDD					162.5	162.5	0.8194	0.8194		
D 13C-OCDD	36.926	84219949	0.87	0.4472	171.9	171.9	0.1927	0.1927	85.96	
OCDF	37.022	66914497	0.89	1.4382	110.5	110.5	0.0954	0.0954		
OCDD	36.926	552848222	0.89	1.1070	1186.0	1186.0	1.125	1.125		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 18-Aug-2021 11:05:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Sample Type: Client
Inject. Date: 15-Aug-2021 06:36:55 ALS Bottle#: 49 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-2-a 320-76769-a-2-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:05:04 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:47:16

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.930	17.855	5		43227613	11445063	28882	72205	396		a
333.9339	17.930	17.855	5		52407827	13779202	40344	100860	342	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.431	17.356	5	0.972	41866313	11314369	24280	60700	466		
317.9389	17.431	17.356	5	0.972	53732208	14553549	72665	181662	200	0.78(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.447	17.371	5	1.001	4071454426	1056898634	10860882715220		973		ae
305.8987	17.447	17.371	5	1.001	4700766792	1109395647	14184213546052		782	0.87(0.65-0.89)	e
A Non-2,3,7,8-sub-TCDF											
303.9016	16.010	17.046	-62	0.918	58366066	15514488	10860882715220		14		
305.8987	16.010	17.046	-62	0.918	75247323	19861021	14184213546052		14	0.78(0.65-0.89)	
303.9016	16.298	17.046	-45	0.935	112353517	22082104	10860882715220		20		
305.8987	16.298	17.046	-45	0.935	144339411	28189329	14184213546052		20	0.78(0.65-0.89)	
303.9016	16.509	17.046	-32	0.947	127128560	31255549	10860882715220		29		
305.8987	16.509	17.046	-32	0.947	163191287	40530512	14184213546052		29	0.78(0.65-0.89)	
303.9016	16.751	17.046	-18	0.961	194388089	50622253	10860882715220		47		
305.8987	16.751	17.046	-18	0.961	251422994	65244633	14184213546052		46	0.77(0.65-0.89)	
303.9016	17.023	17.046	-1	0.977	1822579329	436492845	10860882715220		402		
305.8987	17.023	17.046	-1	0.977	2334355021	558986813	14184213546052		394	0.78(0.65-0.89)	
303.9016	17.265	17.046	13	0.990	62845604	12377707	10860882715220		11		
305.8987	17.265	17.046	13	0.990	81608248	16007645	14184213546052		11	0.77(0.65-0.89)	
303.9016	17.855	17.046	48	1.024	290516799	76803505	10860882715220		71		
305.8987	17.855	17.046	48	1.024	373350231	99895212	14184213546052		70	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.097	17.046	63	1.038	55458867	12737397	10860882715220		12		
305.8987	18.097	17.046	63	1.038	72287578	16456020	14184213546052		12	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.112	18.051	4	1.010	25223123	6020890	28882	72205	208		
333.9339	18.112	18.051	4	1.010	30376282	7456755	40344	100860	185	0.83(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	18.127	18.081	3	1.001	1033212759	242291123	242663	606657	998		a
321.8936	18.127	18.081	3	1.001	1312603711	308508012	221416	553540	1393	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.127	18.081	3	1.011	44745819	10532042	25193	62982	418		
A Non-2,3,7,8-sub-TCDD											M
319.8965	18.021	17.500	31	0.995	9709471	3156931	242663	606657	13		M
321.8936	18.021	17.500	31	0.995	10904439	3961908	221416	553540	18	0.89(0.65-0.89)	
319.8965	18.490	17.500	59	1.021	82968300	18036919	242663	606657	74		
321.8936	18.490	17.500	59	1.021	115064130	22916251	221416	553540	103	0.72(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.476	22.367	7	1.254	48353919	8444412	16158	40395	523		
353.8970	22.476	22.367	7	1.254	30759166	5456118	12960	32400	421	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.490	22.394	6	1.001	202365597	36525184	103999	259997	351		a
341.8567	22.490	22.394	6	1.001	129104348	23547781	64481	161202	365	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.799	23.703	6	1.327	54557344	8979225	16158	40395	556		
353.8970	23.799	23.703	6	1.327	34637054	5648565	12960	32400	436	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.826	23.730	6	1.001	116734360	19320462	103999	259997	186		
341.8567	23.826	23.730	6	1.001	73887159	12223525	64481	161202	190	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.579	20.093	-31	0.871	865369	192821	923	2307	209		
341.8567	19.579	20.093	-31	0.871	536672	123546	1341	3352	92	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											a
339.8597	21.140	23.241	-126	0.941	72471169	16669868	103999	259997	160		
341.8567	21.140	23.241	-126	0.941	45465420	10517985	64481	161202	163	1.59(1.32-1.78)	
339.8597	21.985	23.241	-75	0.978	5367506	662631	103999	259997	6		
341.8567	21.985	23.241	-75	0.978	3375979	401382	64481	161202	6	1.59(1.32-1.78)	
339.8597	22.353	23.241	-53	0.995	10327015	2434276	103999	259997	23		a
341.8567	22.353	23.241	-53	0.995	6560123	1529003	64481	161202	24	1.57(1.32-1.78)	
339.8597	23.008	23.241	-14	1.024	47305609	8553167	103999	259997	82		
341.8567	23.008	23.241	-14	1.024	29644741	5432053	64481	161202	84	1.60(1.32-1.78)	
339.8597	24.167	23.241	55	1.075	27779435	4057254	103999	259997	39		
341.8567	24.153	23.241	55	1.075	17511708	2575615	64481	161202	40	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.508	24.426	5	1.367	34347342	5906736	9839	24597	600		
369.8919	24.508	24.426	5	1.367	20666904	3628934	6651	16627	546	1.66(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											
355.8546	24.535	24.453	5	1.001	10180275	1773182	10211	25527	174		
357.8516	24.535	24.453	5	1.001	6205842	1070413	8030	20075	133	1.64(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.317	23.349	-122	0.870	347059	58871	10211	25527	6		
357.8516	21.303	23.349	-122	0.869	2337430	470278	8030	20075	59	0.15(1.32-1.78)	
	Empc Correction				223909	37981	8030	20075	5		
355.8546	22.503	23.349	-51	0.918	583916	112033	10211	25527	11		
357.8516	22.517	23.349	-50	0.919	637405	110079	8030	20075	14	0.92(1.32-1.78)	
	Empc Correction				376720	72279	8030	20075	9		
355.8546	22.762	23.349	-35	0.929	404203	72289	10211	25527	7		
357.8516	22.762	23.349	-35	0.929	257571	42904	8030	20075	5	1.57(1.32-1.78)	
355.8546	23.062	23.349	-17	0.941	274117	55054	10211	25527	5		
357.8516	23.062	23.349	-17	0.941	193125	34610	8030	20075	4	1.42(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.542	30.503	2	0.950	27869277	5443107	12511	31277	435		
385.8610	30.542	30.503	2	0.950	52770427	10262785	19213	48032	534	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.569	30.529	2	1.001	308891015	60656856	65046	162615	933		
375.8178	30.569	30.529	2	1.001	255570182	50040059	54437	136092	919	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.729	30.689	2	0.956	25228038	5395329	12511	31277	431		
385.8610	30.729	30.689	2	0.956	47889097	10081397	19213	48032	525	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.742	30.716	2	1.000	80591846	16853592	65046	162615	259		
375.8178	30.742	30.716	2	1.000	66278858	13967989	54437	136092	257	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.541	31.514	2	0.981	24338754	6543038	12511	31277	523		
385.8610	31.541	31.514	2	0.981	46143881	12447920	19213	48032	648	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.554	31.528	2	1.000	9499217	2478967	65046	162615	38		M
375.8178	31.554	31.528	2	1.000	6874704	1928286	54437	136092	35	1.38(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.326	0	1.005	22477443	6579752	12511	31277	526		
385.8610	32.326	32.326	0	1.005	43308608	12538732	19213	48032	653	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.340	32.340	0	1.000	4080524	1373912	65046	162615	21		M
375.8178	32.340	32.340	0	1.000	3326224	1117038	54437	136092	21	1.23(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	28.440	30.197	-105	0.931	18484298	2701605	65046	162615	42		
375.8178	28.440	30.197	-105	0.931	15055691	2242964	54437	136092	41	1.23(1.05-1.43)	
373.8208	29.771	30.197	-26	0.975	8383987	1312058	65046	162615	20		
375.8178	29.757	30.197	-26	0.974	6738211	1080567	54437	136092	20	1.24(1.05-1.43)	
373.8208	31.448	30.197	75	1.030	6382004	1510172	65046	162615	23		M
	Empc Correction				5301037	1373834	65046	162615	21		
375.8178	31.448	30.197	75	1.030	4275030	1107931	54437	136092	20	1.49(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	32.433	30.197	134	1.062	15921166	4959198	65046	162615	76		M
375.8178	32.433	30.197	134	1.062	12988460	3996590	54437	136092	73	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.140	1		60003106	17146545	13701	34252	1251		
403.8529	32.153	32.140	1		49553667	14016968	11914	29785	1177	1.21(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.986	31395095	9136736	13701	34252	667		
403.8529	31.714	31.701	1	0.986	25221575	7423639	11914	29785	623	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											Ma
389.8157	31.740	31.714	2	1.001	205677	57522	2700	6750	21		M
391.8127	31.740	31.714	2	1.001	166476	48991	3532	8830	14	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.807	1	0.990	33852560	9085165	13701	34252	663		
403.8529	31.820	31.807	1	0.990	27078825	7231434	11914	29785	607	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.834	31.820	1	1.000	851732	235804	2700	6750	87		
391.8127	31.834	31.820	1	1.000	617830	176299	3532	8830	50	1.38(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											
389.8157	32.166	32.153	1	1.014	473675	116938	2700	6750	43		
391.8127	32.166	32.153	1	1.014	384014	88407	3532	8830	25	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.624	30.882	-75	0.931	1693148	212304	2700	6750	79		
391.8127	29.611	30.882	-76	0.931	1369393	175738	3532	8830	50	1.24(1.05-1.43)	
389.8157	30.622	30.882	-16	0.962	423386	91434	2700	6750	34		
391.8127	30.622	30.882	-16	0.962	301603	71197	3532	8830	20	1.40(1.05-1.43)	
389.8157	30.995	30.882	7	0.974	2429160	520372	2700	6750	193		
391.8127	30.982	30.882	6	0.974	1930096	427176	3532	8830	121	1.26(1.05-1.43)	
389.8157	31.195	30.882	19	0.980	97826	21758	2700	6750	8		
391.8127	31.155	30.882	16	0.979	155536	29069	3532	8830	8	0.63(1.05-1.43)	
	Empc Correction				78891	17546	3532	8830	5		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.766	0	1.050	17540233	6203046	22372	55930	277		
419.8220	33.766	33.766	0	1.050	39730897	13993762	54272	135680	258	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	90195124	32466449	60544	151360	536		
409.7789	33.778	33.778	0	1.000	86495070	30968100	53234	133085	582	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.084	18541082	6109027	22372	55930	273		
419.8220	34.847	34.847	0	1.084	42763890	14009081	54272	135680	258	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.859	34.860	0	1.000	26448392	8776698	60544	151360	145		
409.7789	34.859	34.860	0	1.000	25313287	8335006	53234	133085	157	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.082	34.319	-14	1.009	16984320	6114065	60544	151360	101		
409.7789	34.070	34.319	-15	1.009	17265200	6020283	53234	133085	113	0.98(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.568	-1	1.075	25869315	8182536	20693	51732	395		
437.8140	34.556	34.568	-1	1.075	25762670	8368475	17834	44585	469	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.580	-1	1.000	24413363	7921659	35741	89352	222		
425.7737	34.568	34.580	-1	1.000	23695074	7850347	23621	59052	332	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.985	22647392	8403526	35741	89352	235		
425.7737	34.021	34.301	-17	0.985	21073021	8040645	23621	59052	340	1.07(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.926	0	1.148	39255969	11114553	5882	14705	1890		
471.7750	36.926	36.926	0	1.148	44963980	12464904	4857	12142	2566	0.87(0.76-1.02)	
OCDF											
441.7428	37.022	37.022	0	1.003	31476337	8766391	2899	7247	3024		
443.7399	37.010	37.022	-1	1.002	35438160	9639206	3574	8935	2697	0.89(0.76-1.02)	
OCDD											
457.7377	36.926	36.938	-1	1.000	261028016	72463295	28981	72452	2500		
459.7348	36.926	36.938	-1	1.000	291820206	82300178	29747	74367	2767	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Inject. Date: 15-Aug-2021 06:36:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 9

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	95598521	25867918

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	95598521	25867918

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.010	58366066	15514488	75247323	19861021	136.5	0.78	
16.298	112353517	22082104	144339411	28189329	262.2	0.78	
16.509	127128560	31255549	163191287	40530512	296.6	0.78	
16.751	194388089	50622253	251422994	65244633	455.4	0.77	
17.023	1822579329	436492845	2334355021	558986813	4246.8	0.78	
17.265	62845604	12377707	81608248	16007645	147.6	0.77	
17.855	290516799	76803505	373350231	99895212	678.2	0.78	
18.097	55458867	12737397	72287578	16456020	130.5	0.77	
Signal Totals:							
	2723636831	657885848	3495802093	845171185			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6219438924	1503057033				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6353.9 = (6219438924 * 100.000) / (95598521 * 1.024)

Report Date: 18-Aug-2021 11:05:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Inject. Date: 15-Aug-2021 06:36:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 9

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	55599405	13477645

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	55599405	13477645

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.021	9709471	3156931	10904439	3961908	29.6	0.89	M
18.490	82968300	18036919	115064130	22916251	284.0	0.72	
Signal Totals:							
	92677771	21193850	125968569	26878159			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	218646340	48072009				0.74	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 313.569 = (218646340 * 100.000) / (55599405 * 1.254)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 11:05:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Inject. Date: 15-Aug-2021 06:36:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 9

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	79113085	13900530
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	89194398	14627790

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	84153741	14264160

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.579	865369	192821	536672	123546	1.60	1.61	
Signal Totals:							
	865369	192821	536672	123546			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1402041	316367				1.61	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.602 = (1402041 * 100.000) / (84153741 * 1.040)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Inject. Date: 15-Aug-2021 06:36:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 9

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	79113085	13900530
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	89194398	14627790

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	84153741	14264160

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.140	72471169	16669868	45465420	10517985	134.8	1.59	
21.985	5367506	662631	3375979	401382	10.0	1.59	
22.353	10327015	2434276	6560123	1529003	19.3	1.57	a
23.008	47305609	8553167	29644741	5432053	87.9	1.60	
24.167	27779435	4057254	17511708	2575615	51.8	1.59	
Signal Totals:							
	163250734	32377196	102557971	20456038			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	265808705	52833234				1.59	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 303.778 = (265808705 * 100.000) / (84153741 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 11:05:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Inject. Date: 15-Aug-2021 06:36:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 9

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	55014246	9535670

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	55014246	9535670

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.317	347059	58871	2337430	470278	4.65	0.15	RQ
21.317	347059	58871	223909	37981	0.9899		Empc Correction
22.503	583916	112033	637405	110079	2.12	0.92	RQ
22.503	583916	112033	376720	72279	1.67		Empc Correction
22.762	404203	72289	257571	42904	1.15	1.57	
23.062	274117	55054	193125	34610	0.8101	1.42	
Signal Totals:							
	1609295	298247	1051325	187774			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5034826	956118				0.47	RQ
	2660620	486021					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 8.729 = (5034826 * 100.000) / (55014246 * 1.048)
Empc Amount: 4.613 = (2660620 * 100.000) / (55014246 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 11:05:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Inject. Date: 15-Aug-2021 06:36:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 9

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	80639704	15705892
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	73117135	15476726
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	70482635	18990958
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	65786051	19118484

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	72506381	17323015

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.440	18484298	2701605	15055691	2242964	40.7	1.23	
29.771	8383987	1312058	6738211	1080567	18.4	1.24	
31.448	6382004	1510172	4275030	1107931	12.9	1.49	RQMa
31.448	5301037	1373834	4275030	1107931	11.6		Empc Correction
32.433	15921166	4959198	12988460	3996590	35.1	1.23	Ma
Signal Totals:							
	48090488	10346695	39057392	8428052			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	88228847	18911085				1.26	RQMa
	87147880	18774747					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 107.092 = (88228847 * 100.000) / (72506381 * 1.136)
Empc Amount: 105.780 = (87147880 * 100.000) / (72506381 * 1.136)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 11:05:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Inject. Date: 15-Aug-2021 06:36:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 9

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	56616670	16560375
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	60931385	16316599
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	58774027	16438487

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.624	1693148	212304	1369393	175738	4.89	1.24	
30.622	423386	91434	301603	71197	1.16	1.40	
30.995	2429160	520372	1930096	427176	6.96	1.26	
31.195	97826	21758	155536	29069	0.4046	0.63	RQ
31.195	97826	21758	78891	17546	0.2822		Empc Correction
Signal Totals:							
	4643520	845868	3679983	691657			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8400148	1549048				1.24	RQ
	8323503	1537525					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 13.413 = (8400148 * 100.000) / (58774027 * 1.066)
Empc Amount: 13.291 = (8323503 * 100.000) / (58774027 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 11:05:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Inject. Date: 15-Aug-2021 06:36:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 9

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	57271130	20196808
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	61304972	20118108

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	59288051	20157458

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.082	16984320	6114065	17265200	6020283	41.9	0.98	
Signal Totals:							
	16984320	6114065	17265200	6020283			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	34249520	12134348				0.98	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 41.881 = (34249520 * 100.000) / (59288051 * 1.379)

Report Date: 18-Aug-2021 11:05:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Inject. Date: 15-Aug-2021 06:36:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 9

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	51631985	16551011

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	51631985	16551011

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	22647392	8403526	21073021	8040645	77.4	1.07	
Signal Totals:							
	22647392	8403526	21073021	8040645			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43720413	16444171				1.07	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 77.380 = (43720413 * 100.000) / (51631985 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Not Detected
Expected RT: 17.37

Processing Integration Results

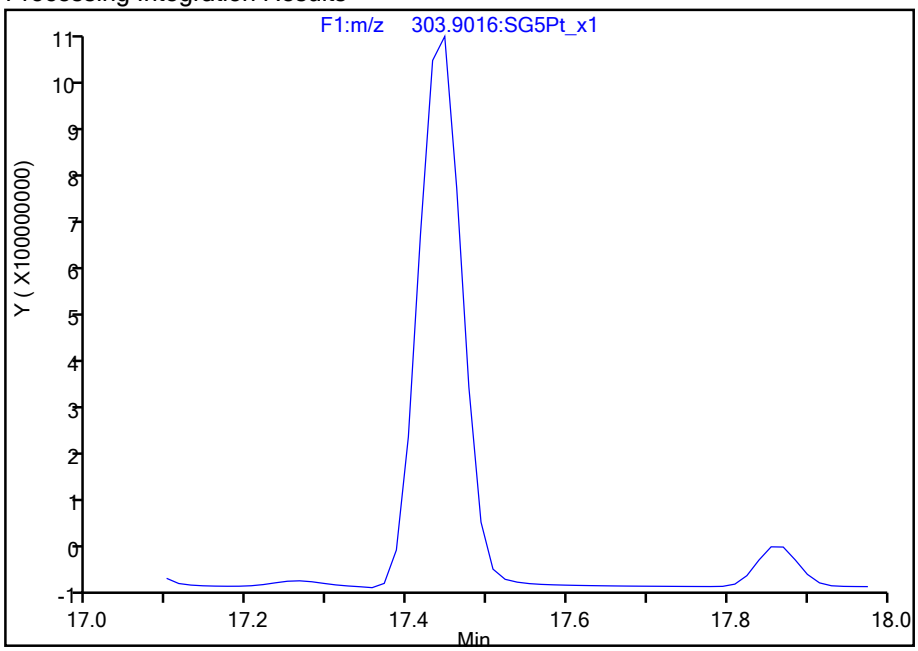

Manual Integration Results

RT: 17.45
Area: 4071454426
Amount: 8961.8238
Amount Units: pg/ul

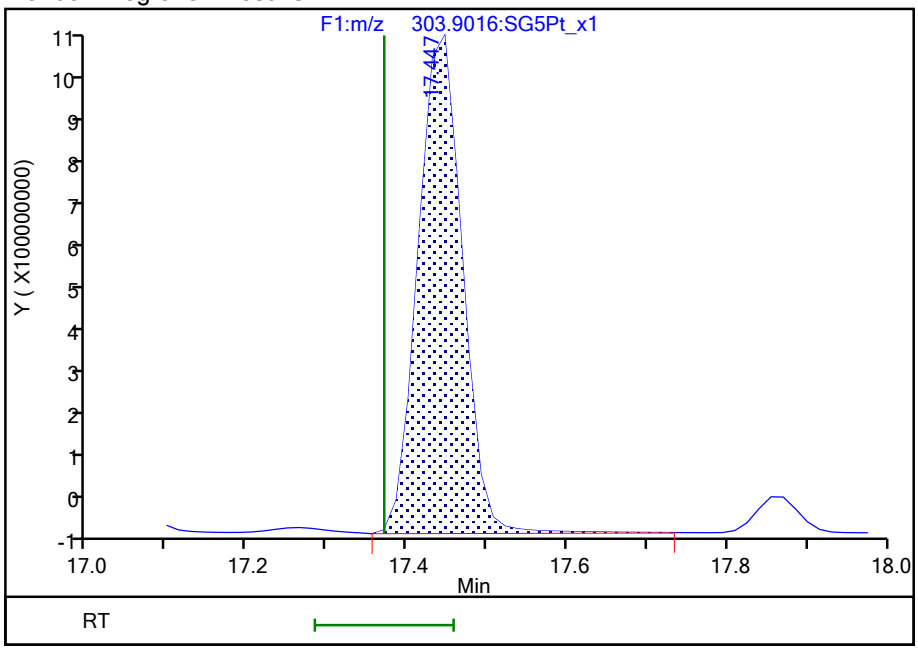

Reviewer: bennettd, 17-Aug-2021 16:46:37
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

774582

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Not Detected
Expected RT: 18.08

Processing Integration Results

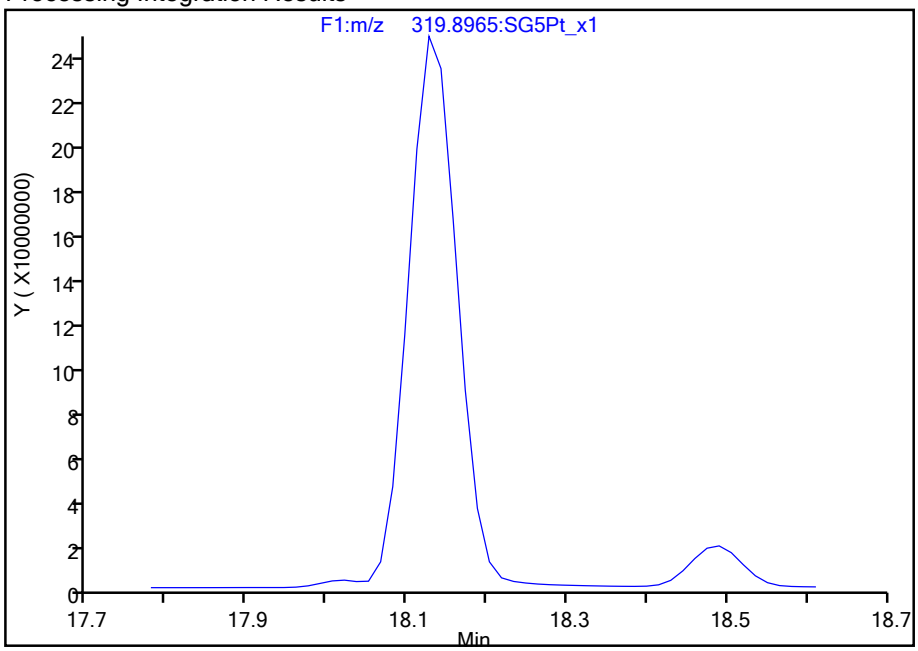

Manual Integration Results

RT: 18.13
Area: 1033212759
Amount: 3364.2236
Amount Units: pg/ul

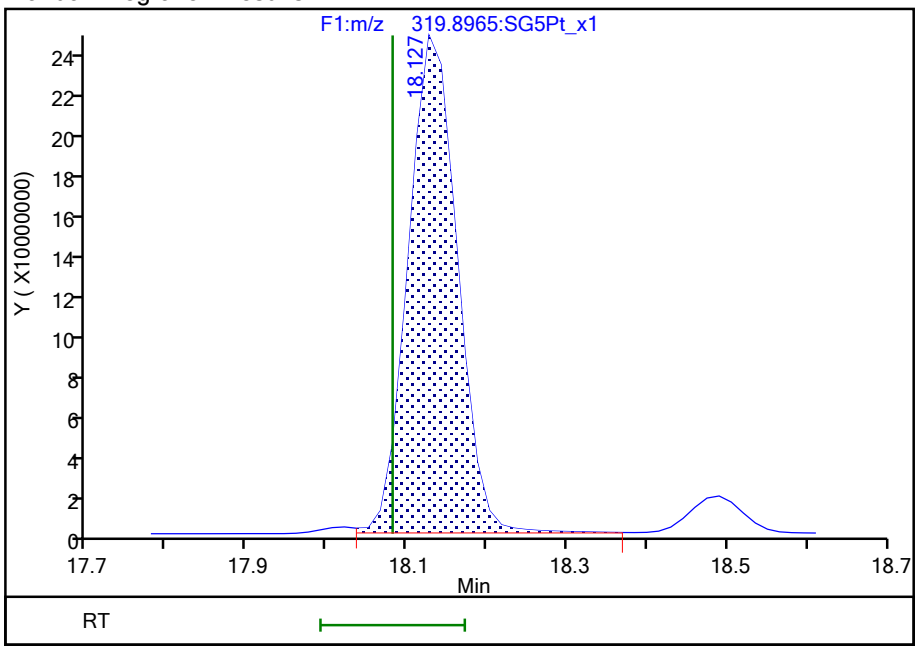

Reviewer: bennettd, 17-Aug-2021 16:47:02
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.80- 19.20)

Signal: 1

Processing Integration Results

RT = 18.021 Area = 300133

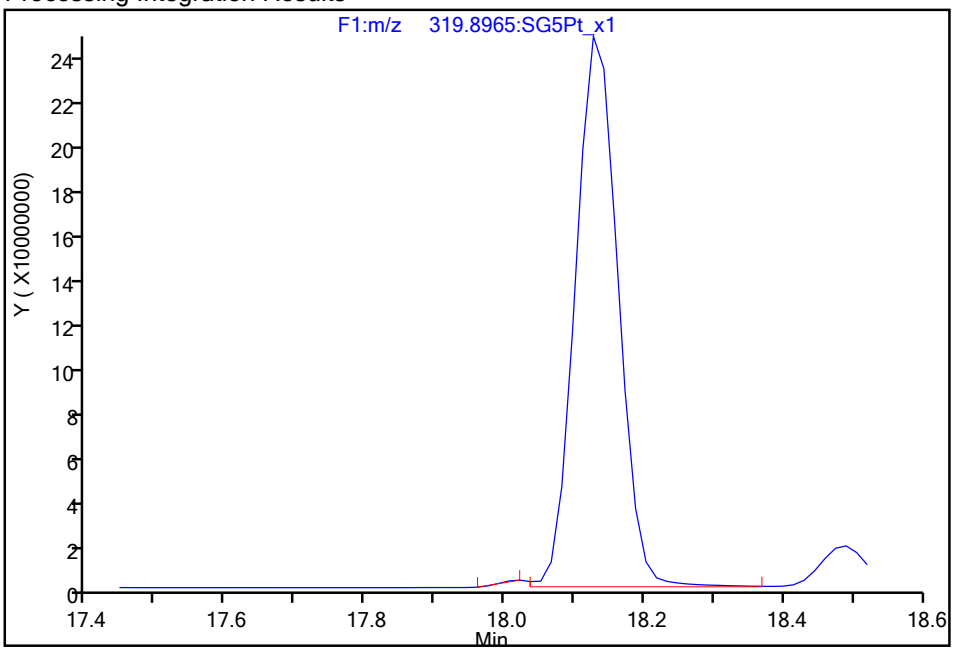

Manual Integration Results

RT = 18.021 Area = 9709471 M

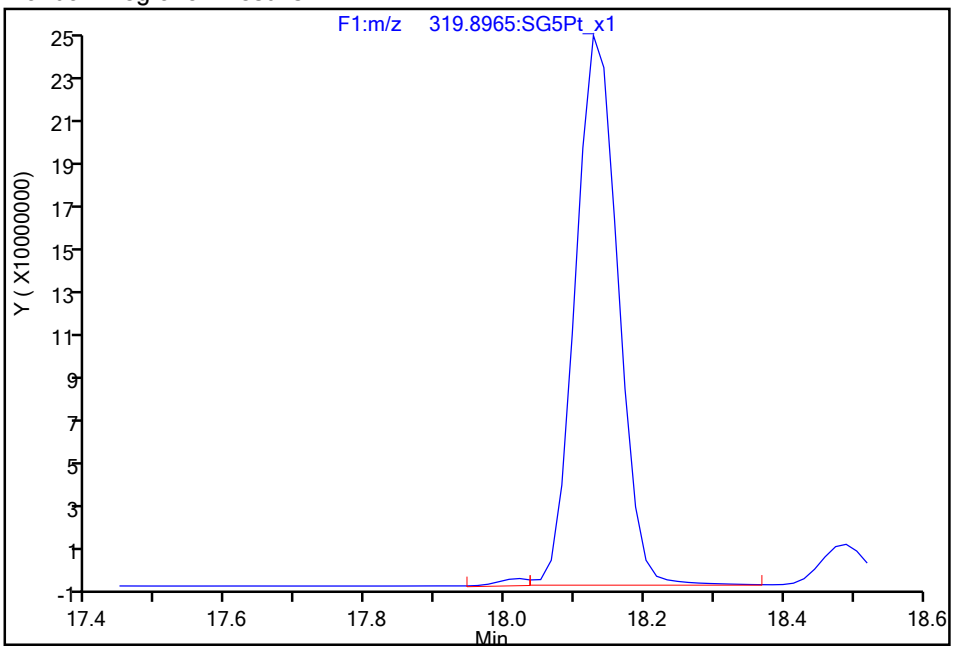

Reviewer: dadunj, 18-Aug-2021 11:02:55

Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.35
Area: 6560123
Amount: 20.115796
Amount Units: pg/ul

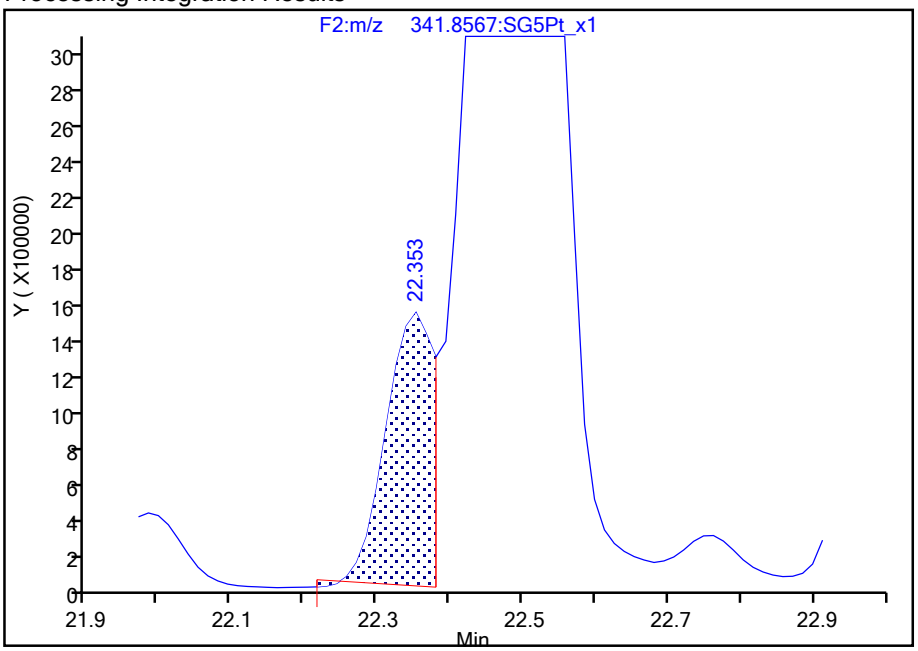

Manual Integration Results

RT: 22.49
Area: 129104348
Amount: 394.8438
Amount Units: pg/ul

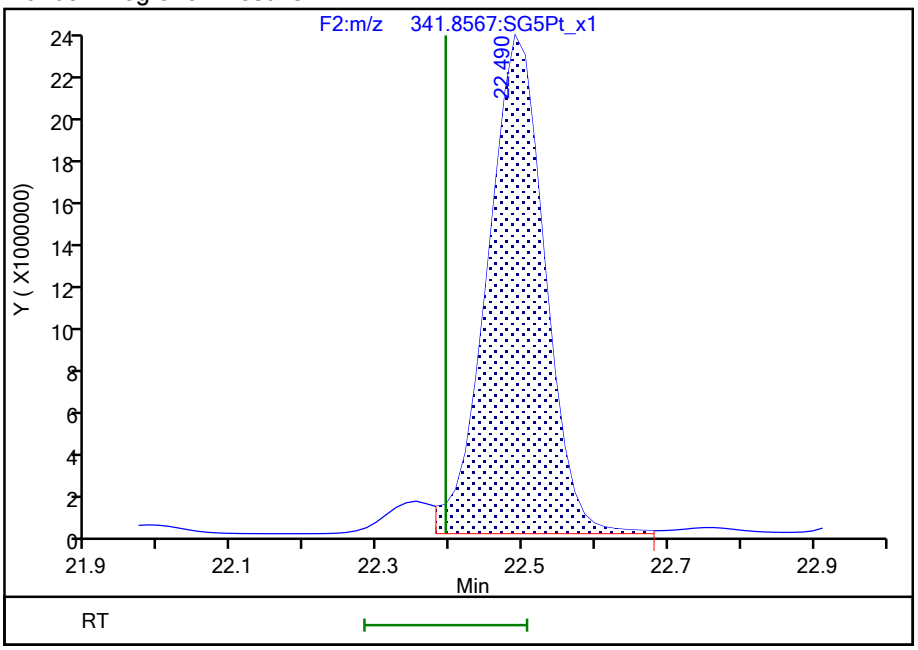

Reviewer: dadunj, 18-Aug-2021 11:03:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

RT: 22.35
Area: 16887138
Amount: 20.115796
Amount Units: pg/ul

Processing Integration Results

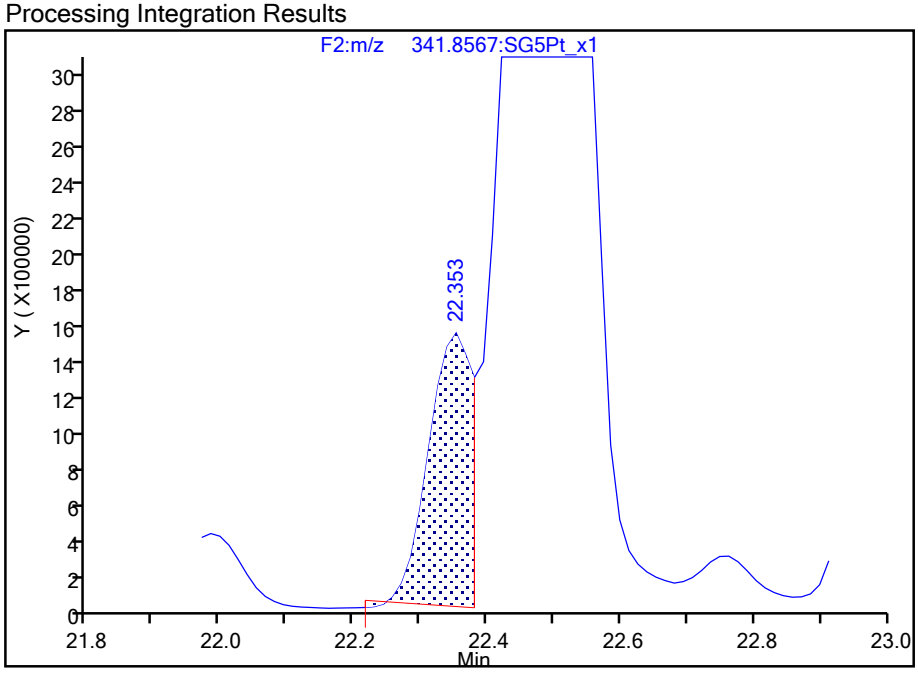

Manual Integration Results

RT: 22.49
Area: 331469945
Amount: 394.8438
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 11:03:04
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

774586

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.35
Area: 10327015
Amount: 20.115796
Amount Units: pg/ul

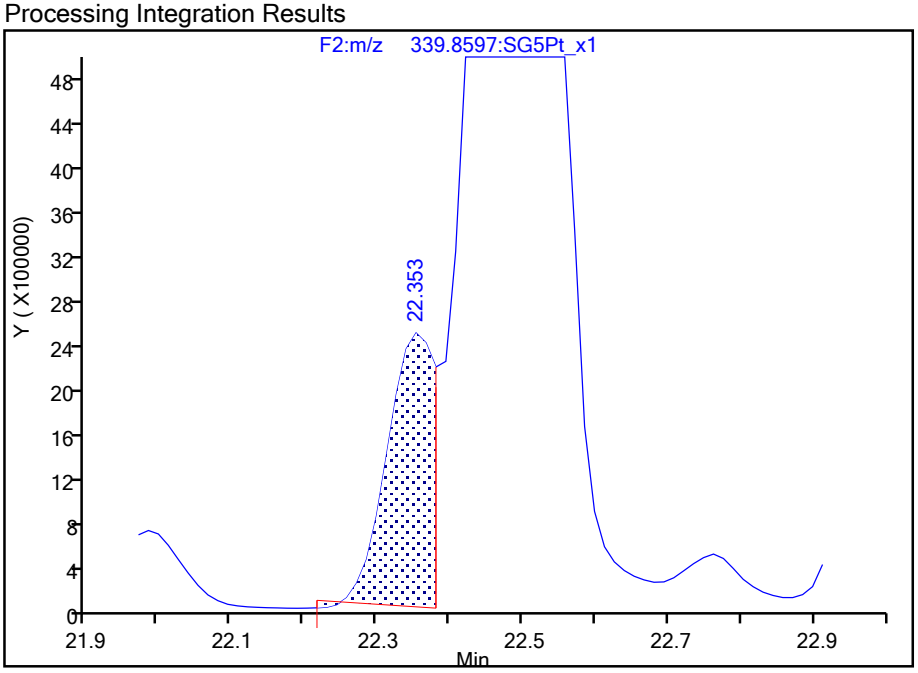

Manual Integration Results

RT: 22.49
Area: 202365597
Amount: 394.8438
Amount Units: pg/ul

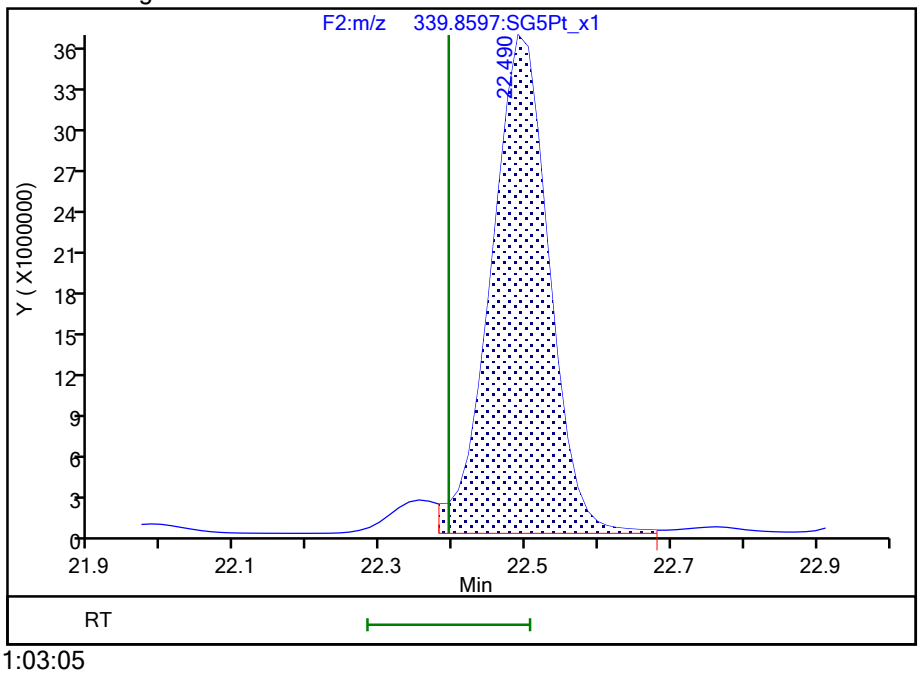

Reviewer: dadunj, 18-Aug-2021 11:03:05
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.55
Area: 13516643
Amount: 29.974460
Amount Units: pg/ul

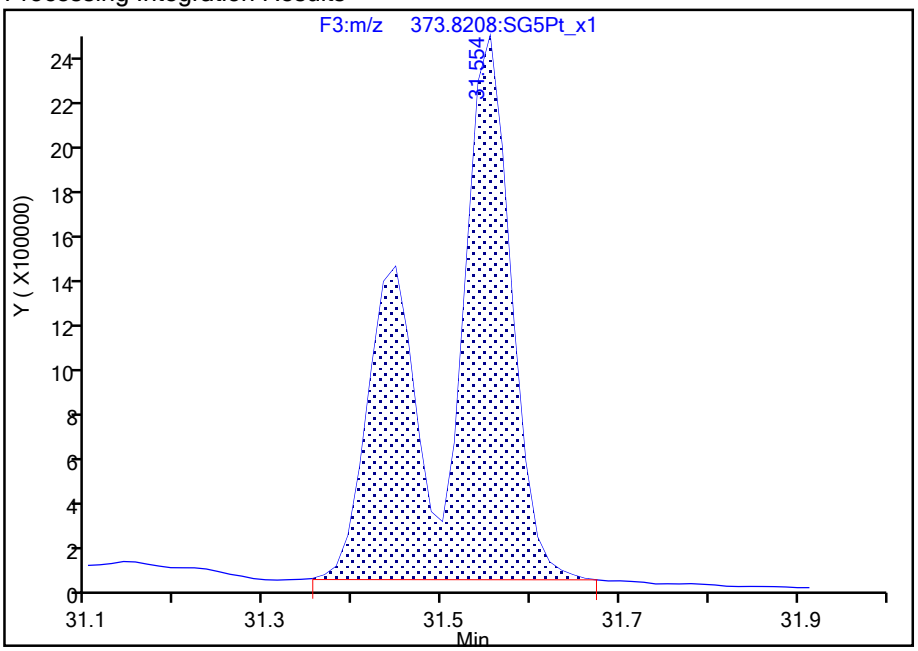

Manual Integration Results

RT: 31.55
Area: 9499217
Amount: 19.897527
Amount Units: pg/ul

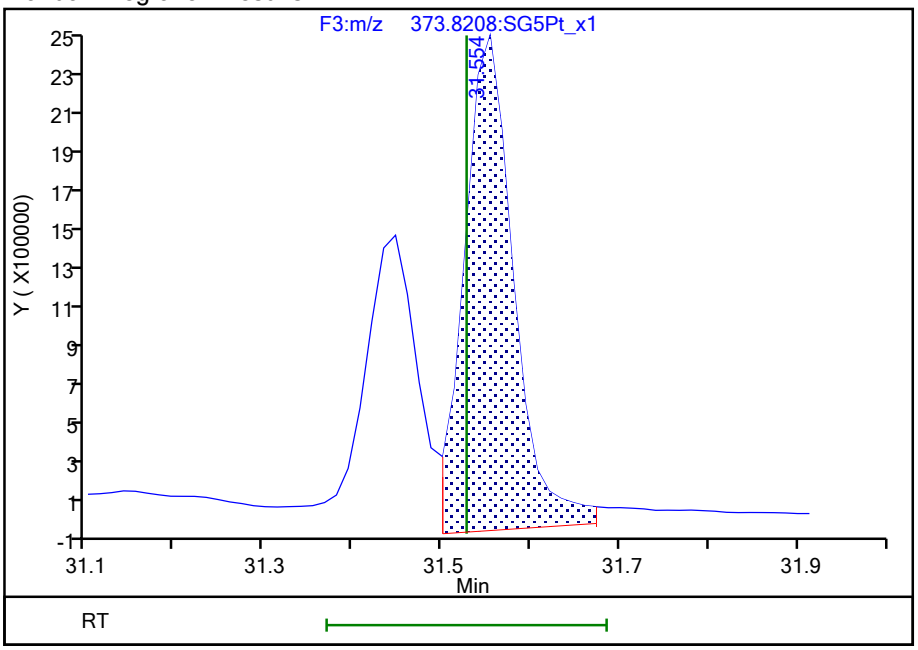

Reviewer: dadunj, 18-Aug-2021 11:03:49

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.55
Area: 11149710
Amount: 29.974460
Amount Units: pg/ul

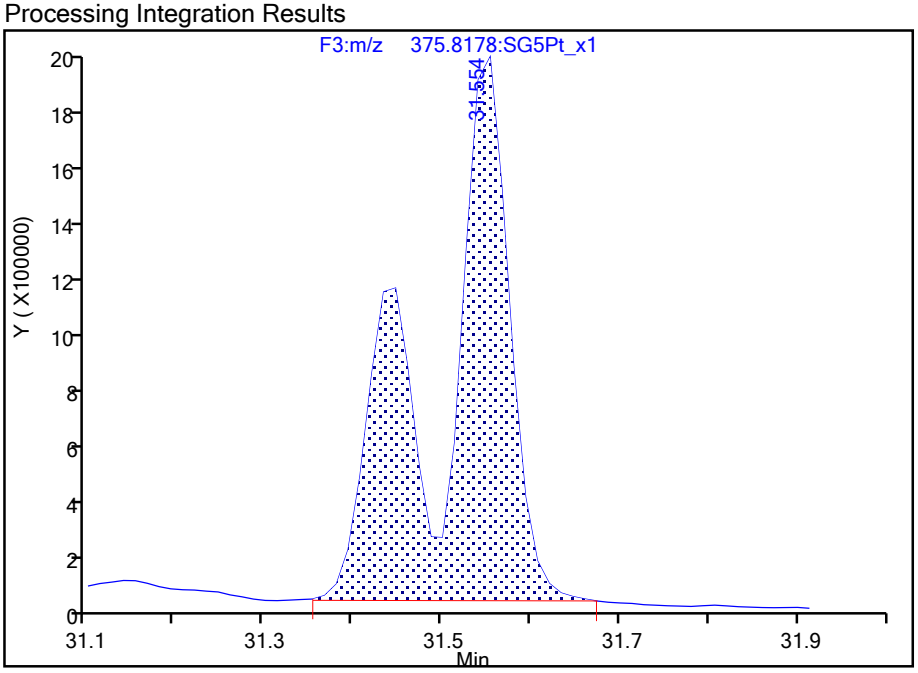

Manual Integration Results

RT: 31.55
Area: 6874704
Amount: 19.897527
Amount Units: pg/ul

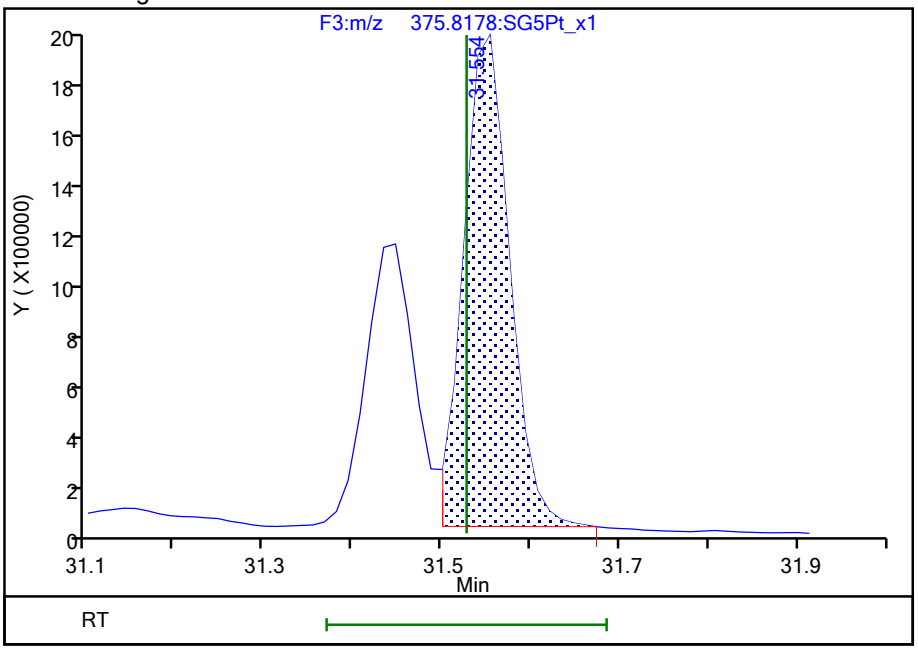

Reviewer: dadunj, 18-Aug-2021 11:03:51

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.43
Area: 20001559
Amount: 47.331087
Amount Units: pg/ul

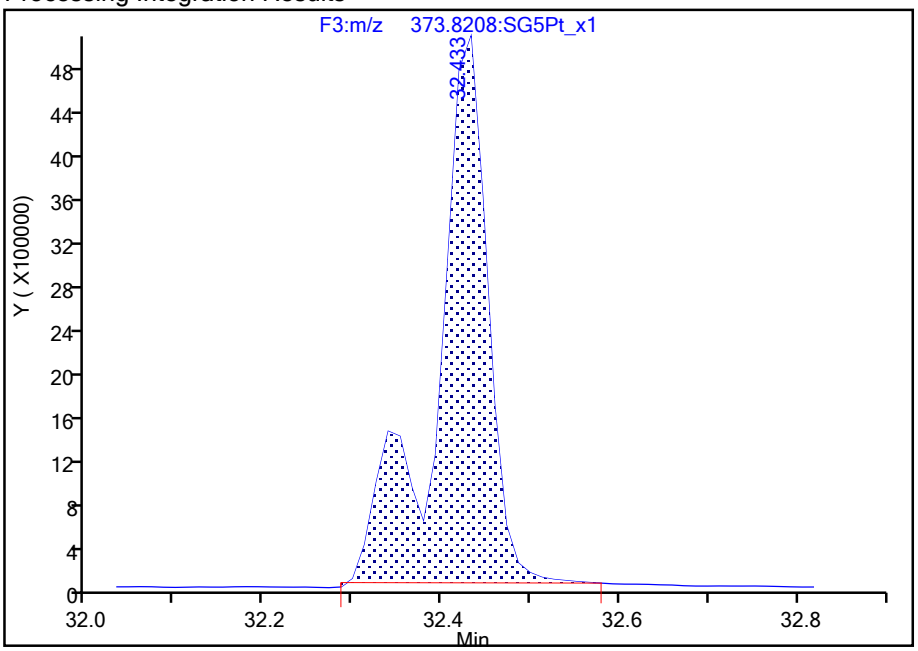

Manual Integration Results

RT: 32.34
Area: 4080524
Amount: 9.653045
Amount Units: pg/ul

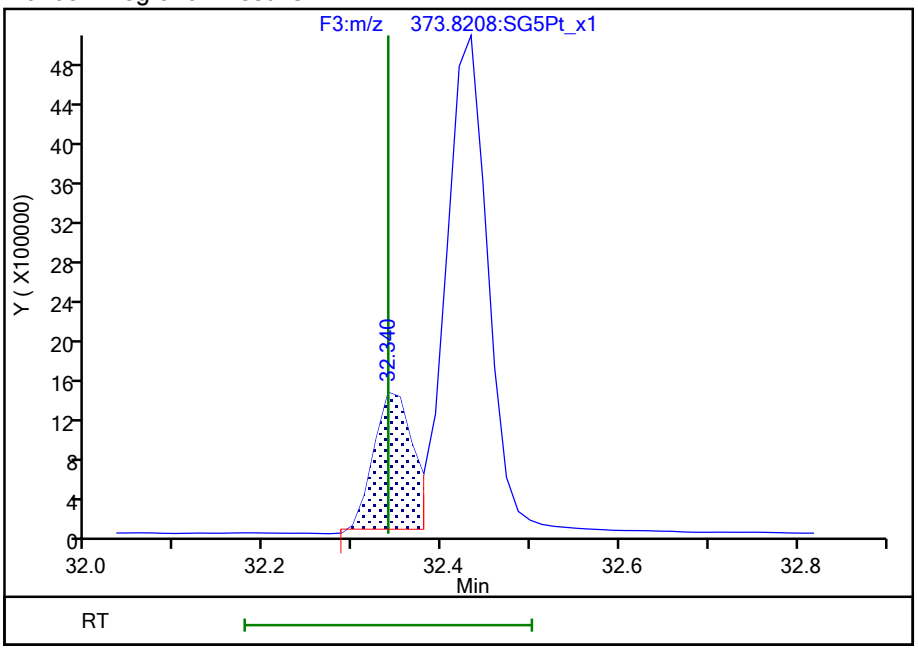

Reviewer: dadunj, 18-Aug-2021 11:04:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.43
Area: 16315419
Amount: 47.331087
Amount Units: pg/ul

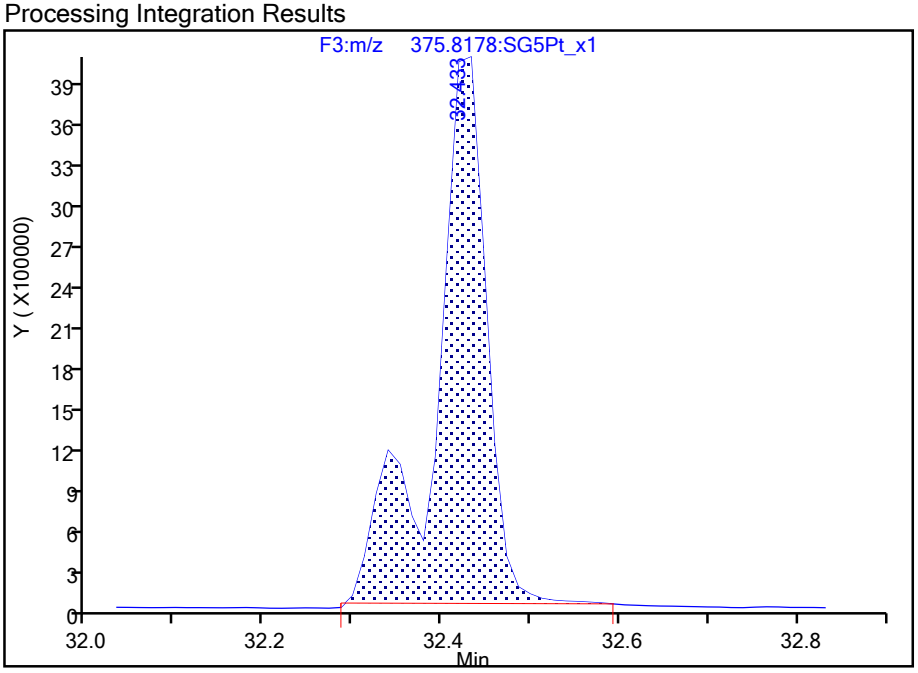

Manual Integration Results

RT: 32.34
Area: 3326224
Amount: 9.653045
Amount Units: pg/ul

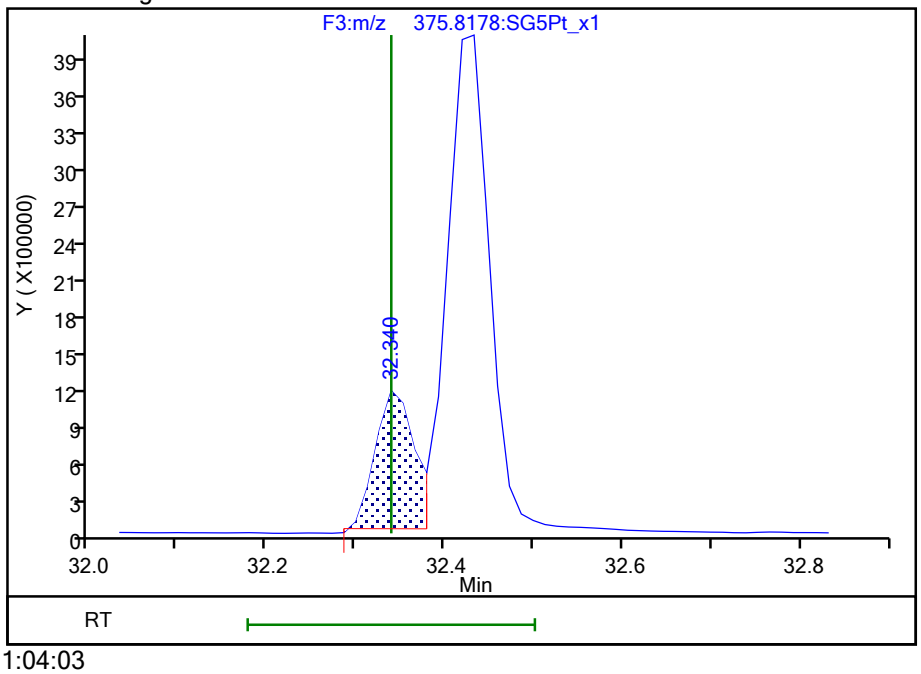

Reviewer: dadunj, 18-Aug-2021 11:04:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Not Detected
RT: 27.94- 32.45

Processing Integration Results

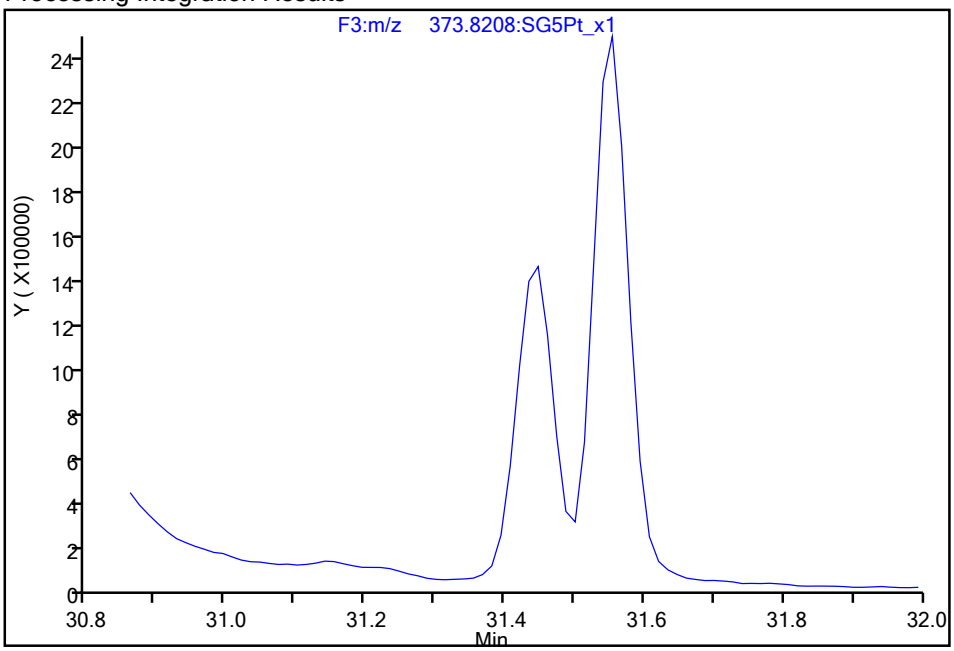

RT = 31.448 Area = 6382004 M

Manual Integration Results

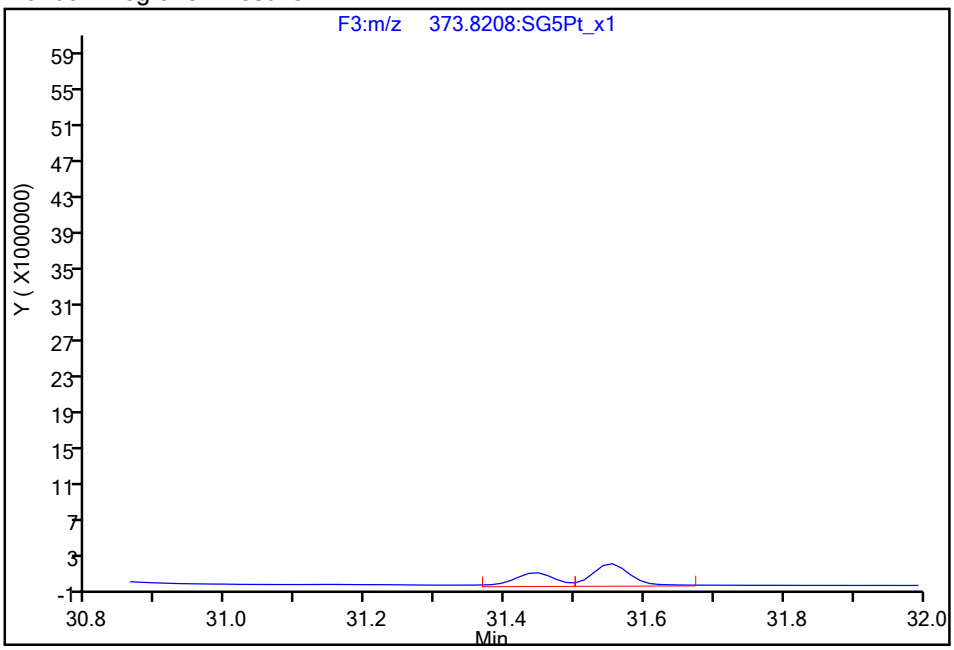

Reviewer: dadunj, 18-Aug-2021 11:04:11

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.433 Area = 20001559

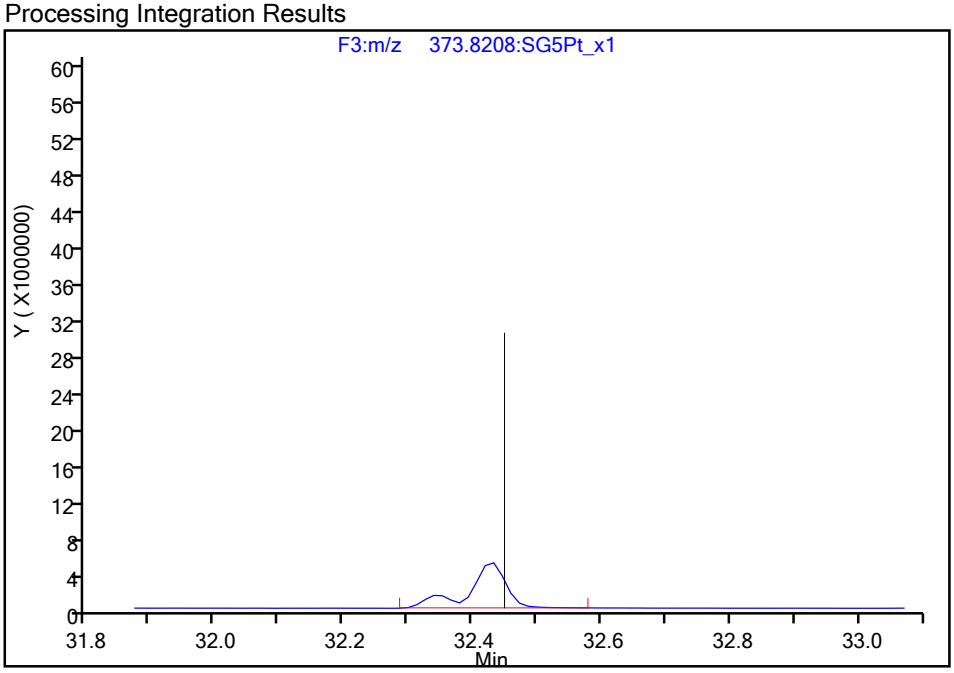

Manual Integration Results

RT = 32.433 Area = 15921166 M

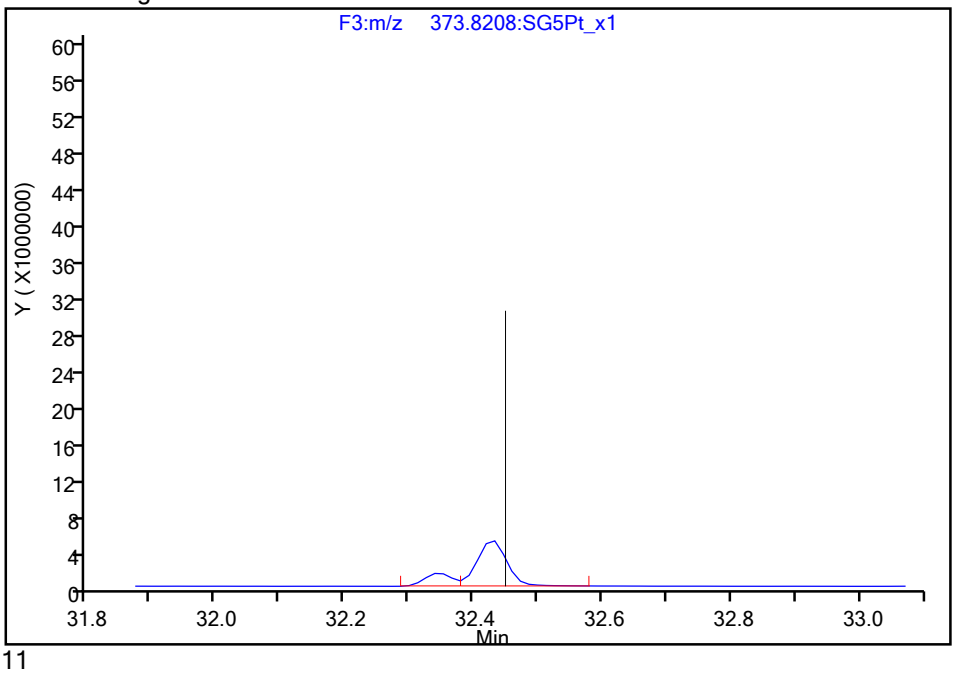

Reviewer: dadunj, 18-Aug-2021 11:04:11

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.83
Area: 784431
Amount: 2.715980
Amount Units: pg/ul

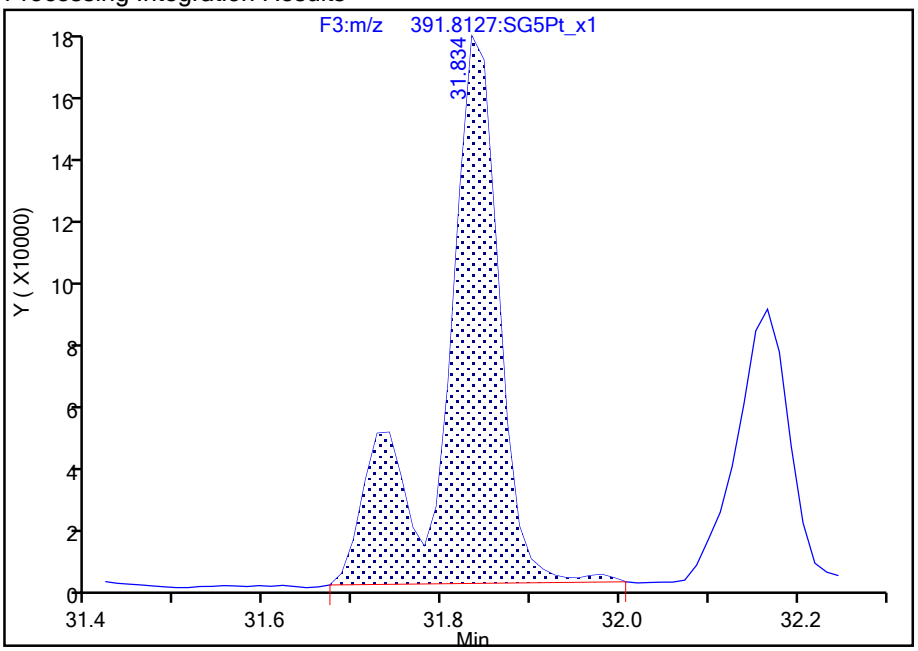

Manual Integration Results

RT: 31.74
Area: 166476
Amount: 0.617762
Amount Units: pg/ul

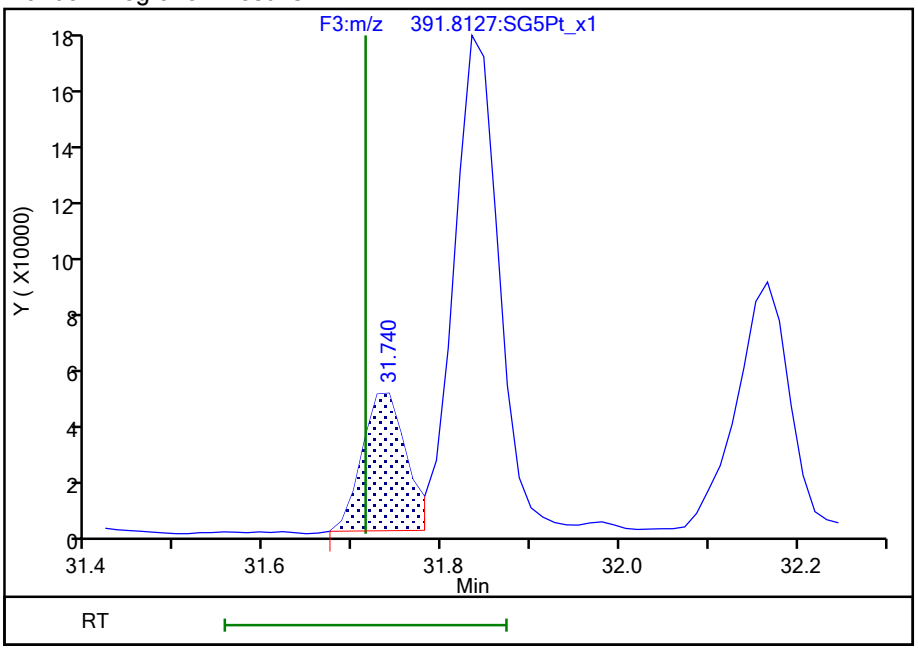

Reviewer: dadunj, 18-Aug-2021 11:04:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

774594

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

RT: 31.83
Area: 1636163
Amount: 2.715980
Amount Units: pg/ul

Processing Integration Results

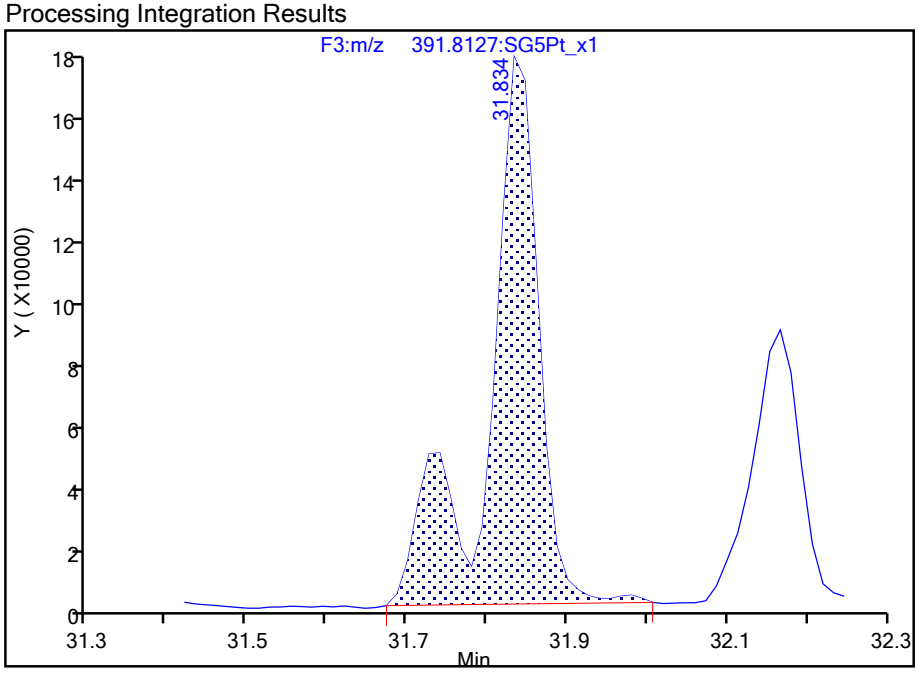

Manual Integration Results

RT: 31.74
Area: 372153
Amount: 0.617762
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 11:04:19
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.83
Area: 851732
Amount: 2.715980
Amount Units: pg/ul

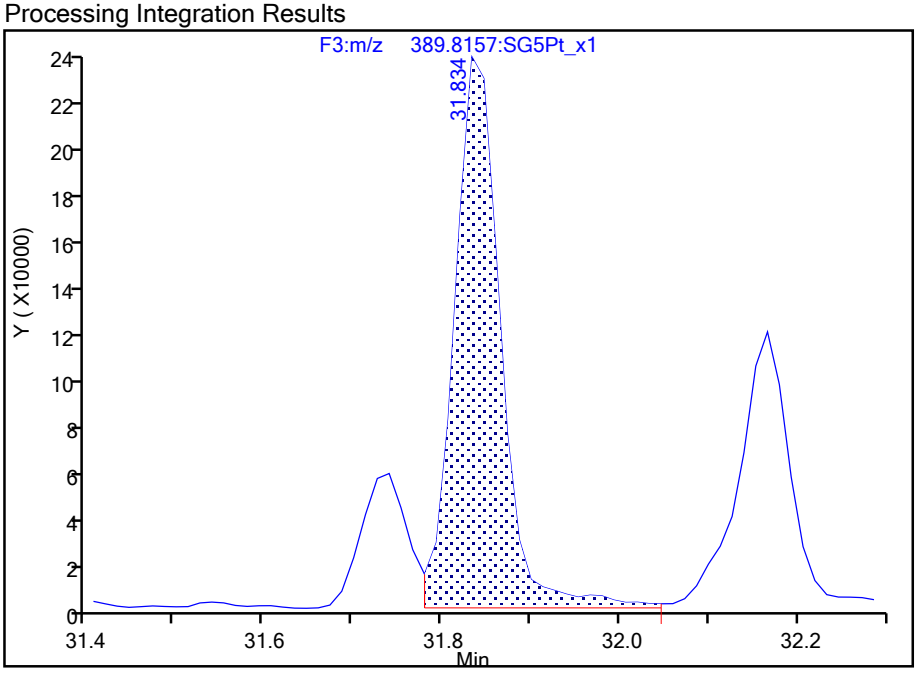

Manual Integration Results

RT: 31.74
Area: 205677
Amount: 0.617762
Amount Units: pg/ul

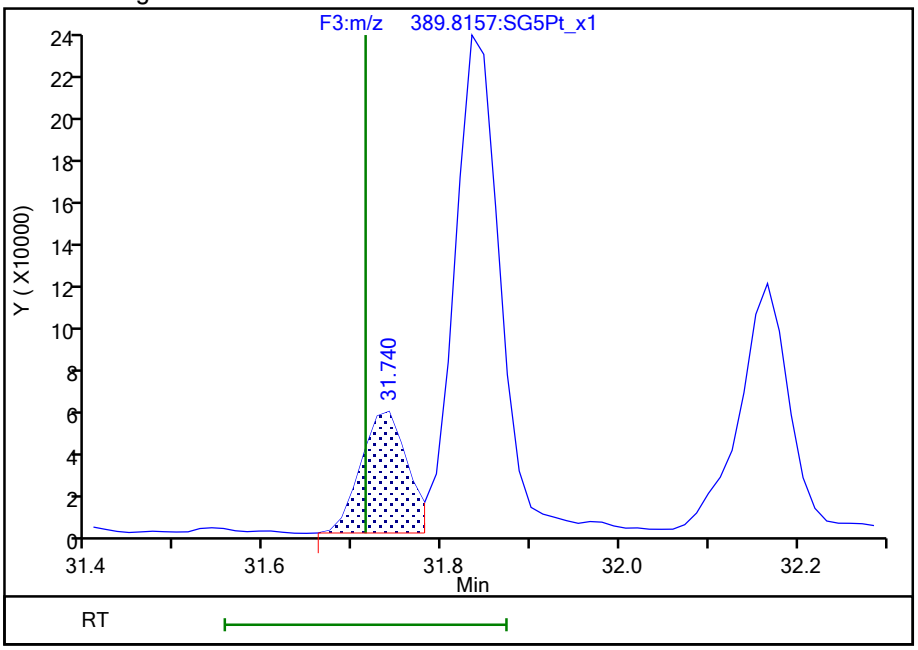

Reviewer: dadunj, 18-Aug-2021 11:04:20

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d				
Injection Date:	15-Aug-2021 06:36:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:	DB	ALS Bottle#:	49	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.83
Area: 784431
Amount: 2.685044
Amount Units: pg/ul

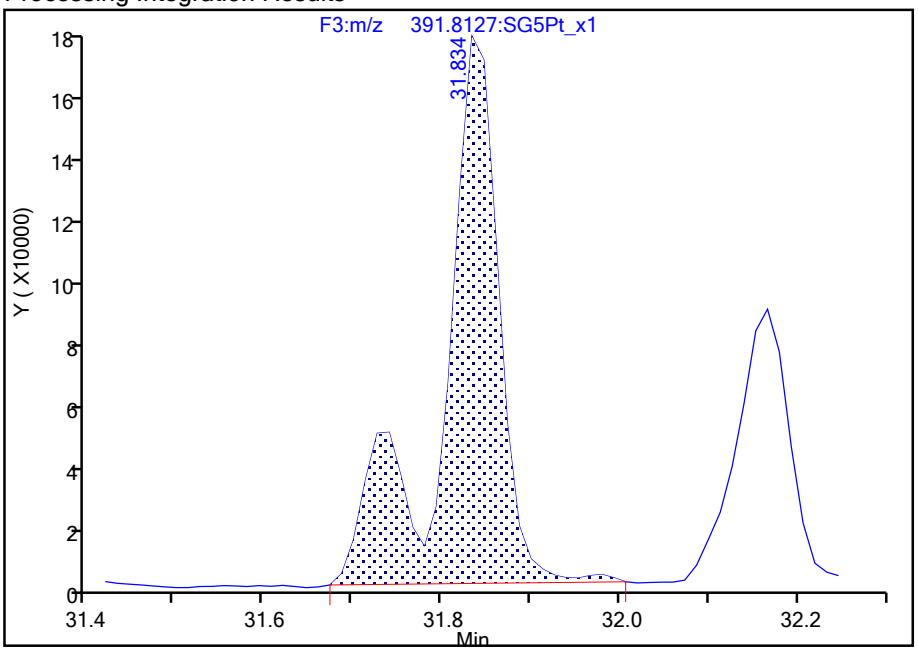

Manual Integration Results

RT: 31.83
Area: 617830
Amount: 2.411642
Amount Units: pg/ul

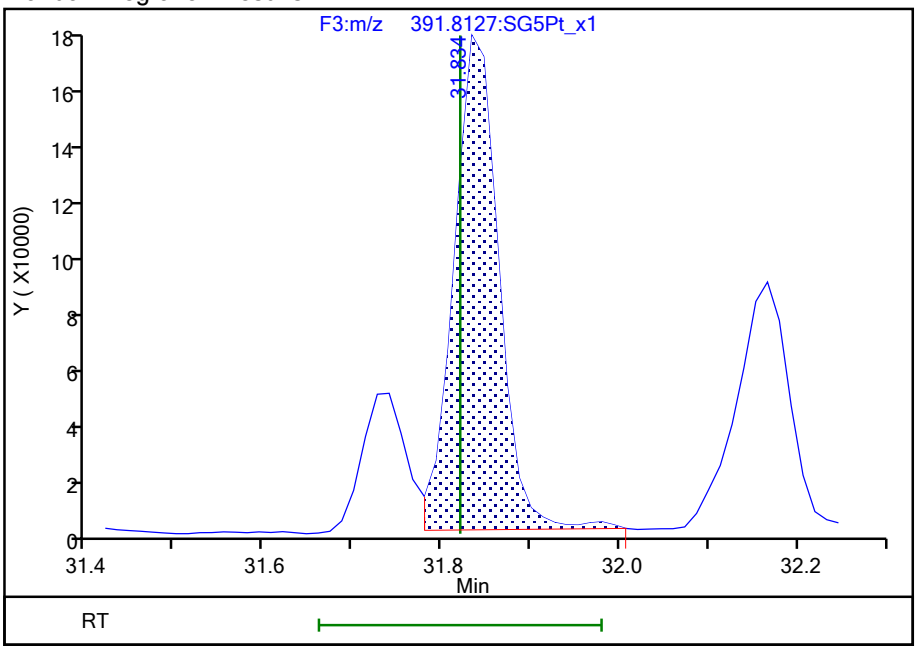

Reviewer: dadunj, 18-Aug-2021 11:04:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

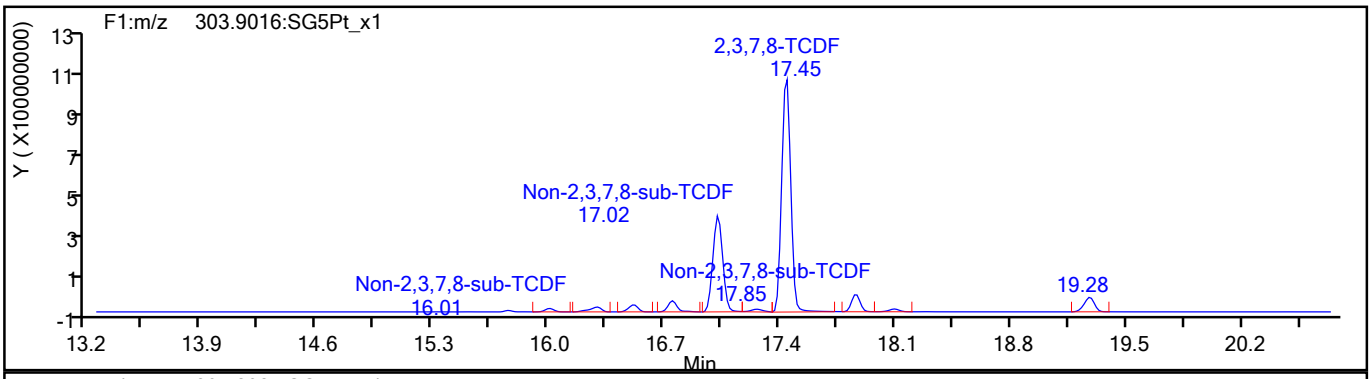

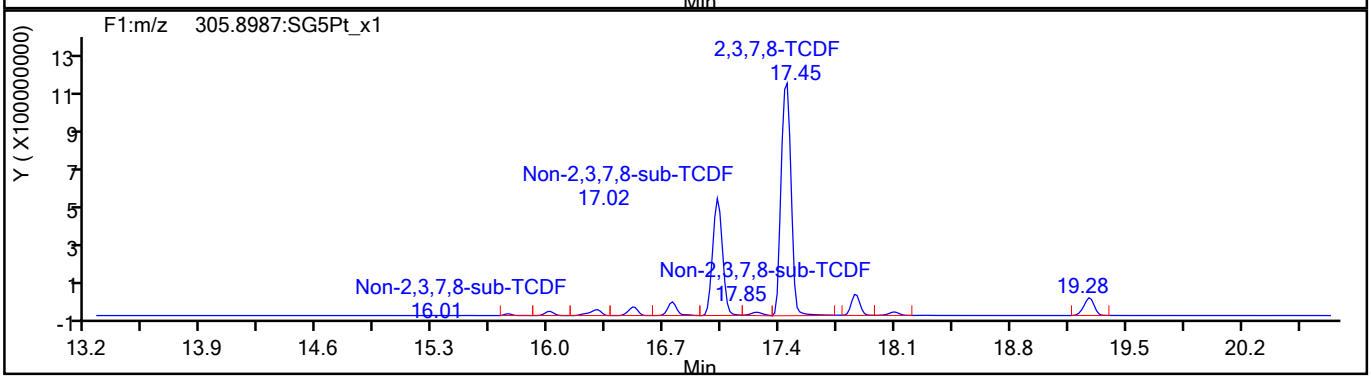

TCDF Standards

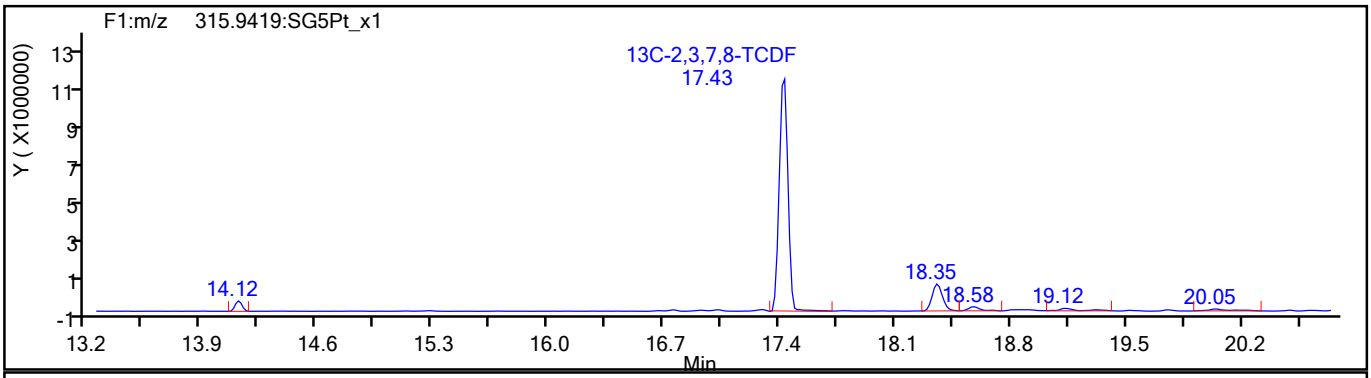

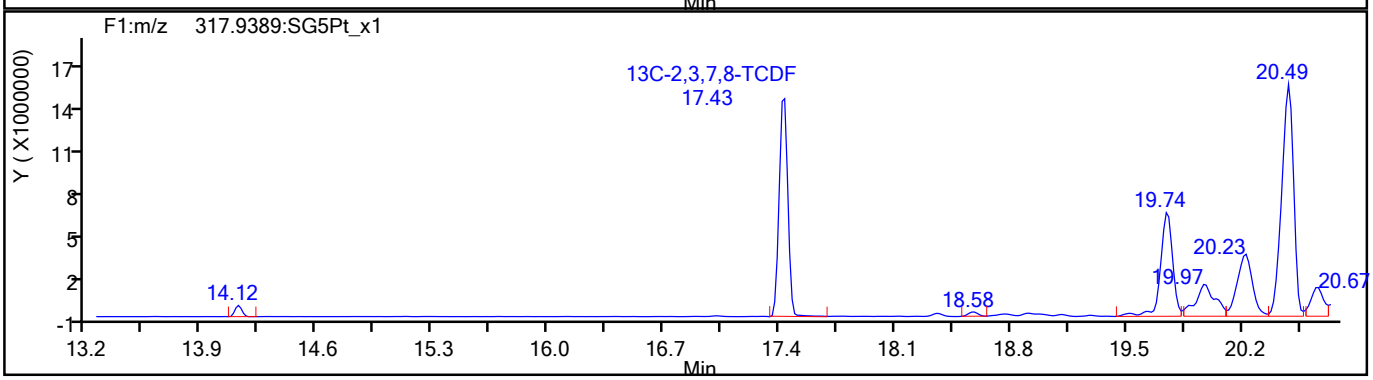

774598

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

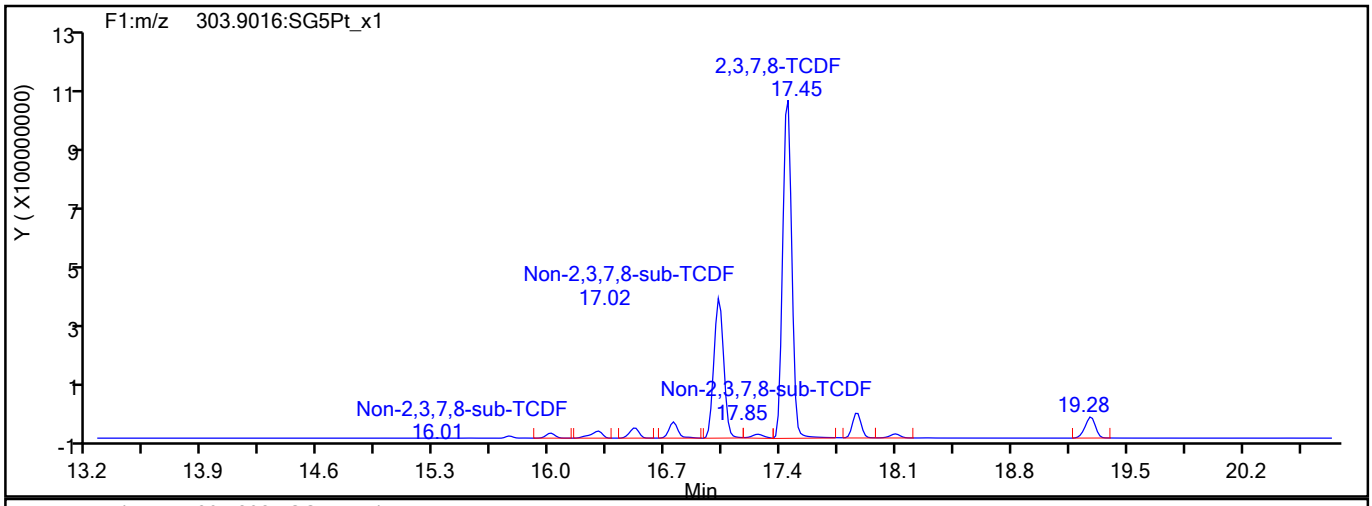

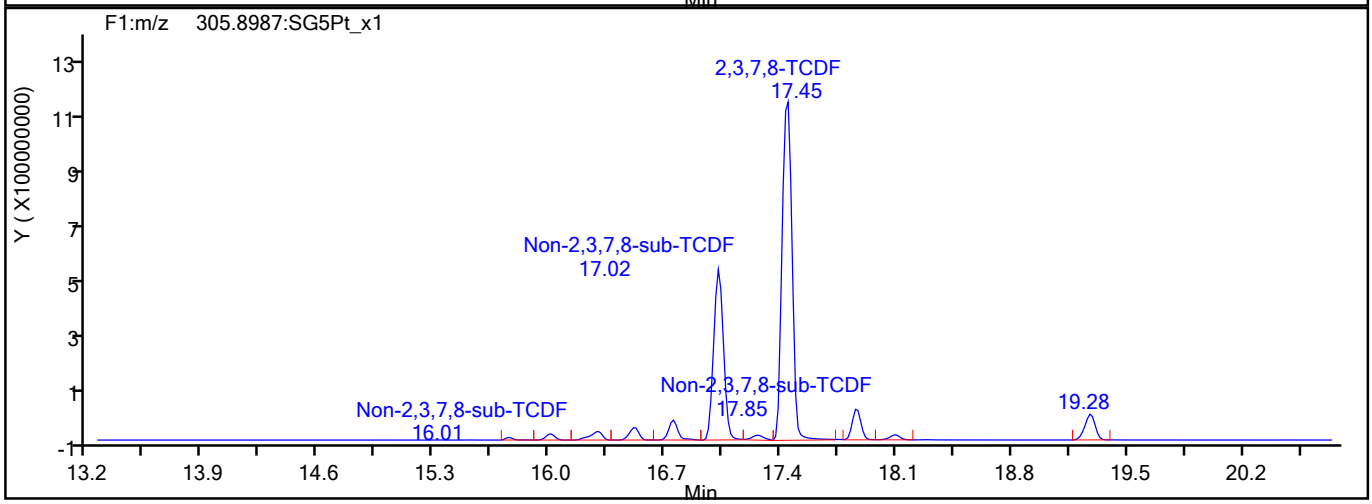

TCDF Interference Mass

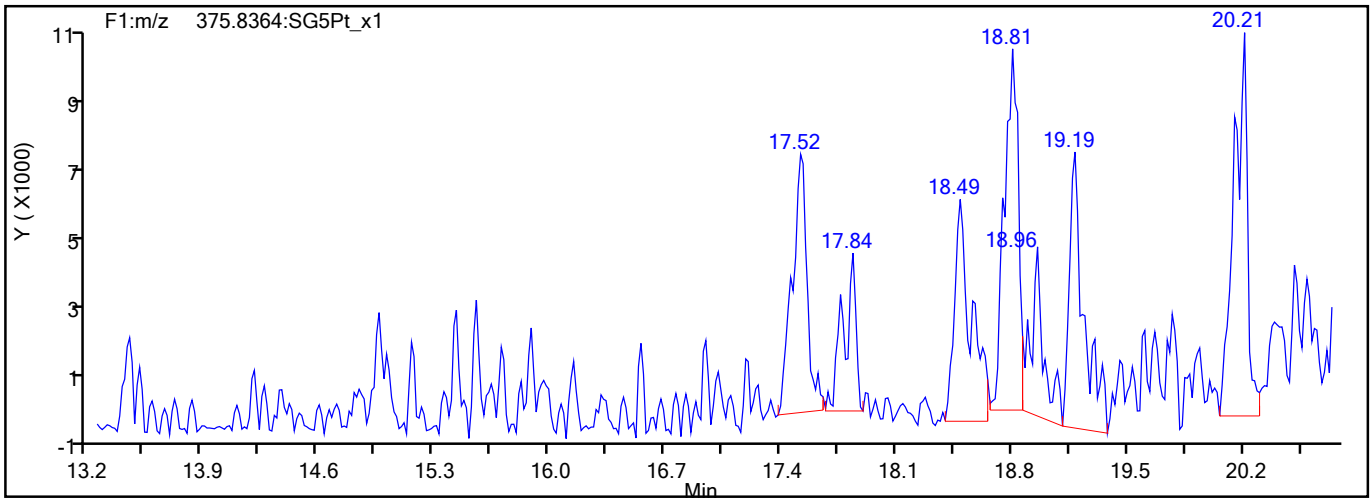

774599

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

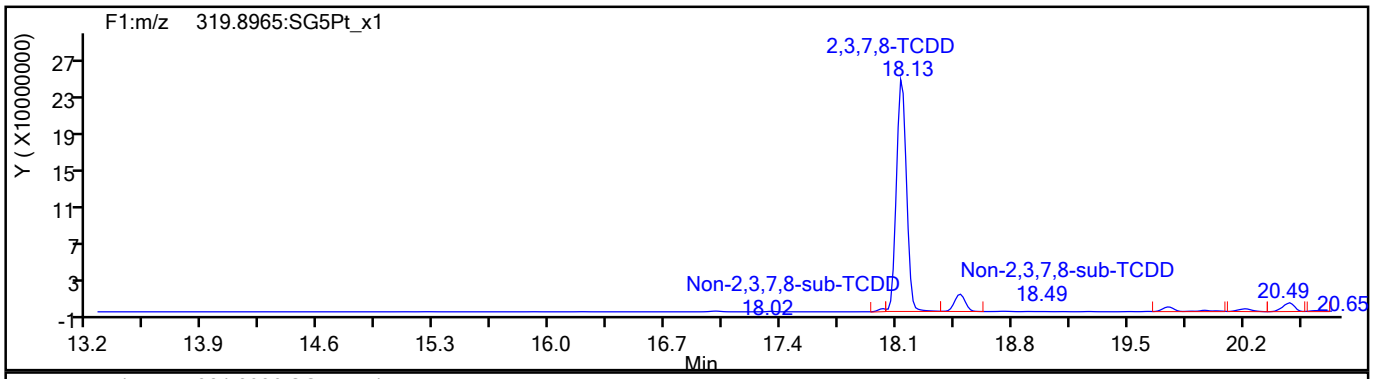

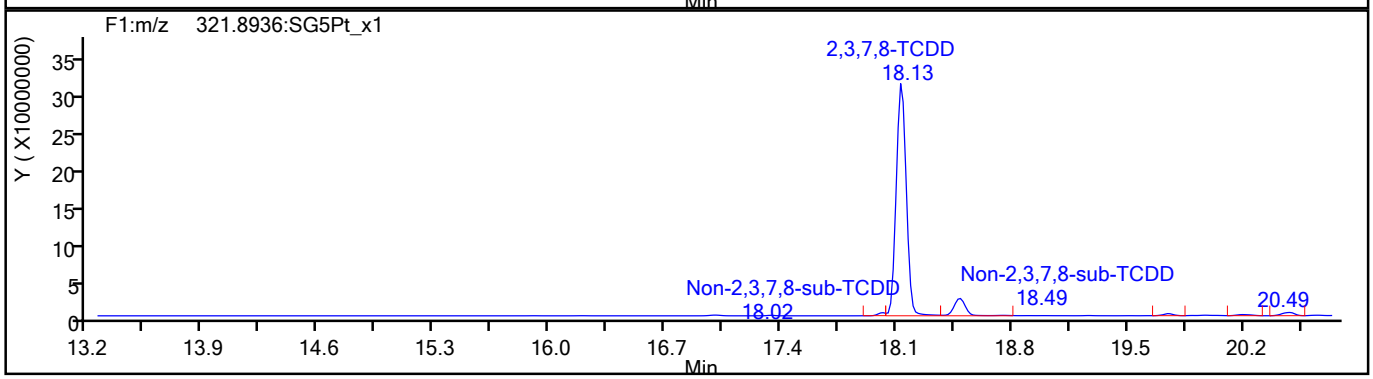

TCDD Standards

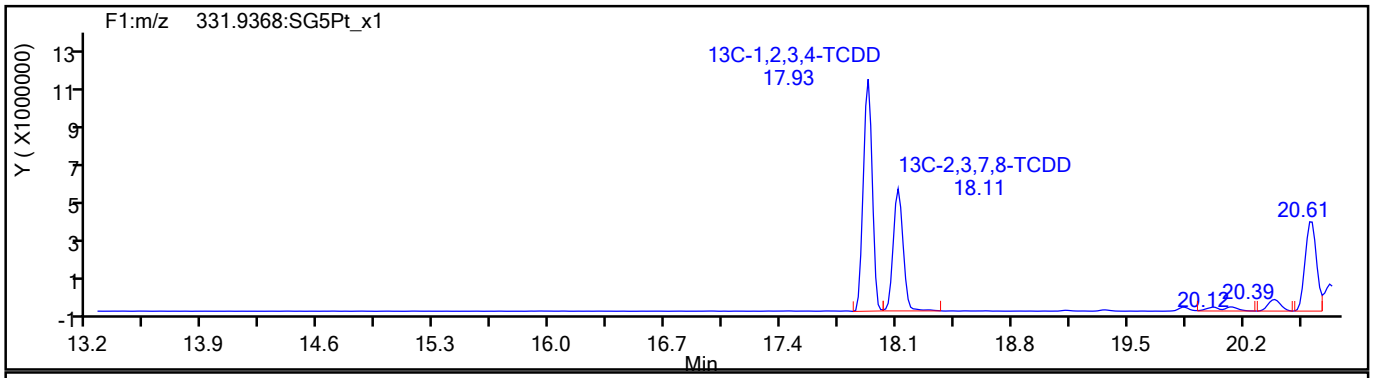

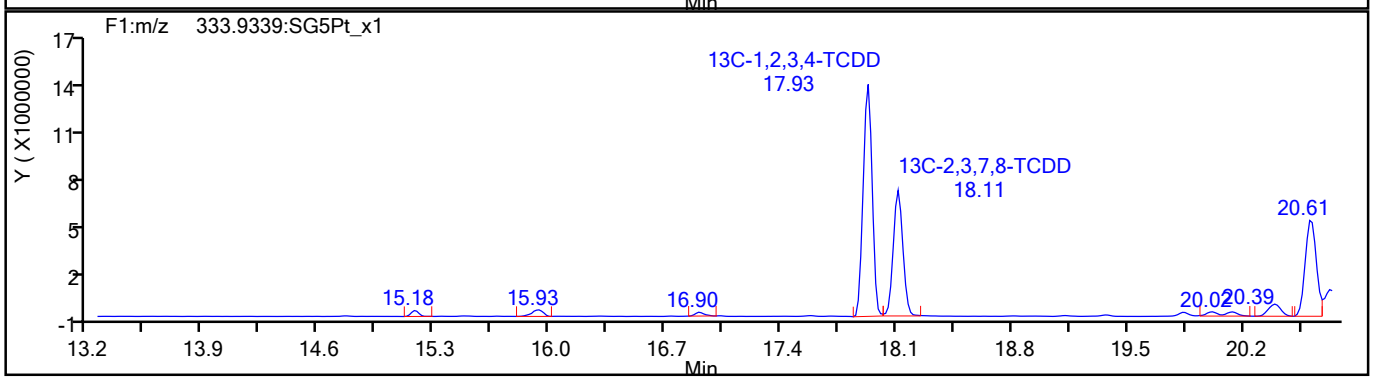

774600

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

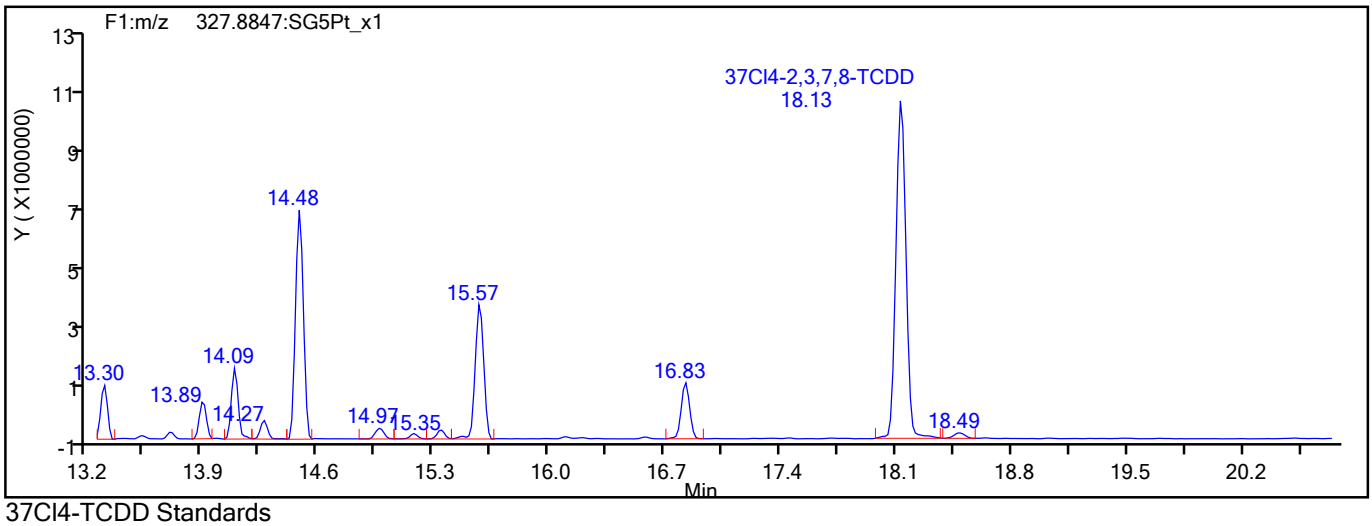

37Cl4-TCDD Standards

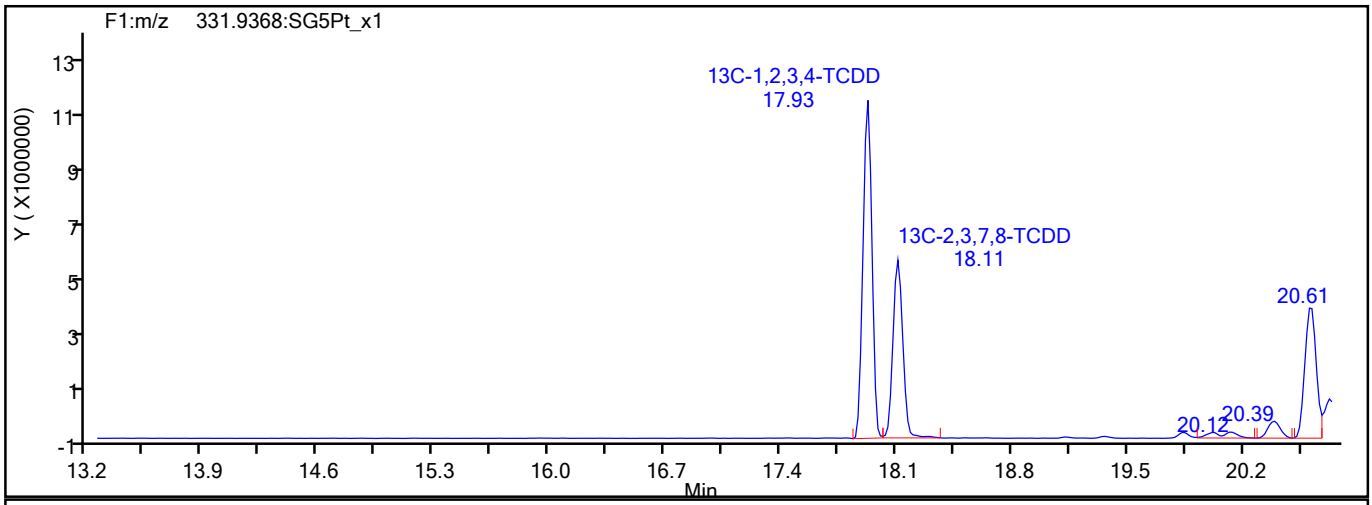

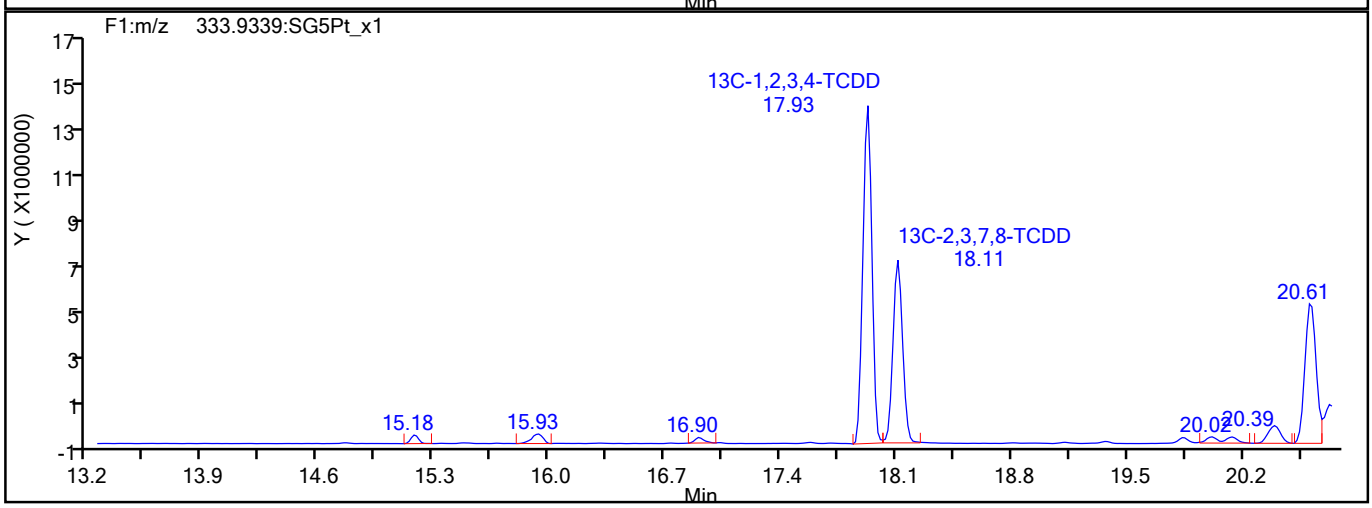

774601

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

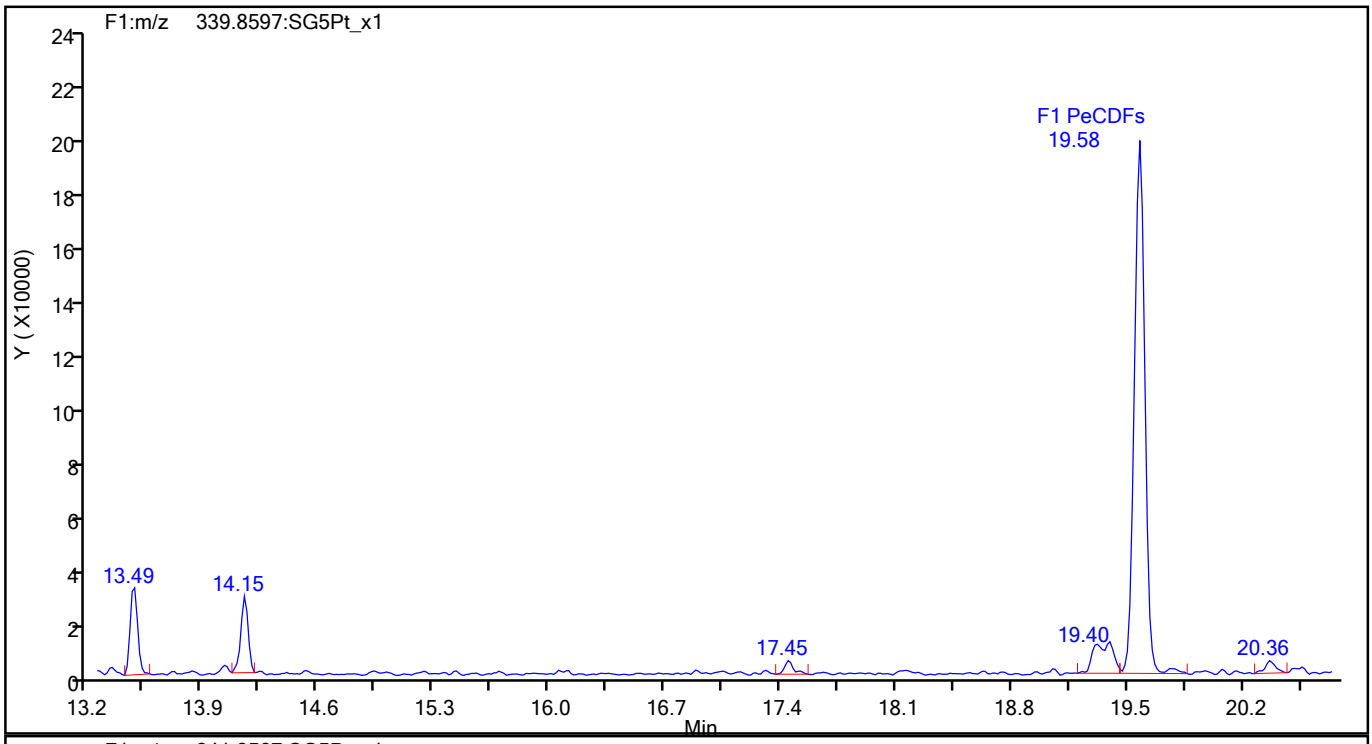

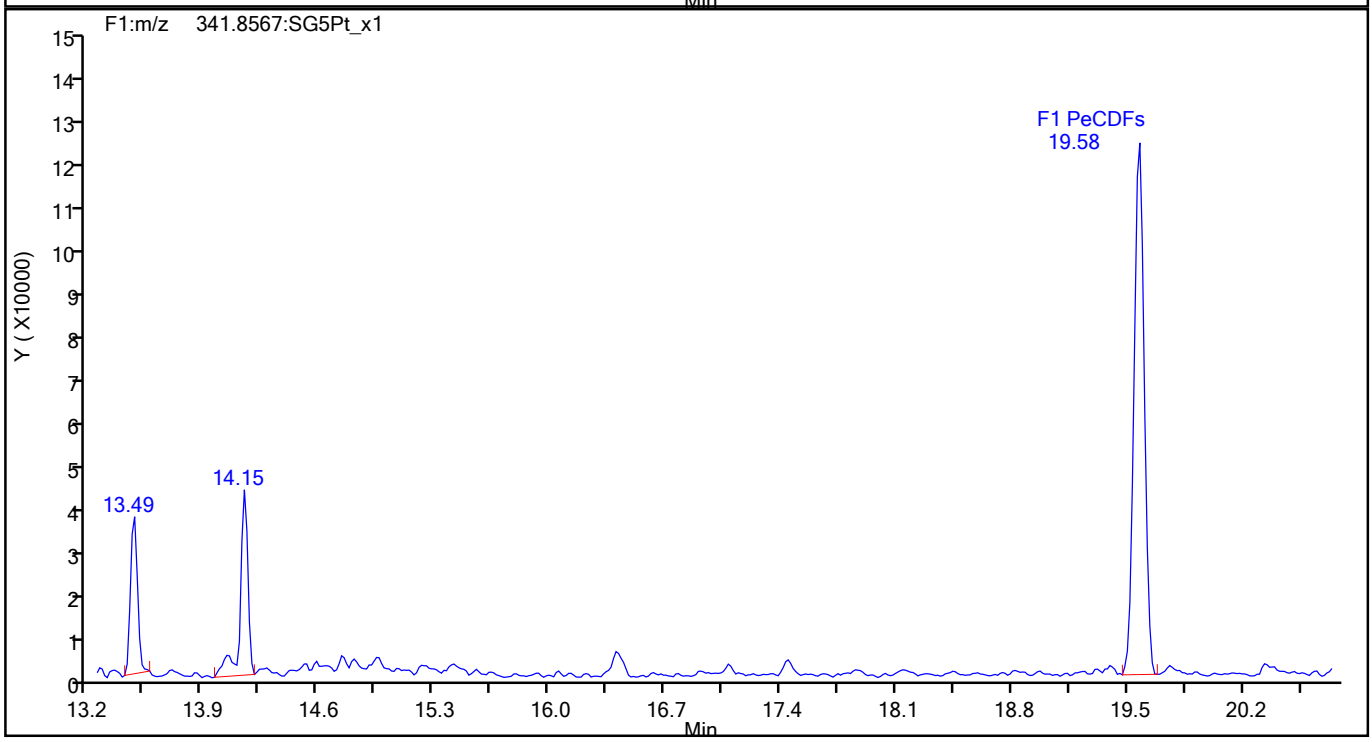

774602

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

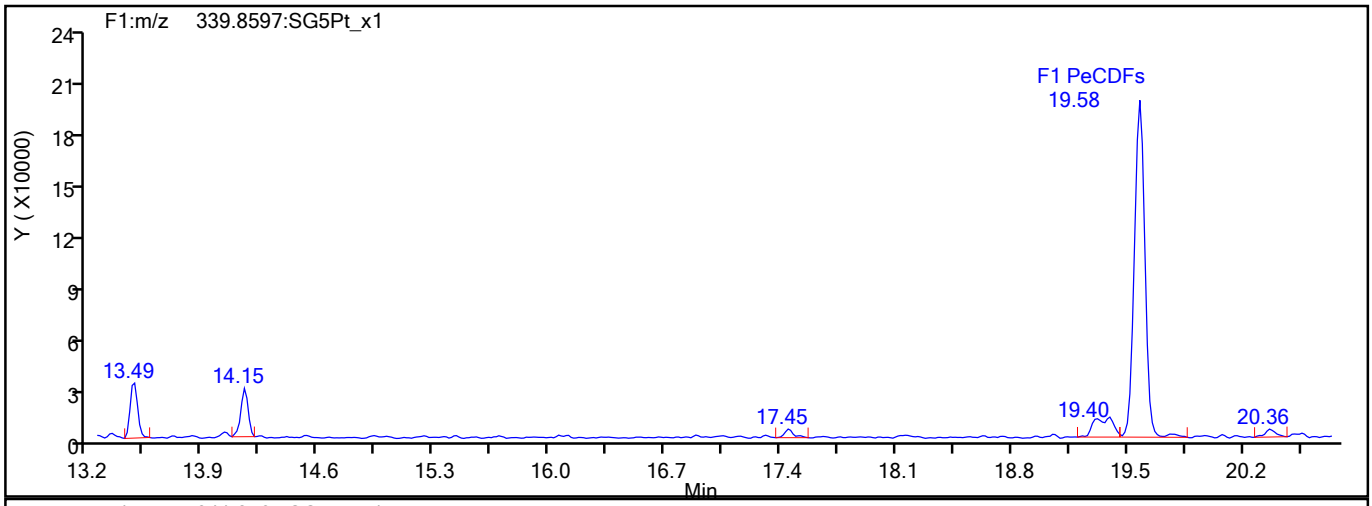

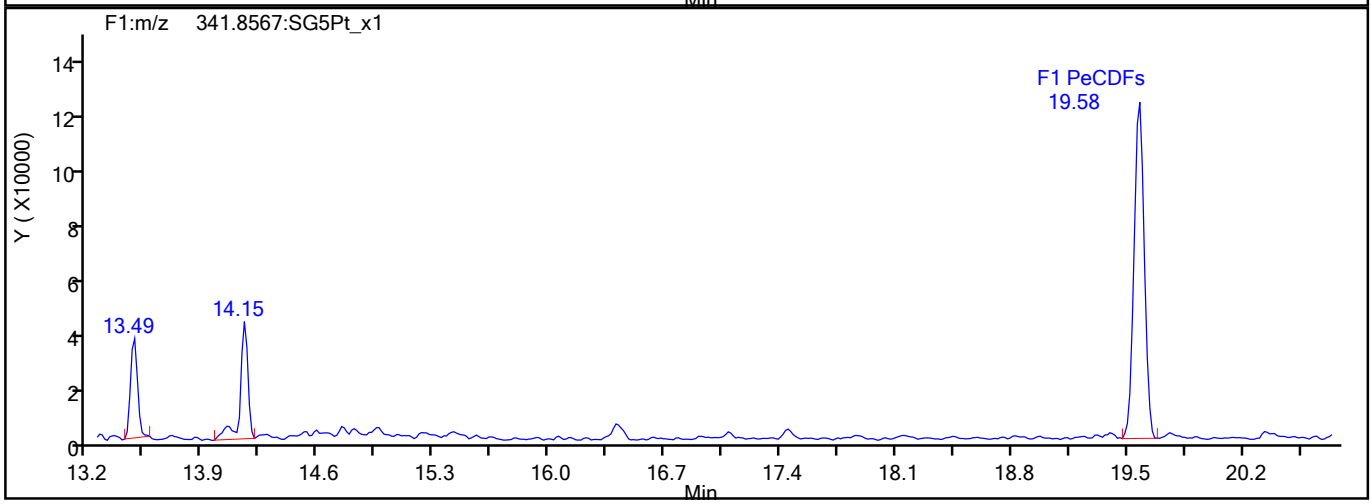

F1 PeCDFs Interference Mass

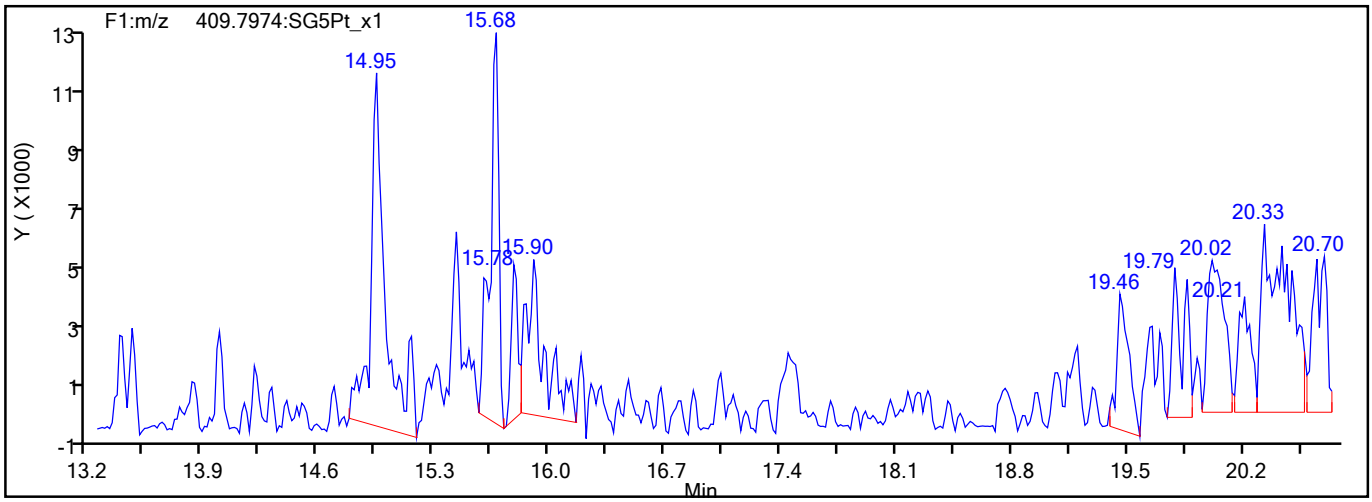

774603

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

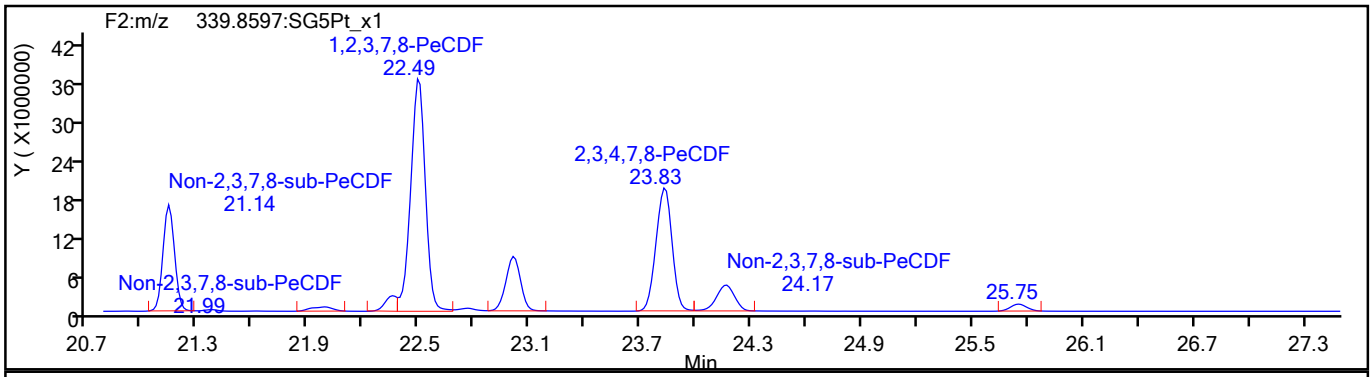

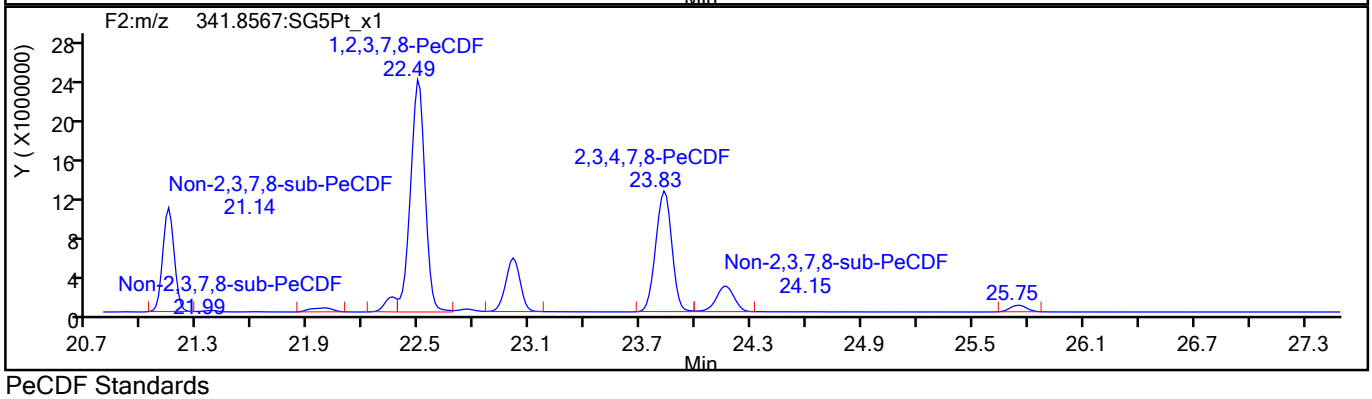

PeCDF Standards

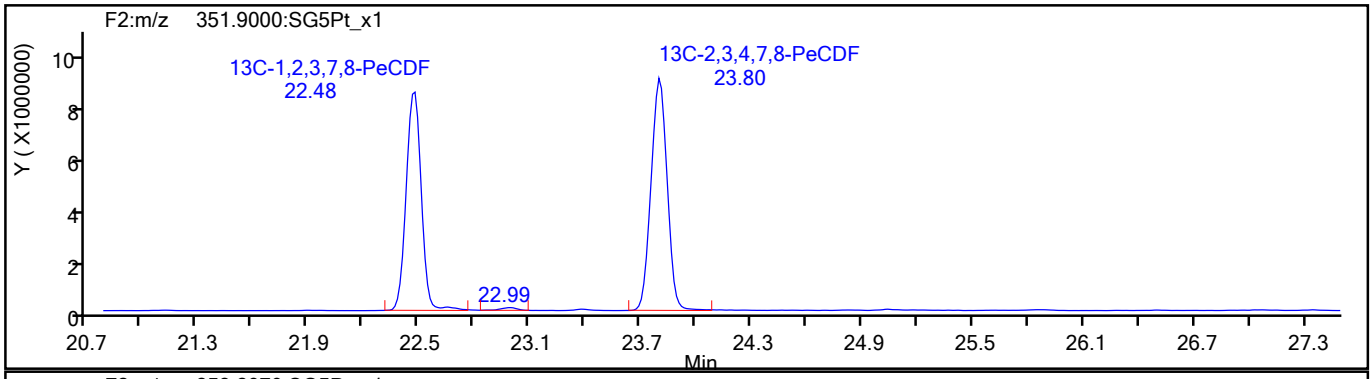

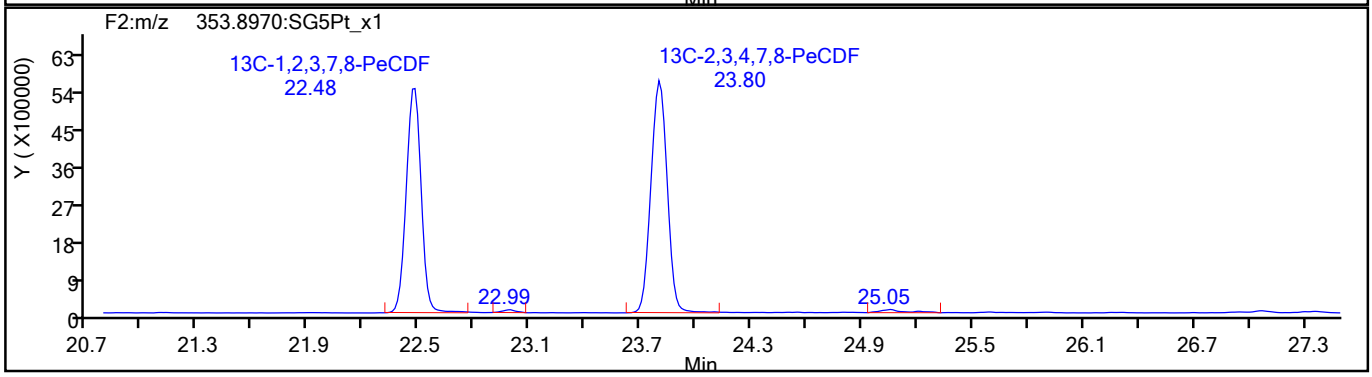

774604

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

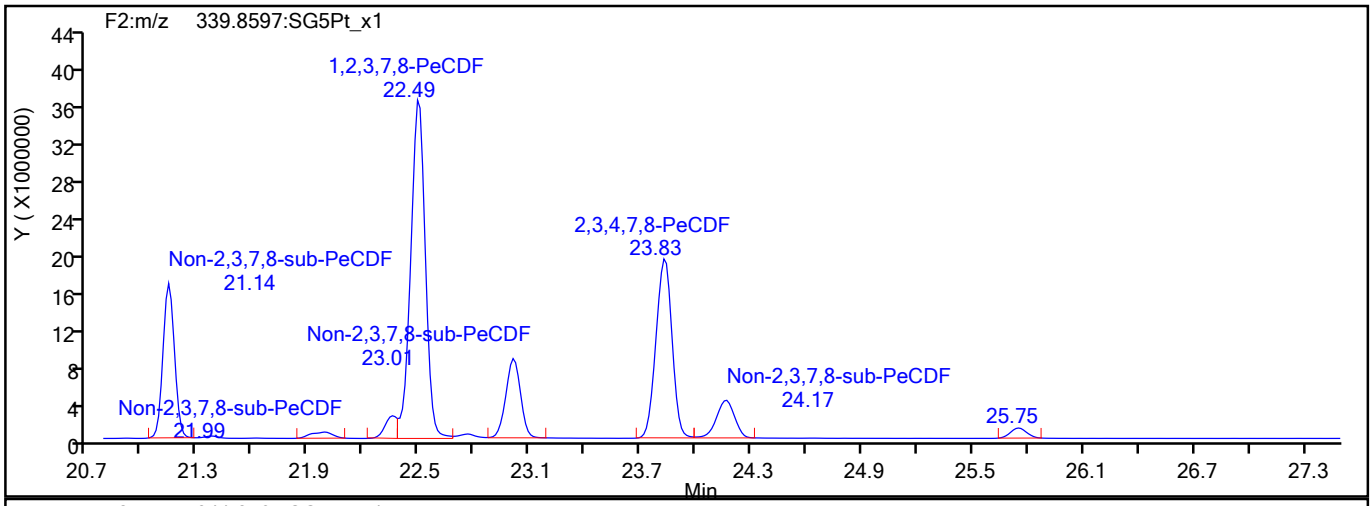

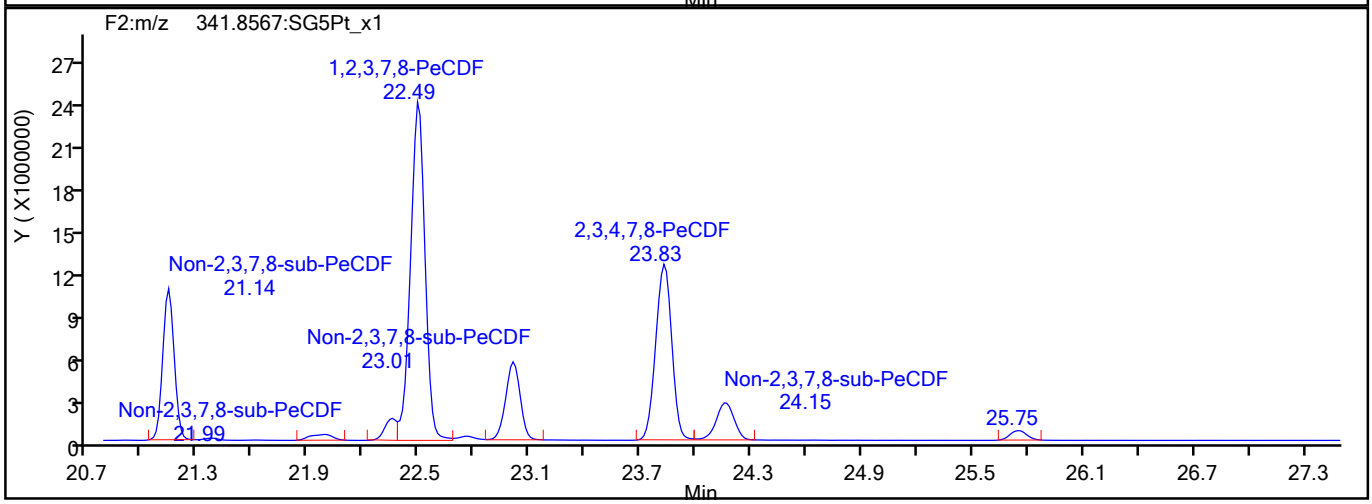

PeCDF Interference Mass

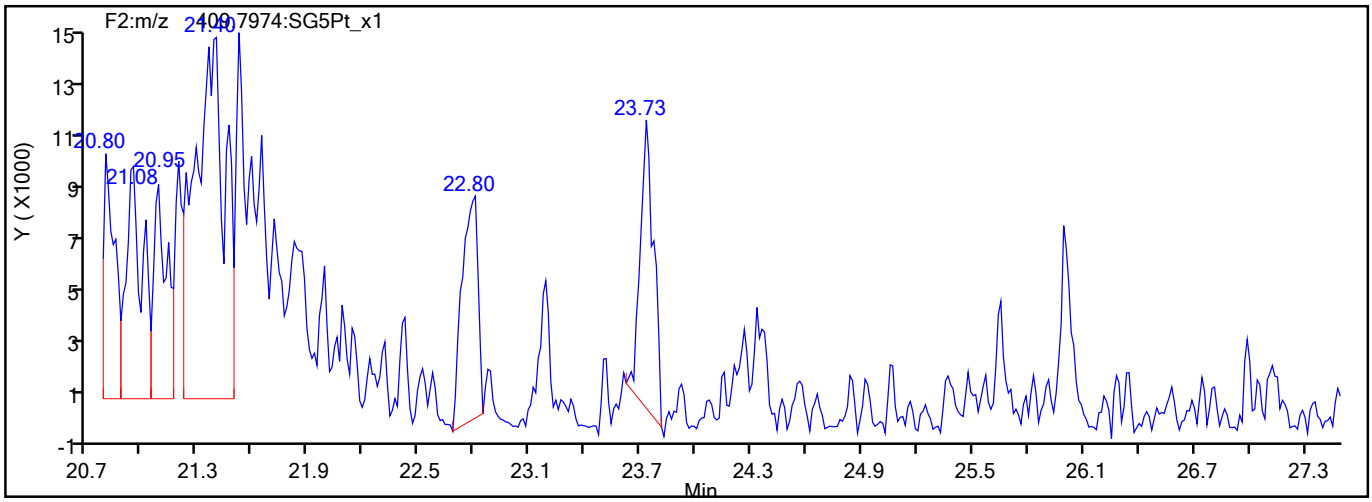

774605

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

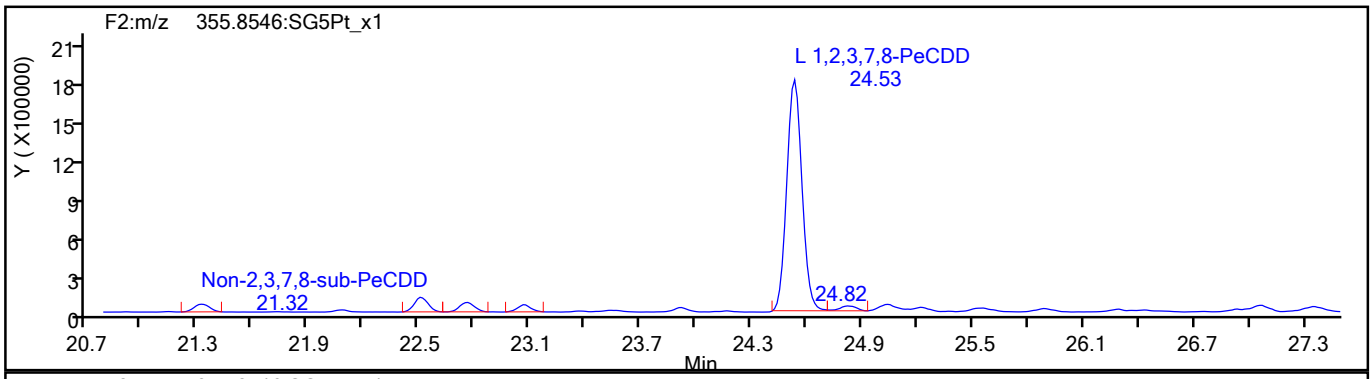

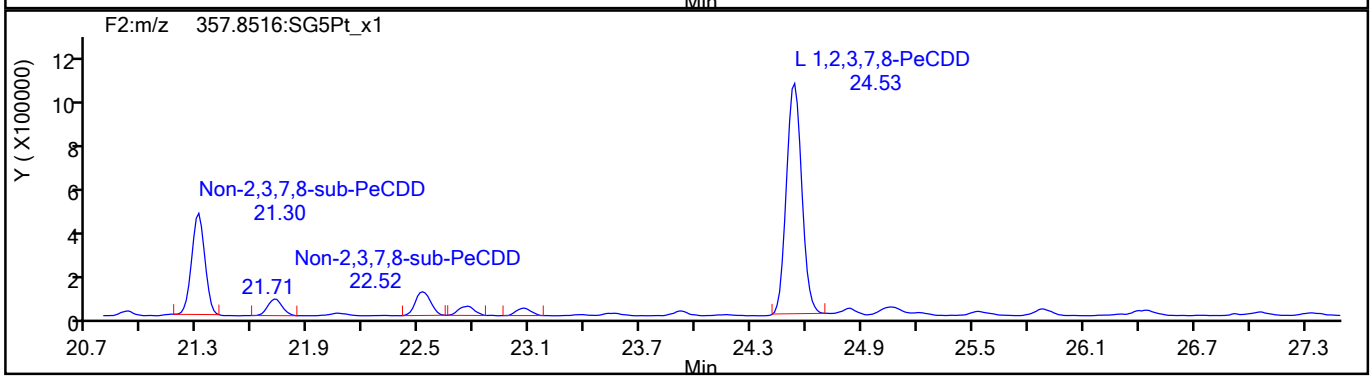

PeCDD Standards

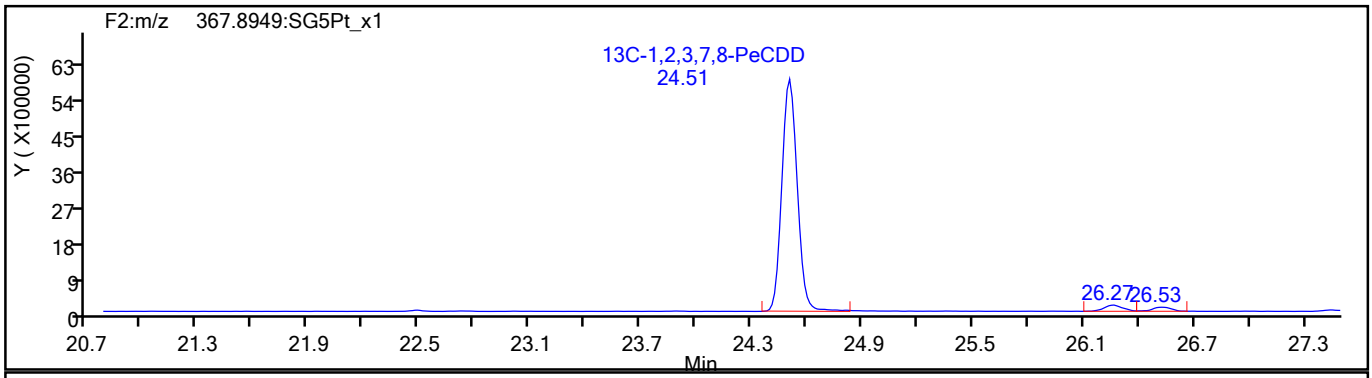

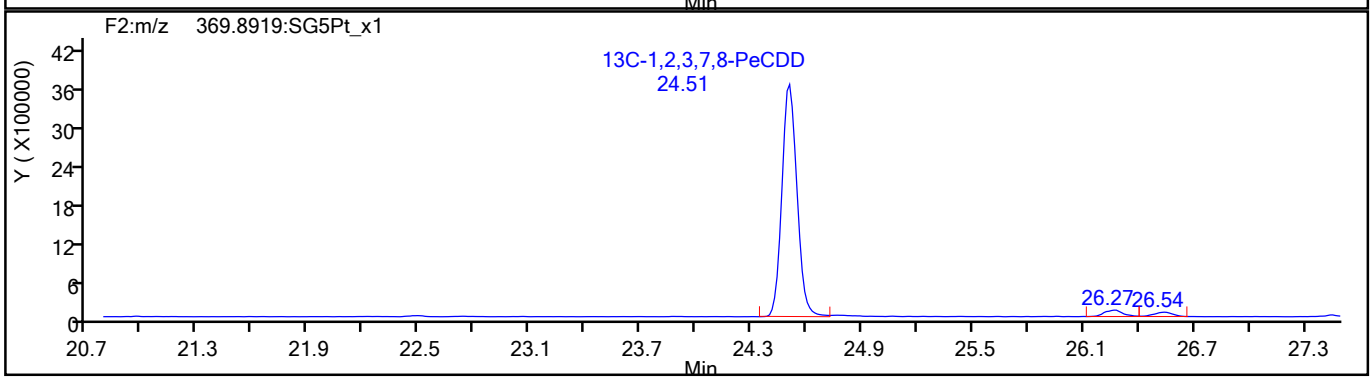

774606

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

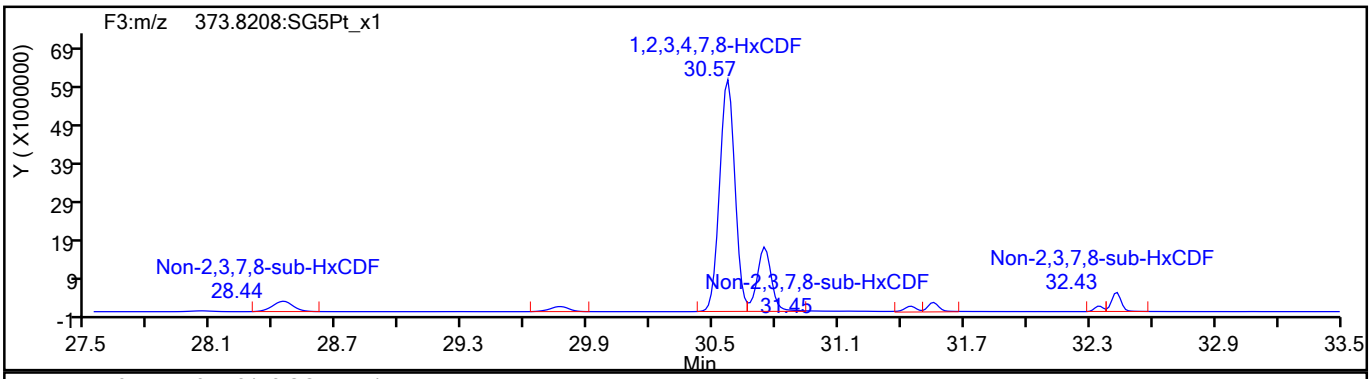

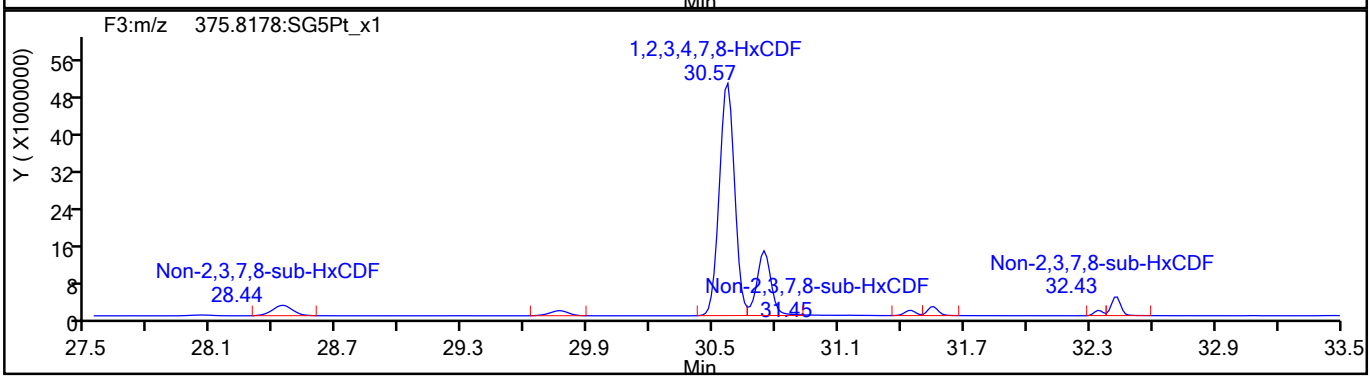

HxCDF Standards

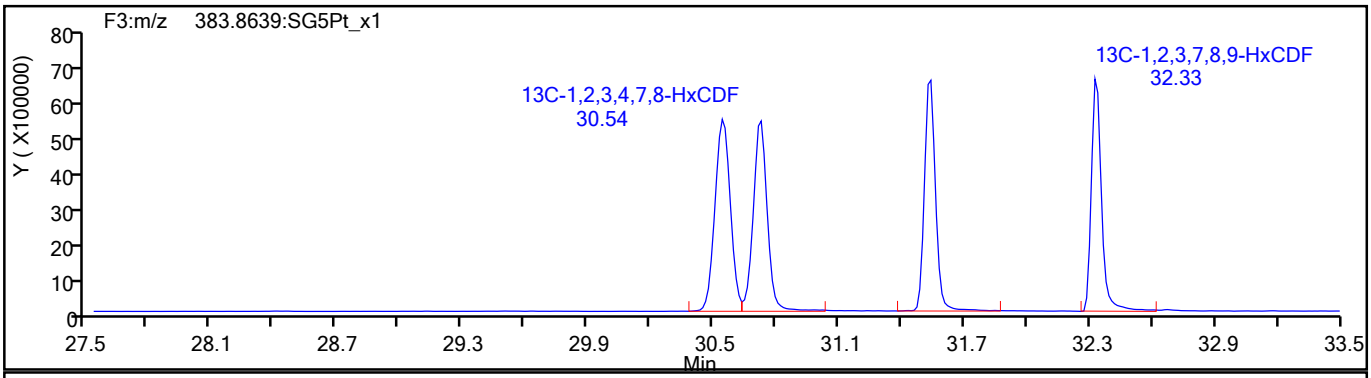

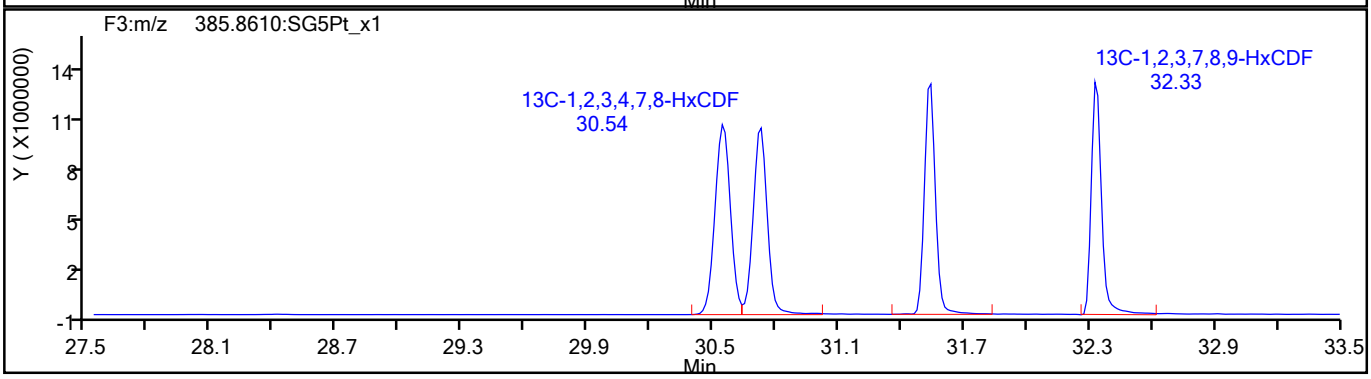

774607

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

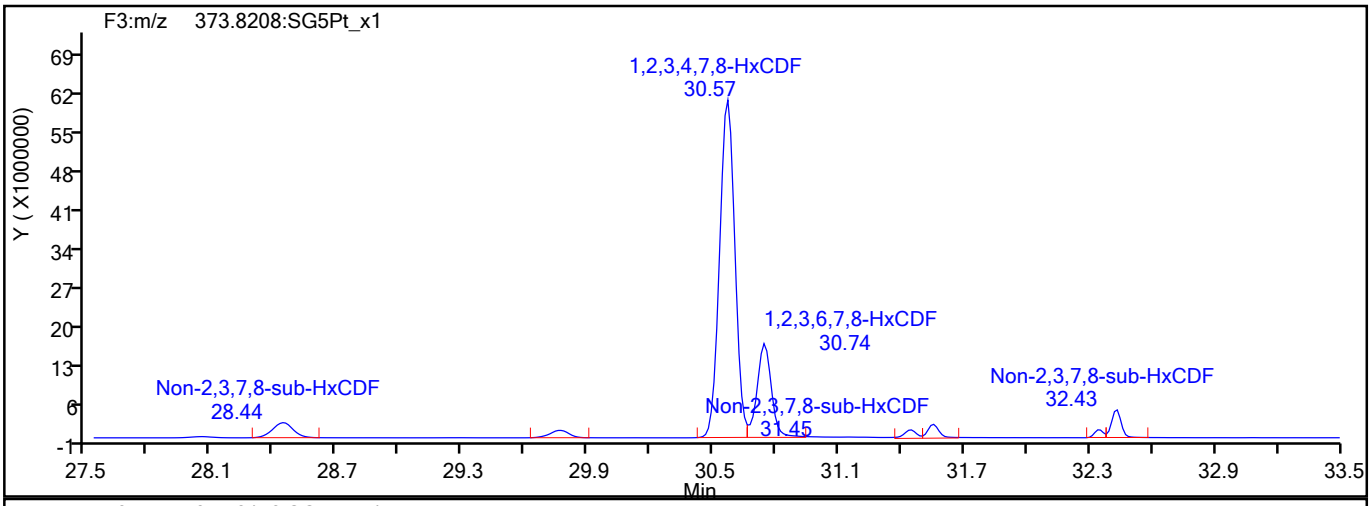

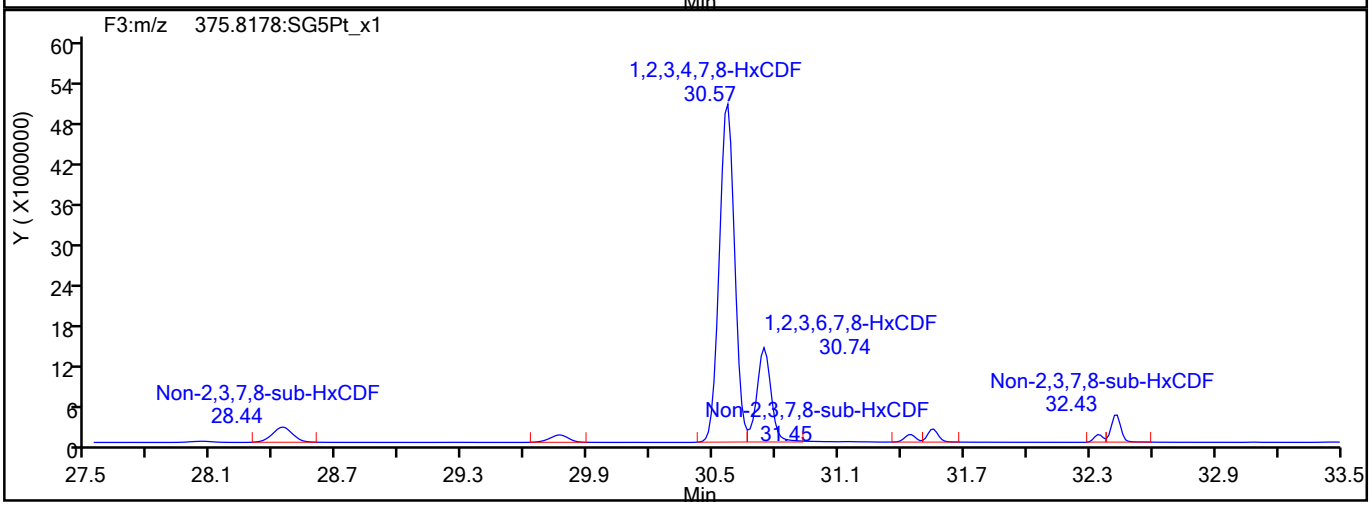

HxCDF Interference Mass

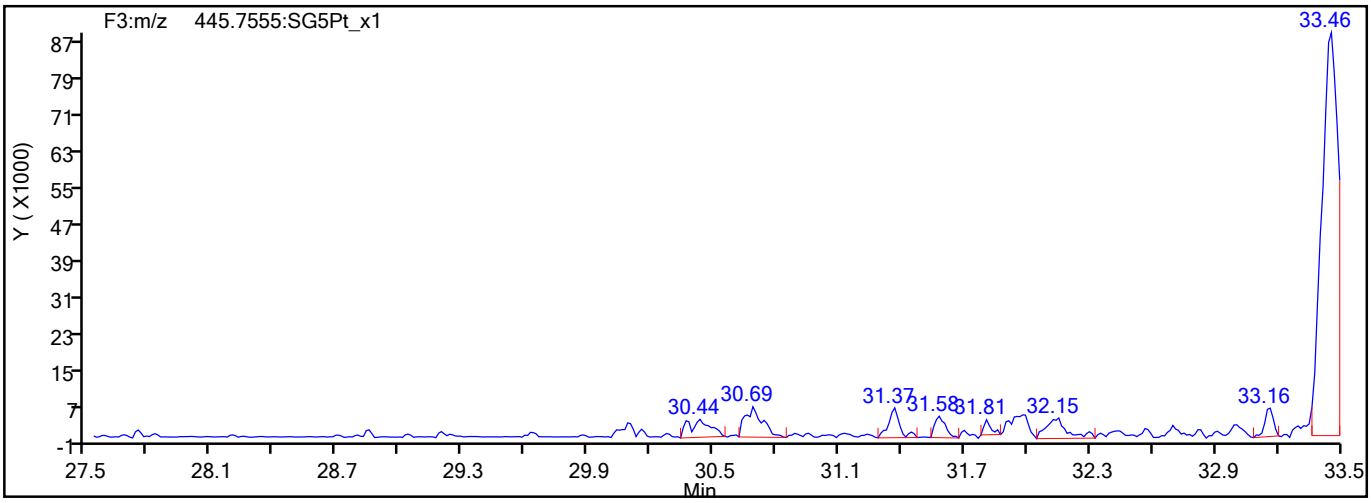

774608

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

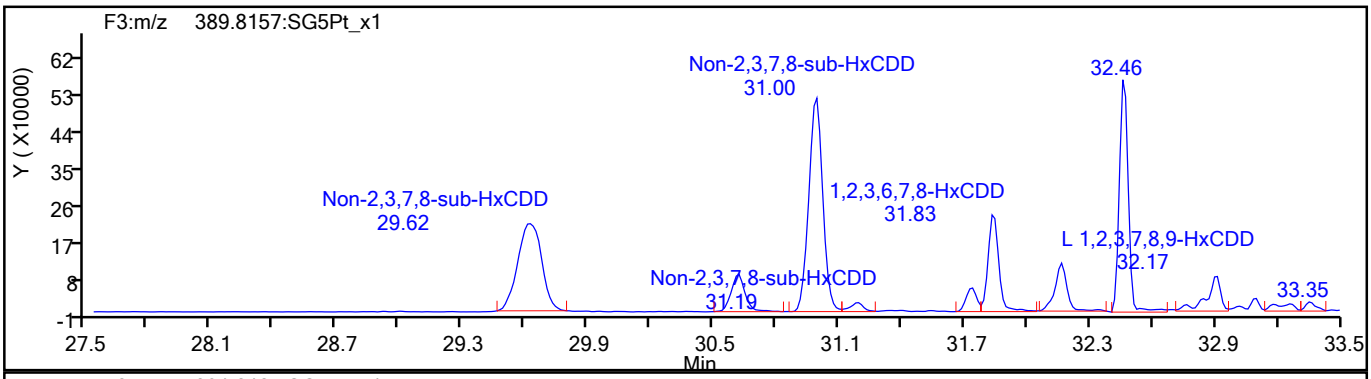

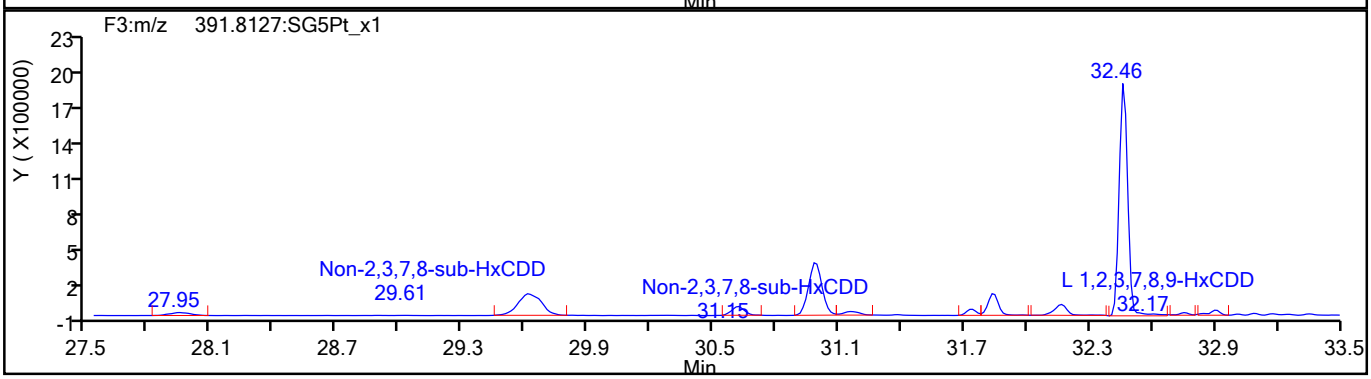

HxCDD Standards

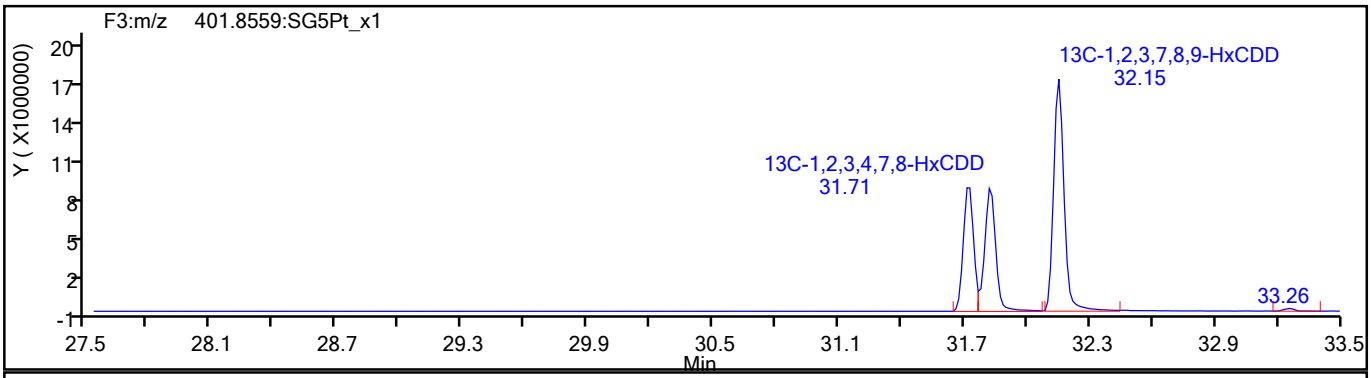

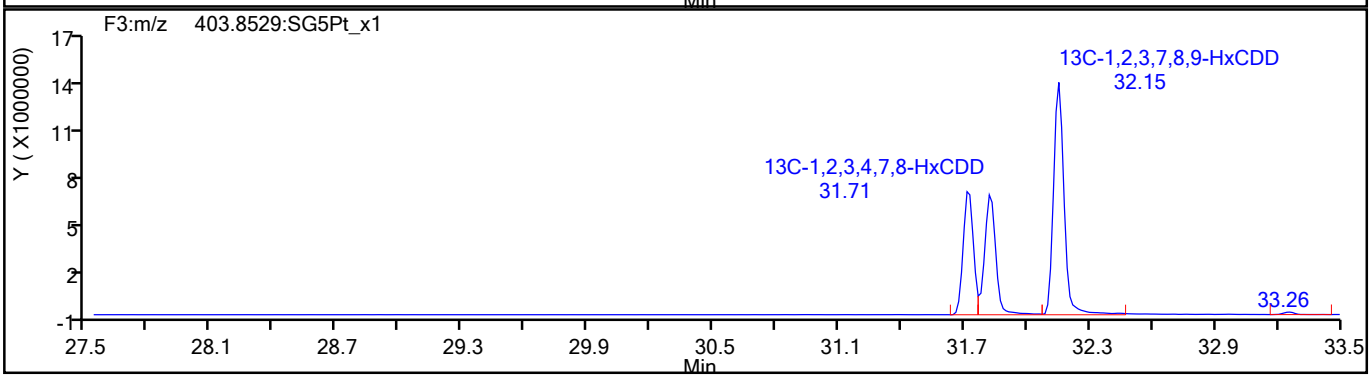

774609

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

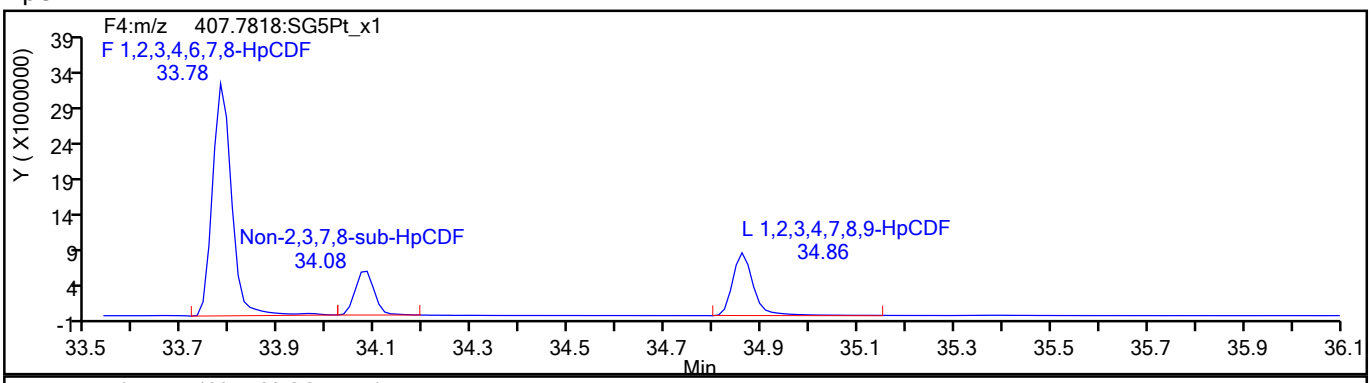

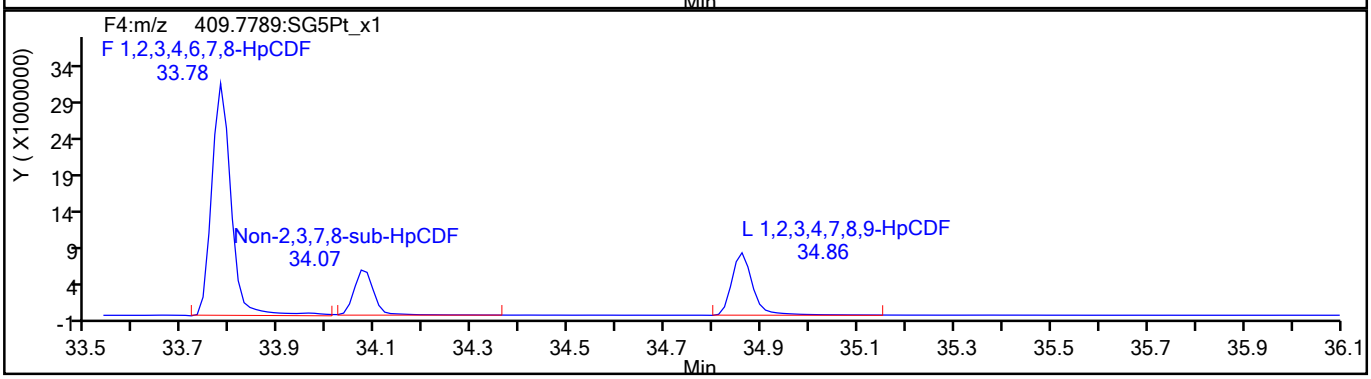

HpCDF Standards

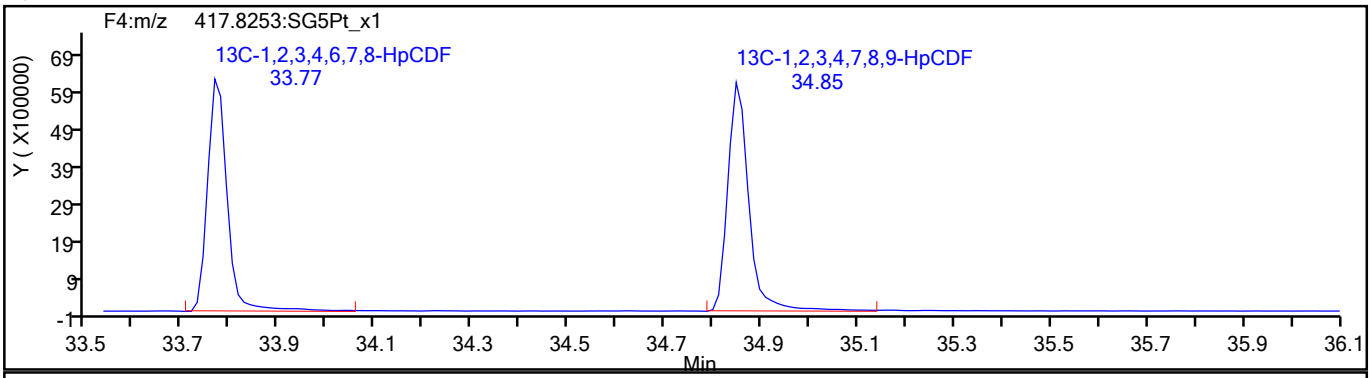

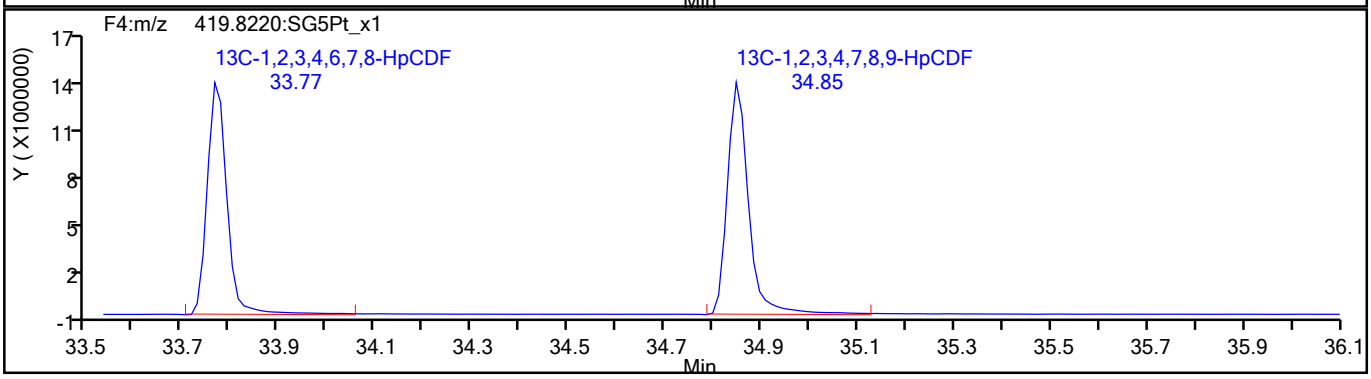

774610

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

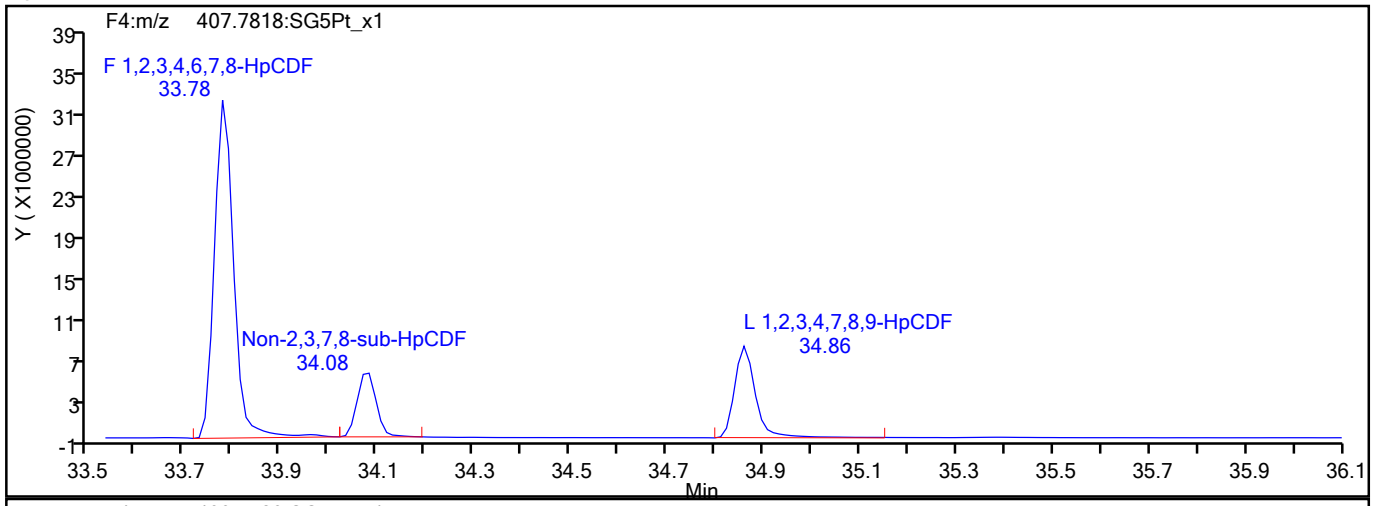

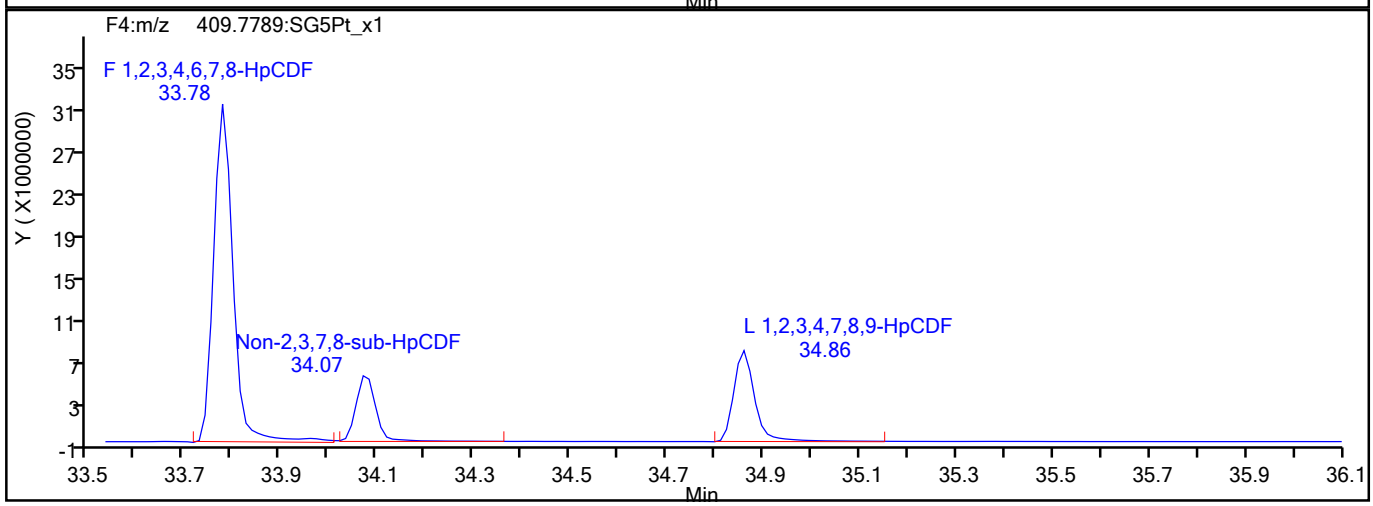

HpCDF Interference Mass

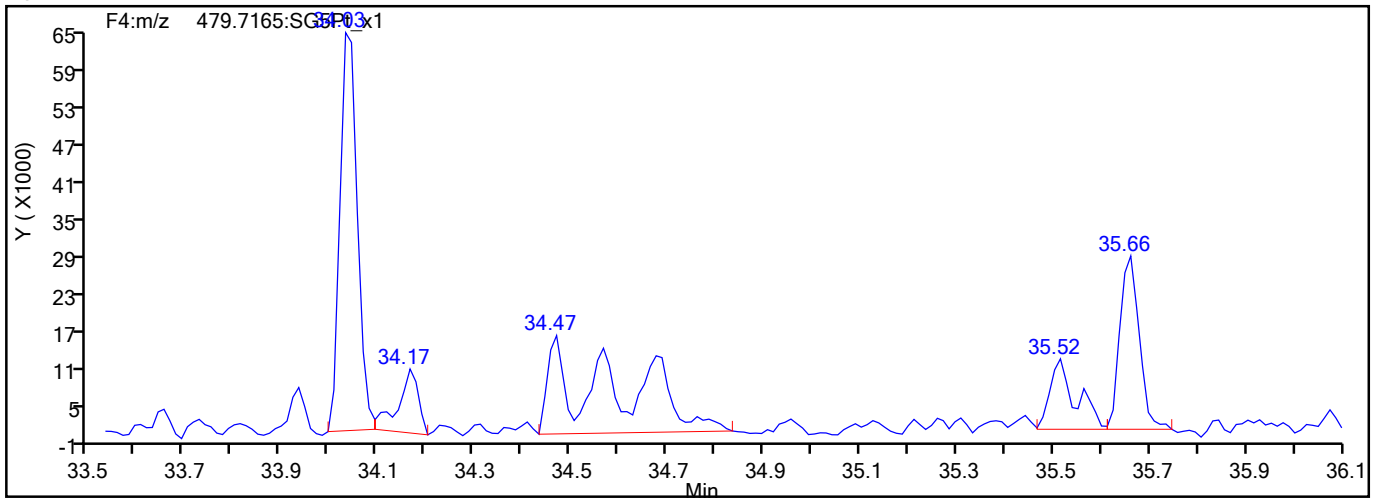

774611

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

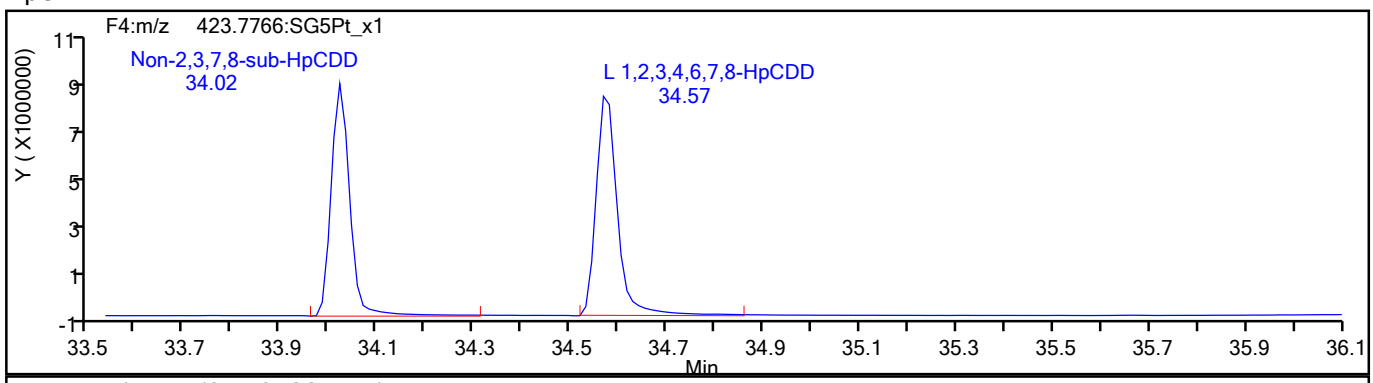

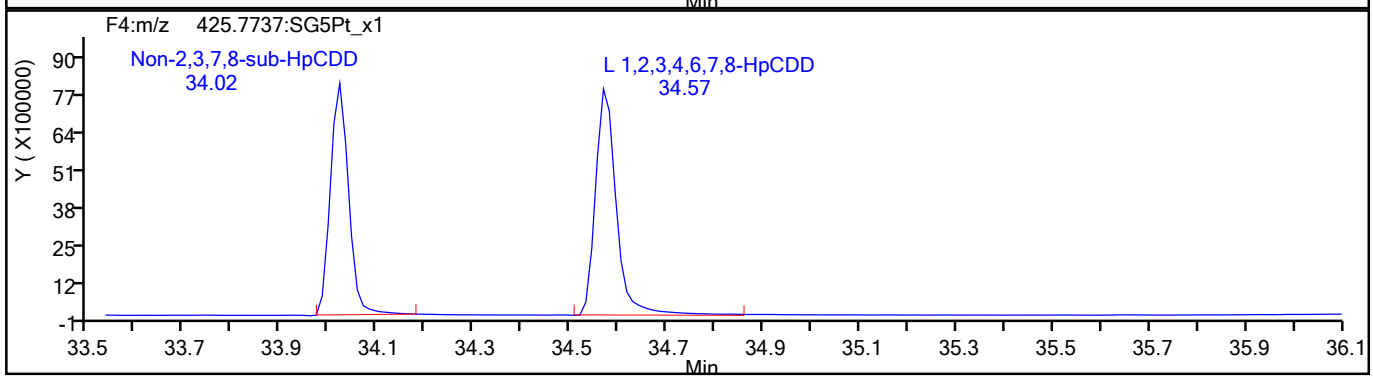

HpCDD Standards

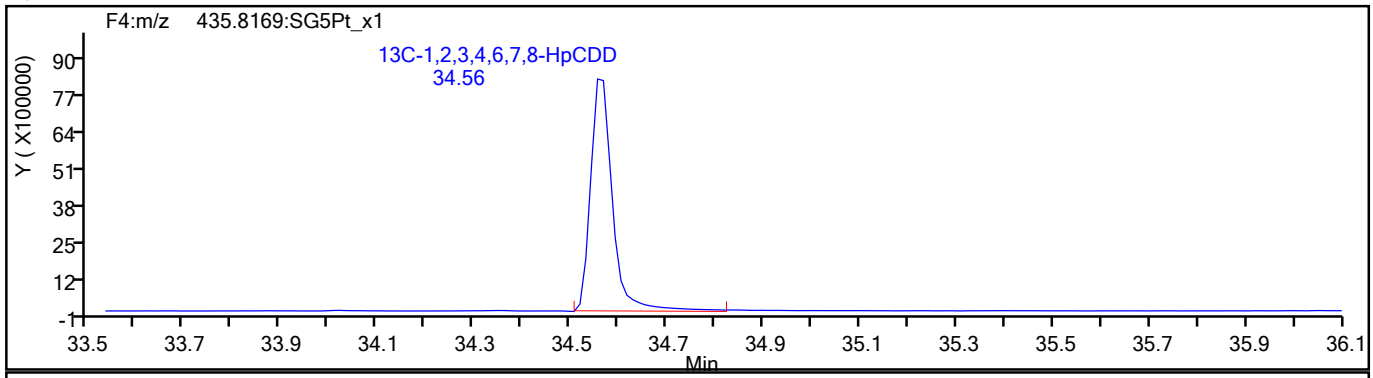

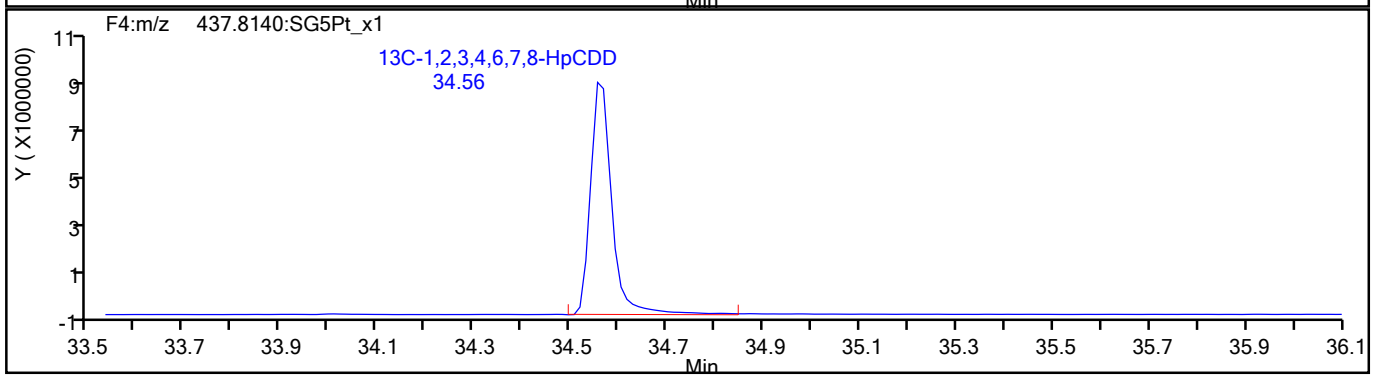

774612

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

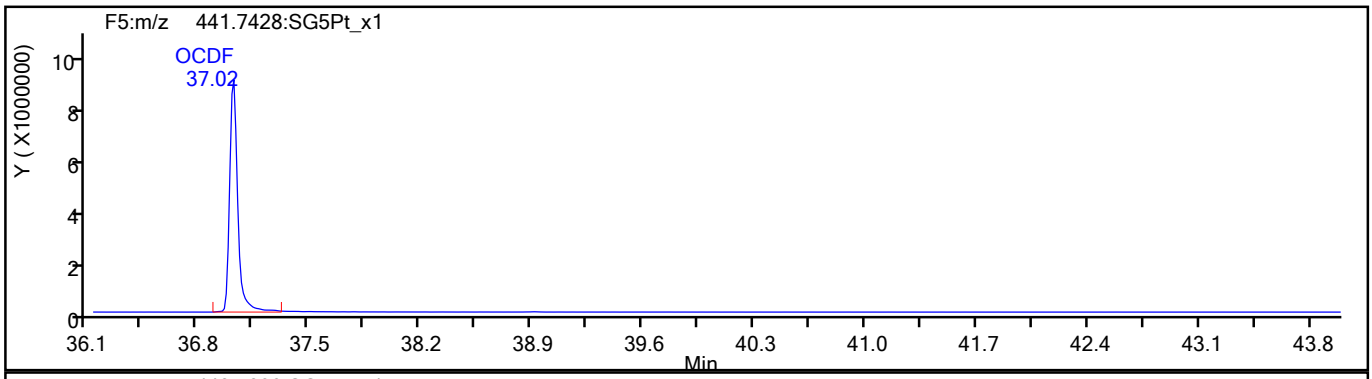

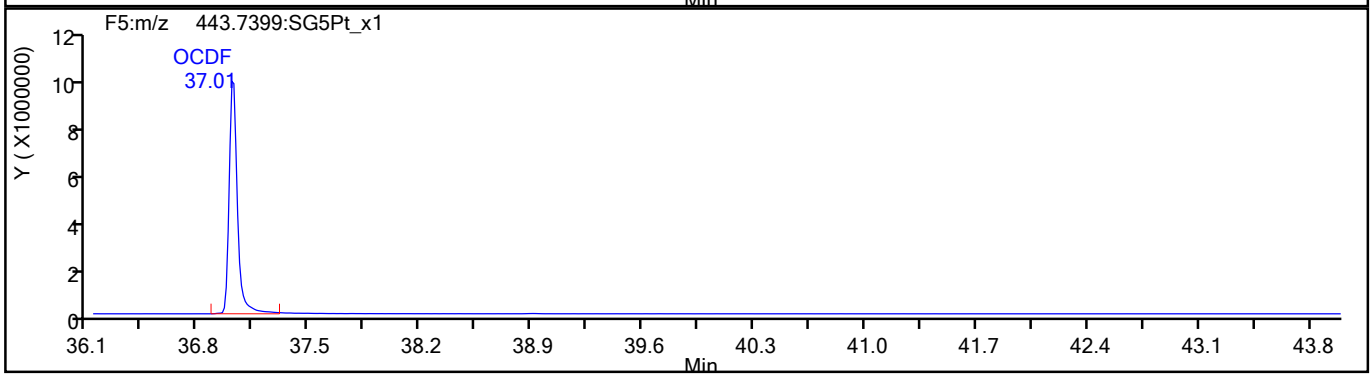

OCDF Standards

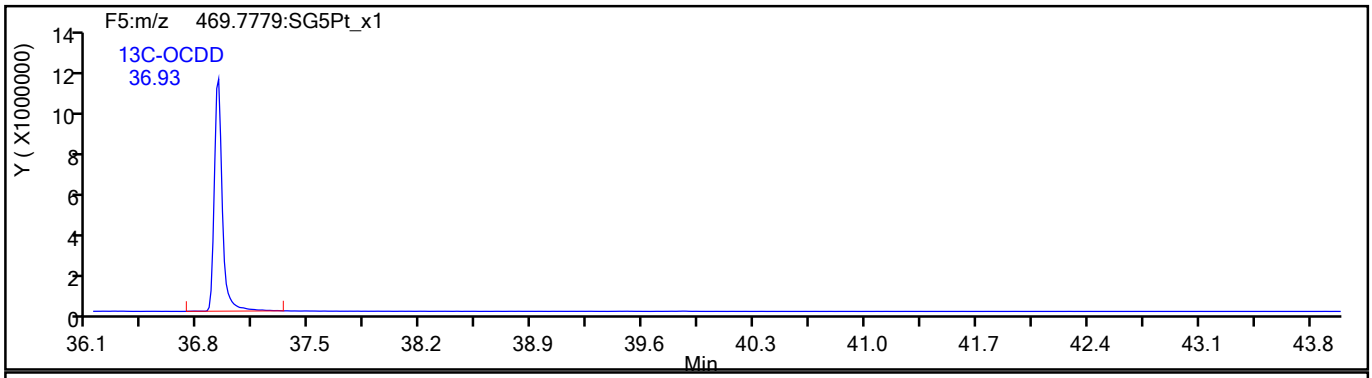

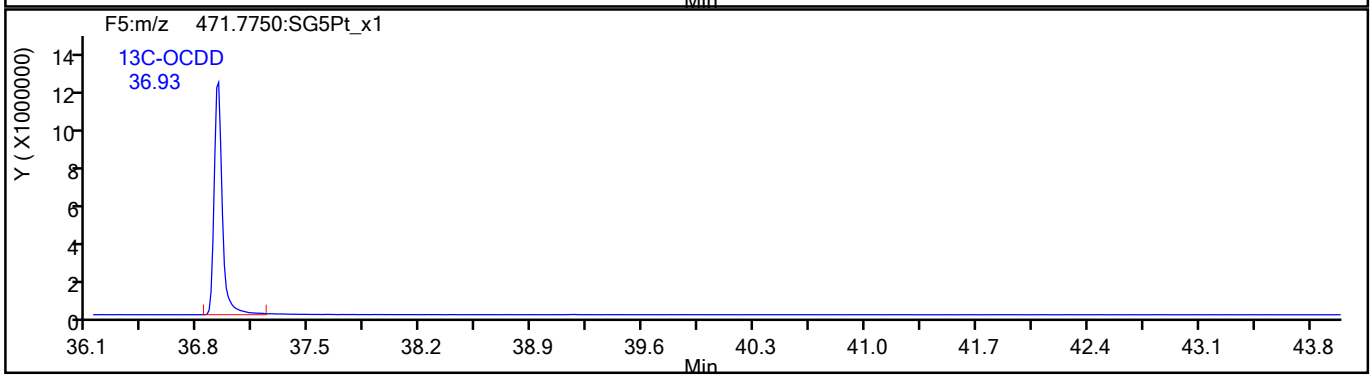

774613

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

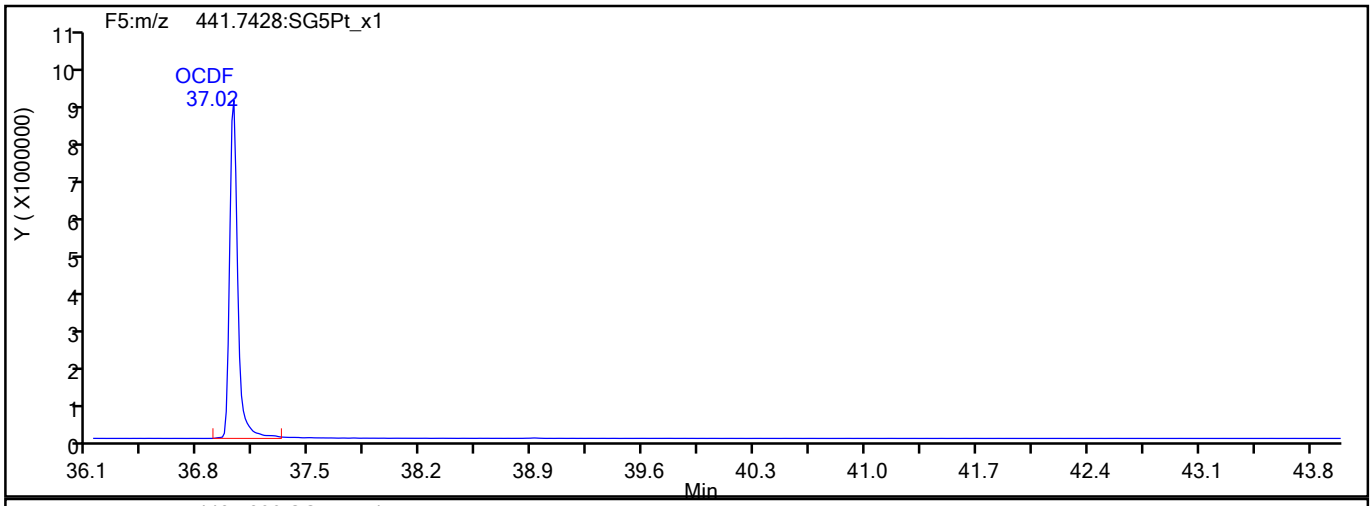

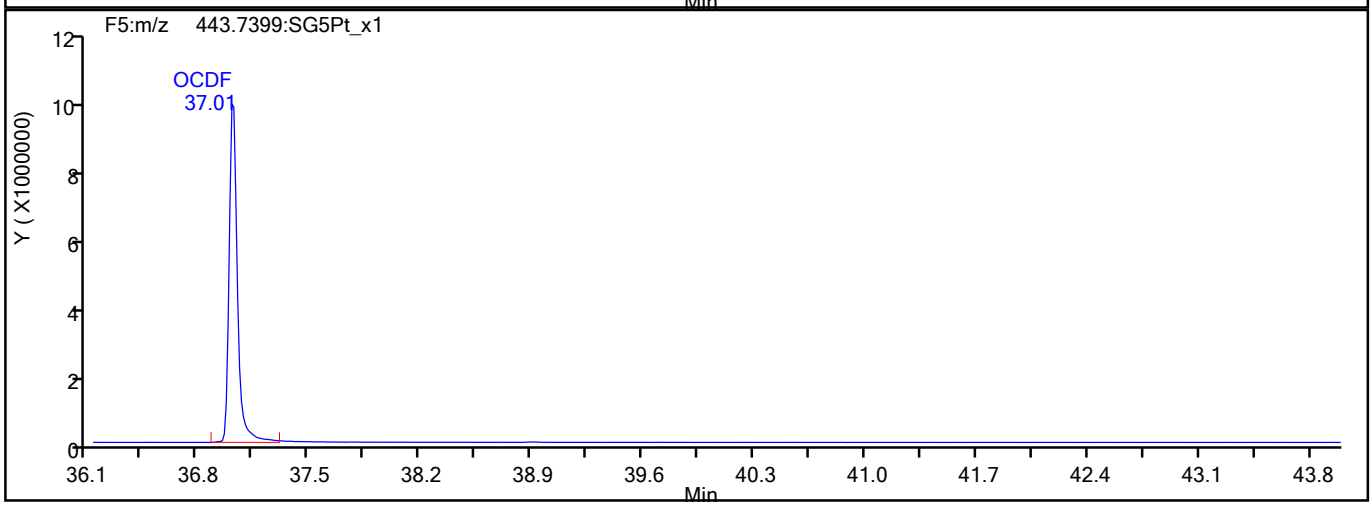

OCDF Interference Mass

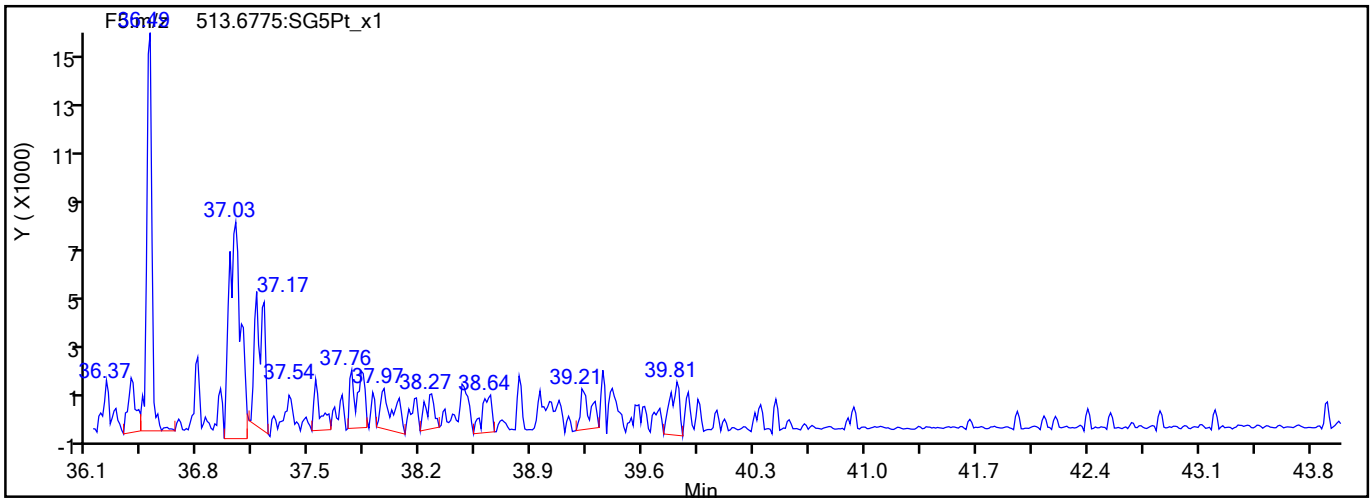

774614

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

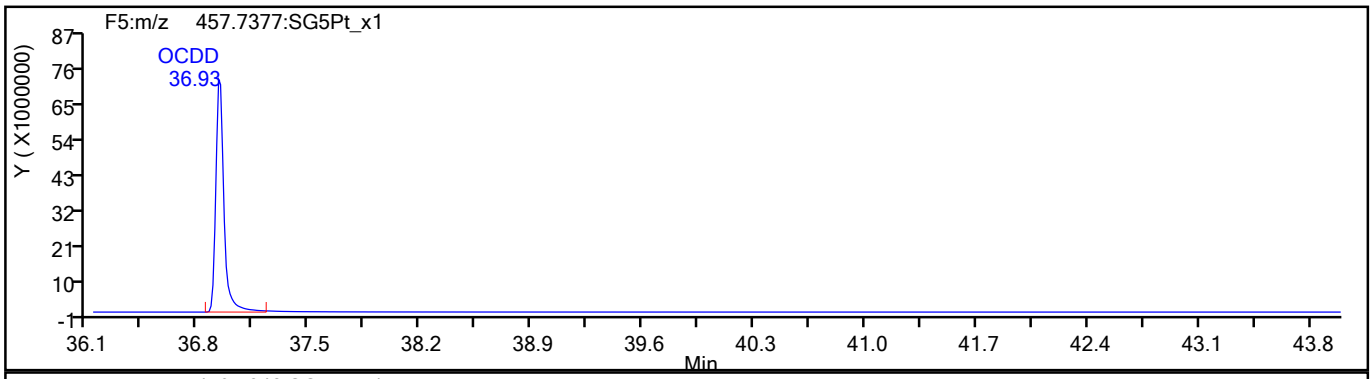

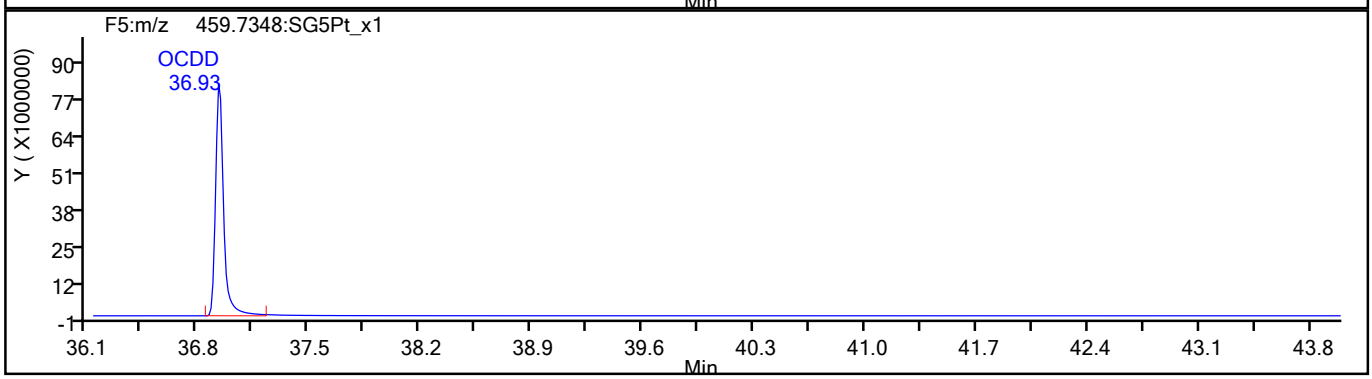

OCDD Standards

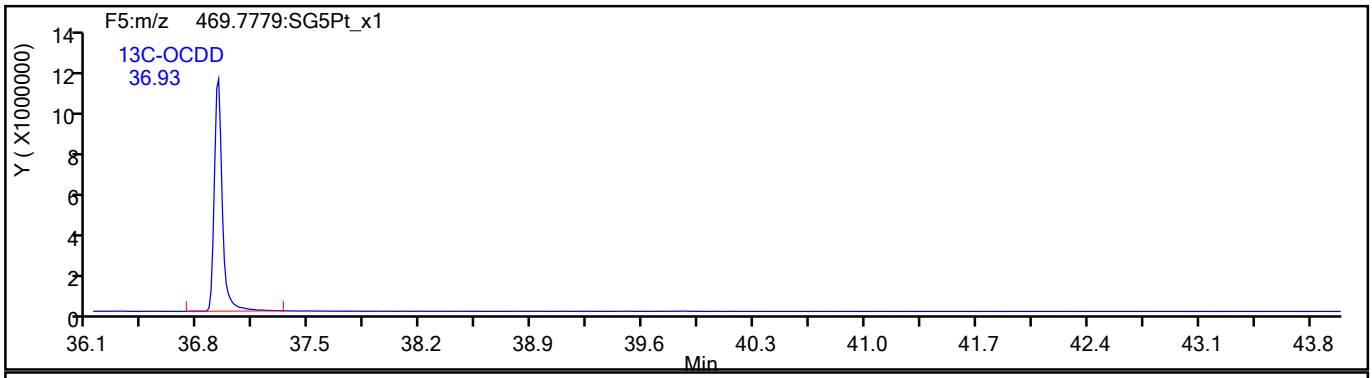

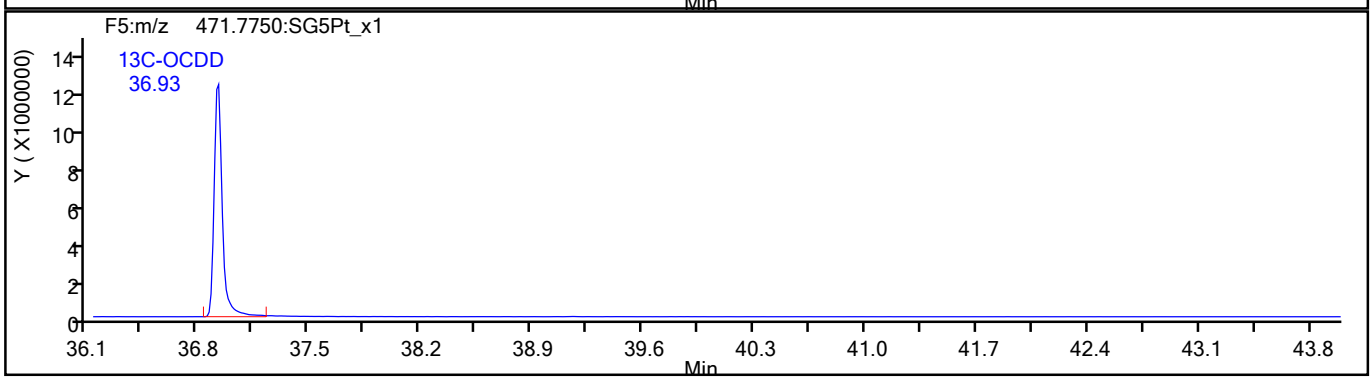

774615

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

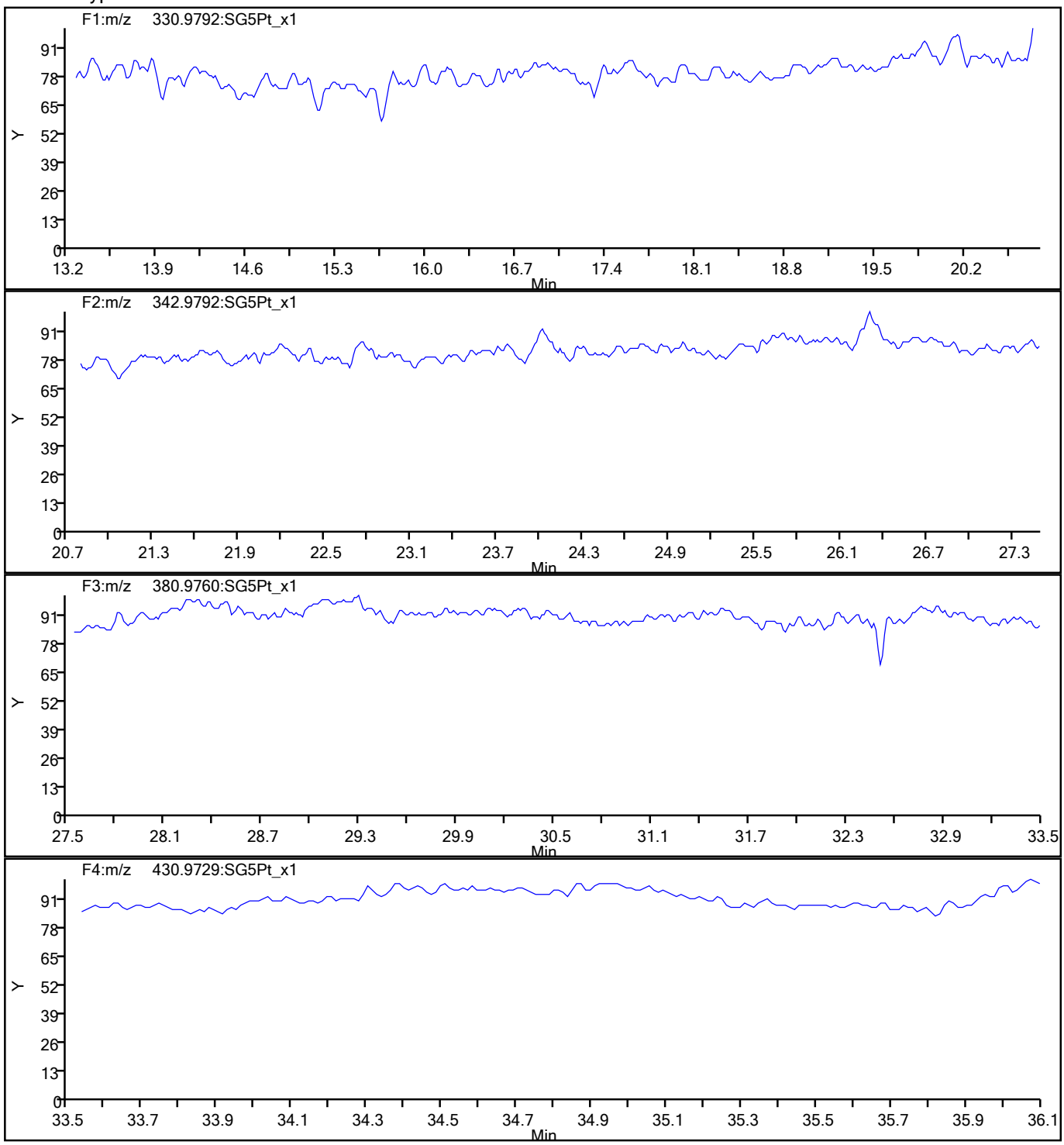

774616

Report Date: 18-Aug-2021 11:05:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_50.d		
Injection Date:	15-Aug-2021 06:36:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	516847	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

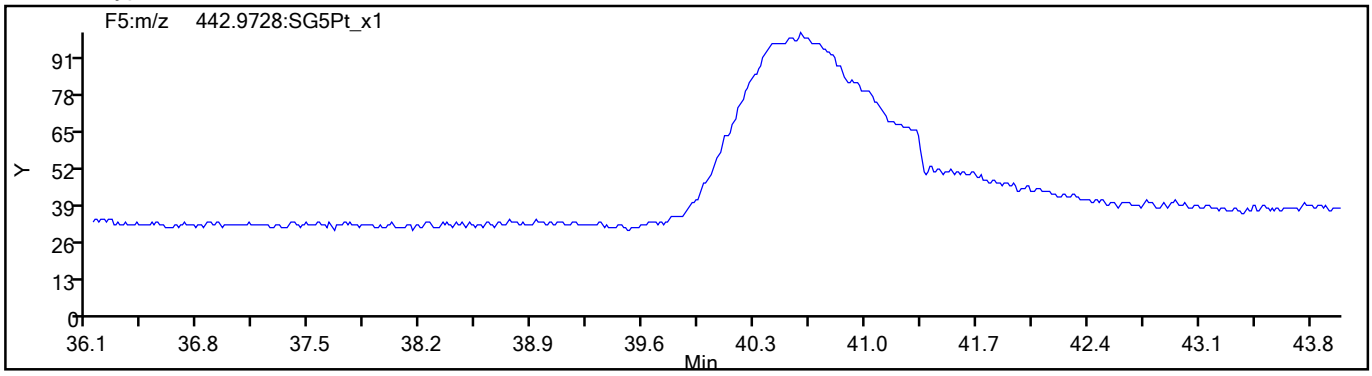

774617

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (2-4) RA
Lab Sample ID: 320-76769-2 RA
Matrix: Sediment
Lab File ID: 24AU2111D2_006.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:45
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.73(g)
Date Analyzed: 08/24/2021 11:40
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 37.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	28000	E B G	29	29

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	80		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	106		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_006.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Sample Type: Client
Inject. Date: 24-Aug-2021 11:40:27 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-2-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:49:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.317	8581796	0.80	7.2E+05	20.0	20.0				nM
D 13C-2,3,7,8-TCDF	17.633	9098624	0.69	1.3327	15.9	15.9	0.4580	0.4580	79.56	M
2,3,7,8-TCDF	17.661	780578289	0.78	0.9978	1719.6	1719.6	1.759	1.759		E
D 13C-2,3,7,8-TCDD	16.097	4700509	0.84	0.8749	12.5	12.5	17.7	17.7	62.60	nMa
$ 37Cl4-2,3,7,8-TCDD	16.111	3137663		0.8648	8.455	8.455	0.2138	0.2138	106	a
2,3,7,8-TCDD	16.111	188226034	0.79	1.0570	757.7	757.7	3.643	3.643		Ea
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_006.d
Lims ID: 320-76769-A-2-A
Client ID: 11215702-072221-SS-SJSB080 (2-4)
Sample Type: Client
Inject. Date: 24-Aug-2021 11:40:27 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-2-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:49:45

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											nM
331.9368	16.317	16.283	2		3805690	818698	122801	307002	7		M
333.9339	16.317	16.283	2		4776106	954525	427504	1068760	2	0.80(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.633	17.613	1	1.081	3712307	662691	10309	25772	64		M
317.9389	17.661	17.613	3	1.082	5386317	796278	11338	28345	70	0.69(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.661	17.641	1	1.002	342397896	64646767	26080	65200	2479		
305.8987	17.661	17.641	1	1.002	438180393	82635367	25132	62830	3288	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											nMa
331.9368	16.097	16.050	3	0.987	2146802	457734	122801	307002	4		M
333.9339	16.097	16.050	3	0.987	2553707	571206	427504	1068760	1	0.84(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											a
327.8840	16.111	16.063	3	0.987	3137663	692897	6559	16397	106		a
2,3,7,8-TCDD											Ea
319.8965	16.111	16.077	2	1.001	83076633	18575566	44924	112310	413		a
321.8936	16.097	16.077	1	1.000	105149401	23356880	34315	85787	681	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_006.d				
Injection Date:	24-Aug-2021 11:40:27	Instrument ID:	11D2		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.63
Area: 3790460
Amount: 16.227814
Amount Units: pg/ul

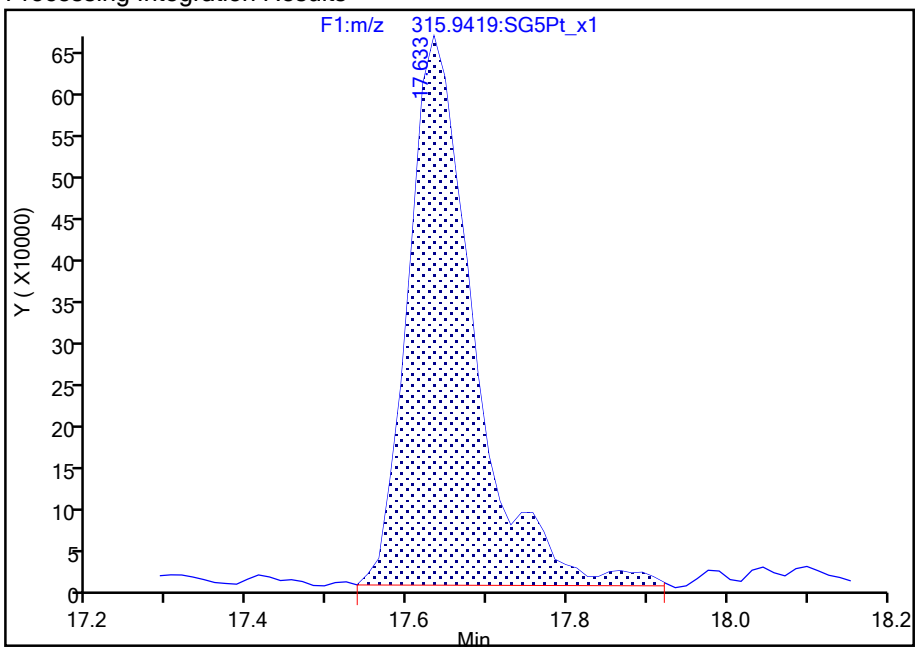

Manual Integration Results

RT: 17.63
Area: 3712307
Amount: 15.911081
Amount Units: pg/ul

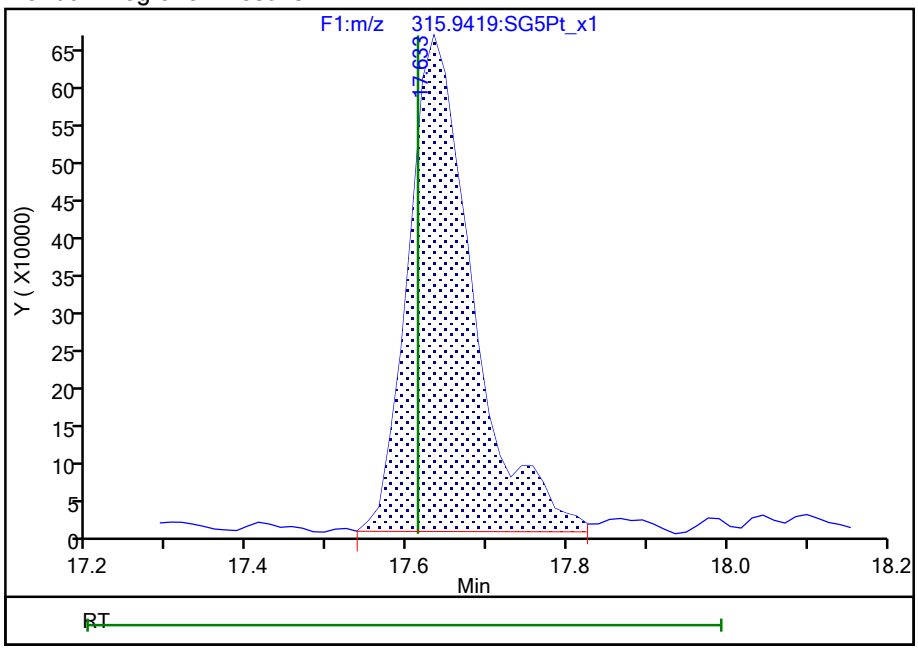

Reviewer: bennettd, 24-Aug-2021 16:49:09

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_006.d				
Injection Date:	24-Aug-2021 11:40:27	Instrument ID:	11D2		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.66
Area: 5489285
Amount: 16.227814
Amount Units: pg/ul

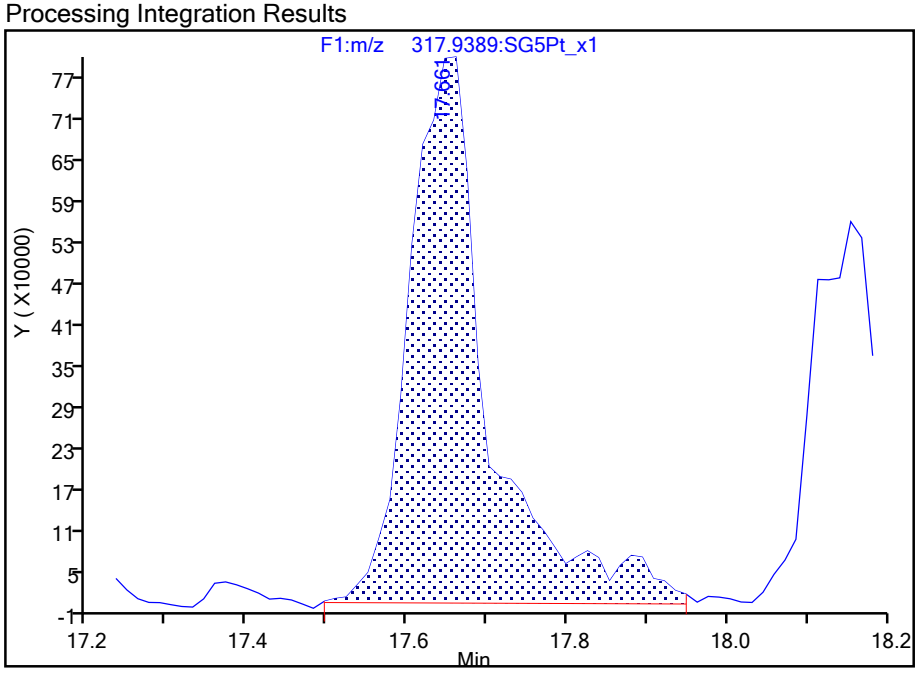

Manual Integration Results

RT: 17.66
Area: 5386317
Amount: 15.911081
Amount Units: pg/ul

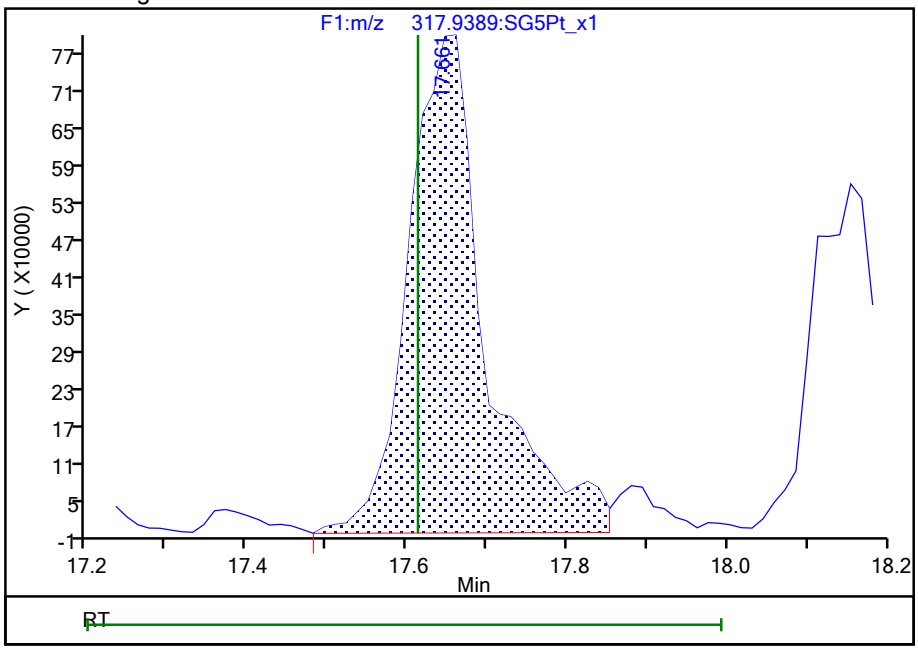

Reviewer: bennettd, 24-Aug-2021 16:49:35

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_006.d				
Injection Date:	24-Aug-2021 11:40:27	Instrument ID:	11D2		
Lims ID:	320-76769-A-2-A	Lab Sample ID:	320-76769-2		
Client ID:	11215702-072221-SS-SJSB080 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.06

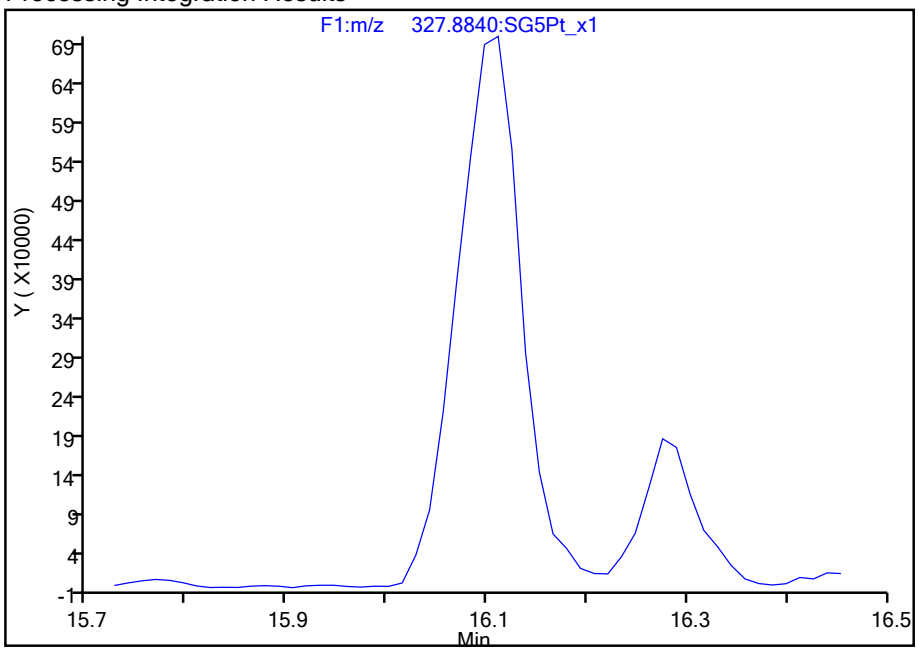

Manual Integration Results

RT: 16.11
Area: 3137663
Amount: 8.455403
Amount Units: pg/ul

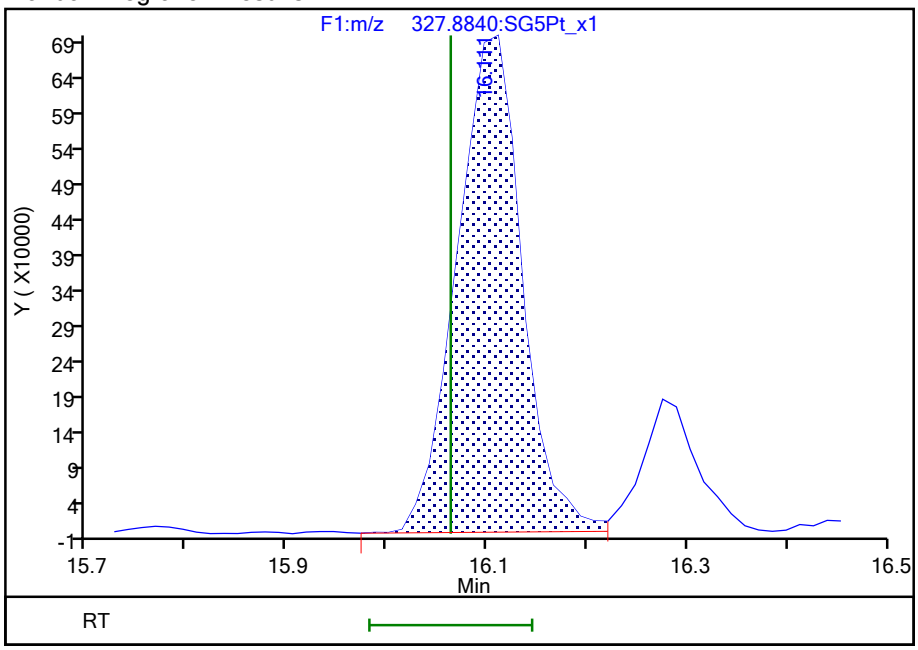

Reviewer: bennettd, 24-Aug-2021 16:48:53
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Report Date: 24-Aug-2021 17:07:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_006.d		
Injection Date:	24-Aug-2021 11:40:27	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	519438	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

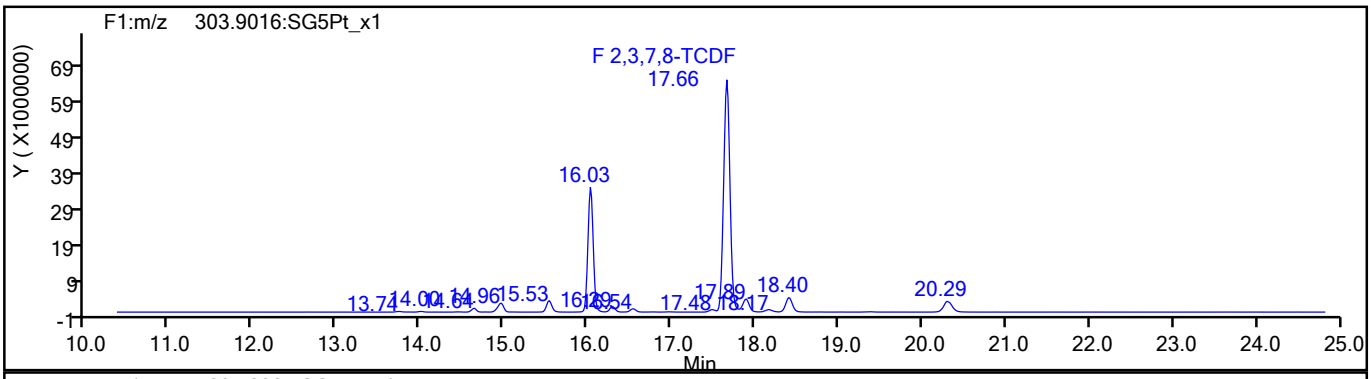

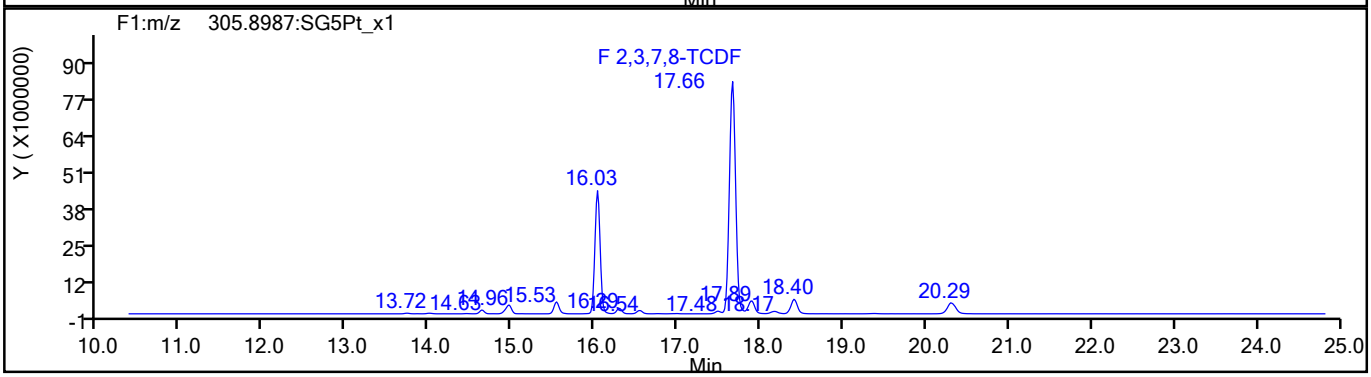

TCDF Standards

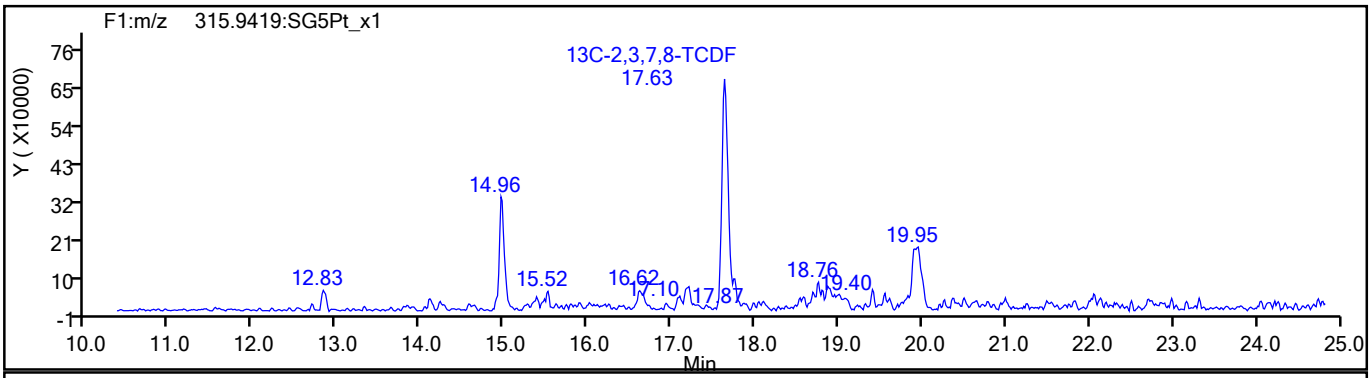

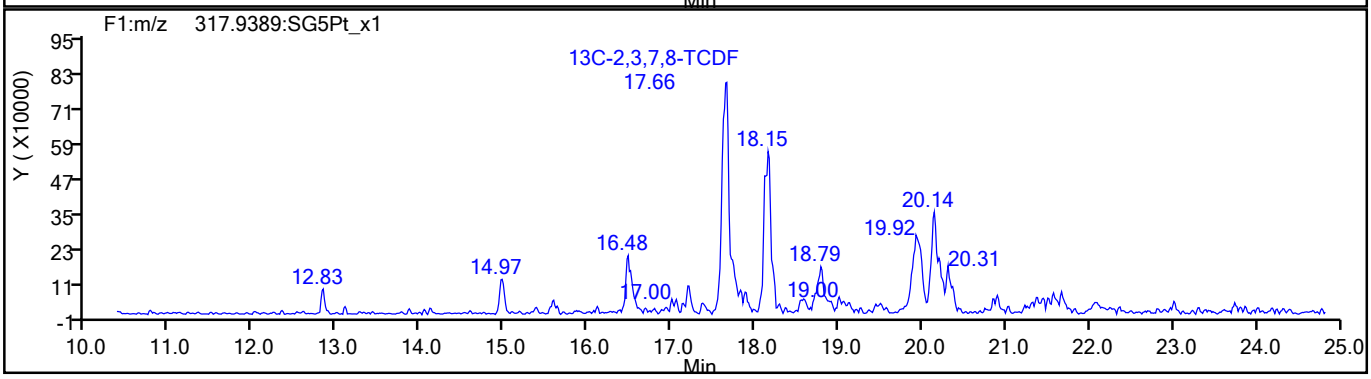

774624

Report Date: 24-Aug-2021 17:07:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_006.d		
Injection Date:	24-Aug-2021 11:40:27	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	519438	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

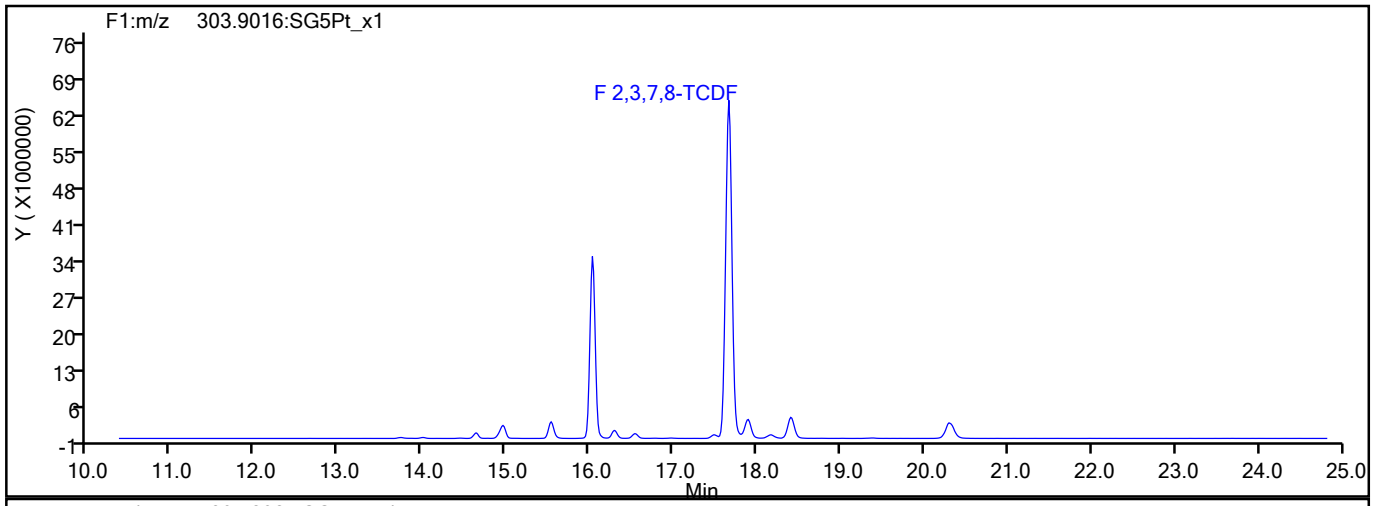

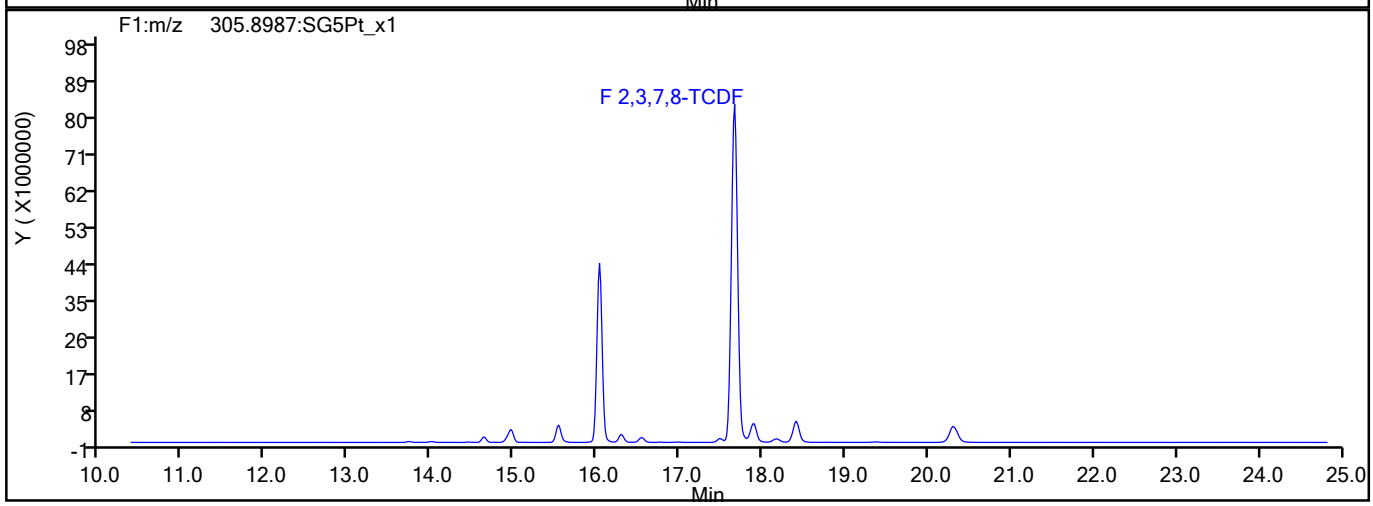

TCDF Interference Mass

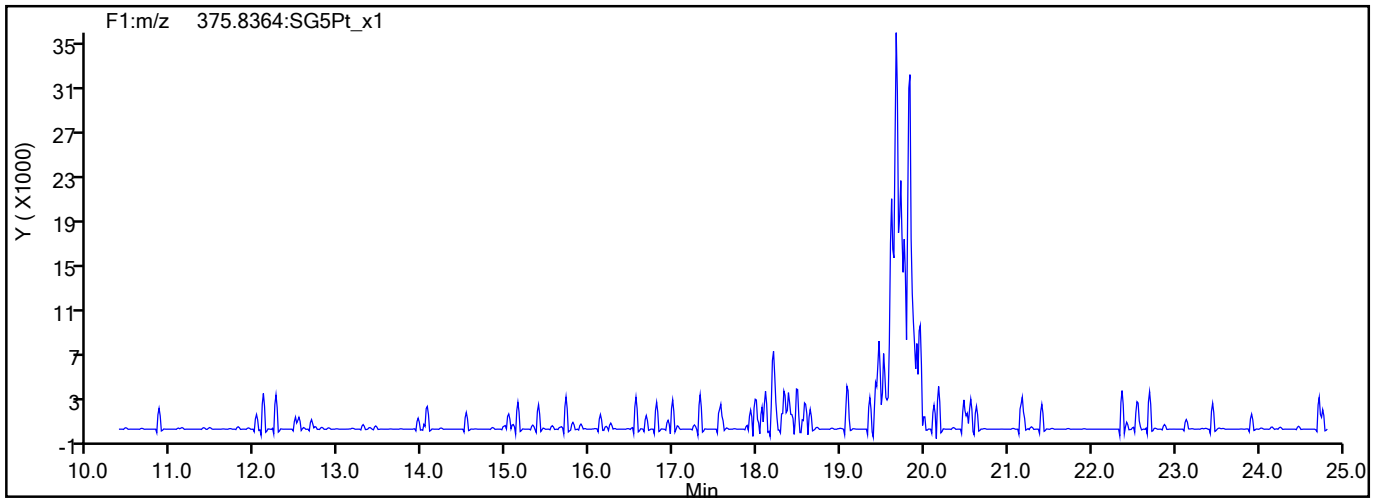

774625

Report Date: 24-Aug-2021 17:07:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_006.d		
Injection Date:	24-Aug-2021 11:40:27	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	519438	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

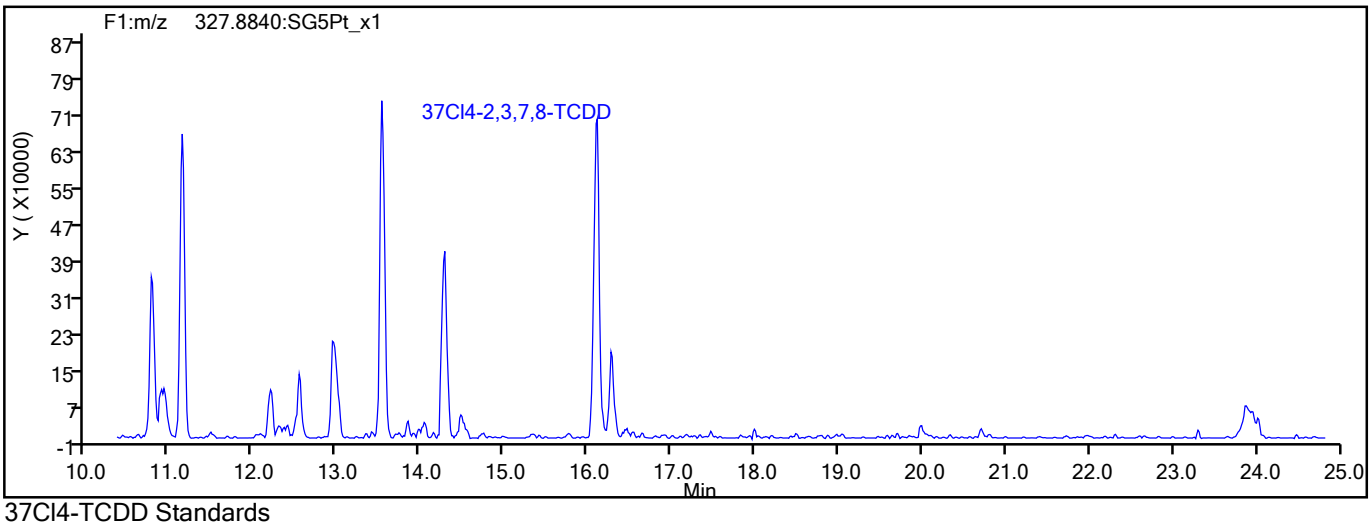

37Cl4-TCDD Standards

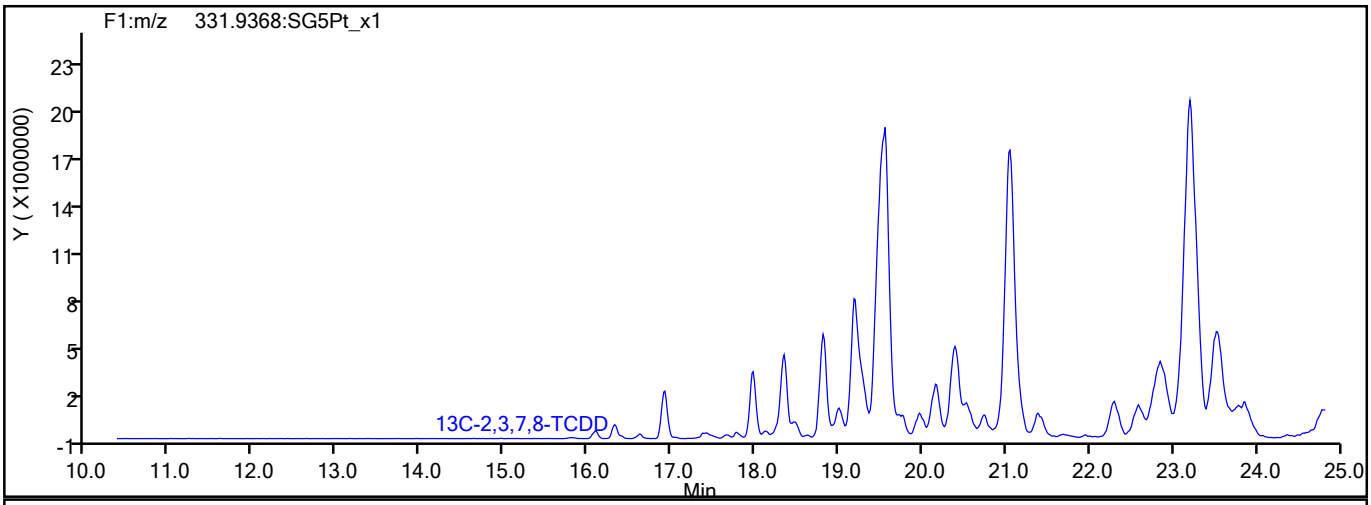

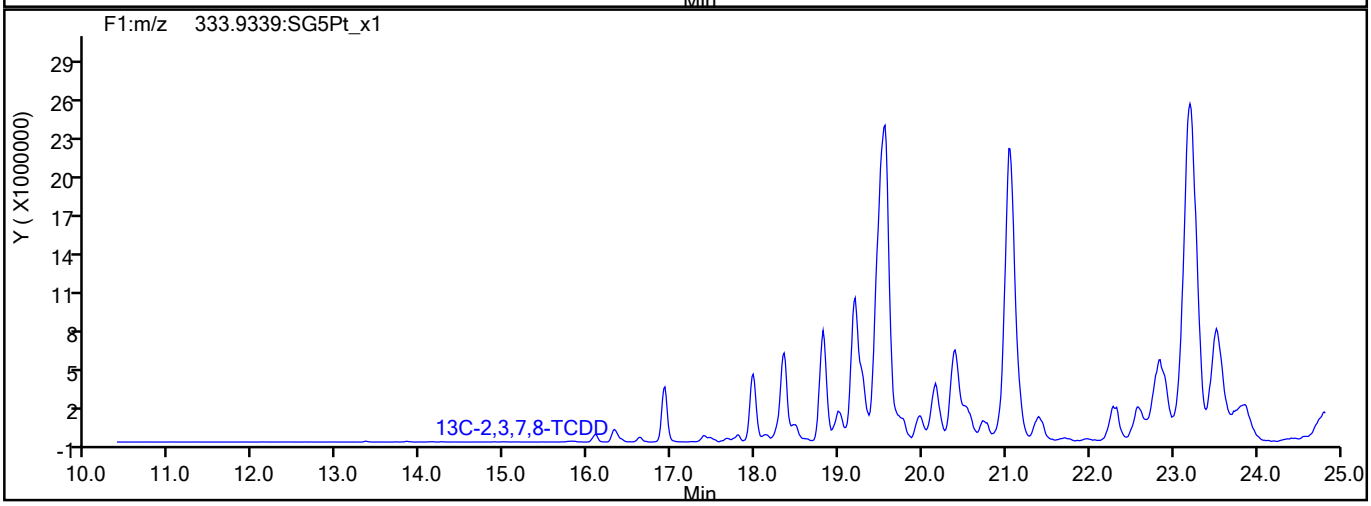

774626

Report Date: 24-Aug-2021 17:07:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_006.d		
Injection Date:	24-Aug-2021 11:40:27	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (2-4)		
Worklist#:	519438	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

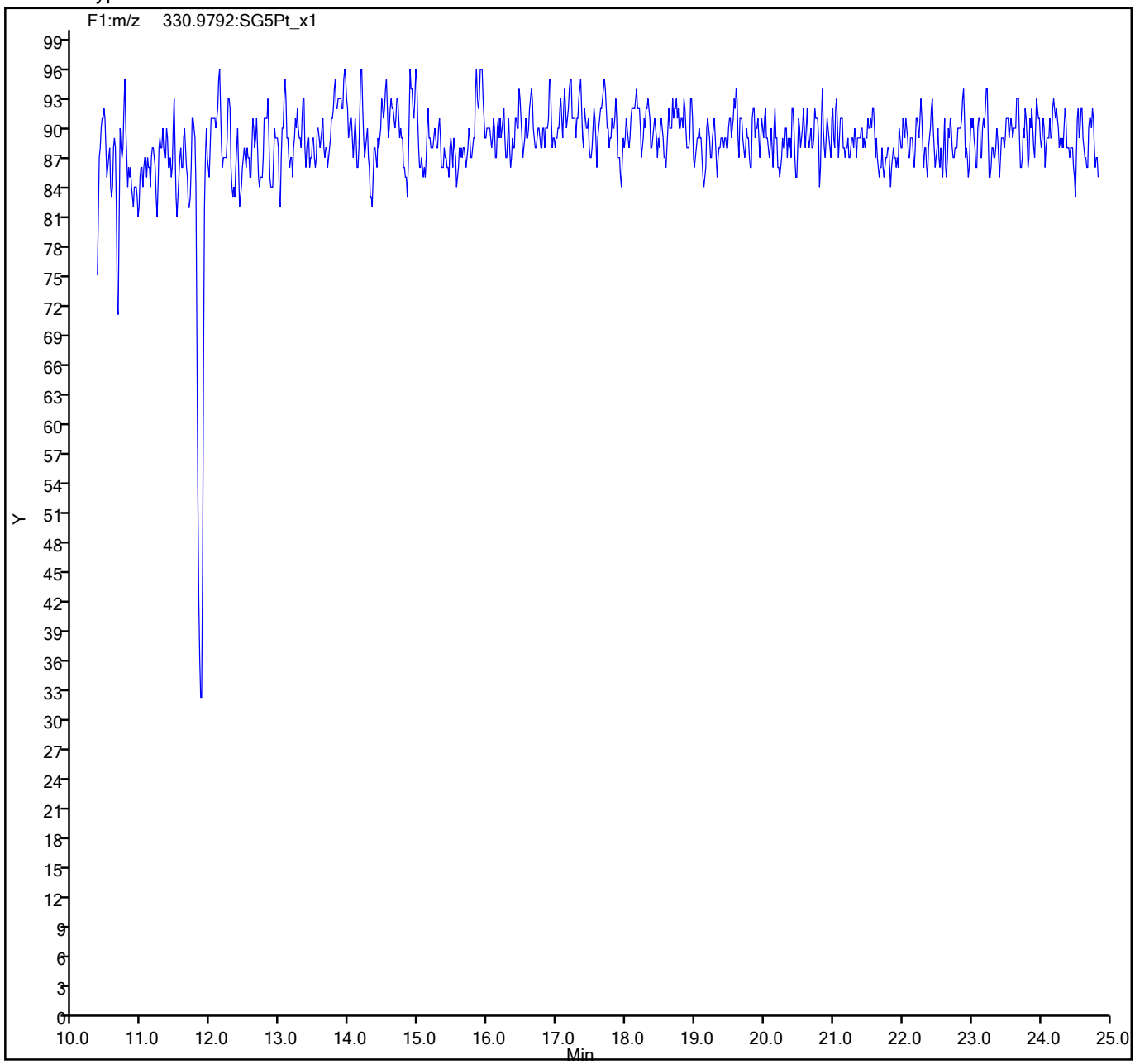

774627

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (4-6)
Lab Sample ID: 320-76769-3
Matrix: Sediment
Lab File ID: 13AU2110D5_51.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.87(g)
Date Analyzed: 08/15/2021 07:21
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 33.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	6900	E B G	13	13
40321-76-4	1,2,3,7,8-PeCDD	58		7.6	0.84
57117-41-6	1,2,3,7,8-PeCDF	810		7.6	5.5
57117-31-4	2,3,4,7,8-PeCDF	420		7.6	5.5
39227-28-6	1,2,3,4,7,8-HxCDD	1.3	J B q	7.6	0.22
57653-85-7	1,2,3,6,7,8-HxCDD	5.7	J	7.6	0.24
19408-74-3	1,2,3,7,8,9-HxCDD	3.3	J B	7.6	0.21
70648-26-9	1,2,3,4,7,8-HxCDF	1700	B G	8.6	8.6
57117-44-9	1,2,3,6,7,8-HxCDF	460	B G	8.6	8.6
72918-21-9	1,2,3,7,8,9-HxCDF	21	B	7.6	6.6
60851-34-5	2,3,4,6,7,8-HxCDF	38		7.6	6.5
35822-46-9	1,2,3,4,6,7,8-HpCDD	210	B	7.6	1.8
67562-39-4	1,2,3,4,6,7,8-HpCDF	660	B	7.6	3.4
55673-89-7	1,2,3,4,7,8,9-HpCDF	170	B	7.6	4.0
3268-87-9	OCDD	3100	B	15	3.4
39001-02-0	OCDF	220	B	15	0.26
41903-57-5	Total TCDD	7600	B G	13	13
30402-14-3	Total TCDF	33000	B G	45	45
36088-22-9	Total PeCDD	67	q	7.6	0.84
30402-15-4	Total PeCDF	1900		7.6	5.5
34465-46-8	Total HxCDD	44	B q	7.6	0.22
55684-94-1	Total HxCDF	2500	B	7.6	7.6
37871-00-4	Total HpCDD	420	B	7.6	1.8
38998-75-3	Total HpCDF	930	B	7.6	3.7

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (4-6)
Lab Sample ID: 320-76769-3
Matrix: Sediment
Lab File ID: 13AU2110D5_51.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.87(g)
Date Analyzed: 08/15/2021 07:21
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 33.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	56		25-164
89059-46-1	13C-2,3,7,8-TCDF	54		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	65		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	59		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	65		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	61		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	58		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	51		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	54		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	66		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	59		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	71		26-138
114423-97-1	13C-OCDD	78		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	88		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Sample Type: Client
Inject. Date: 15-Aug-2021 07:21:55 ALS Bottle#: 50 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-3-a 320-76769-a-3-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:06:40 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:47:58

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.885	76586022	0.83	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.371	66818855	0.77	1.6249	53.7	53.7	0.3066	0.3066	53.69	
2,3,7,8-TCDF	17.386	4543678535	0.78	1.0239	6641.2	6641.2	14.8	14.8		E
A Non-2,3,7,8-sub-TCDF	17.046	2843403188	0.78	1.0239	4156.0	4156.0	14.8	2800.8		
S Total TCDF					10797	10797	14.8	14.8		
D 13C-2,3,7,8-TCDD	18.066	38299186	0.84	0.8993	55.6	55.6	0.4504	0.4504	55.61	
2,3,7,8-TCDD	18.097	1098283396	0.79	1.2541	2286.6	2286.6	4.429	4.429		E
$ 37Cl4-2,3,7,8-TCDD	18.097	29800190		1.1071	35.1	35.1	0.1169	0.1169	87.86	
A Non-2,3,7,8-sub-TCDD	17.500	100707254	0.73	1.2541	209.7	209.7	4.429	188.3		
S Total TCDD					2496.2	2496.2	4.429	4.429		
D 13C-1,2,3,7,8-PeCDF	22.408	54313338	1.56	1.2101	58.6	58.6	0.1852	0.1852	58.61	
1,2,3,7,8-PeCDF	22.435	154813953	1.57	1.0611	268.6	268.6	1.828	1.828		
D 13C-2,3,4,7,8-PeCDF	23.744	61450440	1.57	1.2395	64.7	64.7	0.1808	0.1808	64.73	
2,3,4,7,8-PeCDF	23.771	87296845	1.60	1.0184	139.5	139.5	1.807	1.807		
A F1 PeCDFs	20.093	538120	1.48	1.0398	0.8941	0.8941	0.0344	0.8941		
A Non-2,3,7,8-sub-PeCDF	23.241	124611941	1.59	1.0398	207.1	207.1	1.817	88.8		
S Total PeCDF					616.1	616.1	1.818	1.818		
D 13C-1,2,3,7,8-PeCDD	24.453	37736798	1.65	0.7612	64.7	64.7	0.1243	0.1243	64.73	
1,2,3,7,8-PeCDD	24.480	7520239	1.61	1.0484	19.0	19.0	0.2774	0.2774		
A Non-2,3,7,8-sub-PeCDD	23.349	1291528	1.55	1.0484	5.062	3.264	0.2774	1.310		RQ
S Total PeCDD					24.1	22.3	0.2774	0.2774		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	56264193	0.52	1.0837	58.3	58.3	0.2196	0.2196	58.31	
1,2,3,4,7,8-HxCDF	30.529	346465034	1.21	1.0851	567.5	567.5	2.843	2.843		
D 13C-1,2,3,6,7,8-HxCDF	30.689	51177134	0.52	1.1279	51.0	51.0	0.2110	0.2110	50.96	
1,2,3,6,7,8-HxCDF	30.715	88188450	1.20	1.1260	153.0	153.0	2.852	2.852		
D 13C-2,3,4,6,7,8-HxCDF	31.514	50751457	0.51	1.0637	53.6	53.6	0.2237	0.2237	53.58	
2,3,4,6,7,8-HxCDF	31.527	7373895	1.23	1.1675	12.4	12.4	2.137	2.137		M
D 13C-1,2,3,7,8,9-HxCDF	32.313	46298577	0.51	0.9676	53.7	53.7	0.2459	0.2459	53.74	
1,2,3,7,8,9-HxCDF	32.326	3732975	1.16	1.1664	6.913	6.913	2.193	2.193		Ma
A Non-2,3,7,8-sub-HxCDF	30.197	43215933	1.19	1.1363	74.4	74.4	2.466	32.2		Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					814.3	814.3	2.506	2.506		
* 13C-1,2,3,7,8,9-HxCDD	32.139	89037893	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.700	40103556	1.25	0.7334	61.4	61.4	0.2812	0.2812	61.41	
1,2,3,4,7,8-HxCDD	31.714	178492	1.24	1.0640	0.4779	0.4183	0.0717	0.0717		RQ
D 13C-1,2,3,6,7,8-HxCDD	31.807	42030083	1.24	0.8802	53.6	53.6	0.2343	0.2343	53.63	
1,2,3,6,7,8-HxCDD	31.820	792999	1.23	1.0001	1.887	1.887	0.0777	0.0777		
1,2,3,7,8,9-HxCDD	32.153	499278	1.31	1.1325	1.074	1.074	0.0680	0.0680		
A Non-2,3,7,8-sub-HxCDD	30.882	4841019	1.24	1.0655	11.1	11.1	0.0722	5.477		RQ
S Total HxCDD					14.5	14.4	0.0724	0.0724		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	40908783	0.45	0.7730	59.4	59.4	0.5804	0.5804	59.44	
1,2,3,4,6,7,8-HpCDF	33.766	127967016	1.05	1.4413	217.0	217.0	1.134	1.134		
D 13C-1,2,3,4,7,8,9-HpCDF	34.835	44192975	0.43	0.7008	70.8	70.8	0.6402	0.6402	70.82	
1,2,3,4,7,8,9-HpCDF	34.847	33404460	1.05	1.3174	57.4	57.4	1.313	1.313		
A Non-2,3,7,8-sub-HpCDF	34.319	18218514	1.03	1.3793	31.0	31.0	1.218	31.0		
S Total HpCDF					305.5	305.5	1.223	1.223		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	38306828	1.00	0.6472	66.5	66.5	0.3266	0.3266	66.47	
1,2,3,4,6,7,8-HpCDD	34.568	29328926	1.05	1.0943	70.0	70.0	0.5899	0.5899		
A Non-2,3,7,8-sub-HpCDD	34.301	28644659	1.04	1.0943	68.3	68.3	0.5899	68.3		
S Total HpCDD					138.3	138.3	0.5899	0.5899		
D 13C-OCDD	36.914	62106735	0.87	0.4472	156.0	156.0	0.1903	0.1903	78.00	
OCDF	37.009	32316430	0.88	1.4382	72.4	72.4	0.0862	0.0862		
OCDD	36.926	350191862	0.90	1.1070	1018.7	1018.7	1.112	1.112		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Sample Type: Client
Inject. Date: 15-Aug-2021 07:21:55 ALS Bottle#: 50 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-3-a 320-76769-a-3-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:06:40 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:47:58

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.885	17.855	2		34625337	8889637	10813	27032	822		a
333.9339	17.885	17.855	2		41960685	10675076	20884	52210	511	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.371	17.356	1	0.971	29134814	7825836	11139	27847	703		
317.9389	17.371	17.356	1	0.971	37684041	10040475	27848	69620	361	0.77(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.386	17.371	1	1.001	1990179608	508609086	456891	1142227	1113		
305.8987	17.386	17.371	1	1.001	2553498927	661607650	625764	1564410	1057	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.965	17.046	-65	0.919	20587082	5765115	456891	1142227	13		
305.8987	15.965	17.046	-65	0.919	26508020	7407511	625764	1564410	12	0.78(0.65-0.89)	
303.9016	16.252	17.046	-48	0.936	45553500	9604843	456891	1142227	21		
305.8987	16.252	17.046	-48	0.936	59158824	12365733	625764	1564410	20	0.77(0.65-0.89)	
303.9016	16.479	17.046	-34	0.949	57441302	14573465	456891	1142227	32		
305.8987	16.479	17.046	-34	0.949	73989349	18480106	625764	1564410	30	0.78(0.65-0.89)	
303.9016	16.706	17.046	-20	0.962	90629760	22735206	456891	1142227	50		
305.8987	16.706	17.046	-20	0.962	117241819	29606359	625764	1564410	47	0.77(0.65-0.89)	
303.9016	16.993	17.046	-3	0.978	839111679	214707971	456891	1142227	470		
305.8987	16.993	17.046	-3	0.978	1077119648	274658519	625764	1564410	439	0.78(0.65-0.89)	
303.9016	17.220	17.046	10	0.991	26116407	5860577	456891	1142227	13		
305.8987	17.220	17.046	10	0.991	33364185	7579937	625764	1564410	12	0.78(0.65-0.89)	
303.9016	17.809	17.046	46	1.025	137651006	35858240	456891	1142227	78		
305.8987	17.809	17.046	46	1.025	177976289	46656757	625764	1564410	75	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.051	17.046	60	1.039	26637051	5972127	456891	1142227	13		
305.8987	18.051	17.046	60	1.039	34317267	7633016	625764	1564410	12	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.010	17451819	4202859	10813	27032	389		
333.9339	18.066	18.051	1	1.010	20847367	5155147	20884	52210	247	0.84(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	18.097	18.081	1	1.002	484380390	114485408	106944	267360	1071		
321.8936	18.097	18.081	1	1.002	613903006	142880811	100961	252402	1415	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.097	18.081	1	1.012	29800190	6981118	10132	25330	689		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.976	17.500	29	0.995	4159233	1294894	106944	267360	12		
321.8936	17.976	17.500	29	0.995	6097652	1769255	100961	252402	18	0.68(0.65-0.89)	
319.8965	18.444	17.500	57	1.021	38451352	8731530	106944	267360	82		
321.8936	18.444	17.500	57	1.021	51999017	11440494	100961	252402	113	0.74(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.408	22.367	2	1.253	33101957	5883977	9908	24770	594		
353.8970	22.408	22.367	2	1.253	21211381	3835593	7626	19065	503	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.435	22.394	2	1.001	94462370	16999752	46208	115520	368		
341.8567	22.435	22.394	2	1.001	60351583	10726314	29223	73057	367	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.744	23.703	2	1.328	37569851	6323464	9908	24770	638		
353.8970	23.744	23.703	2	1.328	23880589	3921343	7626	19065	514	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.771	23.730	2	1.001	53773969	9019201	46208	115520	195		
341.8567	23.771	23.730	2	1.001	33522876	5714009	29223	73057	196	1.60(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.518	20.093	-34	0.871	320749	65636	598	1495	110		
341.8567	19.518	20.093	-34	0.871	217371	48650	832	2080	58	1.48(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.085	23.241	-129	0.941	32787844	7113866	46208	115520	154		
341.8567	21.085	23.241	-129	0.941	20644641	4436387	29223	73057	152	1.59(1.32-1.78)	
339.8597	21.930	23.241	-78	0.979	2478632	277444	46208	115520	6		
341.8567	21.930	23.241	-78	0.979	1521239	179958	29223	73057	6	1.63(1.32-1.78)	
339.8597	22.299	23.241	-56	0.995	4625084	998987	46208	115520	22		
341.8567	22.299	23.241	-56	0.995	2935971	629180	29223	73057	22	1.58(1.32-1.78)	
339.8597	22.953	23.241	-17	1.024	21418227	3853486	46208	115520	83		
341.8567	22.953	23.241	-17	1.024	13583376	2466521	29223	73057	84	1.58(1.32-1.78)	
339.8597	24.112	23.241	52	1.076	12297460	1923026	46208	115520	42		
341.8567	24.098	23.241	51	1.075	7655914	1185248	29223	73057	41	1.61(1.32-1.78)	
339.8597	25.694	23.241	147	1.147	2971962	483753	46208	115520	10		
341.8567	25.694	23.241	147	1.147	1691591	282373	29223	73057	10	1.76(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.426	2	1.367	23476918	3830565	4650	11625	824		
369.8919	24.453	24.426	2	1.367	14259880	2344823	2756	6890	851	1.65(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.480	24.453	2	1.001	4637169	782996	3884	9710	202		
357.8516	24.480	24.453	2	1.001	2883070	484418	3299	8247	147	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.262	23.349	-125	0.870	180030	32401	3884	9710	8		
357.8516	21.262	23.349	-125	0.870	775163	159338	3299	8247	48	0.23(1.32-1.78)	
	Empc Correction				116148	20903	3299	8247	6		
355.8546	22.449	23.349	-54	0.918	297547	59160	3884	9710	15		
357.8516	22.449	23.349	-54	0.918	220894	39626	3299	8247	12	1.35(1.32-1.78)	
355.8546	22.708	23.349	-38	0.929	186377	35905	3884	9710	9		
357.8516	22.694	23.349	-39	0.928	110954	18558	3299	8247	6	1.68(1.32-1.78)	
355.8546	23.008	23.349	-20	0.941	161554	28370	3884	9710	7		
	Empc Correction				109155	22871	3884	9710	6		
357.8516	22.994	23.349	-21	0.940	70423	14756	3299	8247	4	2.29(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	19311808	3836765	8910	22275	431		
385.8610	30.516	30.503	1	0.949	36952385	7132338	14459	36147	493	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.000	189423912	37306785	93641	234102	398		
375.8178	30.529	30.529	0	1.000	157041122	31145497	41716	104290	747	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	17437207	3572439	8910	22275	401		
385.8610	30.689	30.689	0	0.955	33739927	6966106	14459	36147	482	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.715	30.716	0	1.001	48127061	9919659	93641	234102	106		
375.8178	30.715	30.716	0	1.001	40061389	8215503	41716	104290	197	1.20(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	17188816	4541052	8910	22275	510		
385.8610	31.514	31.514	0	0.981	33562641	9020339	14459	36147	624	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.527	31.528	0	1.000	4064067	1158197	93641	234102	12		
375.8178	31.527	31.528	0	1.000	3309828	933351	41716	104290	22	1.23(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.326	-1	1.005	15725637	4537136	8910	22275	509		
385.8610	32.313	32.326	-1	1.005	30572940	8695408	14459	36147	601	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											Ma
373.8208	32.326	32.340	-1	1.000	2008191	687600	93641	234102	7		M
375.8178	32.326	32.340	-1	1.000	1724784	569875	41716	104290	14	1.16(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	28.386	30.197	-108	0.930	10200392	1419385	93641	234102	15		
375.8178	28.386	30.197	-108	0.930	8493215	1169011	41716	104290	28	1.20(1.05-1.43)	
373.8208	29.717	30.197	-29	0.974	3735978	591490	93641	234102	6		
375.8178	29.717	30.197	-29	0.974	3259804	494770	41716	104290	12	1.15(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	31.421	30.197	73	1.030	2234390	616404	93641	234102	7		M
375.8178	31.421	30.197	73	1.030	1750355	477556	41716	104290	11	1.28(1.05-1.43)	
373.8208	32.406	30.197	132	1.062	7284834	2286293	93641	234102	24		M
375.8178	32.406	30.197	132	1.062	6256965	1954764	41716	104290	47	1.16(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.139	32.140	0		49091313	13591801	10009	25022	1358		
403.8529	32.139	32.140	0		39946580	10960964	10246	25615	1070	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.700	31.701	0	0.986	22251569	6416701	10009	25022	641		
403.8529	31.700	31.701	0	0.986	17851987	5200647	10246	25615	508	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQ
389.8157	31.714	31.714	0	1.000	124244	34852	1796	4490	19		
	Empc Correction				98808	32717	1796	4490	18		
391.8127	31.714	31.714	0	1.000	79684	26385	1748	4370	15	1.56(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	23281933	6295763	10009	25022	629		
403.8529	31.807	31.807	0	0.990	18748150	5107383	10246	25615	498	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.820	31.820	0	1.000	437432	120182	1796	4490	67		
391.8127	31.820	31.820	0	1.000	355567	103754	1748	4370	59	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.153	0	1.014	283396	67254	1796	4490	37		
391.8127	32.139	32.153	-1	1.014	215882	49925	1748	4370	29	1.31(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.571	30.882	-79	0.930	1076159	133843	1796	4490	75		
391.8127	29.557	30.882	-79	0.929	856452	104998	1748	4370	60	1.26(1.05-1.43)	
389.8157	30.582	30.882	-18	0.962	234972	46026	1796	4490	26		
391.8127	30.582	30.882	-18	0.962	175201	36990	1748	4370	21	1.34(1.05-1.43)	
389.8157	30.968	30.882	5	0.974	1350541	274860	1796	4490	153		
391.8127	30.955	30.882	4	0.973	1046069	220059	1748	4370	126	1.29(1.05-1.43)	
389.8157	31.155	30.882	16	0.979	56257	12648	1796	4490	7		
391.8127	31.141	30.882	16	0.979	64773	12174	1748	4370	7	0.87(1.05-1.43)	
	Empc Correction				45368	10199	1748	4370	6		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.766	-1	1.050	12759258	4486484	19172	47930	234		
419.8220	33.754	33.766	-1	1.050	28149525	10123013	24889	62222	407	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.778	-1	1.000	65560800	23349434	47602	119005	491		
409.7789	33.766	33.778	-1	1.000	62406216	22563627	47922	119805	471	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.835	34.847	-1	1.084	13242352	4185323	19172	47930	218		
419.8220	34.835	34.847	-1	1.084	30950623	9625526	24889	62222	387	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.847	34.860	-1	1.000	17144777	5481624	47602	119005	115		
409.7789	34.847	34.860	-1	1.000	16259683	5241572	47922	119805	109	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.057	34.319	-16	1.009	9256321	3267037	47602	119005	69		
409.7789	34.057	34.319	-16	1.009	8962193	3258070	47922	119805	68	1.03(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.568	-1	1.075	19183795	6123862	9990	24975	613		
437.8140	34.556	34.568	-1	1.075	19123033	6110349	10773	26932	567	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.580	-1	1.000	15048030	4757034	16016	40040	297		
425.7737	34.556	34.580	-1	1.000	14280896	4497628	15574	38935	289	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.009	34.301	-17	0.984	14597027	5199818	16016	40040	325		
425.7737	34.009	34.301	-17	0.984	14047632	4970106	15574	38935	319	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.926	-1	1.149	28964278	8143953	4198	10495	1940		
471.7750	36.914	36.926	-1	1.149	33142457	9150322	4159	10397	2200	0.87(0.76-1.02)	
OCDF											
441.7428	37.009	37.022	-1	1.003	15121985	4243689	2129	5322	1993		
443.7399	37.009	37.022	-1	1.003	17194445	4771773	2157	5392	2212	0.88(0.76-1.02)	
OCDD											
457.7377	36.926	36.938	-1	1.000	165862814	44922262	20449	51122	2197		
459.7348	36.914	36.938	-1	1.000	184329048	49780475	22129	55322	2250	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Inject. Date: 15-Aug-2021 07:21:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 10

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	66818855	17866311

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	66818855	17866311

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.965	20587082	5765115	26508020	7407511	68.8	0.78	
16.252	45553500	9604843	59158824	12365733	153.1	0.77	
16.479	57441302	14573465	73989349	18480106	192.1	0.78	
16.706	90629760	22735206	117241819	29606359	303.8	0.77	
16.993	839111679	214707971	1077119648	274658519	2800.8	0.78	
17.220	26116407	5860577	33364185	7579937	86.9	0.78	
17.809	137651006	35858240	177976289	46656757	461.3	0.77	
18.051	26637051	5972127	34317267	7633016	89.1	0.78	
Signal Totals:							
	1243727787	315077544	1599675401	404387938			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2843403188	719465482				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4156.0 = (2843403188 * 100.000) / (66818855 * 1.024)

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Inject. Date: 15-Aug-2021 07:21:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 10

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	38299186	9358006

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	38299186	9358006

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.976	4159233	1294894	6097652	1769255	21.4	0.68	
18.444	38451352	8731530	51999017	11440494	188.3	0.74	
Signal Totals:							
	42610585	10026424	58096669	13209749			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	100707254	23236173				0.73	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 209.668 = (100707254 * 100.000) / (38299186 * 1.254)

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Inject. Date: 15-Aug-2021 07:21:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 10

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	54313338	9719570
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	61450440	10244807

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	57881889	9982188

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.518	320749	65636	217371	48650	0.8941	1.48	
Signal Totals:							
	320749	65636	217371	48650			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	538120	114286				1.48	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8941 = (538120 * 100.000) / (57881889 * 1.040)

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Inject. Date: 15-Aug-2021 07:21:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 10

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	54313338	9719570
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	61450440	10244807

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	57881889	9982188

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.085	32787844	7113866	20644641	4436387	88.8	1.59	
21.930	2478632	277444	1521239	179958	6.65	1.63	
22.299	4625084	998987	2935971	629180	12.6	1.58	
22.953	21418227	3853486	13583376	2466521	58.2	1.58	
24.112	12297460	1923026	7655914	1185248	33.2	1.61	
25.694	2971962	483753	1691591	282373	7.75	1.76	
Signal Totals:							
	76579209	14650562	48032732	9179667			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	124611941	23830229				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 207.051 = (124611941 * 100.000) / (57881889 * 1.040)

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Inject. Date: 15-Aug-2021 07:21:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 10

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	37736798	6175388

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	37736798	6175388

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.262	180030	32401	775163	159338	2.41	0.23	RQ
21.262	180030	32401	116148	20903	0.7486		Empc Correction
22.449	297547	59160	220894	39626	1.31	1.35	
22.708	186377	35905	110954	18558	0.7515	1.68	
23.008	161554	28370	70423	14756	0.5863	2.29	RQ
23.008	109155	22871	70423	14756	0.4539		Empc Correction
Signal Totals:							
	773109	150337	518419	93843			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2002942	388114				0.70	RQ
	1291528	244180					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 5.062 = (2002942 * 100.000) / (37736798 * 1.048)
Empc Amount: 3.264 = (1291528 * 100.000) / (37736798 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Inject. Date: 15-Aug-2021 07:21:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 10

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	56264193	10969103
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	51177134	10538545
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	50751457	13561391
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	46298577	13232544

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	51122840	12075395

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.386	10200392	1419385	8493215	1169011	32.2	1.20	
29.717	3735978	591490	3259804	494770	12.0	1.15	
31.421	2234390	616404	1750355	477556	6.86	1.28	Ma
32.406	7284834	2286293	6256965	1954764	23.3	1.16	Ma
Signal Totals:							
	23455594	4913572	19760339	4096101			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43215933	9009673				1.19	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 74.396 = (43215933 * 100.000) / (51122840 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Inject. Date: 15-Aug-2021 07:21:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 10

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	40103556	11617348
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	42030083	11403146
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	41066819	11510247

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.571	1076159	133843	856452	104998	4.42	1.26	
30.582	234972	46026	175201	36990	0.9374	1.34	
30.968	1350541	274860	1046069	220059	5.48	1.29	
31.155	56257	12648	64773	12174	0.2766	0.87	RQ
31.155	56257	12648	45368	10199	0.2322		Empc Correction
Signal Totals:							
	2717929	467377	2123090	372246			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4860424	841598				1.27	RQ
	4841019	839623					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 11.107 = (4860424 * 100.000) / (41066819 * 1.066)
Empc Amount: 11.063 = (4841019 * 100.000) / (41066819 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Inject. Date: 15-Aug-2021 07:21:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 10

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	40908783	14609497
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	44192975	13810849

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	42550879	14210173

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.057	9256321	3267037	8962193	3258070	31.0	1.03	
Signal Totals:							
	9256321	3267037	8962193	3258070			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	18218514	6525107				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 31.041 = (18218514 * 100.000) / (42550879 * 1.379)

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Inject. Date: 15-Aug-2021 07:21:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 10

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	38306828	12234211

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	38306828	12234211

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.009	14597027	5199818	14047632	4970106	68.3	1.04	
Signal Totals:							
	14597027	5199818	14047632	4970106			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28644659	10169924				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 68.333 = (28644659 * 100.000) / (38306828 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d				
Injection Date:	15-Aug-2021 07:21:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-3-A	Lab Sample ID:	320-76769-3		
Client ID:	11215702-072221-SS-SJSB080 (4-6)				
Operator ID:	DB	ALS Bottle#:	50	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.53
Area: 5430218
Amount: 16.022944
Amount Units: pg/ul

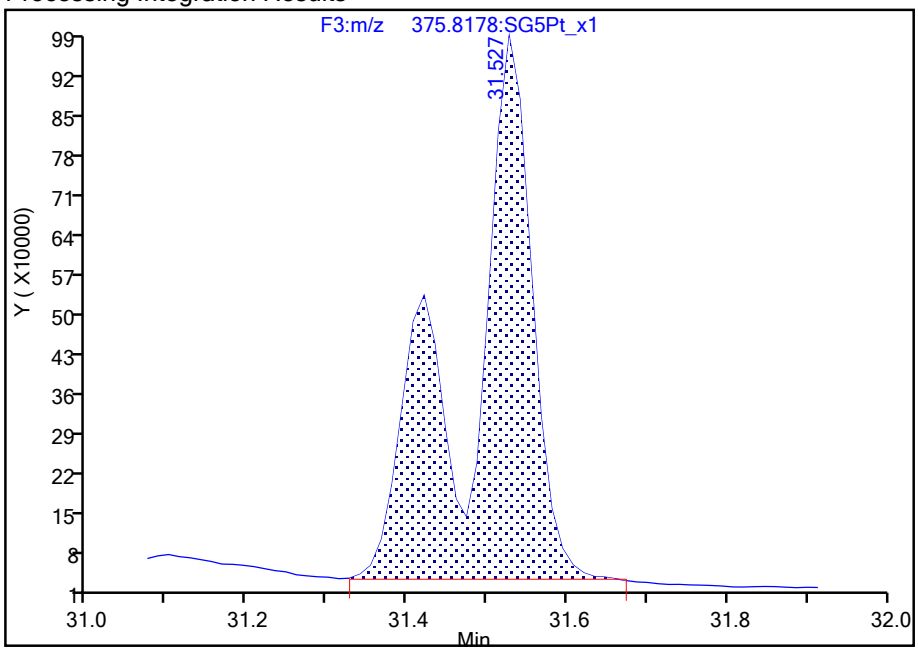

Manual Integration Results

RT: 31.53
Area: 3309828
Amount: 12.444487
Amount Units: pg/ul

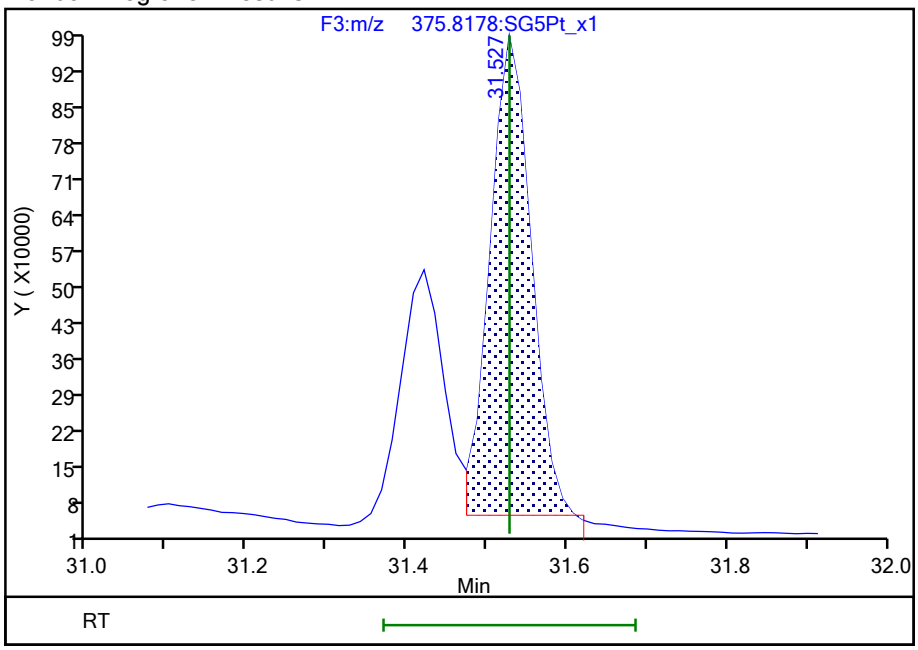

Reviewer: dadunj, 18-Aug-2021 11:06:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d				
Injection Date:	15-Aug-2021 07:21:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-3-A	Lab Sample ID:	320-76769-3		
Client ID:	11215702-072221-SS-SJSB080 (4-6)				
Operator ID:	DB	ALS Bottle#:	50	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.41
Area: 7981749
Amount: 28.271236
Amount Units: pg/ul

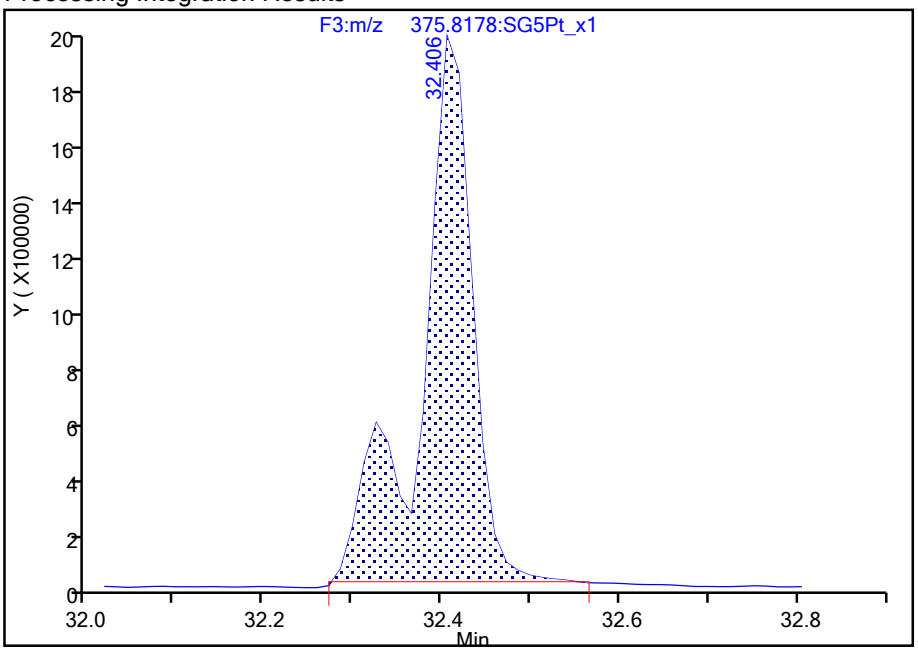

Manual Integration Results

RT: 32.33
Area: 1724784
Amount: 6.912864
Amount Units: pg/ul

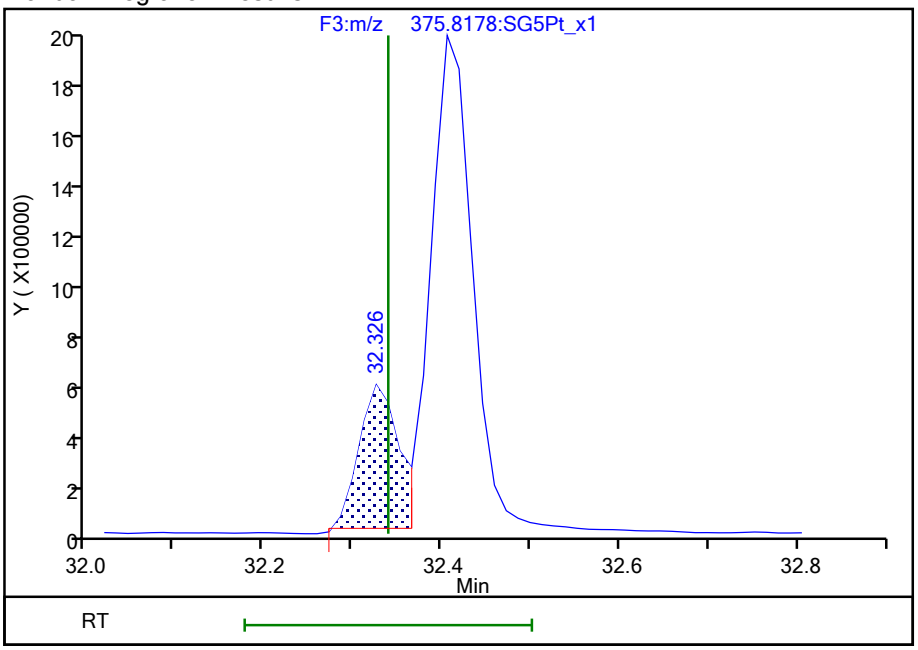

Reviewer: dadunj, 18-Aug-2021 11:06:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

774647

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d				
Injection Date:	15-Aug-2021 07:21:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-3-A	Lab Sample ID:	320-76769-3		
Client ID:	11215702-072221-SS-SJSB080 (4-6)				
Operator ID:	DB	ALS Bottle#:	50	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 3

RT: 32.41
Area: 15266583
Amount: 28.271236
Amount Units: pg/ul

Processing Integration Results

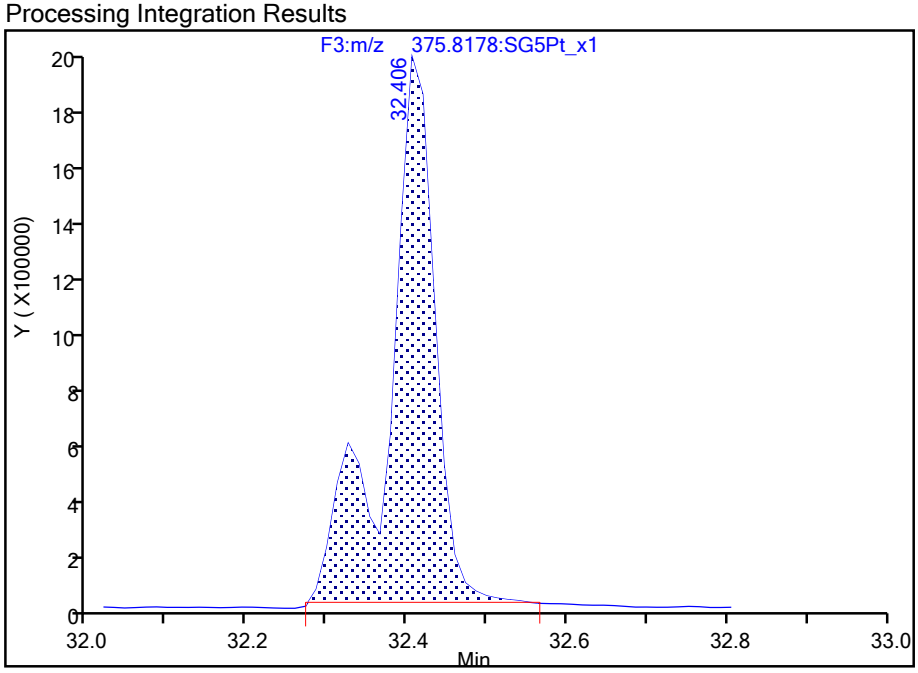

Manual Integration Results

RT: 32.33
Area: 3732975
Amount: 6.912864
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 11:06:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d				
Injection Date:	15-Aug-2021 07:21:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-3-A	Lab Sample ID:	320-76769-3		
Client ID:	11215702-072221-SS-SJSB080 (4-6)				
Operator ID:	DB	ALS Bottle#:	50	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.41
Area: 7284834
Amount: 28.271236
Amount Units: pg/ul

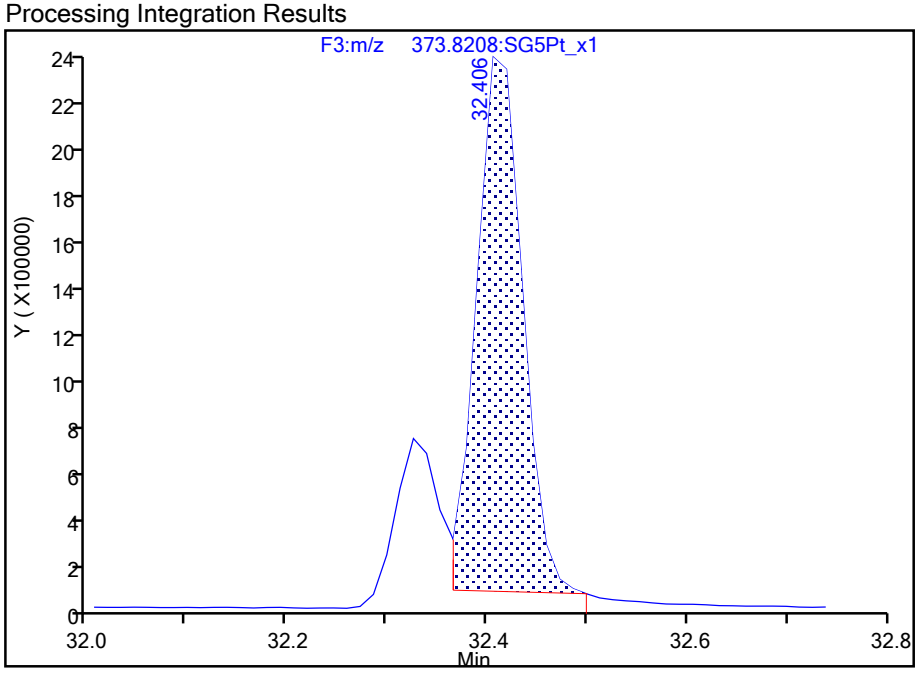

Manual Integration Results

RT: 32.33
Area: 2008191
Amount: 6.912864
Amount Units: pg/ul

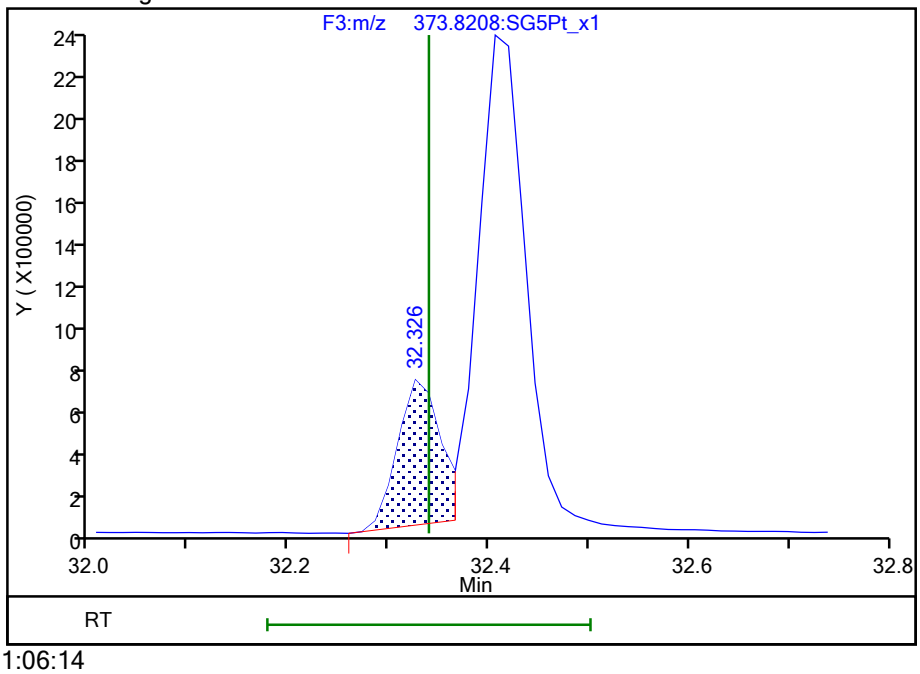

Reviewer: dadunj, 18-Aug-2021 11:06:14

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d				
Injection Date:	15-Aug-2021 07:21:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-3-A	Lab Sample ID:	320-76769-3		
Client ID:	11215702-072221-SS-SJSB080 (4-6)				
Operator ID:	DB	ALS Bottle#:	50	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 31.421 Area = 2234390

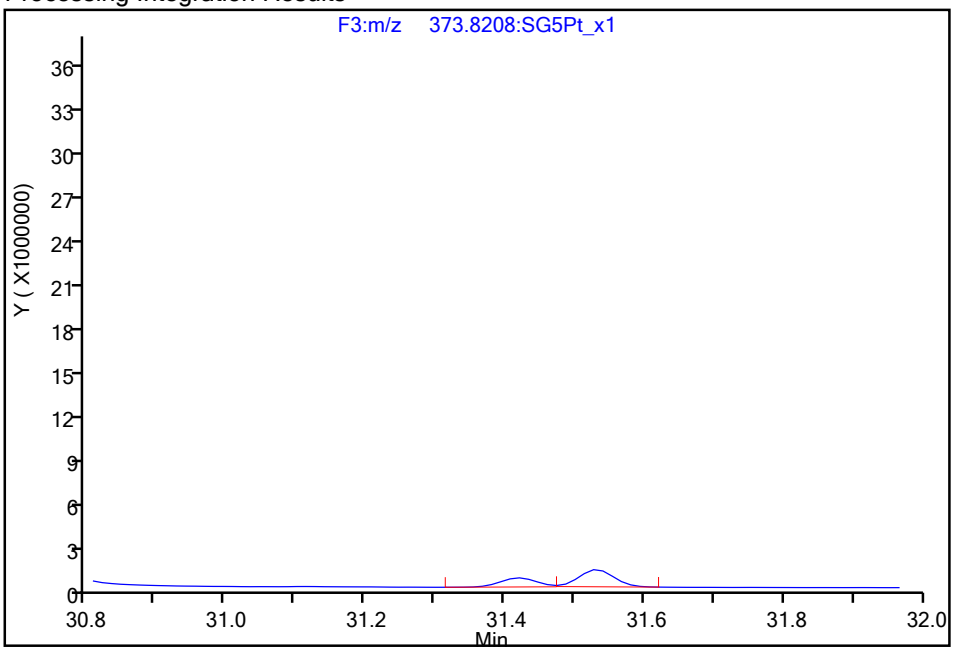

Manual Integration Results

RT = 31.421 Area = 2234390

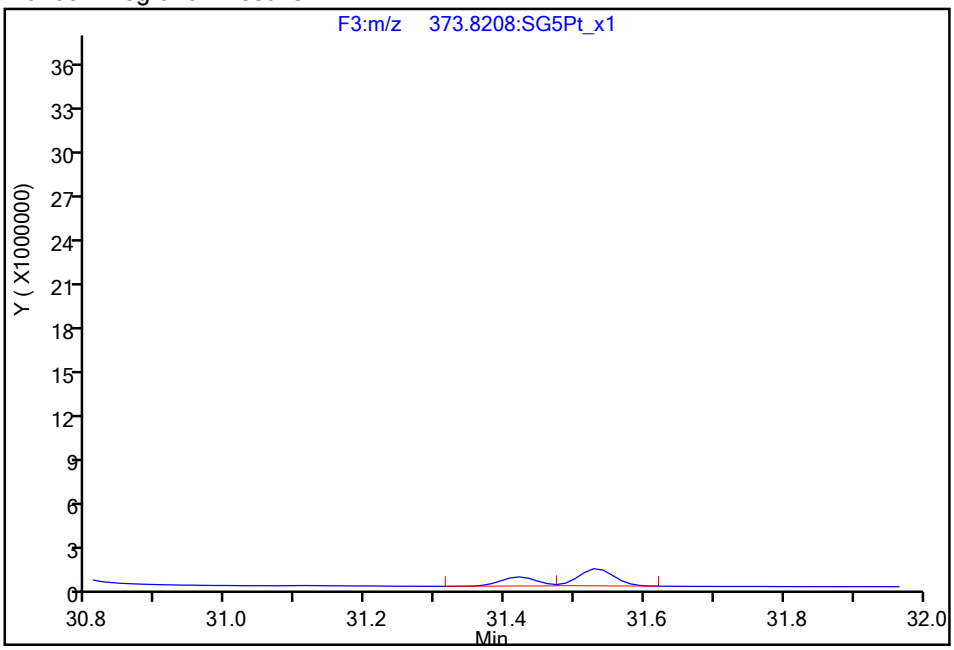

Reviewer: dadunj, 18-Aug-2021 11:06:19

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d				
Injection Date:	15-Aug-2021 07:21:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-3-A	Lab Sample ID:	320-76769-3		
Client ID:	11215702-072221-SS-SJSB080 (4-6)				
Operator ID:	DB	ALS Bottle#:	50	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.406 Area = 7284834

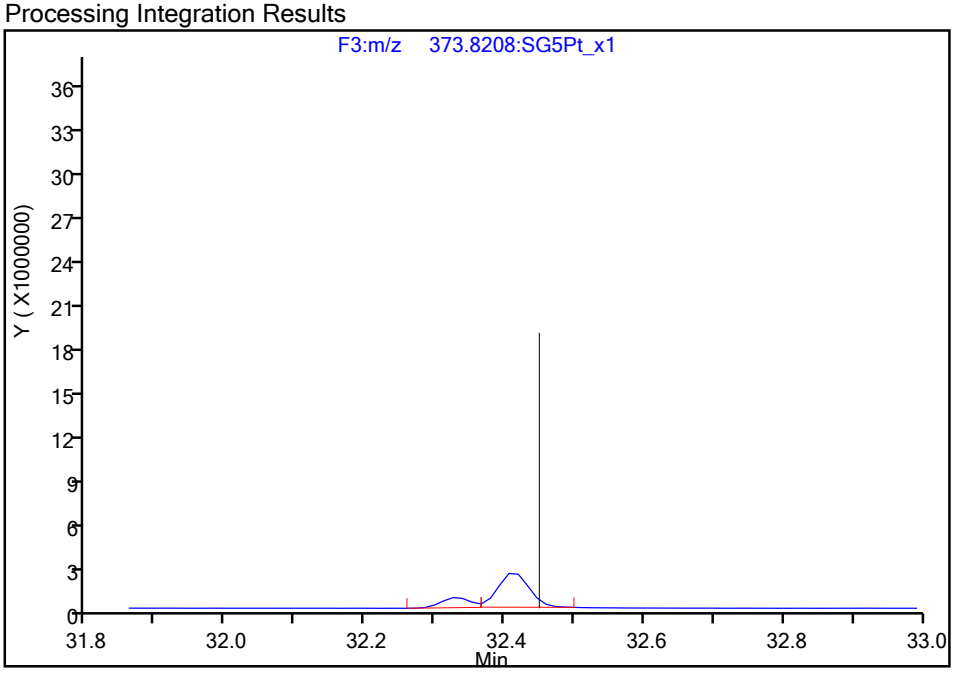

Manual Integration Results

RT = 32.406 Area = 7284834

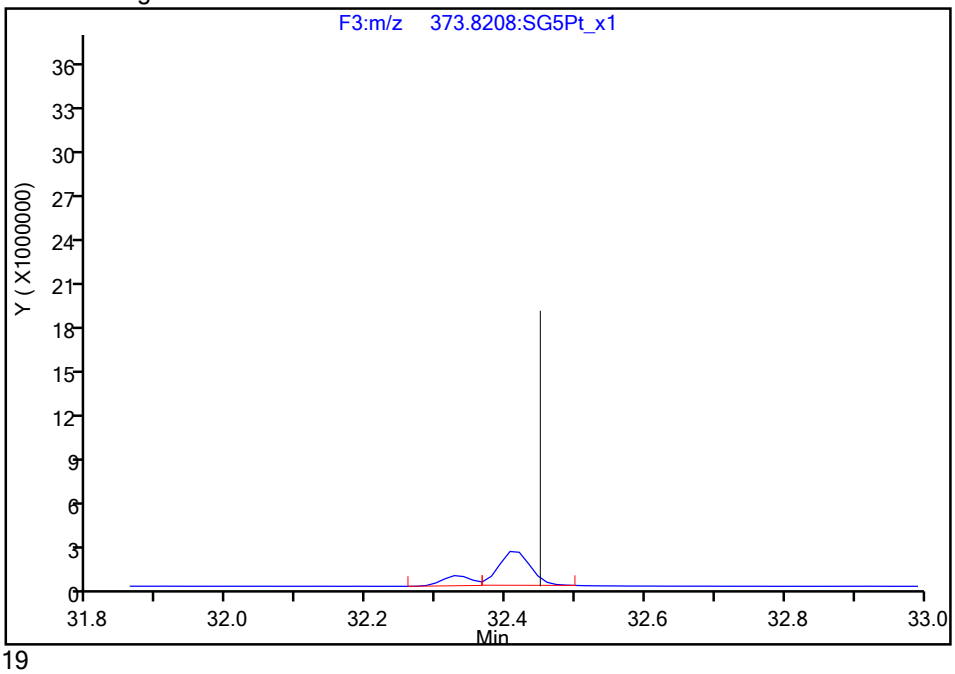

Reviewer: dadunj, 18-Aug-2021 11:06:19

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

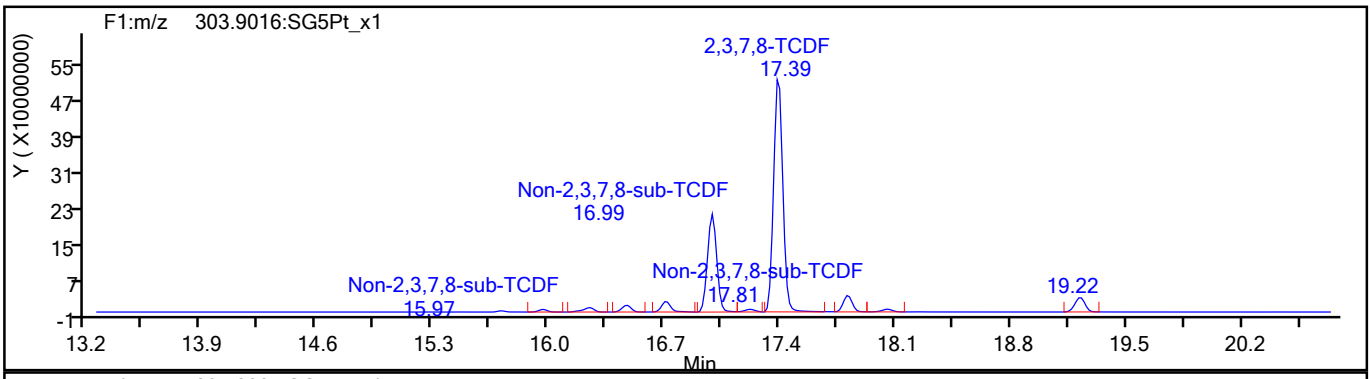

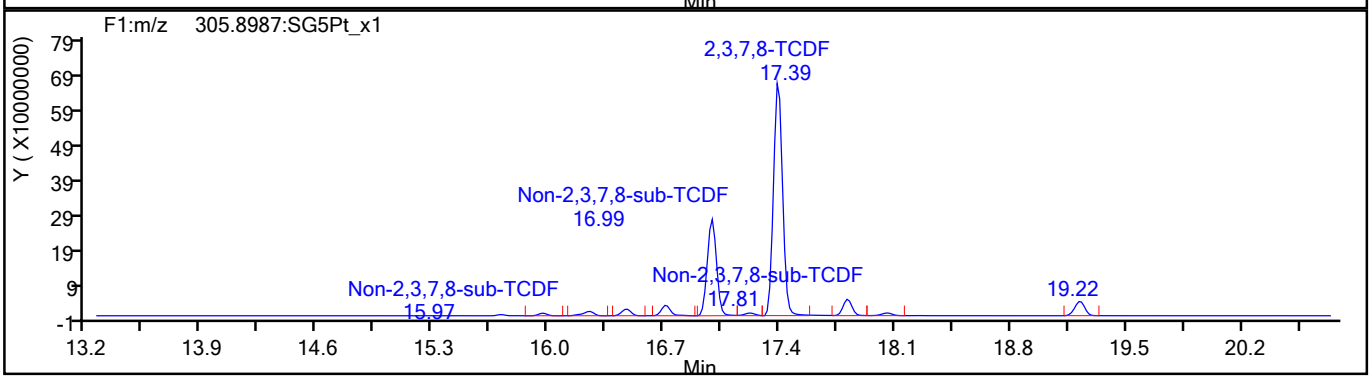

TCDF Standards

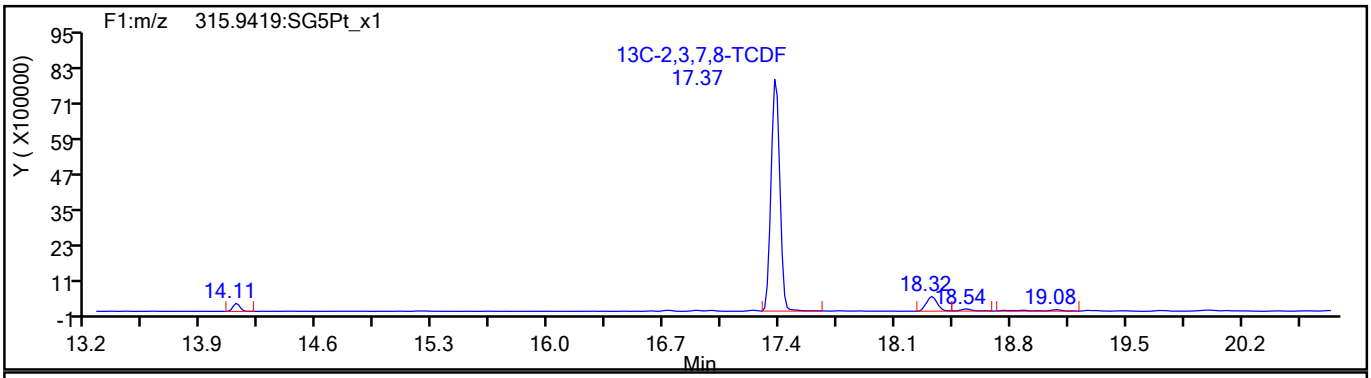

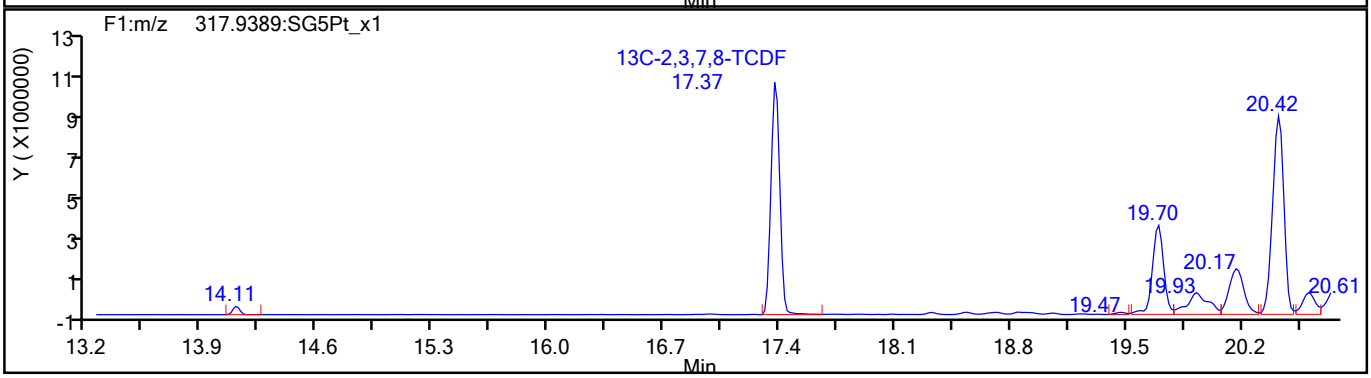

774652

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

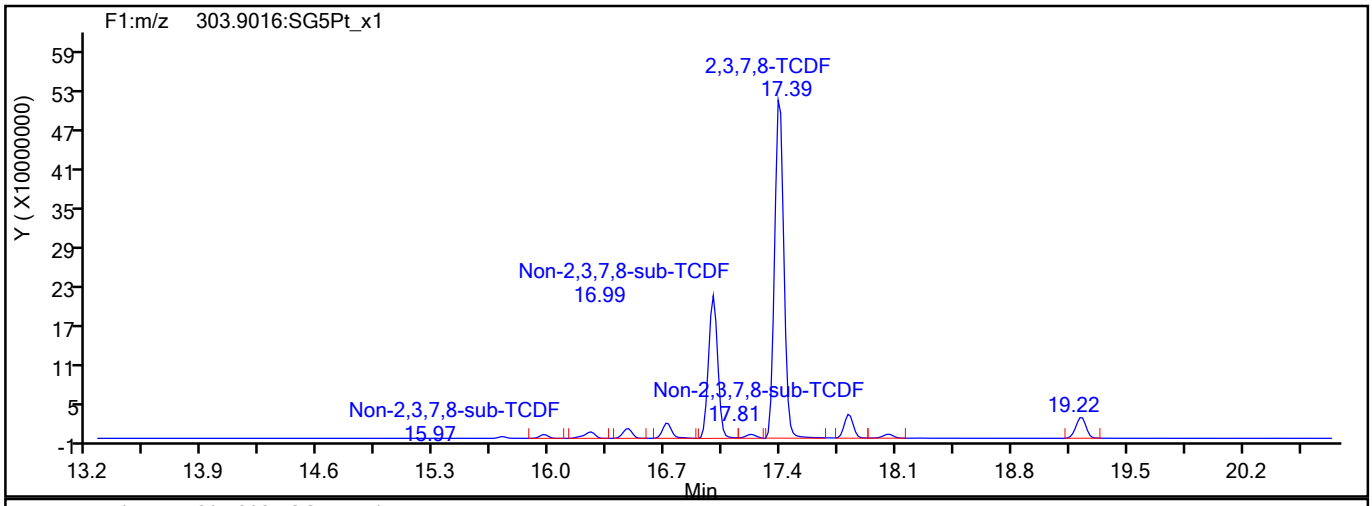

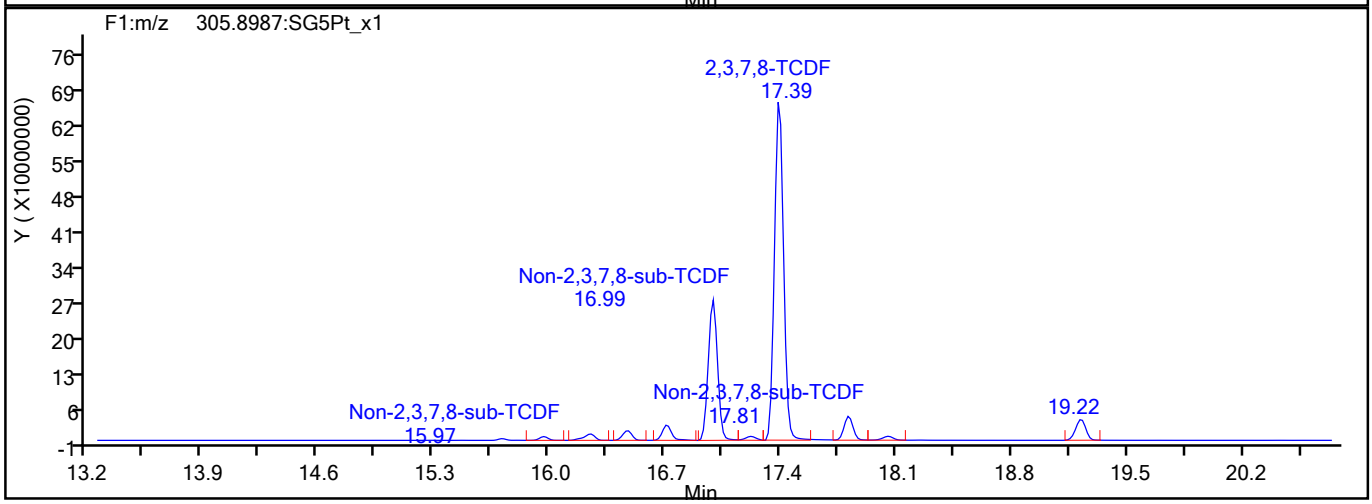

TCDF Interference Mass

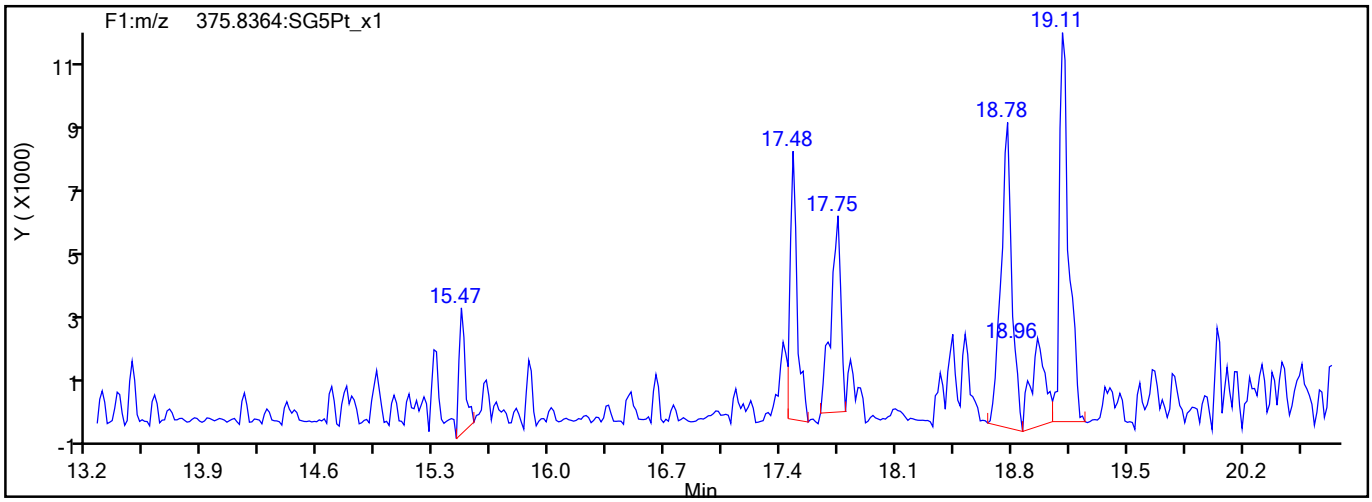

774653

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

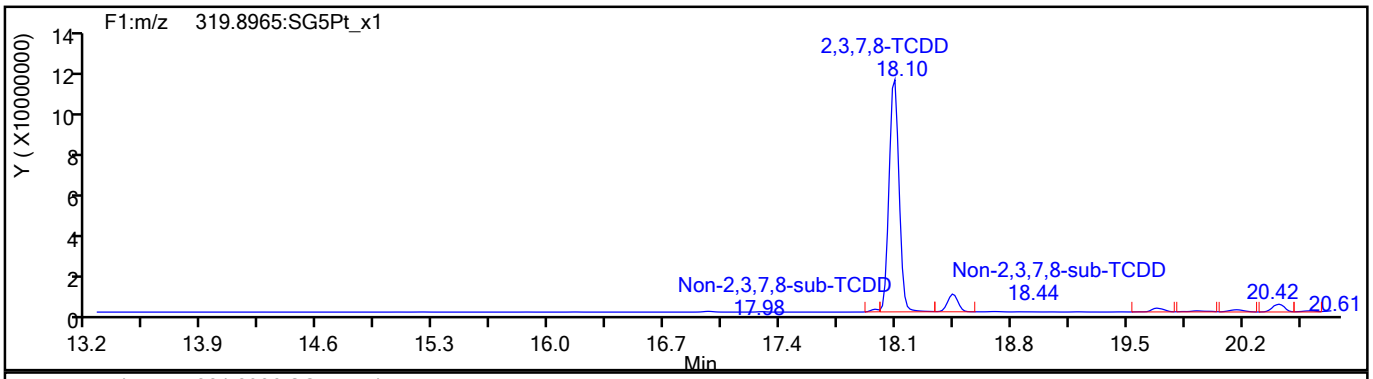

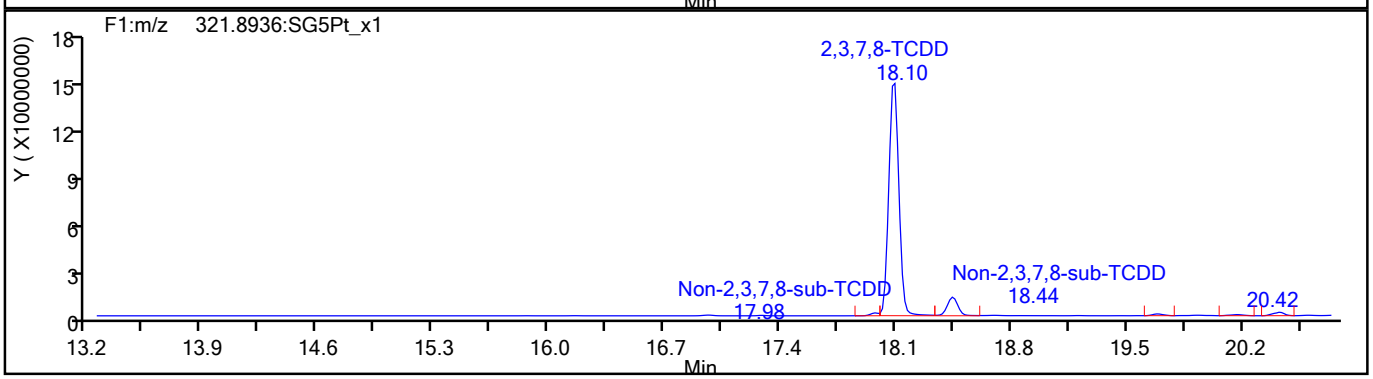

TCDD Standards

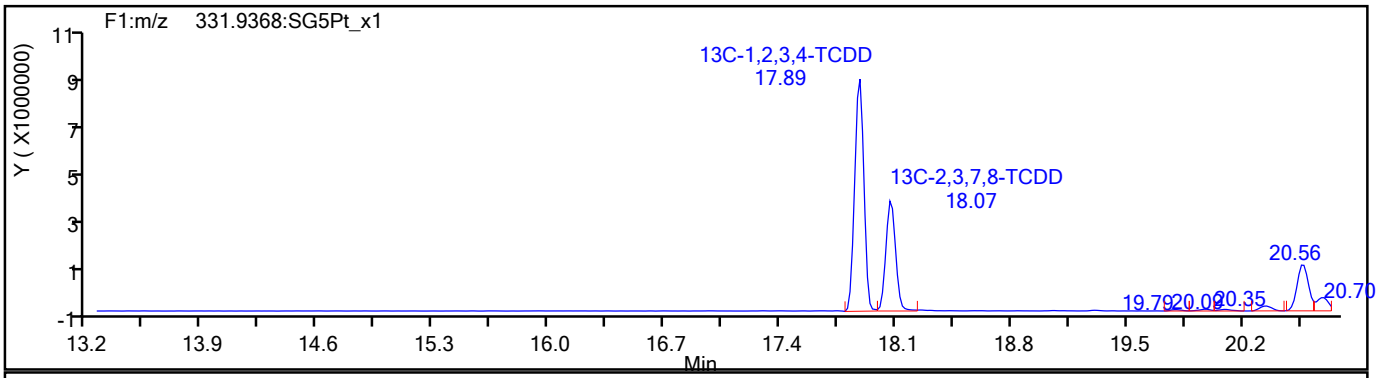

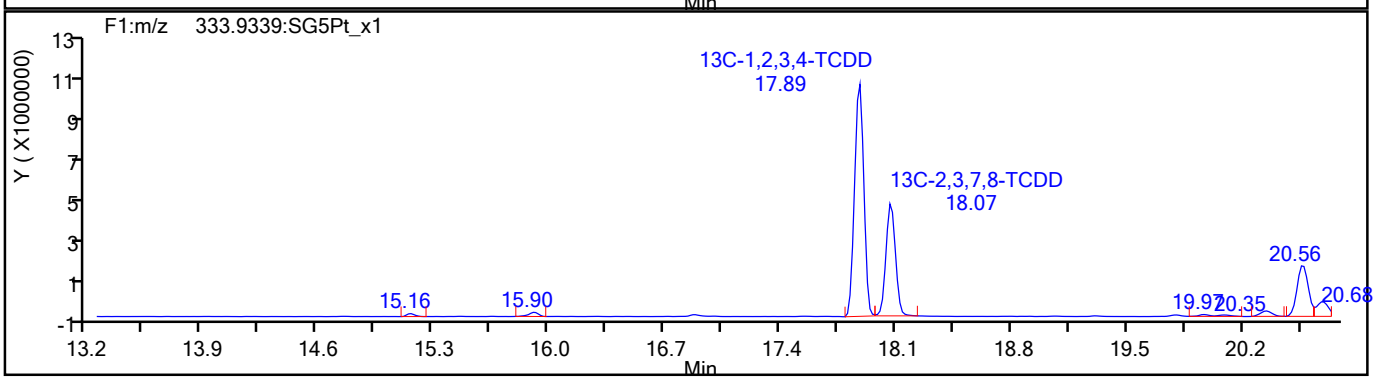

774654

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

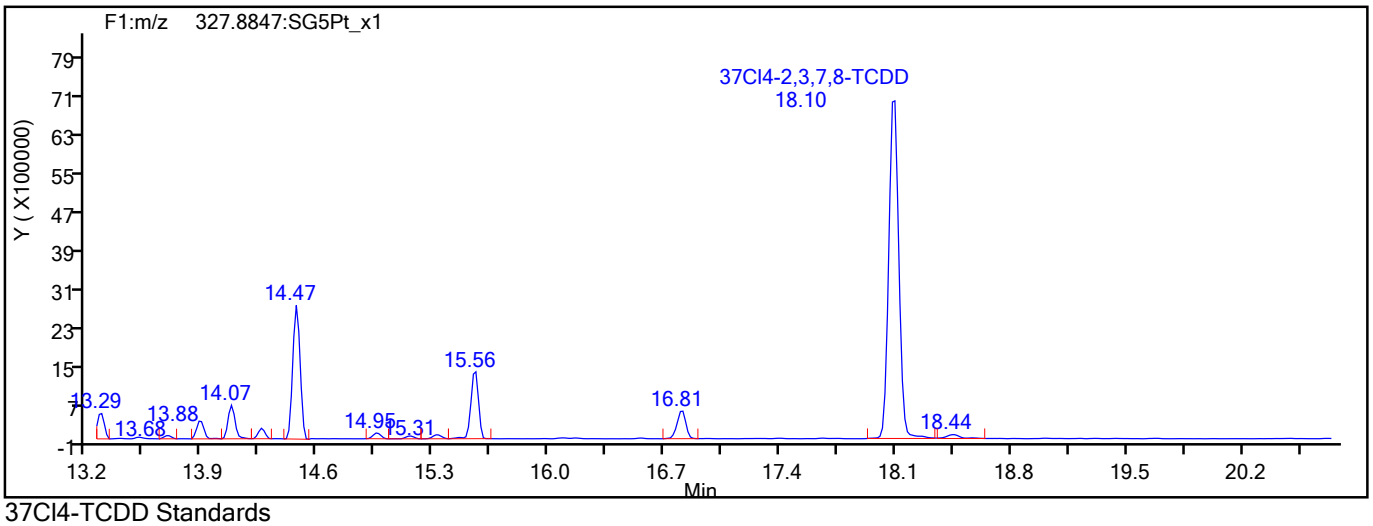

37Cl4-TCDD Standards

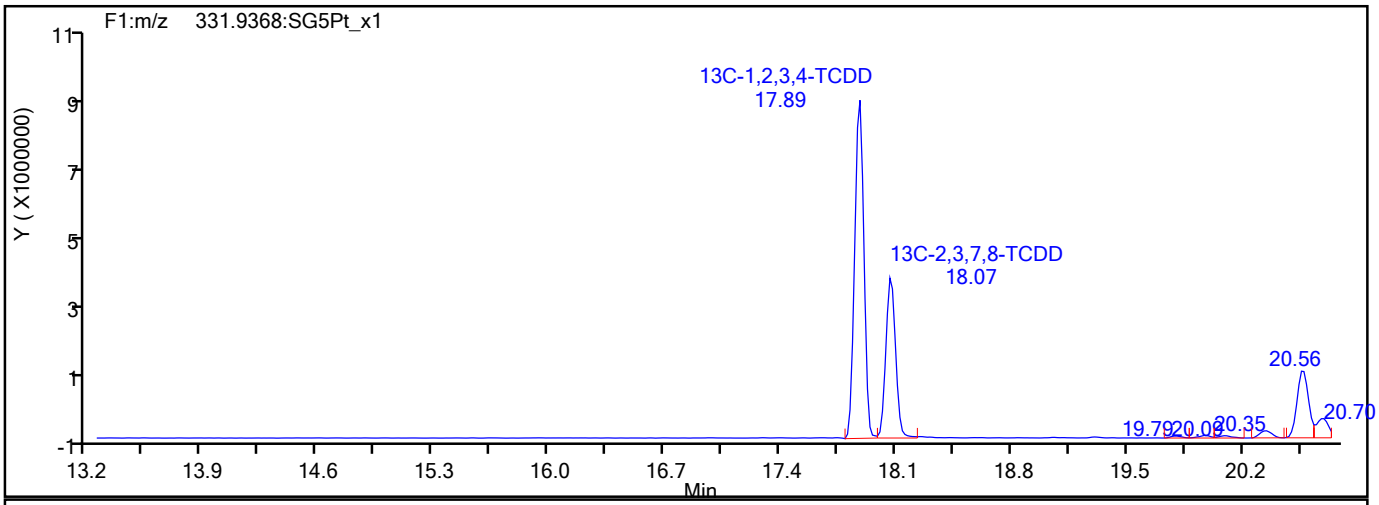

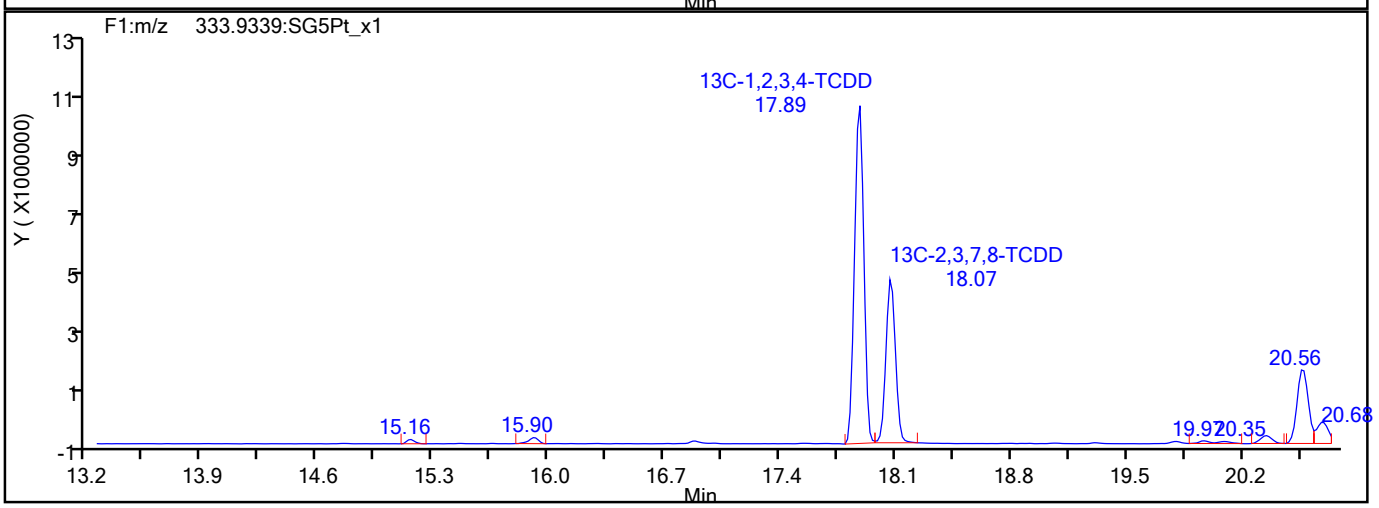

774655

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

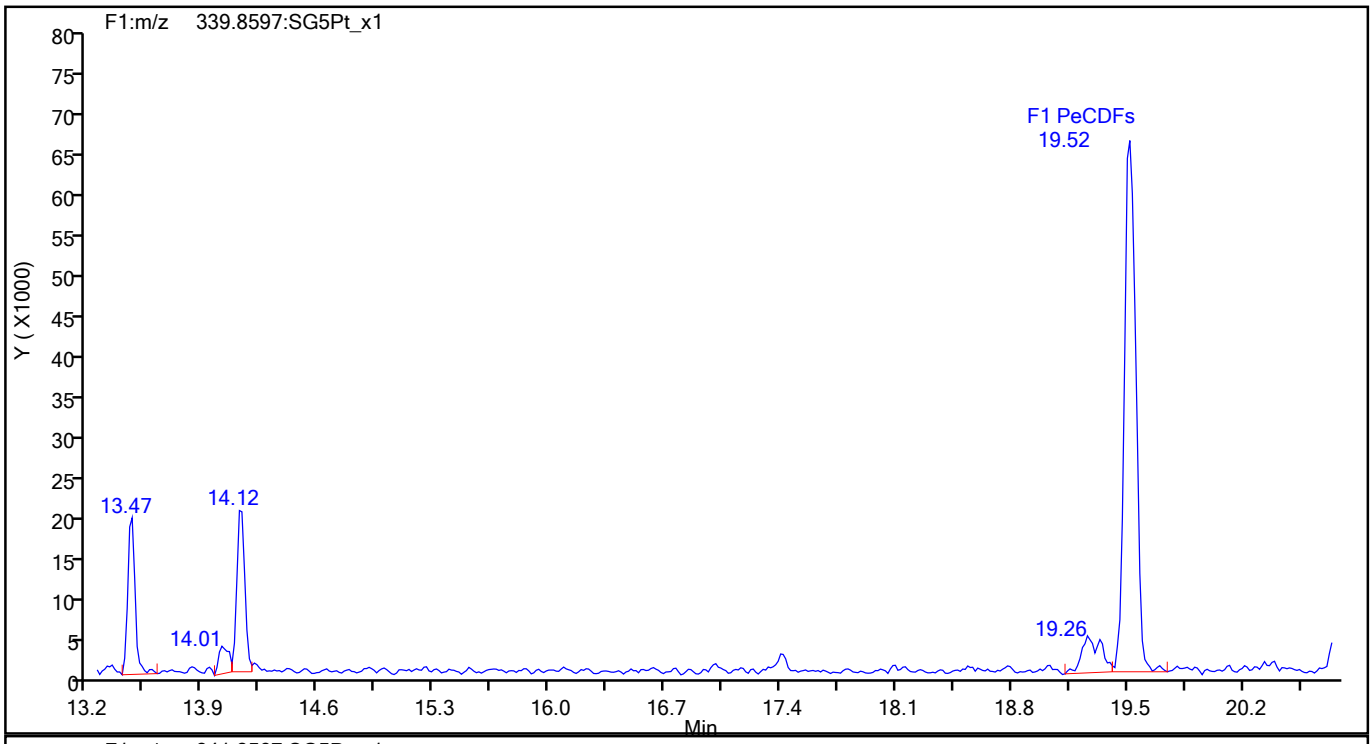

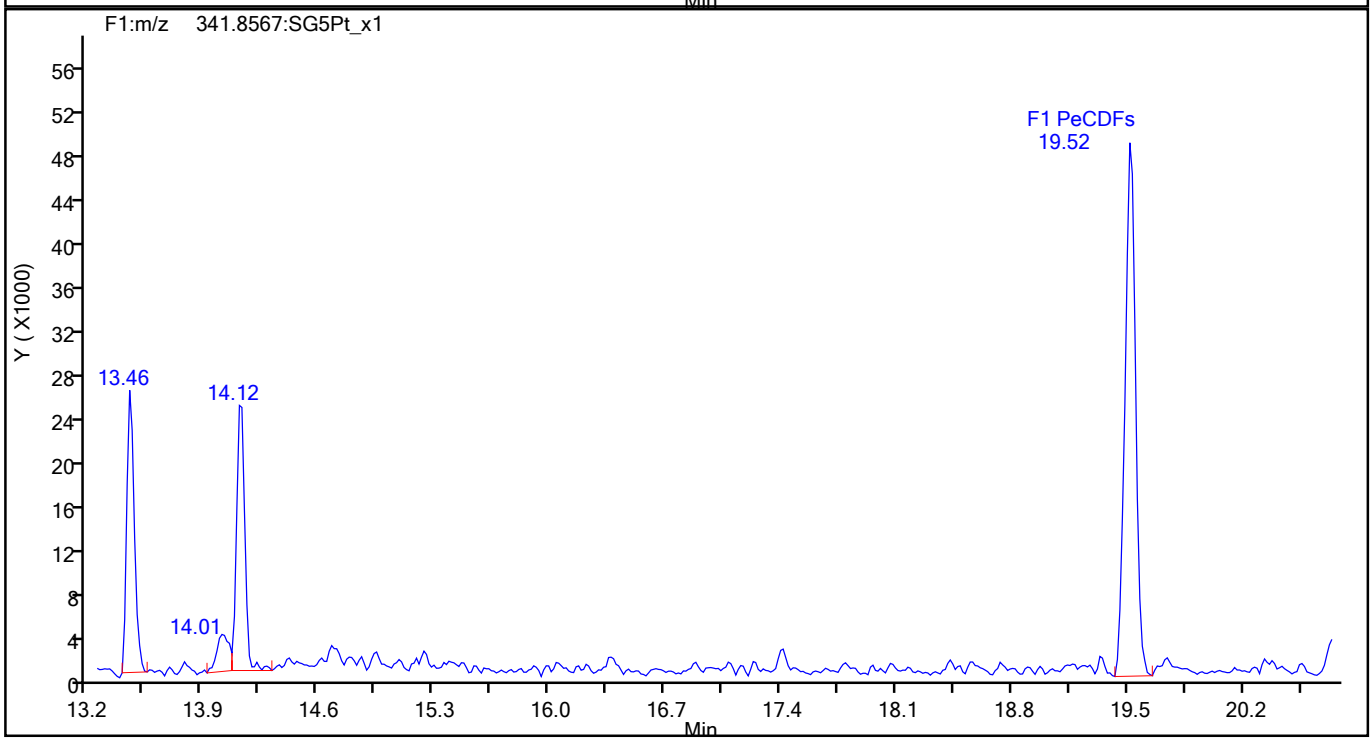

774656

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

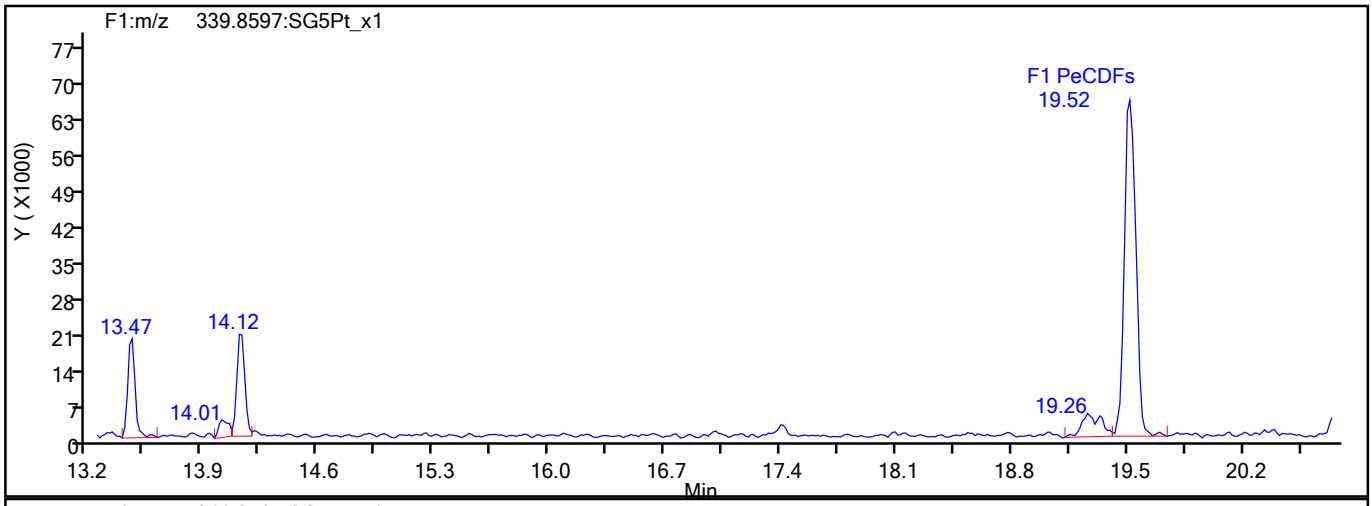

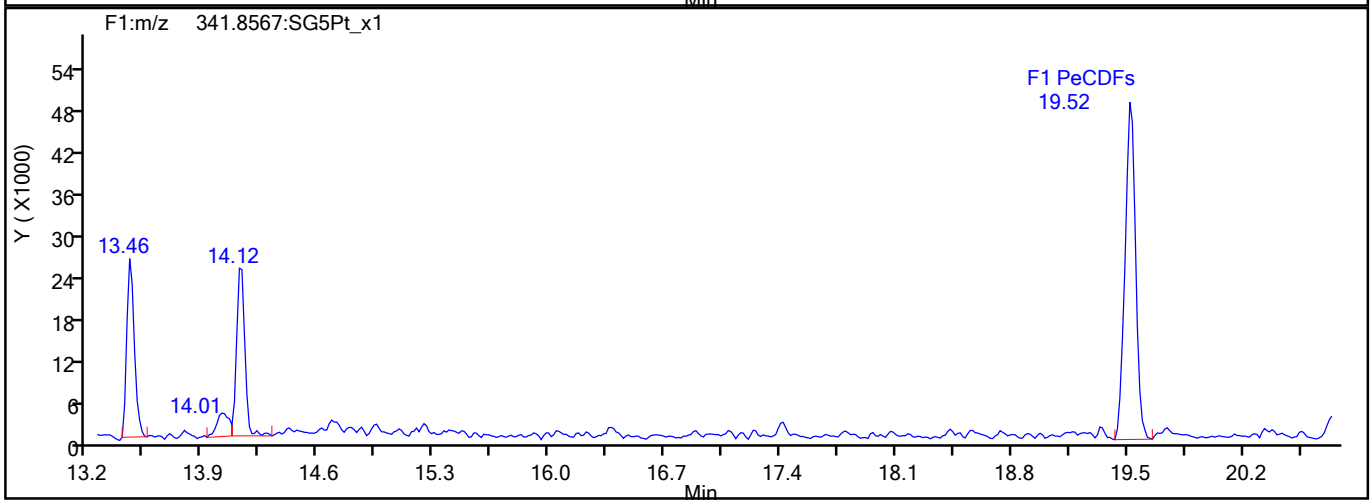

F1 PeCDFs Interference Mass

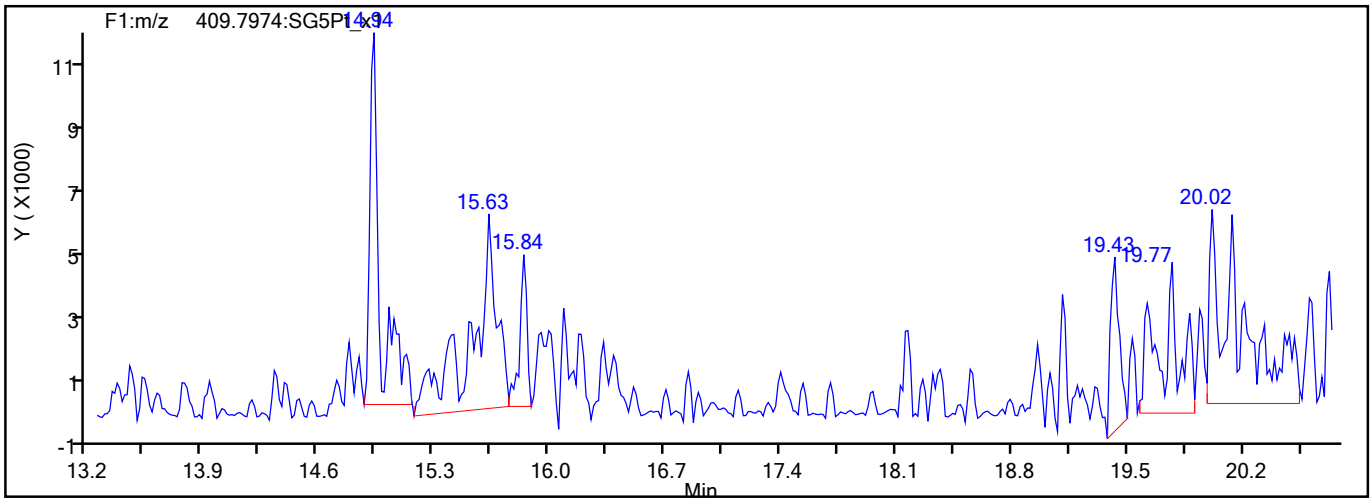

774657

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

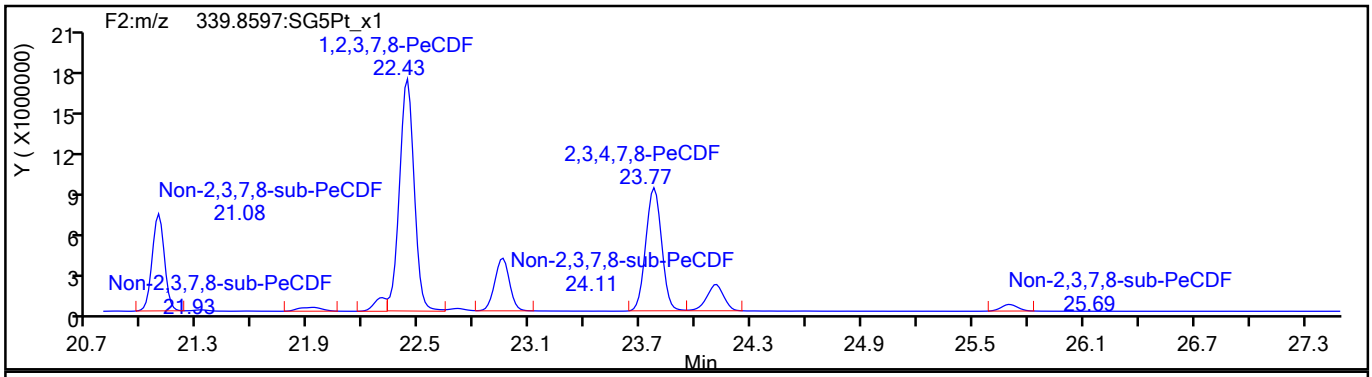

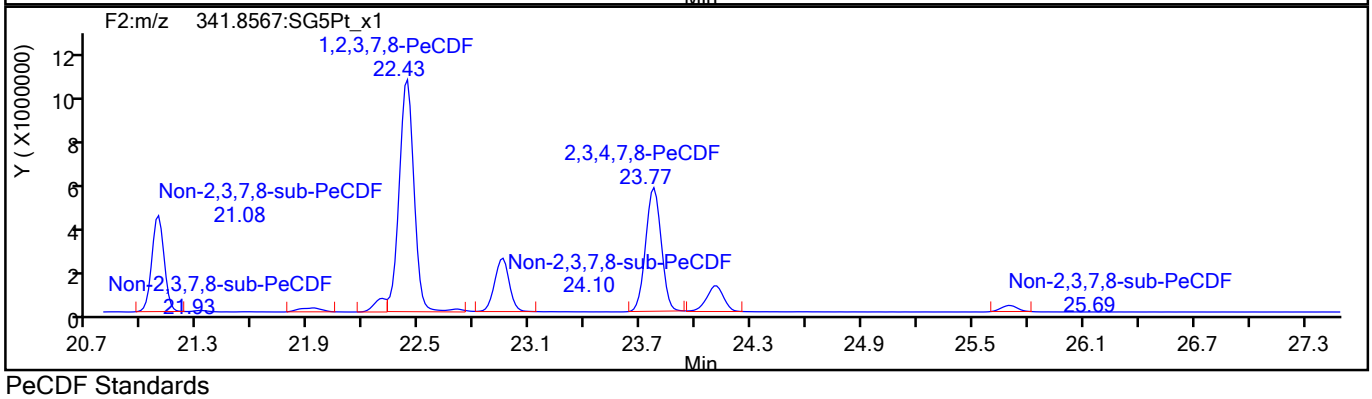

PeCDF Standards

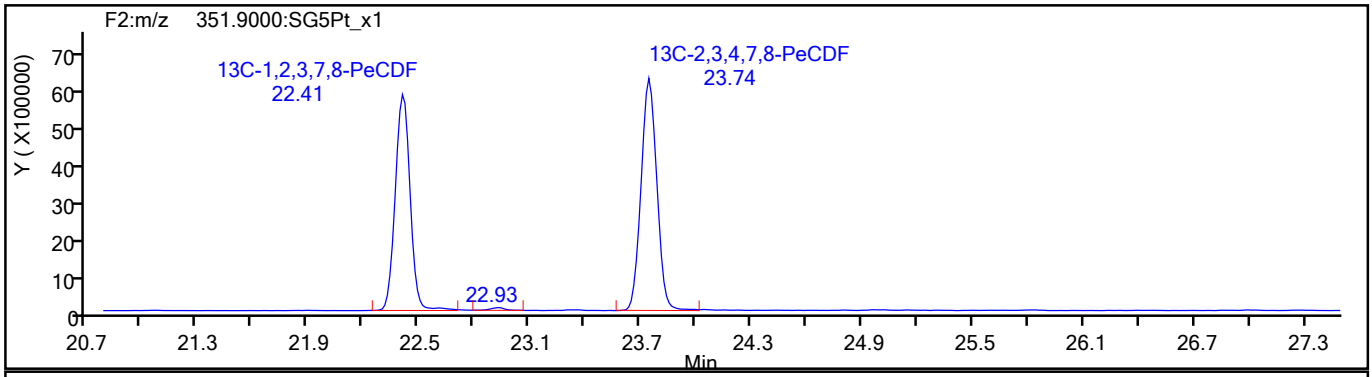

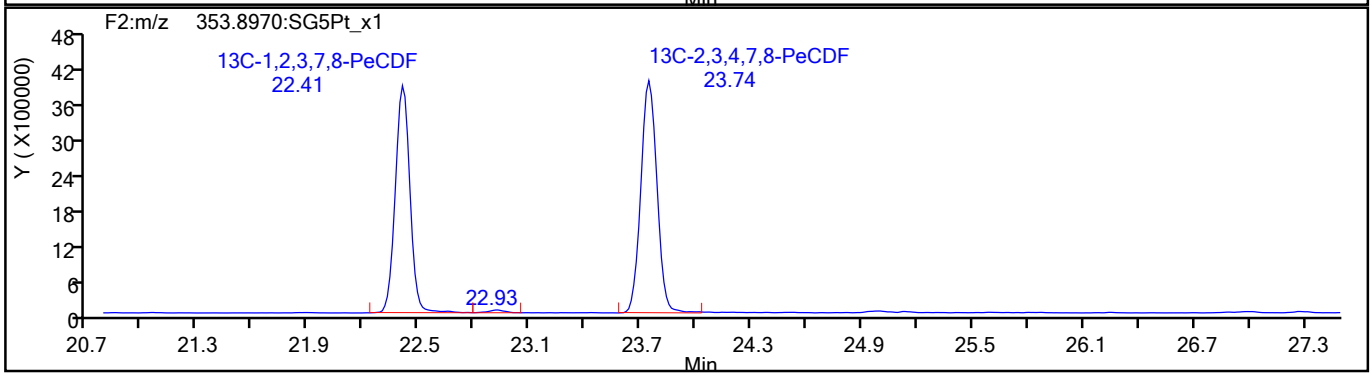

774658

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

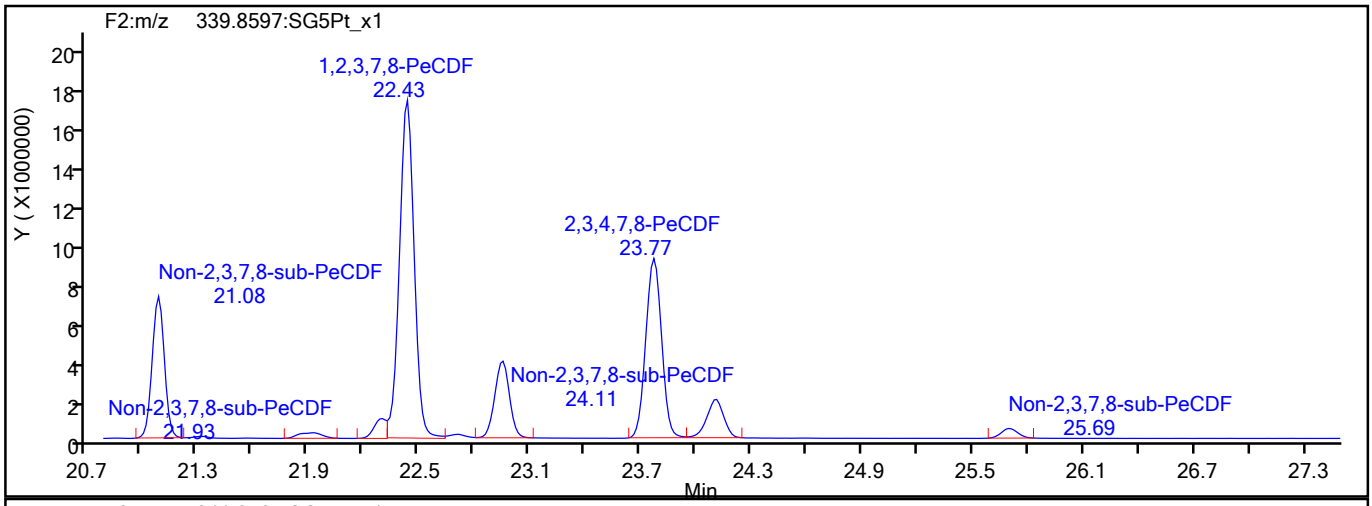

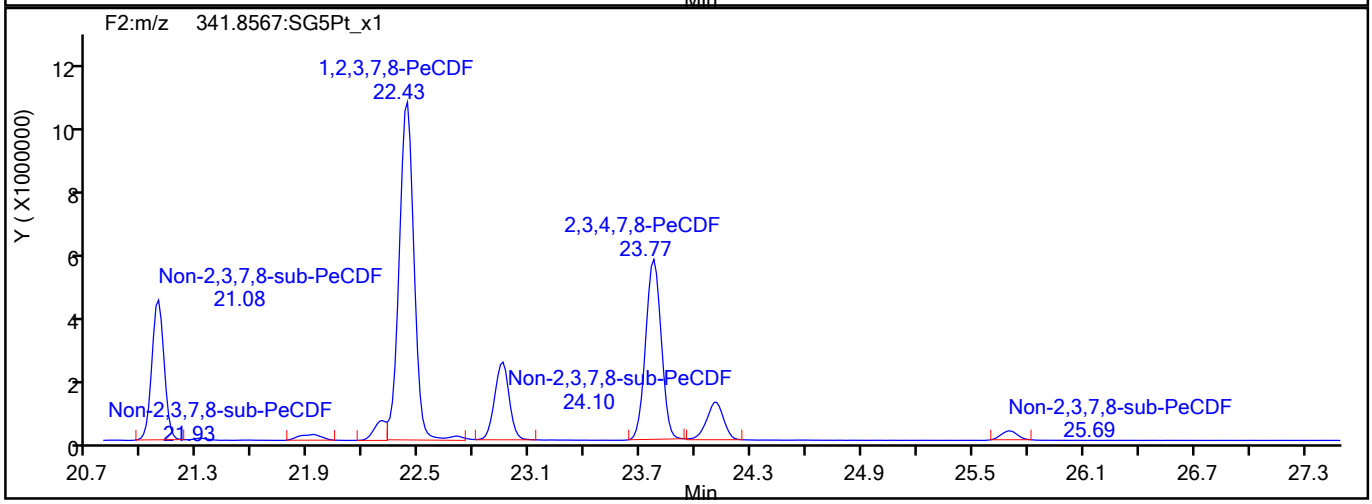

PeCDF Interference Mass

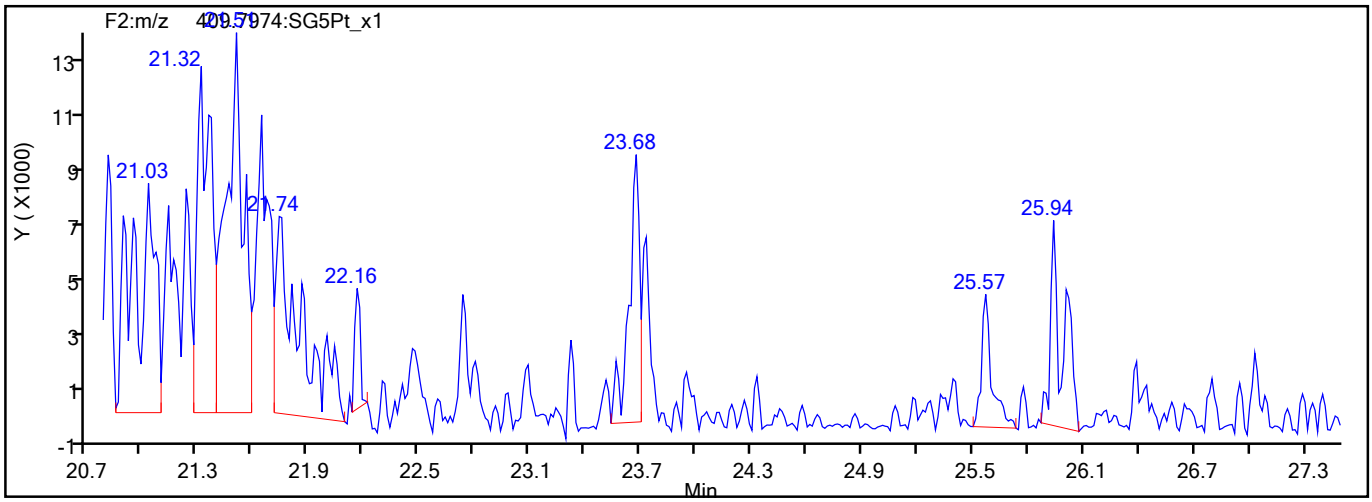

774659

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

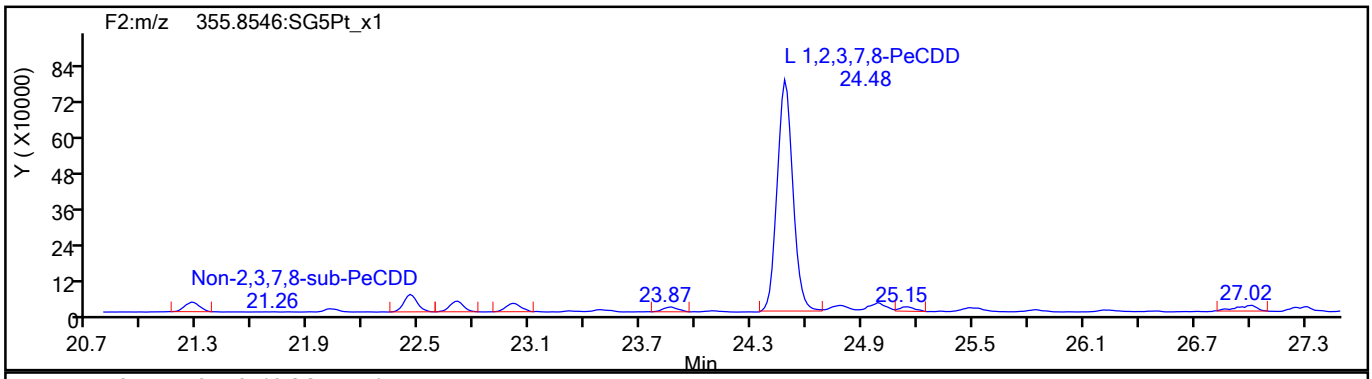

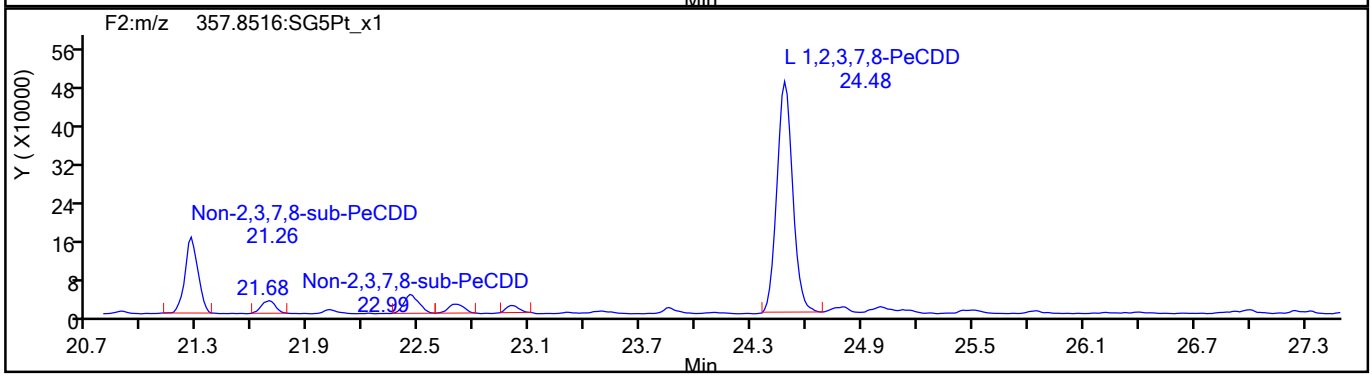

PeCDD Standards

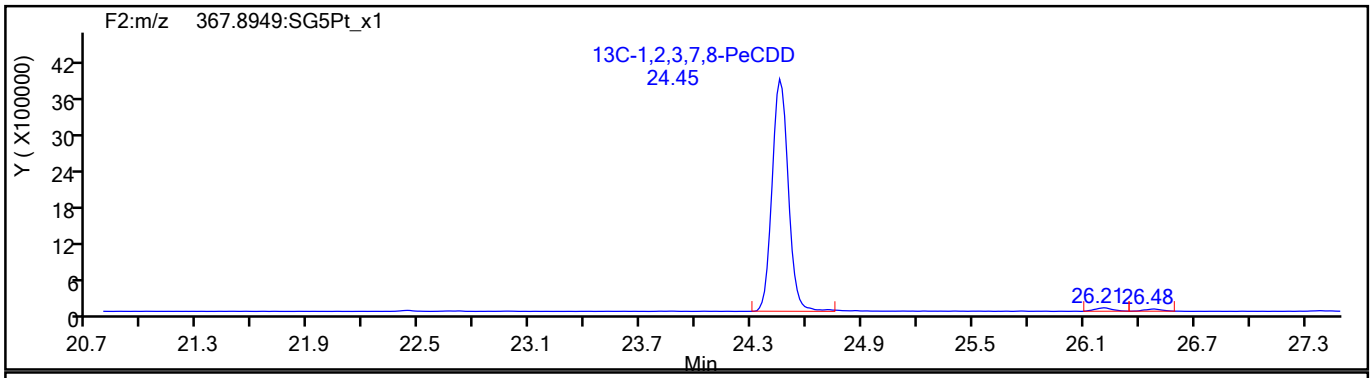

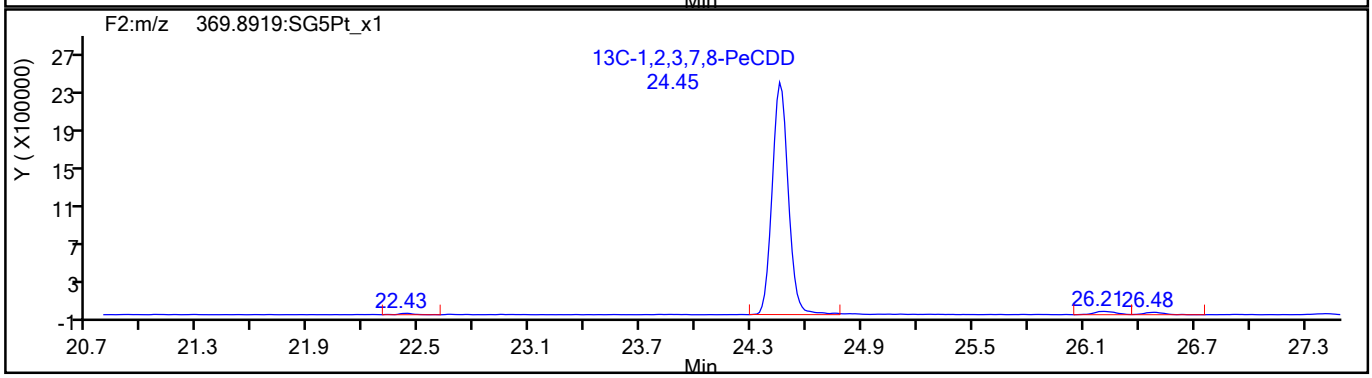

774660

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

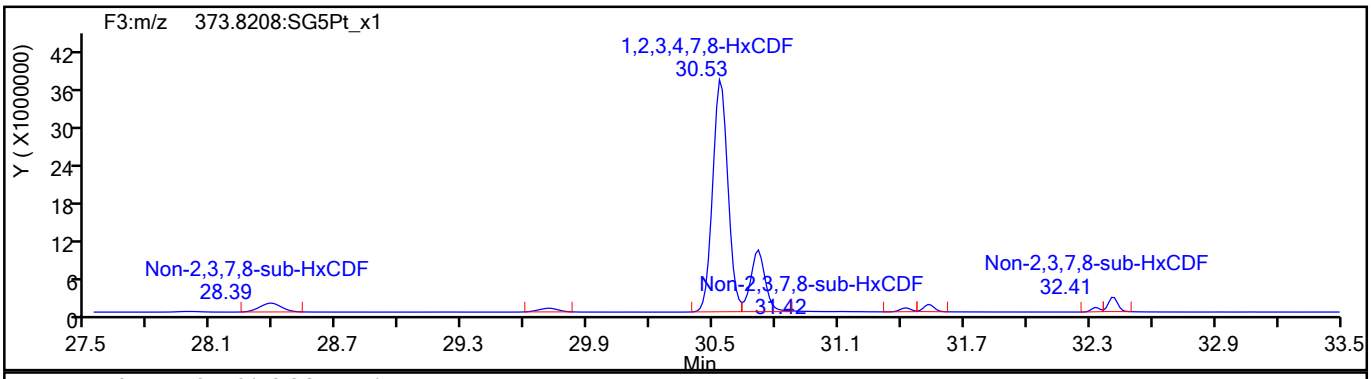

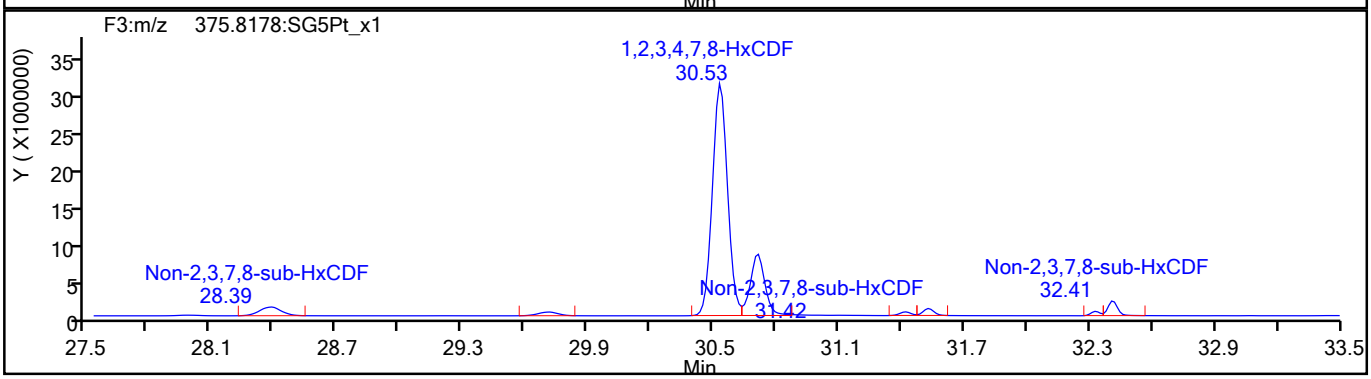

HxCDF Standards

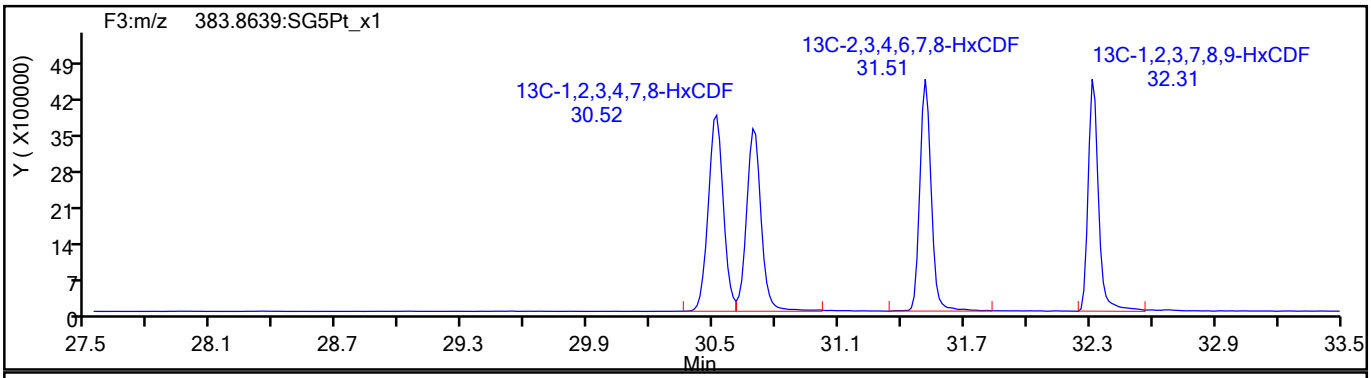

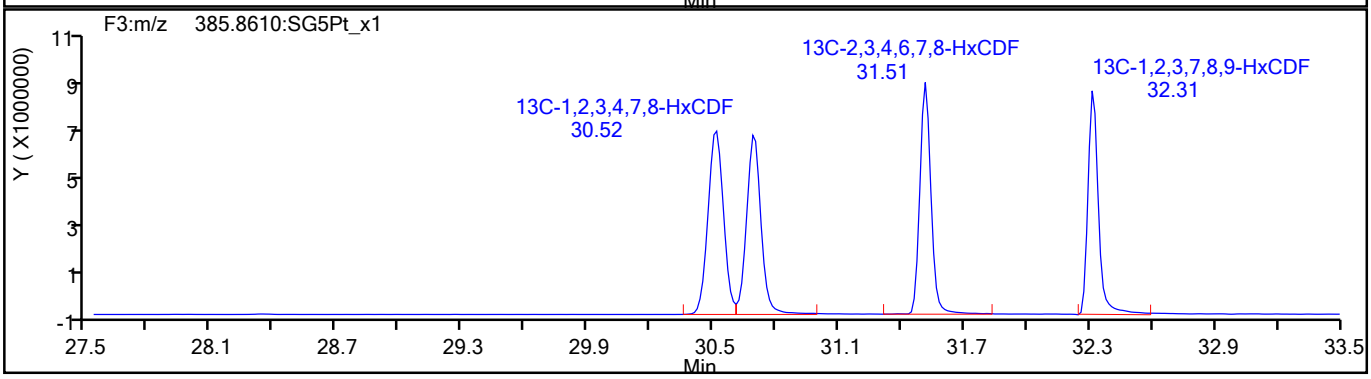

774661

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

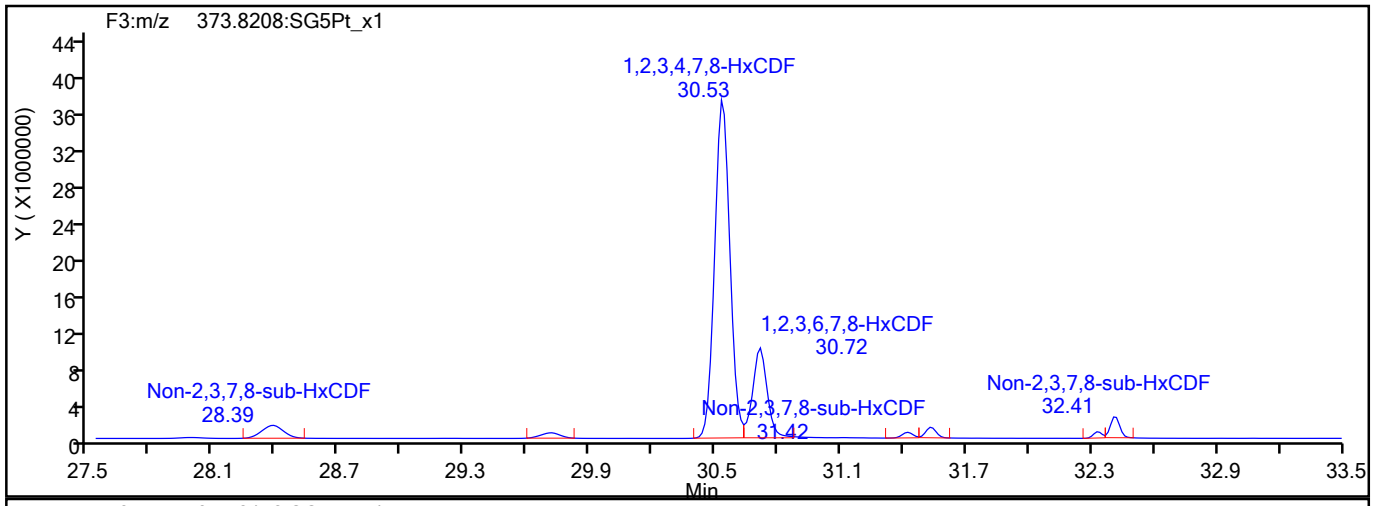

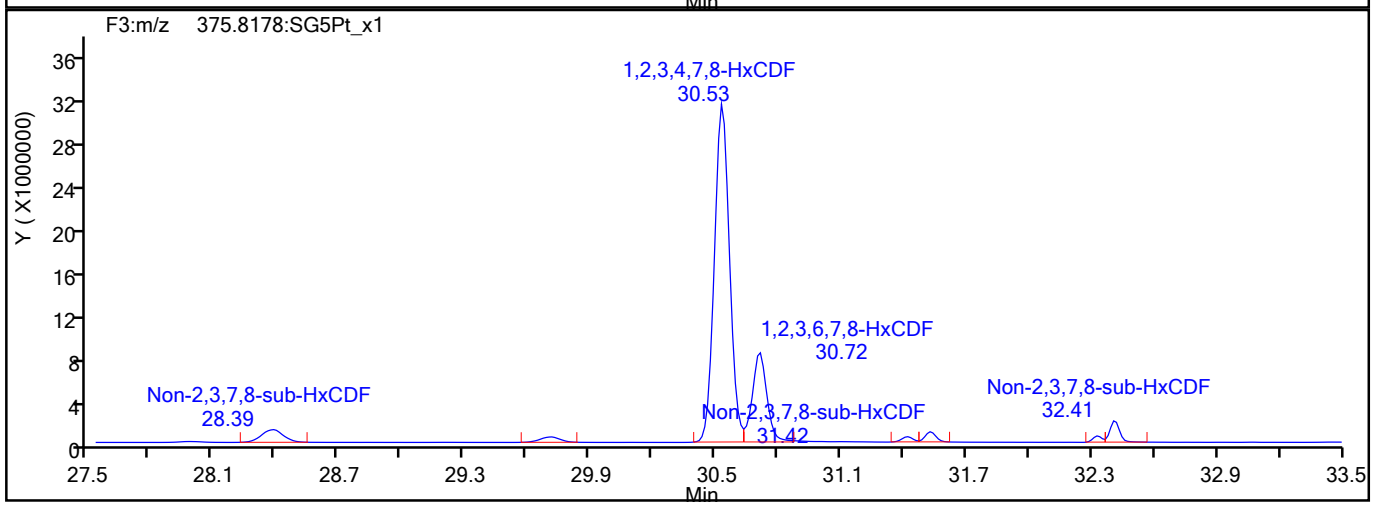

HxCDF Interference Mass

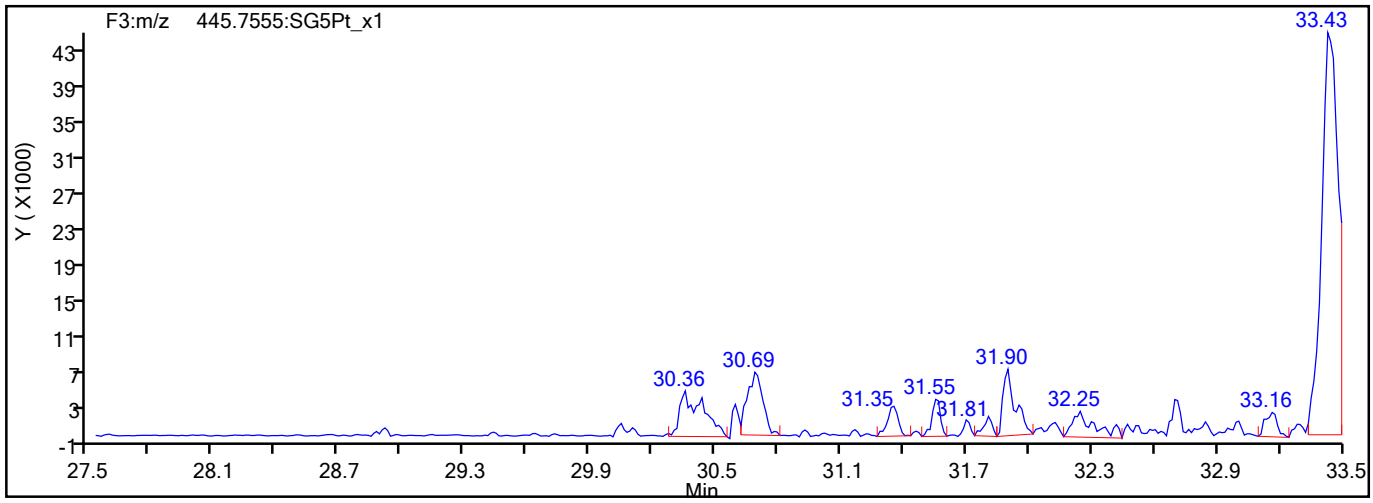

774662

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

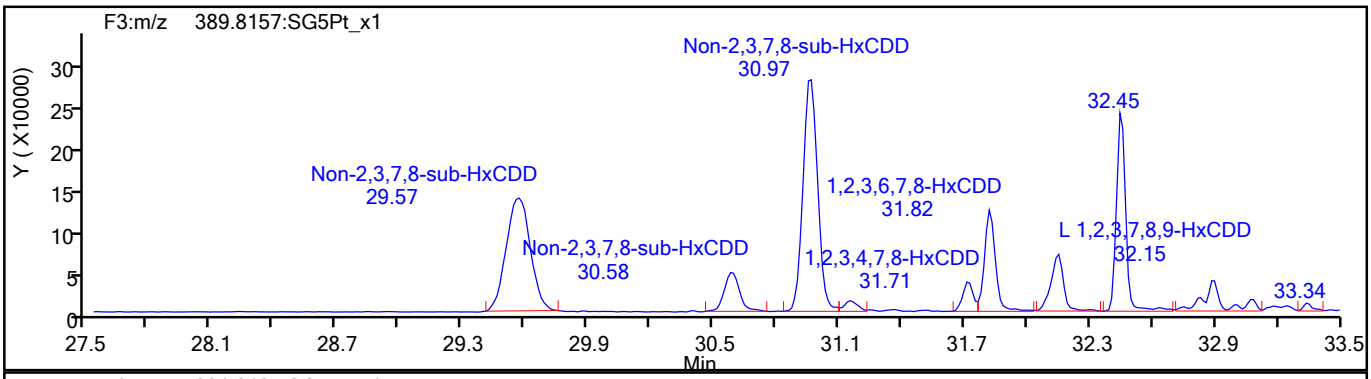

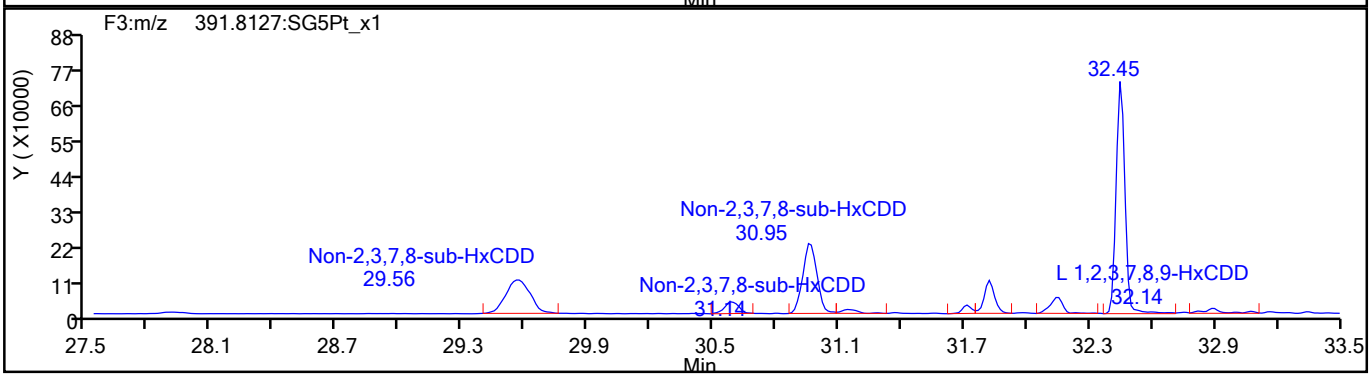

HxCDD Standards

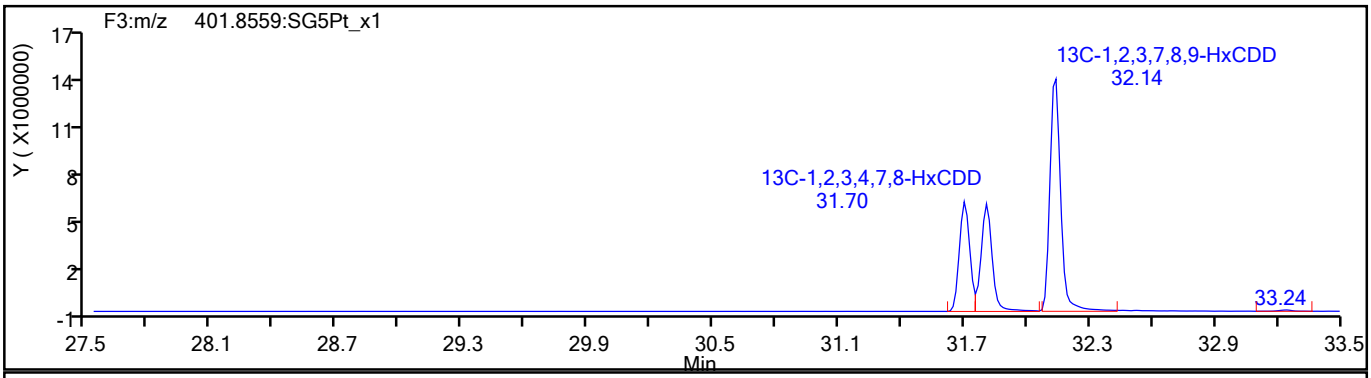

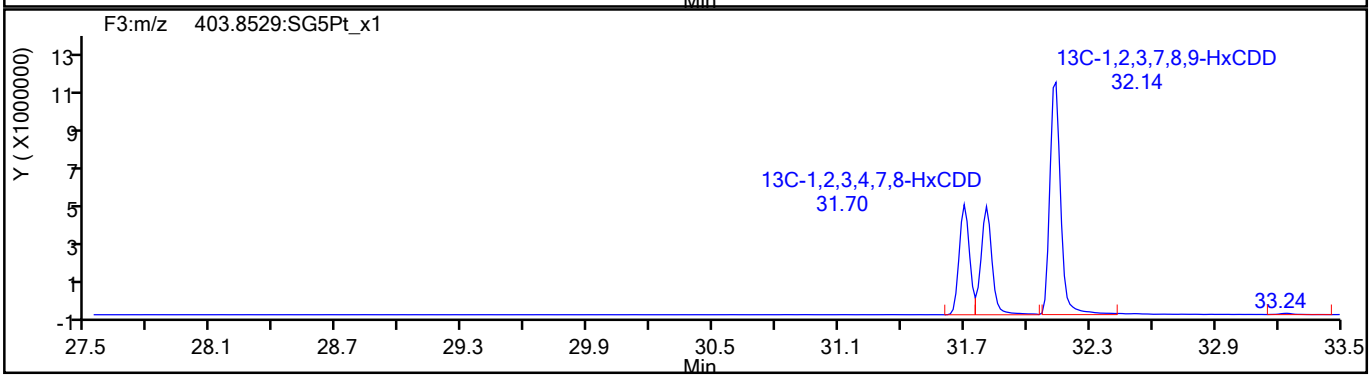

774663

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

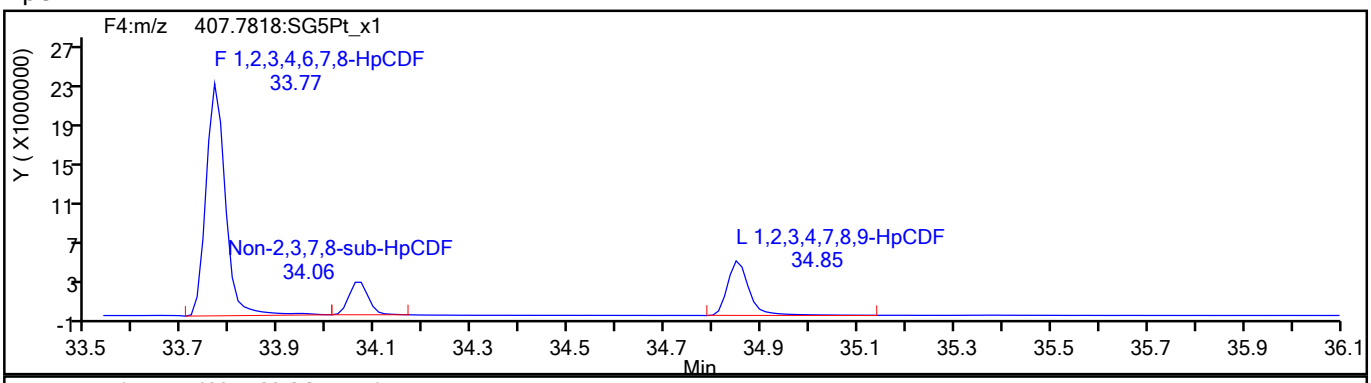

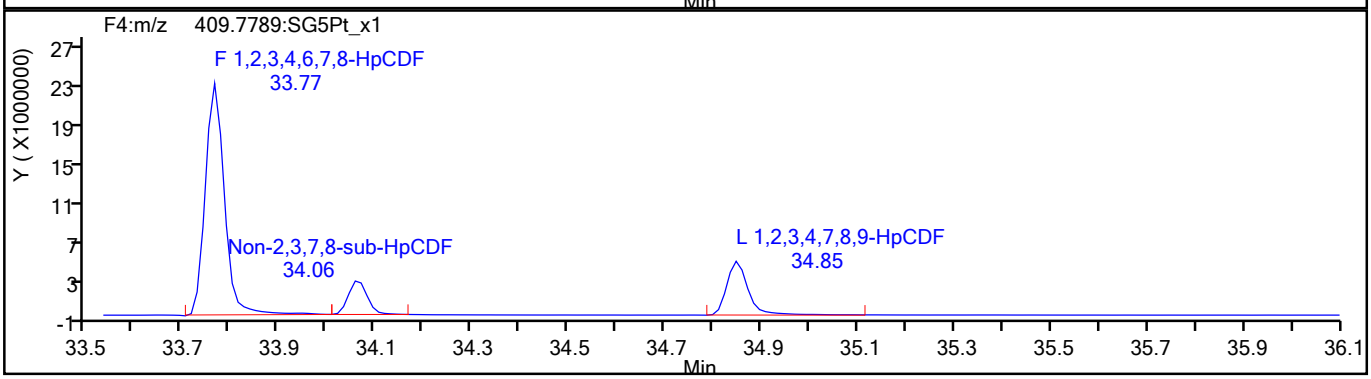

HpCDF Standards

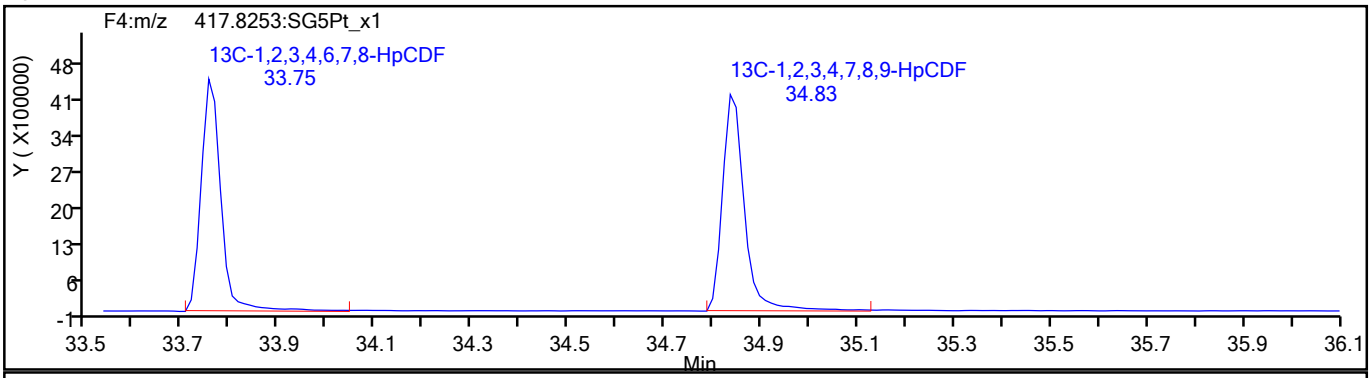

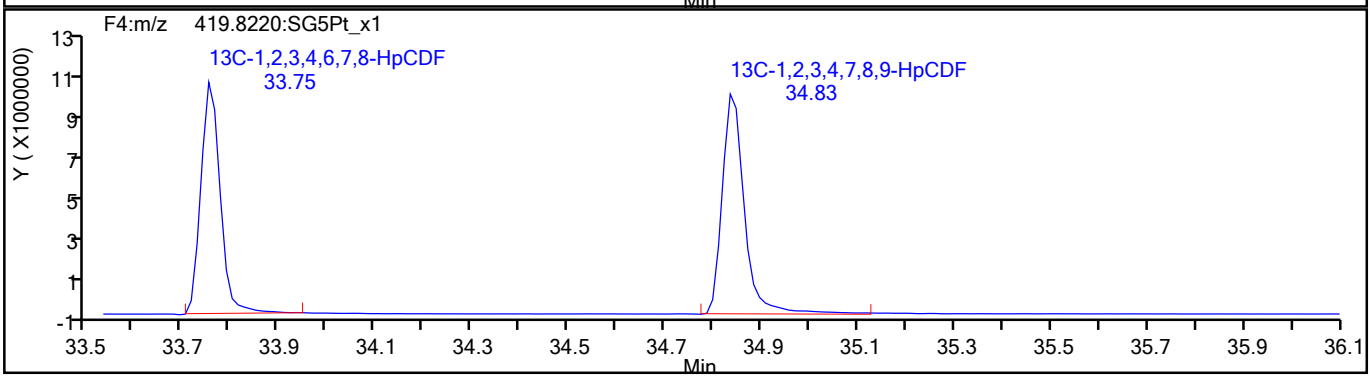

774664

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
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HpCDF

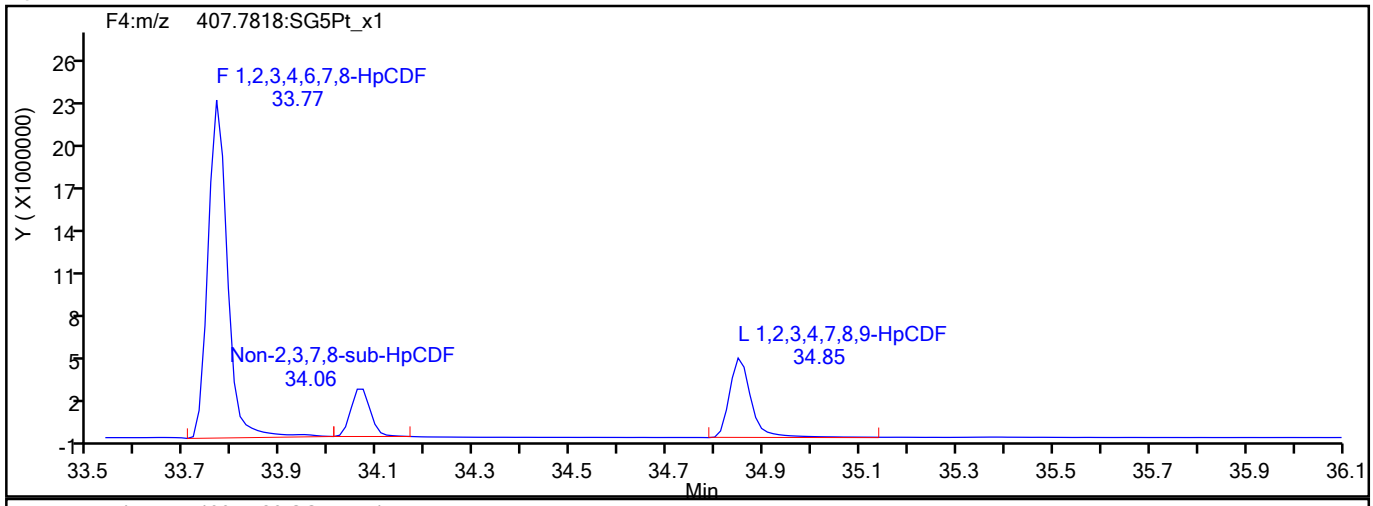

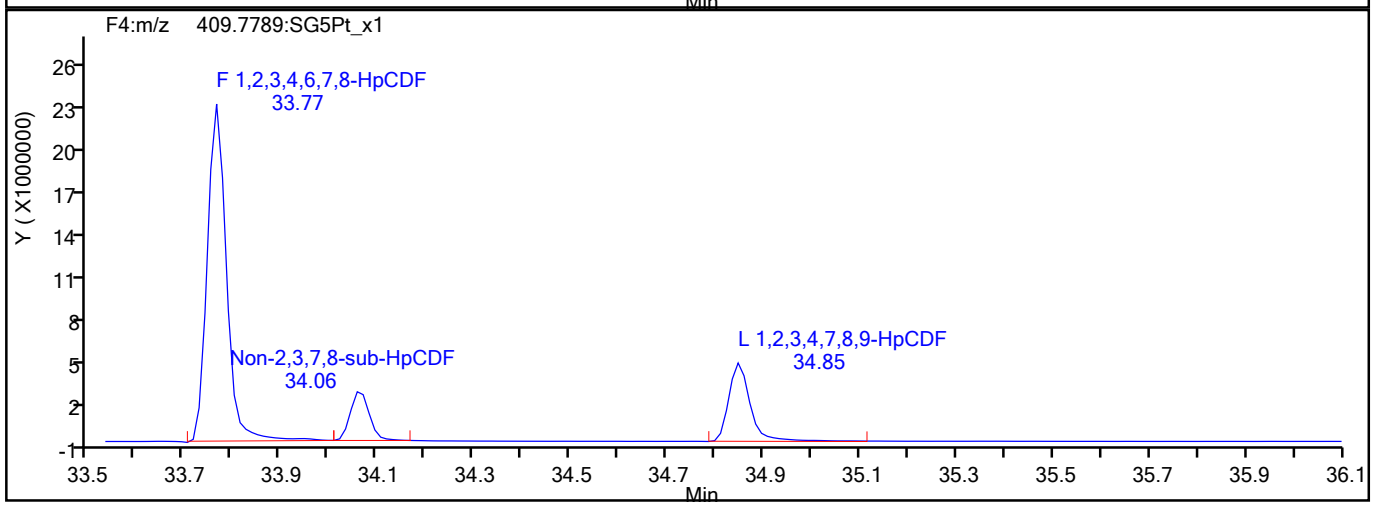

HpCDF Interference Mass

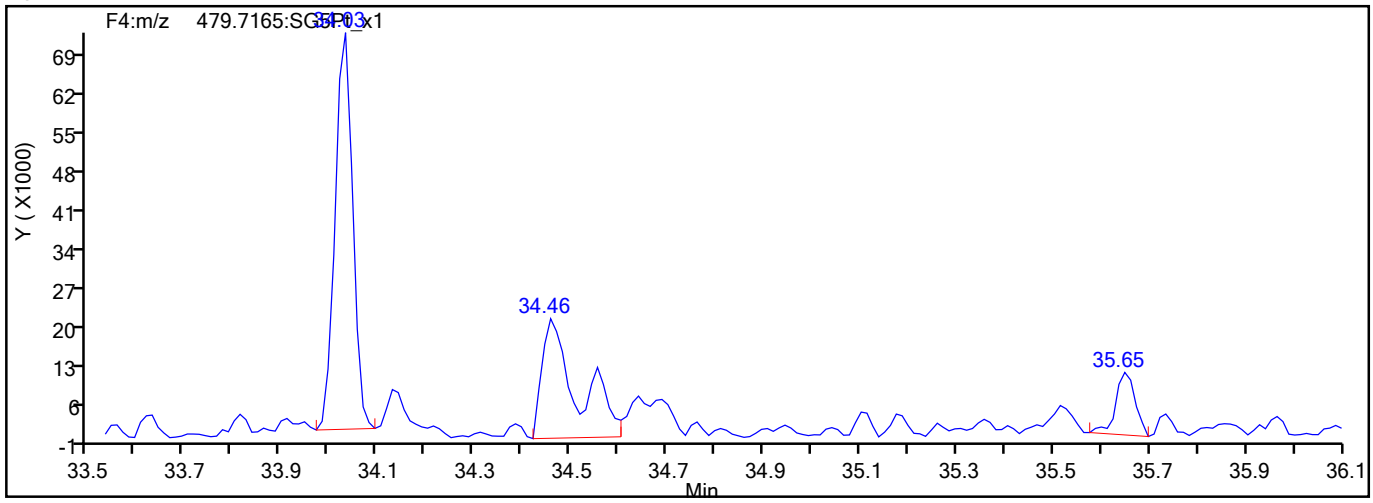

774665

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

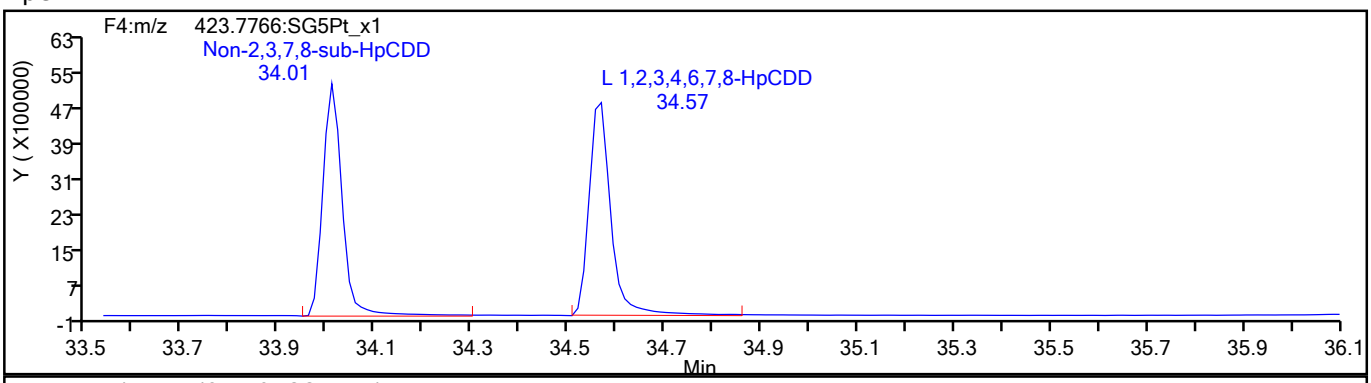

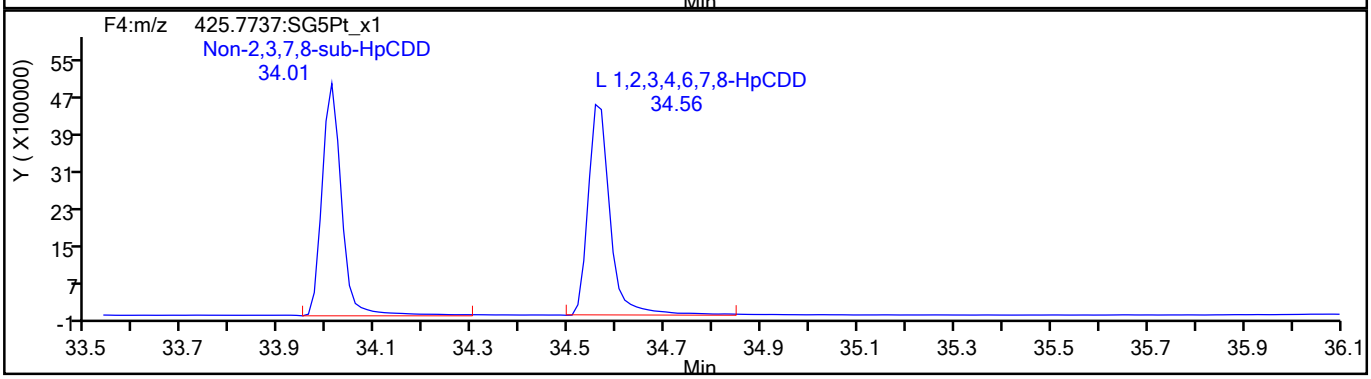

HpCDD Standards

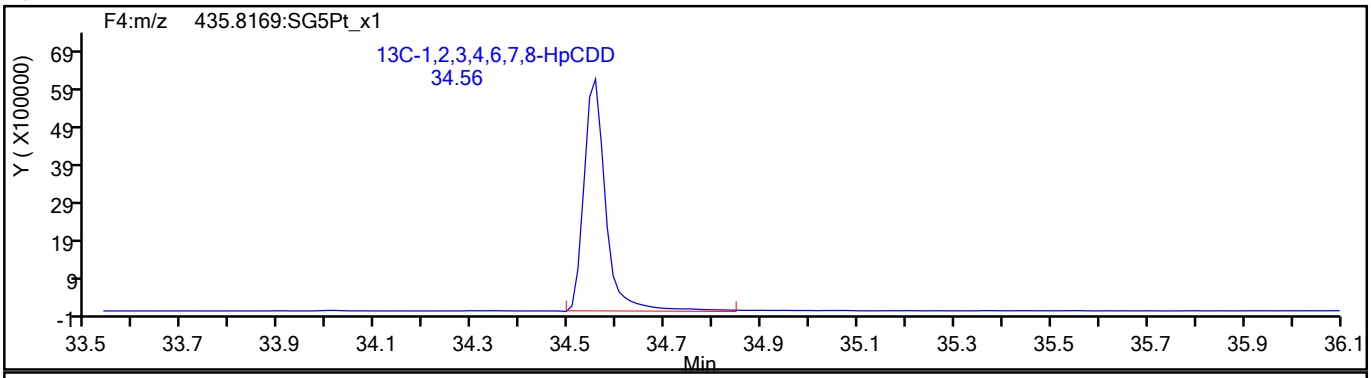

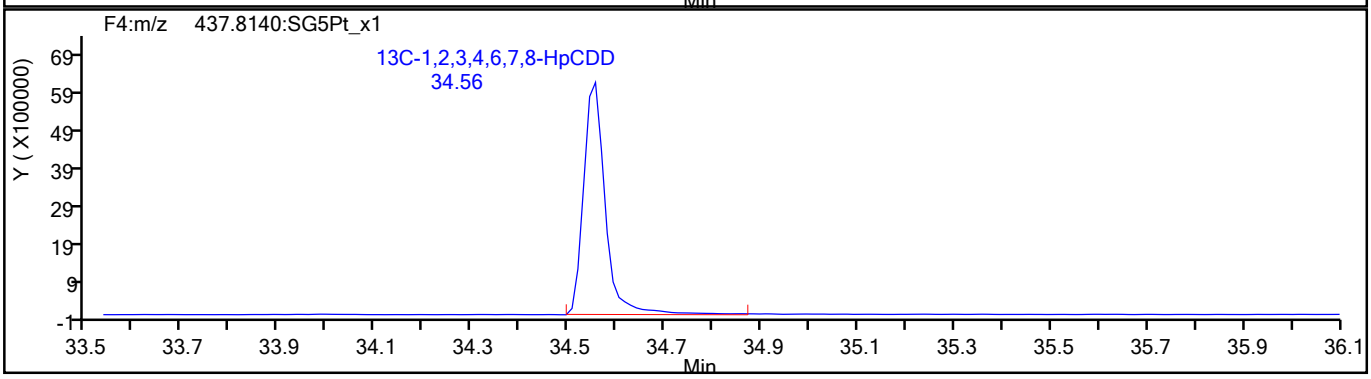

774666

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

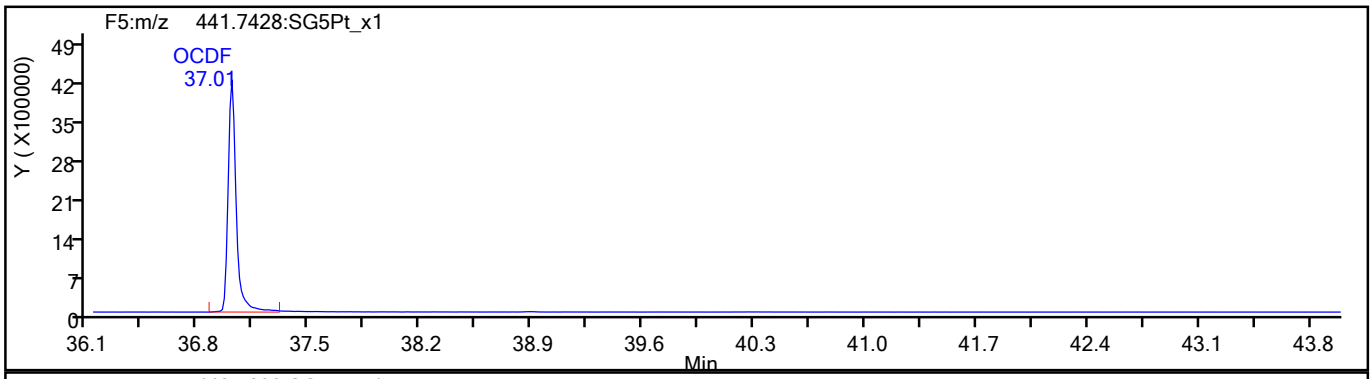

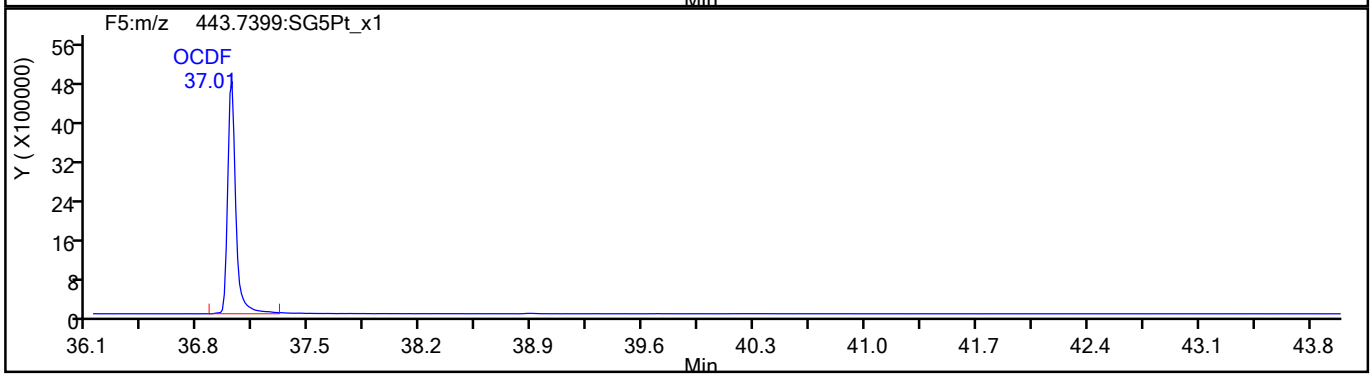

OCDF Standards

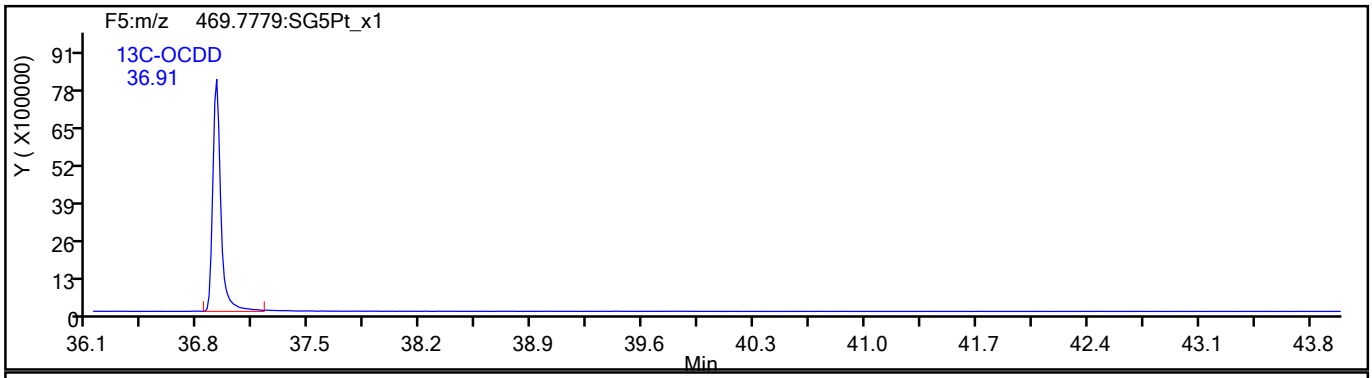

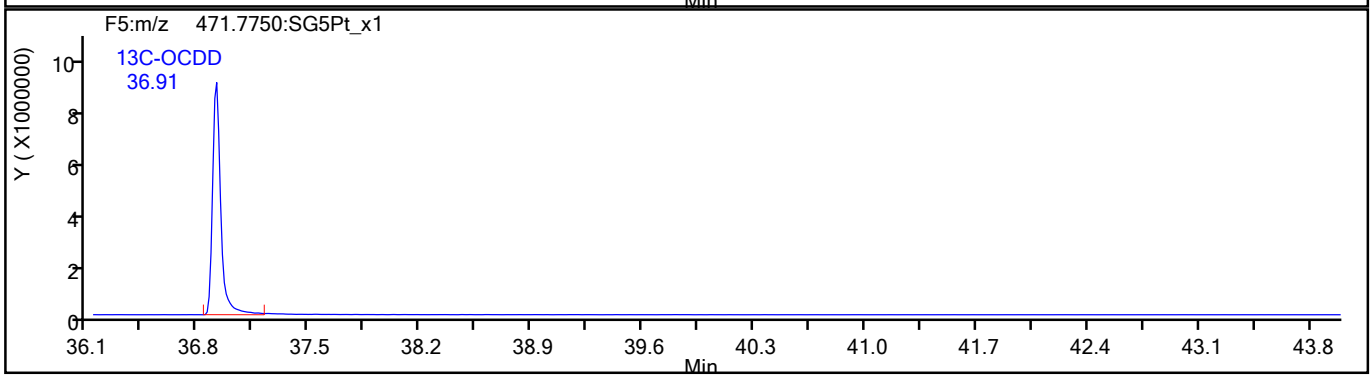

774667

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

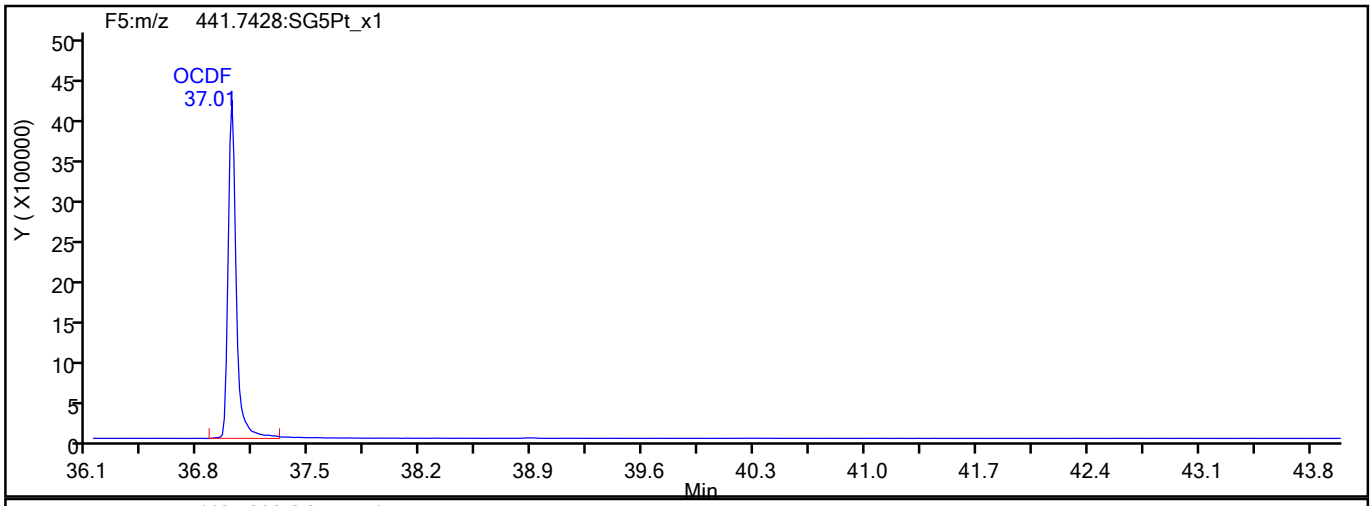

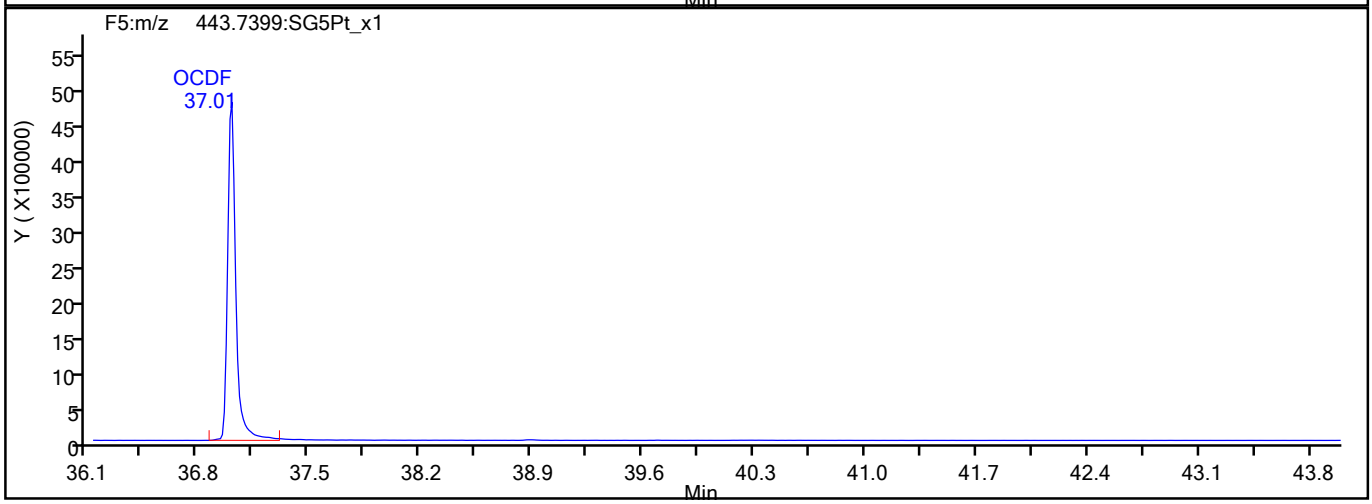

OCDF Interference Mass

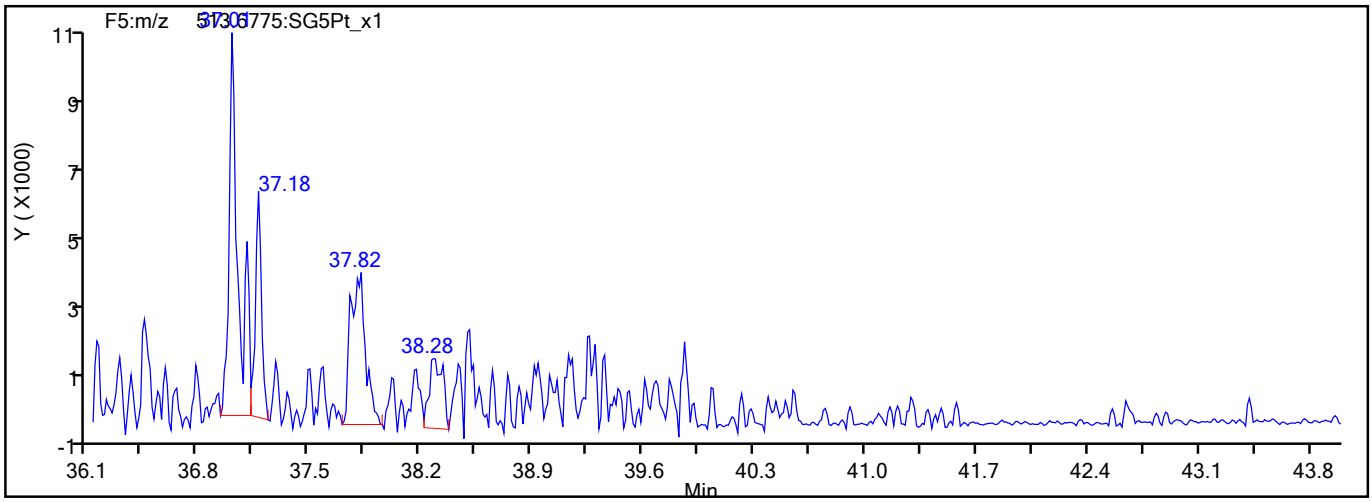

774668

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

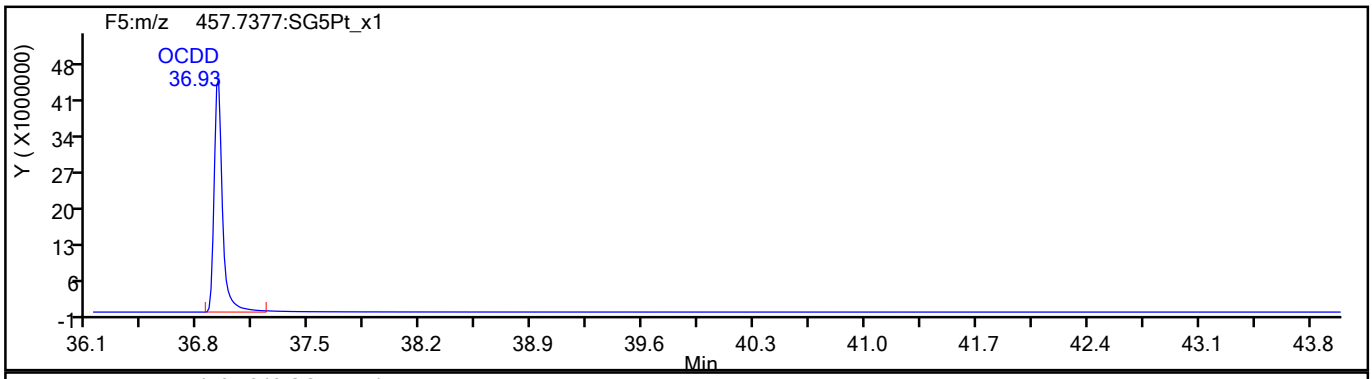

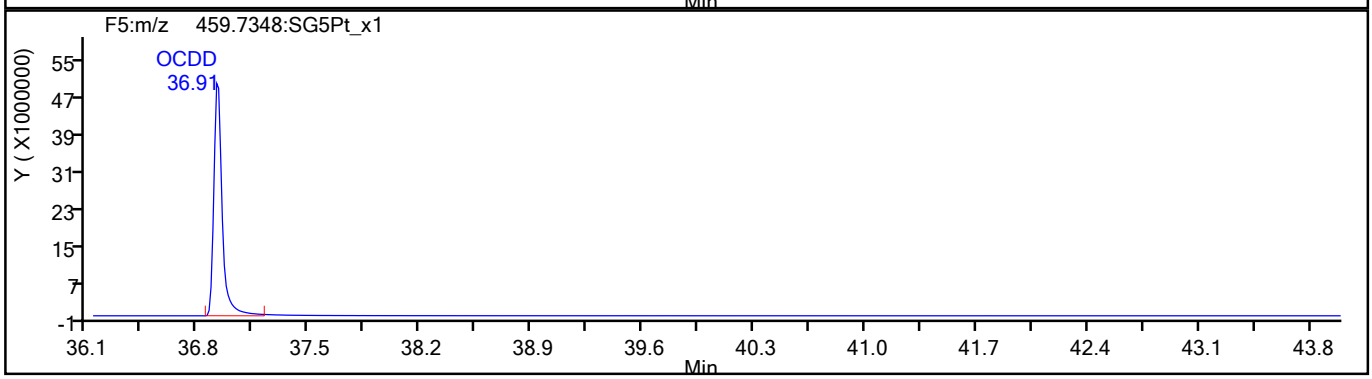

OCDD Standards

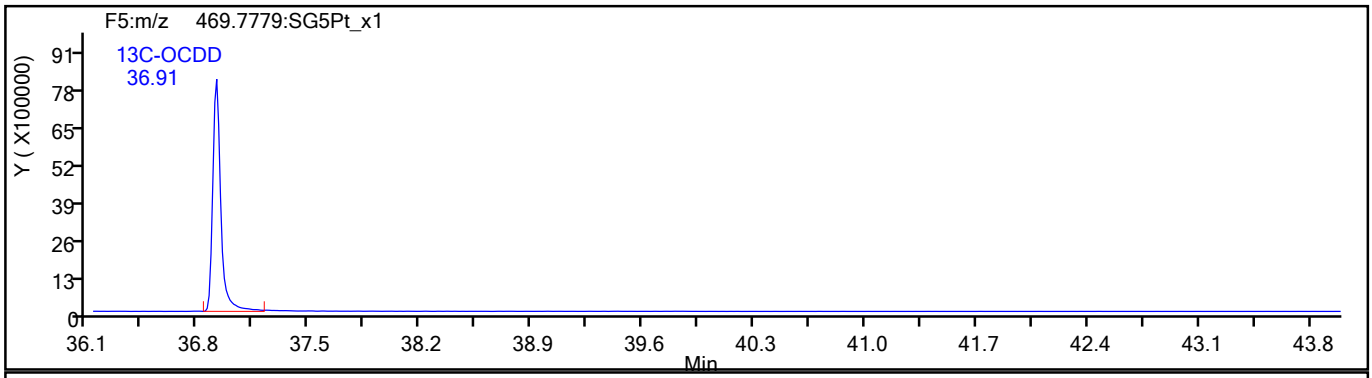

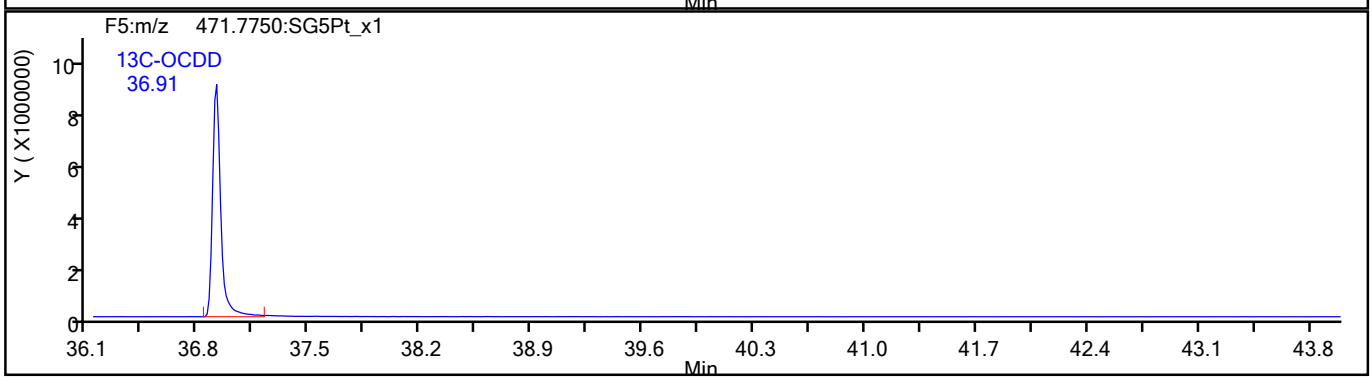

774669

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

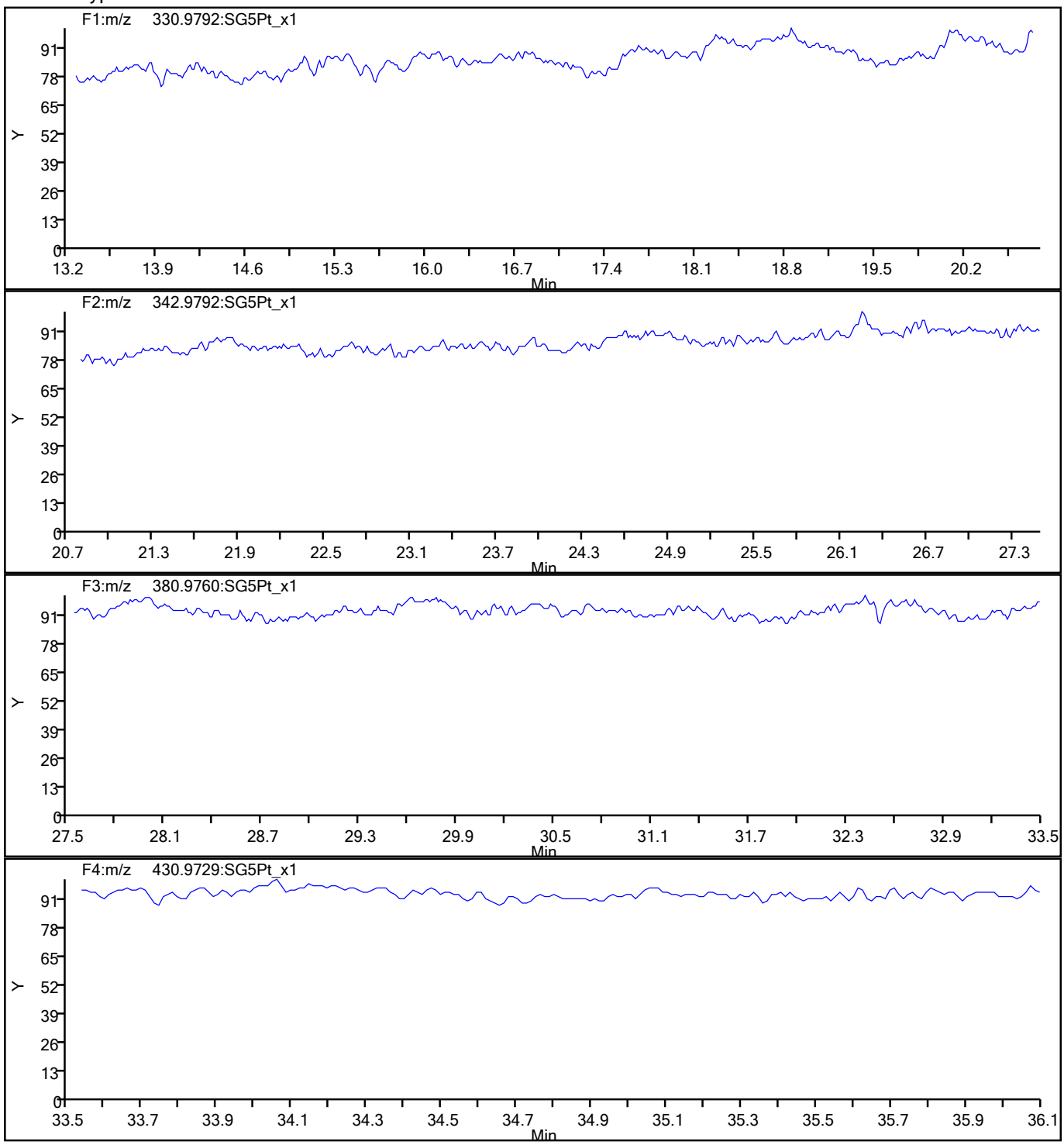

774670

Report Date: 18-Aug-2021 11:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_51.d		
Injection Date:	15-Aug-2021 07:21:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	516847	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

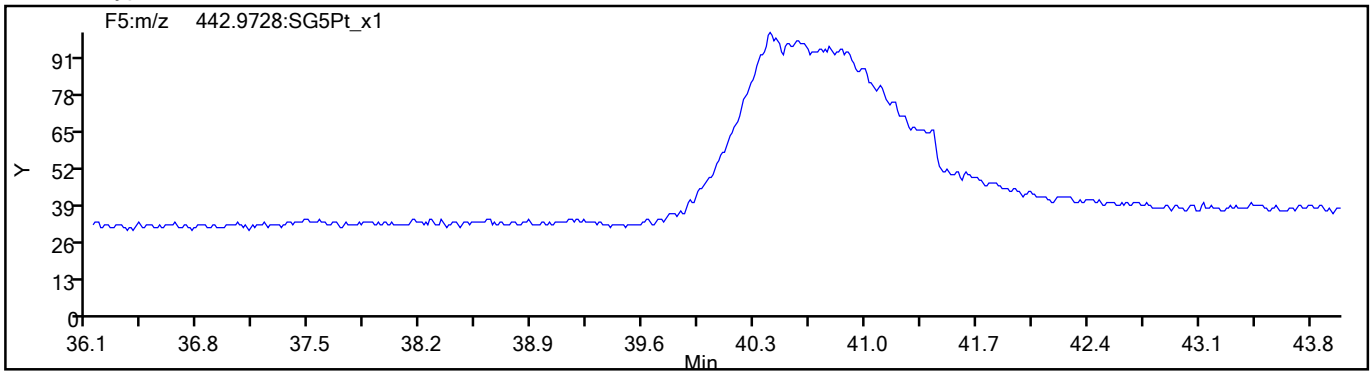

774671

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (4-6) RA
Lab Sample ID: 320-76769-3 RA
Matrix: Sediment
Lab File ID: 21AU2111D2_013.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.87(g)
Date Analyzed: 08/21/2021 21:34
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 33.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518850
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	19000	G E B	15	15

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	67		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	94		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_013.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Sample Type: Client
Inject. Date: 21-Aug-2021 21:34:53 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-3-A RI
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:04:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.342	34799284	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.673	31007539	0.70	1.3327	66.9	66.9	1.031	1.031	66.86	
2,3,7,8-TCDF	17.686	1950631292	0.79	0.9978	6304.7	6304.7	5.079	5.079		E
D 13C-2,3,7,8-TCDD	16.109	18439599	0.74	0.8749	60.6	60.6	24.2	24.2	60.56	
2,3,7,8-TCDD	16.136	483718068	0.79	1.0570	2481.8	2481.8	6.572	6.572		E
$ 37Cl4-2,3,7,8-TCDD	16.136	11330536		0.8648	37.6	37.6	0.3696	0.3696	94.12	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_013.d
Lims ID: 320-76769-A-3-A
Client ID: 11215702-072221-SS-SJSB080 (4-6)
Sample Type: Client
Inject. Date: 21-Aug-2021 21:34:53 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-3-A RI
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:04:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.342	16.309	2		14939039	3425126	343952	859880	10		
333.9339	16.342	16.309	2		19860245	4580772	332834	832085	14	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.673	17.640	2	1.081	12715099	2306836	22683	56707	102		
317.9389	17.673	17.640	2	1.081	18292440	3075270	21337	53342	144	0.70(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.686	17.653	2	1.001	863140525	158999998	48650	121625	3268		
305.8987	17.686	17.653	2	1.001	1087490767	201616348	60451	151127	3335	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.109	16.076	2	0.986	7829016	1806903	343952	859880	5		
333.9339	16.109	16.076	2	0.986	10610583	2645896	332834	832085	8	0.74(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	16.136	16.103	2	1.002	213436266	46486601	68149	170372	682		
321.8936	16.136	16.103	2	1.002	270281802	58414565	55570	138925	1051	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.136	16.103	2	0.987	11330536	2513799	10235	25587	246		

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 23-Aug-2021 10:28:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_013.d		
Injection Date:	21-Aug-2021 21:34:53	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	518850	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

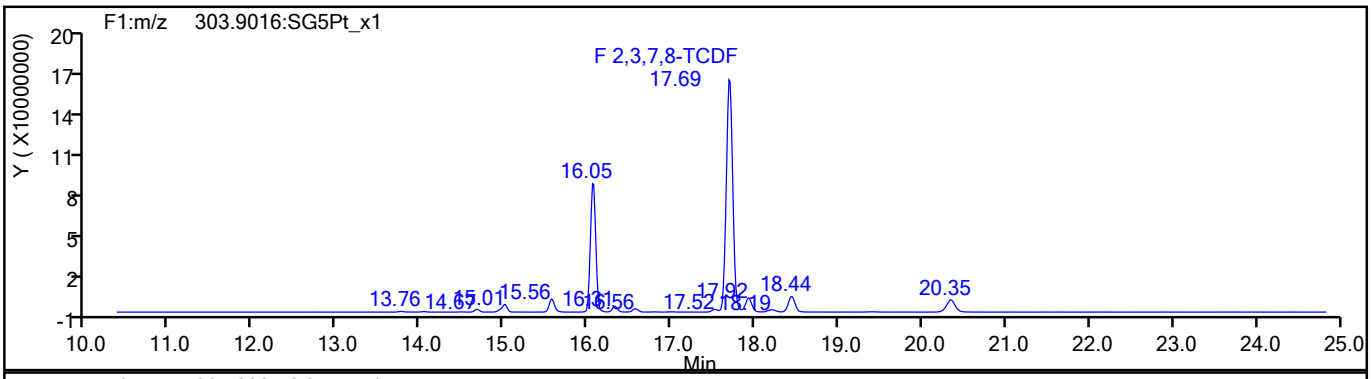

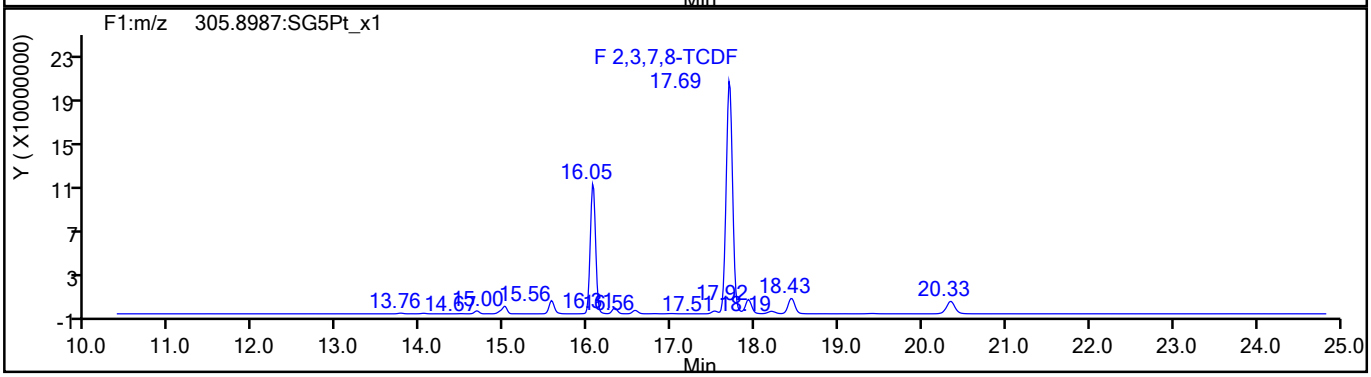

TCDF Standards

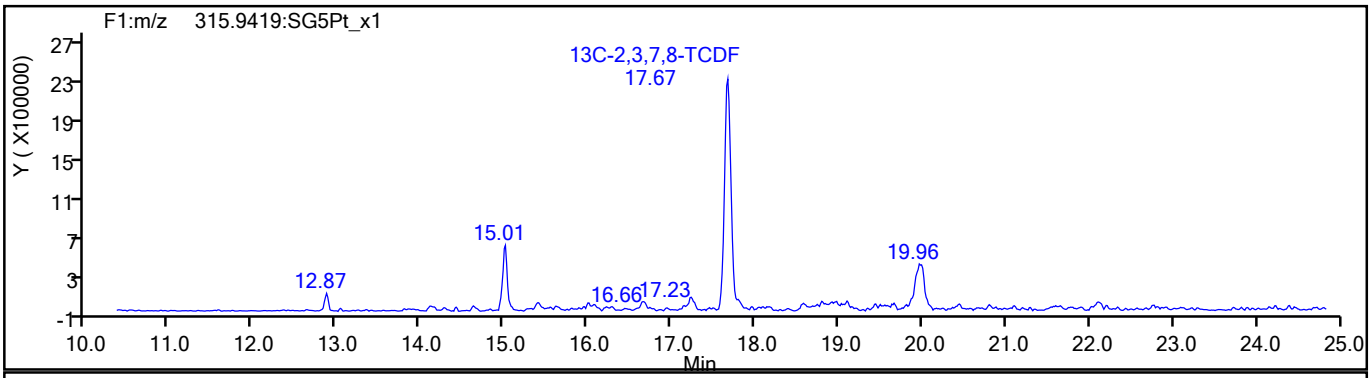

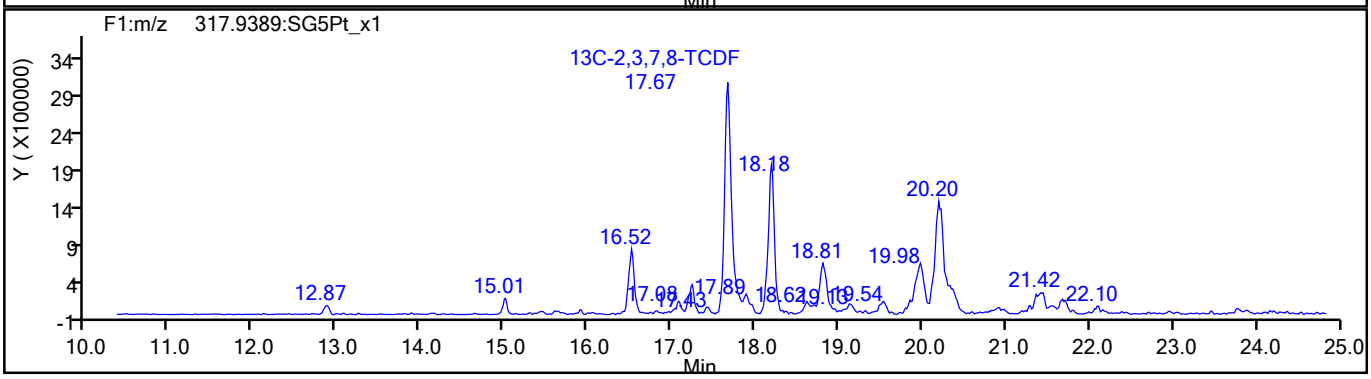

774675

Report Date: 23-Aug-2021 10:28:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_013.d		
Injection Date:	21-Aug-2021 21:34:53	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	518850	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

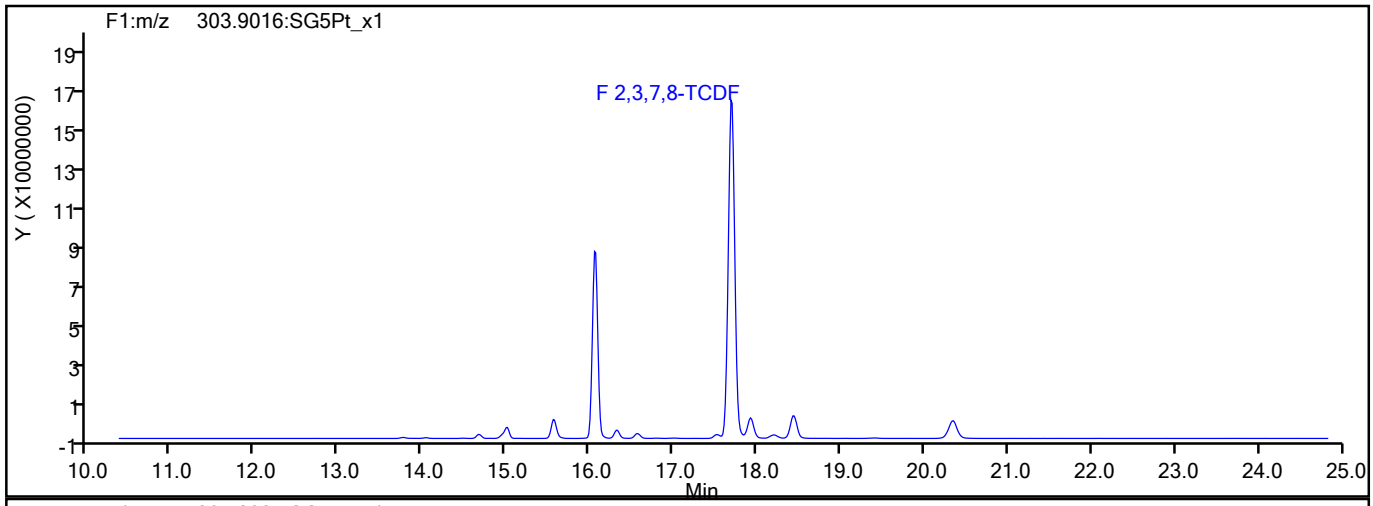

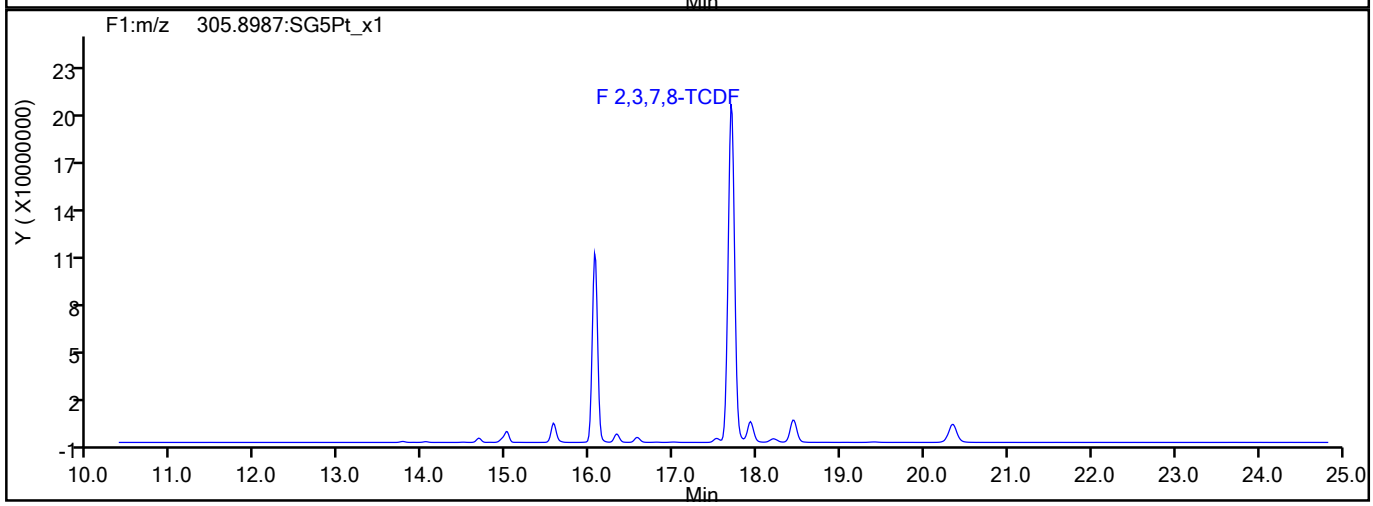

TCDF Interference Mass

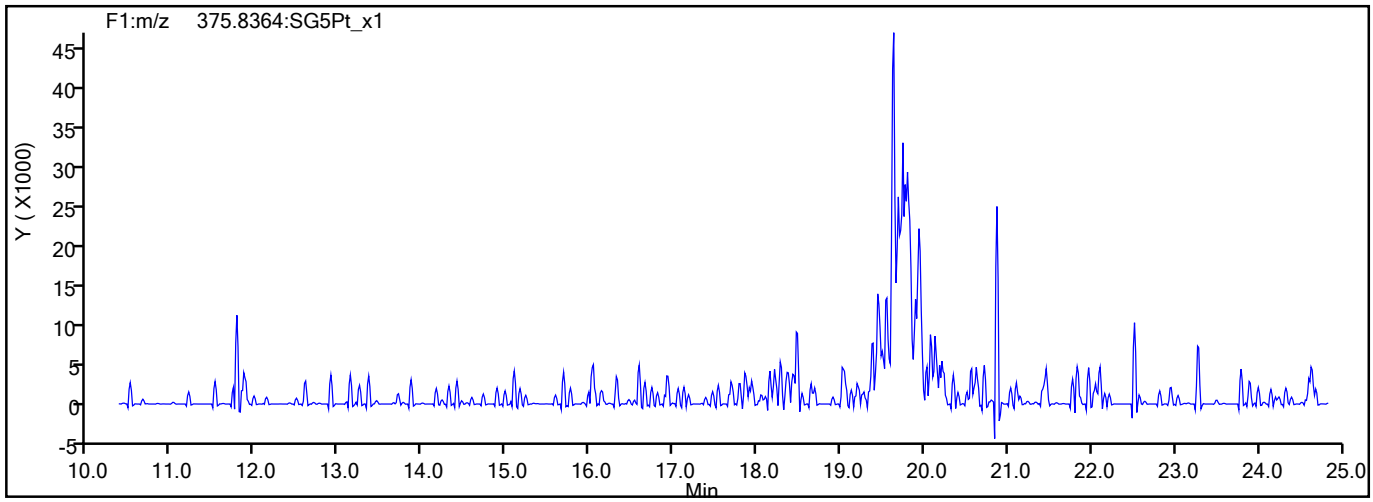

774676

Report Date: 23-Aug-2021 10:28:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_013.d		
Injection Date:	21-Aug-2021 21:34:53	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	518850	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

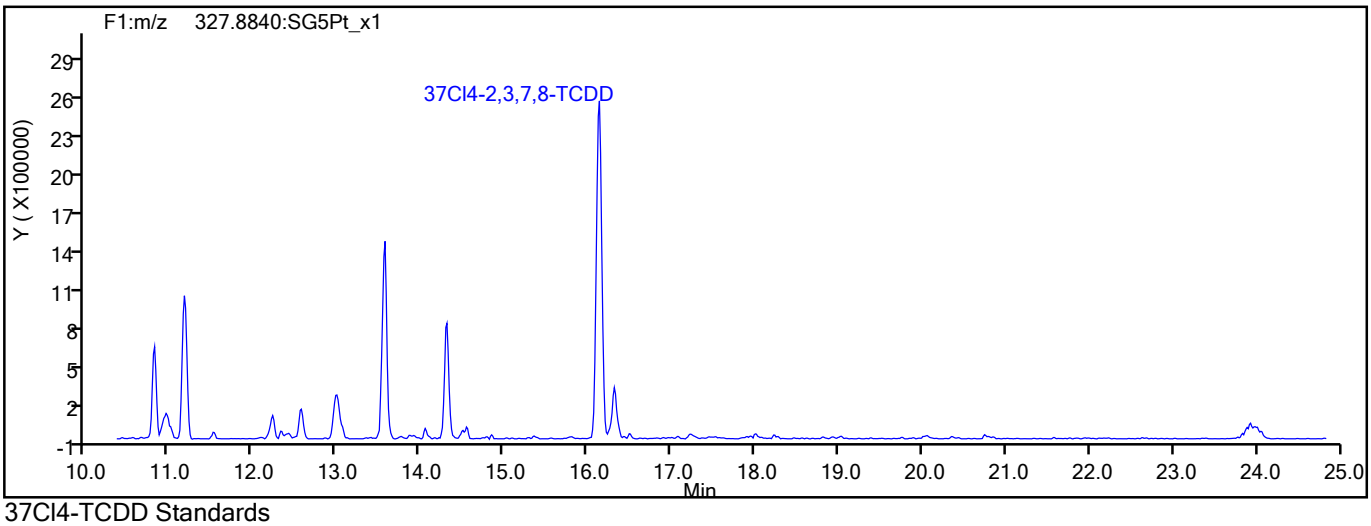

37Cl4-TCDD Standards

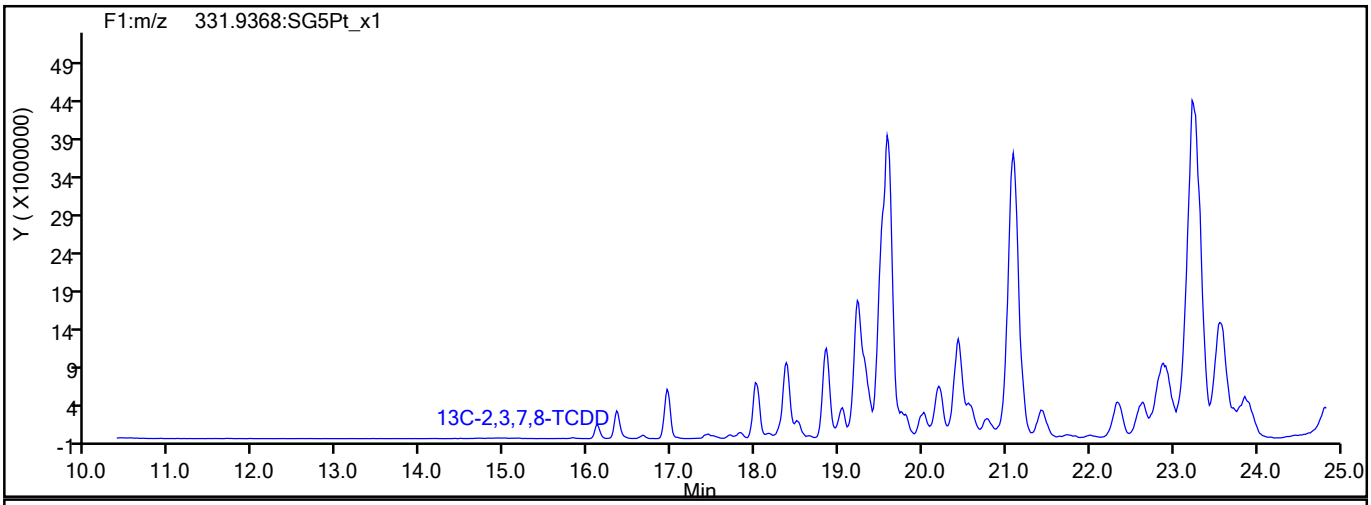

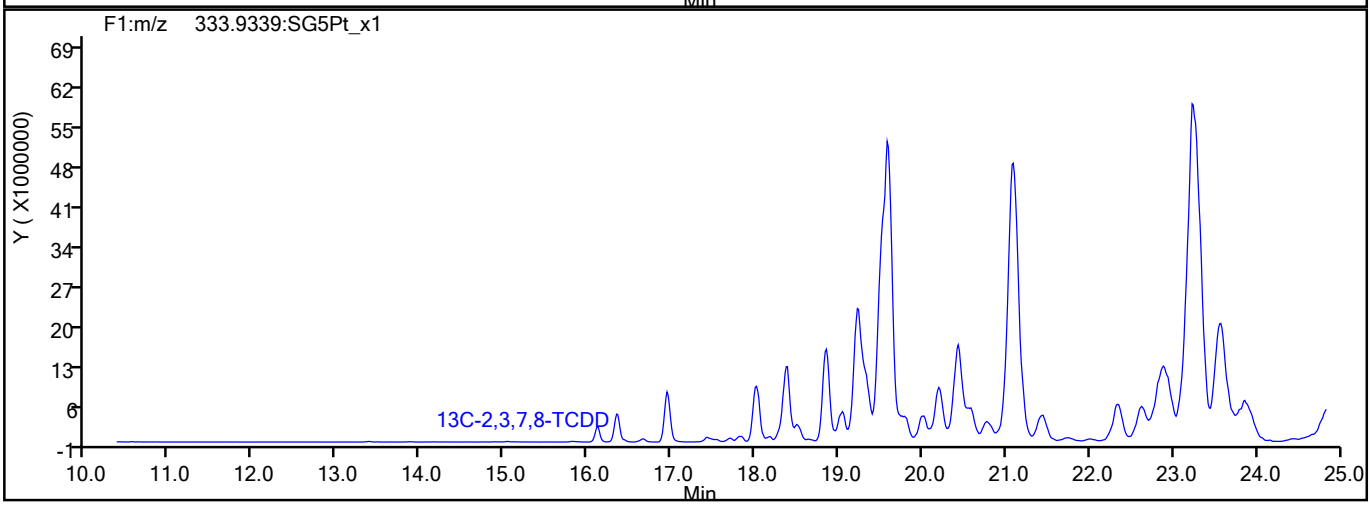

774677

Report Date: 23-Aug-2021 10:28:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_013.d		
Injection Date:	21-Aug-2021 21:34:53	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (4-6)		
Worklist#:	518850	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

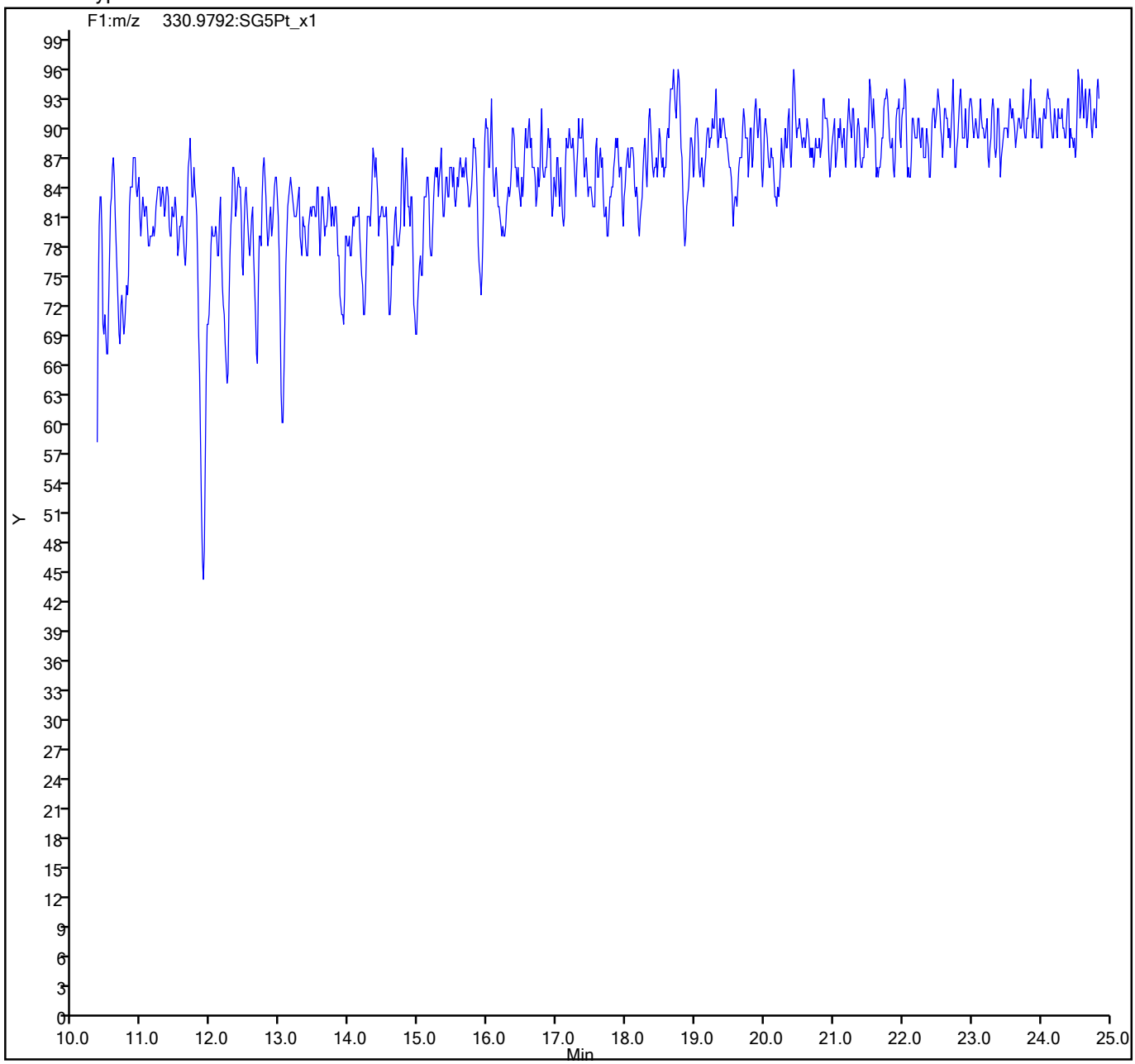

774678

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (6-8)
Lab Sample ID: 320-76769-4
Matrix: Sediment
Lab File ID: 17au21dfs1_55.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:55
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.04(g)
Date Analyzed: 08/19/2021 07:54
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2300	E G	2.7	2.7
40321-76-4	1,2,3,7,8-PeCDD	23		7.2	0.91
57117-41-6	1,2,3,7,8-PeCDF	360		7.2	2.4
57117-31-4	2,3,4,7,8-PeCDF	180		7.2	2.4
39227-28-6	1,2,3,4,7,8-HxCDD	0.79	J q	7.2	0.24
57653-85-7	1,2,3,6,7,8-HxCDD	3.3	J	7.2	0.28
19408-74-3	1,2,3,7,8,9-HxCDD	ND		7.2	0.24
70648-26-9	1,2,3,4,7,8-HxCDF	610		7.2	3.3
57117-44-9	1,2,3,6,7,8-HxCDF	150		7.2	3.1
72918-21-9	1,2,3,7,8,9-HxCDF	10		7.2	3.2
60851-34-5	2,3,4,6,7,8-HxCDF	19		7.2	3.0
35822-46-9	1,2,3,4,6,7,8-HpCDD	120		7.2	0.50
67562-39-4	1,2,3,4,6,7,8-HpCDF	150		7.2	0.67
55673-89-7	1,2,3,4,7,8,9-HpCDF	50		7.2	0.60
3268-87-9	OCDD	1500		14	1.2
39001-02-0	OCDF	68		14	0.38
41903-57-5	Total TCDD	2500	G	2.7	2.7
30402-14-3	Total TCDF	13000	G	10	10
36088-22-9	Total PeCDD	27		7.2	0.91
30402-15-4	Total PeCDF	830		7.2	2.4
34465-46-8	Total HxCDD	25	q	7.2	0.25
55684-94-1	Total HxCDF	900	q	7.2	3.2
37871-00-4	Total HpCDD	230		7.2	0.50
38998-75-3	Total HpCDF	240		7.2	0.64

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (6-8)
Lab Sample ID: 320-76769-4
Matrix: Sediment
Lab File ID: 17au21dfs1_55.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:55
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.04(g)
Date Analyzed: 08/19/2021 07:54
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	31		25-164
89059-46-1	13C-2,3,7,8-TCDF	31		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	28		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	30		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	34		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	39		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	34		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	38		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	33		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	30		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	31		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	39		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	35		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	40		26-138
114423-97-1	13C-OCDD	37		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	44		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d
Lims ID: 320-76769-A-4-B
Client ID: 11215702-072221-SS-SJSB080 (6-8)
Sample Type: Client
Inject. Date: 19-Aug-2021 07:54:00 ALS Bottle#: 0 Worklist Smp#: 51
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-4-b
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 10:22:58 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1656

First Level Reviewer: dadunj Date: 20-Aug-2021 10:22:58

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.401	1367396	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.422	578432	0.80	1.3459	31.4	31.4	0.2578	0.2578	31.43	
2,3,7,8-TCDF	20.456	17085045	0.85	1.0802	2734.4	2734.4	3.619	3.619		E
A Non-2,3,7,8-sub-TCDF	19.878	12202419	0.84	1.0802	1953.0	1953.0	3.619	1101.6		
S Total TCDF					4687.4	4687.4	3.619	3.619		
D 13C-2,3,7,8-TCDD	21.753	400531	0.73	0.9317	31.4	31.4	0.3648	0.3648	31.44	
2,3,7,8-TCDD	21.804	3411855	0.78	1.0753	792.1	792.1	0.9382	0.9382		E
$ 37Cl4-2,3,7,8-TCDD	21.804	240054		1.0083	17.4	17.4	0.0618	0.0618	43.53	
A Non-2,3,7,8-sub-TCDD	20.707	320754	0.81	1.0753	74.5	74.5	0.9382	64.3		
S Total TCDD					866.6	866.6	0.9382	0.9382		
D 13C-1,2,3,7,8-PeCDF	27.259	473652	1.60	1.1405	30.4	30.4	0.0832	0.0832	30.37	
1,2,3,7,8-PeCDF	27.275	631545	1.63	1.0543	126.5	126.5	0.8348	0.8348		
D 13C-2,3,4,7,8-PeCDF	28.758	523382	1.53	1.1253	34.0	34.0	0.0843	0.0843	34.01	
2,3,4,7,8-PeCDF	28.783	322645	1.57	1.0079	61.2	61.2	0.8489	0.8489		
A F1 PeCDFs	24.648	4445	1.48	1.0311	0.8648	0.8648	0.009248	0.8648		M
A Non-2,3,7,8-sub-PeCDF	28.125	516536	1.62	1.0311	100.5	100.5	0.8415	45.2		
S Total PeCDF					289.0	289.0	0.8419	0.8419		
D 13C-1,2,3,7,8-PeCDD	29.558	273850	1.62	0.7165	28.0	28.0	0.0870	0.0870	27.95	
1,2,3,7,8-PeCDD	29.600	22981	1.58	1.0465	8.019	8.019	0.3147	0.3147		
A Non-2,3,7,8-sub-PeCDD	28.489	3490	1.57	1.0465	1.218	1.218	0.3147	0.7830		
S Total PeCDD					9.237	9.237	0.3147	0.3147		
D 13C-1,2,3,4,7,8-HxCDF	34.908	418867	0.57	0.9648	37.5	37.5	0.1148	0.1148	37.51	
1,2,3,4,7,8-HxCDF	34.934	1020791	1.33	1.1474	212.4	212.4	1.154	1.154		
D 13C-1,2,3,6,7,8-HxCDF	35.068	407873	0.49	1.0708	32.9	32.9	0.1034	0.1034	32.91	
1,2,3,6,7,8-HxCDF	35.085	266860	1.29	1.2178	53.7	53.7	1.089	1.089		
D 13C-2,3,4,6,7,8-HxCDF	35.894	373896	0.53	1.0413	31.0	31.0	0.1063	0.1063	31.02	
2,3,4,6,7,8-HxCDF	35.894	29303	1.35	1.2145	6.453	6.453	1.058	1.058		M
D 13C-1,2,3,7,8,9-HxCDF	36.786	339605	0.54	0.9731	30.2	30.2	0.1138	0.1138	30.15	
1,2,3,7,8,9-HxCDF	36.803	15211	1.07	1.2401	3.612	3.612	1.121	1.121		Ma
A Non-2,3,7,8-sub-HxCDF	35.028	175093	1.24	1.2049	38.4	37.7	1.104	15.2		RQMa
S Total HxCDF					314.5	313.9	1.105	1.105		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.593	1157489	1.23	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.096	338711	1.26	0.7587	38.6	38.6	0.1406	0.1406	38.57	
1,2,3,4,7,8-HxCDD	36.129	984	1.24	1.0608	0.3596	0.2739	0.0817	0.0817		RQM
D 13C-1,2,3,6,7,8-HxCDD	36.222	341081	1.19	0.8593	34.3	34.3	0.1242	0.1242	34.29	
1,2,3,6,7,8-HxCDD	36.247	3942	1.14	0.9933	1.163	1.163	0.0975	0.0975		M
1,2,3,7,8,9-HxCDD	36.626						0.0825	0.0825		
A Non-2,3,7,8-sub-HxCDD	35.394	26555	1.24	1.0545	7.409	7.409	0.0868	3.485		M
S Total HxCDD					8.932	8.846	0.0872	0.0872		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.608	299088	0.47	0.7359	35.1	35.1	0.1488	0.1488	35.11	
1,2,3,4,6,7,8-HpCDF	38.624	224775	1.08	1.4421	52.1	52.1	0.2337	0.2337		
D 13C-1,2,3,4,7,8,9-HpCDF	39.862	321098	0.42	0.6854	40.5	40.5	0.1598	0.1598	40.48	
1,2,3,4,7,8,9-HpCDF	39.870	72936	1.05	1.3092	17.4	17.4	0.2090	0.2090		
A Non-2,3,7,8-sub-HpCDF	39.258	60714	1.08	1.3756	14.2	14.2	0.2195	14.2		
S Total HpCDF					83.7	83.7	0.2213	0.2213		
D 13C-1,2,3,4,6,7,8-HpCDD	39.551	307953	1.01	0.6745	39.4	39.4	0.0997	0.0997	39.44	
1,2,3,4,6,7,8-HpCDD	39.559	131878	1.07	1.0503	40.8	40.8	0.1742	0.1742		
A Non-2,3,7,8-sub-HpCDD	39.258	129602	1.03	1.0503	40.1	40.1	0.1742	40.1		
S Total HpCDD					80.8	80.8	0.1742	0.1742		
D 13C-OCDD	42.050	470757	0.90	0.5446	74.7	74.7	0.0754	0.0754	37.34	
OCDF	42.151	73261	0.92	1.3168	23.6	23.6	0.1324	0.1324		
OCDD	42.059	1261888	0.88	1.0620	504.8	504.8	0.4018	0.4018		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d
Lims ID: 320-76769-A-4-B
Client ID: 11215702-072221-SS-SJSB080 (6-8)
Sample Type: Client
Inject. Date: 19-Aug-2021 07:54:00 ALS Bottle#: 0 Worklist Smp#: 51
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-4-b
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 10:22:58 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1656

First Level Reviewer: dadunj Date: 20-Aug-2021 10:22:58

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.401	21.427	-2		610443	81437	157	392	519		
333.9338	21.392	21.427	-2		756953	103025	94	235	1096	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.422	20.401	1	0.954	256804	38753	134	335	289		
317.9389	20.430	20.401	2	0.955	321628	45587	122	305	374	0.80(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.456	20.436	1	1.002	7857903	1053804	594	1485	1774		
305.8987	20.456	20.436	1	1.002	9227142	1238595	725	1812	1708	0.85(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.467	19.878	-144	0.855	37569	6981	594	1485	12		
305.8987	17.467	19.878	-144	0.855	47242	8481	725	1812	12	0.80(0.65-0.89)	
303.9016	17.922	19.878	-117	0.878	139047	22807	594	1485	38		
305.8987	17.922	19.878	-117	0.878	170798	27442	725	1812	38	0.81(0.65-0.89)	
303.9016	18.412	19.878	-88	0.902	271255	34211	594	1485	58		
305.8987	18.420	19.878	-87	0.902	319620	40191	725	1812	55	0.85(0.65-0.89)	
303.9016	18.832	19.878	-63	0.922	261429	33610	594	1485	57		
305.8987	18.841	19.878	-62	0.923	316747	40743	725	1812	56	0.83(0.65-0.89)	
303.9016	19.227	19.878	-39	0.942	372628	53495	594	1485	90		
305.8987	19.219	19.878	-39	0.941	438322	61414	725	1812	85	0.85(0.65-0.89)	
303.9016	19.726	19.878	-9	0.966	3160910	452204	594	1485	761		
305.8987	19.726	19.878	-9	0.966	3722106	546102	725	1812	753	0.85(0.65-0.89)	
303.9016	20.138	19.878	16	0.986	123181	16645	594	1485	28		
305.8987	20.130	19.878	15	0.986	149349	20250	725	1812	28	0.82(0.65-0.89)	
303.9016	21.238	19.878	81	1.040	532686	73268	594	1485	123		
305.8987	21.238	19.878	81	1.040	651675	90085	725	1812	124	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.641	19.878	106	1.060	99386	12328	594	1485	21		
305.8987	21.650	19.878	106	1.060	137921	15373	725	1812	21	0.72(0.65-0.89)	
303.9016	23.626	19.878	224	1.157	564793	100886	594	1485	170		
305.8987	23.626	19.878	224	1.157	685755	126091	725	1812	174	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.753	21.743	1	1.016	168350	22681	157	392	144		
333.9338	21.761	21.743	1	1.017	232181	33816	94	235	360	0.73(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	21.804	21.777	2	1.002	1500224	187463	126	315	1488		
321.8936	21.804	21.777	2	1.002	1911631	239226	102	255	2345	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.804	21.849	-3	1.019	240054	29917	46	115	650		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.345	20.707	-22	0.935	3775	560	126	315	4		
321.8936	20.336	20.707	-22	0.935	4313	698	102	255	7	0.88(0.65-0.89)	
319.8965	21.581	20.707	52	0.992	15702	2714	126	315	22		
321.8936	21.590	20.707	53	0.992	20172	3417	102	255	34	0.78(0.65-0.89)	
319.8965	22.457	20.707	105	1.032	123636	15396	126	315	122		
321.8936	22.457	20.707	105	1.032	153156	18973	102	255	186	0.81(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.259	27.288	-2	1.274	291364	45220	37	92	1222		
353.8970	27.250	27.288	-2	1.273	182288	27155	33	82	823	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.275	27.313	-2	1.001	391747	57232	123	307	465		
341.8567	27.275	27.313	-2	1.001	239798	35325	132	330	268	1.63(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.758	28.795	-2	1.344	316810	44010	37	92	1189		
353.8970	28.758	28.795	-2	1.344	206572	30444	33	82	923	1.53(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.783	28.820	-2	1.001	197020	28506	123	307	232		
341.8567	28.775	28.820	-3	1.001	125625	17544	132	330	133	1.57(1.32-1.78)	
A F1 PeCDFs											M
339.8597	24.047	24.648	-36	0.882	2650	657	1	2	657		M
341.8567	24.055	24.648	-35	0.882	1795	465	2	5	233	1.48(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	25.802	28.125	-139	0.947	144699	24927	123	307	203		
341.8567	25.810	28.125	-139	0.947	87797	14185	132	330	107	1.65(1.32-1.78)	
339.8597	26.711	28.125	-85	0.980	7709	1123	123	307	9		
341.8567	26.711	28.125	-85	0.980	4978	870	132	330	7	1.55(1.32-1.78)	
339.8597	27.141	28.125	-59	0.996	17929	4474	123	307	36		
341.8567	27.132	28.125	-59	0.995	11661	2610	132	330	20	1.54(1.32-1.78)	
339.8597	27.856	28.125	-16	1.022	91328	13242	123	307	108		
341.8567	27.848	28.125	-17	1.022	58130	8953	132	330	68	1.57(1.32-1.78)	
339.8597	29.111	28.125	59	1.068	45317	5992	123	307	49		
341.8567	29.120	28.125	60	1.068	27351	4197	132	330	32	1.66(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	30.821	28.125	161	1.131	12303	1498	123	307	12		
341.8567	30.813	28.125	161	1.130	7334	1206	132	330	9	1.68(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.558	29.612	-3	1.381	169450	24411	27	67	904		
369.8919	29.566	29.612	-3	1.382	104400	15066	19	47	793	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.600	29.637	-2	1.001	14084	1910	36	90	53		
357.8516	29.591	29.637	-3	1.001	8897	1285	16	40	80	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	27.377	28.489	-67	0.926	1357	290	36	90	8		
357.8516	27.377	28.489	-67	0.926	887	215	16	40	13	1.53(1.32-1.78)	
355.8546	27.629	28.489	-51	0.935	775	180	36	90	5		
357.8516	27.680	28.489	-48	0.936	471	119	16	40	7	1.65(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.908	34.942	-2	0.954	151626	25432	44	110	578		
385.8610	34.900	34.942	-3	0.954	267241	49506	66	165	750	0.57(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.934	34.959	-2	1.001	582488	105385	220	550	479		
375.8178	34.934	34.959	-2	1.001	438303	80172	177	442	453	1.33(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.068	35.111	-3	0.958	134026	26613	44	110	605		
385.8610	35.068	35.111	-3	0.958	273847	48160	66	165	730	0.49(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.085	35.119	-2	1.000	150218	26123	220	550	119		
375.8178	35.085	35.119	-2	1.000	116642	21213	177	442	120	1.29(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.894	35.919	-1	0.981	130291	25965	44	110	590		
385.8610	35.894	35.919	-1	0.981	243605	51252	66	165	777	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.894	35.936	-3	1.000	16810	3487	220	550	16		M
375.8178	35.911	35.936	-1	1.000	12493	2514	177	442	14	1.35(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.786	36.811	-1	1.005	118635	25415	44	110	578		
385.8610	36.786	36.811	-1	1.005	220970	45941	66	165	696	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											Ma
373.8208	36.803	36.828	-1	1.000	7876	2232	220	550	10		M
375.8178	36.794	36.828	-2	1.000	7335	1826	177	442	10	1.07(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.418	35.028	-96	0.957	40717	6394	220	550	29		
375.8178	33.426	35.028	-96	0.958	29580	4915	177	442	28	1.38(1.05-1.43)	
373.8208	34.302	35.028	-43	0.983	16959	3073	220	550	14		
375.8178	34.294	35.028	-44	0.982	16547	2900	177	442	16	1.02(1.05-1.43)	
	Empc Correction				13676	2478	177	442	14		
373.8208	35.793	35.028	46	1.025	9655	2248	220	550	10		M
375.8178	35.793	35.028	46	1.025	7632	1574	177	442	9	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	36.895	35.028	112	1.057	31689	7220	220	550	33		M
375.8178	36.904	35.028	112	1.057	25185	5942	177	442	34	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.593	36.609	-1		638840	135179	52	130	2600		
403.8529	36.593	36.609	-1		518649	113167	54	135	2096	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.096	36.129	-2	0.986	188681	41560	52	130	799		
403.8529	36.104	36.129	-1	0.987	150030	35705	54	135	661	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQM
389.8158	36.129	36.146	-1	1.001	545	191	17	42	11		M
391.8127	36.121	36.146	-1	1.001	747	205	10	25	21	0.73(1.05-1.43)	M
	Empc Correction				439	154	10	25	15		
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.222	36.247	-1	0.990	185188	37614	52	130	723		
403.8529	36.222	36.247	-1	0.990	155893	31559	54	135	584	1.19(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8158	36.247	36.264	-1	1.001	2099	453	17	42	27		M
391.8127	36.222	36.264	-2	1.000	1843	399	10	25	40	1.14(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											
389.8158	36.626						17	42			
391.8127	36.626						10	25			
A Non-2,3,7,8-sub-HxCDD											M
389.8158	34.209	35.394	-71	0.944	5960	1017	17	42	60		
391.8127	34.218	35.394	-70	0.945	5191	966	10	25	97	1.15(1.05-1.43)	
389.8158	34.984	35.394	-25	0.966	1584	253	17	42	15		
391.8127	35.009	35.394	-23	0.967	1329	243	10	25	24	1.19(1.05-1.43)	
389.8158	35.346	35.394	-3	0.976	7142	1230	17	42	72		M
391.8127	35.329	35.394	-4	0.975	5349	1135	10	25	114	1.34(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.608	38.626	-1	1.055	95343	24268	46	115	528		
419.8220	38.608	38.626	-1	1.055	203745	46956	63	157	745	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.624	38.630	0	1.000	116737	29619	63	157	470		
409.7788	38.624	38.630	0	1.000	108038	26827	33	82	813	1.08(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.862	39.880	-1	1.089	95419	25381	46	115	552		
419.8220	39.862	39.880	-1	1.089	225679	62337	63	157	989	0.42(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.870	39.885	-1	1.000	37440	10122	63	157	161		
409.7788	39.870	39.885	-1	1.000	35496	10086	33	82	306	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.986	39.258	-16	1.010	31530	8155	63	157	129		
409.7788	38.978	39.258	-17	1.010	29184	7424	33	82	225	1.08(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.551	39.569	-1	1.081	154676	41244	24	60	1719		
437.8140	39.559	39.569	-1	1.081	153277	41840	43	107	973	1.01(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.559	39.582	-1	1.000	68095	18135	34	85	533		
425.7737	39.559	39.582	-1	1.000	63783	16128	27	67	597	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.927	39.258	-20	0.984	65866	18215	34	85	536		
425.7737	38.927	39.258	-20	0.984	63736	17964	27	67	665	1.03(0.88-1.20)	
13C-OCDD											
469.7780	42.050	42.072	-1	1.149	223207	57260	24	60	2386		
471.7750	42.050	42.072	-1	1.149	247550	63193	17	42	3717	0.90(0.76-1.02)	
OCDF											
441.7428	42.151	42.165	-1	1.002	35079	8271	15	37	551		
443.7399	42.143	42.165	-1	1.002	38182	8657	27	67	321	0.92(0.76-1.02)	
OCDD											
457.7377	42.059	42.081	-1	1.000	590436	148284	49	122	3026		
459.7348	42.059	42.081	-1	1.000	671452	168043	54	135	3112	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 20-Aug-2021 10:22:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Lims ID:	320-76769-A-4-B		
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Inject. Date:	19-Aug-2021 07:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	51

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	578432	84340

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	578432	84340

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.467	37569	6981	47242	8481	13.6	0.80	
17.922	139047	22807	170798	27442	49.6	0.81	
18.412	271255	34211	319620	40191	94.6	0.85	
18.832	261429	33610	316747	40743	92.5	0.83	
19.227	372628	53495	438322	61414	129.8	0.85	
19.726	3160910	452204	3722106	546102	1101.6	0.85	
20.138	123181	16645	149349	20250	43.6	0.82	
21.238	532686	73268	651675	90085	189.6	0.82	
21.641	99386	12328	137921	15373	38.0	0.72	
23.626	564793	100886	685755	126091	200.1	0.82	
Signal Totals:							
	5562884	806435	6639535	976172			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12202419	1782607				0.84	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1953.0 = (12202419 * 100.000) / (578432 * 1.080)

Report Date: 20-Aug-2021 10:22:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Lims ID:	320-76769-A-4-B		
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Inject. Date:	19-Aug-2021 07:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	51

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	400531	56497

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	400531	56497

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
20.345	3775	560	4313	698	1.88	0.88	
21.581	15702	2714	20172	3417	8.33	0.78	
22.457	123636	15396	153156	18973	64.3	0.81	
Signal Totals:							
	143113	18670	177641	23088			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	320754	41758				0.81	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 74.471 = (320754 * 100.000) / (400531 * 1.075)

Report Date: 20-Aug-2021 10:22:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Lims ID:	320-76769-A-4-B		
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Inject. Date:	19-Aug-2021 07:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	51

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	473652	72375
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	523382	74454

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	498517	73414

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.047	2650	657	1795	465	0.8648	1.48	M
Signal Totals:							
	2650	657	1795	465			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4445	1122				1.48	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8648 = (4445 * 100.000) / (498517 * 1.031)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 20-Aug-2021 10:22:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Lims ID:	320-76769-A-4-B		
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Inject. Date:	19-Aug-2021 07:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	51

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	473652	72375
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	523382	74454

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	498517	73414

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.802	144699	24927	87797	14185	45.2	1.65	
26.711	7709	1123	4978	870	2.47	1.55	
27.141	17929	4474	11661	2610	5.76	1.54	
27.856	91328	13242	58130	8953	29.1	1.57	
29.111	45317	5992	27351	4197	14.1	1.66	
30.821	12303	1498	7334	1206	3.82	1.68	
Signal Totals:							
	319285	51256	197251	32021			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	516536	83277				1.62	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 100.493 = (516536 * 100.000) / (498517 * 1.031)

Report Date: 20-Aug-2021 10:22:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Lims ID:	320-76769-A-4-B		
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Inject. Date:	19-Aug-2021 07:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	51

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	273850	39477

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	273850	39477

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
27.377	1357	290	887	215	0.7830	1.53	
27.629	775	180	471	119	0.4348	1.65	
Signal Totals:							
	2132	470	1358	334			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3490	804				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.218 = (3490 * 100.000) / (273850 * 1.046)

Report Date: 20-Aug-2021 10:22:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Lims ID:	320-76769-A-4-B		
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Inject. Date:	19-Aug-2021 07:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	51

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	418867	74938
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	407873	74773
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	373896	77217
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	339605	71356

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	385060	74571

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.418	40717	6394	29580	4915	15.2	1.38	
34.302	16959	3073	16547	2900	7.22	1.02	RQ
34.302	16959	3073	13676	2478	6.60		Empc Correction
35.793	9655	2248	7632	1574	3.73	1.27	Ma
36.895	31689	7220	25185	5942	12.3	1.26	Ma
Signal Totals:							
	99020	18935	76073	14909			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	177964	34266				1.25	RQMa
	175093	33844					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 38.356 = (177964 * 100.000) / (385060 * 1.205)

Empc Amount: 37.738 = (175093 * 100.000) / (385060 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 20-Aug-2021 10:22:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Lims ID:	320-76769-A-4-B		
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Inject. Date:	19-Aug-2021 07:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	51

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	338711	77265
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	341081	69173
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	339896	73219

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.209	5960	1017	5191	966	3.11	1.15	
34.984	1584	253	1329	243	0.8127	1.19	
35.346	7142	1230	5349	1135	3.48	1.34	M
Signal Totals:							
	14686	2500	11869	2344			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	26555	4844				1.24	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 7.409 = (26555 * 100.000) / (339896 * 1.055)

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 20-Aug-2021 10:22:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Lims ID:	320-76769-A-4-B		
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Inject. Date:	19-Aug-2021 07:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	51

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	299088	71224
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	321098	87718

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	310093	79471

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.986	31530	8155	29184	7424	14.2	1.08	
Signal Totals:							
	31530	8155	29184	7424			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	60714	15579				1.08	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 14.233 = (60714 * 100.000) / (310093 * 1.376)

Report Date: 20-Aug-2021 10:22:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Lims ID:	320-76769-A-4-B		
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Inject. Date:	19-Aug-2021 07:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	51

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	307953	83084

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	307953	83084

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.927	65866	18215	63736	17964	40.1	1.03	
Signal Totals:							
	65866	18215	63736	17964			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	129602	36179				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 40.069 = (129602 * 100.000) / (307953 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d				
Injection Date:	19-Aug-2021 07:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-4-B	Lab Sample ID:	320-76769-4		
Client ID:	11215702-072221-SS-SJSB080 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

F1 PeCDFs, Signal: 1, m/z: 339.8597, RT: (23.99- 25.30)

Signal: 1

Processing Integration Results

RT = 24.047 Area = 2142

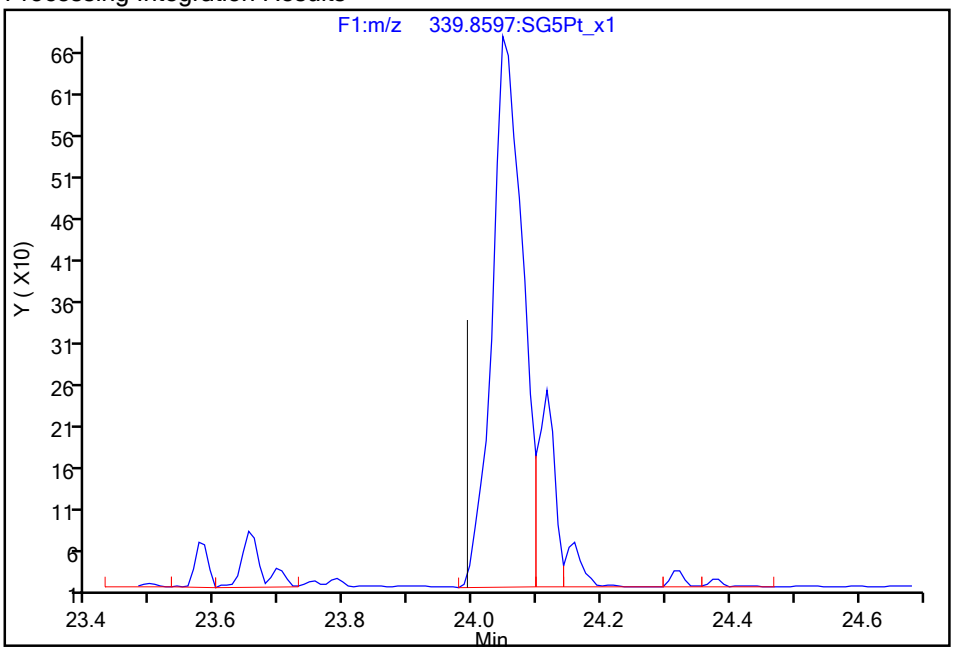

Manual Integration Results

RT = 24.047 Area = 2650 M

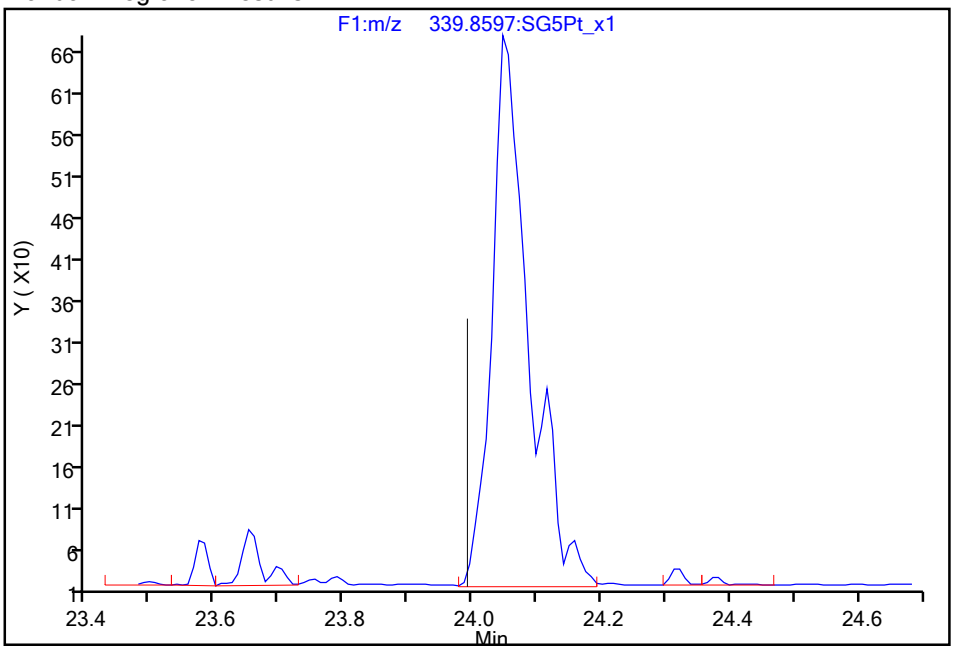

Reviewer: dadunj, 20-Aug-2021 10:20:54

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d				
Injection Date:	19-Aug-2021 07:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-4-B	Lab Sample ID:	320-76769-4		
Client ID:	11215702-072221-SS-SJSB080 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.89
Area: 26466
Amount: 8.579665
Amount Units: pg/ul

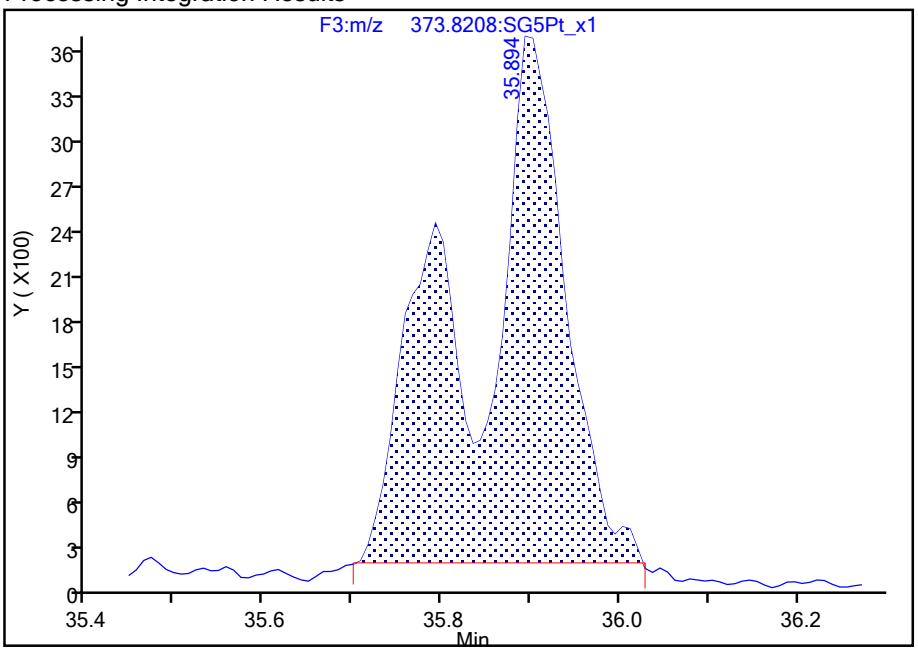

Manual Integration Results

RT: 35.89
Area: 16810
Amount: 6.453192
Amount Units: pg/ul

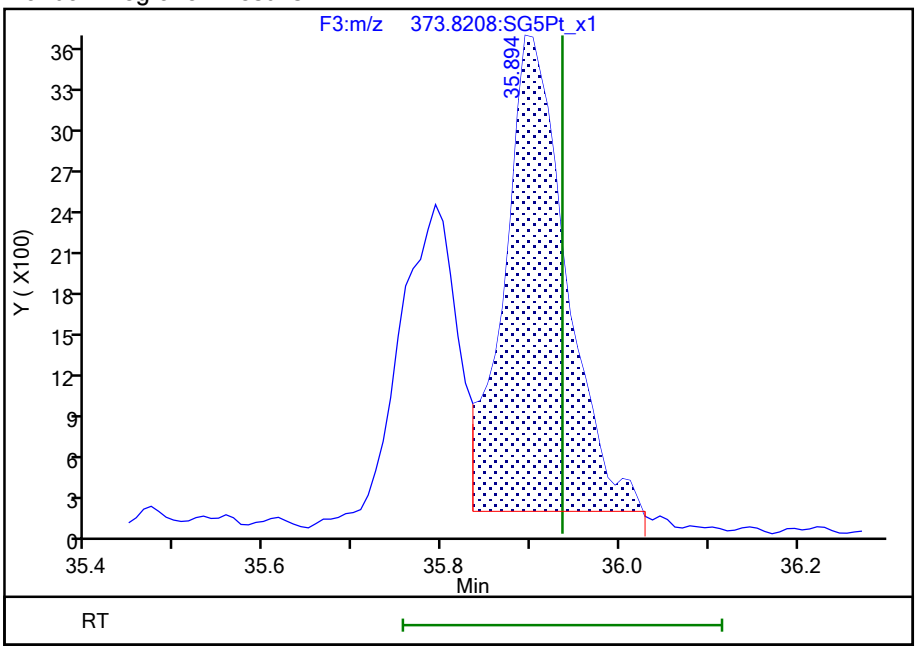

Reviewer: dadunj, 20-Aug-2021 10:21:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d				
Injection Date:	19-Aug-2021 07:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-4-B	Lab Sample ID:	320-76769-4		
Client ID:	11215702-072221-SS-SJSB080 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.90
Area: 25185
Amount: 15.374785
Amount Units: pg/ul

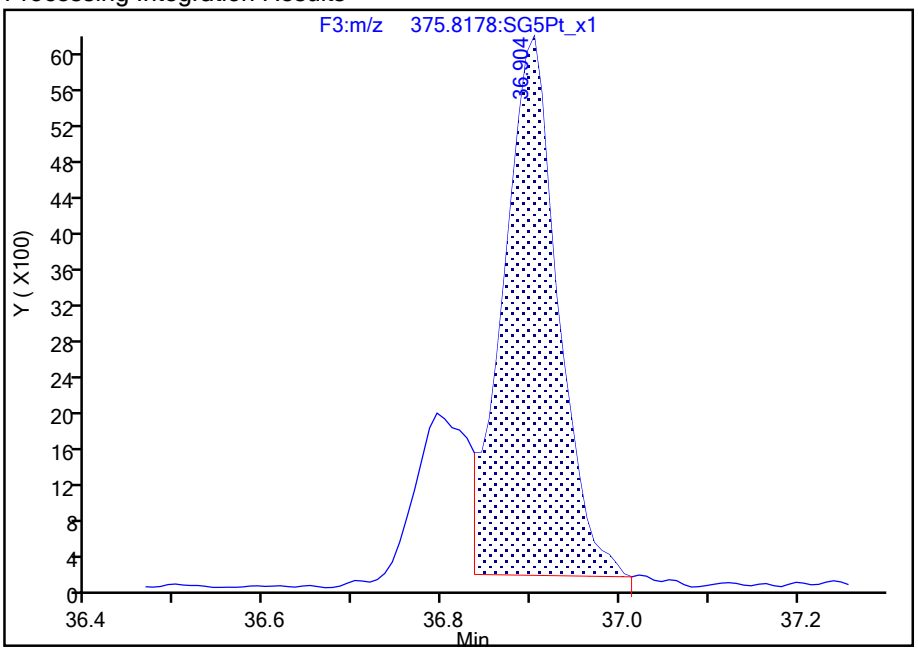

Manual Integration Results

RT: 36.79
Area: 7335
Amount: 3.611772
Amount Units: pg/ul

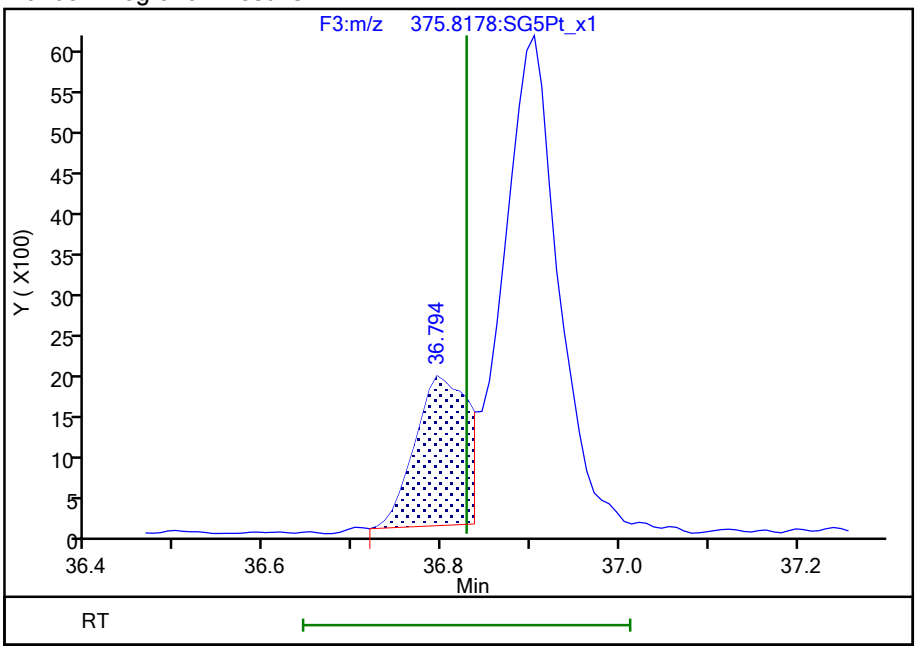

Reviewer: dadunj, 20-Aug-2021 10:21:29

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d				
Injection Date:	19-Aug-2021 07:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-4-B	Lab Sample ID:	320-76769-4		
Client ID:	11215702-072221-SS-SJSB080 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 3

Processing Integration Results

RT: 36.90
Area: 64751
Amount: 15.374785
Amount Units: pg/ul

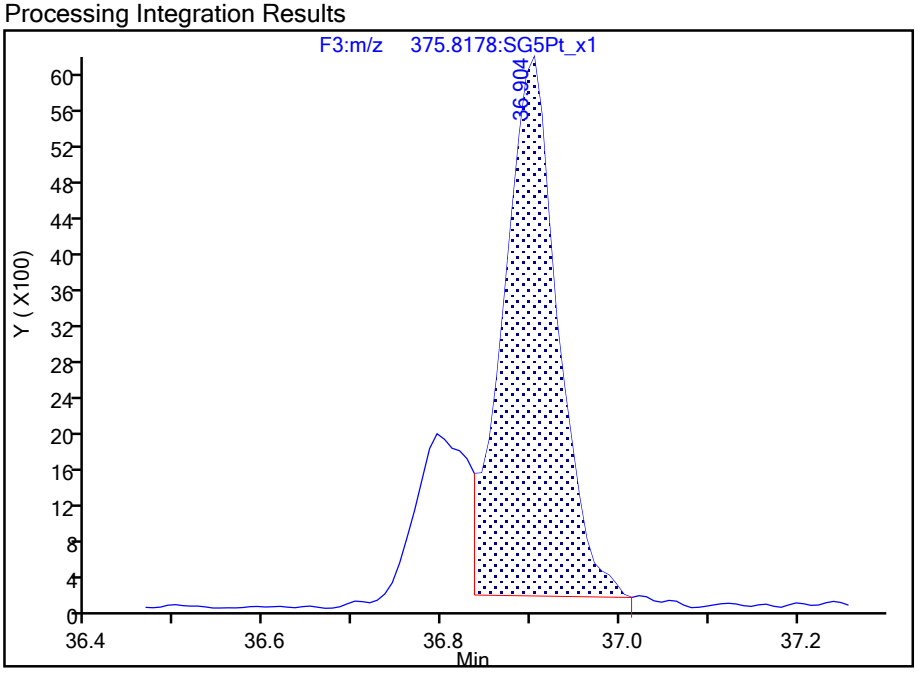

Manual Integration Results

RT: 36.80
Area: 15211
Amount: 3.611772
Amount Units: pg/ul
Reviewer: dadunj, 20-Aug-2021 10:21:29
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d				
Injection Date:	19-Aug-2021 07:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-4-B	Lab Sample ID:	320-76769-4		
Client ID:	11215702-072221-SS-SJSB080 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.90
Area: 39566
Amount: 15.374785
Amount Units: pg/ul

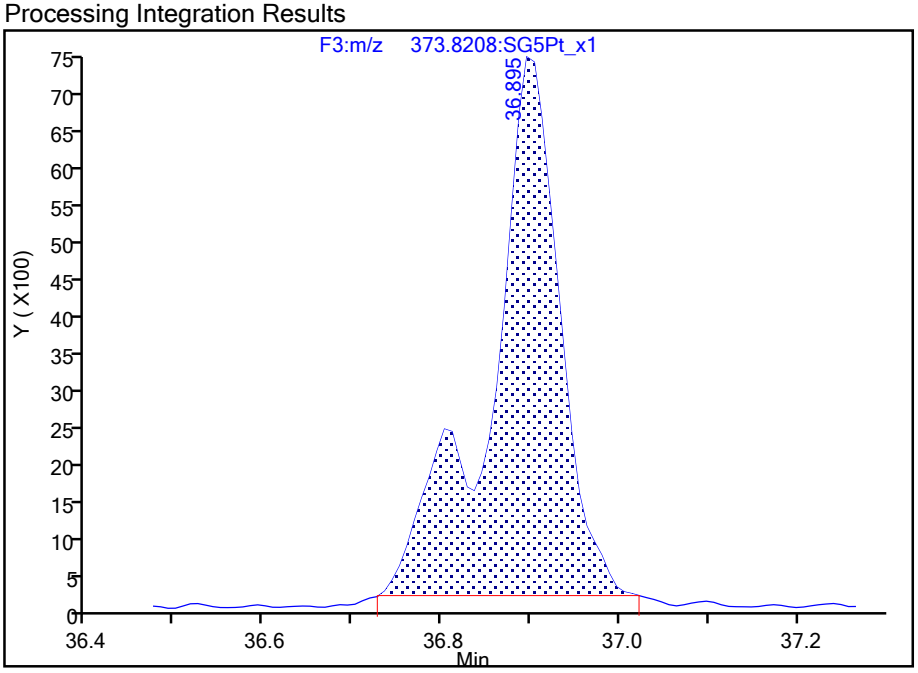

Manual Integration Results

RT: 36.80
Area: 7876
Amount: 3.611772
Amount Units: pg/ul

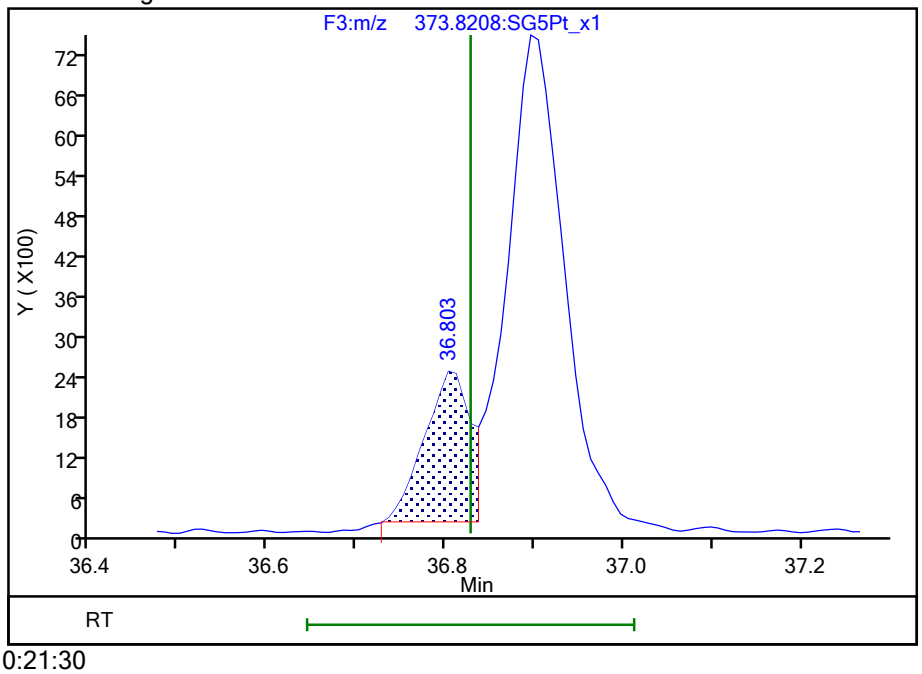

Reviewer: dadunj, 20-Aug-2021 10:21:30

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d				
Injection Date:	19-Aug-2021 07:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-4-B	Lab Sample ID:	320-76769-4		
Client ID:	11215702-072221-SS-SJSB080 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.11- 36.95)

Signal: 1

Processing Integration Results

Not Detected
RT: 33.11- 36.95

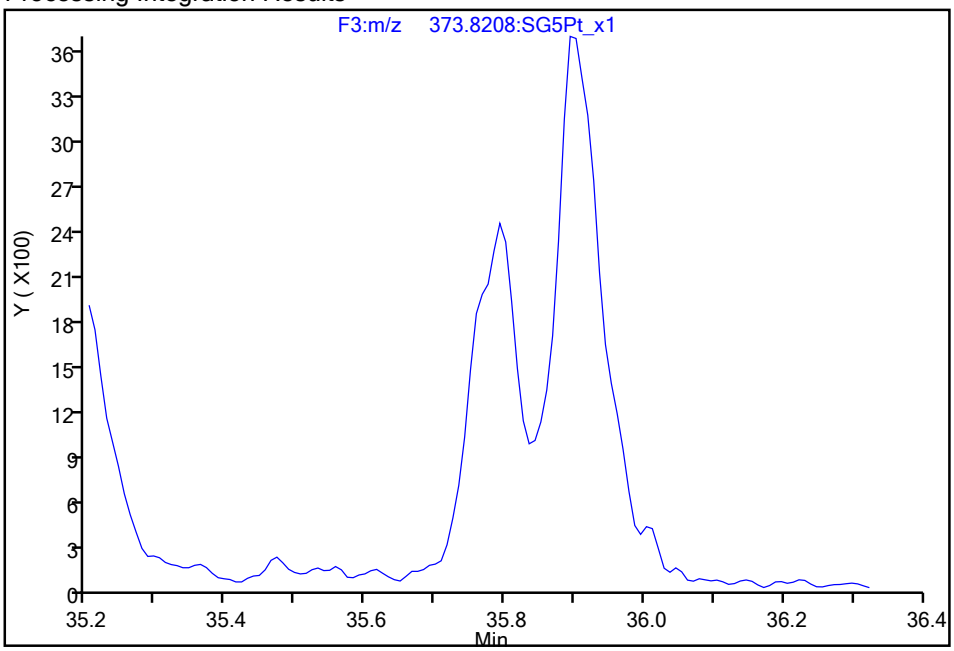

Manual Integration Results

RT = 35.793 Area = 9655 M

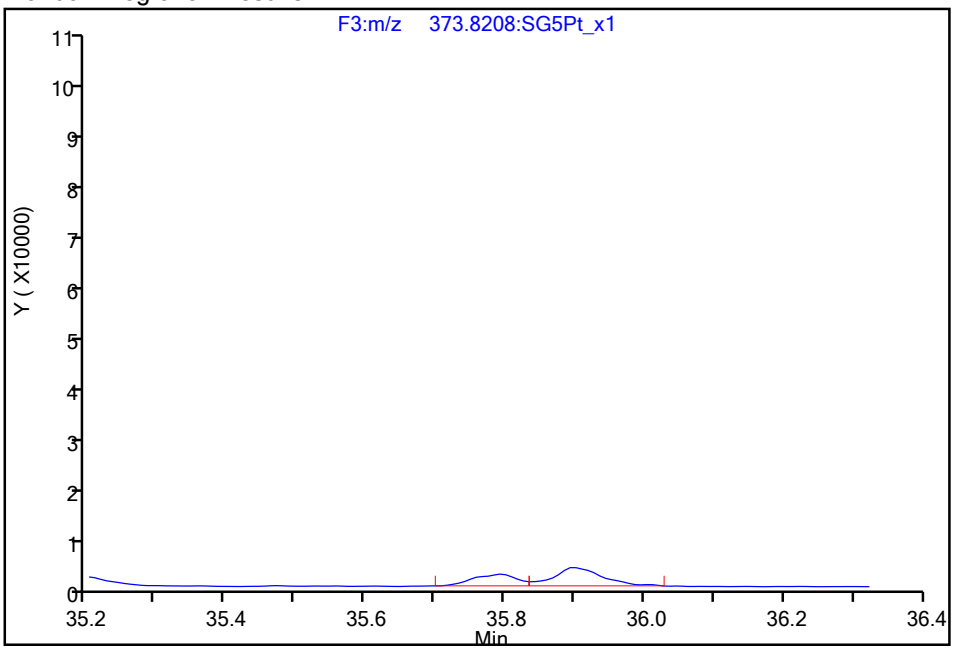

Reviewer: dadunj, 20-Aug-2021 10:21:41

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d				
Injection Date:	19-Aug-2021 07:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-4-B	Lab Sample ID:	320-76769-4		
Client ID:	11215702-072221-SS-SJSB080 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.11- 36.95)

Signal: 1

Processing Integration Results

RT = 36.895 Area = 39566

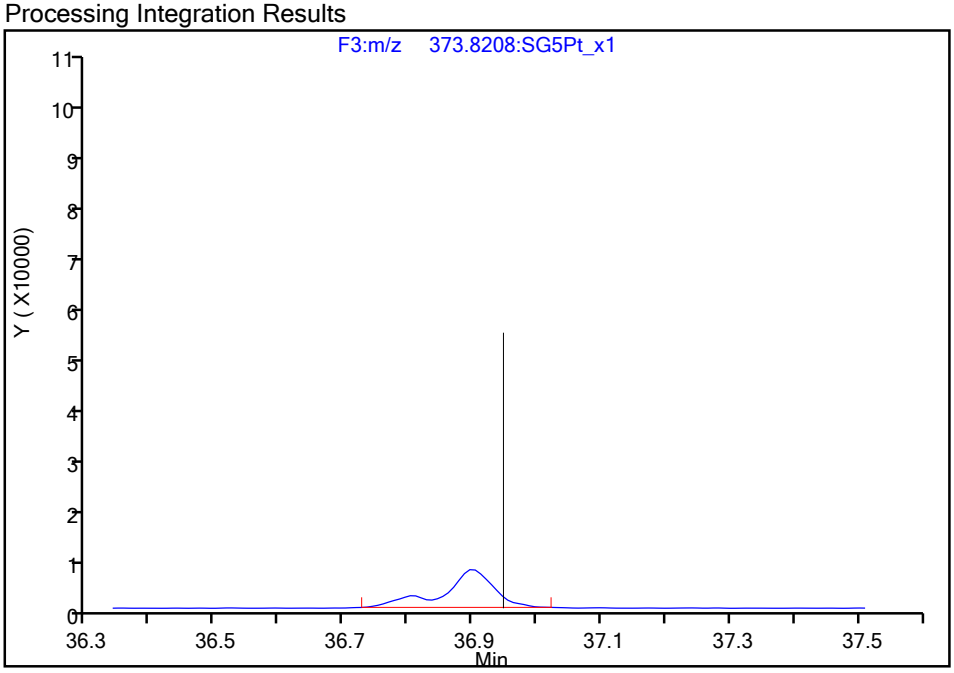

Manual Integration Results

RT = 36.895 Area = 31689 M

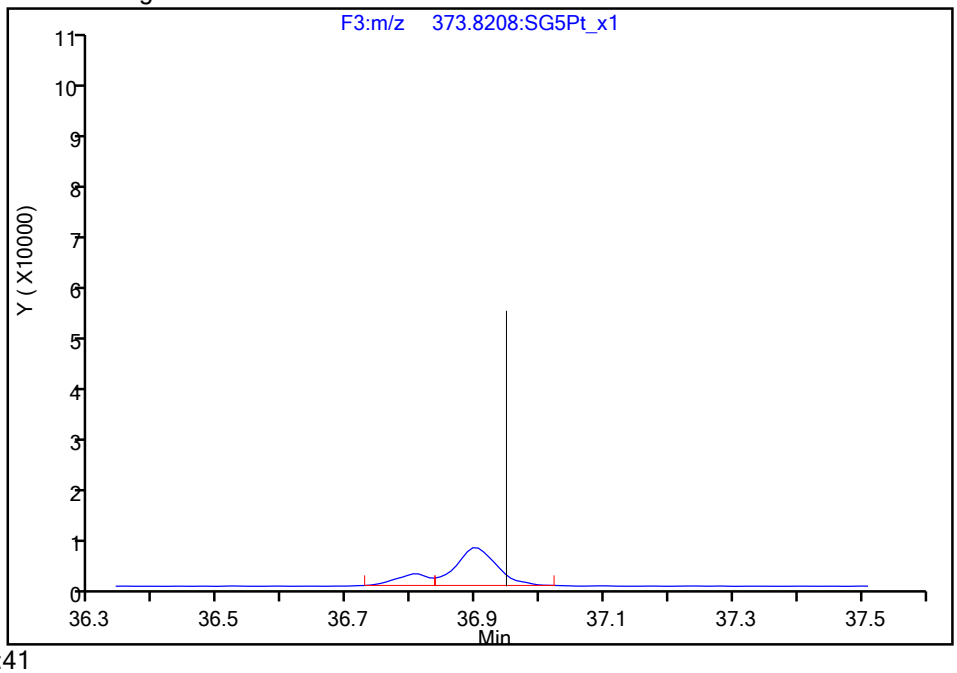

Reviewer: dadunj, 20-Aug-2021 10:21:41

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d				
Injection Date:	19-Aug-2021 07:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-4-B	Lab Sample ID:	320-76769-4		
Client ID:	11215702-072221-SS-SJSB080 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 36.25
Area: 1796
Amount: 1.219868
Amount Units: pg/ul

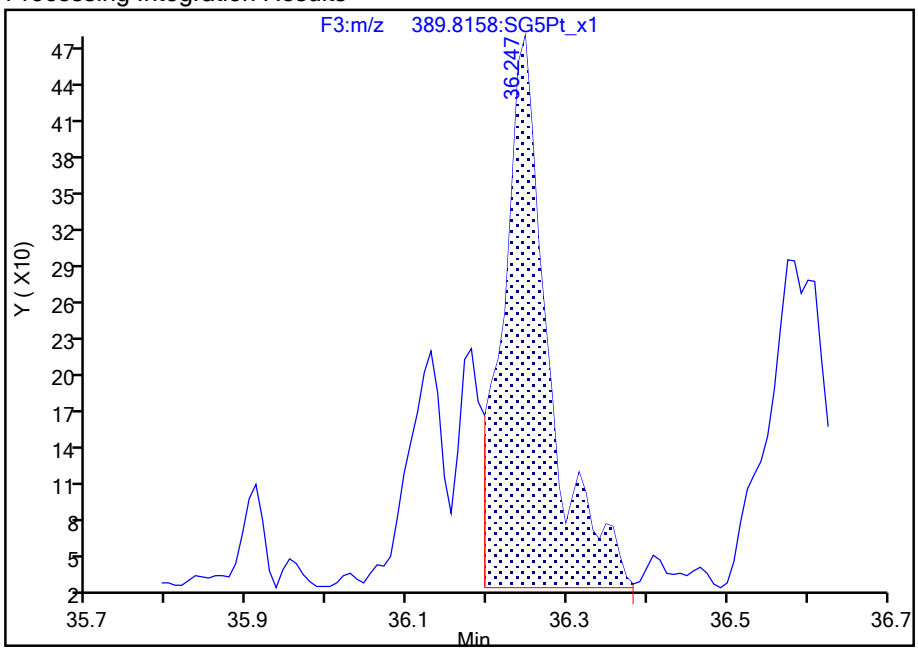

Manual Integration Results

RT: 36.13
Area: 545
Amount: 0.359587
Amount Units: pg/ul

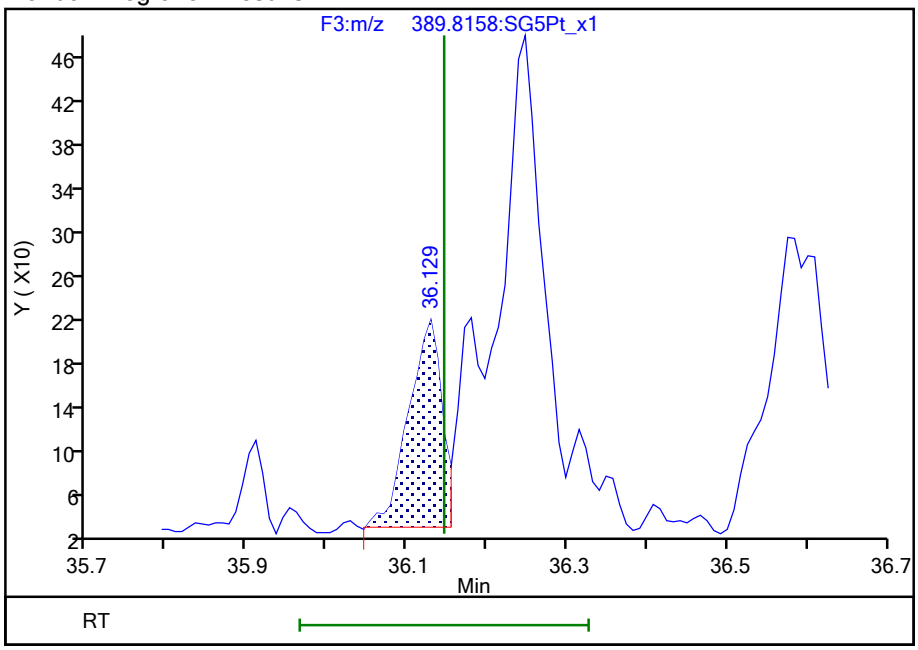

Reviewer: dadunj, 20-Aug-2021 10:22:00

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d				
Injection Date:	19-Aug-2021 07:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-4-B	Lab Sample ID:	320-76769-4		
Client ID:	11215702-072221-SS-SJSB080 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 36.22
Area: 2587
Amount: 1.219868
Amount Units: pg/ul

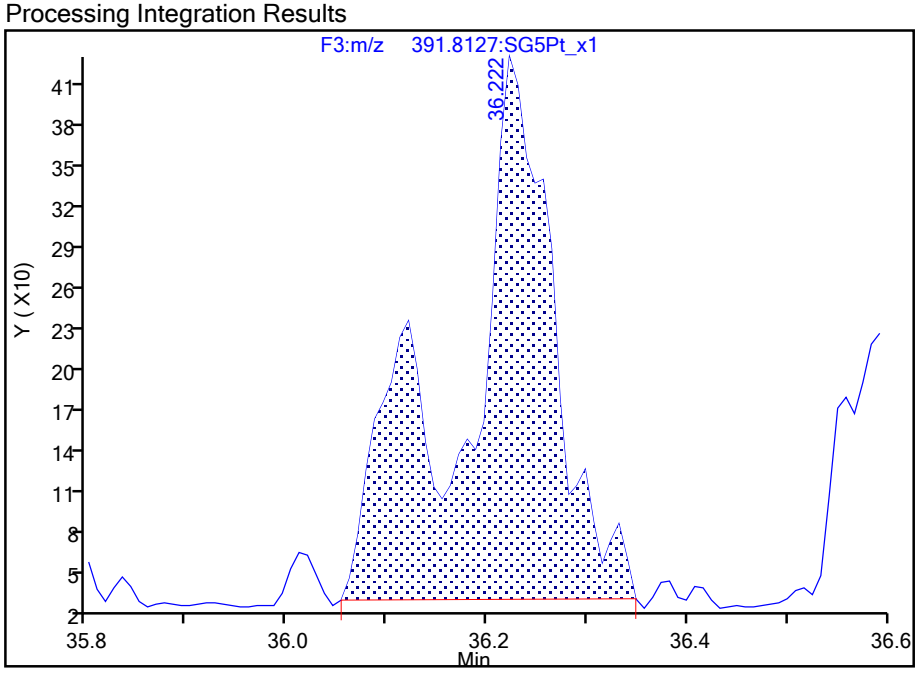

Manual Integration Results

RT: 36.12
Area: 747
Amount: 0.359587
Amount Units: pg/ul

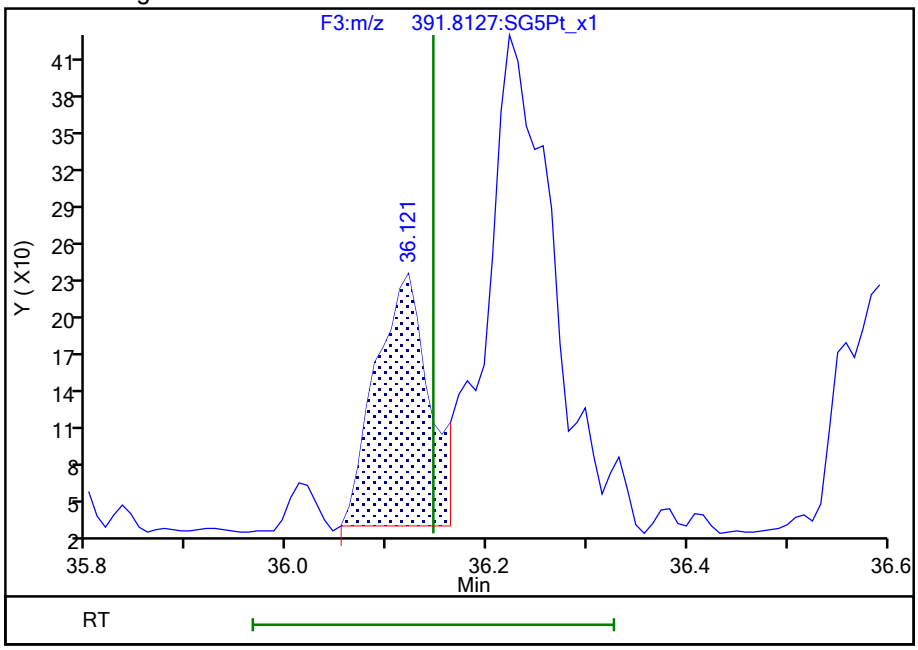

Reviewer: dadunj, 20-Aug-2021 10:22:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d				
Injection Date:	19-Aug-2021 07:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-4-B	Lab Sample ID:	320-76769-4		
Client ID:	11215702-072221-SS-SJSB080 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 36.25
Area: 1796
Amount: 1.293645
Amount Units: pg/ul

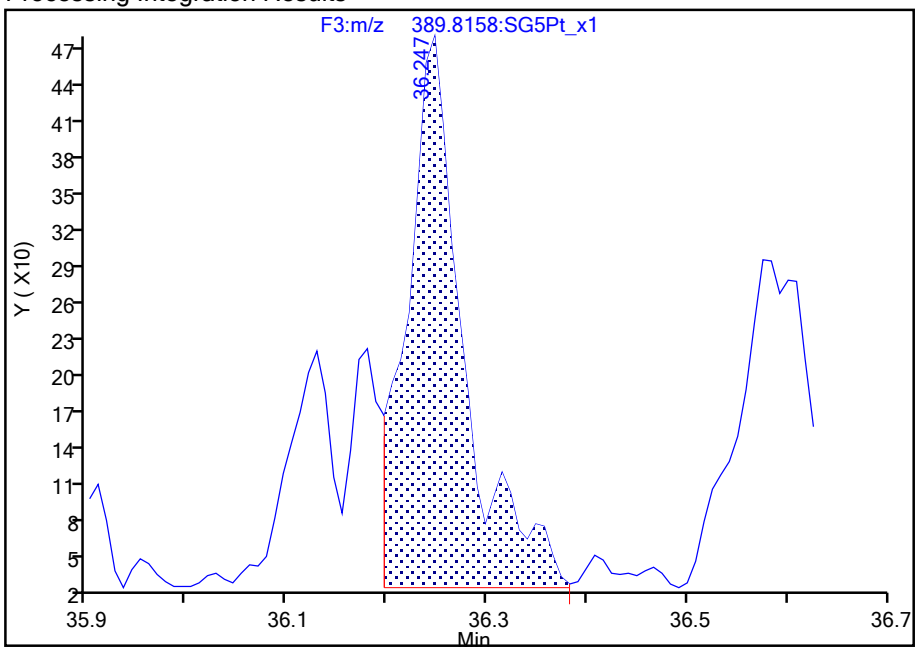

Manual Integration Results

RT: 36.25
Area: 2099
Amount: 1.163484
Amount Units: pg/ul

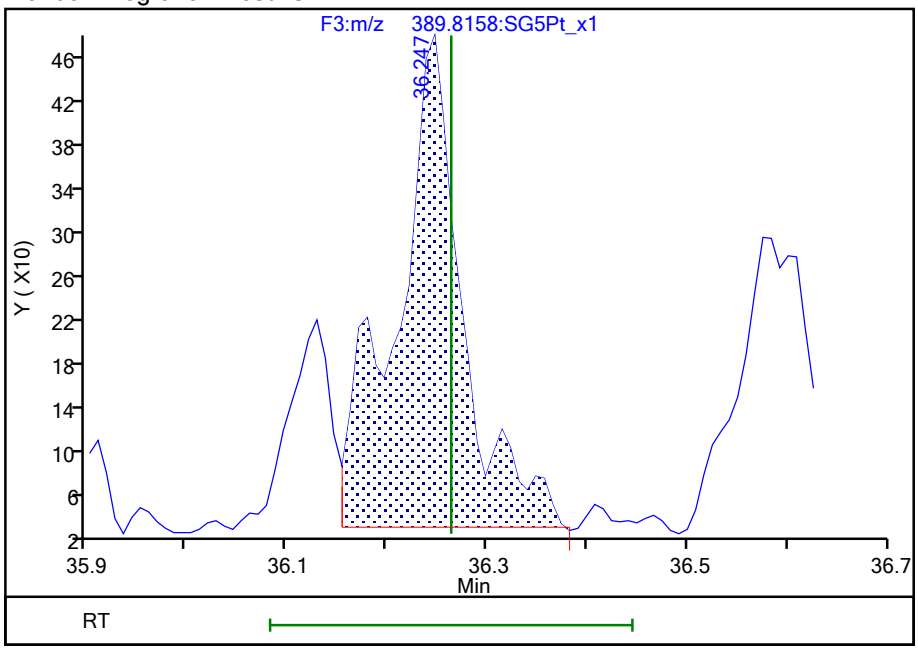

Reviewer: dadunj, 20-Aug-2021 10:22:00

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d				
Injection Date:	19-Aug-2021 07:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-4-B	Lab Sample ID:	320-76769-4		
Client ID:	11215702-072221-SS-SJSB080 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 36.22
Area: 2587
Amount: 1.293645
Amount Units: pg/ul

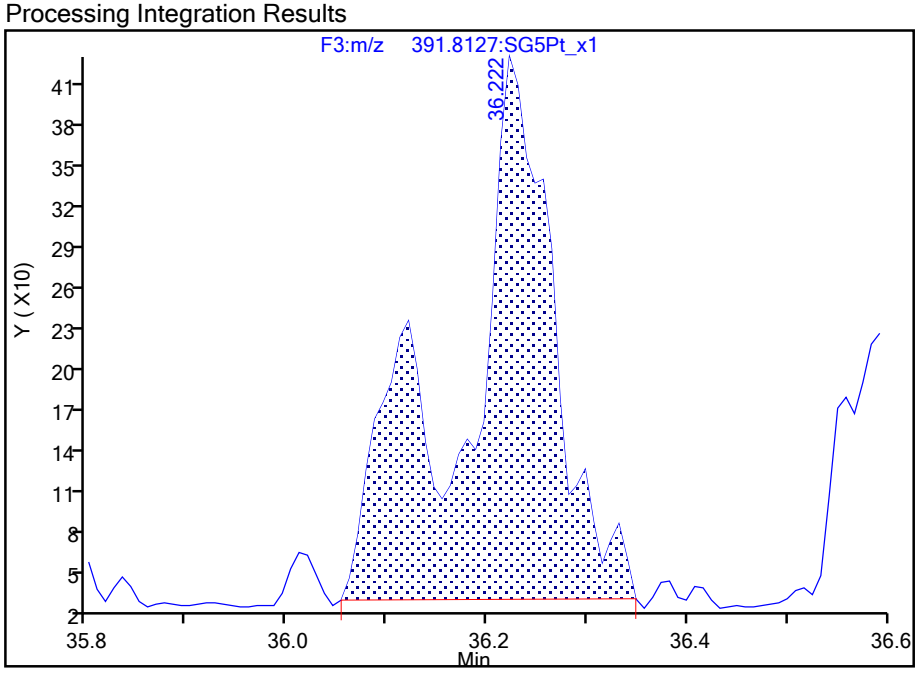

Manual Integration Results

RT: 36.22
Area: 1843
Amount: 1.163484
Amount Units: pg/ul

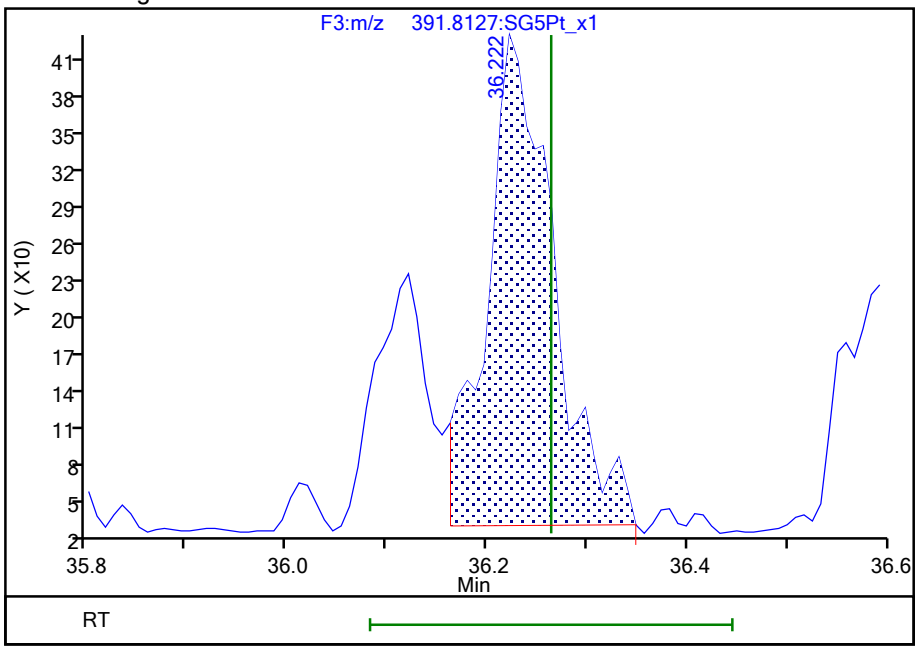

Reviewer: dadunj, 20-Aug-2021 10:22:03
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d				
Injection Date:	19-Aug-2021 07:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-4-B	Lab Sample ID:	320-76769-4		
Client ID:	11215702-072221-SS-SJSB080 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.19- 36.59)

Signal: 1

Processing Integration Results

RT = 35.346 Area = 7711

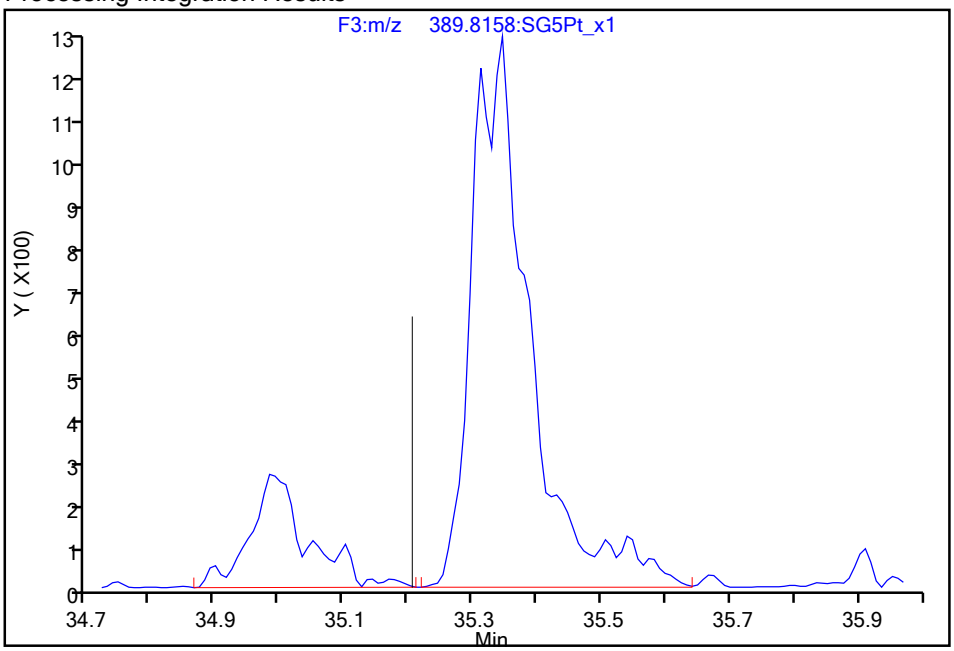

Manual Integration Results

RT = 35.346 Area = 7142 M

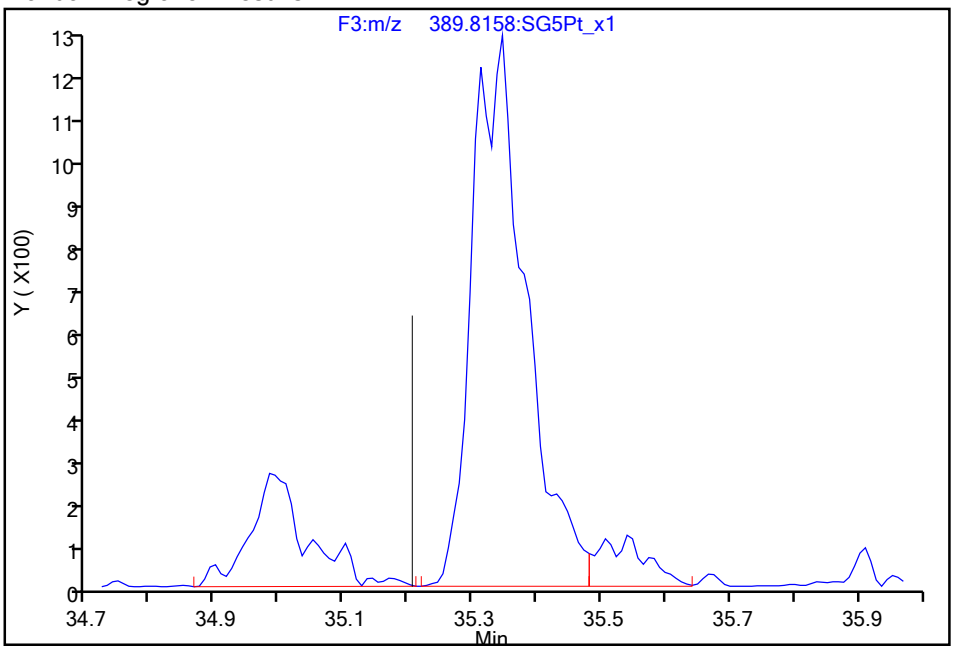

Reviewer: dadunj, 20-Aug-2021 10:22:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 20-Aug-2021 10:23:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

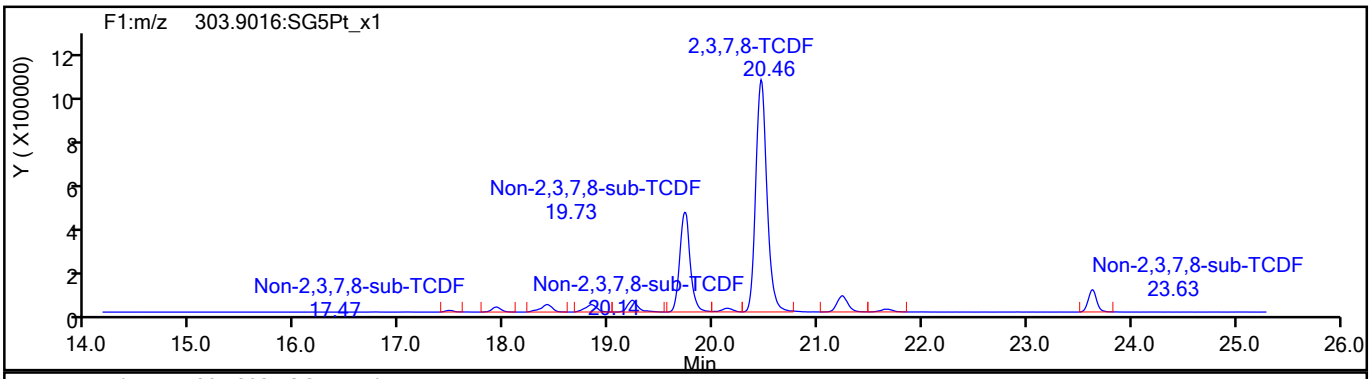

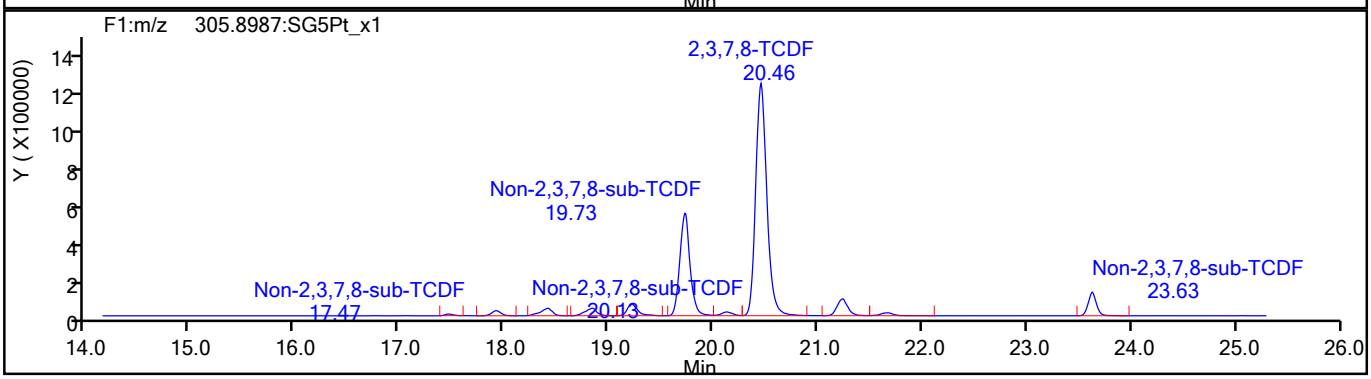

TCDF Standards

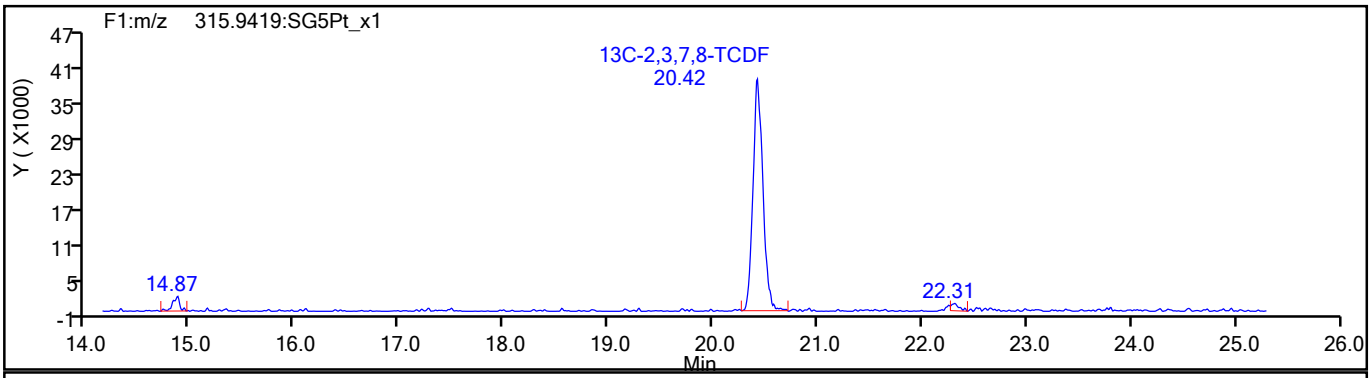

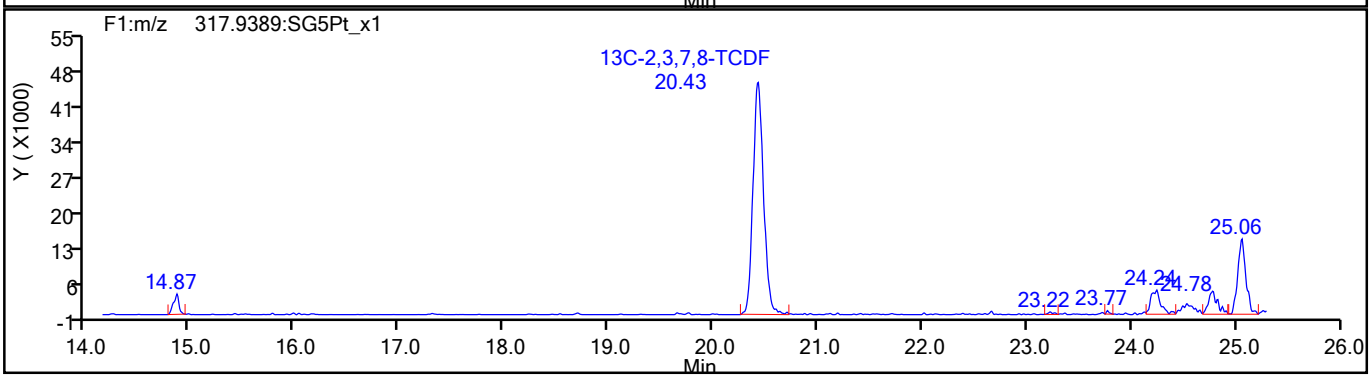

774710

Report Date: 20-Aug-2021 10:23:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

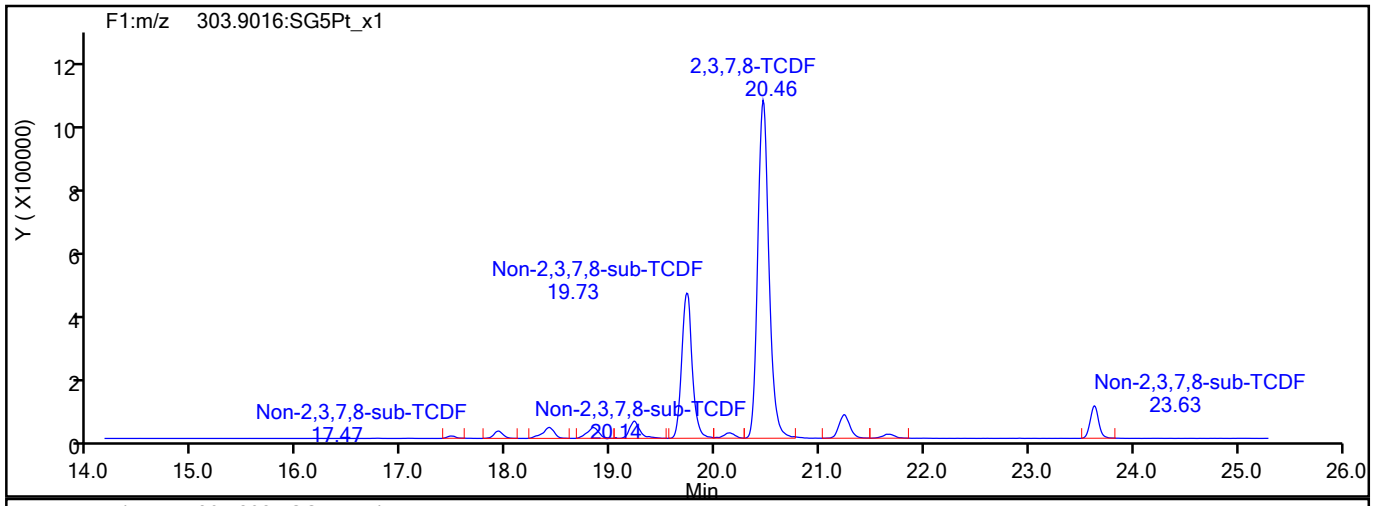

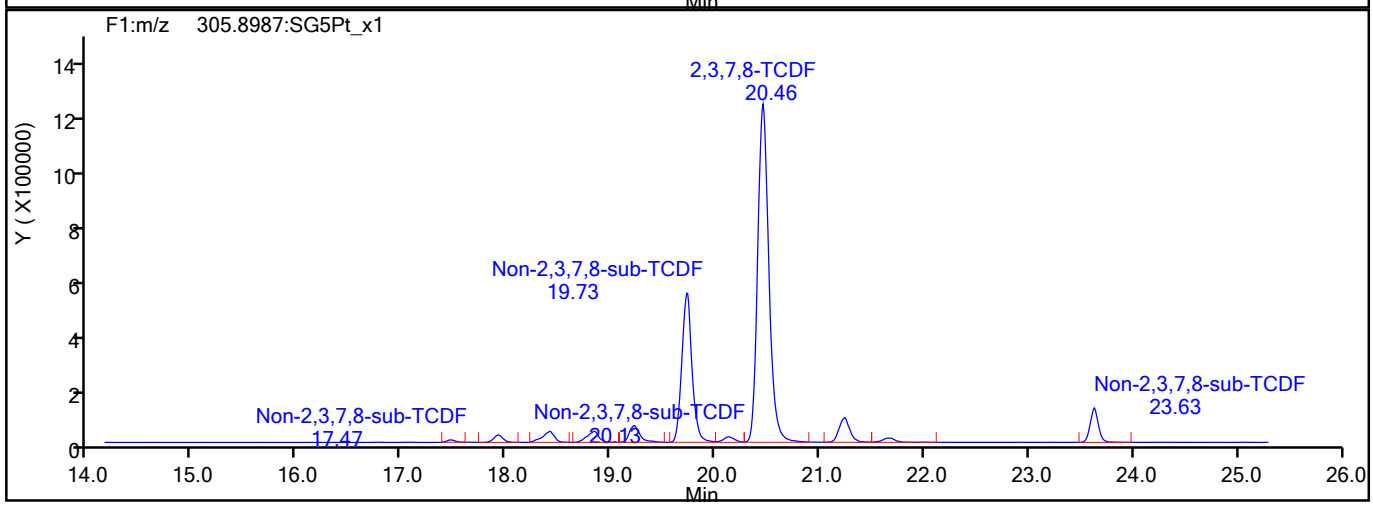

TCDF Interference Mass

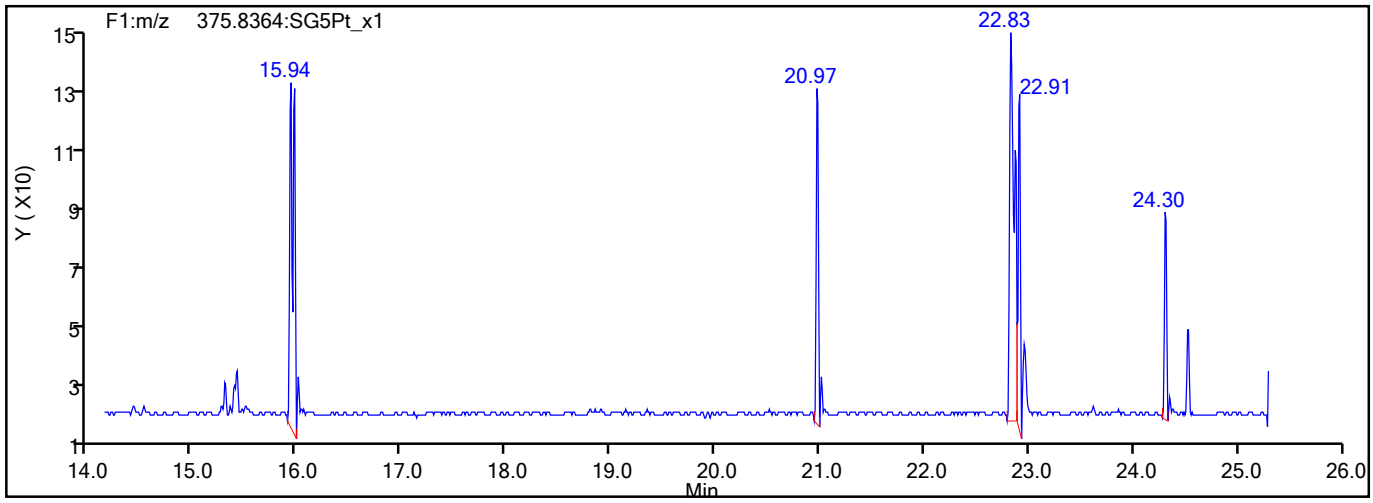

774711

Report Date: 20-Aug-2021 10:23:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

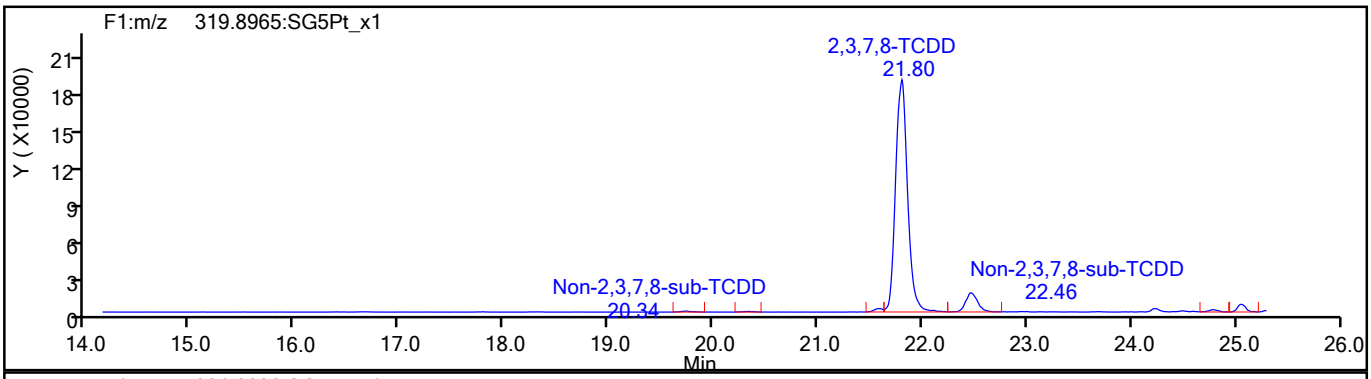

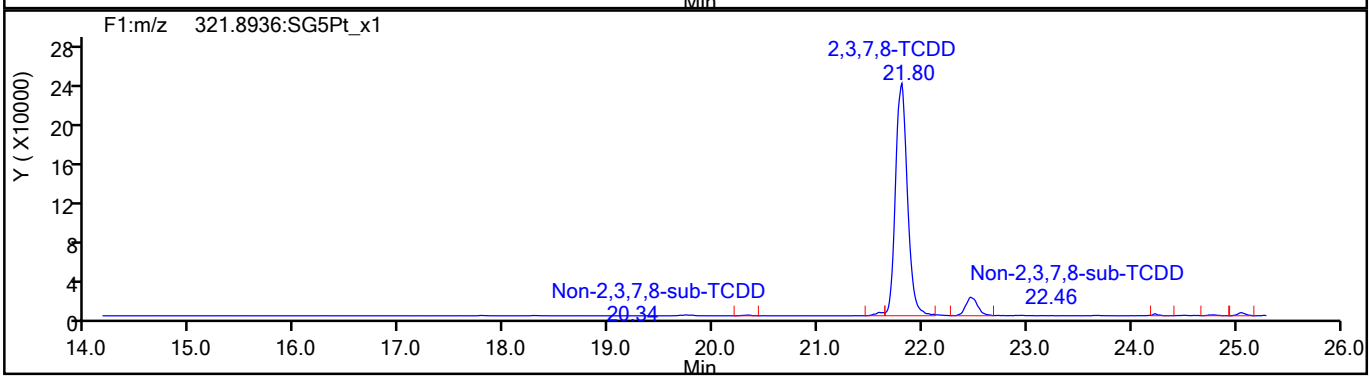

TCDD Standards

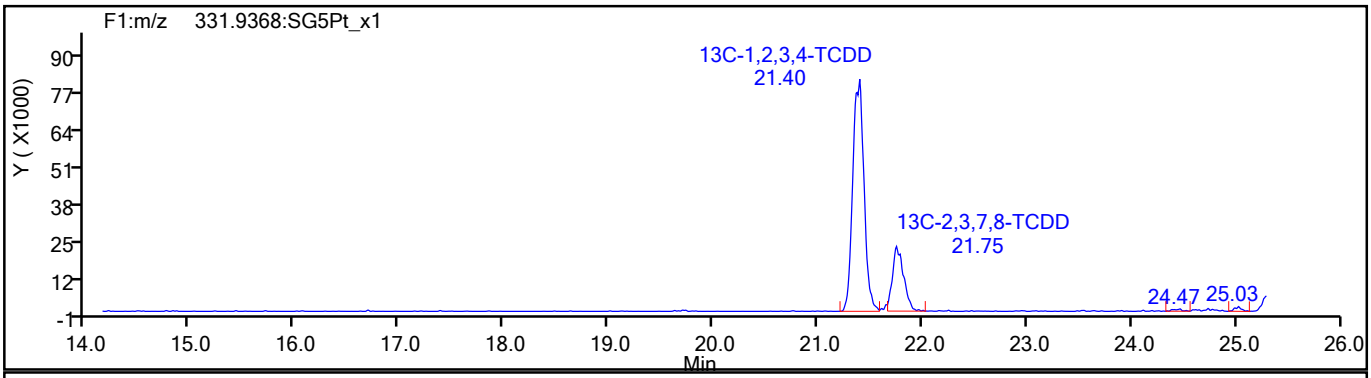

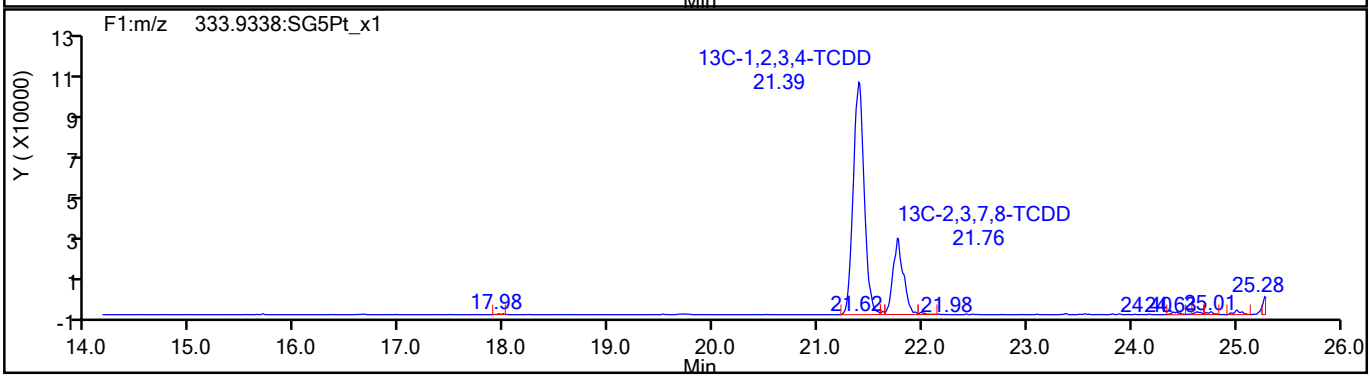

774712

Report Date: 20-Aug-2021 10:23:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

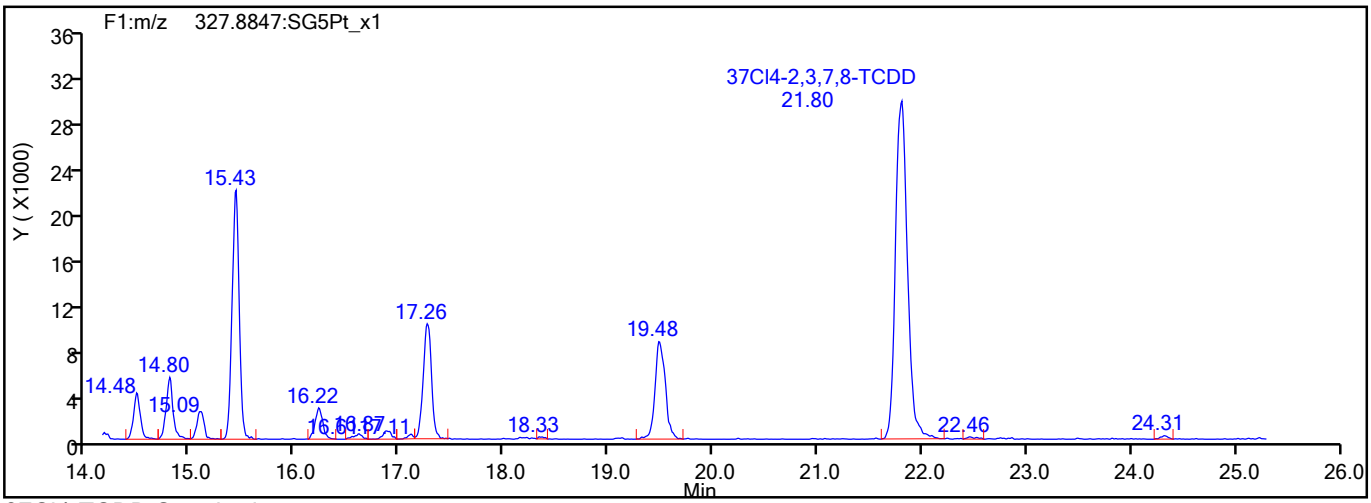

37Cl4-TCDD Standards

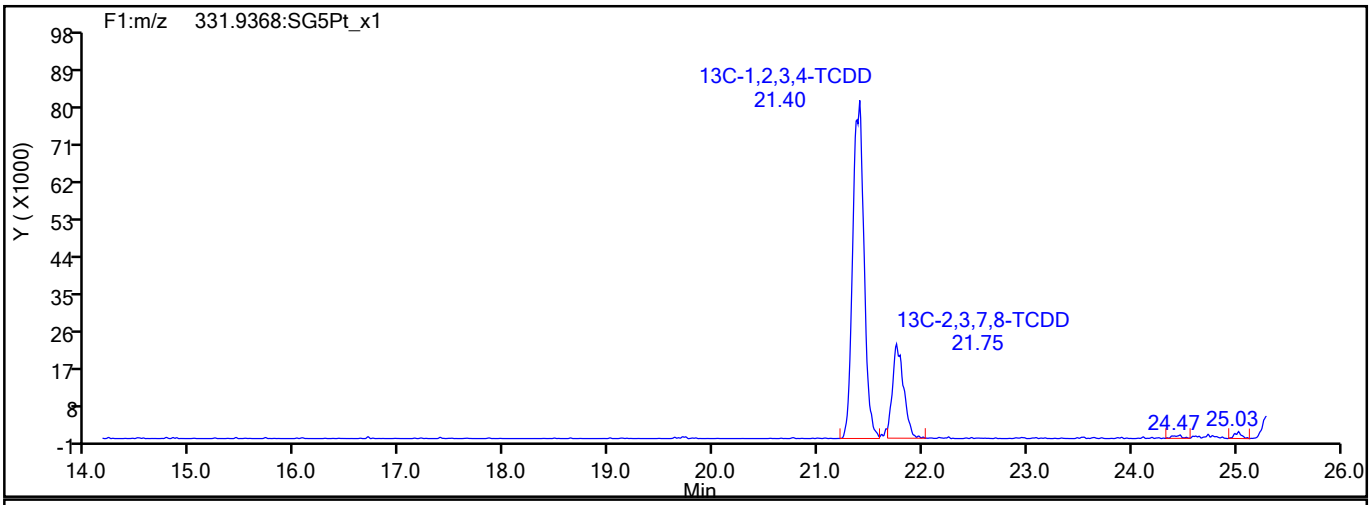

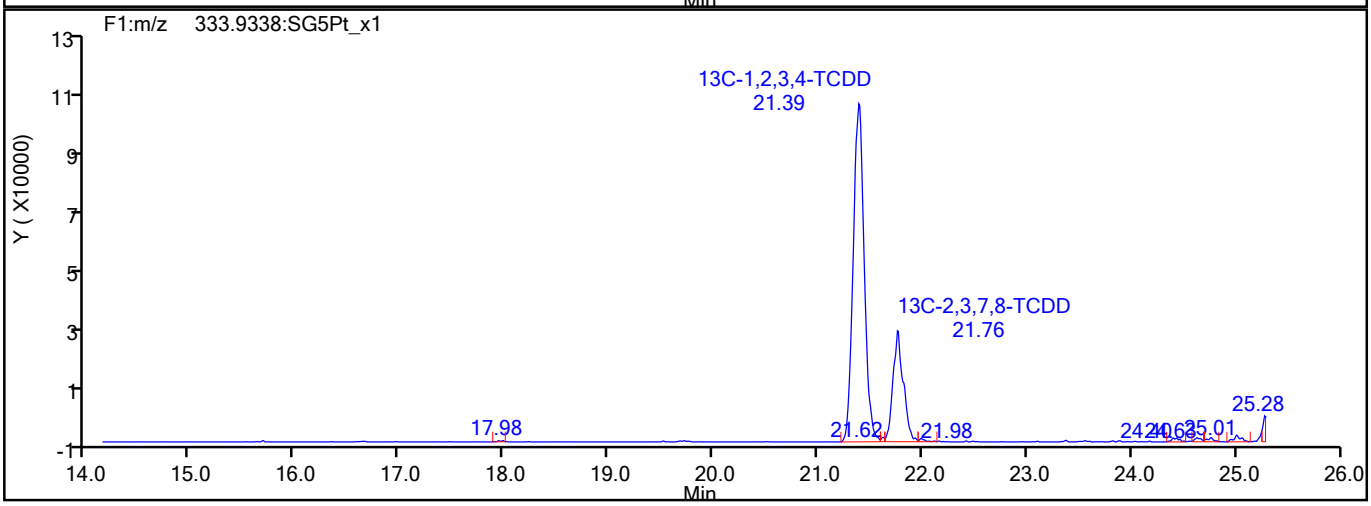

774713

Report Date: 20-Aug-2021 10:23:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

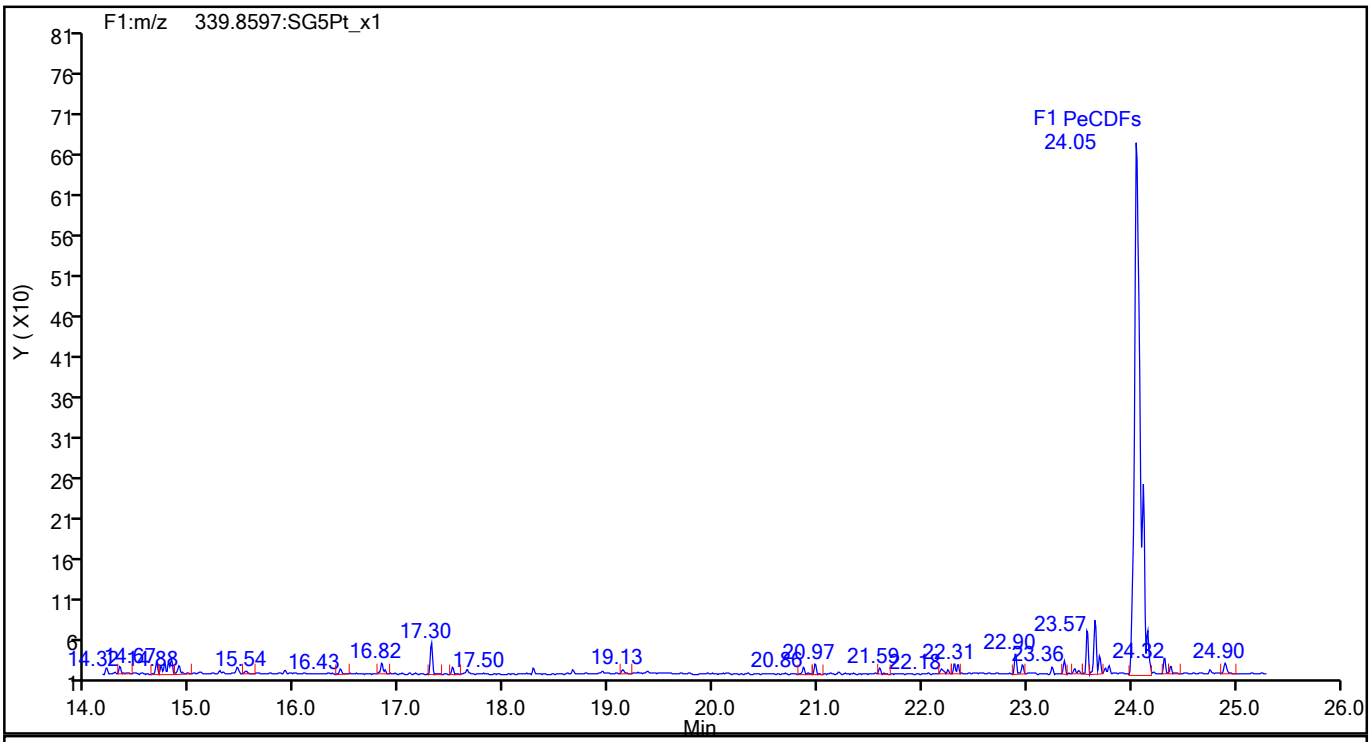

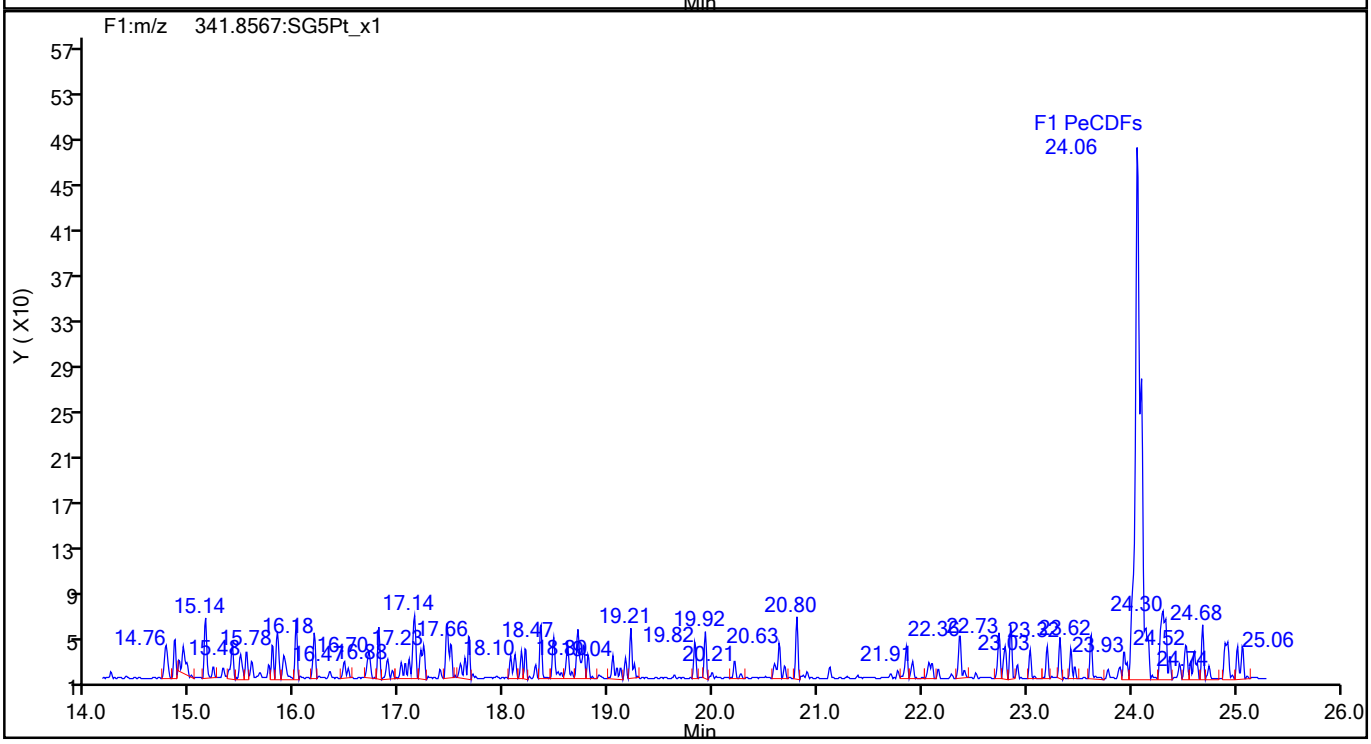

774714

Report Date: 20-Aug-2021 10:23:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

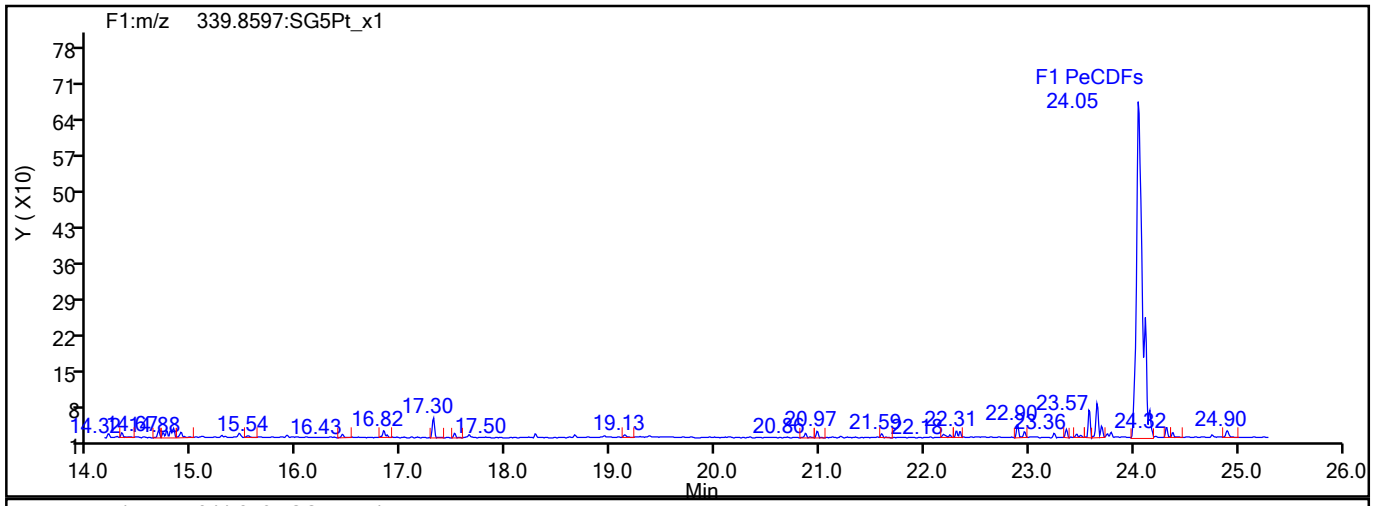

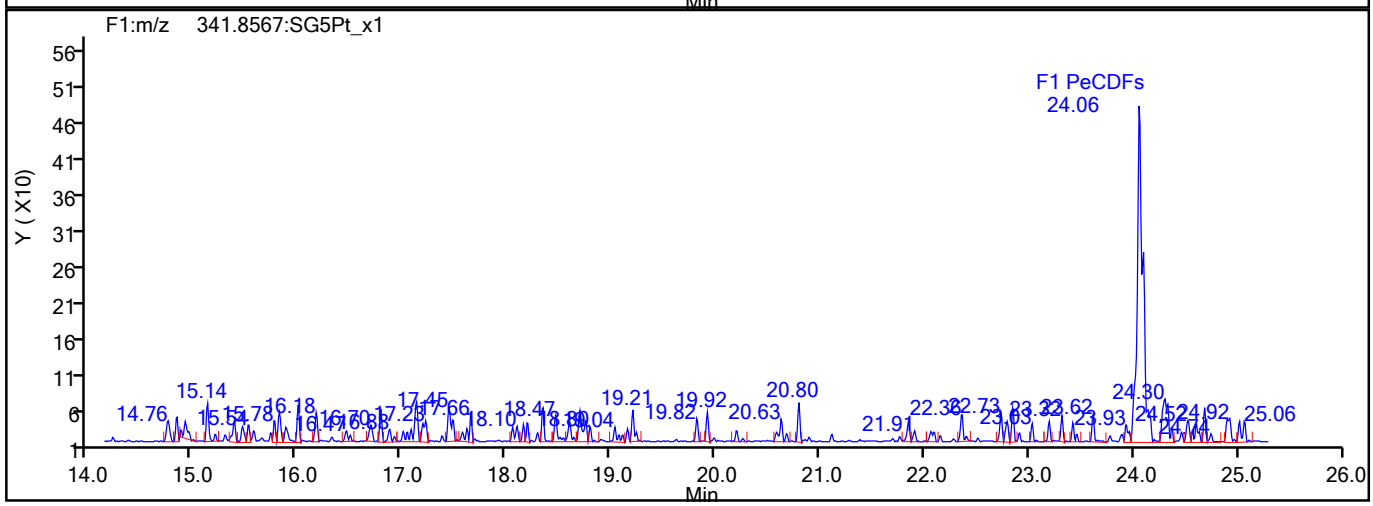

F1 PeCDFs Interference Mass

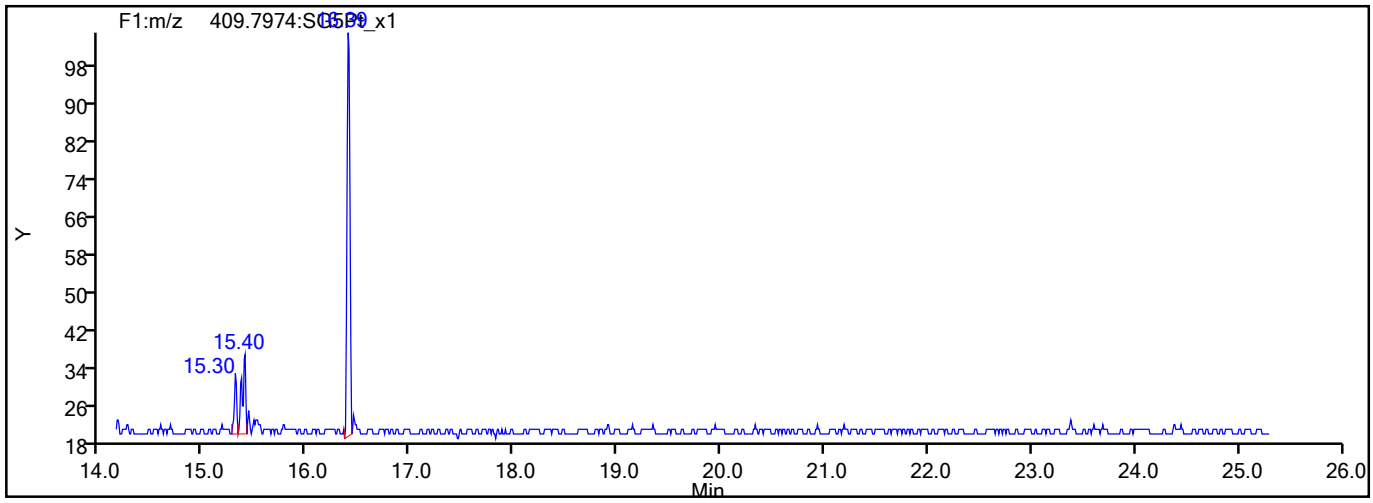

774715

Report Date: 20-Aug-2021 10:23:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

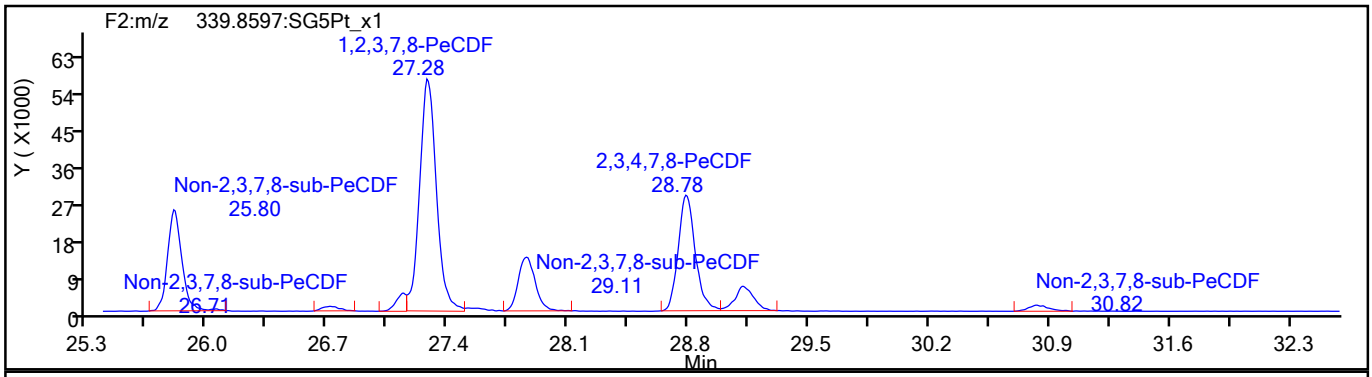

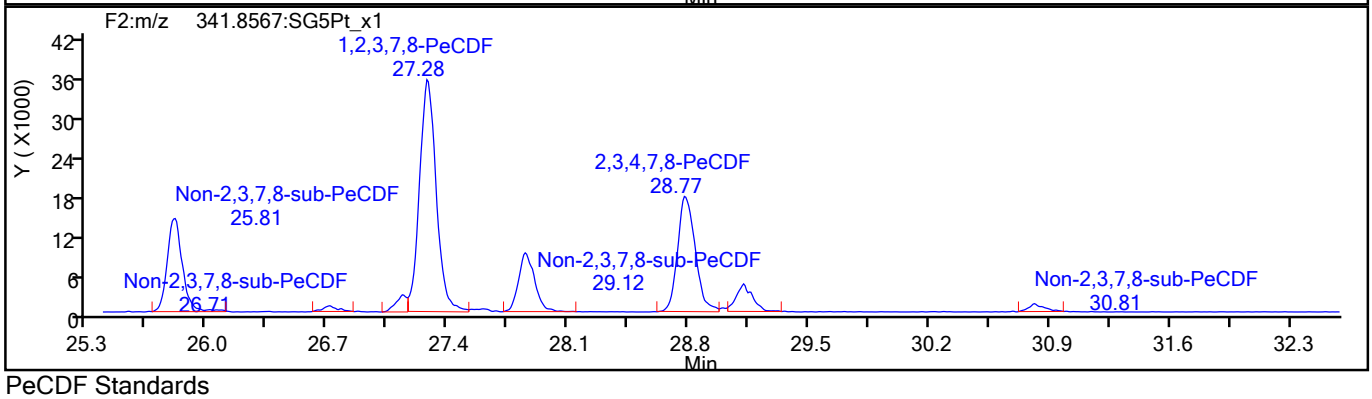

PeCDF Standards

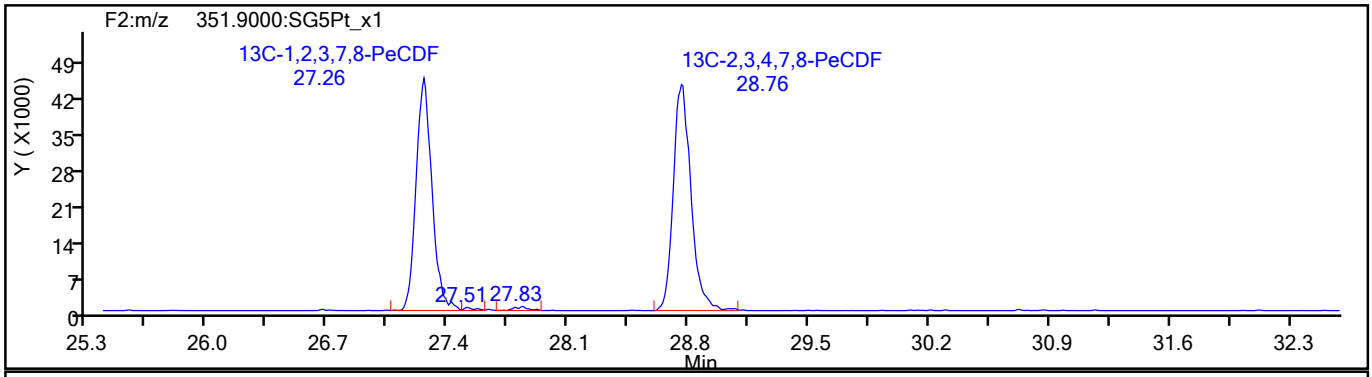

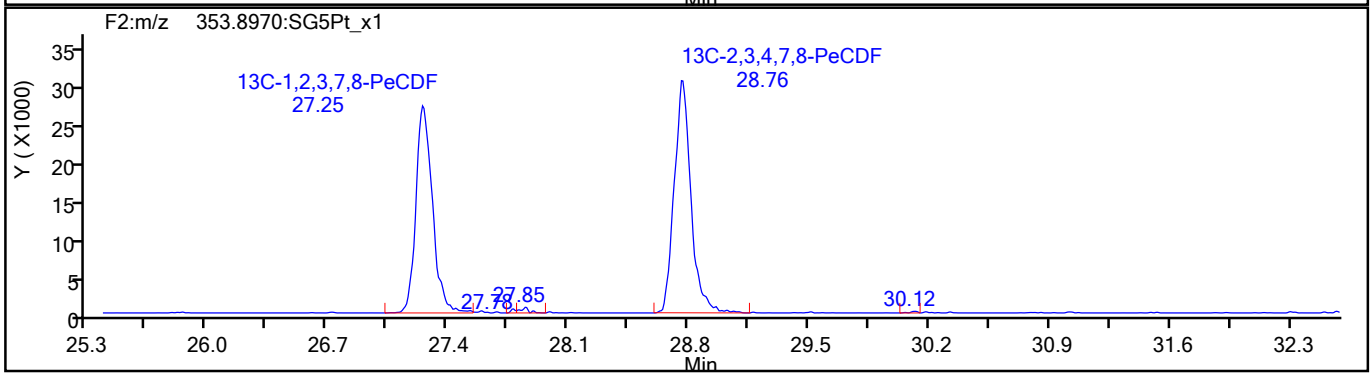

774716

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

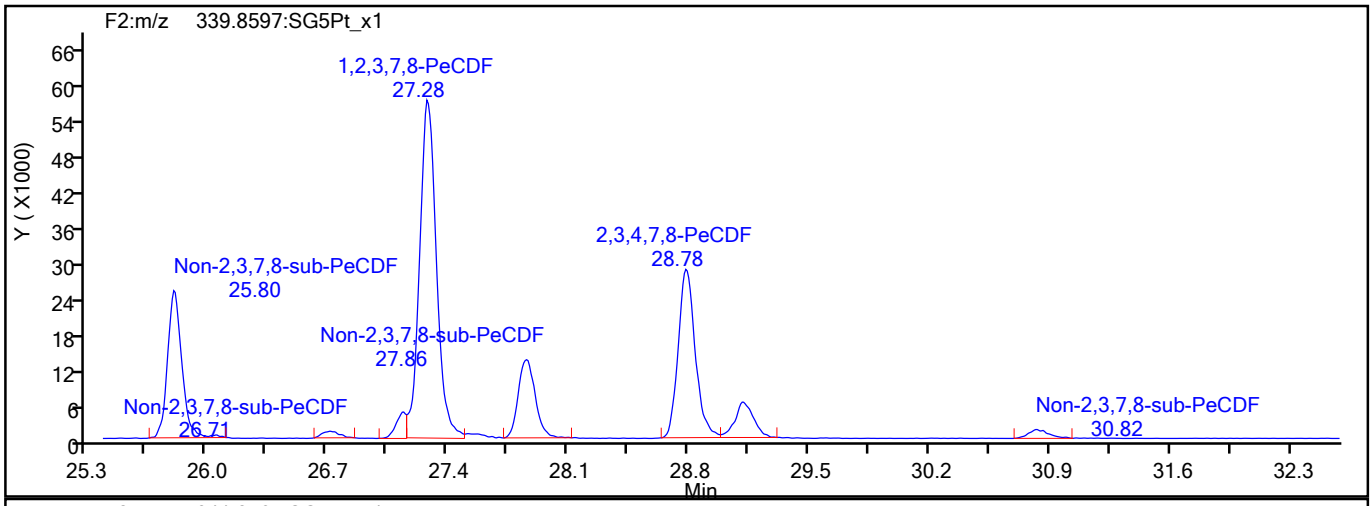

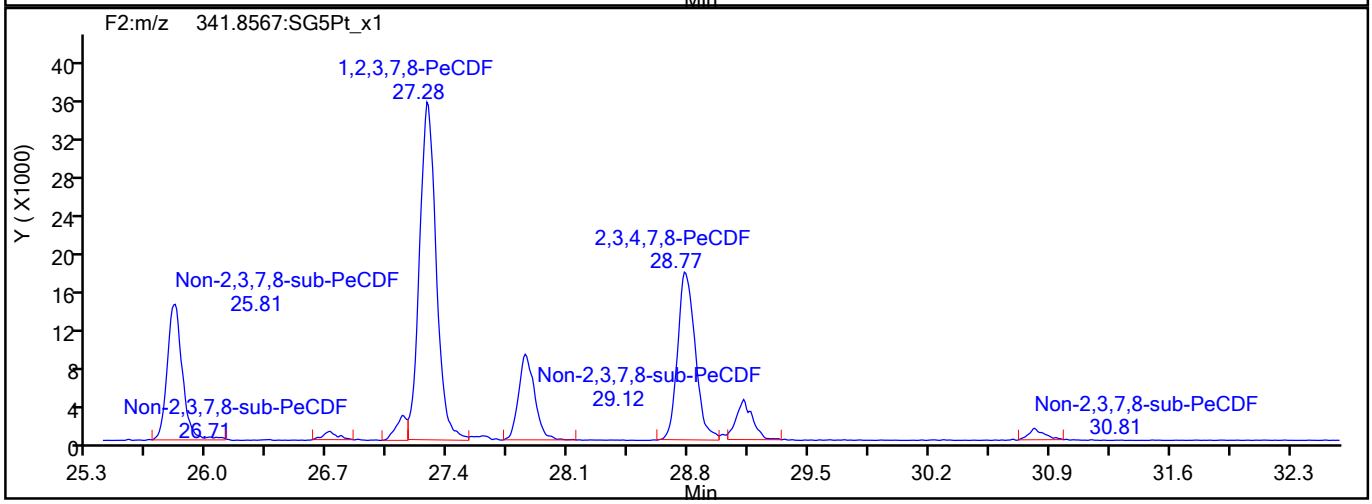

PeCDF Interference Mass

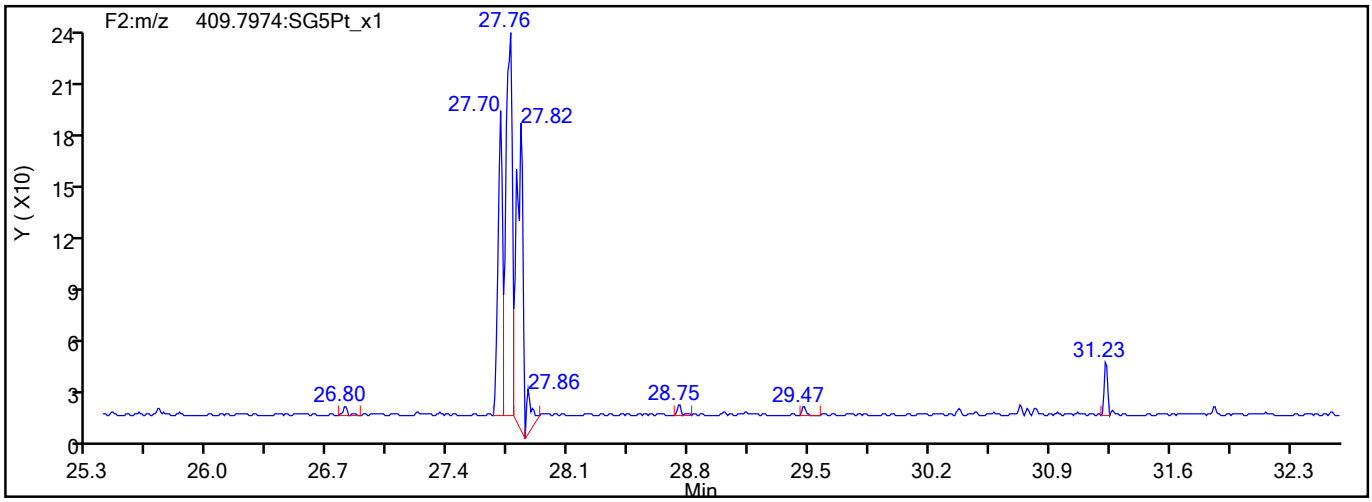

774717

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

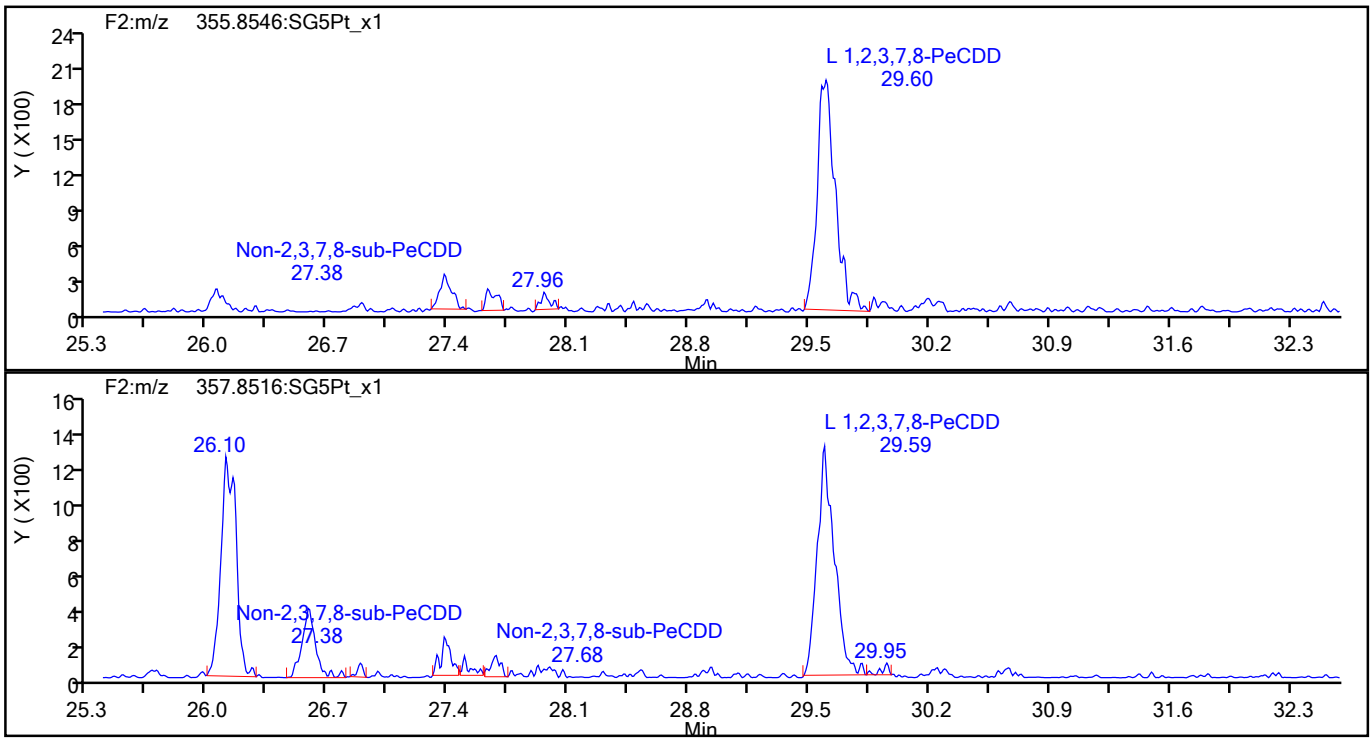

PeCDD Standards

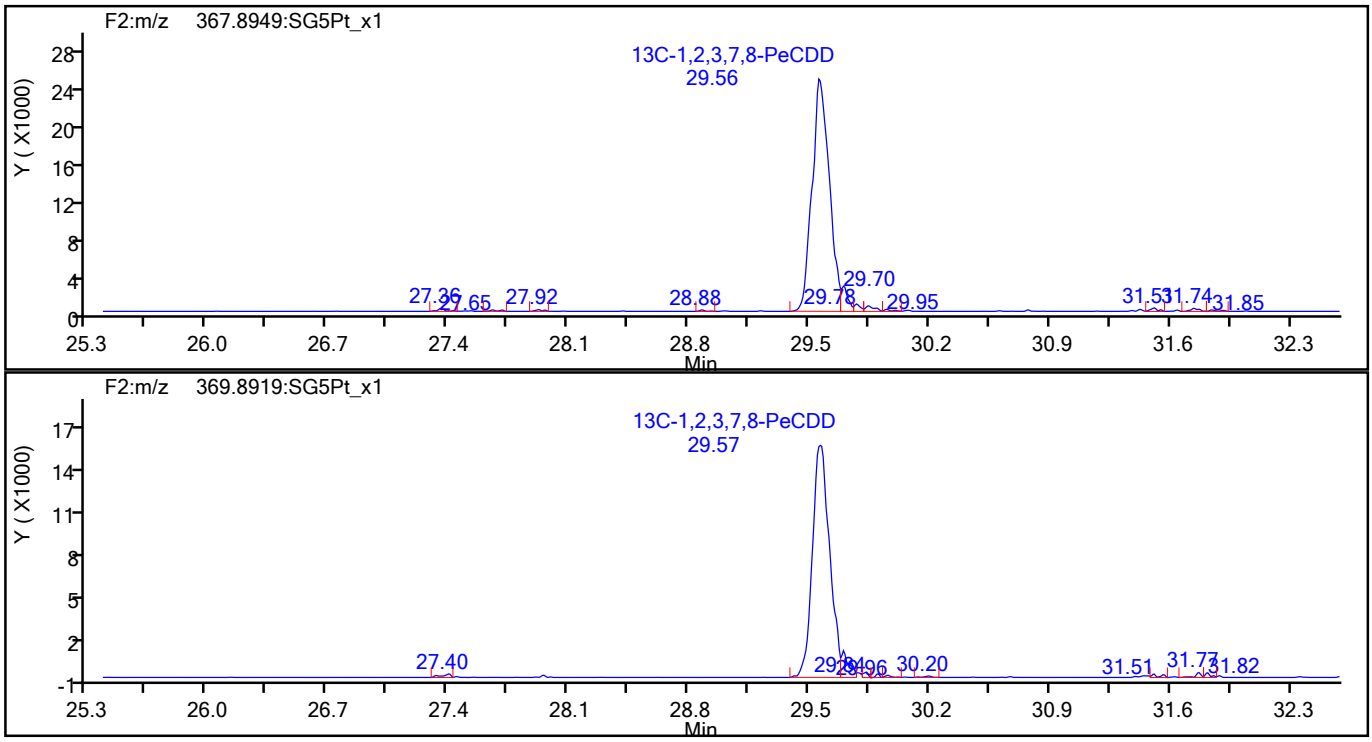

774718

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

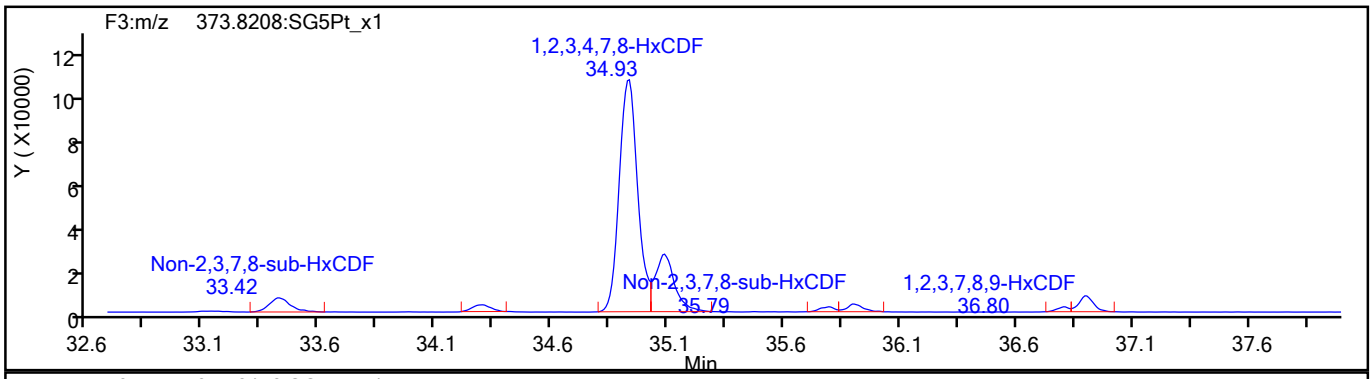

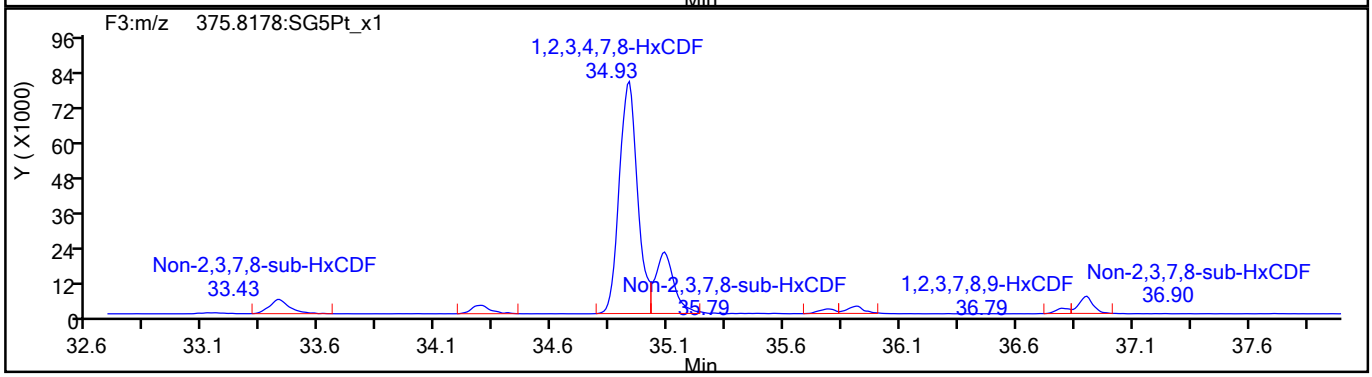

HxCDF Standards

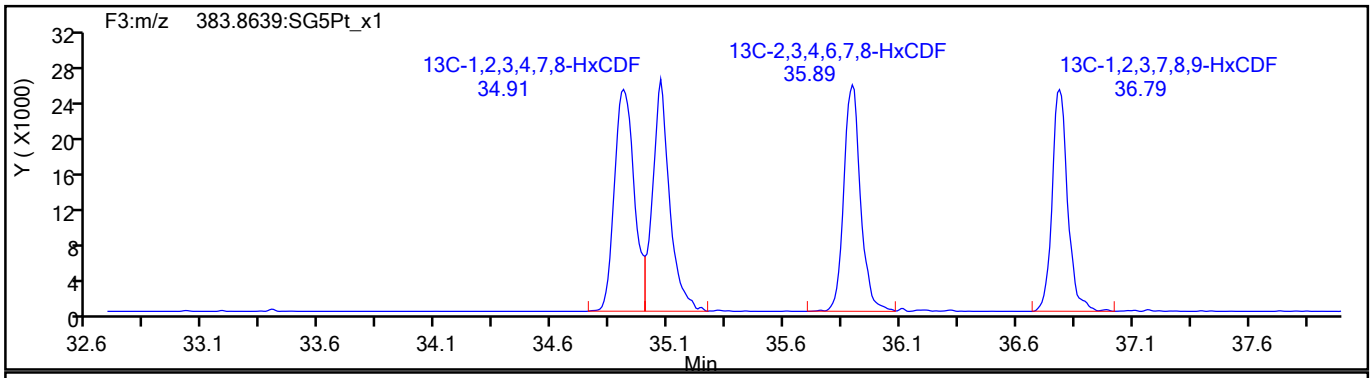

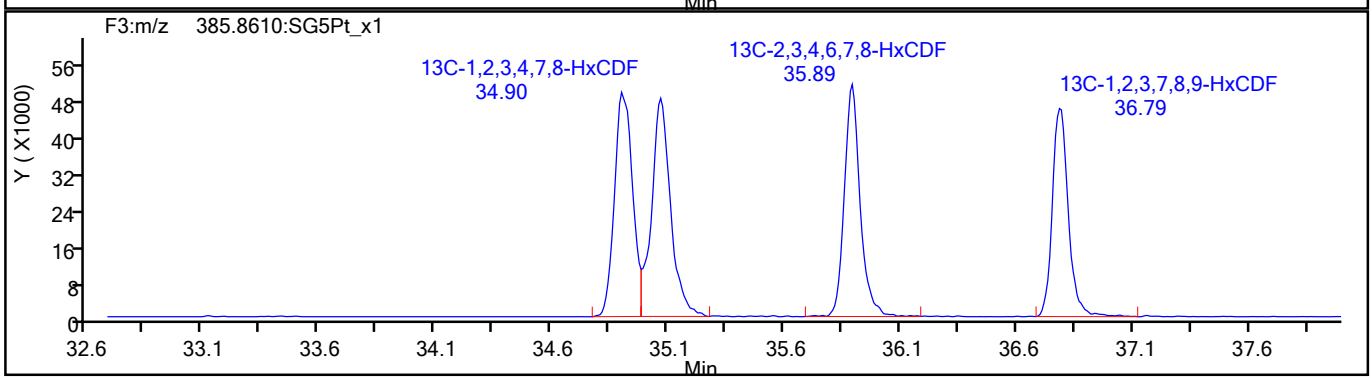

774719

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

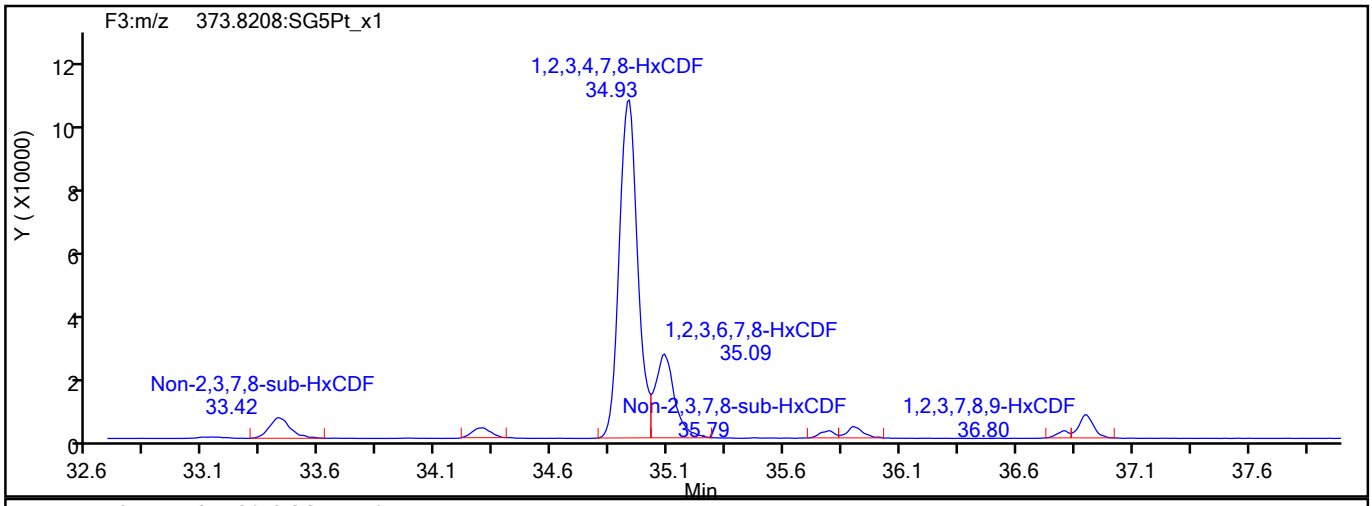

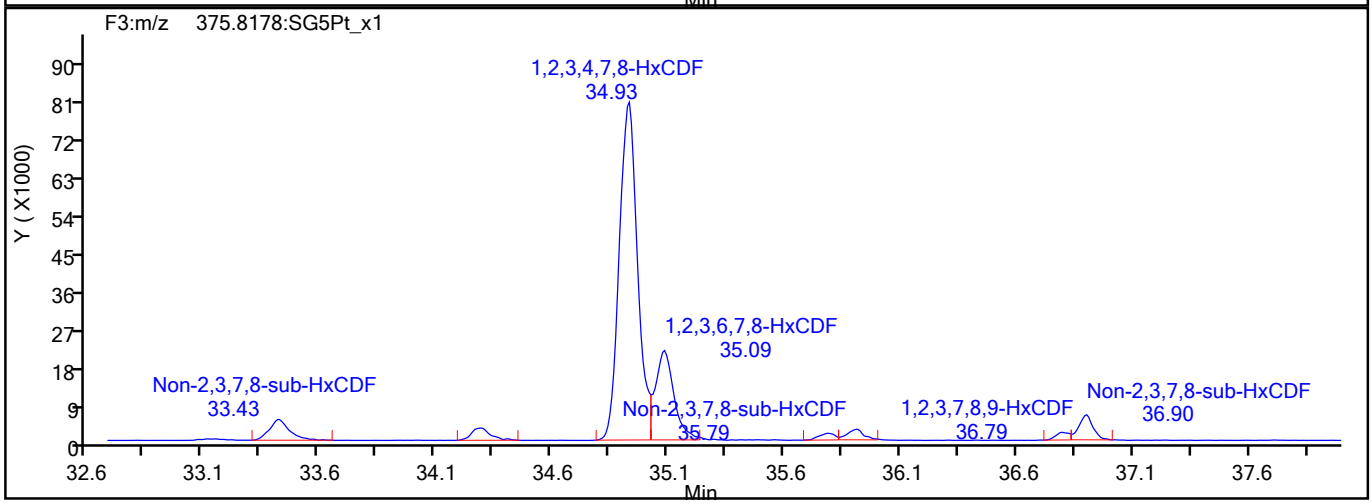

HxCDF Interference Mass

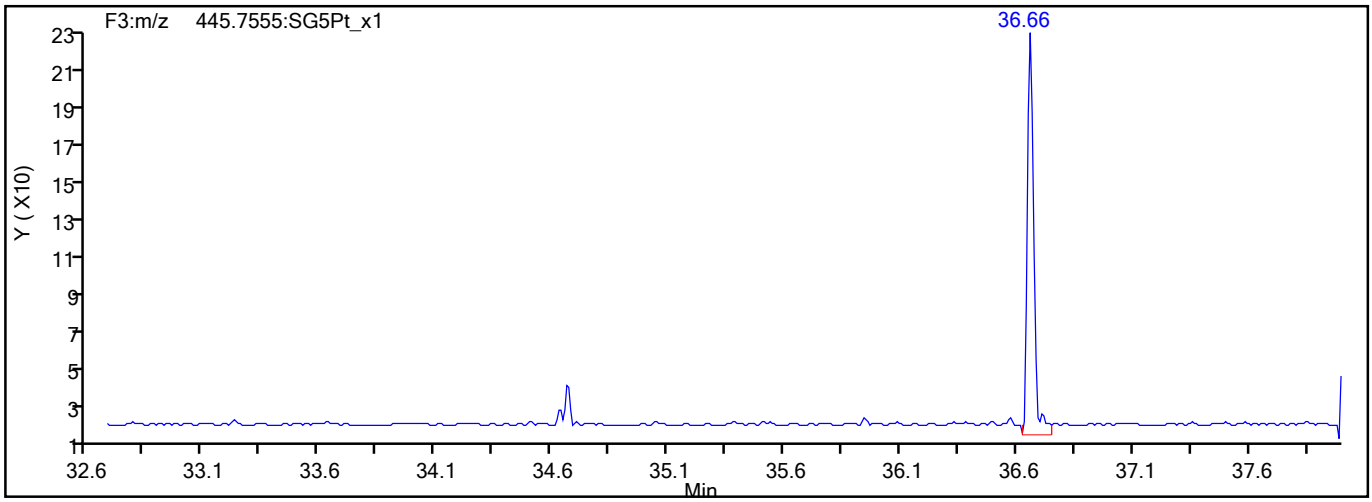

774720

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

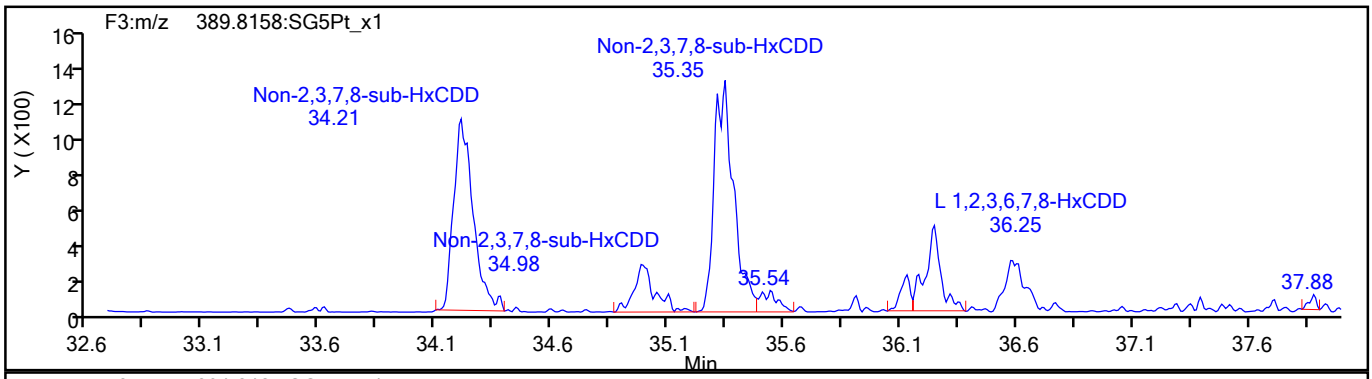

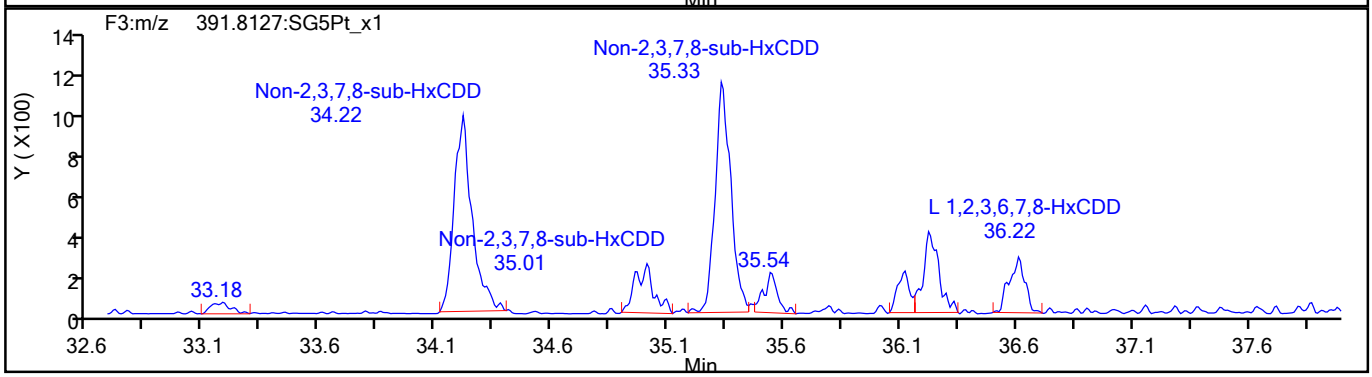

HxCDD Standards

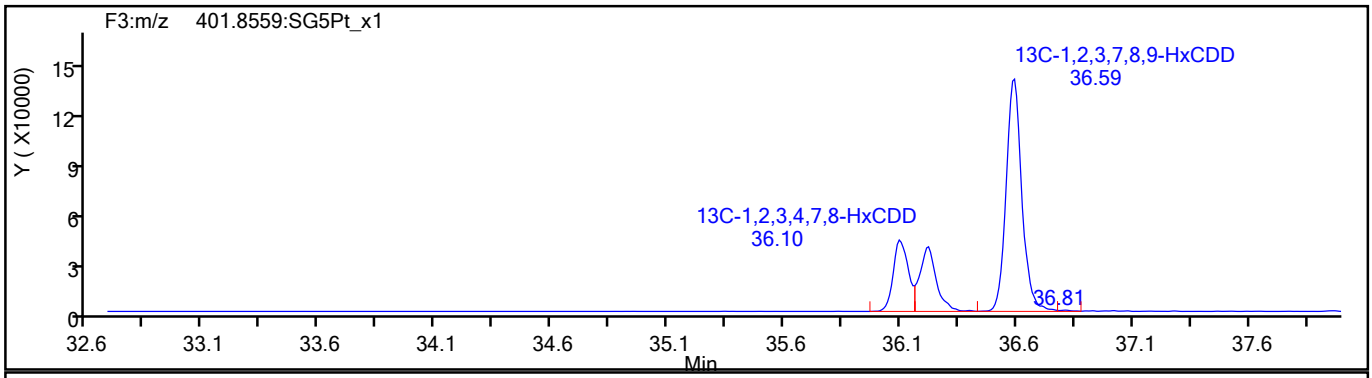

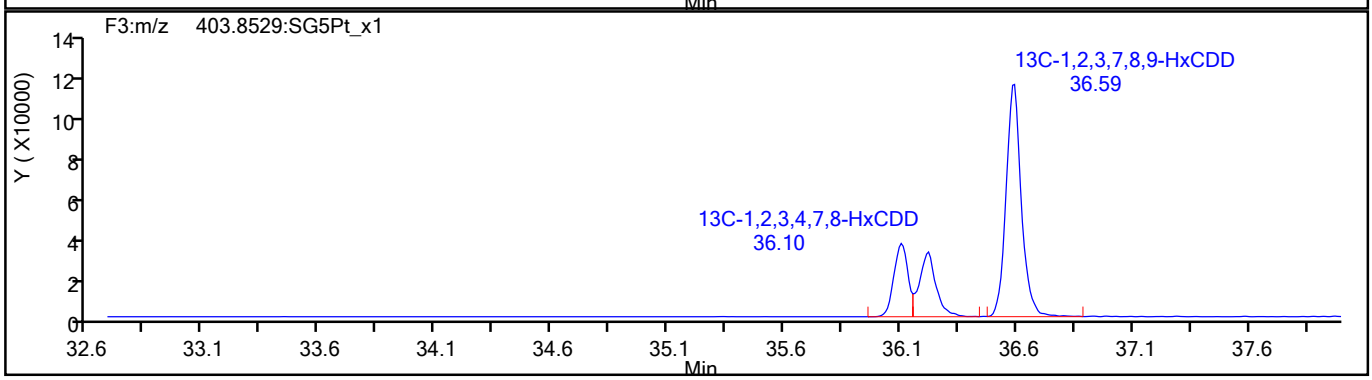

774721

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

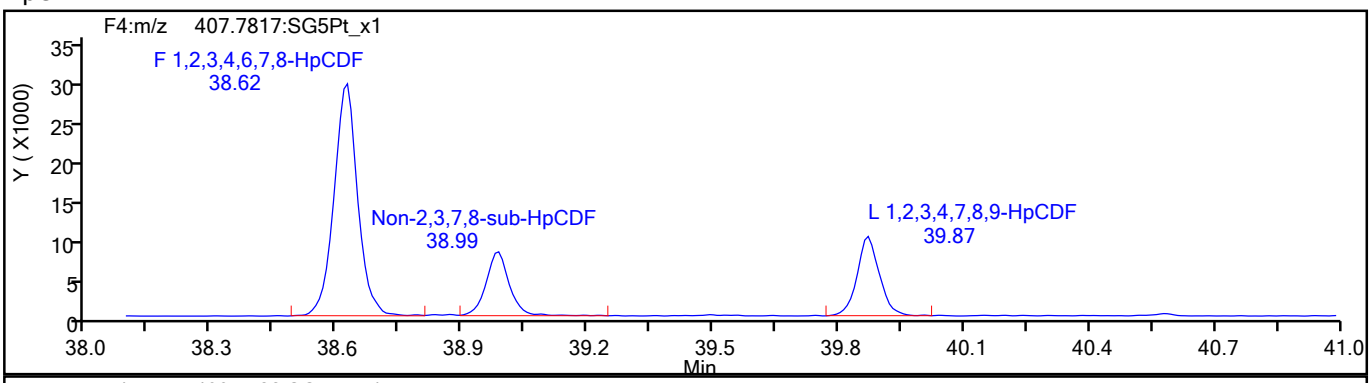

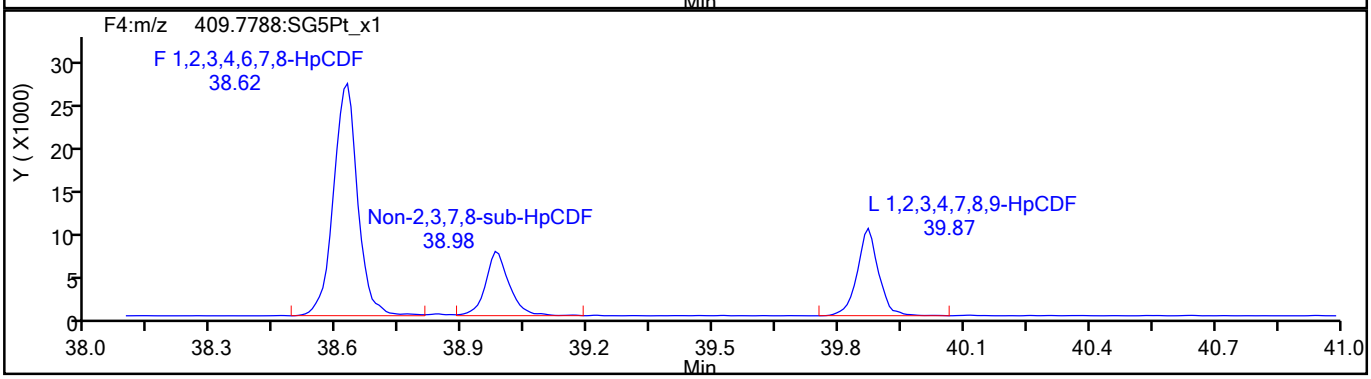

HpCDF Standards

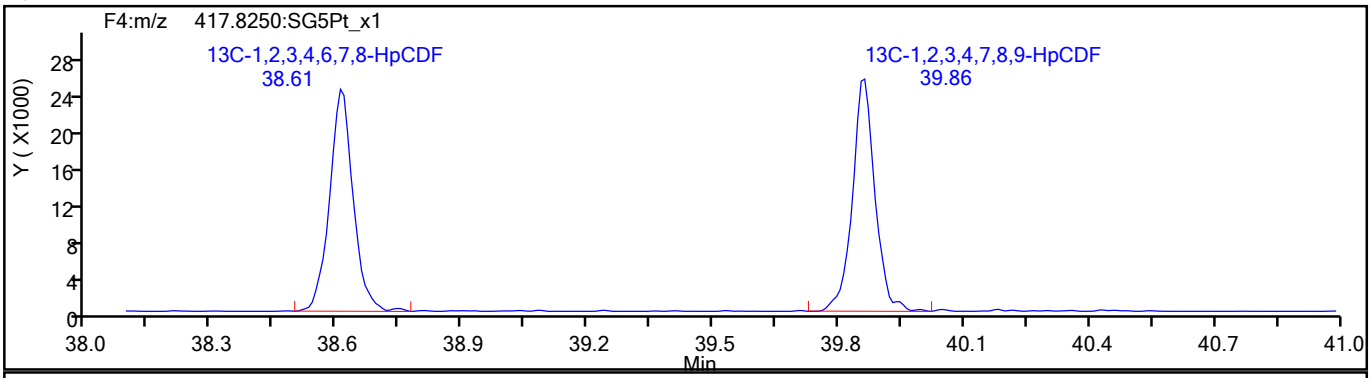

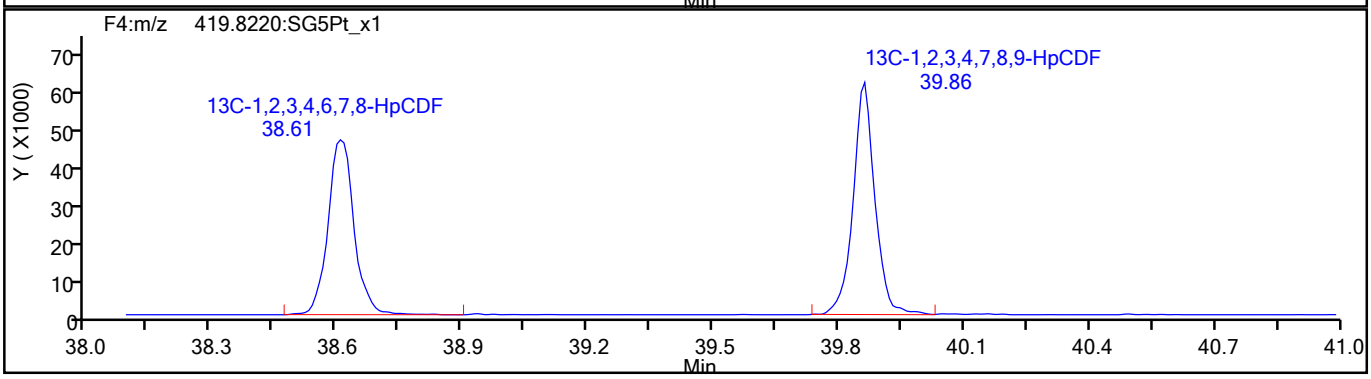

774722

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

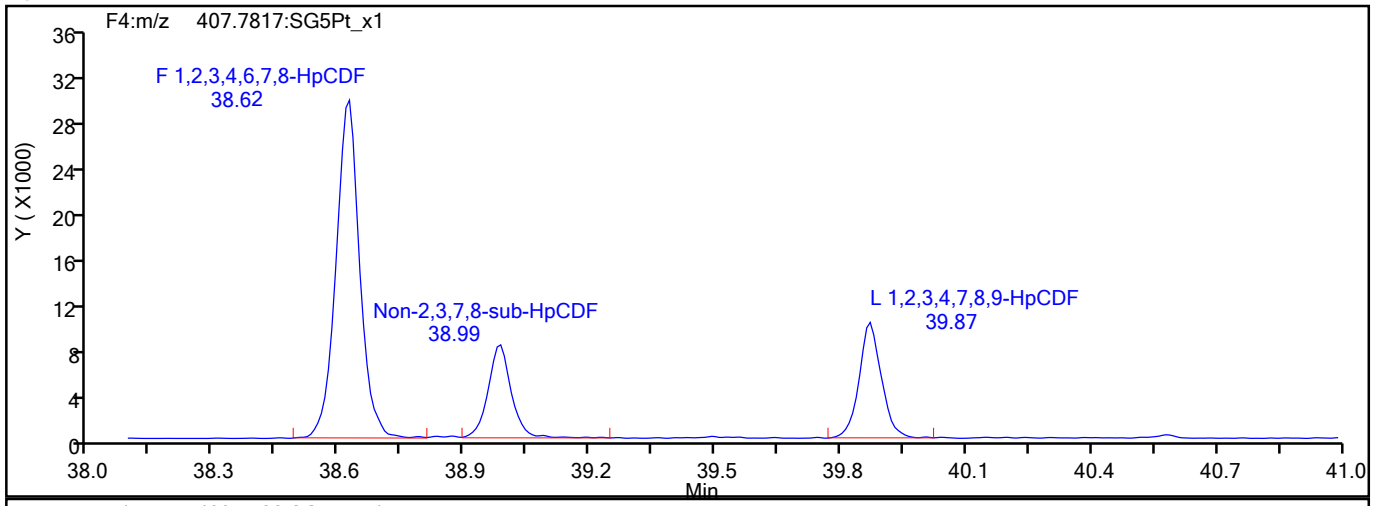

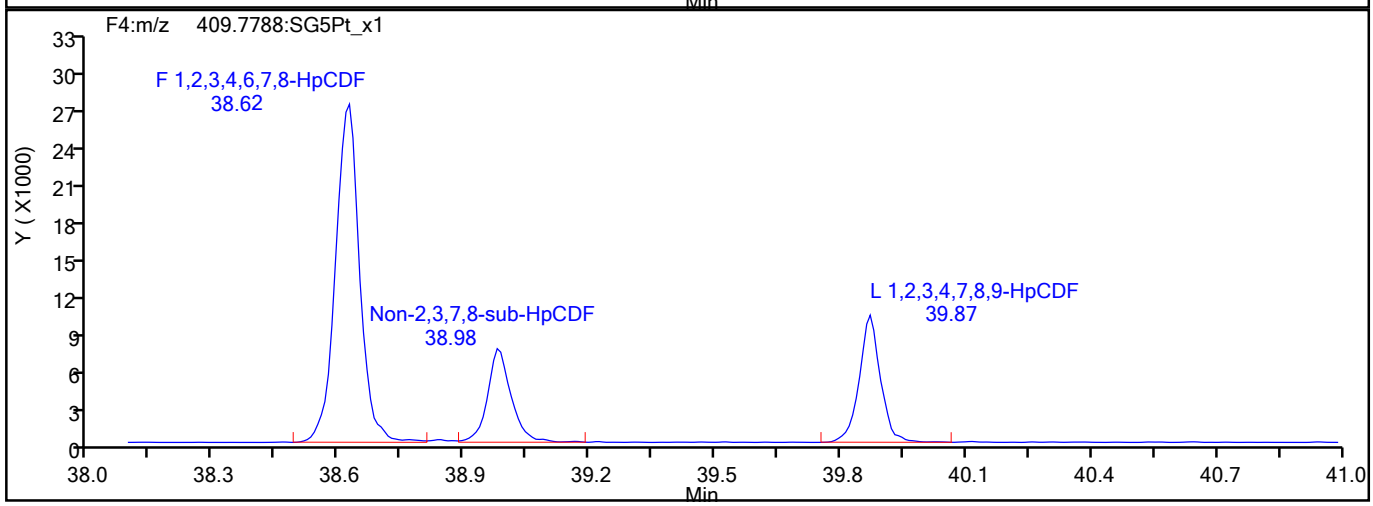

HpCDF Interference Mass

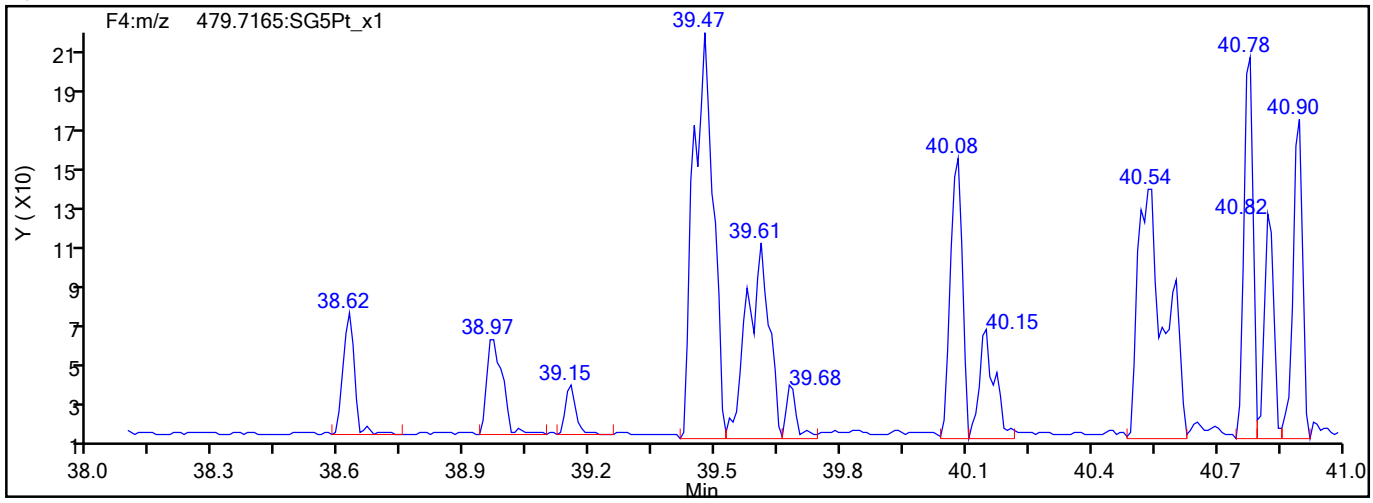

774723

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

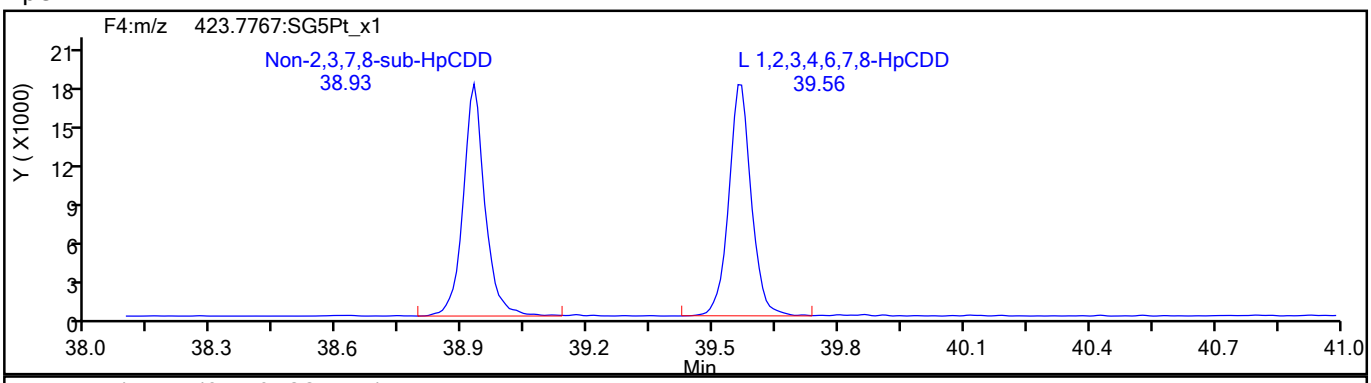

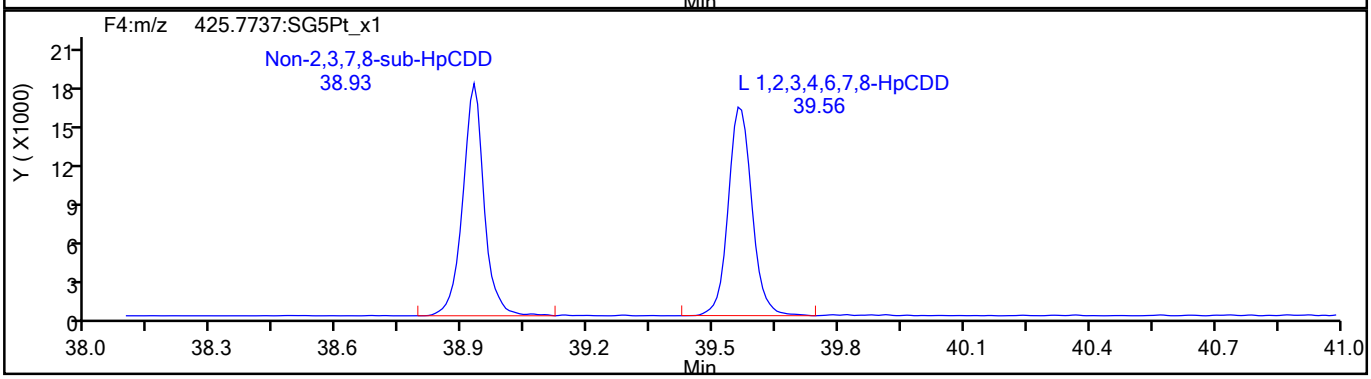

HpCDD Standards

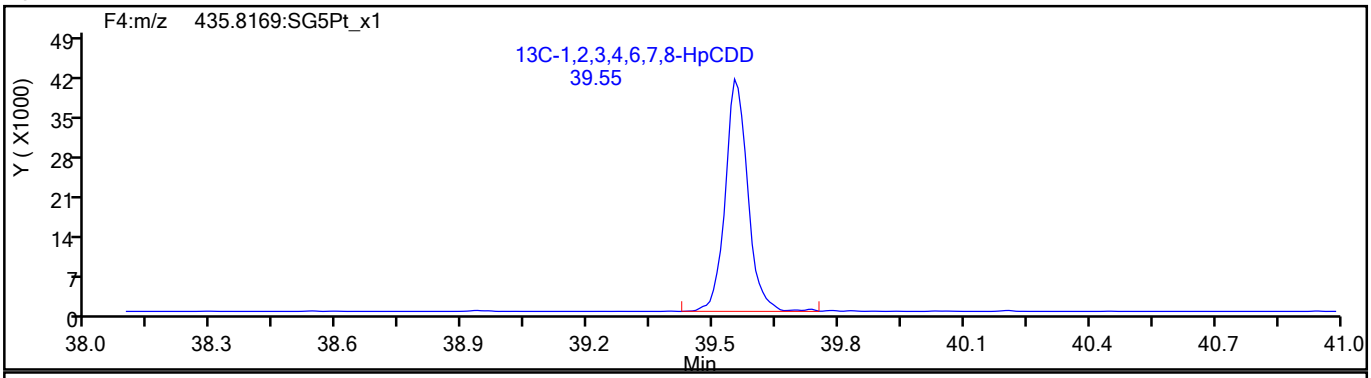

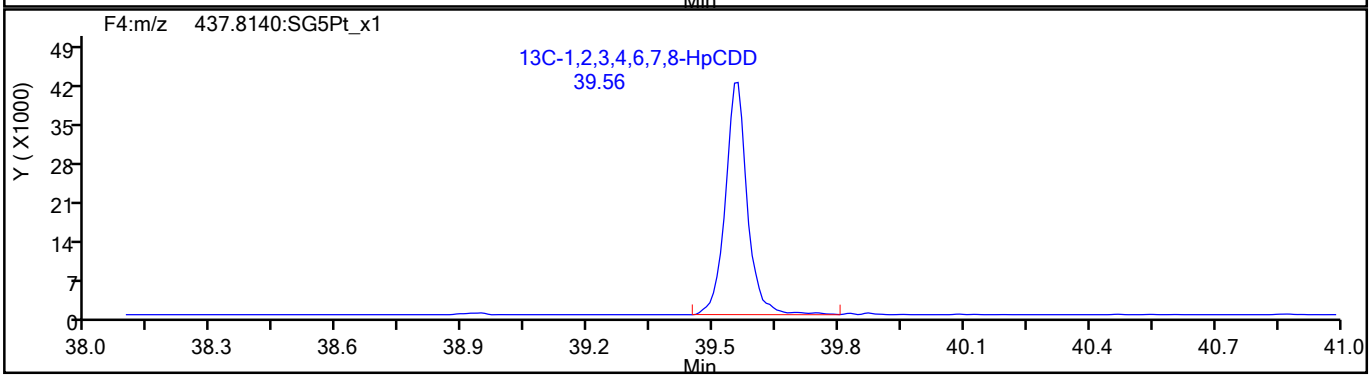

774724

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

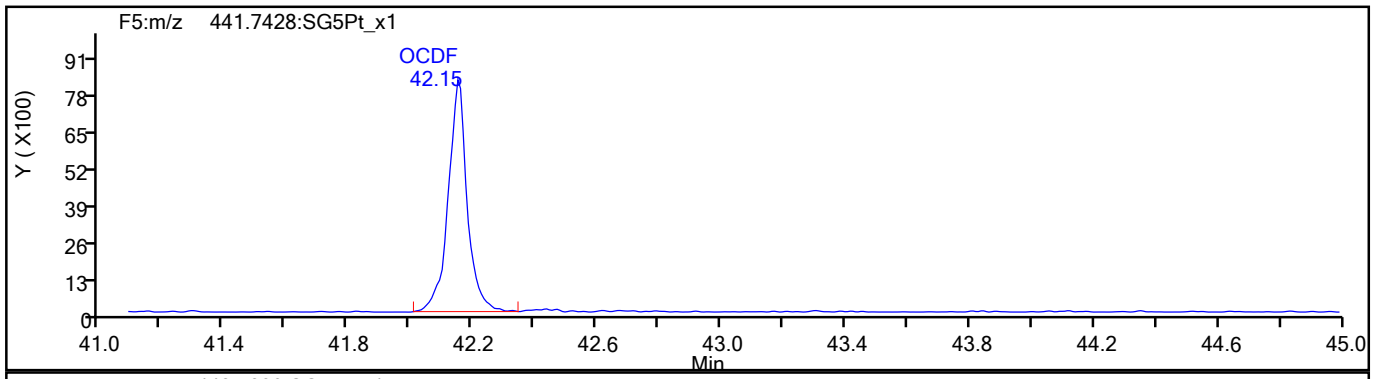

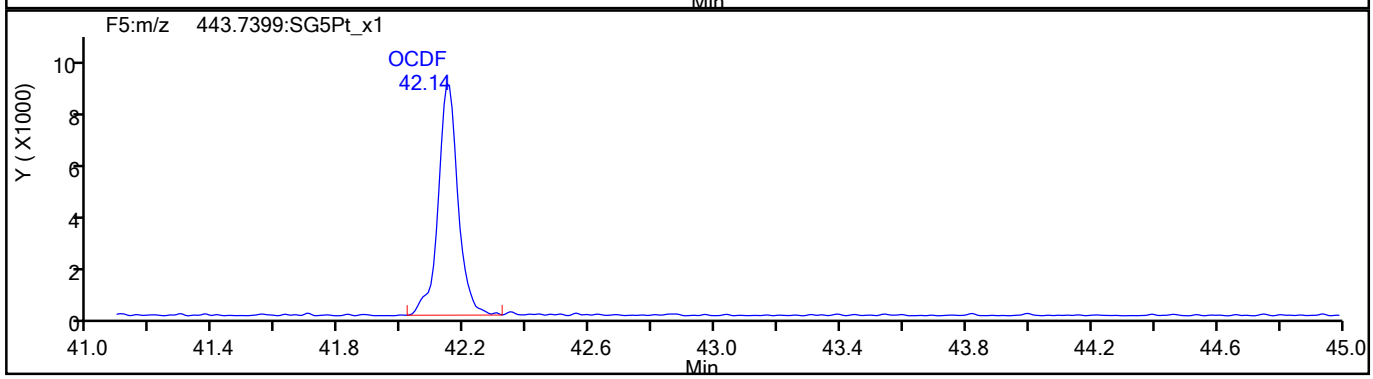

OCDF Standards

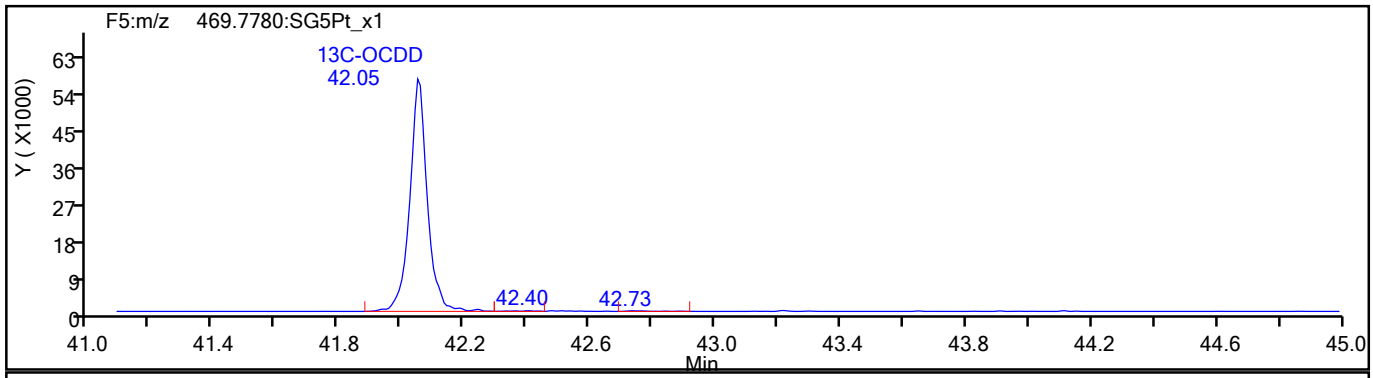

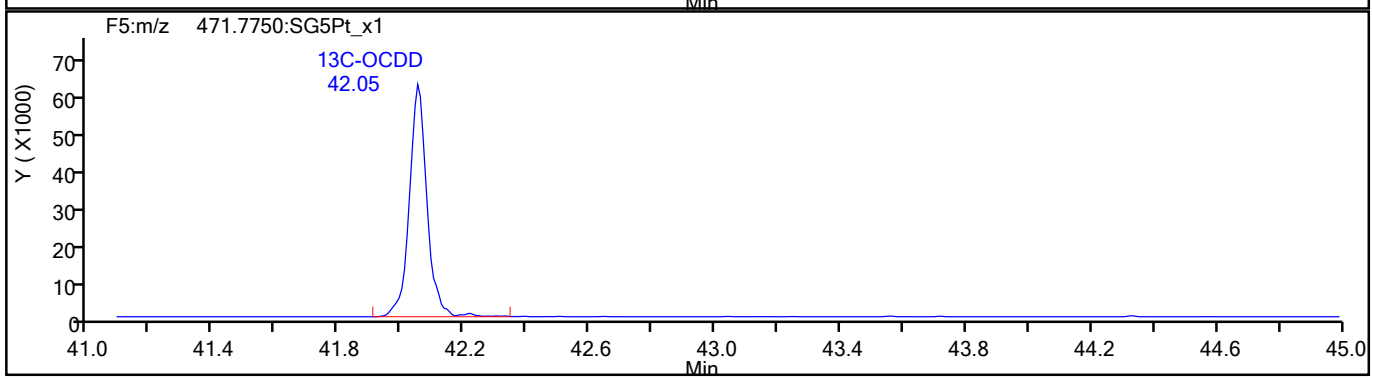

774725

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

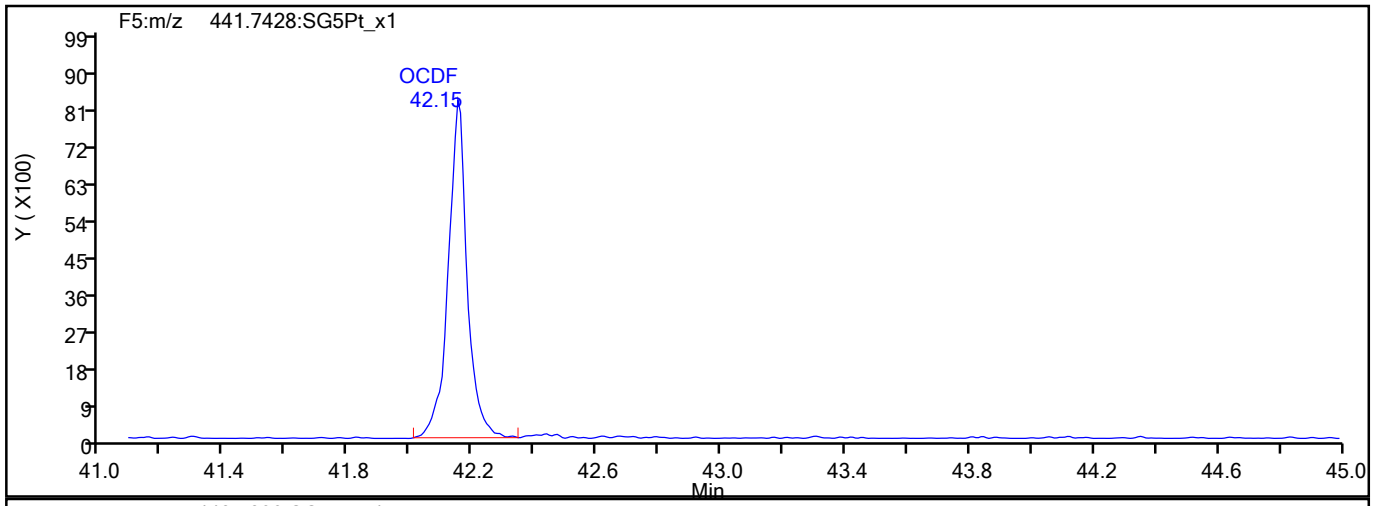

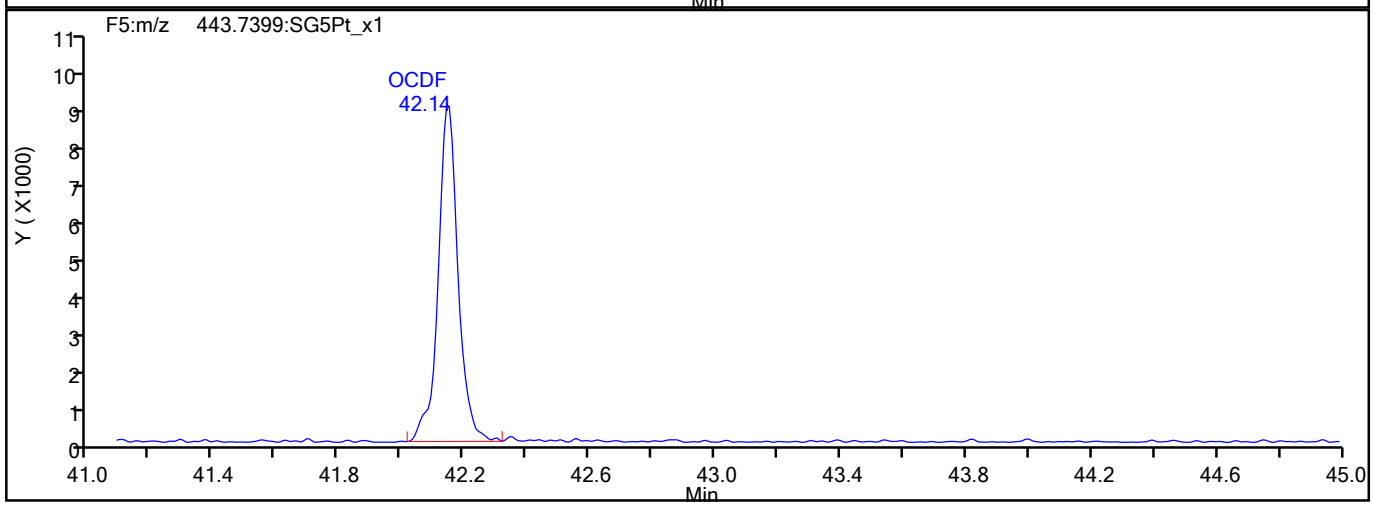

OCDF Interference Mass

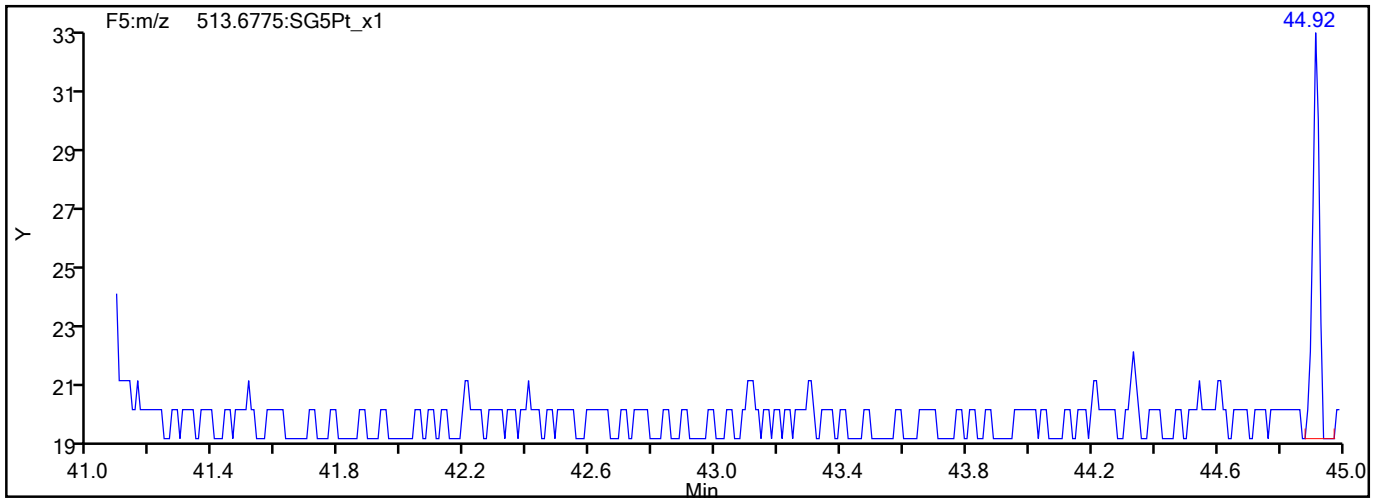

774726

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

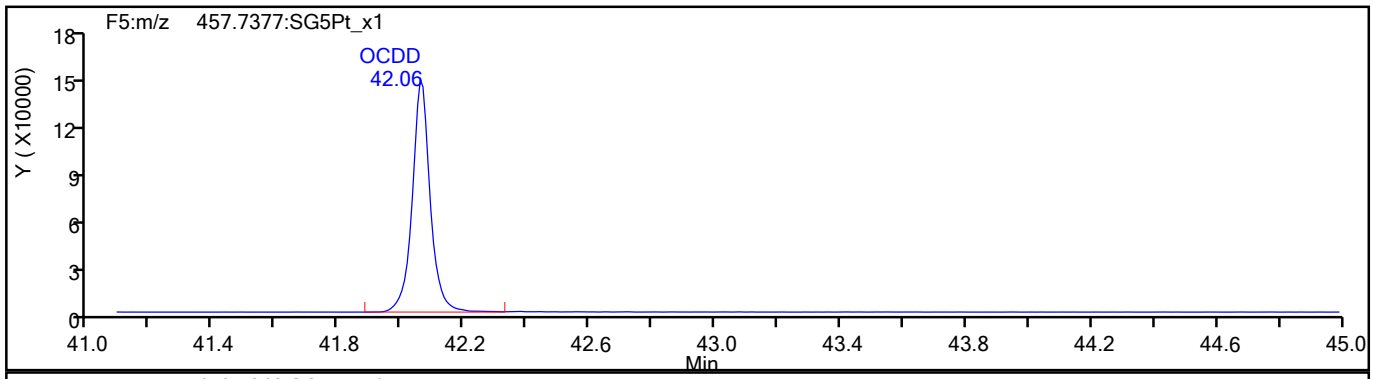

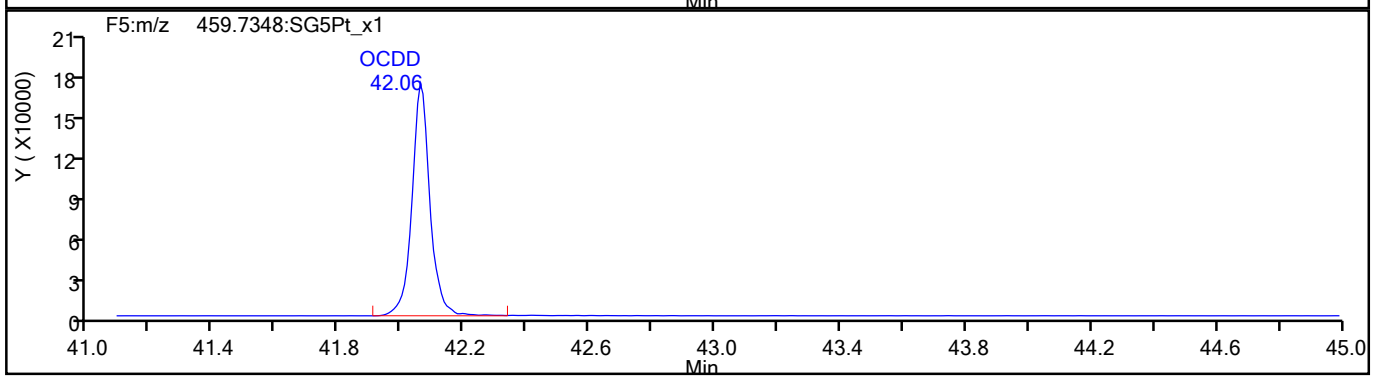

OCDD Standards

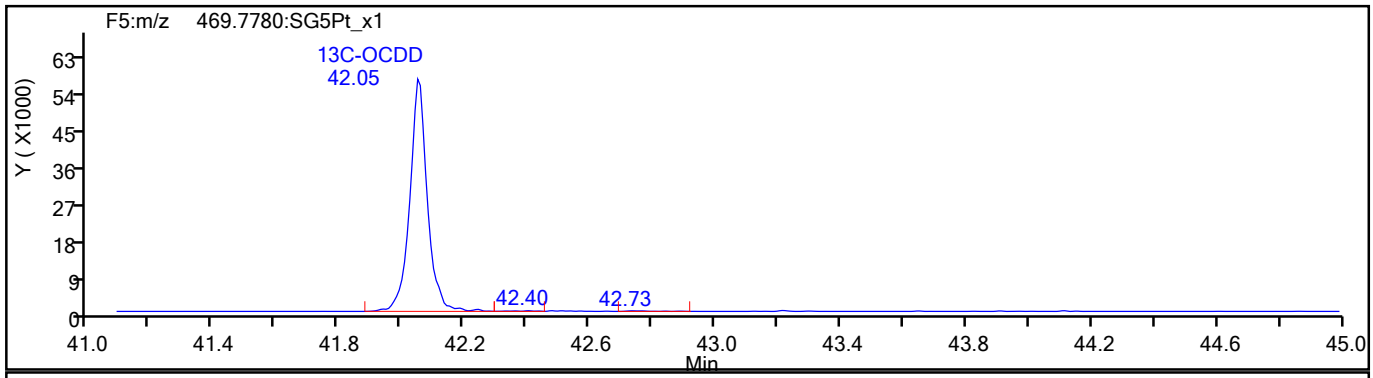

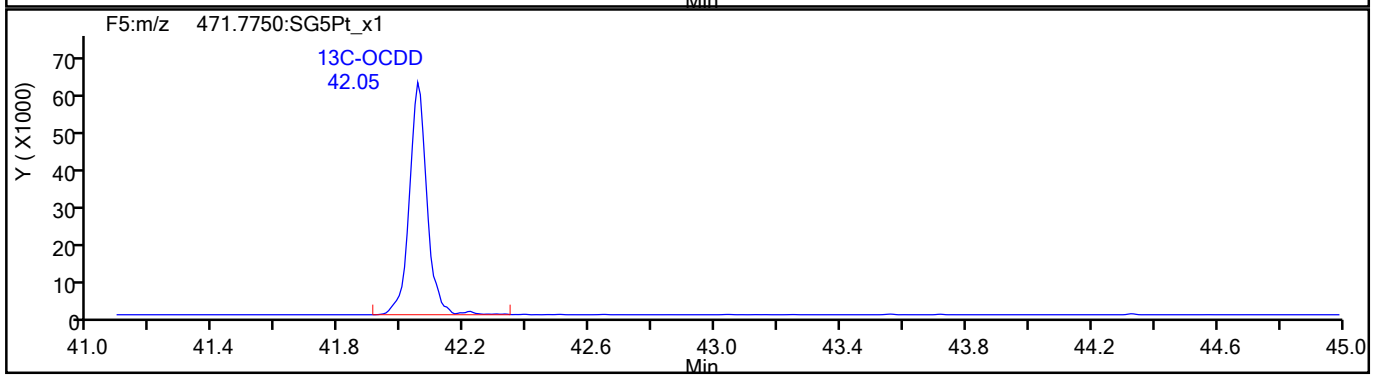

774727

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

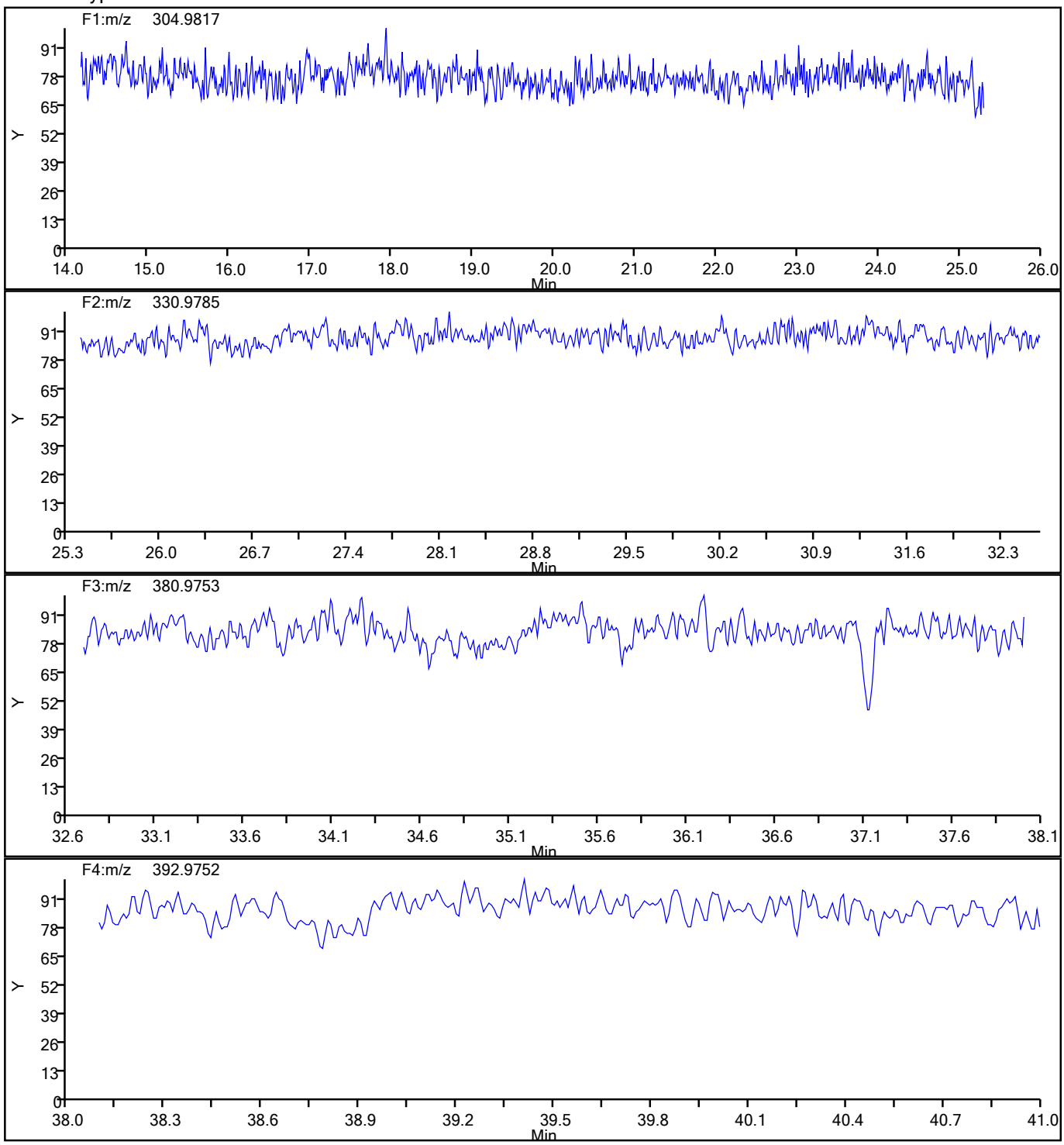

774728

Report Date: 20-Aug-2021 10:23:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_55.d		
Injection Date:	19-Aug-2021 07:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	517462	Sample Line#:	51
Column Type:	DB-5	Column Dia:	0.32 mm

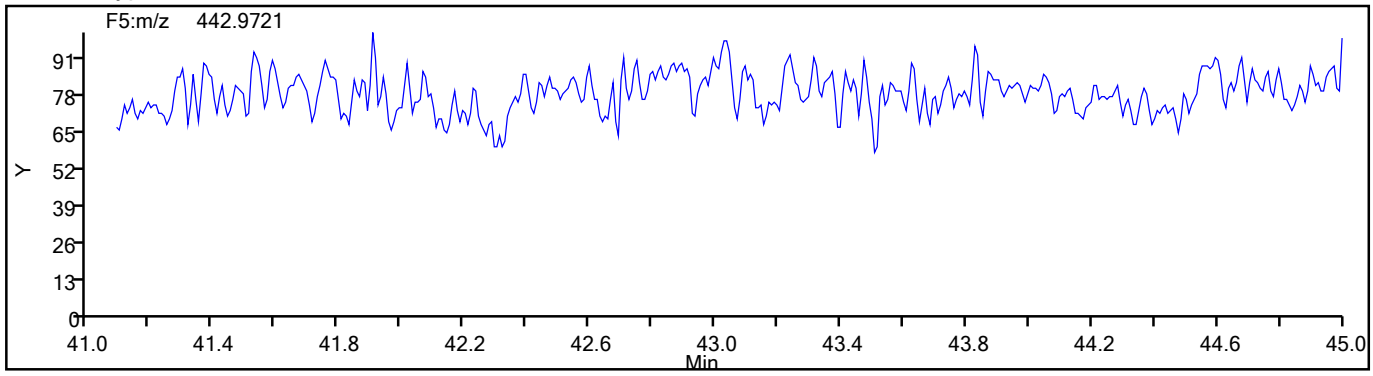

774729

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (6-8) RA
Lab Sample ID: 320-76769-4 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_018.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:55
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.04(g)
Date Analyzed: 08/24/2021 02:26
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	7500	E G	7.0	7.0

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	35		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	45		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_018.d
Lims ID: 320-76769-A-4-B
Client ID: 11215702-072221-SS-SJSB080 (6-8)
Sample Type: Client
Inject. Date: 24-Aug-2021 02:26:41 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-4-B
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:19:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.300	46406357	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.631	21480257	0.74	1.3327	34.7	34.7	0.3968	0.3968	34.73	
2,3,7,8-TCDF	17.644	558465092	0.78	0.9978	2605.6	2605.6	2.450	2.450		E
D 13C-2,3,7,8-TCDD	16.081	12324181	0.81	0.8749	30.4	30.4	8.578	8.578	30.35	
2,3,7,8-TCDD	16.095	129256645	0.78	1.0570	992.3	992.3	2.734	2.734		E
$ 37Cl4-2,3,7,8-TCDD	16.095	7262083		0.8648	18.1	18.1	0.1399	0.1399	45.24	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Report Date: 24-Aug-2021 09:19:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_018.d
Lims ID: 320-76769-A-4-B
Client ID: 11215702-072221-SS-SJSB080 (6-8)
Sample Type: Client
Inject. Date: 24-Aug-2021 02:26:41 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-4-B
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:19:31

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.300	16.298	0		20111181	4454296	140126	350315	32		
333.9339	16.300	16.298	0		26295176	5764089	166635	416587	35	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.631	17.615	1	1.082	9164699	1719848	11408	28520	151		
317.9389	17.631	17.615	1	1.082	12315558	2217752	10208	25520	217	0.74(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.644	17.643	0	1.001	243941171	47109976	17442	43605	2701		
305.8987	17.644	17.643	0	1.001	314523921	60490504	21060	52650	2872	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.081	16.065	1	0.987	5526686	1371545	140126	350315	10		
333.9339	16.081	16.065	1	0.987	6797495	1679675	166635	416587	10	0.81(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	16.095	16.079	1	1.001	56594005	12910189	20334	50835	635		
321.8936	16.095	16.079	1	1.001	72662640	16377479	14939	37347	1096	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.093	0	0.987	7262083	1722566	4944	12360	348		

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 24-Aug-2021 09:19:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_018.d		
Injection Date:	24-Aug-2021 02:26:41	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	518979	Sample Line#:	18
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

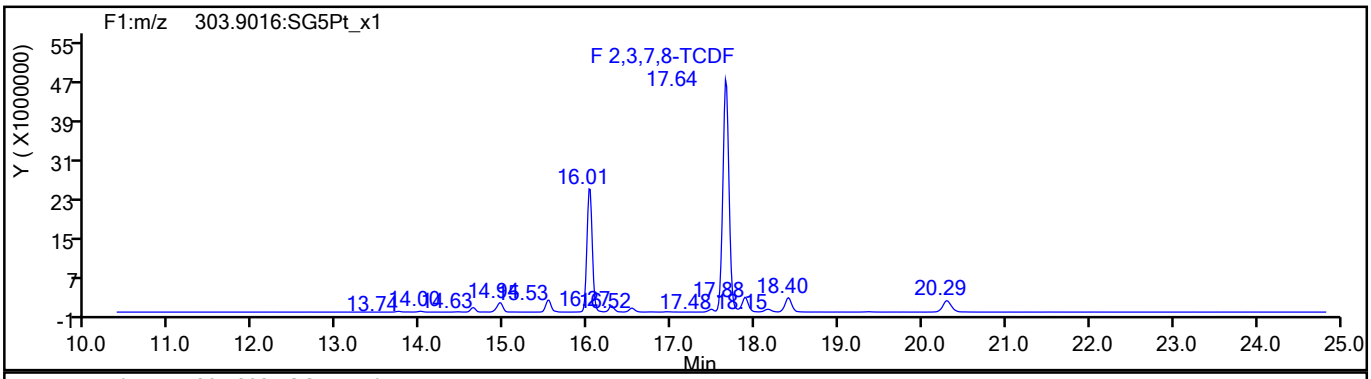

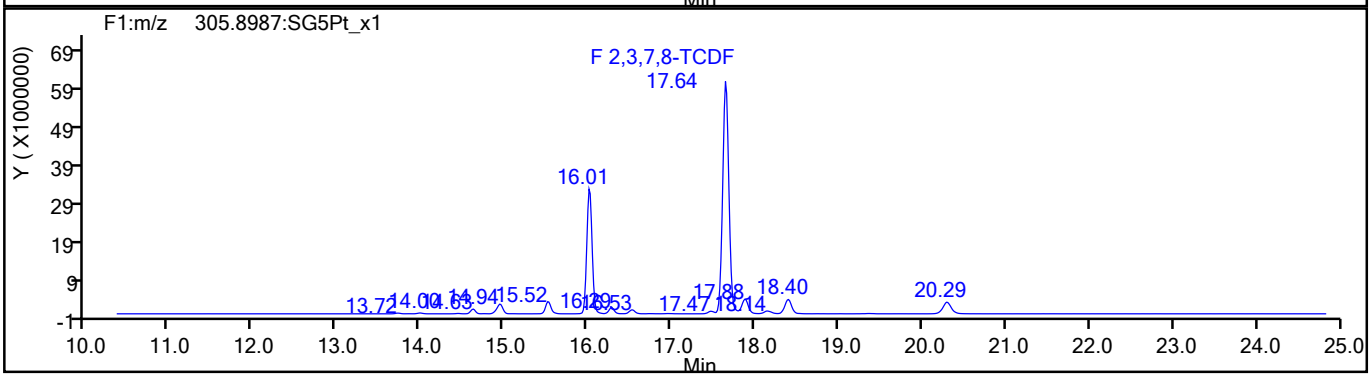

TCDF Standards

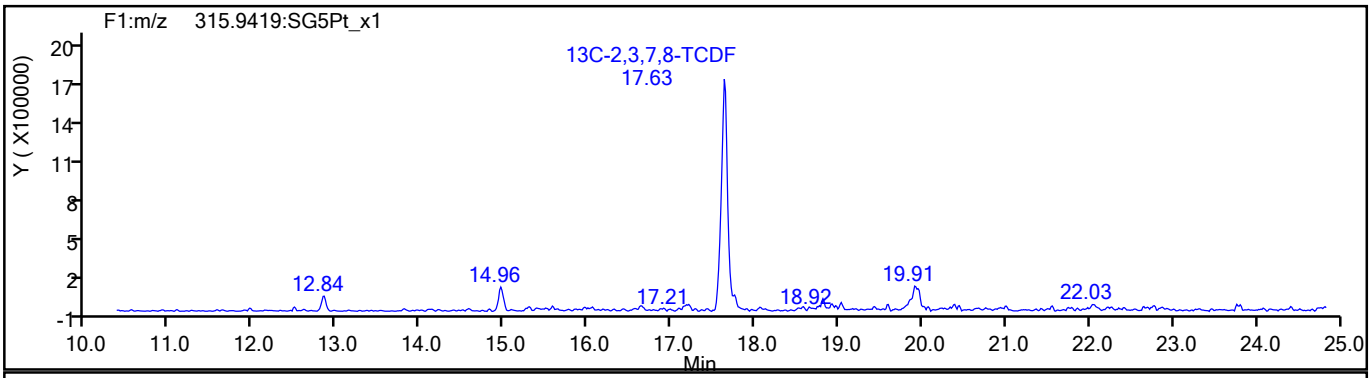

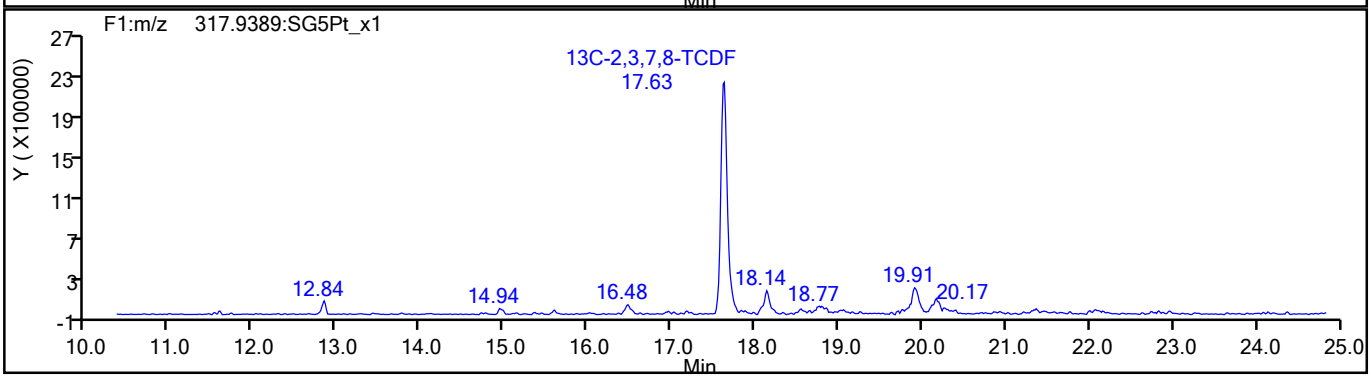

774733

Report Date: 24-Aug-2021 09:19:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_018.d		
Injection Date:	24-Aug-2021 02:26:41	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	518979	Sample Line#:	18
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

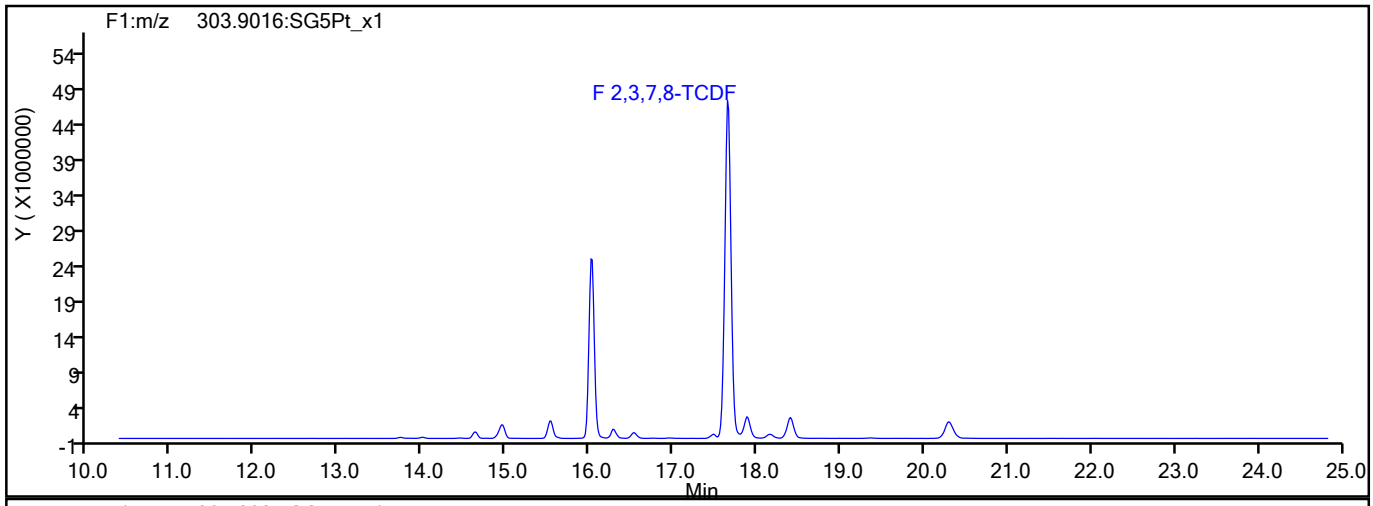

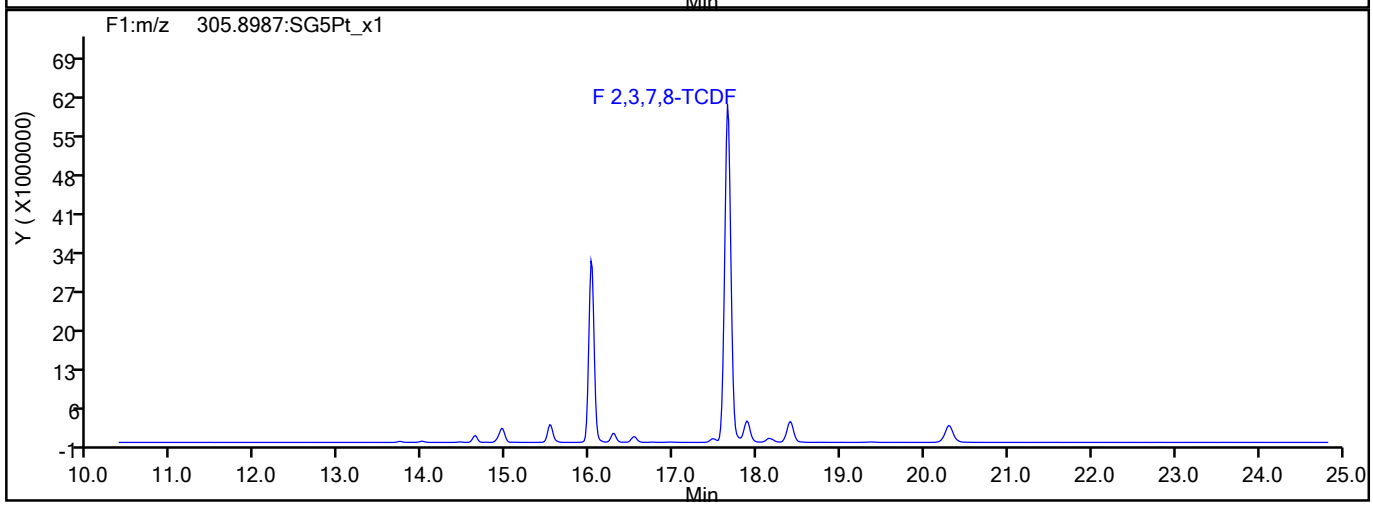

TCDF Interference Mass

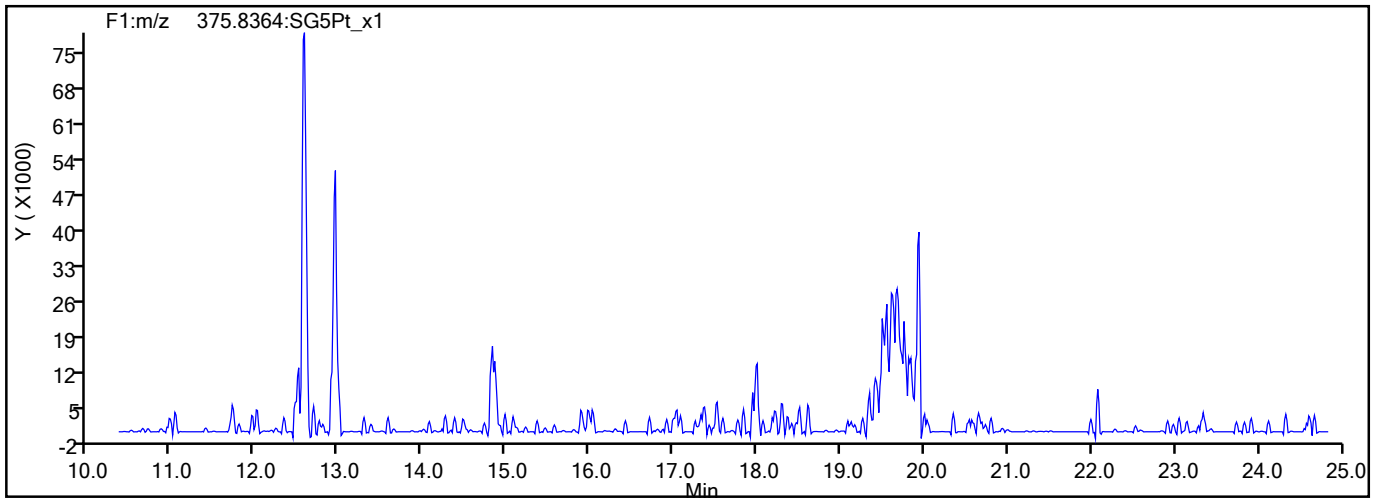

774734

Report Date: 24-Aug-2021 09:19:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_018.d		
Injection Date:	24-Aug-2021 02:26:41	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	518979	Sample Line#:	18
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

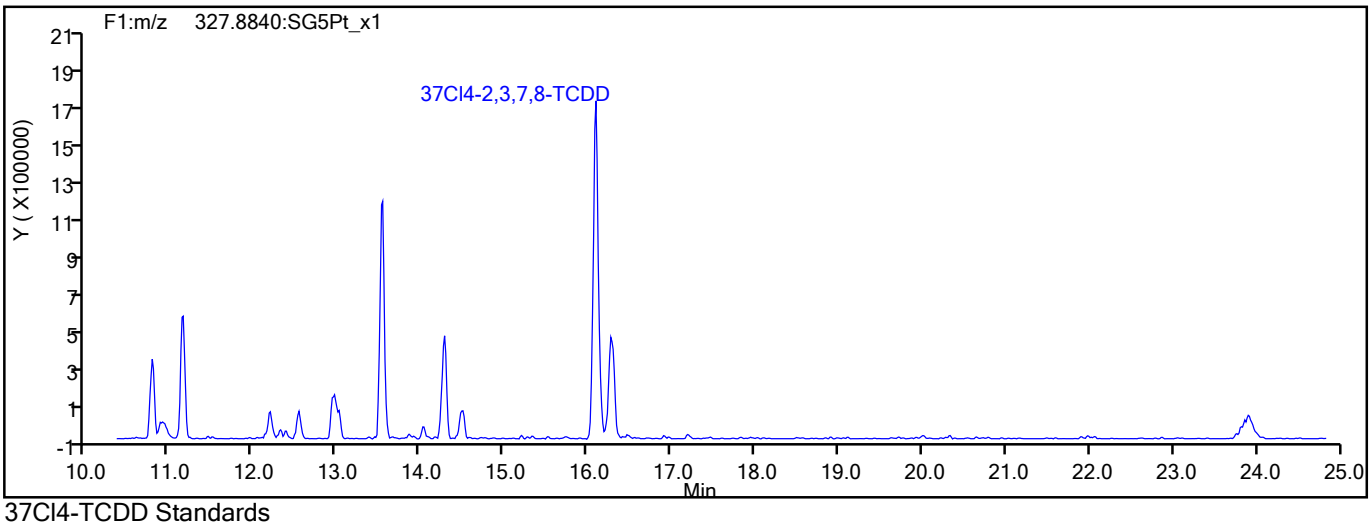

37Cl4-TCDD Standards

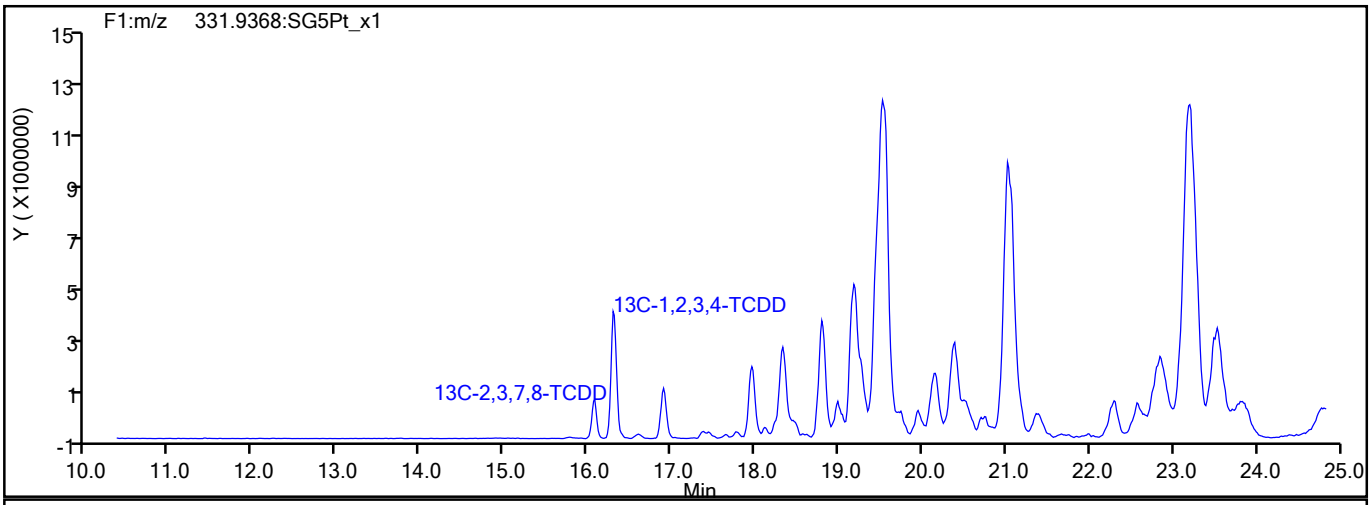

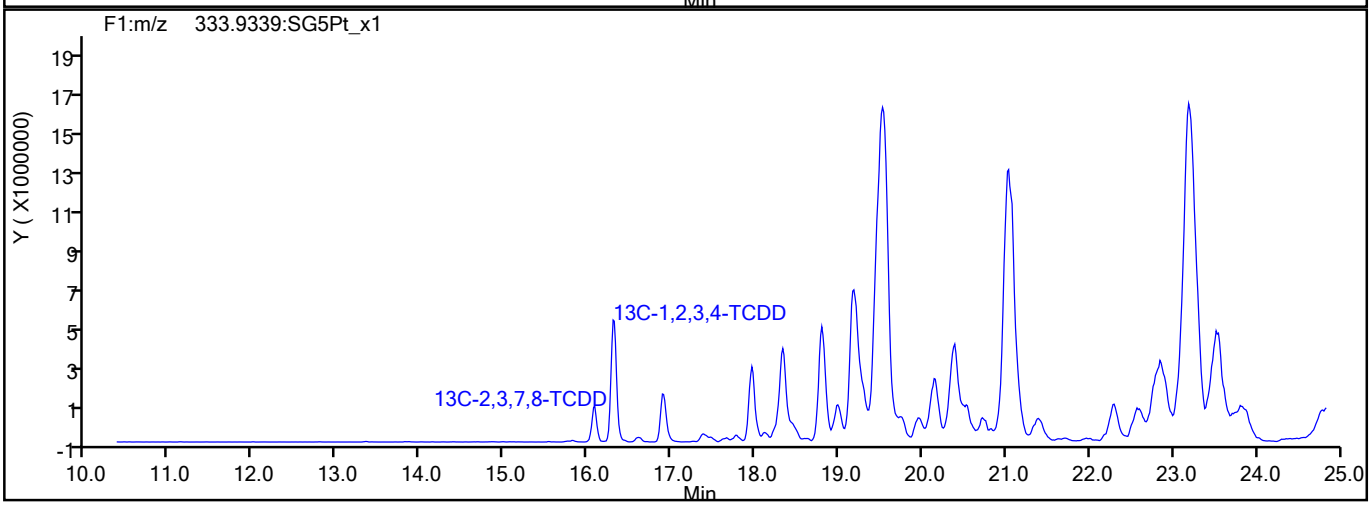

774735

Report Date: 24-Aug-2021 09:19:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_018.d		
Injection Date:	24-Aug-2021 02:26:41	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (6-8)		
Worklist#:	518979	Sample Line#:	18
Column Type:	DB-225	Column Dia:	0.32 mm

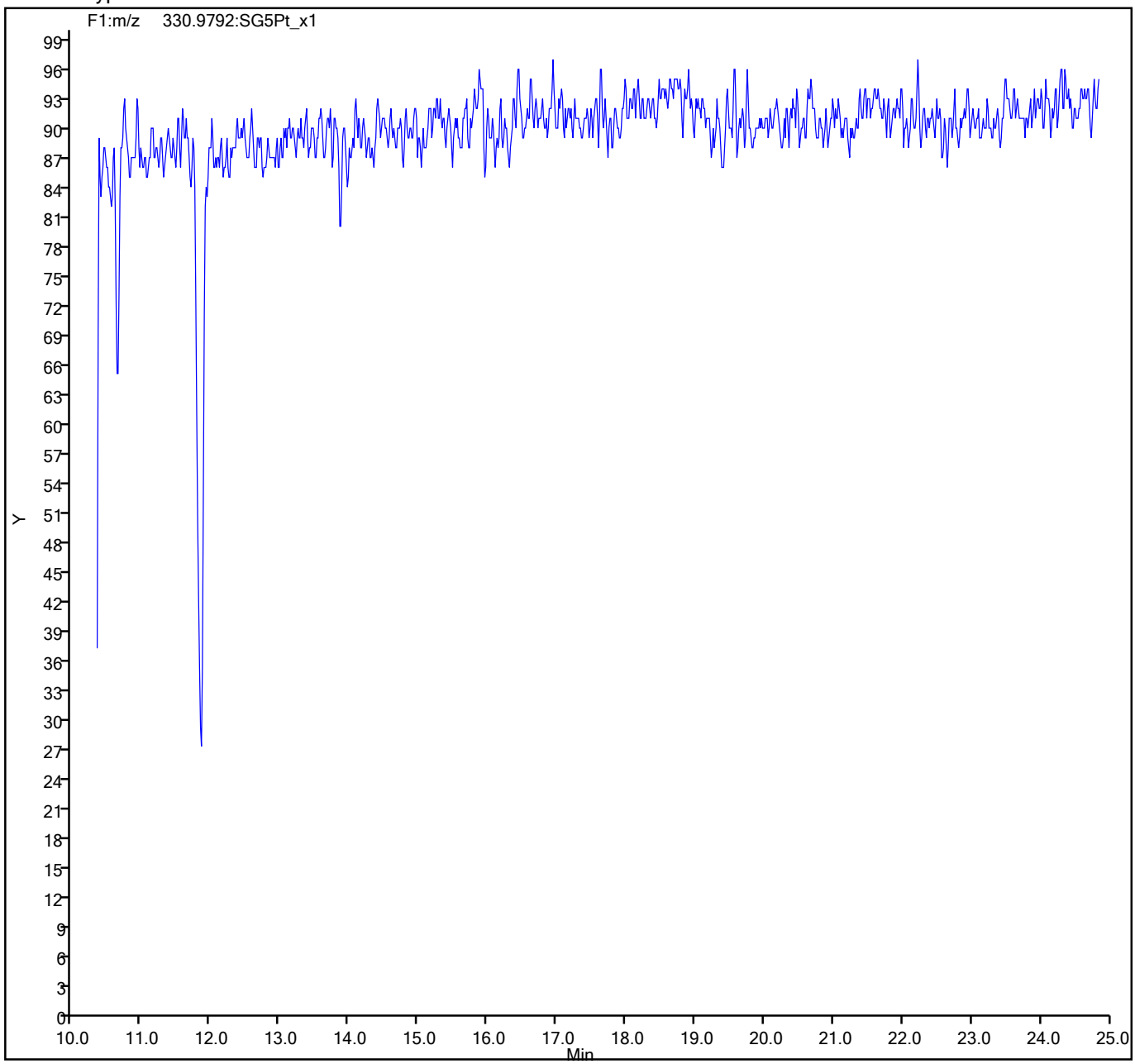

774736

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (8-10)
Lab Sample ID: 320-76769-5
Matrix: Sediment
Lab File ID: 13AU2110D5_52.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.67(g)
Date Analyzed: 08/15/2021 08:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 21.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	1100	E B G	3.5	3.5
40321-76-4	1,2,3,7,8-PeCDD	9.0		6.6	0.19
57117-41-6	1,2,3,7,8-PeCDF	110		6.6	0.72
57117-31-4	2,3,4,7,8-PeCDF	59		6.6	0.72
39227-28-6	1,2,3,4,7,8-HxCDD	0.49	J B	6.6	0.070
57653-85-7	1,2,3,6,7,8-HxCDD	1.4	J	6.6	0.078
19408-74-3	1,2,3,7,8,9-HxCDD	0.81	J B	6.6	0.067
70648-26-9	1,2,3,4,7,8-HxCDF	160	B	6.6	0.77
57117-44-9	1,2,3,6,7,8-HxCDF	44	B	6.6	0.78
72918-21-9	1,2,3,7,8,9-HxCDF	2.4	J B	6.6	0.60
60851-34-5	2,3,4,6,7,8-HxCDF	4.7	J	6.6	0.62
35822-46-9	1,2,3,4,6,7,8-HpCDD	57	B	6.6	0.70
67562-39-4	1,2,3,4,6,7,8-HpCDF	57	B	6.6	0.47
55673-89-7	1,2,3,4,7,8,9-HpCDF	16	B	6.6	0.53
3268-87-9	OCDD	750	B	13	0.77
39001-02-0	OCDF	25	B	13	0.078
41903-57-5	Total TCDD	1300	B G	3.5	3.5
30402-14-3	Total TCDF	6200	B G	11	11
36088-22-9	Total PeCDD	12	q	6.6	0.19
30402-15-4	Total PeCDF	260		6.6	0.72
34465-46-8	Total HxCDD	19	B q	6.6	0.072
55684-94-1	Total HxCDF	240	B	6.6	0.69
37871-00-4	Total HpCDD	140	B	6.6	0.70
38998-75-3	Total HpCDF	90	B	6.6	0.50

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (8-10)
Lab Sample ID: 320-76769-5
Matrix: Sediment
Lab File ID: 13AU2110D5_52.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.67(g)
Date Analyzed: 08/15/2021 08:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 21.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		25-164
89059-46-1	13C-2,3,7,8-TCDF	53		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	65		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	60		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	66		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	64		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	59		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	53		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	63		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	69		26-138
114423-97-1	13C-OCDD	75		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	74		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d
Lims ID: 320-76769-A-5-A
Client ID: 11215702-072221-SS-SJSB080 (8-10)
Sample Type: Client
Inject. Date: 15-Aug-2021 08:06:55 ALS Bottle#: 51 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-5-a 320-76769-a-5-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:08:46 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:49:29

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	57543284	0.81	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.356	49158046	0.77	1.6249	52.6	52.6	0.2644	0.2644	52.57	
2,3,7,8-TCDF	17.371	680693134	0.78	1.0239	1352.4	1352.4	4.024	4.024		E
A Non-2,3,7,8-sub-TCDF	17.046	512055412	0.78	1.0239	1017.3	1017.3	4.024	616.2		
S Total TCDF					2369.7	2369.7	4.024	4.024		
D 13C-2,3,7,8-TCDD	18.066	29576857	0.81	0.8993	57.2	57.2	0.2452	0.2452	57.15	
2,3,7,8-TCDD	18.082	160387153	0.79	1.2541	432.4	432.4	1.331	1.331		E
$ 37Cl4-2,3,7,8-TCDD	18.082	18829059		1.1071	29.6	29.6	0.0894	0.0894	73.89	
A Non-2,3,7,8-sub-TCDD	17.500	16289035	0.80	1.2541	43.9	43.9	1.331	36.3		
S Total TCDD					476.3	476.3	1.331	1.331		
D 13C-1,2,3,7,8-PeCDF	22.381	41724853	1.58	1.2101	59.9	59.9	0.1468	0.1468	59.92	
1,2,3,7,8-PeCDF	22.394	17815489	1.60	1.0611	40.2	40.2	0.2733	0.2733		M
D 13C-2,3,4,7,8-PeCDF	23.717	47021842	1.58	1.2395	65.9	65.9	0.1433	0.1433	65.93	
2,3,4,7,8-PeCDF	23.730	10817116	1.62	1.0184	22.6	22.6	0.2728	0.2728		
A F1 PeCDFs	20.093	127614	1.75	1.0398	0.2766	0.2766	0.0224	0.2766		
A Non-2,3,7,8-sub-PeCDF	23.241	16309643	1.61	1.0398	35.3	35.3	0.2729	14.6		
S Total PeCDF					98.5	98.5	0.2730	0.2730		
D 13C-1,2,3,7,8-PeCDD	24.426	28387475	1.66	0.7612	64.8	64.8	0.0935	0.0935	64.81	
1,2,3,7,8-PeCDD	24.453	1021785	1.60	1.0484	3.433	3.433	0.0733	0.0733		
A Non-2,3,7,8-sub-PeCDD	23.349	382010	1.55	1.0484	1.605	1.284	0.0733	0.3824		RQ
S Total PeCDD					5.039	4.717	0.0733	0.0733		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.503	42419118	0.52	1.0837	59.5	59.5	0.2382	0.2382	59.48	
1,2,3,4,7,8-HxCDF	30.516	28830022	1.21	1.0851	62.6	62.6	0.2932	0.2932		
D 13C-1,2,3,6,7,8-HxCDF	30.689	39354206	0.53	1.1279	53.0	53.0	0.2289	0.2289	53.02	
1,2,3,6,7,8-HxCDF	30.702	7471353	1.25	1.1260	16.9	16.9	0.2959	0.2959		
D 13C-2,3,4,6,7,8-HxCDF	31.514	37473017	0.53	1.0637	53.5	53.5	0.2427	0.2427	53.53	
2,3,4,6,7,8-HxCDF	31.528	787877	1.23	1.1675	1.801	1.801	0.2347	0.2347		
D 13C-1,2,3,7,8,9-HxCDF	32.313	35239145	0.51	0.9676	55.3	55.3	0.2668	0.2668	55.34	
1,2,3,7,8,9-HxCDF	32.326	372732	1.16	1.1664	0.9069	0.9069	0.2296	0.2296		
A Non-2,3,7,8-sub-HxCDF	30.197	4711296	1.20	1.1363	10.7	10.7	0.2602	3.899		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					92.9	92.9	0.2634	0.2634		
* 13C-1,2,3,7,8,9-HxCDD	32.140	65812104	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	30745146	1.25	0.7334	63.7	63.7	0.3069	0.3069	63.70	
1,2,3,4,7,8-HxCDD	31.714	60391	1.06	1.0640	0.1846	0.1846	0.0267	0.0267		Ma
D 13C-1,2,3,6,7,8-HxCDD	31.807	32418868	1.23	0.8802	56.0	56.0	0.2558	0.2558	55.97	
1,2,3,6,7,8-HxCDD	31.820	175155	1.18	1.0001	0.5402	0.5402	0.0295	0.0295		M
1,2,3,7,8,9-HxCDD	32.140	109345	1.31	1.1325	0.3057	0.3057	0.0256	0.0256		M
A Non-2,3,7,8-sub-HxCDD	30.882	2049688	1.24	1.0655	6.134	6.091	0.0272	3.921		RQ
S Total HxCDD					7.164	7.121	0.0273	0.0273		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	30535001	0.44	0.7730	60.0	60.0	0.6581	0.6581	60.02	
1,2,3,4,6,7,8-HpCDF	33.766	9545613	1.06	1.4413	21.7	21.7	0.1795	0.1795		
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	31946727	0.43	0.7008	69.3	69.3	0.7259	0.7259	69.27	
1,2,3,4,7,8,9-HpCDF	34.860	2572656	1.02	1.3174	6.113	6.113	0.2021	0.2021		
A Non-2,3,7,8-sub-HpCDF	34.319	2772338	1.12	1.3793	6.434	6.434	0.1902	6.434		
S Total HpCDF					34.2	34.2	0.1908	0.1908		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	26897576	1.02	0.6472	63.1	63.1	0.3606	0.3606	63.15	
1,2,3,4,6,7,8-HpCDD	34.568	6327782	1.05	1.0943	21.5	21.5	0.2642	0.2642		
A Non-2,3,7,8-sub-HpCDD	34.301	8780627	1.04	1.0943	29.8	29.8	0.2642	29.8		
S Total HpCDD					51.3	51.3	0.2642	0.2642		
D 13C-OCDD	36.914	43875583	0.85	0.4472	149.1	149.1	0.1801	0.1801	74.55	
OCDF	37.010	3052161	0.88	1.4382	9.674	9.674	0.0297	0.0297		
OCDD	36.926	69184147	0.90	1.1070	284.9	284.9	0.2935	0.2935		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d
Lims ID: 320-76769-A-5-A
Client ID: 11215702-072221-SS-SJSB080 (8-10)
Sample Type: Client
Inject. Date: 15-Aug-2021 08:06:55 ALS Bottle#: 51 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-5-a 320-76769-a-5-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:08:46 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:49:29

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.870	17.855	1		25692101	6401540	5296	13240	1209		a
333.9339	17.870	17.855	1		31851183	7903736	7323	18307	1079	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.971	21373241	5572599	6358	15895	876		
317.9389	17.356	17.356	0	0.971	27784805	7280421	18223	45557	400	0.77(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.371	17.371	0	1.001	298450711	74290674	86465	216162	859		
305.8987	17.371	17.371	0	1.001	382242423	95195810	125380	313450	759	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.950	17.046	-66	0.919	4710487	1282458	86465	216162	15		
305.8987	15.950	17.046	-66	0.919	6232685	1732884	125380	313450	14	0.76(0.65-0.89)	
303.9016	16.237	17.046	-48	0.936	8582211	1842302	86465	216162	21		
305.8987	16.237	17.046	-48	0.936	11302405	2422305	125380	313450	19	0.76(0.65-0.89)	
303.9016	16.464	17.046	-35	0.949	9073720	2394519	86465	216162	28		
305.8987	16.464	17.046	-35	0.949	11559683	3064541	125380	313450	24	0.78(0.65-0.89)	
303.9016	16.706	17.046	-20	0.963	13888714	3483167	86465	216162	40		
305.8987	16.706	17.046	-20	0.963	17828362	4434371	125380	313450	35	0.78(0.65-0.89)	
303.9016	16.978	17.046	-4	0.978	136107271	35162805	86465	216162	407		
305.8987	16.978	17.046	-4	0.978	174027050	45448569	125380	313450	362	0.78(0.65-0.89)	
303.9016	17.205	17.046	10	0.991	4588663	1105286	86465	216162	13		
305.8987	17.205	17.046	10	0.991	5945201	1446387	125380	313450	12	0.77(0.65-0.89)	
303.9016	17.794	17.046	45	1.025	20824572	5224160	86465	216162	60		
305.8987	17.794	17.046	45	1.025	26940367	6800937	125380	313450	54	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.036	17.046	59	1.039	4152137	921681	86465	216162	11		
305.8987	18.036	17.046	59	1.039	5343771	1175870	125380	313450	9	0.78(0.65-0.89)	
303.9016	19.185	17.046	128	1.105	22202542	5213473	86465	216162	60		
305.8987	19.185	17.046	128	1.105	28745571	6793420	125380	313450	54	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	13272509	3128665	5296	13240	591		
333.9339	18.066	18.051	1	1.011	16304348	3825521	7323	18307	522	0.81(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	18.082	18.081	0	1.001	70640187	17152303	24465	61162	701		
321.8936	18.082	18.081	0	1.001	89746966	21713993	21957	54892	989	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.081	0	1.012	18829059	4559588	5662	14155	805		
A Non-2,3,7,8-sub-TCDD											
319.8965	16.933	17.500	-34	0.937	576047	134156	24465	61162	5		
321.8936	16.933	17.500	-34	0.937	731754	168248	21957	54892	8	0.79(0.65-0.89)	
319.8965	17.961	17.500	28	0.994	683388	206749	24465	61162	8		
321.8936	17.961	17.500	28	0.994	816218	256833	21957	54892	12	0.84(0.65-0.89)	
319.8965	18.429	17.500	56	1.020	5986579	1406333	24465	61162	57		
321.8936	18.429	17.500	56	1.020	7495049	1777311	21957	54892	81	0.80(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.252	25540642	4558045	5582	13955	817		
353.8970	22.367	22.367	0	1.252	16184211	2885580	4583	11457	630	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.394	22.394	0	1.001	10969428	1974166	5255	13137	376		
341.8567	22.394	22.394	0	1.001	6846061	1226223	3379	8447	363	1.60(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.327	28799243	4718715	5582	13955	845		
353.8970	23.717	23.703	1	1.327	18222599	3051518	4583	11457	666	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.730	23.730	0	1.001	6694684	1142878	5255	13137	217		
341.8567	23.730	23.730	0	1.001	4122432	712077	3379	8447	211	1.62(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.488	20.093	-36	0.871	81189	18350	340	850	54		
341.8567	19.488	20.093	-36	0.871	46425	9839	369	922	27	1.75(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.058	23.241	-131	0.941	4173561	838736	5255	13137	160		
341.8567	21.044	23.241	-132	0.940	2577357	526009	3379	8447	156	1.62(1.32-1.78)	
339.8597	21.862	23.241	-83	0.977	358095	41158	5255	13137	8		
341.8567	21.889	23.241	-81	0.978	246418	27155	3379	8447	8	1.45(1.32-1.78)	
339.8597	22.258	23.241	-59	0.995	721245	155680	5255	13137	30		
341.8567	22.258	23.241	-59	0.995	466784	95861	3379	8447	28	1.55(1.32-1.78)	
339.8597	22.912	23.241	-20	1.024	2759541	506938	5255	13137	96		
341.8567	22.912	23.241	-20	1.024	1743566	323713	3379	8447	96	1.58(1.32-1.78)	
339.8597	24.071	23.241	50	1.076	1611784	248754	5255	13137	47		
341.8567	24.071	23.241	50	1.076	985367	150875	3379	8447	45	1.64(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	25.667	23.241	145	1.147	425888	67250	5255	13137	13		
341.8567	25.681	23.241	146	1.147	240037	38309	3379	8447	11	1.77(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.367	17698996	2833450	2167	5417	1308		
369.8919	24.426	24.426	0	1.367	10688479	1711636	1908	4770	897	1.66(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453	24.453	0	1.001	628774	101341	767	1917	132		
357.8516	24.467	24.453	1	1.002	393011	64923	631	1577	103	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.235	23.349	-127	0.869	48876	9915	767	1917	13		
357.8516	21.249	23.349	-126	0.870	109216	19595	631	1577	31	0.45(1.32-1.78)	
	Empc Correction				31532	6396	631	1577	10		
355.8546	21.999	23.349	-81	0.901	69158	12988	767	1917	17		
357.8516	21.999	23.349	-81	0.901	44641	8092	631	1577	13	1.55(1.32-1.78)	
355.8546	22.408	23.349	-56	0.917	68304	11840	767	1917	15		
357.8516	22.435	23.349	-55	0.918	51947	8669	631	1577	14	1.31(1.32-1.78)	
	Empc Correction				44067	7638	631	1577	12		
355.8546	22.653	23.349	-42	0.927	24130	4595	767	1917	6		
357.8516	22.681	23.349	-40	0.929	20953	4988	631	1577	8	1.15(1.32-1.78)	
	Empc Correction				15567	2964	631	1577	5		
355.8546	22.967	23.349	-23	0.940	26570	6683	767	1917	9		
	Empc Correction				21721	4206	767	1917	5		
357.8516	22.967	23.349	-23	0.940	14014	2714	631	1577	4	1.90(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	14429154	2727531	7125	17812	383		
385.8610	30.503	30.503	0	0.949	27989964	5252313	11187	27967	470	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.516	30.529	-1	1.000	15776299	3009439	5131	12827	587		
375.8178	30.516	30.529	-1	1.000	13053723	2475791	5023	12557	493	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	13572226	2608752	7125	17812	366		
385.8610	30.689	30.689	0	0.955	25781980	5008878	11187	27967	448	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.702	30.716	-1	1.000	4153977	772873	5131	12827	151		
375.8178	30.702	30.716	-1	1.000	3317376	632893	5023	12557	126	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	12906034	3199150	7125	17812	449		
385.8610	31.514	31.514	0	0.981	24566983	6063942	11187	27967	542	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528	31.528	0	1.000	434398	111441	5131	12827	22		
375.8178	31.528	31.528	0	1.000	353479	82984	5023	12557	17	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.326	-1	1.005	11938469	3242068	7125	17812	455		
385.8610	32.313	32.326	-1	1.005	23300676	6236557	11187	27967	557	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.326	32.340	-1	1.000	200032	62766	5131	12827	12		
375.8178	32.326	32.340	-1	1.000	172700	54117	5023	12557	11	1.16(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDF											
373.8208	28.347	30.197	-111	0.929	932255	127881	5131	12827	25		
375.8178	28.347	30.197	-111	0.929	778677	109853	5023	12557	22	1.20(1.05-1.43)	
373.8208	29.677	30.197	-31	0.973	519446	74794	5131	12827	15		
375.8178	29.691	30.197	-30	0.973	417652	54825	5023	12557	11	1.24(1.05-1.43)	
373.8208	31.421	30.197	73	1.030	296271	68495	5131	12827	13		
375.8178	31.408	30.197	73	1.030	226064	52740	5023	12557	10	1.31(1.05-1.43)	
373.8208	32.419	30.197	133	1.063	819533	234105	5131	12827	46		
375.8178	32.406	30.197	132	1.062	721398	192420	5023	12557	38	1.14(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.140	0		36435787	9821255	9328	23320	1053		
403.8529	32.140	32.140	0		29376317	7912330	6640	16600	1192	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	17081927	4844684	9328	23320	519		
403.8529	31.701	31.701	0	0.986	13663219	3839603	6640	16600	578	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											Ma
389.8157	31.714	31.714	0	1.000	31075	8013	538	1345	15		M
391.8127	31.714	31.714	0	1.000	29316	9593	450	1125	21	1.06(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	17911043	4624737	9328	23320	496		
403.8529	31.807	31.807	0	0.990	14507825	3739439	6640	16600	563	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.820	31.820	0	1.000	94837	25438	538	1345	47		M
391.8127	31.820	31.820	0	1.000	80318	21401	450	1125	48	1.18(1.05-1.43)	
1,2,3,7,8,9-HxCDD											M
389.8157	32.140	32.153	-1	1.014	62037	13671	538	1345	25		M
391.8127	32.140	32.153	-1	1.014	47308	8789	450	1125	20	1.31(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.545	30.882	-80	0.929	719005	90639	538	1345	168		
391.8127	29.531	30.882	-81	0.928	600364	73428	450	1125	163	1.20(1.05-1.43)	
389.8157	30.583	30.882	-18	0.962	43609	8778	538	1345	16		
391.8127	30.569	30.882	-19	0.961	37755	6764	450	1125	15	1.16(1.05-1.43)	
389.8157	30.955	30.882	4	0.973	303528	62047	538	1345	115		
391.8127	30.955	30.882	4	0.973	221810	45501	450	1125	101	1.37(1.05-1.43)	
389.8157	31.155	30.882	16	0.979	68431	16223	538	1345	30		
391.8127	31.155	30.882	16	0.979	69552	14395	450	1125	32	0.98(1.05-1.43)	
	Empc Correction				55186	13083	450	1125	29		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.766	0	1.051	9283908	3059850	13611	34027	225		
419.8220	33.766	33.766	0	1.051	21251093	6957258	22475	56187	310	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.778	-1	1.000	4922291	1631131	6272	15680	260		
409.7789	33.766	33.778	-1	1.000	4623322	1566499	4092	10230	383	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.084	9530461	2947630	13611	34027	217		
419.8220	34.847	34.847	0	1.084	22416266	6784197	22475	56187	302	0.43(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860	34.860	0	1.000	1299244	380125	6272	15680	61		
409.7789	34.860	34.860	0	1.000	1273412	380135	4092	10230	93	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.070	34.319	-15	1.009	1464087	462721	6272	15680	74		
409.7789	34.070	34.319	-15	1.009	1308251	440078	4092	10230	108	1.12(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.568	-1	1.075	13551155	4253510	8620	21550	493		
437.8140	34.556	34.568	-1	1.075	13346421	4195584	7936	19840	529	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.580	-1	1.000	3239576	1019368	5364	13410	190		
425.7737	34.568	34.580	-1	1.000	3088206	954716	4408	11020	217	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.009	34.301	-17	0.984	4477792	1450407	5364	13410	270		
425.7737	34.009	34.301	-17	0.984	4302835	1427183	4408	11020	324	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.926	-1	1.149	20187579	5280852	2742	6855	1926		
471.7750	36.914	36.926	-1	1.149	23688004	6060333	2971	7427	2040	0.85(0.76-1.02)	
OCDF											
441.7428	37.010	37.022	-1	1.003	1429218	355482	399	997	891		
443.7399	37.010	37.022	-1	1.003	1622943	413403	570	1425	725	0.88(0.76-1.02)	
OCDD											
457.7377	36.926	36.938	-1	1.000	32816396	8677404	2954	7385	2938		
459.7348	36.926	36.938	-1	1.000	36367751	9610421	4415	11037	2177	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Aug-2021 11:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d
Lims ID: 320-76769-A-5-A
Client ID: 11215702-072221-SS-SJSB080 (8-10)
Inject. Date: 15-Aug-2021 08:06:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 11

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	49158046	12853020

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	49158046	12853020

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.950	4710487	1282458	6232685	1732884	21.7	0.76	
16.237	8582211	1842302	11302405	2422305	39.5	0.76	
16.464	9073720	2394519	11559683	3064541	41.0	0.78	
16.706	13888714	3483167	17828362	4434371	63.0	0.78	
16.978	136107271	35162805	174027050	45448569	616.2	0.78	
17.205	4588663	1105286	5945201	1446387	20.9	0.77	
17.794	20824572	5224160	26940367	6800937	94.9	0.77	
18.036	4152137	921681	5343771	1175870	18.9	0.78	
19.185	22202542	5213473	28745571	6793420	101.2	0.77	
Signal Totals:							
	224130317	56629851	287925095	73319284			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	512055412	129949135				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1017.3 = (512055412 * 100.000) / (49158046 * 1.024)

Report Date: 18-Aug-2021 11:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d
Lims ID: 320-76769-A-5-A
Client ID: 11215702-072221-SS-SJSB080 (8-10)
Inject. Date: 15-Aug-2021 08:06:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 11

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	29576857	6954186

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	29576857	6954186

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.933	576047	134156	731754	168248	3.53	0.79	
17.961	683388	206749	816218	256833	4.04	0.84	
18.429	5986579	1406333	7495049	1777311	36.3	0.80	
Signal Totals:							
	7246014	1747238	9043021	2202392			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	16289035	3949630				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 43.914 = (16289035 * 100.000) / (29576857 * 1.254)

Report Date: 18-Aug-2021 11:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d
Lims ID: 320-76769-A-5-A
Client ID: 11215702-072221-SS-SJSB080 (8-10)
Inject. Date: 15-Aug-2021 08:06:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 11

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	41724853	7443625
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	47021842	7770233

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	44373347	7606929

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.488	81189	18350	46425	9839	0.2766	1.75	
Signal Totals:							
	81189	18350	46425	9839			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	127614	28189				1.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2766 = (127614 * 100.000) / (44373347 * 1.040)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d
Lims ID: 320-76769-A-5-A
Client ID: 11215702-072221-SS-SJSB080 (8-10)
Inject. Date: 15-Aug-2021 08:06:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 11

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	41724853	7443625
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	47021842	7770233

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	44373347	7606929

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.058	4173561	838736	2577357	526009	14.6	1.62	
21.862	358095	41158	246418	27155	1.31	1.45	
22.258	721245	155680	466784	95861	2.57	1.55	
22.912	2759541	506938	1743566	323713	9.76	1.58	
24.071	1611784	248754	985367	150875	5.63	1.64	
25.667	425888	67250	240037	38309	1.44	1.77	
Signal Totals:							
	10050114	1858516	6259529	1161922			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	16309643	3020438				1.61	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 35.349 = (16309643 * 100.000) / (44373347 * 1.040)

Report Date: 18-Aug-2021 11:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d		
Lims ID:	320-76769-A-5-A		
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Inject. Date:	15-Aug-2021 08:06:55	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	11

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	28387475	4545086

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	28387475	4545086

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.235	48876	9915	109216	19595	0.5312	0.45	RQ
21.235	48876	9915	31532	6396	0.2702		Empc Correction
21.999	69158	12988	44641	8092	0.3824	1.55	
22.408	68304	11840	51947	8669	0.4040	1.31	RQ
22.408	68304	11840	44067	7638	0.3776		Empc Correction
22.653	24130	4595	20953	4988	0.1515	1.15	RQ
22.653	24130	4595	15567	2964	0.1334		Empc Correction
22.967	26570	6683	14014	2714	0.1364	1.90	RQ
22.967	21721	4206	14014	2714	0.1201		Empc Correction
Signal Totals:							
	232189	43544	149821	27804			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	477809	90079				0.98	RQ
	382010	71348					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.605 = (477809 * 100.000) / (28387475 * 1.048)

Empc Amount: 1.284 = (382010 * 100.000) / (28387475 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 11:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d
Lims ID: 320-76769-A-5-A
Client ID: 11215702-072221-SS-SJSB080 (8-10)
Inject. Date: 15-Aug-2021 08:06:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 11

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	42419118	7979844
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	39354206	7617630
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	37473017	9263092
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	35239145	9478625

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	38621371	8584797

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.347	932255	127881	778677	109853	3.90	1.20	
29.677	519446	74794	417652	54825	2.14	1.24	
31.421	296271	68495	226064	52740	1.19	1.31	
32.419	819533	234105	721398	192420	3.51	1.14	
Signal Totals:							
	2567505	505275	2143791	409838			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4711296	915113				1.20	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 10.736 = (4711296 * 100.000) / (38621371 * 1.136)

Report Date: 18-Aug-2021 11:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d		
Lims ID:	320-76769-A-5-A		
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Inject. Date:	15-Aug-2021 08:06:55	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	11

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	30745146	8684287
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	32418868	8364176
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	31582007	8524231

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.545	719005	90639	600364	73428	3.92	1.20	
30.583	43609	8778	37755	6764	0.2418	1.16	
30.955	303528	62047	221810	45501	1.56	1.37	
31.155	68431	16223	69552	14395	0.4100	0.98	RQ
31.155	68431	16223	55186	13083	0.3673		Empc Correction
Signal Totals:							
	1134573	177687	915115	138776			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2064054	317775				1.22	RQ
	2049688	316463					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 6.134 = (2064054 * 100.000) / (31582007 * 1.066)

Empc Amount: 6.091 = (2049688 * 100.000) / (31582007 * 1.066)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 11:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d
Lims ID: 320-76769-A-5-A
Client ID: 11215702-072221-SS-SJSB080 (8-10)
Inject. Date: 15-Aug-2021 08:06:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 11

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	30535001	10017108
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	31946727	9731827

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	31240864	9874467

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.070	1464087	462721	1308251	440078	6.43	1.12	
Signal Totals:							
	1464087	462721	1308251	440078			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2772338	902799				1.12	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.434 = (2772338 * 100.000) / (31240864 * 1.379)

Report Date: 18-Aug-2021 11:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d
Lims ID: 320-76769-A-5-A
Client ID: 11215702-072221-SS-SJSB080 (8-10)
Inject. Date: 15-Aug-2021 08:06:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 11

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	26897576	8449094

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	26897576	8449094

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.009	4477792	1450407	4302835	1427183	29.8	1.04	
Signal Totals:							
	4477792	1450407	4302835	1427183			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8780627	2877590				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 29.831 = (8780627 * 100.000) / (26897576 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d				
Injection Date:	15-Aug-2021 08:06:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-5-A	Lab Sample ID:	320-76769-5		
Client ID:	11215702-072221-SS-SJSB080 (8-10)				
Operator ID:	DB	ALS Bottle#:	51	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.39
Area: 6936844
Amount: 40.442672
Amount Units: pg/ul

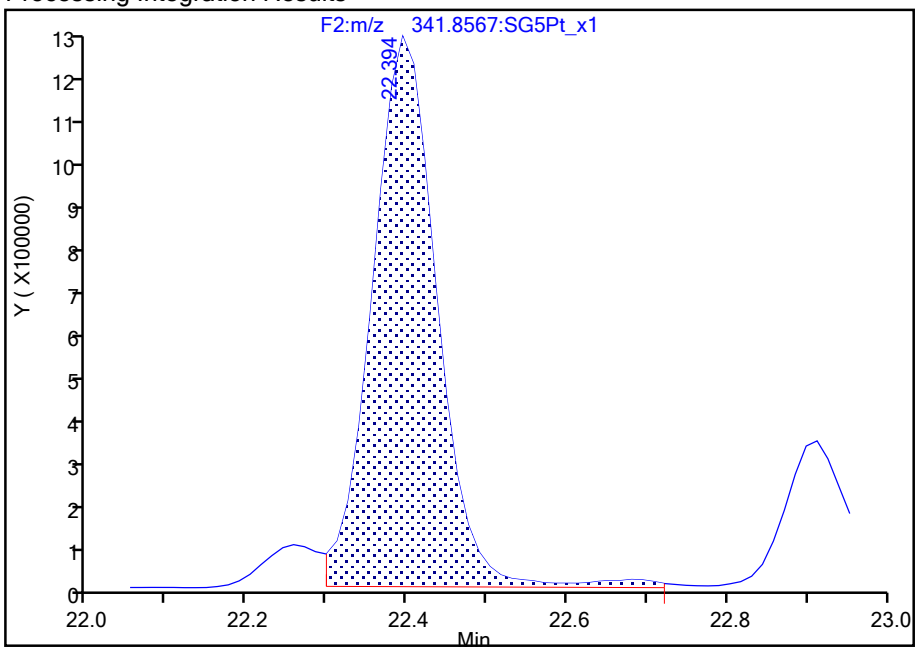

Manual Integration Results

RT: 22.39
Area: 6846061
Amount: 40.237632
Amount Units: pg/ul

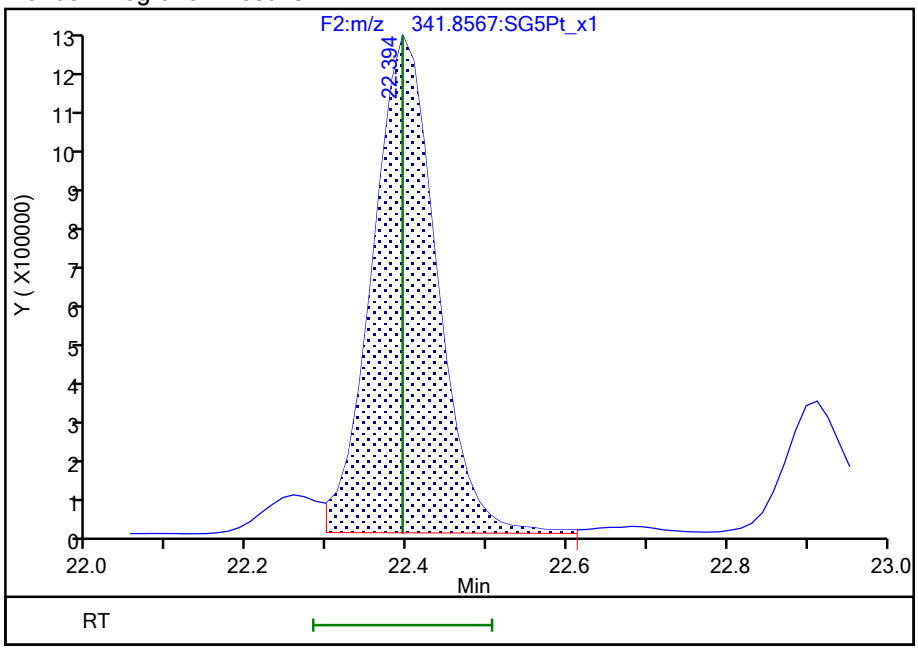

Reviewer: dadunj, 18-Aug-2021 11:07:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d				
Injection Date:	15-Aug-2021 08:06:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-5-A	Lab Sample ID:	320-76769-5		
Client ID:	11215702-072221-SS-SJSB080 (8-10)				
Operator ID:	DB	ALS Bottle#:	51	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.82
Area: 80318
Amount: 0.630368
Amount Units: pg/ul

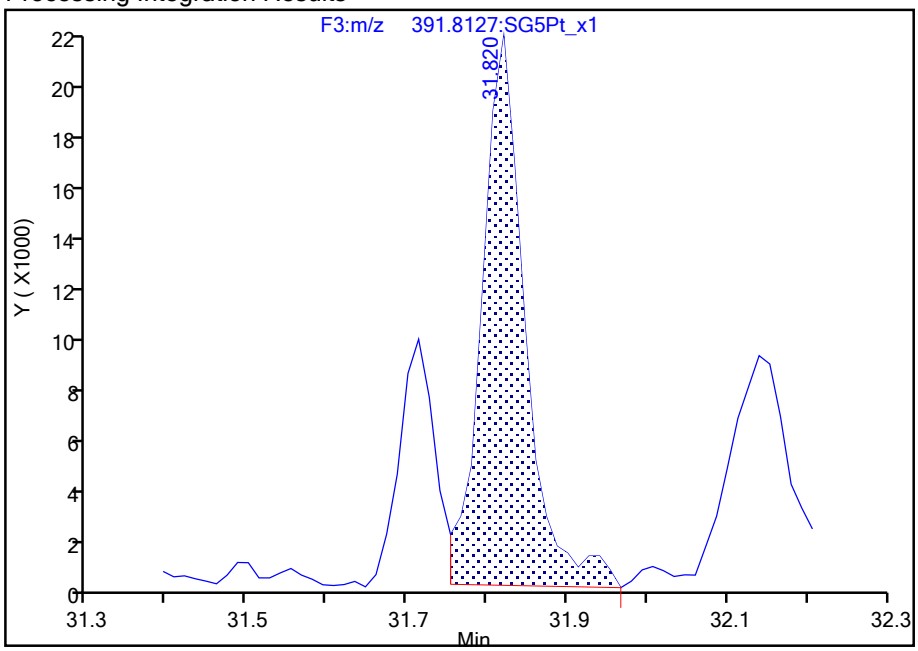

Manual Integration Results

RT: 31.71
Area: 29316
Amount: 0.184604
Amount Units: pg/ul

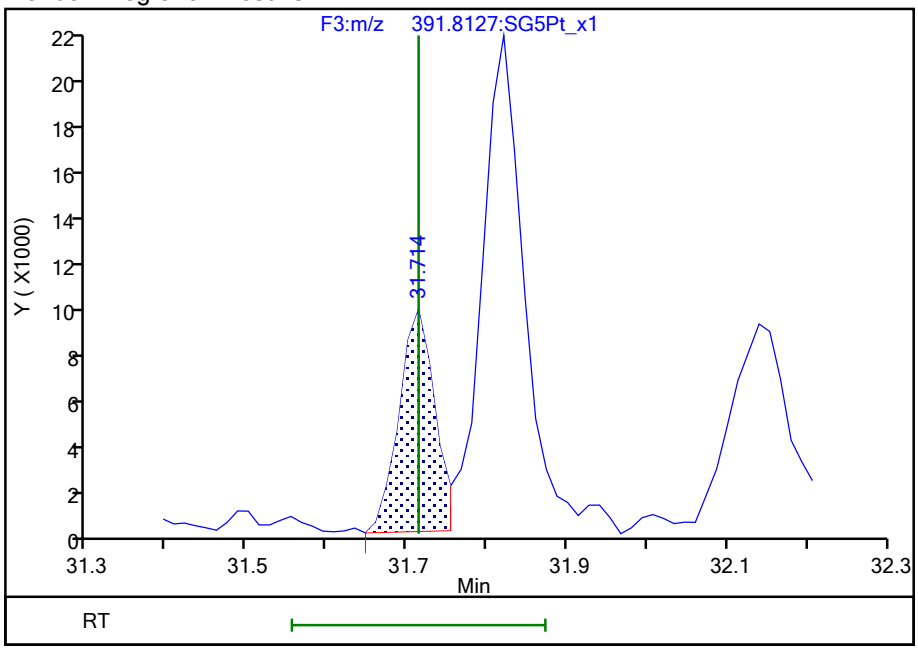

Reviewer: dadunj, 18-Aug-2021 11:07:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d				
Injection Date:	15-Aug-2021 08:06:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-5-A	Lab Sample ID:	320-76769-5		
Client ID:	11215702-072221-SS-SJSB080 (8-10)				
Operator ID:	DB	ALS Bottle#:	51	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

RT: 31.82
Area: 206218
Amount: 0.630368
Amount Units: pg/ul

Processing Integration Results

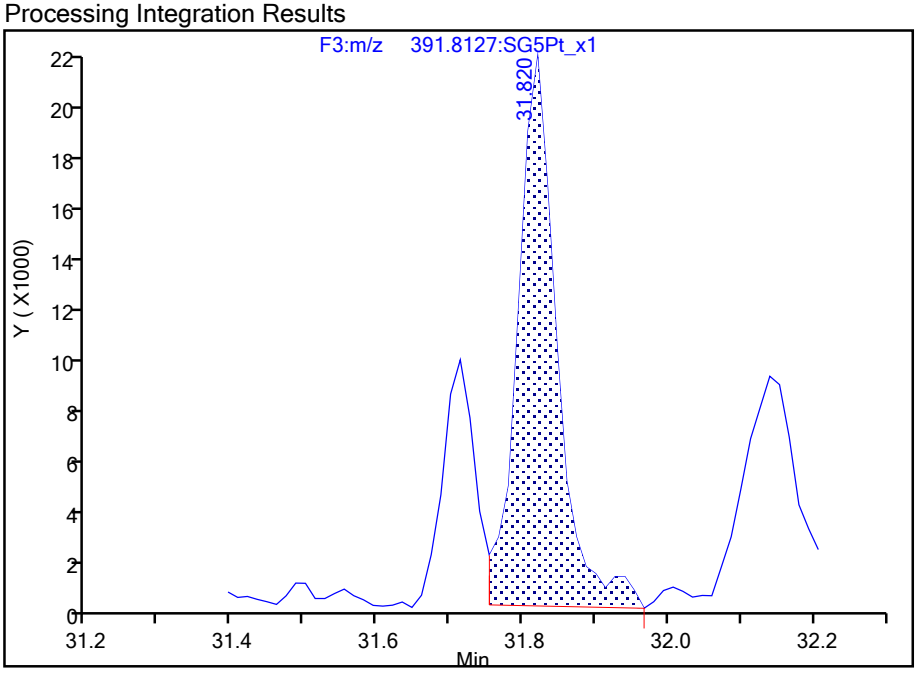

Manual Integration Results

RT: 31.71
Area: 60391
Amount: 0.184604
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 11:07:52
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d				
Injection Date:	15-Aug-2021 08:06:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-5-A	Lab Sample ID:	320-76769-5		
Client ID:	11215702-072221-SS-SJSB080 (8-10)				
Operator ID:	DB	ALS Bottle#:	51	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.82
Area: 125900
Amount: 0.630368
Amount Units: pg/ul

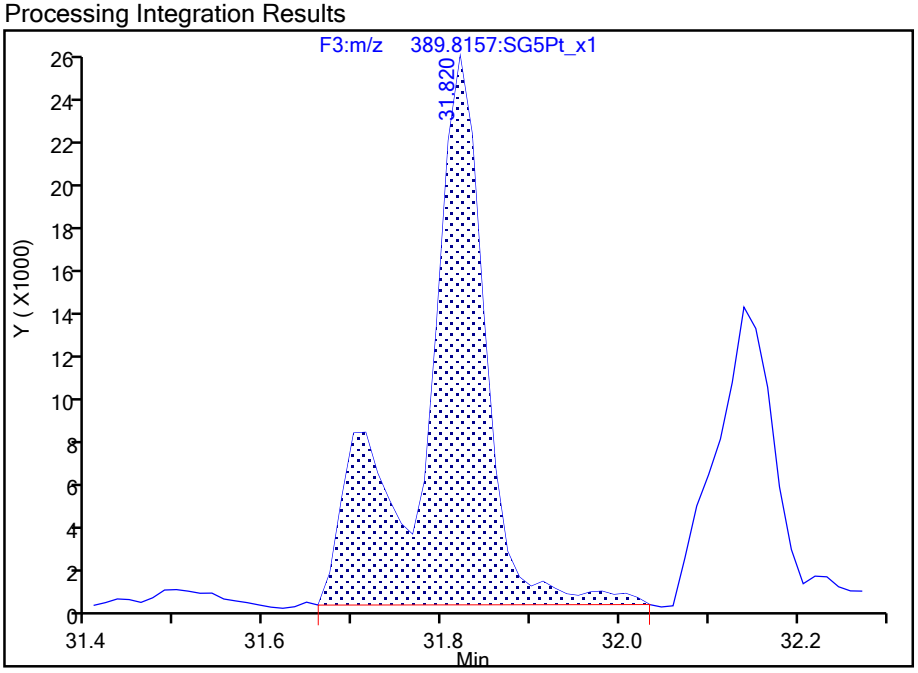

Manual Integration Results

RT: 31.71
Area: 31075
Amount: 0.184604
Amount Units: pg/ul

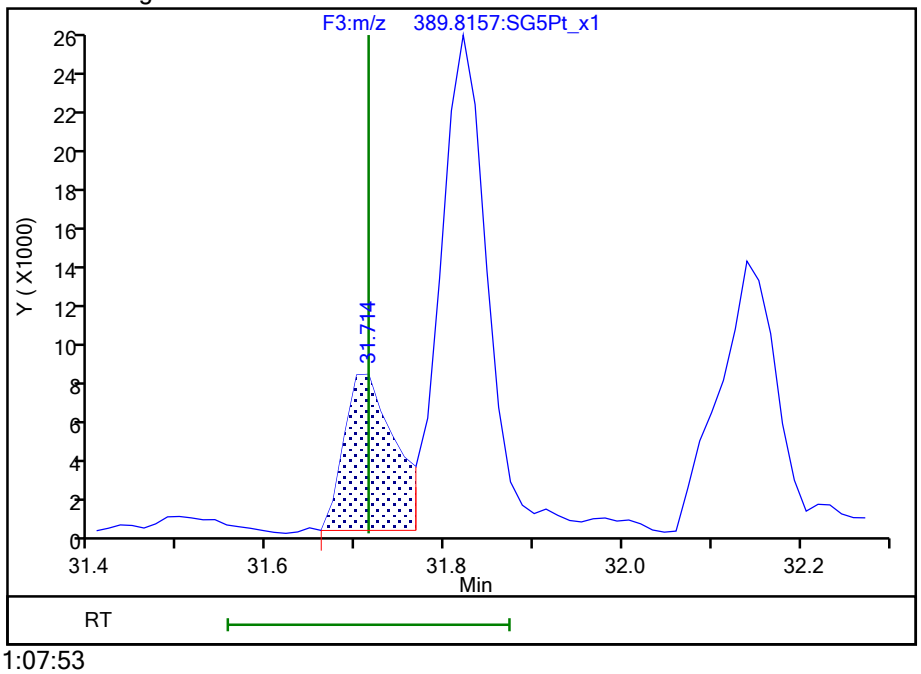

Reviewer: dadunj, 18-Aug-2021 11:07:53

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d				
Injection Date:	15-Aug-2021 08:06:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-5-A	Lab Sample ID:	320-76769-5		
Client ID:	11215702-072221-SS-SJSB080 (8-10)				
Operator ID:	DB	ALS Bottle#:	51	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.82
Area: 125900
Amount: 0.636055
Amount Units: pg/ul

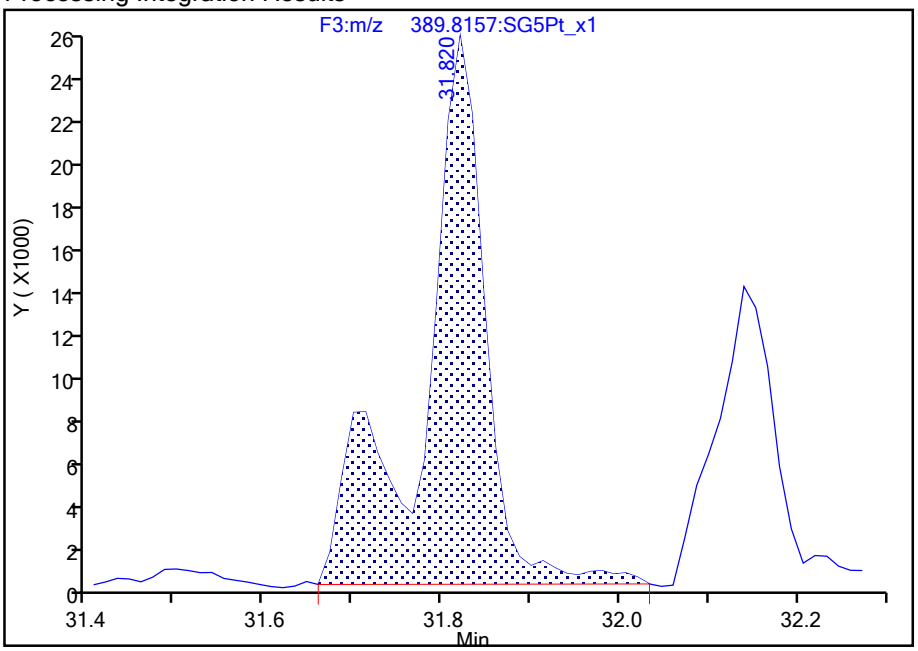

Manual Integration Results

RT: 31.82
Area: 94837
Amount: 0.540245
Amount Units: pg/ul

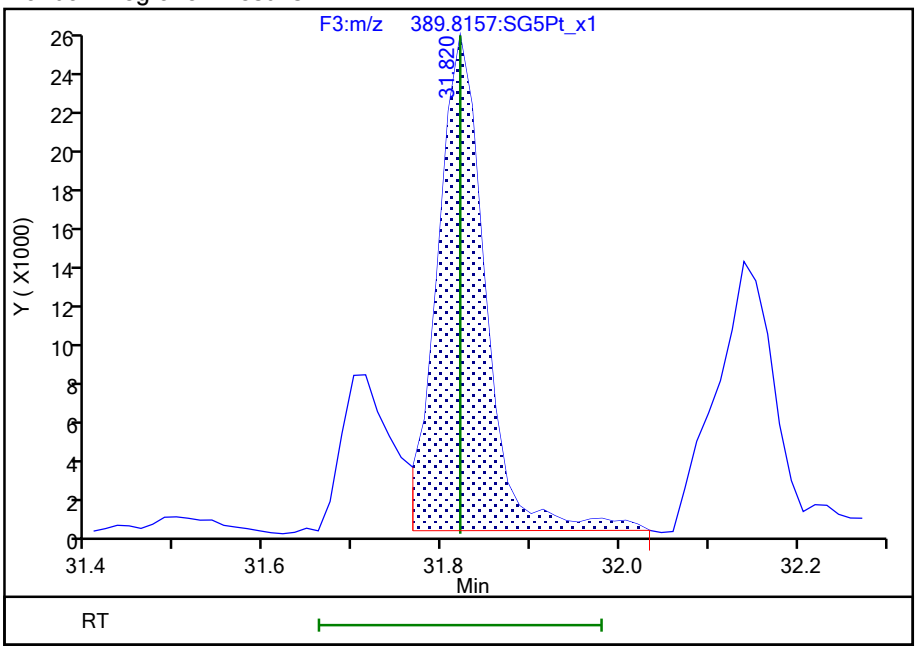

Reviewer: dadunj, 18-Aug-2021 11:07:50

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d				
Injection Date:	15-Aug-2021 08:06:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-5-A	Lab Sample ID:	320-76769-5		
Client ID:	11215702-072221-SS-SJSB080 (8-10)				
Operator ID:	DB	ALS Bottle#:	51	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 32.14
Area: 68441
Amount: 0.331501
Amount Units: pg/ul

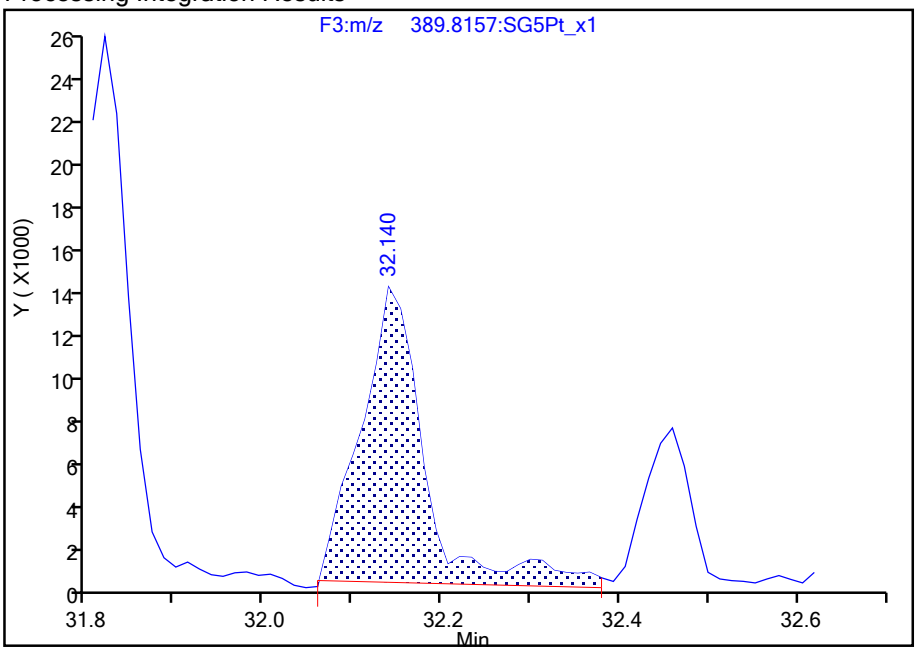

Manual Integration Results

RT: 32.14
Area: 62037
Amount: 0.305712
Amount Units: pg/ul

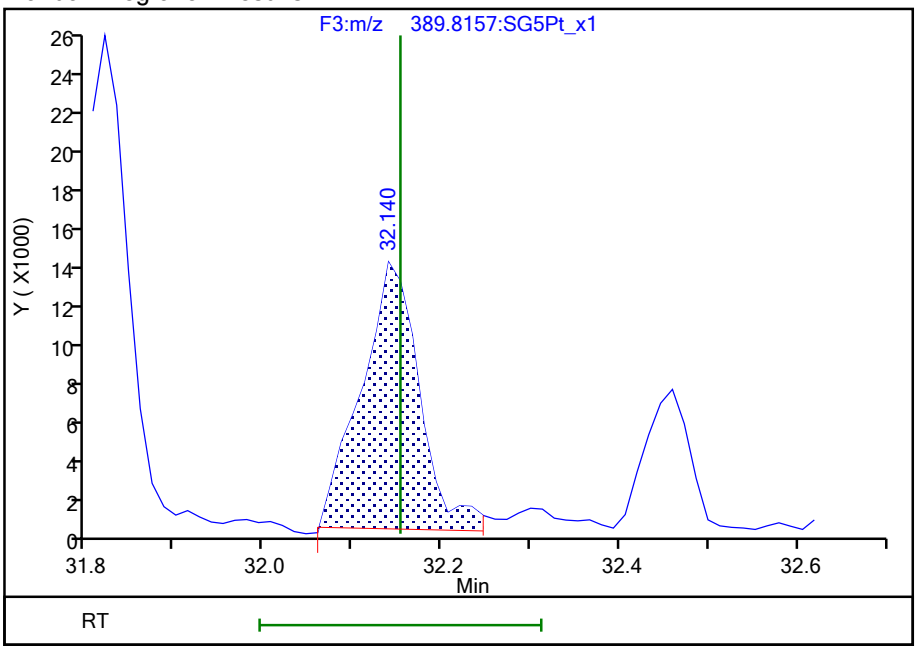

Reviewer: dadunj, 18-Aug-2021 11:07:59

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d				
Injection Date:	15-Aug-2021 08:06:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-5-A	Lab Sample ID:	320-76769-5		
Client ID:	11215702-072221-SS-SJSB080 (8-10)				
Operator ID:	DB	ALS Bottle#:	51	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 32.14
Area: 50128
Amount: 0.331501
Amount Units: pg/ul

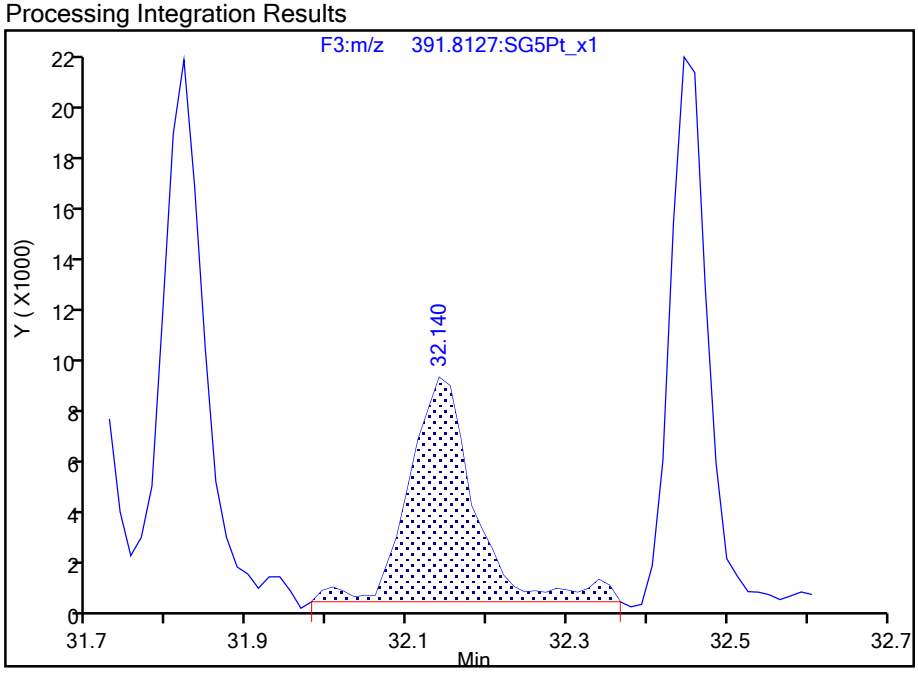

Manual Integration Results

RT: 32.14
Area: 47308
Amount: 0.305712
Amount Units: pg/ul

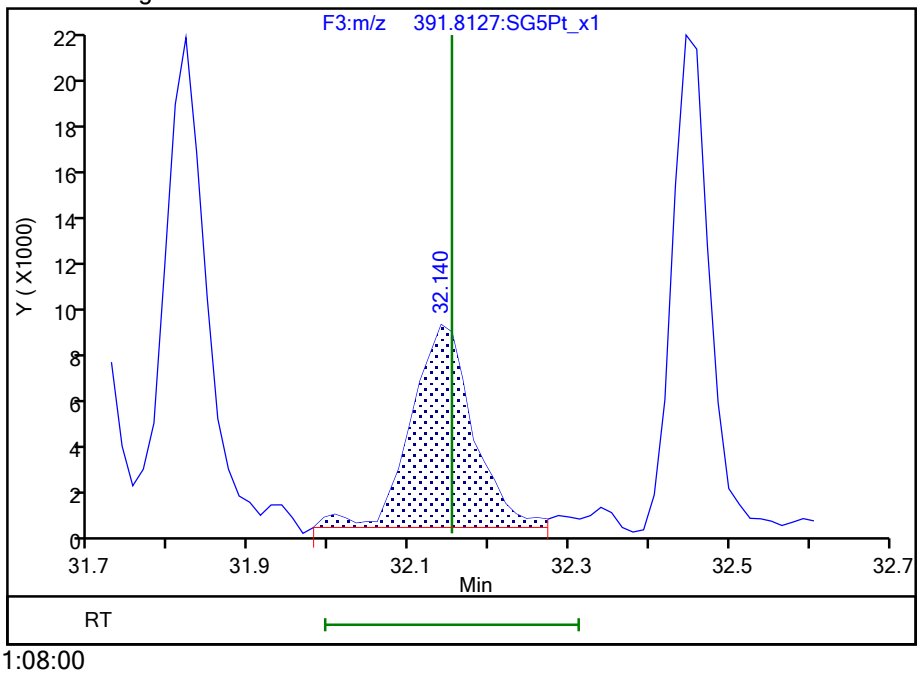

Reviewer: dadunj, 18-Aug-2021 11:08:00
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

774762

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d		
Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	516847	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

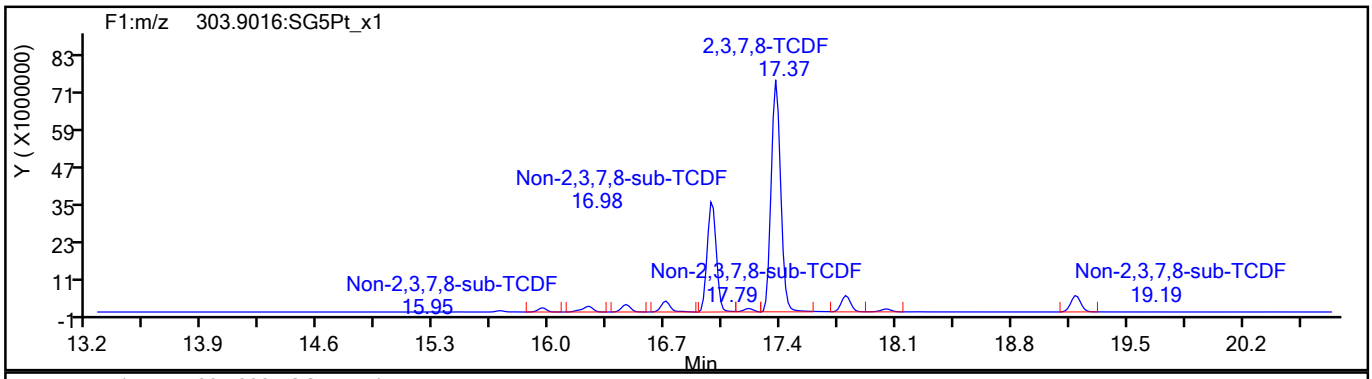

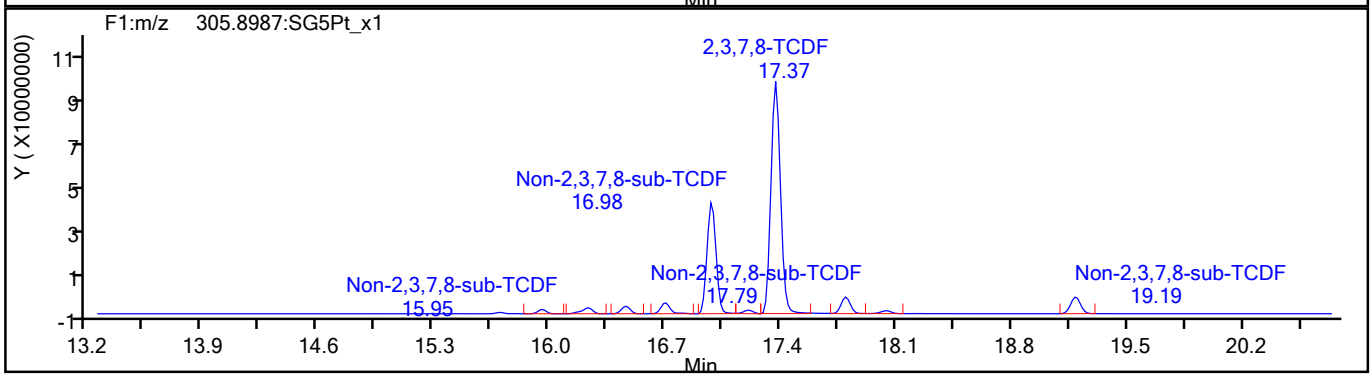

TCDF Standards

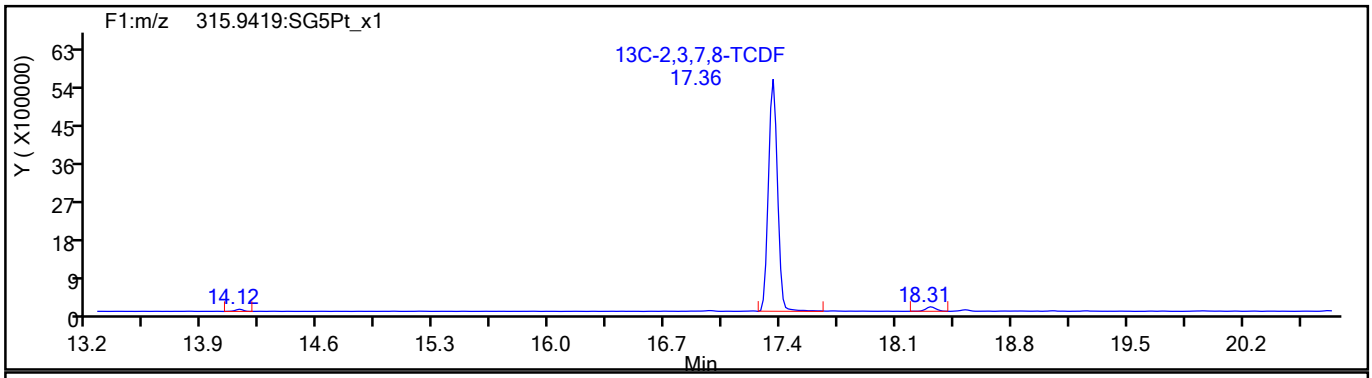

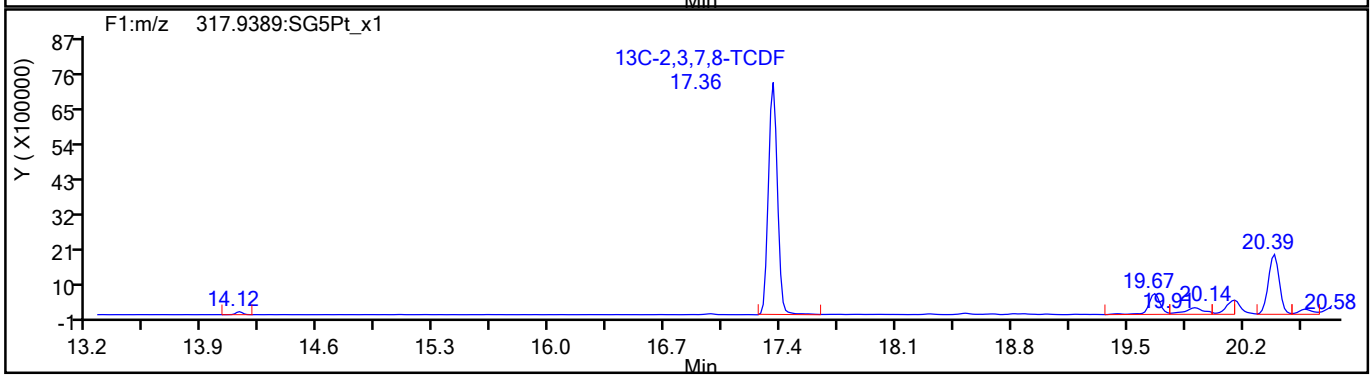

774763

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d		
Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	516847	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

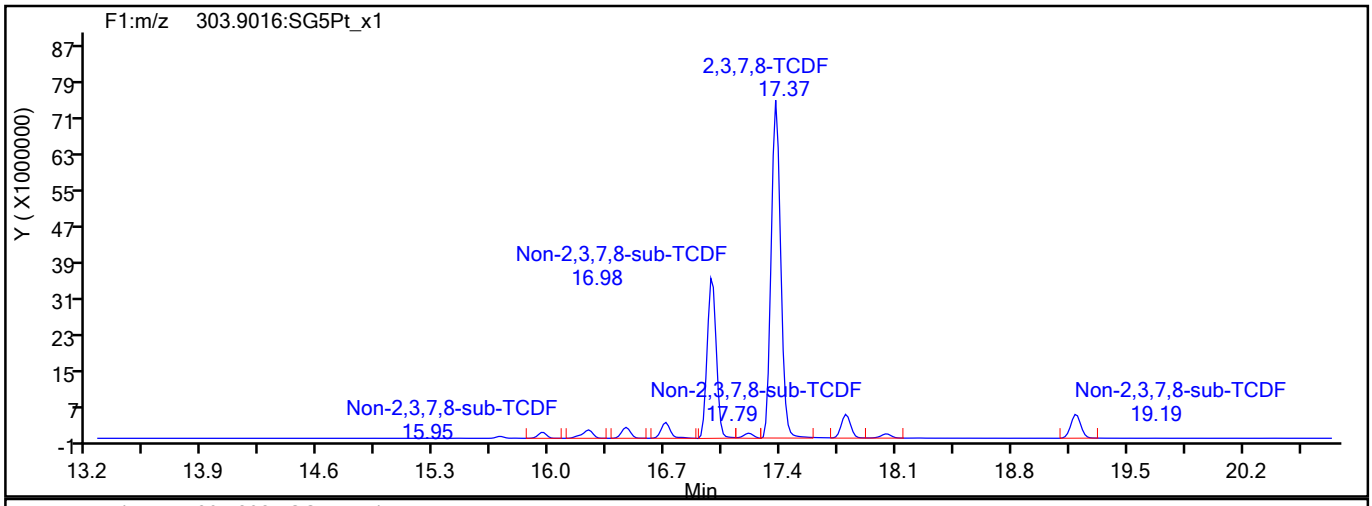

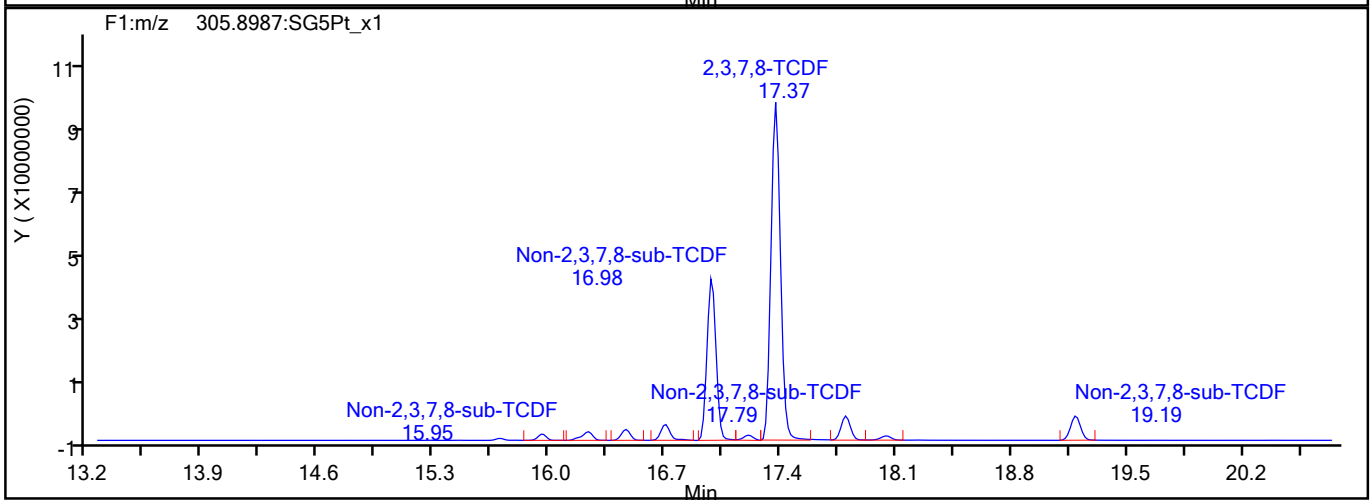

TCDF Interference Mass

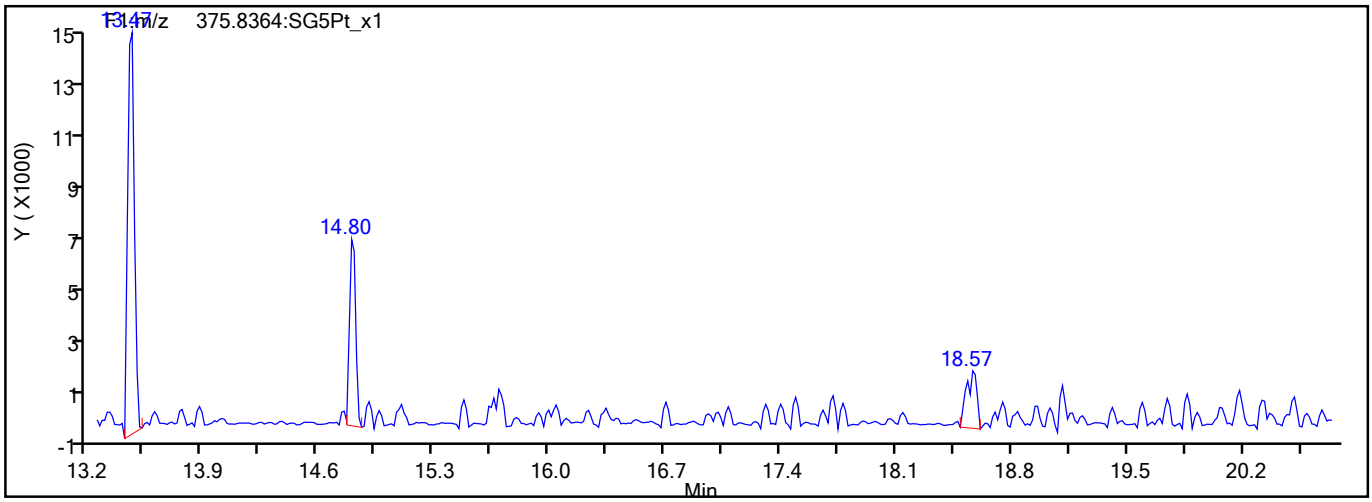

774764

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d		
Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	516847	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

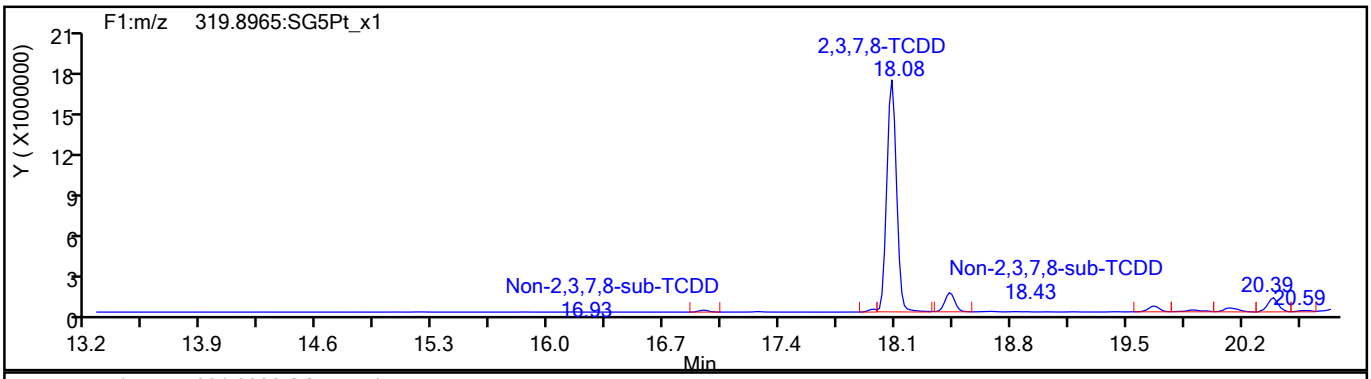

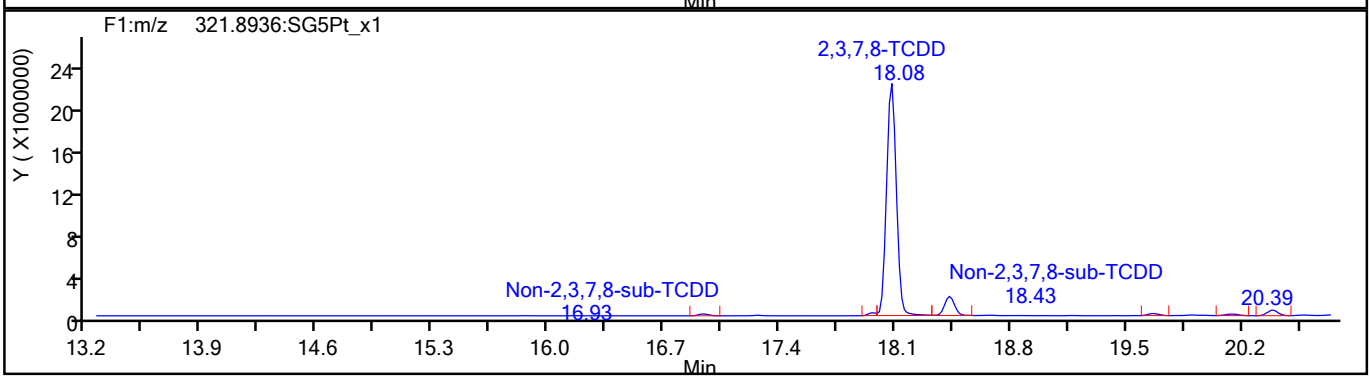

TCDD Standards

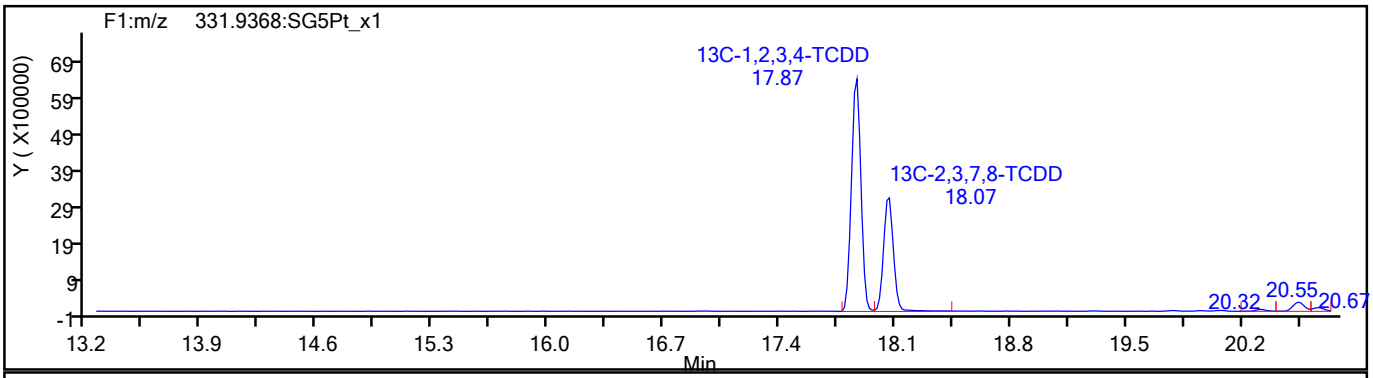

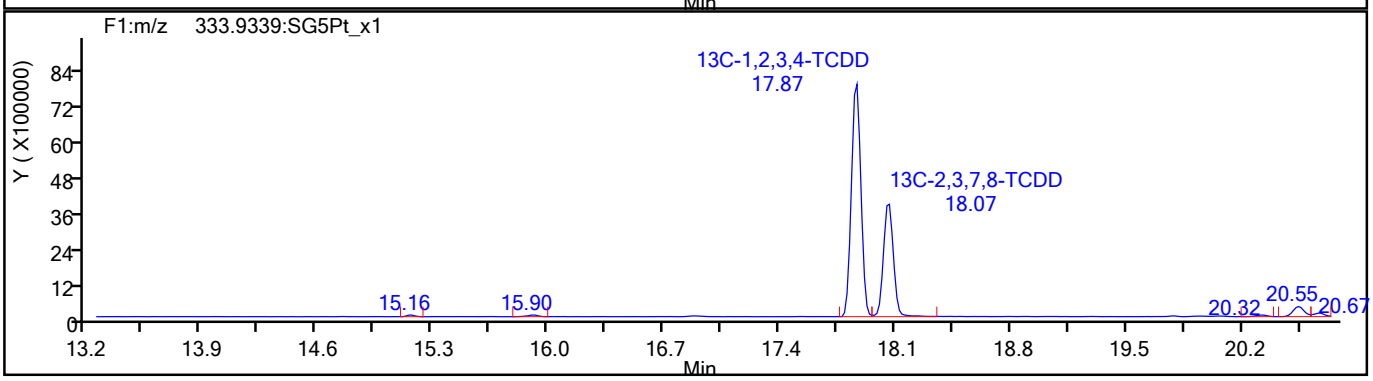

774765

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d		
Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	516847	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

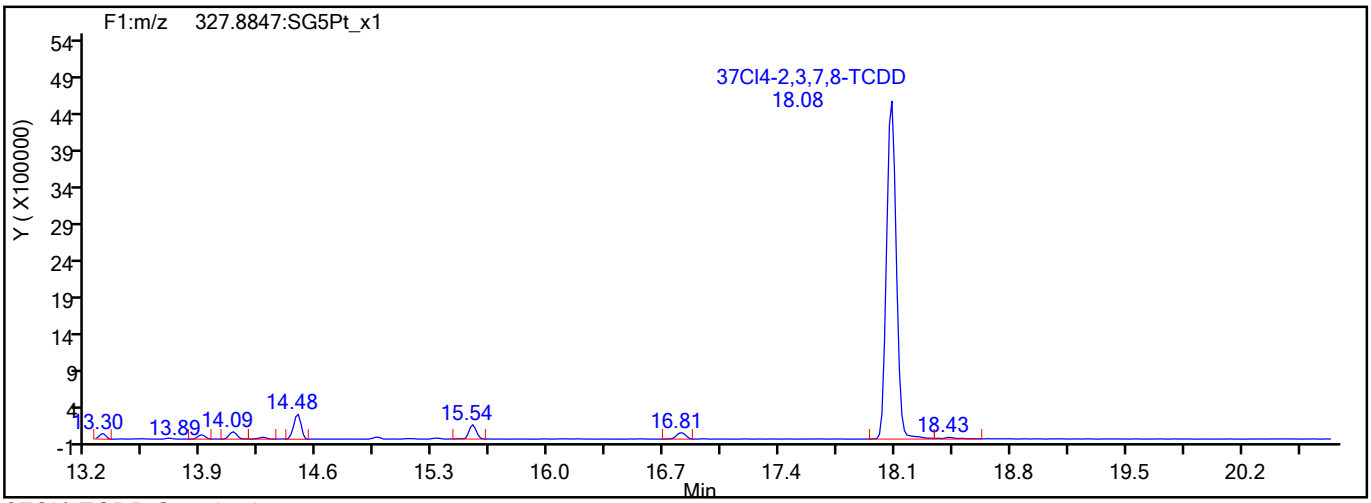

37Cl4-TCDD Standards

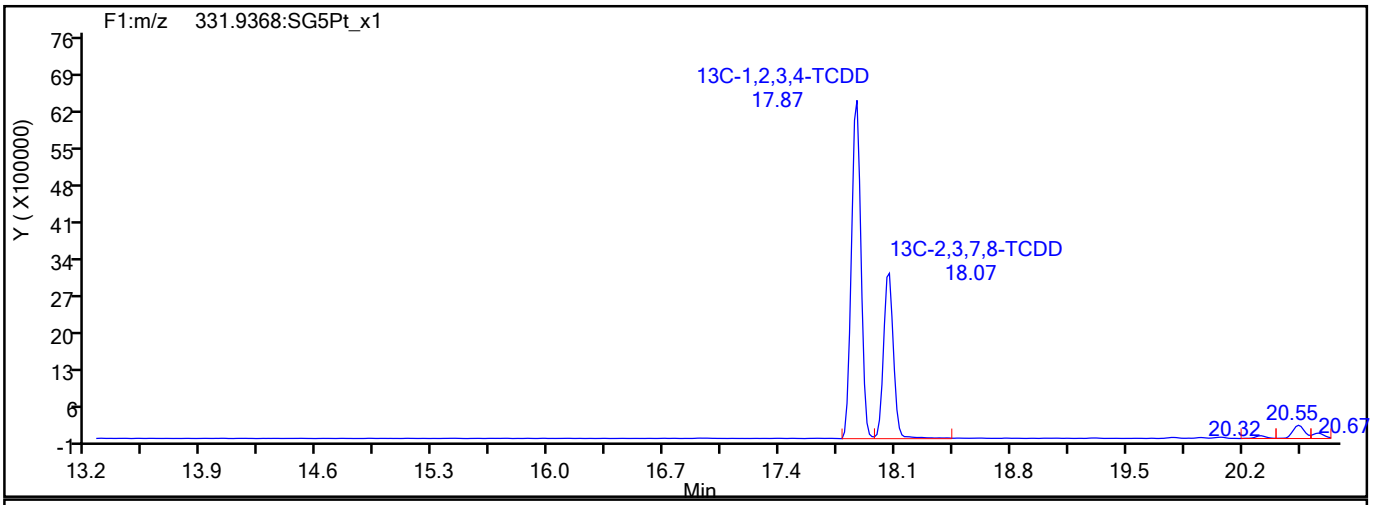

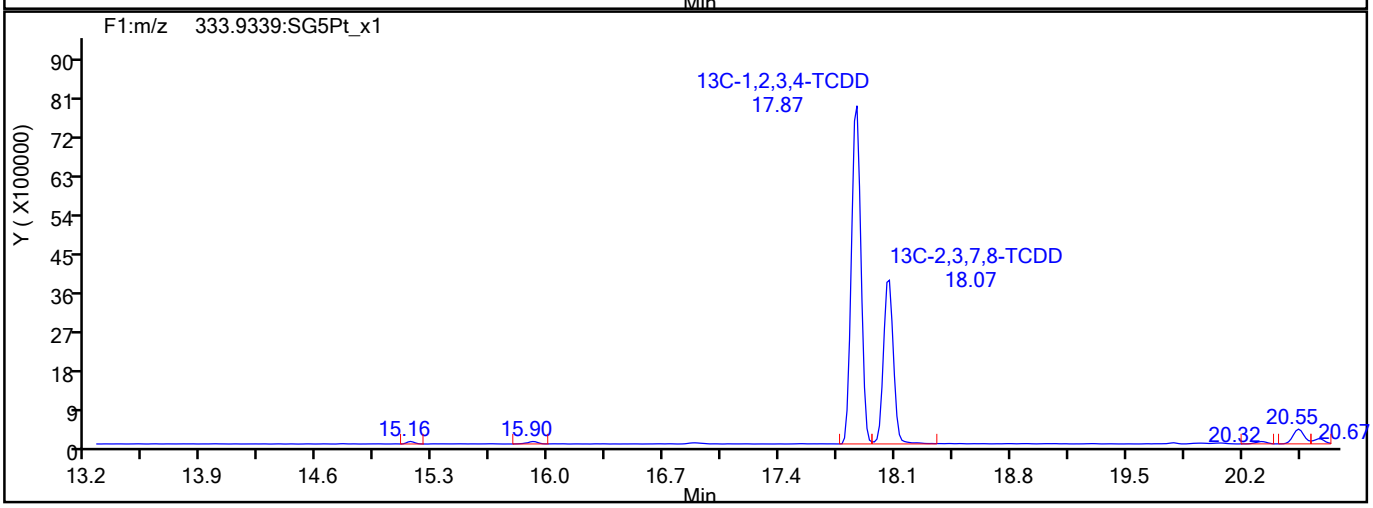

774766

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d		
Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	516847	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

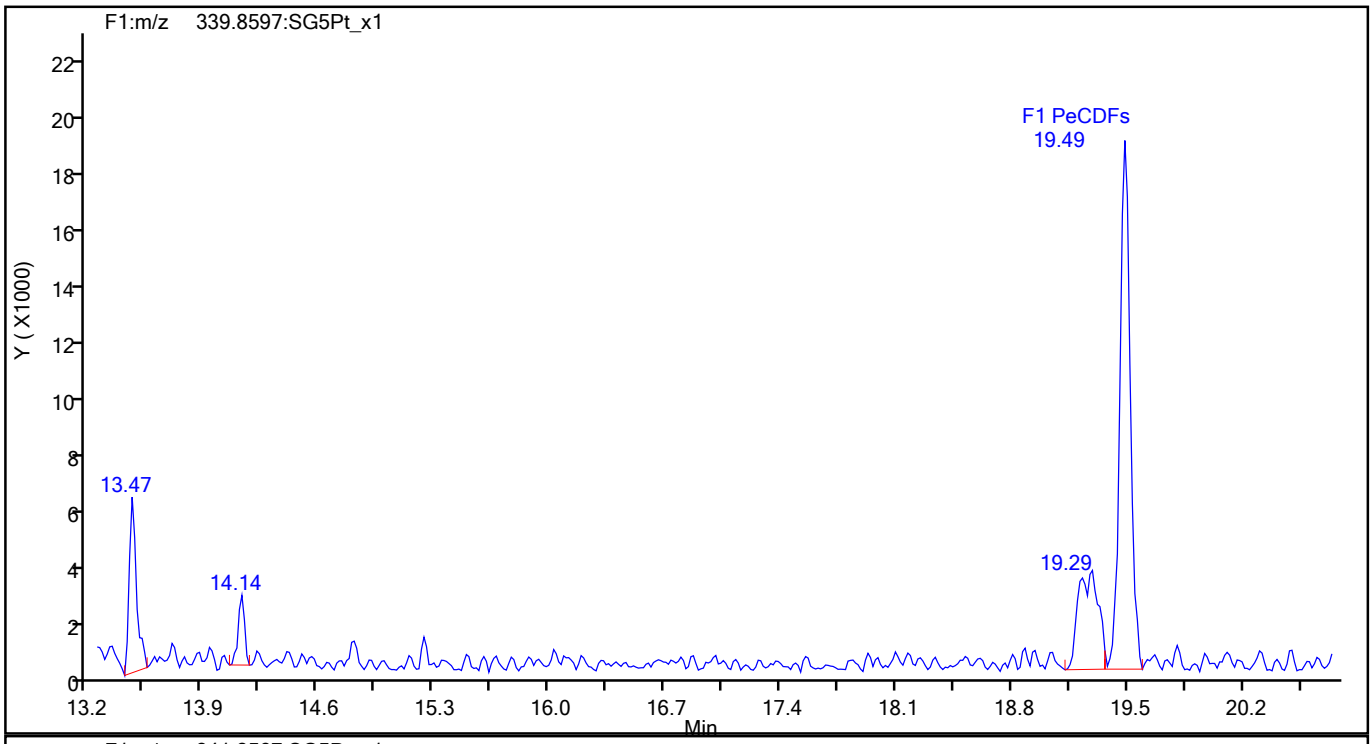

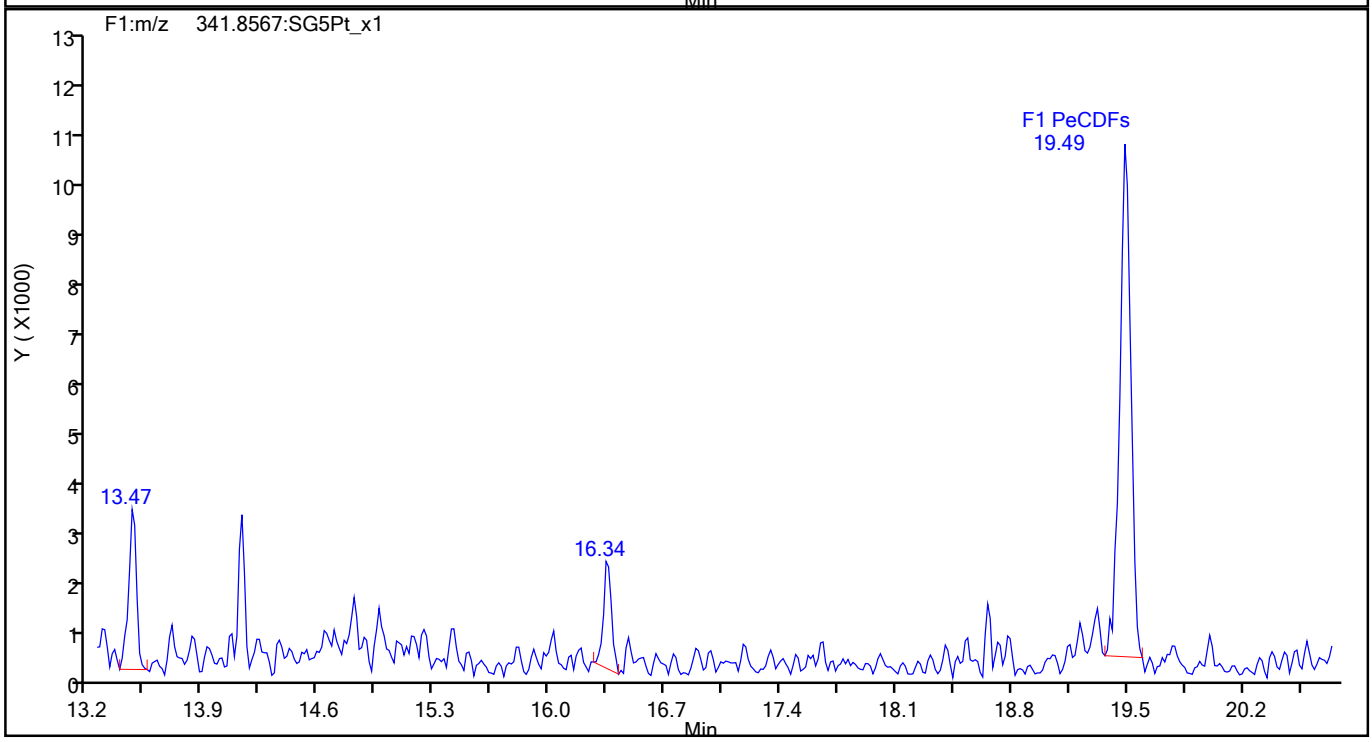

774767

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d		
Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	516847	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

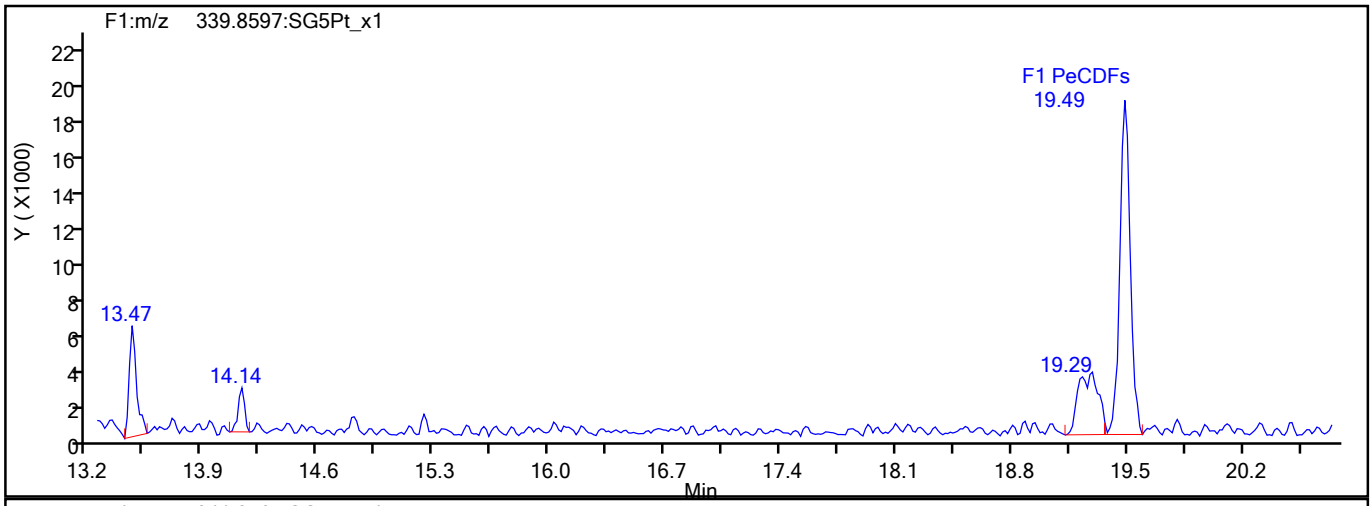

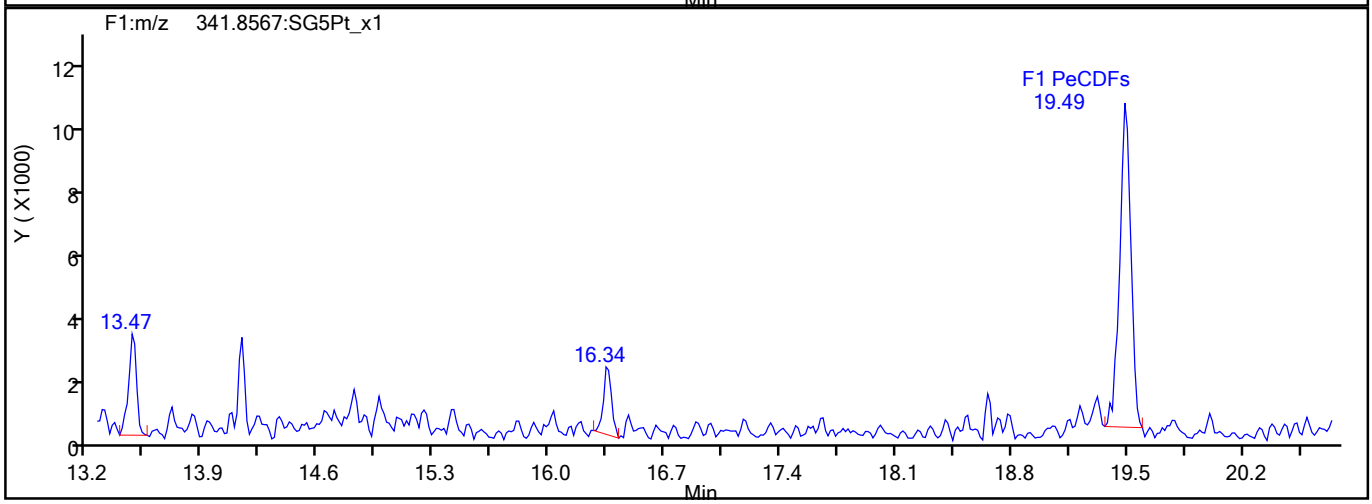

F1 PeCDFs Interference Mass

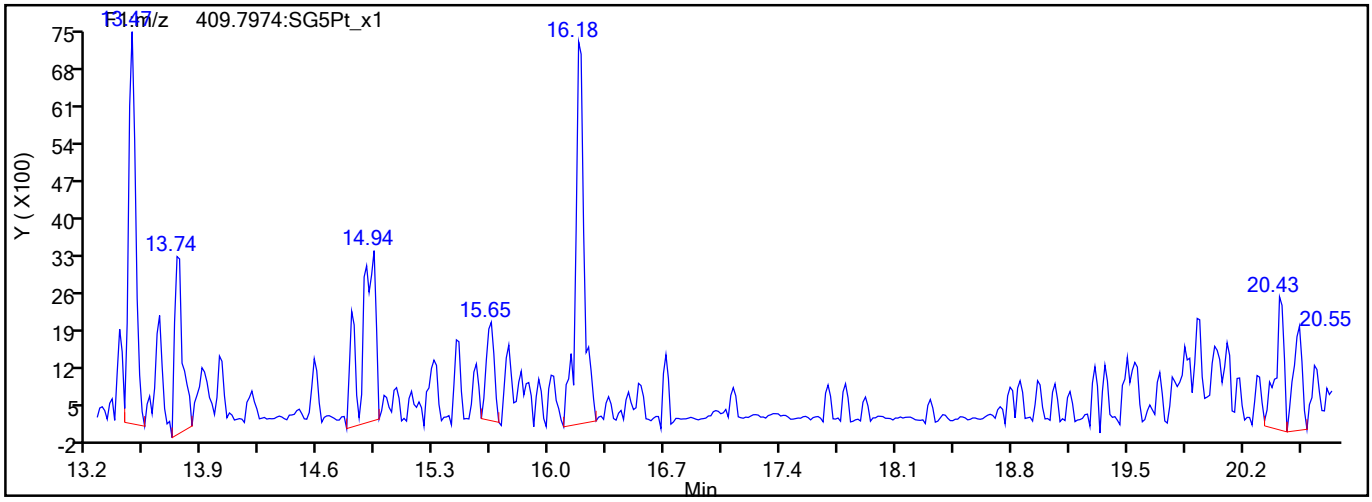

774768

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d		
Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	516847	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

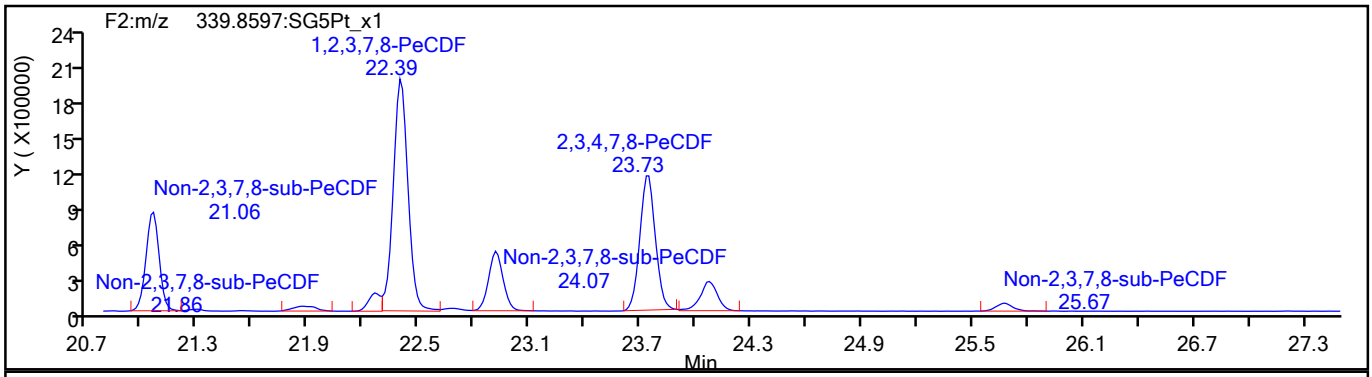

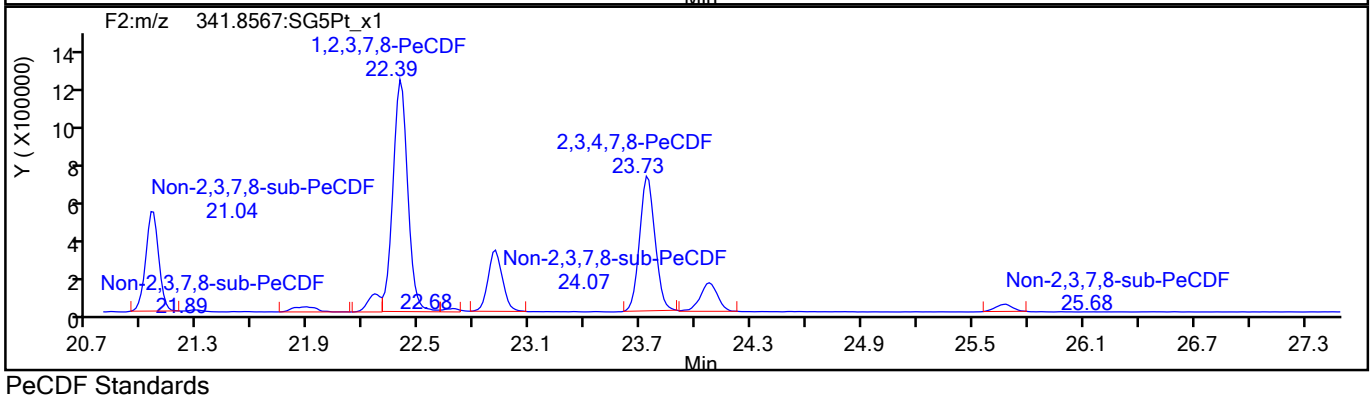

PeCDF Standards

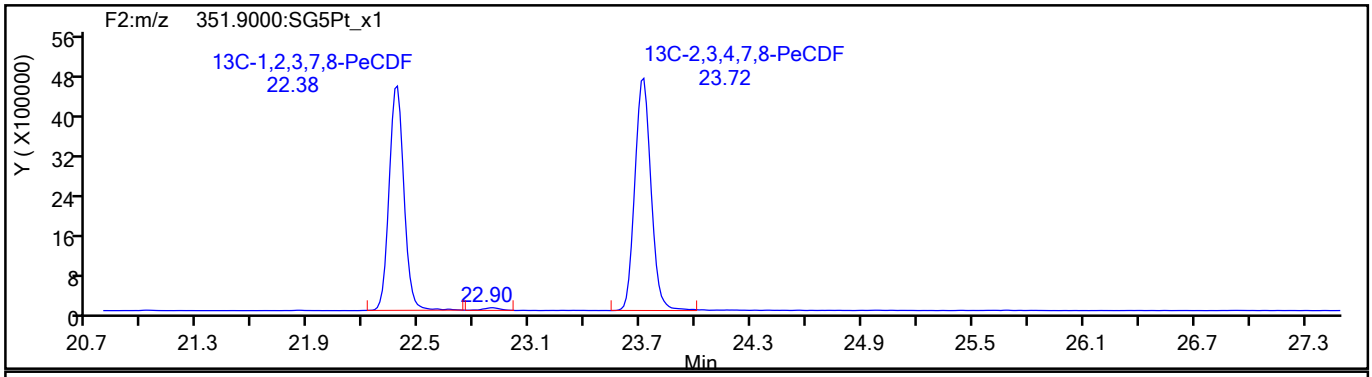

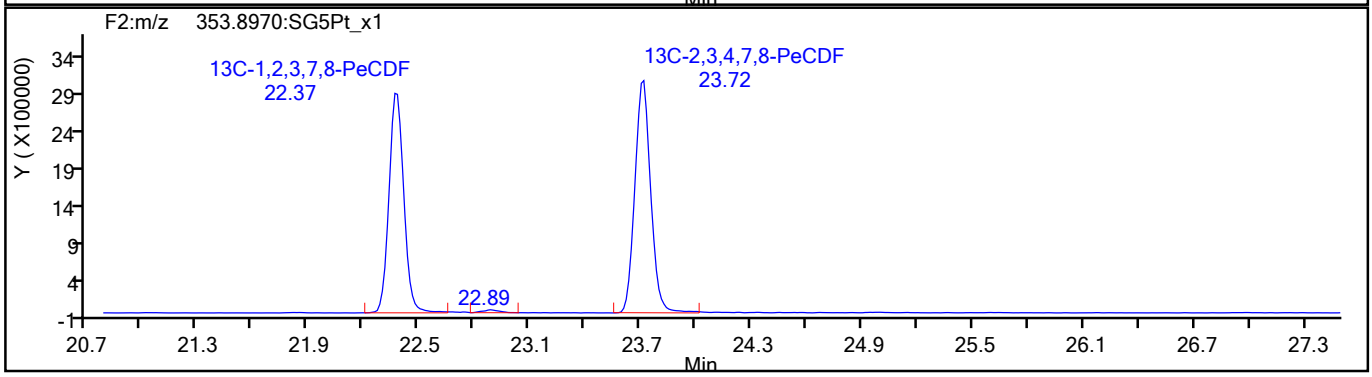

774769

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d		
Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	516847	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

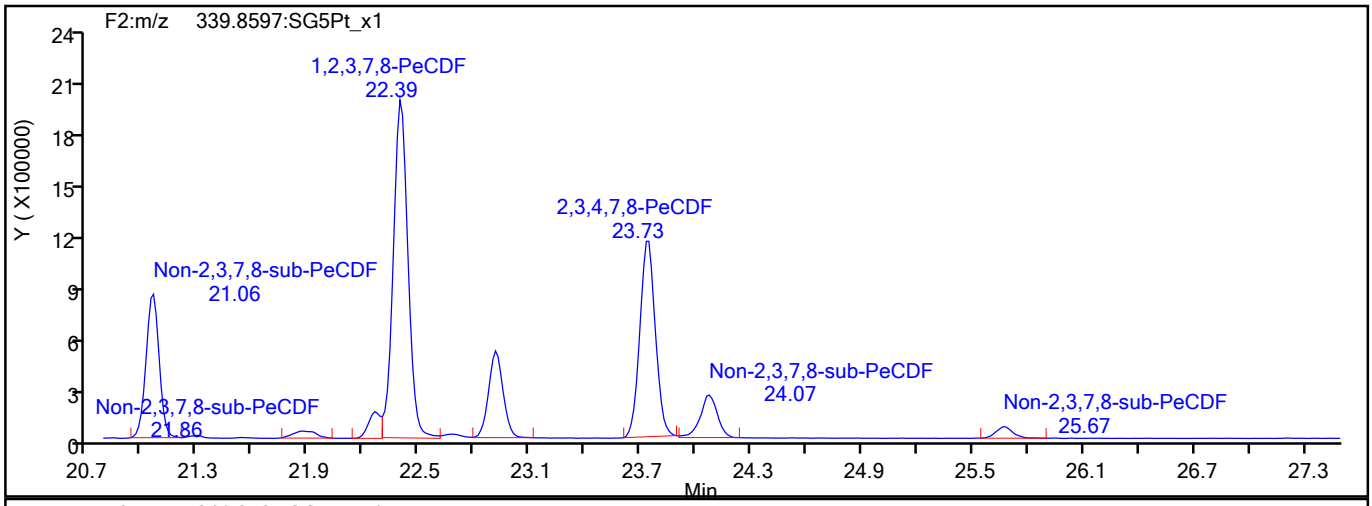

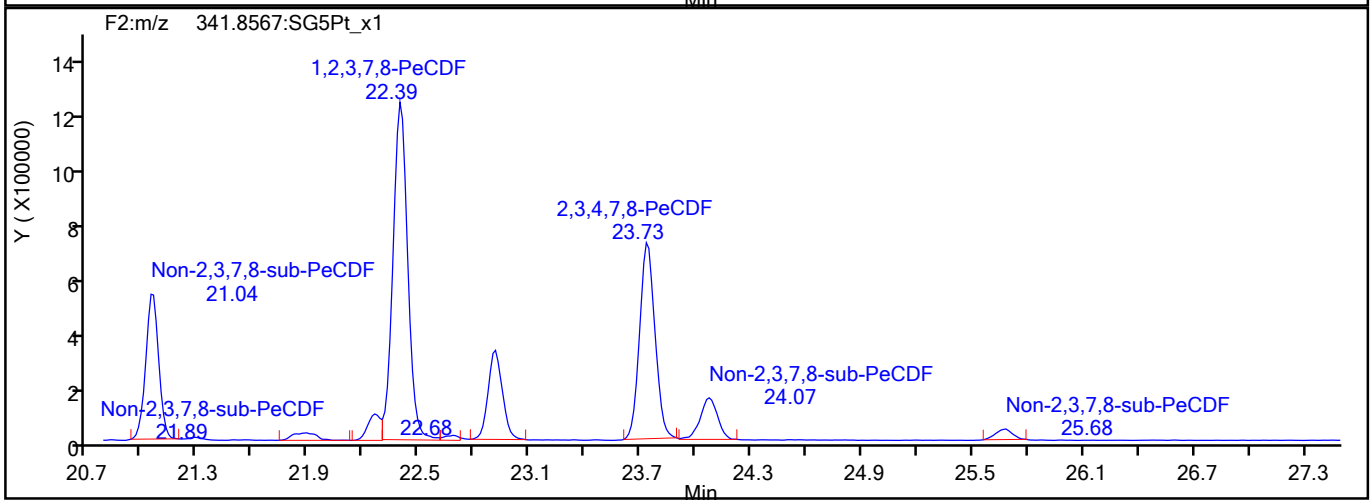

PeCDF Interference Mass

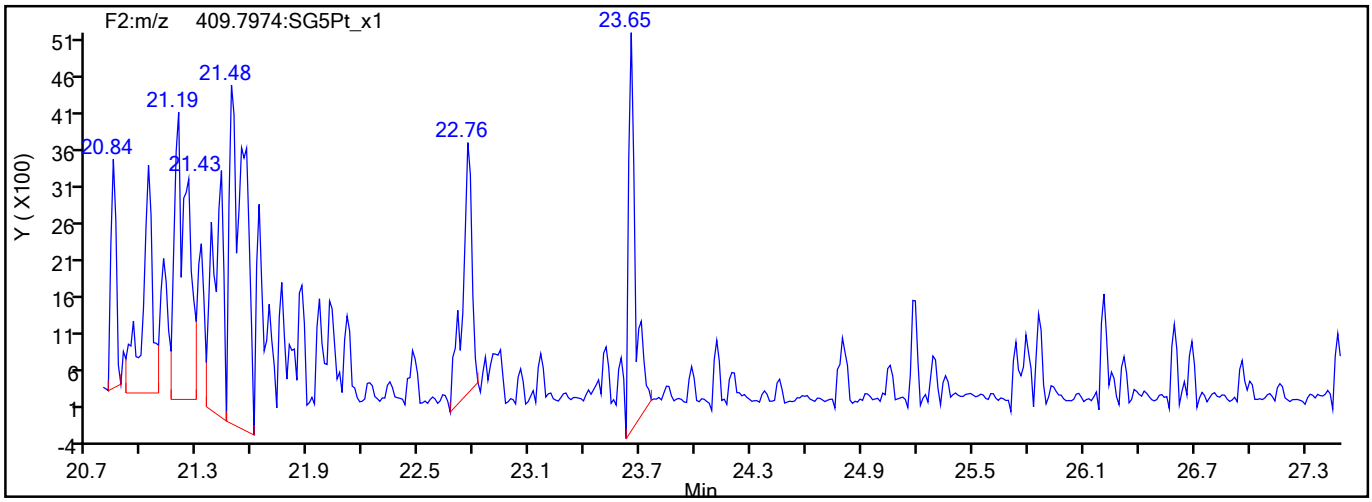

774770

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d		
Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	516847	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

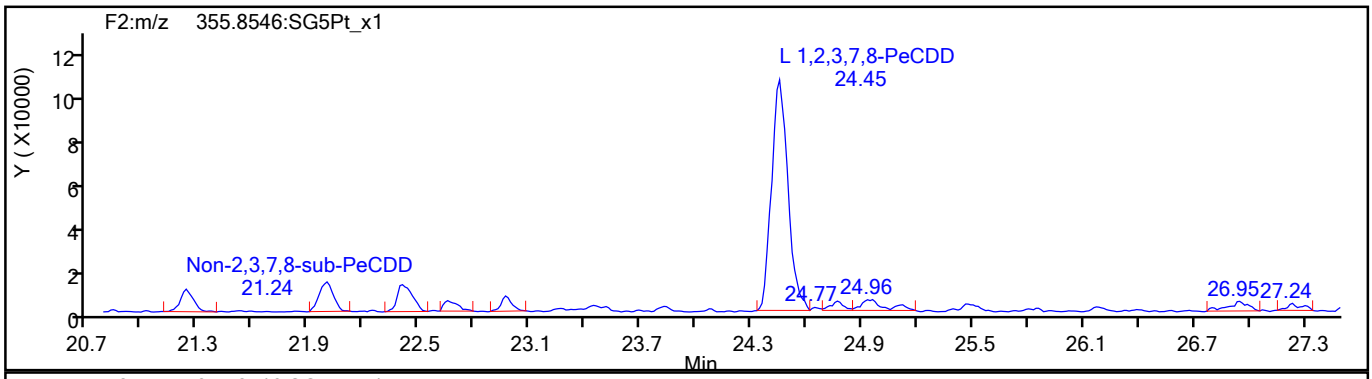

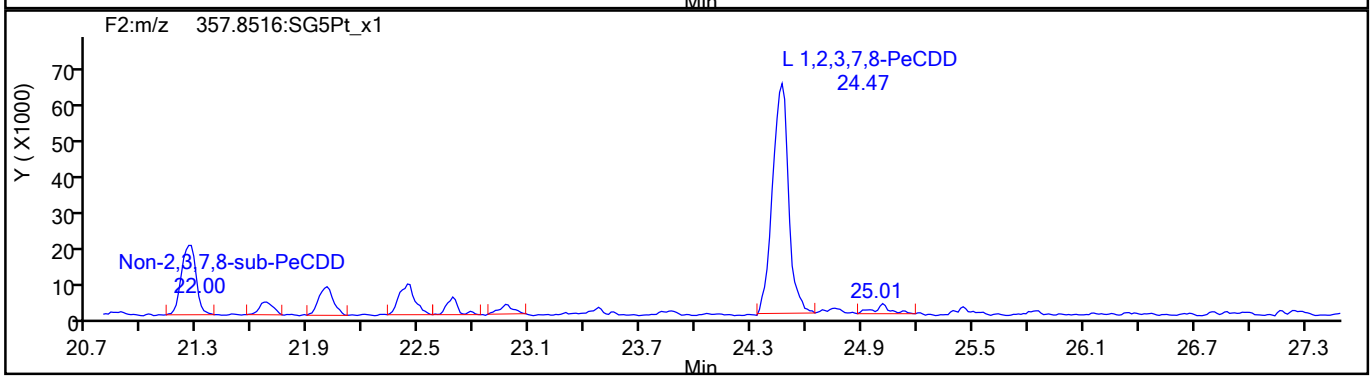

PeCDD Standards

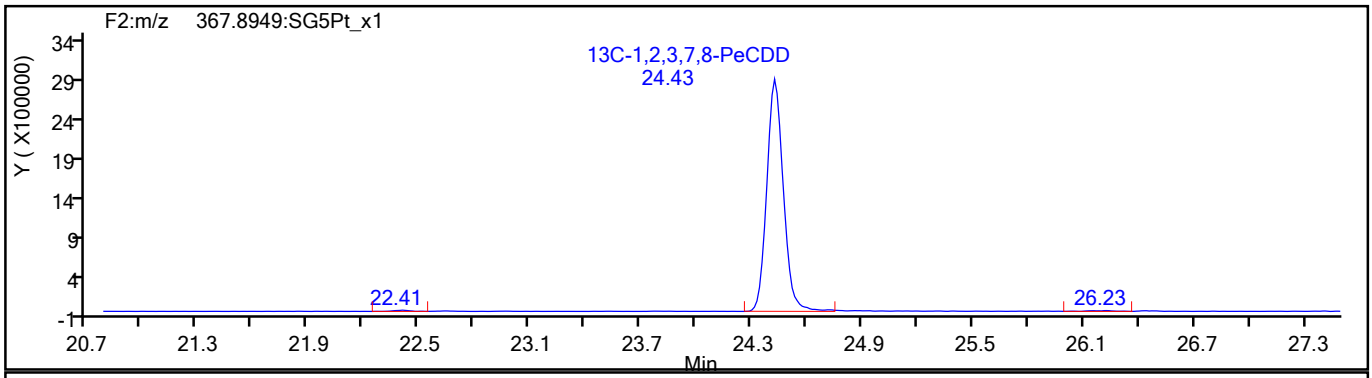

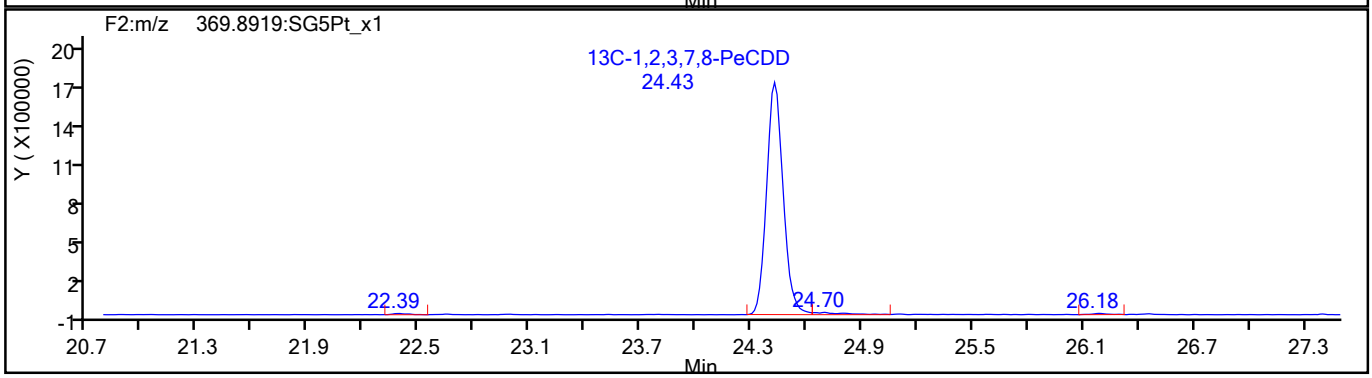

774771

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
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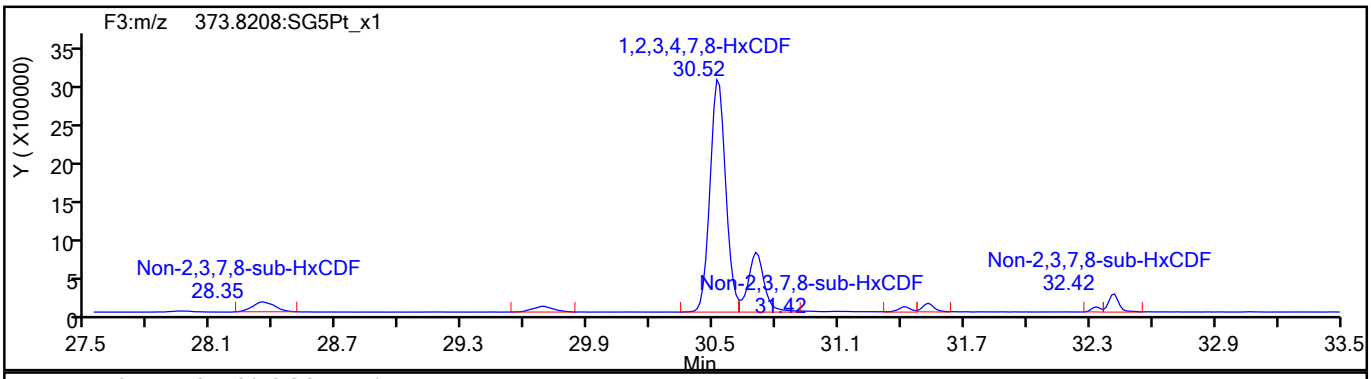

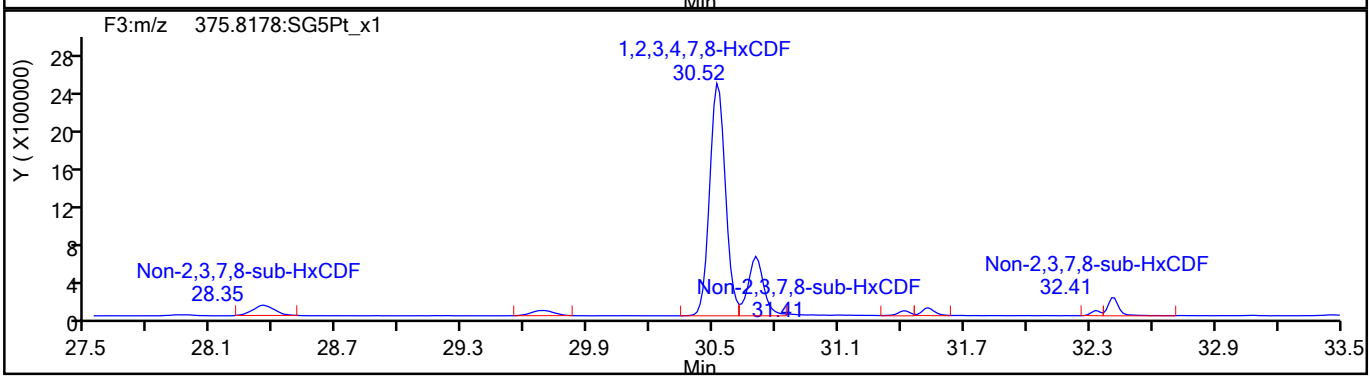

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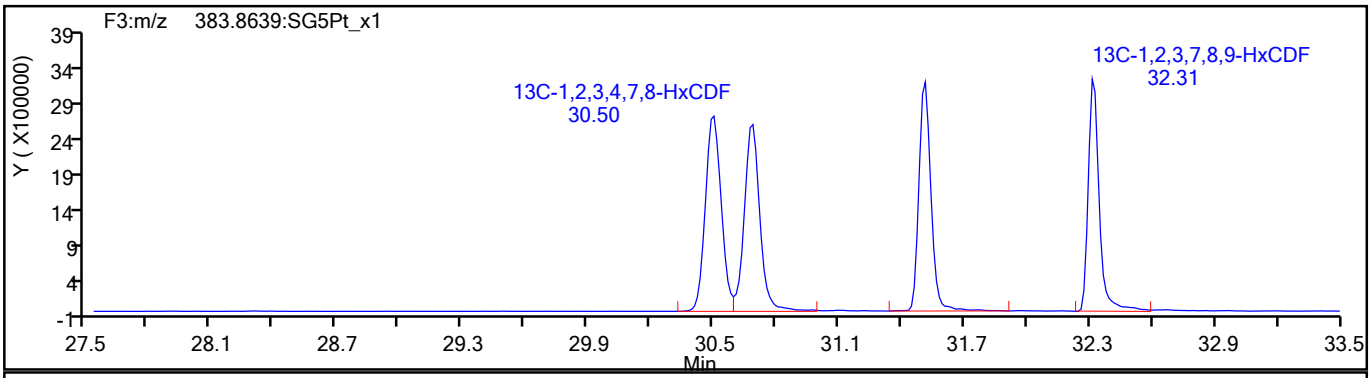

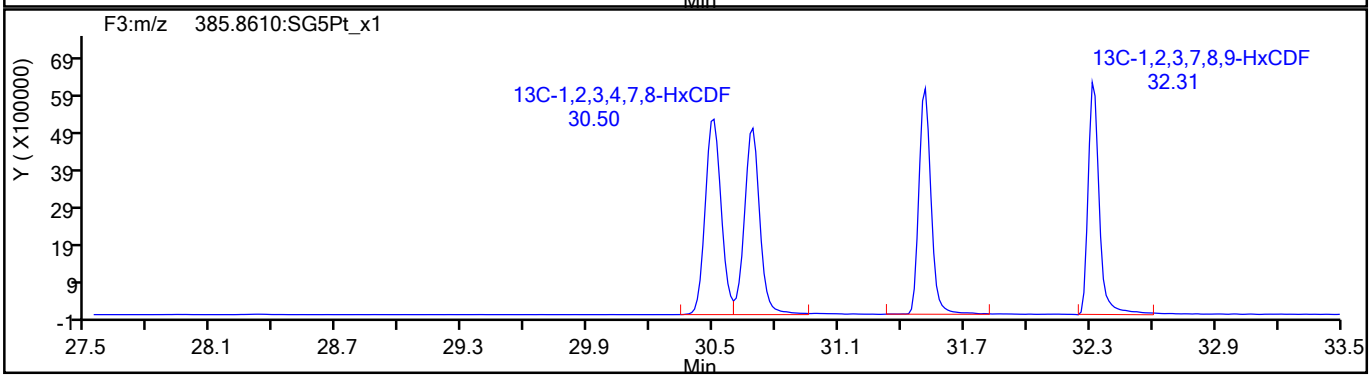

774772

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
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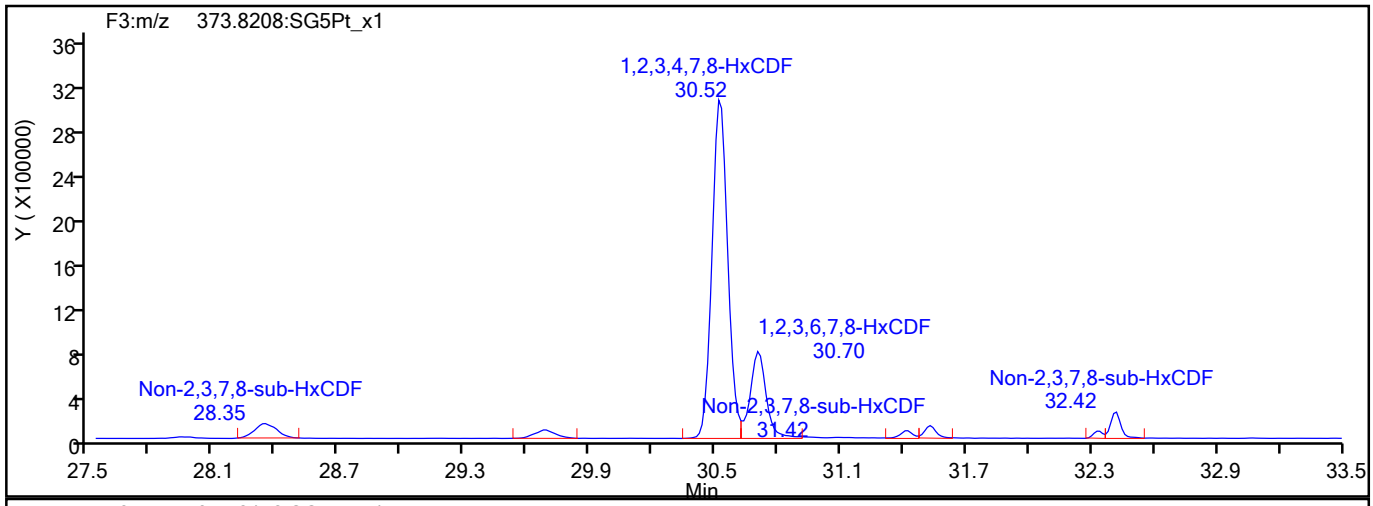

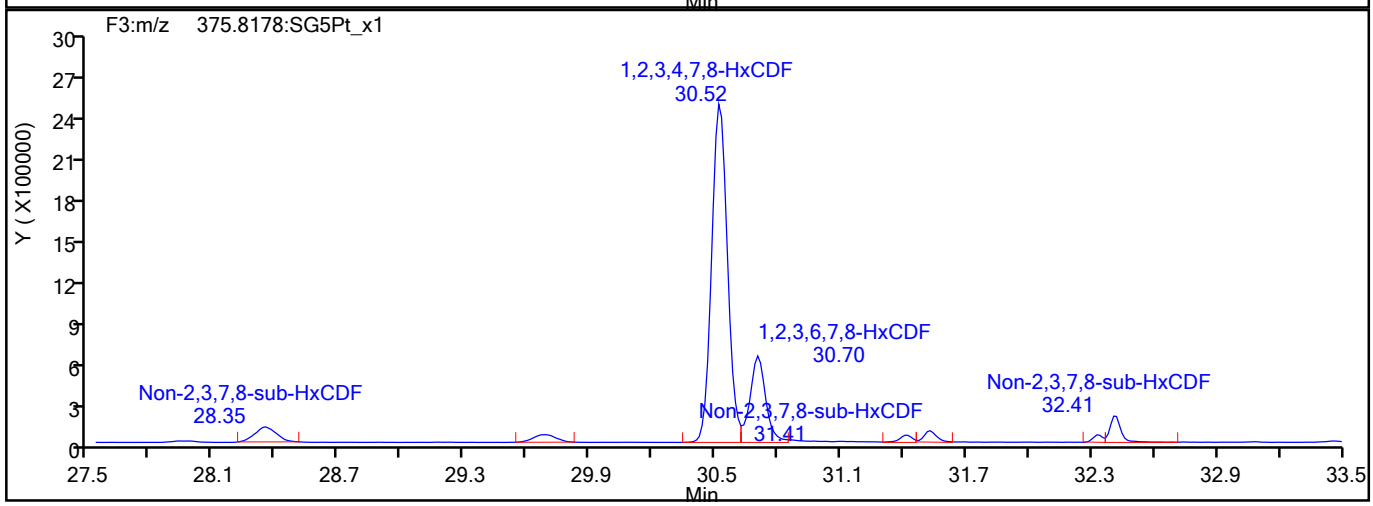

HxCDF Interference Mass

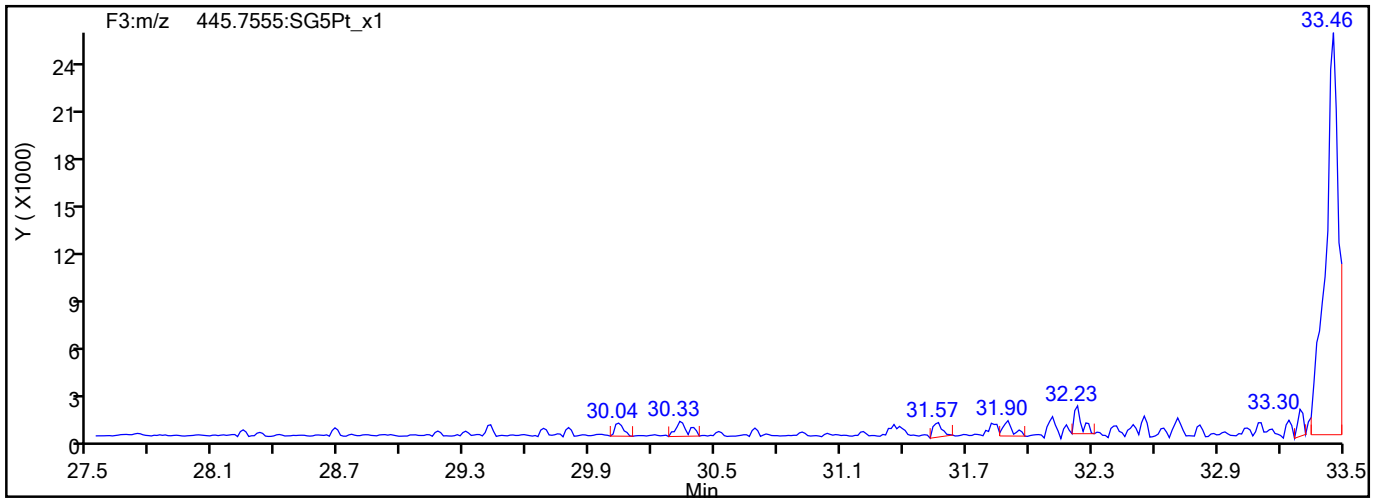

774773

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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Client ID:	11215702-072221-SS-SJSB080 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

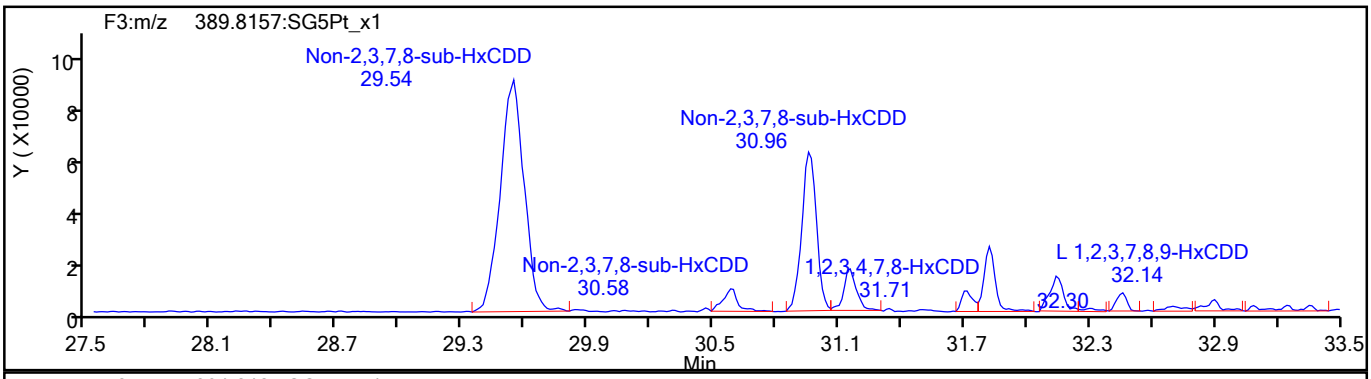

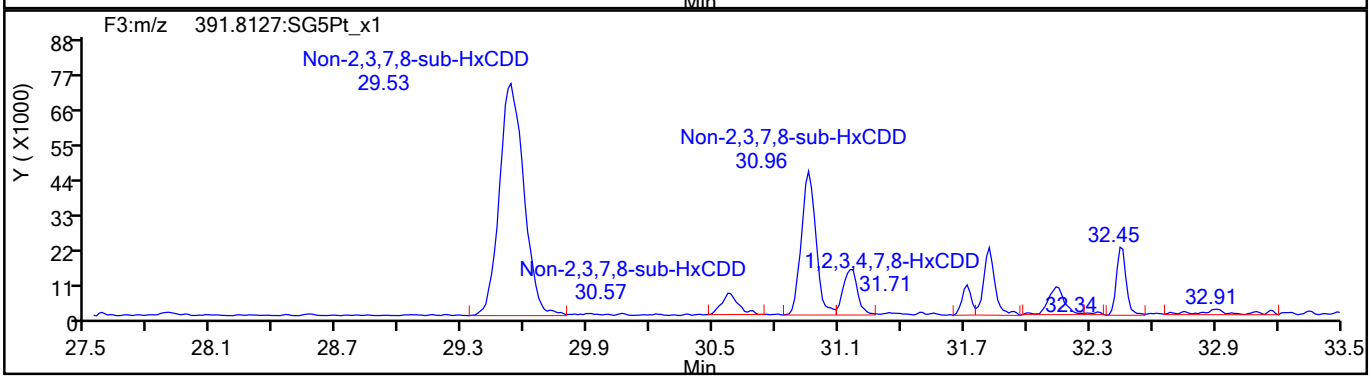

HxCDD Standards

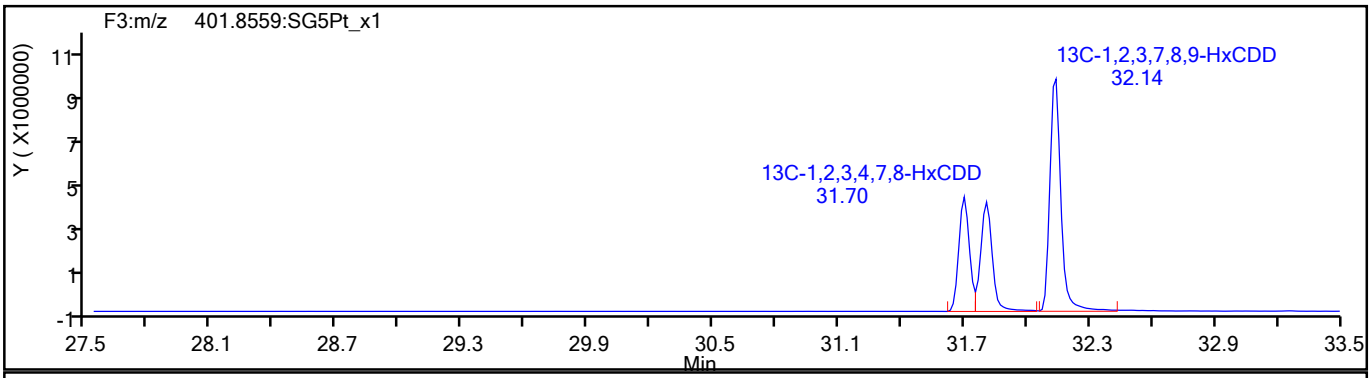

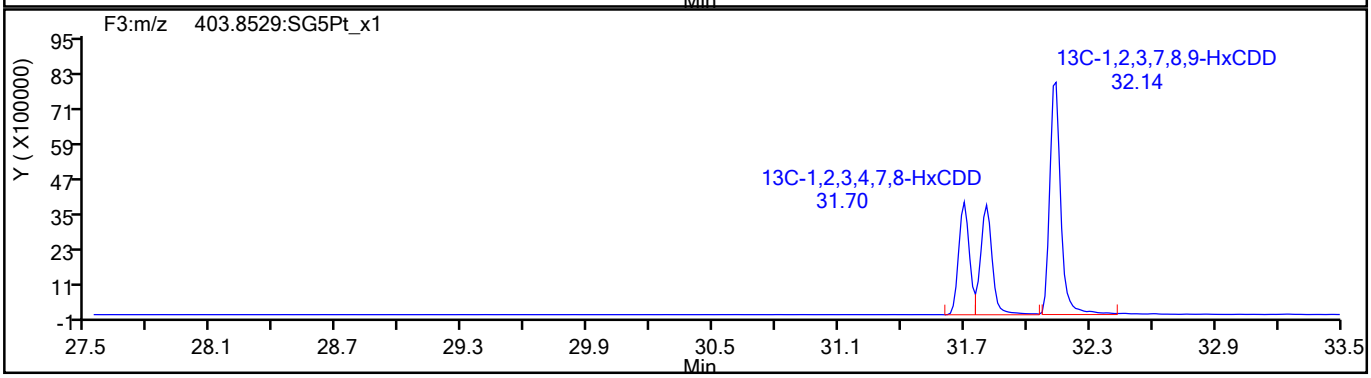

774774

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_52.d		
Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
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Client ID:	11215702-072221-SS-SJSB080 (8-10)		
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HpCDF

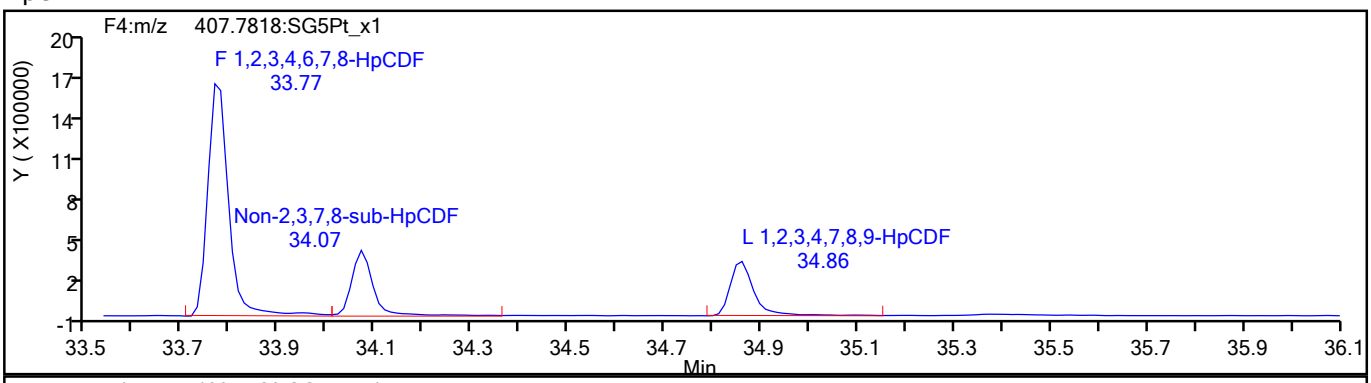

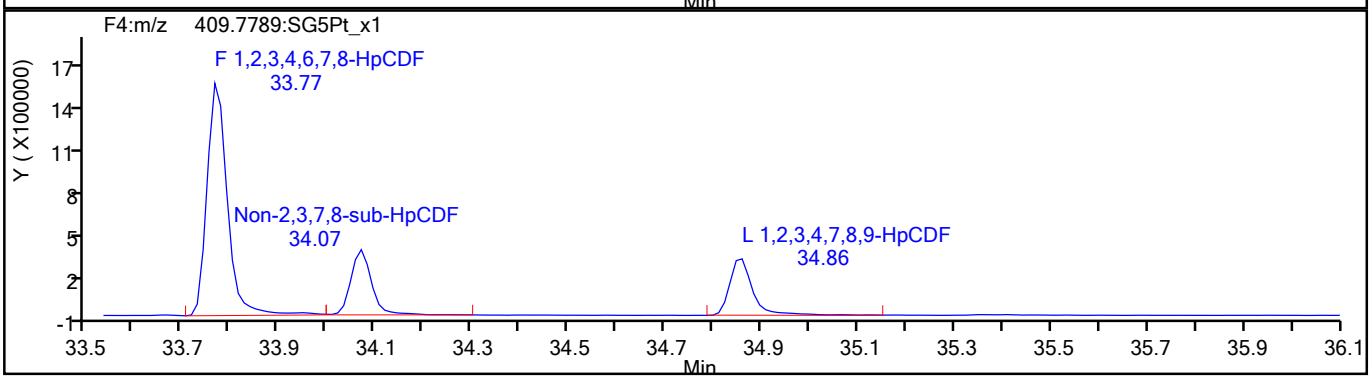

HpCDF Standards

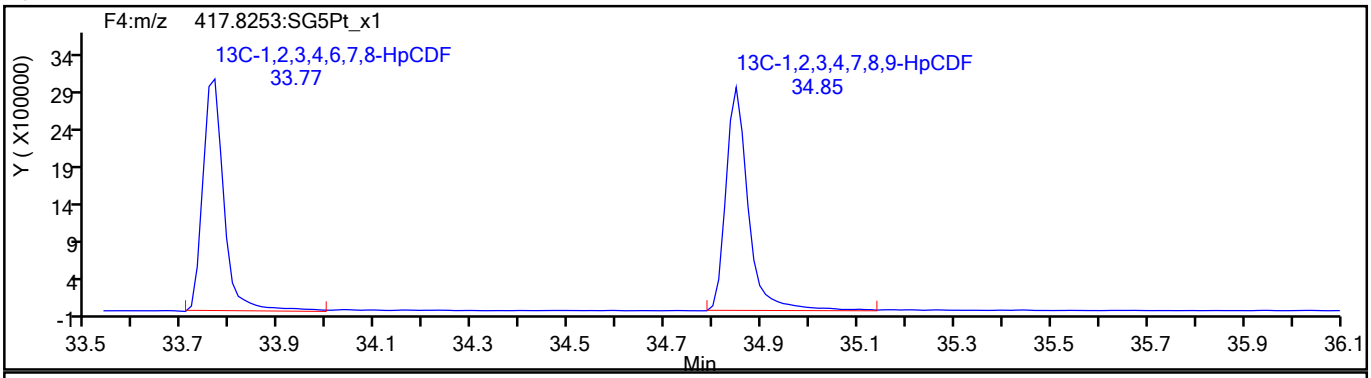

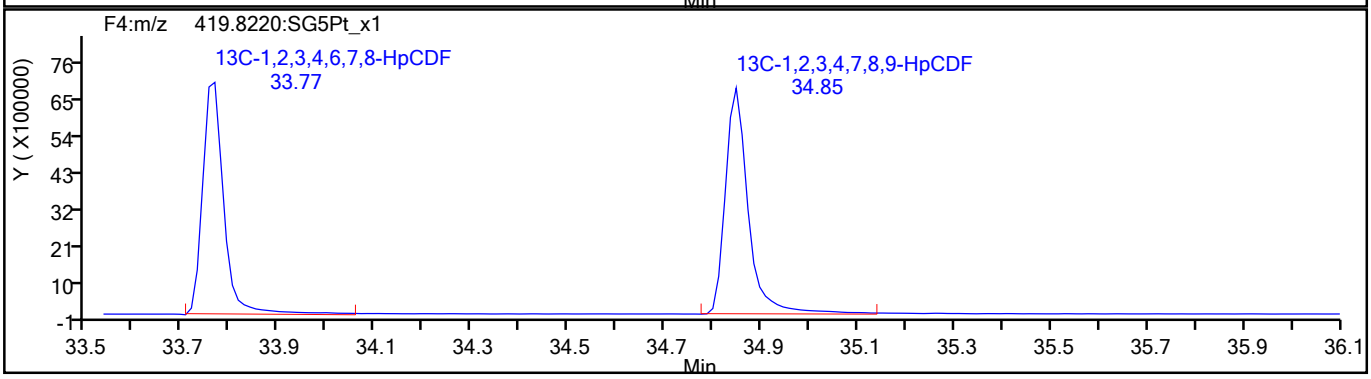

774775

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
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HpCDF

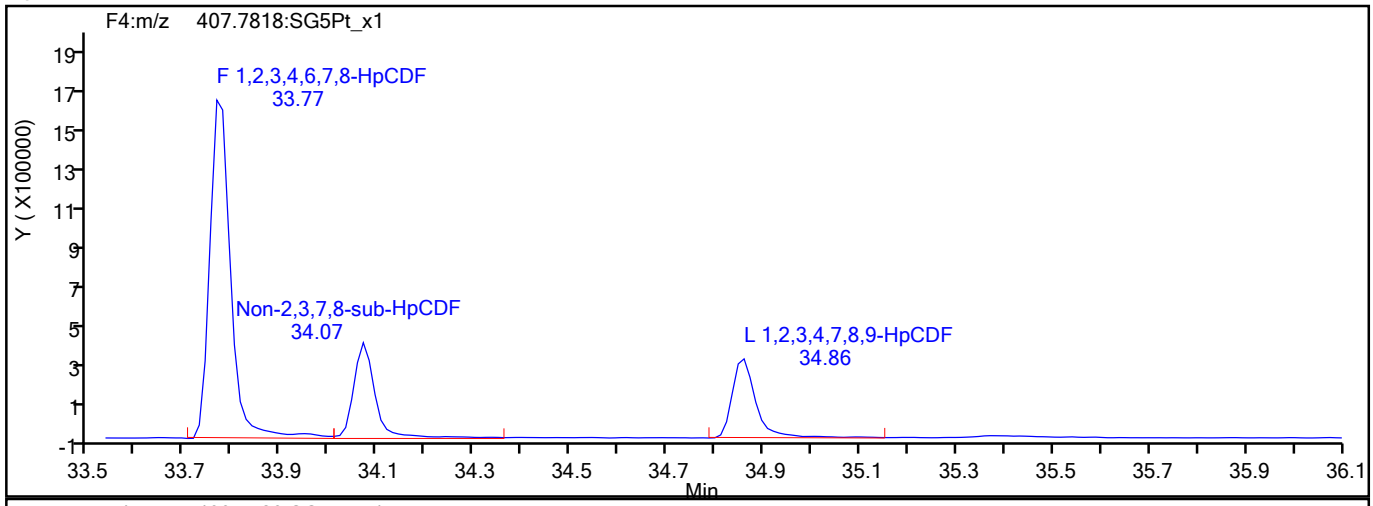

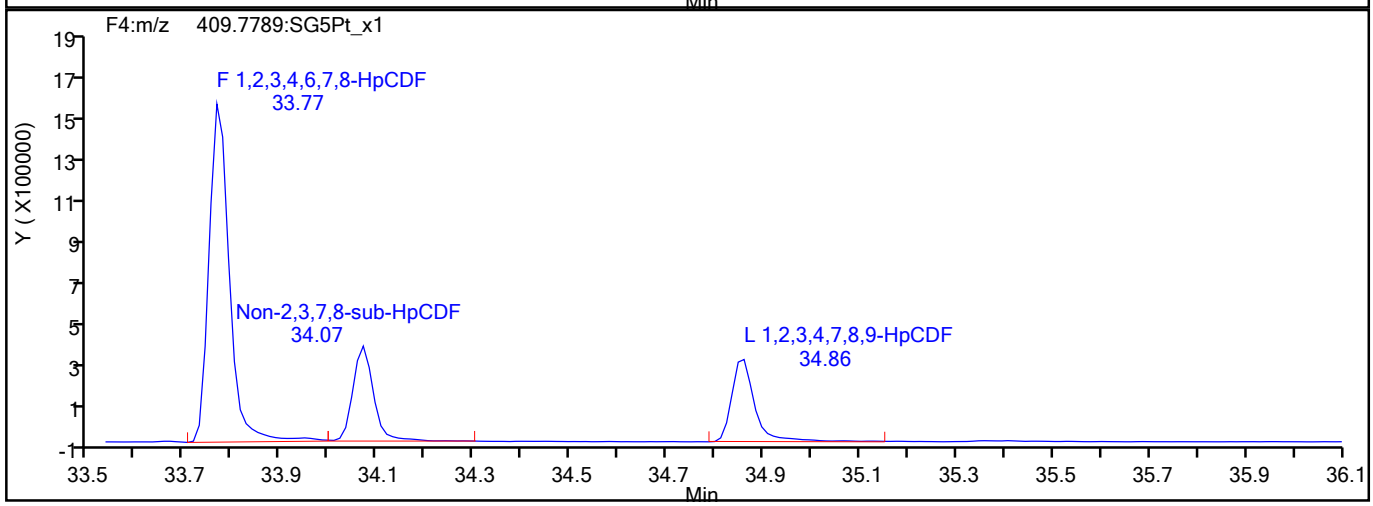

HpCDF Interference Mass

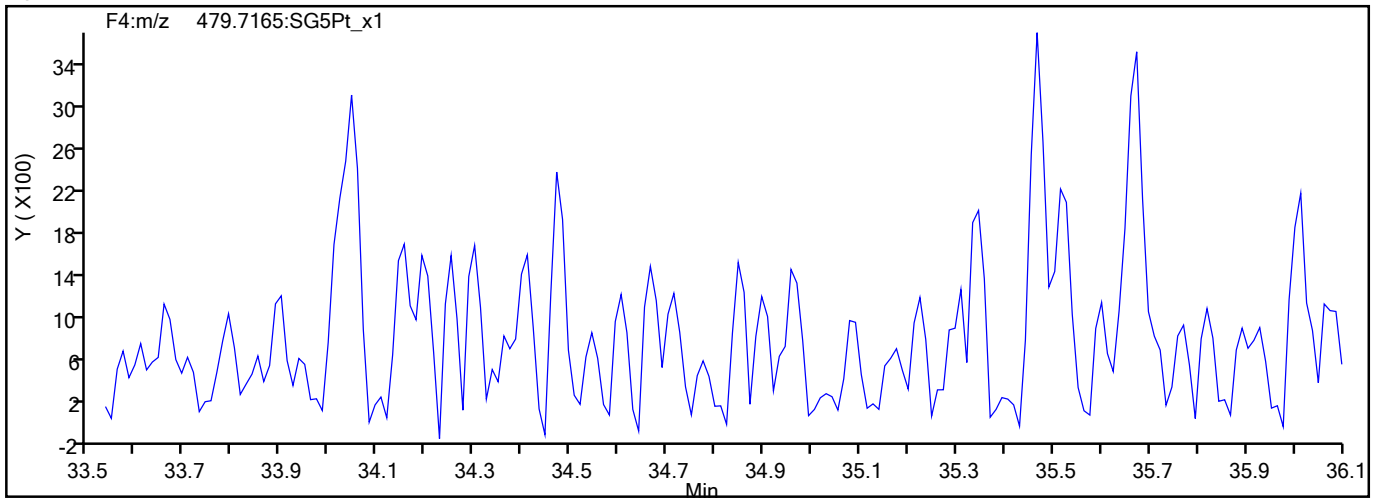

774776

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:	11215702-072221-SS-SJSB080 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

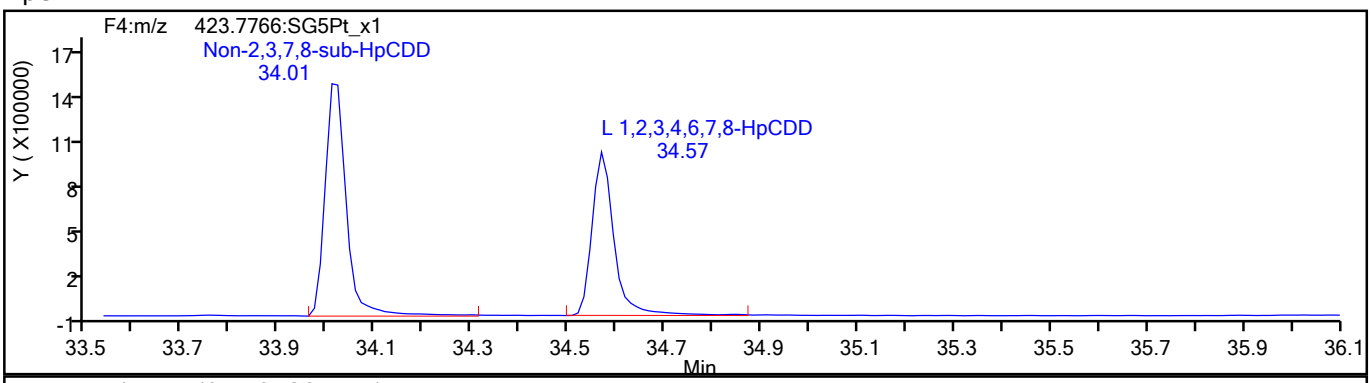

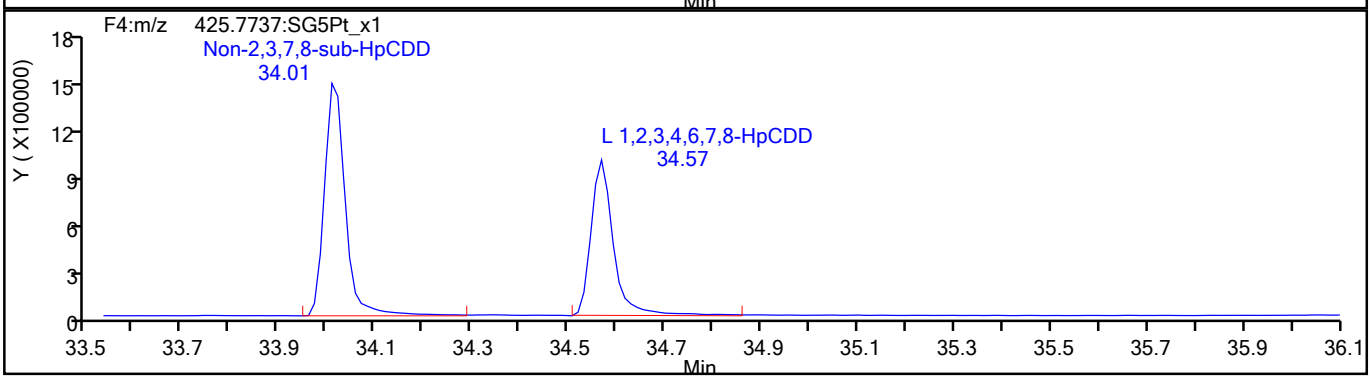

HpCDD Standards

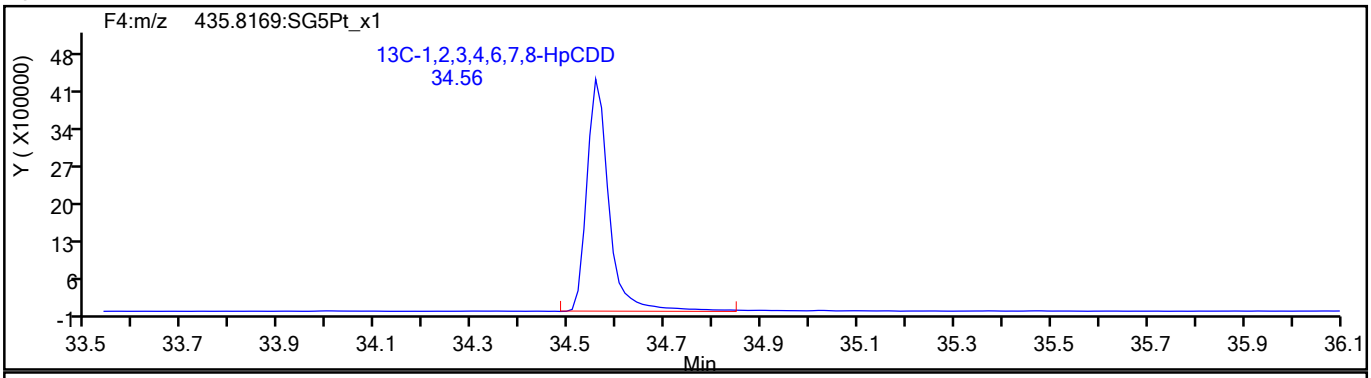

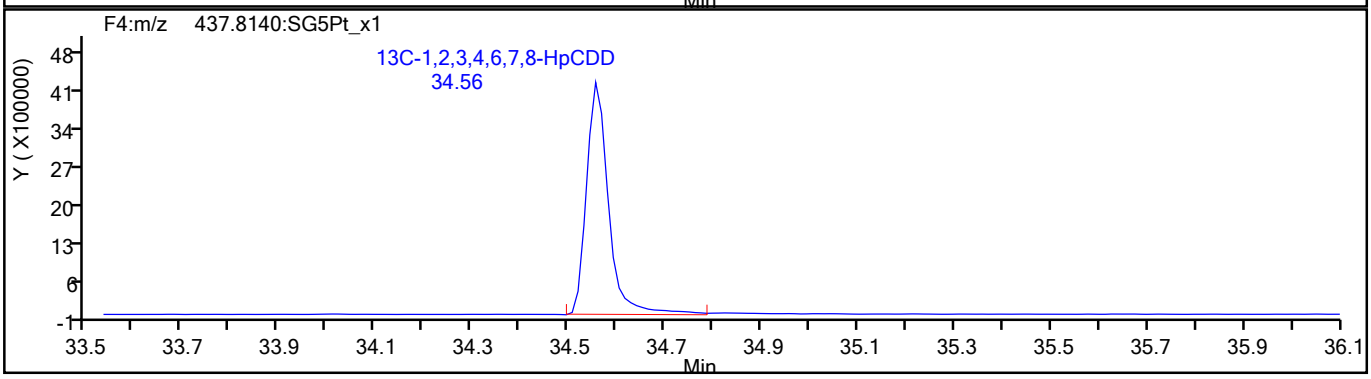

774777

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
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OCDF

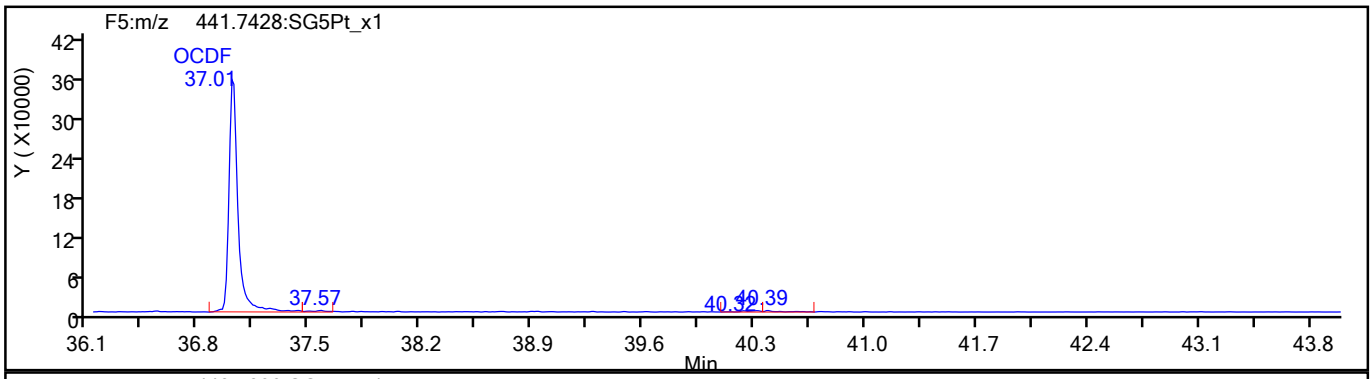

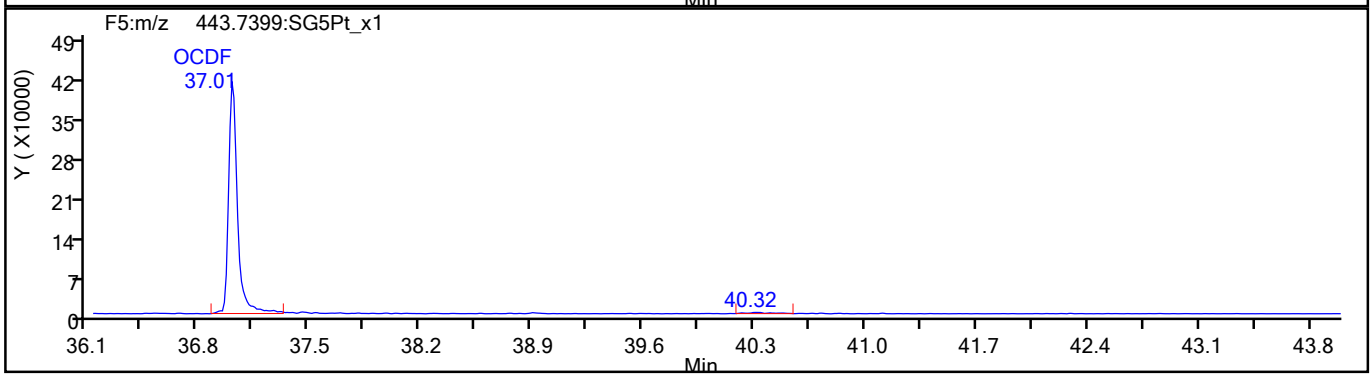

OCDF Standards

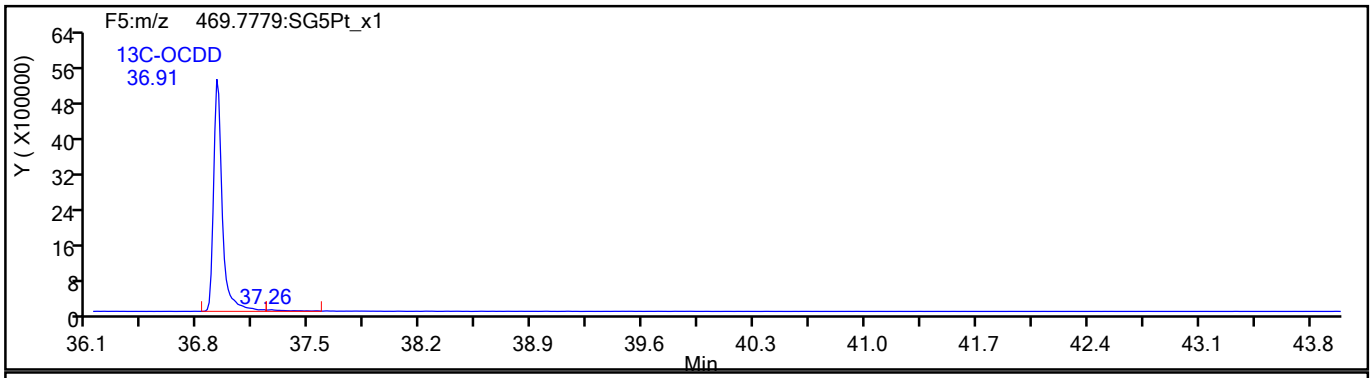

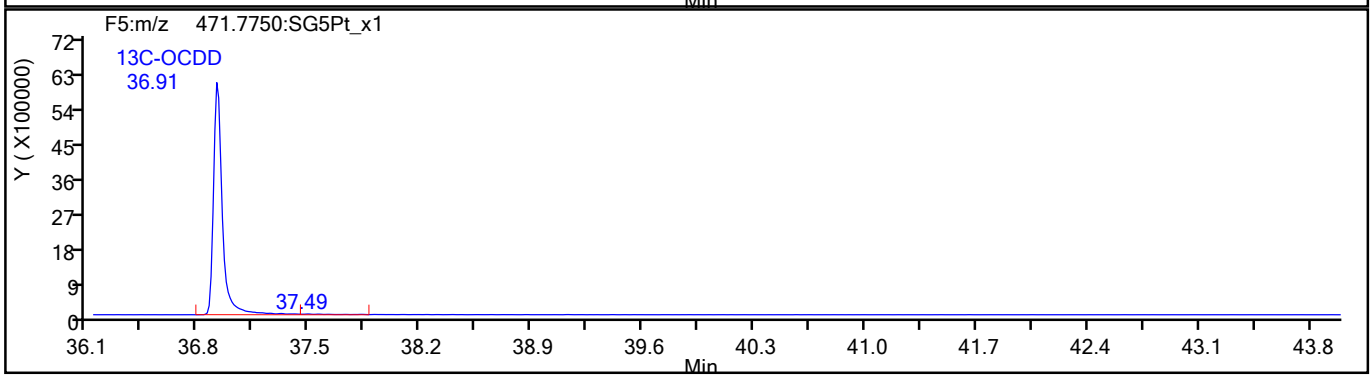

774778

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 08:06:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
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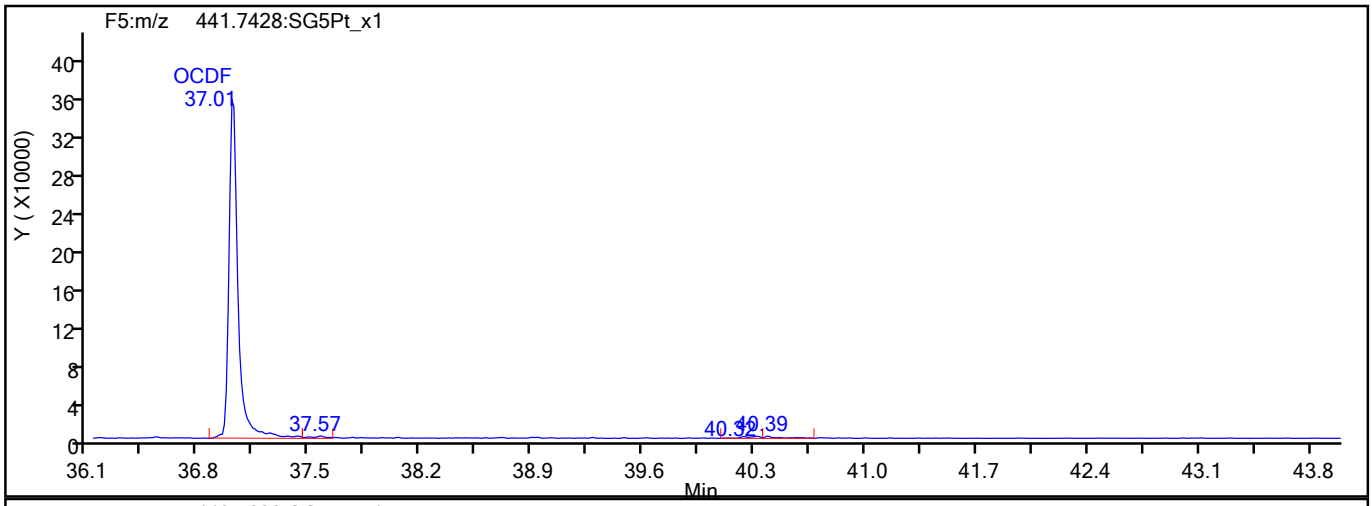

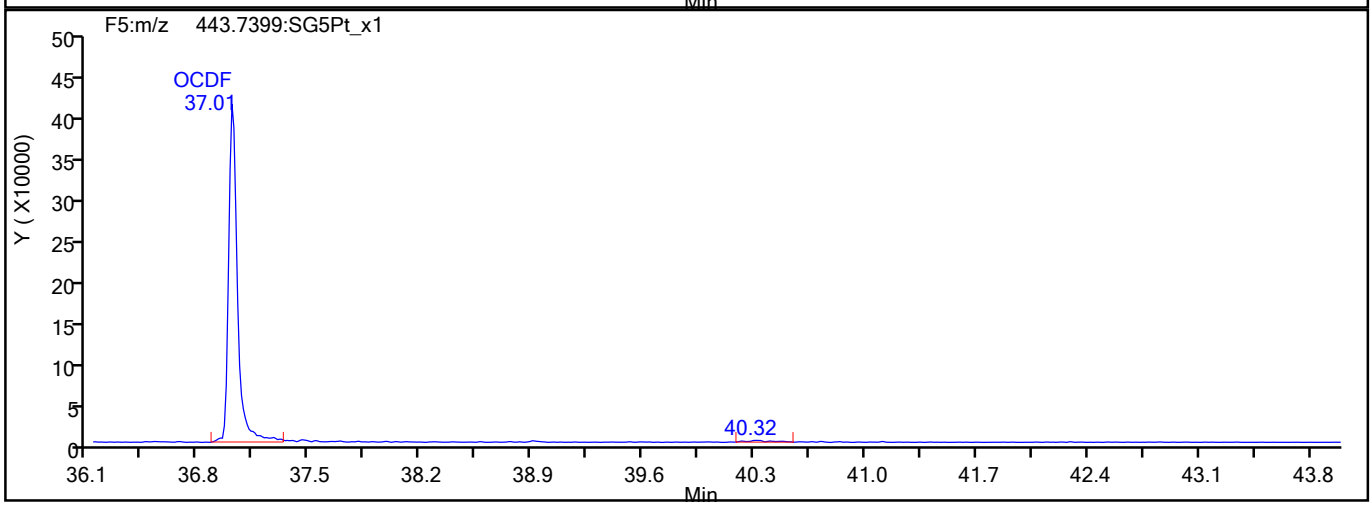

OCDF Interference Mass

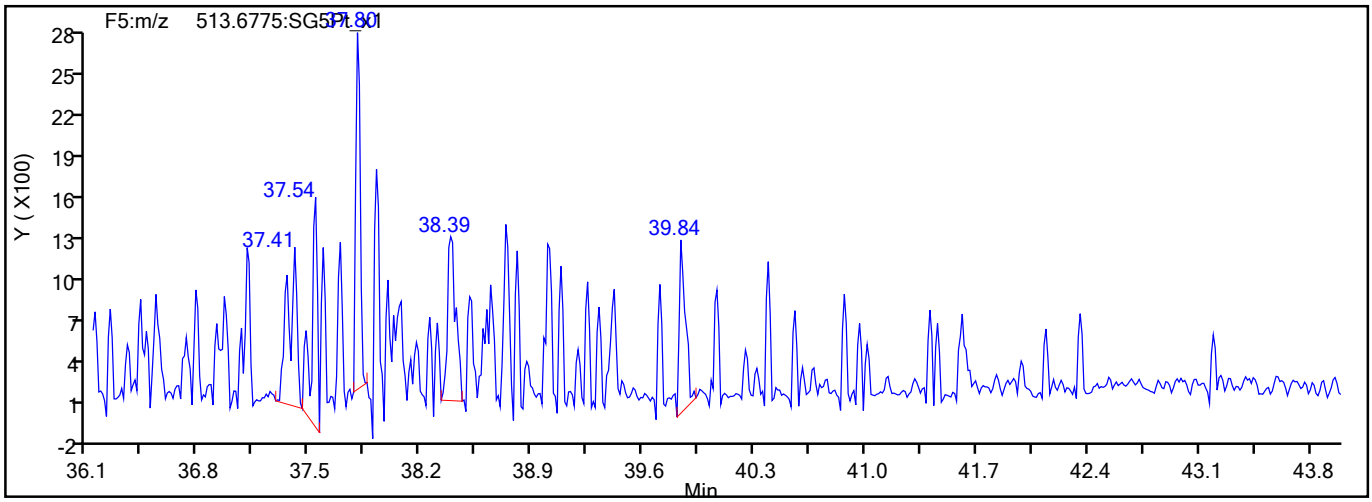

774779

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

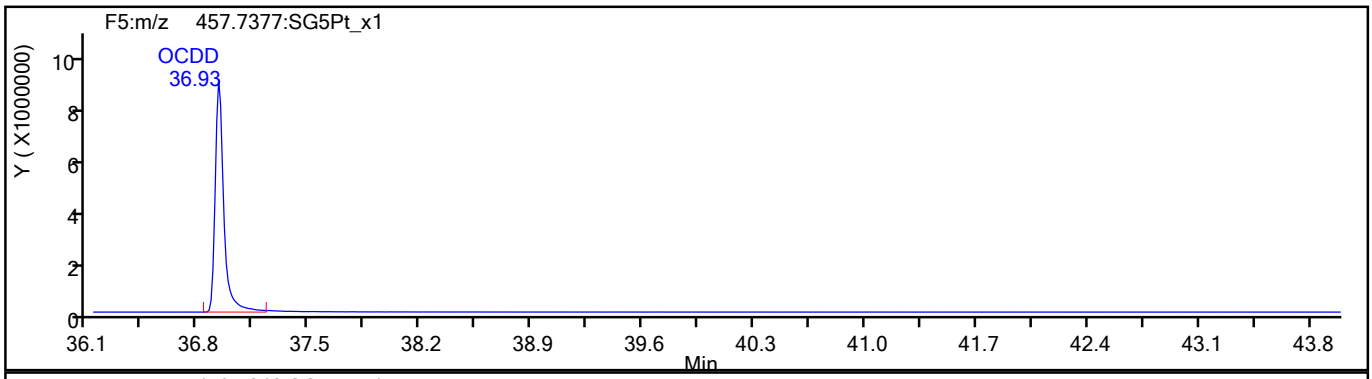

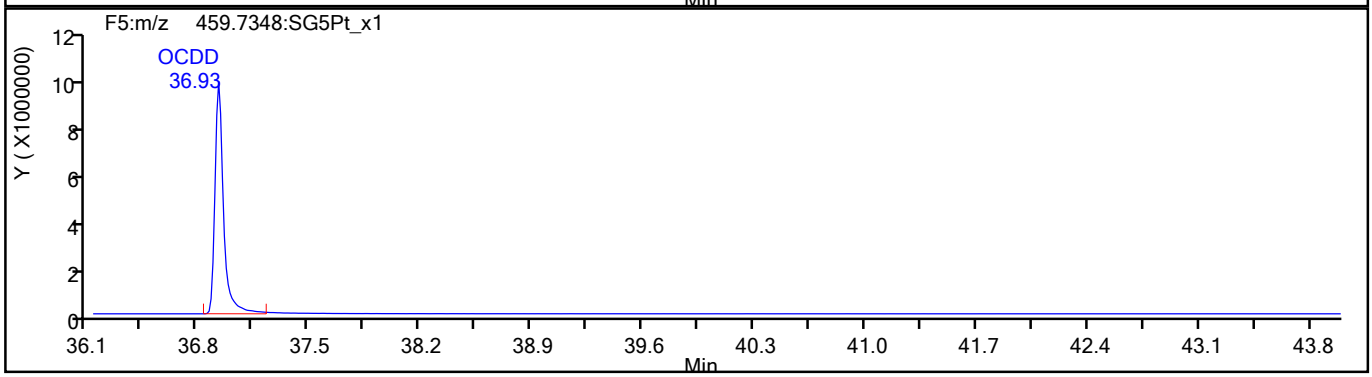

OCDD Standards

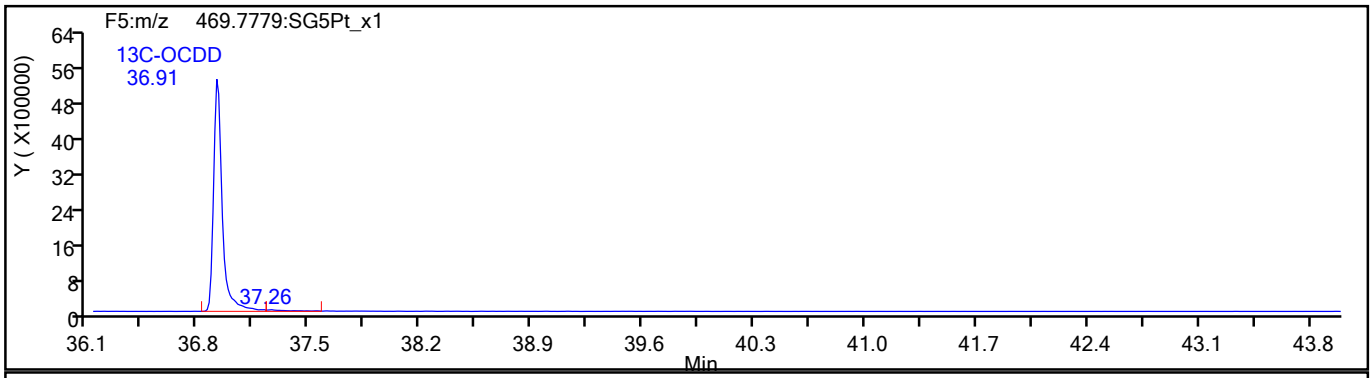

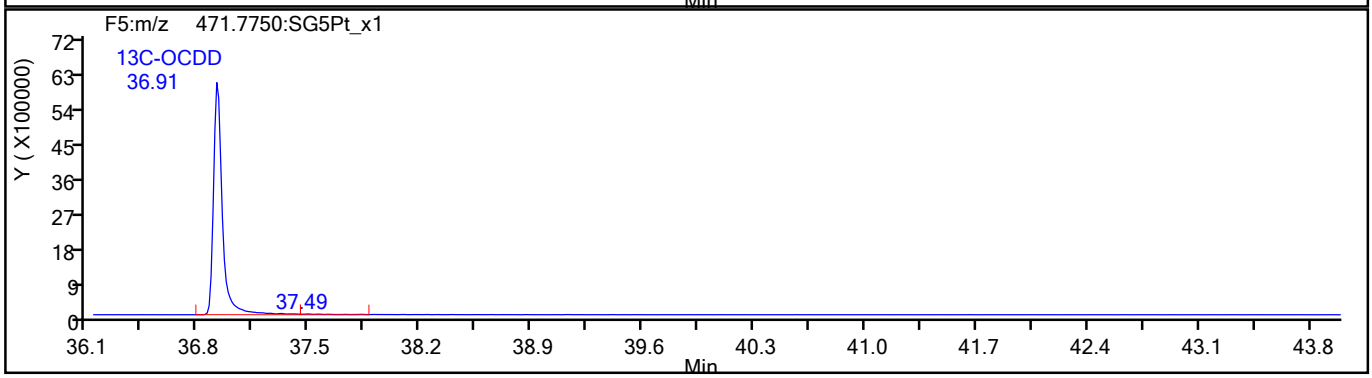

774780

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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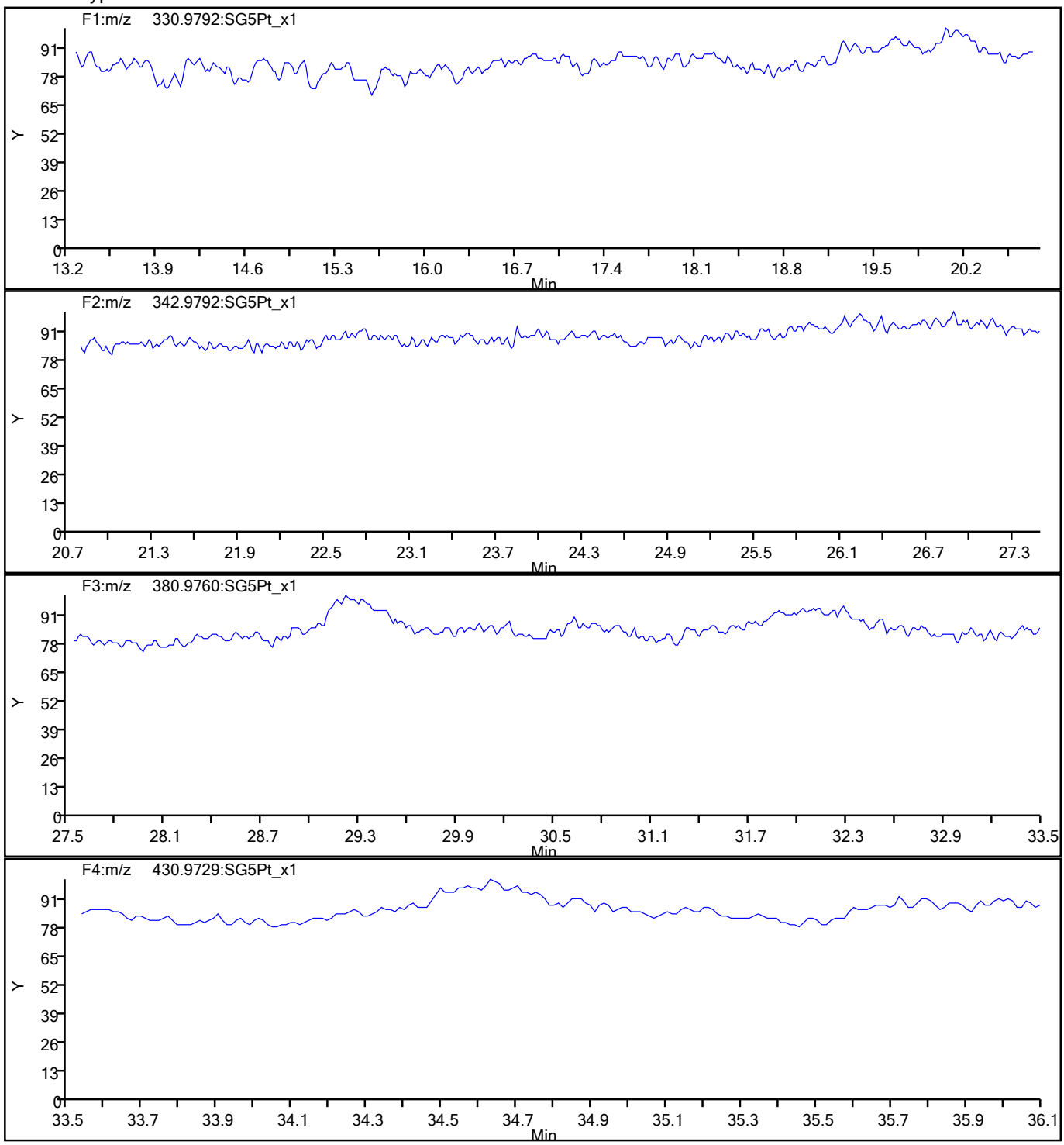

774781

Report Date: 18-Aug-2021 11:08:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	516847	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

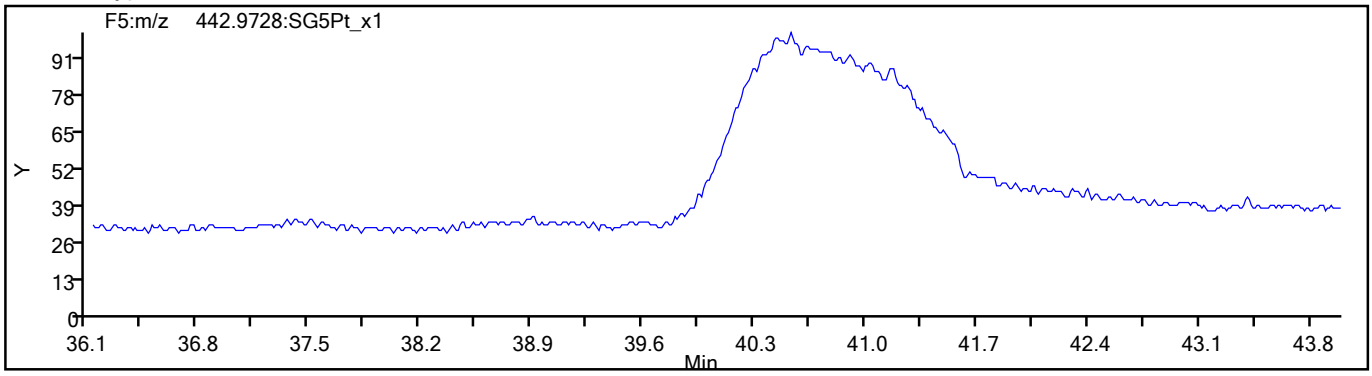

774782

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (8-10) RA
Lab Sample ID: 320-76769-5 RA
Matrix: Sediment
Lab File ID: 21AU2111D2_012.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.67(g)
Date Analyzed: 08/21/2021 20:56
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 21.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518850
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	3300	G E B	3.6	3.6

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	58		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	71		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_012.d
Lims ID: 320-76769-A-5-A
Client ID: 11215702-072221-SS-SJSB080 (8-10)
Sample Type: Client
Inject. Date: 21-Aug-2021 20:56:31 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-5-A RI
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:04:41

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	39344405	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	30529491	0.74	1.3327	58.2	58.2	0.5110	0.5110	58.22	M
2,3,7,8-TCDF	17.669	386210243	0.79	0.9978	1267.8	1267.8	1.367	1.367		E
D 13C-2,3,7,8-TCDD	16.092	18693021	0.78	0.8749	54.3	54.3	6.765	6.765	54.30	
2,3,7,8-TCDD	16.105	88785207	0.76	1.0570	449.4	449.4	1.582	1.582		E
$ 37Cl4-2,3,7,8-TCDD	16.105	9710744		0.8648	28.5	28.5	0.1147	0.1147	71.35	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Report Date: 23-Aug-2021 10:28:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_012.d
Lims ID: 320-76769-A-5-A
Client ID: 11215702-072221-SS-SJSB080 (8-10)
Sample Type: Client
Inject. Date: 21-Aug-2021 20:56:31 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-5-A RI
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:04:41

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.309	1		16968129	3904268	102619	256547	38		
333.9339	16.325	16.309	1		22376276	5195661	112809	282022	46	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											M
315.9419	17.655	17.640	1	1.081	13032499	2431170	11633	29082	209		M
317.9389	17.655	17.640	1	1.081	17496992	3061070	13156	32890	233	0.74(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.669	17.653	1	1.001	170836805	31689846	15201	38002	2085		
305.8987	17.669	17.653	1	1.001	215373438	39751618	14762	36905	2693	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.092	16.076	1	0.986	8205536	1889210	102619	256547	18		
333.9339	16.092	16.076	1	0.986	10487485	2450066	112809	282022	22	0.78(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	16.105	16.103	0	1.001	38433124	8579179	15391	38477	557		
321.8936	16.105	16.103	0	1.001	50352083	11092555	13630	34075	814	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.105	16.103	0	0.987	9710744	2182801	3612	9030	604		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_012.d				
Injection Date:	21-Aug-2021 20:56:31	Instrument ID:	11D2		
Lims ID:	320-76769-A-5-A	Lab Sample ID:	320-76769-5		
Client ID:	11215702-072221-SS-SJSB080 (8-10)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.66
Area: 13204569
Amount: 59.511614
Amount Units: pg/ul

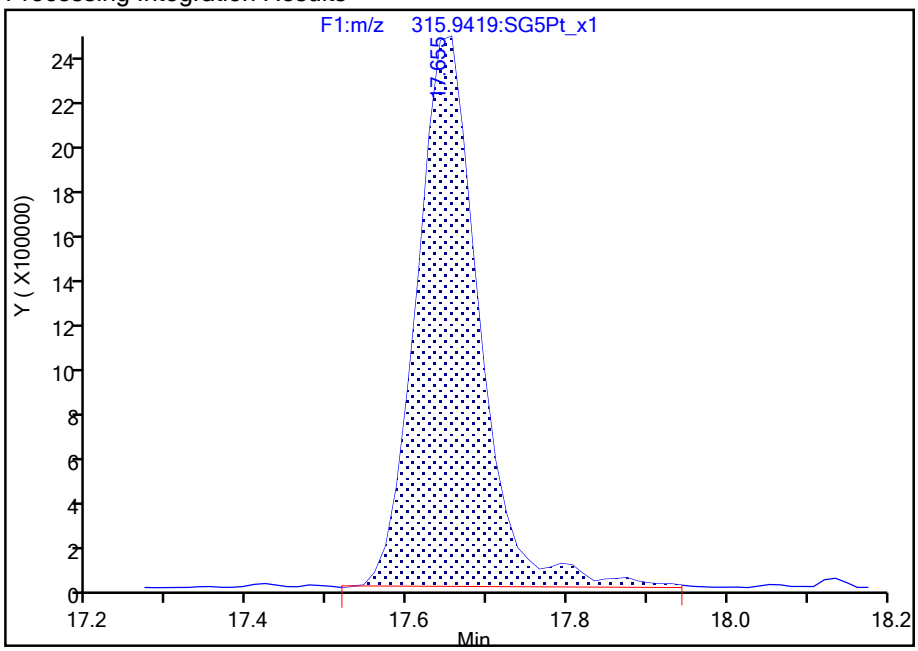

Manual Integration Results

RT: 17.66
Area: 13032499
Amount: 58.224899
Amount Units: pg/ul

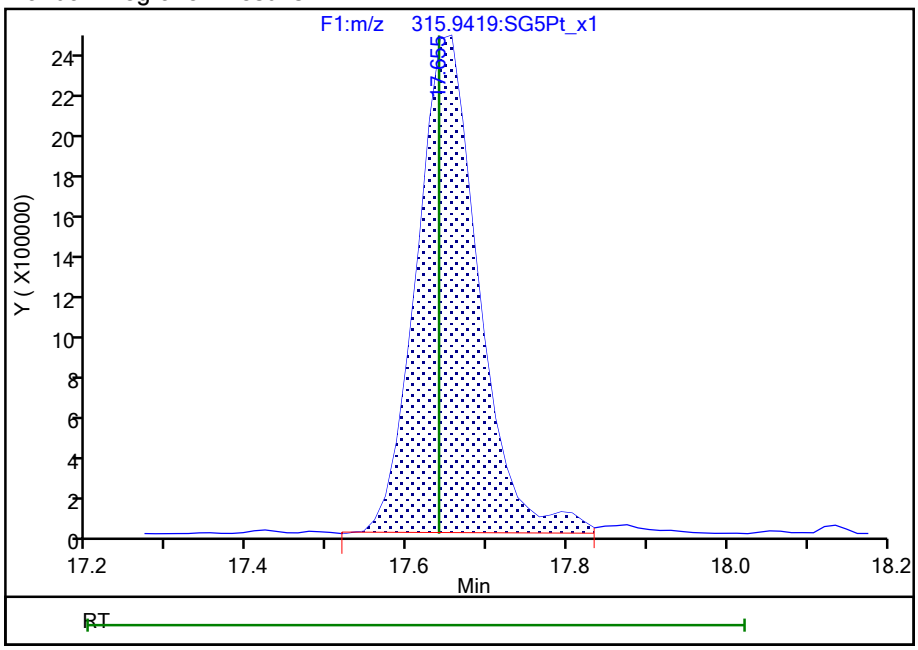

Reviewer: bennettd, 23-Aug-2021 10:04:24

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_012.d				
Injection Date:	21-Aug-2021 20:56:31	Instrument ID:	11D2		
Lims ID:	320-76769-A-5-A	Lab Sample ID:	320-76769-5		
Client ID:	11215702-072221-SS-SJSB080 (8-10)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.66
Area: 17999595
Amount: 59.511614
Amount Units: pg/ul

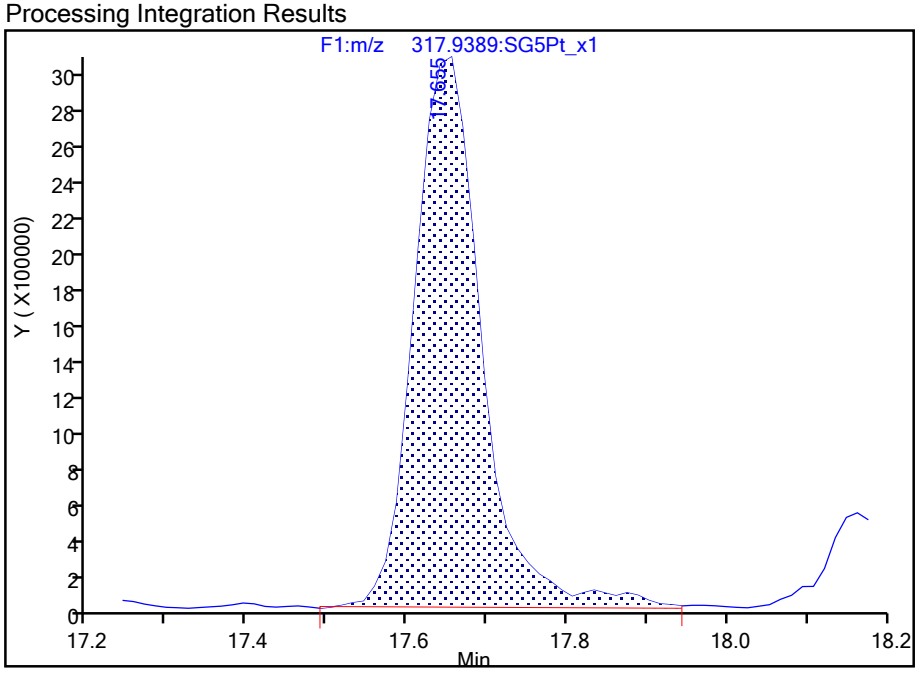

Manual Integration Results

RT: 17.66
Area: 17496992
Amount: 58.224899
Amount Units: pg/ul

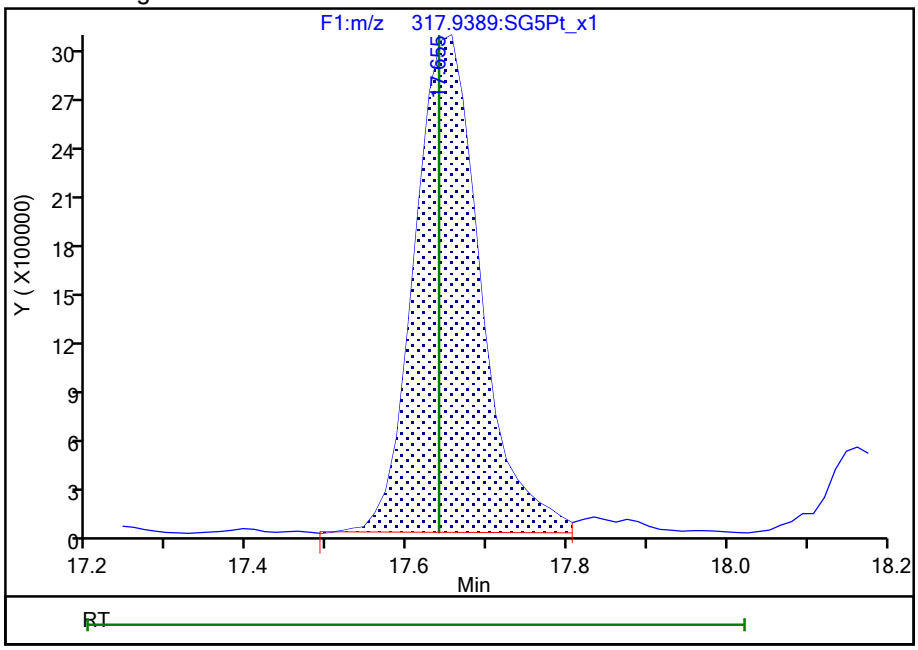

Reviewer: bennettd, 23-Aug-2021 10:04:27

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 23-Aug-2021 10:28:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_012.d		
Injection Date:	21-Aug-2021 20:56:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	518850	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

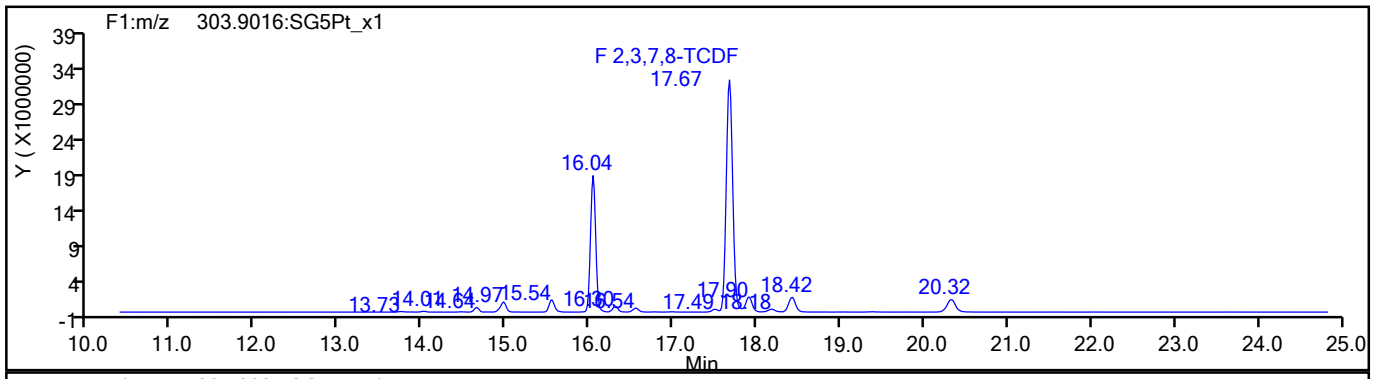

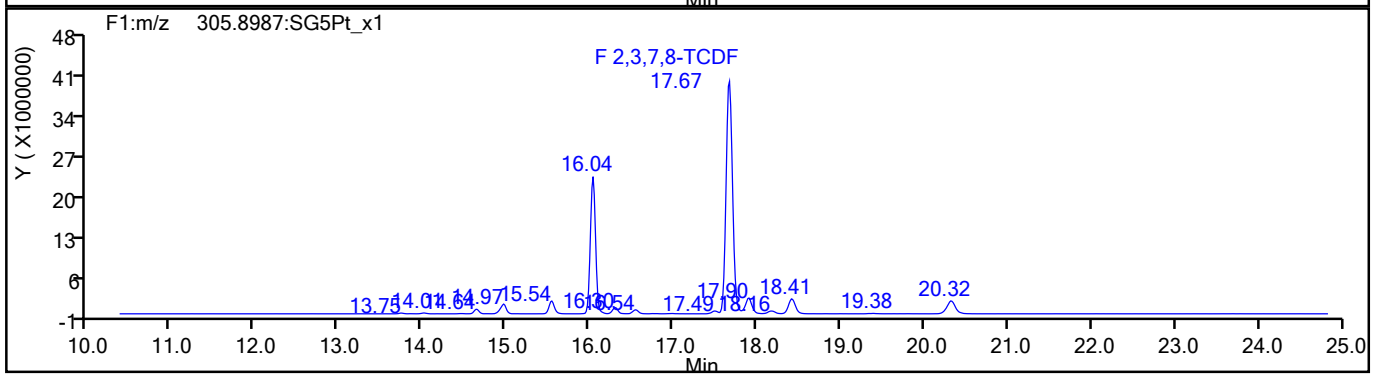

TCDF Standards

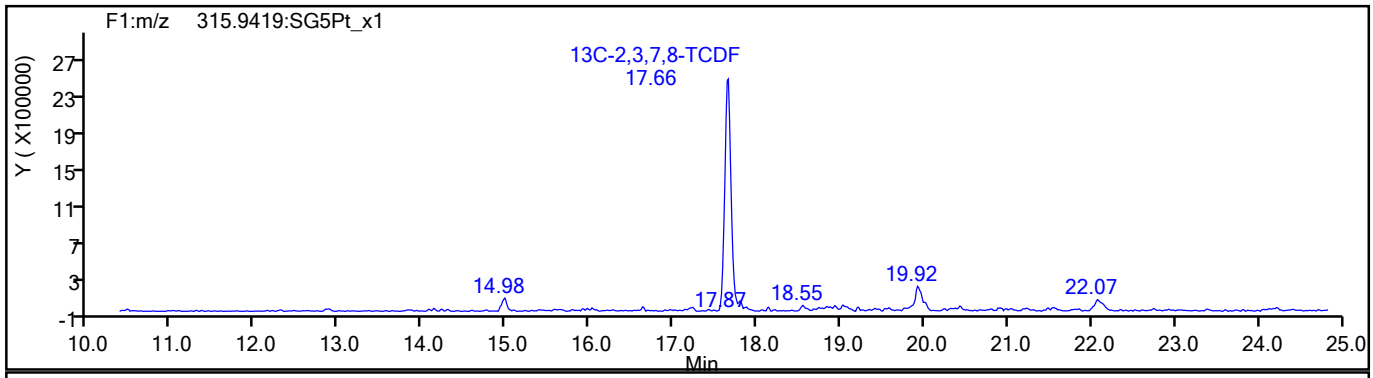

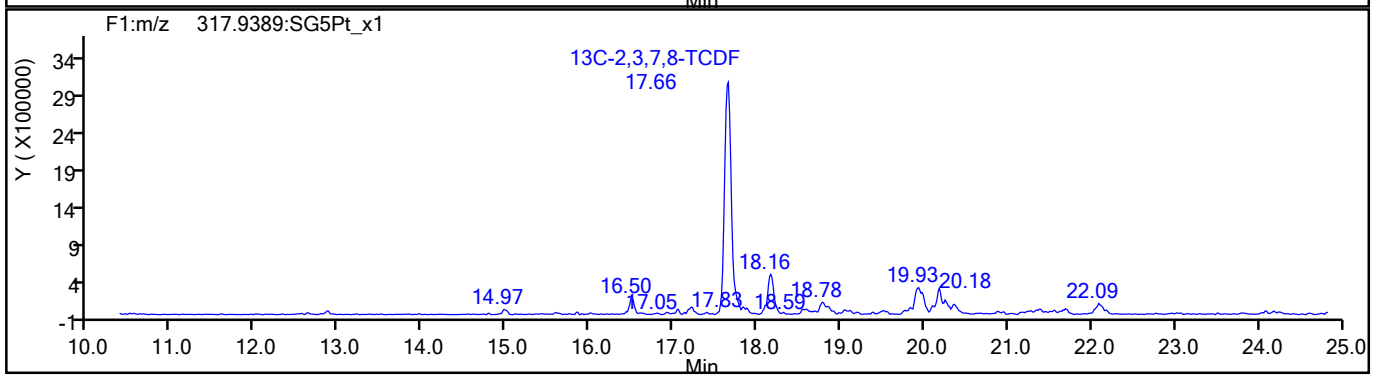

774788

Report Date: 23-Aug-2021 10:28:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_012.d		
Injection Date:	21-Aug-2021 20:56:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	518850	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

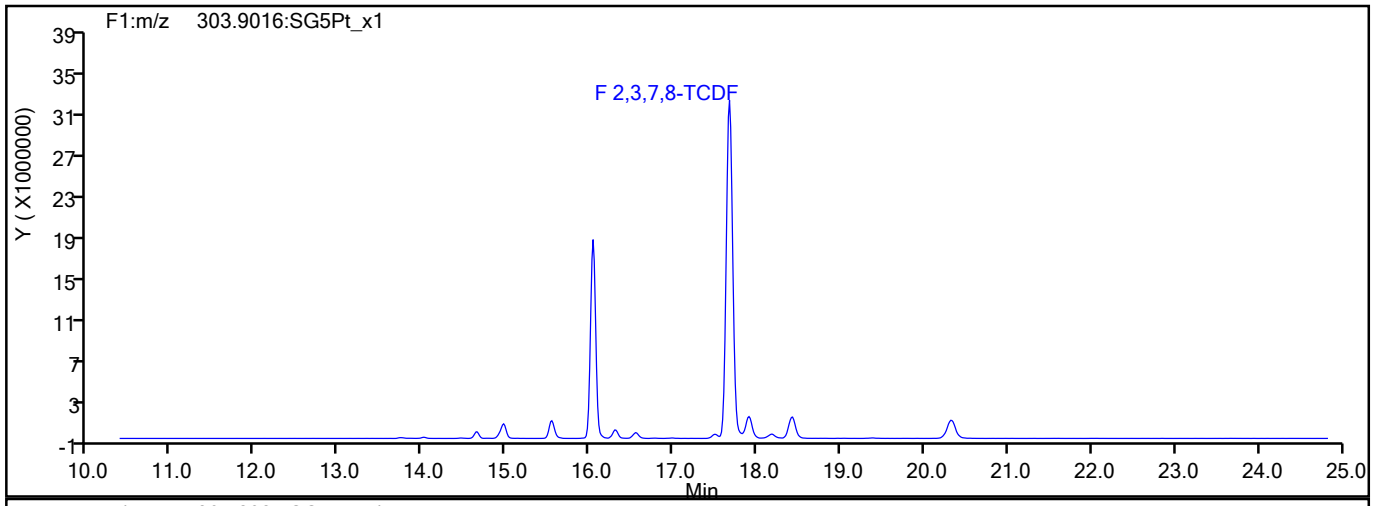

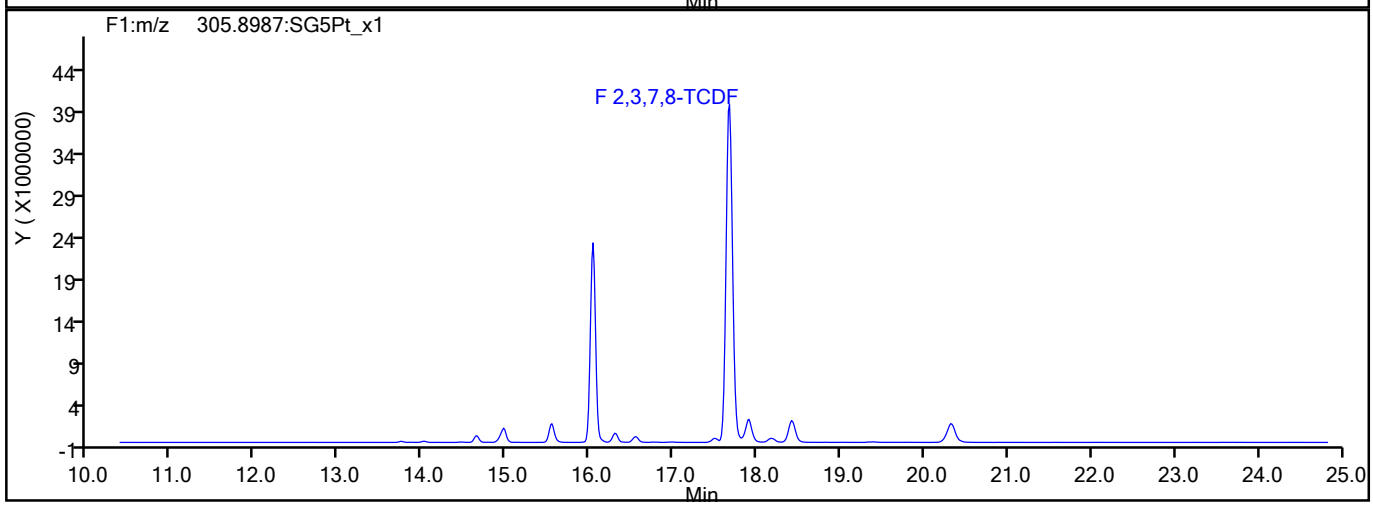

TCDF Interference Mass

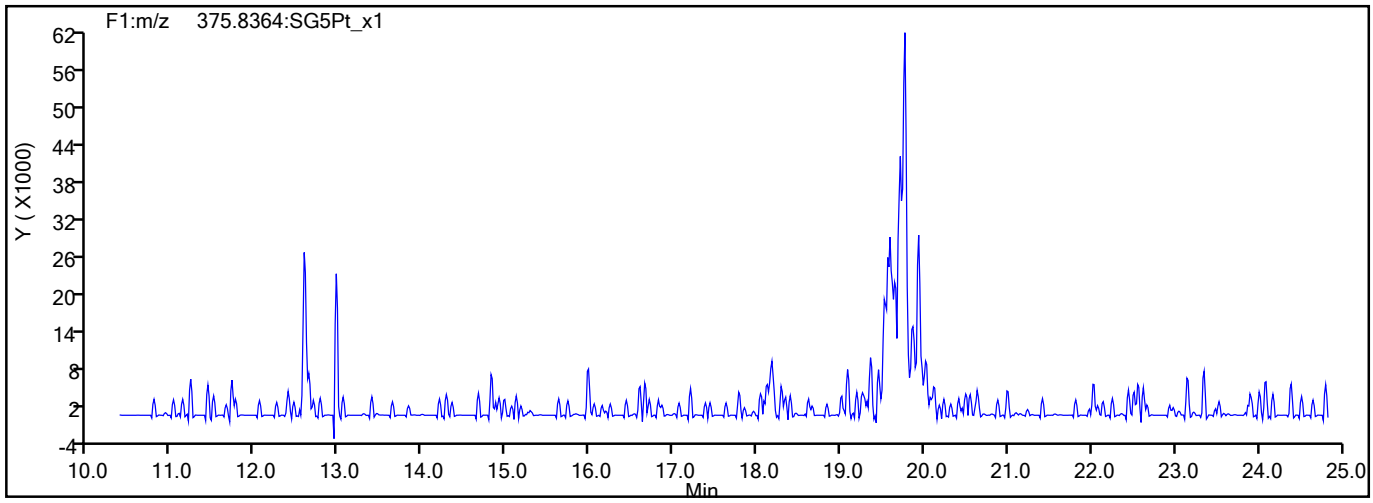

774789

Report Date: 23-Aug-2021 10:28:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_012.d		
Injection Date:	21-Aug-2021 20:56:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	518850	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

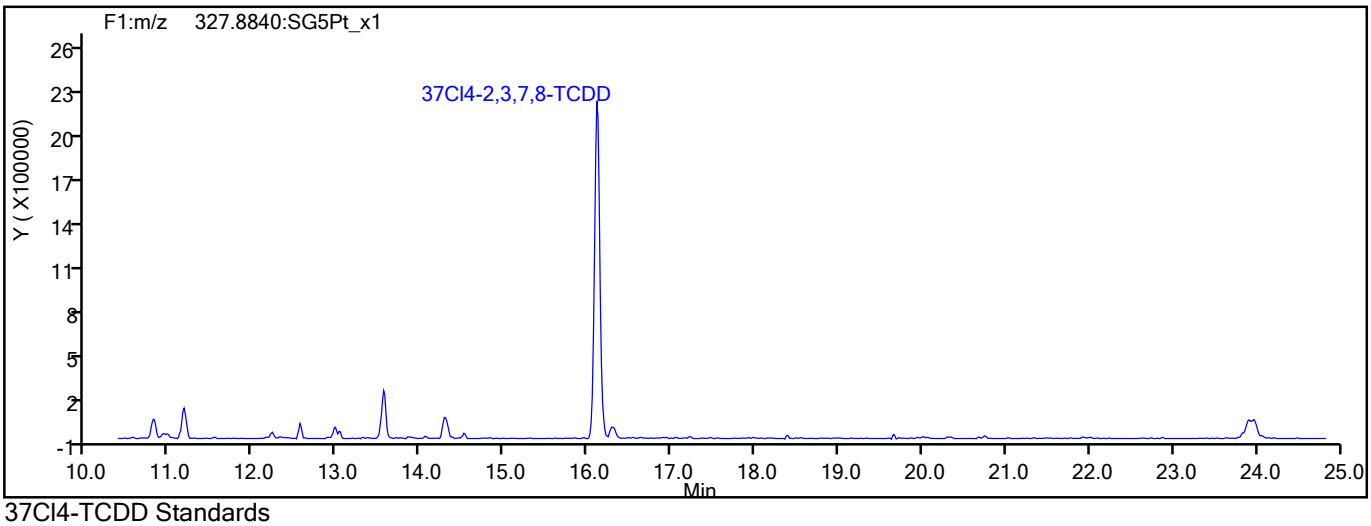

37Cl4-TCDD Standards

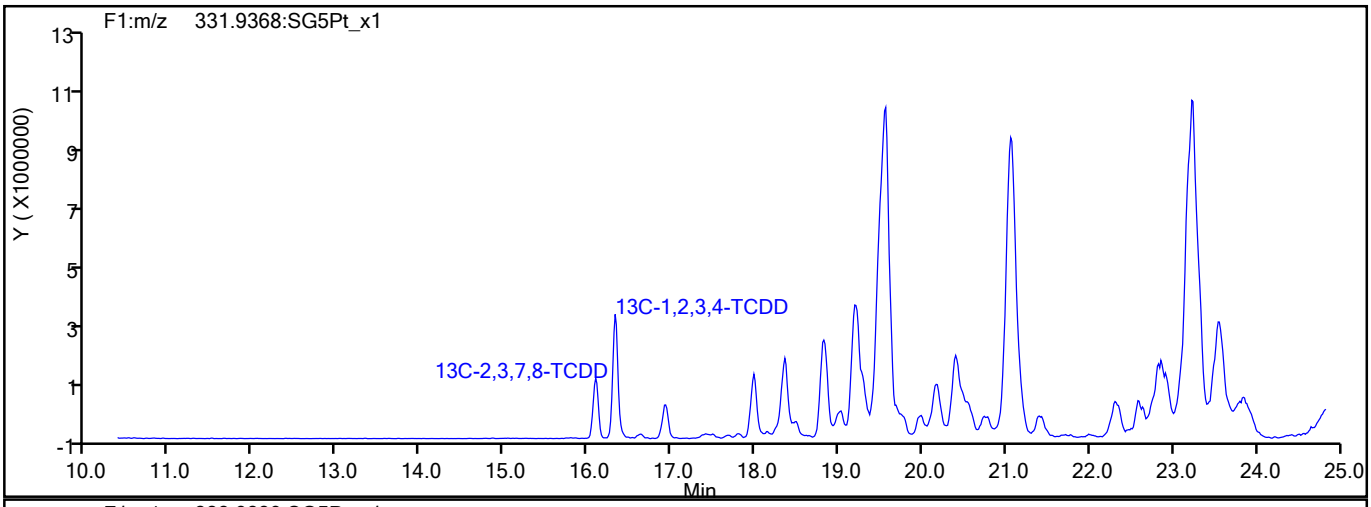

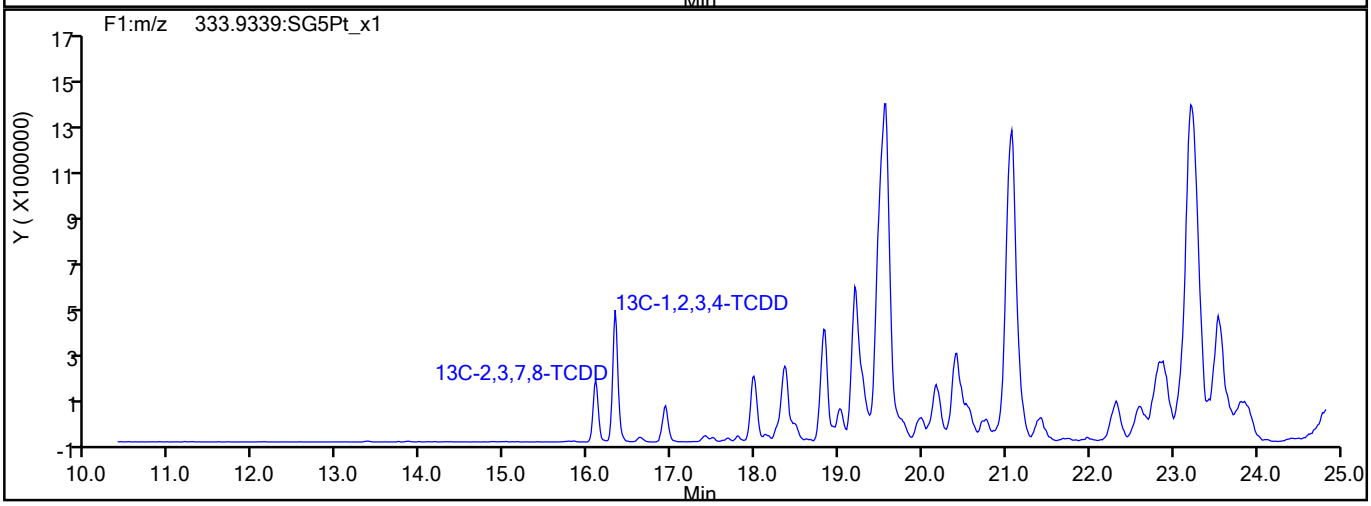

774790

Report Date: 23-Aug-2021 10:28:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_012.d		
Injection Date:	21-Aug-2021 20:56:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (8-10)		
Worklist#:	518850	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

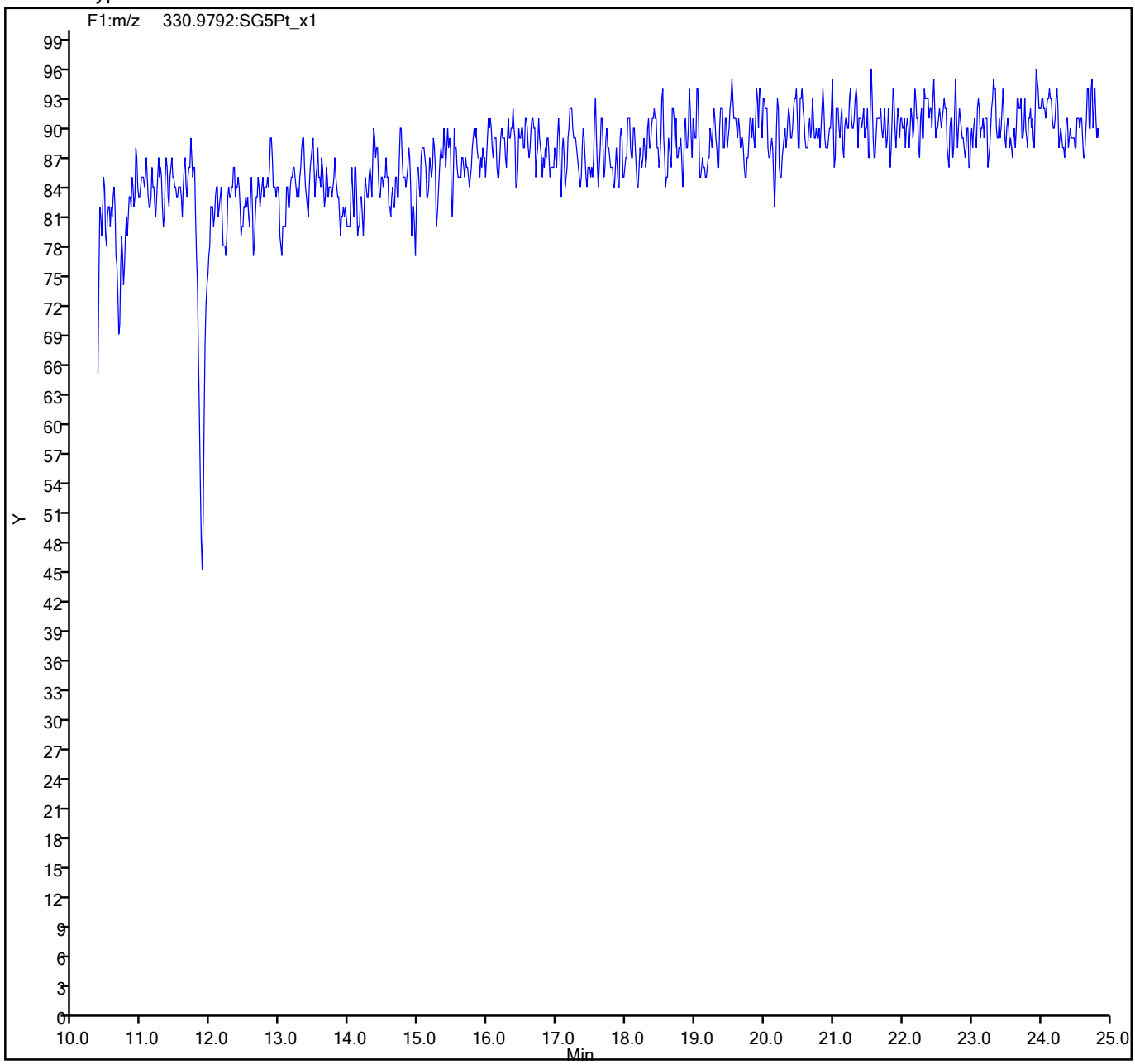

774791

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (10-12)
Lab Sample ID: 320-76769-6
Matrix: Sediment
Lab File ID: 13AU2110D5_53.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.86(g)
Date Analyzed: 08/15/2021 08:51
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 17.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	9.0	B	1.2	0.093
40321-76-4	1,2,3,7,8-PeCDD	ND		6.2	0.055
57117-41-6	1,2,3,7,8-PeCDF	0.98	J	6.2	0.057
57117-31-4	2,3,4,7,8-PeCDF	0.46	J	6.2	0.059
39227-28-6	1,2,3,4,7,8-HxCDD	0.20	J B	6.2	0.067
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.2	0.070
19408-74-3	1,2,3,7,8,9-HxCDD	ND		6.2	0.062
70648-26-9	1,2,3,4,7,8-HxCDF	1.5	J B	6.2	0.048
57117-44-9	1,2,3,6,7,8-HxCDF	0.42	J B	6.2	0.049
72918-21-9	1,2,3,7,8,9-HxCDF	0.082	J B q	6.2	0.041
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.2	0.038
35822-46-9	1,2,3,4,6,7,8-HpCDD	1.9	J B	6.2	0.11
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.58	J B	6.2	0.051
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.13	J B q	6.2	0.059
3268-87-9	OCDD	57	B	12	0.16
39001-02-0	OCDF	0.37	J B	12	0.039
41903-57-5	Total TCDD	14	B	1.2	0.093
30402-14-3	Total TCDF	48	B q	1.2	0.19
36088-22-9	Total PeCDD	1.6	J	6.2	0.055
30402-15-4	Total PeCDF	2.2	J	6.2	0.058
34465-46-8	Total HxCDD	6.0	J B	6.2	0.066
55684-94-1	Total HxCDF	2.2	J B q	6.2	0.044
37871-00-4	Total HpCDD	8.9	B	6.2	0.11
38998-75-3	Total HpCDF	0.89	J B q	6.2	0.055

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (10-12)
Lab Sample ID: 320-76769-6
Matrix: Sediment
Lab File ID: 13AU2110D5_53.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.86(g)
Date Analyzed: 08/15/2021 08:51
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 17.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	62		25-164
89059-46-1	13C-2,3,7,8-TCDF	57		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	62		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	57		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	62		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	67		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	64		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	62		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	59		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	58		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	58		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	66		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	69		26-138
114423-97-1	13C-OCDD	71		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d
Lims ID: 320-76769-A-6-A
Client ID: 11215702-072221-SS-SJSB080 (10-12)
Sample Type: Client
Inject. Date: 15-Aug-2021 08:51:52 ALS Bottle#: 52 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-6-a 320-76769-a-6-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:11:54 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:50:02

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.840	59605296	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.326	55020991	0.77	1.6249	56.8	56.8	0.0716	0.0716	56.81	
2,3,7,8-TCDF	17.356	6420956	0.77	1.0239	11.4	11.4	0.0764	0.0764		
A Non-2,3,7,8-sub-TCDF	17.046	4438217	0.77	1.0239	7.989	7.878	0.0764	4.740		RQMa
S Total TCDF					19.4	19.3	0.0764	0.0764		RQ
D 13C-2,3,7,8-TCDD	18.036	33381167	0.80	0.8993	62.3	62.3	0.1438	0.1438	62.27	
2,3,7,8-TCDD	18.066	1523877	0.79	1.2541	3.640	3.640	0.0376	0.0376		
$ 37Cl4-2,3,7,8-TCDD	18.066	19022138		1.1071	28.8	28.8	0.0235	0.0235	72.06	
A Non-2,3,7,8-sub-TCDD	17.500	849984	0.78	1.2541	2.030	2.030	0.0376	1.584		
S Total TCDD					5.670	5.670	0.0376	0.0376		
D 13C-1,2,3,7,8-PeCDF	22.367	41221527	1.60	1.2101	57.2	57.2	0.1485	0.1485	57.15	
1,2,3,7,8-PeCDF	22.394	174247	1.51	1.0611	0.3984	0.3984	0.0231	0.0231		M
D 13C-2,3,4,7,8-PeCDF	23.703	45628764	1.58	1.2395	61.8	61.8	0.1450	0.1450	61.76	
2,3,4,7,8-PeCDF	23.717	86953	1.51	1.0184	0.1871	0.1871	0.0238	0.0238		M
A F1 PeCDFs	20.093						0.0135	0.0135		
A Non-2,3,7,8-sub-PeCDF	23.241	129519	1.42	1.0398	0.2868	0.2868	0.0234	0.1826		
S Total PeCDF					0.8723	0.8723	0.0234	0.0234		
D 13C-1,2,3,7,8-PeCDD	24.426	28338280	1.60	0.7612	62.5	62.5	0.0836	0.0836	62.46	
1,2,3,7,8-PeCDD	24.440						0.0222	0.0222		
A Non-2,3,7,8-sub-PeCDD	23.349	197222	1.50	1.0484	0.6638	0.6638	0.0222	0.4731		
S Total PeCDD					0.6638	0.6638	0.0222	0.0222		
D 13C-1,2,3,4,7,8-HxCDF	30.503	36806514	0.52	1.0837	62.4	62.4	0.2894	0.2894	62.39	
1,2,3,4,7,8-HxCDF	30.516	236187	1.18	1.0851	0.5914	0.5914	0.0194	0.0194		M
D 13C-1,2,3,6,7,8-HxCDF	30.689	35976866	0.52	1.1279	58.6	58.6	0.2780	0.2780	58.59	
1,2,3,6,7,8-HxCDF	30.689	69675	1.31	1.1260	0.1720	0.1720	0.0198	0.0198		Ma
D 13C-2,3,4,6,7,8-HxCDF	31.514	33828667	0.51	1.0637	58.4	58.4	0.2948	0.2948	58.41	
2,3,4,6,7,8-HxCDF	31.528						0.0154	0.0154		
D 13C-1,2,3,7,8,9-HxCDF	32.326	30792702	0.52	0.9676	58.5	58.5	0.3241	0.3241	58.46	
1,2,3,7,8,9-HxCDF	32.326	11864	1.24	1.1664	0.0428	0.0330	0.0164	0.0164		RQ
A Non-2,3,7,8-sub-HxCDF	30.197	34338	1.24	1.1363	0.0951	0.0880	0.0176	0.0488		RQ

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.9013	0.8844	0.0177	0.0177		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.140	54441832	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	26627064	1.25	0.7334	66.7	66.7	0.2954	0.2954	66.69	
1,2,3,4,7,8-HxCDD	31.714	23486	1.07	1.0640	0.0829	0.0829	0.0273	0.0273		M
D 13C-1,2,3,6,7,8-HxCDD	31.807	30472449	1.23	0.8802	63.6	63.6	0.2461	0.2461	63.59	
1,2,3,6,7,8-HxCDD	31.714						0.0282	0.0282		MU
1,2,3,7,8,9-HxCDD	32.153						0.0252	0.0252		
A Non-2,3,7,8-sub-HxCDD	30.882	718769	1.25	1.0655	2.363	2.363	0.0268	2.187		
S Total HxCDD					2.446	2.446	0.0269	0.0269		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	25213518	0.43	0.7730	59.9	59.9	0.9727	0.9727	59.91	
1,2,3,4,6,7,8-HpCDF	33.779	85941	1.12	1.4413	0.2365	0.2365	0.0208	0.0208		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.848	26456739	0.44	0.7008	69.3	69.3	1.073	1.073	69.34	
1,2,3,4,7,8,9-HpCDF	34.860	18938	1.04	1.3174	0.0635	0.0543	0.0241	0.0241		RQM
A Non-2,3,7,8-sub-HpCDF	34.319	24058	1.00	1.3793	0.0675	0.0675	0.0223	0.0675		M
S Total HpCDF					0.3675	0.3583	0.0224	0.0224		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	23325778	1.01	0.6472	66.2	66.2	0.3670	0.3670	66.20	
1,2,3,4,6,7,8-HpCDD	34.569	193798	1.07	1.0943	0.7592	0.7592	0.0438	0.0438		
A Non-2,3,7,8-sub-HpCDD	34.301	724946	1.01	1.0943	2.840	2.840	0.0438	2.840		
S Total HpCDD					3.599	3.599	0.0438	0.0438		
D 13C-OCDD	36.914	34382813	0.89	0.4472	141.2	141.2	0.2354	0.2354	70.62	
OCDF	37.022	36584	0.80	1.4382	0.1480	0.1480	0.0159	0.0159		M
OCDD	36.926	4378186	0.90	1.1070	23.0	23.0	0.0656	0.0656		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d
Lims ID: 320-76769-A-6-A
Client ID: 11215702-072221-SS-SJSB080 (10-12)
Sample Type: Client
Inject. Date: 15-Aug-2021 08:51:52 ALS Bottle#: 52 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-6-a 320-76769-a-6-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:11:54 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:50:02

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.840	17.855	-1		26569753	6487311	3575	8937	1815		
333.9339	17.840	17.855	-1		33035543	8022081	3929	9822	2042	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.326	17.356	-2	0.971	23861643	5482163	3649	9122	1502		
317.9389	17.326	17.356	-2	0.971	31159348	7219684	3105	7762	2325	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.371	-1	1.002	2785185	605003	1783	4457	339		
305.8987	17.341	17.371	-2	1.001	3635771	806259	2191	5477	368	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	15.935	17.046	-67	0.920	53943	15463	1783	4457	9		
305.8987	15.935	17.046	-67	0.920	70219	15520	2191	5477	7	0.77(0.65-0.89)	
303.9016	16.207	17.046	-50	0.935	75441	17322	1783	4457	10		
305.8987	16.207	17.046	-50	0.935	95086	21810	2191	5477	10	0.79(0.65-0.89)	
303.9016	16.449	17.046	-36	0.949	84208	19718	1783	4457	11		
305.8987	16.449	17.046	-36	0.949	115173	28458	2191	5477	13	0.73(0.65-0.89)	
303.9016	16.691	17.046	-21	0.963	131482	31432	1783	4457	18		
305.8987	16.676	17.046	-22	0.962	163132	37054	2191	5477	17	0.81(0.65-0.89)	
303.9016	16.963	17.046	-5	0.979	1160351	277910	1783	4457	156		
305.8987	16.963	17.046	-5	0.979	1509906	372967	2191	5477	170	0.77(0.65-0.89)	
303.9016	17.129	17.046	5	0.989	3552	3996	1783	4457	2		M
305.8987	17.174	17.046	8	0.991	49332	10503	2191	5477	5	0.07(0.65-0.89)	
	Empc Correction				4612	5189	2191	5477	2		
303.9016	17.190	17.046	9	0.992	55505	12196	1783	4457	7		M
	Empc Correction				37985	8087	1783	4457	5		
305.8987	17.174	17.046	8	0.991	49332	10503	2191	5477	5	1.13(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.779	17.046	44	1.026	195283	42426	1783	4457	24		
305.8987	17.779	17.046	44	1.026	250937	53944	2191	5477	25	0.78(0.65-0.89)	M
303.9016	19.170	17.046	127	1.106	202186	40917	1783	4457	23		
305.8987	19.170	17.046	127	1.106	235389	47870	2191	5477	22	0.86(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.036	18.051	-1	1.011	14886188	3264080	3575	8937	913		
333.9339	18.036	18.051	-1	1.011	18494979	4082728	3929	9822	1039	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.081	-1	1.002	672436	147952	707	1767	209		
321.8936	18.066	18.081	-1	1.002	851441	192212	678	1695	283	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.081	-1	1.013	19022138	4247868	1512	3780	2809		
A Non-2,3,7,8-sub-TCDD											
319.8965	16.917	17.500	-35	0.938	294490	74437	707	1767	105		
321.8936	16.917	17.500	-35	0.938	368514	91966	678	1695	136	0.80(0.65-0.89)	
319.8965	17.794	17.500	18	0.987	21950	5398	707	1767	8		
321.8936	17.809	17.500	19	0.987	31924	7522	678	1695	11	0.69(0.65-0.89)	
319.8965	18.429	17.500	56	1.022	55093	11061	707	1767	16		
321.8936	18.414	17.500	55	1.021	78013	15187	678	1695	22	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.254	25350591	4238185	6353	15882	667		
353.8970	22.367	22.367	0	1.254	15870936	2608867	4076	10190	640	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.394	22.394	0	1.001	104797	19420	354	885	55		M
341.8567	22.394	22.394	0	1.001	69450	12354	316	790	39	1.51(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.329	27974138	4255597	6353	15882	670		
353.8970	23.703	23.703	0	1.329	17654626	2661919	4076	10190	653	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	23.717	23.730	-1	1.001	52354	8669	354	885	24		
341.8567	23.730	23.730	0	1.001	34599	5550	316	790	18	1.51(1.32-1.78)	M
A F1 PeCDFs											
339.8597	20.093						200	500			
341.8567	20.093						186	465			
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.017	23.241	-133	0.940	49198	7945	354	885	22		
341.8567	21.017	23.241	-133	0.940	33248	5518	316	790	17	1.48(1.32-1.78)	
339.8597	22.912	23.241	-20	1.024	26880	3897	354	885	11		
341.8567	22.926	23.241	-19	1.025	20193	3041	316	790	10	1.33(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.369	17437892	2568446	2331	5827	1102		
369.8919	24.426	24.426	0	1.369	10900388	1591662	1362	3405	1169	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453						226	565			
357.8516	24.453						162	405			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.235	23.349	-127	0.869	7926	1719	226	565	8		
357.8516	21.208	23.349	-128	0.868	4887	1089	162	405	7	1.62(1.32-1.78)	
355.8546	21.999	23.349	-81	0.901	83414	14634	226	565	65		
357.8516	21.972	23.349	-82	0.900	57142	11165	162	405	69	1.46(1.32-1.78)	
355.8546	23.417	23.349	4	0.959	27021	3681	226	565	16		
357.8516	23.444	23.349	6	0.960	16832	2646	162	405	16	1.61(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	12558703	2325462	5996	14990	388		
385.8610	30.503	30.503	0	0.949	24247811	4496710	11336	28340	397	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											M
373.8208	30.516	30.529	-1	1.000	127804	22541	322	805	70		M
375.8178	30.530	30.529	0	1.001	108383	19860	253	632	78	1.18(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	12281732	2194824	5996	14990	366		
385.8610	30.689	30.689	0	0.955	23695134	4250444	11336	28340	375	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											Ma
373.8208	30.689	30.716	-2	1.000	39552	6288	322	805	20		M
375.8178	30.703	30.716	-1	1.000	30123	7256	253	632	29	1.31(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	11393452	2647535	5996	14990	442		
385.8610	31.514	31.514	0	0.981	22435215	5353430	11336	28340	472	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						322	805			
375.8178	31.528						253	632			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.326	0	1.006	10481459	2579537	5996	14990	430		
385.8610	32.313	32.326	-1	1.005	20311243	4933322	11336	28340	435	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQ
373.8208	32.326	32.340	-1	1.000	6568	2350	322	805	7		
375.8178	32.326	32.340	-1	1.000	8809	2898	253	632	11	0.75(1.05-1.43)	
	Empc Correction				5296	1895	253	632	7		
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	28.373	30.197	-109	0.930	11256	1898	322	805	6		
	Empc Correction				8461	1731	322	805	5		
375.8178	28.373	30.197	-109	0.930	6824	1396	253	632	6	1.65(1.05-1.43)	
373.8208	32.406	30.197	132	1.062	10102	2859	322	805	9		
375.8178	32.420	30.197	133	1.063	8951	2855	253	632	11	1.13(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.140	0		30169568	7669705	6775	16937	1132		
403.8529	32.140	32.140	0		24272264	6147178	5198	12995	1183	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	14775072	4060920	6775	16937	599		
403.8529	31.701	31.701	0	0.986	11851992	3243797	5198	12995	624	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDD											M
389.8157	31.714	31.714	0	1.000	12144	3304	487	1217	7		M
391.8127	31.701	31.714	-1	1.000	11342	2886	361	902	8	1.07(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	16820486	4149867	6775	16937	613		
403.8529	31.807	31.807	0	0.990	13651963	3375244	5198	12995	649	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											MU
389.8157	31.820						487	1217			
391.8127	31.820						361	902			
1,2,3,7,8,9-HxCDD											
389.8157	32.153						487	1217			
391.8127	32.153						361	902			
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.518	30.882	-82	0.928	371347	44248	487	1217	91		
391.8127	29.545	30.882	-80	0.929	293929	34357	361	902	95	1.26(1.05-1.43)	
389.8157	30.955	30.882	4	0.973	28485	5302	487	1217	11		
391.8127	30.942	30.882	4	0.973	25008	4602	361	902	13	1.14(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.766	0	1.051	7617843	2353554	10920	27300	216		
419.8220	33.766	33.766	0	1.051	17595675	5373559	30636	76590	175	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.779	33.778	0	1.000	45409	14027	603	1507	23		M
409.7789	33.766	33.778	-1	1.000	40532	12731	323	807	39	1.12(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.848	34.847	0	1.084	8047433	2238520	10920	27300	205		
419.8220	34.848	34.847	0	1.084	18409306	5065943	30636	76590	165	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											RQM
407.7818	34.860	34.860	0	1.000	9655	3445	603	1507	6		M
409.7789	34.860	34.860	0	1.000	12480	4781	323	807	15	0.77(0.88-1.20)	M
	Empc Correction				9283	3312	323	807	10		
A Non-2,3,7,8-sub-HpCDF											M
407.7818	34.070	34.319	-15	1.009	12038	3937	603	1507	7		M
409.7789	34.058	34.319	-16	1.009	12020	3232	323	807	10	1.00(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.568	-1	1.075	11732079	3417695	6300	15750	542		
437.8140	34.556	34.568	-1	1.075	11593699	3400706	6829	17072	498	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.569	34.580	-1	1.000	100121	28066	606	1515	46		
425.7737	34.569	34.580	-1	1.000	93677	24376	701	1752	35	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.022	34.301	-17	0.985	364172	109654	606	1515	181		
425.7737	34.009	34.301	-17	0.984	360774	101536	701	1752	145	1.01(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.926	-1	1.149	16197229	3779624	2854	7135	1324		
471.7750	36.914	36.926	-1	1.149	18185584	4275892	2964	7410	1443	0.89(0.76-1.02)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											M
441.7428	37.022	37.022	0	1.003	16269	5190	182	455	29		M
443.7399	37.010	37.022	-1	1.003	20315	6591	187	467	35	0.80(0.76-1.02)	M
OCDD											
457.7377	36.926	36.938	-1	1.000	2075080	478753	495	1237	967		
459.7348	36.926	36.938	-1	1.000	2303106	541068	676	1690	800	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d
Lims ID: 320-76769-A-6-A
Client ID: 11215702-072221-SS-SJSB080 (10-12)
Inject. Date: 15-Aug-2021 08:51:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 12

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	55020991	12701847

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	55020991	12701847

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.935	53943	15463	70219	15520	0.2204	0.77	
16.207	75441	17322	95086	21810	0.3027	0.79	
16.449	84208	19718	115173	28458	0.3539	0.73	
16.691	131482	31432	163132	37054	0.5230	0.81	
16.963	1160351	277910	1509906	372967	4.74	0.77	
17.129	3552	3996	49332	10503	0.0939	0.07	RnQM
17.129	3552	3996	4612	5189	0.0145		Empc Correction
17.190	55505	12196	49332	10503	0.1861	1.13	RQMa
17.190	37985	8087	49332	10503	0.1550		Empc Correction
17.779	195283	42426	250937	53944	0.7921	0.78	M
19.170	202186	40917	235389	47870	0.7767	0.86	
Signal Totals:							
	1944431	457271	2493786	593315			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4500457	1060009				0.77	RQMa
	4438217	1050586					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.989 = (4500457 * 100.000) / (55020991 * 1.024)
Empc Amount: 7.878 = (4438217 * 100.000) / (55020991 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Lims ID:	320-76769-A-6-A		
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Inject. Date:	15-Aug-2021 08:51:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	12

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	33381167	7346808

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	33381167	7346808

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.917	294490	74437	368514	91966	1.58	0.80	
17.794	21950	5398	31924	7522	0.1287	0.69	
18.429	55093	11061	78013	15187	0.3179	0.71	
Signal Totals:							
	371533	90896	478451	114675			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	849984	205571				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.030 = (849984 * 100.000) / (33381167 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d
Lims ID: 320-76769-A-6-A
Client ID: 11215702-072221-SS-SJSB080 (10-12)
Inject. Date: 15-Aug-2021 08:51:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 12

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	41221527	6847052
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	45628764	6917516

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	43425145	6882284

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.017	49198	7945	33248	5518	0.1826	1.48	
22.912	26880	3897	20193	3041	0.1043	1.33	
Signal Totals:							
	76078	11842	53441	8559			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	129519	20401				1.42	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2868 = (129519 * 100.000) / (43425145 * 1.040)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Lims ID:	320-76769-A-6-A		
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Inject. Date:	15-Aug-2021 08:51:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	12

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	28338280	4160108

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	28338280	4160108

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.235	7926	1719	4887	1089	0.0431	1.62	
21.999	83414	14634	57142	11165	0.4731	1.46	
23.417	27021	3681	16832	2646	0.1476	1.61	
Signal Totals:							
	118361	20034	78861	14900			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	197222	34934				1.50	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.6638 = (197222 * 100.000) / (28338280 * 1.048)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Lims ID:	320-76769-A-6-A		
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Inject. Date:	15-Aug-2021 08:51:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	12

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	36806514	6822172
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	35976866	6445268
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	33828667	8000965
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	30792702	7512859

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	34351187	7195316

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.373	11256	1898	6824	1396	0.0463	1.65	RQ
28.373	8461	1731	6824	1396	0.0392		Empc Correction
32.406	10102	2859	8951	2855	0.0488	1.13	
Signal Totals:							
	18563	4590	15775	4251			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	37133	9008				1.35	RQ
	34338	8841					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0951 = (37133 * 100.000) / (34351187 * 1.136)

Empc Amount: 0.0880 = (34338 * 100.000) / (34351187 * 1.136)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Lims ID:	320-76769-A-6-A		
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Inject. Date:	15-Aug-2021 08:51:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	12

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	26627064	7304717
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	30472449	7525111
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	28549756	7414914

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.518	371347	44248	293929	34357	2.19	1.26	
30.955	28485	5302	25008	4602	0.1758	1.14	
Signal Totals:							
	399832	49550	318937	38959			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	718769	88509				1.25	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.363 = (718769 * 100.000) / (28549756 * 1.066)

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Lims ID:	320-76769-A-6-A		
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Inject. Date:	15-Aug-2021 08:51:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	12

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	25213518	7727113
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	26456739	7304463

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	25835128	7515788

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.070	12038	3937	12020	3232	0.0675	1.00	M
Signal Totals:							
	12038	3937	12020	3232			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	24058	7169				1.00	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0675 = (24058 * 100.000) / (25835128 * 1.379)

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Lims ID:	320-76769-A-6-A		
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Inject. Date:	15-Aug-2021 08:51:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	12

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	23325778	6818401

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	23325778	6818401

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.022	364172	109654	360774	101536	2.84	1.01	
Signal Totals:							
	364172	109654	360774	101536			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	724946	211190				1.01	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.840 = (724946 * 100.000) / (23325778 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

Not Detected
RT: 14.89- 19.20

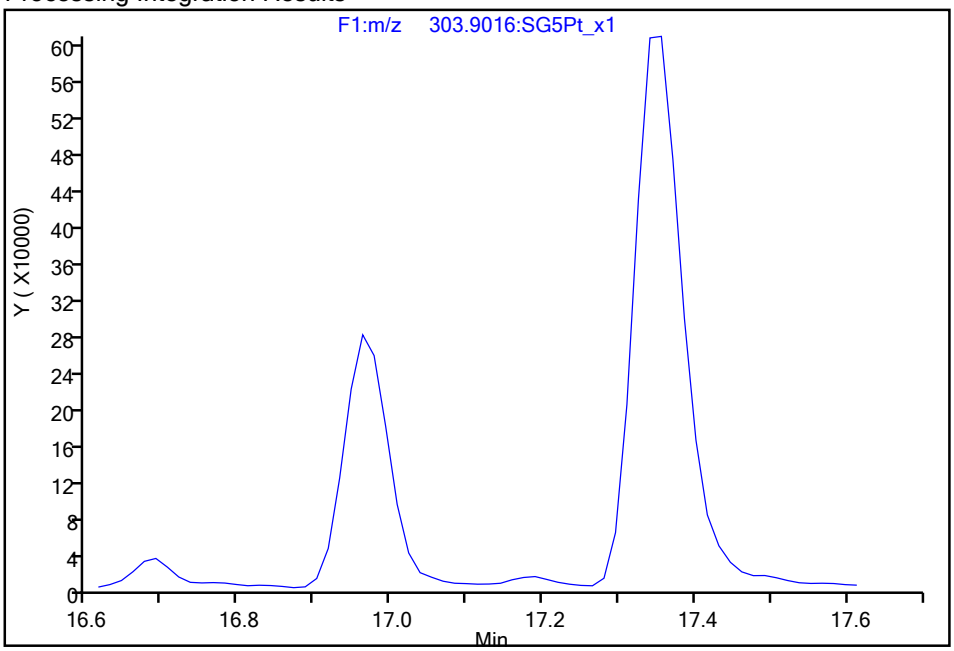

Manual Integration Results

RT = 17.129 Area = 3552 M

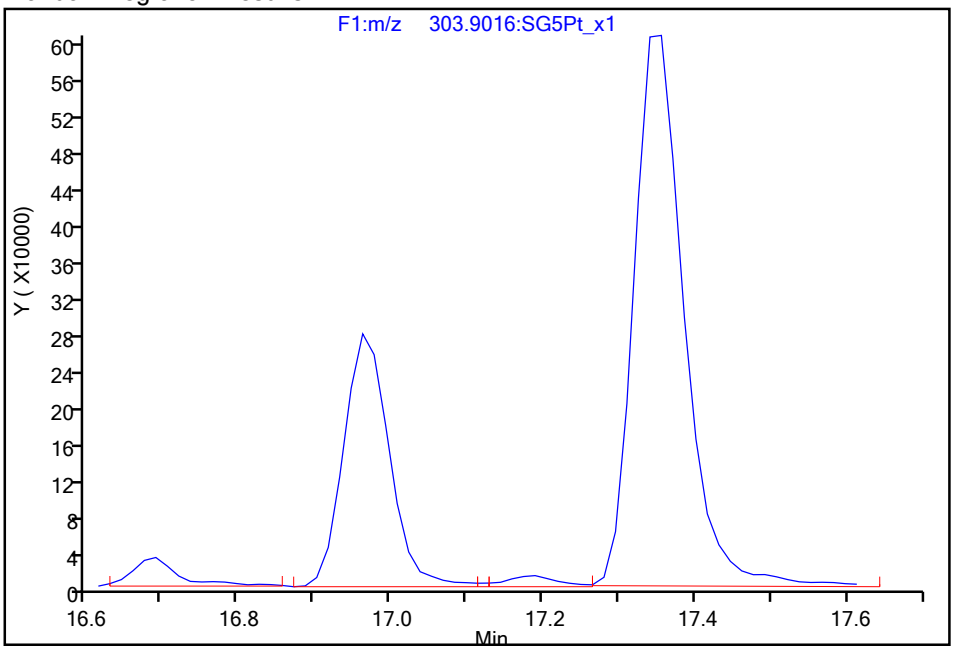

Reviewer: dadunj, 18-Aug-2021 11:09:14

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 17.190 Area = 59058

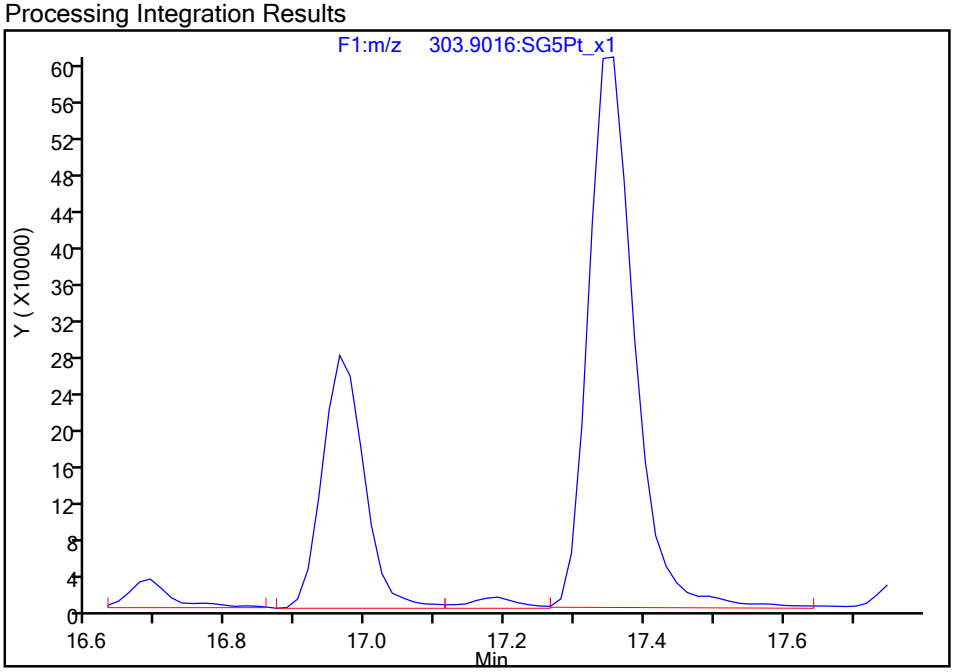

Manual Integration Results

RT = 17.190 Area = 55505 M

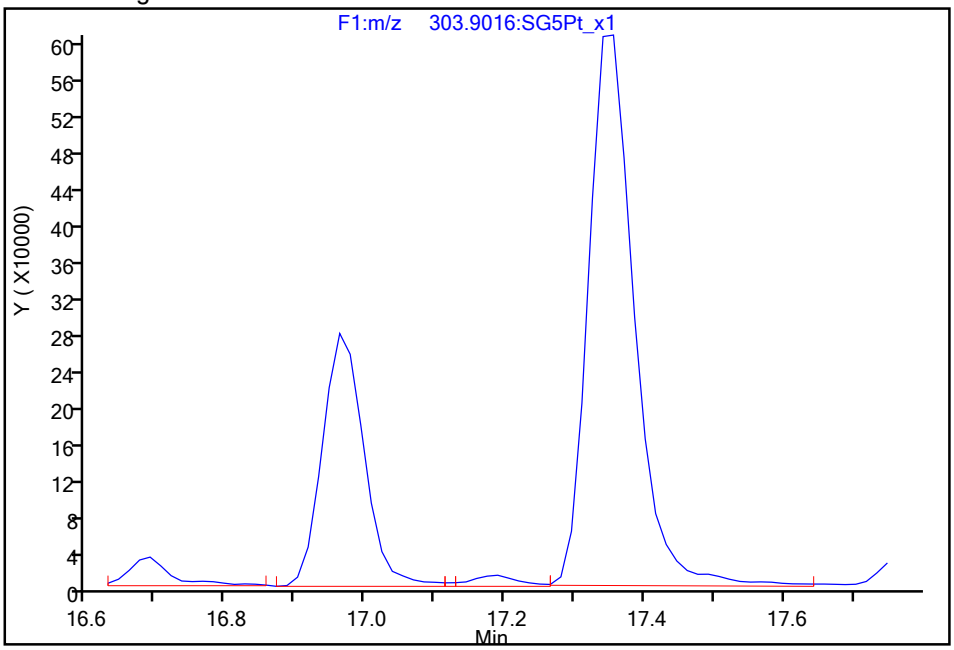

Reviewer: dadunj, 18-Aug-2021 11:09:14

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.89- 19.20)

Signal: 2

Processing Integration Results

RT = 17.779 Area = 298977

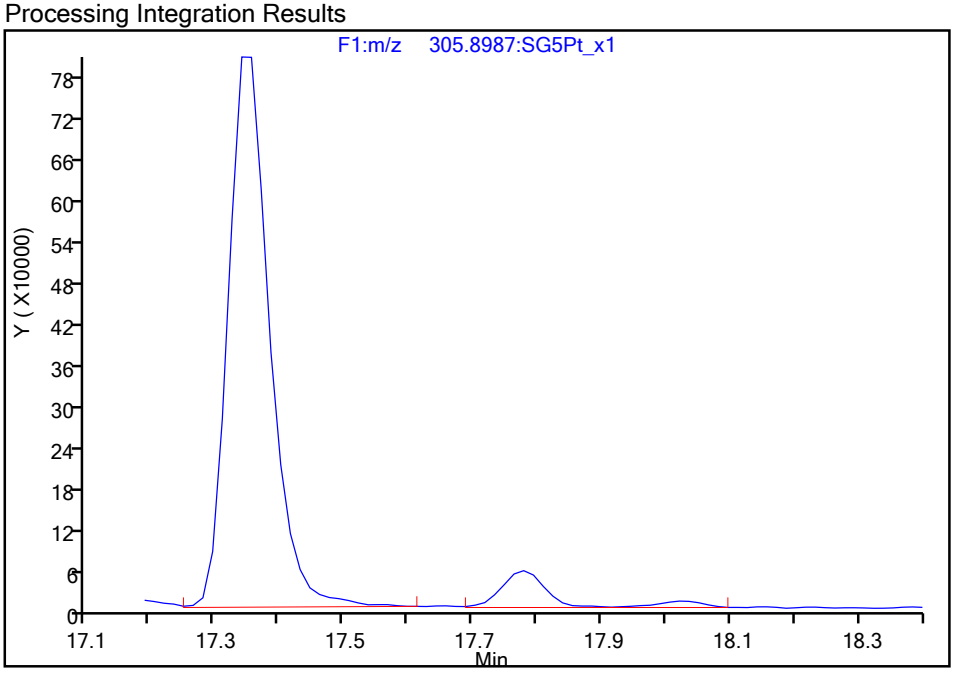

Manual Integration Results

RT = 17.779 Area = 250937 M

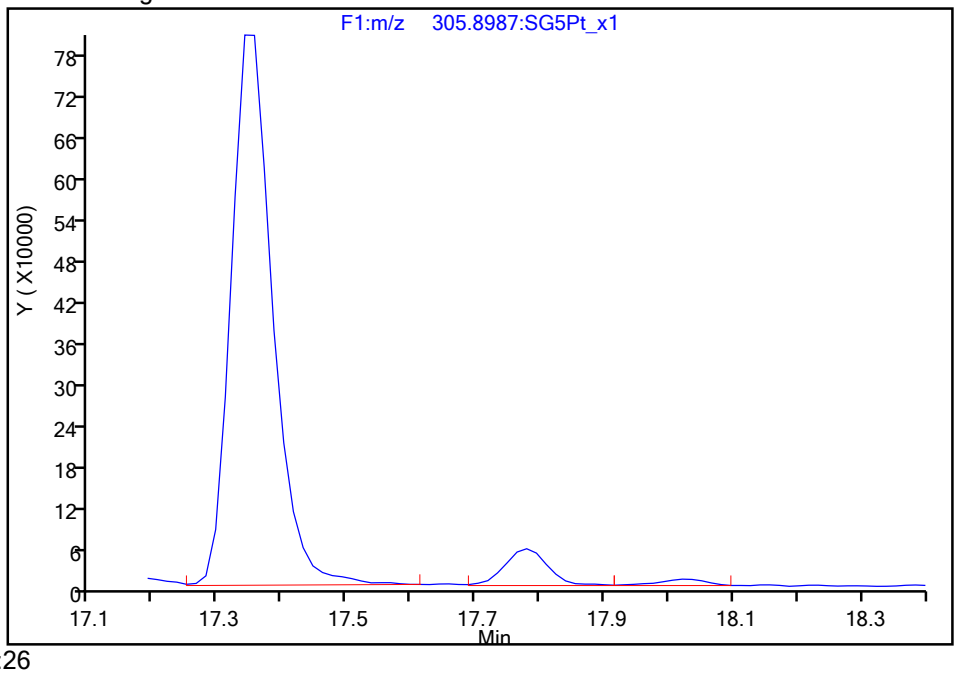

Reviewer: dadunj, 18-Aug-2021 11:09:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.39
Area: 111100
Amount: 0.412765
Amount Units: pg/ul

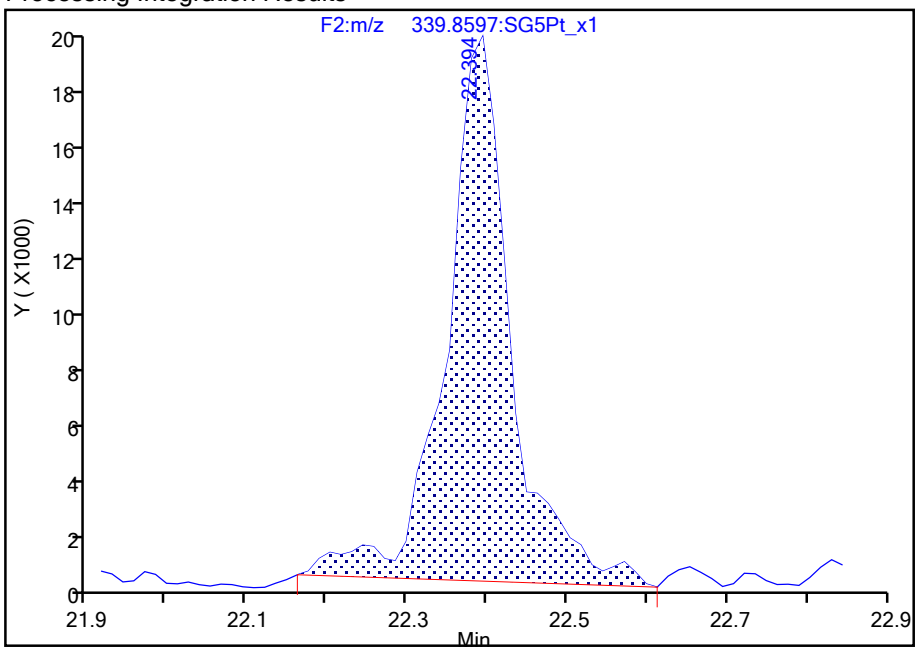

Manual Integration Results

RT: 22.39
Area: 104797
Amount: 0.398355
Amount Units: pg/ul

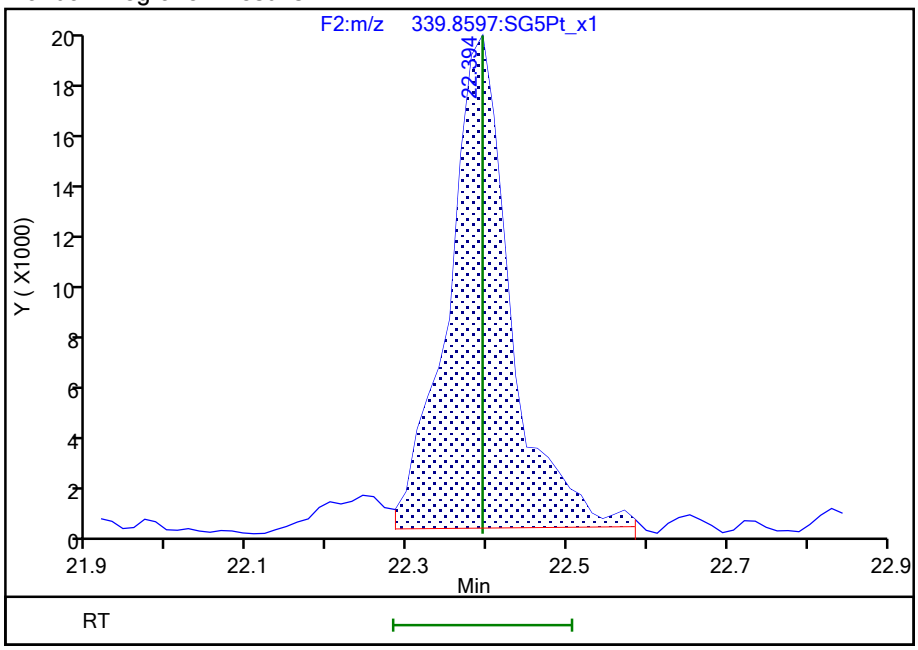

Reviewer: dadunj, 18-Aug-2021 11:09:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.73
Area: 46600
Amount: 0.212946
Amount Units: pg/ul

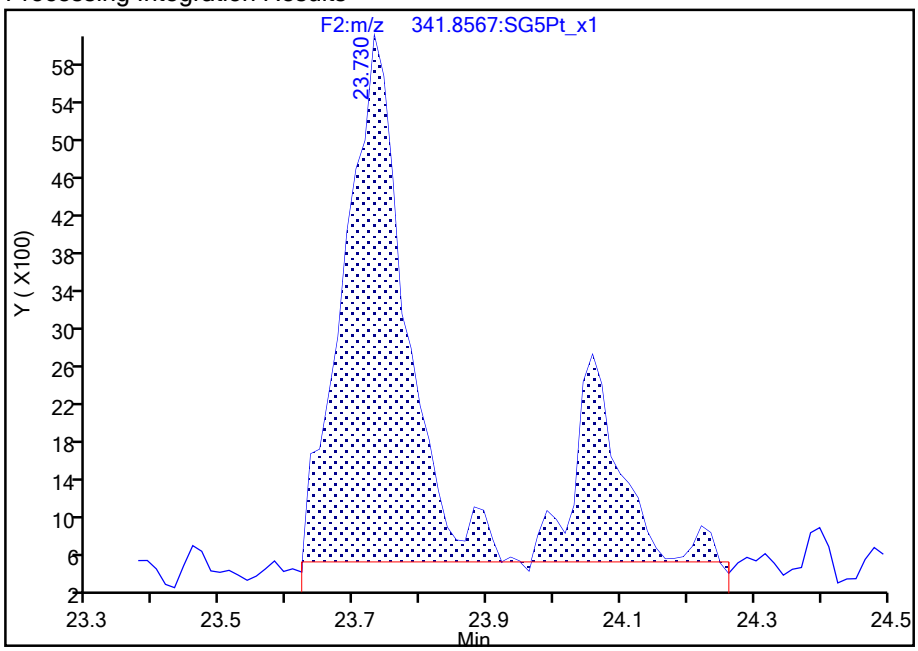

Manual Integration Results

RT: 23.73
Area: 34599
Amount: 0.187120
Amount Units: pg/ul

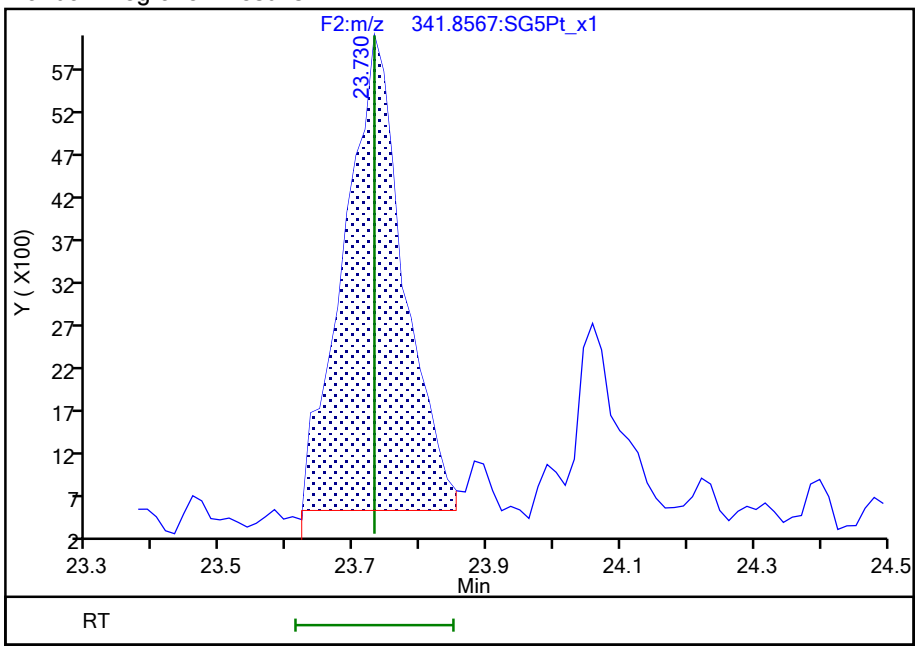

Reviewer: dadunj, 18-Aug-2021 11:09:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

RT: 30.52
Area: 167356
Amount: 0.690388
Amount Units: pg/ul

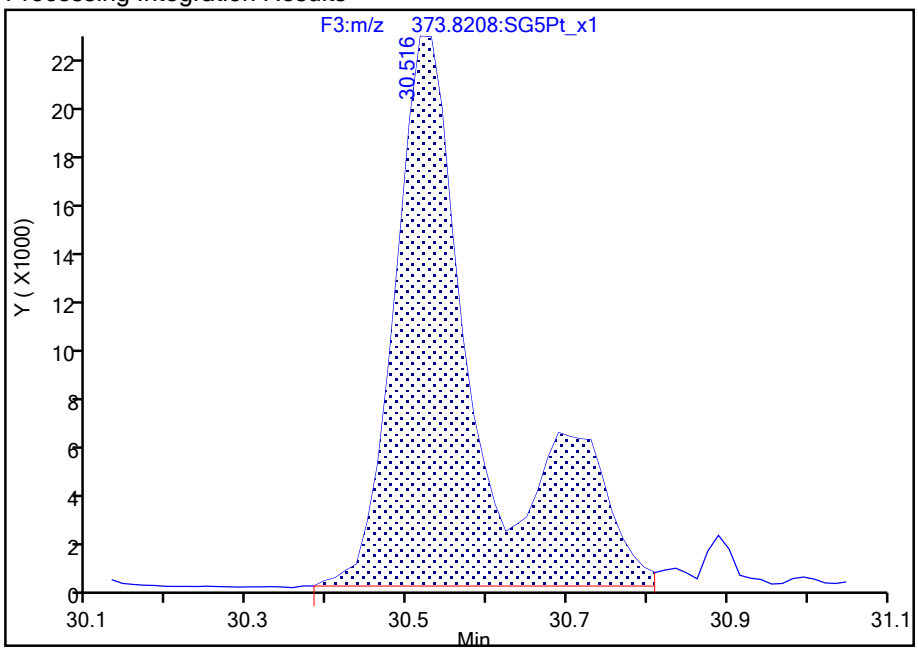

Manual Integration Results

RT: 30.52
Area: 127804
Amount: 0.591358
Amount Units: pg/ul

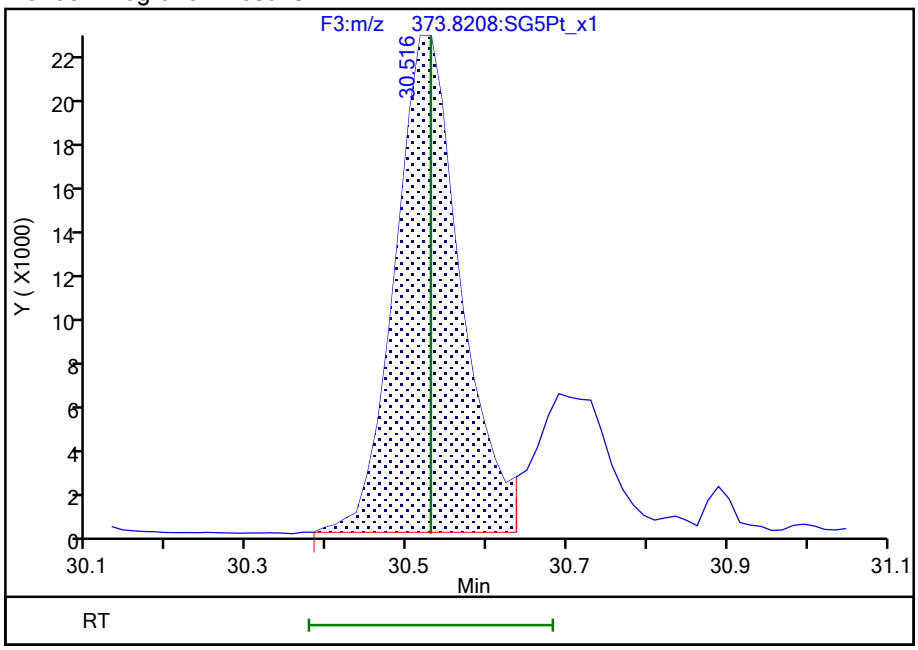

Reviewer: dadunj, 18-Aug-2021 11:10:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.72

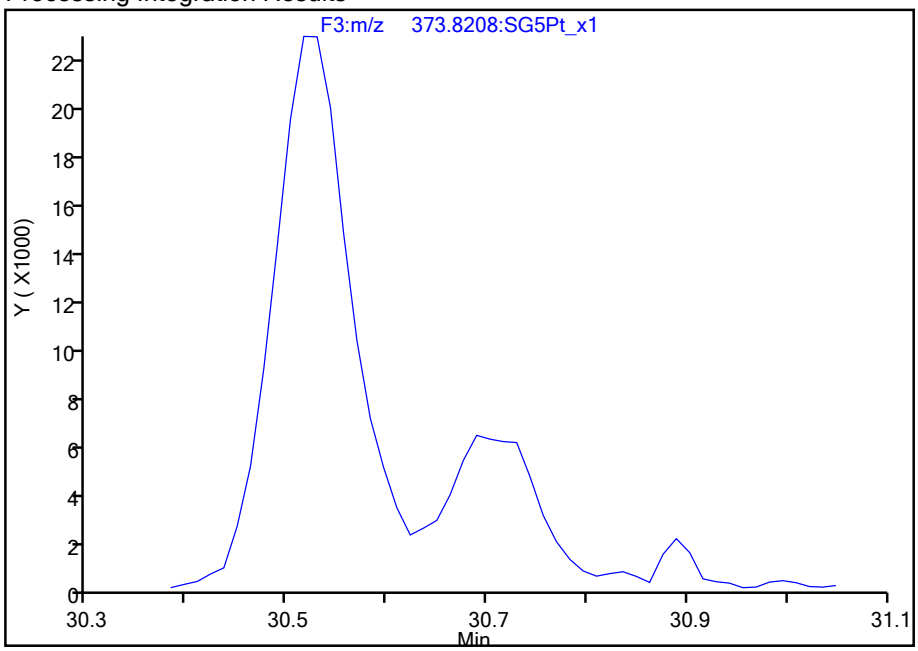

Manual Integration Results

RT: 30.69
Area: 39552
Amount: 0.171993
Amount Units: pg/ul

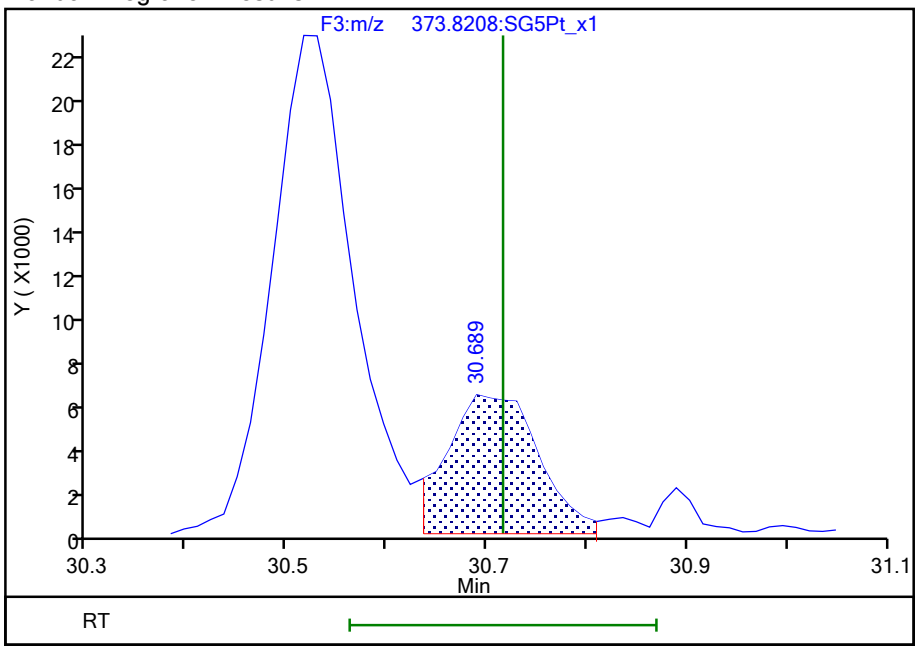

Reviewer: dadunj, 18-Aug-2021 11:10:12
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

774816

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.71
Area: 15391
Amount: 0.094356
Amount Units: pg/ul

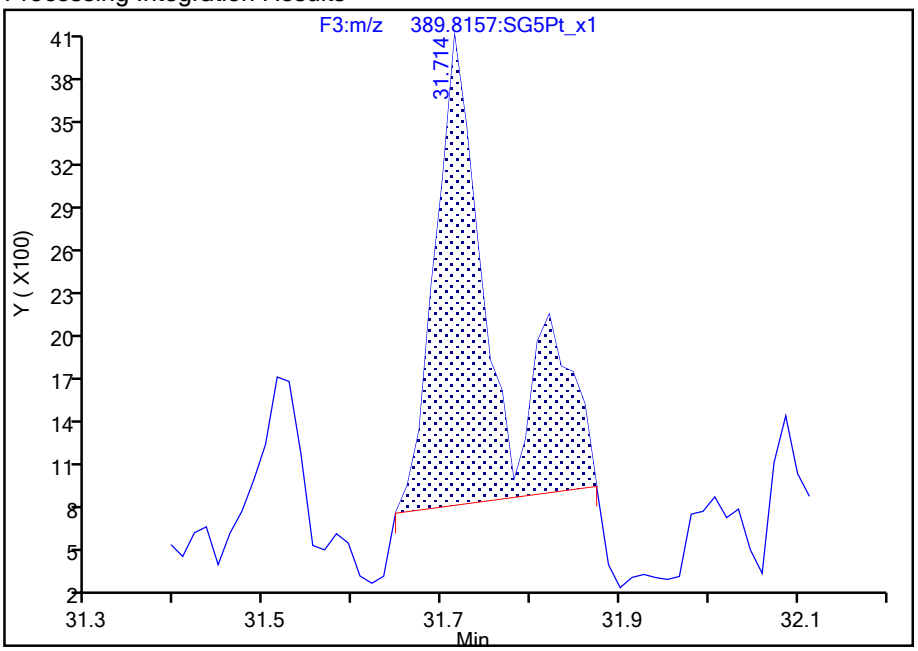

Manual Integration Results

RT: 31.71
Area: 12144
Amount: 0.082895
Amount Units: pg/ul

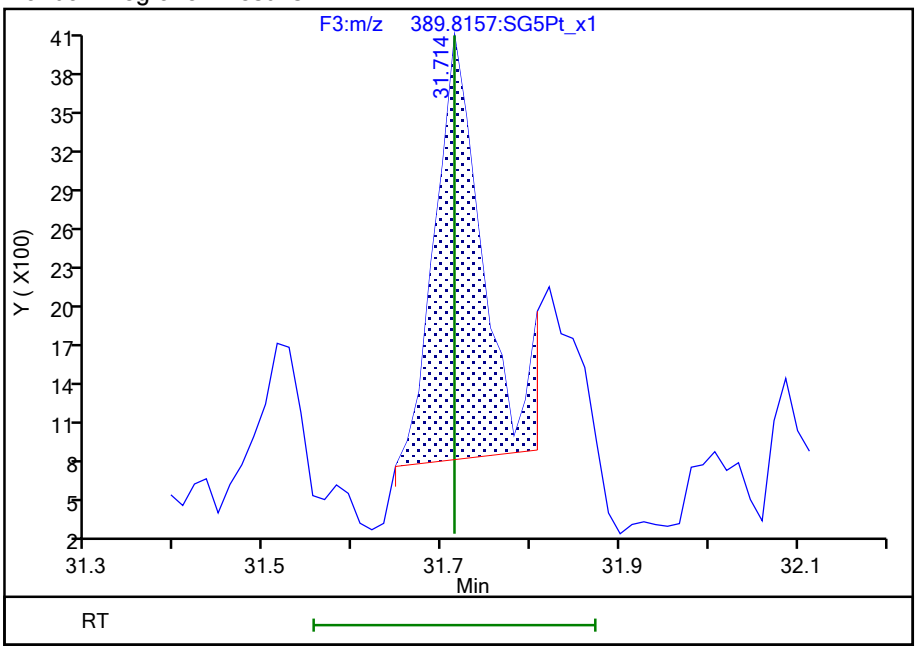

Reviewer: dadunj, 18-Aug-2021 11:10:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.78
Area: 43425
Amount: 0.232658
Amount Units: pg/ul

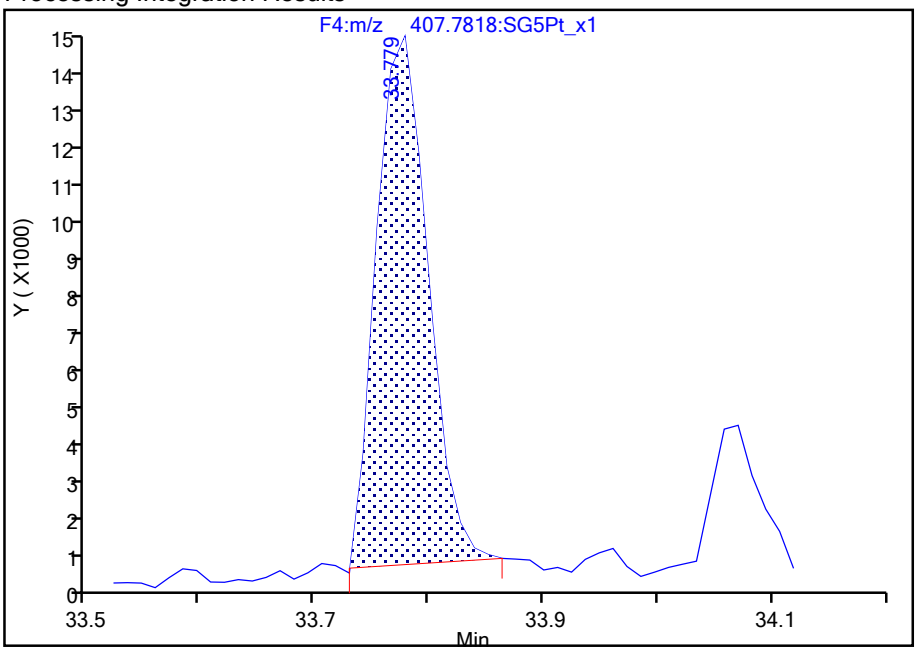

Manual Integration Results

RT: 33.78
Area: 45409
Amount: 0.236491
Amount Units: pg/ul

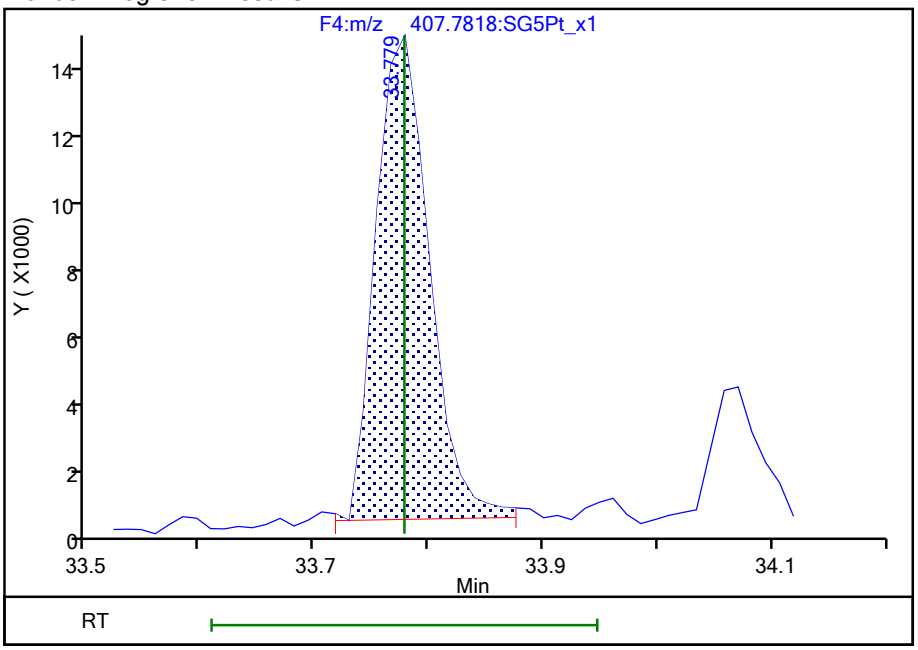

Reviewer: dadunj, 18-Aug-2021 11:10:46

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.77
Area: 41123
Amount: 0.232658
Amount Units: pg/ul

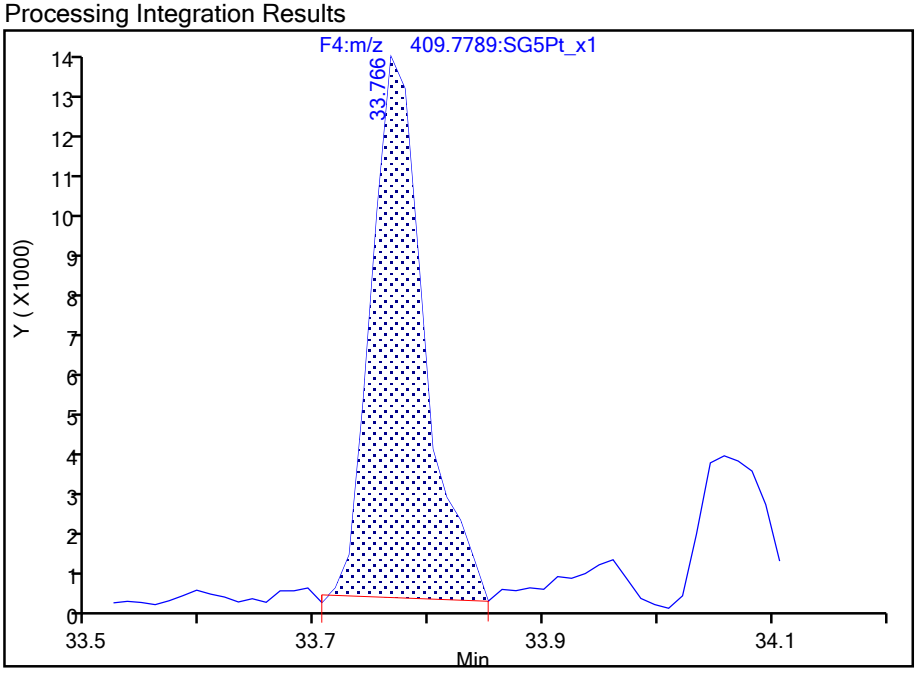

Manual Integration Results

RT: 33.77
Area: 40532
Amount: 0.236491
Amount Units: pg/ul

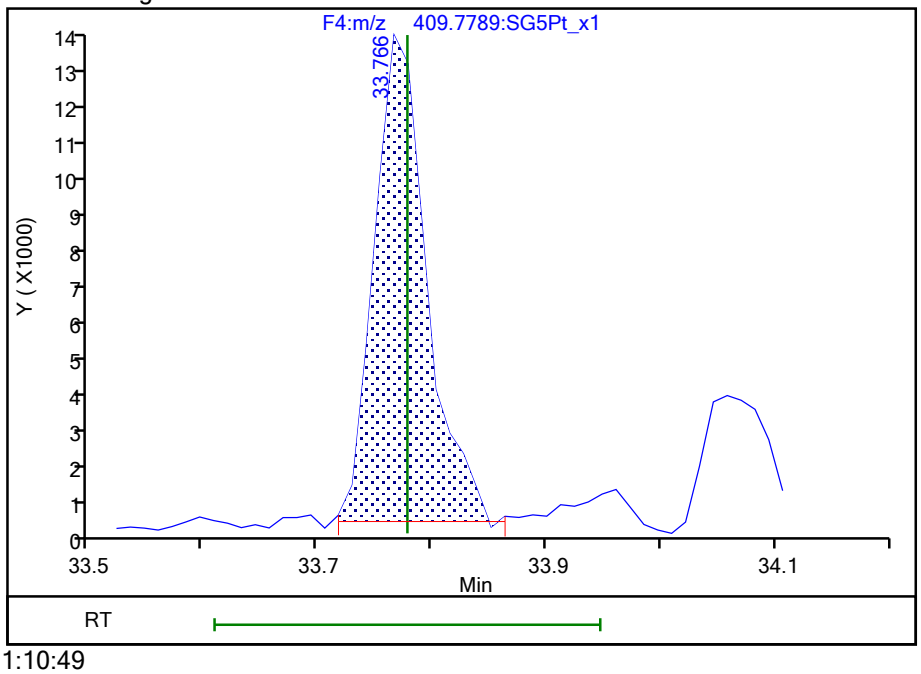

Reviewer: dadunj, 18-Aug-2021 11:10:49

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 34.86
Area: 12277
Amount: 0.074646
Amount Units: pg/ul

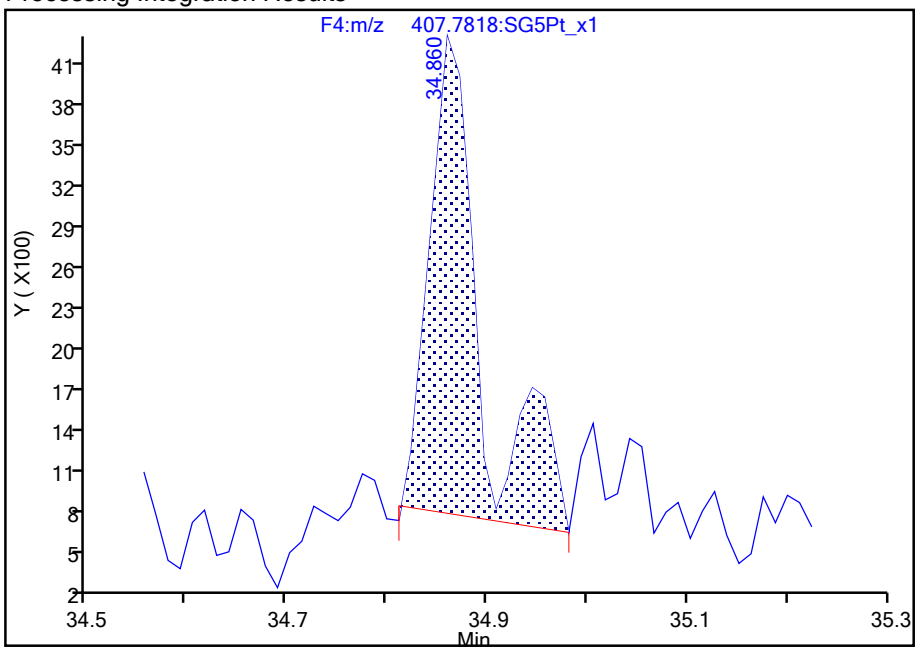

Manual Integration Results

RT: 34.86
Area: 9655
Amount: 0.063508
Amount Units: pg/ul

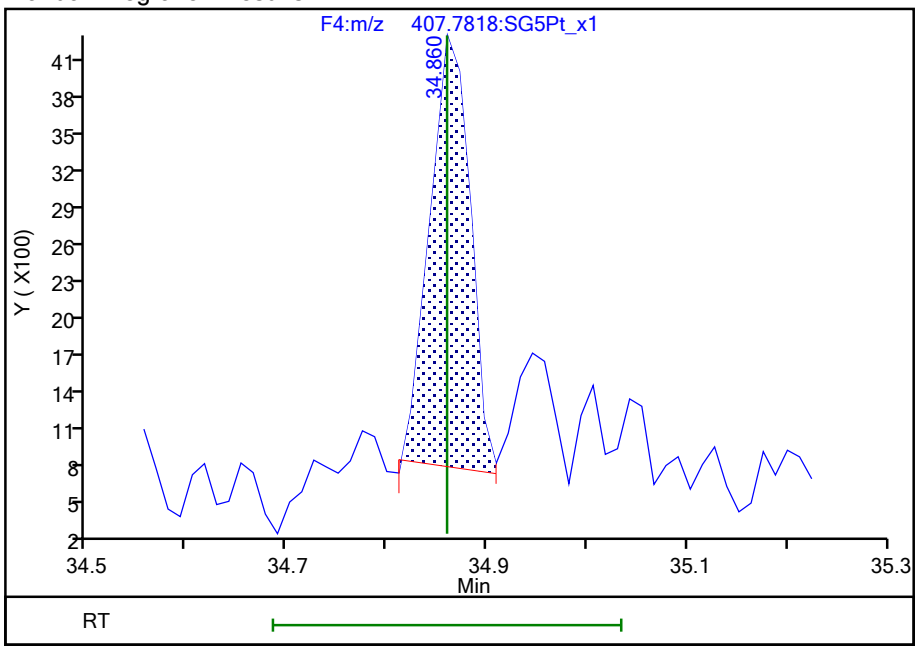

Reviewer: dadunj, 18-Aug-2021 11:11:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 2

Processing Integration Results

RT: 34.86
Area: 13740
Amount: 0.074646
Amount Units: pg/ul

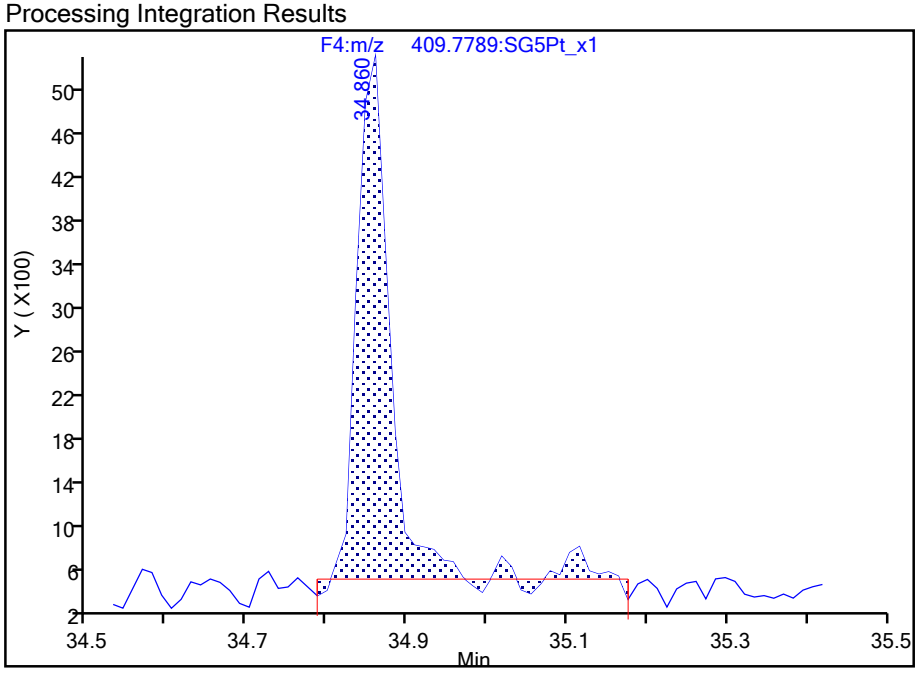

Manual Integration Results

RT: 34.86
Area: 12480
Amount: 0.063508
Amount Units: pg/ul

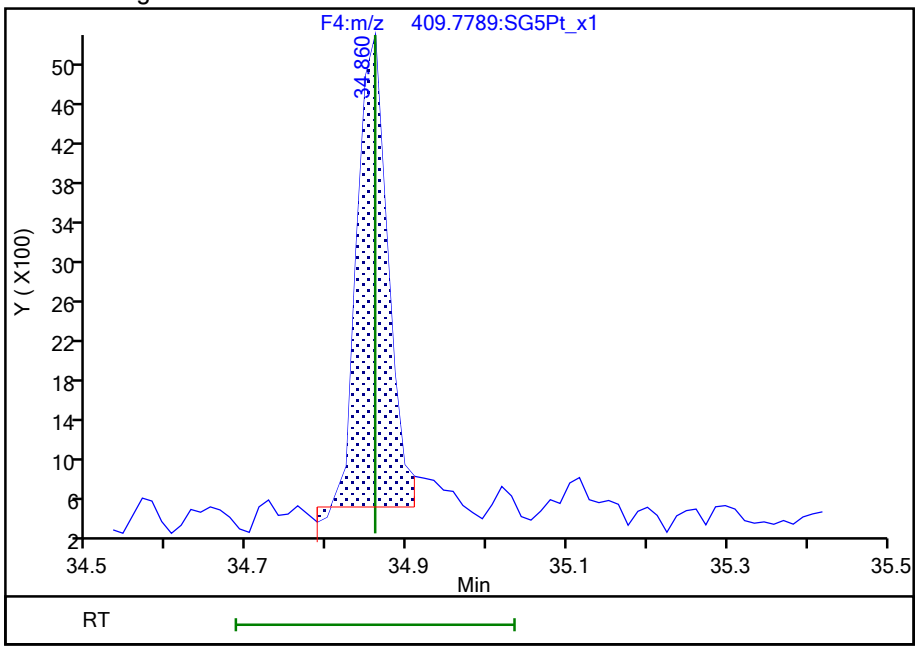

Reviewer: dadunj, 18-Aug-2021 11:11:04

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7818, RT: (33.75- 34.89)

Signal: 1

Processing Integration Results

RT = 34.070 Area = 13784

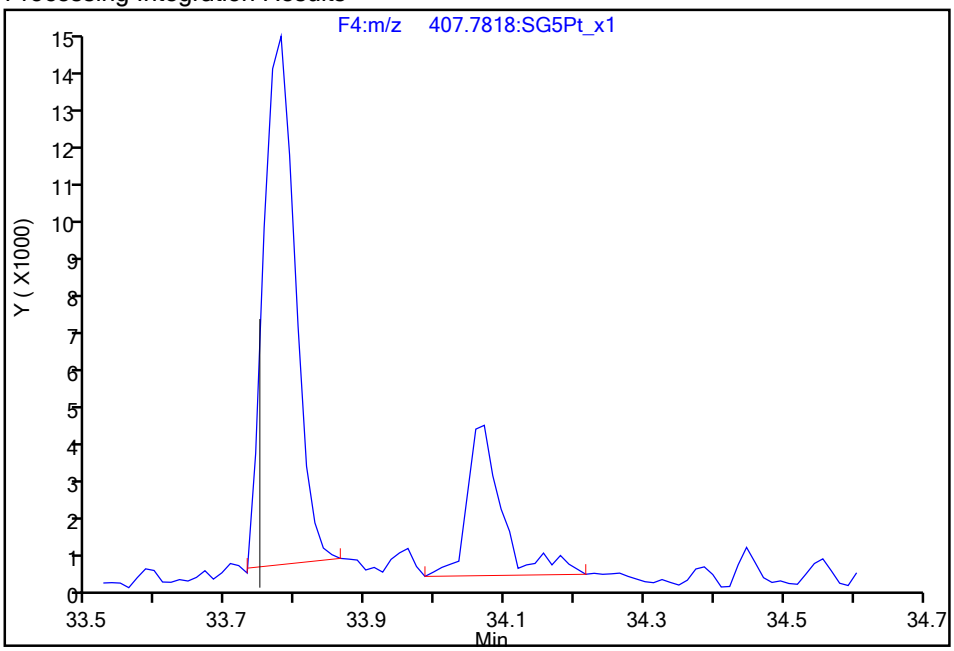

Manual Integration Results

RT = 34.070 Area = 12038 M

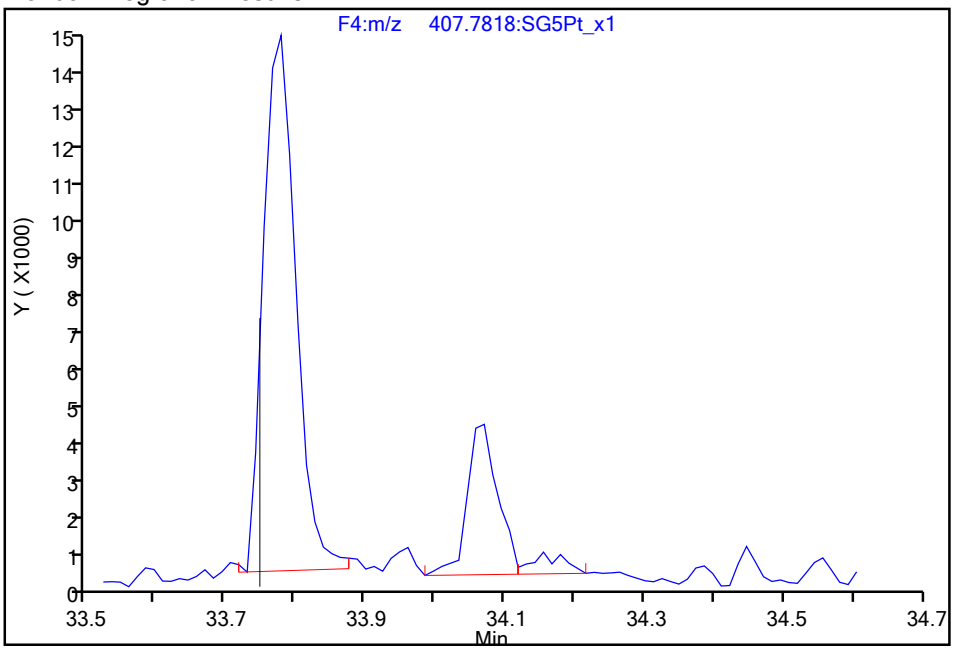

Reviewer: dadunj, 18-Aug-2021 11:11:07

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 21357
Amount: 0.184011
Amount Units: pg/ul

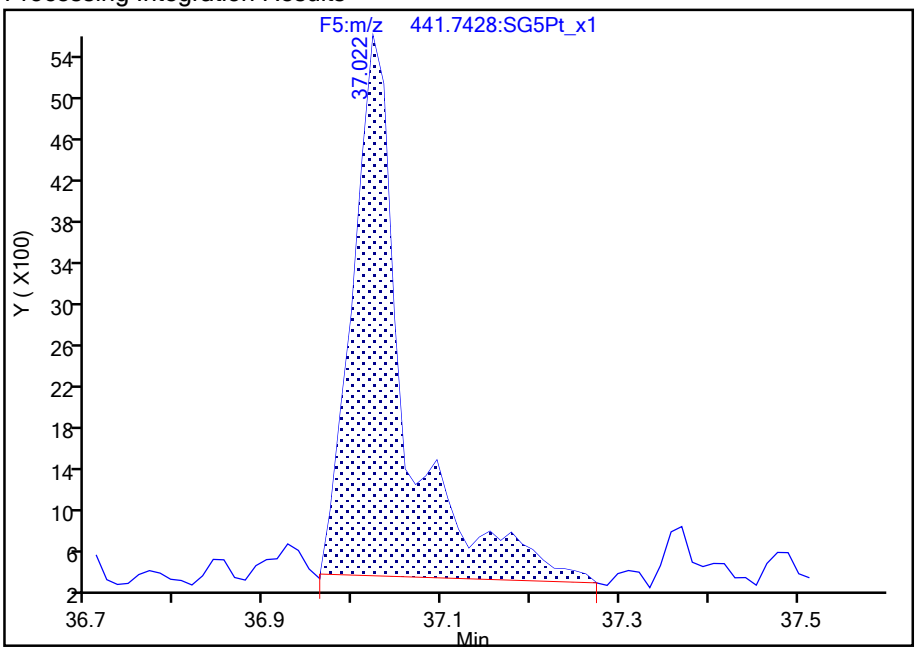

Manual Integration Results

RT: 37.02
Area: 16269
Amount: 0.147969
Amount Units: pg/ul

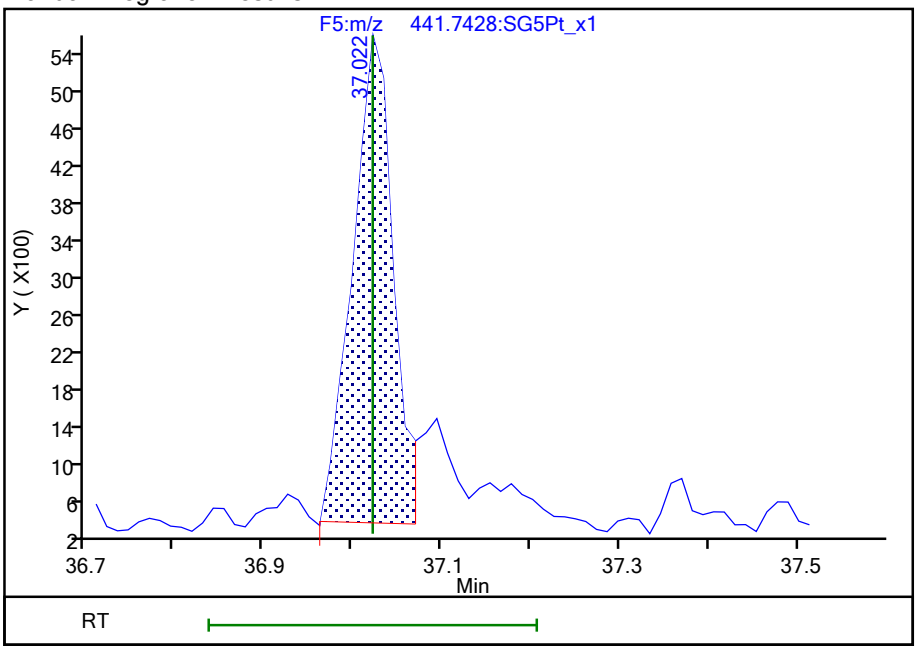

Reviewer: dadunj, 18-Aug-2021 11:11:23

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d				
Injection Date:	15-Aug-2021 08:51:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-6-A	Lab Sample ID:	320-76769-6		
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Operator ID:	DB	ALS Bottle#:	52	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.01
Area: 24138
Amount: 0.184011
Amount Units: pg/ul

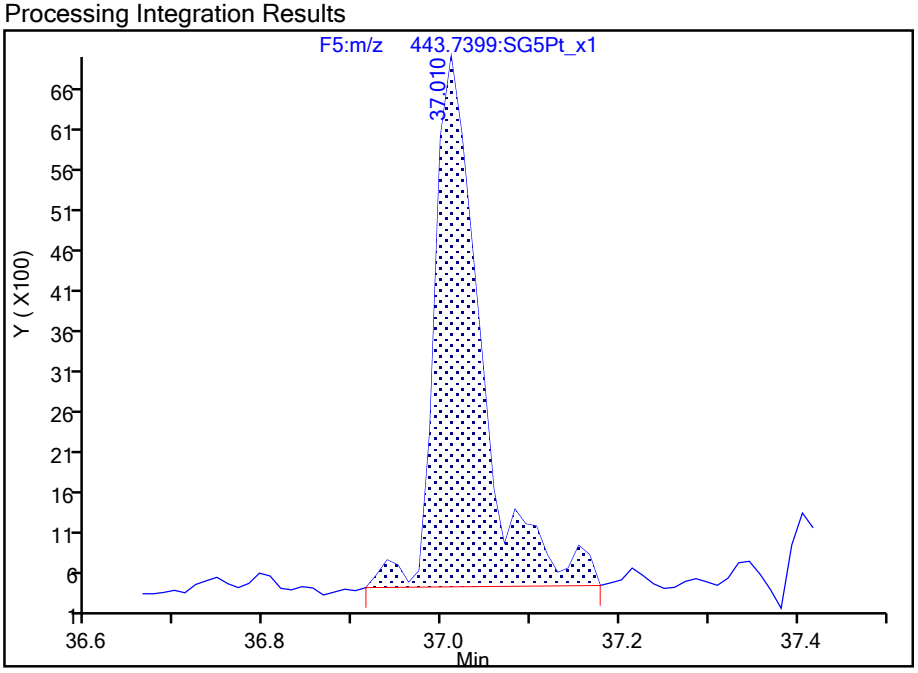

Manual Integration Results

RT: 37.01
Area: 20315
Amount: 0.147969
Amount Units: pg/ul

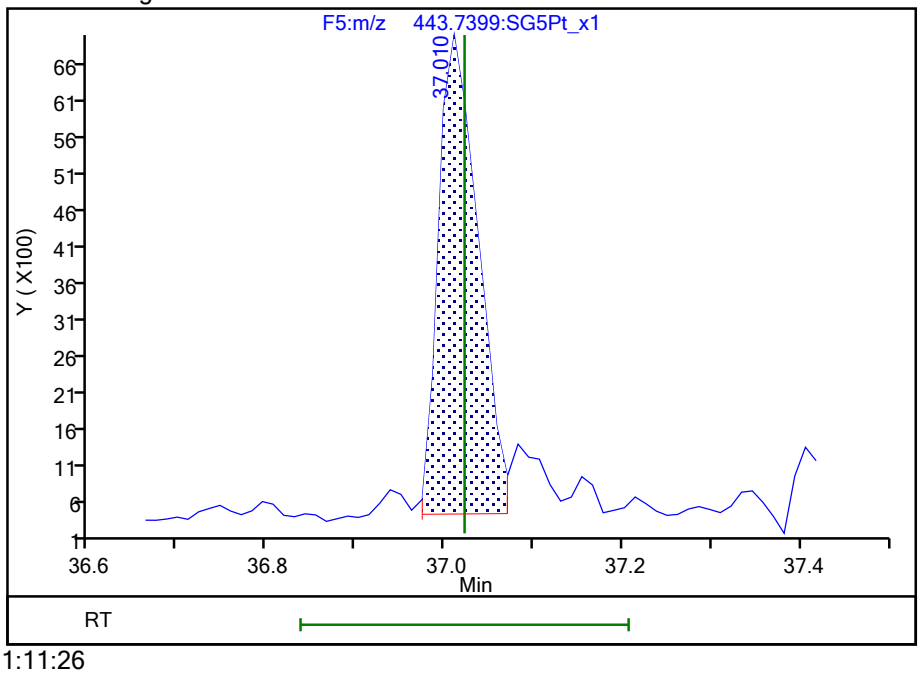

Reviewer: dadunj, 18-Aug-2021 11:11:26
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

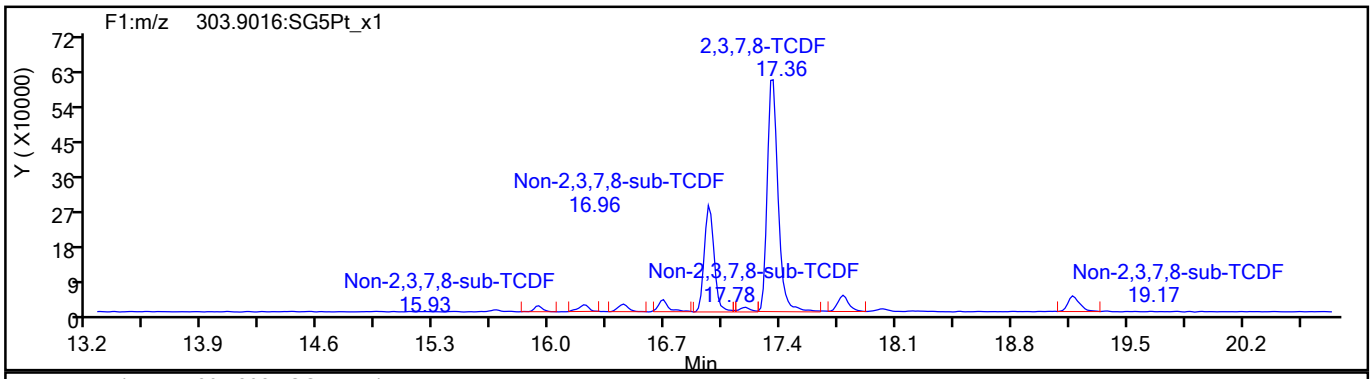

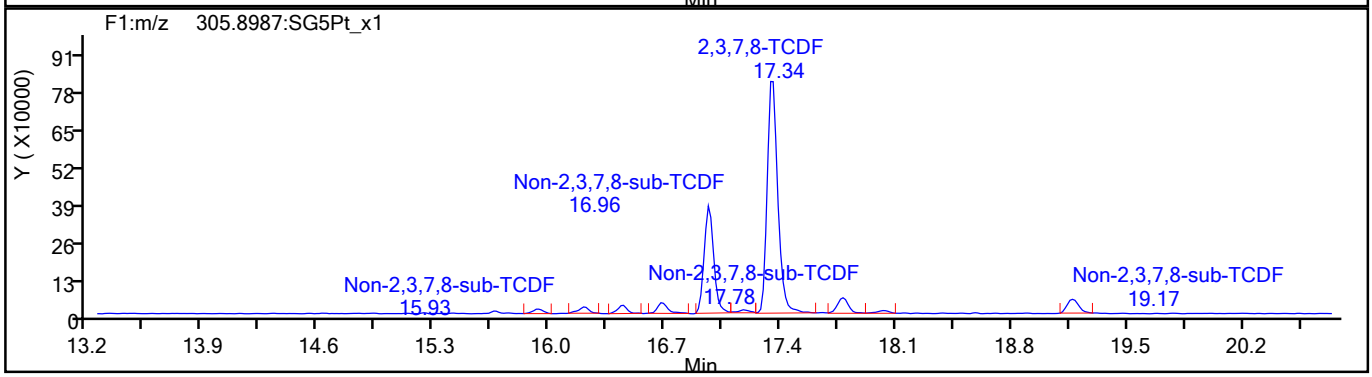

TCDF Standards

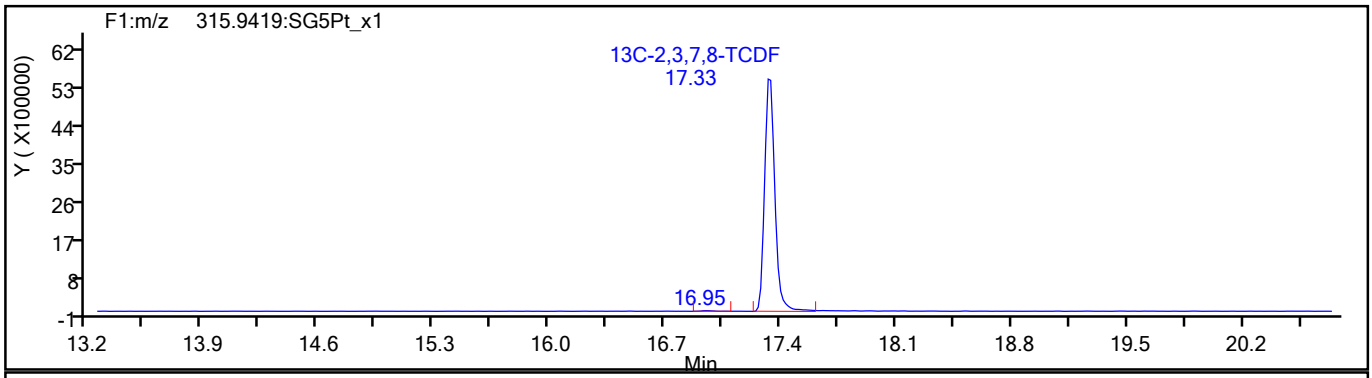

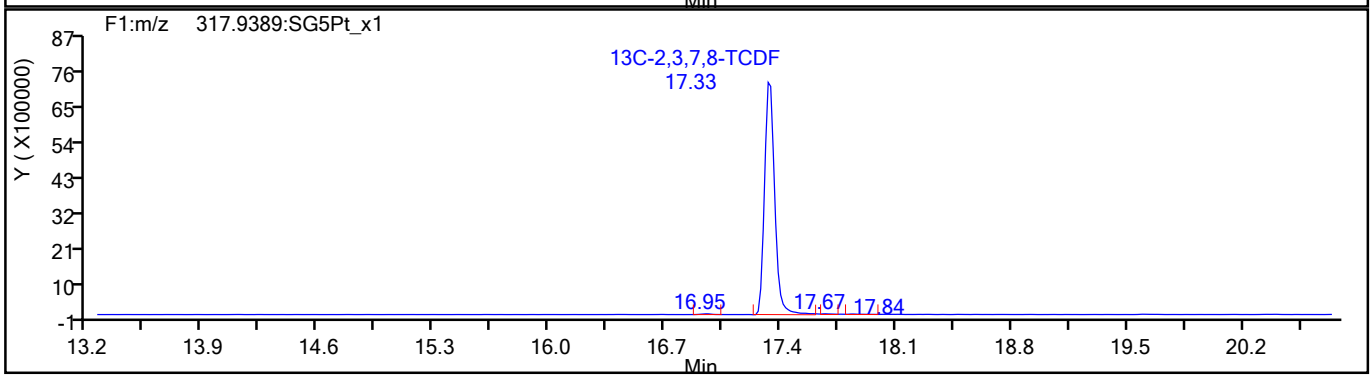

774825

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

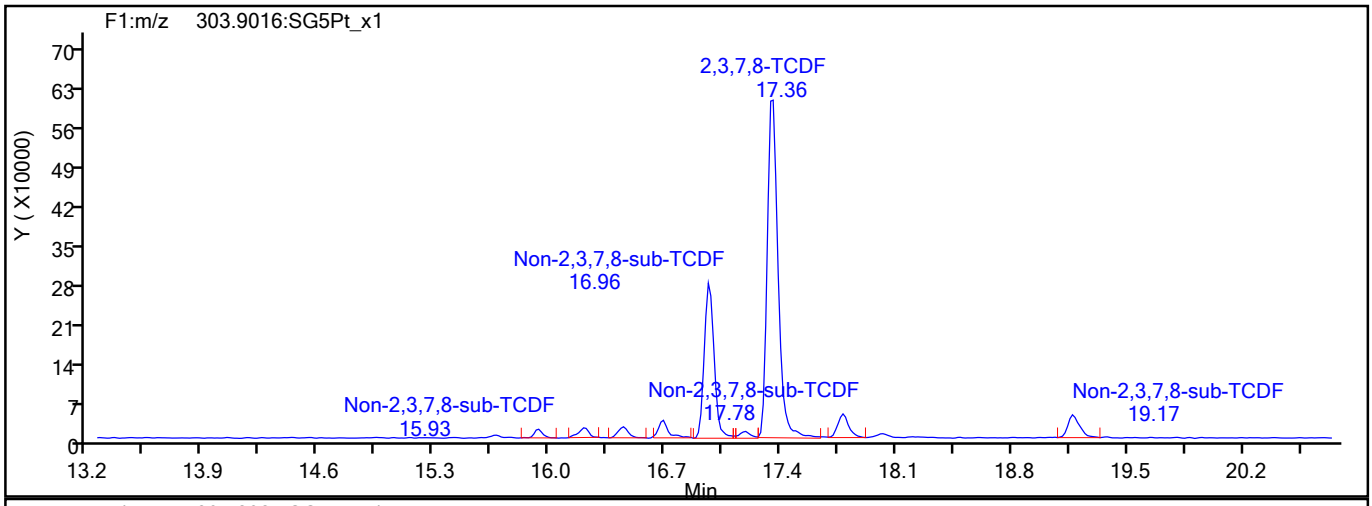

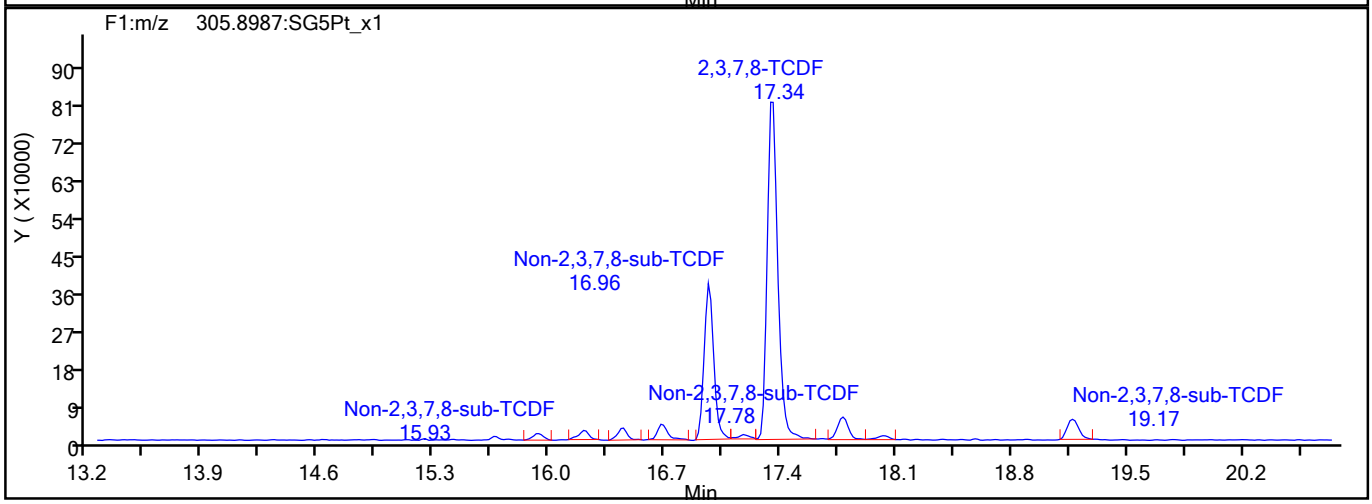

TCDF Interference Mass

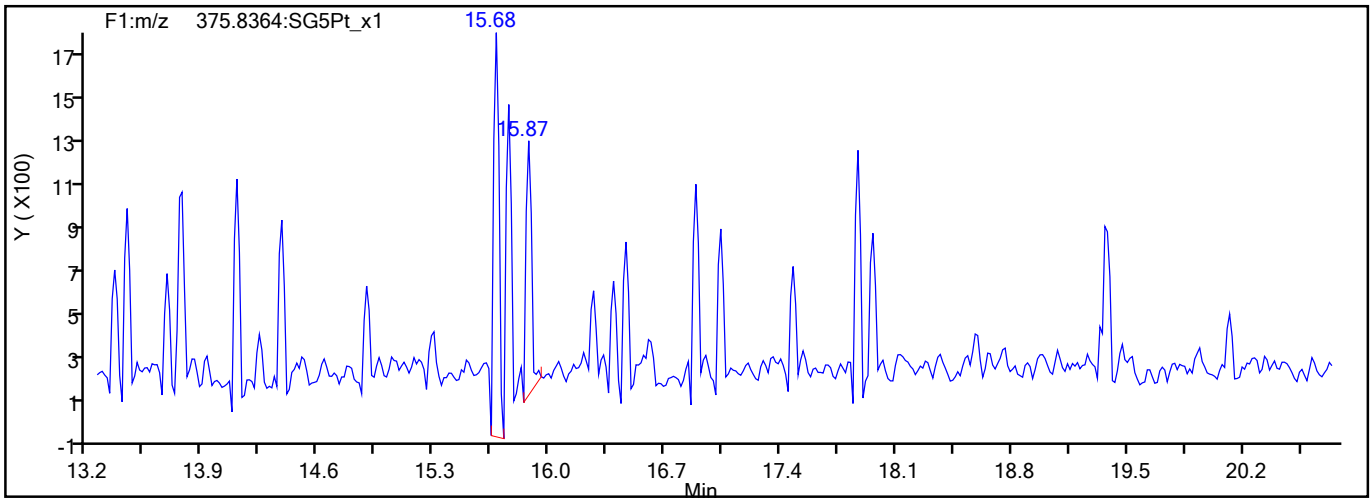

774826

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

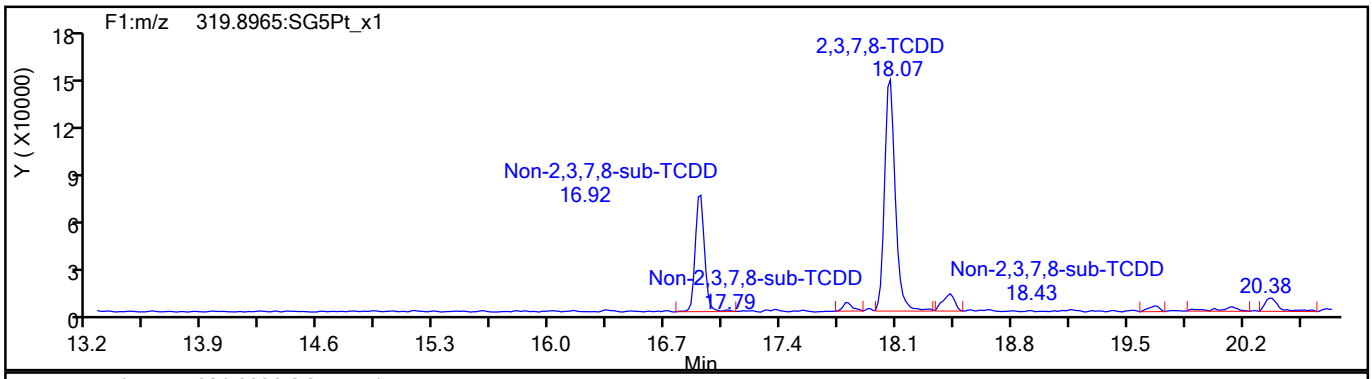

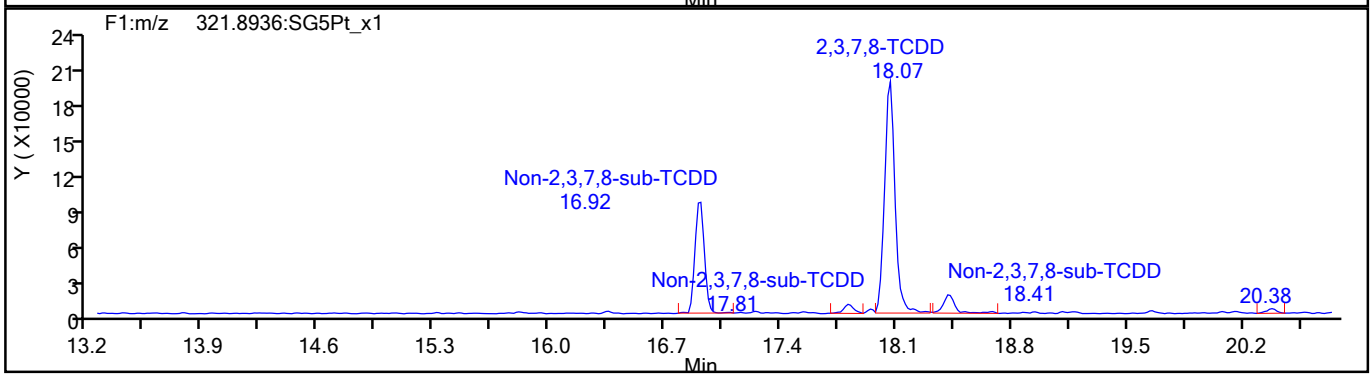

TCDD Standards

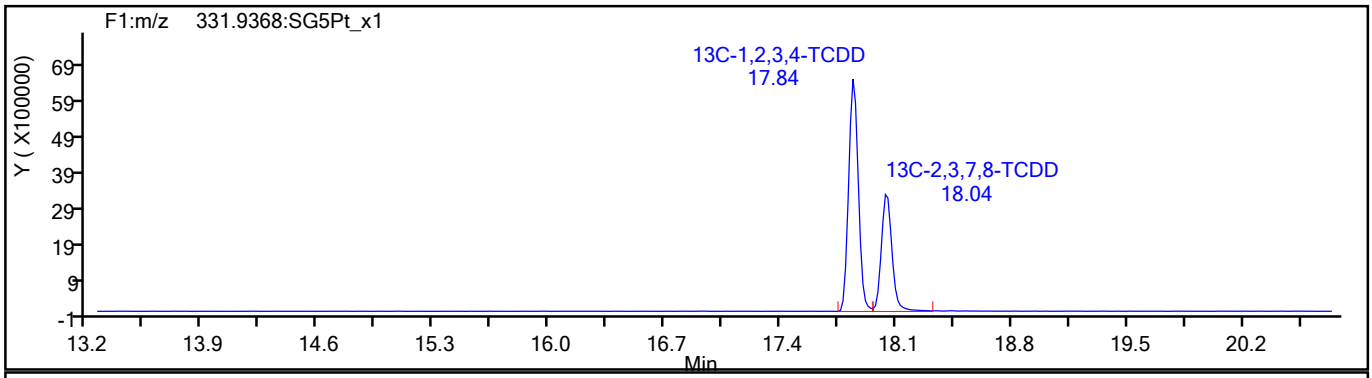

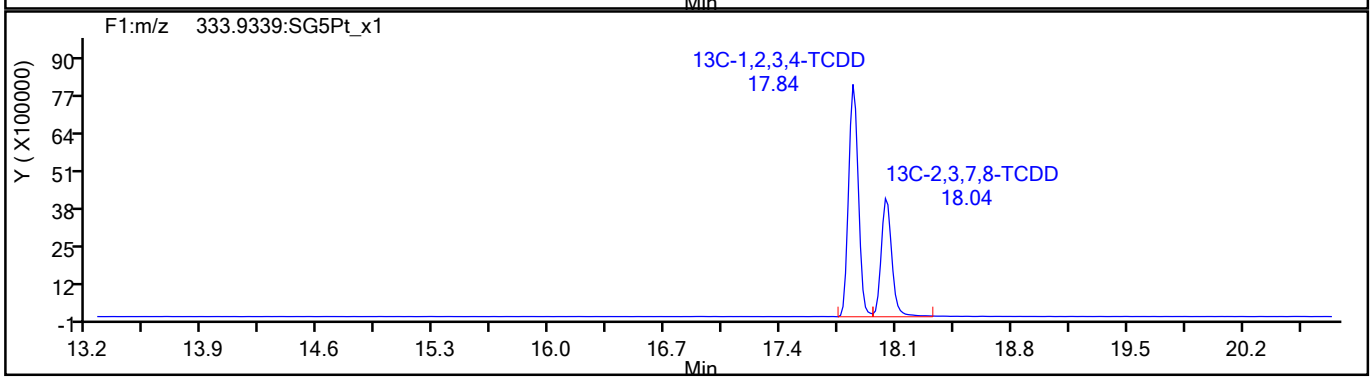

774827

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

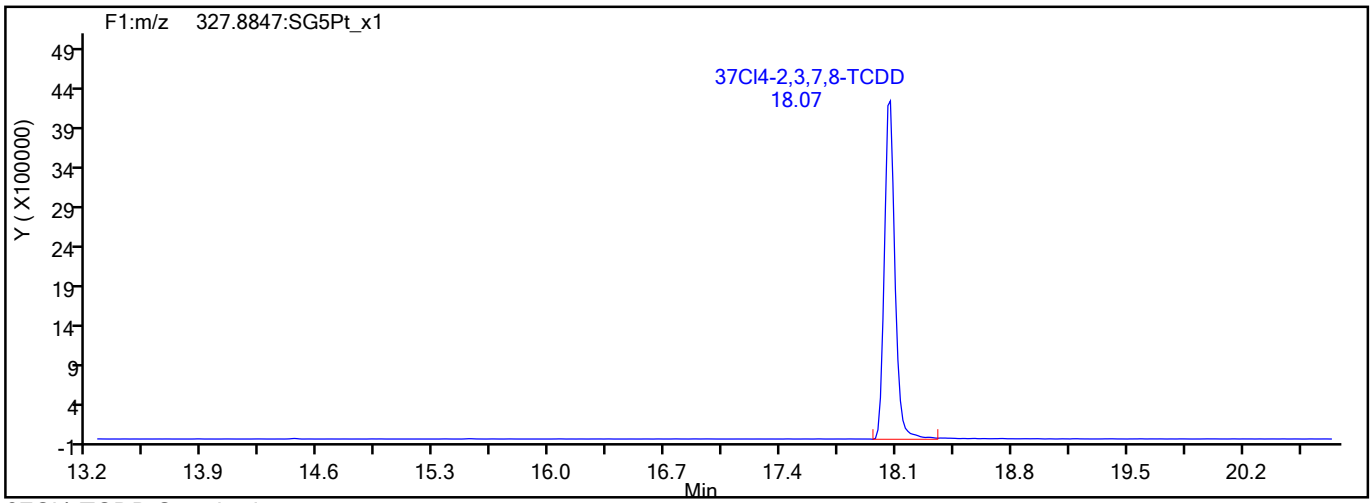

37Cl4-TCDD Standards

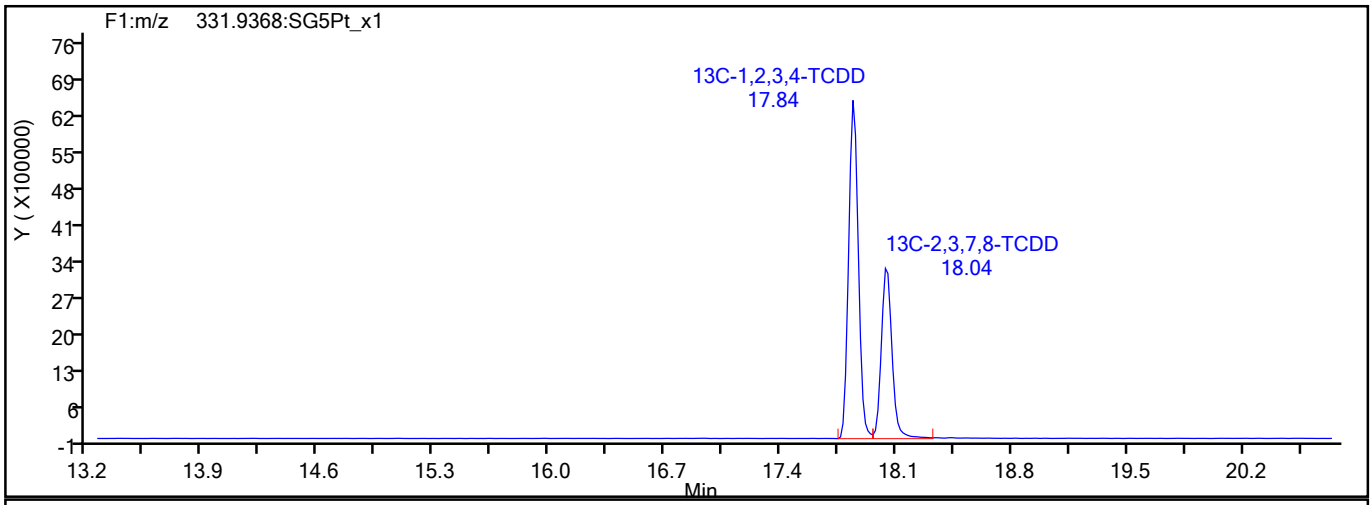

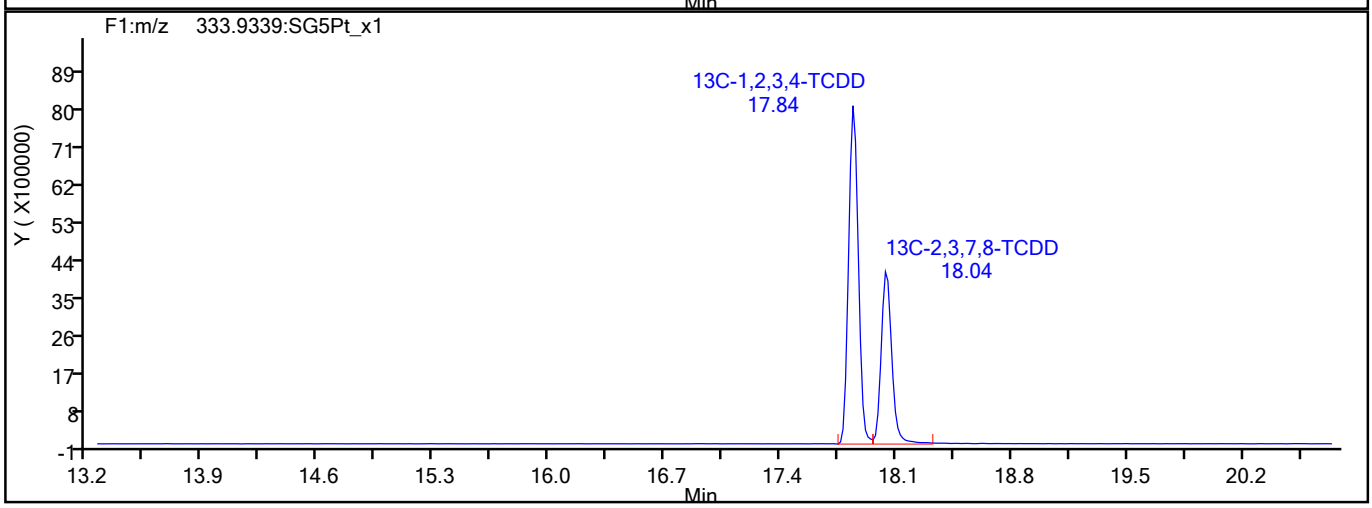

774828

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

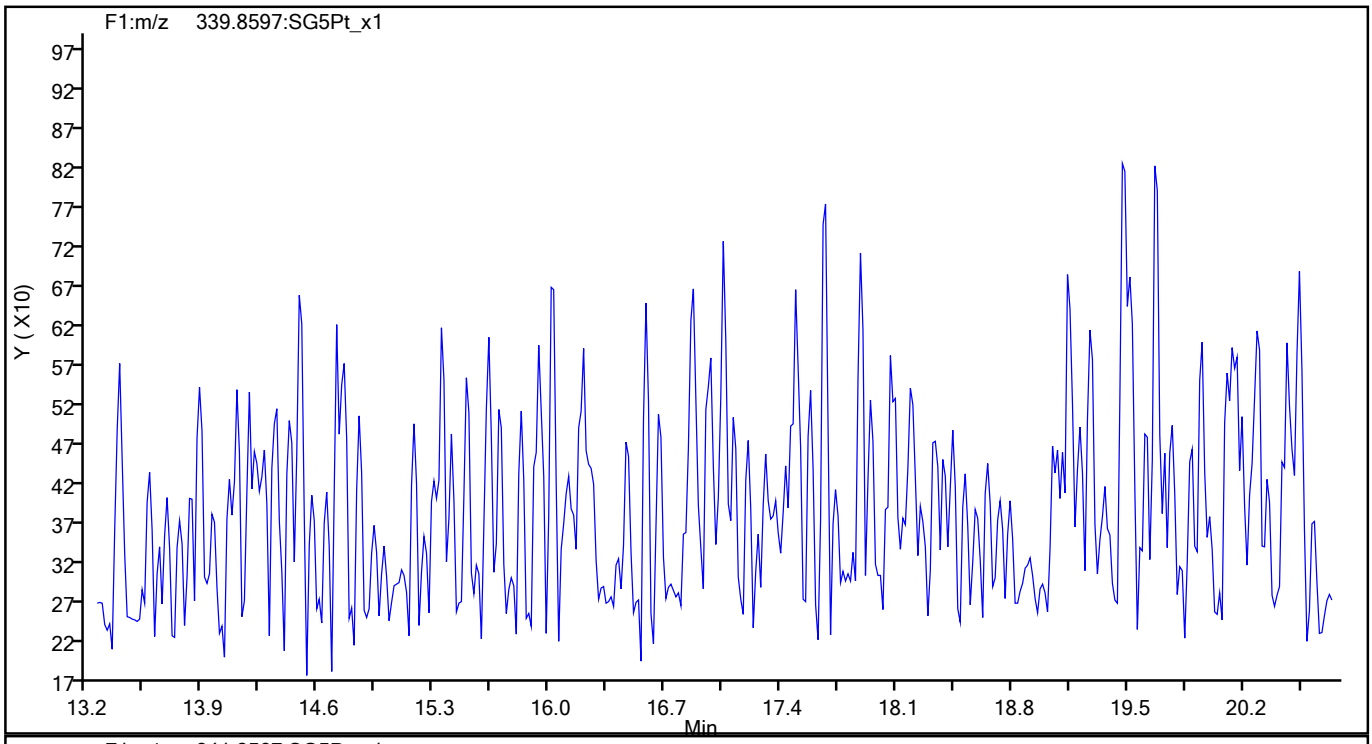

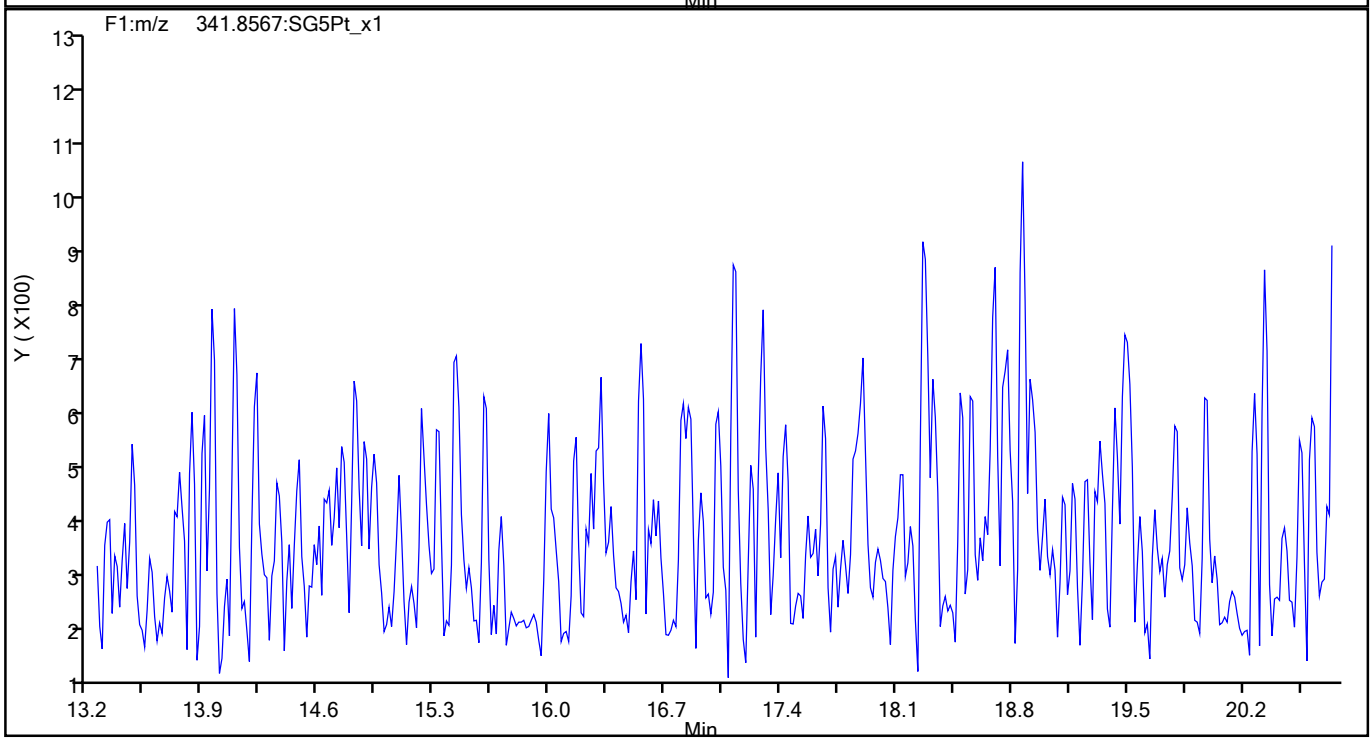

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

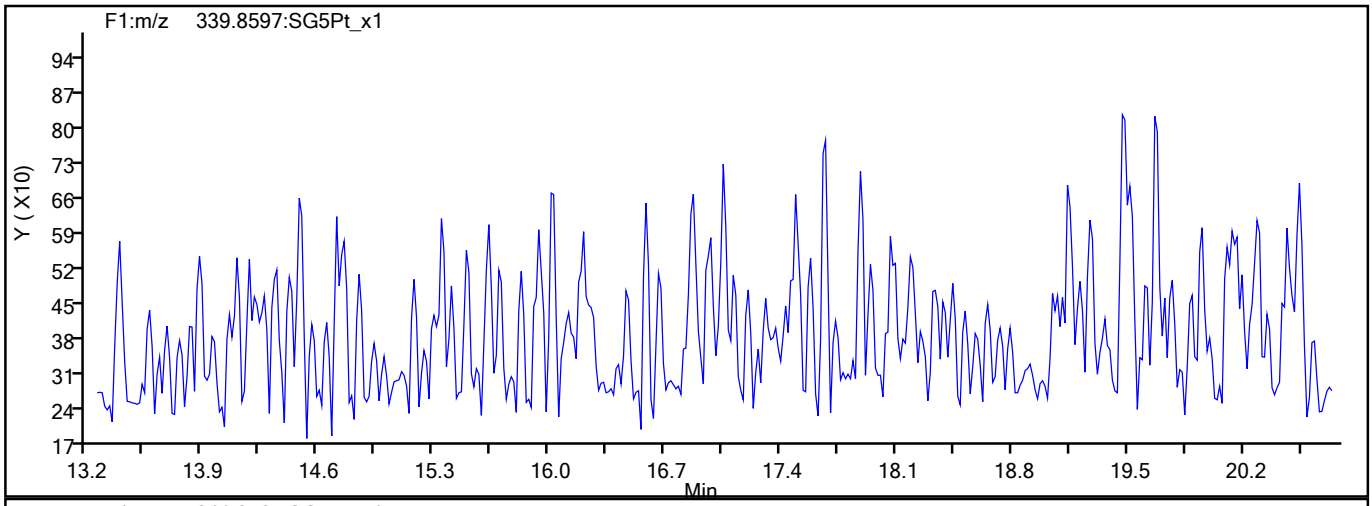

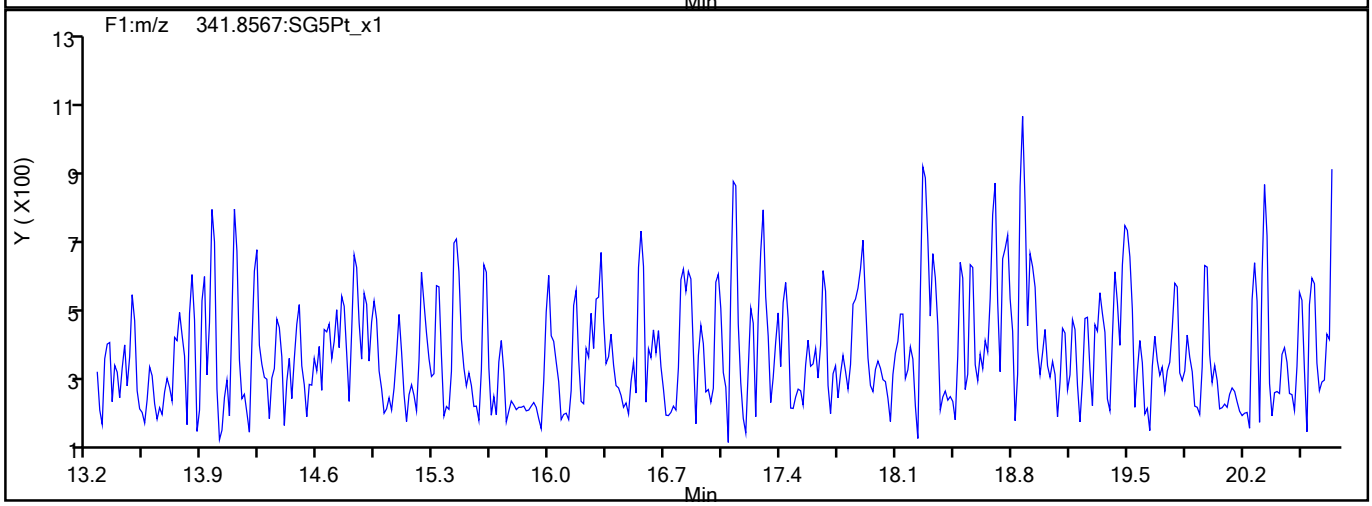

F1 PeCDFs Interference Mass

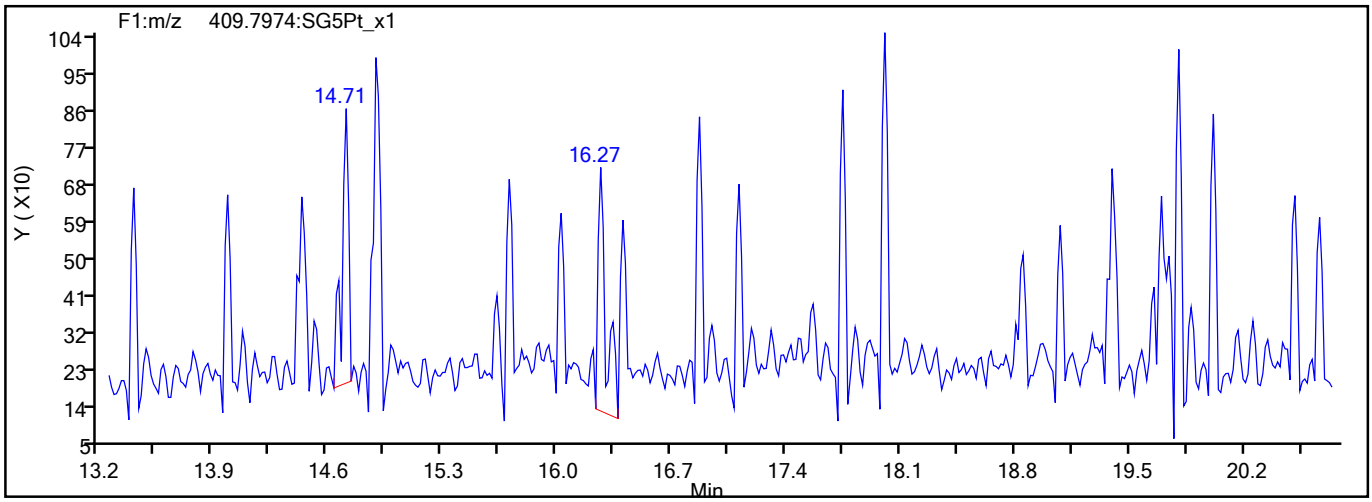

774830

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

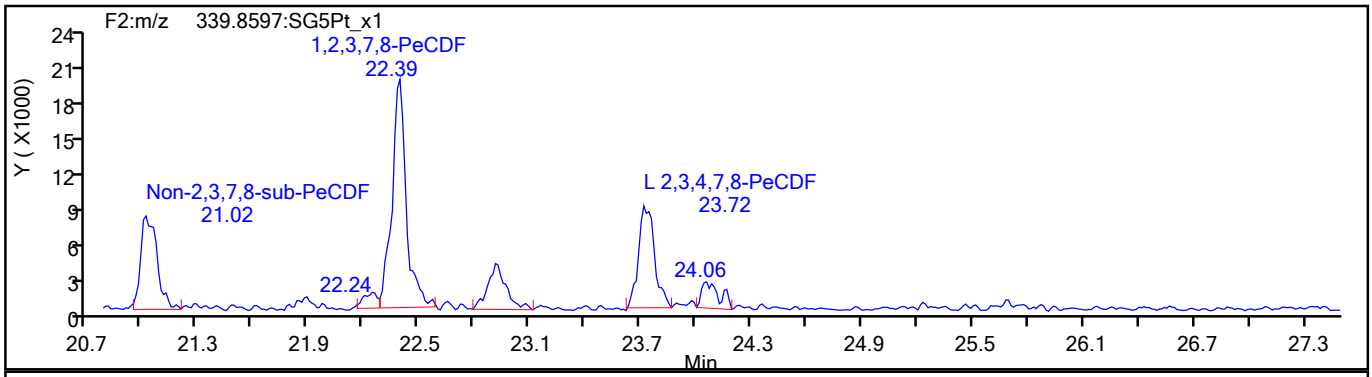

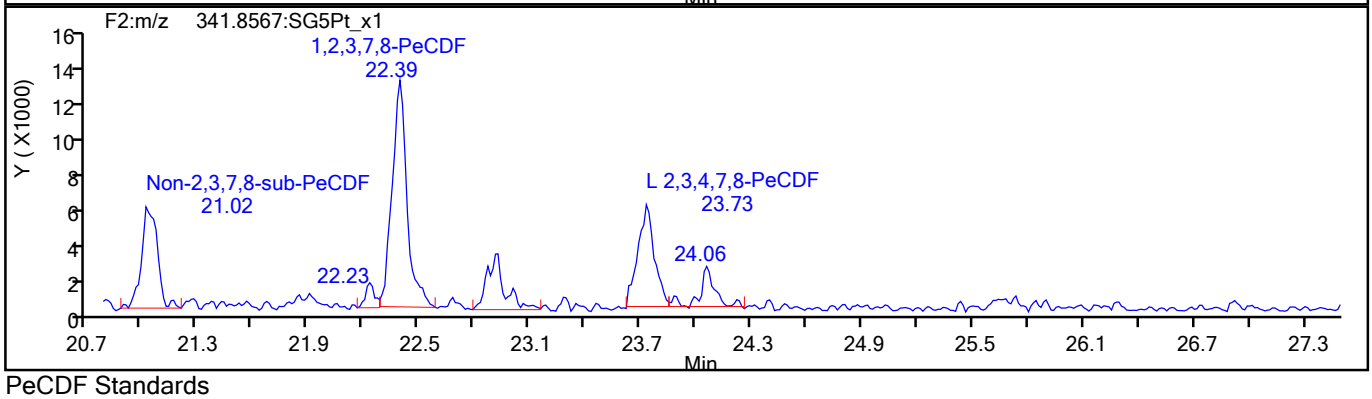

PeCDF Standards

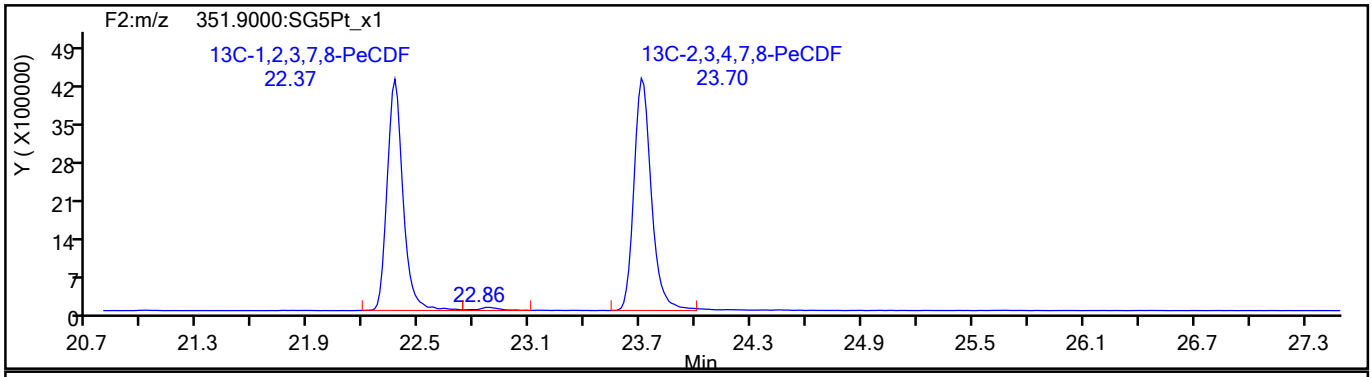

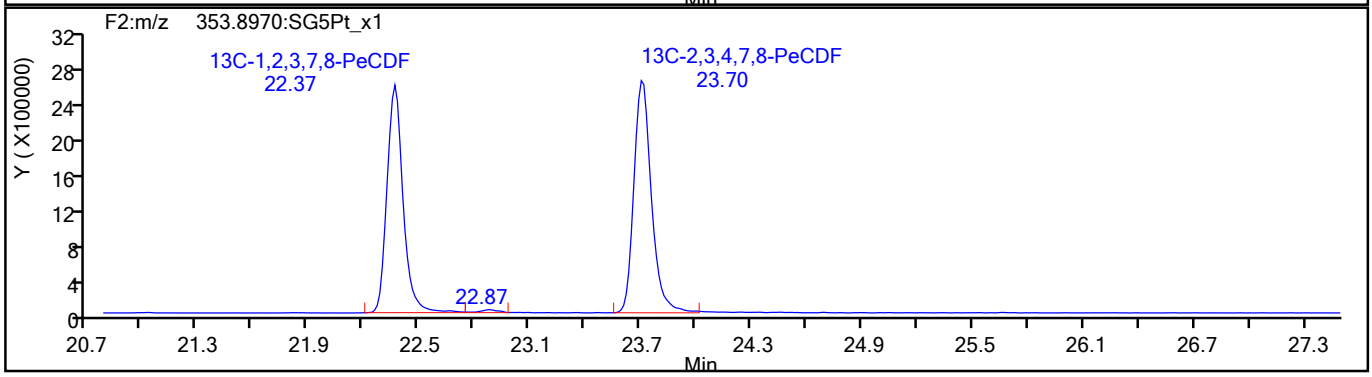

774831

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

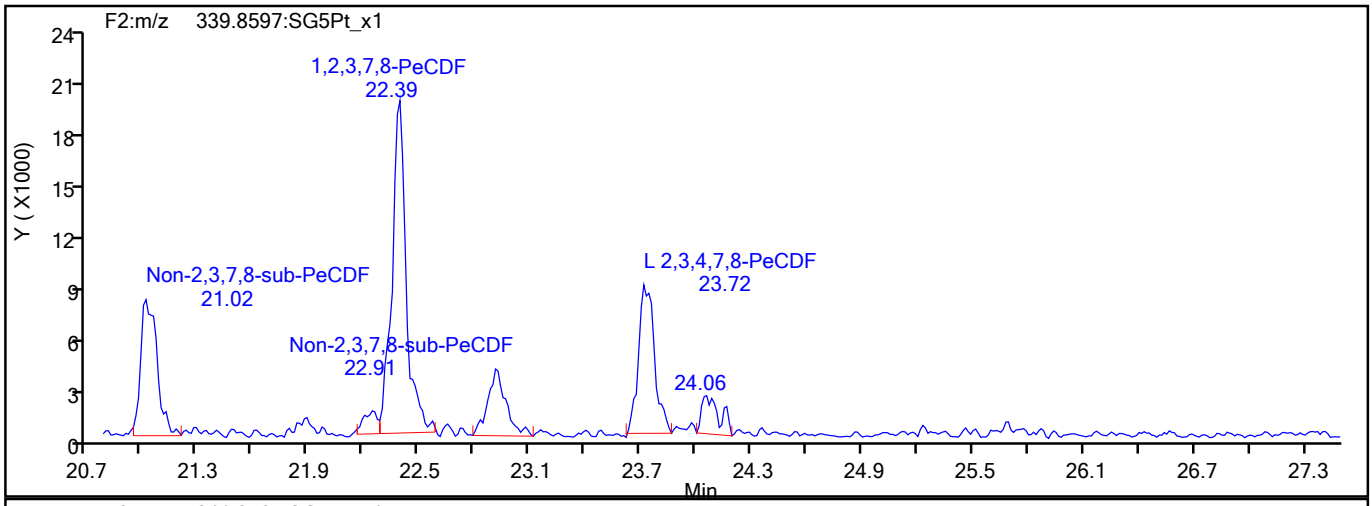

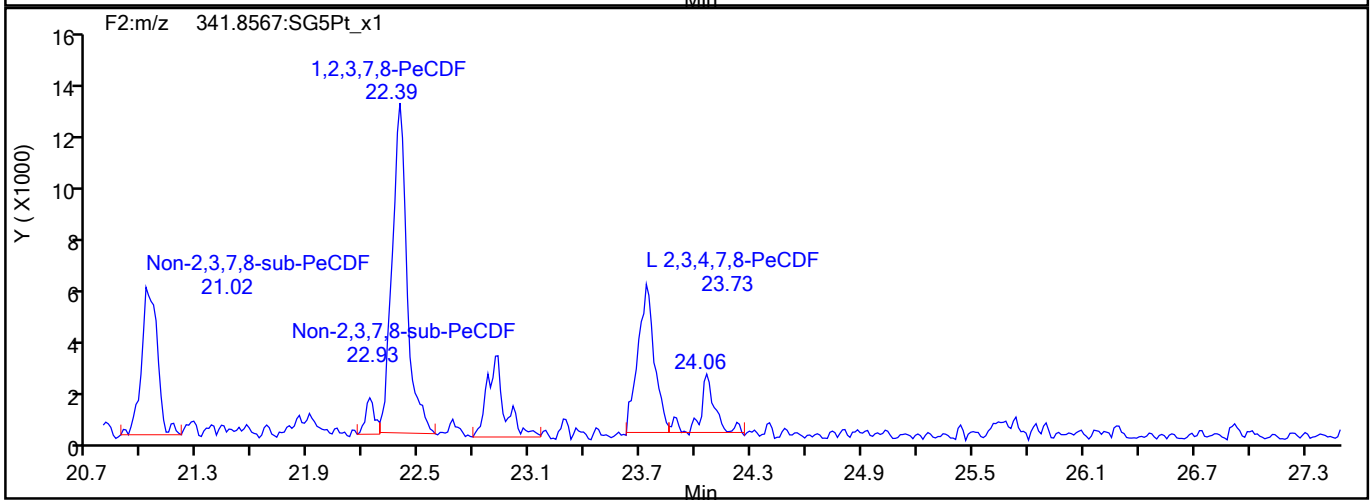

PeCDF Interference Mass

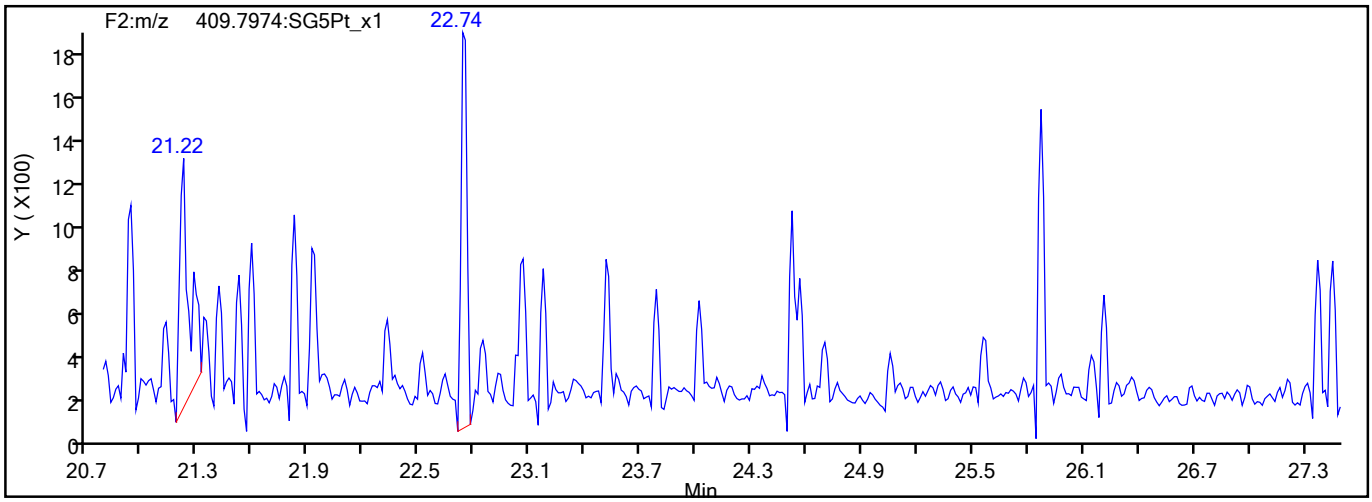

774832

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

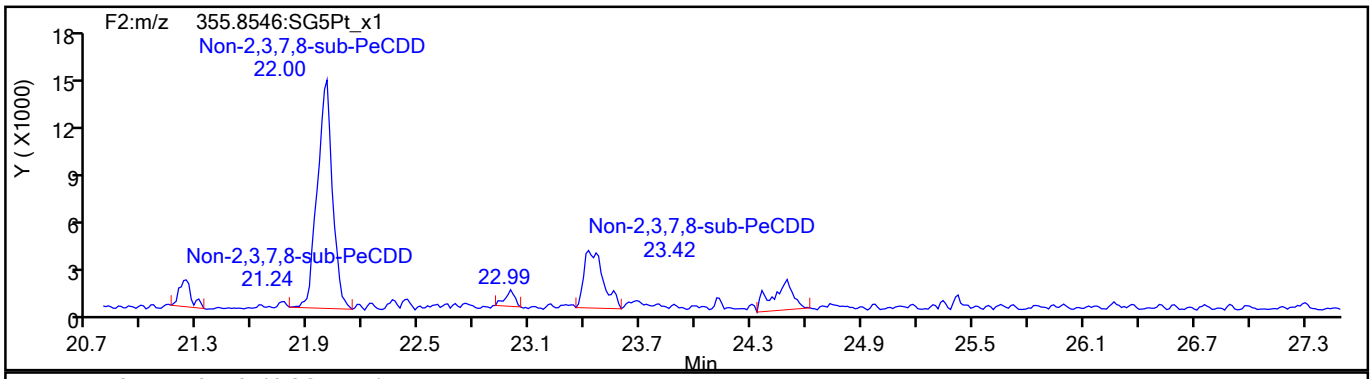

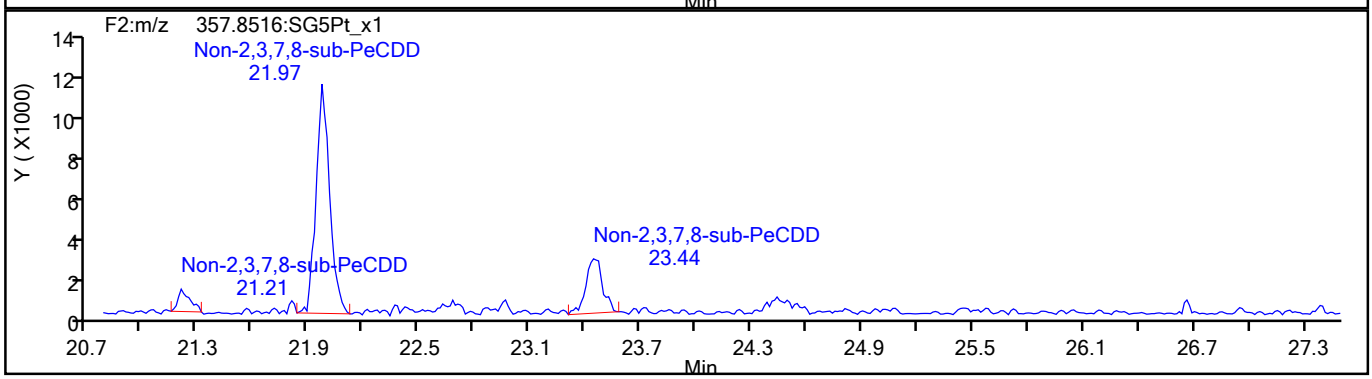

PeCDD Standards

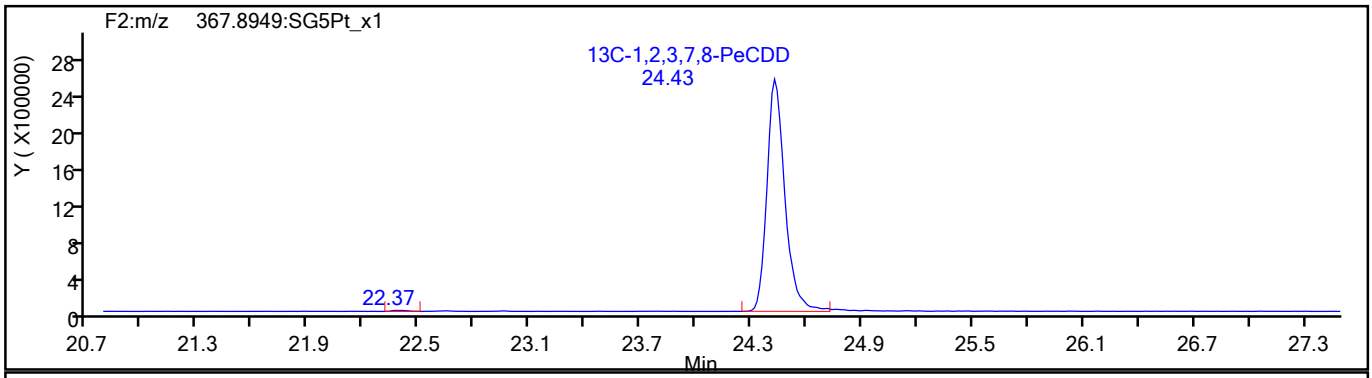

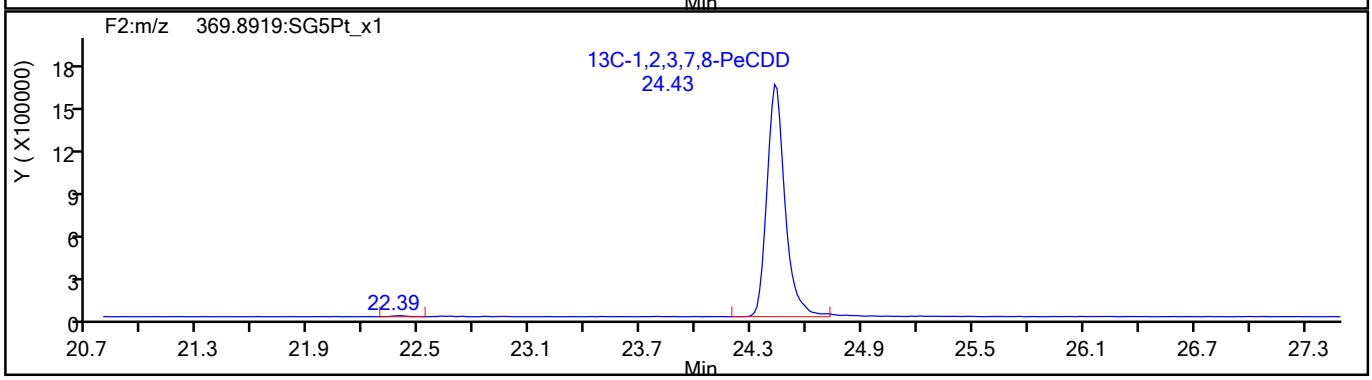

774833

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

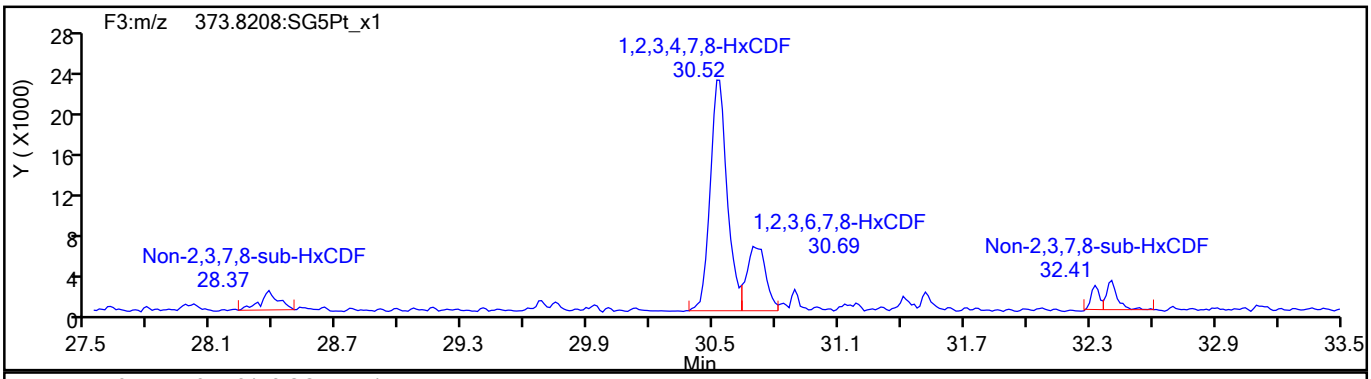

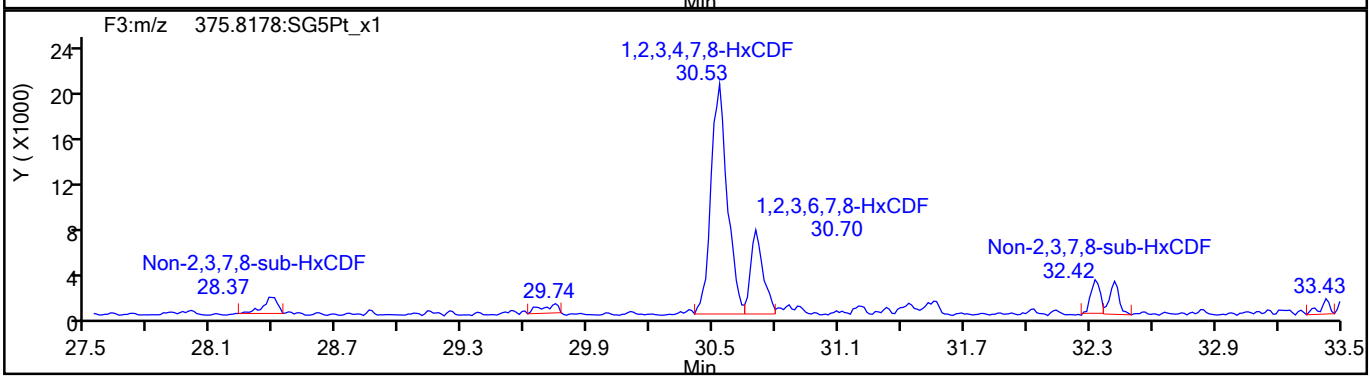

HxCDF Standards

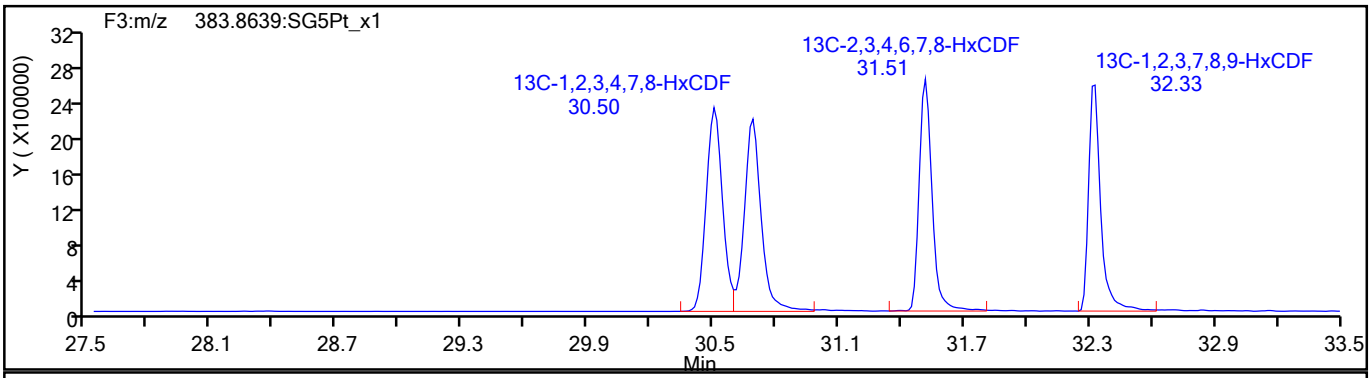

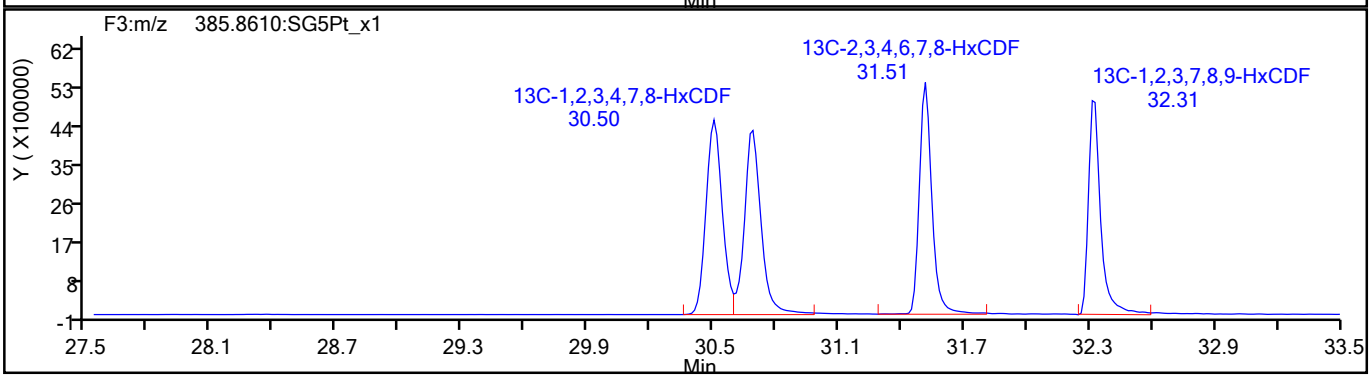

774834

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

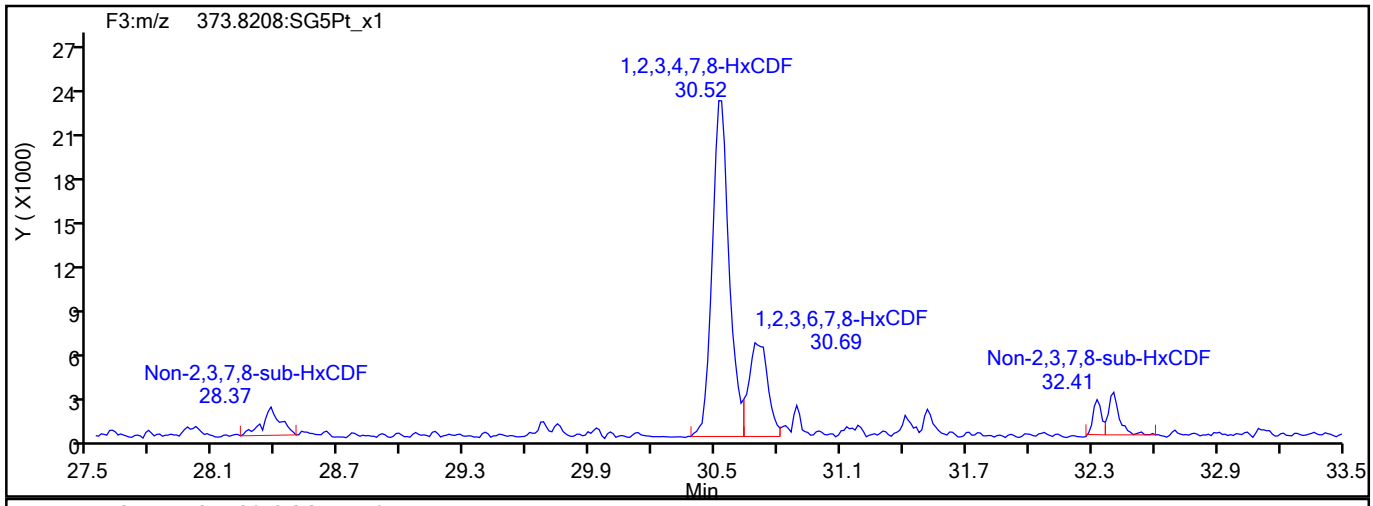

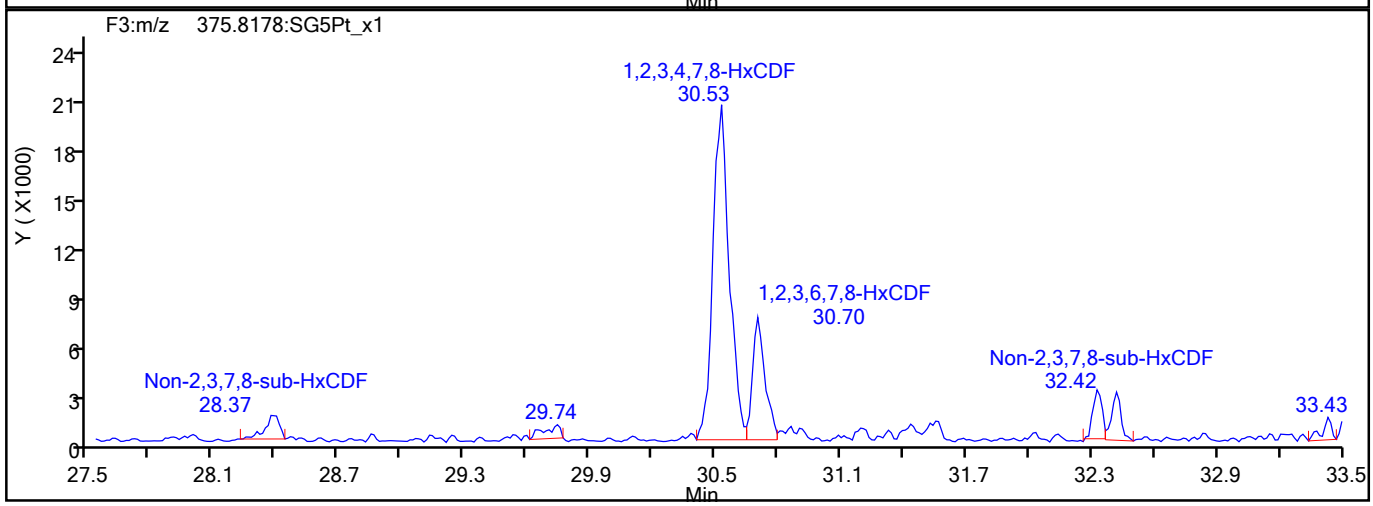

HxCDF Interference Mass

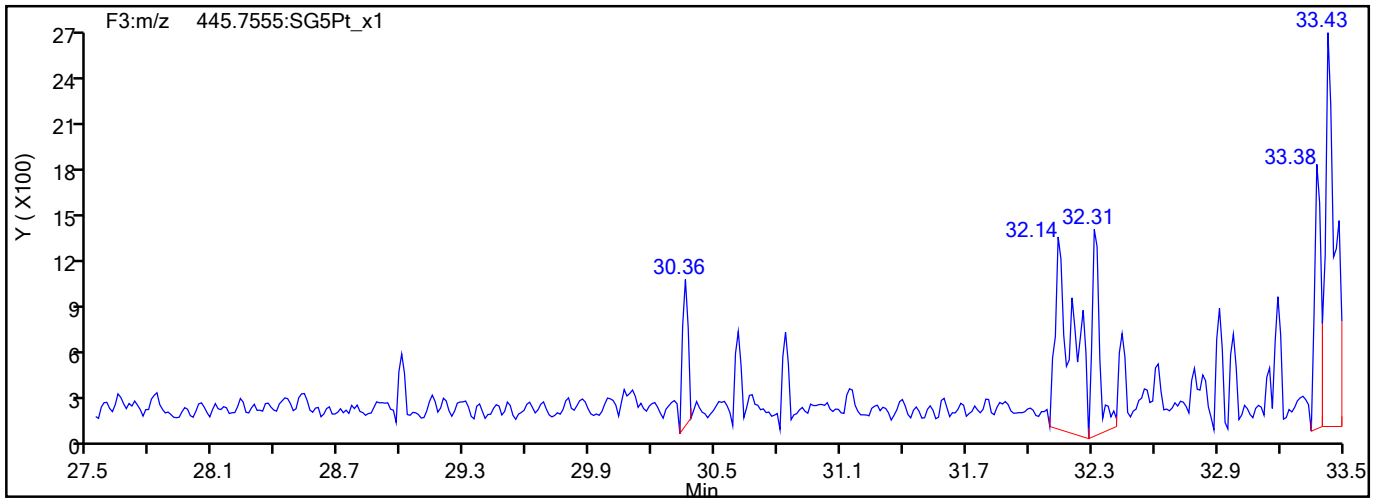

774835

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

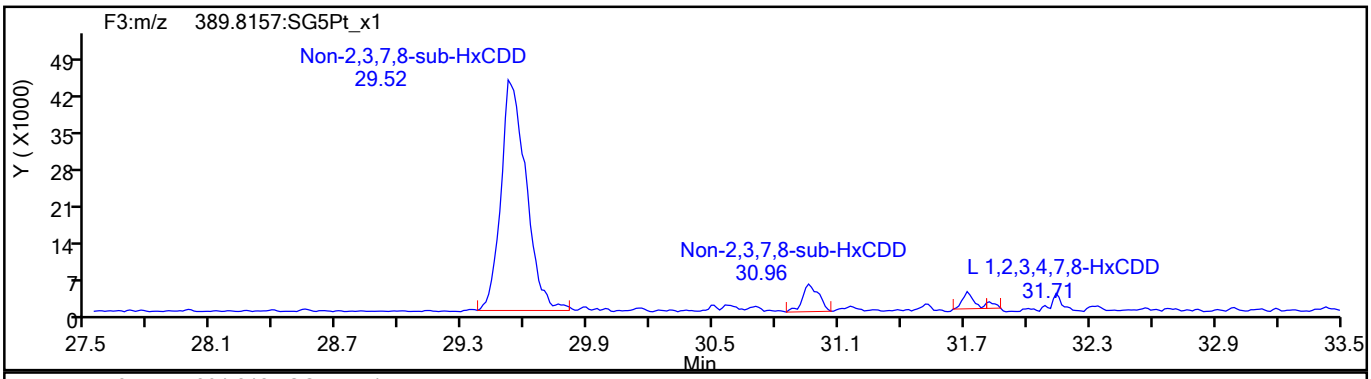

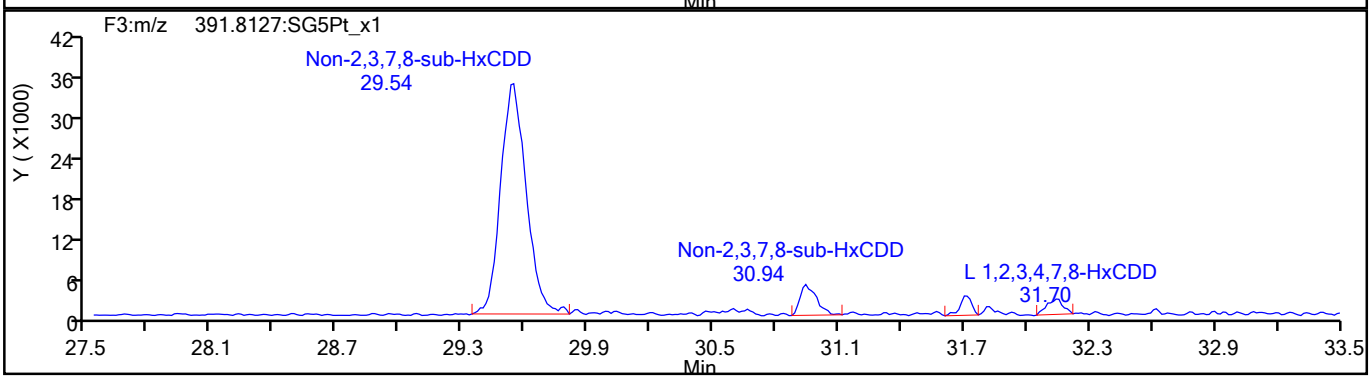

HxCDD Standards

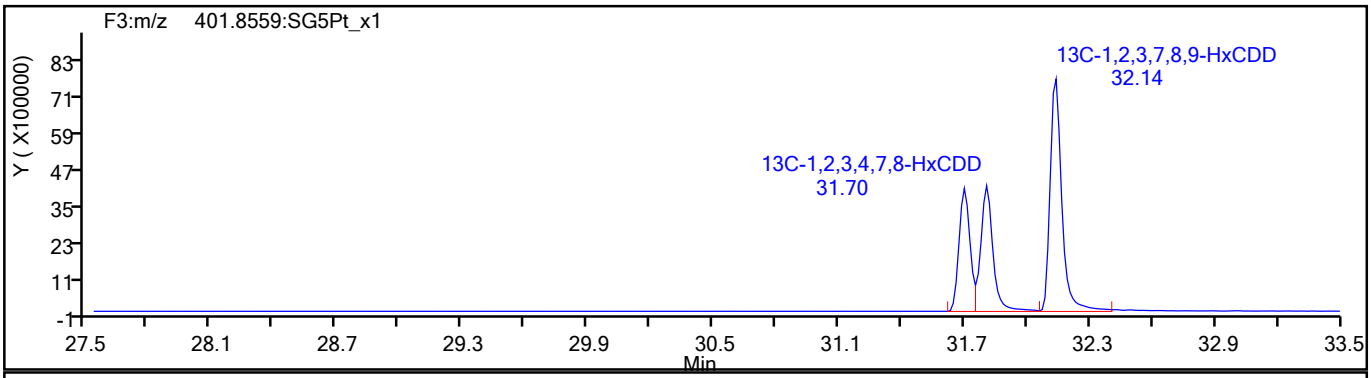

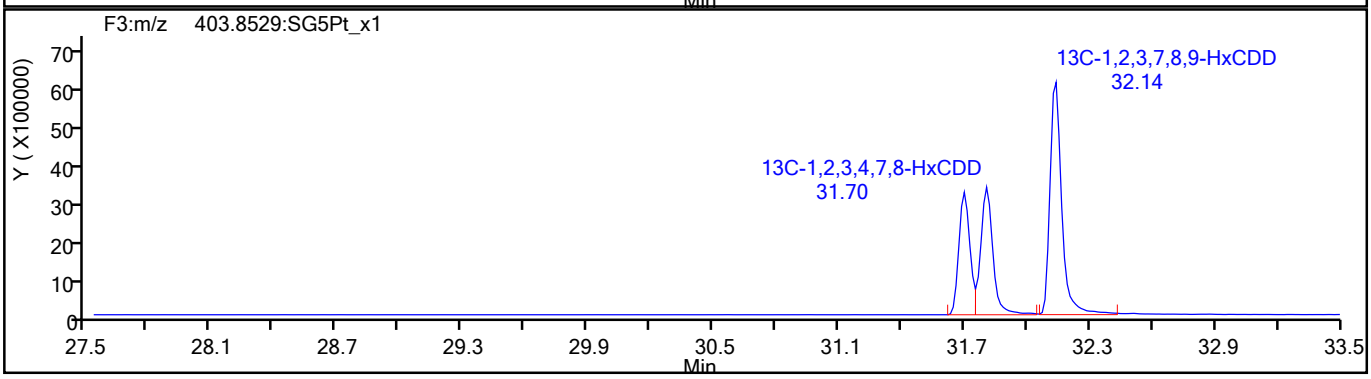

774836

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

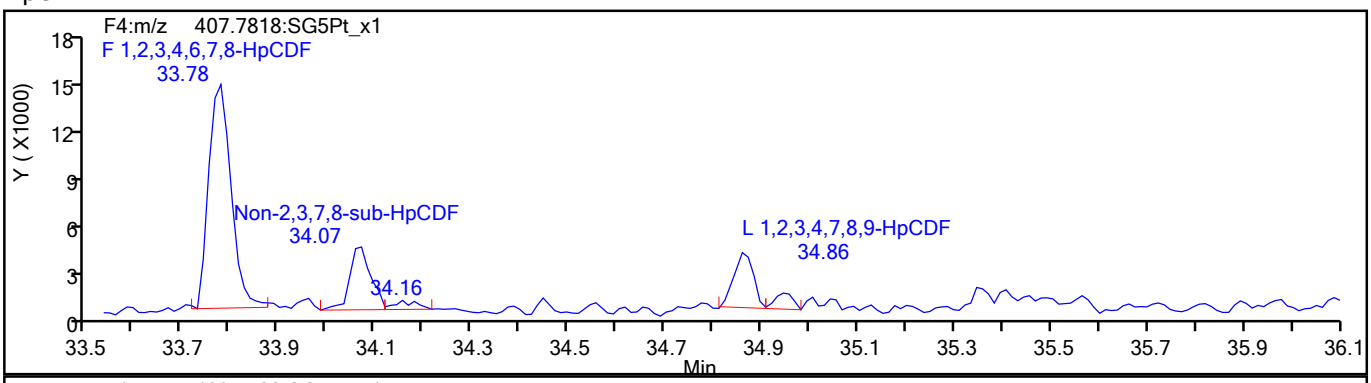

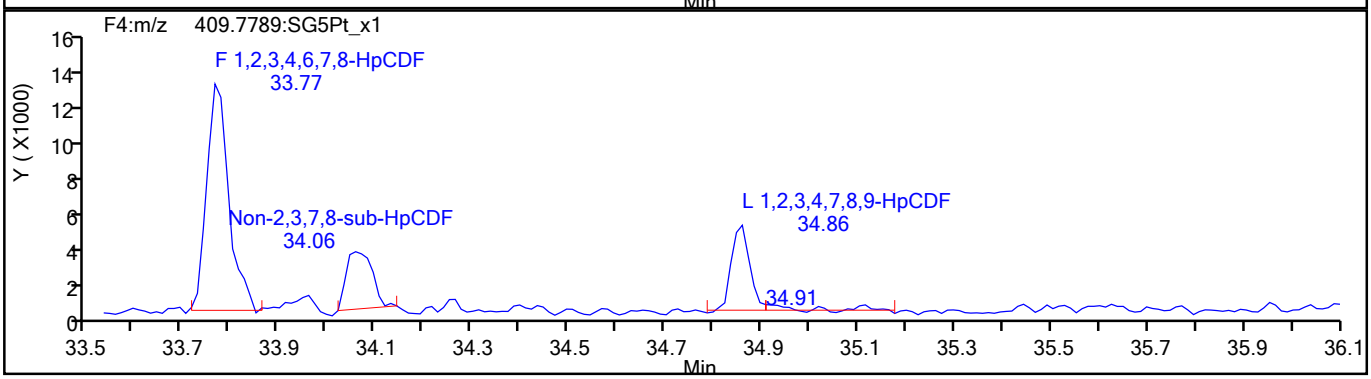

HpCDF Standards

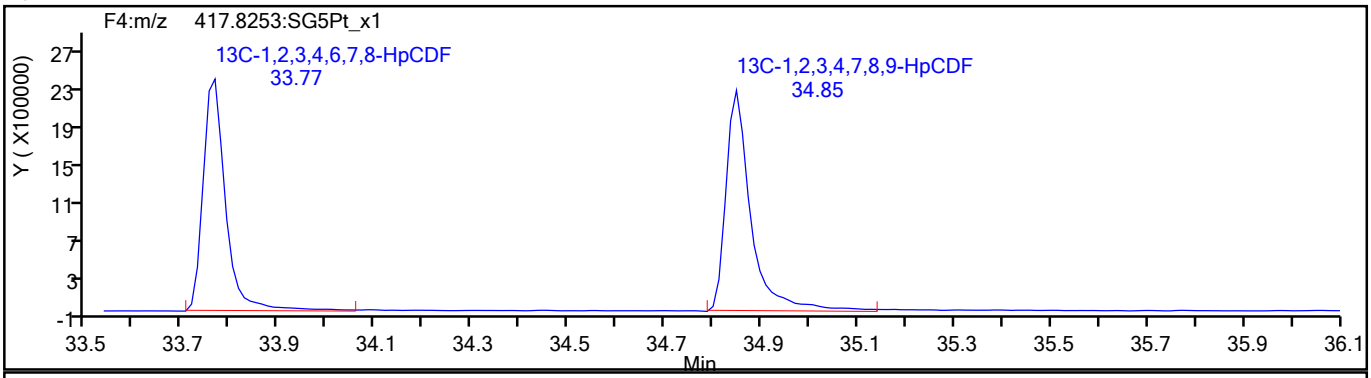

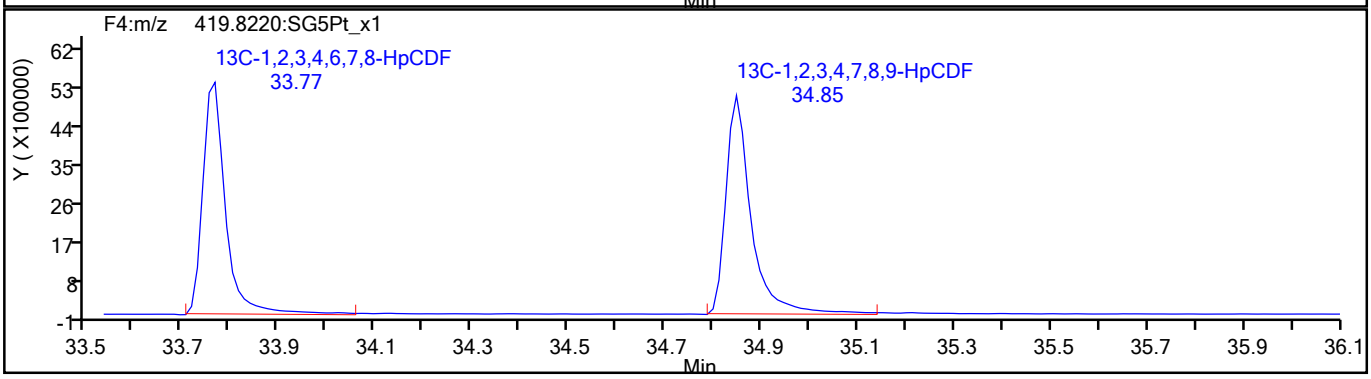

774837

Report Date: 18-Aug-2021 11:11:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

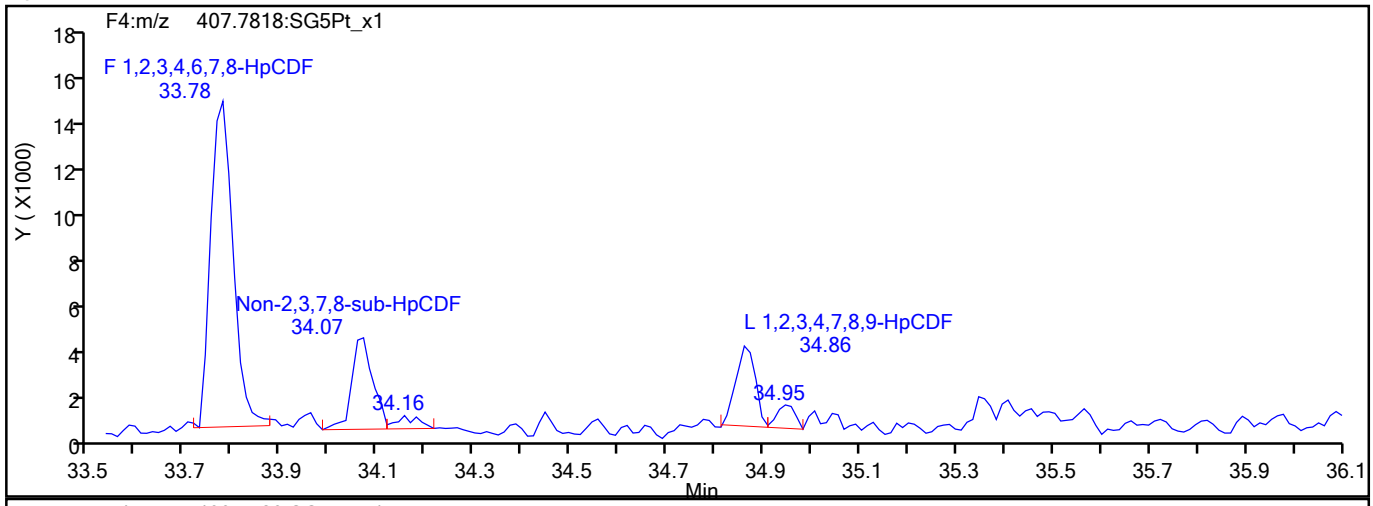

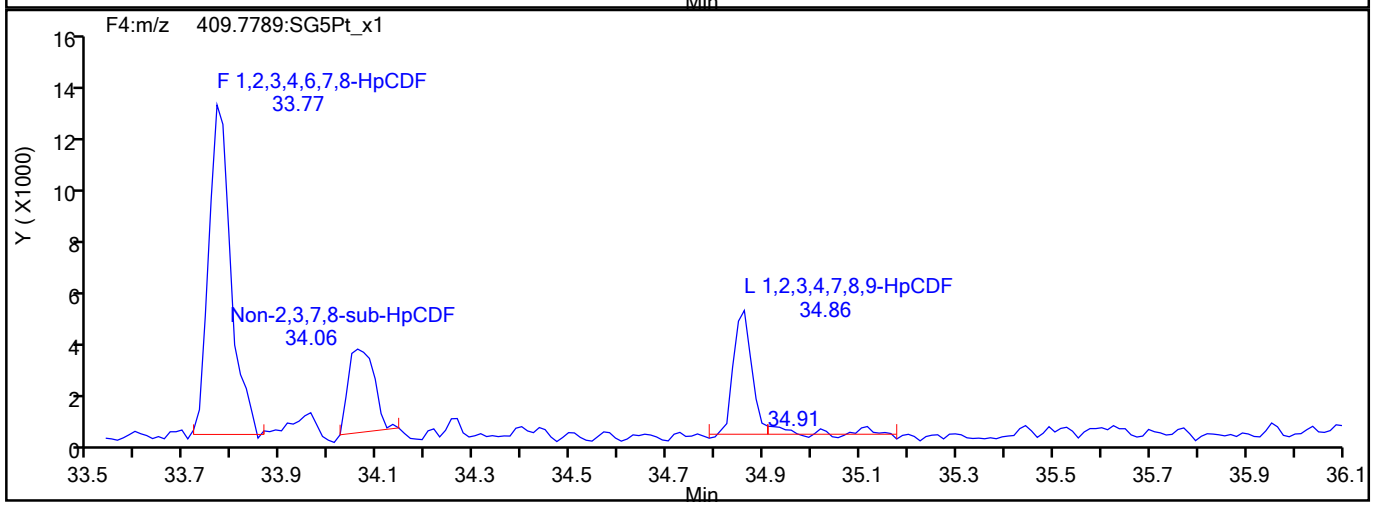

HpCDF Interference Mass

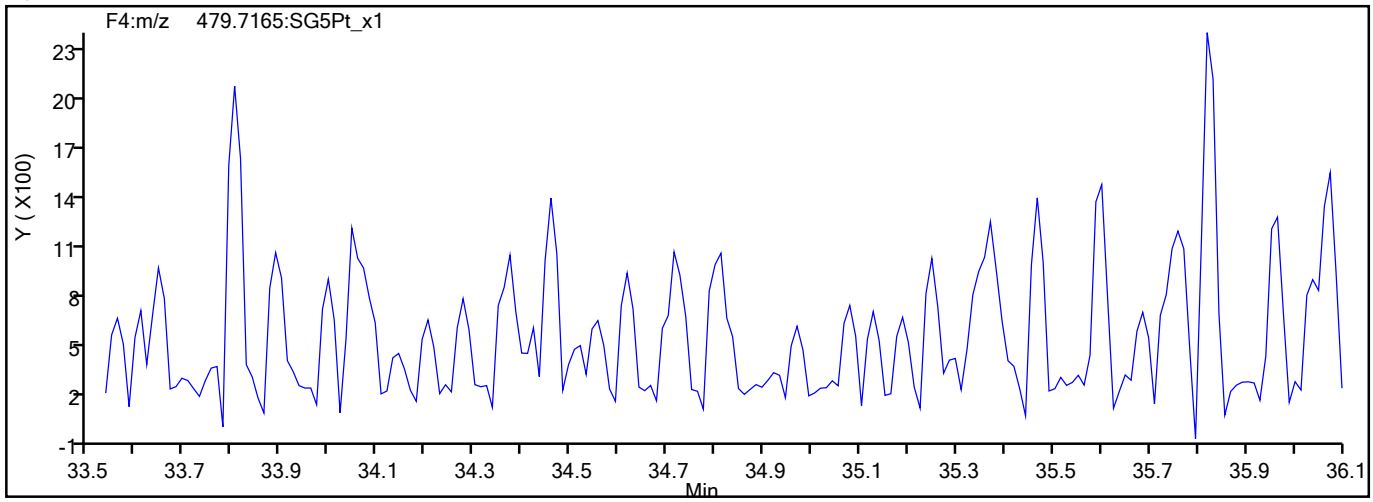

774838

Report Date: 18-Aug-2021 11:11:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

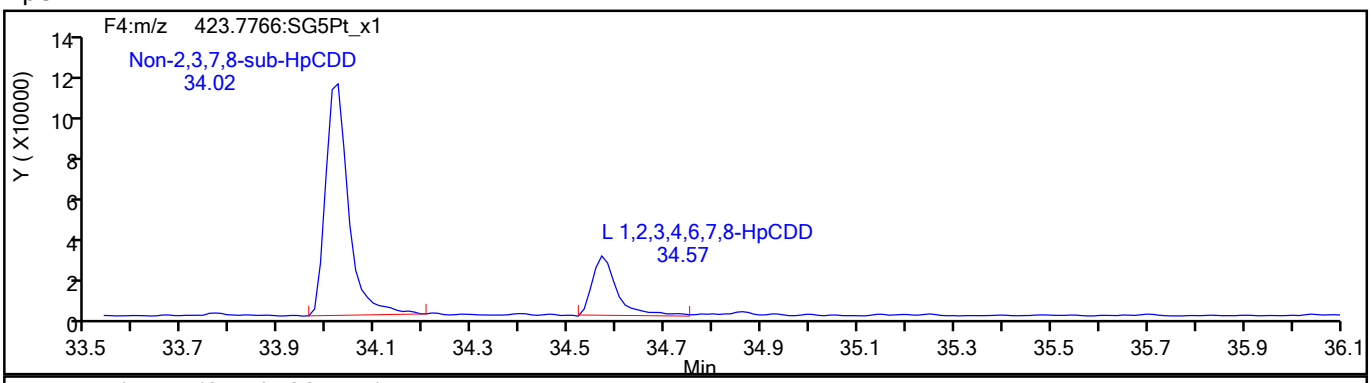

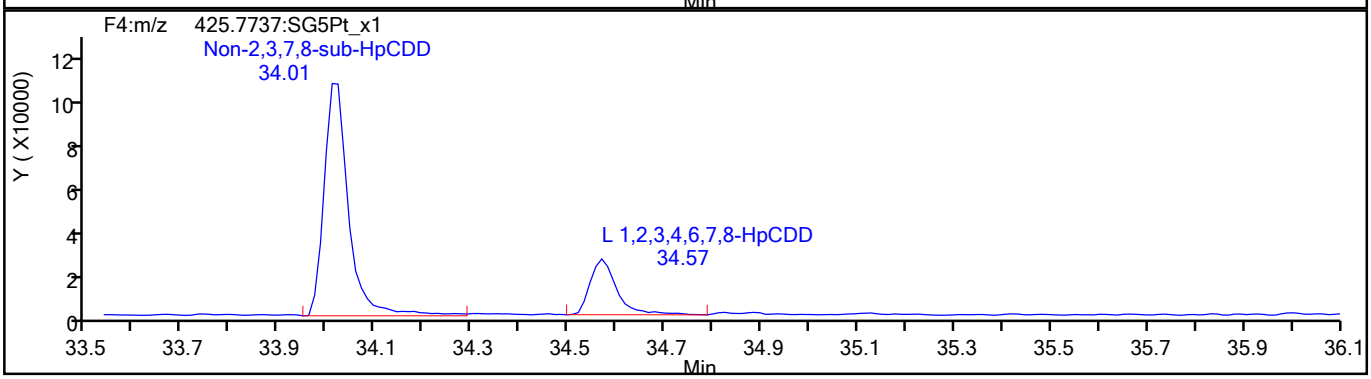

HpCDD Standards

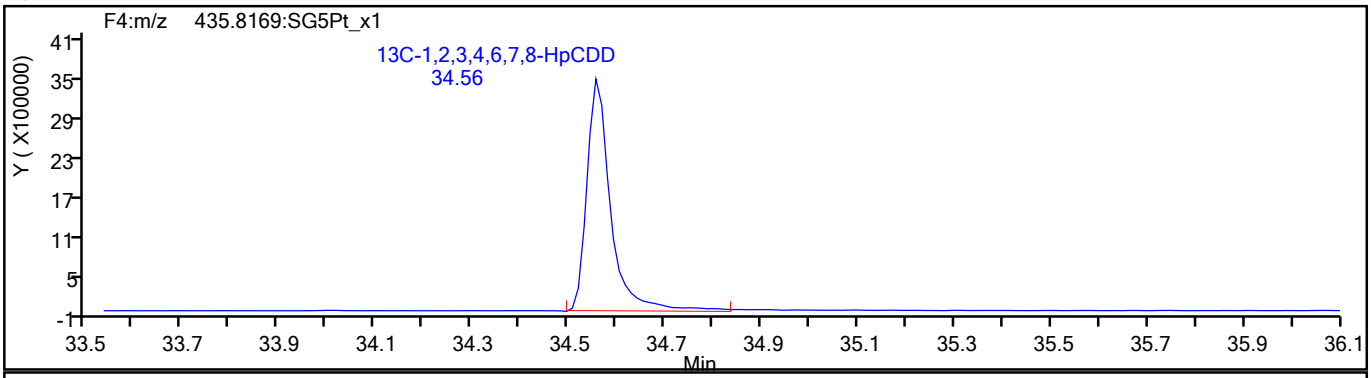

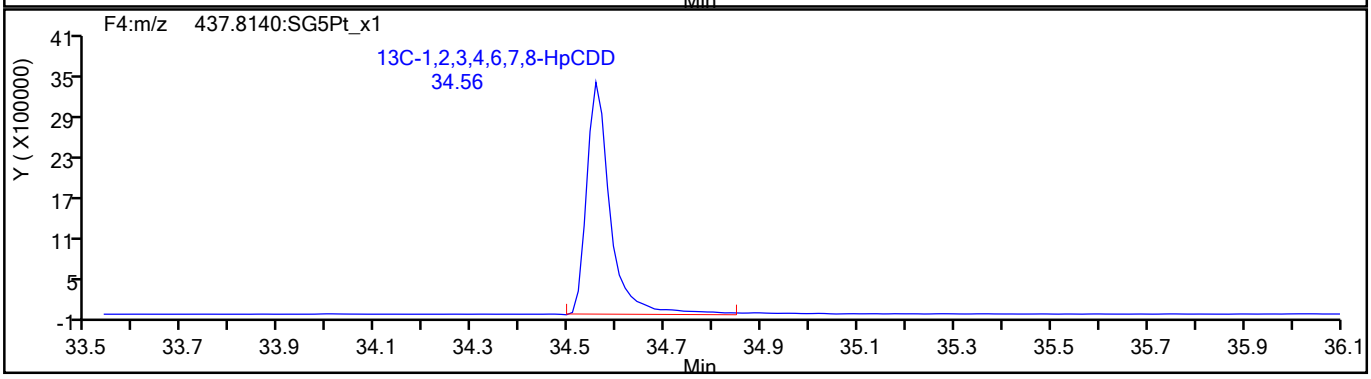

774839

Report Date: 18-Aug-2021 11:11:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

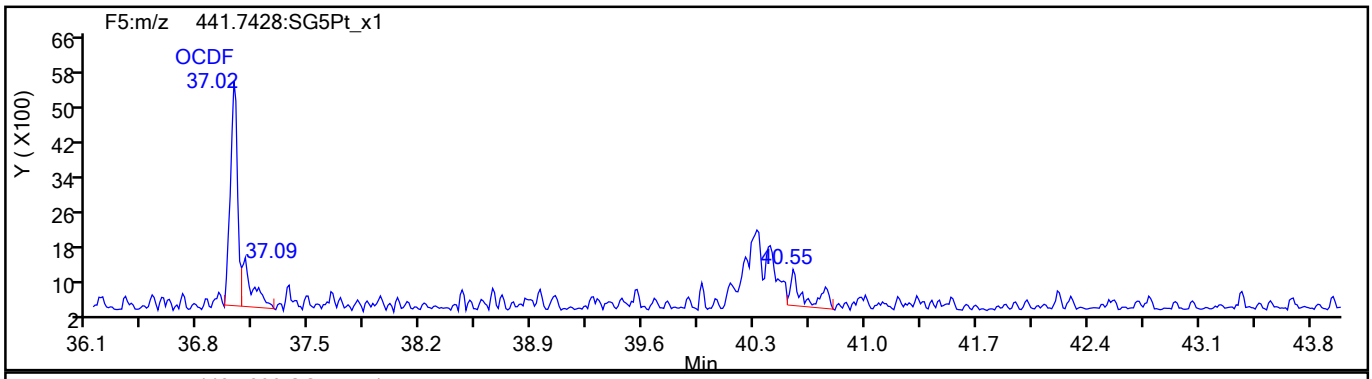

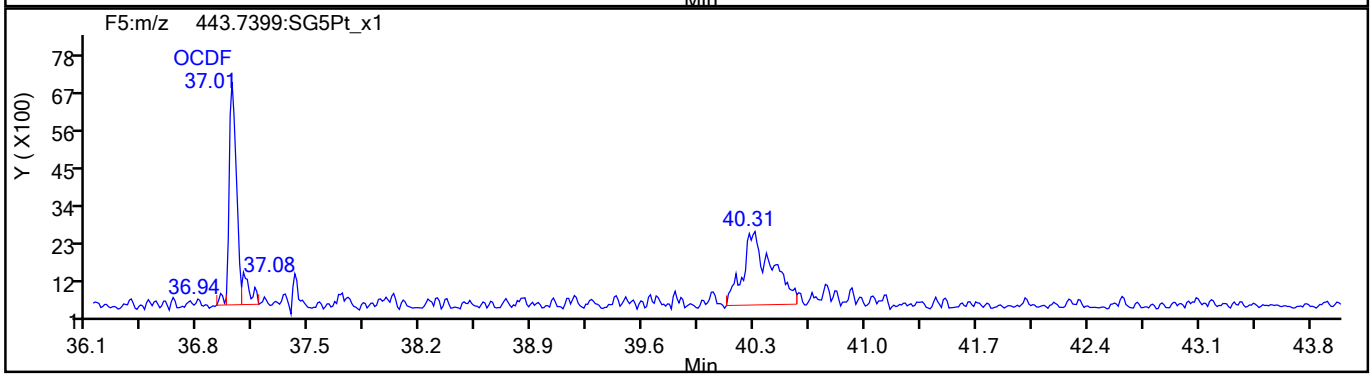

OCDF Standards

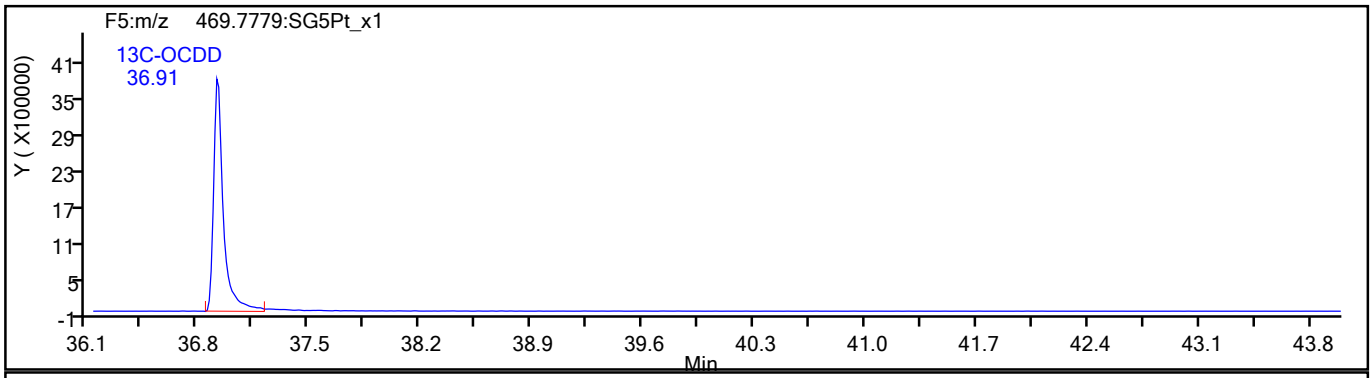

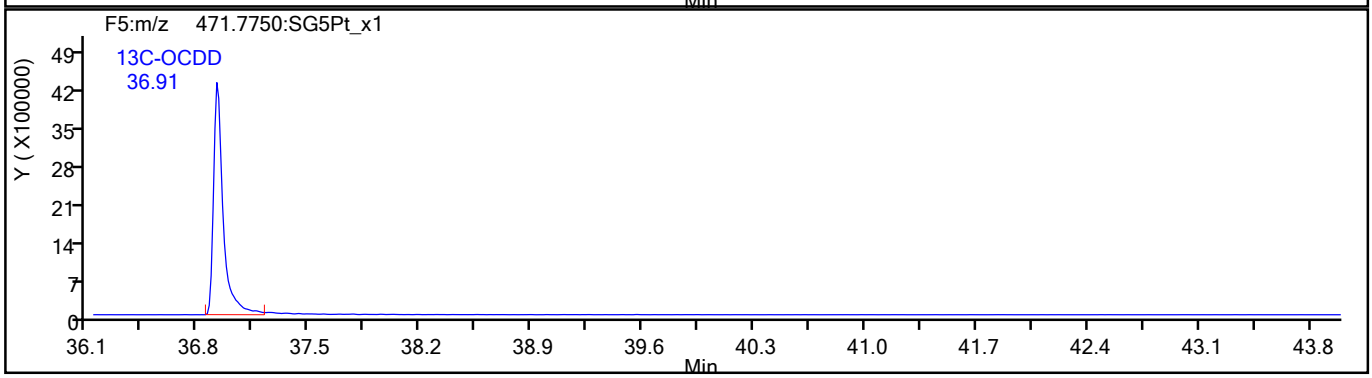

774840

Report Date: 18-Aug-2021 11:11:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

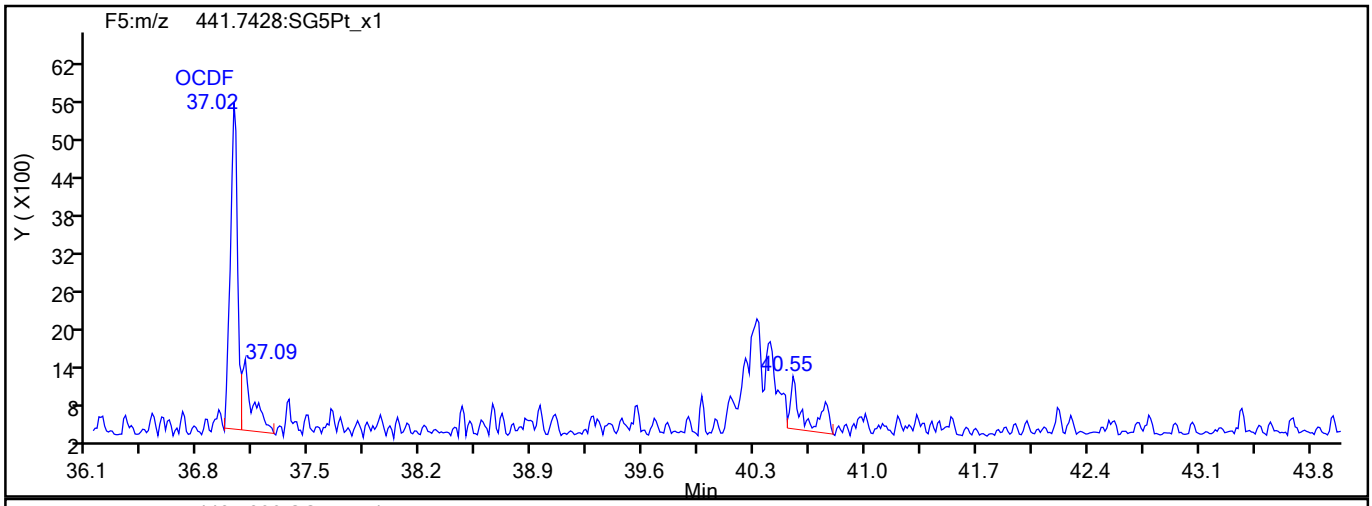

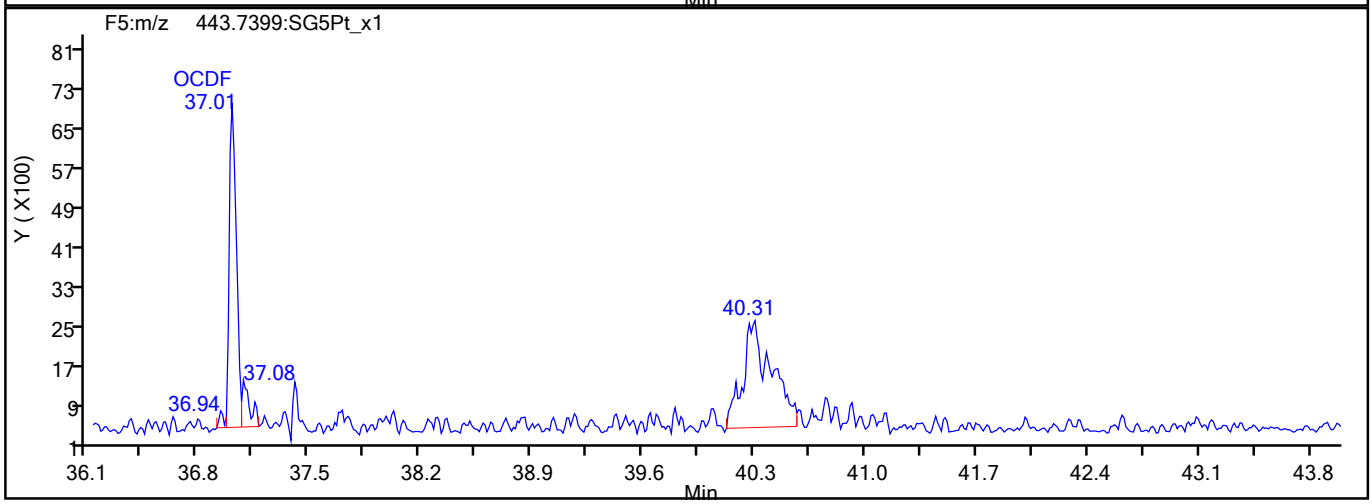

OCDF Interference Mass

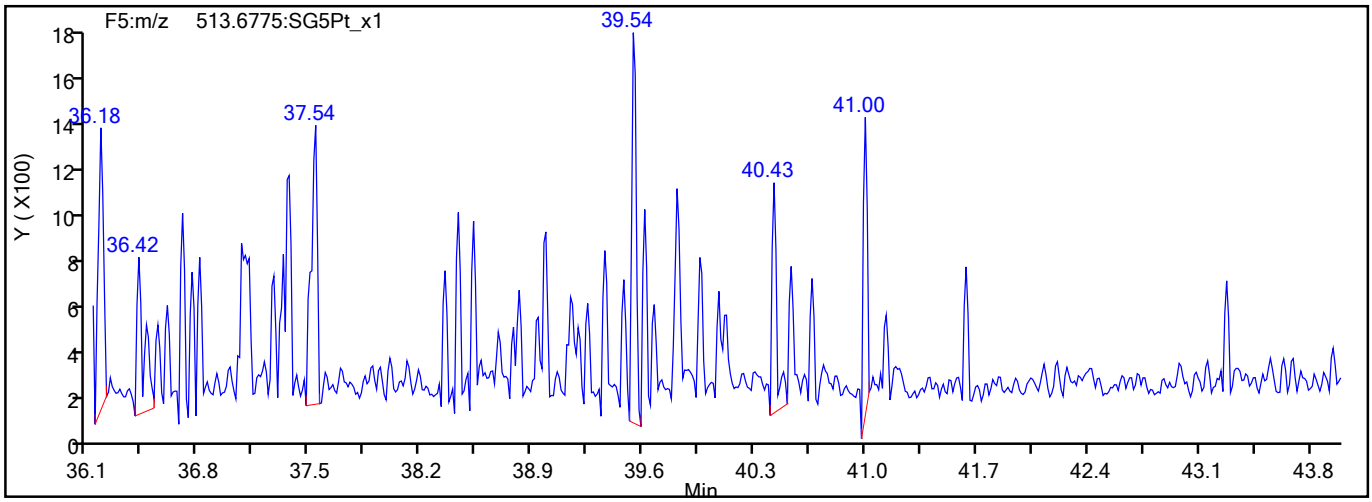

774841

Report Date: 18-Aug-2021 11:11:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

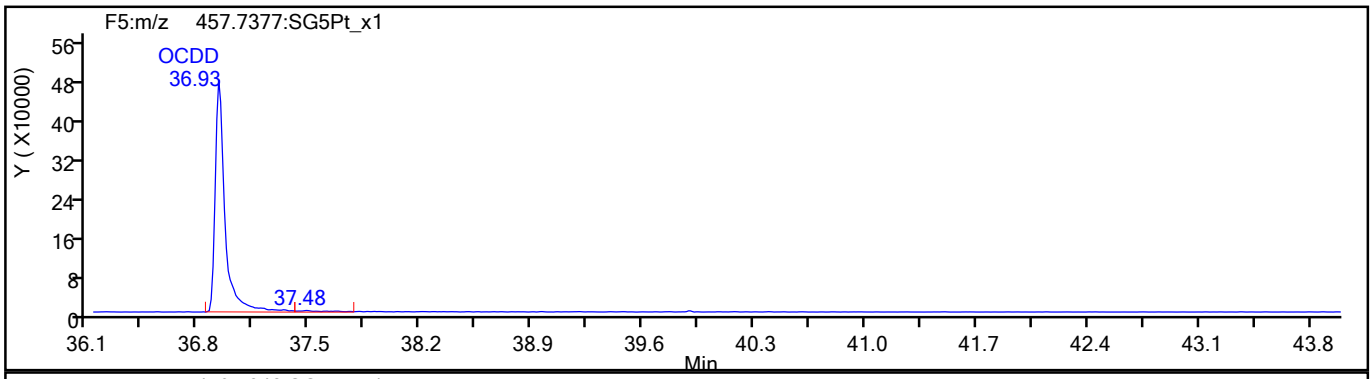

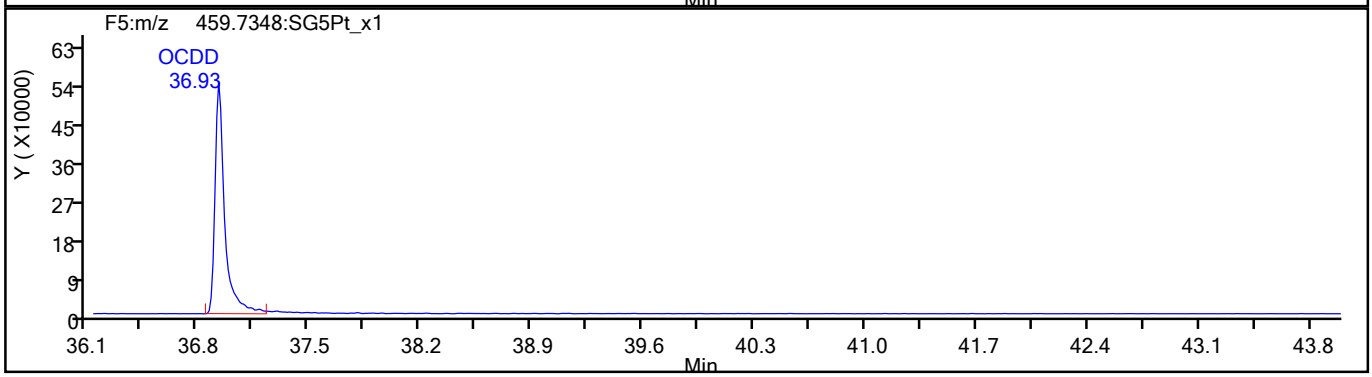

OCDD Standards

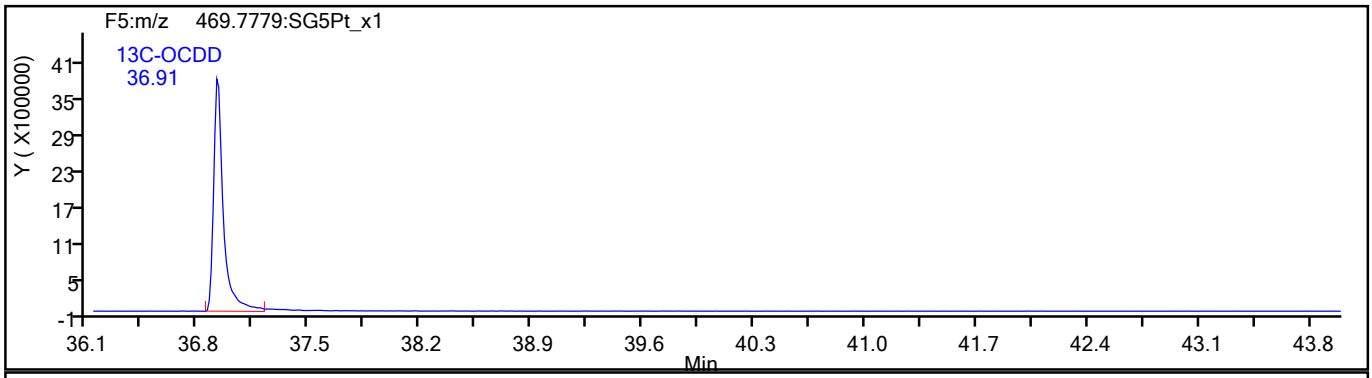

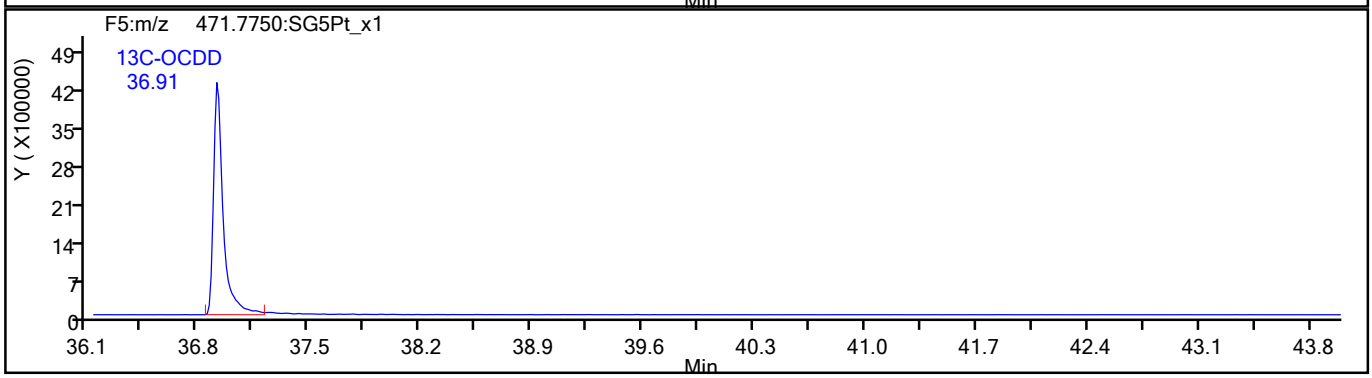

774842

Report Date: 18-Aug-2021 11:11:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

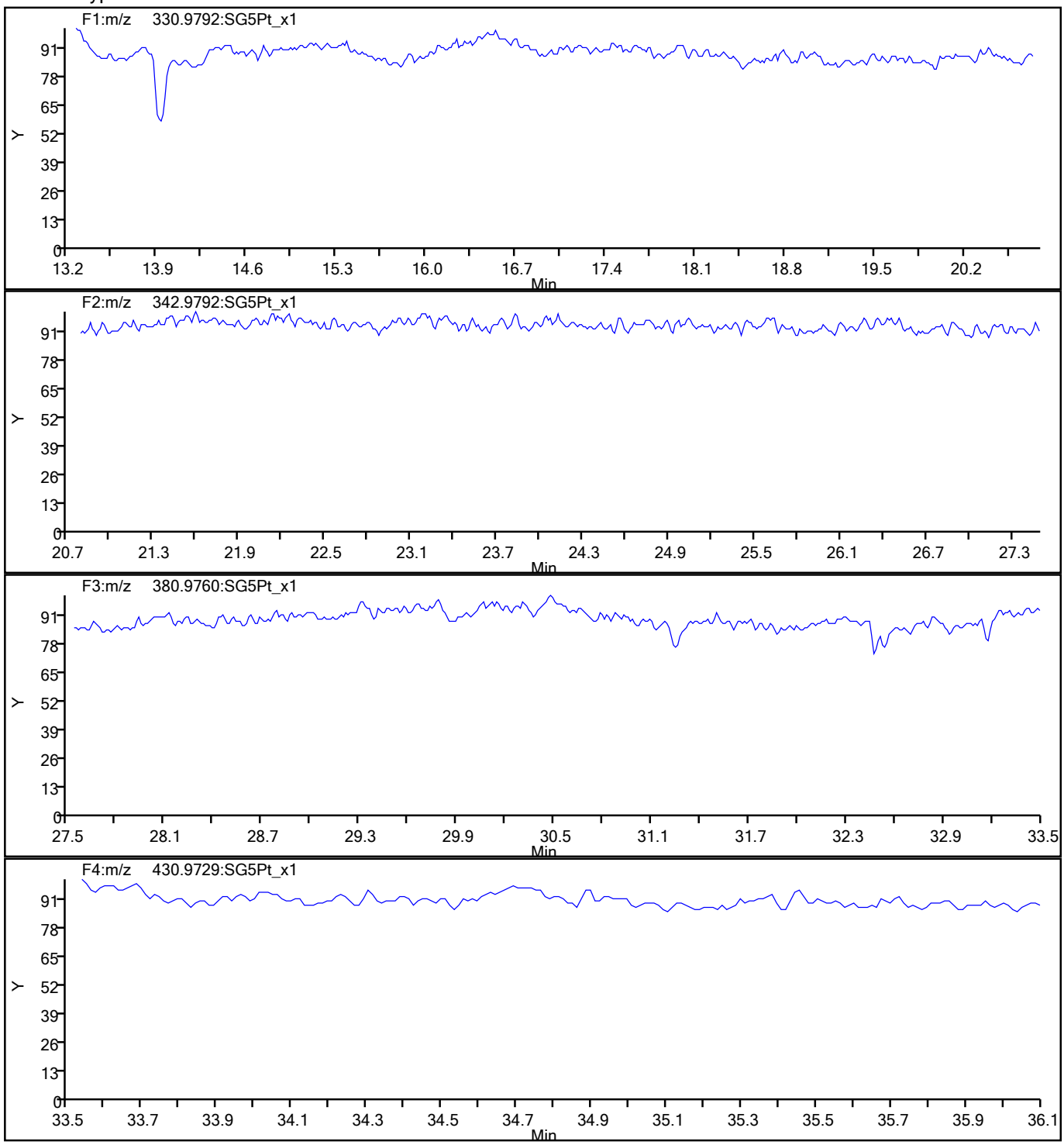

774843

Report Date: 18-Aug-2021 11:11:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_53.d		
Injection Date:	15-Aug-2021 08:51:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	516847	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

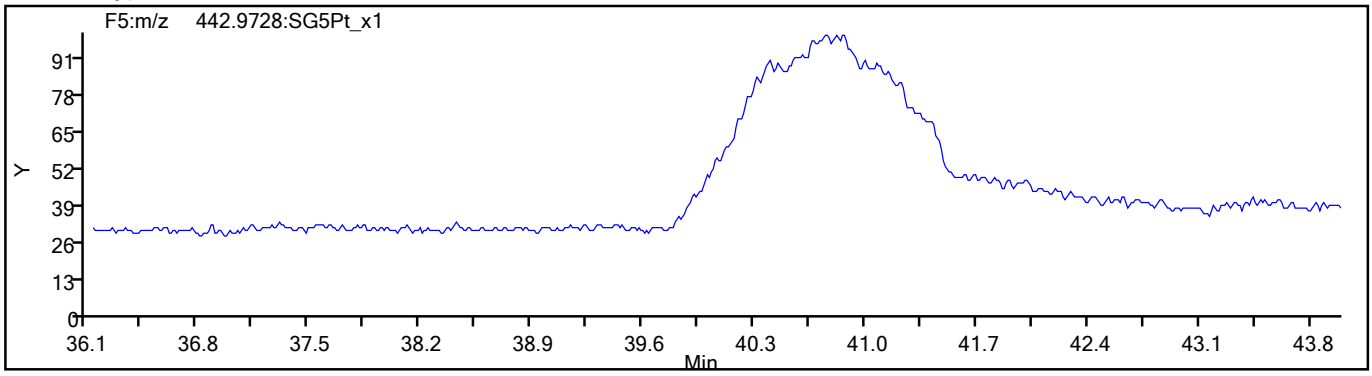

774844

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (10-12) RA
Lab Sample ID: 320-76769-6 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_007.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.86(g)
Date Analyzed: 08/23/2021 19:24
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 17.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	26	B	1.2	0.23

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	62		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	73		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_007.d
Lims ID: 320-76769-A-6-A
Client ID: 11215702-072221-SS-SJSB080 (10-12)
Sample Type: Client
Inject. Date: 23-Aug-2021 19:24:34 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-6-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:15:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.299	60774679	0.82	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.629	50118915	0.79	1.3327	61.9	61.9	0.2330	0.2330	61.88	
2,3,7,8-TCDF	17.643	5235251	0.76	0.9978	10.5	10.5	0.0916	0.0916		
D 13C-2,3,7,8-TCDD	16.079	32665914	0.75	0.8749	61.4	61.4	0.6399	0.6399	61.43	
2,3,7,8-TCDD	16.093	1252760	0.78	1.0570	3.628	3.628	0.1051	0.1051		
$ 37Cl4-2,3,7,8-TCDD	16.093	15316344		0.8648	29.1	29.1	0.0859	0.0859	72.85	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

774846

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_007.d				
Lims ID:	320-76769-A-6-A				
Client ID:	11215702-072221-SS-SJSB080 (10-12)				
Sample Type:	Client				
Inject. Date:	23-Aug-2021 19:24:34	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-76769-A-6-A				
Misc. Info.:	DB225RES				
Operator ID:		Instrument ID:	11D2		
Method:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m				
Limit Group:	HR - 1613B - ICAL				
Last Update:	24-Aug-2021 09:19:40	Calib Date:	14-Jul-2021 14:47:36		
Integrator:	Picker				
Quant Method:	Isotopic Dilution	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d				
Column 1 :	DB-225 (0.32 mm)		Det: F1:HRSIR		
Process Host:	CTX1683				
First Level Reviewer: bennettd		Date:	24-Aug-2021 09:15:52		

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.299	16.298	0		27297049	5970565	13570	33925	440		
333.9339	16.299	16.298	0		33477630	7287958	16121	40302	452	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.629	17.615	1	1.082	22085494	4112501	9101	22752	452		
317.9389	17.615	17.615	0	1.081	28033421	5262853	7366	18415	714	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.643	0	1.001	2264015	408282	1241	3102	329		
305.8987	17.643	17.643	0	1.001	2971236	548027	2187	5467	251	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.079	16.065	1	0.987	13971596	2982689	13570	33925	220		
333.9339	16.066	16.065	0	0.986	18694318	4106068	16121	40302	255	0.75(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.079	1	1.001	548154	127879	1829	4572	70		
321.8936	16.093	16.079	1	1.001	704606	154624	1322	3305	117	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.093	16.093	0	0.987	15316344	3351585	3942	9855	850		

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 09:19:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_007.d		
Injection Date:	23-Aug-2021 19:24:34	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	518979	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

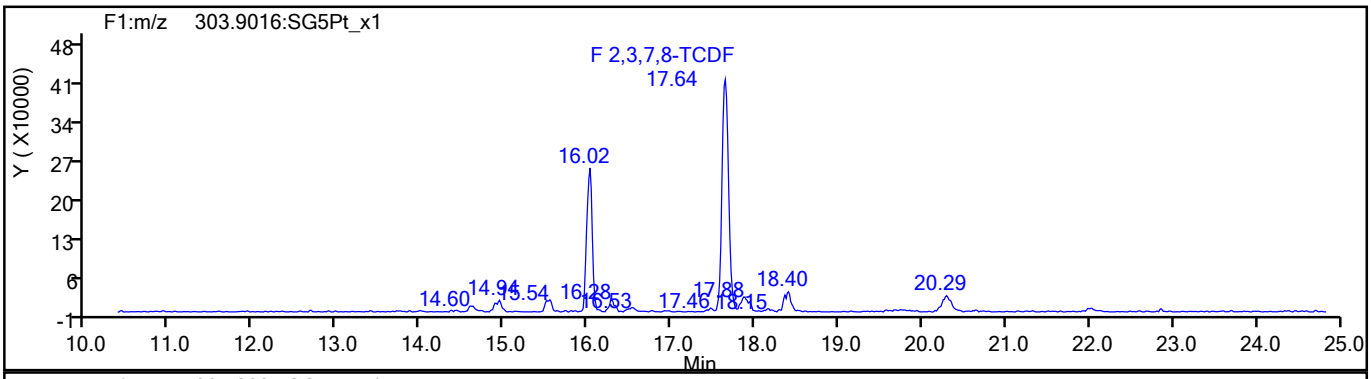

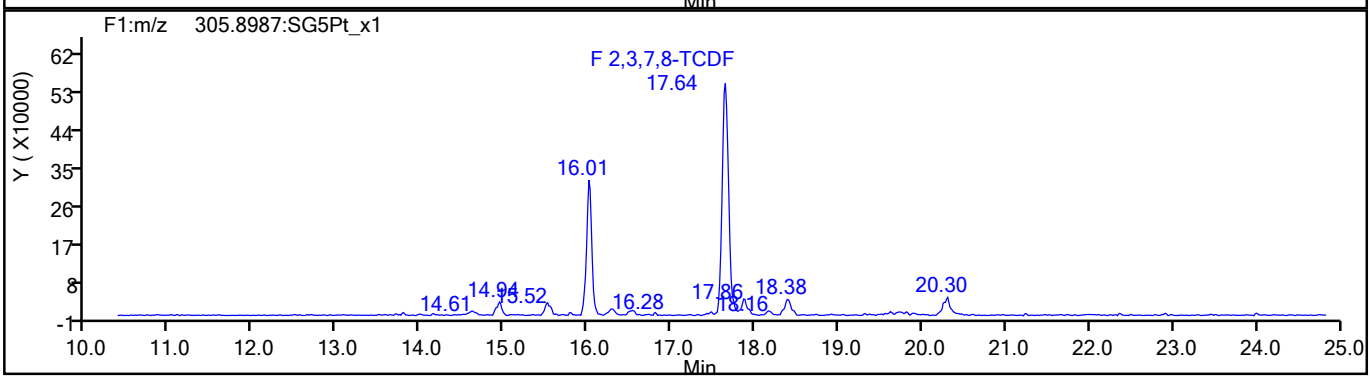

TCDF Standards

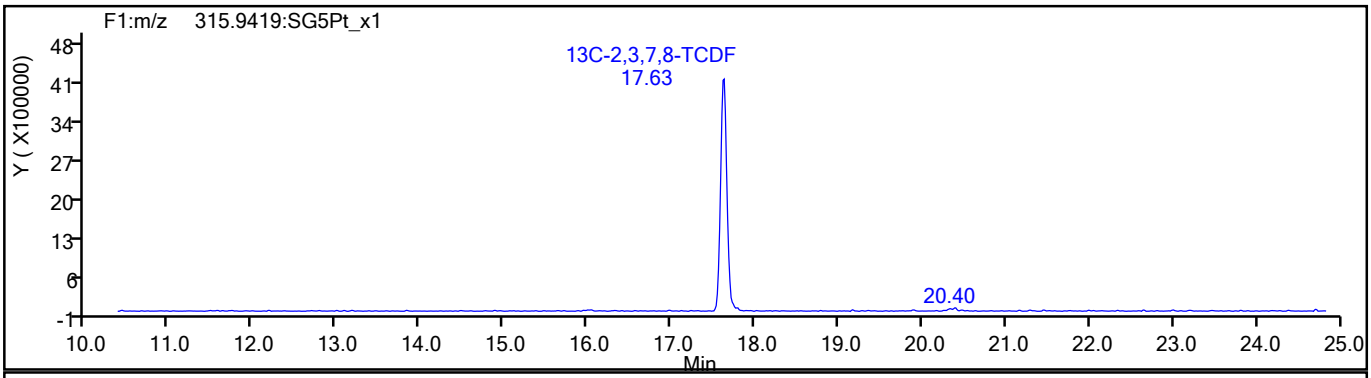

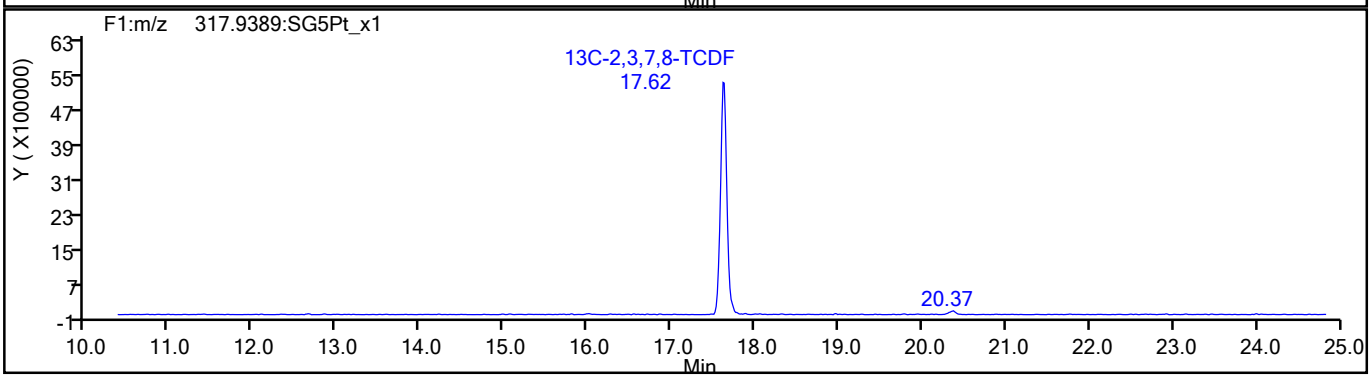

774848

Report Date: 24-Aug-2021 09:19:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_007.d		
Injection Date:	23-Aug-2021 19:24:34	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	518979	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

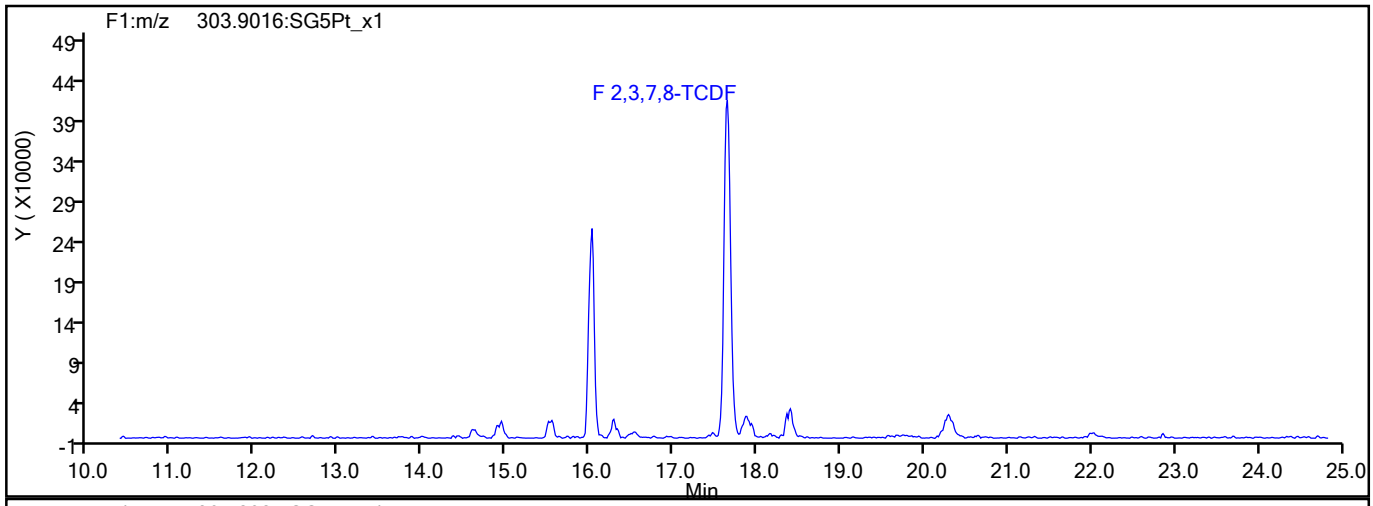

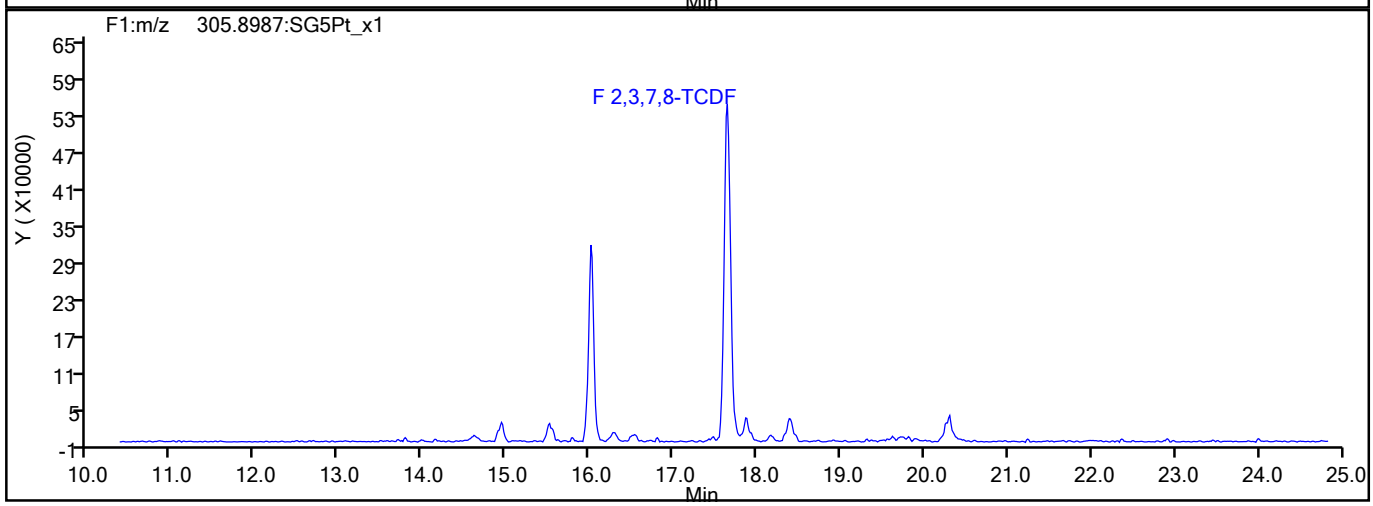

TCDF Interference Mass

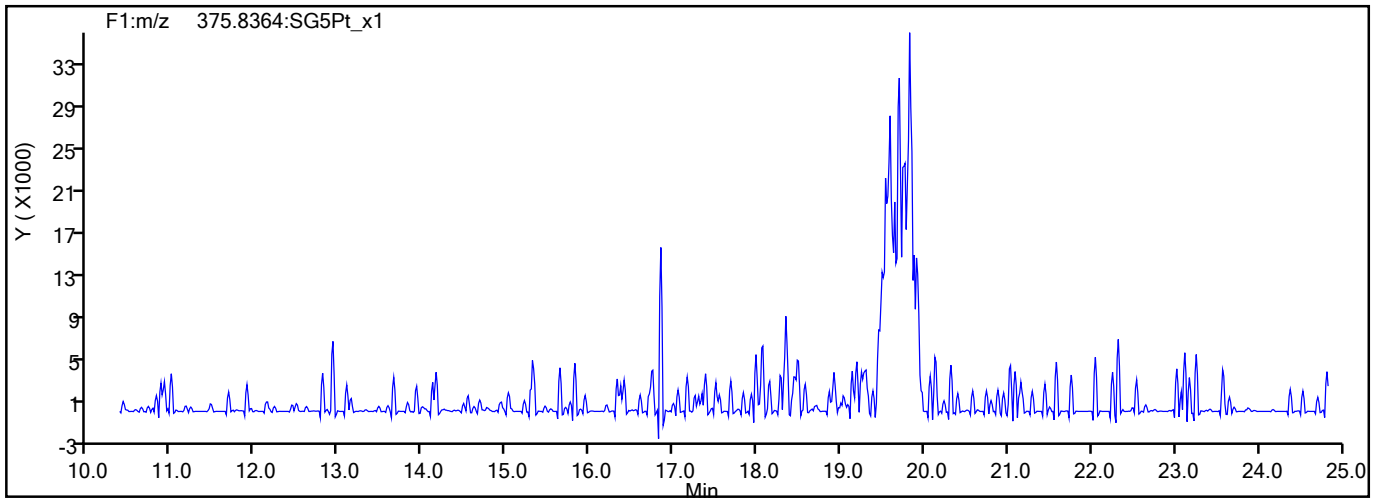

774849

Report Date: 24-Aug-2021 09:19:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_007.d		
Injection Date:	23-Aug-2021 19:24:34	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	518979	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

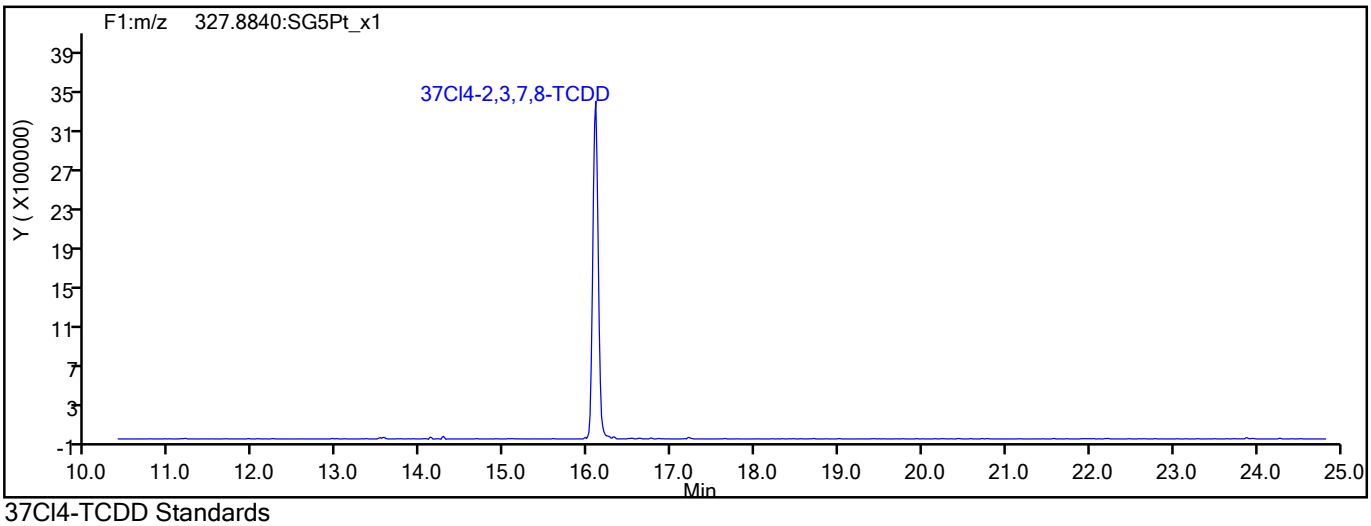

37Cl4-TCDD Standards

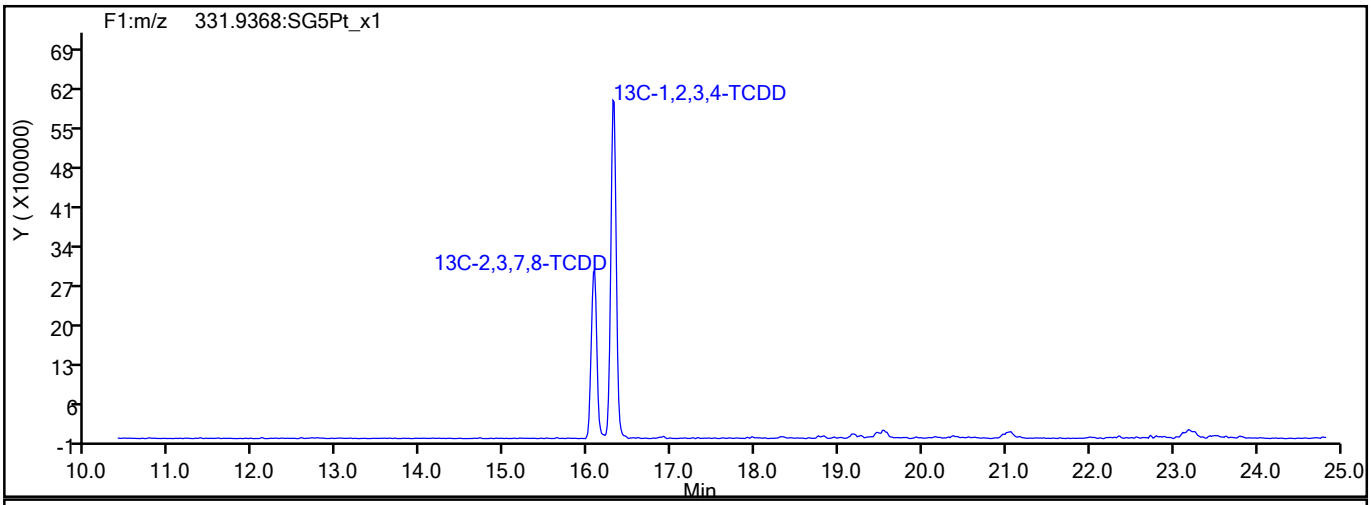

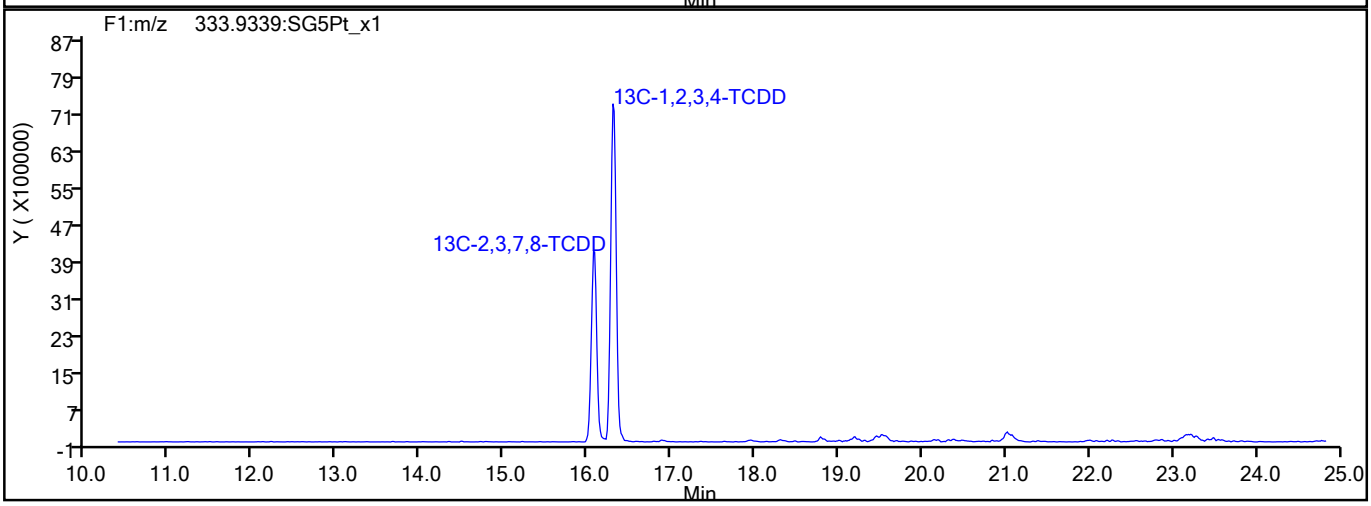

774850

Report Date: 24-Aug-2021 09:19:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_007.d		
Injection Date:	23-Aug-2021 19:24:34	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (10-12)		
Worklist#:	518979	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

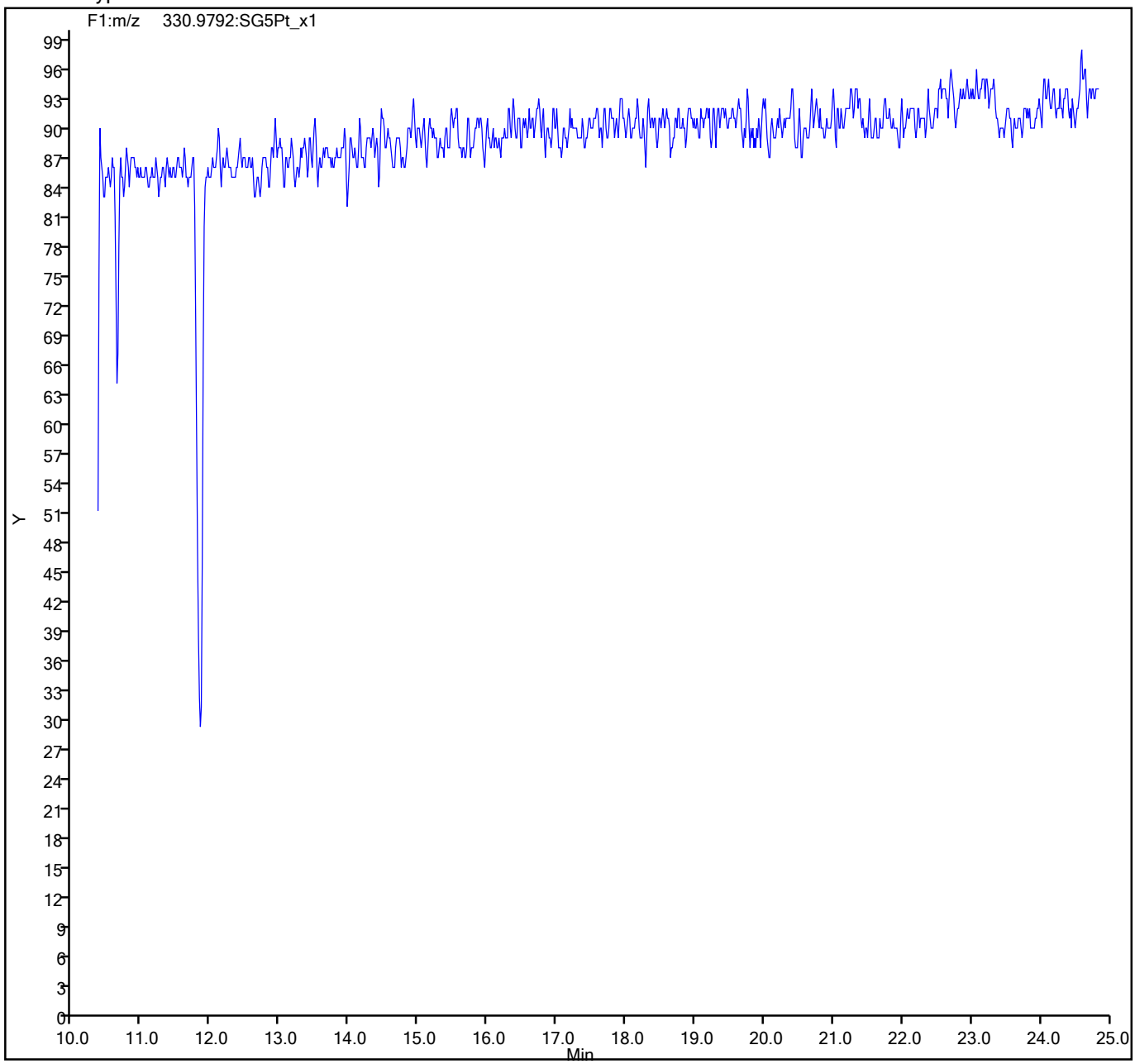

774851

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (12-14)
Lab Sample ID: 320-76769-7
Matrix: Sediment
Lab File ID: 13AU2110D5_54.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.97(g)
Date Analyzed: 08/15/2021 09:36
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	1.1	J B	1.2	0.056
40321-76-4	1,2,3,7,8-PeCDD	ND		6.2	0.055
57117-41-6	1,2,3,7,8-PeCDF	0.13	J q	6.2	0.041
57117-31-4	2,3,4,7,8-PeCDF	ND		6.2	0.042
39227-28-6	1,2,3,4,7,8-HxCDD	0.17	J B	6.2	0.069
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.2	0.073
19408-74-3	1,2,3,7,8,9-HxCDD	0.22	J B	6.2	0.065
70648-26-9	1,2,3,4,7,8-HxCDF	0.23	J B	6.2	0.035
57117-44-9	1,2,3,6,7,8-HxCDF	0.092	J B	6.2	0.035
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.2	0.028
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.2	0.027
35822-46-9	1,2,3,4,6,7,8-HpCDD	2.9	J B	6.2	0.11
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.16	J B q	6.2	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.2	0.061
3268-87-9	OCDD	58	B	12	0.14
39001-02-0	OCDF	0.22	J B q	12	0.036
41903-57-5	Total TCDD	2.2	B q	1.2	0.056
30402-14-3	Total TCDF	4.5	B q	1.2	0.087
36088-22-9	Total PeCDD	1.3	J q	6.2	0.055
30402-15-4	Total PeCDF	0.13	J q	6.2	0.042
34465-46-8	Total HxCDD	5.8	J B	6.2	0.069
55684-94-1	Total HxCDF	0.32	J B	6.2	0.031
37871-00-4	Total HpCDD	11	B	6.2	0.11
38998-75-3	Total HpCDF	0.16	J B q	6.2	0.055

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (12-14)
Lab Sample ID: 320-76769-7
Matrix: Sediment
Lab File ID: 13AU2110D5_54.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.97(g)
Date Analyzed: 08/15/2021 09:36
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	56		25-164
89059-46-1	13C-2,3,7,8-TCDF	50		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	55		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	50		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	55		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	60		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	56		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	52		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	52		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	52		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	57		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	52		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	60		26-138
114423-97-1	13C-OCDD	61		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	67		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d
Lims ID: 320-76769-A-7-A
Client ID: 11215702-072221-SS-SJSB080 (12-14)
Sample Type: Client
Inject. Date: 15-Aug-2021 09:36:52 ALS Bottle#: 53 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-7-a 320-76769-a-7-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:20:00 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 11:20:00

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.840	60928703	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	49317610	0.76	1.6249	49.8	49.8	0.1212	0.1212	49.81	
2,3,7,8-TCDF	17.356	588349	0.82	1.0239	1.165	1.165	0.0355	0.0355		
A Non-2,3,7,8-sub-TCDF	17.046	341391	0.77	1.0239	0.6842	0.6761	0.0355	0.4584		RQ
S Total TCDF					1.849	1.841	0.0355	0.0355		RQ
D 13C-2,3,7,8-TCDD	18.051	30470228	0.82	0.8993	55.6	55.6	0.1525	0.1525	55.61	
2,3,7,8-TCDD	18.051	170331	0.69	1.2541	0.4457	0.4457	0.0228	0.0228		M
$ 37Cl4-2,3,7,8-TCDD	18.066	18163078		1.1071	26.9	26.9	0.0803	0.0803	67.31	
A Non-2,3,7,8-sub-TCDD	17.500	170981	0.77	1.2541	0.4889	0.4474	0.0228	0.3403		RQM
S Total TCDD					0.9346	0.8932	0.0228	0.0228		RQ
D 13C-1,2,3,7,8-PeCDF	22.367	37041090	1.56	1.2101	50.2	50.2	0.1296	0.1296	50.24	
1,2,3,7,8-PeCDF	22.381	20838	1.55	1.0611	0.0633	0.0530	0.0168	0.0168		RQM
D 13C-2,3,4,7,8-PeCDF	23.703	41703395	1.58	1.2395	55.2	55.2	0.1266	0.1266	55.22	
2,3,4,7,8-PeCDF	23.717						0.0171	0.0171		
A F1 PeCDFs	20.093						0.0108	0.0108		
A Non-2,3,7,8-sub-PeCDF	23.241						0.0169	0.0212		RQU
S Total PeCDF					0.0633	0.0530	0.0169	0.0169		RQ
D 13C-1,2,3,7,8-PeCDD	24.426	25343955	1.63	0.7612	54.6	54.6	0.0792	0.0792	54.64	
1,2,3,7,8-PeCDD	24.453						0.0225	0.0225		
A Non-2,3,7,8-sub-PeCDD	23.349	138879	1.55	1.0484	0.5625	0.5227	0.0225	0.3301		RQ
S Total PeCDD					0.5625	0.5227	0.0225	0.0225		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.503	33373497	0.51	1.0837	55.9	55.9	0.2709	0.2709	55.91	
1,2,3,4,7,8-HxCDF	30.529	33492	1.24	1.0851	0.0925	0.0925	0.0141	0.0141		M
D 13C-1,2,3,6,7,8-HxCDF	30.676	32243073	0.52	1.1279	51.9	51.9	0.2602	0.2602	51.90	
1,2,3,6,7,8-HxCDF	30.689	13514	1.22	1.1260	0.0372	0.0372	0.0143	0.0143		Ma
D 13C-2,3,4,6,7,8-HxCDF	31.514	30408576	0.51	1.0637	51.9	51.9	0.2759	0.2759	51.90	
2,3,4,6,7,8-HxCDF	31.528						0.0110	0.0110		
D 13C-1,2,3,7,8,9-HxCDF	32.313	27530337	0.52	0.9676	51.7	51.7	0.3034	0.3034	51.66	
1,2,3,7,8,9-HxCDF	32.326						0.0112	0.0112		RQU
A Non-2,3,7,8-sub-HxCDF	30.197						0.0125	0.0125		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.1297	0.1297	0.0127	0.0127		
* 13C-1,2,3,7,8,9-HxCDD	32.127	55082482	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	24407320	1.23	0.7334	60.4	60.4	0.3196	0.3196	60.42	
1,2,3,4,7,8-HxCDD	31.714	18350	1.15	1.0640	0.0707	0.0707	0.0282	0.0282		M
D 13C-1,2,3,6,7,8-HxCDD	31.807	26975181	1.25	0.8802	55.6	55.6	0.2663	0.2663	55.64	
1,2,3,6,7,8-HxCDD	31.714						0.0295	0.0295		QMU
1,2,3,7,8,9-HxCDD	32.127	25990	1.23	1.1325	0.0893	0.0893	0.0263	0.0263		M
A Non-2,3,7,8-sub-HxCDD	30.882	602315	1.28	1.0655	2.200	2.200	0.0279	1.937		
S Total HxCDD					2.360	2.360	0.0280	0.0280		
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	21986840	0.44	0.7730	51.6	51.6	0.6538	0.6538	51.64	
1,2,3,4,6,7,8-HpCDF	33.778	21032	1.04	1.4413	0.0732	0.0664	0.0203	0.0203		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	23162998	0.43	0.7008	60.0	60.0	0.7211	0.7211	60.00	
1,2,3,4,7,8,9-HpCDF	34.860						0.0247	0.0247		
A Non-2,3,7,8-sub-HpCDF	34.319						0.0223	0.0223		
S Total HpCDF					0.0732	0.0664	0.0225	0.0225		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	20317796	1.04	0.6472	57.0	57.0	0.2554	0.2554	56.99	
1,2,3,4,6,7,8-HpCDD	34.568	263592	1.02	1.0943	1.186	1.186	0.0454	0.0454		
A Non-2,3,7,8-sub-HpCDD	34.301	765370	1.08	1.0943	3.442	3.442	0.0454	3.442		
S Total HpCDD					4.628	4.628	0.0454	0.0454		
D 13C-OCDD	36.914	30135494	0.87	0.4472	122.4	122.4	0.1453	0.1453	61.18	
OCDF	37.022	19024	0.89	1.4382	0.1007	0.0878	0.0145	0.0145		RQM
OCDD	36.926	3957274	0.90	1.1070	23.7	23.7	0.0554	0.0554		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d
Lims ID: 320-76769-A-7-A
Client ID: 11215702-072221-SS-SJSB080 (12-14)
Sample Type: Client
Inject. Date: 15-Aug-2021 09:36:52 ALS Bottle#: 53 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-7-a 320-76769-a-7-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:20:00 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 11:20:00

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.840	17.855	-1		27176859	6529862	3557	8892	1836		
333.9339	17.840	17.855	-1		33751844	8098659	4469	11172	1812	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.356	-1	0.972	21345569	5035756	4962	12405	1015		
317.9389	17.341	17.356	-1	0.972	27972041	6501572	6558	16395	991	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.371	-1	1.001	265310	55699	685	1712	81		
305.8987	17.356	17.371	-1	1.001	323039	74270	993	2482	75	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.449	17.046	-36	0.949	14561	3287	685	1712	5		
305.8987	16.434	17.046	-37	0.948	16366	4227	993	2482	4	0.89(0.65-0.89)	
303.9016	16.691	17.046	-21	0.963	13400	2732	685	1712	4		
305.8987	16.706	17.046	-20	0.963	21494	4907	993	2482	5	0.62(0.65-0.89)	
	Empc Correction				17402	3548	993	2482	4		
303.9016	16.978	17.046	-4	0.979	93270	20980	685	1712	31		
305.8987	16.978	17.046	-4	0.979	138195	31061	993	2482	31	0.67(0.65-0.89)	
303.9016	17.794	17.046	45	1.026	19494	3452	685	1712	5		
305.8987	17.779	17.046	44	1.025	28703	7080	993	2482	7	0.68(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.012	13705945	3013106	3557	8892	847		
333.9339	18.051	18.051	0	1.012	16764283	3703272	4469	11172	829	0.82(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	18.051	18.081	-2	1.000	69663	14427	435	1087	33		M
321.8936	18.066	18.081	-1	1.001	100668	22394	334	835	67	0.69(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.081	-1	1.013	18163078	4064611	5202	13005	781		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											RQM
319.8965	16.917	17.500	-35	0.937	56565	13271	435	1087	31		
321.8936	16.902	17.500	-36	0.936	89301	23057	334	835	69	0.63(0.65-0.89)	M
	Empc Correction				73461	17235	334	835	52		
319.8965	17.809	17.500	19	0.987	18822	5021	435	1087	12		M
321.8936	17.809	17.500	19	0.987	22133	5650	334	835	17	0.85(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.254	22547256	3774312	5795	14487	651		
353.8970	22.367	22.367	0	1.254	14493834	2368084	3384	8460	700	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											RQM
339.8597	22.381	22.394	-1	1.001	16689	2592	162	405	16		M
	Empc Correction				12666	2653	162	405	16		
341.8567	22.408	22.394	1	1.002	8172	1712	275	687	6	2.04(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.329	25515073	3830348	5795	14487	661		
353.8970	23.703	23.703	0	1.329	16188322	2457765	3384	8460	726	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.730						162	405			
341.8567	23.730						275	687			
A F1 PeCDFs											
339.8597	20.093						102	255			
341.8567	20.093						177	442			
A Non-2,3,7,8-sub-PeCDF											U
339.8597	21.031	23.241	-132	0.940	5272	1242	162	405	8		
341.8567	21.044	23.241	-132	0.941	5434	935	275	687	3	0.97(1.32-1.78)	
	Empc Correction				3401	801	275	687	3		
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.369	15719340	2289188	1884	4710	1215		
369.8919	24.426	24.426	0	1.369	9624615	1421437	1645	4112	864	1.63(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453						206	515			
357.8516	24.453						144	360			
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.221	23.349	-127	0.869	15180	2782	206	515	14		
357.8516	21.249	23.349	-126	0.870	12644	2271	144	360	16	1.20(1.32-1.78)	
	Empc Correction				9793	1794	144	360	12		
355.8546	21.985	23.349	-82	0.900	53779	9161	206	515	44		
357.8516	21.985	23.349	-82	0.900	33924	6975	144	360	48	1.59(1.32-1.78)	
355.8546	23.471	23.349	7	0.961	23671	3030	206	515	15		
	Empc Correction				15927	2380	206	515	12		
357.8516	23.431	23.349	5	0.959	10276	1536	144	360	11	2.30(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	11296026	1989340	5805	14512	343		
385.8610	30.503	30.503	0	0.949	22077471	3941958	10601	26502	372	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											M
373.8208	30.529	30.529	0	1.001	18561	3525	191	477	18		
375.8178	30.516	30.529	-1	1.000	14931	2827	171	427	17	1.24(1.05-1.43)	M

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.676	30.689	-1	0.955	10987909	1921040	5805	14512	331		
385.8610	30.689	30.689	0	0.955	21255164	3690113	10601	26502	348	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											Ma
373.8208	30.689	30.716	-2	1.000	7415	1403	191	477	7		M
375.8178	30.702	30.716	-1	1.001	6099	1237	171	427	7	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	10323595	2385581	5805	14512	411		
385.8610	31.514	31.514	0	0.981	20084981	4648729	10601	26502	439	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						191	477			
375.8178	31.528						171	427			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.326	-1	1.006	9415769	2358124	5805	14512	406		
385.8610	32.313	32.326	-1	1.006	18114568	4540237	10601	26502	428	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQU
373.8208	32.340						191	477			
375.8178	32.340						171	427			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.197						191	477			
375.8178	30.197						171	427			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.127	32.140	-1		30356390	7710107	6993	17482	1103		
403.8529	32.127	32.140	-1		24726092	6263747	6108	15270	1025	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.987	13441649	3611831	6993	17482	516		
403.8529	31.701	31.701	0	0.987	10965671	2859316	6108	15270	468	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.714	31.714	0	1.000	9827	3873	430	1075	9		M
391.8127	31.687	31.714	-2	1.000	8523	2763	347	867	8	1.15(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	14976504	3642628	6993	17482	521		
403.8529	31.807	31.807	0	0.990	11998677	2940885	6108	15270	481	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											QMU
389.8157	31.820						430	1075			
391.8127	31.820						347	867			
1,2,3,7,8,9-HxCDD											M
389.8157	32.127	32.153	-2	1.013	14323	2791	430	1075	6		
391.8127	32.140	32.153	-1	1.014	11667	2346	347	867	7	1.23(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.531	30.882	-81	0.928	297031	30723	430	1075	71		
391.8127	29.531	30.882	-81	0.928	233357	28909	347	867	83	1.27(1.05-1.43)	
389.8157	30.955	30.882	4	0.973	40938	7794	430	1075	18		
391.8127	30.942	30.882	4	0.973	30989	7391	347	867	21	1.32(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.766	-1	1.051	6728658	2038732	8016	20040	254		
419.8220	33.754	33.766	-1	1.051	15258182	4703607	20233	50582	232	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7818	33.778	33.778	0	1.001	12871	4734	498	1245	10		M
	Empc Correction				10722	2887	498	1245	6		
409.7789	33.754	33.778	-1	1.000	10310	2776	290	725	10	1.25(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.085	6934588	1806258	8016	20040	225		
419.8220	34.847	34.847	0	1.085	16228410	4239592	20233	50582	210	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860						498	1245			
409.7789	34.860						290	725			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						498	1245			
409.7789	34.319						290	725			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.568	-1	1.076	10361309	3032777	4440	11100	683		
437.8140	34.556	34.568	-1	1.076	9956487	2933614	4799	11997	611	1.04(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.580	-1	1.000	133124	38771	580	1450	67		
425.7737	34.556	34.580	-1	1.000	130468	36125	606	1515	60	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.009	34.301	-17	0.984	397119	117417	580	1450	202		
425.7737	34.009	34.301	-17	0.984	368251	110533	606	1515	182	1.08(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.926	-1	1.149	13993379	3278730	2225	5562	1474		
471.7750	36.914	36.926	-1	1.149	16142115	3860191	1407	3517	2744	0.87(0.76-1.02)	
OCDF											RQM
441.7428	37.022	37.022	0	1.003	11763	3455	124	310	28		M
	Empc Correction				8958	2299	124	310	19		
443.7399	37.010	37.022	-1	1.003	10066	2584	174	435	15	1.17(0.76-1.02)	M
OCDD											
457.7377	36.926	36.938	-1	1.000	1879446	440091	483	1207	911		
459.7348	36.926	36.938	-1	1.000	2077828	477687	393	982	1215	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d
Lims ID: 320-76769-A-7-A
Client ID: 11215702-072221-SS-SJSB080 (12-14)
Inject. Date: 15-Aug-2021 09:36:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 13

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	49317610	11537328

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	49317610	11537328

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.449	14561	3287	16366	4227	0.0612	0.89	
16.691	13400	2732	21494	4907	0.0691	0.62	RQ
16.691	13400	2732	17402	3548	0.0610		Empc Correction
16.978	93270	20980	138195	31061	0.4584	0.67	
17.794	19494	3452	28703	7080	0.0954	0.68	
Signal Totals:							
	140725	30451	200666	45916			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	345483	77726				0.69	RQ
	341391	76367					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6842 = (345483 * 100.000) / (49317610 * 1.024)
Empc Amount: 0.6761 = (341391 * 100.000) / (49317610 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d
Lims ID: 320-76769-A-7-A
Client ID: 11215702-072221-SS-SJSB080 (12-14)
Inject. Date: 15-Aug-2021 09:36:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 13

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	30470228	6716378

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	30470228	6716378

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.917	56565	13271	89301	23057	0.3817	0.63	RQM
16.917	56565	13271	73461	17235	0.3403		Empc Correction
17.809	18822	5021	22133	5650	0.1072	0.85	M
Signal Totals:							
	75387	18292	95594	22885			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	186821	46999				0.68	RQM
	170981	41177					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4889 = (186821 * 100.000) / (30470228 * 1.254)
Empc Amount: 0.4474 = (170981 * 100.000) / (30470228 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Lims ID:	320-76769-A-7-A		
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Inject. Date:	15-Aug-2021 09:36:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	13

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	37041090	6142396
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	41703395	6288113

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	39372242	6215254

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.031	5272	1242	5434	935	0.0262	0.97	RQ
21.031	5272	1242	3401	801	0.0212		Empc Correction

Compound is Marked ND

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Lims ID:	320-76769-A-7-A		
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Inject. Date:	15-Aug-2021 09:36:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	13

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	25343955	3710625

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	25343955	3710625

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.221	15180	2782	12644	2271	0.1047	1.20	RQ
21.221	15180	2782	9793	1794	0.0940		Empc Correction
21.985	53779	9161	33924	6975	0.3301	1.59	
23.471	23671	3030	10276	1536	0.1278	2.30	RQ
23.471	15927	2380	10276	1536	0.0986		Empc Correction
Signal Totals:							
	84886	14323	53993	10305			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	149474	25755				1.63	RQ
	138879	24628					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5625 = (149474 * 100.000) / (25343955 * 1.048)

Empc Amount: 0.5227 = (138879 * 100.000) / (25343955 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d
Lims ID: 320-76769-A-7-A
Client ID: 11215702-072221-SS-SJSB080 (12-14)
Inject. Date: 15-Aug-2021 09:36:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 13

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	33373497	5931298
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	32243073	5611153
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	30408576	7034310
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	27530337	6898361

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	30888870	6368780

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d
Lims ID: 320-76769-A-7-A
Client ID: 11215702-072221-SS-SJSB080 (12-14)
Inject. Date: 15-Aug-2021 09:36:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 13

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	24407320	6471147
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	26975181	6583513
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	25691250	6527330

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.531	297031	30723	233357	28909	1.94	1.27	
30.955	40938	7794	30989	7391	0.2627	1.32	
Signal Totals:							
	337969	38517	264346	36300			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	602315	74817				1.28	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.200 = (602315 * 100.000) / (25691250 * 1.066)

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Lims ID:	320-76769-A-7-A		
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Inject. Date:	15-Aug-2021 09:36:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	13

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	20317796	5966391

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	20317796	5966391

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.009	397119	117417	368251	110533	3.44	1.08	
Signal Totals:							
	397119	117417	368251	110533			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	765370	227950				1.08	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.442 = (765370 * 100.000) / (20317796 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.05
Area: 68179
Amount: 0.452423
Amount Units: pg/ul

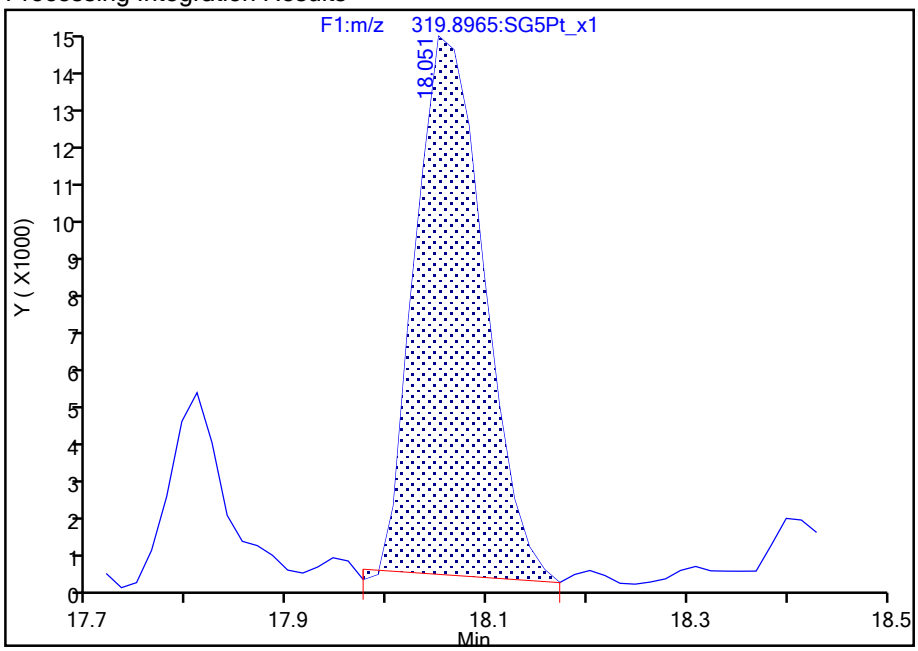

Manual Integration Results

RT: 18.05
Area: 69663
Amount: 0.445737
Amount Units: pg/ul

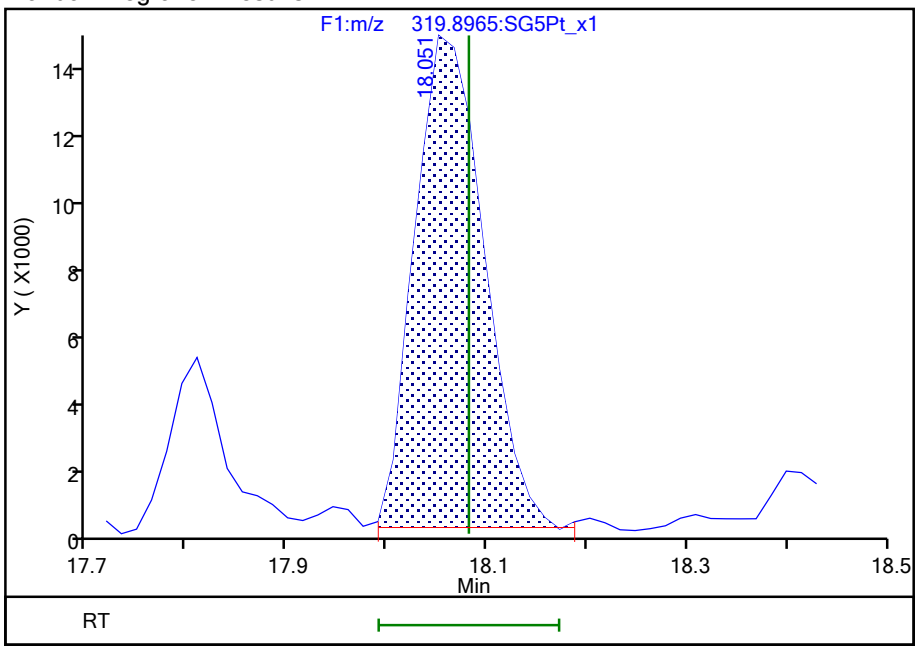

Reviewer: dadunj, 18-Aug-2021 11:16:50

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.07
Area: 104707
Amount: 0.452423
Amount Units: pg/ul

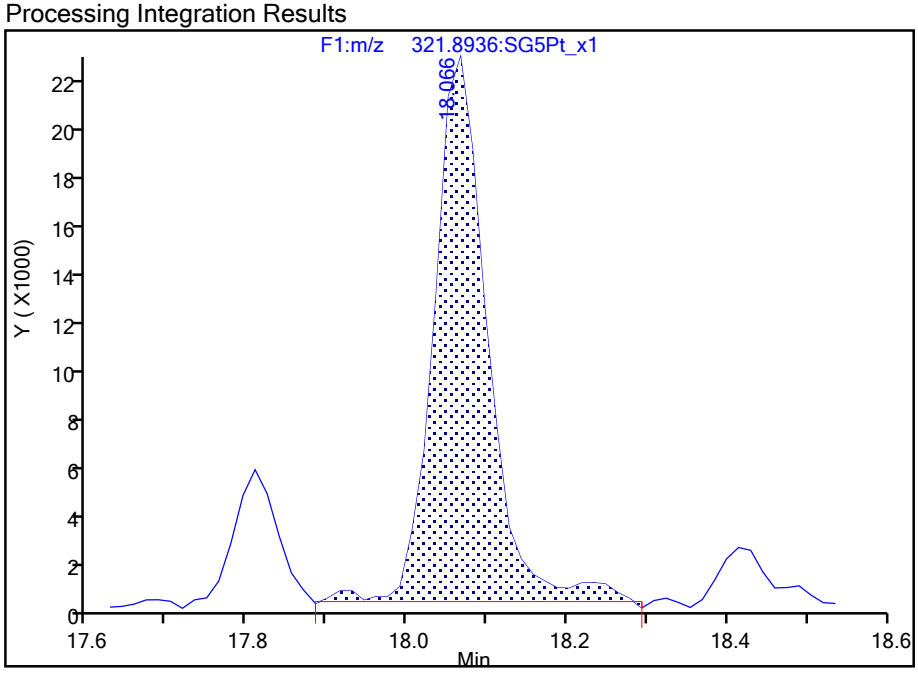

Manual Integration Results

RT: 18.07
Area: 100668
Amount: 0.445737
Amount Units: pg/ul

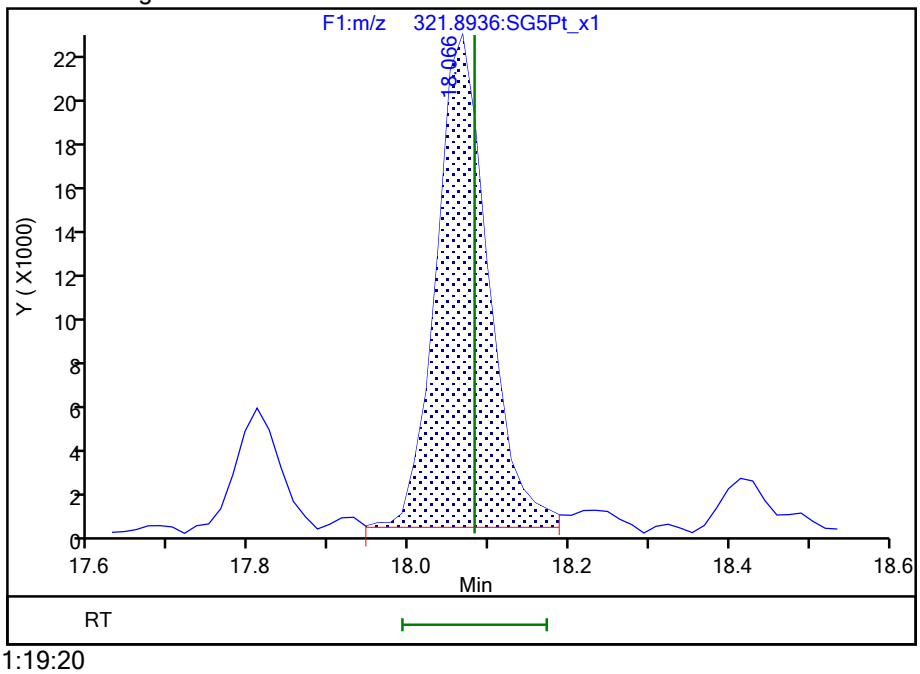

Reviewer: dadunj, 18-Aug-2021 11:19:20

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (15.80- 19.20)

Signal: 2

Processing Integration Results

RT = 16.902 Area = 92032

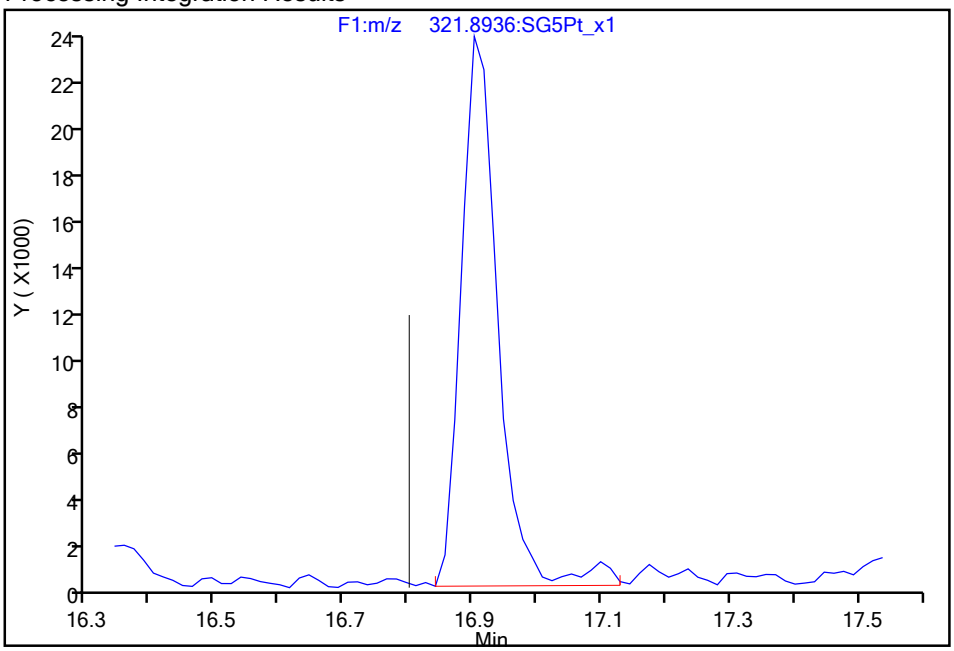

Manual Integration Results

RT = 16.902 Area = 89301 M

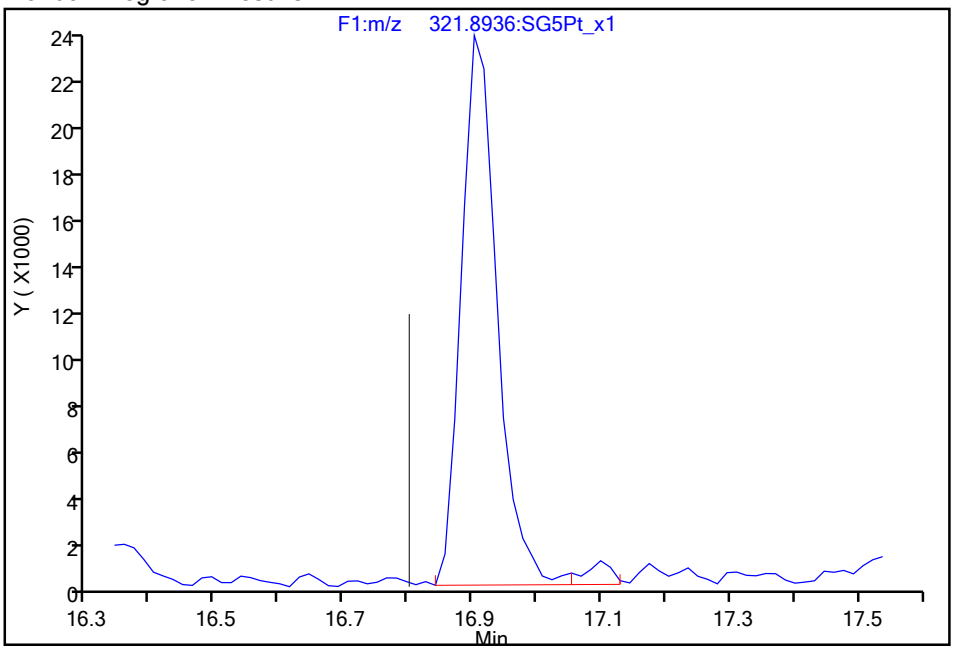

Reviewer: dadunj, 18-Aug-2021 11:16:57

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.80- 19.20)

Signal: 1

Processing Integration Results

RT = 17.809 Area = 20870

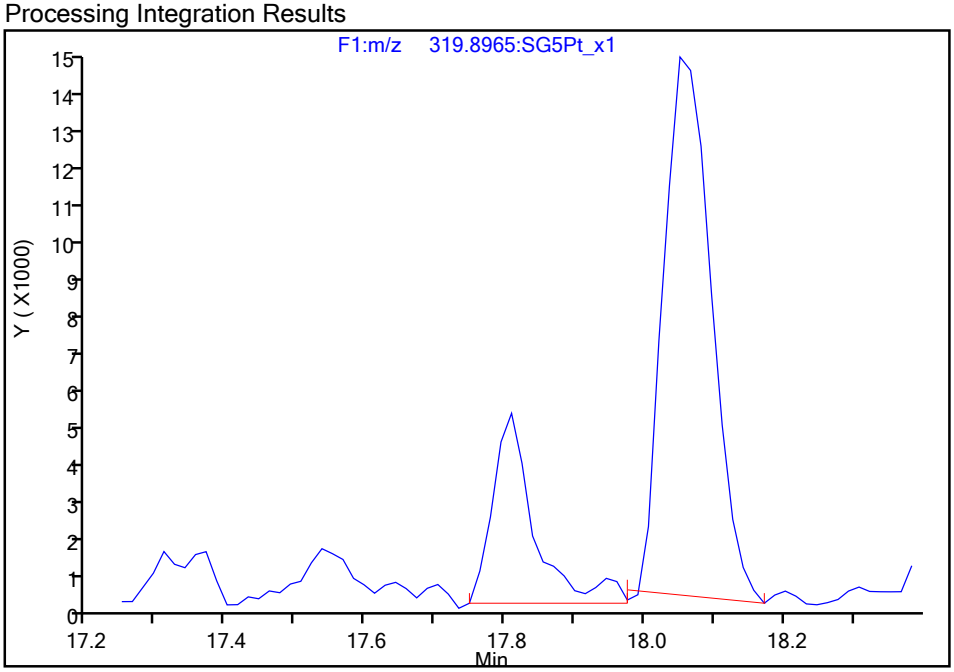

Manual Integration Results

RT = 17.809 Area = 18822 M

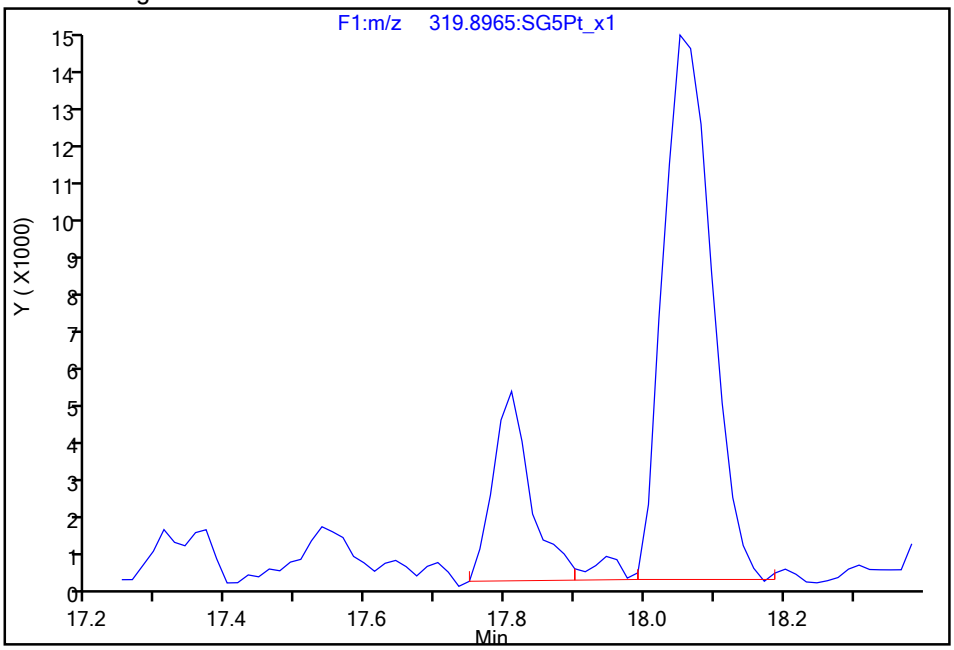

Reviewer: dadunj, 18-Aug-2021 11:16:57

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.38
Area: 18243
Amount: 0.067204
Amount Units: pg/ul

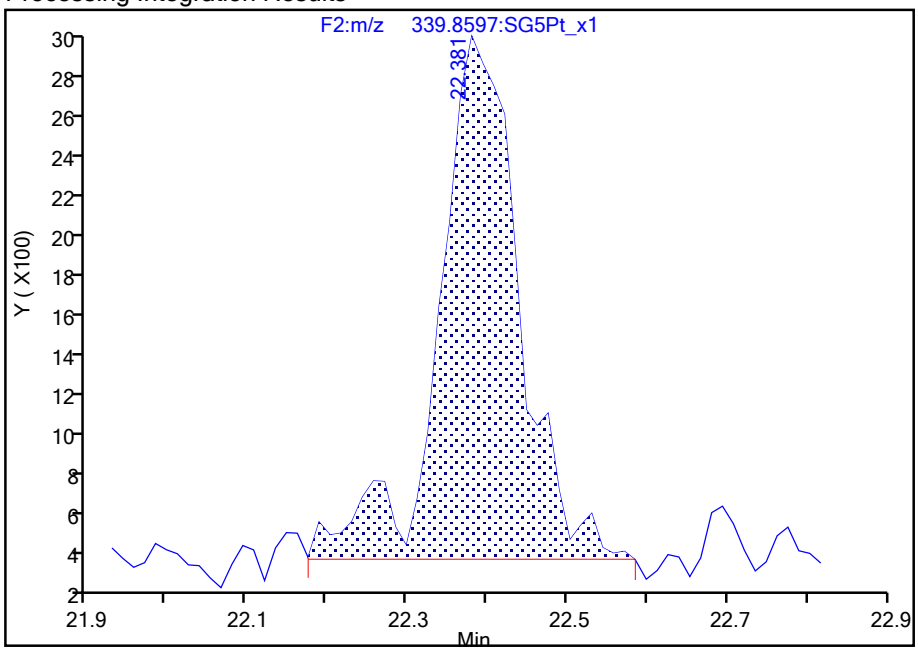

Manual Integration Results

RT: 22.38
Area: 16689
Amount: 0.063251
Amount Units: pg/ul

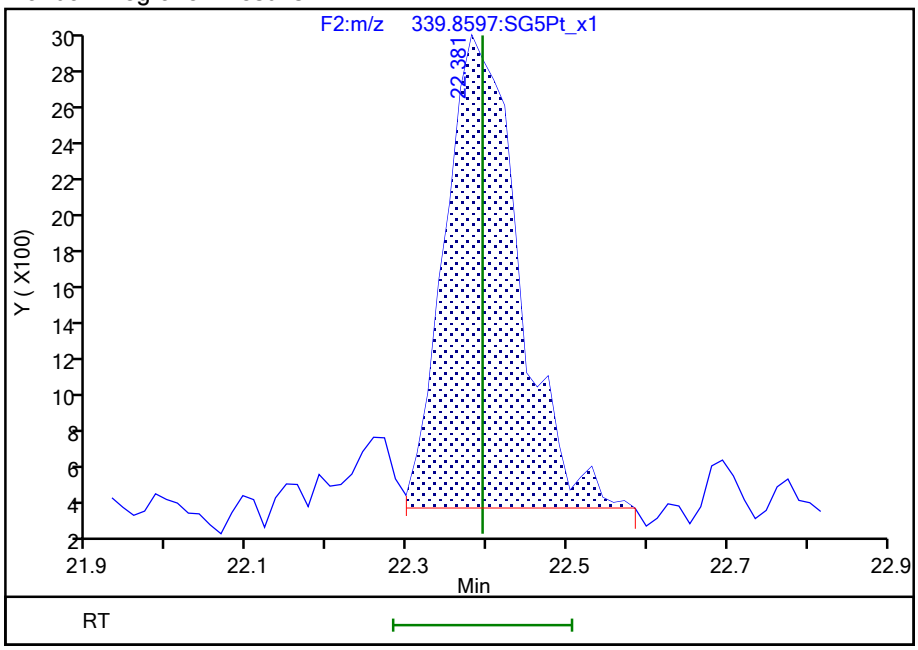

Reviewer: dadunj, 18-Aug-2021 11:17:04

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 2

Processing Integration Results

RT: 30.52
Area: 21039
Amount: 0.109349
Amount Units: pg/ul

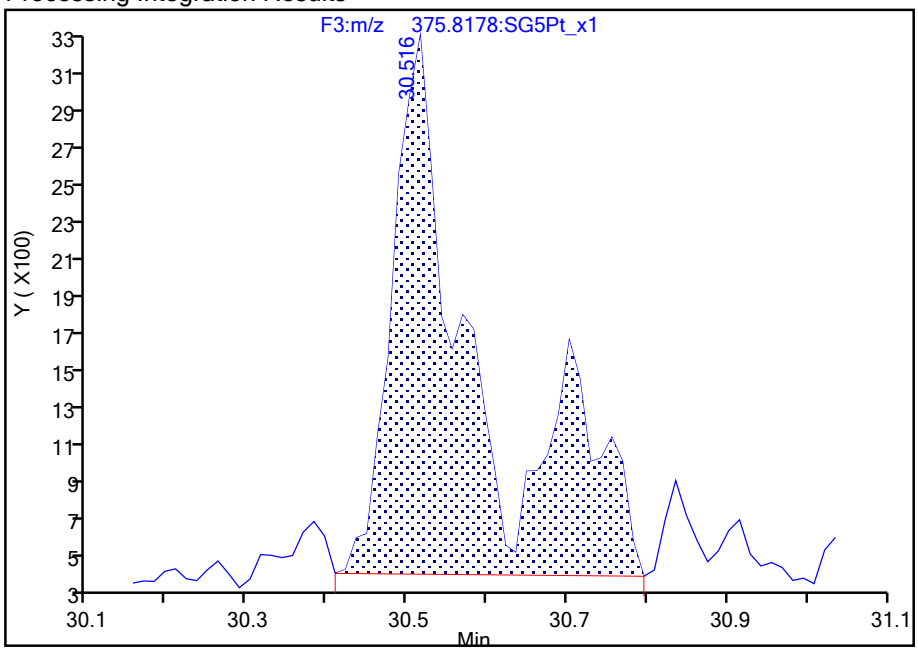

Manual Integration Results

RT: 30.52
Area: 14931
Amount: 0.092482
Amount Units: pg/ul

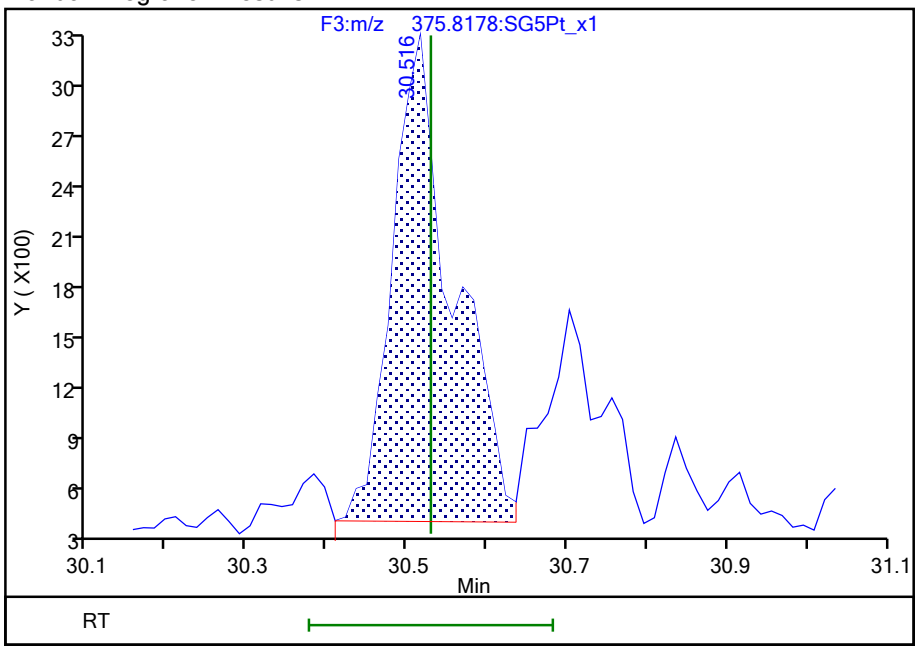

Reviewer: dadunj, 18-Aug-2021 11:17:17

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.72

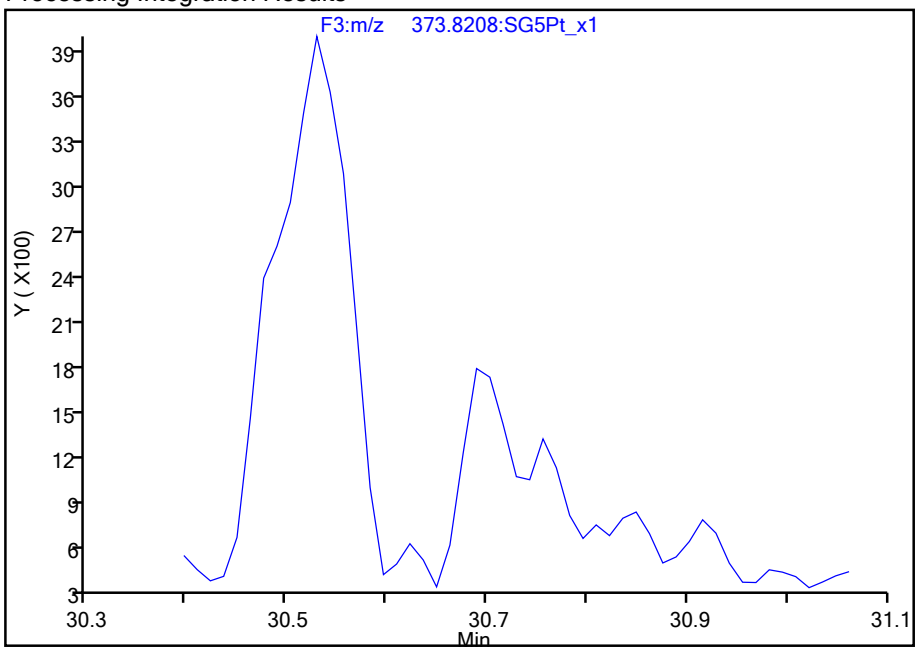

Manual Integration Results

RT: 30.69
Area: 7415
Amount: 0.037222
Amount Units: pg/ul

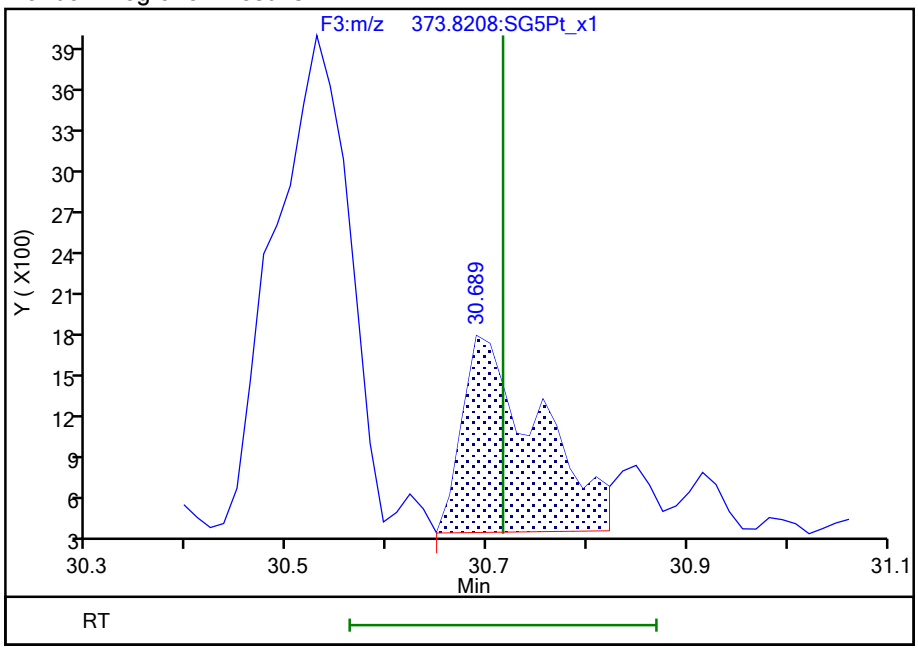

Reviewer: dadunj, 18-Aug-2021 11:17:24

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

774873

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.71
Area: 12626
Amount: 0.092660
Amount Units: pg/ul

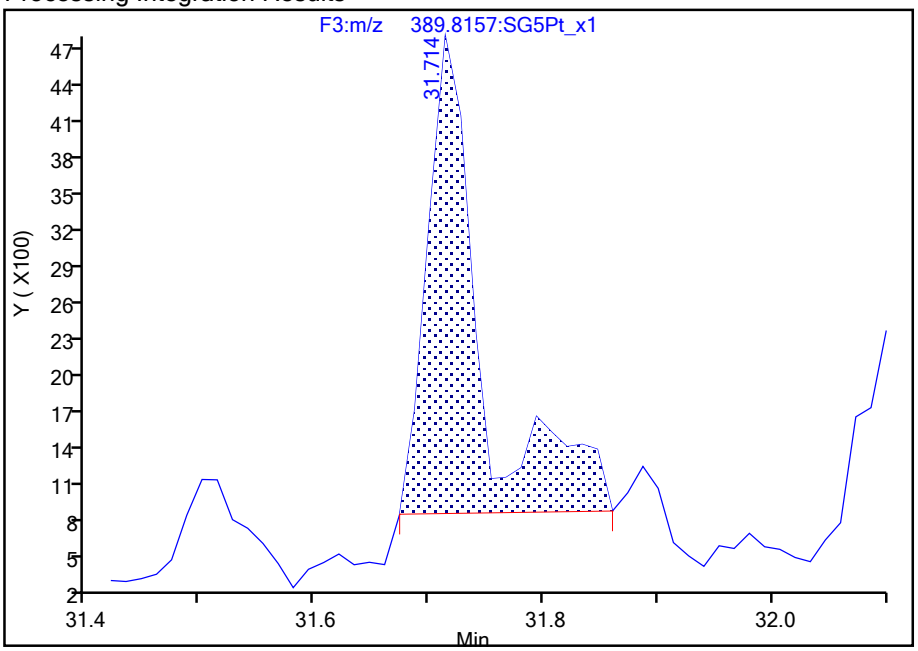

Manual Integration Results

RT: 31.71
Area: 9827
Amount: 0.070658
Amount Units: pg/ul

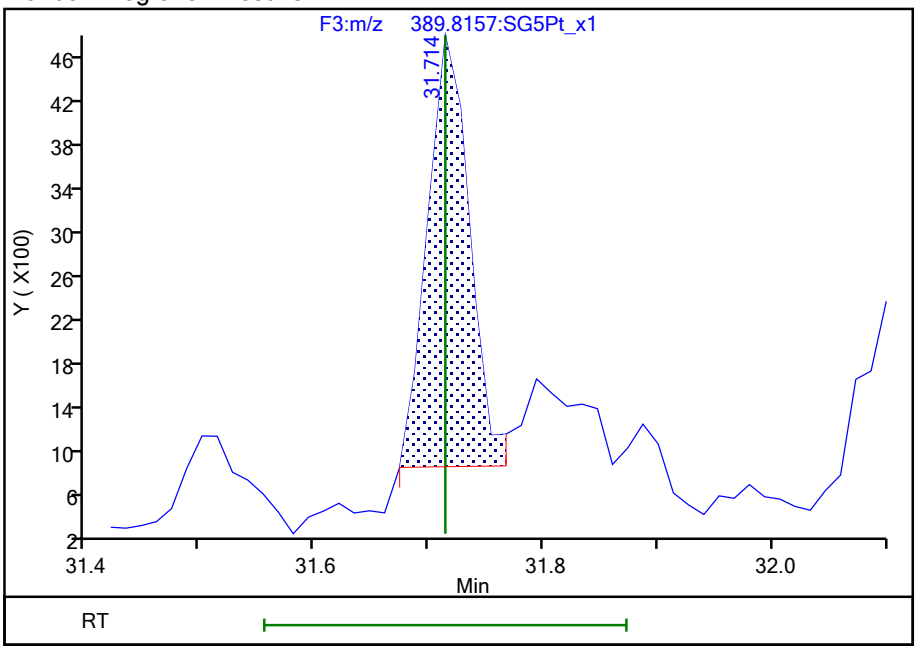

Reviewer: dadunj, 18-Aug-2021 11:17:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.69
Area: 11438
Amount: 0.092660
Amount Units: pg/ul

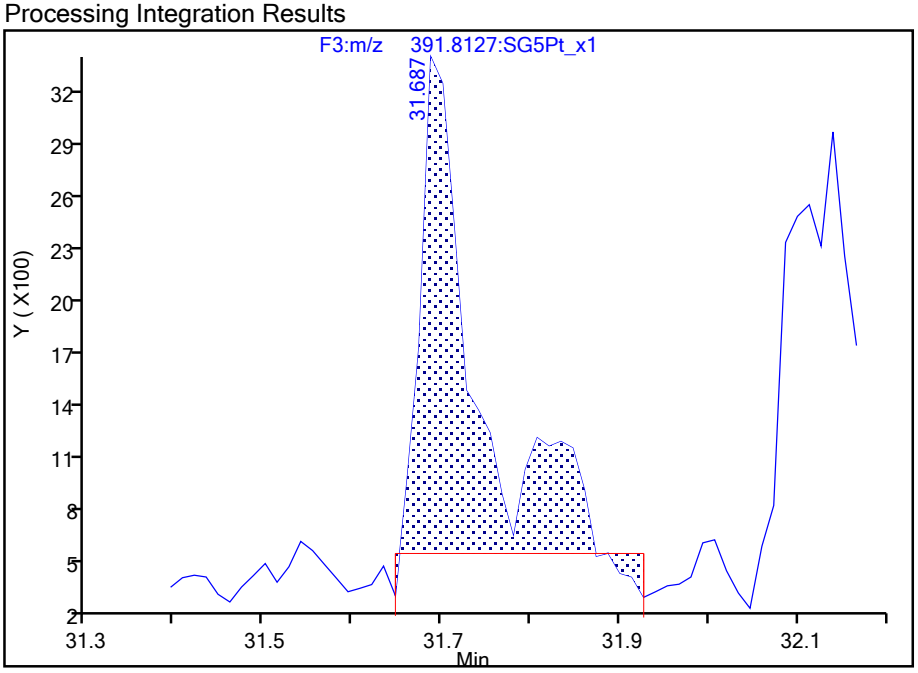

Manual Integration Results

RT: 31.69
Area: 8523
Amount: 0.070658
Amount Units: pg/ul

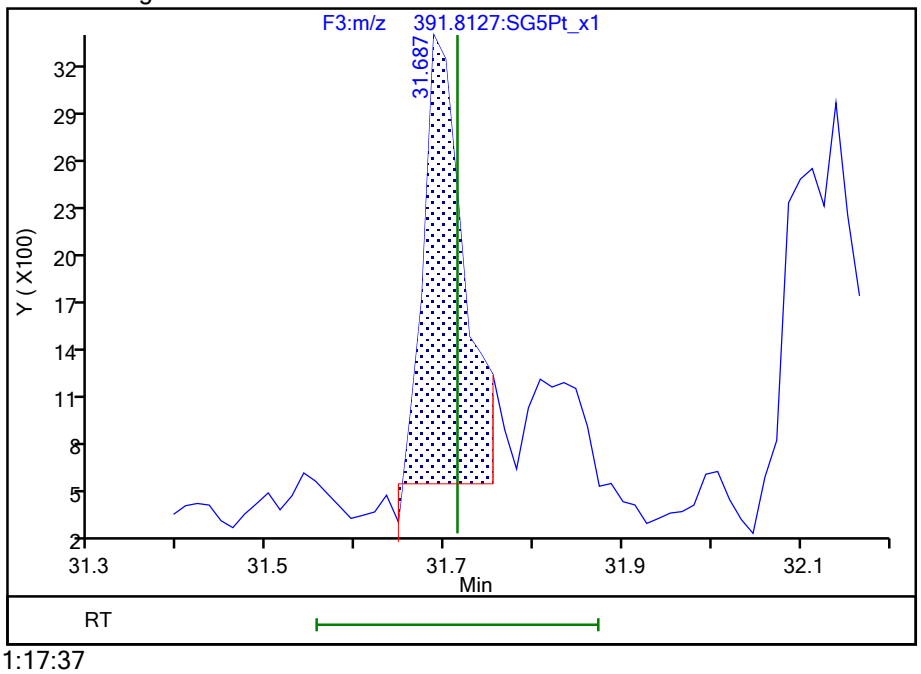

Reviewer: dadunj, 18-Aug-2021 11:17:37

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 32.14
Area: 10926
Amount: 0.086778
Amount Units: pg/ul

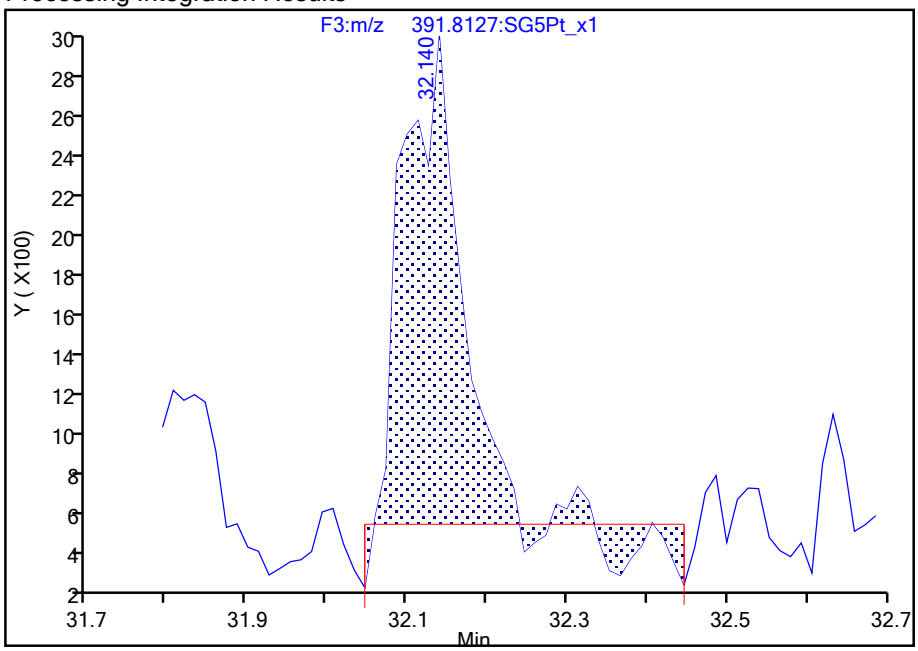

Manual Integration Results

RT: 32.14
Area: 11667
Amount: 0.089325
Amount Units: pg/ul

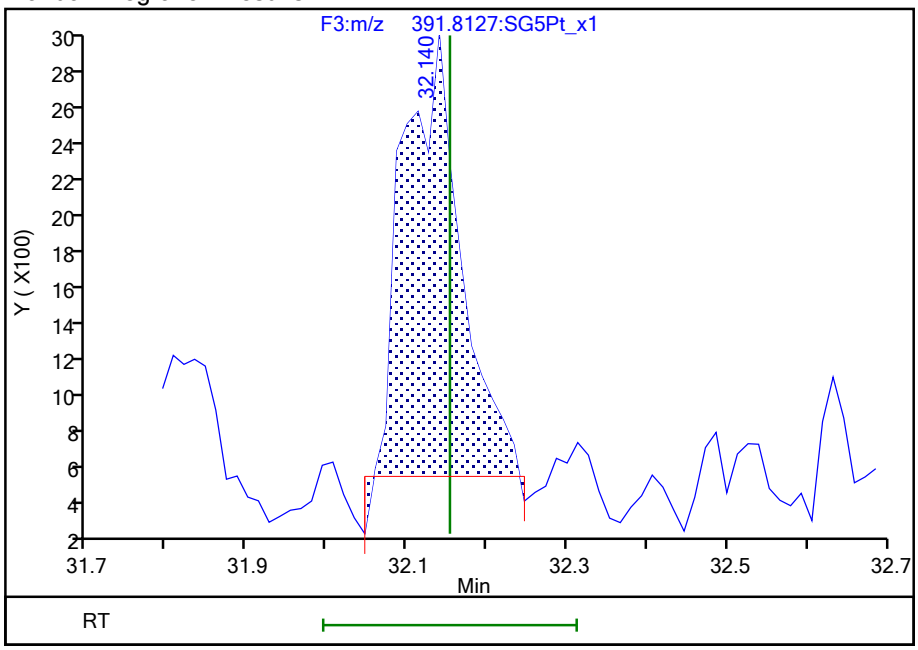

Reviewer: dadunj, 18-Aug-2021 11:17:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.75
Area: 10705
Amount: 0.074520
Amount Units: pg/ul

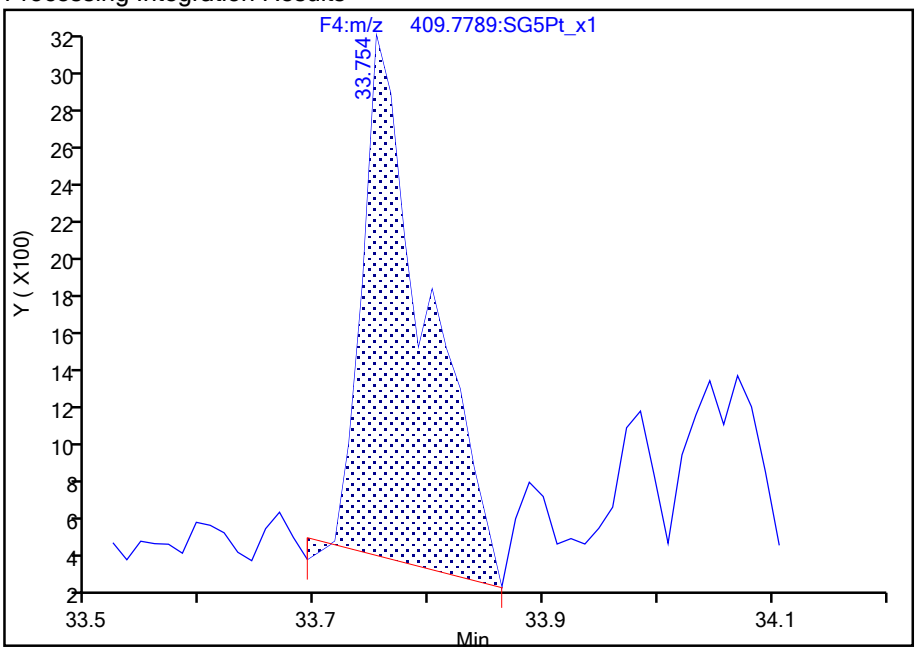

Manual Integration Results

RT: 33.75
Area: 10310
Amount: 0.073151
Amount Units: pg/ul

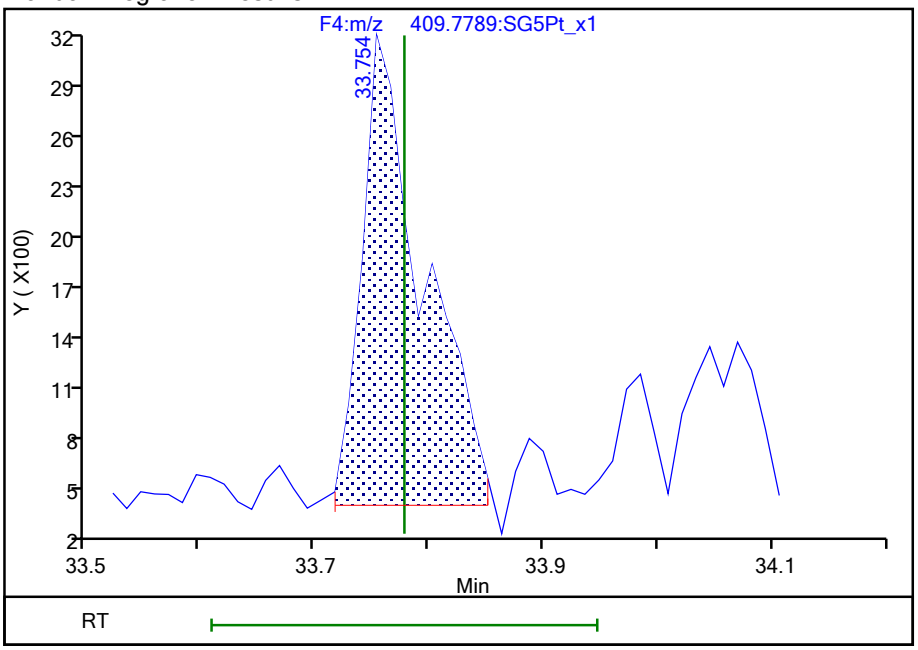

Reviewer: dadunj, 18-Aug-2021 11:17:59

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.78
Area: 12910
Amount: 0.074520
Amount Units: pg/ul

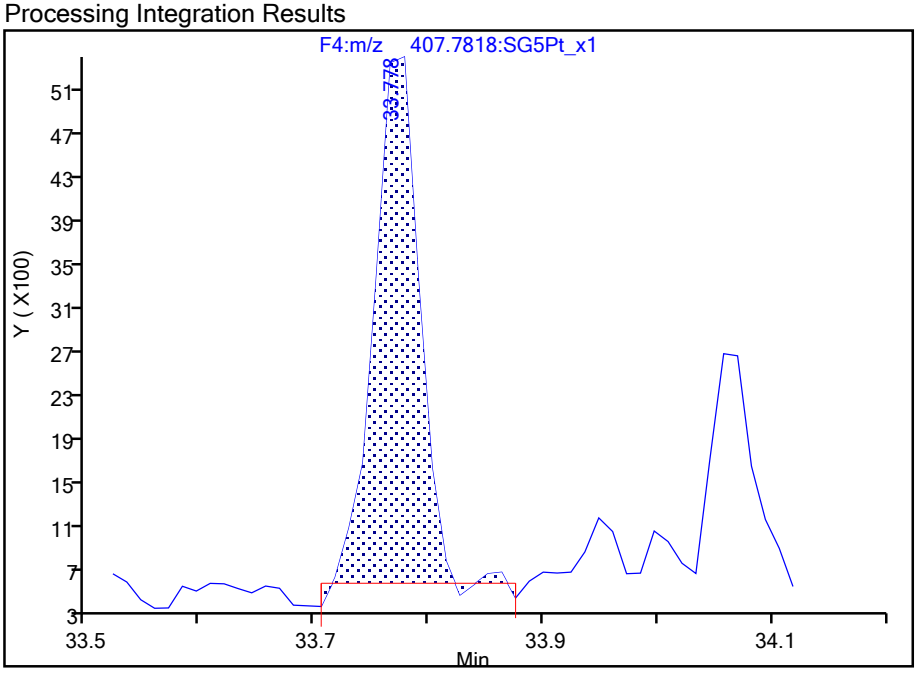

Manual Integration Results

RT: 33.78
Area: 12871
Amount: 0.073151
Amount Units: pg/ul

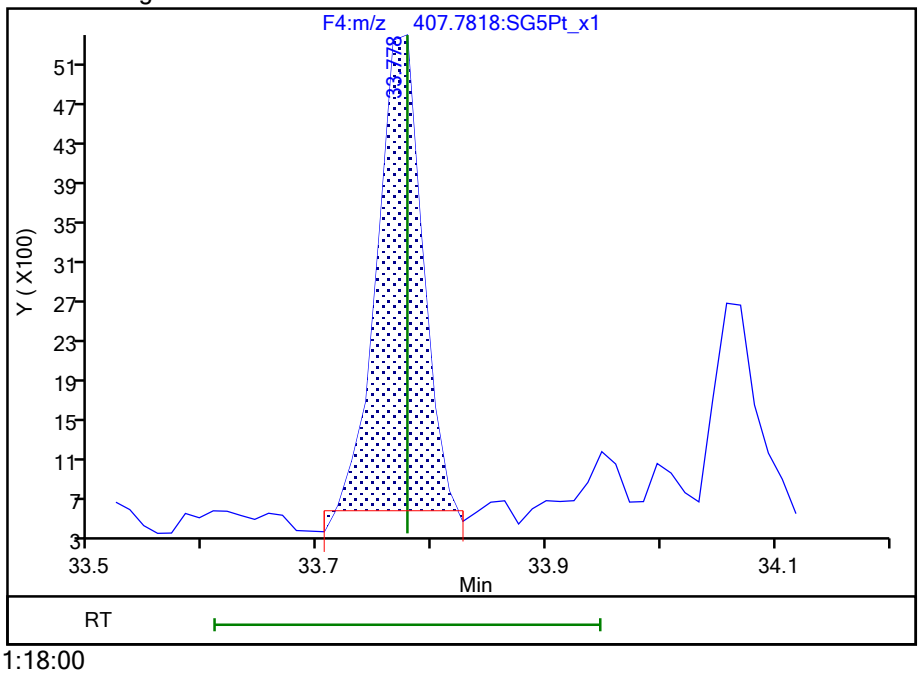

Reviewer: dadunj, 18-Aug-2021 11:18:00

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

774878

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 13571
Amount: 0.125326
Amount Units: pg/ul

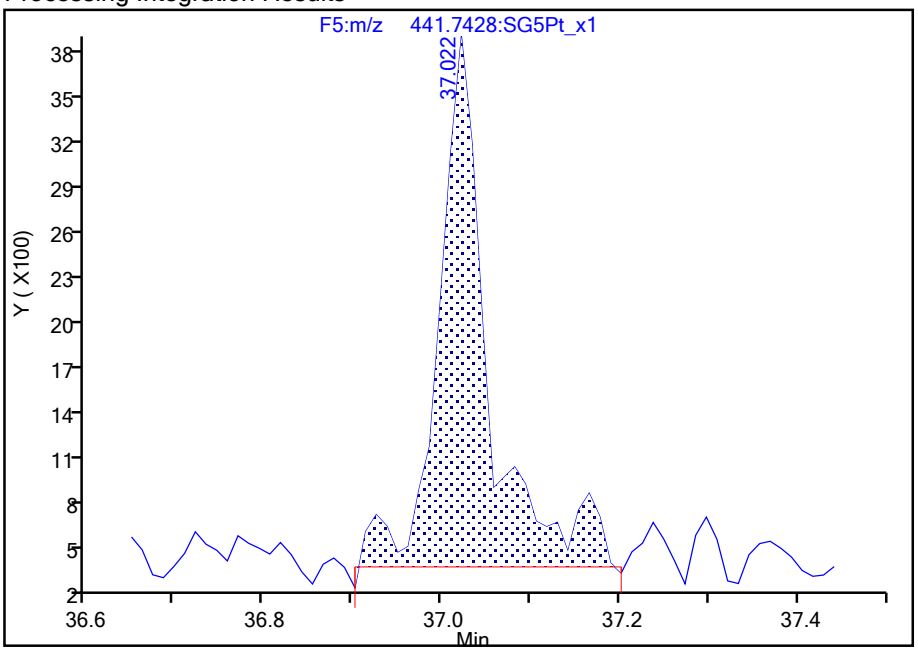

Manual Integration Results

RT: 37.02
Area: 11763
Amount: 0.100734
Amount Units: pg/ul

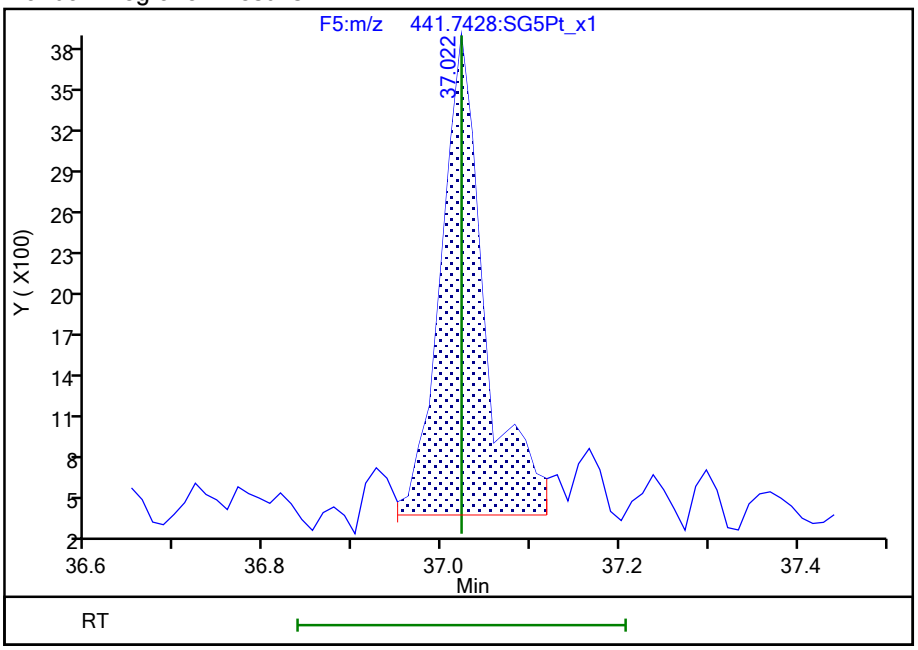

Reviewer: dadunj, 18-Aug-2021 11:18:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d				
Injection Date:	15-Aug-2021 09:36:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-7-A	Lab Sample ID:	320-76769-7		
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Operator ID:	DB	ALS Bottle#:	53	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.01
Area: 13587
Amount: 0.125326
Amount Units: pg/ul

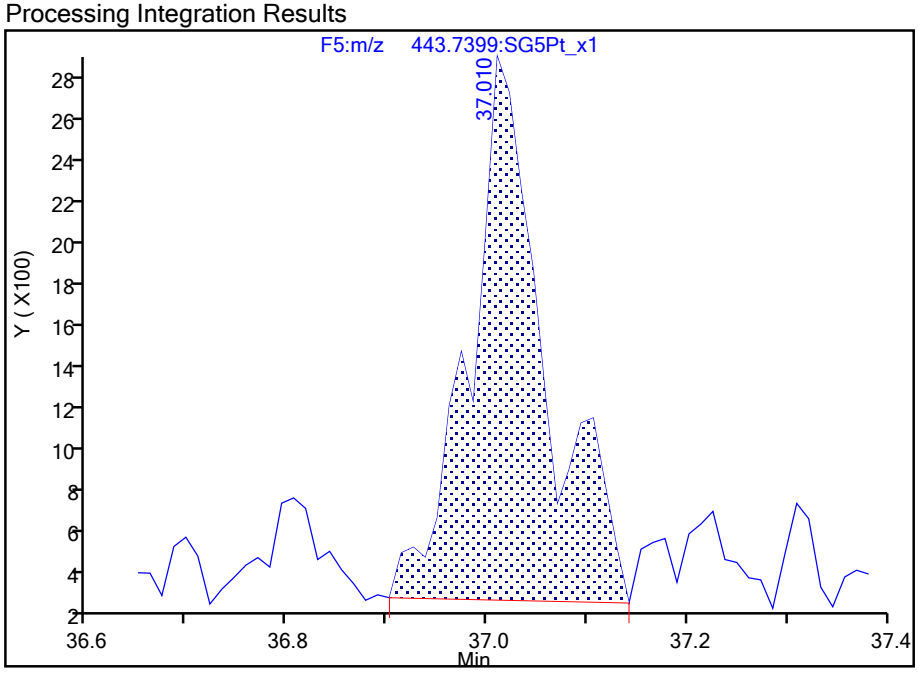

Manual Integration Results

RT: 37.01
Area: 10066
Amount: 0.100734
Amount Units: pg/ul

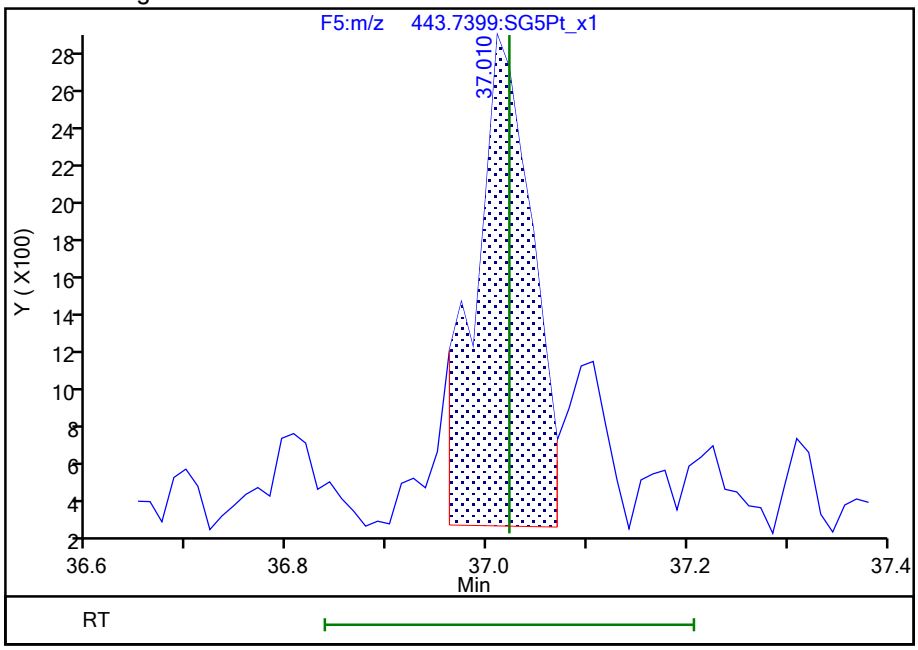

Reviewer: dadunj, 18-Aug-2021 11:18:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Injection Date:	15-Aug-2021 09:36:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	516847	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

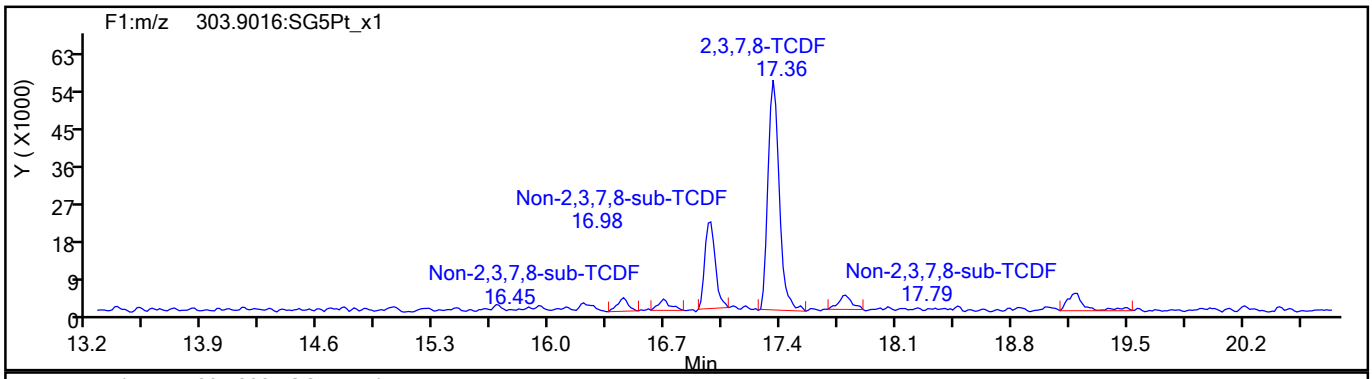

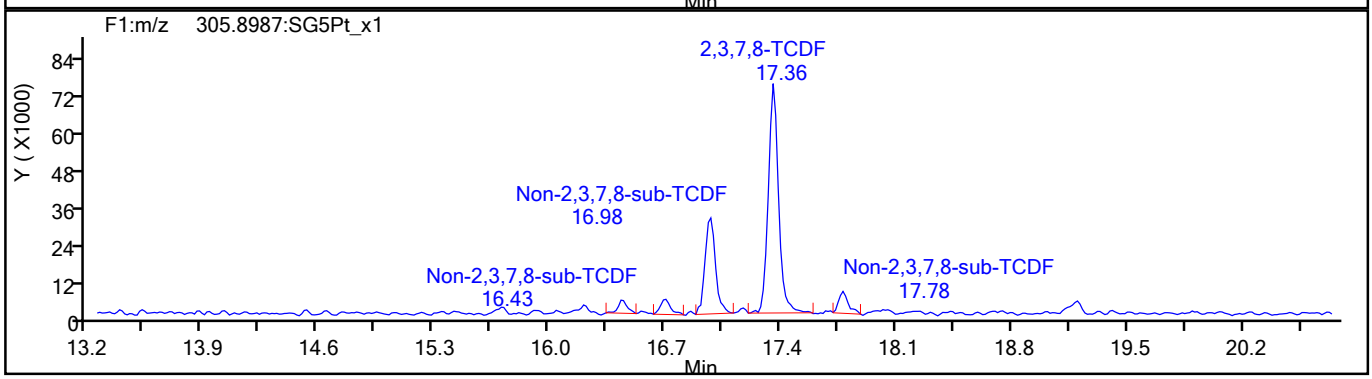

TCDF Standards

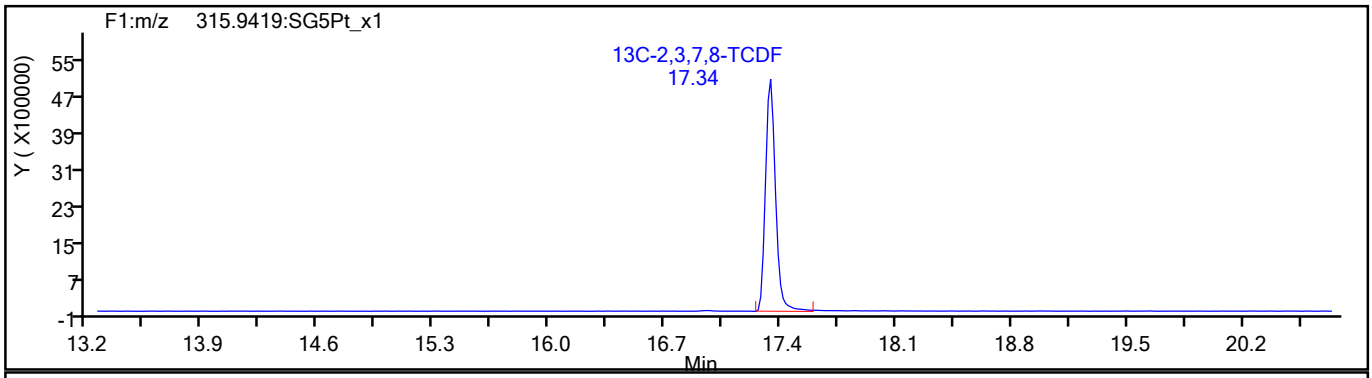

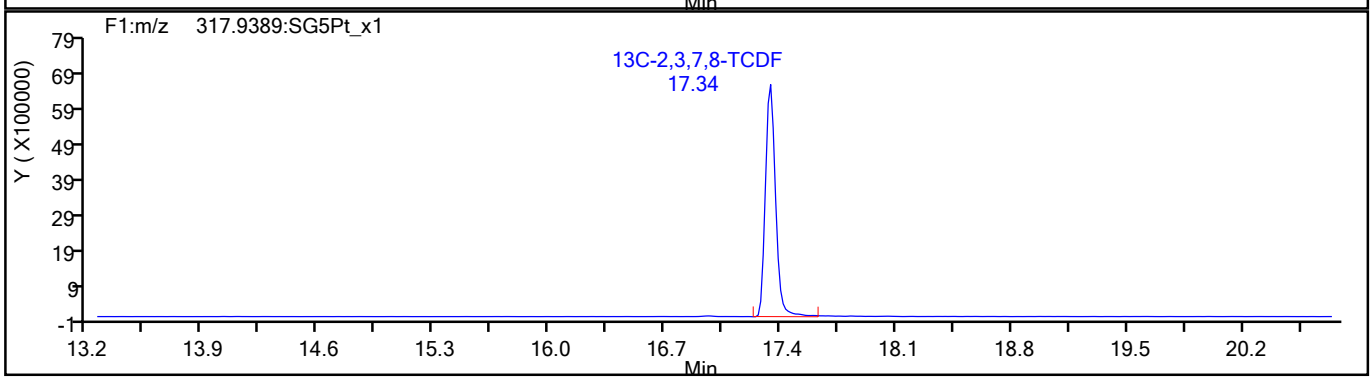

774881

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Injection Date:	15-Aug-2021 09:36:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	516847	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

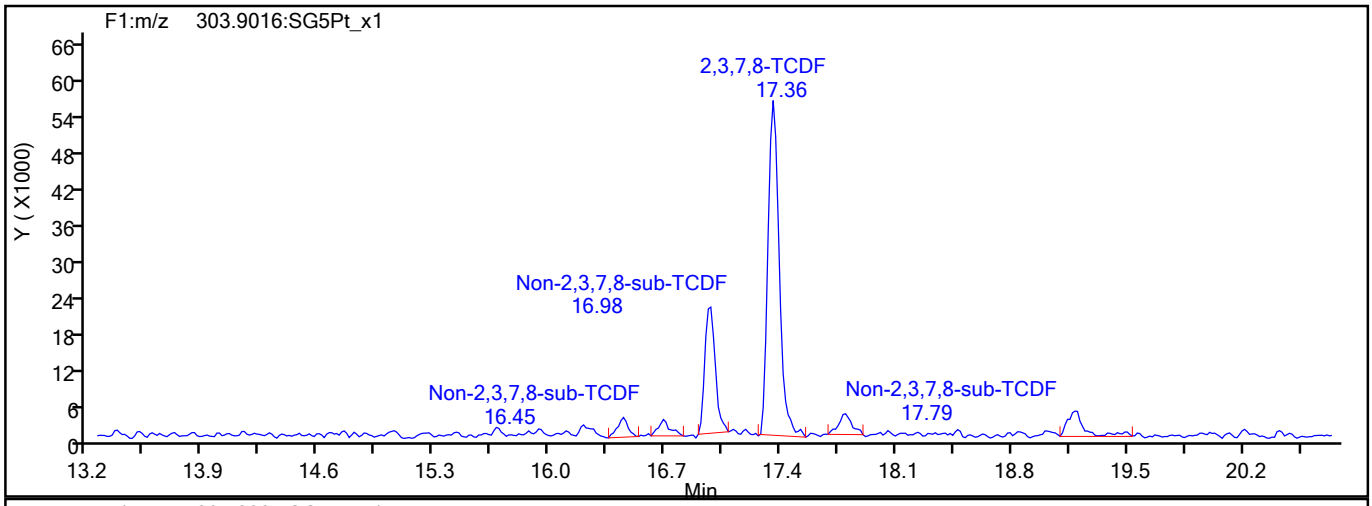

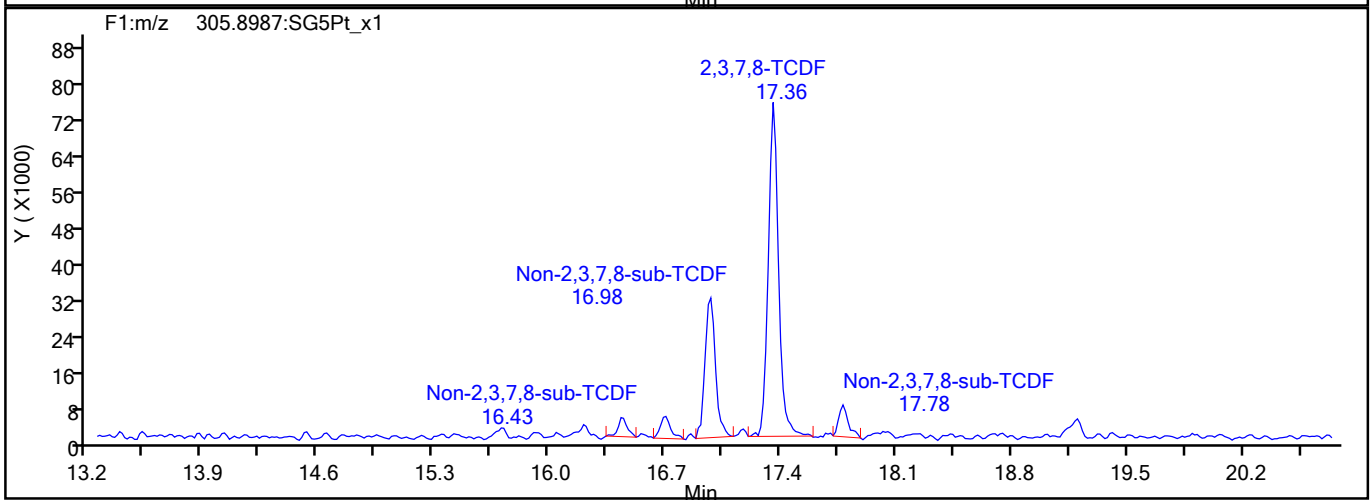

TCDF Interference Mass

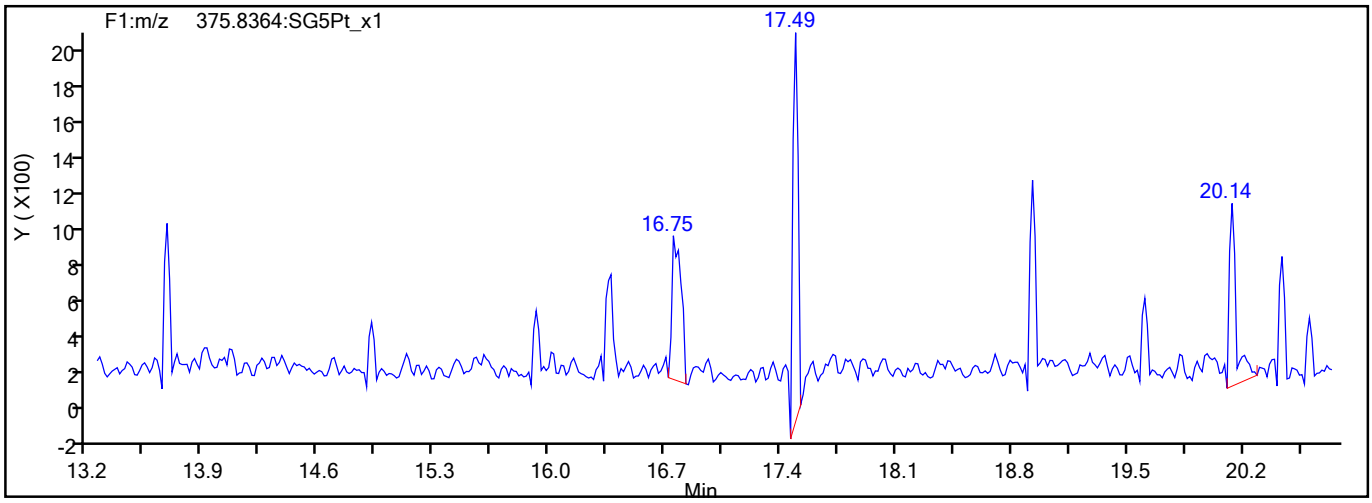

774882

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Injection Date:	15-Aug-2021 09:36:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	516847	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

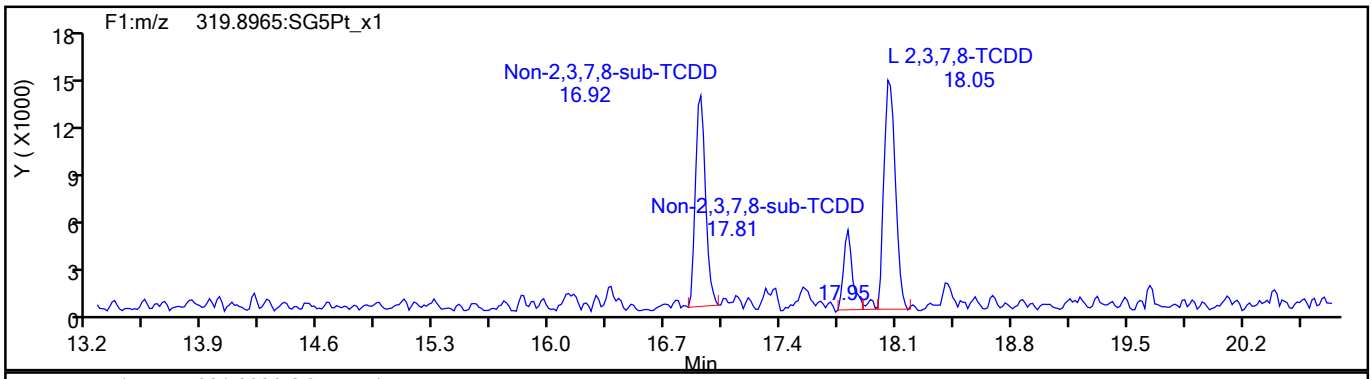

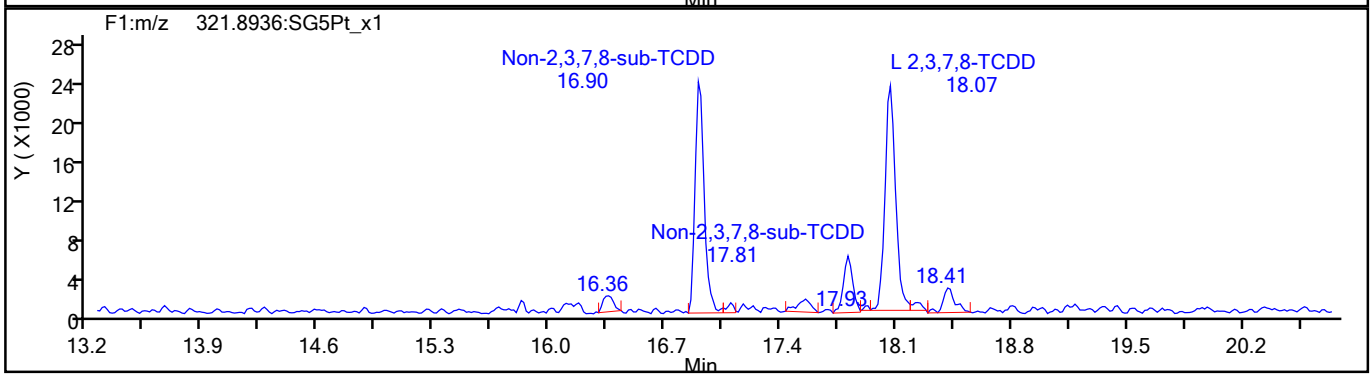

TCDD Standards

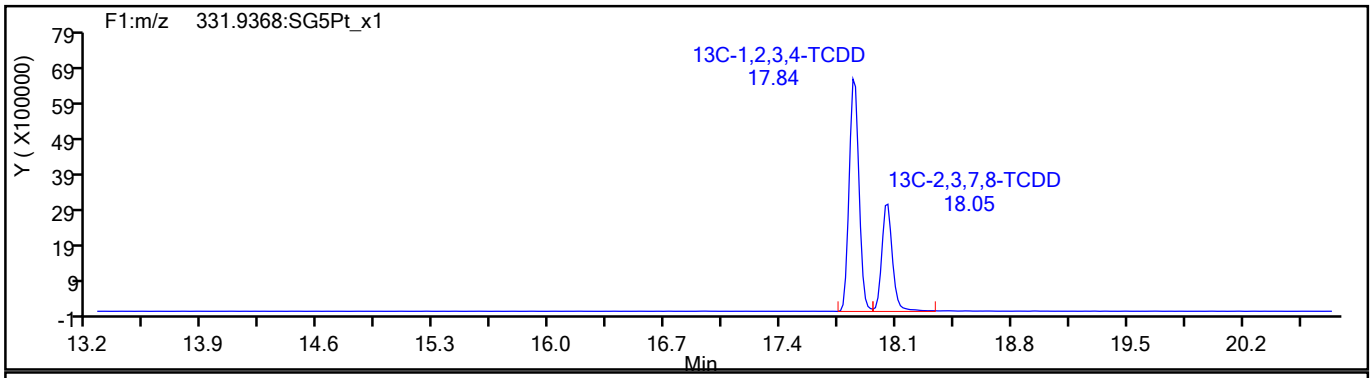

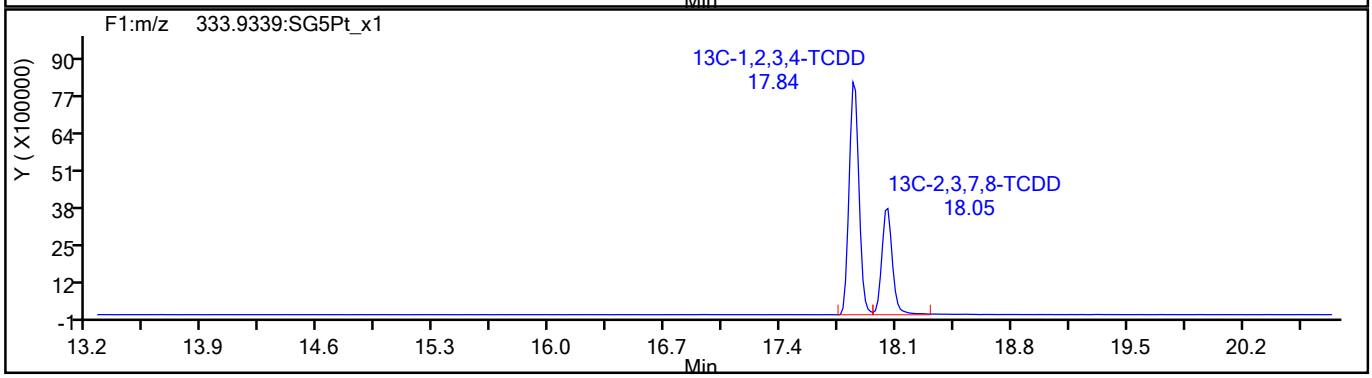

774883

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Injection Date:	15-Aug-2021 09:36:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	516847	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

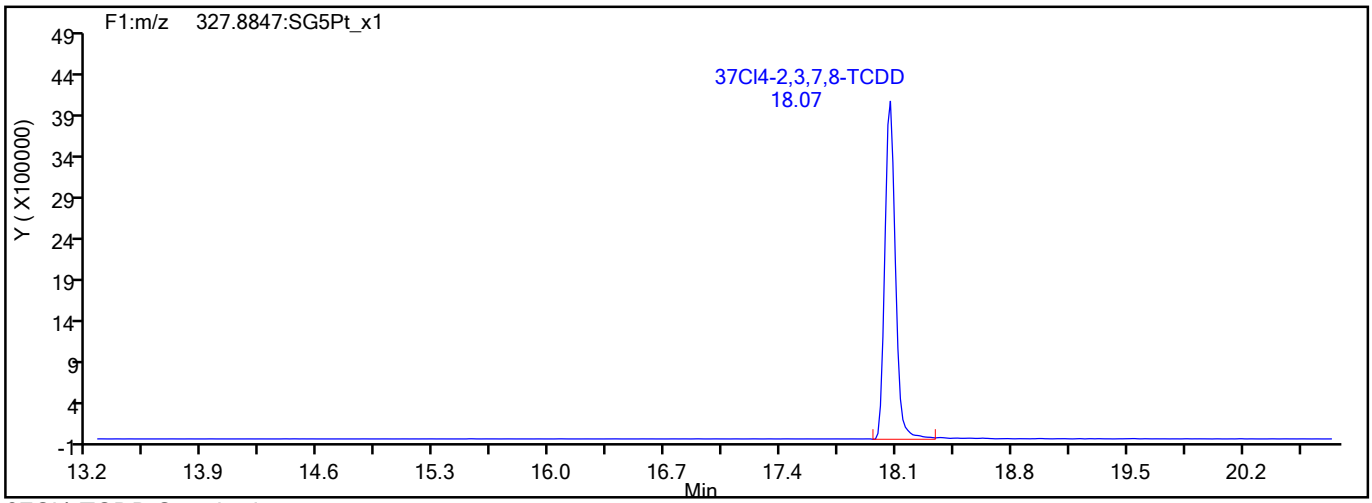

37Cl4-TCDD Standards

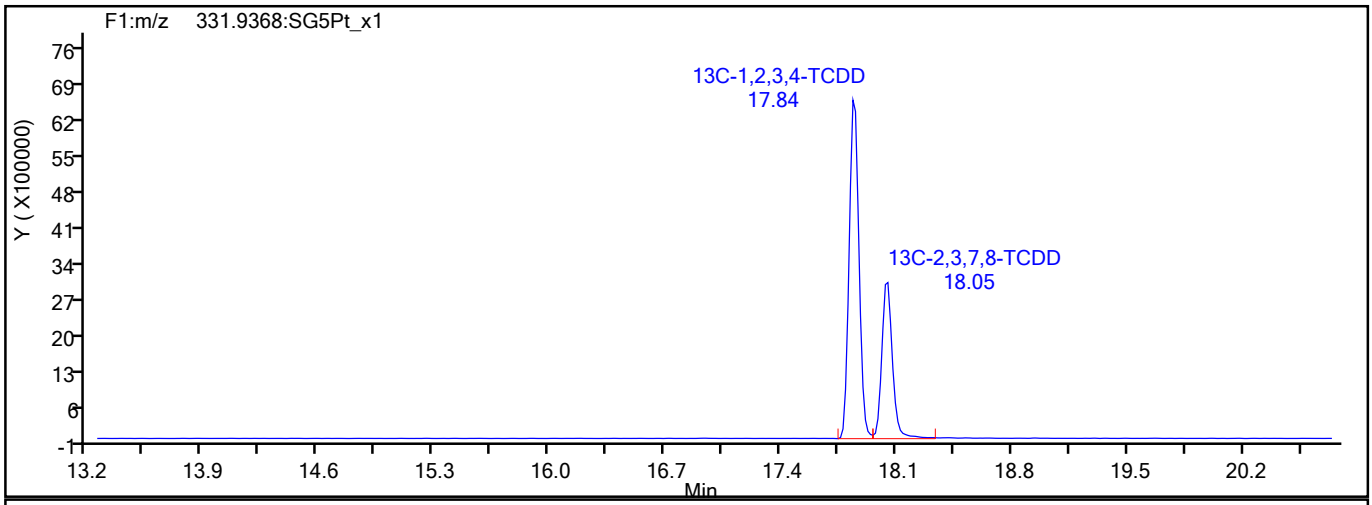

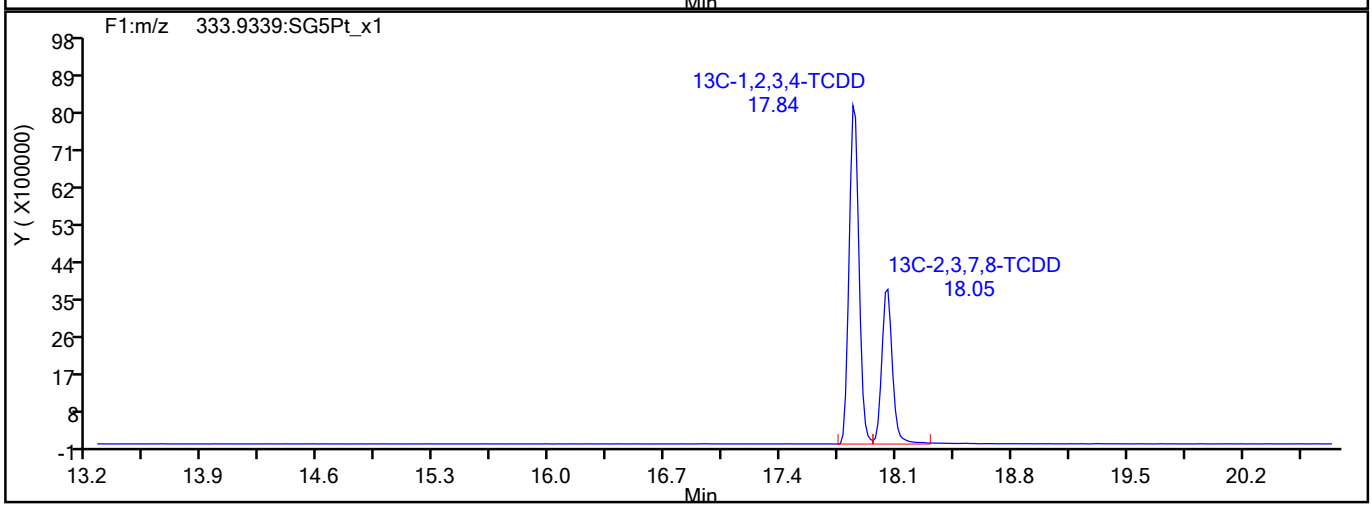

774884

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Injection Date:	15-Aug-2021 09:36:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	516847	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

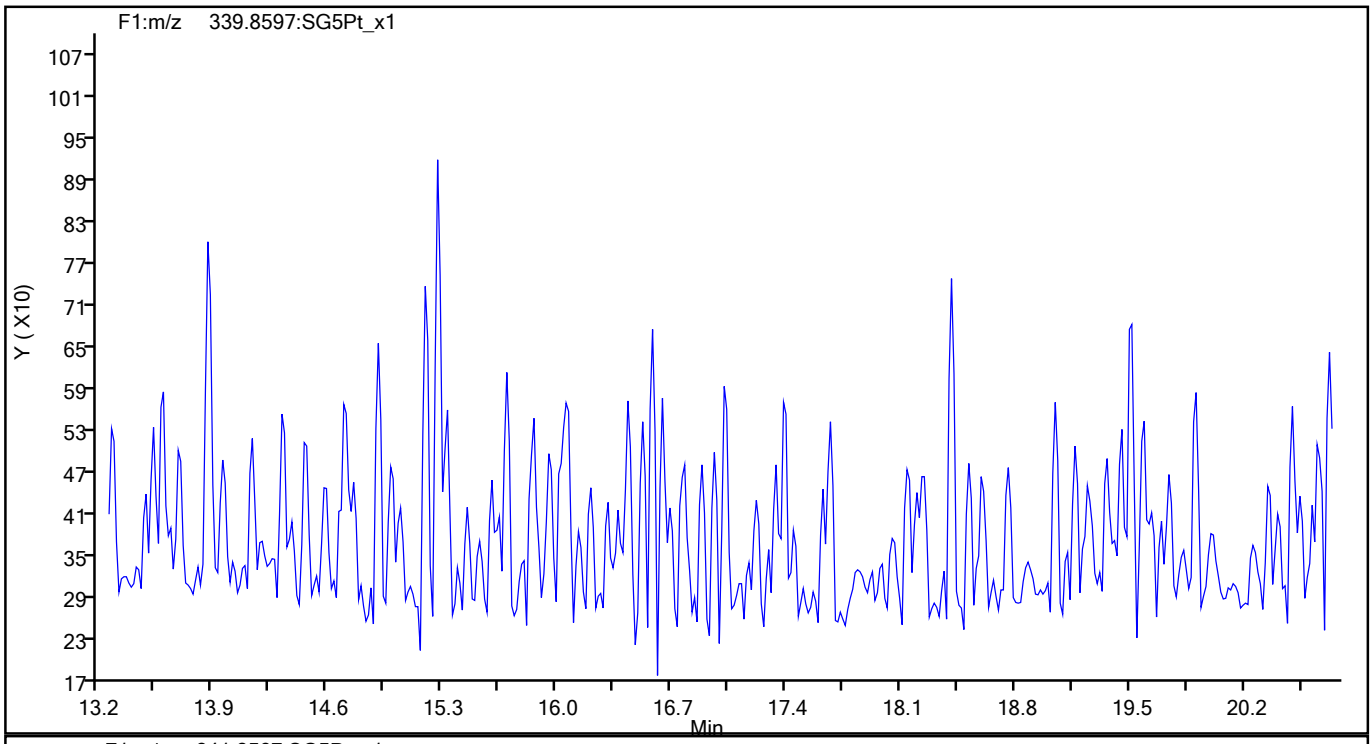

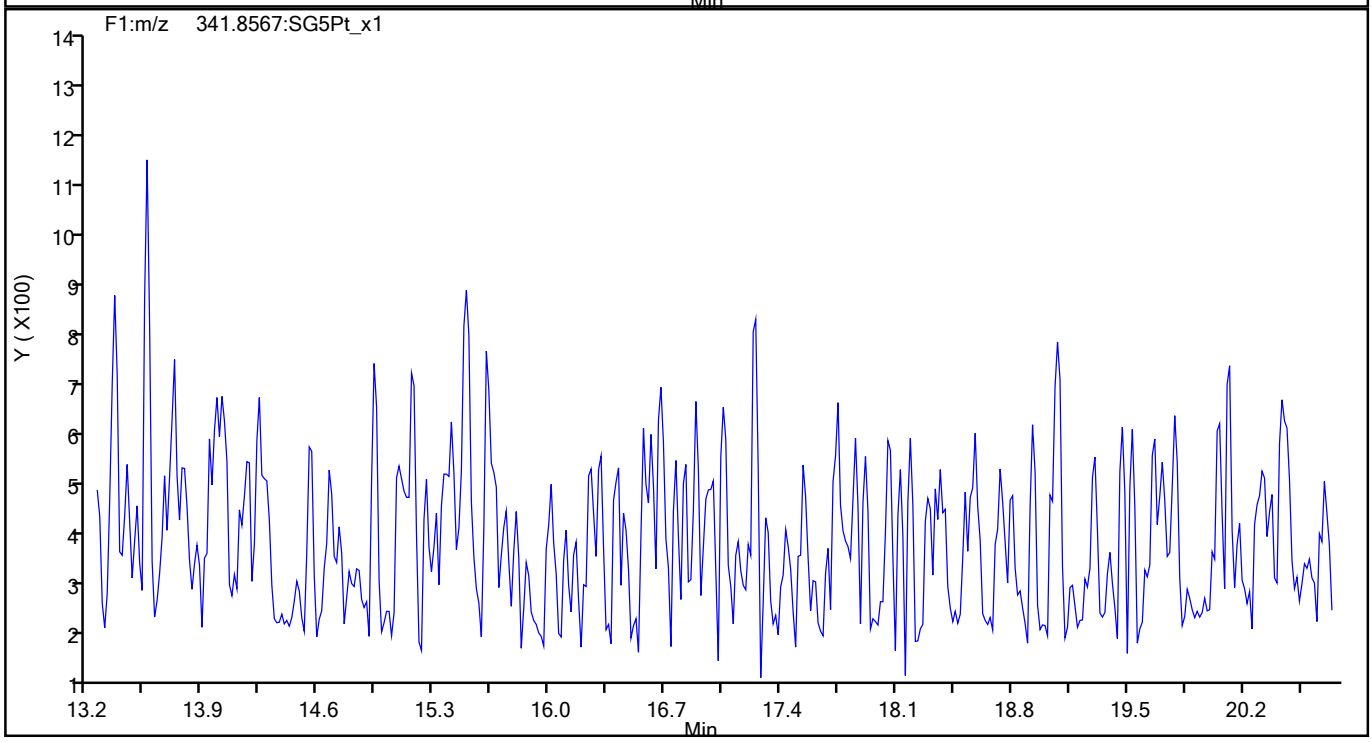

774885

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Injection Date:	15-Aug-2021 09:36:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	516847	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

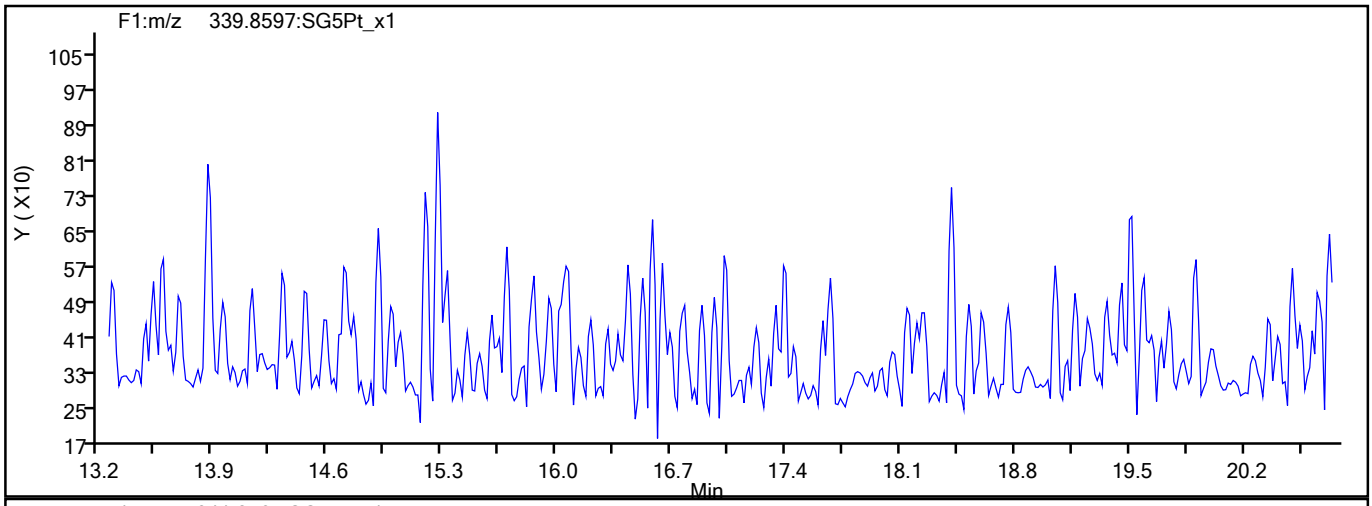

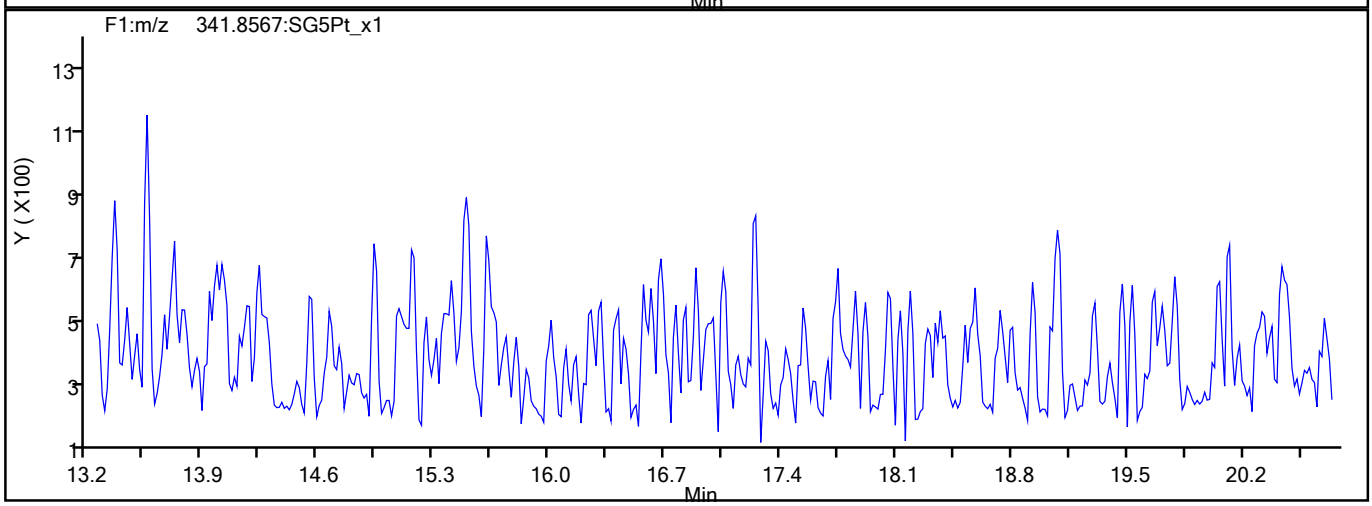

F1 PeCDFs Interference Mass

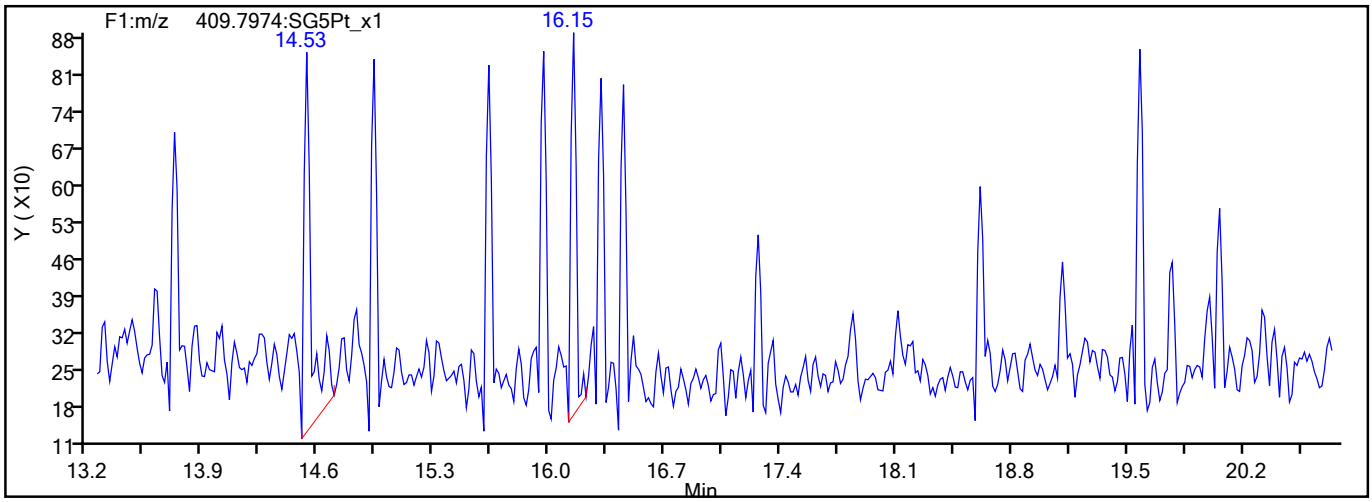

774886

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Injection Date:	15-Aug-2021 09:36:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	516847	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

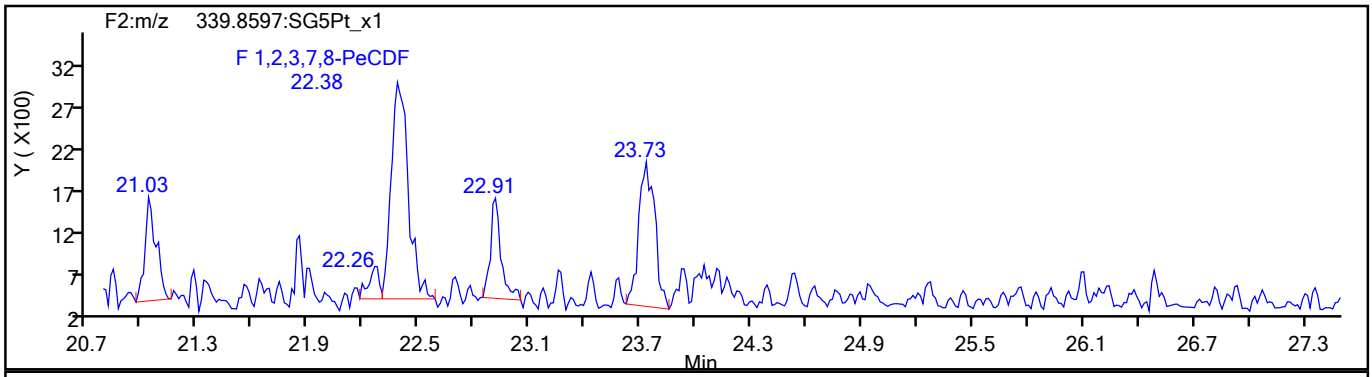

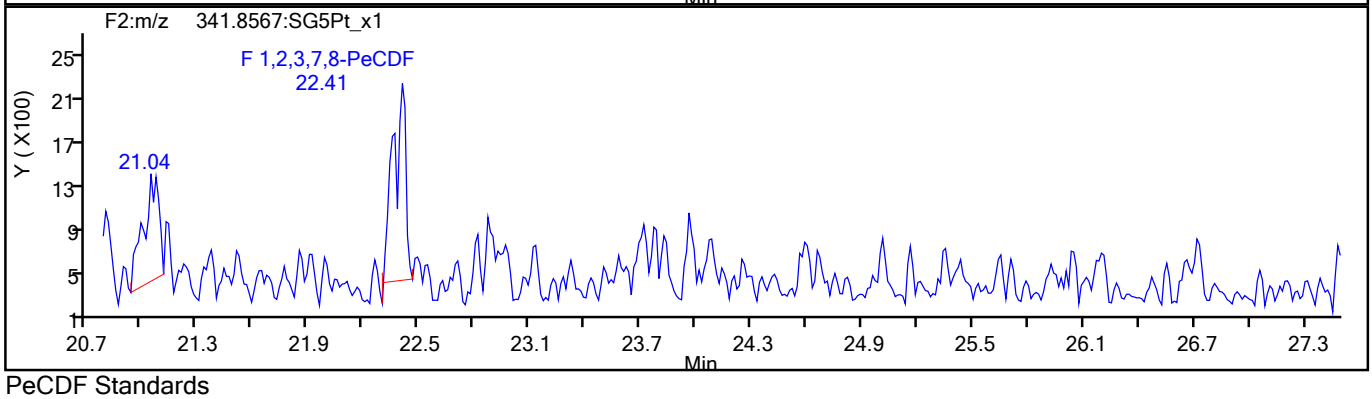

PeCDF Standards

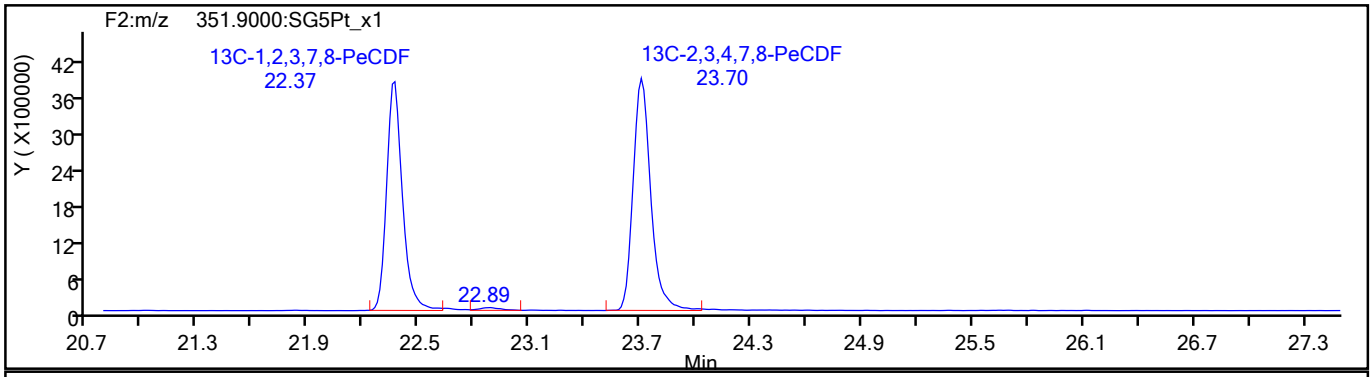

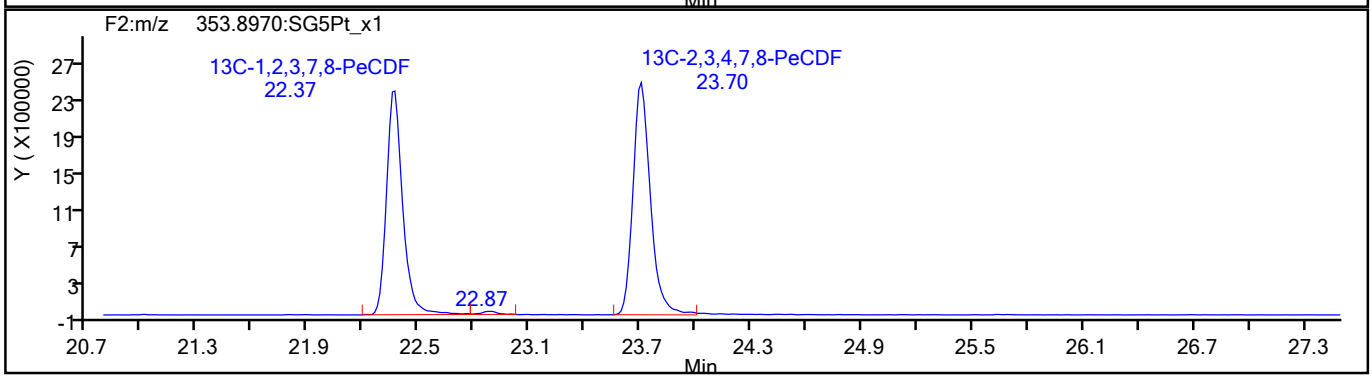

774887

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Injection Date:	15-Aug-2021 09:36:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	516847	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

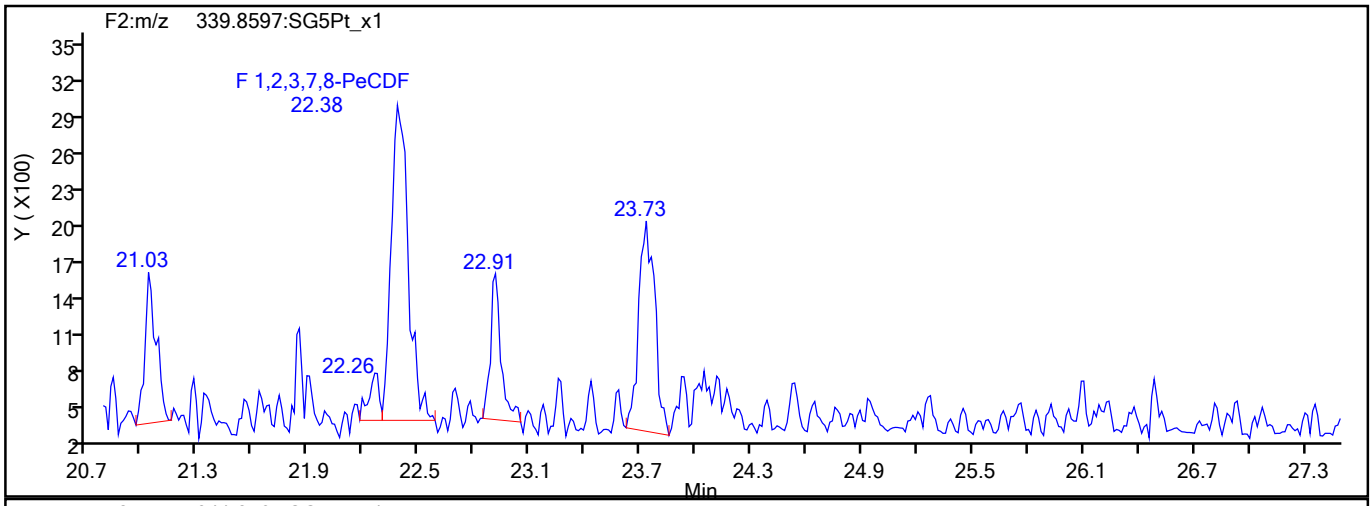

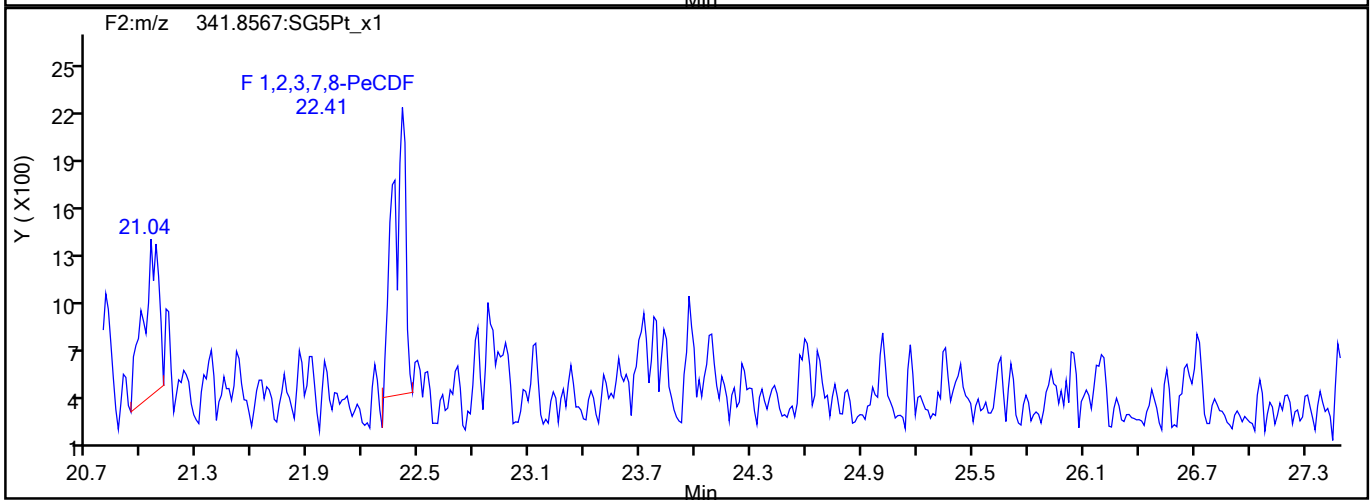

PeCDF Interference Mass

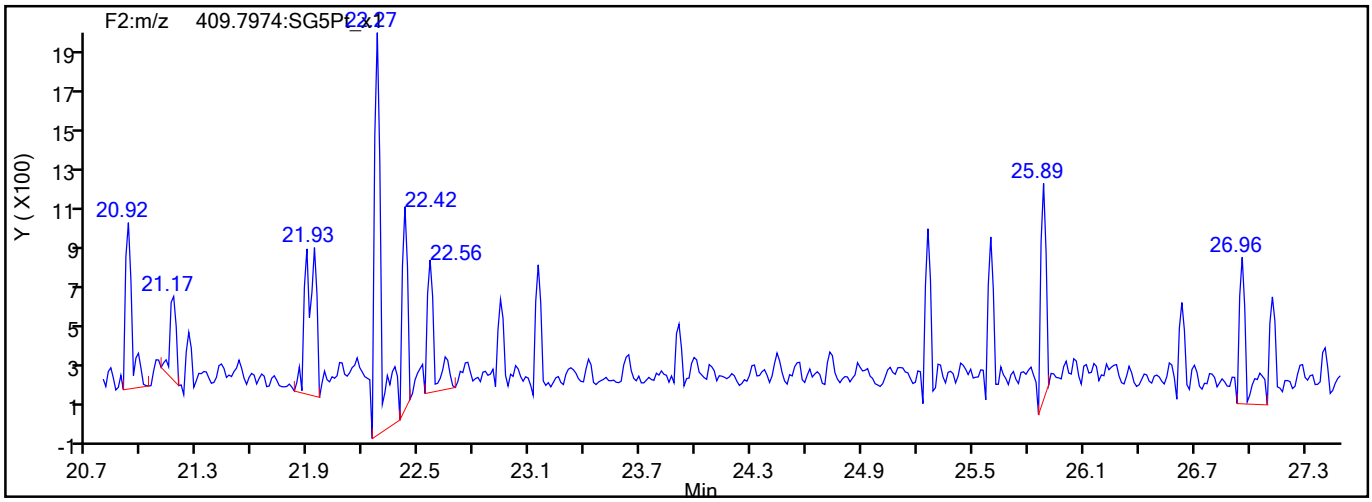

774888

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	516847	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

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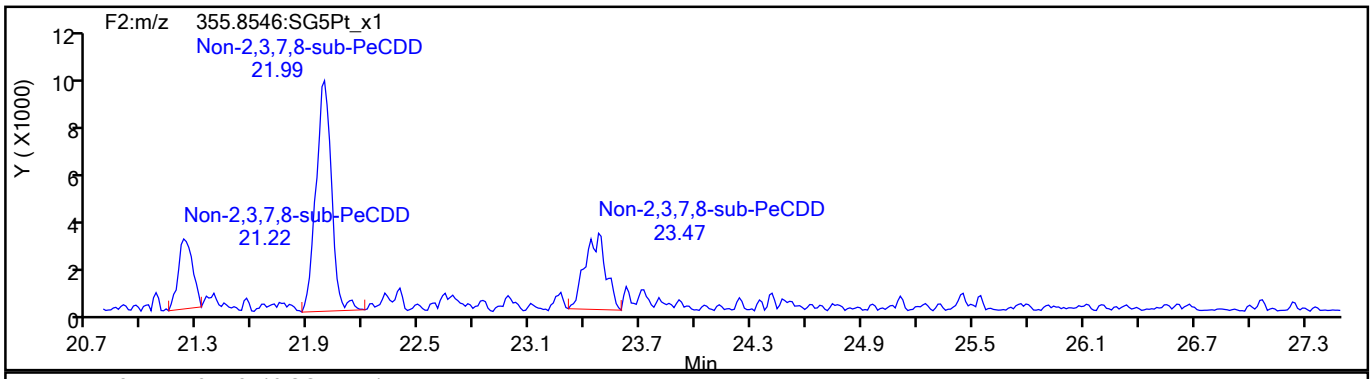

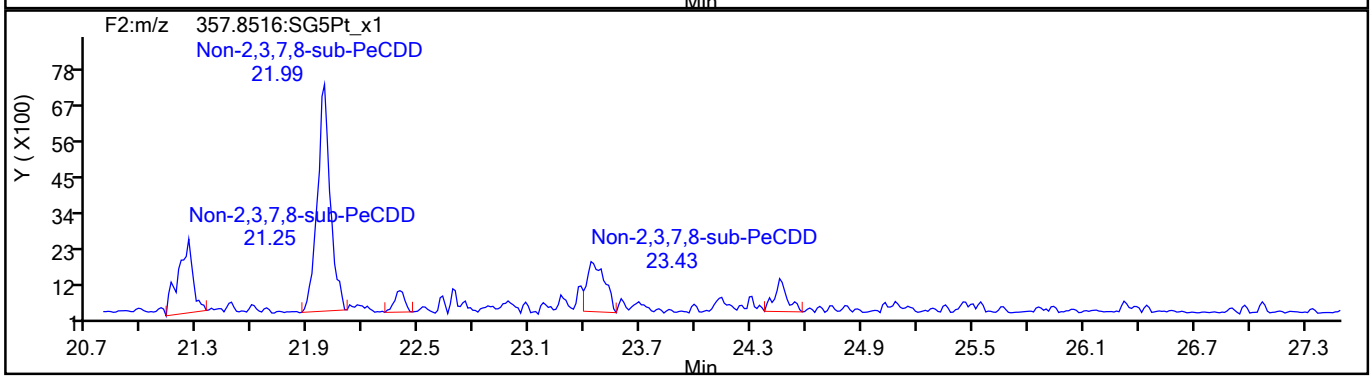

PeCDD Standards

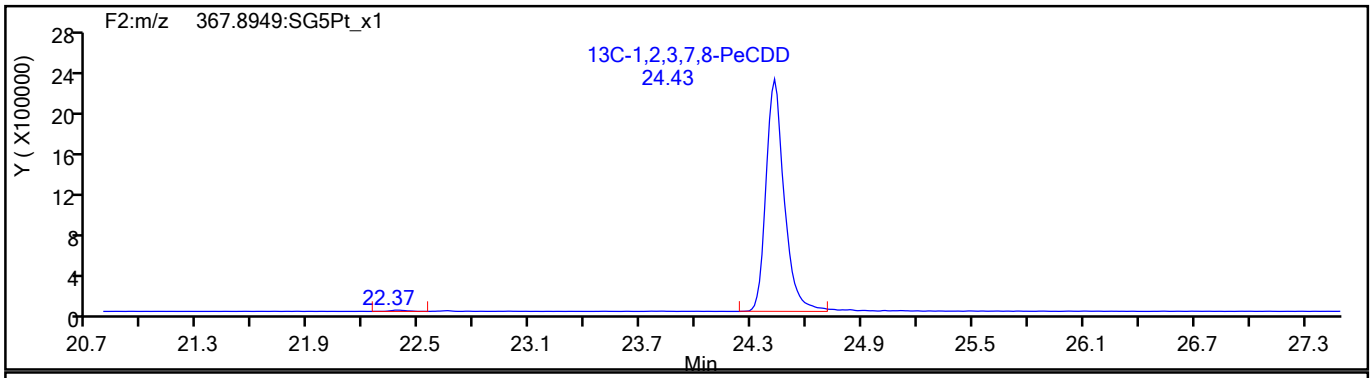

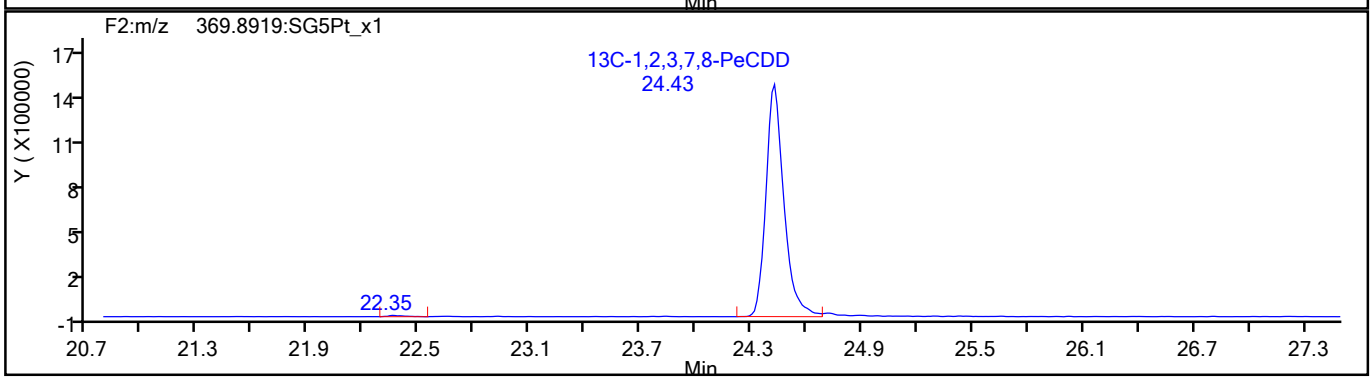

774889

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
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HxCDF

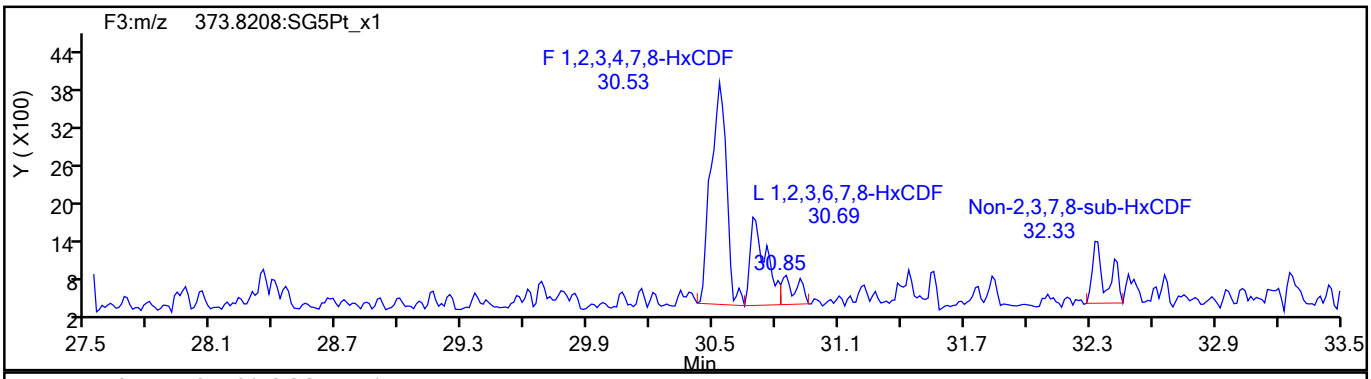

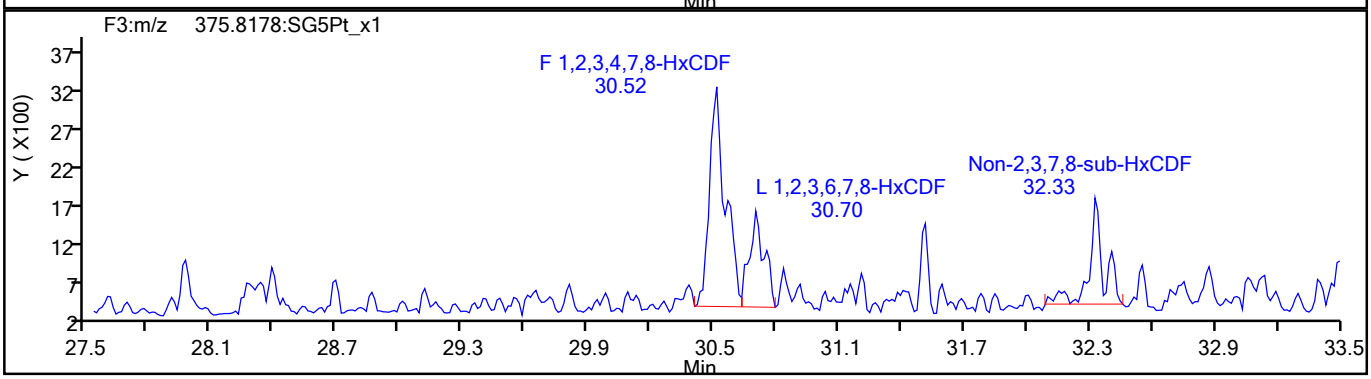

HxCDF Standards

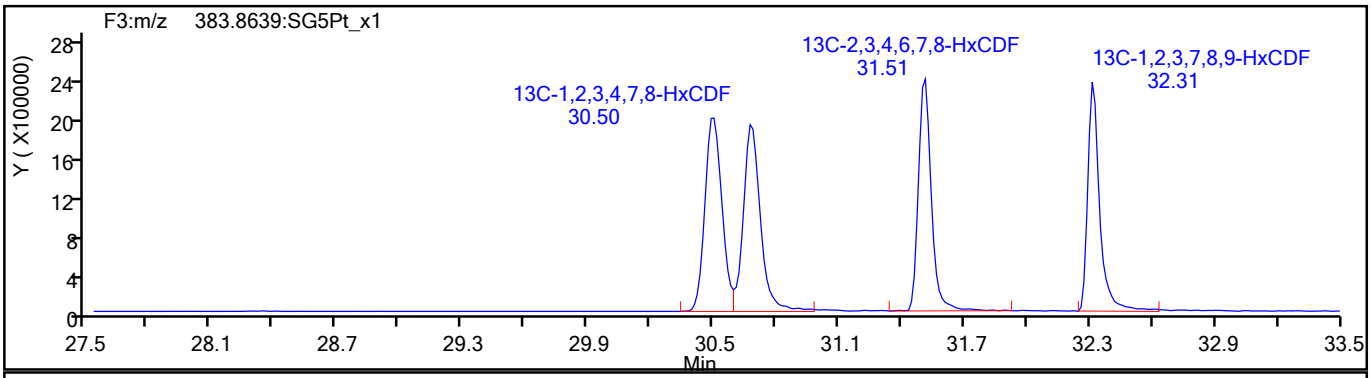

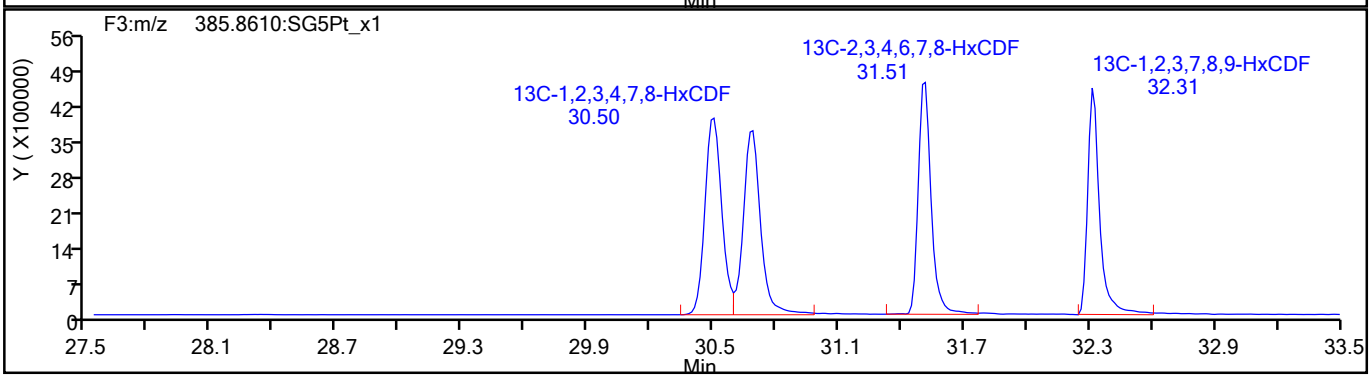

774890

Report Date: 18-Aug-2021 11:20:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

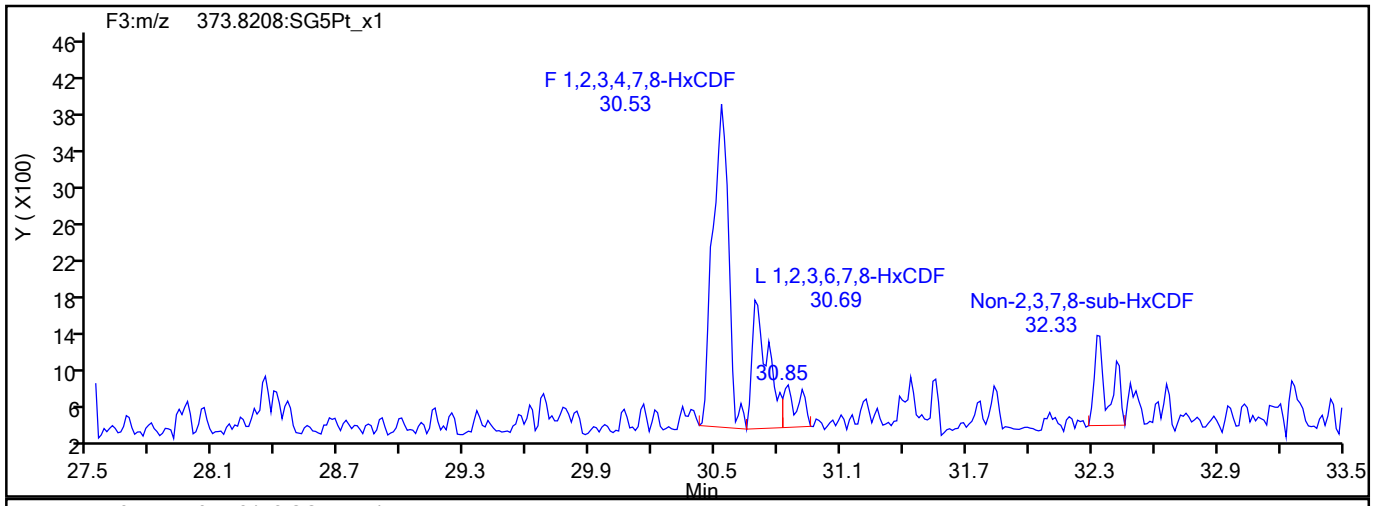

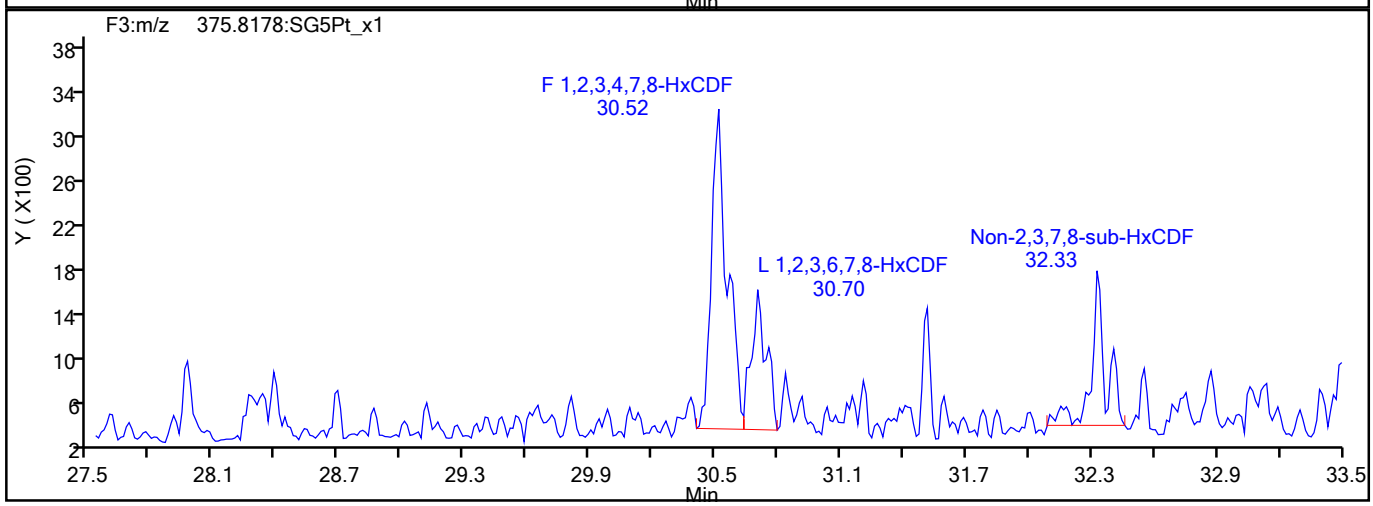

HxCDF Interference Mass

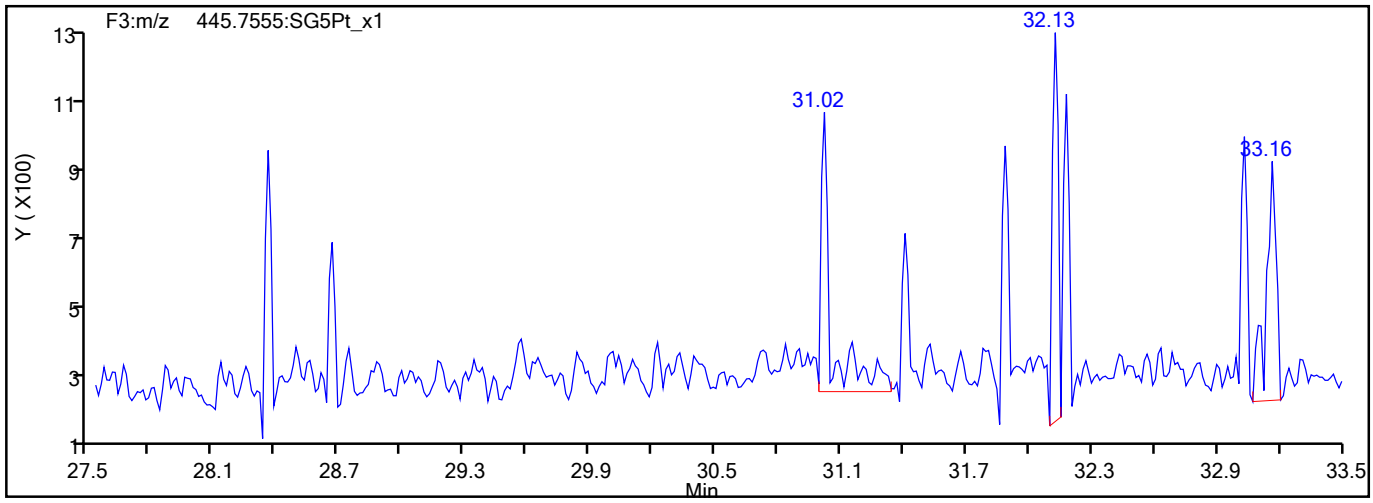

774891

Report Date: 18-Aug-2021 11:20:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

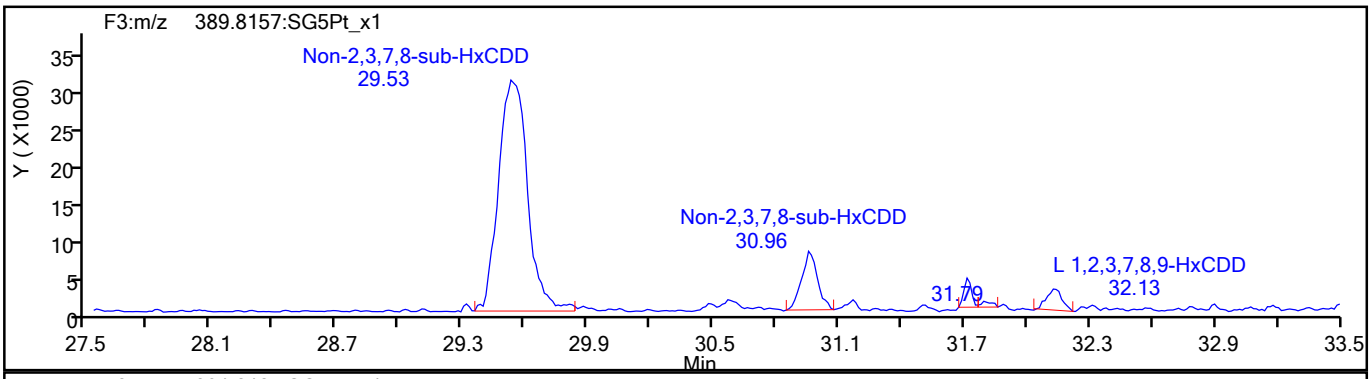

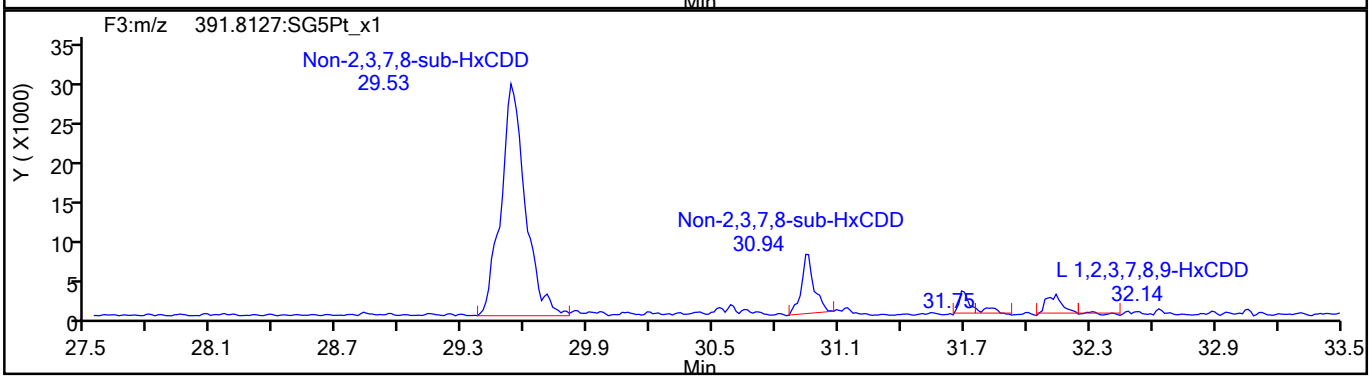

HxCDD Standards

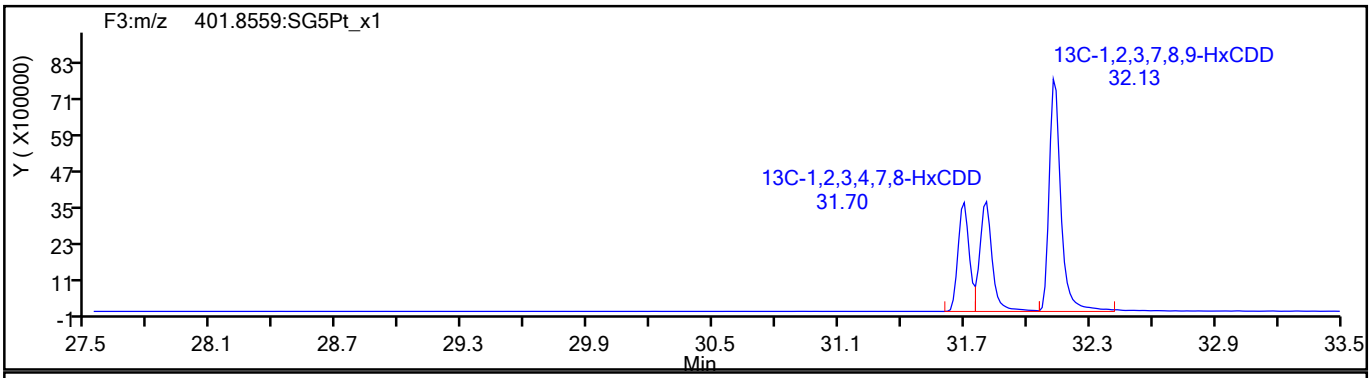

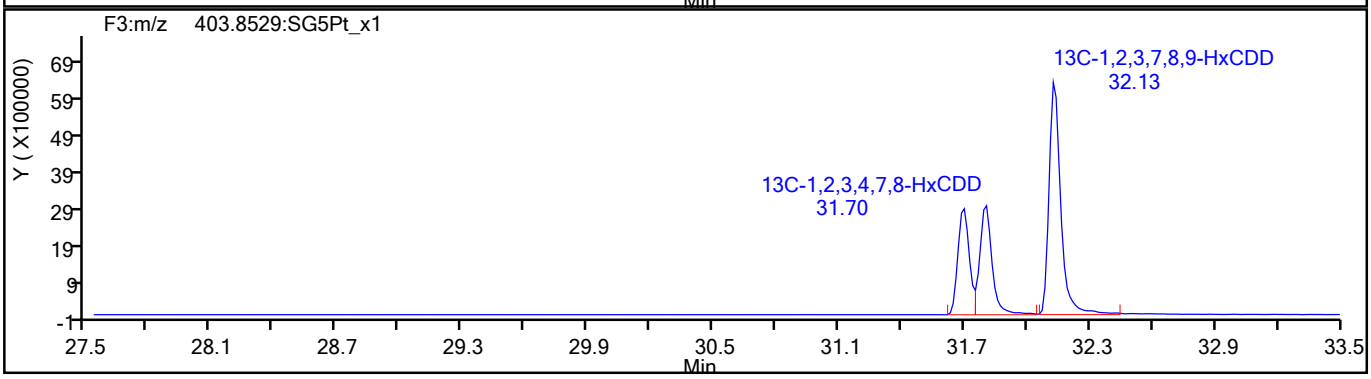

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Report Date: 18-Aug-2021 11:20:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 09:36:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
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Client ID:	11215702-072221-SS-SJSB080 (12-14)		
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HpCDF

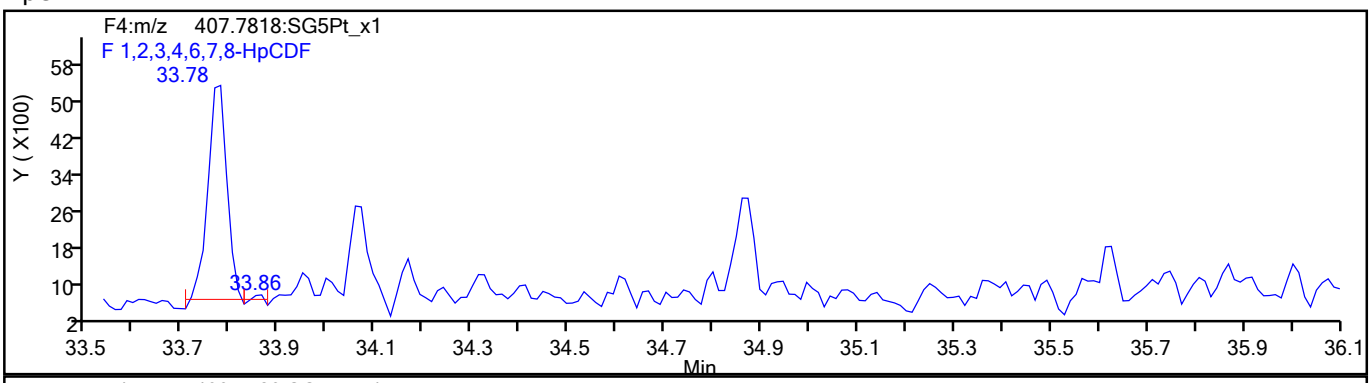

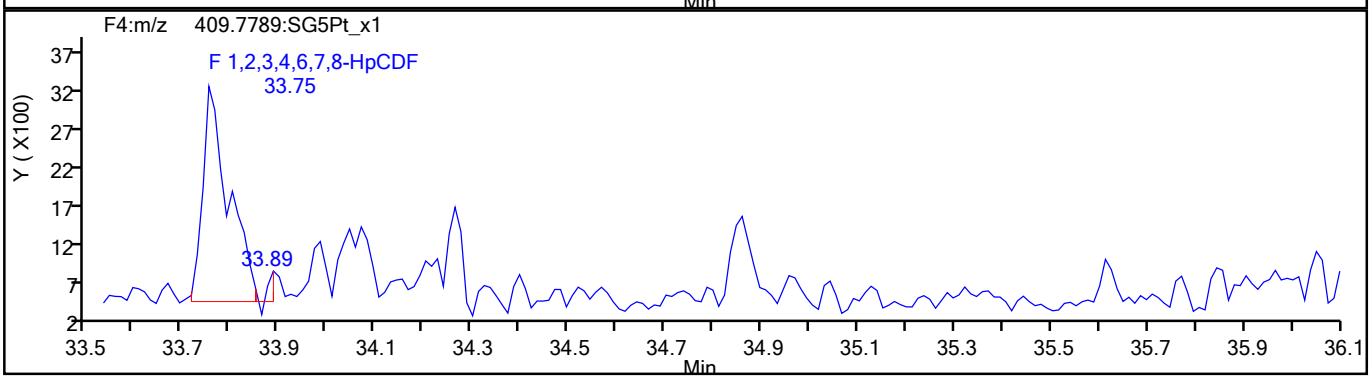

HpCDF Standards

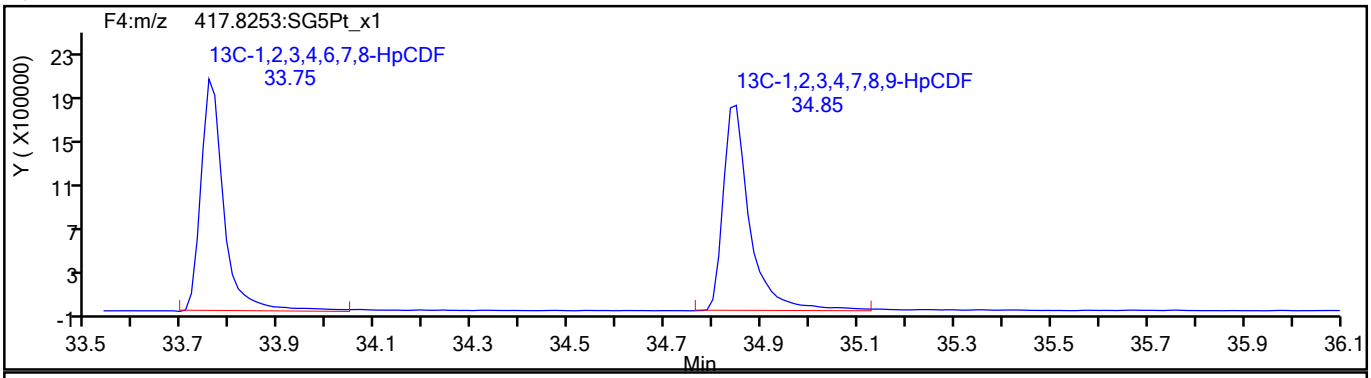

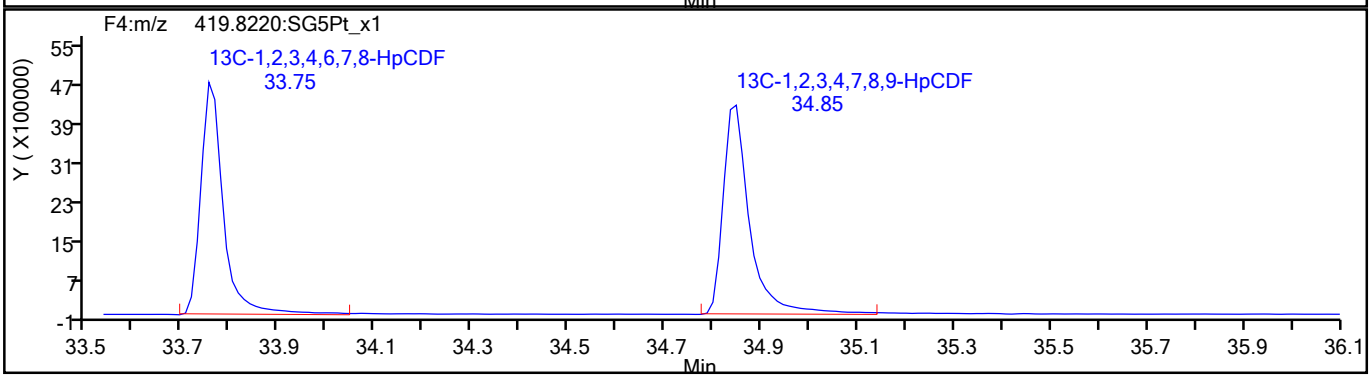

774893

Report Date: 18-Aug-2021 11:20:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

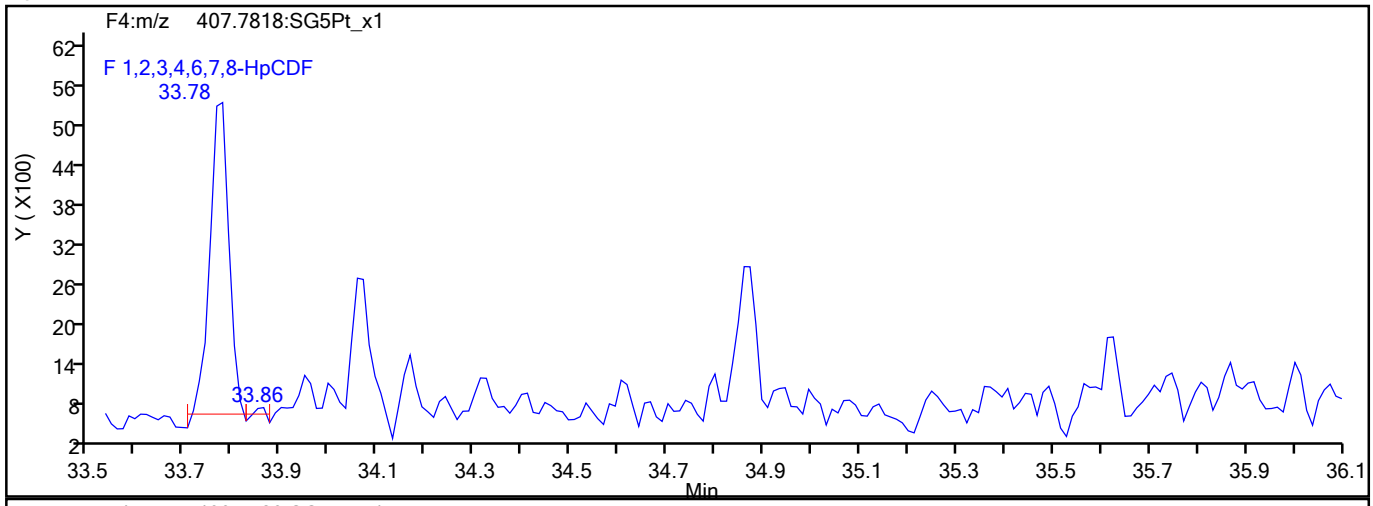

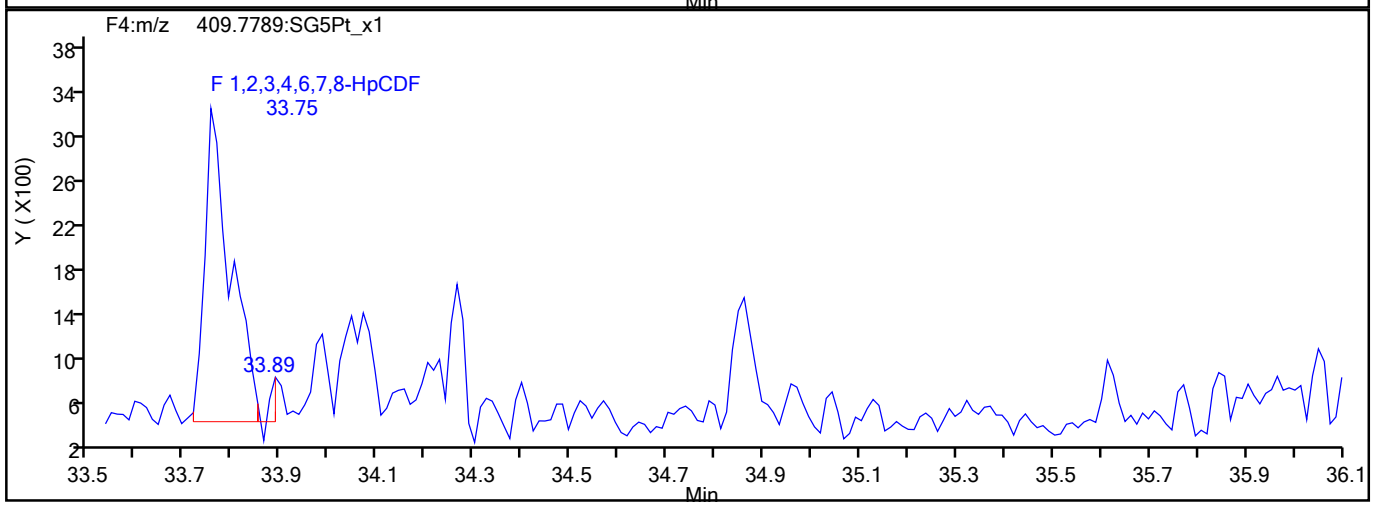

HpCDF Interference Mass

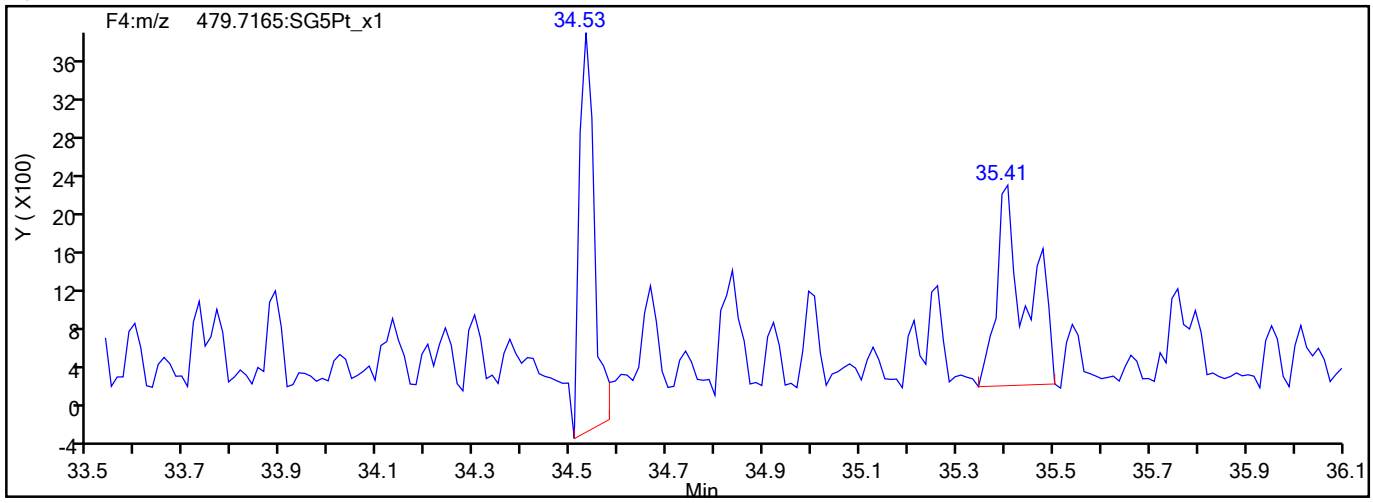

774894

Report Date: 18-Aug-2021 11:20:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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Client ID:	11215702-072221-SS-SJSB080 (12-14)		
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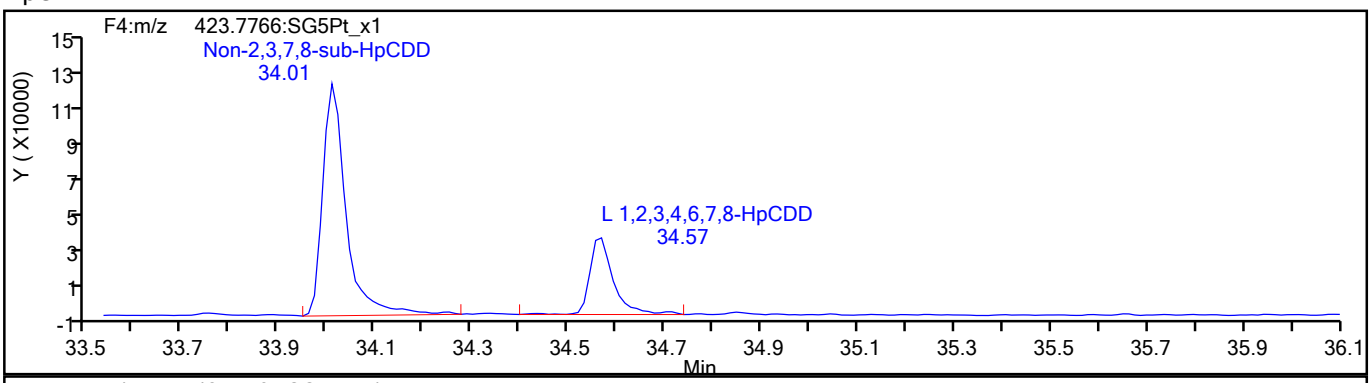

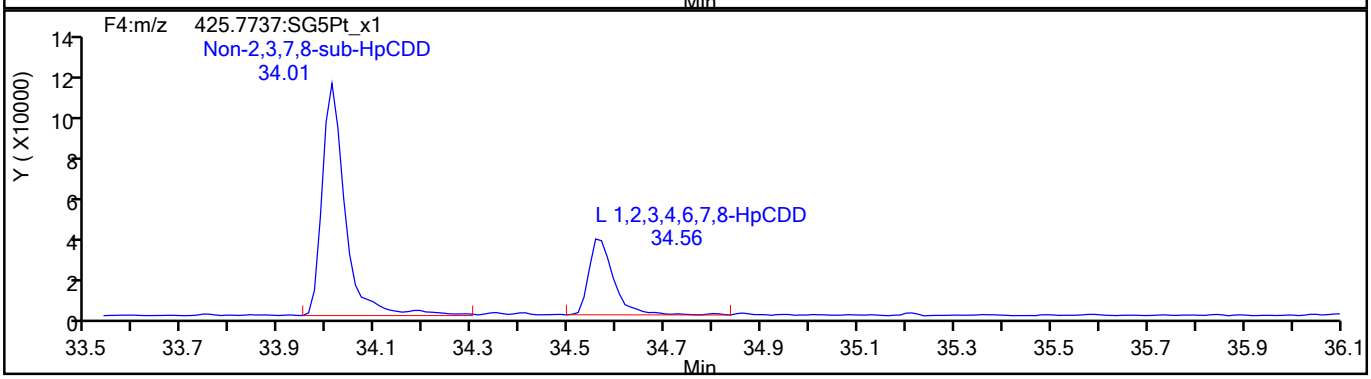

HpCDD Standards

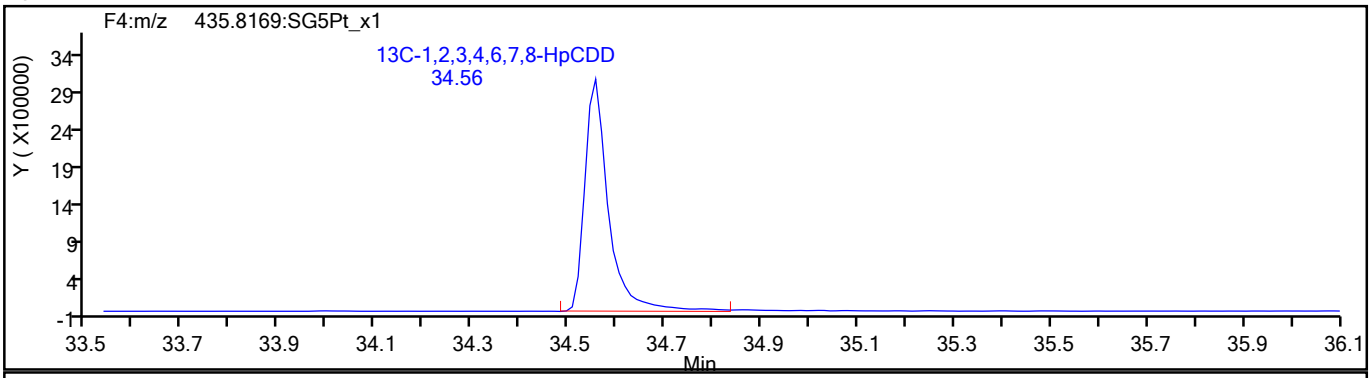

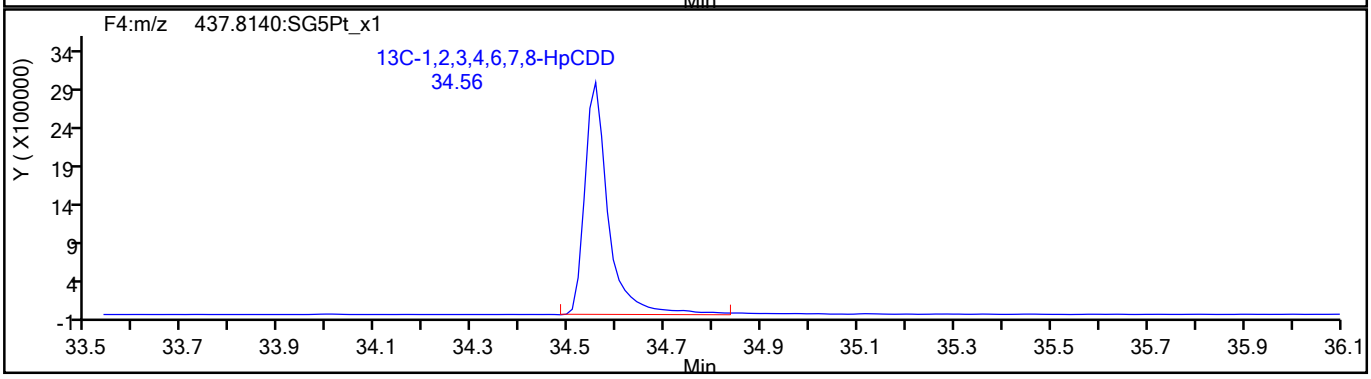

774895

Report Date: 18-Aug-2021 11:20:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
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OCDF

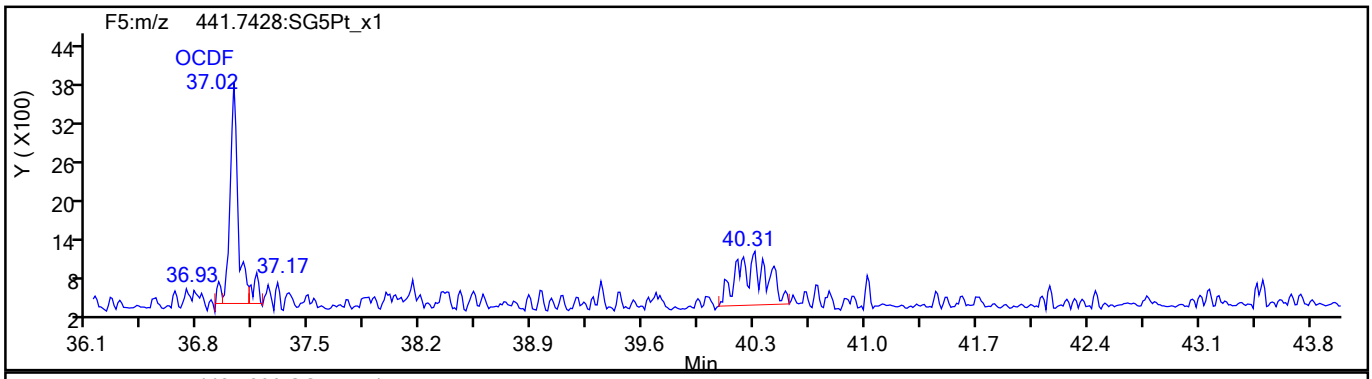

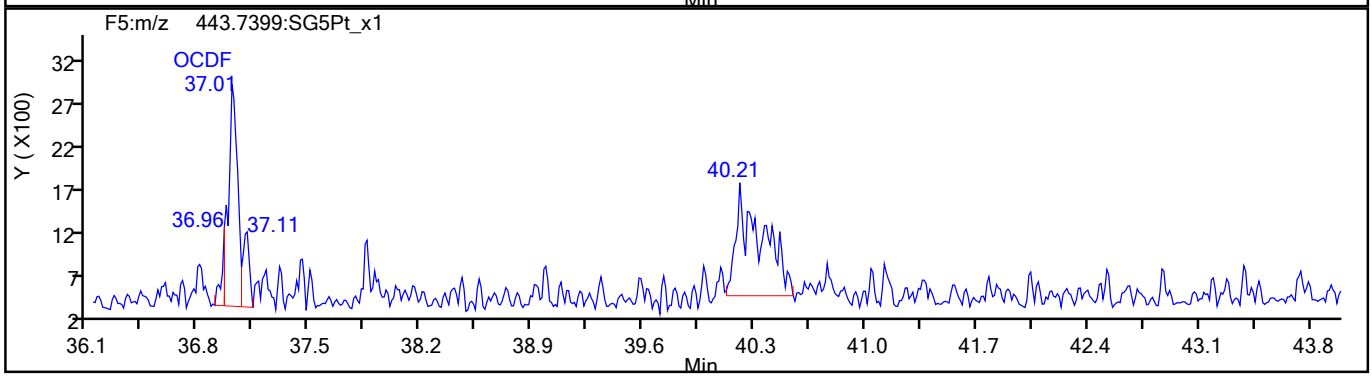

OCDF Standards

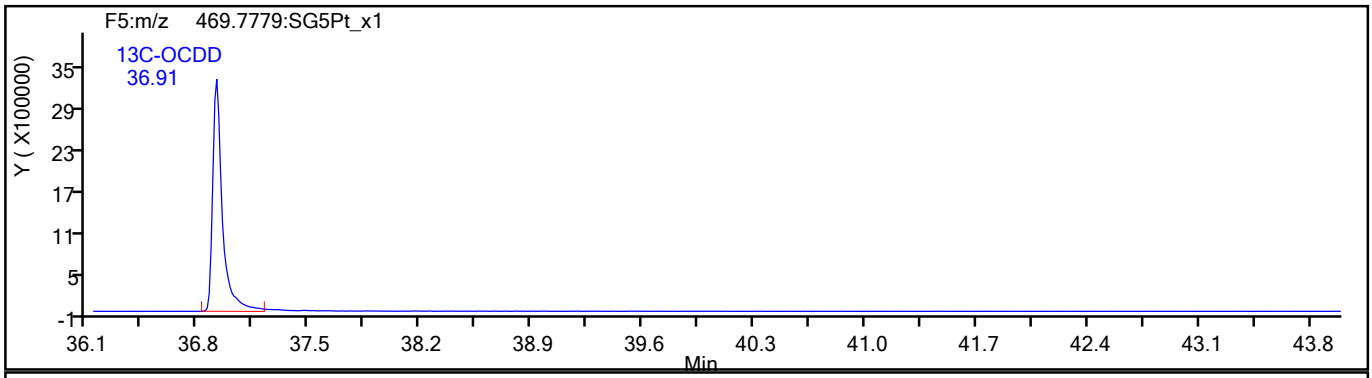

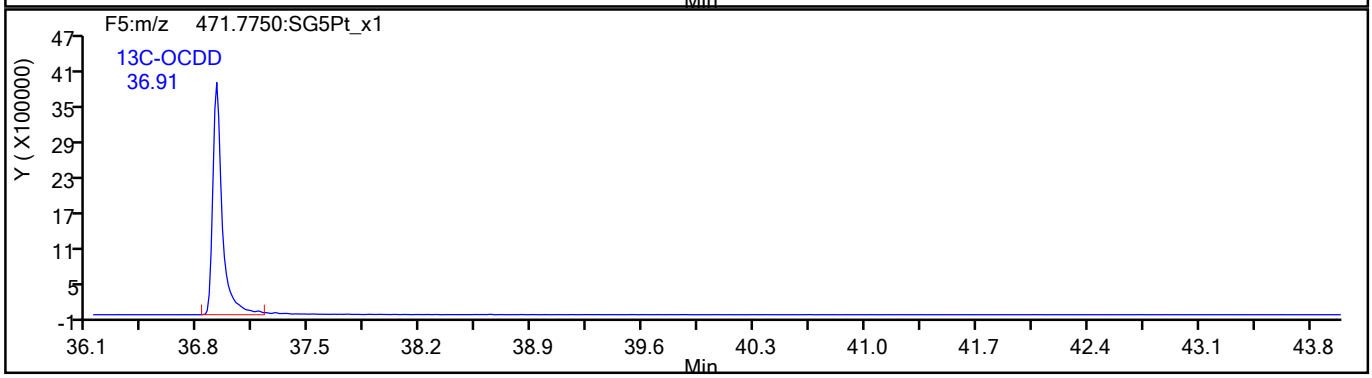

774896

Report Date: 18-Aug-2021 11:20:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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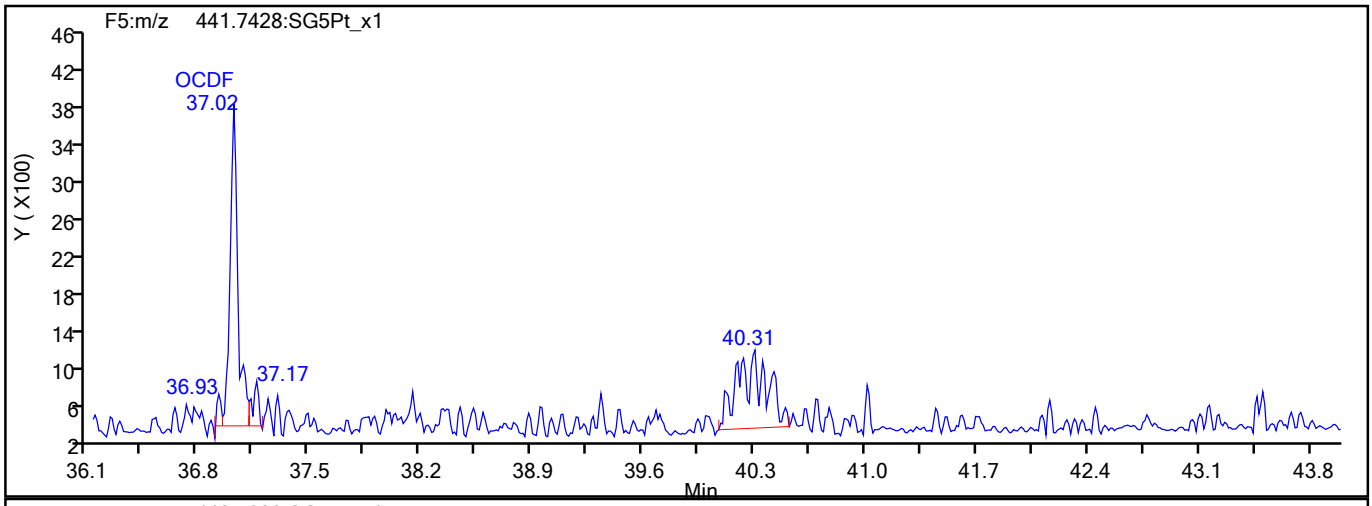

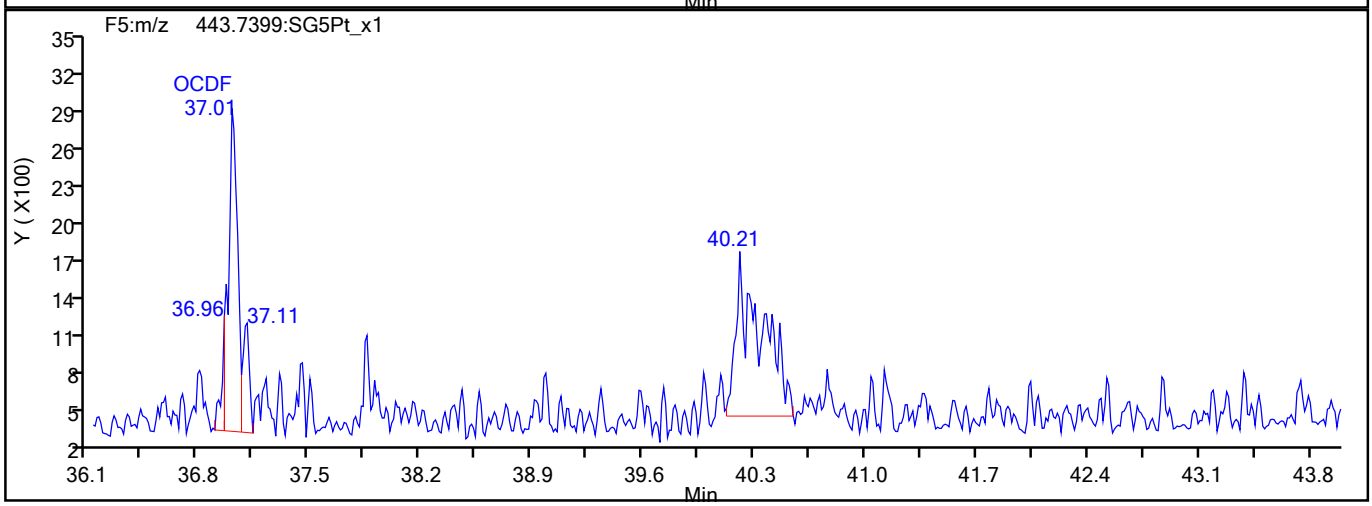

OCDF Interference Mass

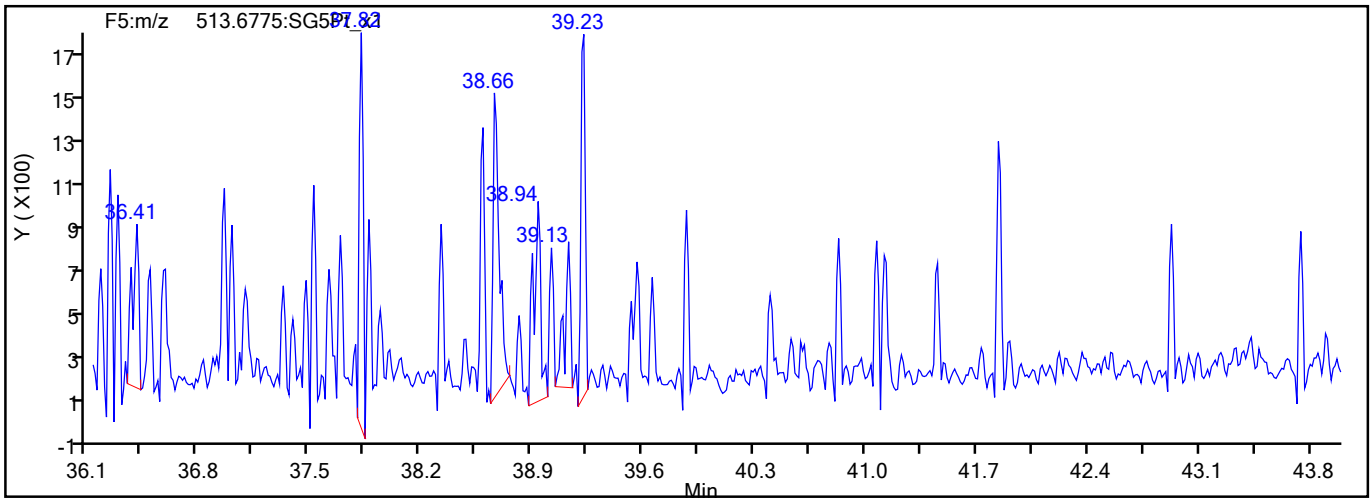

774897

Report Date: 18-Aug-2021 11:20:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

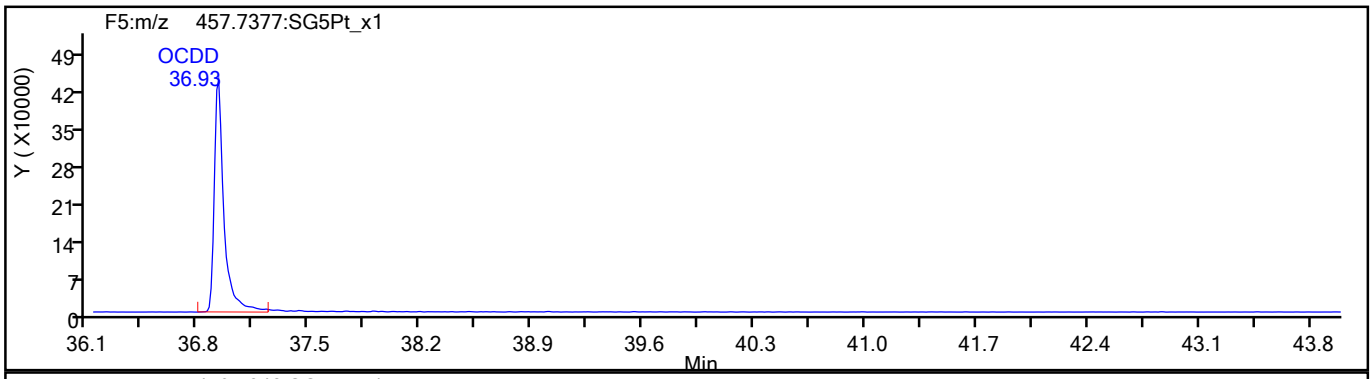

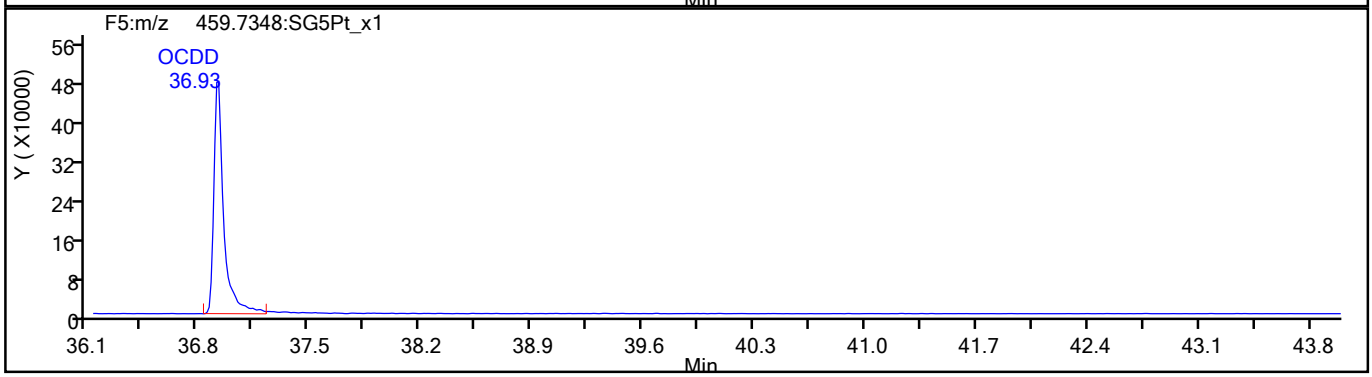

OCDD Standards

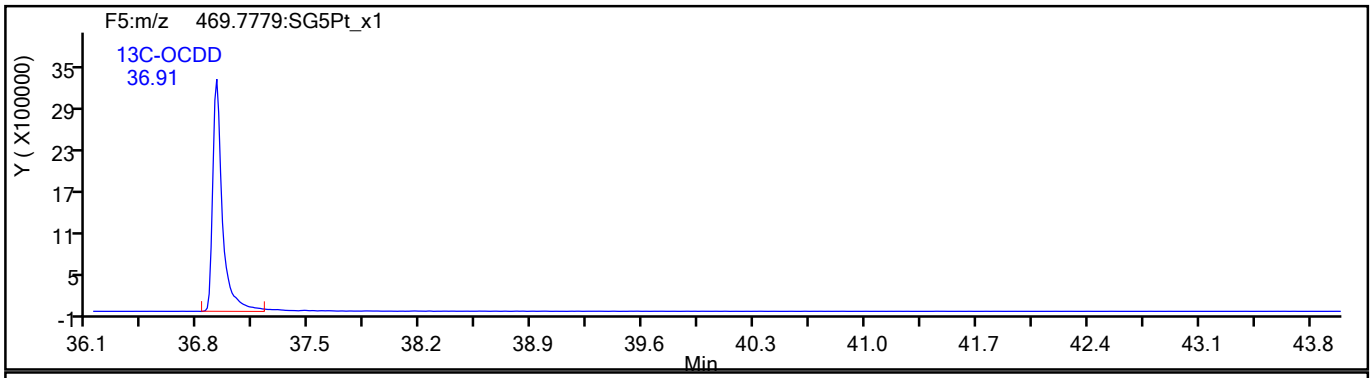

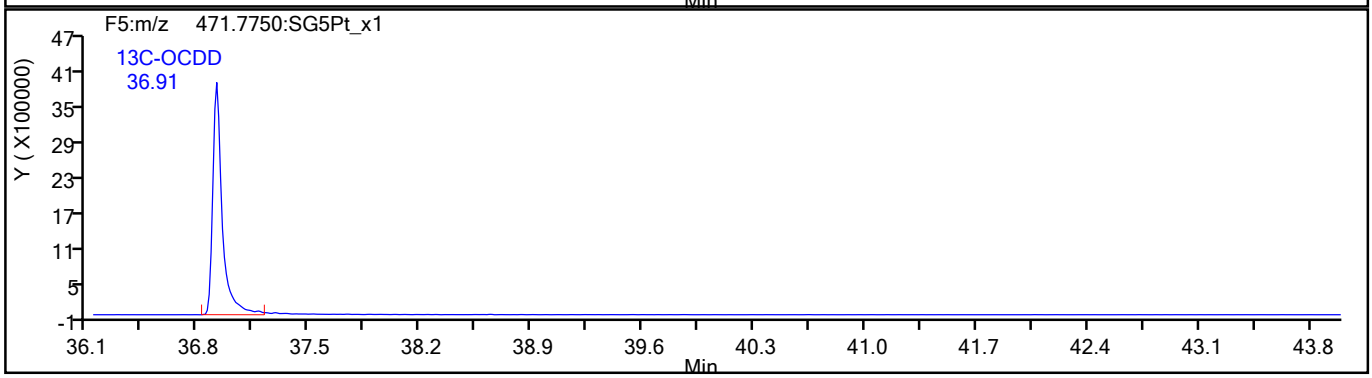

774898

Report Date: 18-Aug-2021 11:20:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Injection Date:	15-Aug-2021 09:36:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	516847	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

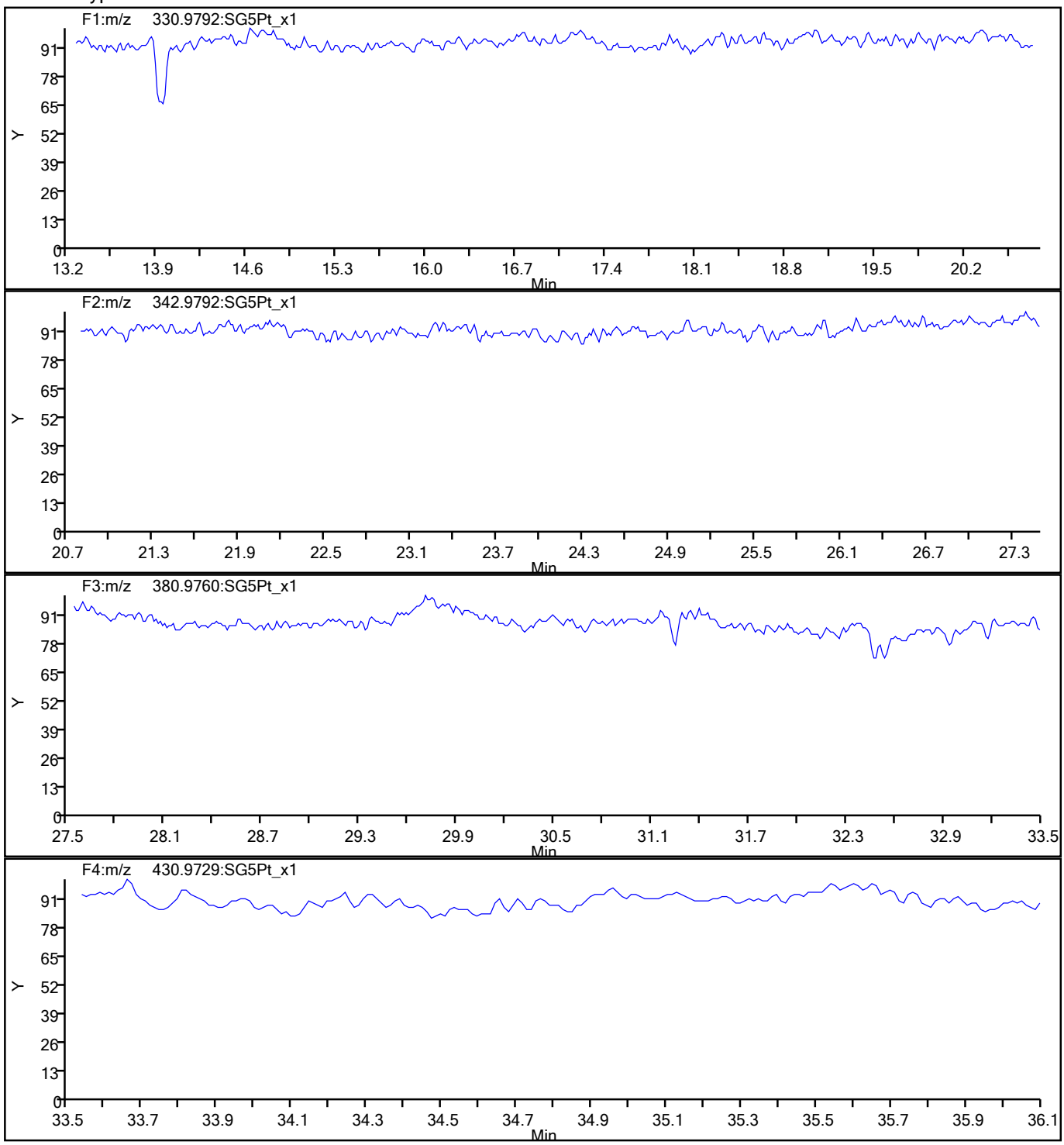

774899

Report Date: 18-Aug-2021 11:20:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_54.d		
Injection Date:	15-Aug-2021 09:36:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	516847	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

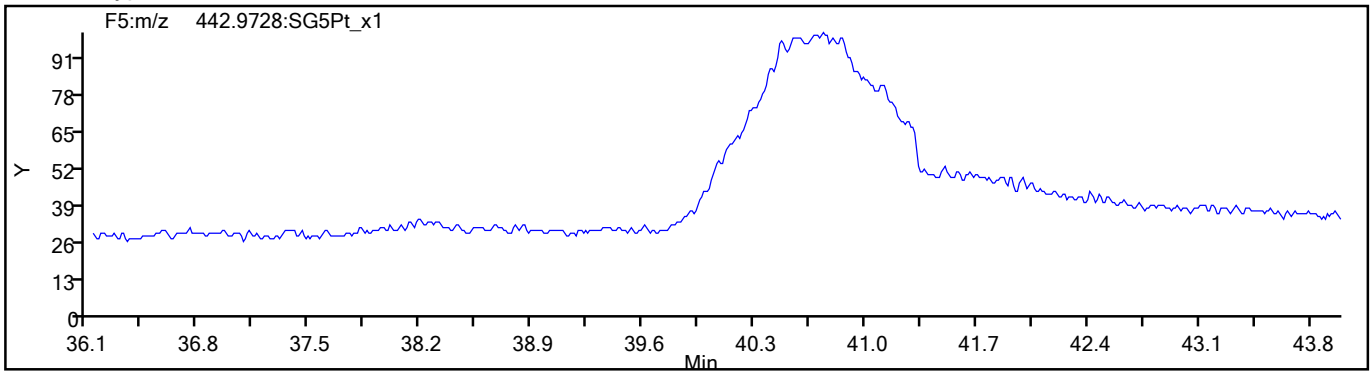

774900

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (12-14) RA
Lab Sample ID: 320-76769-7 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_008.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.97(g)
Date Analyzed: 08/23/2021 20:02
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	2.7	B	1.2	0.15

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	57		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	70		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_008.d
Lims ID: 320-76769-A-7-A
Client ID: 11215702-072221-SS-SJSB080 (12-14)
Sample Type: Client
Inject. Date: 23-Aug-2021 20:02:58 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-7-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:16:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.288	57707156	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.619	44136501	0.81	1.3327	57.4	57.4	0.2568	0.2568	57.39	
2,3,7,8-TCDF	17.633	489251	0.66	0.9978	1.111	1.111	0.0600	0.0600		
D 13C-2,3,7,8-TCDD	16.055	28799517	0.78	0.8749	57.0	57.0	0.3424	0.3424	57.04	
2,3,7,8-TCDD	16.069	119366	0.70	1.0570	0.3921	0.3921	0.0863	0.0863		
$ 37Cl4-2,3,7,8-TCDD	16.069	13931442		0.8648	27.9	27.9	0.0985	0.0985	69.79	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_008.d				
Lims ID:	320-76769-A-7-A				
Client ID:	11215702-072221-SS-SJSB080 (12-14)				
Sample Type:	Client				
Inject. Date:	23-Aug-2021 20:02:58	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-76769-A-7-A				
Misc. Info.:	DB225RES				
Operator ID:		Instrument ID:	11D2		
Method:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m				
Limit Group:	HR - 1613B - ICAL				
Last Update:	24-Aug-2021 09:19:40	Calib Date:	14-Jul-2021 14:47:36		
Integrator:	Picker				
Quant Method:	Isotopic Dilution	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d				
Column 1 :	DB-225 (0.32 mm)		Det: F1:HRSIR		
Process Host:	CTX1683				
First Level Reviewer: bennettd		Date:	24-Aug-2021 09:16:09		

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.288	16.298	-1		25080765	5724529	9125	22812	627		
333.9339	16.288	16.298	-1		32626391	7242006	6412	16030	1129	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.619	17.615	0	1.082	19753554	3747931	8873	22182	422		
317.9389	17.619	17.615	0	1.082	24382947	4693944	8879	22197	529	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.633	17.643	-1	1.001	194108	37796	665	1662	57		
305.8987	17.619	17.643	-1	1.000	295143	56384	1355	3387	42	0.66(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.055	16.065	-1	0.986	12663951	2834710	9125	22812	311		
333.9339	16.055	16.065	-1	0.986	16135566	3843661	6412	16030	599	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.069	16.079	-1	1.001	49200	14609	1401	3502	10		
321.8936	16.069	16.079	-1	1.001	70166	18283	1036	2590	18	0.70(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.069	16.093	-1	0.987	13931442	3116925	4417	11042	706		

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 09:19:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_008.d		
Injection Date:	23-Aug-2021 20:02:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	518979	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

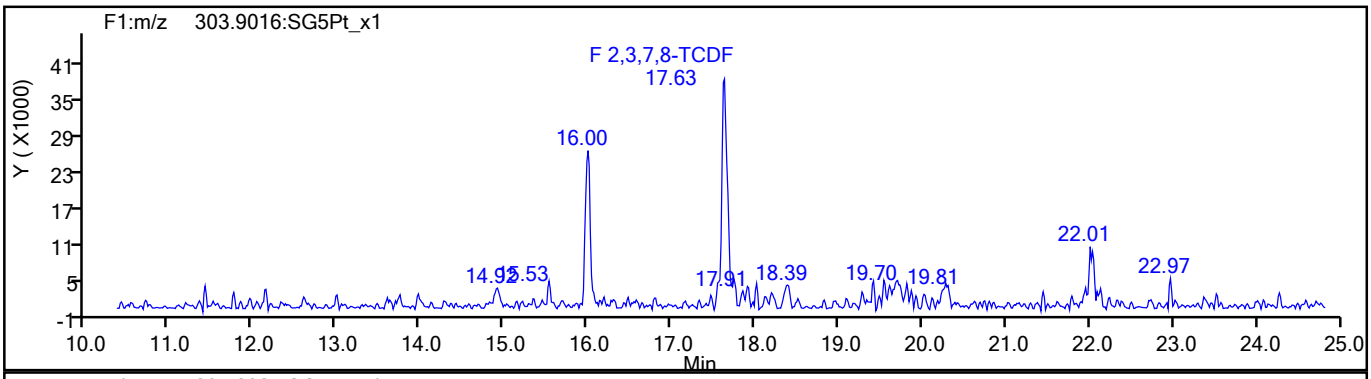

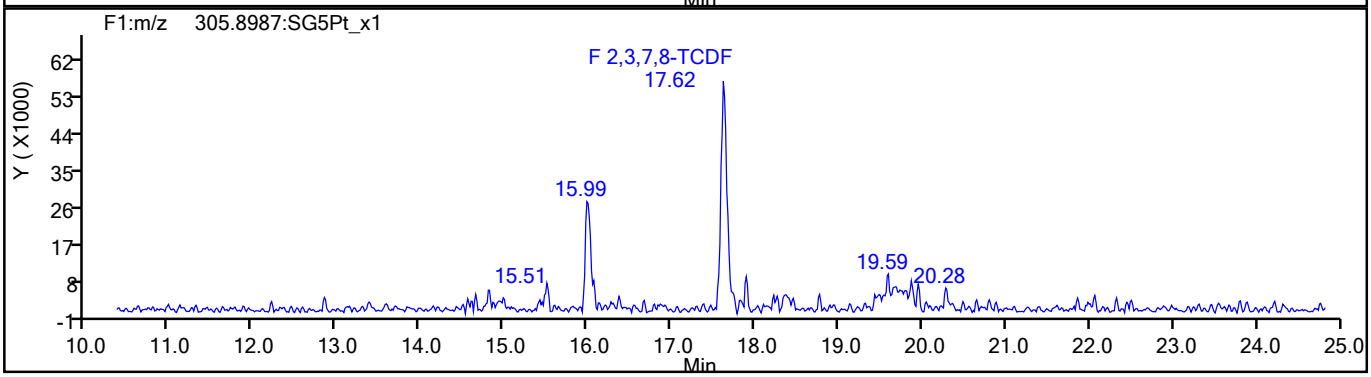

TCDF Standards

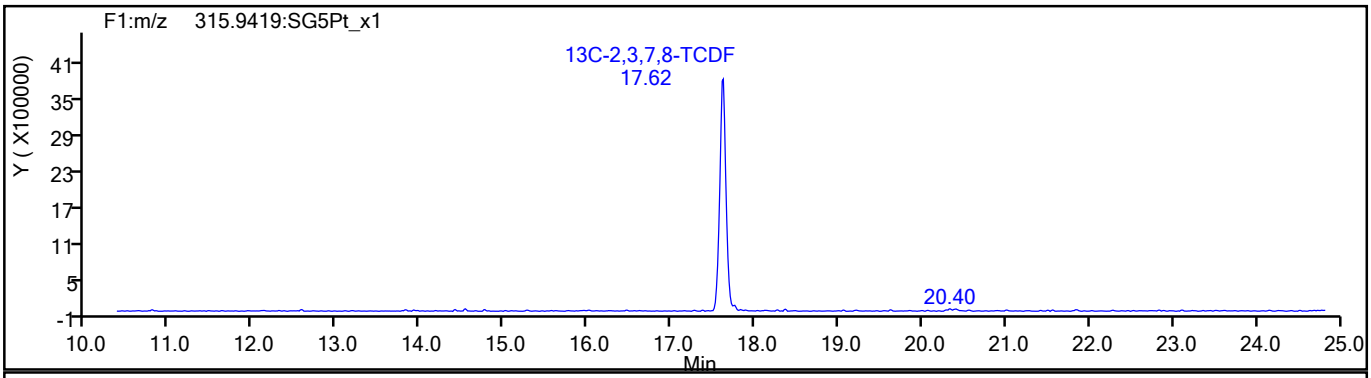

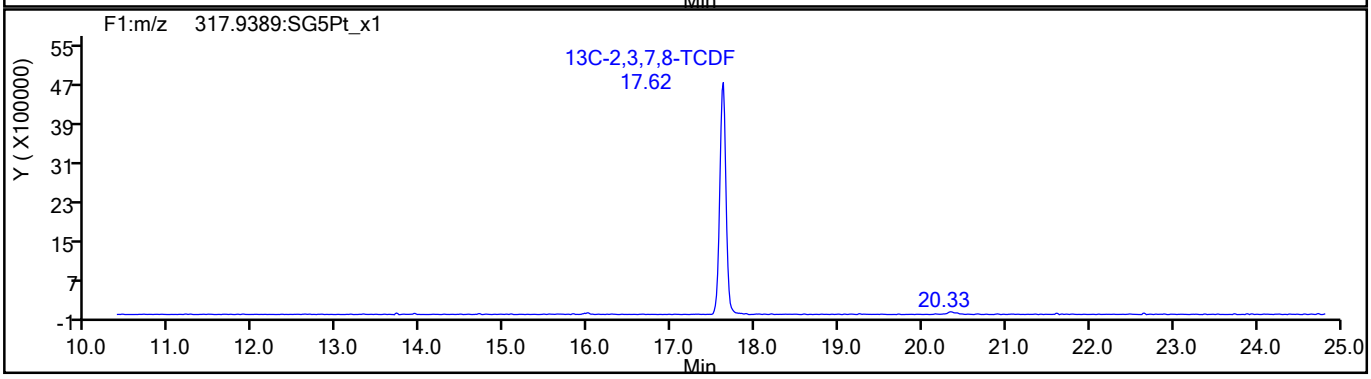

774904

Report Date: 24-Aug-2021 09:19:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_008.d		
Injection Date:	23-Aug-2021 20:02:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	518979	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

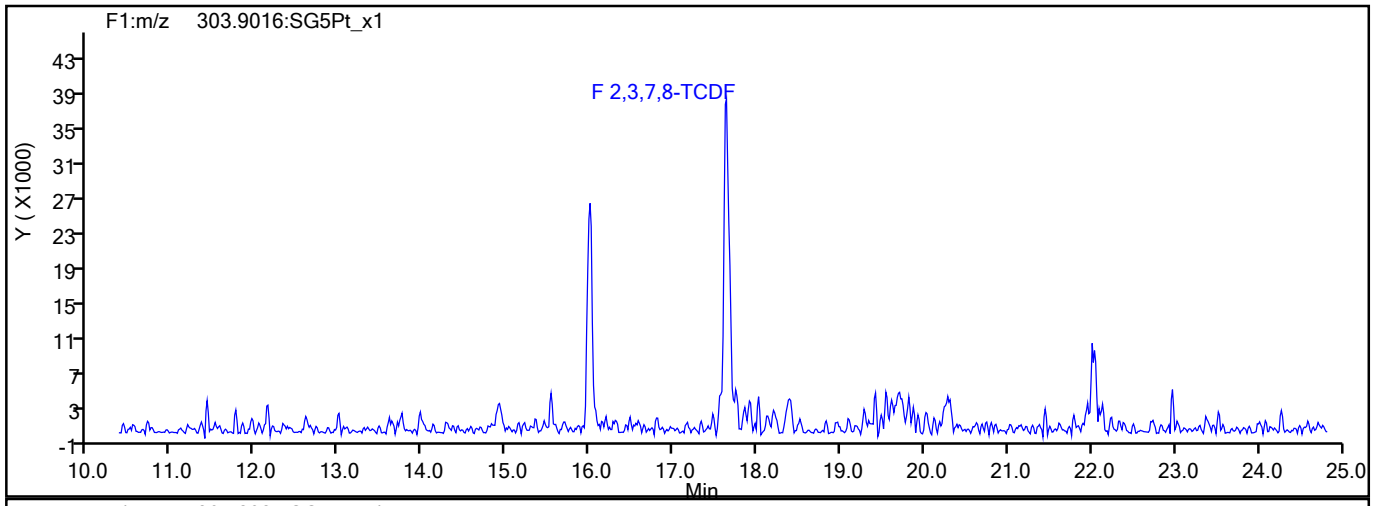

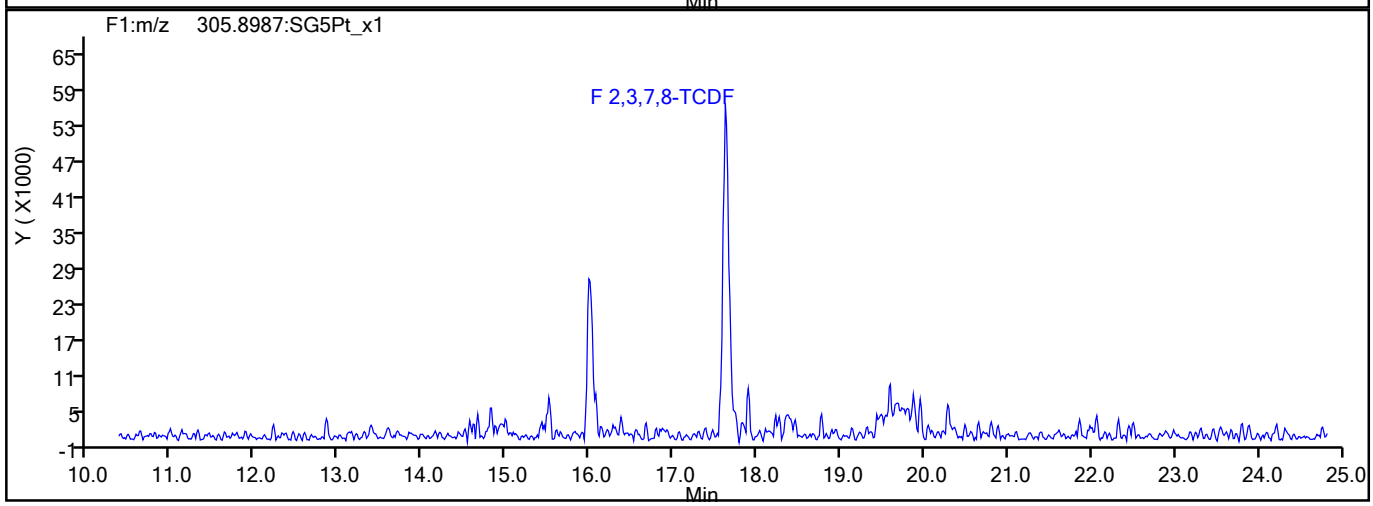

TCDF Interference Mass

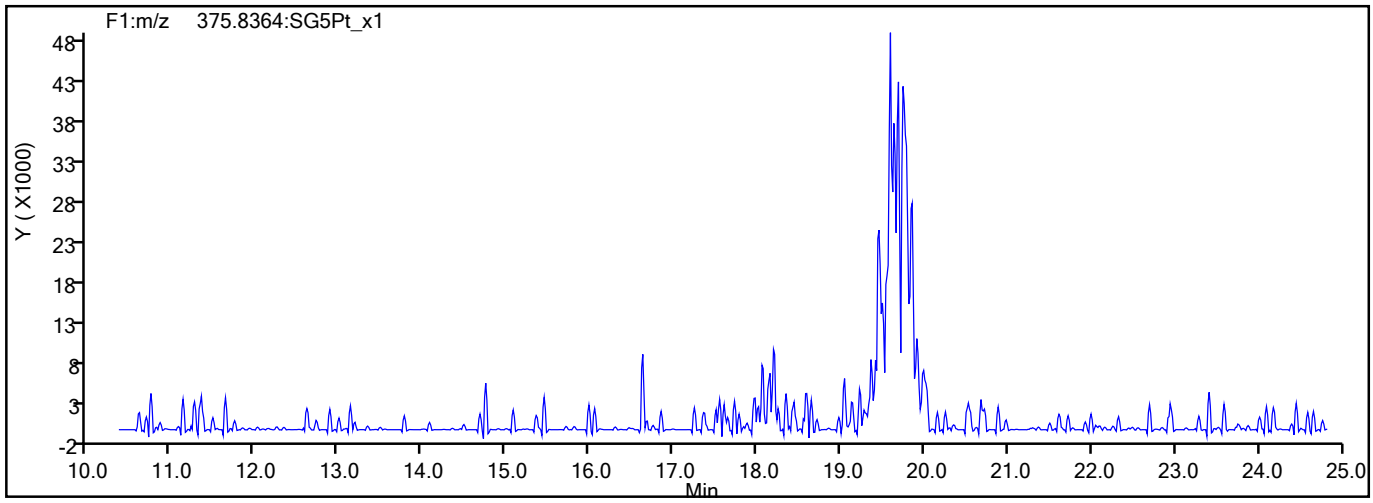

774905

Report Date: 24-Aug-2021 09:19:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_008.d		
Injection Date:	23-Aug-2021 20:02:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	518979	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

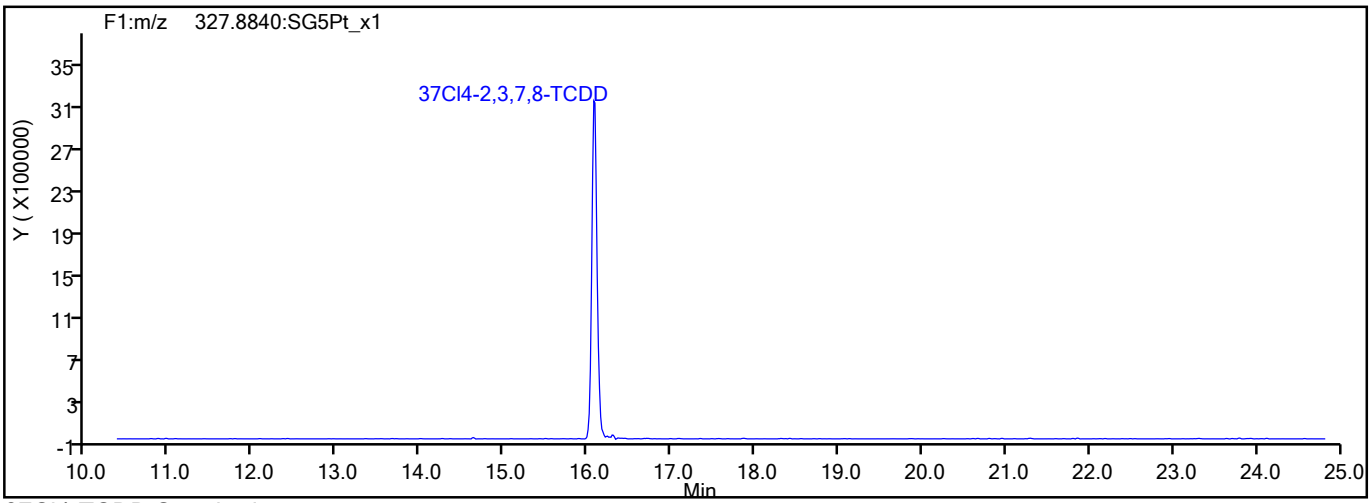

37Cl4-TCDD Standards

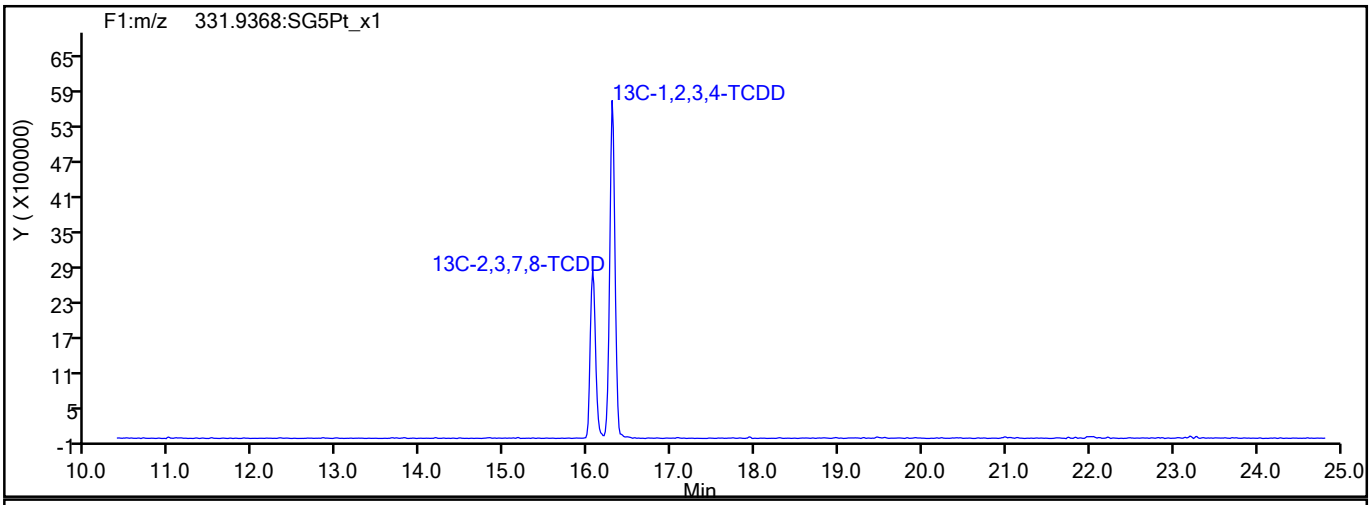

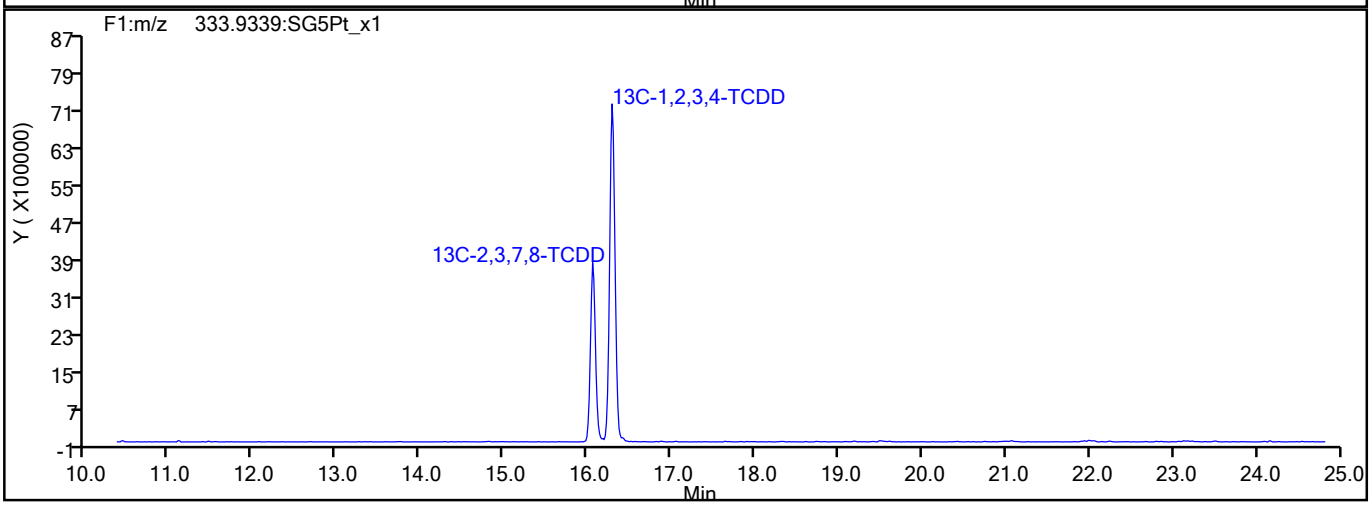

774906

Report Date: 24-Aug-2021 09:19:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_008.d		
Injection Date:	23-Aug-2021 20:02:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (12-14)		
Worklist#:	518979	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

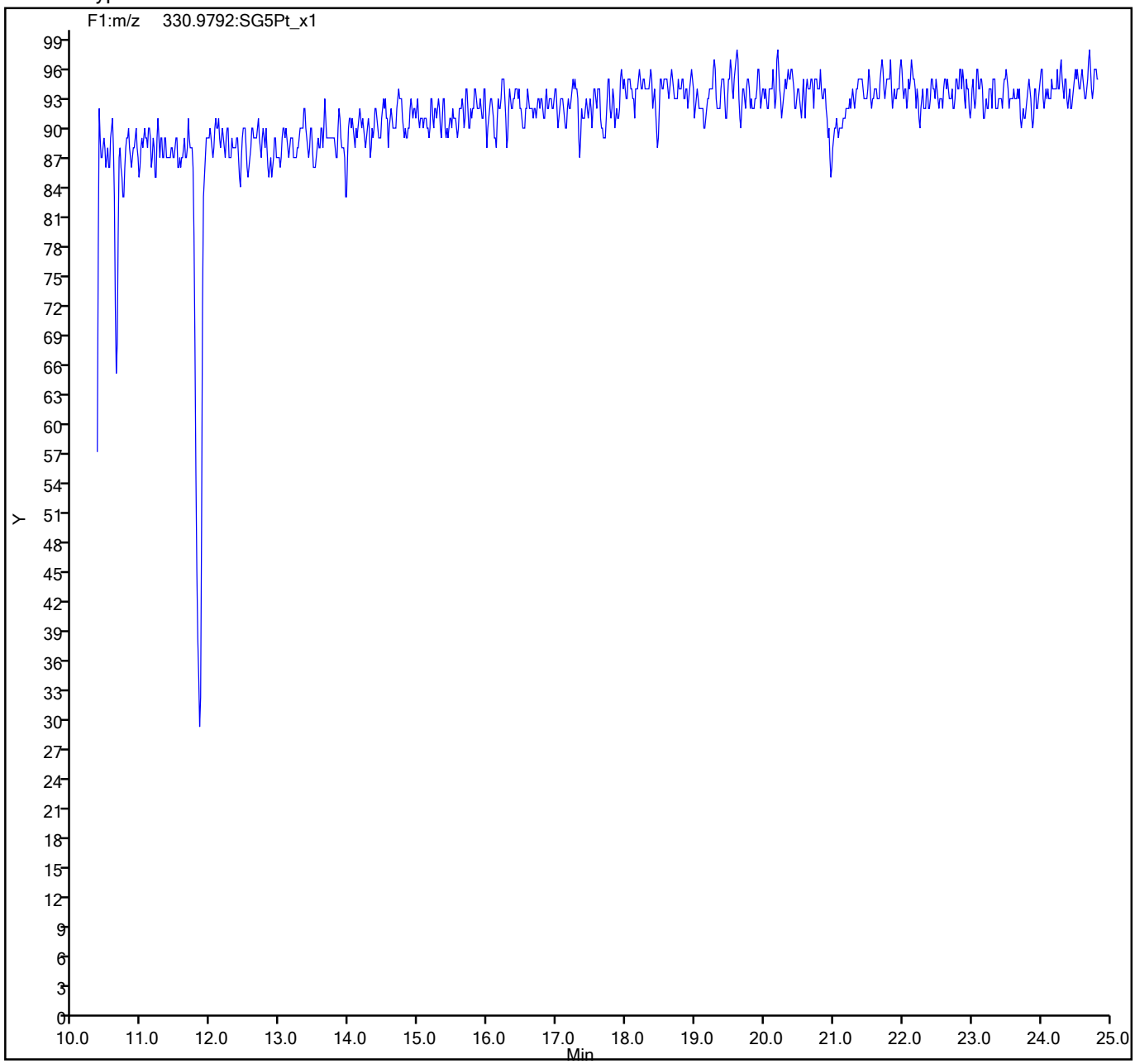

774907

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (14-16)
Lab Sample ID: 320-76769-8
Matrix: Sediment
Lab File ID: 13AU2110D5_55.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.39(g)
Date Analyzed: 08/15/2021 10:21
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.34	J B q	1.2	0.059
40321-76-4	1,2,3,7,8-PeCDD	ND		5.9	0.073
57117-41-6	1,2,3,7,8-PeCDF	ND		5.9	0.038
57117-31-4	2,3,4,7,8-PeCDF	ND		5.9	0.038
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.9	0.12
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.9	0.12
19408-74-3	1,2,3,7,8,9-HxCDD	0.46	J B	5.9	0.11
70648-26-9	1,2,3,4,7,8-HxCDF	0.096	J B	5.9	0.034
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.9	0.035
72918-21-9	1,2,3,7,8,9-HxCDF	0.077	J B	5.9	0.029
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.9	0.028
35822-46-9	1,2,3,4,6,7,8-HpCDD	6.4	B	5.9	0.17
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.095	J B q	5.9	0.048
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.9	0.055
3268-87-9	OCDD	120	B	12	0.24
39001-02-0	OCDF	0.21	J B	12	0.034
41903-57-5	Total TCDD	2.6	B q	1.2	0.059
30402-14-3	Total TCDF	1.9	B	1.2	0.082
36088-22-9	Total PeCDD	2.1	J q	5.9	0.073
30402-15-4	Total PeCDF	ND		5.9	0.038
34465-46-8	Total HxCDD	8.7	B	5.9	0.12
55684-94-1	Total HxCDF	0.17	J B	5.9	0.032
37871-00-4	Total HpCDD	24	B	5.9	0.17
38998-75-3	Total HpCDF	0.095	J B q	5.9	0.051

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (14-16)
Lab Sample ID: 320-76769-8
Matrix: Sediment
Lab File ID: 13AU2110D5_55.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.39(g)
Date Analyzed: 08/15/2021 10:21
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		25-164
89059-46-1	13C-2,3,7,8-TCDF	49		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	56		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	51		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	56		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	60		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	57		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	53		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	51		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	51		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	57		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	51		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	59		26-138
114423-97-1	13C-OCDD	59		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	68		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d
Lims ID: 320-76769-A-8-A
Client ID: 11215702-072221-SS-SJSB080 (14-16)
Sample Type: Client
Inject. Date: 15-Aug-2021 10:21:52 ALS Bottle#: 54 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-8-a 320-76769-a-8-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:22:04 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 11:22:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.840	54496217	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	43288902	0.76	1.6249	48.9	48.9	0.0803	0.0803	48.89	
2,3,7,8-TCDF	17.356	231999	0.80	1.0239	0.5234	0.5234	0.0348	0.0348		M
A Non-2,3,7,8-sub-TCDF	17.046	122166	0.74	1.0239	0.2756	0.2756	0.0348	0.2756		M
S Total TCDF					0.7990	0.7990	0.0348	0.0348		
D 13C-2,3,7,8-TCDD	18.036	26502587	0.83	0.8993	54.1	54.1	0.1244	0.1244	54.08	
2,3,7,8-TCDD	18.066	47693	0.77	1.2541	0.1954	0.1435	0.0251	0.0251		RQ
$ 37Cl4-2,3,7,8-TCDD	18.066	16410684		1.1071	27.2	27.2	0.0238	0.0238	68.00	
A Non-2,3,7,8-sub-TCDD	17.500	312274	0.77	1.2541	0.9874	0.9395	0.0251	0.5951		RQ
S Total TCDD					1.183	1.083	0.0251	0.0251		RQ
D 13C-1,2,3,7,8-PeCDF	22.353	33362339	1.57	1.2101	50.6	50.6	0.1377	0.1377	50.59	
1,2,3,7,8-PeCDF	22.394						0.0159	0.0159		
D 13C-2,3,4,7,8-PeCDF	23.703	37662626	1.60	1.2395	55.8	55.8	0.1345	0.1345	55.76	
2,3,4,7,8-PeCDF	23.730						0.0160	0.0160		
A F1 PeCDFs	20.093						0.0157	0.0157		
A Non-2,3,7,8-sub-PeCDF	23.241						0.0159	0.0159		
S Total PeCDF							0.0160	0.0160		
D 13C-1,2,3,7,8-PeCDD	24.412	23053659	1.62	0.7612	55.6	55.6	0.0749	0.0749	55.57	
1,2,3,7,8-PeCDD	24.453						0.0311	0.0311		
A Non-2,3,7,8-sub-PeCDD	23.349	215617	1.55	1.0484	0.9133	0.8921	0.0311	0.5263		RQM
S Total PeCDD					0.9133	0.8921	0.0311	0.0311		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.489	30556775	0.51	1.0837	57.4	57.4	0.2861	0.2861	57.41	
1,2,3,4,7,8-HxCDF	30.516	13468	1.25	1.0851	0.0406	0.0406	0.0145	0.0145		M
D 13C-1,2,3,6,7,8-HxCDF	30.676	29289306	0.52	1.1279	52.9	52.9	0.2748	0.2748	52.87	
1,2,3,6,7,8-HxCDF	30.716						0.0149	0.0149		
D 13C-2,3,4,6,7,8-HxCDF	31.514	26868995	0.52	1.0637	51.4	51.4	0.2914	0.2914	51.42	
2,3,4,6,7,8-HxCDF	31.528						0.0118	0.0118		
D 13C-1,2,3,7,8,9-HxCDF	32.313	24366053	0.51	0.9676	51.3	51.3	0.3204	0.3204	51.27	
1,2,3,7,8,9-HxCDF	32.313	9243	1.07	1.1664	0.0325	0.0325	0.0122	0.0122		M
A Non-2,3,7,8-sub-HxCDF	30.197						0.0133	0.0133		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.0731	0.0731	0.0134	0.0134		
* 13C-1,2,3,7,8,9-HxCDD	32.126	49119202	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	21616331	1.25	0.7334	60.0	60.0	0.3061	0.3061	60.00	
1,2,3,4,7,8-HxCDD	31.714						0.0511	0.0511		
D 13C-1,2,3,6,7,8-HxCDD	31.807	24182589	1.25	0.8802	55.9	55.9	0.2551	0.2551	55.93	
1,2,3,6,7,8-HxCDD	31.820						0.0528	0.0528		
1,2,3,7,8,9-HxCDD	32.140	50110	1.38	1.1325	0.1932	0.1932	0.0473	0.0473		
A Non-2,3,7,8-sub-HxCDD	30.882	848377	1.30	1.0655	3.477	3.477	0.0503	2.797		
S Total HxCDD					3.670	3.670	0.0504	0.0504		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	19243096	0.43	0.7730	50.7	50.7	0.6804	0.6804	50.68	
1,2,3,4,6,7,8-HpCDF	33.766	11173	1.04	1.4413	0.0615	0.0403	0.0205	0.0205		RQ
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	20194508	0.43	0.7008	58.7	58.7	0.7505	0.7505	58.67	
1,2,3,4,7,8,9-HpCDF	34.860						0.0231	0.0231		
A Non-2,3,7,8-sub-HpCDF	34.319						0.0218	0.0218		
S Total HpCDF					0.0615	0.0403	0.0218	0.0218		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	17969864	1.03	0.6472	56.5	56.5	0.3245	0.3245	56.52	
1,2,3,4,6,7,8-HpCDD	34.568	535692	0.99	1.0943	2.724	2.724	0.0708	0.0708		
A Non-2,3,7,8-sub-HpCDD	34.301	1430985	0.97	1.0943	7.277	7.277	0.0708	7.277		
S Total HpCDD					10.0	10.0	0.0708	0.0708		
D 13C-OCDD	36.914	25995012	0.88	0.4472	118.4	118.4	0.1690	0.1690	59.18	
OCDF	37.022	16397	0.90	1.4382	0.0877	0.0877	0.0144	0.0144		M
OCDD	36.926	7346151	0.87	1.1070	51.1	51.1	0.1038	0.1038		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d
Lims ID: 320-76769-A-8-A
Client ID: 11215702-072221-SS-SJSB080 (14-16)
Sample Type: Client
Inject. Date: 15-Aug-2021 10:21:52 ALS Bottle#: 54 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-8-a 320-76769-a-8-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:22:04 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 11:22:04

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.840	17.855	-1		24554523	5927646	2838	7095	2089		
333.9339	17.840	17.855	-1		29941694	7347101	3105	7762	2366	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.356	-1	0.972	18713246	4408745	3056	7640	1443		
317.9389	17.341	17.356	-1	0.972	24575656	5729678	3874	9685	1479	0.76(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.356	17.371	-1	1.001	103343	21387	647	1617	33		
305.8987	17.356	17.371	-1	1.001	128656	31256	798	1995	39	0.80(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											M
303.9016	16.978	17.046	-4	0.979	51927	12514	647	1617	19		M
305.8987	16.963	17.046	-5	0.978	70239	15479	798	1995	19	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.036	18.051	-1	1.011	11996424	2634636	2838	7095	928		
333.9339	18.036	18.051	-1	1.011	14506163	3232490	3105	7762	1041	0.83(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	18.066	18.081	-1	1.002	20748	5082	417	1042	12		
321.8936	18.066	18.081	-1	1.002	44212	12158	322	805	38	0.47(0.65-0.89)	
	Empc Correction				26945	6600	322	805	20		
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.081	-1	1.013	16410684	3656283	1397	3492	2617		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	16.116	17.500	-83	0.894	8469	2067	417	1042	5		
321.8936	16.131	17.500	-82	0.894	11559	3044	322	805	9	0.73(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	16.358	17.500	-68	0.907	13995	3313	417	1042	8		
321.8936	16.358	17.500	-68	0.907	23688	5644	322	805	18	0.59(0.65-0.89)	
	Empc Correction				18175	4302	322	805	13		
319.8965	16.917	17.500	-35	0.938	81082	21303	417	1042	51		
321.8936	16.917	17.500	-35	0.938	116710	28610	322	805	89	0.69(0.65-0.89)	
319.8965	17.809	17.500	19	0.987	16837	4041	417	1042	10		
321.8936	17.809	17.500	19	0.987	32264	8101	322	805	25	0.52(0.65-0.89)	
	Empc Correction				21866	5248	322	805	16		
319.8965	17.961	17.500	28	0.996	10950	2684	417	1042	6		
321.8936	17.945	17.500	27	0.995	12631	3407	322	805	11	0.87(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.353	22.367	-1	1.253	20360130	3339650	5555	13887	601		
353.8970	22.353	22.367	-1	1.253	13002209	2090791	3295	8237	635	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.394						146	365			
341.8567	22.394						221	552			
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.329	23159874	3468718	5555	13887	624		
353.8970	23.690	23.703	-1	1.328	14502752	2168282	3295	8237	658	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.730						146	365			
341.8567	23.730						221	552			
A F1 PeCDFs											
339.8597	20.093						152	380			
341.8567	20.093						209	522			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.241						146	365			
341.8567	23.241						221	552			
13C-1,2,3,7,8-PeCDD											
367.8949	24.412	24.426	-1	1.368	14261516	1981676	1877	4692	1056		
369.8919	24.412	24.426	-1	1.368	8792143	1255223	1151	2877	1091	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453						261	652			
357.8516	24.453						161	402			
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	21.235	23.349	-127	0.870	23973	5155	261	652	20		
357.8516	21.235	23.349	-127	0.870	17102	2807	161	402	17	1.40(1.32-1.78)	M
355.8546	21.971	23.349	-82	0.900	78563	13542	261	652	52		
357.8516	21.999	23.349	-81	0.901	48647	6995	161	402	43	1.61(1.32-1.78)	
355.8546	23.471	23.349	7	0.961	28771	3444	261	652	13		
357.8516	23.458	23.349	7	0.961	23702	3585	161	402	22	1.21(1.32-1.78)	
	Empc Correction				18561	2221	161	402	14		
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.489	30.503	-1	0.949	10266976	1815347	5155	12887	352		
385.8610	30.503	30.503	0	0.949	20289799	3603116	9953	24882	362	0.51(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDF											M
373.8208	30.516	30.529	-1	1.001	7473	1012	184	460	6		M
375.8178	30.516	30.529	-1	1.001	5995	1120	158	395	7	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.676	30.689	-1	0.955	10031566	1745176	5155	12887	339		
385.8610	30.676	30.689	-1	0.955	19257740	3342325	9953	24882	336	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.716						184	460			
375.8178	30.716						158	395			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	9234026	2138365	5155	12887	415		
385.8610	31.514	31.514	0	0.981	17634969	4042331	9953	24882	406	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						184	460			
375.8178	31.528						158	395			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.326	-1	1.006	8192897	2030232	5155	12887	394		
385.8610	32.313	32.326	-1	1.006	16173156	3970201	9953	24882	399	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.313	32.340	-2	1.000	4788	928	184	460	5		M
375.8178	32.339	32.340	0	1.001	4455	1106	158	395	7	1.07(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						184	460			
375.8178	30.197						158	395			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.126	32.140	-1		27105124	6699406	5613	14032	1194		
403.8529	32.126	32.140	-1		22014078	5484743	5330	13325	1029	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.987	12001988	3145863	5613	14032	560		
403.8529	31.701	31.701	0	0.987	9614343	2504391	5330	13325	470	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714						561	1402			
391.8127	31.714						668	1670			
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	13415107	3238371	5613	14032	577		
403.8529	31.807	31.807	0	0.990	10767482	2575934	5330	13325	483	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.820						561	1402			
391.8127	31.820						668	1670			
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.153	-1	1.014	29041	6007	561	1402	11		
391.8127	32.140	32.153	-1	1.014	21069	5172	668	1670	8	1.38(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.517	30.882	-82	0.928	386026	42243	561	1402	75		
391.8127	29.517	30.882	-82	0.928	296529	32002	668	1670	48	1.30(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
389.8157	30.955	30.882	4	0.973	93222	19031	561	1402	34		
391.8127	30.942	30.882	4	0.973	72600	13607	668	1670	20	1.28(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.766	0	1.051	5779942	1729015	6730	16825	257		
419.8220	33.766	33.766	0	1.051	13463154	3923515	18904	47260	208	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQ
407.7818	33.766	33.778	-1	1.000	11573	4416	459	1147	10		
	Empc Correction				5696	2125	459	1147	5		
409.7789	33.766	33.778	-1	1.000	5477	2044	210	525	10	2.11(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.085	6039543	1662755	6730	16825	247		
419.8220	34.847	34.847	0	1.085	14154965	3825263	18904	47260	202	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860						459	1147			
409.7789	34.860						210	525			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						459	1147			
409.7789	34.319						210	525			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.568	-1	1.076	9113107	2601928	4493	11232	579		
437.8140	34.556	34.568	-1	1.076	8856757	2502349	5744	14360	436	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.580	-1	1.000	267086	74623	779	1947	96		
425.7737	34.568	34.580	-1	1.000	268606	71577	802	2005	89	0.99(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.009	34.301	-17	0.984	705669	209481	779	1947	269		
425.7737	34.009	34.301	-17	0.984	725316	216163	802	2005	270	0.97(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.926	-1	1.149	12137440	2863660	1887	4717	1518		
471.7750	36.914	36.926	-1	1.149	13857572	3340436	1796	4490	1860	0.88(0.76-1.02)	
OCDF											M
441.7428	37.022	37.022	0	1.003	7772	2330	114	285	20		M
443.7399	37.010	37.022	-1	1.003	8625	2244	143	357	16	0.90(0.76-1.02)	M
OCDD											
457.7377	36.926	36.938	-1	1.000	3419112	817645	770	1925	1062		
459.7348	36.926	36.938	-1	1.000	3927039	928965	656	1640	1416	0.87(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d
Lims ID: 320-76769-A-8-A
Client ID: 11215702-072221-SS-SJSB080 (14-16)
Inject. Date: 15-Aug-2021 10:21:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 14

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	43288902	10138423

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	43288902	10138423

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.978	51927	12514	70239	15479	0.2756	0.74	M
Signal Totals:							
	51927	12514	70239	15479			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	122166	27993				0.74	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2756 = (122166 * 100.000) / (43288902 * 1.024)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Lims ID:	320-76769-A-8-A		
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Inject. Date:	15-Aug-2021 10:21:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	14

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	26502587	5867126

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	26502587	5867126

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.116	8469	2067	11559	3044	0.0603	0.73	
16.358	13995	3313	23688	5644	0.1134	0.59	RQ
16.358	13995	3313	18175	4302	0.0968		Empc Correction
16.917	81082	21303	116710	28610	0.5951	0.69	
17.809	16837	4041	32264	8101	0.1477	0.52	RQ
17.809	16837	4041	21866	5248	0.1164		Empc Correction
17.961	10950	2684	12631	3407	0.0709	0.87	
Signal Totals:							
	131333	33408	180941	44611			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	328185	82214				0.67	RQ
	312274	78019					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.9874 = (328185 * 100.000) / (26502587 * 1.254)
Empc Amount: 0.9395 = (312274 * 100.000) / (26502587 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Lims ID:	320-76769-A-8-A		
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Inject. Date:	15-Aug-2021 10:21:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	14

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	23053659	3236899

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	23053659	3236899

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.235	23973	5155	17102	2807	0.1699	1.40	M
21.971	78563	13542	48647	6995	0.5263	1.61	
23.471	28771	3444	23702	3585	0.2171	1.21	RQ
23.471	28771	3444	18561	2221	0.1958		Empc Correction
Signal Totals:							
	131307	22141	84310	12023			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	220758	35528				1.47	RQM
	215617	34164					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.9133 = (220758 * 100.000) / (23053659 * 1.048)
Empc Amount: 0.8921 = (215617 * 100.000) / (23053659 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d
Lims ID: 320-76769-A-8-A
Client ID: 11215702-072221-SS-SJSB080 (14-16)
Inject. Date: 15-Aug-2021 10:21:52 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 14

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	21616331	5650254
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	24182589	5814305
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	22899460	5732279

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.517	386026	42243	296529	32002	2.80	1.30	
30.955	93222	19031	72600	13607	0.6796	1.28	
Signal Totals:							
	479248	61274	369129	45609			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	848377	106883				1.30	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.477 = (848377 * 100.000) / (22899460 * 1.066)

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Lims ID:	320-76769-A-8-A		
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Inject. Date:	15-Aug-2021 10:21:52	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	14

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	17969864	5104277

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	17969864	5104277

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.009	705669	209481	725316	216163	7.28	0.97	
Signal Totals:							
	705669	209481	725316	216163			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1430985	425644				0.97	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 7.277 = (1430985 * 100.000) / (17969864 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d				
Injection Date:	15-Aug-2021 10:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-8-A	Lab Sample ID:	320-76769-8		
Client ID:	11215702-072221-SS-SJSB080 (14-16)				
Operator ID:	DB	ALS Bottle#:	54	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.36
Area: 131478
Amount: 0.529783
Amount Units: pg/ul

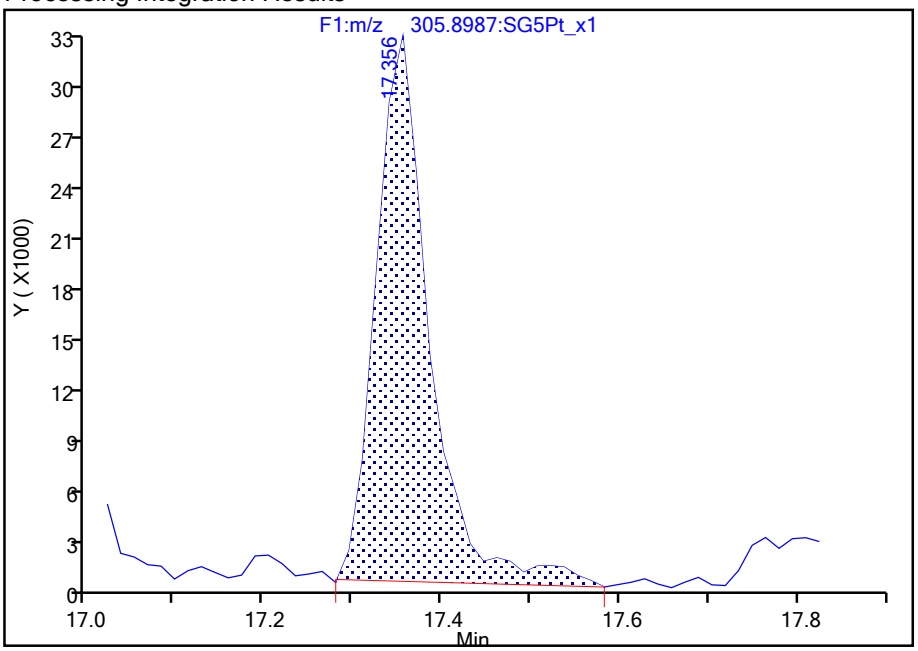

Manual Integration Results

RT: 17.36
Area: 128656
Amount: 0.523417
Amount Units: pg/ul

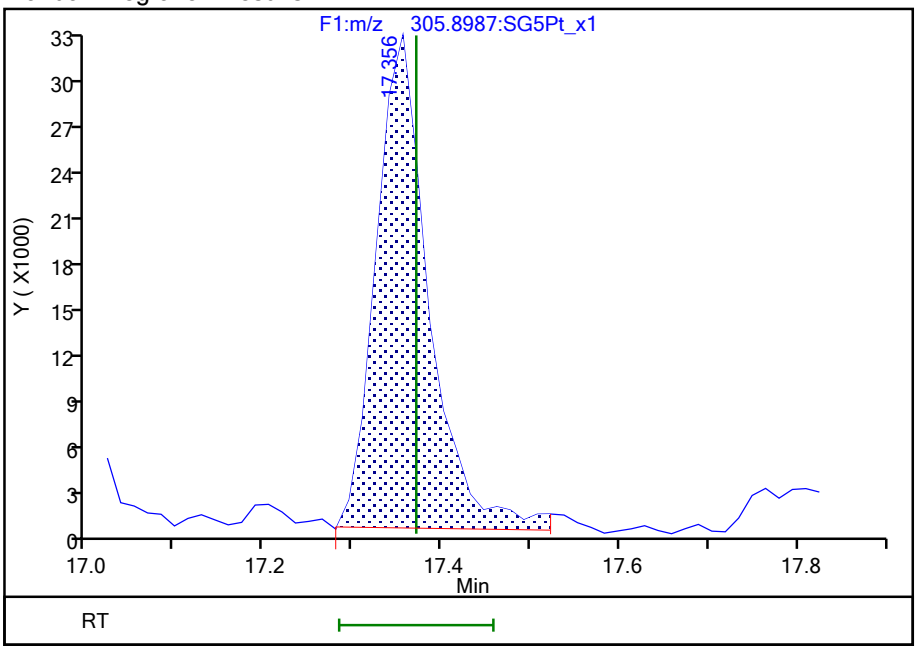

Reviewer: dadunj, 18-Aug-2021 11:20:15

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d				
Injection Date:	15-Aug-2021 10:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-8-A	Lab Sample ID:	320-76769-8		
Client ID:	11215702-072221-SS-SJSB080 (14-16)				
Operator ID:	DB	ALS Bottle#:	54	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 16.978 Area = 54359

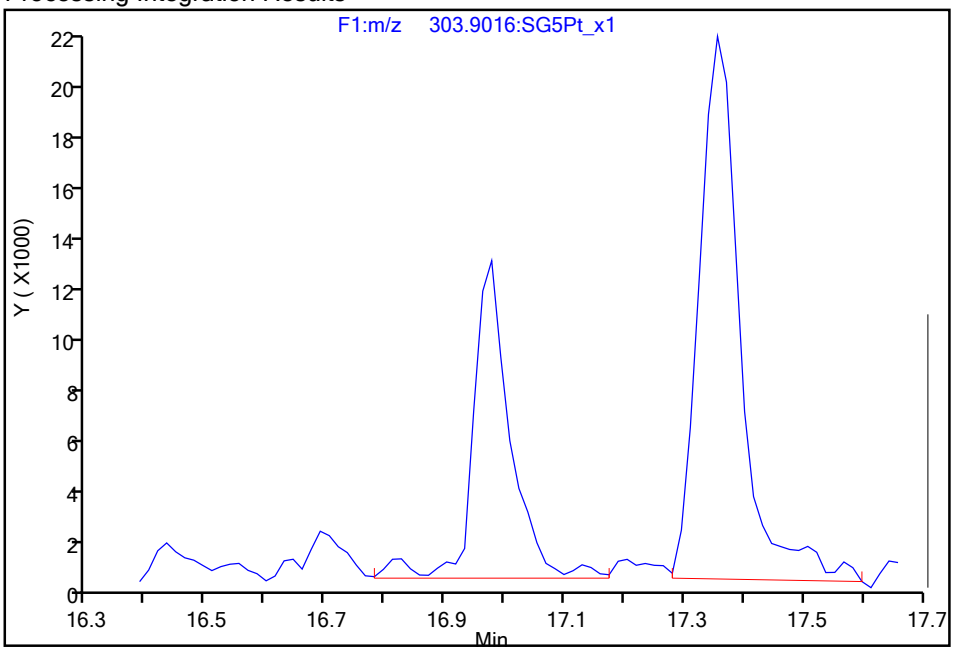

Manual Integration Results

RT = 16.978 Area = 51927 M

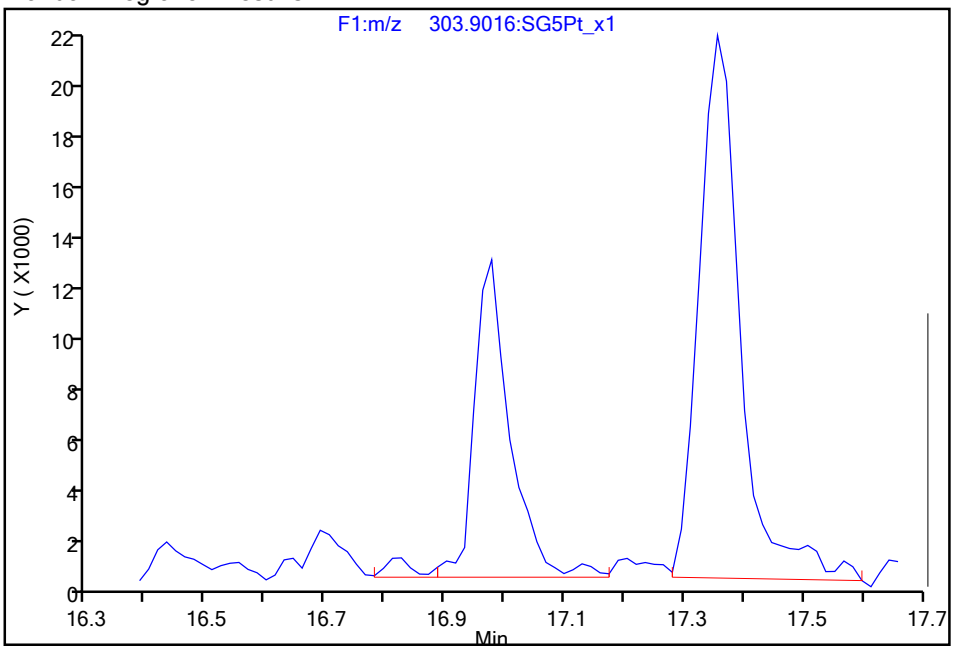

Reviewer: dadunj, 18-Aug-2021 11:20:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d				
Injection Date:	15-Aug-2021 10:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-8-A	Lab Sample ID:	320-76769-8		
Client ID:	11215702-072221-SS-SJSB080 (14-16)				
Operator ID:	DB	ALS Bottle#:	54	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.21- 25.49)

Signal: 2

Processing Integration Results

RT = 21.235 Area = 18264

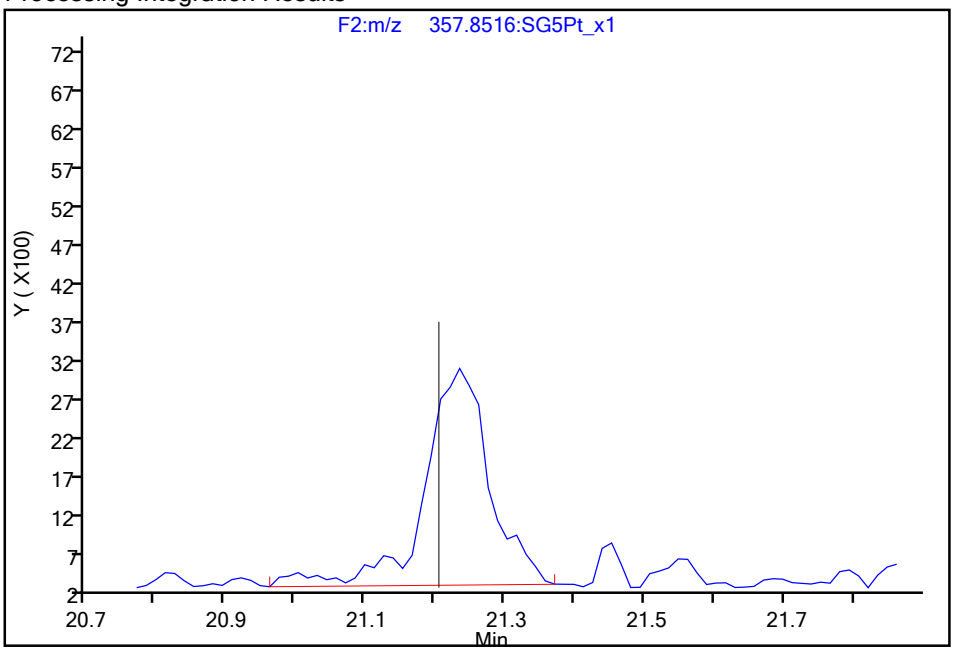

Manual Integration Results

RT = 21.235 Area = 17102 M

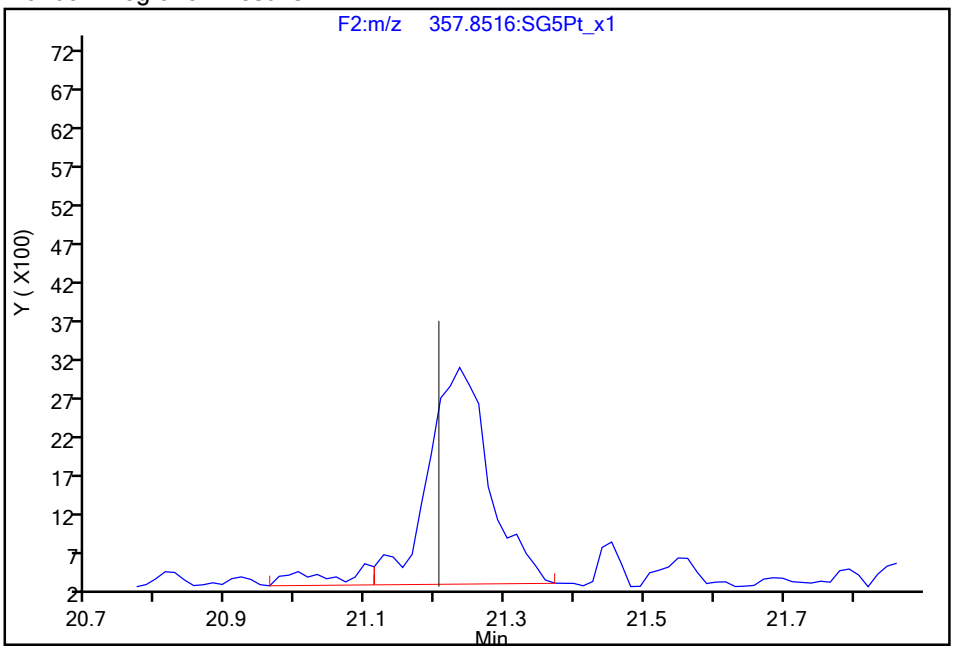

Reviewer: dadunj, 18-Aug-2021 11:20:37

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d				
Injection Date:	15-Aug-2021 10:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-8-A	Lab Sample ID:	320-76769-8		
Client ID:	11215702-072221-SS-SJSB080 (14-16)				
Operator ID:	DB	ALS Bottle#:	54	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

RT: 30.52
Area: 10937
Amount: 0.051065
Amount Units: pg/ul

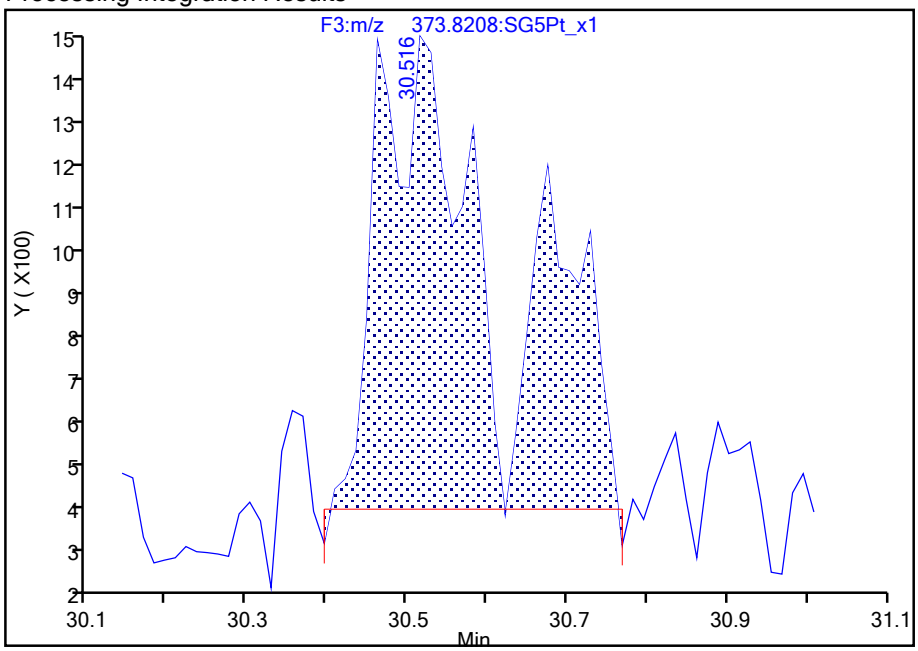

Manual Integration Results

RT: 30.52
Area: 7473
Amount: 0.040618
Amount Units: pg/ul

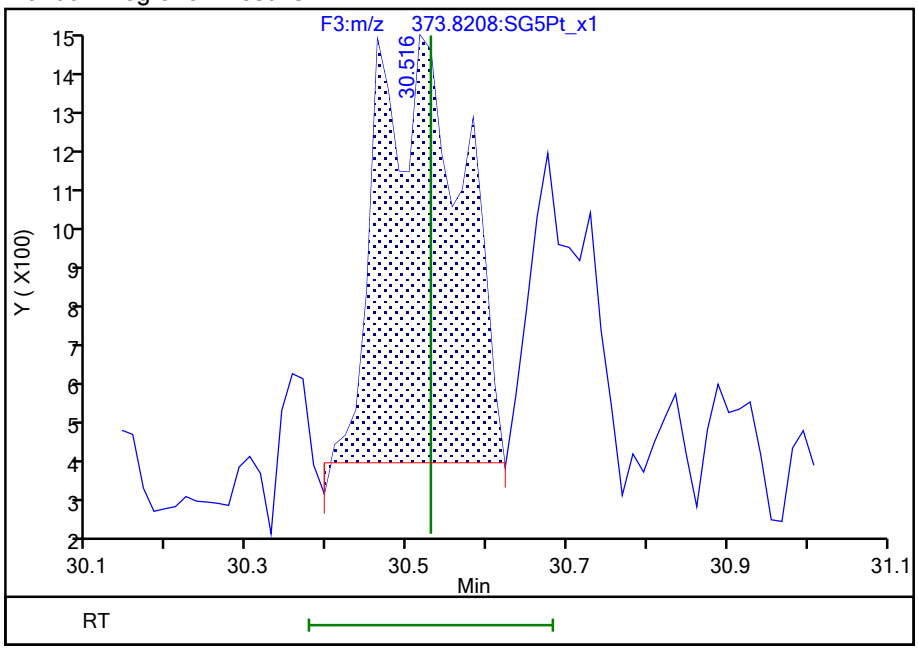

Reviewer: dadunj, 18-Aug-2021 11:20:49

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d				
Injection Date:	15-Aug-2021 10:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-8-A	Lab Sample ID:	320-76769-8		
Client ID:	11215702-072221-SS-SJSB080 (14-16)				
Operator ID:	DB	ALS Bottle#:	54	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.31
Area: 6140
Amount: 0.040518
Amount Units: pg/ul

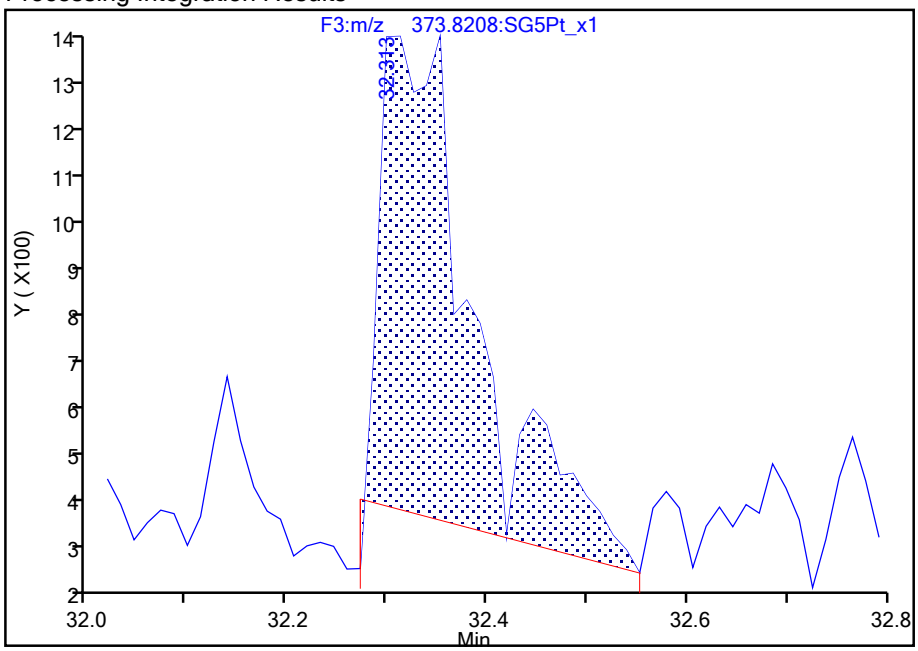

Manual Integration Results

RT: 32.31
Area: 4788
Amount: 0.032524
Amount Units: pg/ul

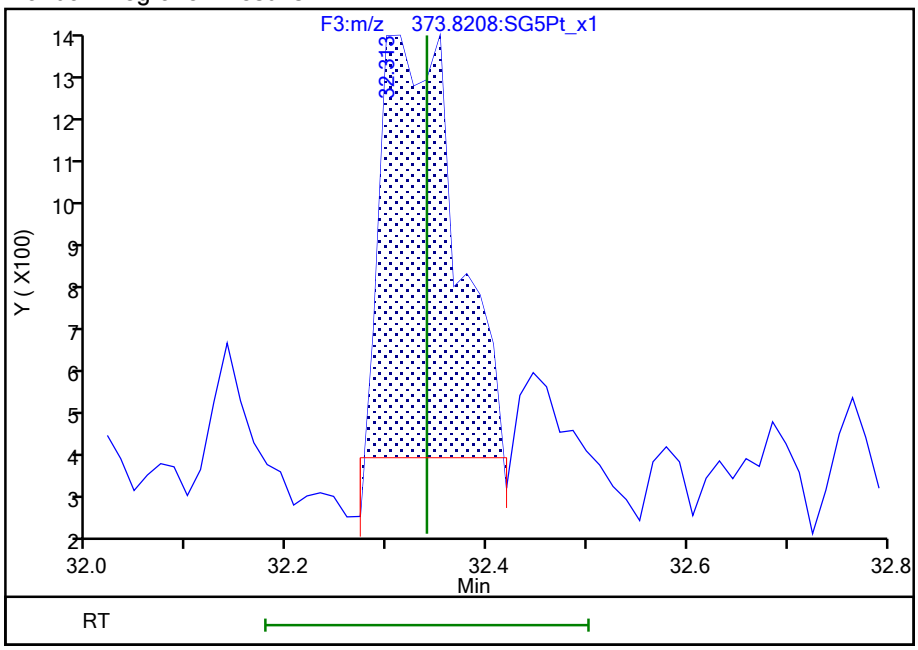

Reviewer: dadunj, 18-Aug-2021 11:21:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d				
Injection Date:	15-Aug-2021 10:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-8-A	Lab Sample ID:	320-76769-8		
Client ID:	11215702-072221-SS-SJSB080 (14-16)				
Operator ID:	DB	ALS Bottle#:	54	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.34
Area: 5375
Amount: 0.040518
Amount Units: pg/ul

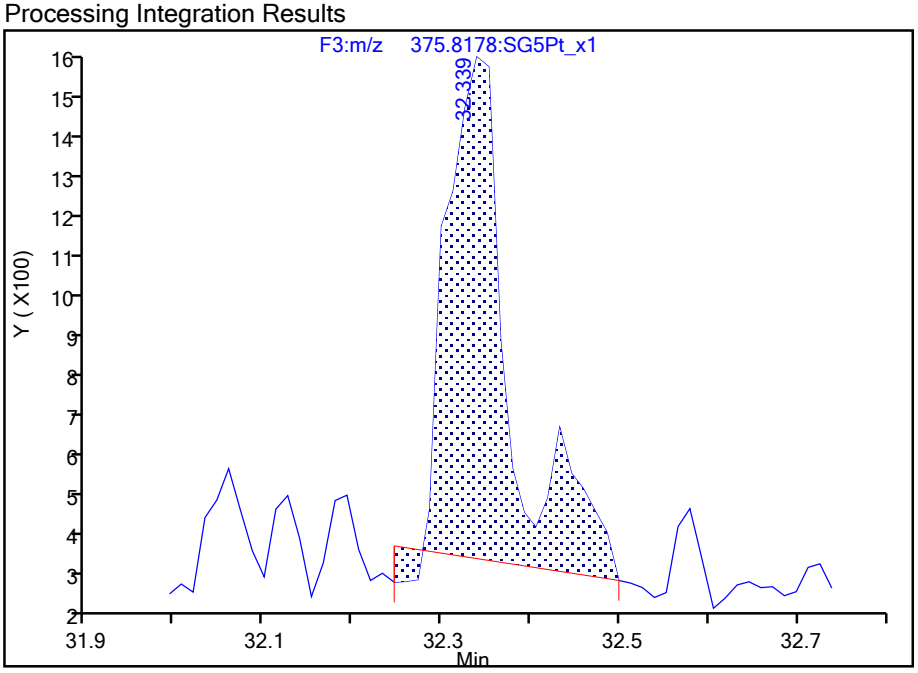

Manual Integration Results

RT: 32.34
Area: 4455
Amount: 0.032524
Amount Units: pg/ul

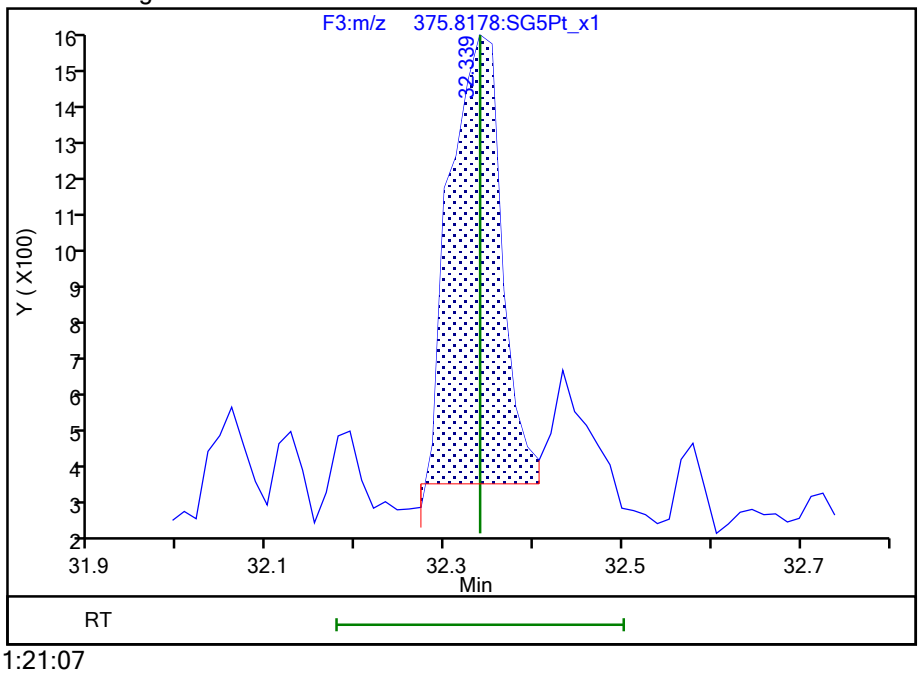

Reviewer: dadunj, 18-Aug-2021 11:21:07

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d				
Injection Date:	15-Aug-2021 10:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-8-A	Lab Sample ID:	320-76769-8		
Client ID:	11215702-072221-SS-SJSB080 (14-16)				
Operator ID:	DB	ALS Bottle#:	54	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.01
Area: 11422
Amount: 0.110296
Amount Units: pg/ul

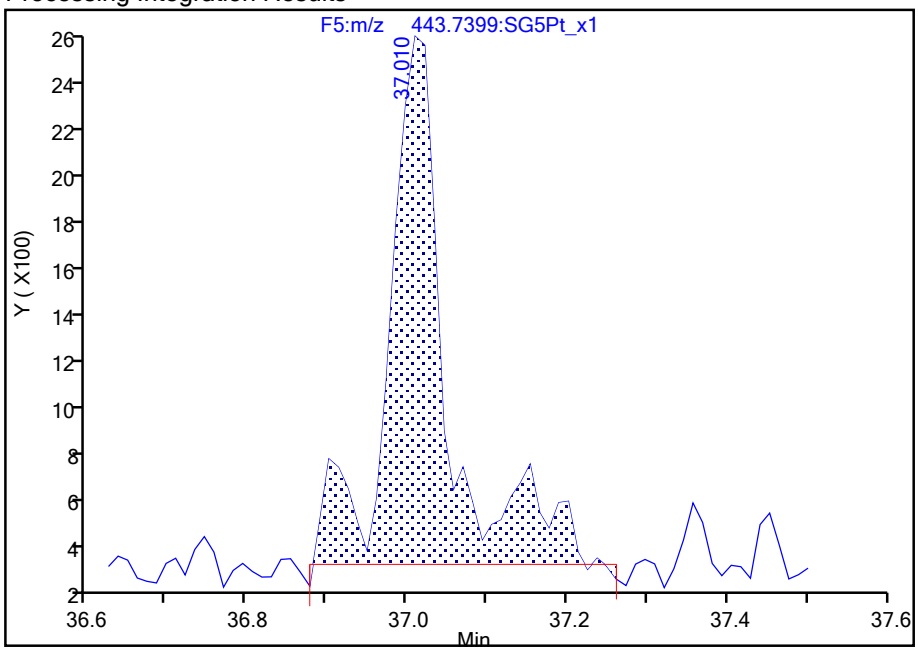

Manual Integration Results

RT: 37.01
Area: 8625
Amount: 0.087720
Amount Units: pg/ul

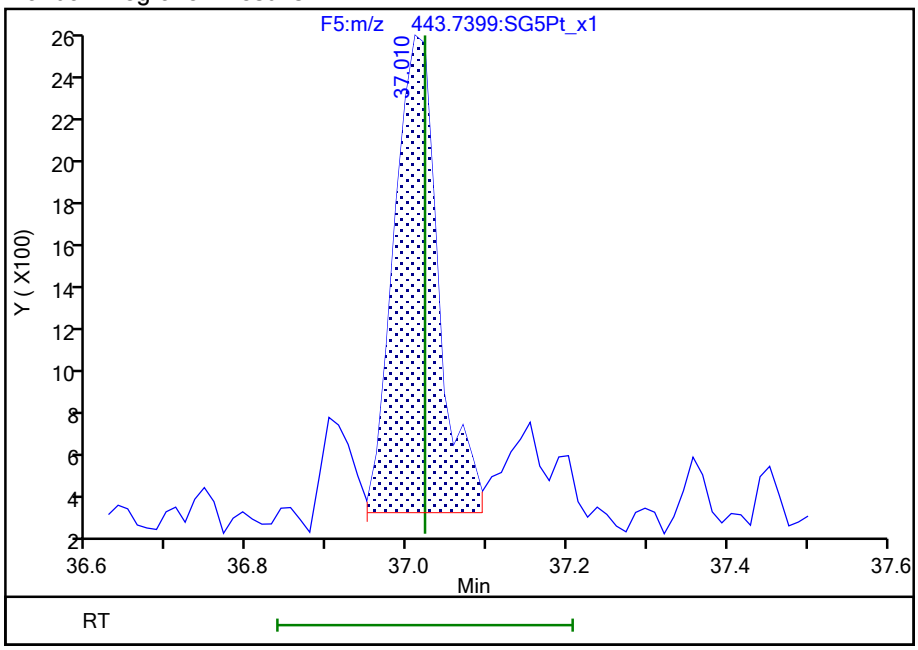

Reviewer: dadunj, 18-Aug-2021 11:21:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d				
Injection Date:	15-Aug-2021 10:21:52	Instrument ID:	10D5		
Lims ID:	320-76769-A-8-A	Lab Sample ID:	320-76769-8		
Client ID:	11215702-072221-SS-SJSB080 (14-16)				
Operator ID:	DB	ALS Bottle#:	54	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 9195
Amount: 0.110296
Amount Units: pg/ul

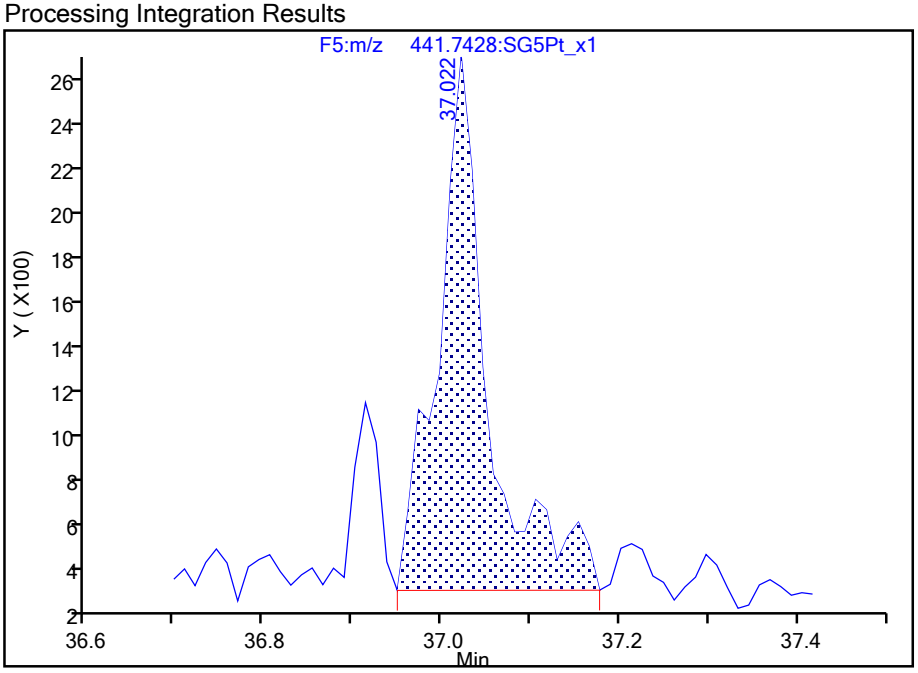

Manual Integration Results

RT: 37.02
Area: 7772
Amount: 0.087720
Amount Units: pg/ul

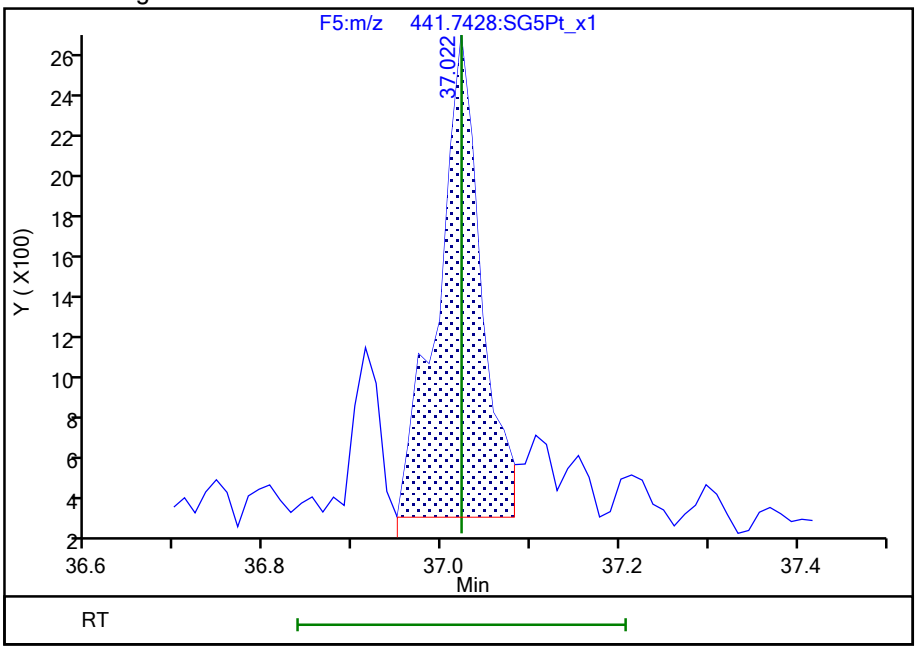

Reviewer: dadunj, 18-Aug-2021 11:21:31
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

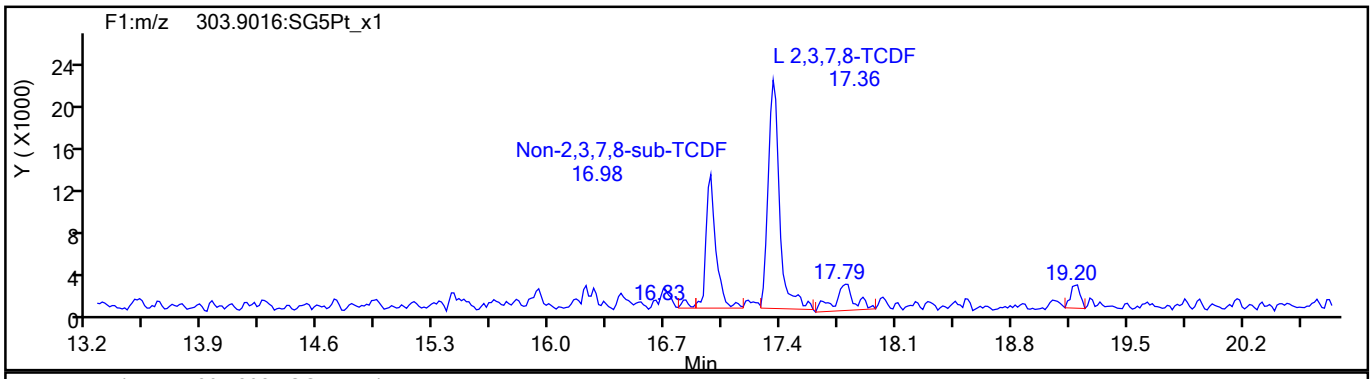

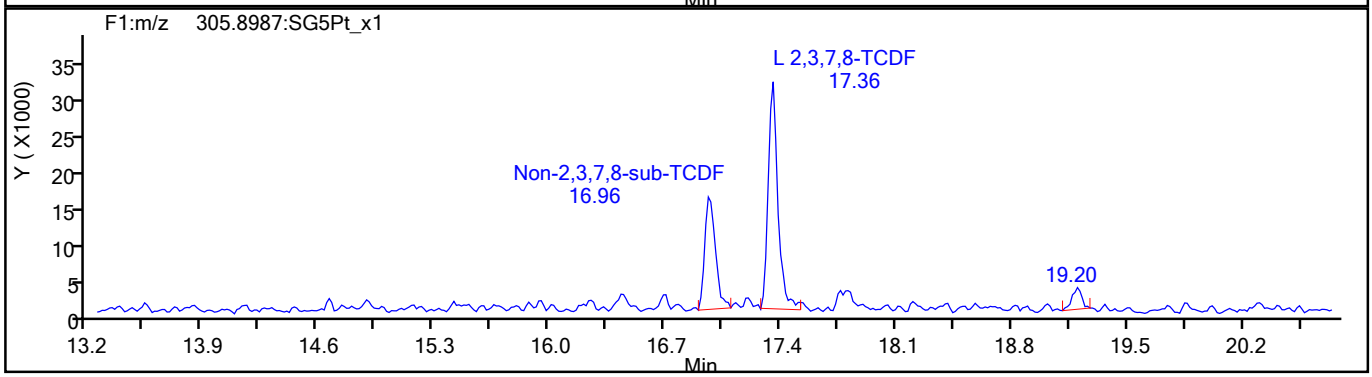

TCDF Standards

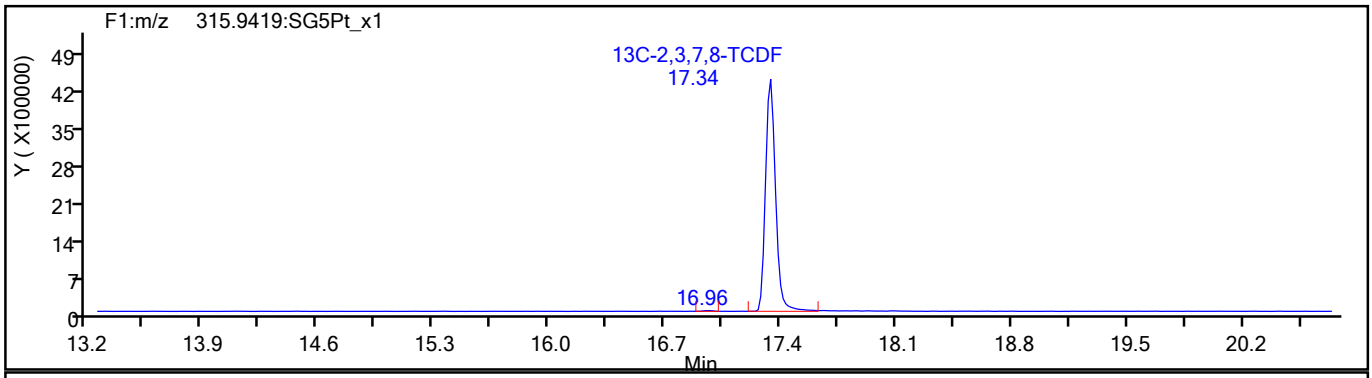

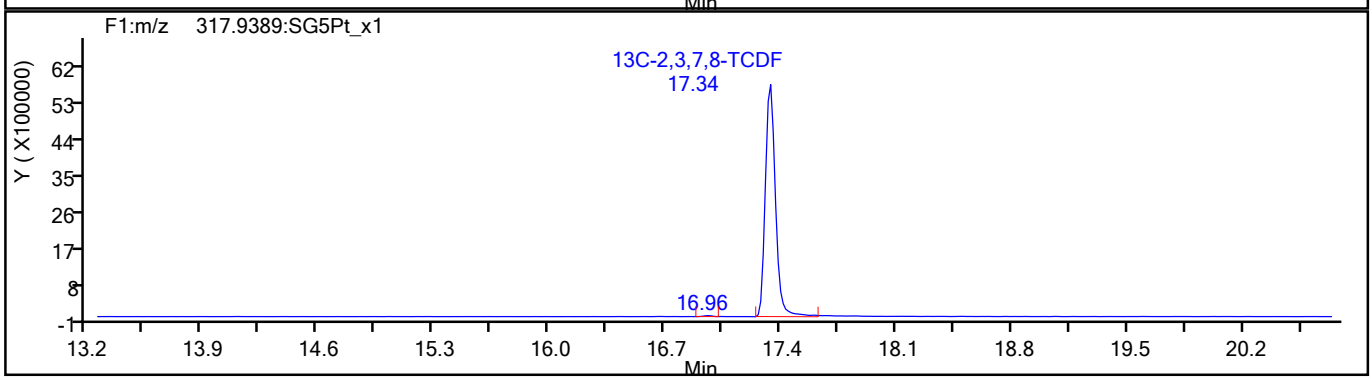

774929

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

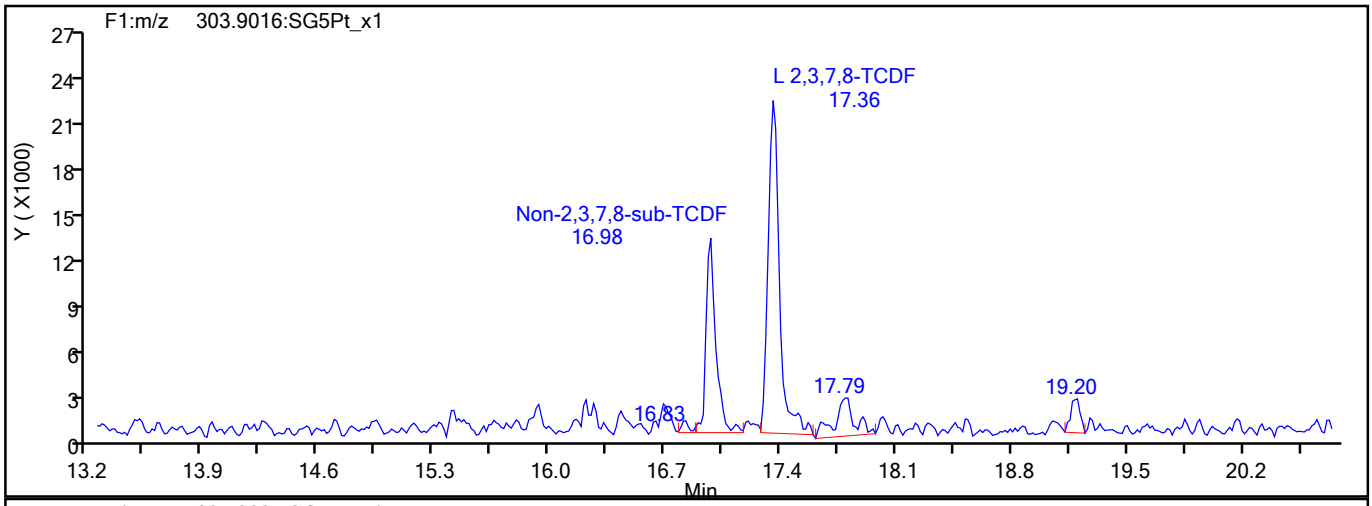

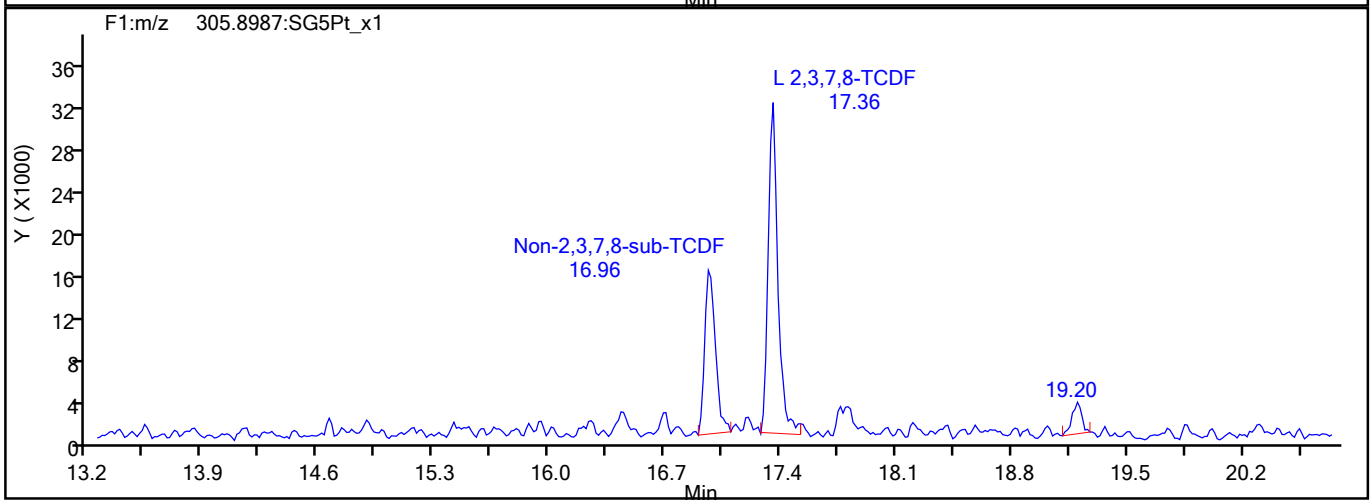

TCDF Interference Mass

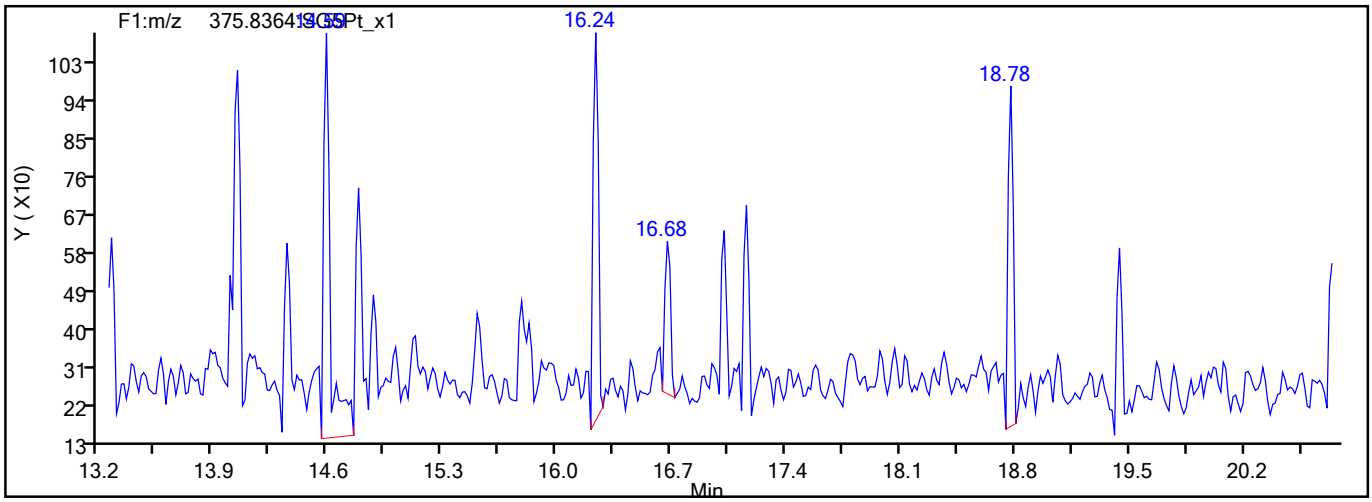

774930

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

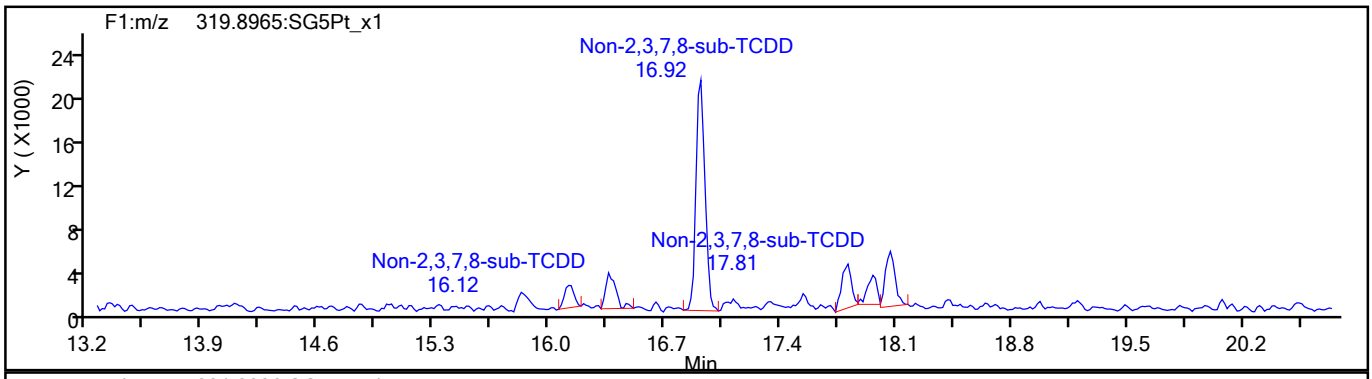

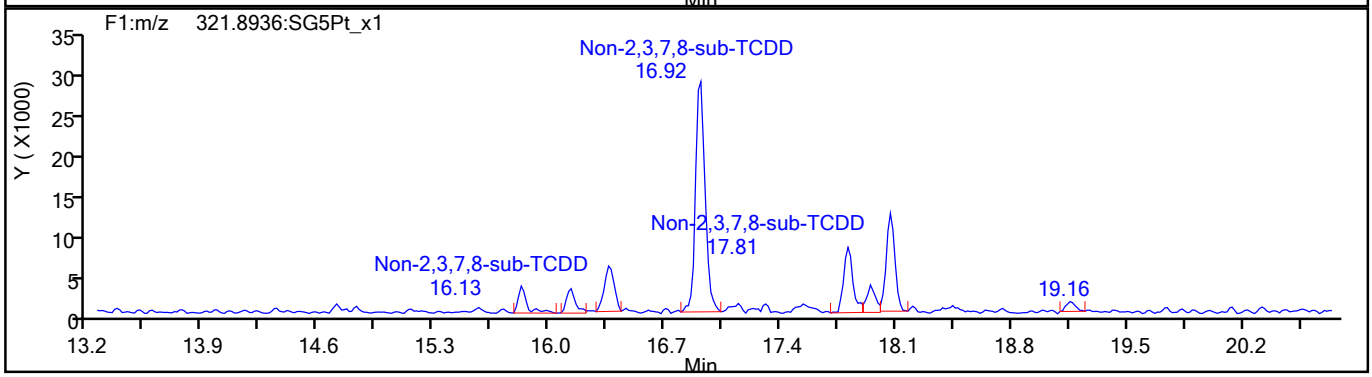

TCDD Standards

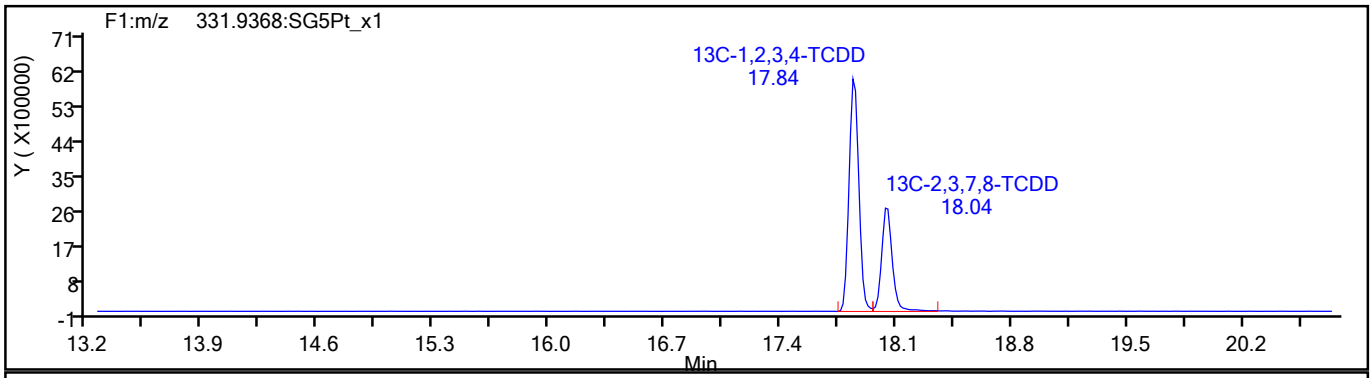

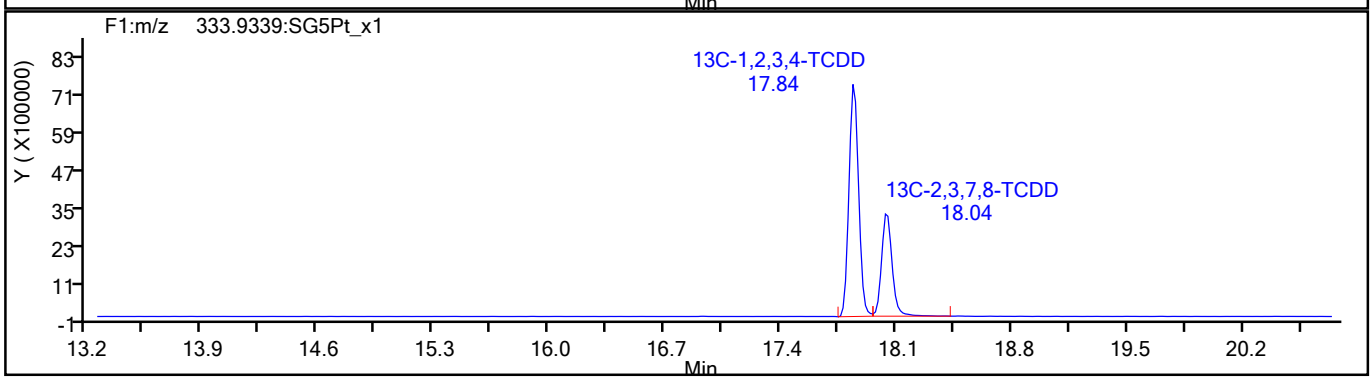

774931

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

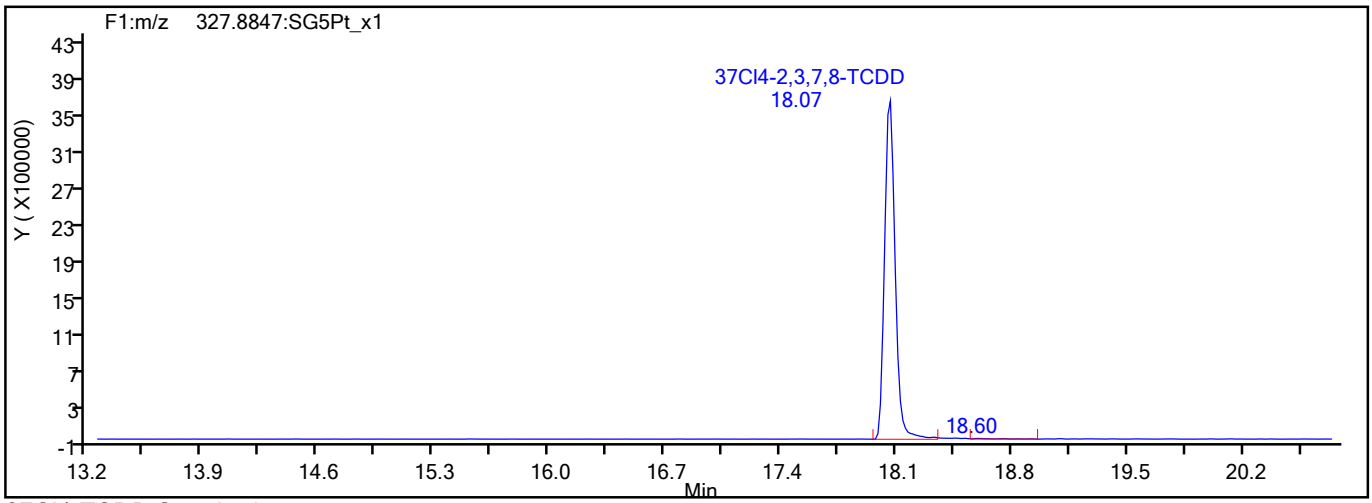

37Cl4-TCDD Standards

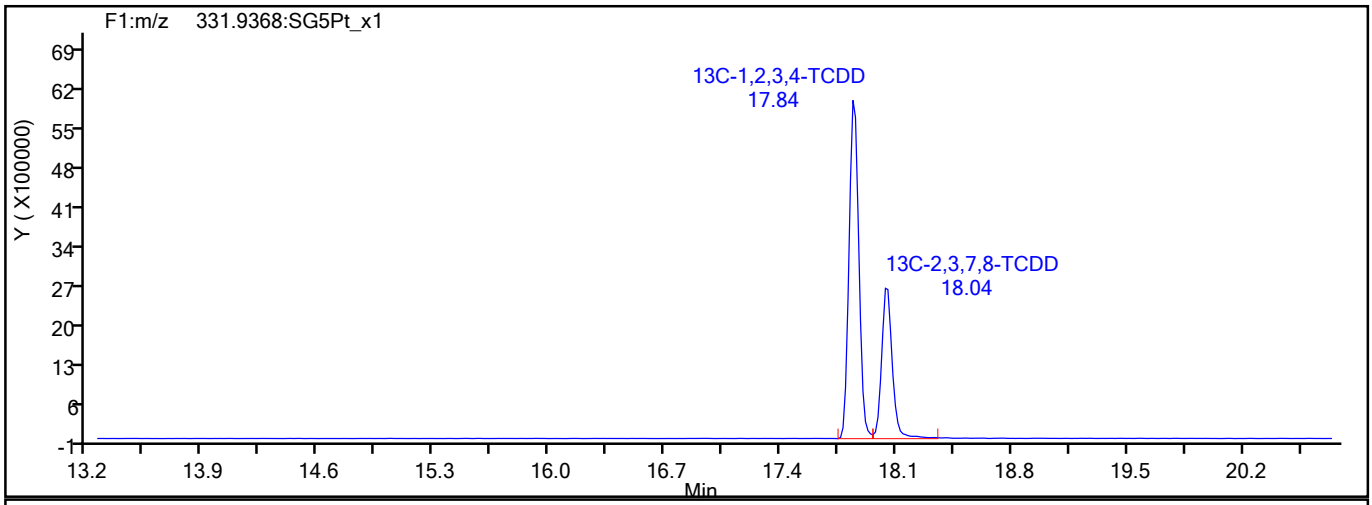

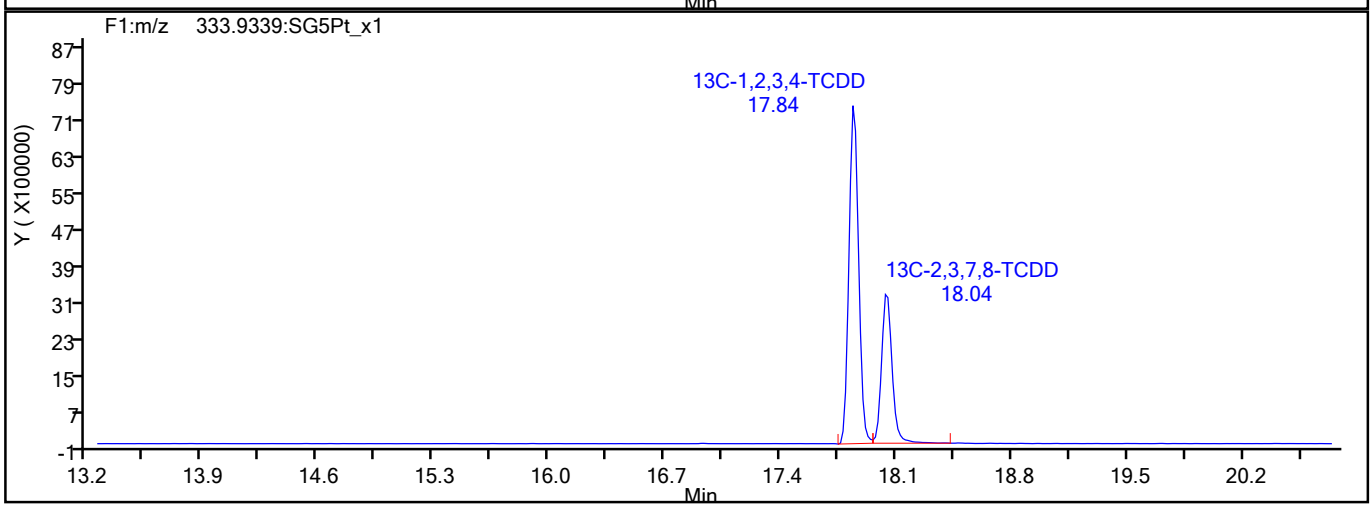

774932

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

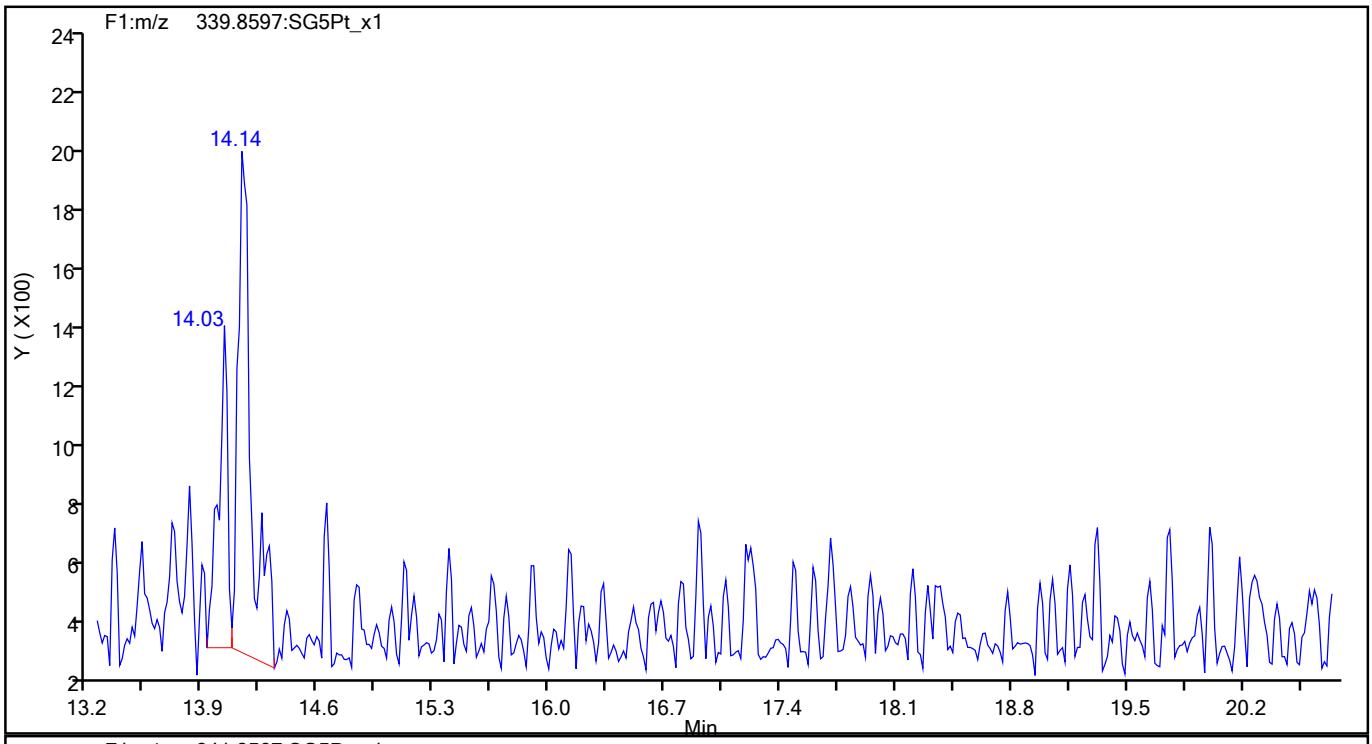

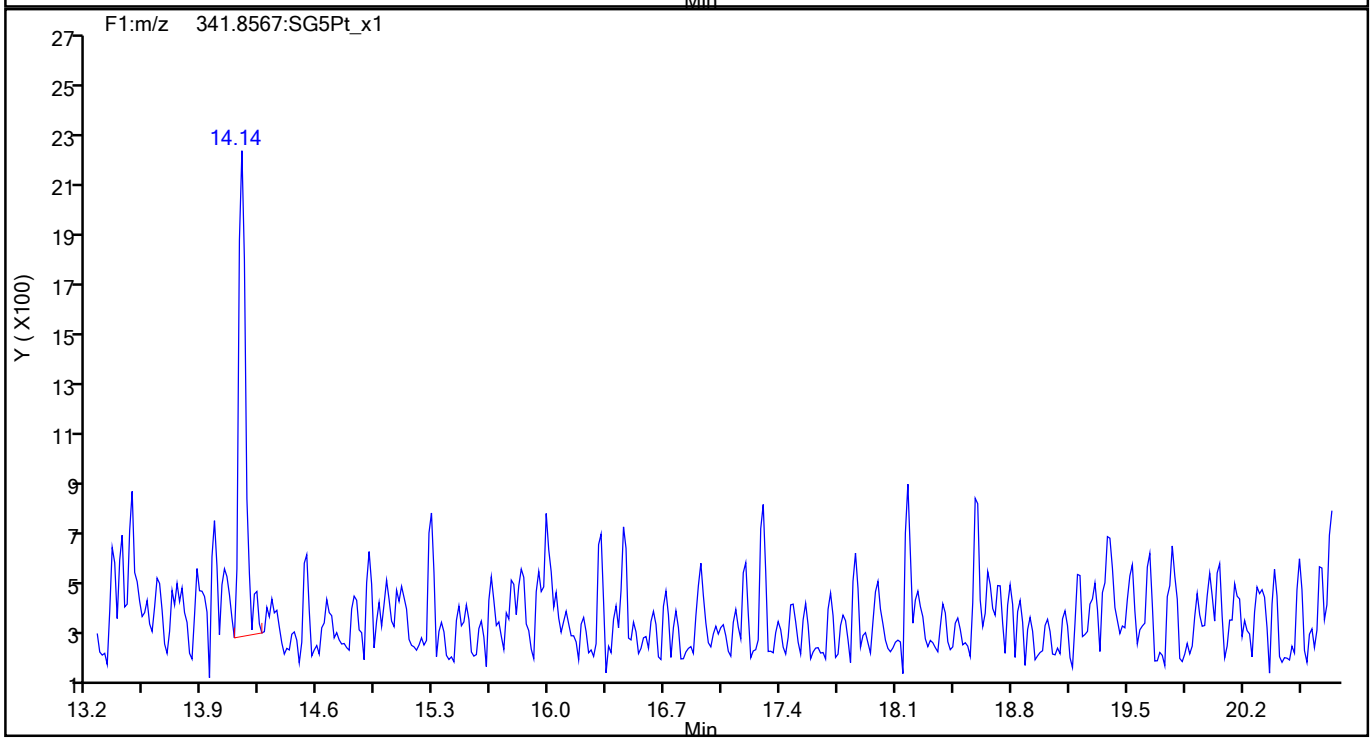

774933

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

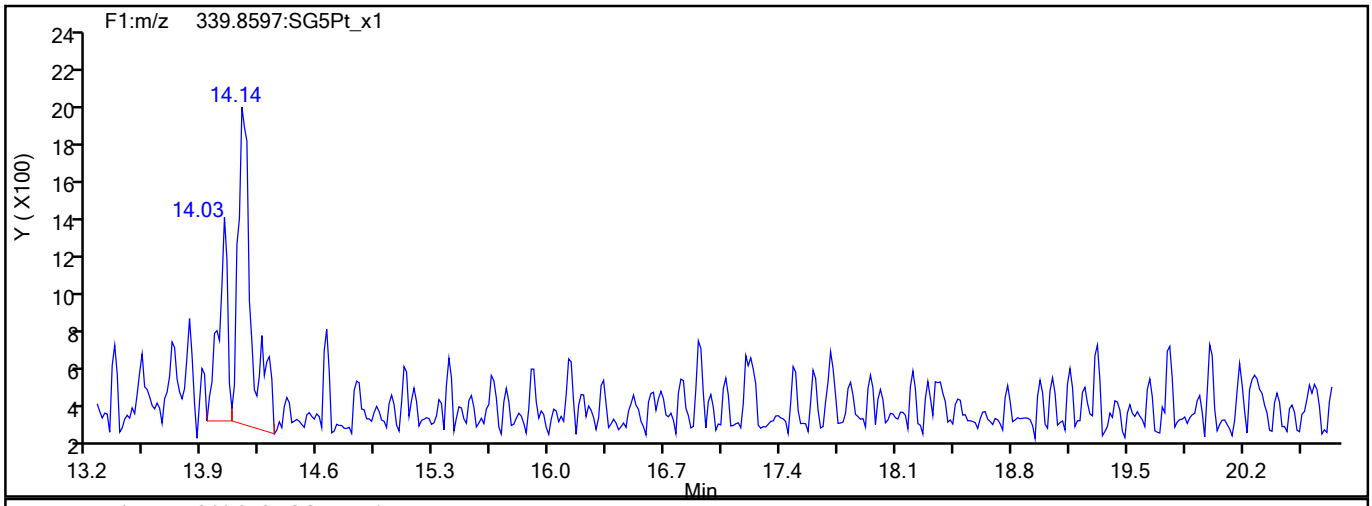

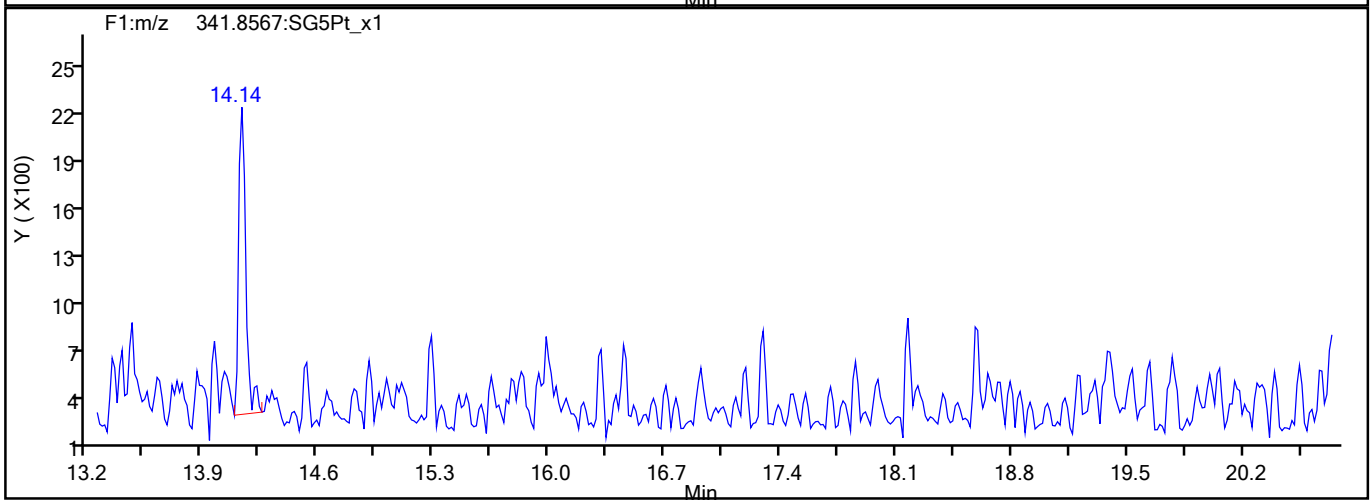

F1 PeCDFs Interference Mass

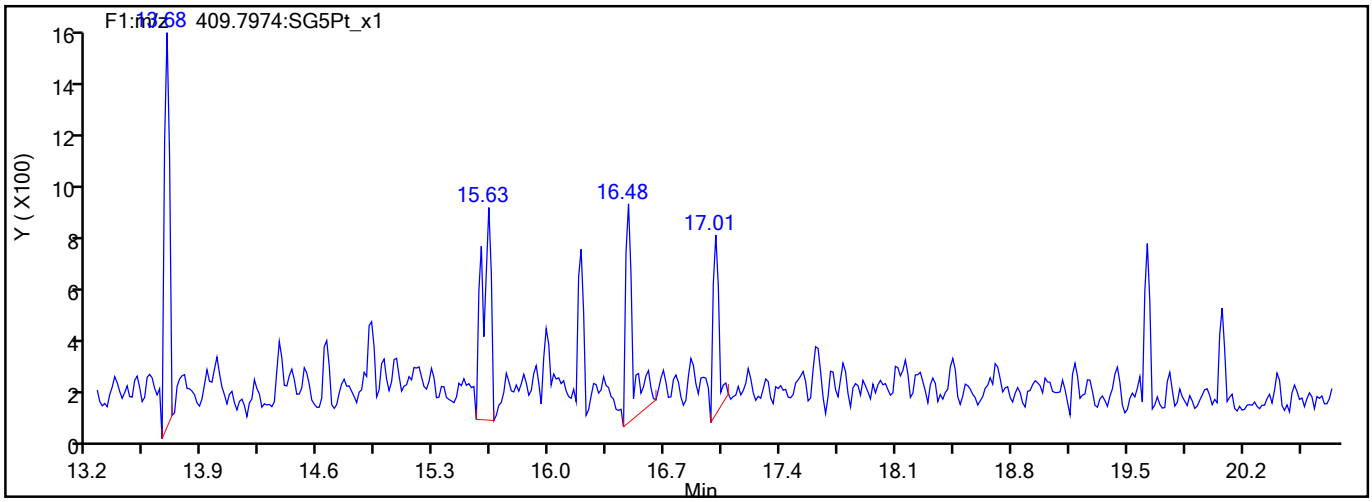

774934

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

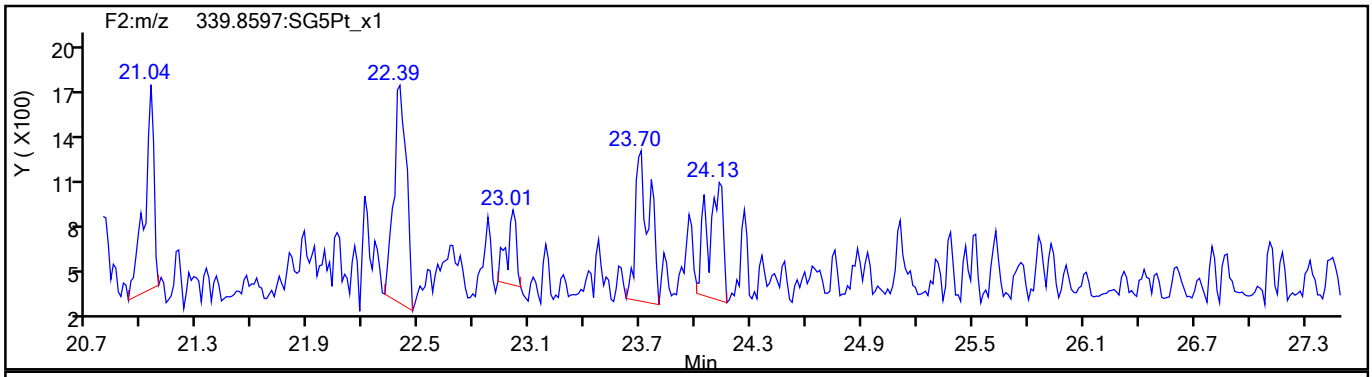

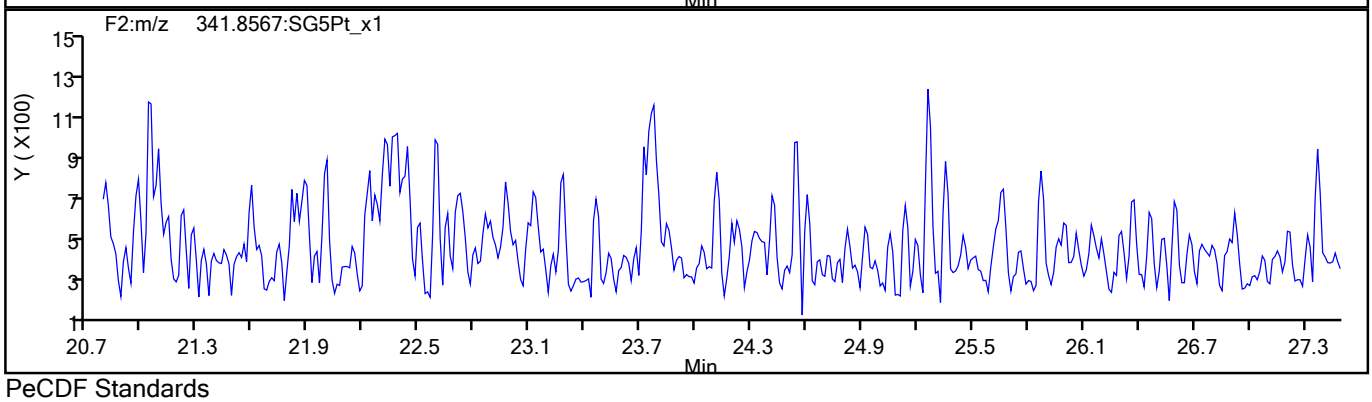

PeCDF Standards

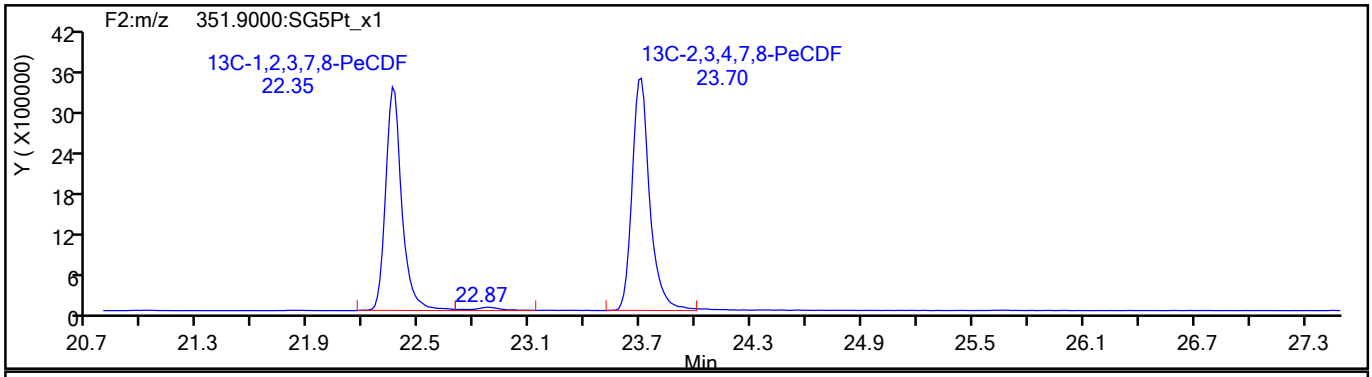

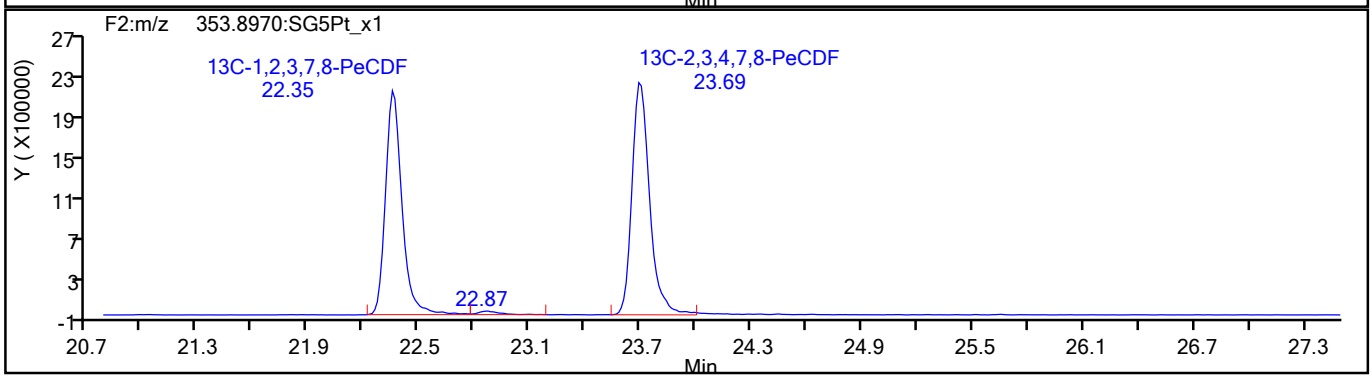

774935

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

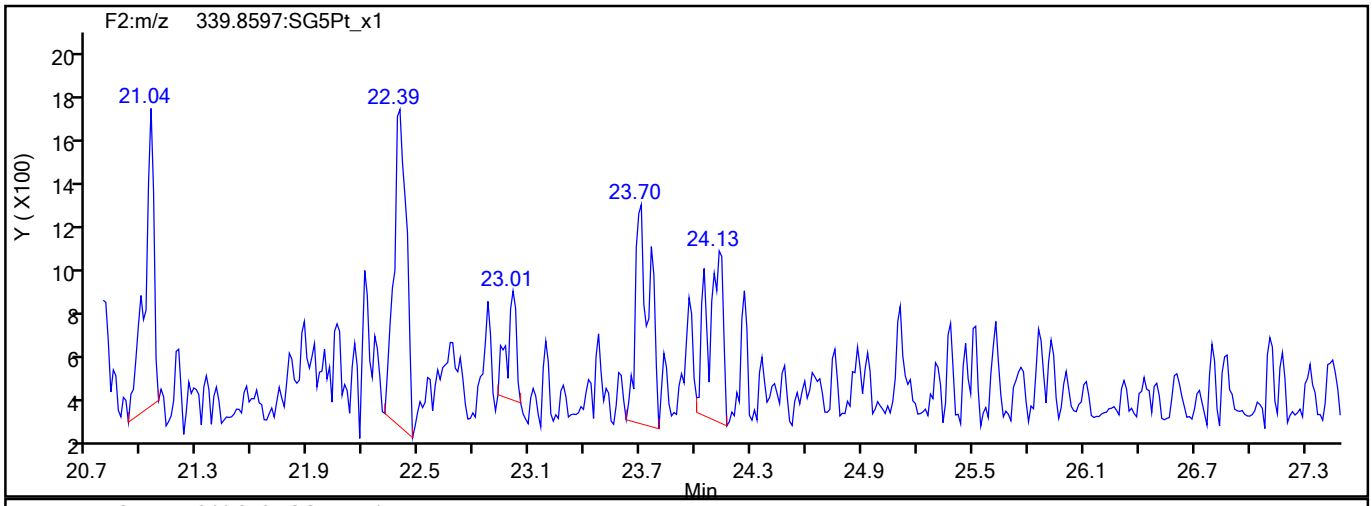

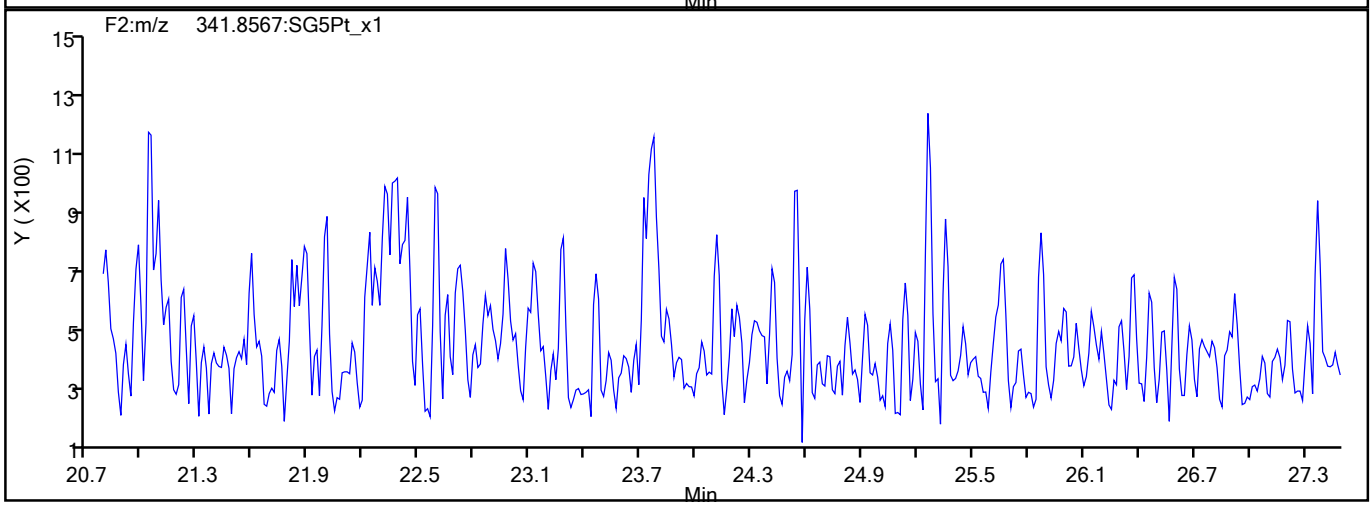

PeCDF Interference Mass

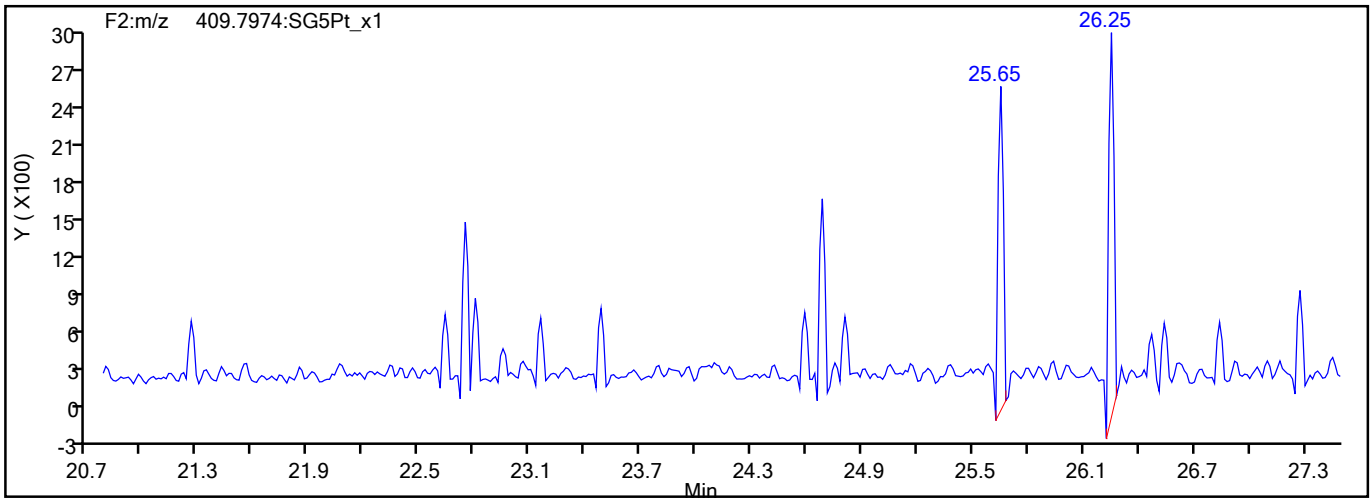

774936

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

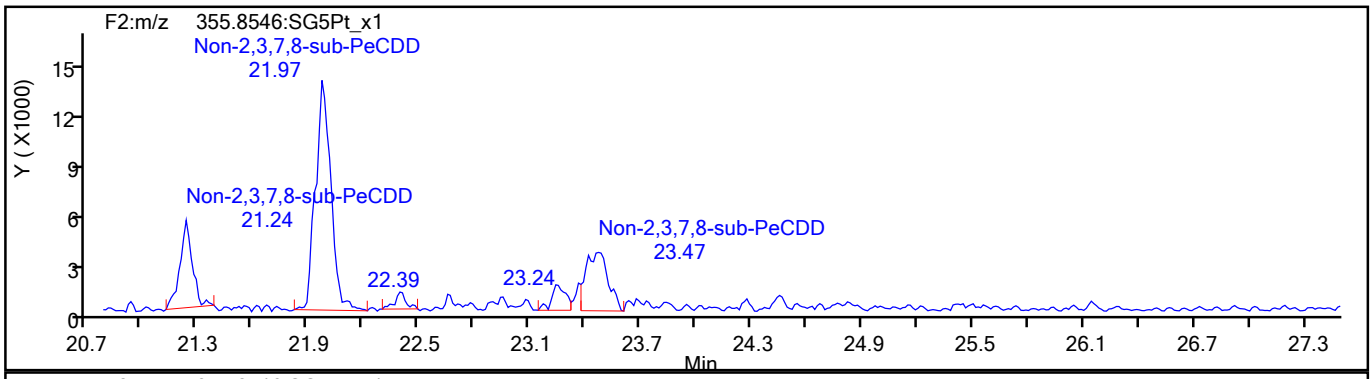

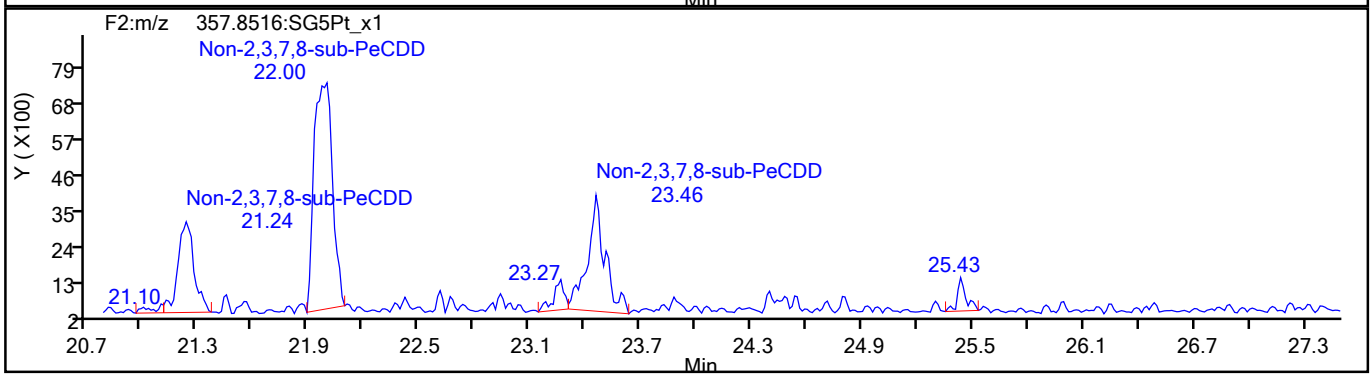

PeCDD Standards

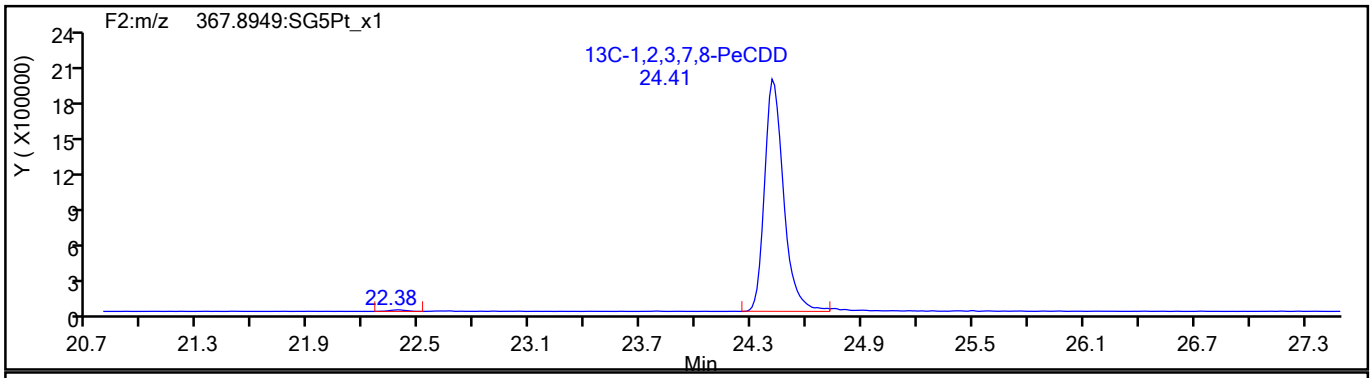

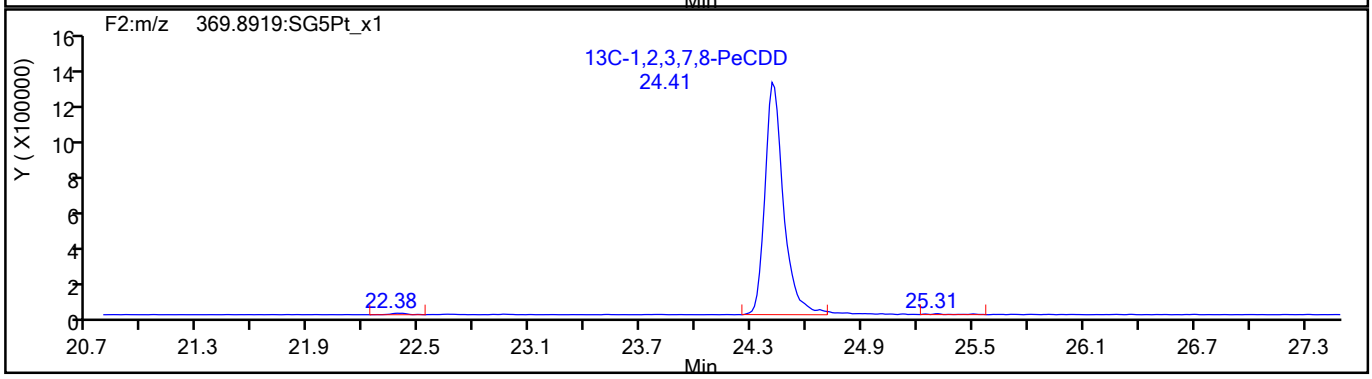

774937

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

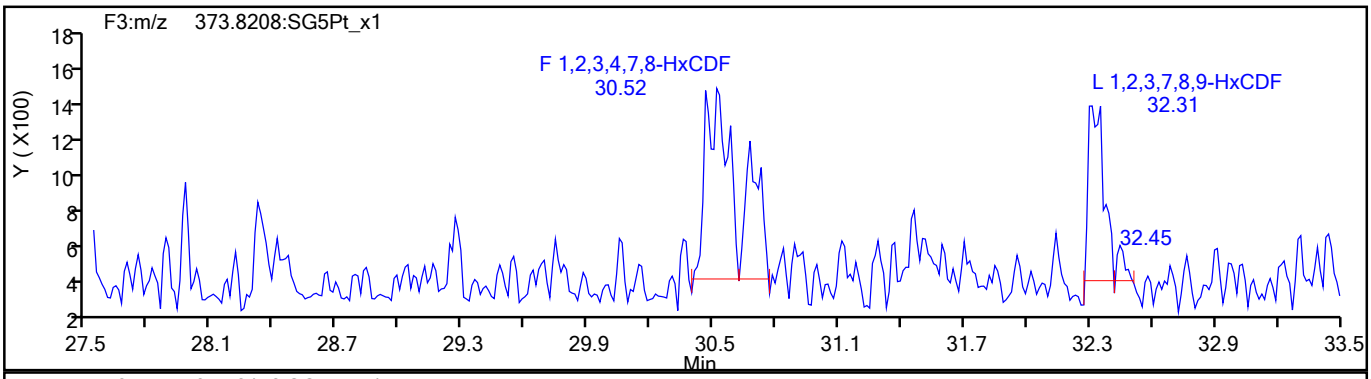

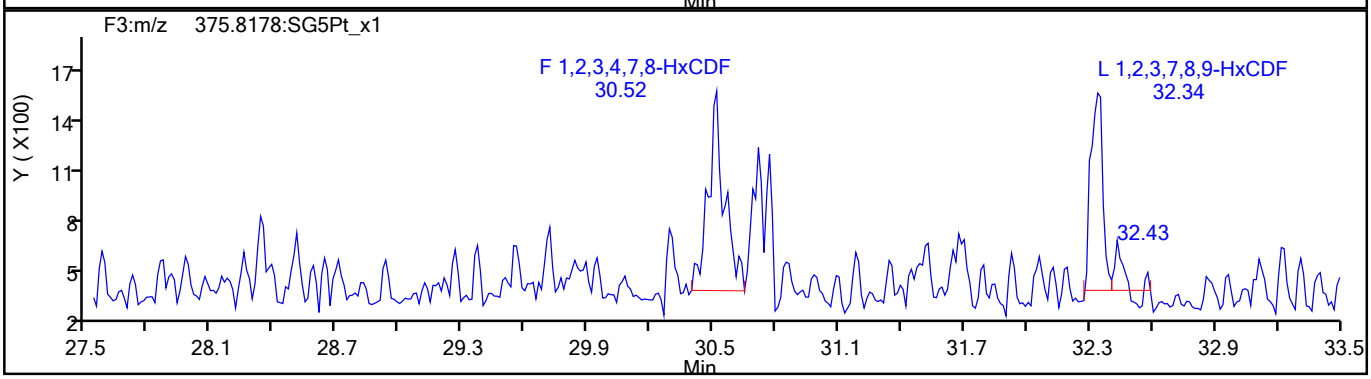

HxCDF Standards

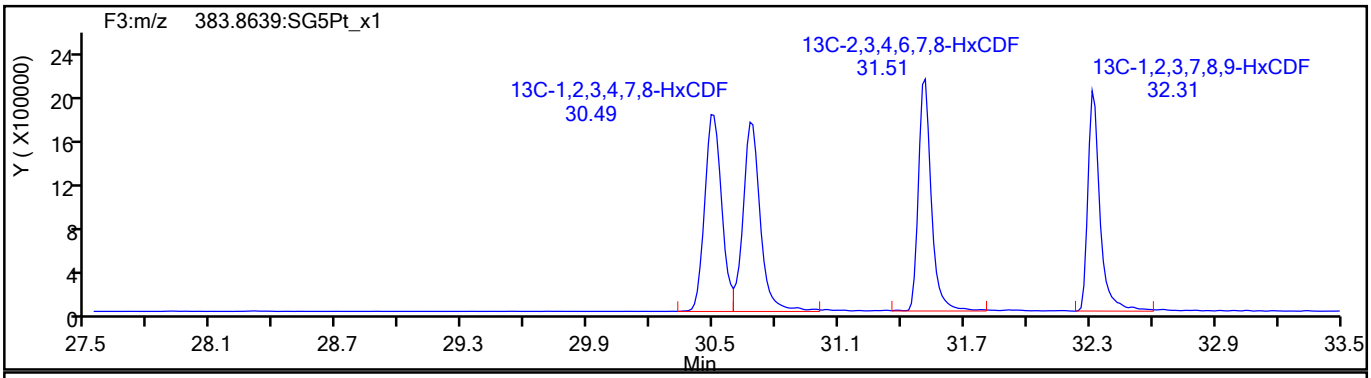

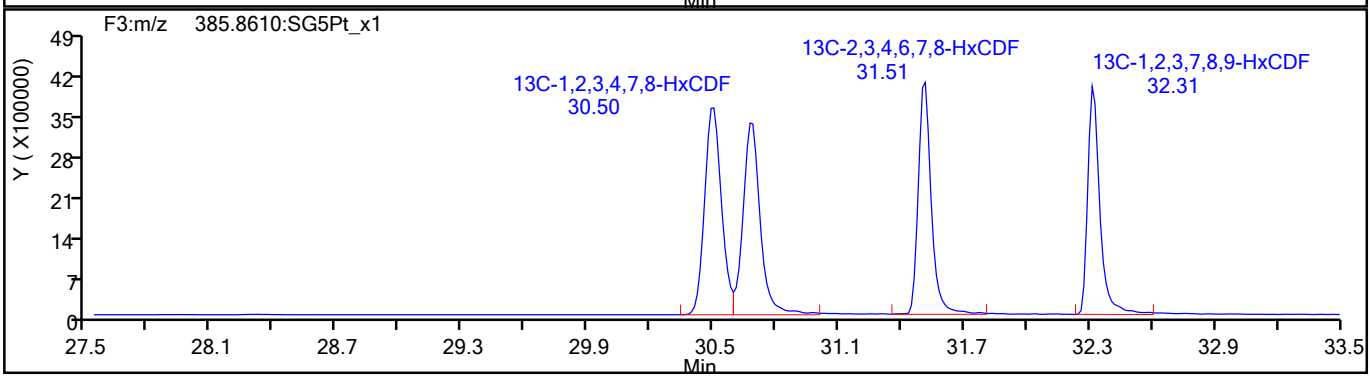

774938

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

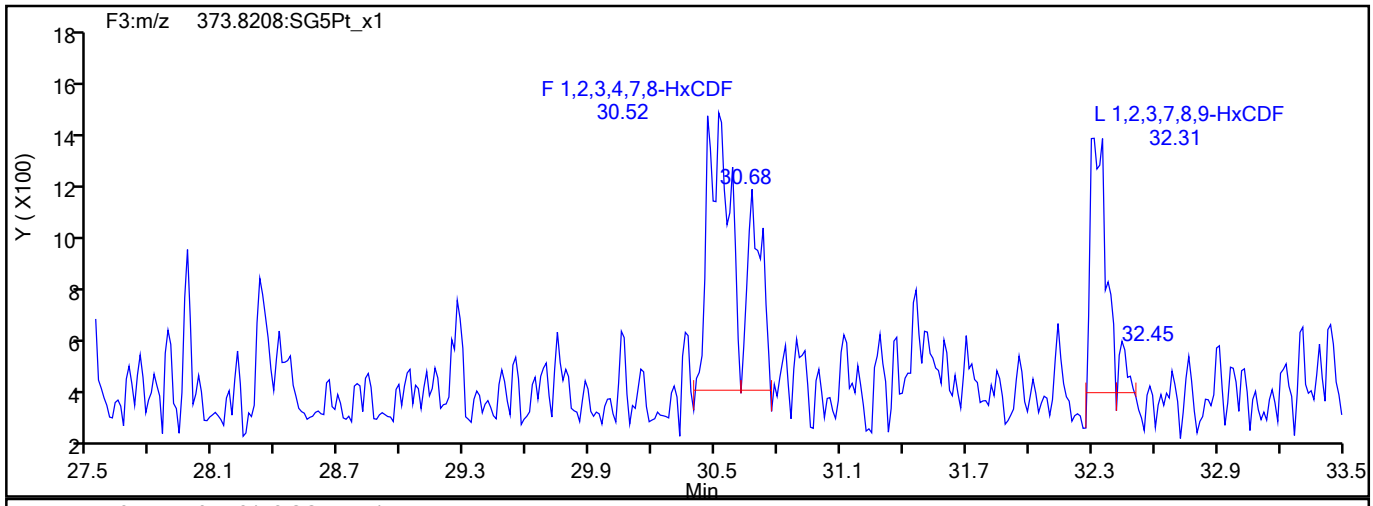

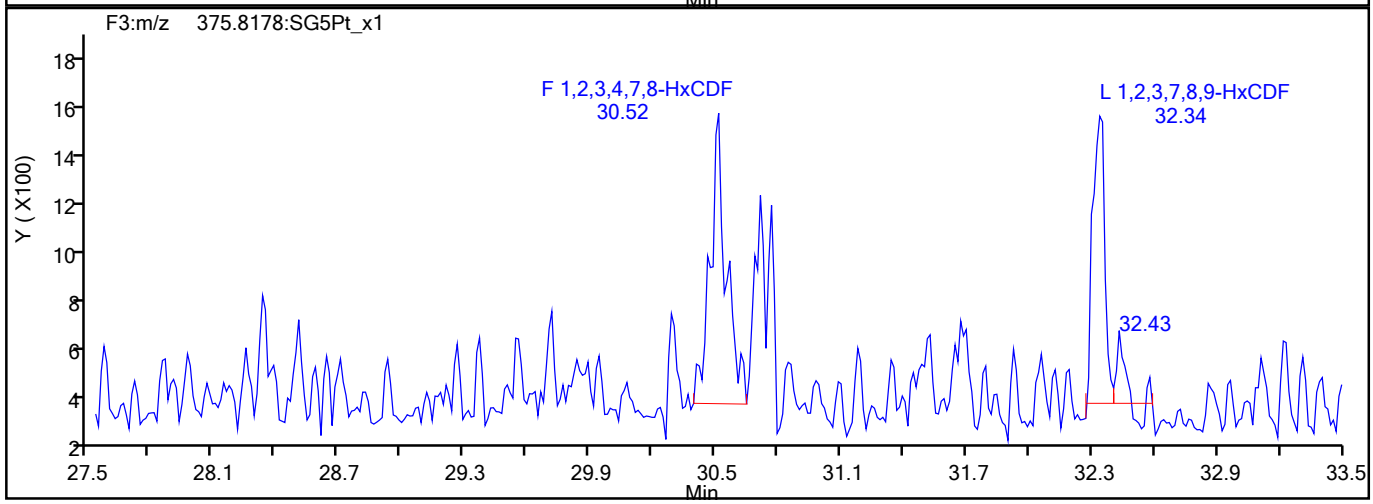

HxCDF Interference Mass

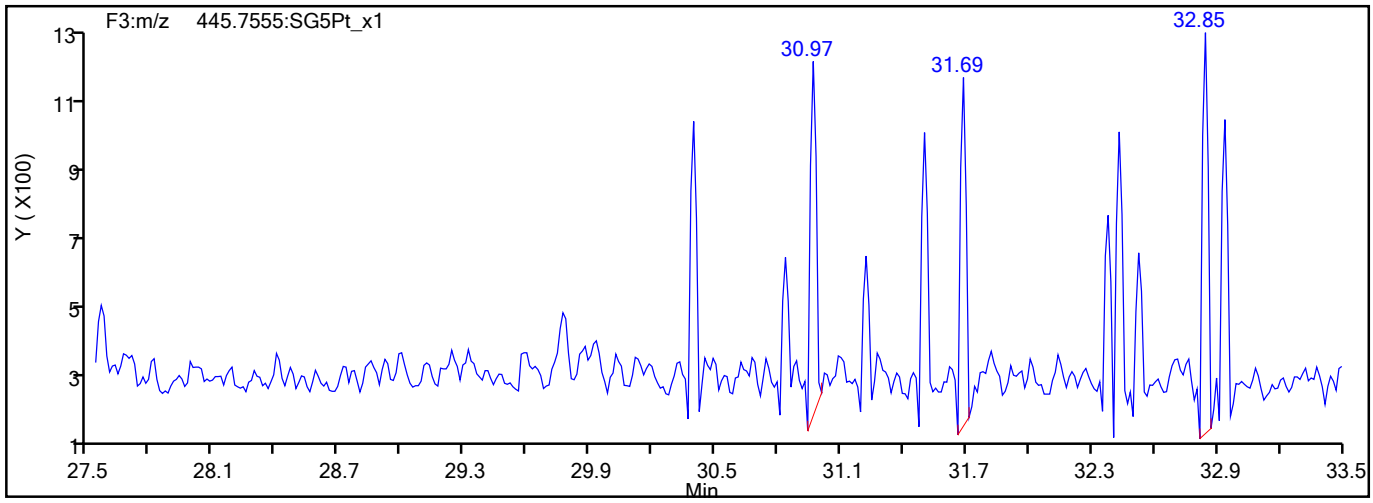

774939

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

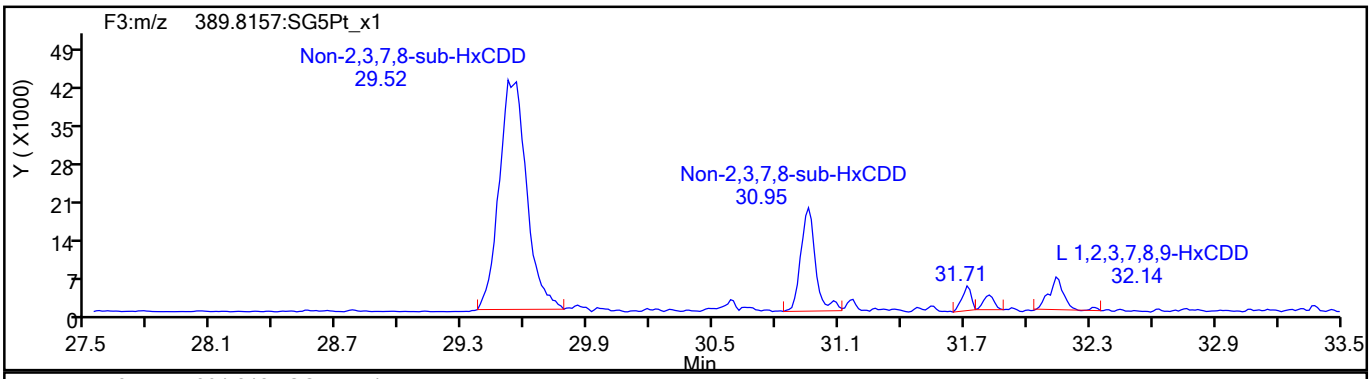

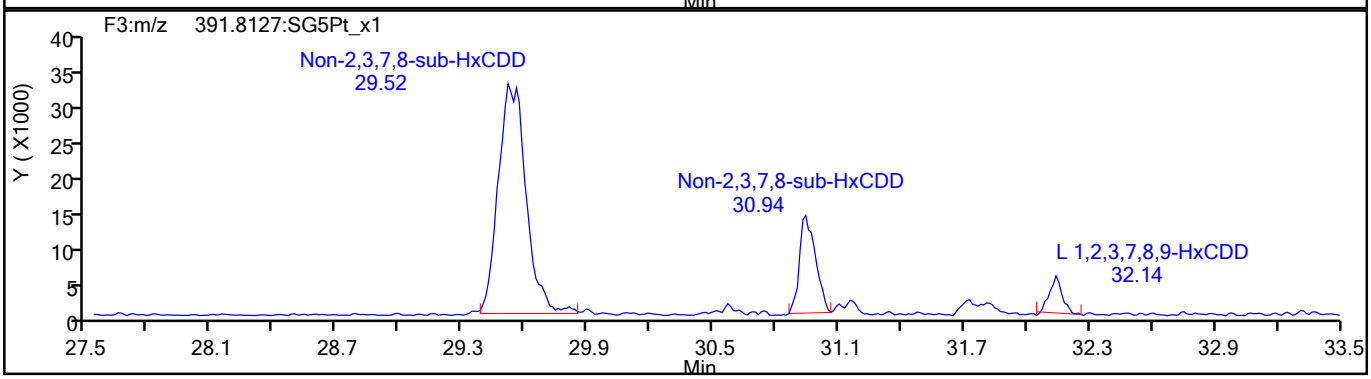

HxCDD Standards

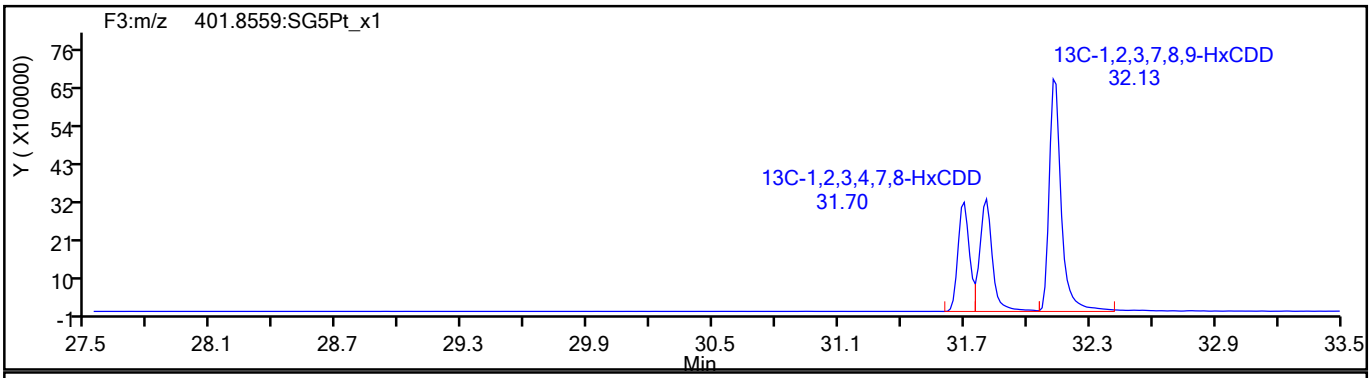

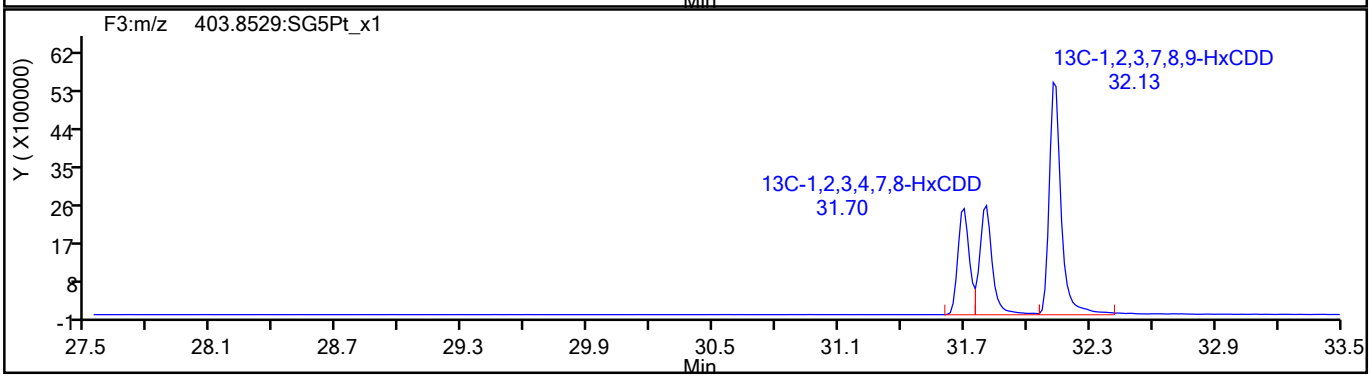

774940

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

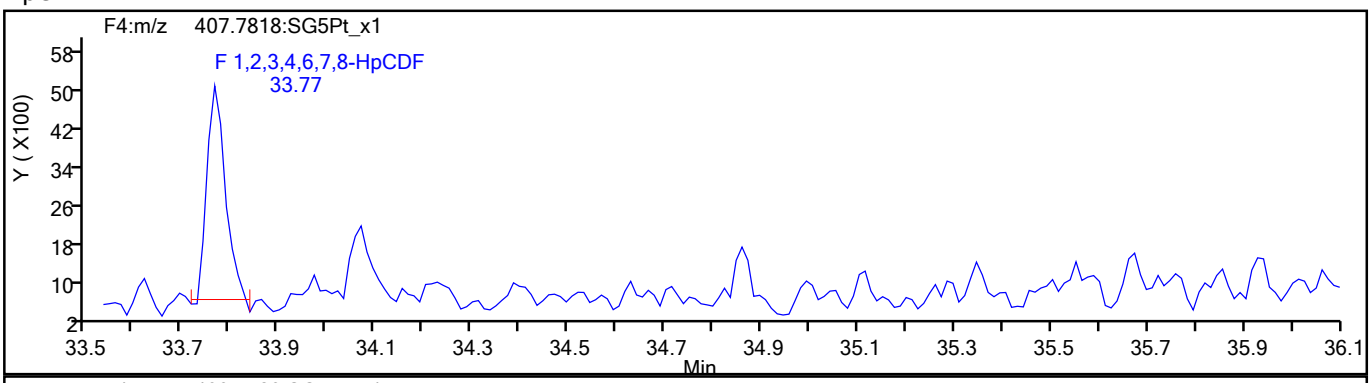

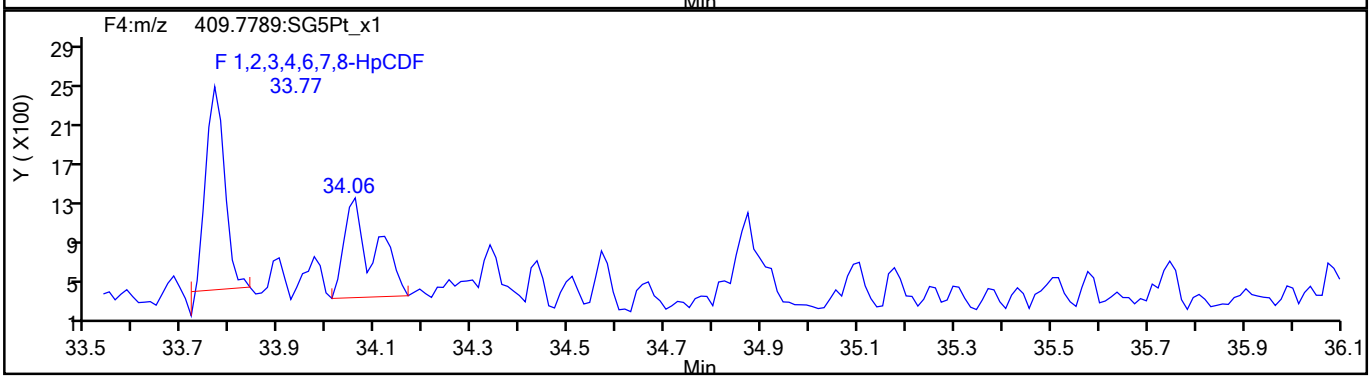

HpCDF Standards

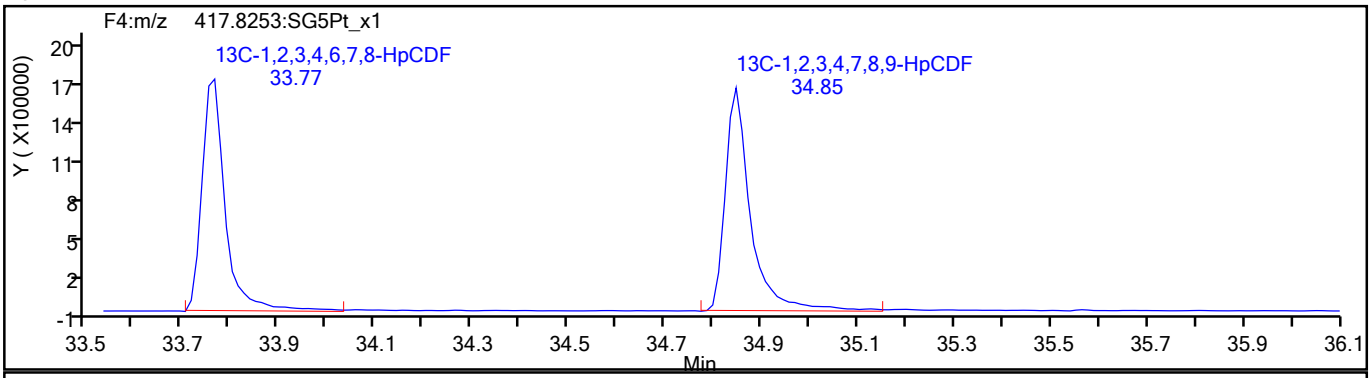

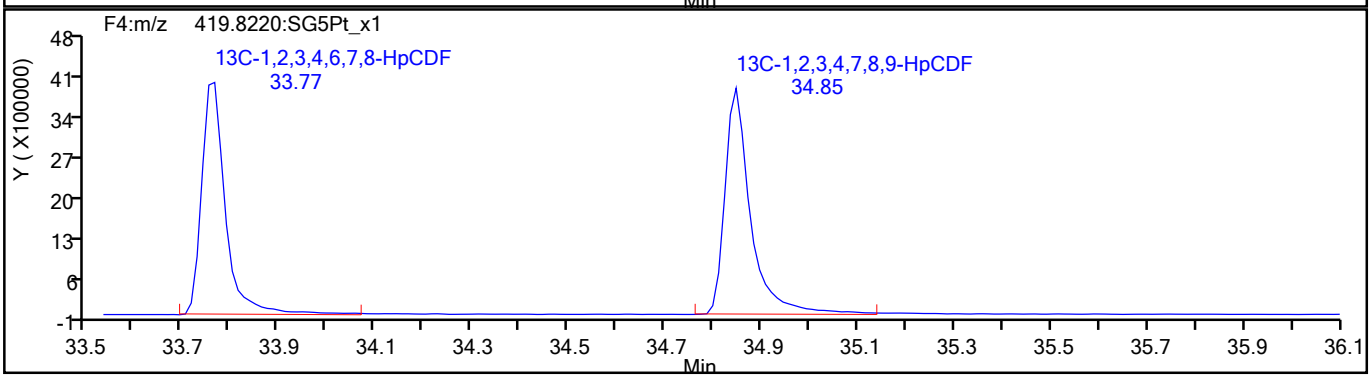

774941

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

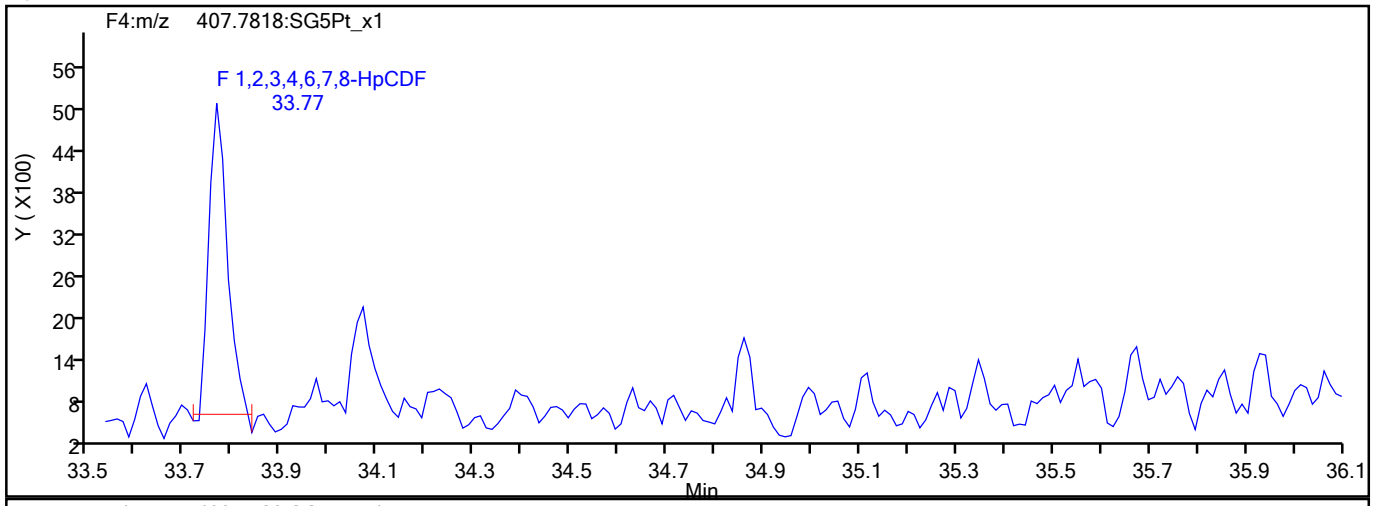

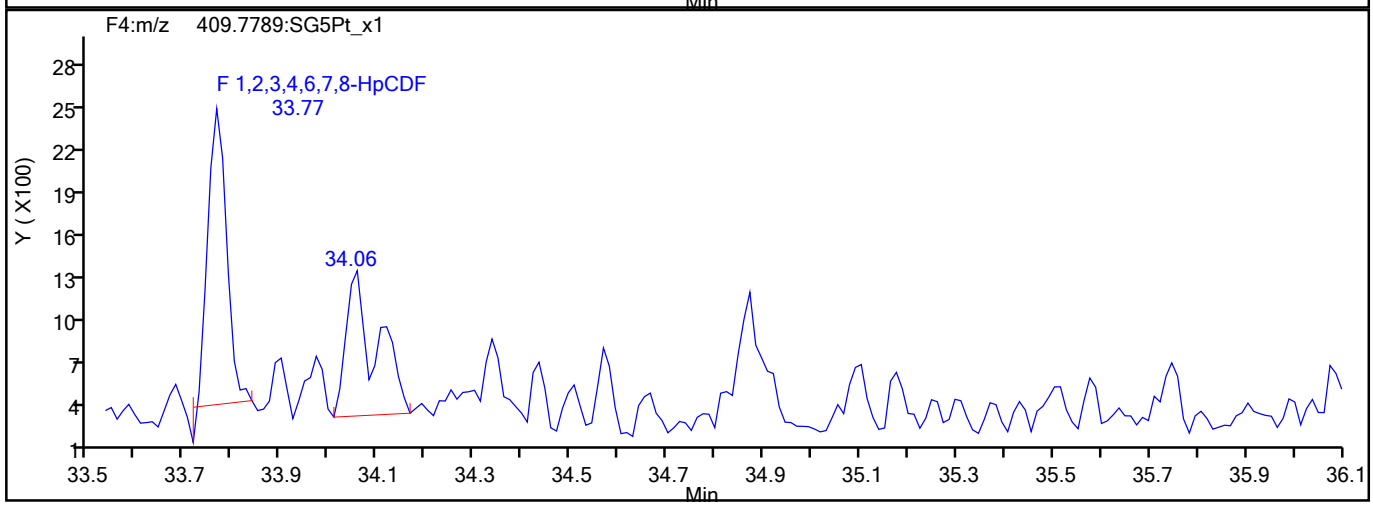

HpCDF Interference Mass

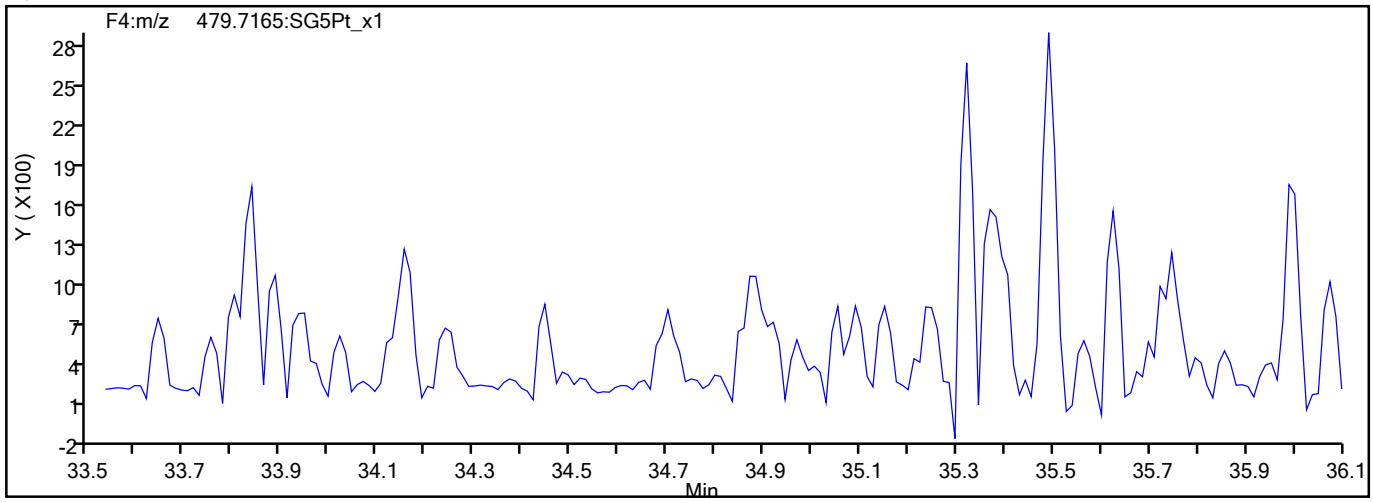

774942

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

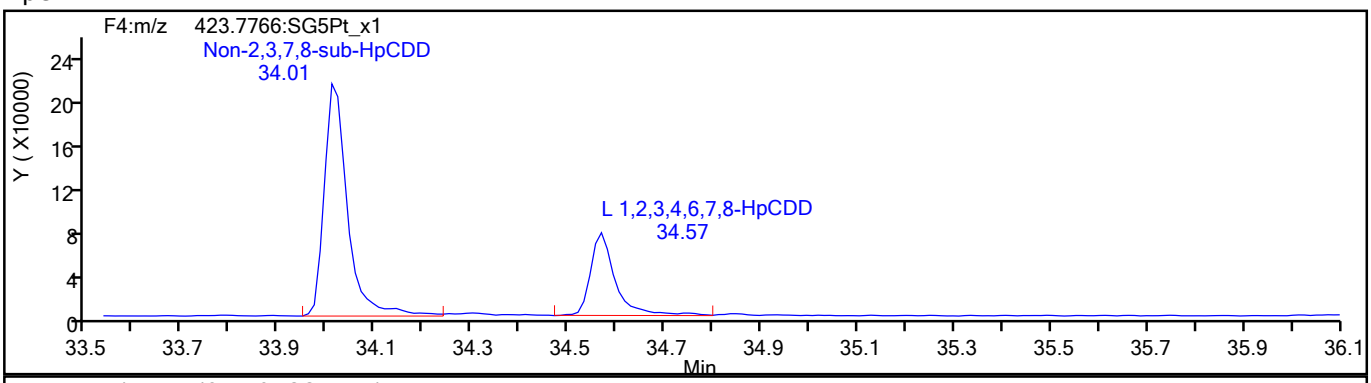

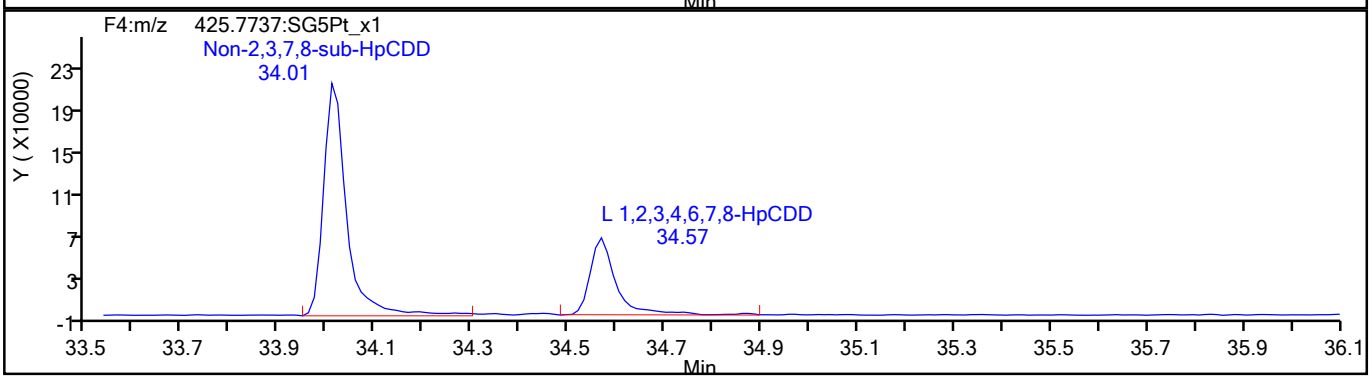

HpCDD Standards

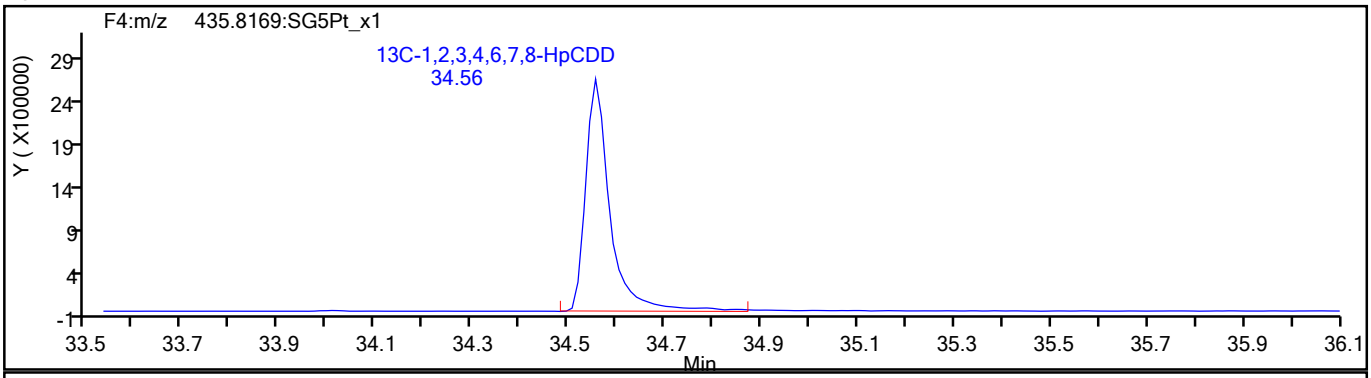

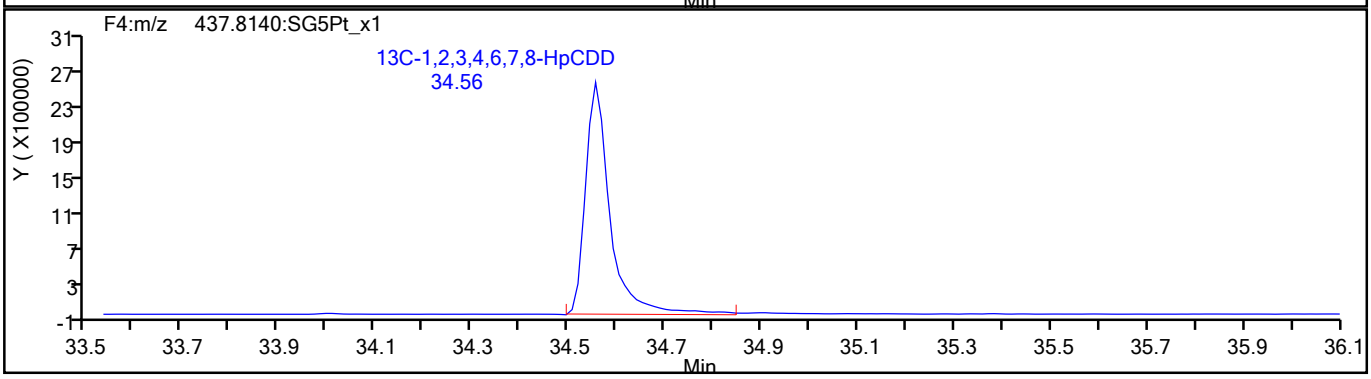

774943

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

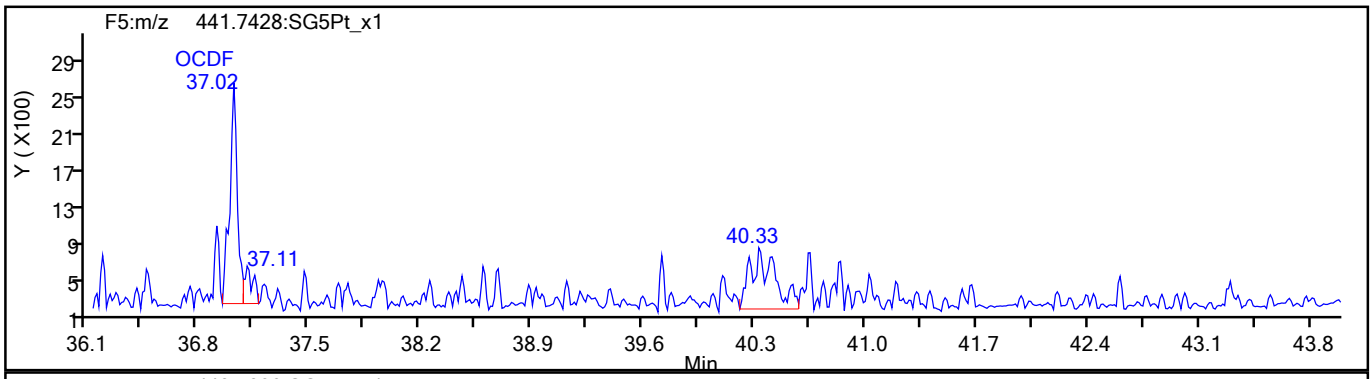

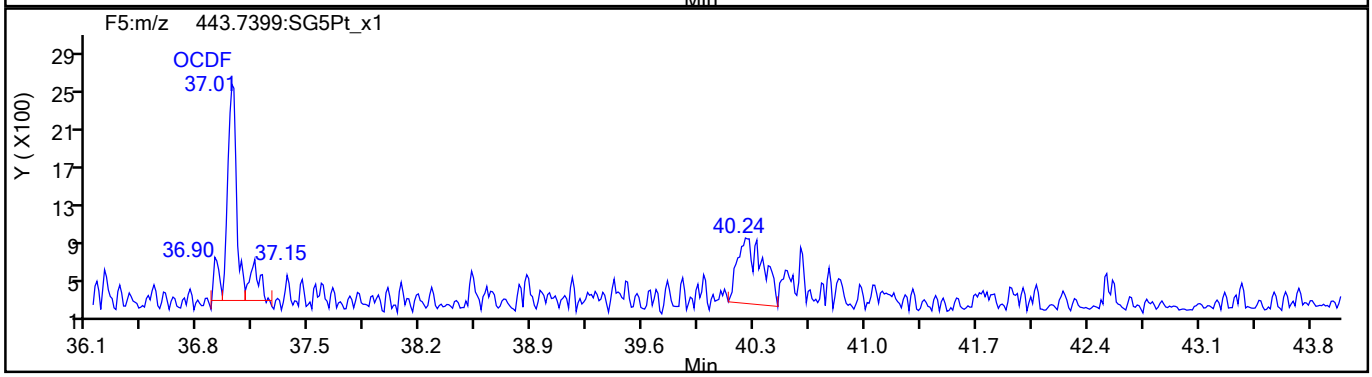

OCDF Standards

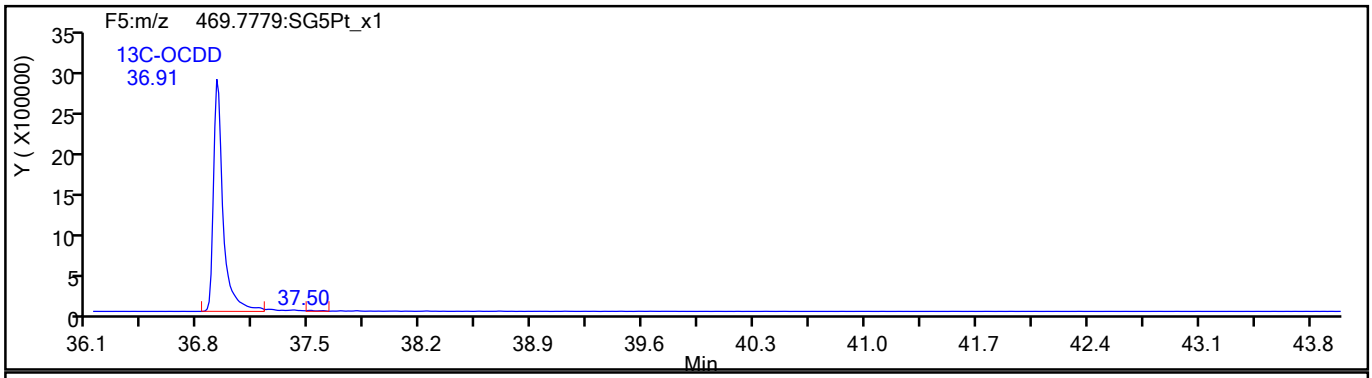

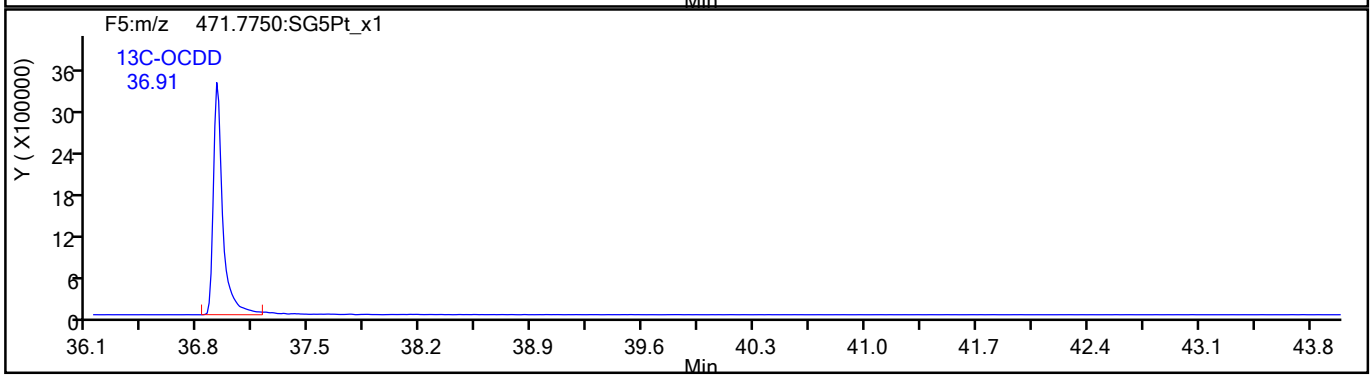

774944

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

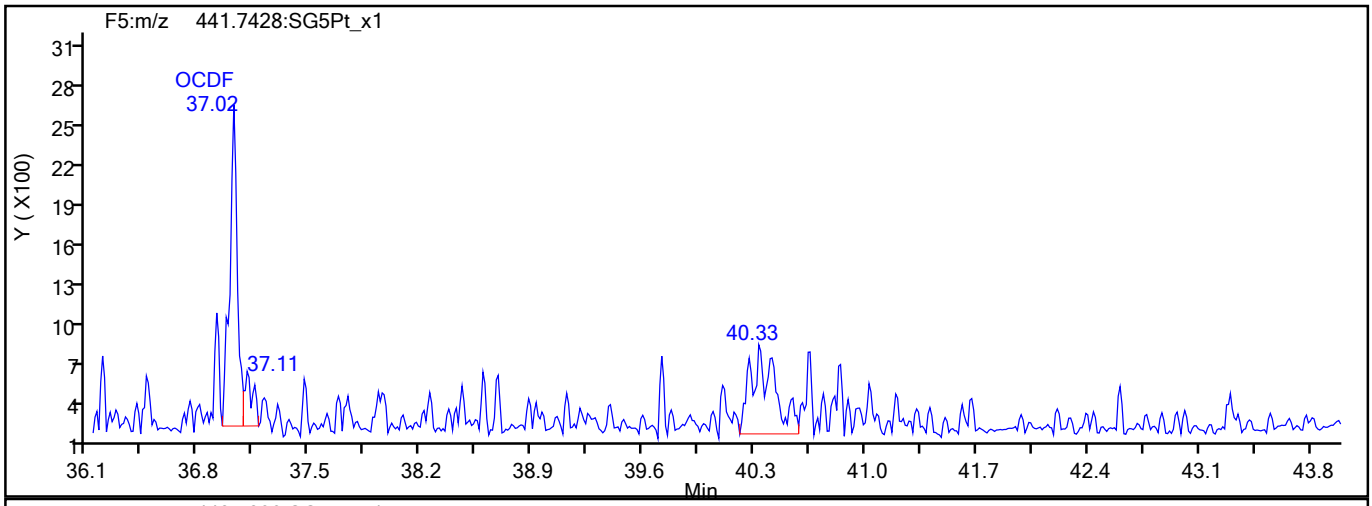

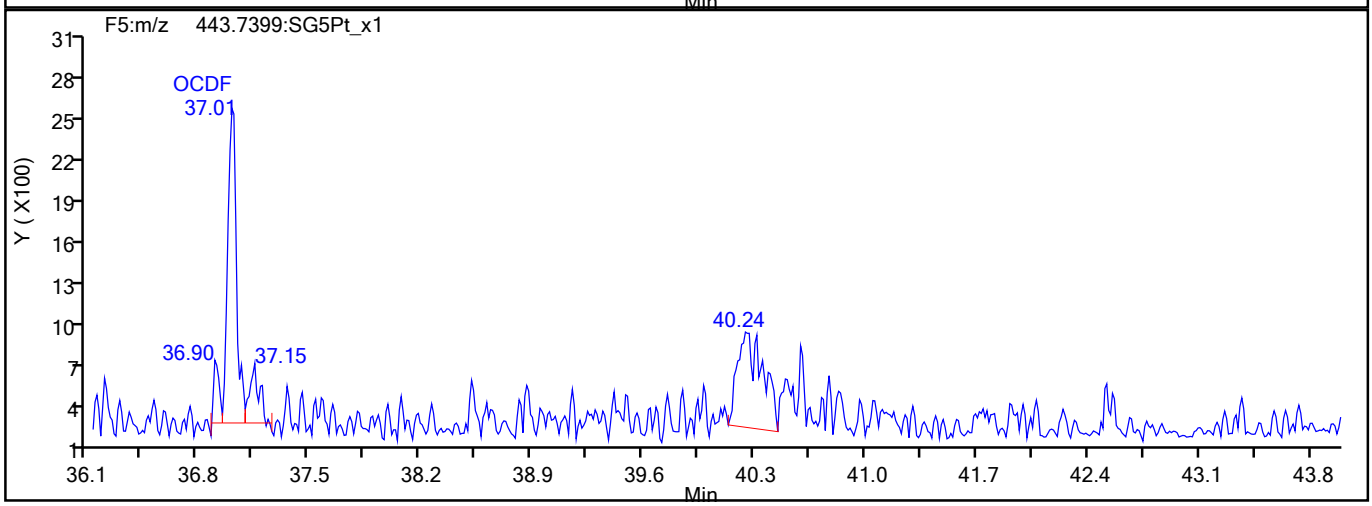

OCDF Interference Mass

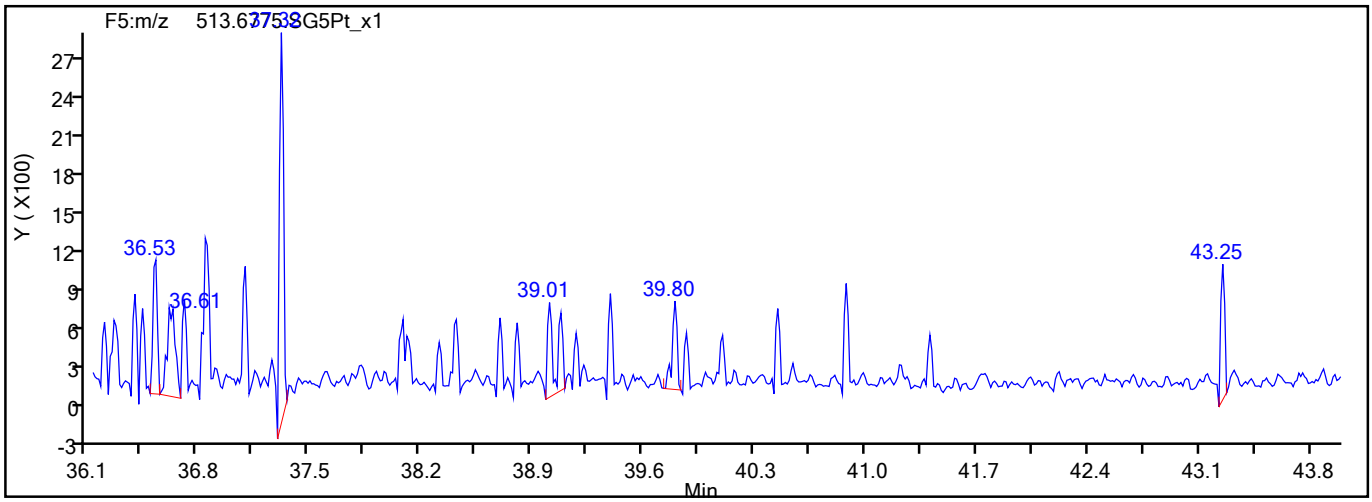

774945

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

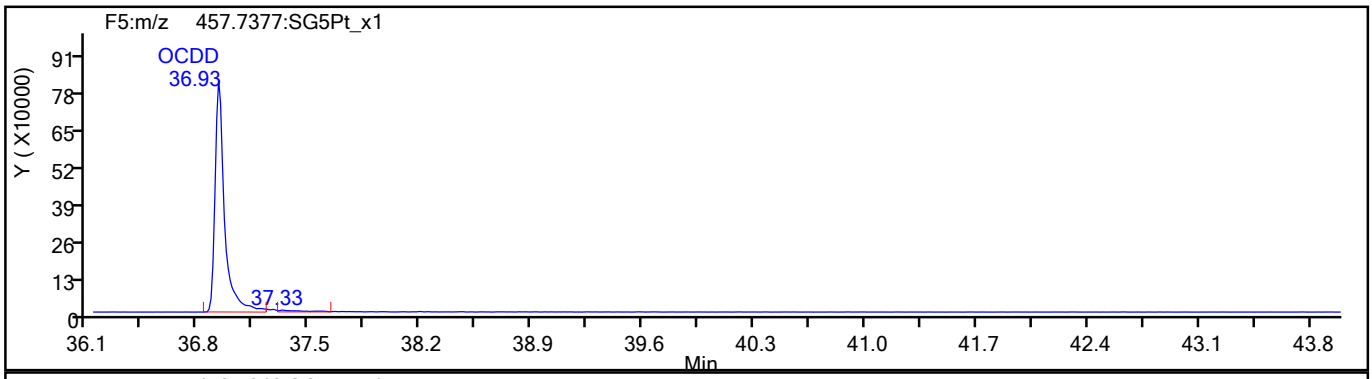

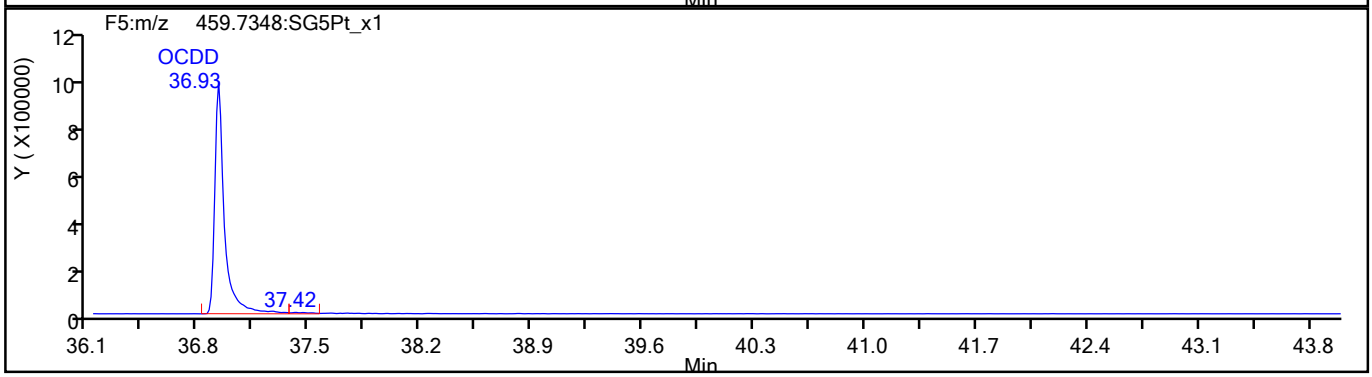

OCDD Standards

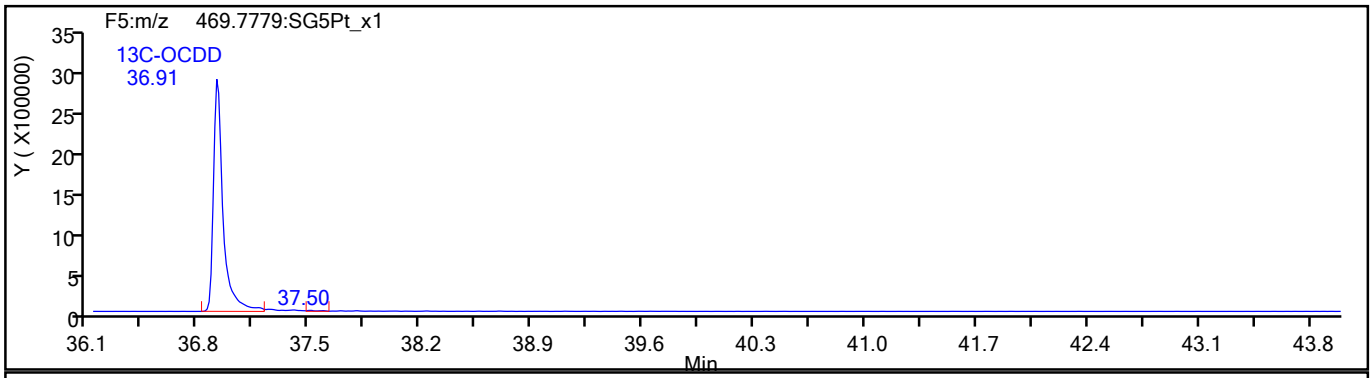

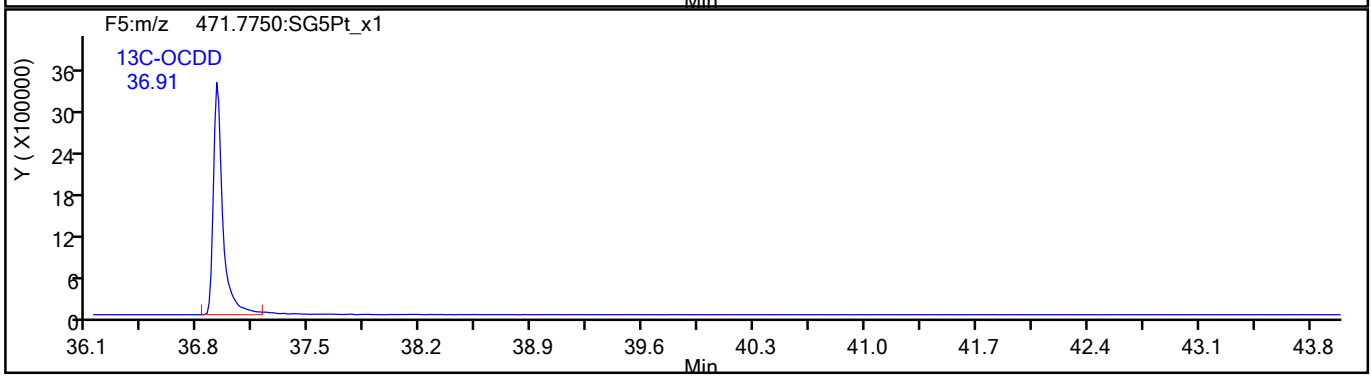

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

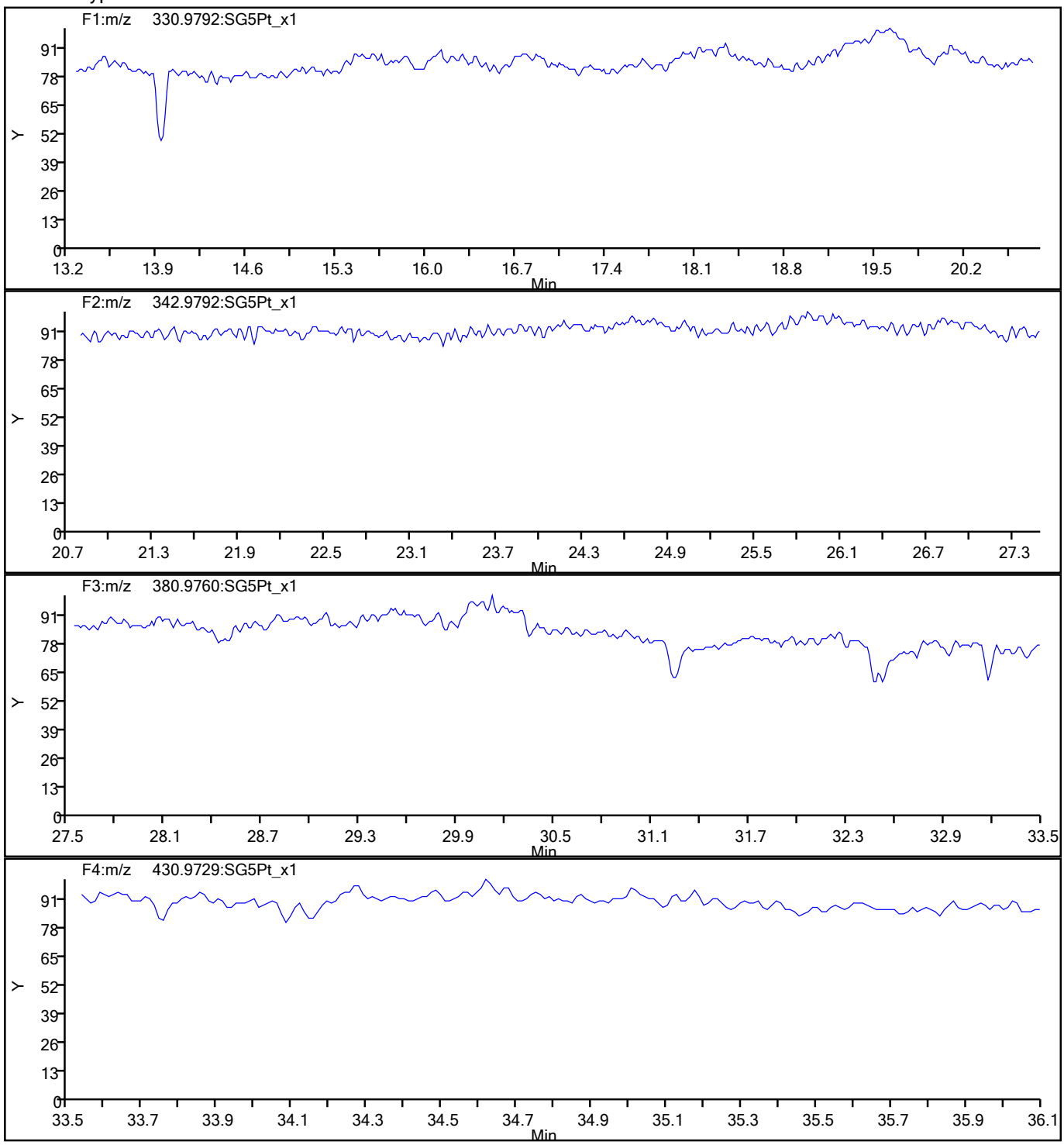

774947

Report Date: 18-Aug-2021 11:22:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_55.d		
Injection Date:	15-Aug-2021 10:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	516847	Sample Line#:	14
Column Type:	DB-5	Column Dia:	0.32 mm

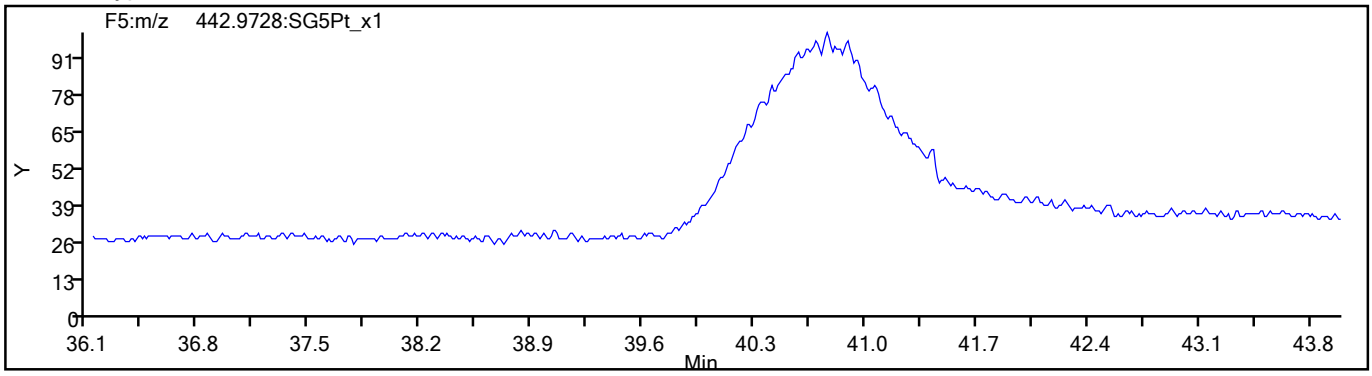

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (14-16) RA
Lab Sample ID: 320-76769-8 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_006.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.39(g)
Date Analyzed: 08/23/2021 18:46
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	1.1	J B	1.2	0.16

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	56		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	74		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_006.d
Lims ID: 320-76769-A-8-A
Client ID: 11215702-072221-SS-SJSB080 (14-16)
Sample Type: Client
Inject. Date: 23-Aug-2021 18:46:11 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-8-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:15:38

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.310	53985767	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.627	40364968	0.77	1.3327	56.1	56.1	0.2748	0.2748	56.10	
2,3,7,8-TCDF	17.654	194279	0.74	0.9978	0.4824	0.4824	0.0690	0.0690		M
D 13C-2,3,7,8-TCDD	16.077	25859566	0.74	0.8749	54.7	54.7	0.2763	0.2763	54.75	
2,3,7,8-TCDD	16.104	83022	0.77	1.0570	0.3730	0.3037	0.0957	0.0957		RQ
$ 37Cl4-2,3,7,8-TCDD	16.091	13883034		0.8648	29.7	29.7	0.0733	0.0733	74.34	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Report Date: 24-Aug-2021 09:19:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_006.d
Lims ID: 320-76769-A-8-A
Client ID: 11215702-072221-SS-SJSB080 (14-16)
Sample Type: Client
Inject. Date: 23-Aug-2021 18:46:11 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-8-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:15:38

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.310	16.298	1		23787414	5307703	7577	18942	701		
333.9339	16.310	16.298	1		30198353	6708474	4042	10105	1660	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.627	17.615	1	1.081	17621594	3328759	8897	22242	374		
317.9389	17.627	17.615	1	1.081	22743374	4254241	8705	21762	489	0.77(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.654	17.643	1	1.002	82897	14453	831	2077	17		M
305.8987	17.668	17.643	2	1.002	111382	21780	1258	3145	17	0.74(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.077	16.065	1	0.986	10985746	2618858	7577	18942	346		
333.9339	16.077	16.065	1	0.986	14873820	3196895	4042	10105	791	0.74(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.104	16.079	2	1.002	36117	4652	1148	2870	4		
321.8936	16.118	16.079	2	1.003	65834	14324	1204	3010	12	0.55(0.65-0.89)	
	Empc Correction				46905	6041	1204	3010	5		
37Cl4-2,3,7,8-TCDD											
327.8840	16.091	16.093	0	0.987	13883034	3077993	3047	7617	1010		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_006.d				
Injection Date:	23-Aug-2021 18:46:11	Instrument ID:	11D2		
Lims ID:	320-76769-A-8-A	Lab Sample ID:	320-76769-8		
Client ID:	11215702-072221-SS-SJSB080 (14-16)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.67
Area: 124909
Amount: 0.511977
Amount Units: pg/ul

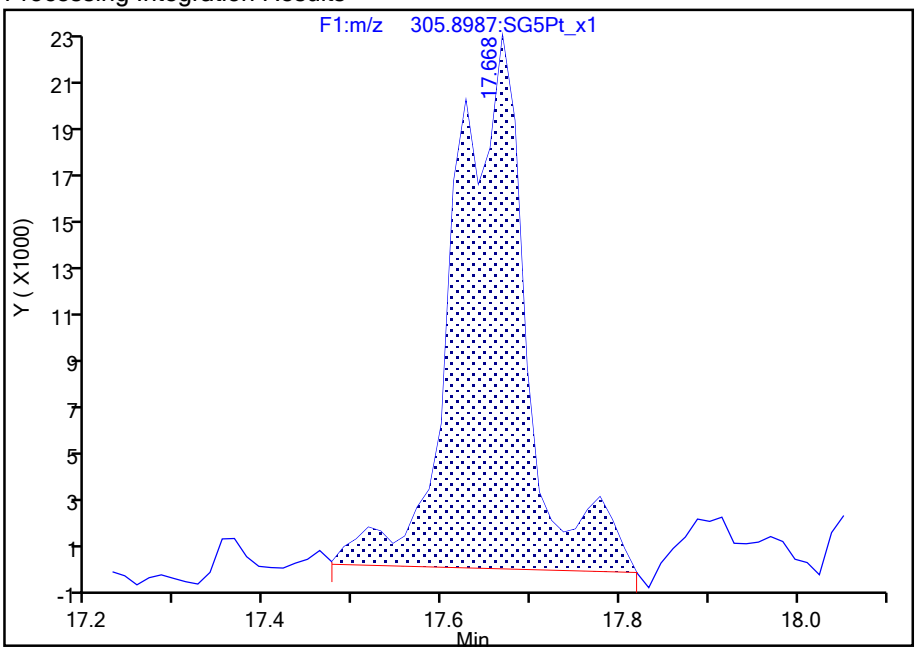

Manual Integration Results

RT: 17.67
Area: 111382
Amount: 0.482364
Amount Units: pg/ul

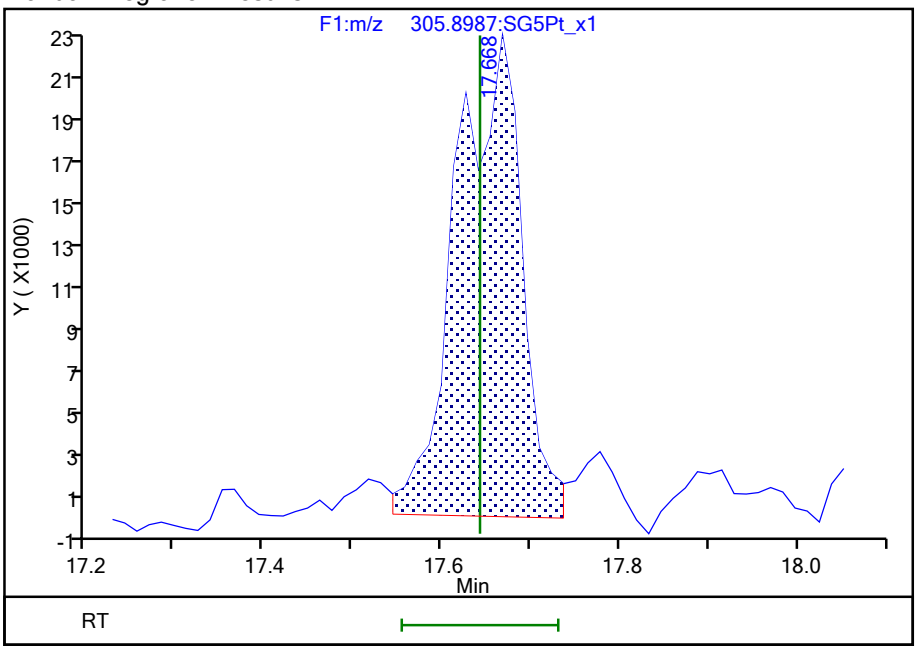

Reviewer: bennettd, 24-Aug-2021 09:15:16

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_006.d				
Injection Date:	23-Aug-2021 18:46:11	Instrument ID:	11D2		
Lims ID:	320-76769-A-8-A	Lab Sample ID:	320-76769-8		
Client ID:	11215702-072221-SS-SJSB080 (14-16)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.65
Area: 81297
Amount: 0.511977
Amount Units: pg/ul

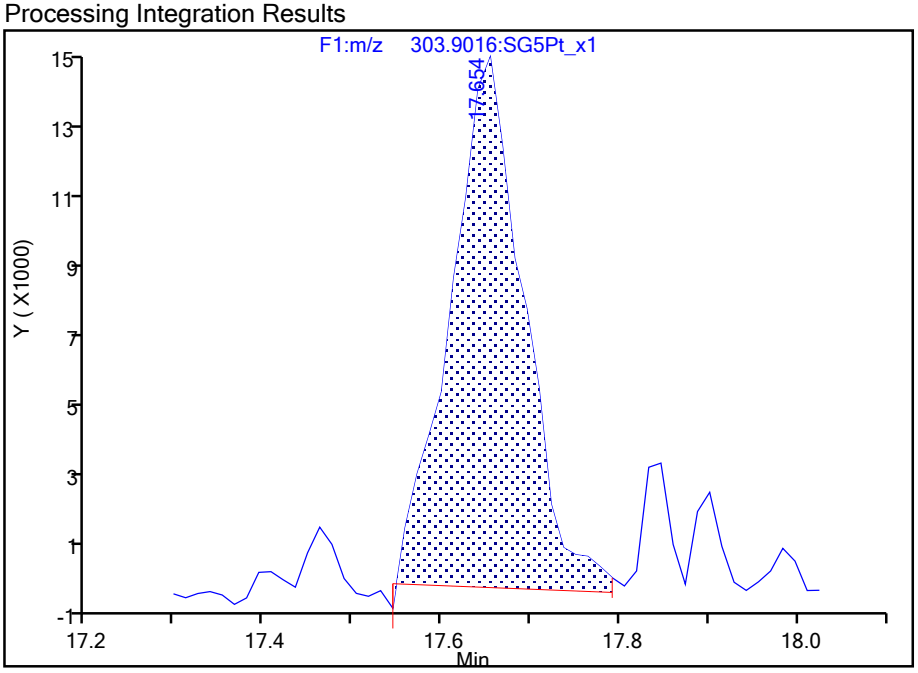

Manual Integration Results

RT: 17.65
Area: 82897
Amount: 0.482364
Amount Units: pg/ul

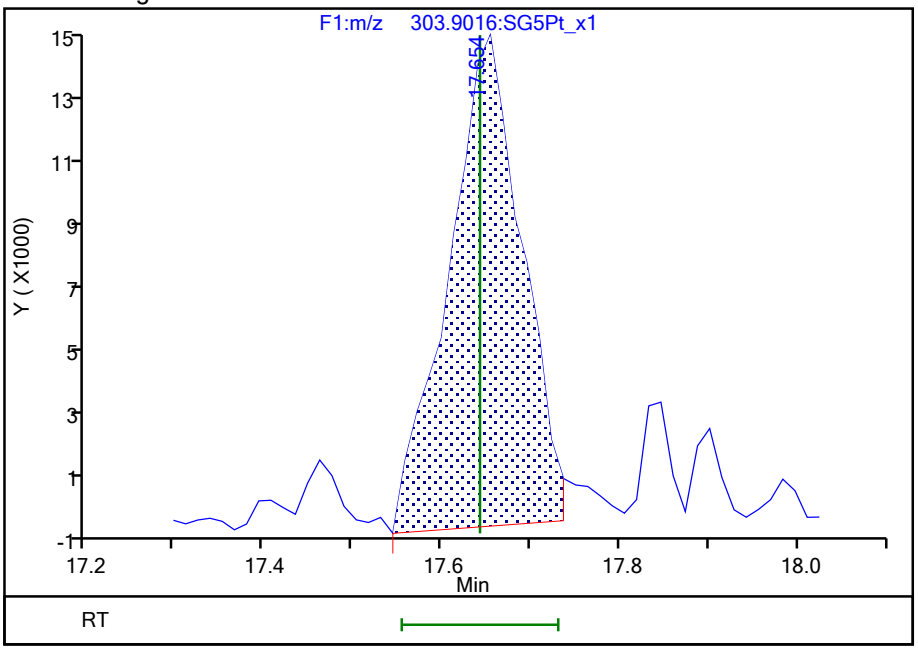

Reviewer: bennettd, 24-Aug-2021 09:15:32

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 24-Aug-2021 09:19:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_006.d		
Injection Date:	23-Aug-2021 18:46:11	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	518979	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

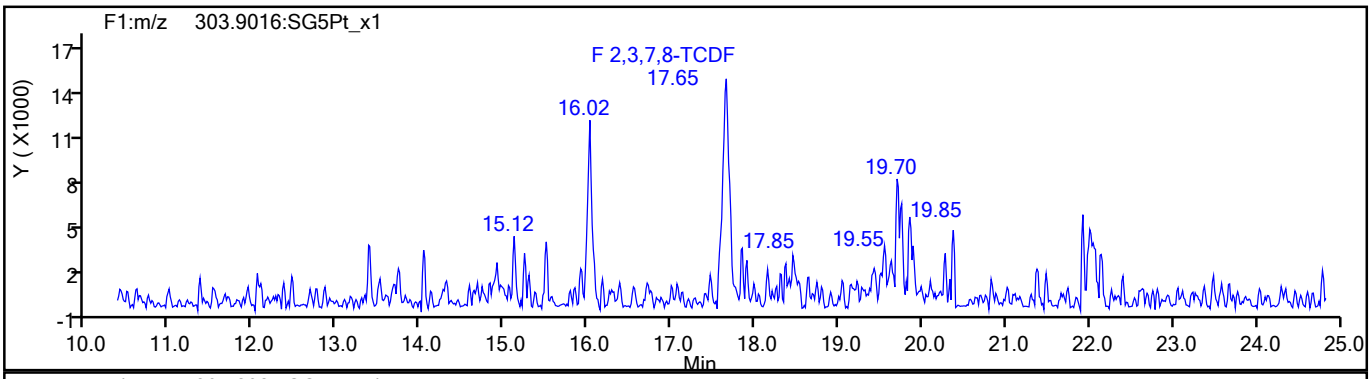

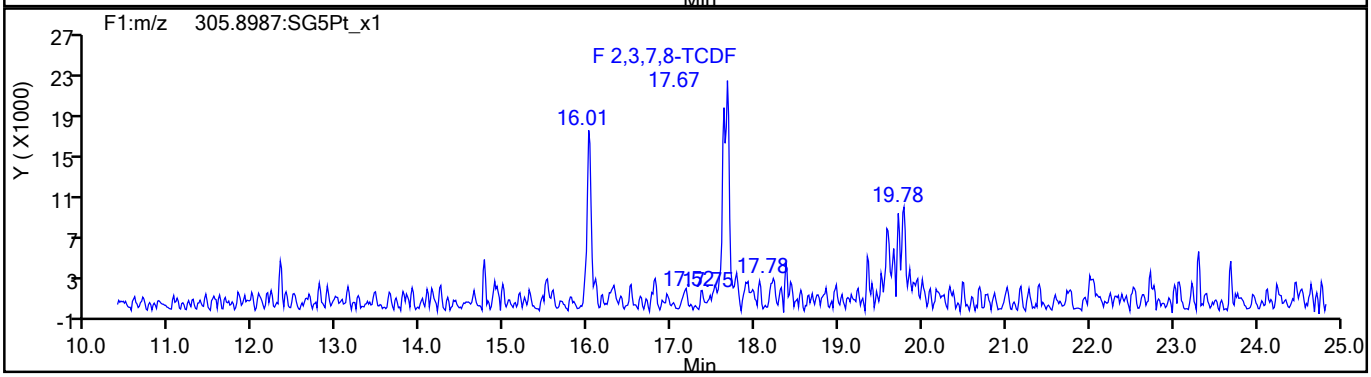

TCDF Standards

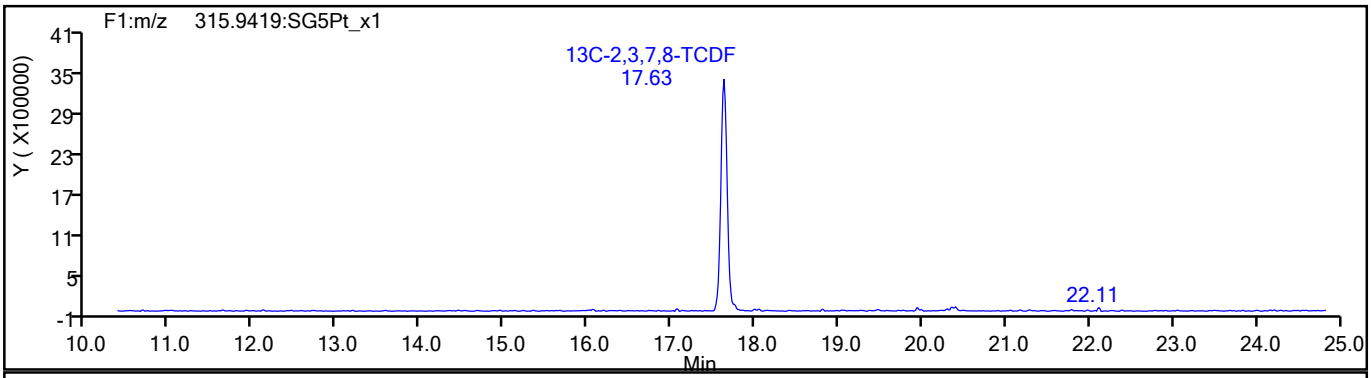

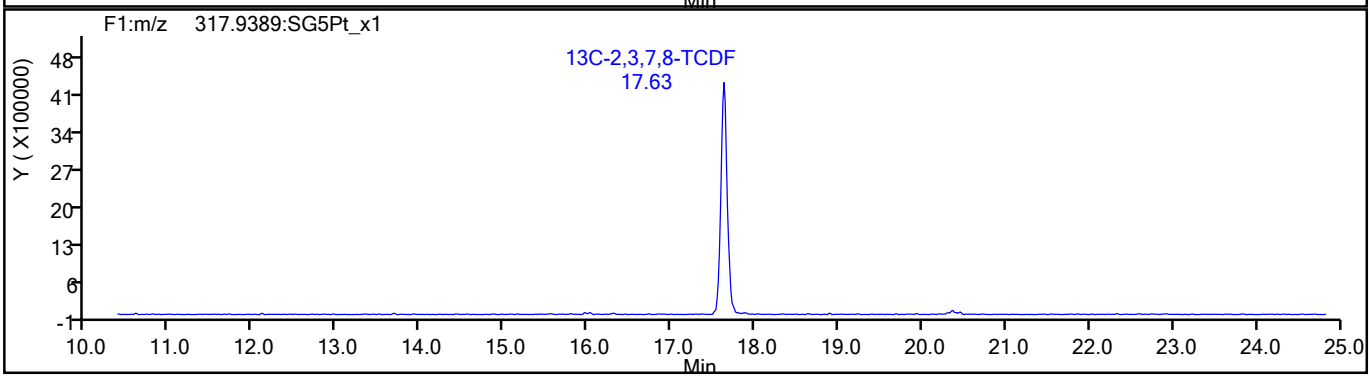

774954

Report Date: 24-Aug-2021 09:19:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_006.d		
Injection Date:	23-Aug-2021 18:46:11	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	518979	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

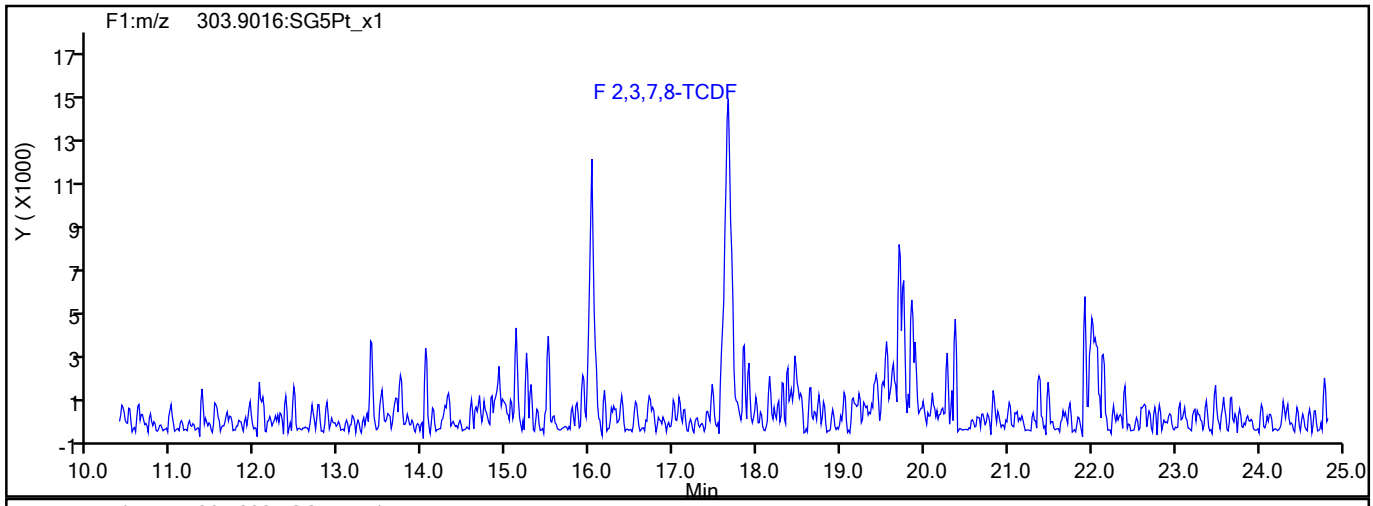

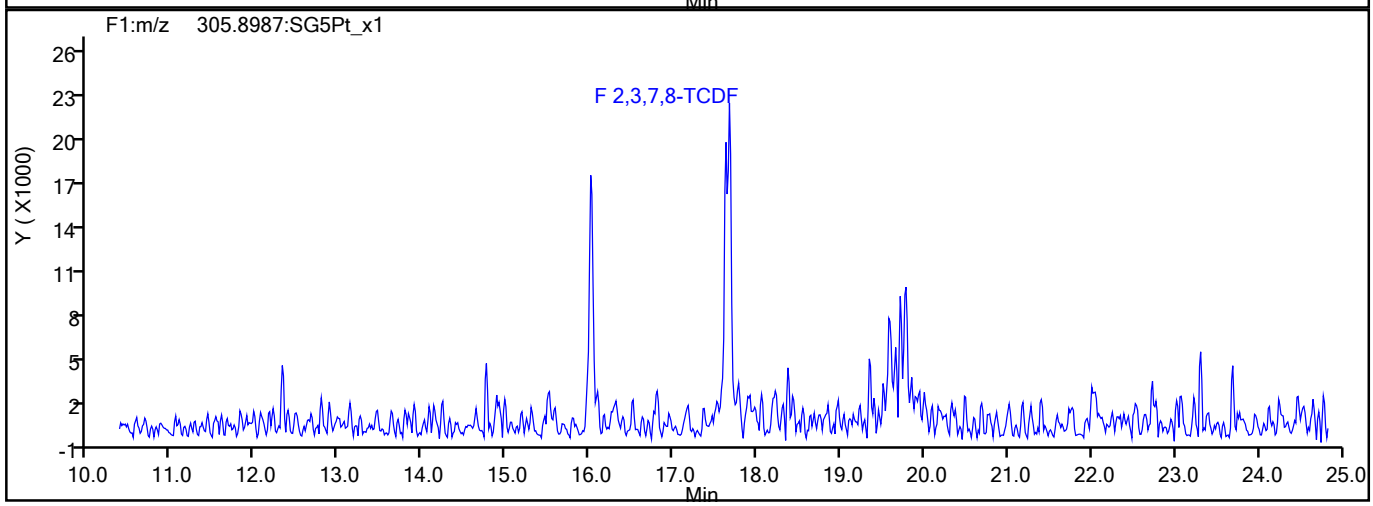

TCDF Interference Mass

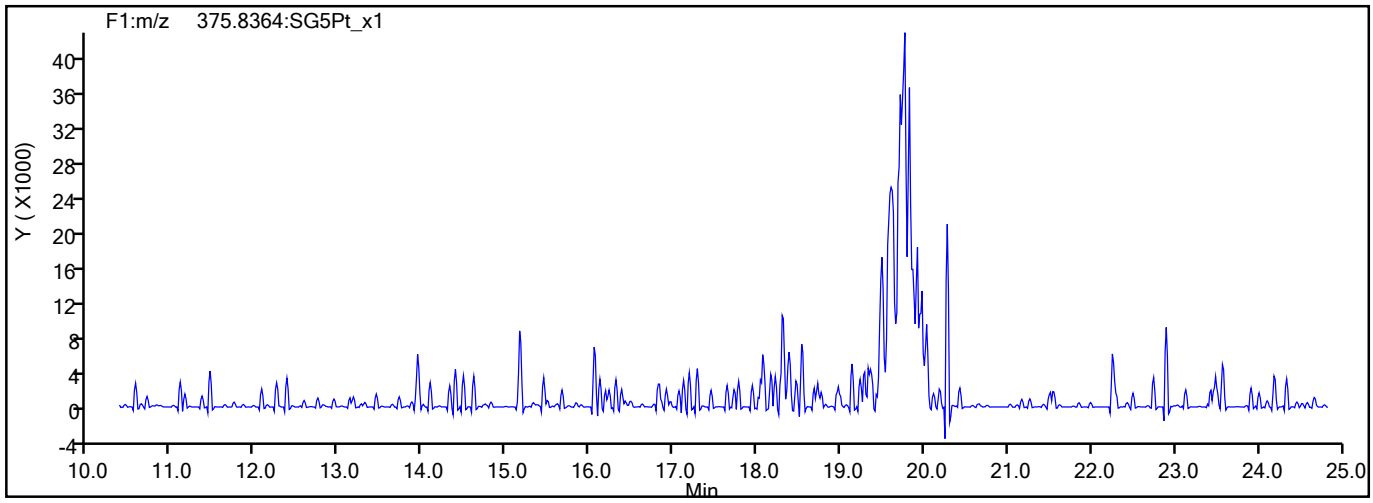

774955

Report Date: 24-Aug-2021 09:19:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_006.d		
Injection Date:	23-Aug-2021 18:46:11	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	518979	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

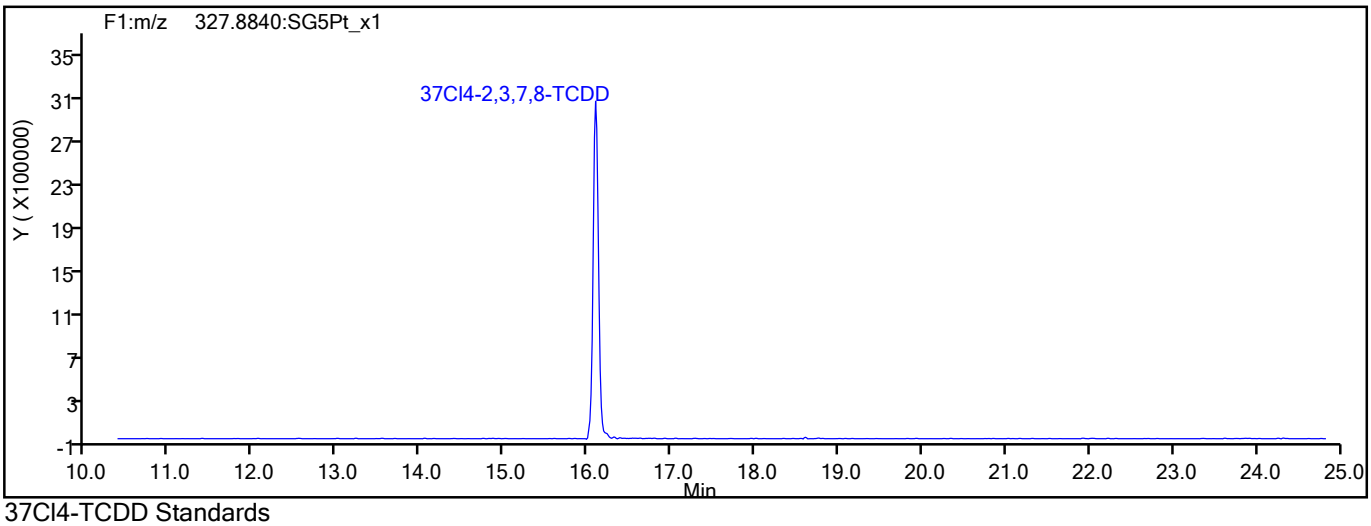

37Cl4-TCDD Standards

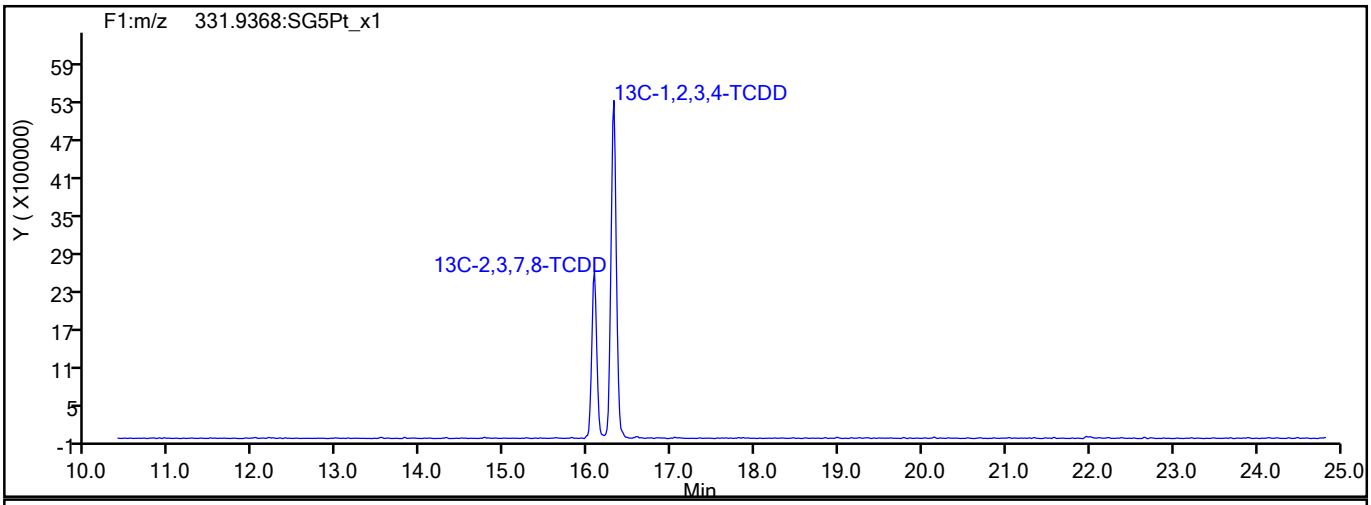

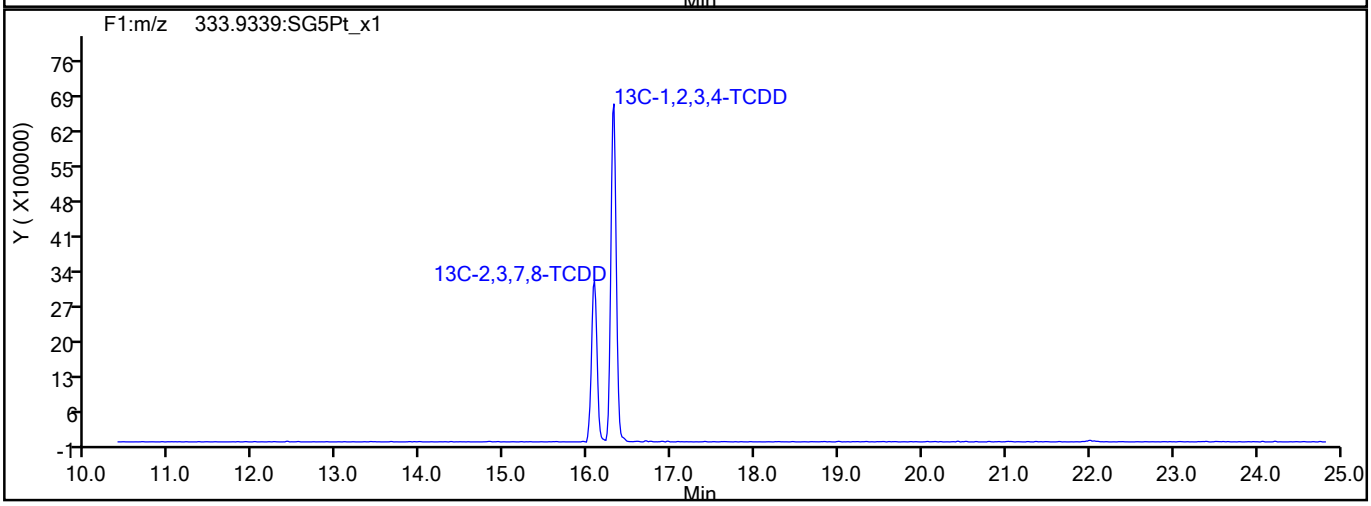

774956

Report Date: 24-Aug-2021 09:19:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_006.d		
Injection Date:	23-Aug-2021 18:46:11	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (14-16)		
Worklist#:	518979	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

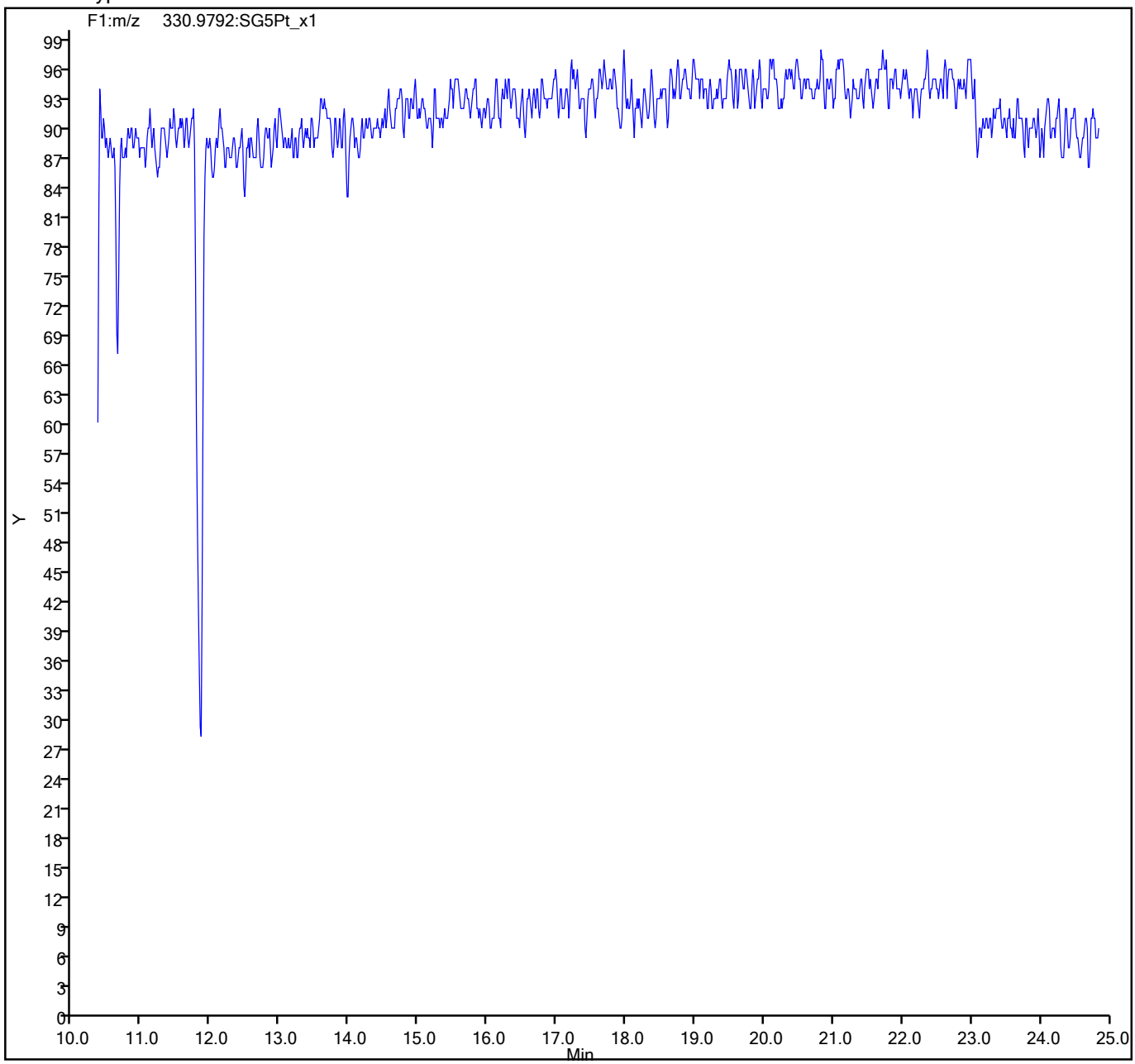

774957

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (0-2)
Lab Sample ID: 320-76769-13
Matrix: Sediment
Lab File ID: 13AU2110D5_59.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.08(g)
Date Analyzed: 08/15/2021 13:42
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 25.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	5600	E B G	8.5	8.5
40321-76-4	1,2,3,7,8-PeCDD	49		6.7	0.70
57117-41-6	1,2,3,7,8-PeCDF	680		6.7	5.2
57117-31-4	2,3,4,7,8-PeCDF	370		6.7	5.3
39227-28-6	1,2,3,4,7,8-HxCDD	1.3	J B	6.7	0.16
57653-85-7	1,2,3,6,7,8-HxCDD	3.6	J	6.7	0.17
19408-74-3	1,2,3,7,8,9-HxCDD	2.7	J B	6.7	0.15
70648-26-9	1,2,3,4,7,8-HxCDF	910	B	6.7	5.4
57117-44-9	1,2,3,6,7,8-HxCDF	240	B	6.7	5.8
72918-21-9	1,2,3,7,8,9-HxCDF	13	B	6.7	4.6
60851-34-5	2,3,4,6,7,8-HxCDF	28		6.7	4.6
35822-46-9	1,2,3,4,6,7,8-HpCDD	110	B	6.7	1.5
67562-39-4	1,2,3,4,6,7,8-HpCDF	280	B	6.7	2.0
55673-89-7	1,2,3,4,7,8,9-HpCDF	85	B	6.7	2.4
3268-87-9	OCDD	2200	B	13	2.8
39001-02-0	OCDF	140	B	13	0.15
41903-57-5	Total TCDD	6100	B q G	8.5	8.5
30402-14-3	Total TCDF	34000	B G	53	53
36088-22-9	Total PeCDD	52	q	6.7	0.70
30402-15-4	Total PeCDF	1600		6.7	5.2
34465-46-8	Total HxCDD	32	B q	6.7	0.16
55684-94-1	Total HxCDF	1300	B	6.7	5.1
37871-00-4	Total HpCDD	230	B	6.7	1.5
38998-75-3	Total HpCDF	440	B	6.7	2.2

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (0-2)
Lab Sample ID: 320-76769-13
Matrix: Sediment
Lab File ID: 13AU2110D5_59.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.08(g)
Date Analyzed: 08/15/2021 13:42
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 25.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		25-164
89059-46-1	13C-2,3,7,8-TCDF	44		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	52		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	50		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	53		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	60		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	57		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	50		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	50		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	50		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	59		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	54		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	62		26-138
114423-97-1	13C-OCDD	68		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	84		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d
Lims ID: 320-76769-A-13-A
Client ID: 11215702-072221-SS-SJSB074 (0-2)
Sample Type: Client
Inject. Date: 15-Aug-2021 13:42:08 ALS Bottle#: 57 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-13-a 320-76769-a-13-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:22:10 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: krenns Date: 18-Aug-2021 10:22:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	56247569	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	40051203	0.77	1.6249	43.8	43.8	0.1941	0.1941	43.82	
2,3,7,8-TCDF	17.371	2940960981	0.78	1.0239	7171.5	7171.5	19.8	19.8		E
A Non-2,3,7,8-sub-TCDF	17.046	2216348864	0.78	1.0239	5404.6	5404.6	19.8	3303.4		Ma
S Total TCDF					12576	12576	19.8	19.8		
D 13C-2,3,7,8-TCDD	18.052	27475981	0.80	0.8993	54.3	54.3	0.3011	0.3011	54.32	
2,3,7,8-TCDD	18.082	720070337	0.79	1.2541	2089.7	2089.7	3.197	3.197		E
$ 37Cl4-2,3,7,8-TCDD	18.082	21014964		1.1071	33.7	33.7	0.0876	0.0876	84.36	
A Non-2,3,7,8-sub-TCDD	17.500	67881849	0.77	1.2541	198.7	197.0	3.197	182.5		RQ
S Total TCDD					2288.4	2286.7	3.197	3.197		RQ
D 13C-1,2,3,7,8-PeCDF	22.381	33775264	1.59	1.2101	49.6	49.6	0.1229	0.1229	49.62	
1,2,3,7,8-PeCDF	22.408	91763396	1.58	1.0611	256.0	256.0	1.934	1.934		
D 13C-2,3,4,7,8-PeCDF	23.717	36647796	1.57	1.2395	52.6	52.6	0.1200	0.1200	52.57	
2,3,4,7,8-PeCDF	23.744	52239462	1.60	1.0184	140.0	140.0	1.997	1.997		
A F1 PeCDFs	20.093	450263	1.56	1.0398	1.230	1.230	0.0216	1.230		
A Non-2,3,7,8-sub-PeCDF	23.241	74836371	1.60	1.0398	204.4	204.4	1.964	89.4		
S Total PeCDF					601.6	601.6	1.965	1.965		
D 13C-1,2,3,7,8-PeCDD	24.440	22358453	1.63	0.7612	52.2	52.2	0.1063	0.1063	52.22	
1,2,3,7,8-PeCDD	24.467	4259128	1.60	1.0484	18.2	18.2	0.2607	0.2607		M
A Non-2,3,7,8-sub-PeCDD	23.349	312378	1.55	1.0484	4.948	1.333	0.2607	0.8710		RQ
S Total PeCDD					23.1	19.5	0.2607	0.2607		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.503	31946306	0.51	1.0837	56.5	56.5	0.2280	0.2280	56.51	
1,2,3,4,7,8-HxCDF	30.529	118515954	1.21	1.0851	341.9	341.9	2.030	2.030		
D 13C-1,2,3,6,7,8-HxCDF	30.689	29612115	0.51	1.1279	50.3	50.3	0.2190	0.2190	50.32	
1,2,3,6,7,8-HxCDF	30.702	29899398	1.25	1.1260	89.7	89.7	2.178	2.178		
D 13C-2,3,4,6,7,8-HxCDF	31.514	27920236	0.52	1.0637	50.3	50.3	0.2322	0.2322	50.31	
2,3,4,6,7,8-HxCDF	31.528	3385981	1.25	1.1675	10.4	10.4	1.705	1.705		
D 13C-1,2,3,7,8,9-HxCDF	32.313	25290971	0.52	0.9676	50.1	50.1	0.2553	0.2553	50.10	
1,2,3,7,8,9-HxCDF	32.326	1407334	1.18	1.1664	4.771	4.771	1.722	1.722		
A Non-2,3,7,8-sub-HxCDF	30.197	18414690	1.23	1.1363	56.5	56.5	1.891	21.5		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					503.2	503.2	1.909	1.909		
* 13C-1,2,3,7,8,9-HxCDD	32.140	52171887	1.21	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	22861501	1.26	0.7334	59.7	59.7	0.3042	0.3042	59.75	
1,2,3,4,7,8-HxCDD	31.714	120100	1.18	1.0640	0.4937	0.4937	0.0598	0.0598		Ma
D 13C-1,2,3,6,7,8-HxCDD	31.807	24929032	1.22	0.8802	54.3	54.3	0.2535	0.2535	54.29	
1,2,3,6,7,8-HxCDD	31.820	335567	1.20	1.0001	1.346	1.346	0.0646	0.0646		M
1,2,3,7,8,9-HxCDD	32.140	275858	1.11	1.1325	1.019	1.019	0.0566	0.0566		
A Non-2,3,7,8-sub-HxCDD	30.882	2290511	1.24	1.0655	9.079	8.996	0.0602	3.947		RQMa
S Total HxCDD					11.9	11.9	0.0604	0.0604		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	21741938	0.44	0.7730	53.9	53.9	0.8473	0.8473	53.91	
1,2,3,4,6,7,8-HpCDF	33.766	32855229	1.05	1.4413	104.8	104.8	0.7617	0.7617		
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	22780409	0.45	0.7008	62.3	62.3	0.9346	0.9346	62.31	
1,2,3,4,7,8,9-HpCDF	34.860	9526367	1.04	1.3174	31.7	31.7	0.8867	0.8867		
A Non-2,3,7,8-sub-HpCDF	34.319	8749348	1.07	1.3793	28.5	28.5	0.8206	28.5		
S Total HpCDF					165.1	165.1	0.8242	0.8242		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	19989258	1.02	0.6472	59.2	59.2	0.2998	0.2998	59.20	
1,2,3,4,6,7,8-HpCDD	34.568	8984113	1.05	1.0943	41.1	41.1	0.5628	0.5628		
A Non-2,3,7,8-sub-HpCDD	34.301	10221466	1.02	1.0943	46.7	46.7	0.5628	46.7		
S Total HpCDD					87.8	87.8	0.5628	0.5628		
D 13C-OCDD	36.914	31857687	0.88	0.4472	136.6	136.6	0.1864	0.1864	68.28	
OCDF	37.010	12160987	0.88	1.4382	53.1	53.1	0.0578	0.0578		
OCDD	36.926	143087634	0.90	1.1070	811.5	811.5	1.043	1.043		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d
Lims ID: 320-76769-A-13-A
Client ID: 11215702-072221-SS-SJSB074 (0-2)
Sample Type: Client
Inject. Date: 15-Aug-2021 13:42:08 ALS Bottle#: 57 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-13-a 320-76769-a-13-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:22:10 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: krenns Date: 18-Aug-2021 10:22:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		25159413	6179043	6405	16012	965		
333.9339	17.855	17.855	0		31088156	7568712	8488	21220	892	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.972	17487128	4366998	4608	11520	948		
317.9389	17.356	17.356	0	0.972	22564075	5516318	12732	31830	433	0.77(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.371	17.371	0	1.001	1292864881	303252701	347856	869640	872		
305.8987	17.371	17.371	0	1.001	1648096100	386740017	454721	1136802	850	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											Ma
303.9016	15.950	17.046	-66	0.919	18294771	5169384	347856	869640	15		
305.8987	15.950	17.046	-66	0.919	23676771	6702706	454721	1136802	15	0.77(0.65-0.89)	
303.9016	16.237	17.046	-48	0.936	32813302	6619153	347856	869640	19		
305.8987	16.237	17.046	-48	0.936	42352611	8402694	454721	1136802	18	0.77(0.65-0.89)	
303.9016	16.449	17.046	-36	0.948	36815838	9928501	347856	869640	29		M
305.8987	16.449	17.046	-36	0.948	50305067	13247713	454721	1136802	29	0.73(0.65-0.89)	
303.9016	16.706	17.046	-20	0.963	62374971	14790849	347856	869640	43		M
305.8987	16.691	17.046	-21	0.962	82229935	19267060	454721	1136802	42	0.76(0.65-0.89)	M
303.9016	16.978	17.046	-4	0.978	594796069	153079719	347856	869640	440		
305.8987	16.978	17.046	-4	0.978	759898572	195152415	454721	1136802	429	0.78(0.65-0.89)	
303.9016	17.205	17.046	10	0.991	19197617	4692691	347856	869640	13		
305.8987	17.205	17.046	10	0.991	24317612	5943525	454721	1136802	13	0.79(0.65-0.89)	
303.9016	17.795	17.046	45	1.025	99794015	24969864	347856	869640	72		
305.8987	17.795	17.046	45	1.025	127808153	31801921	454721	1136802	70	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.036	17.046	59	1.039	22588001	5140445	347856	869640	15		
305.8987	18.036	17.046	59	1.039	29308227	6553988	454721	1136802	14	0.77(0.65-0.89)	
303.9016	19.201	17.046	129	1.106	83059125	18895579	347856	869640	54		a
305.8987	19.201	17.046	129	1.106	106718207	24009593	454721	1136802	53	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.052	18.051	0	1.011	12183838	2870342	6405	16012	448		
333.9339	18.052	18.051	0	1.011	15292143	3608783	8488	21220	425	0.80(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	18.082	18.081	0	1.002	316821932	74268121	60025	150062	1237		
321.8936	18.082	18.081	0	1.002	403248405	93296618	43890	109725	2126	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.081	0	1.013	21014964	4904079	5332	13330	920		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	17.961	17.500	28	0.995	2778577	801817	60025	150062	13		
	Empc Correction				2177969	781020	60025	150062	13		
321.8936	17.961	17.500	28	0.995	2828532	1014312	43890	109725	23	0.98(0.65-0.89)	
319.8965	18.430	17.500	56	1.021	28201849	6117584	60025	150062	102		
321.8936	18.430	17.500	56	1.021	34673499	7832043	43890	109725	178	0.81(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.253	20742700	3658495	4897	12242	747		
353.8970	22.381	22.367	1	1.253	13032564	2354450	3281	8202	718	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.408	22.394	1	1.001	56264767	9810163	29889	74722	328		
341.8567	22.408	22.394	1	1.001	35498629	6232845	19460	48650	320	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.328	22392389	3684540	4897	12242	752		
353.8970	23.717	23.703	1	1.328	14255407	2383028	3281	8202	726	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.744	23.730	1	1.001	32135091	5293658	29889	74722	177		
341.8567	23.744	23.730	1	1.001	20104371	3321060	19460	48650	171	1.60(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.488	20.093	-36	0.871	274066	54692	278	695	197		
341.8567	19.488	20.093	-36	0.871	176197	39713	264	660	150	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.058	23.241	-131	0.941	20217641	4150280	29889	74722	139		
341.8567	21.058	23.241	-131	0.941	12513437	2545821	19460	48650	131	1.62(1.32-1.78)	
339.8597	22.271	23.241	-58	0.995	2972688	676732	29889	74722	23		
341.8567	22.271	23.241	-58	0.995	1920961	436275	19460	48650	22	1.55(1.32-1.78)	
339.8597	22.926	23.241	-19	1.024	13712159	2434514	29889	74722	81		
341.8567	22.926	23.241	-19	1.024	8549653	1474145	19460	48650	76	1.60(1.32-1.78)	
339.8597	24.085	23.241	51	1.076	7409013	1156911	29889	74722	39		
341.8567	24.085	23.241	51	1.076	4641199	731933	19460	48650	38	1.60(1.32-1.78)	
339.8597	25.681	23.241	146	1.147	1749155	273963	29889	74722	9		
341.8567	25.681	23.241	146	1.147	1150465	170092	19460	48650	9	1.52(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.369	13862898	2093244	2793	6982	749		
369.8919	24.440	24.426	1	1.369	8495555	1361083	1658	4145	821	1.63(1.32-1.78)	
1,2,3,7,8-PeCDD											M
355.8546	24.467	24.453	1	1.001	2619117	419304	1951	4877	215		
357.8516	24.467	24.453	1	1.001	1640011	255374	1825	4562	140	1.60(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.249	23.349	-126	0.869	124104	21519	1951	4877	11		
357.8516	21.262	23.349	-125	0.870	927515	178317	1825	4562	98	0.13(1.32-1.78)	
	Empc Correction				80067	13883	1825	4562	8		
355.8546	22.980	23.349	-22	0.940	66925	13210	1951	4877	7		
357.8516	22.980	23.349	-22	0.940	41282	8339	1825	4562	5	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	10765407	2075328	4816	12040	431		
385.8610	30.503	30.503	0	0.949	21180899	4183423	8659	21647	483	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.001	64877142	12212166	27759	69397	440		
375.8178	30.529	30.529	0	1.001	53638812	10039016	27387	68467	367	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	9989968	1886856	4816	12040	392		
385.8610	30.689	30.689	0	0.955	19622147	3735401	8659	21647	431	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.702	30.716	-1	1.000	16632509	3139721	27759	69397	113		
375.8178	30.702	30.716	-1	1.000	13266889	2562803	27387	68467	94	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	9513356	2372563	4816	12040	493		
385.8610	31.514	31.514	0	0.981	18406880	4552705	8659	21647	526	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528	31.528	0	1.000	1879383	489415	27759	69397	18		
375.8178	31.528	31.528	0	1.000	1506598	391079	27387	68467	14	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.326	-1	1.005	8651419	2368411	4816	12040	492		
385.8610	32.313	32.326	-1	1.005	16639552	4494021	8659	21647	519	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.326	32.340	-1	1.000	761644	252621	27759	69397	9		
375.8178	32.326	32.340	-1	1.000	645690	216470	27387	68467	8	1.18(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	28.360	30.197	-110	0.930	3634124	484893	27759	69397	17		
375.8178	28.360	30.197	-110	0.930	2937258	403605	27387	68467	15	1.24(1.05-1.43)	
373.8208	29.691	30.197	-30	0.973	1605255	235852	27759	69397	8		
375.8178	29.691	30.197	-30	0.973	1317186	197910	27387	68467	7	1.22(1.05-1.43)	
373.8208	31.421	30.197	73	1.030	1055168	265421	27759	69397	10		
375.8178	31.408	30.197	73	1.030	854416	220016	27387	68467	8	1.23(1.05-1.43)	
373.8208	32.406	30.197	132	1.062	3863544	1137418	27759	69397	41		
375.8178	32.406	30.197	132	1.062	3147739	940163	27387	68467	34	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.140	0		28596719	7494875	6850	17125	1094		
403.8529	32.140	32.140	0		23575168	6141078	5319	13297	1155	1.21(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	12729334	3607893	6850	17125	527		
403.8529	31.701	31.701	0	0.986	10132167	2818121	5319	13297	530	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											Ma
389.8157	31.714	31.714	0	1.000	65082	16682	963	2407	17		M
391.8127	31.714	31.714	0	1.000	55018	12899	673	1682	19	1.18(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	13692485	3499262	6850	17125	511		
403.8529	31.807	31.807	0	0.990	11236547	2828881	5319	13297	532	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.820	31.820	0	1.000	182786	46041	963	2407	48		M
391.8127	31.820	31.820	0	1.000	152781	37431	673	1682	56	1.20(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.153	-1	1.014	145100	33065	963	2407	34		
391.8127	32.140	32.153	-1	1.014	130758	30236	673	1682	45	1.11(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQMa
389.8157	29.558	30.882	-79	0.929	539347	69472	963	2407	72		
391.8127	29.544	30.882	-80	0.929	459246	54648	673	1682	81	1.17(1.05-1.43)	
389.8157	30.583	30.882	-18	0.962	114090	22326	963	2407	23		
391.8127	30.569	30.882	-19	0.961	103928	18206	673	1682	27	1.10(1.05-1.43)	
389.8157	30.955	30.882	4	0.973	543473	111142	963	2407	115		M
391.8127	30.955	30.882	4	0.973	461383	89679	673	1682	133	1.18(1.05-1.43)	
389.8157	31.155	30.882	16	0.979	38221	7846	963	2407	8		M
391.8127	31.142	30.882	16	0.979	52079	10825	673	1682	16	0.73(1.05-1.43)	
	Empc Correction				30823	6327	673	1682	9		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.766	-1	1.050	6604308	2186995	11203	28007	195		
419.8220	33.754	33.766	-1	1.050	15137630	5017185	24521	61302	205	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.778	-1	1.000	16861556	5544149	15266	38165	363		
409.7789	33.766	33.778	-1	1.000	15993673	5313768	16368	40920	325	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.084	7020444	2119704	11203	28007	189		
419.8220	34.847	34.847	0	1.084	15759965	4650566	24521	61302	190	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860	34.860	0	1.000	4845959	1394588	15266	38165	91		
409.7789	34.847	34.860	-1	1.000	4680408	1348650	16368	40920	82	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.070	34.319	-15	1.009	4523139	1343167	15266	38165	88		
409.7789	34.070	34.319	-15	1.009	4226209	1236840	16368	40920	76	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.568	-1	1.075	10086653	3089191	5563	13907	555		
437.8140	34.556	34.568	-1	1.075	9902605	3045690	5022	12555	606	1.02(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.580	-1	1.000	4599424	1420501	8701	21752	163		
425.7737	34.568	34.580	-1	1.000	4384689	1314130	6411	16027	205	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.009	34.301	-17	0.984	5155308	1723104	8701	21752	198		
425.7737	34.009	34.301	-17	0.984	5066158	1681925	6411	16027	262	1.02(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.926	-1	1.149	14878699	3963306	2327	5817	1703		
471.7750	36.914	36.926	-1	1.149	16978988	4527079	2219	5547	2040	0.88(0.76-1.02)	
OCDF											
441.7428	37.010	37.022	-1	1.003	5675449	1516325	595	1487	2548		
443.7399	37.010	37.022	-1	1.003	6485538	1720662	817	2042	2106	0.88(0.76-1.02)	
OCDD											
457.7377	36.926	36.938	-1	1.000	67595877	17930749	8883	22207	2019		
459.7348	36.926	36.938	-1	1.000	75491757	19836019	10715	26787	1851	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d
Lims ID: 320-76769-A-13-A
Client ID: 11215702-072221-SS-SJSB074 (0-2)
Inject. Date: 15-Aug-2021 13:42:08 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 18

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	40051203	9883316

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	40051203	9883316

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.950	18294771	5169384	23676771	6702706	102.3	0.77	
16.237	32813302	6619153	42352611	8402694	183.3	0.77	
16.449	36815838	9928501	50305067	13247713	212.4	0.73	Ma
16.706	62374971	14790849	82229935	19267060	352.6	0.76	M
16.978	594796069	153079719	759898572	195152415	3303.4	0.78	
17.205	19197617	4692691	24317612	5943525	106.1	0.79	
17.795	99794015	24969864	127808153	31801921	555.0	0.78	
18.036	22588001	5140445	29308227	6553988	126.5	0.77	
19.201	83059125	18895579	106718207	24009593	462.8	0.78	a
Signal Totals:							
	969733709	243286185	1246615155	311081615			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2216348864	554367800				0.78	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 5404.6 = (2216348864 * 100.000) / (40051203 * 1.024)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d
Lims ID: 320-76769-A-13-A
Client ID: 11215702-072221-SS-SJSB074 (0-2)
Inject. Date: 15-Aug-2021 13:42:08 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 18

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	27475981	6479125

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	27475981	6479125

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.961	2778577	801817	2828532	1014312	16.3	0.98	RQ
17.961	2177969	781020	2828532	1014312	14.5		Empc Correction
18.430	28201849	6117584	34673499	7832043	182.5	0.81	
Signal Totals:							
	30379818	6898604	37502031	8846355			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	68482457	15765756				0.83	RQ
	67881849	15744959					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 198.741 = (68482457 * 100.000) / (27475981 * 1.254)
Empc Amount: 196.998 = (67881849 * 100.000) / (27475981 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d
Lims ID: 320-76769-A-13-A
Client ID: 11215702-072221-SS-SJSB074 (0-2)
Inject. Date: 15-Aug-2021 13:42:08 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 18

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	33775264	6012945
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	36647796	6067568

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	35211530	6040256

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.488	274066	54692	176197	39713	1.23	1.56	
Signal Totals:							
	274066	54692	176197	39713			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	450263	94405				1.56	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.230 = (450263 * 100.000) / (35211530 * 1.040)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Lims ID:	320-76769-A-13-A		
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Inject. Date:	15-Aug-2021 13:42:08	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	18

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	33775264	6012945
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	36647796	6067568

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	35211530	6040256

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.058	20217641	4150280	12513437	2545821	89.4	1.62	
22.271	2972688	676732	1920961	436275	13.4	1.55	
22.926	13712159	2434514	8549653	1474145	60.8	1.60	
24.085	7409013	1156911	4641199	731933	32.9	1.60	
25.681	1749155	273963	1150465	170092	7.92	1.52	
Signal Totals:							
	46060656	8692400	28775715	5358266			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	74836371	14050666				1.60	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 204.403 = (74836371 * 100.000) / (35211530 * 1.040)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d
Lims ID: 320-76769-A-13-A
Client ID: 11215702-072221-SS-SJSB074 (0-2)
Inject. Date: 15-Aug-2021 13:42:08 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 18

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	22358453	3454327

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	22358453	3454327

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	124104	21519	927515	178317	4.49	0.13	RQ
21.249	124104	21519	80067	13883	0.8710		Empc Correction
22.980	66925	13210	41282	8339	0.4616	1.62	
Signal Totals:							
	191029	34729	121349	22222			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1159826	221385				0.20	RQ
	312378	56951					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.948 = (1159826 * 100.000) / (22358453 * 1.048)
Empc Amount: 1.333 = (312378 * 100.000) / (22358453 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Lims ID:	320-76769-A-13-A		
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Inject. Date:	15-Aug-2021 13:42:08	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	18

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	31946306	6258751
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	29612115	5622257
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	27920236	6925268
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	25290971	6862432

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	28692407	6417177

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.360	3634124	484893	2937258	403605	20.2	1.24	
29.691	1605255	235852	1317186	197910	8.96	1.22	
31.421	1055168	265421	854416	220016	5.86	1.23	
32.406	3863544	1137418	3147739	940163	21.5	1.23	
Signal Totals:							
	10158091	2123584	8256599	1761694			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	18414690	3885278				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 56.483 = (18414690 * 100.000) / (28692407 * 1.136)

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Eurofins TestAmerica, Sacramento

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Lims ID:	320-76769-A-13-A		
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Inject. Date:	15-Aug-2021 13:42:08	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	18

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	22861501	6426014
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	24929032	6328143
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	23895266	6377078

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.558	539347	69472	459246	54648	3.92	1.17	
30.583	114090	22326	103928	18206	0.8563	1.10	
30.955	543473	111142	461383	89679	3.95	1.18	M
31.155	38221	7846	52079	10825	0.3547	0.73	RQMa
31.155	38221	7846	30823	6327	0.2712		Empc Correction
Signal Totals:							
	1235131	210786	1055380	168860			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2311767	384144				1.15	RQMa
	2290511	379646					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 9.079 = (2311767 * 100.000) / (23895266 * 1.066)

Empc Amount: 8.996 = (2290511 * 100.000) / (23895266 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Lims ID:	320-76769-A-13-A		
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Inject. Date:	15-Aug-2021 13:42:08	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	18

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	21741938	7204180
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	22780409	6770270

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	22261173	6987225

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.070	4523139	1343167	4226209	1236840	28.5	1.07	
Signal Totals:							
	4523139	1343167	4226209	1236840			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8749348	2580007				1.07	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 28.494 = (8749348 * 100.000) / (22261173 * 1.379)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Lims ID:	320-76769-A-13-A		
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Inject. Date:	15-Aug-2021 13:42:08	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	18

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	19989258	6134881

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	19989258	6134881

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.009	5155308	1723104	5066158	1681925	46.7	1.02	
Signal Totals:							
	5155308	1723104	5066158	1681925			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10221466	3405029				1.02	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 46.728 = (10221466 * 100.000) / (19989258 * 1.094)

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d				
Injection Date:	15-Aug-2021 13:42:08	Instrument ID:	10D5		
Lims ID:	320-76769-A-13-A	Lab Sample ID:	320-76769-13		
Client ID:	11215702-072221-SS-SJSB074 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 16.449 Area = 39771476

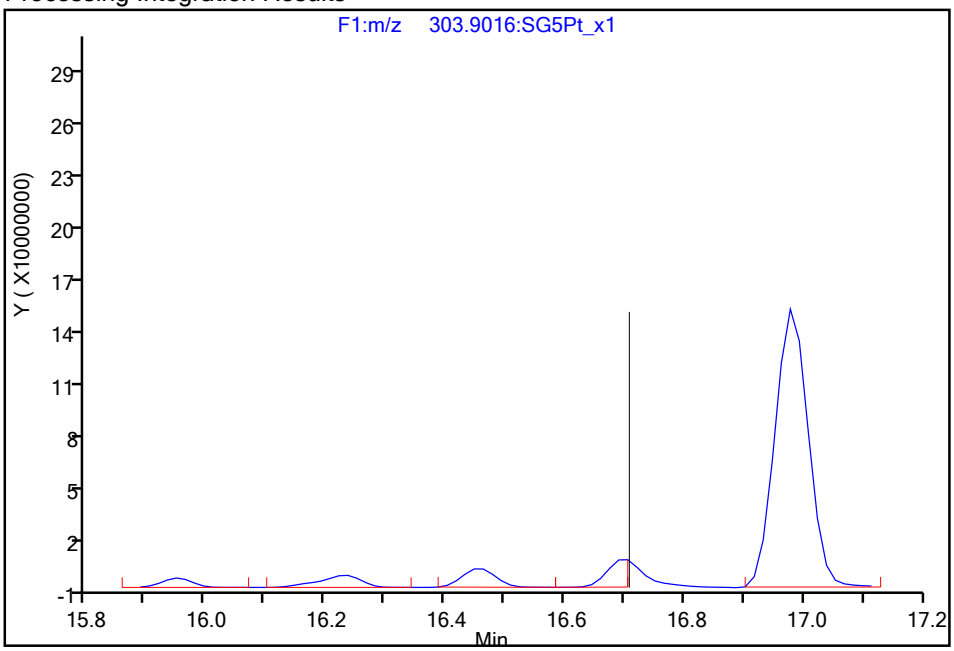

Manual Integration Results

RT = 16.449 Area = 36815838 M

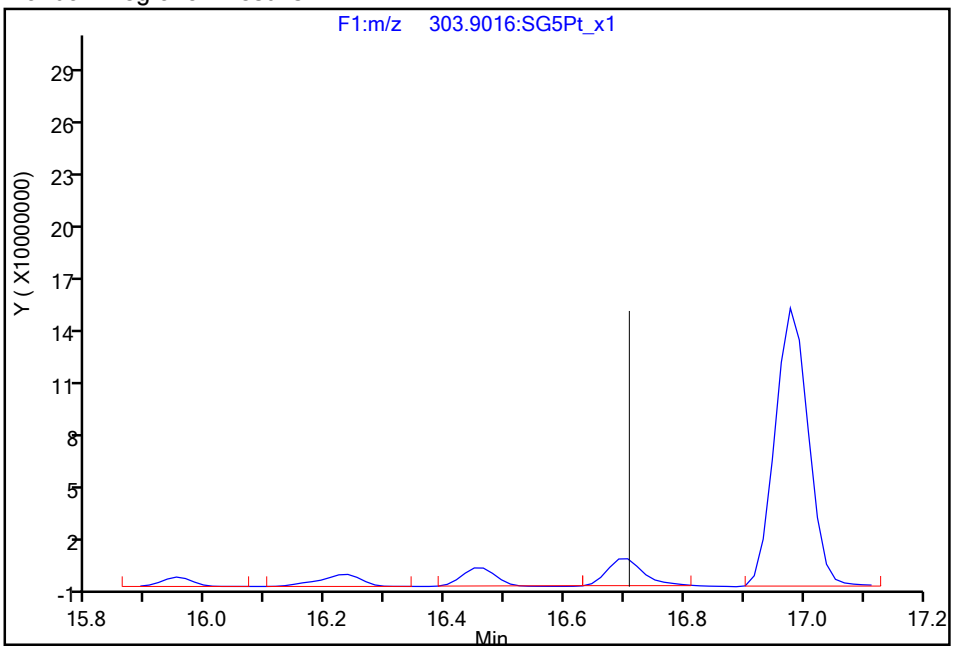

Reviewer: krenns, 18-Aug-2021 10:21:27

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d				
Injection Date:	15-Aug-2021 13:42:08	Instrument ID:	10D5		
Lims ID:	320-76769-A-13-A	Lab Sample ID:	320-76769-13		
Client ID:	11215702-072221-SS-SJSB074 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 16.691 Area = 35532511

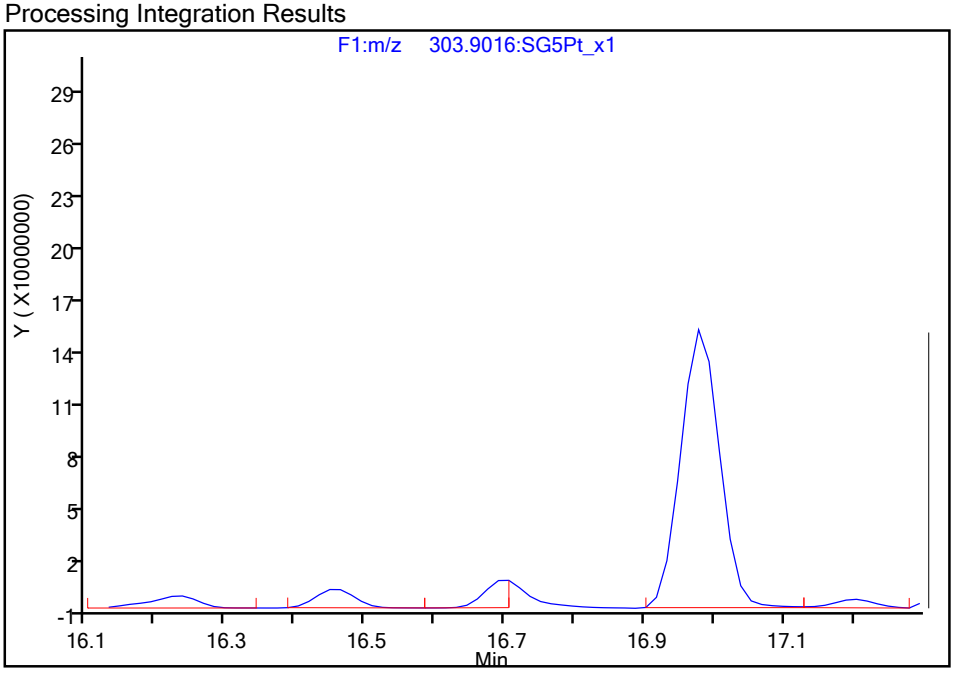

Manual Integration Results

RT = 16.706 Area = 62374971 M

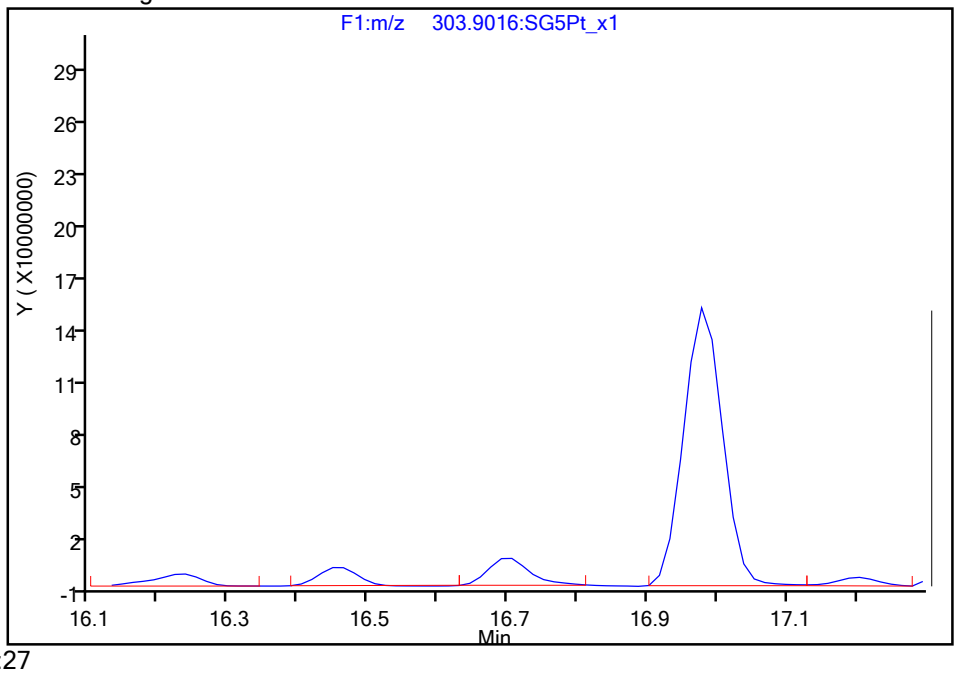

Reviewer: krenns, 18-Aug-2021 10:21:27

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d				
Injection Date:	15-Aug-2021 13:42:08	Instrument ID:	10D5		
Lims ID:	320-76769-A-13-A	Lab Sample ID:	320-76769-13		
Client ID:	11215702-072221-SS-SJSB074 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.89- 19.20)

Signal: 2

Processing Integration Results

RT = 16.676 Area = 29529377

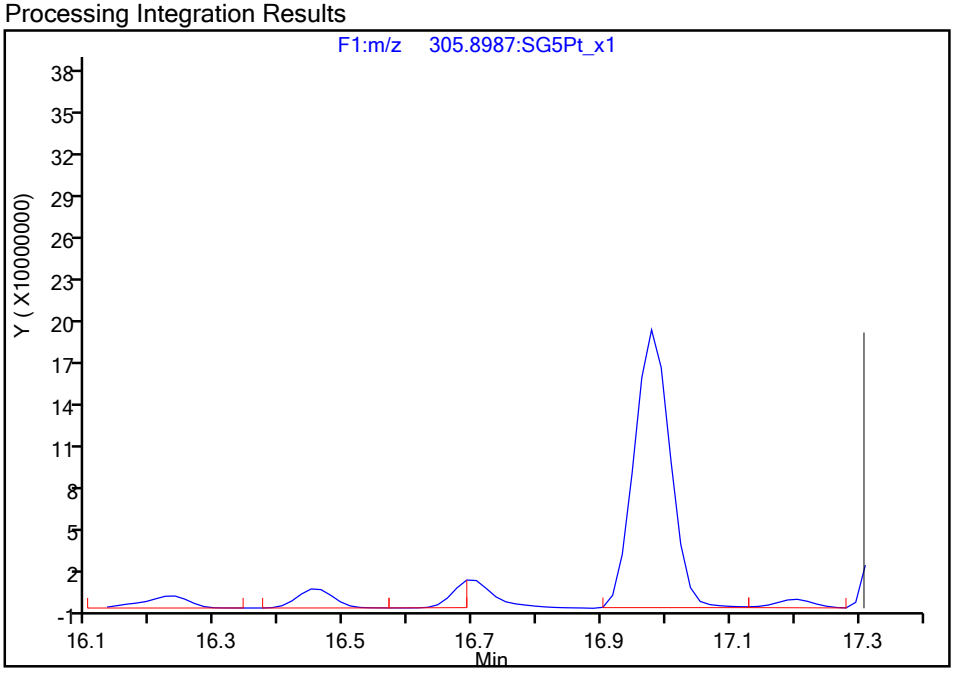

Manual Integration Results

RT = 16.691 Area = 82229935 M

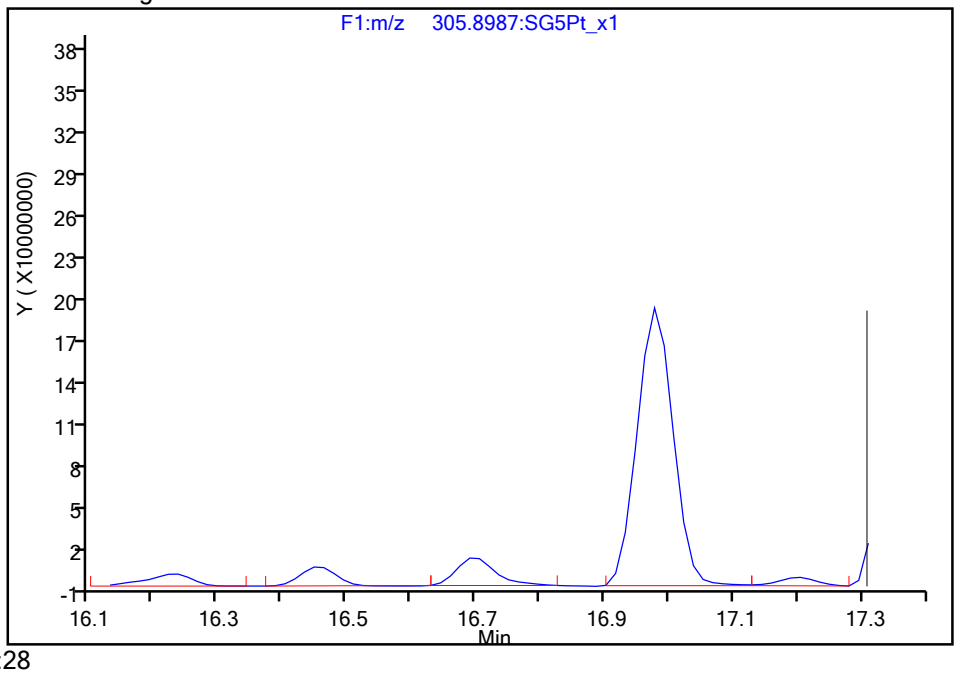

Reviewer: dadunj, 18-Aug-2021 11:22:28

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d				
Injection Date:	15-Aug-2021 13:42:08	Instrument ID:	10D5		
Lims ID:	320-76769-A-13-A	Lab Sample ID:	320-76769-13		
Client ID:	11215702-072221-SS-SJSB074 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 2

Processing Integration Results

RT: 24.47
Area: 1677843
Amount: 18.330737
Amount Units: pg/ul

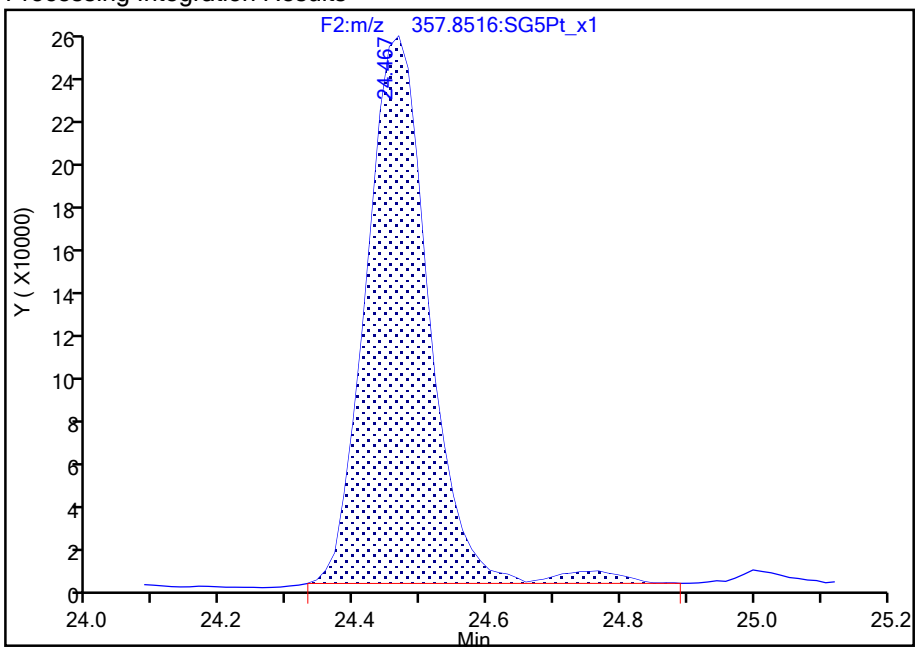

Manual Integration Results

RT: 24.47
Area: 1640011
Amount: 18.169346
Amount Units: pg/ul

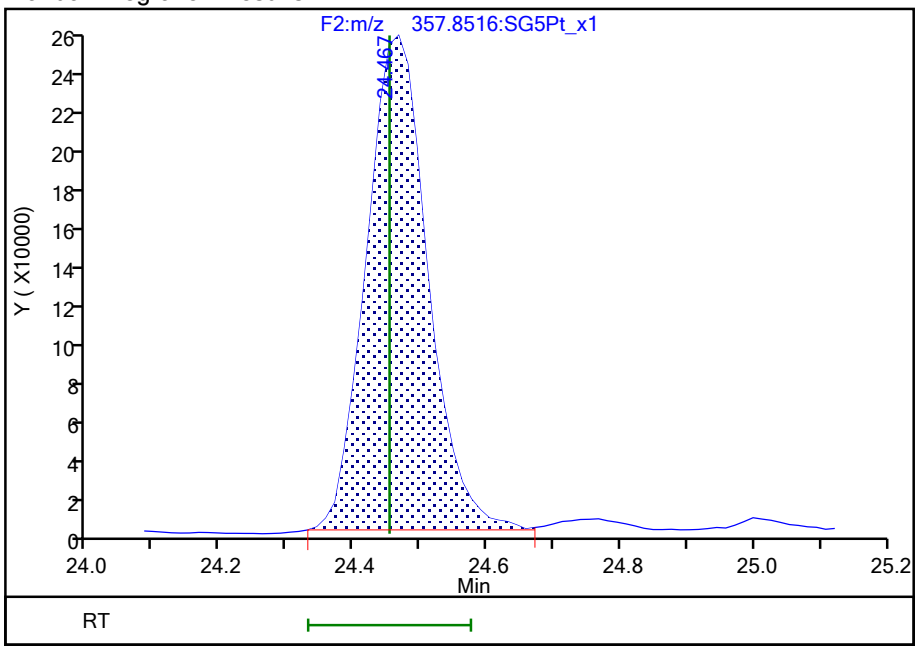

Reviewer: dadunj, 18-Aug-2021 11:23:04

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d				
Injection Date:	15-Aug-2021 13:42:08	Instrument ID:	10D5		
Lims ID:	320-76769-A-13-A	Lab Sample ID:	320-76769-13		
Client ID:	11215702-072221-SS-SJSB074 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.82
Area: 152781
Amount: 1.646882
Amount Units: pg/ul

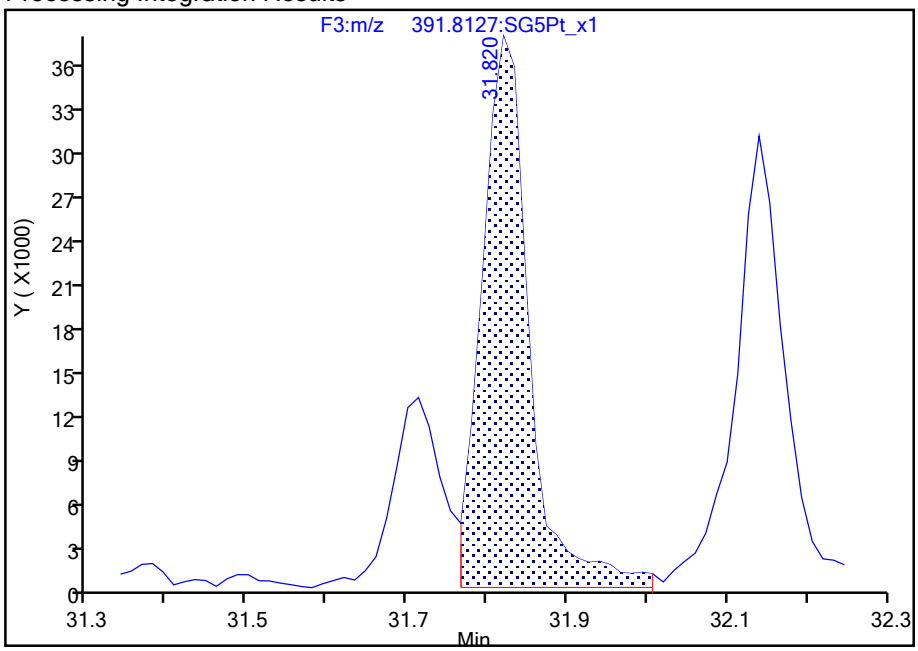

Manual Integration Results

RT: 31.71
Area: 55018
Amount: 0.493722
Amount Units: pg/ul

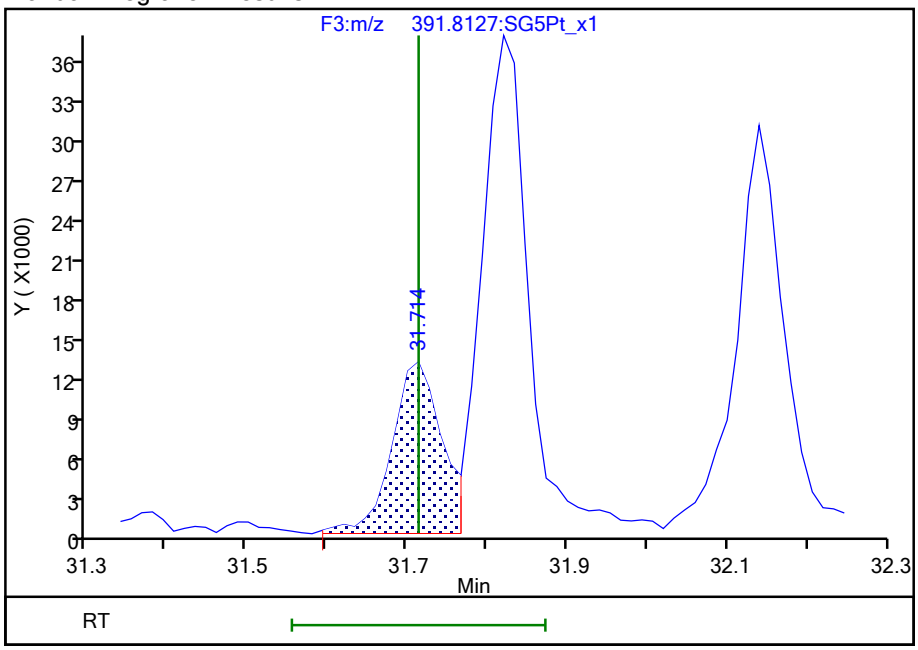

Reviewer: dadunj, 18-Aug-2021 11:23:22
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d				
Injection Date:	15-Aug-2021 13:42:08	Instrument ID:	10D5		
Lims ID:	320-76769-A-13-A	Lab Sample ID:	320-76769-13		
Client ID:	11215702-072221-SS-SJSB074 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

RT: 31.82
Area: 400611
Amount: 1.646882
Amount Units: pg/ul

Processing Integration Results

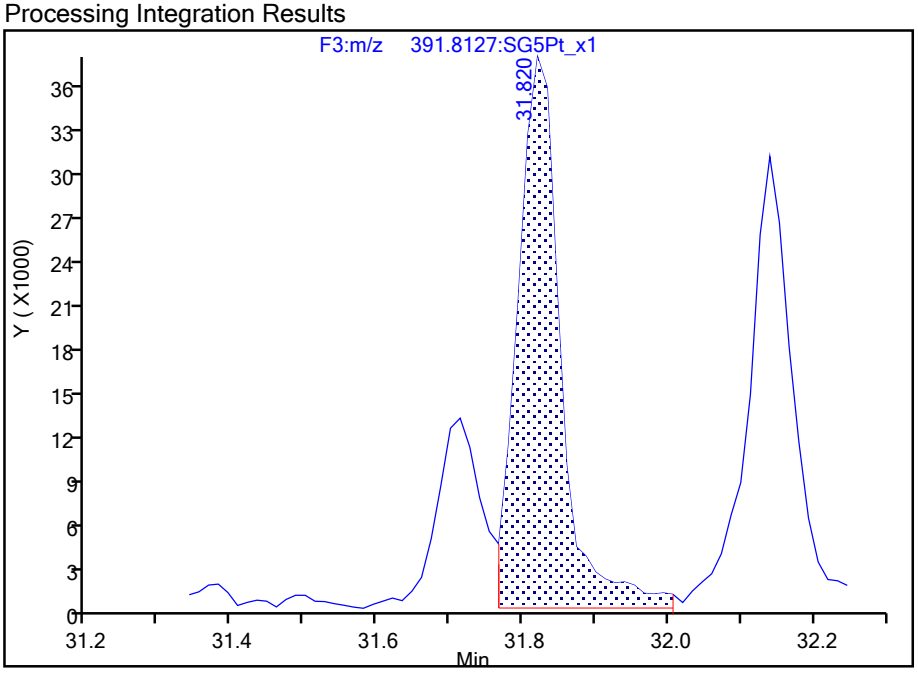

Manual Integration Results

RT: 31.71
Area: 120100
Amount: 0.493722
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 11:23:22
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d				
Injection Date:	15-Aug-2021 13:42:08	Instrument ID:	10D5		
Lims ID:	320-76769-A-13-A	Lab Sample ID:	320-76769-13		
Client ID:	11215702-072221-SS-SJSB074 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.82
Area: 247830
Amount: 1.646882
Amount Units: pg/ul

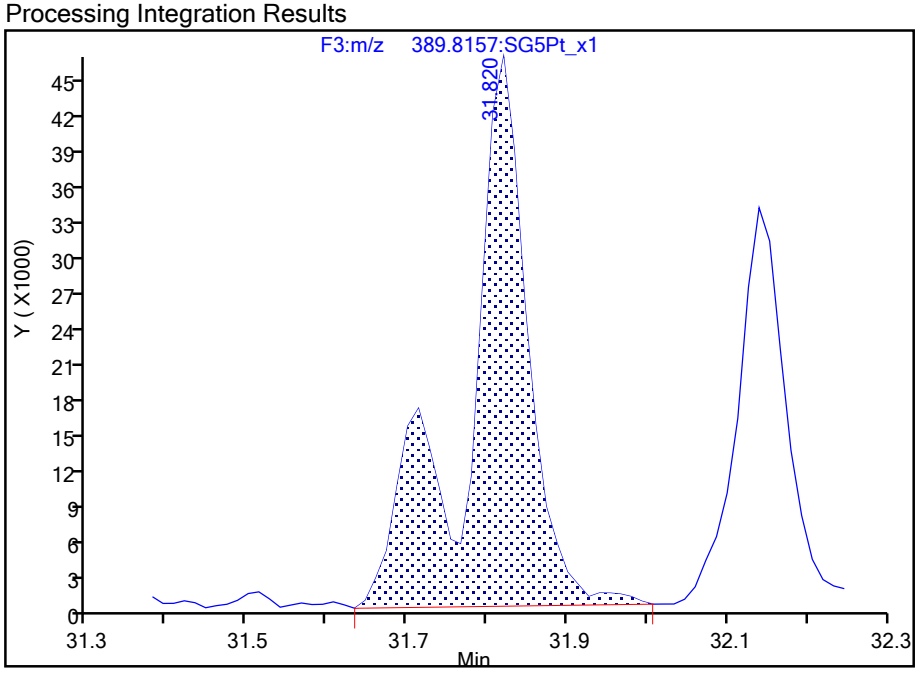

Manual Integration Results

RT: 31.71
Area: 65082
Amount: 0.493722
Amount Units: pg/ul

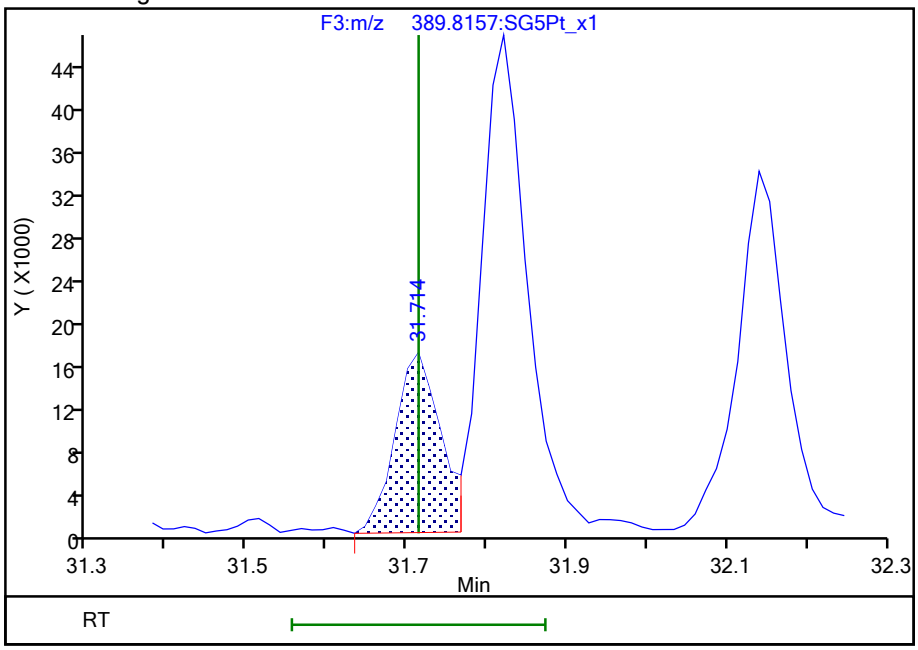

Reviewer: dadunj, 18-Aug-2021 11:23:23

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d				
Injection Date:	15-Aug-2021 13:42:08	Instrument ID:	10D5		
Lims ID:	320-76769-A-13-A	Lab Sample ID:	320-76769-13		
Client ID:	11215702-072221-SS-SJSB074 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.82
Area: 247830
Amount: 1.606880
Amount Units: pg/ul

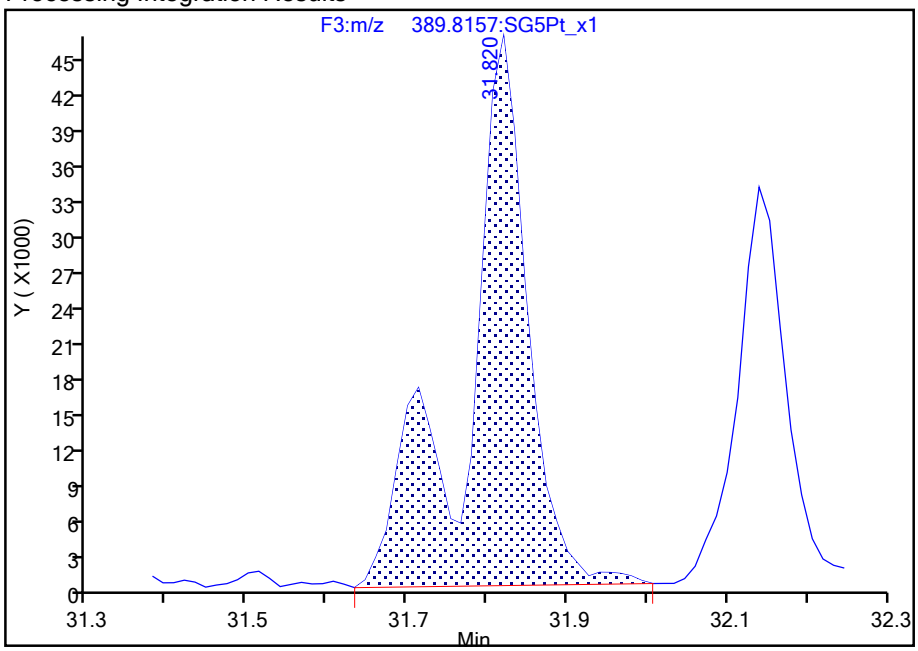

Manual Integration Results

RT: 31.82
Area: 182786
Amount: 1.345983
Amount Units: pg/ul

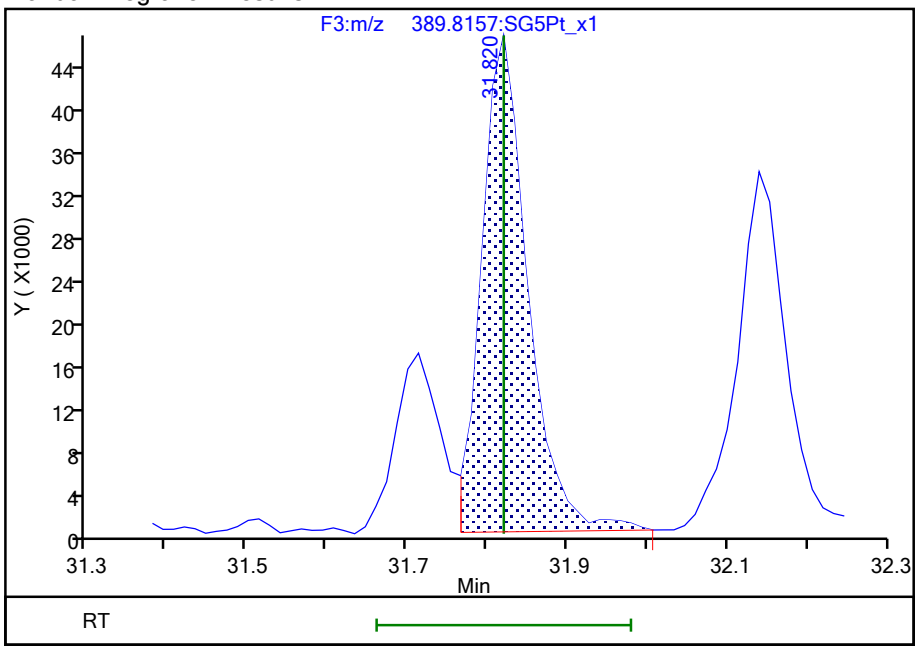

Reviewer: dadunj, 18-Aug-2021 11:23:20

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d				
Injection Date:	15-Aug-2021 13:42:08	Instrument ID:	10D5		
Lims ID:	320-76769-A-13-A	Lab Sample ID:	320-76769-13		
Client ID:	11215702-072221-SS-SJSB074 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (29.36- 32.41)

Signal: 1

Processing Integration Results

RT = 30.955 Area = 581695

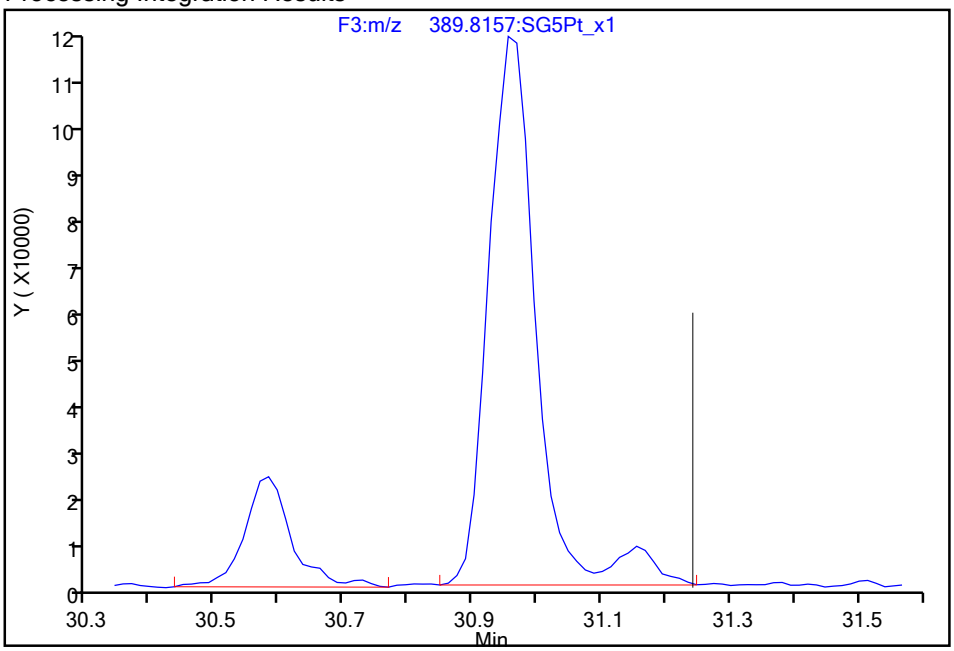

Manual Integration Results

RT = 30.955 Area = 543473 M

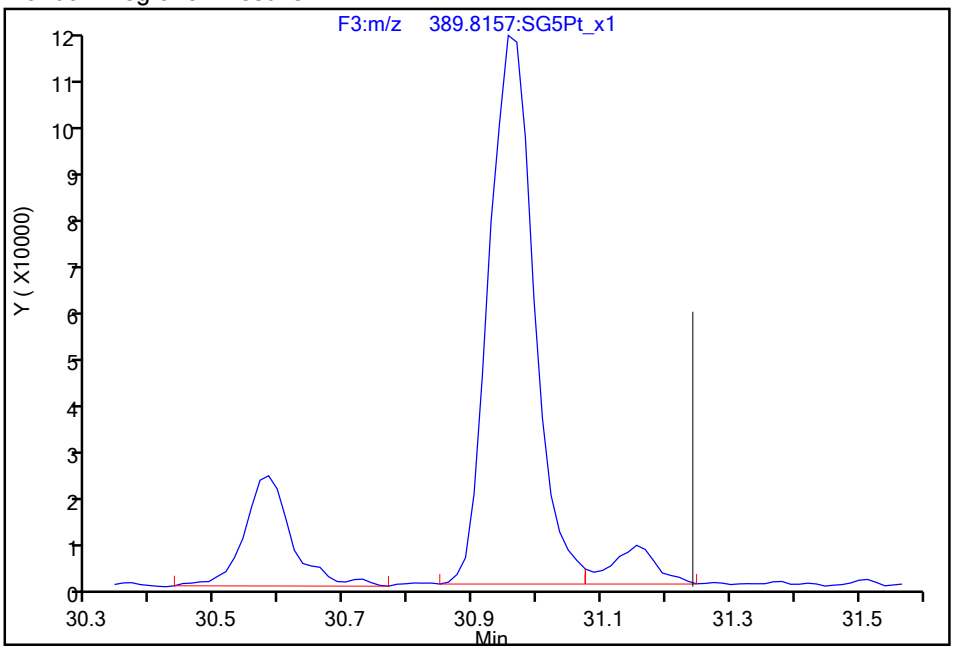

Reviewer: dadunj, 18-Aug-2021 11:23:38

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d				
Injection Date:	15-Aug-2021 13:42:08	Instrument ID:	10D5		
Lims ID:	320-76769-A-13-A	Lab Sample ID:	320-76769-13		
Client ID:	11215702-072221-SS-SJSB074 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (29.36- 32.41)

Signal: 1

Not Detected
RT: 29.36- 32.41

Processing Integration Results

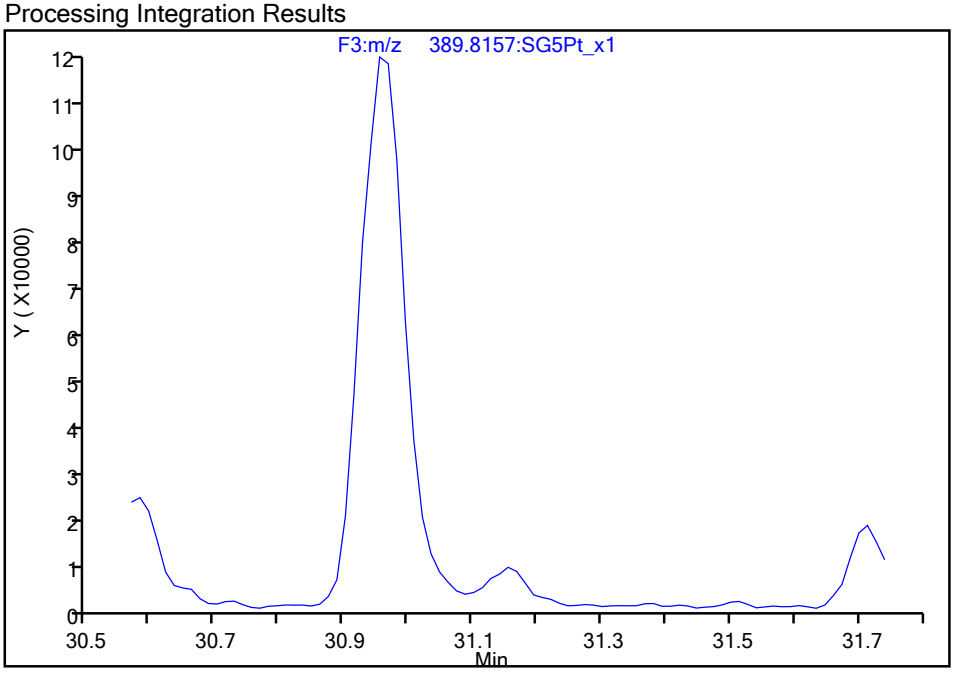

RT = 31.155 Area = 38221 M

Manual Integration Results

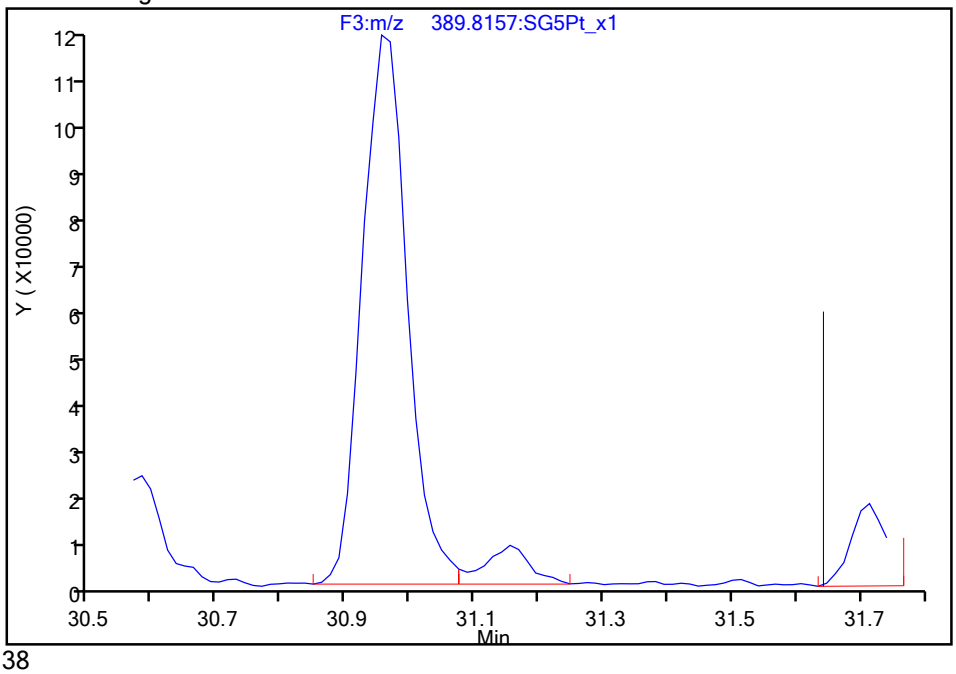

Reviewer: dadunj, 18-Aug-2021 11:23:38
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

774986

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Injection Date:	15-Aug-2021 13:42:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	516848	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

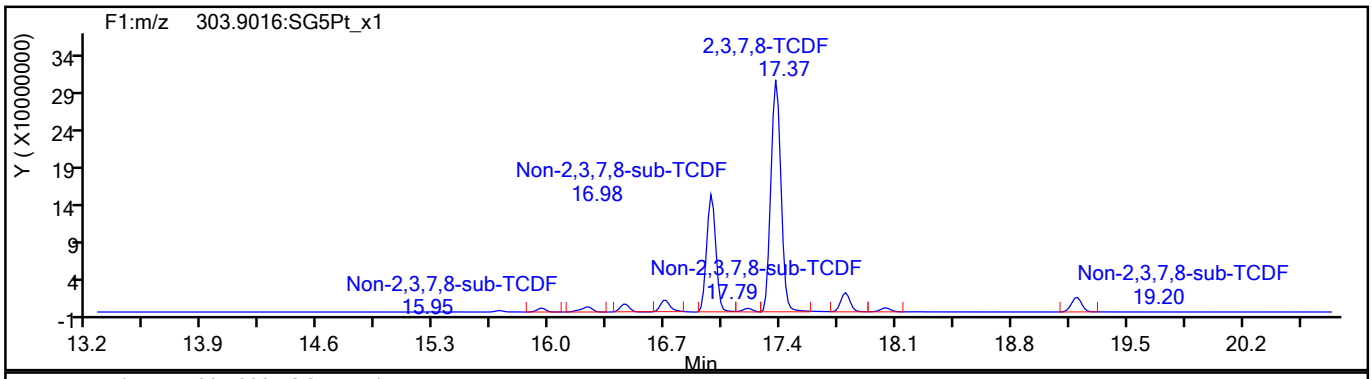

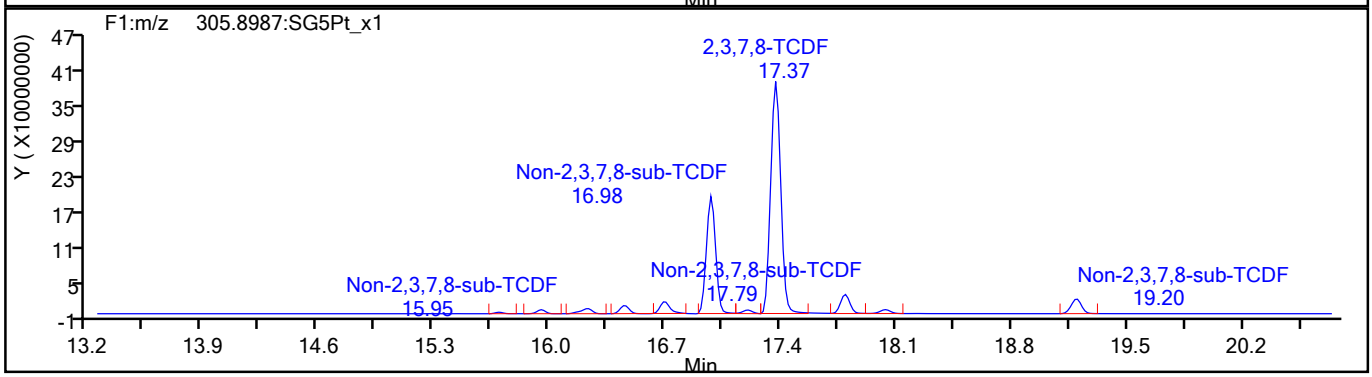

TCDF Standards

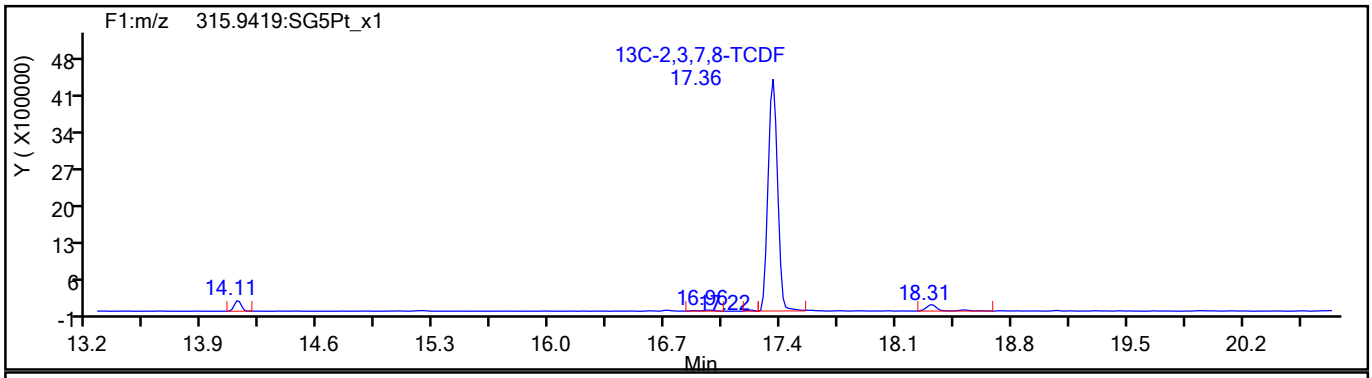

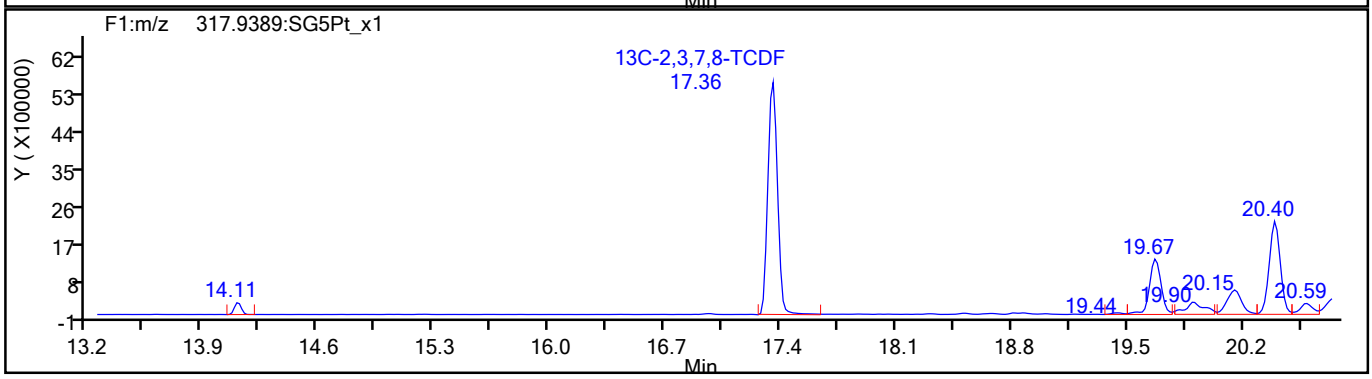

774987

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Injection Date:	15-Aug-2021 13:42:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	516848	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

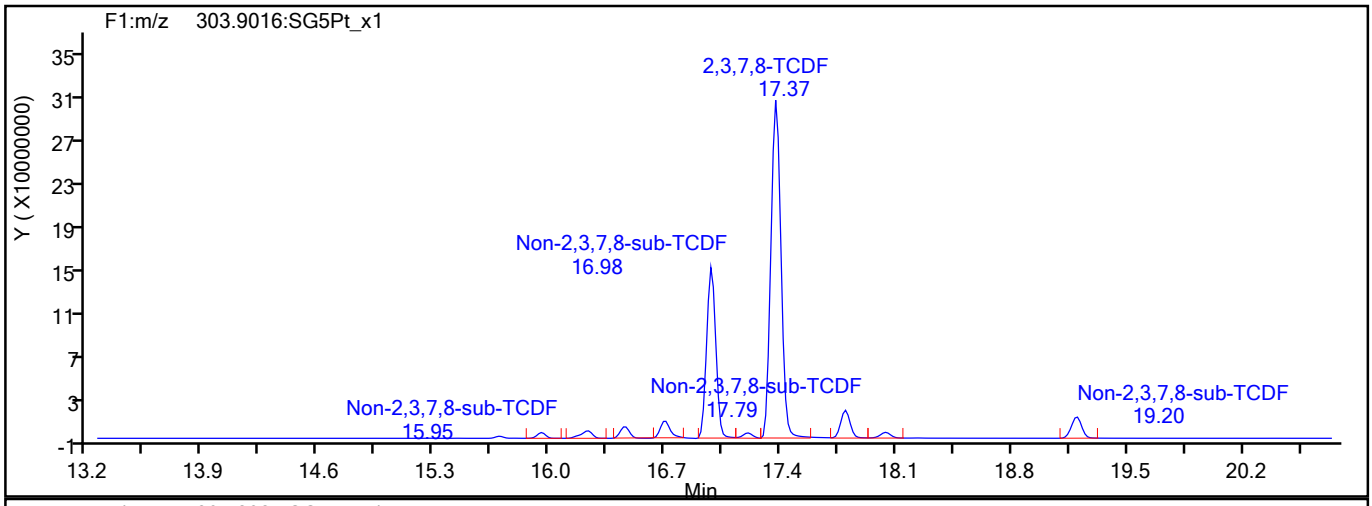

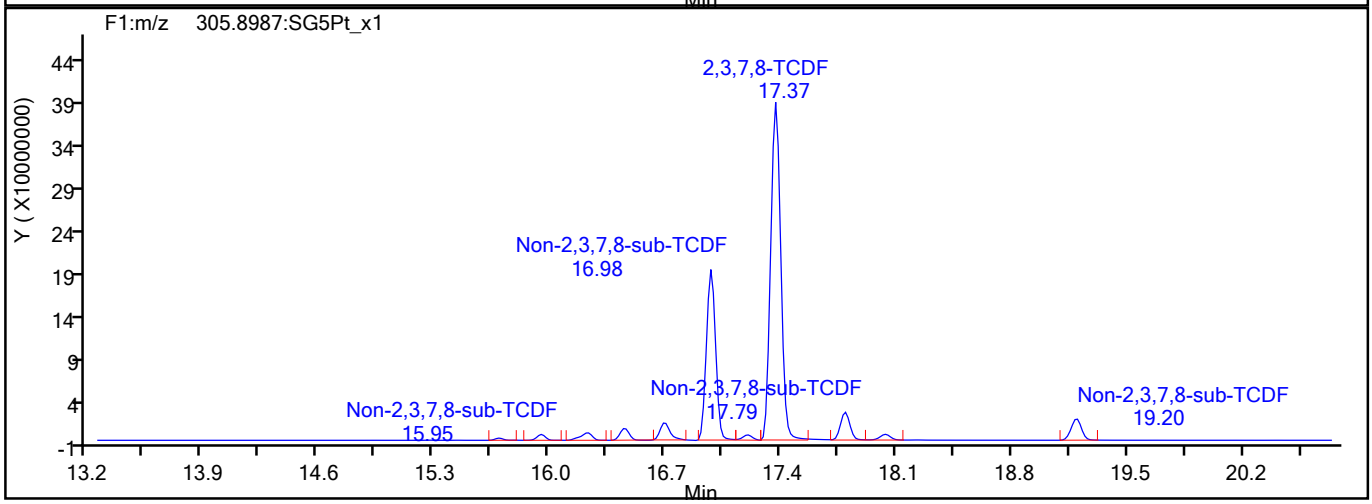

TCDF Interference Mass

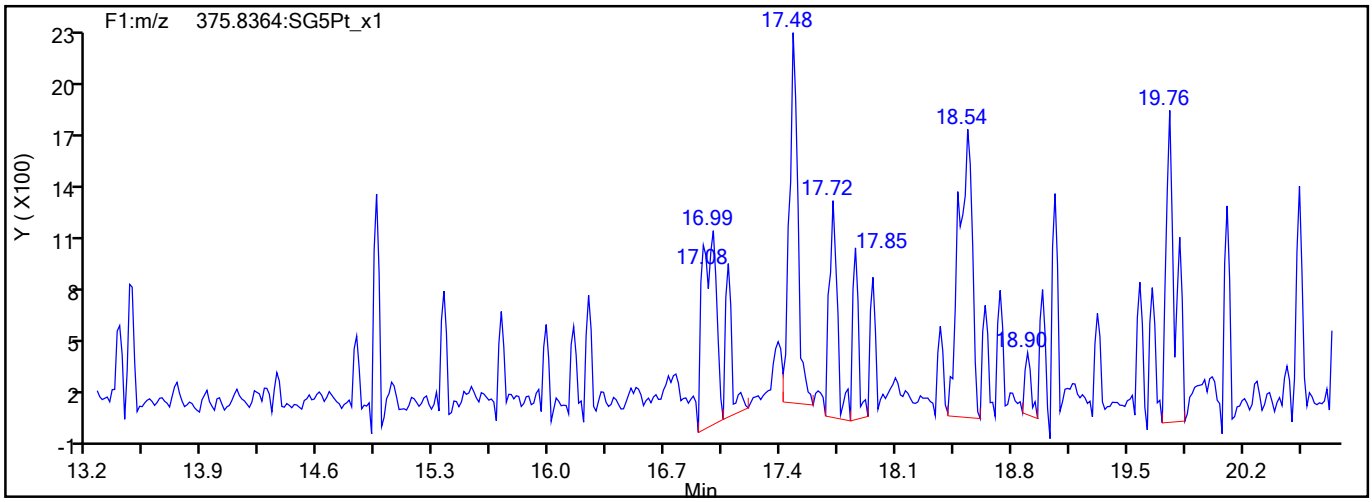

774988

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Injection Date:	15-Aug-2021 13:42:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	516848	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

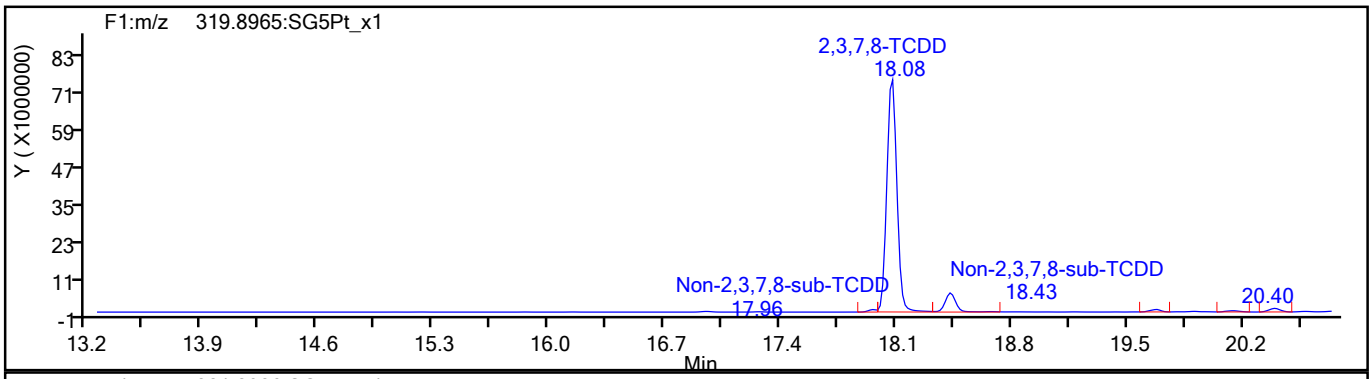

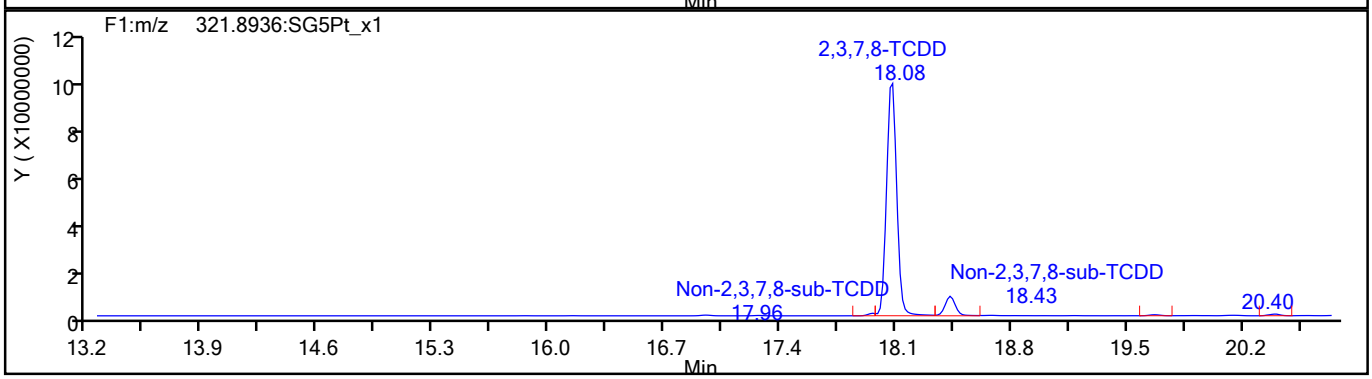

TCDD Standards

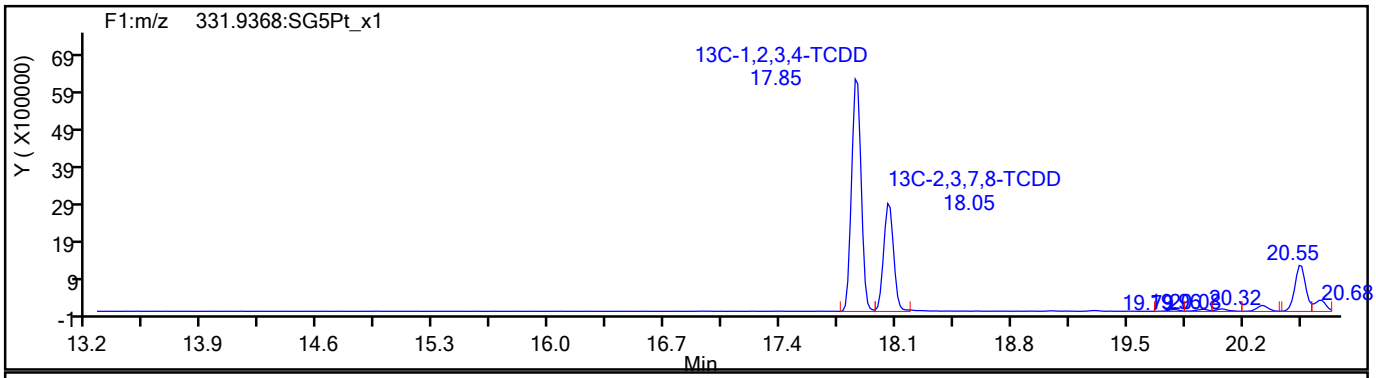

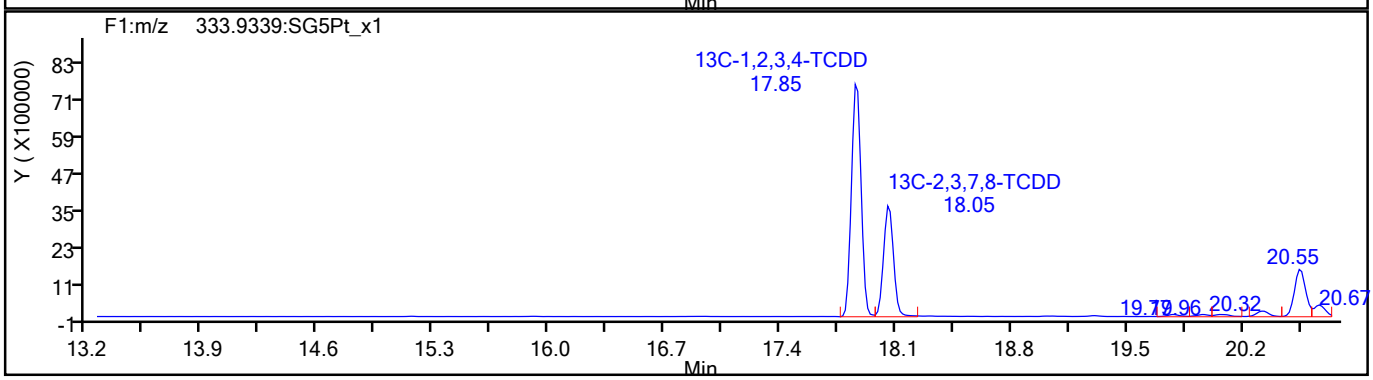

774989

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Injection Date:	15-Aug-2021 13:42:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	516848	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

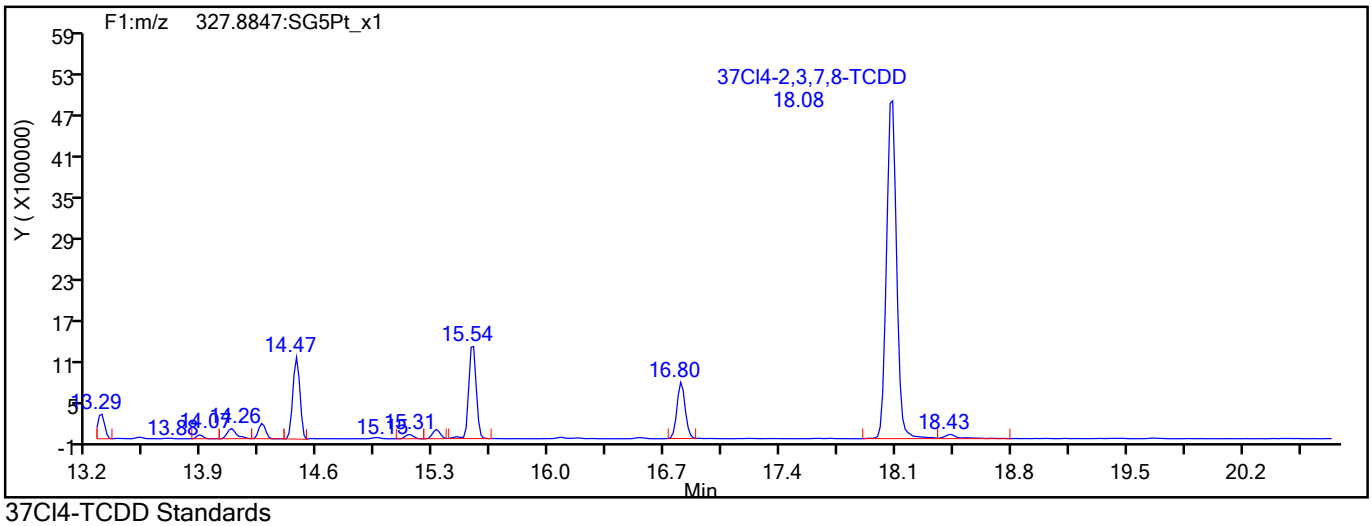

37Cl4-TCDD Standards

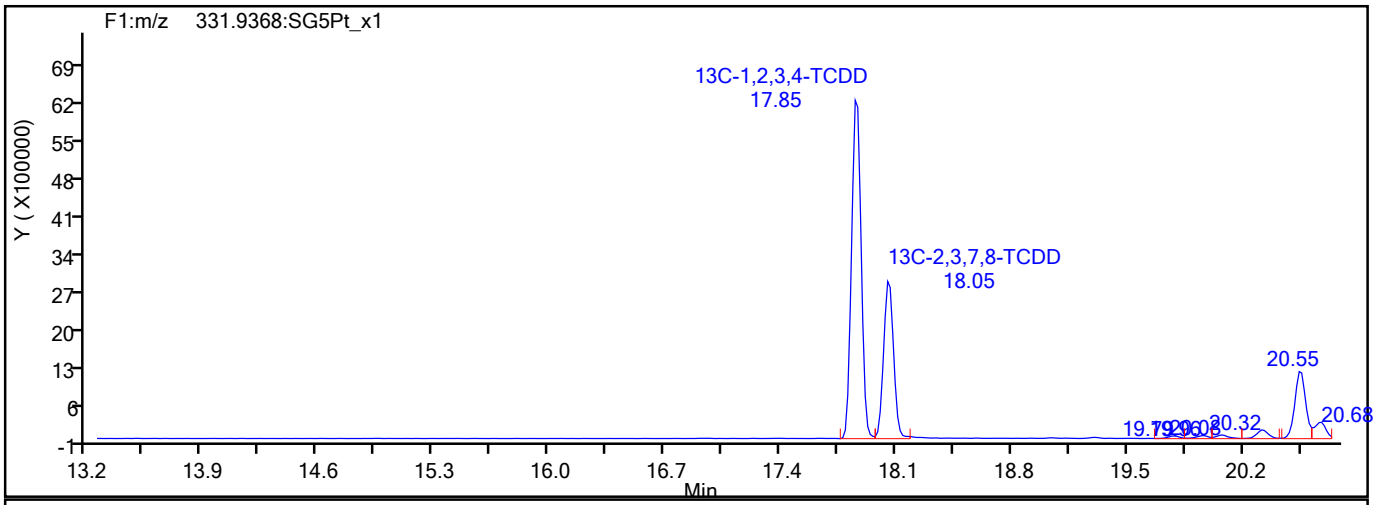

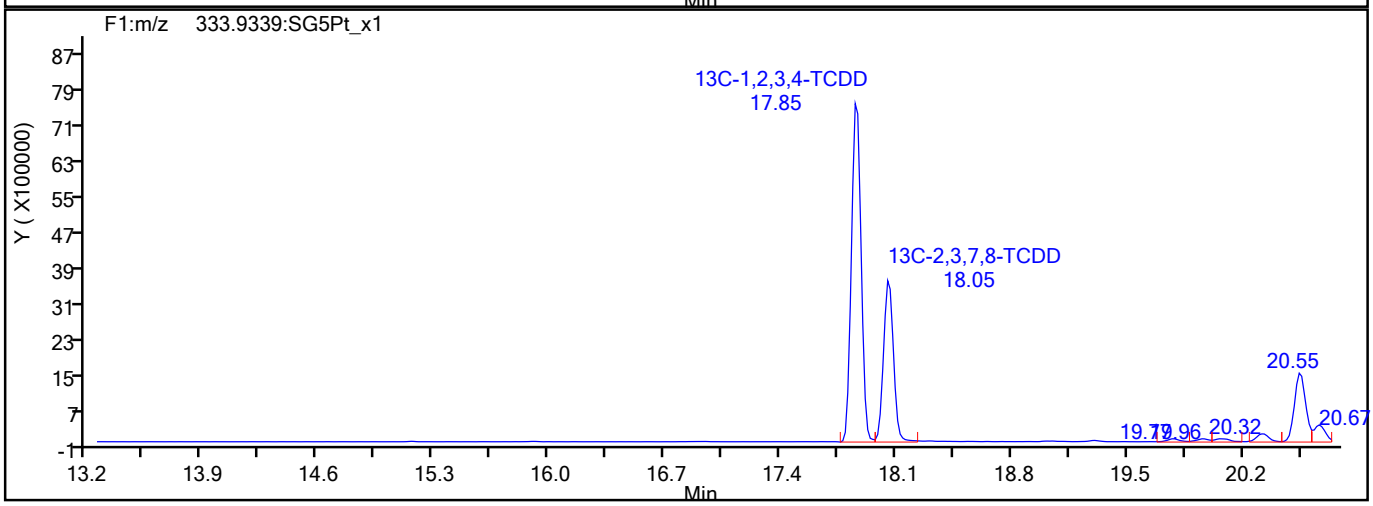

774990

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Injection Date:	15-Aug-2021 13:42:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	516848	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

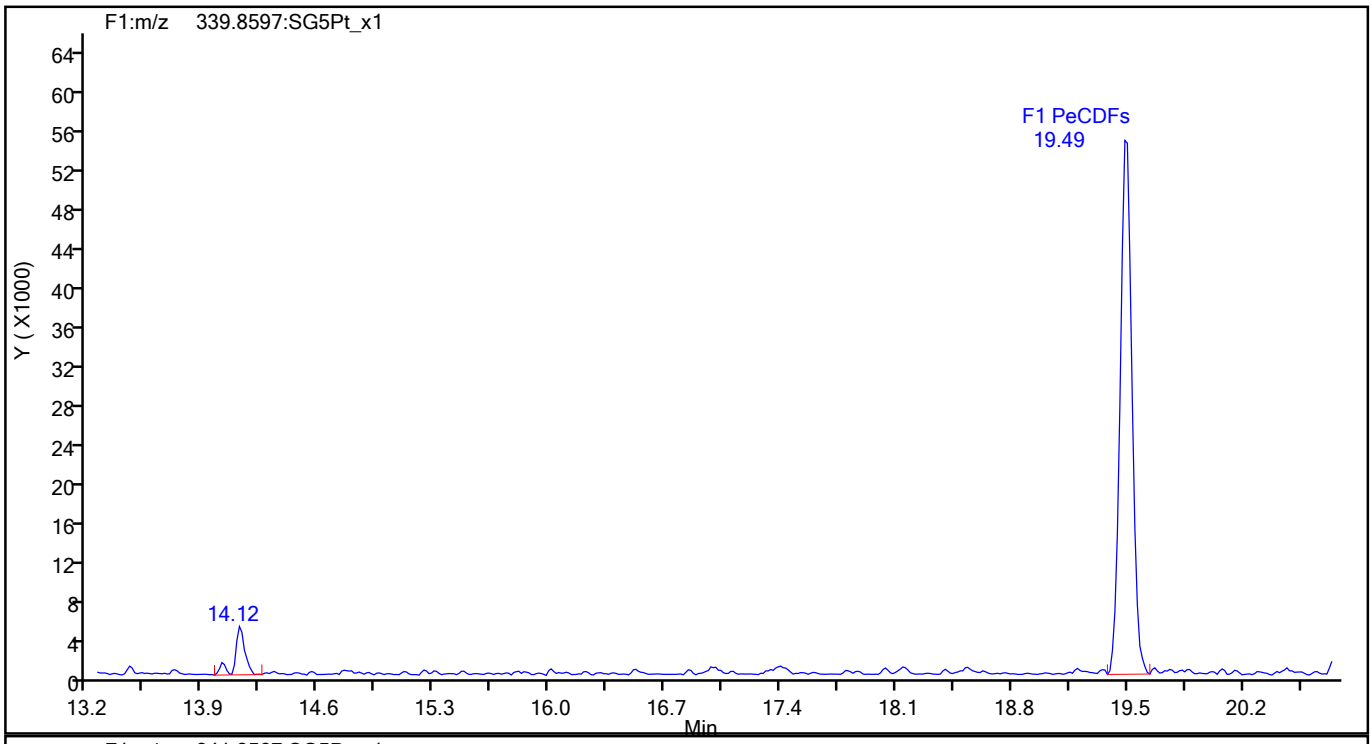

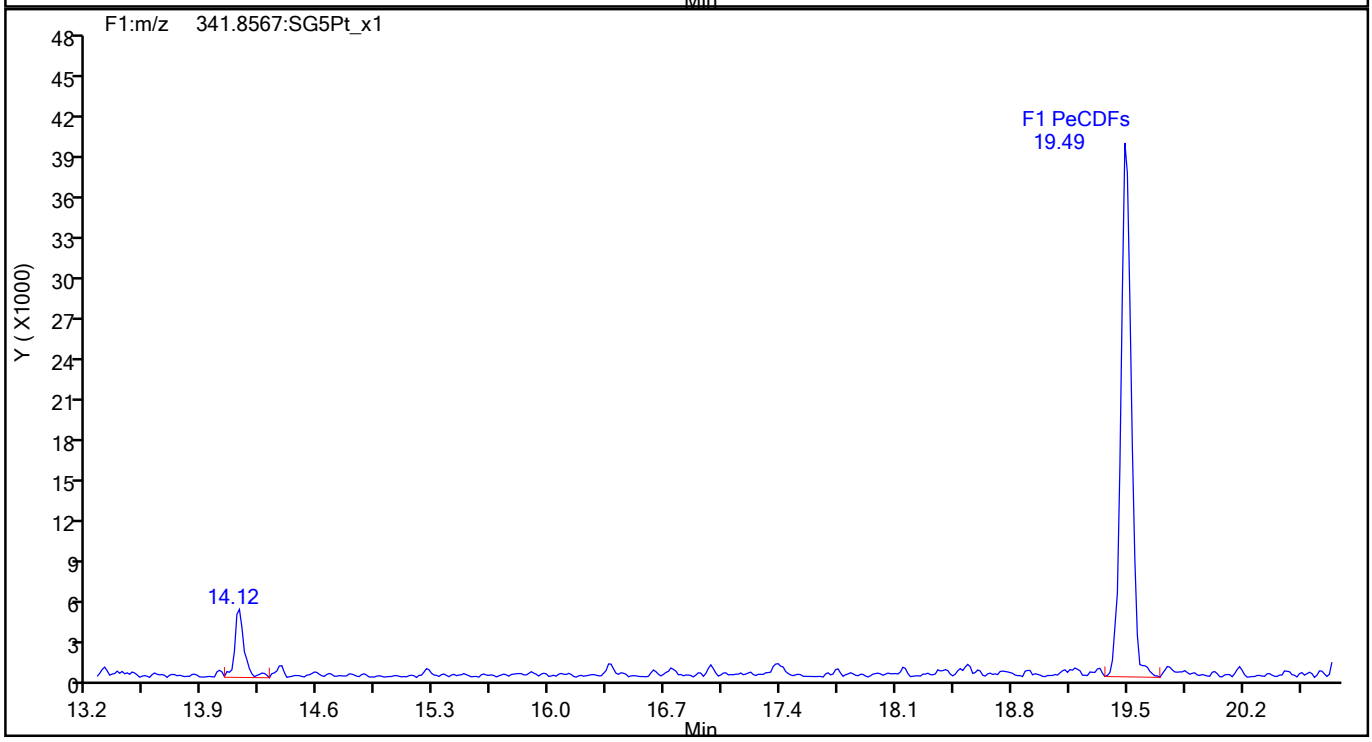

774991

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Injection Date:	15-Aug-2021 13:42:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	516848	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

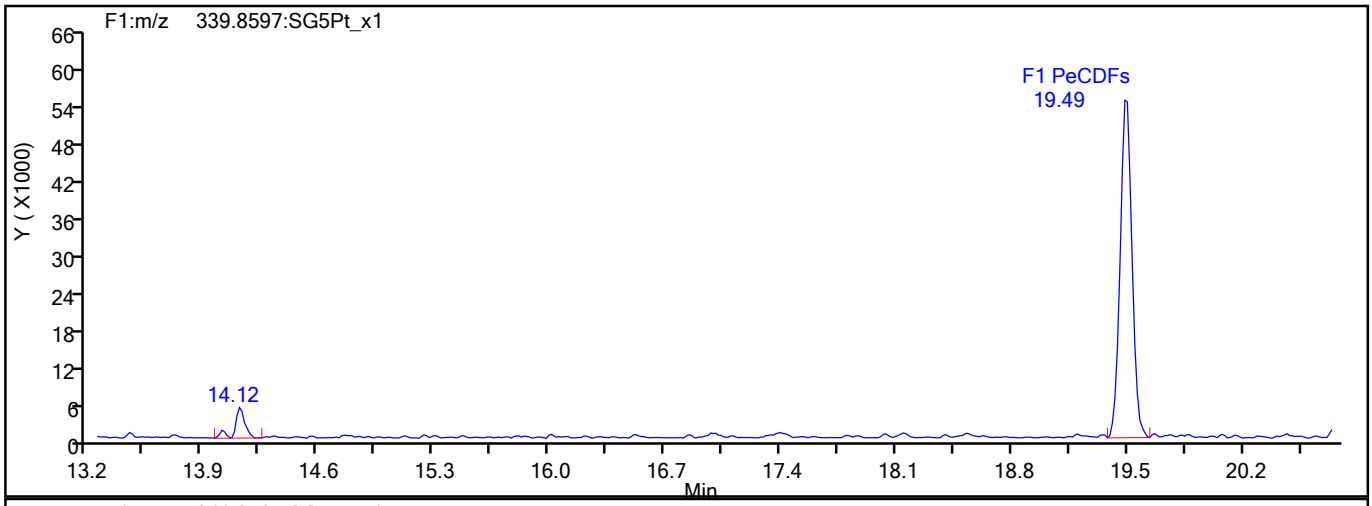

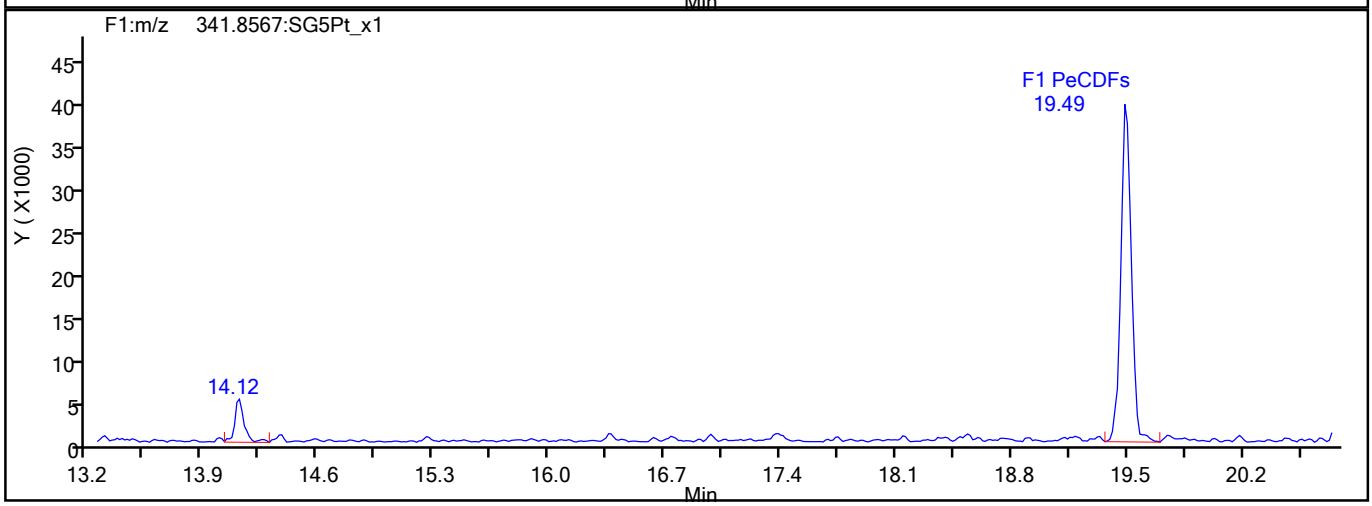

F1 PeCDFs Interference Mass

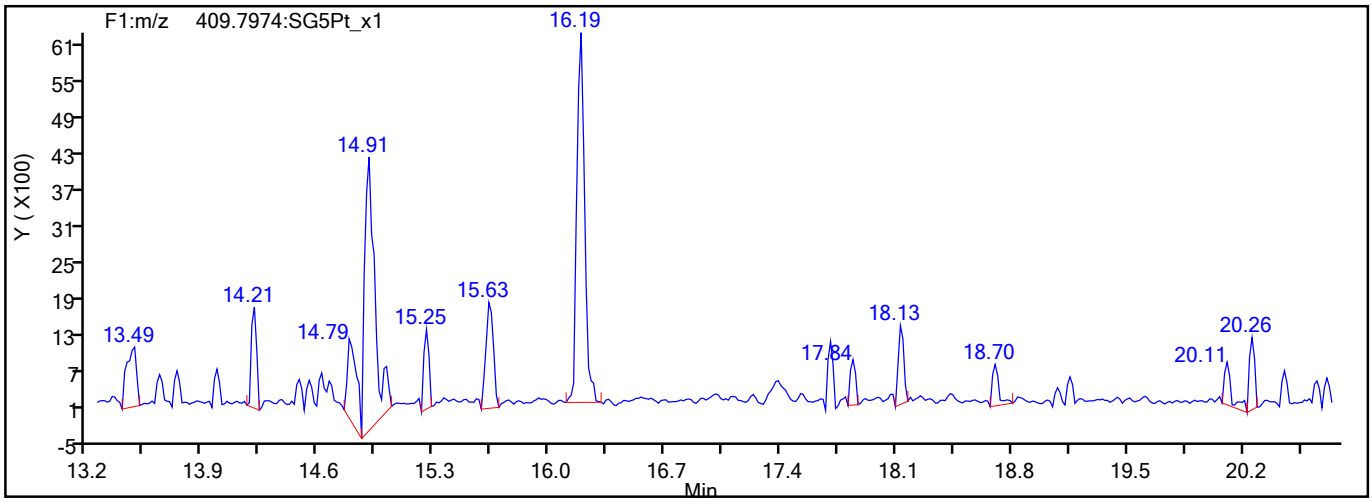

774992

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 13:42:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	516848	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

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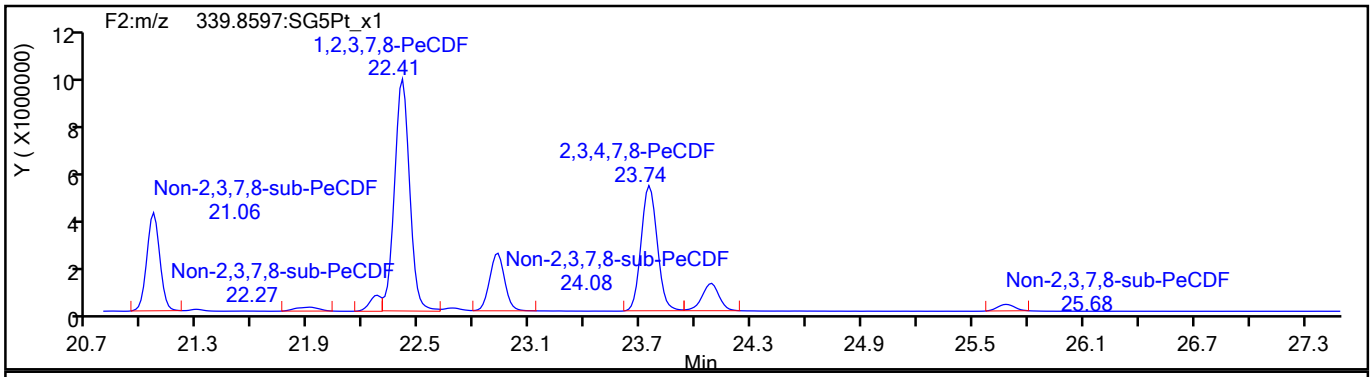

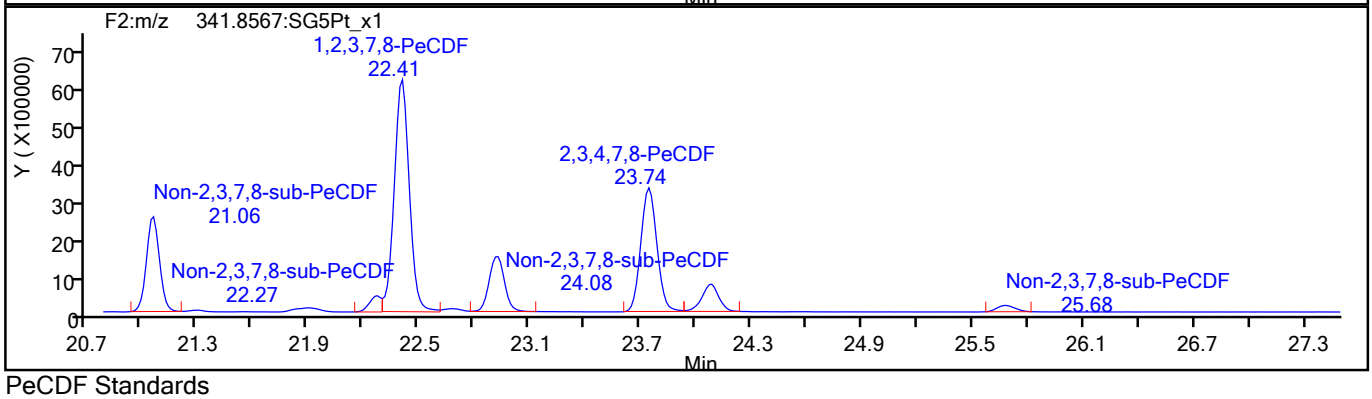

PeCDF Standards

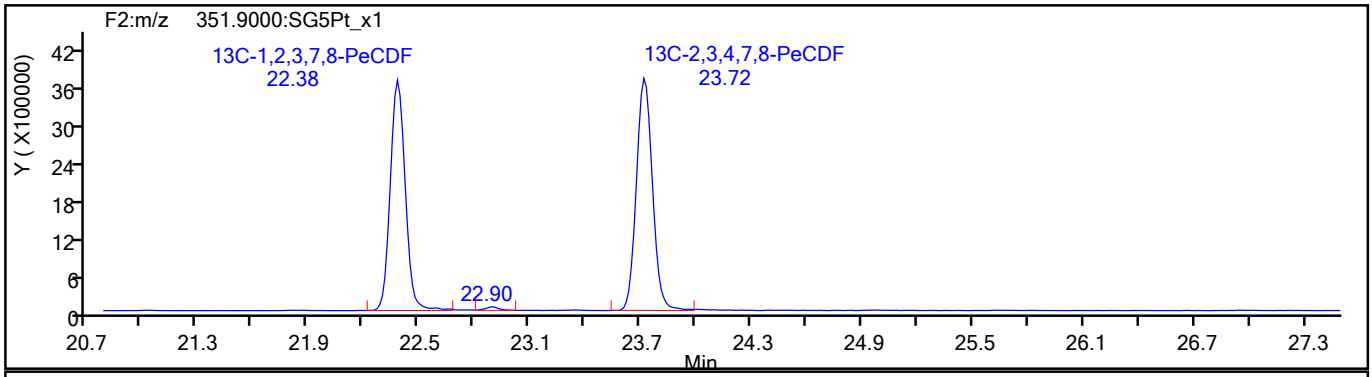

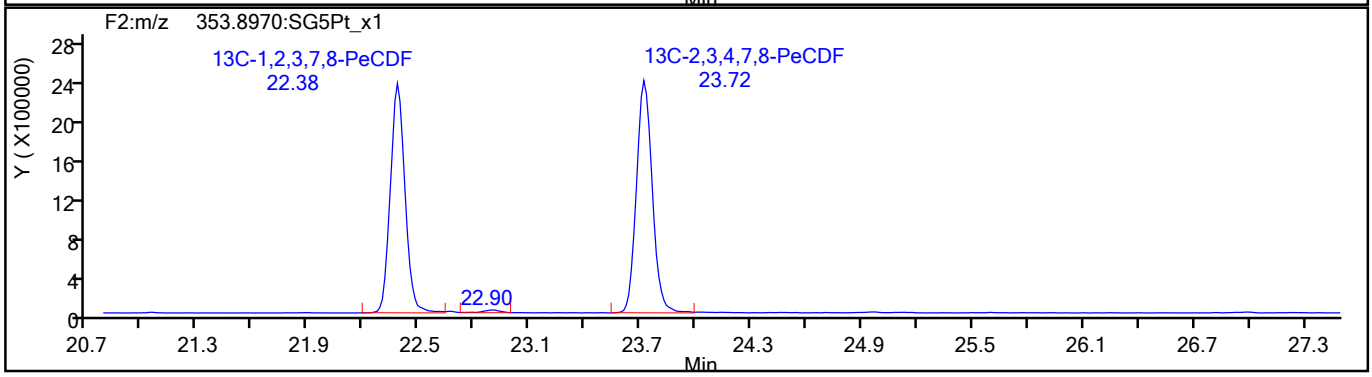

774993

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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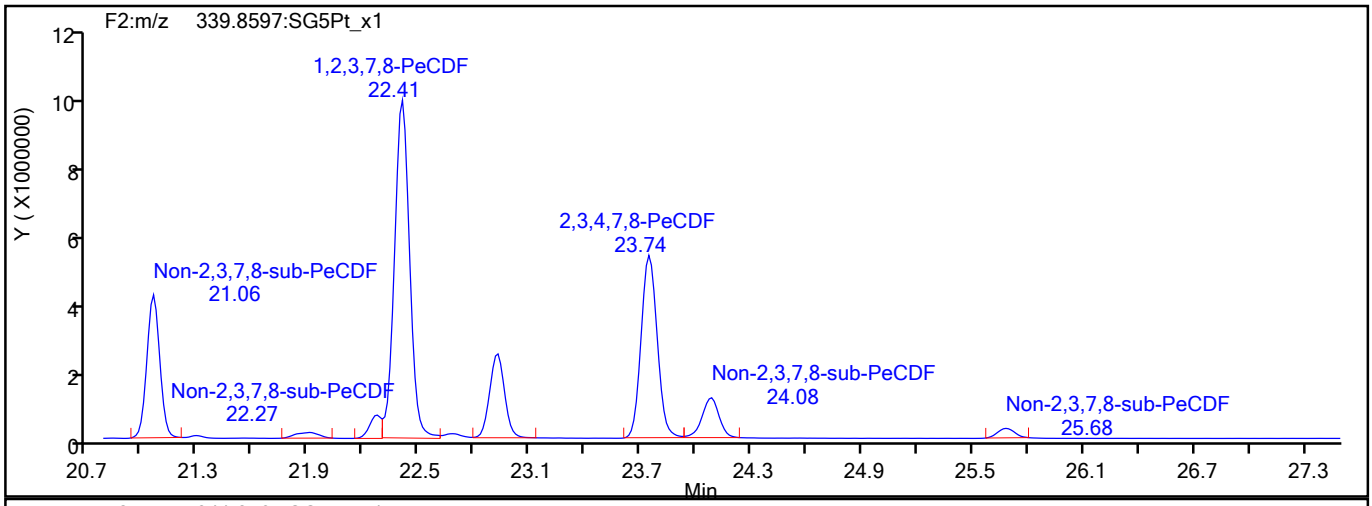

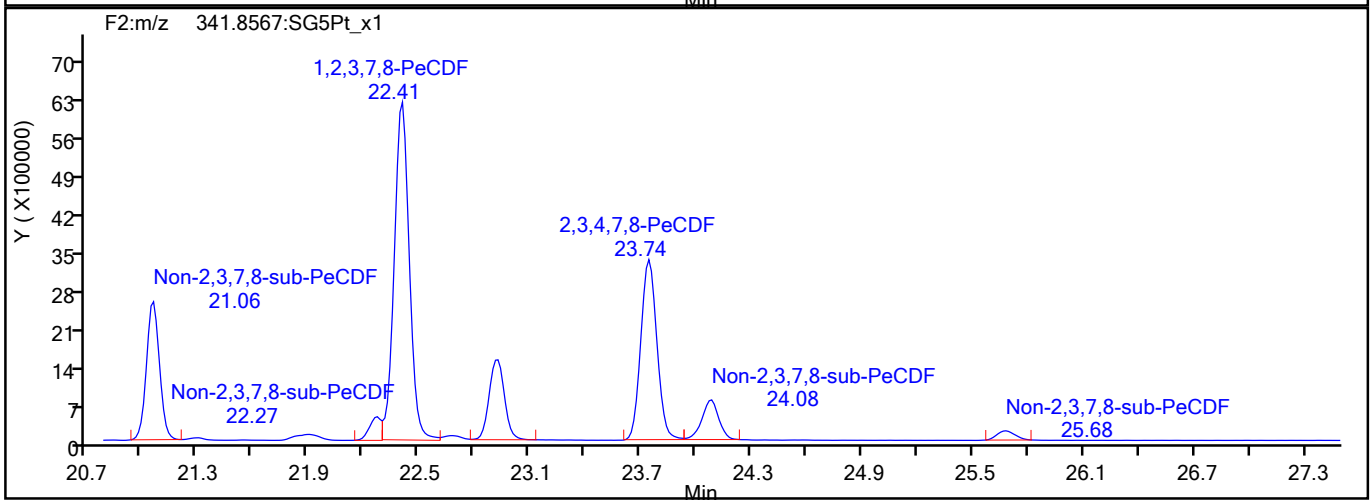

PeCDF Interference Mass

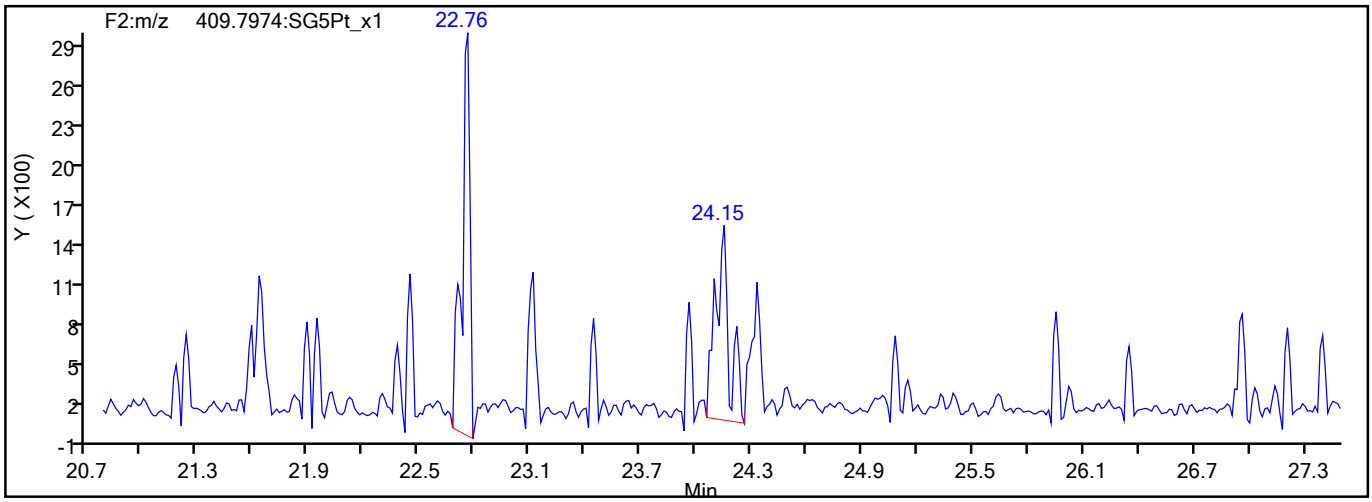

774994

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:	11215702-072221-SS-SJSB074 (0-2)		
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PeCDD

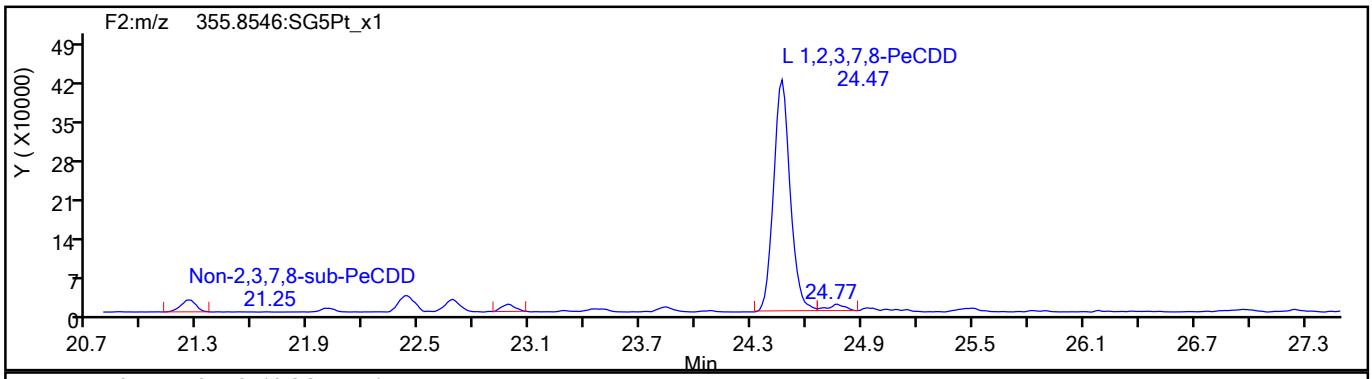

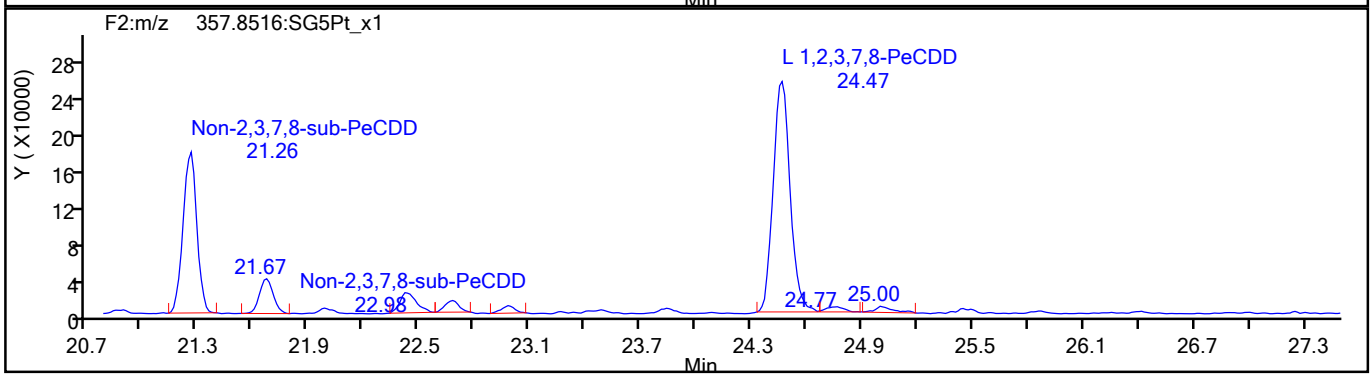

PeCDD Standards

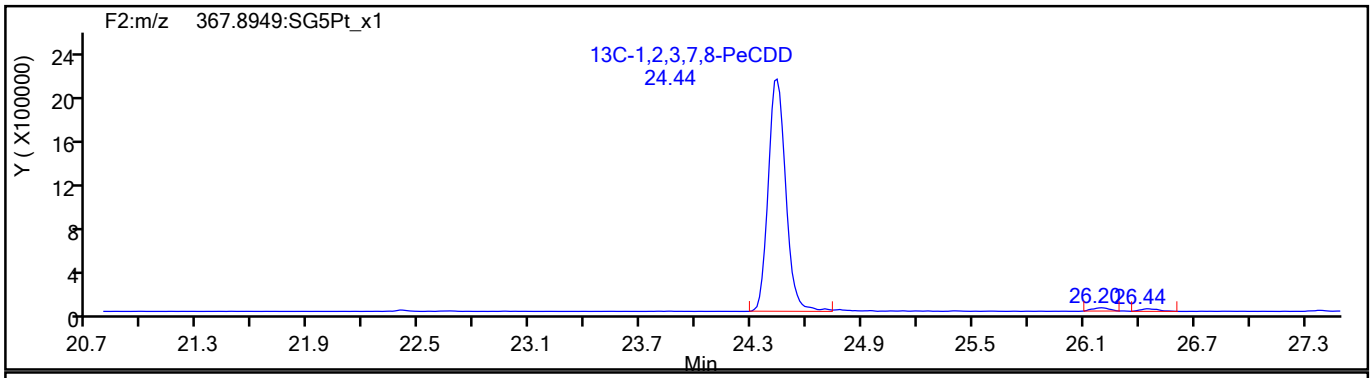

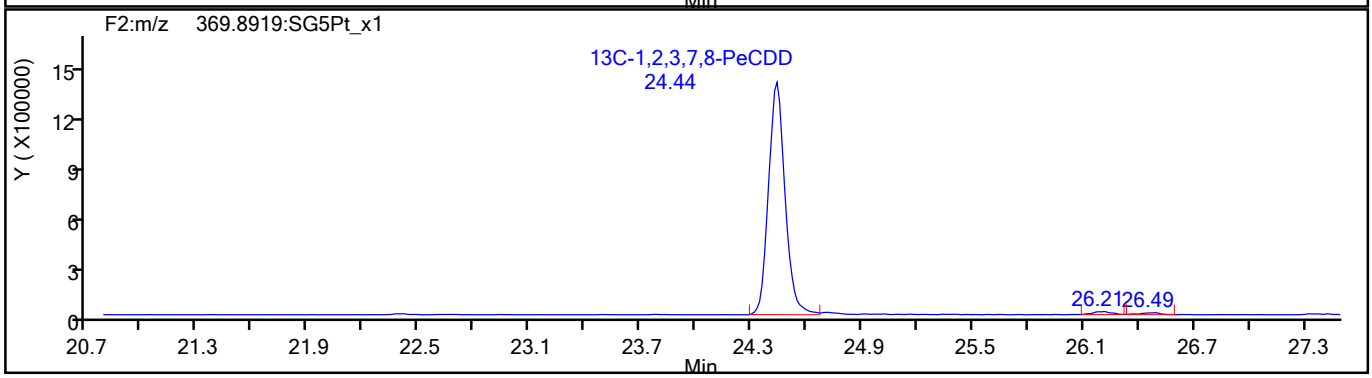

774995

Report Date: 18-Aug-2021 10:22:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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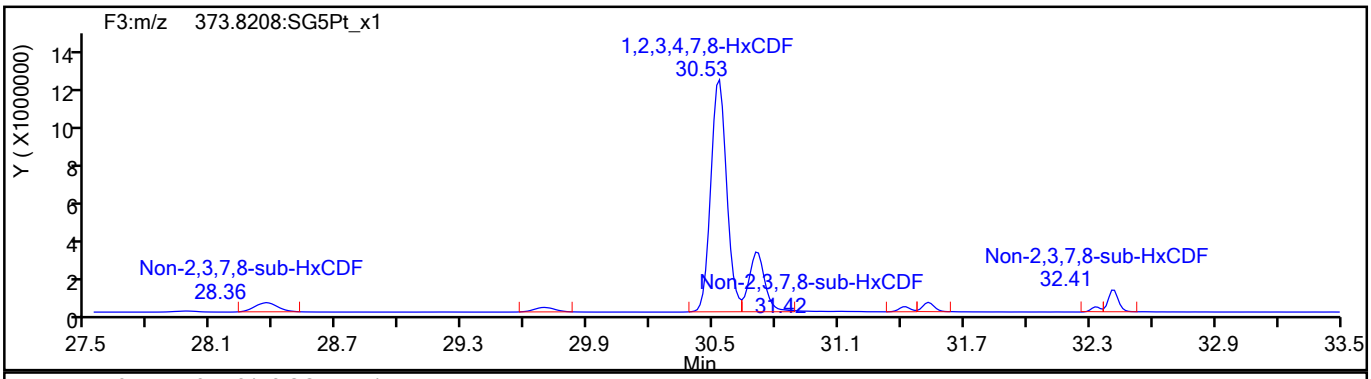

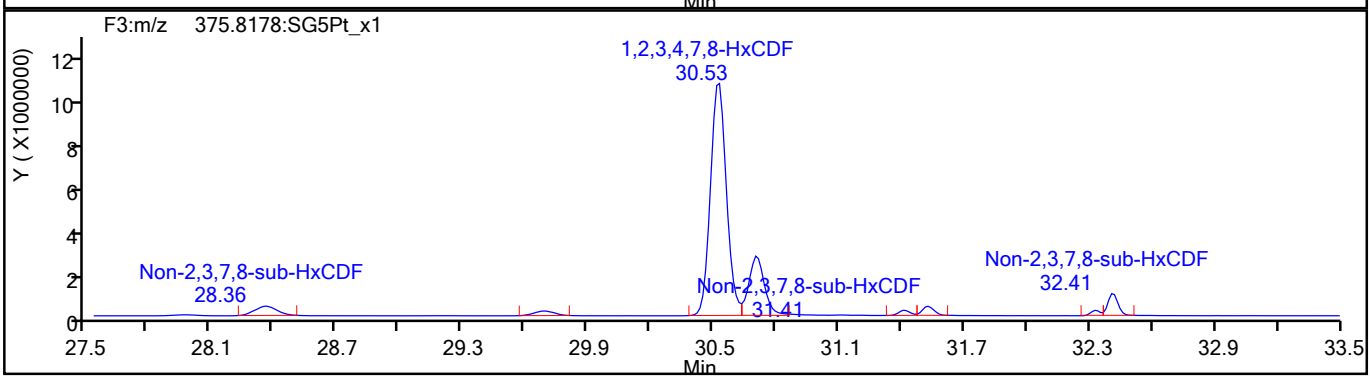

HxCDF Standards

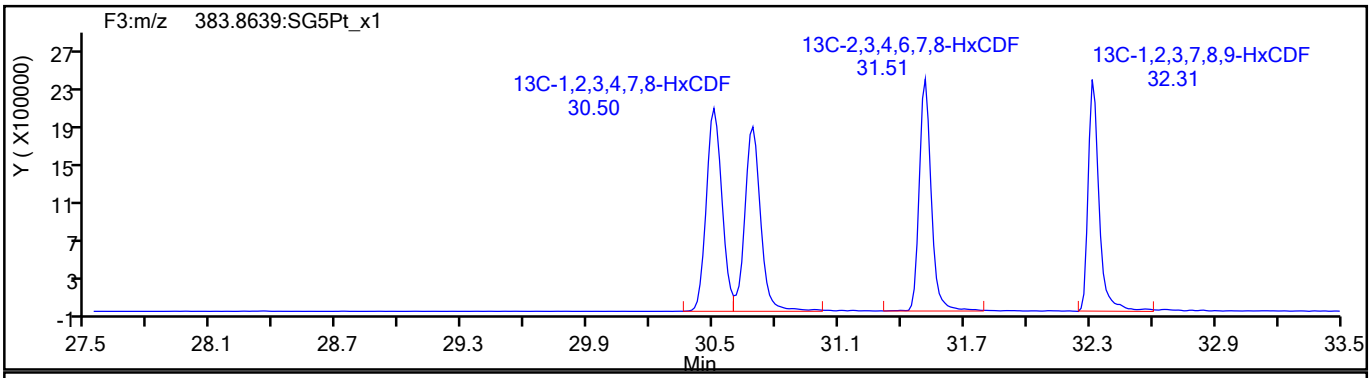

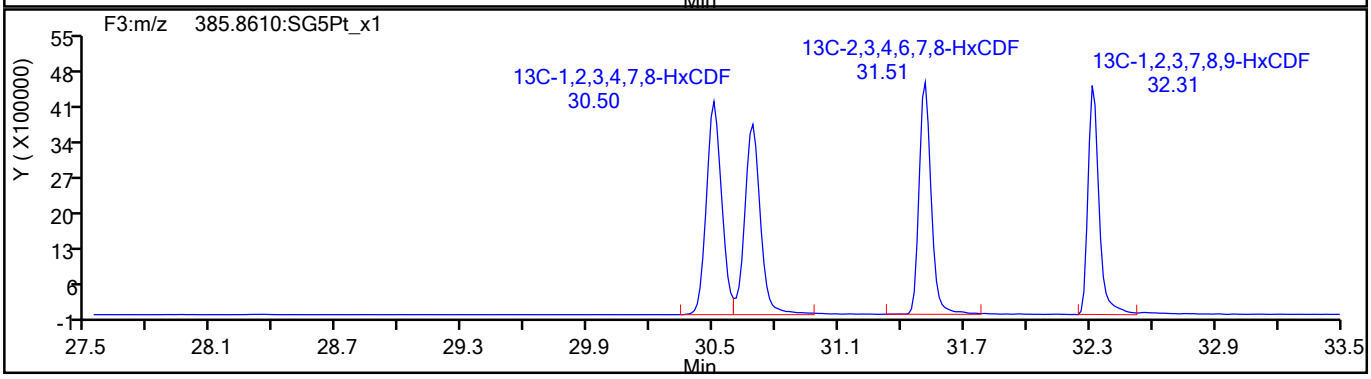

774996

Report Date: 18-Aug-2021 10:22:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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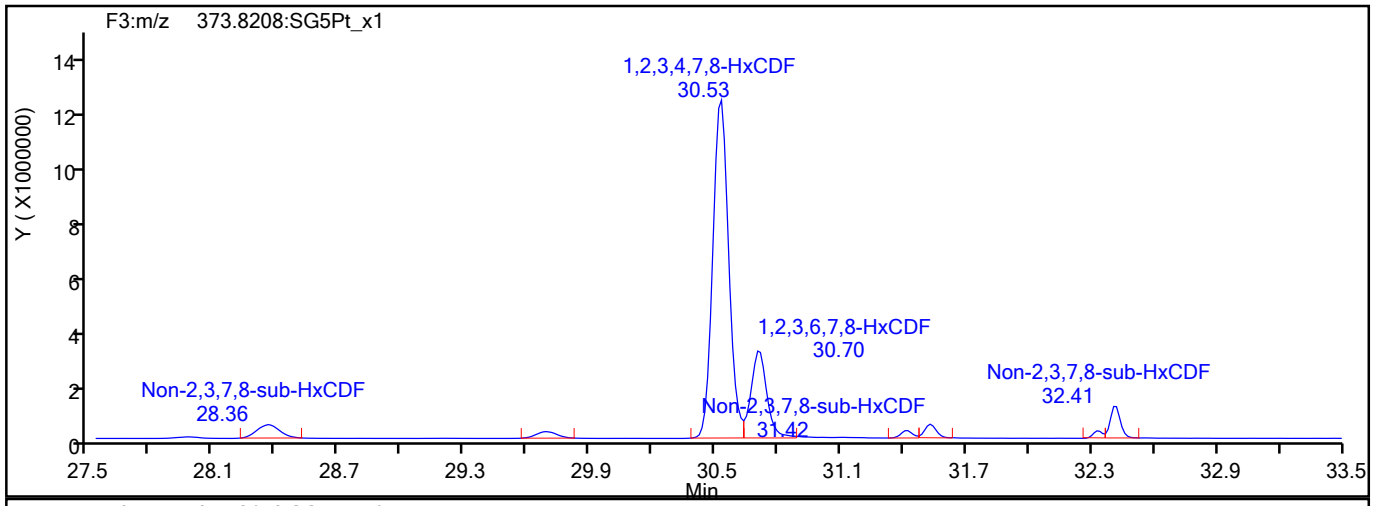

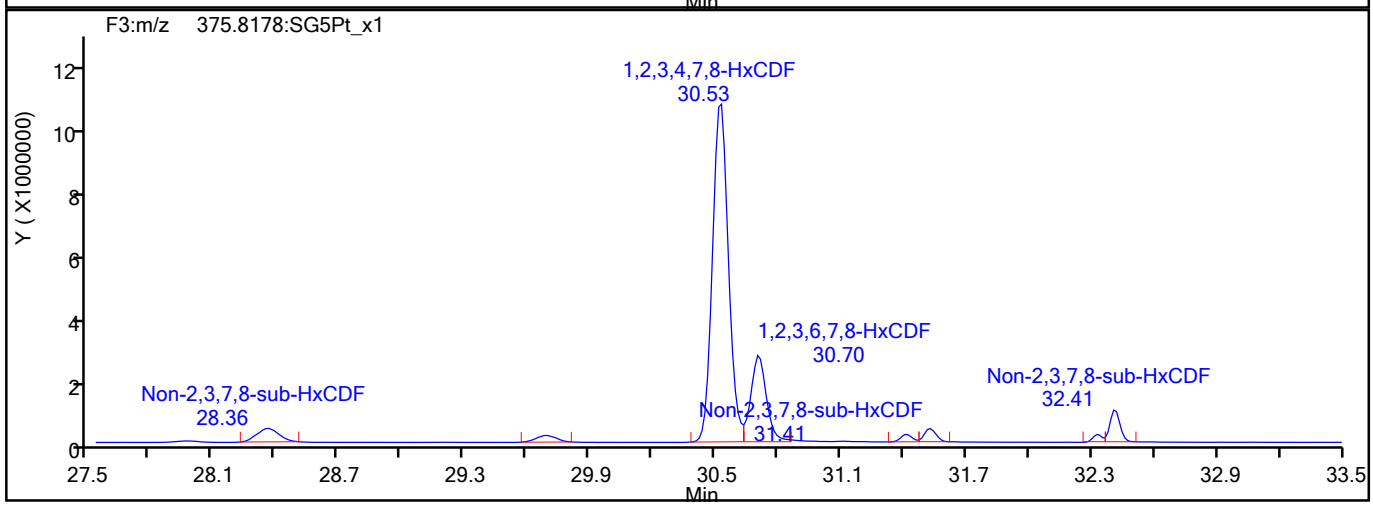

HxCDF Interference Mass

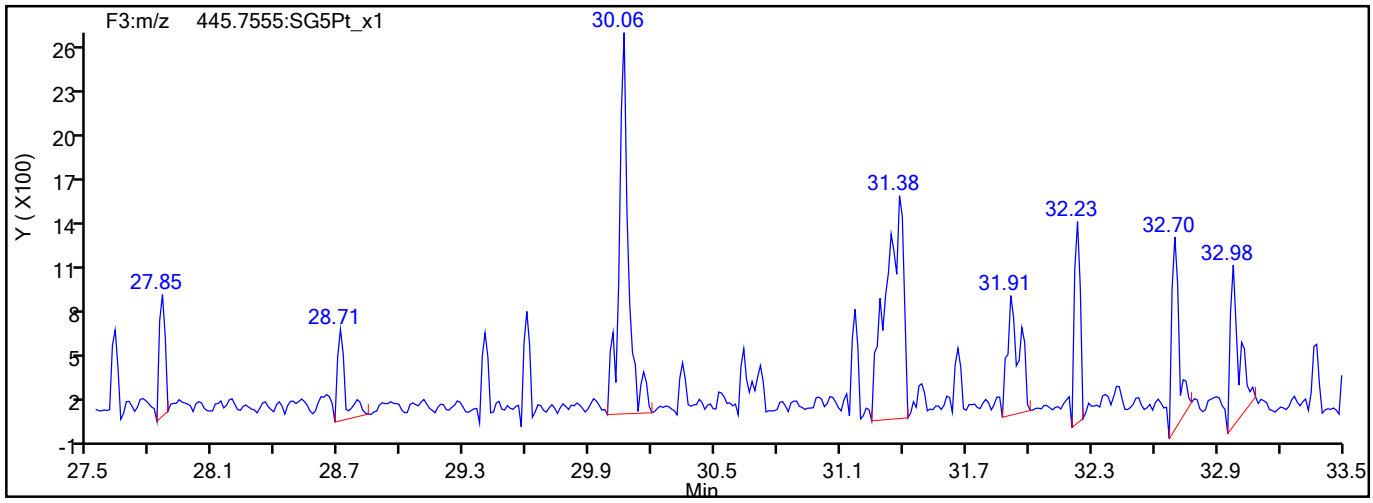

774997

Report Date: 18-Aug-2021 10:22:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

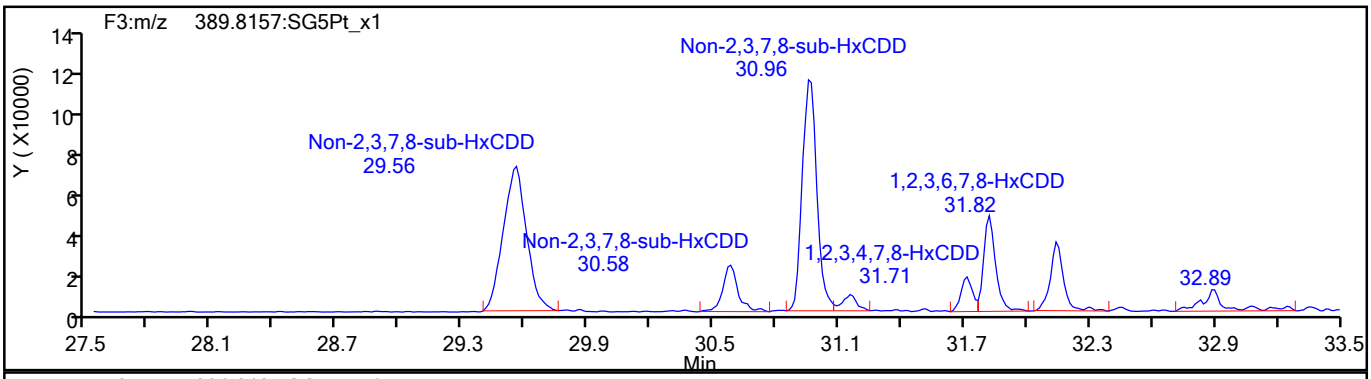

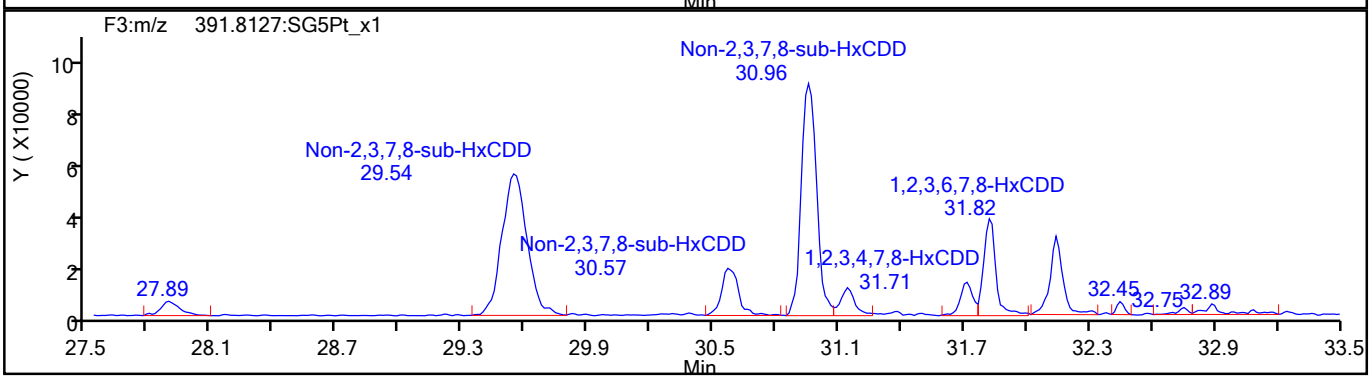

HxCDD Standards

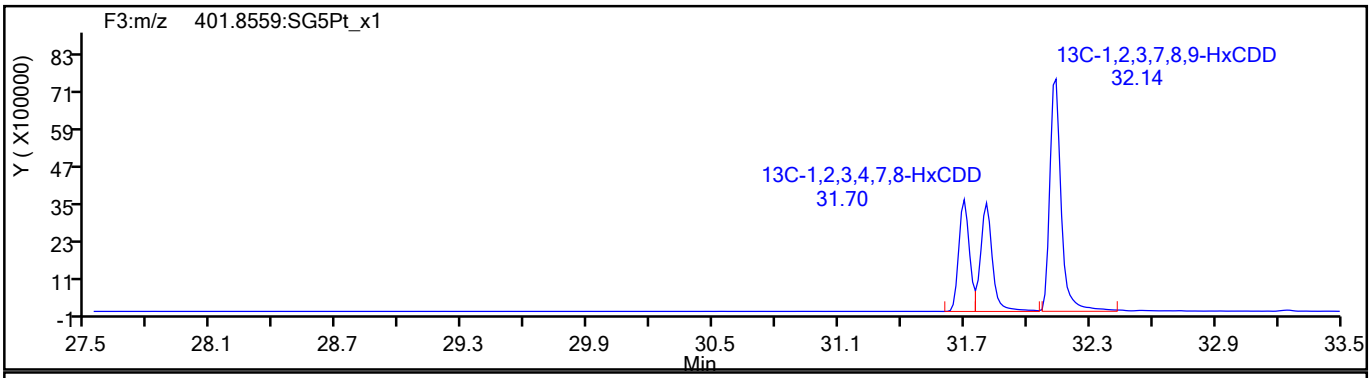

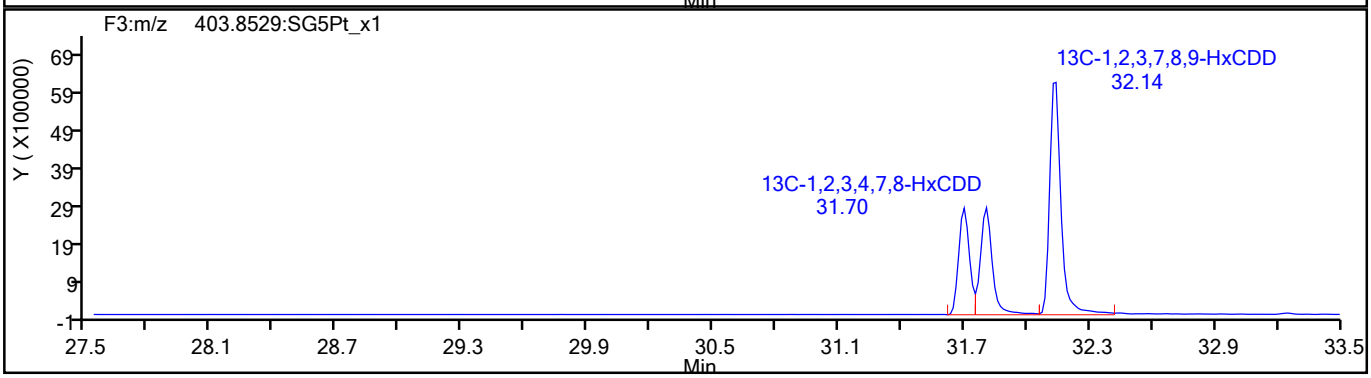

774998

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Eurofins TestAmerica, Sacramento

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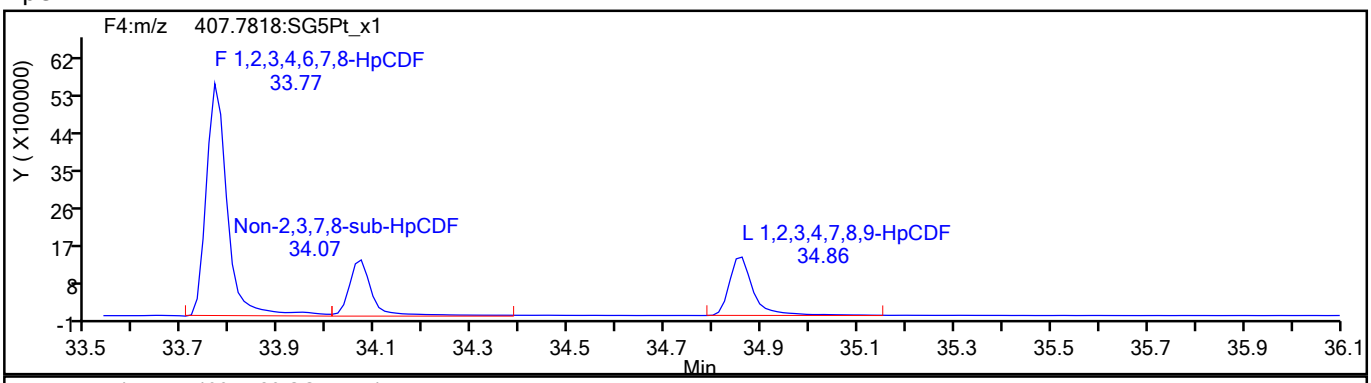

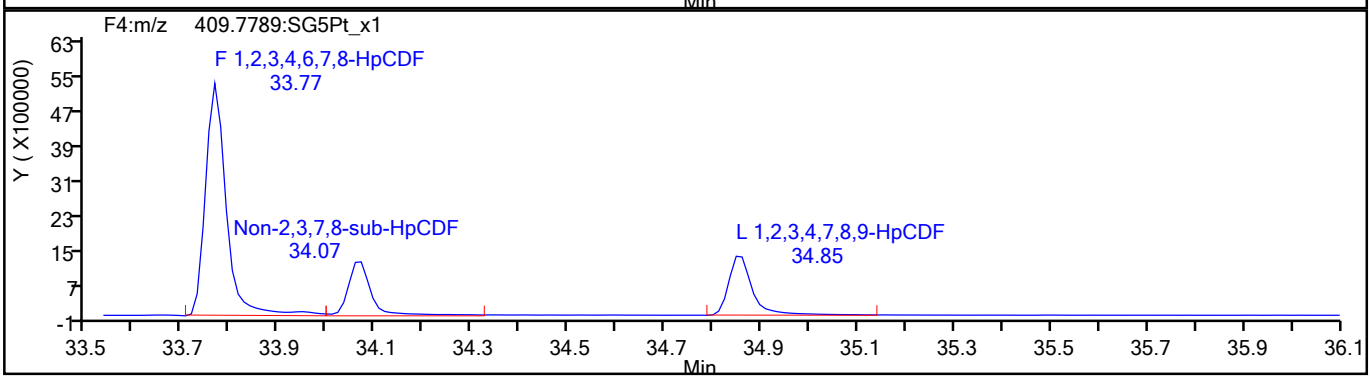

HpCDF Standards

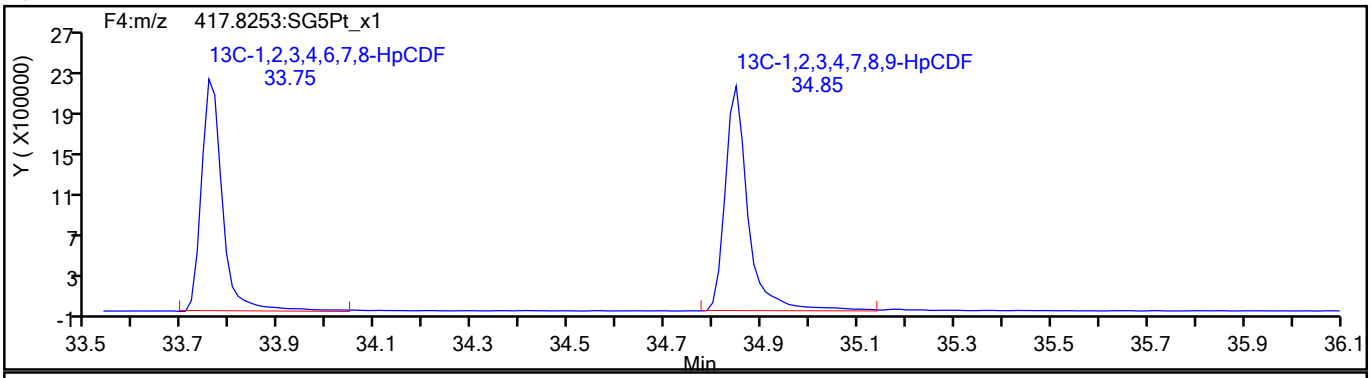

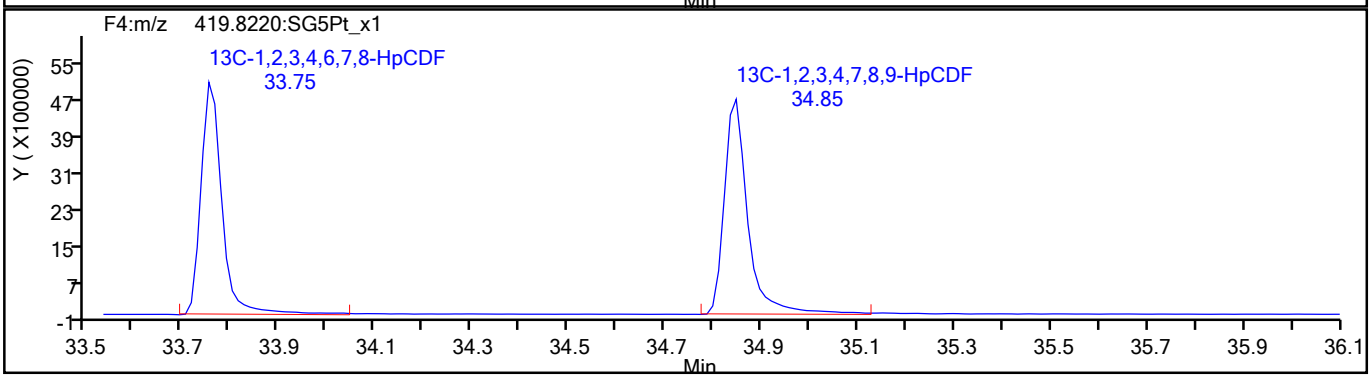

774999

Report Date: 18-Aug-2021 10:22:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
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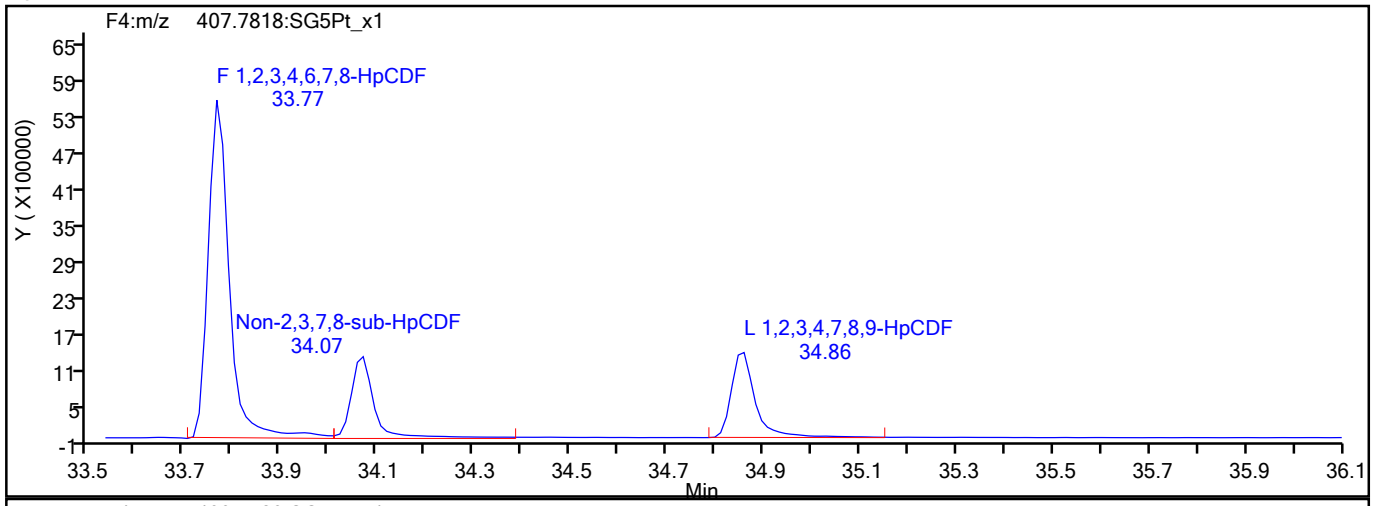

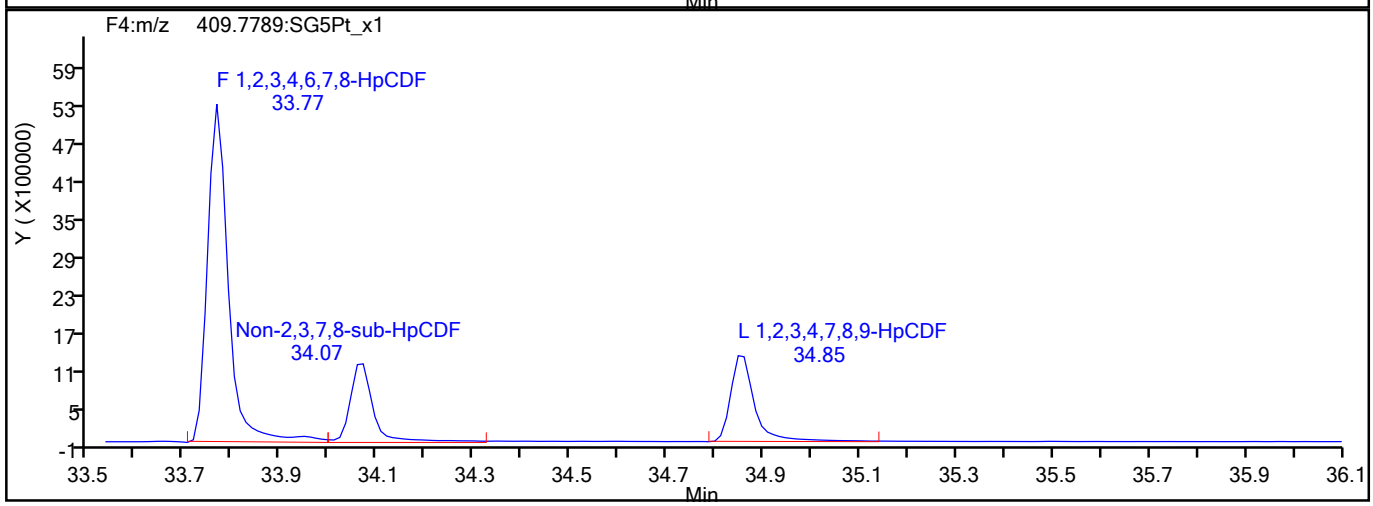

HpCDF Interference Mass

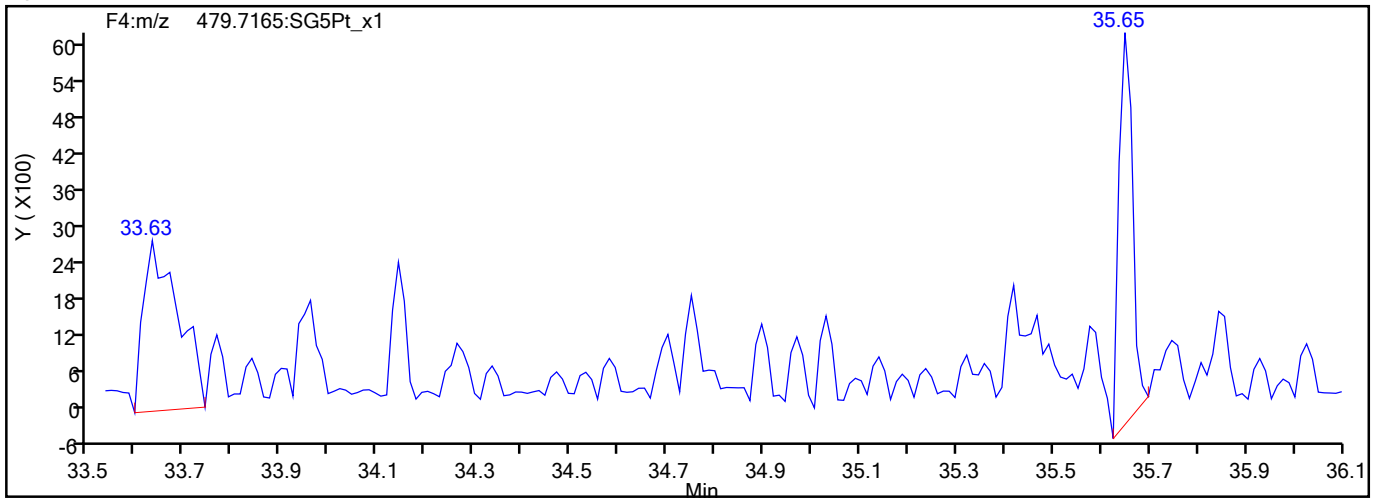

775000

Report Date: 18-Aug-2021 10:22:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

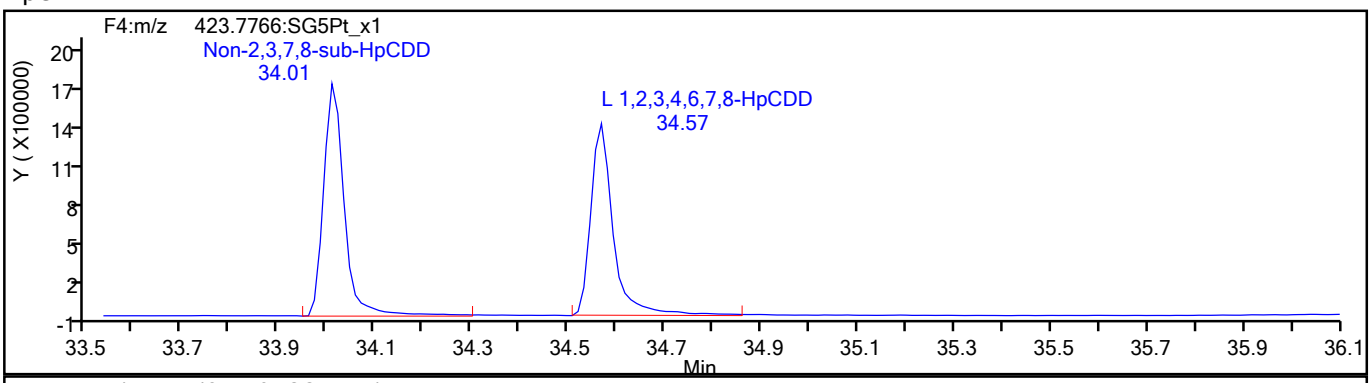

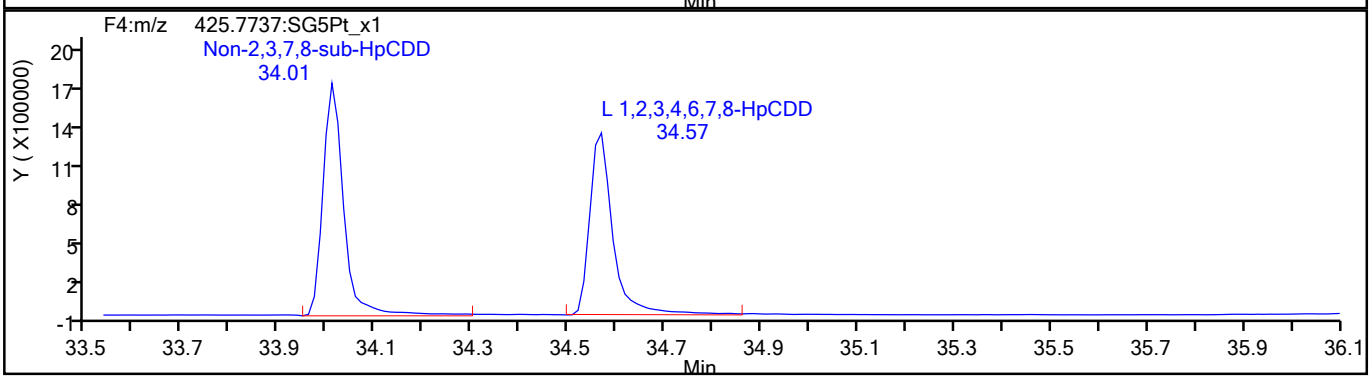

HpCDD Standards

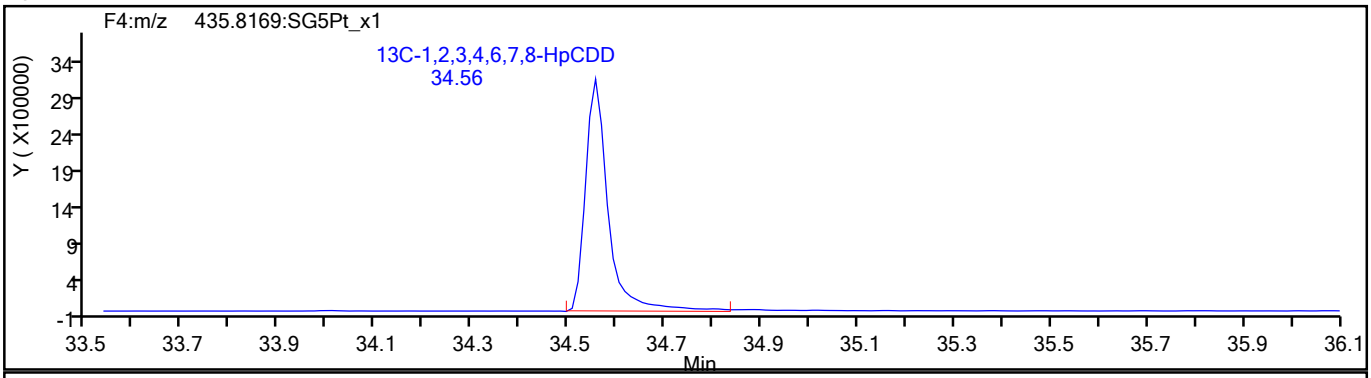

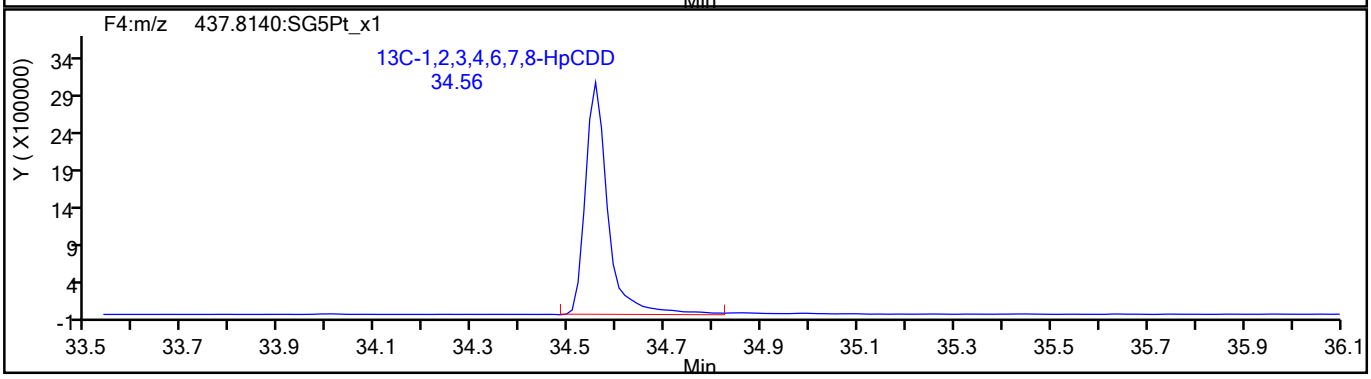

775001

Report Date: 18-Aug-2021 10:22:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
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OCDF

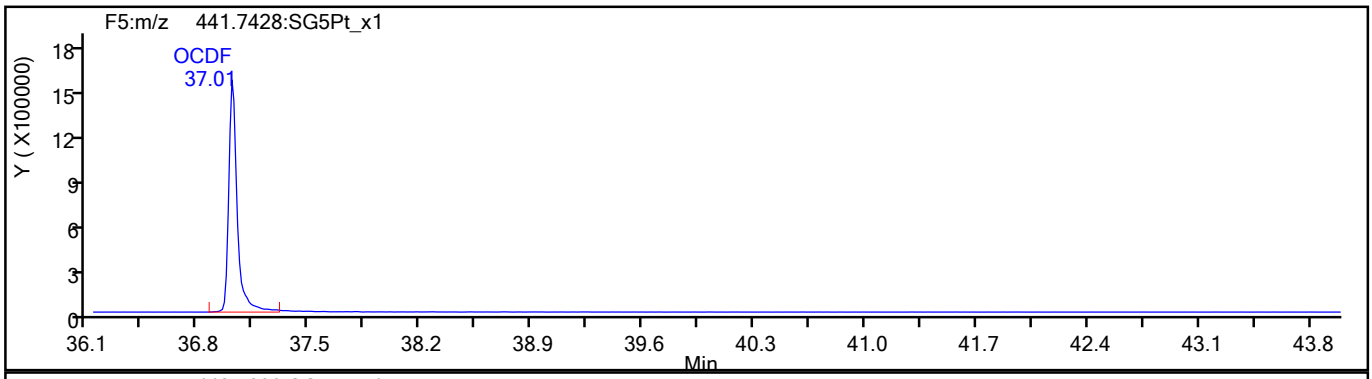

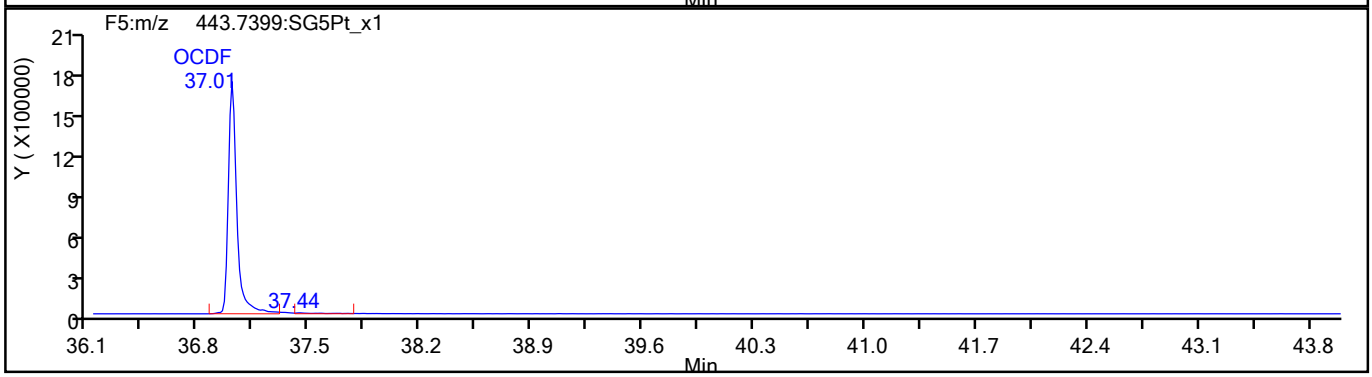

OCDF Standards

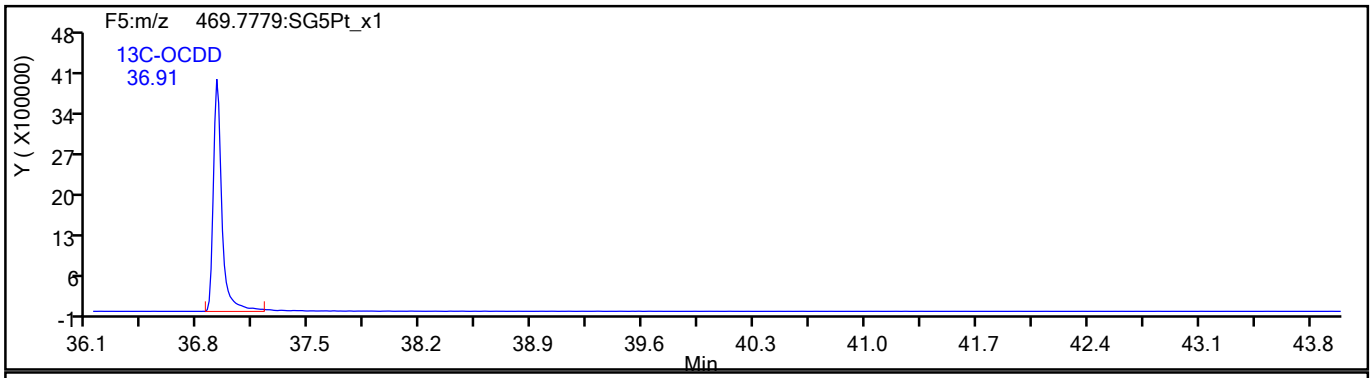

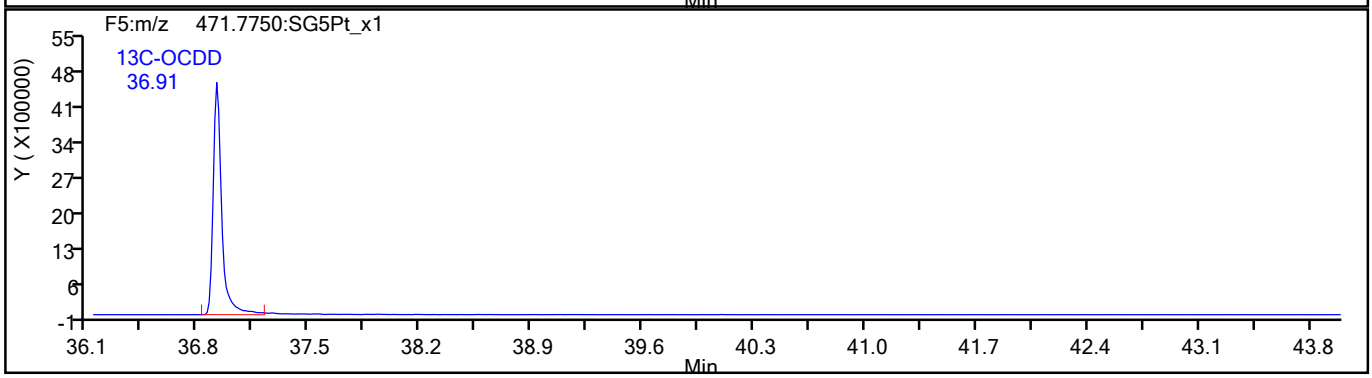

775002

Report Date: 18-Aug-2021 10:22:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Injection Date:	15-Aug-2021 13:42:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	516848	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

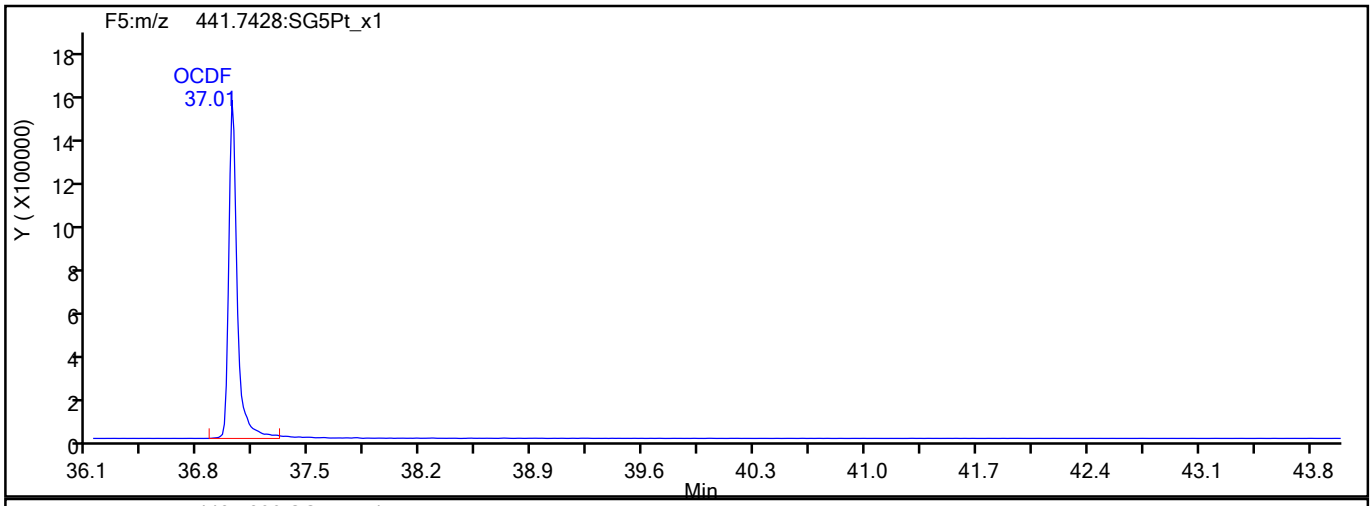

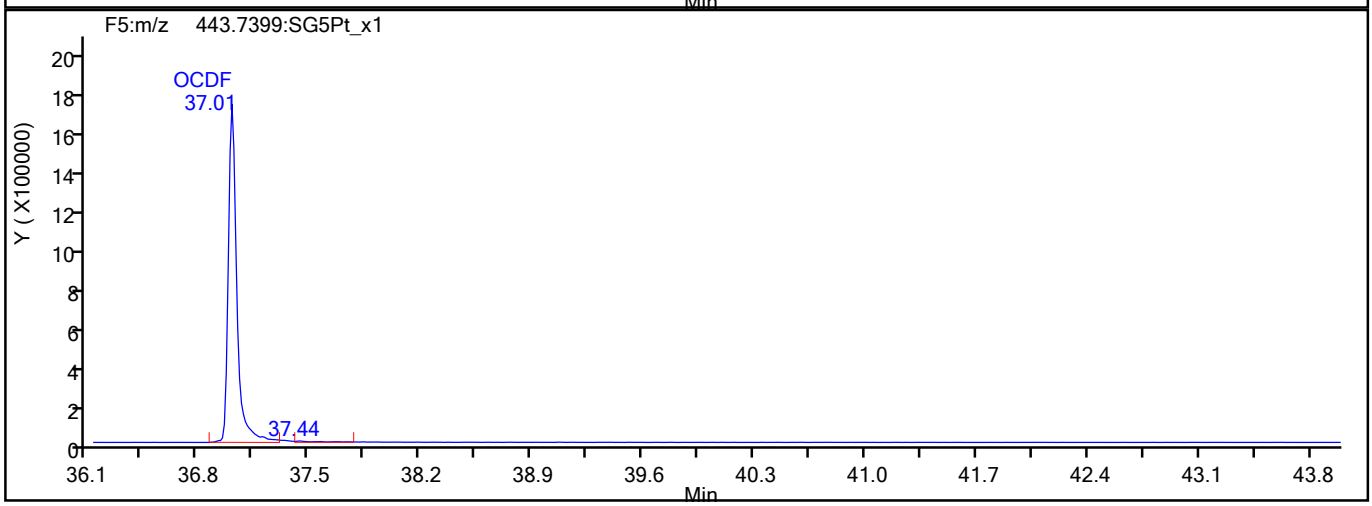

OCDF Interference Mass

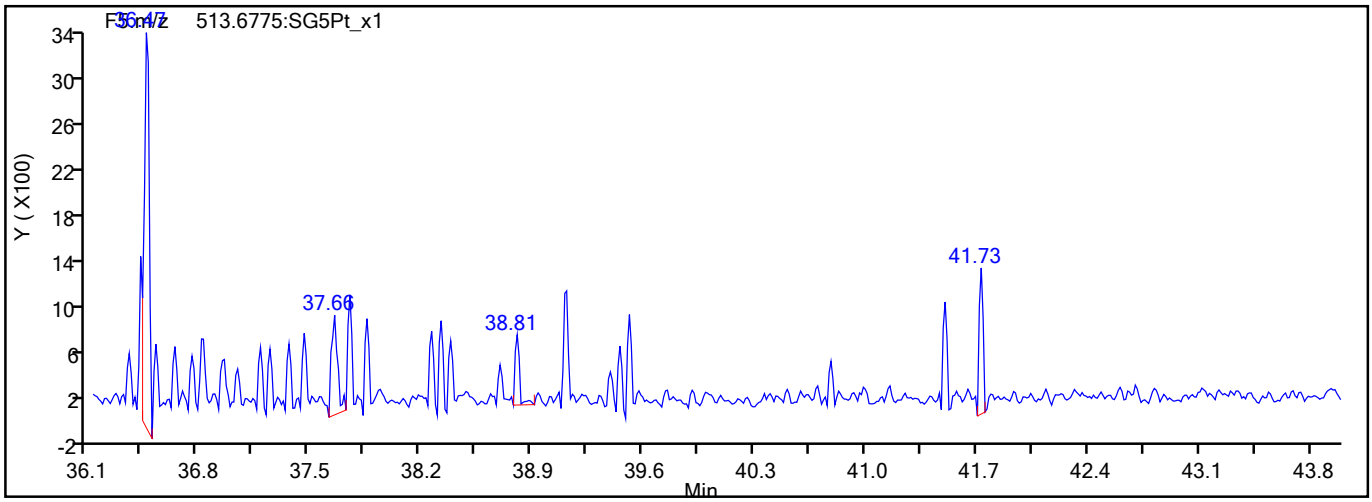

775003

Report Date: 18-Aug-2021 10:22:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Injection Date:	15-Aug-2021 13:42:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	516848	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

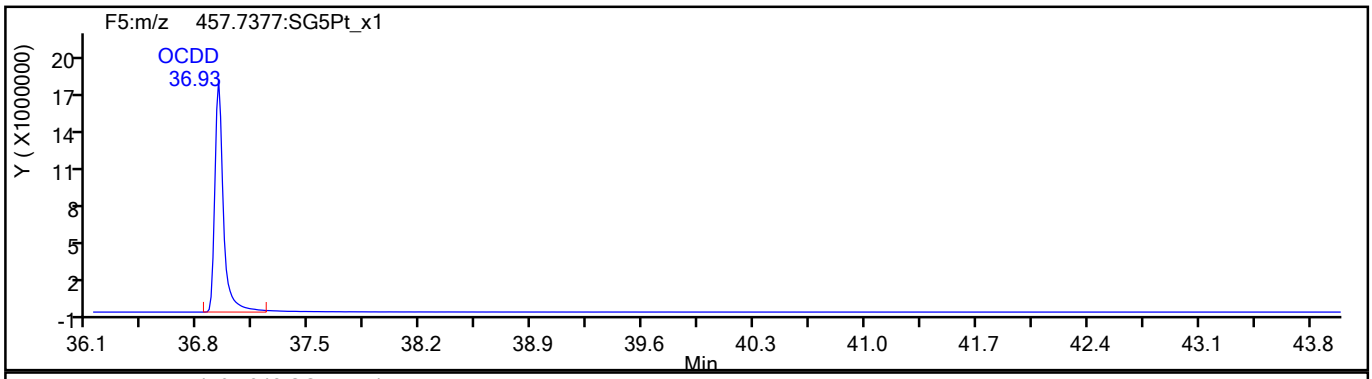

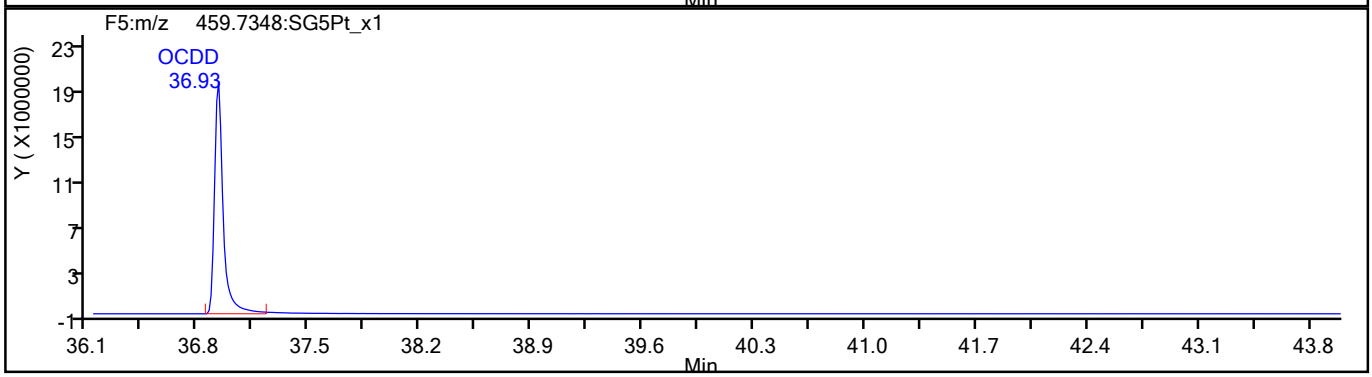

OCDD Standards

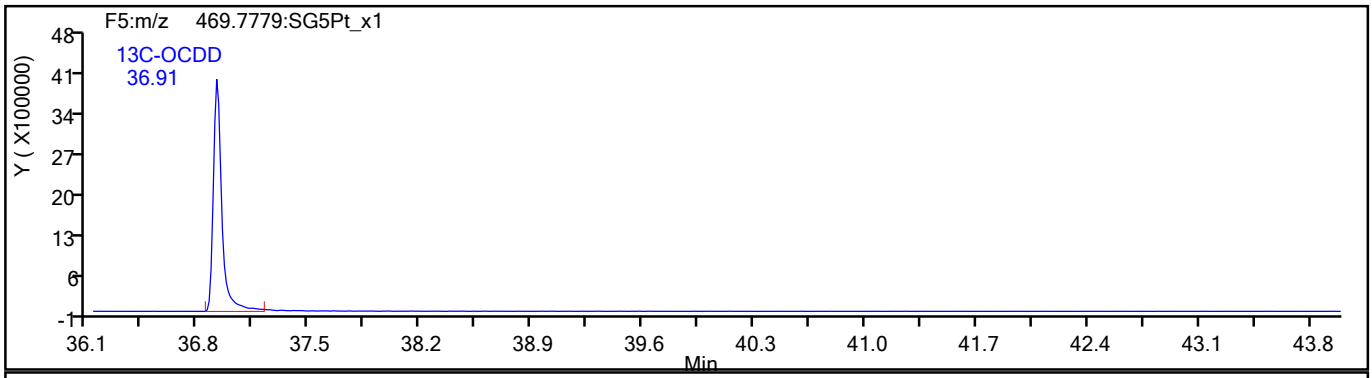

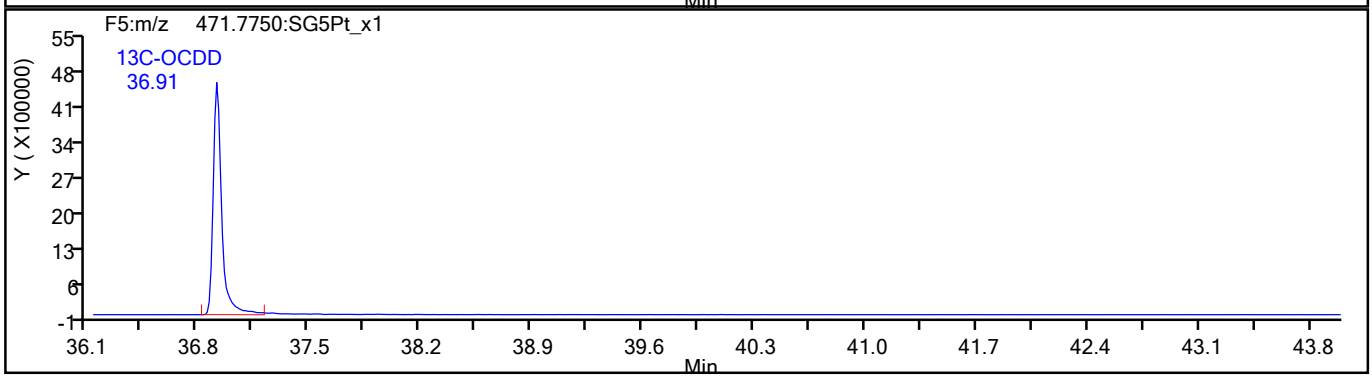

775004

Report Date: 18-Aug-2021 10:22:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Injection Date:	15-Aug-2021 13:42:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	516848	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

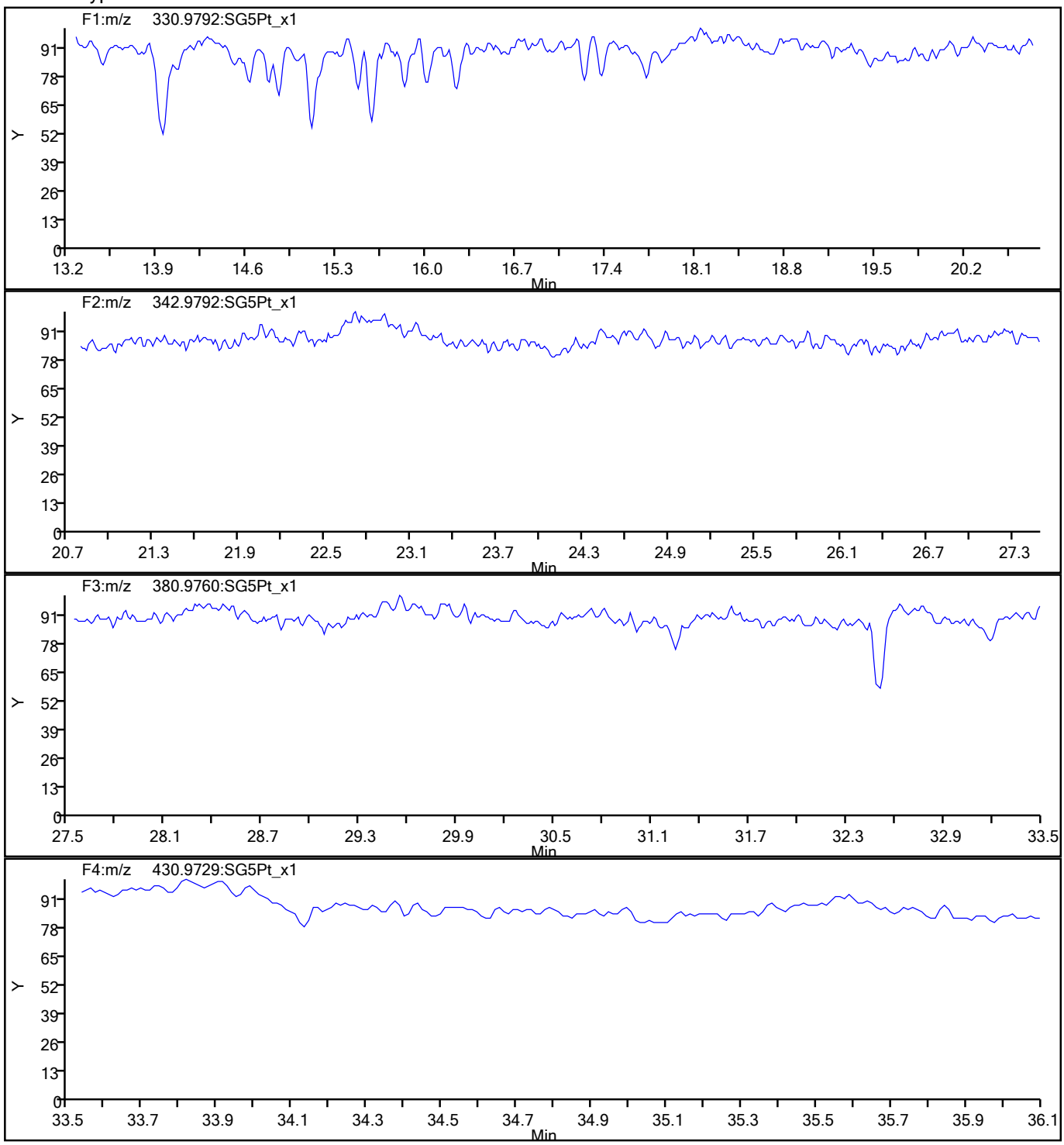

775005

Report Date: 18-Aug-2021 10:22:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_59.d		
Injection Date:	15-Aug-2021 13:42:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	516848	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

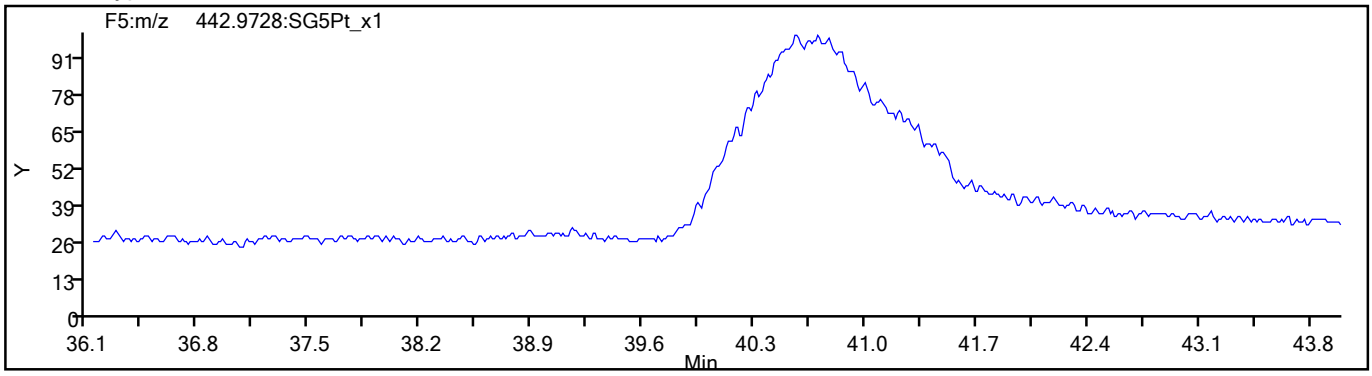

775006

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (0-2) RA
Lab Sample ID: 320-76769-13 RA
Matrix: Sediment
Lab File ID: 21AU2111D2_014.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.08(g)
Date Analyzed: 08/21/2021 22:13
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 25.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518850
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	19000	G E B	14	14

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	64		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	94		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_014.d
Lims ID: 320-76769-A-13-A
Client ID: 11215702-072221-SS-SJSB074 (0-2)
Sample Type: Client
Inject. Date: 21-Aug-2021 22:13:16 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-13-A RI
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:05:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.328	35967021	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.645	30446589	0.76	1.3327	63.5	63.5	0.6661	0.6661	63.52	M
2,3,7,8-TCDF	17.673	2143478218	0.79	0.9978	7055.6	7055.6	5.330	5.330		E
D 13C-2,3,7,8-TCDD	16.095	18624742	0.80	0.8749	59.2	59.2	17.0	17.0	59.19	
2,3,7,8-TCDD	16.109	454567687	0.78	1.0570	2309.1	2309.1	5.733	5.733		E
$ 37Cl4-2,3,7,8-TCDD	16.109	11701323		0.8648	37.6	37.6	0.2292	0.2292	94.05	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_014.d
Lims ID: 320-76769-A-13-A
Client ID: 11215702-072221-SS-SJSB074 (0-2)
Sample Type: Client
Inject. Date: 21-Aug-2021 22:13:16 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-13-A RI
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:05:31

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.328	16.309	1		15590029	3442717	229967	574917	15		
333.9339	16.328	16.309	1		20376992	4600743	248323	620807	19	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											M
315.9419	17.645	17.640	0	1.081	13098962	2488585	12243	30607	203		
317.9389	17.645	17.640	0	1.081	17347627	3161504	16320	40800	194	0.76(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.673	17.653	1	1.002	947956032	174719666	53957	134892	3238		
305.8987	17.673	17.653	1	1.002	1195522186	219680922	66242	165605	3316	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.095	16.076	1	0.986	8255045	1912919	229967	574917	8		
333.9339	16.095	16.076	1	0.986	10369697	2414455	248323	620807	10	0.80(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	16.109	16.103	0	1.001	199822559	44067366	59078	147695	746		
321.8936	16.109	16.103	0	1.001	254745128	56887133	45811	114527	1242	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.109	16.103	0	0.987	11701323	2652082	6376	15940	416		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_014.d				
Injection Date:	21-Aug-2021 22:13:16	Instrument ID:	11D2		
Lims ID:	320-76769-A-13-A	Lab Sample ID:	320-76769-13		
Client ID:	11215702-072221-SS-SJSB074 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.65
Area: 18113660
Amount: 65.117534
Amount Units: pg/ul

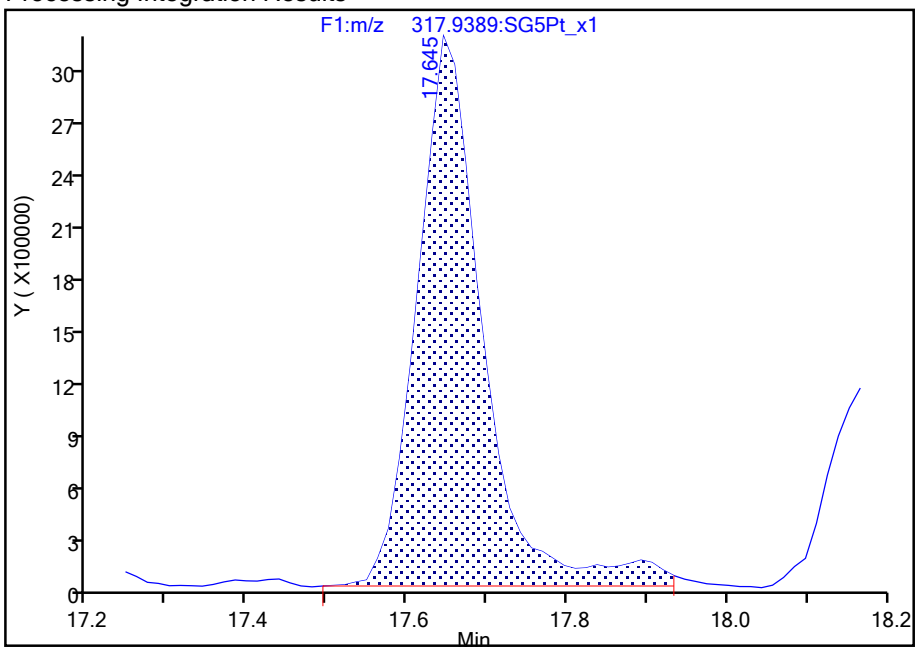

Manual Integration Results

RT: 17.65
Area: 17347627
Amount: 63.519393
Amount Units: pg/ul

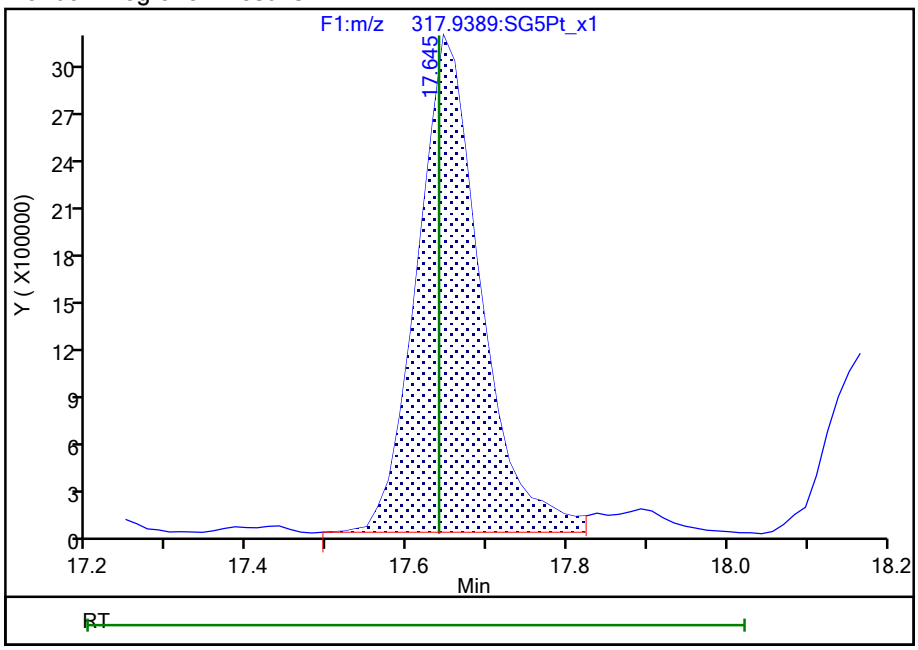

Reviewer: bennettd, 23-Aug-2021 10:05:15

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 23-Aug-2021 10:28:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_014.d		
Injection Date:	21-Aug-2021 22:13:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	518850	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

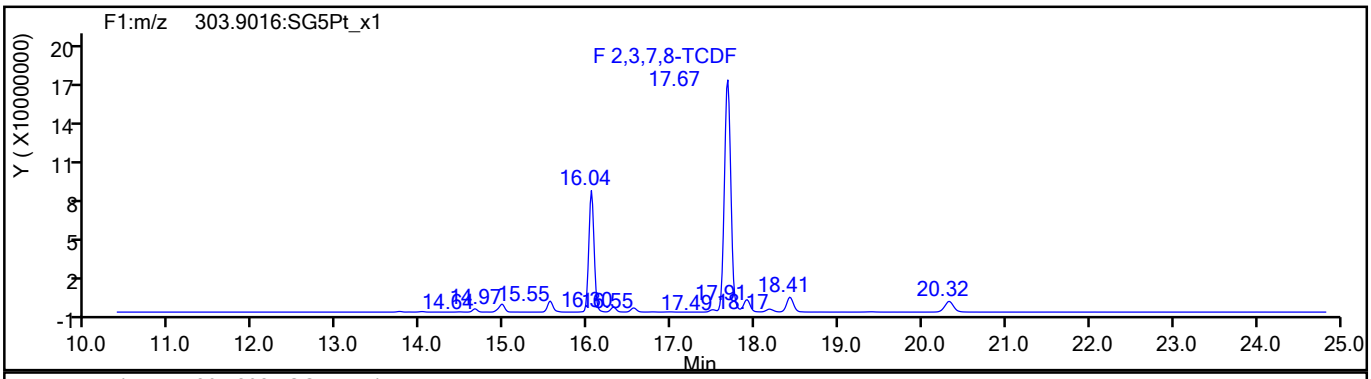

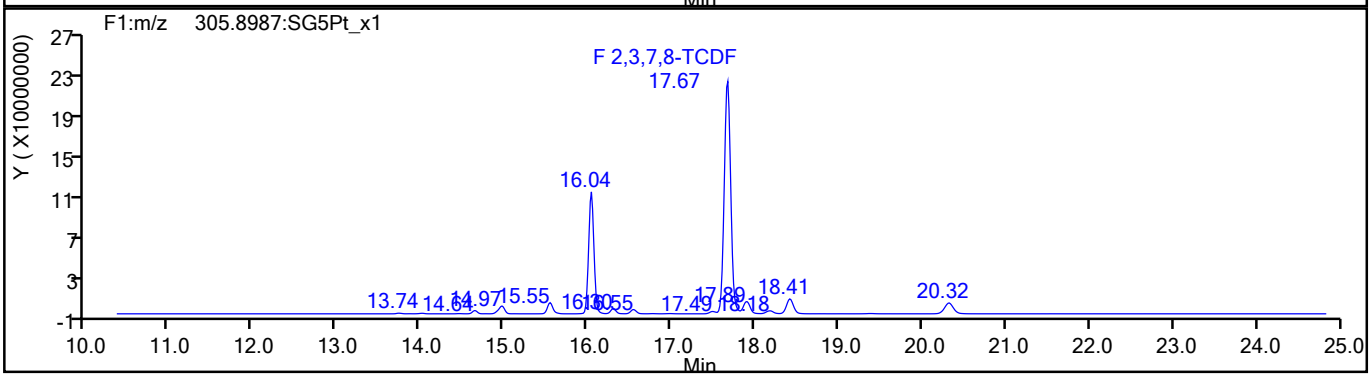

TCDF Standards

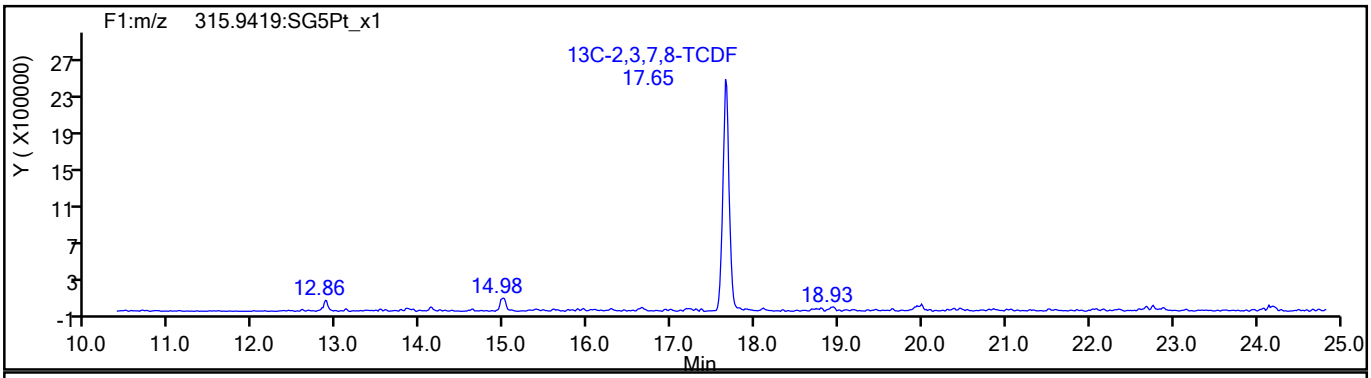

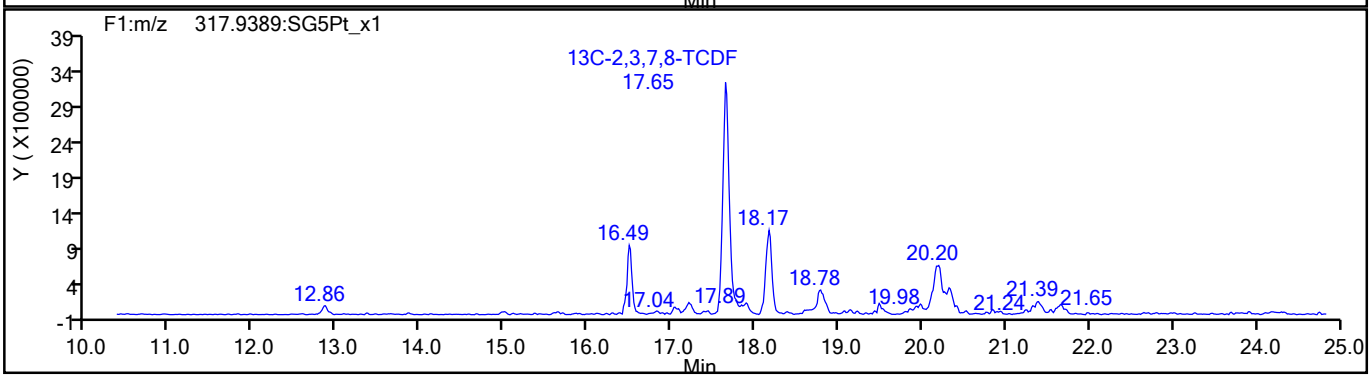

775011

Report Date: 23-Aug-2021 10:28:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_014.d		
Injection Date:	21-Aug-2021 22:13:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	518850	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

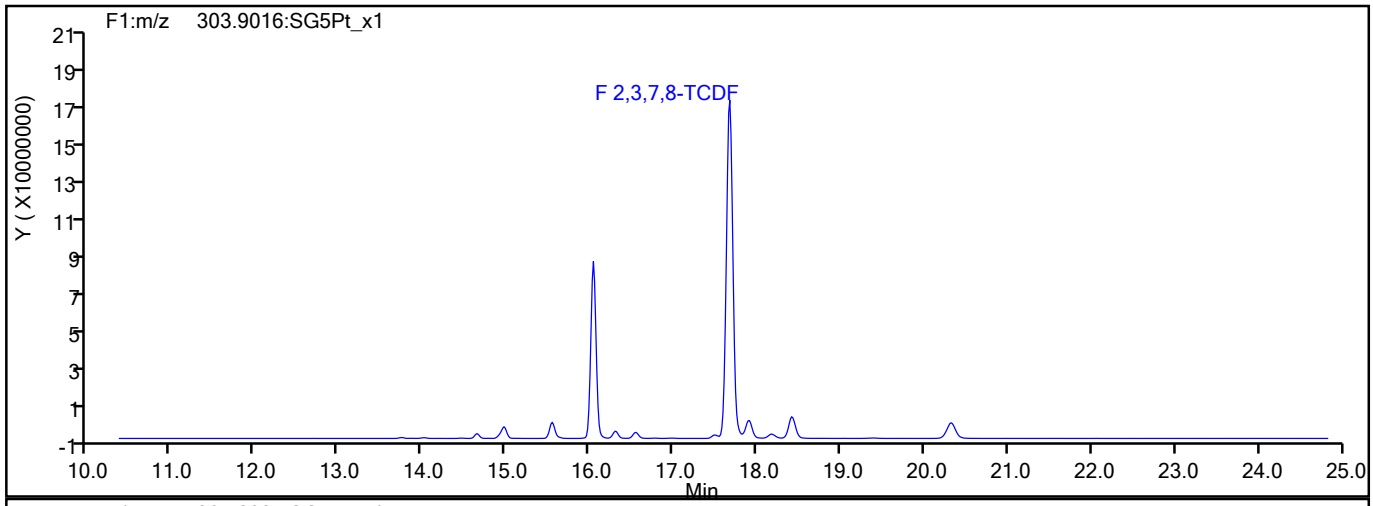

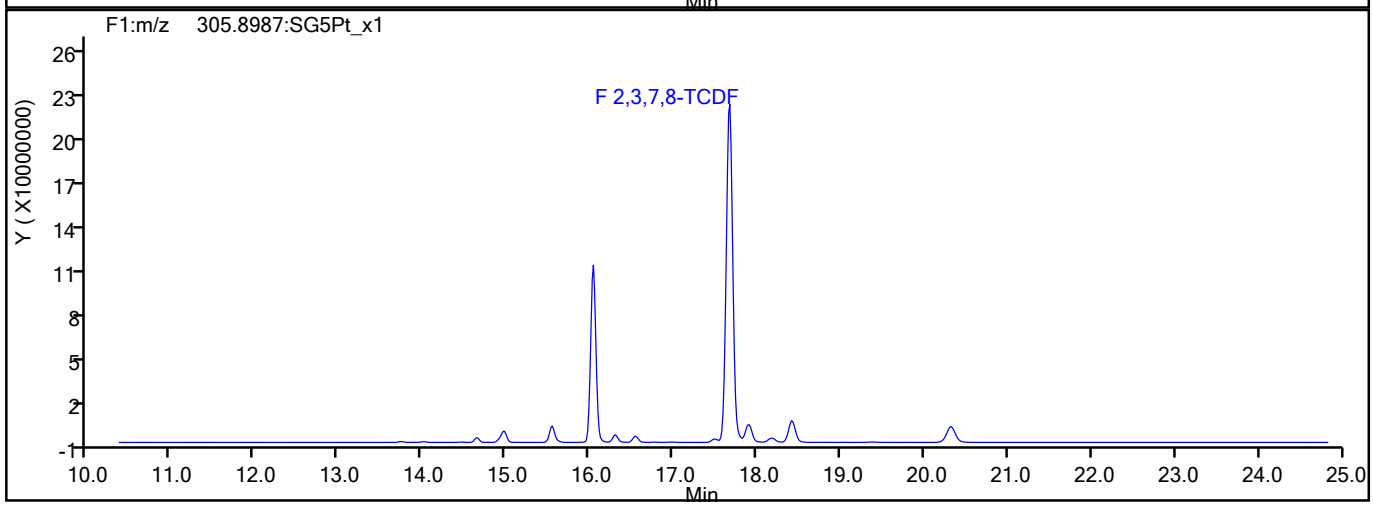

TCDF Interference Mass

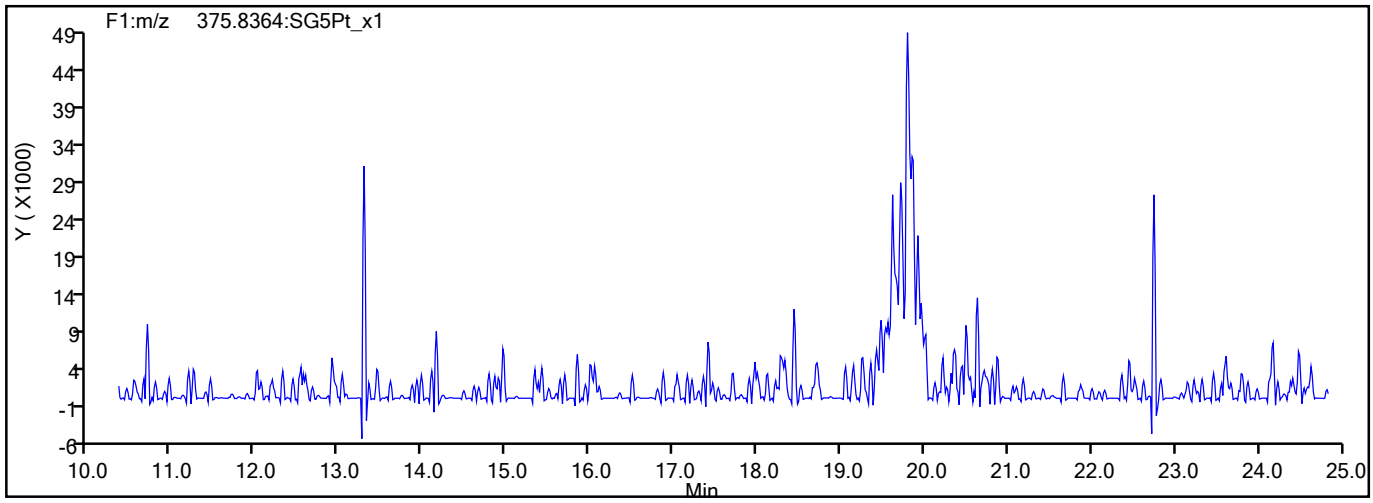

775012

Report Date: 23-Aug-2021 10:28:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_014.d		
Injection Date:	21-Aug-2021 22:13:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	518850	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

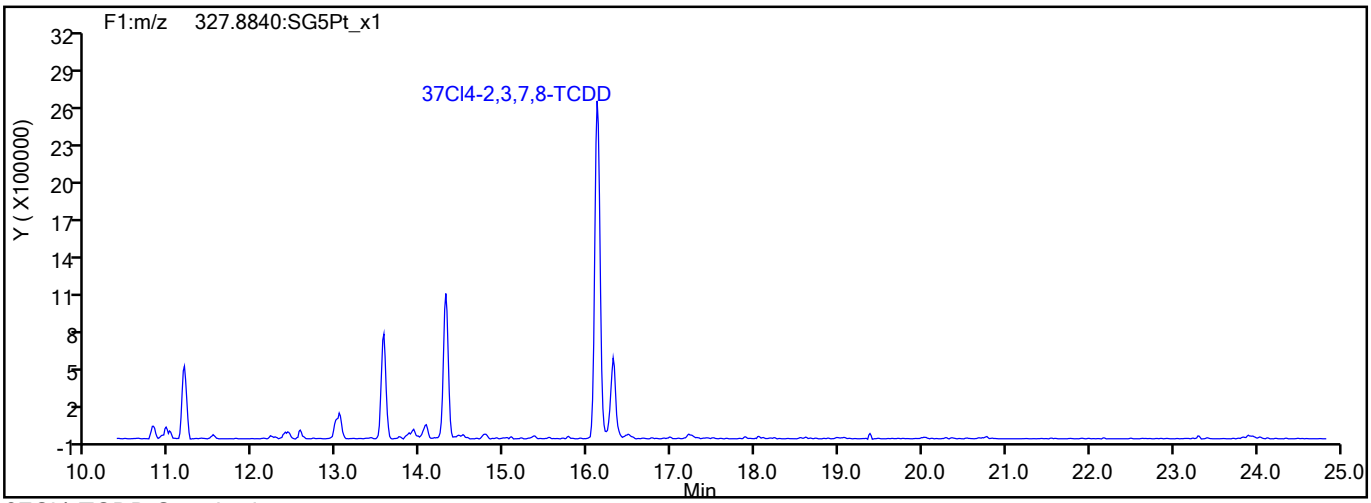

37Cl4-TCDD Standards

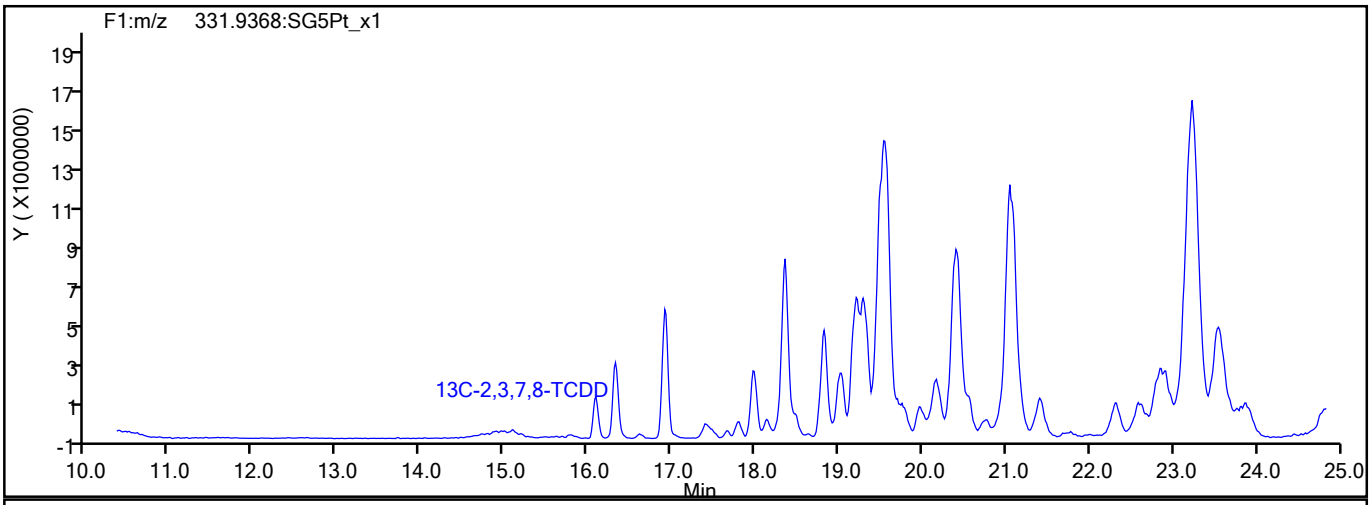

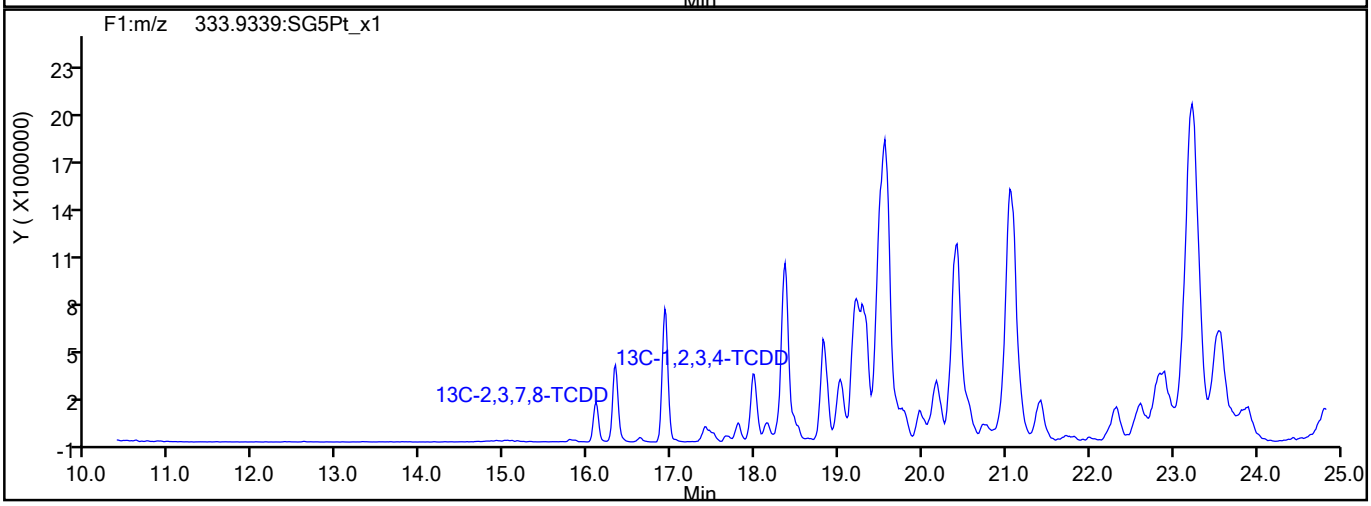

775013

Report Date: 23-Aug-2021 10:28:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_014.d		
Injection Date:	21-Aug-2021 22:13:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (0-2)		
Worklist#:	518850	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

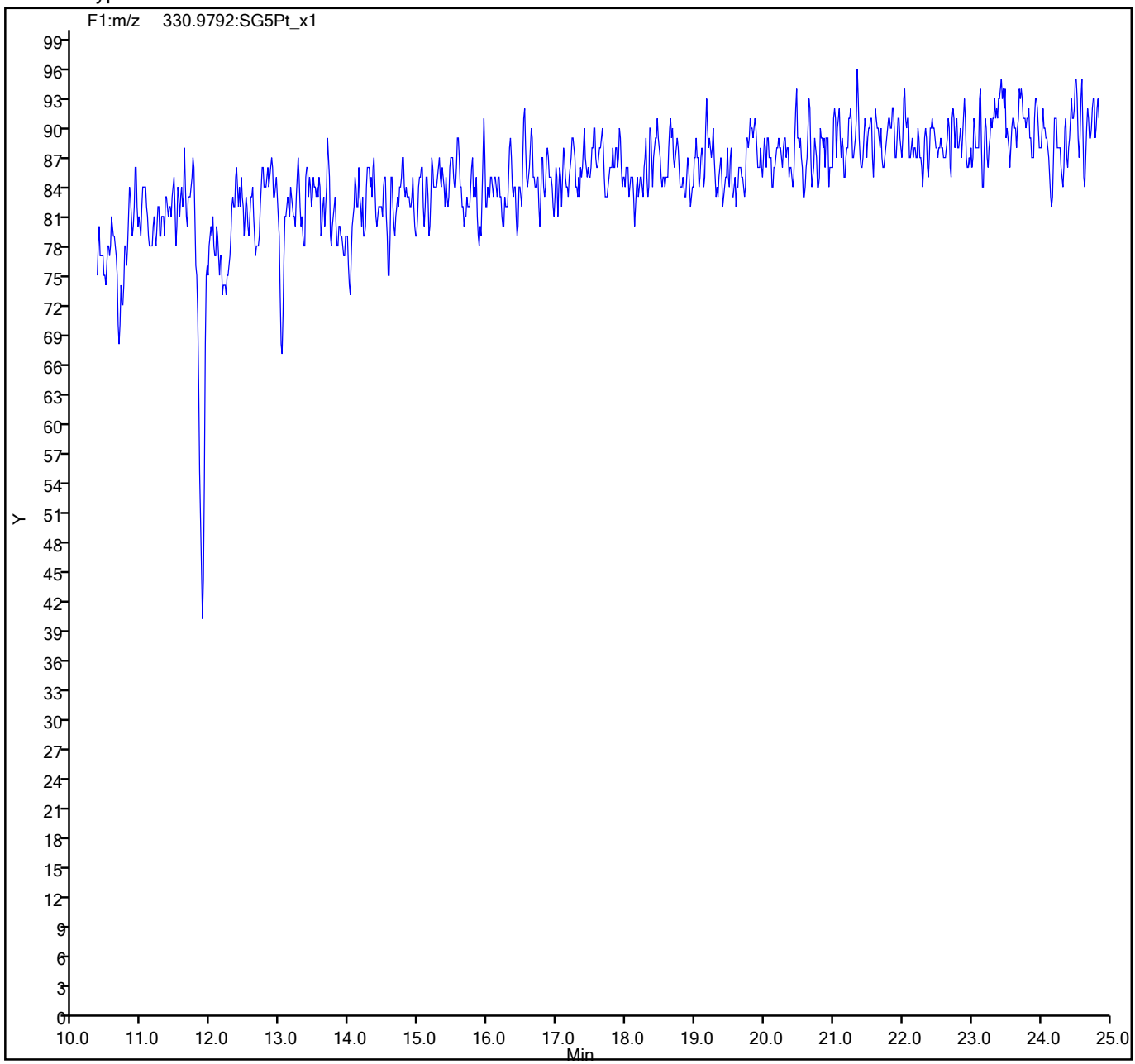

775014

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (2-4)
Lab Sample ID: 320-76769-14
Matrix: Sediment
Lab File ID: 13AU2110D5_69.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.09(g)
Date Analyzed: 08/15/2021 21:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 48.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	49000	E B G	76	76
40321-76-4	1,2,3,7,8-PeCDD	480		9.6	5.7
57117-41-6	1,2,3,7,8-PeCDF	5300	E G	31	31
57117-31-4	2,3,4,7,8-PeCDF	3300	G	34	34
39227-28-6	1,2,3,4,7,8-HxCDD	8.7	J B	9.6	1.0
57653-85-7	1,2,3,6,7,8-HxCDD	80		9.6	1.1
19408-74-3	1,2,3,7,8,9-HxCDD	25	B	9.6	0.97
70648-26-9	1,2,3,4,7,8-HxCDF	9900	E B G	33	33
57117-44-9	1,2,3,6,7,8-HxCDF	2700	B G	27	27
72918-21-9	1,2,3,7,8,9-HxCDF	130	B G	23	23
60851-34-5	2,3,4,6,7,8-HxCDF	250	G	22	22
35822-46-9	1,2,3,4,6,7,8-HpCDD	4000	E B G	25	25
67562-39-4	1,2,3,4,6,7,8-HpCDF	4200	E B G	19	19
55673-89-7	1,2,3,4,7,8,9-HpCDF	1100	B G	20	20
3268-87-9	OCDD	41000	E B G	29	29
39001-02-0	OCDF	1600	B	19	1.2
41903-57-5	Total TCDD	54000	B G	76	76
30402-14-3	Total TCDF	210000	B q G	360	360
36088-22-9	Total PeCDD	600		9.6	5.7
30402-15-4	Total PeCDF	13000	G	33	33
34465-46-8	Total HxCDD	450	B	9.6	1.0
55684-94-1	Total HxCDF	15000	B G	26	26
37871-00-4	Total HpCDD	6600	B G	25	25
38998-75-3	Total HpCDF	6300	B G	19	19

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (2-4)
Lab Sample ID: 320-76769-14
Matrix: Sediment
Lab File ID: 13AU2110D5_69.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.09(g)
Date Analyzed: 08/15/2021 21:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 48.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	68		25-164
89059-46-1	13C-2,3,7,8-TCDF	52		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	68		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	63		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	71		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	62		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	58		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	51		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	66		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	61		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	72		26-138
114423-97-1	13C-OCDD	86		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	185		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d
Lims ID: 320-76769-A-14-A
Client ID: 11215702-072221-SS-SJSB074 (2-4)
Sample Type: Client
Inject. Date: 15-Aug-2021 21:12:18 ALS Bottle#: 67 Worklist Smp#: 28
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-14-a 320-76769-a-14-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:31:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 17-Aug-2021 16:53:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	63366452	0.79	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.628	54001150	0.84	1.6249	52.4	52.4	2.410	2.410	52.45	
2,3,7,8-TCDF	17.628	110050215310.77		1.0239	22296	19903	93.6	93.6		REQa
A Non-2,3,7,8-sub-TCDF	17.046	195273676190.83		1.0239	35317	35317	93.6	21688		a
S Total TCDF					57612	55220	93.6	93.6		RQ
D 13C-2,3,7,8-TCDD	18.293	38898283	0.88	0.8993	68.3	68.3	1.798	1.798	68.26	a
2,3,7,8-TCDD	18.309	6213233373	0.79	1.2541	12736	12736	19.7	19.7		Ea
$ 37Cl4-2,3,7,8-TCDD	18.309	51909253		1.1071	74.0	74.0	0.7392	0.7392	185	
A Non-2,3,7,8-sub-TCDD	17.500	625060779	0.78	1.2541	1281.3	1281.3	19.7	1143.9		
S Total TCDD					14018	14018	19.7	19.7		
D 13C-1,2,3,7,8-PeCDF	22.722	48478745	1.54	1.2101	63.2	63.2	0.4724	0.4724	63.22	
1,2,3,7,8-PeCDF	22.749	706965264	1.57	1.0611	1374.3	1374.3	8.135	8.135		Ea
D 13C-2,3,4,7,8-PeCDF	24.031	55636725	1.59	1.2395	70.8	70.8	0.4612	0.4612	70.84	
2,3,4,7,8-PeCDF	24.058	484057711	1.57	1.0184	854.3	854.3	8.832	8.832		a
A F1 PeCDFs	20.093	3340403	1.54	1.0398	6.171	6.171	0.0941	6.171		
A Non-2,3,7,8-sub-PeCDF	23.241	616889732	1.57	1.0398	1139.7	1139.7	8.473	472.4		
S Total PeCDF					3374.4	3374.4	8.484	8.484		
D 13C-1,2,3,7,8-PeCDD	24.740	33010694	1.67	0.7612	68.4	68.4	0.1570	0.1570	68.43	
1,2,3,7,8-PeCDD	24.753	42803273	1.63	1.0484	123.7	123.7	1.485	1.485		a
A Non-2,3,7,8-sub-PeCDD	23.349	11347712	1.54	1.0484	32.8	32.8	1.485	21.6		
S Total PeCDD					156.5	156.5	1.485	1.485		
D 13C-1,2,3,4,7,8-HxCDF	30.676	54863552	0.53	1.0837	58.3	58.3	0.3193	0.3193	58.29	
1,2,3,4,7,8-HxCDF	30.703	1537139529	1.22	1.0851	2582.0	2582.0	8.486	8.486		Ea
D 13C-1,2,3,6,7,8-HxCDF	30.836	49571581	0.52	1.1279	50.6	50.6	0.3068	0.3068	50.60	
1,2,3,6,7,8-HxCDF	30.862	391246946	1.17	1.1260	700.9	700.9	7.113	7.113		a
D 13C-2,3,4,6,7,8-HxCDF	31.621	50230394	0.53	1.0637	54.4	54.4	0.3253	0.3253	54.36	a
2,3,4,6,7,8-HxCDF	31.634	37517111	1.22	1.1675	64.0	64.0	5.590	5.590		Ma
D 13C-1,2,3,7,8,9-HxCDF	32.393	45829326	0.51	0.9676	54.5	54.5	0.3576	0.3576	54.53	a
1,2,3,7,8,9-HxCDF	32.406	18499516	1.22	1.1664	34.6	34.6	6.069	6.069		M
A Non-2,3,7,8-sub-HxCDF	30.197	225253889	1.22	1.1363	395.5	395.5	6.668	154.7		Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					3777.0	3777.0	6.814	6.814		
* 13C-1,2,3,7,8,9-HxCDD	32.207	86861329	1.23	6.2E+05	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	31.794	39692050	1.30	0.7334	62.3	62.3	0.3901	0.3901	62.30	
1,2,3,4,7,8-HxCDD	31.807	951475	1.30	1.0640	2.253	2.253	0.2705	0.2705		
D 13C-1,2,3,6,7,8-HxCDD	31.887	41439347	1.19	0.8802	54.2	54.2	0.3250	0.3250	54.20	
1,2,3,6,7,8-HxCDD	31.900	8626948	1.23	1.0001	20.8	20.8	0.2826	0.2826		
1,2,3,7,8,9-HxCDD	32.233	2946121	1.28	1.1325	6.413	6.413	0.2518	0.2518		
A Non-2,3,7,8-sub-HxCDD	30.882	37749143	1.27	1.0655	87.3	87.3	0.2676	52.7		
S Total HxCDD					116.8	116.8	0.2683	0.2683		
D 13C-1,2,3,4,6,7,8-HpCDF	33.815	40862111	0.45	0.7730	60.9	60.9	0.5158	0.5158	60.86	
1,2,3,4,6,7,8-HpCDF	33.815	637366258	1.04	1.4413	1082.2	1082.2	4.974	4.974		E
D 13C-1,2,3,4,7,8,9-HpCDF	34.884	43885981	0.43	0.7008	72.1	72.1	0.5689	0.5689	72.09	
1,2,3,4,7,8,9-HpCDF	34.896	167482925	1.04	1.3174	289.7	289.7	5.135	5.135		
A Non-2,3,7,8-sub-HpCDF	34.319	155092160	1.04	1.3793	265.4	265.4	5.047	265.4		
S Total HpCDF					1637.3	1637.3	5.054	5.054		
D 13C-1,2,3,4,6,7,8-HpCDD	34.592	37314929	1.02	0.6472	66.4	66.4	0.3936	0.3936	66.37	
1,2,3,4,6,7,8-HpCDD	34.605	424235572	1.04	1.0943	1038.9	1038.9	6.487	6.487		E
A Non-2,3,7,8-sub-HpCDD	34.301	280944022	1.07	1.0943	688.0	688.0	6.487	688.0		
S Total HpCDD					1726.9	1726.9	6.487	6.487		
D 13C-OCDD	36.962	66859873	0.89	0.4472	172.1	172.1	0.2861	0.2861	86.07	
OCDF	37.058	201963851	0.87	1.4382	420.1	420.1	0.3067	0.3067		
OCDD	36.974	3973716279	0.90	1.1070	10738	10738	7.645	7.645		E

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 18-Aug-2021 10:31:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d
Lims ID: 320-76769-A-14-A
Client ID: 11215702-072221-SS-SJSB074 (2-4)
Sample Type: Client
Inject. Date: 15-Aug-2021 21:12:18 ALS Bottle#: 67 Worklist Smp#: 28
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-14-a 320-76769-a-14-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:31:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 17-Aug-2021 16:53:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	18.142	17.855	17		27894377	8994345	58874	147185	153		a
333.9339	18.142	17.855	17		35472075	11430615	73242	183105	156	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.356	16	0.972	24649971	7004156	48282	120705	145		
317.9389	17.628	17.356	16	0.972	29351179	8423139	271594	678985	31	0.84(0.65-0.89)	
2,3,7,8-TCDF											REQa
303.9016	17.628	17.371	15	1.000	6110389212	1132332230	29566087391520		383		ae
	Empc Correction				4787495110	858451073	29566087391520		290		
305.8987	17.658	17.371	17	1.002	6217526421	1114871532	29571947392985		377	0.98(0.65-0.89)	e
A Non-2,3,7,8-sub-TCDF											a
303.9016	15.950	17.046	-66	0.905	61687800	20352367	29566087391520		7		
305.8987	15.950	17.046	-66	0.905	78845352	26185896	29571947392985		9	0.78(0.65-0.89)	
303.9016	16.207	17.046	-50	0.919	167467059	36802569	29566087391520		12		
305.8987	16.192	17.046	-51	0.919	215620936	47484610	29571947392985		16	0.78(0.65-0.89)	
303.9016	16.479	17.046	-34	0.935	317328946	72971670	29566087391520		25		
305.8987	16.479	17.046	-34	0.935	406822405	94555334	29571947392985		32	0.78(0.65-0.89)	
303.9016	16.691	17.046	-21	0.947	353634132	100313757	29566087391520		34		
305.8987	16.691	17.046	-21	0.947	452386576	129410305	29571947392985		44	0.78(0.65-0.89)	
303.9016	16.917	17.046	-8	0.960	571208878	155939595	29566087391520		53		
305.8987	16.917	17.046	-8	0.960	738117855	197977688	29571947392985		67	0.77(0.65-0.89)	
303.9016	17.190	17.046	9	0.975	5545726026	1073274224	29566087391520		363		e
305.8987	17.190	17.046	9	0.975	6446347183	1098796852	29571947392985		372	0.86(0.65-0.89)	e
303.9016	18.082	17.046	62	1.026	784439517	207660767	29566087391520		70		
305.8987	18.082	17.046	62	1.026	1004737143	261481420	29571947392985		88	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.278	17.046	74	1.037	178171795	42803927	29566087391520		14		
305.8987	18.278	17.046	74	1.037	229137490	55381500	29571947392985		19	0.78(0.65-0.89)	
303.9016	19.488	17.046	146	1.106	867202605	134072796	29566087391520		45		a
305.8987	19.488	17.046	146	1.106	1108485921	170554367	29571947392985		58	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	18.293	18.051	14	1.008	18209998	3948954	58874	147185	67		a
333.9339	18.293	18.051	14	1.008	20688285	4909642	73242	183105	67	0.88(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	18.309	18.081	14	1.001	2747813245	653640680	382521	956302	1709		a
321.8936	18.309	18.081	14	1.001	3465420128	820436049	494062	1235155	1661	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.309	18.081	14	1.009	51909253	12058936	66860	167150	180		
A Non-2,3,7,8-sub-TCDD											
319.8965	18.188	17.500	41	0.994	29247903	10282411	382521	956302	27		
321.8936	18.188	17.500	41	0.994	37779930	13293623	494062	1235155	27	0.77(0.65-0.89)	
319.8965	18.656	17.500	69	1.020	244907169	44517841	382521	956302	116		
321.8936	18.656	17.500	69	1.020	313125777	56034758	494062	1235155	113	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.722	22.367	21	1.252	29424228	5316290	26474	66185	201		
353.8970	22.722	22.367	21	1.252	19054517	3442326	20227	50567	170	1.54(1.32-1.78)	
1,2,3,7,8-PeCDF											Ea
339.8597	22.749	22.394	21	1.001	431921839	81742592	186286	465715	439		a
341.8567	22.749	22.394	21	1.001	275043425	52012869	116161	290402	448	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.031	23.703	20	1.325	34187194	5166193	26474	66185	195		
353.8970	24.031	23.703	20	1.325	21449531	3240539	20227	50567	160	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	24.058	23.730	20	1.001	295706532	44786282	186286	465715	240		a
341.8567	24.058	23.730	20	1.001	188351179	28570267	116161	290402	246	1.57(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.805	20.093	-17	0.872	2027131	493147	1540	3850	320		
341.8567	19.805	20.093	-17	0.872	1313272	311517	1818	4545	171	1.54(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.372	23.241	-112	0.941	156052354	42600724	186286	465715	229		
341.8567	21.372	23.241	-112	0.941	99632311	27222754	116161	290402	234	1.57(1.32-1.78)	
339.8597	22.244	23.241	-60	0.979	15753804	1906450	186286	465715	10		
341.8567	22.230	23.241	-61	0.978	9787502	1192890	116161	290402	10	1.61(1.32-1.78)	
339.8597	22.599	23.241	-38	0.995	29032086	5898394	186286	465715	32		
341.8567	22.599	23.241	-38	0.995	18812147	3725894	116161	290402	32	1.54(1.32-1.78)	
339.8597	22.981	23.241	-16	1.011	4834849	1000441	186286	465715	5		
341.8567	22.981	23.241	-16	1.011	2915387	582468	116161	290402	5	1.66(1.32-1.78)	
339.8597	23.253	23.241	1	1.023	104723648	21999521	186286	465715	118		
341.8567	23.253	23.241	1	1.023	66428182	13951918	116161	290402	120	1.58(1.32-1.78)	
339.8597	24.385	23.241	69	1.073	66896425	9475116	186286	465715	51		
341.8567	24.385	23.241	69	1.073	42021037	5924208	116161	290402	51	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.740	24.426	19	1.364	20630128	4085381	5837	14592	700		
369.8919	24.740	24.426	19	1.364	12380566	2522403	3926	9815	642	1.67(1.32-1.78)	
1,2,3,7,8-PeCDD											a
355.8546	24.753	24.453	18	1.001	26546705	5461111	23957	59892	228		a
357.8516	24.753	24.453	18	1.001	16256568	3429001	17189	42972	199	1.63(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	22.749	23.349	-36	0.920	4483922	939741	23957	59892	39		
357.8516	22.735	23.349	-37	0.919	2989634	602697	17189	42972	35	1.50(1.32-1.78)	
355.8546	22.981	23.349	-22	0.929	823691	158250	23957	59892	7		
357.8516	22.981	23.349	-22	0.929	477968	100959	17189	42972	6	1.72(1.32-1.78)	
355.8546	23.308	23.349	-2	0.942	1573604	269798	23957	59892	11		
357.8516	23.308	23.349	-2	0.942	998893	172475	17189	42972	10	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.676	30.503	10	0.952	18944914	3689765	14984	37460	246		
385.8610	30.676	30.503	10	0.952	35918638	7052195	16536	41340	426	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											Ea
373.8208	30.703	30.529	10	1.001	843246942	172016820	216726	541815	794		a
375.8178	30.703	30.529	10	1.001	693892587	143291945	178948	447370	801	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.836	30.689	9	0.957	17005868	4237278	14984	37460	283		
385.8610	30.836	30.689	9	0.957	32565713	8112889	16536	41340	491	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											a
373.8208	30.862	30.716	9	1.001	211294917	50868685	216726	541815	235		a
375.8178	30.849	30.716	8	1.000	179952029	42398191	178948	447370	237	1.17(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											a
383.8639	31.621	31.514	6	0.982	17493240	5167657	14984	37460	345		a
385.8610	31.621	31.514	6	0.982	32737154	9989777	16536	41340	604	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											Ma
373.8208	31.634	31.528	6	1.000	20589241	6335812	216726	541815	29		M
375.8178	31.634	31.528	6	1.000	16927870	5280071	178948	447370	30	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											a
383.8639	32.393	32.326	4	1.006	15430061	4725402	14984	37460	315		a
385.8610	32.393	32.326	4	1.006	30399265	9249394	16536	41340	559	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.406	32.340	4	1.000	10155649	3602435	216726	541815	17		M
375.8178	32.406	32.340	4	1.000	8343867	2857573	178948	447370	16	1.22(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	28.693	30.197	-90	0.935	48375893	7956697	216726	541815	37		
375.8178	28.693	30.197	-90	0.935	39734280	6554703	178948	447370	37	1.22(1.05-1.43)	
373.8208	29.971	30.197	-14	0.977	23692487	4778660	216726	541815	22		
375.8178	29.971	30.197	-14	0.977	19468647	3953890	178948	447370	22	1.22(1.05-1.43)	
373.8208	31.541	30.197	81	1.028	12440606	3338003	216726	541815	15		M
375.8178	31.528	30.197	80	1.028	10207873	2717937	178948	447370	15	1.22(1.05-1.43)	
373.8208	32.486	30.197	137	1.059	39119949	12677167	216726	541815	58		M
375.8178	32.486	30.197	137	1.059	32214154	10331016	178948	447370	58	1.21(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											a
401.8559	32.207	32.140	4		47866158	12611393	15862	39655	795		a
403.8529	32.207	32.140	4		38995171	10163252	10200	25500	996	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.794	31.701	6	0.987	22422886	6869849	15862	39655	433		
403.8529	31.794	31.701	6	0.987	17269164	5476345	10200	25500	537	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.807	31.714	6	1.000	537359	177529	7296	18240	24		
391.8127	31.807	31.714	6	1.000	414116	131214	6916	17290	19	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.887	31.807	5	0.990	22498432	6967353	15862	39655	439		
403.8529	31.887	31.807	5	0.990	18940915	5603052	10200	25500	549	1.19(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.900	31.820	5	1.000	4764438	1474364	7296	18240	202		
391.8127	31.900	31.820	5	1.000	3862510	1180169	6916	17290	171	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.233	32.153	5	1.014	1654732	386318	7296	18240	53		
391.8127	32.220	32.153	4	1.013	1291389	300340	6916	17290	43	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.837	30.882	-63	0.936	6735503	909364	7296	18240	125		
391.8127	29.837	30.882	-63	0.936	5358533	727307	6916	17290	105	1.26(1.05-1.43)	
389.8157	30.743	30.882	-8	0.964	1641468	400459	7296	18240	55		
391.8127	30.743	30.882	-8	0.964	1252547	306029	6916	17290	44	1.31(1.05-1.43)	
389.8157	31.089	30.882	12	0.975	12716611	2725741	7296	18240	374		
391.8127	31.089	30.882	12	0.975	10044481	2162166	6916	17290	313	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.815	33.766	3	1.050	12776299	4367372	15283	38207	286		
419.8220	33.815	33.766	3	1.050	28085812	9603353	21040	52600	456	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											E
407.7818	33.815	33.778	2	1.000	325112880	108840419	203522	508805	535		
409.7789	33.815	33.778	2	1.000	312253378	107120851	197091	492727	544	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.884	34.847	2	1.083	13269691	4524588	15283	38207	296		
419.8220	34.884	34.847	2	1.083	30616290	10280745	21040	52600	489	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.896	34.860	2	1.000	85404790	27993119	203522	508805	138		
409.7789	34.896	34.860	2	1.000	82078135	26347281	197091	492727	134	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.119	34.319	-12	1.009	79077022	31422201	203522	508805	154		
409.7789	34.119	34.319	-12	1.009	76015138	29982545	197091	492727	152	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.592	34.568	1	1.074	18806802	6467377	11363	28407	569		
437.8140	34.592	34.568	1	1.074	18508127	6279742	11844	29610	530	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											E
423.7766	34.605	34.580	1	1.000	216134271	73407198	172994	432485	424		
425.7737	34.605	34.580	1	1.000	208101301	70806835	188963	472407	375	1.04(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.058	34.301	-15	0.985	145515917	53782409	172994	432485	311		
425.7737	34.058	34.301	-15	0.985	135428105	53430318	188963	472407	283	1.07(0.88-1.20)	
13C-OCDD											
469.7779	36.962	36.926	2	1.148	31450937	8979008	6875	17187	1306		
471.7750	36.962	36.926	2	1.148	35408936	10118940	4780	11950	2117	0.89(0.76-1.02)	
OCDF											
441.7428	37.058	37.022	2	1.003	94152712	26078025	8135	20337	3206		
443.7399	37.058	37.022	2	1.003	107811139	29995171	8713	21782	3443	0.87(0.76-1.02)	
OCDD											E
457.7377	36.974	36.938	2	1.000	1881337138	552499270	152181	380452	3631		
459.7348	36.974	36.938	2	1.000	2092379141	620707369	171085	427712	3628	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d
Lims ID: 320-76769-A-14-A
Client ID: 11215702-072221-SS-SJSB074 (2-4)
Inject. Date: 15-Aug-2021 21:12:18 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 28

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	54001150	15427295

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	54001150	15427295

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.950	61687800	20352367	78845352	26185896	254.2	0.78	
16.207	167467059	36802569	215620936	47484610	692.8	0.78	
16.479	317328946	72971670	406822405	94555334	1309.7	0.78	
16.691	353634132	100313757	452386576	129410305	1457.7	0.78	
16.917	571208878	155939595	738117855	197977688	2368.0	0.77	
17.190	5545726026	1073274224	6446347183	1098796852	21688	0.86	
18.082	784439517	207660767	1004737143	261481420	3235.8	0.78	
18.278	178171795	42803927	229137490	55381500	736.6	0.78	
19.488	867202605	134072796	1108485921	170554367	3573.2	0.78	a
Signal Totals:							
	8846866758	1844191672	10680500861	2081827972			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	19527367619	3926019644				0.83	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 35317 = (19527367619 * 100.000) / (54001150 * 1.024)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d
Lims ID: 320-76769-A-14-A
Client ID: 11215702-072221-SS-SJSB074 (2-4)
Inject. Date: 15-Aug-2021 21:12:18 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 28

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	38898283	8858596

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	38898283	8858596

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.188	29247903	10282411	37779930	13293623	137.4	0.77	
18.656	244907169	44517841	313125777	56034758	1143.9	0.78	
Signal Totals:							
	274155072	54800252	350905707	69328381			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	625060779	124128633				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1281.3 = (625060779 * 100.000) / (38898283 * 1.254)

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d
Lims ID: 320-76769-A-14-A
Client ID: 11215702-072221-SS-SJSB074 (2-4)
Inject. Date: 15-Aug-2021 21:12:18 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 28

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	48478745	8758616
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	55636725	8406732

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	52057735	8582674

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.805	2027131	493147	1313272	311517	6.17	1.54	
Signal Totals:							
	2027131	493147	1313272	311517			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3340403	804664				1.54	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.171 = (3340403 * 100.000) / (52057735 * 1.040)

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Lims ID:	320-76769-A-14-A		
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Inject. Date:	15-Aug-2021 21:12:18	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	28

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	48478745	8758616
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	55636725	8406732

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	52057735	8582674

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.372	156052354	42600724	99632311	27222754	472.4	1.57	
22.244	15753804	1906450	9787502	1192890	47.2	1.61	
22.599	29032086	5898394	18812147	3725894	88.4	1.54	
22.981	4834849	1000441	2915387	582468	14.3	1.66	
23.253	104723648	21999521	66428182	13951918	316.2	1.58	
24.385	66896425	9475116	42021037	5924208	201.2	1.59	
Signal Totals:							
	377293166	82880646	239596566	52600132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	616889732	135480778				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1139.7 = (616889732 * 100.000) / (52057735 * 1.040)

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d
Lims ID: 320-76769-A-14-A
Client ID: 11215702-072221-SS-SJSB074 (2-4)
Inject. Date: 15-Aug-2021 21:12:18 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 28

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	33010694	6607784

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	33010694	6607784

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.749	4483922	939741	2989634	602697	21.6	1.50	
22.981	823691	158250	477968	100959	3.76	1.72	
23.308	1573604	269798	998893	172475	7.43	1.58	
Signal Totals:							
	6881217	1367789	4466495	876131			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11347712	2243920				1.54	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 32.788 = (11347712 * 100.000) / (33010694 * 1.048)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d
Lims ID: 320-76769-A-14-A
Client ID: 11215702-072221-SS-SJSB074 (2-4)
Inject. Date: 15-Aug-2021 21:12:18 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 28

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	54863552	10741960
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	49571581	12350167
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	50230394	15157434
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	45829326	13974796

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	50123713	13056089

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.693	48375893	7956697	39734280	6554703	154.7	1.22	
29.971	23692487	4778660	19468647	3953890	75.8	1.22	
31.541	12440606	3338003	10207873	2717937	39.8	1.22	Ma
32.486	39119949	12677167	32214154	10331016	125.2	1.21	Ma
Signal Totals:							
	123628935	28750527	101624954	23557546			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	225253889	52308073				1.22	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 395.505 = (225253889 * 100.000) / (50123713 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d
Lims ID: 320-76769-A-14-A
Client ID: 11215702-072221-SS-SJSB074 (2-4)
Inject. Date: 15-Aug-2021 21:12:18 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 28

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	39692050	12346194
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	41439347	12570405
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	40565698	12458299

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.837	6735503	909364	5358533	727307	28.0	1.26	
30.743	1641468	400459	1252547	306029	6.70	1.31	
31.089	12716611	2725741	10044481	2162166	52.7	1.27	
Signal Totals:							
	21093582	4035564	16655561	3195502			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	37749143	7231066				1.27	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 87.333 = (37749143 * 100.000) / (40565698 * 1.066)

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d
Lims ID: 320-76769-A-14-A
Client ID: 11215702-072221-SS-SJSB074 (2-4)
Inject. Date: 15-Aug-2021 21:12:18 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 28

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	40862111	13970725
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	43885981	14805333

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	42374046	14388029

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.119	79077022	31422201	76015138	29982545	265.4	1.04	
Signal Totals:							
	79077022	31422201	76015138	29982545			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	155092160	61404746				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 265.350 = (155092160 * 100.000) / (42374046 * 1.379)

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d
Lims ID: 320-76769-A-14-A
Client ID: 11215702-072221-SS-SJSB074 (2-4)
Inject. Date: 15-Aug-2021 21:12:18 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 28

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	37314929	12747119

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	37314929	12747119

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.058	145515917	53782409	135428105	53430318	688.0	1.07	
Signal Totals:							
	145515917	53782409	135428105	53430318			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	280944022	107212727				1.07	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 688.018 = (280944022 * 100.000) / (37314929 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.45
Area: 240242655
Amount: 993.4216
Amount Units: pg/ul

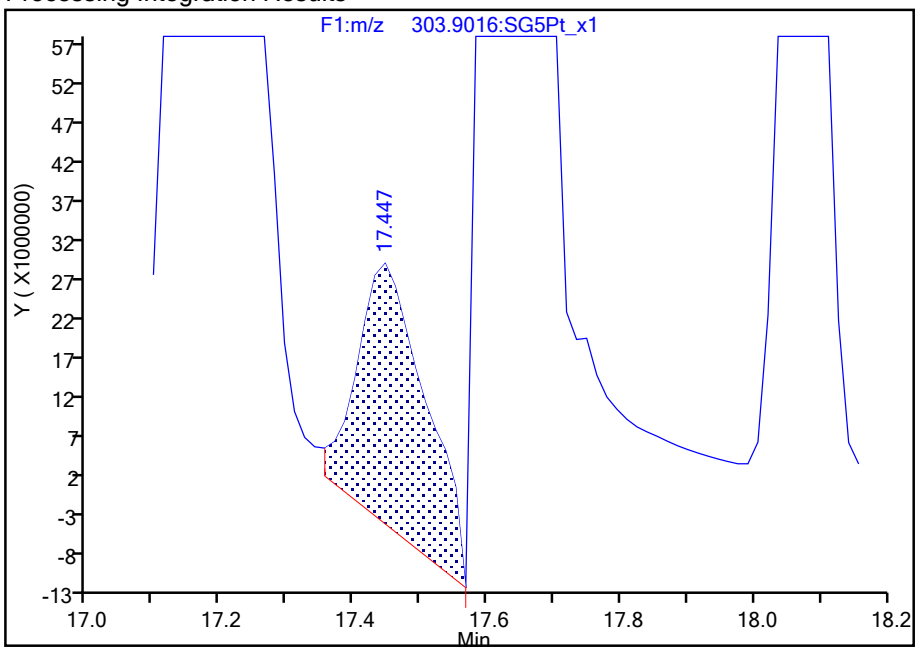

Manual Integration Results

RT: 17.63
Area: 6110389212
Amount: 22296
Amount Units: pg/ul

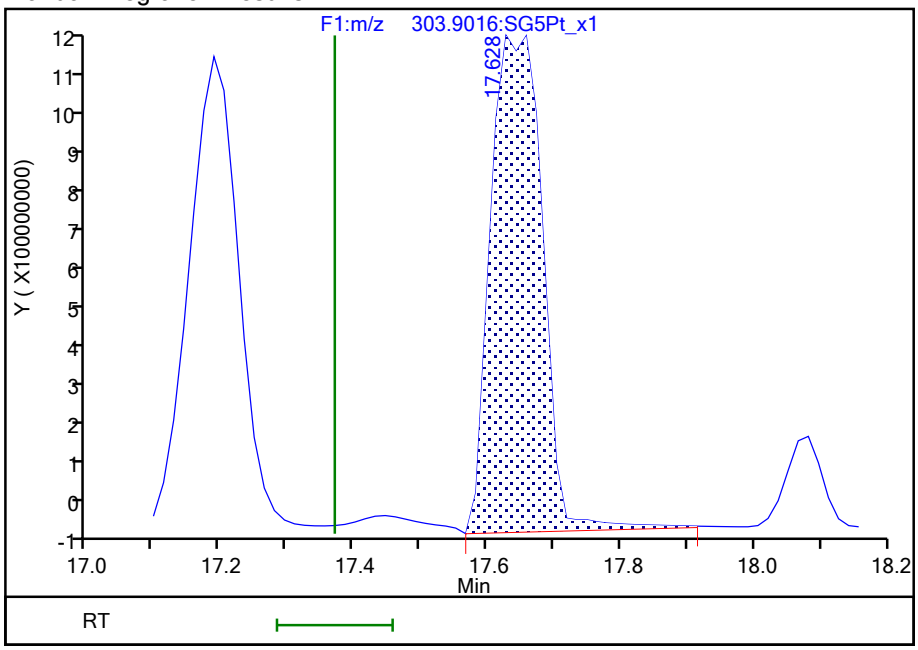

Reviewer: bennettd, 17-Aug-2021 16:52:45

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 18.14
Area: 27894377
Amount: 111.1955
Amount Units: pg/ul

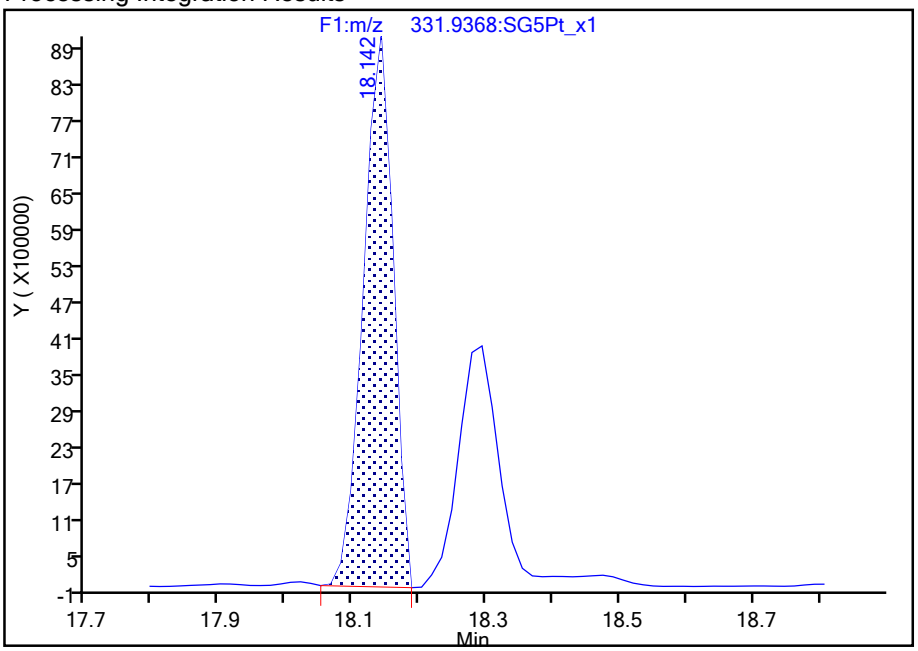

Manual Integration Results

RT: 18.29
Area: 18209998
Amount: 68.258764
Amount Units: pg/ul

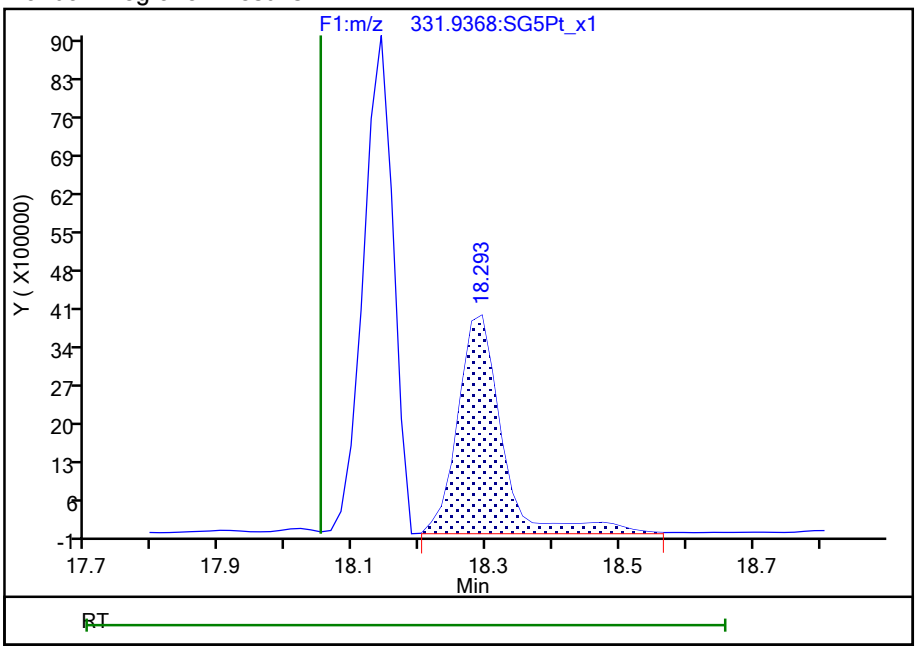

Reviewer: bennettd, 17-Aug-2021 16:52:27

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Not Detected
Expected RT: 18.08

Processing Integration Results

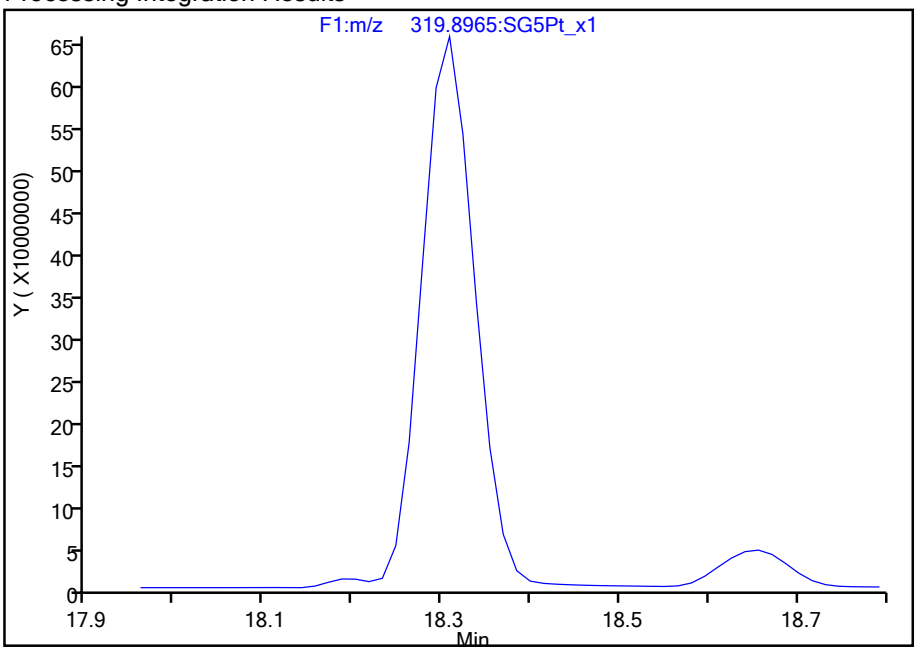

RT: 18.31
Area: 2747813245
Amount: 12736
Amount Units: pg/ul

Manual Integration Results

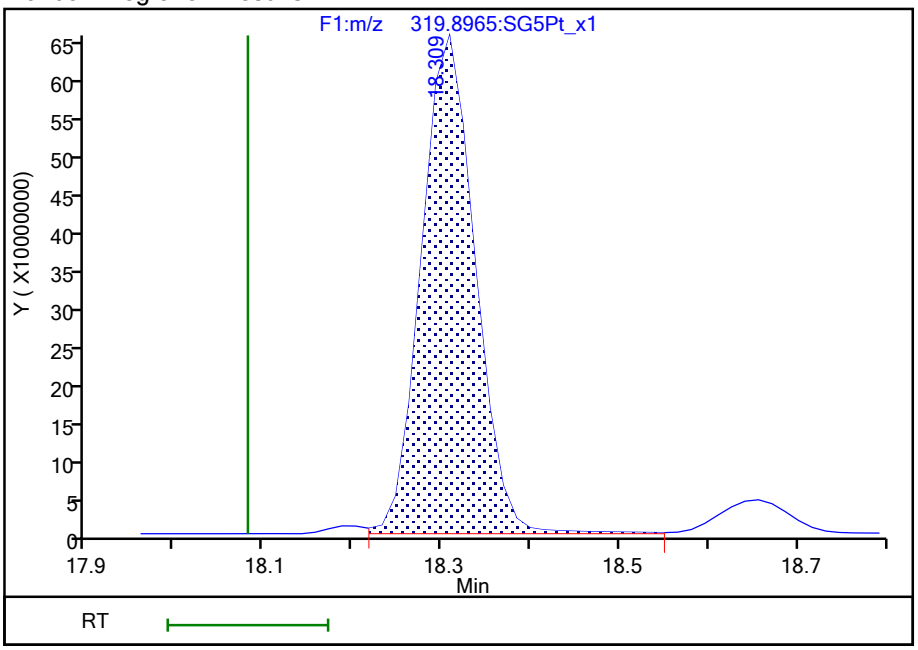

Reviewer: bennettd, 17-Aug-2021 16:52:35
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Not Detected
Expected RT: 22.39

Processing Integration Results

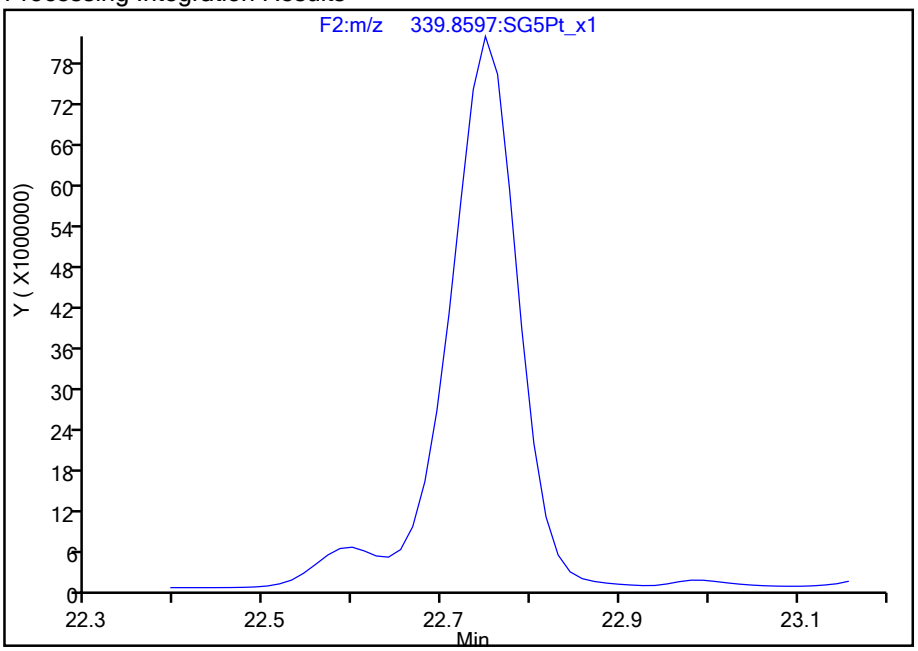

Manual Integration Results

RT: 22.75
Area: 431921839
Amount: 1374.2830
Amount Units: pg/ul

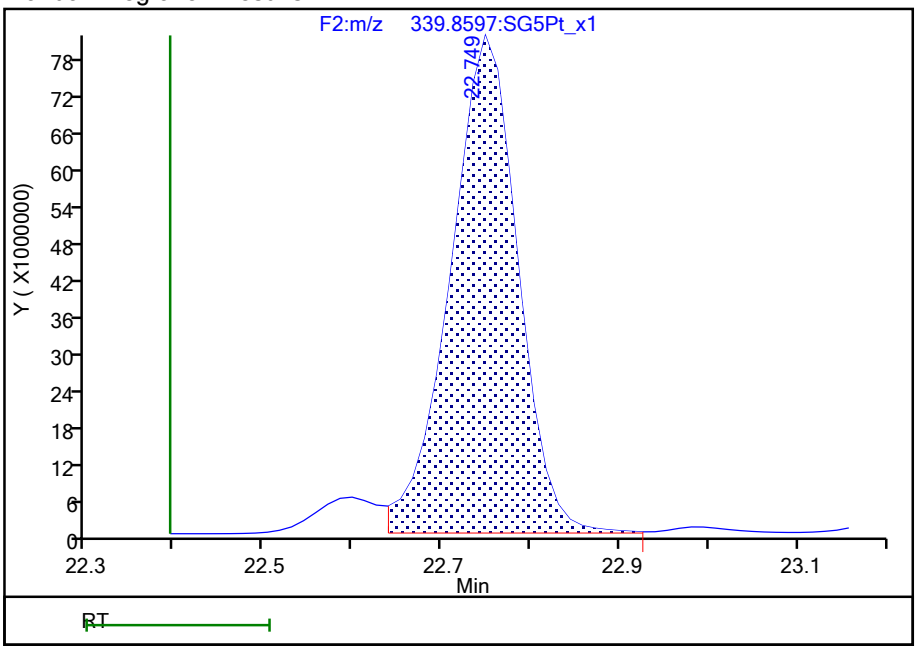

Reviewer: dadunj, 18-Aug-2021 11:52:48
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Not Detected
Expected RT: 23.73

Processing Integration Results

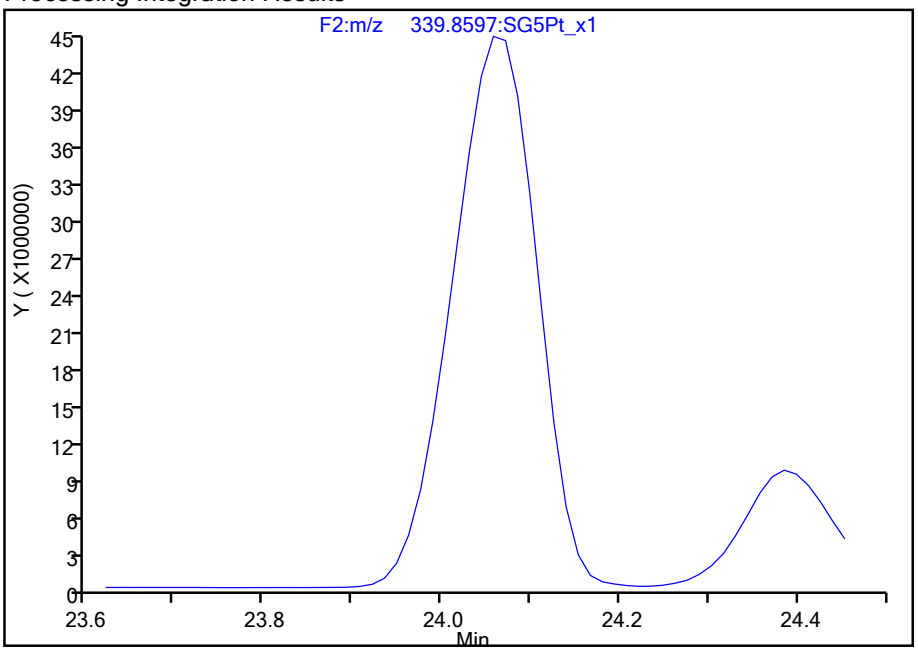

Manual Integration Results

RT: 24.06
Area: 295706532
Amount: 854.2982
Amount Units: pg/ul

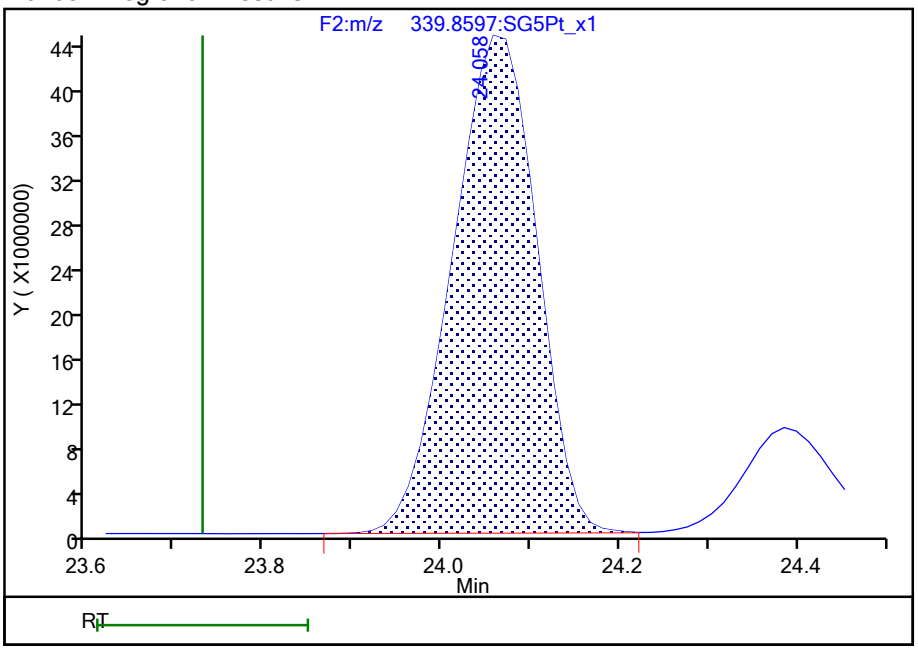

Reviewer: dadunj, 18-Aug-2021 11:52:53
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.45

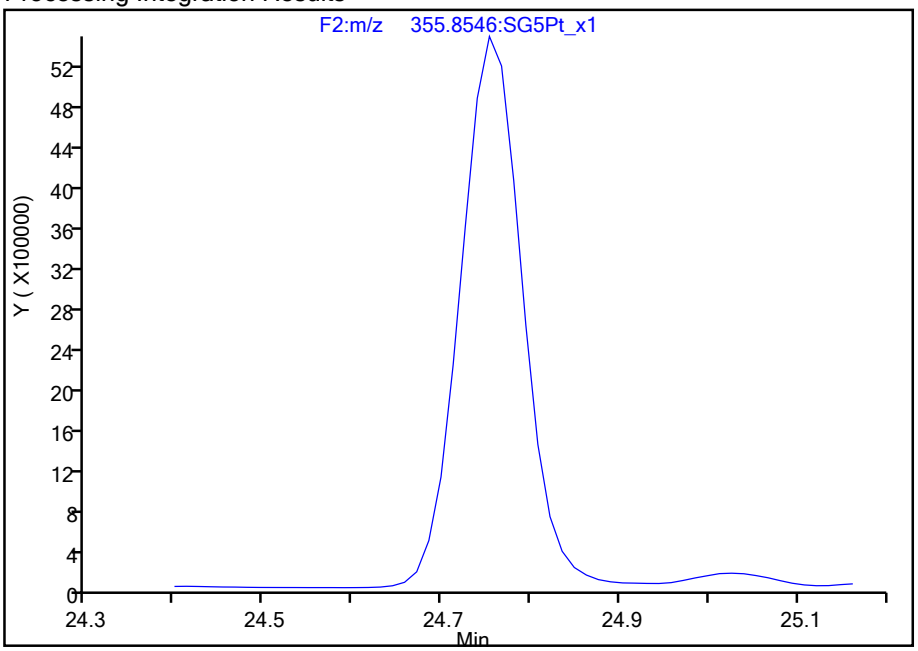

Manual Integration Results

RT: 24.75
Area: 26546705
Amount: 123.6752
Amount Units: pg/ul

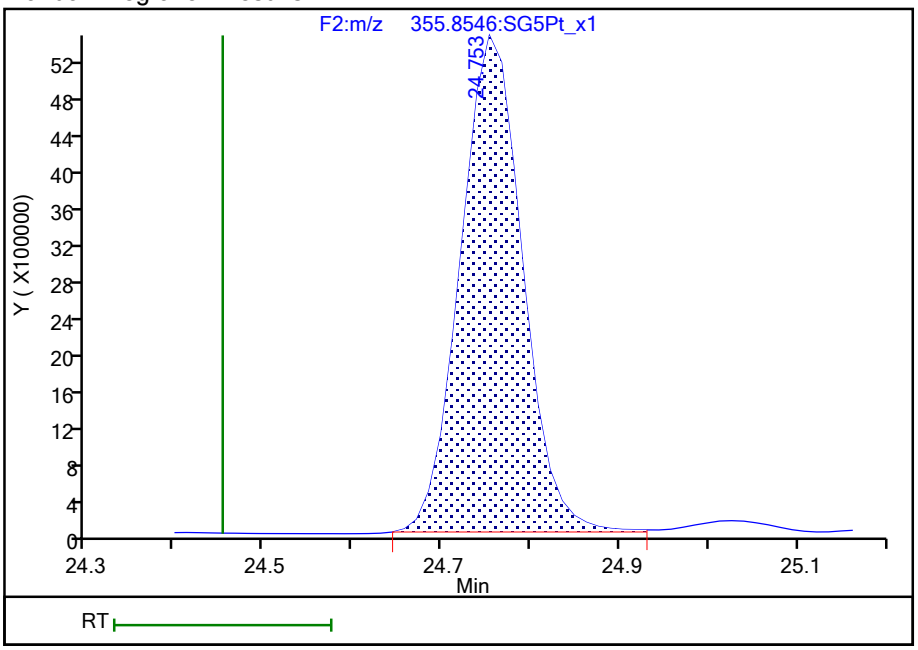

Reviewer: dadunj, 18-Aug-2021 11:53:13
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.53

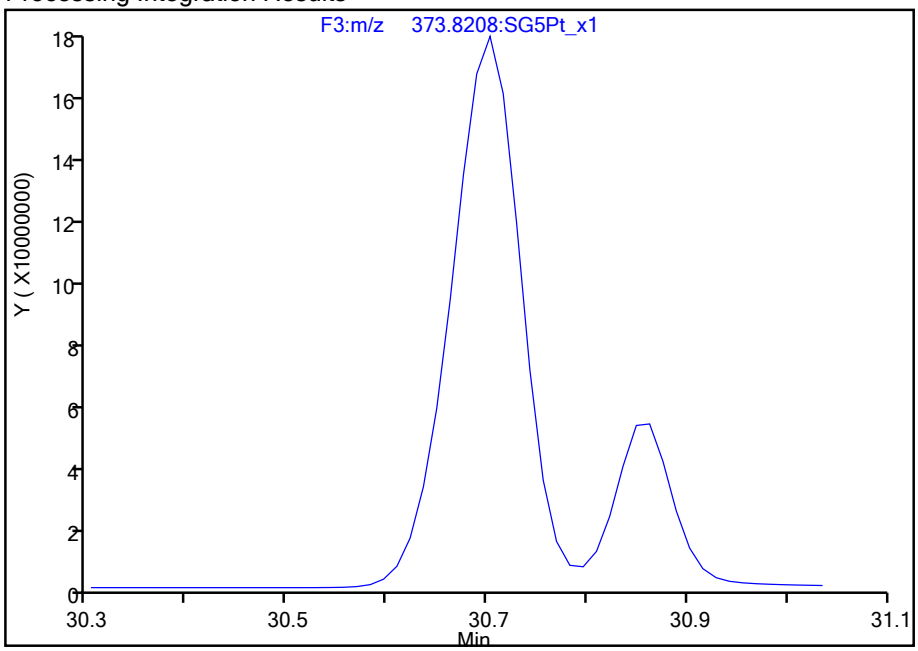

Manual Integration Results

RT: 30.70
Area: 843246942
Amount: 2581.9563
Amount Units: pg/ul

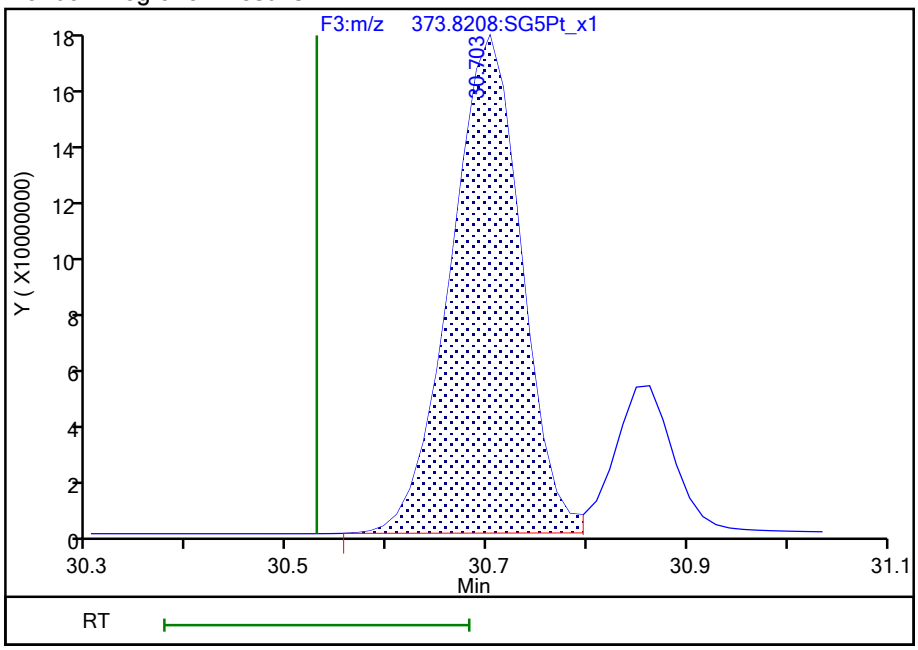

Reviewer: dadunj, 18-Aug-2021 11:53:38
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.70
Area: 843246942
Amount: 2753.8316
Amount Units: pg/ul

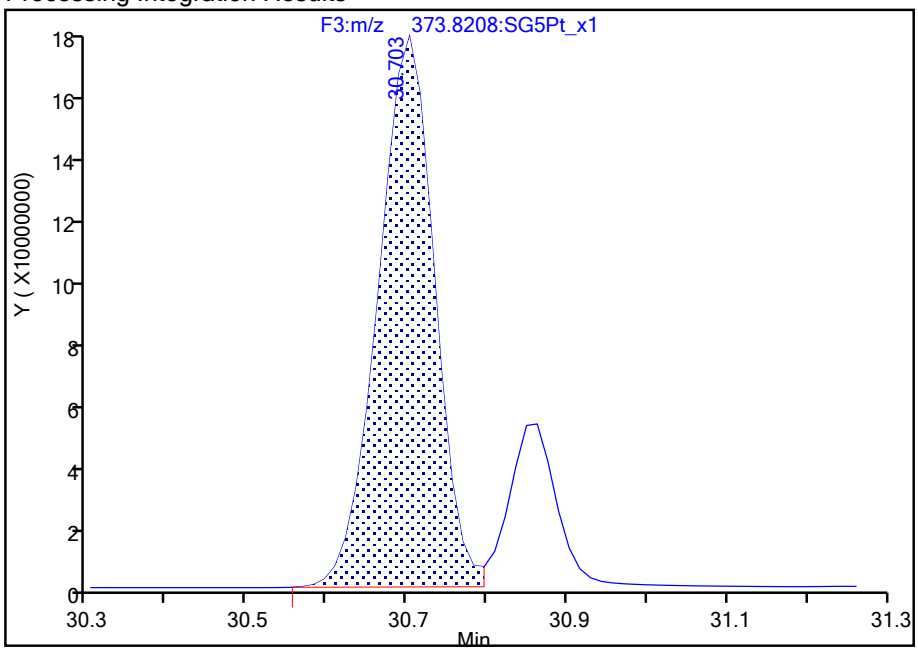

Manual Integration Results

RT: 30.86
Area: 211294917
Amount: 700.9307
Amount Units: pg/ul

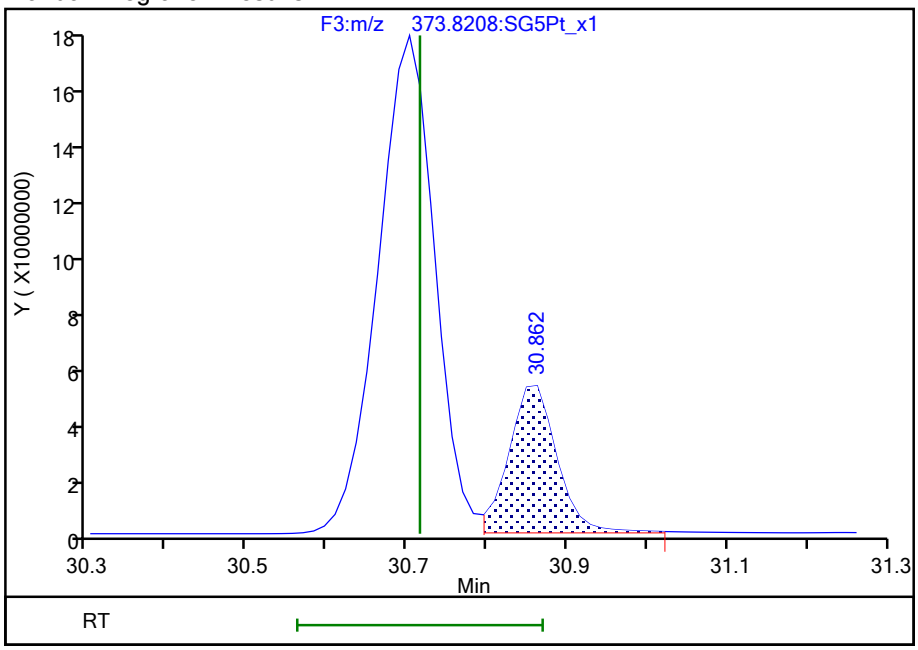

Reviewer: dadunj, 18-Aug-2021 11:53:45

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-2,3,4,6,7,8-HxCDF, CAS: 116843-05-1

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.51

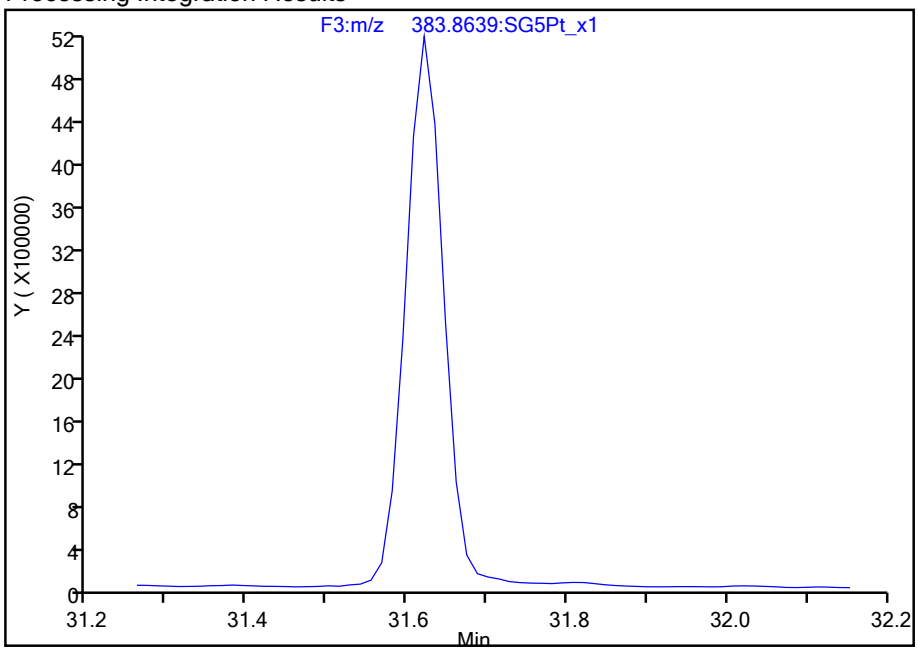

Manual Integration Results

RT: 31.62
Area: 17493240
Amount: 54.363673
Amount Units: pg/ul

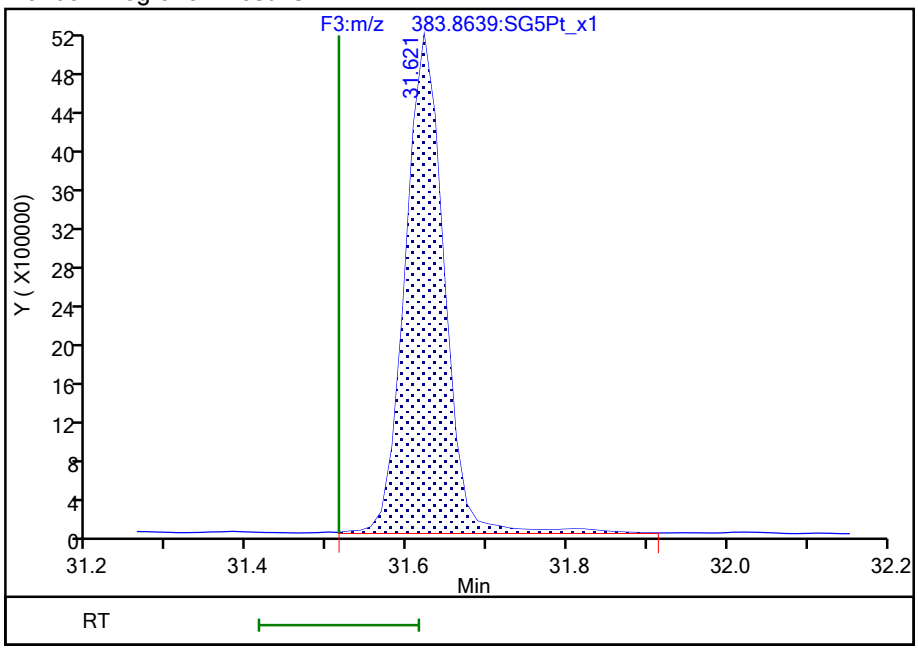

Reviewer: dadunj, 18-Aug-2021 11:53:49
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.63
Area: 27134067
Amount: 102.5847
Amount Units: pg/ul

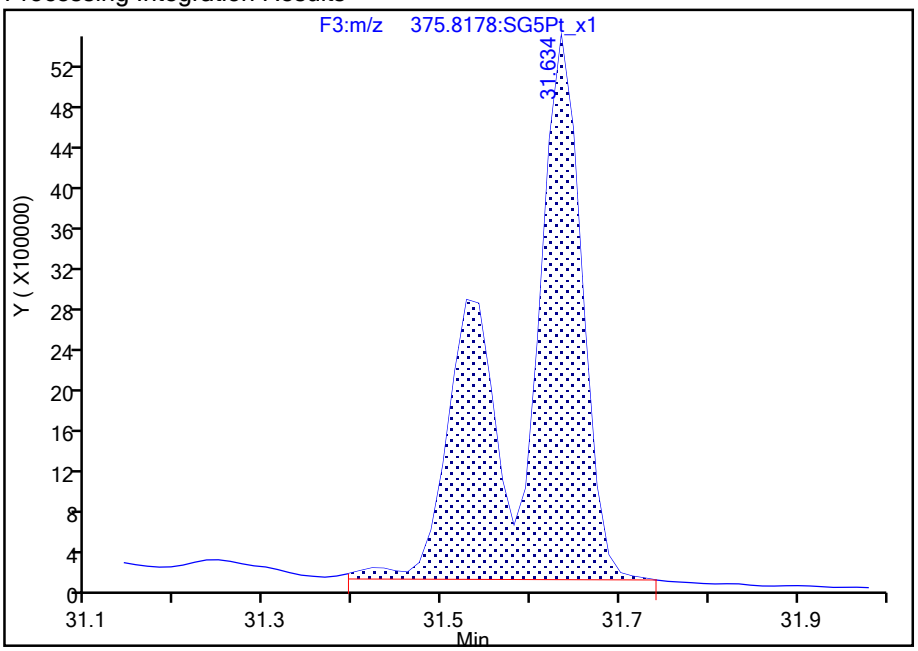

Manual Integration Results

RT: 31.63
Area: 16927870
Amount: 63.972210
Amount Units: pg/ul

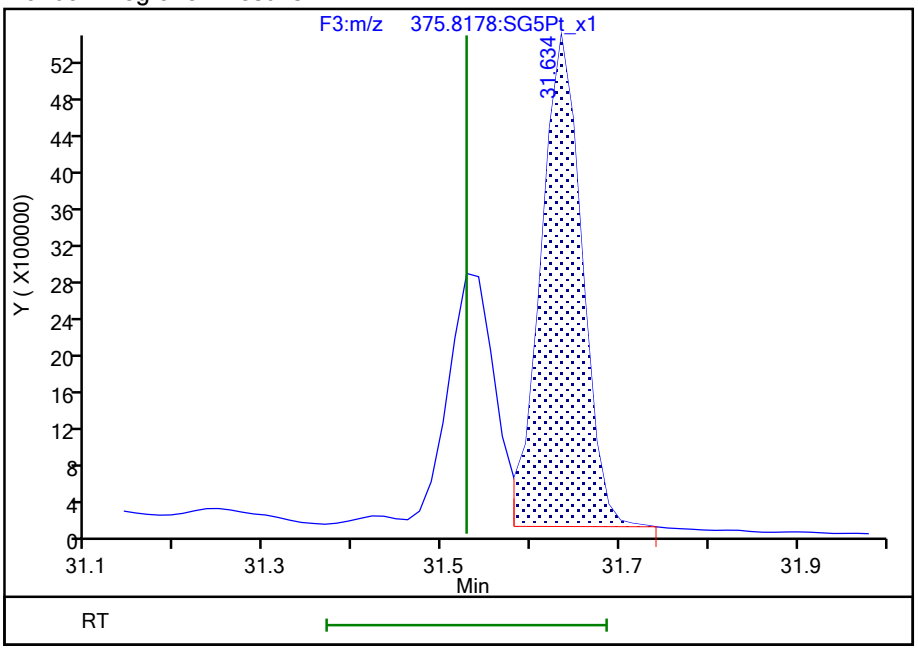

Reviewer: dadunj, 18-Aug-2021 11:55:31

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 3

RT: 31.63
Area: 60161777
Amount: 102.5847
Amount Units: pg/ul

Processing Integration Results

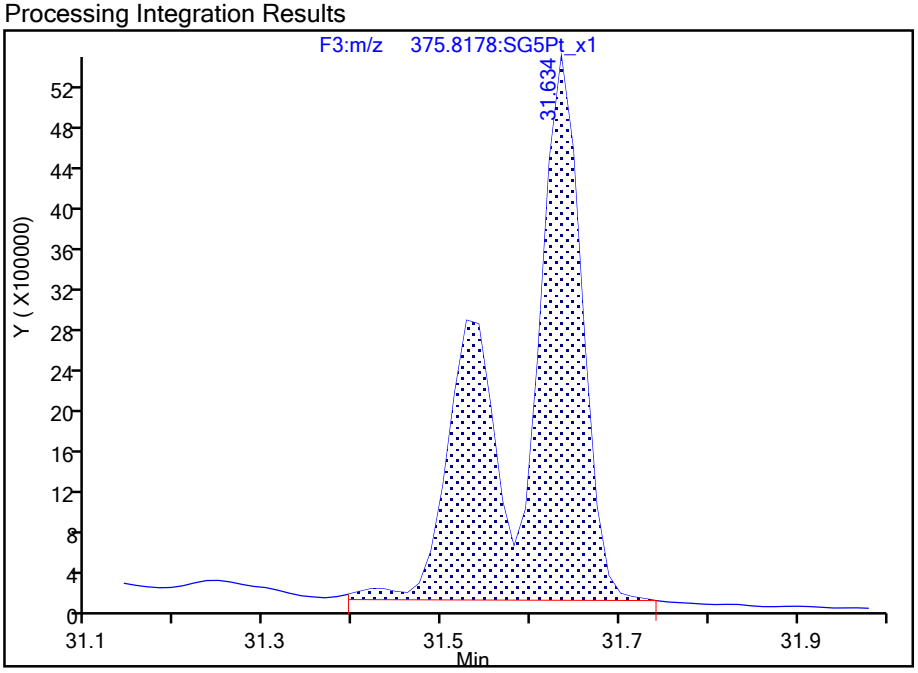

Manual Integration Results

RT: 31.63
Area: 37517111
Amount: 63.972210
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 11:55:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.63
Area: 33027710
Amount: 102.5847
Amount Units: pg/ul

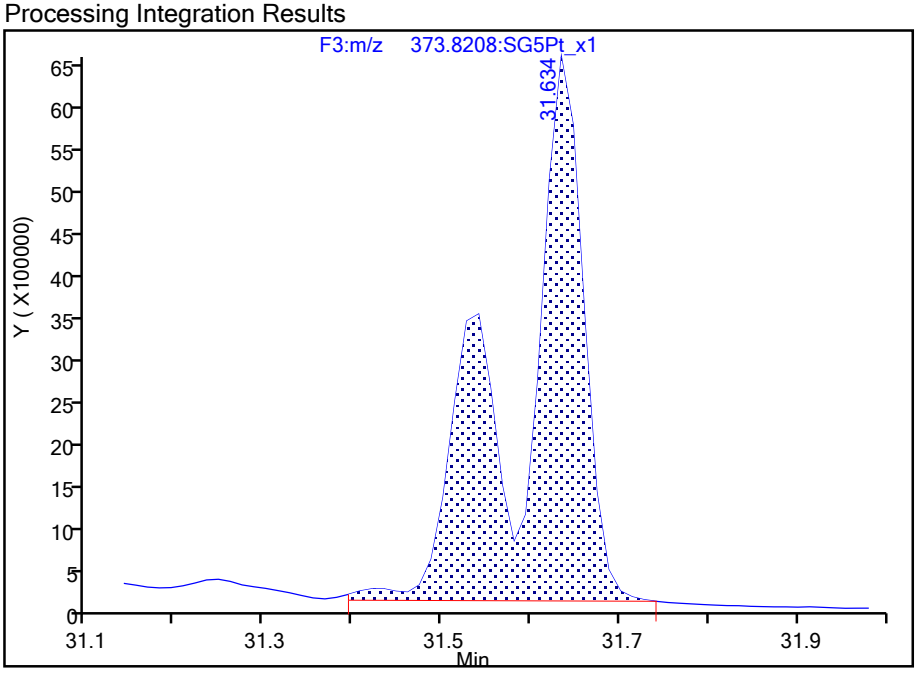

Manual Integration Results

RT: 31.63
Area: 20589241
Amount: 63.972210
Amount Units: pg/ul

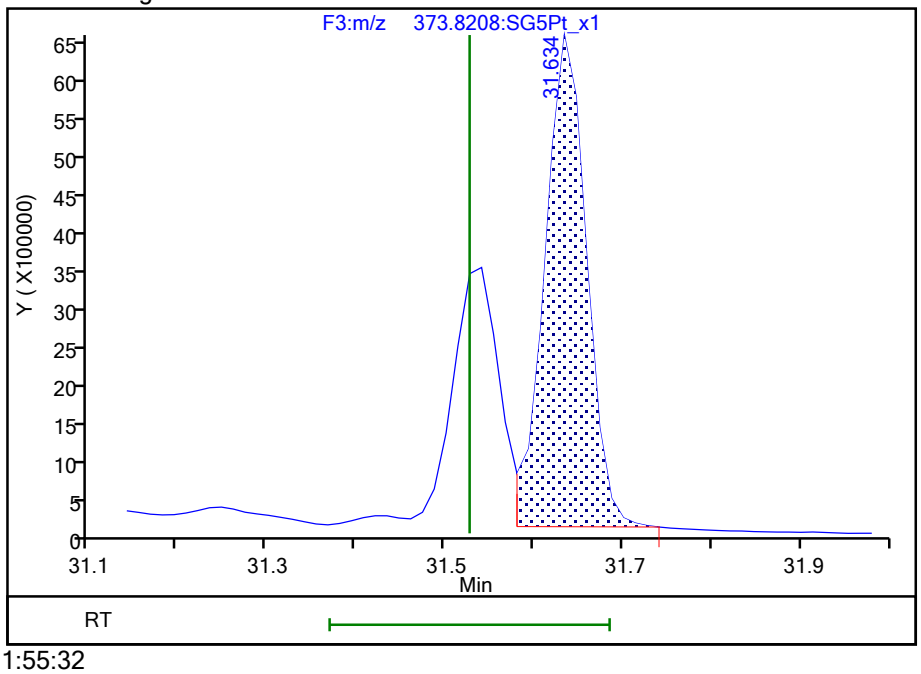

Reviewer: dadunj, 18-Aug-2021 11:55:32

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,7,8,9-HxCDF, CAS: 116843-04-0

Signal: 1

Processing Integration Results

RT: 31.62
Area: 17493240
Amount: 0
Amount Units: pg/ul

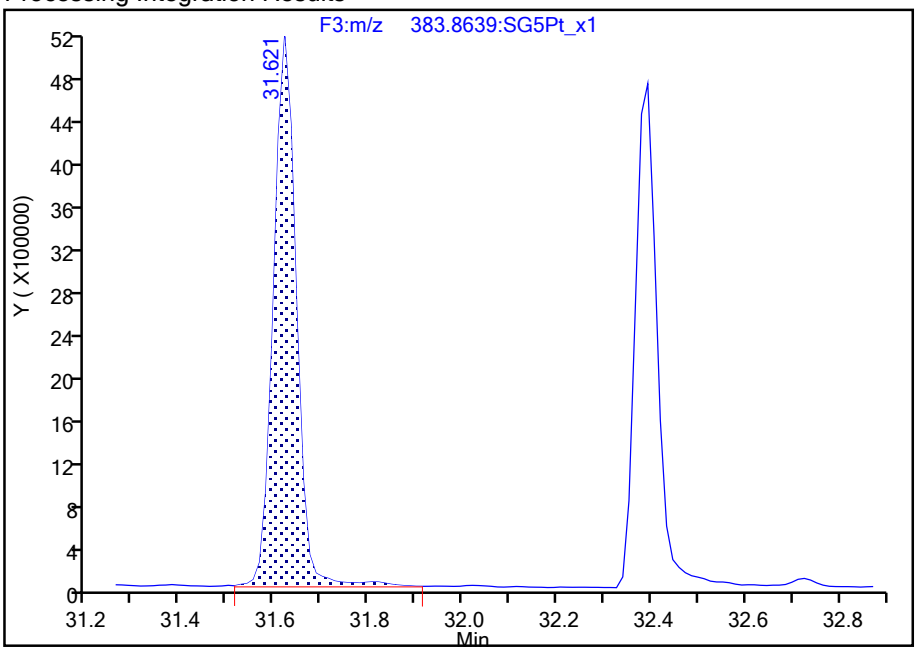

Manual Integration Results

RT: 32.39
Area: 15430061
Amount: 54.530019
Amount Units: pg/ul

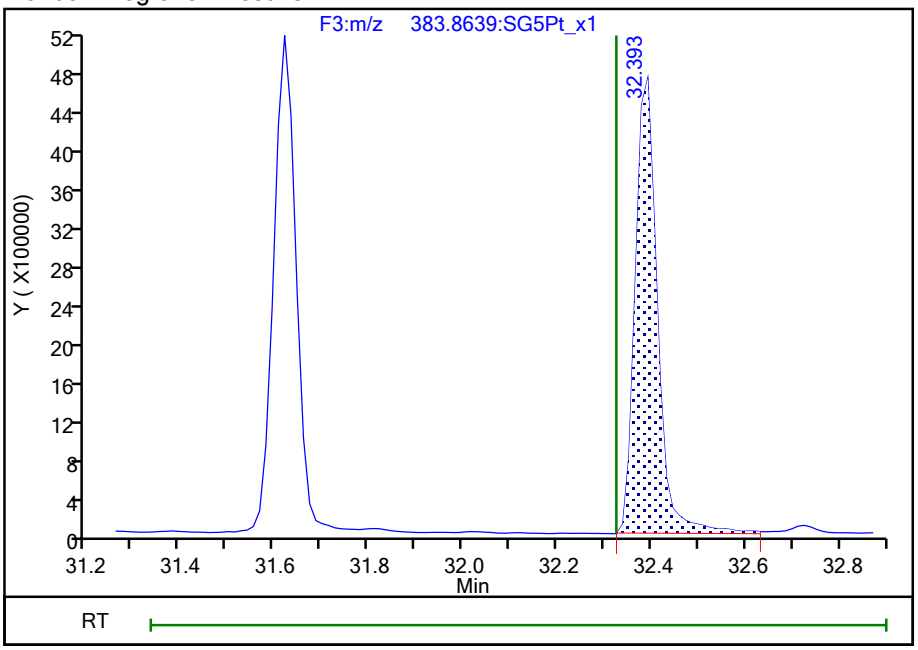

Reviewer: dadunj, 18-Aug-2021 11:53:52

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.49
Area: 49274757
Amount: 168.0583
Amount Units: pg/ul

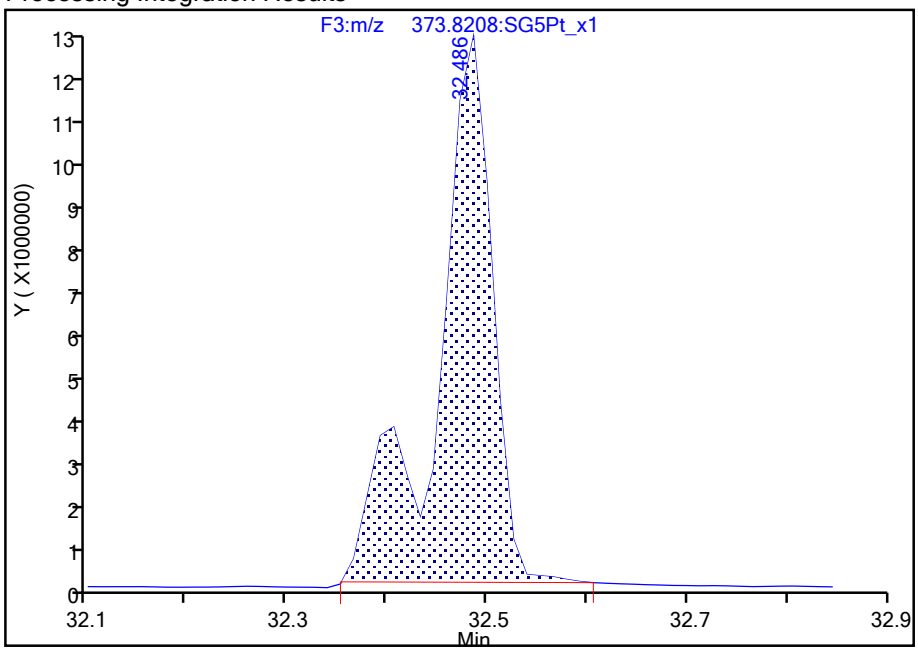

Manual Integration Results

RT: 32.41
Area: 10155649
Amount: 34.608876
Amount Units: pg/ul

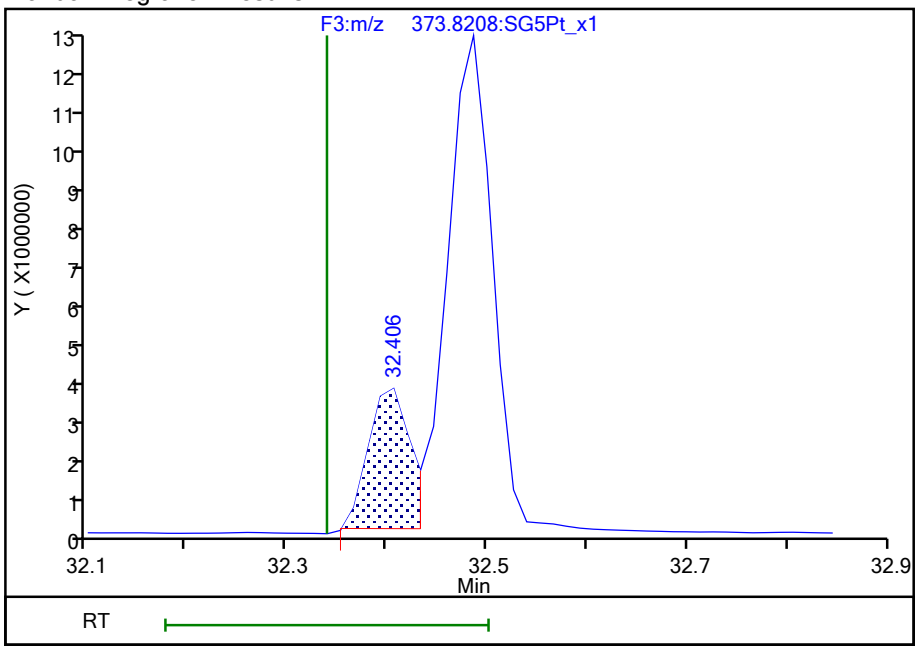

Reviewer: dadunj, 18-Aug-2021 11:54:09

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.49
Area: 40557607
Amount: 168.0583
Amount Units: pg/ul

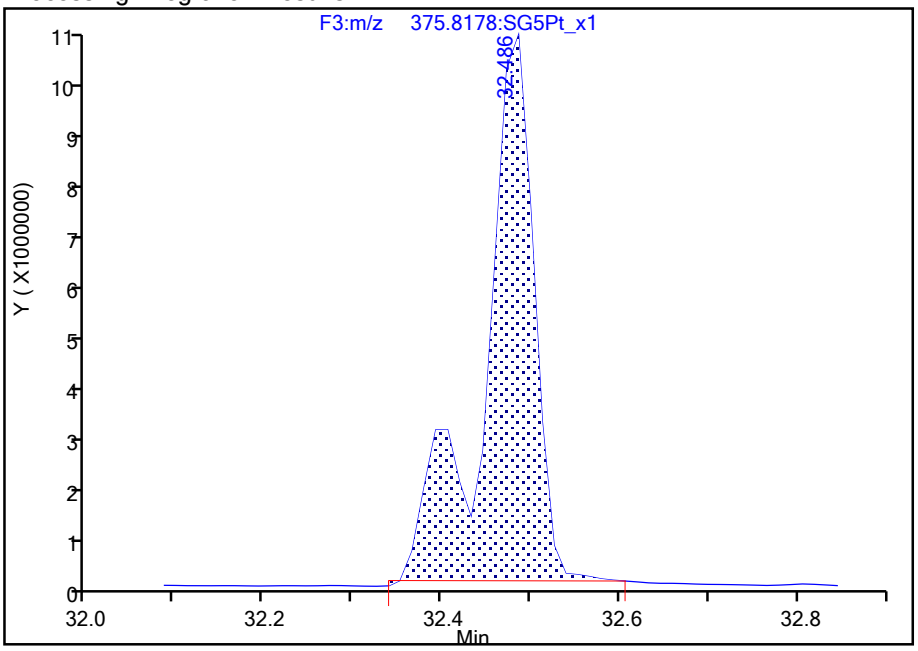

Manual Integration Results

RT: 32.41
Area: 8343867
Amount: 34.608876
Amount Units: pg/ul

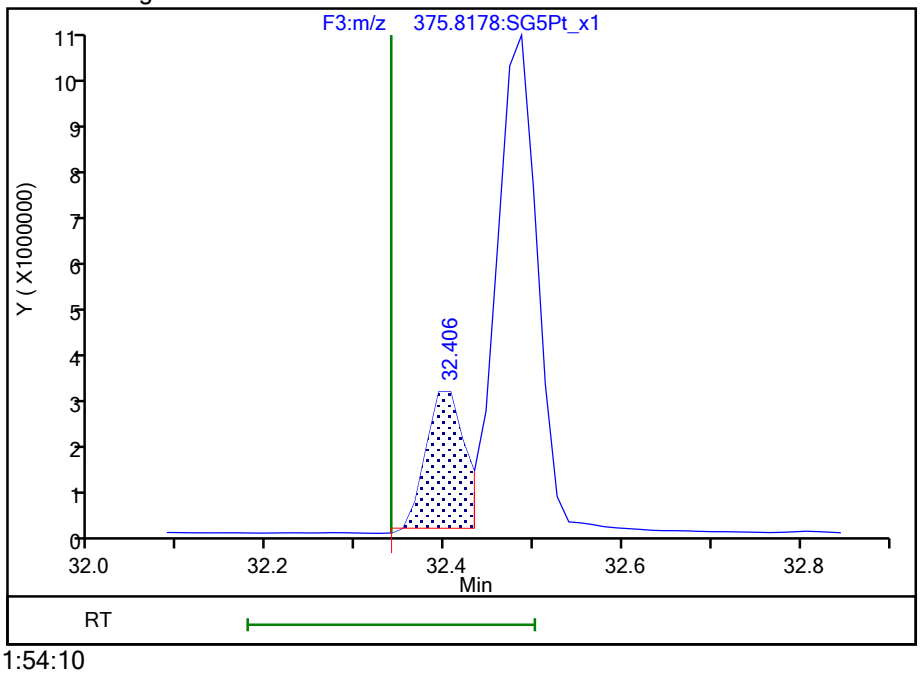

Reviewer: dadunj, 18-Aug-2021 11:54:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

Not Detected
RT: 27.94- 32.45

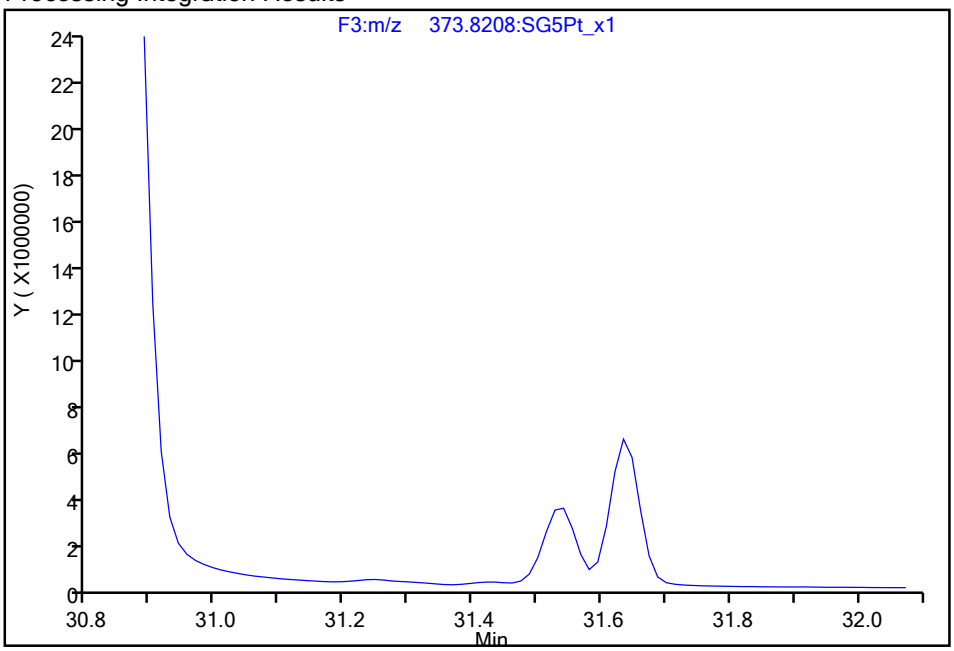

Manual Integration Results

RT = 31.541 Area = 12440606 M

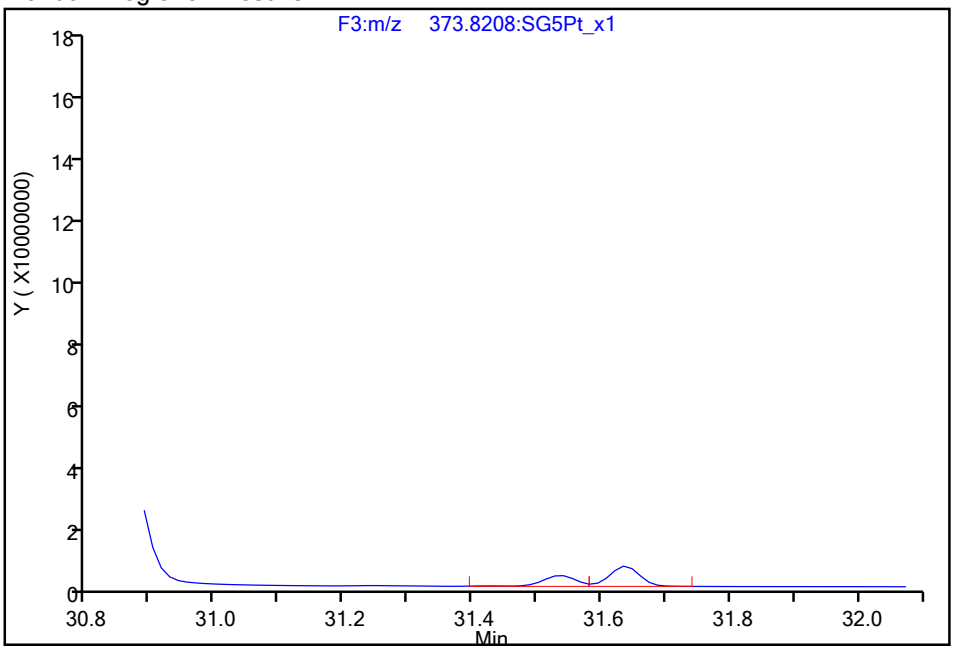

Reviewer: dadunj, 18-Aug-2021 11:54:38

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d				
Injection Date:	15-Aug-2021 21:12:18	Instrument ID:	10D5		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:	DB	ALS Bottle#:	67	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.486 Area = 49274757

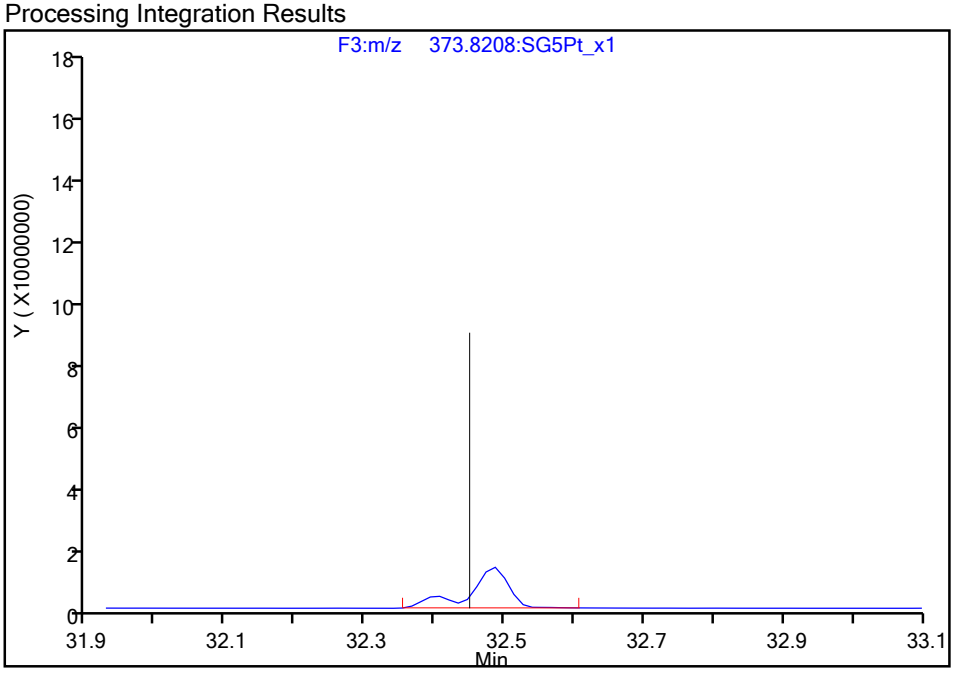

Manual Integration Results

RT = 32.486 Area = 39119949 M

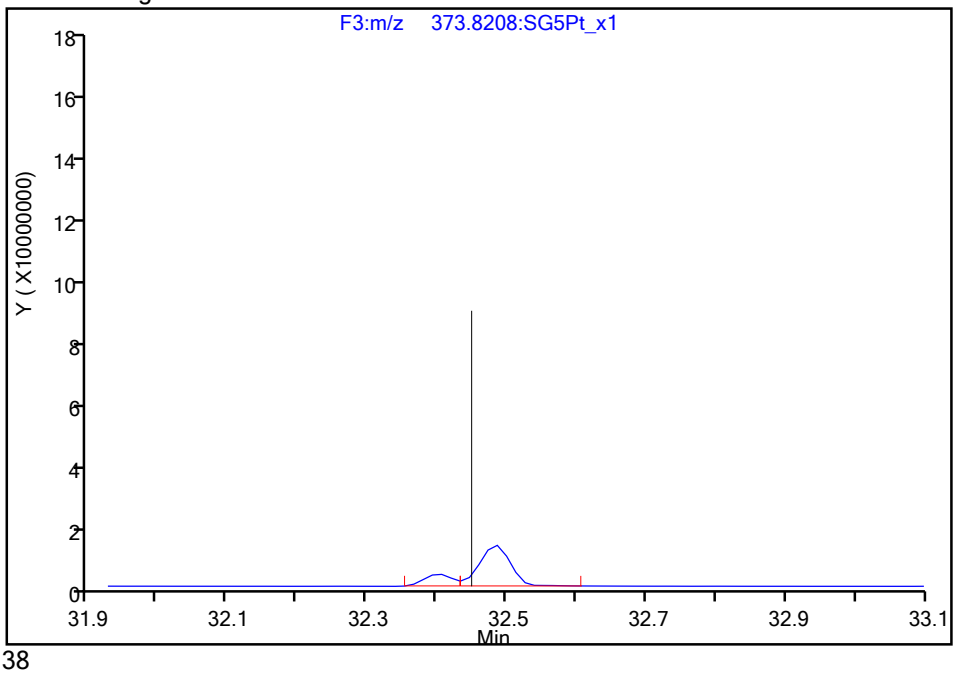

Reviewer: dadunj, 18-Aug-2021 11:54:38

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

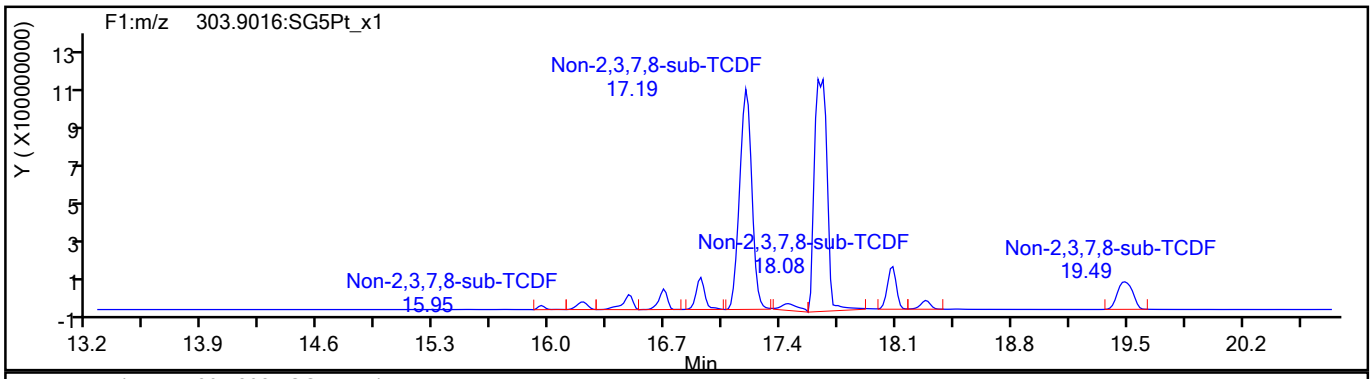

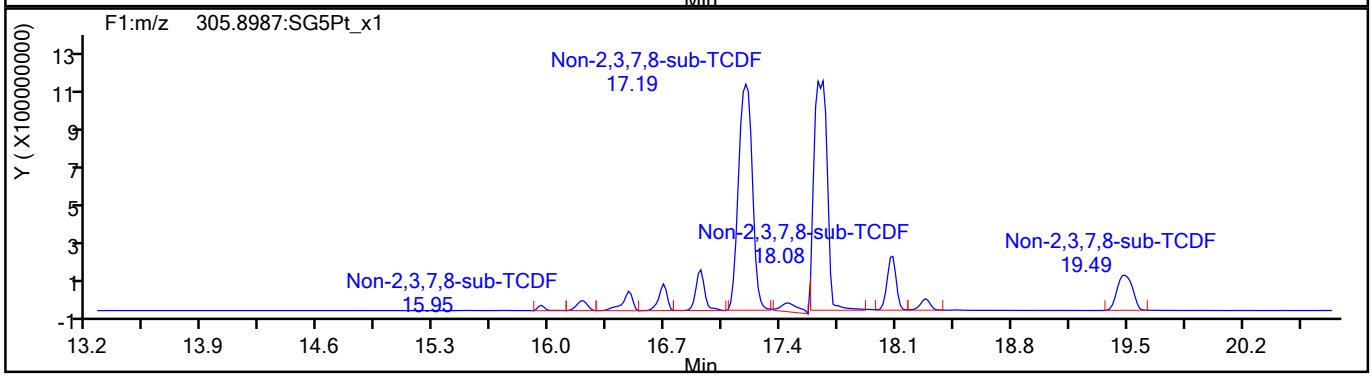

TCDF Standards

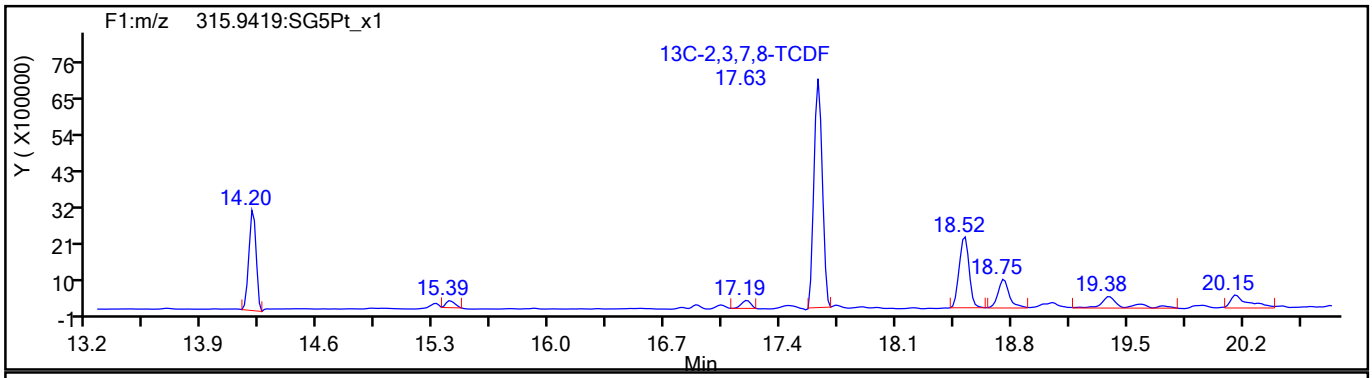

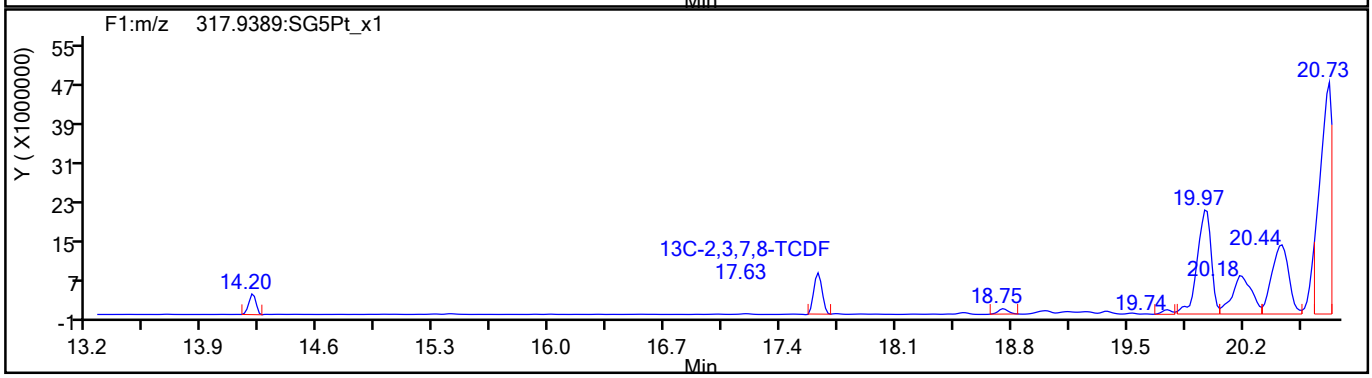

775050

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

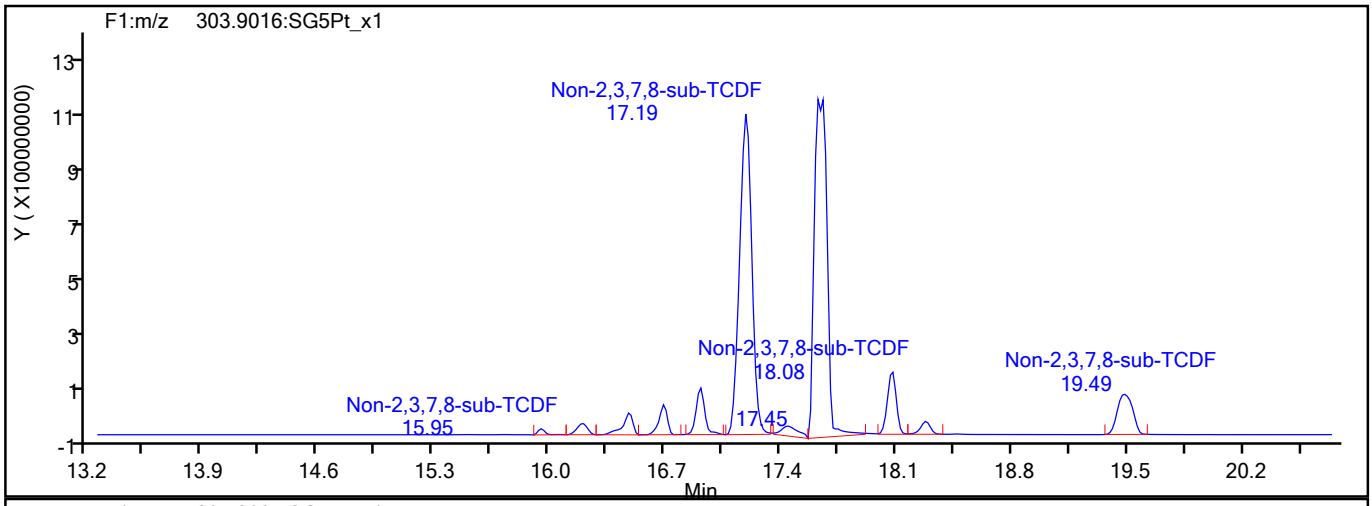

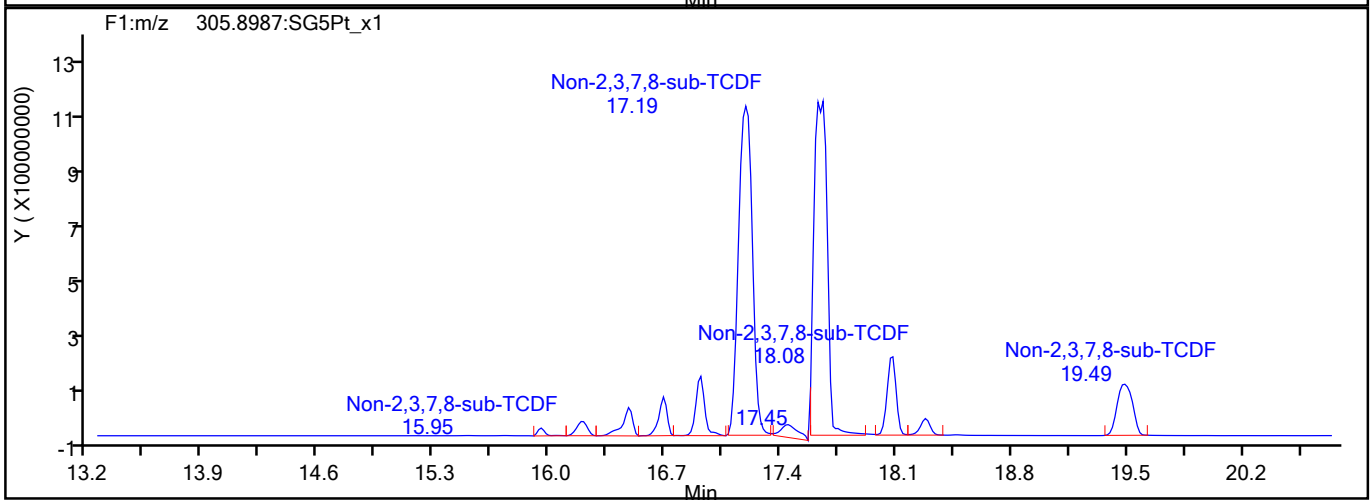

TCDF Interference Mass

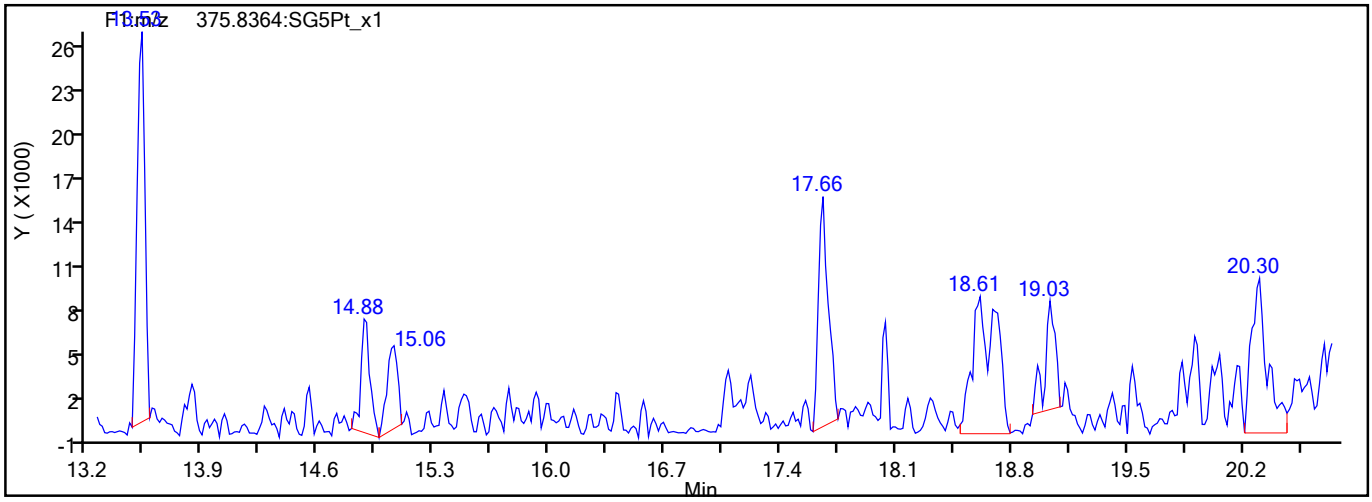

775051

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

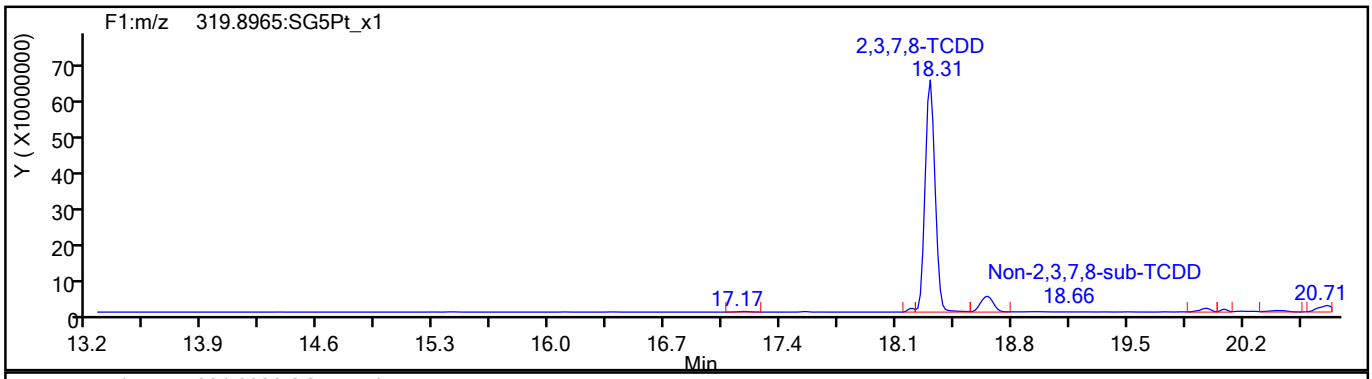

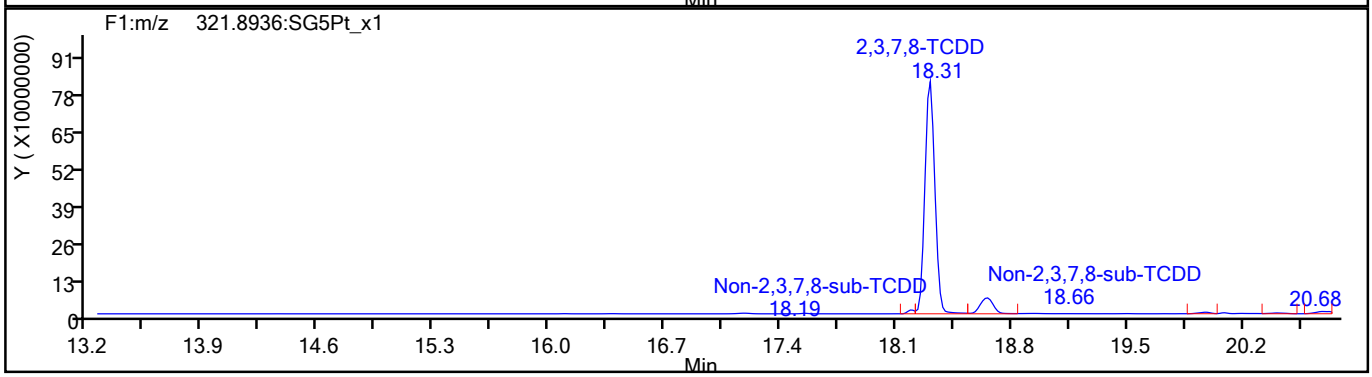

TCDD Standards

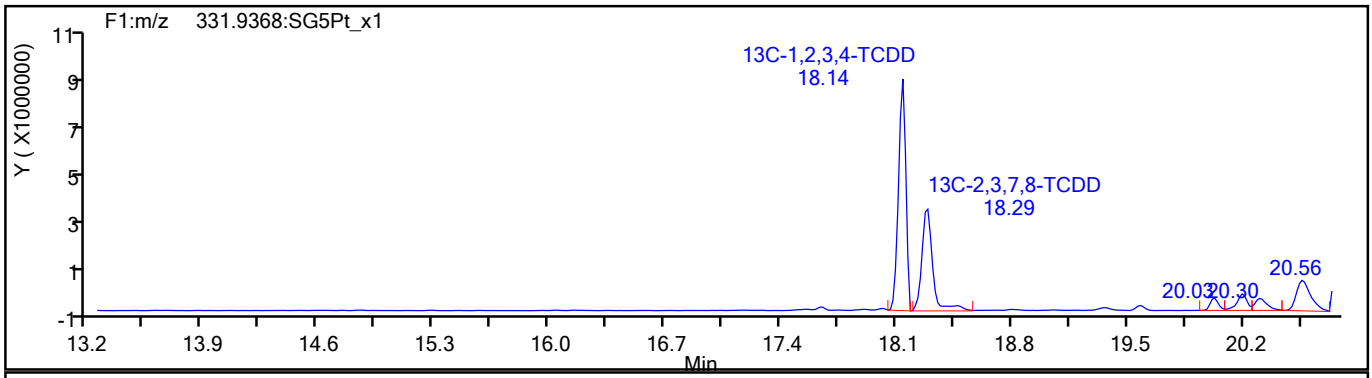

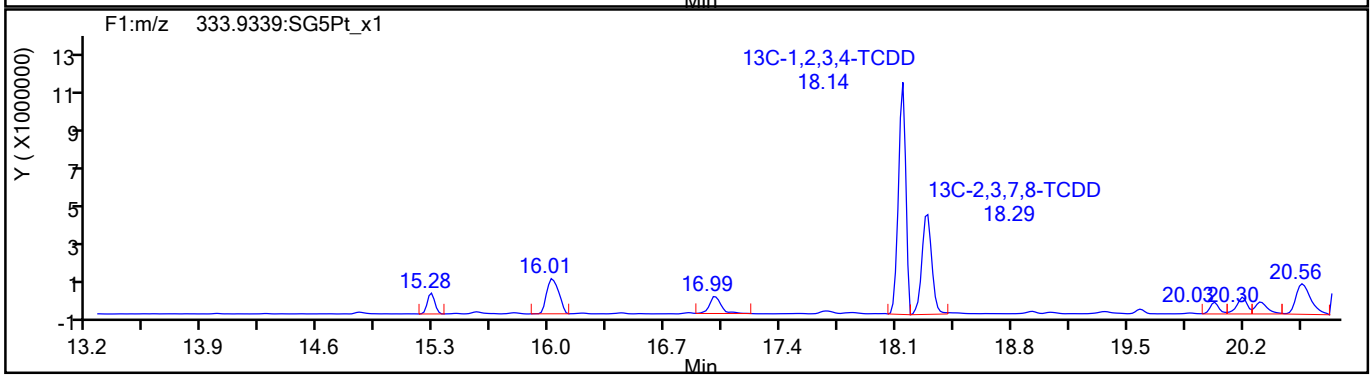

775052

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

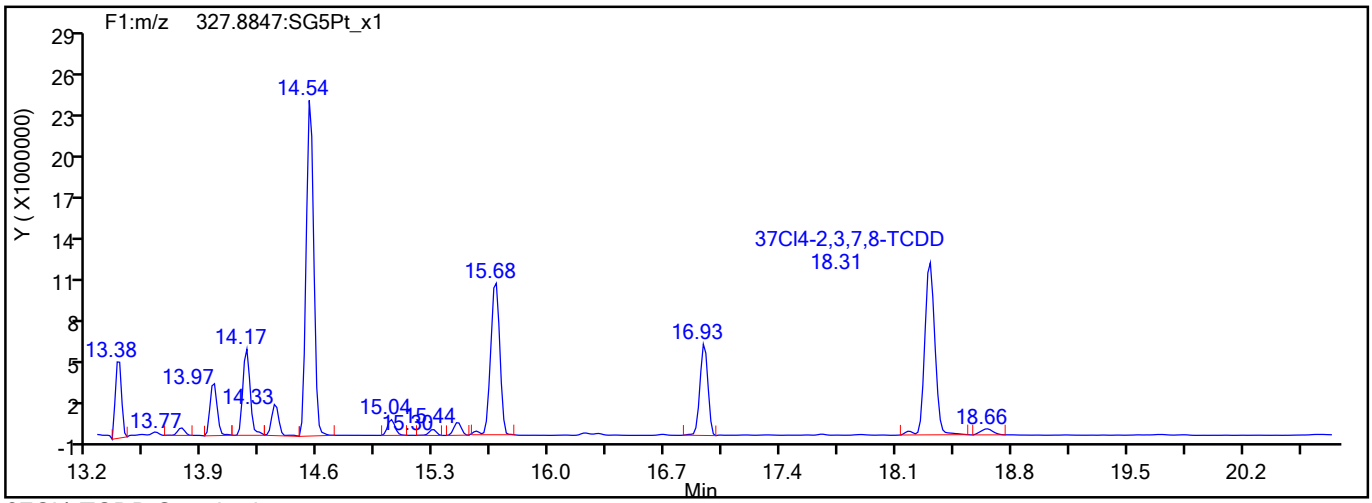

37Cl4-TCDD Standards

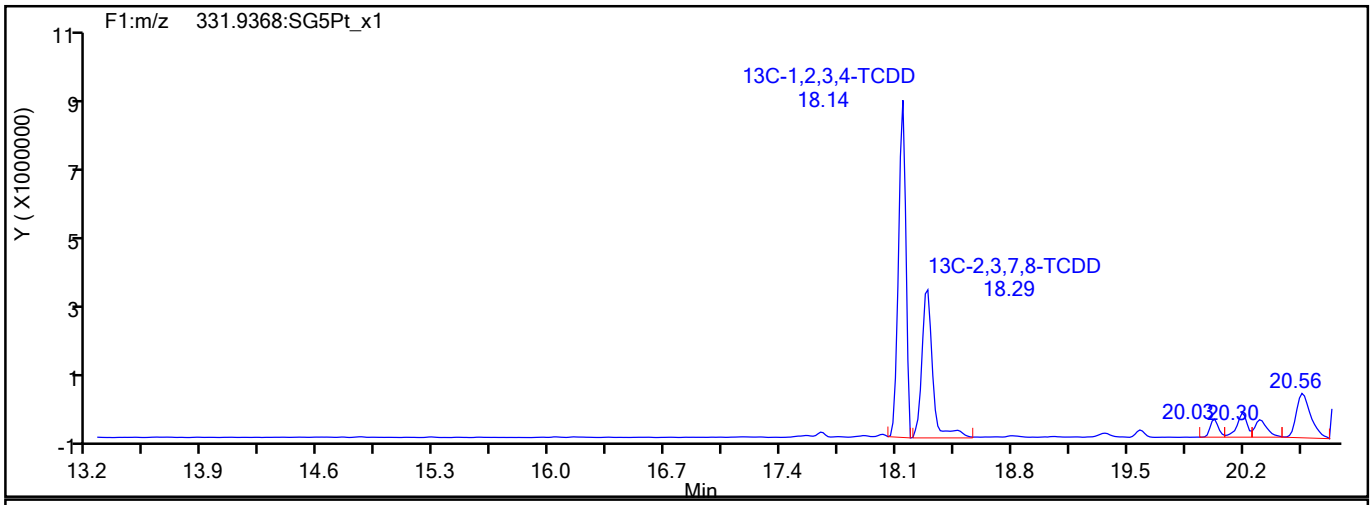

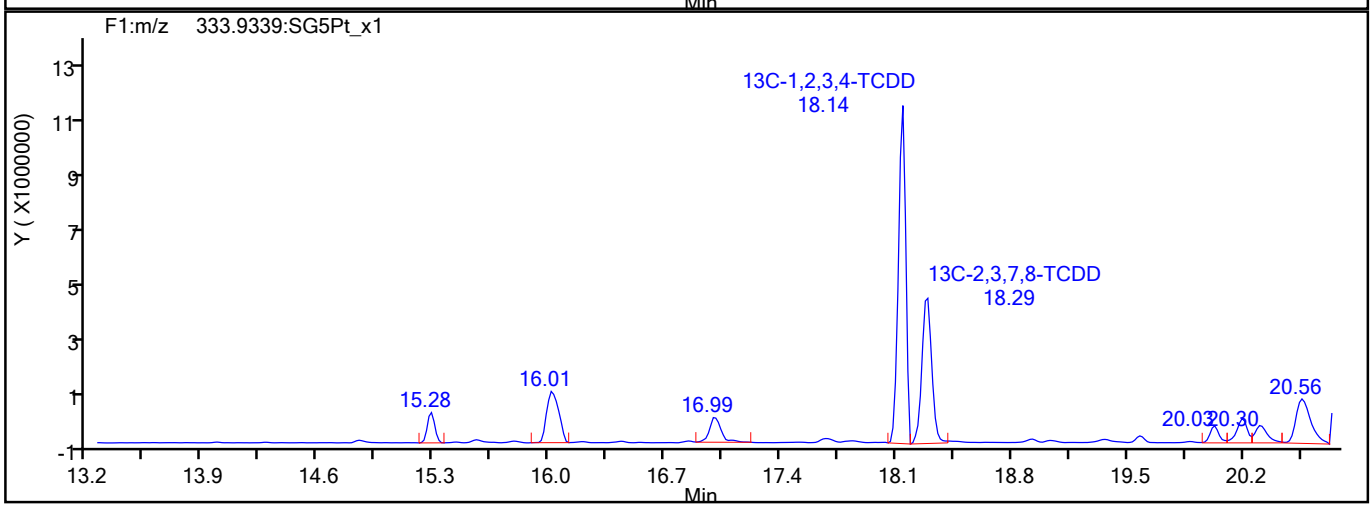

775053

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

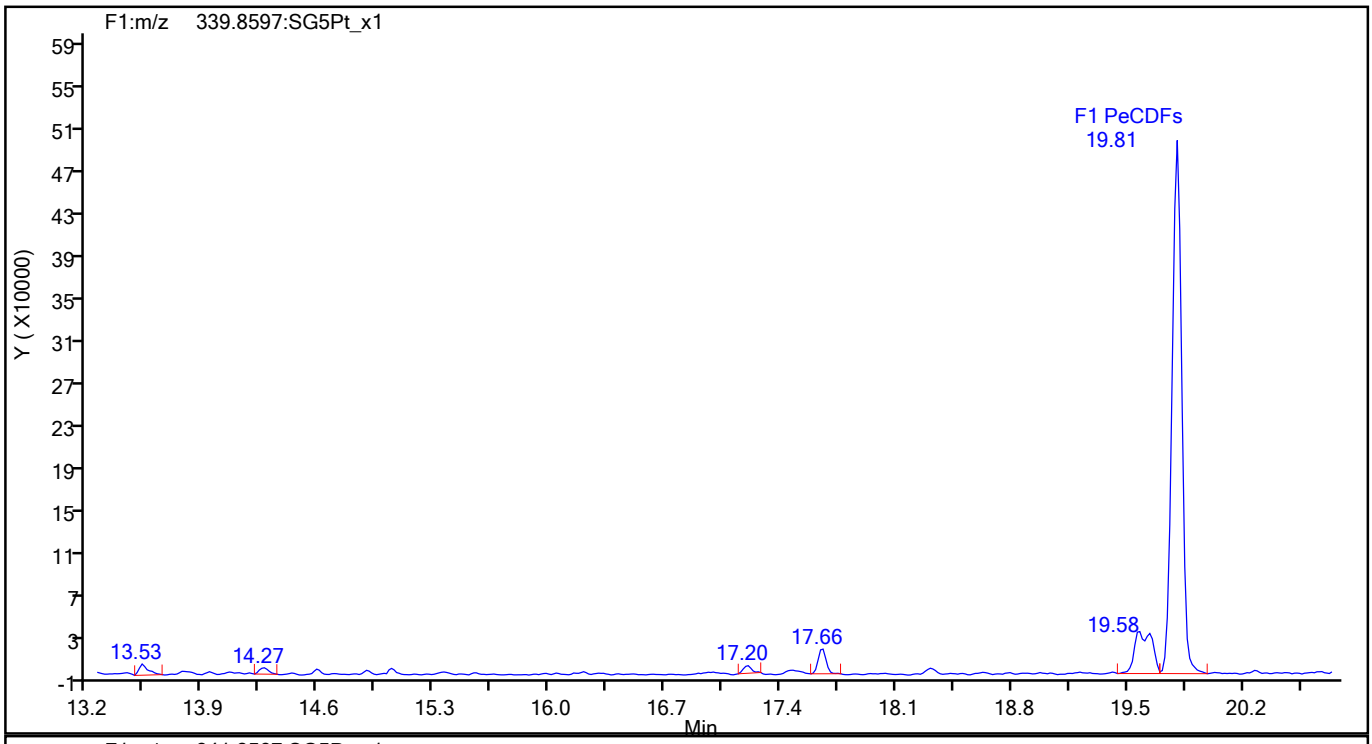

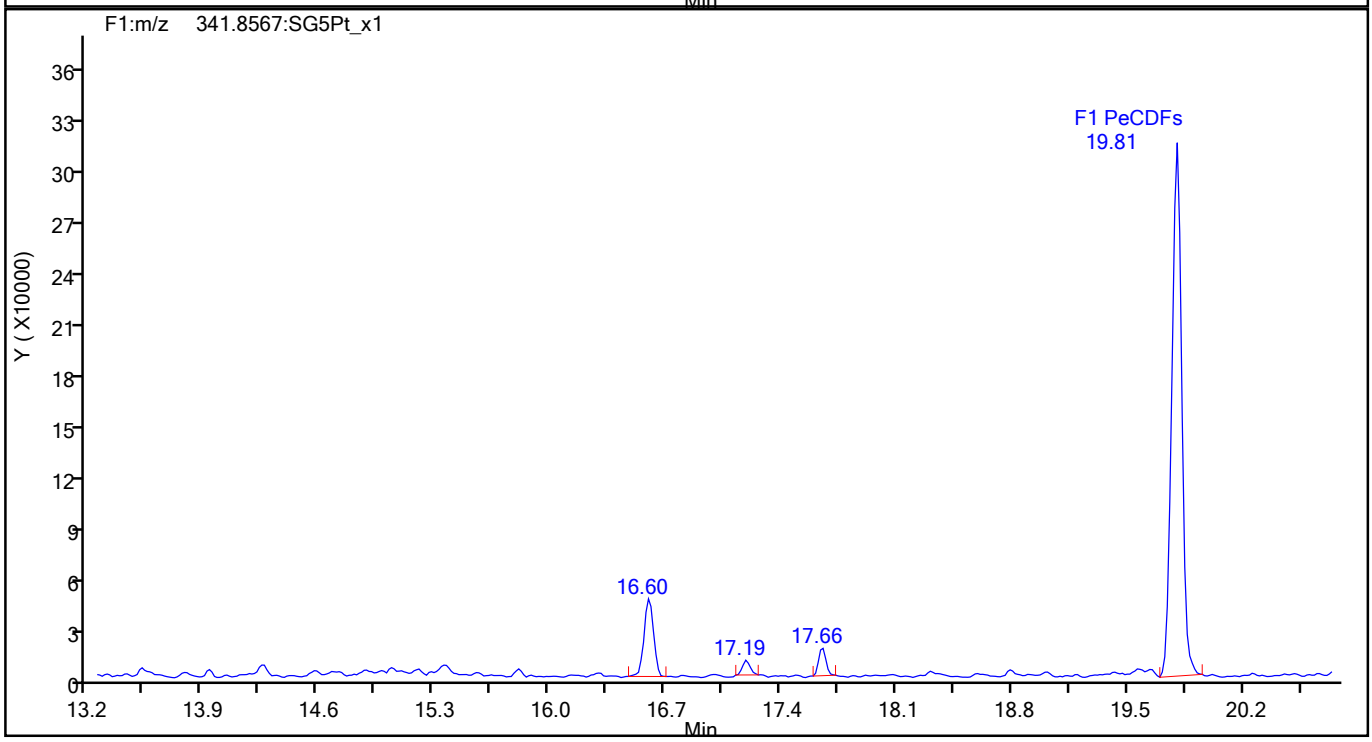

775054

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

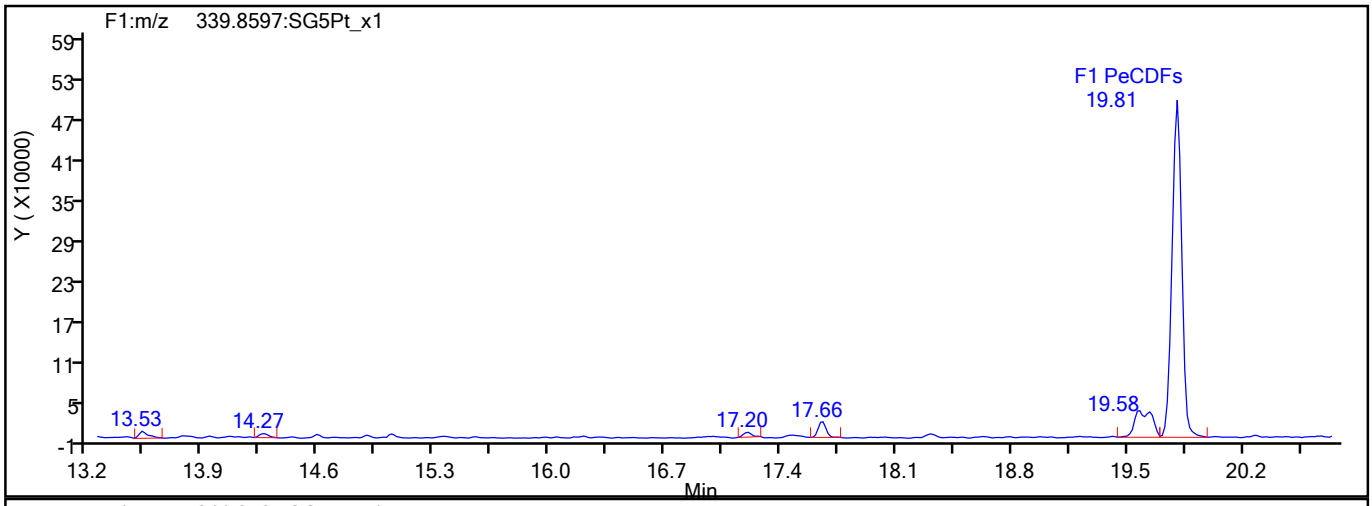

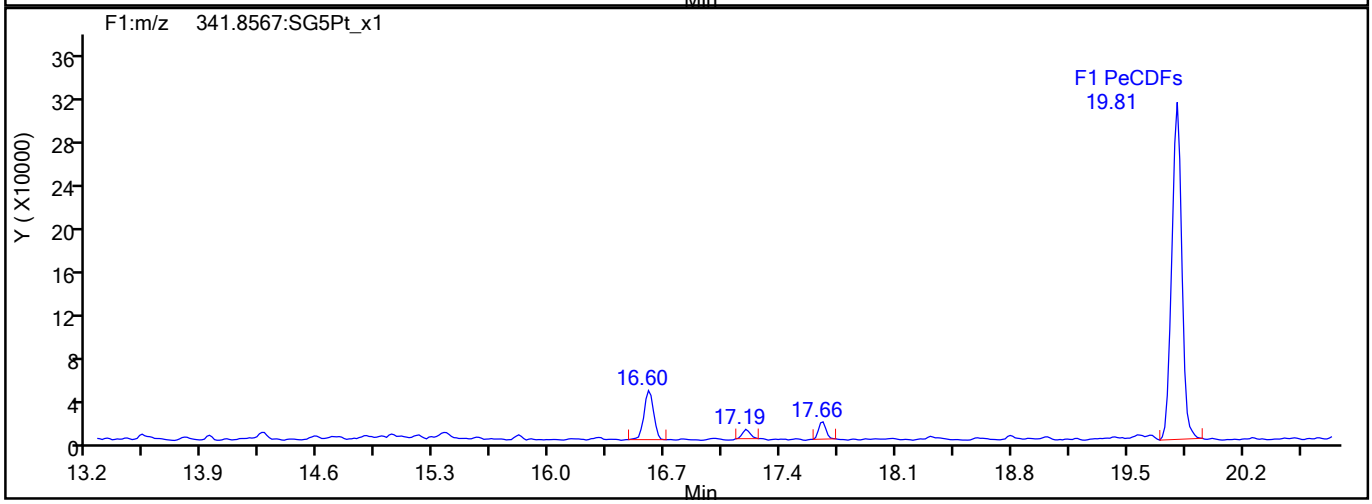

F1 PeCDFs Interference Mass

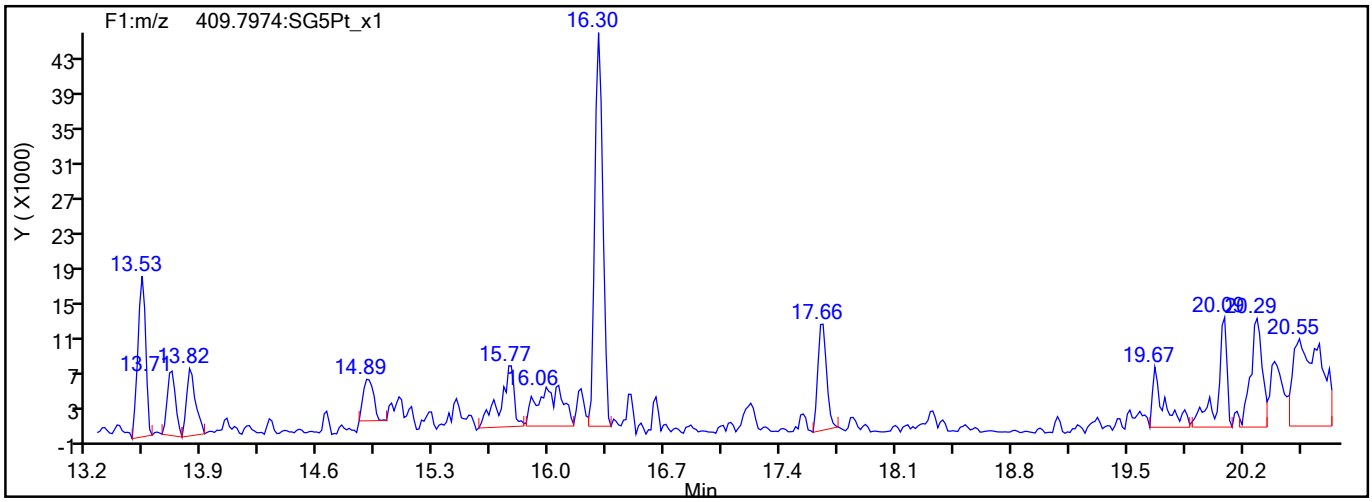

775055

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

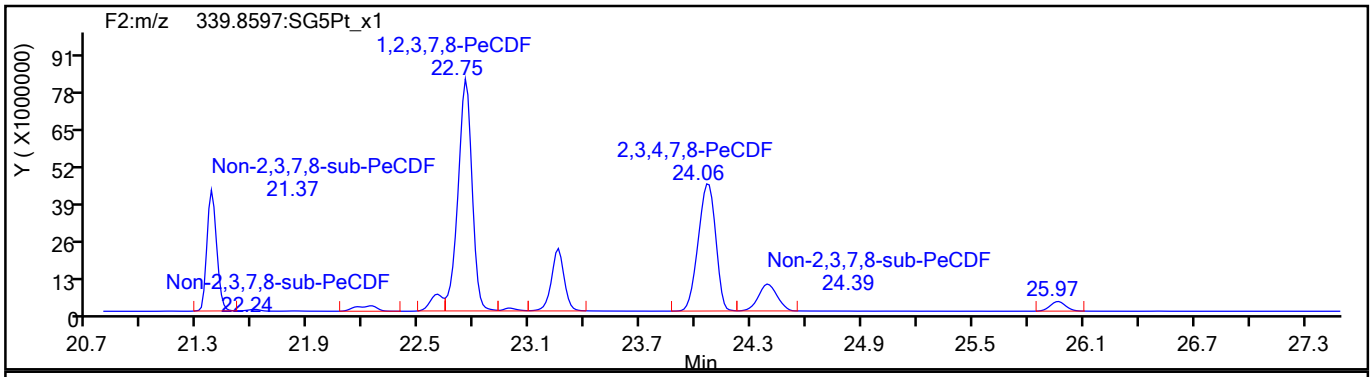

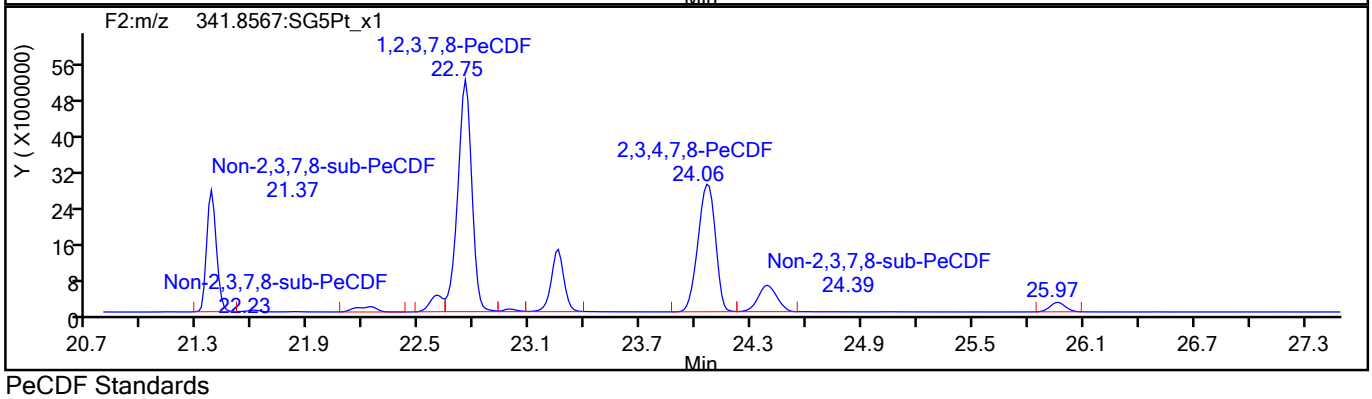

PeCDF Standards

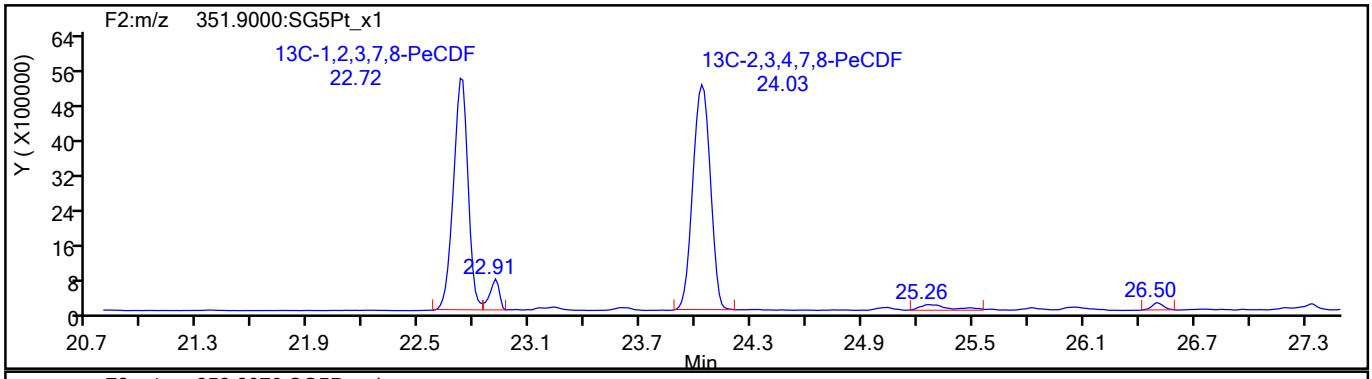

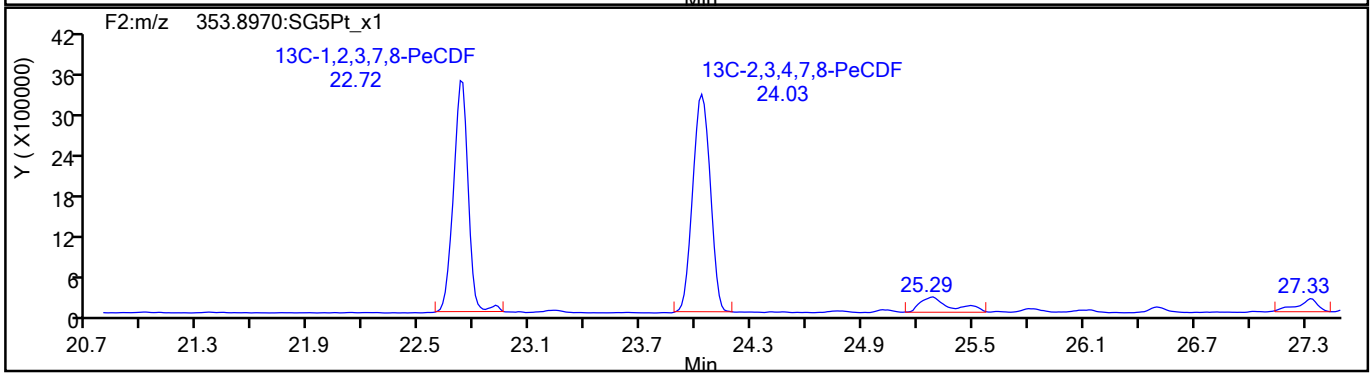

775056

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

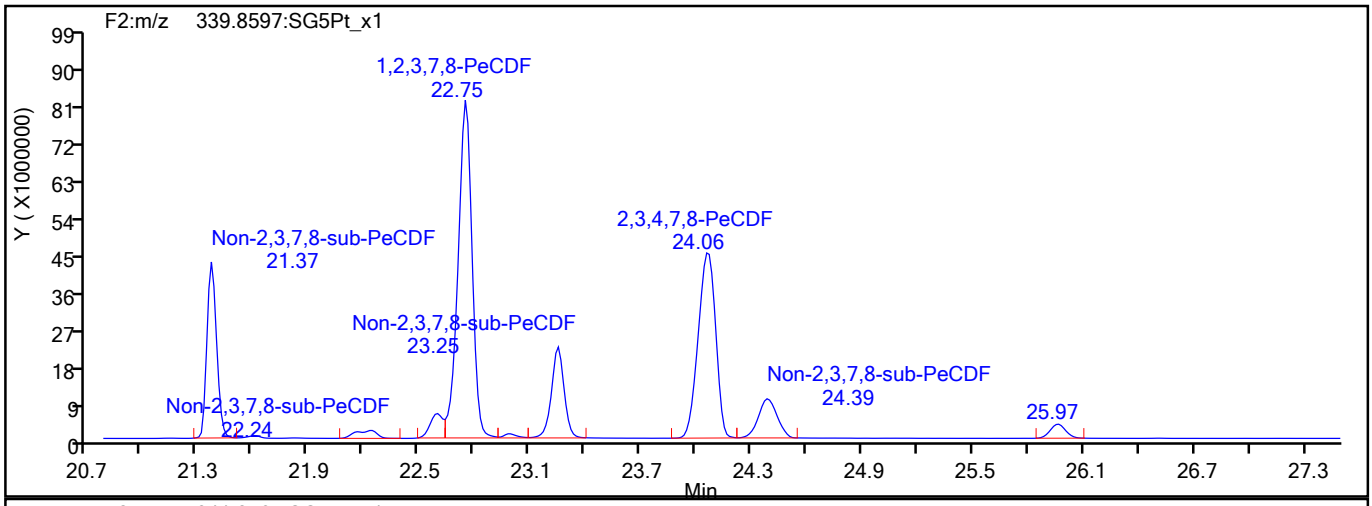

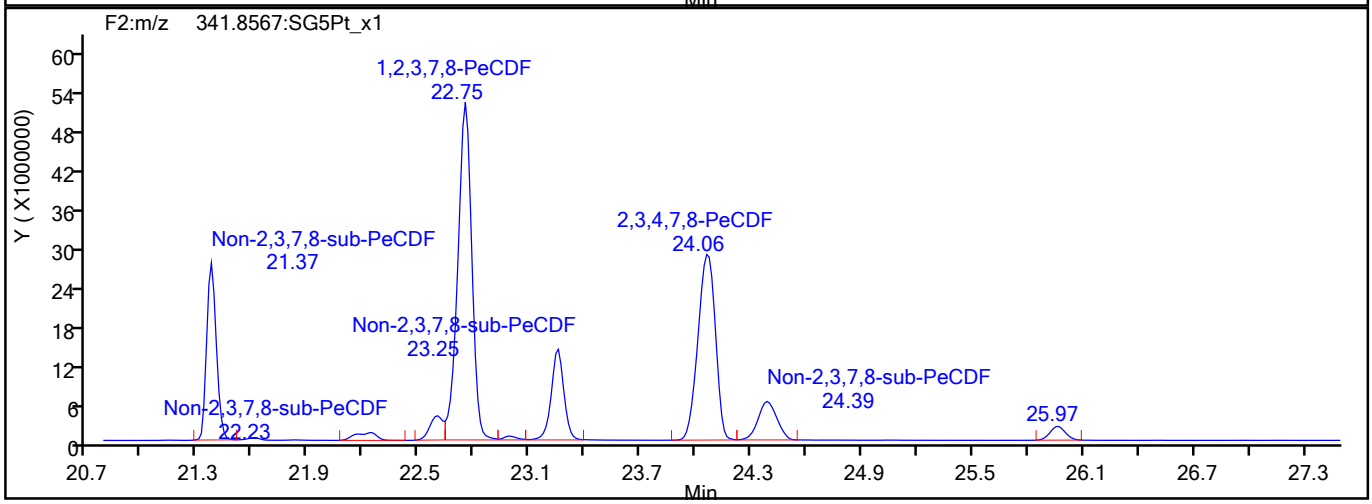

PeCDF Interference Mass

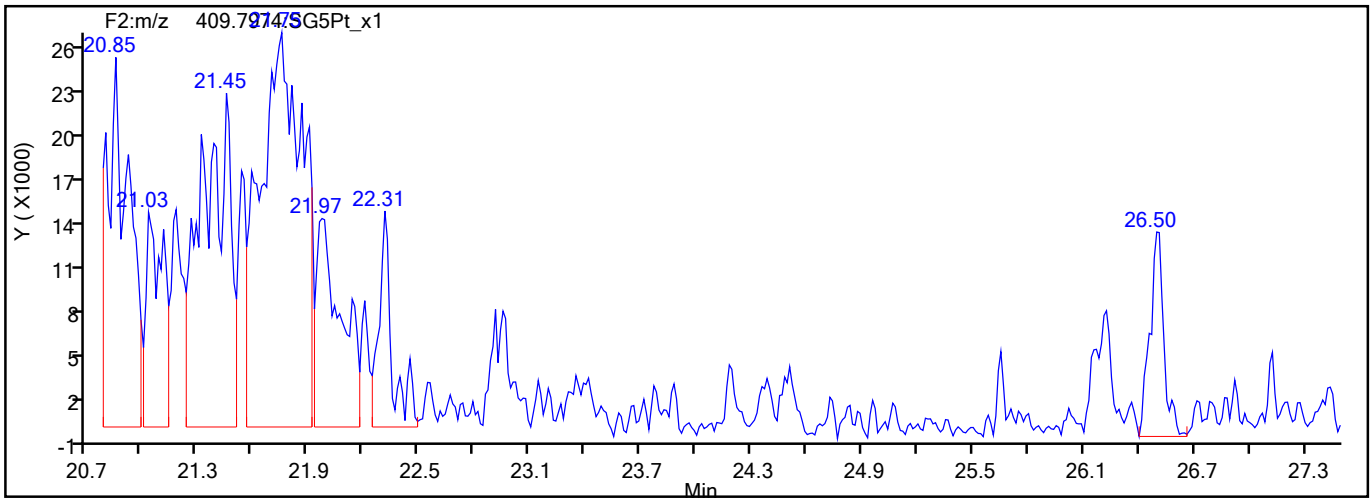

775057

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

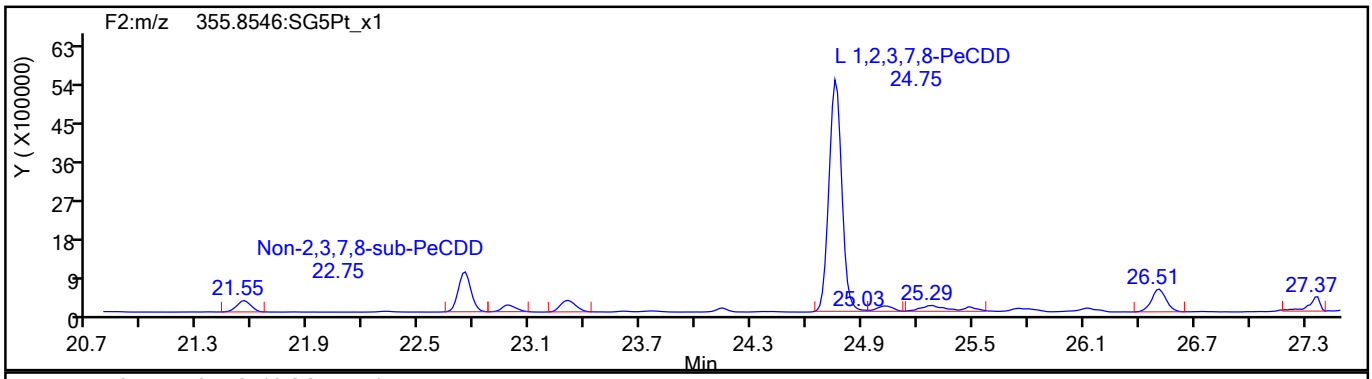

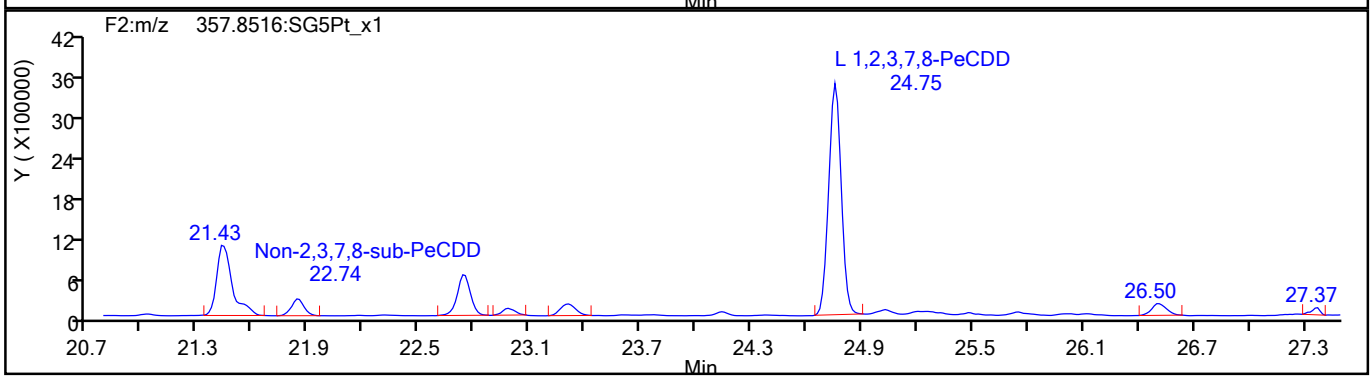

PeCDD Standards

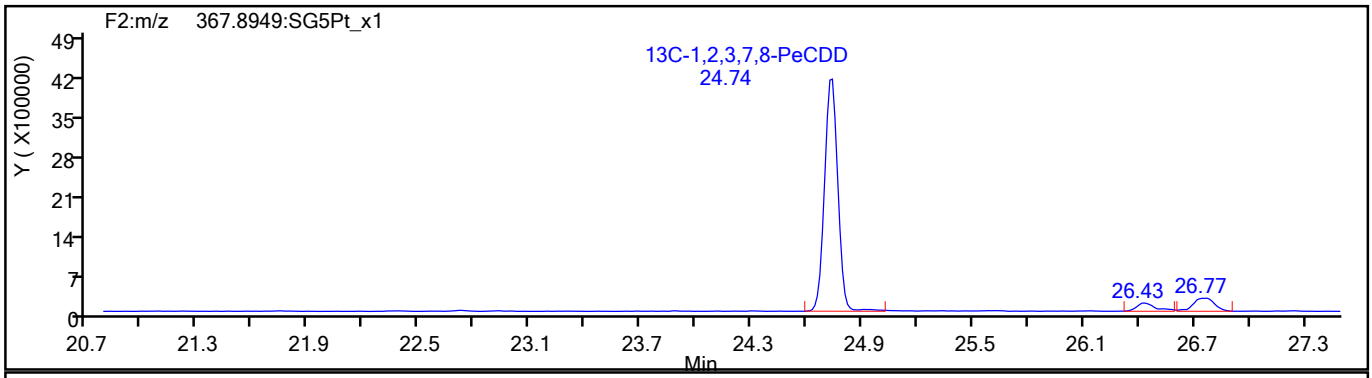

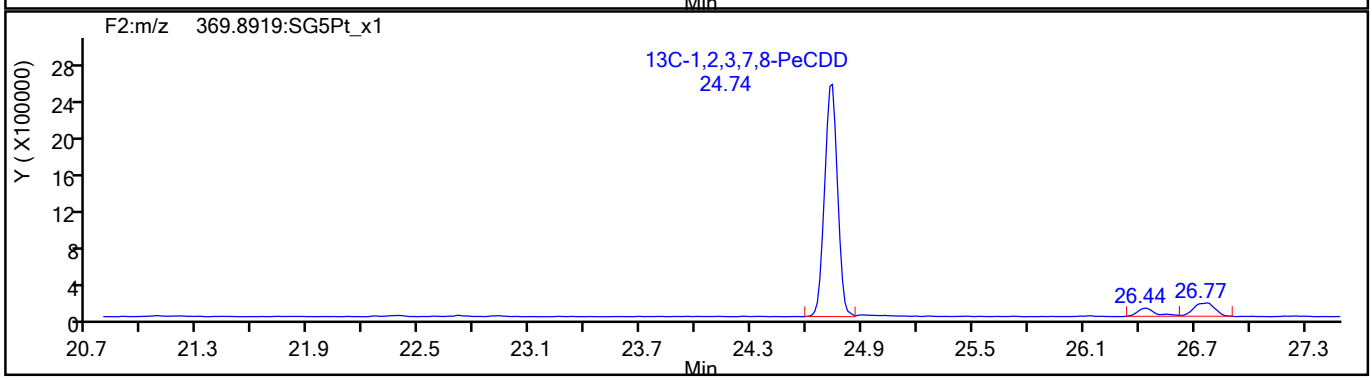

775058

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

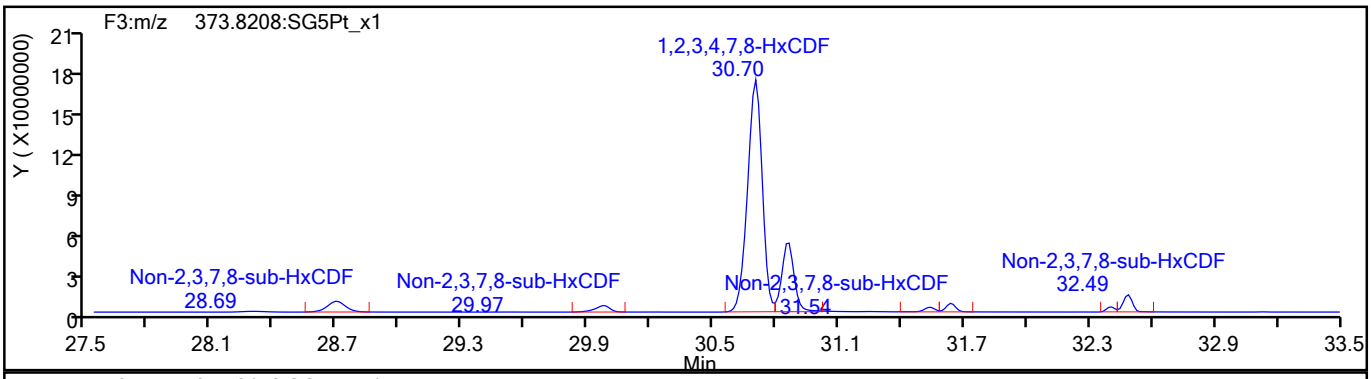

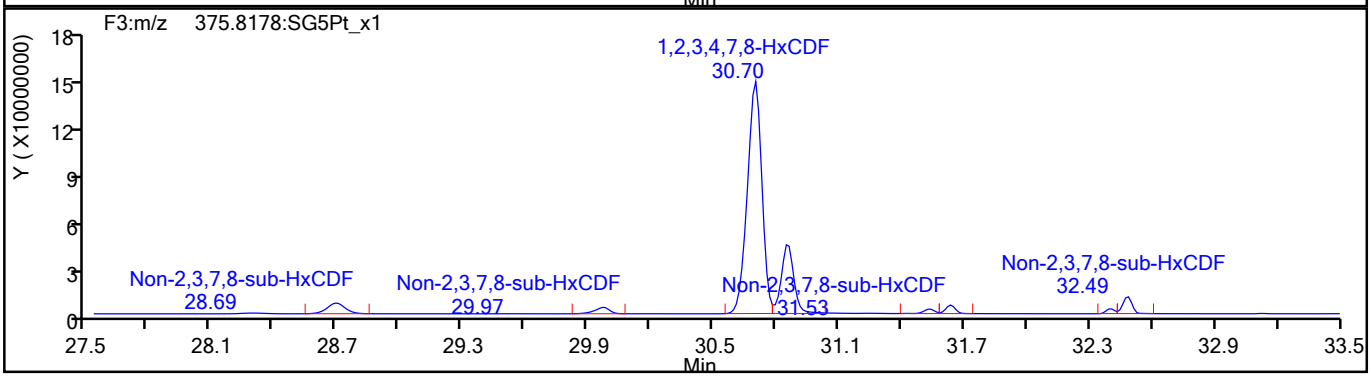

HxCDF Standards

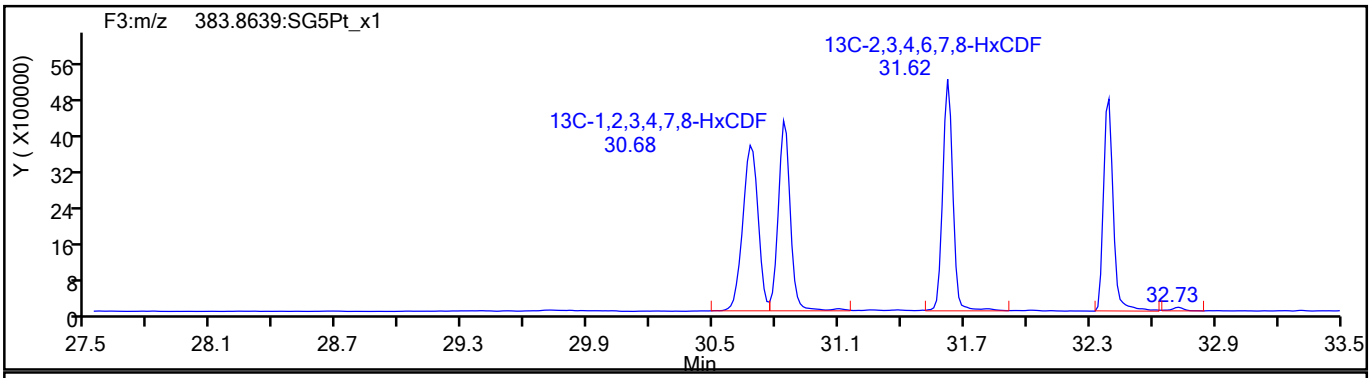

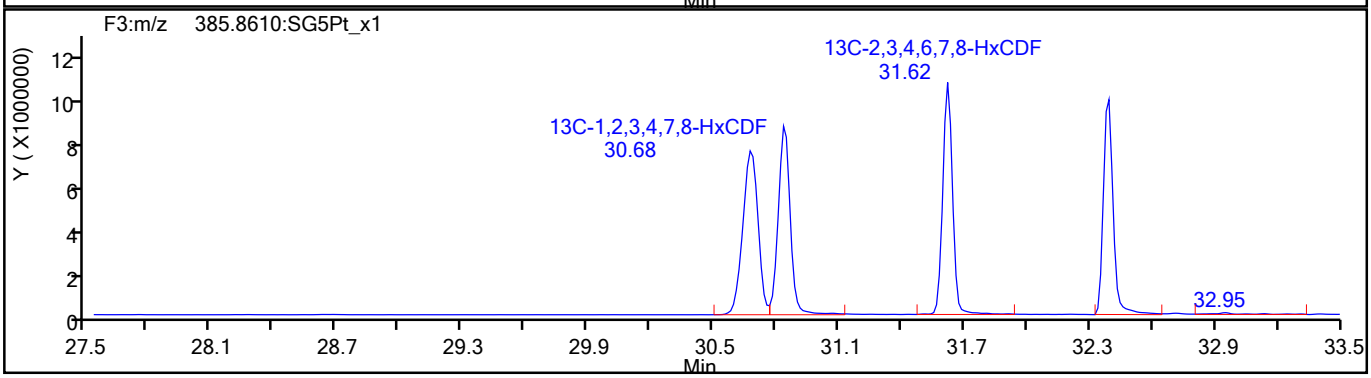

775059

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

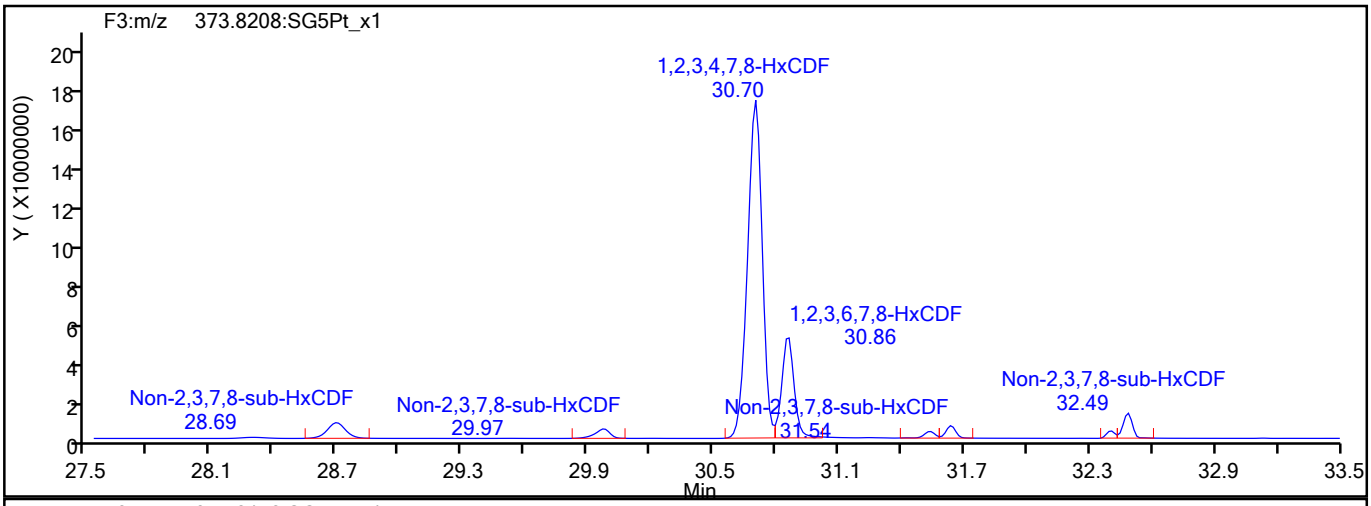

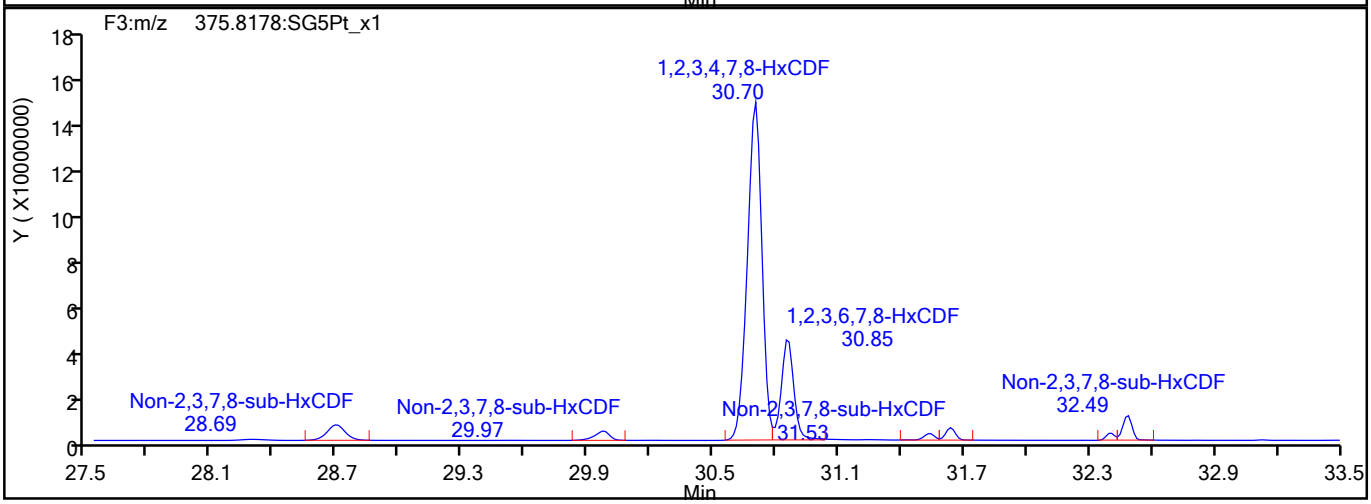

HxCDF Interference Mass

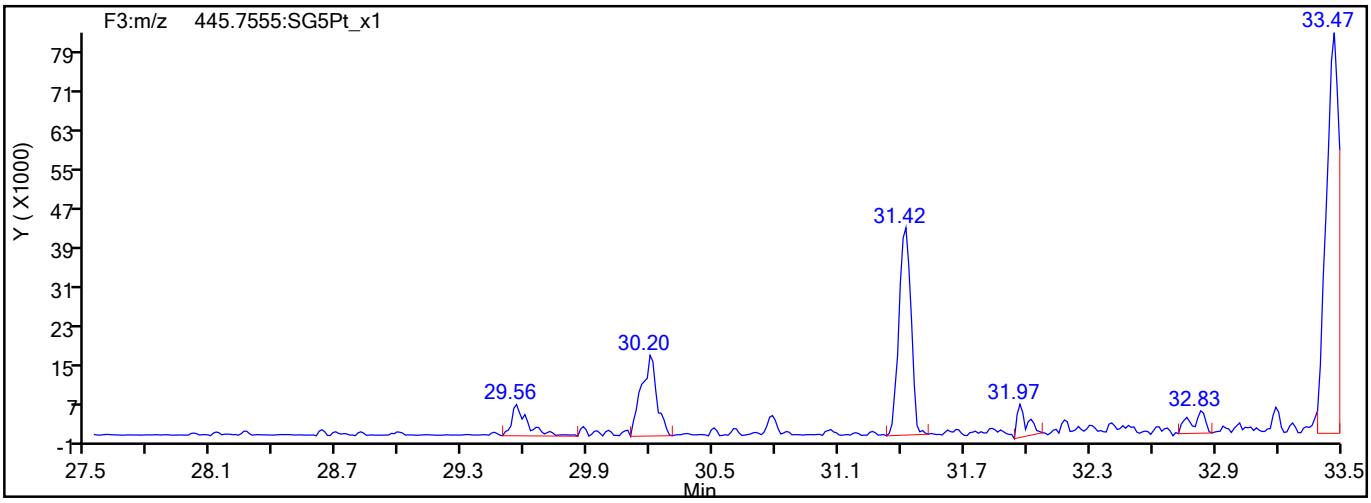

775060

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

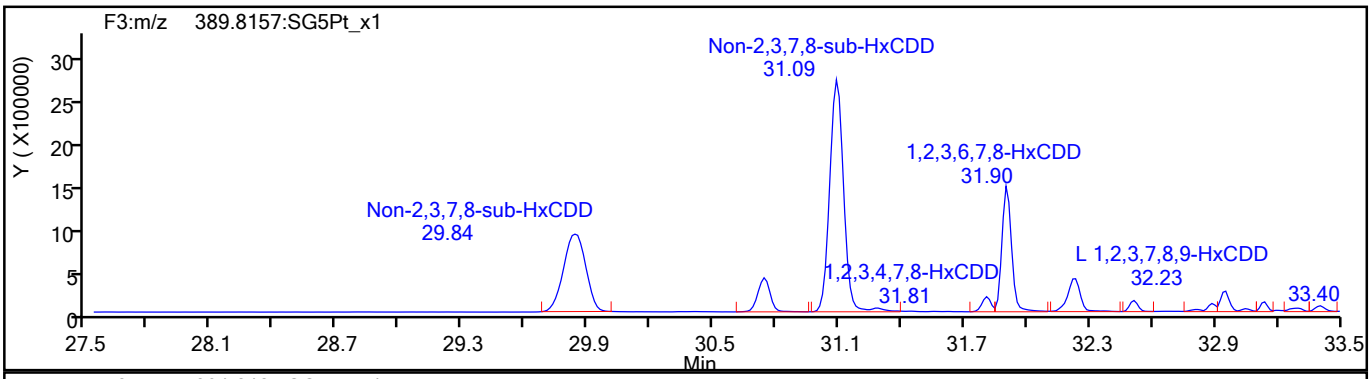

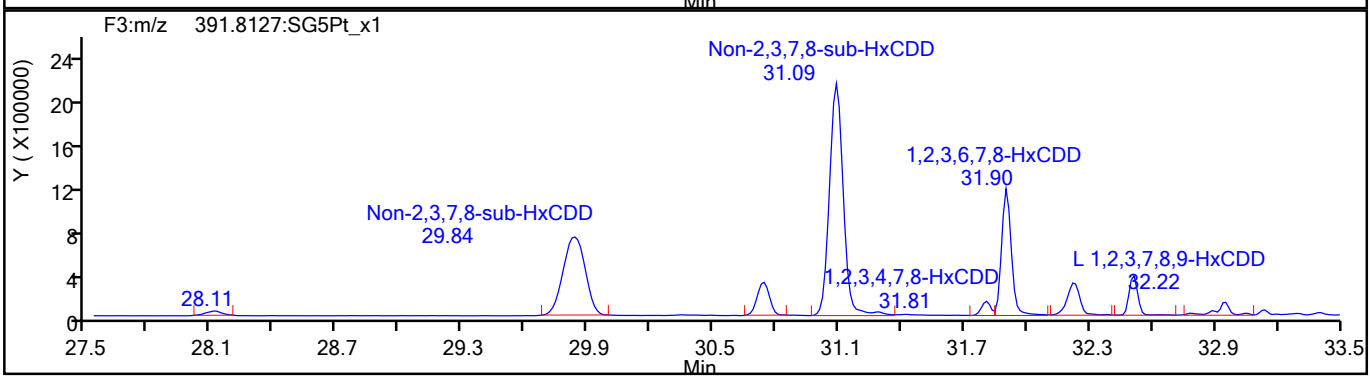

HxCDD Standards

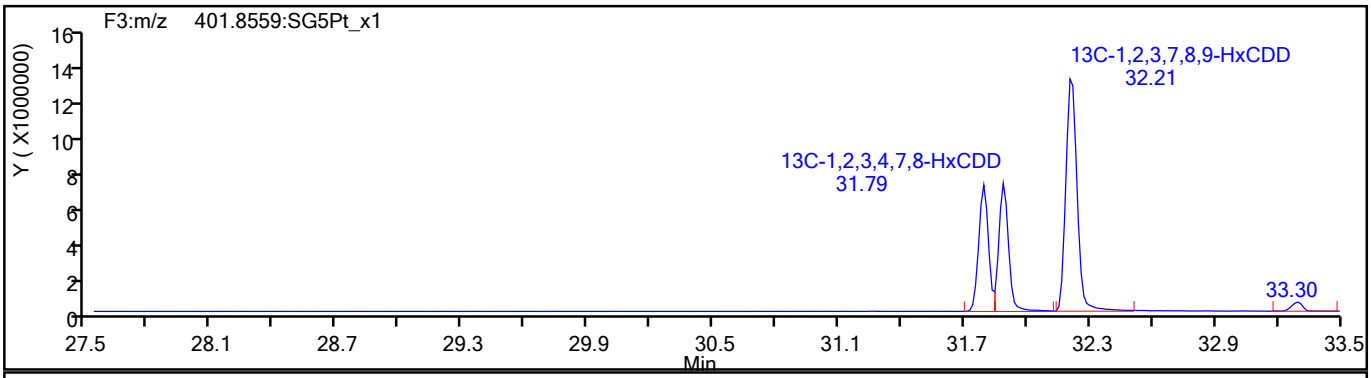

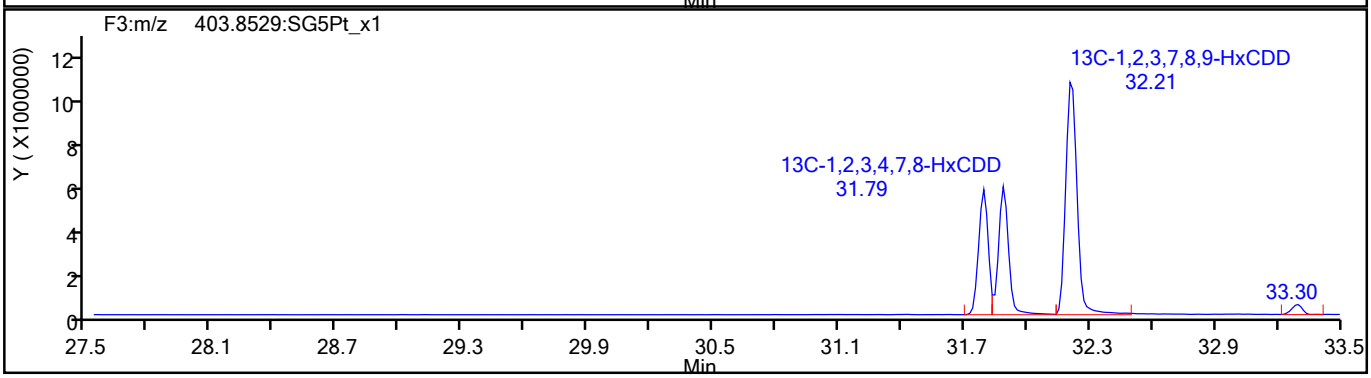

775061

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

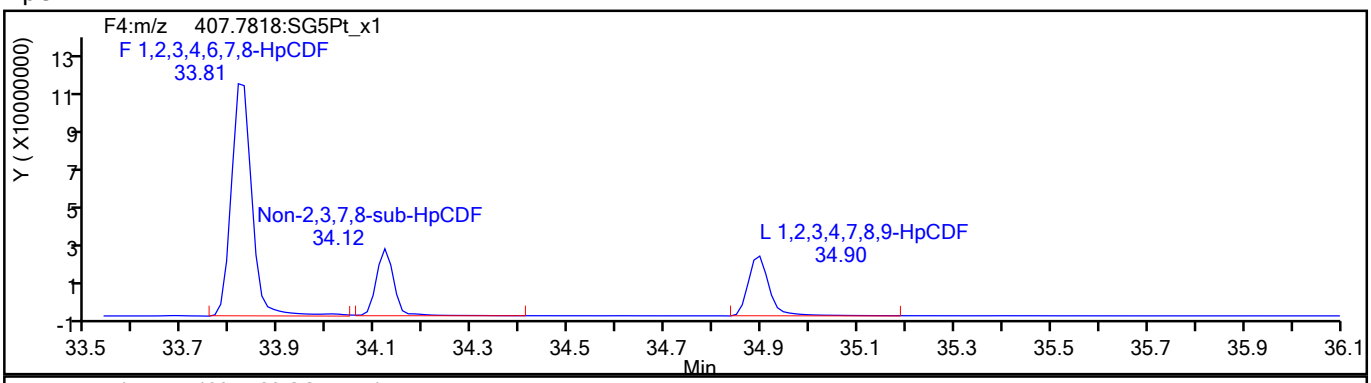

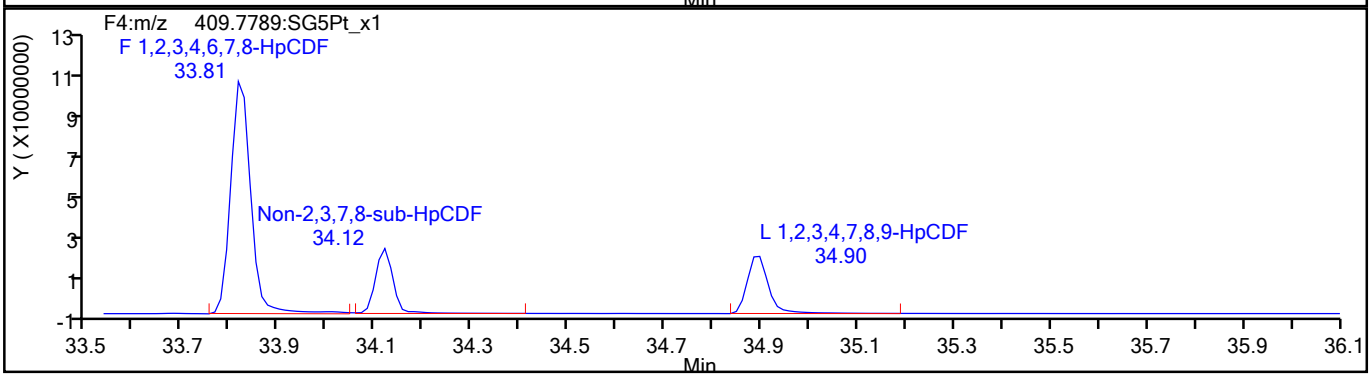

HpCDF Standards

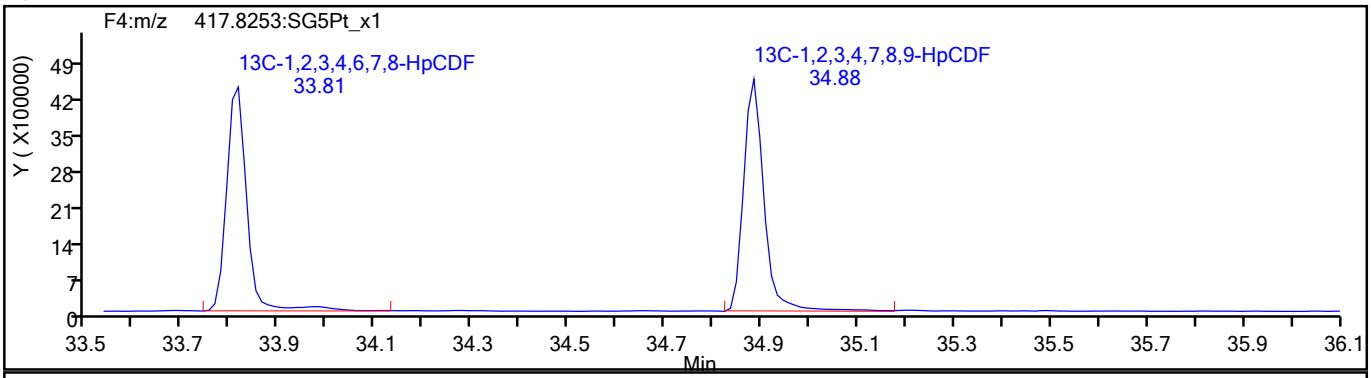

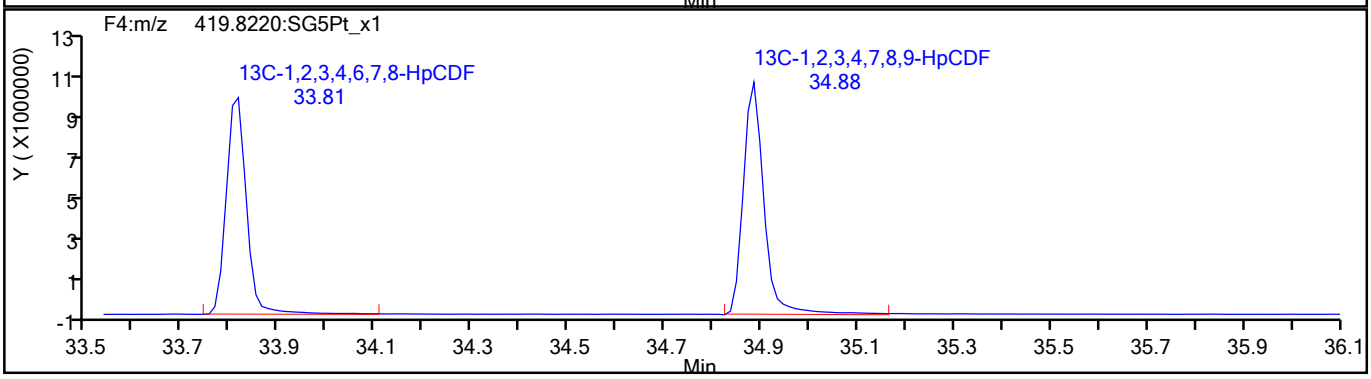

775062

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

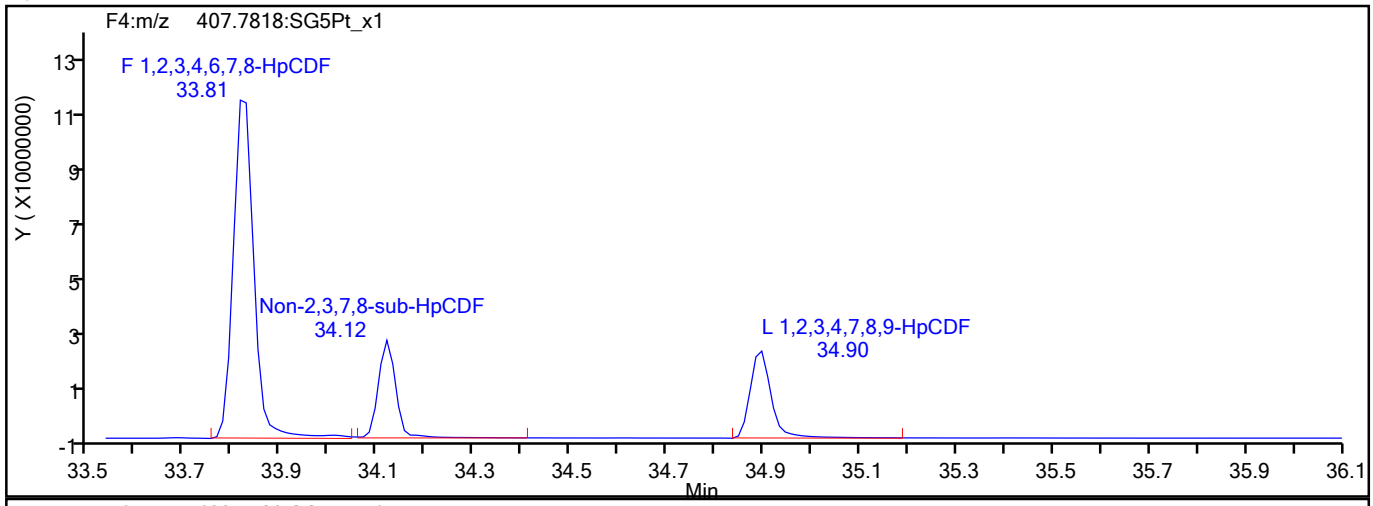

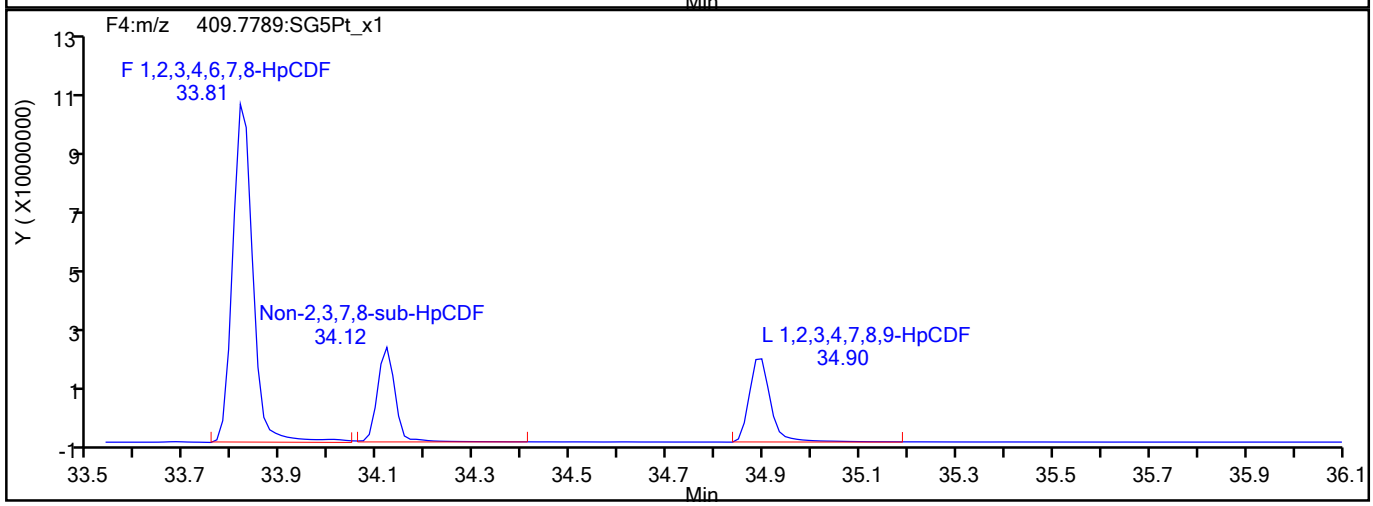

HpCDF Interference Mass

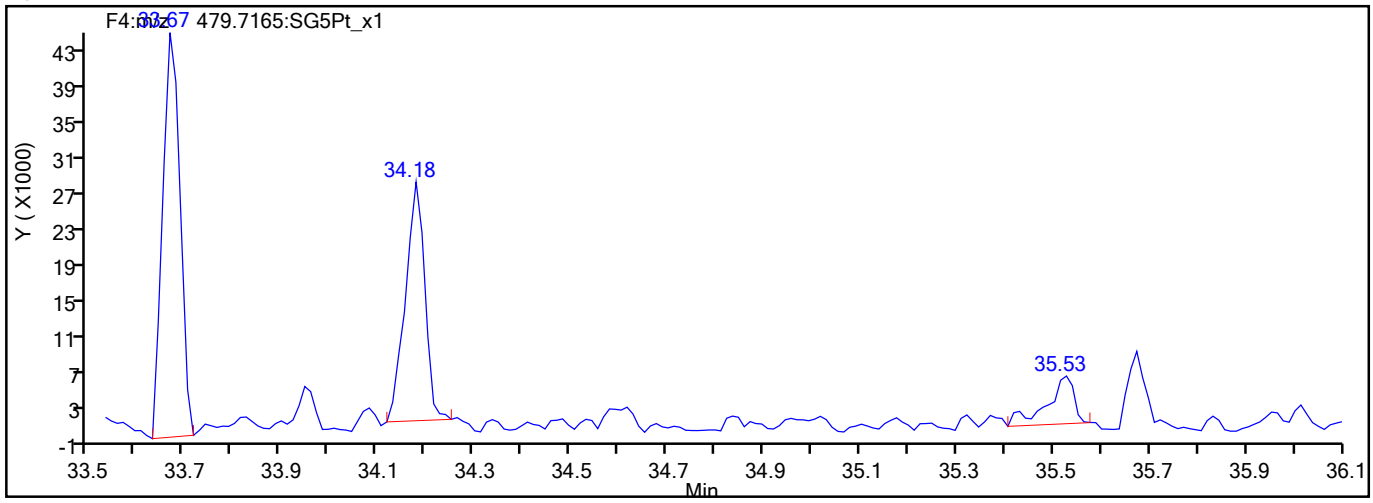

775063

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

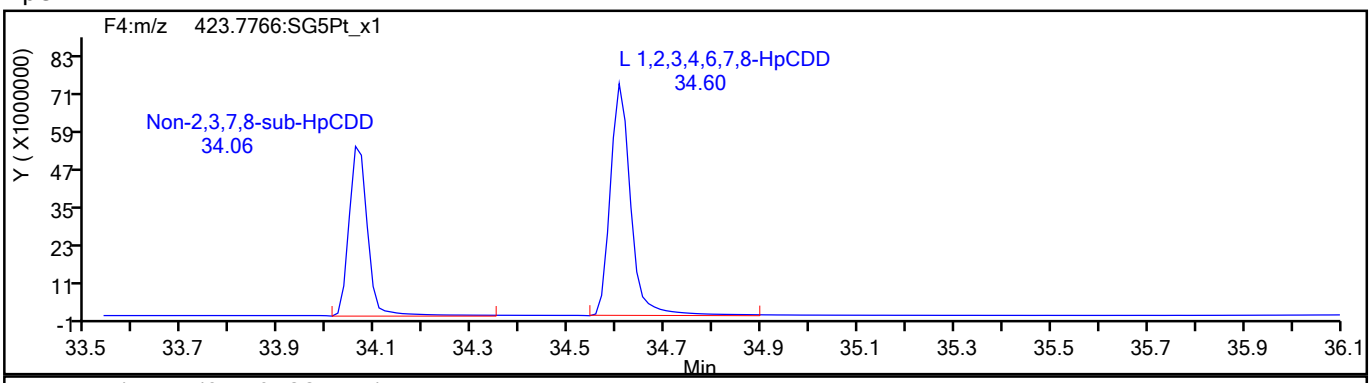

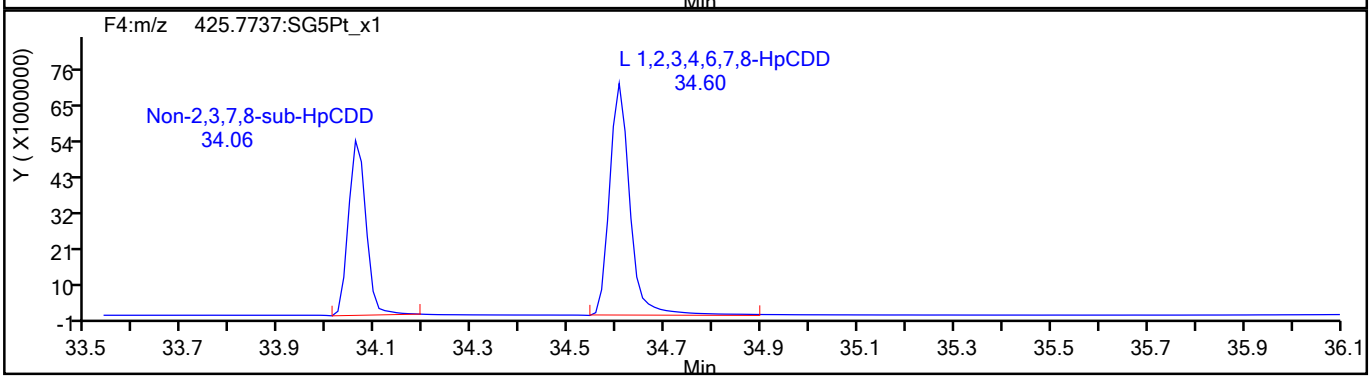

HpCDD Standards

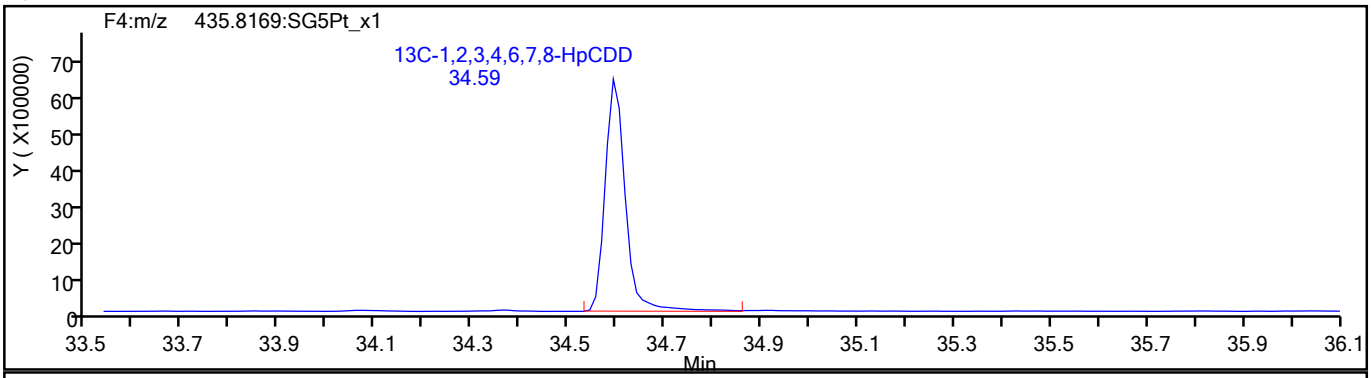

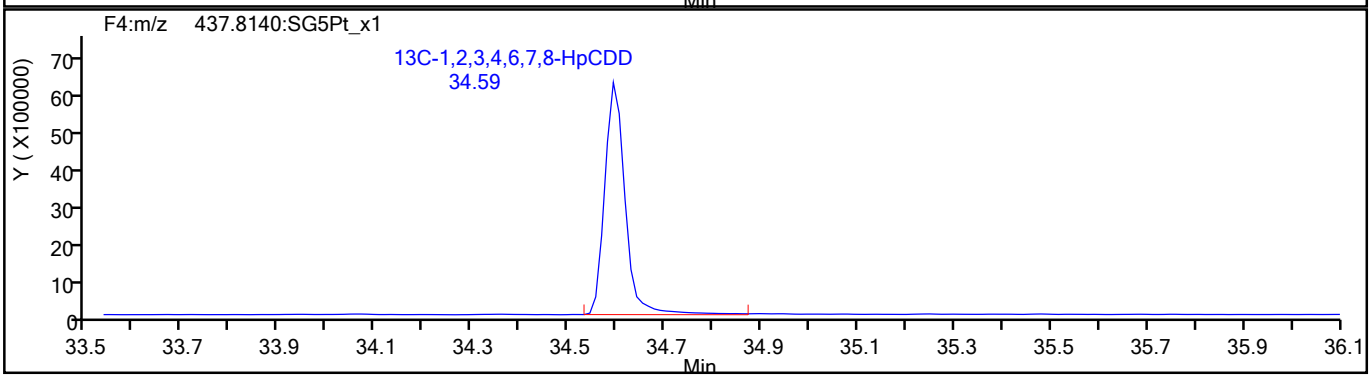

775064

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

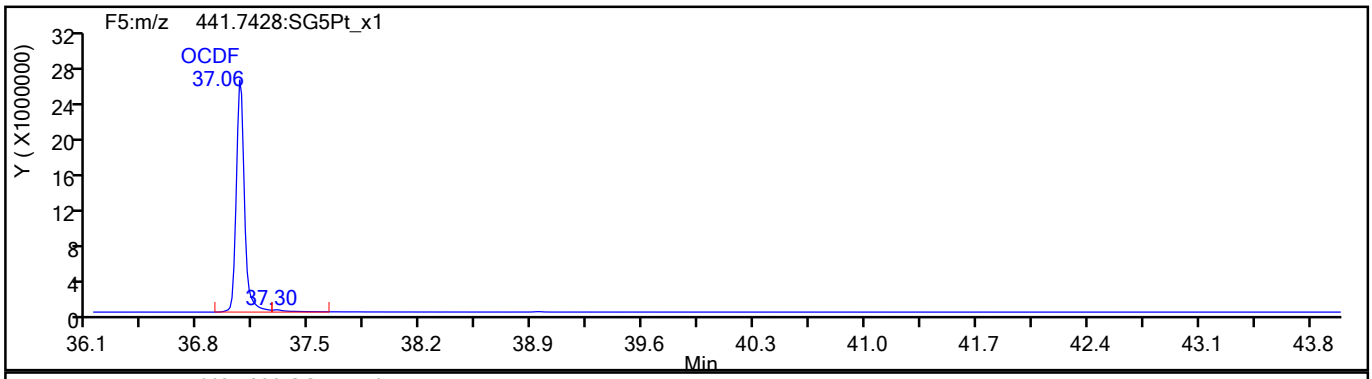

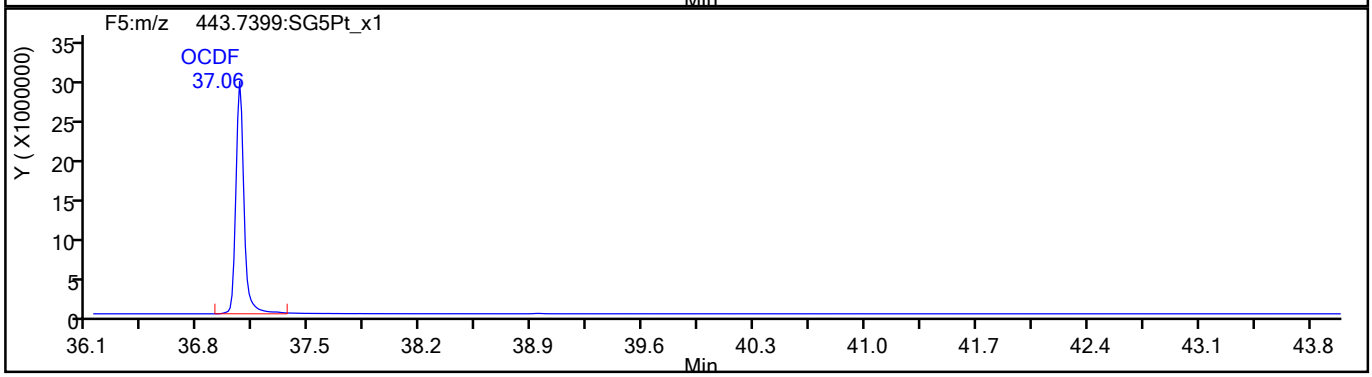

OCDF Standards

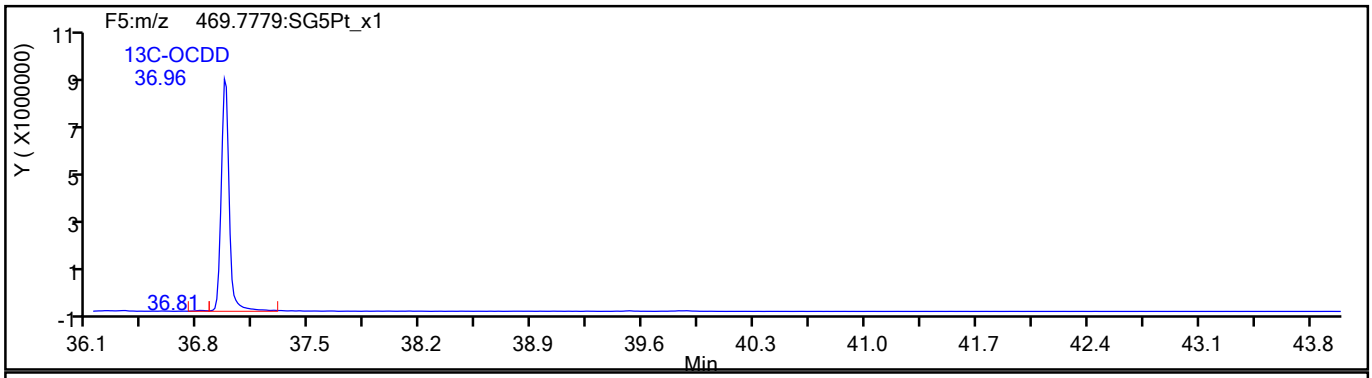

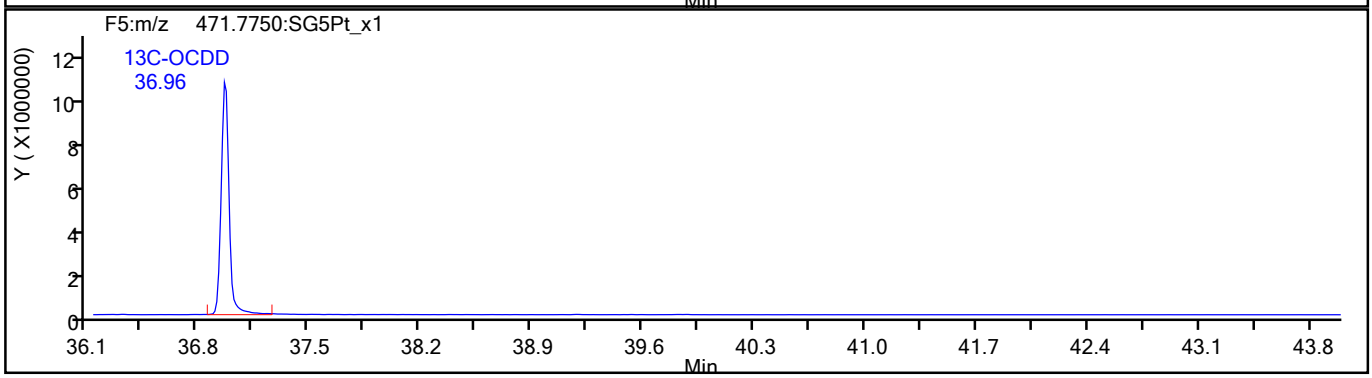

775065

Report Date: 18-Aug-2021 10:31:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

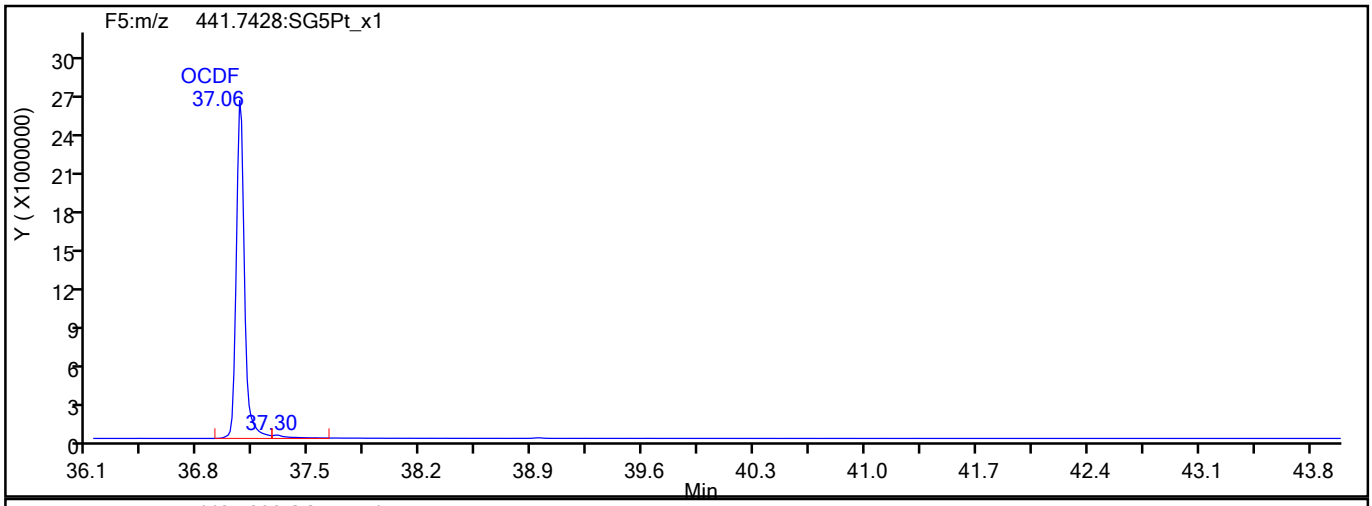

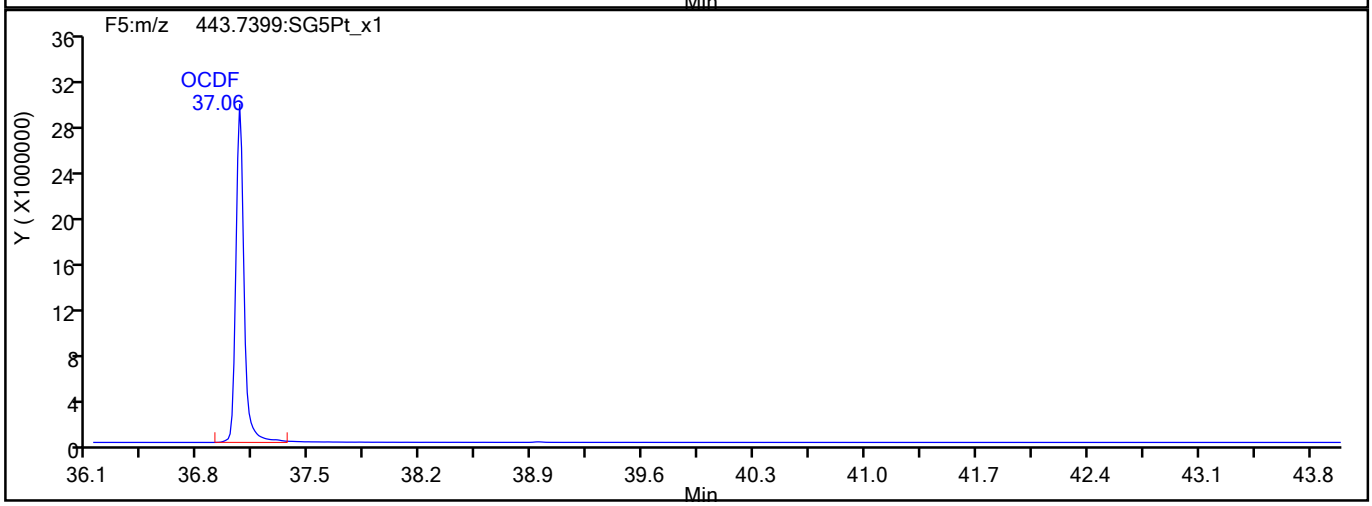

OCDF Interference Mass

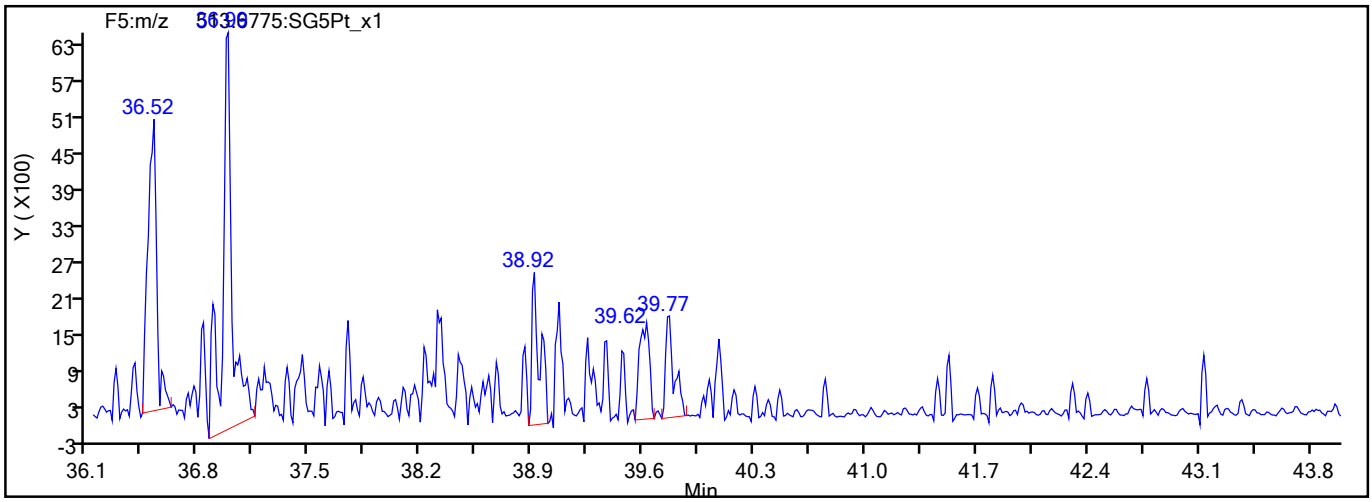

775066

Report Date: 18-Aug-2021 10:31:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

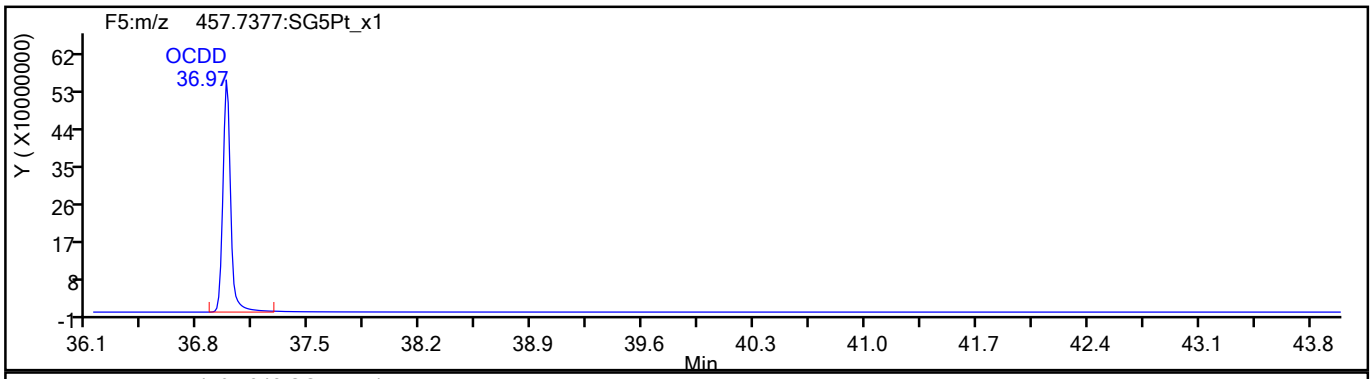

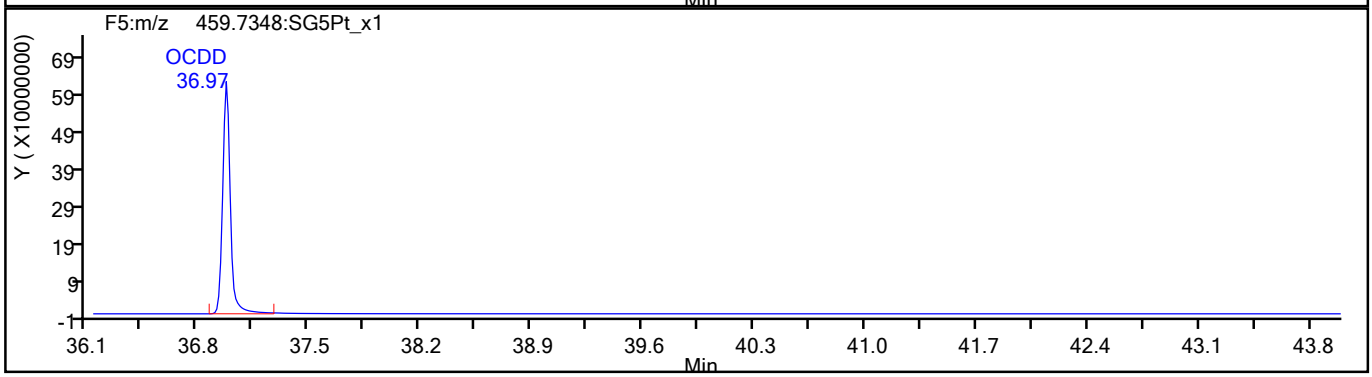

OCDD Standards

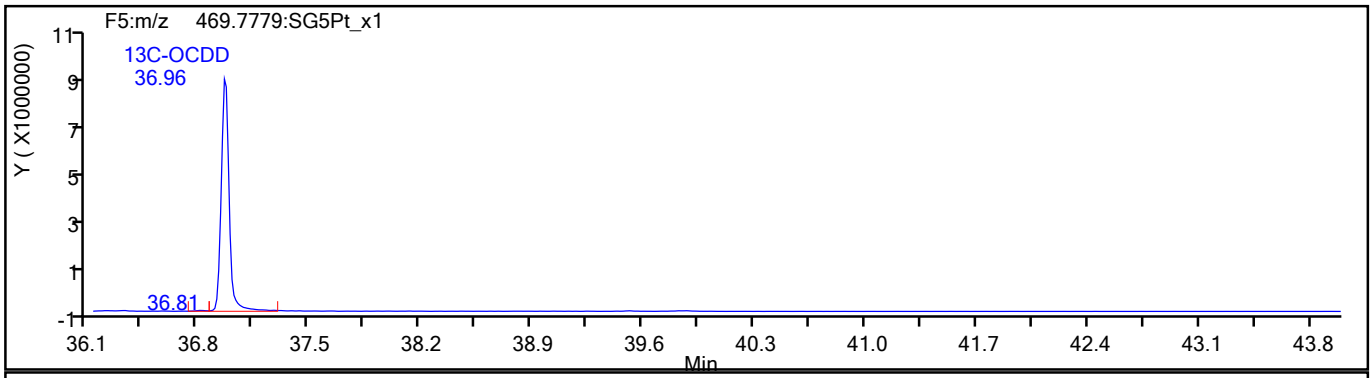

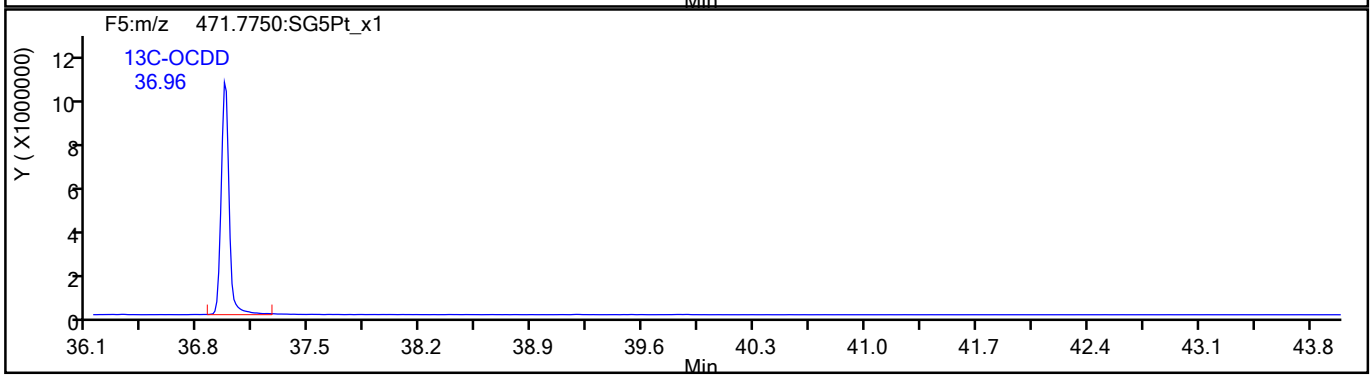

775067

Report Date: 18-Aug-2021 10:31:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

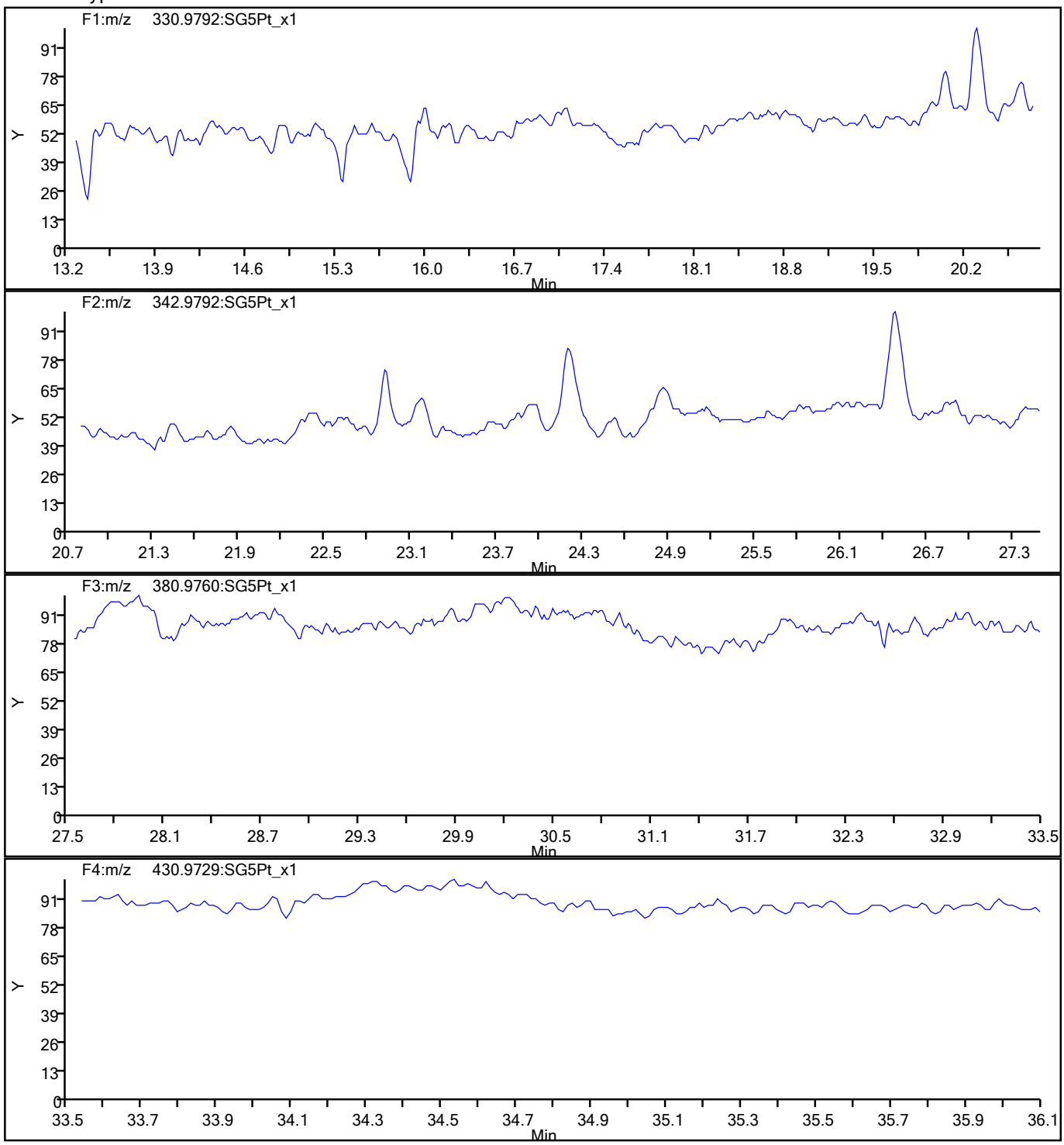

775068

Report Date: 18-Aug-2021 10:31:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_69.d		
Injection Date:	15-Aug-2021 21:12:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	516848	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

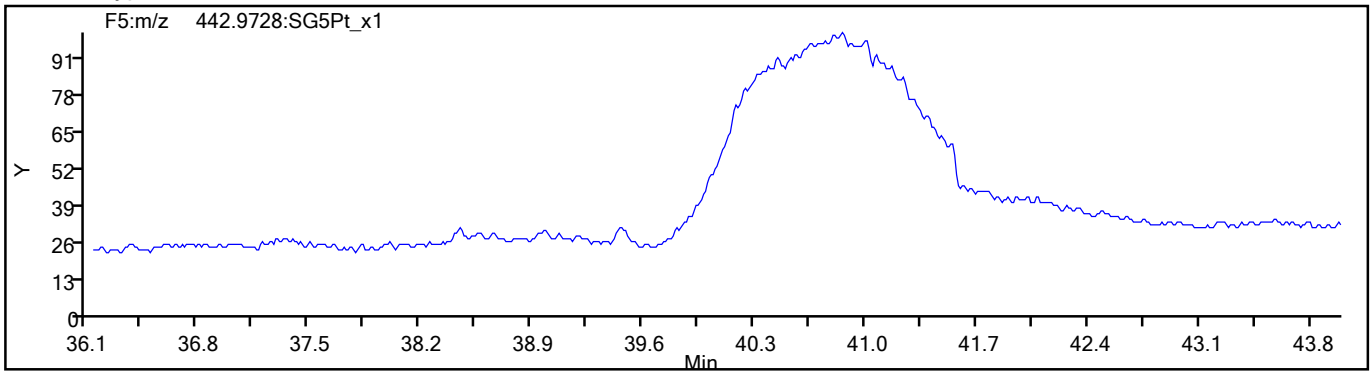

775069

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (2-4) RA
Lab Sample ID: 320-76769-14 RA
Matrix: Sediment
Lab File ID: 24AU2111D2_007.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.09(g)
Date Analyzed: 08/24/2021 12:18
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 48.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	180000	E B G	150	150

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	51		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	144		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_007.d
Lims ID: 320-76769-A-14-A
Client ID: 11215702-072221-SS-SJSB074 (2-4)
Sample Type: Client
Inject. Date: 24-Aug-2021 12:18:45 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-14-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:52:55

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.355	10662870	0.74	7.2E+05	20.0	20.0				nM
D 13C-2,3,7,8-TCDF	17.686	7240626	0.70	1.3327	10.2	10.2	1.152	1.152	50.95	Ma
2,3,7,8-TCDF	17.699	3462966329	0.79	0.9978	9586.4	9586.4	7.760	7.760		Ea
D 13C-2,3,7,8-TCDD	16.122	5839939	0.64	0.8749	12.5	12.5	28.9	28.9	62.60	RnMa
$ 37Cl4-2,3,7,8-TCDD	16.136	5317090		0.8648	11.5	11.5	0.3507	0.3507	144	a
2,3,7,8-TCDD	16.136	773993685	0.80	1.0570	2507.8	2507.8	11.6	11.6		Ea
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 24-Aug-2021 17:07:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_007.d
Lims ID: 320-76769-A-14-A
Client ID: 11215702-072221-SS-SJSB074 (2-4)
Sample Type: Client
Inject. Date: 24-Aug-2021 12:18:45 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-14-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:52:55

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											nM
331.9368	16.355	16.283	4		4539273	978592	688884	1722210	1		M
333.9339	16.355	16.283	4		6123597	1331733	479771	1199427	3	0.74(0.65-0.89)	M
13C-2,3,7,8-TCDF											Ma
315.9419	17.686	17.613	4	1.081	2987162	575370	35503	88757	16		M
317.9389	17.686	17.613	4	1.081	4253464	765501	35455	88637	22	0.70(0.65-0.89)	M
2,3,7,8-TCDF											Ea
303.9016	17.699	17.641	4	1.001	1530982129	286795398	92378	230945	3105		a
305.8987	17.699	17.641	4	1.001	1931984200	363941597	115276	288190	3157	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											RnMa
331.9368	16.122	16.050	4	0.986	2281893	461542	688884	1722210	1		M
333.9339	16.122	16.050	4	0.986	3558046	651352	479771	1199427	1	0.64(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.136	16.063	4	0.987	5317090	1198874	14015	35037	86		a
2,3,7,8-TCDD											Ea
319.8965	16.136	16.077	4	1.001	343040815	76068232	172838	432095	440		a
321.8936	16.136	16.077	4	1.001	430952870	95961850	99407	248517	965	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_007.d				
Injection Date:	24-Aug-2021 12:18:45	Instrument ID:	11D2		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 18.62
Area: 933313
Amount: 3.936090
Amount Units: pg/ul

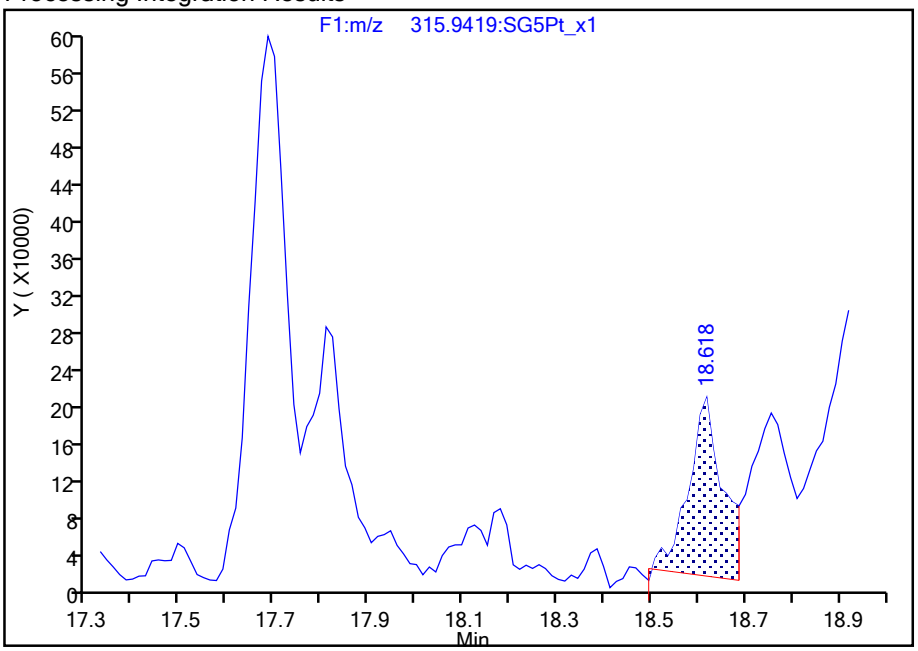

Manual Integration Results

RT: 17.69
Area: 2987162
Amount: 10.190703
Amount Units: pg/ul

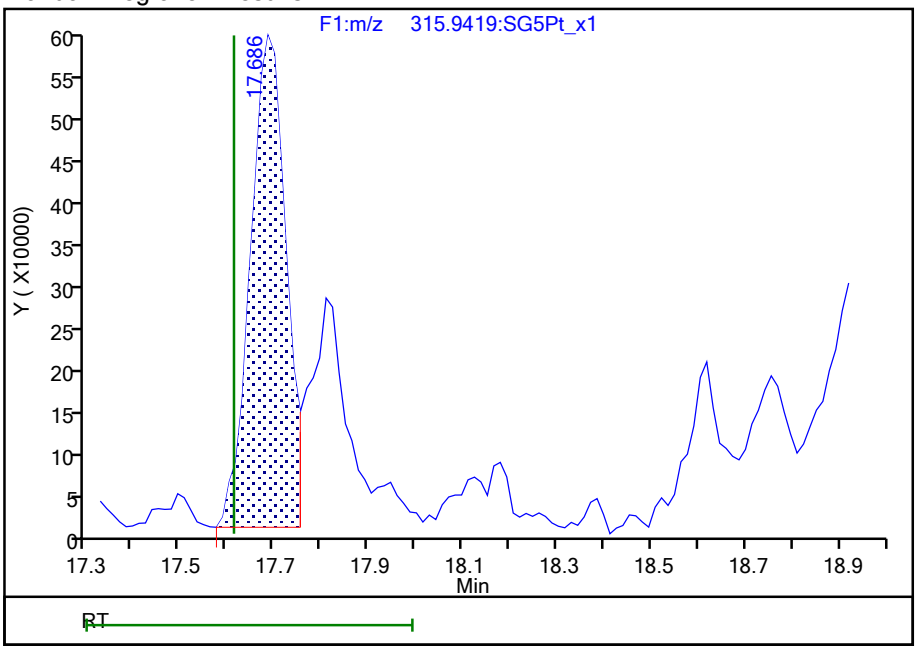

Reviewer: bennettd, 24-Aug-2021 16:52:06

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_007.d				
Injection Date:	24-Aug-2021 12:18:45	Instrument ID:	11D2		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 18.62
Area: 1863330
Amount: 3.936090
Amount Units: pg/ul

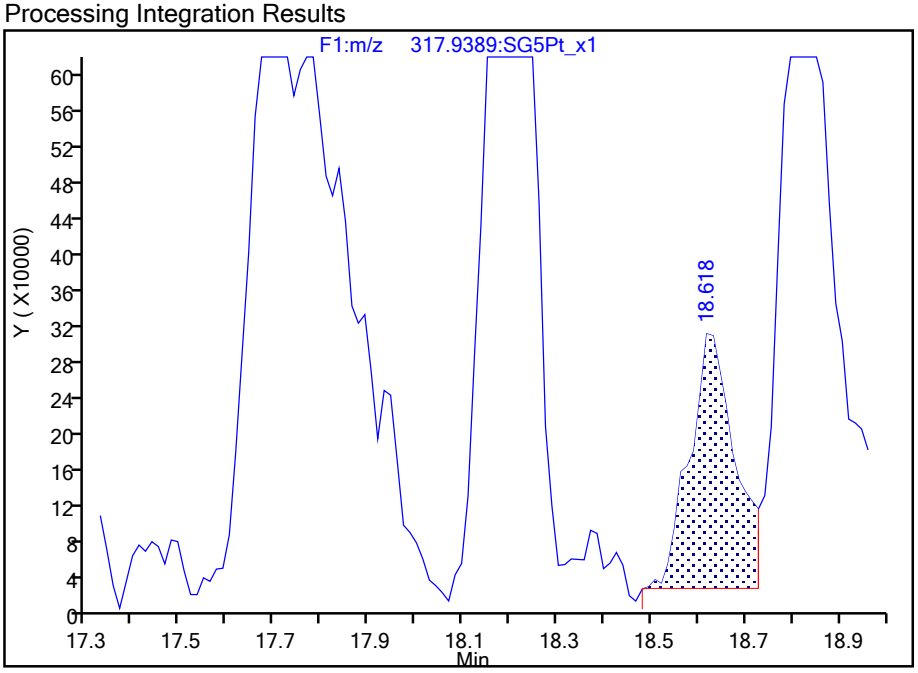

Manual Integration Results

RT: 17.69
Area: 4253464
Amount: 10.190703
Amount Units: pg/ul

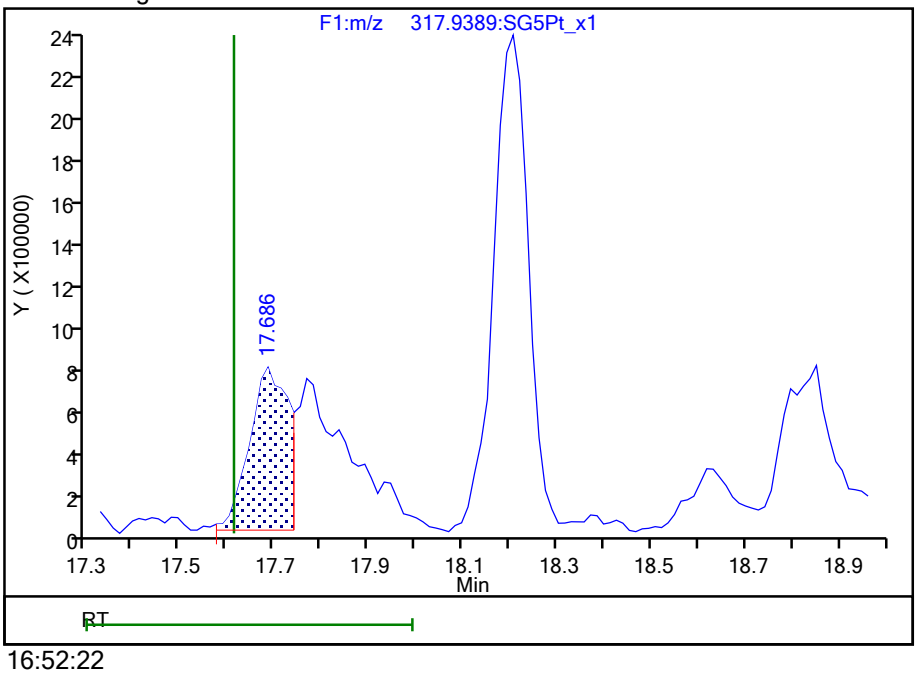

Reviewer: bennettd, 24-Aug-2021 16:52:22

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_007.d				
Injection Date:	24-Aug-2021 12:18:45	Instrument ID:	11D2		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Not Detected
Expected RT: 17.64

Processing Integration Results

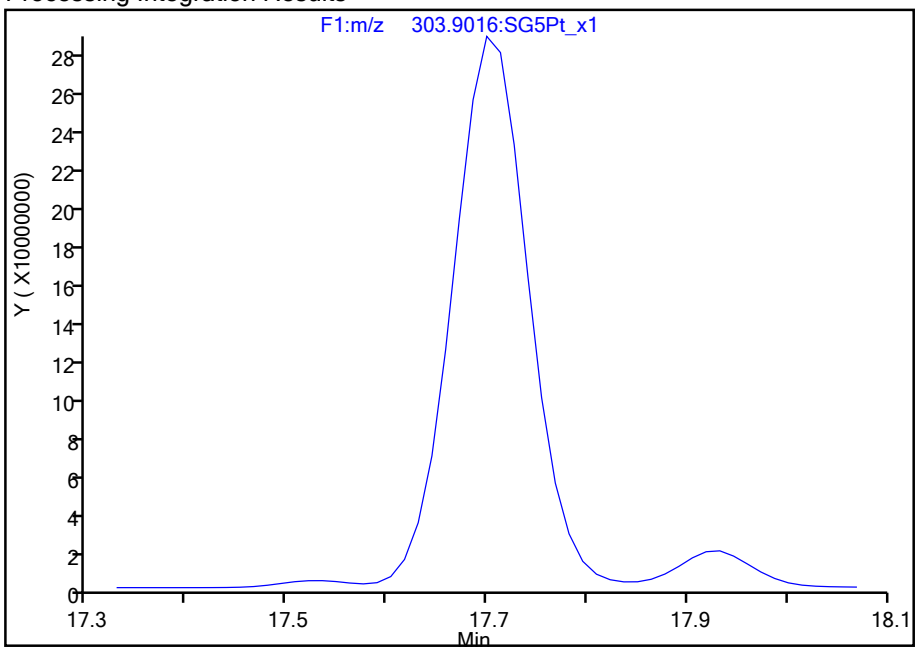

Manual Integration Results

RT: 17.70
Area: 1530982129
Amount: 9586.4034
Amount Units: pg/ul

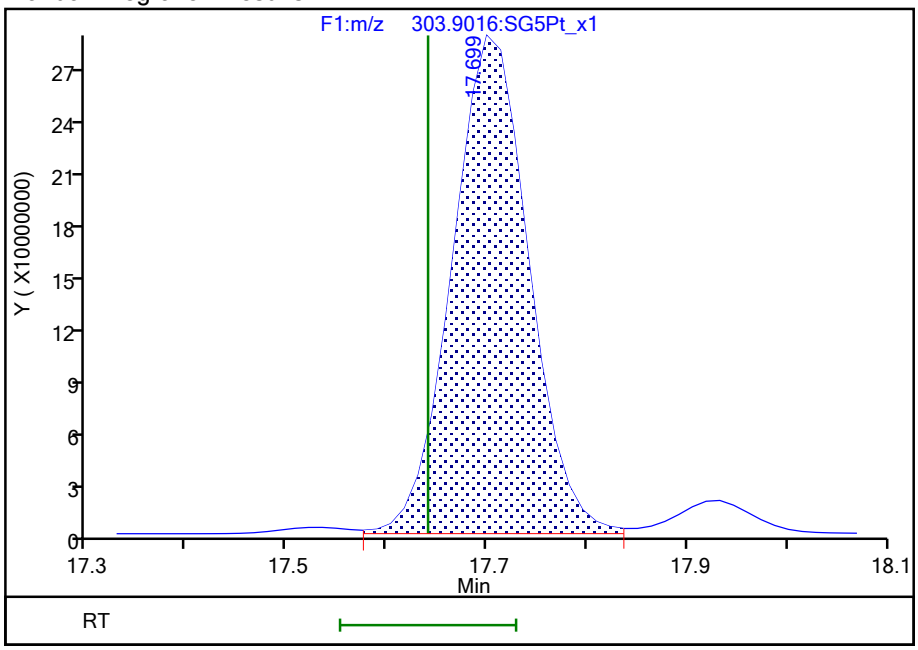

Reviewer: bennettd, 24-Aug-2021 16:52:38
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_007.d				
Injection Date:	24-Aug-2021 12:18:45	Instrument ID:	11D2		
Lims ID:	320-76769-A-14-A	Lab Sample ID:	320-76769-14		
Client ID:	11215702-072221-SS-SJSB074 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.06

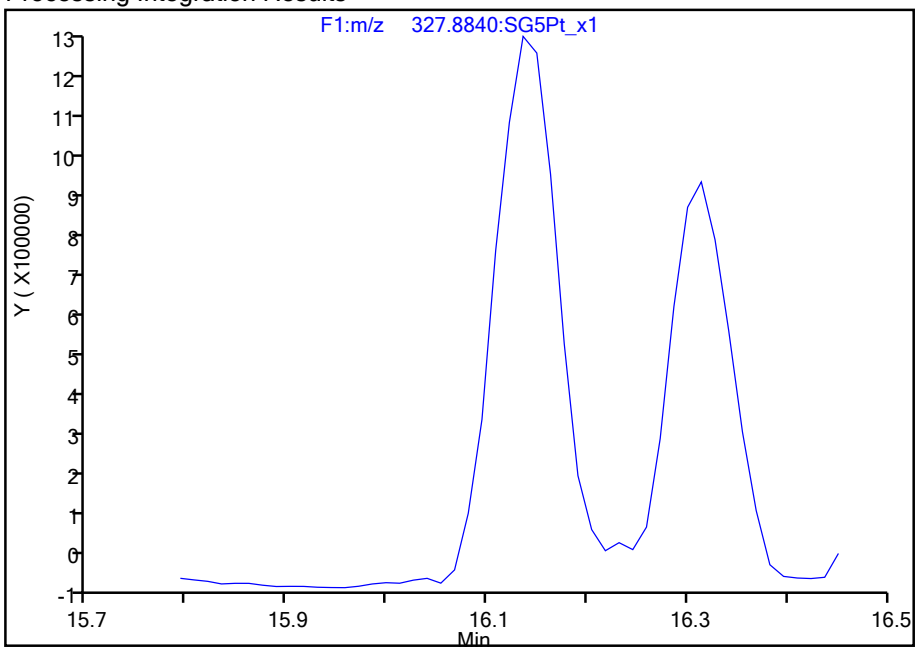

Manual Integration Results

RT: 16.14
Area: 5317090
Amount: 11.532039
Amount Units: pg/ul

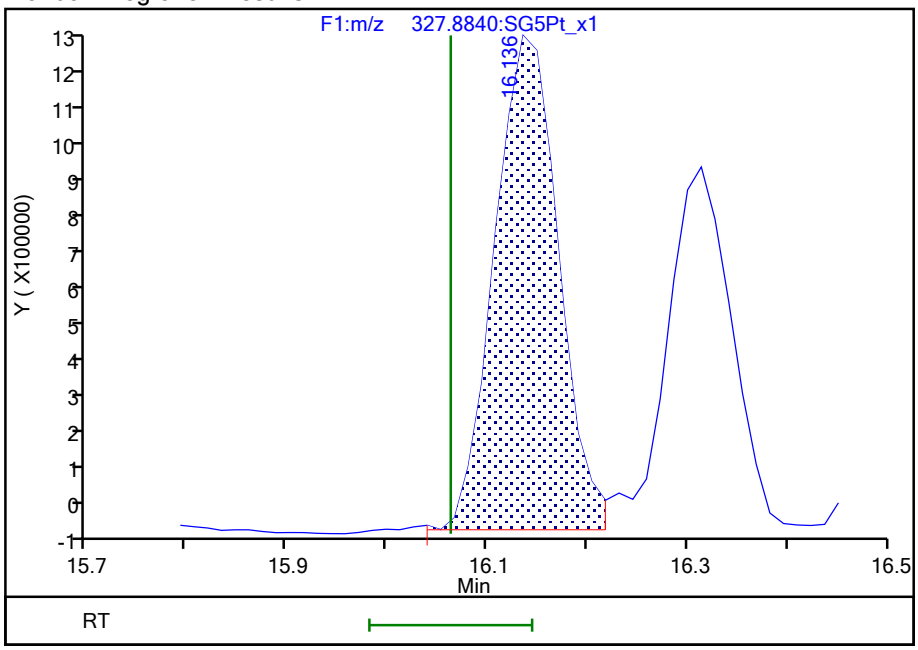

Reviewer: bennettd, 24-Aug-2021 16:50:50
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Report Date: 24-Aug-2021 17:07:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_007.d		
Injection Date:	24-Aug-2021 12:18:45	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	519438	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

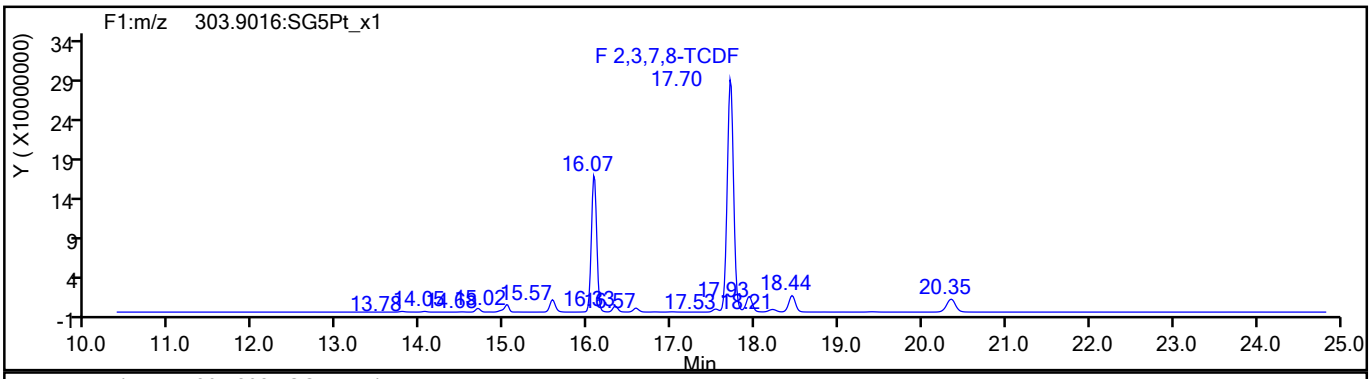

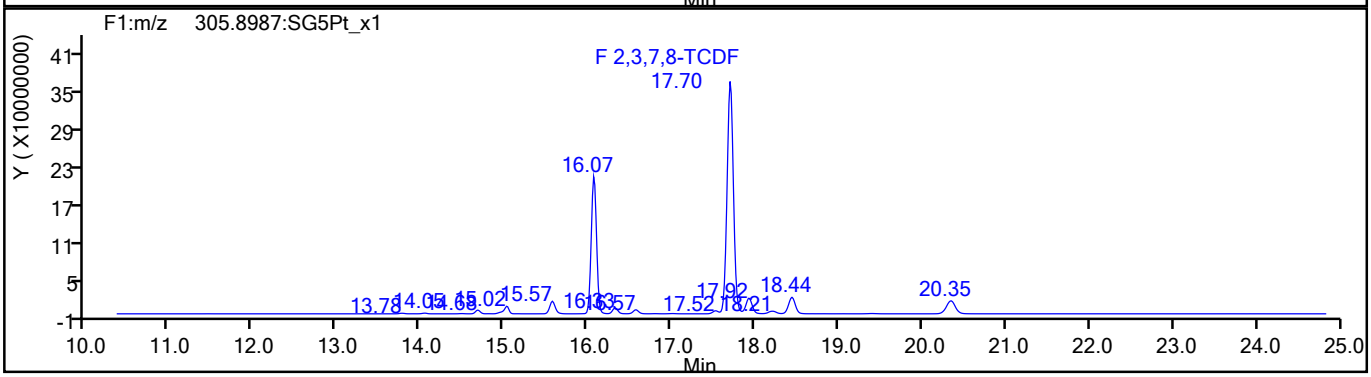

TCDF Standards

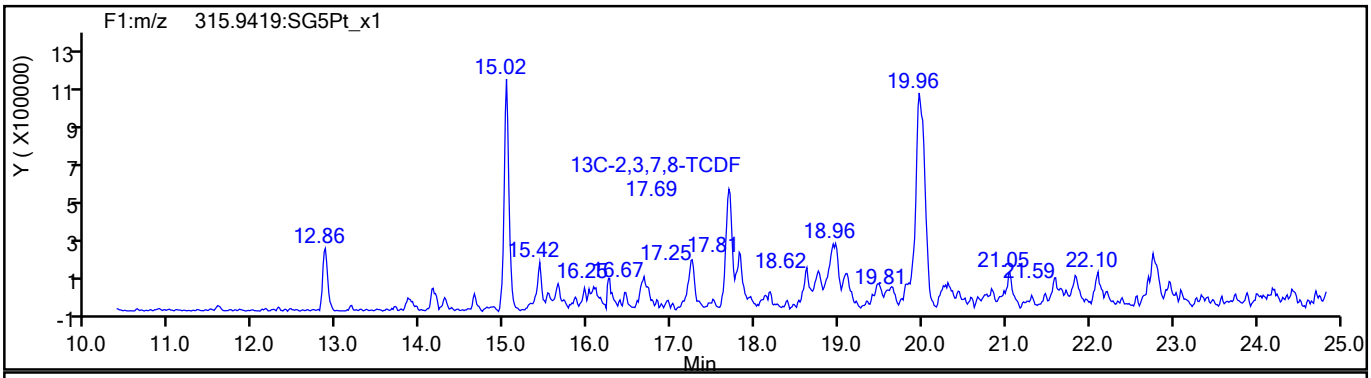

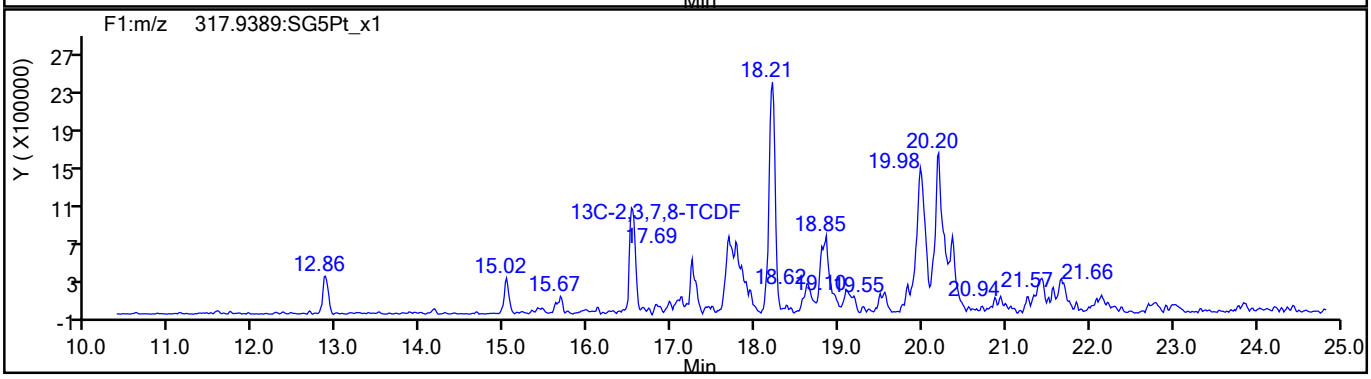

775077

Report Date: 24-Aug-2021 17:07:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_007.d		
Injection Date:	24-Aug-2021 12:18:45	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	519438	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

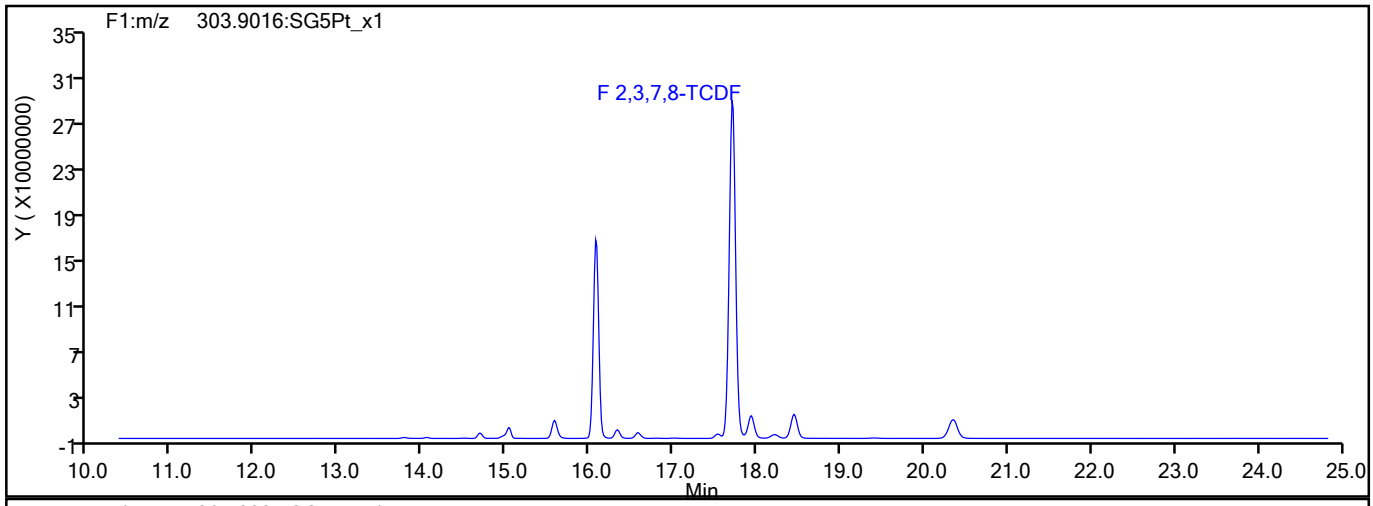

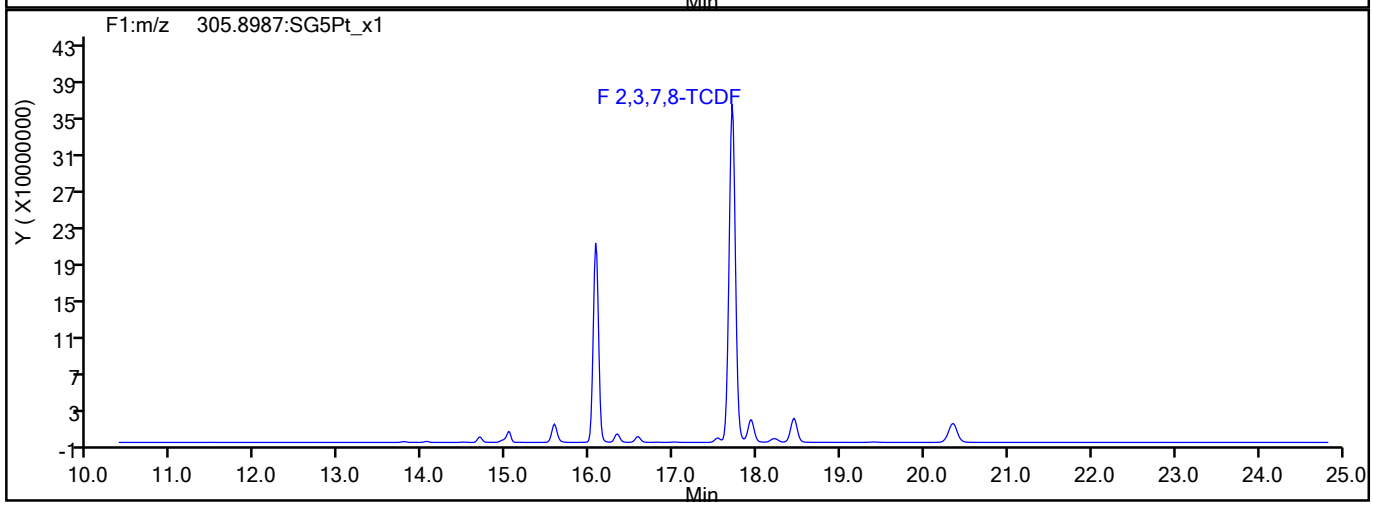

TCDF Interference Mass

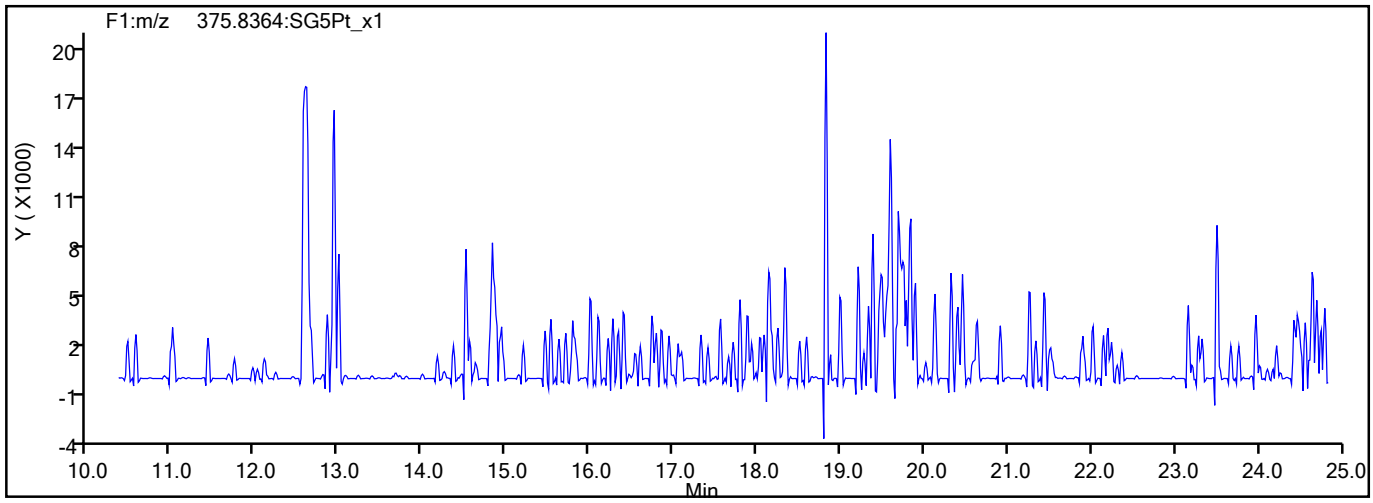

775078

Report Date: 24-Aug-2021 17:07:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_007.d		
Injection Date:	24-Aug-2021 12:18:45	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	519438	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

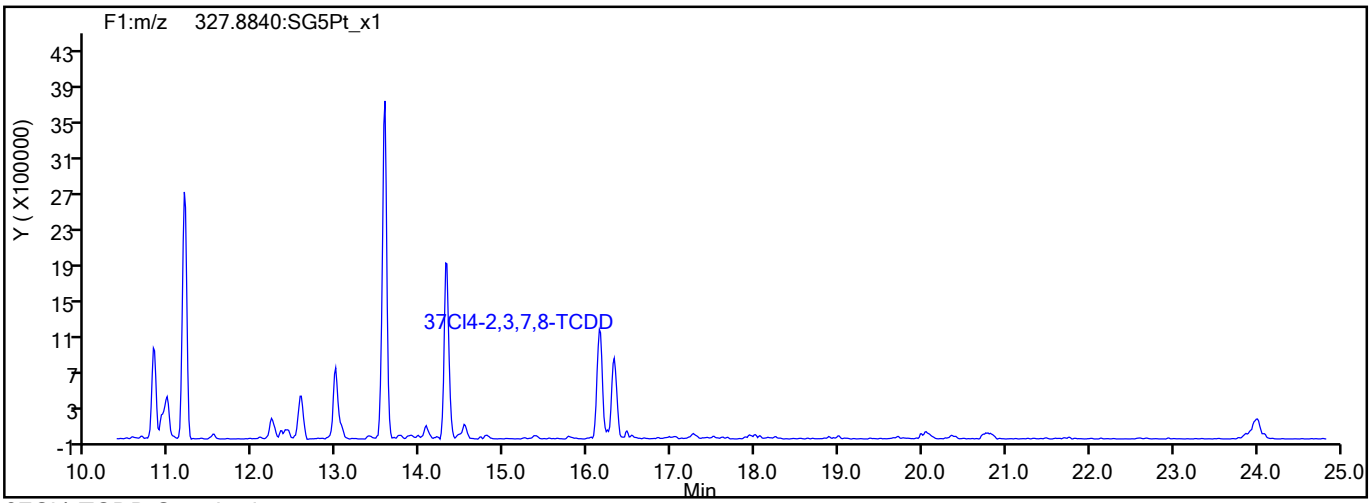

37Cl4-TCDD Standards

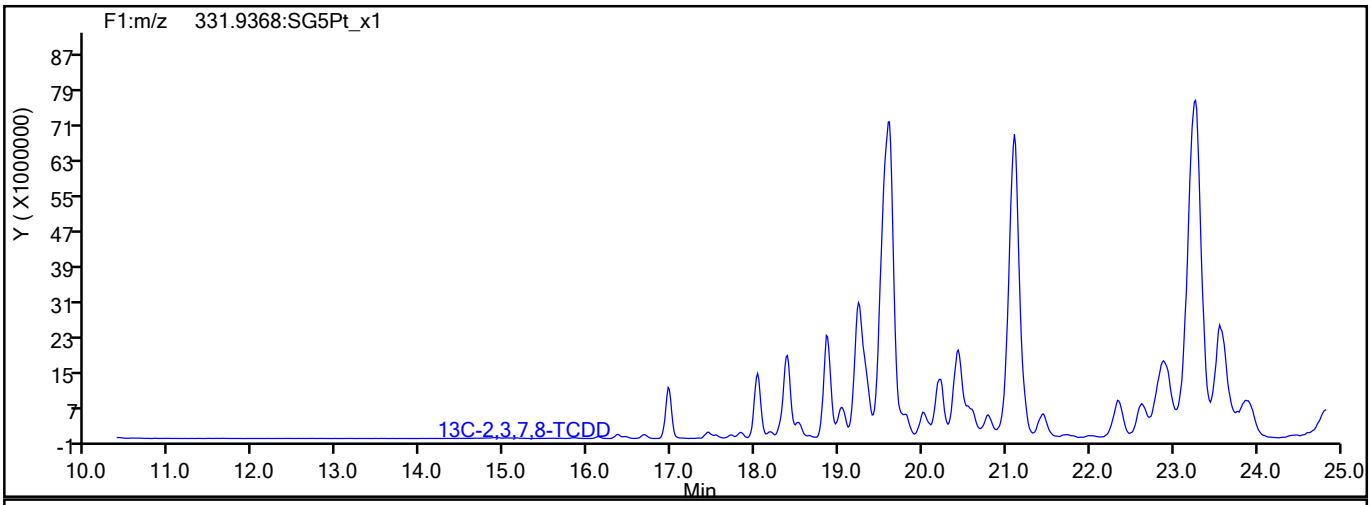

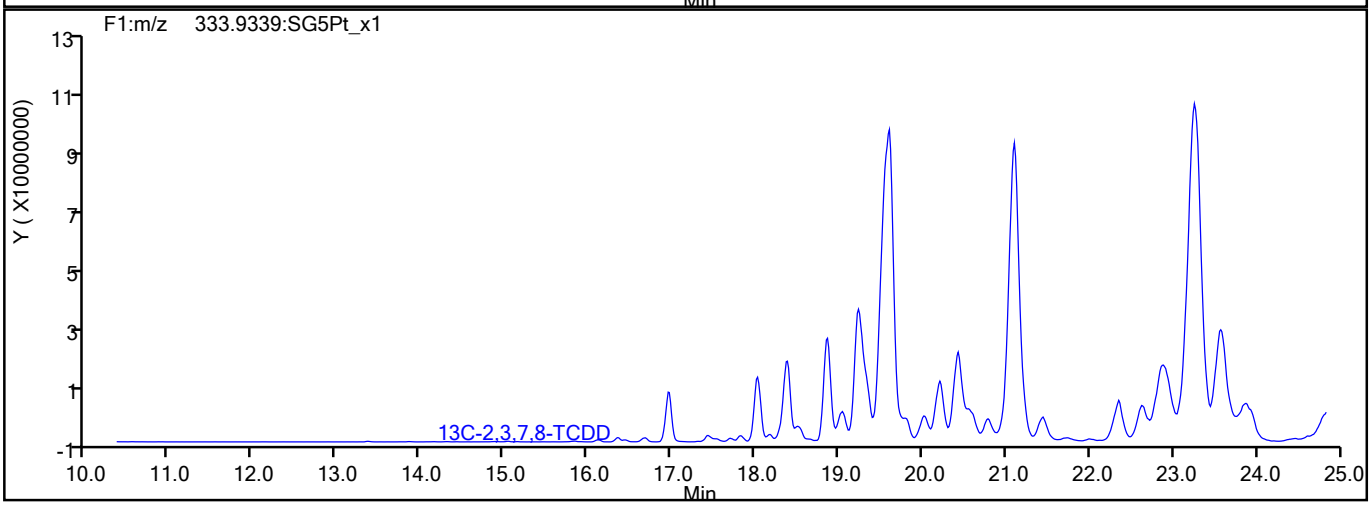

775079

Report Date: 24-Aug-2021 17:07:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_007.d		
Injection Date:	24-Aug-2021 12:18:45	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (2-4)		
Worklist#:	519438	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

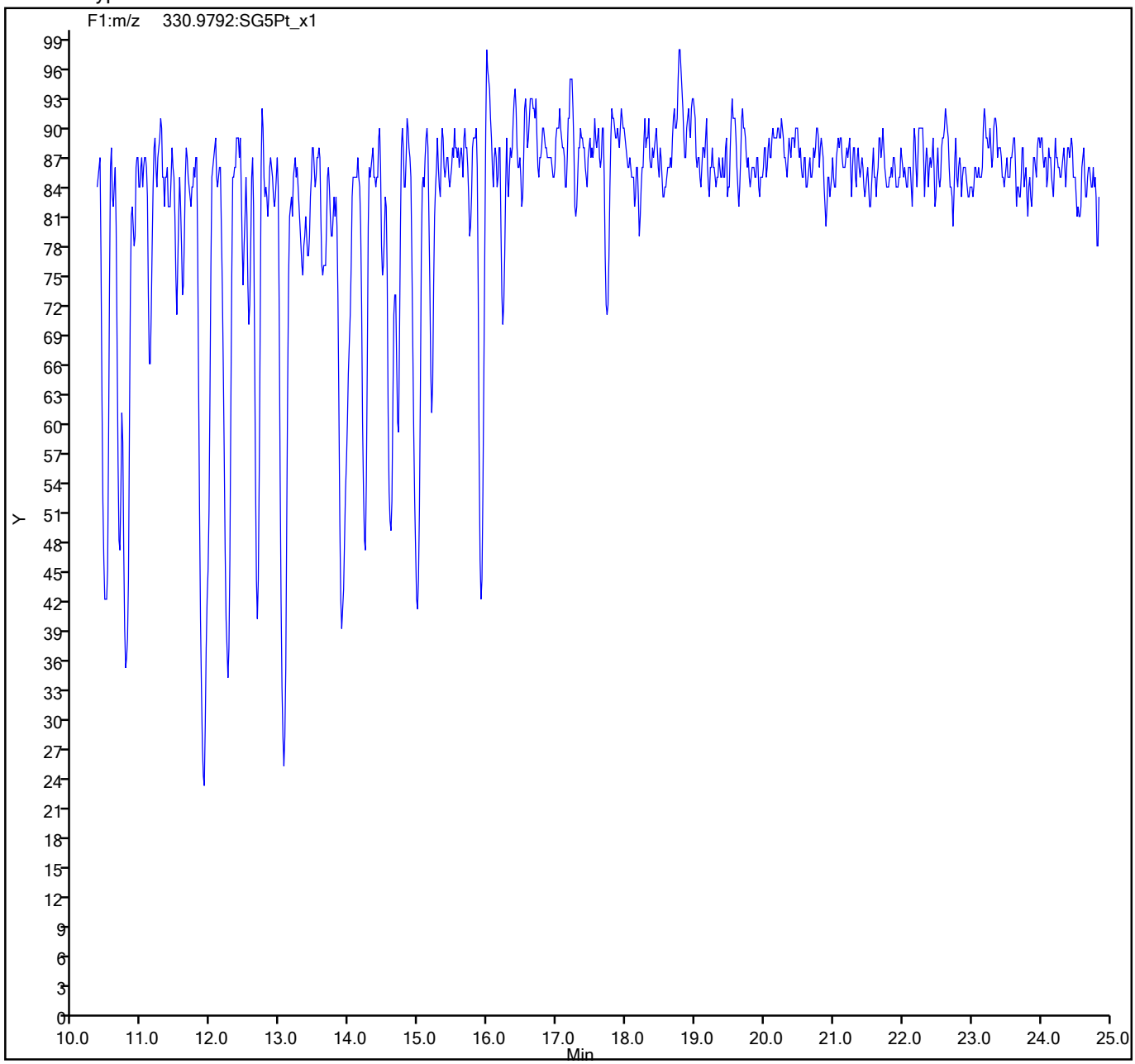

775080

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (4-6)
Lab Sample ID: 320-76769-15
Matrix: Sediment
Lab File ID: 13AU2110D5_60.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.68(g)
Date Analyzed: 08/15/2021 14:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 42.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	22000	E B G	42	42
40321-76-4	1,2,3,7,8-PeCDD	190		9.0	2.0
57117-41-6	1,2,3,7,8-PeCDF	3600	E G	22	22
57117-31-4	2,3,4,7,8-PeCDF	1500	G	19	19
39227-28-6	1,2,3,4,7,8-HxCDD	4.0	J B	9.0	1.1
57653-85-7	1,2,3,6,7,8-HxCDD	32		9.0	1.0
19408-74-3	1,2,3,7,8,9-HxCDD	8.6	J B	9.0	0.95
70648-26-9	1,2,3,4,7,8-HxCDF	5100	E B G	20	20
57117-44-9	1,2,3,6,7,8-HxCDF	1400	B G	18	18
72918-21-9	1,2,3,7,8,9-HxCDF	110	B G	14	14
60851-34-5	2,3,4,6,7,8-HxCDF	160	G	17	17
35822-46-9	1,2,3,4,6,7,8-HpCDD	1700	B G	14	14
67562-39-4	1,2,3,4,6,7,8-HpCDF	1200	B	9.0	7.6
55673-89-7	1,2,3,4,7,8,9-HpCDF	420	B	9.0	8.3
3268-87-9	OCDD	17000	E B	18	18
39001-02-0	OCDF	600	B	18	0.63
41903-57-5	Total TCDD	24000	B G	42	42
30402-14-3	Total TCDF	110000	B G	250	250
36088-22-9	Total PeCDD	240	q	9.0	2.0
30402-15-4	Total PeCDF	7600	q G	21	21
34465-46-8	Total HxCDD	350	B	9.0	1.0
55684-94-1	Total HxCDF	7800	B G	17	17
37871-00-4	Total HpCDD	2700	B G	14	14
38998-75-3	Total HpCDF	2000	B	9.0	7.9

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (4-6)
Lab Sample ID: 320-76769-15
Matrix: Sediment
Lab File ID: 13AU2110D5_60.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.68(g)
Date Analyzed: 08/15/2021 14:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 42.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	52		25-164
89059-46-1	13C-2,3,7,8-TCDF	48		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	84		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	53		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	67		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	59		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	57		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	58		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	52		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	45		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	52		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	45		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	52		26-138
114423-97-1	13C-OCDD	58		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	106		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d
Lims ID: 320-76769-A-15-A
Client ID: 11215702-072221-SS-SJSB074 (4-6)
Sample Type: Client
Inject. Date: 15-Aug-2021 14:27:09 ALS Bottle#: 58 Worklist Smp#: 19
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-15-a 320-76769-a-15-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:23:23 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 17-Aug-2021 16:54:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.036	33535899	0.79	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.537	26021064	0.79	1.6249	47.8	47.8	0.9346	0.9346	47.75	
2,3,7,8-TCDF	17.552	4703710597	0.78	1.0239	17654	17654	70.6	70.6		Ea
A Non-2,3,7,8-sub-TCDF	17.046	3457432591	0.78	1.0239	12977	12977	70.6	8092.4		a
S Total TCDF					30631	30631	70.6	70.6		
D 13C-2,3,7,8-TCDD	18.218	15596674	0.81	0.8993	51.7	51.7	0.6209	0.6209	51.71	a
2,3,7,8-TCDD	18.233	1196898534	0.79	1.2541	6119.1	6119.1	11.8	11.8		Ea
$ 37Cl4-2,3,7,8-TCDD	18.233	15765403		1.1071	42.5	42.5	0.3955	0.3955	106	
A Non-2,3,7,8-sub-TCDD	17.500	126728286	0.77	1.2541	647.9	647.9	11.8	576.7		a
S Total TCDD					6767.0	6767.0	11.8	11.8		
D 13C-1,2,3,7,8-PeCDF	22.599	21679080	1.67	1.2101	53.4	53.4	0.3882	0.3882	53.42	
1,2,3,7,8-PeCDF	22.626	232511391	1.56	1.0611	1010.7	1010.7	6.220	6.220		Ea
D 13C-2,3,4,7,8-PeCDF	23.908	27731942	1.61	1.2395	66.7	66.7	0.3790	0.3790	66.72	
2,3,4,7,8-PeCDF	23.949	117231598	1.58	1.0184	415.1	415.1	5.416	5.416		a
A F1 PeCDFs	20.093	598487	1.75	1.0398	2.330	2.330	0.0531	2.330		
A Non-2,3,7,8-sub-PeCDF	23.241	174388815	1.55	1.0398	683.5	678.9	5.780	314.6		RQa
S Total PeCDF					2111.6	2107.0	5.818	5.818		RQ
D 13C-1,2,3,7,8-PeCDD	24.617	21348441	1.64	0.7612	83.6	83.6	0.2581	0.2581	83.63	
1,2,3,7,8-PeCDD	24.644	11722984	1.59	1.0484	52.4	52.4	0.5628	0.5628		a
A Non-2,3,7,8-sub-PeCDD	23.349	3138629	1.55	1.0484	17.5	14.0	0.5628	5.585		RQ
S Total PeCDD					69.9	66.4	0.5628	0.5628		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.622	29848171	0.52	1.0837	58.3	58.3	0.2626	0.2626	58.29	
1,2,3,4,7,8-HxCDF	30.636	456699203	1.21	1.0851	1410.0	1410.0	5.451	5.451		E
D 13C-1,2,3,6,7,8-HxCDF	30.782	27666465	0.51	1.1279	51.9	51.9	0.2523	0.2523	51.91	
1,2,3,6,7,8-HxCDF	30.809	122621432	1.21	1.1260	393.6	393.6	4.898	4.898		
D 13C-2,3,4,6,7,8-HxCDF	31.581	22456592	0.52	1.0637	44.7	44.7	0.2675	0.2675	44.68	
2,3,4,6,7,8-HxCDF	31.607	11349143	1.22	1.1675	43.3	43.3	4.818	4.818		M
D 13C-1,2,3,7,8,9-HxCDF	32.366	24932152	0.51	0.9676	54.5	54.5	0.2941	0.2941	54.53	a
1,2,3,7,8,9-HxCDF	32.379	8857322	1.18	1.1664	30.5	30.5	3.909	3.909		M
A Non-2,3,7,8-sub-HxCDF	30.197	84693053	1.22	1.1363	284.2	284.2	4.709	101.6		Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					2161.6	2161.6	4.769	4.769		
* 13C-1,2,3,7,8,9-HxCDD	32.193	47251259	1.23	6.2E+05	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	31.767	20277626	1.28	0.7334	58.5	58.5	0.2905	0.2905	58.51	
1,2,3,4,7,8-HxCDD	31.781	238139	1.37	1.0640	1.104	1.104	0.2967	0.2967		
D 13C-1,2,3,6,7,8-HxCDD	31.860	23519396	1.19	0.8802	56.6	56.6	0.2421	0.2421	56.55	
1,2,3,6,7,8-HxCDD	31.874	2106536	1.24	1.0001	8.956	8.956	0.2859	0.2859		
1,2,3,7,8,9-HxCDD	32.193	596905	1.20	1.1325	2.407	2.407	0.2649	0.2649		
A Non-2,3,7,8-sub-HxCDD	30.882	19599052	1.27	1.0655	84.0	84.0	0.2816	46.7		
S Total HxCDD					96.5	96.5	0.2825	0.2825		
D 13C-1,2,3,4,6,7,8-HpCDF	33.790	16360832	0.44	0.7730	44.8	44.8	0.5264	0.5264	44.79	
1,2,3,4,6,7,8-HpCDF	33.802	79456133	1.04	1.4413	337.0	337.0	2.110	2.110		
D 13C-1,2,3,4,7,8,9-HpCDF	34.872	17237883	0.44	0.7008	52.1	52.1	0.5806	0.5806	52.06	
1,2,3,4,7,8,9-HpCDF	34.884	26682331	1.04	1.3174	117.5	117.5	2.306	2.306		
A Non-2,3,7,8-sub-HpCDF	34.319	26478813	0.99	1.3793	114.3	114.3	2.203	114.3		
S Total HpCDF					568.7	568.7	2.208	2.208		
D 13C-1,2,3,4,6,7,8-HpCDD	34.580	15918103	1.03	0.6472	52.1	52.1	0.2491	0.2491	52.05	
1,2,3,4,6,7,8-HpCDD	34.592	84732483	1.04	1.0943	486.4	486.4	3.777	3.777		
A Non-2,3,7,8-sub-HpCDD	34.301	46726895	1.11	1.0943	268.2	268.2	3.777	268.2		
S Total HpCDD					754.7	754.7	3.777	3.777		
D 13C-OCDD	36.950	24533772	0.89	0.4472	116.1	116.1	0.1699	0.1699	58.06	
OCDF	37.046	29739550	0.89	1.4382	168.6	168.6	0.1759	0.1759		
OCDD	36.962	654744541	0.90	1.1070	4821.5	4821.5	4.989	4.989		E

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d
Lims ID: 320-76769-A-15-A
Client ID: 11215702-072221-SS-SJSB074 (4-6)
Sample Type: Client
Inject. Date: 15-Aug-2021 14:27:09 ALS Bottle#: 58 Worklist Smp#: 19
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-15-a 320-76769-a-15-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:23:23 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 17-Aug-2021 16:54:20

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	18.036	17.855	11		14765807	3979991	7992	19980	498		a
333.9339	18.036	17.855	11		18770092	5005309	12076	30190	414	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.537	17.356	11	0.972	11458839	3440818	16843	42107	204		
317.9389	17.537	17.356	11	0.972	14562225	4409038	37736	94340	117	0.79(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.552	17.371	11	1.001	2068105489	589159669	905251	2263127	651		a
305.8987	17.552	17.371	11	1.001	2635605108	743915691	13644323411080		545	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	16.116	17.046	-56	0.919	27132490	6549044	905251	2263127	7		
305.8987	16.116	17.046	-56	0.919	35316362	8322116	13644323411080		6	0.77(0.65-0.89)	
303.9016	16.403	17.046	-38	0.935	56255074	11689165	905251	2263127	13		
305.8987	16.403	17.046	-38	0.935	72009134	14818755	13644323411080		11	0.78(0.65-0.89)	
303.9016	16.615	17.046	-26	0.947	63201084	17104629	905251	2263127	19		
305.8987	16.615	17.046	-26	0.947	81407980	22216513	13644323411080		16	0.78(0.65-0.89)	
303.9016	16.842	17.046	-12	0.960	92029973	24740920	905251	2263127	27		
305.8987	16.842	17.046	-12	0.960	118493560	32078864	13644323411080		24	0.78(0.65-0.89)	
303.9016	17.129	17.046	5	0.977	946502816	190993097	905251	2263127	211		
305.8987	17.114	17.046	4	0.976	1209568790	242913952	13644323411080		178	0.78(0.65-0.89)	
303.9016	17.976	17.046	56	1.025	145746551	41752555	905251	2263127	46		a
305.8987	17.976	17.046	56	1.025	186933098	53143331	13644323411080		39	0.78(0.65-0.89)	
303.9016	18.202	17.046	69	1.038	27625407	6624817	905251	2263127	7		
305.8987	18.202	17.046	69	1.038	35659338	8546842	13644323411080		6	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	19.397	17.046	141	1.106	157478742	31238165	905251	2263127	35		a
305.8987	19.397	17.046	141	1.106	202072192	39886617	13644323411080		29	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	18.218	18.051	10	1.010	6977059	1713574	7992	19980	214		a
333.9339	18.218	18.051	10	1.010	8619615	2185070	12076	30190	181	0.81(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	18.233	18.081	9	1.001	527848741	128628333	124070	310175	1037		a
321.8936	18.233	18.081	9	1.001	669049793	161657763	106789	266972	1514	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.233	18.081	9	1.011	15765403	3750381	15738	39345	238		
A Non-2,3,7,8-sub-TCDD											a
319.8965	18.127	17.500	38	0.995	6532658	1856035	124070	310175	15		a
321.8936	18.112	17.500	37	0.994	7392492	2472824	106789	266972	23	0.88(0.65-0.89)	
319.8965	18.580	17.500	65	1.020	48577403	9426386	124070	310175	76		
321.8936	18.580	17.500	65	1.020	64225733	11908042	106789	266972	112	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.599	22.367	14	1.253	13552382	2310156	9471	23677	244		
353.8970	22.599	22.367	14	1.253	8126698	1401559	7412	18530	189	1.67(1.32-1.78)	
1,2,3,7,8-PeCDF											Ea
339.8597	22.626	22.394	14	1.001	141842191	26706718	59955	149887	445		a
341.8567	22.626	22.394	14	1.001	90669200	17045584	38046	95115	448	1.56(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.908	23.703	12	1.326	17093353	2758941	9471	23677	291		
353.8970	23.908	23.703	12	1.326	10638589	1682701	7412	18530	227	1.61(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	23.949	23.730	13	1.002	71751627	11119013	59955	149887	185		a
341.8567	23.949	23.730	13	1.002	45479971	7030407	38046	95115	185	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.699	20.093	-24	0.872	380977	84227	456	1140	185		
341.8567	19.699	20.093	-24	0.872	217510	53805	444	1110	121	1.75(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQa
339.8597	21.262	23.241	-118	0.941	49270231	11992555	59955	149887	200		
341.8567	21.262	23.241	-118	0.941	31534122	7679143	38046	95115	202	1.56(1.32-1.78)	
339.8597	22.476	23.241	-46	0.995	6796467	1451350	59955	149887	24		a
	Empc Correction				5611643	1373650	59955	149887	23		
341.8567	22.476	23.241	-46	0.995	3620415	886226	38046	95115	23	1.88(1.32-1.78)	
339.8597	22.885	23.241	-21	1.013	1679112	318831	59955	149887	5		
341.8567	22.885	23.241	-21	1.013	987839	193177	38046	95115	5	1.70(1.32-1.78)	
339.8597	23.144	23.241	-6	1.024	28342067	5078611	59955	149887	85		
341.8567	23.144	23.241	-6	1.024	17850998	3216073	38046	95115	85	1.59(1.32-1.78)	
339.8597	24.276	23.241	62	1.074	21826423	3421790	59955	149887	57		
341.8567	24.276	23.241	62	1.074	13665965	2133676	38046	95115	56	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.617	24.426	11	1.365	13258848	2455307	4703	11757	522		
369.8919	24.617	24.426	11	1.365	8089593	1508843	2358	5895	640	1.64(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											a
355.8546	24.644	24.453	11	1.001	7196278	1326124	5957	14892	223		a
357.8516	24.644	24.453	11	1.001	4526706	831442	3400	8500	245	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.426	23.349	-115	0.870	427884	80029	5957	14892	13		
357.8516	21.385	23.349	-118	0.869	1025400	161065	3400	8500	47	0.42(1.32-1.78)	
	Empc Correction				276054	51631	3400	8500	15		
355.8546	22.626	23.349	-43	0.919	752598	157920	5957	14892	27		
357.8516	22.626	23.349	-43	0.919	497562	99659	3400	8500	29	1.51(1.32-1.78)	
355.8546	22.871	23.349	-29	0.929	233863	47397	5957	14892	8		
357.8516	22.871	23.349	-29	0.929	145512	30144	3400	8500	9	1.61(1.32-1.78)	
355.8546	23.185	23.349	-10	0.942	280240	54266	5957	14892	9		
357.8516	23.185	23.349	-10	0.942	174504	35464	3400	8500	10	1.61(1.32-1.78)	
355.8546	24.931	23.349	95	1.013	212996	35525	5957	14892	6		
357.8516	24.903	23.349	93	1.012	172811	25048	3400	8500	7	1.23(1.32-1.78)	
	Empc Correction				137416	22919	3400	8500	7		
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.622	30.503	7	0.951	10214078	1982739	6434	16085	308		
385.8610	30.622	30.503	7	0.951	19634093	3852413	8350	20875	461	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											E
373.8208	30.636	30.529	6	1.000	249768861	49800592	85291	213227	584		
375.8178	30.636	30.529	6	1.000	206930342	41593844	52778	131945	788	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.782	30.689	6	0.956	9386948	2133257	6434	16085	332		
385.8610	30.782	30.689	6	0.956	18279517	4125426	8350	20875	494	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.809	30.716	6	1.001	67132042	14806538	85291	213227	174		
375.8178	30.809	30.716	6	1.001	55489390	12270324	52778	131945	232	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.581	31.514	4	0.981	7662054	2061843	6434	16085	320		
385.8610	31.581	31.514	4	0.981	14794538	4074569	8350	20875	488	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.607	31.528	5	1.001	6230996	1728938	85291	213227	20		M
375.8178	31.594	31.528	4	1.000	5118147	1428575	52778	131945	27	1.22(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											a
383.8639	32.366	32.326	2	1.005	8436851	2582863	6434	16085	401		a
385.8610	32.366	32.326	2	1.005	16495301	4988471	8350	20875	597	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.379	32.340	2	1.000	4792905	1610053	85291	213227	19		M
375.8178	32.379	32.340	2	1.000	4064417	1323888	52778	131945	25	1.18(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	28.586	30.197	-96	0.933	15409840	2542359	85291	213227	30		
375.8178	28.586	30.197	-96	0.933	12693067	2067334	52778	131945	39	1.21(1.05-1.43)	
373.8208	29.877	30.197	-19	0.976	9241517	1621631	85291	213227	19		
375.8178	29.877	30.197	-19	0.976	7572599	1353058	52778	131945	26	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	31.488	30.197	77	1.028	5204851	1492930	85291	213227	18		M
375.8178	31.488	30.197	77	1.028	4299007	1232451	52778	131945	23	1.21(1.05-1.43)	
373.8208	32.459	30.197	135	1.060	16661128	5773530	85291	213227	68		M
375.8178	32.459	30.197	135	1.060	13611044	4743291	52778	131945	90	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	32.193	32.140	3		26102398	7181173	5707	14267	1258		a
403.8529	32.193	32.140	3		21148861	5807640	5363	13407	1083	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.767	31.701	4	0.987	11391985	3268754	5707	14267	573		
403.8529	31.767	31.701	4	0.987	8885641	2667911	5363	13407	497	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.781	31.714	4	1.000	137625	41685	4036	10090	10		
391.8127	31.781	31.714	4	1.000	100514	30658	3460	8650	9	1.37(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.860	31.807	3	0.990	12785936	3627893	5707	14267	636		
403.8529	31.860	31.807	3	0.990	10733460	2926886	5363	13407	546	1.19(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.874	31.820	3	1.000	1166241	319824	4036	10090	79		
391.8127	31.874	31.820	3	1.000	940295	264232	3460	8650	76	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.193	32.153	2	1.013	325107	80477	4036	10090	20		
391.8127	32.193	32.153	2	1.013	271798	68700	3460	8650	20	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.744	30.882	-68	0.934	6113924	831705	4036	10090	206		
391.8127	29.731	30.882	-69	0.933	4774081	669540	3460	8650	194	1.28(1.05-1.43)	
389.8157	30.689	30.882	-12	0.963	380824	85278	4036	10090	21		
391.8127	30.689	30.882	-12	0.963	291012	66998	3460	8650	19	1.31(1.05-1.43)	
389.8157	31.048	30.882	10	0.975	4451486	905641	4036	10090	224		
391.8127	31.035	30.882	9	0.974	3587725	723593	3460	8650	209	1.24(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.790	33.766	1	1.050	5017615	1650152	6408	16020	258		
419.8220	33.790	33.766	1	1.050	11343217	3773087	14733	36832	256	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.802	33.778	1	1.000	40501393	13635847	34792	86980	392		
409.7789	33.802	33.778	1	1.000	38954740	13298158	31183	77957	426	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.872	34.847	1	1.083	5233465	1651997	6408	16020	258		
419.8220	34.872	34.847	1	1.083	12004418	3778334	14733	36832	256	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.884	34.860	1	1.000	13633757	4314003	34792	86980	124		
409.7789	34.884	34.860	1	1.000	13048574	4136871	31183	77957	133	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.106	34.319	-13	1.009	13205868	4731535	34792	86980	136		
409.7789	34.106	34.319	-13	1.009	13272945	4450480	31183	77957	143	0.99(0.88-1.20)	

Report Date: 18-Aug-2021 10:23:23 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.580	34.568	1	1.074	8077007	2595904	3605	9012	720		
437.8140	34.580	34.568	1	1.074	7841096	2537349	4772	11930	532	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.592	34.580	1	1.000	43143183	13766495	50780	126950	271		
425.7737	34.592	34.580	1	1.000	41589300	13453826	34090	85225	395	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.045	34.301	-15	0.985	24565679	8764528	50780	126950	173		
425.7737	34.045	34.301	-15	0.985	22161216	8359142	34090	85225	245	1.11(0.88-1.20)	
13C-OCDD											
469.7779	36.950	36.926	1	1.148	11571321	3134776	1853	4632	1692		
471.7750	36.950	36.926	1	1.148	12962451	3498061	2094	5235	1671	0.89(0.76-1.02)	
OCDF											
441.7428	37.046	37.022	1	1.003	13981470	3846048	1630	4075	2360		
443.7399	37.046	37.022	1	1.003	15758080	4232187	1726	4315	2452	0.89(0.76-1.02)	
OCDD											E
457.7377	36.962	36.938	1	1.000	310321474	82244295	33932	84830	2424		
459.7348	36.950	36.938	1	1.000	344423067	90939241	39330	98325	2312	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d
Lims ID: 320-76769-A-15-A
Client ID: 11215702-072221-SS-SJSB074 (4-6)
Inject. Date: 15-Aug-2021 14:27:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 19

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	26021064	7849856

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	26021064	7849856

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.116	27132490	6549044	35316362	8322116	234.4	0.77	
16.403	56255074	11689165	72009134	14818755	481.4	0.78	
16.615	63201084	17104629	81407980	22216513	542.8	0.78	
16.842	92029973	24740920	118493560	32078864	790.2	0.78	
17.129	946502816	190993097	1209568790	242913952	8092.4	0.78	
17.976	145746551	41752555	186933098	53143331	1248.6	0.78	a
18.202	27625407	6624817	35659338	8546842	237.5	0.77	
19.397	157478742	31238165	202072192	39886617	1349.5	0.78	a
Signal Totals:							
	1515972137	330692392	1941460454	421926990			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3457432591	752619382				0.78	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 12977 = (3457432591 * 100.000) / (26021064 * 1.024)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d
Lims ID: 320-76769-A-15-A
Client ID: 11215702-072221-SS-SJSB074 (4-6)
Inject. Date: 15-Aug-2021 14:27:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 19

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	15596674	3898644

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	15596674	3898644

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.127	6532658	1856035	7392492	2472824	71.2	0.88	a
18.580	48577403	9426386	64225733	11908042	576.7	0.76	
Signal Totals:							
	55110061	11282421	71618225	14380866			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	126728286	25663287				0.77	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 647.892 = (126728286 * 100.000) / (15596674 * 1.254)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Lims ID:	320-76769-A-15-A		
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Inject. Date:	15-Aug-2021 14:27:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	19

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	21679080	3711715
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	27731942	4441642

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	24705511	4076678

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.699	380977	84227	217510	53805	2.33	1.75	
Signal Totals:							
	380977	84227	217510	53805			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	598487	138032				1.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.330 = (598487 * 100.000) / (24705511 * 1.040)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Lims ID:	320-76769-A-15-A		
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Inject. Date:	15-Aug-2021 14:27:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	19

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	21679080	3711715
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	27731942	4441642

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	24705511	4076678

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.262	49270231	11992555	31534122	7679143	314.6	1.56	
22.476	6796467	1451350	3620415	886226	40.6	1.88	RQa
22.476	5611643	1373650	3620415	886226	35.9		Empc Correction
22.885	1679112	318831	987839	193177	10.4	1.70	
23.144	28342067	5078611	17850998	3216073	179.8	1.59	
24.276	21826423	3421790	13665965	2133676	138.2	1.60	
Signal Totals:							
	106729476	22185437	67659339	14108295			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	175573639	36371432				1.59	RQa
	174388815	36293732					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 683.480 = (175573639 * 100.000) / (24705511 * 1.040)
Empc Amount: 678.867 = (174388815 * 100.000) / (24705511 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Lims ID:	320-76769-A-15-A		
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Inject. Date:	15-Aug-2021 14:27:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	19

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	21348441	3964150

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	21348441	3964150

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.426	427884	80029	1025400	161065	6.49	0.42	RQ
21.426	427884	80029	276054	51631	3.15		Empc Correction
22.626	752598	157920	497562	99659	5.59	1.51	
22.871	233863	47397	145512	30144	1.69	1.61	
23.185	280240	54266	174504	35464	2.03	1.61	
24.931	212996	35525	172811	25048	1.72	1.23	RQ
24.931	212996	35525	137416	22919	1.57		Empc Correction
Signal Totals:							
	1907581	375137	1231048	239817			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3923370	726517				0.95	RQ
	3138629	614954					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 17.529 = (3923370 * 100.000) / (21348441 * 1.048)
Empc Amount: 14.023 = (3138629 * 100.000) / (21348441 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d
Lims ID: 320-76769-A-15-A
Client ID: 11215702-072221-SS-SJSB074 (4-6)
Inject. Date: 15-Aug-2021 14:27:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 19

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	29848171	5835152
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	27666465	6258683
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	22456592	6136412
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	24932152	7571334

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	26225845	6450395

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.586	15409840	2542359	12693067	2067334	94.3	1.21	
29.877	9241517	1621631	7572599	1353058	56.4	1.22	
31.488	5204851	1492930	4299007	1232451	31.9	1.21	Ma
32.459	16661128	5773530	13611044	4743291	101.6	1.22	Ma
Signal Totals:							
	46517336	11430450	38175717	9396134			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	84693053	20826584				1.22	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 284.211 = (84693053 * 100.000) / (26225845 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d
Lims ID: 320-76769-A-15-A
Client ID: 11215702-072221-SS-SJSB074 (4-6)
Inject. Date: 15-Aug-2021 14:27:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 19

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	20277626	5936665
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	23519396	6554779
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	21898511	6245722

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.744	6113924	831705	4774081	669540	46.7	1.28	
30.689	380824	85278	291012	66998	2.88	1.31	
31.048	4451486	905641	3587725	723593	34.5	1.24	
Signal Totals:							
	10946234	1822624	8652818	1460131			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	19599052	3282755				1.27	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 83.994 = (19599052 * 100.000) / (21898511 * 1.066)

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Lims ID:	320-76769-A-15-A		
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Inject. Date:	15-Aug-2021 14:27:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	19

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	16360832	5423239
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	17237883	5430331

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	16799357	5426785

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.106	13205868	4731535	13272945	4450480	114.3	0.99	
Signal Totals:							
	13205868	4731535	13272945	4450480			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	26478813	9182015				0.99	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 114.271 = (26478813 * 100.000) / (16799357 * 1.379)

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Lims ID:	320-76769-A-15-A		
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Inject. Date:	15-Aug-2021 14:27:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	19

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	15918103	5133253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	15918103	5133253

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.045	24565679	8764528	22161216	8359142	268.2	1.11	
Signal Totals:							
	24565679	8764528	22161216	8359142			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	46726895	17123670				1.11	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 268.249 = (46726895 * 100.000) / (15918103 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.37
Area: 37949167
Amount: 325.1487
Amount Units: pg/ul

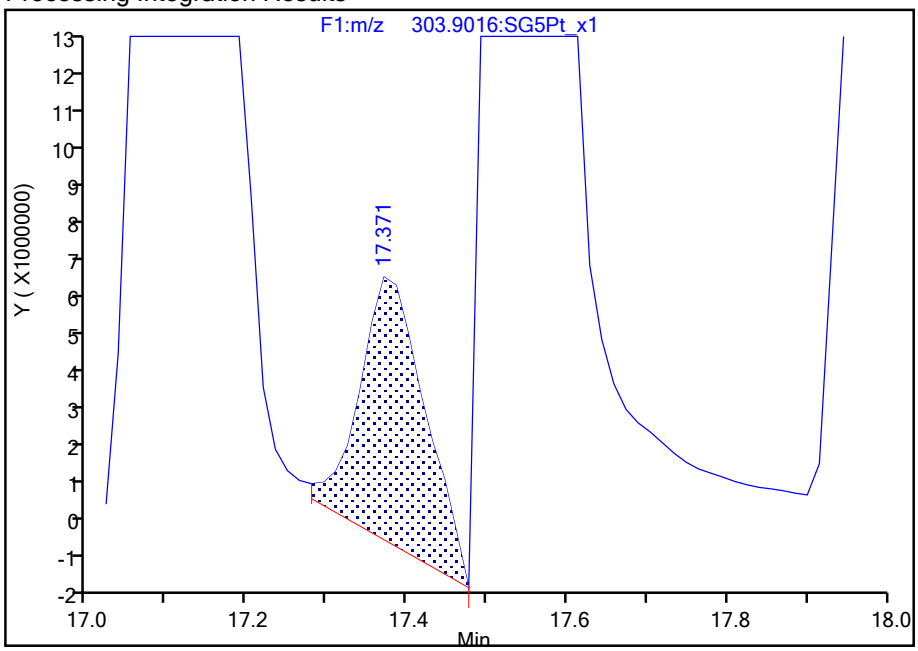

Manual Integration Results

RT: 17.55
Area: 2068105489
Amount: 17654
Amount Units: pg/ul

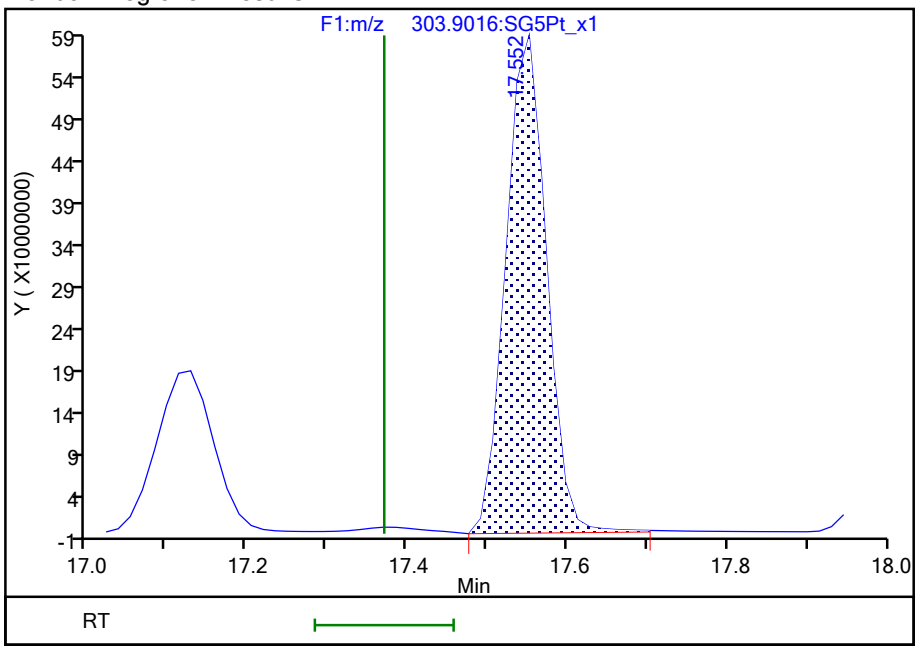

Reviewer: bennettd, 17-Aug-2021 16:53:56

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 18.04
Area: 14765807
Amount: 111.1955
Amount Units: pg/ul

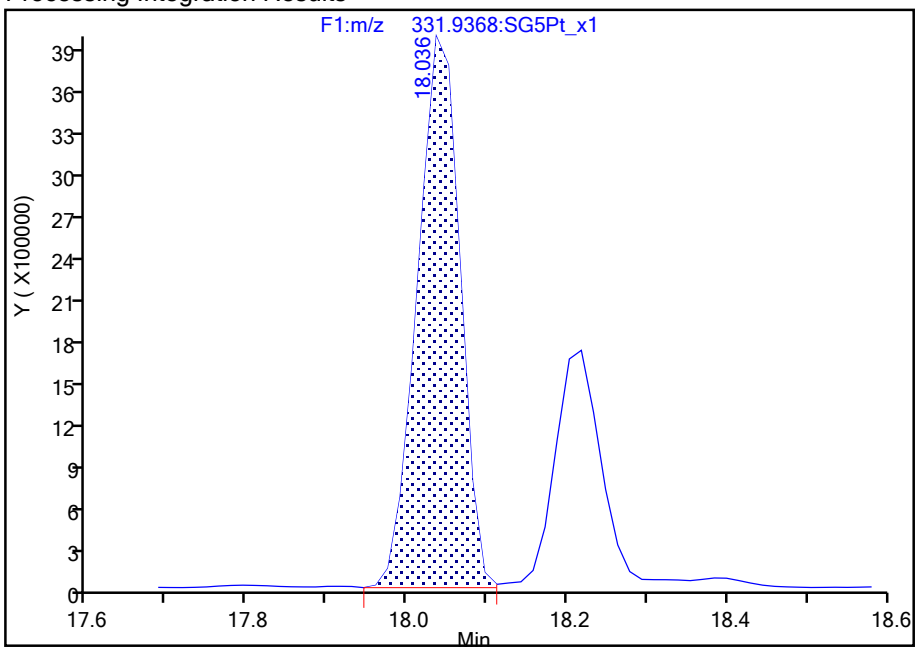

Manual Integration Results

RT: 18.22
Area: 6977059
Amount: 51.714153
Amount Units: pg/ul

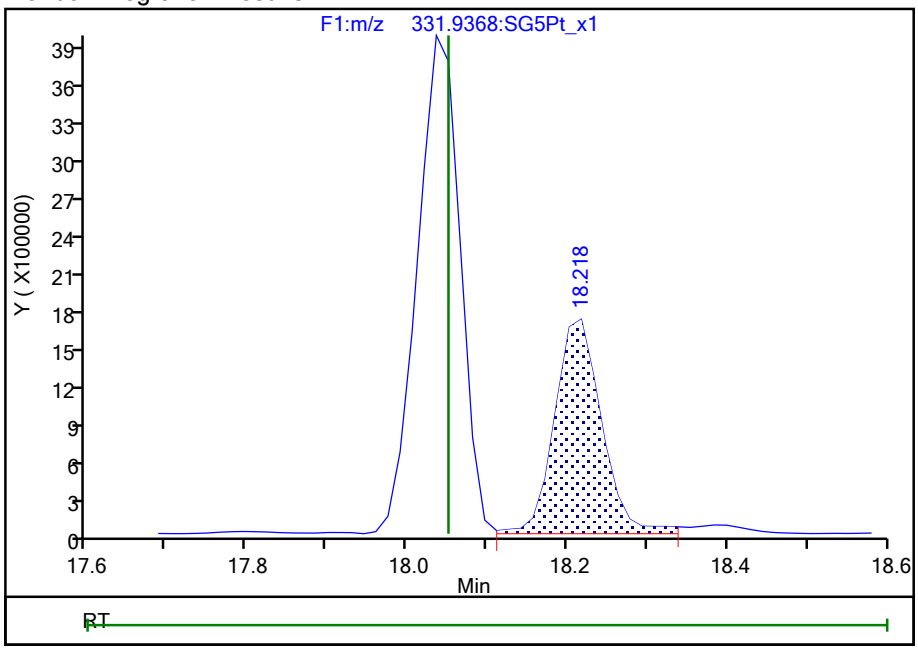

Reviewer: bennettd, 17-Aug-2021 16:53:39

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.13
Area: 6532658
Amount: 71.191616
Amount Units: pg/ul

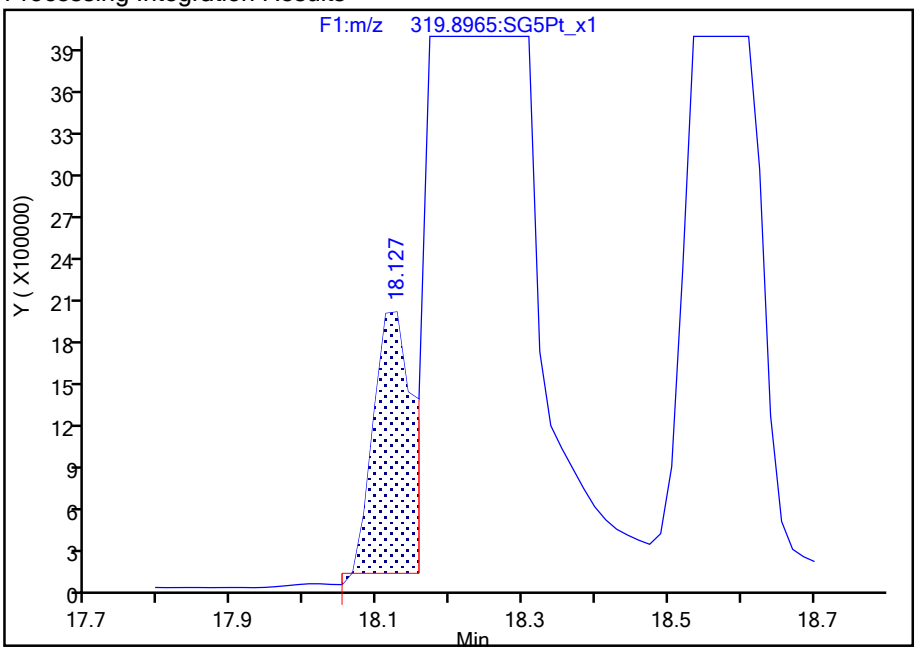

Manual Integration Results

RT: 18.23
Area: 527848741
Amount: 6119.0825
Amount Units: pg/ul

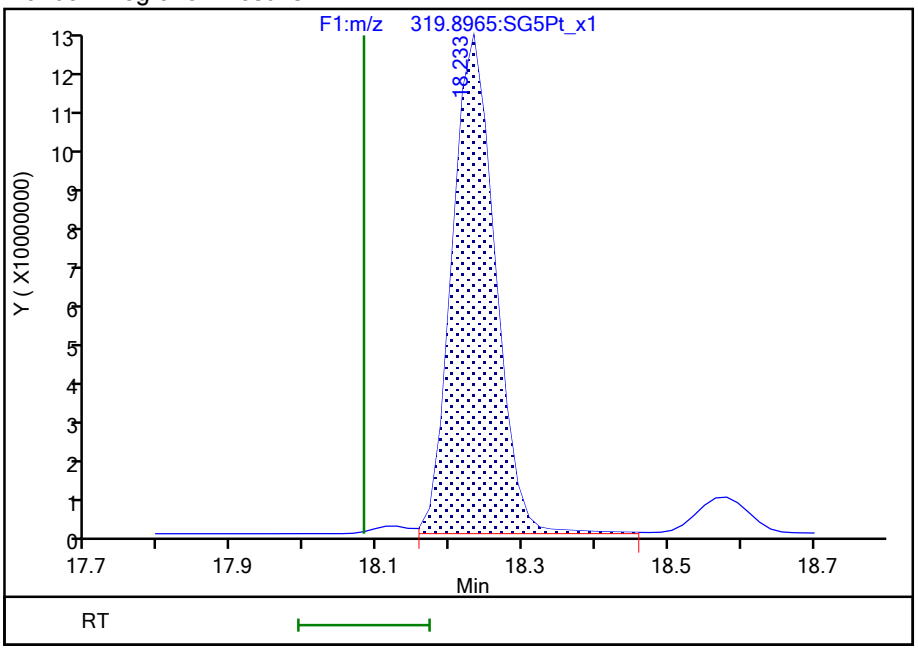

Reviewer: bennettd, 17-Aug-2021 16:53:47

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.48
Area: 3620415
Amount: 45.282081
Amount Units: pg/ul

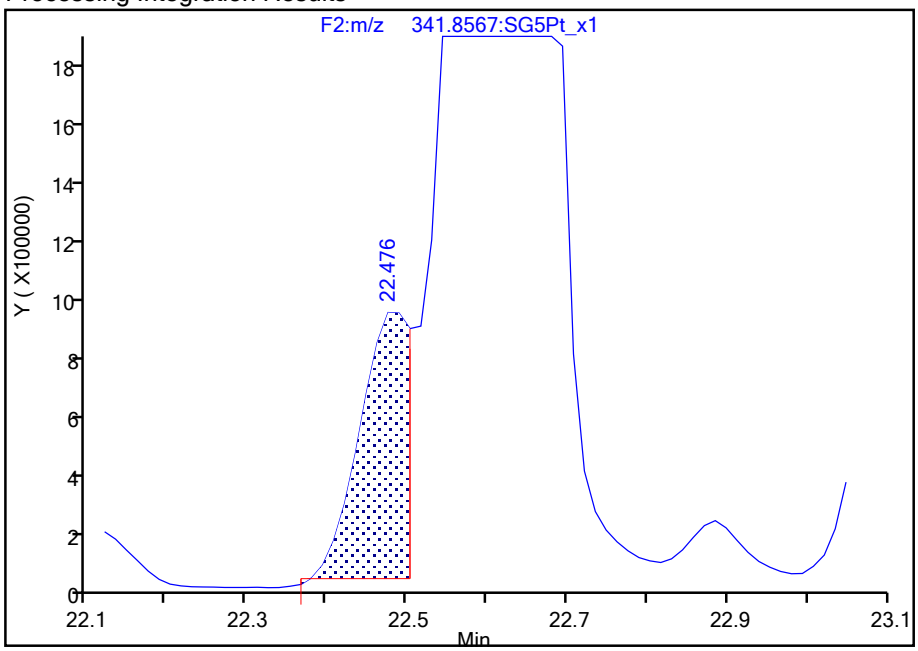

Manual Integration Results

RT: 22.63
Area: 90669200
Amount: 1010.7247
Amount Units: pg/ul

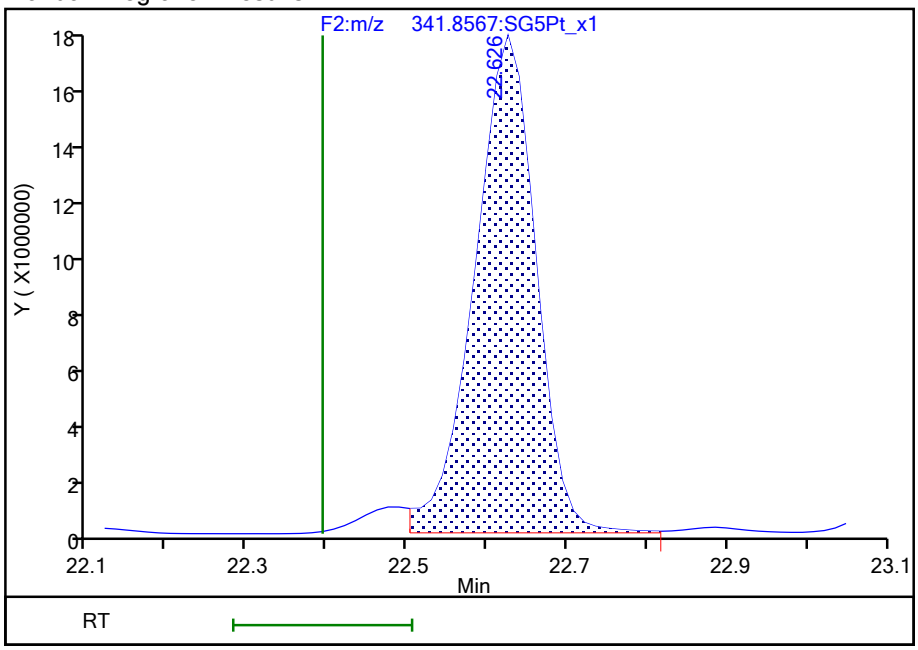

Reviewer: dadunj, 18-Aug-2021 11:25:18
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

RT: 22.48
Area: 10416882
Amount: 45.282081
Amount Units: pg/ul

Processing Integration Results

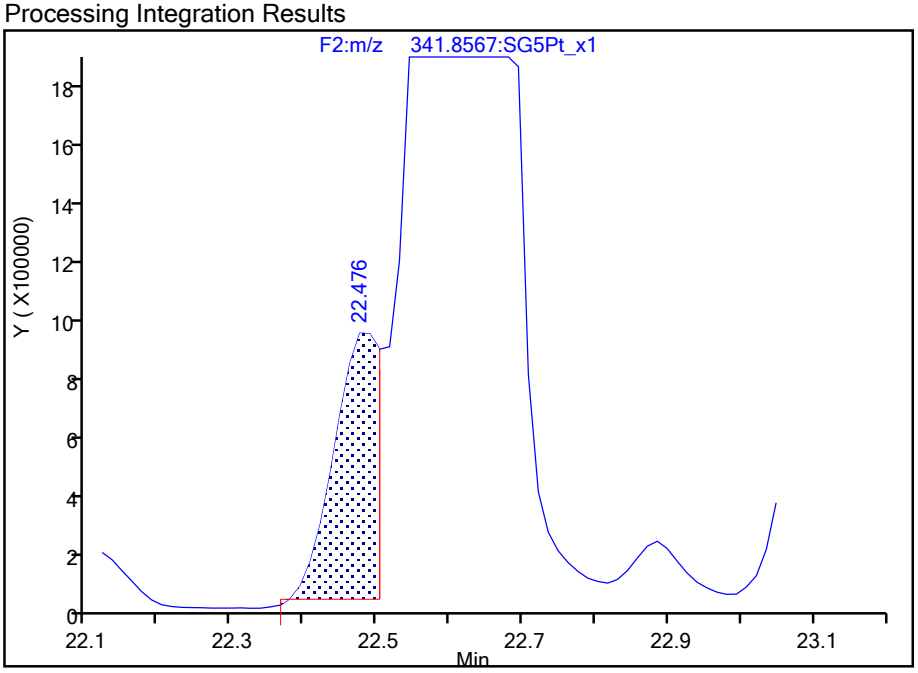

Manual Integration Results

RT: 22.63
Area: 232511391
Amount: 1010.7247
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 11:25:18
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.48
Area: 6796467
Amount: 45.282081
Amount Units: pg/ul

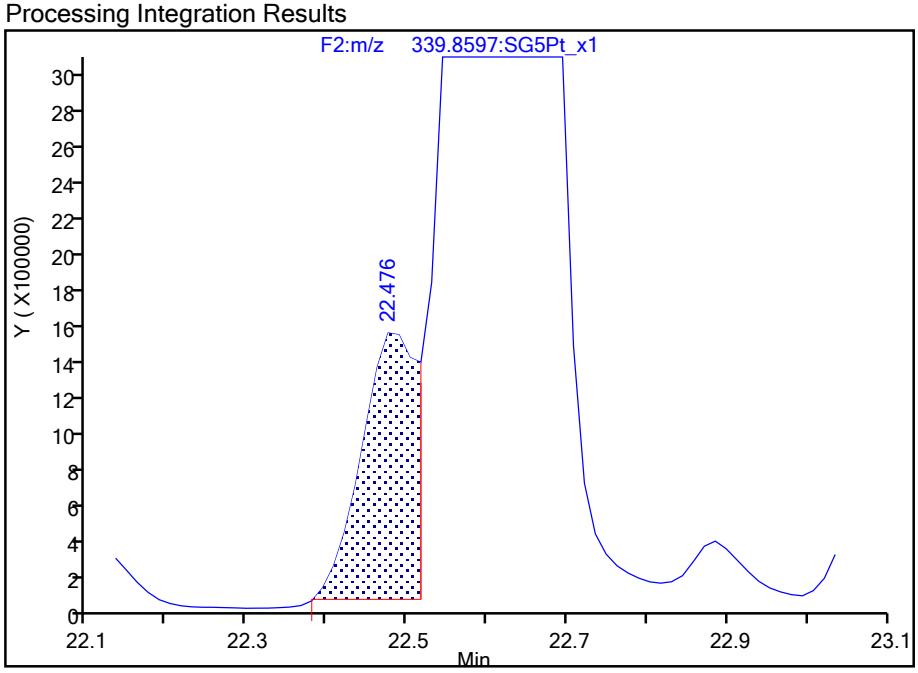

Manual Integration Results

RT: 22.63
Area: 141842191
Amount: 1010.7247
Amount Units: pg/ul

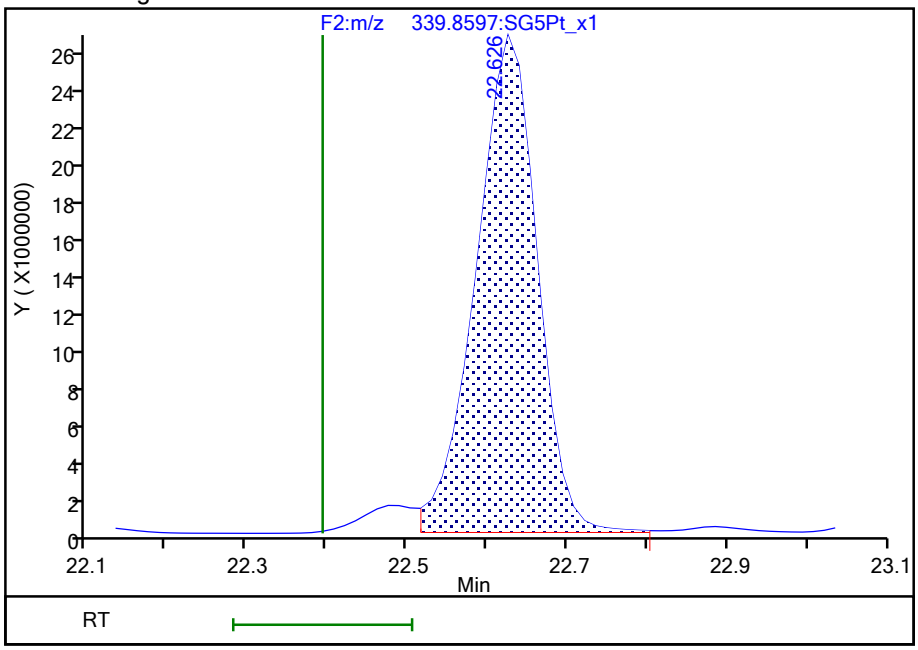

Reviewer: dadunj, 18-Aug-2021 11:25:19
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Not Detected
Expected RT: 23.73

Processing Integration Results

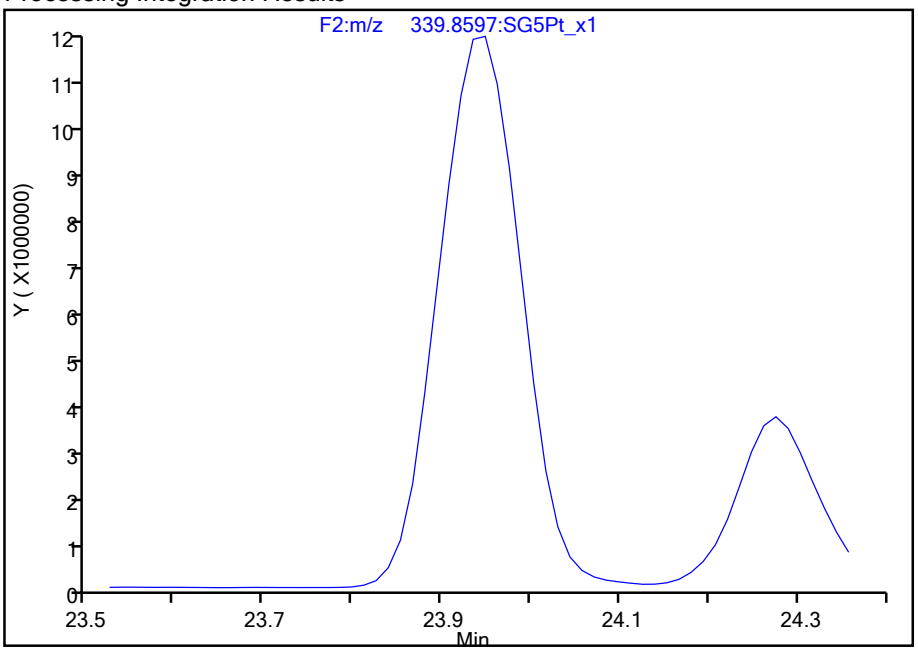

Manual Integration Results

RT: 23.95
Area: 71751627
Amount: 415.0862
Amount Units: pg/ul

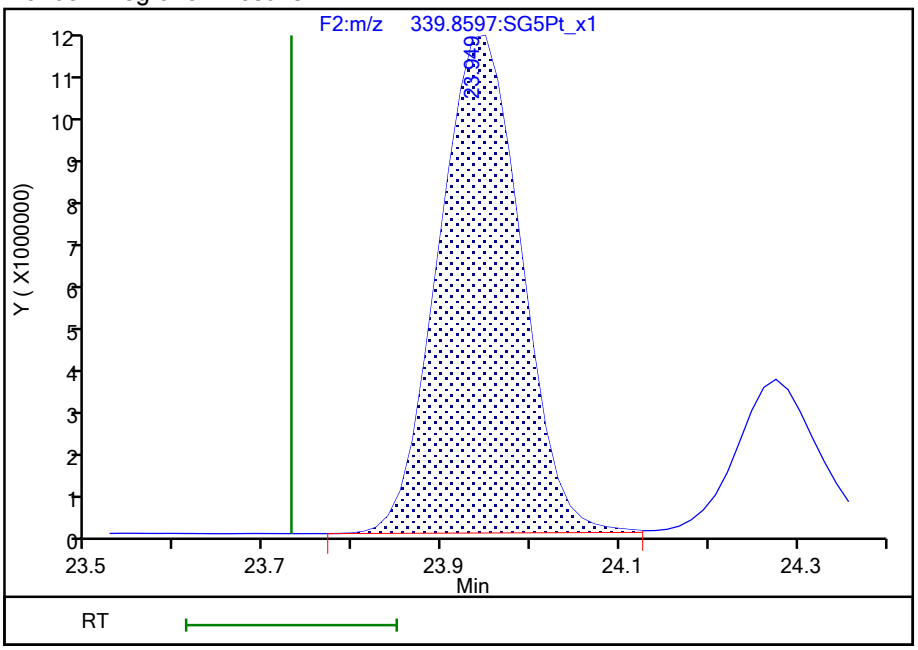

Reviewer: dadunj, 18-Aug-2021 11:25:23
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.45

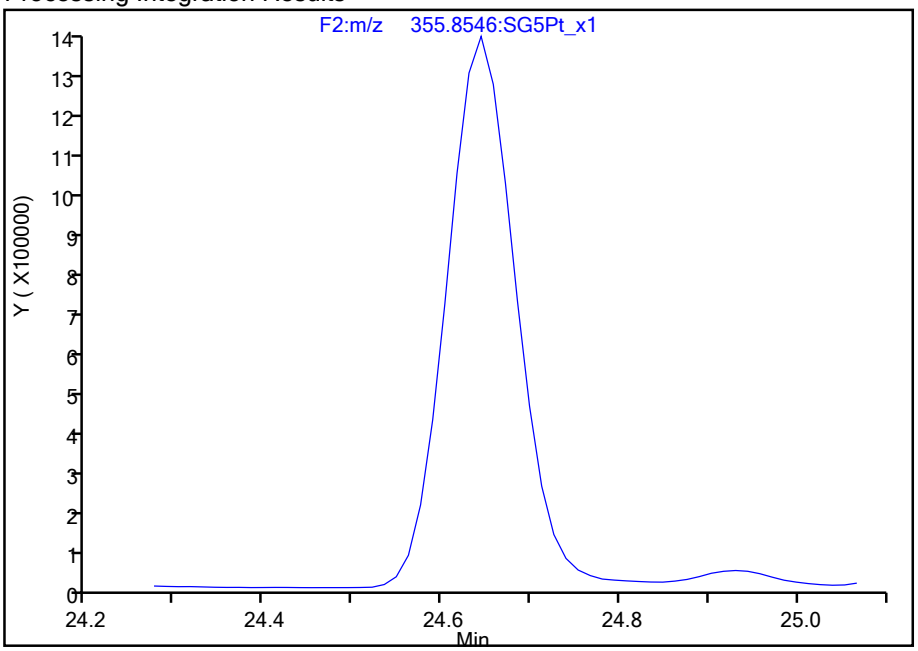

Manual Integration Results

RT: 24.64
Area: 7196278
Amount: 52.376004
Amount Units: pg/ul

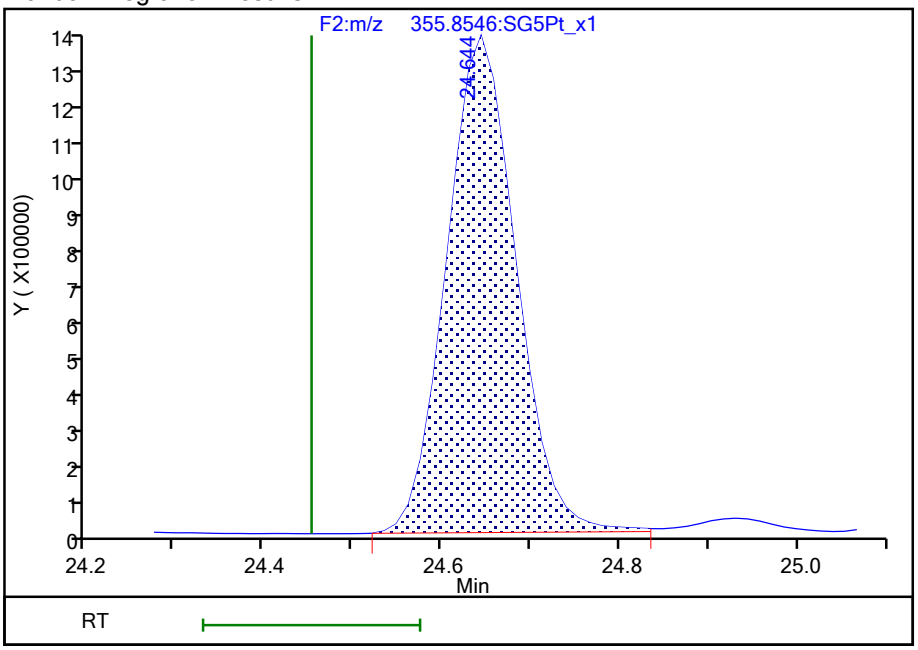

Reviewer: dadunj, 18-Aug-2021 11:25:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.61
Area: 11435291
Amount: 79.531877
Amount Units: pg/ul

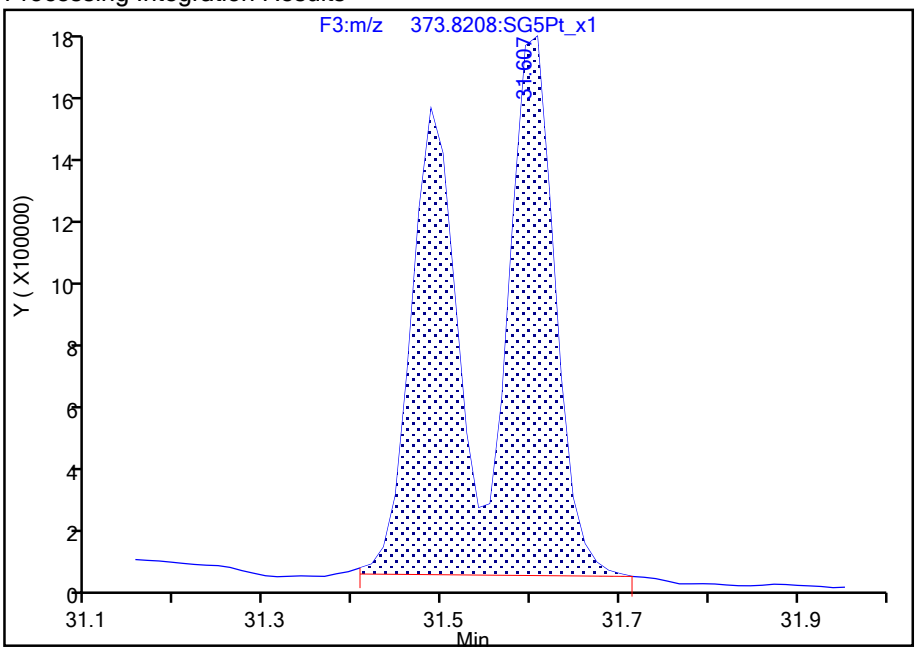

Manual Integration Results

RT: 31.61
Area: 6230996
Amount: 43.286032
Amount Units: pg/ul

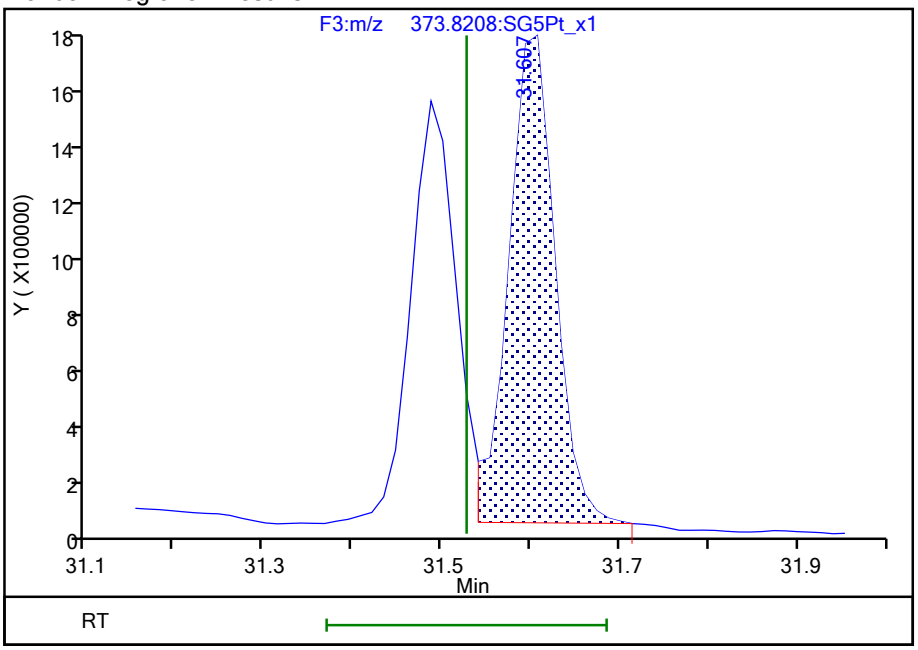

Reviewer: dadunj, 18-Aug-2021 11:26:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.59
Area: 9417132
Amount: 79.531877
Amount Units: pg/ul

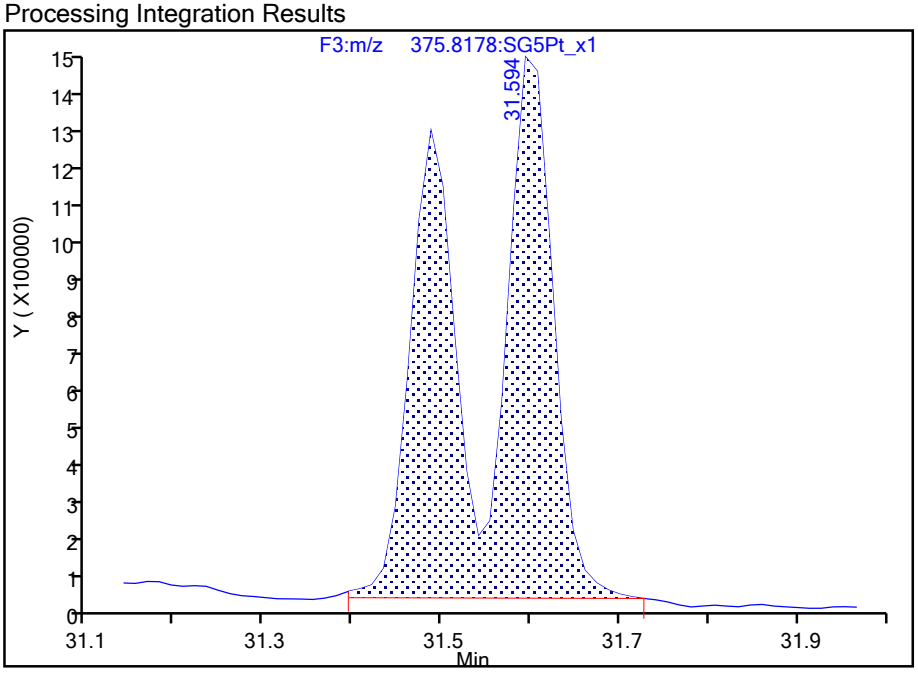

Manual Integration Results

RT: 31.59
Area: 5118147
Amount: 43.286032
Amount Units: pg/ul

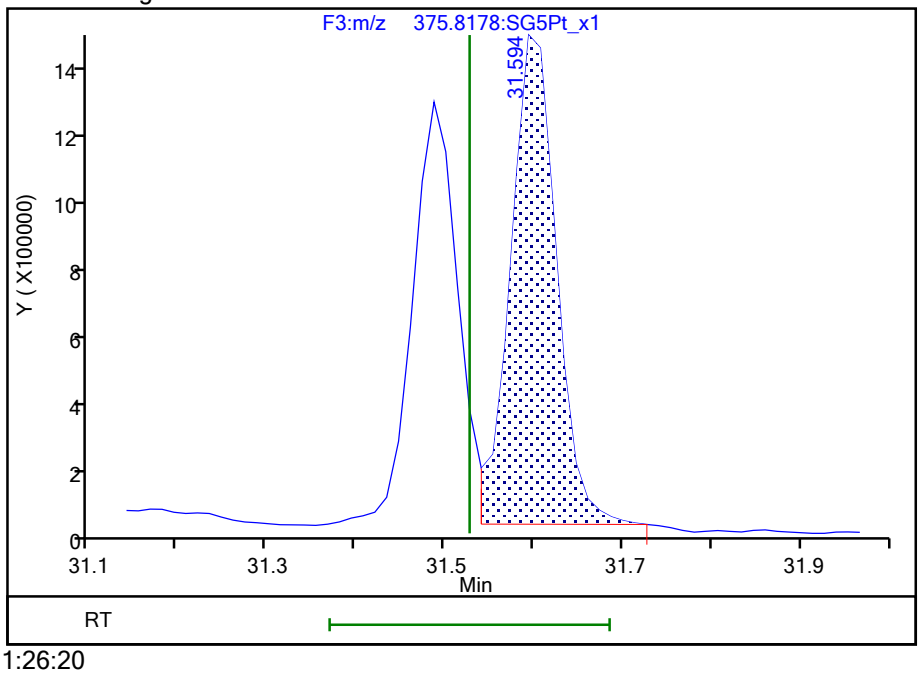

Reviewer: dadunj, 18-Aug-2021 11:26:20
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

775109

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,7,8,9-HxCDF, CAS: 116843-04-0

Signal: 1

Processing Integration Results

RT: 31.58
Area: 7662054
Amount: 0
Amount Units: pg/ul

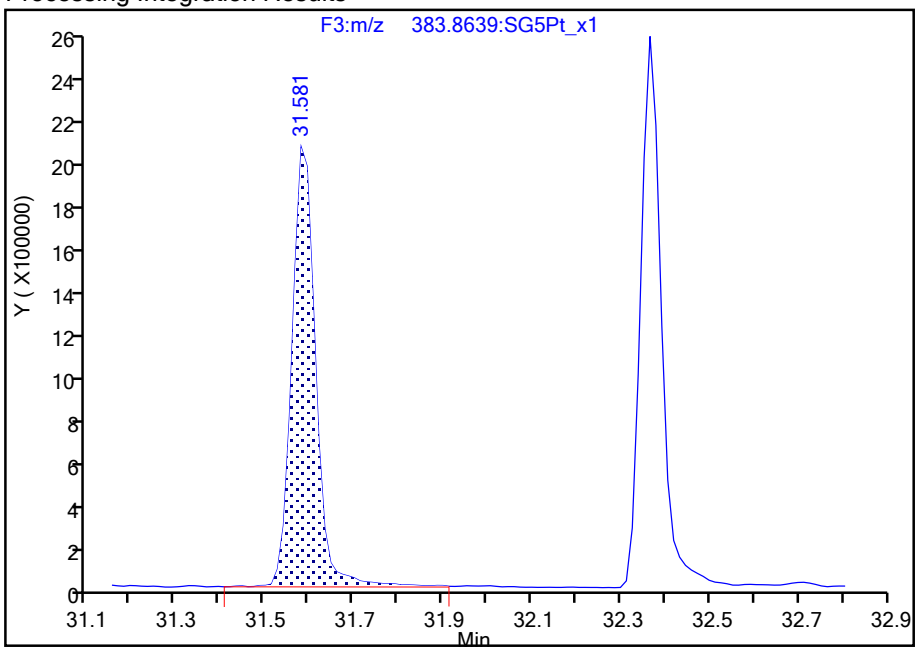

Manual Integration Results

RT: 32.37
Area: 8436851
Amount: 54.533708
Amount Units: pg/ul

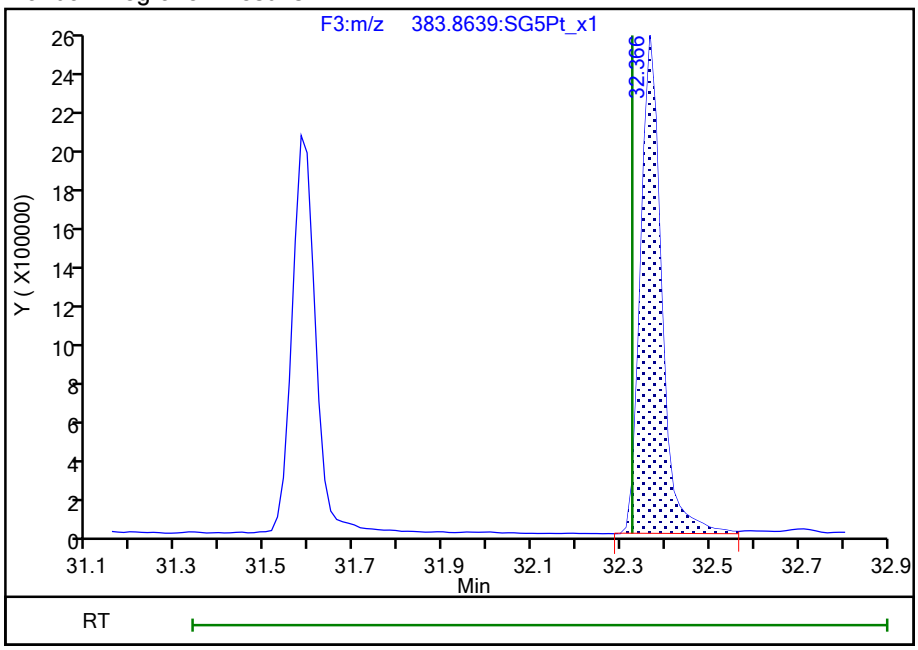

Reviewer: dadunj, 18-Aug-2021 11:26:26

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.46
Area: 21453895
Amount: 134.5608
Amount Units: pg/ul

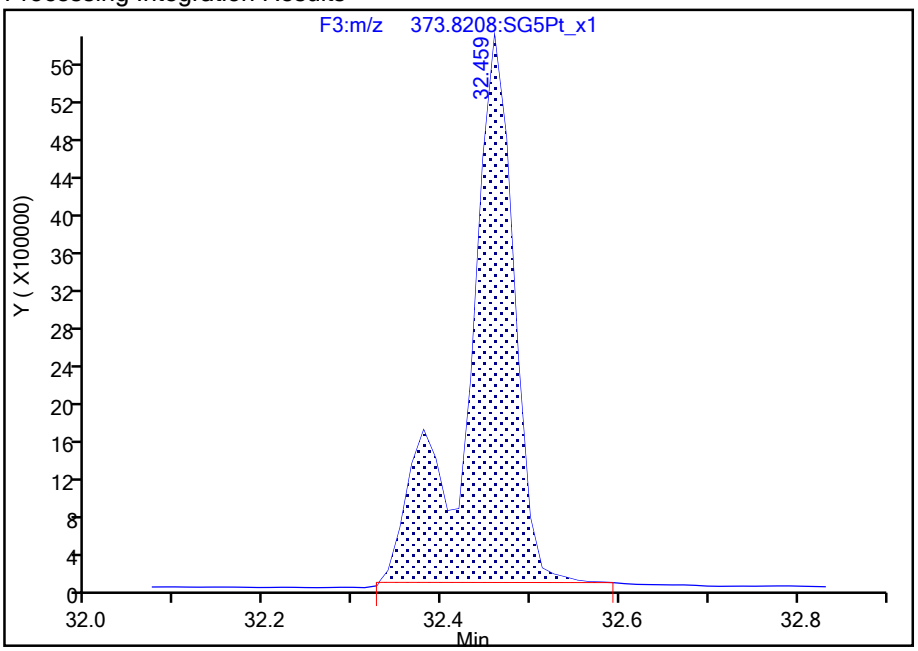

Manual Integration Results

RT: 32.38
Area: 4792905
Amount: 30.458833
Amount Units: pg/ul

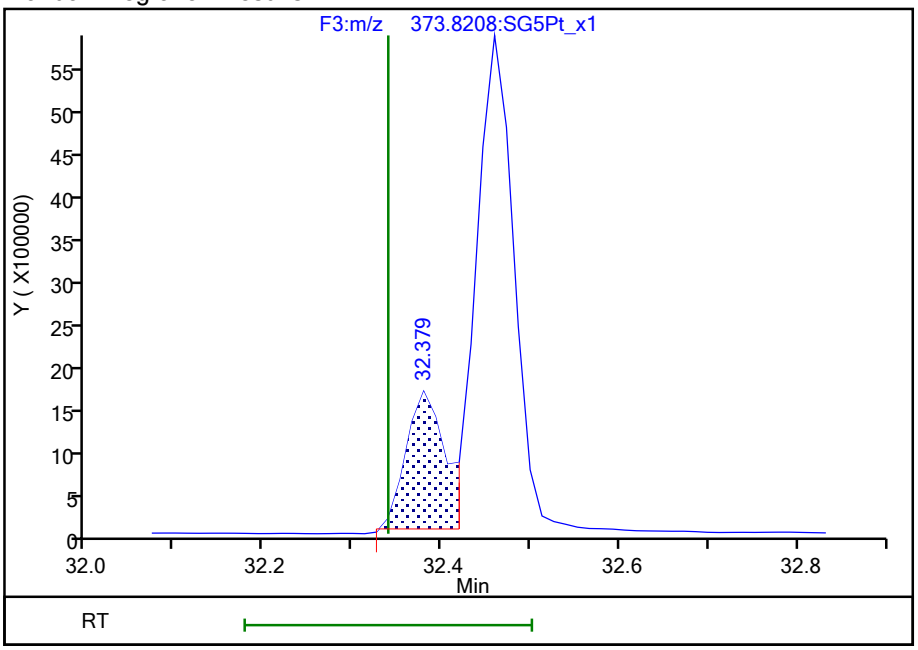

Reviewer: dadunj, 18-Aug-2021 11:26:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.46
Area: 17675920
Amount: 134.5608
Amount Units: pg/ul

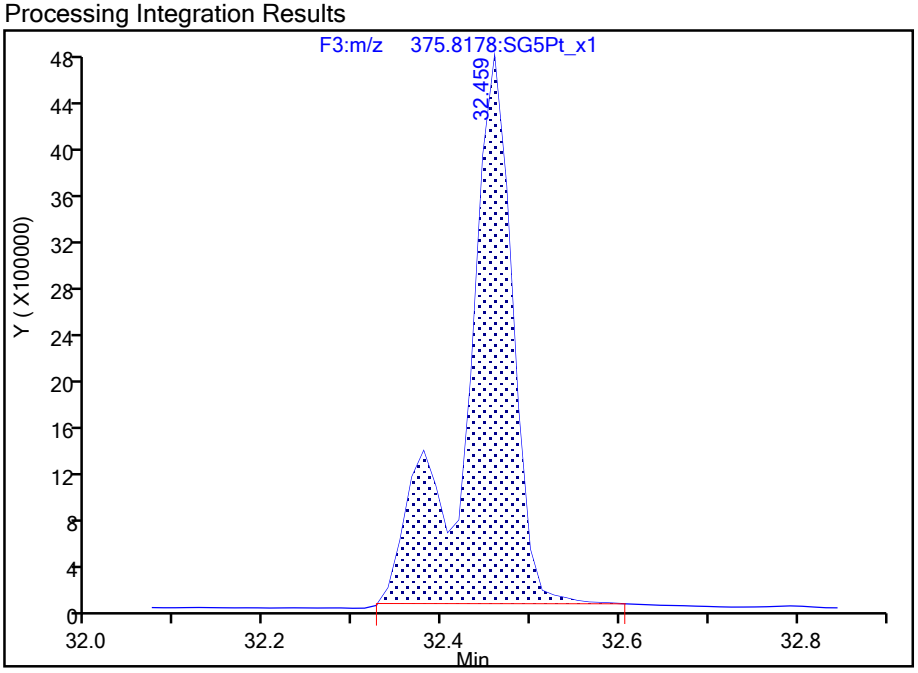

Manual Integration Results

RT: 32.38
Area: 4064417
Amount: 30.458833
Amount Units: pg/ul

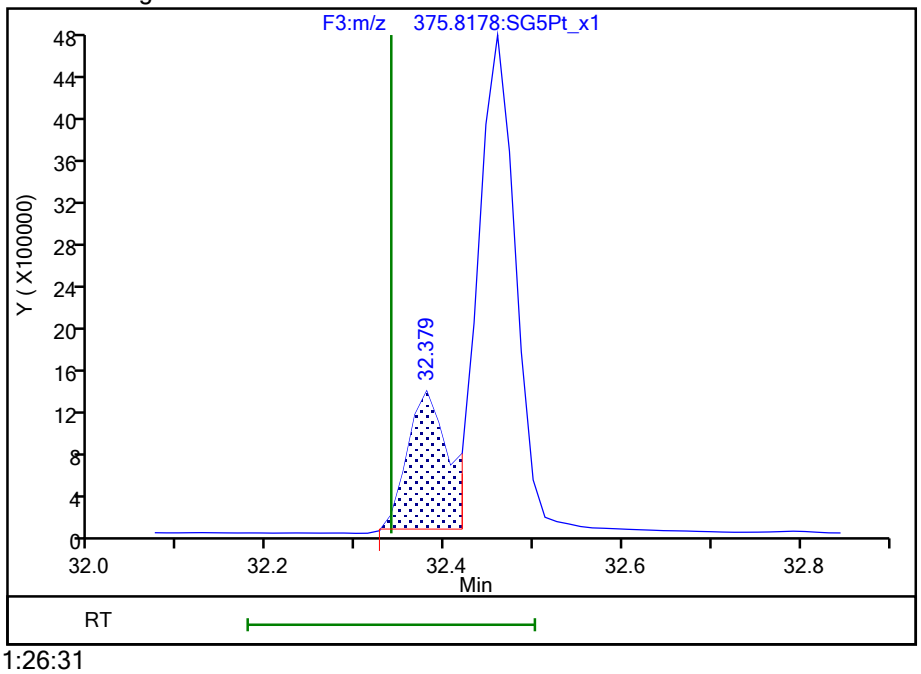

Reviewer: dadunj, 18-Aug-2021 11:26:31

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Not Detected

RT: 27.94- 32.45

Processing Integration Results

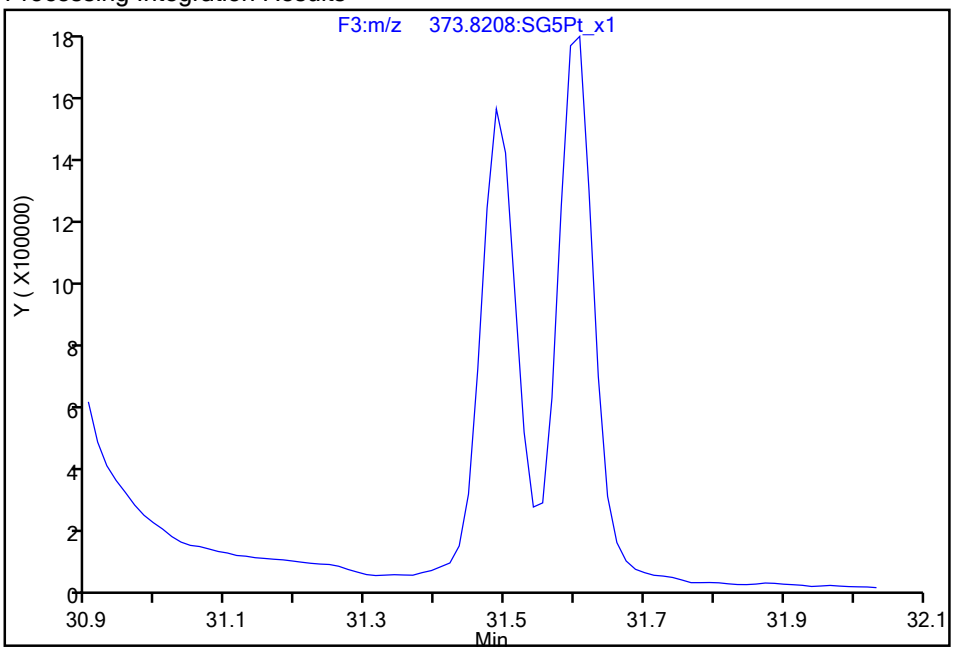

RT = 31.488 Area = 5204851 M

Manual Integration Results

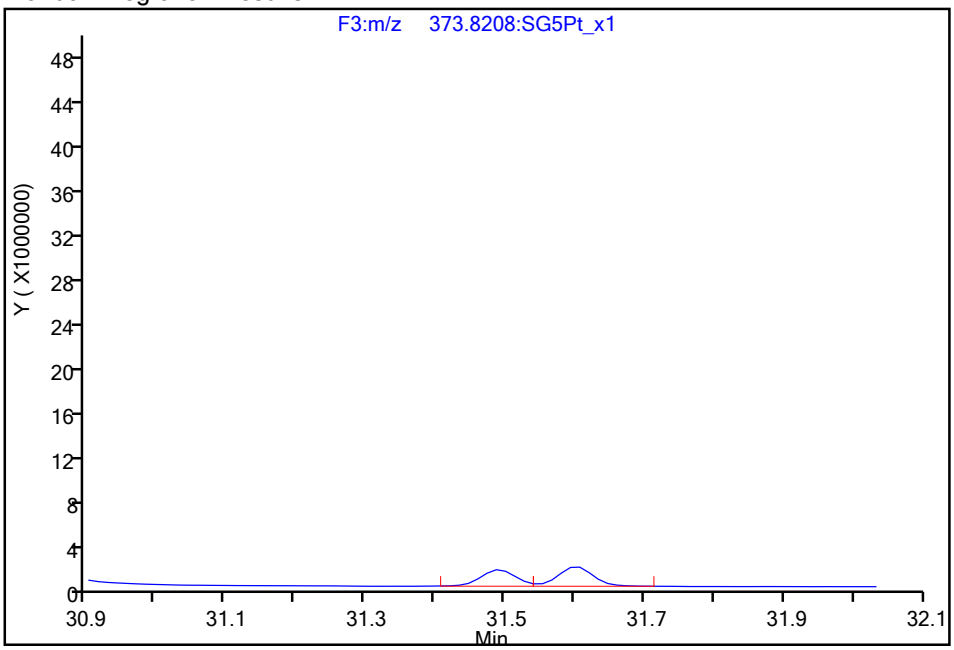

Reviewer: dadunj, 18-Aug-2021 11:27:21

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d				
Injection Date:	15-Aug-2021 14:27:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.459 Area = 21453895

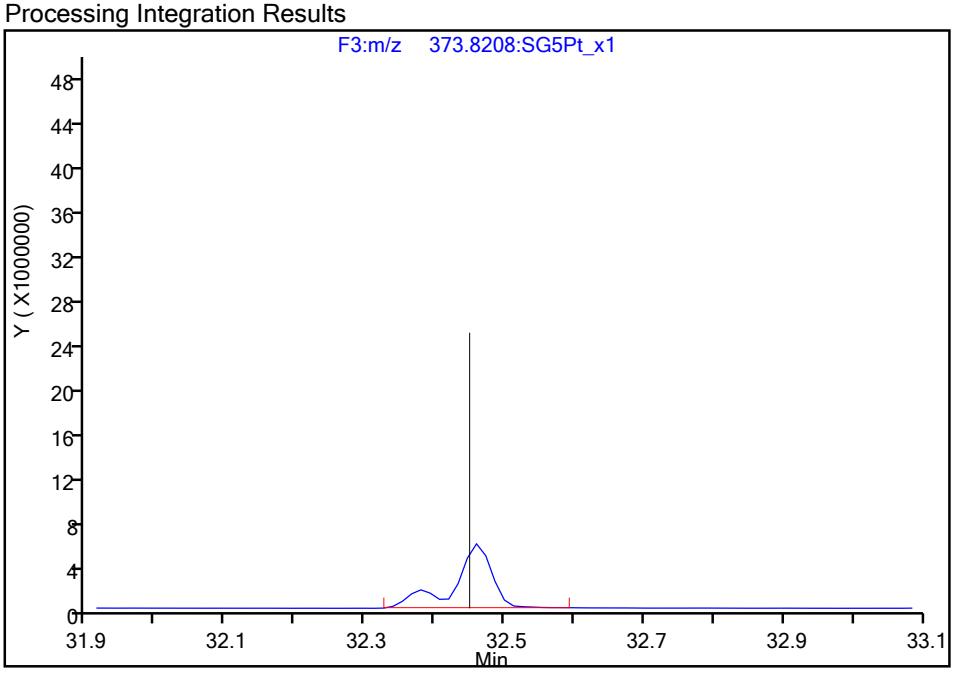

Manual Integration Results

RT = 32.459 Area = 16661128 M

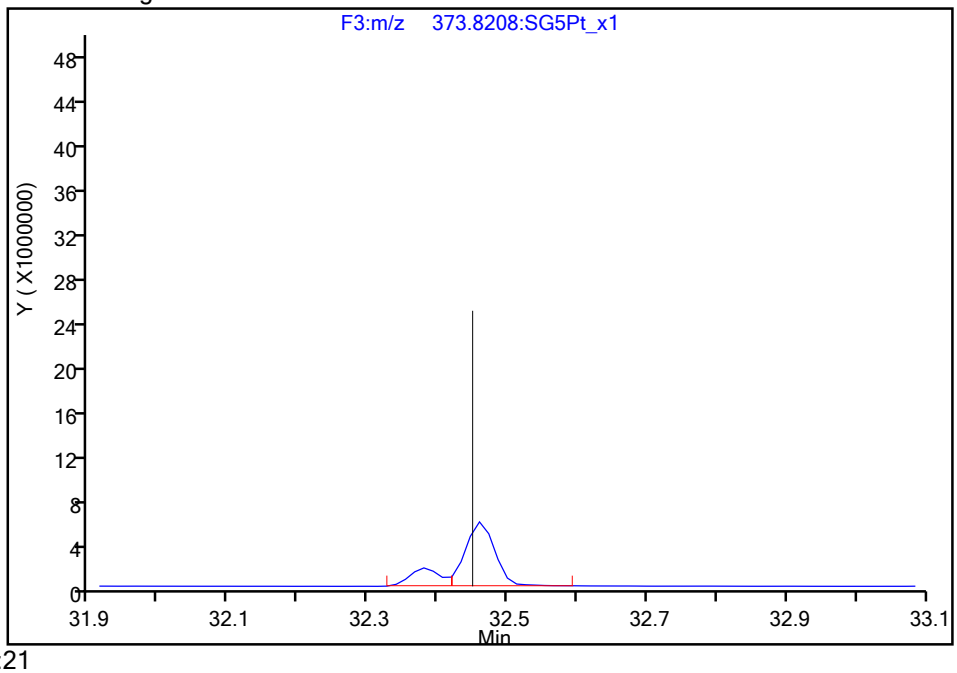

Reviewer: dadunj, 18-Aug-2021 11:27:21

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

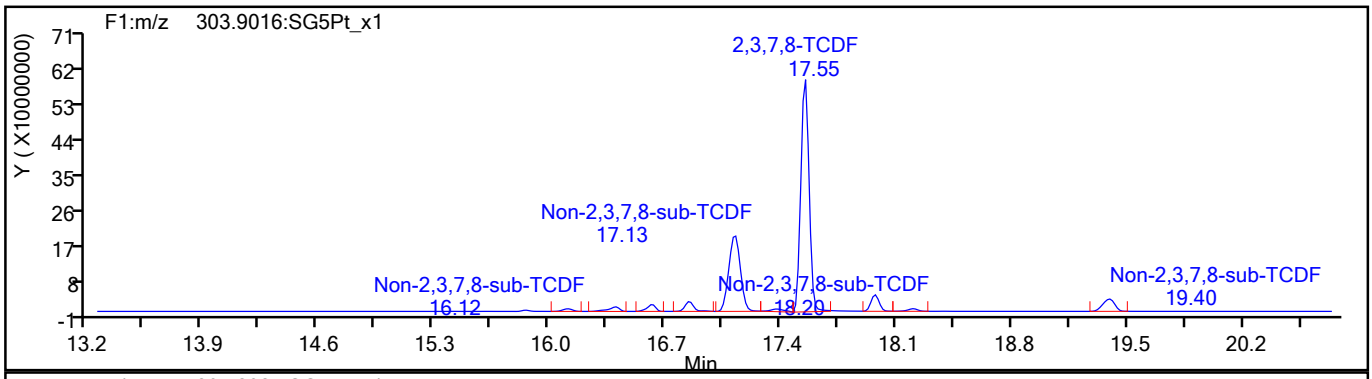

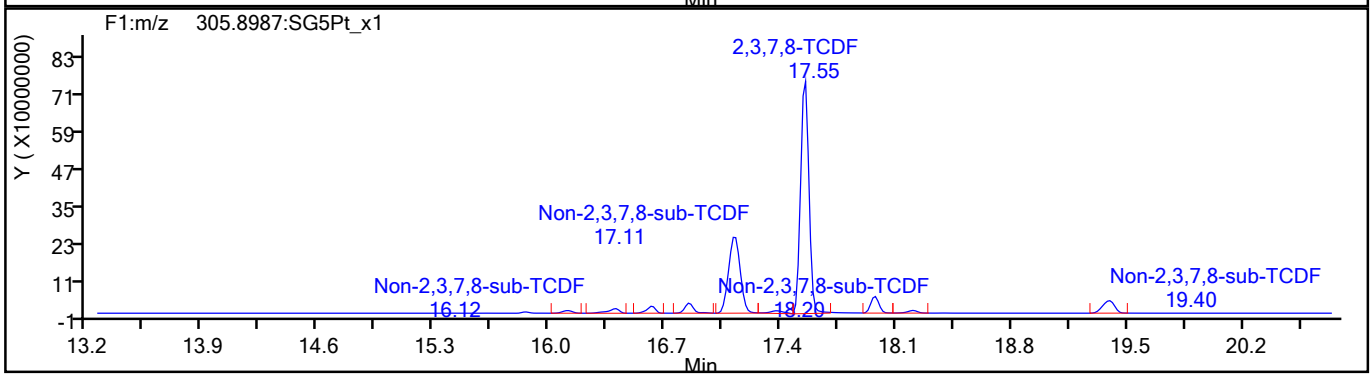

TCDF Standards

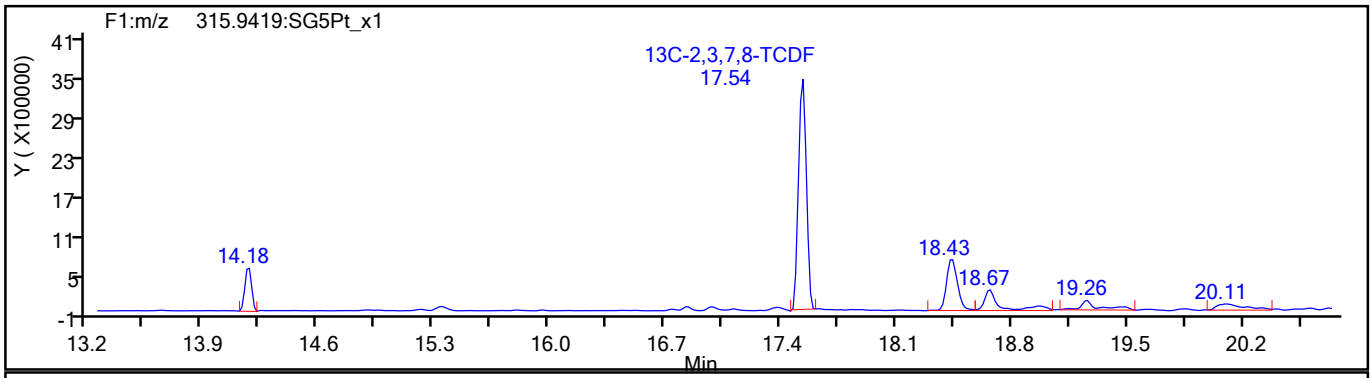

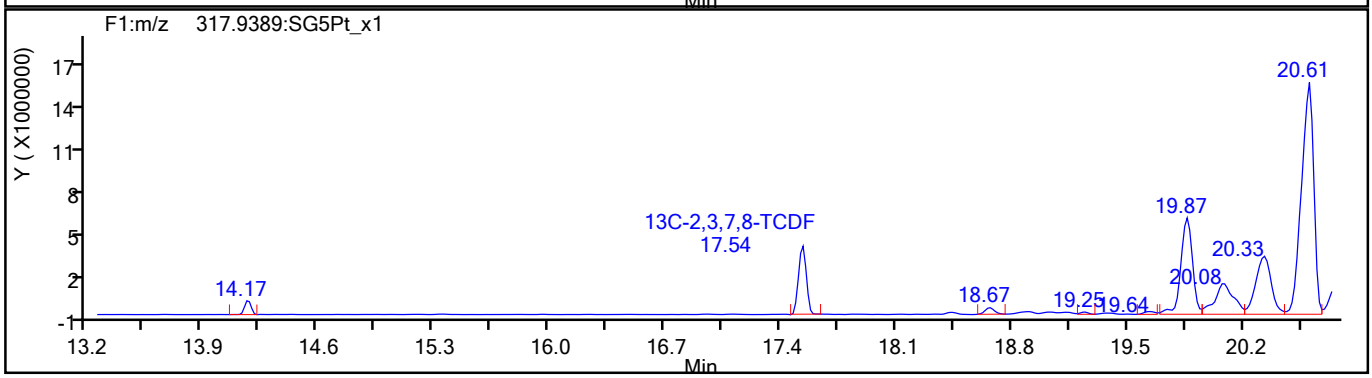

775115

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

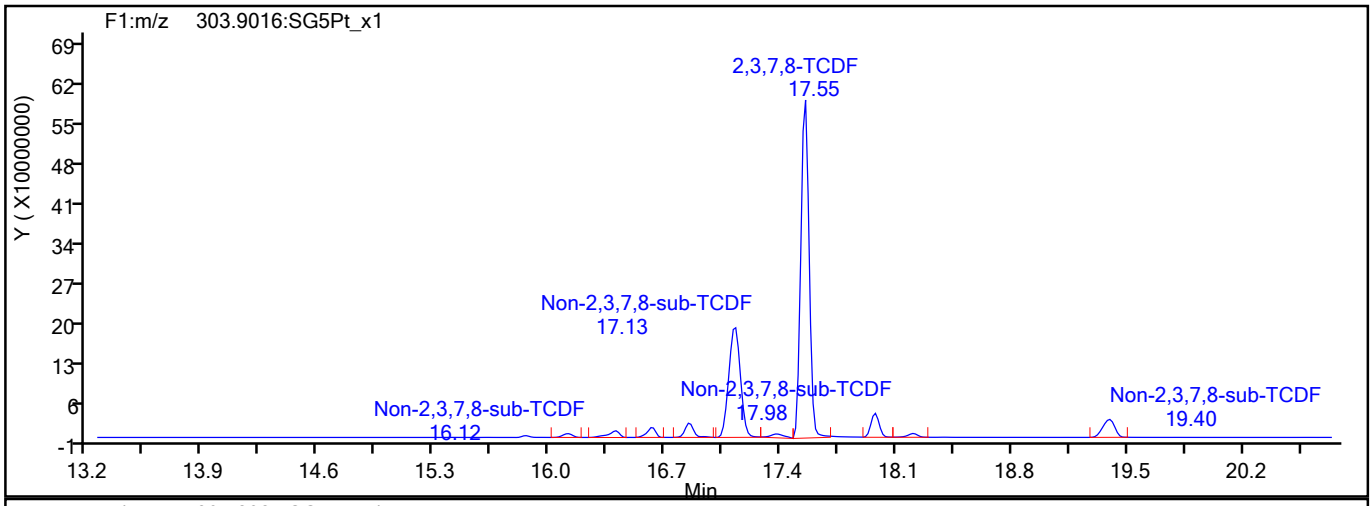

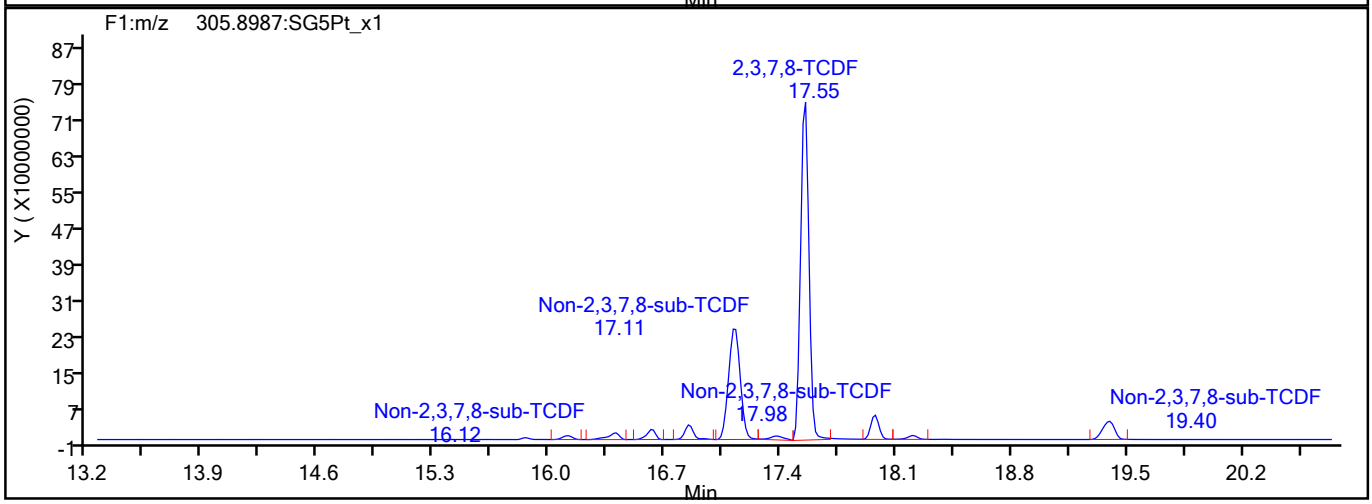

TCDF Interference Mass

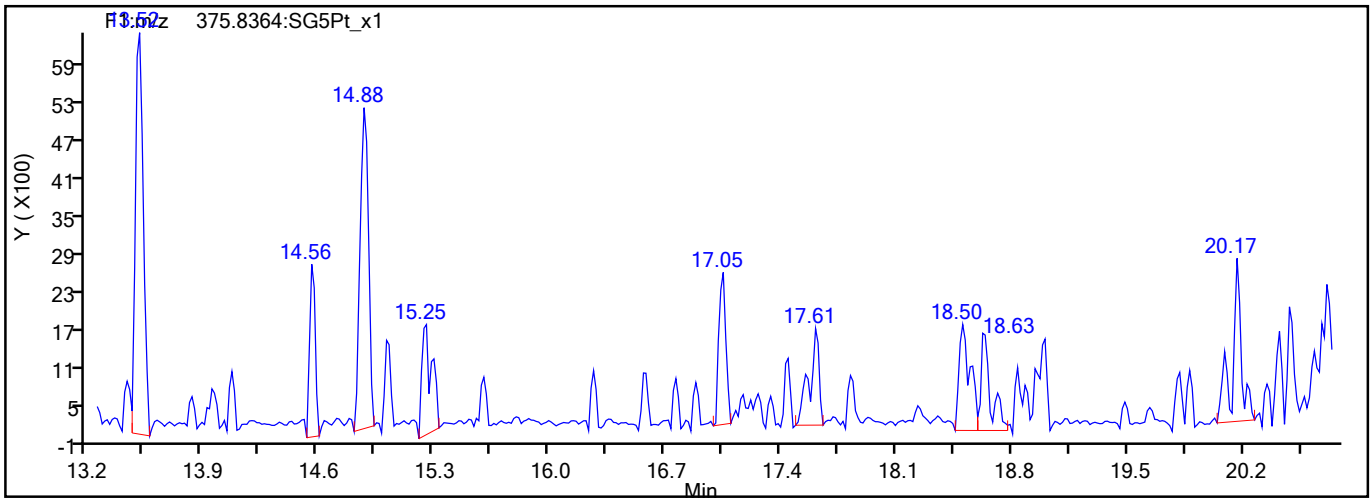

775116

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

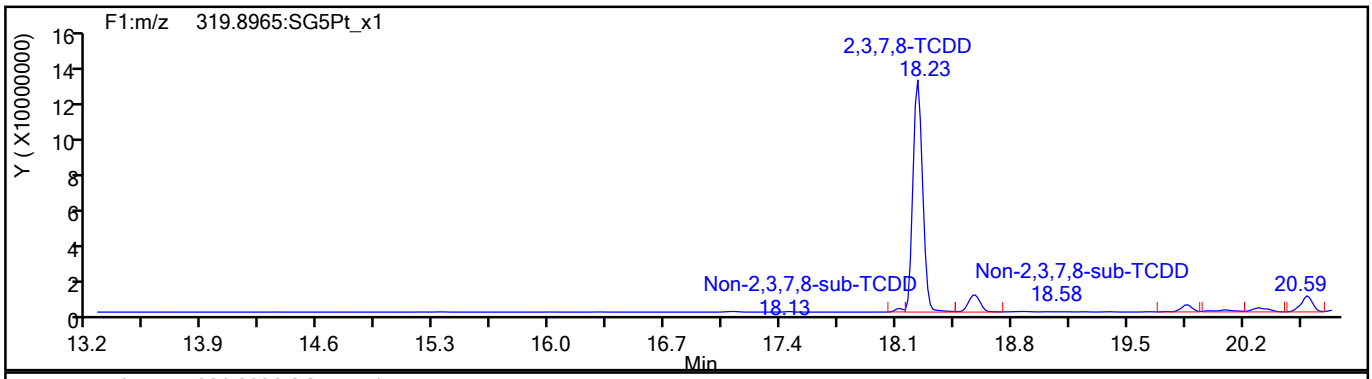

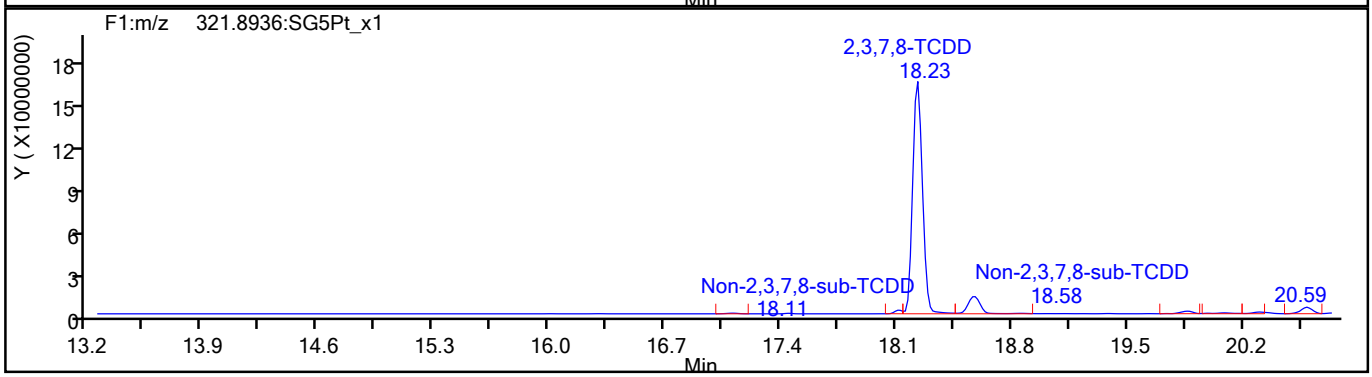

TCDD Standards

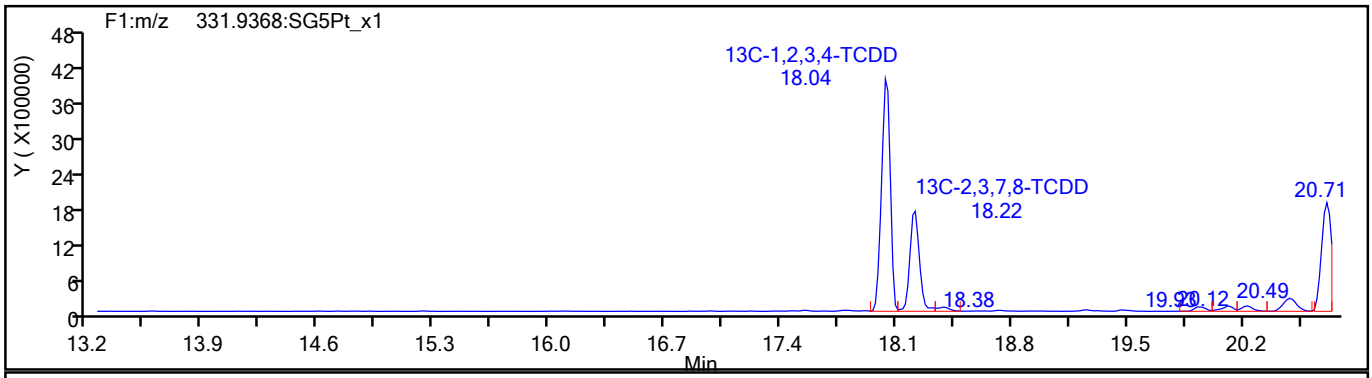

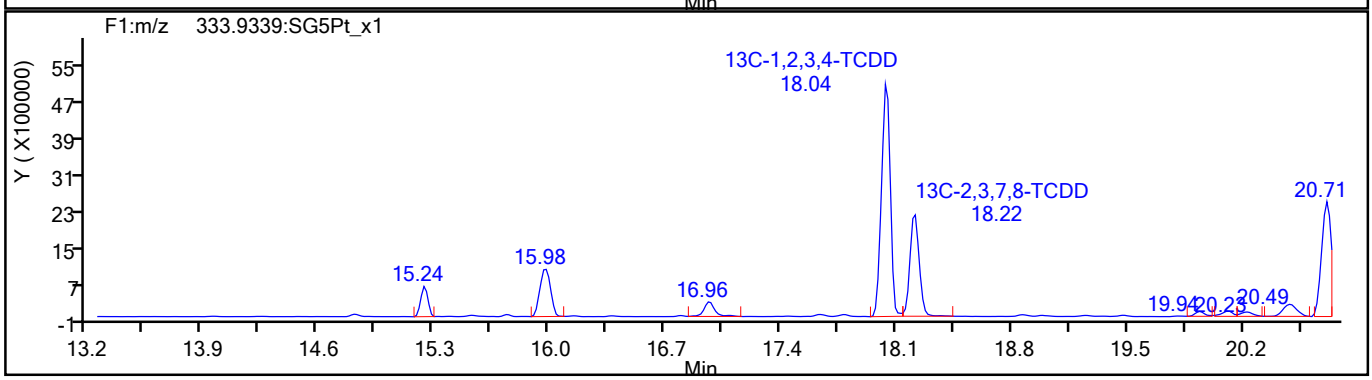

775117

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

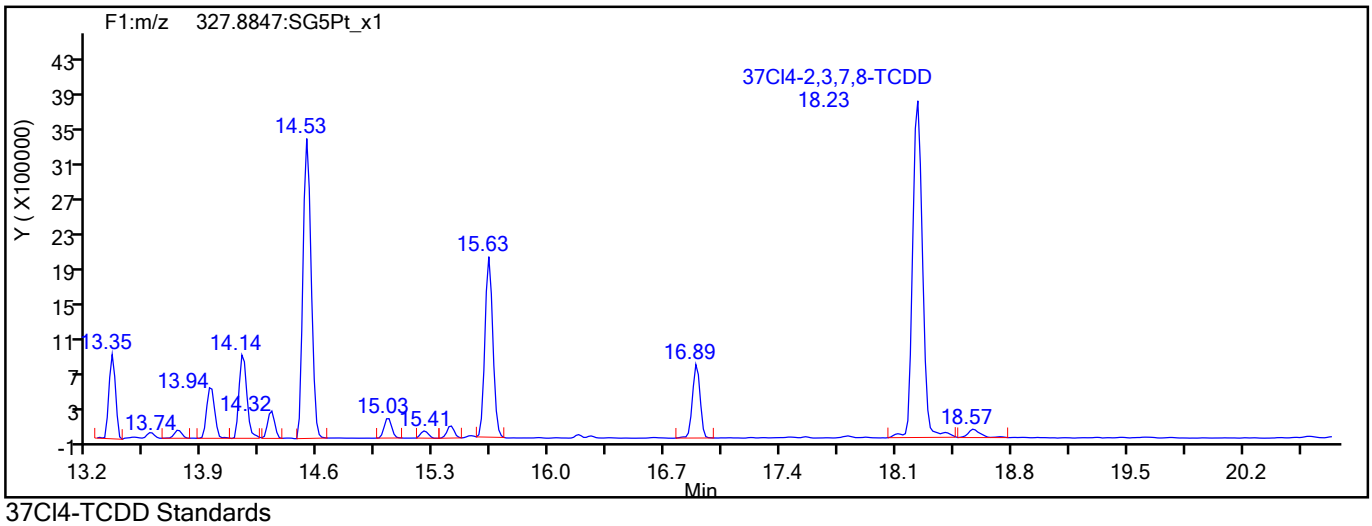

37Cl4-TCDD Standards

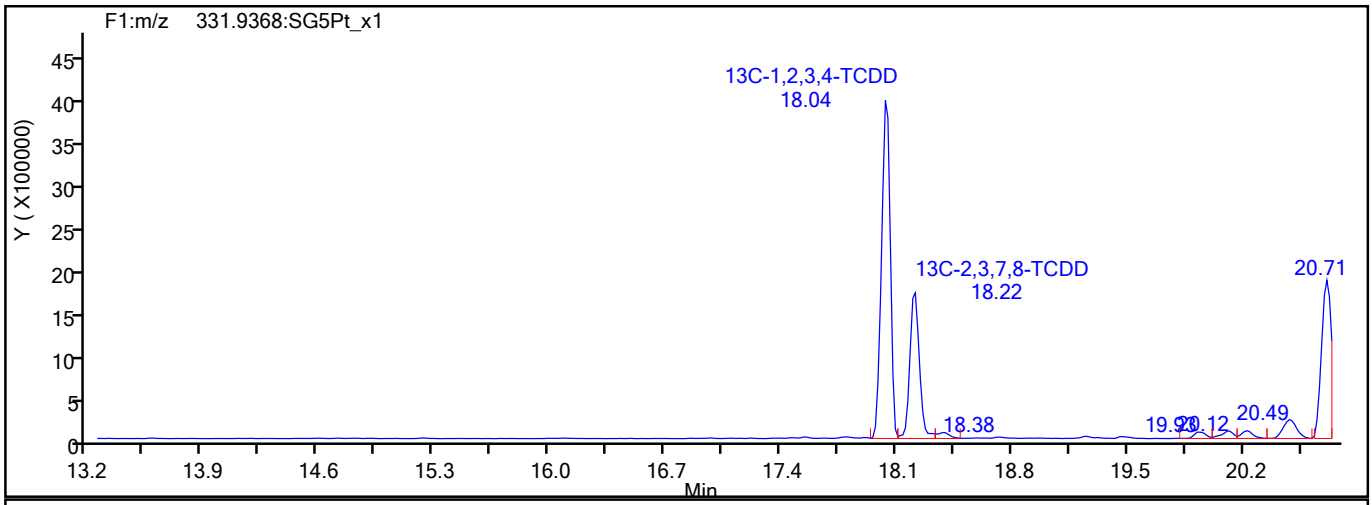

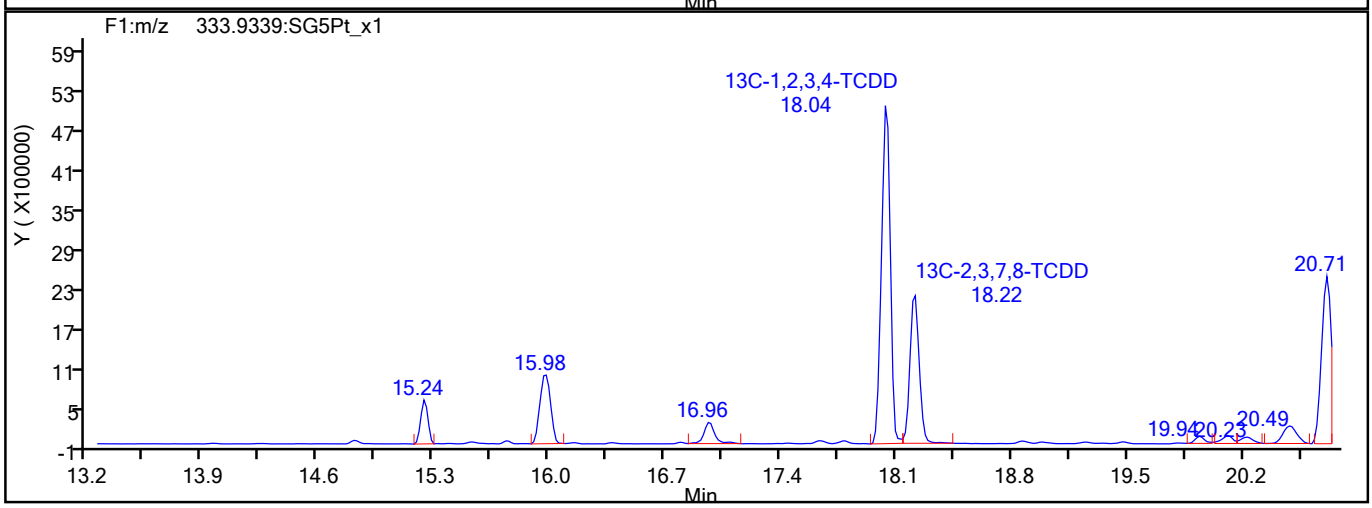

775118

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

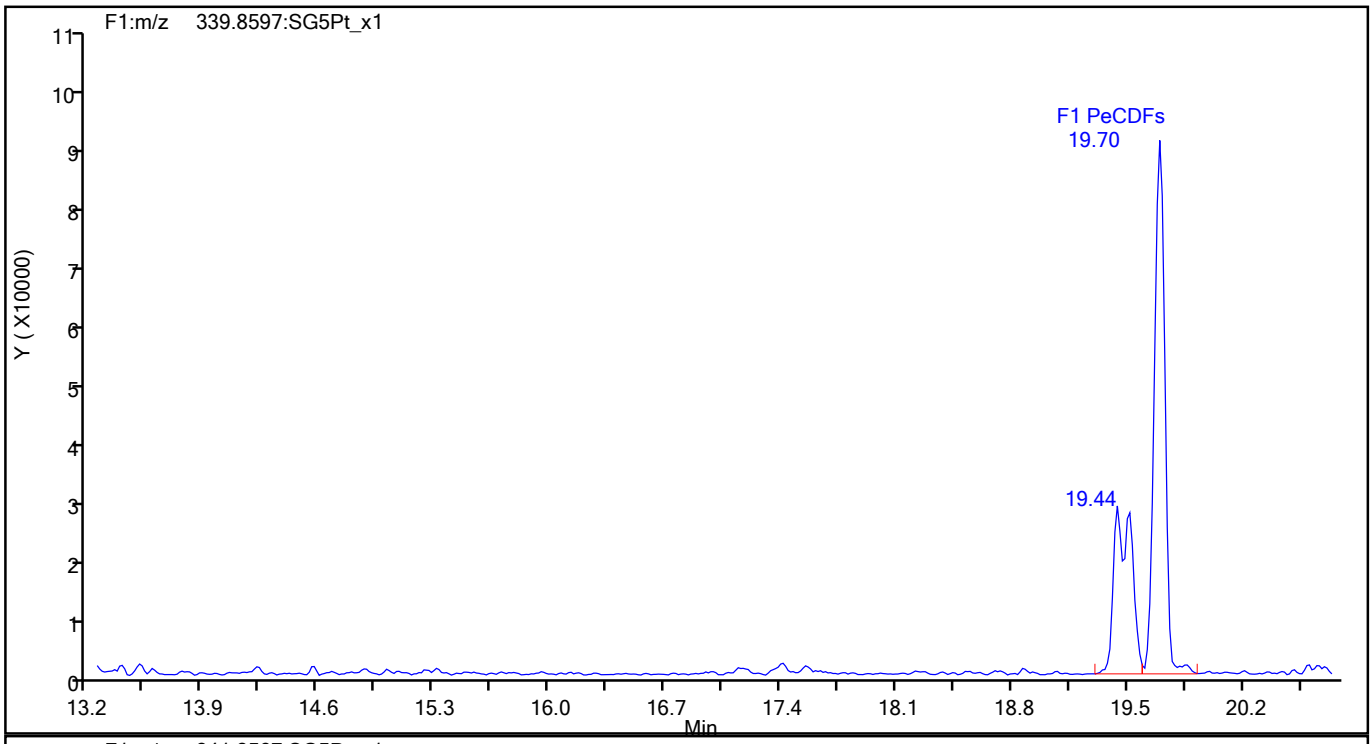

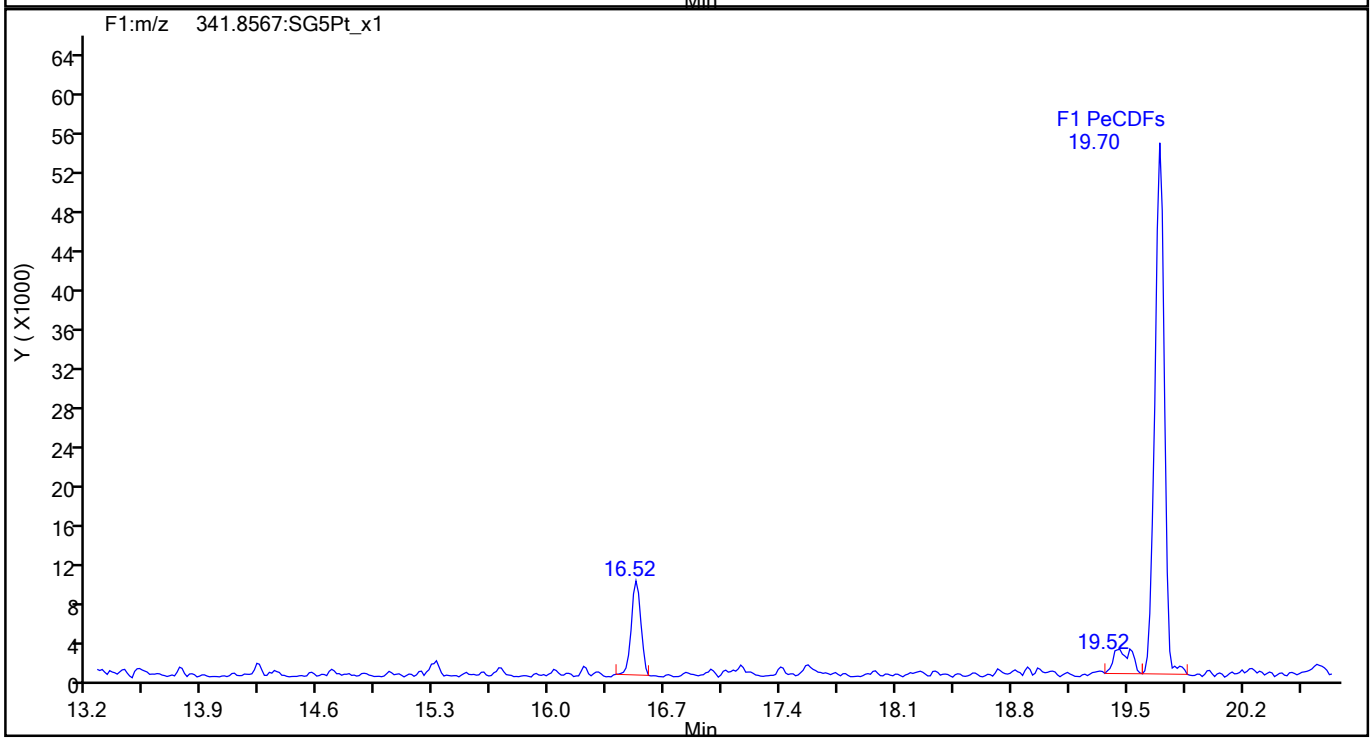

775119

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

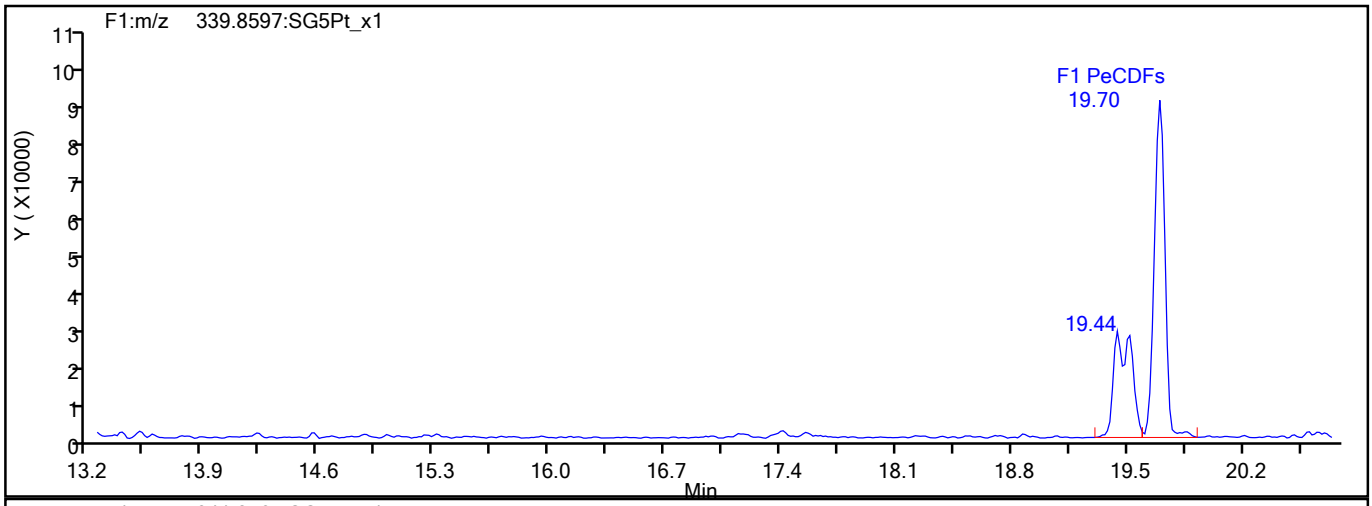

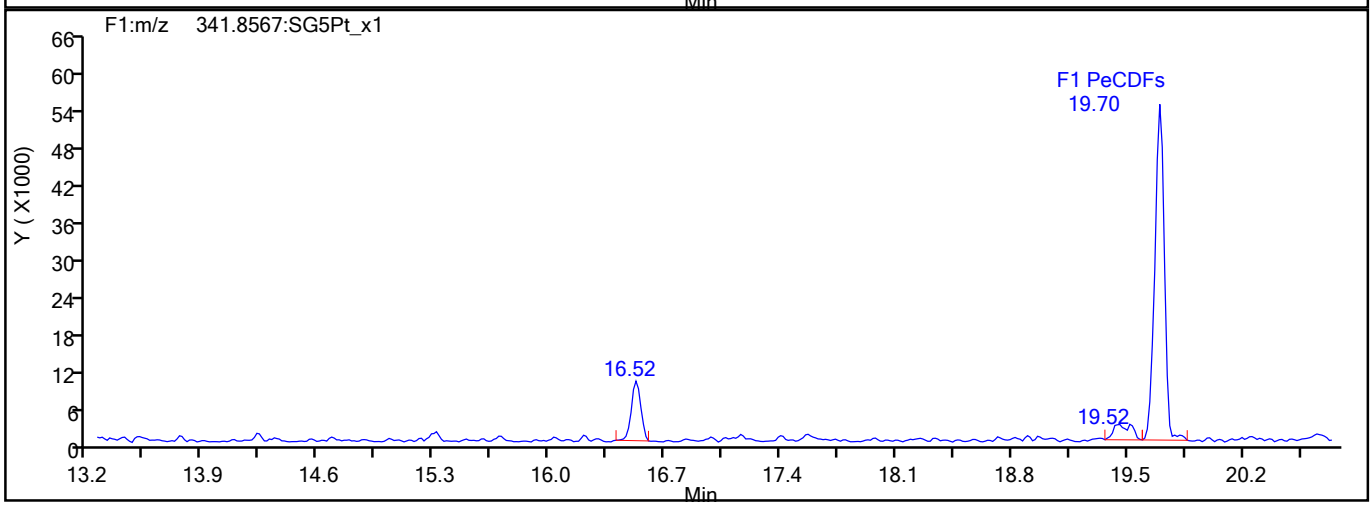

F1 PeCDFs Interference Mass

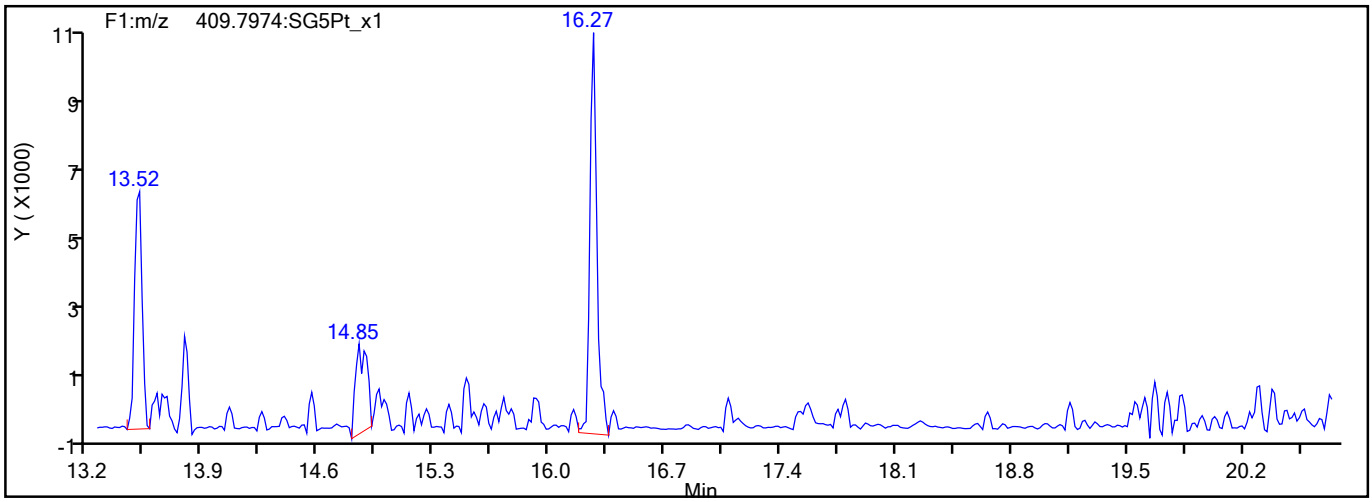

775120

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

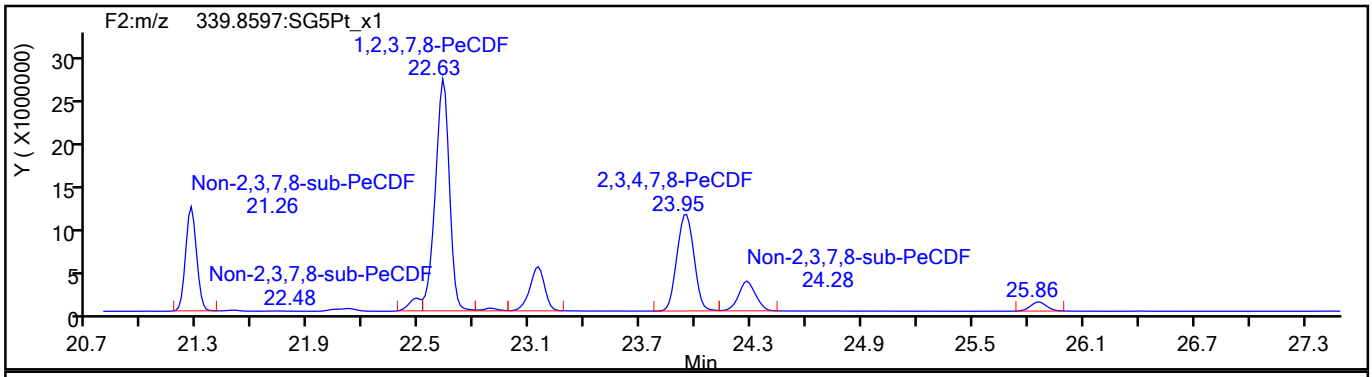

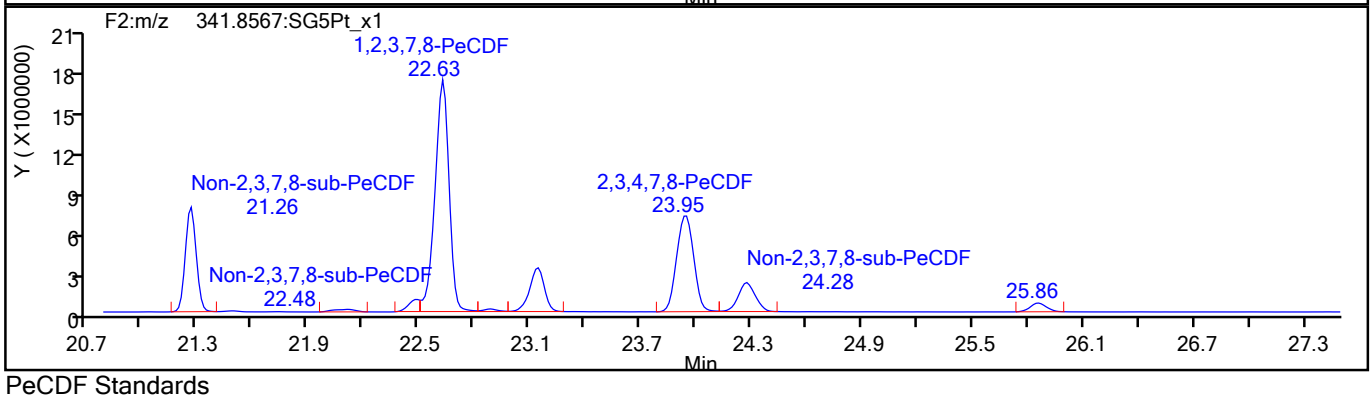

PeCDF Standards

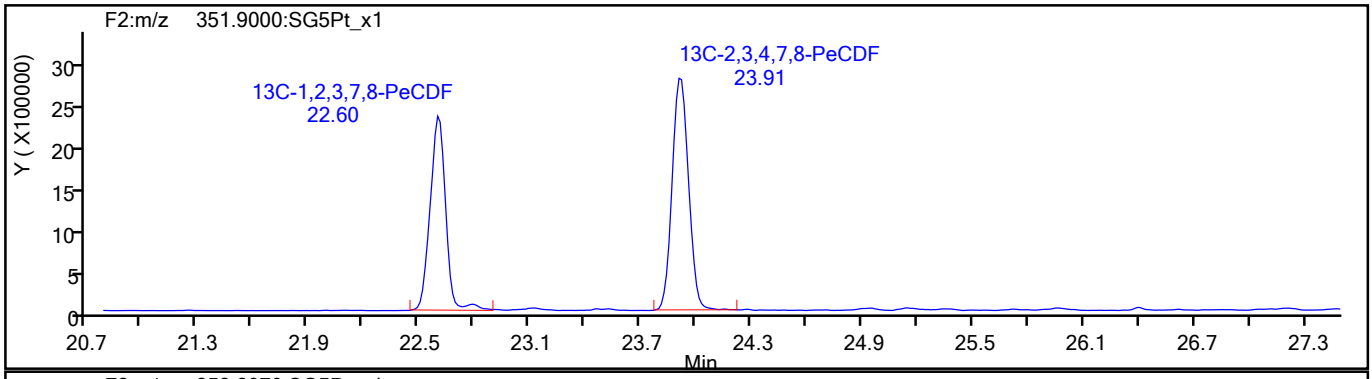

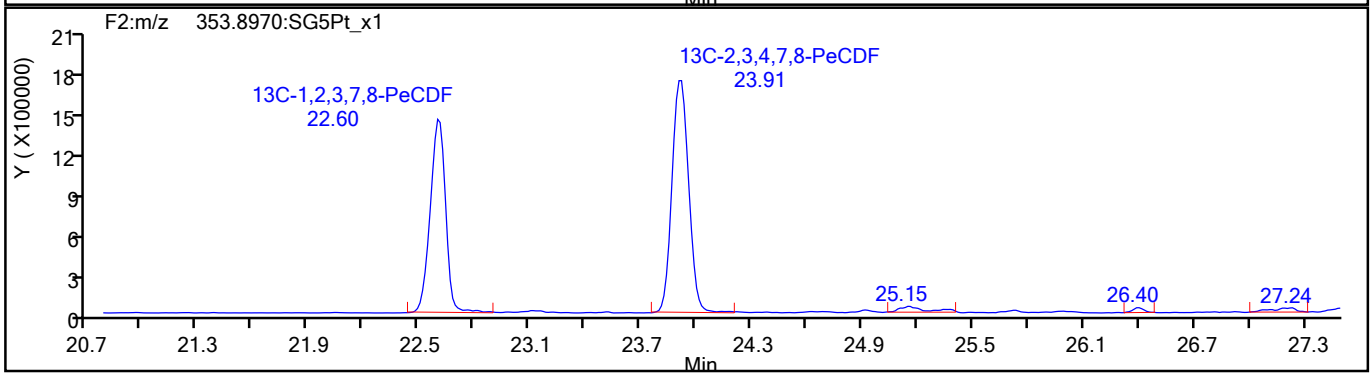

775121

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

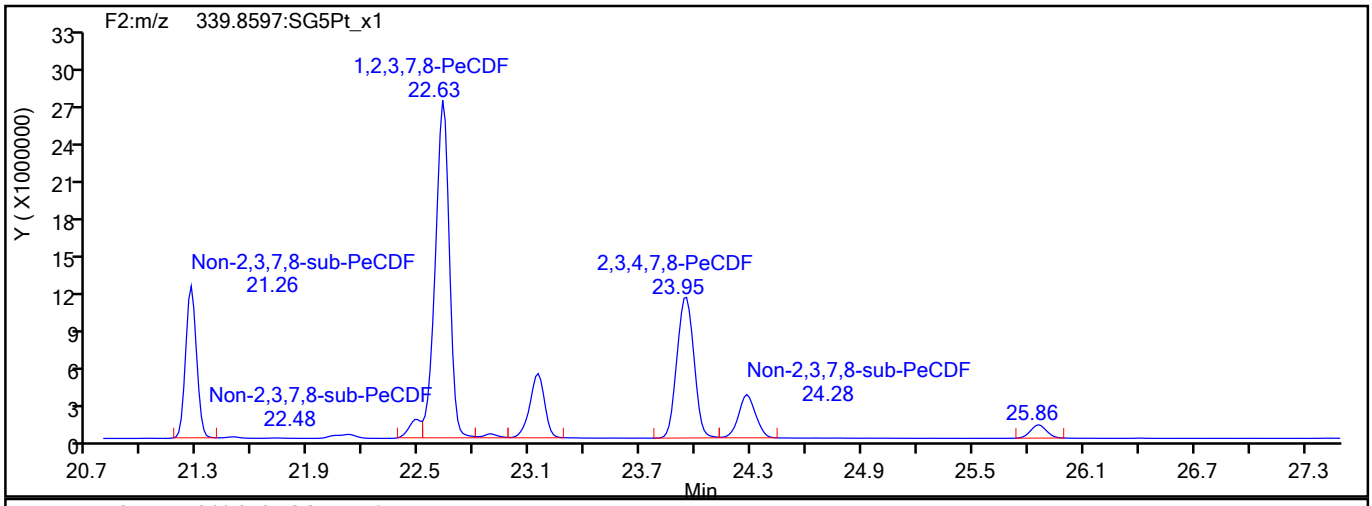

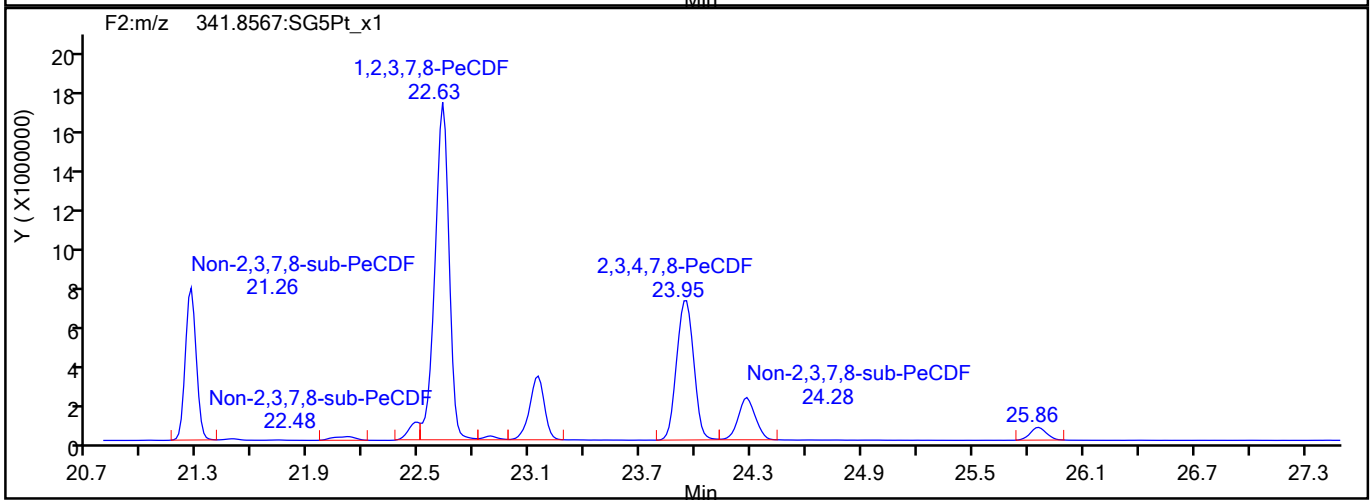

PeCDF Interference Mass

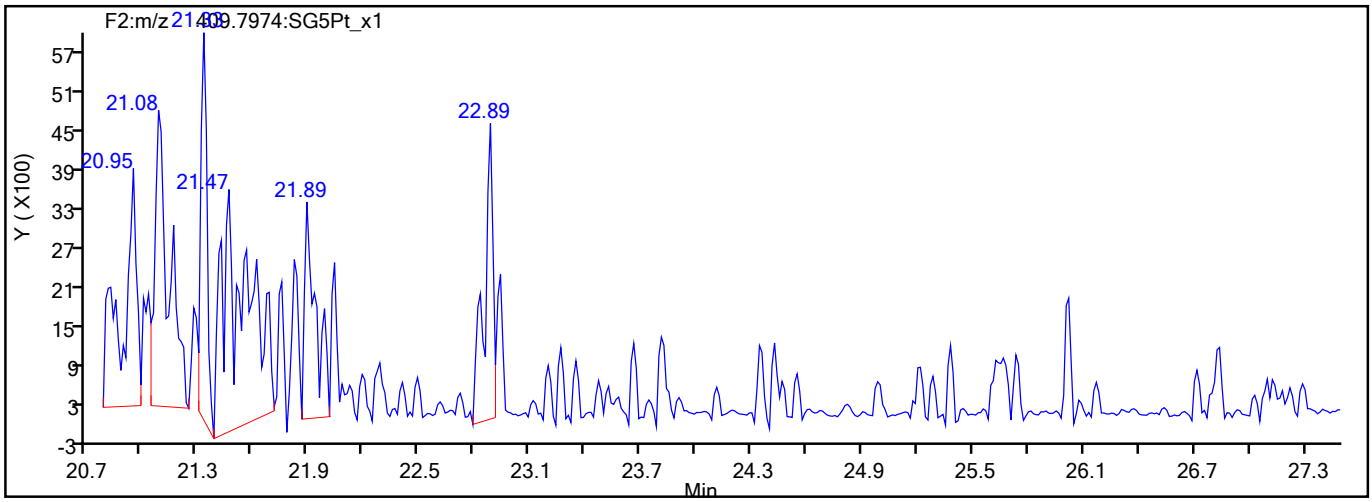

775122

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

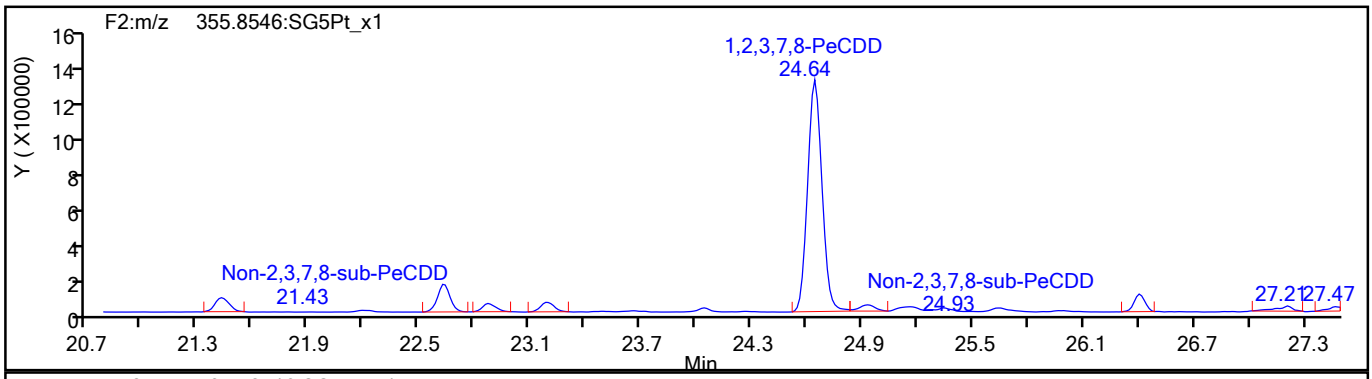

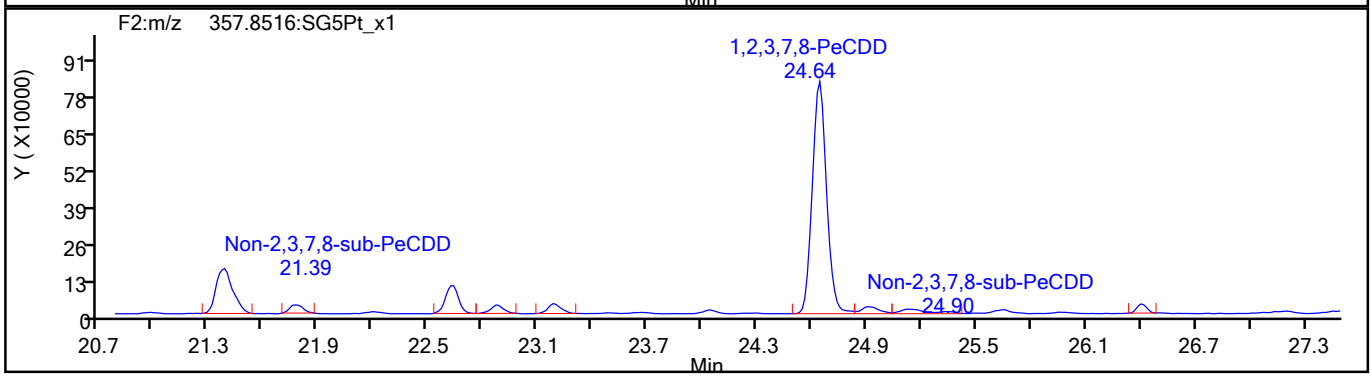

PeCDD Standards

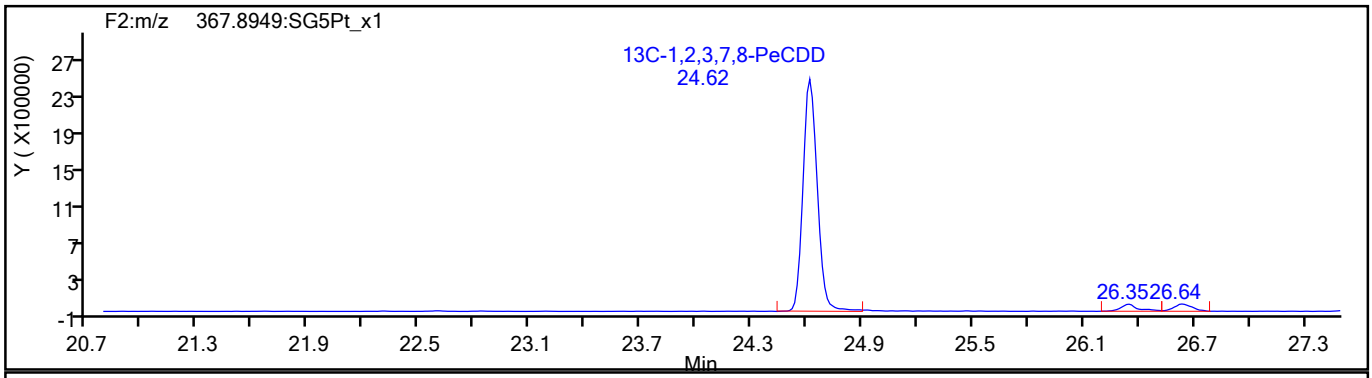

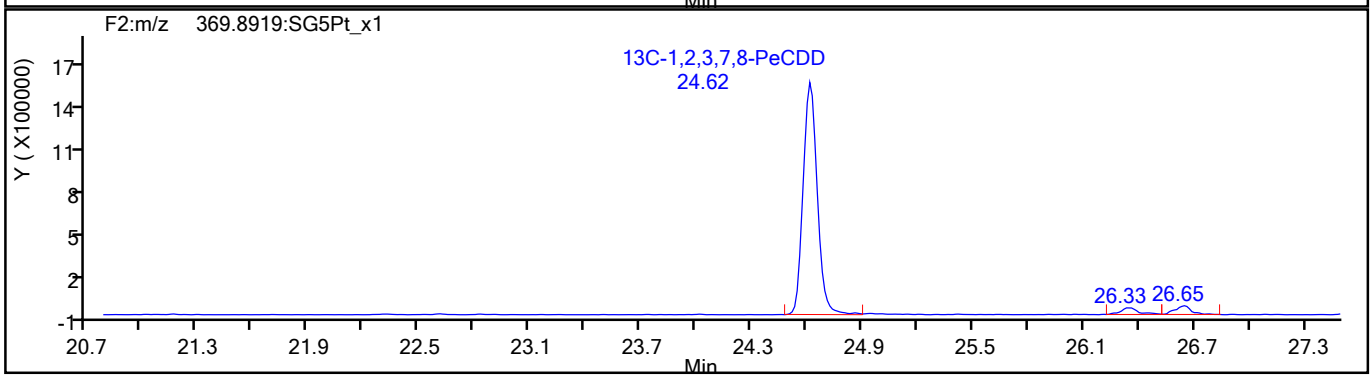

775123

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

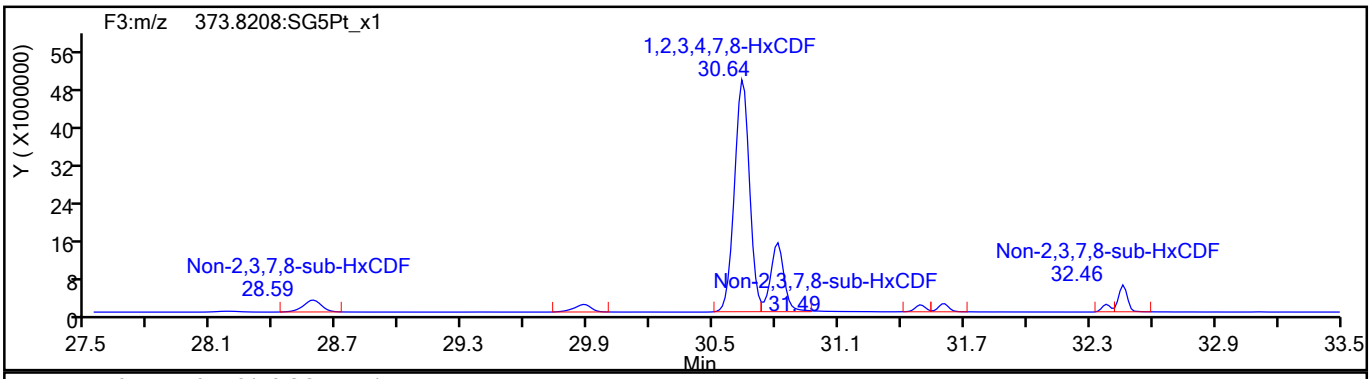

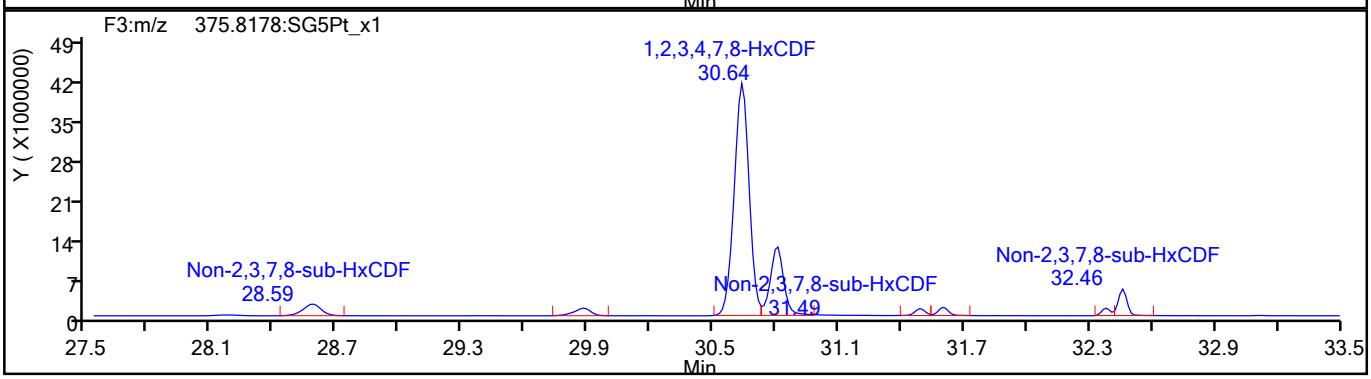

HxCDF Standards

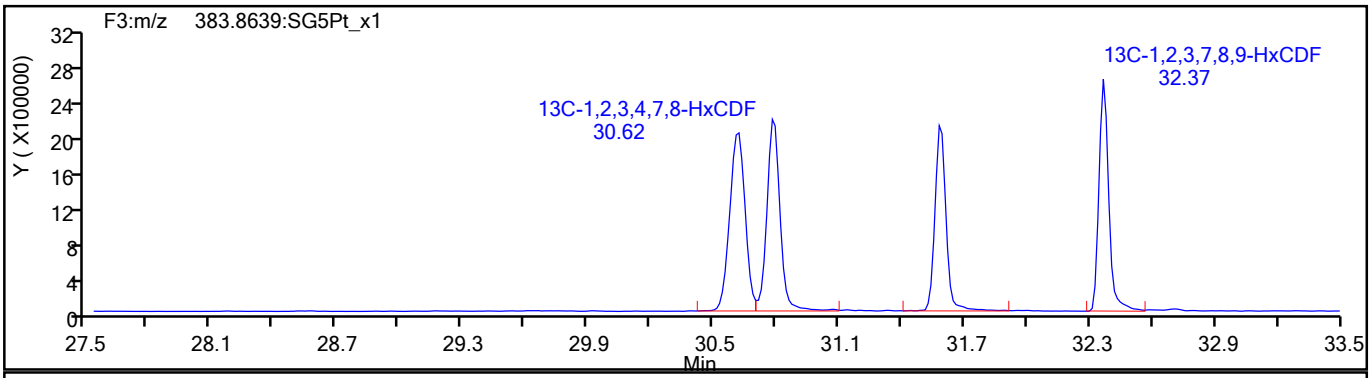

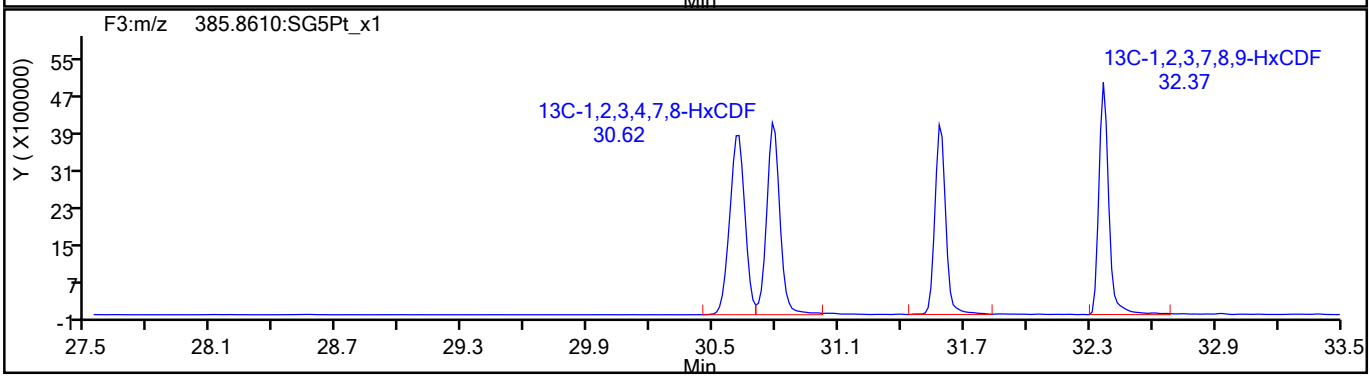

775124

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

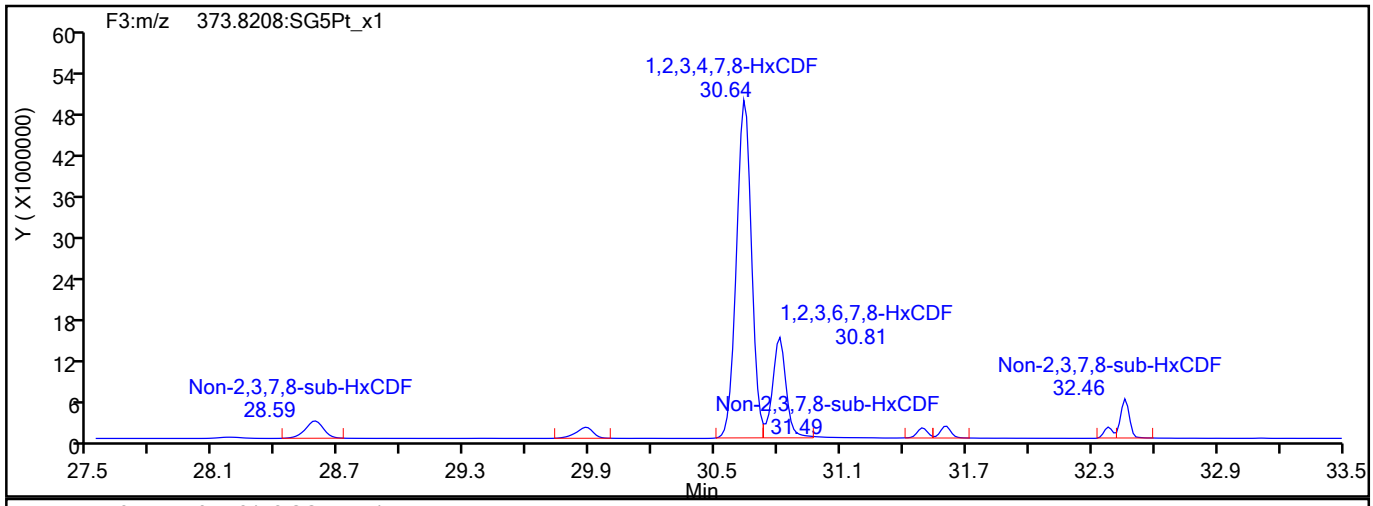

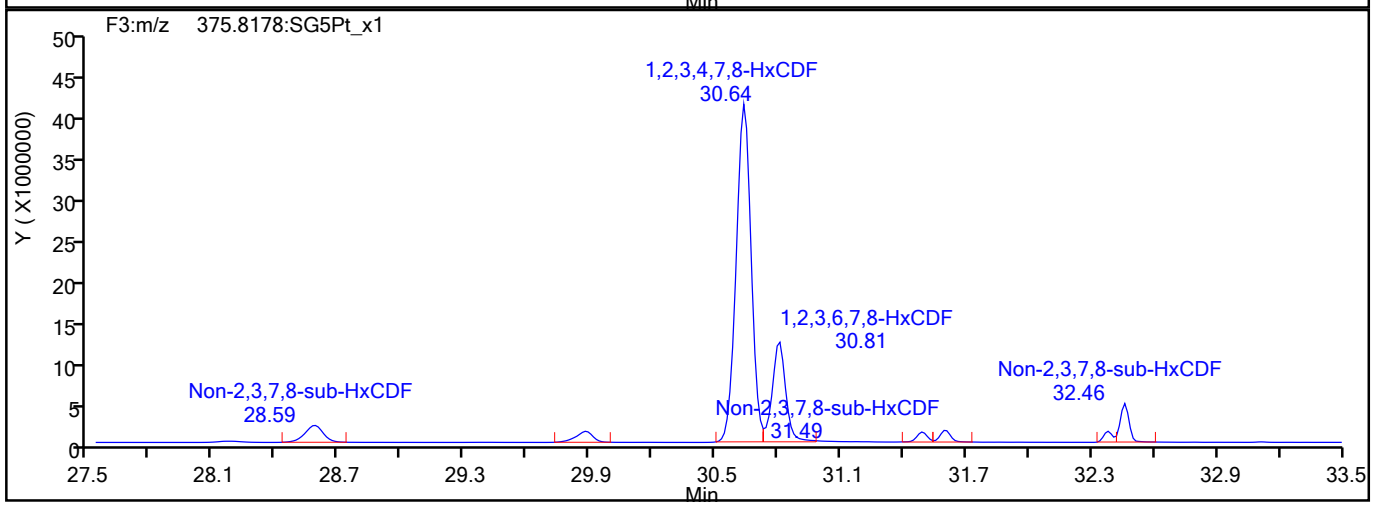

HxCDF Interference Mass

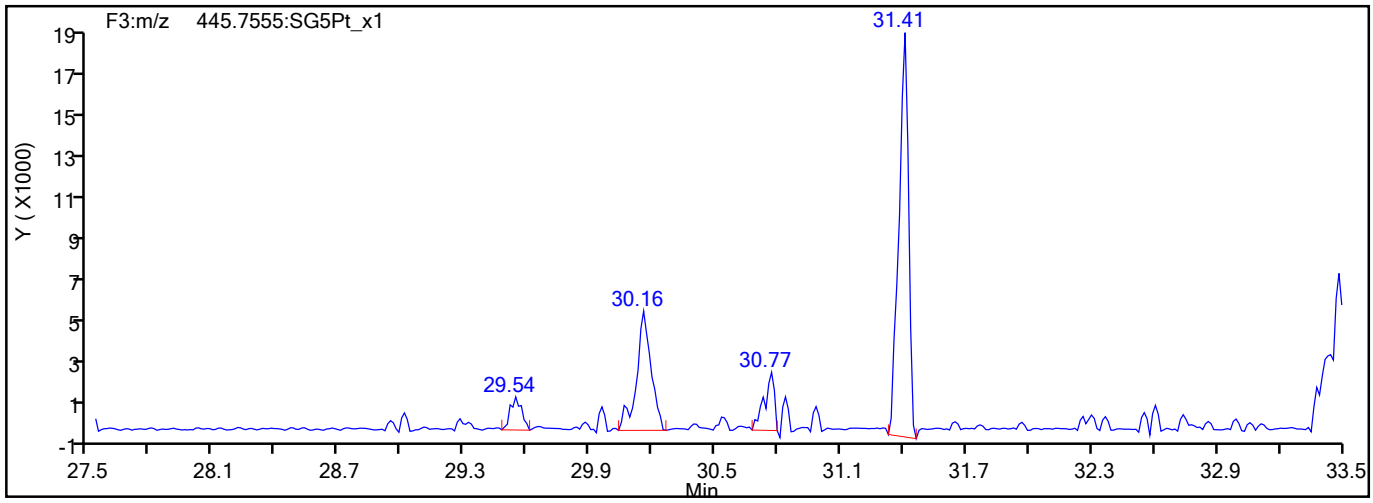

775125

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

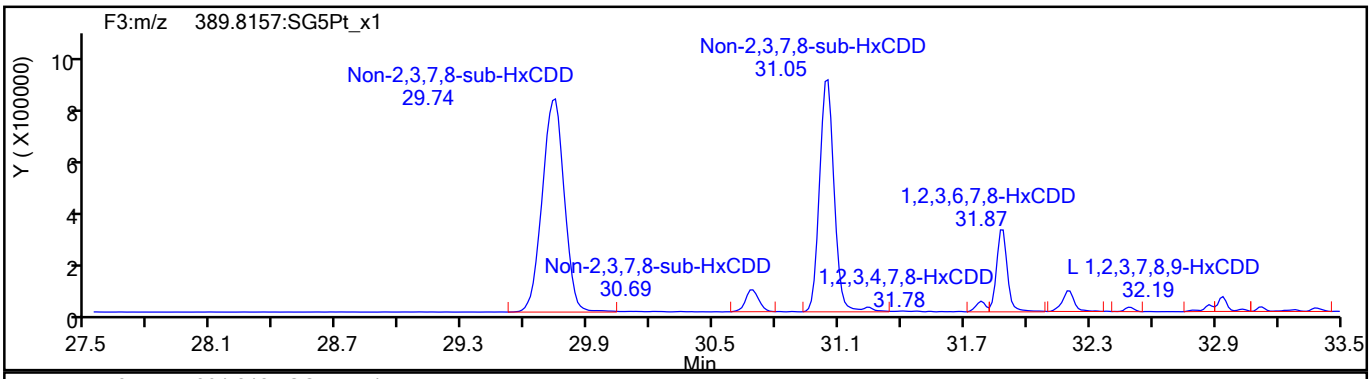

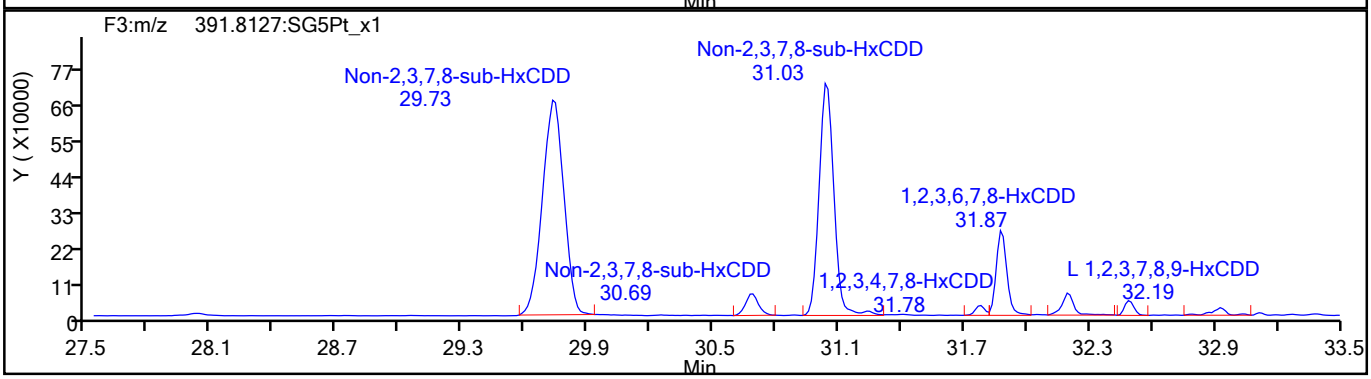

HxCDD Standards

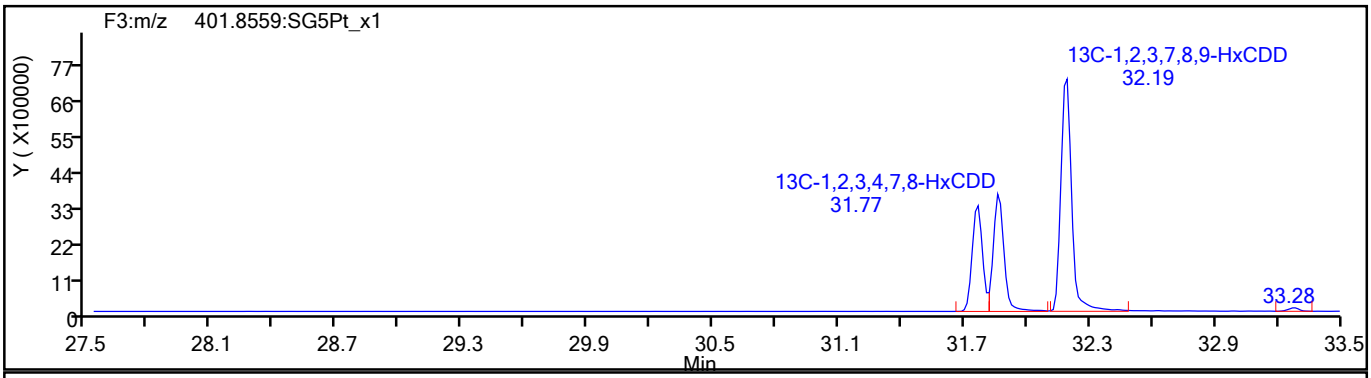

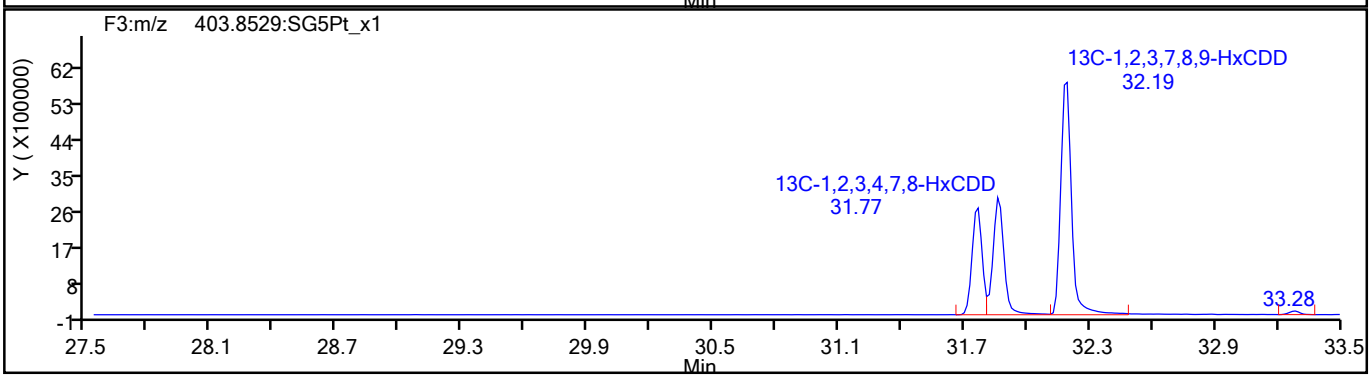

775126

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

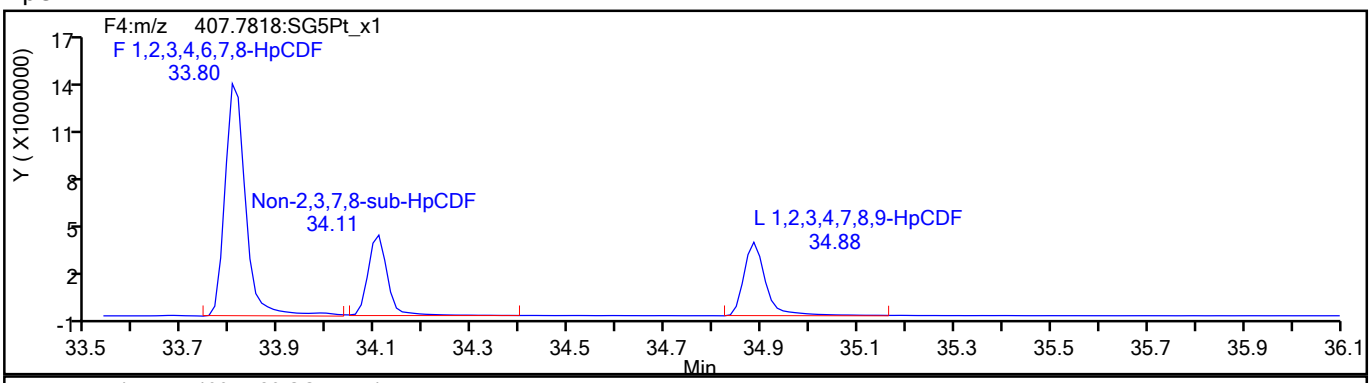

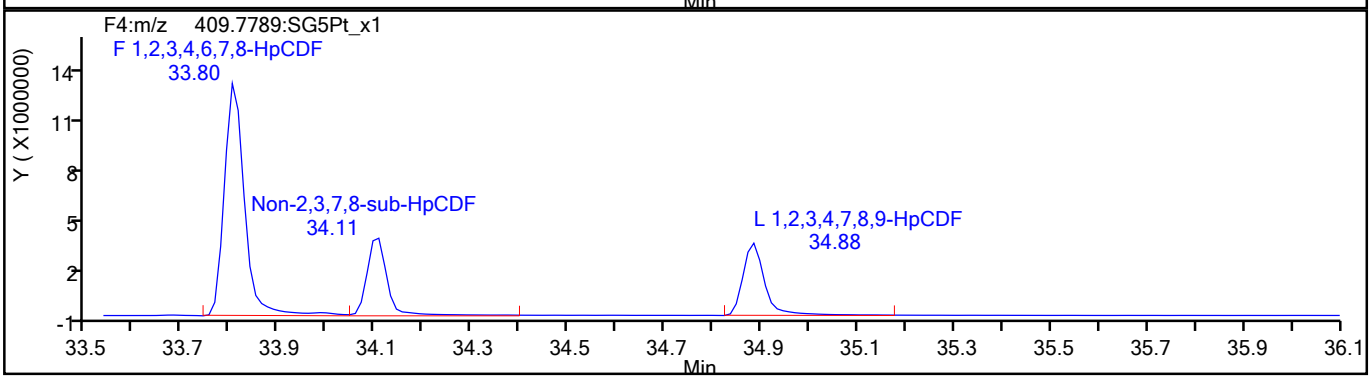

HpCDF Standards

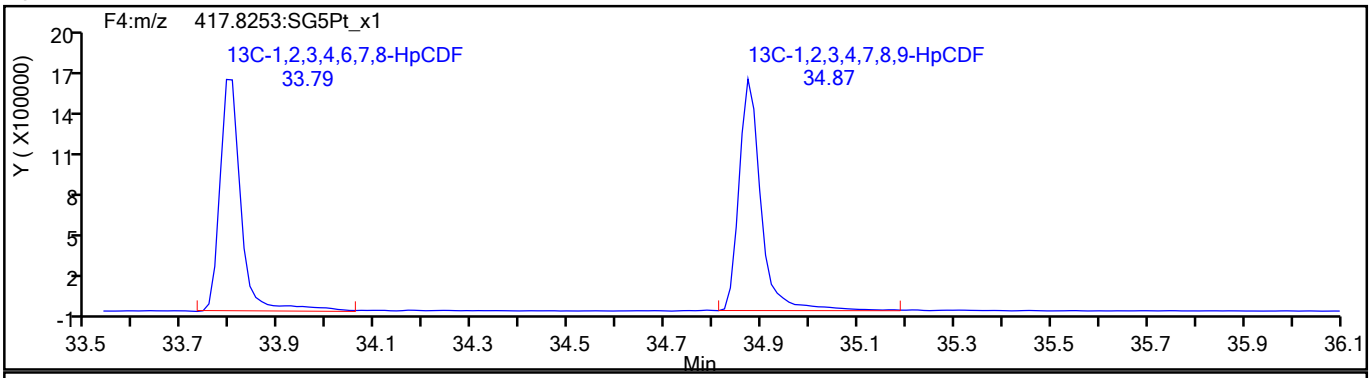

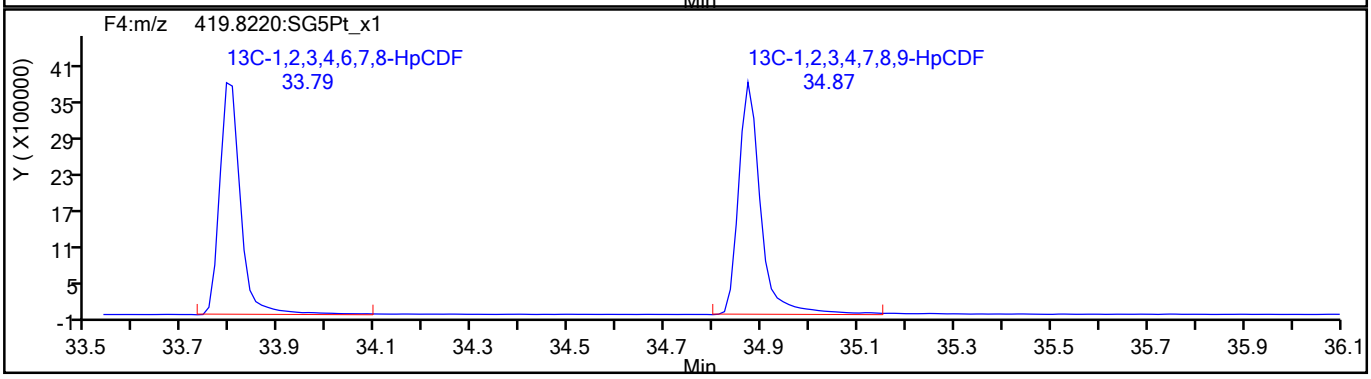

775127

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

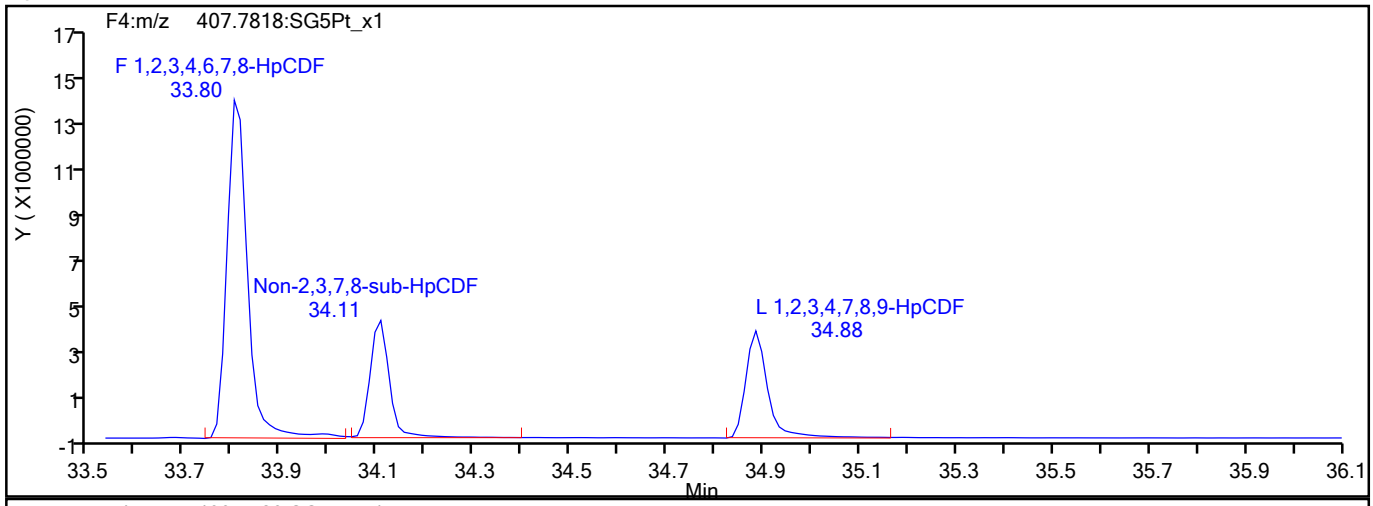

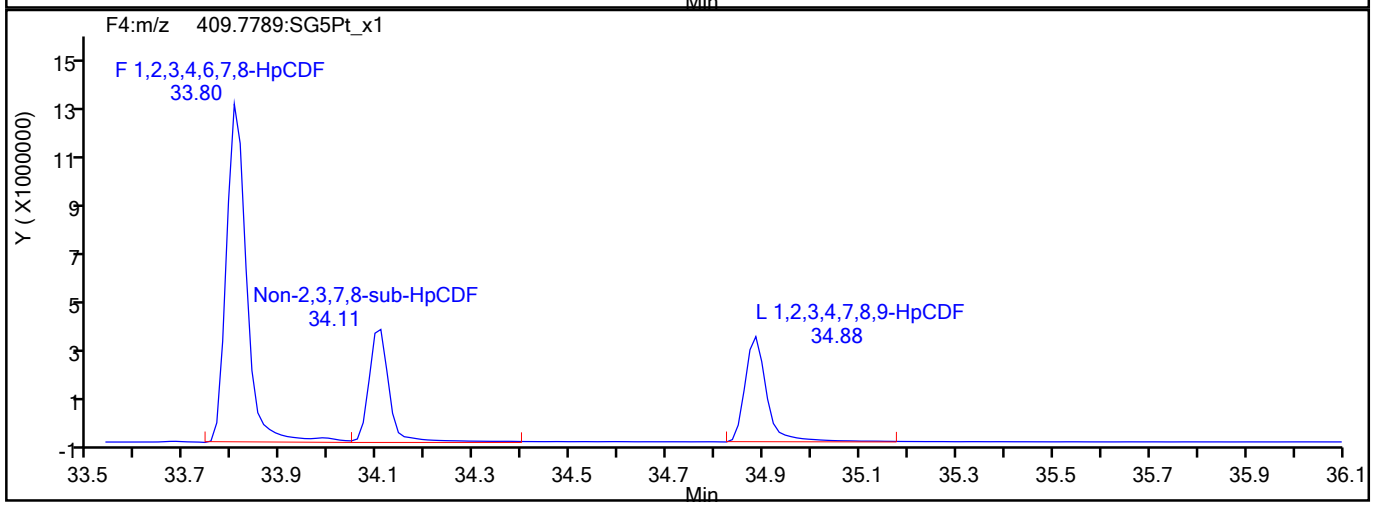

HpCDF Interference Mass

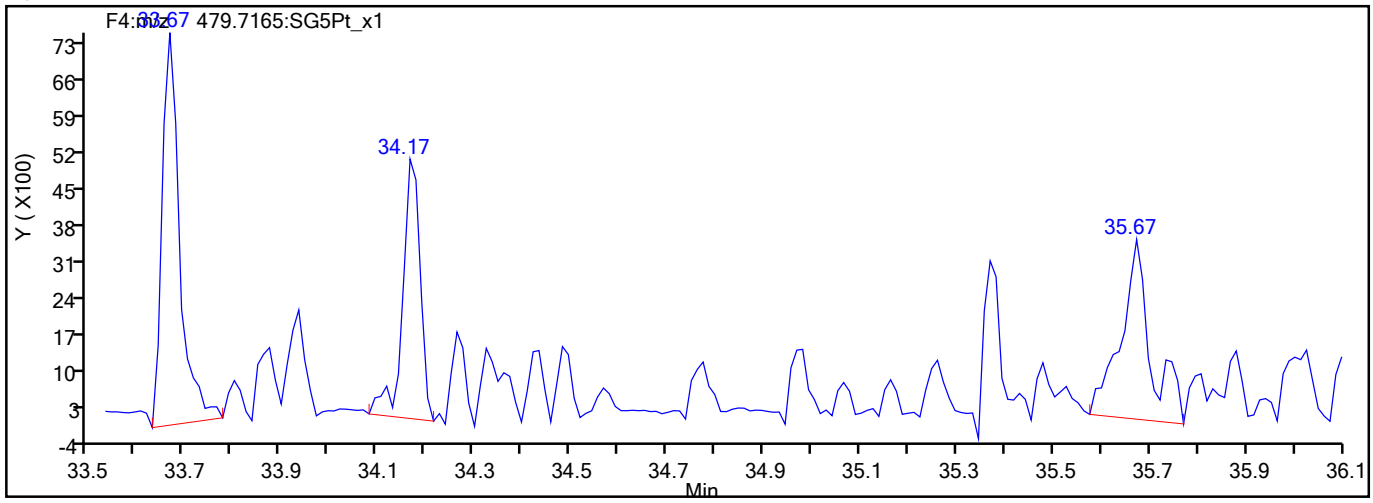

775128

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

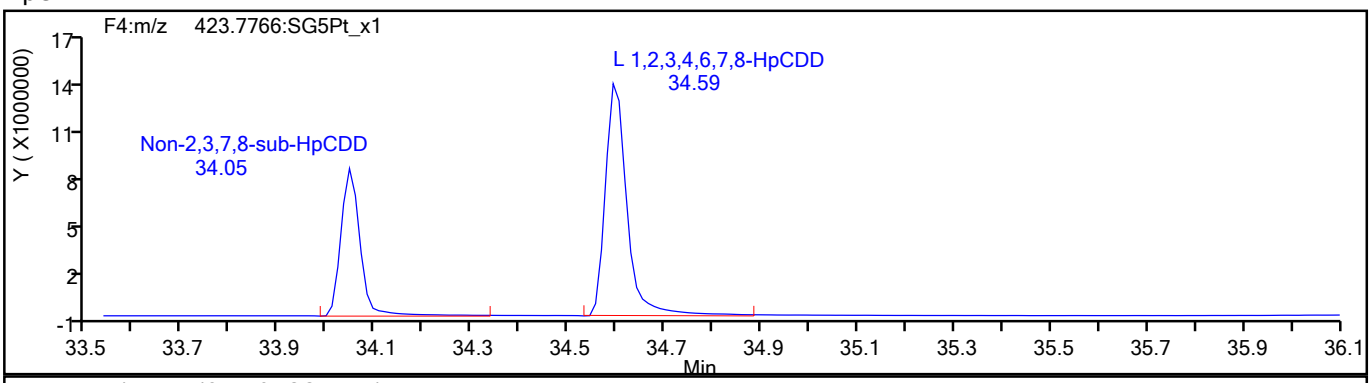

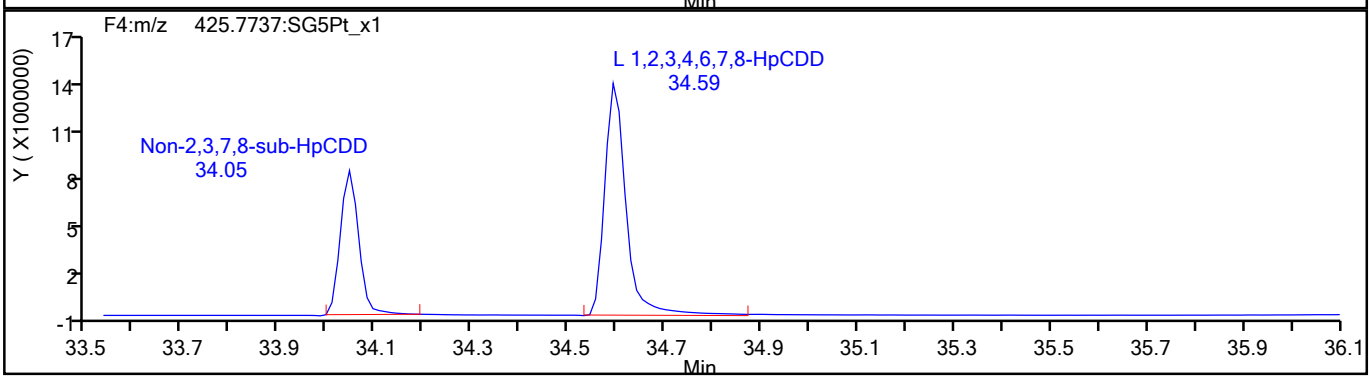

HpCDD Standards

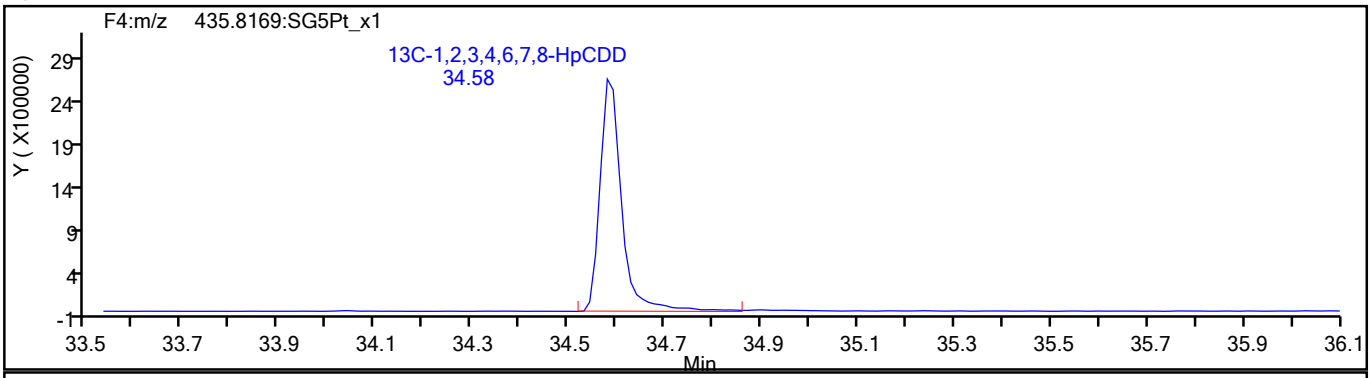

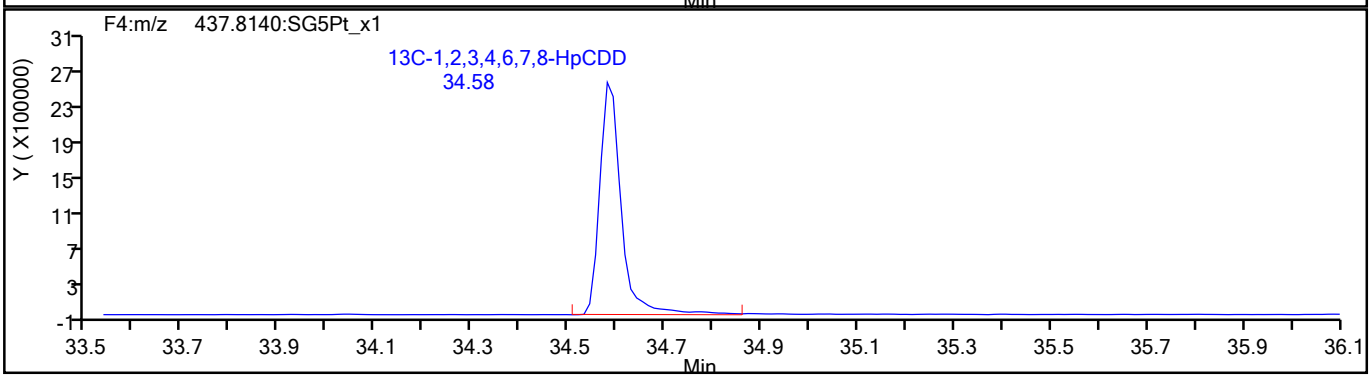

775129

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

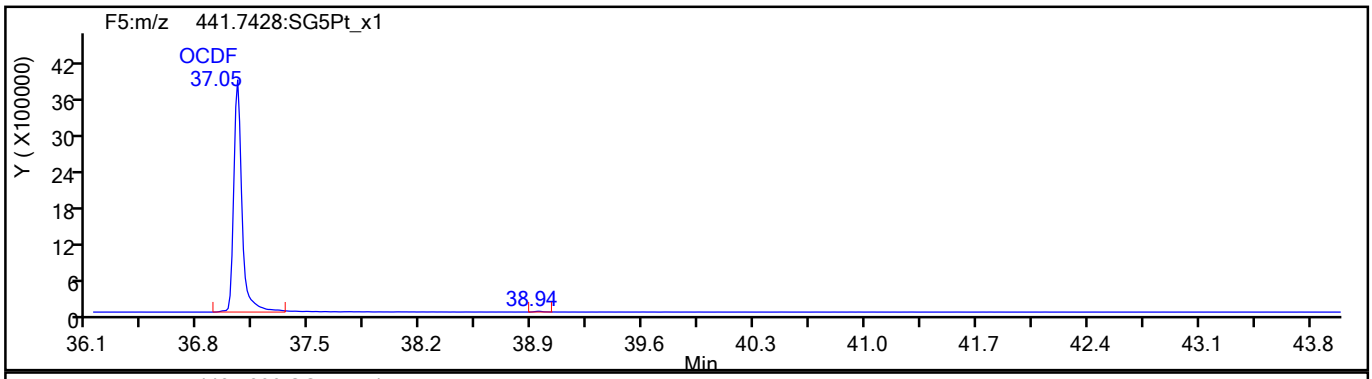

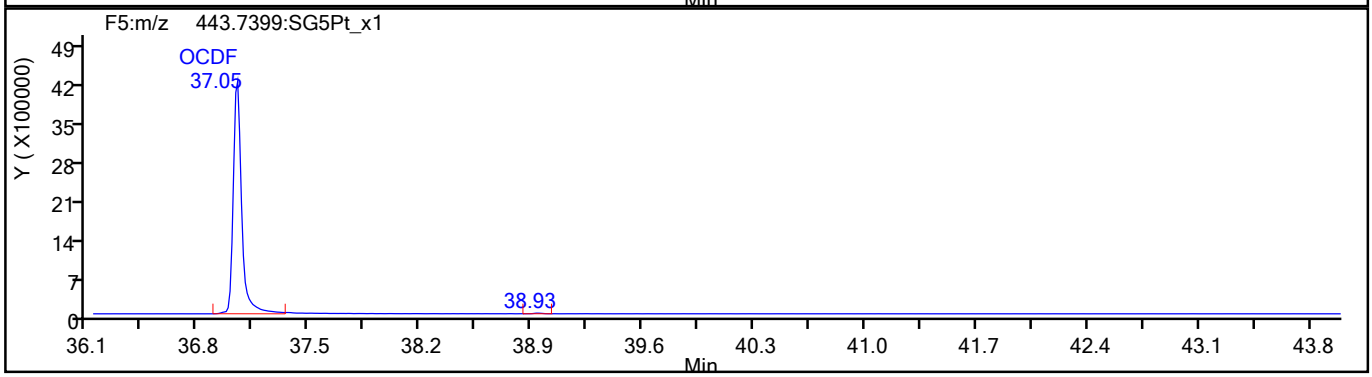

OCDF Standards

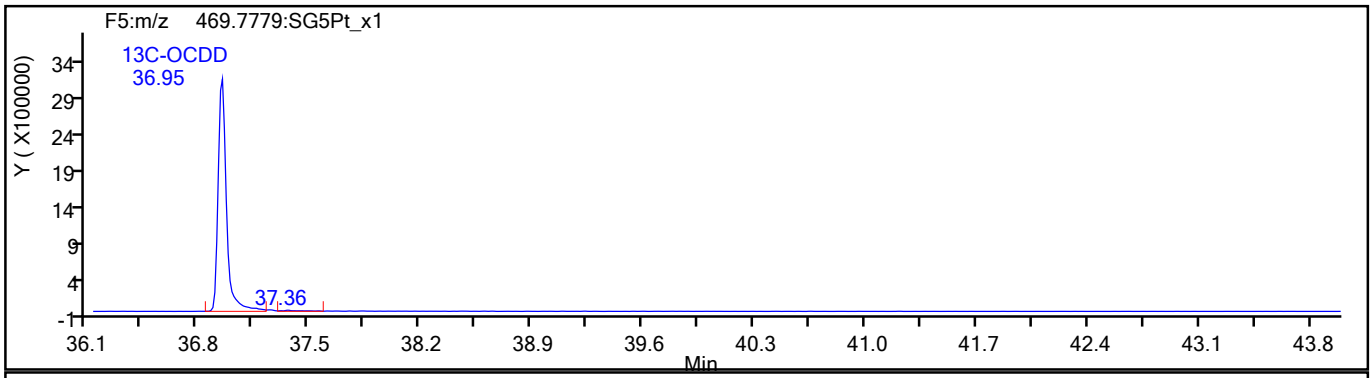

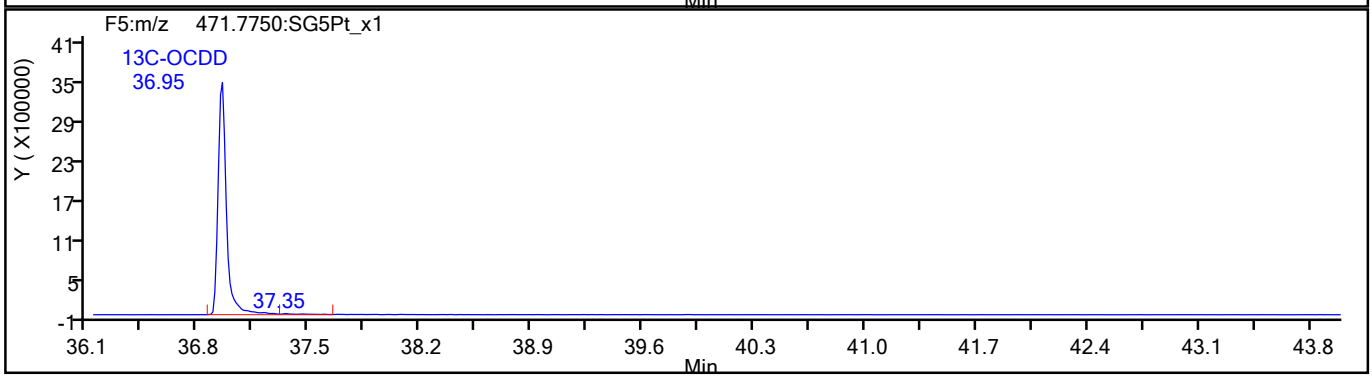

775130

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

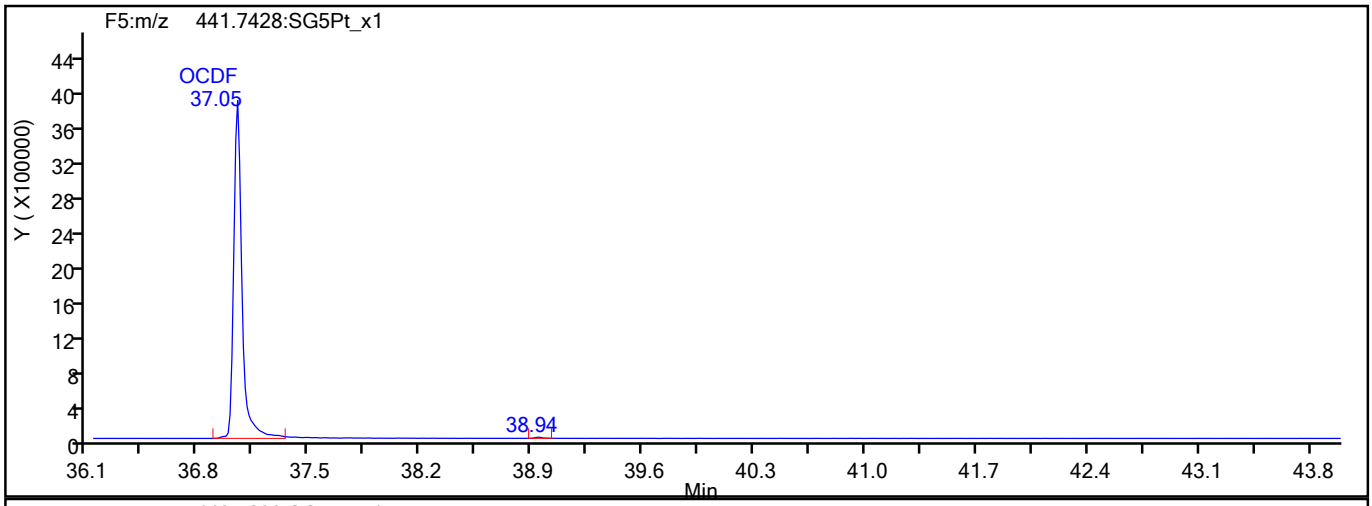

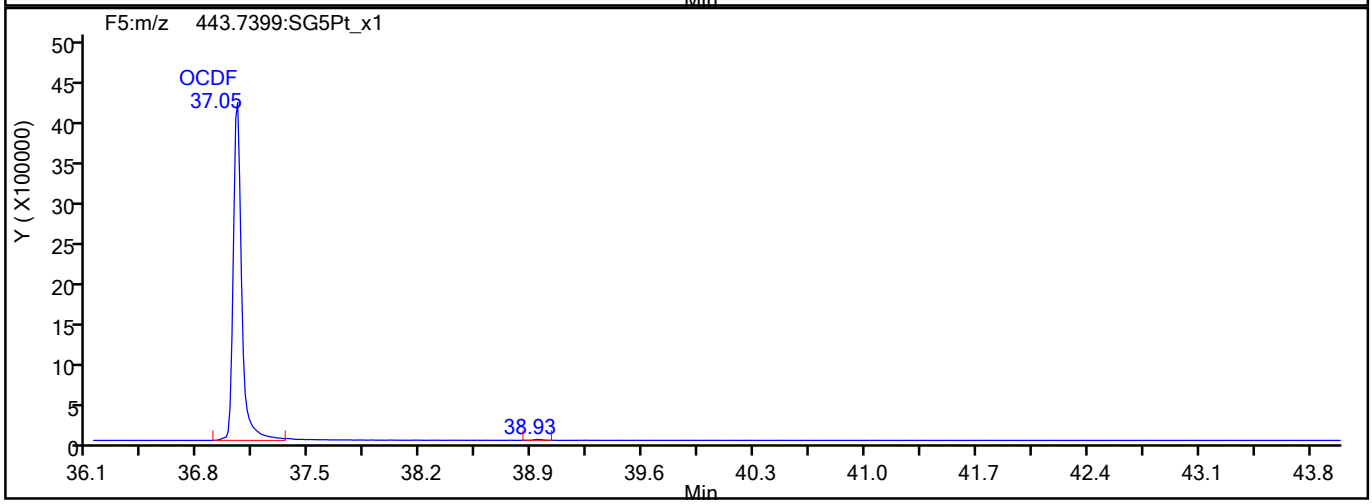

OCDF Interference Mass

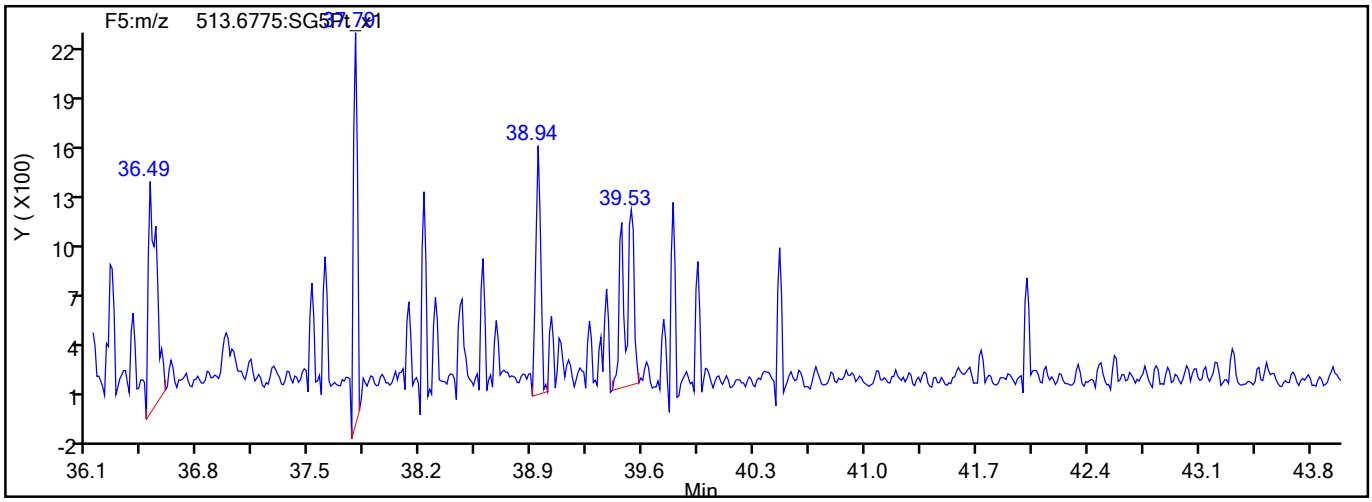

775131

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

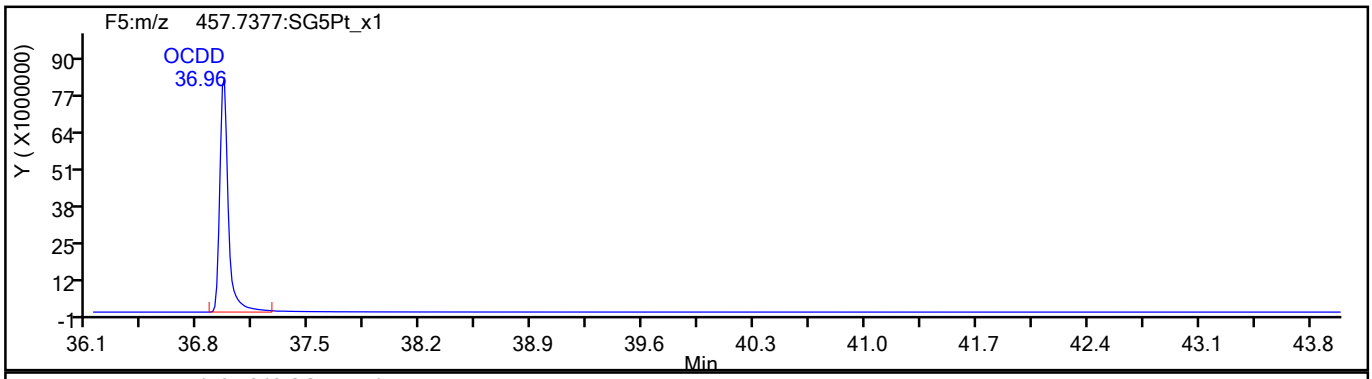

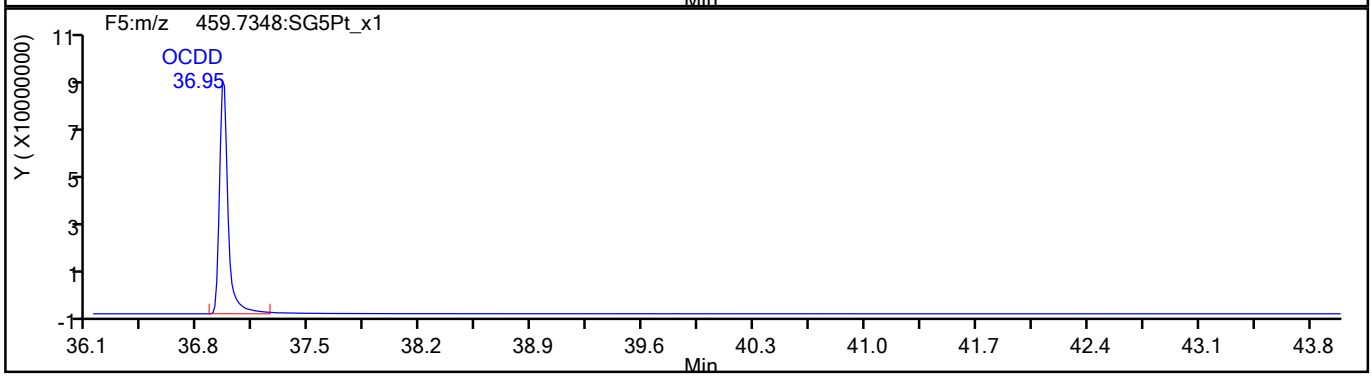

OCDD Standards

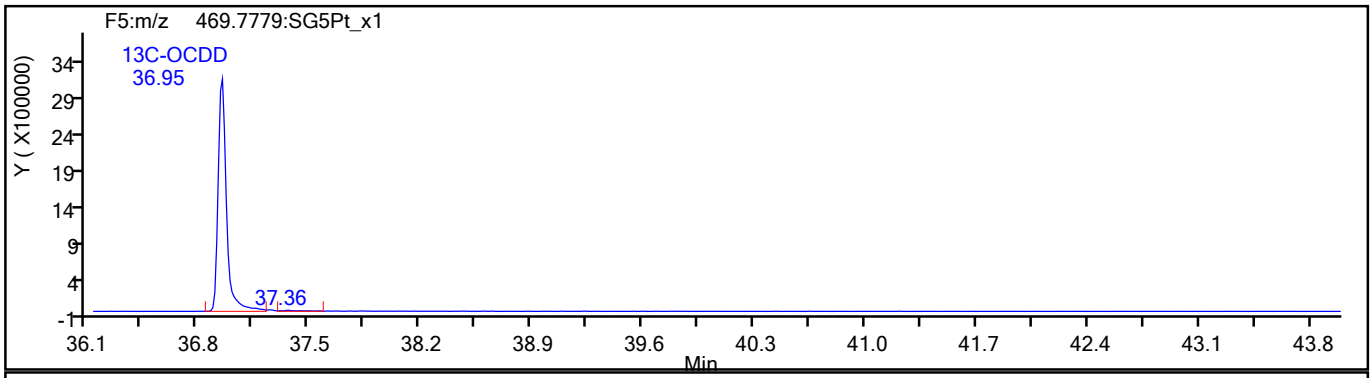

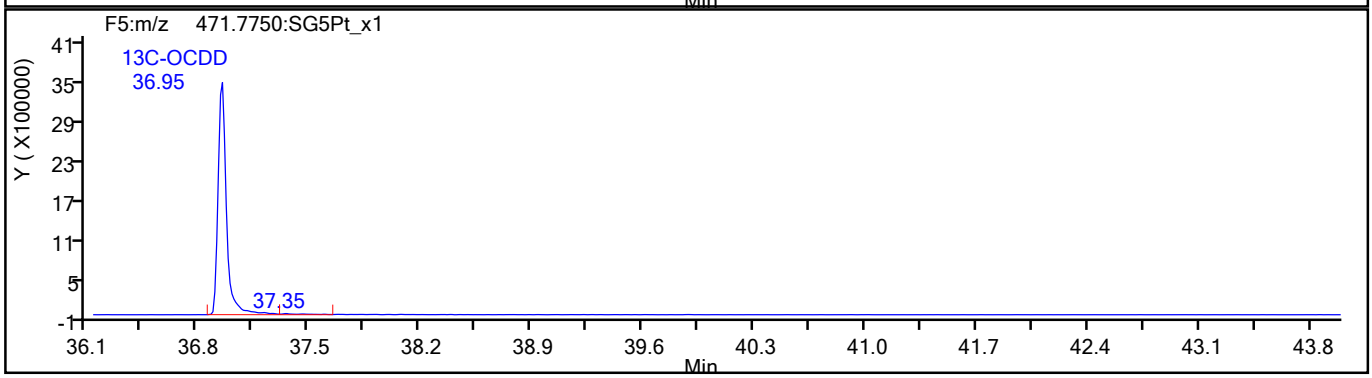

775132

Report Date: 18-Aug-2021 10:23:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

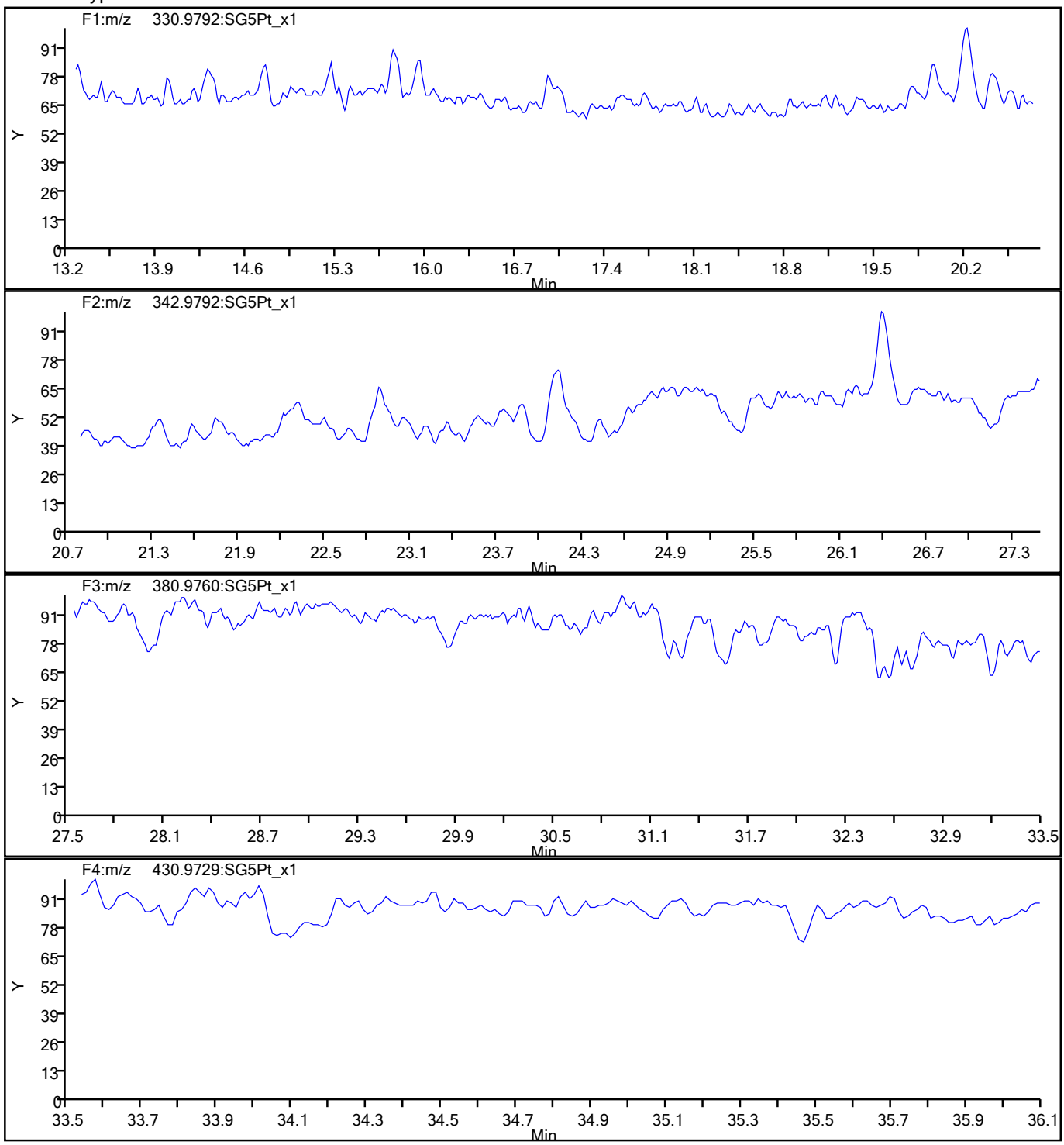

775133

Report Date: 18-Aug-2021 10:23:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_60.d		
Injection Date:	15-Aug-2021 14:27:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	516848	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

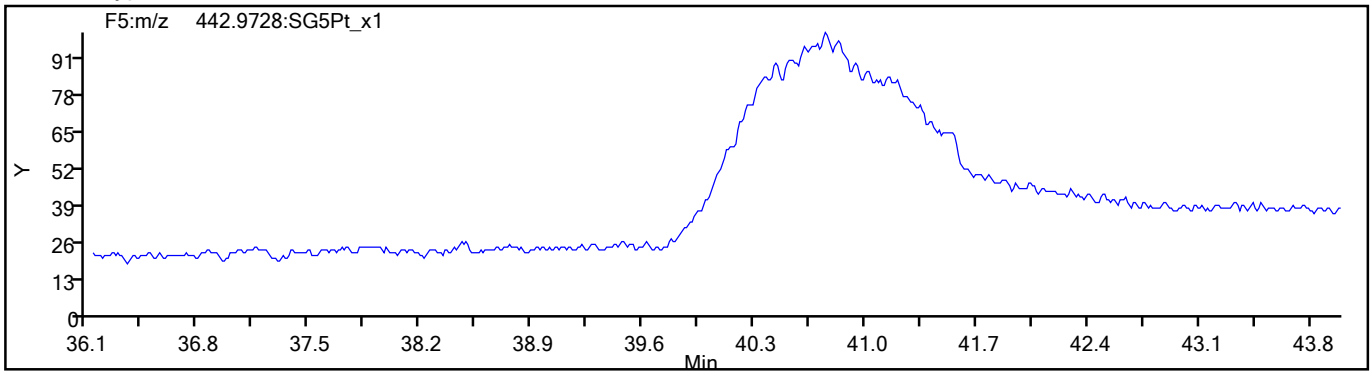

775134

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (4-6) RA
Lab Sample ID: 320-76769-15 RA
Matrix: Sediment
Lab File ID: 21AU2111D2_015.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.68(g)
Date Analyzed: 08/21/2021 22:51
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 42.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518850
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	63000	G E B	82	82

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	56		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	114		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_015.d				
Lims ID:	320-76769-A-15-A				
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Sample Type:	Client				
Inject. Date:	21-Aug-2021 22:51:38	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-76769-A-15-A RI				
Misc. Info.:	DB225RES				
Operator ID:		Instrument ID:	11D2		
Method:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m				
Limit Group:	HR - 1613B - ICAL				
Last Update:	23-Aug-2021 10:28:21	Calib Date:	14-Jul-2021 14:47:36		
Integrator:	Picker				
Quant Method:	Isotopic Dilution	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d				
Column 1 :	DB-225 (0.32 mm)		Det: F1:HRSIR		
Process Host:	CTX1643				

First Level Reviewer: bennettd Date: 23-Aug-2021 10:08:06

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.436	28195461	0.79	7.2E+05	100.0	100.0				M
D 13C-2,3,7,8-TCDF	17.794	21156041	0.75	1.3327	56.3	56.3	4.408	4.408	56.30	M
2,3,7,8-TCDF	17.807	3707551626	0.80	0.9978	17563	17563	22.8	22.8		E
D 13C-2,3,7,8-TCDD	16.203	13282302	0.81	0.8749	53.8	53.8	55.1	55.1	53.84	nM
2,3,7,8-TCDD	16.230	969476983	0.79	1.0570	6905.5	6905.5	23.5	23.5		Ea
$ 37Cl4-2,3,7,8-TCDD	16.216	11090780		0.8648	45.5	45.5	0.6731	0.6731	114	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_015.d
Lims ID: 320-76769-A-15-A
Client ID: 11215702-072221-SS-SJSB074 (4-6)
Sample Type: Client
Inject. Date: 21-Aug-2021 22:51:38 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-15-A RI
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:08:06

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.436	16.309	8		12420881	2997397	494657	1236642	6		M
333.9339	16.436	16.309	8		15774580	3966150	847864	2119660	5	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											M
315.9419	17.794	17.640	9	1.083	9033578	1709130	76649	191622	22		
317.9389	17.794	17.640	9	1.083	12122463	2060333	86977	217442	24	0.75(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.807	17.653	9	1.001	1648868646	301802907	152553	381382	1978		
305.8987	17.807	17.653	9	1.001	2058682980	376608811	189839	474597	1984	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.203	16.076	8	0.986	5938200	1470242	494657	1236642	3		M
333.9339	16.203	16.076	8	0.986	7344102	1779082	847864	2119660	2	0.81(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.230	16.103	8	1.002	428423693	95337567	196965	492412	484		a
321.8936	16.216	16.103	7	1.001	541053290	121810855	125826	314565	968	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.216	16.103	7	0.987	11090780	2526178	16215	40537	156		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_015.d				
Injection Date:	21-Aug-2021 22:51:38	Instrument ID:	11D2		
Lims ID:	320-76769-A-15-A	Lab Sample ID:	320-76769-15		
Client ID:	11215702-072221-SS-SJSB074 (4-6)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.79
Area: 23148064
Amount: 85.644832
Amount Units: pg/ul

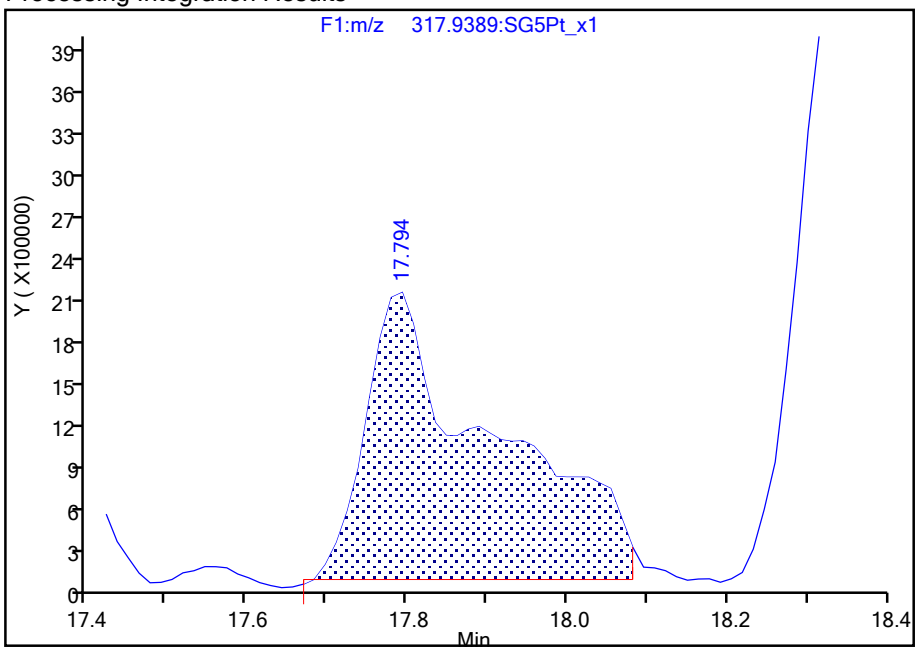

Manual Integration Results

RT: 17.79
Area: 12122463
Amount: 56.302459
Amount Units: pg/ul

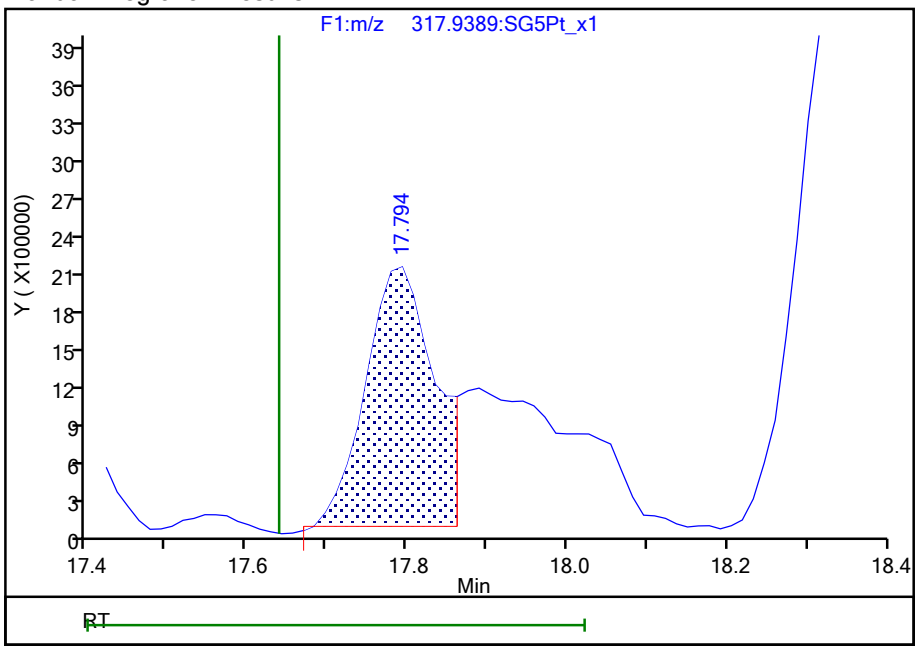

Reviewer: bennettd, 23-Aug-2021 10:06:41

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 23-Aug-2021 10:28:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_015.d		
Injection Date:	21-Aug-2021 22:51:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	518850	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

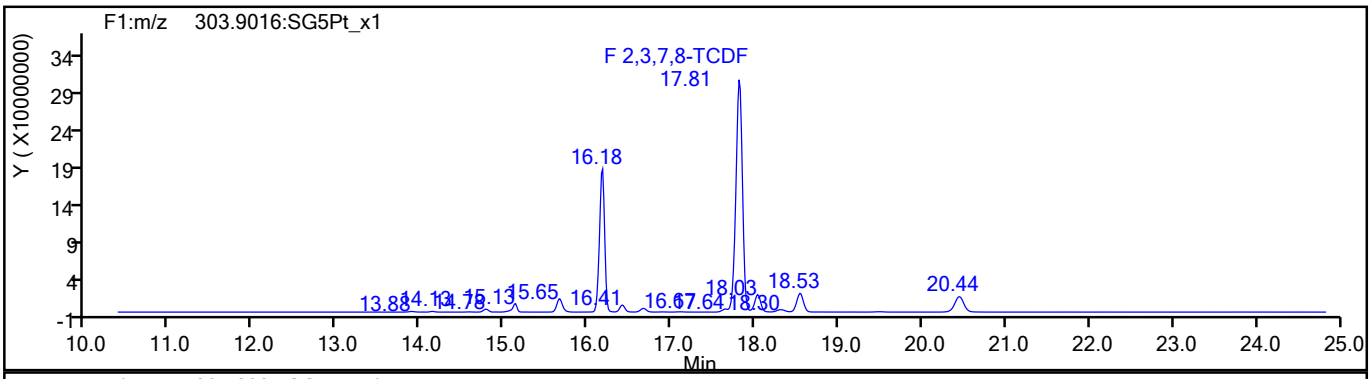

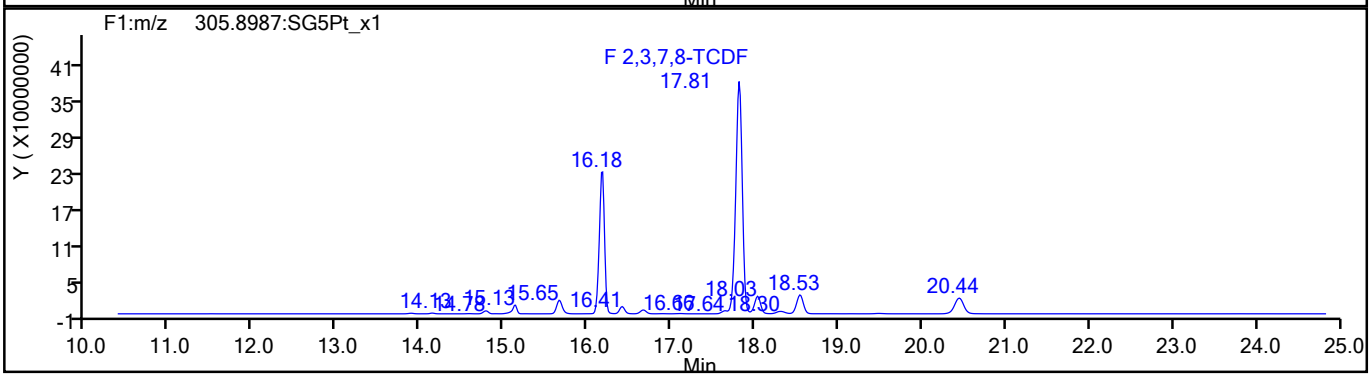

TCDF Standards

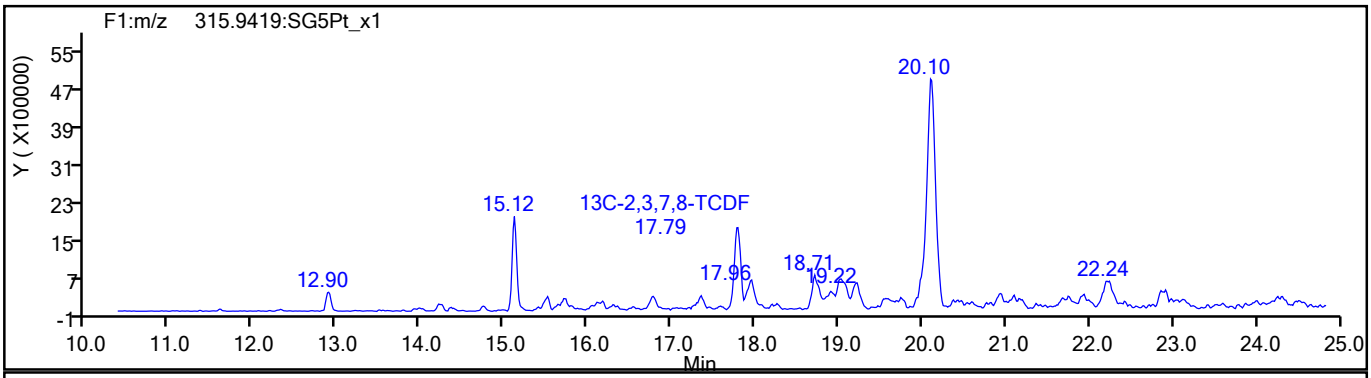

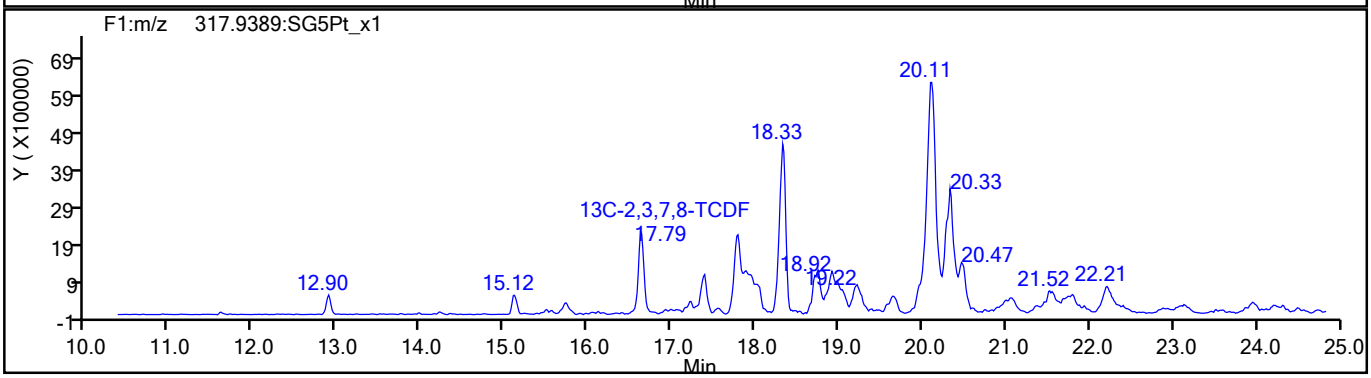

775139

Report Date: 23-Aug-2021 10:28:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_015.d		
Injection Date:	21-Aug-2021 22:51:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	518850	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

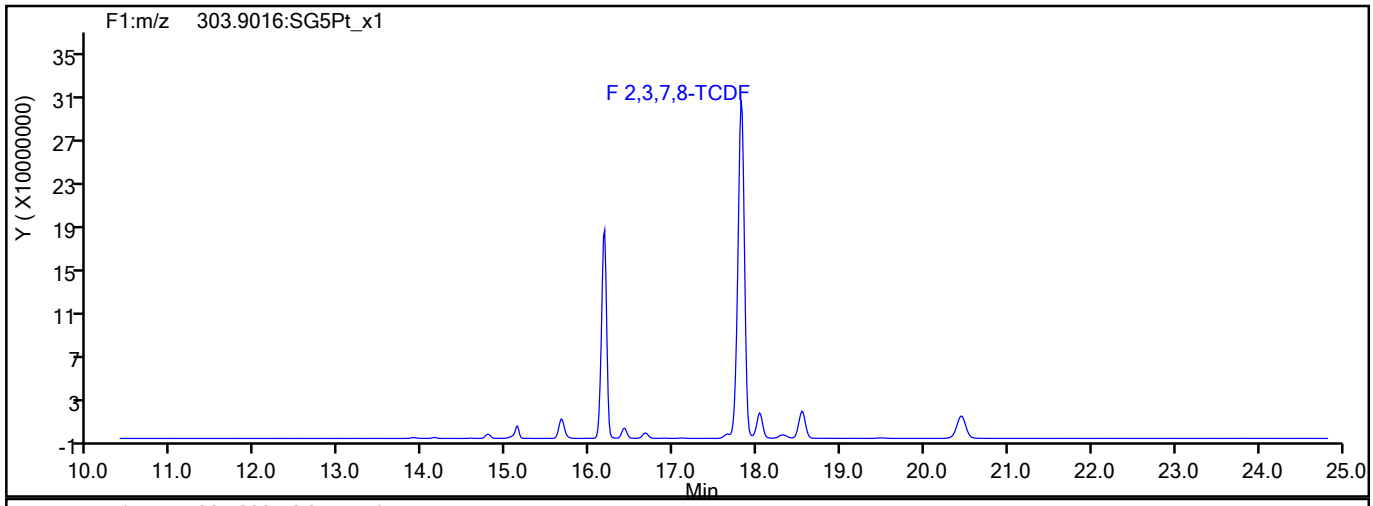

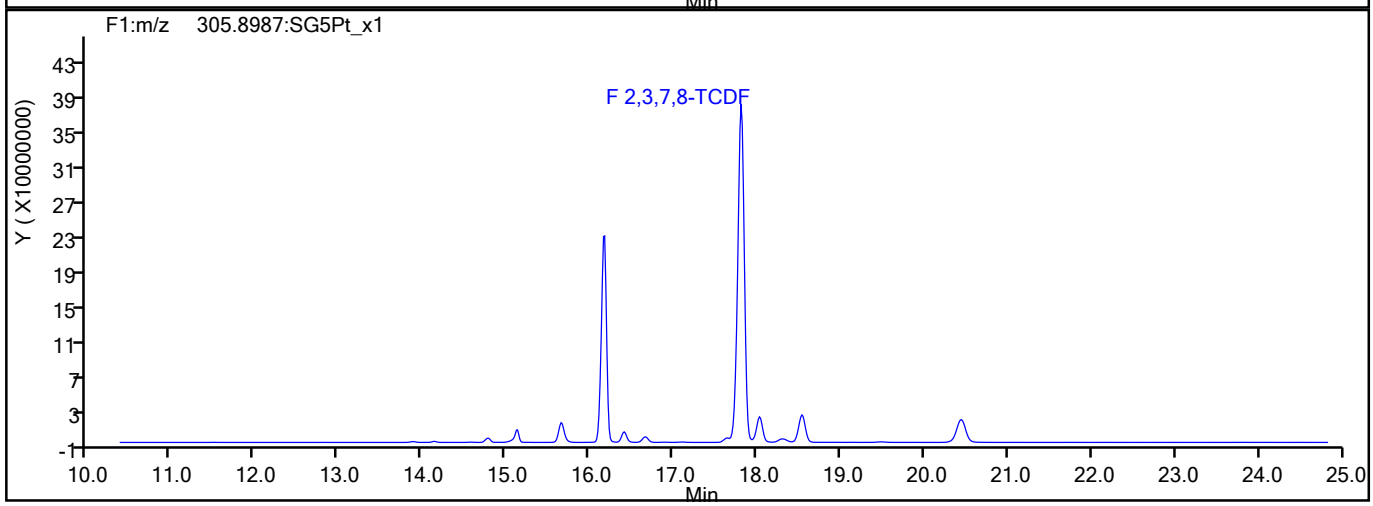

TCDF Interference Mass

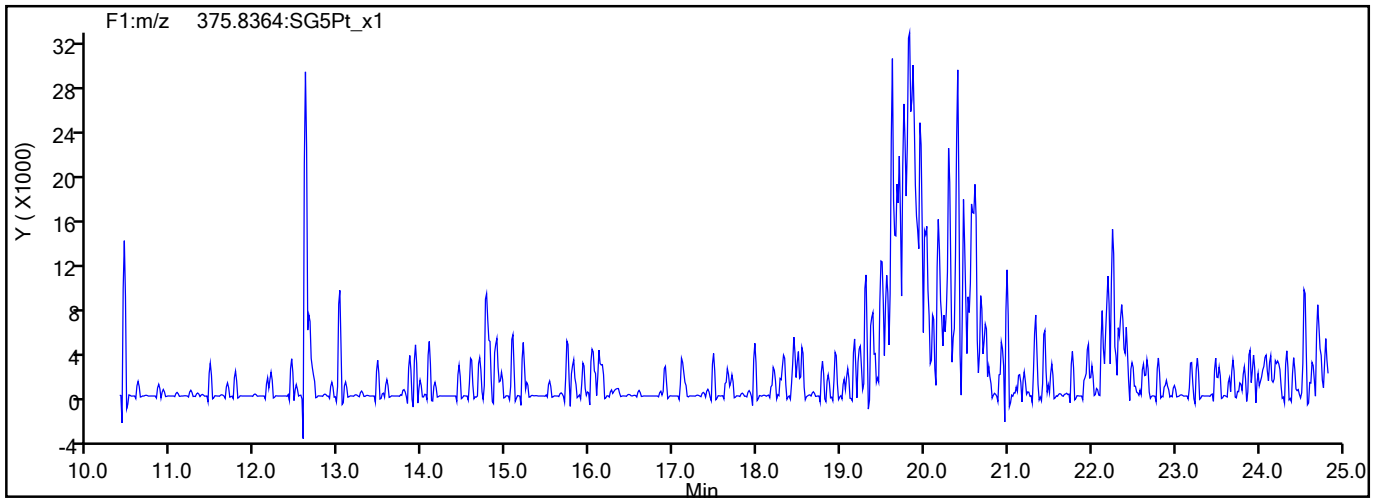

775140

Report Date: 23-Aug-2021 10:28:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_015.d		
Injection Date:	21-Aug-2021 22:51:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	518850	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

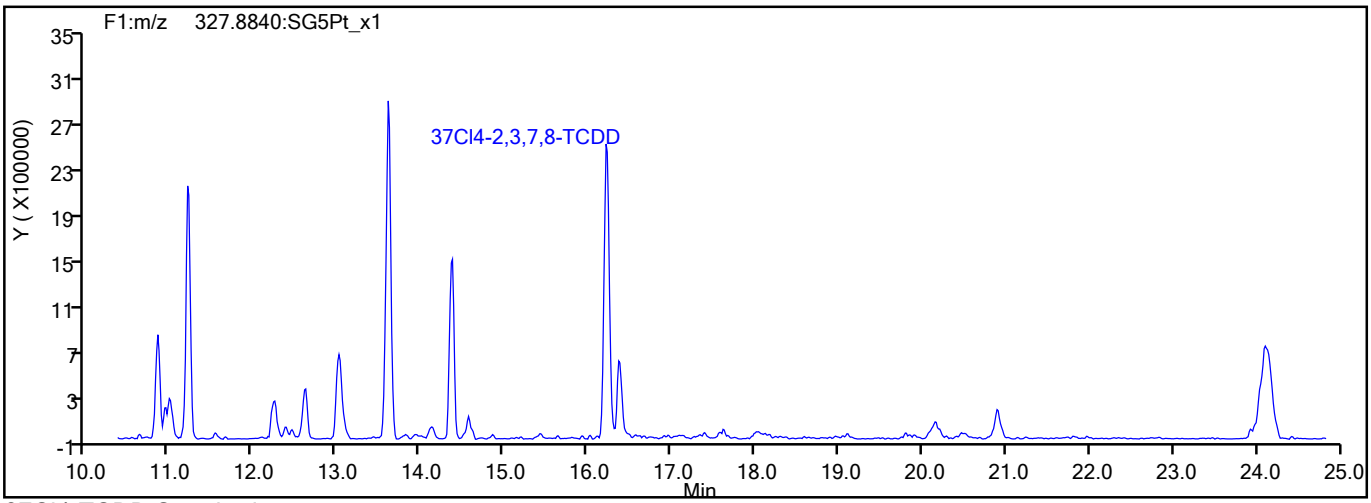

37Cl4-TCDD Standards

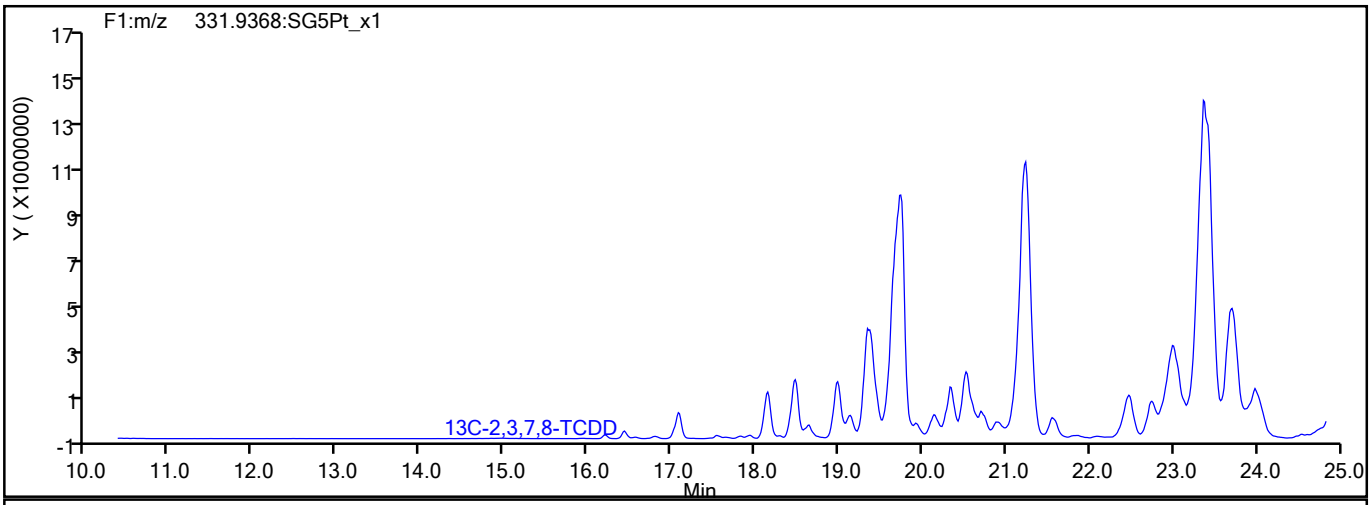

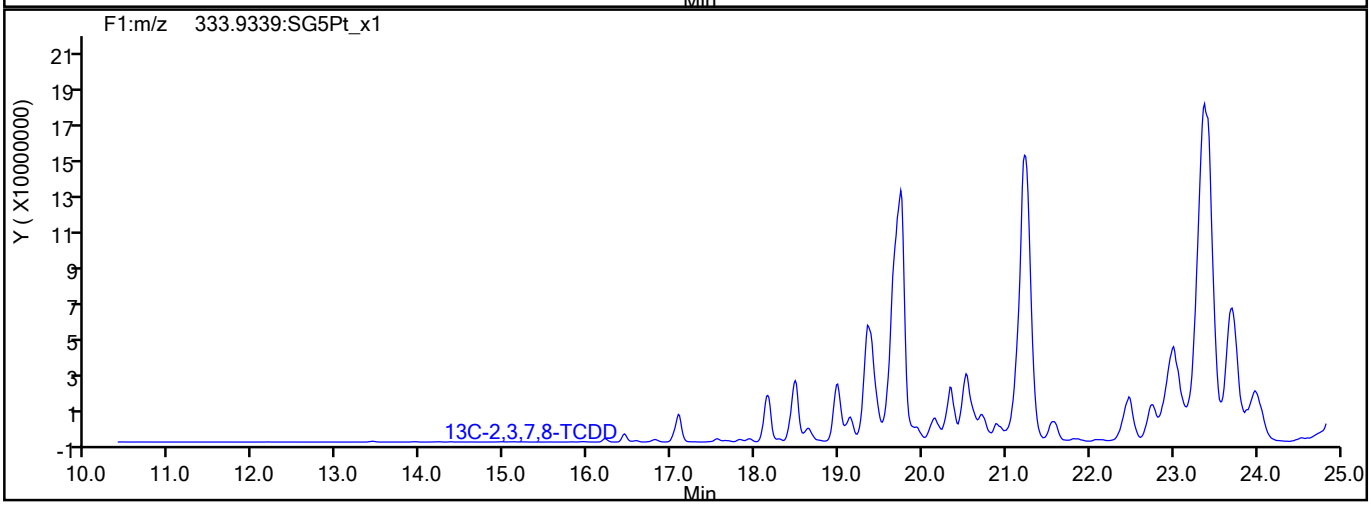

775141

Report Date: 23-Aug-2021 10:28:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_015.d		
Injection Date:	21-Aug-2021 22:51:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (4-6)		
Worklist#:	518850	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

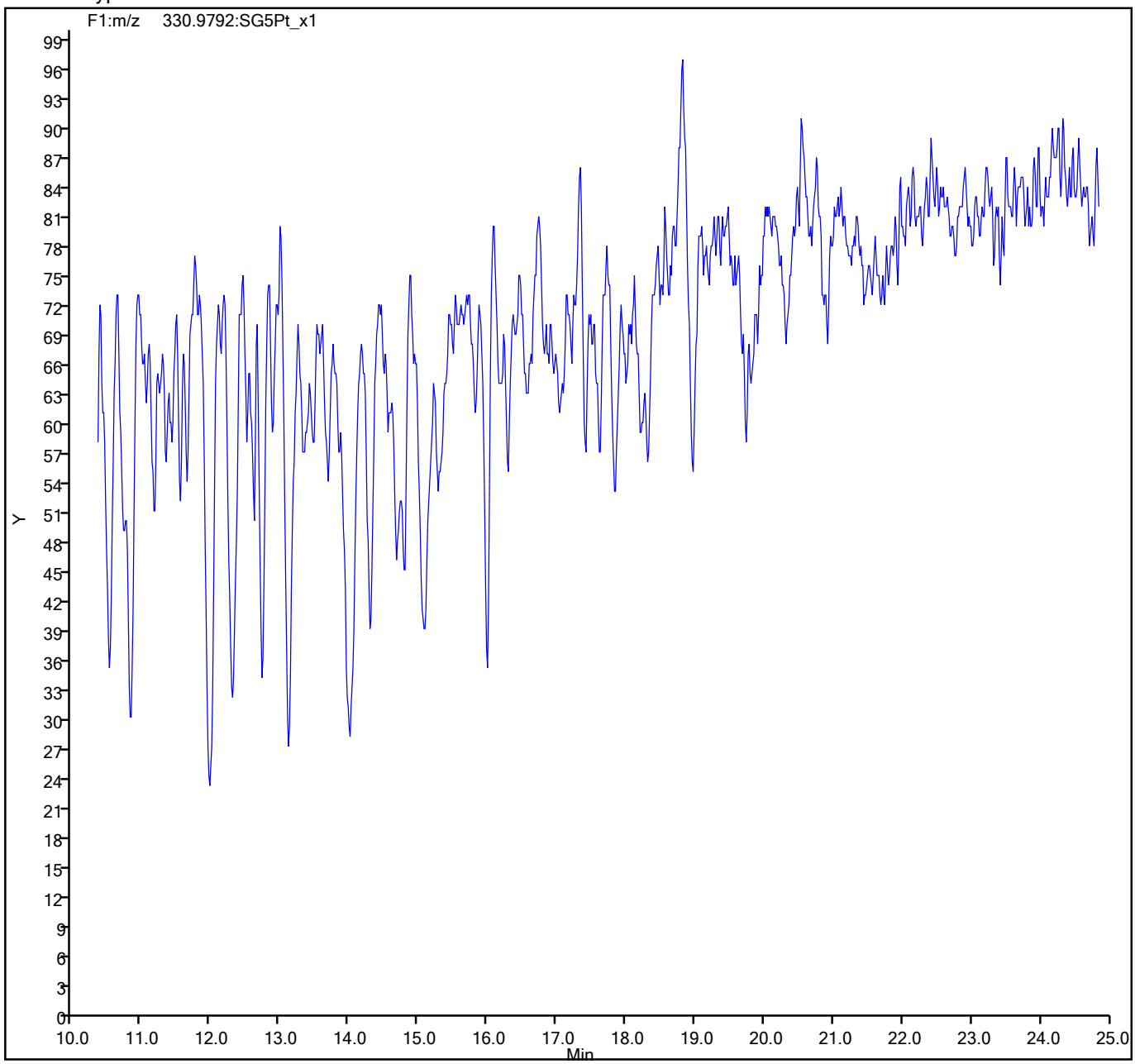

775142

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (6-8)
Lab Sample ID: 320-76769-16
Matrix: Sediment
Lab File ID: 13AU2110D5_61.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.00(g)
Date Analyzed: 08/15/2021 15:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 19.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	63	B	1.2	0.30
40321-76-4	1,2,3,7,8-PeCDD	0.64	J q	6.2	0.10
57117-41-6	1,2,3,7,8-PeCDF	5.6	J	6.2	0.13
57117-31-4	2,3,4,7,8-PeCDF	3.6	J	6.2	0.13
39227-28-6	1,2,3,4,7,8-HxCDD	0.55	J B	6.2	0.14
57653-85-7	1,2,3,6,7,8-HxCDD	0.98	J	6.2	0.14
19408-74-3	1,2,3,7,8,9-HxCDD	1.4	J B	6.2	0.13
70648-26-9	1,2,3,4,7,8-HxCDF	7.8	B	6.2	0.10
57117-44-9	1,2,3,6,7,8-HxCDF	2.3	J B	6.2	0.10
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.2	0.085
60851-34-5	2,3,4,6,7,8-HxCDF	0.32	J q	6.2	0.083
35822-46-9	1,2,3,4,6,7,8-HpCDD	34	B	6.2	0.79
67562-39-4	1,2,3,4,6,7,8-HpCDF	4.3	J B	6.2	0.14
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.87	J B	6.2	0.16
3268-87-9	OCDD	1200	B	12	1.7
39001-02-0	OCDF	7.1	J B	12	0.059
41903-57-5	Total TCDD	69	B q	1.2	0.30
30402-14-3	Total TCDF	370	B	1.2	0.83
36088-22-9	Total PeCDD	4.1	J q	6.2	0.10
30402-15-4	Total PeCDF	17		6.2	0.13
34465-46-8	Total HxCDD	21	B q	6.2	0.14
55684-94-1	Total HxCDF	14	B q	6.2	0.092
37871-00-4	Total HpCDD	110	B	6.2	0.79
38998-75-3	Total HpCDF	7.3	B	6.2	0.15

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (6-8)
Lab Sample ID: 320-76769-16
Matrix: Sediment
Lab File ID: 13AU2110D5_61.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.00(g)
Date Analyzed: 08/15/2021 15:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 19.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	51		25-164
89059-46-1	13C-2,3,7,8-TCDF	45		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	54		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	48		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	52		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	51		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	52		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	49		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	47		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	47		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	47		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	41		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	49		26-138
114423-97-1	13C-OCDD	50		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	64		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d
Lims ID: 320-76769-A-16-A
Client ID: 11215702-072221-SS-SJSB074 (6-8)
Sample Type: Client
Inject. Date: 15-Aug-2021 15:12:09 ALS Bottle#: 59 Worklist Smp#: 20
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-16-a 320-76769-a-16-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:24:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: dadunj Date: 18-Aug-2021 11:30:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	58754668	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	43272066	0.77	1.6249	45.3	45.3	0.0923	0.0923	45.32	
2,3,7,8-TCDF	17.371	37907126	0.77	1.0239	85.6	85.6	0.3316	0.3316		
A Non-2,3,7,8-sub-TCDF	17.046	27483307	0.77	1.0239	62.0	62.0	0.3316	37.6		a
S Total TCDF					147.6	147.6	0.3316	0.3316		
D 13C-2,3,7,8-TCDD	18.066	26927747	0.82	0.8993	51.0	51.0	0.1718	0.1718	50.96	
2,3,7,8-TCDD	18.082	8538824	0.80	1.2541	25.3	25.3	0.1204	0.1204		
$ 37Cl4-2,3,7,8-TCDD	18.082	16608201		1.1071	25.5	25.5	0.0393	0.0393	63.83	
A Non-2,3,7,8-sub-TCDD	17.500	823745	0.77	1.2541	2.487	2.439	0.1204	2.169		RQ
S Total TCDD					27.8	27.7	0.1204	0.1204		RQ
D 13C-1,2,3,7,8-PeCDF	22.394	34370211	1.54	1.2101	48.3	48.3	0.1373	0.1373	48.34	
1,2,3,7,8-PeCDF	22.421	813114	1.43	1.0611	2.229	2.229	0.0515	0.0515		M
D 13C-2,3,4,7,8-PeCDF	23.730	38163080	1.58	1.2395	52.4	52.4	0.1340	0.1340	52.40	
2,3,4,7,8-PeCDF	23.758	555072	1.53	1.0184	1.428	1.428	0.0534	0.0534		
A F1 PeCDFs	20.093	76620	1.37	1.0398	0.2032	0.2032	0.0292	0.2032		
A Non-2,3,7,8-sub-PeCDF	23.241	1046561	1.55	1.0398	2.775	2.775	0.0525	1.244		Ma
S Total PeCDF					6.636	6.636	0.0525	0.0525		
D 13C-1,2,3,7,8-PeCDD	24.467	24138009	1.58	0.7612	54.0	54.0	0.0771	0.0771	53.97	
1,2,3,7,8-PeCDD	24.480	65450	1.55	1.0484	0.3119	0.2586	0.0419	0.0419		RQ
A Non-2,3,7,8-sub-PeCDD	23.349	348677	1.55	1.0484	1.440	1.378	0.0419	0.4198		RQMa
S Total PeCDD					1.752	1.636	0.0419	0.0419		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.529	31687478	0.51	1.0837	51.5	51.5	0.2224	0.2224	51.51	
1,2,3,4,7,8-HxCDF	30.556	1081660	1.27	1.0851	3.146	3.146	0.0404	0.0404		
D 13C-1,2,3,6,7,8-HxCDF	30.715	31061063	0.52	1.1279	48.5	48.5	0.2137	0.2137	48.51	
1,2,3,6,7,8-HxCDF	30.742	317093	1.15	1.1260	0.9066	0.9066	0.0405	0.0405		
D 13C-2,3,4,6,7,8-HxCDF	31.527	28168739	0.52	1.0637	46.6	46.6	0.2266	0.2266	46.65	
2,3,4,6,7,8-HxCDF	31.541	42447	1.24	1.1675	0.1586	0.1291	0.0331	0.0331		RQ
D 13C-1,2,3,7,8,9-HxCDF	32.339	25936809	0.52	0.9676	47.2	47.2	0.2491	0.2491	47.22	
1,2,3,7,8,9-HxCDF	32.432						0.0342	0.0342		U
A Non-2,3,7,8-sub-HxCDF	30.197	448784	1.24	1.1363	1.368	1.352	0.0368	0.6283		RQa

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					5.579	5.533	0.0370	0.0370		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.153	56767550	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	24199991	1.22	0.7334	58.1	58.1	0.3239	0.3239	58.12	
1,2,3,4,7,8-HxCDD	31.740	56452	1.34	1.0640	0.2192	0.2192	0.0566	0.0566		
D 13C-1,2,3,6,7,8-HxCDD	31.820	25633348	1.24	0.8802	51.3	51.3	0.2699	0.2699	51.30	
1,2,3,6,7,8-HxCDD	31.847	100521	1.33	1.0001	0.3921	0.3921	0.0578	0.0578		
1,2,3,7,8,9-HxCDD	32.166	154019	1.22	1.1325	0.5458	0.5458	0.0521	0.0521		
A Non-2,3,7,8-sub-HxCDD	30.882	1910766	1.24	1.0655	7.228	7.197	0.0553	4.566		RQMa
S Total HxCDD					8.386	8.354	0.0555	0.0555		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.778	17898028	0.42	0.7730	40.8	40.8	0.4870	0.4870	40.79	
1,2,3,4,6,7,8-HpCDF	33.790	450348	0.94	1.4413	1.746	1.746	0.0548	0.0548		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.859	19318210	0.44	0.7008	48.6	48.6	0.5372	0.5372	48.56	
1,2,3,4,7,8,9-HpCDF	34.871	89099	1.13	1.3174	0.3501	0.3501	0.0638	0.0638		
A Non-2,3,7,8-sub-HpCDF	34.319	211447	1.02	1.3793	0.8238	0.8238	0.0590	0.8238		
S Total HpCDF					2.920	2.920	0.0593	0.0593		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	17276580	1.05	0.6472	47.0	47.0	0.2578	0.2578	47.02	
1,2,3,4,6,7,8-HpCDD	34.580	2560889	1.03	1.0943	13.5	13.5	0.3171	0.3171		
A Non-2,3,7,8-sub-HpCDD	34.301	5625072	1.04	1.0943	29.8	29.8	0.3171	29.8		
S Total HpCDD					43.3	43.3	0.3171	0.3171		
D 13C-OCDD	36.938	25619238	0.88	0.4472	100.9	100.9	0.1394	0.1394	50.46	
OCDF	37.034	525300	0.83	1.4382	2.851	2.851	0.0236	0.0236		M
OCDD	36.938	66268448	0.90	1.1070	467.3	467.3	0.6742	0.6742		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d
Lims ID: 320-76769-A-16-A
Client ID: 11215702-072221-SS-SJSB074 (6-8)
Sample Type: Client
Inject. Date: 15-Aug-2021 15:12:09 ALS Bottle#: 59 Worklist Smp#: 20
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-16-a 320-76769-a-16-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:24:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: dadunj Date: 18-Aug-2021 11:30:09

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		26193238	6454628	4315	10787	1496		
333.9339	17.870	17.855	1		32561430	8088901	4671	11677	1732	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.971	18869633	4563279	3320	8300	1374		
317.9389	17.356	17.356	0	0.971	24402433	5925567	5405	13512	1096	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.371	0	1.001	16479920	3788676	6112	15280	620		
305.8987	17.371	17.371	0	1.001	21427206	4947849	8133	20332	608	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	15.950	17.046	-66	0.919	256691	68874	6112	15280	11		
305.8987	15.950	17.046	-66	0.919	346364	93069	8133	20332	11	0.74(0.65-0.89)	
303.9016	16.237	17.046	-48	0.936	540123	115733	6112	15280	19		
305.8987	16.237	17.046	-48	0.936	689969	145985	8133	20332	18	0.78(0.65-0.89)	
303.9016	16.464	17.046	-35	0.949	496508	119290	6112	15280	20		
305.8987	16.464	17.046	-35	0.949	679939	170987	8133	20332	21	0.73(0.65-0.89)	
303.9016	16.706	17.046	-20	0.963	722125	161911	6112	15280	26		
305.8987	16.706	17.046	-20	0.963	881013	206737	8133	20332	25	0.82(0.65-0.89)	
303.9016	16.993	17.046	-3	0.979	7299040	1860325	6112	15280	304		
305.8987	16.993	17.046	-3	0.979	9367339	2391323	8133	20332	294	0.78(0.65-0.89)	
303.9016	17.205	17.046	10	0.991	278095	69183	6112	15280	11		
305.8987	17.205	17.046	10	0.991	357102	78896	8133	20332	10	0.78(0.65-0.89)	
303.9016	17.809	17.046	46	1.026	1093526	243517	6112	15280	40		
305.8987	17.794	17.046	45	1.025	1441255	326023	8133	20332	40	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.051	17.046	60	1.040	221062	45551	6112	15280	7		
305.8987	18.051	17.046	60	1.040	276551	64169	8133	20332	8	0.80(0.65-0.89)	
303.9016	19.201	17.046	129	1.106	1056184	224464	6112	15280	37		a
305.8987	19.201	17.046	129	1.106	1480421	305483	8133	20332	38	0.71(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	12140931	2765530	4315	10787	641		
333.9339	18.066	18.051	1	1.011	14786816	3356219	4671	11677	719	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.082	18.081	0	1.001	3784867	860166	1812	4530	475		
321.8936	18.082	18.081	0	1.001	4753957	1103925	1887	4717	585	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.081	0	1.012	16608201	3751381	2534	6335	1480		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	16.948	17.500	-33	0.938	39702	8930	1812	4530	5		
321.8936	16.948	17.500	-33	0.938	67734	15839	1887	4717	8	0.59(0.65-0.89)	
	Empc Correction				51561	11597	1887	4717	6		
319.8965	18.444	17.500	57	1.021	319048	72931	1812	4530	40		
321.8936	18.444	17.500	57	1.021	413434	87971	1887	4717	47	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.394	22.367	2	1.253	20832115	3561643	5815	14537	612		
353.8970	22.394	22.367	2	1.253	13538096	2266721	3850	9625	589	1.54(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.421	22.394	2	1.001	478758	79275	693	1732	114		M
341.8567	22.421	22.394	2	1.001	334356	54886	582	1455	94	1.43(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.730	23.703	2	1.328	23382500	3610194	5815	14537	621		
353.8970	23.730	23.703	2	1.328	14780580	2248531	3850	9625	584	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.758	23.730	2	1.001	335940	48946	693	1732	71		
341.8567	23.758	23.730	2	1.001	219132	34503	582	1455	59	1.53(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.488	20.093	-36	0.870	44297	10684	333	832	32		
341.8567	19.503	20.093	-35	0.871	32323	7962	377	942	21	1.37(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											Ma
339.8597	21.058	23.241	-131	0.940	284871	50240	693	1732	72		
341.8567	21.071	23.241	-130	0.941	184315	31264	582	1455	54	1.55(1.32-1.78)	
339.8597	21.917	23.241	-79	0.979	47846	5195	693	1732	7		
341.8567	21.876	23.241	-82	0.977	33322	3684	582	1455	6	1.44(1.32-1.78)	
339.8597	22.285	23.241	-57	0.995	36398	7154	693	1732	10		M
341.8567	22.285	23.241	-57	0.995	23610	5534	582	1455	10	1.54(1.32-1.78)	
339.8597	22.940	23.241	-18	1.024	143660	25285	693	1732	36		
341.8567	22.926	23.241	-19	1.024	87217	14830	582	1455	25	1.65(1.32-1.78)	
339.8597	24.085	23.241	51	1.076	104257	13992	693	1732	20		
341.8567	24.085	23.241	51	1.076	67485	9330	582	1455	16	1.54(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	25.680	23.241	146	1.147	19508	3077	693	1732	4		
341.8567	25.708	23.241	148	1.148	14072	2928	582	1455	5	1.39(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.467	24.426	2	1.369	14791235	2196674	2004	5010	1096		
369.8919	24.467	24.426	2	1.369	9346774	1356615	1411	3527	961	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											RQ
355.8546	24.480	24.453	2	1.001	53269	7353	322	805	23		
	Empc Correction				39783	5941	322	805	18		
357.8516	24.480	24.453	2	1.001	25667	3833	302	755	13	2.08(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQMa
355.8546	21.262	23.349	-125	0.869	62510	10778	322	805	33		
357.8516	21.235	23.349	-127	0.868	43738	6375	302	755	21	1.43(1.32-1.78)	M
355.8546	21.999	23.349	-81	0.899	52824	10048	322	805	31		
357.8516	22.012	23.349	-80	0.900	40615	7412	302	755	25	1.30(1.32-1.78)	
	Empc Correction				34080	6482	302	755	21		
355.8546	22.462	23.349	-53	0.918	20921	3855	322	805	12		M
357.8516	22.476	23.349	-52	0.919	14425	2065	302	755	7	1.45(1.32-1.78)	
355.8546	22.667	23.349	-41	0.926	22132	3523	322	805	11		
357.8516	22.680	23.349	-40	0.927	14638	2397	302	755	8	1.51(1.32-1.78)	M
355.8546	22.994	23.349	-21	0.940	13254	2193	322	805	7		M
357.8516	22.994	23.349	-21	0.940	11172	2345	302	755	8	1.19(1.32-1.78)	
	Empc Correction				8550	1414	302	755	5		
355.8546	23.499	23.349	9	0.960	43967	6446	322	805	20		M
	Empc Correction				37446	5556	322	805	17		
357.8516	23.499	23.349	9	0.960	24159	3585	302	755	12	1.82(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.529	30.503	2	0.949	10761716	2000202	4979	12447	402		
385.8610	30.529	30.503	2	0.949	20925762	3882563	9271	23177	419	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.556	30.529	2	1.001	604591	106838	532	1330	201		
375.8178	30.542	30.529	1	1.000	477069	87466	500	1250	175	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.715	30.689	2	0.955	10575163	1916986	4979	12447	385		
385.8610	30.715	30.689	2	0.955	20485900	3746047	9271	23177	404	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.742	30.716	2	1.001	169292	31402	532	1330	59		
375.8178	30.729	30.716	1	1.000	147801	25844	500	1250	52	1.15(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.527	31.514	1	0.981	9612256	2293257	4979	12447	461		
385.8610	31.527	31.514	1	0.981	18556483	4378151	9271	23177	472	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQ
373.8208	31.541	31.528	1	1.000	23498	5311	532	1330	10		
375.8178	31.541	31.528	1	1.000	28666	6195	500	1250	12	0.82(1.05-1.43)	
	Empc Correction				18949	4283	500	1250	9		
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.339	32.326	1	1.006	8837184	2205439	4979	12447	443		
385.8610	32.339	32.326	1	1.006	17099625	4270505	9271	23177	461	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											U
373.8208	32.340						532	1330			
375.8178	32.340						500	1250			
A Non-2,3,7,8-sub-HxCDF											RQa
373.8208	28.000	30.197	-132	0.917	20703	2836	532	1330	5		
375.8178	28.013	30.197	-131	0.918	17544	2299	500	1250	5	1.18(1.05-1.43)	
373.8208	28.373	30.197	-109	0.929	112402	14317	532	1330	27		
375.8178	28.386	30.197	-108	0.930	96163	12523	500	1250	25	1.17(1.05-1.43)	
373.8208	29.717	30.197	-29	0.973	56693	7401	532	1330	14		
375.8178	29.730	30.197	-28	0.974	48264	6011	500	1250	12	1.17(1.05-1.43)	
373.8208	31.434	30.197	74	1.030	14645	3559	532	1330	7		
375.8178	31.447	30.197	75	1.030	17251	4398	500	1250	9	0.85(1.05-1.43)	
	Empc Correction				11810	2870	500	1250	6		
373.8208	32.432	30.197	134	1.062	39136	10931	532	1330	21		a
375.8178	32.432	30.197	134	1.062	31424	8906	500	1250	18	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.140	1		31335213	8179308	7691	19227	1063		
403.8529	32.153	32.140	1		25432337	6602784	6354	15885	1039	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.986	13275423	3415209	7691	19227	444		
403.8529	31.714	31.701	1	0.986	10924568	2821458	6354	15885	444	1.22(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.740	31.714	2	1.001	32318	8447	794	1985	11		
391.8127	31.727	31.714	1	1.000	24134	7072	708	1770	10	1.34(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.807	1	0.990	14185077	3590843	7691	19227	467		
403.8529	31.820	31.807	1	0.990	11448271	2909626	6354	15885	458	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.847	31.820	2	1.001	57467	13452	794	1985	17		
391.8127	31.833	31.820	1	1.000	43054	9589	708	1770	14	1.33(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.166	32.153	1	1.014	84753	18663	794	1985	24		
391.8127	32.166	32.153	1	1.014	69266	15016	708	1770	21	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQMa
389.8157	29.597	30.882	-77	0.930	668998	75430	794	1985	95		
391.8127	29.584	30.882	-78	0.930	543264	66144	708	1770	93	1.23(1.05-1.43)	
389.8157	30.609	30.882	-16	0.962	43306	6877	794	1985	9		
	Empc Correction				34928	6941	794	1985	9		
391.8127	30.582	30.882	-18	0.961	28168	5598	708	1770	8	1.54(1.05-1.43)	
389.8157	30.995	30.882	7	0.974	323210	60428	794	1985	76		
391.8127	30.982	30.882	6	0.974	267693	51488	708	1770	73	1.21(1.05-1.43)	M
389.8157	31.168	30.882	17	0.979	23883	5074	794	1985	6		M
391.8127	31.154	30.882	16	0.979	20622	3998	708	1770	6	1.16(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.778	33.766	1	1.051	5296867	1676844	7263	18157	231		
419.8220	33.778	33.766	1	1.051	12601161	3910312	14998	37495	261	0.42(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.790	33.778	1	1.000	217823	66641	1004	2510	66		
409.7789	33.790	33.778	1	1.000	232525	74536	760	1900	98	0.94(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.859	34.847	1	1.084	5897435	1598121	7263	18157	220		
419.8220	34.859	34.847	1	1.084	13420775	3650431	14998	37495	243	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.871	34.860	1	1.000	47261	13399	1004	2510	13		
409.7789	34.871	34.860	1	1.000	41838	12640	760	1900	17	1.13(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.082	34.319	-14	1.009	106555	31246	1004	2510	31		
409.7789	34.082	34.319	-14	1.009	104892	33327	760	1900	44	1.02(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.075	8836251	2476545	4409	11022	562		
437.8140	34.568	34.568	0	1.075	8440329	2326139	5456	13640	426	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	1300074	362384	3391	8477	107		
425.7737	34.580	34.580	0	1.000	1260815	360607	3275	8187	110	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.033	34.301	-16	0.985	2869053	889685	3391	8477	262		
425.7737	34.033	34.301	-16	0.985	2756019	850057	3275	8187	260	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.938	36.926	1	1.149	11961665	2946258	1912	4780	1541		
471.7750	36.938	36.926	1	1.149	13657573	3337380	1773	4432	1882	0.88(0.76-1.02)	
OCDF											M
441.7428	37.034	37.022	1	1.003	238097	56743	208	520	273		
443.7399	37.034	37.022	1	1.003	287203	71013	219	547	324	0.83(0.76-1.02)	M
OCDD											
457.7377	36.938	36.938	0	1.000	31334734	7697291	4018	10045	1916		
459.7348	36.938	36.938	0	1.000	34933714	8669263	5362	13405	1617	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d
Lims ID: 320-76769-A-16-A
Client ID: 11215702-072221-SS-SJSB074 (6-8)
Inject. Date: 15-Aug-2021 15:12:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 20

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	43272066	10488846

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	43272066	10488846

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.950	256691	68874	346364	93069	1.36	0.74	
16.237	540123	115733	689969	145985	2.78	0.78	
16.464	496508	119290	679939	170987	2.66	0.73	
16.706	722125	161911	881013	206737	3.62	0.82	
16.993	7299040	1860325	9367339	2391323	37.6	0.78	
17.205	278095	69183	357102	78896	1.43	0.78	
17.809	1093526	243517	1441255	326023	5.72	0.76	
18.051	221062	45551	276551	64169	1.12	0.80	
19.201	1056184	224464	1480421	305483	5.73	0.71	a
Signal Totals:							
	11963354	2908848	15519953	3782672			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	27483307	6691520				0.77	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 62.030 = (27483307 * 100.000) / (43272066 * 1.024)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d
Lims ID: 320-76769-A-16-A
Client ID: 11215702-072221-SS-SJSB074 (6-8)
Inject. Date: 15-Aug-2021 15:12:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 20

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	26927747	6121749

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	26927747	6121749

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.948	39702	8930	67734	15839	0.3181	0.59	RQ
16.948	39702	8930	51561	11597	0.2702		Empc Correction
18.444	319048	72931	413434	87971	2.17	0.77	
Signal Totals:							
	358750	81861	464995	99568			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	839918	185671				0.75	RQ
	823745	181429					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.487 = (839918 * 100.000) / (26927747 * 1.254)
Empc Amount: 2.439 = (823745 * 100.000) / (26927747 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Lims ID:	320-76769-A-16-A		
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Inject. Date:	15-Aug-2021 15:12:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	20

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	34370211	5828364
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	38163080	5858725

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	36266645	5843544

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.488	44297	10684	32323	7962	0.2032	1.37	
Signal Totals:							
	44297	10684	32323	7962			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	76620	18646				1.37	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.2032 = (76620 * 100.000) / (36266645 * 1.040)

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Lims ID:	320-76769-A-16-A		
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Inject. Date:	15-Aug-2021 15:12:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	20

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	34370211	5828364
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	38163080	5858725

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	36266645	5843544

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.058	284871	50240	184315	31264	1.24	1.55	
21.917	47846	5195	33322	3684	0.2152	1.44	
22.285	36398	7154	23610	5534	0.1591	1.54	Ma
22.940	143660	25285	87217	14830	0.6123	1.65	
24.085	104257	13992	67485	9330	0.4554	1.54	
25.680	19508	3077	14072	2928	0.0890	1.39	
Signal Totals:							
	636540	104943	410021	67570			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1046561	172513				1.55	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.775 = (1046561 * 100.000) / (36266645 * 1.040)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Lims ID:	320-76769-A-16-A		
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Inject. Date:	15-Aug-2021 15:12:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	20

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	24138009	3553289

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	24138009	3553289

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.262	62510	10778	43738	6375	0.4198	1.43	M
21.999	52824	10048	40615	7412	0.3692	1.30	RQ
21.999	52824	10048	34080	6482	0.3434		Empc Correction
22.462	20921	3855	14425	2065	0.1397	1.45	Ma
22.667	22132	3523	14638	2397	0.1453	1.51	M
22.994	13254	2193	11172	2345	0.0965	1.19	RQM
22.994	13254	2193	8550	1414	0.0862		Empc Correction
23.499	43967	6446	24159	3585	0.2692	1.82	RQM
23.499	37446	5556	24159	3585	0.2434		Empc Correction
Signal Totals:							
	209087	35953	139590	22318			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	364355	61022				1.45	RQMa
	348677	58271					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.440 = (364355 * 100.000) / (24138009 * 1.048)

Empc Amount: 1.378 = (348677 * 100.000) / (24138009 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Lims ID:	320-76769-A-16-A		
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Inject. Date:	15-Aug-2021 15:12:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	20

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	31687478	5882765
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	31061063	5663033
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	28168739	6671408
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	25936809	6475944

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	29213522	6173287

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.000	20703	2836	17544	2299	0.1152	1.18	
28.373	112402	14317	96163	12523	0.6283	1.17	
29.717	56693	7401	48264	6011	0.3162	1.17	
31.434	14645	3559	17251	4398	0.0961	0.85	RQ
31.434	14645	3559	11810	2870	0.0797		Empc Correction
32.432	39136	10931	31424	8906	0.2126	1.25	a
Signal Totals:							
	243579	39044	205205	32609			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	454225	73181				1.16	RQa
	448784	71653					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.368 = (454225 * 100.000) / (29213522 * 1.136)

Empc Amount: 1.352 = (448784 * 100.000) / (29213522 * 1.136)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d
Lims ID: 320-76769-A-16-A
Client ID: 11215702-072221-SS-SJSB074 (6-8)
Inject. Date: 15-Aug-2021 15:12:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 20

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	24199991	6236667
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	25633348	6500469
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	24916669	6368568

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.597	668998	75430	543264	66144	4.57	1.23	
30.609	43306	6877	28168	5598	0.2692	1.54	RQ
30.609	34928	6941	28168	5598	0.2377		Empc Correction
30.995	323210	60428	267693	51488	2.23	1.21	M
31.168	23883	5074	20622	3998	0.1676	1.16	Ma
Signal Totals:							
	1051019	147873	859747	127228			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1919144	275037				1.23	RQMa
	1910766	275101					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.228 = (1919144 * 100.000) / (24916669 * 1.066)
Empc Amount: 7.197 = (1910766 * 100.000) / (24916669 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Lims ID:	320-76769-A-16-A		
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Inject. Date:	15-Aug-2021 15:12:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	20

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	17898028	5587156
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	19318210	5248552

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	18608119	5417854

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.082	106555	31246	104892	33327	0.8238	1.02	
Signal Totals:							
	106555	31246	104892	33327			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	211447	64573				1.02	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.8238 = (211447 * 100.000) / (18608119 * 1.379)

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d
Lims ID: 320-76769-A-16-A
Client ID: 11215702-072221-SS-SJSB074 (6-8)
Inject. Date: 15-Aug-2021 15:12:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 20

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	17276580	4802684

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	17276580	4802684

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.033	2869053	889685	2756019	850057	29.8	1.04	
Signal Totals:							
	2869053	889685	2756019	850057			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5625072	1739742				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 29.753 = (5625072 * 100.000) / (17276580 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d				
Injection Date:	15-Aug-2021 15:12:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-16-A	Lab Sample ID:	320-76769-16		
Client ID:	11215702-072221-SS-SJSB074 (6-8)				
Operator ID:	DB	ALS Bottle#:	59	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.42
Area: 528622
Amount: 2.366176
Amount Units: pg/ul

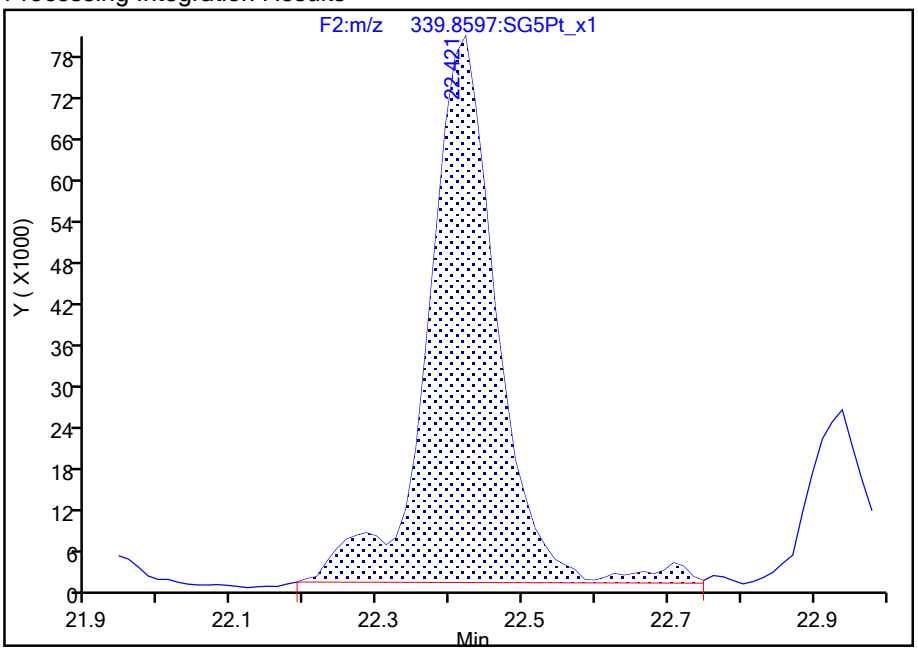

Manual Integration Results

RT: 22.42
Area: 478758
Amount: 2.229455
Amount Units: pg/ul

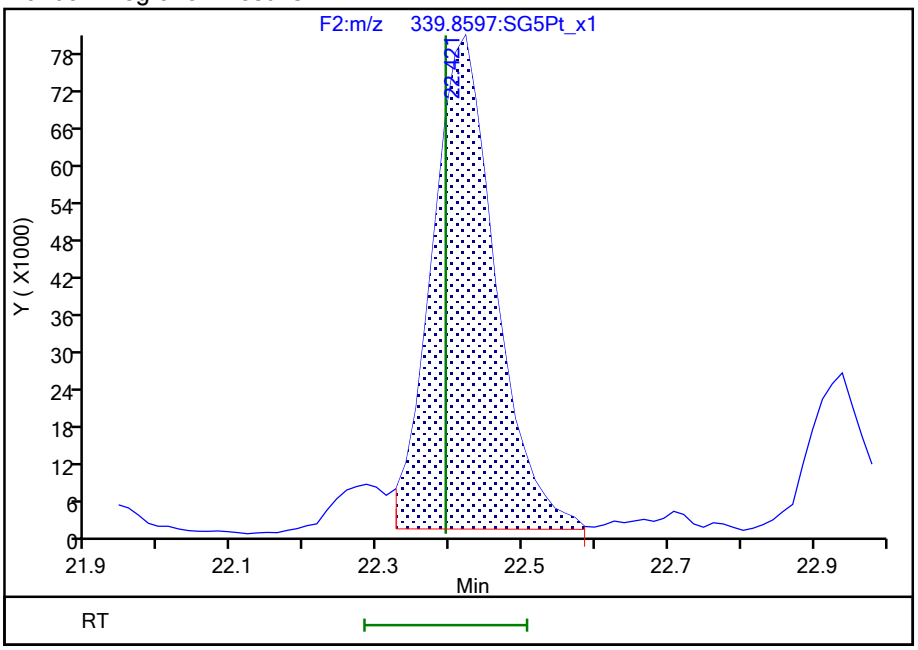

Reviewer: dadunj, 18-Aug-2021 11:28:09

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d				
Injection Date:	15-Aug-2021 15:12:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-16-A	Lab Sample ID:	320-76769-16		
Client ID:	11215702-072221-SS-SJSB074 (6-8)				
Operator ID:	DB	ALS Bottle#:	59	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 25.71)

Signal: 1

Not Detected
RT: 20.77- 25.71

Processing Integration Results

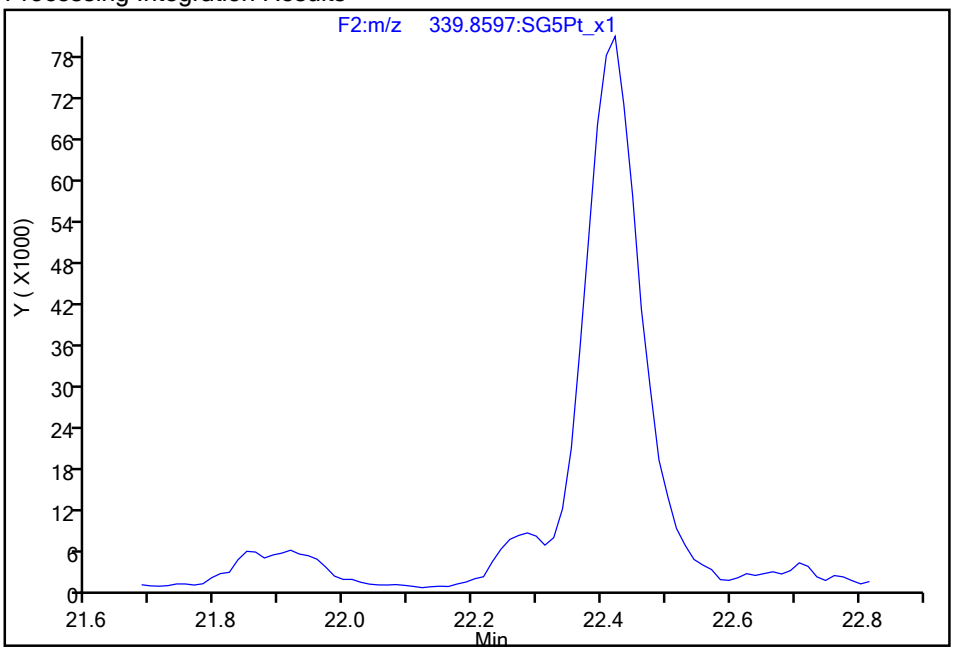

RT = 22.285 Area = 36398 M

Manual Integration Results

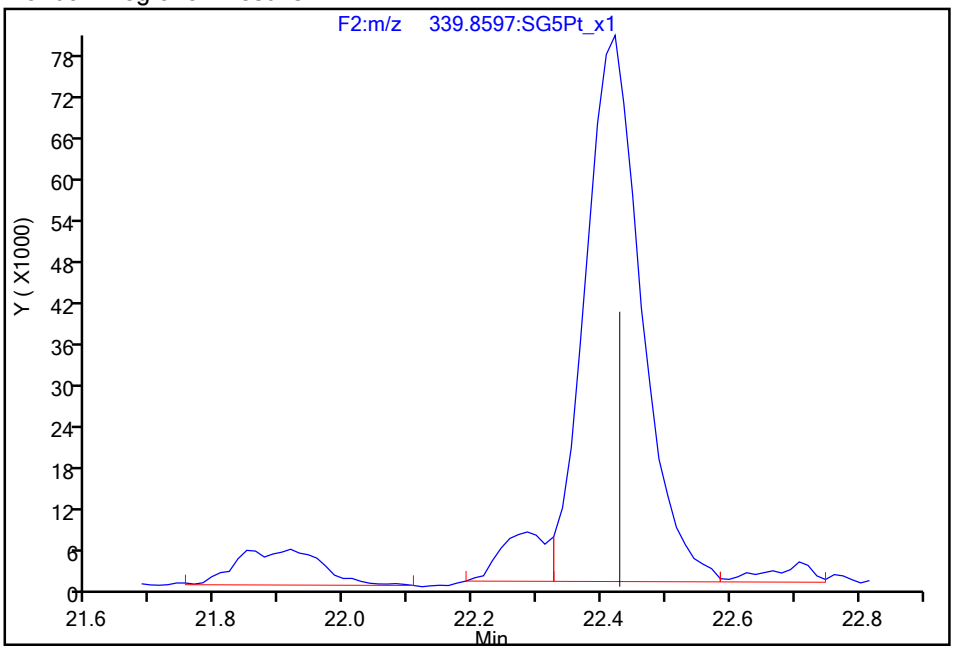

Reviewer: dadunj, 18-Aug-2021 11:28:16

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d				
Injection Date:	15-Aug-2021 15:12:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-16-A	Lab Sample ID:	320-76769-16		
Client ID:	11215702-072221-SS-SJSB074 (6-8)				
Operator ID:	DB	ALS Bottle#:	59	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.21- 25.49)

Signal: 2

Processing Integration Results

RT = 21.235 Area = 45474

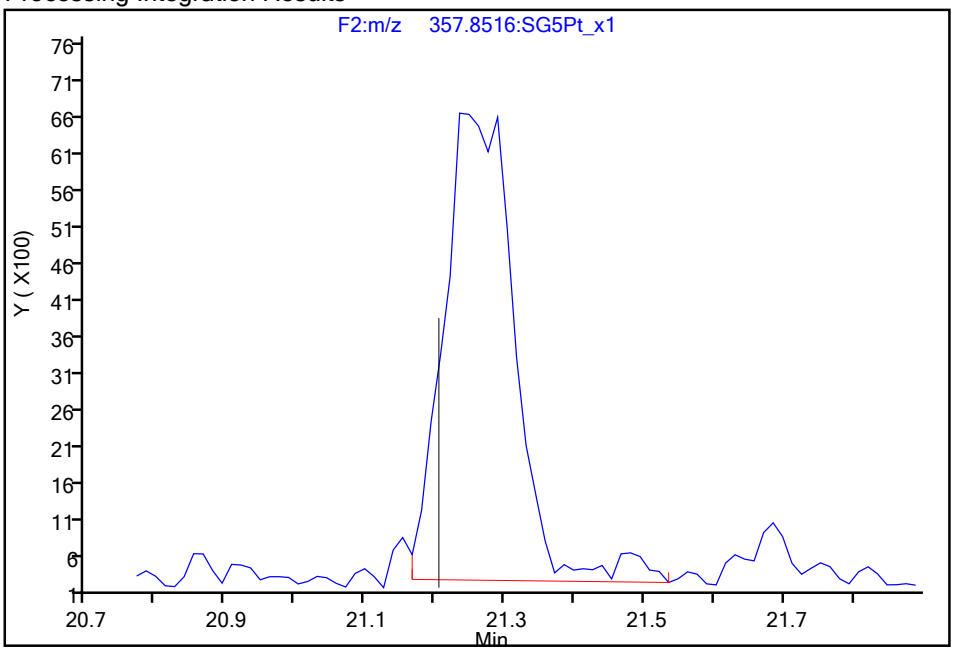

Manual Integration Results

RT = 21.235 Area = 43738 M

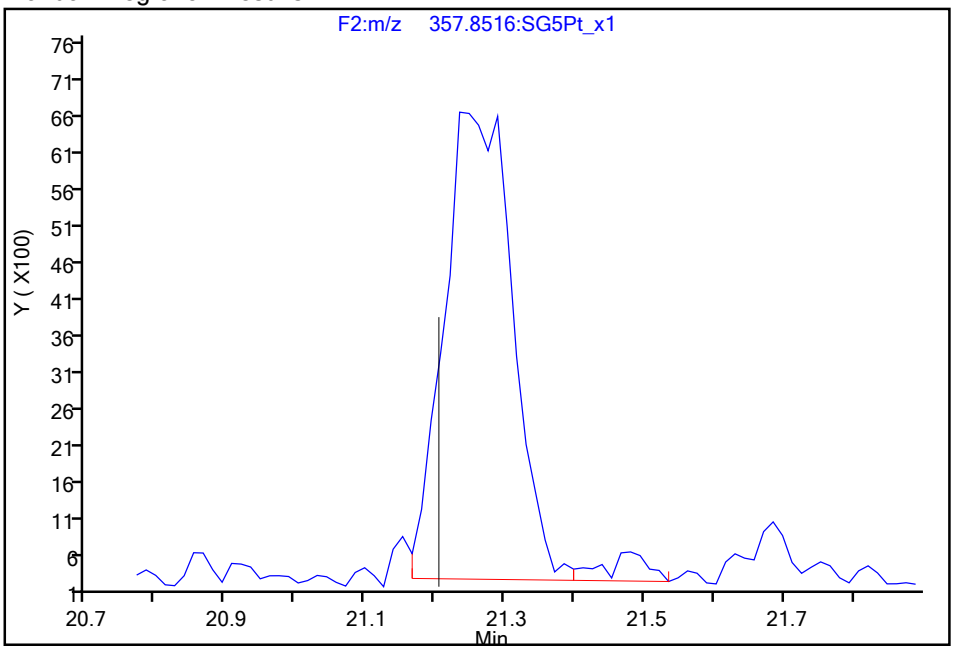

Reviewer: dadunj, 18-Aug-2021 11:28:31

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d				
Injection Date:	15-Aug-2021 15:12:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-16-A	Lab Sample ID:	320-76769-16		
Client ID:	11215702-072221-SS-SJSB074 (6-8)				
Operator ID:	DB	ALS Bottle#:	59	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.21- 25.49)

Signal: 1

Processing Integration Results

RT = 22.462 Area = 20921

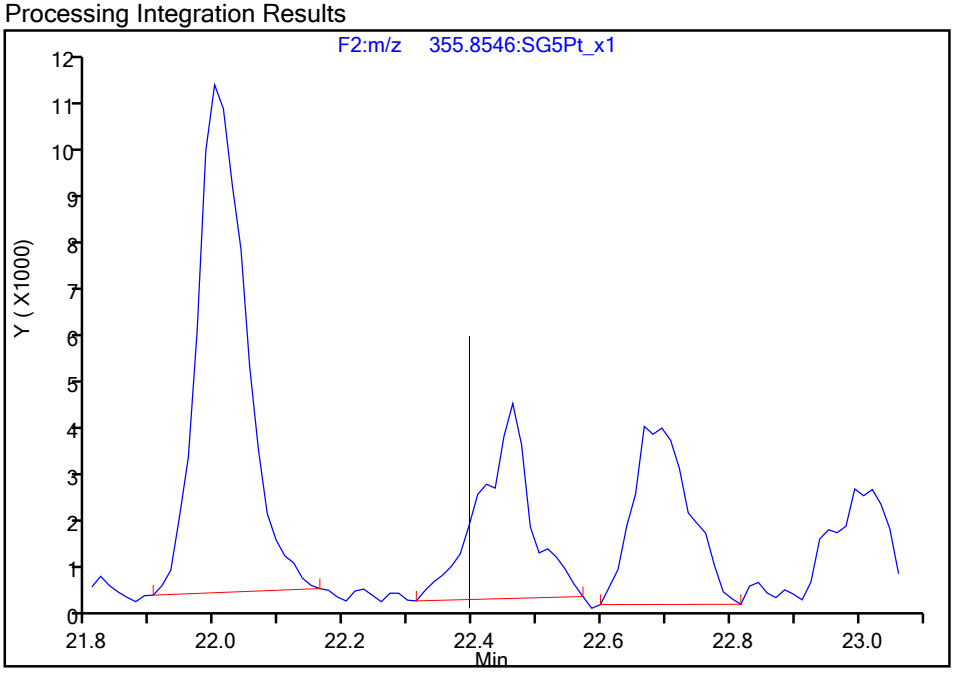

Manual Integration Results

RT = 22.462 Area = 20921

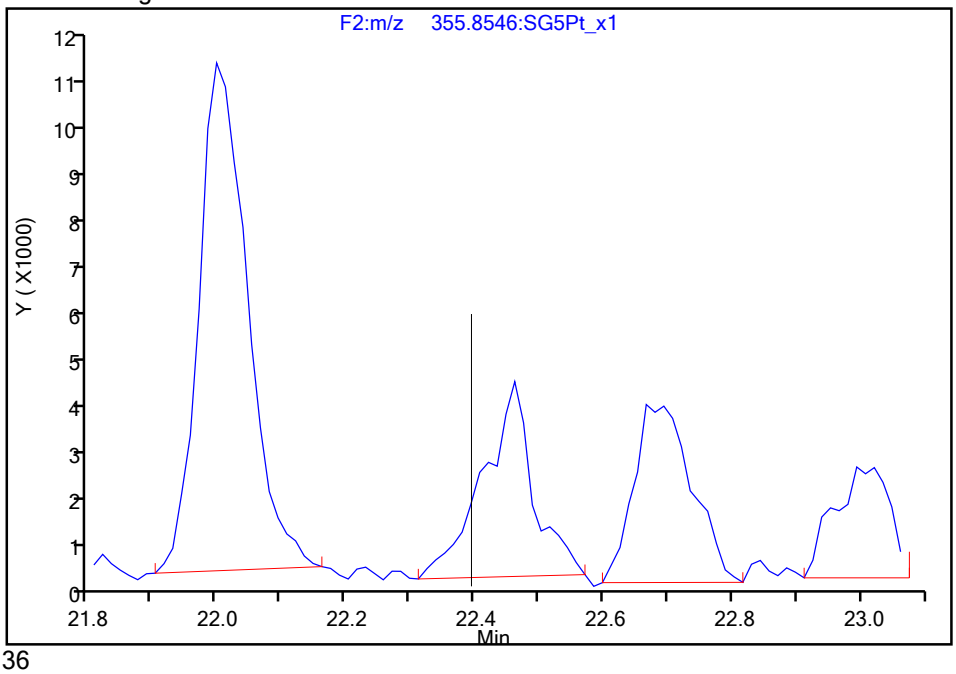

Reviewer: dadunj, 18-Aug-2021 11:28:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d				
Injection Date:	15-Aug-2021 15:12:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-16-A	Lab Sample ID:	320-76769-16		
Client ID:	11215702-072221-SS-SJSB074 (6-8)				
Operator ID:	DB	ALS Bottle#:	59	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.21- 25.49)

Signal: 2

Processing Integration Results

RT = 22.680 Area = 29041

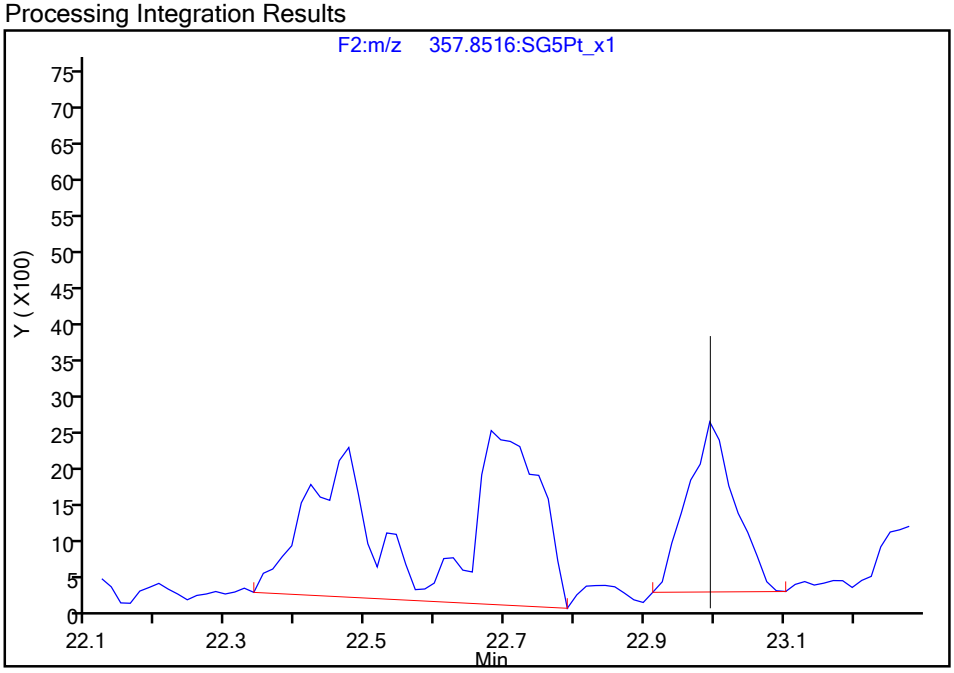

Manual Integration Results

RT = 22.680 Area = 14638 M

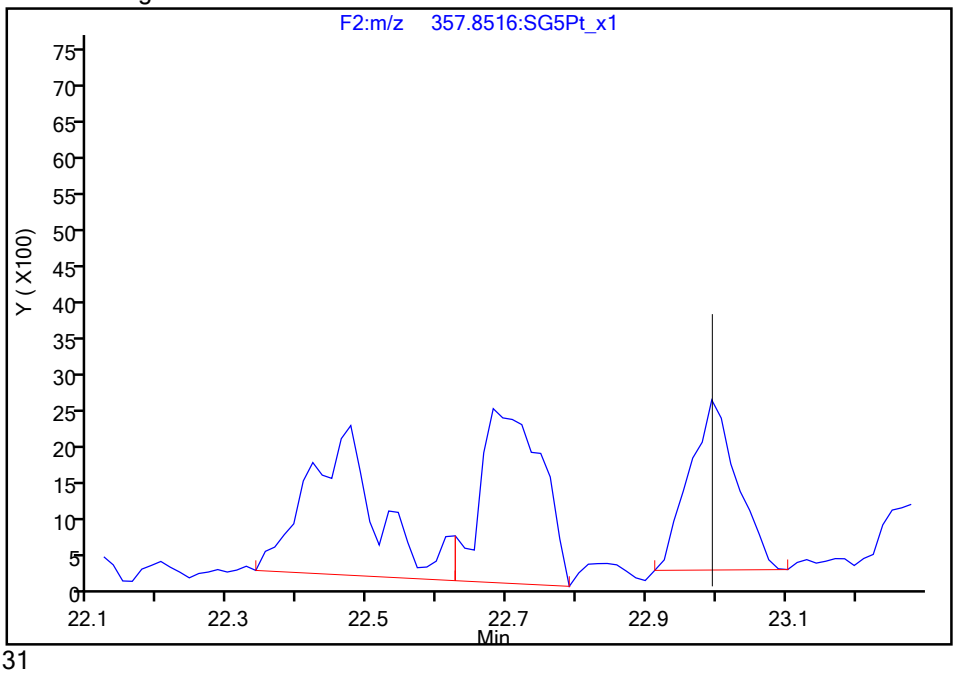

Reviewer: dadunj, 18-Aug-2021 11:28:31

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d				
Injection Date:	15-Aug-2021 15:12:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-16-A	Lab Sample ID:	320-76769-16		
Client ID:	11215702-072221-SS-SJSB074 (6-8)				
Operator ID:	DB	ALS Bottle#:	59	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.21- 25.49)

Signal: 1

Processing Integration Results

RT = 22.994 Area = 16498

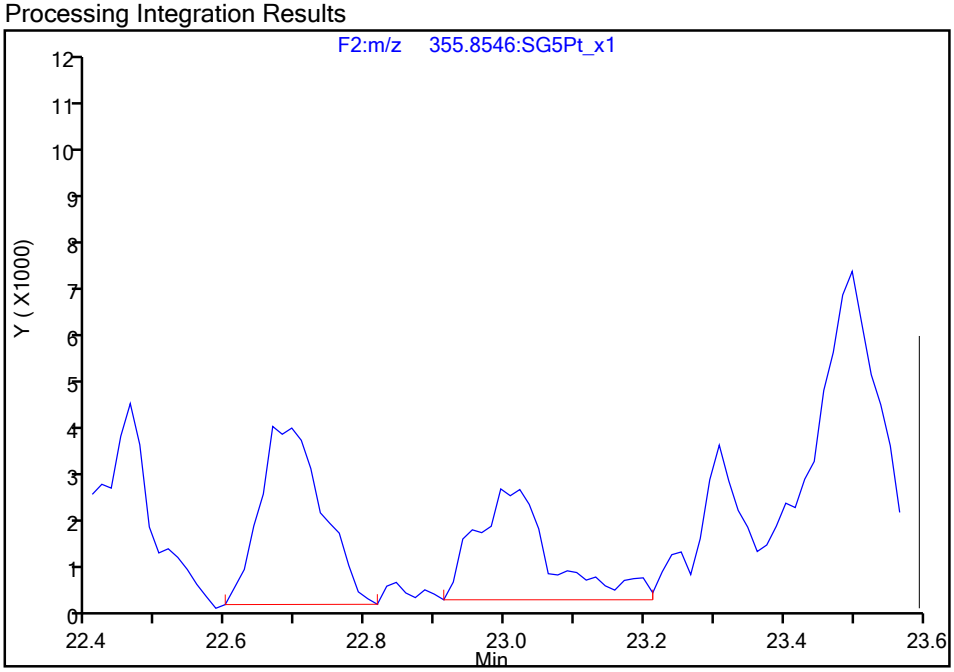

Manual Integration Results

RT = 22.994 Area = 13254 M

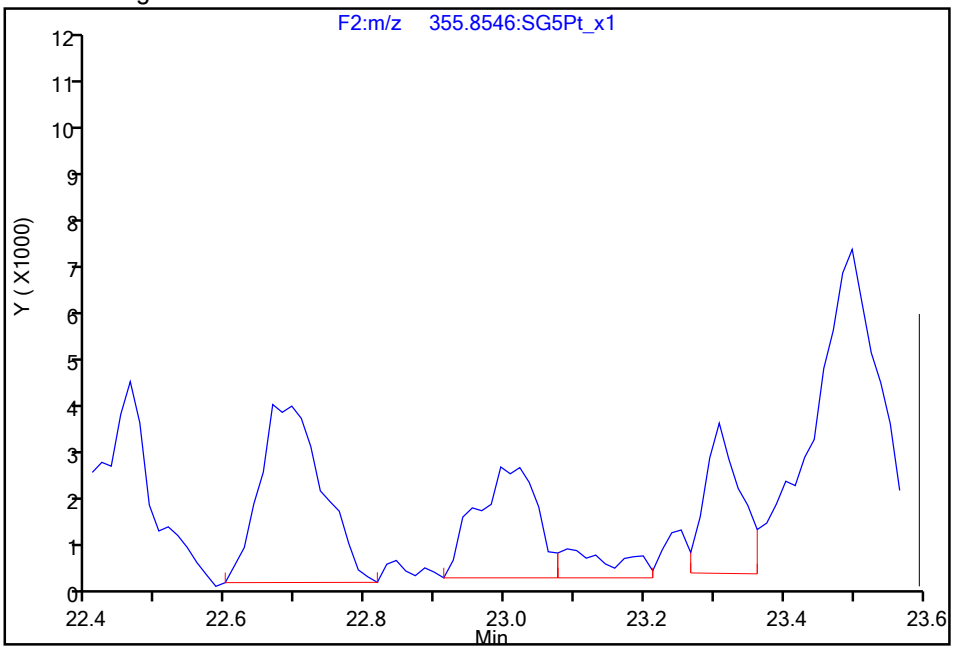

Reviewer: dadunj, 18-Aug-2021 11:28:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d				
Injection Date:	15-Aug-2021 15:12:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-16-A	Lab Sample ID:	320-76769-16		
Client ID:	11215702-072221-SS-SJSB074 (6-8)				
Operator ID:	DB	ALS Bottle#:	59	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.21- 25.49)

Signal: 1

Processing Integration Results

RT = 23.499 Area = 56361

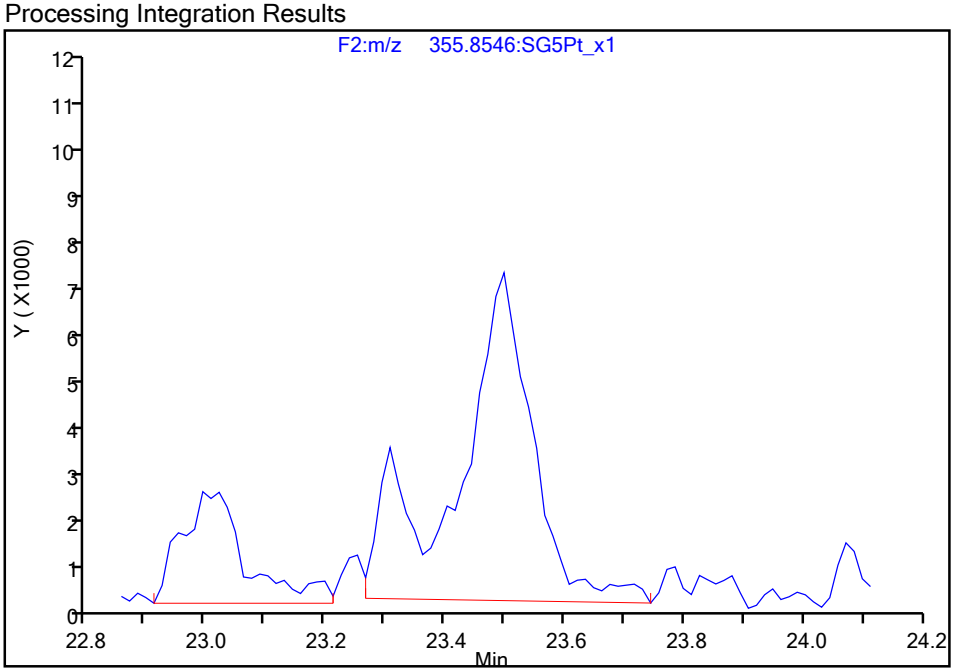

Manual Integration Results

RT = 23.499 Area = 43967 M

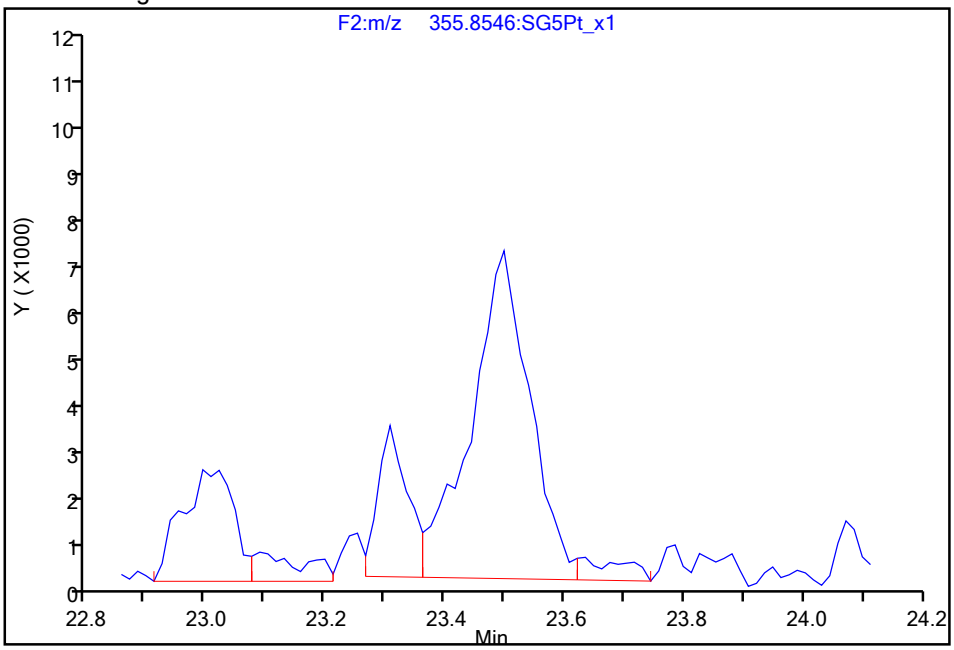

Reviewer: dadunj, 18-Aug-2021 11:28:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d				
Injection Date:	15-Aug-2021 15:12:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-16-A	Lab Sample ID:	320-76769-16		
Client ID:	11215702-072221-SS-SJSB074 (6-8)				
Operator ID:	DB	ALS Bottle#:	59	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (29.36- 32.41)

Signal: 2

Processing Integration Results

RT = 30.982 Area = 288315

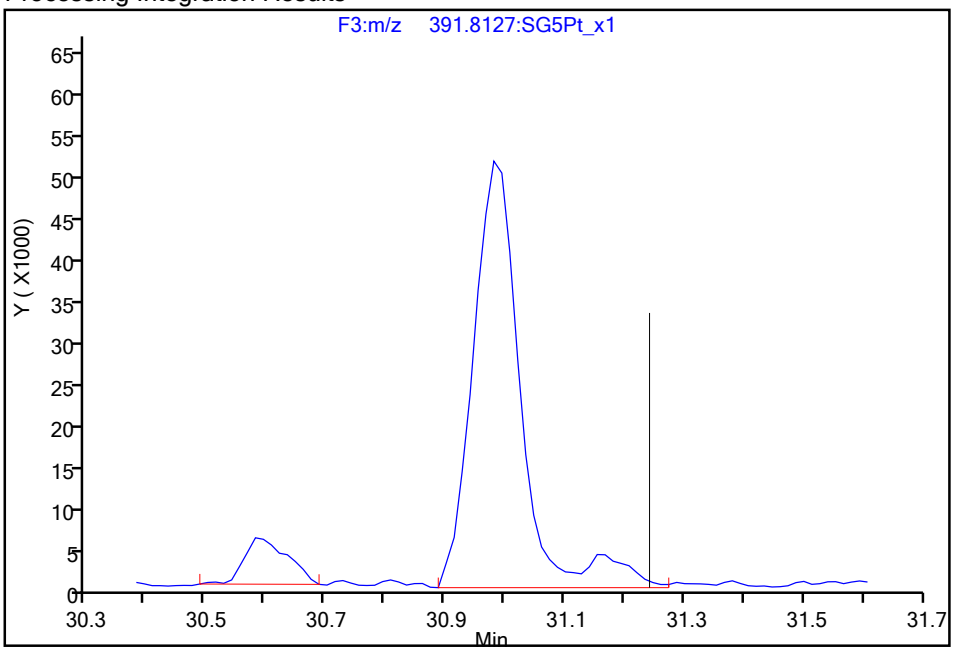

Manual Integration Results

RT = 30.982 Area = 267693 M

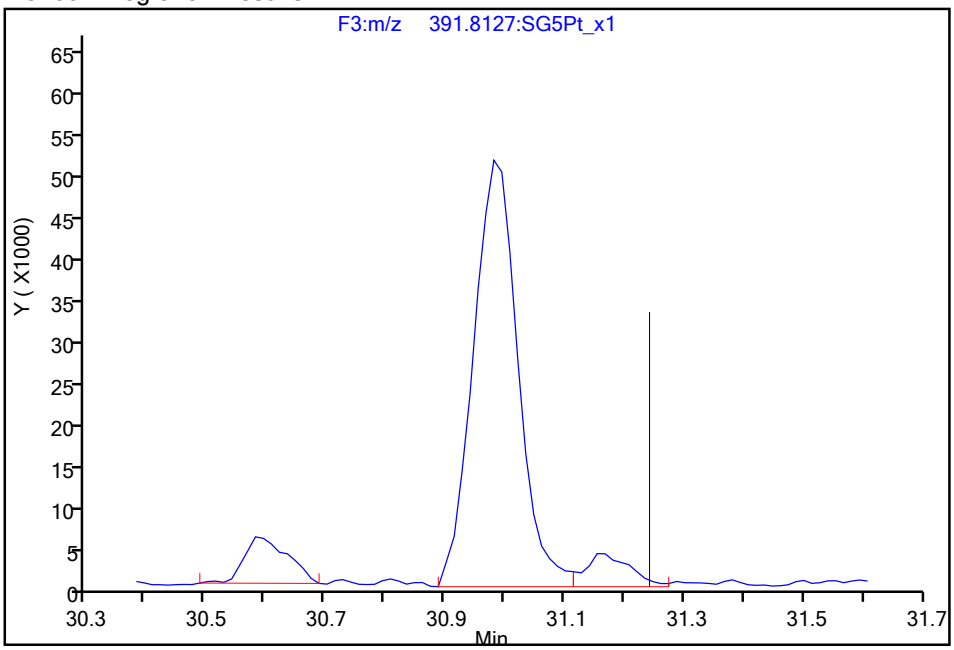

Reviewer: dadunj, 18-Aug-2021 11:29:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d				
Injection Date:	15-Aug-2021 15:12:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-16-A	Lab Sample ID:	320-76769-16		
Client ID:	11215702-072221-SS-SJSB074 (6-8)				
Operator ID:	DB	ALS Bottle#:	59	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (29.36- 32.41)

Signal: 1

Processing Integration Results

RT = 31.168 Area = 23883

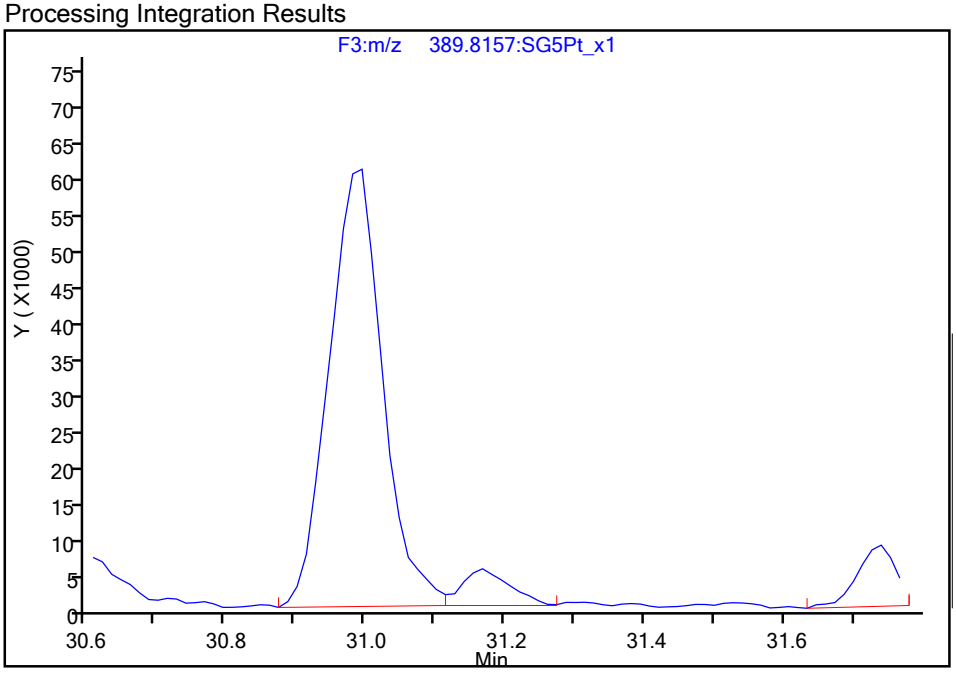

Manual Integration Results

RT = 31.168 Area = 23883

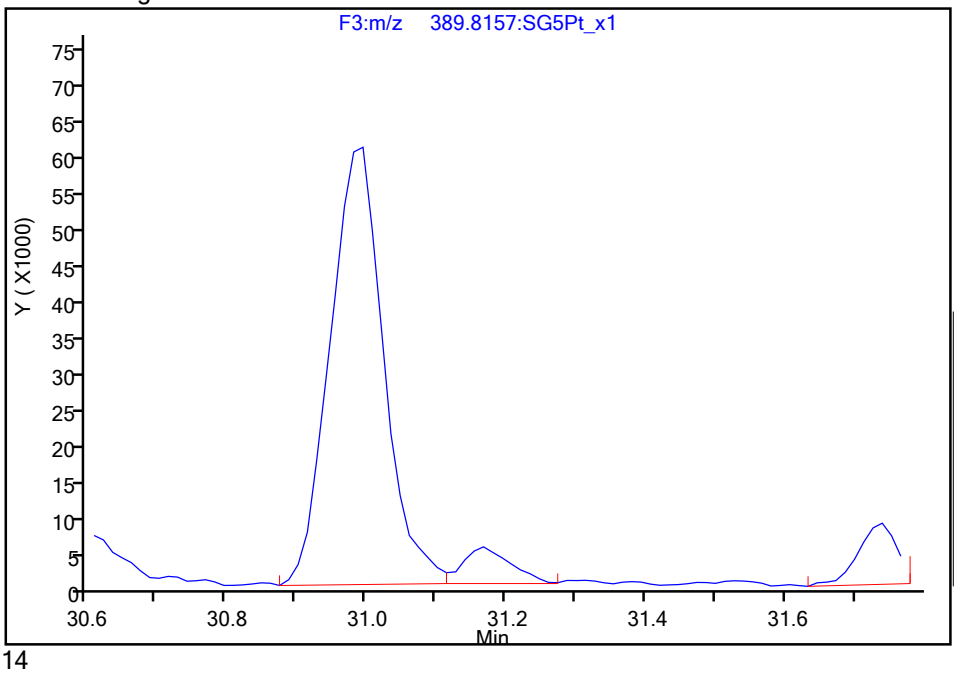

Reviewer: dadunj, 18-Aug-2021 11:29:14

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d				
Injection Date:	15-Aug-2021 15:12:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-16-A	Lab Sample ID:	320-76769-16		
Client ID:	11215702-072221-SS-SJSB074 (6-8)				
Operator ID:	DB	ALS Bottle#:	59	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.79
Area: 242847
Amount: 1.785801
Amount Units: pg/ul

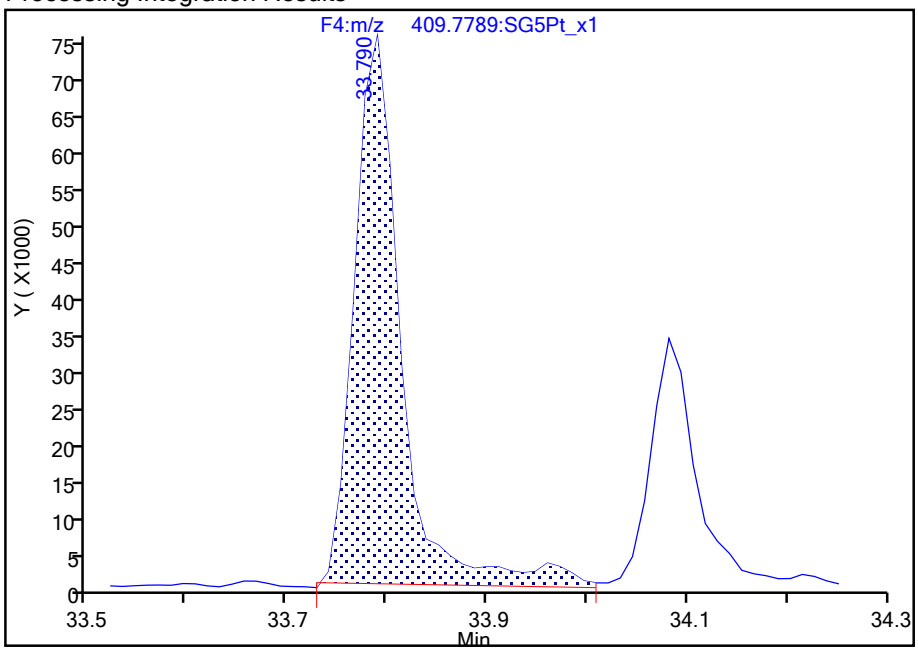

Manual Integration Results

RT: 33.79
Area: 232525
Amount: 1.745787
Amount Units: pg/ul

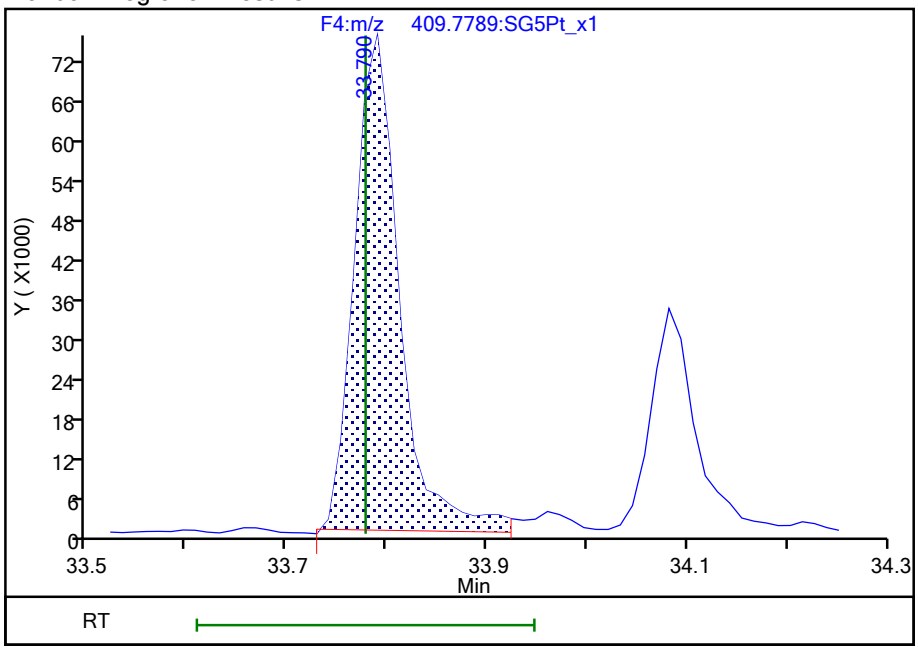

Reviewer: dadunj, 18-Aug-2021 11:29:19

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d				
Injection Date:	15-Aug-2021 15:12:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-16-A	Lab Sample ID:	320-76769-16		
Client ID:	11215702-072221-SS-SJSB074 (6-8)				
Operator ID:	DB	ALS Bottle#:	59	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.03
Area: 299895
Amount: 2.920330
Amount Units: pg/ul

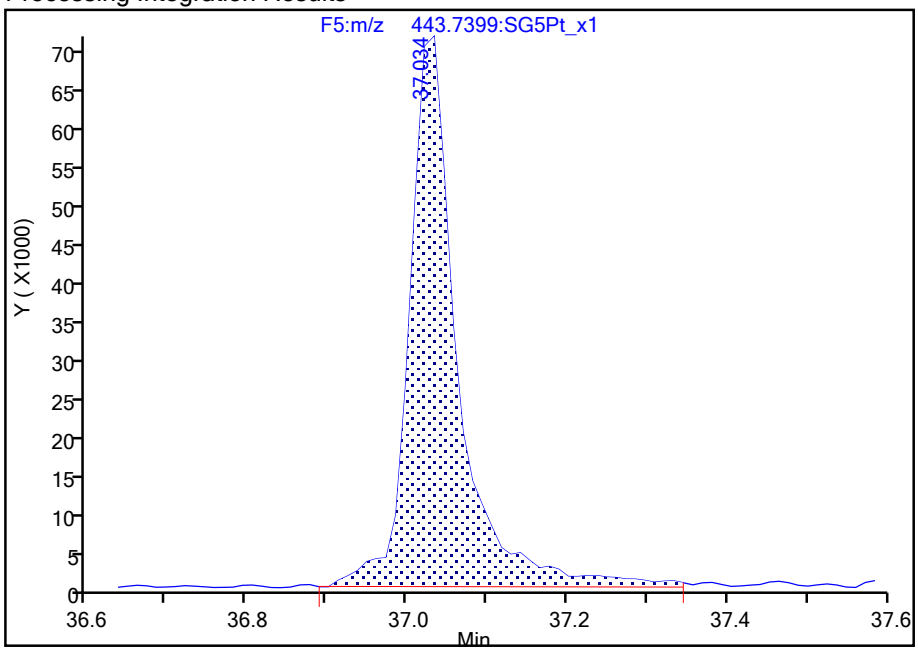

Manual Integration Results

RT: 37.03
Area: 287203
Amount: 2.851436
Amount Units: pg/ul

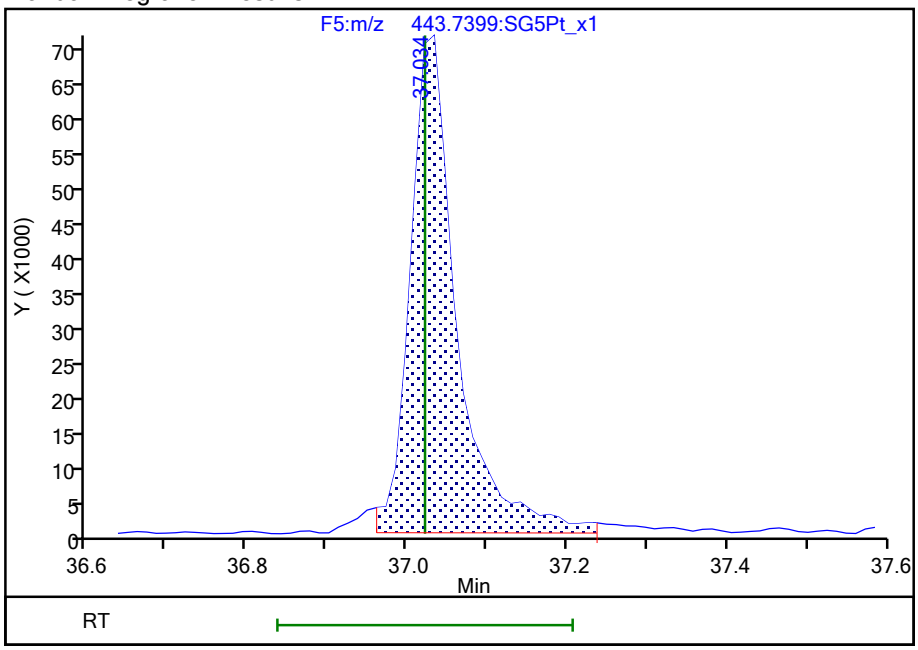

Reviewer: dadunj, 18-Aug-2021 11:29:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

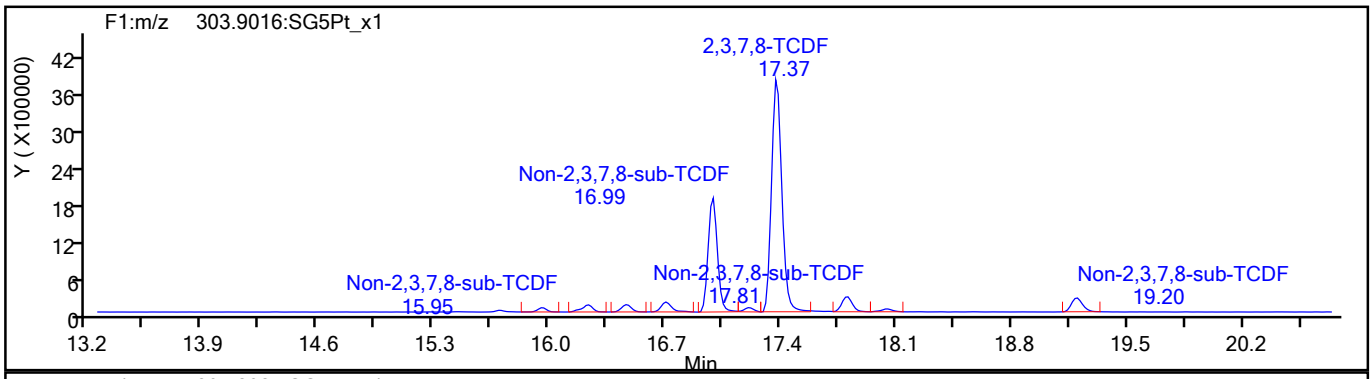

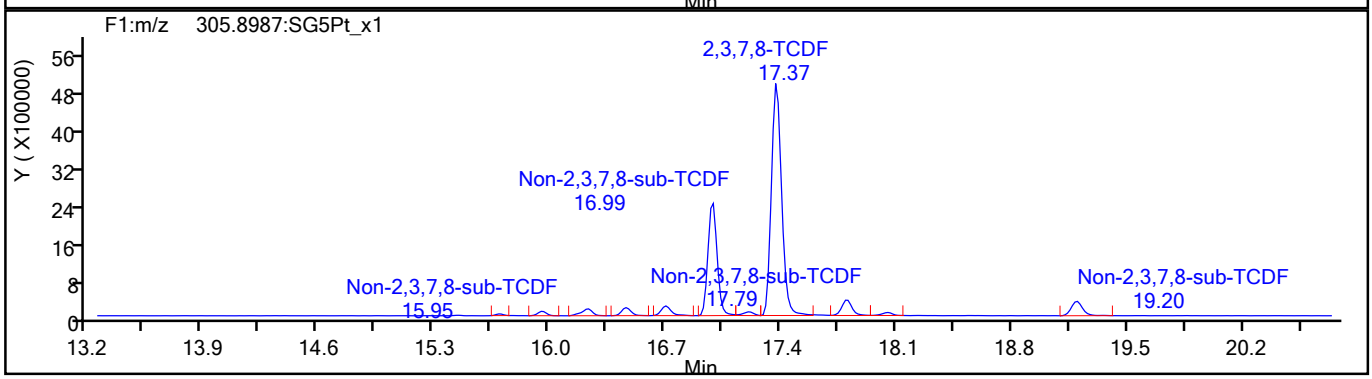

TCDF Standards

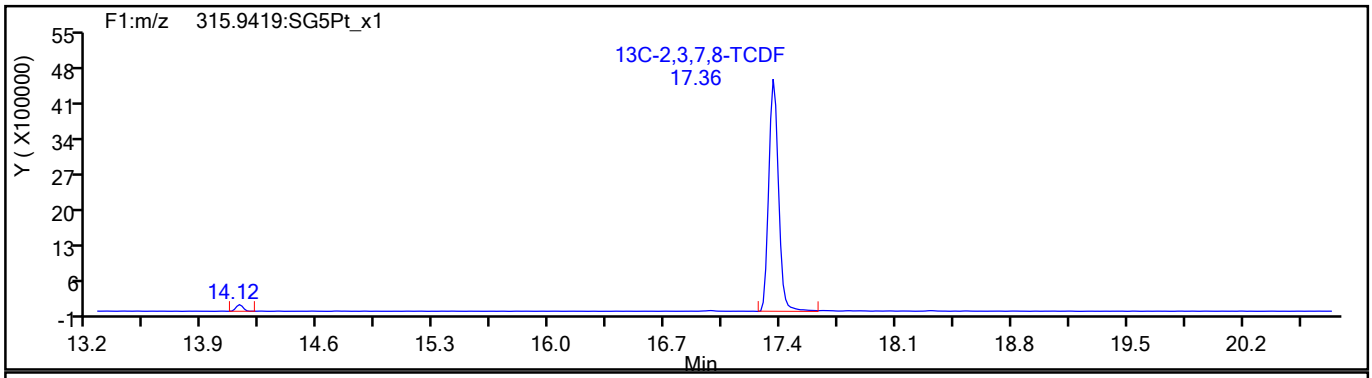

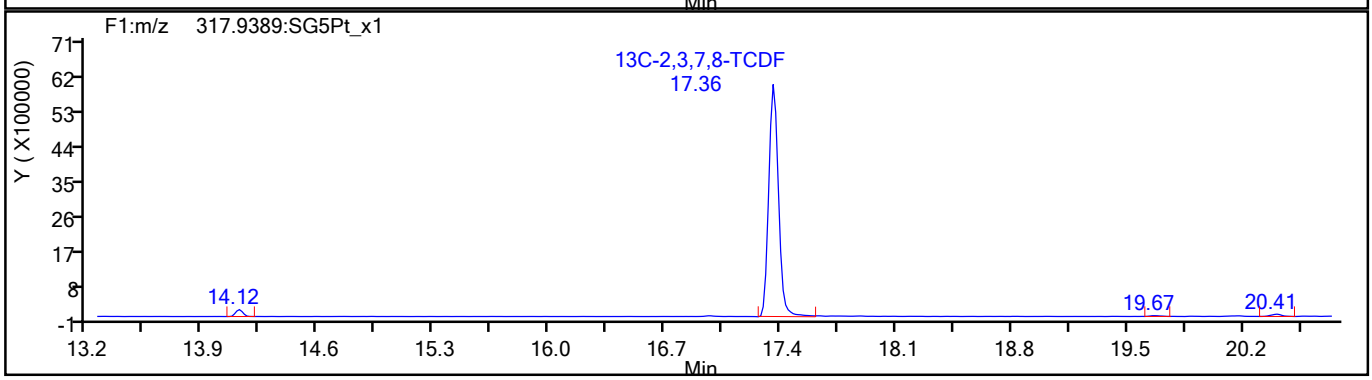

775175

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

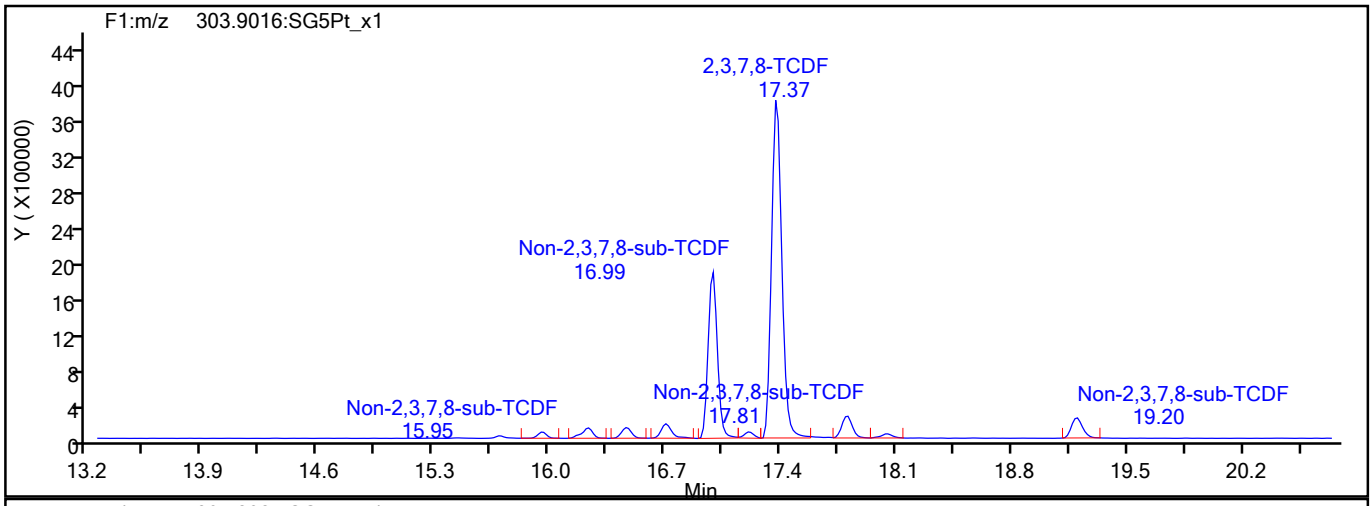

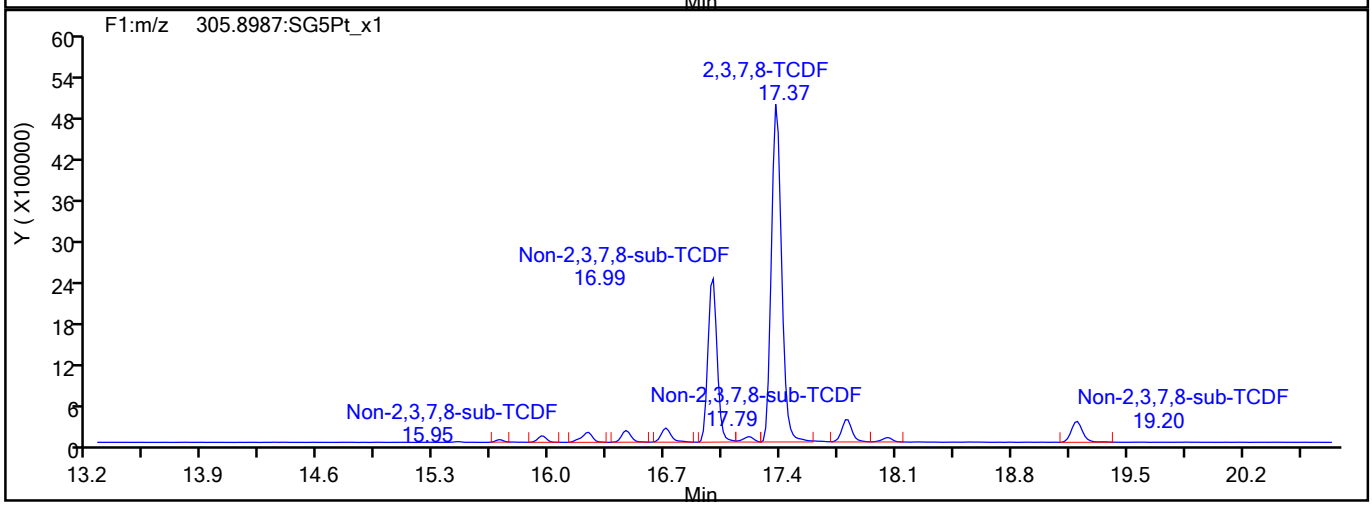

TCDF Interference Mass

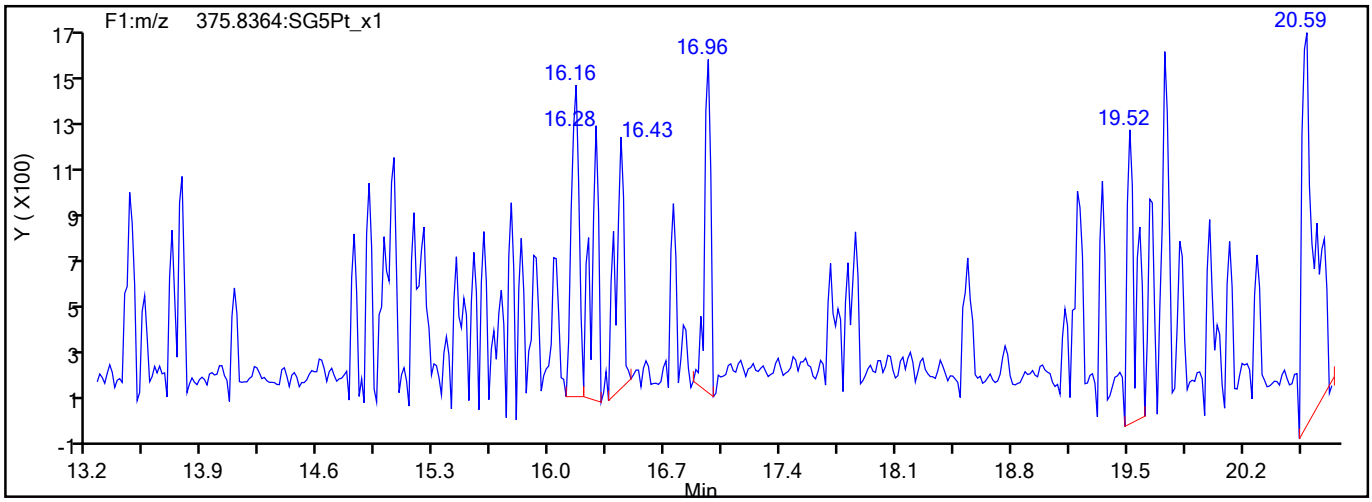

775176

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

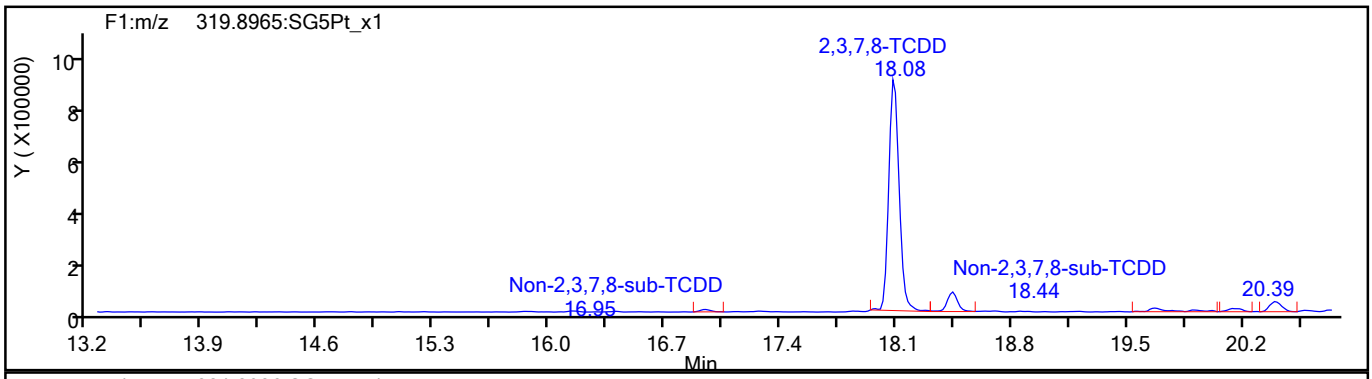

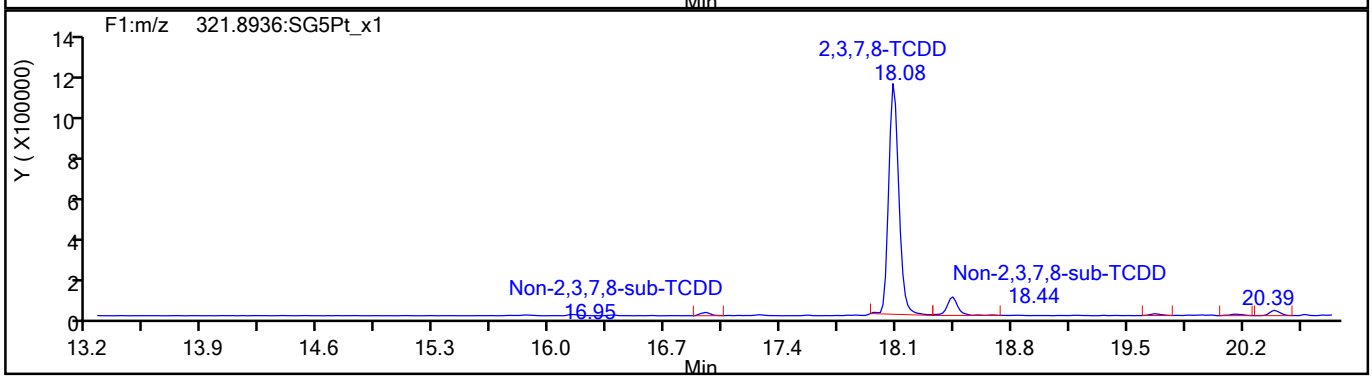

TCDD Standards

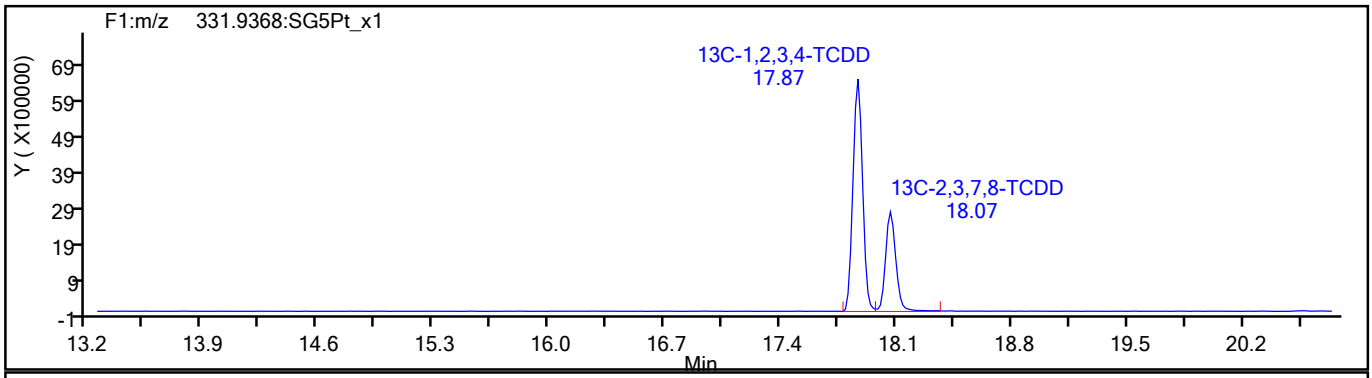

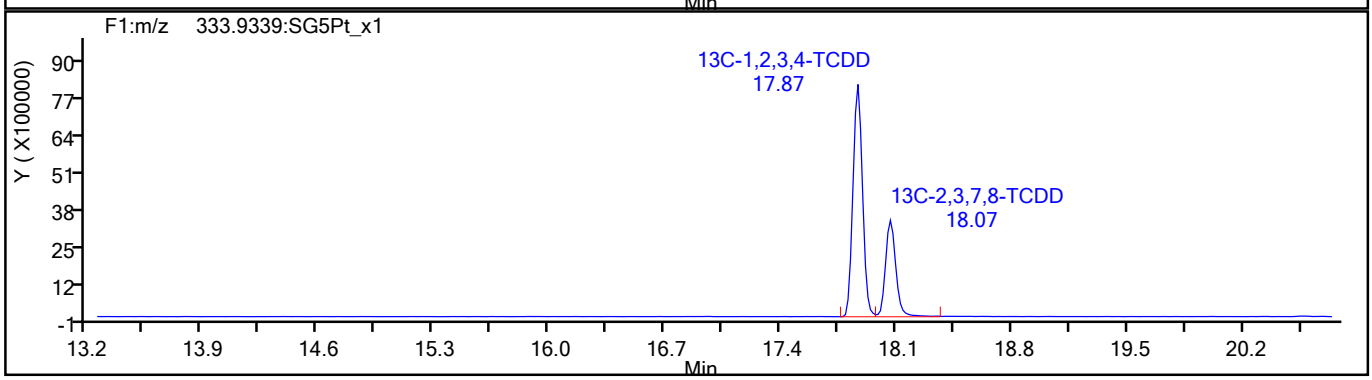

775177

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

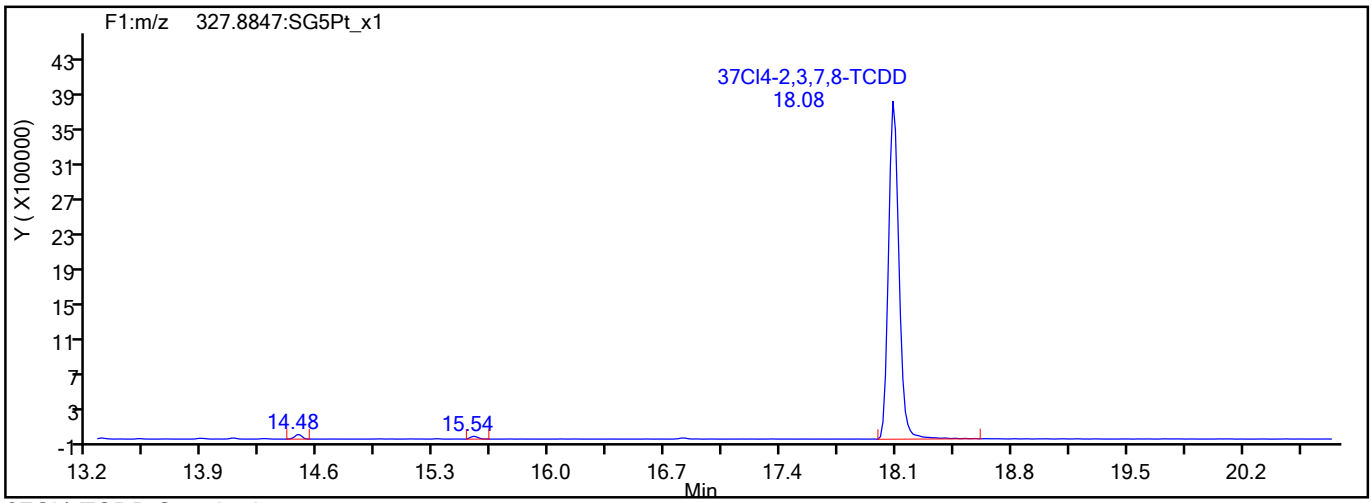

37Cl4-TCDD Standards

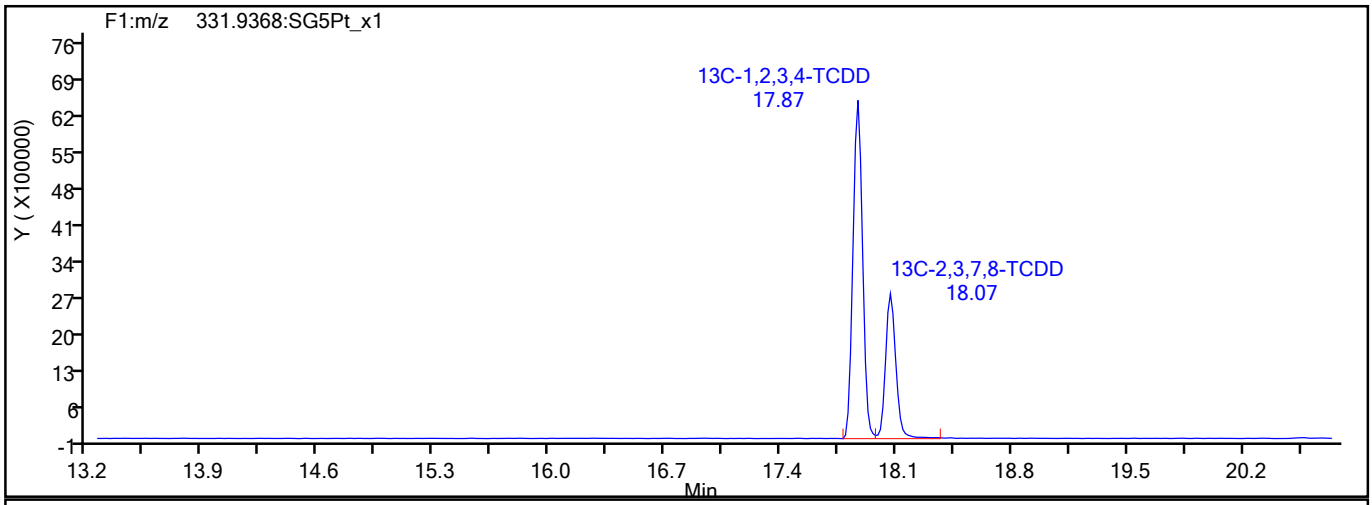

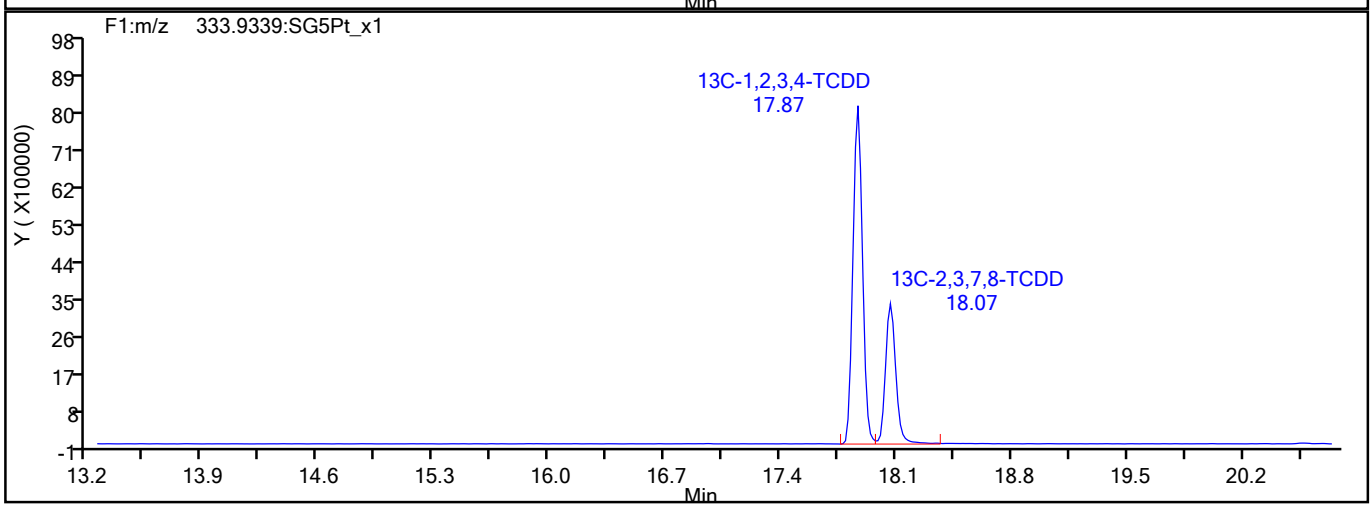

775178

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

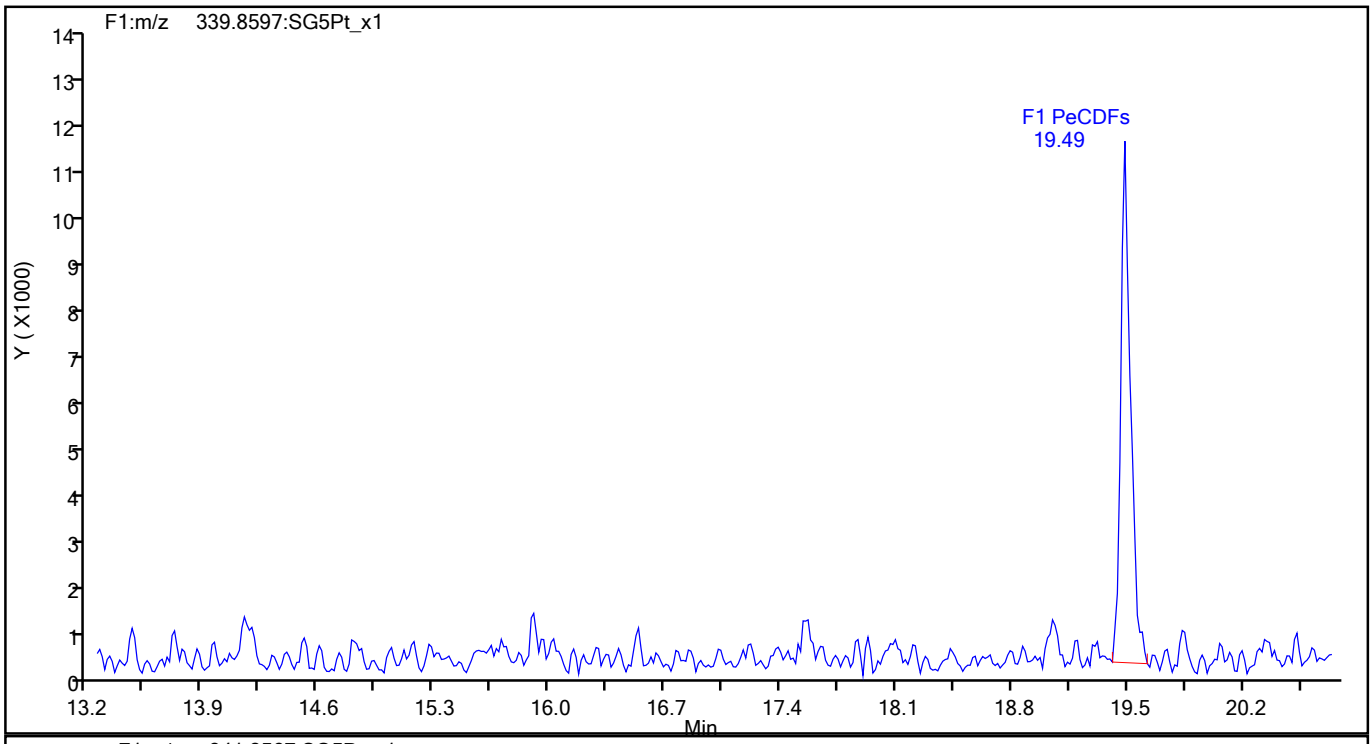

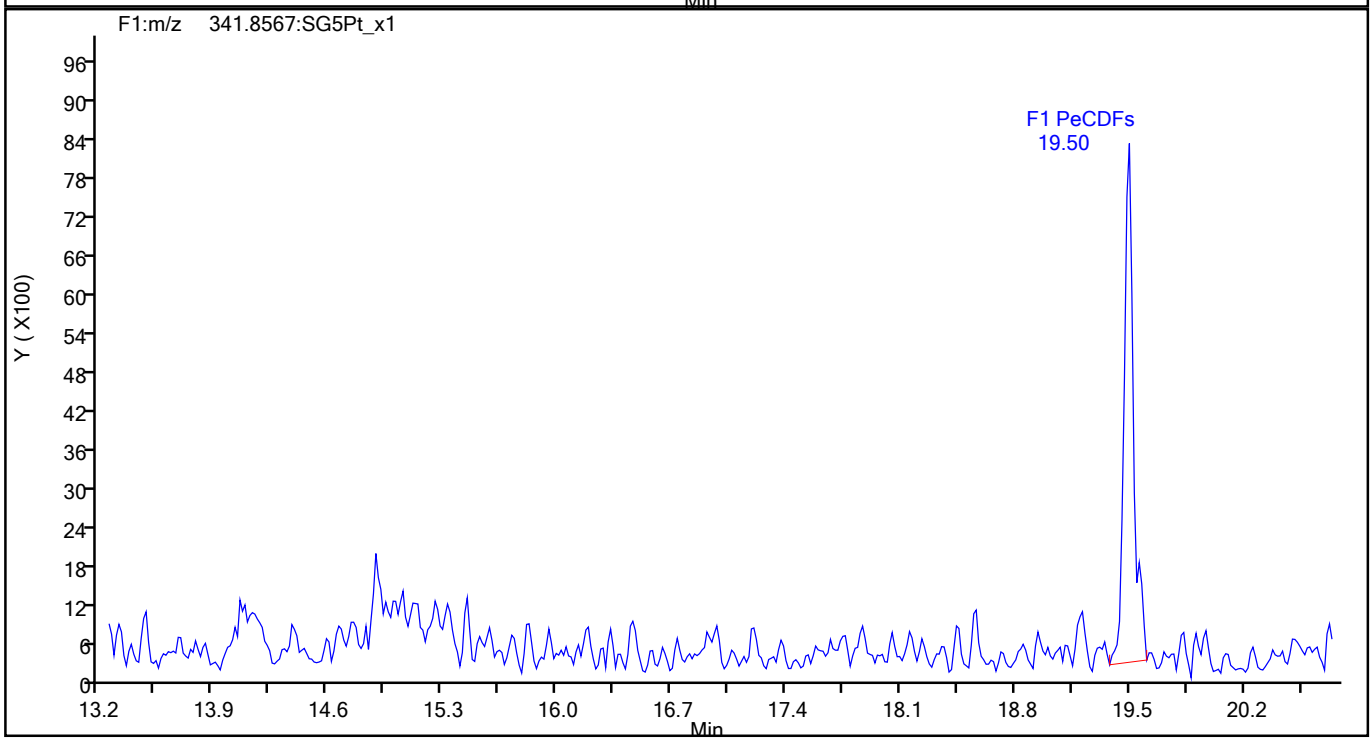

775179

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

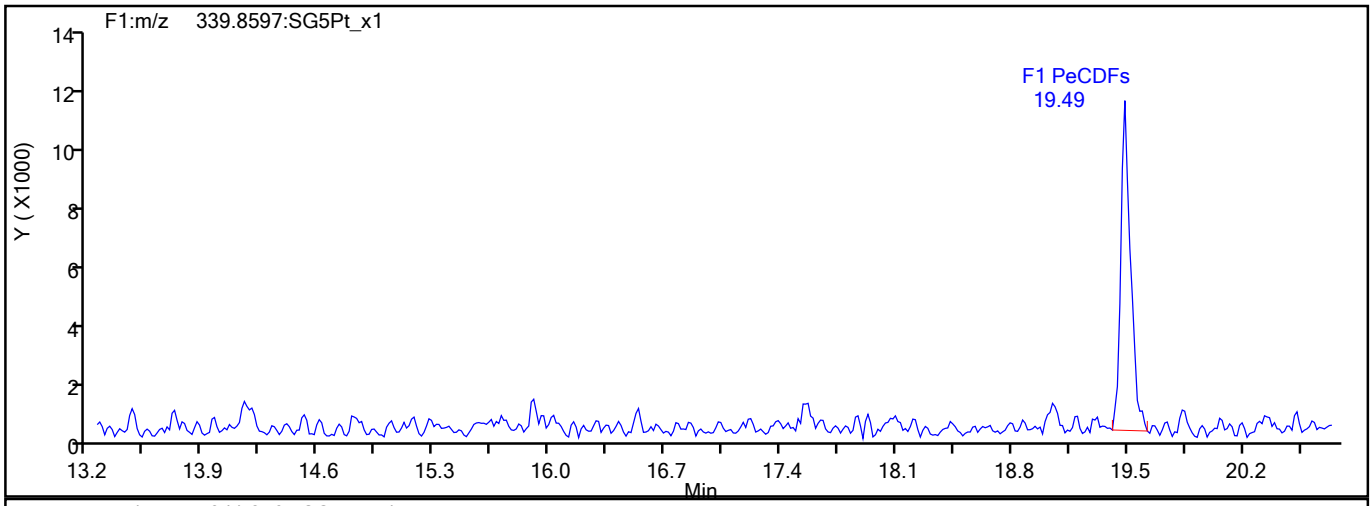

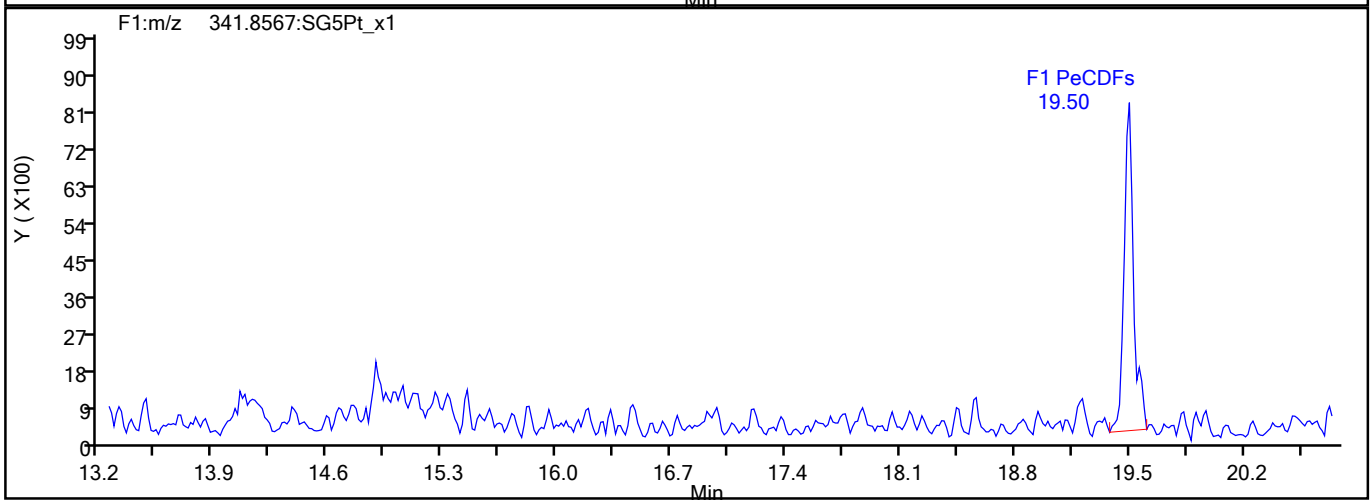

F1 PeCDFs Interference Mass

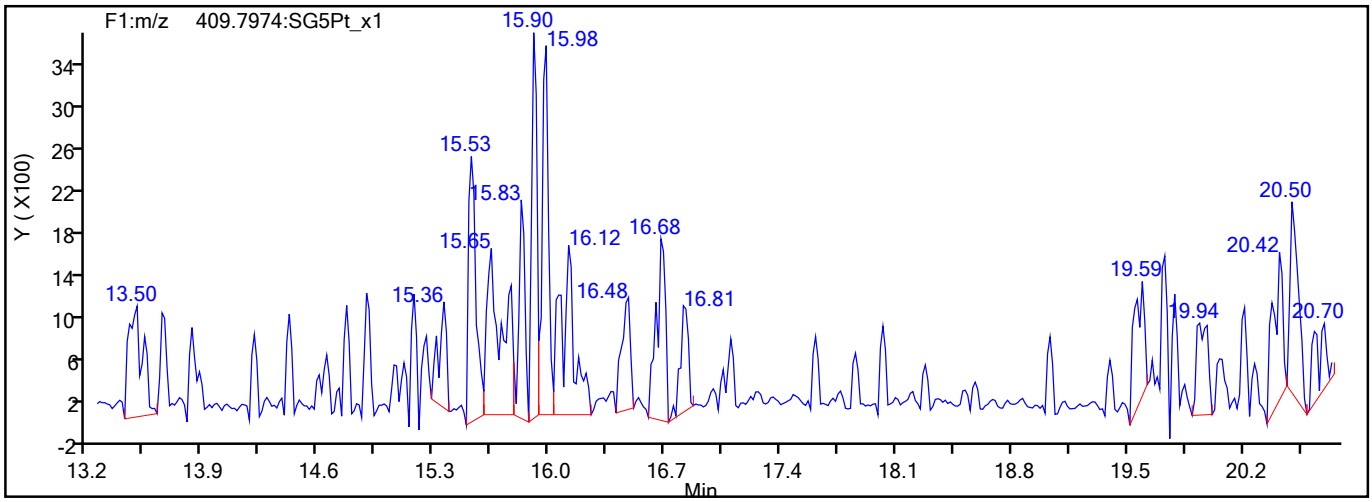

775180

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

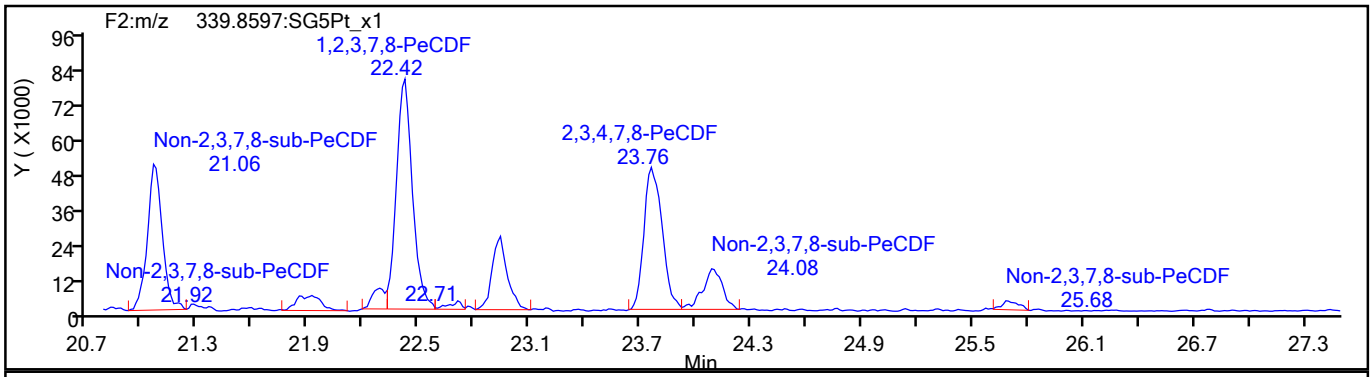

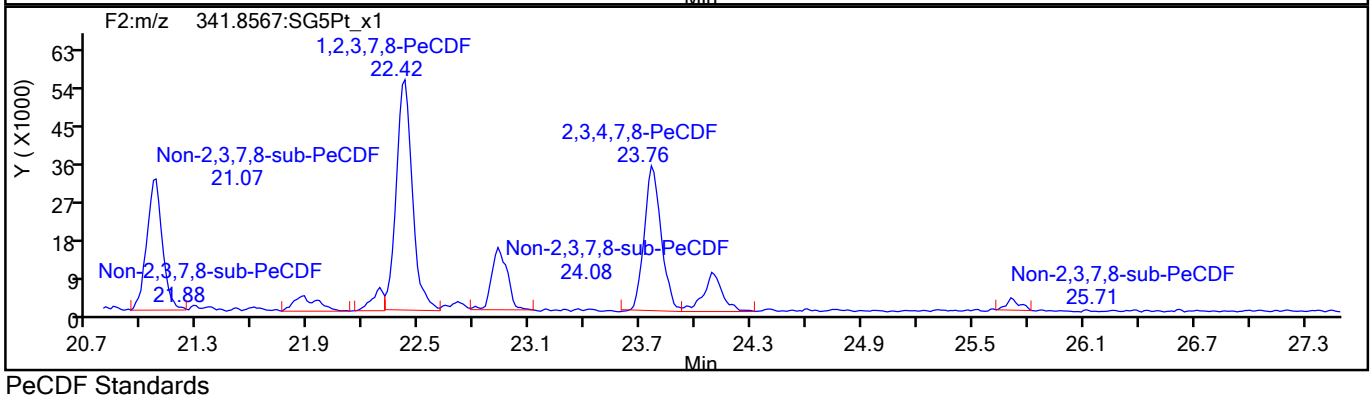

PeCDF Standards

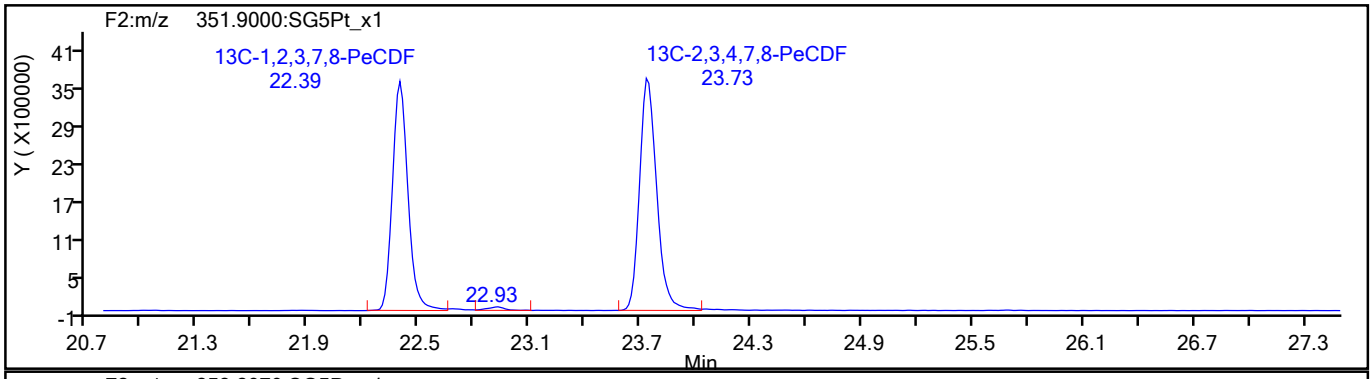

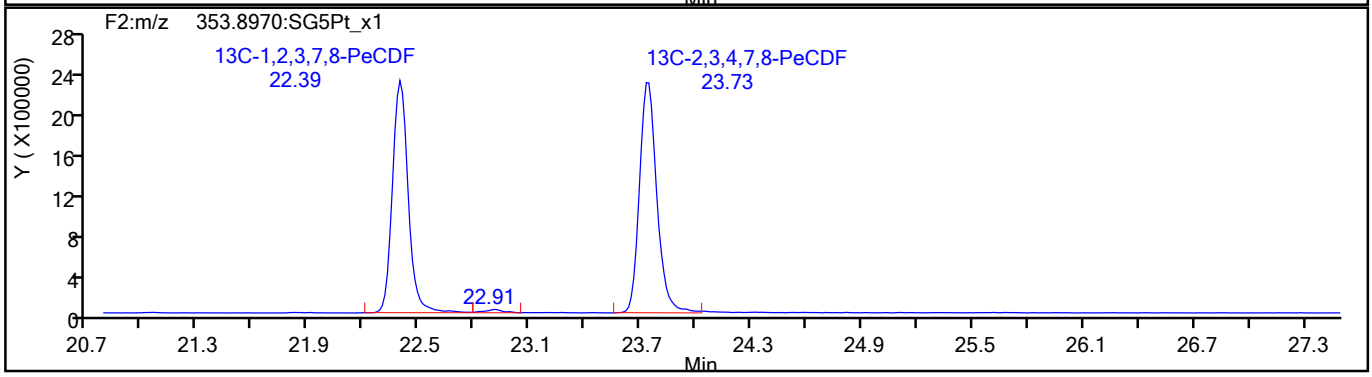

775181

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

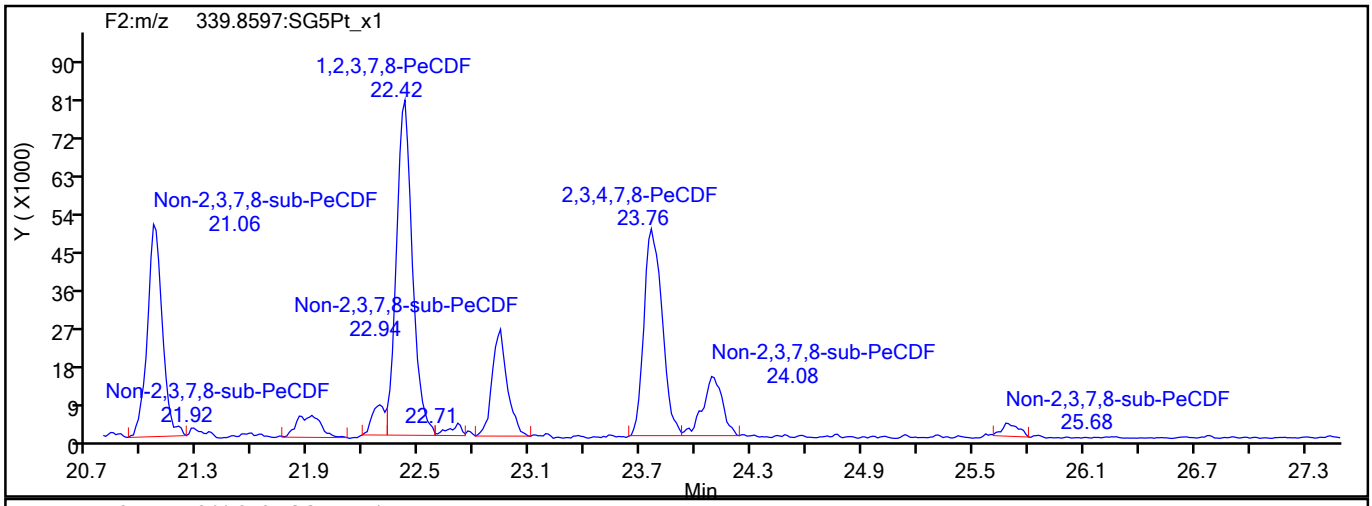

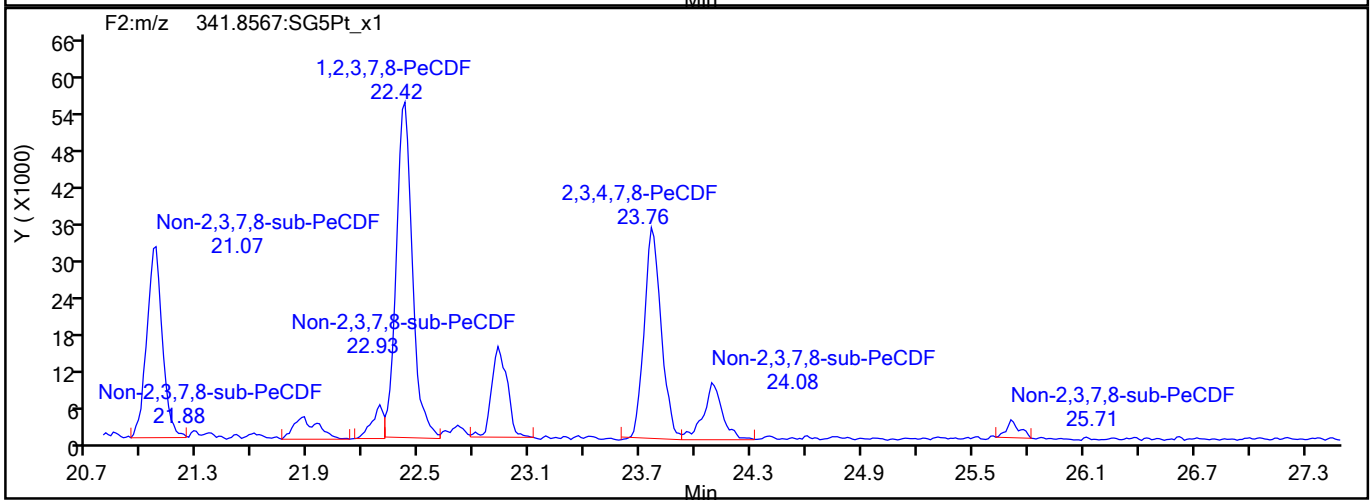

PeCDF Interference Mass

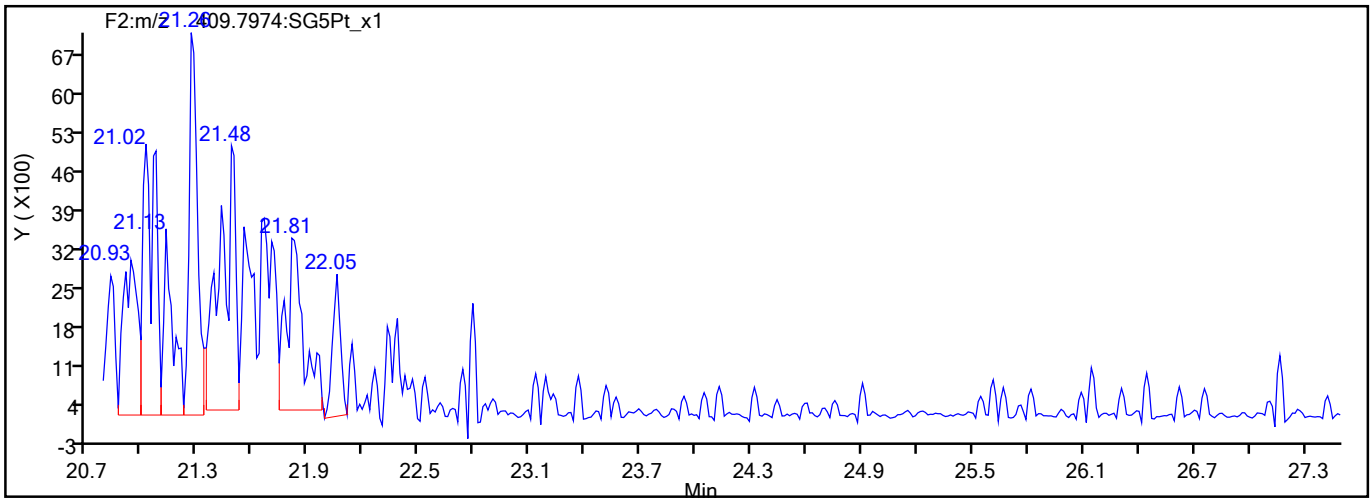

775182

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

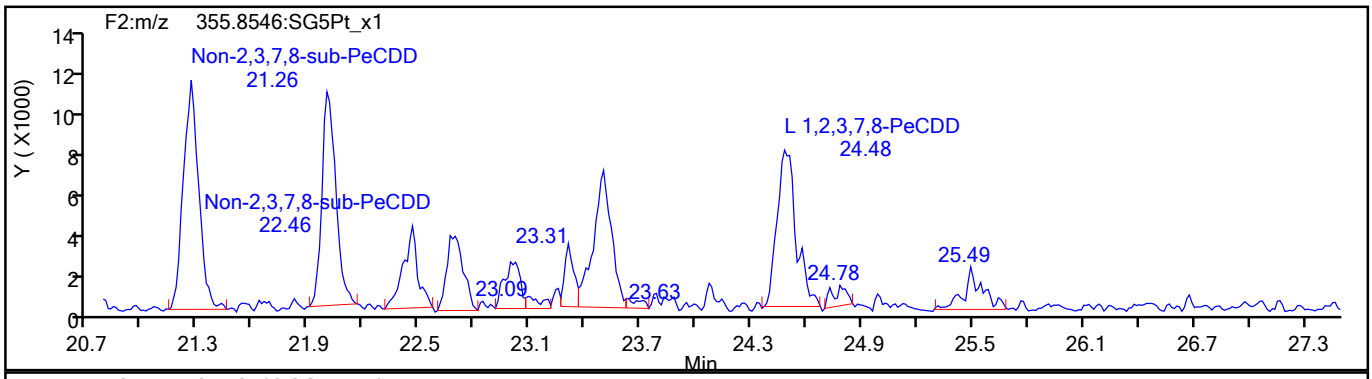

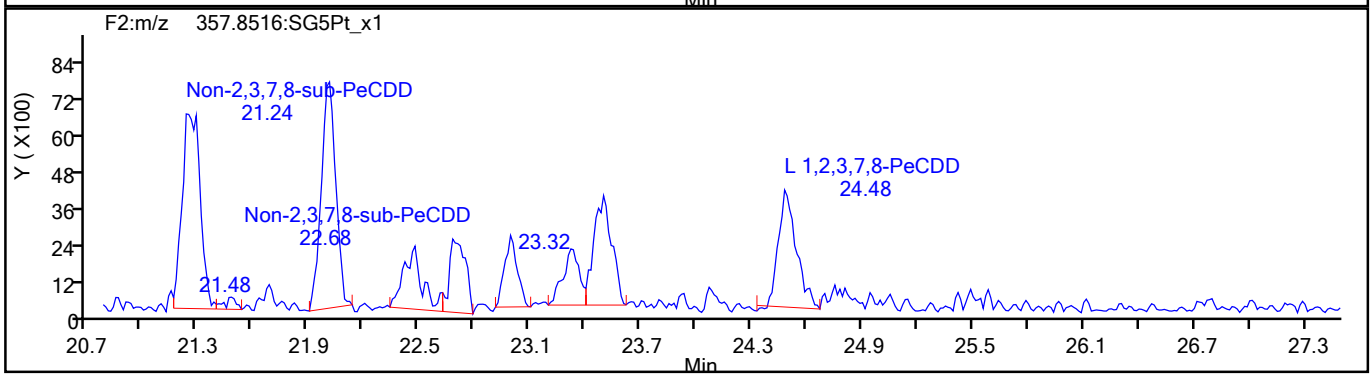

PeCDD Standards

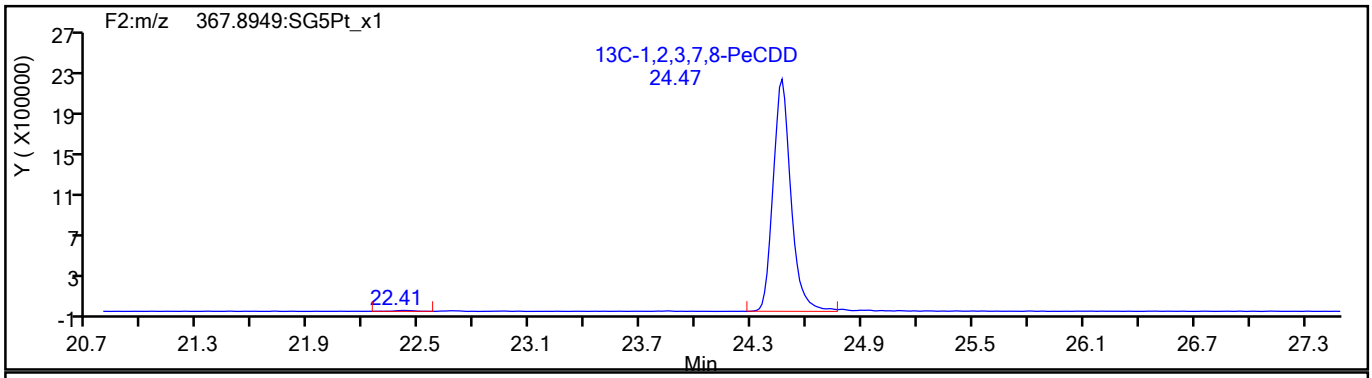

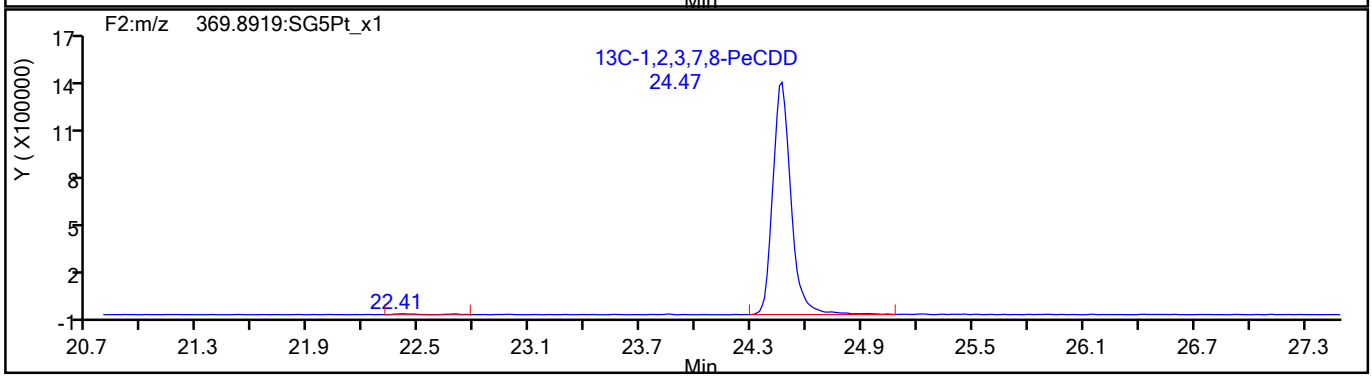

775183

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

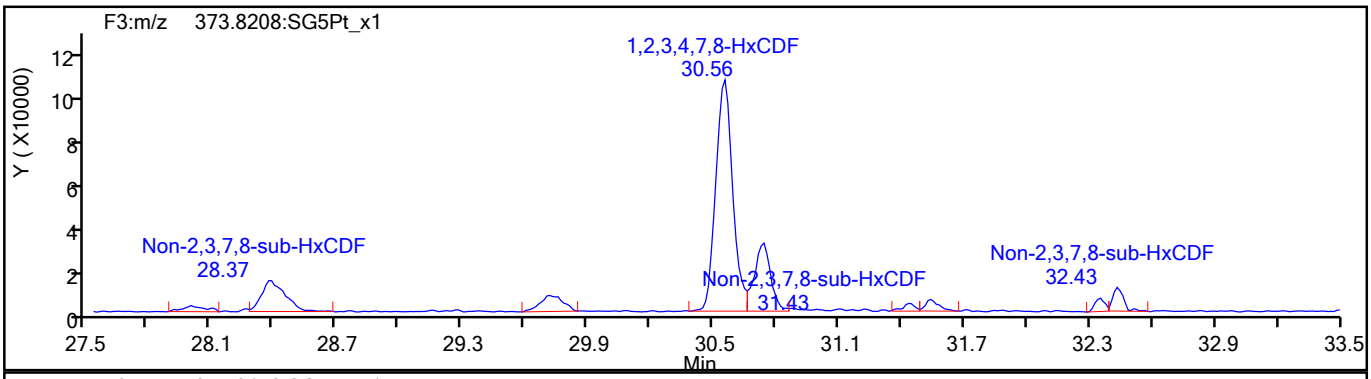

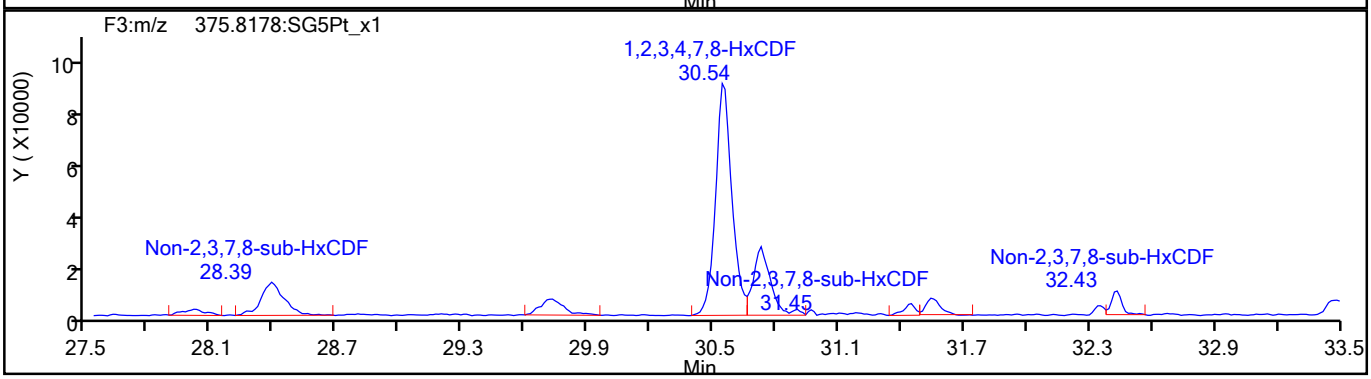

HxCDF Standards

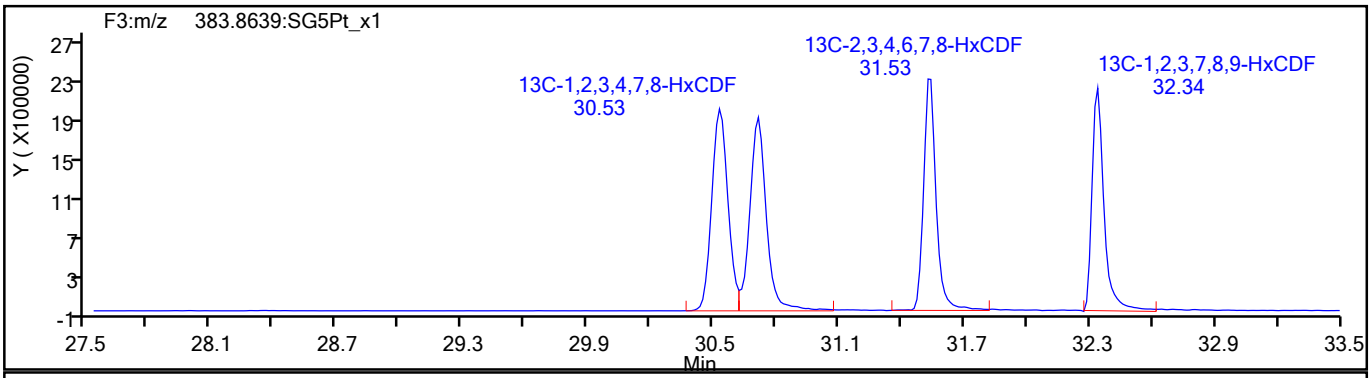

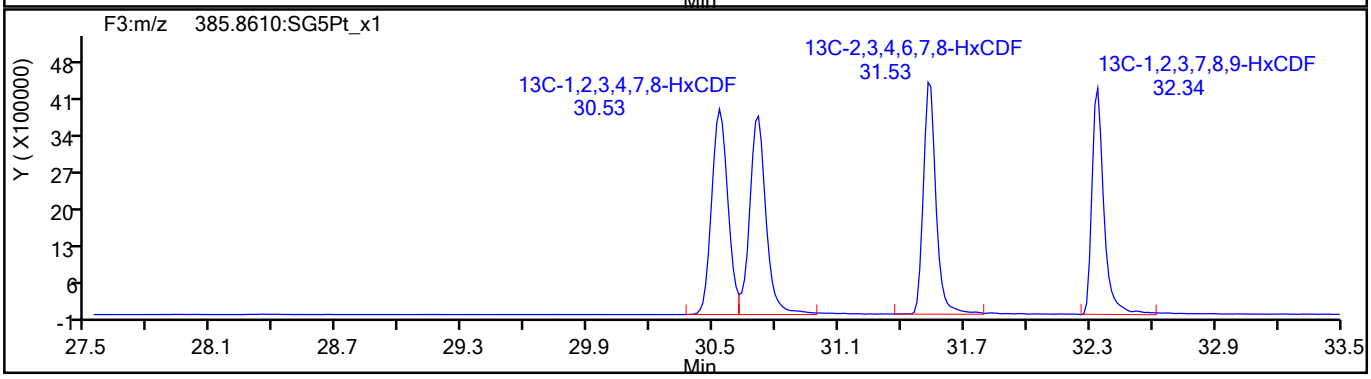

775184

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

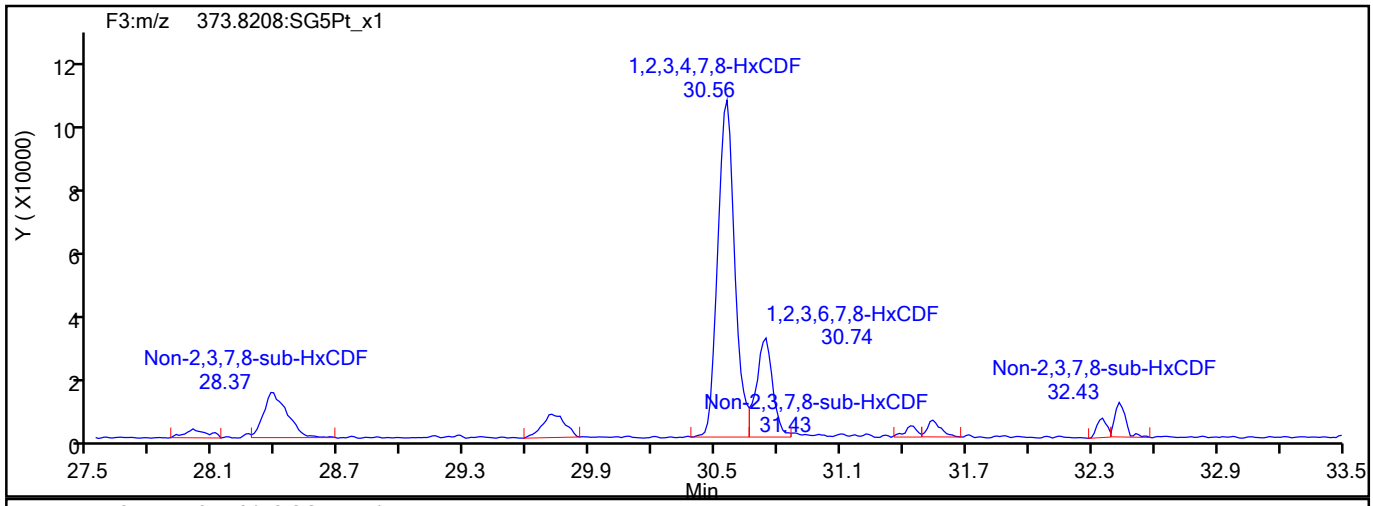

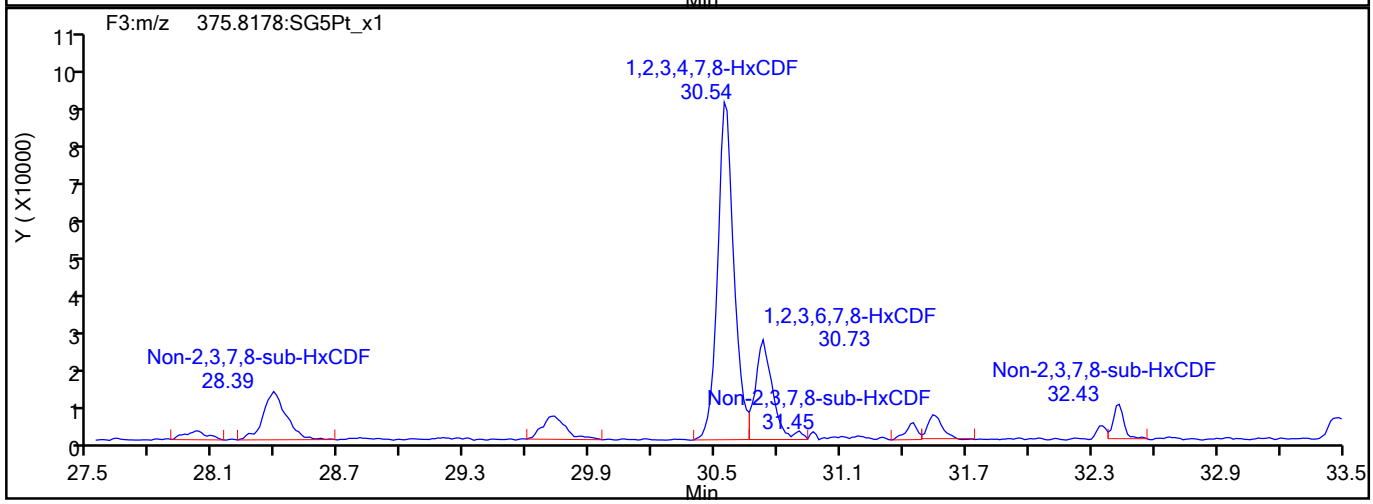

HxCDF Interference Mass

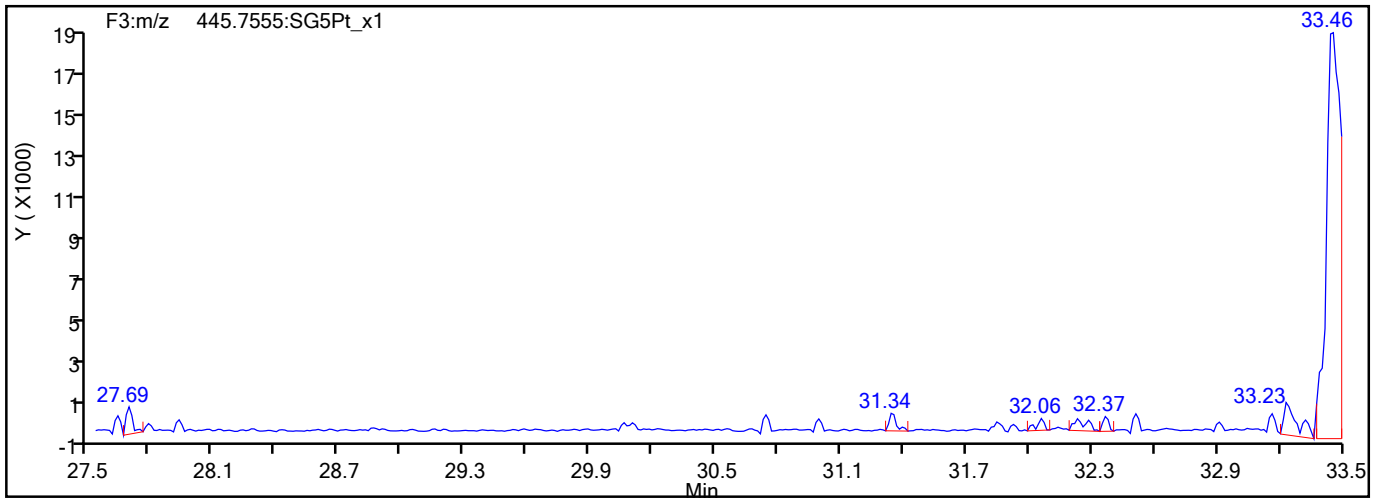

775185

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

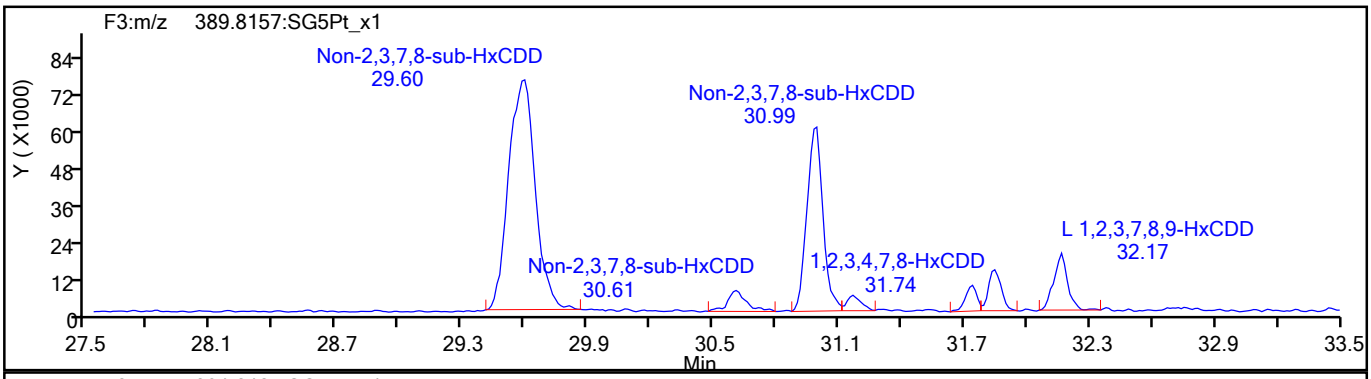

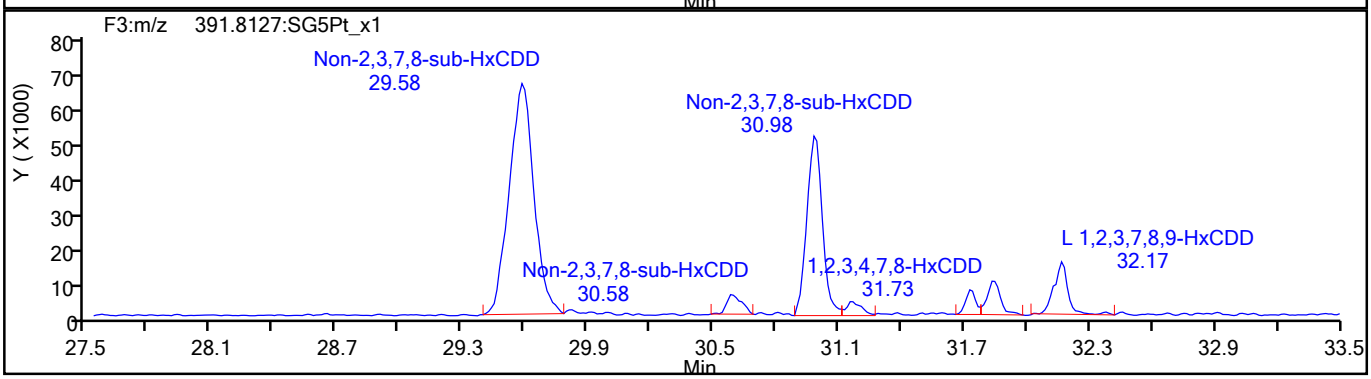

HxCDD Standards

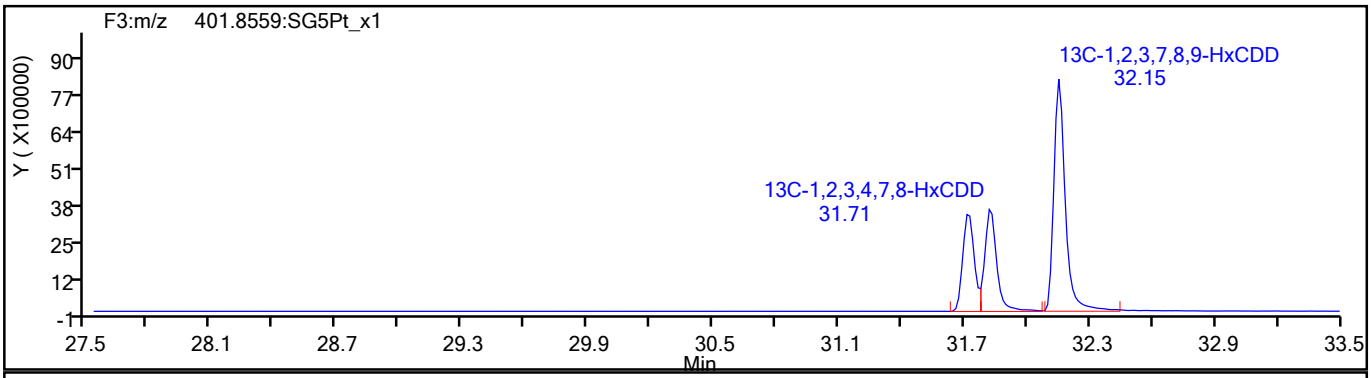

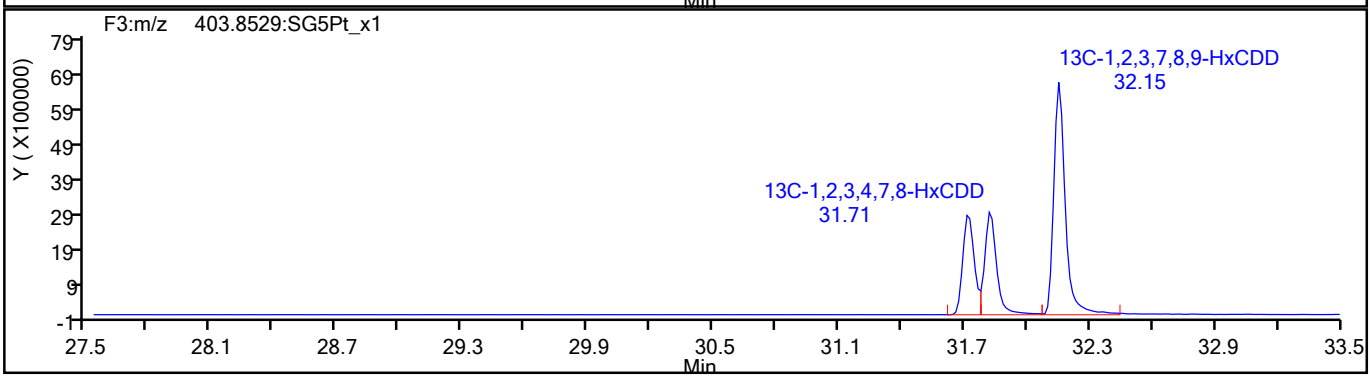

775186

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

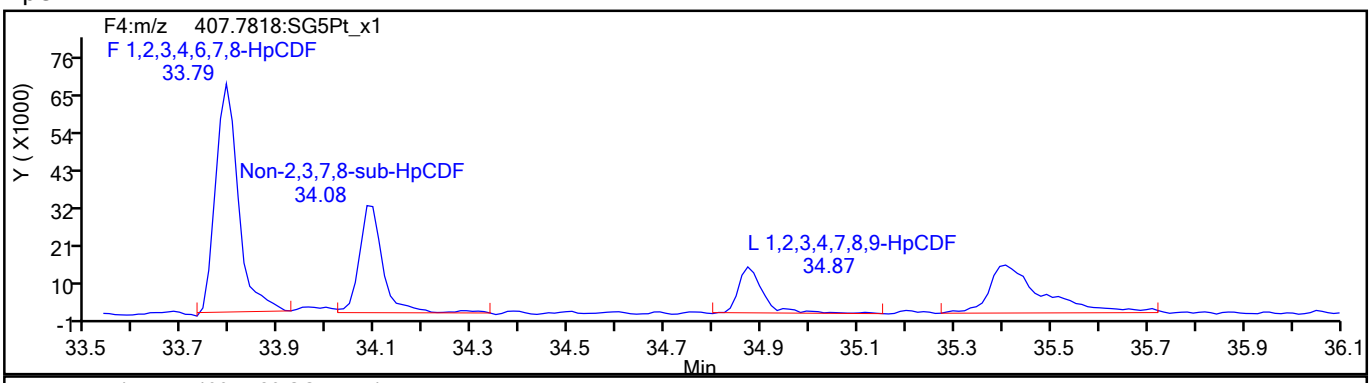

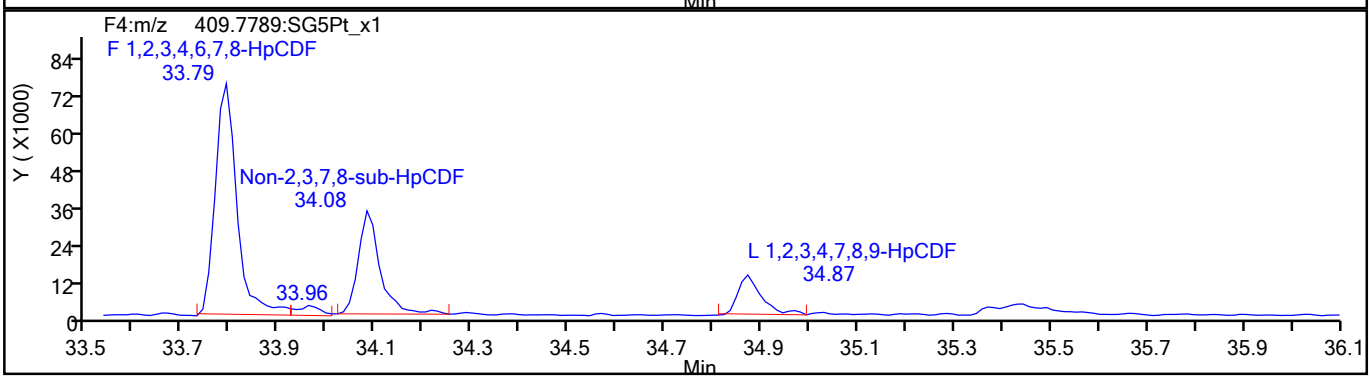

HpCDF Standards

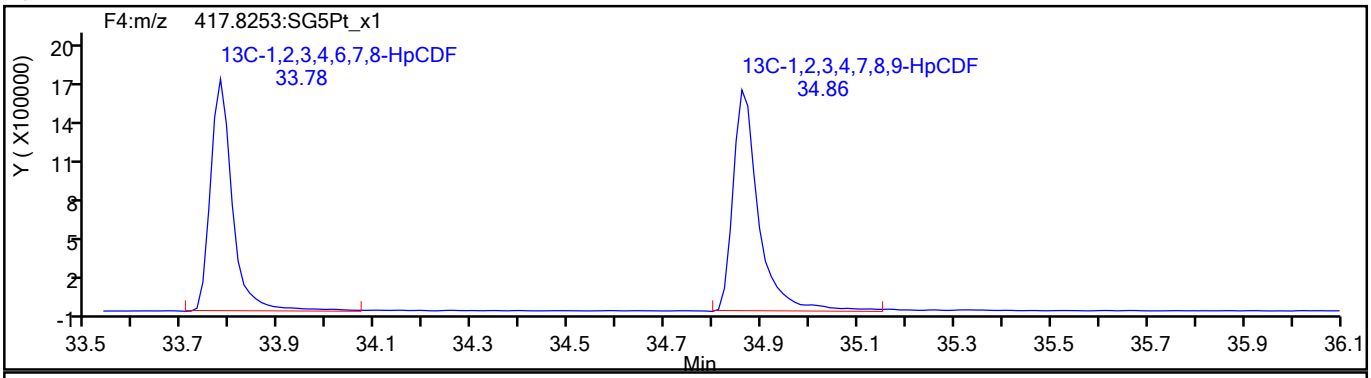

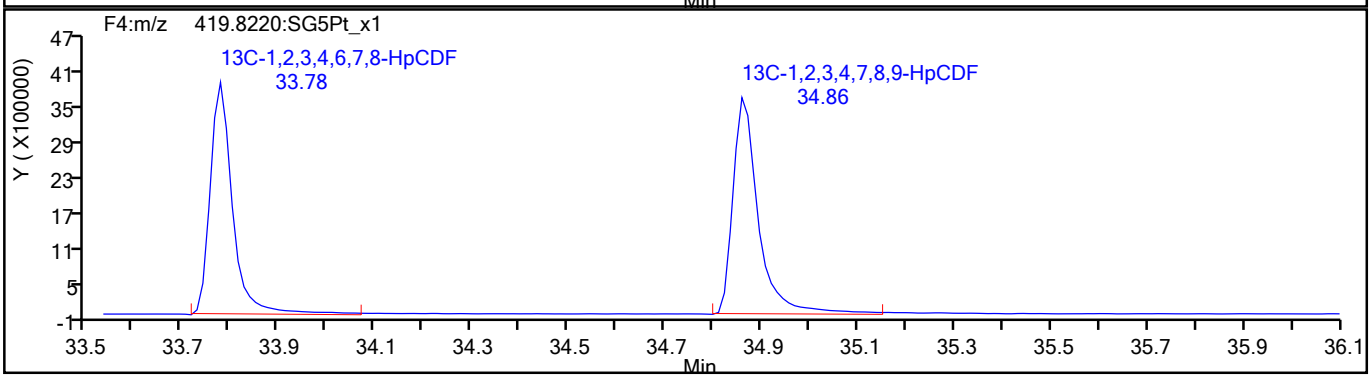

775187

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
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HpCDF

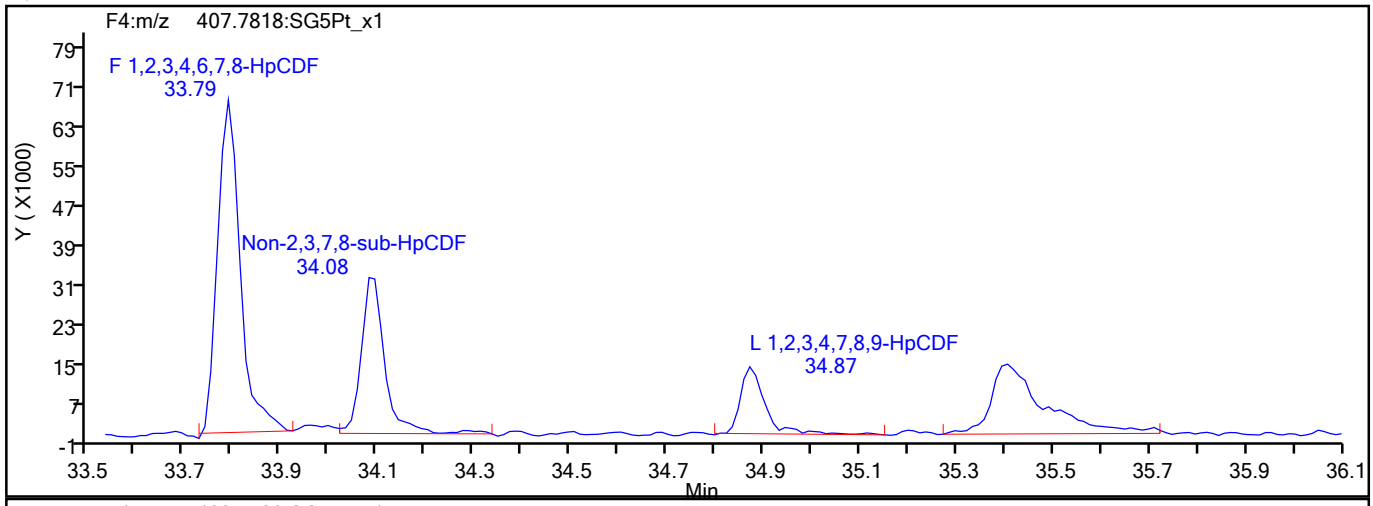

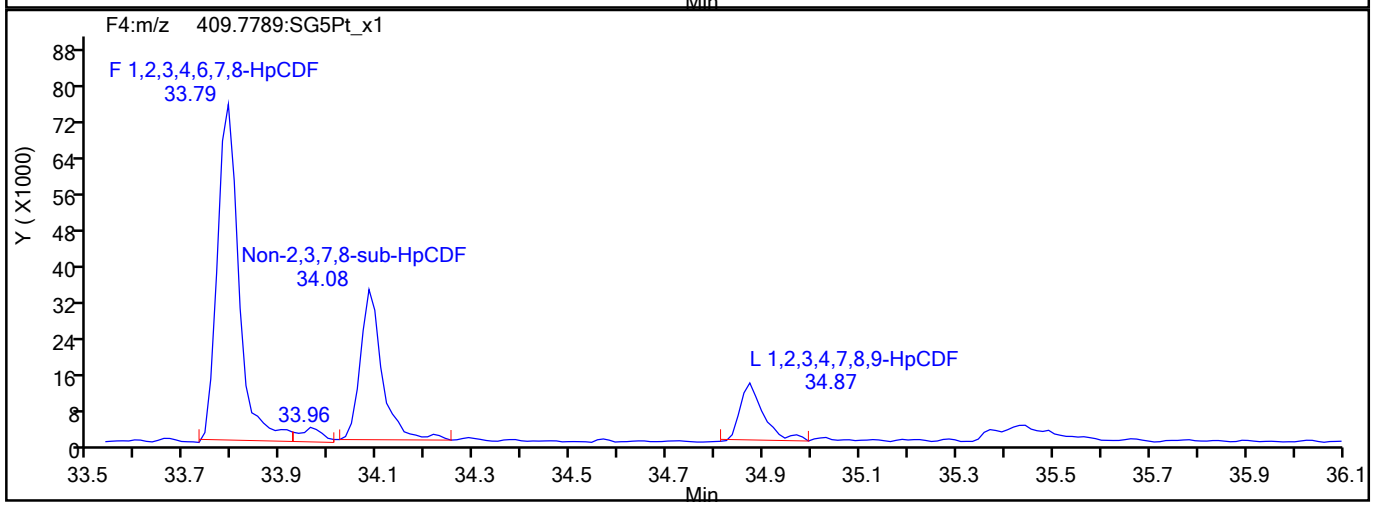

HpCDF Interference Mass

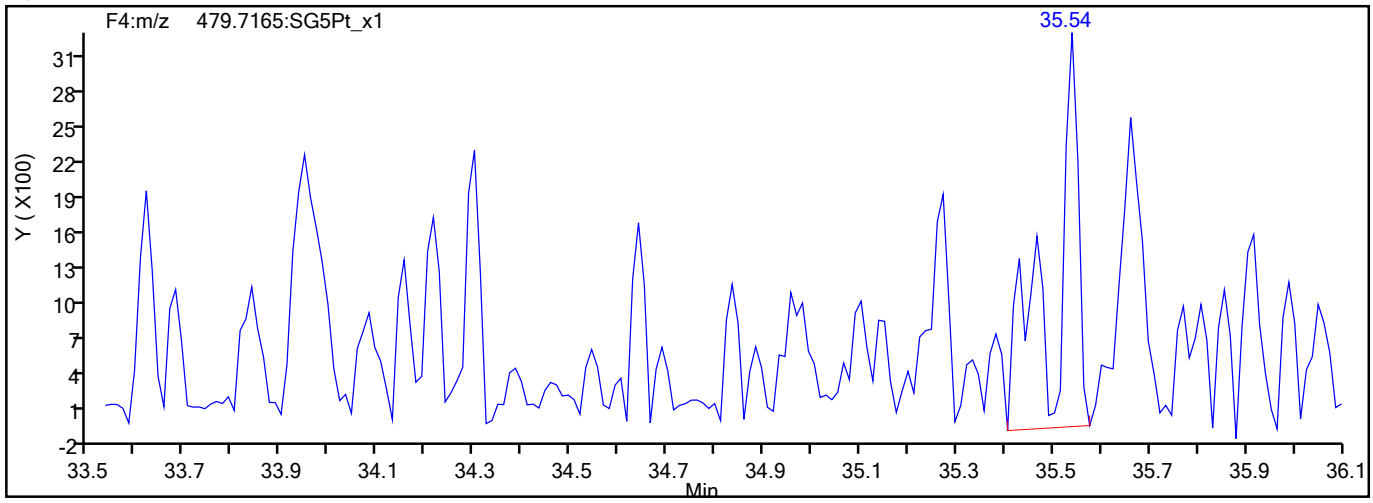

775188

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

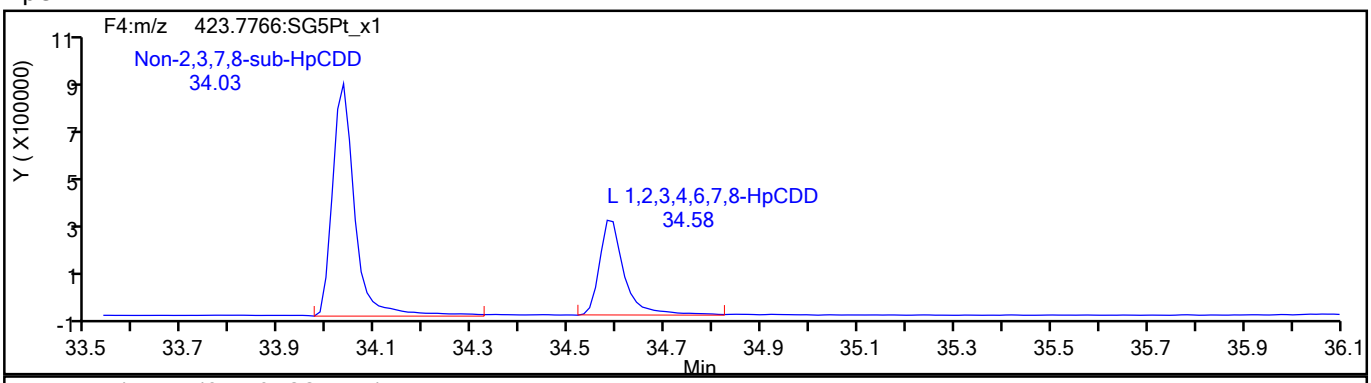

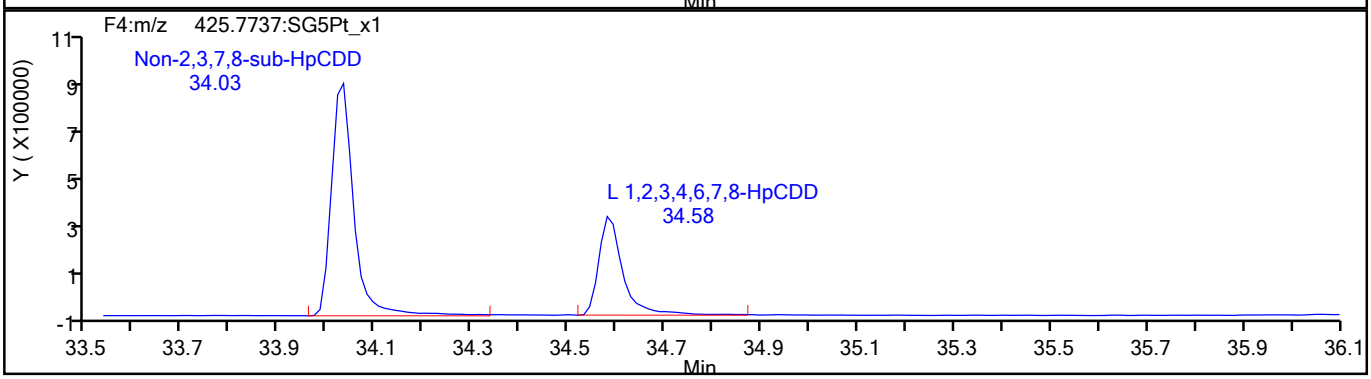

HpCDD Standards

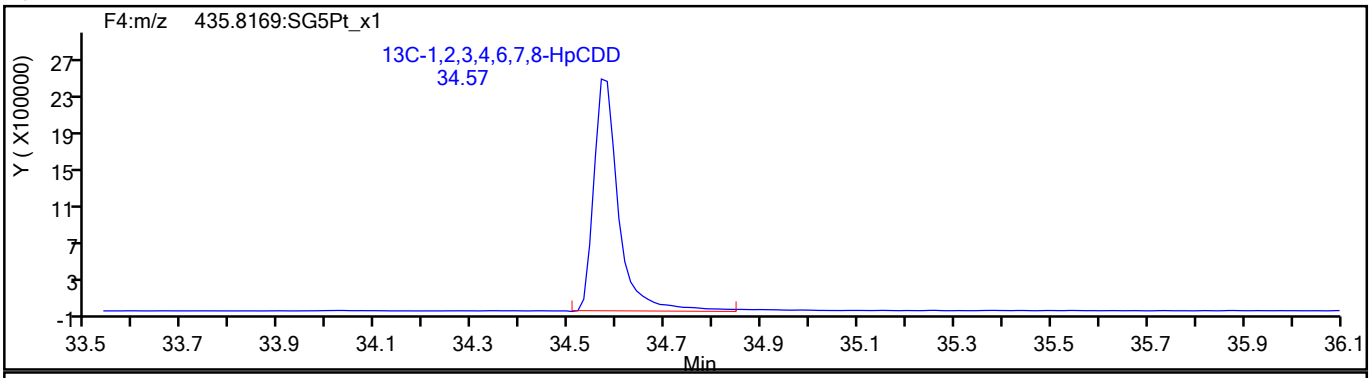

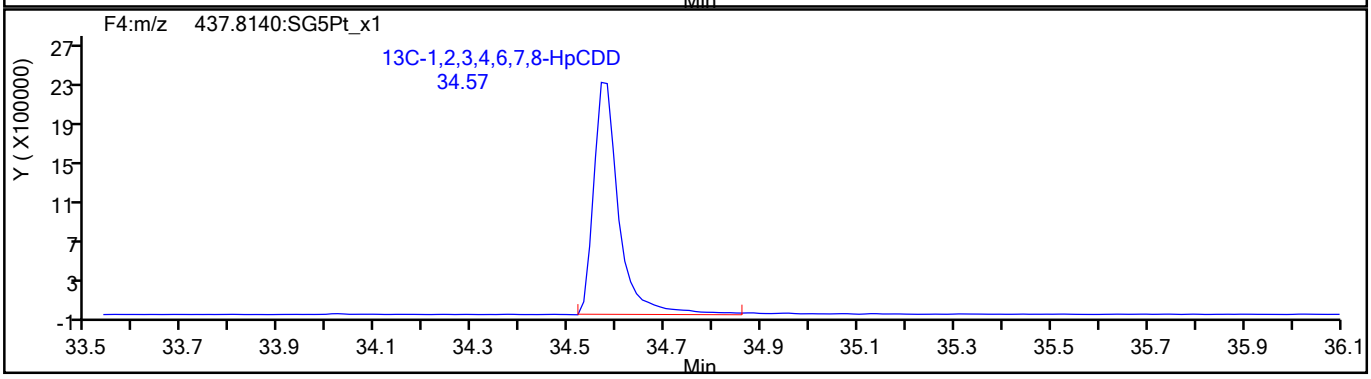

775189

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

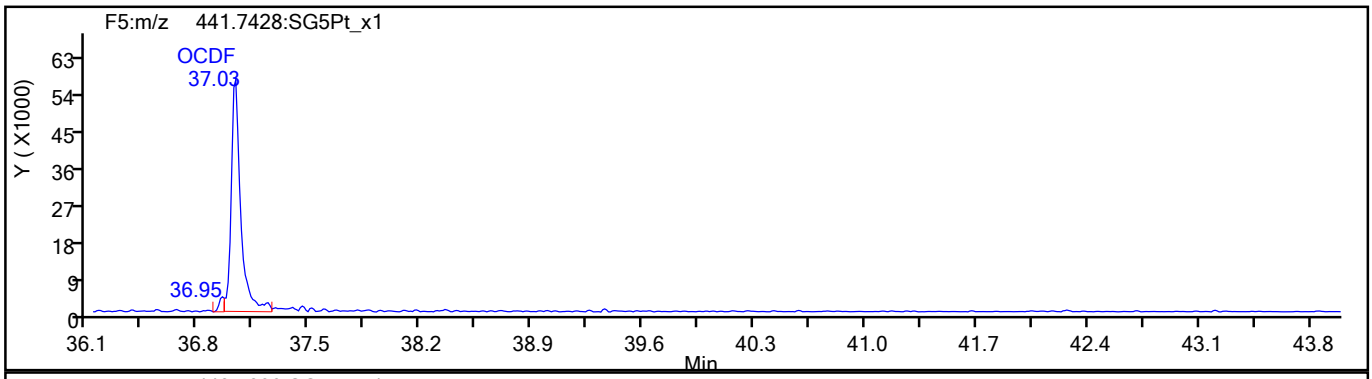

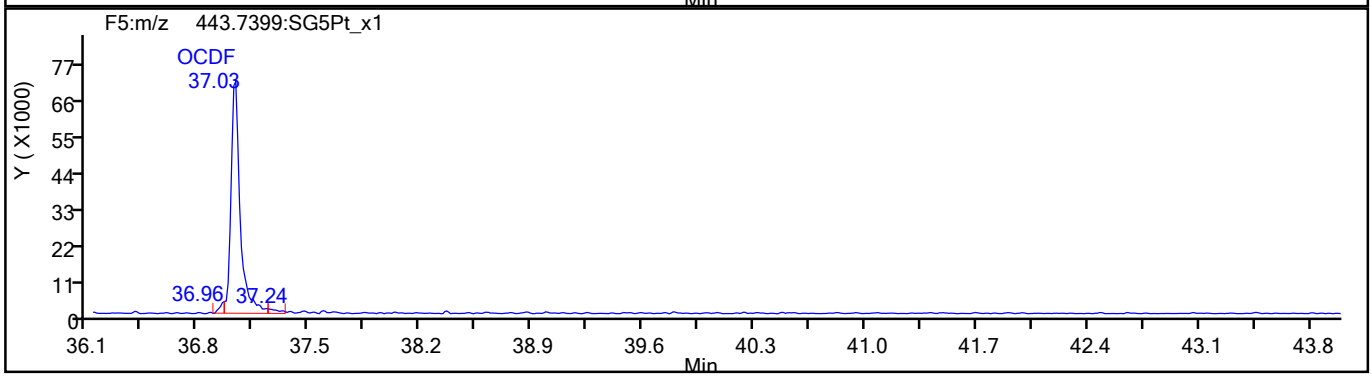

OCDF Standards

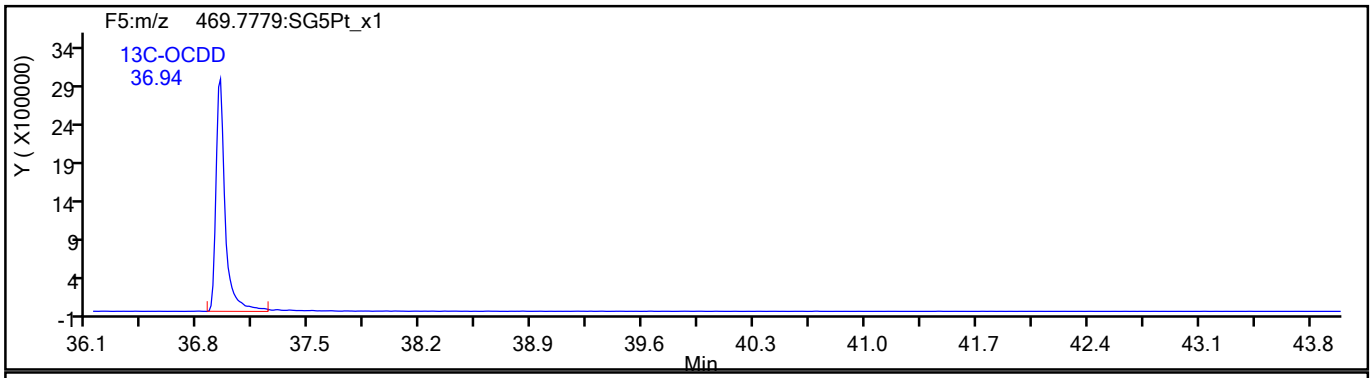

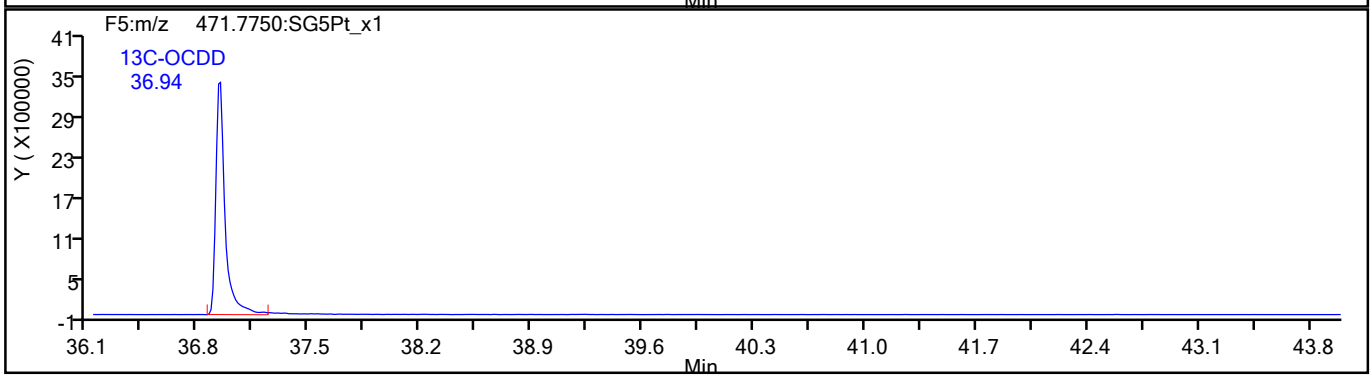

775190

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

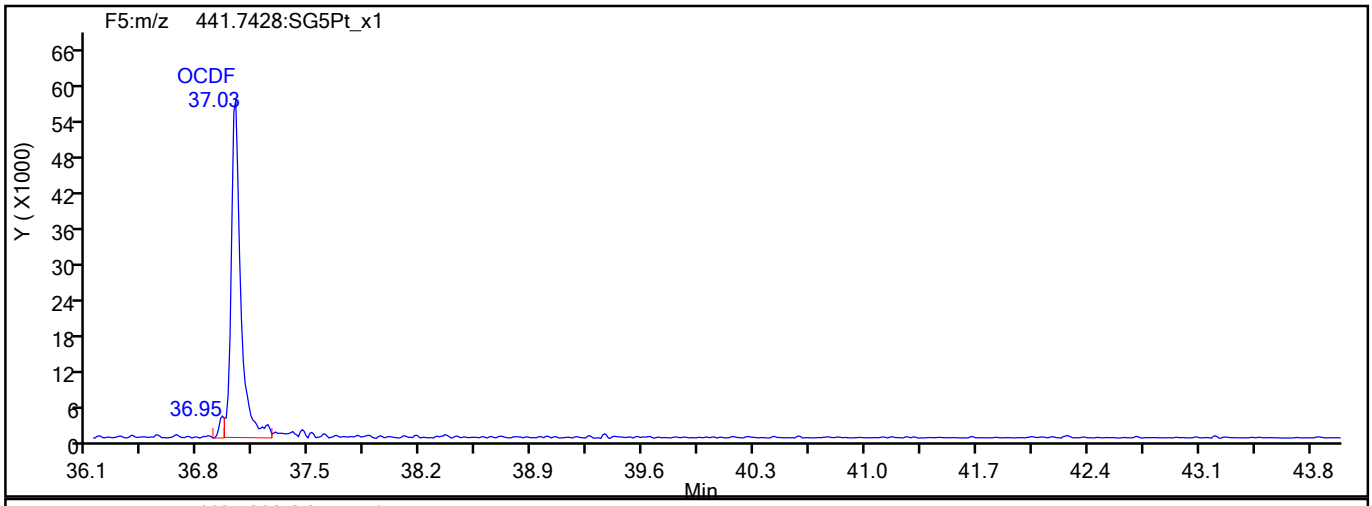

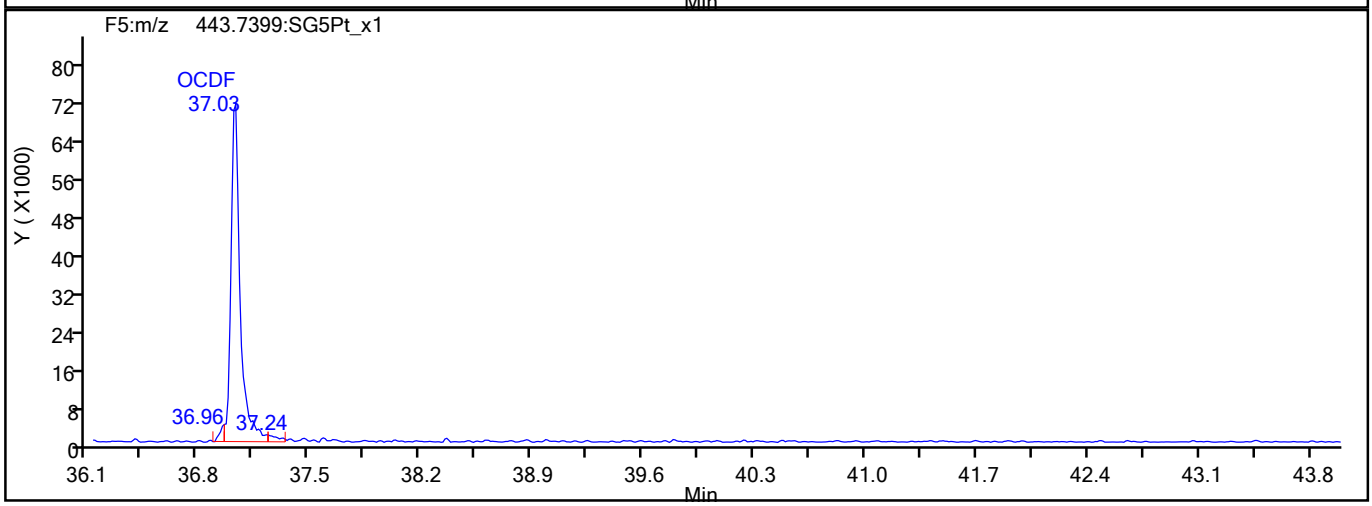

OCDF Interference Mass

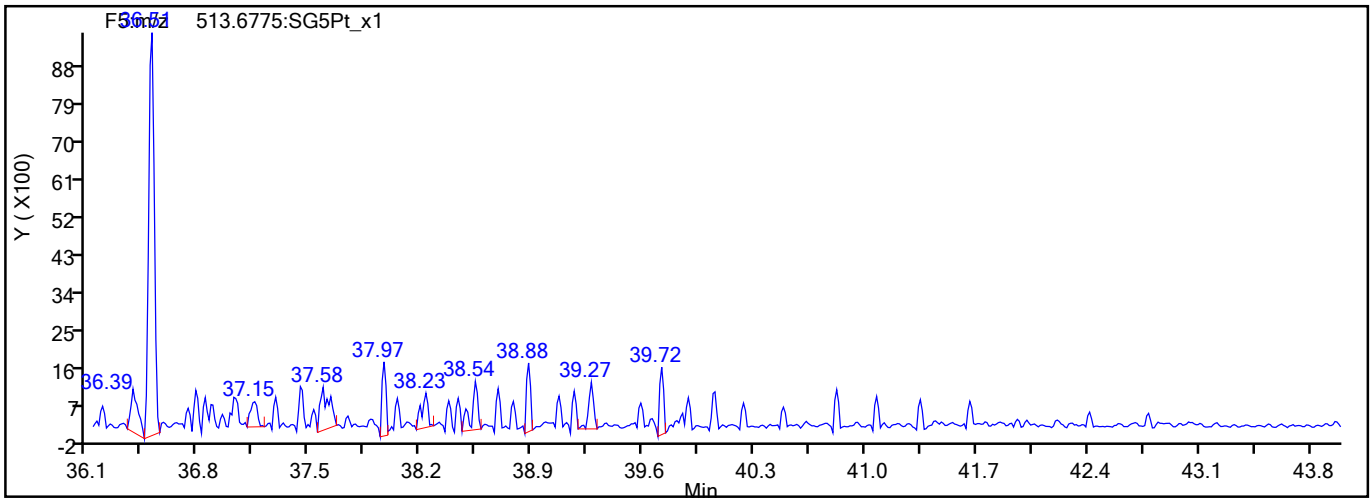

775191

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

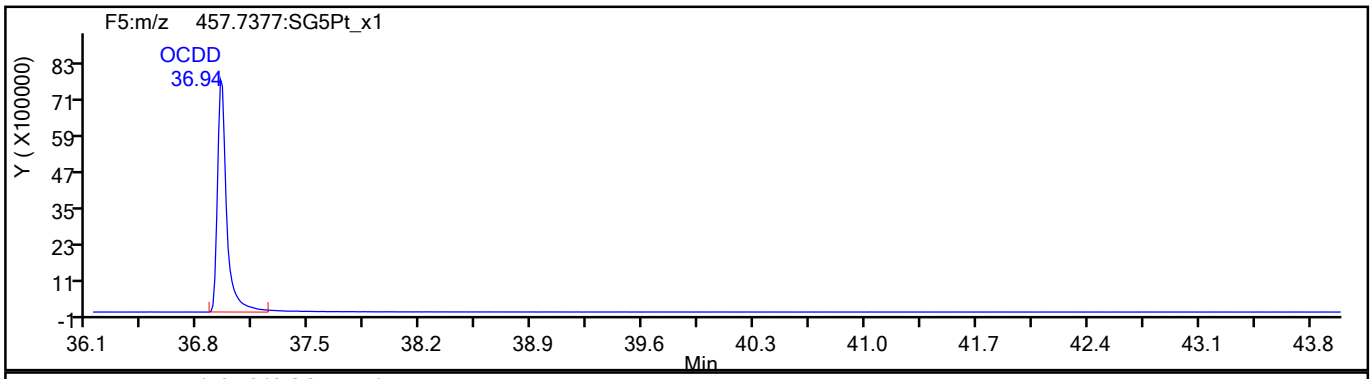

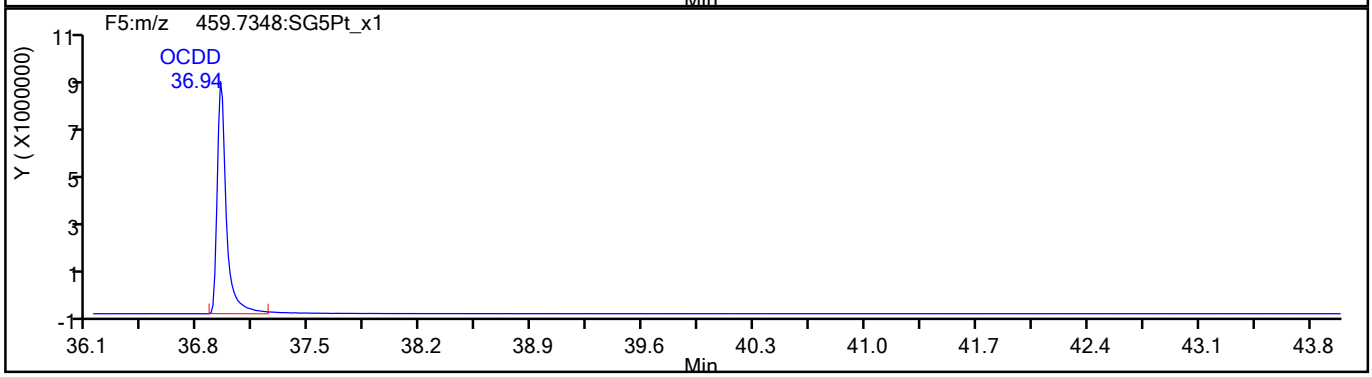

OCDD Standards

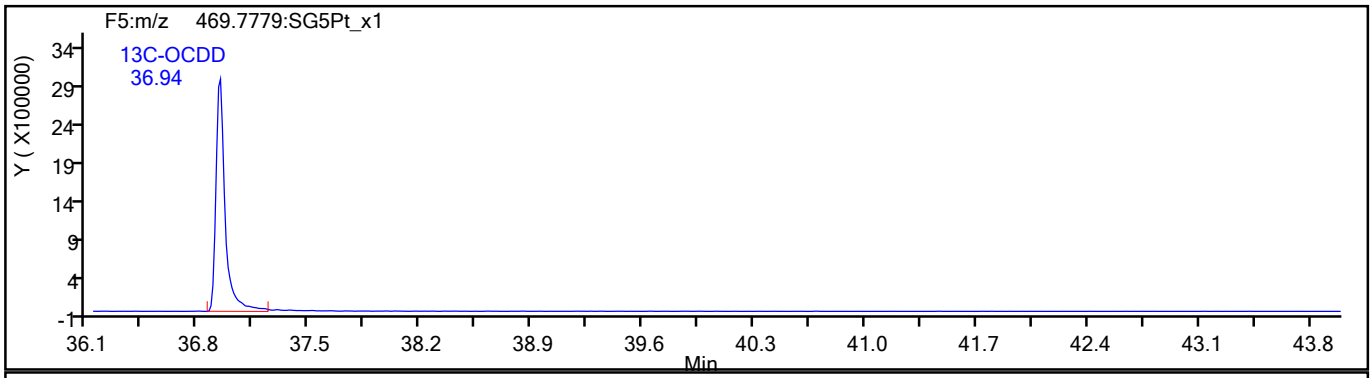

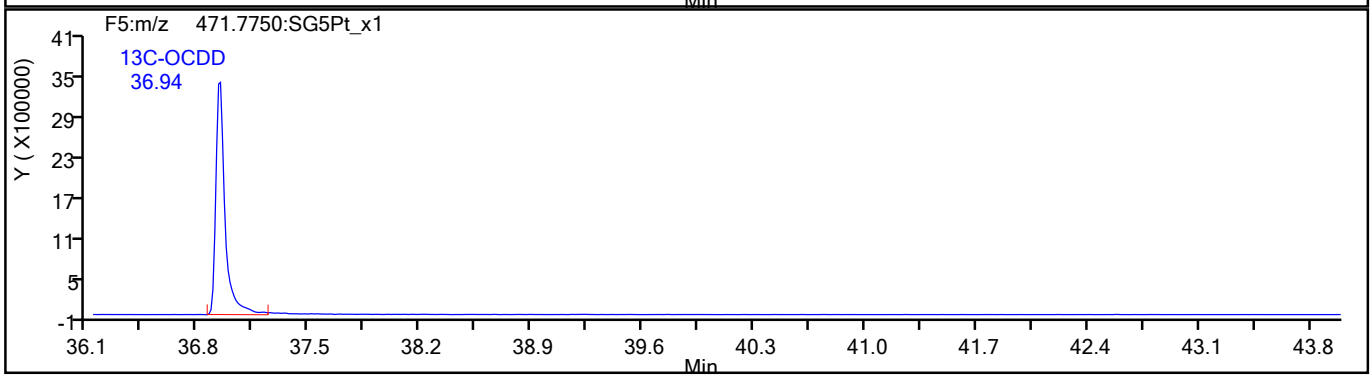

775192

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

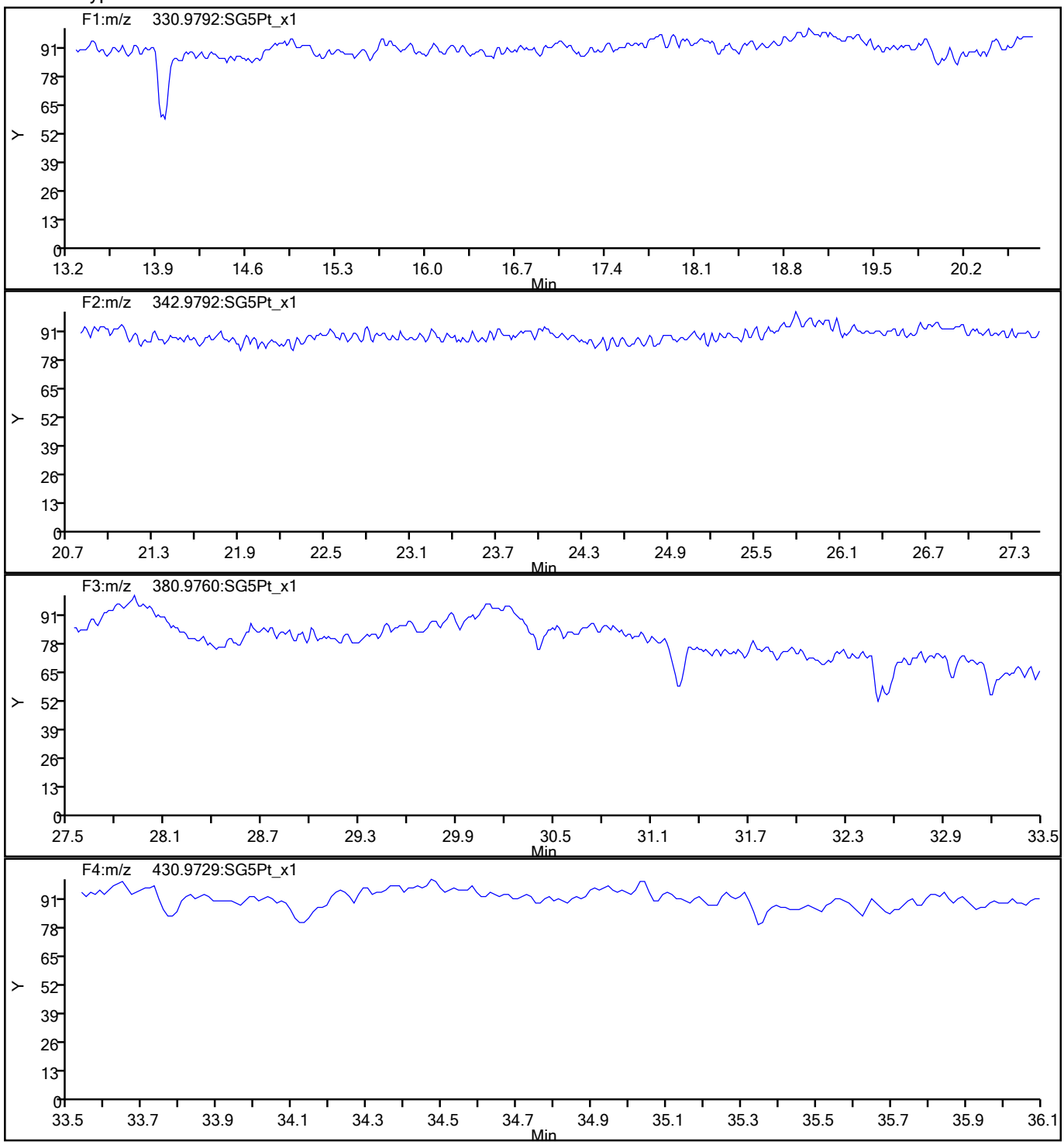

775193

Report Date: 18-Aug-2021 10:24:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_61.d		
Injection Date:	15-Aug-2021 15:12:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	516848	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

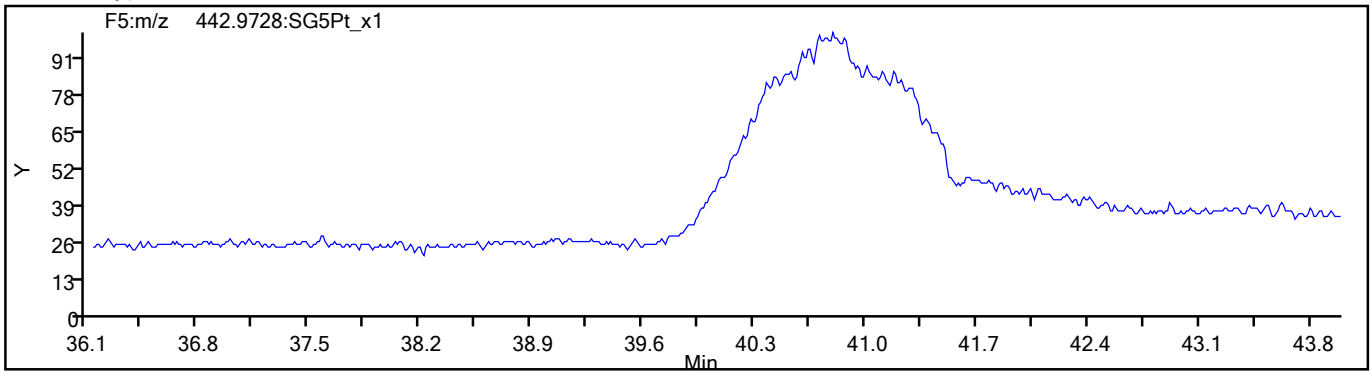

775194

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (6-8) RA
Lab Sample ID: 320-76769-16 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_015.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.00(g)
Date Analyzed: 08/24/2021 00:31
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 19.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	200	B	1.2	0.42

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	51		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	70		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_015.d
Lims ID: 320-76769-A-16-A
Client ID: 11215702-072221-SS-SJSB074 (6-8)
Sample Type: Client
Inject. Date: 24-Aug-2021 00:31:34 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-16-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:18:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.299	53194892	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	36431913	0.81	1.3327	51.4	51.4	0.2044	0.2044	51.39	
2,3,7,8-TCDF	17.629	29148194	0.76	0.9978	80.2	80.2	0.1694	0.1694		
D 13C-2,3,7,8-TCDD	16.066	23180226	0.77	0.8749	49.8	49.8	1.144	1.144	49.81	
2,3,7,8-TCDD	16.079	7099806	0.79	1.0570	29.0	29.0	0.2114	0.2114		
$ 37Cl4-2,3,7,8-TCDD	16.079	12807353		0.8648	27.8	27.8	0.0788	0.0788	69.60	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_015.d
Lims ID: 320-76769-A-16-A
Client ID: 11215702-072221-SS-SJSB074 (6-8)
Sample Type: Client
Inject. Date: 24-Aug-2021 00:31:34 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-16-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:18:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.299	16.298	0		23294060	5351223	24111	60277	222		
333.9339	16.299	16.298	0		29900832	6434140	23094	57735	279	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.081	16297851	3075257	7314	18285	420		
317.9389	17.615	17.615	0	1.081	20134062	3768073	5529	13822	682	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.643	-1	1.001	12606094	2353477	2001	5002	1176		
305.8987	17.629	17.643	-1	1.001	16542100	3083948	2626	6565	1174	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.065	0	0.986	10052511	2283498	24111	60277	95		
333.9339	16.066	16.065	0	0.986	13127715	2836791	23094	57735	123	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.079	16.079	0	1.001	3131497	660624	2406	6015	275		
321.8936	16.079	16.079	0	1.001	3968309	919189	2171	5427	423	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.079	16.093	-1	0.987	12807353	2907504	3212	8030	905		

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 09:19:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_015.d		
Injection Date:	24-Aug-2021 00:31:34	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	518979	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

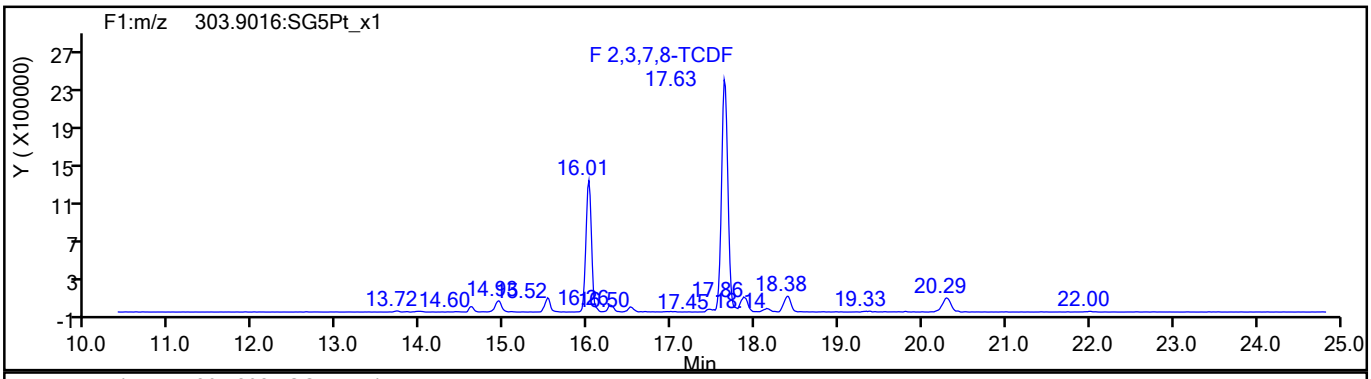

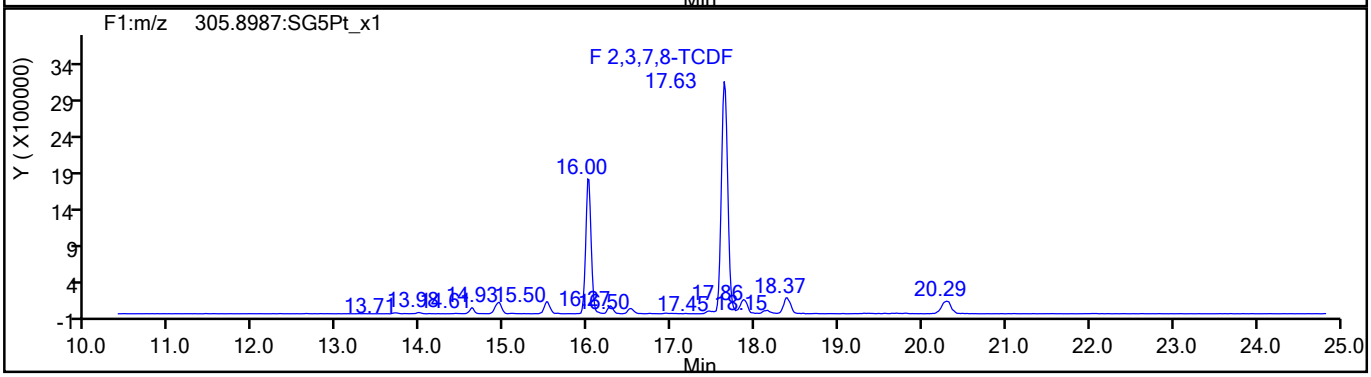

TCDF Standards

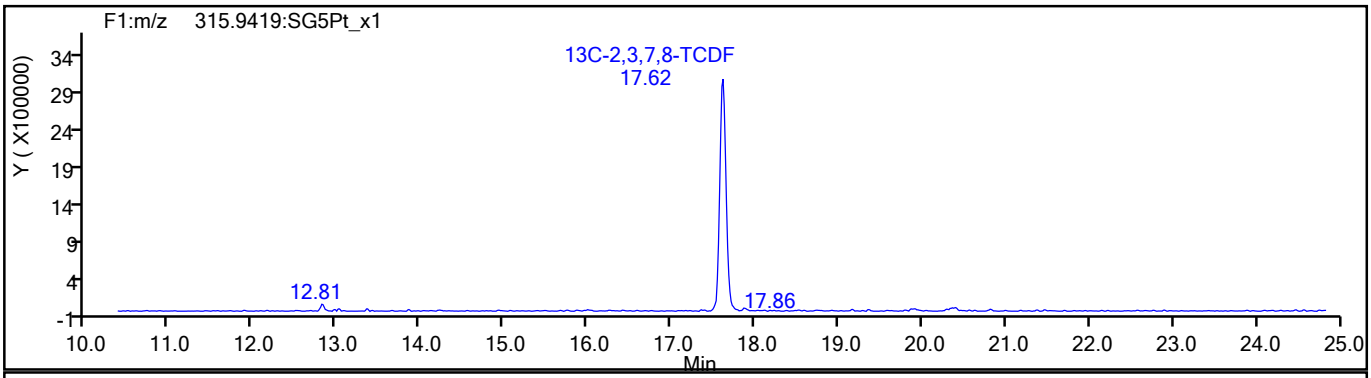

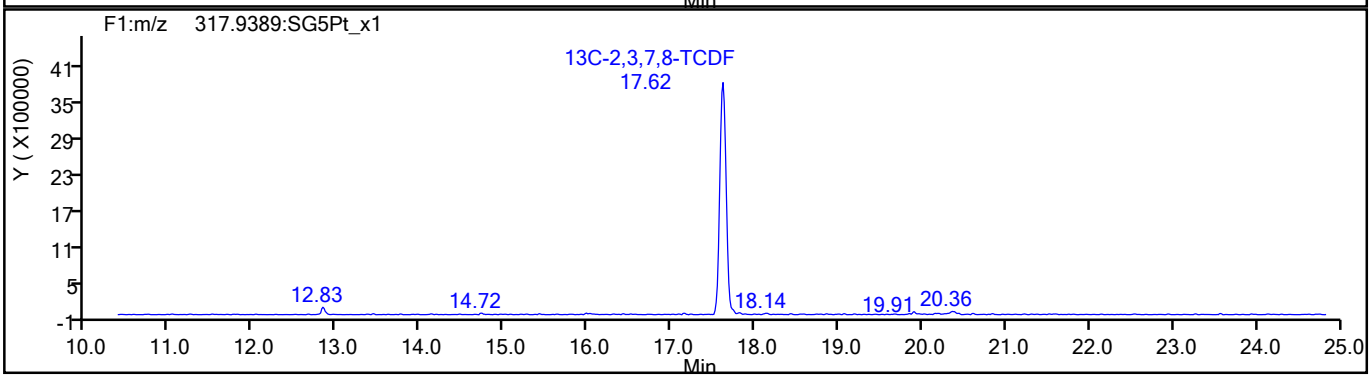

775198

Report Date: 24-Aug-2021 09:19:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_015.d		
Injection Date:	24-Aug-2021 00:31:34	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	518979	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

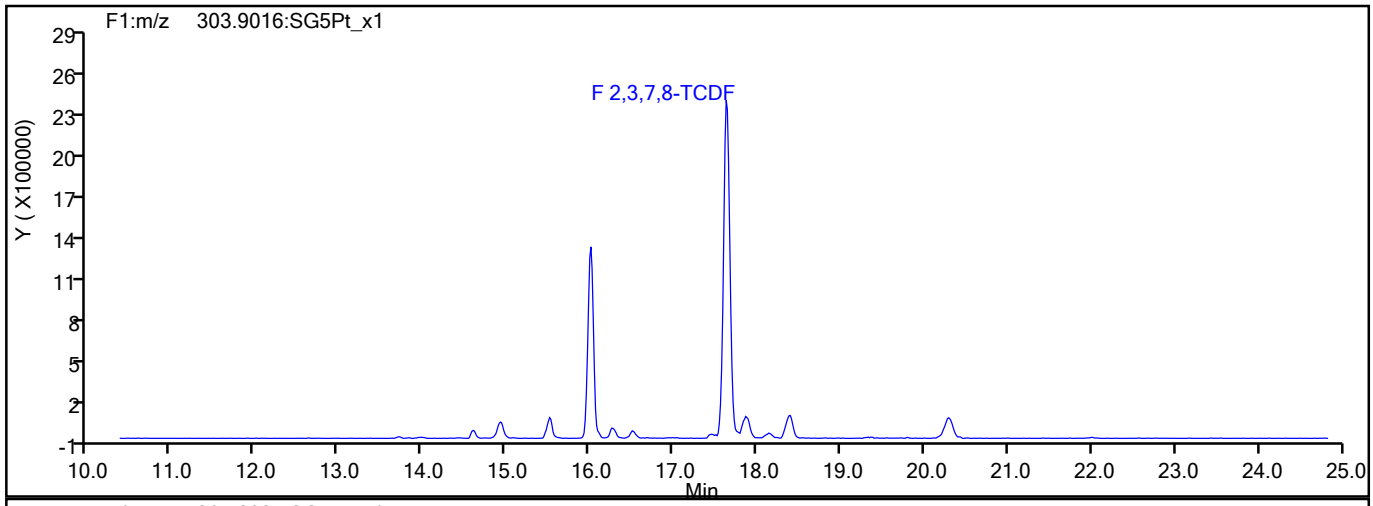

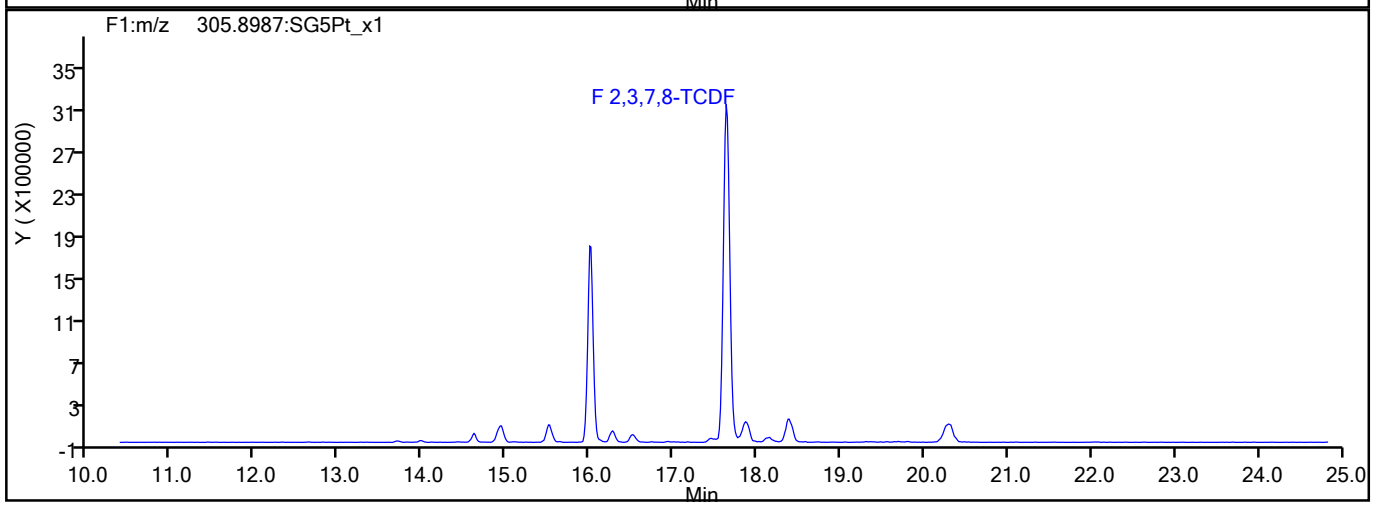

TCDF Interference Mass

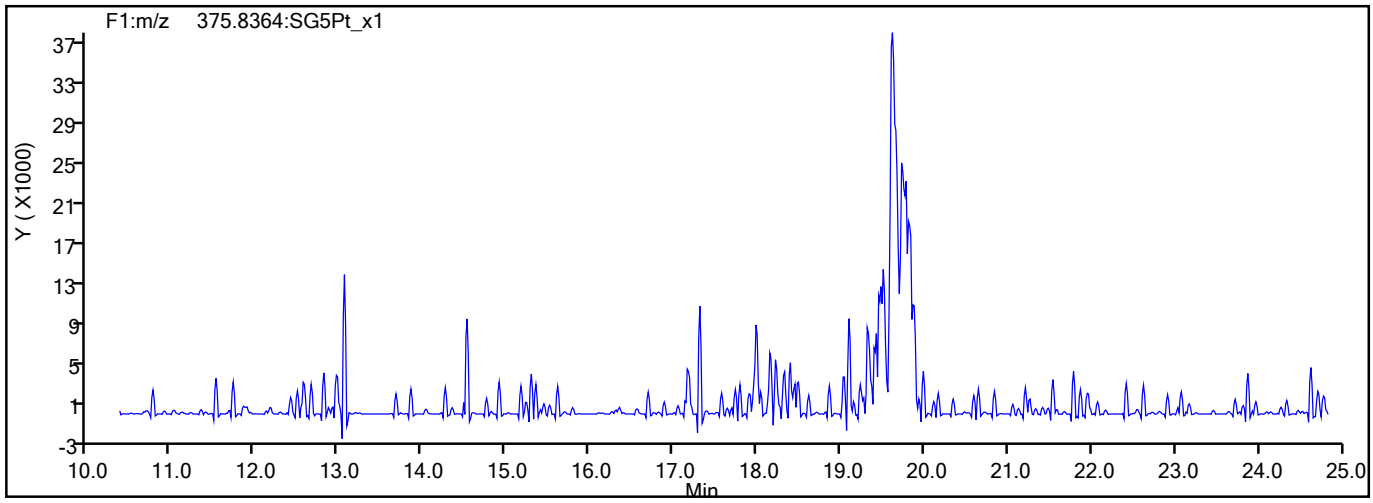

775199

Report Date: 24-Aug-2021 09:19:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_015.d		
Injection Date:	24-Aug-2021 00:31:34	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	518979	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

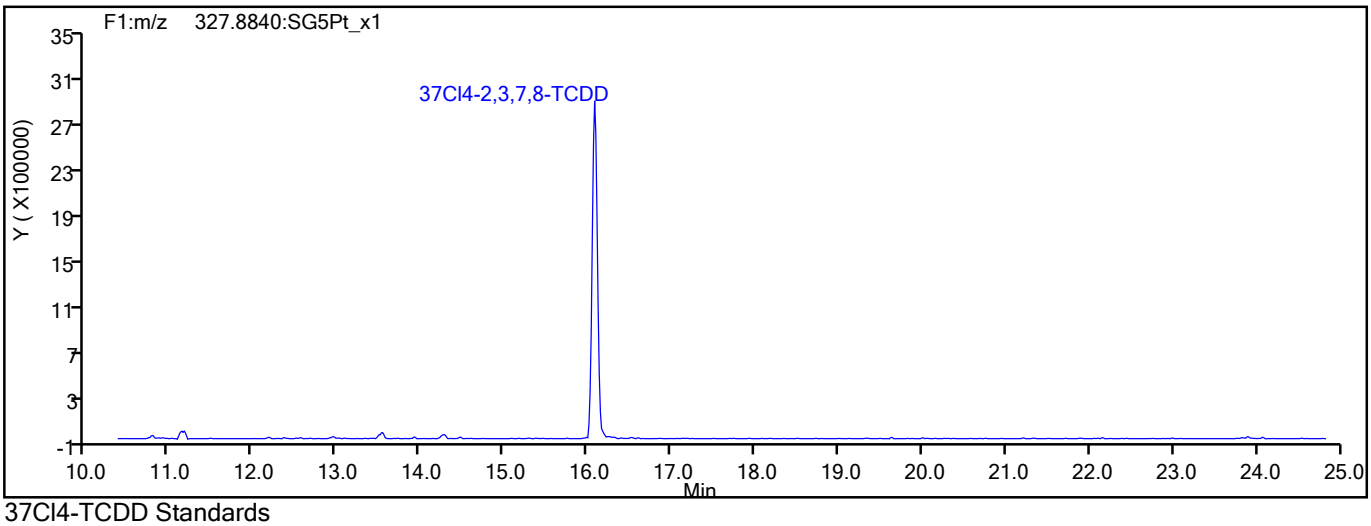

37Cl4-TCDD Standards

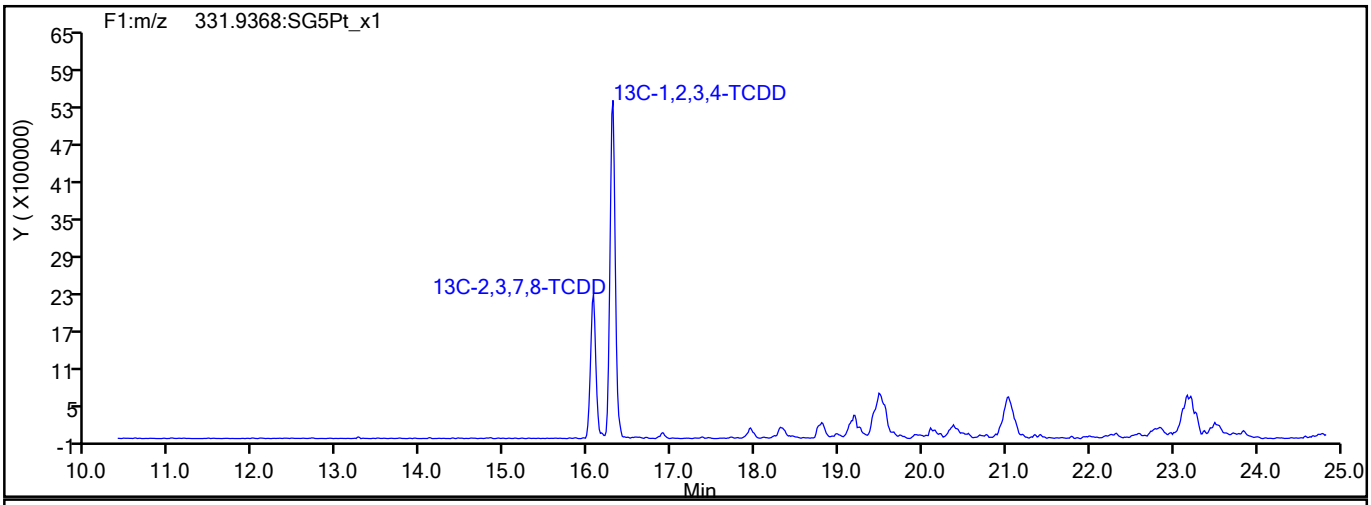

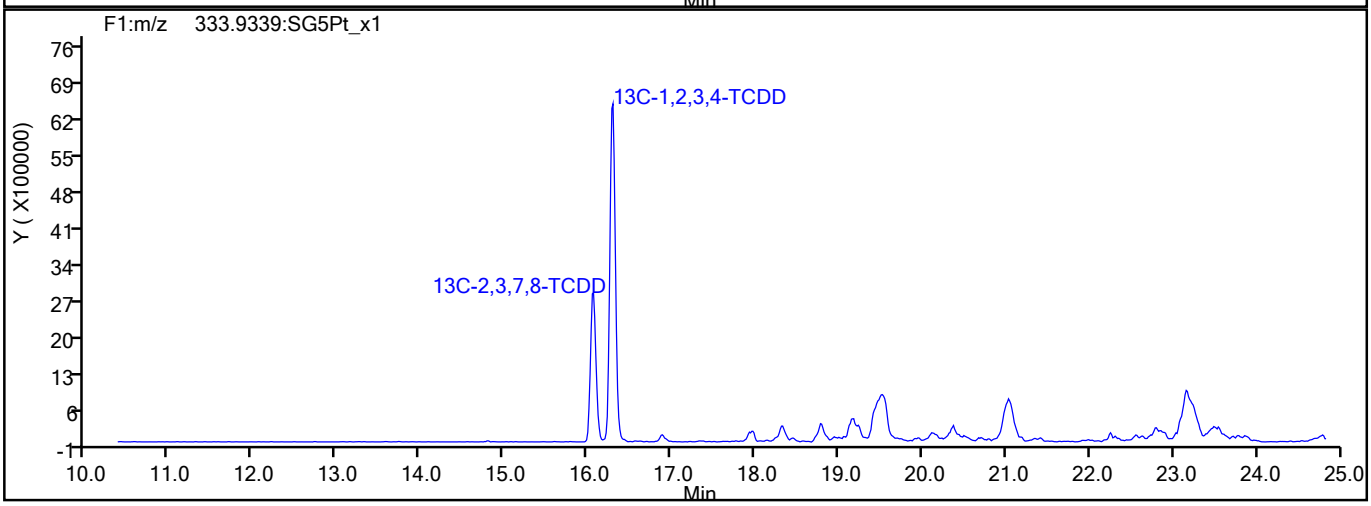

775200

Report Date: 24-Aug-2021 09:19:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_015.d		
Injection Date:	24-Aug-2021 00:31:34	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (6-8)		
Worklist#:	518979	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

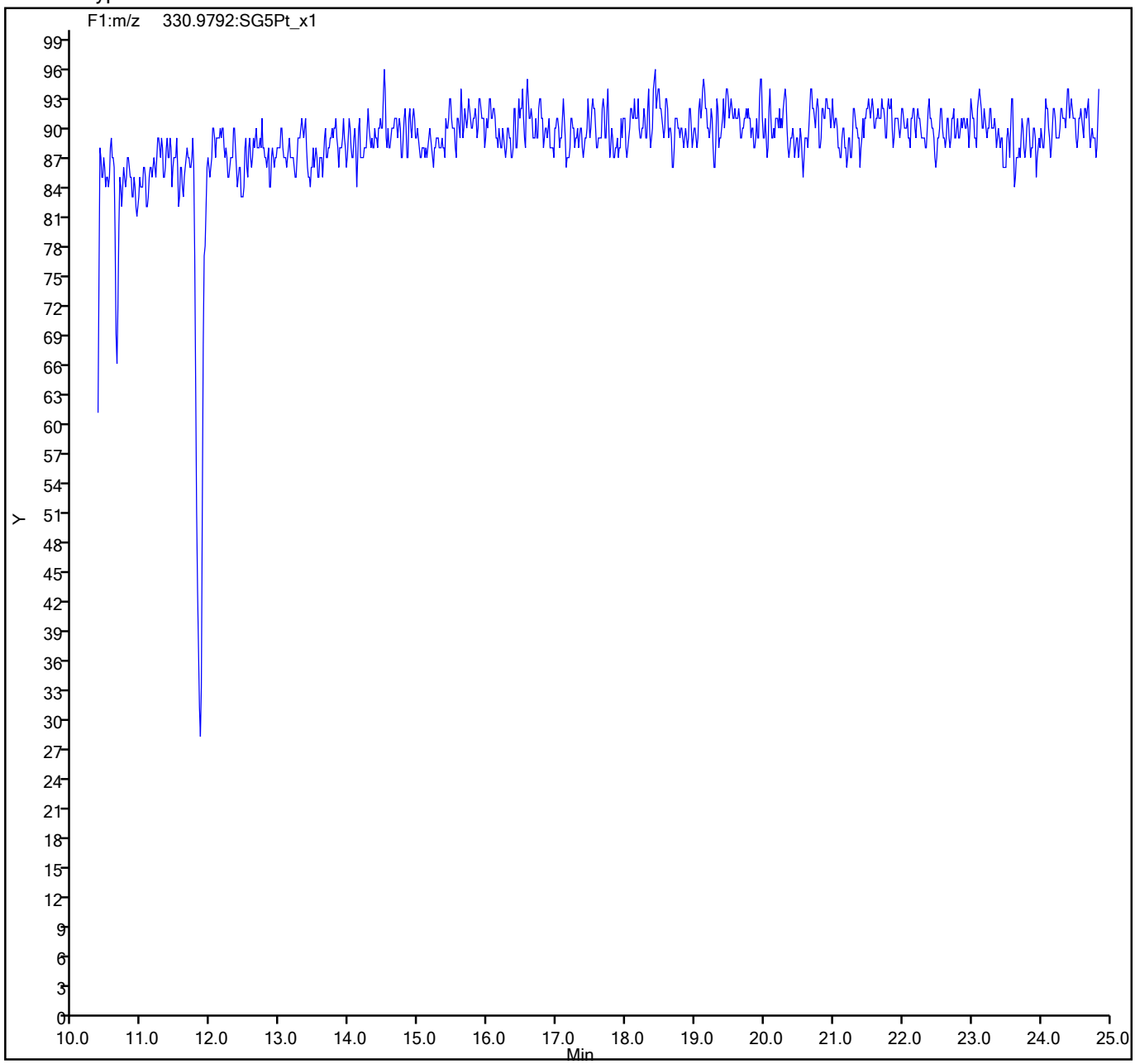

775201

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (8-10)
Lab Sample ID: 320-76769-17
Matrix: Sediment
Lab File ID: 13AU2110D5_62.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.01(g)
Date Analyzed: 08/15/2021 15:57
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 16.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	3.7	B	1.2	0.099
40321-76-4	1,2,3,7,8-PeCDD	ND		6.0	0.065
57117-41-6	1,2,3,7,8-PeCDF	0.33	J	6.0	0.060
57117-31-4	2,3,4,7,8-PeCDF	0.20	J	6.0	0.061
39227-28-6	1,2,3,4,7,8-HxCDD	0.20	J B q	6.0	0.080
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.0	0.082
19408-74-3	1,2,3,7,8,9-HxCDD	0.19	J B q	6.0	0.074
70648-26-9	1,2,3,4,7,8-HxCDF	0.44	J B q	6.0	0.043
57117-44-9	1,2,3,6,7,8-HxCDF	0.12	J B	6.0	0.045
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.0	0.036
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.0	0.035
35822-46-9	1,2,3,4,6,7,8-HpCDD	2.9	J B	6.0	0.14
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.22	J B	6.0	0.049
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.0	0.063
3268-87-9	OCDD	82	B	12	0.21
39001-02-0	OCDF	0.38	J B q	12	0.033
41903-57-5	Total TCDD	4.0	B	1.2	0.099
30402-14-3	Total TCDF	22	B q	1.2	0.15
36088-22-9	Total PeCDD	0.17	J q	6.0	0.065
30402-15-4	Total PeCDF	0.69	J q	6.0	0.060
34465-46-8	Total HxCDD	2.7	J B q	6.0	0.078
55684-94-1	Total HxCDF	0.56	J B q	6.0	0.040
37871-00-4	Total HpCDD	13	B	6.0	0.14
38998-75-3	Total HpCDF	0.35	J B q	6.0	0.056

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (8-10)
Lab Sample ID: 320-76769-17
Matrix: Sediment
Lab File ID: 13AU2110D5_62.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.01(g)
Date Analyzed: 08/15/2021 15:57
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 16.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	48		25-164
89059-46-1	13C-2,3,7,8-TCDF	43		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	48		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	44		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	48		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	49		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	49		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	48		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	45		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	44		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	43		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	48		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	44		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	50		26-138
114423-97-1	13C-OCDD	52		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	61		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d
Lims ID: 320-76769-A-17-A
Client ID: 11215702-072221-SS-SJSB074 (8-10)
Sample Type: Client
Inject. Date: 15-Aug-2021 15:57:09 ALS Bottle#: 60 Worklist Smp#: 21
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-17-a 320-76769-a-17-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:25:18 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 17-Aug-2021 16:56:16

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	49544968	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	34221959	0.76	1.6249	42.5	42.5	0.1013	0.1013	42.51	
2,3,7,8-TCDF	17.371	1840939	0.77	1.0239	5.254	5.254	0.0641	0.0641		
A Non-2,3,7,8-sub-TCDF	17.046	1386665	0.77	1.0239	4.057	3.957	0.0641	2.471		RQMa
S Total TCDF					9.311	9.211	0.0641	0.0641		RQ
D 13C-2,3,7,8-TCDD	18.051	21371581	0.81	0.8993	48.0	48.0	0.1639	0.1639	47.97	
2,3,7,8-TCDD	18.081	412096	0.70	1.2541	1.538	1.538	0.0415	0.0415		
$ 37Cl4-2,3,7,8-TCDD	18.081	13290186		1.1071	24.2	24.2	0.0402	0.0402	60.57	
A Non-2,3,7,8-sub-TCDD	17.500	35176	0.88	1.2541	0.1312	0.1312	0.0415	0.1312		
S Total TCDD					1.669	1.669	0.0415	0.0415		
D 13C-1,2,3,7,8-PeCDF	22.381	26133105	1.58	1.2101	43.6	43.6	0.1230	0.1230	43.59	
1,2,3,7,8-PeCDF	22.408	38234	1.66	1.0611	0.1379	0.1379	0.0251	0.0251		M
D 13C-2,3,4,7,8-PeCDF	23.717	29410198	1.58	1.2395	47.9	47.9	0.1201	0.1201	47.89	
2,3,4,7,8-PeCDF	23.744	25471	1.37	1.0184	0.0850	0.0850	0.0255	0.0255		M
A F1 PeCDFs	20.093						0.0180	0.0180		
A Non-2,3,7,8-sub-PeCDF	23.241	19539	1.55	1.0398	0.0826	0.0677	0.0253	0.0677		RQ
S Total PeCDF					0.3055	0.2906	0.0253	0.0253		RQ
D 13C-1,2,3,7,8-PeCDD	24.440	18059978	1.57	0.7612	47.9	47.9	0.0718	0.0718	47.88	
1,2,3,7,8-PeCDD	24.453						0.0274	0.0274		
A Non-2,3,7,8-sub-PeCDD	23.349	13255	1.55	1.0484	0.0755	0.0700	0.0274	0.0700		RQ
S Total PeCDD					0.0755	0.0700	0.0274	0.0274		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	24774857	0.50	1.0837	47.6	47.6	0.2407	0.2407	47.63	
1,2,3,4,7,8-HxCDF	30.529	49273	1.24	1.0851	0.2022	0.1833	0.0179	0.0179		RQ
D 13C-1,2,3,6,7,8-HxCDF	30.702	24096323	0.51	1.1279	44.5	44.5	0.2312	0.2312	44.51	
1,2,3,6,7,8-HxCDF	30.715	13778	1.17	1.1260	0.0508	0.0508	0.0189	0.0189		M
D 13C-2,3,4,6,7,8-HxCDF	31.514	22123397	0.50	1.0637	43.3	43.3	0.2452	0.2452	43.33	
2,3,4,6,7,8-HxCDF	31.528						0.0147	0.0147		
D 13C-1,2,3,7,8,9-HxCDF	32.326	20335984	0.52	0.9676	43.8	43.8	0.2696	0.2696	43.79	
1,2,3,7,8,9-HxCDF	32.366						0.0150	0.0150		RQU
A Non-2,3,7,8-sub-HxCDF	30.197						0.0165	0.0165		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.2530	0.2341	0.0166	0.0166		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.140	47999994	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	17162150	1.25	0.7334	48.7	48.7	0.2724	0.2724	48.75	
1,2,3,4,7,8-HxCDD	31.714	15124	1.24	1.0640	0.0977	0.0828	0.0335	0.0335		RQM
D 13C-1,2,3,6,7,8-HxCDD	31.807	20759564	1.25	0.8802	49.1	49.1	0.2270	0.2270	49.14	
1,2,3,6,7,8-HxCDD	31.714						0.0343	0.0343		RQMU
1,2,3,7,8,9-HxCDD	32.140	17333	1.24	1.1325	0.0910	0.0807	0.0309	0.0309		RQ
A Non-2,3,7,8-sub-HxCDD	30.882	199152	1.19	1.0655	0.9857	0.9857	0.0328	0.8077		M
S Total HxCDD					1.174	1.149	0.0329	0.0329		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	16478100	0.43	0.7730	44.4	44.4	0.5193	0.5193	44.41	
1,2,3,4,6,7,8-HpCDF	33.778	21508	0.98	1.4413	0.0906	0.0906	0.0206	0.0206		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.848	16874592	0.44	0.7008	50.2	50.2	0.5728	0.5728	50.16	
1,2,3,4,7,8,9-HpCDF	34.860						0.0264	0.0264		
A Non-2,3,7,8-sub-HpCDF	34.319	13085	1.04	1.3793	0.0710	0.0569	0.0232	0.0569		RQM
S Total HpCDF					0.1615	0.1474	0.0235	0.0235		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	15043397	1.01	0.6472	48.4	48.4	0.2814	0.2814	48.42	
1,2,3,4,6,7,8-HpCDD	34.581	196791	1.07	1.0943	1.195	1.195	0.0568	0.0568		
A Non-2,3,7,8-sub-HpCDD	34.301	716267	1.00	1.0943	4.351	4.351	0.0568	4.351		
S Total HpCDD					5.546	5.546	0.0568	0.0568		
D 13C-OCDD	36.926	22342623	0.87	0.4472	104.1	104.1	0.1817	0.1817	52.05	
OCDF	37.010	25332	0.89	1.4382	0.1776	0.1577	0.0137	0.0137		RQM
OCDD	36.938	4251751	0.89	1.1070	34.4	34.4	0.0897	0.0897		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d
Lims ID: 320-76769-A-17-A
Client ID: 11215702-072221-SS-SJSB074 (8-10)
Sample Type: Client
Inject. Date: 15-Aug-2021 15:57:09 ALS Bottle#: 60 Worklist Smp#: 21
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-17-a 320-76769-a-17-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:25:18 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 17-Aug-2021 16:56:16

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		22221510	5373185	2924	7310	1838		
333.9339	17.855	17.855	0		27323458	6649709	4163	10407	1597	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.972	14767400	3423260	2759	6897	1241		
317.9389	17.356	17.356	0	0.972	19454559	4495671	5159	12897	871	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.371	0	1.001	801436	169328	932	2330	182		
305.8987	17.371	17.371	0	1.001	1039503	231826	1147	2867	202	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	15.935	17.046	-67	0.918	20895	3744	932	2330	4		
	Empc Correction				16839	4142	932	2330	4		
305.8987	15.950	17.046	-66	0.919	21870	5380	1147	2867	5	0.96(0.65-0.89)	
303.9016	16.222	17.046	-49	0.935	35665	7120	932	2330	8		
305.8987	16.237	17.046	-48	0.936	51527	8675	1147	2867	8	0.69(0.65-0.89)	
303.9016	16.479	17.046	-34	0.949	31644	7786	932	2330	8		
305.8987	16.464	17.046	-35	0.949	37078	8604	1147	2867	8	0.85(0.65-0.89)	
303.9016	16.706	17.046	-20	0.963	34078	6989	932	2330	7		
305.8987	16.706	17.046	-20	0.963	61118	13327	1147	2867	12	0.56(0.65-0.89)	
	Empc Correction				44257	9076	1147	2867	8		
303.9016	16.993	17.046	-3	0.979	382421	85913	932	2330	92		M
305.8987	16.978	17.046	-4	0.978	483387	103857	1147	2867	91	0.79(0.65-0.89)	
303.9016	17.794	17.046	45	1.025	62354	13812	932	2330	15		
305.8987	17.794	17.046	45	1.025	77307	16872	1147	2867	15	0.81(0.65-0.89)	M
303.9016	19.200	17.046	129	1.106	47087	8545	932	2330	9		a
305.8987	19.185	17.046	128	1.105	75232	14664	1147	2867	13	0.63(0.65-0.89)	
	Empc Correction				61151	11097	1147	2867	10		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	9596533	2063642	2924	7310	706		
333.9339	18.051	18.051	0	1.011	11775048	2534566	4163	10407	609	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.081	18.081	0	1.002	169651	39426	520	1300	76		
321.8936	18.066	18.081	-1	1.001	242445	49799	437	1092	114	0.70(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.081	18.081	0	1.013	13290186	2896093	2138	5345	1355		
A Non-2,3,7,8-sub-TCDD											
319.8965	18.444	17.500	57	1.022	16488	3450	520	1300	7		
321.8936	18.444	17.500	57	1.022	18688	3363	437	1092	8	0.88(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.253	16006548	2623651	4507	11267	582		
353.8970	22.381	22.367	1	1.253	10126557	1681599	2652	6630	634	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.408	22.394	1	1.001	23843	3727	223	557	17		M
341.8567	22.367	22.394	-2	0.999	14391	2710	236	590	11	1.66(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.328	18007359	2696004	4507	11267	598		
353.8970	23.717	23.703	1	1.328	11402839	1718840	2652	6630	648	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	23.744	23.730	1	1.001	14732	2450	223	557	11		M
341.8567	23.730	23.730	0	1.001	10739	1316	236	590	6	1.37(1.32-1.78)	M
A F1 PeCDFs											
339.8597	20.093						138	345			
341.8567	20.093						189	472			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.044	23.241	-132	0.940	11877	2818	223	557	13		
341.8567	21.071	23.241	-130	0.942	11973	1904	236	590	8	0.99(1.32-1.78)	
	Empc Correction				7662	1818	236	590	8		
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.369	11031194	1585849	1540	3850	1030		
369.8919	24.453	24.426	2	1.370	7028784	958178	1088	2720	881	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453						178	445			
357.8516	24.453						115	287			
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.249	23.349	-126	0.869	8057	1441	178	445	8		
357.8516	21.249	23.349	-126	0.869	6234	827	115	287	7	1.29(1.32-1.78)	
	Empc Correction				5198	929	115	287	8		
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	8307174	1493516	4715	11787	317		
385.8610	30.516	30.503	1	0.949	16467683	3011904	8038	20095	375	0.50(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQ
373.8208	30.529	30.529	0	1.000	32366	5588	167	417	33		
	Empc Correction				27276	5555	167	417	33		
375.8178	30.516	30.529	-1	1.000	21997	4480	183	457	24	1.47(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	8133393	1382419	4715	11787	293		
385.8610	30.702	30.689	1	0.955	15962930	2726221	8038	20095	339	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											M
373.8208	30.715	30.716	0	1.000	7434	1723	167	417	10		M
375.8178	30.702	30.716	-1	1.000	6344	1119	183	457	6	1.17(1.05-1.43)	M
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	7392771	1690689	4715	11787	359		
385.8610	31.514	31.514	0	0.981	14730626	3421623	8038	20095	426	0.50(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						167	417			
375.8178	31.528						183	457			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.326	0	1.006	6947739	1702431	4715	11787	361		
385.8610	32.326	32.326	0	1.006	13388245	3294178	8038	20095	410	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQU
373.8208	32.340						167	417			
375.8178	32.340						183	457			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.197						167	417			
375.8178	30.197						183	457			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.140	0		26620628	6774785	5466	13665	1239		
403.8529	32.140	32.140	0		21379366	5449379	4302	10755	1267	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	9540386	2573577	5466	13665	471		
403.8529	31.701	31.701	0	0.986	7621764	2076098	4302	10755	483	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQM
389.8157	31.714	31.714	0	1.000	11094	2861	329	822	9		M
	Empc Correction				8372	2612	329	822	8		
391.8127	31.714	31.714	0	1.000	6752	2107	333	832	6	1.64(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	11536431	2686263	5466	13665	491		
403.8529	31.807	31.807	0	0.990	9223133	2133312	4302	10755	496	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQMU
389.8157	31.820						329	822			
391.8127	31.820						333	832			
1,2,3,7,8,9-HxCDD											RQ
389.8157	32.140	32.153	-1	1.014	11798	2863	329	822	9		
	Empc Correction				9595	2700	329	822	8		
391.8127	32.140	32.153	-1	1.014	7738	2178	333	832	7	1.52(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											M
389.8157	29.571	30.882	-79	0.930	89165	11011	329	822	33		
391.8127	29.558	30.882	-79	0.929	74018	9737	333	832	29	1.20(1.05-1.43)	
389.8157	30.969	30.882	5	0.974	19005	3560	329	822	11		
391.8127	30.969	30.882	5	0.974	16964	3848	333	832	12	1.12(1.05-1.43)	M

Report Date: 18-Aug-2021 10:25:18 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.766	0	1.051	4974681	1570718	5353	13382	293		
419.8220	33.766	33.766	0	1.051	11503419	3556856	14275	35687	249	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.778	33.778	0	1.000	10665	4080	379	947	11		M
409.7789	33.778	33.778	0	1.000	10843	3407	229	572	15	0.98(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.848	34.847	0	1.084	5148855	1315315	5353	13382	246		
419.8220	34.848	34.847	0	1.084	11725737	3057017	14275	35687	214	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860						379	947			
409.7789	34.860						229	572			
A Non-2,3,7,8-sub-HpCDF											RQM
407.7818	34.082	34.319	-14	1.009	6671	1768	379	947	5		M
409.7789	34.070	34.319	-15	1.009	9658	2773	229	572	12	0.69(0.88-1.20)	
	Empc Correction				6414	1700	229	572	7		
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.076	7551182	2048163	4140	10350	495		
437.8140	34.568	34.568	0	1.076	7492215	2008288	4765	11912	421	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.581	34.580	0	1.000	101837	26434	465	1162	57		
425.7737	34.568	34.580	-1	1.000	94954	27053	543	1357	50	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.984	358413	103542	465	1162	223		
425.7737	34.021	34.301	-17	0.984	357854	102359	543	1357	189	1.00(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.926	0	1.149	10377743	2374640	2152	5380	1103		
471.7750	36.926	36.926	0	1.149	11964880	2772053	1820	4550	1523	0.87(0.76-1.02)	
OCDF											RQM
441.7428	37.010	37.022	-1	1.002	11929	2125	79	197	27		M
443.7399	37.022	37.022	0	1.003	16610	3621	124	310	29	0.72(0.76-1.02)	
	Empc Correction				13403	2387	124	310	19		
OCDD											
457.7377	36.938	36.938	0	1.000	2004235	446961	409	1022	1093		
459.7348	36.938	36.938	0	1.000	2247516	513643	613	1532	838	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 10:25:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d
Lims ID: 320-76769-A-17-A
Client ID: 11215702-072221-SS-SJSB074 (8-10)
Inject. Date: 15-Aug-2021 15:57:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 21

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	34221959	7918931

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	34221959	7918931

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.935	20895	3744	21870	5380	0.1220	0.96	RQ
15.935	16839	4142	21870	5380	0.1105		Empc Correction
16.222	35665	7120	51527	8675	0.2488	0.69	
16.479	31644	7786	37078	8604	0.1961	0.85	
16.706	34078	6989	61118	13327	0.2717	0.56	RQ
16.706	34078	6989	44257	9076	0.2236		Empc Correction
16.993	382421	85913	483387	103857	2.47	0.79	M
17.794	62354	13812	77307	16872	0.3986	0.81	M
19.200	47087	8545	75232	14664	0.3491	0.63	RQa
19.200	47087	8545	61151	11097	0.3089		Empc Correction
Signal Totals:							
	610088	134307	776577	163561			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1421663	305288				0.76	RQMa
	1386665	297868					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.057 = (1421663 * 100.000) / (34221959 * 1.024)
Empc Amount: 3.957 = (1386665 * 100.000) / (34221959 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:25:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d
Lims ID: 320-76769-A-17-A
Client ID: 11215702-072221-SS-SJSB074 (8-10)
Inject. Date: 15-Aug-2021 15:57:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 21

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	21371581	4598208

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	21371581	4598208

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.444	16488	3450	18688	3363	0.1312	0.88	
Signal Totals:							
	16488	3450	18688	3363			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	35176	6813				0.88	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1312 = (35176 * 100.000) / (21371581 * 1.254)

Report Date: 18-Aug-2021 10:25:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Lims ID:	320-76769-A-17-A		
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Inject. Date:	15-Aug-2021 15:57:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	21

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	26133105	4305250
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	29410198	4414844

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	27771651	4360047

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.044	11877	2818	11973	1904	0.0826	0.99	RQ
21.044	11877	2818	7662	1818	0.0677		Empc Correction
Signal Totals:							
	11877	2818	7662	1818			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23850	4722				0.99	RQ
	19539	4636					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0826 = (23850 * 100.000) / (27771651 * 1.040)
Empc Amount: 0.0677 = (19539 * 100.000) / (27771651 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:25:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Lims ID:	320-76769-A-17-A		
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Inject. Date:	15-Aug-2021 15:57:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	21

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	18059978	2544027

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	18059978	2544027

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	8057	1441	6234	827	0.0755	1.29	RQ
21.249	8057	1441	5198	929	0.0700		Empc Correction
Signal Totals:							
	8057	1441	5198	929			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	14291	2268				1.29	RQ
	13255	2370					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0755 = (14291 * 100.000) / (18059978 * 1.048)

Empc Amount: 0.0700 = (13255 * 100.000) / (18059978 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d
Lims ID: 320-76769-A-17-A
Client ID: 11215702-072221-SS-SJSB074 (8-10)
Inject. Date: 15-Aug-2021 15:57:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 21

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	24774857	4505420
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	24096323	4108640
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	22123397	5112312
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	20335984	4996609

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	22832640	4680745

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 18-Aug-2021 10:25:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d
Lims ID: 320-76769-A-17-A
Client ID: 11215702-072221-SS-SJSB074 (8-10)
Inject. Date: 15-Aug-2021 15:57:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 21

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	17162150	4649675
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	20759564	4819575
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	18960857	4734625

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.571	89165	11011	74018	9737	0.8077	1.20	
30.969	19005	3560	16964	3848	0.1780	1.12	M
Signal Totals:							
	108170	14571	90982	13585			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	199152	28156				1.19	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.9857 = (199152 * 100.000) / (18960857 * 1.066)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 10:25:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Lims ID:	320-76769-A-17-A		
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Inject. Date:	15-Aug-2021 15:57:09	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	21

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	16478100	5127574
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	16874592	4372332

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	16676346	4749953

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.082	6671	1768	9658	2773	0.0710	0.69	RQM
34.082	6671	1768	6414	1700	0.0569		Empc Correction
Signal Totals:							
	6671	1768	6414	1700			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	16329	4541				0.69	RQM
	13085	3468					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0710 = (16329 * 100.000) / (16676346 * 1.379)
Empc Amount: 0.0569 = (13085 * 100.000) / (16676346 * 1.379)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 10:25:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d
Lims ID: 320-76769-A-17-A
Client ID: 11215702-072221-SS-SJSB074 (8-10)
Inject. Date: 15-Aug-2021 15:57:09 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 21

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	15043397	4056451

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	15043397	4056451

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	358413	103542	357854	102359	4.35	1.00	
Signal Totals:							
	358413	103542	357854	102359			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	716267	205901				1.00	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.351 = (716267 * 100.000) / (15043397 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 16.993 Area = 396113

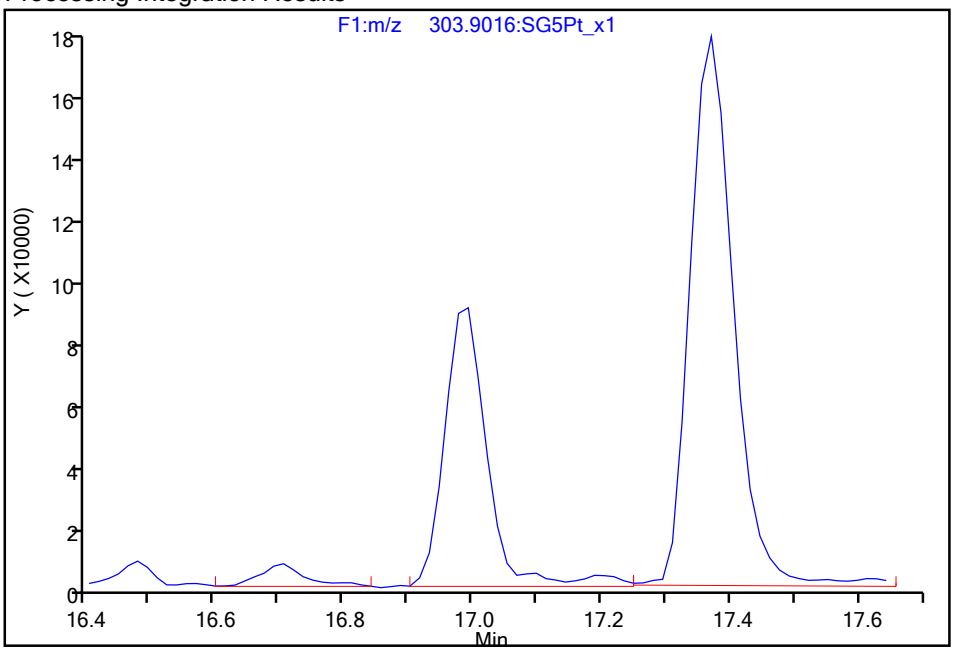

Manual Integration Results

RT = 16.993 Area = 382421 M

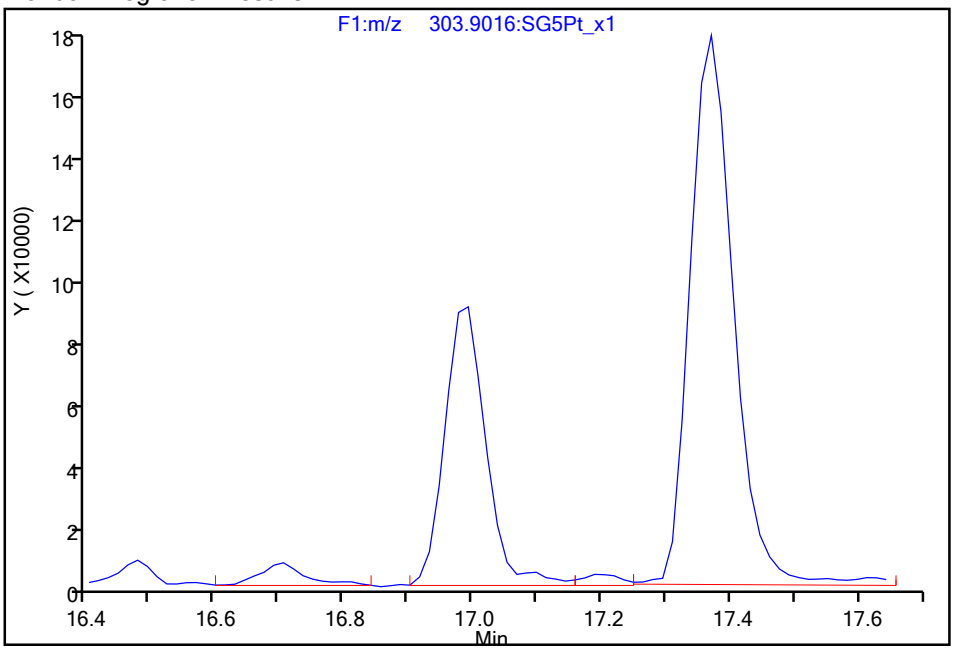

Reviewer: krenns, 18-Aug-2021 10:24:47

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.89- 19.20)

Signal: 2

Processing Integration Results

RT = 17.794 Area = 98290

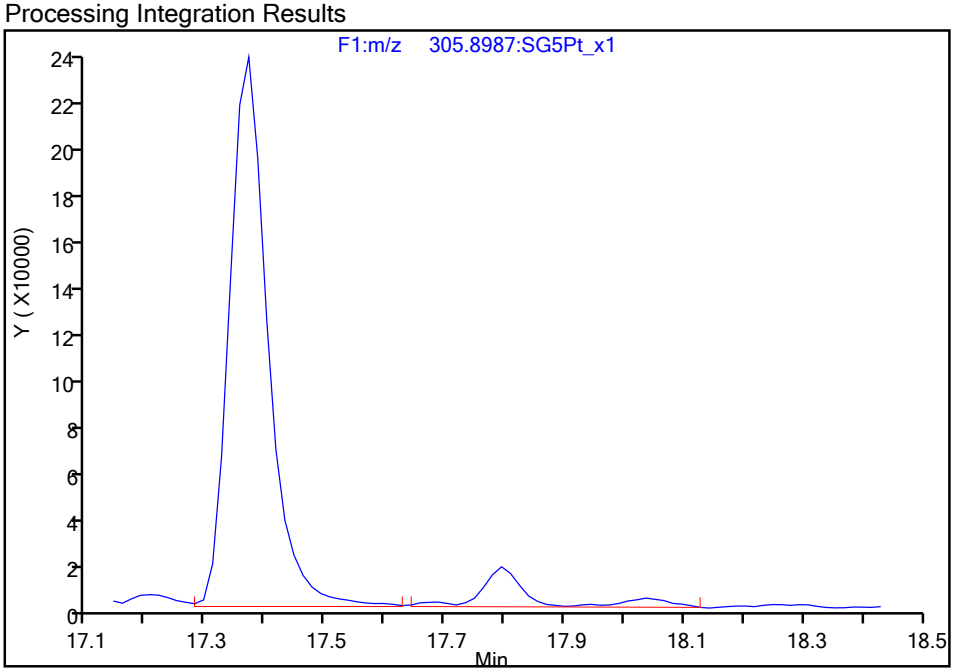

Manual Integration Results

RT = 17.794 Area = 77307 M

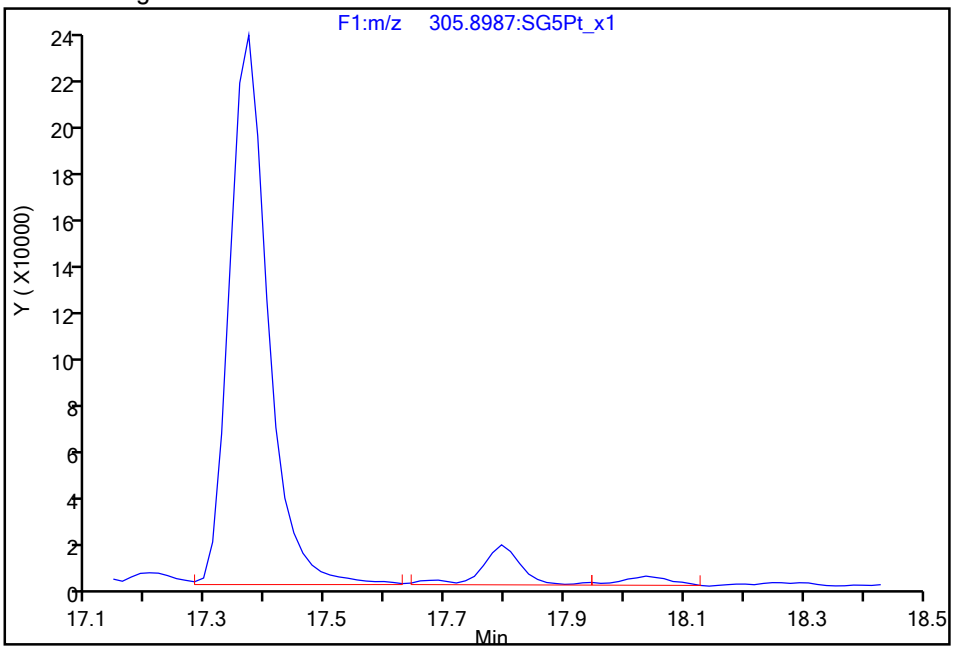

Reviewer: dadunj, 18-Aug-2021 11:30:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.37
Area: 20158
Amount: 0.170511
Amount Units: pg/ul

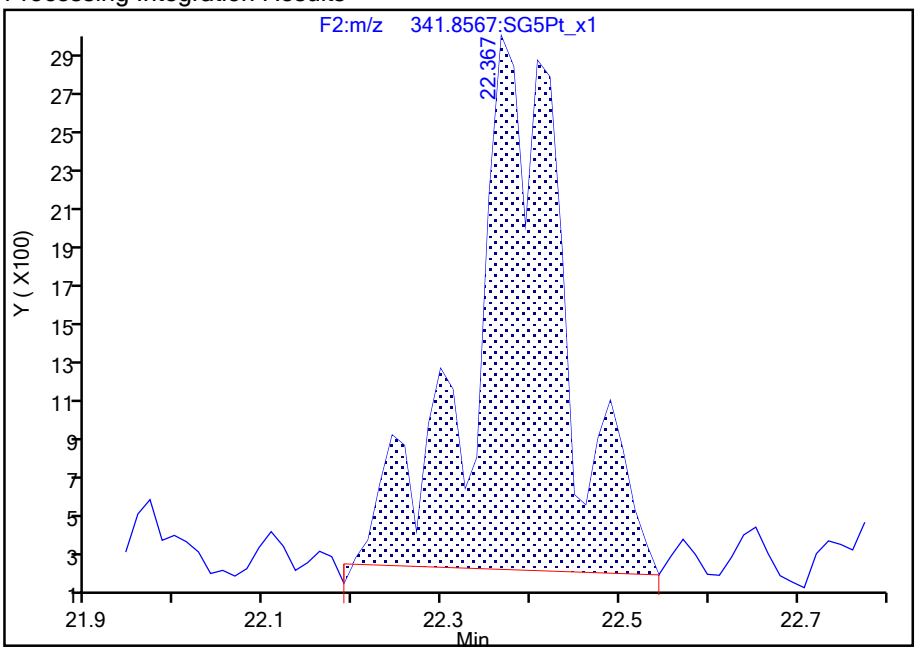

Manual Integration Results

RT: 22.37
Area: 14391
Amount: 0.137876
Amount Units: pg/ul

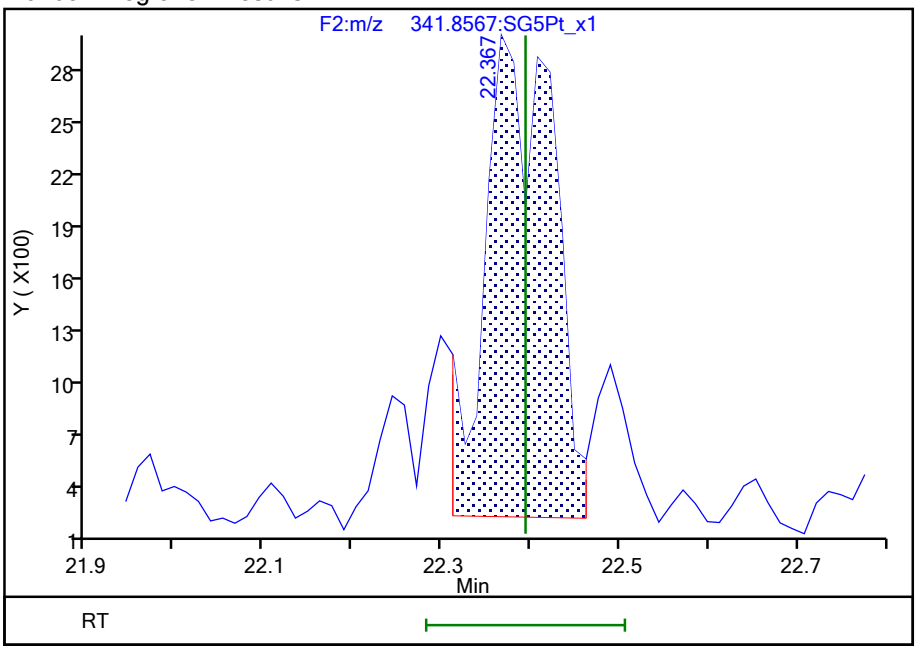

Reviewer: dadunj, 18-Aug-2021 11:30:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

RT: 22.41
Area: 27126
Amount: 0.170511
Amount Units: pg/ul

Processing Integration Results

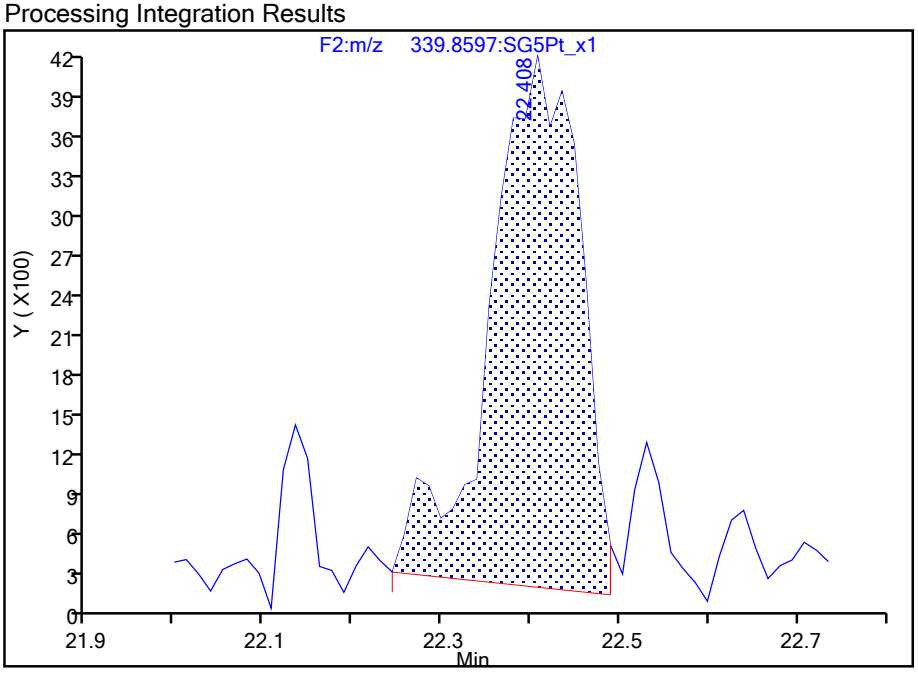

RT: 22.41
Area: 23843
Amount: 0.137876
Amount Units: pg/ul

Manual Integration Results

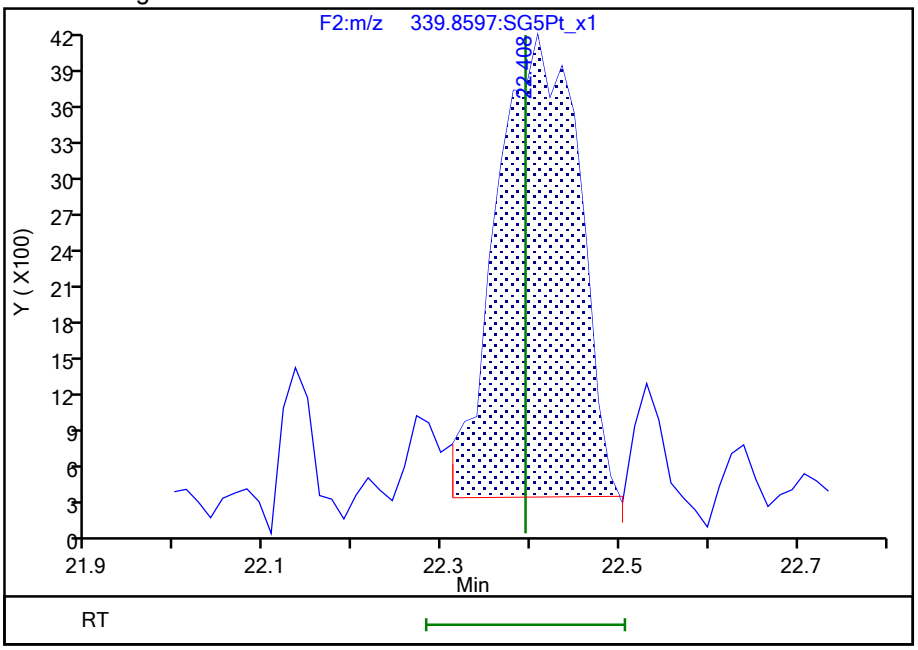

Reviewer: dadunj, 18-Aug-2021 11:30:59
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.73
Area: 10321
Amount: 0.092592
Amount Units: pg/ul

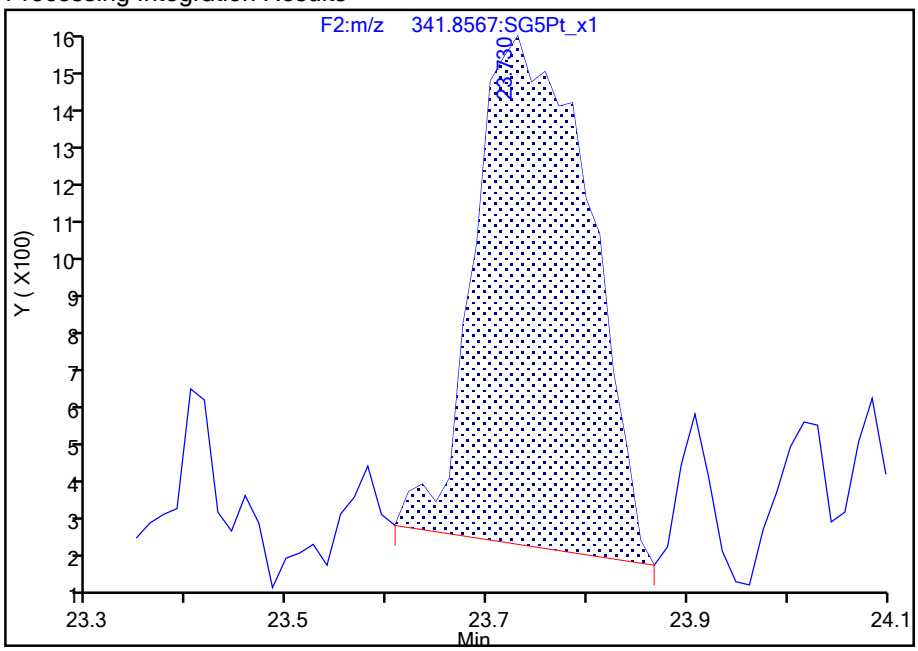

Manual Integration Results

RT: 23.73
Area: 10739
Amount: 0.085040
Amount Units: pg/ul

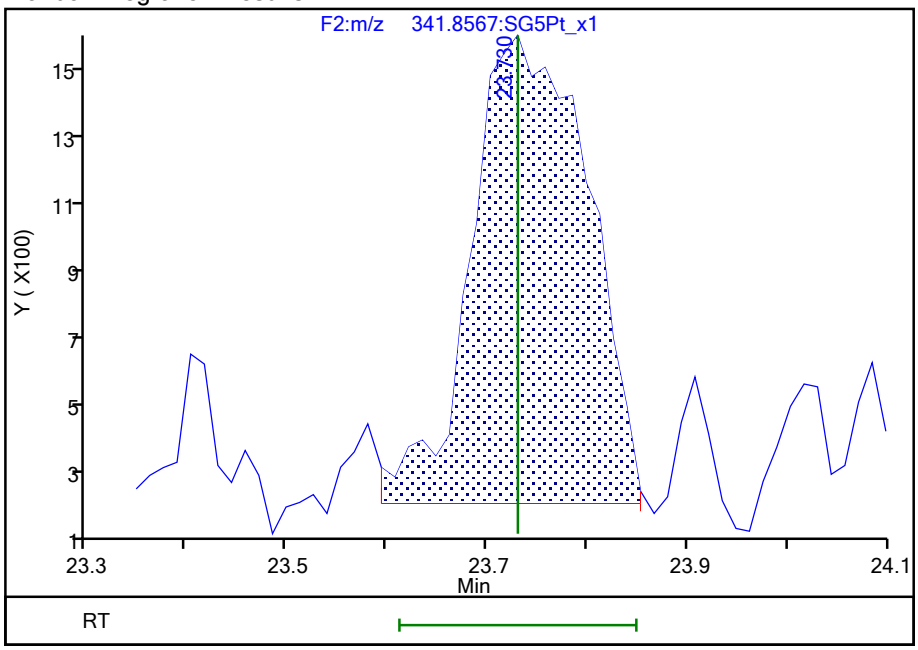

Reviewer: dadunj, 18-Aug-2021 11:31:08

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 23.74
Area: 17412
Amount: 0.092592
Amount Units: pg/ul

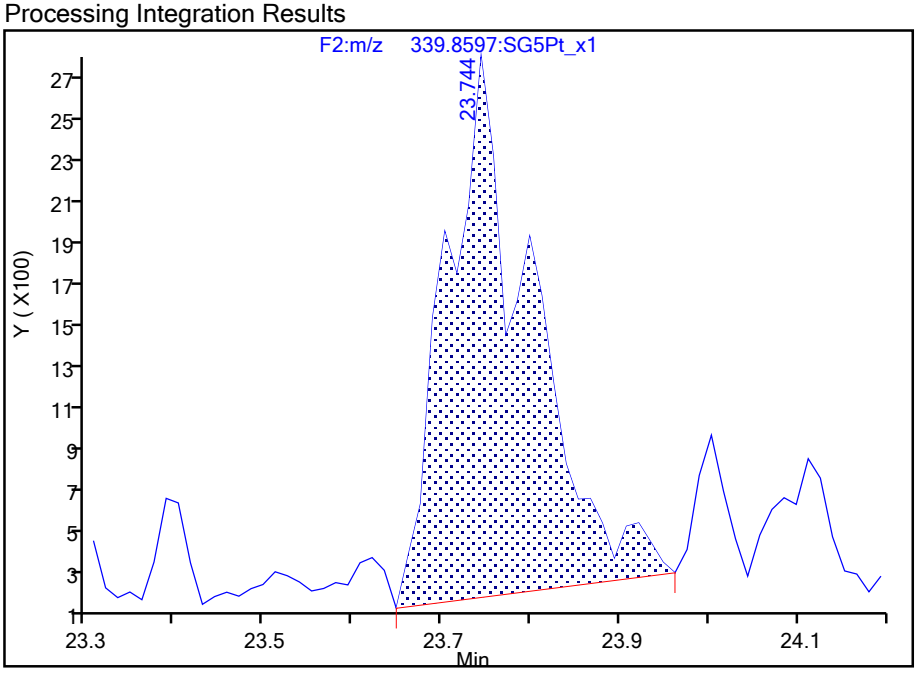

Manual Integration Results

RT: 23.74
Area: 14732
Amount: 0.085040
Amount Units: pg/ul

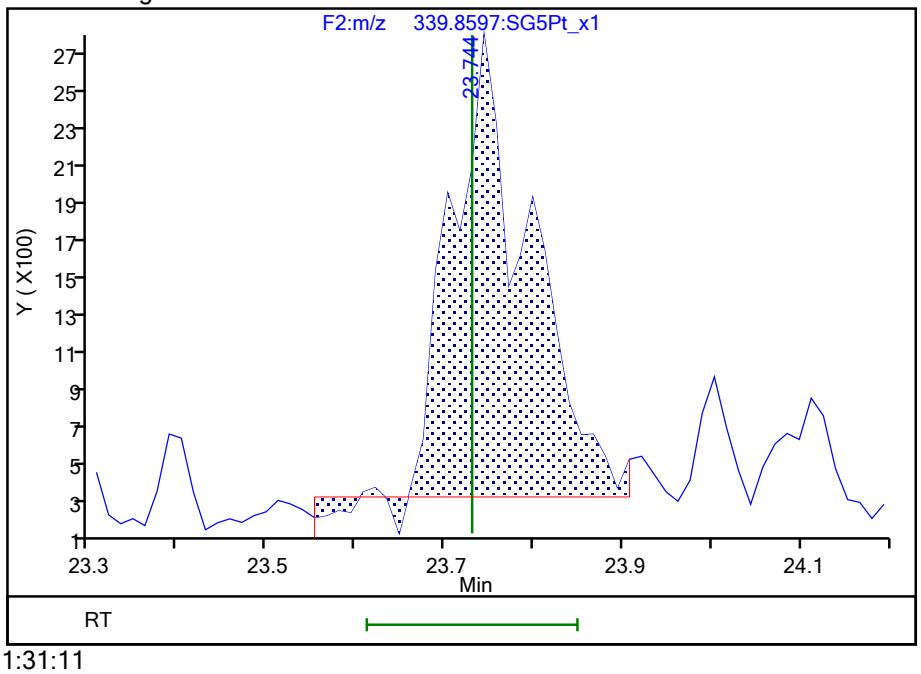

Reviewer: dadunj, 18-Aug-2021 11:31:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 30.70
Area: 7803
Amount: 0.061159
Amount Units: pg/ul

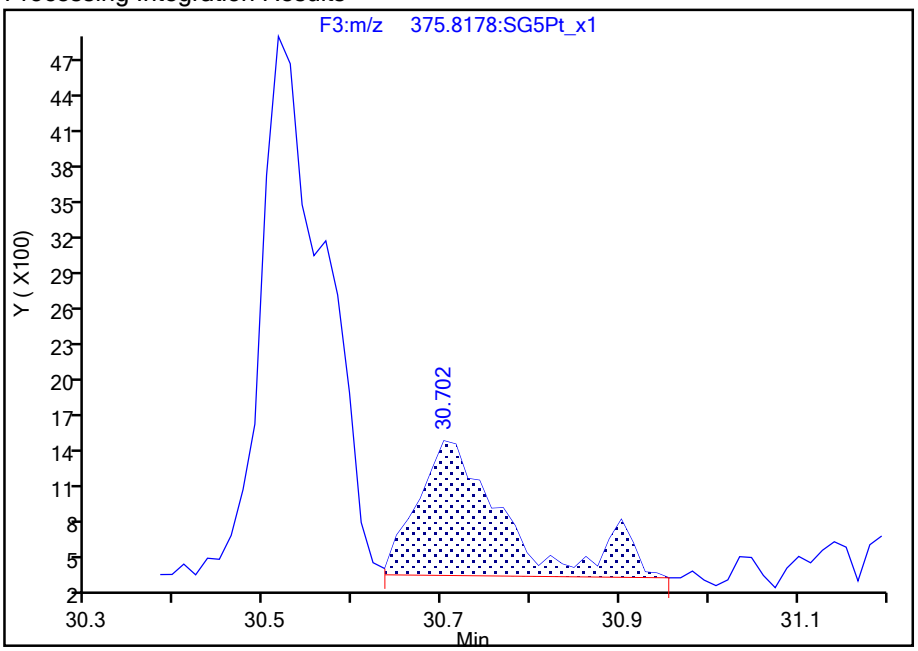

Manual Integration Results

RT: 30.70
Area: 6344
Amount: 0.050780
Amount Units: pg/ul

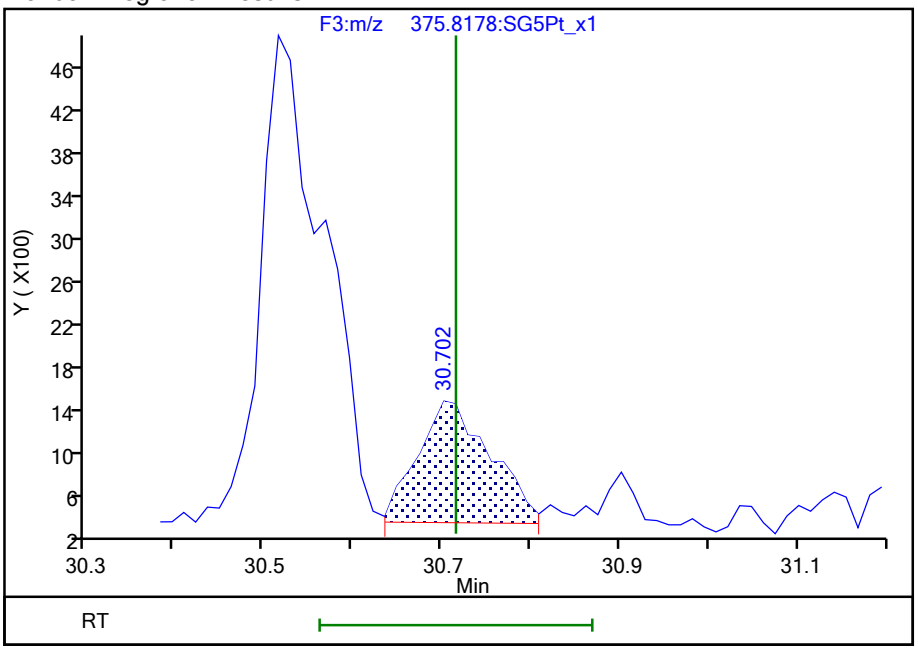

Reviewer: dadunj, 18-Aug-2021 11:31:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.72
Area: 8791
Amount: 0.061159
Amount Units: pg/ul

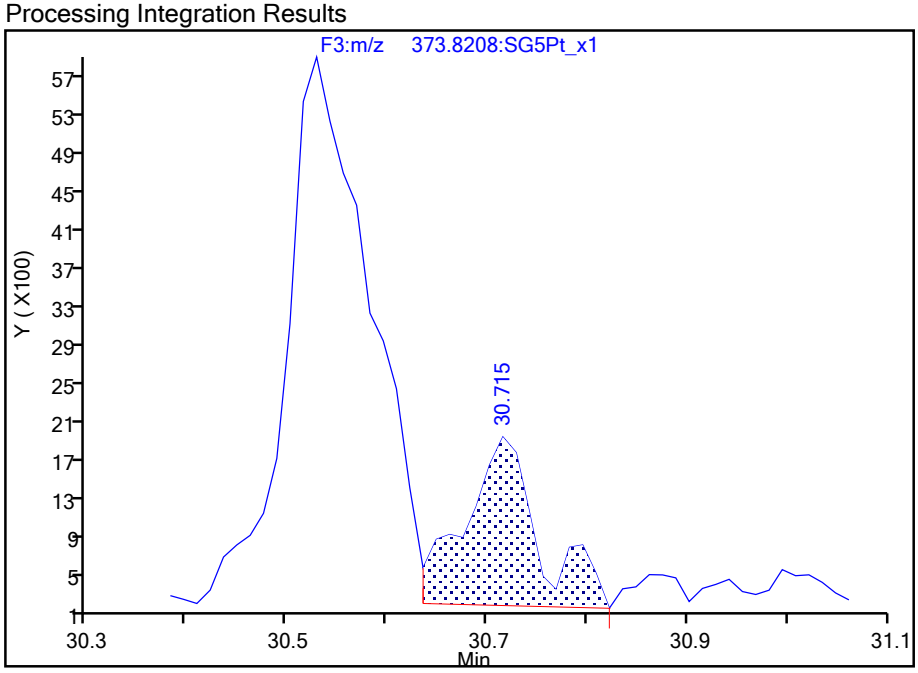

Manual Integration Results

RT: 30.72
Area: 7434
Amount: 0.050780
Amount Units: pg/ul

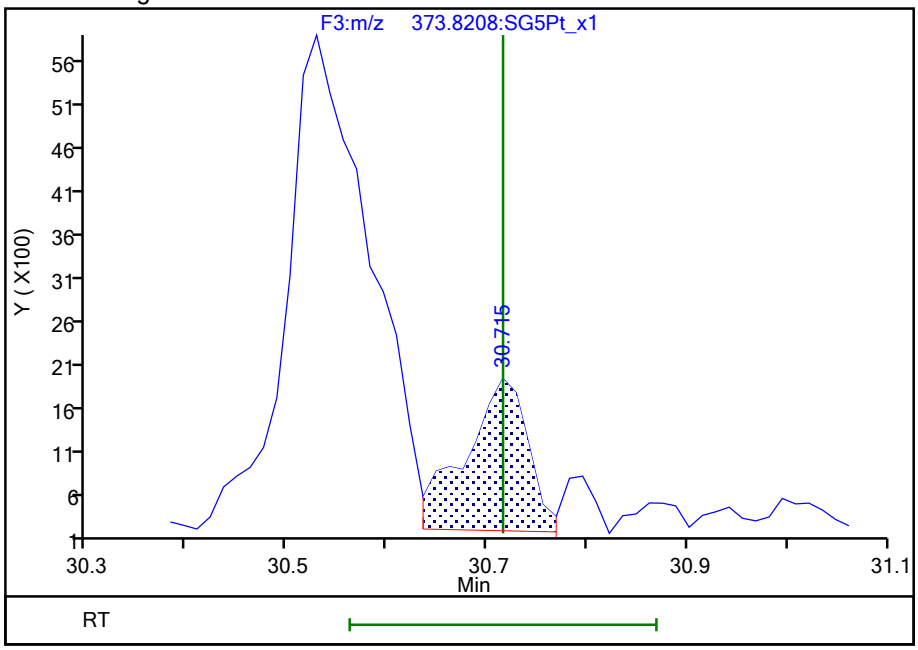

Reviewer: dadunj, 18-Aug-2021 11:31:30

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.71
Area: 15431
Amount: 0.154164
Amount Units: pg/ul

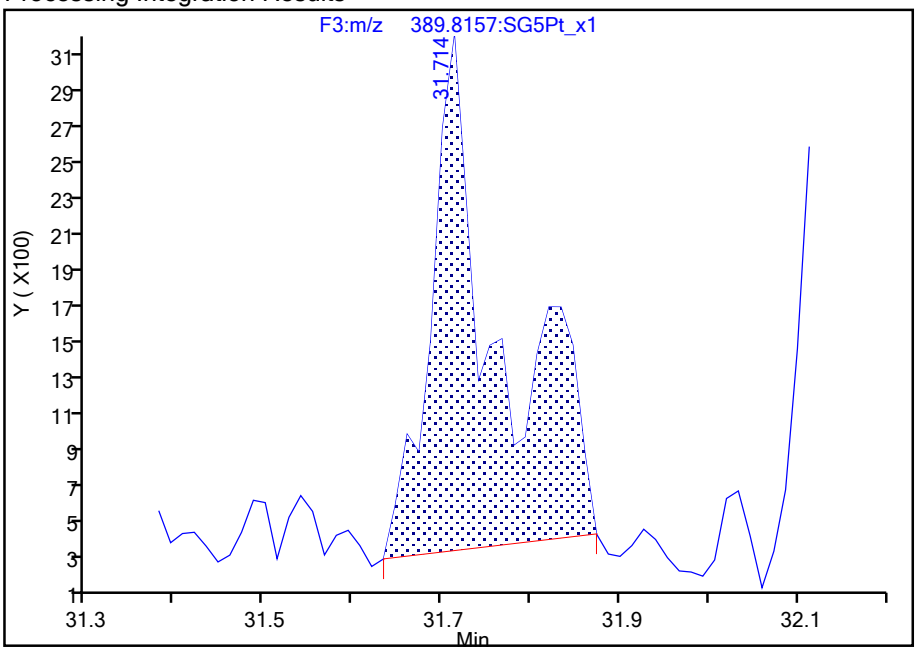

Manual Integration Results

RT: 31.71
Area: 11094
Amount: 0.097727
Amount Units: pg/ul

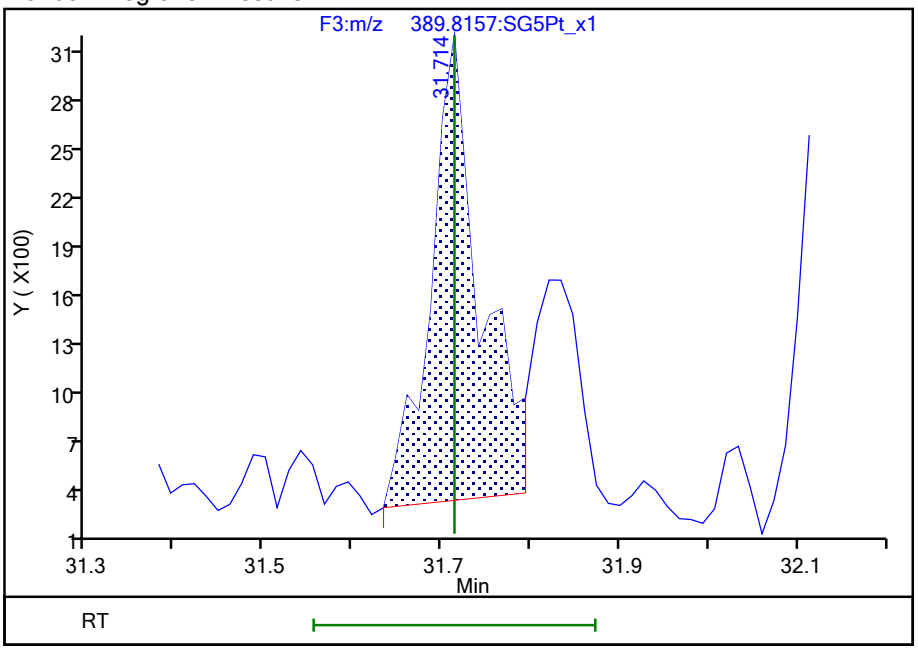

Reviewer: dadunj, 18-Aug-2021 11:31:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.71
Area: 12721
Amount: 0.154164
Amount Units: pg/ul

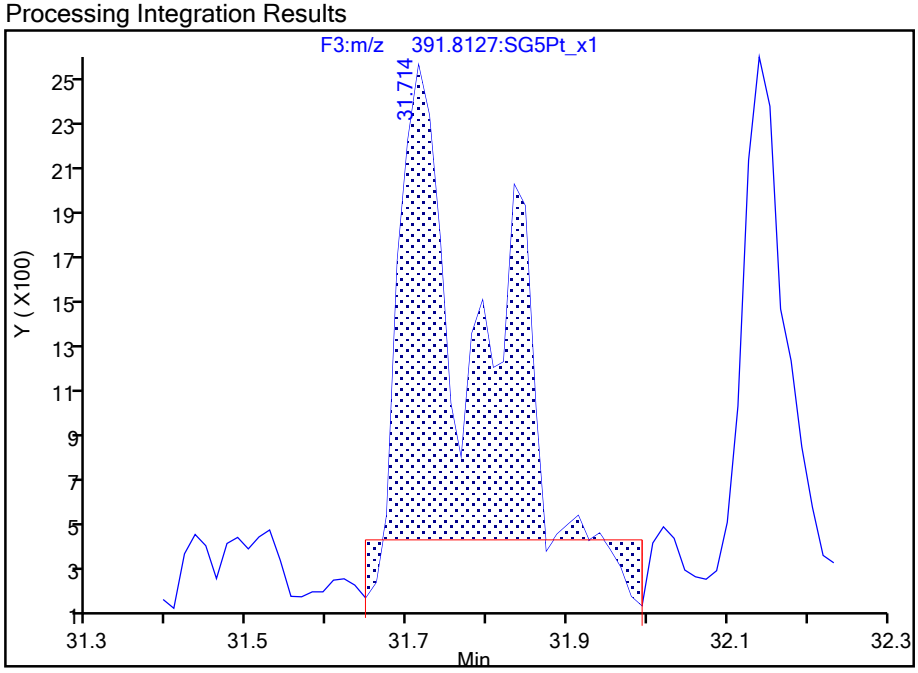

Manual Integration Results

RT: 31.71
Area: 6752
Amount: 0.097727
Amount Units: pg/ul

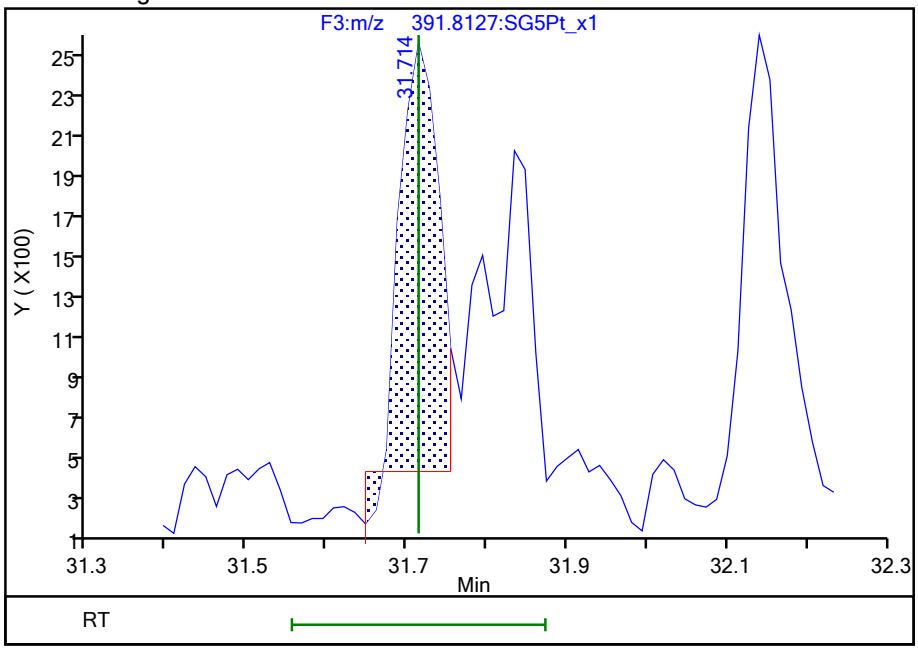

Reviewer: dadunj, 18-Aug-2021 11:31:46
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (29.36- 32.41)

Signal: 2

Processing Integration Results

RT = 30.969 Area = 20621

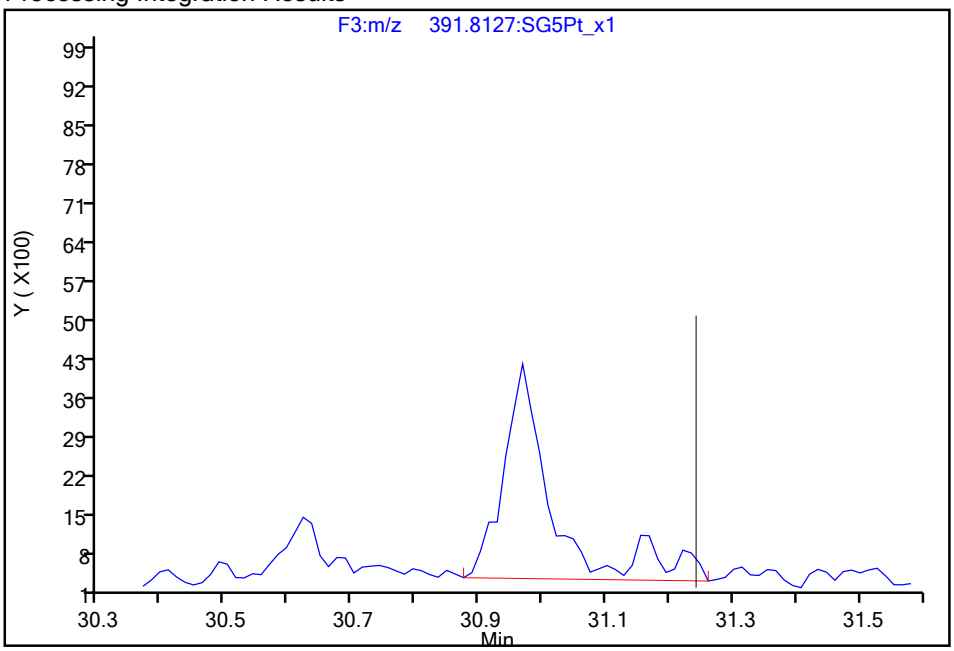

Manual Integration Results

RT = 30.969 Area = 16964 M

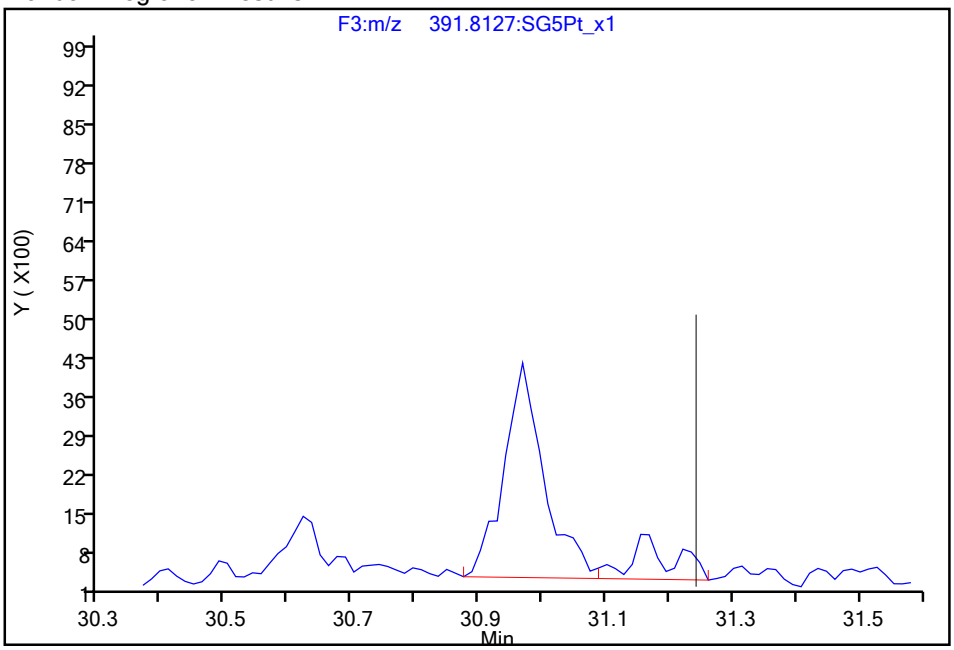

Reviewer: dadunj, 18-Aug-2021 11:31:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.78
Area: 13044
Amount: 0.103795
Amount Units: pg/ul

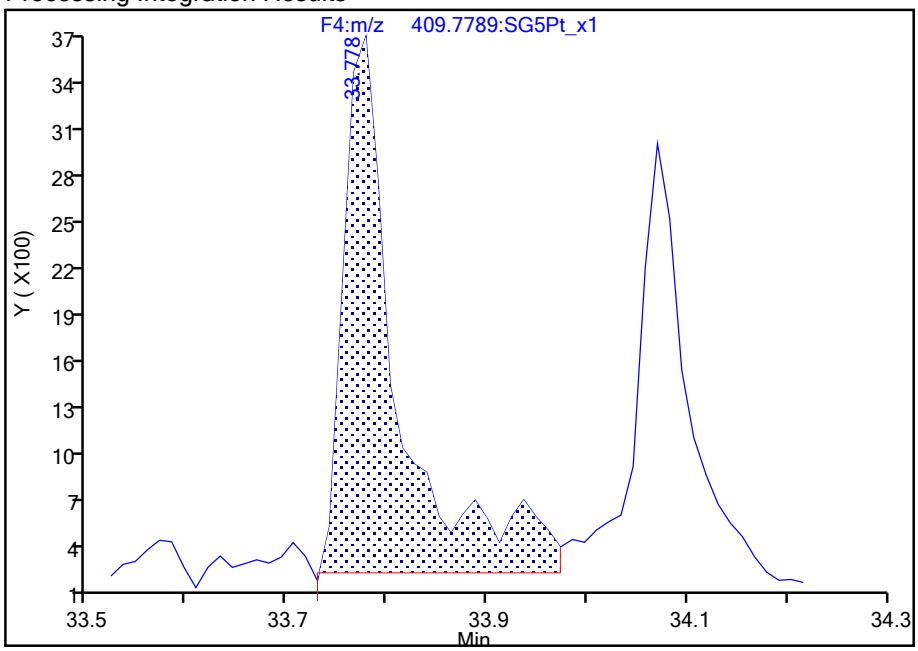

Manual Integration Results

RT: 33.78
Area: 10843
Amount: 0.090561
Amount Units: pg/ul

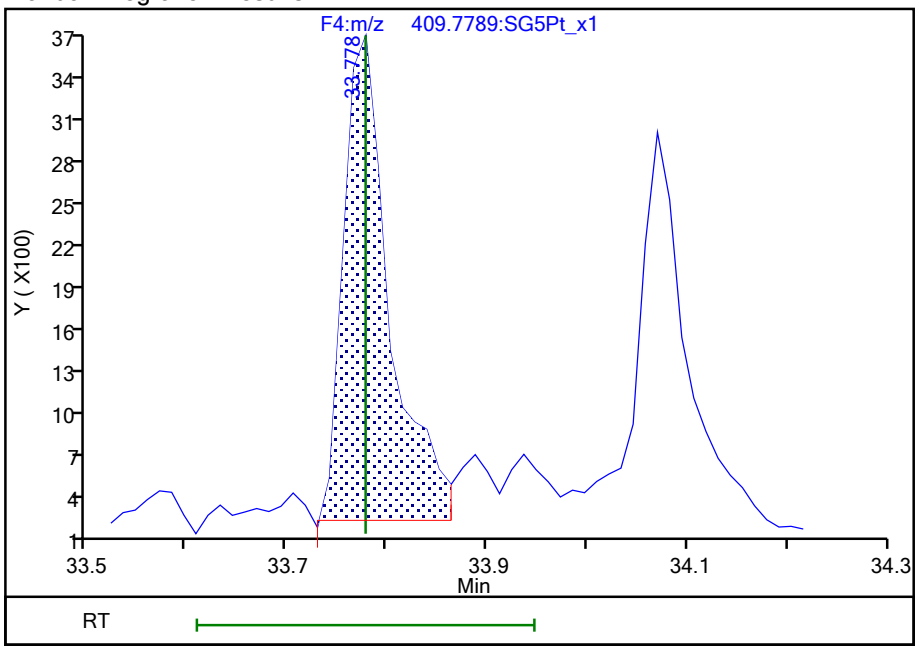

Reviewer: dadunj, 18-Aug-2021 11:31:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.78
Area: 11607
Amount: 0.103795
Amount Units: pg/ul

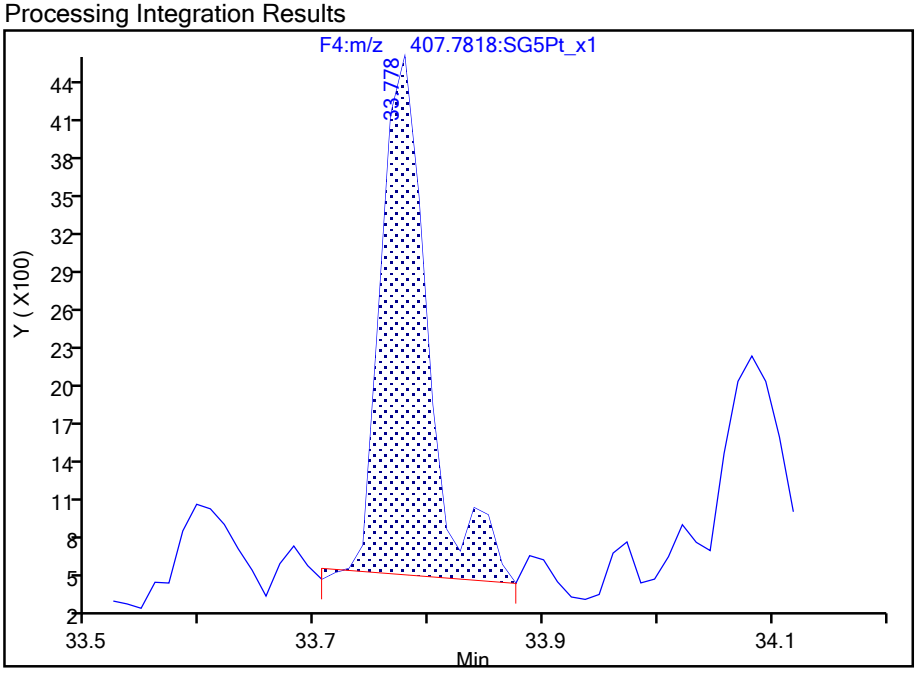

Manual Integration Results

RT: 33.78
Area: 10665
Amount: 0.090561
Amount Units: pg/ul

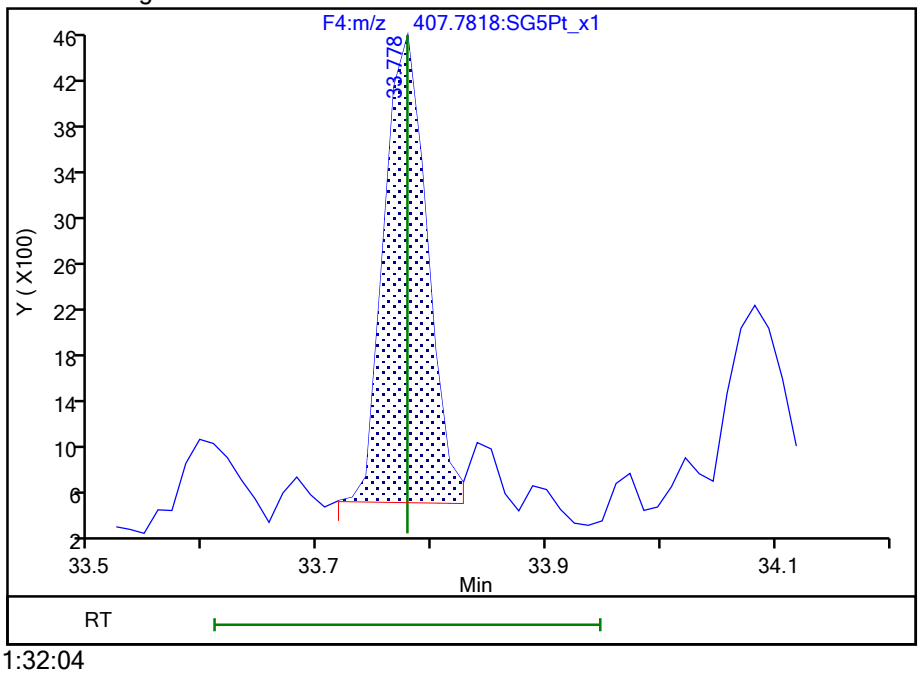

Reviewer: dadunj, 18-Aug-2021 11:32:04

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7818, RT: (33.75- 34.89)

Signal: 1

Processing Integration Results

RT = 34.082 Area = 8629

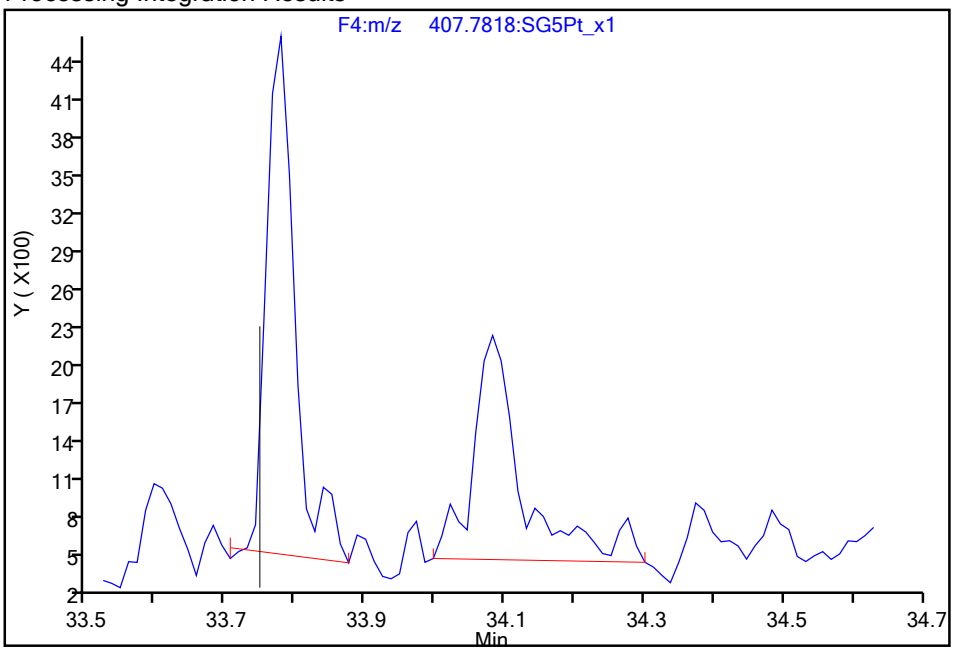

Manual Integration Results

RT = 34.082 Area = 6671 M

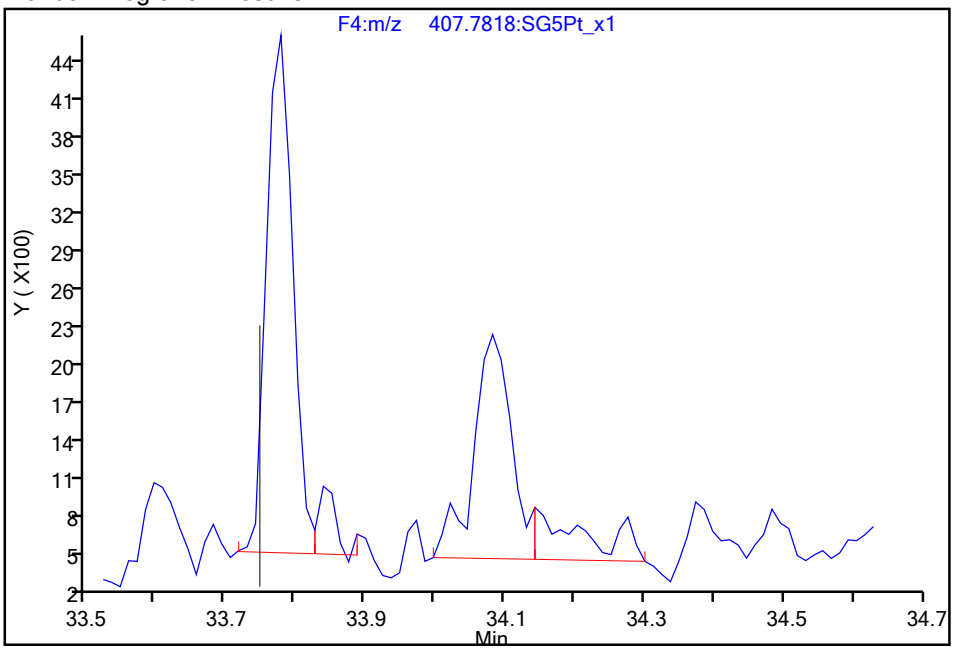

Reviewer: dadunj, 18-Aug-2021 11:32:09

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d				
Injection Date:	15-Aug-2021 15:57:09	Instrument ID:	10D5		
Lims ID:	320-76769-A-17-A	Lab Sample ID:	320-76769-17		
Client ID:	11215702-072221-SS-SJSB074 (8-10)				
Operator ID:	DB	ALS Bottle#:	60	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.01
Area: 12806
Amount: 0.183093
Amount Units: pg/ul

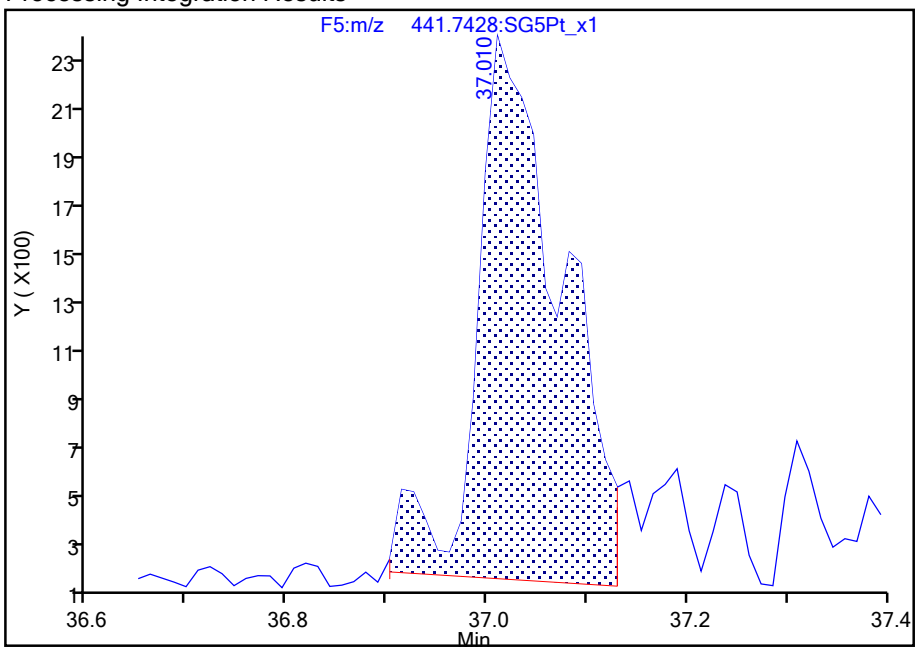

Manual Integration Results

RT: 37.01
Area: 11929
Amount: 0.177634
Amount Units: pg/ul

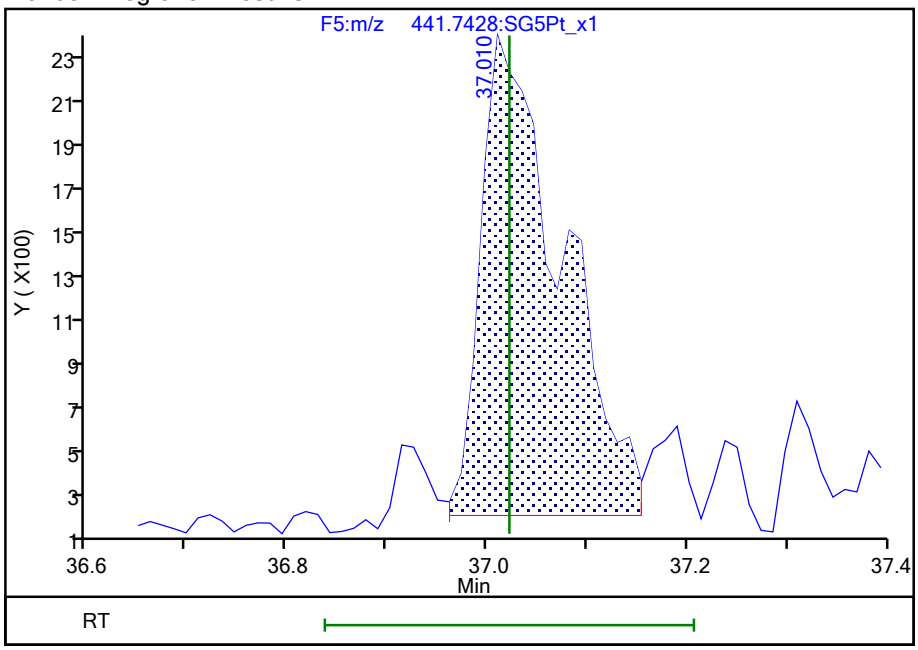

Reviewer: dadunj, 18-Aug-2021 11:32:25

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

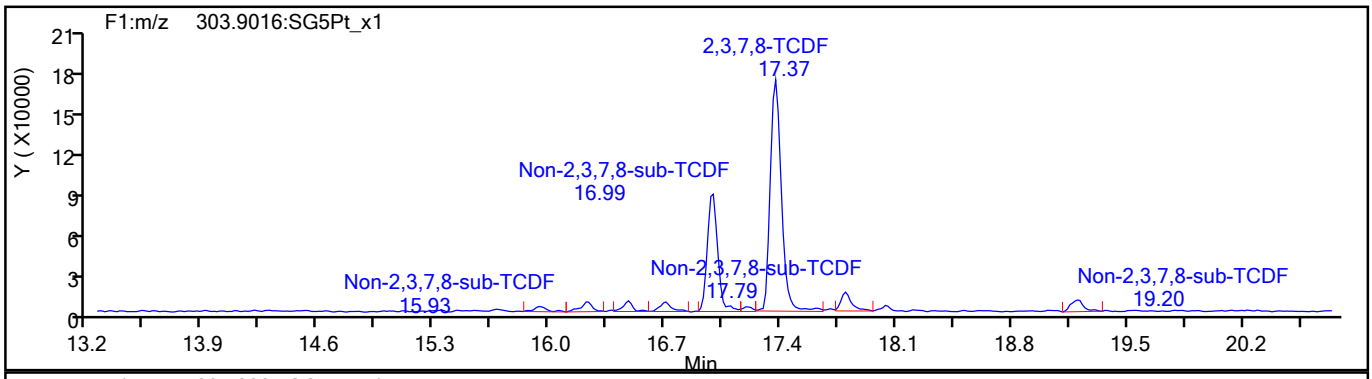

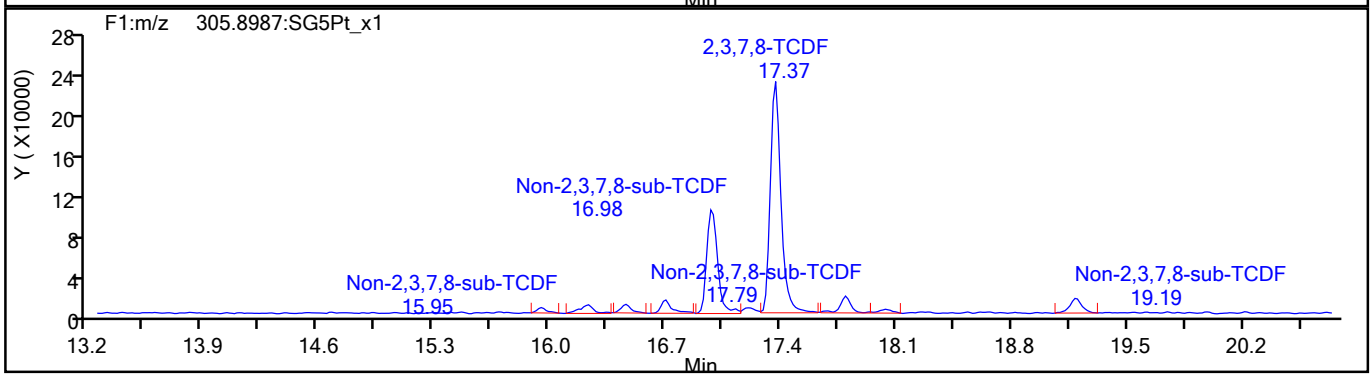

TCDF Standards

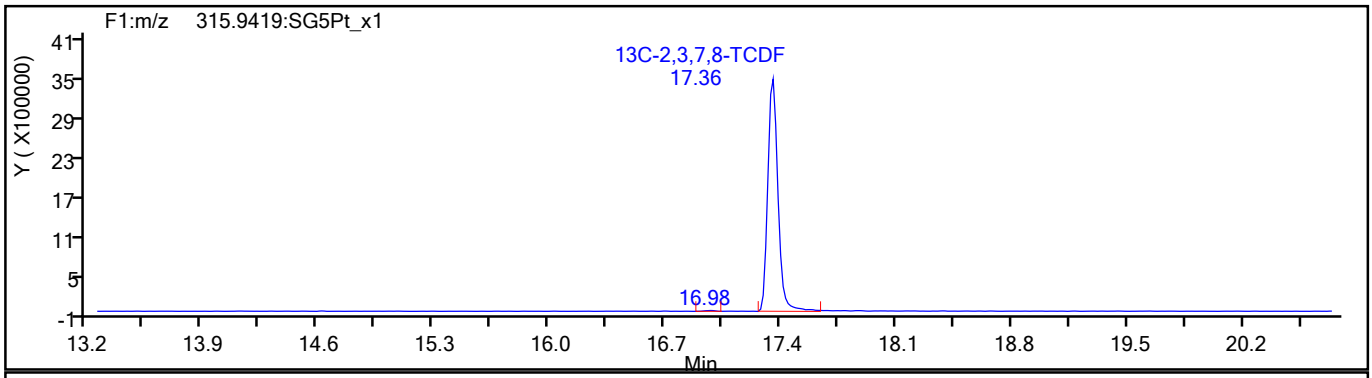

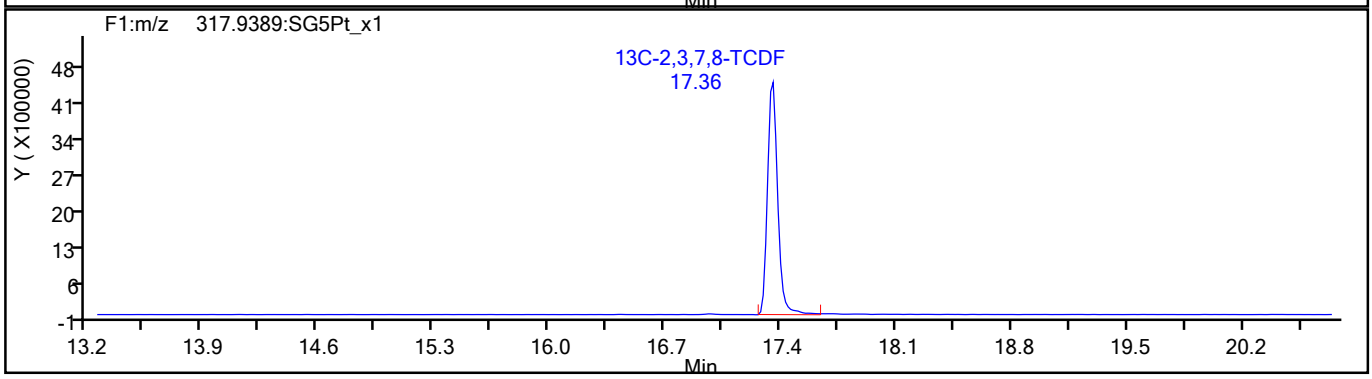

775234

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

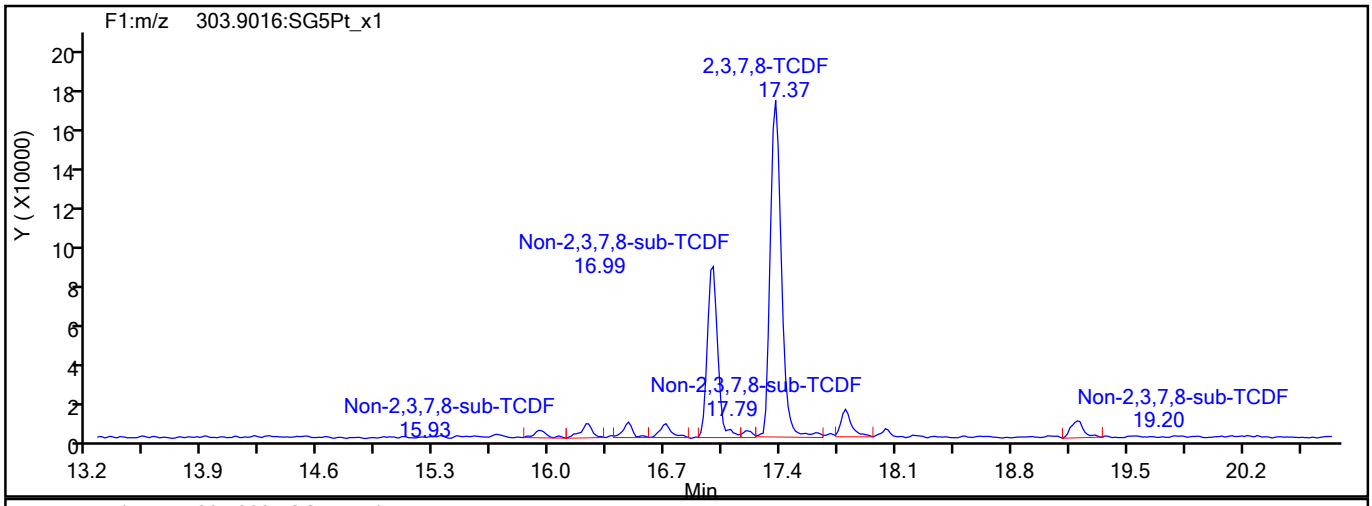

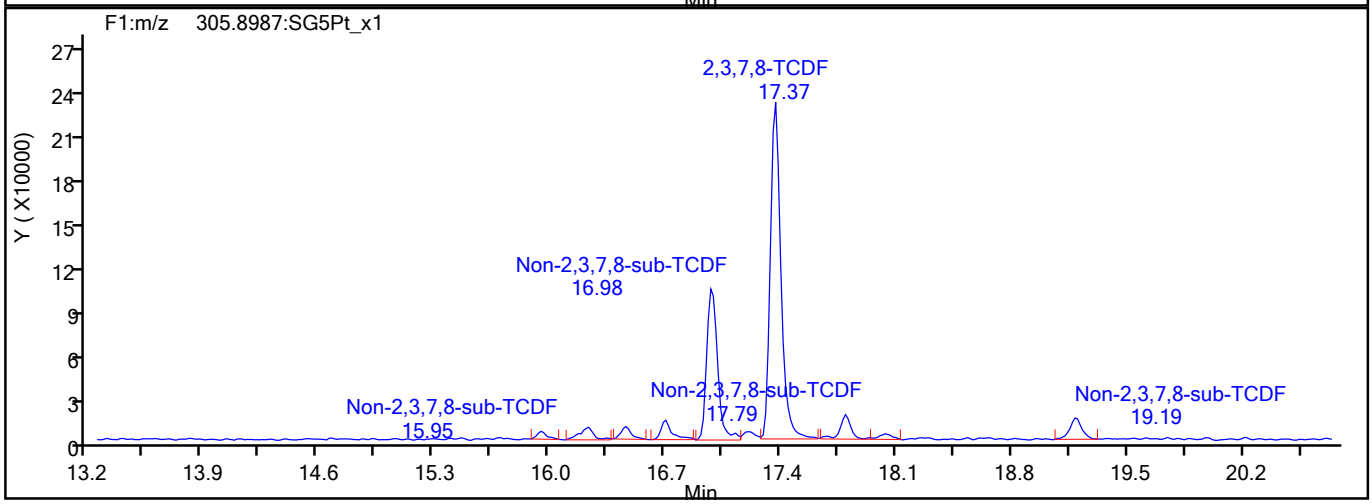

TCDF Interference Mass

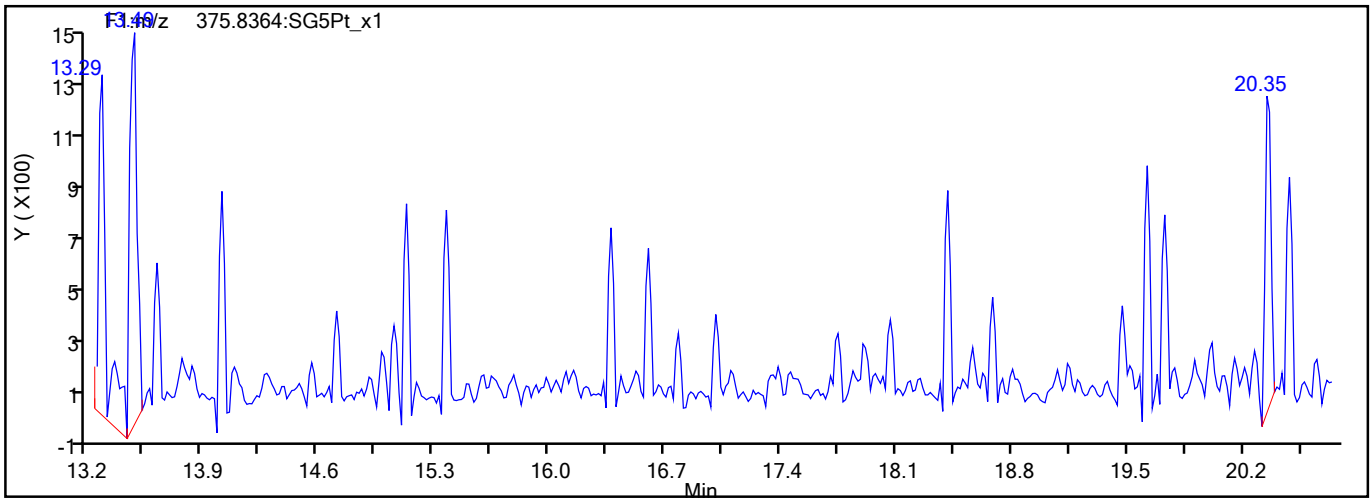

775235

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

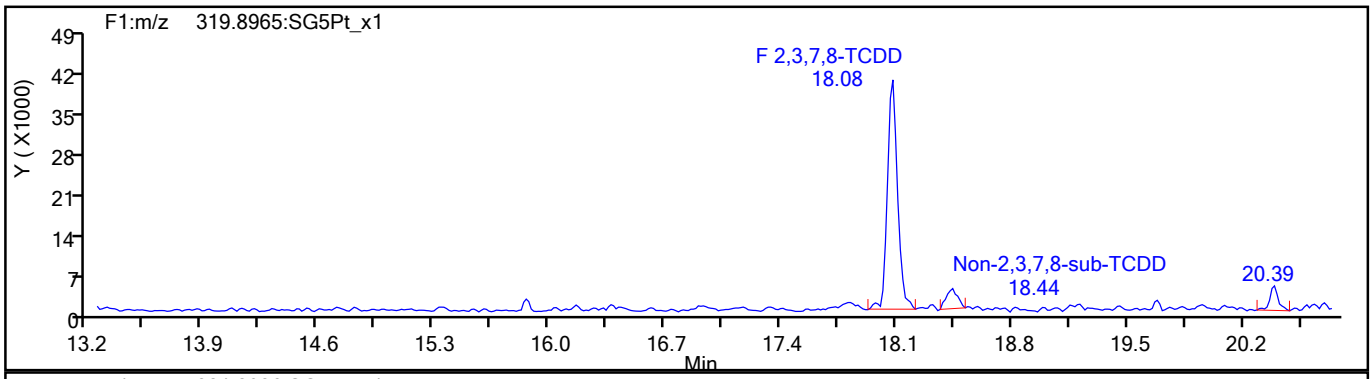

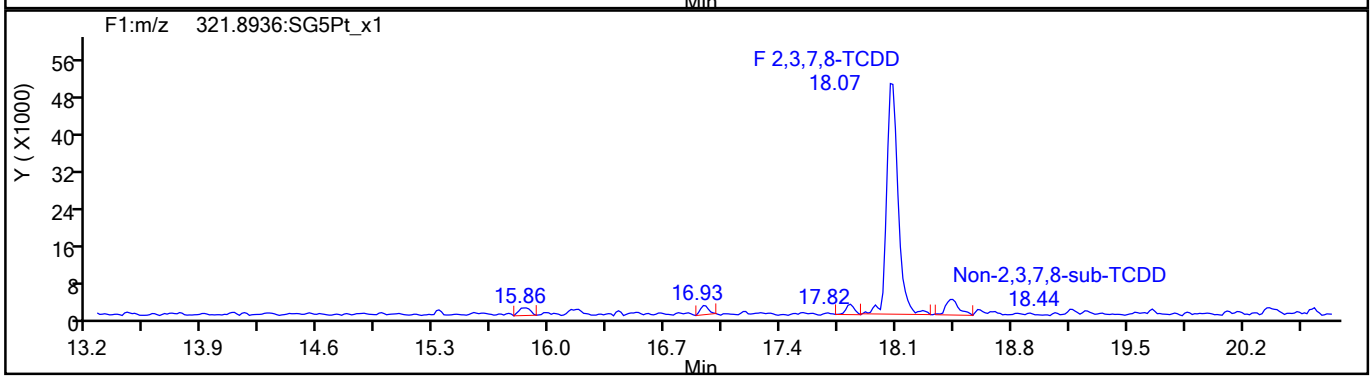

TCDD Standards

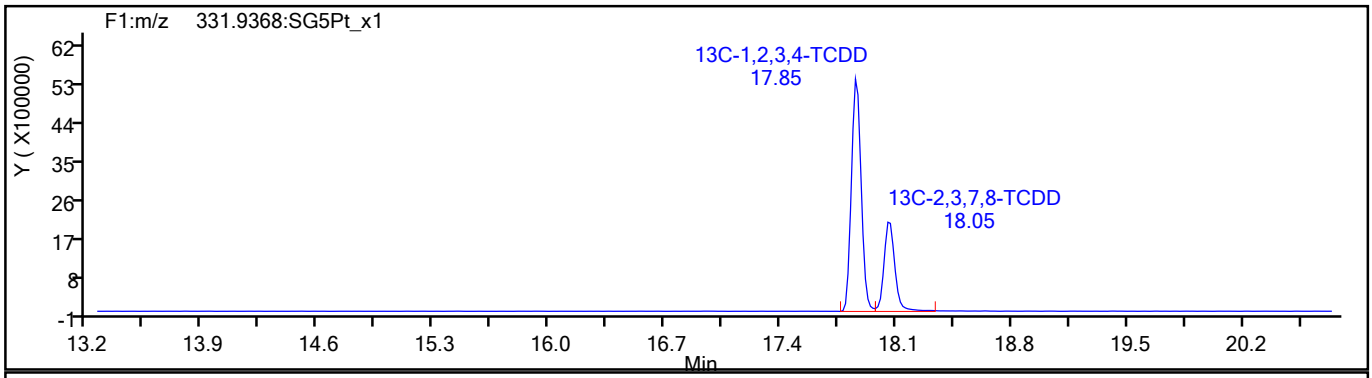

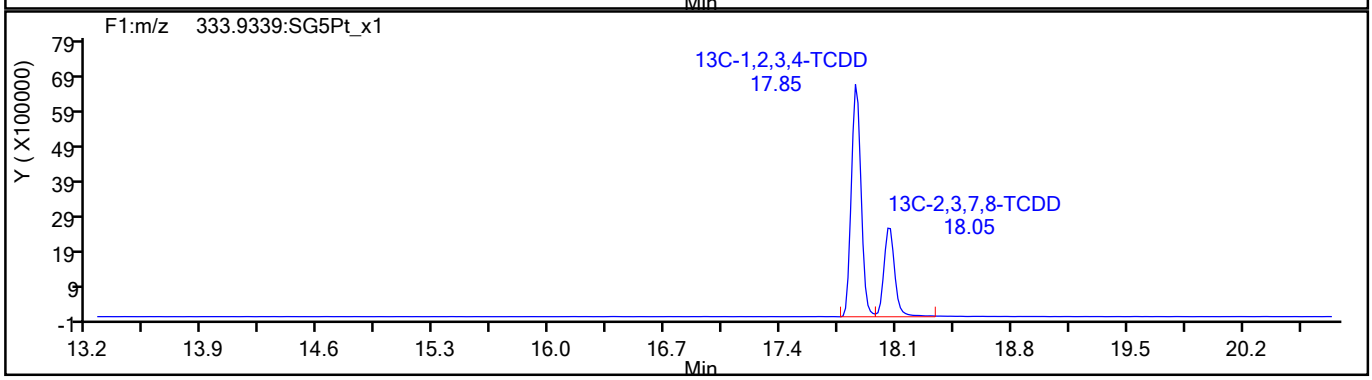

775236

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

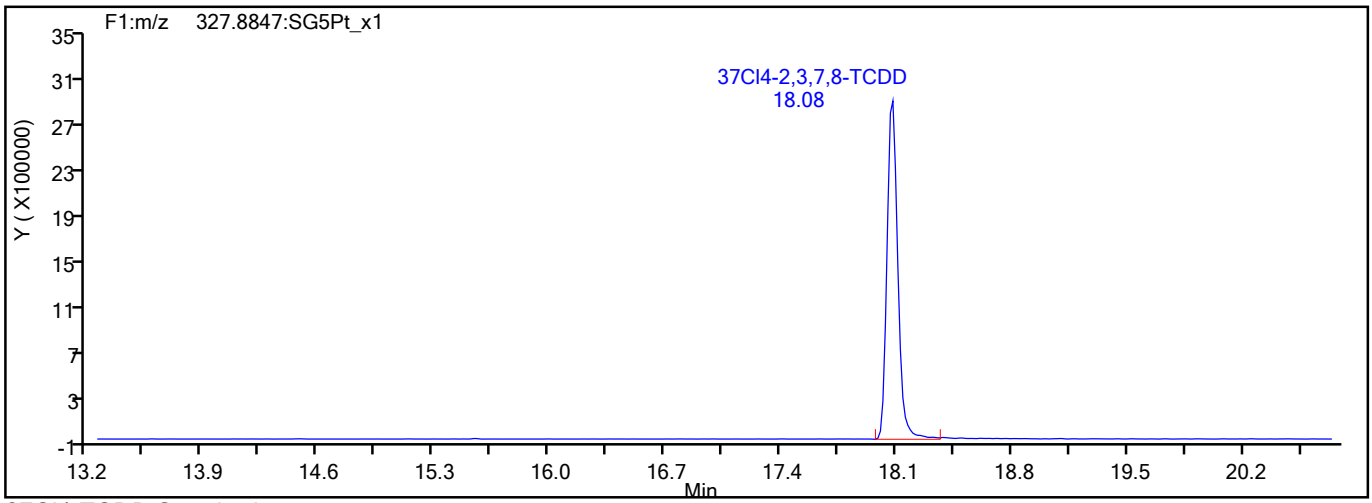

37Cl4-TCDD Standards

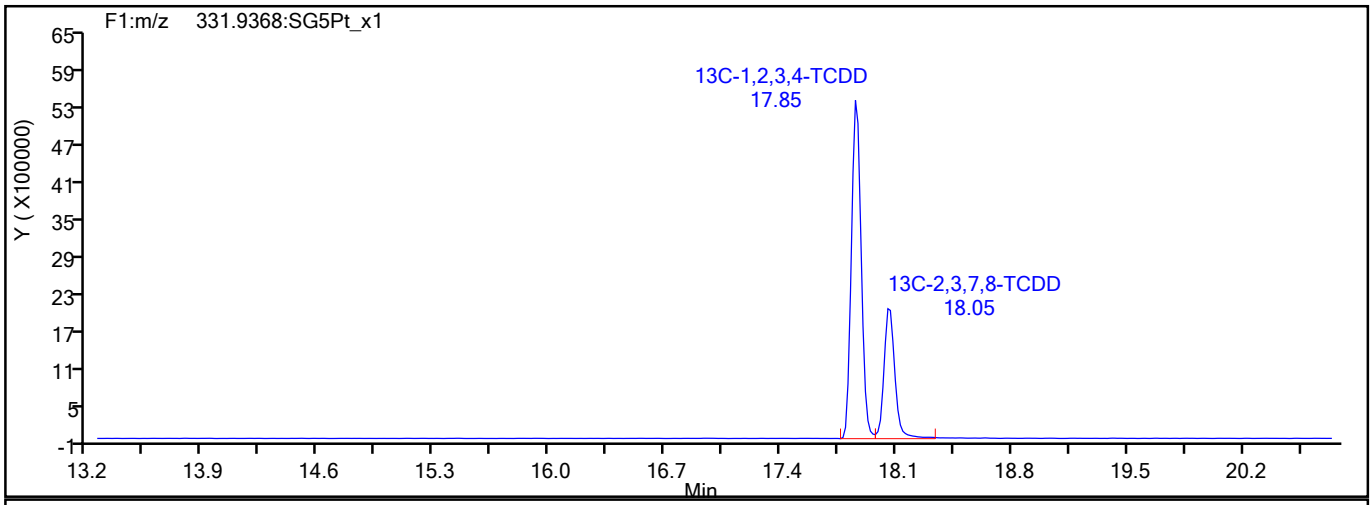

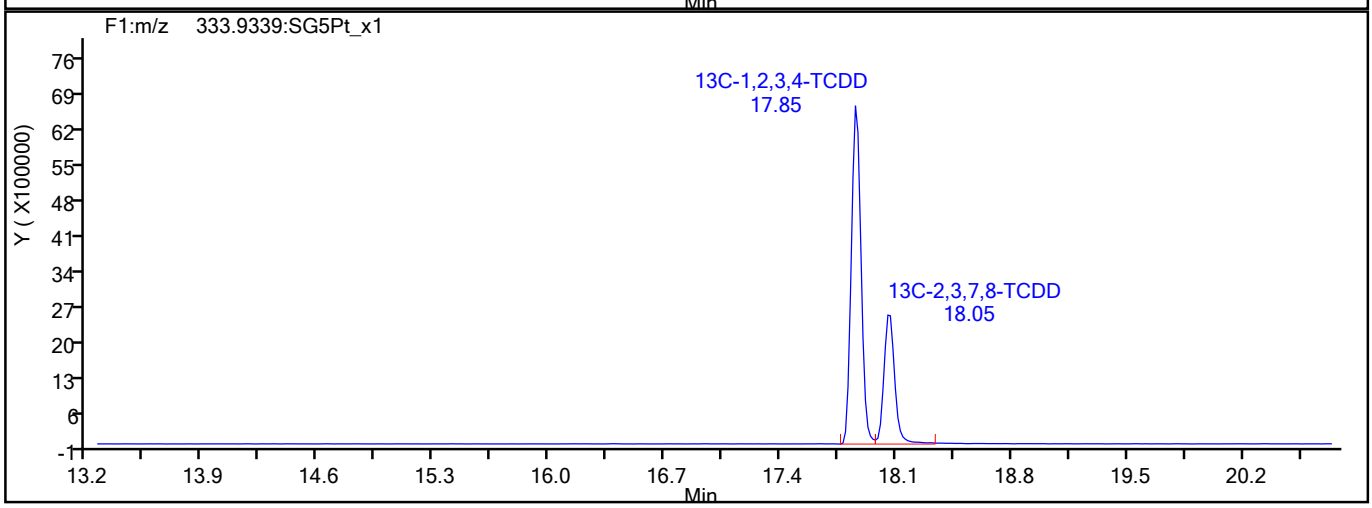

775237

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

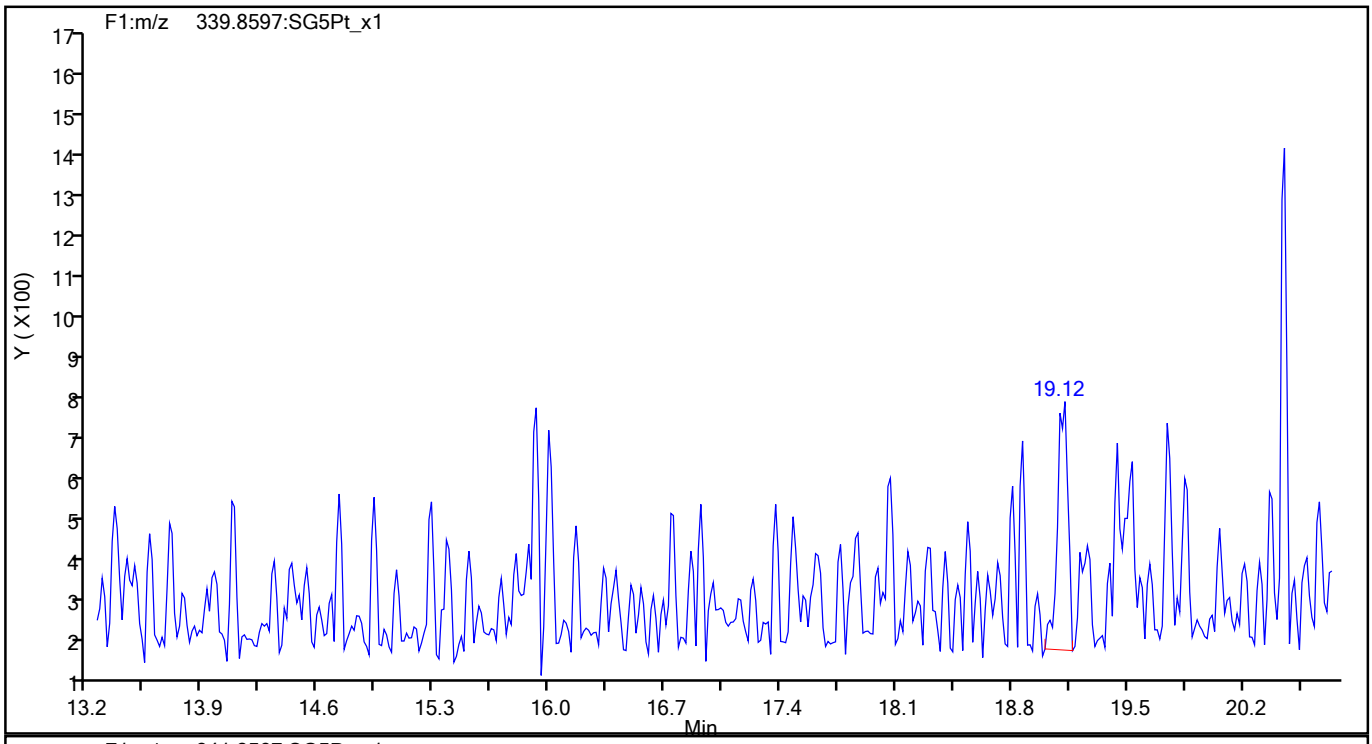

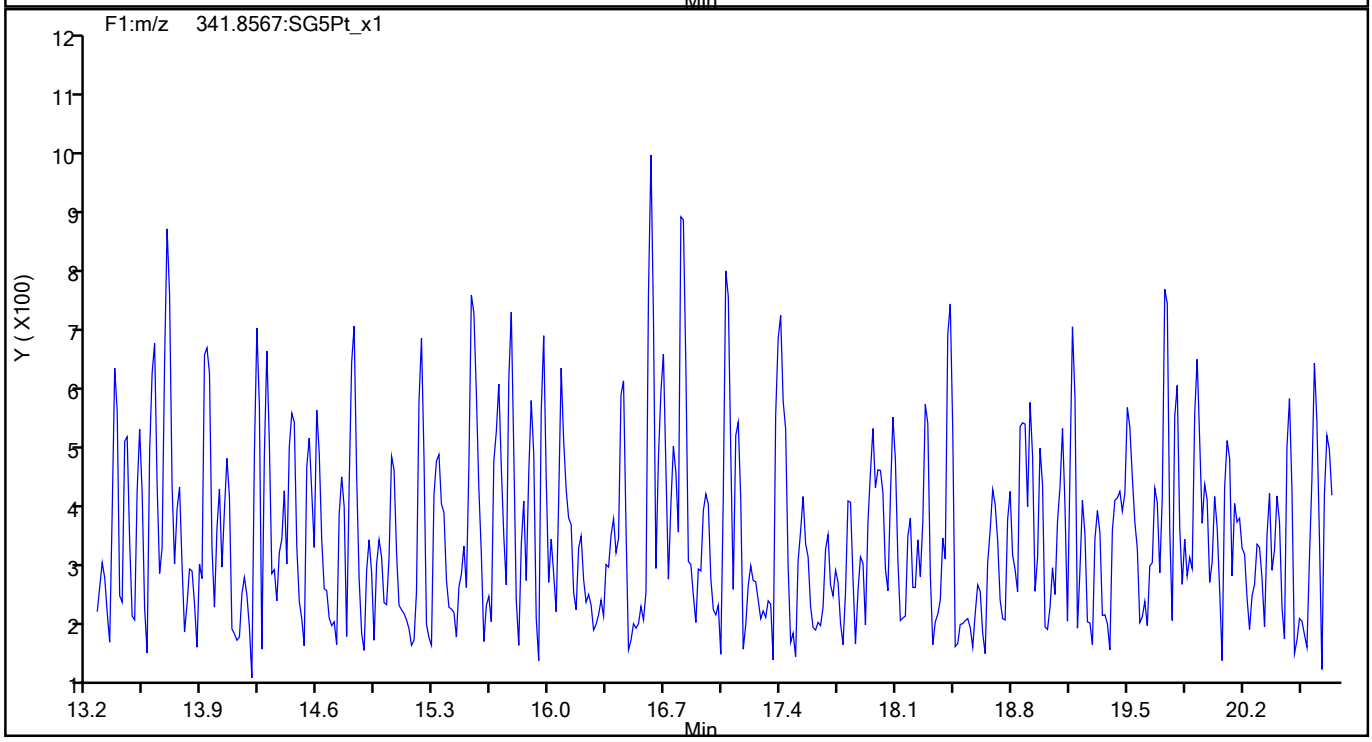

775238

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

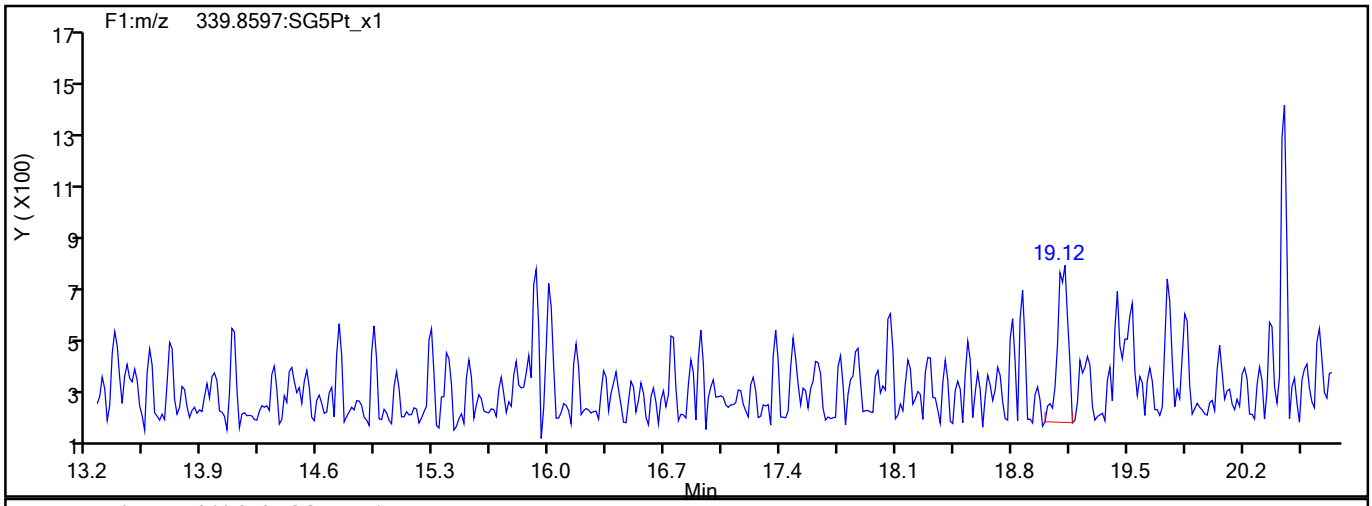

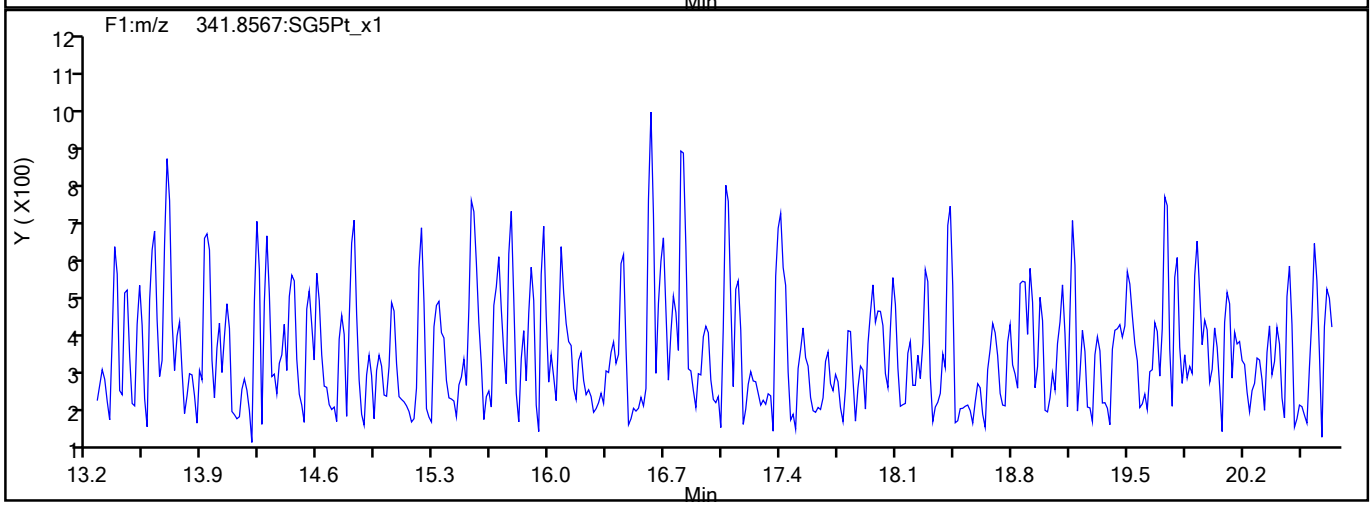

F1 PeCDFs Interference Mass

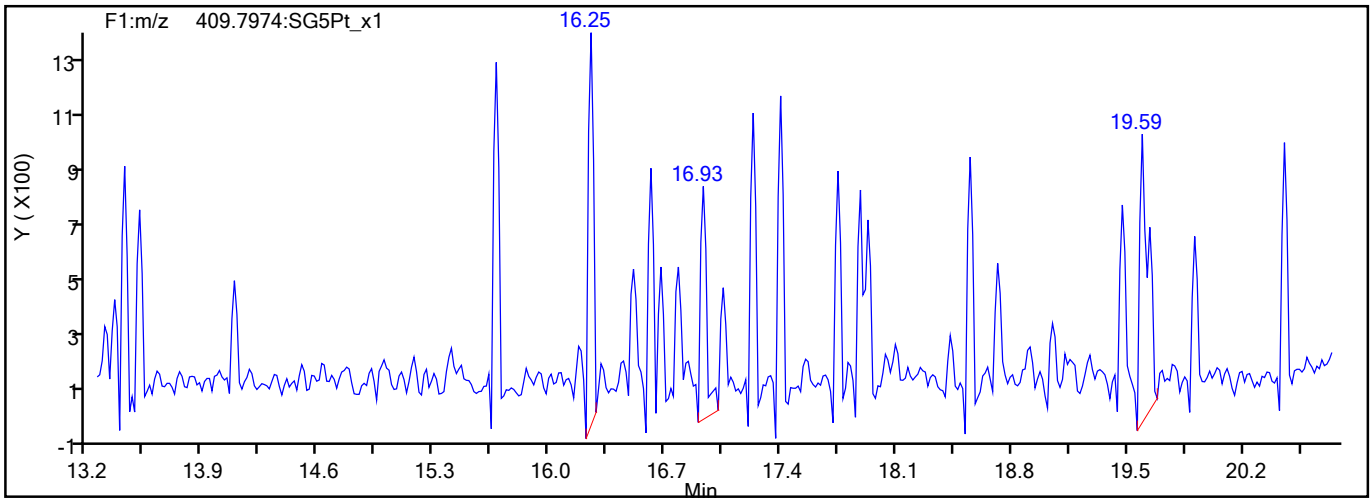

775239

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
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Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

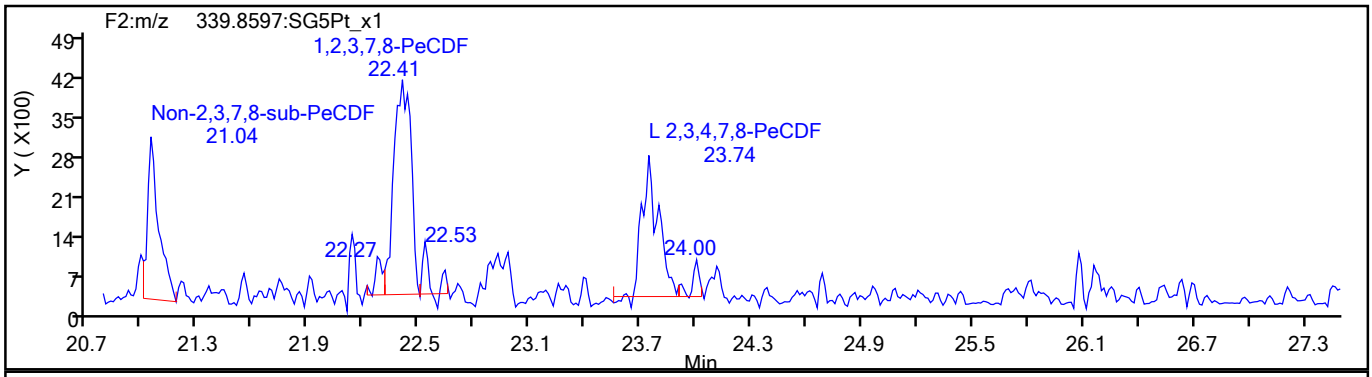

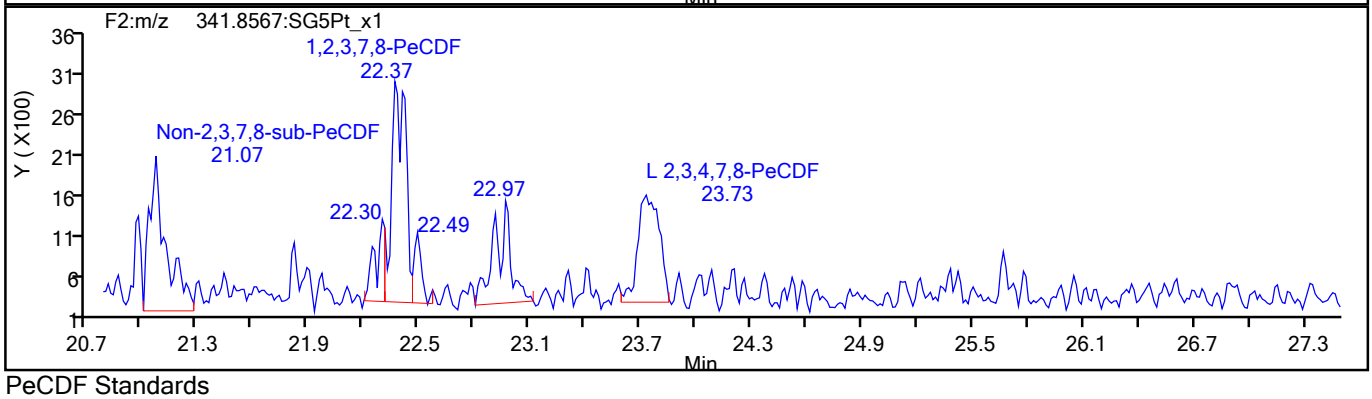

PeCDF Standards

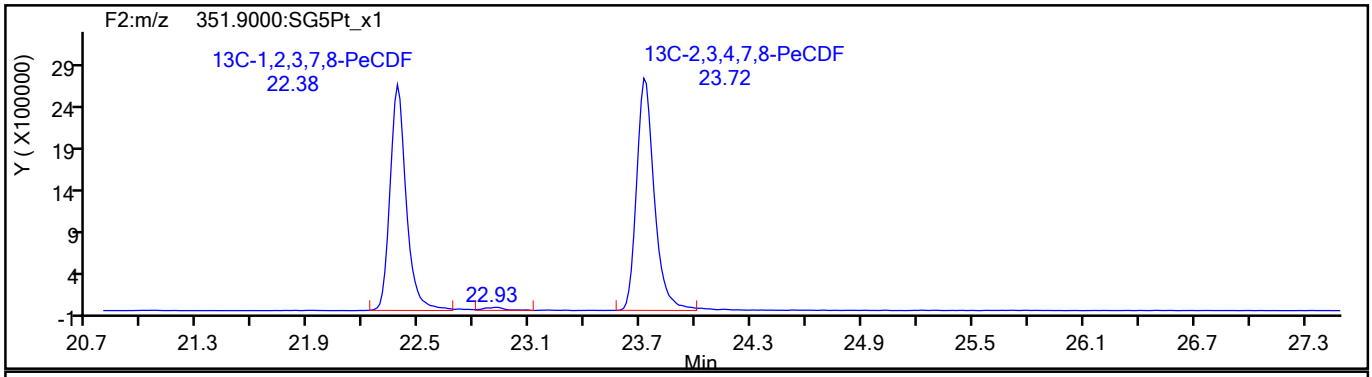

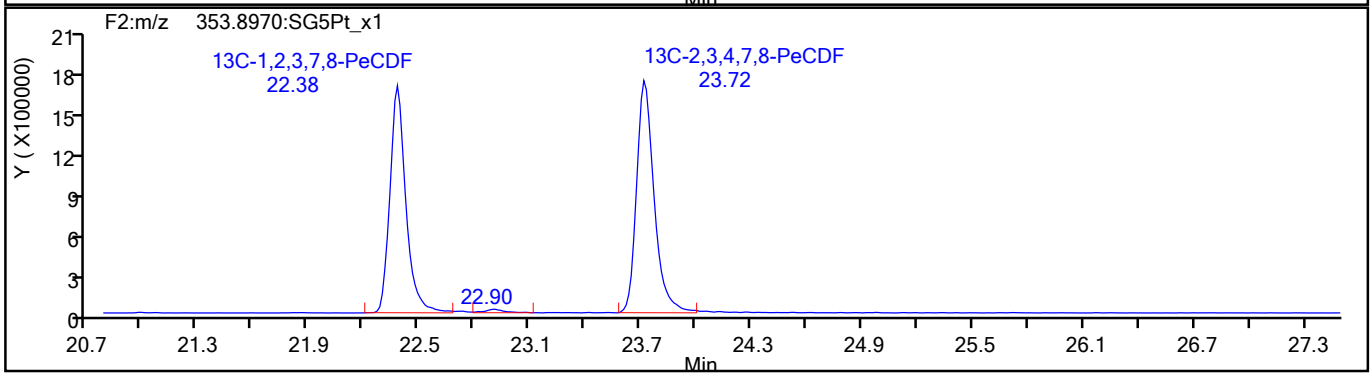

775240

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
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PeCDF

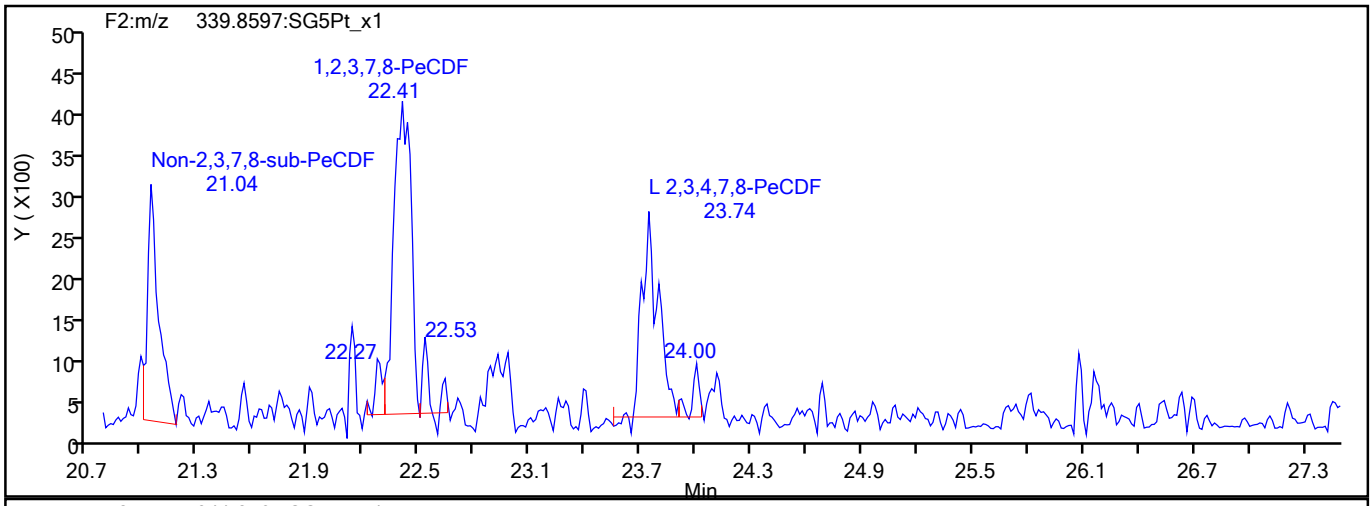

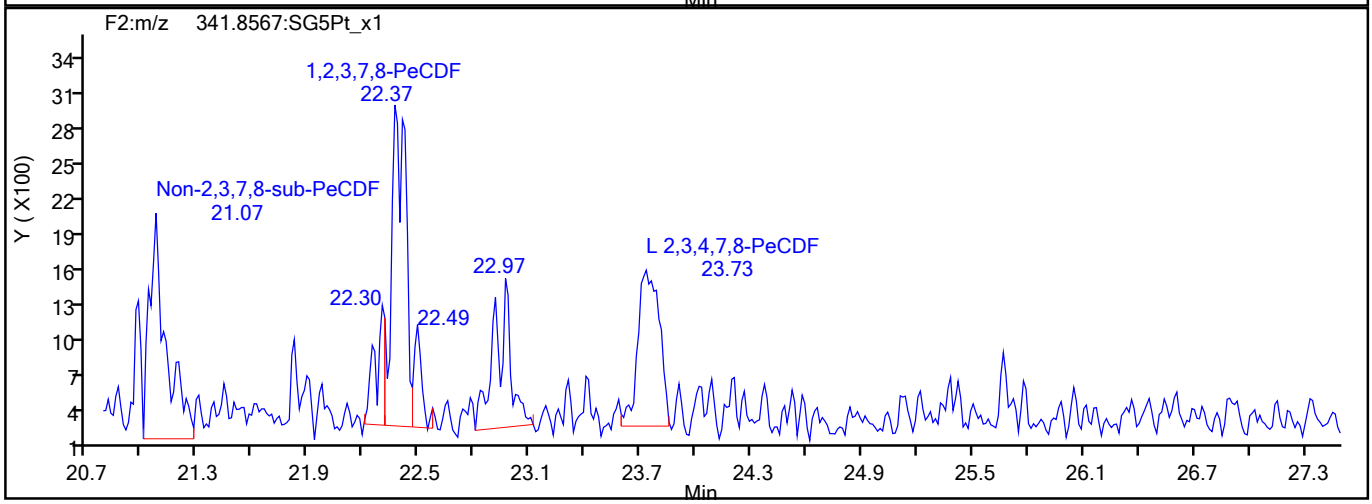

PeCDF Interference Mass

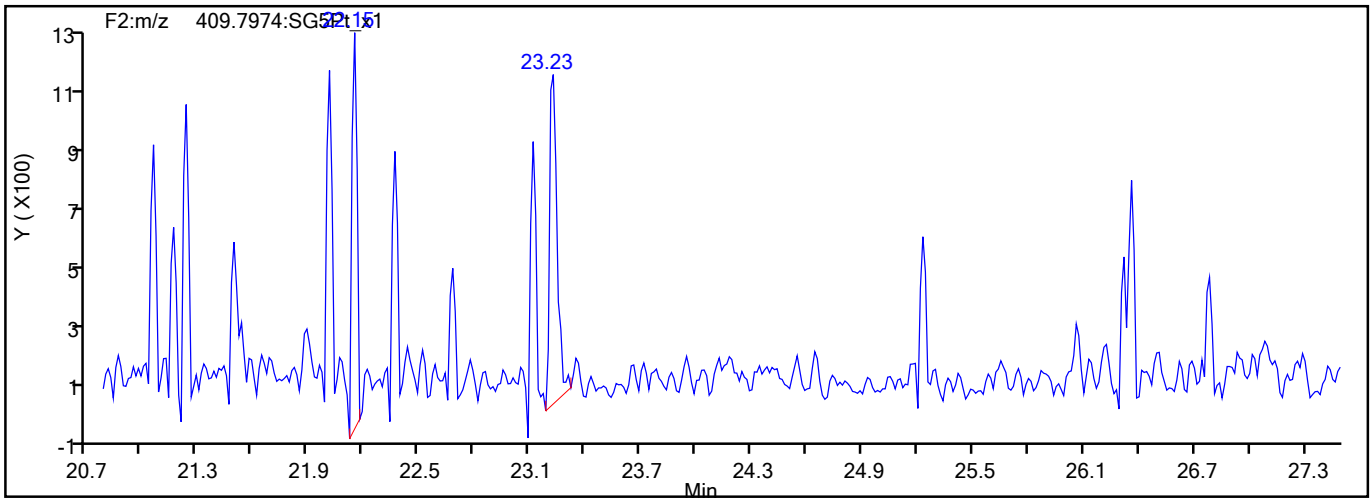

775241

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

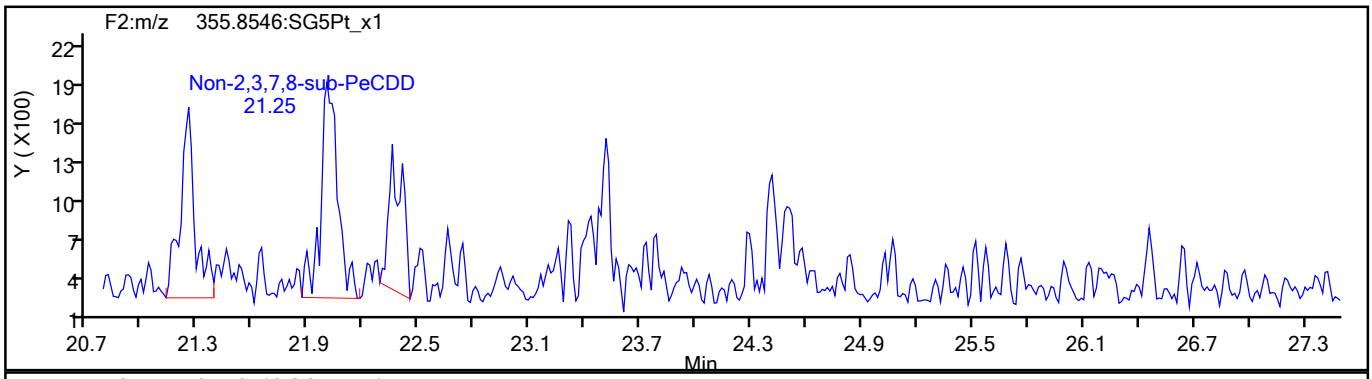

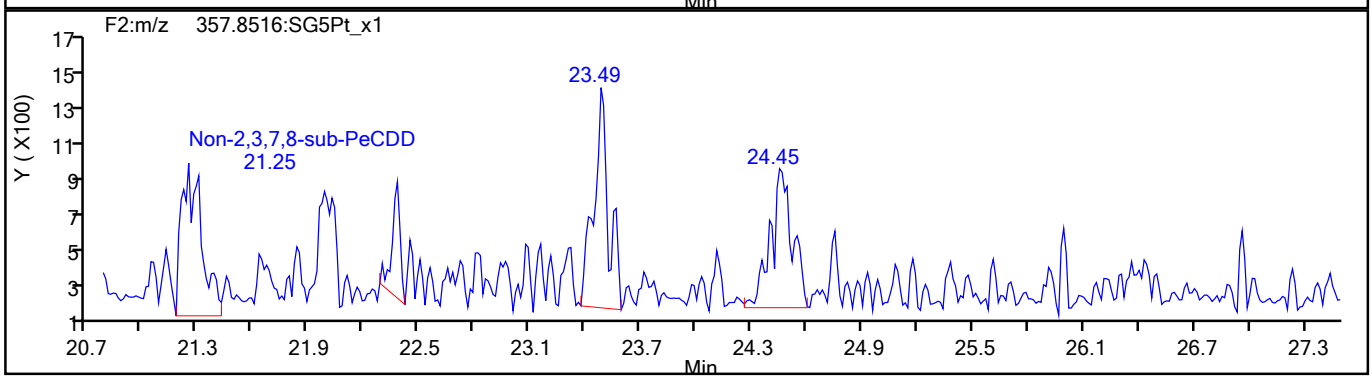

PeCDD Standards

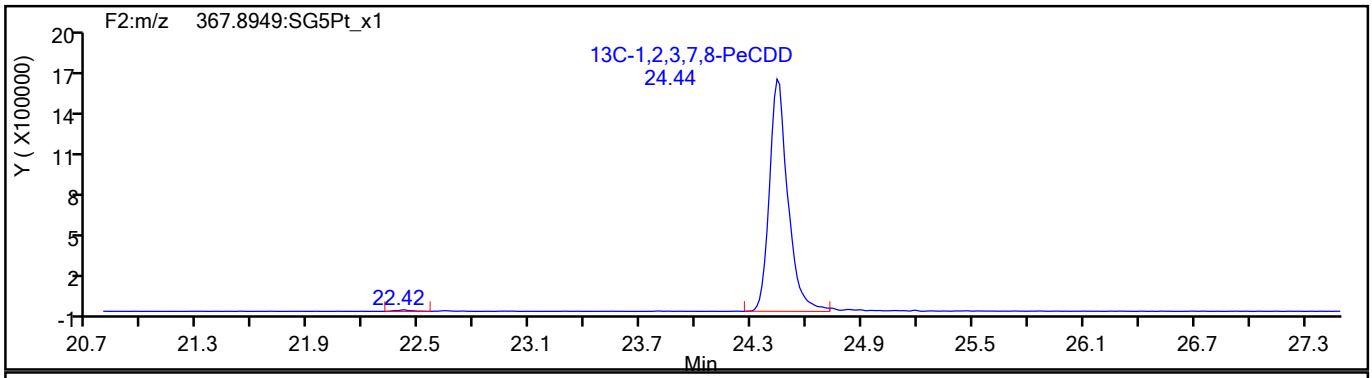

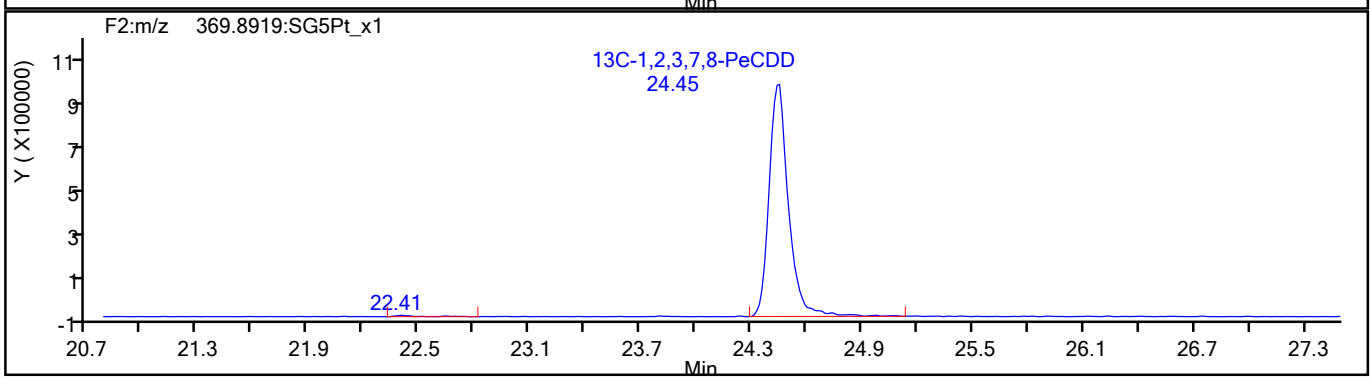

775242

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

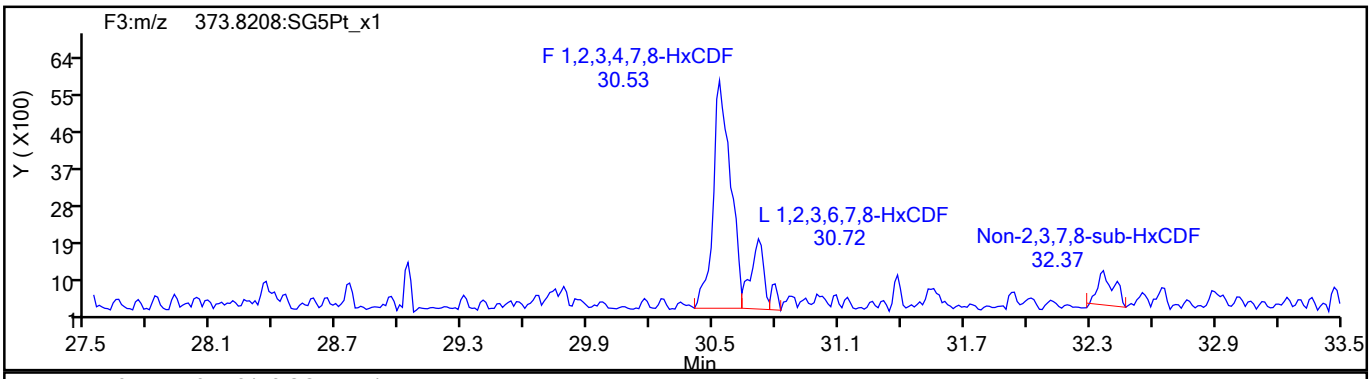

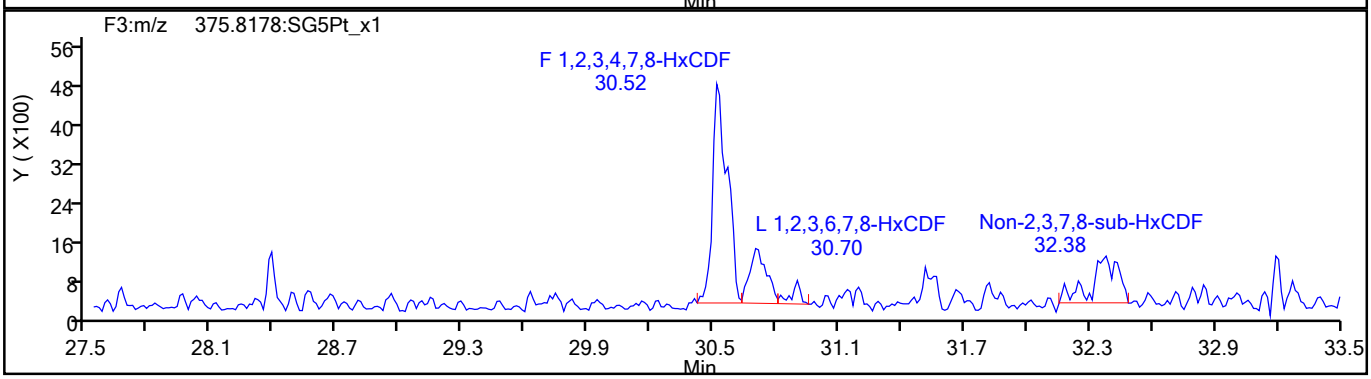

HxCDF Standards

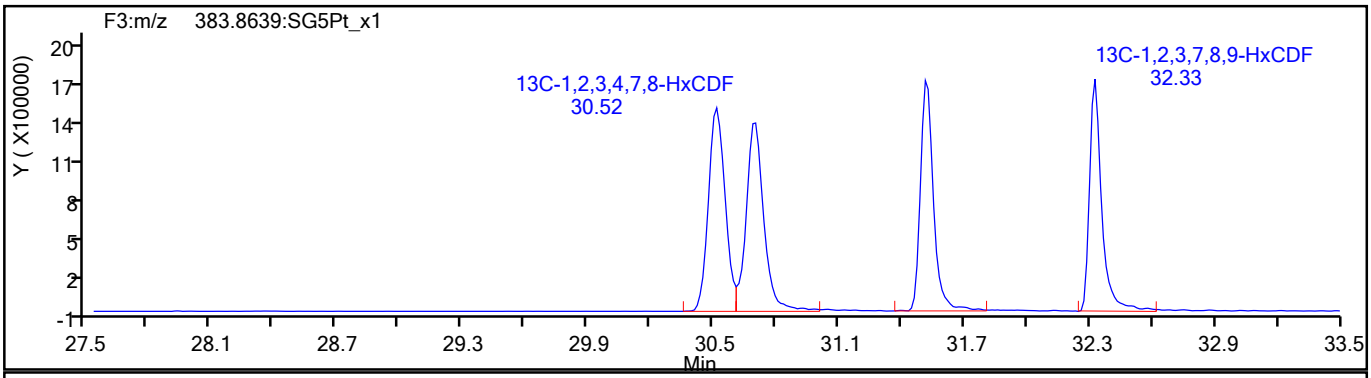

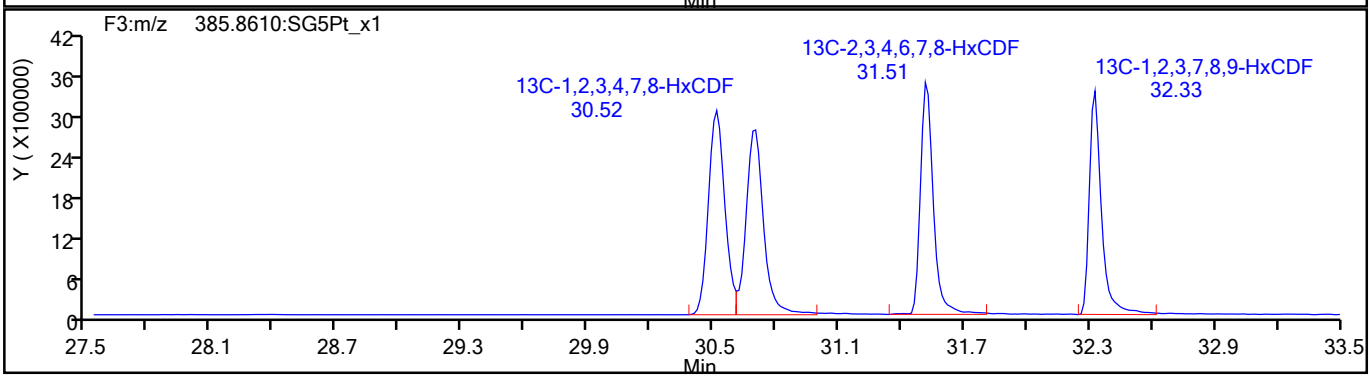

775243

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

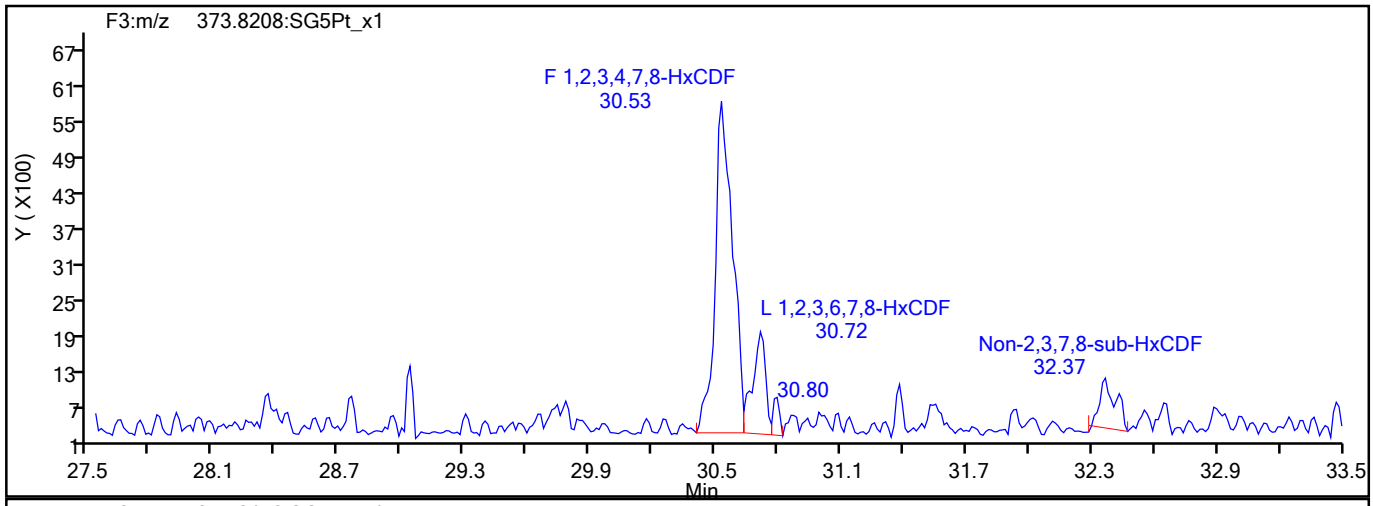

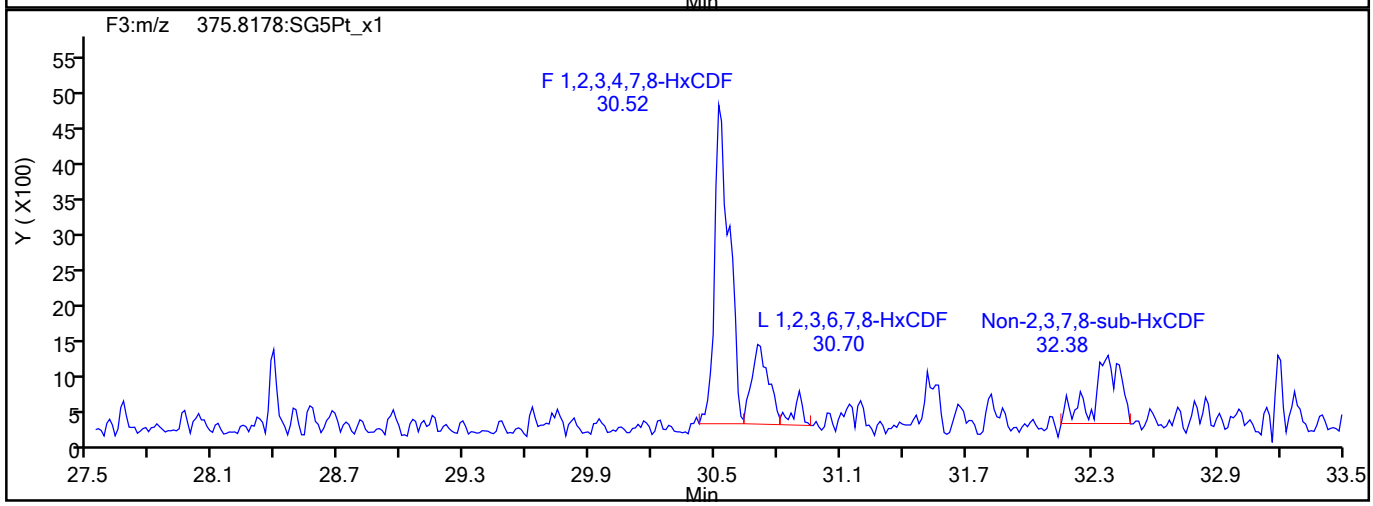

HxCDF Interference Mass

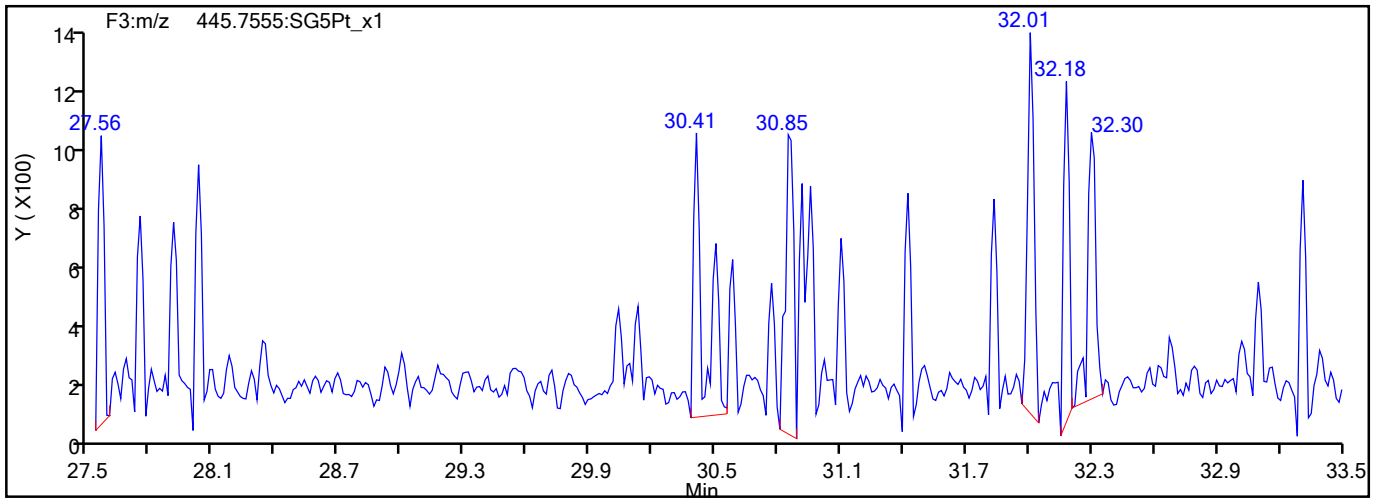

775244

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

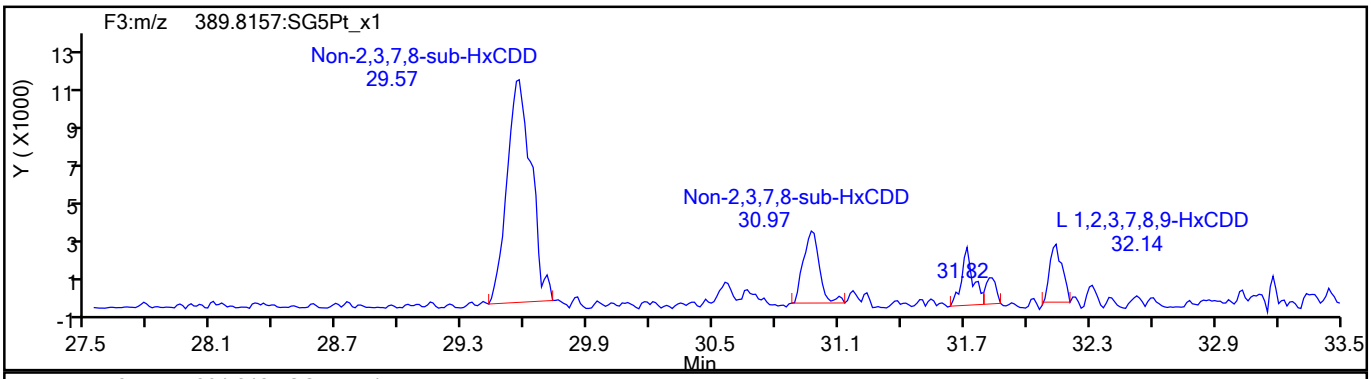

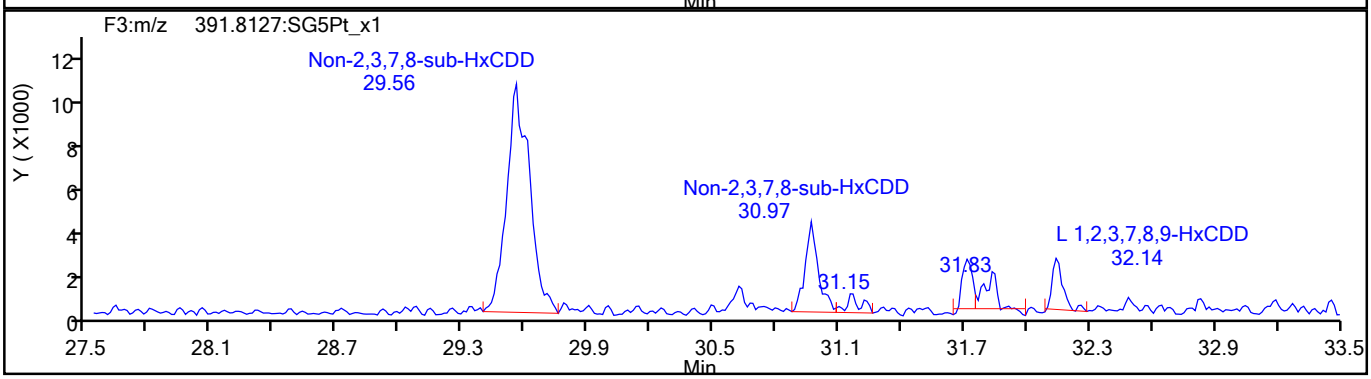

HxCDD Standards

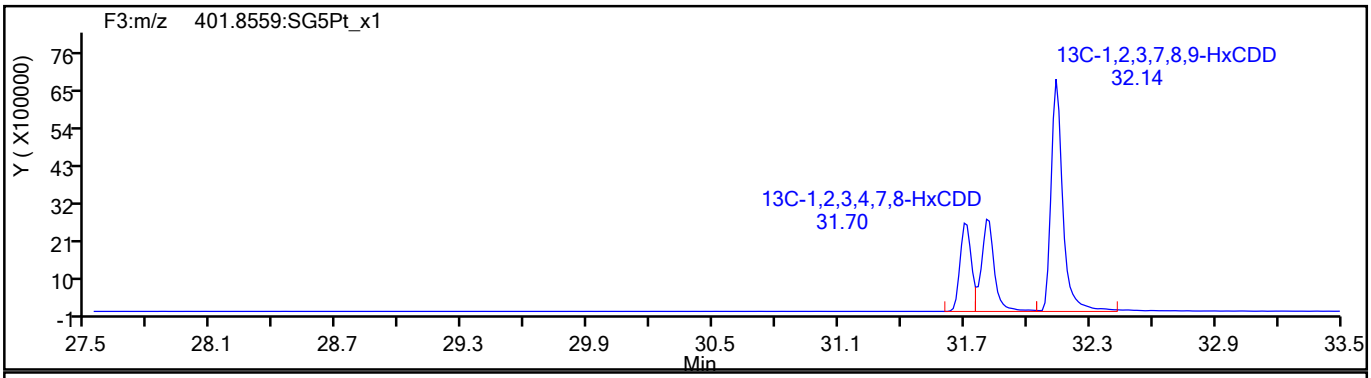

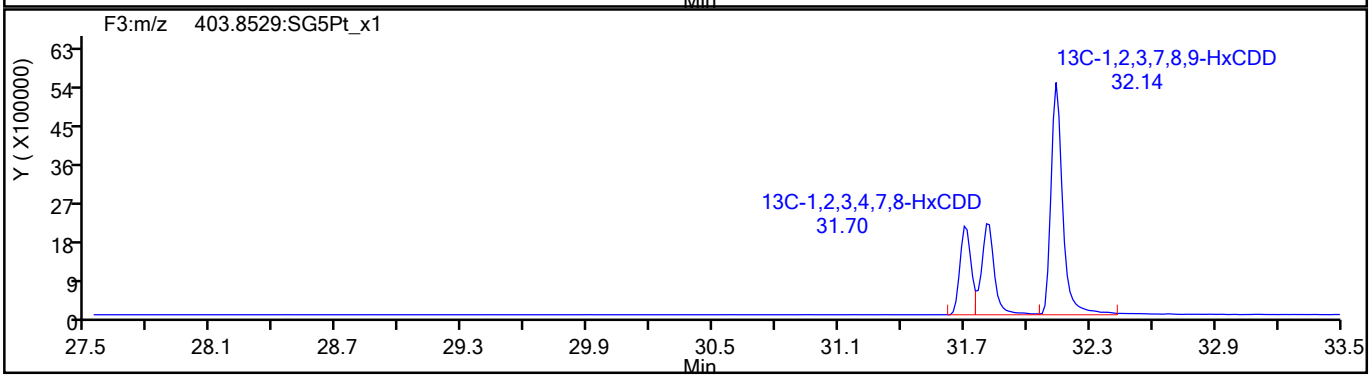

775245

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

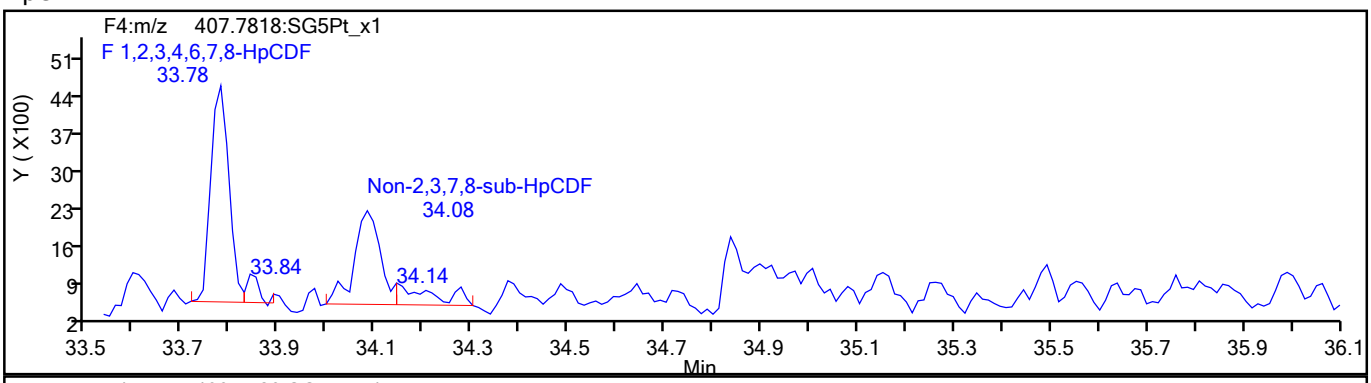

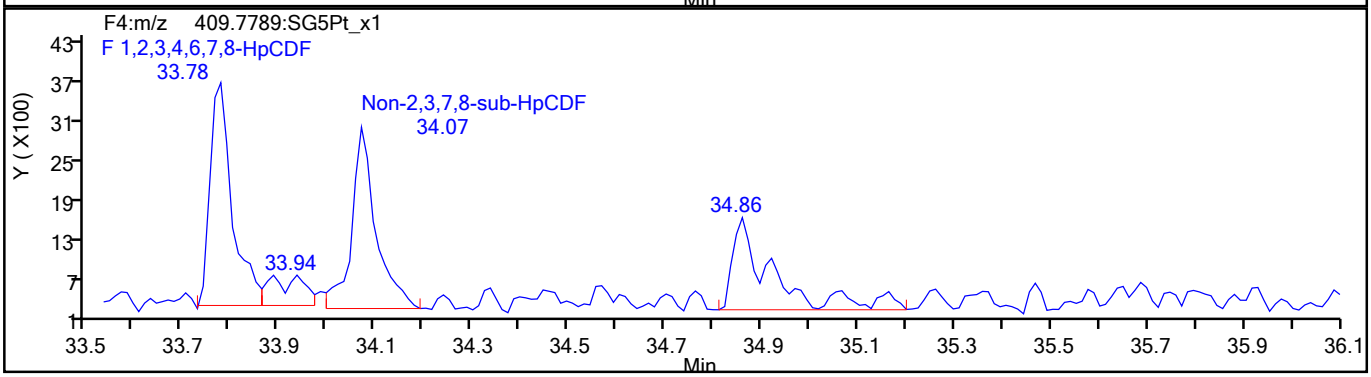

HpCDF Standards

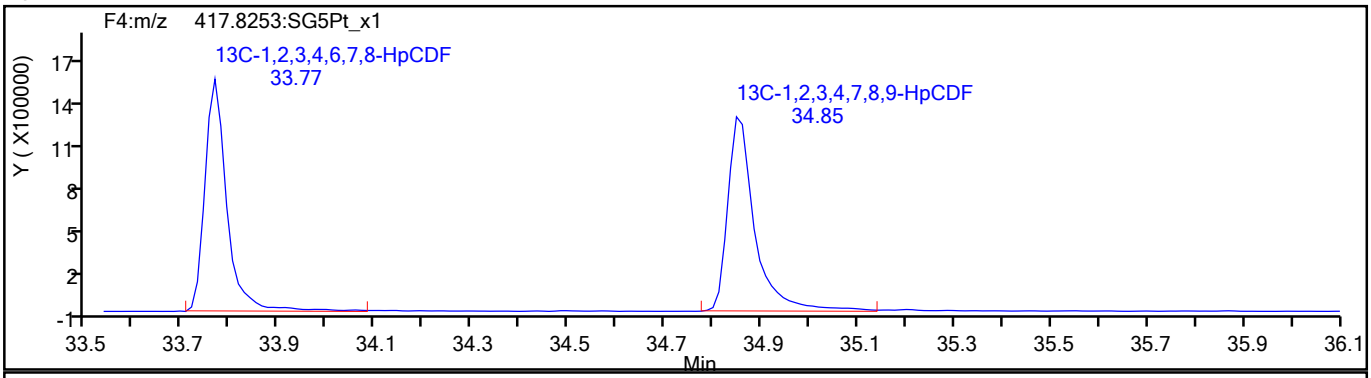

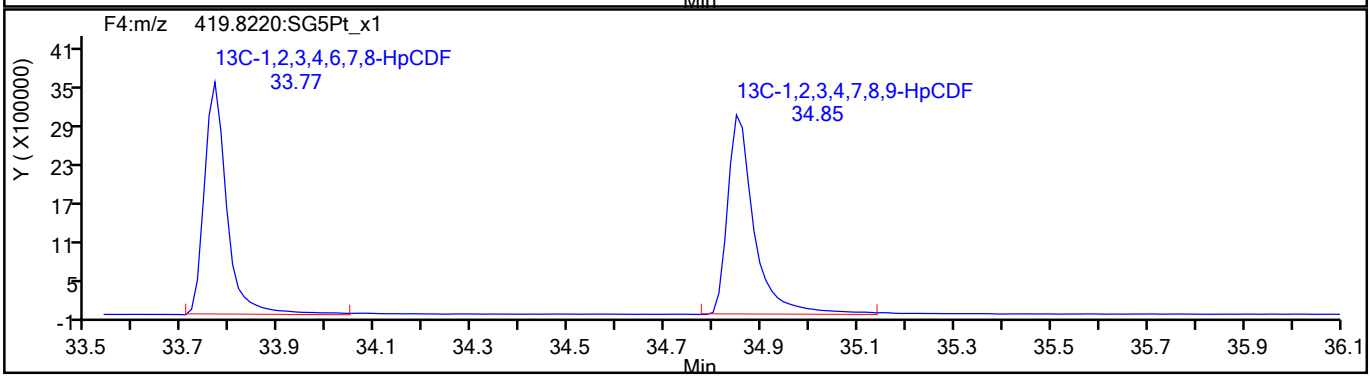

775246

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

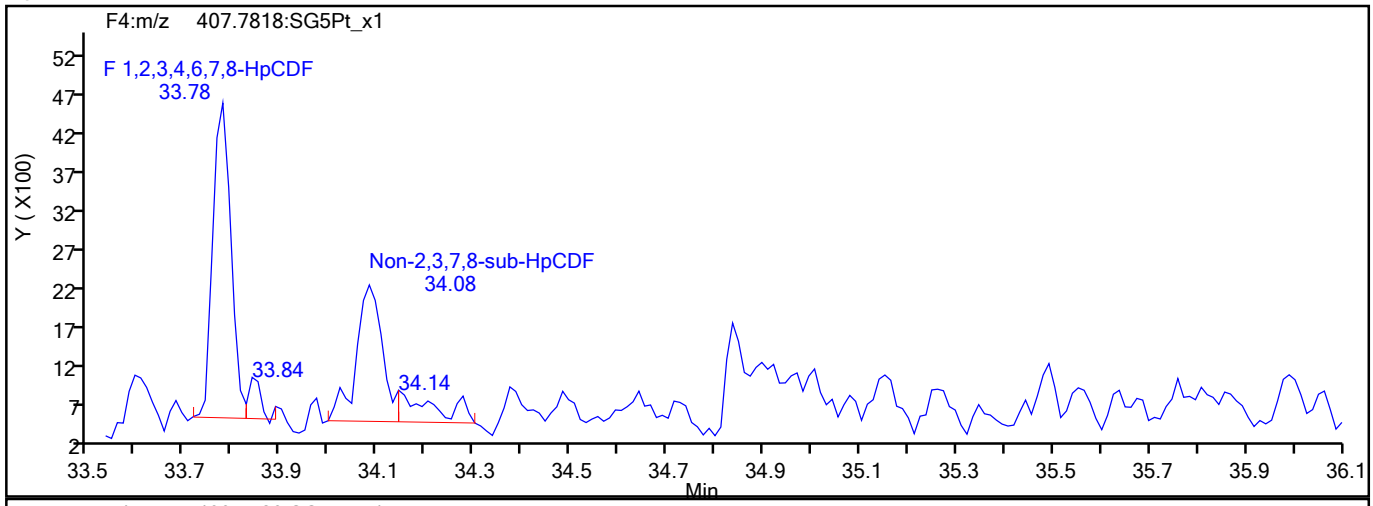

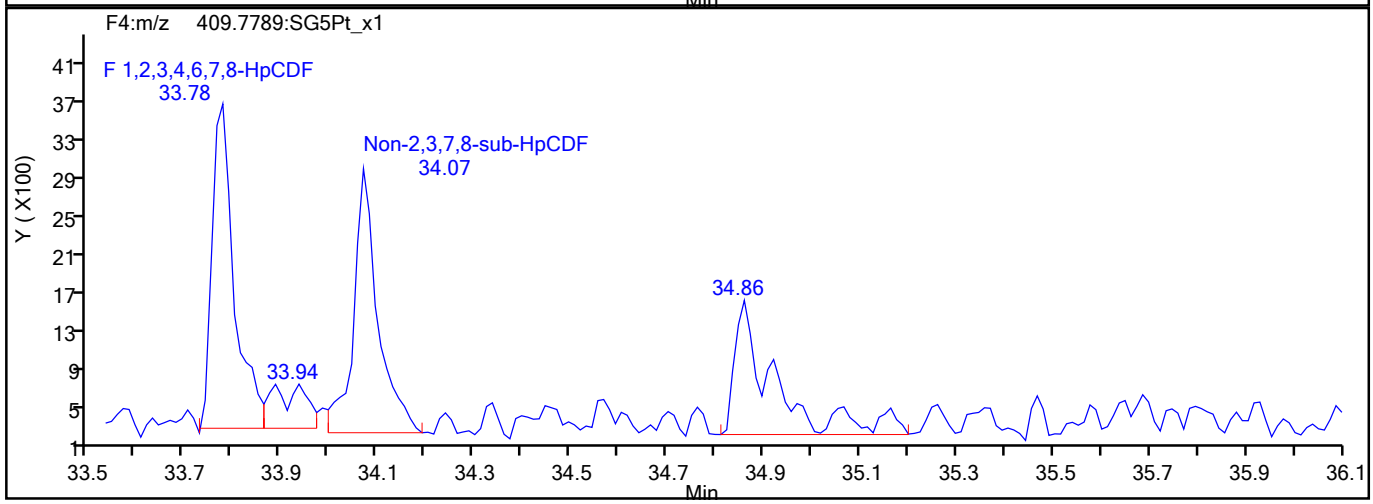

HpCDF Interference Mass

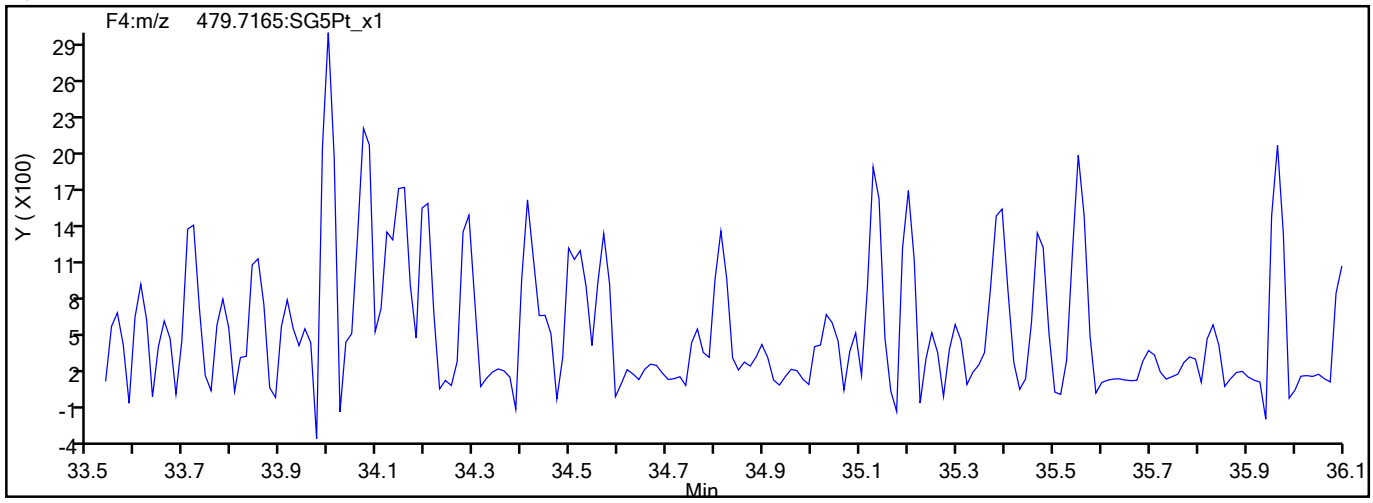

775247

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

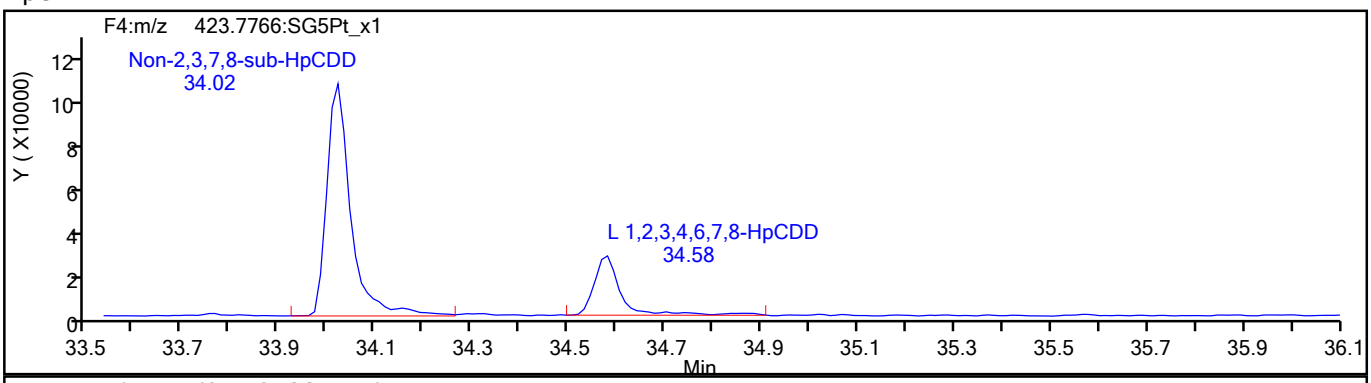

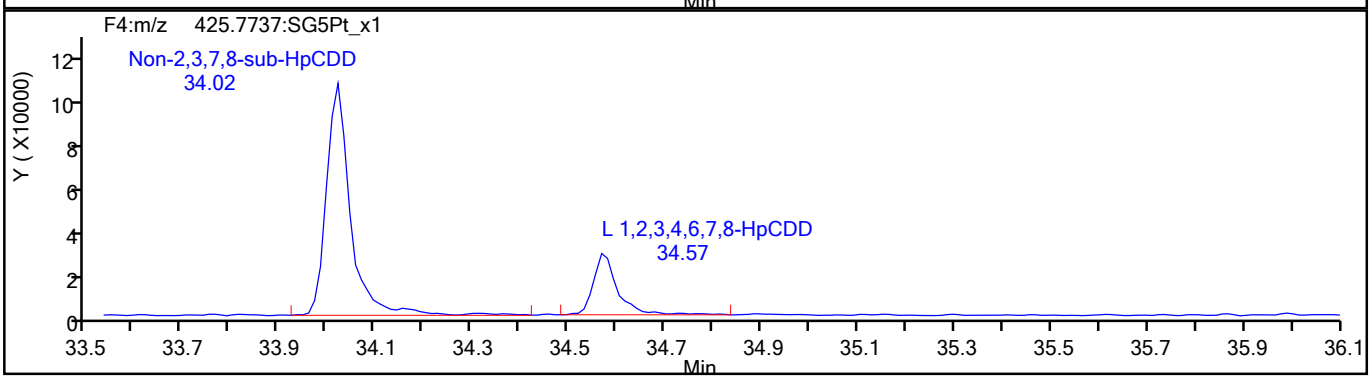

HpCDD Standards

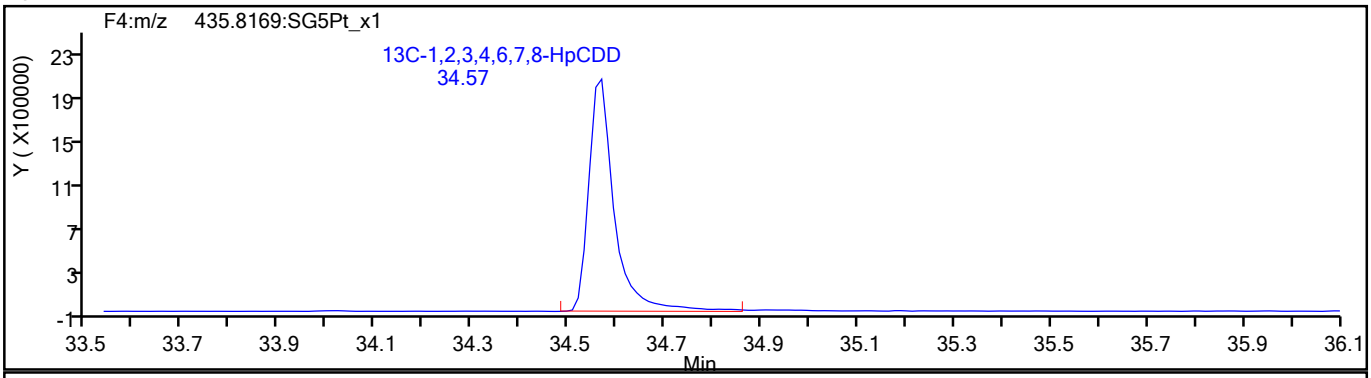

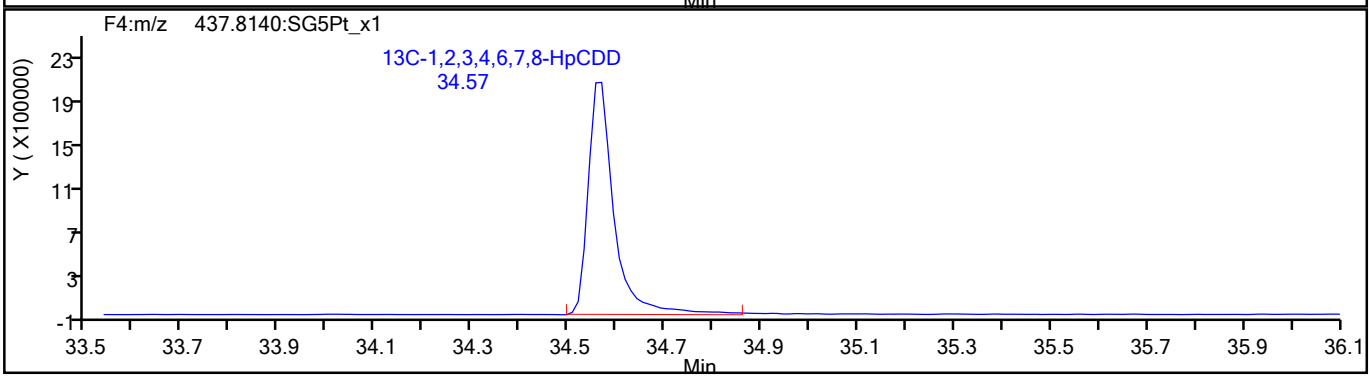

775248

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

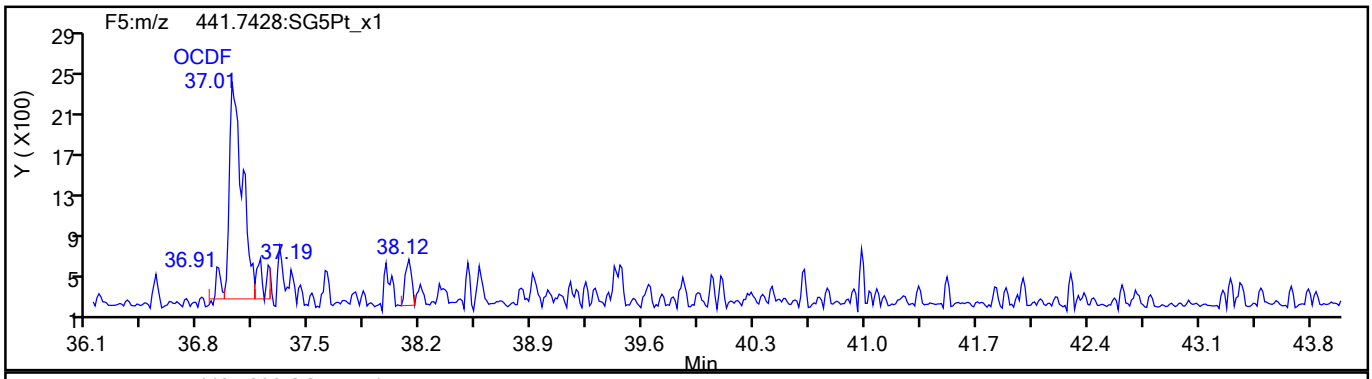

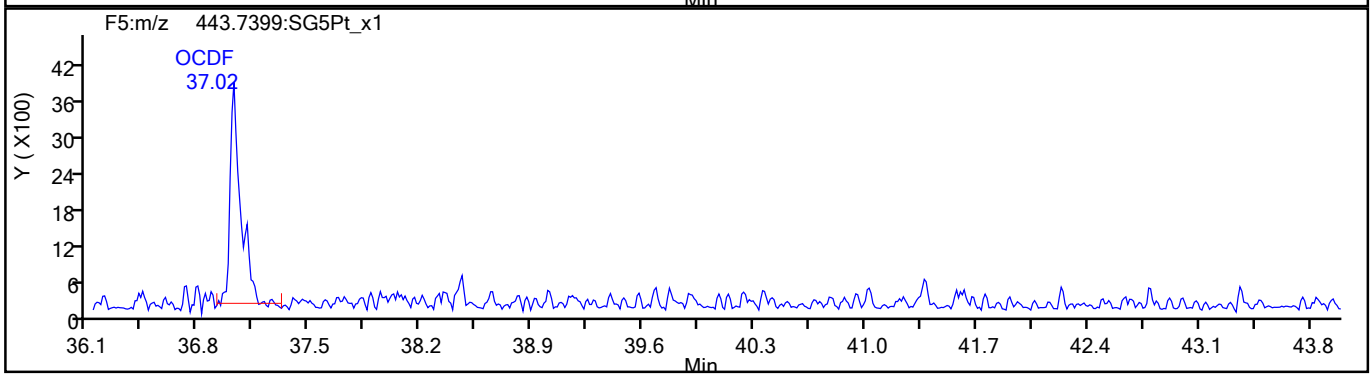

OCDF Standards

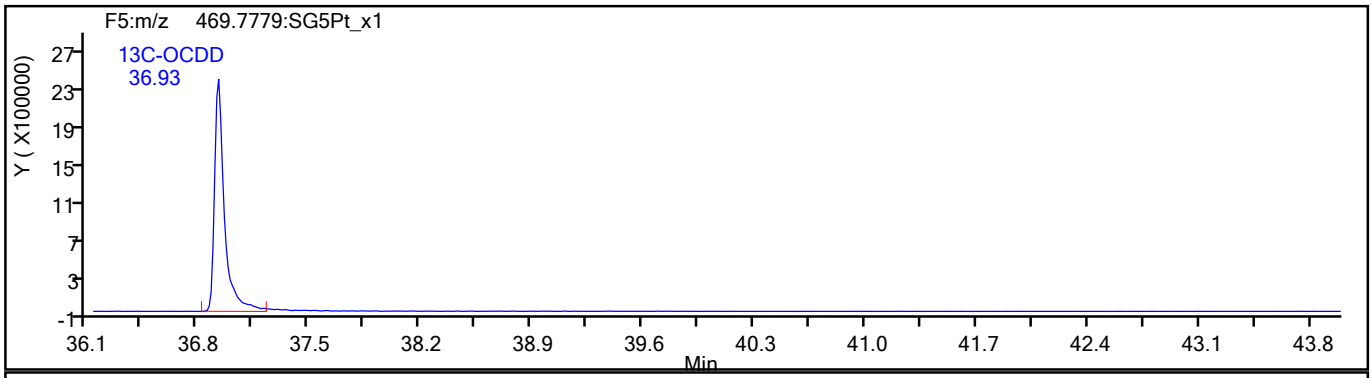

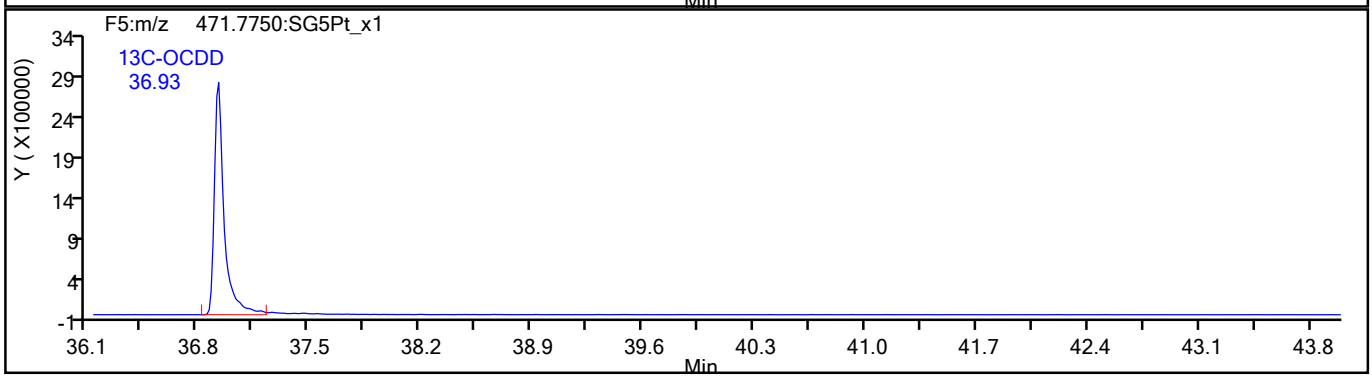

775249

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

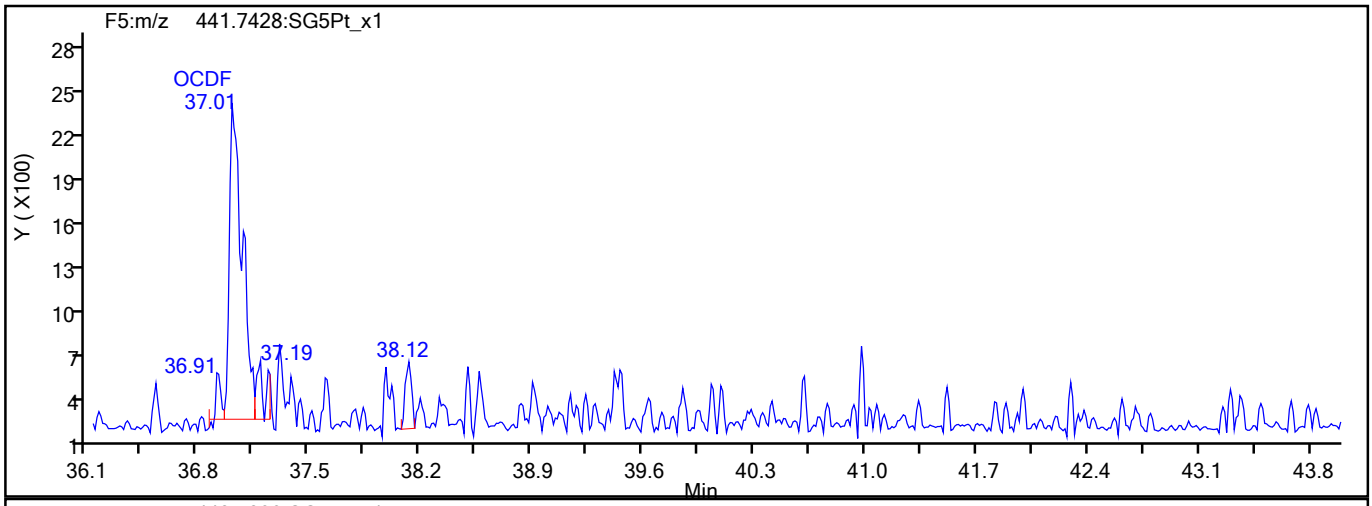

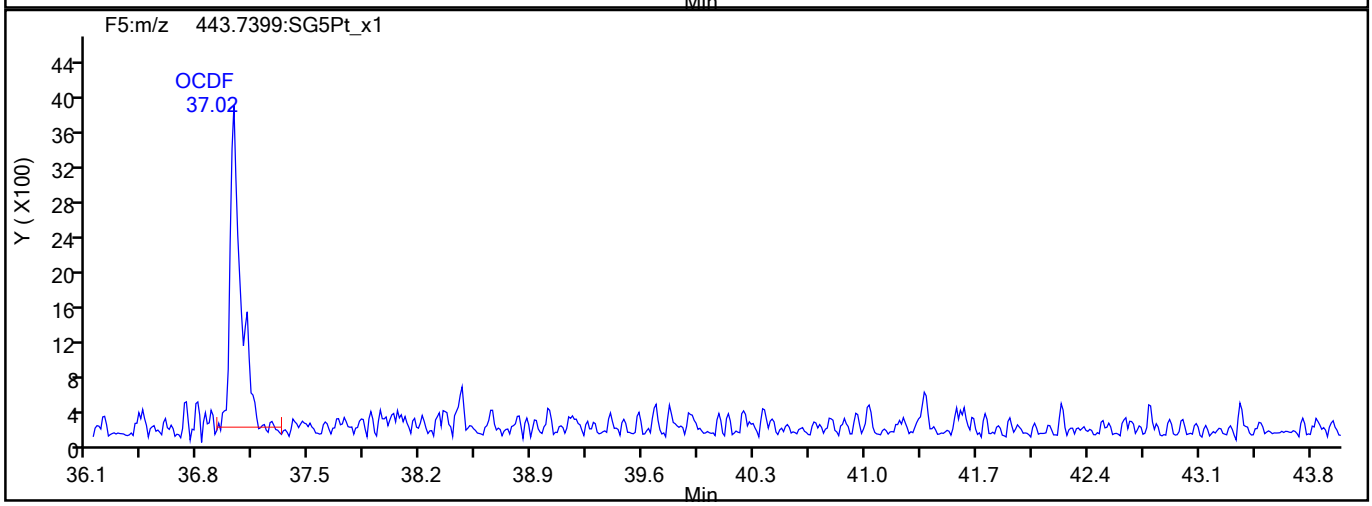

OCDF Interference Mass

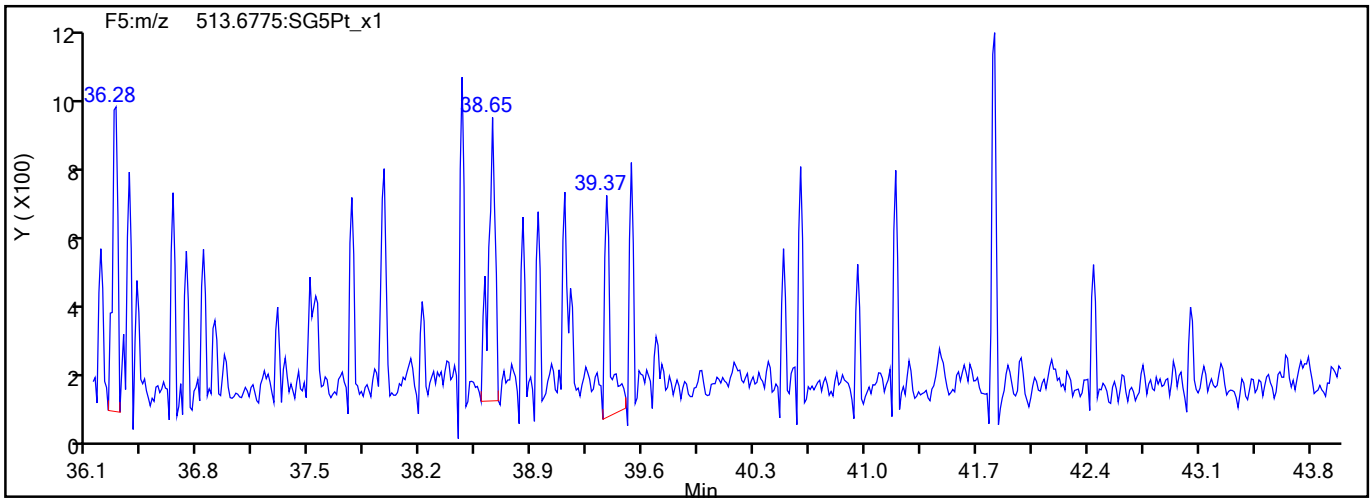

775250

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

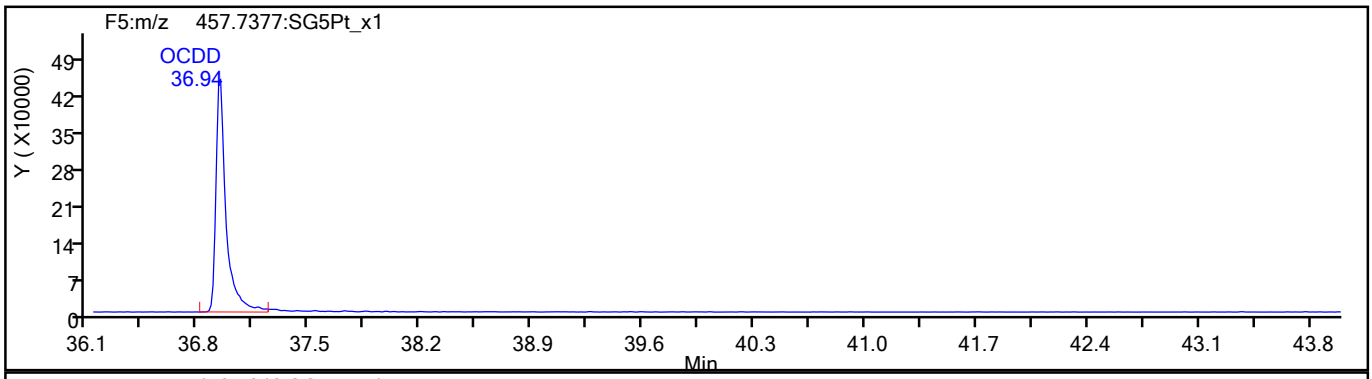

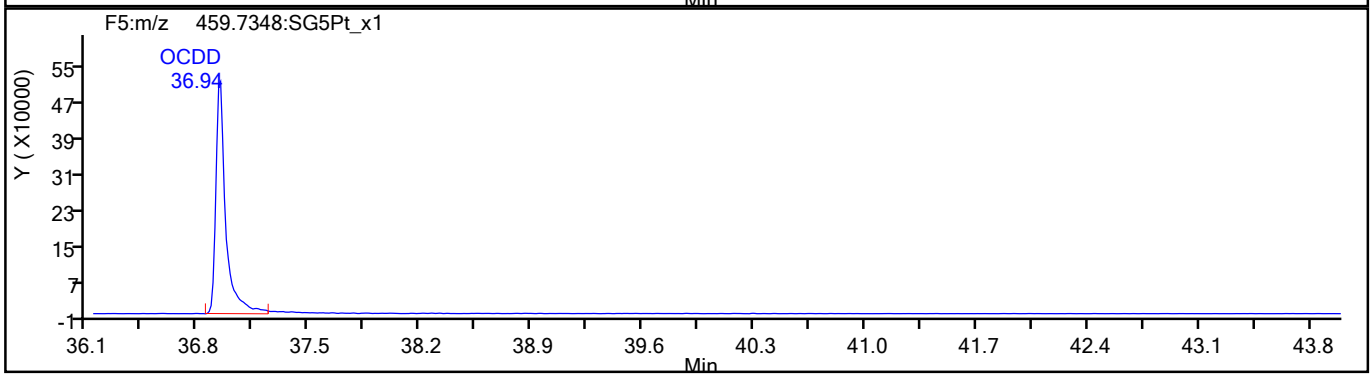

OCDD Standards

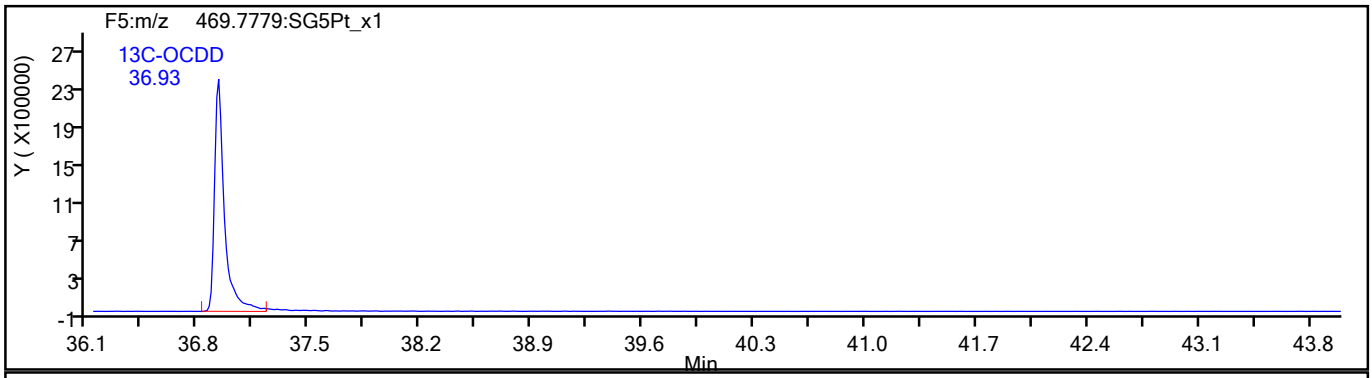

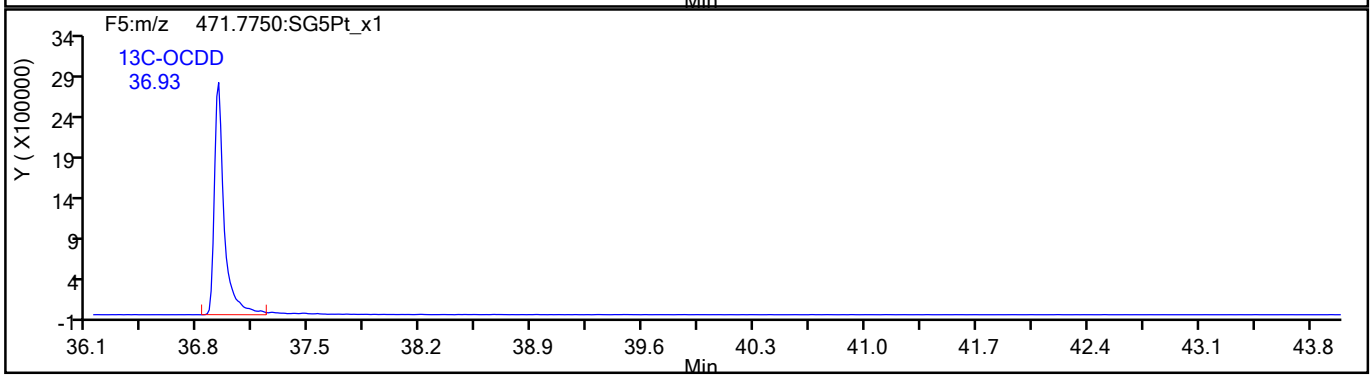

775251

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

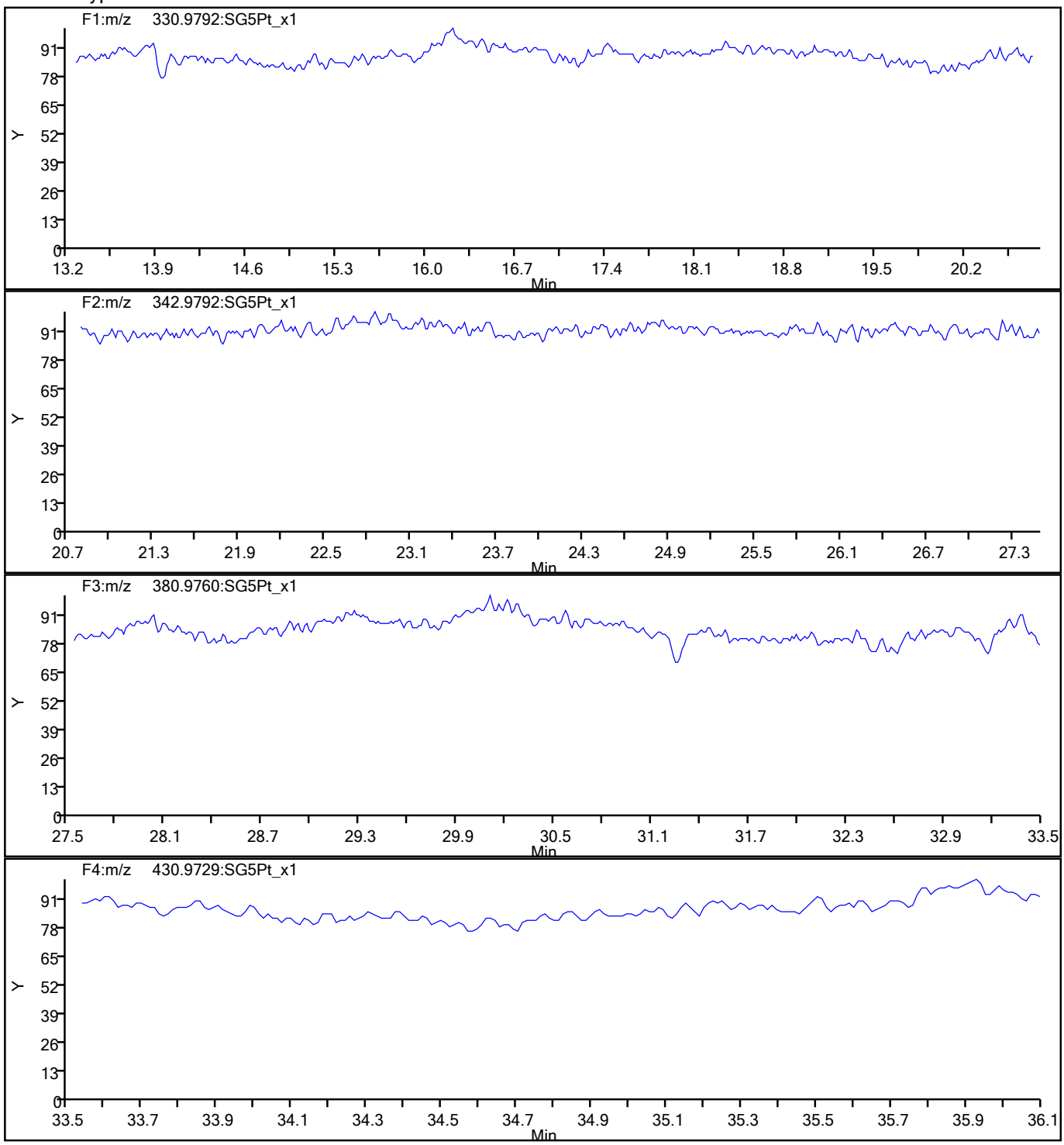

775252

Report Date: 18-Aug-2021 10:25:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_62.d		
Injection Date:	15-Aug-2021 15:57:09	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	516848	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

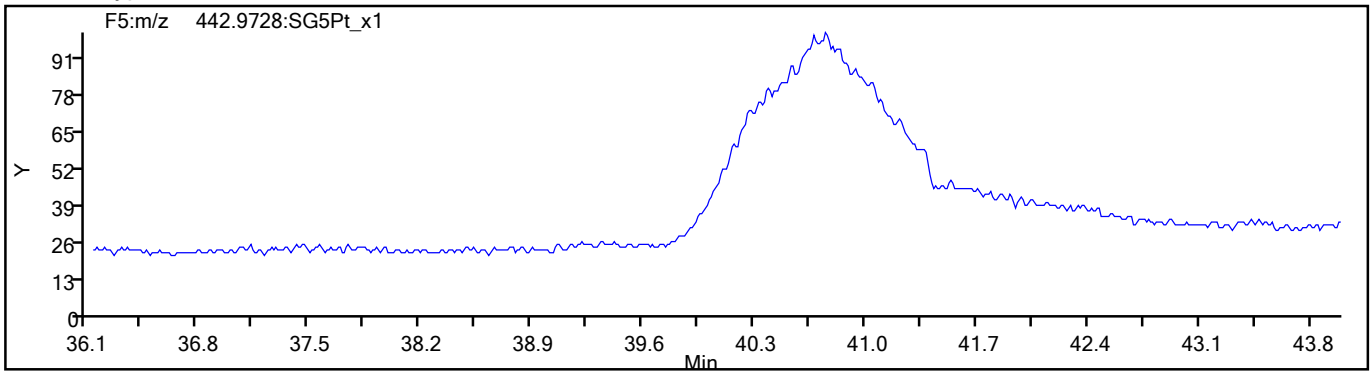

775253

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (8-10) RA
Lab Sample ID: 320-76769-17 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_012.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.01(g)
Date Analyzed: 08/23/2021 22:36
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 16.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	12	B	1.2	0.20

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	48		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	63		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_012.d
Lims ID: 320-76769-A-17-A
Client ID: 11215702-072221-SS-SJSB074 (8-10)
Sample Type: Client
Inject. Date: 23-Aug-2021 22:36:27 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-17-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:17:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.299	50345006	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.629	31917674	0.82	1.3327	47.6	47.6	0.2241	0.2241	47.57	
2,3,7,8-TCDF	17.643	1607828	0.70	0.9978	5.048	5.048	0.0847	0.0847		
D 13C-2,3,7,8-TCDD	16.079	19598521	0.79	0.8749	44.5	44.5	0.3588	0.3588	44.49	
2,3,7,8-TCDD	16.093	365549	0.78	1.0570	1.765	1.765	0.1395	0.1395		
$ 37Cl4-2,3,7,8-TCDD	16.093	10972771		0.8648	25.2	25.2	0.0531	0.0531	63.01	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_012.d
Lims ID: 320-76769-A-17-A
Client ID: 11215702-072221-SS-SJSB074 (8-10)
Sample Type: Client
Inject. Date: 23-Aug-2021 22:36:27 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-17-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:17:46

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.299	16.298	0		22068896	4826979	7954	19885	607		
333.9339	16.299	16.298	0		28276110	6145889	5825	14562	1055	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.629	17.615	1	1.082	14351307	2617796	6111	15277	428		
317.9389	17.615	17.615	0	1.081	17566367	3386881	6999	17497	484	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.643	0	1.001	663091	129328	892	2230	145		
305.8987	17.643	17.643	0	1.001	944737	175307	1139	2847	154	0.70(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.079	16.065	1	0.987	8672733	1855337	7954	19885	233		
333.9339	16.066	16.065	0	0.986	10925788	2370846	5825	14562	407	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.079	1	1.001	160372	36869	1117	2792	33		
321.8936	16.093	16.079	1	1.001	205177	47629	1375	3437	35	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.093	16.093	0	0.987	10972771	2434777	2015	5037	1208		

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 09:19:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_012.d		
Injection Date:	23-Aug-2021 22:36:27	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	518979	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

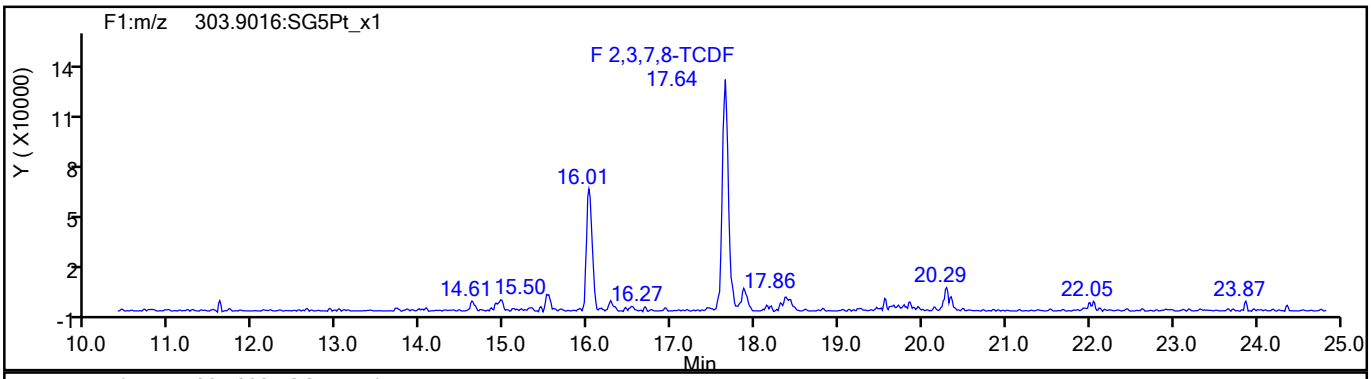

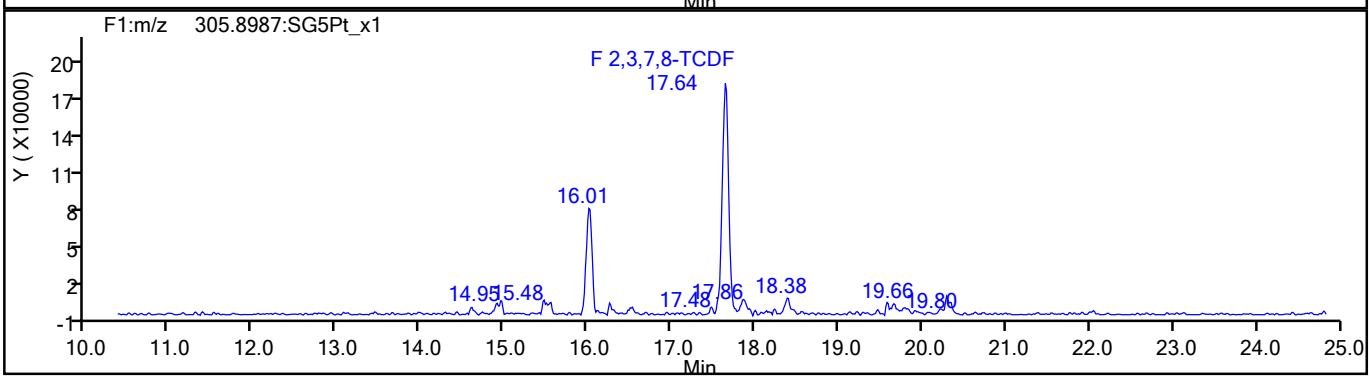

TCDF Standards

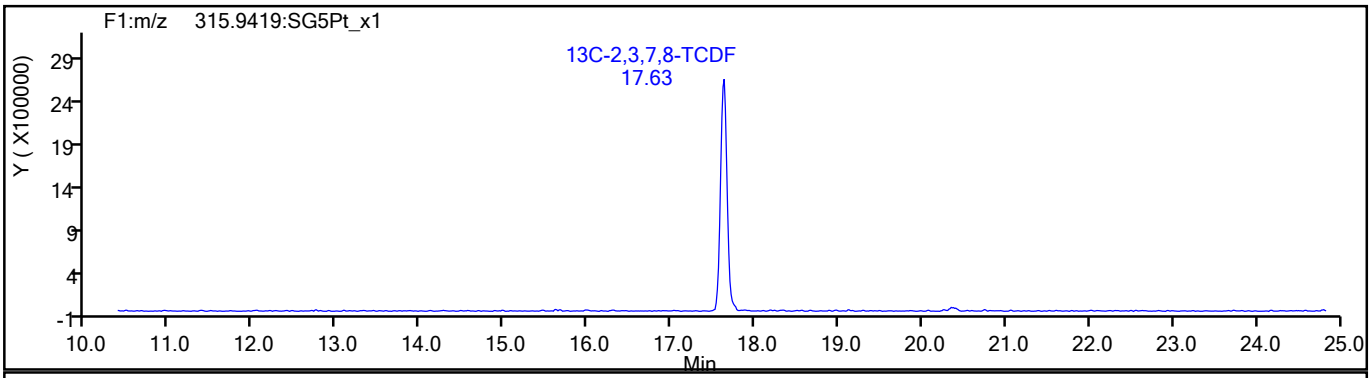

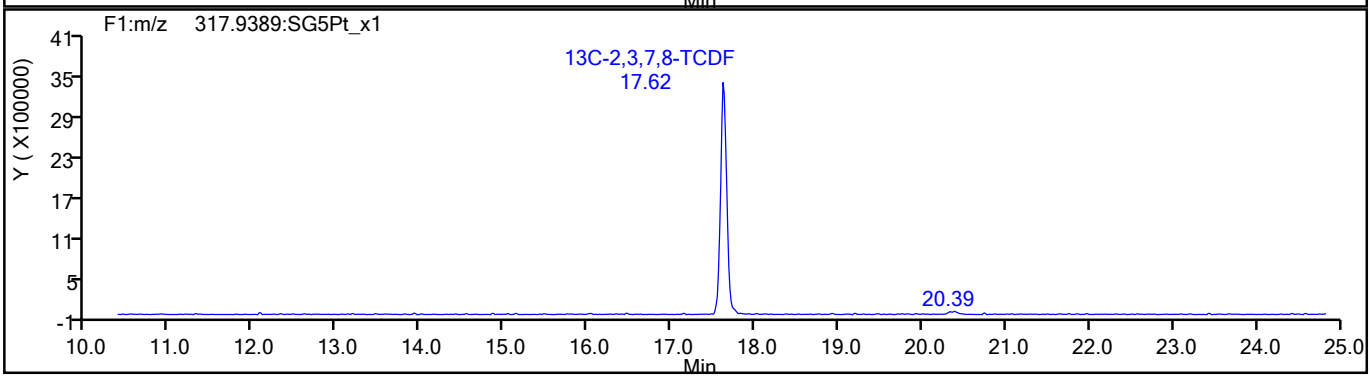

775257

Report Date: 24-Aug-2021 09:19:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_012.d		
Injection Date:	23-Aug-2021 22:36:27	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	518979	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

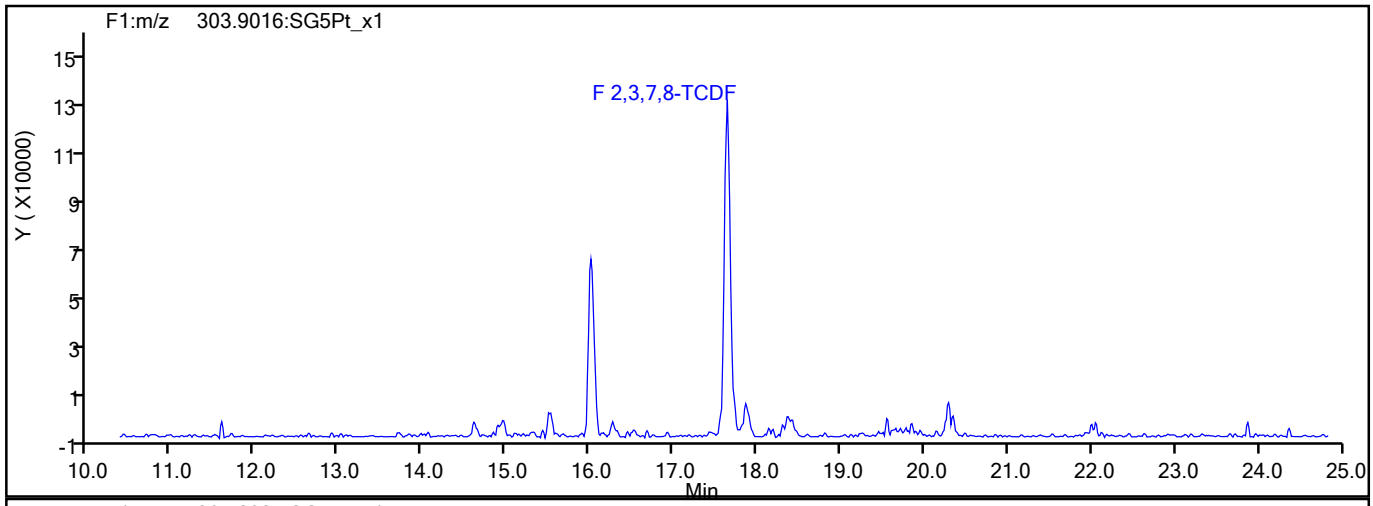

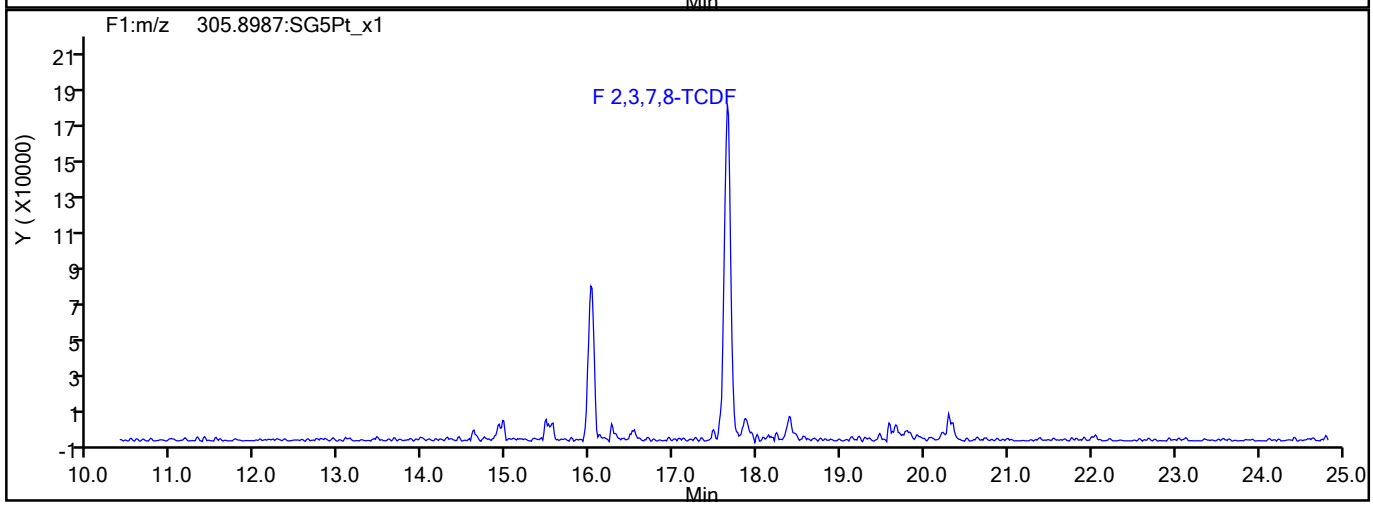

TCDF Interference Mass

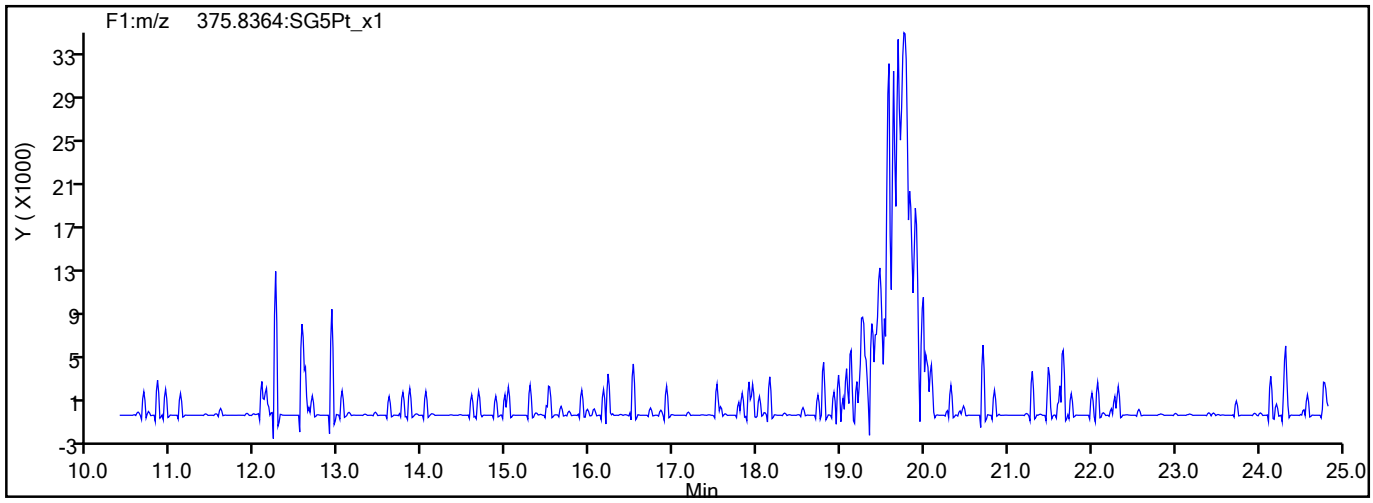

775258

Report Date: 24-Aug-2021 09:19:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_012.d		
Injection Date:	23-Aug-2021 22:36:27	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	518979	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

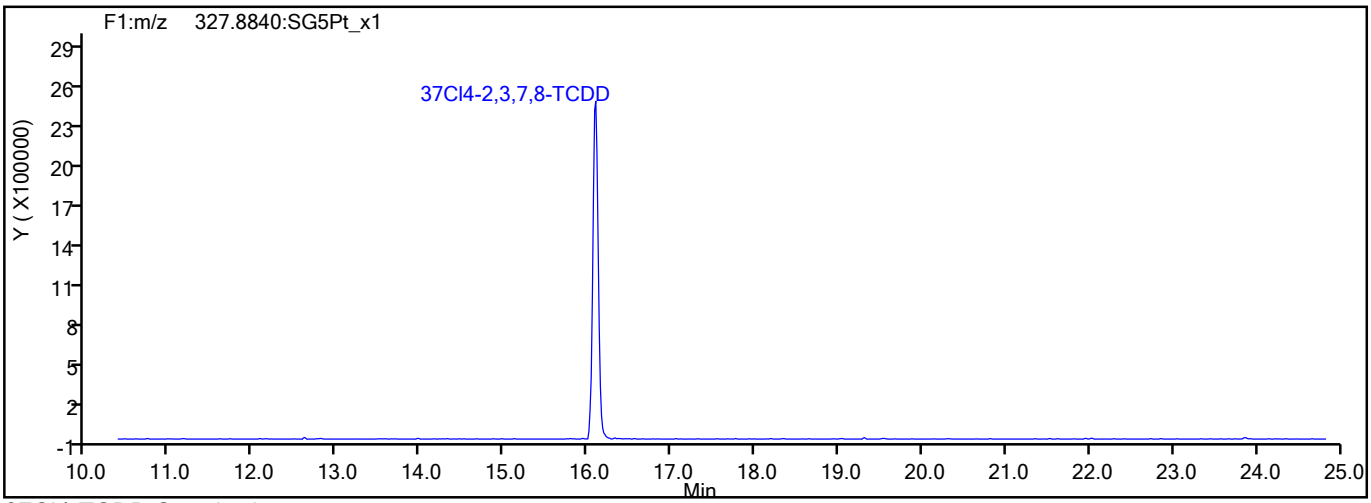

37Cl4-TCDD Standards

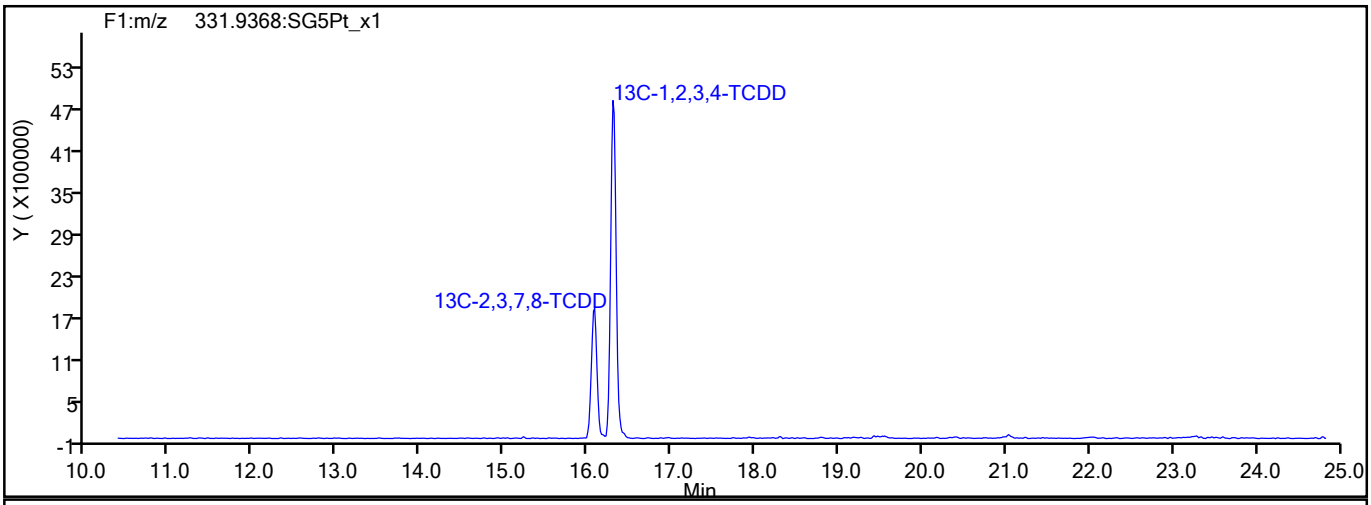

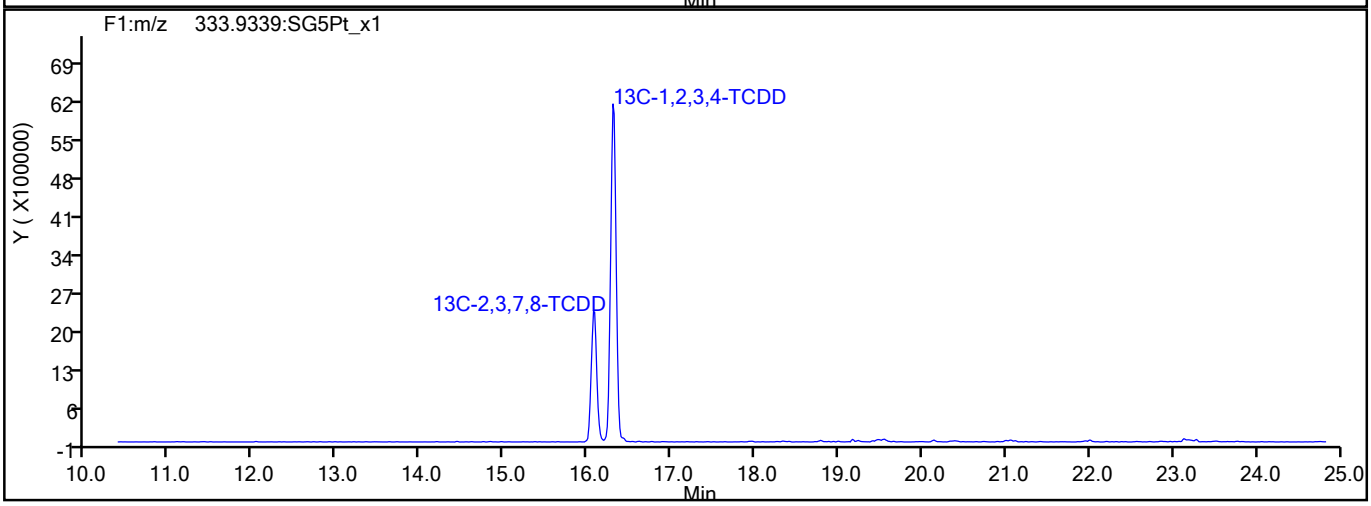

775259

Report Date: 24-Aug-2021 09:19:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_012.d		
Injection Date:	23-Aug-2021 22:36:27	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (8-10)		
Worklist#:	518979	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

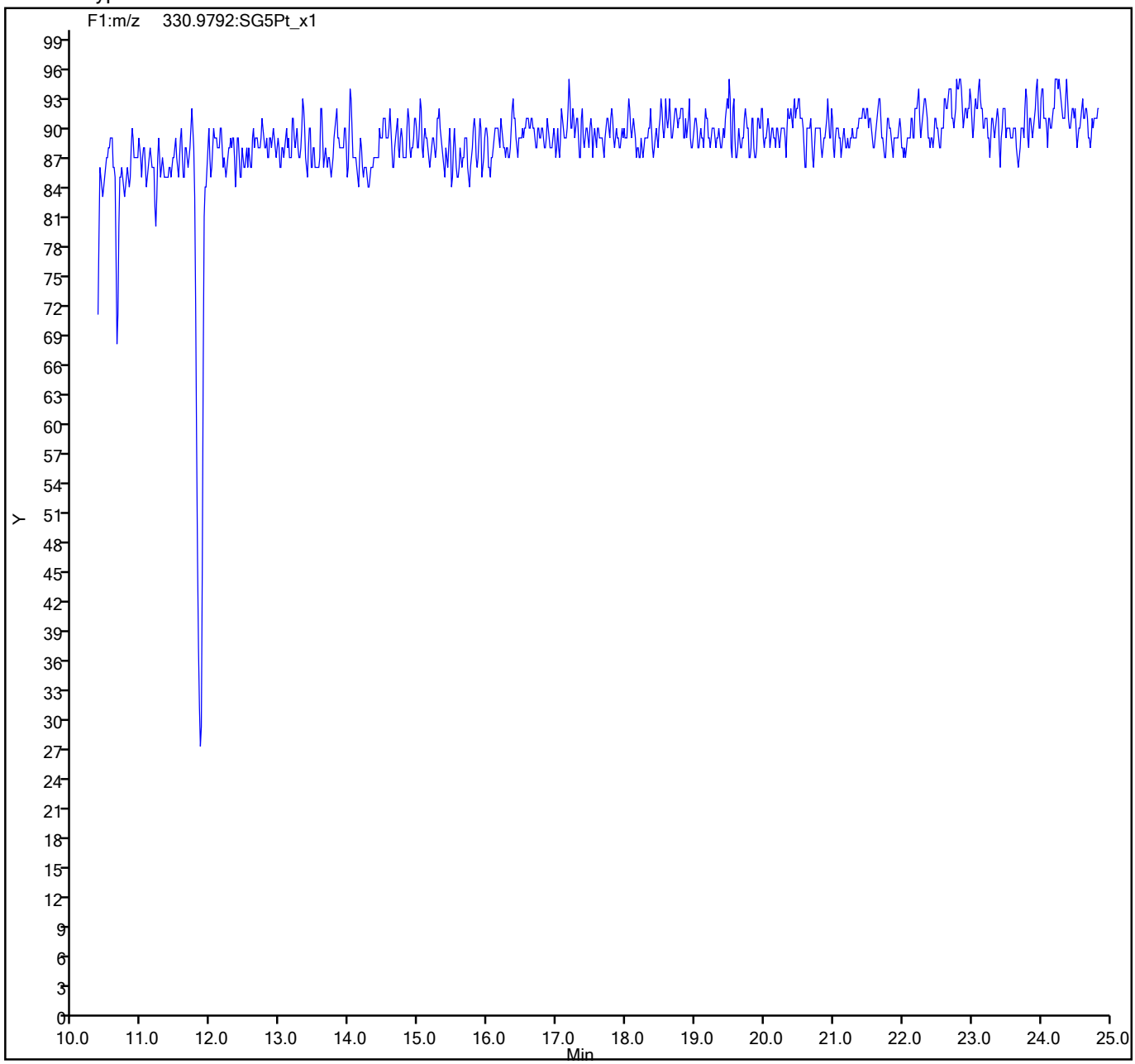

775260

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (10-12)
Lab Sample ID: 320-76769-18
Matrix: Sediment
Lab File ID: 13AU2110D5_63.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.06(g)
Date Analyzed: 08/15/2021 16:42
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 16.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2.3	B	1.2	0.059
40321-76-4	1,2,3,7,8-PeCDD	ND		5.9	0.043
57117-41-6	1,2,3,7,8-PeCDF	0.17	J q	5.9	0.043
57117-31-4	2,3,4,7,8-PeCDF	0.12	J q	5.9	0.043
39227-28-6	1,2,3,4,7,8-HxCDD	0.19	J B	5.9	0.065
57653-85-7	1,2,3,6,7,8-HxCDD	0.074	J q	5.9	0.068
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.9	0.061
70648-26-9	1,2,3,4,7,8-HxCDF	0.28	J B q	5.9	0.029
57117-44-9	1,2,3,6,7,8-HxCDF	0.13	J B	5.9	0.030
72918-21-9	1,2,3,7,8,9-HxCDF	0.067	J B q	5.9	0.025
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.9	0.024
35822-46-9	1,2,3,4,6,7,8-HpCDD	1.8	J B	5.9	0.083
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.16	J B	5.9	0.048
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.9	0.059
3268-87-9	OCDD	58	B	12	0.13
39001-02-0	OCDF	0.16	J B q	12	0.040
41903-57-5	Total TCDD	2.7	B q	1.2	0.059
30402-14-3	Total TCDF	10	B q	1.2	0.092
36088-22-9	Total PeCDD	0.18	J q	5.9	0.043
30402-15-4	Total PeCDF	0.36	J q	5.9	0.043
34465-46-8	Total HxCDD	1.4	J B q	5.9	0.065
55684-94-1	Total HxCDF	0.47	J B q	5.9	0.027
37871-00-4	Total HpCDD	7.1	B	5.9	0.083
38998-75-3	Total HpCDF	0.16	J B	5.9	0.053

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (10-12)
Lab Sample ID: 320-76769-18
Matrix: Sediment
Lab File ID: 13AU2110D5_63.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.06(g)
Date Analyzed: 08/15/2021 16:42
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 16.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	52		25-164
89059-46-1	13C-2,3,7,8-TCDF	47		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	55		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	49		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	54		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	55		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	53		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	50		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	49		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	49		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	55		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	51		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	59		26-138
114423-97-1	13C-OCDD	60		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	65		35-197

Report Date: 18-Aug-2021 10:26:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d
Lims ID: 320-76769-A-18-A
Client ID: 11215702-072221-SS-SJSB074 (10-12)
Sample Type: Client
Inject. Date: 15-Aug-2021 16:42:10 ALS Bottle#: 61 Worklist Smp#: 22
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-18-a 320-76769-a-18-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:26:03 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: dadunj Date: 18-Aug-2021 11:35:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	55282552	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	42214165	0.77	1.6249	47.0	47.0	0.0669	0.0669	46.99	
2,3,7,8-TCDF	17.371	1159456	0.74	1.0239	2.682	2.682	0.0390	0.0390		
A Non-2,3,7,8-sub-TCDF	17.046	712198	0.77	1.0239	1.697	1.648	0.0390	1.158		RQMa
S Total TCDF					4.380	4.330	0.0390	0.0390		RQ
D 13C-2,3,7,8-TCDD	18.066	26032847	0.80	0.8993	52.4	52.4	0.1163	0.1163	52.36	
2,3,7,8-TCDD	18.081	312383	0.75	1.2541	0.9568	0.9568	0.0247	0.0247		M
$ 37Cl4-2,3,7,8-TCDD	18.081	16004334		1.1071	26.1	26.1	0.0268	0.0268	65.37	
A Non-2,3,7,8-sub-TCDD	17.500	53791	0.77	1.2541	0.1805	0.1648	0.0247	0.0961		RQ
S Total TCDD					1.137	1.122	0.0247	0.0247		RQ
D 13C-1,2,3,7,8-PeCDF	22.381	33092563	1.57	1.2101	49.5	49.5	0.1457	0.1457	49.47	
1,2,3,7,8-PeCDF	22.421	24893	1.55	1.0611	0.0846	0.0709	0.0182	0.0182		RQM
D 13C-2,3,4,7,8-PeCDF	23.717	37164290	1.57	1.2395	54.2	54.2	0.1422	0.1422	54.24	
2,3,4,7,8-PeCDF	23.730	19792	1.55	1.0184	0.0594	0.0523	0.0183	0.0183		RQ
A F1 PeCDFs	20.093						0.0114	0.0114		
A Non-2,3,7,8-sub-PeCDF	23.241	9704	1.55	1.0398	0.0326	0.0266	0.0182	0.0266		RQM
S Total PeCDF					0.1765	0.1497	0.0183	0.0183		RQ
D 13C-1,2,3,7,8-PeCDD	24.440	23117463	1.60	0.7612	54.9	54.9	0.0784	0.0784	54.93	
1,2,3,7,8-PeCDD	24.494						0.0179	0.0179		U
A Non-2,3,7,8-sub-PeCDD	23.349	18724	1.55	1.0484	0.0864	0.0773	0.0179	0.0461		RQM
S Total PeCDD					0.0864	0.0773	0.0179	0.0179		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	31240851	0.51	1.0837	53.4	53.4	0.2496	0.2496	53.36	
1,2,3,4,7,8-HxCDF	30.529	39851	1.24	1.0851	0.1313	0.1176	0.0122	0.0122		RQ
D 13C-1,2,3,6,7,8-HxCDF	30.702	30235425	0.51	1.1279	49.6	49.6	0.2398	0.2398	49.62	
1,2,3,6,7,8-HxCDF	30.716	18240	1.33	1.1260	0.0536	0.0536	0.0128	0.0128		M
D 13C-2,3,4,6,7,8-HxCDF	31.514	27917565	0.51	1.0637	48.6	48.6	0.2543	0.2543	48.58	
2,3,4,6,7,8-HxCDF	31.541						0.0103	0.0103		RQU
D 13C-1,2,3,7,8,9-HxCDF	32.326	25625977	0.52	0.9676	49.0	49.0	0.2795	0.2795	49.02	
1,2,3,7,8,9-HxCDF	32.340	8500	1.24	1.1664	0.0354	0.0284	0.0105	0.0105		RQM
A Non-2,3,7,8-sub-HxCDF	30.197						0.0114	0.0114		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.2203	0.1996	0.0114	0.0114		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.140	54025257	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	21840641	1.23	0.7334	55.1	55.1	0.2914	0.2914	55.12	
1,2,3,4,7,8-HxCDD	31.714	18991	1.40	1.0640	0.0817	0.0817	0.0274	0.0274		M
D 13C-1,2,3,6,7,8-HxCDD	31.807	25556076	1.21	0.8802	53.7	53.7	0.2428	0.2428	53.74	
1,2,3,6,7,8-HxCDD	31.834	7974	1.24	1.0001	0.0342	0.0312	0.0287	0.0287		RQMa
1,2,3,7,8,9-HxCDD	32.153						0.0255	0.0255		
A Non-2,3,7,8-sub-HxCDD	30.882	119413	1.24	1.0655	0.5077	0.4729	0.0271	0.3766		RQ
S Total HxCDD					0.6235	0.5858	0.0272	0.0272		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	21127271	0.43	0.7730	50.6	50.6	0.6445	0.6445	50.59	
1,2,3,4,6,7,8-HpCDF	33.778	20889	1.01	1.4413	0.0686	0.0686	0.0200	0.0200		
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	22416594	0.42	0.7008	59.2	59.2	0.7109	0.7109	59.21	
1,2,3,4,7,8,9-HpCDF	34.860						0.0248	0.0248		
A Non-2,3,7,8-sub-HpCDF	34.319						0.0222	0.0222		
S Total HpCDF					0.0686	0.0686	0.0224	0.0224		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	19058413	1.02	0.6472	54.5	54.5	0.3320	0.3320	54.50	
1,2,3,4,6,7,8-HpCDD	34.568	157540	0.92	1.0943	0.7554	0.7554	0.0350	0.0350		M
A Non-2,3,7,8-sub-HpCDD	34.301	466301	1.00	1.0943	2.236	2.236	0.0350	2.236		M
S Total HpCDD					2.991	2.991	0.0350	0.0350		
D 13C-OCDD	36.926	29056638	0.87	0.4472	120.3	120.3	0.1584	0.1584	60.14	
OCDF	37.022	13924	0.89	1.4382	0.0851	0.0666	0.0167	0.0167		RQM
OCDD	36.938	3922891	0.89	1.1070	24.4	24.4	0.0538	0.0538		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d
Lims ID: 320-76769-A-18-A
Client ID: 11215702-072221-SS-SJSB074 (10-12)
Sample Type: Client
Inject. Date: 15-Aug-2021 16:42:10 ALS Bottle#: 61 Worklist Smp#: 22
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-18-a 320-76769-a-18-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:26:03 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: dadunj Date: 18-Aug-2021 11:35:18

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		24692275	5893289	2721	6802	2166		
333.9339	17.870	17.855	1		30590277	7328386	2811	7027	2607	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.971	18326728	4243720	3205	8012	1324		
317.9389	17.356	17.356	0	0.971	23887437	5590952	2547	6367	2195	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.371	0	1.001	491620	109272	698	1745	157		
305.8987	17.371	17.371	0	1.001	667836	146670	872	2180	168	0.74(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	16.706	17.046	-20	0.963	32419	5509	698	1745	8		
	Empc Correction				22395	3912	698	1745	6		
305.8987	16.721	17.046	-19	0.963	29085	5081	872	2180	6	1.11(0.65-0.89)	
303.9016	16.993	17.046	-3	0.979	217874	49991	698	1745	72		M
305.8987	16.993	17.046	-3	0.979	282463	63586	872	2180	73	0.77(0.65-0.89)	
303.9016	17.794	17.046	45	1.025	44780	8626	698	1745	12		
	Empc Correction				33307	6049	698	1745	9		
305.8987	17.809	17.046	46	1.026	43256	7856	872	2180	9	1.04(0.65-0.89)	
303.9016	19.201	17.046	129	1.106	36770	7881	698	1745	11		a
305.8987	19.185	17.046	128	1.105	47048	9686	872	2180	11	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	11600324	2565186	2721	6802	943		
333.9339	18.066	18.051	1	1.011	14432523	3208841	2811	7027	1142	0.80(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	18.081	18.081	0	1.001	133462	30435	366	915	83		
321.8936	18.081	18.081	0	1.001	178921	41239	349	872	118	0.75(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	18.081	18.081	0	1.012	16004334	3667005	1569	3922	2337		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	16.933	17.500	-34	0.937	12617	3142	366	915	9		
321.8936	16.933	17.500	-34	0.937	18771	4544	349	872	13	0.67(0.65-0.89)	
319.8965	18.460	17.500	57	1.022	9746	1765	366	915	5		
321.8936	18.414	17.500	55	1.019	17811	2805	349	872	8	0.55(0.65-0.89)	
	Empc Correction				12657	2292	349	872	7		
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.252	20206834	3282801	5530	13825	594		
353.8970	22.381	22.367	1	1.252	12885729	2075671	3794	9485	547	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											RQM
339.8597	22.421	22.394	2	1.002	19932	4154	187	467	22		M
	Empc Correction				15131	2963	187	467	16		
341.8567	22.408	22.394	1	1.001	9762	1912	227	567	8	2.04(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.327	22683112	3377174	5530	13825	611		
353.8970	23.730	23.703	2	1.328	14481178	2176202	3794	9485	574	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											RQ
339.8597	23.730	23.730	0	1.001	12031	2275	187	467	12		
341.8567	23.703	23.730	-2	0.999	10437	1622	227	567	7	1.15(1.32-1.78)	
	Empc Correction				7761	1467	227	567	6		
A F1 PeCDFs											
339.8597	20.093						111	277			
341.8567	20.093						148	370			
A Non-2,3,7,8-sub-PeCDF											RQM
339.8597	21.058	23.241	-131	0.941	5899	1168	187	467	6		
341.8567	21.099	23.241	-128	0.943	6004	1117	227	567	5	0.98(1.32-1.78)	M
	Empc Correction				3805	753	227	567	3		
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.368	14221812	1978153	1964	4910	1007		
369.8919	24.453	24.426	2	1.368	8895651	1224617	1192	2980	1027	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											U
355.8546	24.453						161	402			
357.8516	24.453						80	200			
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	21.249	23.349	-126	0.869	4392	988	161	402	6		
357.8516	21.249	23.349	-126	0.869	3156	838	80	200	10	1.39(1.32-1.78)	
355.8546	21.999	23.349	-81	0.900	9016	2107	161	402	13		M
	Empc Correction				6793	1832	161	402	11		
357.8516	21.999	23.349	-81	0.900	4383	1182	80	200	15	2.06(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	10528702	1962530	5340	13350	368		
385.8610	30.516	30.503	1	0.949	20712149	3839508	9498	23745	404	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQ
373.8208	30.529	30.529	0	1.000	26727	4802	165	412	29		
	Empc Correction				22060	4059	165	412	25		
375.8178	30.529	30.529	0	1.000	17791	3274	142	355	23	1.50(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	10158552	1790237	5340	13350	335		
385.8610	30.702	30.689	1	0.955	20076873	3541436	9498	23745	373	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											M
373.8208	30.716	30.716	0	1.000	10411	2273	165	412	14		
375.8178	30.716	30.716	0	1.000	7829	1317	142	355	9	1.33(1.05-1.43)	M
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	9440804	2141467	5340	13350	401		
385.8610	31.514	31.514	0	0.981	18476761	4242430	9498	23745	447	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQU
373.8208	31.528						165	412			
375.8178	31.528						142	355			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.326	0	1.006	8821138	2184468	5340	13350	409		
385.8610	32.326	32.326	0	1.006	16804839	4083026	9498	23745	430	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	32.340	32.340	0	1.000	6779	2271	165	412	14		M
	Empc Correction				4705	1812	165	412	11		
375.8178	32.340	32.340	0	1.000	3795	1462	142	355	10	1.79(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.197						165	412			
375.8178	30.197						142	355			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.140	0		29893566	7659894	6780	16950	1130		
403.8529	32.140	32.140	0		24131691	6054763	4943	12357	1225	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	12050745	3268653	6780	16950	482		
403.8529	31.701	31.701	0	0.986	9789896	2674681	4943	12357	541	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.714	31.714	0	1.000	11085	3151	411	1027	8		M
391.8127	31.727	31.714	1	1.001	7906	2053	282	705	7	1.40(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	14015496	3314511	6780	16950	489		
403.8529	31.807	31.807	0	0.990	11540580	2721232	4943	12357	551	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQMa
389.8157	31.834	31.820	1	1.001	5169	1106	411	1027	3		
	Empc Correction				4414	1413	411	1027	3		
391.8127	31.807	31.820	-1	1.000	3560	1140	282	705	4	1.45(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153						411	1027			
391.8127	32.153						282	705			
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.571	30.882	-78	0.930	61418	7628	411	1027	19		
	Empc Correction				52640	5947	411	1027	14		
391.8127	29.571	30.882	-78	0.930	42452	4796	282	705	17	1.45(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
389.8157	30.955	30.882	4	0.973	13719	3131	411	1027	8		
391.8127	30.982	30.882	6	0.974	10602	2559	282	705	9	1.29(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.766	0	1.051	6359316	2048915	7390	18475	277		
419.8220	33.766	33.766	0	1.051	14767955	4700620	19942	49855	236	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	10506	4471	552	1380	8		
409.7789	33.766	33.778	-1	1.000	10383	4210	228	570	18	1.01(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.084	6673659	1760317	7390	18475	238		
419.8220	34.847	34.847	0	1.084	15742935	4198927	19942	49855	211	0.42(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860						552	1380			
409.7789	34.860						228	570			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						552	1380			
409.7789	34.319						228	570			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.568	-1	1.075	9606069	2671225	6081	15202	439		
437.8140	34.556	34.568	-1	1.075	9452344	2639064	5708	14270	462	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											M
423.7766	34.568	34.580	-1	1.000	75695	23171	440	1100	53		M
425.7737	34.568	34.580	-1	1.000	81845	26421	373	932	71	0.92(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											M
423.7766	34.021	34.301	-17	0.985	232643	69009	440	1100	157		
425.7737	34.021	34.301	-17	0.985	233658	68068	373	932	182	1.00(0.88-1.20)	M
13C-OCDD											
469.7779	36.926	36.926	0	1.149	13526913	3176585	2100	5250	1513		
471.7750	36.926	36.926	0	1.149	15529725	3613953	1785	4462	2025	0.87(0.76-1.02)	
OCDF											RQM
441.7428	37.022	37.022	0	1.003	6557	2261	131	327	17		M
443.7399	37.022	37.022	0	1.003	11221	3122	196	490	16	0.58(0.76-1.02)	M
	Empc Correction				7367	2540	196	490	13		
OCDD											
457.7377	36.938	36.938	0	1.000	1844408	434262	507	1267	857		
459.7348	36.938	36.938	0	1.000	2078483	478096	302	755	1583	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Lims ID:	320-76769-A-18-A		
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Inject. Date:	15-Aug-2021 16:42:10	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	22

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	42214165	9834672

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	42214165	9834672

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.706	32419	5509	29085	5081	0.1423	1.11	RQ
16.706	22395	3912	29085	5081	0.1191		Empc Correction
16.993	217874	49991	282463	63586	1.16	0.77	M
17.794	44780	8626	43256	7856	0.2037	1.04	RQ
17.794	33307	6049	43256	7856	0.1771		Empc Correction
19.201	36770	7881	47048	9686	0.1939	0.78	a
Signal Totals:							
	310346	67833	401852	86209			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	733695	158216				0.83	RQMa
	712198	154042					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.697 = (733695 * 100.000) / (42214165 * 1.024)

Empc Amount: 1.648 = (712198 * 100.000) / (42214165 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d
Lims ID: 320-76769-A-18-A
Client ID: 11215702-072221-SS-SJSB074 (10-12)
Inject. Date: 15-Aug-2021 16:42:10 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 22

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	26032847	5774027

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	26032847	5774027

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.933	12617	3142	18771	4544	0.0961	0.67	
18.460	9746	1765	17811	2805	0.0844	0.55	RQ
18.460	9746	1765	12657	2292	0.0686		Empc Correction
Signal Totals:							
	22363	4907	31428	6836			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	58945	12256				0.61	RQ
	53791	11743					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1805 = (58945 * 100.000) / (26032847 * 1.254)
Empc Amount: 0.1648 = (53791 * 100.000) / (26032847 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Lims ID:	320-76769-A-18-A		
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Inject. Date:	15-Aug-2021 16:42:10	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	22

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	33092563	5358472
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	37164290	5553376

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	35128426	5455924

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.058	5899	1168	6004	1117	0.0326	0.98	RQM
21.058	5899	1168	3805	753	0.0266		Empc Correction
Signal Totals:							
	5899	1168	3805	753			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11903	2285				0.98	RQM
	9704	1921					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0326 = (11903 * 100.000) / (35128426 * 1.040)
Empc Amount: 0.0266 = (9704 * 100.000) / (35128426 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d
Lims ID: 320-76769-A-18-A
Client ID: 11215702-072221-SS-SJSB074 (10-12)
Inject. Date: 15-Aug-2021 16:42:10 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 22

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	23117463	3202770

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	23117463	3202770

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	4392	988	3156	838	0.0311	1.39	
21.999	9016	2107	4383	1182	0.0553	2.06	RQM
21.999	6793	1832	4383	1182	0.0461		Empc Correction
Signal Totals:							
	11185	2820	7539	2020			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	20947	5115				1.78	RQM
	18724	4840					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0864 = (20947 * 100.000) / (23117463 * 1.048)
Empc Amount: 0.0773 = (18724 * 100.000) / (23117463 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Lims ID:	320-76769-A-18-A		
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Inject. Date:	15-Aug-2021 16:42:10	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	22

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	31240851	5802038
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	30235425	5331673
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	27917565	6383897
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	25625977	6267494

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	28754954	5946275

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Lims ID:	320-76769-A-18-A		
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Inject. Date:	15-Aug-2021 16:42:10	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	22

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	21840641	5943334
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	25556076	6035743
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	23698358	5989538

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.571	61418	7628	42452	4796	0.4113	1.45	RQ
29.571	52640	5947	42452	4796	0.3766		Empc Correction
30.955	13719	3131	10602	2559	0.0963	1.29	
Signal Totals:							
	66359	9078	53054	7355			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	128191	18114				1.42	RQ
	119413	16433					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5077 = (128191 * 100.000) / (23698358 * 1.066)

Empc Amount: 0.4729 = (119413 * 100.000) / (23698358 * 1.066)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Lims ID:	320-76769-A-18-A		
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Inject. Date:	15-Aug-2021 16:42:10	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	22

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	19058413	5310289

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	19058413	5310289

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	232643	69009	233658	68068	2.24	1.00	M
Signal Totals:							
	232643	69009	233658	68068			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	466301	137077				1.00	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.236 = (466301 * 100.000) / (19058413 * 1.094)

QC Flag Legend

Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 16.993 Area = 236882

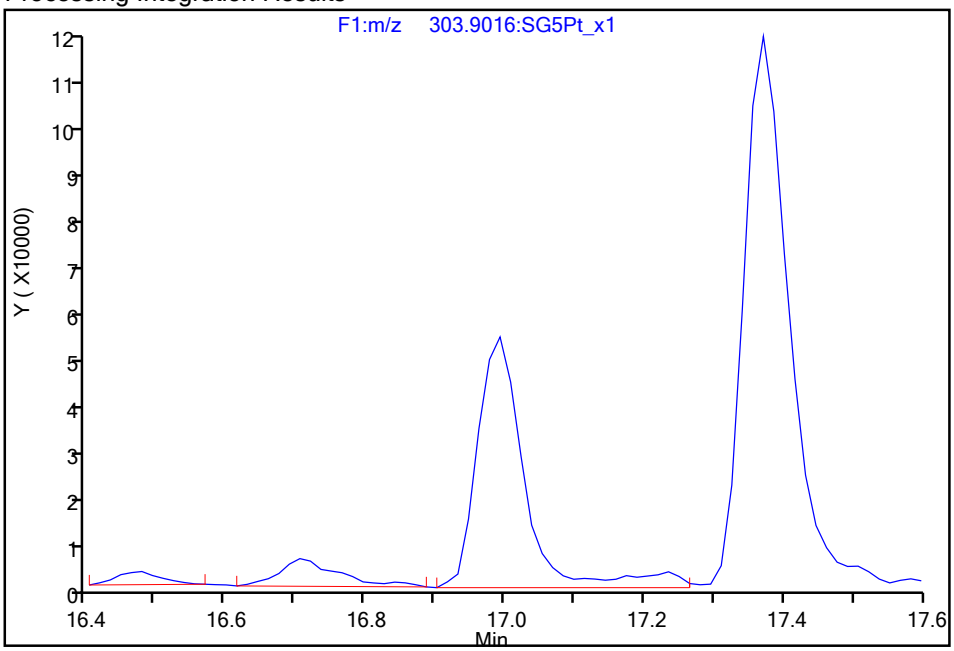

Manual Integration Results

RT = 16.993 Area = 217874 M

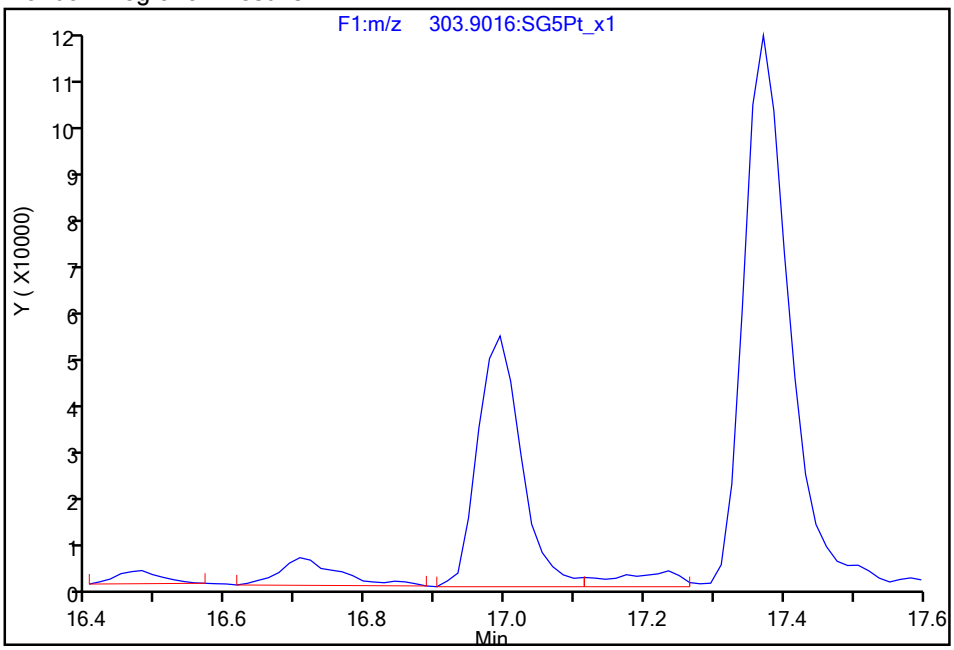

Reviewer: krenns, 18-Aug-2021 10:25:30

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.08
Area: 182513
Amount: 0.967814
Amount Units: pg/ul

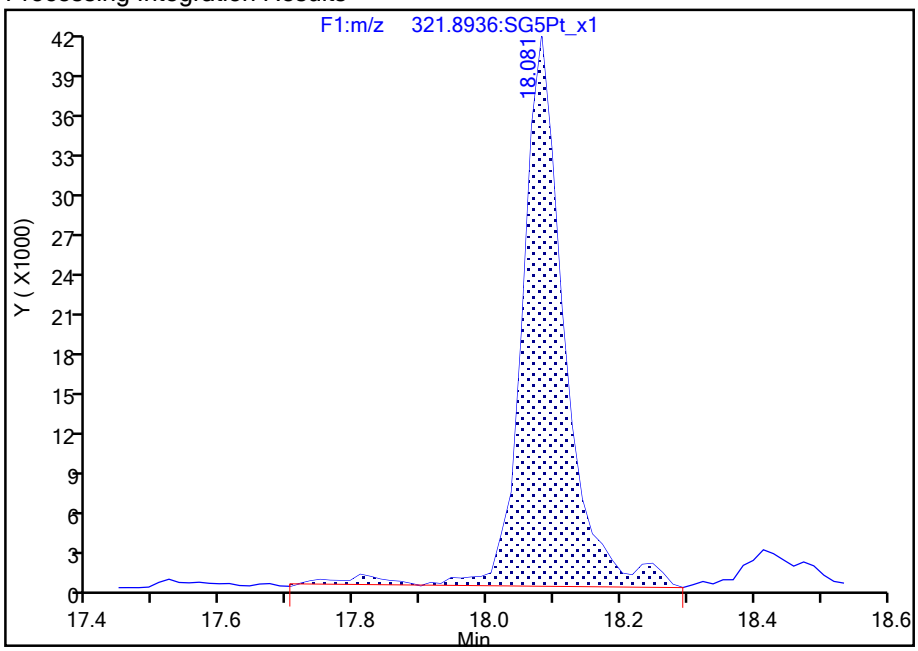

Manual Integration Results

RT: 18.08
Area: 178921
Amount: 0.956812
Amount Units: pg/ul

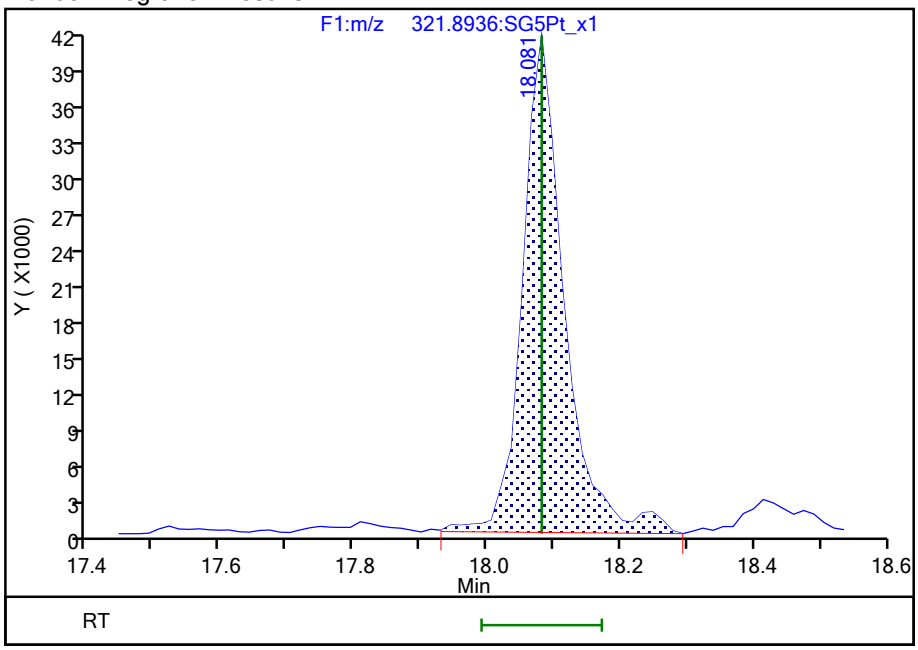

Reviewer: dadunj, 18-Aug-2021 11:33:14

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.41
Area: 9861
Amount: 0.096441
Amount Units: pg/ul

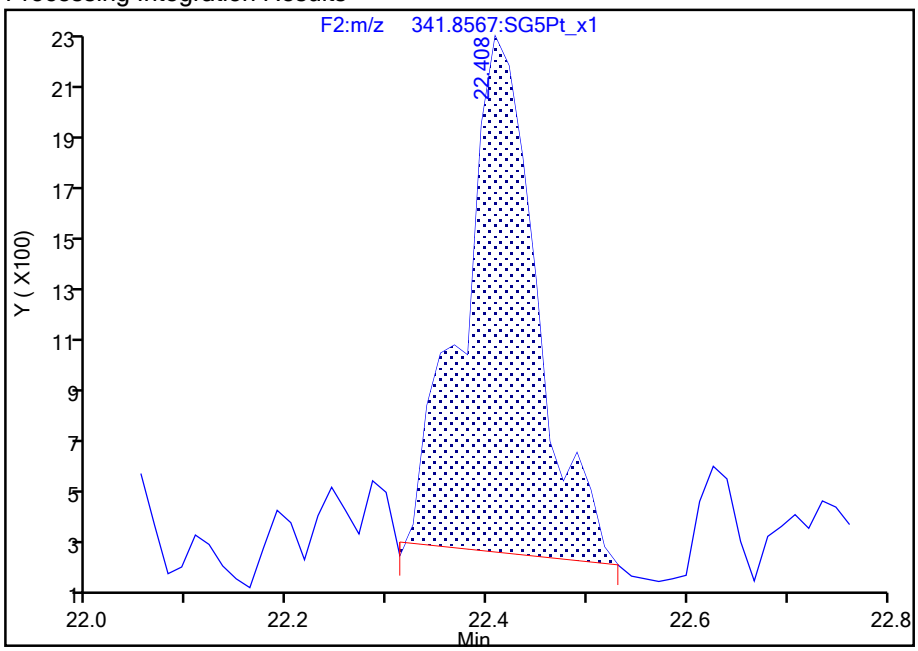

Manual Integration Results

RT: 22.41
Area: 9762
Amount: 0.084561
Amount Units: pg/ul

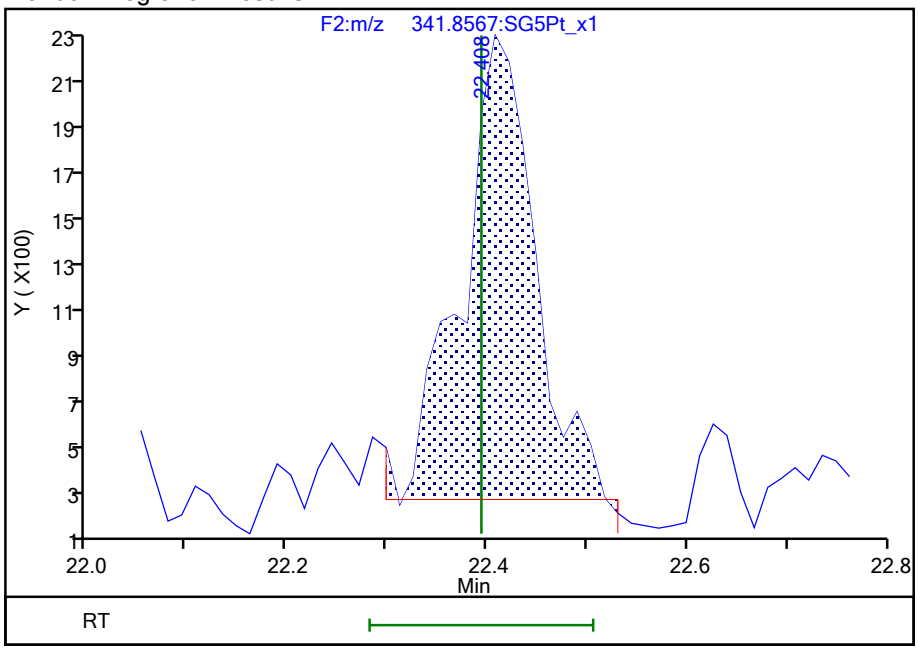

Reviewer: dadunj, 18-Aug-2021 11:33:24

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.42
Area: 24005
Amount: 0.096441
Amount Units: pg/ul

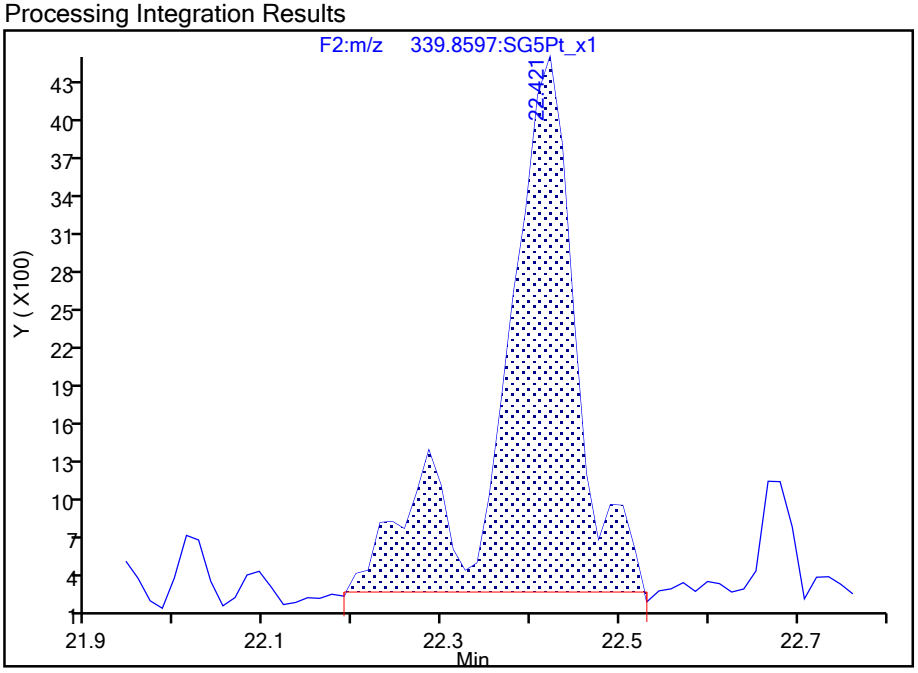

Manual Integration Results

RT: 22.42
Area: 19932
Amount: 0.084561
Amount Units: pg/ul

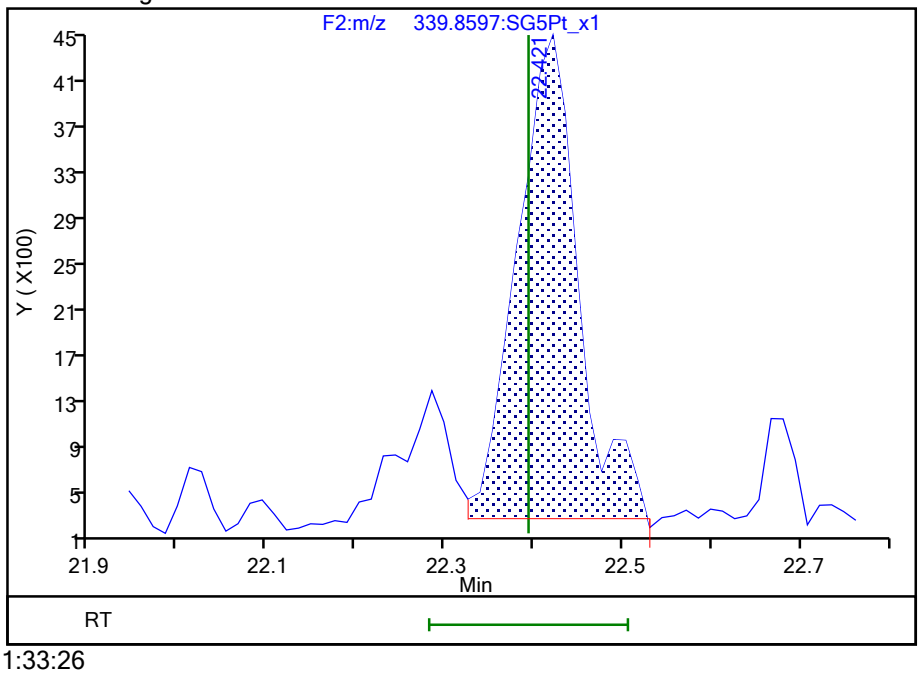

Reviewer: dadunj, 18-Aug-2021 11:33:26
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 2, m/z: 341.8567, RT: (20.77- 25.71)

Signal: 2

Processing Integration Results

RT = 21.099 Area = 7433

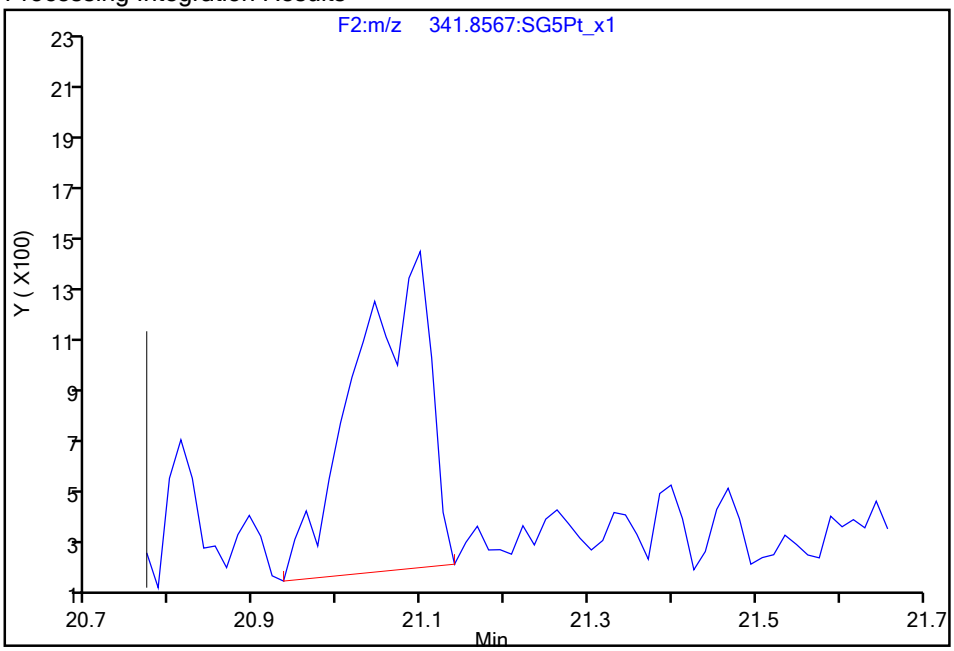

Manual Integration Results

RT = 21.099 Area = 6004 M

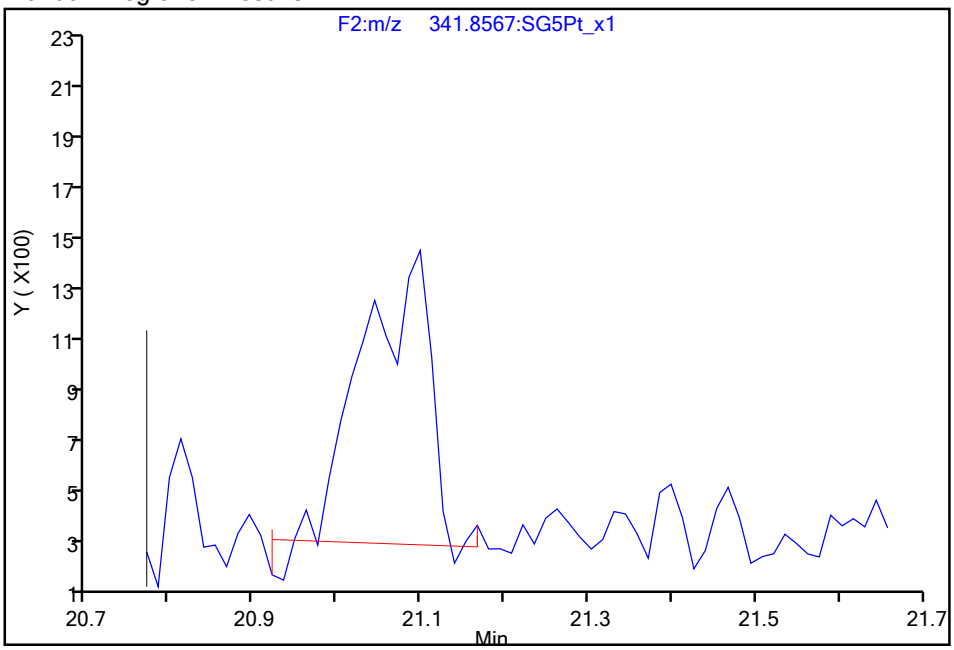

Reviewer: dadunj, 18-Aug-2021 11:33:36

Audit Action: Manually Integrated Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.21- 25.49)

Signal: 1

Processing Integration Results

RT = 21.999 Area = 11833

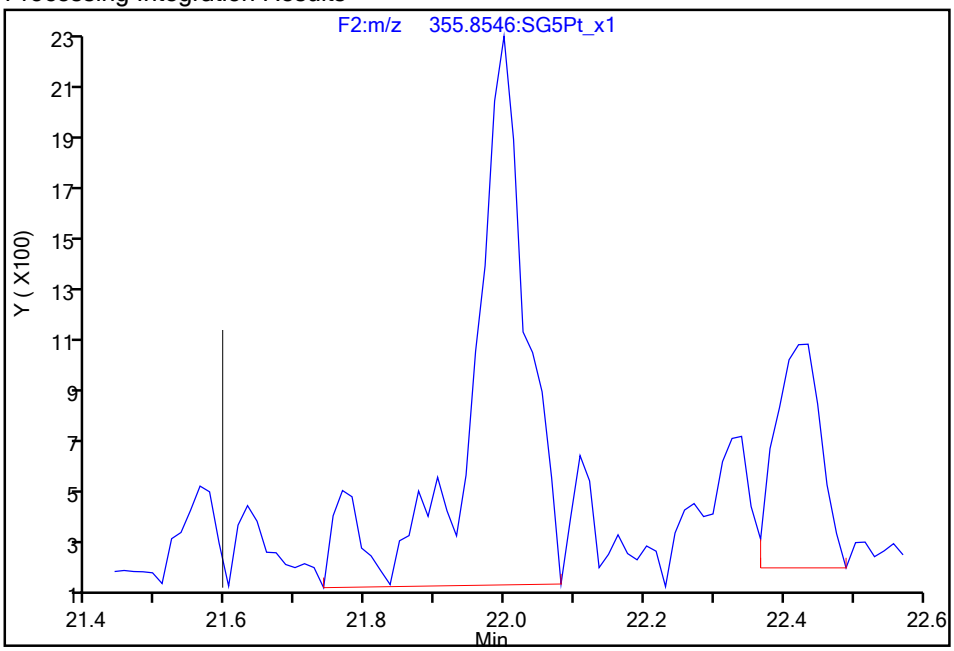

Manual Integration Results

RT = 21.999 Area = 9016 M

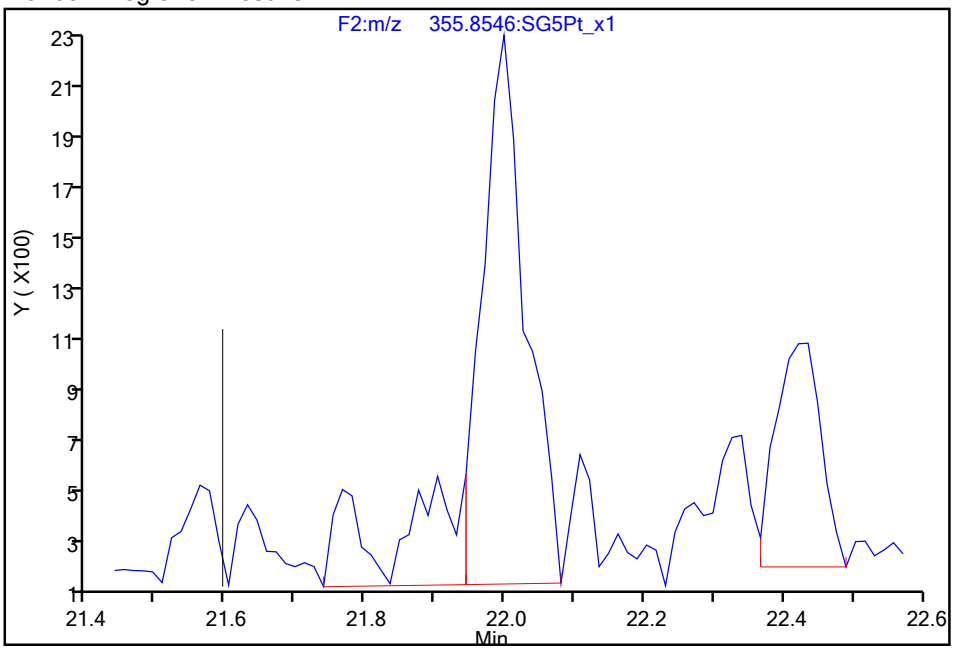

Reviewer: dadunj, 18-Aug-2021 11:33:46

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 30.72
Area: 8924
Amount: 0.056792
Amount Units: pg/ul

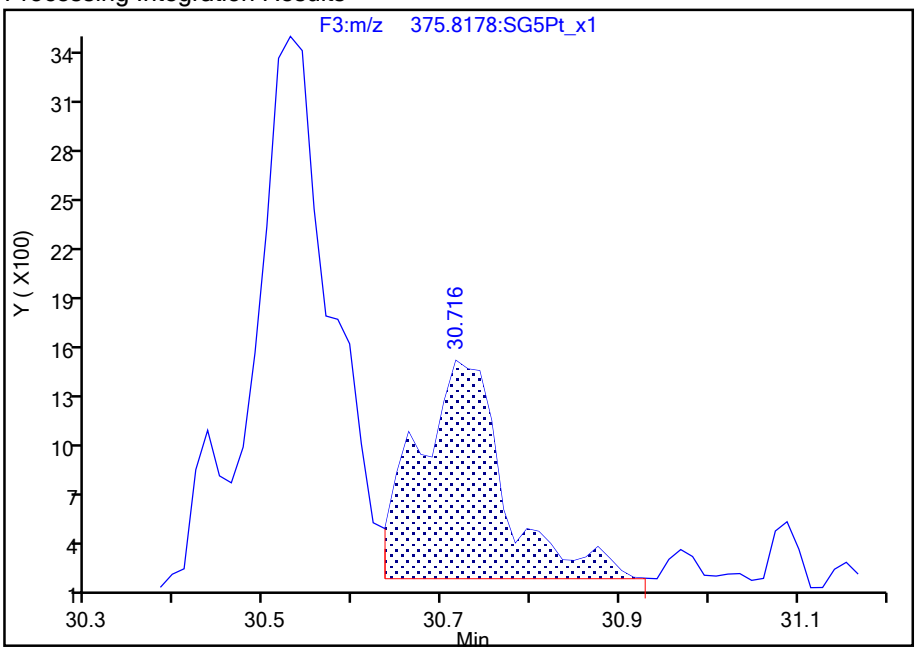

Manual Integration Results

RT: 30.72
Area: 7829
Amount: 0.053575
Amount Units: pg/ul

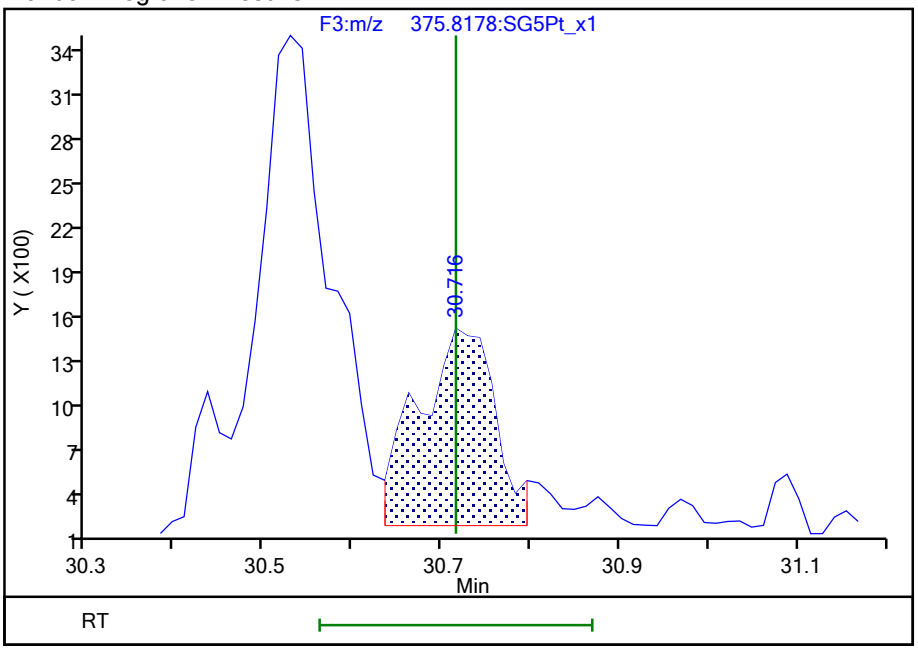

Reviewer: dadunj, 18-Aug-2021 11:33:51

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.34
Area: 8563
Amount: 0.041346
Amount Units: pg/ul

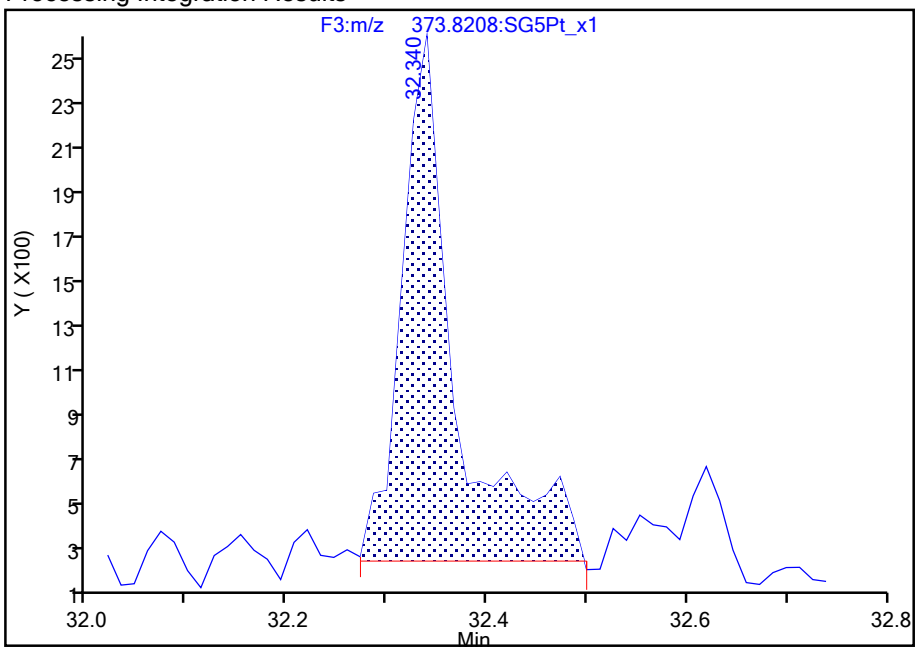

Manual Integration Results

RT: 32.34
Area: 6779
Amount: 0.035378
Amount Units: pg/ul

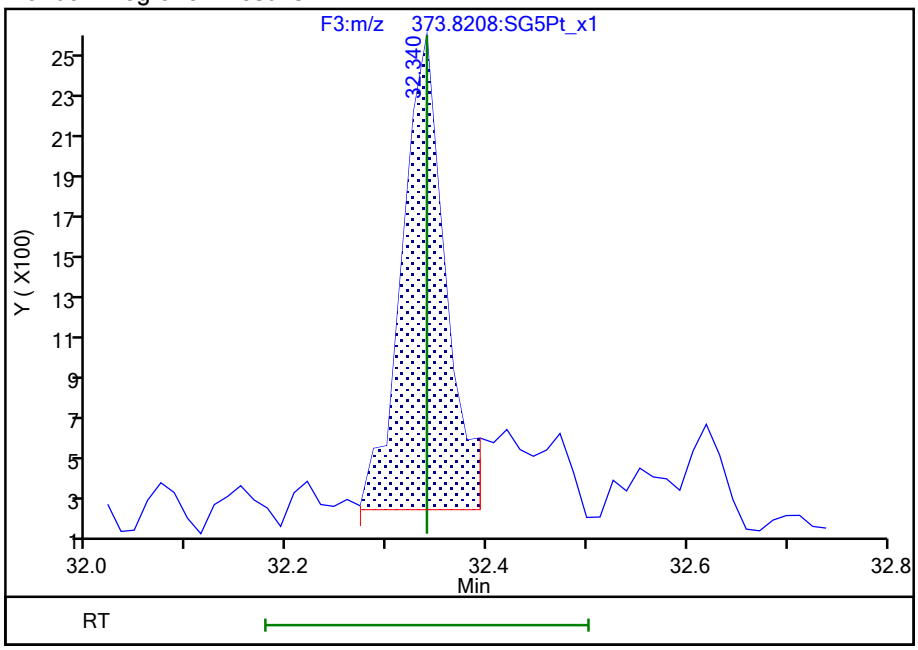

Reviewer: dadunj, 18-Aug-2021 11:33:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.71
Area: 16249
Amount: 0.119290
Amount Units: pg/ul

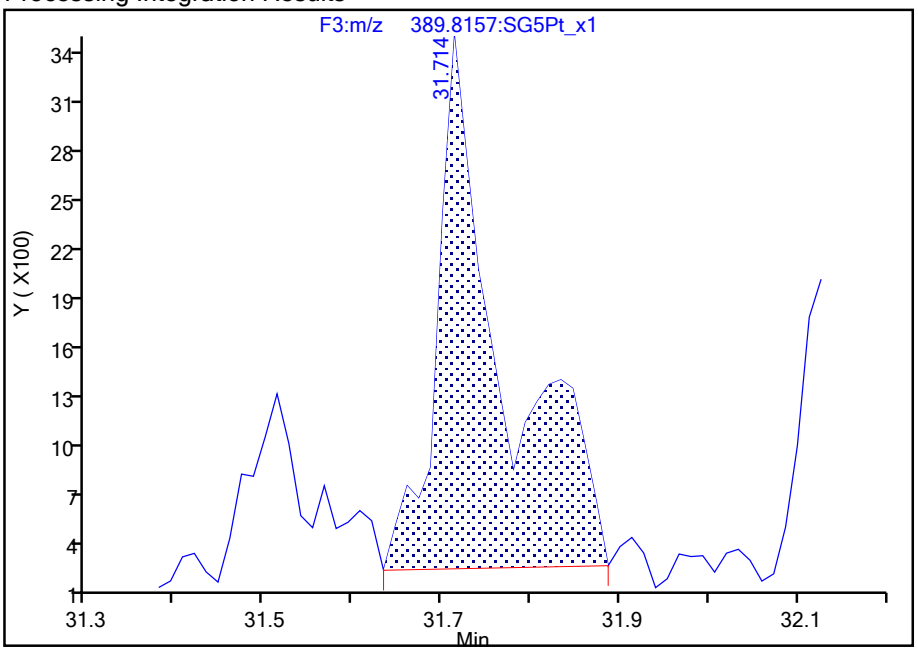

Manual Integration Results

RT: 31.71
Area: 11085
Amount: 0.081720
Amount Units: pg/ul

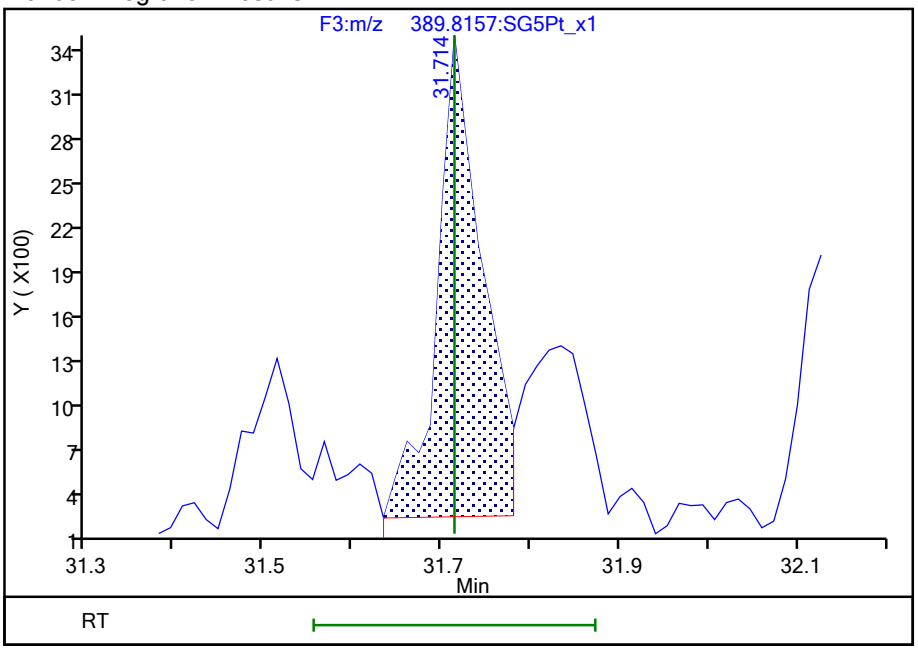

Reviewer: dadunj, 18-Aug-2021 11:34:05

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.73
Area: 11473
Amount: 0.119290
Amount Units: pg/ul

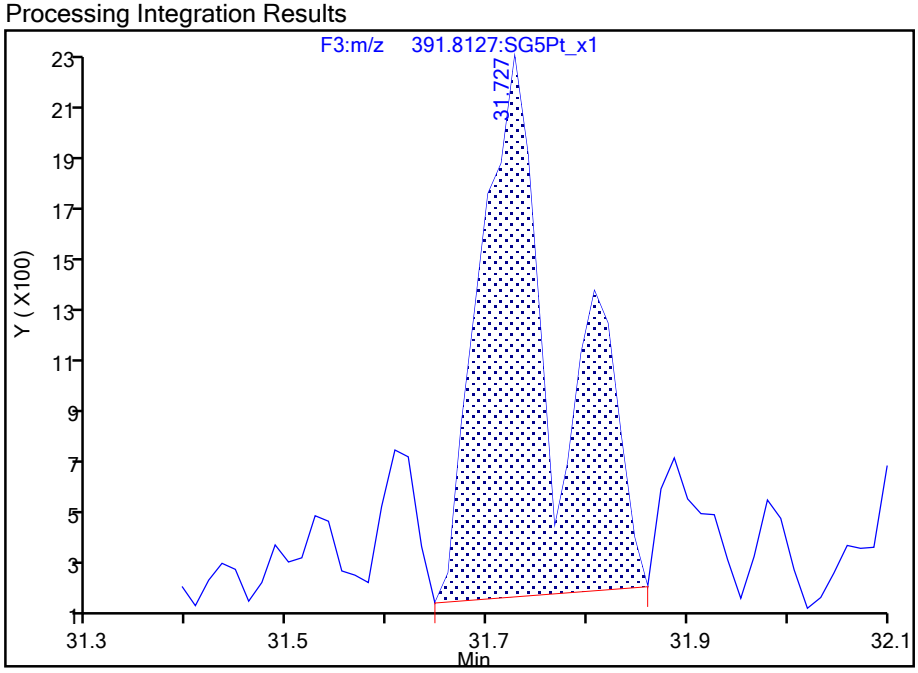

Manual Integration Results

RT: 31.73
Area: 7906
Amount: 0.081720
Amount Units: pg/ul

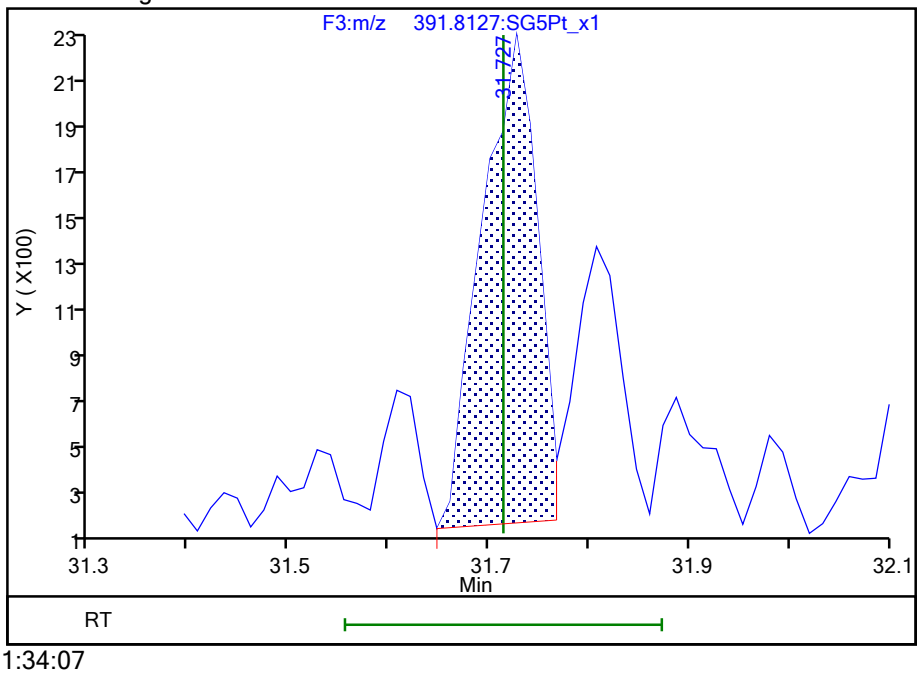

Reviewer: dadunj, 18-Aug-2021 11:34:07

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.73
Area: 11473
Amount: 0.108467
Amount Units: pg/ul

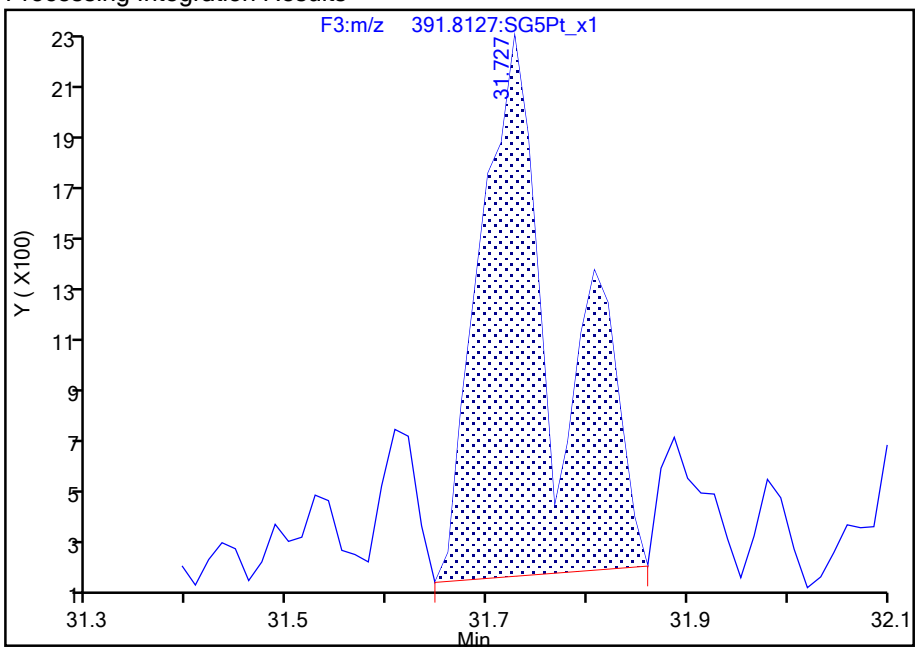

Manual Integration Results

RT: 31.81
Area: 3560
Amount: 0.034154
Amount Units: pg/ul

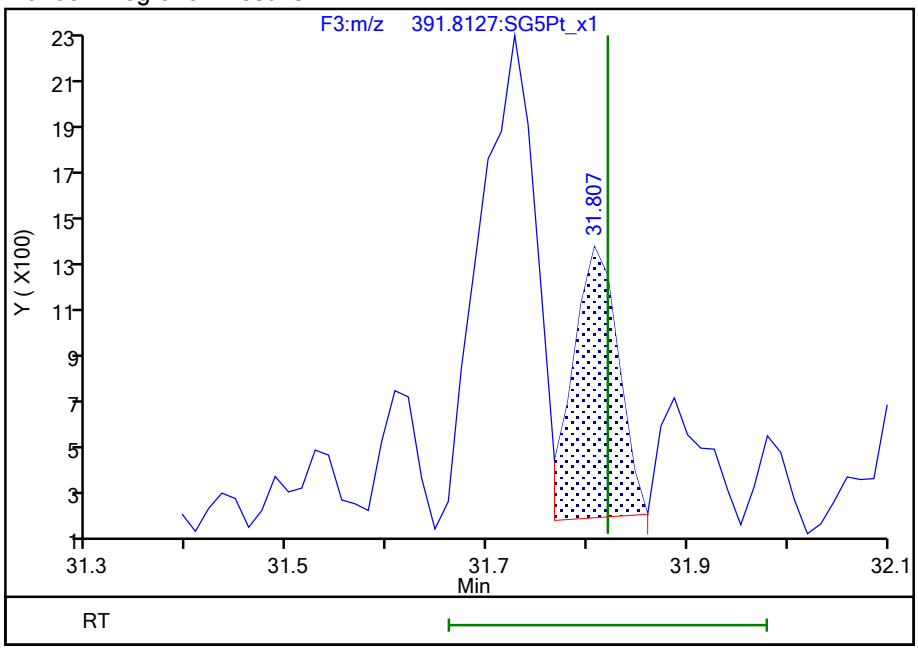

Reviewer: dadunj, 18-Aug-2021 11:35:07

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 3

Processing Integration Results

RT: 31.71
Area: 27722
Amount: 0.108467
Amount Units: pg/ul

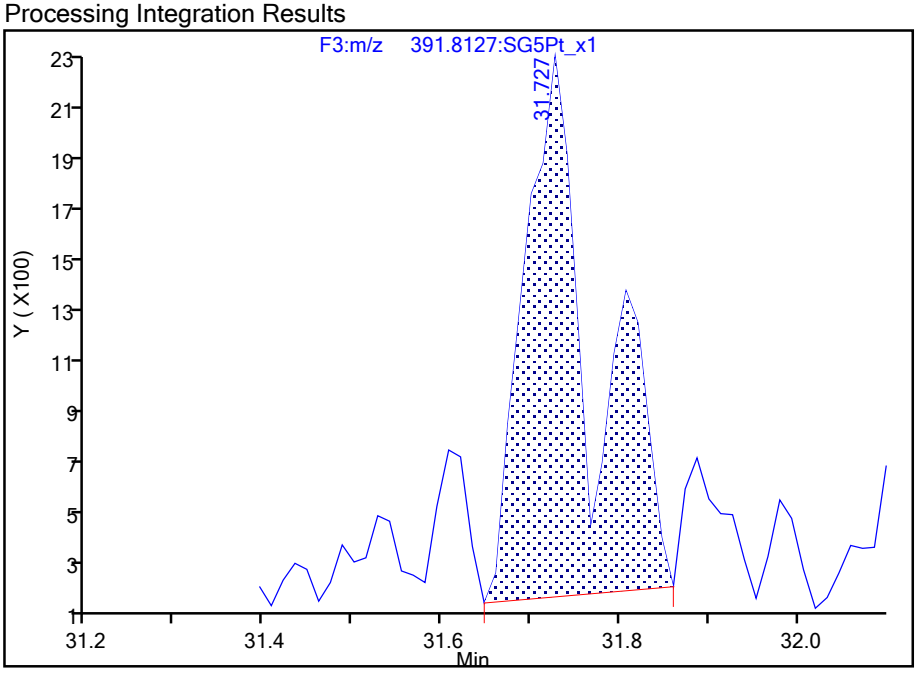

Manual Integration Results

RT: 31.83
Area: 8729
Amount: 0.034154
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 11:35:07
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 34.57
Area: 87388
Amount: 0.849232
Amount Units: pg/ul

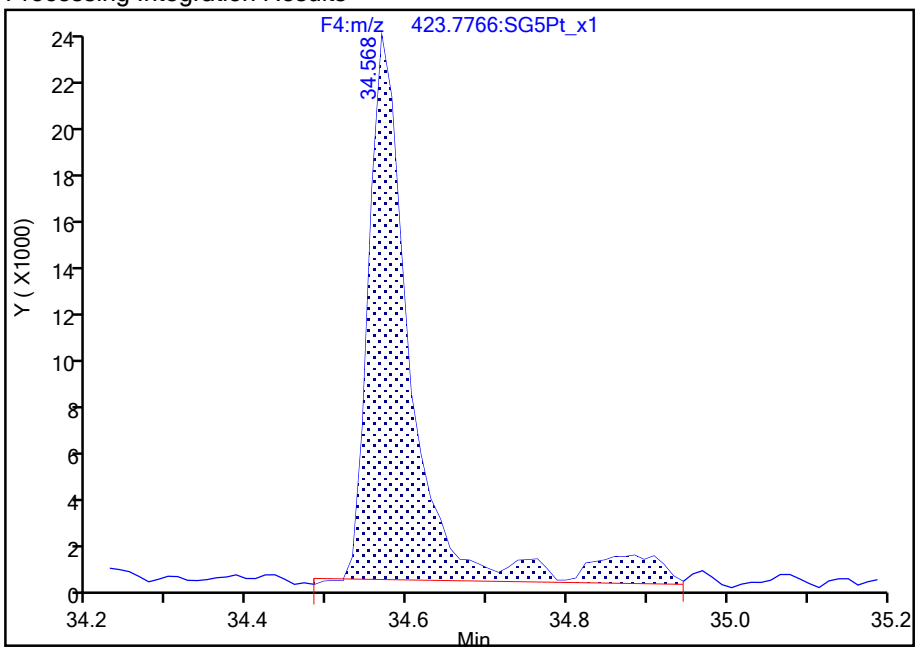

Manual Integration Results

RT: 34.57
Area: 75695
Amount: 0.755382
Amount Units: pg/ul

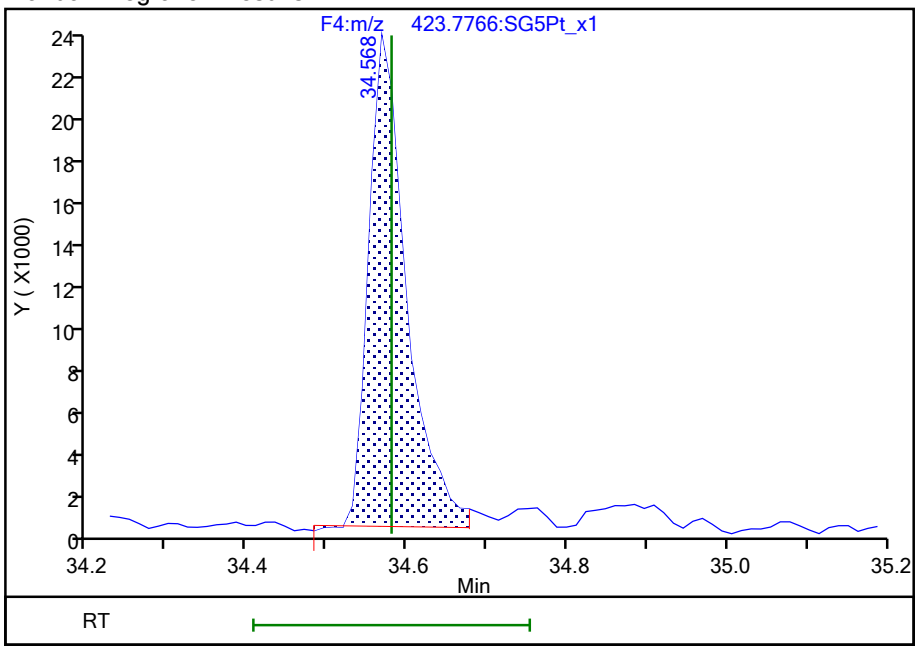

Reviewer: dadunj, 18-Aug-2021 11:34:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 34.57
Area: 89725
Amount: 0.849232
Amount Units: pg/ul

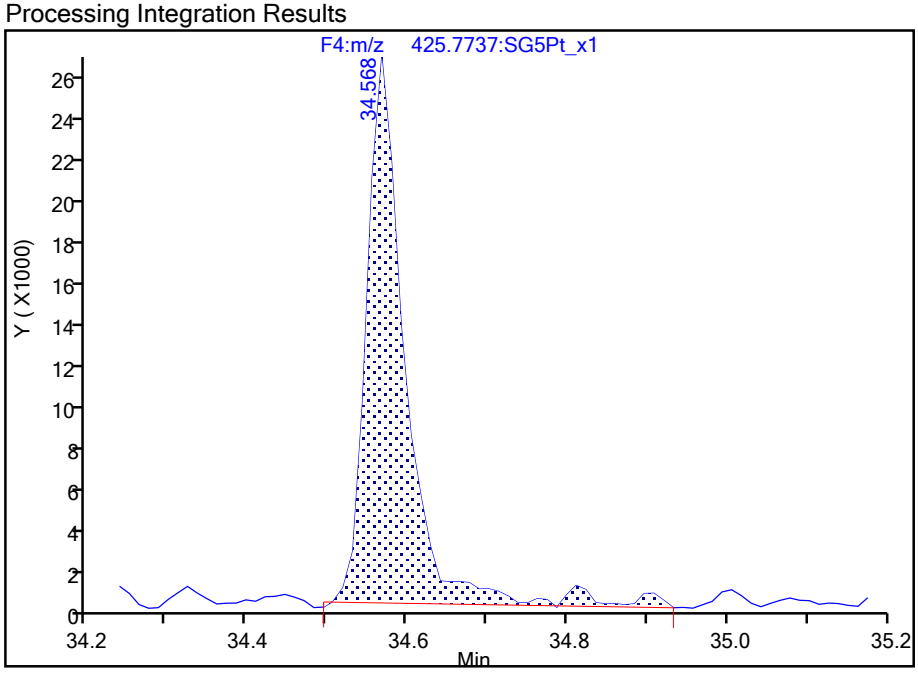

Manual Integration Results

RT: 34.57
Area: 81845
Amount: 0.755382
Amount Units: pg/ul

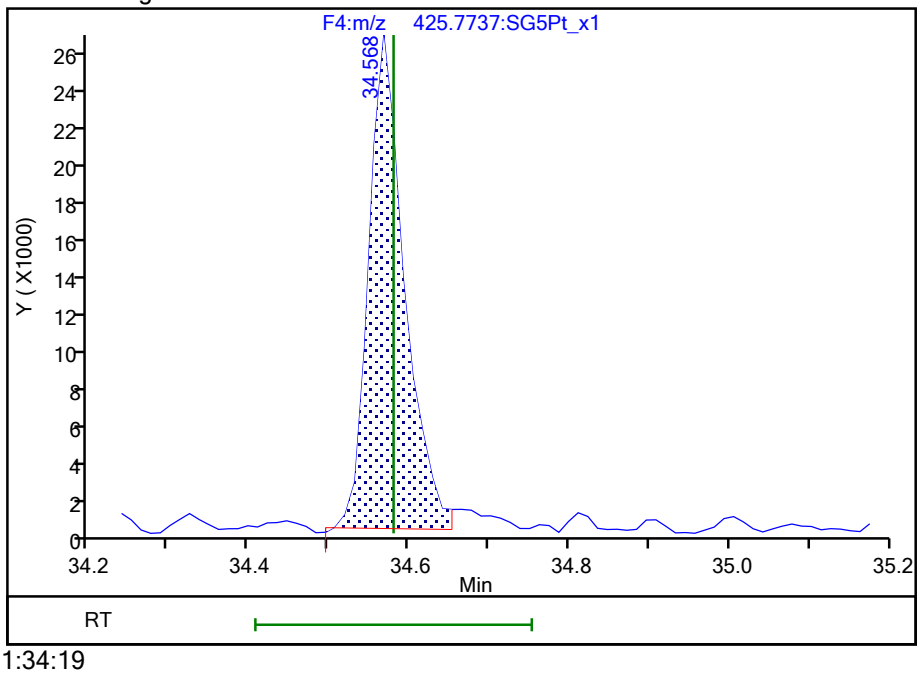

Reviewer: dadunj, 18-Aug-2021 11:34:19

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 2, m/z: 425.7737, RT: (33.99- 34.61)

Signal: 2

Processing Integration Results

RT = 34.021 Area = 237250

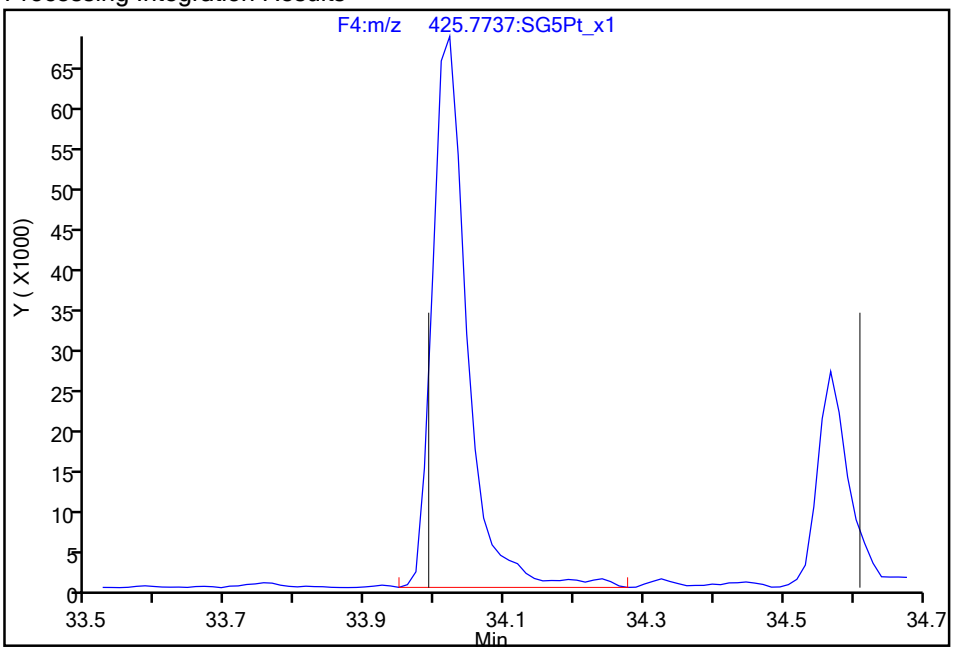

Manual Integration Results

RT = 34.021 Area = 233658 M

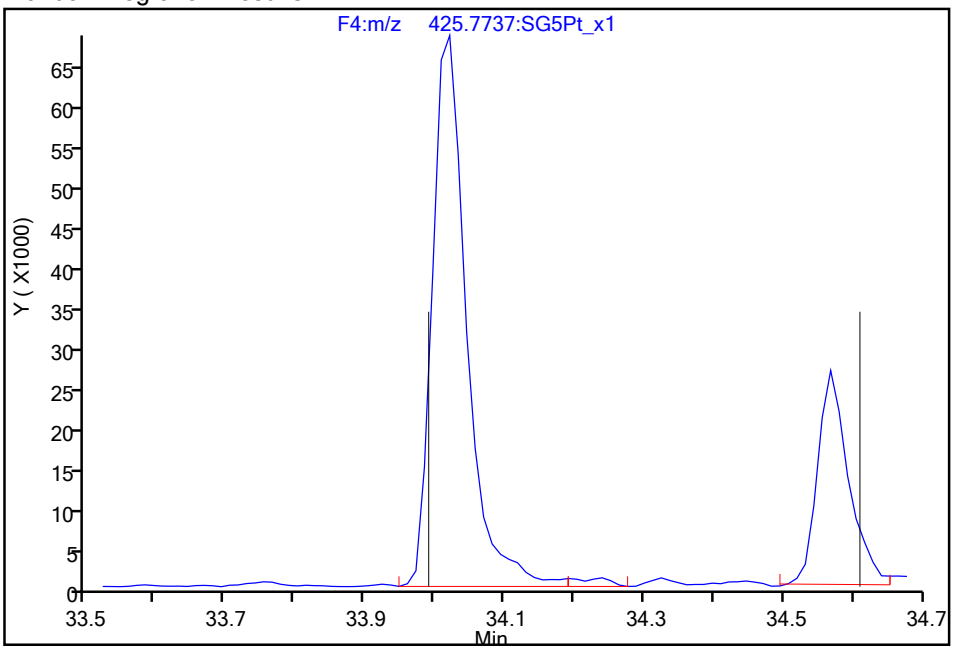

Reviewer: dadunj, 18-Aug-2021 11:34:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.02
Area: 12608
Amount: 0.100363
Amount Units: pg/ul

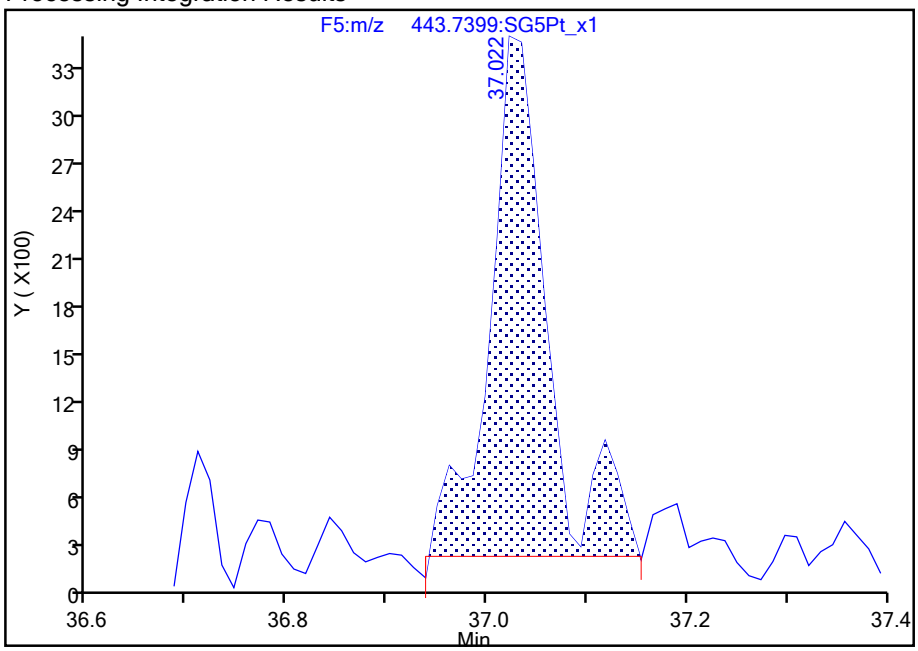

Manual Integration Results

RT: 37.02
Area: 11221
Amount: 0.085086
Amount Units: pg/ul

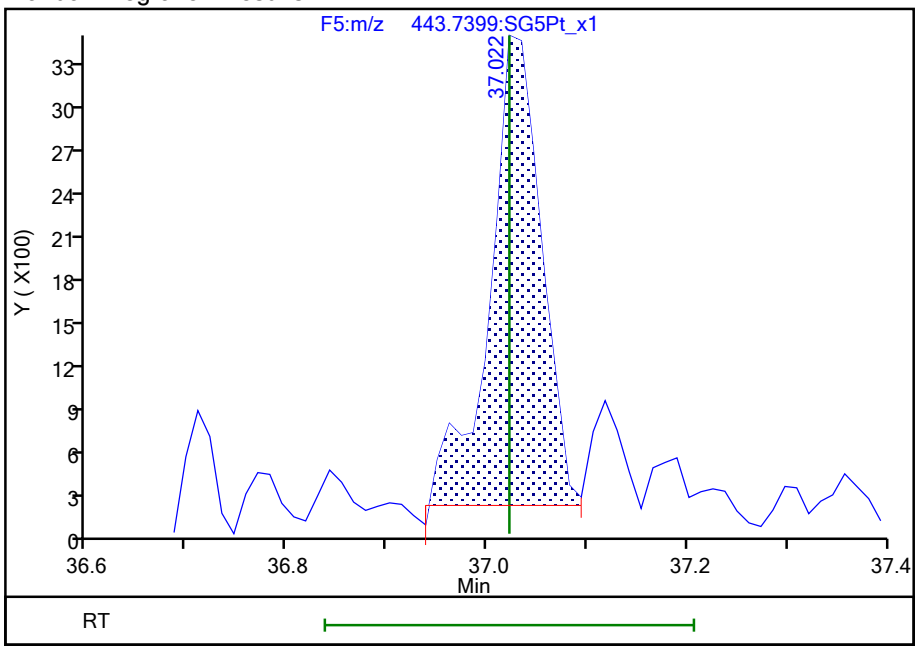

Reviewer: dadunj, 18-Aug-2021 11:34:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d				
Injection Date:	15-Aug-2021 16:42:10	Instrument ID:	10D5		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:	DB	ALS Bottle#:	61	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 8362
Amount: 0.100363
Amount Units: pg/ul

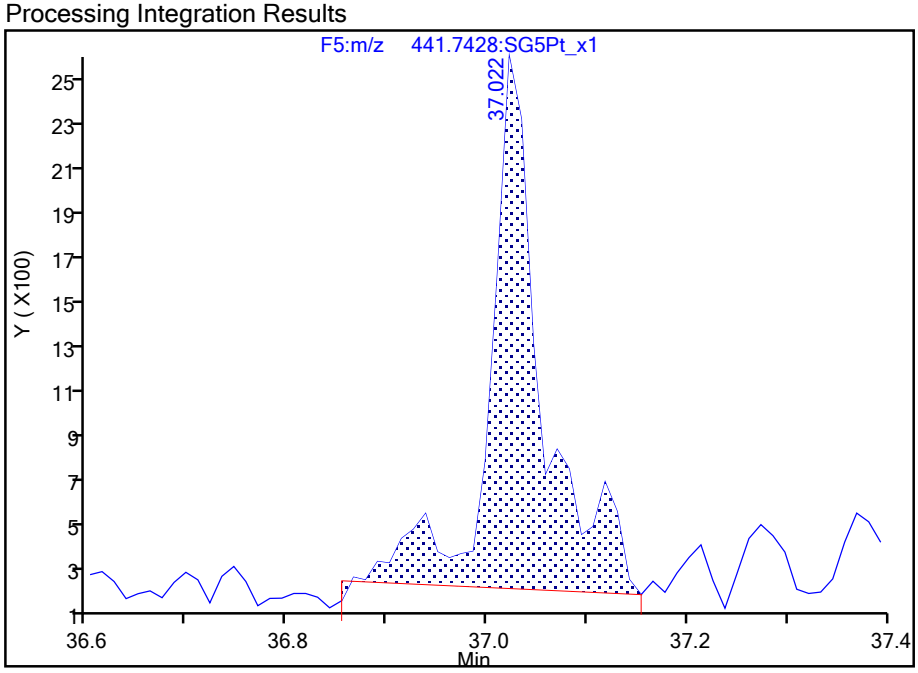

Manual Integration Results

RT: 37.02
Area: 6557
Amount: 0.085086
Amount Units: pg/ul

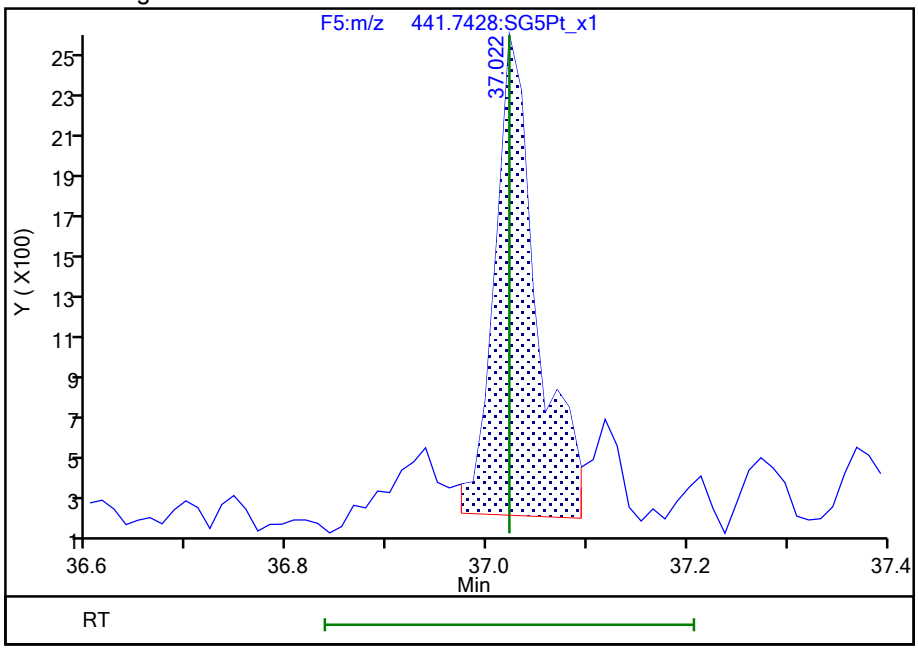

Reviewer: dadunj, 18-Aug-2021 11:34:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

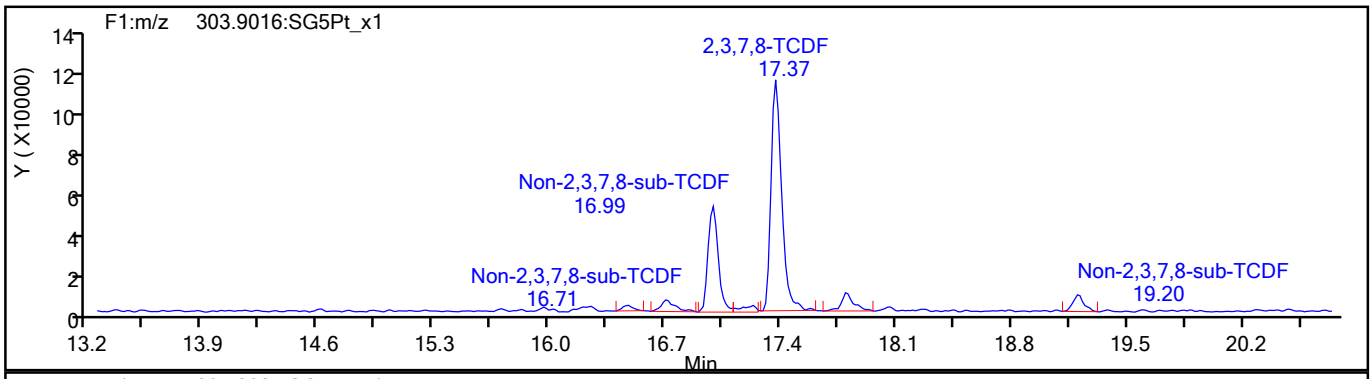

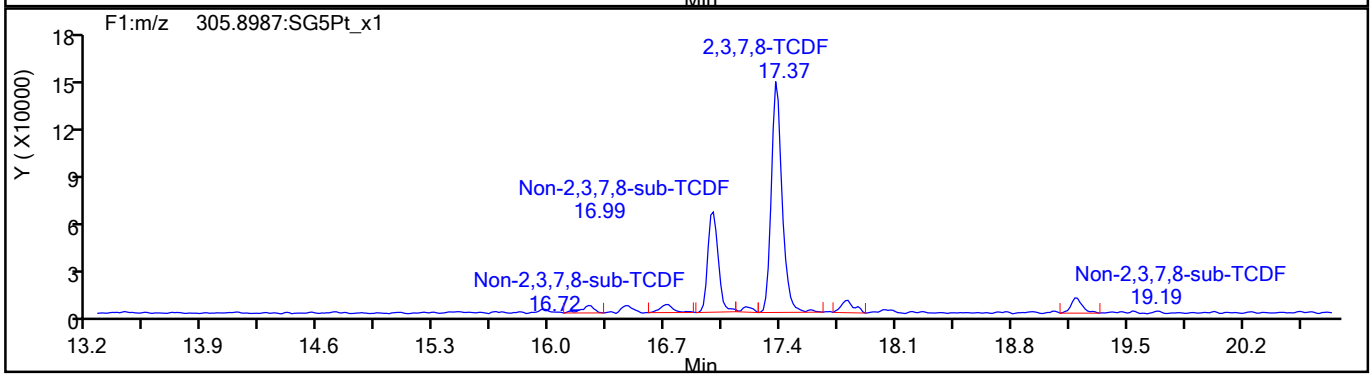

TCDF Standards

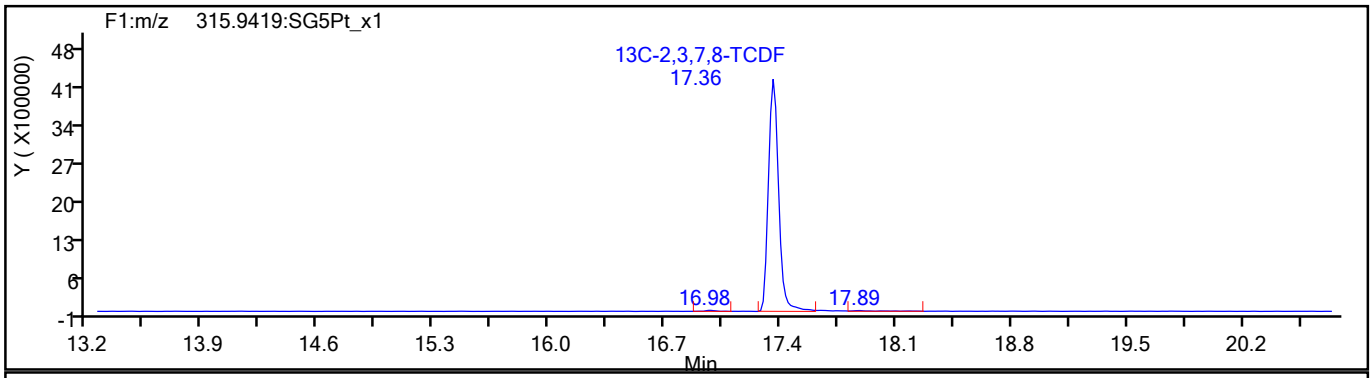

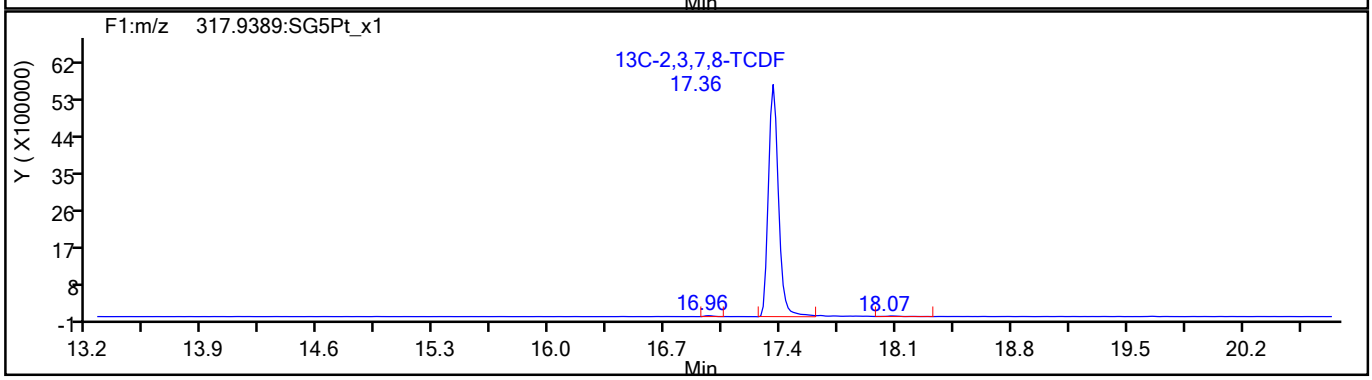

775294

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

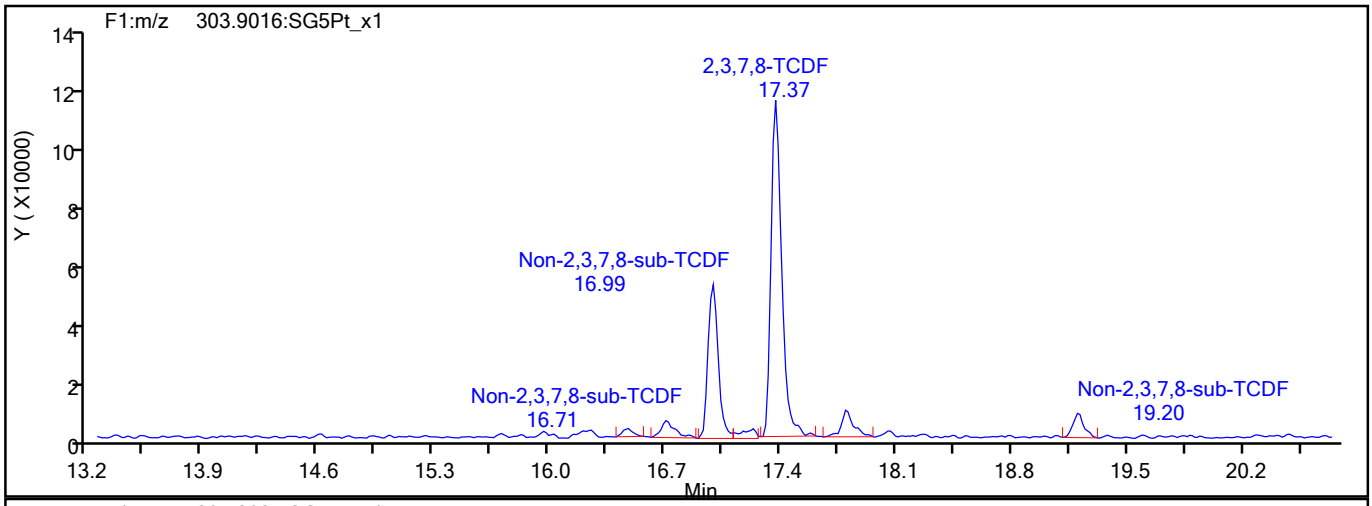

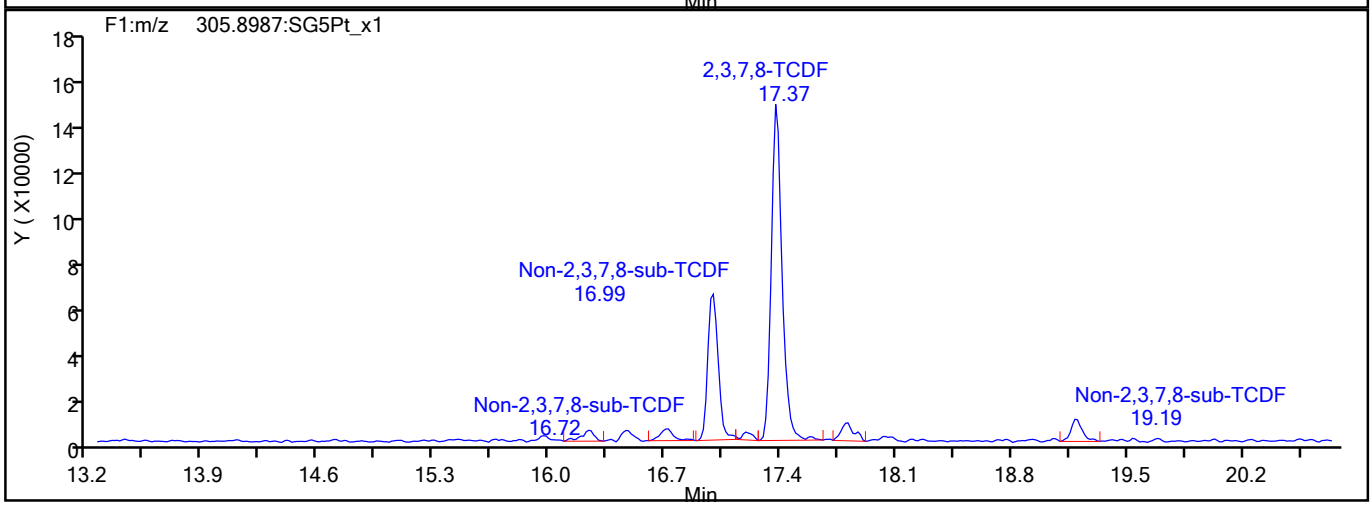

TCDF Interference Mass

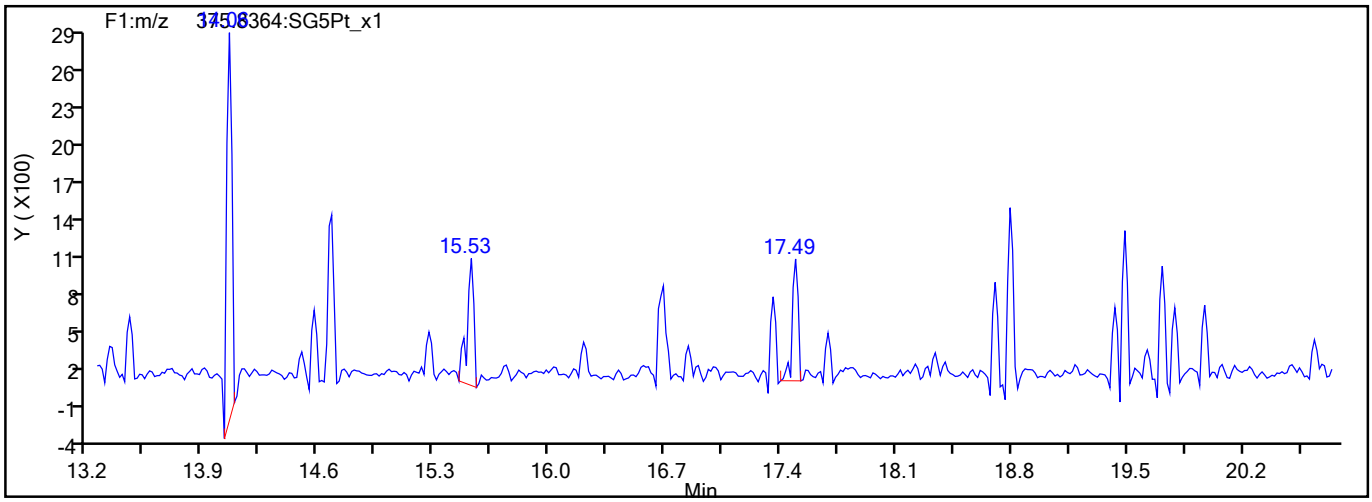

775295

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

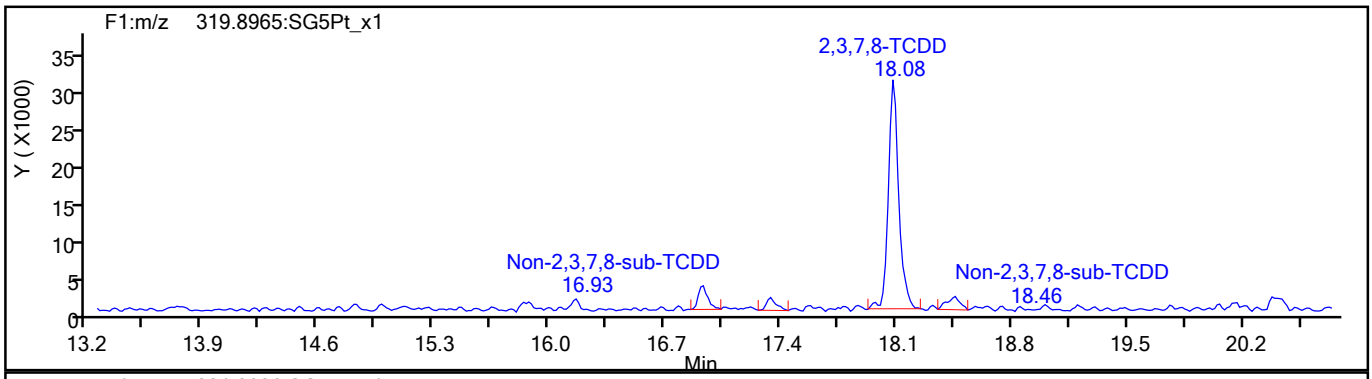

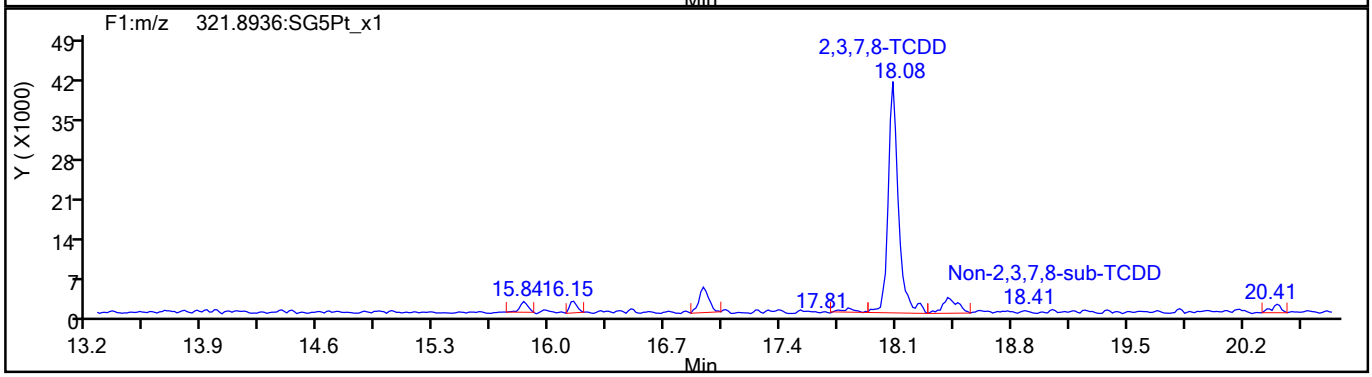

TCDD Standards

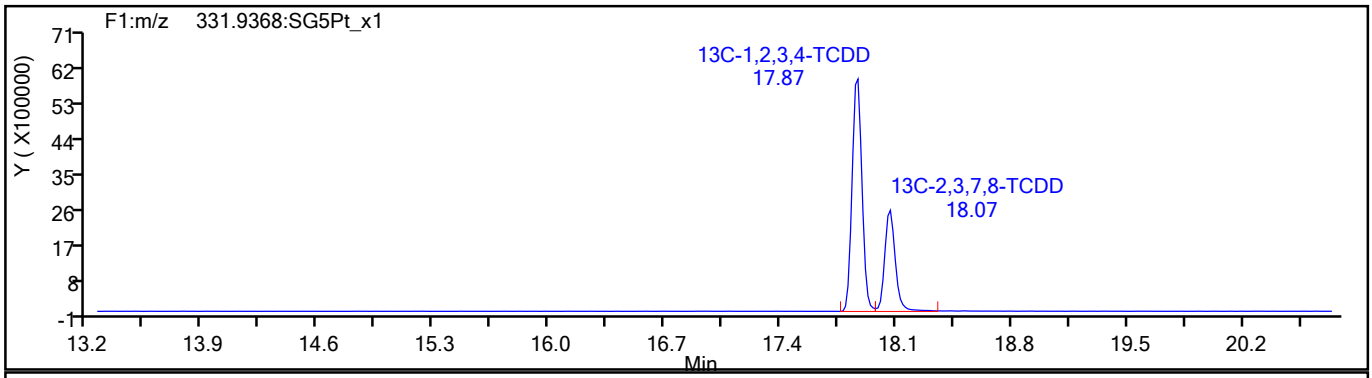

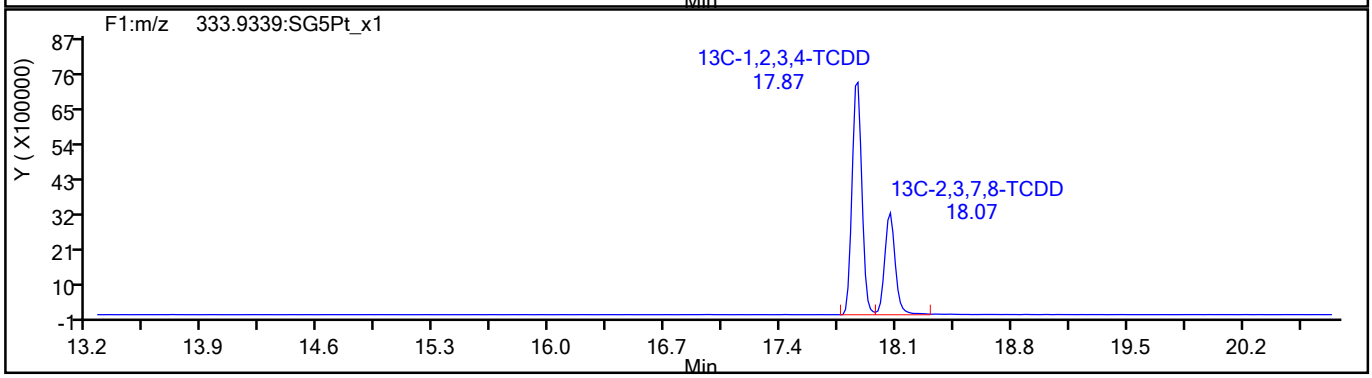

775296

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

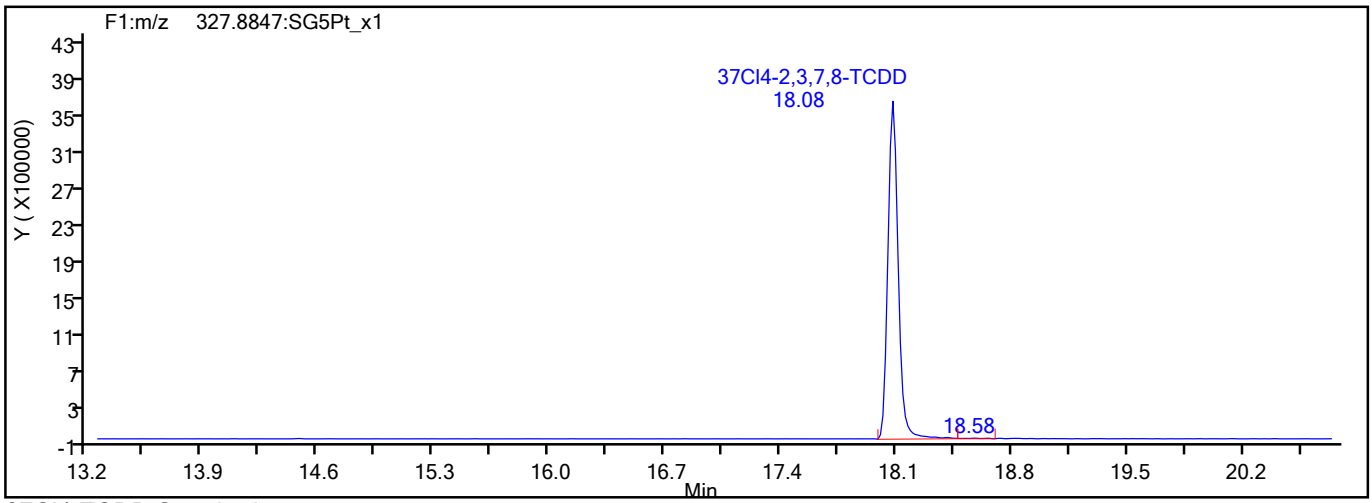

37Cl4-TCDD Standards

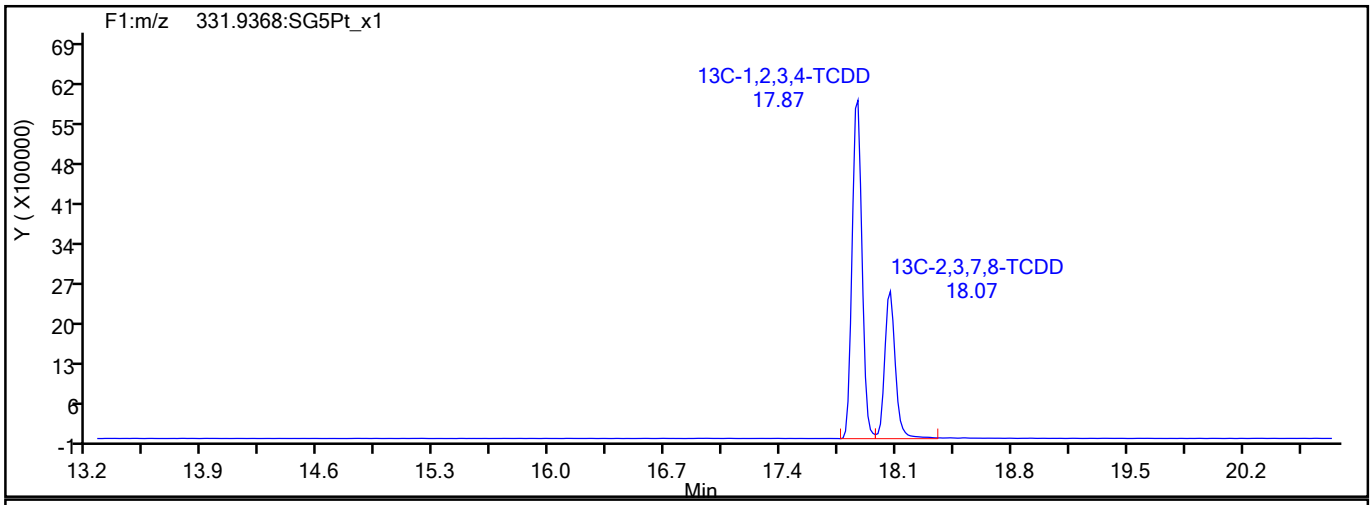

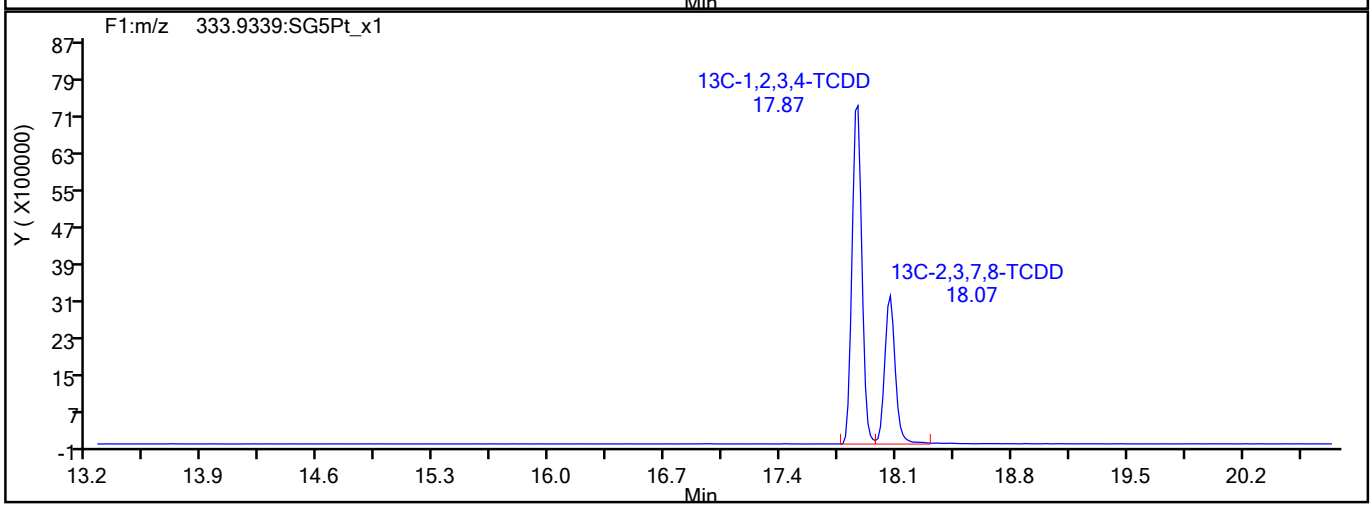

775297

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

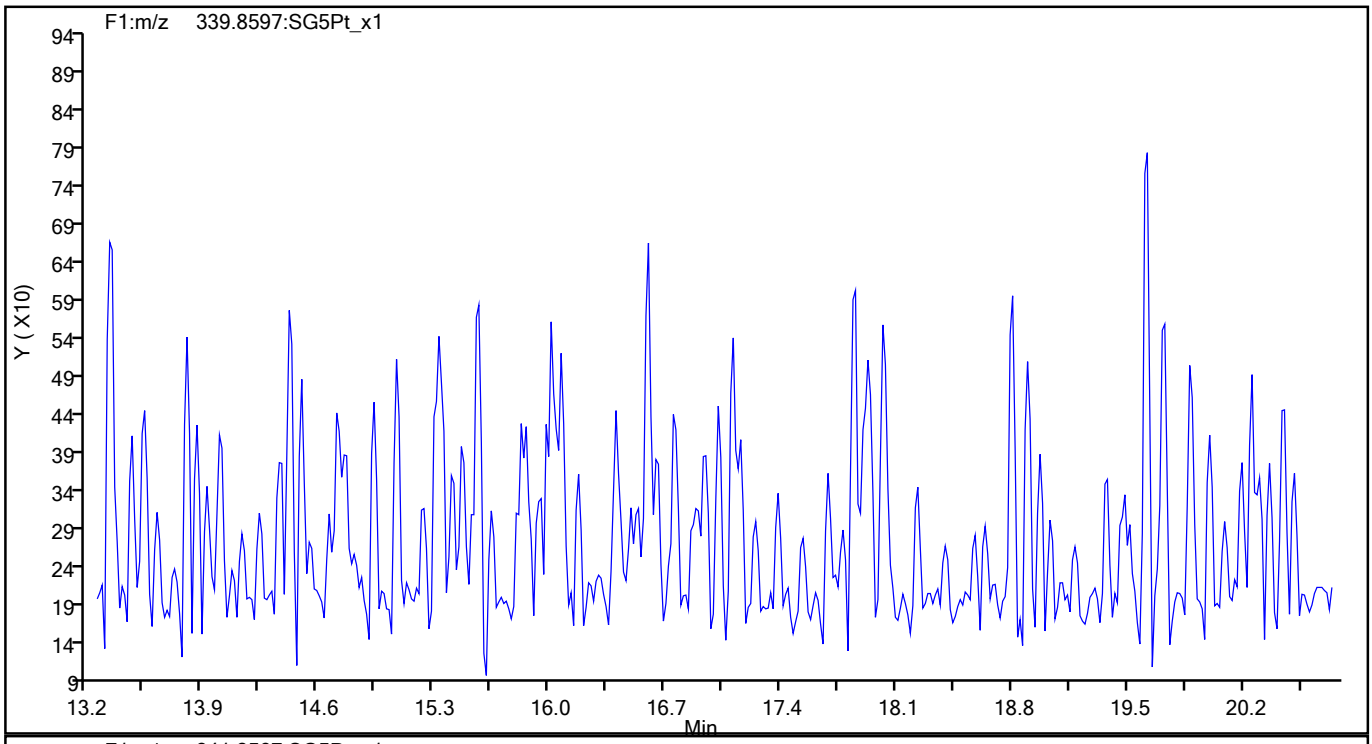

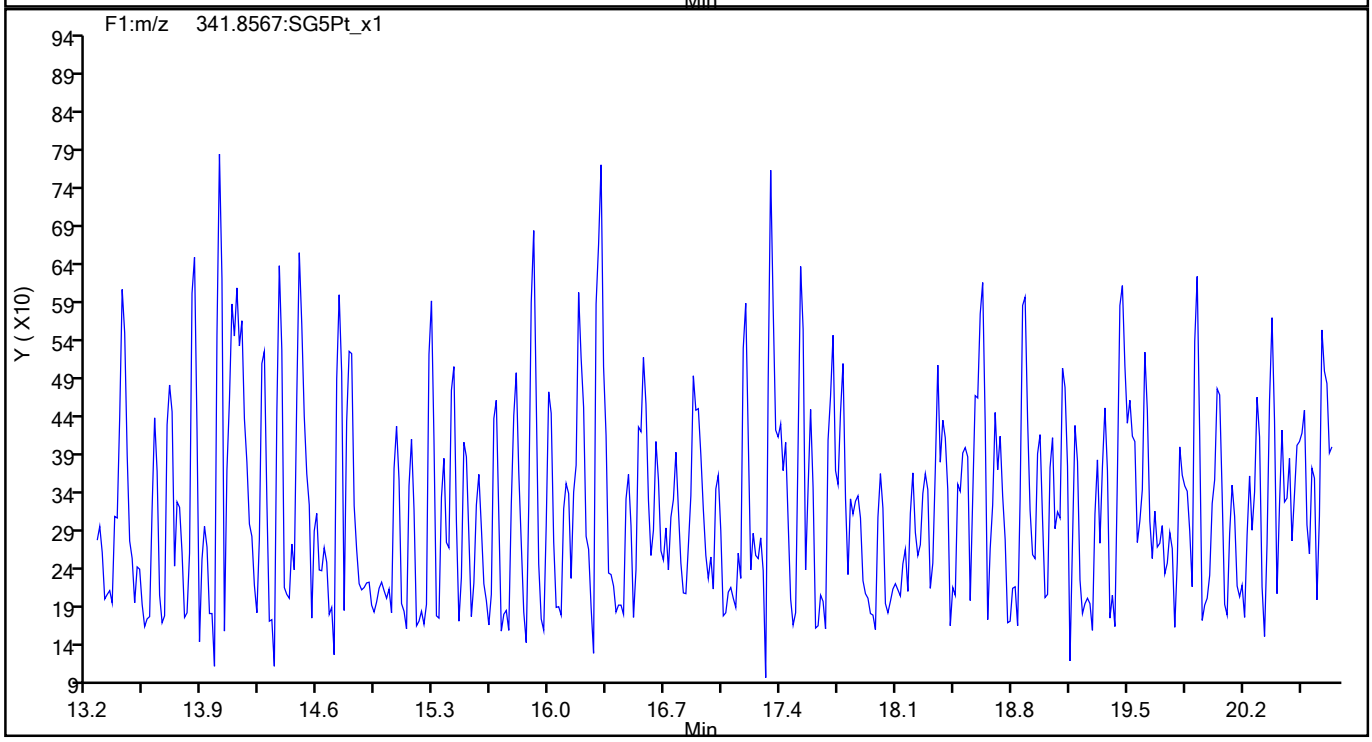

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

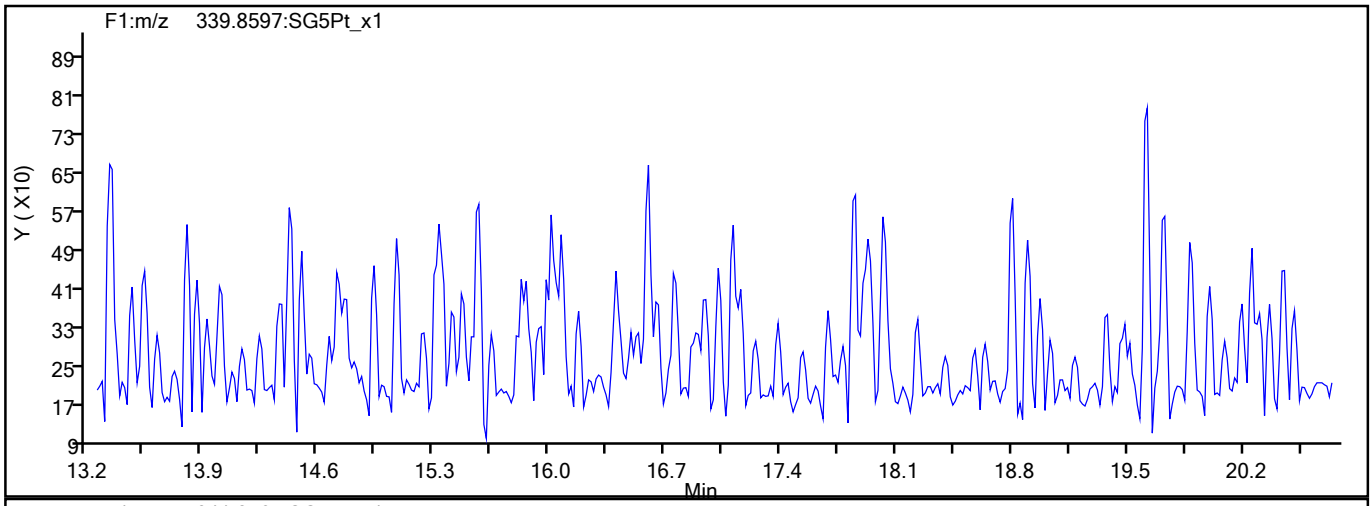

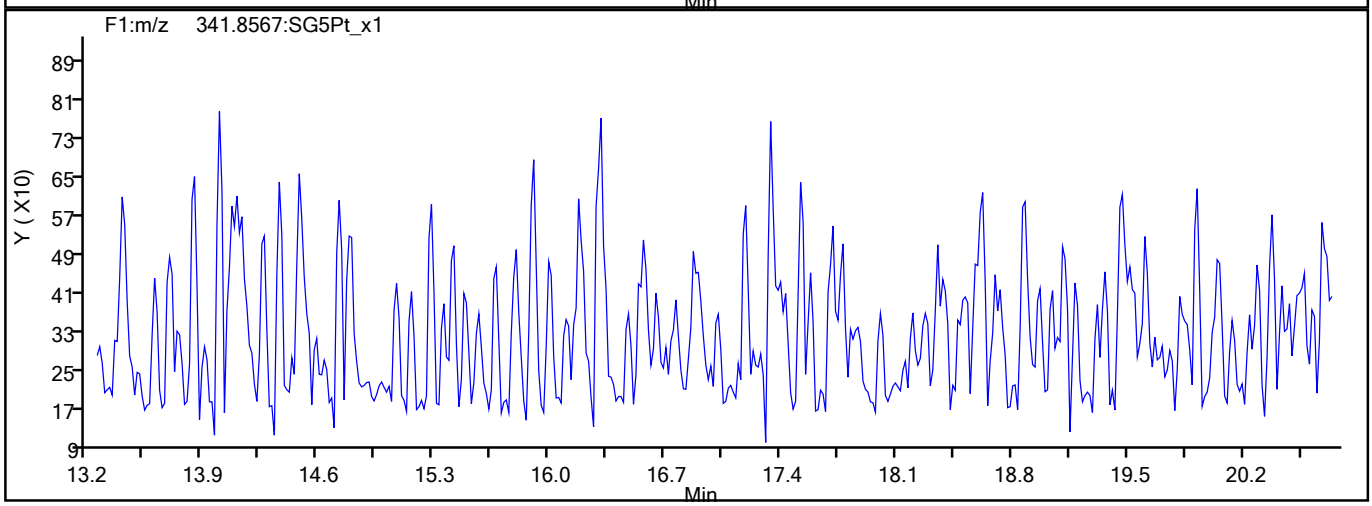

F1 PeCDFs Interference Mass

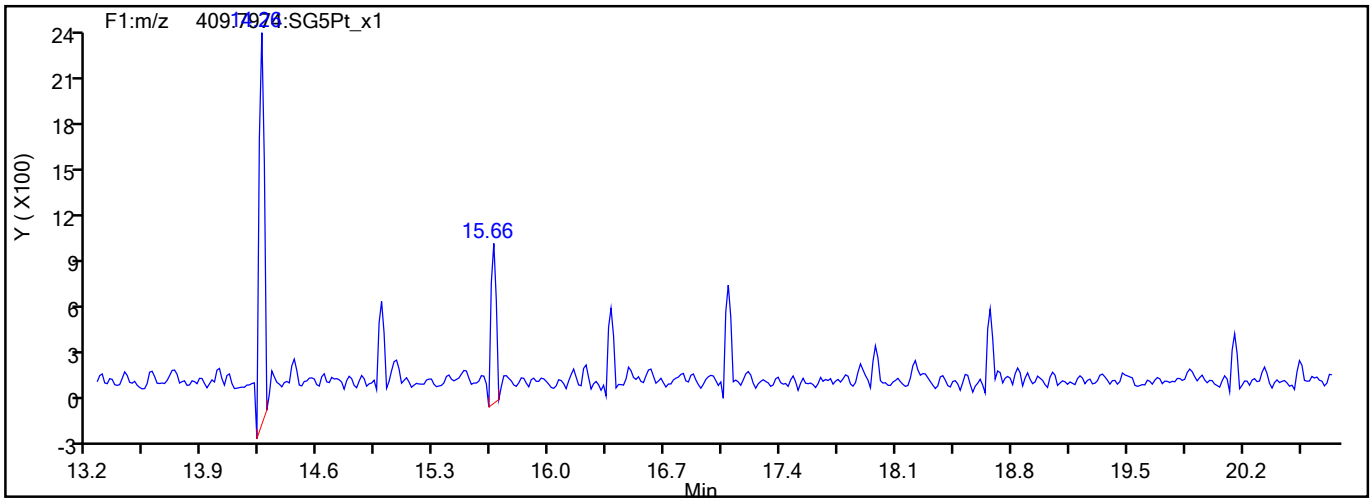

775299

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

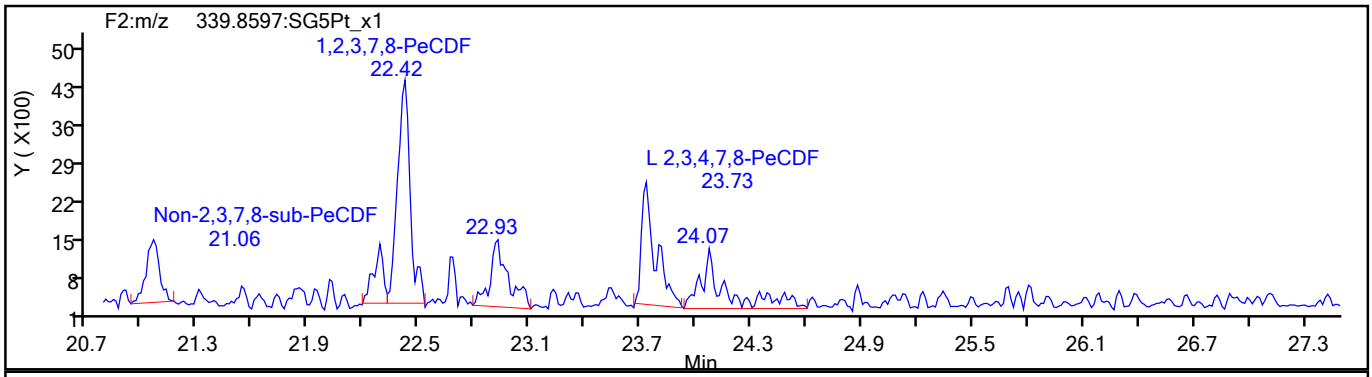

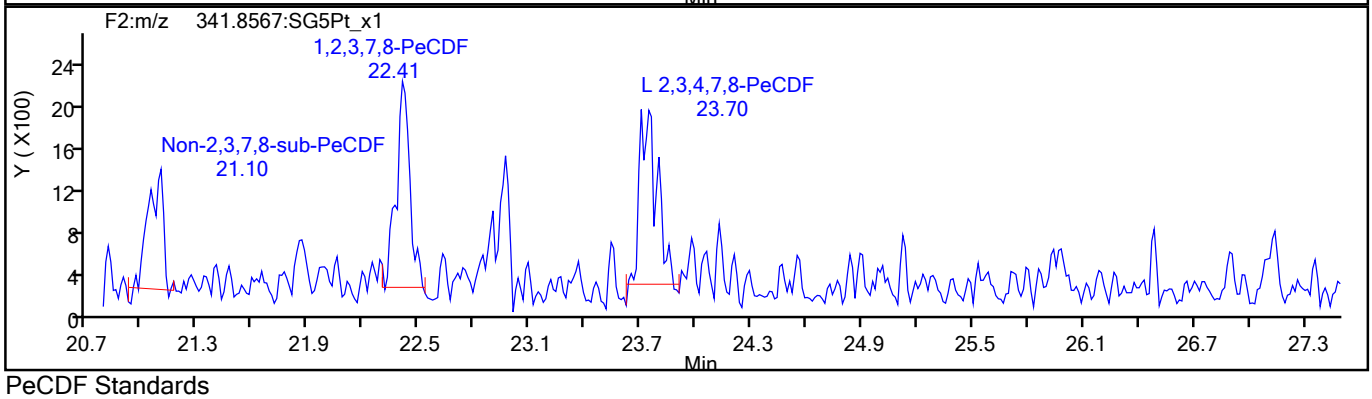

PeCDF Standards

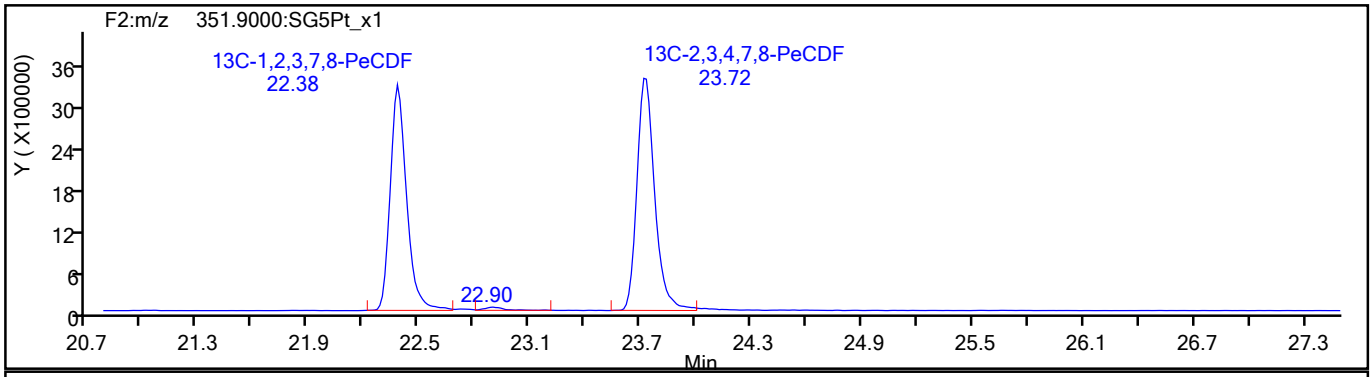

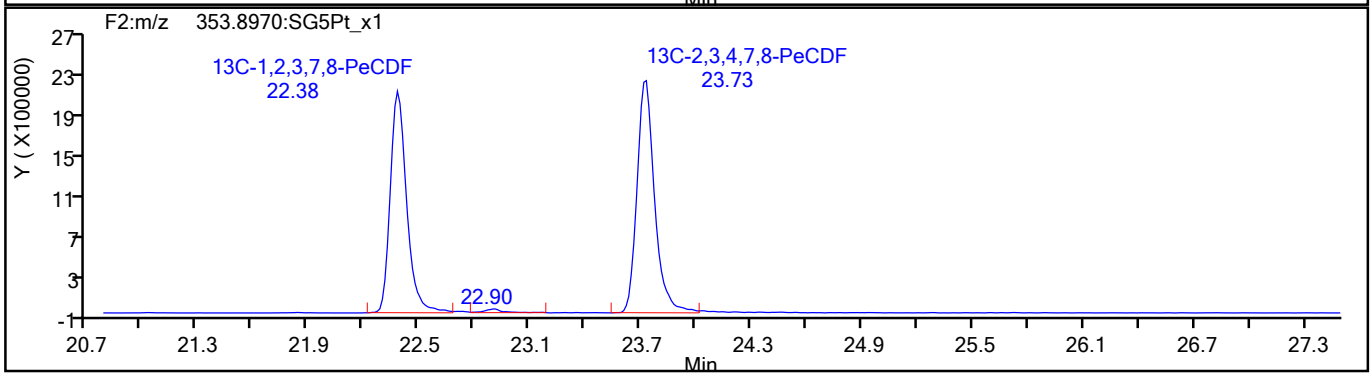

775300

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

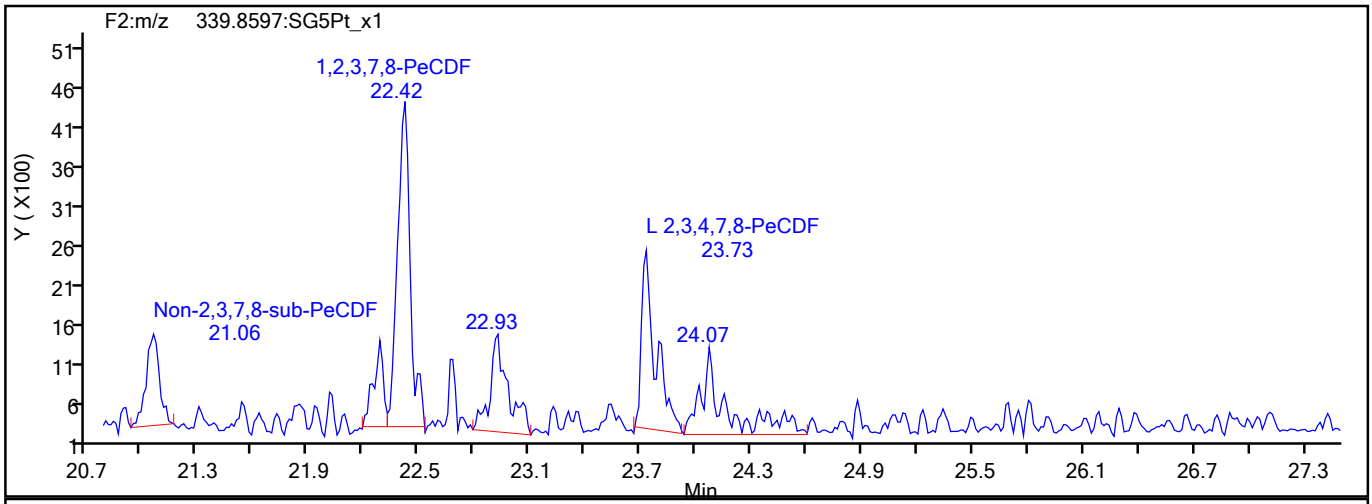

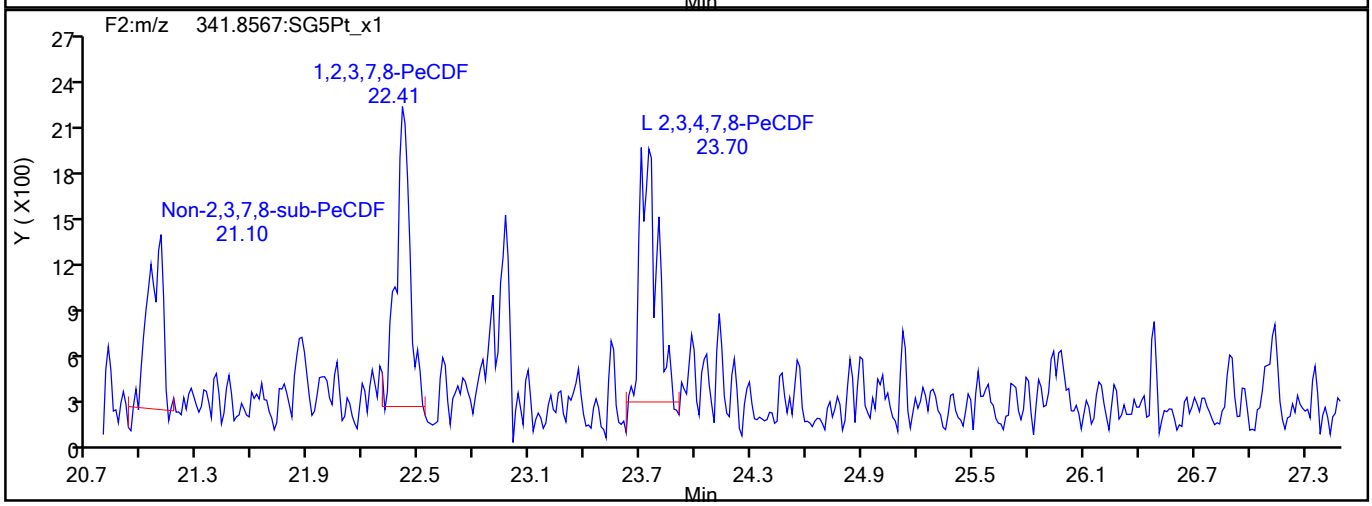

PeCDF Interference Mass

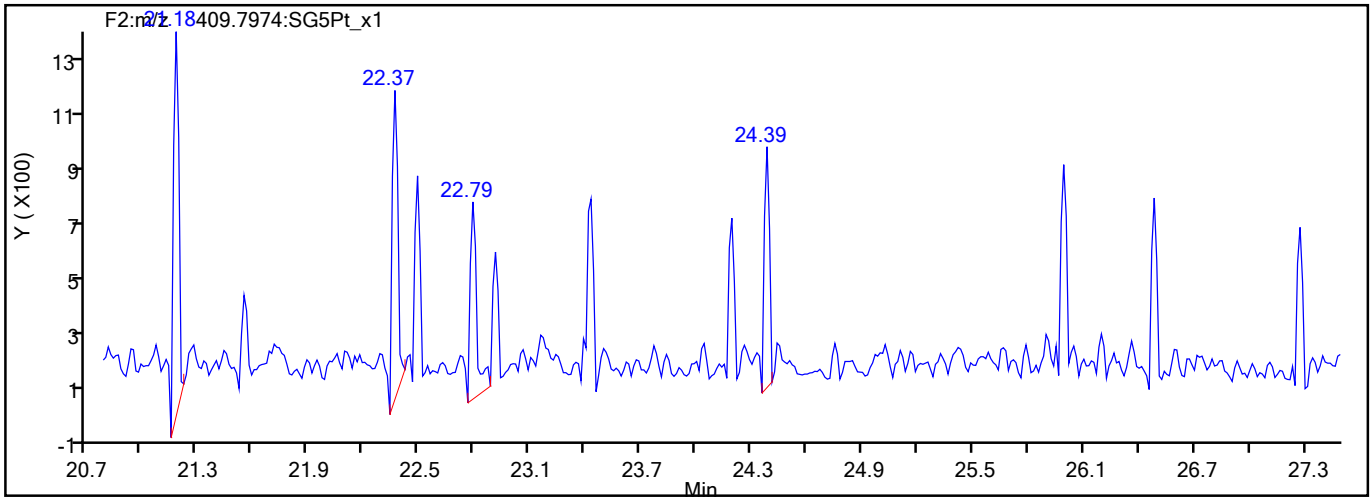

775301

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

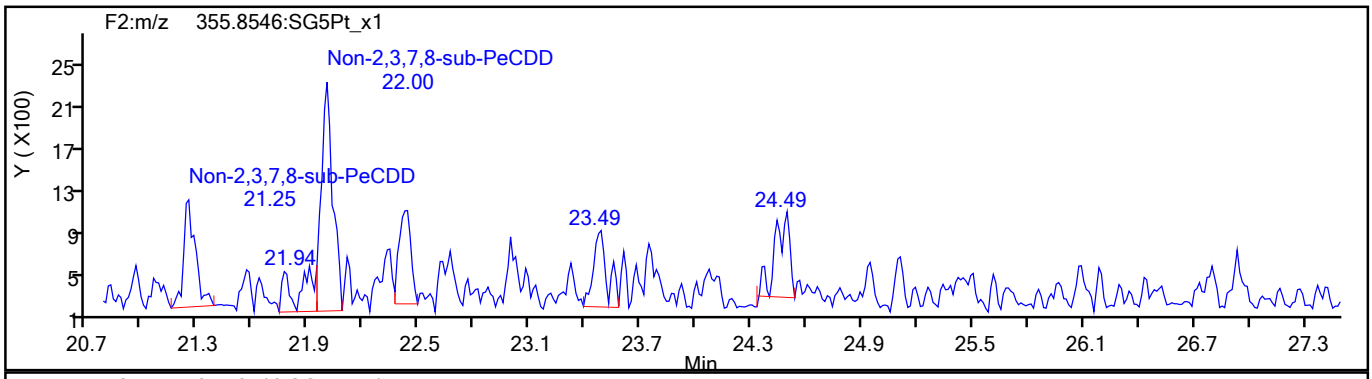

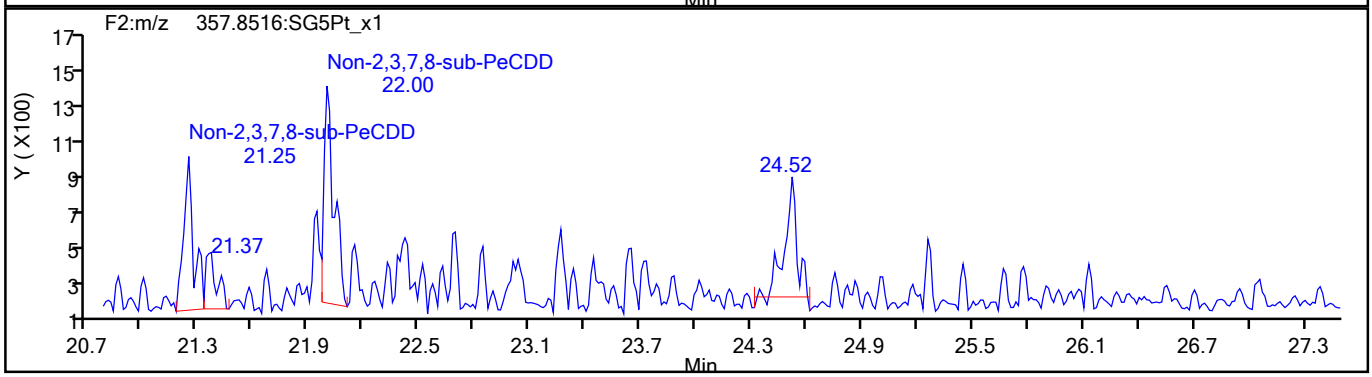

PeCDD Standards

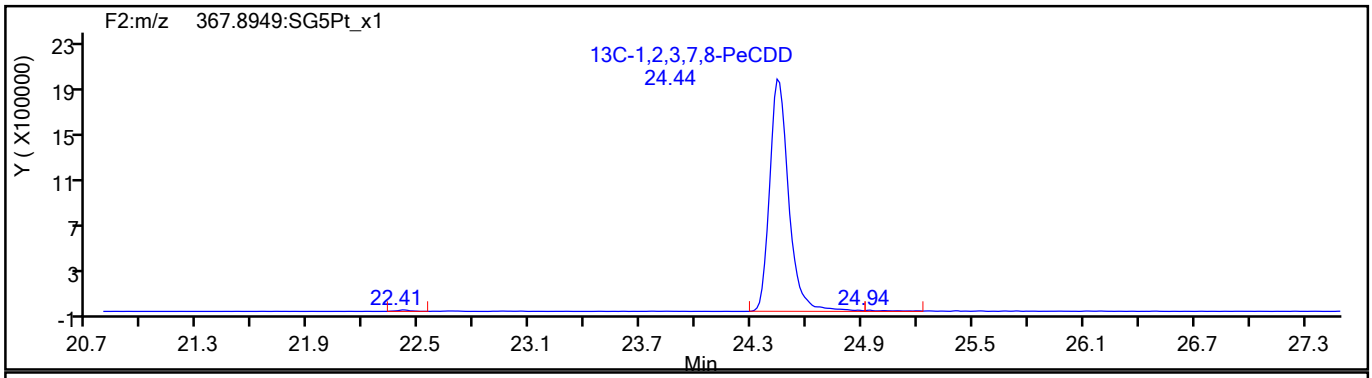

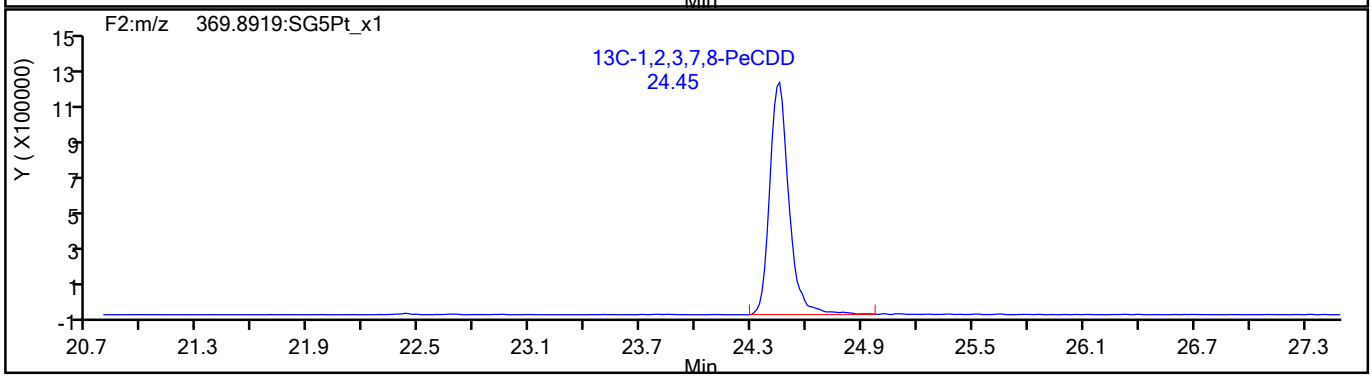

775302

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

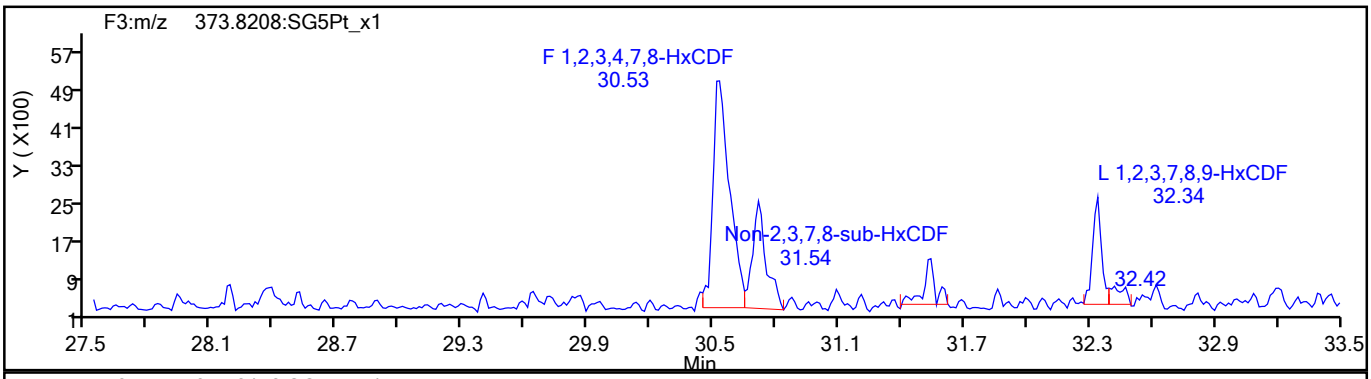

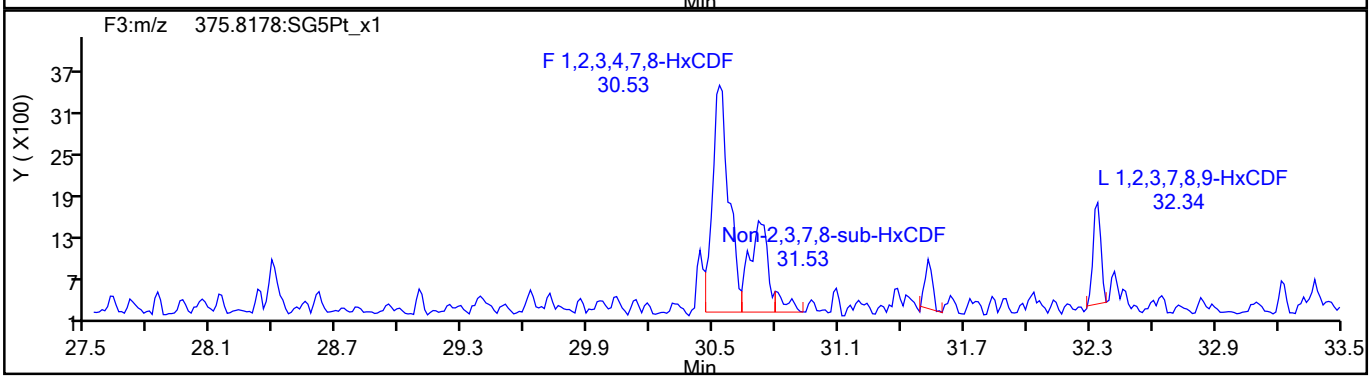

HxCDF Standards

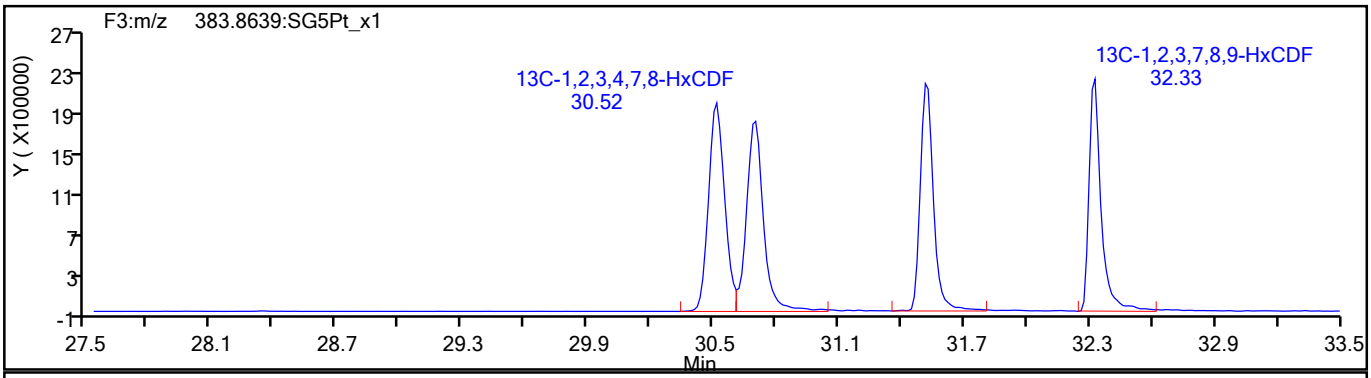

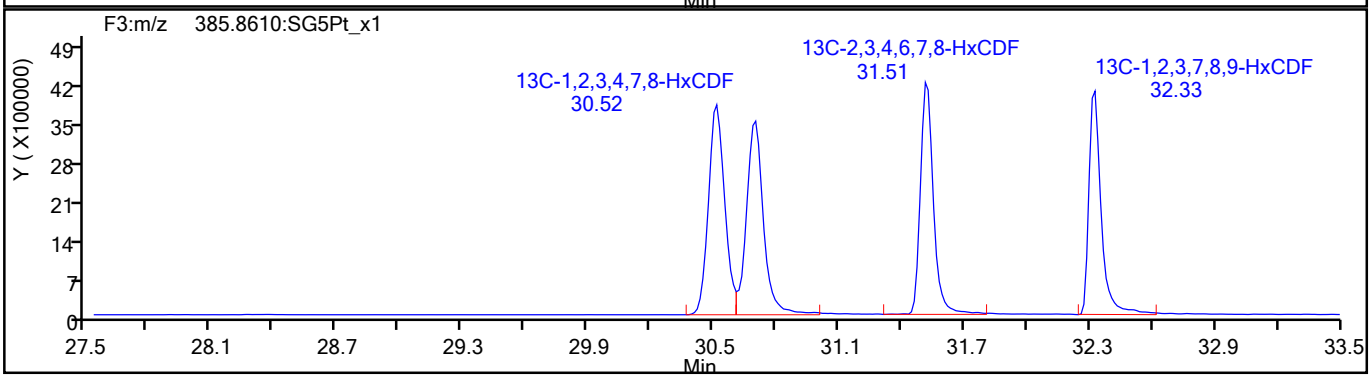

775303

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
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HxCDF

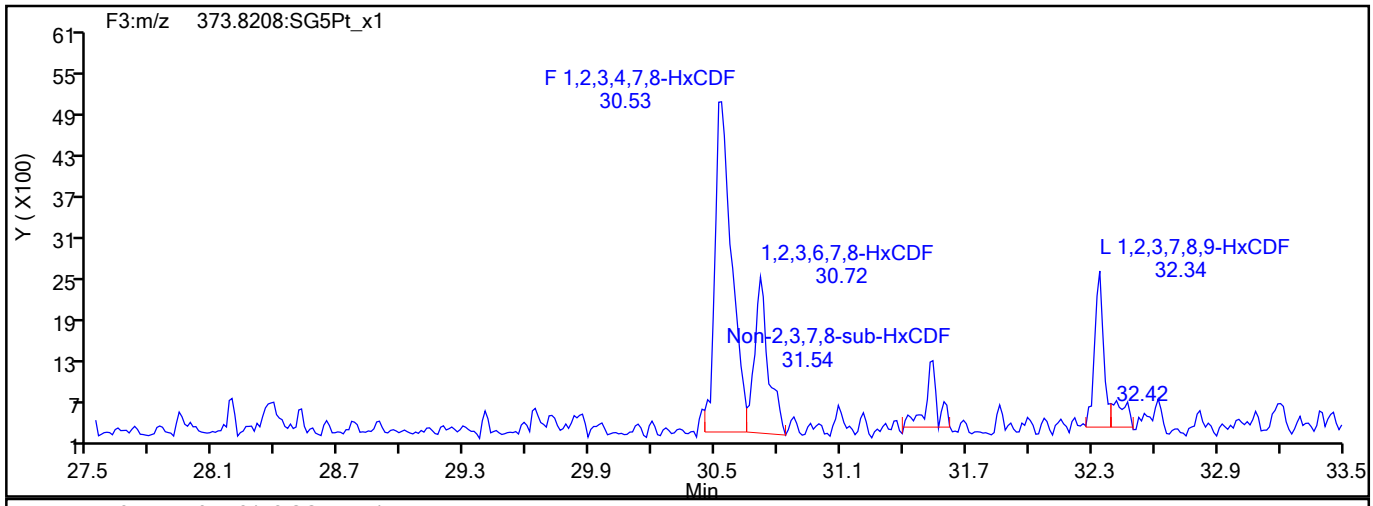

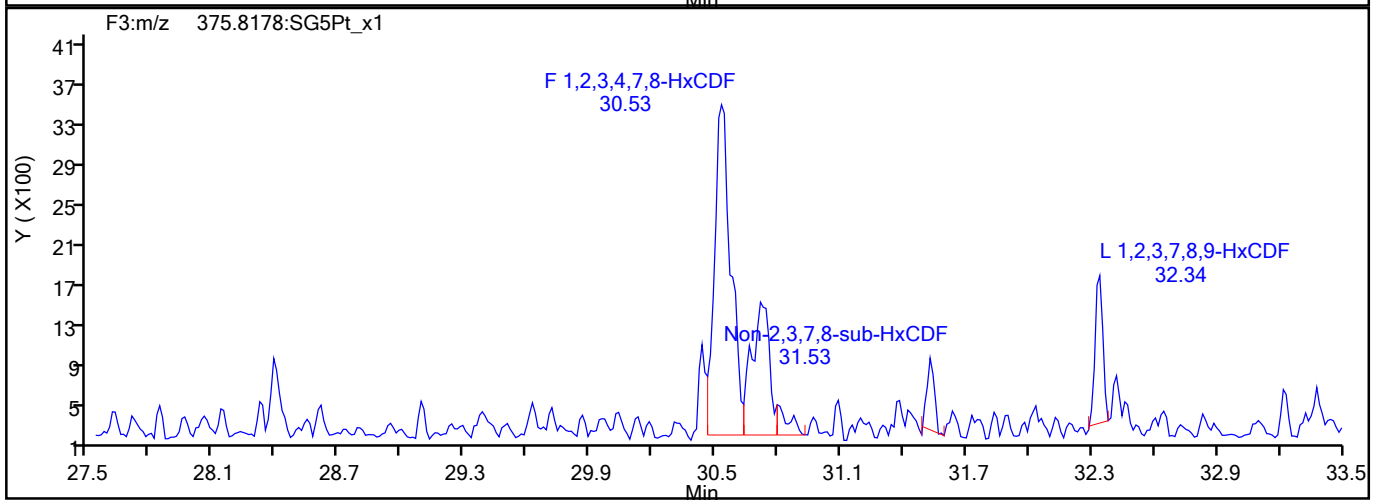

HxCDF Interference Mass

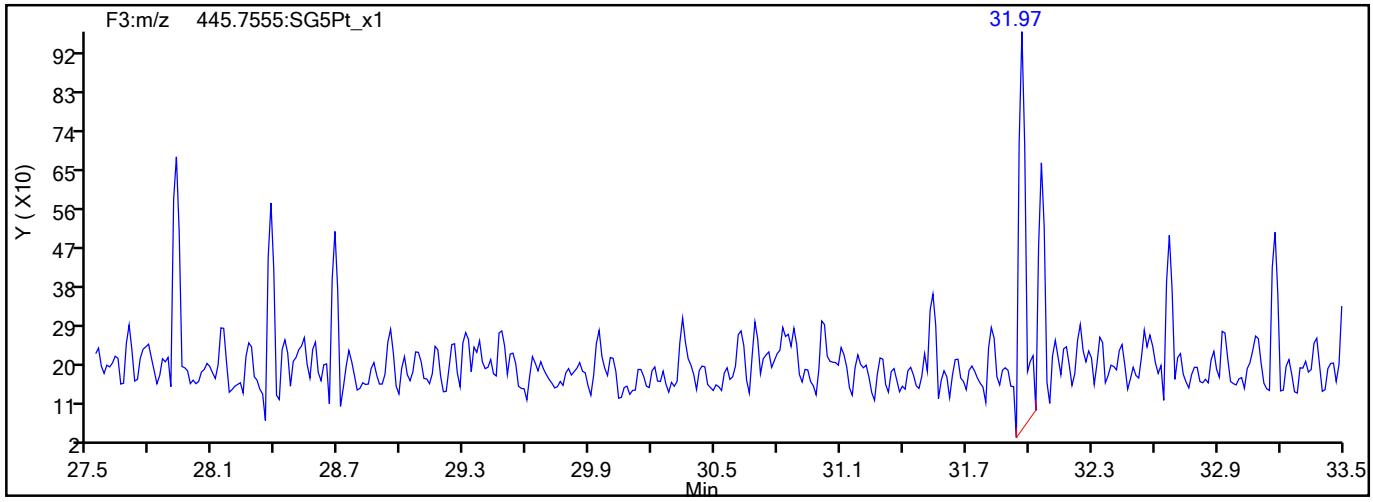

775304

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

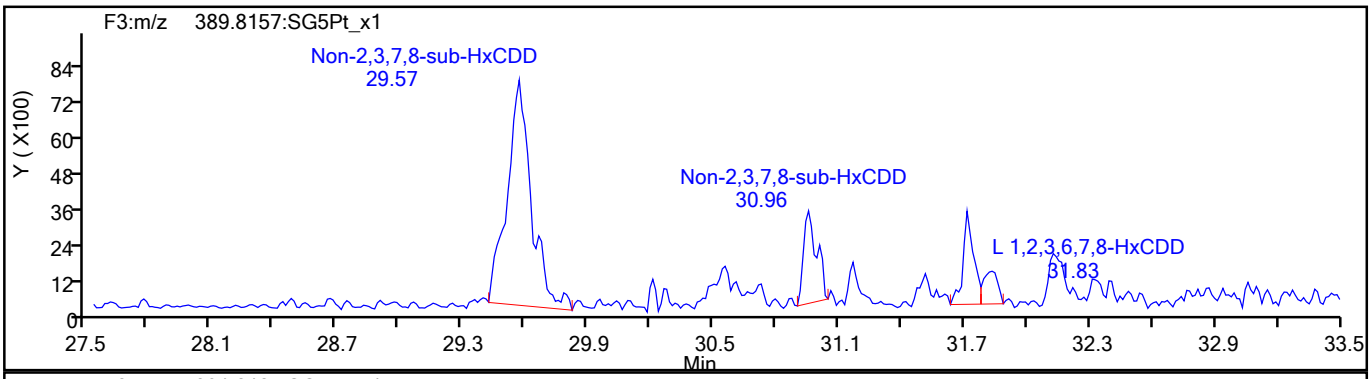

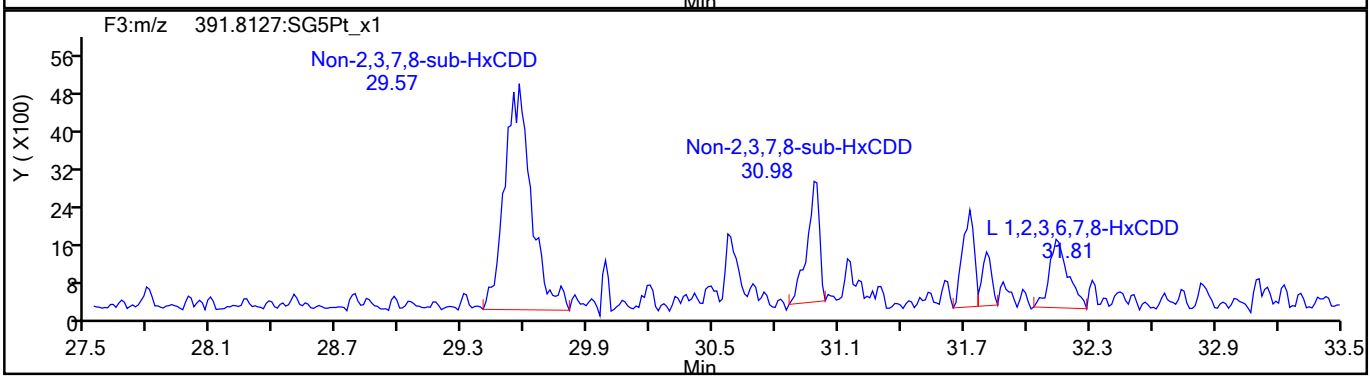

HxCDD Standards

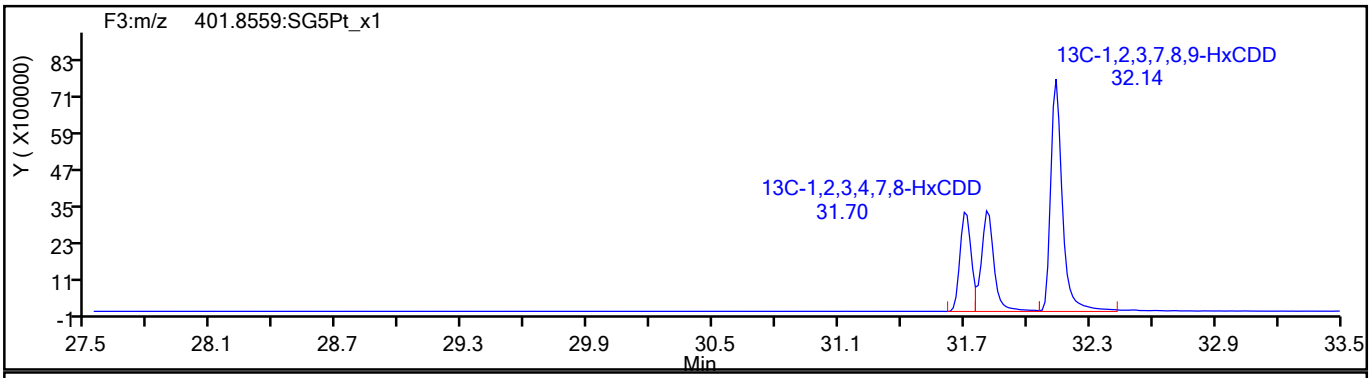

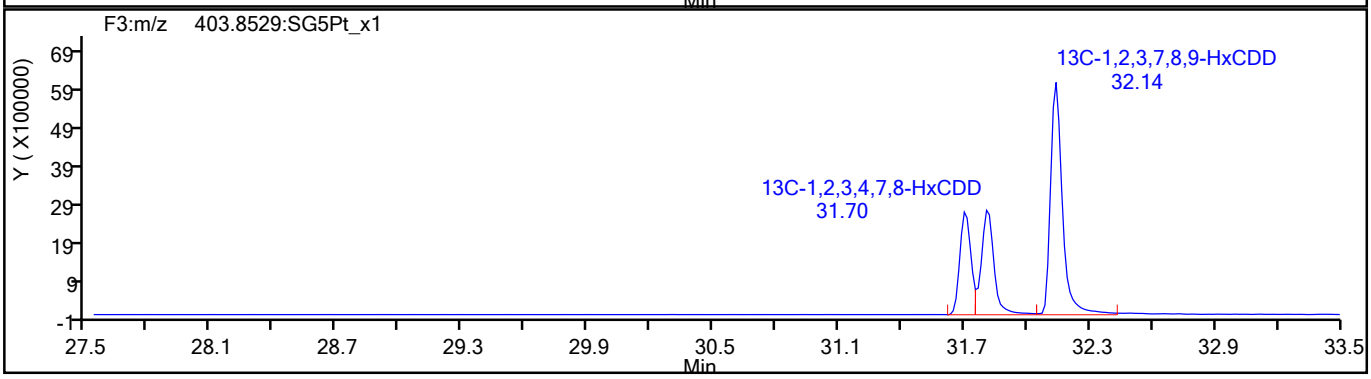

775305

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

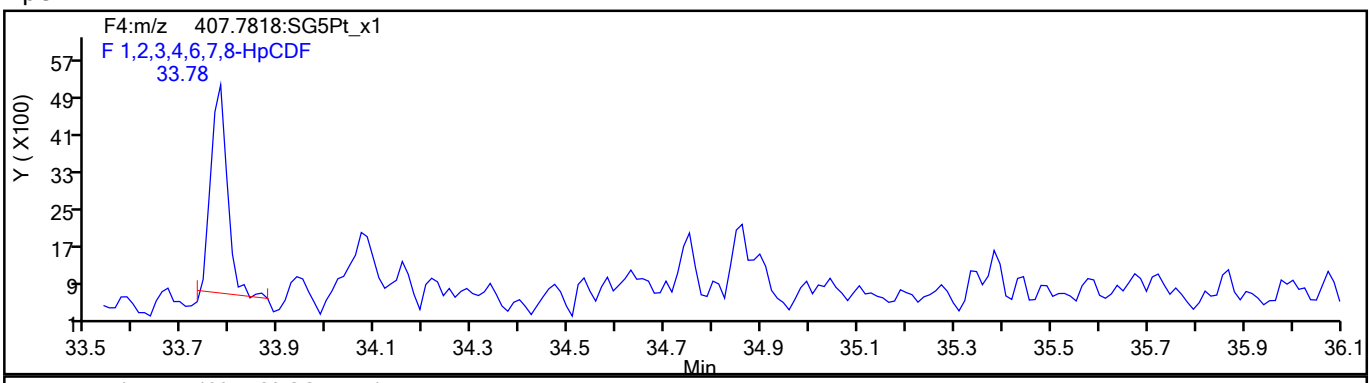

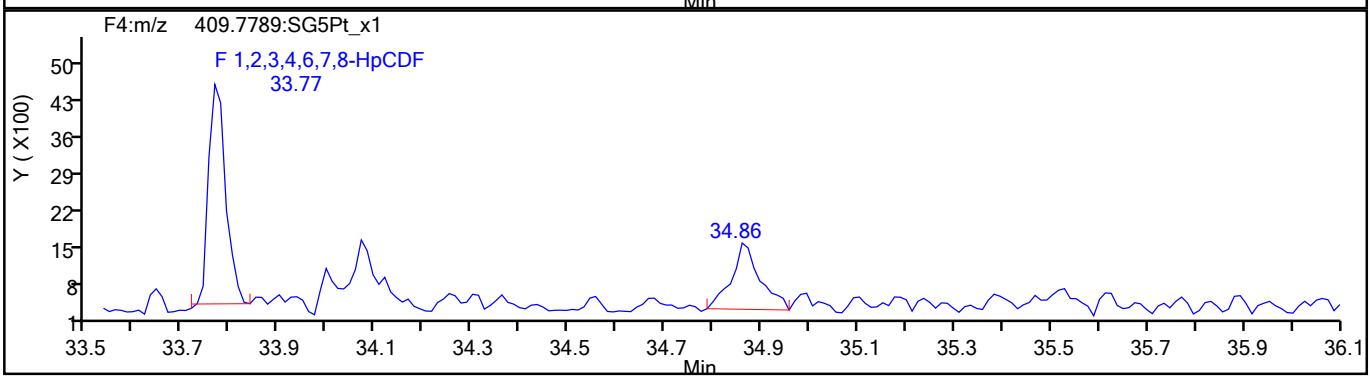

HpCDF Standards

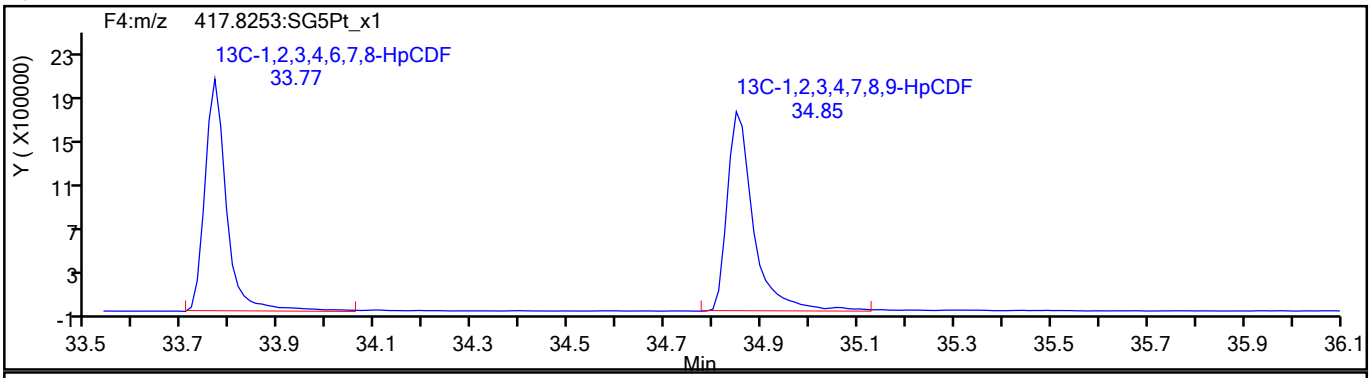

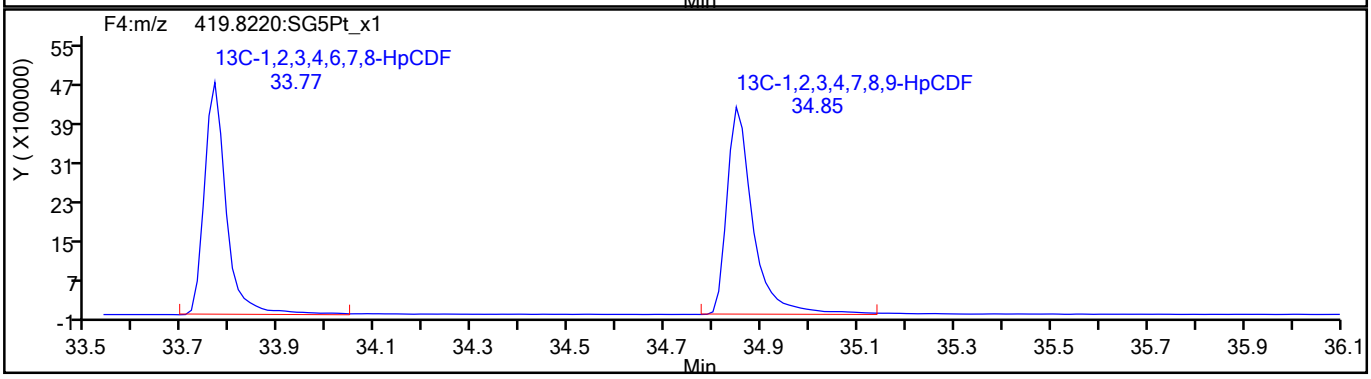

775306

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

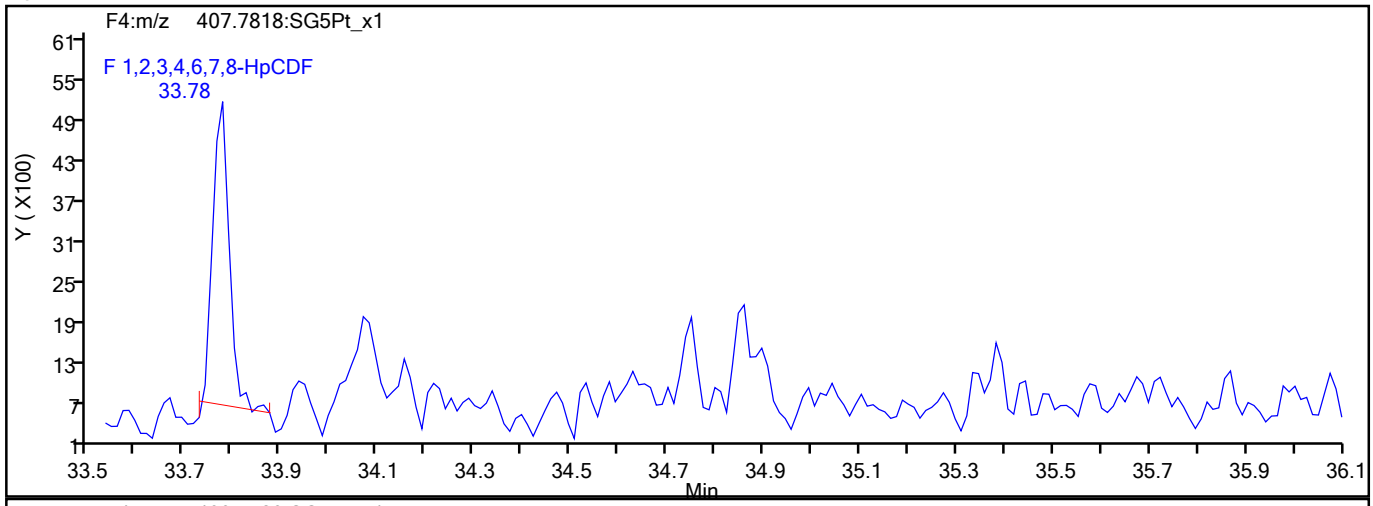

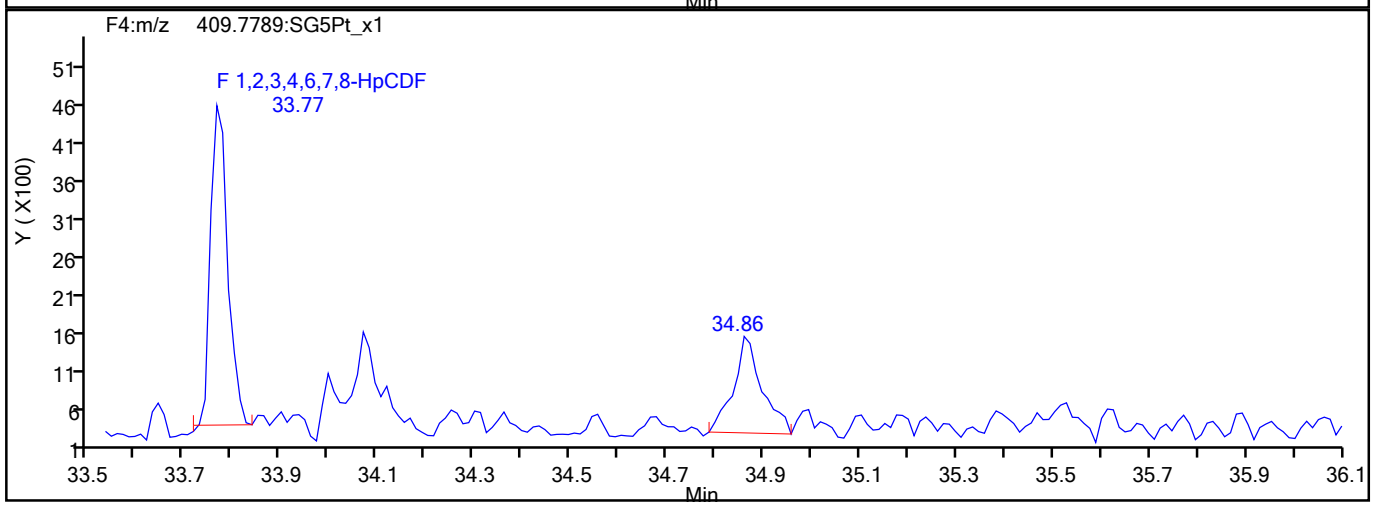

HpCDF Interference Mass

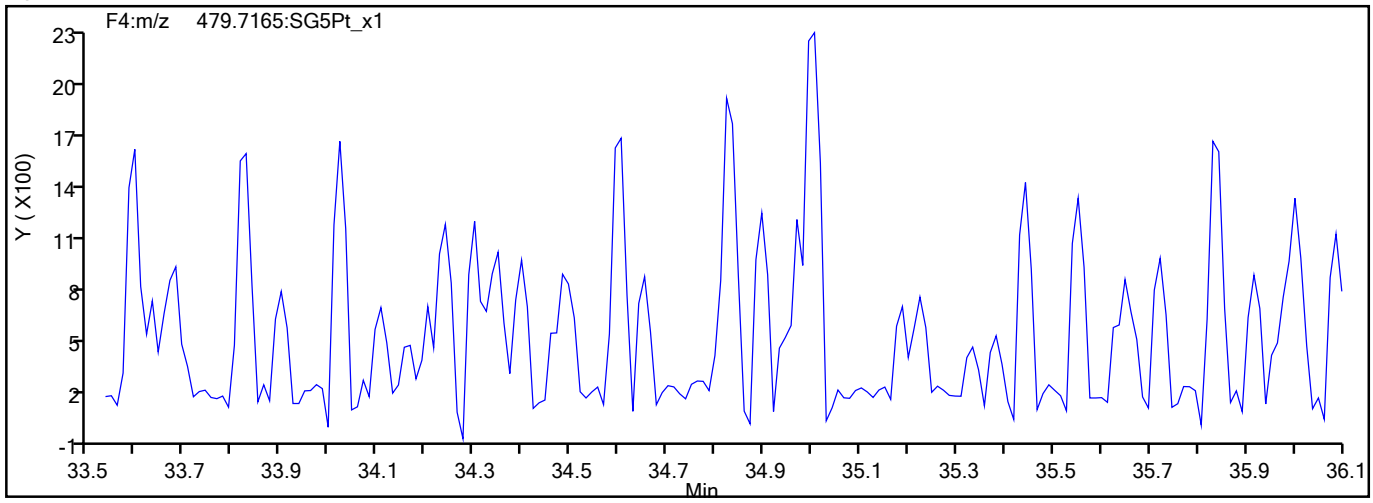

775307

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

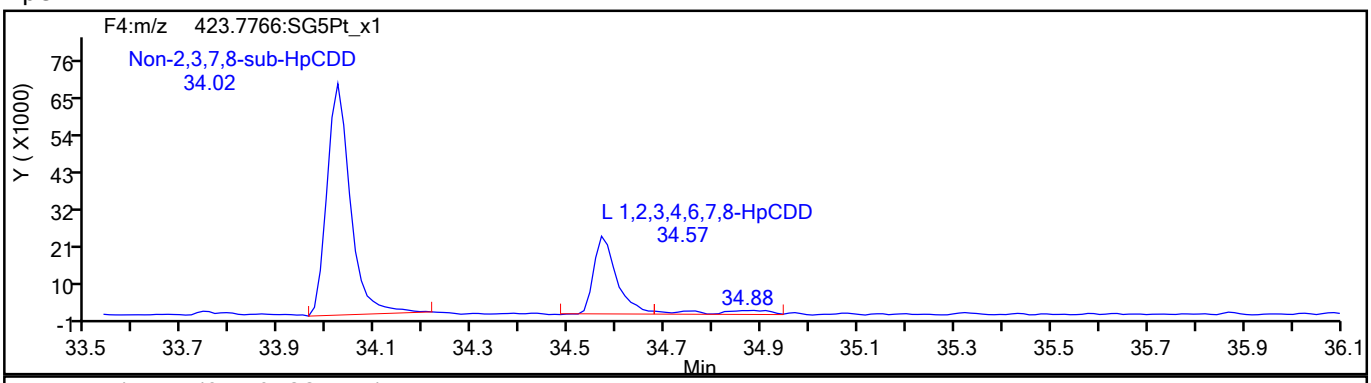

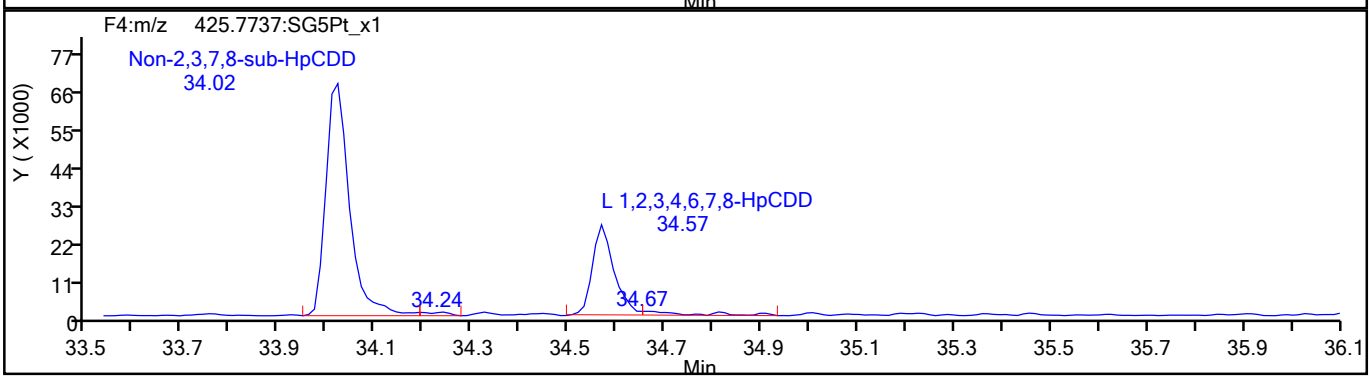

HpCDD Standards

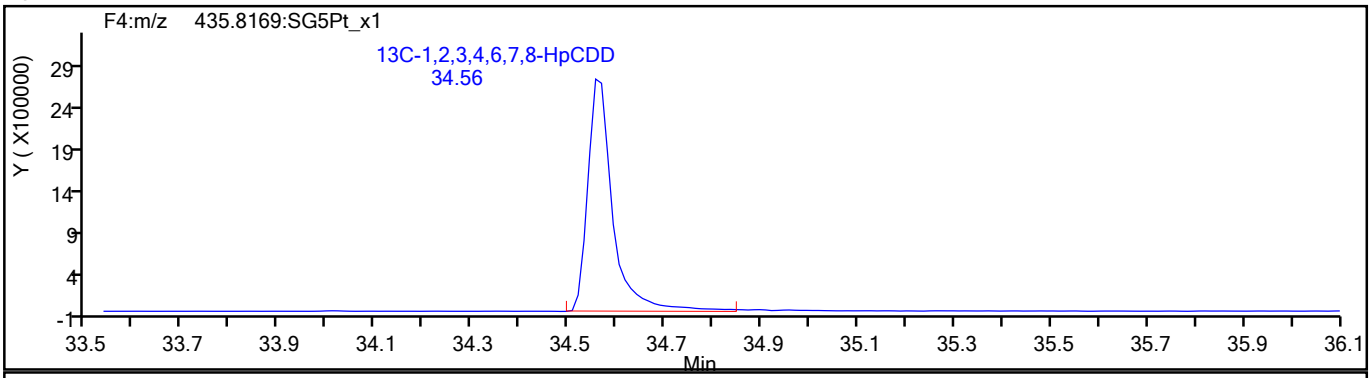

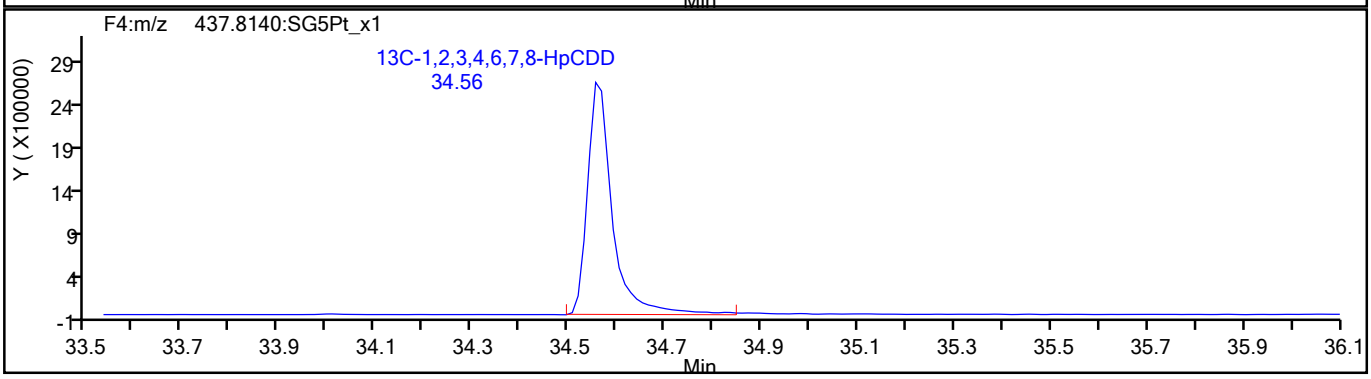

775308

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

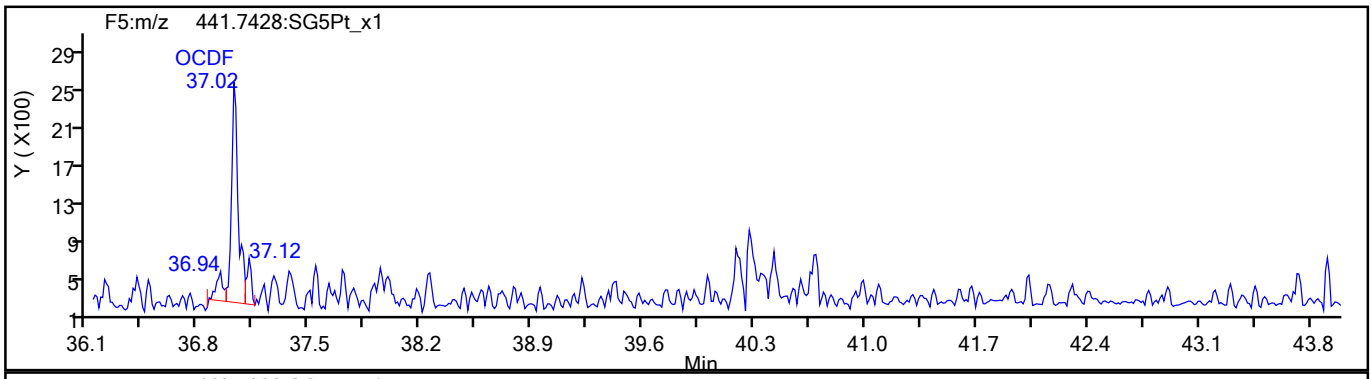

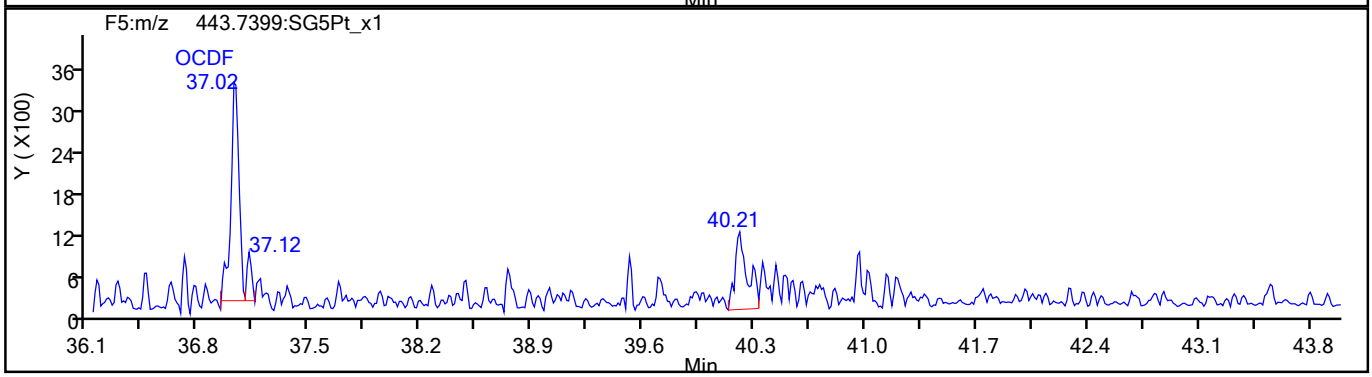

OCDF Standards

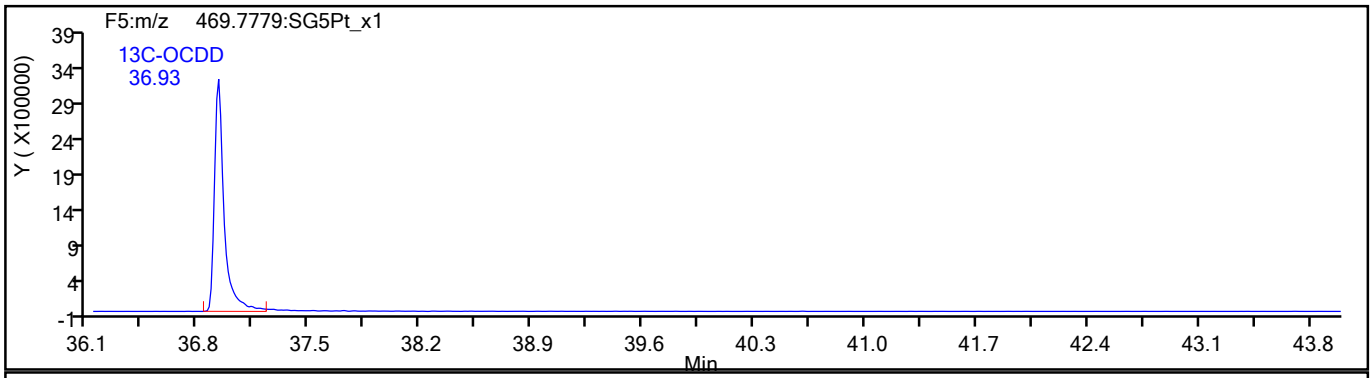

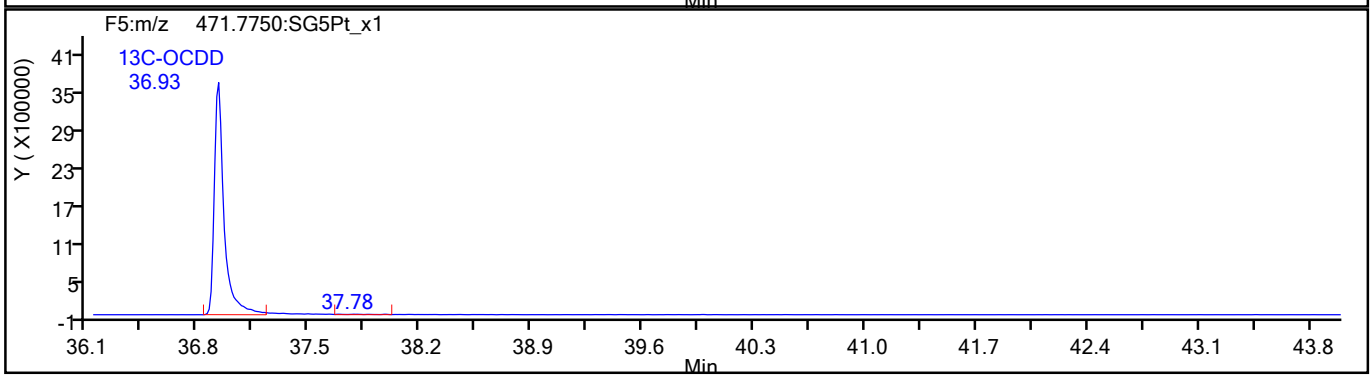

775309

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

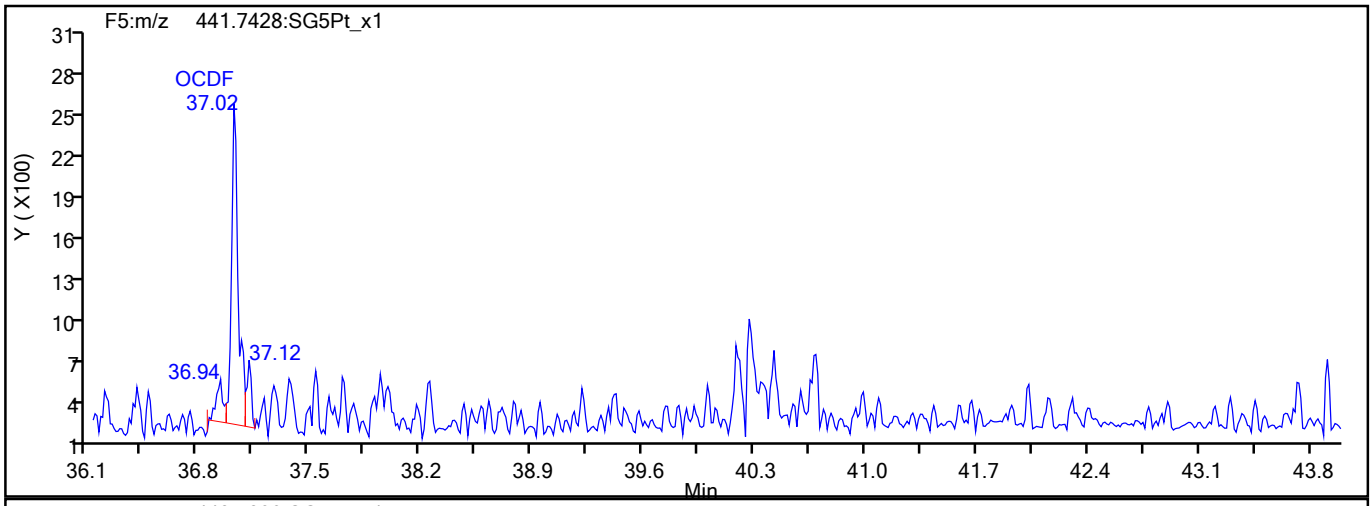

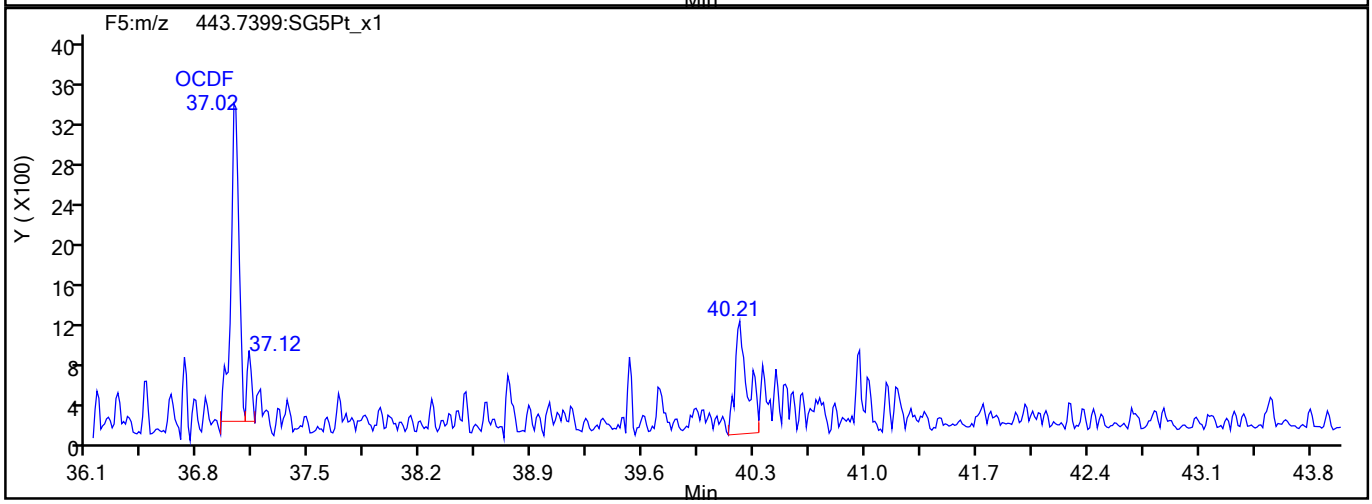

OCDF Interference Mass

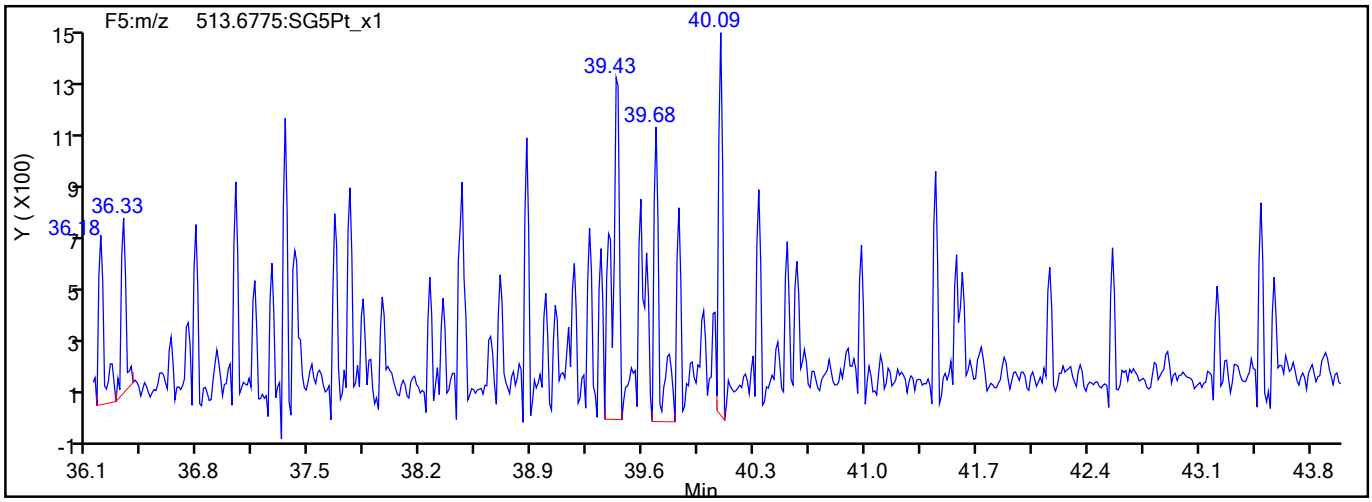

775310

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

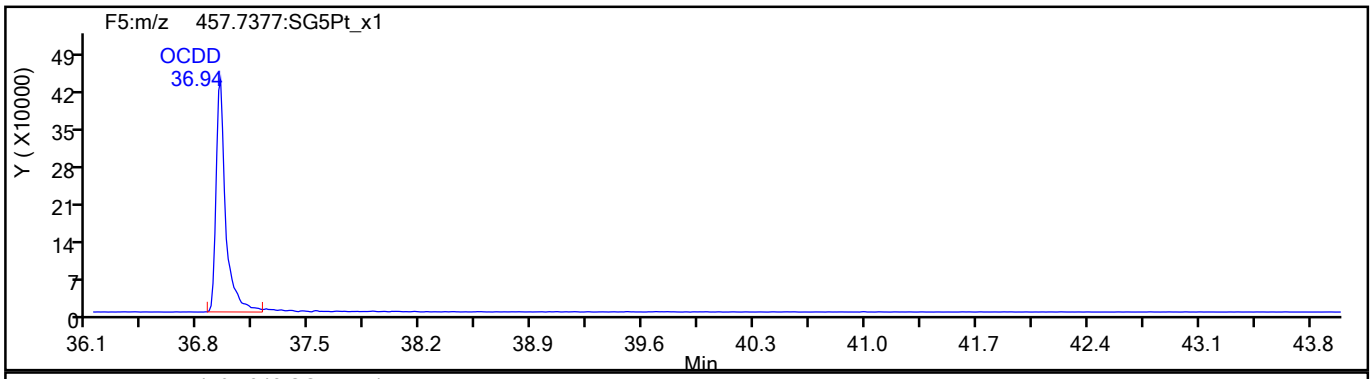

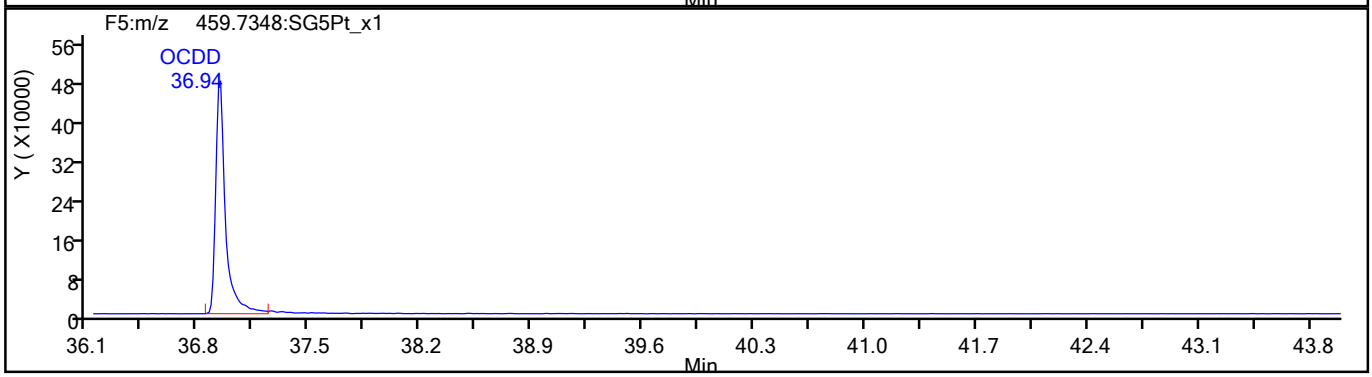

OCDD Standards

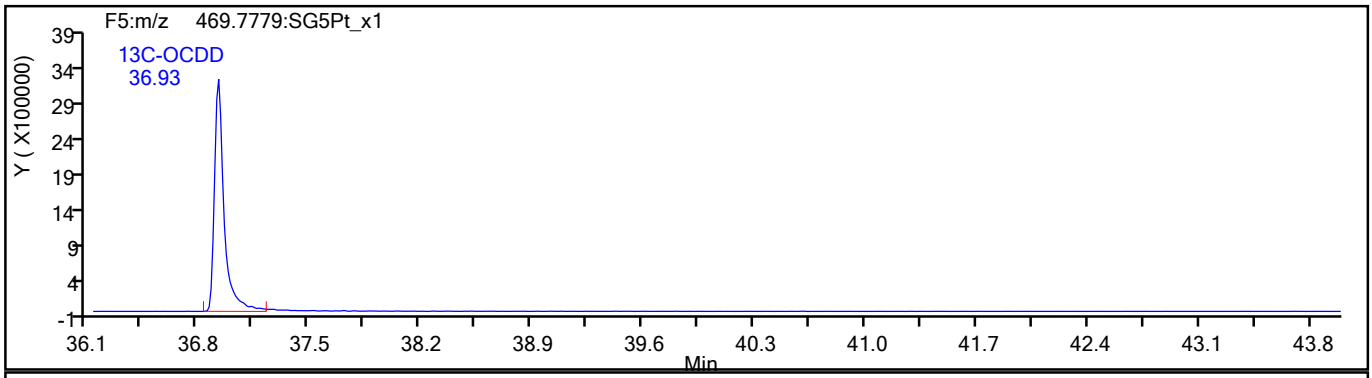

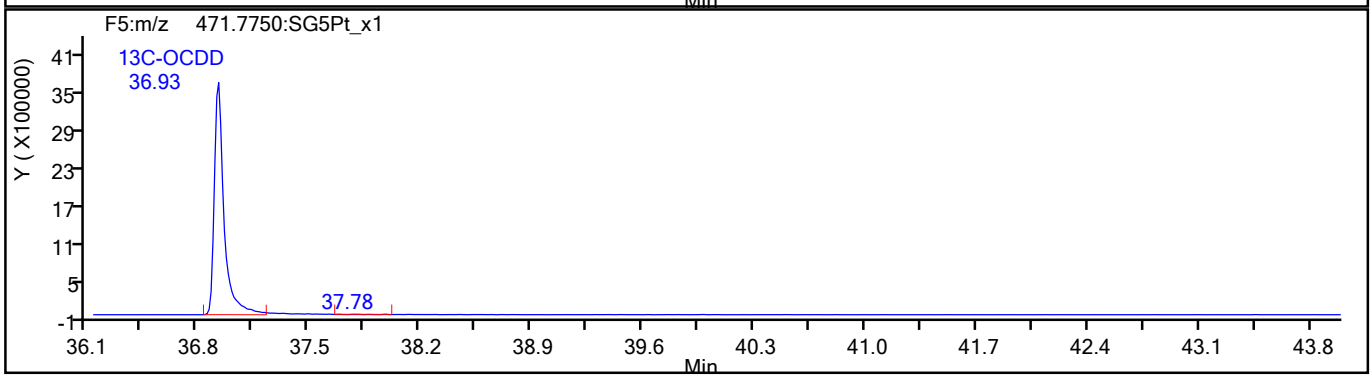

775311

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

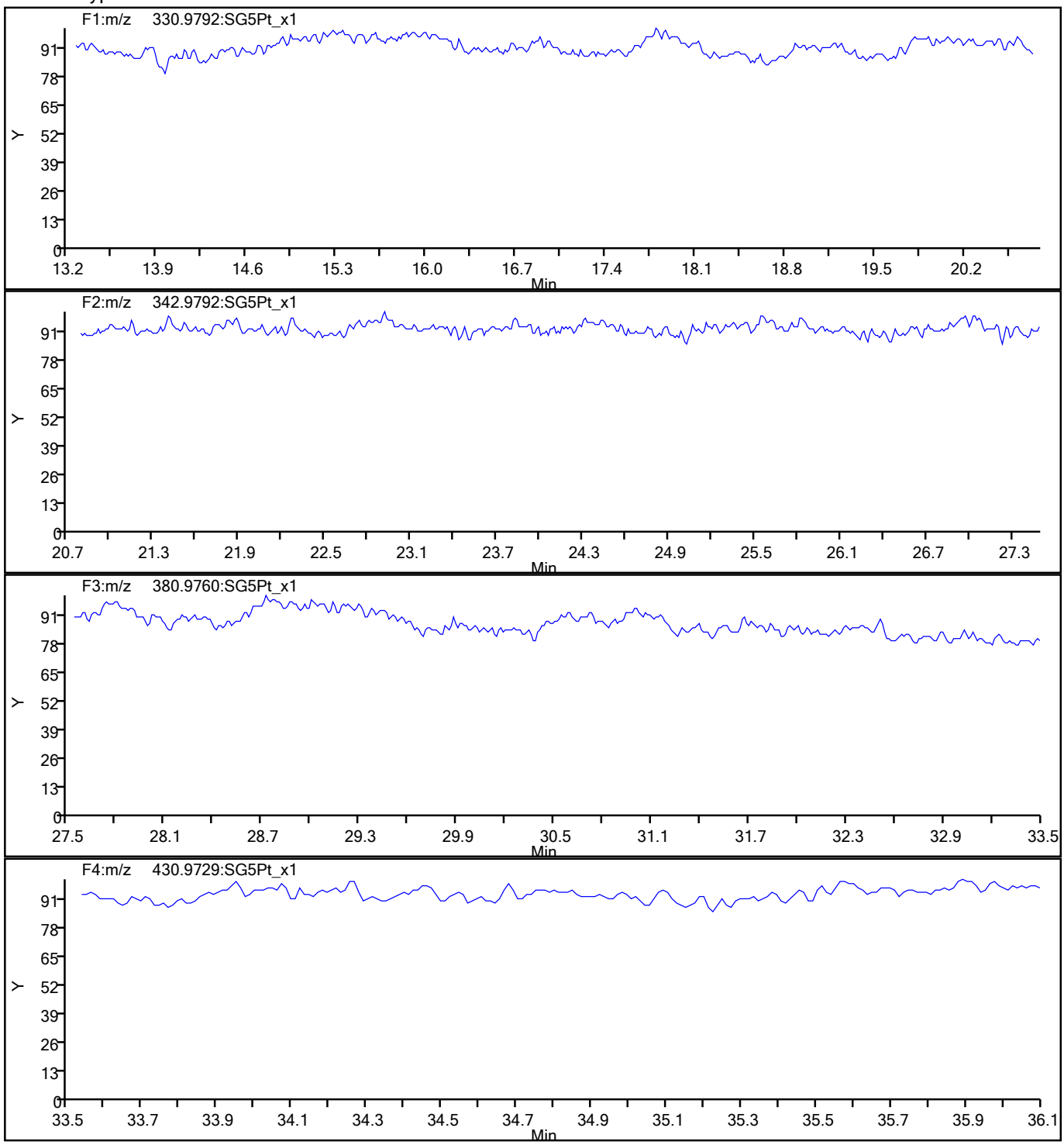

775312

Report Date: 18-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_63.d		
Injection Date:	15-Aug-2021 16:42:10	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	516848	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

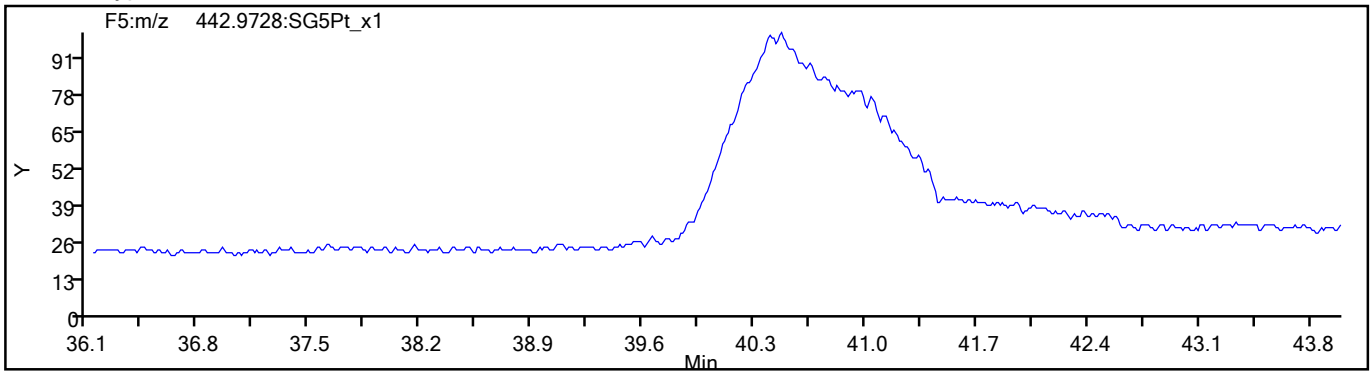

775313

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (10-12) RA
Lab Sample ID: 320-76769-18 RA
Matrix: Sediment
Lab File ID: 24AU2111D2_005.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.06(g)
Date Analyzed: 08/24/2021 11:02
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 16.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	6.2	B	1.2	0.23

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	54		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	64		35-197

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_005.d
Lims ID: 320-76769-A-18-A
Client ID: 11215702-072221-SS-SJSB074 (10-12)
Sample Type: Client
Inject. Date: 24-Aug-2021 11:02:10 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-18-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:45:50

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.314	25922424	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	18812030	0.80	1.3327	54.5	54.5	0.3154	0.3154	54.45	
2,3,7,8-TCDF	17.672	493694	0.87	0.9978	2.630	2.630	0.0949	0.0949		M
D 13C-2,3,7,8-TCDD	16.095	12170423	0.77	0.8749	53.7	53.7	0.5290	0.5290	53.66	
$ 37Cl4-2,3,7,8-TCDD	16.108	5749761		0.8648	25.6	25.6	0.0766	0.0766	64.12	
2,3,7,8-TCDD	16.136	149189	0.74	1.0570	1.160	1.160	0.1199	0.1199		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_005.d
Lims ID: 320-76769-A-18-A
Client ID: 11215702-072221-SS-SJSB074 (10-12)
Sample Type: Client
Inject. Date: 24-Aug-2021 11:02:10 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-18-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:45:50

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.314	16.283	2		11403727	2489728	6598	16495	377		
333.9339	16.328	16.283	3		14518697	3221965	3976	9940	810	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.613	2	1.082	8344387	1610610	5071	12677	318		
317.9389	17.644	17.613	2	1.082	10467643	2057527	4531	11327	454	0.80(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.672	17.641	2	1.002	229143	41077	691	1727	59		
305.8987	17.658	17.641	1	1.001	264551	53090	699	1747	76	0.87(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.095	16.050	3	0.987	5286226	1201119	6598	16495	182		
333.9339	16.081	16.050	2	0.986	6884197	1510711	3976	9940	380	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.108	16.063	3	0.987	5749761	1360376	1513	3782	899		
2,3,7,8-TCDD											
319.8965	16.136	16.077	4	1.003	63444	10800	716	1790	15		
321.8936	16.122	16.077	3	1.002	85745	19780	659	1647	30	0.74(0.65-0.89)	

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_005.d				
Injection Date:	24-Aug-2021 11:02:10	Instrument ID:	11D2		
Lims ID:	320-76769-A-18-A	Lab Sample ID:	320-76769-18		
Client ID:	11215702-072221-SS-SJSB074 (10-12)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.66
Area: 267441
Amount: 2.645517
Amount Units: pg/ul

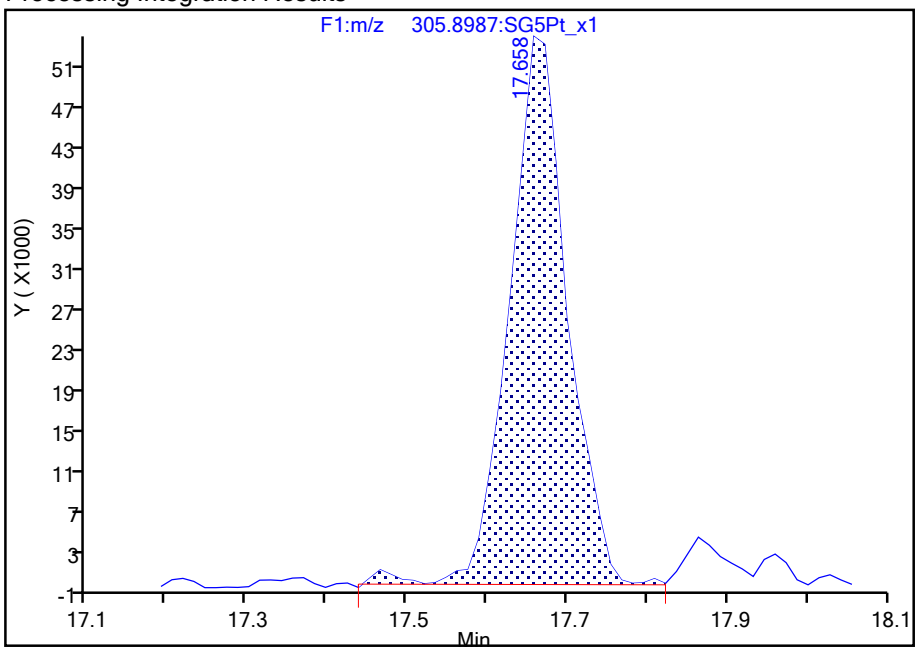

Manual Integration Results

RT: 17.66
Area: 264551
Amount: 2.630121
Amount Units: pg/ul

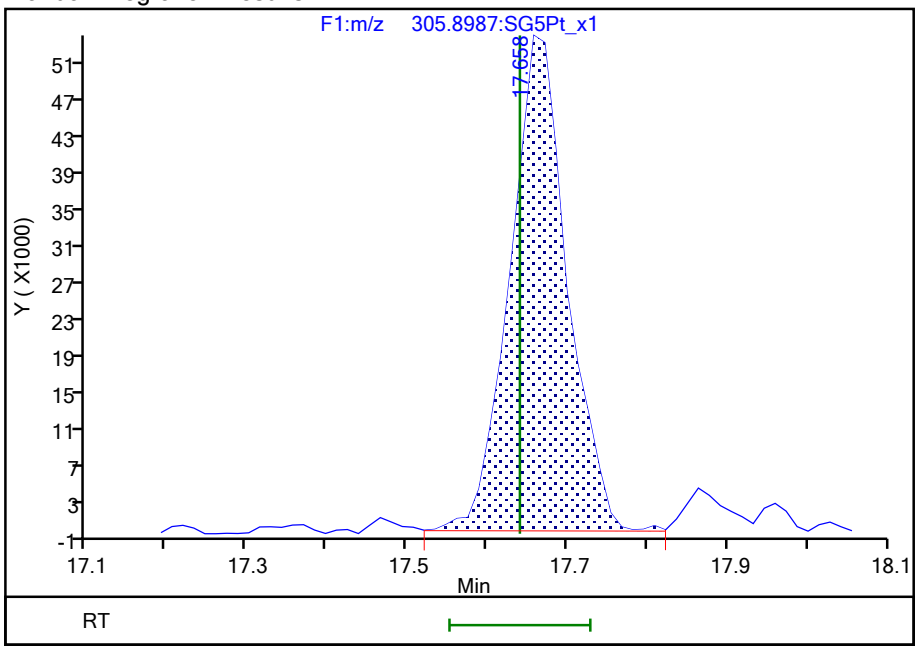

Reviewer: bennettd, 24-Aug-2021 16:45:43

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 24-Aug-2021 17:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_005.d		
Injection Date:	24-Aug-2021 11:02:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	519438	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

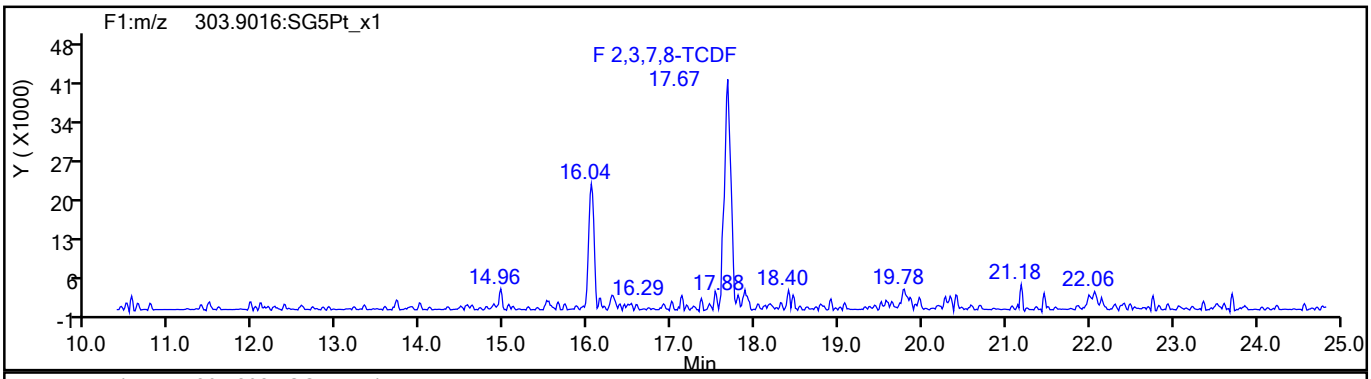

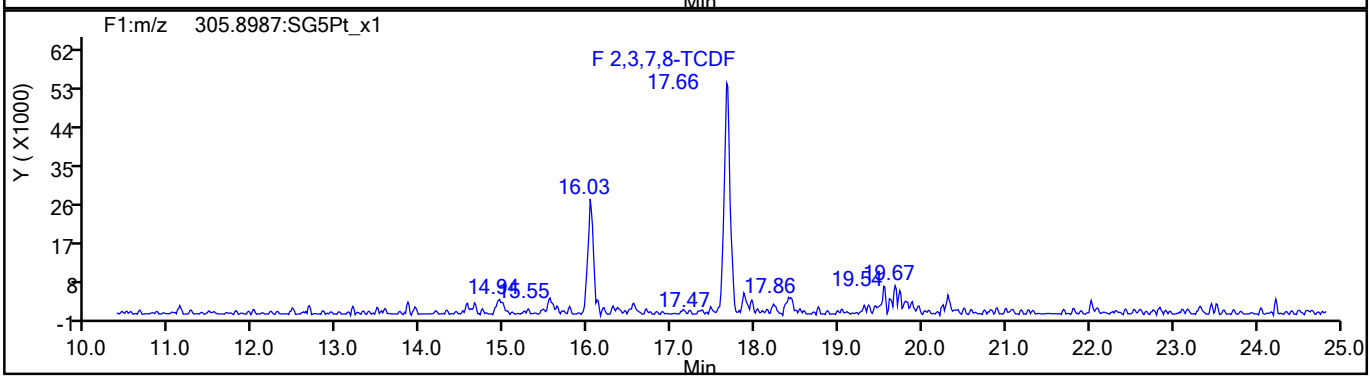

TCDF Standards

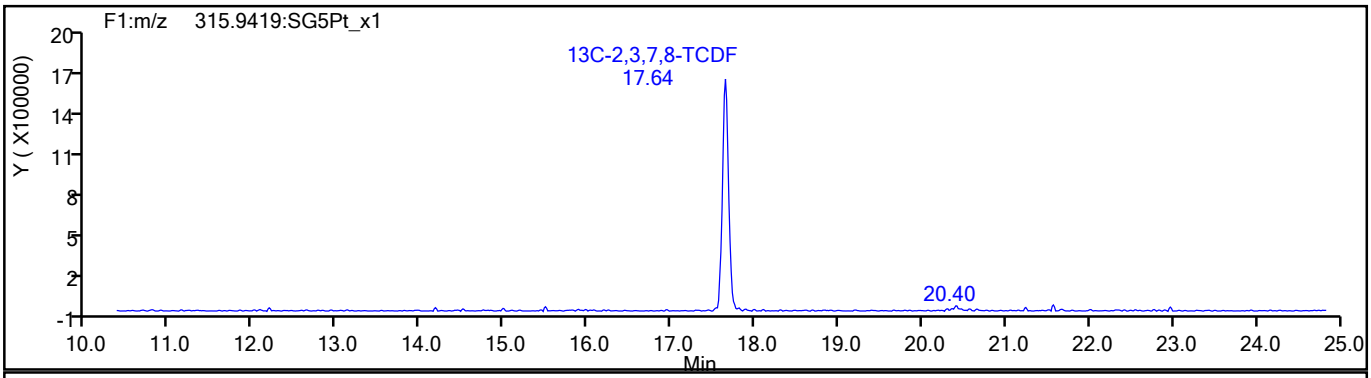

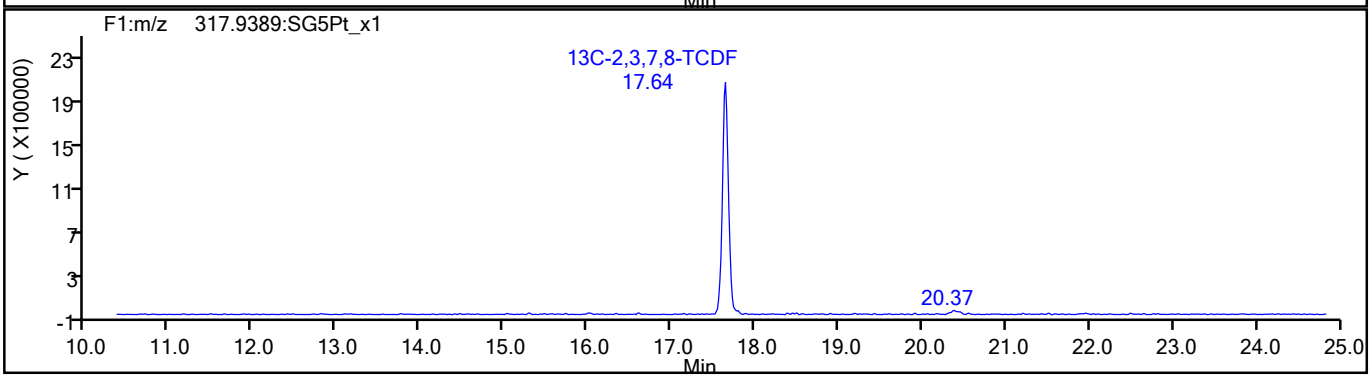

775318

Report Date: 24-Aug-2021 17:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_005.d		
Injection Date:	24-Aug-2021 11:02:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	519438	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

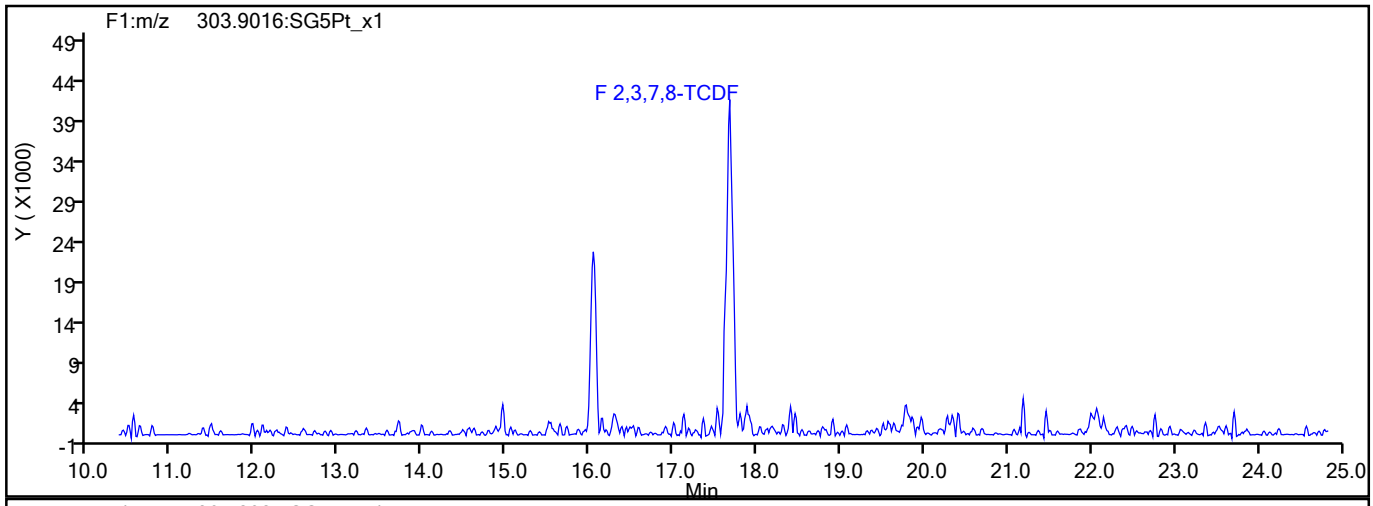

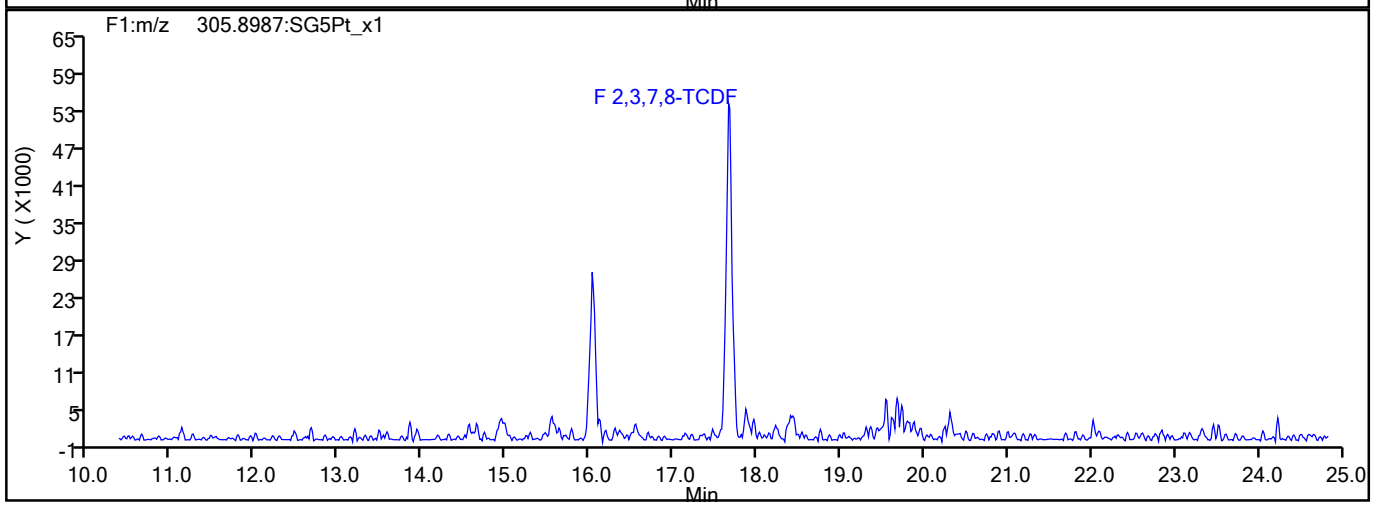

TCDF Interference Mass

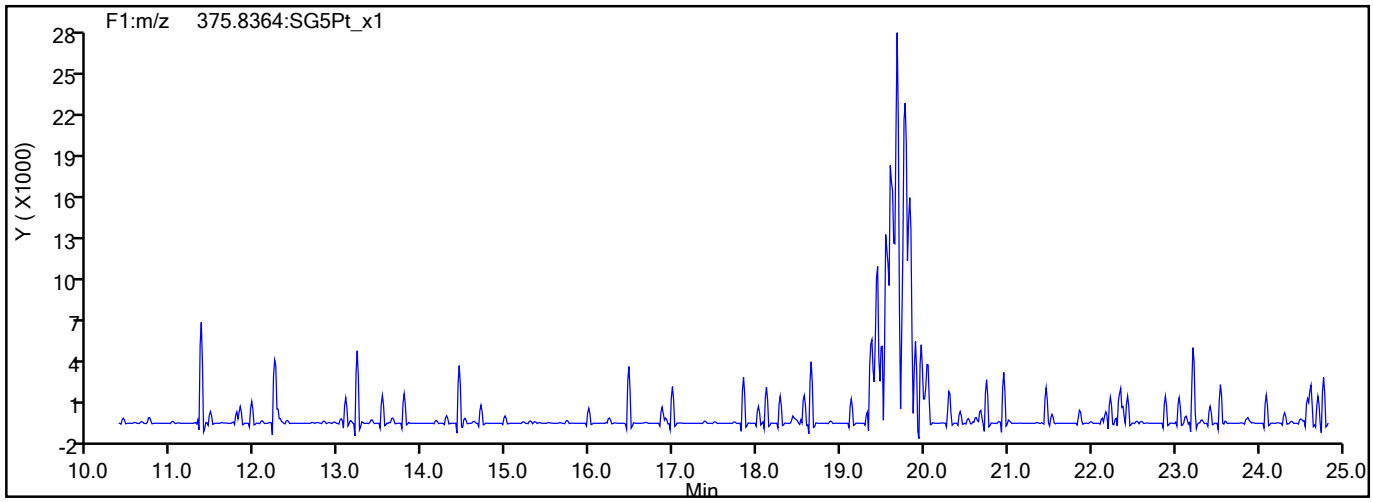

775319

Report Date: 24-Aug-2021 17:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_005.d		
Injection Date:	24-Aug-2021 11:02:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	519438	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

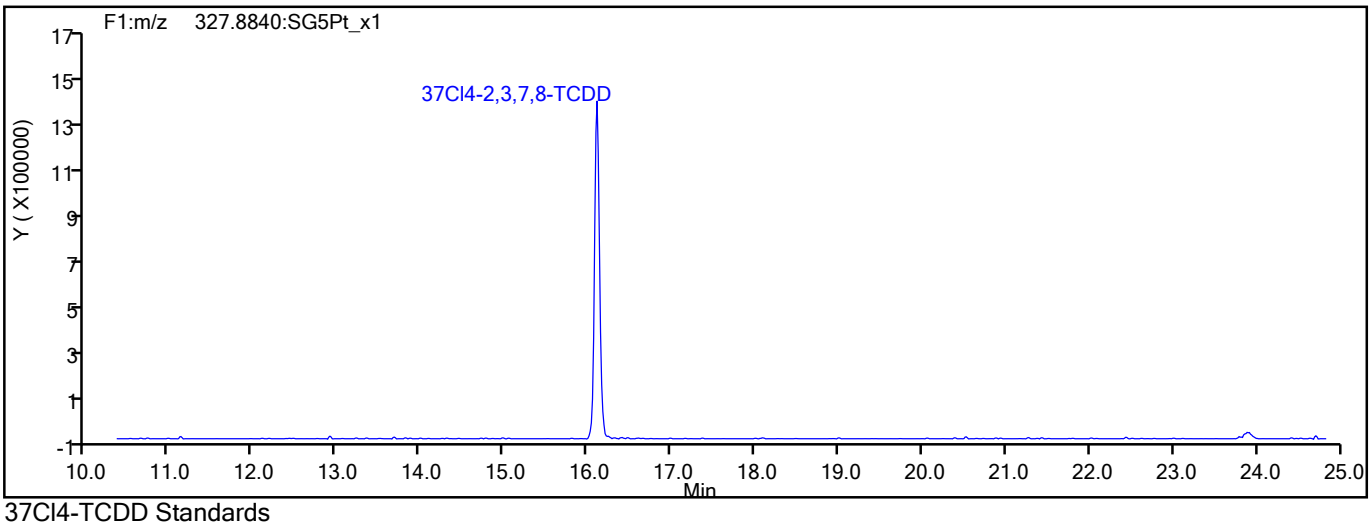

37Cl4-TCDD Standards

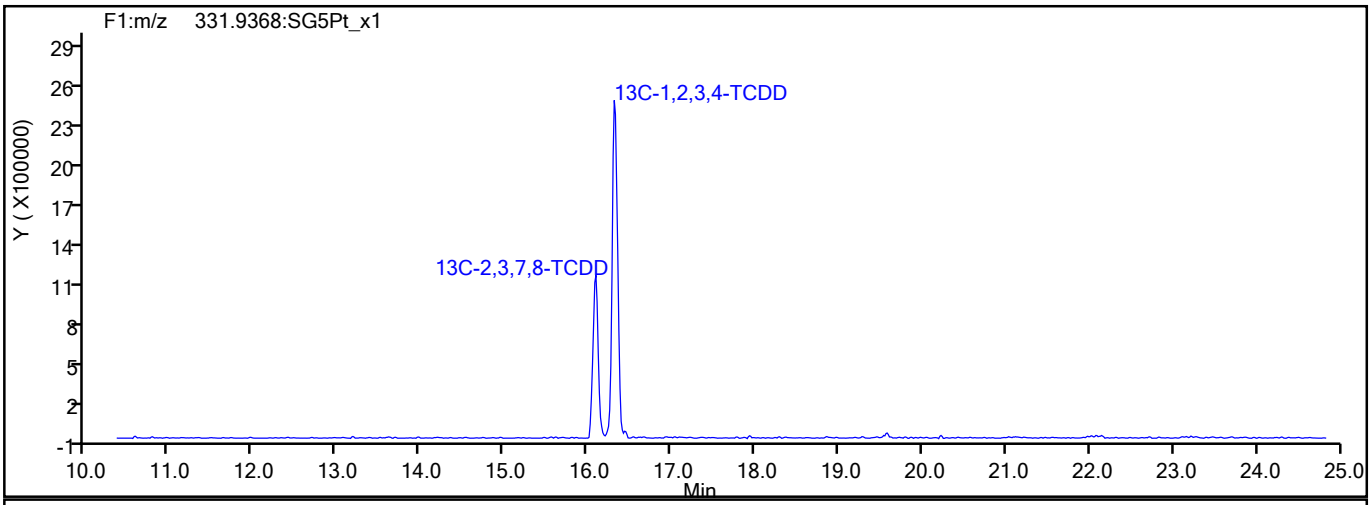

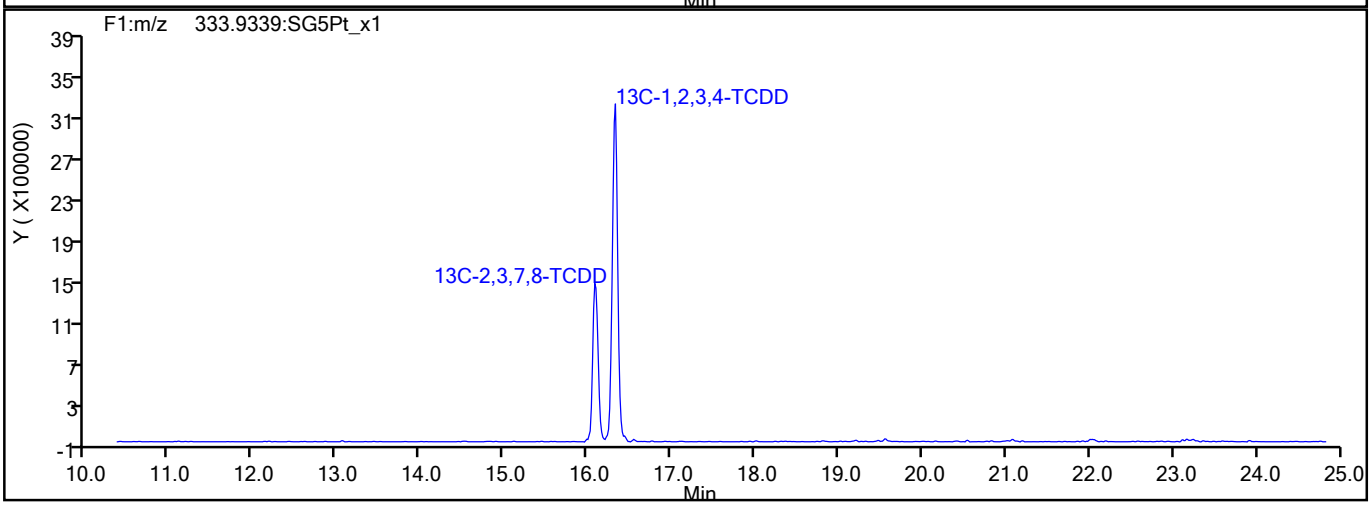

775320

Report Date: 24-Aug-2021 17:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_005.d		
Injection Date:	24-Aug-2021 11:02:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (10-12)		
Worklist#:	519438	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

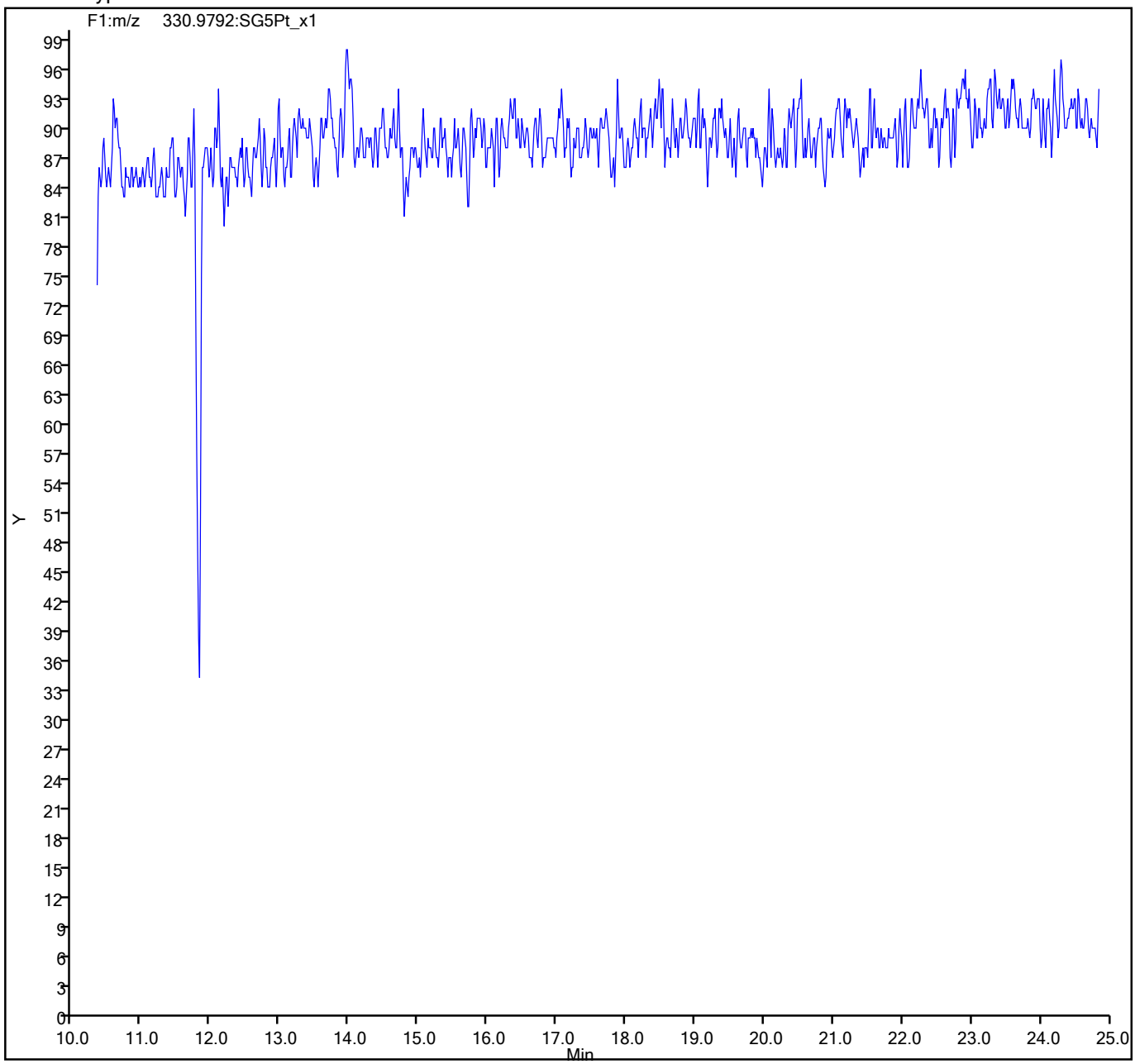

775321

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (12-14)
Lab Sample ID: 320-76769-19
Matrix: Sediment
Lab File ID: 13AU2110D5_64.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:30
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.67(g)
Date Analyzed: 08/15/2021 17:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 16.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.26	J B q	1.1	0.063
51207-31-9	2,3,7,8-TCDF	0.76	J B	1.1	0.055
40321-76-4	1,2,3,7,8-PeCDD	0.11	J q	5.6	0.063
57117-41-6	1,2,3,7,8-PeCDF	ND		5.6	0.033
57117-31-4	2,3,4,7,8-PeCDF	ND		5.6	0.032
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.6	0.11
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.6	0.11
19408-74-3	1,2,3,7,8,9-HxCDD	0.22	J B q	5.6	0.098
70648-26-9	1,2,3,4,7,8-HxCDF	0.13	J B q	5.6	0.030
57117-44-9	1,2,3,6,7,8-HxCDF	0.054	J B q	5.6	0.032
72918-21-9	1,2,3,7,8,9-HxCDF	0.11	J B q	5.6	0.027
60851-34-5	2,3,4,6,7,8-HxCDF	0.056	J	5.6	0.024
35822-46-9	1,2,3,4,6,7,8-HpCDD	2.2	J B	5.6	0.097
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.13	J B	5.6	0.038
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.093	J B	5.6	0.046
3268-87-9	OCDD	55	B	11	0.15
39001-02-0	OCDF	0.28	J B	11	0.033
41903-57-5	Total TCDD	7.9	B q	1.1	0.063
30402-14-3	Total TCDF	1.1	B	1.1	0.055
36088-22-9	Total PeCDD	2.9	J q	5.6	0.063
30402-15-4	Total PeCDF	ND		5.6	0.033
34465-46-8	Total HxCDD	7.9	B q	5.6	0.10
55684-94-1	Total HxCDF	0.35	J B q	5.6	0.028
37871-00-4	Total HpCDD	9.6	B	5.6	0.097
38998-75-3	Total HpCDF	0.34	J B	5.6	0.042

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (12-14)
Lab Sample ID: 320-76769-19
Matrix: Sediment
Lab File ID: 13AU2110D5_64.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:30
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.67(g)
Date Analyzed: 08/15/2021 17:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 16.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	49		25-164
89059-46-1	13C-2,3,7,8-TCDF	44		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	51		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	46		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	51		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	51		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	49		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	50		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	46		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	45		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	45		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	51		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	49		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	55		26-138
114423-97-1	13C-OCDD	55		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	63		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d
Lims ID: 320-76769-A-19-A
Client ID: 11215702-072221-SS-SJSB074 (12-14)
Sample Type: Client
Inject. Date: 15-Aug-2021 17:27:12 ALS Bottle#: 62 Worklist Smp#: 23
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-19-a 320-76769-a-19-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:37:08 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 11:37:08

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	63754426	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	45475138	0.75	1.6249	43.9	43.9	0.0792	0.0792	43.90	
2,3,7,8-TCDF	17.371	156972	0.77	1.0239	0.3371	0.3371	0.0244	0.0244		
A Non-2,3,7,8-sub-TCDF	17.046	67286	0.66	1.0239	0.1445	0.1445	0.0244	0.1445		M
S Total TCDF					0.4816	0.4816	0.0244	0.0244		
D 13C-2,3,7,8-TCDD	18.066	28000882	0.82	0.8993	48.8	48.8	0.1071	0.1071	48.84	
2,3,7,8-TCDD	18.097	40447	0.77	1.2541	0.1587	0.1152	0.0279	0.0279		RQ
$ 37Cl4-2,3,7,8-TCDD	18.082	17703773		1.1071	25.1	25.1	0.0313	0.0313	62.70	
A Non-2,3,7,8-sub-TCDD	17.500	1187195	0.75	1.2541	3.381	3.381	0.0279	3.117		
S Total TCDD					3.539	3.496	0.0279	0.0279		RQ
D 13C-1,2,3,7,8-PeCDF	22.381	35545551	1.59	1.2101	46.1	46.1	0.1279	0.1279	46.07	
1,2,3,7,8-PeCDF	22.394						0.0144	0.0144		
D 13C-2,3,4,7,8-PeCDF	23.717	40677347	1.57	1.2395	51.5	51.5	0.1248	0.1248	51.48	
2,3,4,7,8-PeCDF	23.730						0.0144	0.0144		
A F1 PeCDFs	20.093						0.0122	0.0122		
A Non-2,3,7,8-sub-PeCDF	23.241						0.0144	0.0144		
S Total PeCDF							0.0144	0.0144		
D 13C-1,2,3,7,8-PeCDD	24.440	24672579	1.65	0.7612	50.8	50.8	0.0619	0.0619	50.84	
1,2,3,7,8-PeCDD	24.426	13124	1.55	1.0484	0.0572	0.0507	0.0280	0.0280		RQ
A Non-2,3,7,8-sub-PeCDD	23.349	322778	1.55	1.0484	1.267	1.248	0.0280	1.032		RQ
S Total PeCDD					1.324	1.299	0.0280	0.0280		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	34038869	0.51	1.0837	49.7	49.7	0.2382	0.2382	49.65	
1,2,3,4,7,8-HxCDF	30.516	20871	1.24	1.0851	0.0653	0.0565	0.0135	0.0135		RQM
D 13C-1,2,3,6,7,8-HxCDF	30.702	32727981	0.52	1.1279	45.9	45.9	0.2288	0.2288	45.87	
1,2,3,6,7,8-HxCDF	30.716	8817	1.24	1.1260	0.0299	0.0239	0.0141	0.0141		RQMa
D 13C-2,3,4,6,7,8-HxCDF	31.514	30522960	0.51	1.0637	45.4	45.4	0.2426	0.2426	45.36	
2,3,4,6,7,8-HxCDF	31.541	8775	1.08	1.1675	0.0246	0.0246	0.0108	0.0108		
D 13C-1,2,3,7,8,9-HxCDF	32.326	27424125	0.52	0.9676	44.8	44.8	0.2667	0.2667	44.80	
1,2,3,7,8,9-HxCDF	32.340	15765	1.24	1.1664	0.0558	0.0493	0.0119	0.0119		RQM
A Non-2,3,7,8-sub-HxCDF	30.197						0.0125	0.0125		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.1757	0.1543	0.0126	0.0126		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.140	63263247	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	23451683	1.23	0.7334	50.5	50.5	0.2943	0.2943	50.54	
1,2,3,4,7,8-HxCDD	31.714						0.0476	0.0476		
D 13C-1,2,3,6,7,8-HxCDD	31.807	27310127	1.23	0.8802	49.0	49.0	0.2452	0.2452	49.05	
1,2,3,6,7,8-HxCDD	31.820						0.0478	0.0478		
1,2,3,7,8,9-HxCDD	32.153	28269	1.24	1.1325	0.1078	0.0983	0.0435	0.0435		RQM
A Non-2,3,7,8-sub-HxCDD	30.882	923255	1.24	1.0655	3.440	3.414	0.0462	3.215		RQ
S Total HxCDD					3.548	3.512	0.0463	0.0463		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	23742882	0.43	0.7730	48.5	48.5	0.6841	0.6841	48.55	
1,2,3,4,6,7,8-HpCDF	33.766	19061	1.10	1.4413	0.0557	0.0557	0.0169	0.0169		
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	24469906	0.43	0.7008	55.2	55.2	0.7546	0.7546	55.19	
1,2,3,4,7,8,9-HpCDF	34.860	13250	1.13	1.3174	0.0411	0.0411	0.0205	0.0205		M
A Non-2,3,7,8-sub-HpCDF	34.319	17340	1.16	1.3793	0.0521	0.0521	0.0186	0.0521		
S Total HpCDF					0.1490	0.1490	0.0187	0.0187		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	20939743	1.00	0.6472	51.1	51.1	0.2483	0.2483	51.14	
1,2,3,4,6,7,8-HpCDD	34.568	224748	0.90	1.0943	0.9808	0.9808	0.0429	0.0429		
A Non-2,3,7,8-sub-HpCDD	34.301	745641	1.00	1.0943	3.254	3.254	0.0429	3.254		
S Total HpCDD					4.235	4.235	0.0429	0.0429		
D 13C-OCDD	36.926	31258169	0.88	0.4472	110.5	110.5	0.1832	0.1832	55.25	
OCDF	37.022	28308	0.93	1.4382	0.1259	0.1259	0.0146	0.0146		M
OCDD	36.926	4190620	0.91	1.1070	24.2	24.2	0.0655	0.0655		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d
Lims ID: 320-76769-A-19-A
Client ID: 11215702-072221-SS-SJSB074 (12-14)
Sample Type: Client
Inject. Date: 15-Aug-2021 17:27:12 ALS Bottle#: 62 Worklist Smp#: 23
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-19-a 320-76769-a-19-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:37:08 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 11:37:08

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		28626700	6965096	3275	8187	2127		
333.9339	17.855	17.855	0		35127726	8482335	2674	6685	3172	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.972	19559613	4512027	4290	10725	1052		
317.9389	17.356	17.356	0	0.972	25915525	5994662	3666	9165	1635	0.75(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.371	0	1.001	68284	13964	522	1305	27		
305.8987	17.371	17.371	0	1.001	88688	19784	526	1315	38	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											M
303.9016	16.978	17.046	-4	0.978	26822	5945	522	1305	11		M
305.8987	16.993	17.046	-3	0.979	40464	7560	526	1315	14	0.66(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.012	12606661	2756601	3275	8187	842		
333.9339	18.066	18.051	1	1.012	15394221	3328958	2674	6685	1245	0.82(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	18.097	18.081	1	1.002	17596	2604	482	1205	5		
321.8936	18.066	18.081	-1	1.000	38134	8288	369	922	22	0.46(0.65-0.89)	
	Empc Correction				22851	3381	369	922	9		
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.081	0	1.013	17703773	3960027	2144	5360	1847		
A Non-2,3,7,8-sub-TCDD											
319.8965	16.933	17.500	-34	0.937	470498	121042	482	1205	251		
321.8936	16.933	17.500	-34	0.937	624199	154015	369	922	417	0.75(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	17.825	17.500	19	0.987	37378	9492	482	1205	20		
321.8936	17.825	17.500	19	0.987	55120	11528	369	922	31	0.68(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.253	21804983	3517106	5679	14197	619		
353.8970	22.381	22.367	1	1.253	13740568	2253015	3882	9705	580	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.394						144	360			
341.8567	22.394						209	522			
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.328	24872141	3665358	5679	14197	645		
353.8970	23.717	23.703	1	1.328	15805206	2354033	3882	9705	606	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.730						144	360			
341.8567	23.730						209	522			
A F1 PeCDFs											
339.8597	20.093						97	242			
341.8567	20.093						201	502			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.241						144	360			
341.8567	23.241						209	522			
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.369	15365255	2167486	1653	4132	1311		
369.8919	24.440	24.426	1	1.369	9307324	1330627	1257	3142	1059	1.65(1.32-1.78)	
1,2,3,7,8-PeCDD											RQ
355.8546	24.426	24.453	-2	0.999	9648	1290	239	597	5		
	Empc Correction				7977	1452	239	597	6		
357.8516	24.480	24.453	2	1.002	5147	937	172	430	5	1.87(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	22.012	23.349	-80	0.901	159131	26095	239	597	109		
357.8516	21.999	23.349	-81	0.900	107913	17059	172	430	99	1.47(1.32-1.78)	
355.8546	23.472	23.349	7	0.960	33878	4331	239	597	18		
357.8516	23.526	23.349	11	0.963	26730	3014	172	430	18	1.27(1.32-1.78)	
	Empc Correction				21856	2794	172	430	16		
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	11496239	2082367	6000	15000	347		
385.8610	30.516	30.503	1	0.949	22542630	4189741	10691	26727	392	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQM
373.8208	30.516	30.529	-1	1.000	11554	1759	191	477	9		M
375.8178	30.569	30.529	2	1.002	12570	1929	177	442	11	0.92(1.05-1.43)	
	Empc Correction				9317	1418	177	442	8		
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	11152314	1934348	6000	15000	322		
385.8610	30.702	30.689	1	0.955	21575667	3871404	10691	26727	362	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQMa
373.8208	30.716	30.716	0	1.000	4881	983	191	477	5		M
375.8178	30.729	30.716	1	1.001	6143	994	177	442	6	0.79(1.05-1.43)	M
	Empc Correction				3936	792	177	442	4		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	10364999	2505173	6000	15000	418		
385.8610	31.514	31.514	0	0.981	20157961	4773214	10691	26727	446	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.541	31.528	1	1.001	4547	1357	191	477	7		
375.8178	31.514	31.528	-1	1.000	4228	984	177	442	6	1.08(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.326	0	1.006	9339552	2256084	6000	15000	376		
385.8610	32.326	32.326	0	1.006	18084573	4388155	10691	26727	410	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	32.340	32.340	0	1.000	10823	2676	191	477	14		M
	Empc Correction				8727	2651	191	477	14		
375.8178	32.326	32.340	-1	1.000	7038	2138	177	442	12	1.54(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						191	477			
375.8178	30.197						177	442			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.140	0		34878930	8941786	7517	18792	1190		
403.8529	32.140	32.140	0		28384317	7225289	6441	16102	1122	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	12942300	3499968	7517	18792	466		
403.8529	31.701	31.701	0	0.986	10509383	2845925	6441	16102	442	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714						584	1460			
391.8127	31.714						703	1757			
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	15041549	3679557	7517	18792	489		
403.8529	31.807	31.807	0	0.990	12268578	3049584	6441	16102	473	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.820						584	1460			
391.8127	31.820						703	1757			
1,2,3,7,8,9-HxCDD											RQM
389.8157	32.153	32.153	0	1.014	15649	3740	584	1460	6		M
391.8127	32.140	32.153	-1	1.014	15344	4049	703	1757	6	1.02(1.05-1.43)	
	Empc Correction				12620	3016	703	1757	4		
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.558	30.882	-79	0.929	468940	56237	584	1460	96		
391.8127	29.558	30.882	-79	0.929	400502	42648	703	1757	61	1.17(1.05-1.43)	
389.8157	30.969	30.882	5	0.974	36982	6888	584	1460	12		
	Empc Correction				29789	6295	584	1460	11		
391.8127	30.942	30.882	4	0.973	24024	5077	703	1757	7	1.54(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.766	0	1.051	7179207	2271796	10635	26587	214		
419.8220	33.766	33.766	0	1.051	16563675	5091948	23564	58910	216	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.778	-1	1.000	9963	2608	477	1192	5		
409.7789	33.766	33.778	-1	1.000	9098	3728	241	602	15	1.10(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.084	7397114	2054285	10635	26587	193		
419.8220	34.847	34.847	0	1.084	17072792	4607799	23564	58910	196	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.860	34.860	0	1.000	7025	2143	477	1192	4		
409.7789	34.884	34.860	1	1.001	6225	1419	241	602	6	1.13(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.070	34.319	-15	1.009	9327	2721	477	1192	6		
409.7789	34.070	34.319	-15	1.009	8013	2725	241	602	11	1.16(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.568	-1	1.075	10450580	2992256	5328	13320	562		
437.8140	34.556	34.568	-1	1.075	10489163	2997759	5063	12657	592	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.580	-1	1.000	106209	30658	622	1555	49		
425.7737	34.568	34.580	-1	1.000	118539	32085	503	1257	64	0.90(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.985	372545	107729	622	1555	173		
425.7737	34.009	34.301	-17	0.984	373096	107875	503	1257	214	1.00(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.926	0	1.149	14587332	3360480	2695	6737	1247		
471.7750	36.926	36.926	0	1.149	16670837	3855557	2603	6507	1481	0.88(0.76-1.02)	
OCDF											M
441.7428	37.022	37.022	0	1.003	13640	3622	153	382	24		M
443.7399	37.010	37.022	-1	1.002	14668	3480	149	372	23	0.93(0.76-1.02)	M
OCDD											
457.7377	36.926	36.938	-1	1.000	1994112	451582	492	1230	918		
459.7348	36.926	36.938	-1	1.000	2196508	503473	554	1385	909	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d
Lims ID: 320-76769-A-19-A
Client ID: 11215702-072221-SS-SJSB074 (12-14)
Inject. Date: 15-Aug-2021 17:27:12 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 23

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	45475138	10506689

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	45475138	10506689

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.978	26822	5945	40464	7560	0.1445	0.66	M
Signal Totals:							
	26822	5945	40464	7560			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	67286	13505				0.66	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1445 = (67286 * 100.000) / (45475138 * 1.024)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Lims ID:	320-76769-A-19-A		
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Inject. Date:	15-Aug-2021 17:27:12	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	23

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	28000882	6085559

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	28000882	6085559

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.933	470498	121042	624199	154015	3.12	0.75	
17.825	37378	9492	55120	11528	0.2634	0.68	
Signal Totals:							
	507876	130534	679319	165543			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1187195	296077				0.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.381 = (1187195 * 100.000) / (28000882 * 1.254)

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Lims ID:	320-76769-A-19-A		
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Inject. Date:	15-Aug-2021 17:27:12	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	23

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	24672579	3498113

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	24672579	3498113

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.012	159131	26095	107913	17059	1.03	1.47	
23.472	33878	4331	26730	3014	0.2343	1.27	RQ
23.472	33878	4331	21856	2794	0.2155		Empc Correction
Signal Totals:							
	193009	30426	129769	19853			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	327652	50499				1.43	RQ
	322778	50279					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.267 = (327652 * 100.000) / (24672579 * 1.048)

Empc Amount: 1.248 = (322778 * 100.000) / (24672579 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Lims ID:	320-76769-A-19-A		
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Inject. Date:	15-Aug-2021 17:27:12	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	23

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	23451683	6345893
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	27310127	6729141
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	25380905	6537517

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.558	468940	56237	400502	42648	3.21	1.17	
30.969	36982	6888	24024	5077	0.2256	1.54	RQ
30.969	29789	6295	24024	5077	0.1990		Empc Correction
Signal Totals:							
	498729	62532	424526	47725			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	930448	110850				1.19	RQ
	923255	110257					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.440 = (930448 * 100.000) / (25380905 * 1.066)

Empc Amount: 3.414 = (923255 * 100.000) / (25380905 * 1.066)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d
Lims ID: 320-76769-A-19-A
Client ID: 11215702-072221-SS-SJSB074 (12-14)
Inject. Date: 15-Aug-2021 17:27:12 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 23

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	23742882	7363744
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	24469906	6662084

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	24106394	7012914

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.070	9327	2721	8013	2725	0.0521	1.16	
Signal Totals:							
	9327	2721	8013	2725			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	17340	5446				1.16	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0521 = (17340 * 100.000) / (24106394 * 1.379)

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Lims ID:	320-76769-A-19-A		
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Inject. Date:	15-Aug-2021 17:27:12	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	23

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	20939743	5990015

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	20939743	5990015

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	372545	107729	373096	107875	3.25	1.00	
Signal Totals:							
	372545	107729	373096	107875			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	745641	215604				1.00	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.254 = (745641 * 100.000) / (20939743 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d				
Injection Date:	15-Aug-2021 17:27:12	Instrument ID:	10D5		
Lims ID:	320-76769-A-19-A	Lab Sample ID:	320-76769-19		
Client ID:	11215702-072221-SS-SJSB074 (12-14)				
Operator ID:	DB	ALS Bottle#:	62	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 16.978 Area = 31525

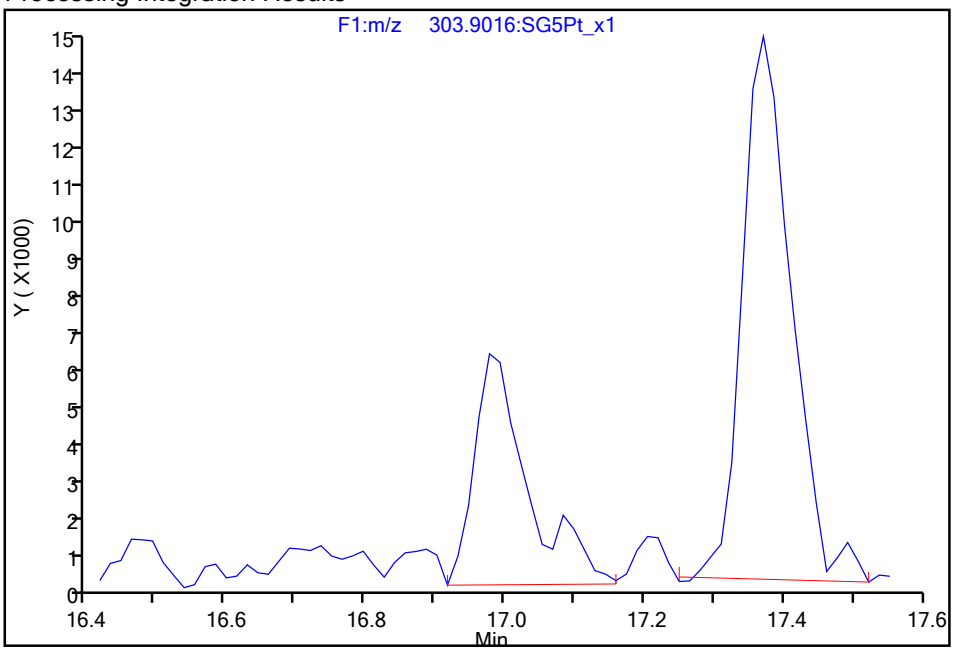

Manual Integration Results

RT = 16.978 Area = 26822 M

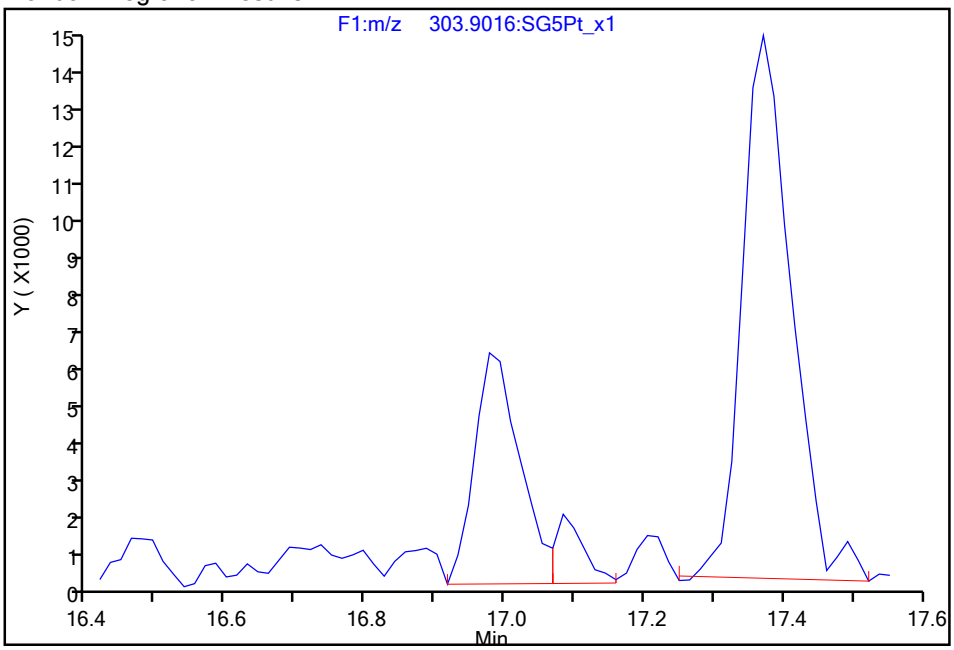

Reviewer: dadunj, 18-Aug-2021 11:35:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d				
Injection Date:	15-Aug-2021 17:27:12	Instrument ID:	10D5		
Lims ID:	320-76769-A-19-A	Lab Sample ID:	320-76769-19		
Client ID:	11215702-072221-SS-SJSB074 (12-14)				
Operator ID:	DB	ALS Bottle#:	62	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.89- 19.20)

Signal: 2

Processing Integration Results

RT = 16.993 Area = 52405

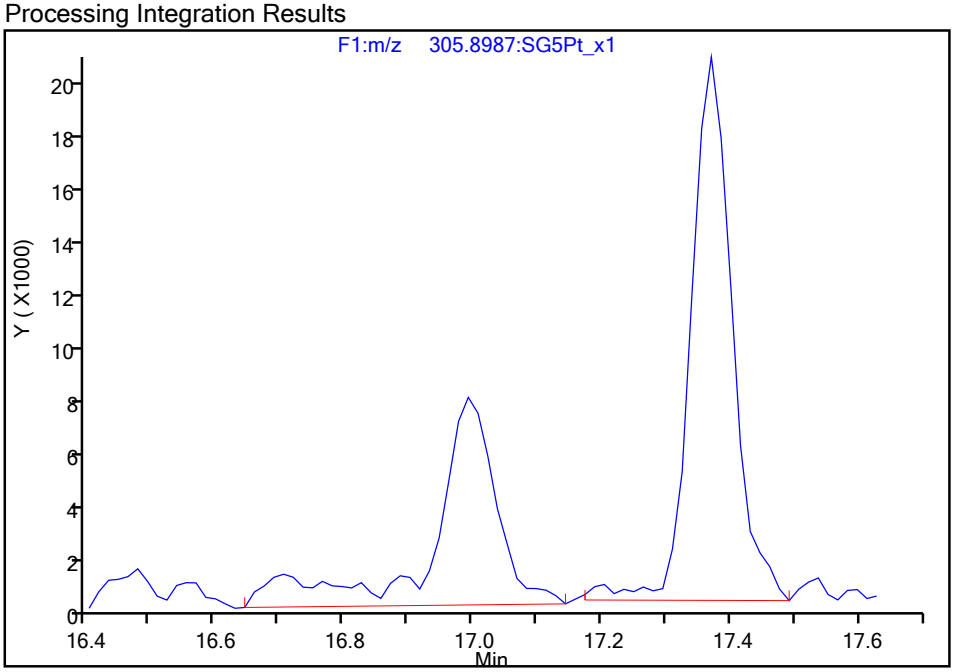

Manual Integration Results

RT = 16.993 Area = 40464 M

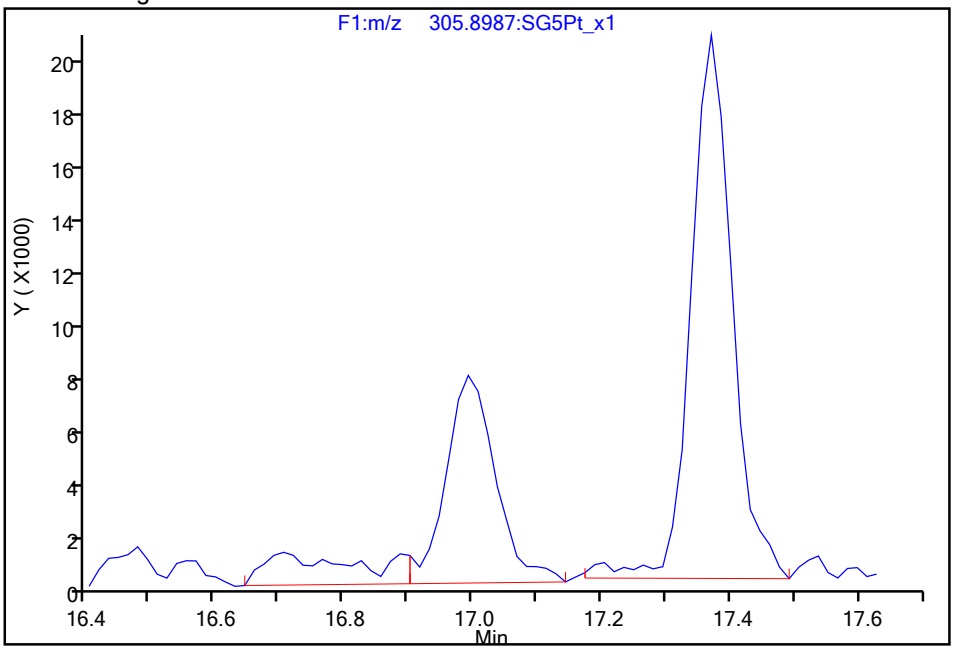

Reviewer: dadunj, 18-Aug-2021 11:35:33

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

775337

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d				
Injection Date:	15-Aug-2021 17:27:12	Instrument ID:	10D5		
Lims ID:	320-76769-A-19-A	Lab Sample ID:	320-76769-19		
Client ID:	11215702-072221-SS-SJSB074 (12-14)				
Operator ID:	DB	ALS Bottle#:	62	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

RT: 30.52
Area: 16417
Amount: 0.078478
Amount Units: pg/ul

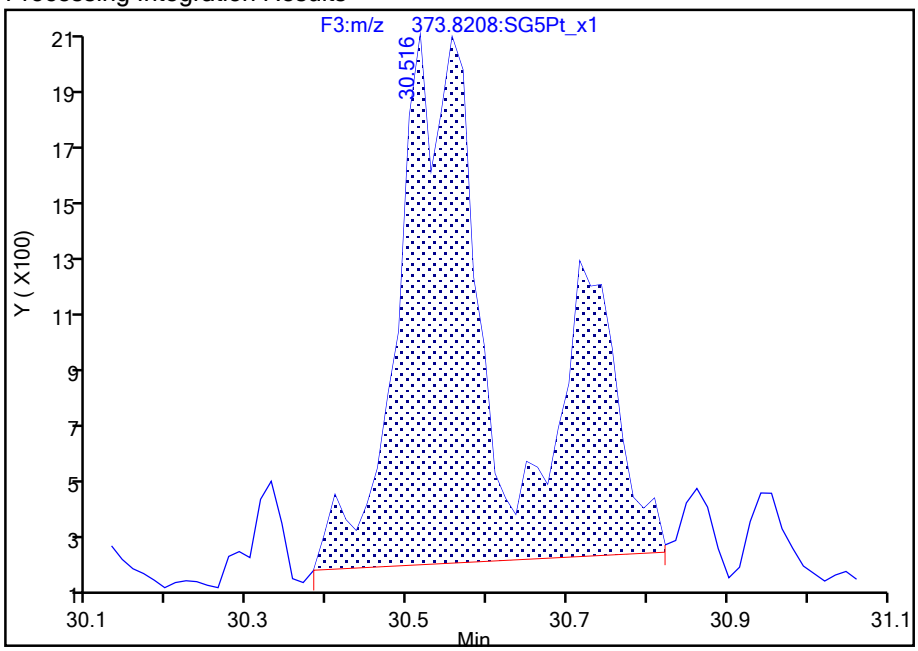

Manual Integration Results

RT: 30.52
Area: 11554
Amount: 0.065312
Amount Units: pg/ul

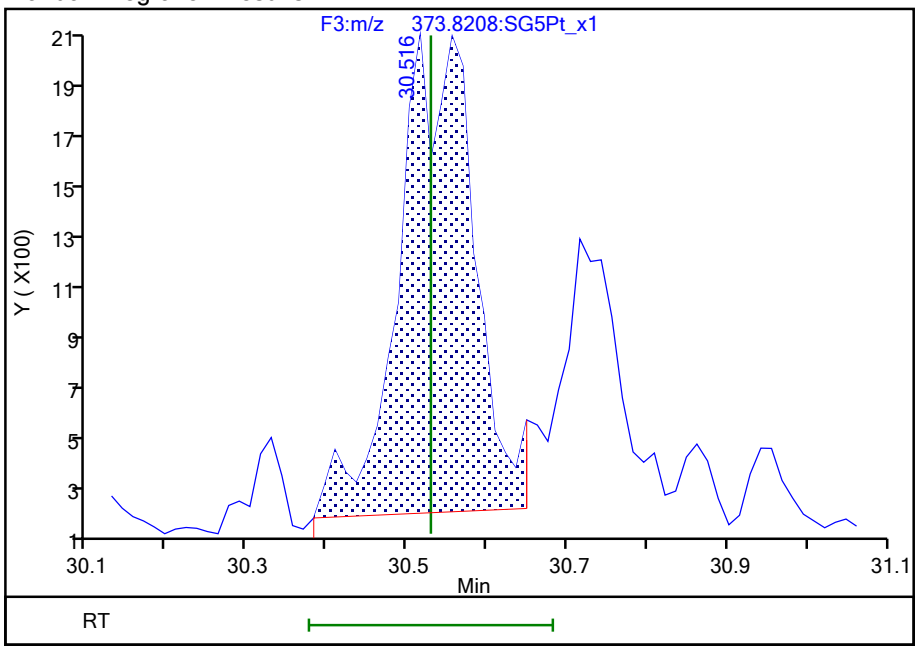

Reviewer: dadunj, 18-Aug-2021 11:35:51

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d				
Injection Date:	15-Aug-2021 17:27:12	Instrument ID:	10D5		
Lims ID:	320-76769-A-19-A	Lab Sample ID:	320-76769-19		
Client ID:	11215702-072221-SS-SJSB074 (12-14)				
Operator ID:	DB	ALS Bottle#:	62	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Not Detected
Expected RT: 30.72

Processing Integration Results

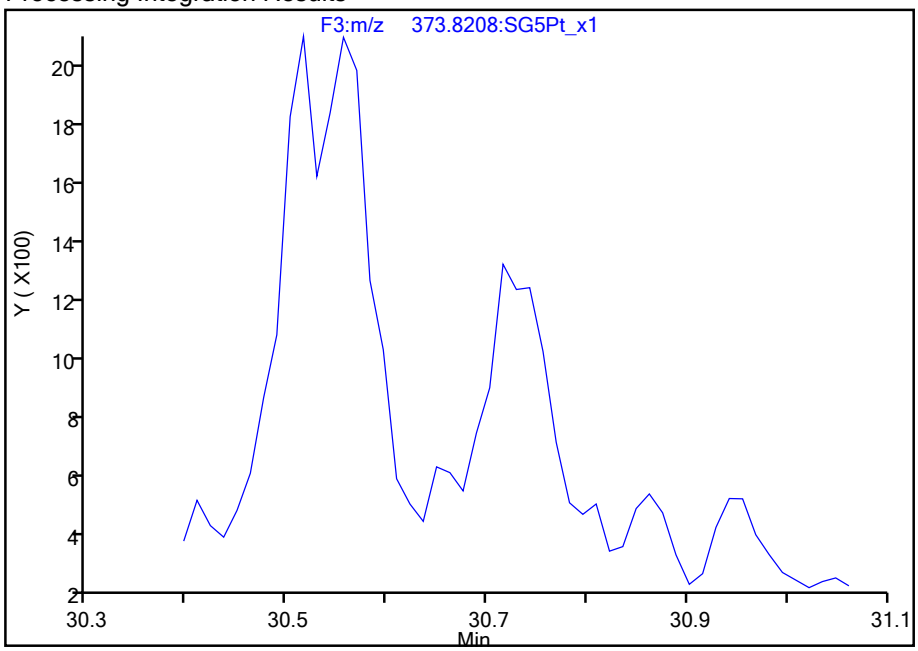

Manual Integration Results

RT: 30.72
Area: 4881
Amount: 0.029914
Amount Units: pg/ul

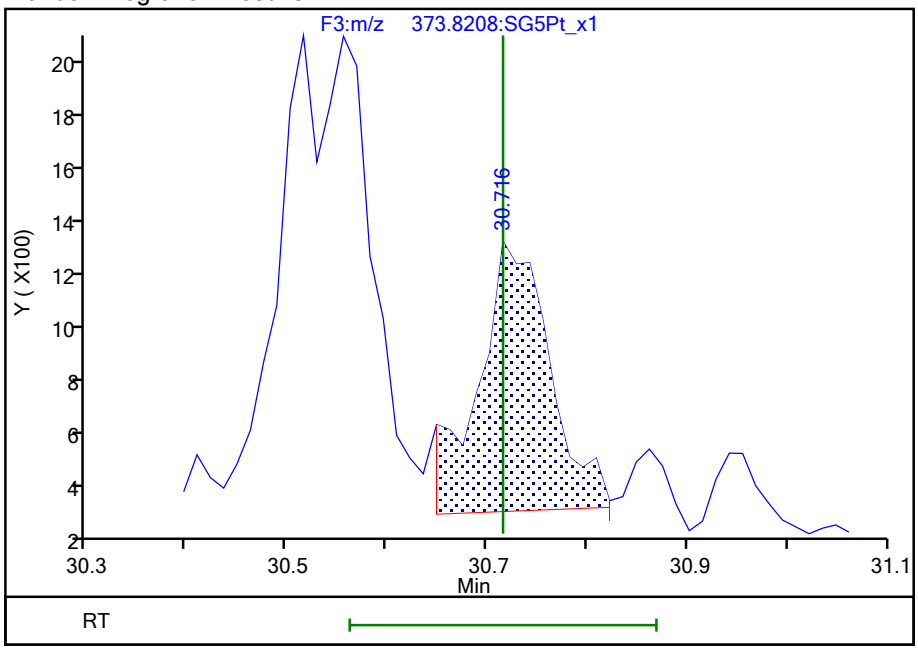

Reviewer: dadunj, 18-Aug-2021 11:35:56
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

775339

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d				
Injection Date:	15-Aug-2021 17:27:12	Instrument ID:	10D5		
Lims ID:	320-76769-A-19-A	Lab Sample ID:	320-76769-19		
Client ID:	11215702-072221-SS-SJSB074 (12-14)				
Operator ID:	DB	ALS Bottle#:	62	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Not Detected
Expected RT: 30.72

Processing Integration Results

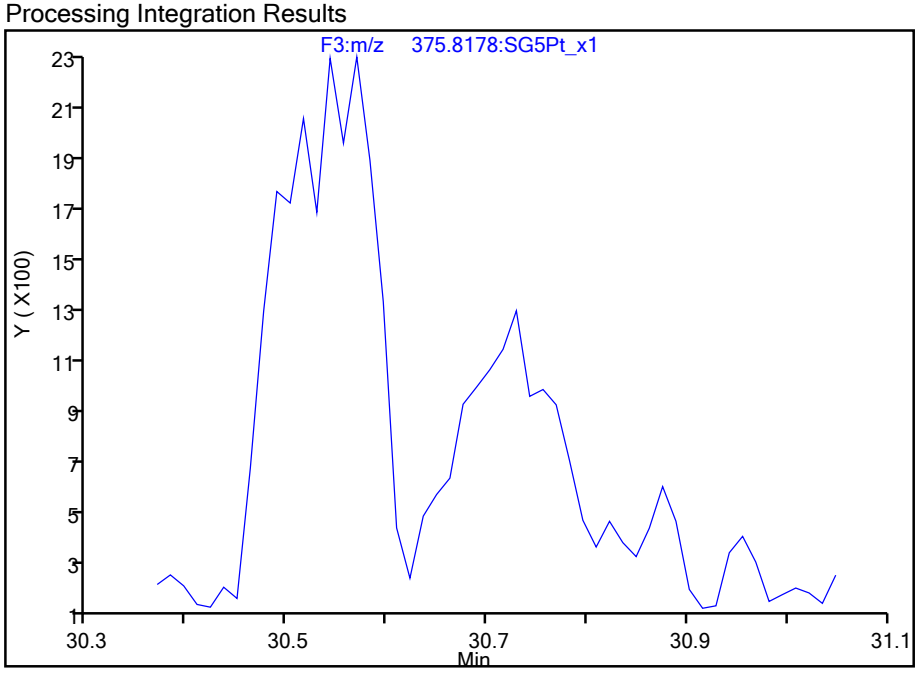

Manual Integration Results

RT: 30.73
Area: 6143
Amount: 0.029914
Amount Units: pg/ul

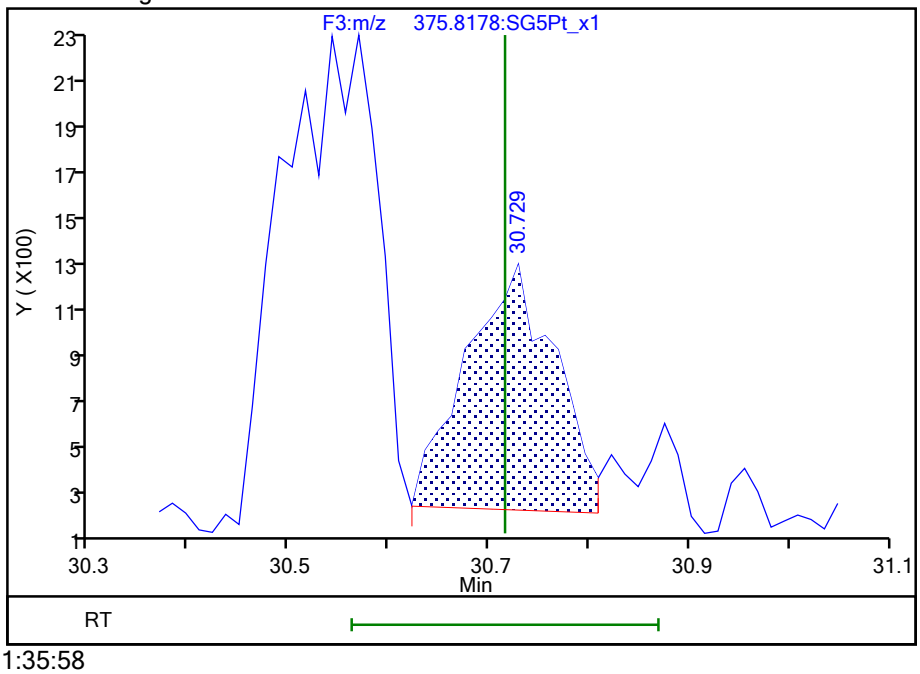

Reviewer: dadunj, 18-Aug-2021 11:35:58
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

775340

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d				
Injection Date:	15-Aug-2021 17:27:12	Instrument ID:	10D5		
Lims ID:	320-76769-A-19-A	Lab Sample ID:	320-76769-19		
Client ID:	11215702-072221-SS-SJSB074 (12-14)				
Operator ID:	DB	ALS Bottle#:	62	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.33
Area: 8859
Amount: 0.063327
Amount Units: pg/ul

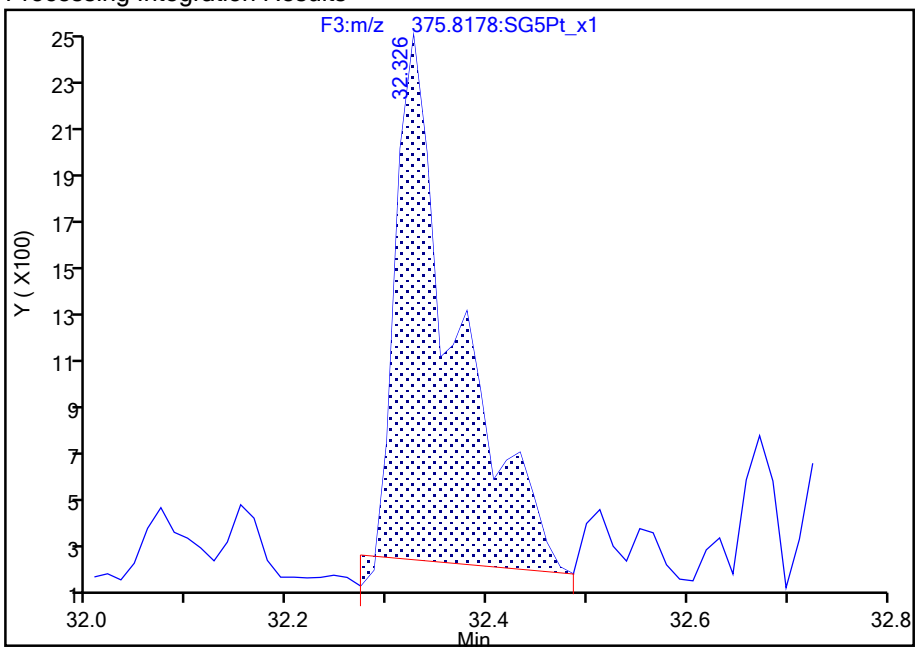

Manual Integration Results

RT: 32.33
Area: 7038
Amount: 0.055840
Amount Units: pg/ul

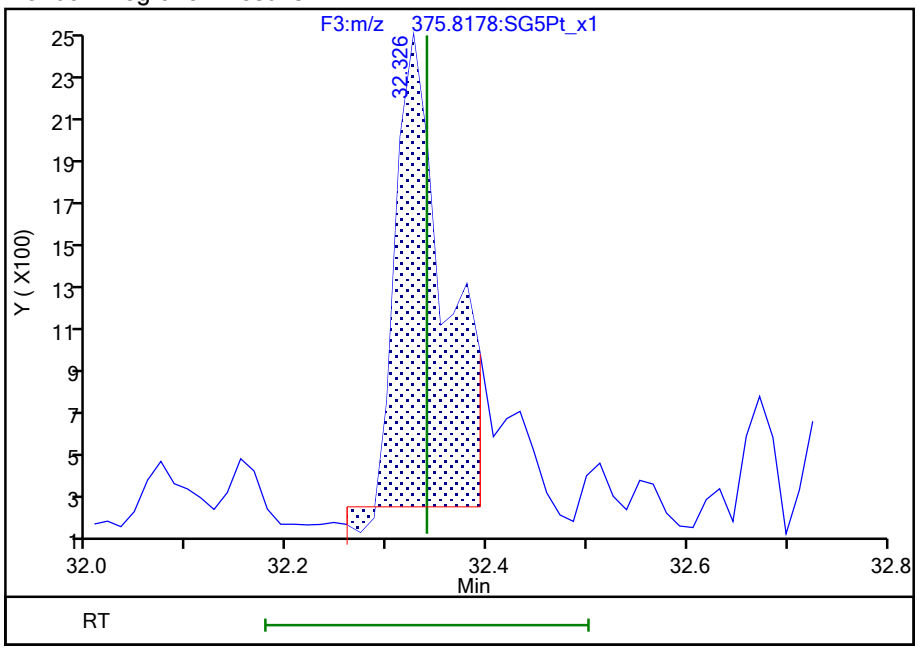

Reviewer: dadunj, 18-Aug-2021 11:36:09

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d				
Injection Date:	15-Aug-2021 17:27:12	Instrument ID:	10D5		
Lims ID:	320-76769-A-19-A	Lab Sample ID:	320-76769-19		
Client ID:	11215702-072221-SS-SJSB074 (12-14)				
Operator ID:	DB	ALS Bottle#:	62	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.34
Area: 11397
Amount: 0.063327
Amount Units: pg/ul

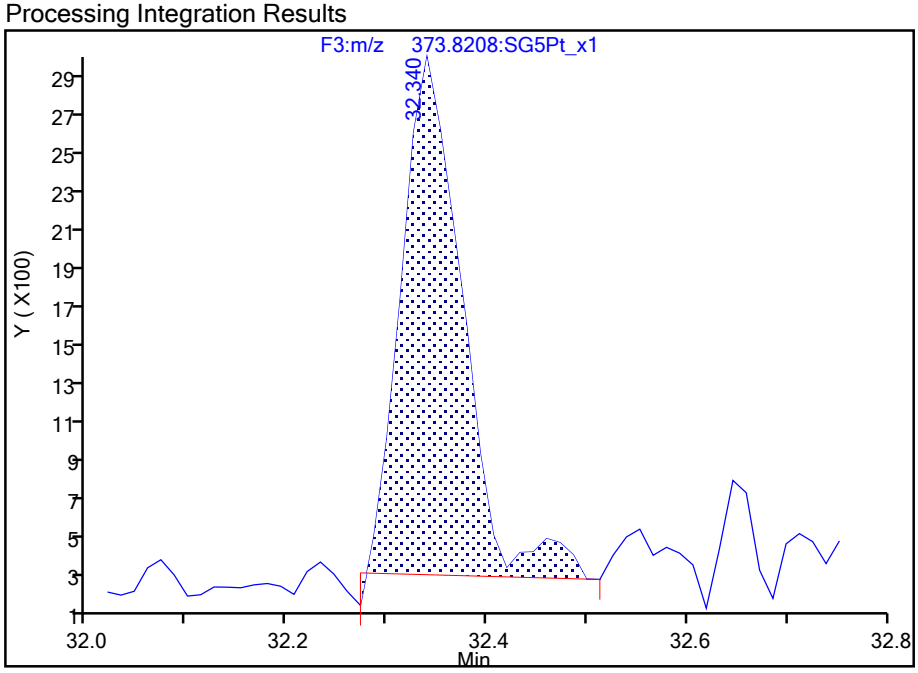

Manual Integration Results

RT: 32.34
Area: 10823
Amount: 0.055840
Amount Units: pg/ul

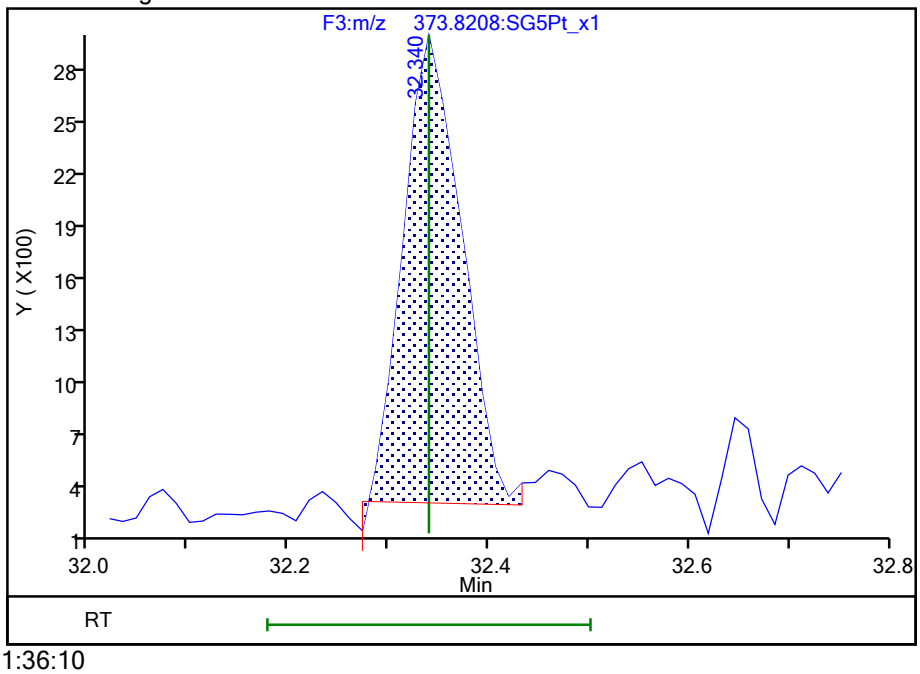

Reviewer: dadunj, 18-Aug-2021 11:36:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d				
Injection Date:	15-Aug-2021 17:27:12	Instrument ID:	10D5		
Lims ID:	320-76769-A-19-A	Lab Sample ID:	320-76769-19		
Client ID:	11215702-072221-SS-SJSB074 (12-14)				
Operator ID:	DB	ALS Bottle#:	62	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 32.15
Area: 20732
Amount: 0.125506
Amount Units: pg/ul

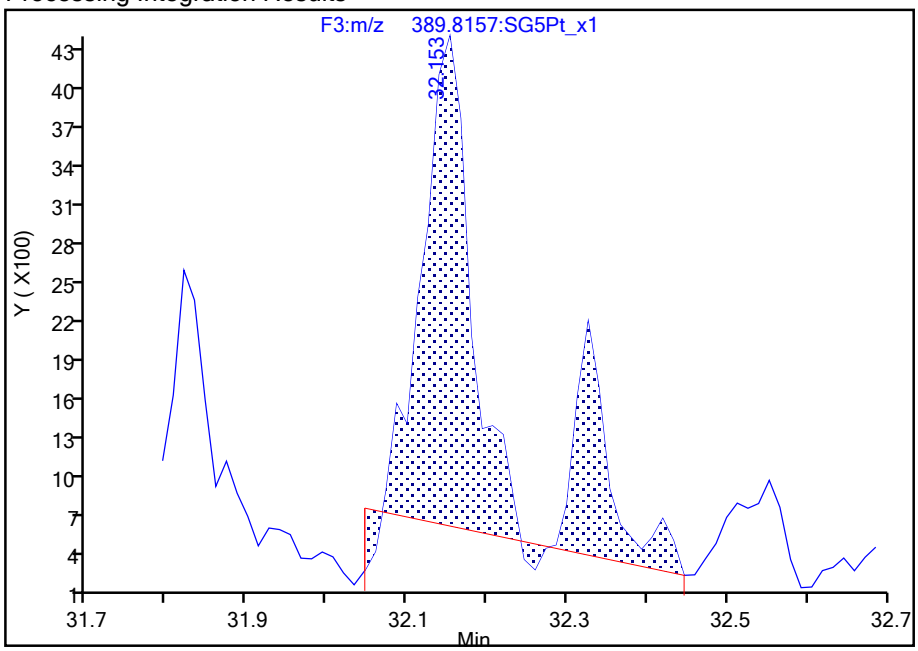

Manual Integration Results

RT: 32.15
Area: 15649
Amount: 0.107823
Amount Units: pg/ul

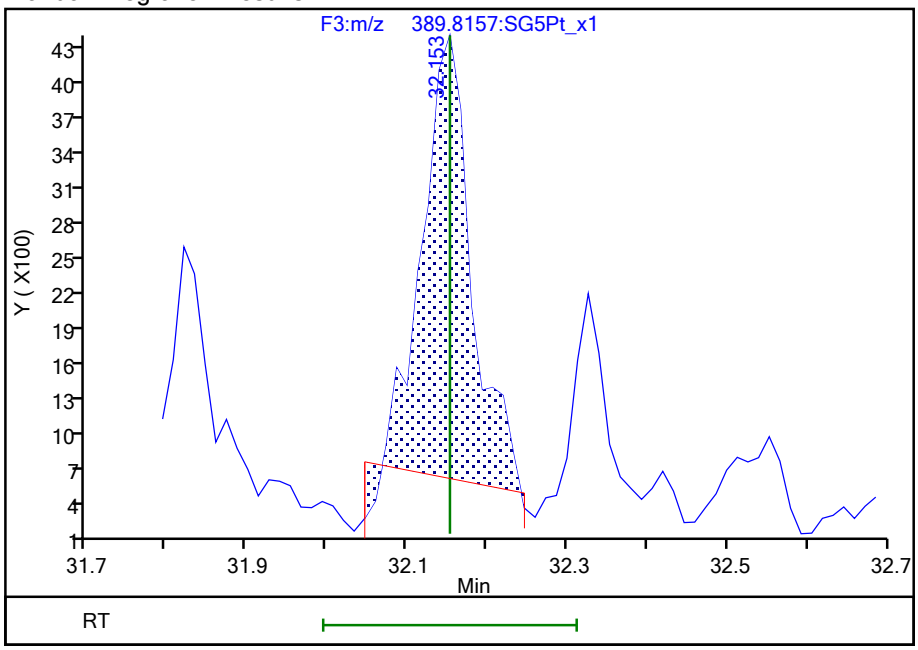

Reviewer: dadunj, 18-Aug-2021 11:36:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d				
Injection Date:	15-Aug-2021 17:27:12	Instrument ID:	10D5		
Lims ID:	320-76769-A-19-A	Lab Sample ID:	320-76769-19		
Client ID:	11215702-072221-SS-SJSB074 (12-14)				
Operator ID:	DB	ALS Bottle#:	62	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 2

Processing Integration Results

RT: 34.88
Area: 6729
Amount: 0.042666
Amount Units: pg/ul

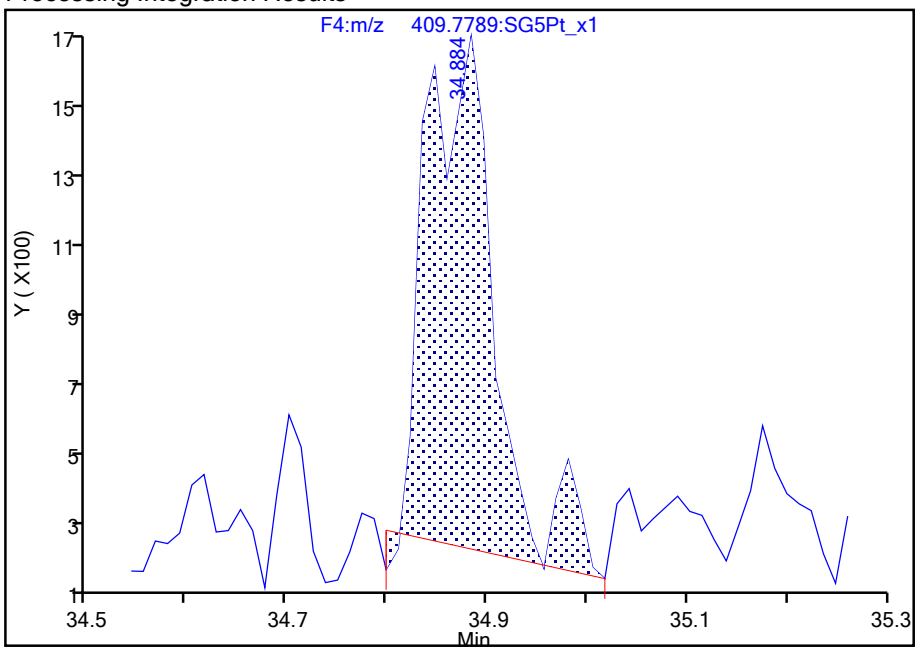

Manual Integration Results

RT: 34.88
Area: 6225
Amount: 0.041103
Amount Units: pg/ul

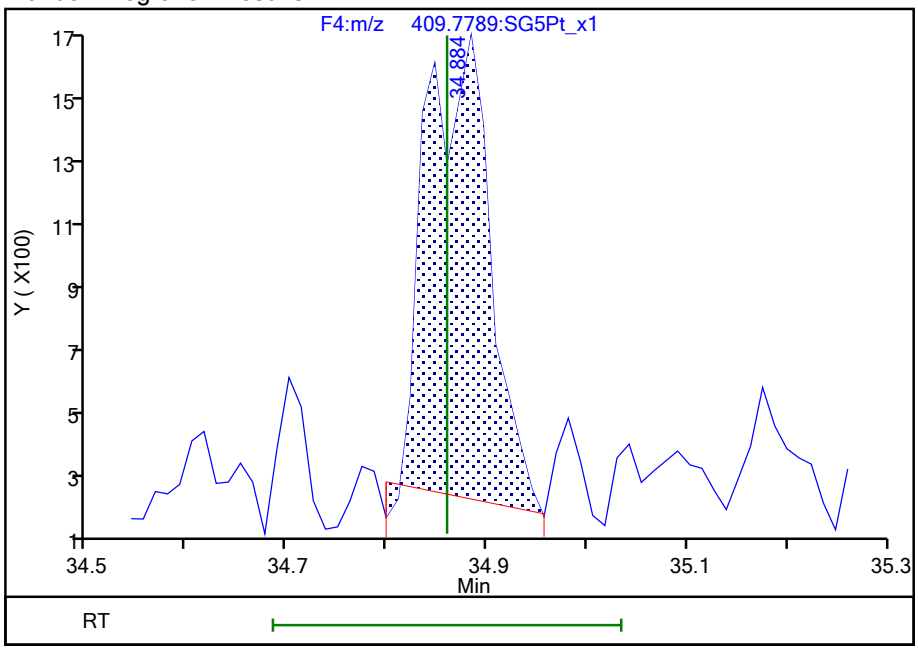

Reviewer: dadunj, 18-Aug-2021 11:36:24

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d				
Injection Date:	15-Aug-2021 17:27:12	Instrument ID:	10D5		
Lims ID:	320-76769-A-19-A	Lab Sample ID:	320-76769-19		
Client ID:	11215702-072221-SS-SJSB074 (12-14)				
Operator ID:	DB	ALS Bottle#:	62	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.01
Area: 16879
Amount: 0.149970
Amount Units: pg/ul

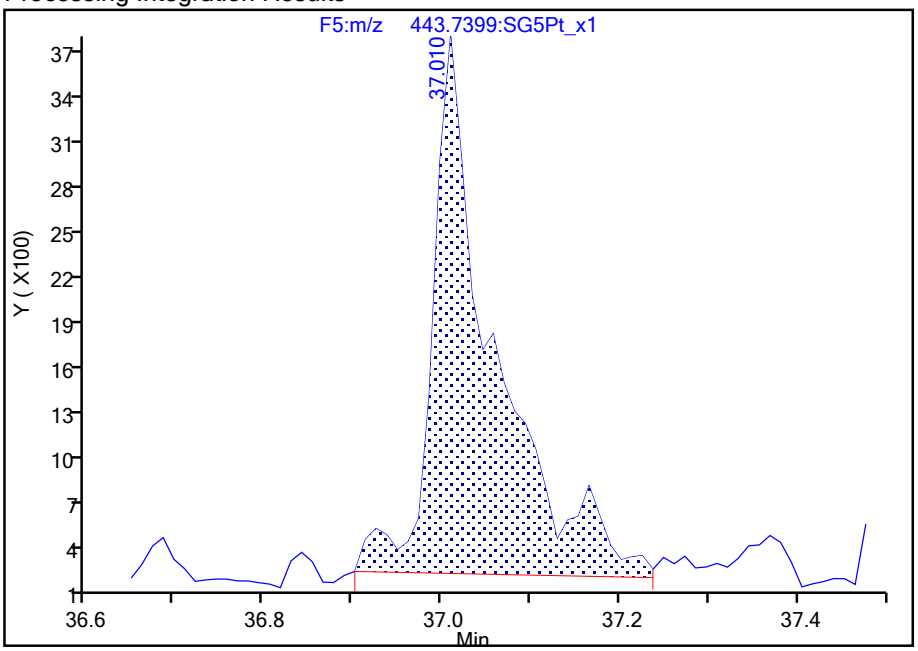

Manual Integration Results

RT: 37.01
Area: 14668
Amount: 0.125941
Amount Units: pg/ul

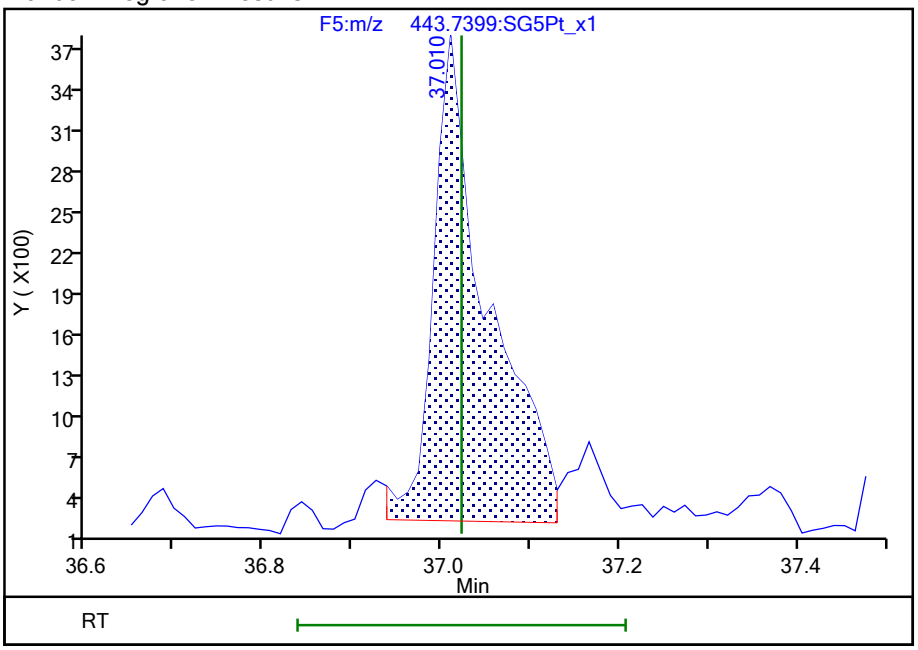

Reviewer: dadunj, 18-Aug-2021 11:36:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d				
Injection Date:	15-Aug-2021 17:27:12	Instrument ID:	10D5		
Lims ID:	320-76769-A-19-A	Lab Sample ID:	320-76769-19		
Client ID:	11215702-072221-SS-SJSB074 (12-14)				
Operator ID:	DB	ALS Bottle#:	62	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 16830
Amount: 0.149970
Amount Units: pg/ul

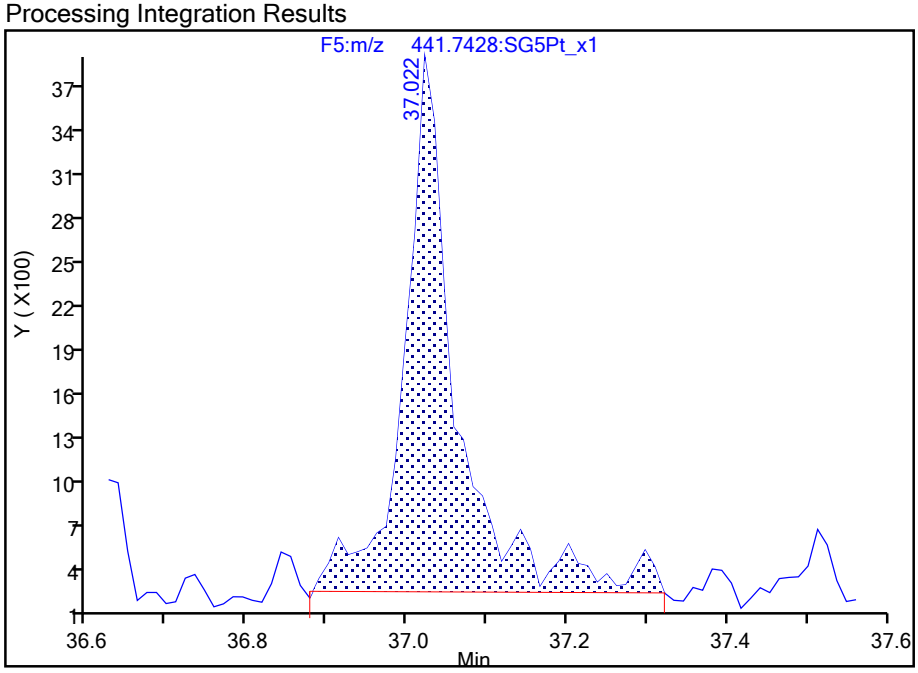

Manual Integration Results

RT: 37.02
Area: 13640
Amount: 0.125941
Amount Units: pg/ul

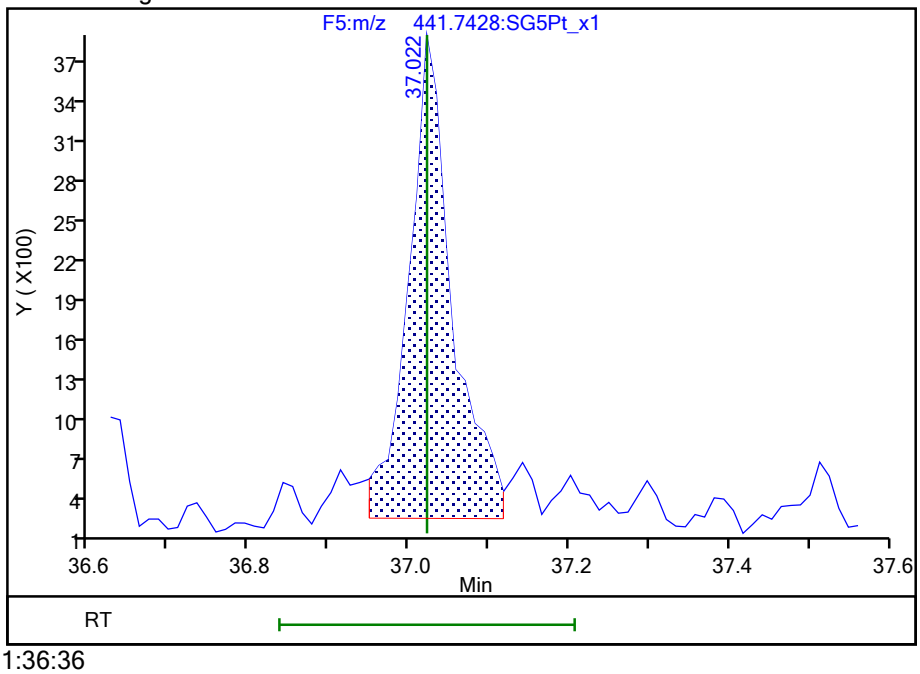

Reviewer: dadunj, 18-Aug-2021 11:36:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Injection Date:	15-Aug-2021 17:27:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Worklist#:	516848	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

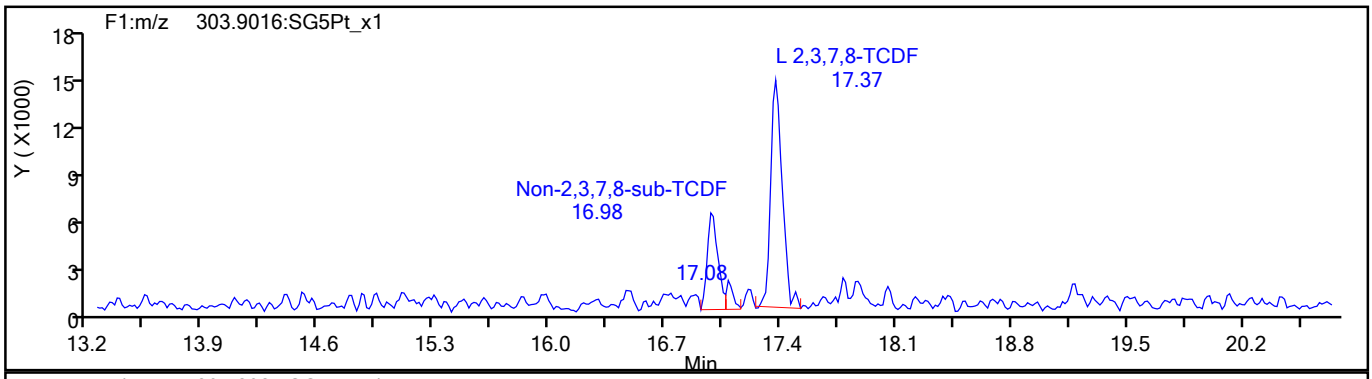

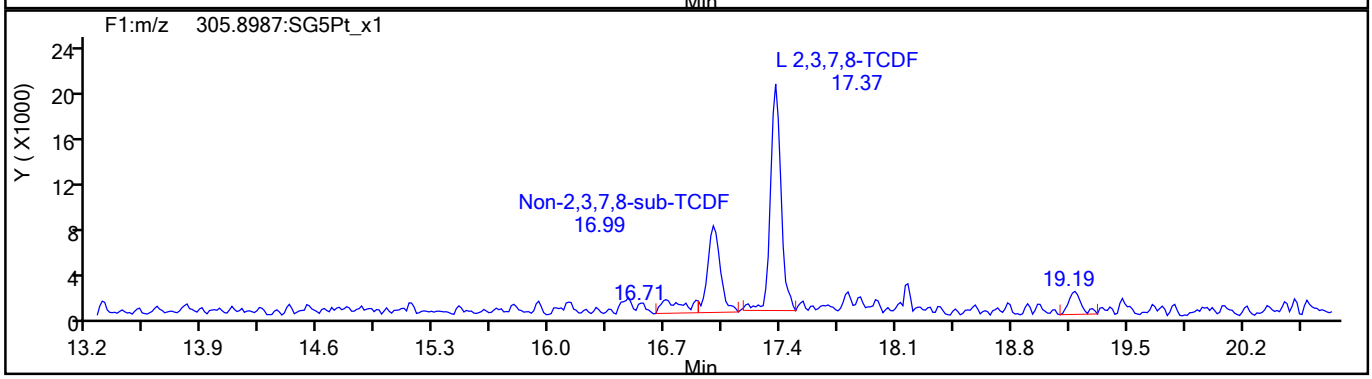

TCDF Standards

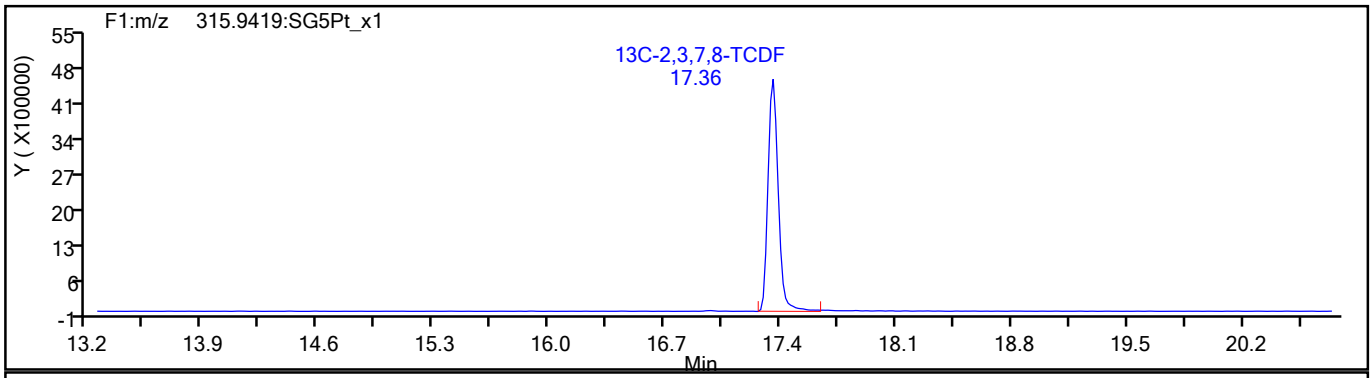

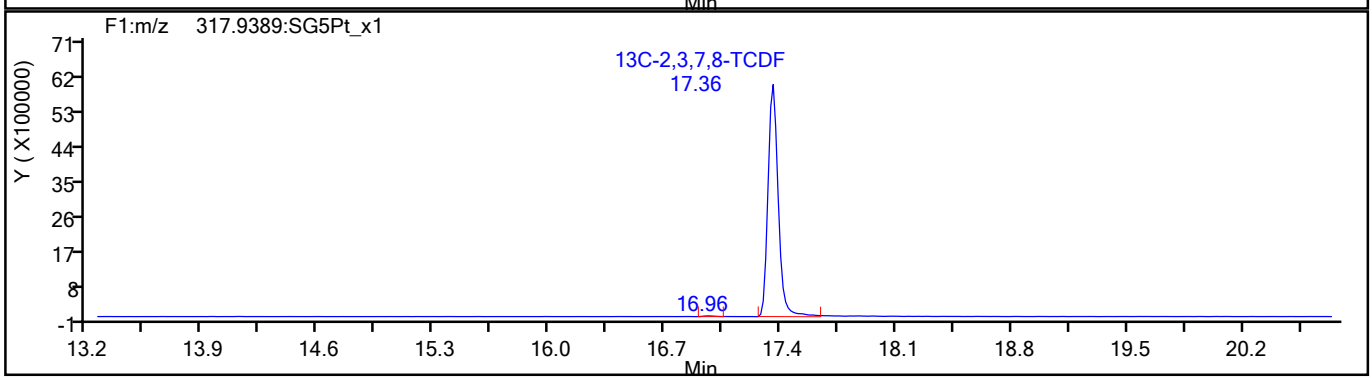

775347

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Injection Date:	15-Aug-2021 17:27:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Worklist#:	516848	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

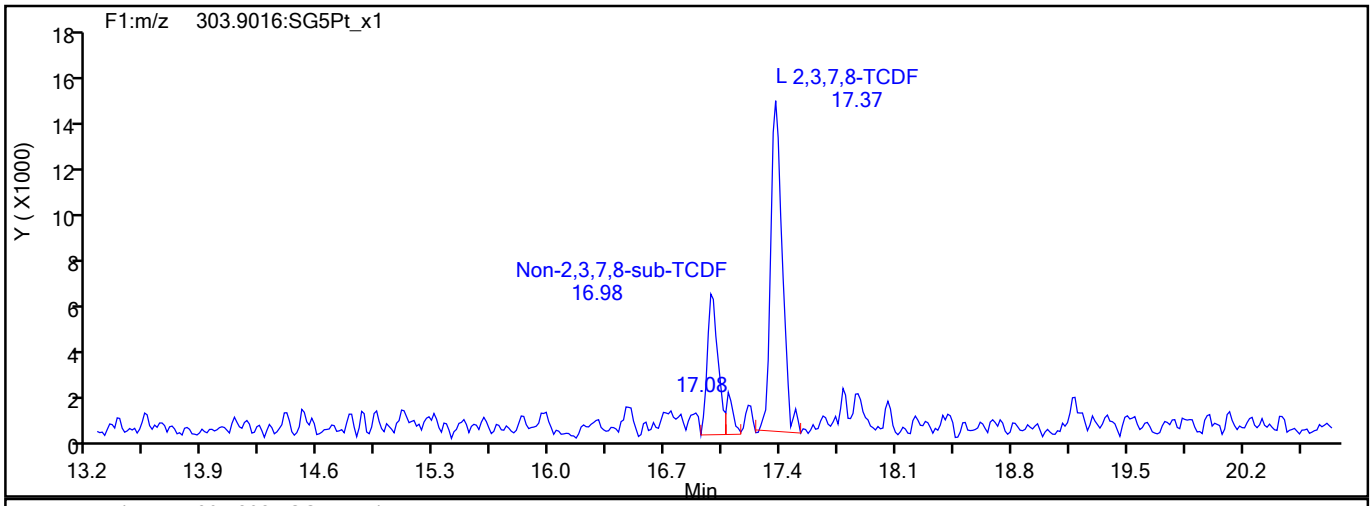

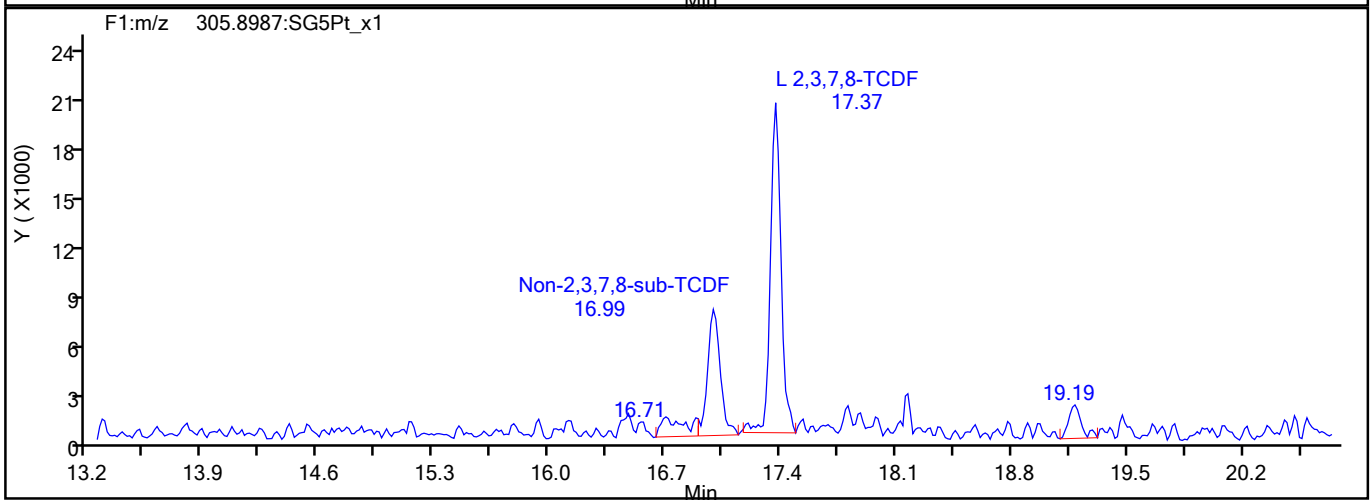

TCDF Interference Mass

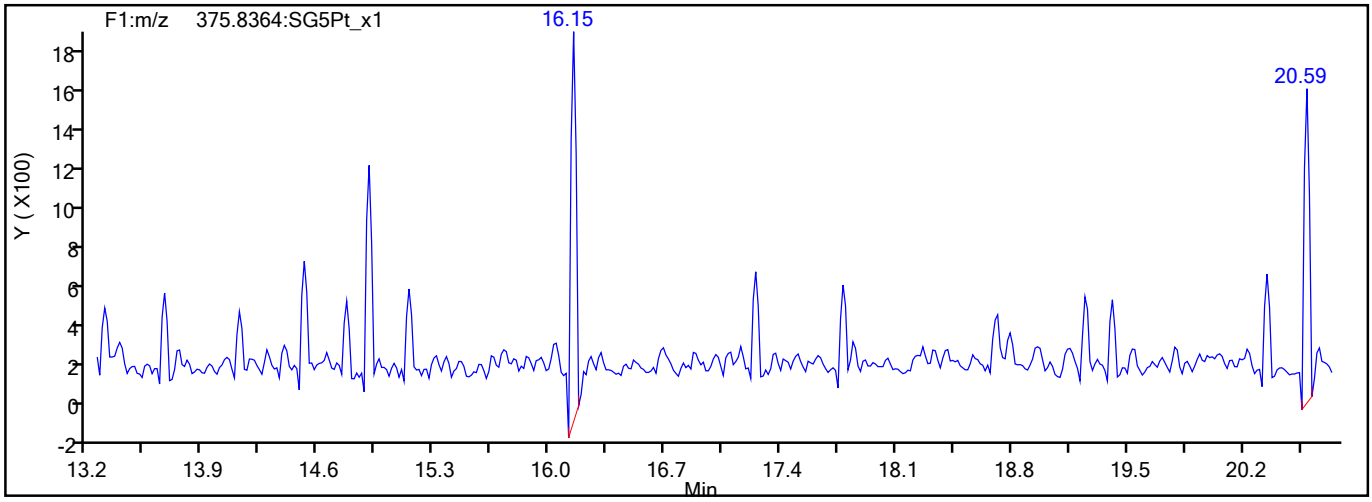

775348

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Injection Date:	15-Aug-2021 17:27:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Worklist#:	516848	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

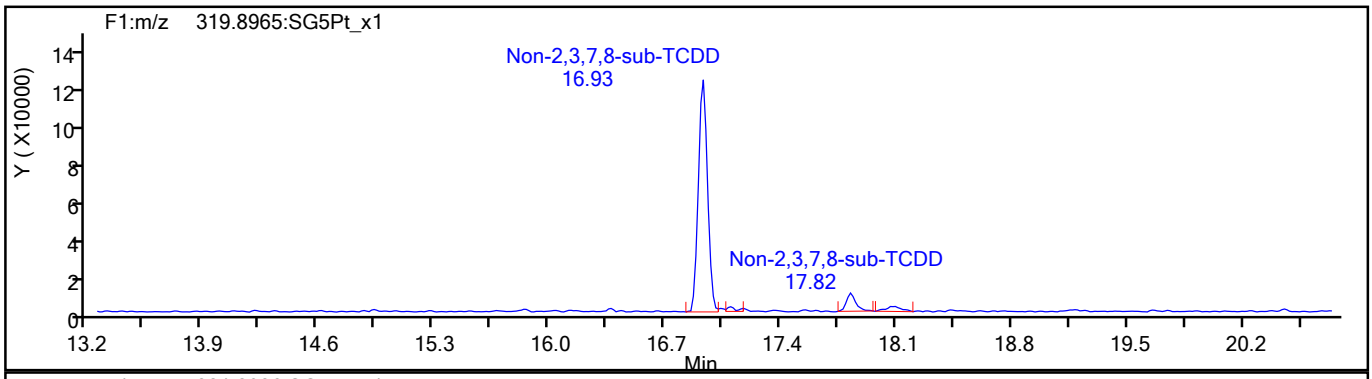

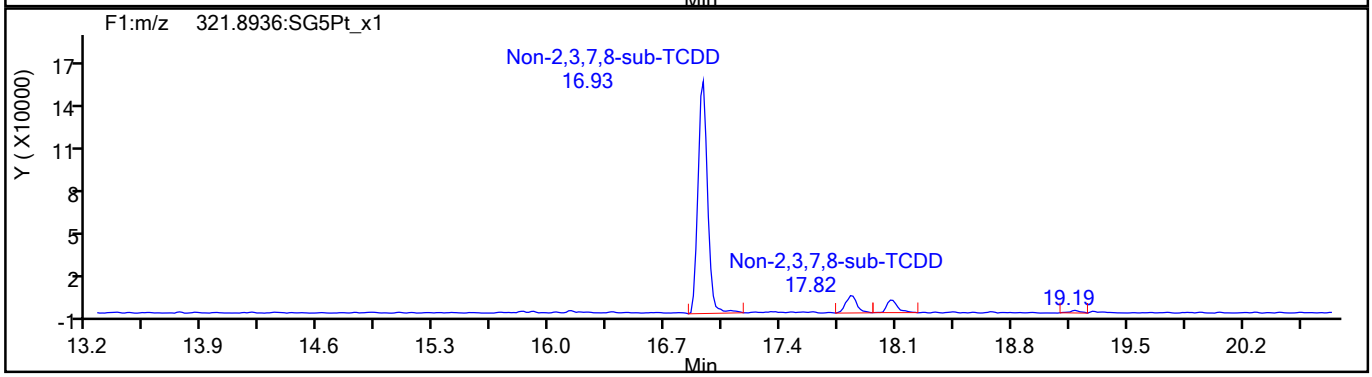

TCDD Standards

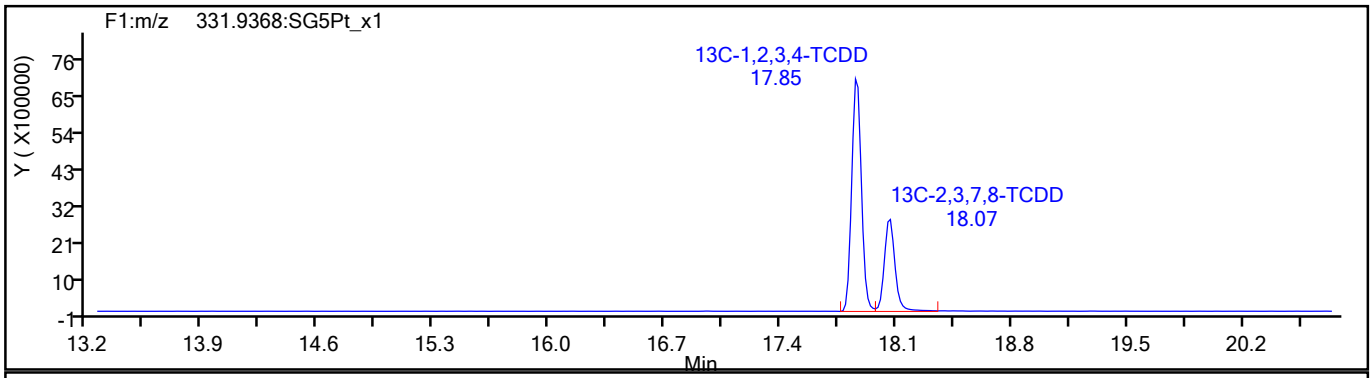

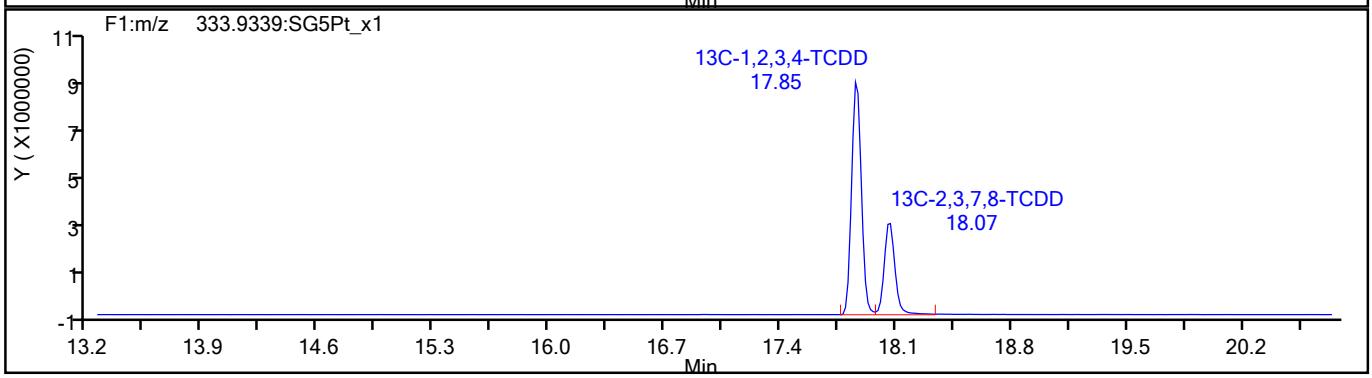

775349

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Injection Date:	15-Aug-2021 17:27:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Worklist#:	516848	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

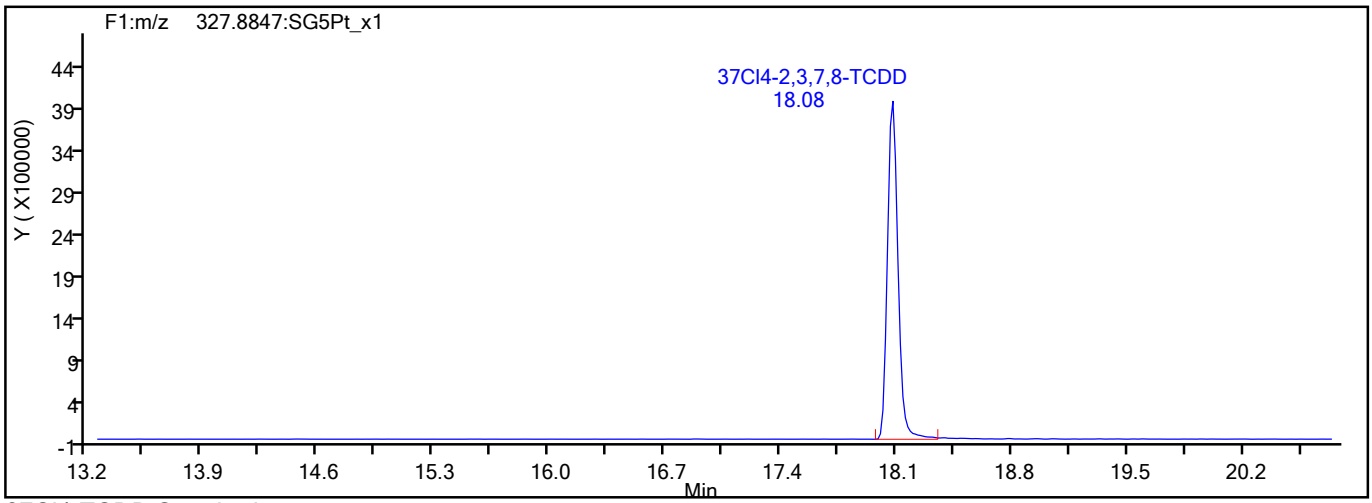

37Cl4-TCDD Standards

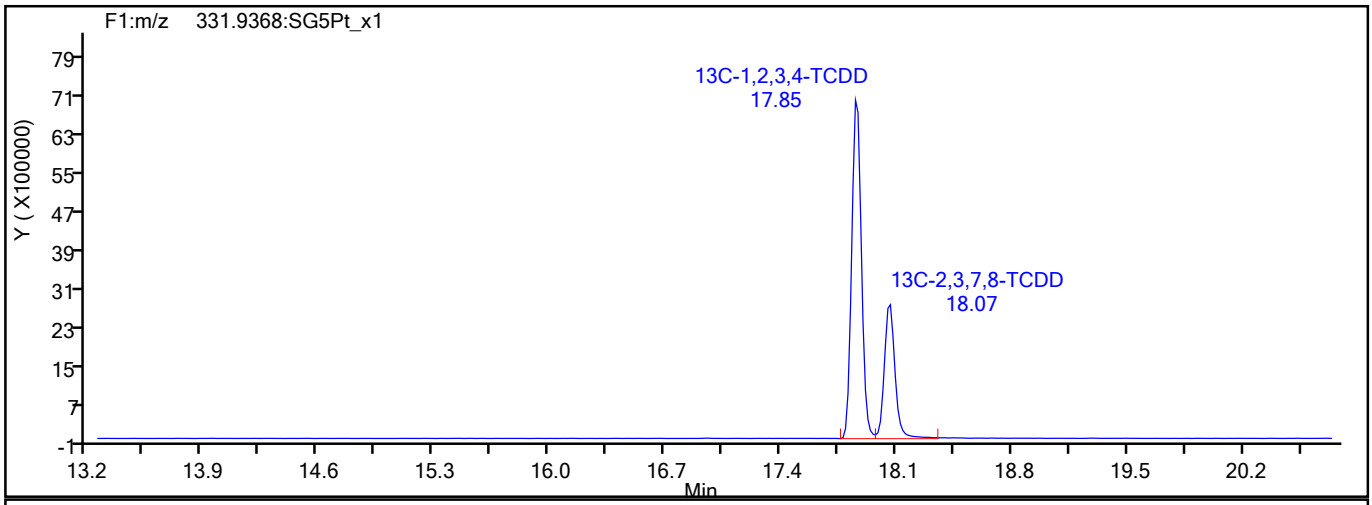

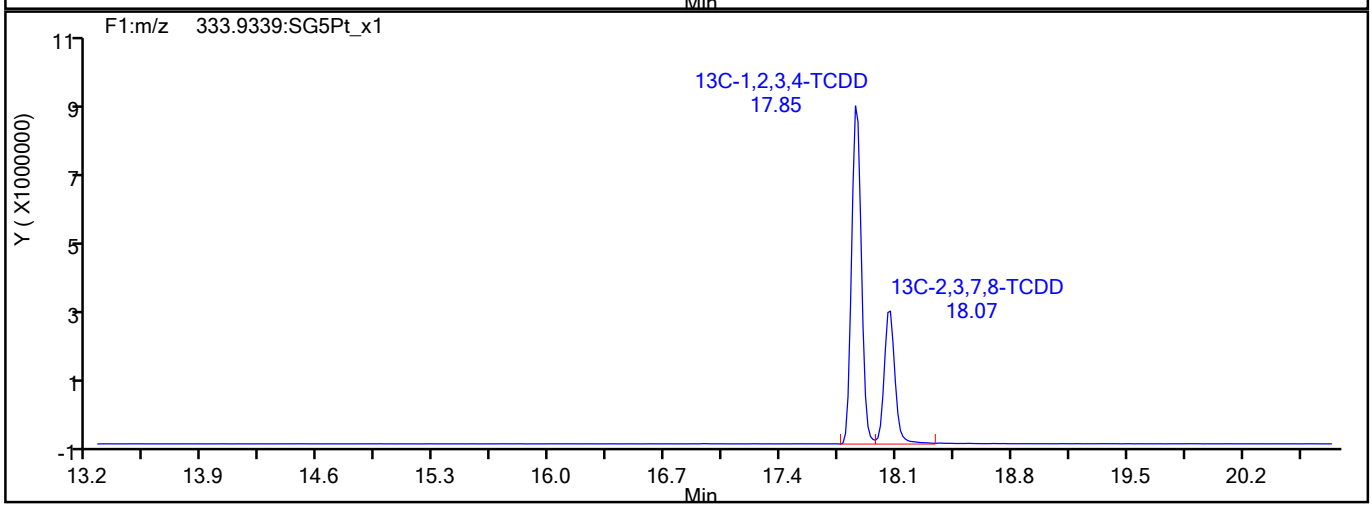

775350

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Injection Date:	15-Aug-2021 17:27:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Worklist#:	516848	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

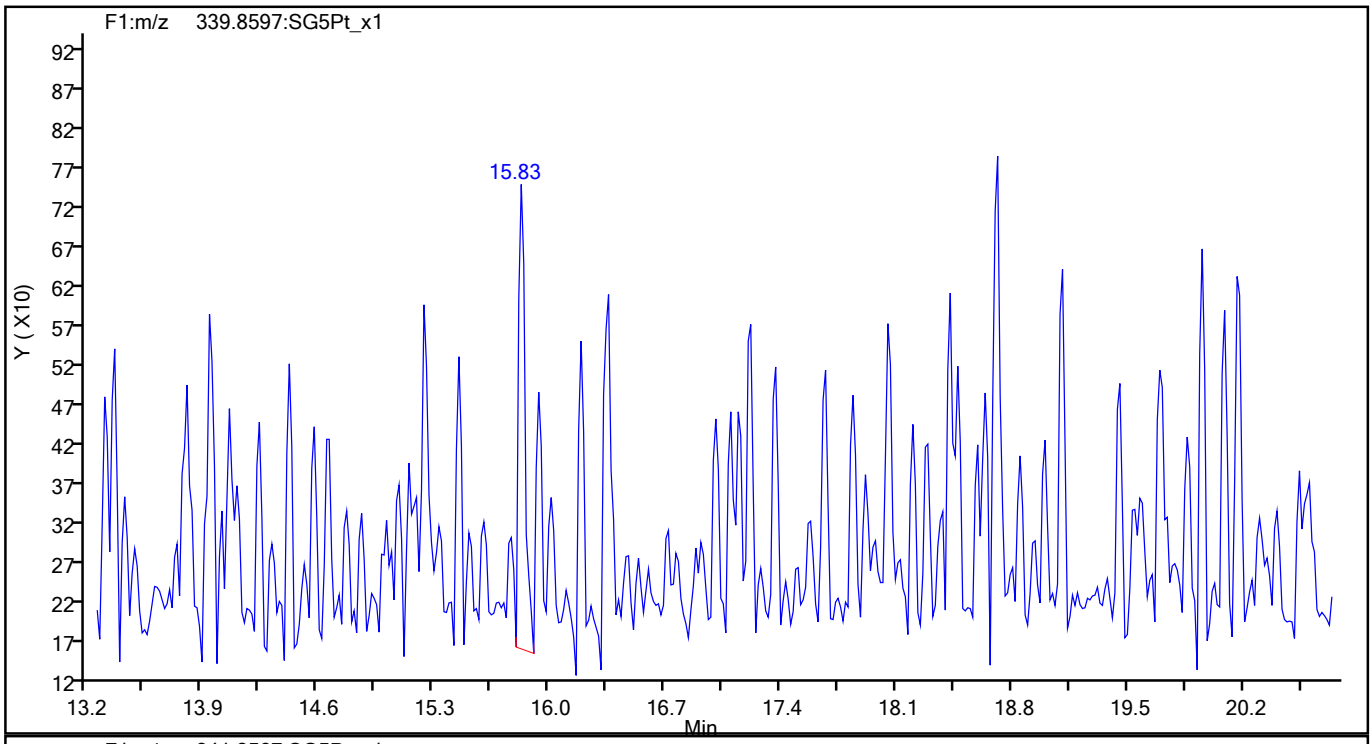

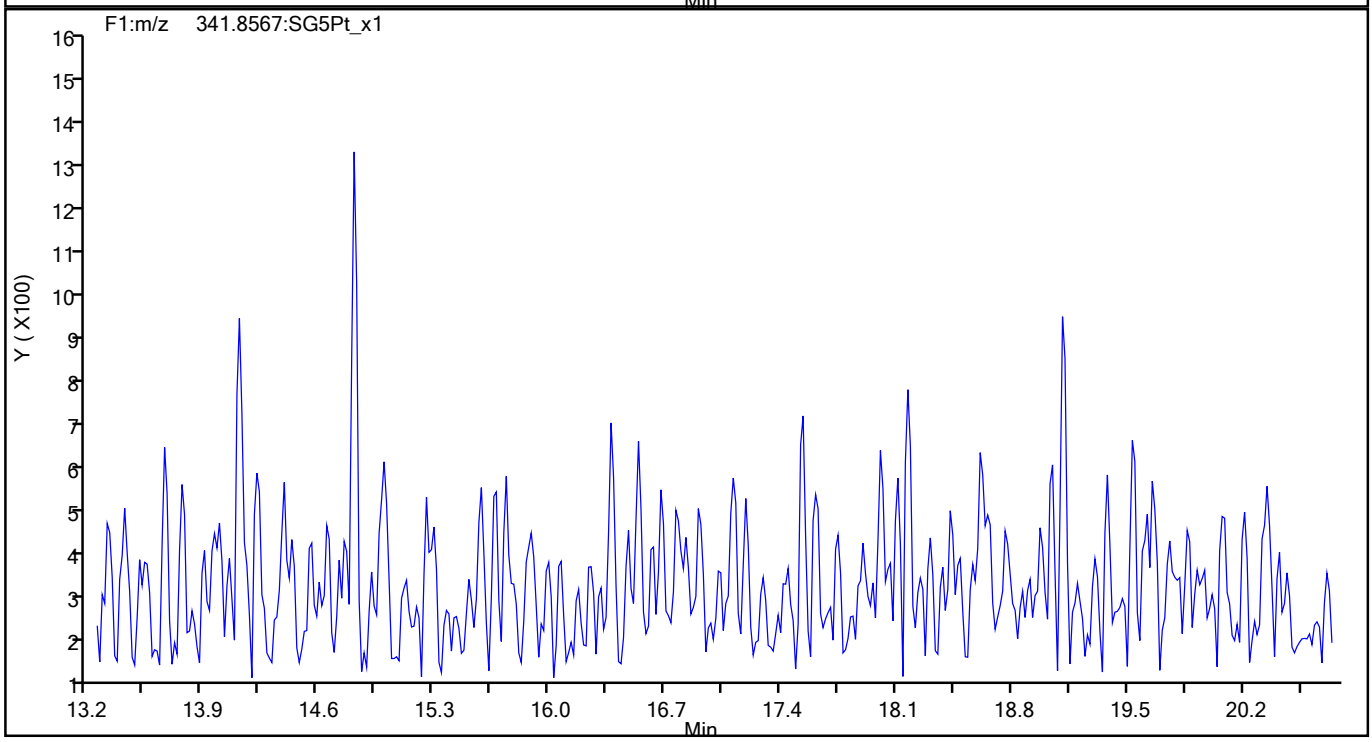

775351

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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Client ID:	11215702-072221-SS-SJSB074 (12-14)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

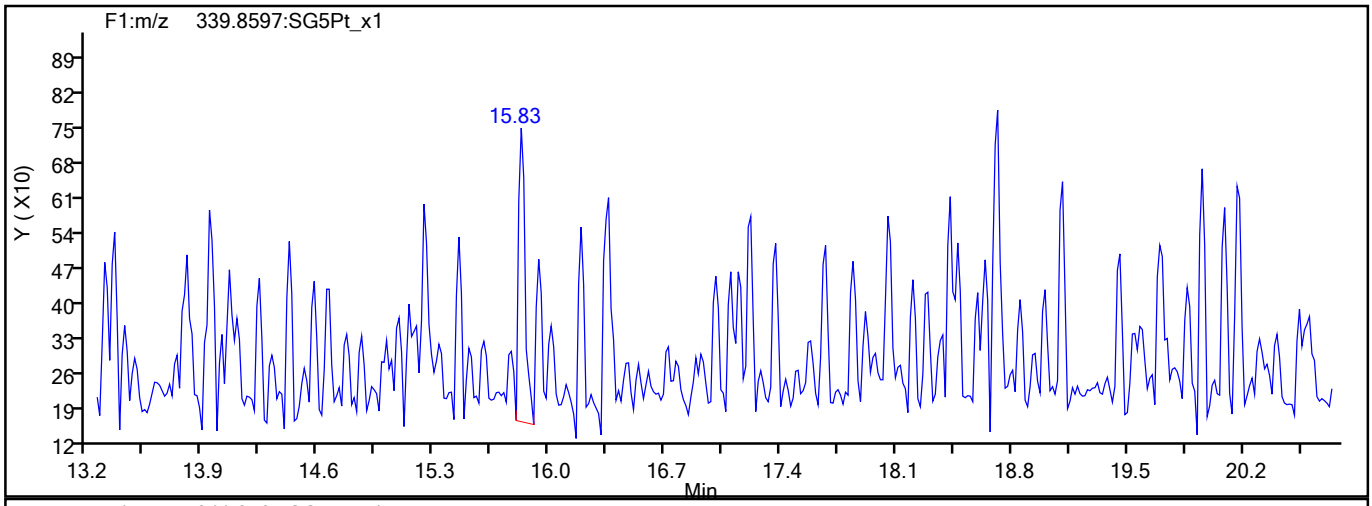

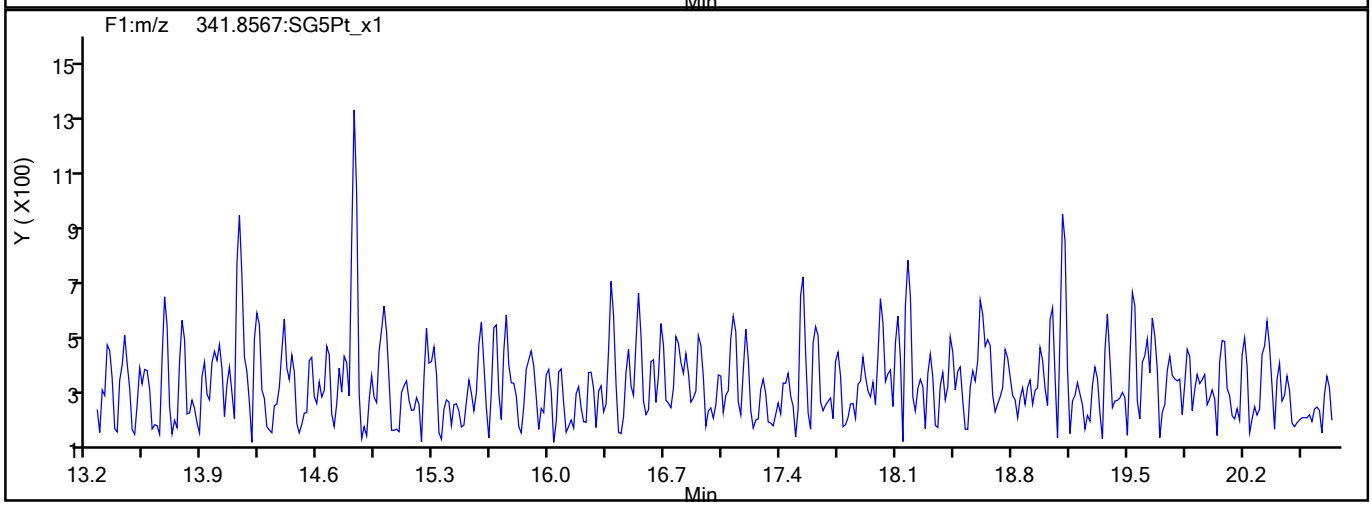

F1 PeCDFs Interference Mass

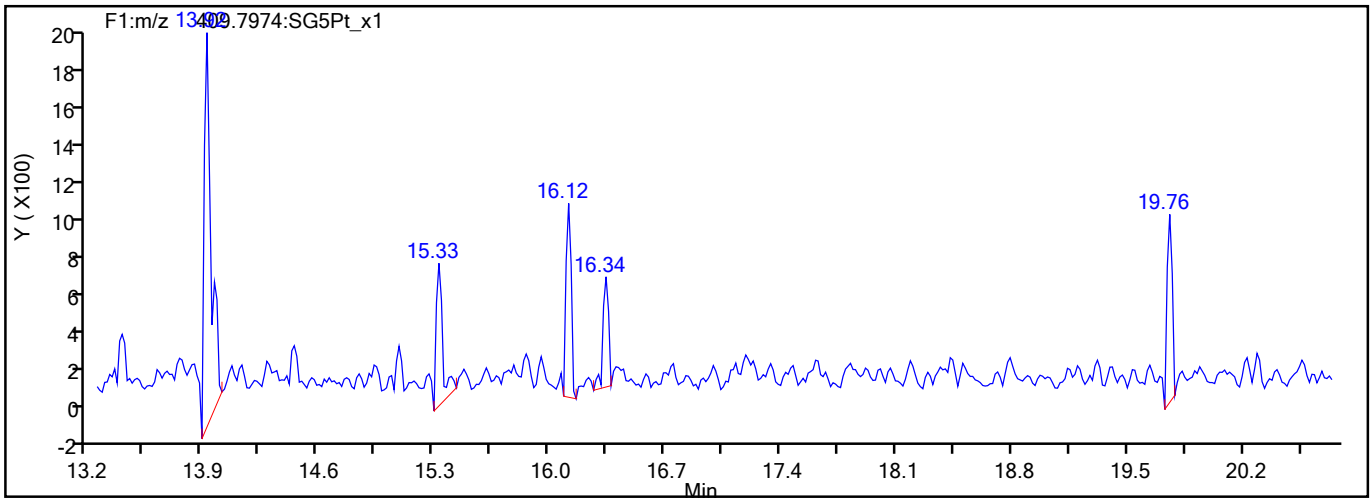

775352

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
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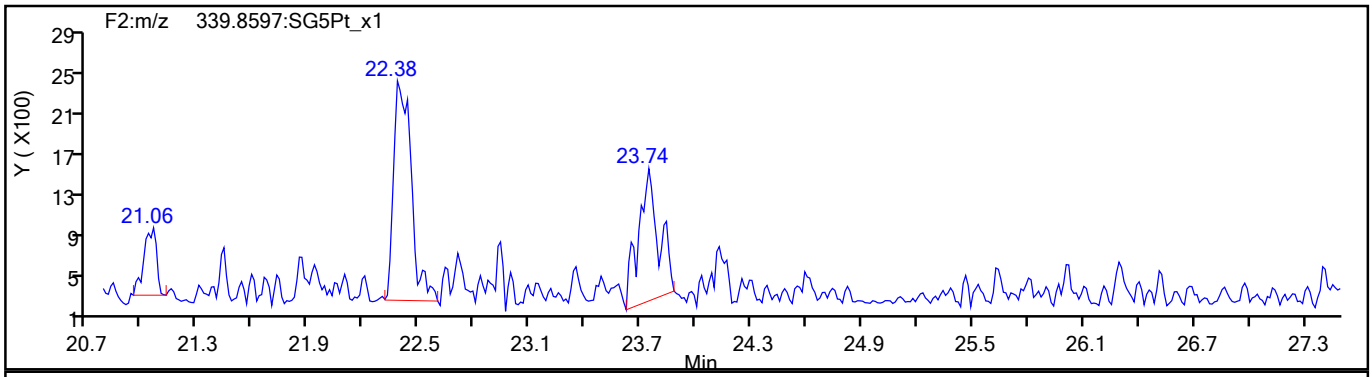

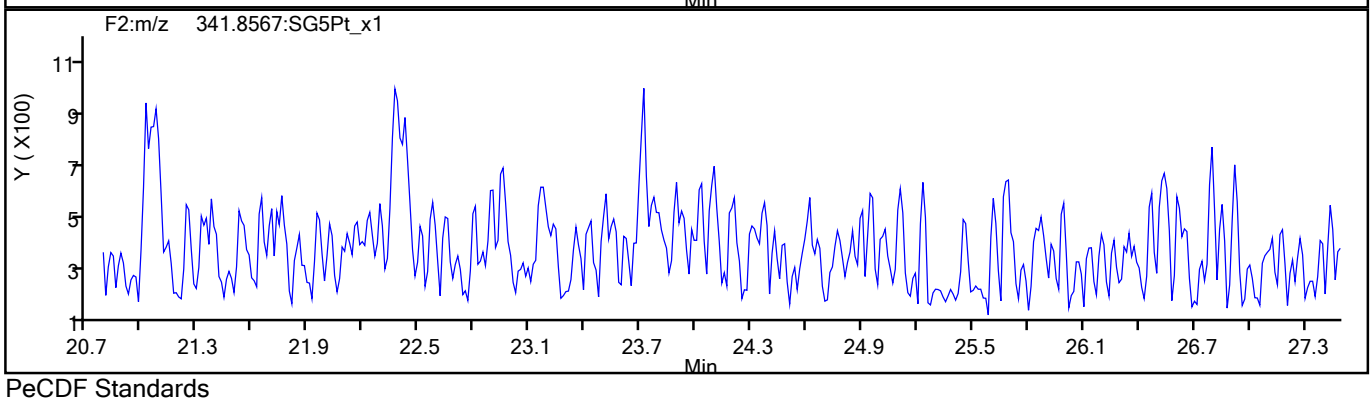

PeCDF Standards

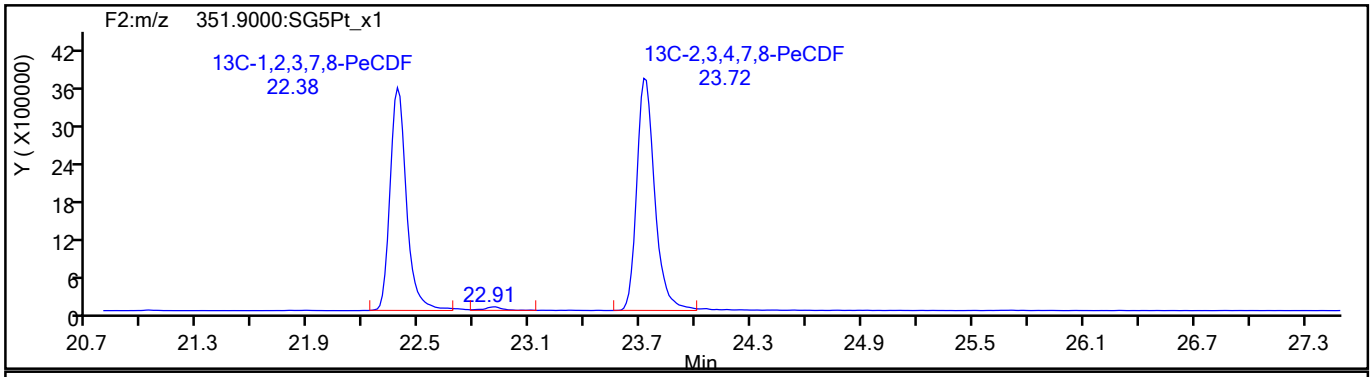

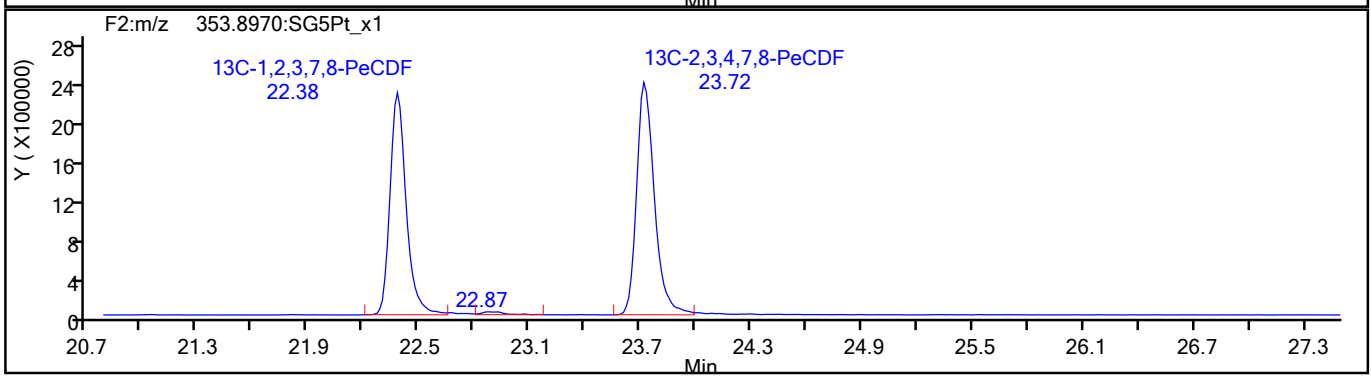

775353

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:	11215702-072221-SS-SJSB074 (12-14)		
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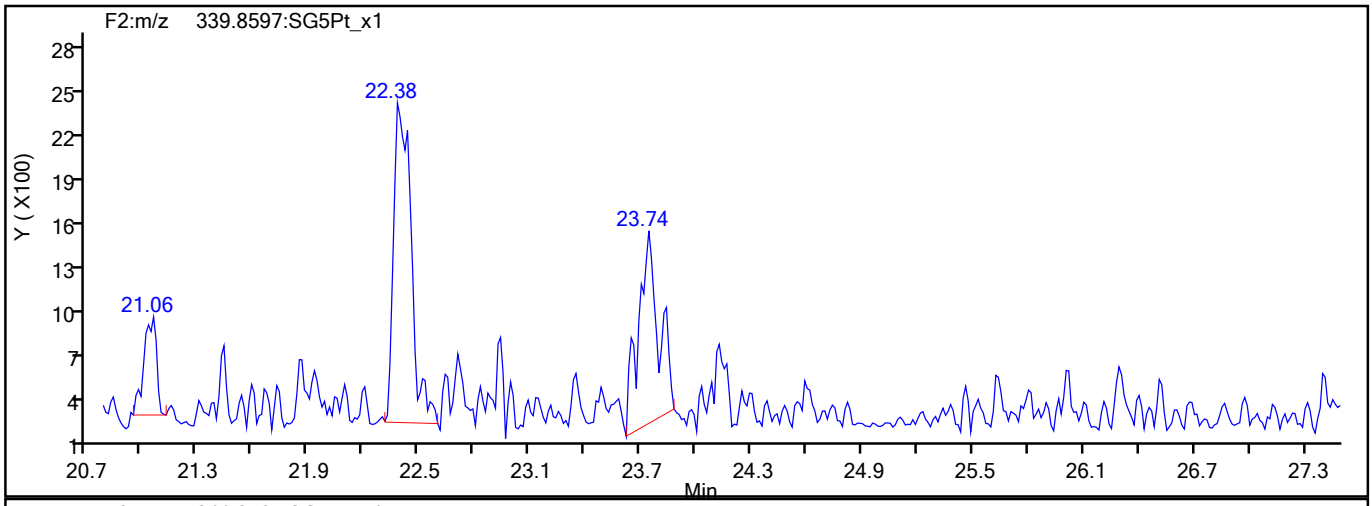

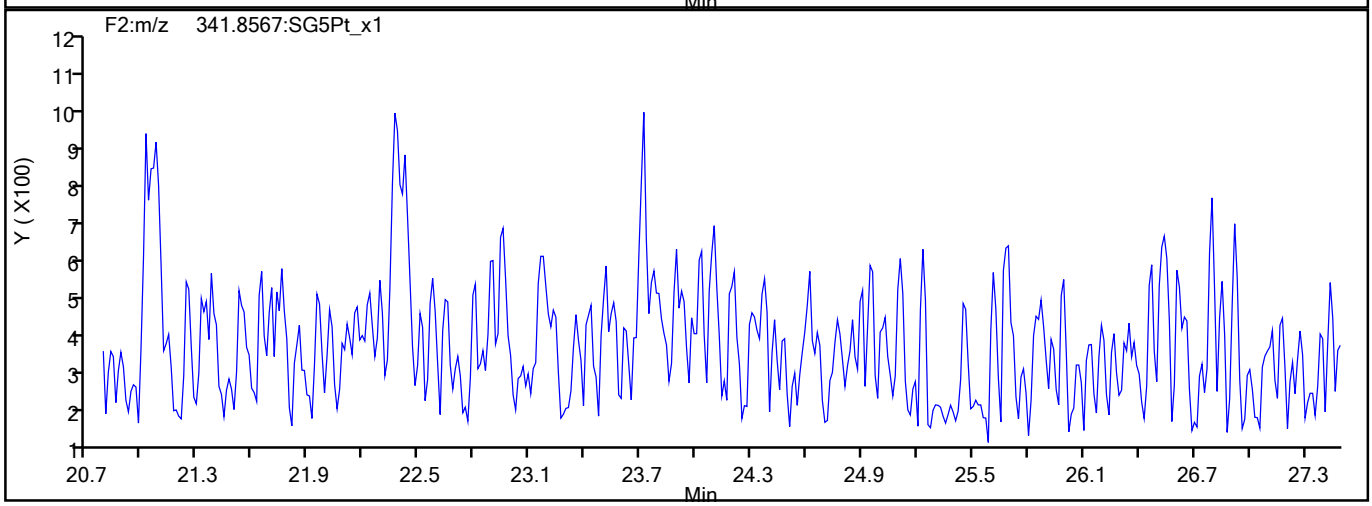

PeCDF Interference Mass

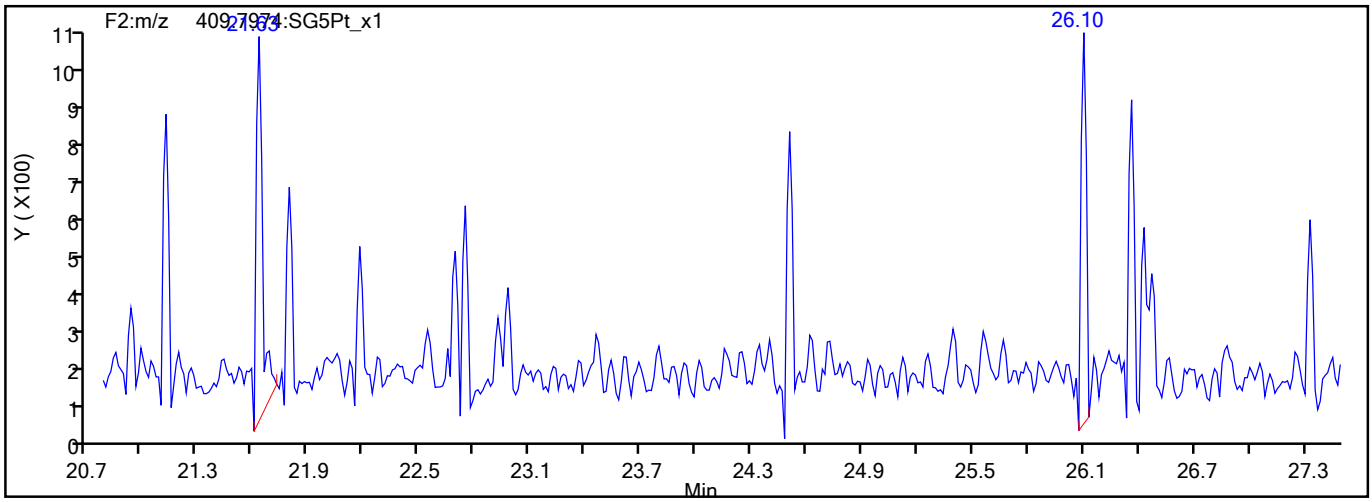

775354

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:	11215702-072221-SS-SJSB074 (12-14)		
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PeCDD

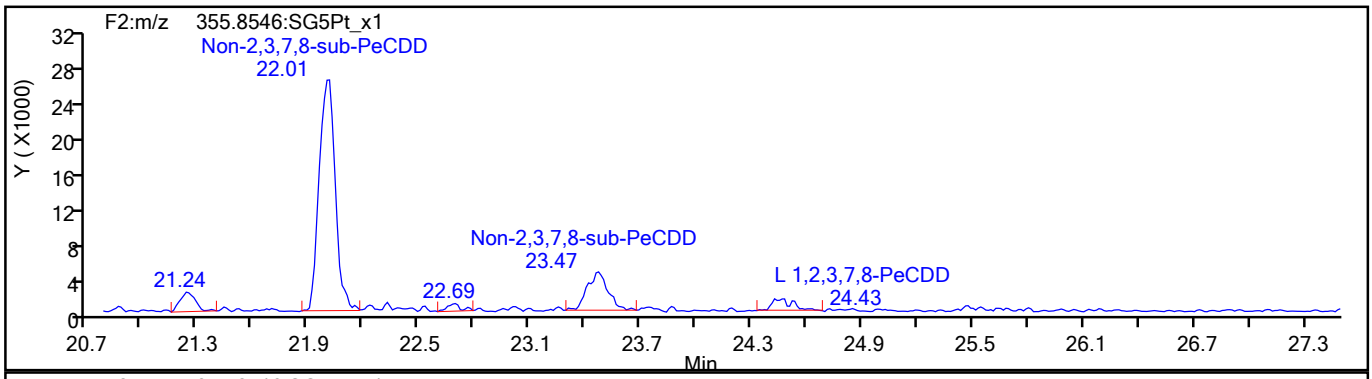

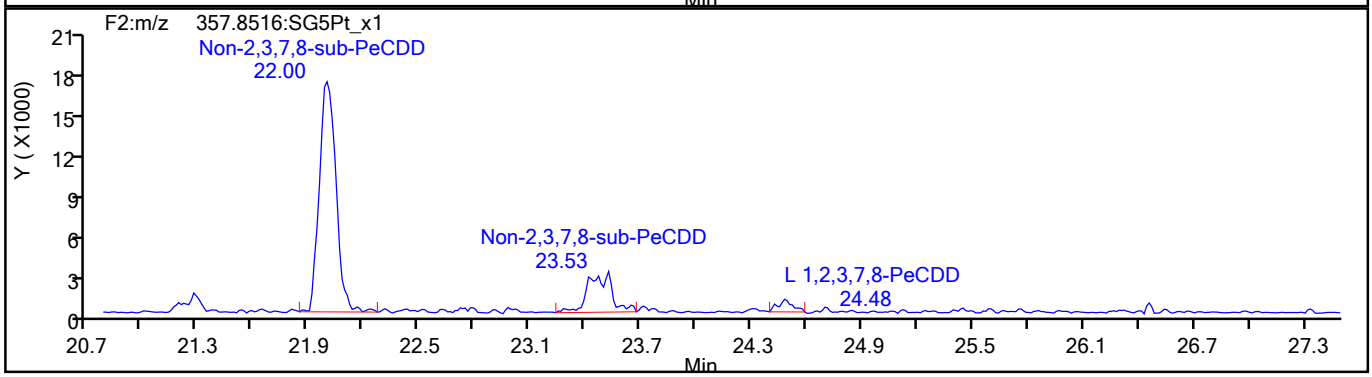

PeCDD Standards

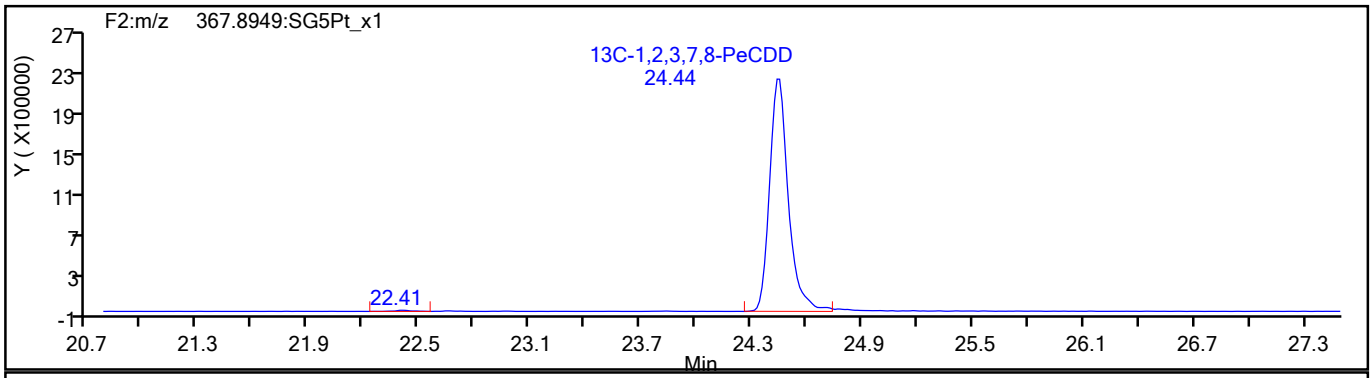

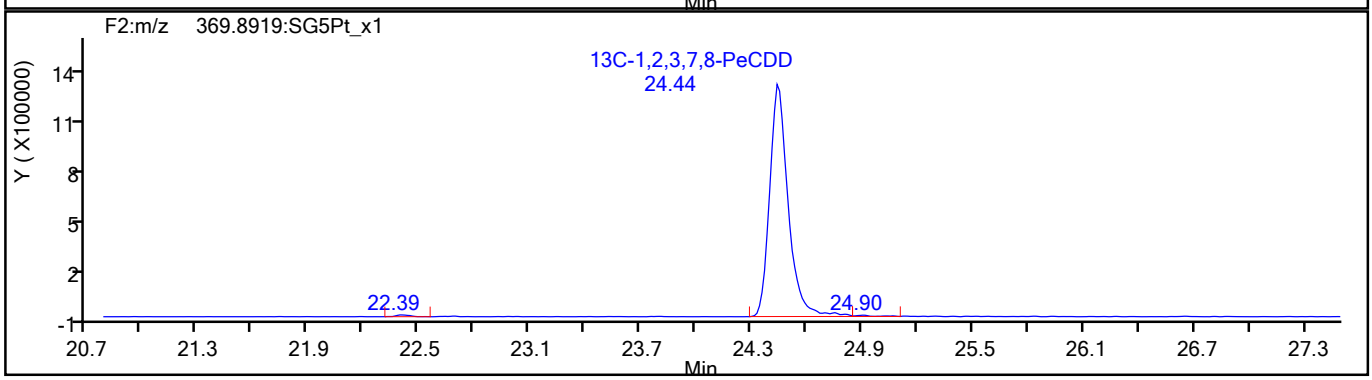

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Eurofins TestAmerica, Sacramento

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HxCDF

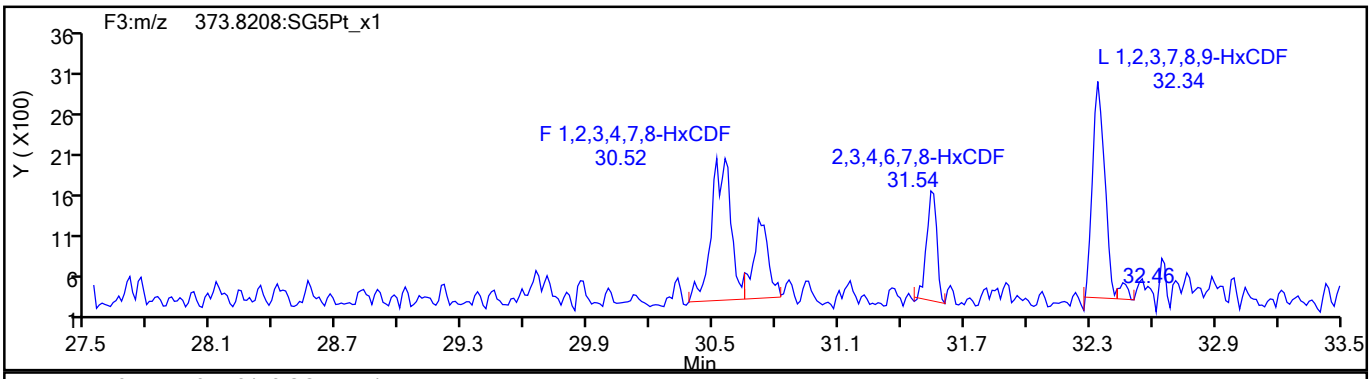

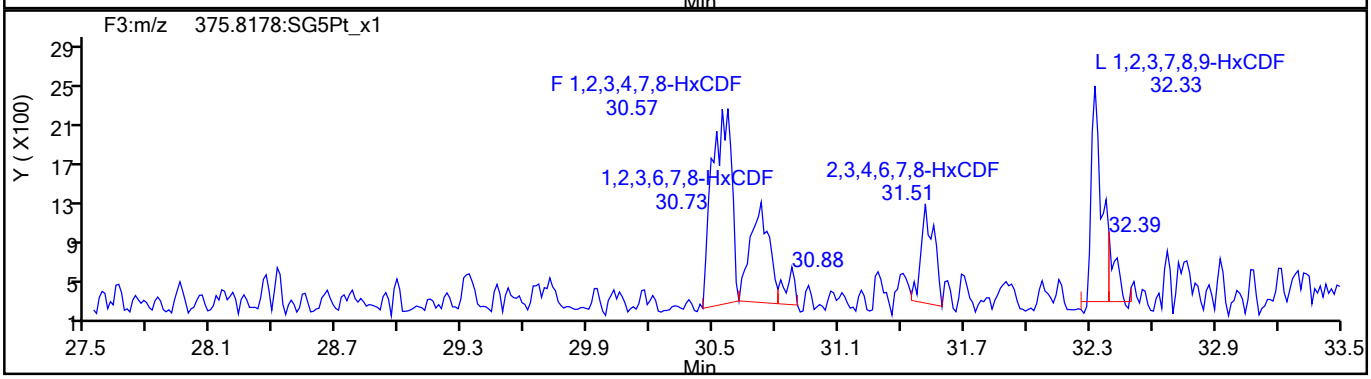

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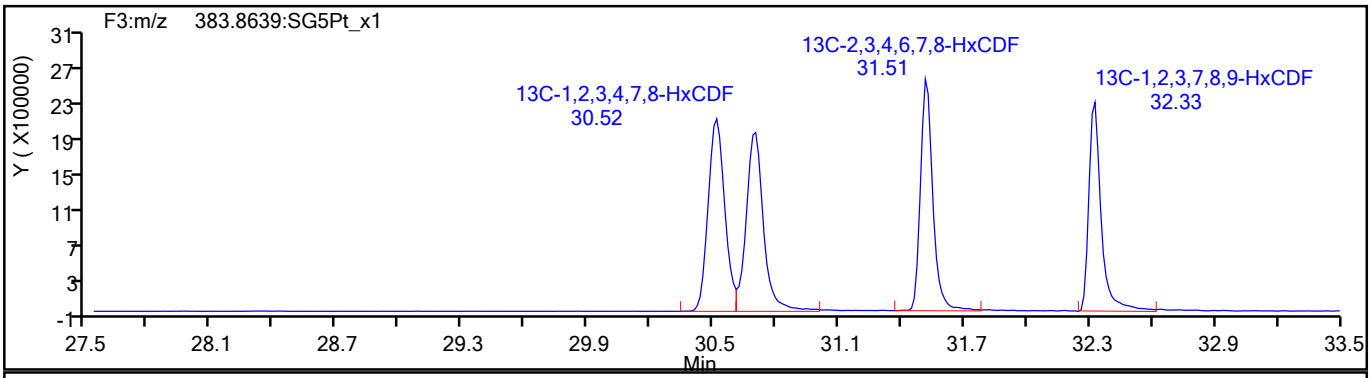

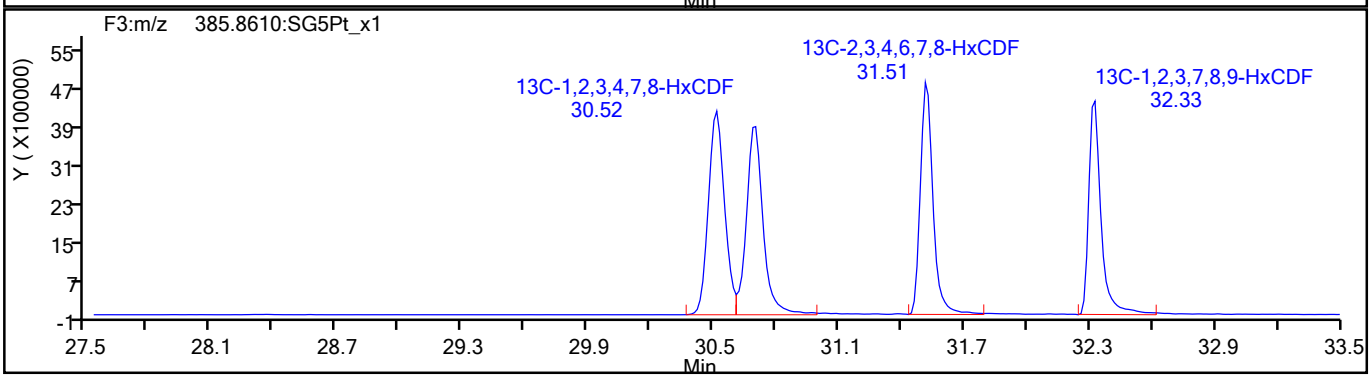

775356

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Eurofins TestAmerica, Sacramento

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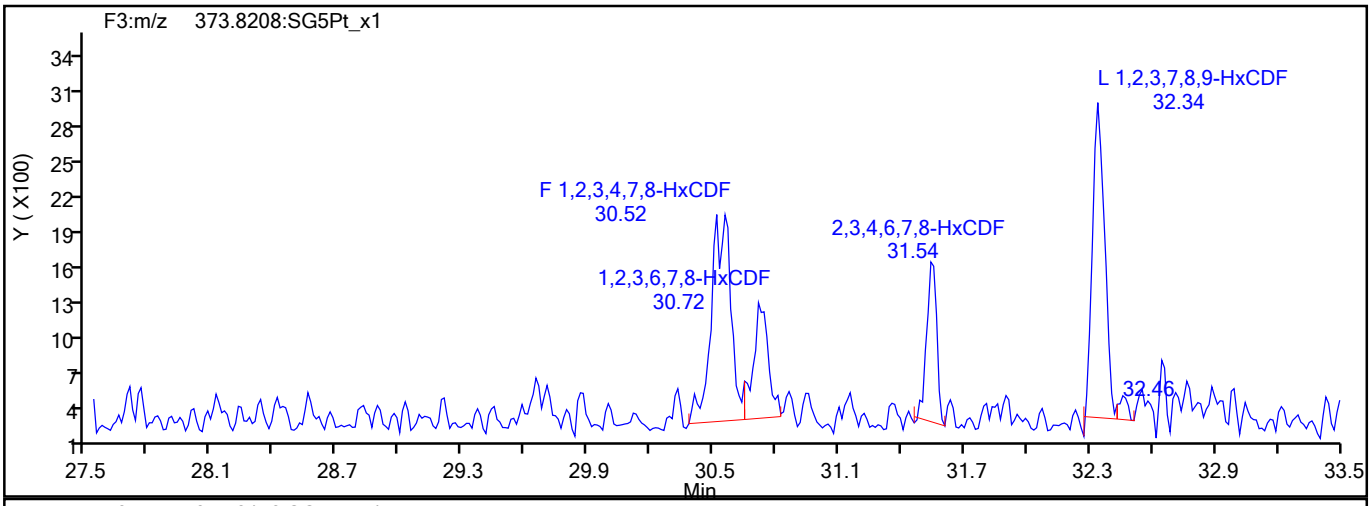

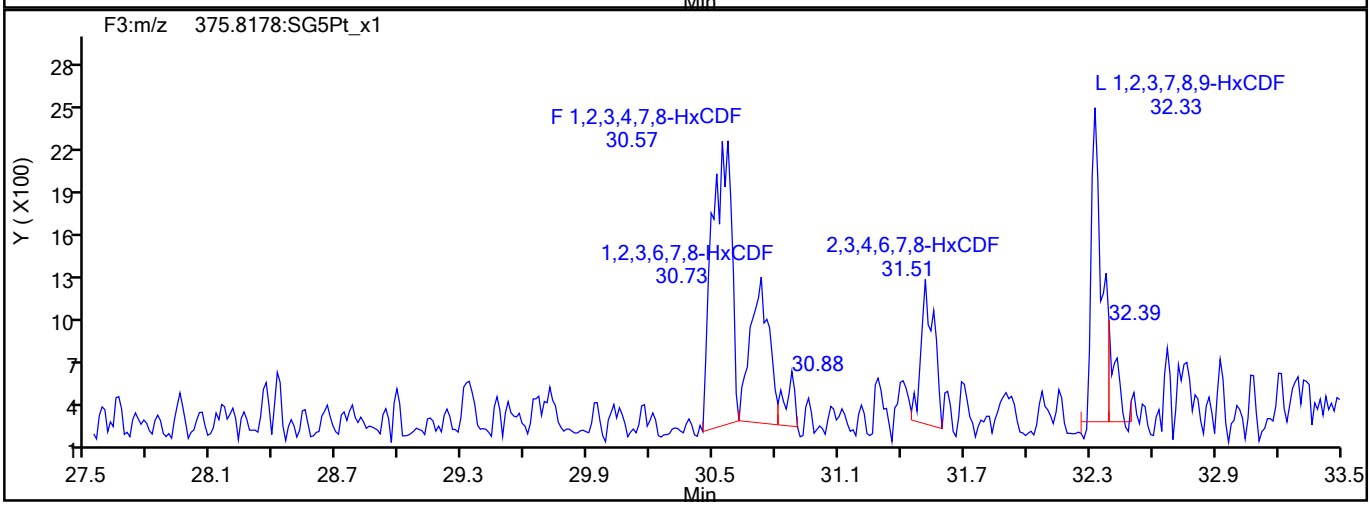

HxCDF Interference Mass

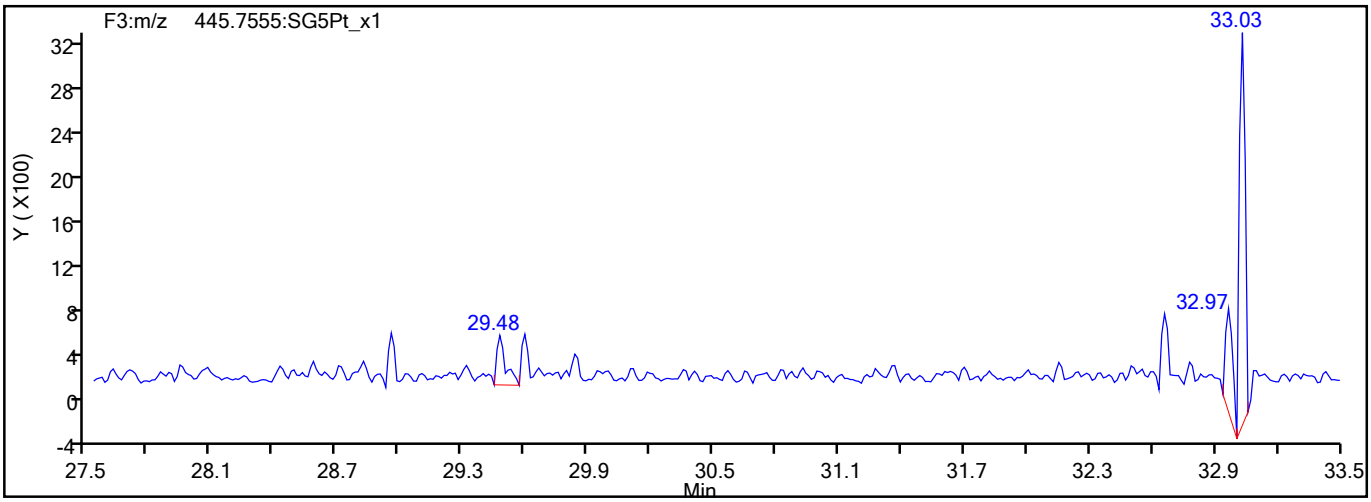

775357

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

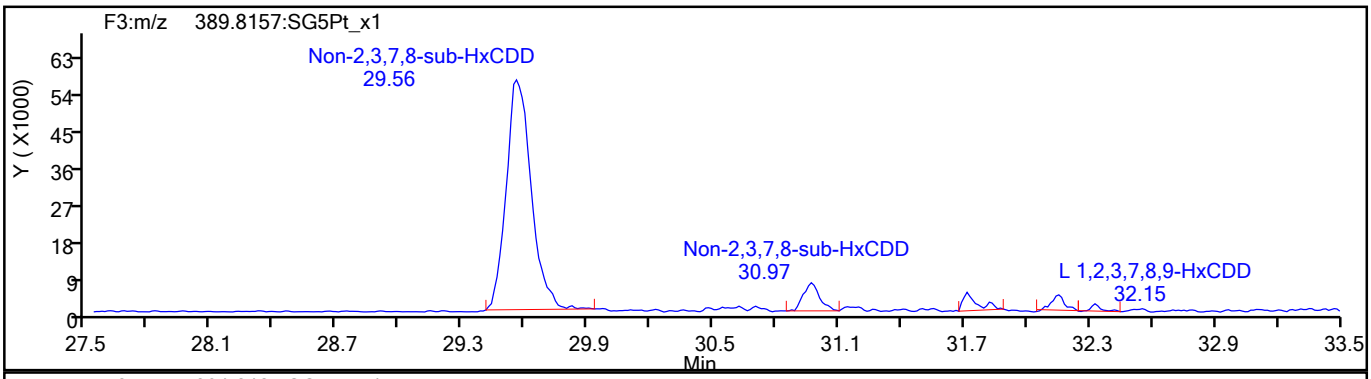

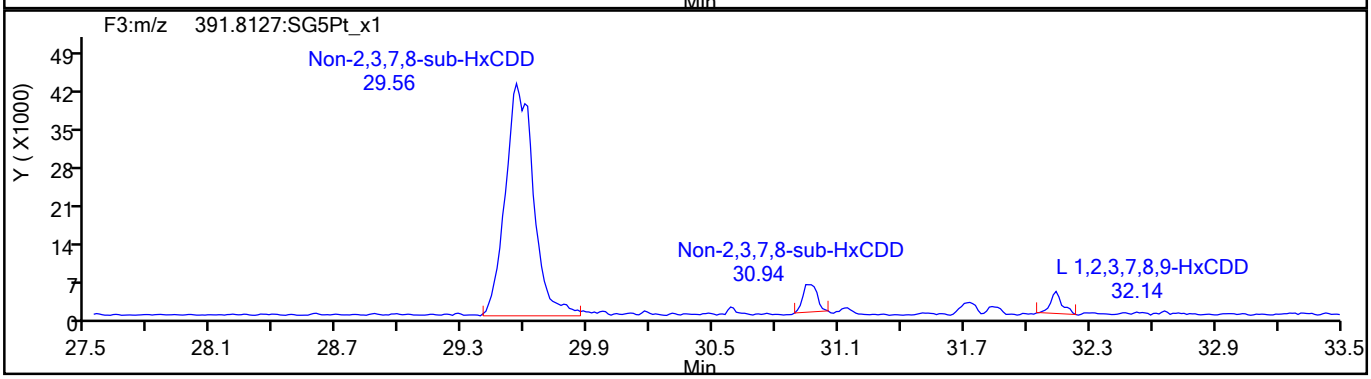

HxCDD Standards

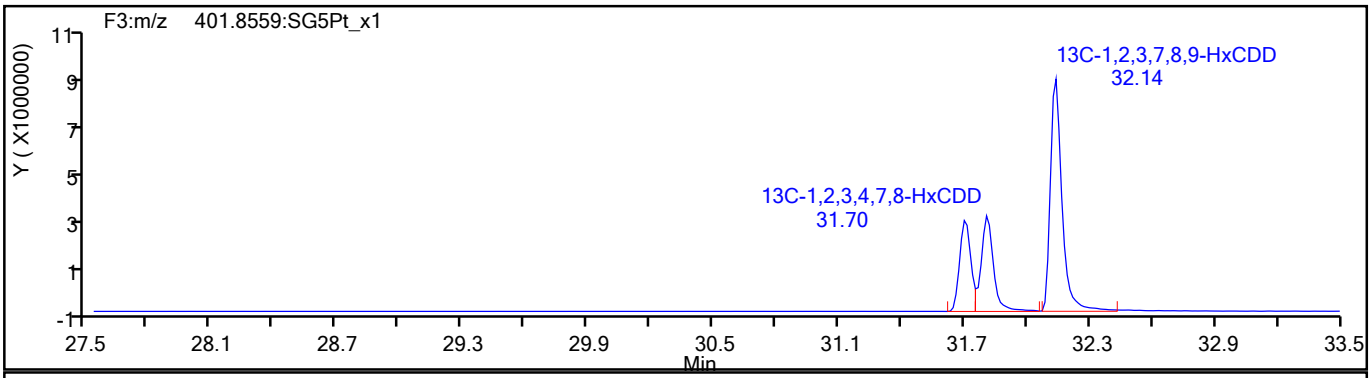

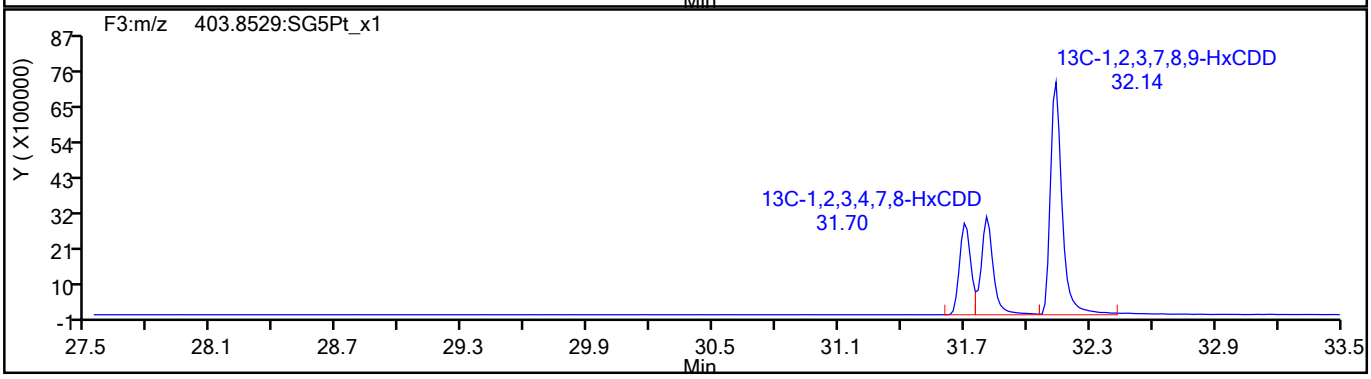

775358

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Eurofins TestAmerica, Sacramento

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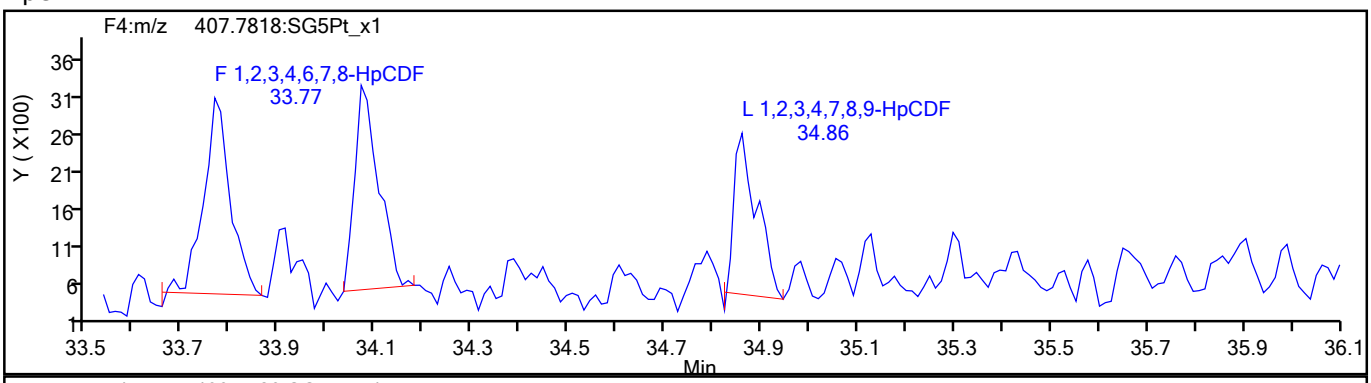

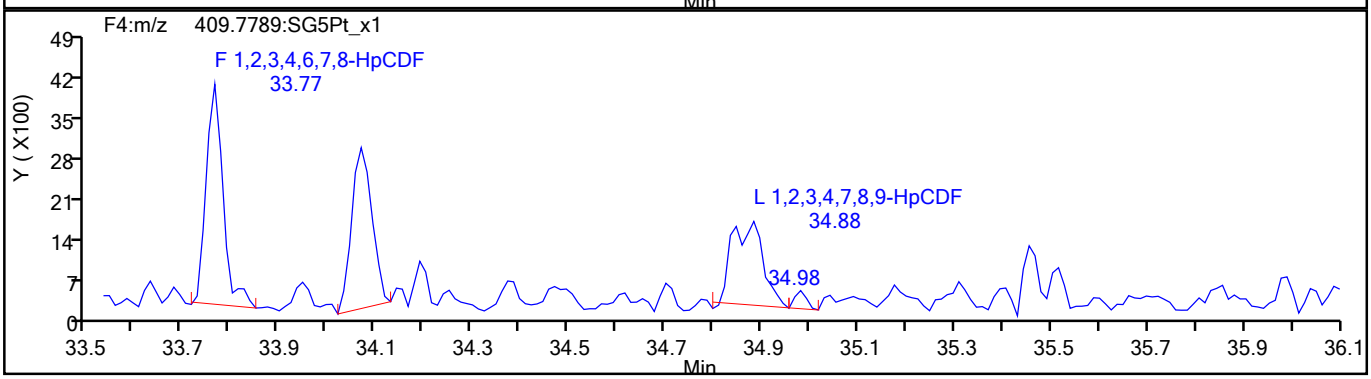

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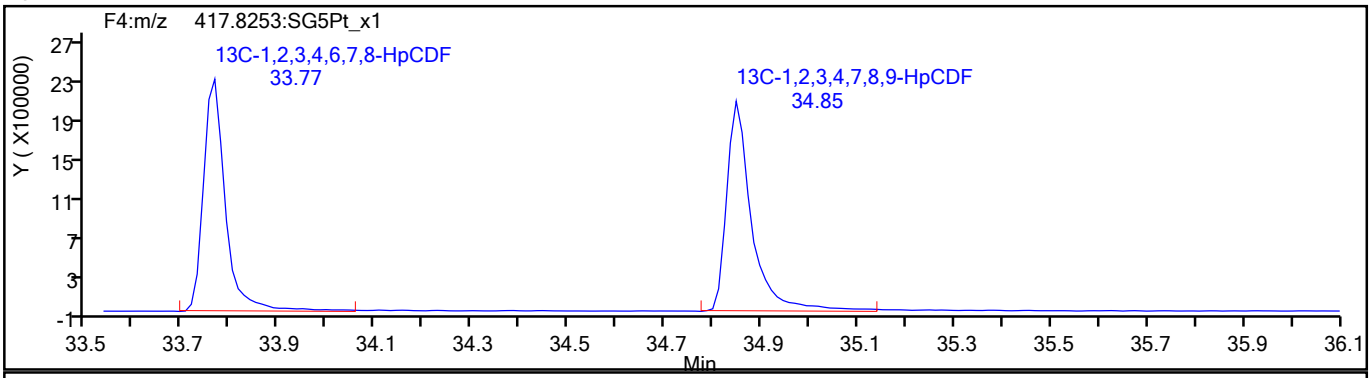

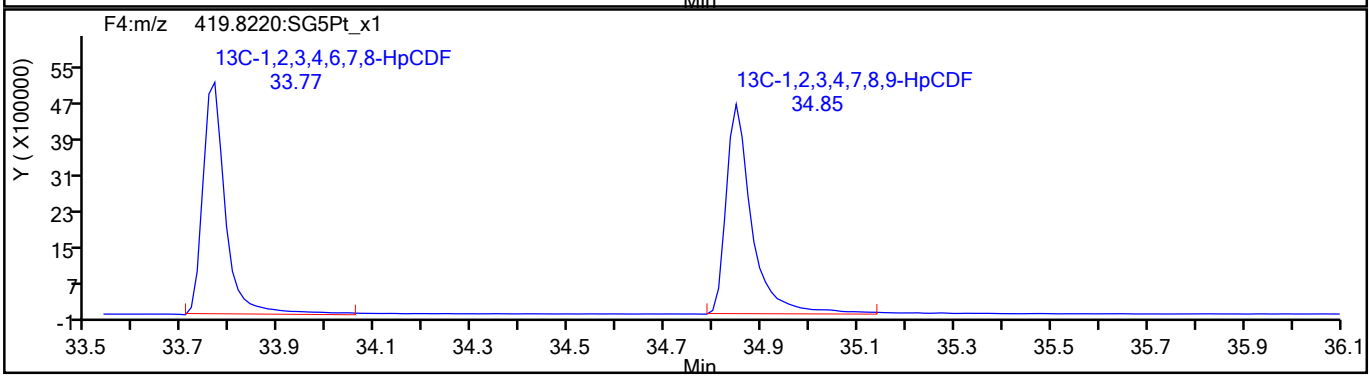

775359

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Eurofins TestAmerica, Sacramento

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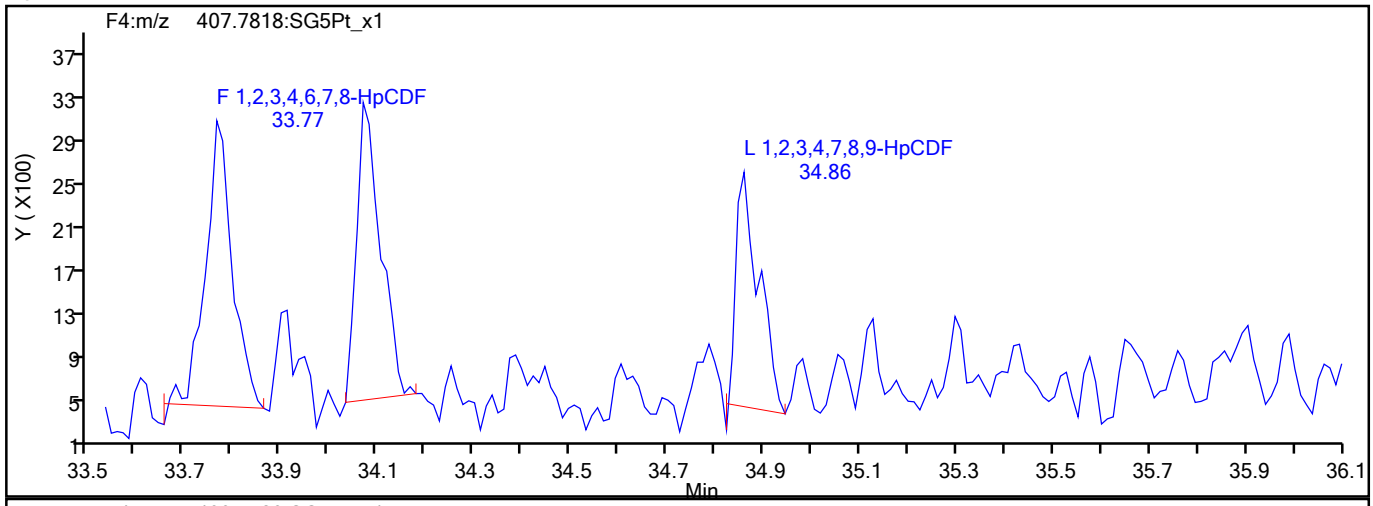

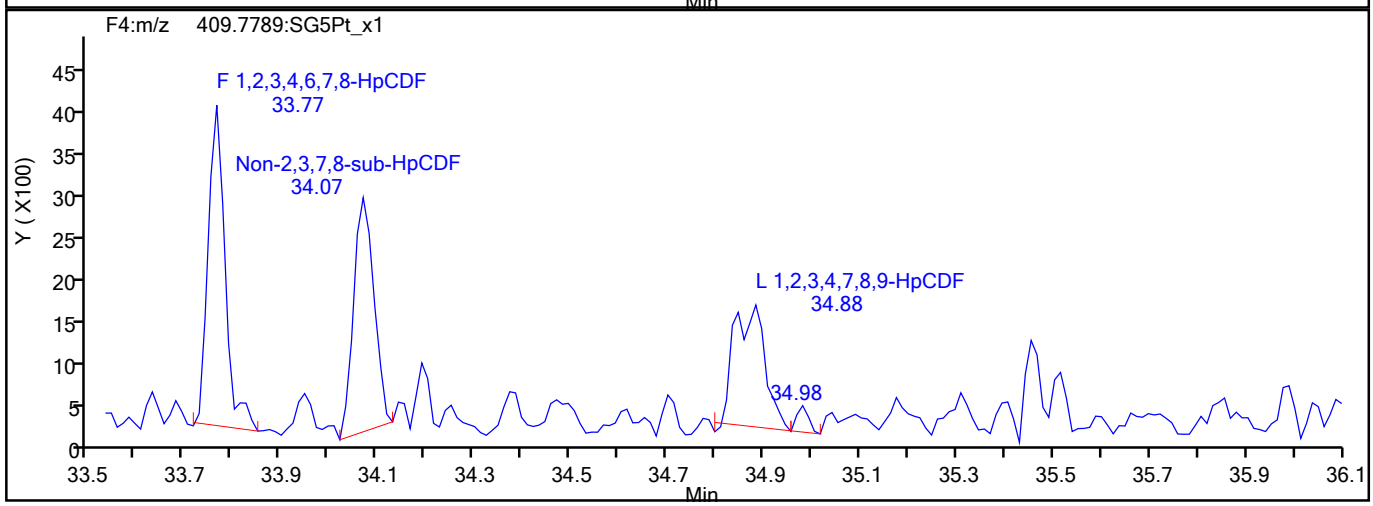

HpCDF Interference Mass

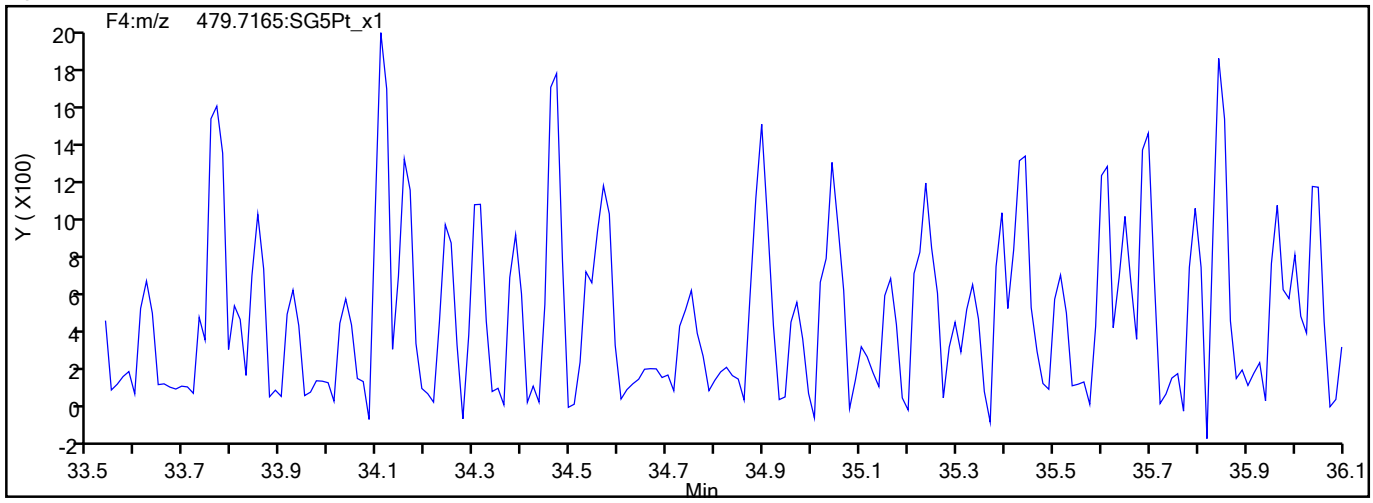

775360

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Eurofins TestAmerica, Sacramento

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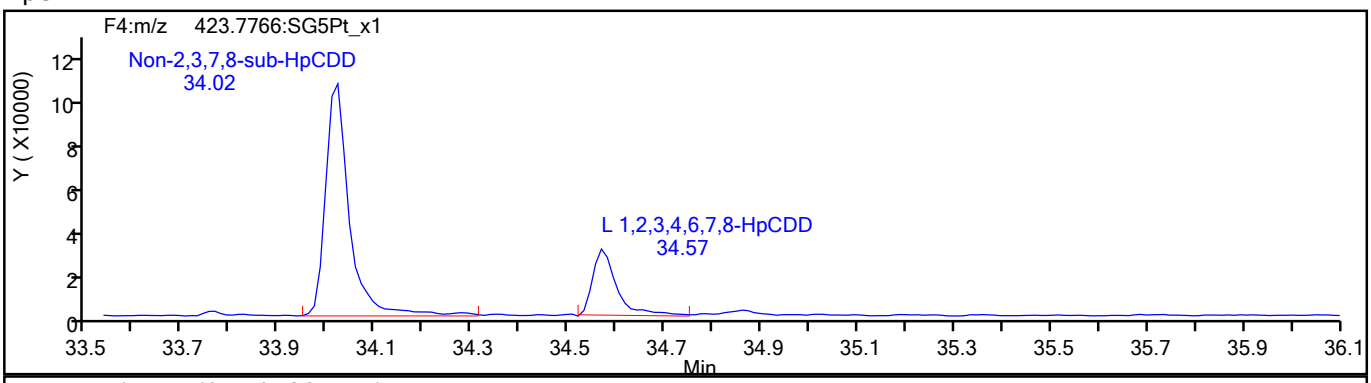

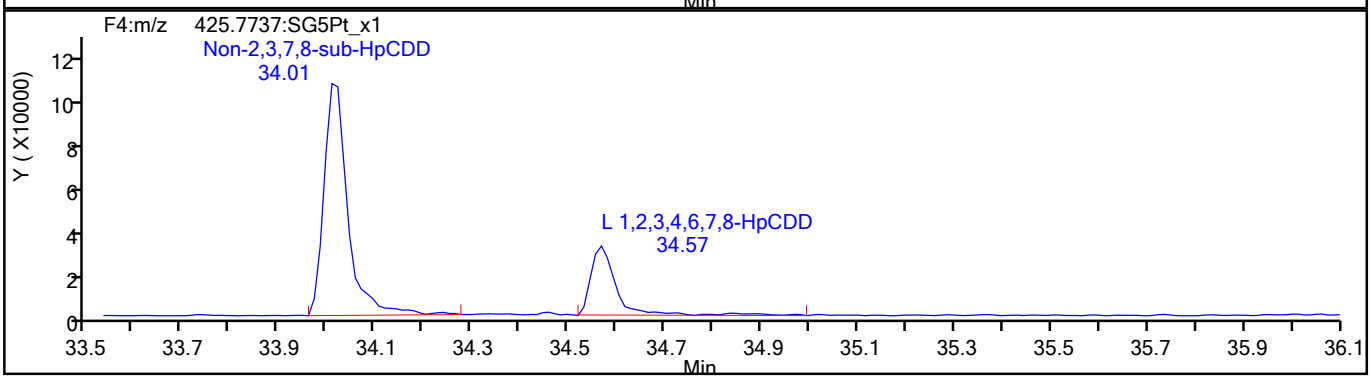

HpCDD Standards

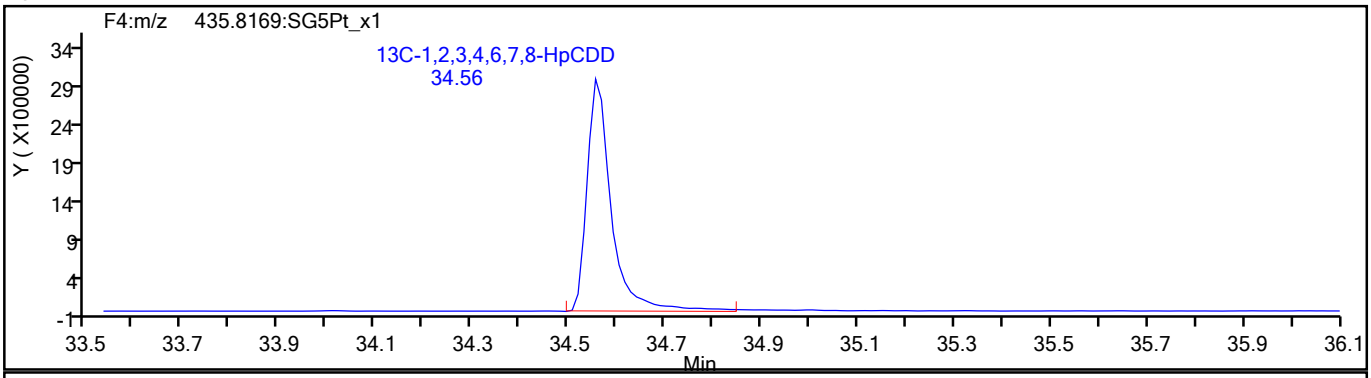

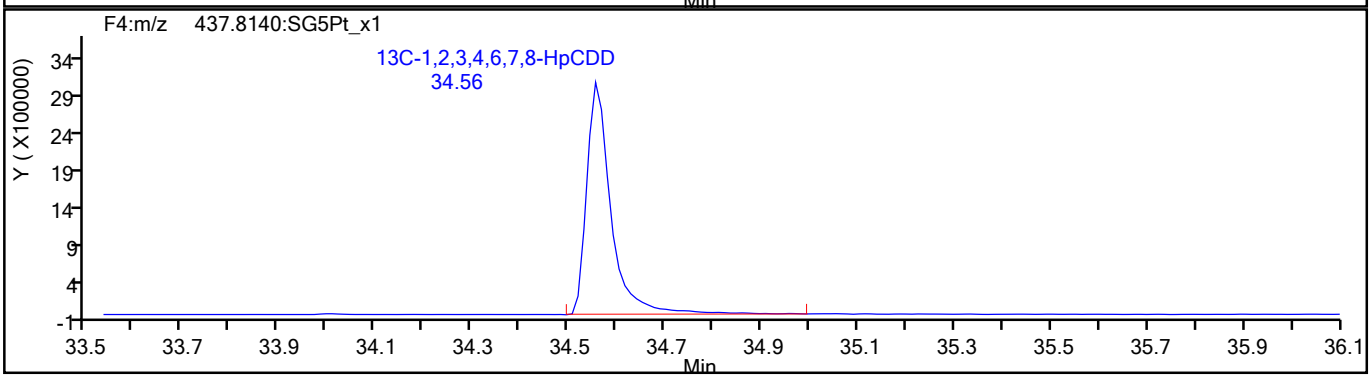

775361

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDF

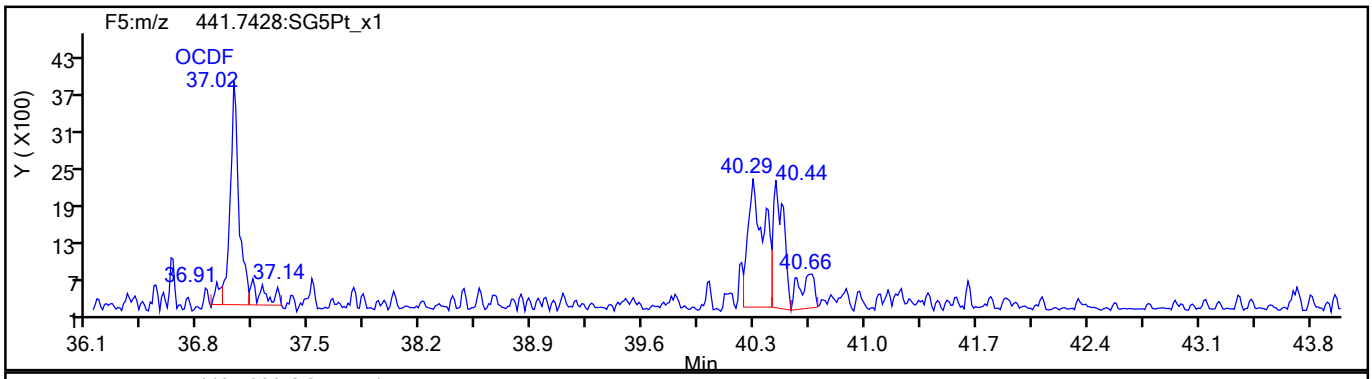

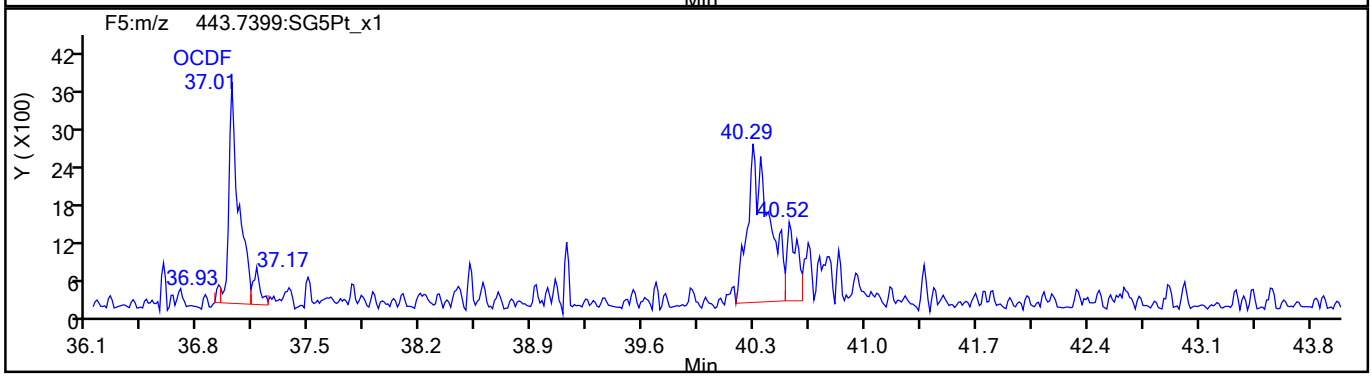

OCDF Standards

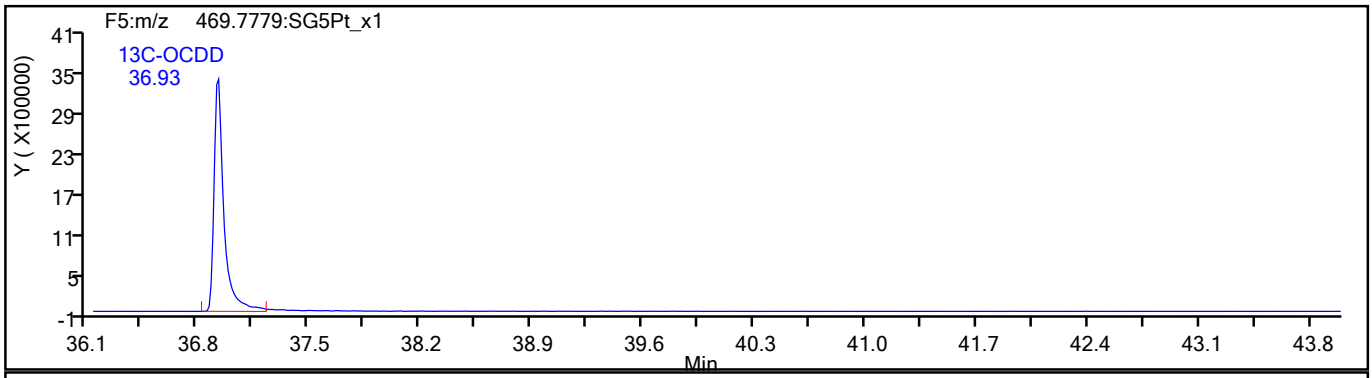

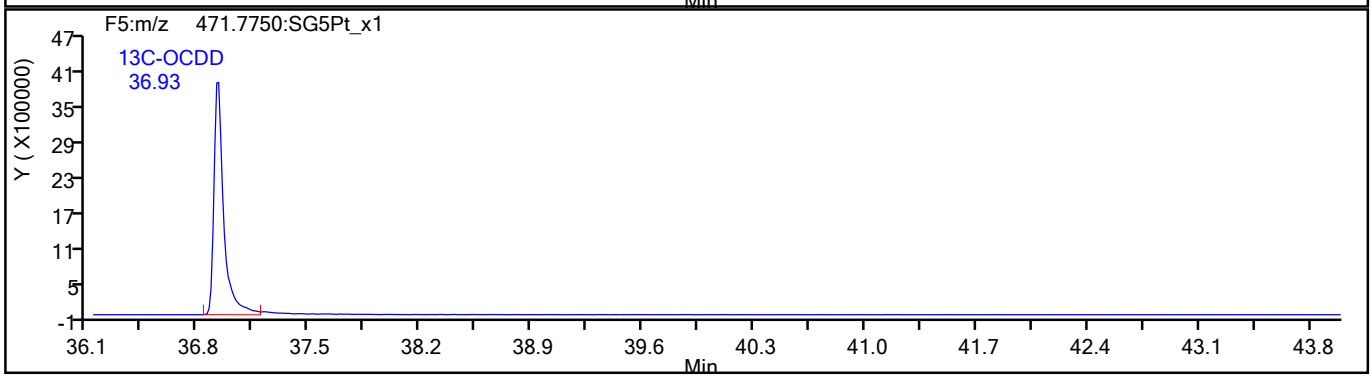

775362

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Injection Date:	15-Aug-2021 17:27:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Worklist#:	516848	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

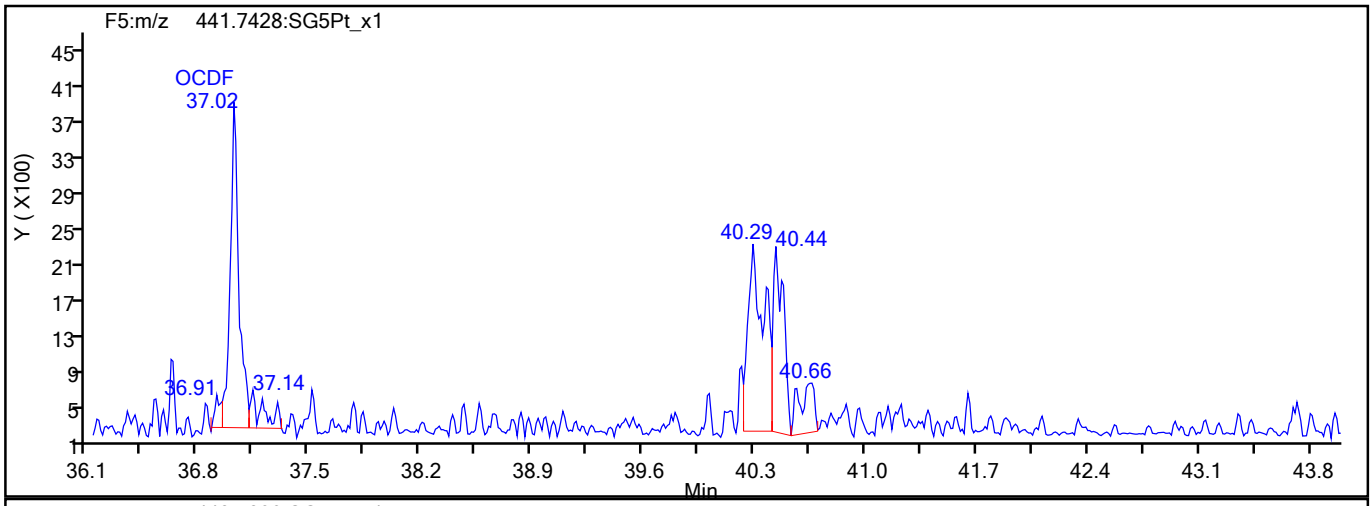

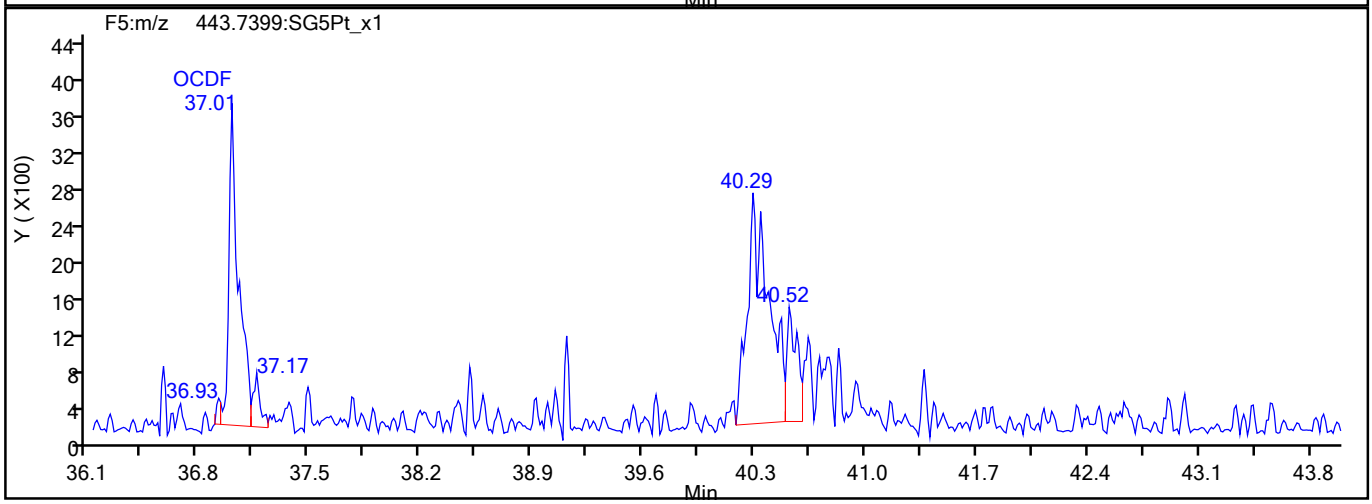

OCDF Interference Mass

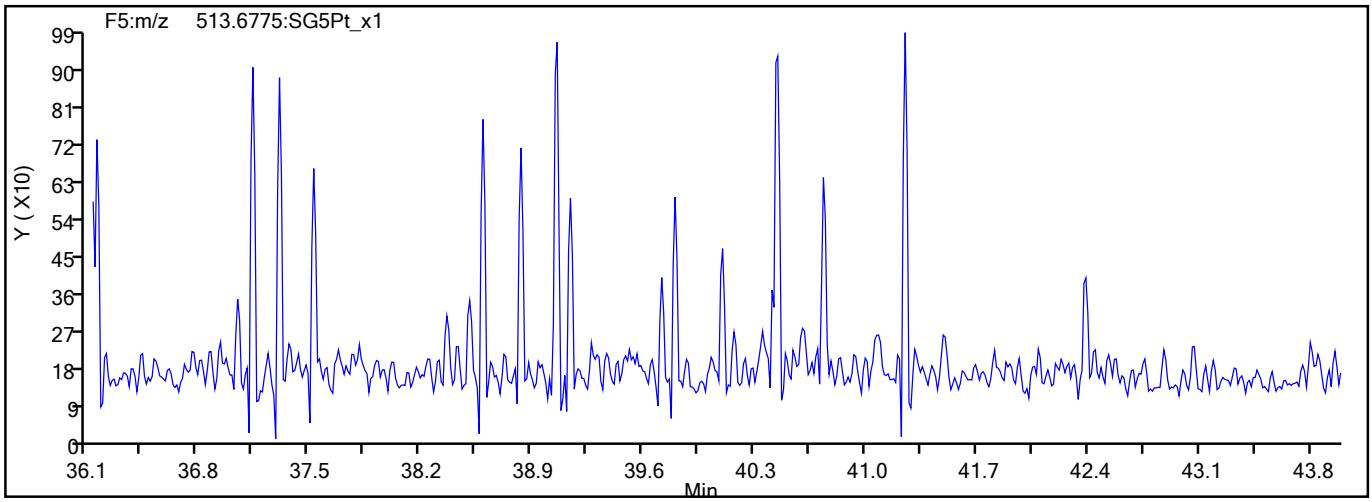

775363

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Injection Date:	15-Aug-2021 17:27:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Worklist#:	516848	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

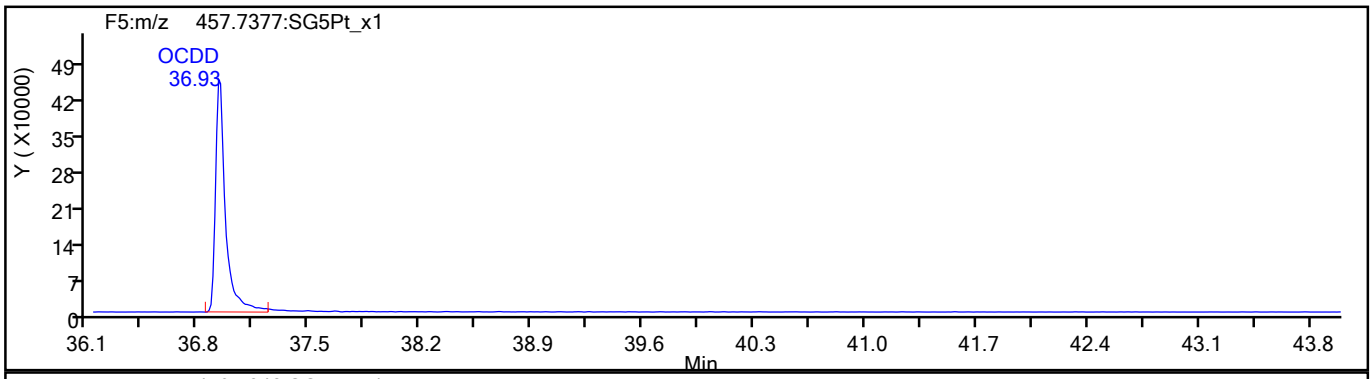

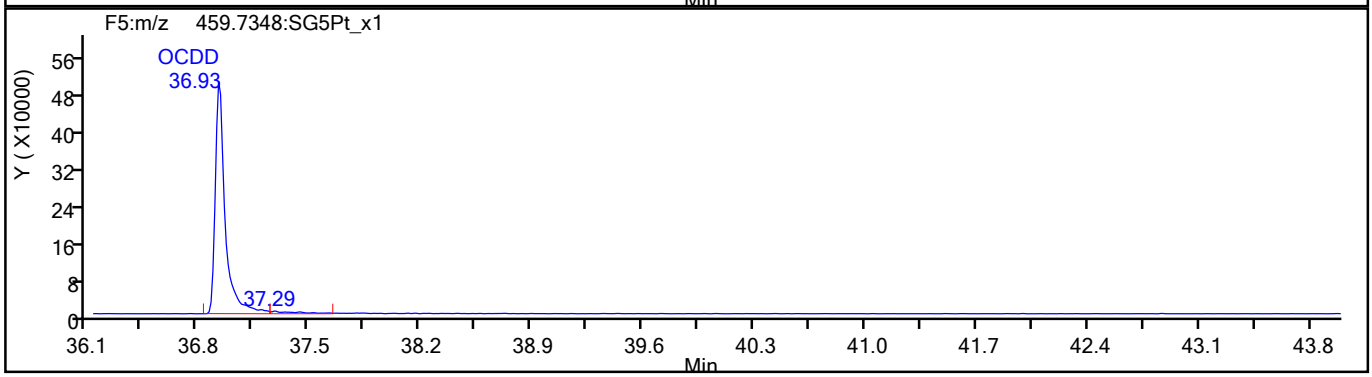

OCDD Standards

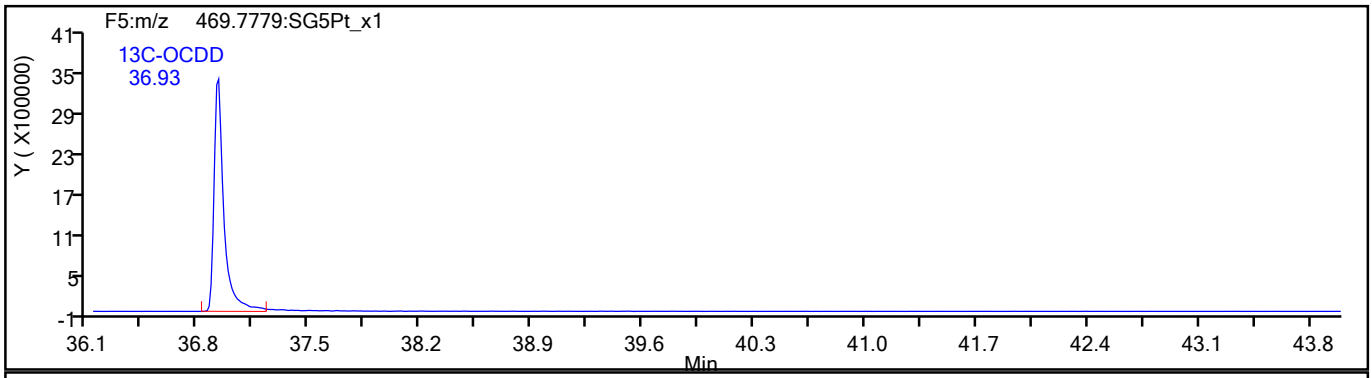

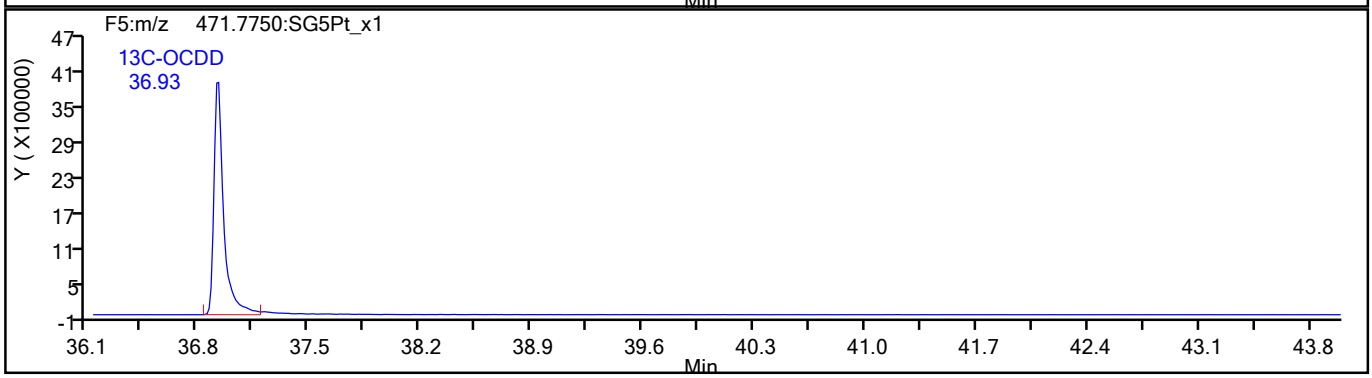

775364

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Injection Date:	15-Aug-2021 17:27:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Worklist#:	516848	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

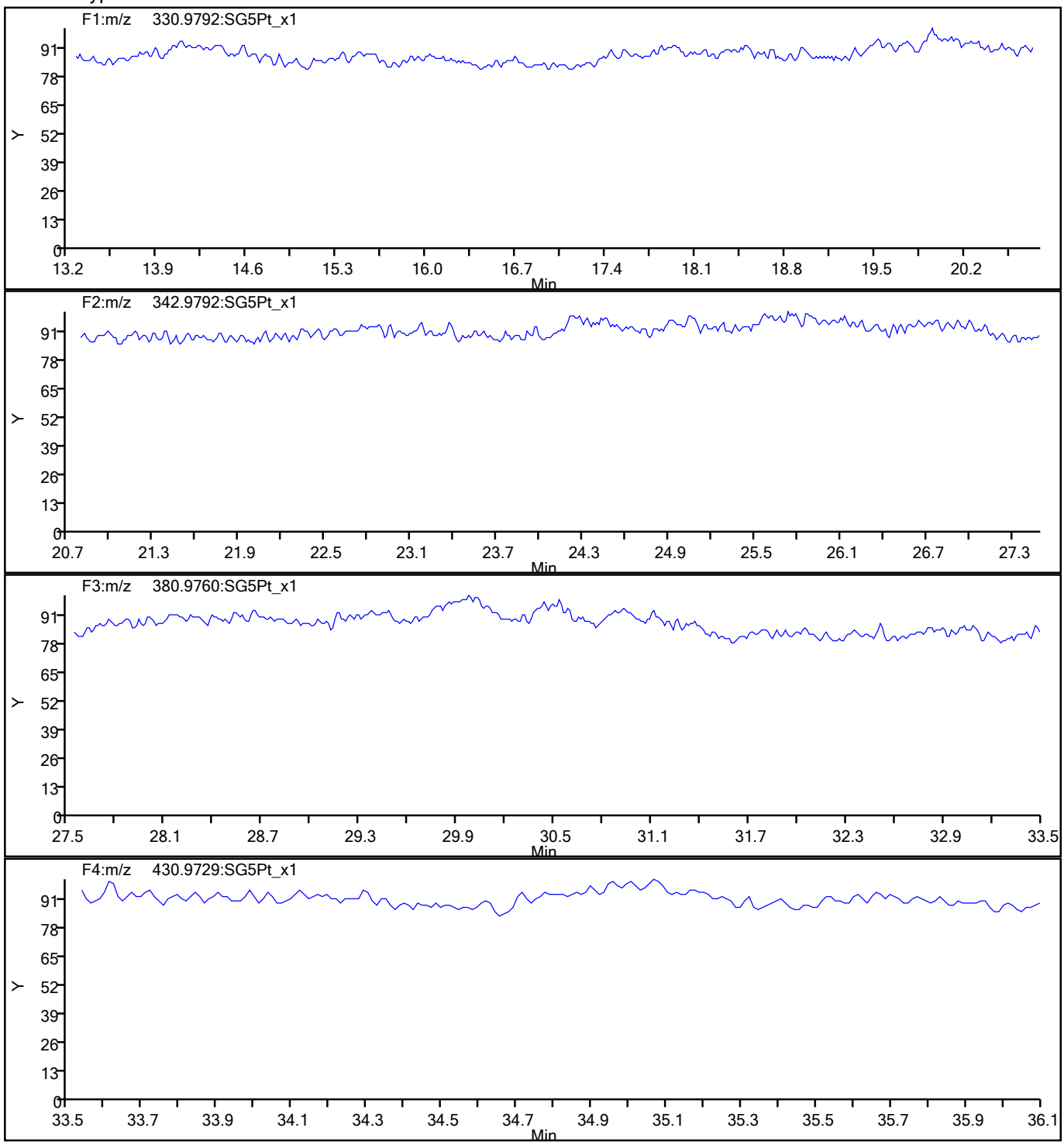

775365

Report Date: 18-Aug-2021 11:37:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_64.d		
Injection Date:	15-Aug-2021 17:27:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (12-14)		
Worklist#:	516848	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

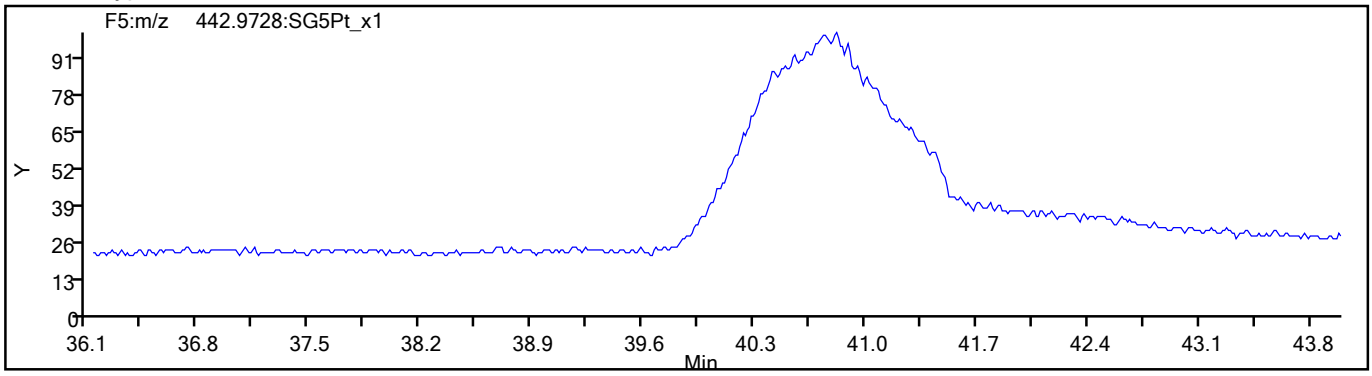

775366

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (14-16)
Lab Sample ID: 320-76769-20
Matrix: Sediment
Lab File ID: 13AU2110D5_65.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.16(g)
Date Analyzed: 08/15/2021 18:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 17.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	1.8	B	1.2	0.071
40321-76-4	1,2,3,7,8-PeCDD	ND		5.9	0.054
57117-41-6	1,2,3,7,8-PeCDF	0.30	J	5.9	0.039
57117-31-4	2,3,4,7,8-PeCDF	0.16	J q	5.9	0.040
39227-28-6	1,2,3,4,7,8-HxCDD	0.25	J B	5.9	0.065
57653-85-7	1,2,3,6,7,8-HxCDD	0.19	J q	5.9	0.068
19408-74-3	1,2,3,7,8,9-HxCDD	0.24	J B q	5.9	0.061
70648-26-9	1,2,3,4,7,8-HxCDF	0.38	J B q	5.9	0.033
57117-44-9	1,2,3,6,7,8-HxCDF	0.20	J B	5.9	0.034
72918-21-9	1,2,3,7,8,9-HxCDF	0.19	J B	5.9	0.028
60851-34-5	2,3,4,6,7,8-HxCDF	0.10	J	5.9	0.028
35822-46-9	1,2,3,4,6,7,8-HpCDD	2.2	J B	5.9	0.070
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.42	J B	5.9	0.041
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.12	J B	5.9	0.053
3268-87-9	OCDD	51	B	12	0.097
39001-02-0	OCDF	0.34	J B q	12	0.028
41903-57-5	Total TCDD	4.6	B	1.2	0.071
30402-14-3	Total TCDF	7.7	B q	1.2	0.073
36088-22-9	Total PeCDD	1.8	J q	5.9	0.054
30402-15-4	Total PeCDF	0.55	J q	5.9	0.039
34465-46-8	Total HxCDD	6.8	B q	5.9	0.065
55684-94-1	Total HxCDF	0.88	J B q	5.9	0.031
37871-00-4	Total HpCDD	7.6	B	5.9	0.070
38998-75-3	Total HpCDF	0.74	J B	5.9	0.047

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (14-16)
Lab Sample ID: 320-76769-20
Matrix: Sediment
Lab File ID: 13AU2110D5_65.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.16(g)
Date Analyzed: 08/15/2021 18:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 17.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		25-164
89059-46-1	13C-2,3,7,8-TCDF	49		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	52		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	56		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	52		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	55		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	51		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	49		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	50		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	57		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	54		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	61		26-138
114423-97-1	13C-OCDD	62		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	67		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d
Lims ID: 320-76769-A-20-A
Client ID: 11215702-072221-SS-SJSB074 (14-16)
Sample Type: Client
Inject. Date: 15-Aug-2021 18:12:13 ALS Bottle#: 63 Worklist Smp#: 24
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-20-a 320-76769-a-20-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:27:36 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: krenns Date: 18-Aug-2021 10:27:36

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	63379510	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	50256591	0.77	1.6249	48.8	48.8	0.0684	0.0684	48.80	
2,3,7,8-TCDF	17.371	1007454	0.74	1.0239	1.958	1.958	0.0308	0.0308		
A Non-2,3,7,8-sub-TCDF	17.046	664340	0.77	1.0239	1.308	1.291	0.0308	0.8197		RQMa
S Total TCDF					3.266	3.249	0.0308	0.0308		RQ
D 13C-2,3,7,8-TCDD	18.066	30608633	0.80	0.8993	53.7	53.7	0.1153	0.1153	53.70	
2,3,7,8-TCDD	18.082	292525	0.70	1.2541	0.7620	0.7620	0.0299	0.0299		
$ 37Cl4-2,3,7,8-TCDD	18.082	18735273		1.1071	26.7	26.7	0.0436	0.0436	66.75	
A Non-2,3,7,8-sub-TCDD	17.500	449026	0.75	1.2541	1.170	1.170	0.0299	1.020		M
S Total TCDD					1.932	1.932	0.0299	0.0299		
D 13C-1,2,3,7,8-PeCDF	22.381	39612940	1.60	1.2101	51.7	51.7	0.1410	0.1410	51.65	
1,2,3,7,8-PeCDF	22.408	52825	1.49	1.0611	0.1257	0.1257	0.0162	0.0162		M
D 13C-2,3,4,7,8-PeCDF	23.730	44012821	1.58	1.2395	56.0	56.0	0.1376	0.1376	56.03	
2,3,4,7,8-PeCDF	23.730	29605	1.55	1.0184	0.0736	0.0660	0.0170	0.0170		RQM
A F1 PeCDFs	20.093						0.0103	0.0103		
A Non-2,3,7,8-sub-PeCDF	23.241	18208	1.37	1.0398	0.0419	0.0419	0.0166	0.0419		M
S Total PeCDF					0.2412	0.2336	0.0166	0.0166		RQ
D 13C-1,2,3,7,8-PeCDD	24.440	27934058	1.62	0.7612	57.9	57.9	0.0770	0.0770	57.90	
1,2,3,7,8-PeCDD	24.453						0.0226	0.0226		RQU
A Non-2,3,7,8-sub-PeCDD	23.349	222640	1.55	1.0484	0.7743	0.7602	0.0226	0.5728		RQM
S Total PeCDD					0.7743	0.7602	0.0226	0.0226		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	38496751	0.51	1.0837	54.7	54.7	0.2557	0.2557	54.71	
1,2,3,4,7,8-HxCDF	30.556	66931	1.24	1.0851	0.1748	0.1602	0.0138	0.0138		RQ
D 13C-1,2,3,6,7,8-HxCDF	30.702	37351569	0.52	1.1279	51.0	51.0	0.2457	0.2457	51.00	
1,2,3,6,7,8-HxCDF	30.702	35552	1.18	1.1260	0.0845	0.0845	0.0144	0.0144		
D 13C-2,3,4,6,7,8-HxCDF	31.514	34478069	0.51	1.0637	49.9	49.9	0.2605	0.2605	49.91	
2,3,4,6,7,8-HxCDF	31.528	17680	1.21	1.1675	0.0439	0.0439	0.0117	0.0117		M
D 13C-1,2,3,7,8,9-HxCDF	32.326	30881439	0.52	0.9676	49.2	49.2	0.2864	0.2864	49.15	
1,2,3,7,8,9-HxCDF	32.326	29109	1.32	1.1664	0.0808	0.0808	0.0119	0.0119		M
A Non-2,3,7,8-sub-HxCDF	30.197						0.0129	0.0308		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.3841	0.3695	0.0129	0.0129		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.140	64937023	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	27828300	1.25	0.7334	58.4	58.4	0.2931	0.2931	58.43	
1,2,3,4,7,8-HxCDD	31.727	31038	1.28	1.0640	0.1048	0.1048	0.0275	0.0275		M
D 13C-1,2,3,6,7,8-HxCDD	31.807	29867834	1.24	0.8802	52.3	52.3	0.2442	0.2442	52.26	
1,2,3,6,7,8-HxCDD	31.834	23396	1.24	1.0001	0.0879	0.0783	0.0286	0.0286		RQMa
1,2,3,7,8,9-HxCDD	32.153	32480	1.24	1.1325	0.1091	0.0994	0.0255	0.0255		RQ
A Non-2,3,7,8-sub-HxCDD	30.882	795208	1.24	1.0655	2.611	2.587	0.0271	2.429		RQ
S Total HxCDD					2.913	2.870	0.0272	0.0272		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	27343132	0.43	0.7730	54.5	54.5	0.7040	0.7040	54.47	
1,2,3,4,6,7,8-HpCDF	33.778	69681	1.20	1.4413	0.1768	0.1768	0.0171	0.0171		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	27666860	0.43	0.7008	60.8	60.8	0.7766	0.7766	60.79	
1,2,3,4,7,8,9-HpCDF	34.860	19112	0.88	1.3174	0.0524	0.0524	0.0224	0.0224		
A Non-2,3,7,8-sub-HpCDF	34.319	30775	0.91	1.3793	0.0811	0.0811	0.0194	0.0811		M
S Total HpCDF					0.3104	0.3104	0.0197	0.0197		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	24148166	1.02	0.6472	57.5	57.5	0.2588	0.2588	57.46	
1,2,3,4,6,7,8-HpCDD	34.580	242335	0.99	1.0943	0.9171	0.9171	0.0294	0.0294		
A Non-2,3,7,8-sub-HpCDD	34.301	600065	1.11	1.0943	2.271	2.271	0.0294	2.271		
S Total HpCDD					3.188	3.188	0.0294	0.0294		
D 13C-OCDD	36.926	36201342	0.87	0.4472	124.7	124.7	0.1406	0.1406	62.34	
OCDF	37.010	36847	0.89	1.4382	0.1565	0.1415	0.0120	0.0120		RQM
OCDD	36.938	4268057	0.89	1.1070	21.3	21.3	0.0409	0.0409		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 10:27:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d
Lims ID: 320-76769-A-20-A
Client ID: 11215702-072221-SS-SJSB074 (14-16)
Sample Type: Client
Inject. Date: 15-Aug-2021 18:12:13 ALS Bottle#: 63 Worklist Smp#: 24
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-20-a 320-76769-a-20-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:27:36 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: krenns Date: 18-Aug-2021 10:27:36

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		28387405	6974624	2786	6965	2503		
333.9339	17.870	17.855	1		34992105	8638155	3691	9227	2340	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.971	21851067	5108182	3730	9325	1369		
317.9389	17.356	17.356	0	0.971	28405524	6706627	3213	8032	2087	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.371	0	1.001	429248	97544	675	1687	145		
305.8987	17.386	17.371	1	1.002	578206	122288	818	2045	149	0.74(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	16.479	17.046	-34	0.949	17226	3782	675	1687	6		
305.8987	16.479	17.046	-34	0.949	20035	4703	818	2045	6	0.86(0.65-0.89)	
303.9016	16.706	17.046	-20	0.963	20707	4865	675	1687	7		
305.8987	16.706	17.046	-20	0.963	35840	8500	818	2045	10	0.58(0.65-0.89)	
	Empc Correction				26892	6318	818	2045	8		
303.9016	16.993	17.046	-3	0.979	180627	43318	675	1687	64		
305.8987	16.993	17.046	-3	0.979	241174	54554	818	2045	67	0.75(0.65-0.89)	M
303.9016	17.794	17.046	45	1.025	37572	7398	675	1687	11		
305.8987	17.809	17.046	46	1.026	46464	9063	818	2045	11	0.81(0.65-0.89)	M
303.9016	19.201	17.046	129	1.106	34199	5902	675	1687	9		a
305.8987	19.201	17.046	129	1.106	39444	7175	818	2045	9	0.87(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	13599571	3073434	2786	6965	1103		
333.9339	18.066	18.051	1	1.011	17009062	3871455	3691	9227	1049	0.80(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											
319.8965	18.082	18.081	0	1.001	120671	23197	672	1680	35		
321.8936	18.082	18.081	0	1.001	171854	37452	369	922	101	0.70(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.081	0	1.012	18735273	4257815	3012	7530	1414		
A Non-2,3,7,8-sub-TCDD											M
319.8965	16.933	17.500	-34	0.937	168324	41075	672	1680	61		
321.8936	16.933	17.500	-34	0.937	223391	55344	369	922	150	0.75(0.65-0.89)	M
319.8965	17.825	17.500	19	0.987	24267	5788	672	1680	9		
321.8936	17.840	17.500	20	0.987	33044	9010	369	922	24	0.73(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.252	24394330	4051078	6481	16202	625		
353.8970	22.381	22.367	1	1.252	15218610	2454922	4171	10427	589	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.408	22.394	1	1.001	31597	5825	185	462	31		M
341.8567	22.435	22.394	2	1.002	21228	3179	263	657	12	1.49(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.730	23.703	2	1.328	26935763	3995173	6481	16202	616		
353.8970	23.717	23.703	1	1.327	17077058	2484730	4171	10427	596	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											RQM
339.8597	23.730	23.730	0	1.000	21396	3667	185	462	20		
	Empc Correction				17995	4953	185	462	27		
341.8567	23.744	23.730	1	1.001	11610	3196	263	657	12	1.84(1.32-1.78)	M
A F1 PeCDFs											
339.8597	20.093						104	260			
341.8567	20.093						173	432			
A Non-2,3,7,8-sub-PeCDF											M
339.8597	21.085	23.241	-129	0.942	10527	1913	185	462	10		
341.8567	21.031	23.241	-132	0.940	7681	1415	263	657	5	1.37(1.32-1.78)	M
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.368	17276871	2386109	2225	5562	1072		
369.8919	24.440	24.426	1	1.368	10657187	1504704	1435	3587	1049	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											RQU
355.8546	24.453						222	555			
357.8516	24.453						147	367			
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	21.263	23.349	-125	0.870	10203	2040	222	555	9		
357.8516	21.263	23.349	-125	0.870	10704	1978	147	367	13	0.95(1.32-1.78)	
	Empc Correction				6582	1316	147	367	9		
355.8546	21.999	23.349	-81	0.900	100820	18672	222	555	84		
357.8516	22.012	23.349	-80	0.901	66935	10930	147	367	74	1.51(1.32-1.78)	M
355.8546	23.472	23.349	7	0.960	22829	3425	222	555	15		
357.8516	23.472	23.349	7	0.960	15271	2175	147	367	15	1.49(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	13006289	2419457	6640	16600	364		
385.8610	30.516	30.503	1	0.949	25490462	4705155	11968	29920	393	0.51(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDF											RQ
373.8208	30.556	30.529	2	1.001	43135	7370	203	507	36		
	Empc Correction				37051	6190	203	507	30		
375.8178	30.543	30.529	1	1.001	29880	4992	225	562	22	1.44(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	12736237	2254110	6640	16600	339		
385.8610	30.702	30.689	1	0.955	24615332	4350016	11968	29920	363	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.702	30.716	-1	1.000	19277	3994	203	507	20		
375.8178	30.716	30.716	0	1.000	16275	3109	225	562	14	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	11666075	2630400	6640	16600	396		
385.8610	31.514	31.514	0	0.981	22811994	5230004	11968	29920	437	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.528	31.528	0	1.000	9697	2547	203	507	13		
375.8178	31.541	31.528	1	1.001	7983	1939	225	562	9	1.21(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.326	0	1.006	10549034	2635907	6640	16600	397		
385.8610	32.326	32.326	0	1.006	20332405	5082947	11968	29920	425	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.326	32.340	-1	1.000	16552	3841	203	507	19		M
375.8178	32.340	32.340	0	1.000	12557	3453	225	562	15	1.32(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	28.413	30.197	-107	0.931	6727	1290	203	507	6		
375.8178	28.347	30.197	-111	0.929	5610	1728	225	562	8	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.140	0		36055849	9300589	7642	19105	1217		
403.8529	32.140	32.140	0		28881174	7485308	6790	16975	1102	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.987	15437022	3910656	7642	19105	512		
403.8529	31.701	31.701	0	0.986	12391278	3155065	6790	16975	465	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.727	31.714	1	1.000	17413	4844	435	1087	11		
391.8127	31.727	31.714	1	1.000	13625	3616	391	977	9	1.28(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	16552884	3964260	7642	19105	519		
403.8529	31.807	31.807	0	0.990	13314950	3250603	6790	16975	479	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQMa
389.8157	31.834	31.820	1	1.001	15797	4755	435	1087	11		M
	Empc Correction				12951	2948	435	1087	7		
391.8127	31.847	31.820	2	1.001	10445	2378	391	977	6	1.51(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											RQ
389.8157	32.153	32.153	0	1.014	21139	5129	435	1087	12		
	Empc Correction				17980	4465	435	1087	10		
391.8127	32.153	32.153	0	1.014	14500	3601	391	977	9	1.46(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.558	30.882	-79	0.929	406962	48031	435	1087	110		
391.8127	29.558	30.882	-79	0.929	339691	38440	391	977	98	1.20(1.05-1.43)	
389.8157	30.982	30.882	6	0.974	26879	6011	435	1087	14		
391.8127	30.969	30.882	5	0.974	29182	4719	391	977	12	0.92(1.05-1.43)	
	Empc Correction				21676	4847	391	977	12		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.766	0	1.051	8264079	2583727	12347	30867	209		
419.8220	33.766	33.766	0	1.051	19079053	5998344	24196	60490	248	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.778	33.778	0	1.000	38012	11693	566	1415	21		
409.7789	33.778	33.778	0	1.000	31669	11824	278	695	43	1.20(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.847	1	1.085	8253452	2153201	12347	30867	174		
419.8220	34.847	34.847	0	1.084	19413408	5012711	24196	60490	207	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860	34.860	0	1.000	8952	2851	566	1415	5		
409.7789	34.860	34.860	0	1.000	10160	3168	278	695	11	0.88(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											M
407.7818	34.070	34.319	-15	1.009	14695	5012	566	1415	9		M
409.7789	34.082	34.319	-14	1.009	16080	4891	278	695	18	0.91(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.076	12193793	3384047	5488	13720	617		
437.8140	34.568	34.568	0	1.076	11954373	3323612	5759	14397	577	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	120526	29149	435	1087	67		
425.7737	34.568	34.580	-1	1.000	121809	31697	427	1067	74	0.99(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.984	315516	92121	435	1087	212		
425.7737	34.021	34.301	-17	0.984	284549	82766	427	1067	194	1.11(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.926	0	1.149	16856783	4014499	2215	5537	1812		
471.7750	36.926	36.926	0	1.149	19344559	4530339	2007	5017	2257	0.87(0.76-1.02)	
OCDF											RQM
441.7428	37.010	37.022	-1	1.002	21234	5500	129	322	43		M
	Empc Correction				17351	4619	129	322	36		
443.7399	37.022	37.022	0	1.003	19496	5190	165	412	31	1.09(0.76-1.02)	M
OCDD											
457.7377	36.938	36.938	0	1.000	2003975	446942	383	957	1167		
459.7348	36.938	36.938	0	1.000	2264082	502732	391	977	1286	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Lims ID:	320-76769-A-20-A		
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Inject. Date:	15-Aug-2021 18:12:13	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	24

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	50256591	11814809

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	50256591	11814809

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.479	17226	3782	20035	4703	0.0724	0.86	
16.706	20707	4865	35840	8500	0.1099	0.58	RQ
16.706	20707	4865	26892	6318	0.0925		Empc Correction
16.993	180627	43318	241174	54554	0.8197	0.75	M
17.794	37572	7398	46464	9063	0.1633	0.81	M
19.201	34199	5902	39444	7175	0.1431	0.87	a
Signal Totals:							
	290331	65265	374009	81813			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	673288	149260				0.76	RQMa
	664340	147078					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.308 = (673288 * 100.000) / (50256591 * 1.024)

Empc Amount: 1.291 = (664340 * 100.000) / (50256591 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d
Lims ID: 320-76769-A-20-A
Client ID: 11215702-072221-SS-SJSB074 (14-16)
Inject. Date: 15-Aug-2021 18:12:13 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 24

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	30608633	6944889

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	30608633	6944889

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.933	168324	41075	223391	55344	1.02	0.75	M
17.825	24267	5788	33044	9010	0.1493	0.73	
Signal Totals:							
	192591	46863	256435	64354			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	449026	111217				0.75	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.170 = (449026 * 100.000) / (30608633 * 1.254)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Lims ID:	320-76769-A-20-A		
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Inject. Date:	15-Aug-2021 18:12:13	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	24

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	39612940	6506000
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	44012821	6479903

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	41812880	6492951

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.085	10527	1913	7681	1415	0.0419	1.37	M
Signal Totals:							
	10527	1913	7681	1415			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	18208	3328				1.37	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0419 = (18208 * 100.000) / (41812880 * 1.040)

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Lims ID:	320-76769-A-20-A		
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Inject. Date:	15-Aug-2021 18:12:13	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	24

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	27934058	3890813

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	27934058	3890813

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.263	10203	2040	10704	1978	0.0714	0.95	RQ
21.263	10203	2040	6582	1316	0.0573		Empc Correction
21.999	100820	18672	66935	10930	0.5728	1.51	M
23.472	22829	3425	15271	2175	0.1301	1.49	
Signal Totals:							
	133852	24137	88788	14421			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	226762	39220				1.44	RQM
	222640	38558					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7743 = (226762 * 100.000) / (27934058 * 1.048)
Empc Amount: 0.7602 = (222640 * 100.000) / (27934058 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Lims ID:	320-76769-A-20-A		
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Inject. Date:	15-Aug-2021 18:12:13	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	24

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	38496751	7124612
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	37351569	6604126
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	34478069	7860404
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	30881439	7718854

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	35301957	7326999

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.413	6727	1290	5610	1728	0.0308	1.20	

Compound is Marked ND

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Lims ID:	320-76769-A-20-A		
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Inject. Date:	15-Aug-2021 18:12:13	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	24

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	27828300	7065721
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	29867834	7214863
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	28848067	7140292

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.558	406962	48031	339691	38440	2.43	1.20	
30.982	26879	6011	29182	4719	0.1824	0.92	RQ
30.982	26879	6011	21676	4847	0.1580		Empc Correction
Signal Totals:							
	433841	54042	361367	43287			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	802714	97201				1.18	RQ
	795208	97329					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.611 = (802714 * 100.000) / (28848067 * 1.066)

Empc Amount: 2.587 = (795208 * 100.000) / (28848067 * 1.066)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d
Lims ID: 320-76769-A-20-A
Client ID: 11215702-072221-SS-SJSB074 (14-16)
Inject. Date: 15-Aug-2021 18:12:13 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 24

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	27343132	8582071
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	27666860	7165912

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	27504996	7873991

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.070	14695	5012	16080	4891	0.0811	0.91	M
Signal Totals:							
	14695	5012	16080	4891			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	30775	9903				0.91	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0811 = (30775 * 100.000) / (27504996 * 1.379)

QC Flag Legend

Review Flags
M - Manually Integrated

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Lims ID:	320-76769-A-20-A		
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Inject. Date:	15-Aug-2021 18:12:13	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	24

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	24148166	6707659

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	24148166	6707659

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	315516	92121	284549	82766	2.27	1.11	
Signal Totals:							
	315516	92121	284549	82766			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	600065	174887				1.11	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.271 = (600065 * 100.000) / (24148166 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.89- 19.20)

Signal: 2

Processing Integration Results

RT = 16.993 Area = 258490

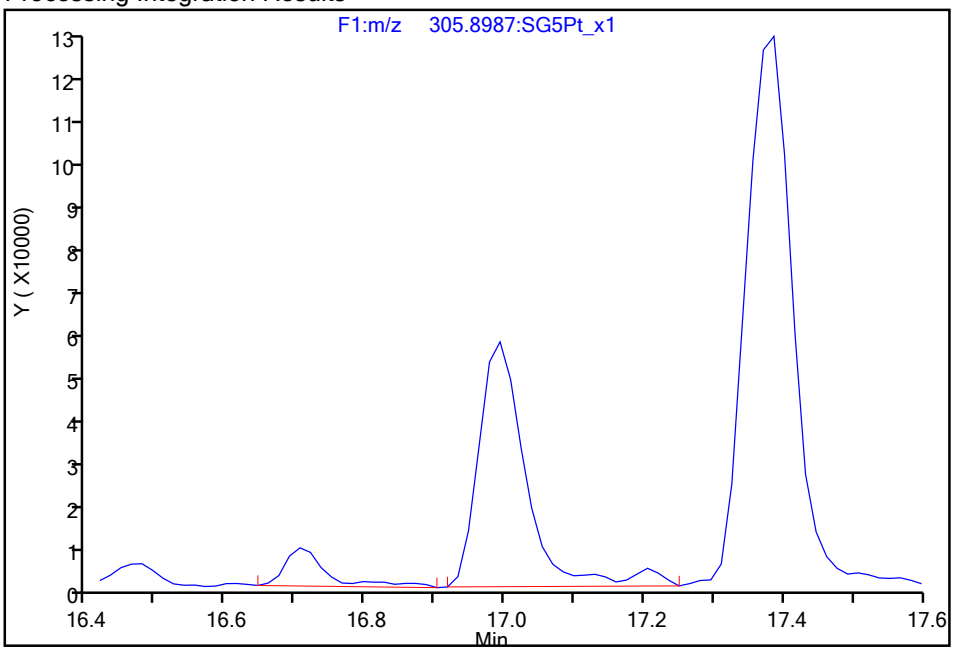

Manual Integration Results

RT = 16.993 Area = 241174 M

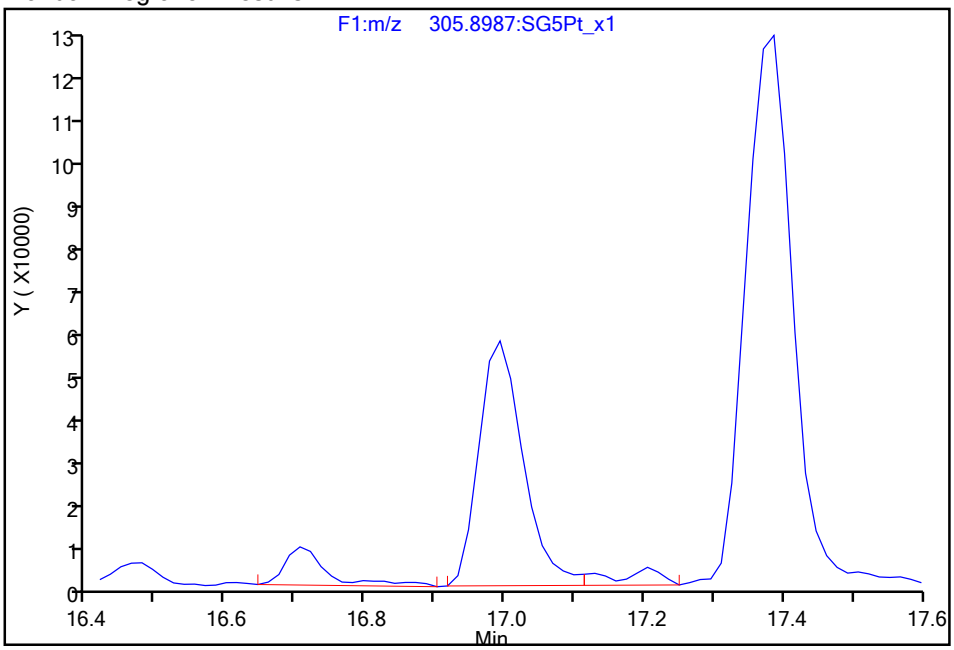

Reviewer: dadunj, 18-Aug-2021 11:37:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.89- 19.20)

Signal: 2

Processing Integration Results

RT = 17.809 Area = 55609

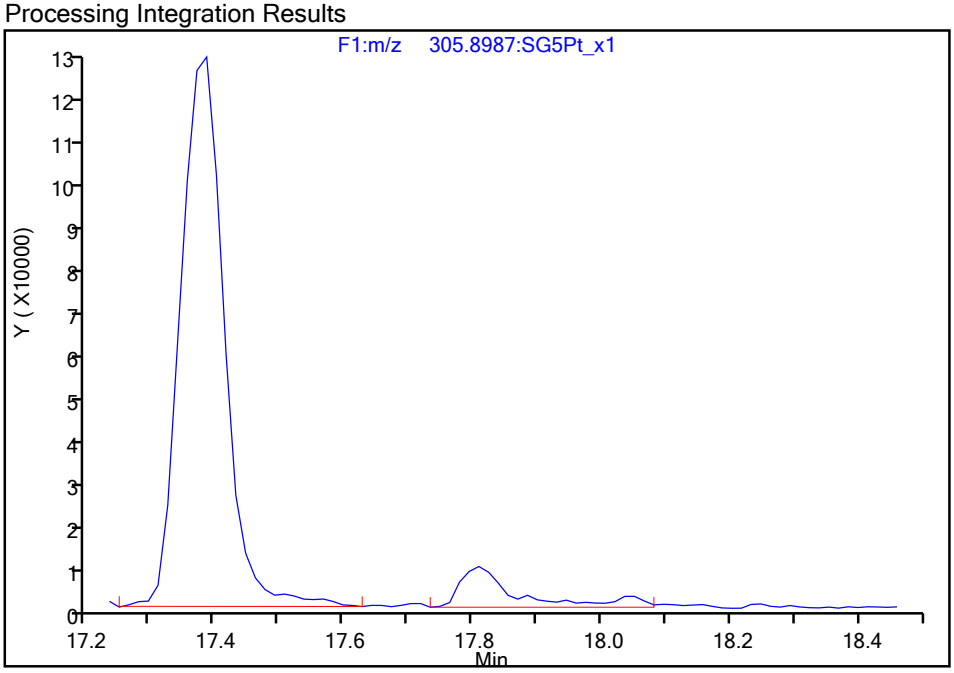

Manual Integration Results

RT = 17.809 Area = 46464 M

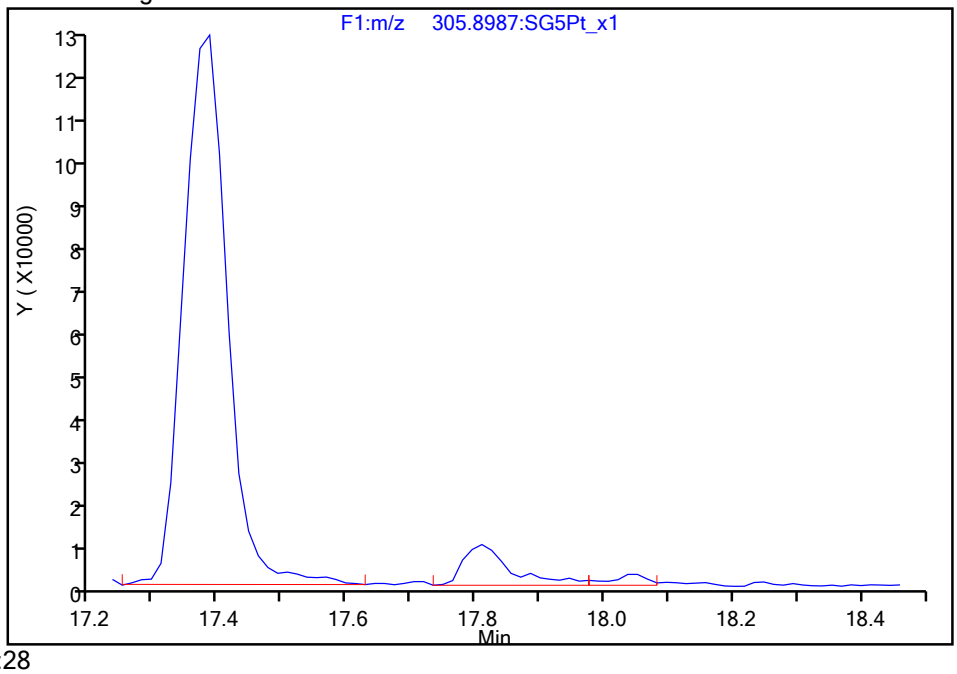

Reviewer: dadunj, 18-Aug-2021 11:37:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (15.80- 19.20)

Signal: 2

Processing Integration Results

RT = 16.933 Area = 233002

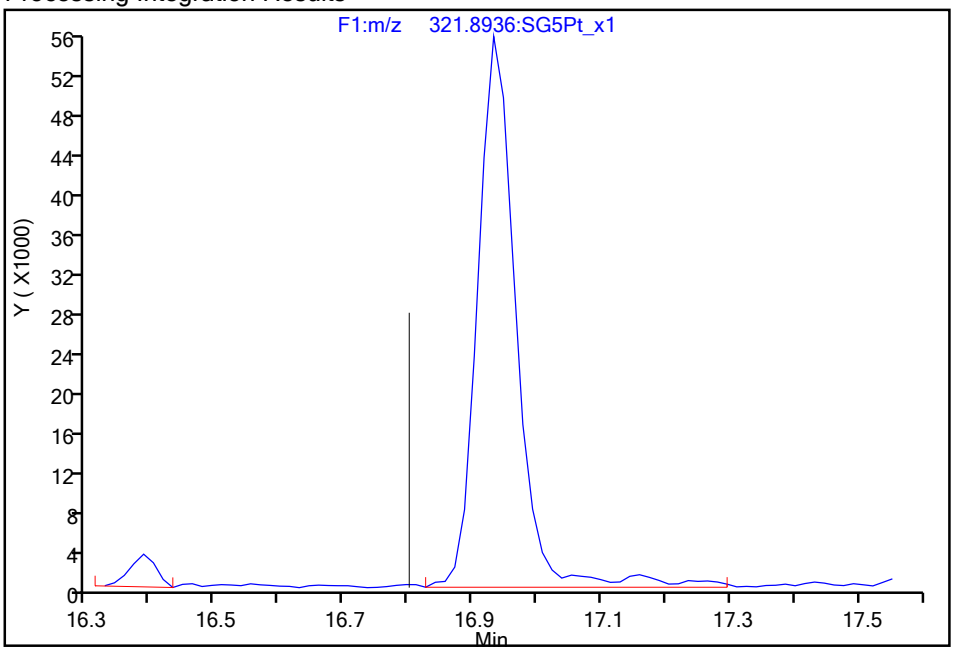

Manual Integration Results

RT = 16.933 Area = 223391 M

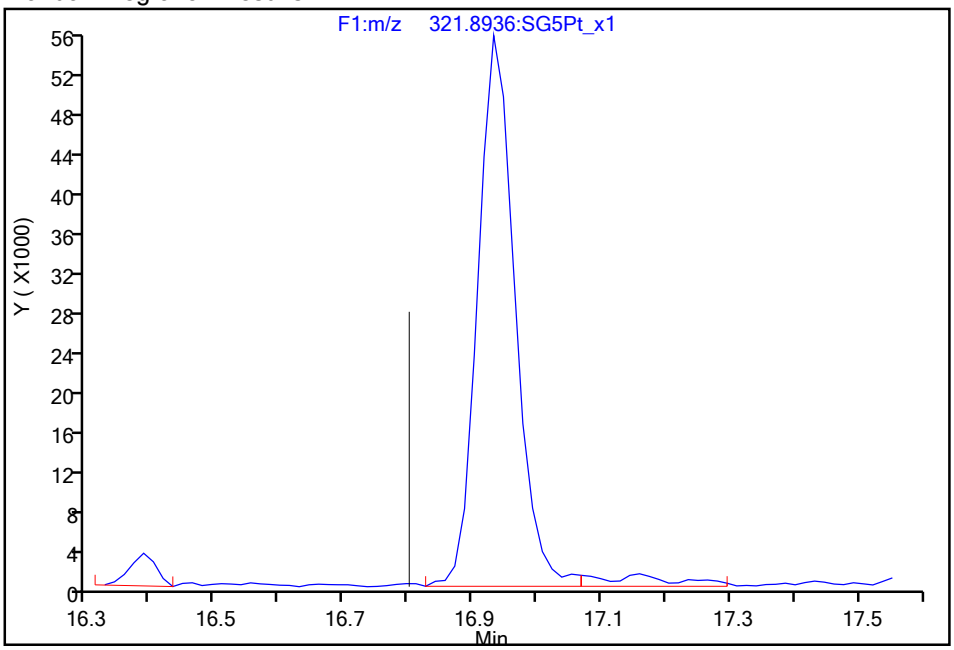

Reviewer: dadunj, 18-Aug-2021 11:39:20

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.44
Area: 21826
Amount: 0.132595
Amount Units: pg/ul

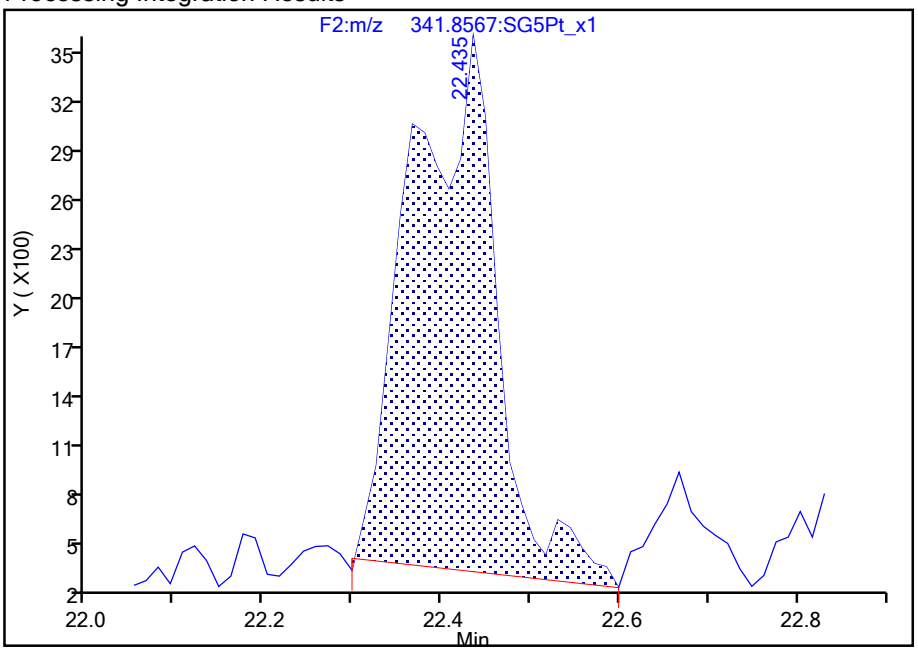

Manual Integration Results

RT: 22.44
Area: 21228
Amount: 0.125670
Amount Units: pg/ul

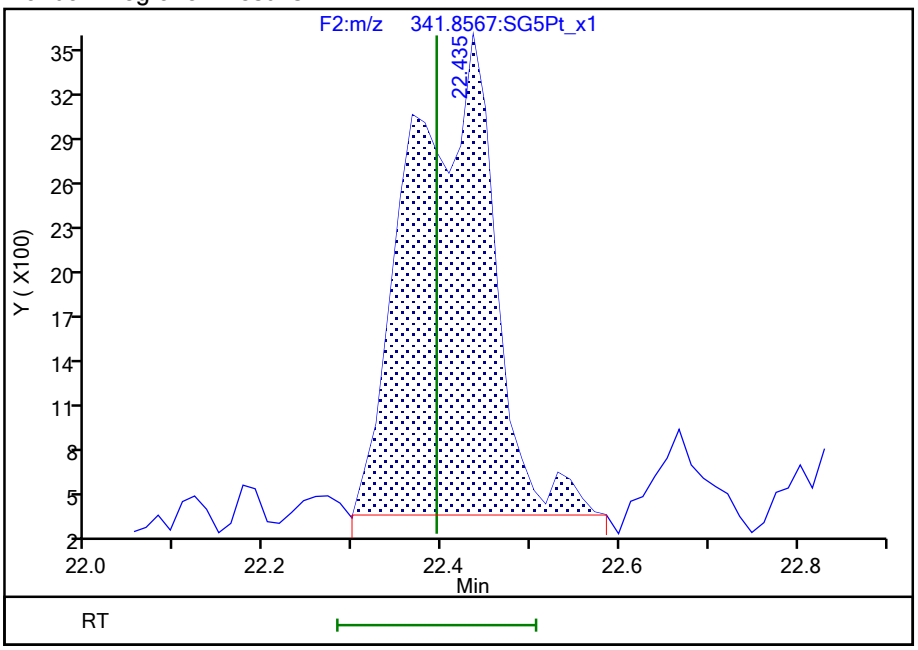

Reviewer: dadunj, 18-Aug-2021 11:37:37

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.41
Area: 33910
Amount: 0.132595
Amount Units: pg/ul

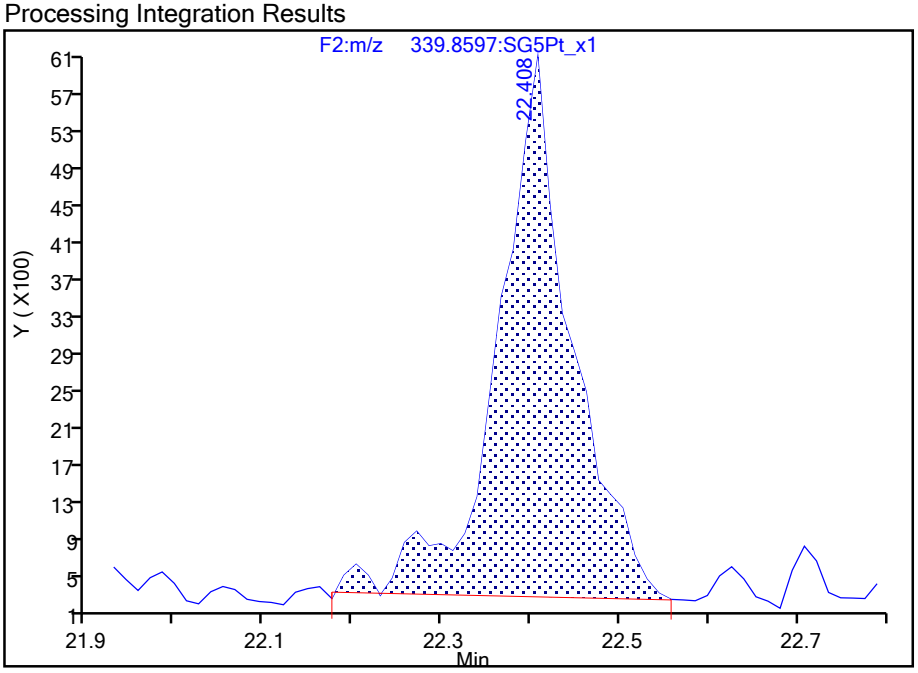

Manual Integration Results

RT: 22.41
Area: 31597
Amount: 0.125670
Amount Units: pg/ul

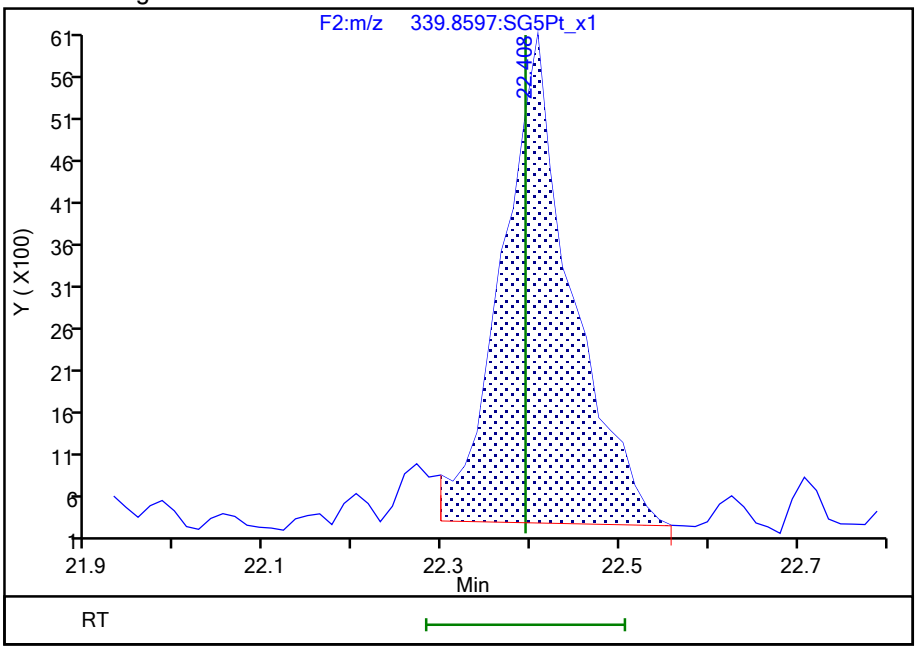

Reviewer: dadunj, 18-Aug-2021 11:37:40
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

775389

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.74
Area: 12575
Amount: 0.075788
Amount Units: pg/ul

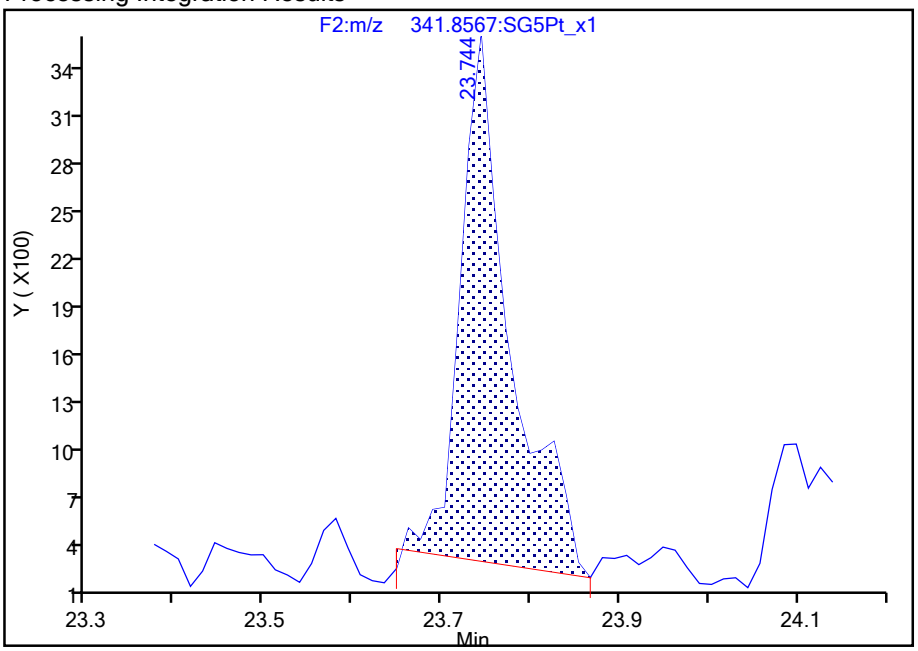

Manual Integration Results

RT: 23.74
Area: 11610
Amount: 0.073636
Amount Units: pg/ul

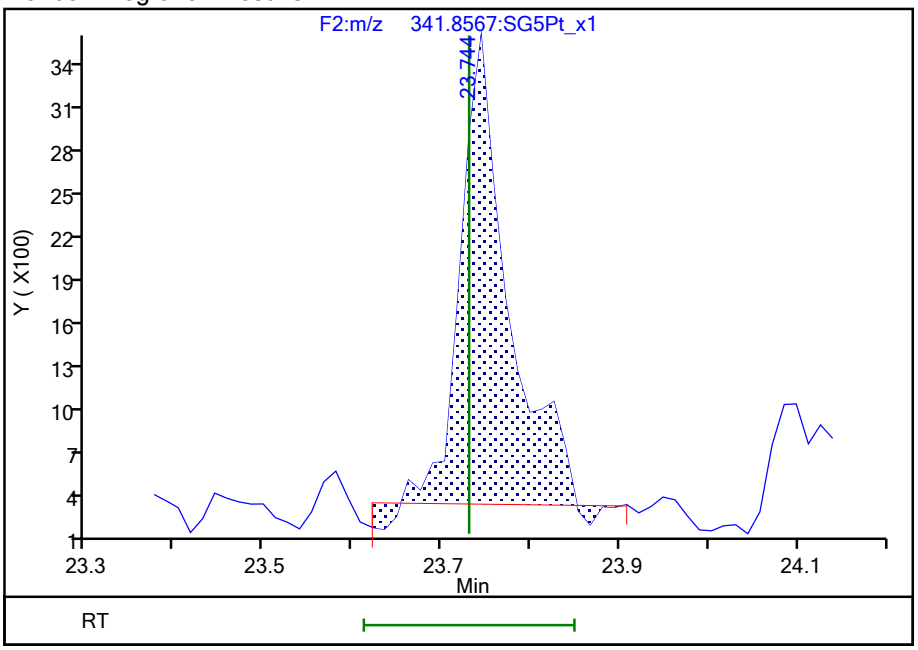

Reviewer: dadunj, 18-Aug-2021 11:37:47

Audit Action: Manually Integrated Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 2, m/z: 341.8567, RT: (20.77- 25.71)

Signal: 2

Processing Integration Results

RT = 21.031 Area = 9644

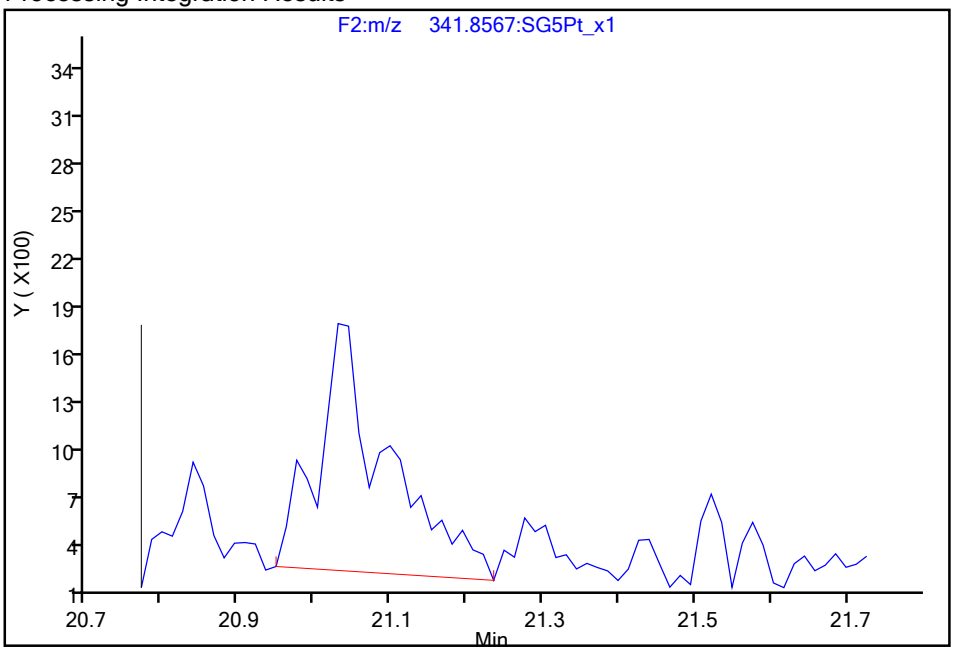

Manual Integration Results

RT = 21.031 Area = 7681 M

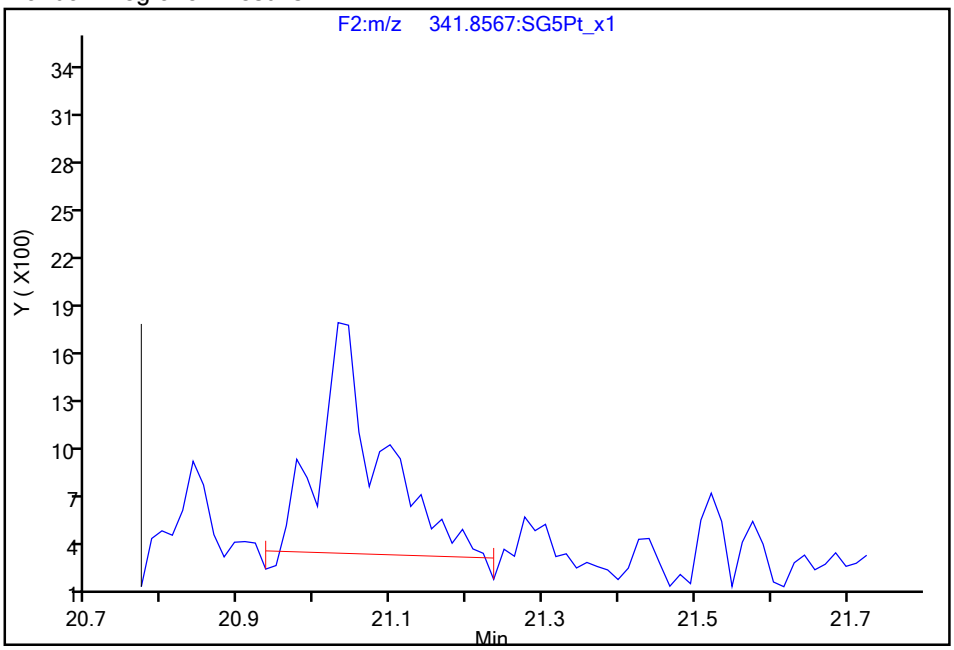

Reviewer: dadunj, 18-Aug-2021 11:37:57

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.21- 25.49)

Signal: 2

Processing Integration Results

RT = 22.012 Area = 71451

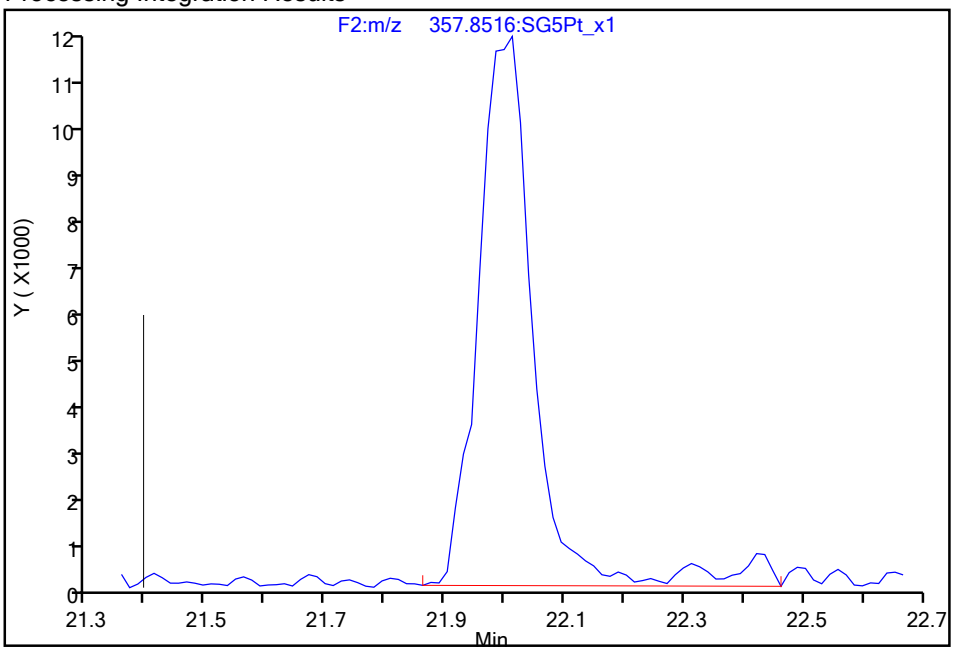

Manual Integration Results

RT = 22.012 Area = 66935 M

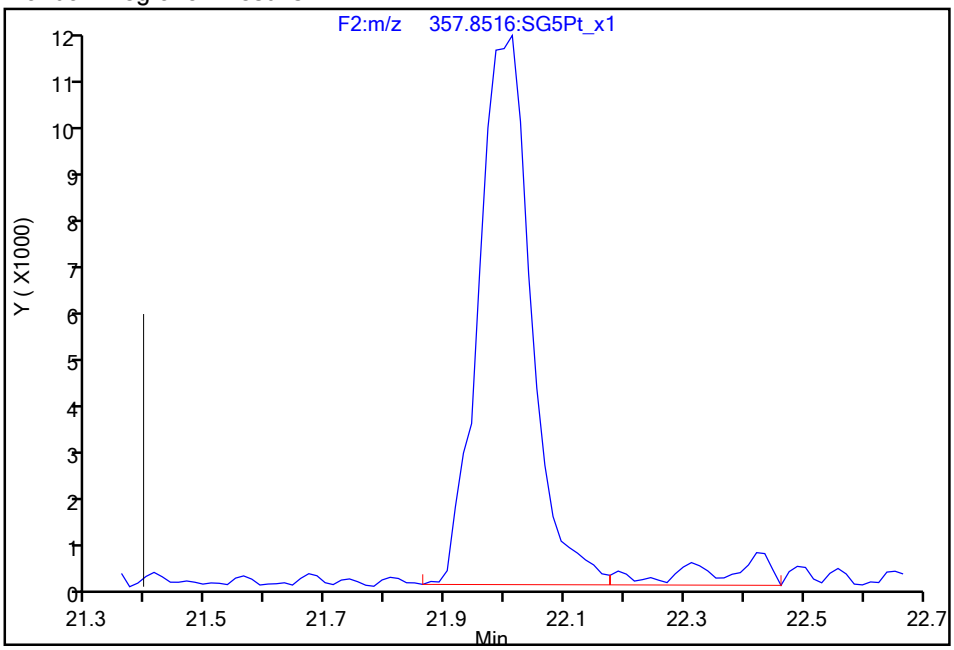

Reviewer: dadunj, 18-Aug-2021 11:38:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.54
Area: 9132
Amount: 0.046775
Amount Units: pg/ul

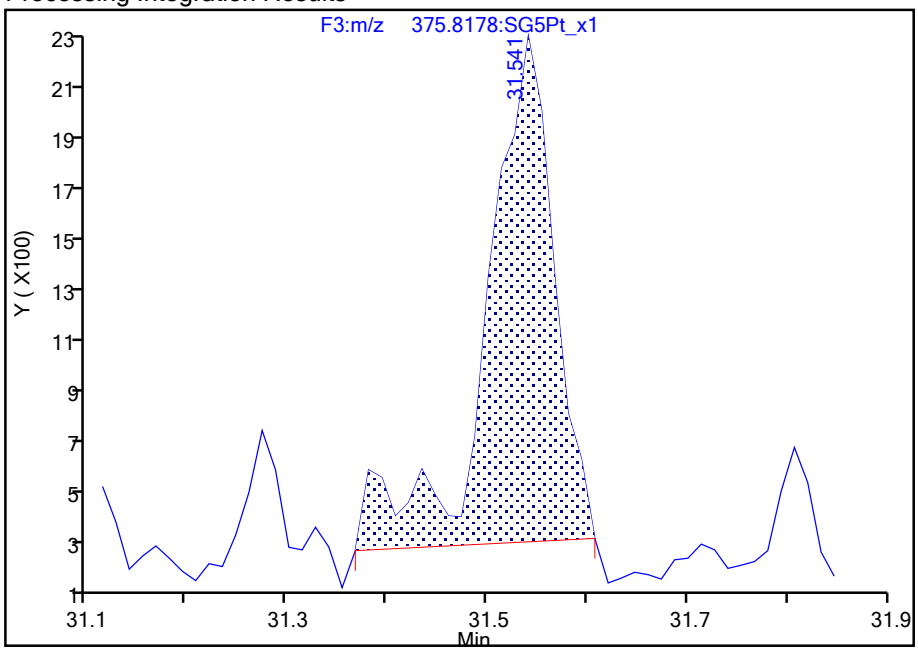

Manual Integration Results

RT: 31.54
Area: 7983
Amount: 0.043921
Amount Units: pg/ul

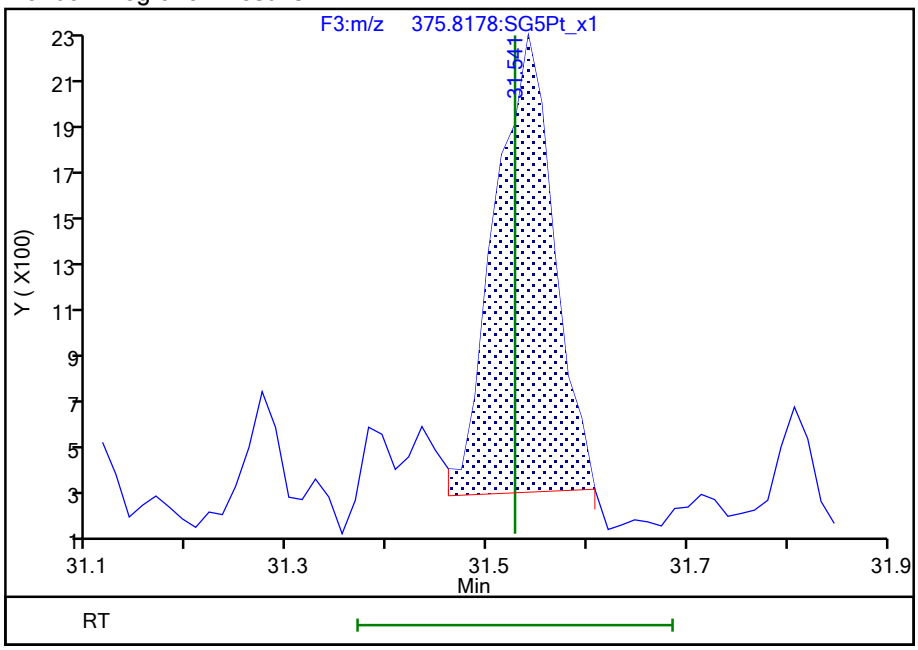

Reviewer: dadunj, 18-Aug-2021 11:38:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.34
Area: 16564
Amount: 0.099046
Amount Units: pg/ul

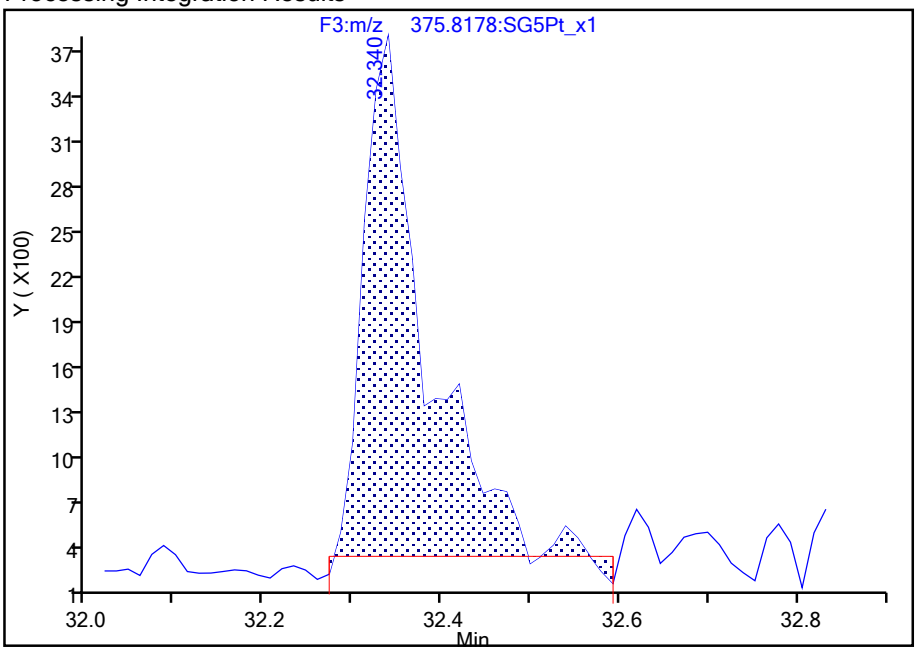

Manual Integration Results

RT: 32.34
Area: 12557
Amount: 0.080817
Amount Units: pg/ul

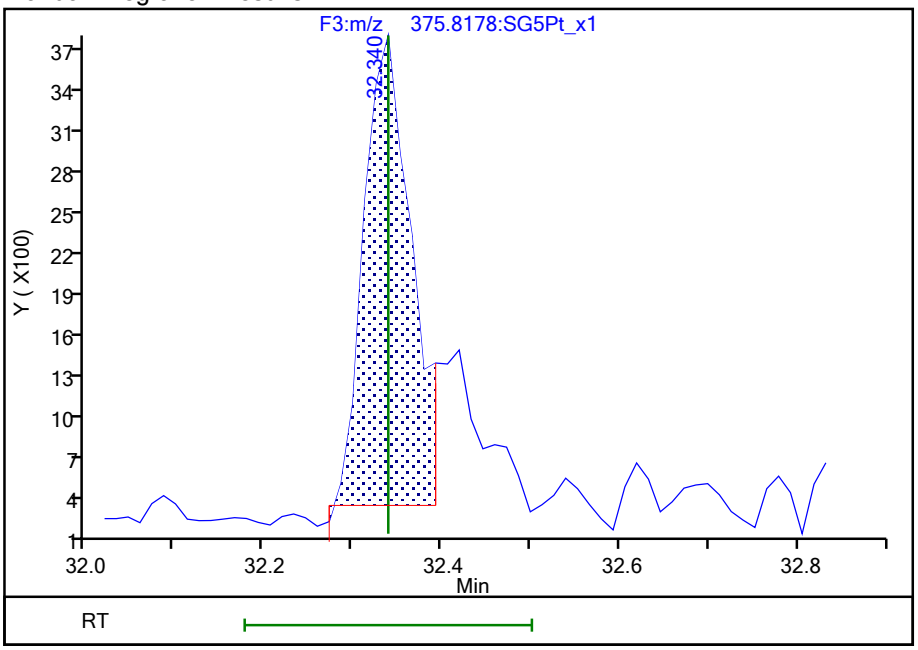

Reviewer: dadunj, 18-Aug-2021 11:38:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.33
Area: 19111
Amount: 0.099046
Amount Units: pg/ul

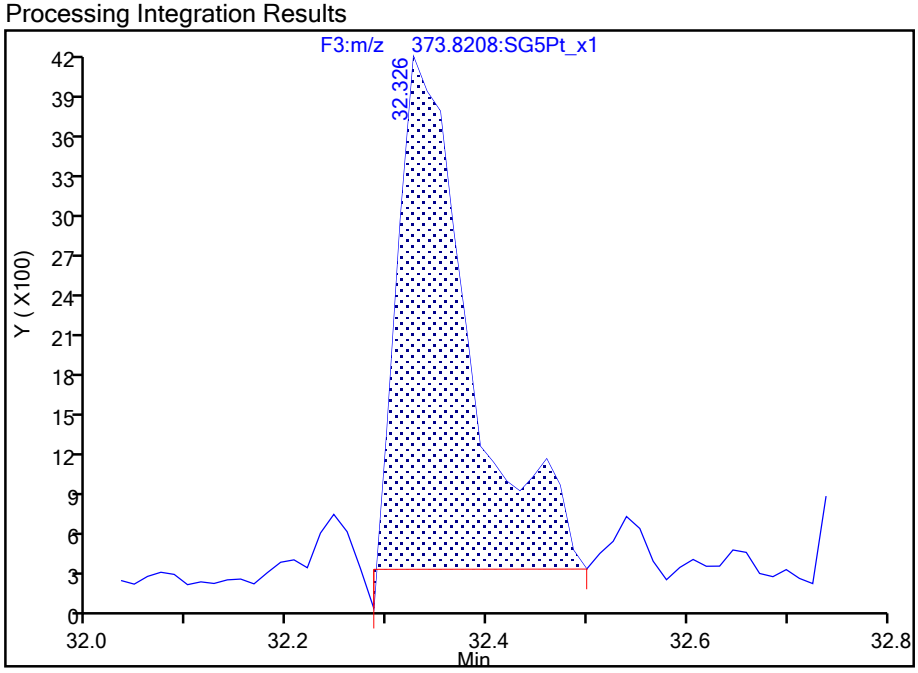

Manual Integration Results

RT: 32.33
Area: 16552
Amount: 0.080817
Amount Units: pg/ul

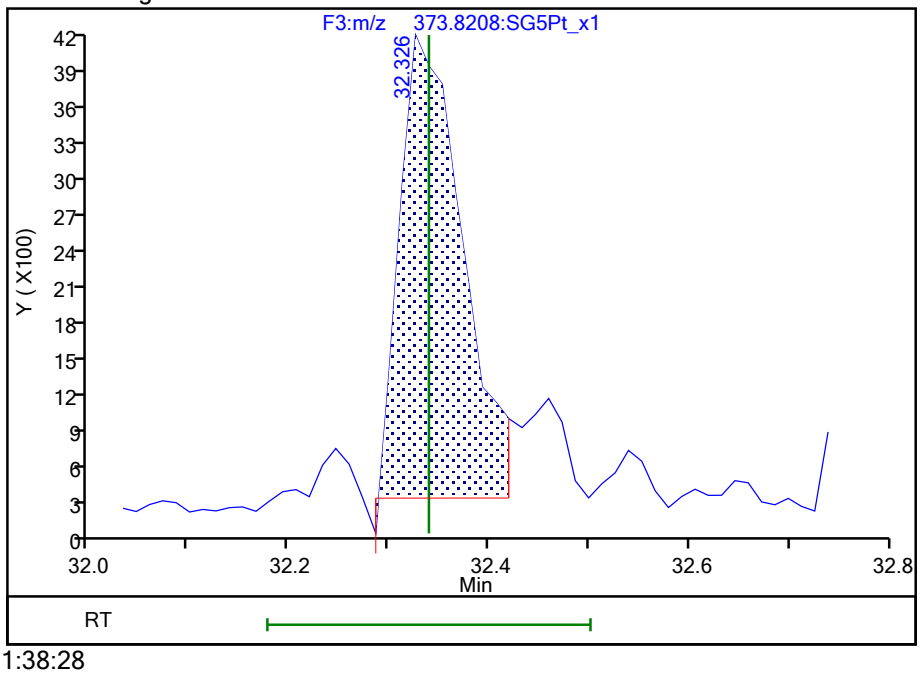

Reviewer: dadunj, 18-Aug-2021 11:38:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.73
Area: 27267
Amount: 0.150894
Amount Units: pg/ul

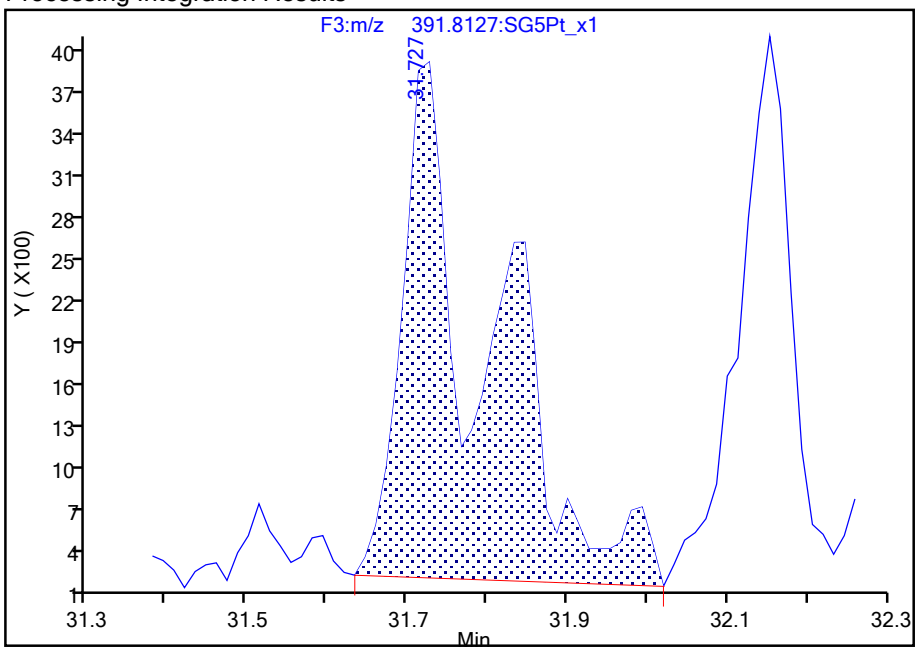

Manual Integration Results

RT: 31.73
Area: 13625
Amount: 0.104822
Amount Units: pg/ul

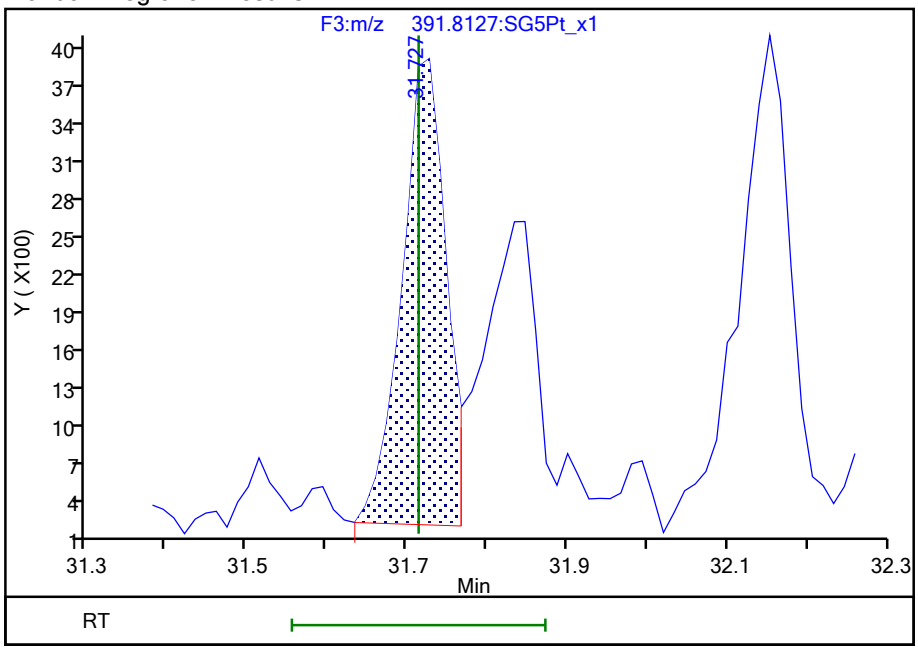

Reviewer: dadunj, 18-Aug-2021 11:38:38

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.73
Area: 17413
Amount: 0.149581
Amount Units: pg/ul

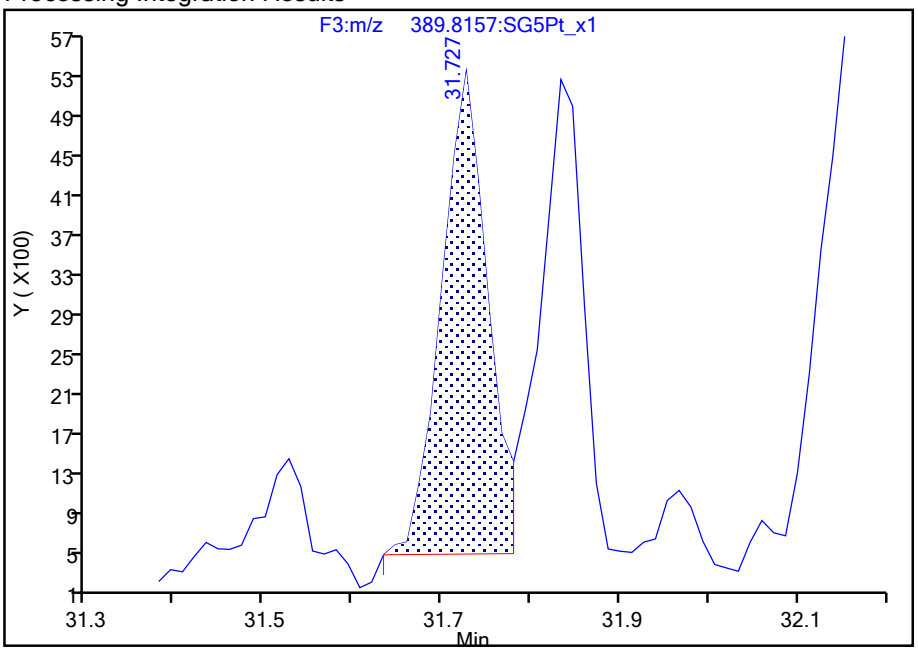

Manual Integration Results

RT: 31.83
Area: 15797
Amount: 0.087854
Amount Units: pg/ul

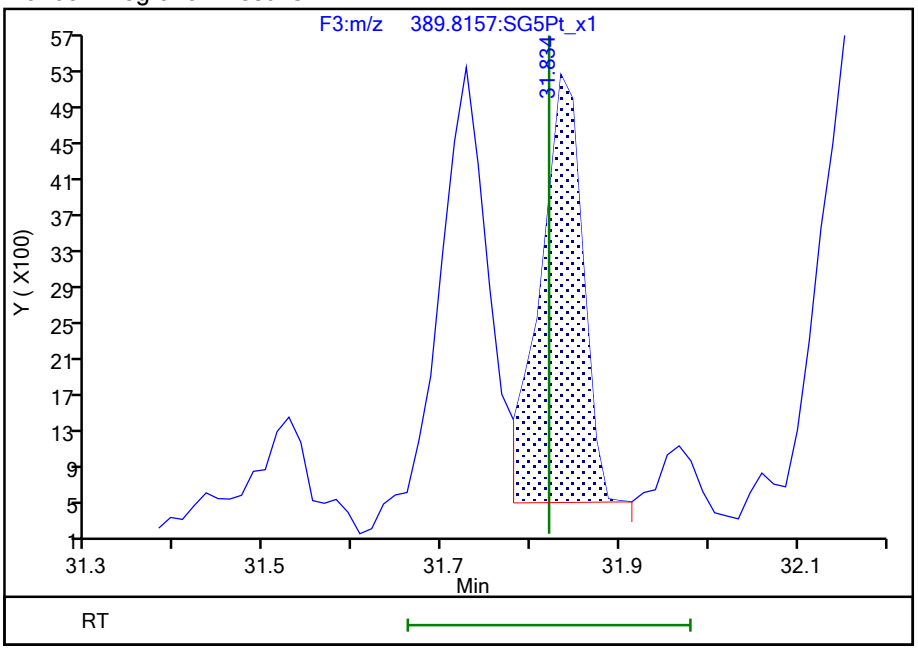

Reviewer: dadunj, 18-Aug-2021 11:38:41

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

775397

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.73
Area: 27267
Amount: 0.149581
Amount Units: pg/ul

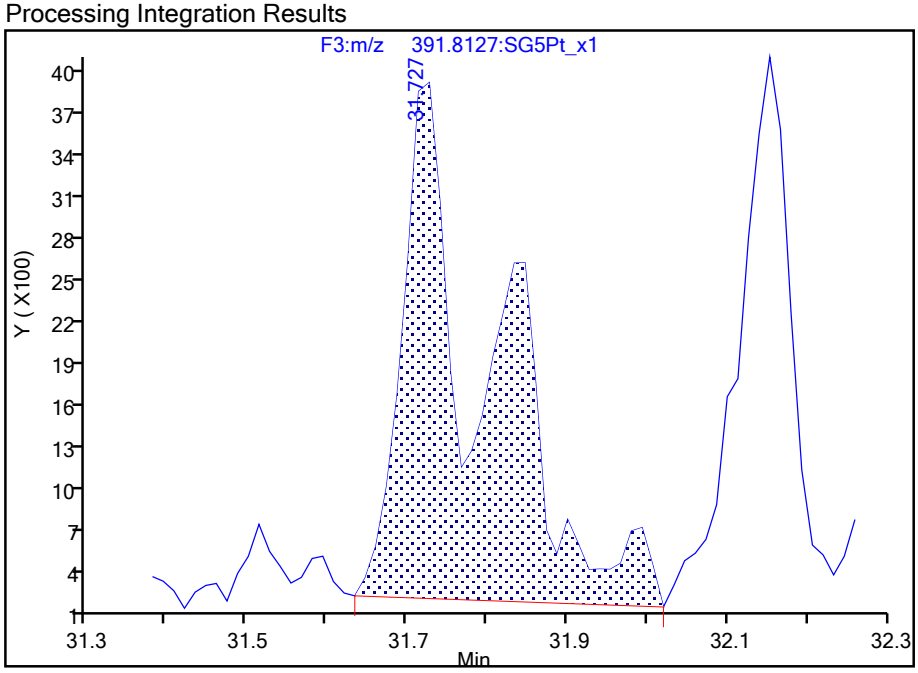

Manual Integration Results

RT: 31.85
Area: 10445
Amount: 0.087854
Amount Units: pg/ul

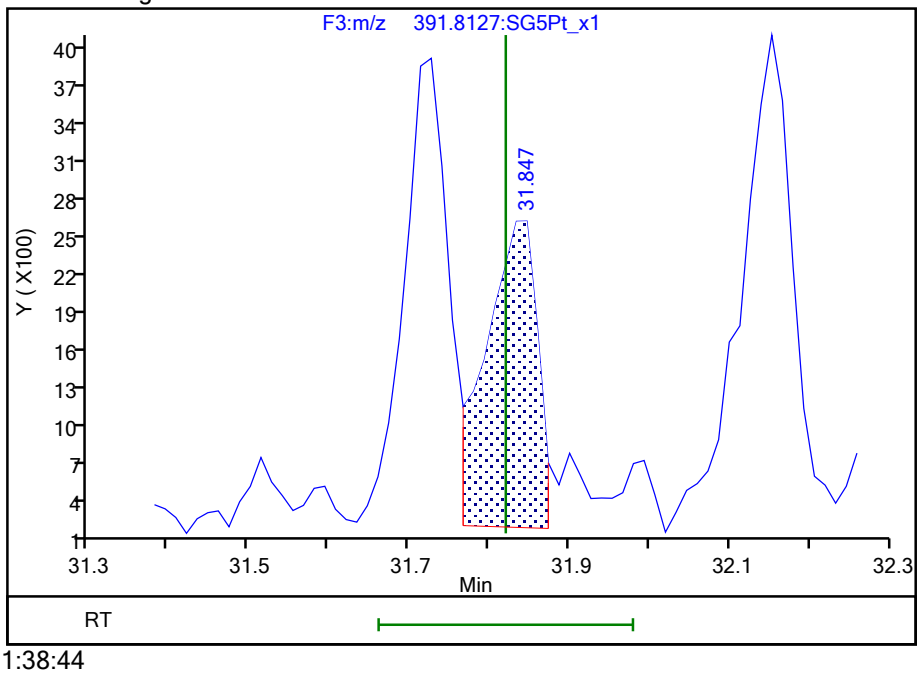

Reviewer: dadunj, 18-Aug-2021 11:38:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.78
Area: 33851
Amount: 0.182350
Amount Units: pg/ul

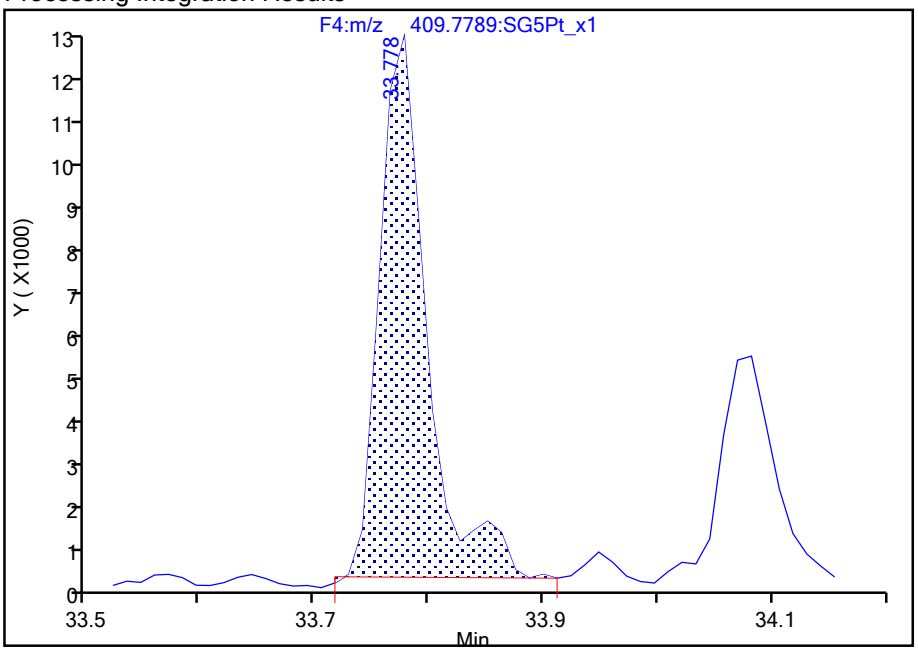

Manual Integration Results

RT: 33.78
Area: 31669
Amount: 0.176813
Amount Units: pg/ul

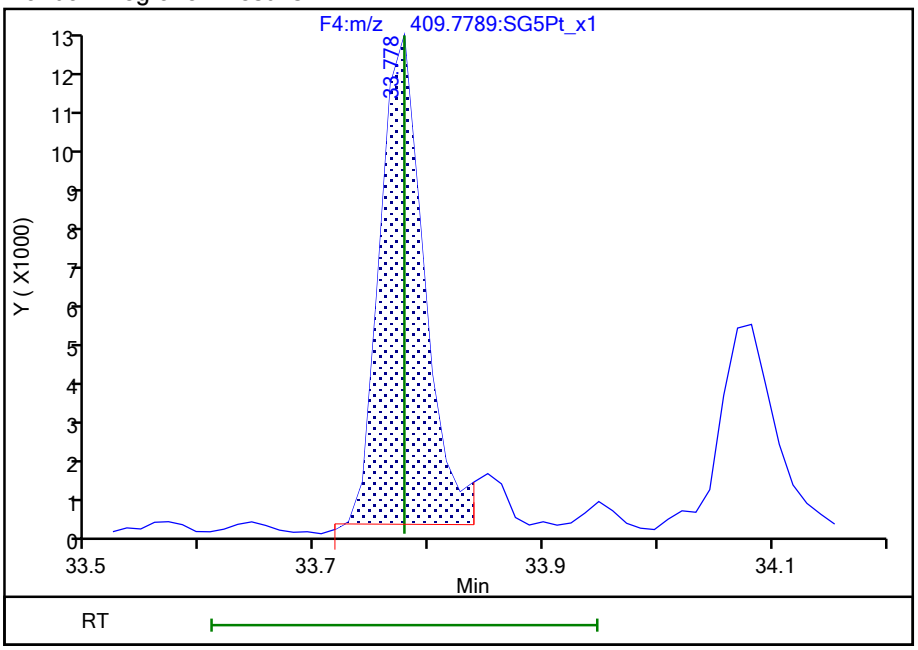

Reviewer: dadunj, 18-Aug-2021 11:38:50

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7818, RT: (33.75- 34.89)

Signal: 1

Processing Integration Results

RT = 34.070 Area = 16587

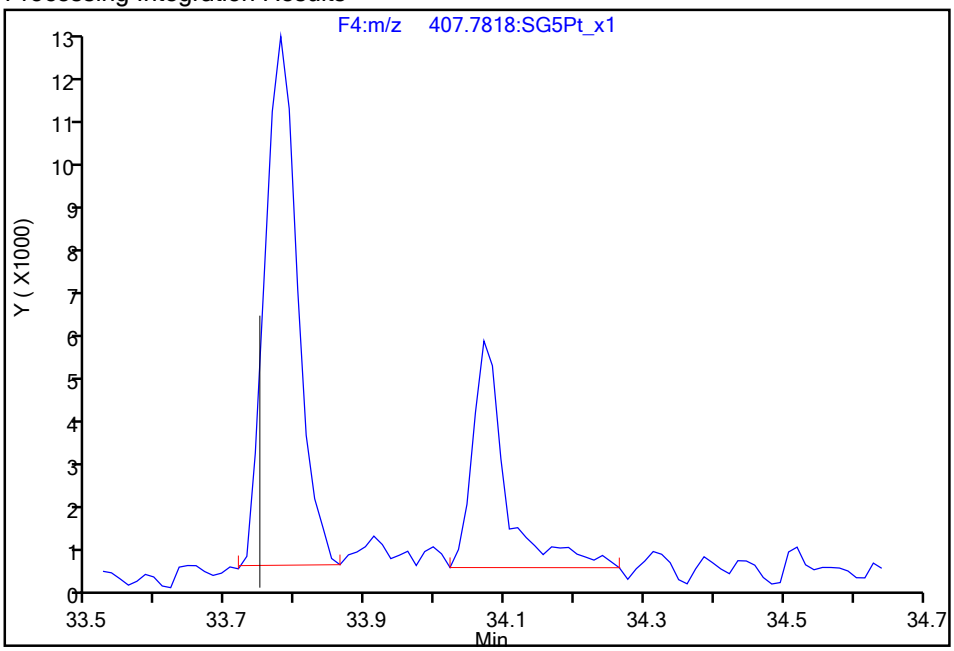

Manual Integration Results

RT = 34.070 Area = 14695 M

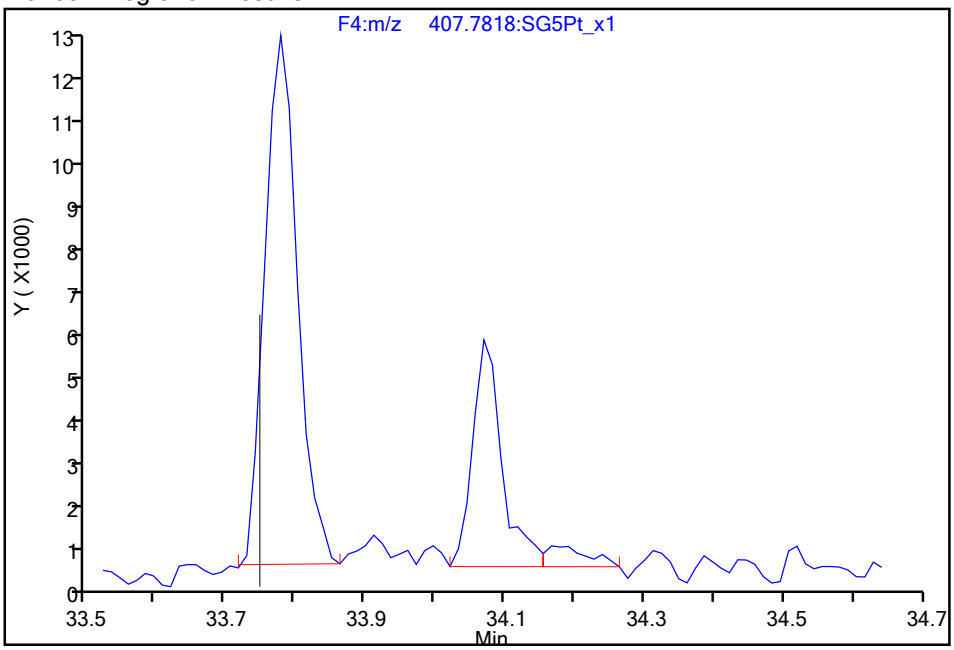

Reviewer: dadunj, 18-Aug-2021 11:38:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.02
Area: 20721
Amount: 0.168061
Amount Units: pg/ul

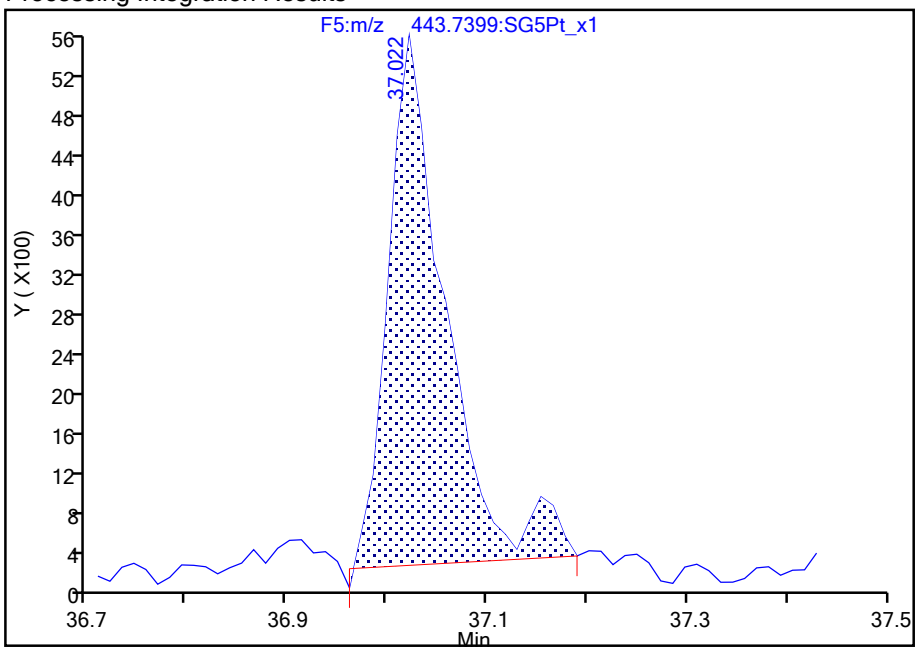

Manual Integration Results

RT: 37.02
Area: 19496
Amount: 0.156463
Amount Units: pg/ul

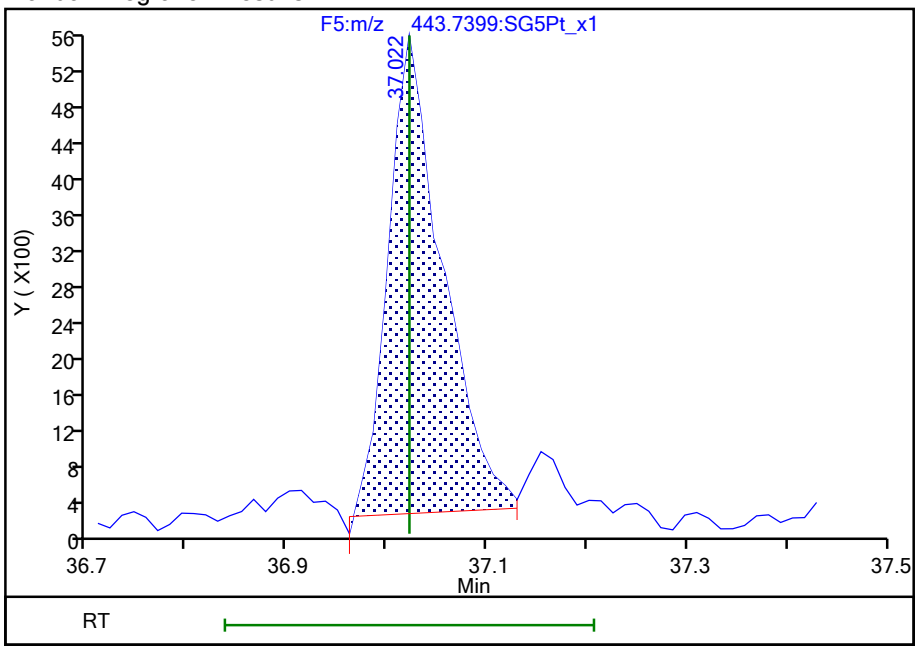

Reviewer: dadunj, 18-Aug-2021 11:39:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d				
Injection Date:	15-Aug-2021 18:12:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:	DB	ALS Bottle#:	63	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.01
Area: 23028
Amount: 0.168061
Amount Units: pg/ul

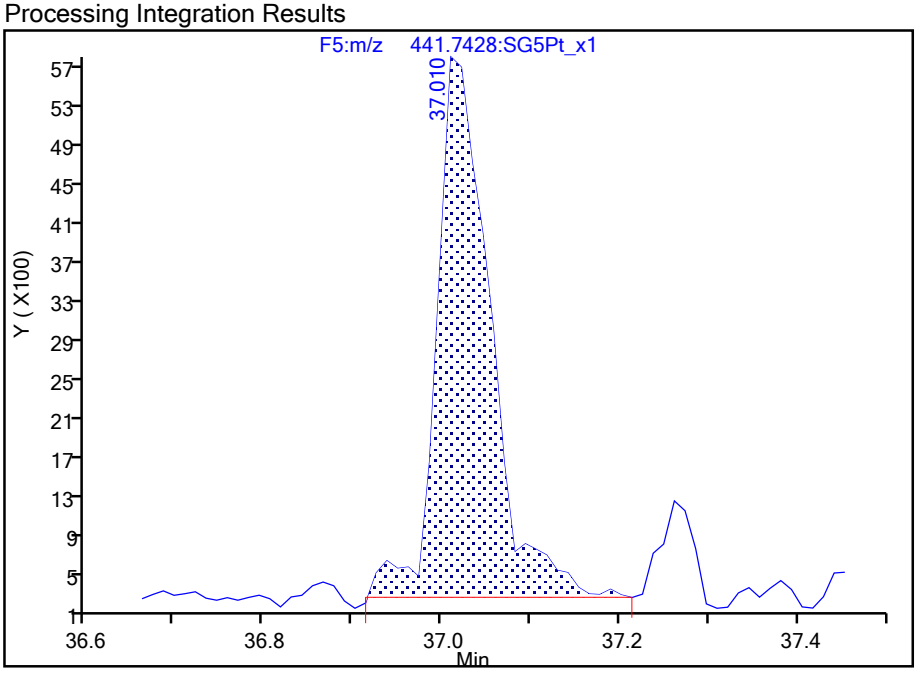

Manual Integration Results

RT: 37.01
Area: 21234
Amount: 0.156463
Amount Units: pg/ul

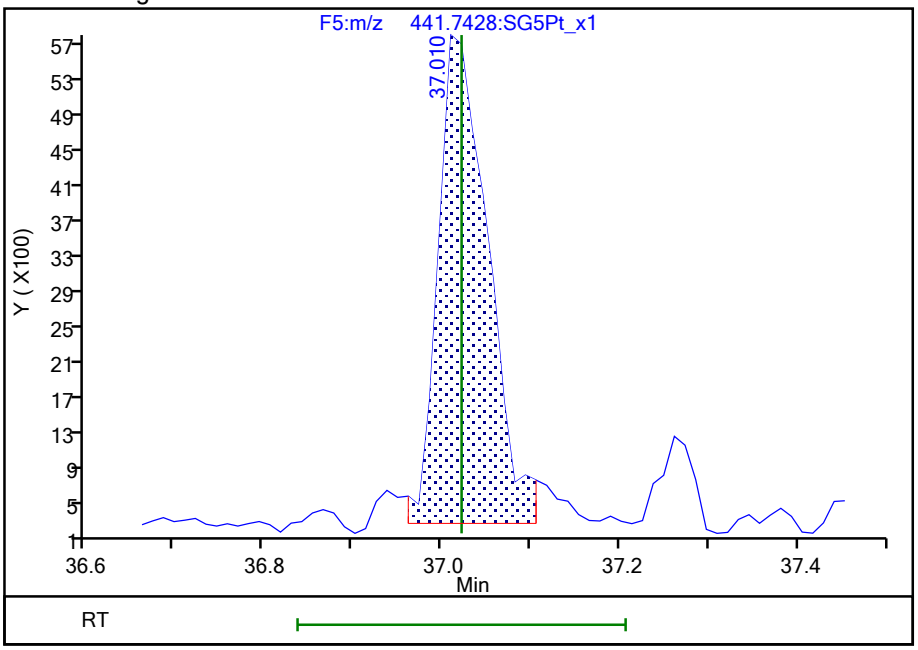

Reviewer: dadunj, 18-Aug-2021 11:39:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

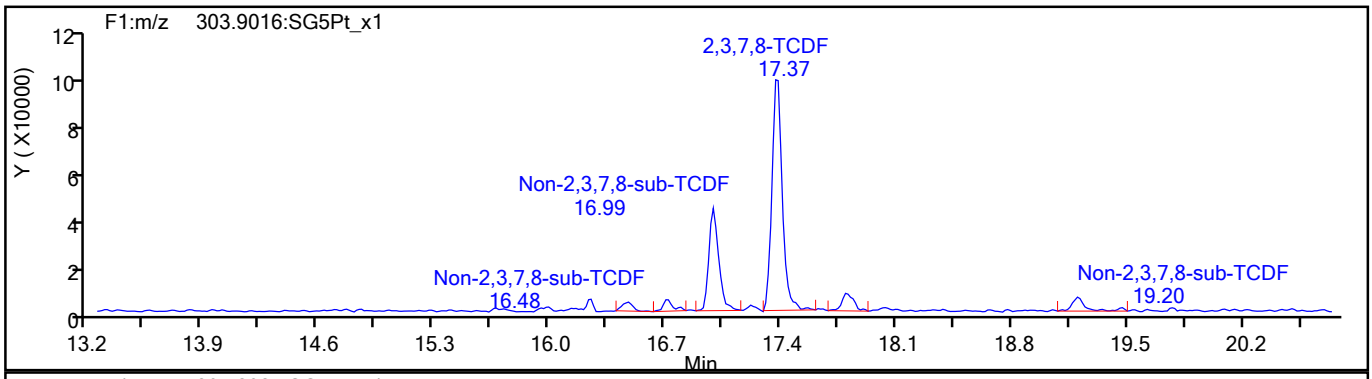

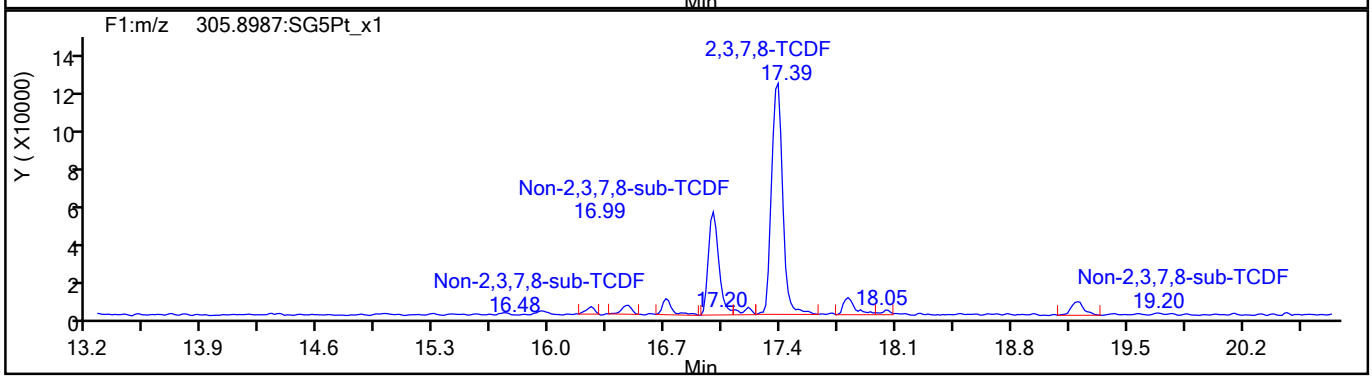

TCDF Standards

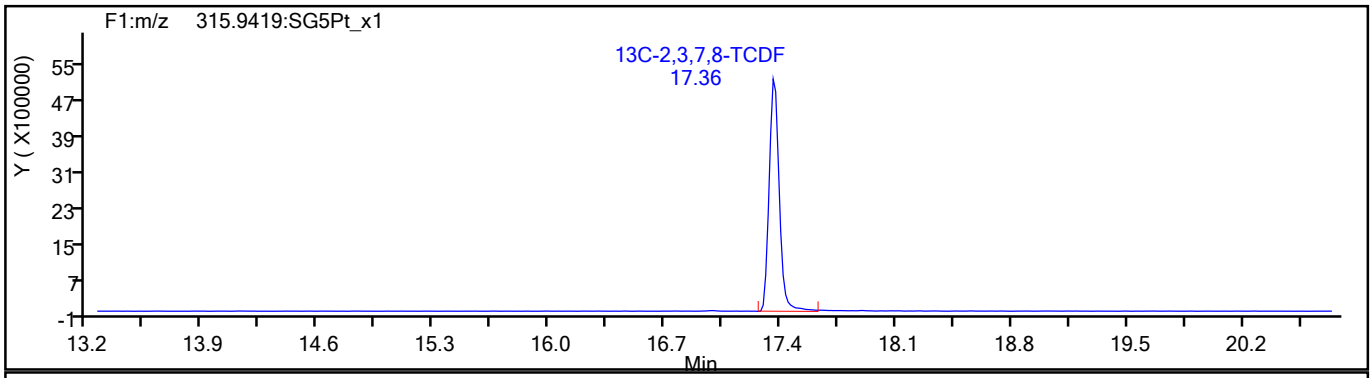

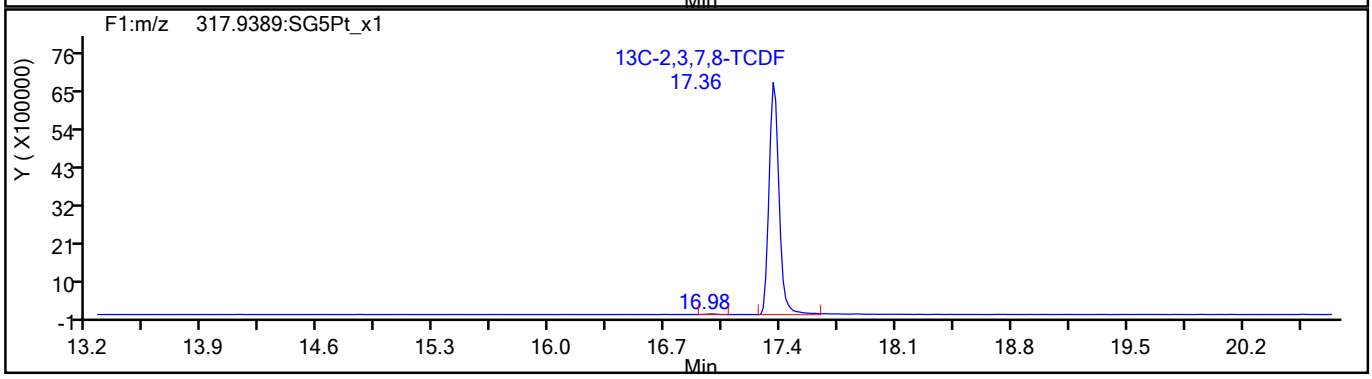

775403

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

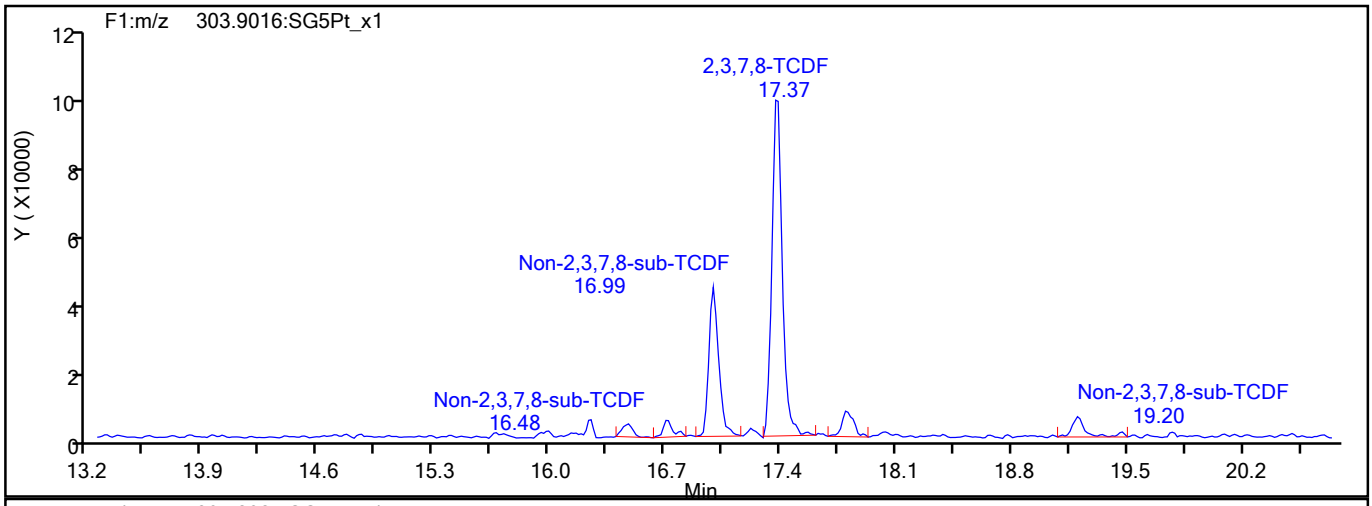

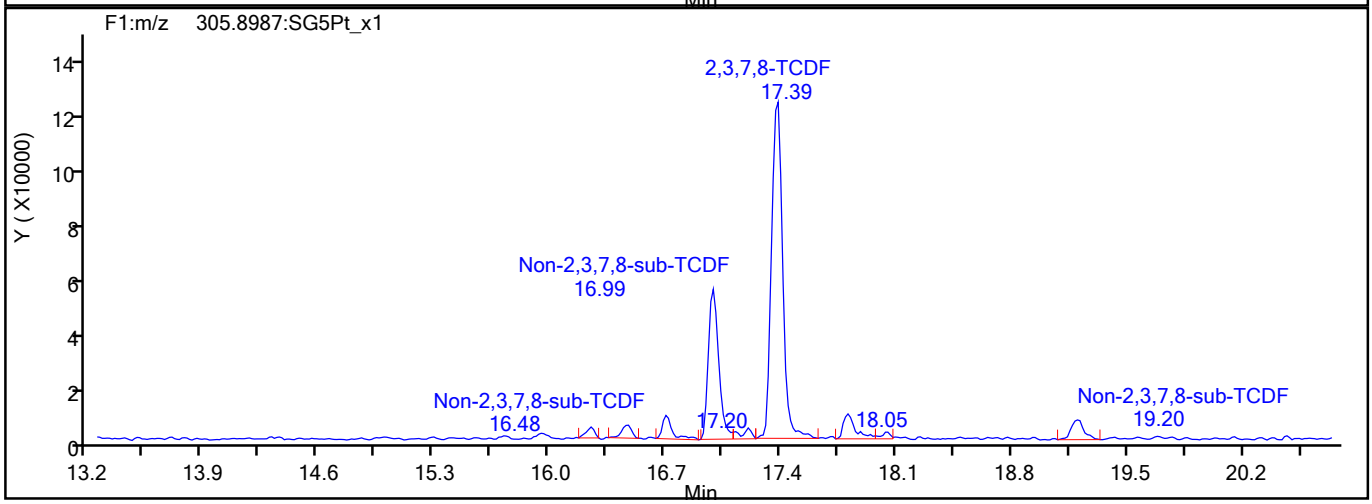

TCDF Interference Mass

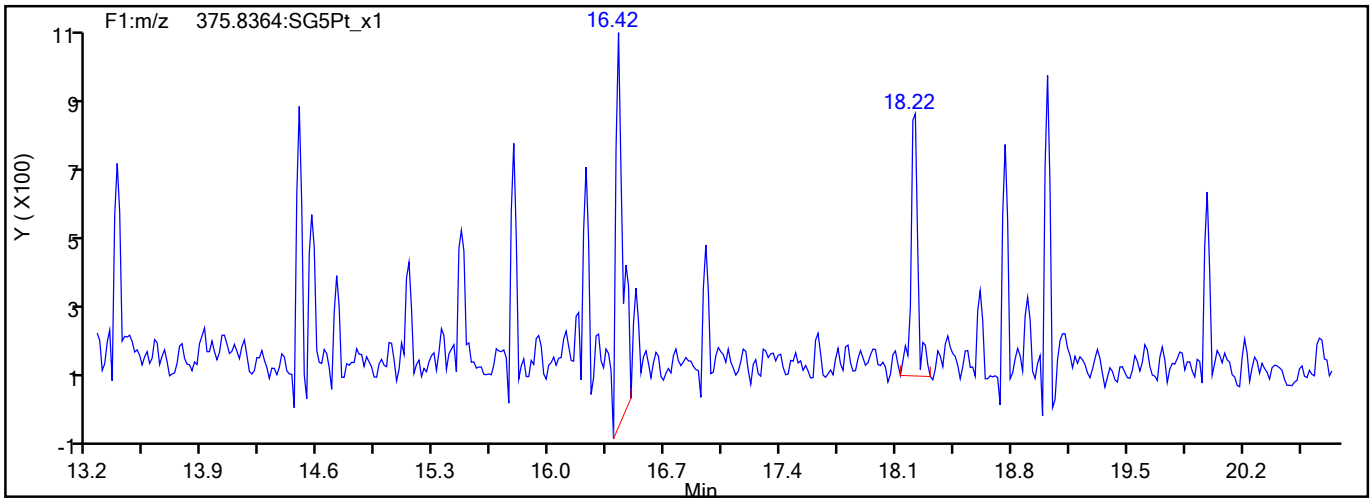

775404

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

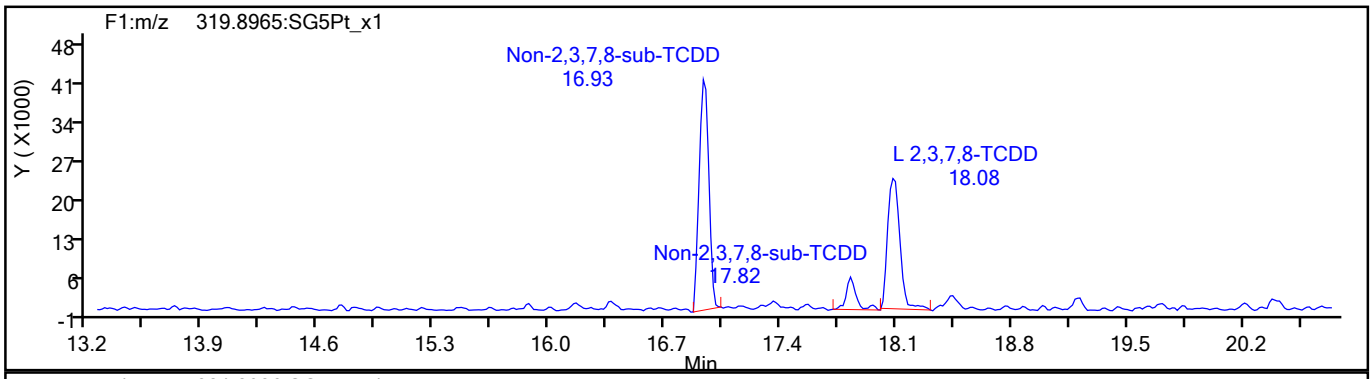

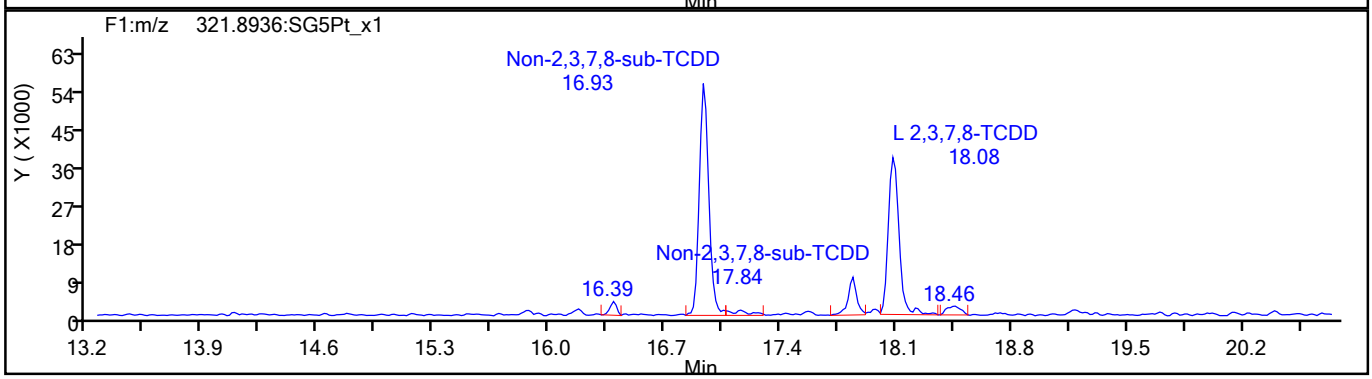

TCDD Standards

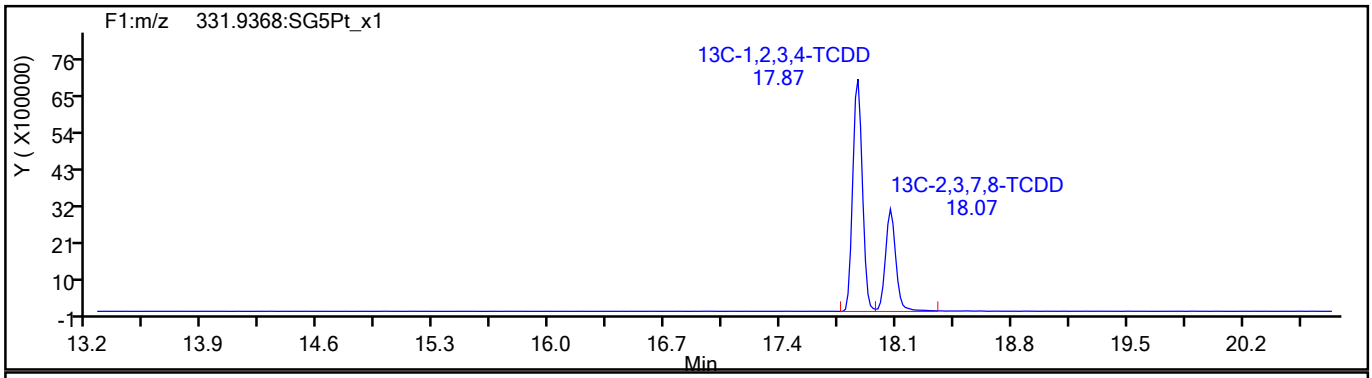

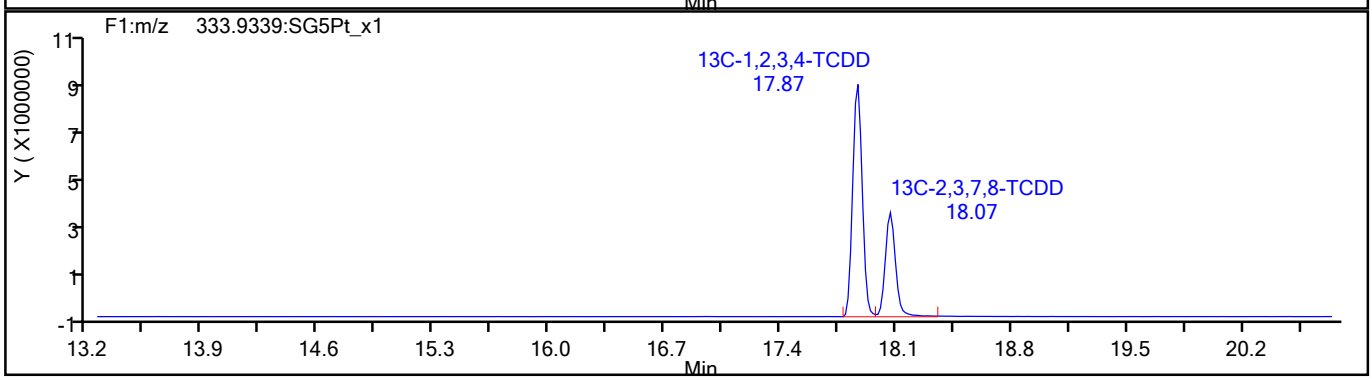

775405

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

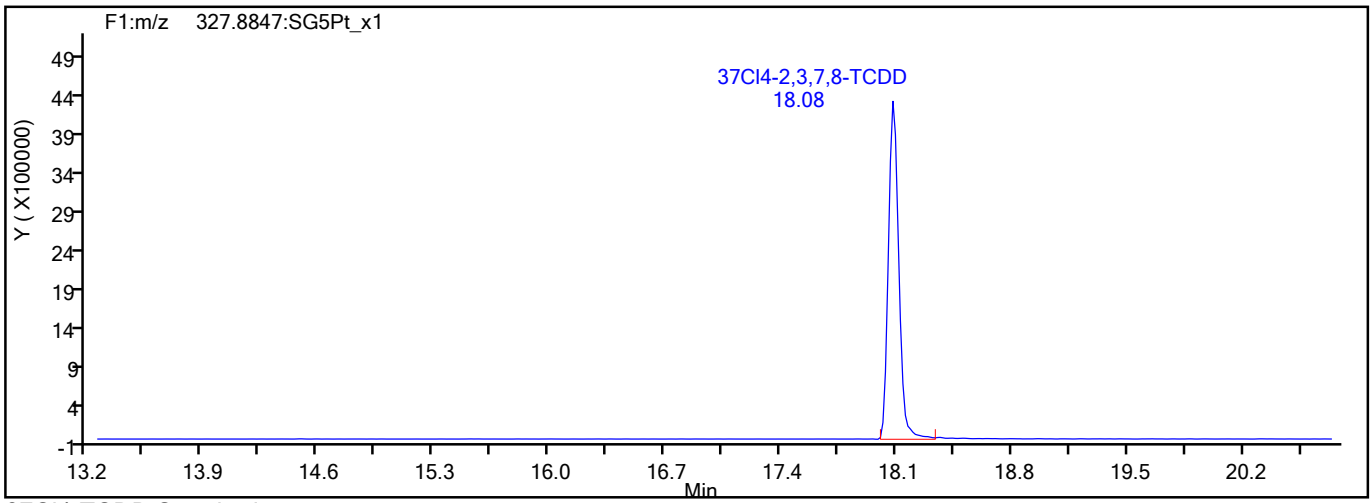

37Cl4-TCDD Standards

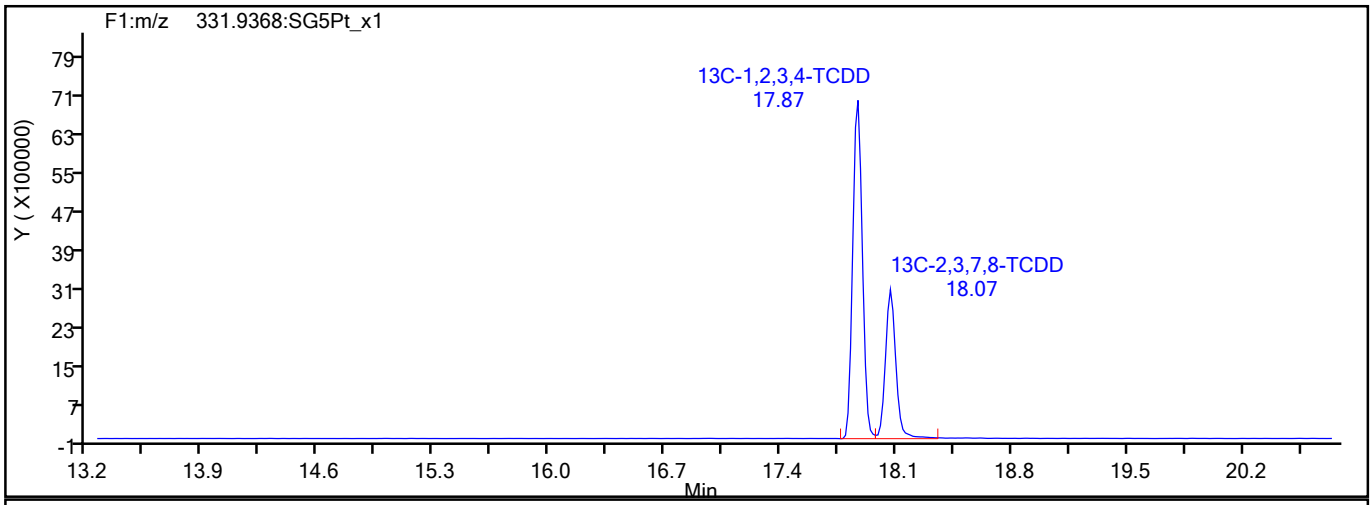

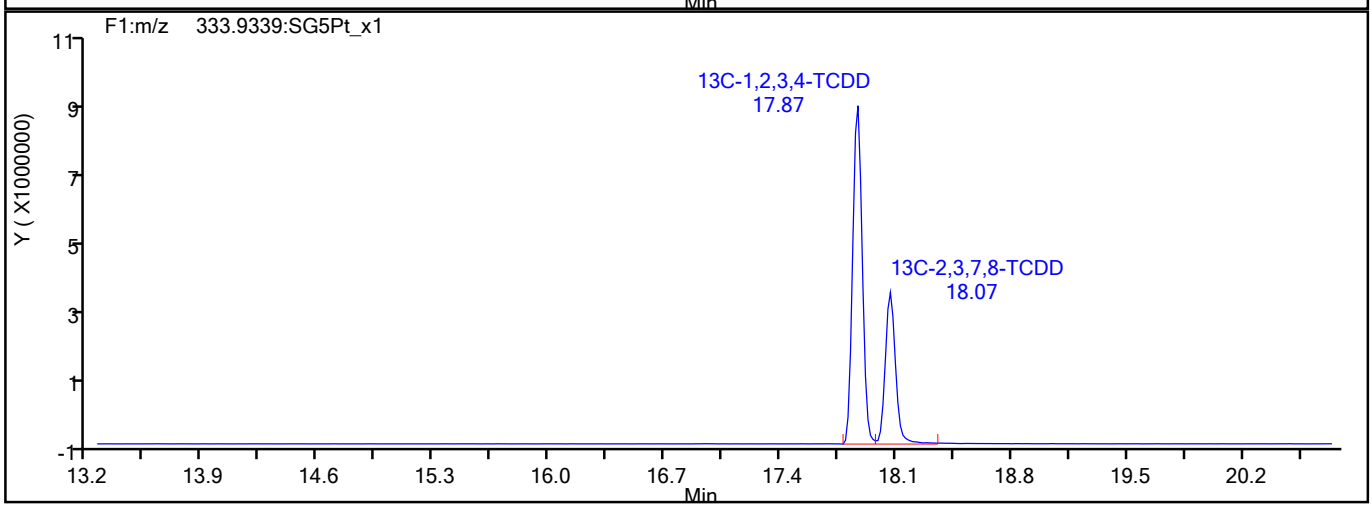

775406

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

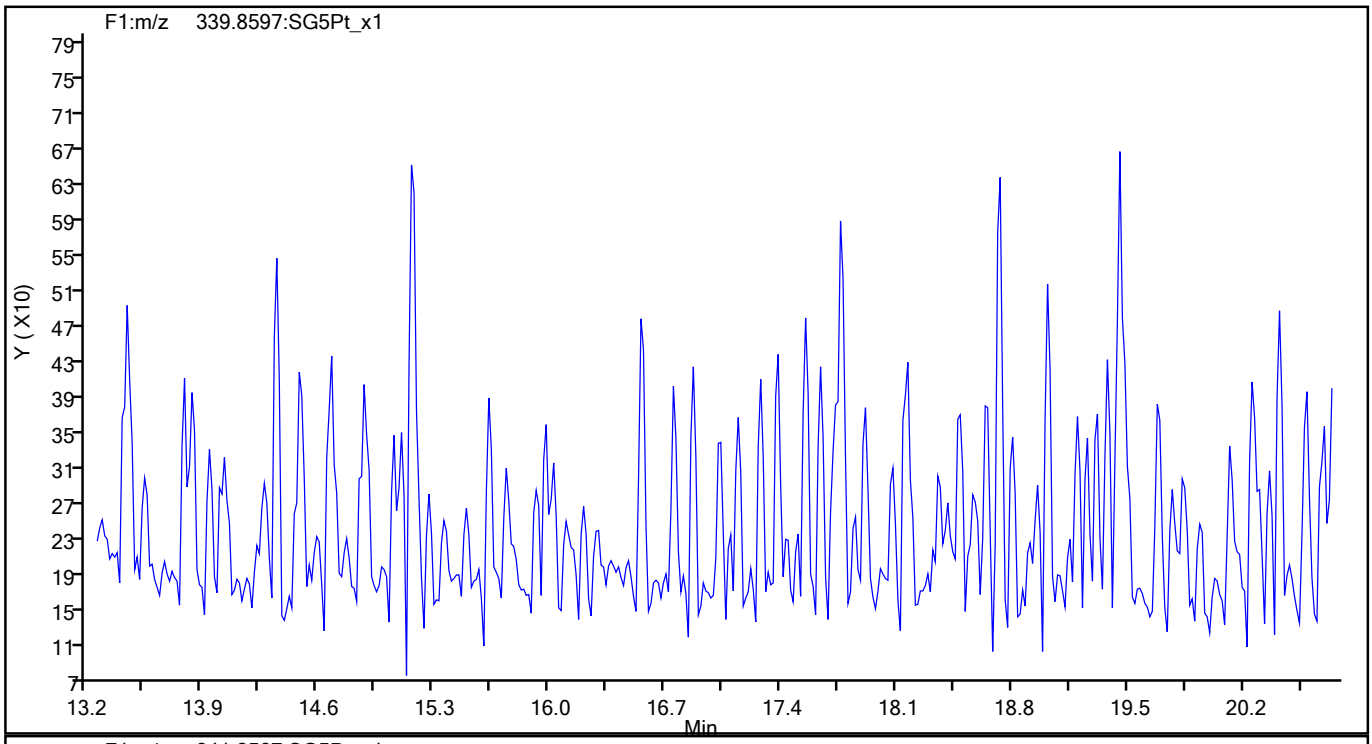

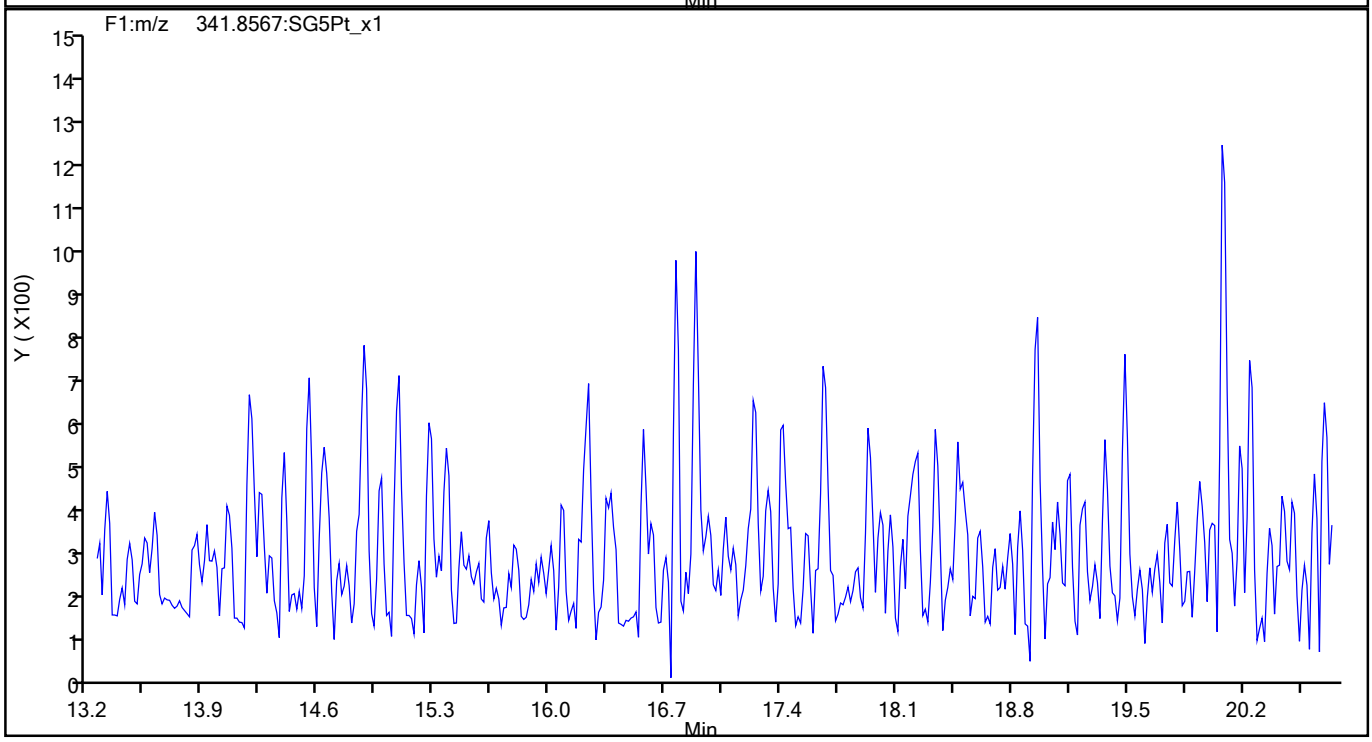

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

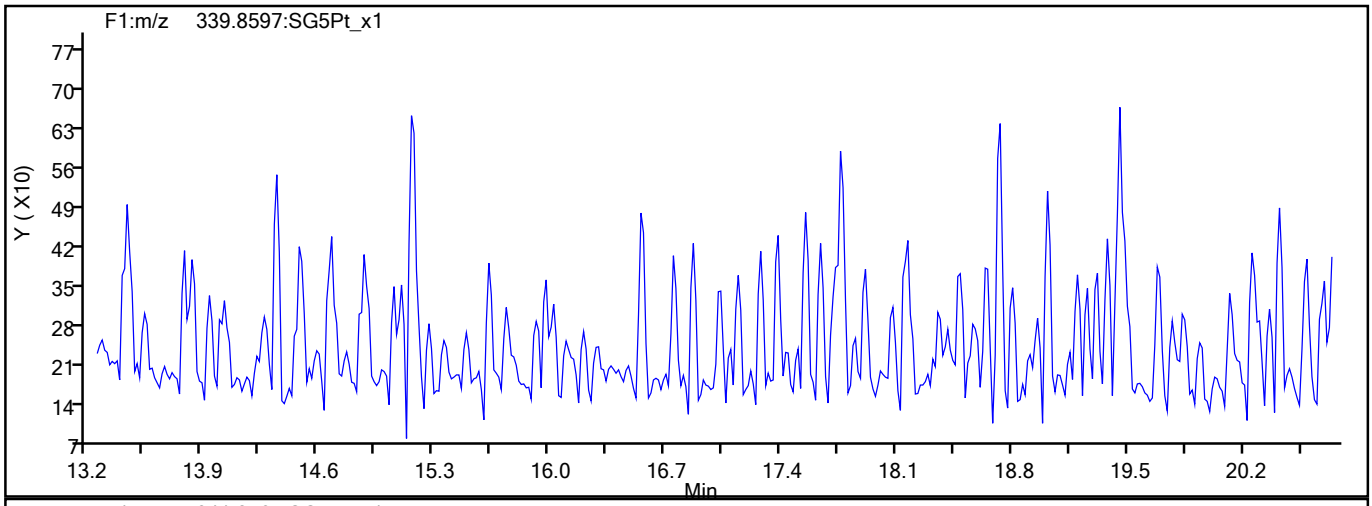

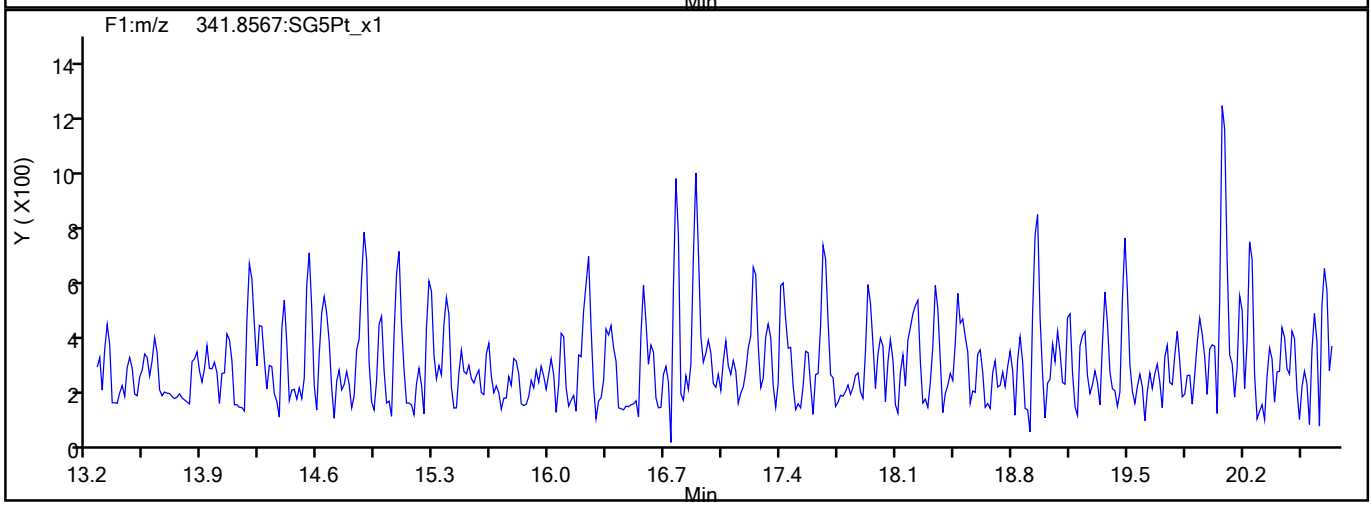

F1 PeCDFs Interference Mass

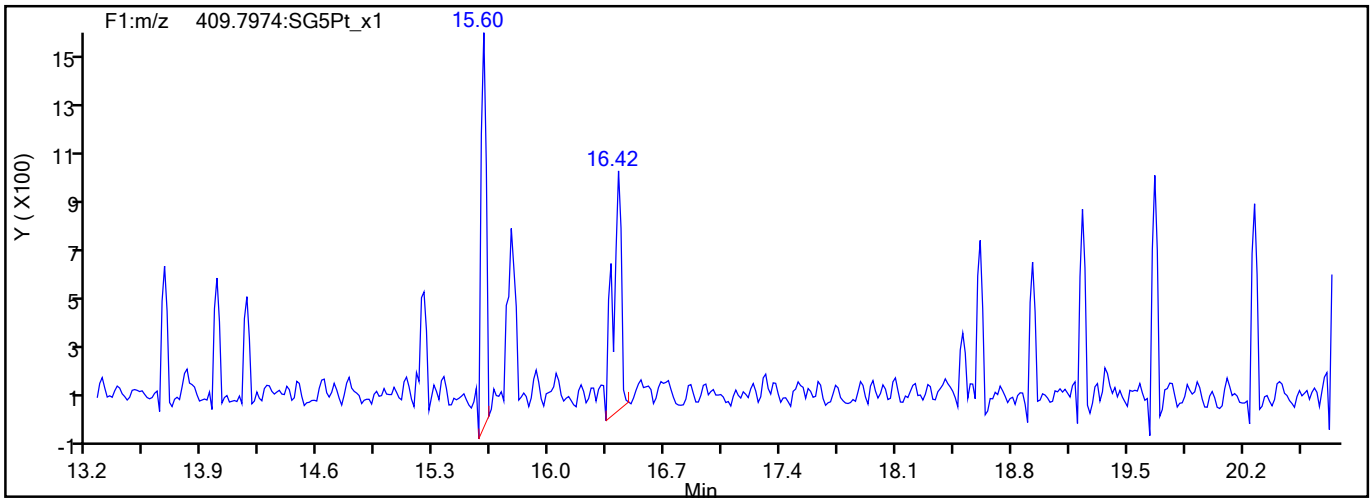

775408

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

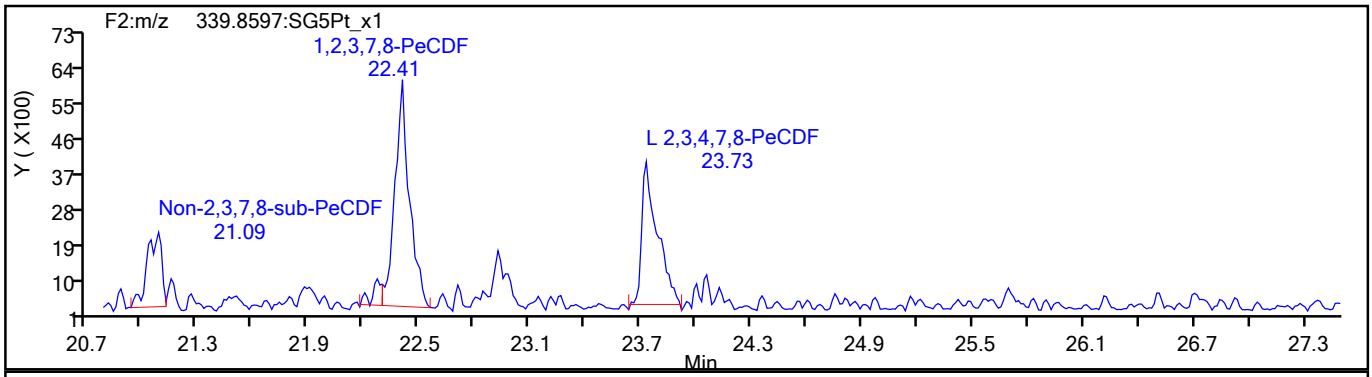

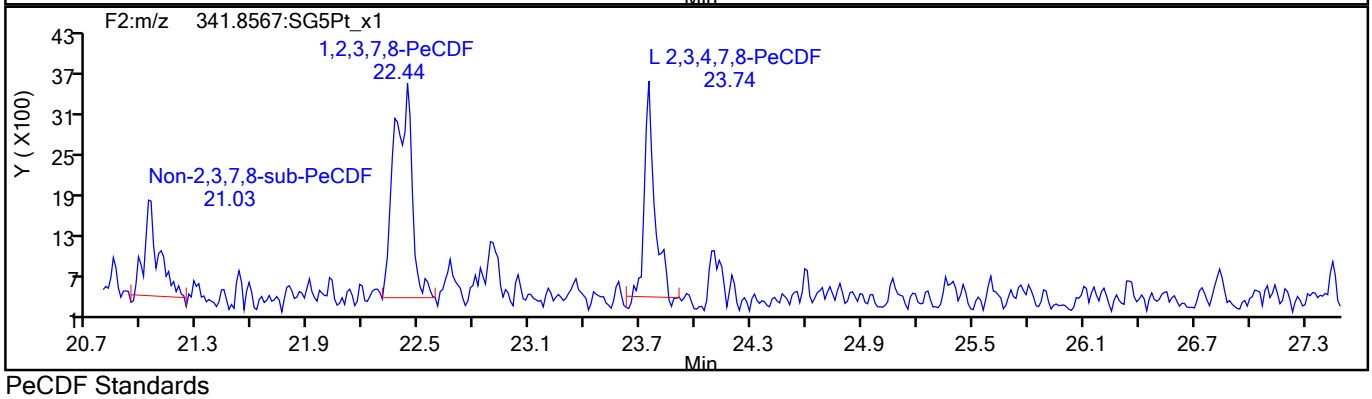

PeCDF Standards

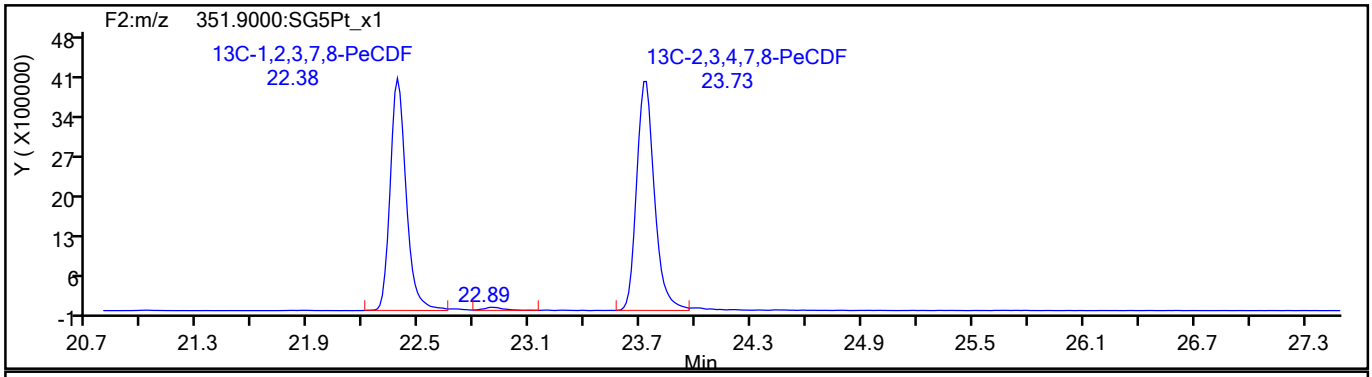

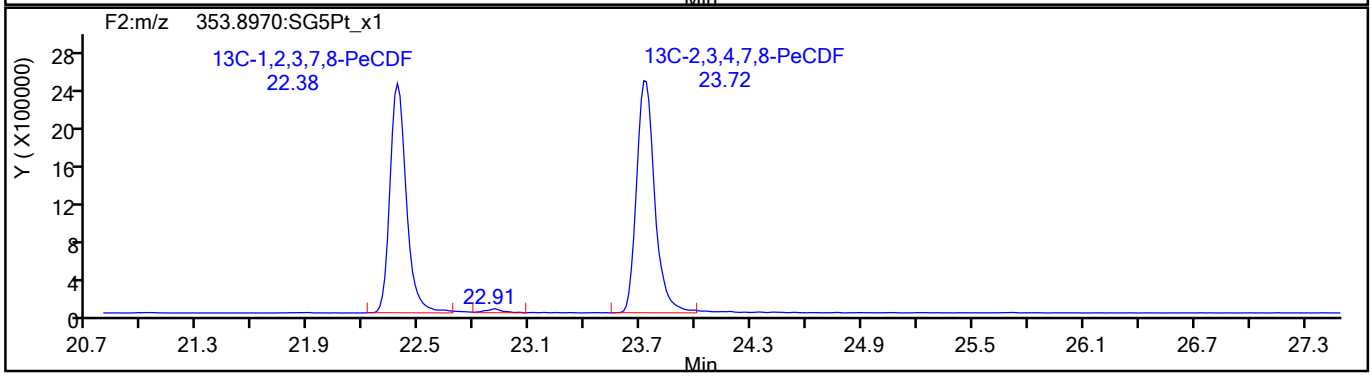

775409

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

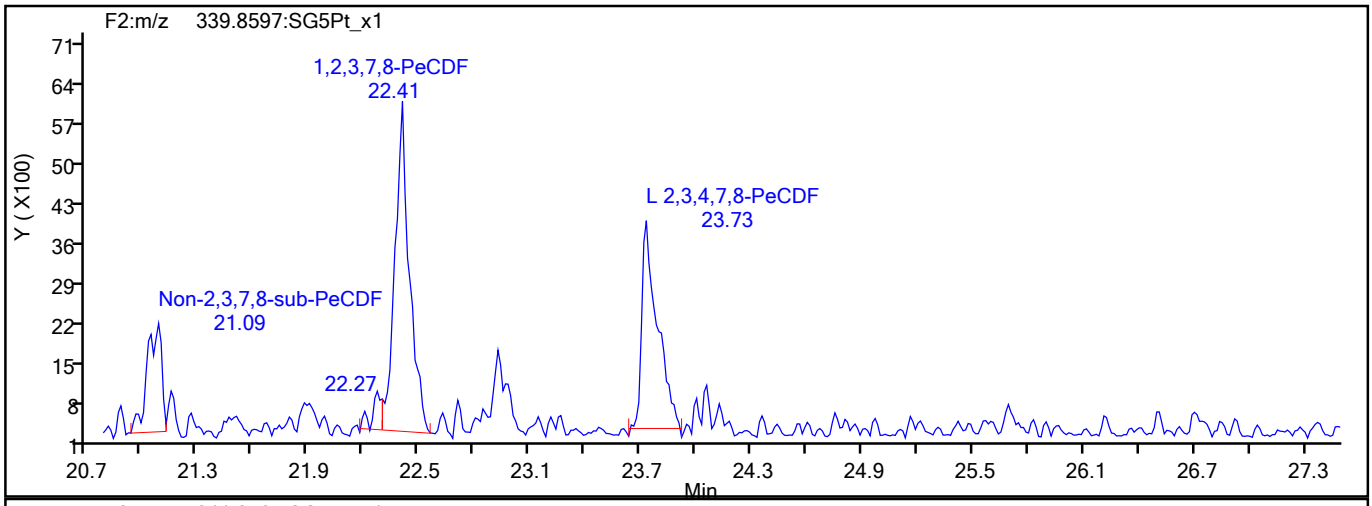

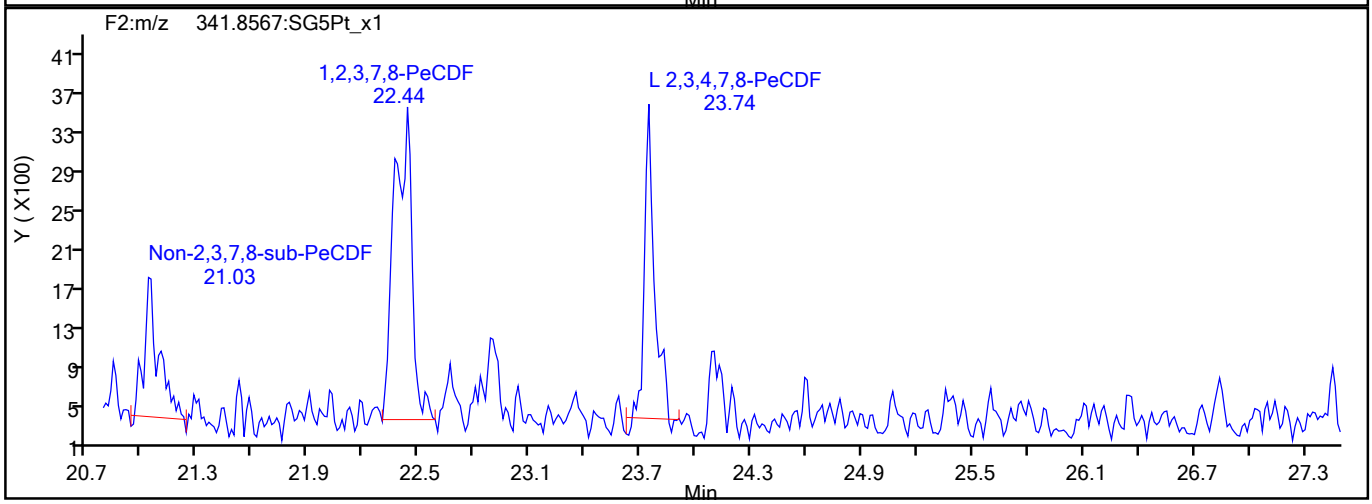

PeCDF Interference Mass

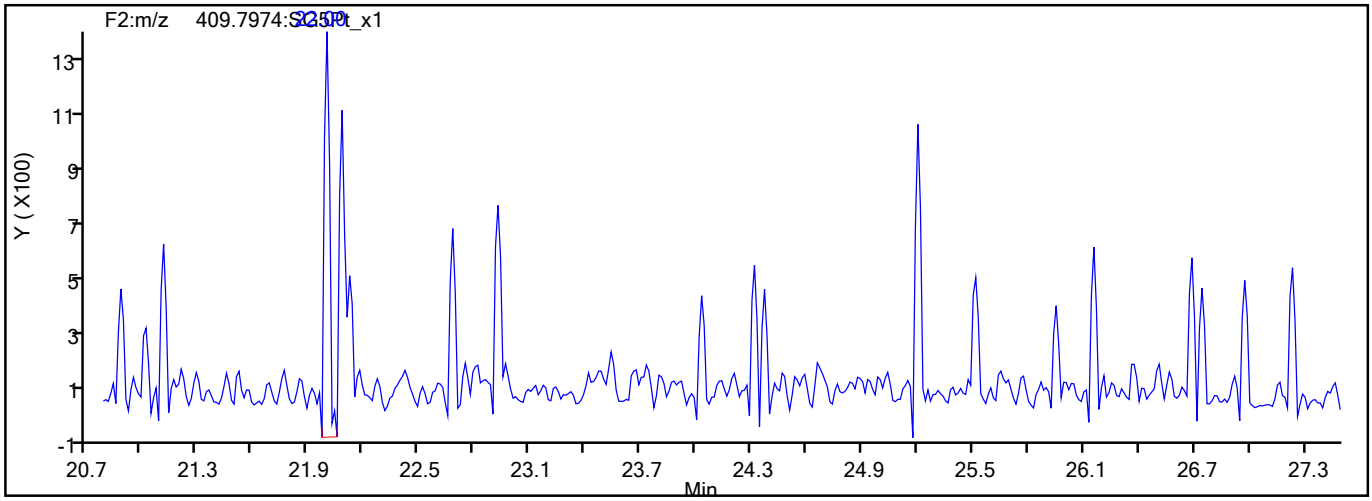

775410

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

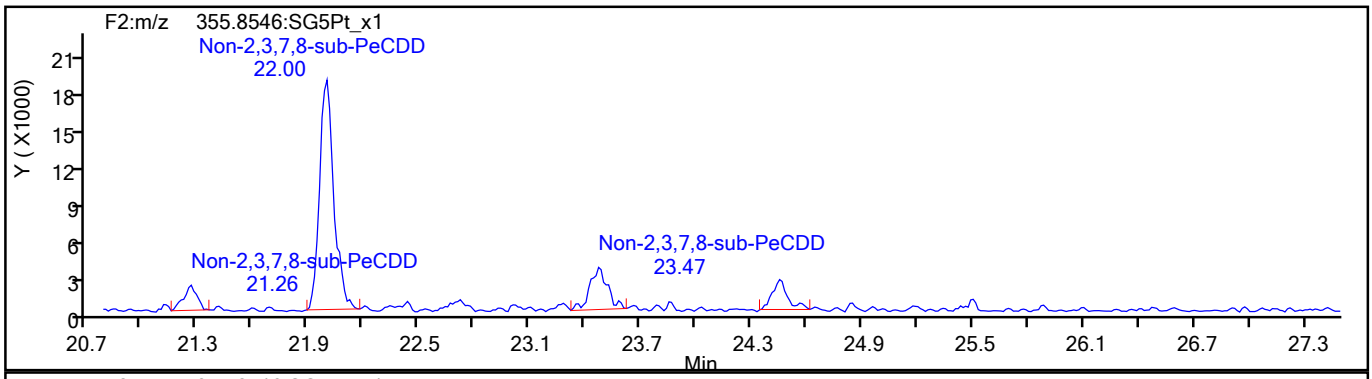

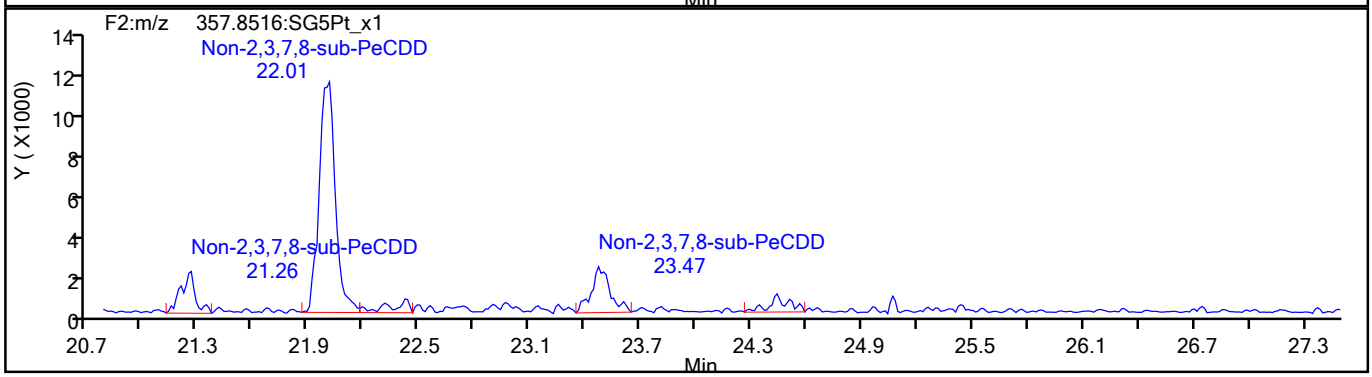

PeCDD Standards

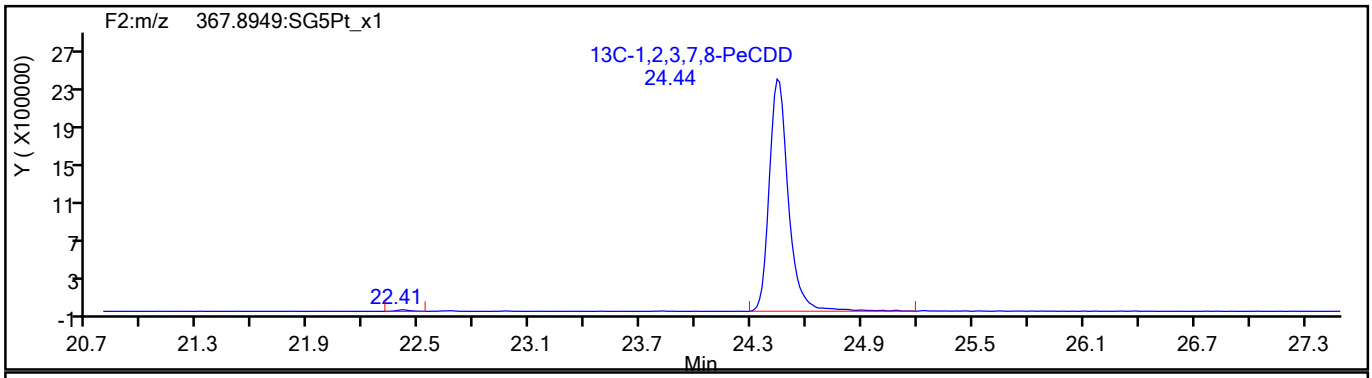

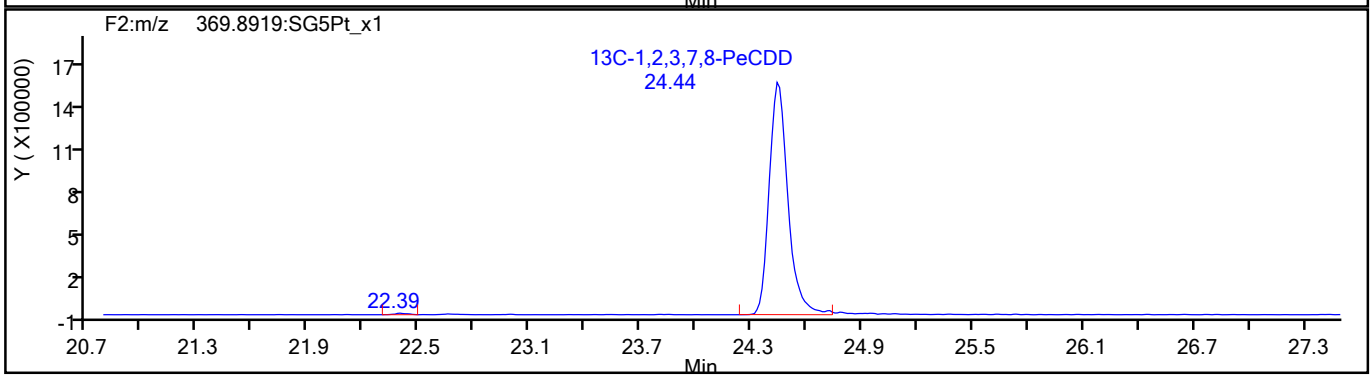

775411

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

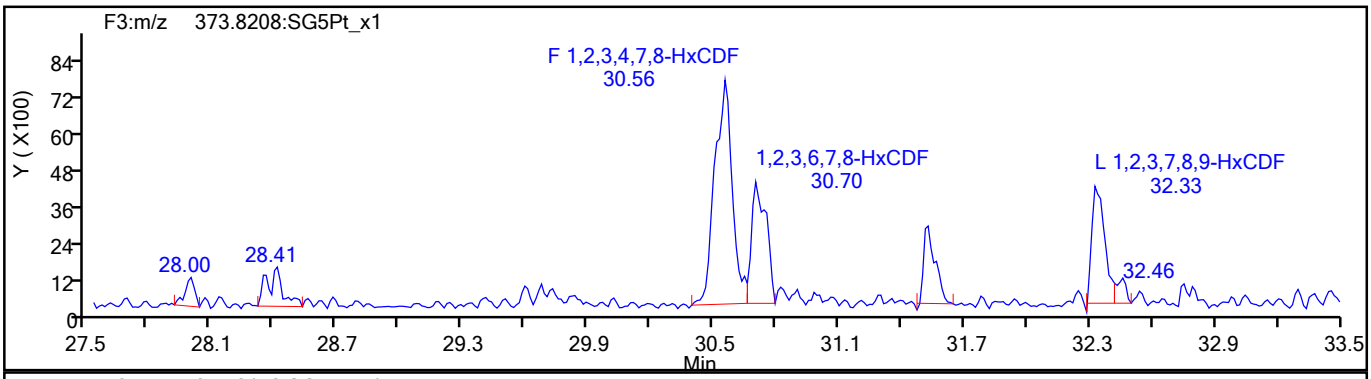

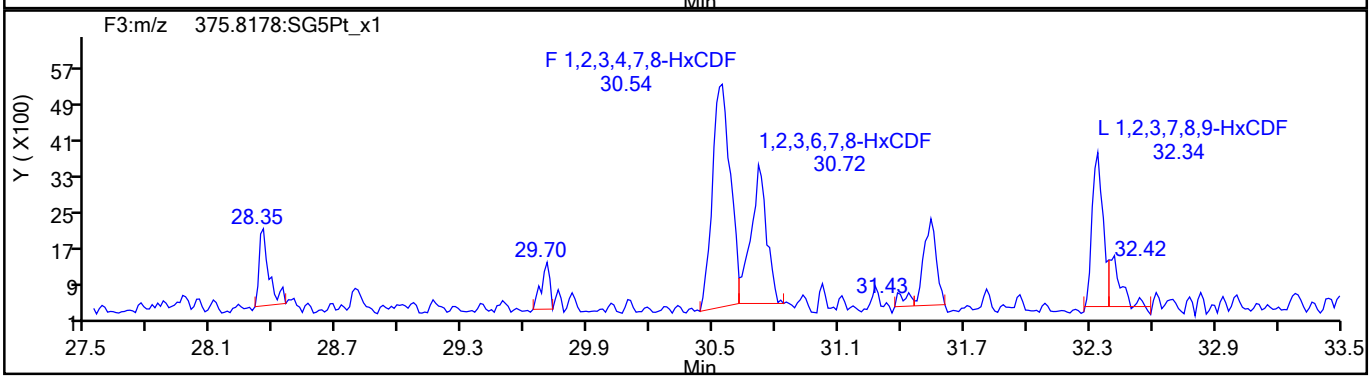

HxCDF Standards

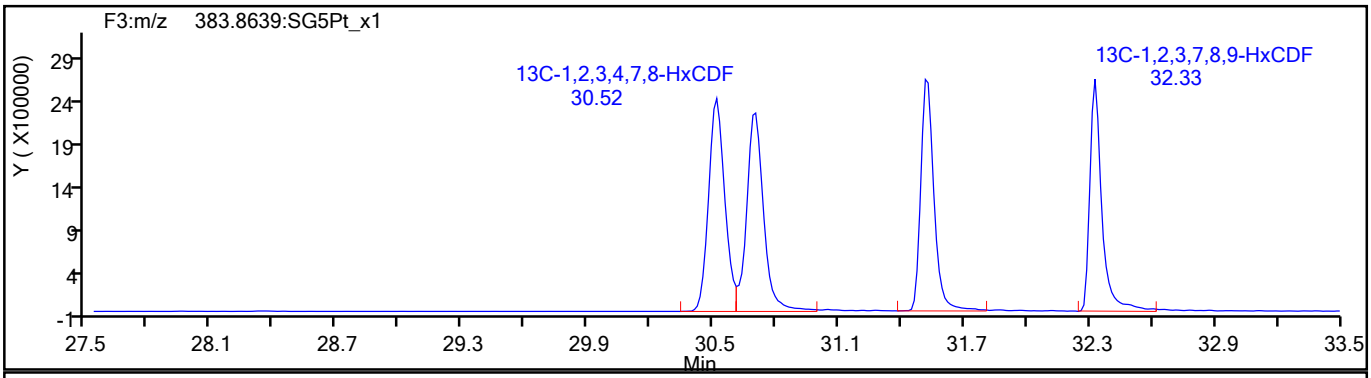

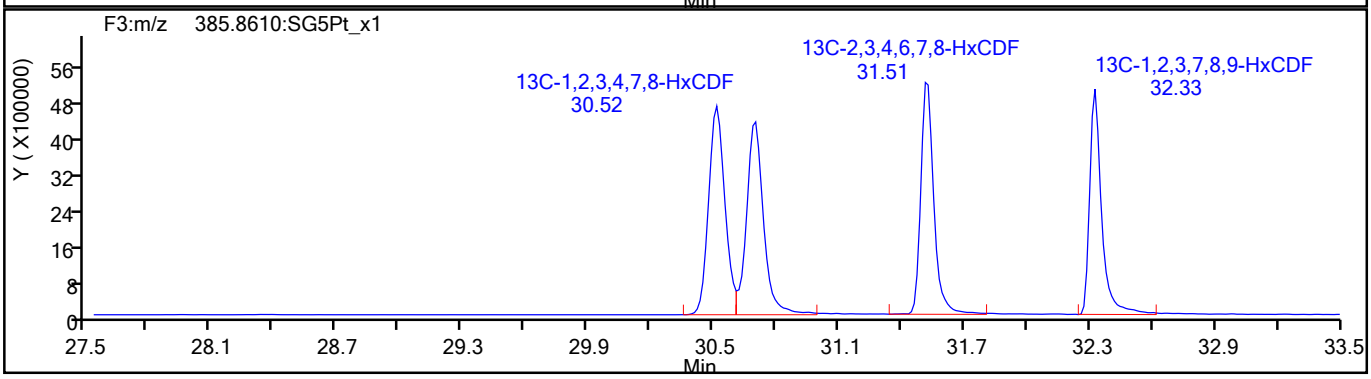

775412

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

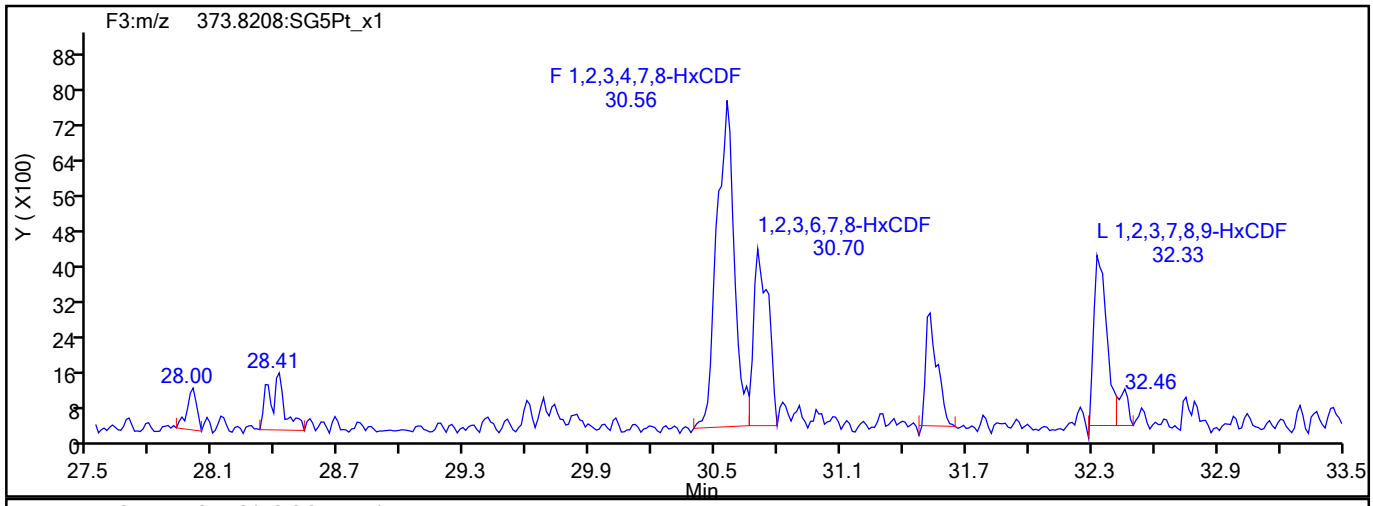

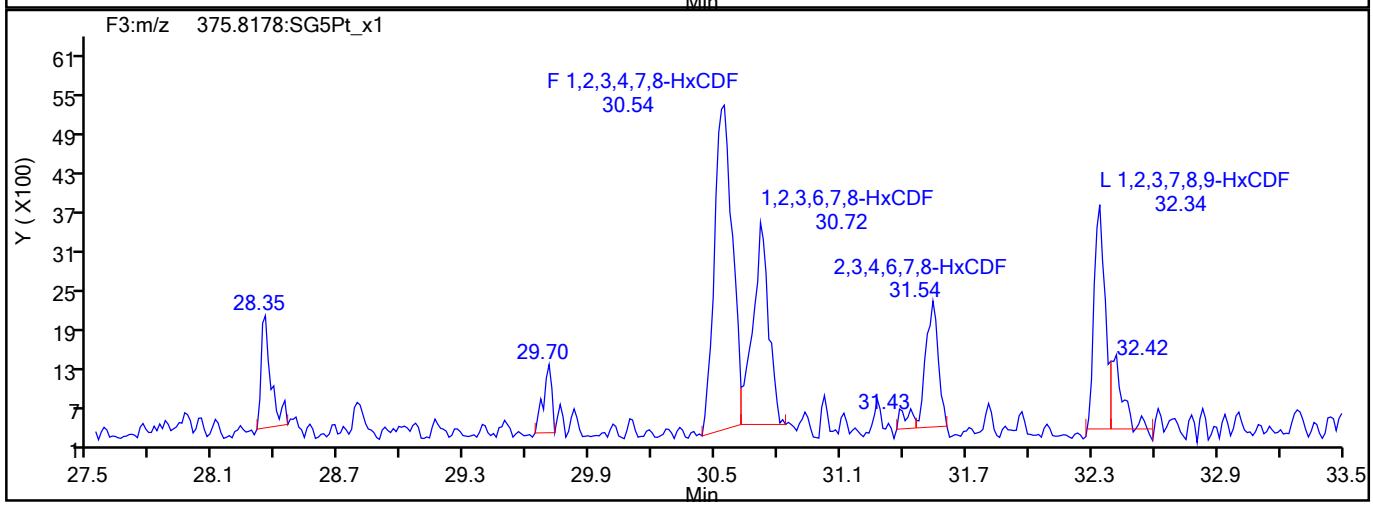

HxCDF Interference Mass

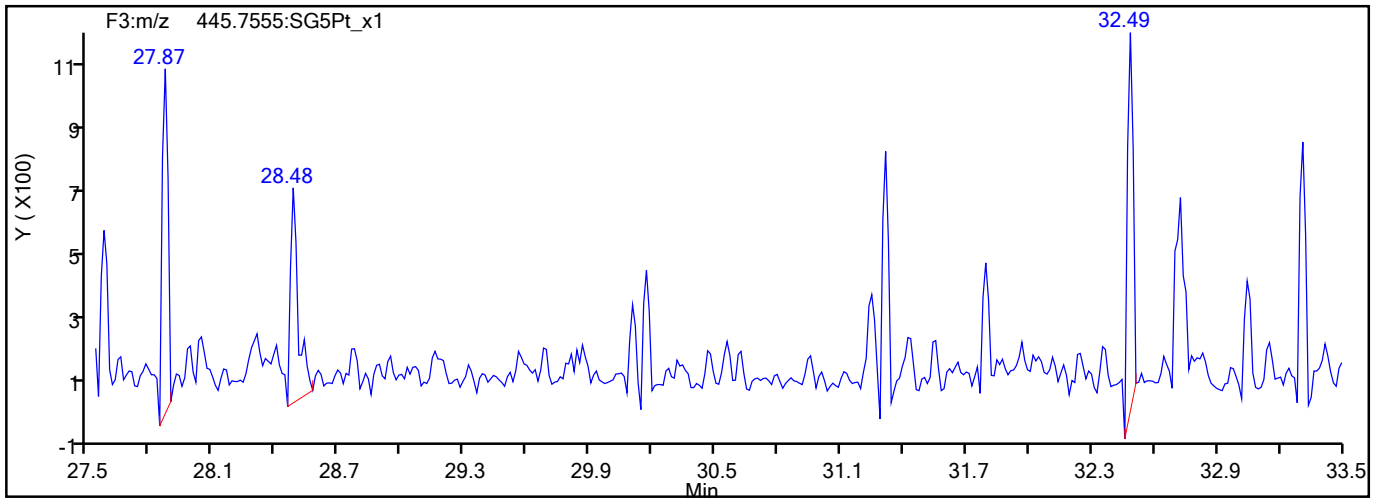

775413

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

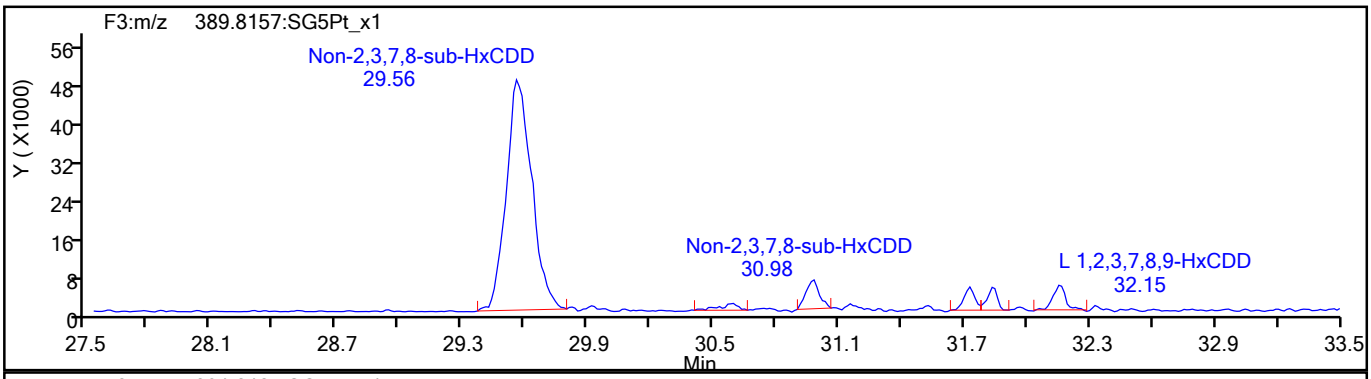

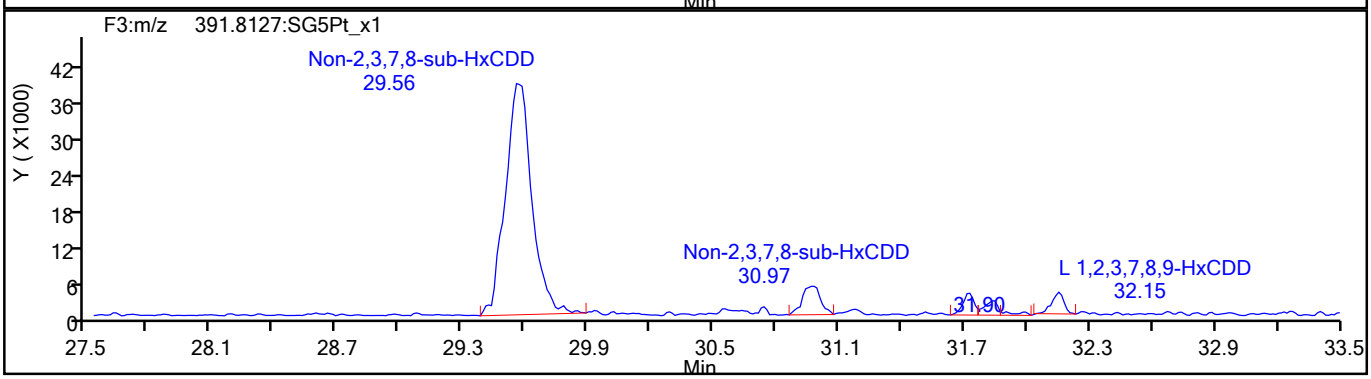

HxCDD Standards

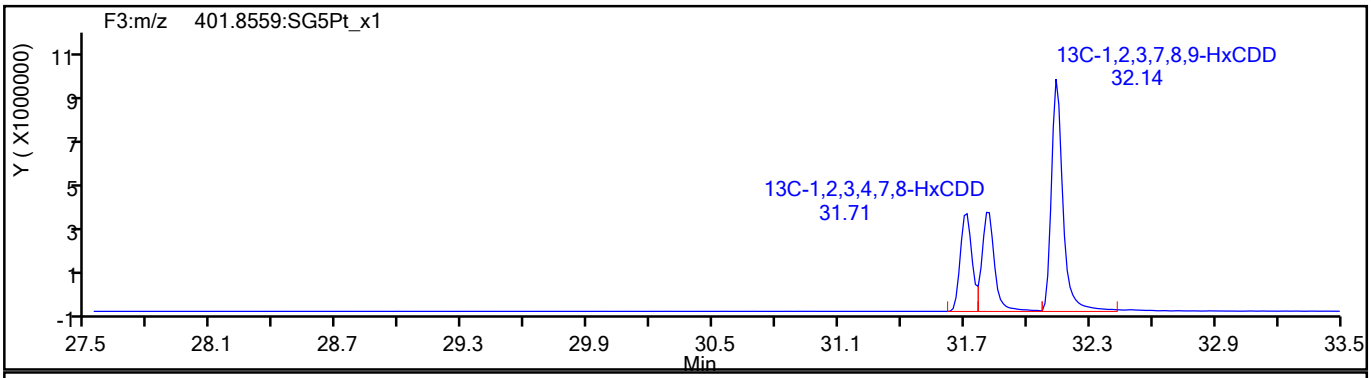

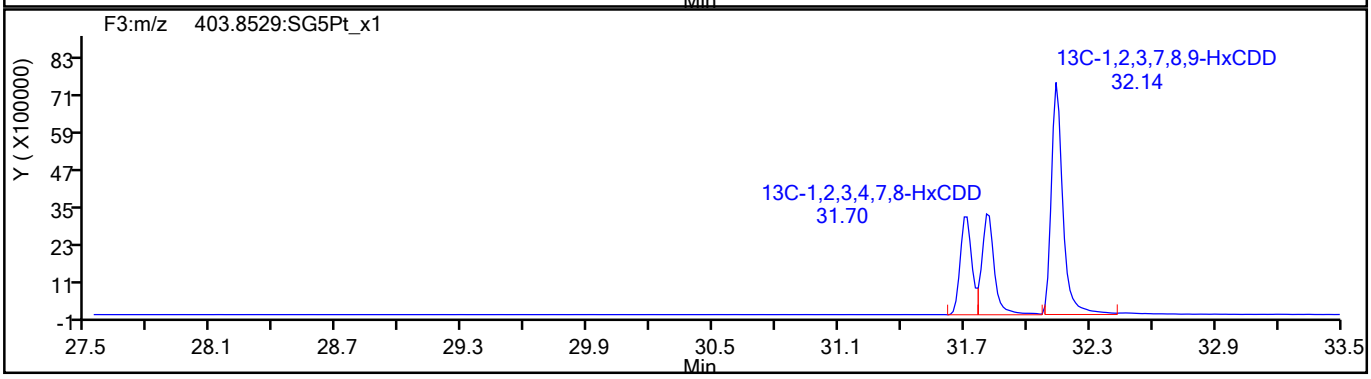

775414

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

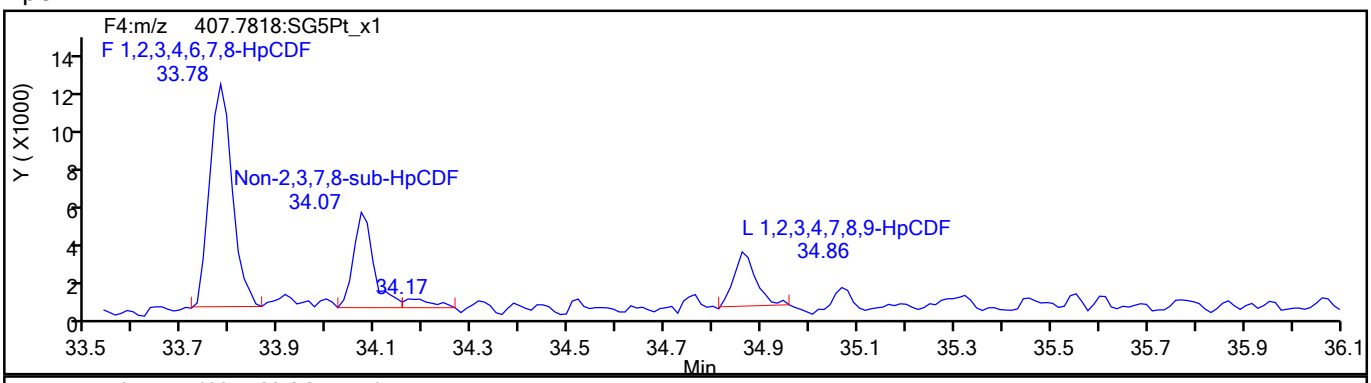

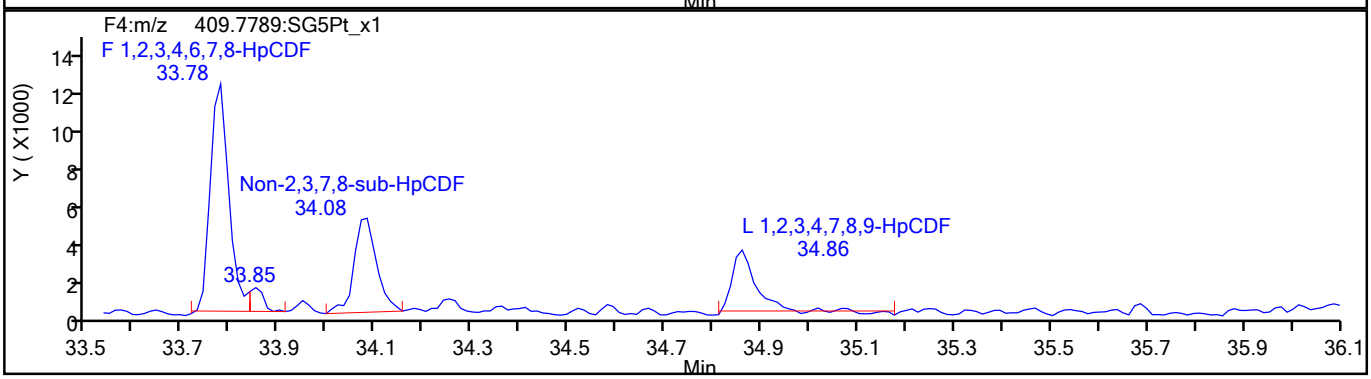

HpCDF Standards

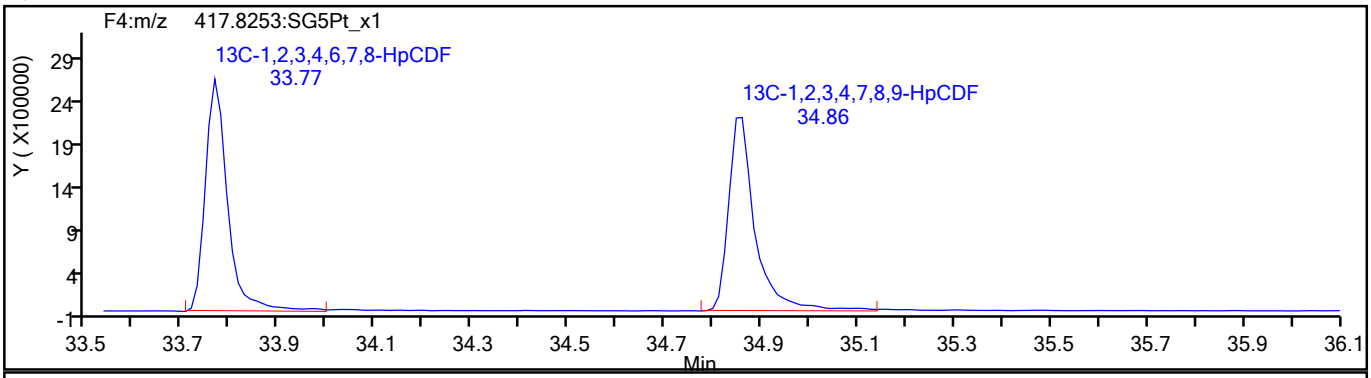

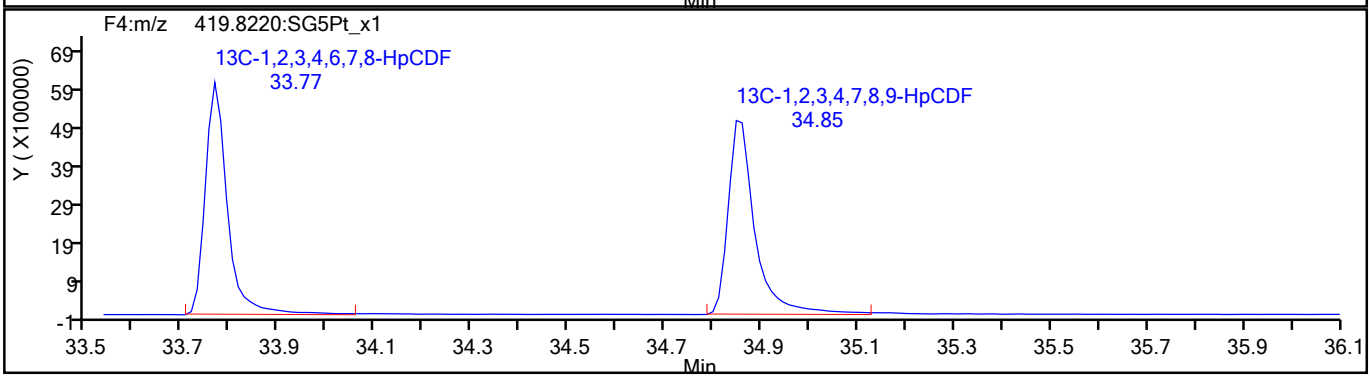

775415

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

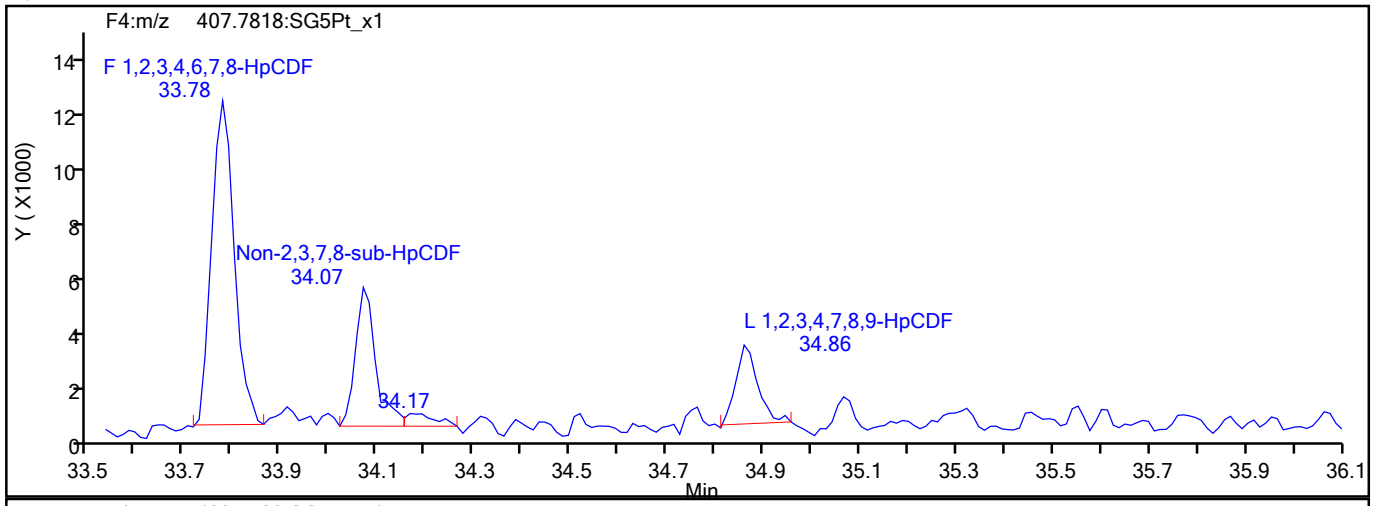

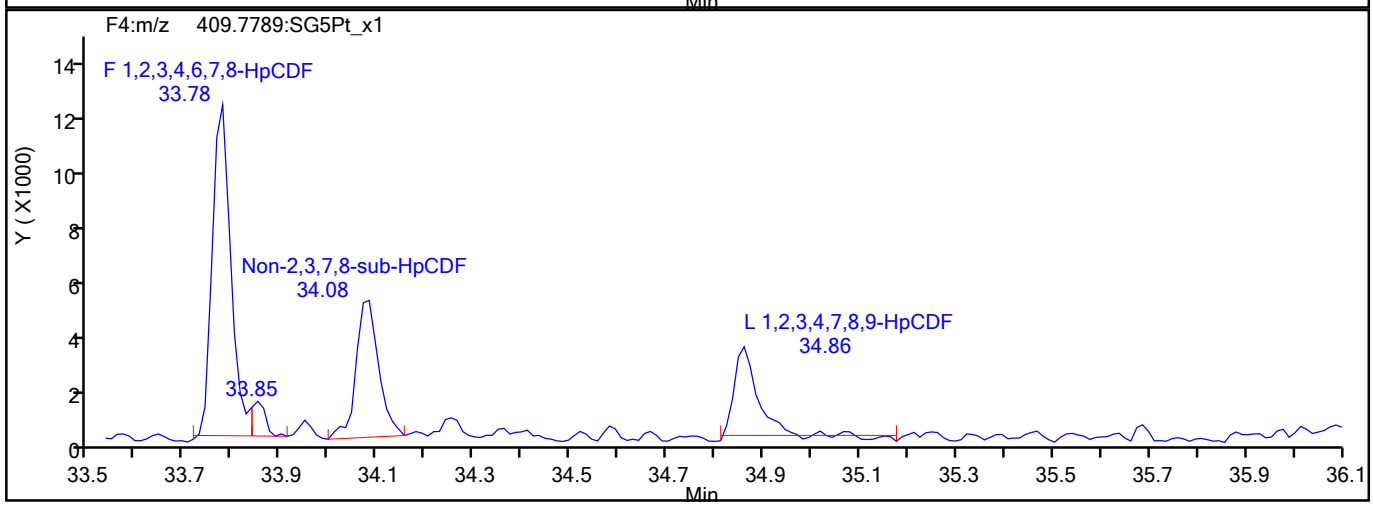

HpCDF Interference Mass

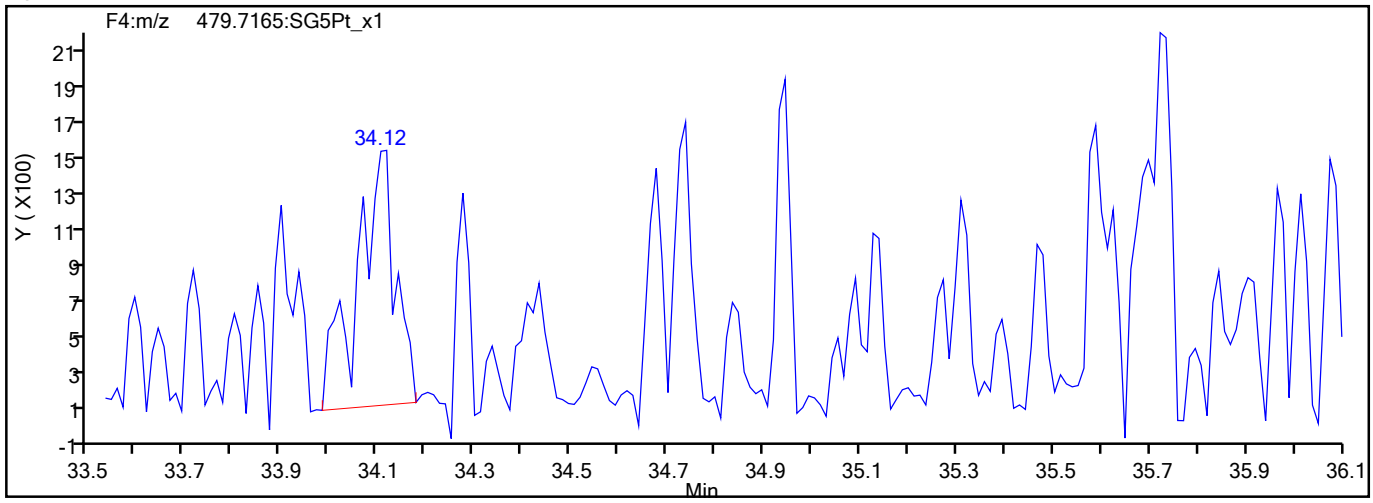

775416

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

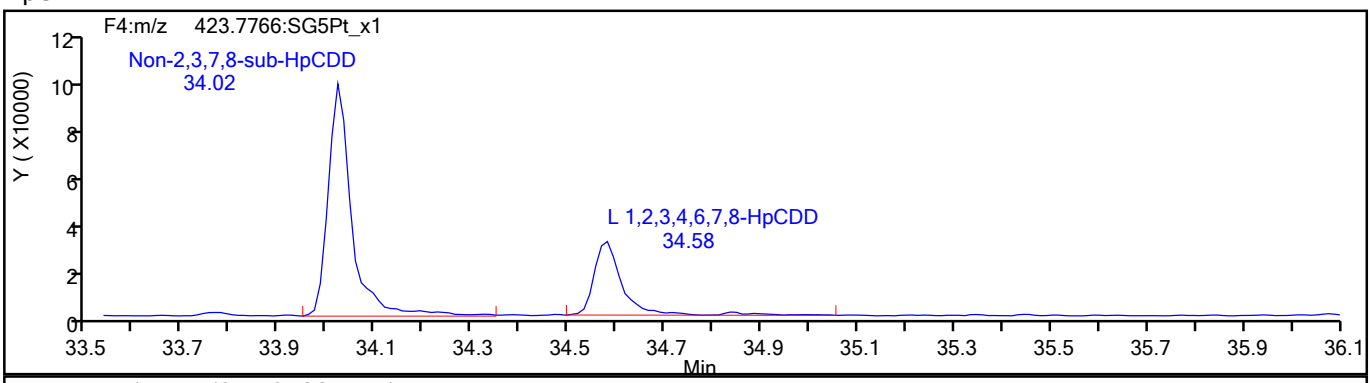

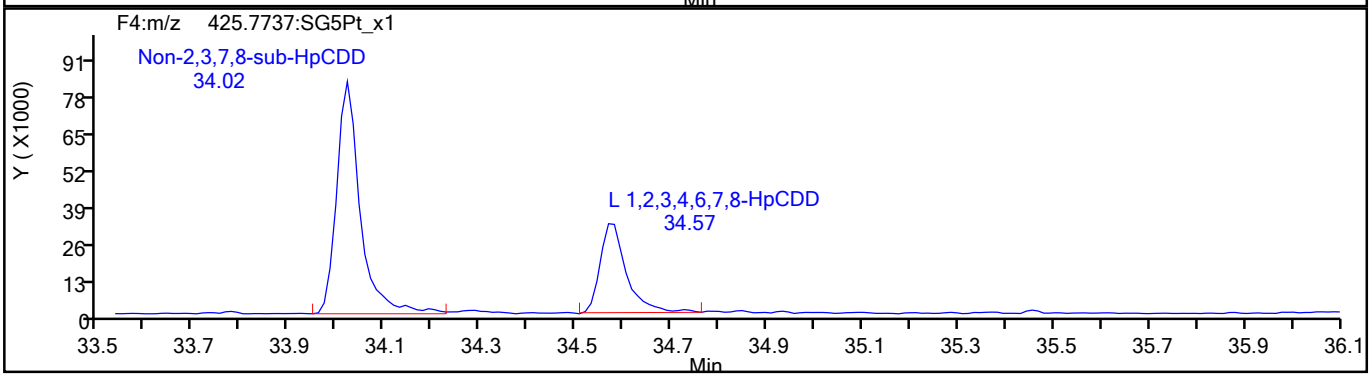

HpCDD Standards

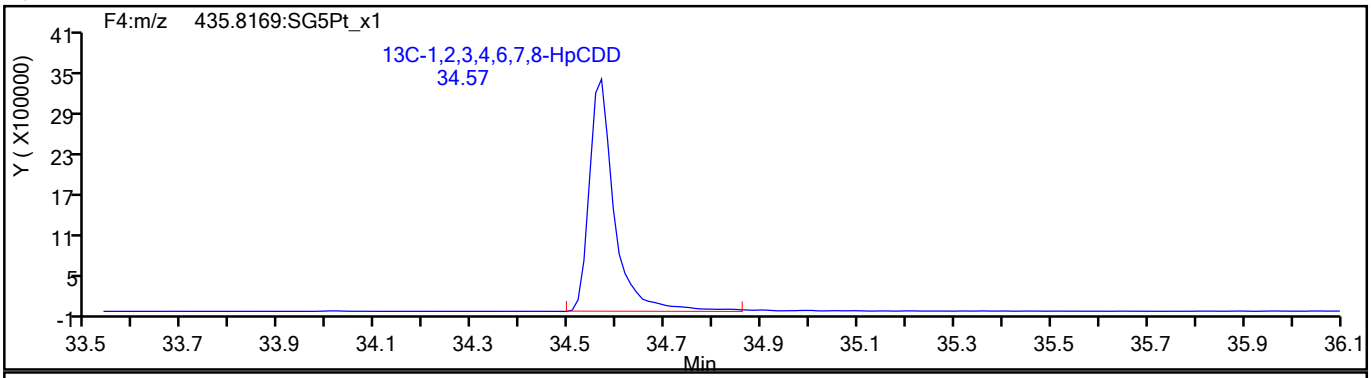

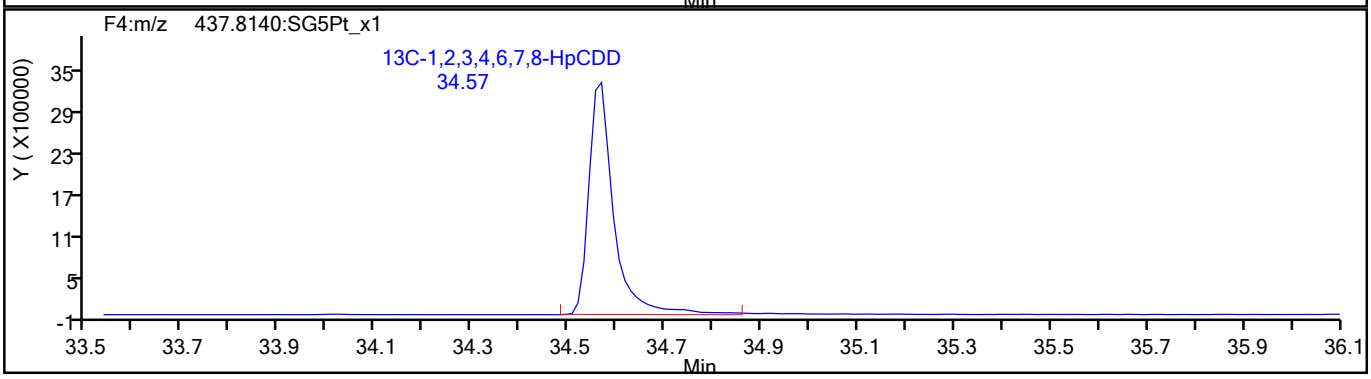

775417

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

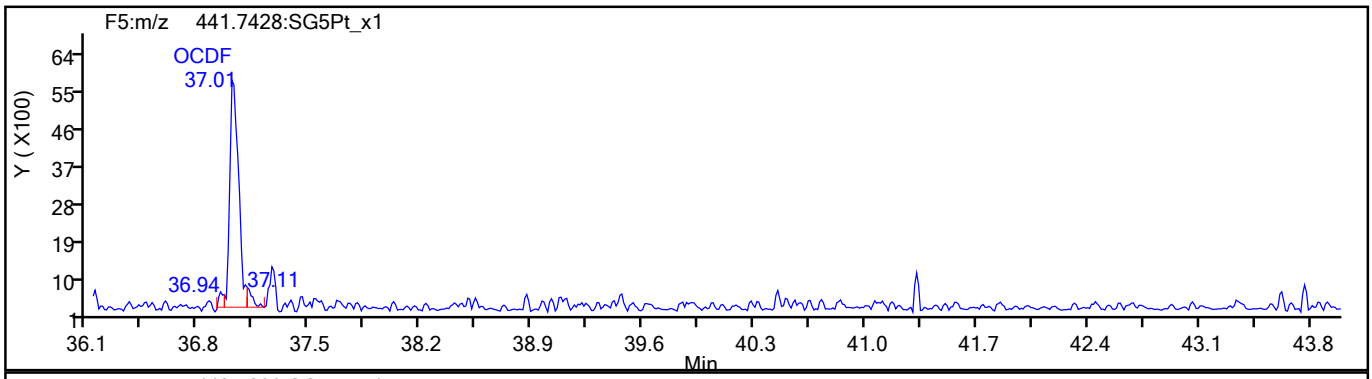

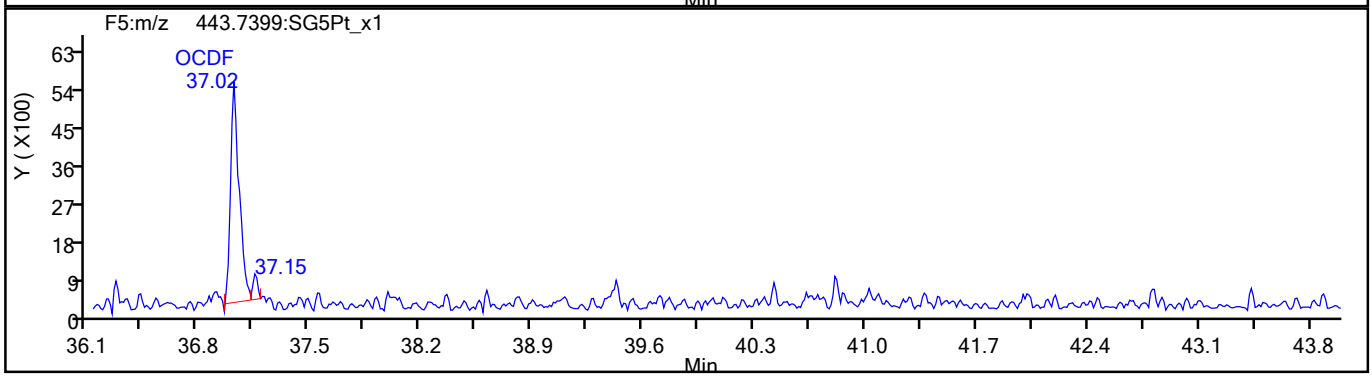

OCDF Standards

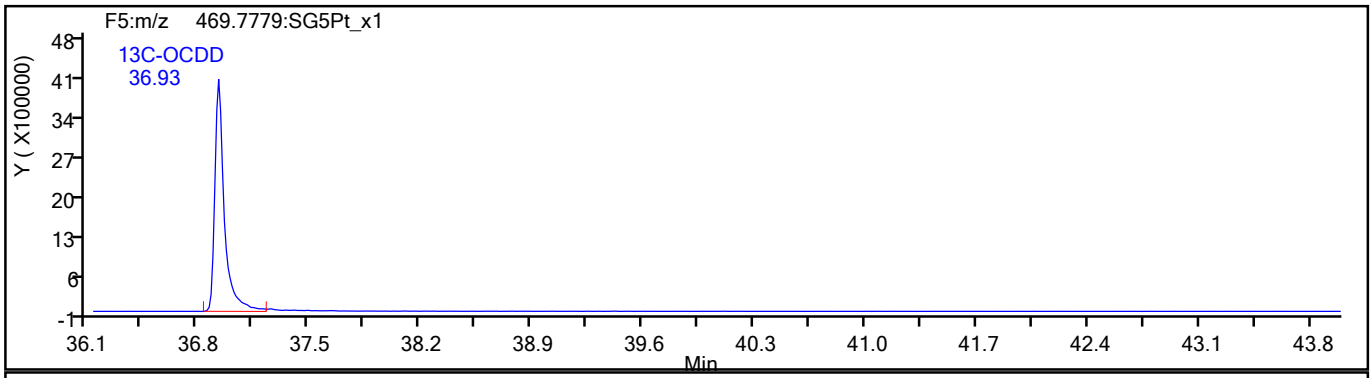

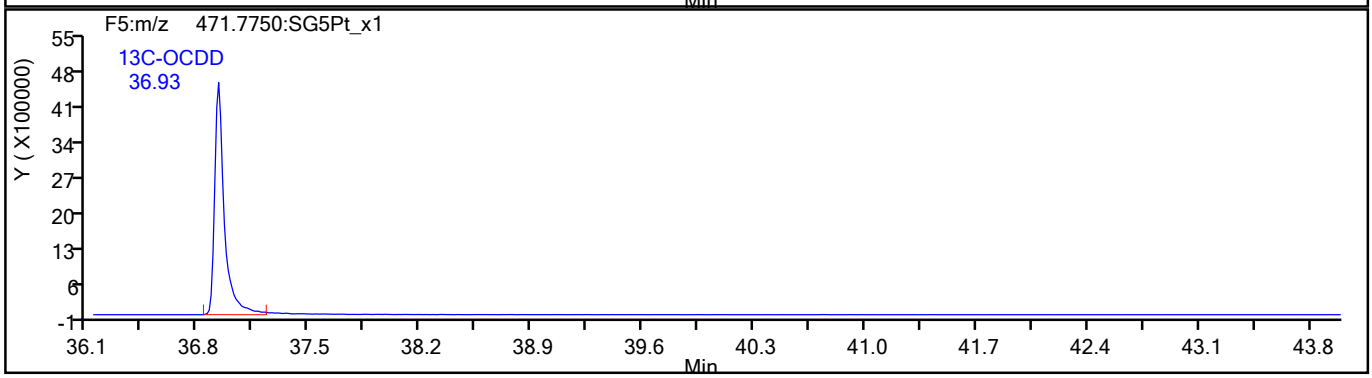

775418

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

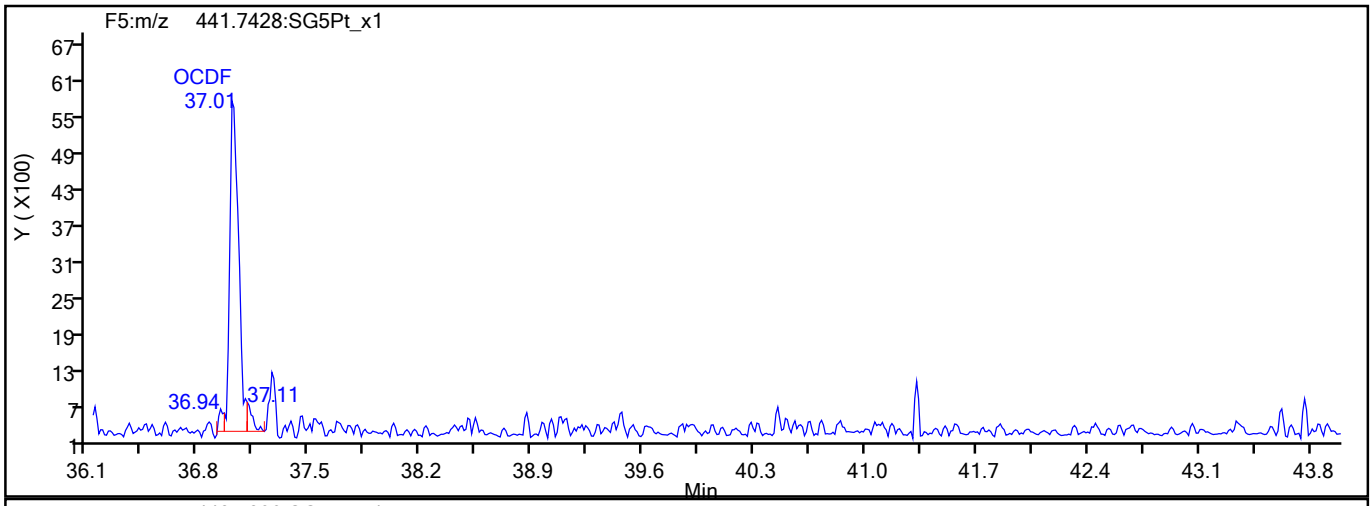

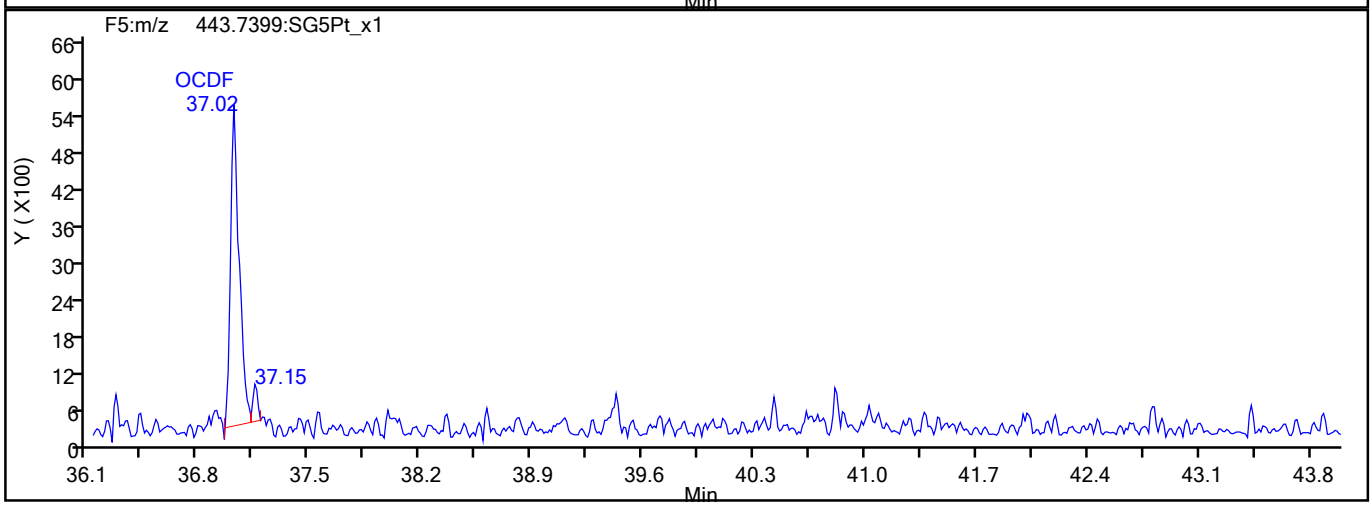

OCDF Interference Mass

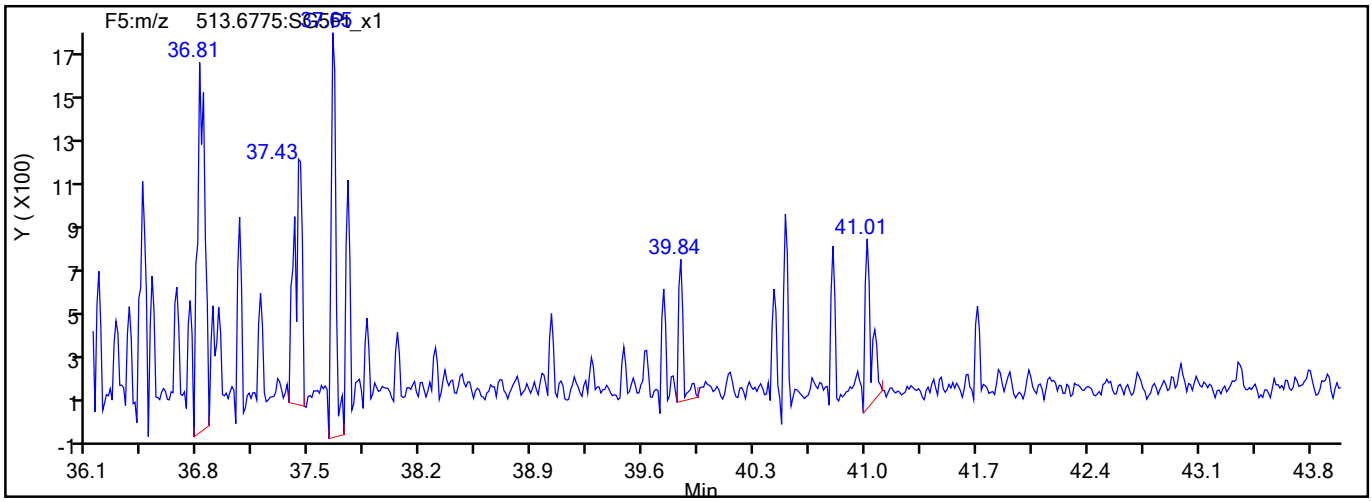

775419

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

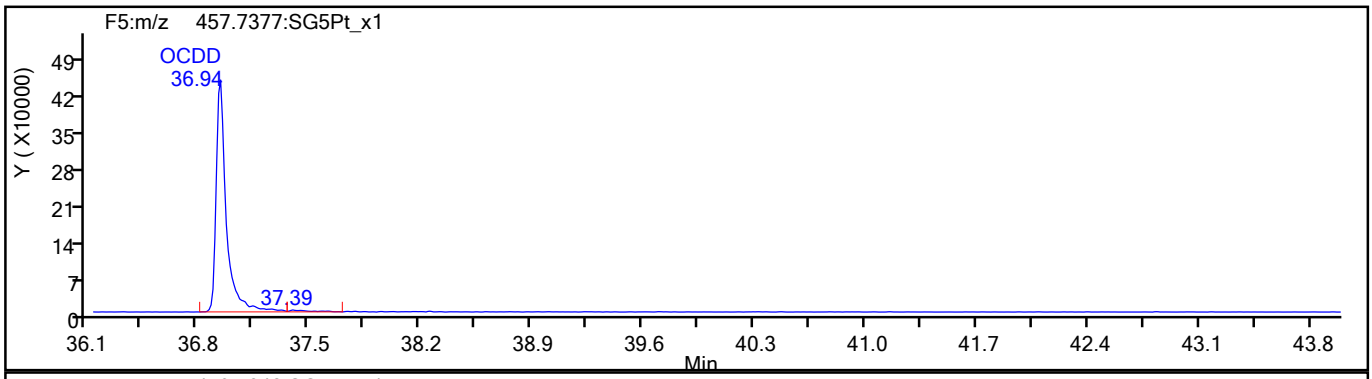

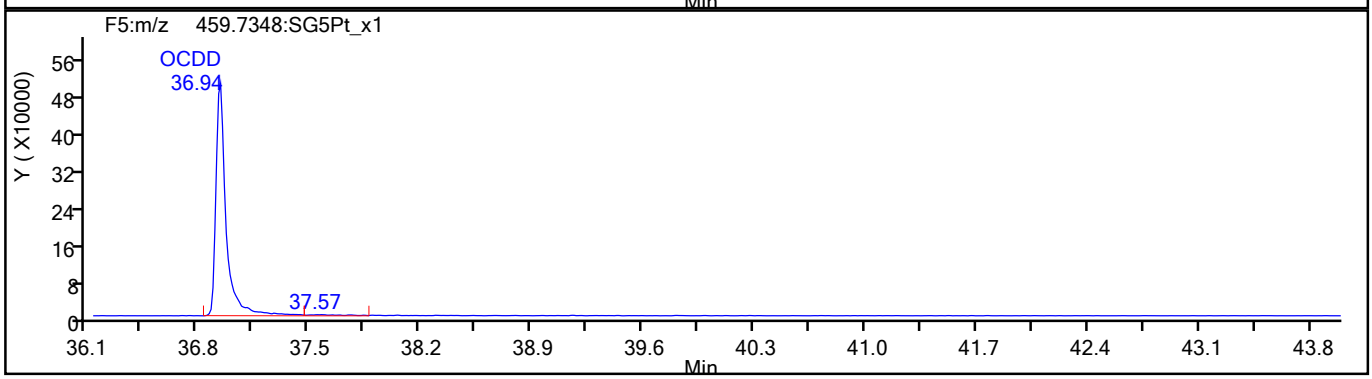

OCDD Standards

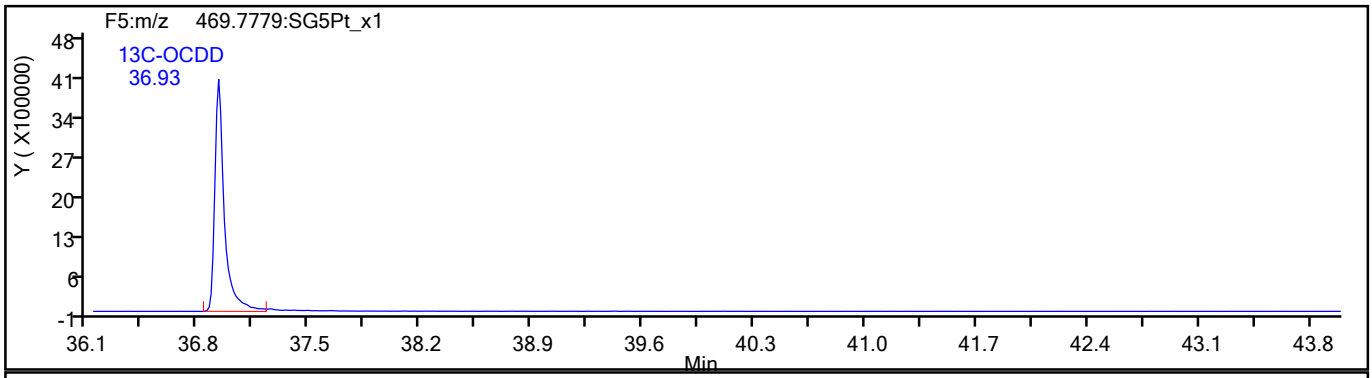

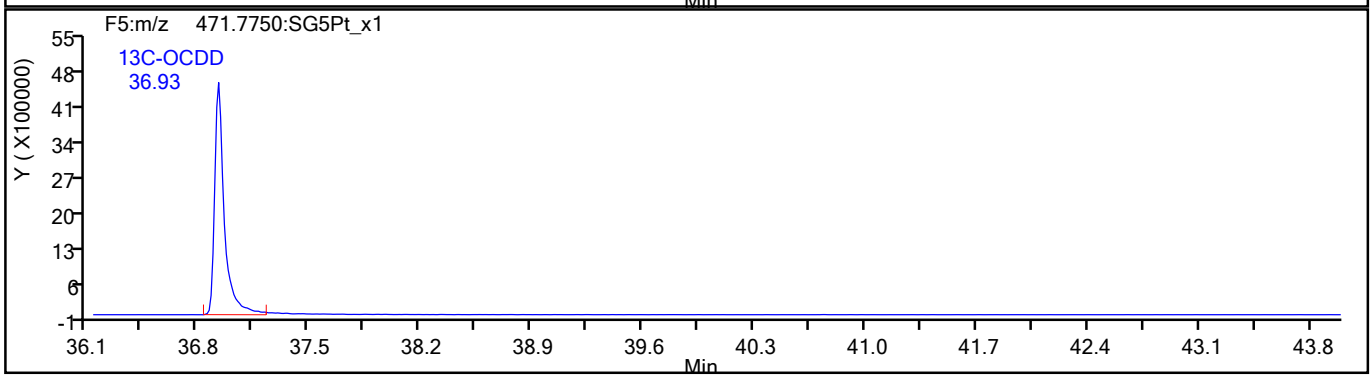

775420

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

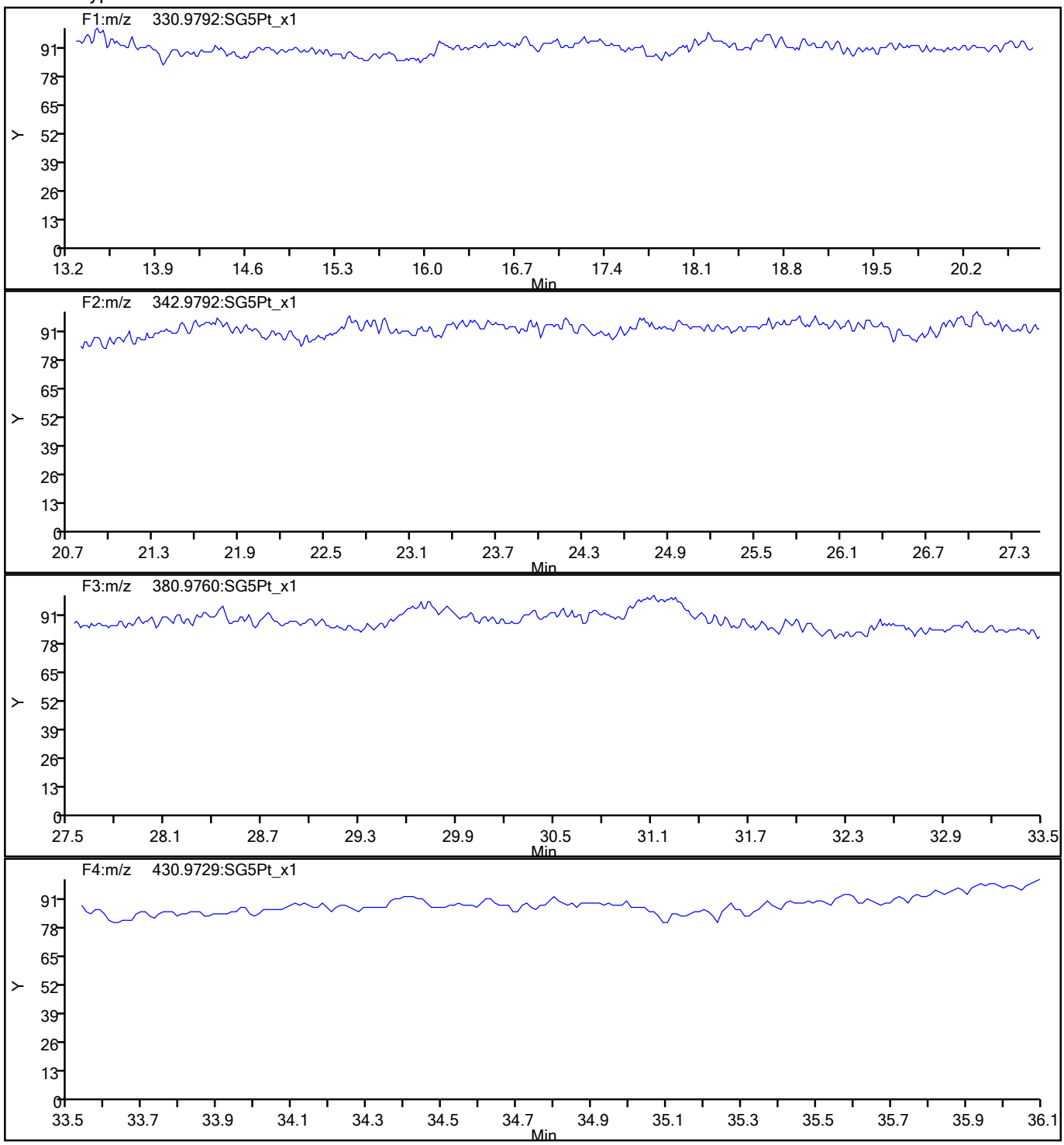

775421

Report Date: 18-Aug-2021 10:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_65.d		
Injection Date:	15-Aug-2021 18:12:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	516848	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

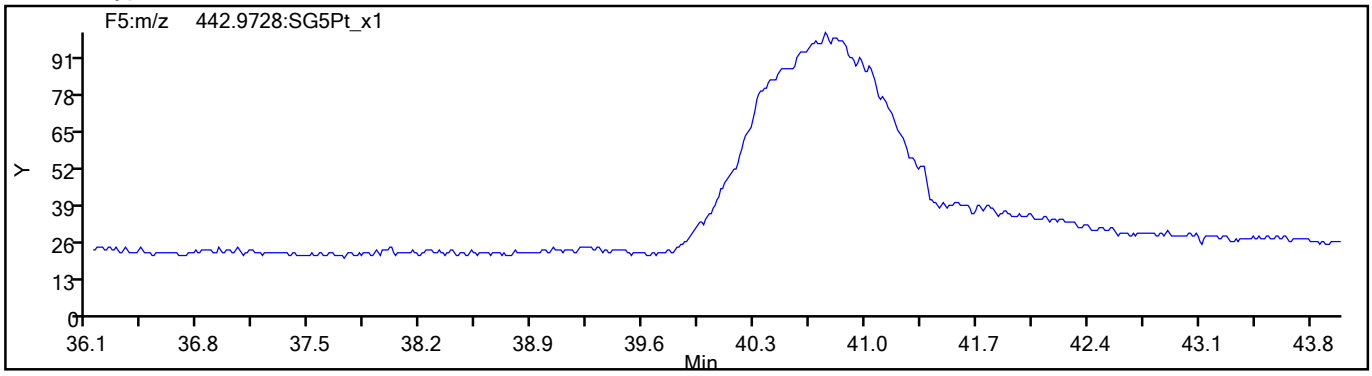

775422

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (14-16) RA
Lab Sample ID: 320-76769-20 RA
Matrix: Sediment
Lab File ID: 23AU2111D2_006.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.16(g)
Date Analyzed: 08/23/2021 12:43
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 17.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518958
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	5.7	B	1.2	0.82

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	48		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	63		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_006.d
Lims ID: 320-76769-A-20-A
Client ID: 11215702-072221-SS-SJSB074 (14-16)
Sample Type: Client
Inject. Date: 23-Aug-2021 12:43:44 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-20-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:48:01

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.340	7752244	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.670	4989369	0.81	1.3327	48.3	48.3	0.6798	0.6798	48.29	
2,3,7,8-TCDF	17.698	119342	0.66	0.9978	2.397	2.397	0.3464	0.3464		M
D 13C-2,3,7,8-TCDD	16.107	3640054	0.72	0.8749	53.7	53.7	1.116	1.116	53.67	
2,3,7,8-TCDD	16.093						0.3717	0.3717		
$ 37Cl4-2,3,7,8-TCDD	16.120	1694290		0.8648	25.3	25.3	0.2116	0.2116	63.18	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_006.d
Lims ID: 320-76769-A-20-A
Client ID: 11215702-072221-SS-SJSB074 (14-16)
Sample Type: Client
Inject. Date: 23-Aug-2021 12:43:44 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-20-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:48:01

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.340	16.312	2		3380863	745666	4081	10202	183		
333.9339	16.340	16.312	2		4371381	1019598	2815	7037	362	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.670	17.615	3	1.081	2239792	405939	3705	9262	110		
317.9389	17.670	17.615	3	1.081	2749577	509647	2692	6730	189	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.698	17.643	3	1.002	47495	9101	526	1315	17		M
305.8987	17.725	17.643	5	1.003	71847	15825	740	1850	21	0.66(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.107	16.065	2	0.986	1520702	345543	4081	10202	85		
333.9339	16.107	16.065	2	0.986	2119352	481621	2815	7037	171	0.72(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093						703	1757			
321.8936	16.093						597	1492			
37Cl4-2,3,7,8-TCDD											
327.8840	16.120	16.093	2	0.987	1694290	379243	1292	3230	294		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_006.d				
Injection Date:	23-Aug-2021 12:43:44	Instrument ID:	11D2		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.73
Area: 43435
Amount: 1.765839
Amount Units: pg/ul

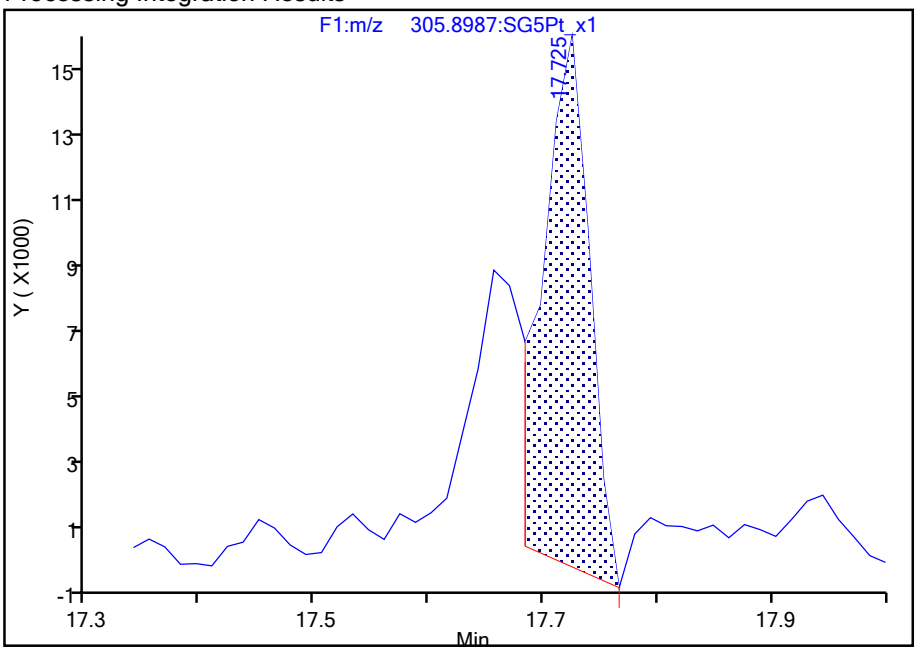

Manual Integration Results

RT: 17.73
Area: 71847
Amount: 2.397183
Amount Units: pg/ul

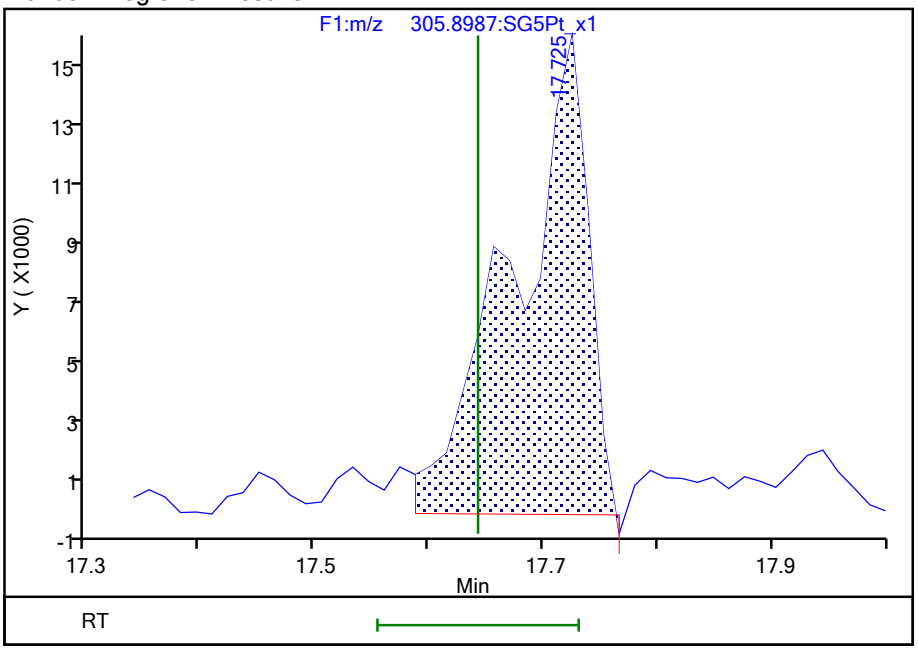

Reviewer: bennettd, 23-Aug-2021 15:46:04

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_006.d				
Injection Date:	23-Aug-2021 12:43:44	Instrument ID:	11D2		
Lims ID:	320-76769-A-20-A	Lab Sample ID:	320-76769-20		
Client ID:	11215702-072221-SS-SJSB074 (14-16)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.70
Area: 44476
Amount: 1.765839
Amount Units: pg/ul

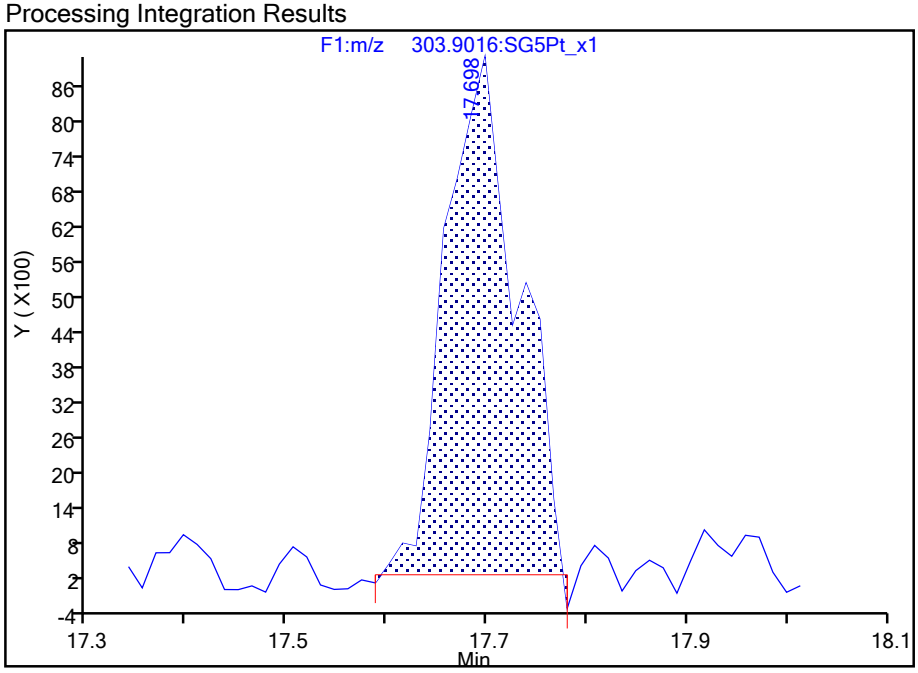

Manual Integration Results

RT: 17.70
Area: 47495
Amount: 2.397183
Amount Units: pg/ul

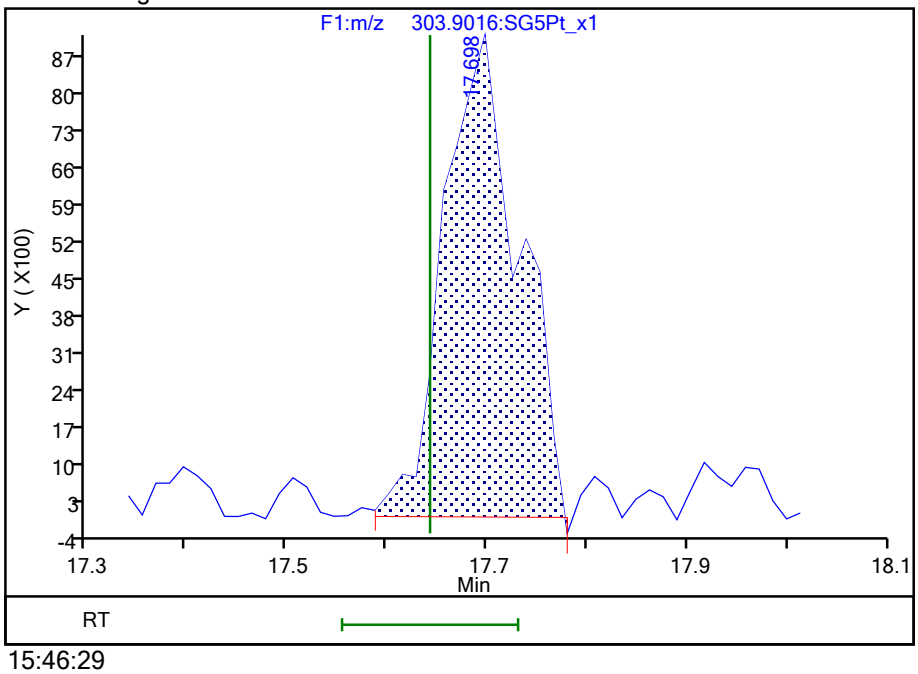

Reviewer: bennettd, 23-Aug-2021 15:46:29

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Report Date: 23-Aug-2021 15:56:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_006.d		
Injection Date:	23-Aug-2021 12:43:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	518958	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

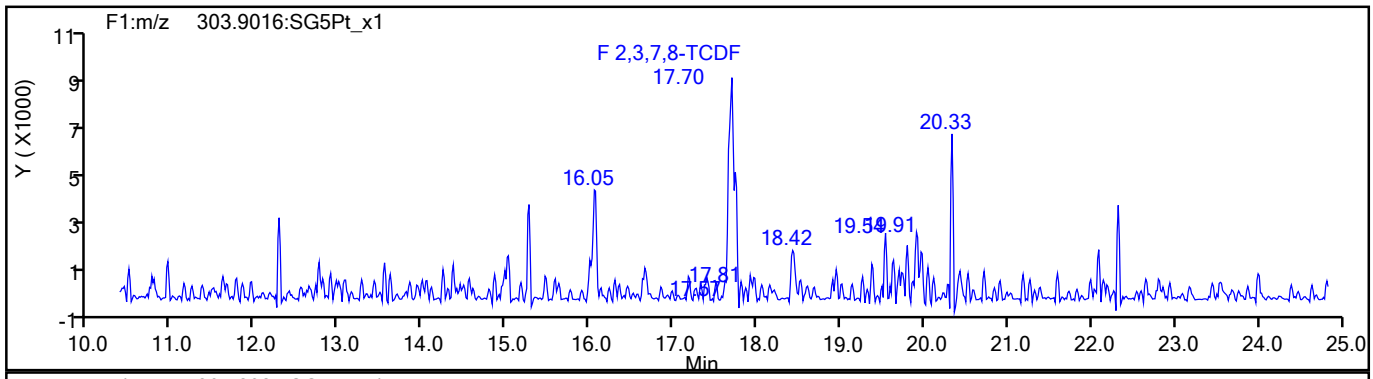

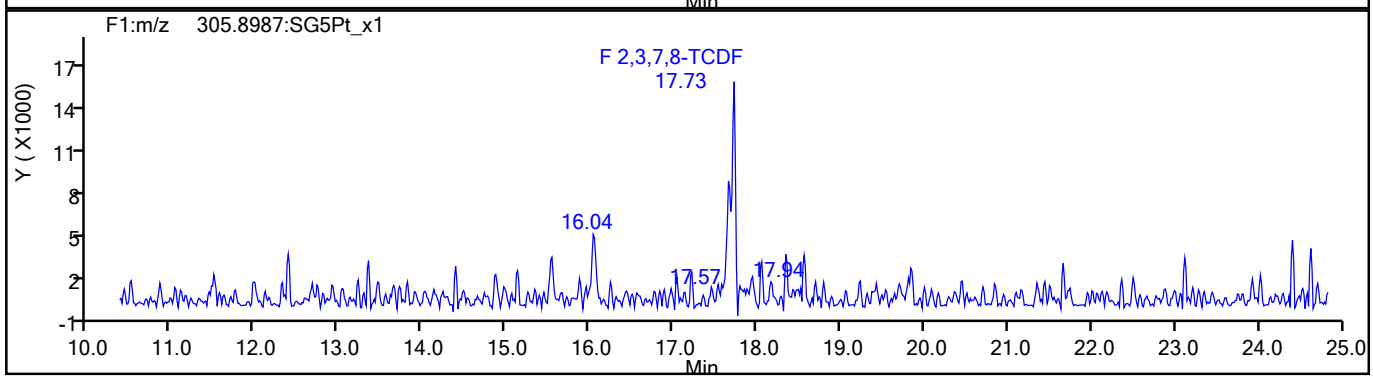

TCDF Standards

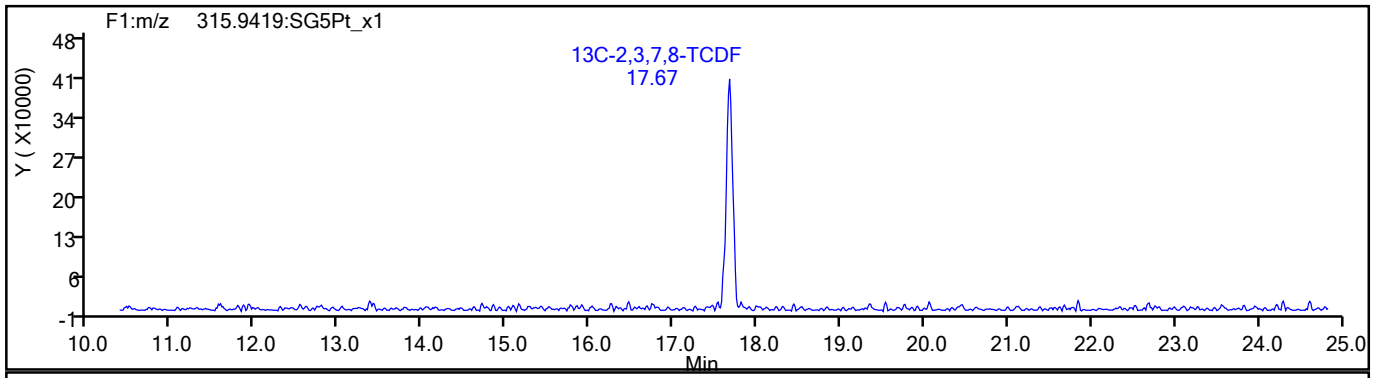

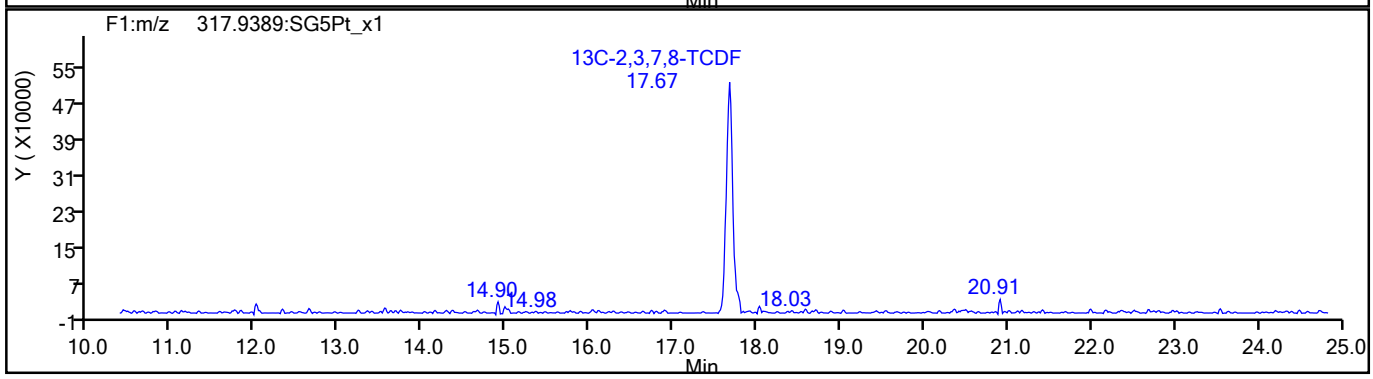

775428

Report Date: 23-Aug-2021 15:56:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_006.d		
Injection Date:	23-Aug-2021 12:43:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	518958	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

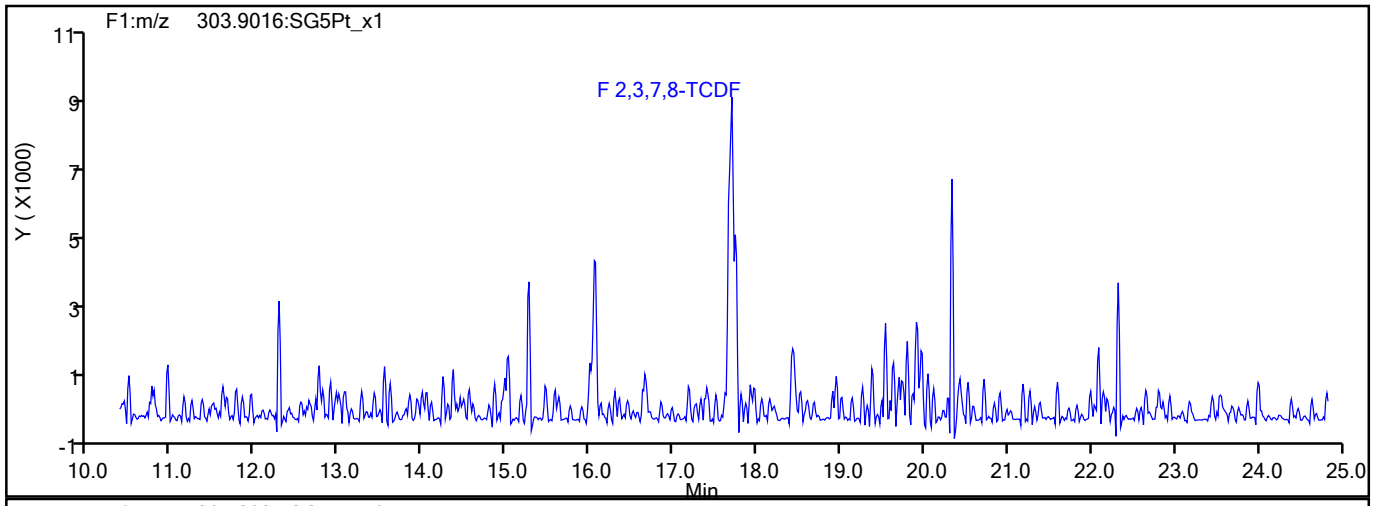

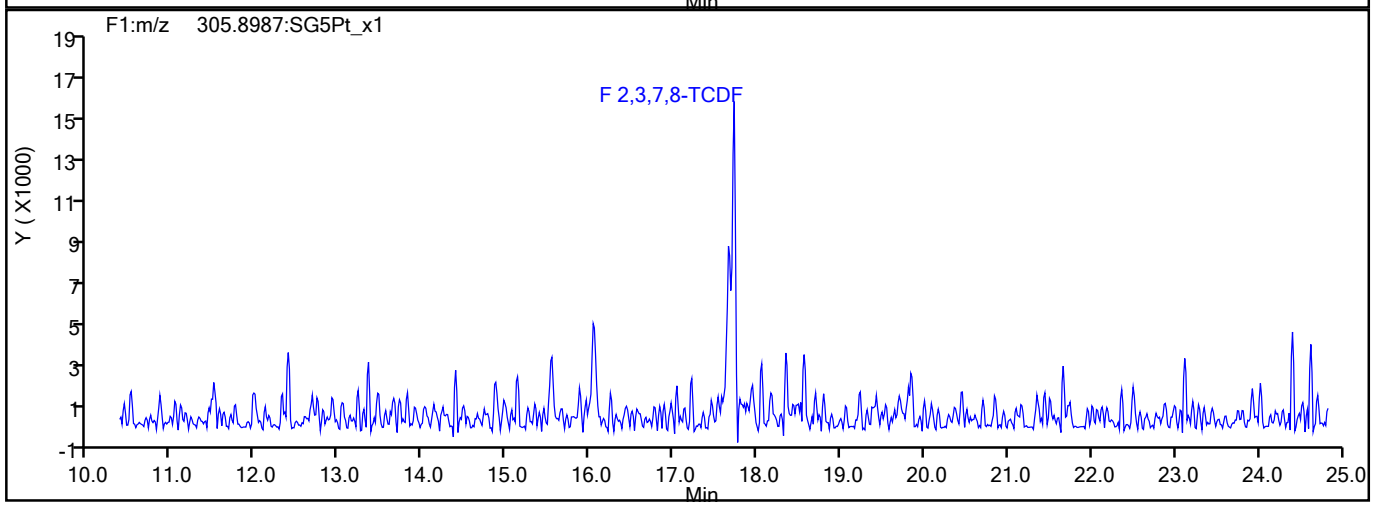

TCDF Interference Mass

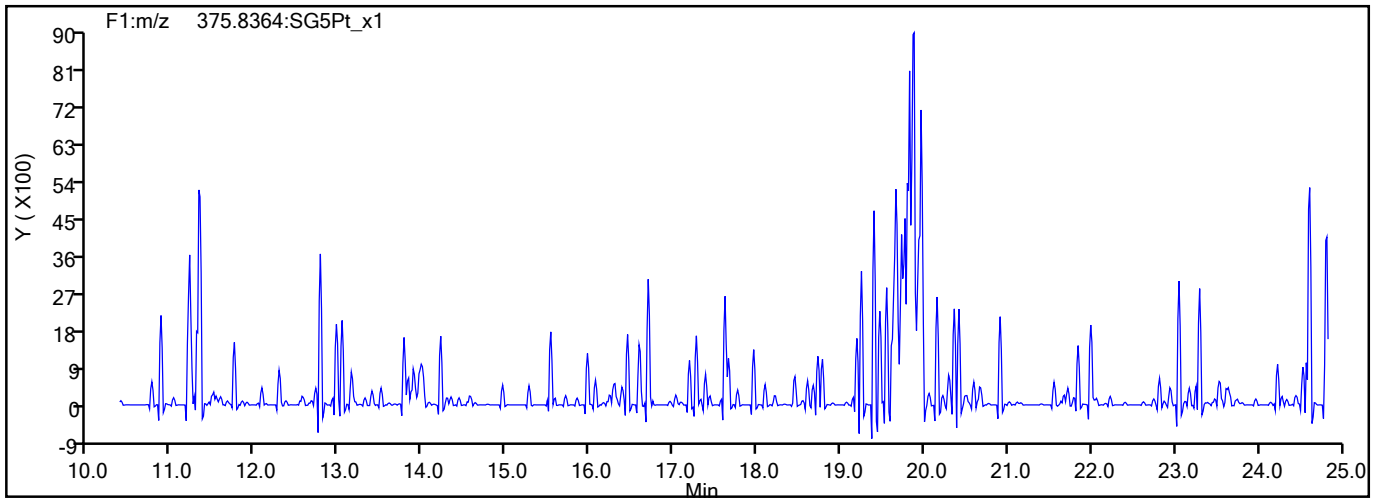

775429

Report Date: 23-Aug-2021 15:56:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_006.d		
Injection Date:	23-Aug-2021 12:43:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	518958	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

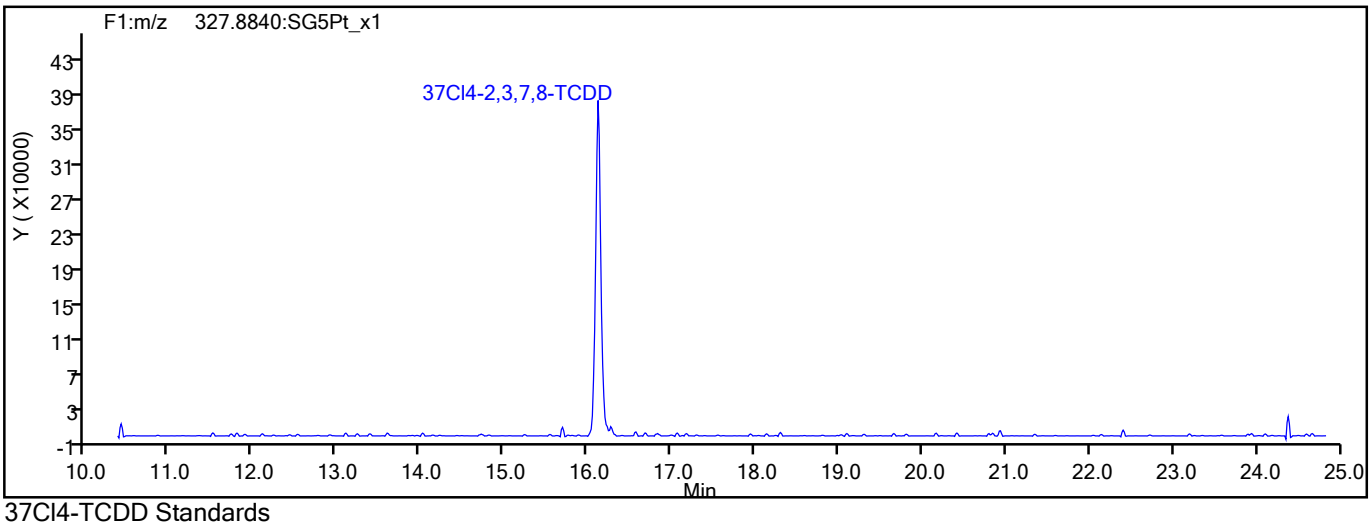

37Cl4-TCDD Standards

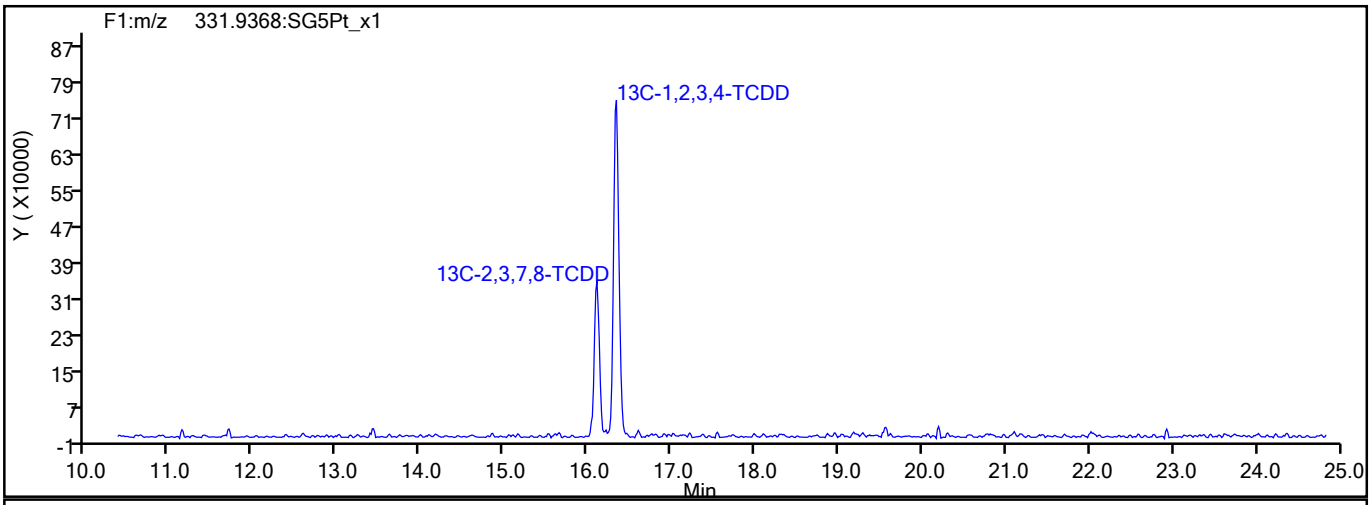

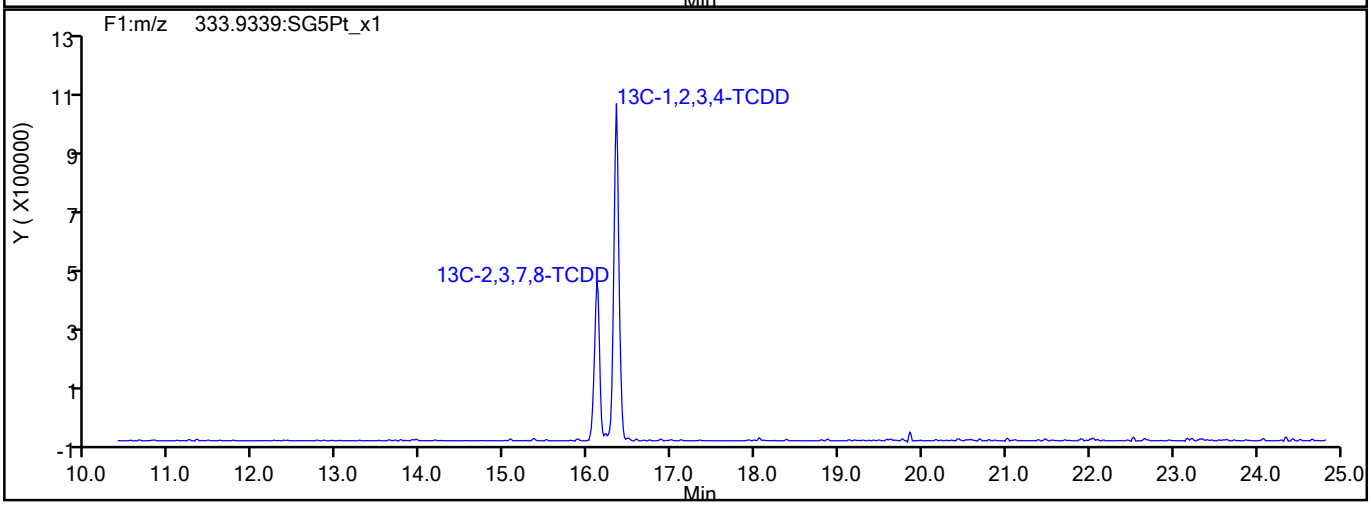

775430

Report Date: 23-Aug-2021 15:56:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_006.d		
Injection Date:	23-Aug-2021 12:43:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (14-16)		
Worklist#:	518958	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

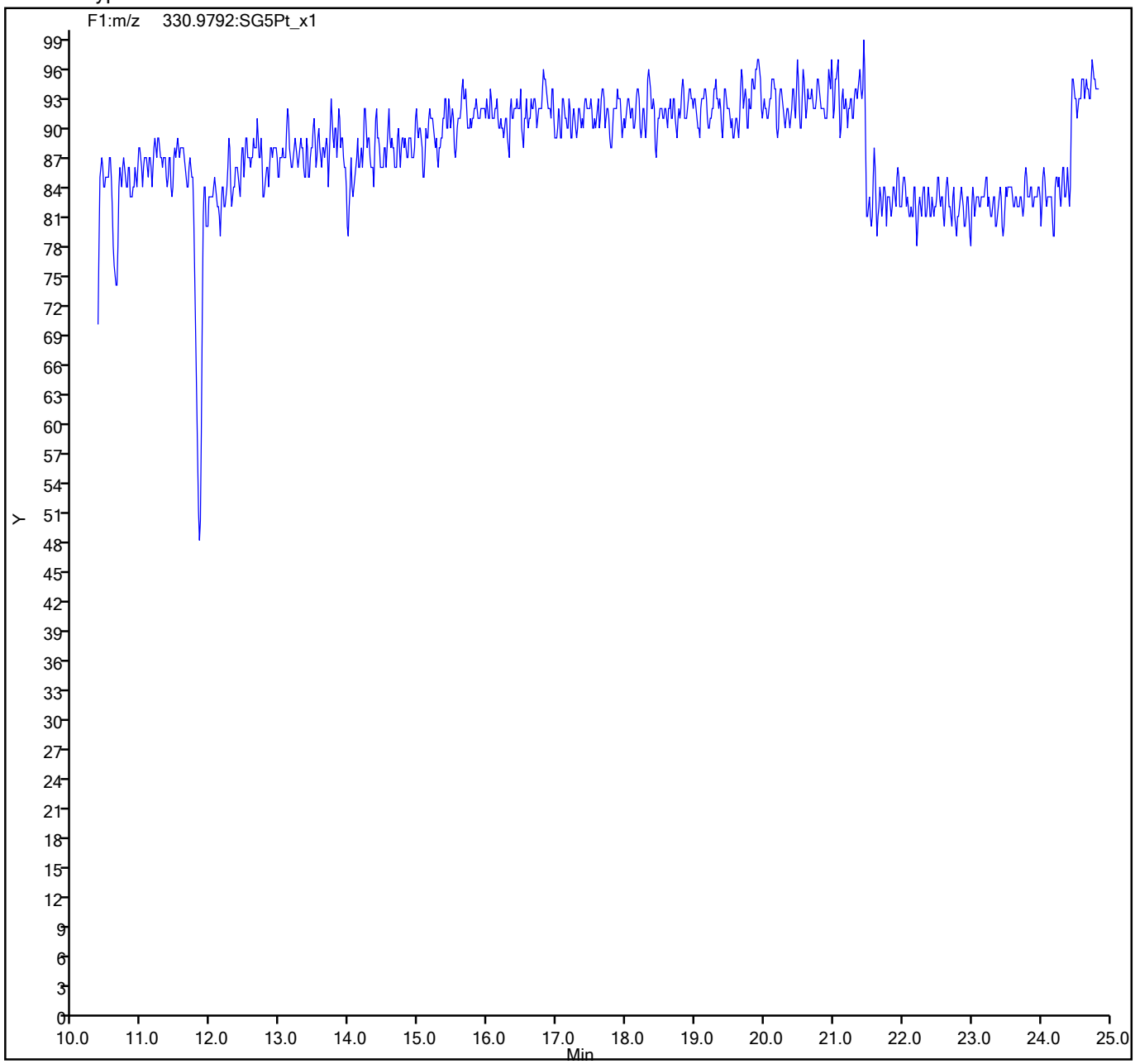

775431

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: 11215702-072221-DUP-4 Lab Sample ID: 320-76769-25

Matrix: Sediment Lab File ID: 13AU2110D5_66.d

Analysis Method: 1613B Date Collected: 07/22/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:22

Sample wt/vol: 10.26(g) Date Analyzed: 08/15/2021 18:57

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 19.1 GPC Cleanup:(Y/N) N

Analysis Batch No.: 516848 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2.1	B	1.2	0.064
40321-76-4	1,2,3,7,8-PeCDD	ND		6.0	0.055
57117-41-6	1,2,3,7,8-PeCDF	0.27	J	6.0	0.040
57117-31-4	2,3,4,7,8-PeCDF	0.10	J q	6.0	0.039
39227-28-6	1,2,3,4,7,8-HxCDD	0.22	J B	6.0	0.074
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.0	0.077
19408-74-3	1,2,3,7,8,9-HxCDD	0.27	J B	6.0	0.069
70648-26-9	1,2,3,4,7,8-HxCDF	0.35	J B	6.0	0.027
57117-44-9	1,2,3,6,7,8-HxCDF	0.10	J B q	6.0	0.028
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.0	0.023
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.0	0.022
35822-46-9	1,2,3,4,6,7,8-HpCDD	3.5	J B	6.0	0.13
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.18	J B q	6.0	0.038
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.0	0.051
3268-87-9	OCDD	72	B	12	0.13
39001-02-0	OCDF	0.26	J B	12	0.026
41903-57-5	Total TCDD	2.6	B	1.2	0.064
30402-14-3	Total TCDF	11	B q	1.2	0.081
36088-22-9	Total PeCDD	0.93	J q	6.0	0.055
30402-15-4	Total PeCDF	0.49	J q	6.0	0.039
34465-46-8	Total HxCDD	4.5	J B	6.0	0.073
55684-94-1	Total HxCDF	0.45	J B q	6.0	0.025
37871-00-4	Total HpCDD	13	B	6.0	0.13
38998-75-3	Total HpCDF	0.29	J B q	6.0	0.045

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: 11215702-072221-DUP-4 Lab Sample ID: 320-76769-25

Matrix: Sediment Lab File ID: 13AU2110D5_66.d

Analysis Method: 1613B Date Collected: 07/22/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:22

Sample wt/vol: 10.26(g) Date Analyzed: 08/15/2021 18:57

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 19.1 GPC Cleanup:(Y/N) N

Analysis Batch No.: 516848 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	44		25-164
89059-46-1	13C-2,3,7,8-TCDF	40		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	46		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	42		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	47		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	48		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	43		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	45		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	42		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	41		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	42		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	49		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	47		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	52		26-138
114423-97-1	13C-OCDD	55		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	54		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d
Lims ID: 320-76769-A-25-A
Client ID: 11215702-072221-DUP-4
Sample Type: Client
Inject. Date: 15-Aug-2021 18:57:14 ALS Bottle#: 64 Worklist Smp#: 25
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-25-a 320-76769-a-25-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:28:24 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: dadunj Date: 18-Aug-2021 11:42:49

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	68868102	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	44837621	0.75	1.6249	40.1	40.1	0.0662	0.0662	40.07	
2,3,7,8-TCDF	17.371	1169747	0.76	1.0239	2.548	2.548	0.0336	0.0336		
A Non-2,3,7,8-sub-TCDF	17.046	861627	0.77	1.0239	1.907	1.877	0.0336	1.122		RQa
S Total TCDF					4.455	4.425	0.0336	0.0336		RQ
D 13C-2,3,7,8-TCDD	18.066	27328732	0.82	0.8993	44.1	44.1	0.1057	0.1057	44.13	
2,3,7,8-TCDD	18.082	299920	0.76	1.2541	0.8751	0.8751	0.0266	0.0266		M
$ 37Cl4-2,3,7,8-TCDD	18.082	16549311		1.1071	21.7	21.7	0.0197	0.0197	54.26	
A Non-2,3,7,8-sub-TCDD	17.500	65133	0.88	1.2541	0.1900	0.1900	0.0266	0.1900		
S Total TCDD					1.065	1.065	0.0266	0.0266		
D 13C-1,2,3,7,8-PeCDF	22.381	35190632	1.57	1.2101	42.2	42.2	0.1282	0.1282	42.23	
1,2,3,7,8-PeCDF	22.394	41102	1.64	1.0611	0.1101	0.1101	0.0164	0.0164		M
D 13C-2,3,4,7,8-PeCDF	23.717	40274190	1.57	1.2395	47.2	47.2	0.1252	0.1252	47.18	
2,3,4,7,8-PeCDF	23.744	17746	1.55	1.0184	0.0513	0.0433	0.0163	0.0163		RQM
A F1 PeCDFs	20.093						0.0133	0.0133		
A Non-2,3,7,8-sub-PeCDF	23.241	18963	1.78	1.0398	0.0483	0.0483	0.0163	0.0483		
S Total PeCDF					0.2097	0.2017	0.0164	0.0164		RQ
D 13C-1,2,3,7,8-PeCDD	24.453	24233396	1.66	0.7612	46.2	46.2	0.0605	0.0605	46.23	
1,2,3,7,8-PeCDD	24.453						0.0226	0.0226		
A Non-2,3,7,8-sub-PeCDD	23.349	97625	1.55	1.0484	0.3990	0.3842	0.0226	0.2156		RQM
S Total PeCDD					0.3990	0.3842	0.0226	0.0226		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	34265411	0.52	1.0837	44.9	44.9	0.2194	0.2194	44.89	
1,2,3,4,7,8-HxCDF	30.542	53985	1.20	1.0851	0.1452	0.1452	0.0111	0.0111		
D 13C-1,2,3,6,7,8-HxCDF	30.702	33160442	0.51	1.1279	41.7	41.7	0.2107	0.2107	41.74	
1,2,3,6,7,8-HxCDF	30.702	15795	1.24	1.1260	0.0495	0.0423	0.0116	0.0116		RQ
D 13C-2,3,4,6,7,8-HxCDF	31.527	31128924	0.51	1.0637	41.5	41.5	0.2235	0.2235	41.55	
2,3,4,6,7,8-HxCDF	31.528						0.009305	0.009305		
D 13C-1,2,3,7,8,9-HxCDF	32.326	28091215	0.52	0.9676	41.2	41.2	0.2457	0.2457	41.22	
1,2,3,7,8,9-HxCDF	32.339						0.009644	0.009644		RQU
A Non-2,3,7,8-sub-HxCDF	30.197						0.0104	0.0104		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.1947	0.1875	0.0104	0.0104		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.140	70433985	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	24793923	1.25	0.7334	48.0	48.0	0.2637	0.2637	48.00	
1,2,3,4,7,8-HxCDD	31.714	24257	1.25	1.0640	0.0919	0.0919	0.0306	0.0306		
D 13C-1,2,3,6,7,8-HxCDD	31.807	26854457	1.25	0.8802	43.3	43.3	0.2197	0.2197	43.32	
1,2,3,6,7,8-HxCDD	31.714						0.0319	0.0319		U
1,2,3,7,8,9-HxCDD	32.153	32301	1.25	1.1325	0.1104	0.1104	0.0285	0.0285		
A Non-2,3,7,8-sub-HxCDD	30.882	461888	1.34	1.0655	1.679	1.679	0.0302	1.312		M
S Total HxCDD					1.881	1.881	0.0303	0.0303		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	25534196	0.43	0.7730	46.9	46.9	0.6086	0.6086	46.90	
1,2,3,4,6,7,8-HpCDF	33.778	26786	1.04	1.4413	0.0813	0.0728	0.0159	0.0159		RQ
D 13C-1,2,3,4,7,8,9-HpCDF	34.859	25654779	0.43	0.7008	52.0	52.0	0.6713	0.6713	51.97	
1,2,3,4,7,8,9-HpCDF	34.860						0.0213	0.0213		
A Non-2,3,7,8-sub-HpCDF	34.319	16395	1.04	1.3793	0.0532	0.0464	0.0183	0.0464		RQM
S Total HpCDF					0.1345	0.1192	0.0186	0.0186		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	22297733	1.01	0.6472	48.9	48.9	0.2162	0.2162	48.91	
1,2,3,4,6,7,8-HpCDD	34.580	355029	1.13	1.0943	1.455	1.455	0.0532	0.0532		
A Non-2,3,7,8-sub-HpCDD	34.301	992503	1.00	1.0943	4.068	4.068	0.0532	4.068		
S Total HpCDD					5.523	5.523	0.0532	0.0532		
D 13C-OCDD	36.926	34491988	0.86	0.4472	109.5	109.5	0.1290	0.1290	54.76	
OCDF	37.021	26924	0.96	1.4382	0.1086	0.1086	0.0106	0.0106		M
OCDD	36.938	5663185	0.91	1.1070	29.7	29.7	0.0521	0.0521		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d
Lims ID: 320-76769-A-25-A
Client ID: 11215702-072221-DUP-4
Sample Type: Client
Inject. Date: 15-Aug-2021 18:57:14 ALS Bottle#: 64 Worklist Smp#: 25
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-25-a 320-76769-a-25-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:28:24 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: dadunj Date: 18-Aug-2021 11:42:49

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		30628749	7404579	3400	8500	2178		
333.9339	17.870	17.855	1		38239353	9129509	2884	7210	3166	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.971	19268147	4638780	3605	9012	1287		
317.9389	17.356	17.356	0	0.971	25569474	6037555	3509	8772	1721	0.75(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.371	0	1.001	504003	111796	671	1677	167		
305.8987	17.371	17.371	0	1.001	665744	149821	799	1997	188	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQa
303.9016	16.237	17.046	-48	0.936	24965	6565	671	1677	10		
305.8987	16.237	17.046	-48	0.936	27914	5925	799	1997	7	0.89(0.65-0.89)	
303.9016	16.464	17.046	-35	0.949	22633	3566	671	1677	5		
	Empc Correction				19258	4393	671	1677	7		
305.8987	16.464	17.046	-35	0.949	25011	5706	799	1997	7	0.90(0.65-0.89)	
303.9016	16.706	17.046	-20	0.963	24084	6106	671	1677	9		
305.8987	16.706	17.046	-20	0.963	34789	6708	799	1997	8	0.69(0.65-0.89)	
303.9016	16.993	17.046	-3	0.979	222444	50873	671	1677	76		
305.8987	16.993	17.046	-3	0.979	292873	70294	799	1997	88	0.76(0.65-0.89)	
303.9016	17.220	17.046	10	0.992	12504	3258	671	1677	5		
305.8987	17.190	17.046	9	0.990	16115	3315	799	1997	4	0.78(0.65-0.89)	
303.9016	17.809	17.046	46	1.026	47197	9071	671	1677	14		
	Empc Correction				36725	7201	671	1677	11		
305.8987	17.809	17.046	46	1.026	47695	9352	799	1997	12	0.99(0.65-0.89)	
303.9016	19.215	17.046	130	1.107	32946	6739	671	1677	10		a
305.8987	19.185	17.046	128	1.105	44304	8179	799	1997	10	0.74(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	12298645	2747512	3400	8500	808		
333.9339	18.066	18.051	1	1.011	15030087	3292990	2884	7210	1142	0.82(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	18.082	18.081	0	1.001	129138	30935	490	1225	63		
321.8936	18.082	18.081	0	1.001	170782	41245	316	790	131	0.76(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.081	0	1.012	16549311	3680328	1441	3602	2554		
A Non-2,3,7,8-sub-TCDD											
319.8965	16.917	17.500	-35	0.936	30482	7777	490	1225	16		
321.8936	16.933	17.500	-34	0.937	34651	9726	316	790	31	0.88(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.252	21497684	3543845	6162	15405	575		
353.8970	22.381	22.367	1	1.252	13692948	2235685	4099	10247	545	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.394	22.394	0	1.001	25518	4724	162	405	29		M
341.8567	22.394	22.394	0	1.001	15584	3053	240	600	13	1.64(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.327	24603186	3697553	6162	15405	600		
353.8970	23.730	23.703	2	1.328	15671004	2348131	4099	10247	573	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											RQM
339.8597	23.744	23.730	1	1.001	10787	1878	162	405	12		M
341.8567	23.744	23.730	1	1.001	10273	2510	240	600	10	1.05(1.32-1.78)	M
	Empc Correction				6959	1211	240	600	5		
A F1 PeCDFs											
339.8597	20.093						125	312			
341.8567	20.093						201	502			
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.071	23.241	-130	0.942	12132	2067	162	405	13		
341.8567	21.044	23.241	-132	0.940	6831	1320	240	600	6	1.78(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.426	2	1.368	15111070	2082440	1800	4500	1157		
369.8919	24.440	24.426	1	1.368	9122326	1297908	1247	3117	1041	1.66(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453						205	512			
357.8516	24.453						116	290			
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	21.262	23.349	-125	0.870	12739	2386	205	512	12		
357.8516	21.221	23.349	-127	0.868	11972	1889	116	290	16	1.06(1.32-1.78)	M
	Empc Correction				8218	1539	116	290	13		
355.8546	21.999	23.349	-81	0.900	31308	7524	205	512	37		
357.8516	21.985	23.349	-82	0.899	23468	3965	116	290	34	1.33(1.32-1.78)	
355.8546	23.485	23.349	8	0.960	13682	2107	205	512	10		M
357.8516	23.485	23.349	8	0.960	8210	1602	116	290	14	1.67(1.32-1.78)	M

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	11674769	2165043	6077	15192	356		
385.8610	30.516	30.503	1	0.949	22590642	4257567	11179	27947	381	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.542	30.529	1	1.001	29416	5781	166	415	35		
375.8178	30.556	30.529	2	1.001	24569	3959	144	360	27	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	11256813	2030107	6077	15192	334		
385.8610	30.702	30.689	1	0.955	21903629	3883174	11179	27947	347	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQ
373.8208	30.702	30.716	-1	1.000	8744	1528	166	415	9		
375.8178	30.715	30.716	0	1.000	9744	1992	144	360	14	0.90(1.05-1.43)	
	Empc Correction				7051	1232	144	360	9		
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.527	31.514	1	0.981	10567728	2461992	6077	15192	405		
385.8610	31.514	31.514	0	0.981	20561196	4671715	11179	27947	418	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						166	415			
375.8178	31.528						144	360			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.326	0	1.006	9621939	2368622	6077	15192	390		
385.8610	32.326	32.326	0	1.006	18469276	4521276	11179	27947	404	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQU
373.8208	32.340						166	415			
375.8178	32.340						144	360			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.197						166	415			
375.8178	30.197						144	360			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.140	0		38884441	10082396	7676	19190	1313		
403.8529	32.140	32.140	0		31549544	8066174	6364	15910	1267	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.987	13778856	3545264	7676	19190	462		
403.8529	31.714	31.701	1	0.987	11015067	2872405	6364	15910	451	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.714	0	1.000	13486	3211	385	962	8		
391.8127	31.740	31.714	2	1.001	10771	2629	450	1125	6	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	14931321	3640872	7676	19190	474		
403.8529	31.807	31.807	0	0.990	11923136	2893929	6364	15910	455	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											U
389.8157	31.820						385	962			
391.8127	31.820						450	1125			
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.153	0	1.014	17915	3902	385	962	10		
391.8127	32.153	32.153	0	1.014	14386	3566	450	1125	8	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDD											M
389.8157	29.558	30.882	-79	0.929	207557	22423	385	962	58		M
391.8127	29.544	30.882	-80	0.929	153517	17168	450	1125	38	1.35(1.05-1.43)	
389.8157	30.982	30.882	6	0.974	57321	9914	385	962	26		M
391.8127	30.968	30.882	5	0.974	43493	9529	450	1125	21	1.32(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.766	0	1.051	7674487	2430917	12342	30855	197		
419.8220	33.766	33.766	0	1.051	17859709	5609730	21811	54527	257	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQ
407.7818	33.778	33.778	0	1.000	13656	5103	513	1282	10		
409.7789	33.778	33.778	0	1.000	16252	5005	222	555	23	0.84(0.88-1.20)	
	Empc Correction				13130	4906	222	555	22		
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.859	34.847	1	1.085	7705468	1958013	12342	30855	159		
419.8220	34.847	34.847	0	1.084	17949311	4578150	21811	54527	210	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860						513	1282			
409.7789	34.860						222	555			
A Non-2,3,7,8-sub-HpCDF											RQM
407.7818	34.069	34.319	-15	1.009	10741	3515	513	1282	7		
	Empc Correction				8358	1805	513	1282	4		
409.7789	34.069	34.319	-15	1.009	8037	1736	222	555	8	1.34(0.88-1.20)	M
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.076	11209142	3083107	4764	11910	647		
437.8140	34.568	34.568	0	1.076	11088591	3067150	5396	13490	568	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	188600	52546	719	1797	73		
425.7737	34.568	34.580	-1	1.000	166429	48345	713	1782	68	1.13(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.984	496281	148017	719	1797	206		
425.7737	34.021	34.301	-17	0.984	496222	142320	713	1782	200	1.00(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.926	0	1.149	15963235	3772477	2154	5385	1751		
471.7750	36.926	36.926	0	1.149	18528753	4281592	2033	5082	2106	0.86(0.76-1.02)	
OCDF											M
441.7428	37.021	37.022	0	1.003	13207	3180	92	230	35		M
443.7399	37.021	37.022	0	1.003	13717	2995	154	385	19	0.96(0.76-1.02)	
OCDD											
457.7377	36.938	36.938	0	1.000	2700980	621519	512	1280	1214		
459.7348	36.938	36.938	0	1.000	2962205	666507	417	1042	1598	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 18-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Lims ID:	320-76769-A-25-A		
Client ID:	11215702-072221-DUP-4		
Inject. Date:	15-Aug-2021 18:57:14	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	25

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	44837621	10676335

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	44837621	10676335

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.237	24965	6565	27914	5925	0.1152	0.89	
16.464	22633	3566	25011	5706	0.1038	0.90	RQ
16.464	19258	4393	25011	5706	0.0964		Empc Correction
16.706	24084	6106	34789	6708	0.1282	0.69	
16.993	222444	50873	292873	70294	1.12	0.76	
17.220	12504	3258	16115	3315	0.0623	0.78	
17.809	47197	9071	47695	9352	0.2067	0.99	RQ
17.809	36725	7201	47695	9352	0.1839		Empc Correction
19.215	32946	6739	44304	8179	0.1683	0.74	a
Signal Totals:							
	372926	85135	488701	109479			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	875474	195657				0.79	RQa
	861627	194614					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.907 = (875474 * 100.000) / (44837621 * 1.024)

Empc Amount: 1.877 = (861627 * 100.000) / (44837621 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d
Lims ID: 320-76769-A-25-A
Client ID: 11215702-072221-DUP-4
Inject. Date: 15-Aug-2021 18:57:14 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 25

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	27328732	6040502

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	27328732	6040502

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.917	30482	7777	34651	9726	0.1900	0.88	
Signal Totals:							
	30482	7777	34651	9726			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	65133	17503				0.88	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1900 = (65133 * 100.000) / (27328732 * 1.254)

Report Date: 18-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Lims ID:	320-76769-A-25-A		
Client ID:	11215702-072221-DUP-4		
Inject. Date:	15-Aug-2021 18:57:14	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	25

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	35190632	5779530
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	40274190	6045684

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	37732411	5912607

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.071	12132	2067	6831	1320	0.0483	1.78	
Signal Totals:							
	12132	2067	6831	1320			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	18963	3387				1.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0483 = (18963 * 100.000) / (37732411 * 1.040)

Report Date: 18-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Lims ID:	320-76769-A-25-A		
Client ID:	11215702-072221-DUP-4		
Inject. Date:	15-Aug-2021 18:57:14	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	25

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	24233396	3380348

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	24233396	3380348

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.262	12739	2386	11972	1889	0.0973	1.06	RQM
21.262	12739	2386	8218	1539	0.0825		Empc Correction
21.999	31308	7524	23468	3965	0.2156	1.33	
23.485	13682	2107	8210	1602	0.0862	1.67	M
Signal Totals:							
	57729	12017	39896	7106			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	101379	19473				1.32	RQM
	97625	19123					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3990 = (101379 * 100.000) / (24233396 * 1.048)
Empc Amount: 0.3842 = (97625 * 100.000) / (24233396 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d
Lims ID: 320-76769-A-25-A
Client ID: 11215702-072221-DUP-4
Inject. Date: 15-Aug-2021 18:57:14 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 25

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	34265411	6422610
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	33160442	5913281
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	31128924	7133707
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	28091215	6889898

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	31661498	6589874

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 18-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d
Lims ID: 320-76769-A-25-A
Client ID: 11215702-072221-DUP-4
Inject. Date: 15-Aug-2021 18:57:14 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 25

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	24793923	6417669
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	26854457	6534801
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	25824190	6476235

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.558	207557	22423	153517	17168	1.31	1.35	M
30.982	57321	9914	43493	9529	0.3664	1.32	M
Signal Totals:							
	264878	32337	197010	26697			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	461888	59034				1.34	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.679 = (461888 * 100.000) / (25824190 * 1.066)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Lims ID:	320-76769-A-25-A		
Client ID:	11215702-072221-DUP-4		
Inject. Date:	15-Aug-2021 18:57:14	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	25

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	25534196	8040647
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	25654779	6536163

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	25594487	7288405

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.069	10741	3515	8037	1736	0.0532	1.34	RQM
34.069	8358	1805	8037	1736	0.0464		Empc Correction
Signal Totals:							
	8358	1805	8037	1736			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	18778	5251				1.34	RQM
	16395	3541					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0532 = (18778 * 100.000) / (25594487 * 1.379)
Empc Amount: 0.0464 = (16395 * 100.000) / (25594487 * 1.379)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Lims ID:	320-76769-A-25-A		
Client ID:	11215702-072221-DUP-4		
Inject. Date:	15-Aug-2021 18:57:14	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	25

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	22297733	6150257

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	22297733	6150257

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	496281	148017	496222	142320	4.07	1.00	
Signal Totals:							
	496281	148017	496222	142320			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	992503	290337				1.00	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.068 = (992503 * 100.000) / (22297733 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d				
Injection Date:	15-Aug-2021 18:57:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-25-A	Lab Sample ID:	320-76769-25		
Client ID:	11215702-072221-DUP-4				
Operator ID:	DB	ALS Bottle#:	64	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.08
Area: 182990
Amount: 0.910698
Amount Units: pg/ul

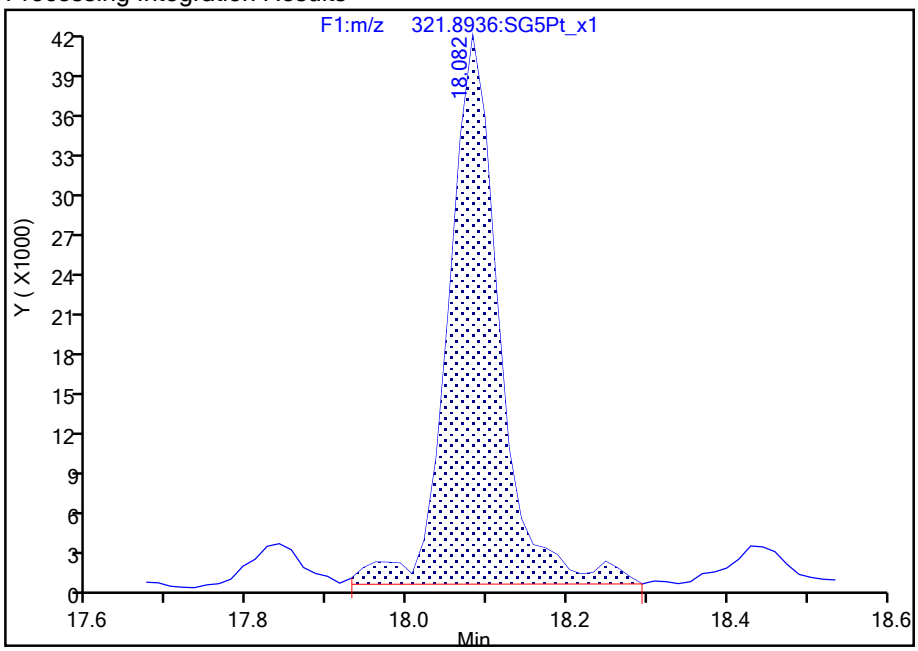

Manual Integration Results

RT: 18.08
Area: 170782
Amount: 0.875078
Amount Units: pg/ul

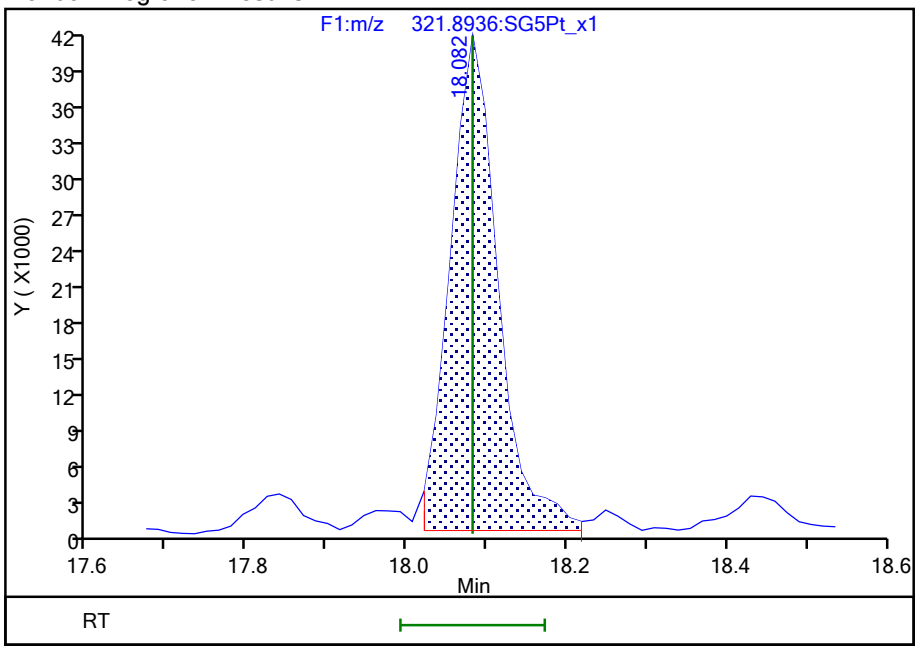

Reviewer: dadunj, 18-Aug-2021 11:40:30

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d				
Injection Date:	15-Aug-2021 18:57:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-25-A	Lab Sample ID:	320-76769-25		
Client ID:	11215702-072221-DUP-4				
Operator ID:	DB	ALS Bottle#:	64	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.39
Area: 18280
Amount: 0.129781
Amount Units: pg/ul

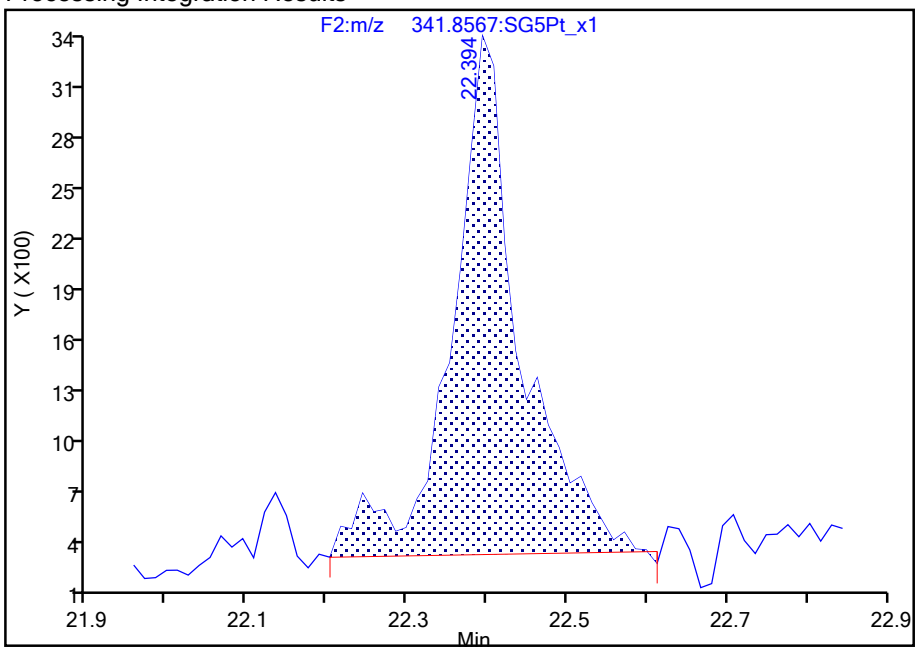

Manual Integration Results

RT: 22.39
Area: 15584
Amount: 0.110069
Amount Units: pg/ul

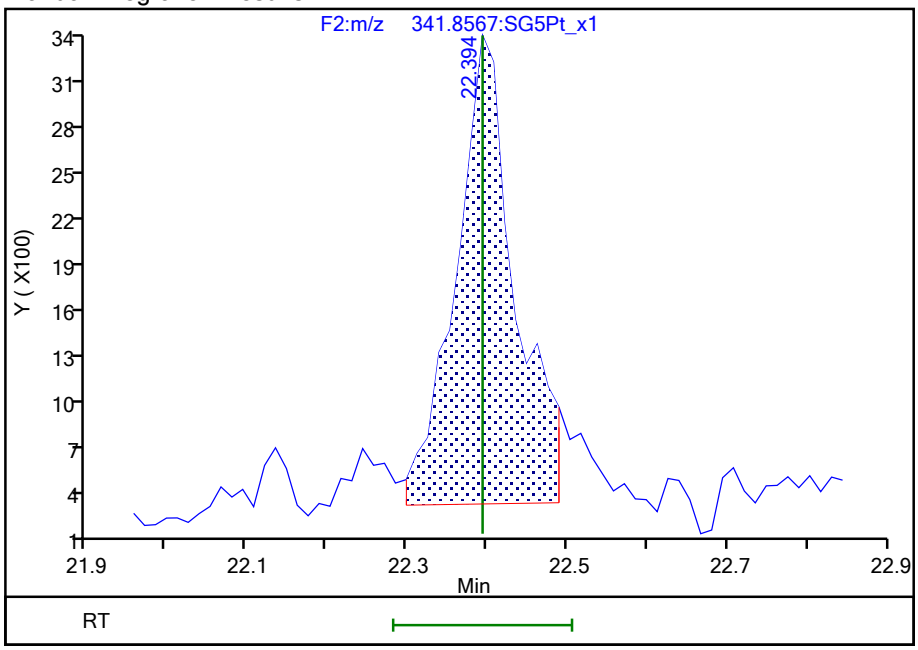

Reviewer: dadunj, 18-Aug-2021 11:40:40

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d				
Injection Date:	15-Aug-2021 18:57:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-25-A	Lab Sample ID:	320-76769-25		
Client ID:	11215702-072221-DUP-4				
Operator ID:	DB	ALS Bottle#:	64	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.39
Area: 30183
Amount: 0.129781
Amount Units: pg/ul

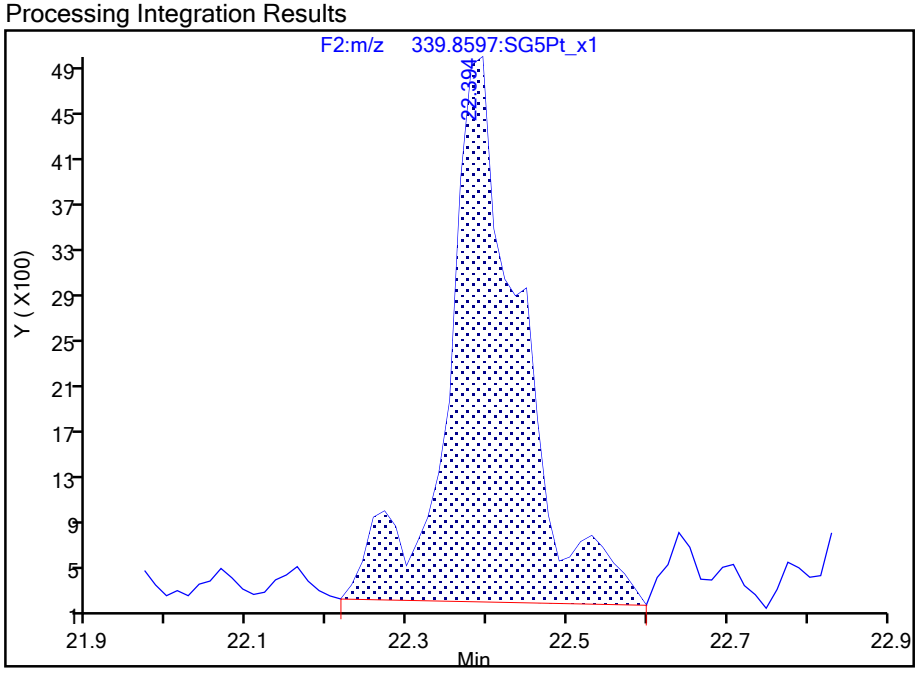

Manual Integration Results

RT: 22.39
Area: 25518
Amount: 0.110069
Amount Units: pg/ul

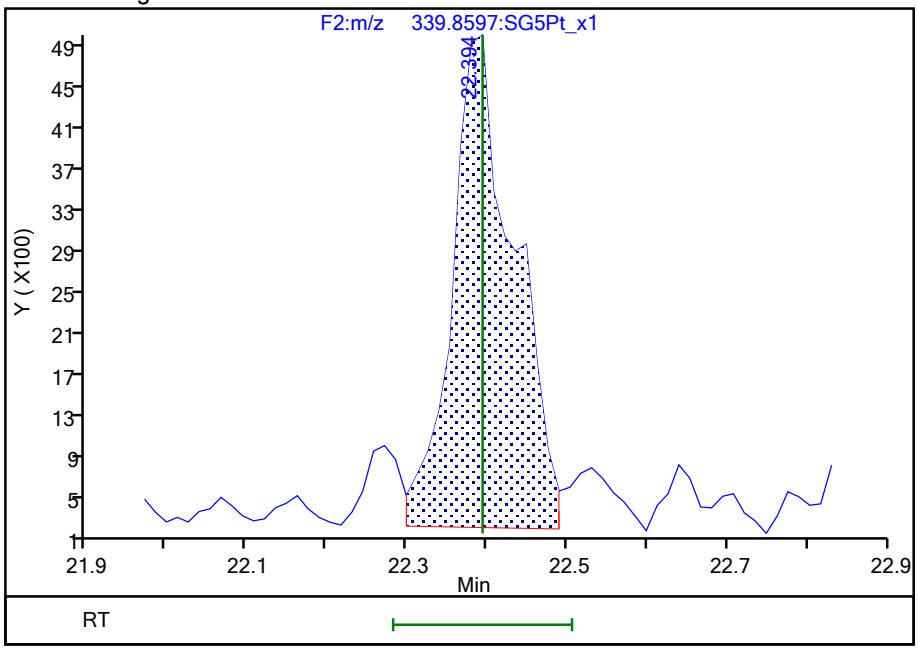

Reviewer: dadunj, 18-Aug-2021 11:40:41

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d				
Injection Date:	15-Aug-2021 18:57:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-25-A	Lab Sample ID:	320-76769-25		
Client ID:	11215702-072221-DUP-4				
Operator ID:	DB	ALS Bottle#:	64	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.74
Area: 13391
Amount: 0.071226
Amount Units: pg/ul

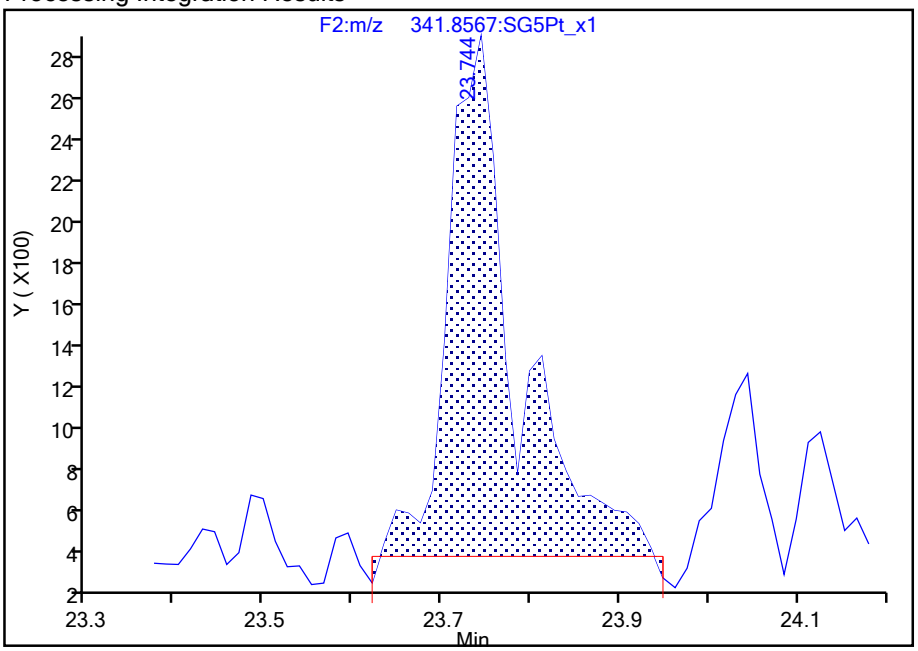

Manual Integration Results

RT: 23.74
Area: 10273
Amount: 0.051346
Amount Units: pg/ul

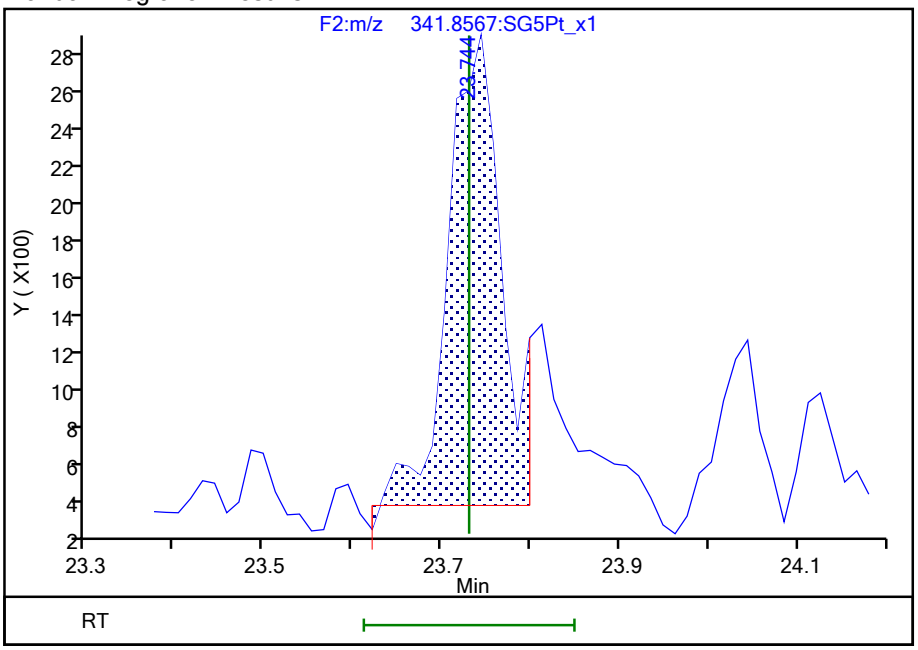

Reviewer: dadunj, 18-Aug-2021 11:40:46

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d				
Injection Date:	15-Aug-2021 18:57:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-25-A	Lab Sample ID:	320-76769-25		
Client ID:	11215702-072221-DUP-4				
Operator ID:	DB	ALS Bottle#:	64	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 23.74
Area: 15823
Amount: 0.071226
Amount Units: pg/ul

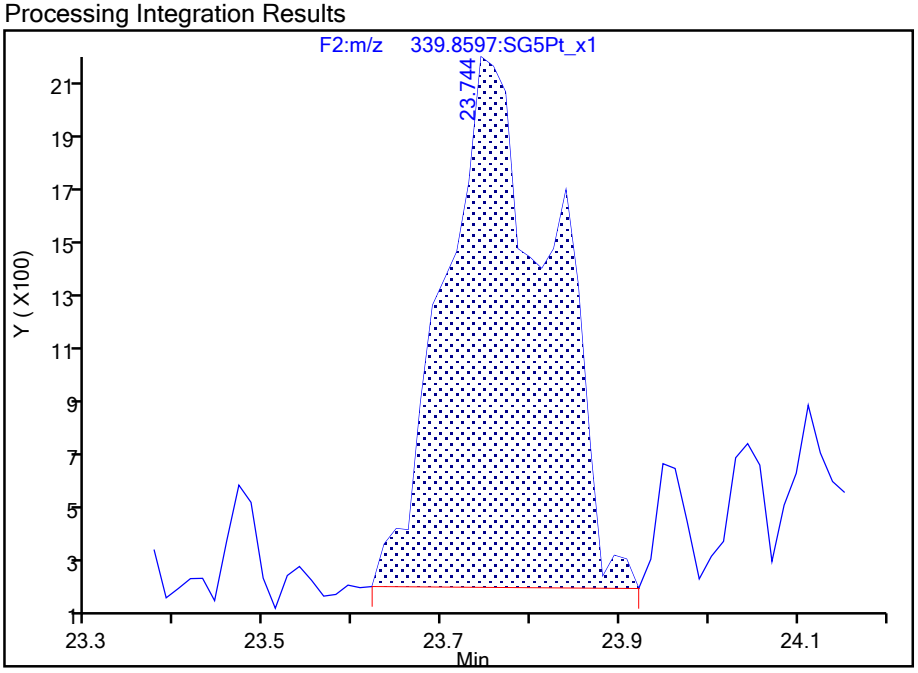

Manual Integration Results

RT: 23.74
Area: 10787
Amount: 0.051346
Amount Units: pg/ul

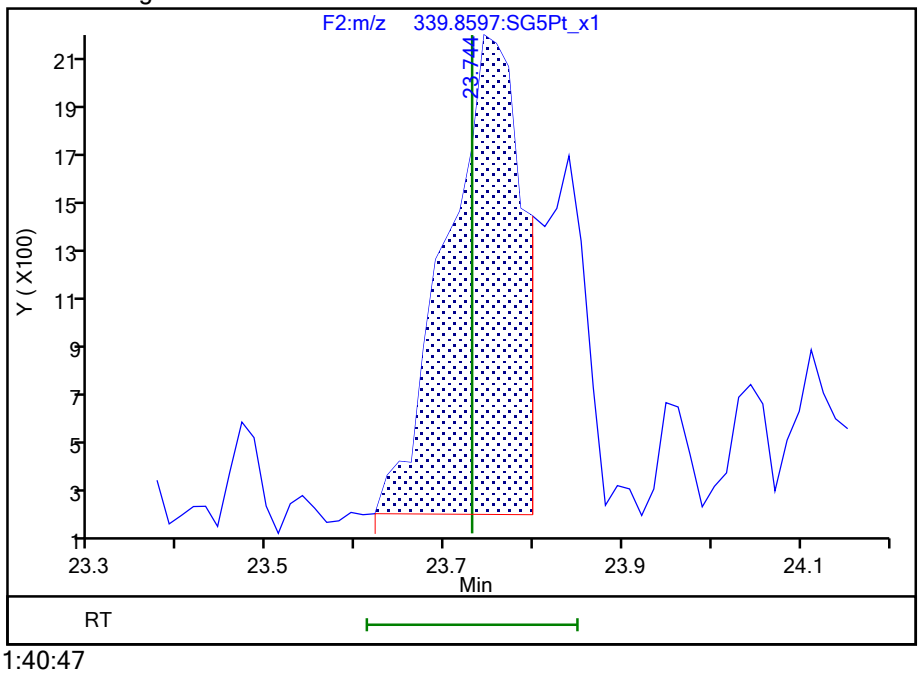

Reviewer: dadunj, 18-Aug-2021 11:40:47

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d				
Injection Date:	15-Aug-2021 18:57:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-25-A	Lab Sample ID:	320-76769-25		
Client ID:	11215702-072221-DUP-4				
Operator ID:	DB	ALS Bottle#:	64	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.21- 25.49)

Signal: 2

Processing Integration Results

RT = 21.221 Area = 12990

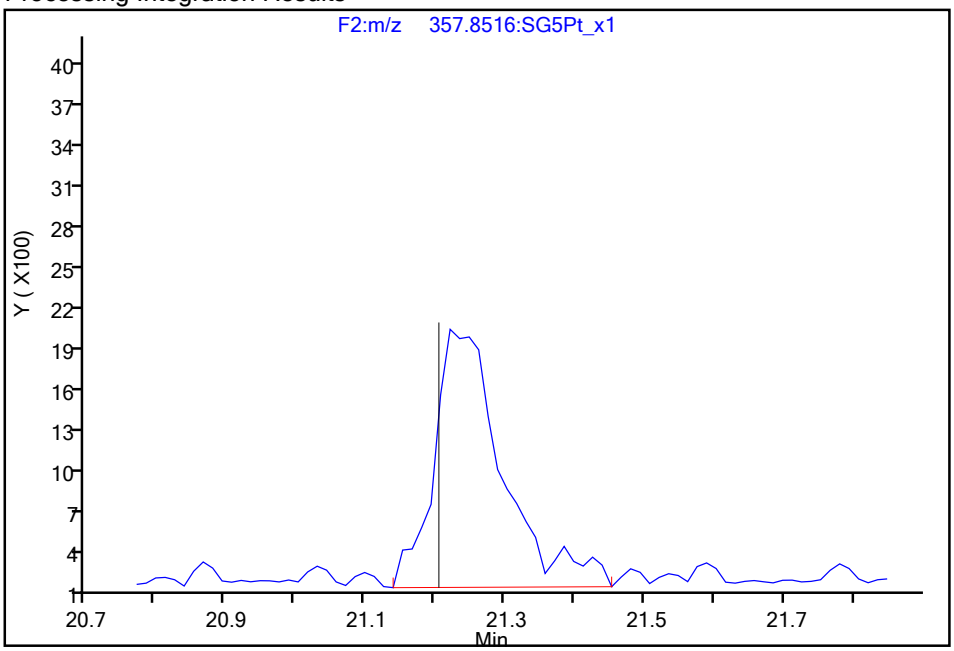

Manual Integration Results

RT = 21.221 Area = 11972 M

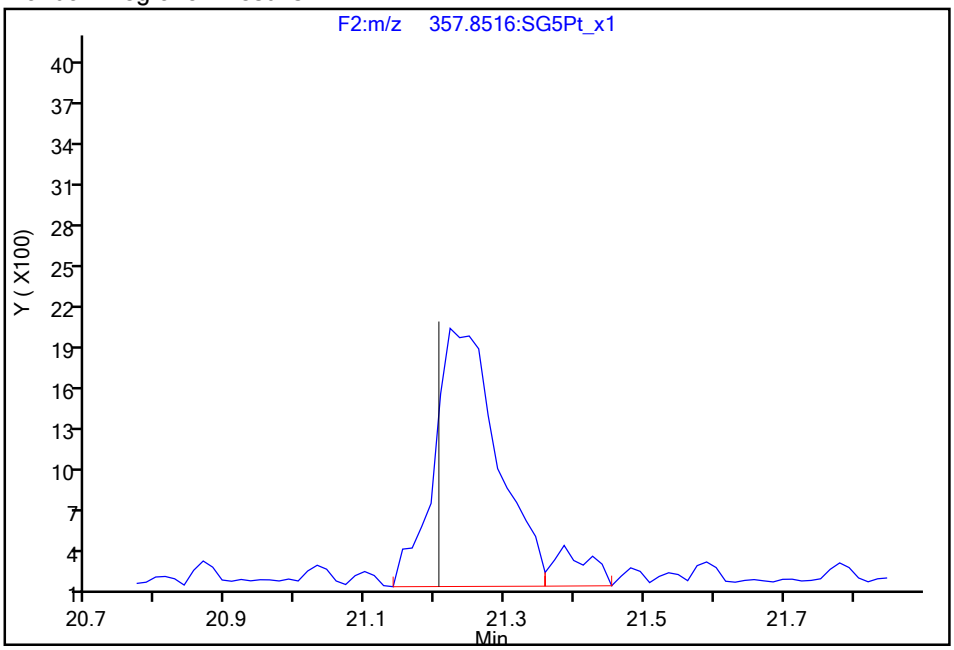

Reviewer: dadunj, 18-Aug-2021 11:42:30

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d				
Injection Date:	15-Aug-2021 18:57:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-25-A	Lab Sample ID:	320-76769-25		
Client ID:	11215702-072221-DUP-4				
Operator ID:	DB	ALS Bottle#:	64	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.21- 25.49)

Signal: 1

Processing Integration Results

RT = 23.485 Area = 15738

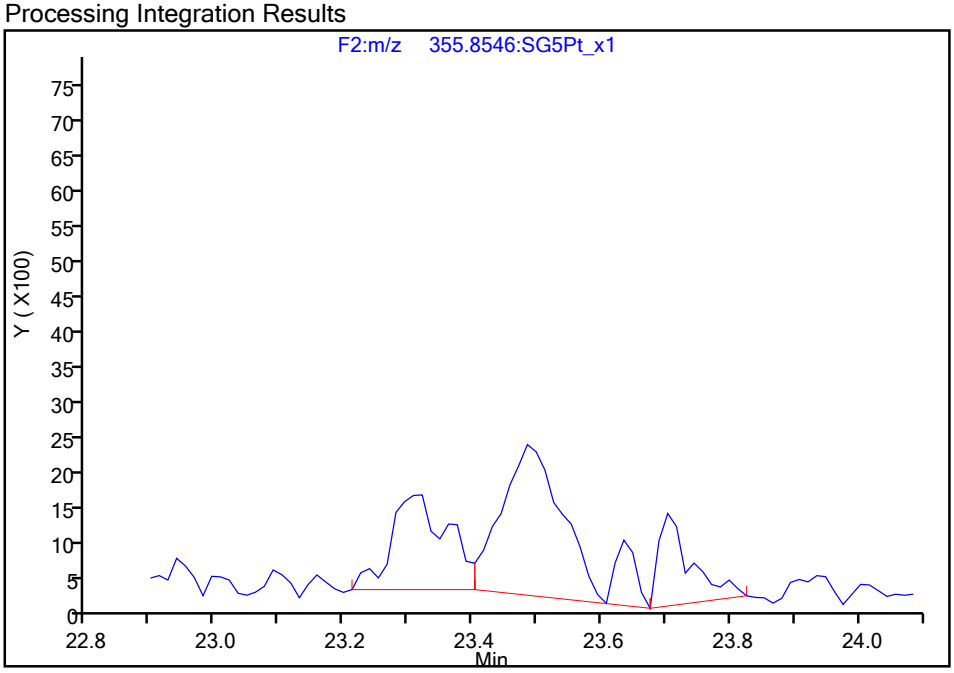

Manual Integration Results

RT = 23.485 Area = 13682 M

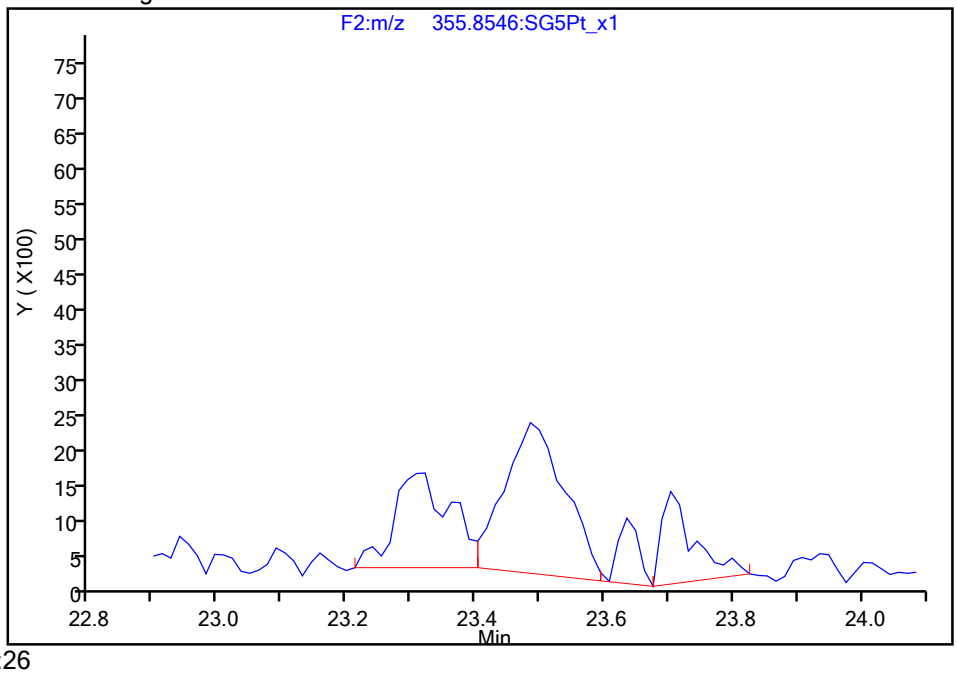

Reviewer: dadunj, 18-Aug-2021 11:42:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d				
Injection Date:	15-Aug-2021 18:57:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-25-A	Lab Sample ID:	320-76769-25		
Client ID:	11215702-072221-DUP-4				
Operator ID:	DB	ALS Bottle#:	64	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.21- 25.49)

Signal: 2

Processing Integration Results

RT = 23.485 Area = 8911

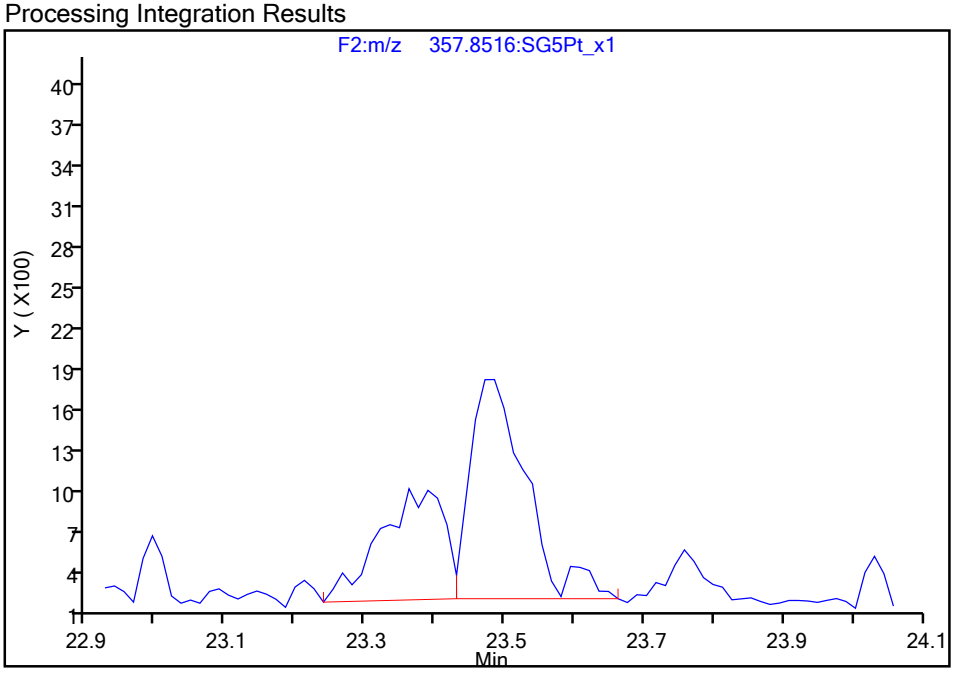

Manual Integration Results

RT = 23.485 Area = 8210 M

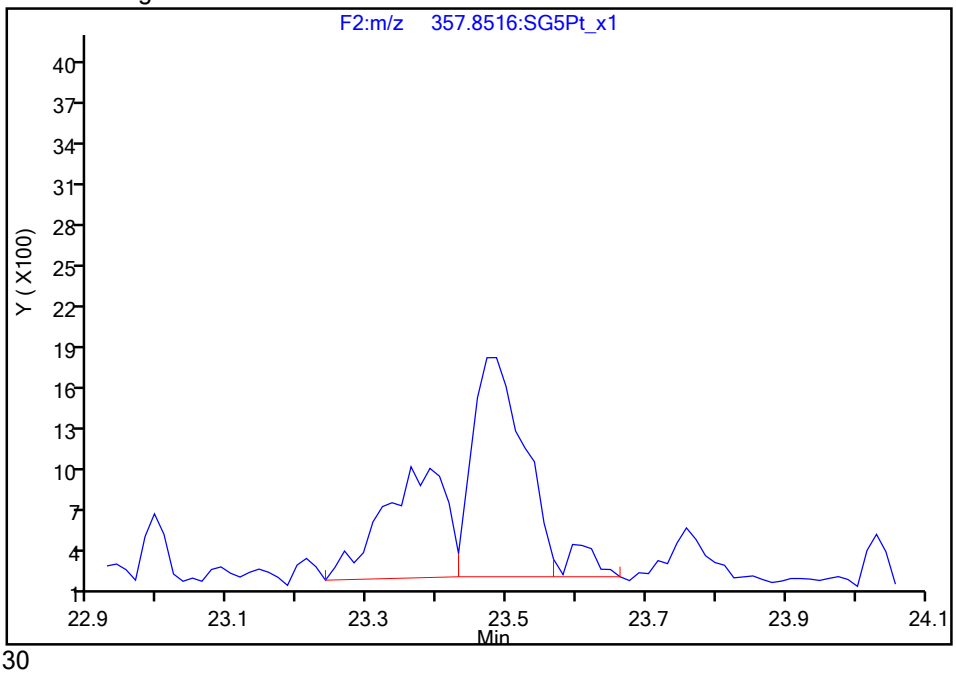

Reviewer: dadunj, 18-Aug-2021 11:42:30

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d				
Injection Date:	15-Aug-2021 18:57:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-25-A	Lab Sample ID:	320-76769-25		
Client ID:	11215702-072221-DUP-4				
Operator ID:	DB	ALS Bottle#:	64	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (29.36- 32.41)

Signal: 1

Processing Integration Results

RT = 29.558 Area = 209308

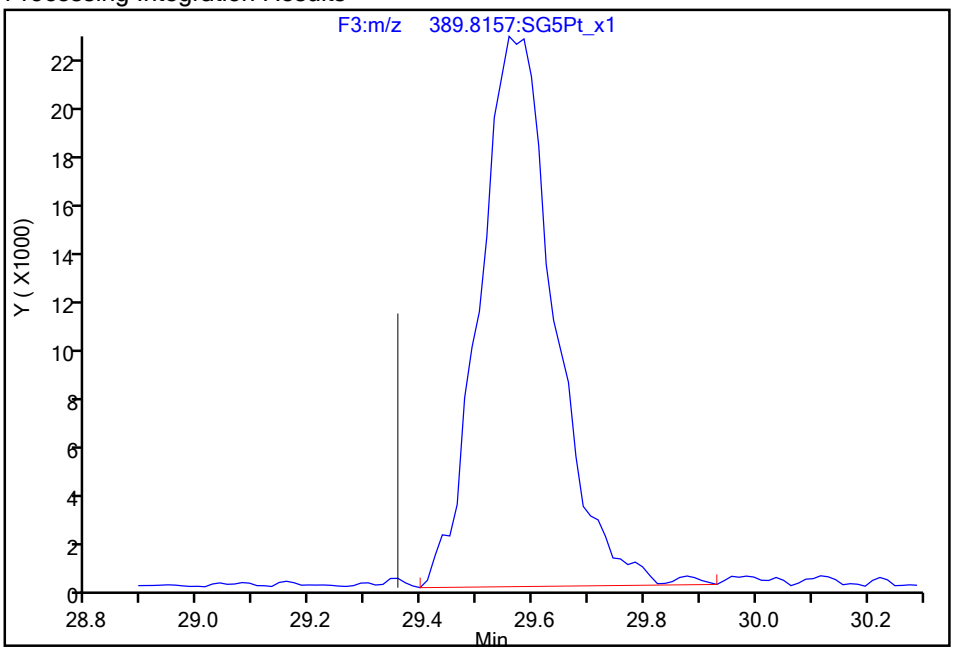

Manual Integration Results

RT = 29.558 Area = 207557 M

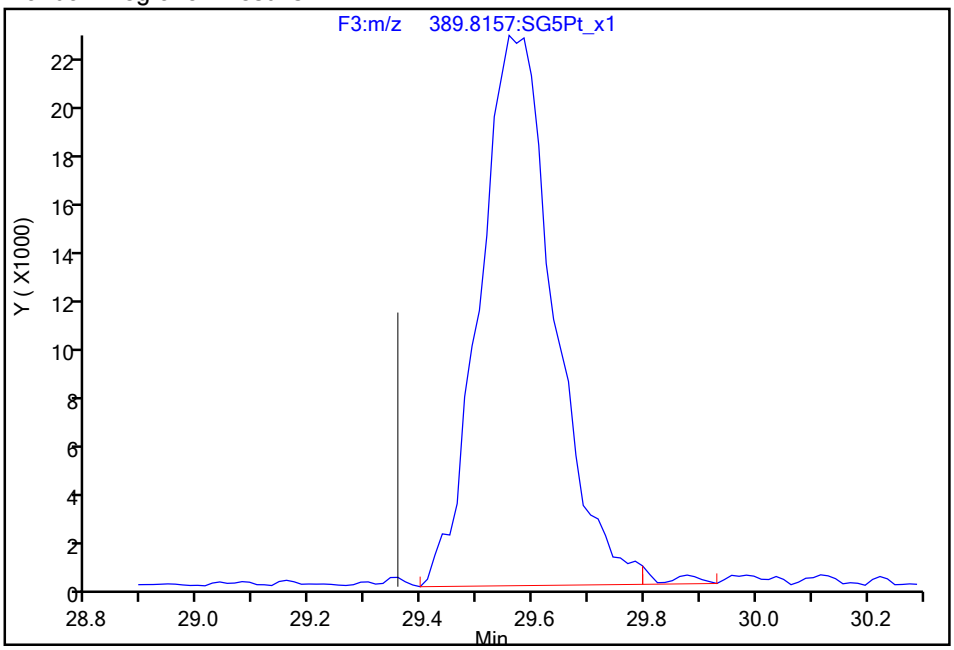

Reviewer: dadunj, 18-Aug-2021 11:41:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d				
Injection Date:	15-Aug-2021 18:57:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-25-A	Lab Sample ID:	320-76769-25		
Client ID:	11215702-072221-DUP-4				
Operator ID:	DB	ALS Bottle#:	64	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (29.36- 32.41)

Signal: 1

Processing Integration Results

RT = 30.982 Area = 67451

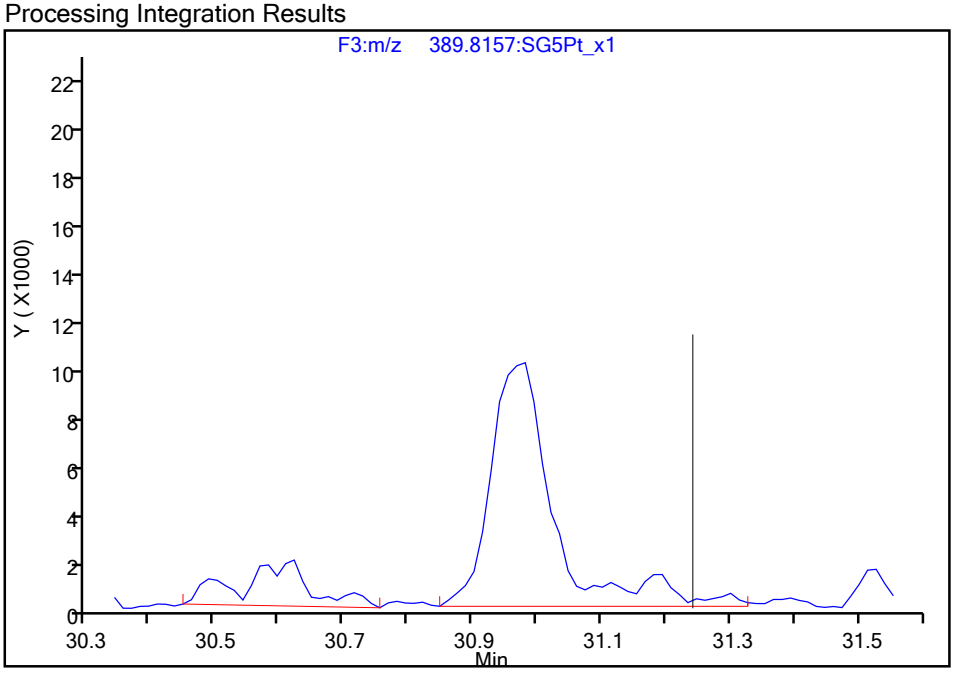

Manual Integration Results

RT = 30.982 Area = 57321 M

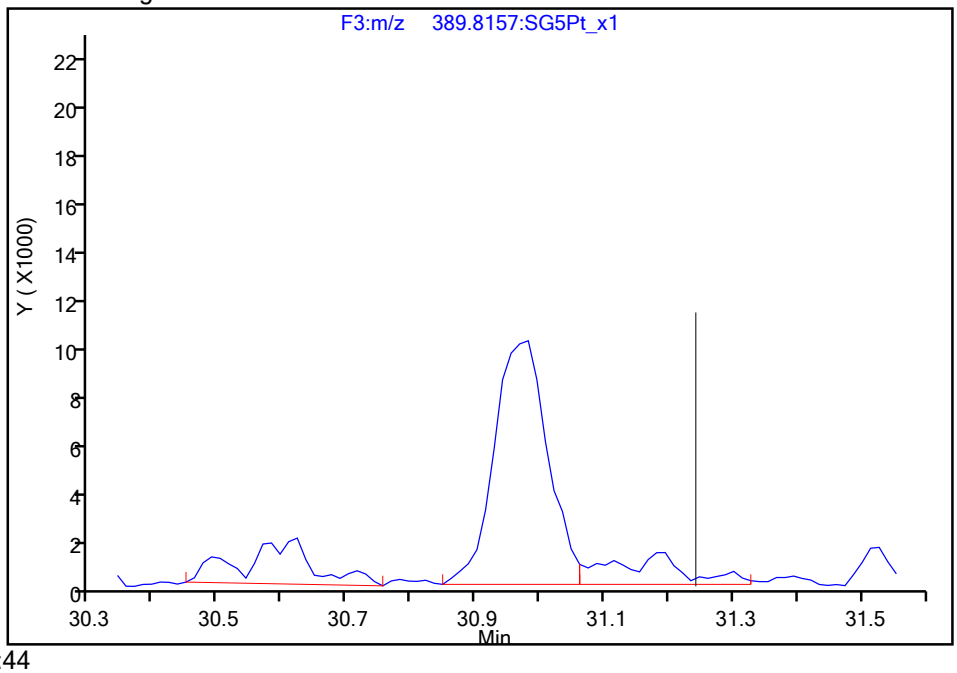

Reviewer: dadunj, 18-Aug-2021 11:41:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d				
Injection Date:	15-Aug-2021 18:57:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-25-A	Lab Sample ID:	320-76769-25		
Client ID:	11215702-072221-DUP-4				
Operator ID:	DB	ALS Bottle#:	64	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 2, m/z: 409.7789, RT: (33.75- 34.89)

Signal: 2

Processing Integration Results

RT = 34.069 Area = 9354

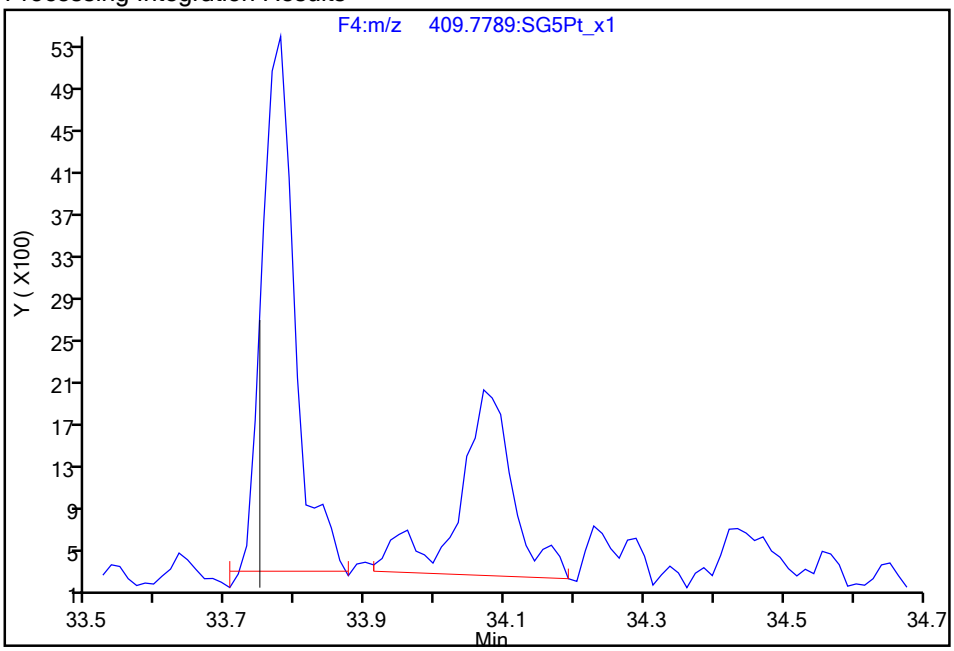

Manual Integration Results

RT = 34.069 Area = 8037 M

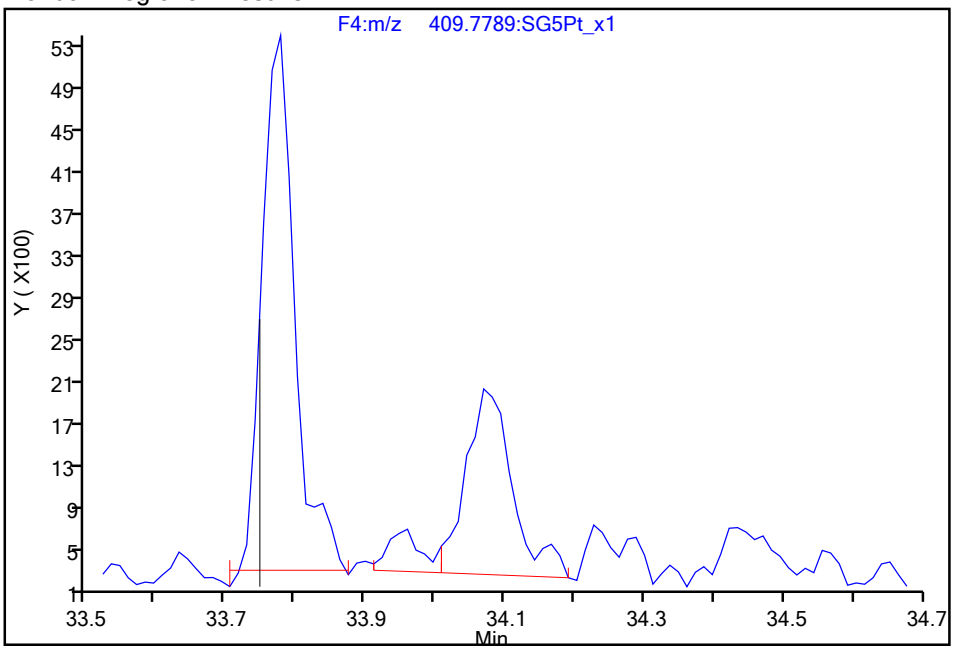

Reviewer: dadunj, 18-Aug-2021 11:41:51

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d				
Injection Date:	15-Aug-2021 18:57:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-25-A	Lab Sample ID:	320-76769-25		
Client ID:	11215702-072221-DUP-4				
Operator ID:	DB	ALS Bottle#:	64	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 13935
Amount: 0.111489
Amount Units: pg/ul

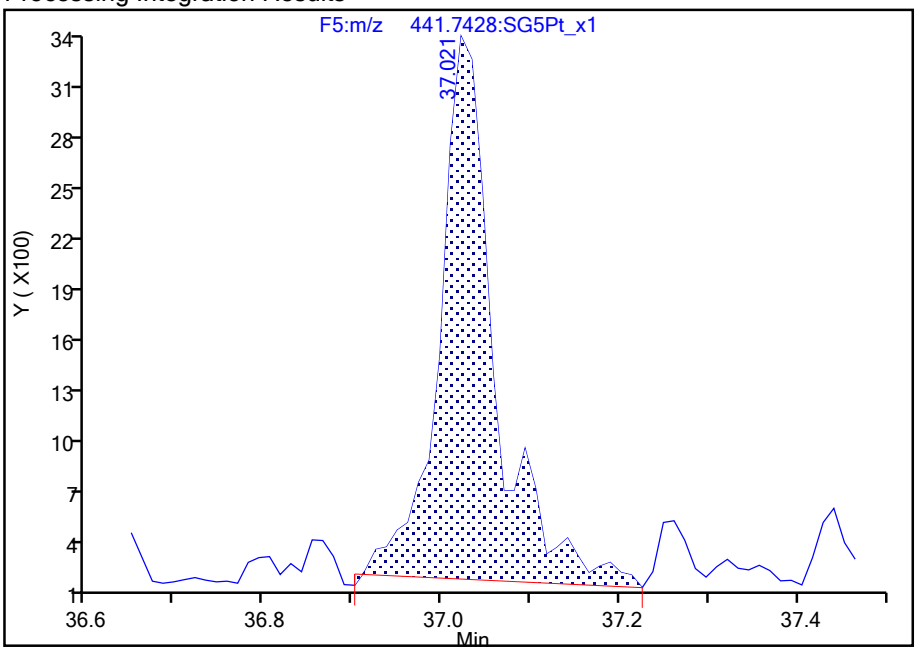

Manual Integration Results

RT: 37.02
Area: 13207
Amount: 0.108553
Amount Units: pg/ul

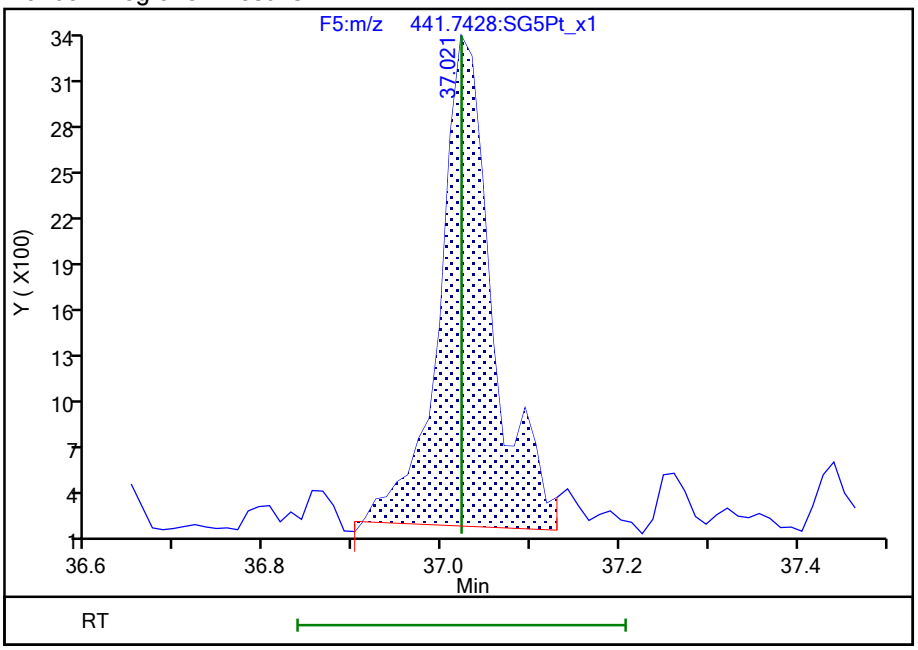

Reviewer: dadunj, 18-Aug-2021 11:41:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

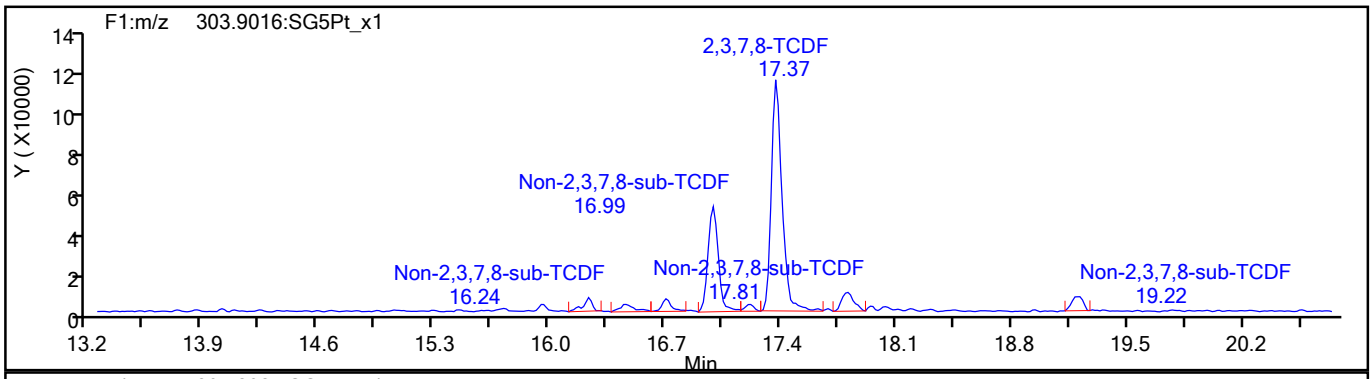

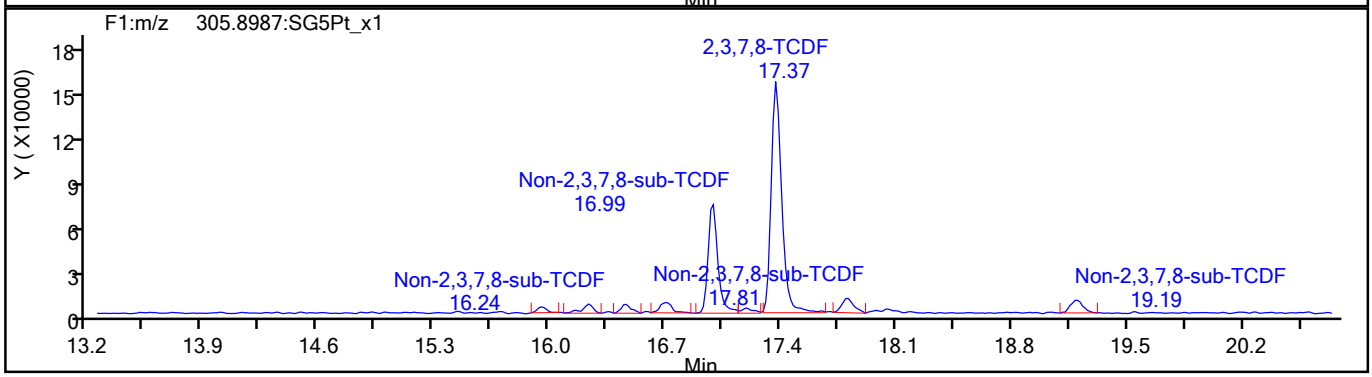

TCDF Standards

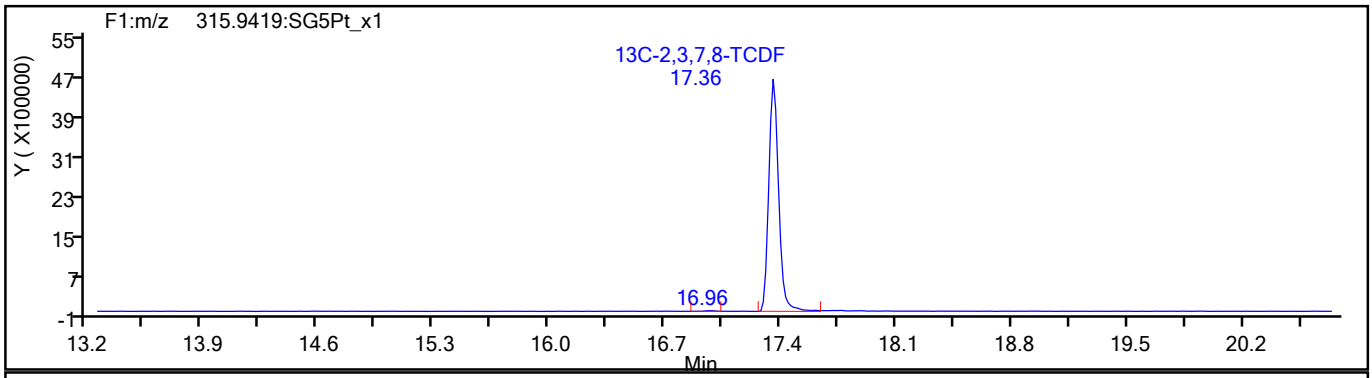

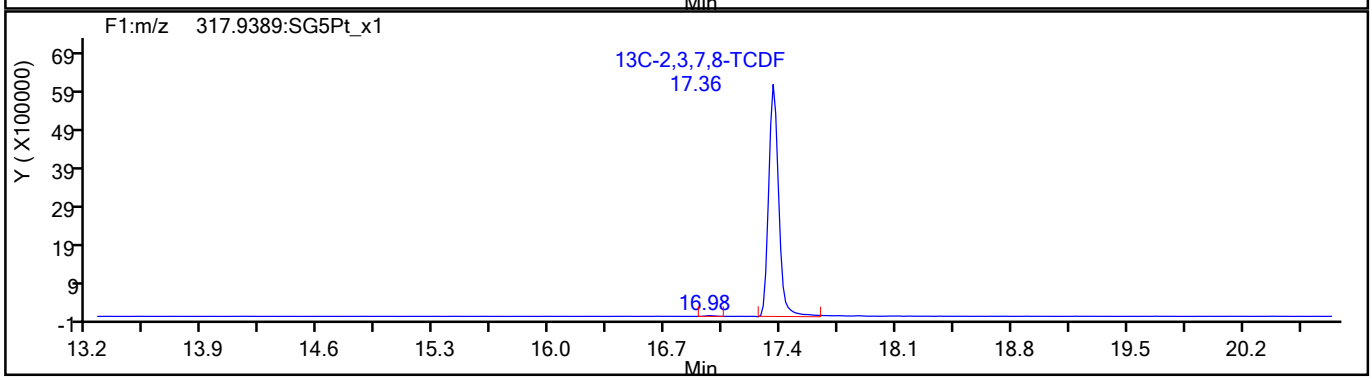

775462

Report Date: 18-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

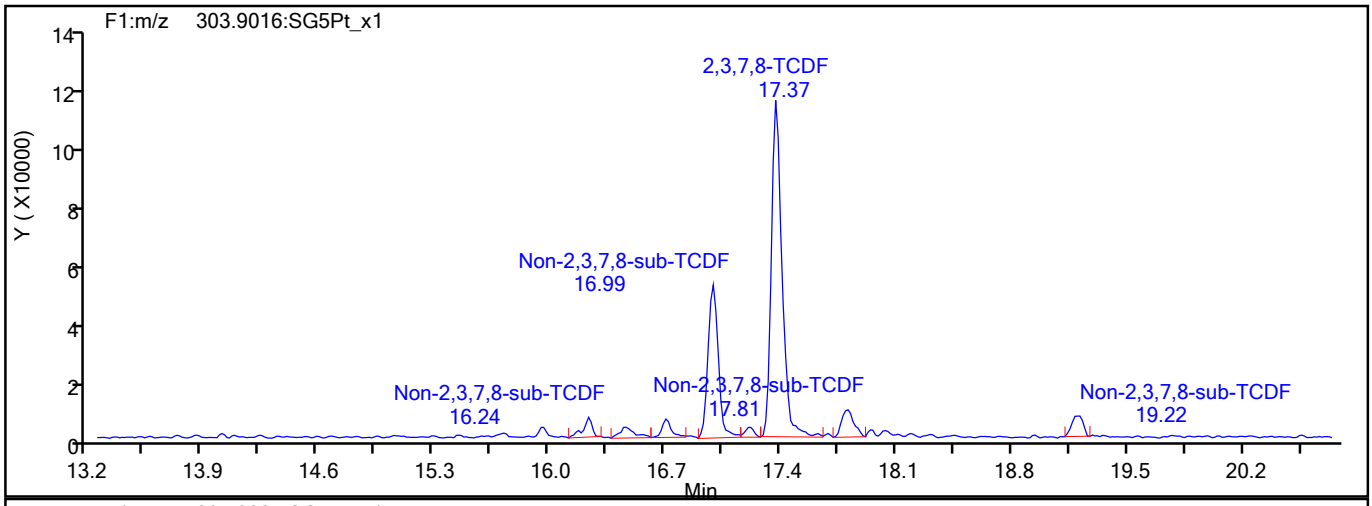

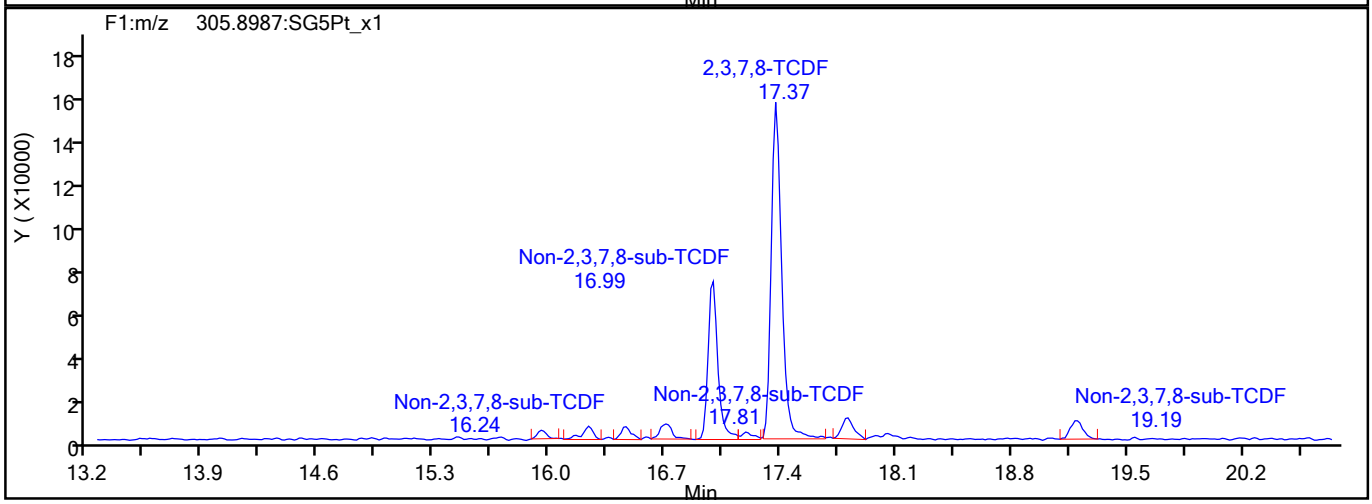

TCDF Interference Mass

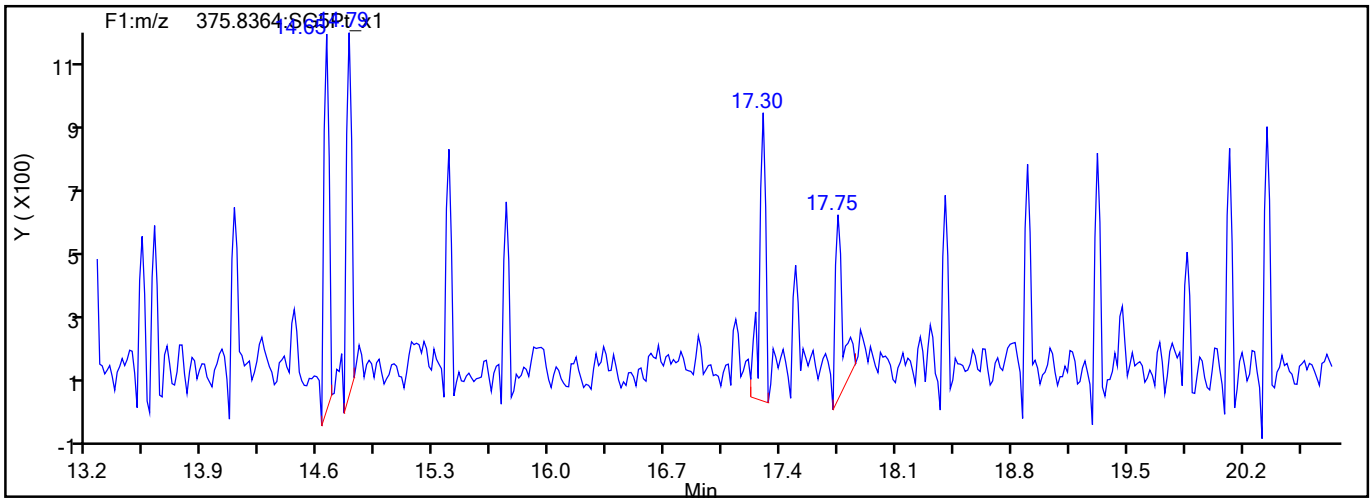

775463

Report Date: 18-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

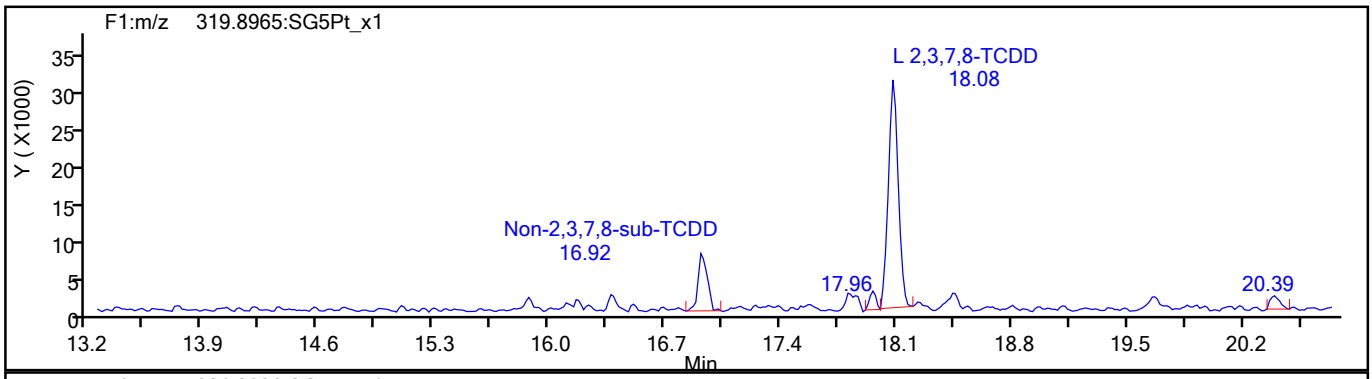

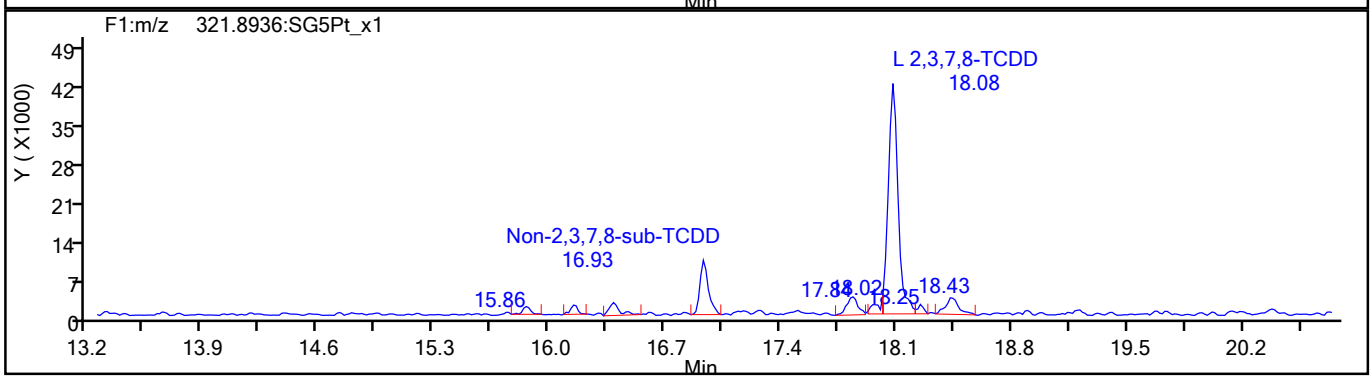

TCDD Standards

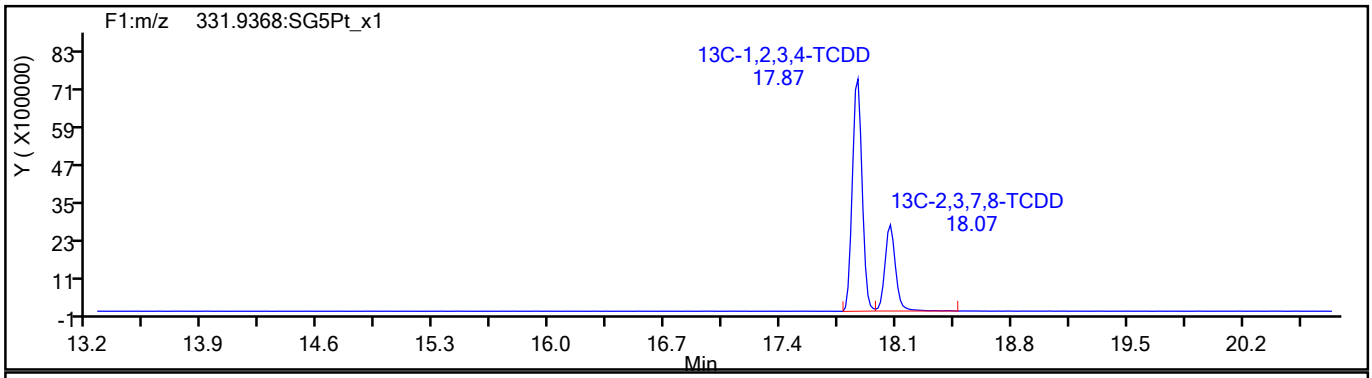

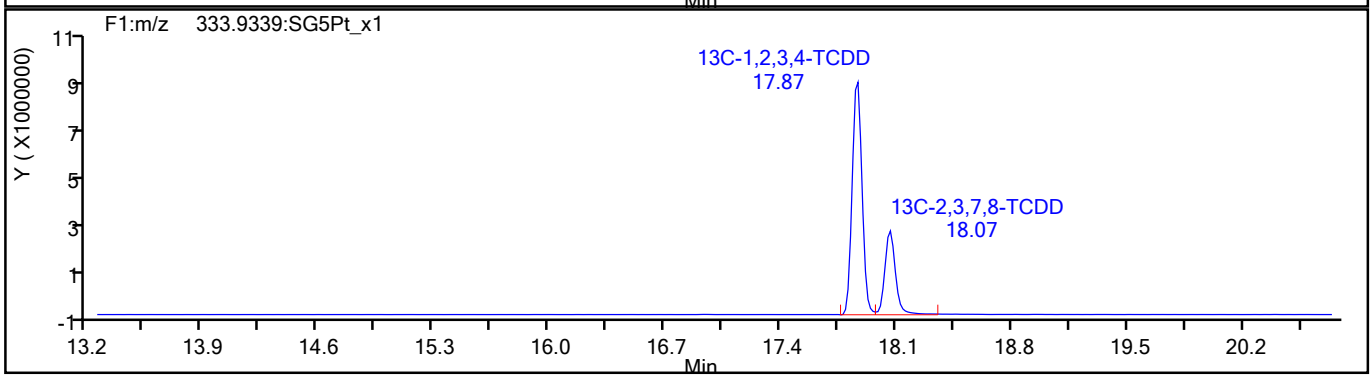

775464

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

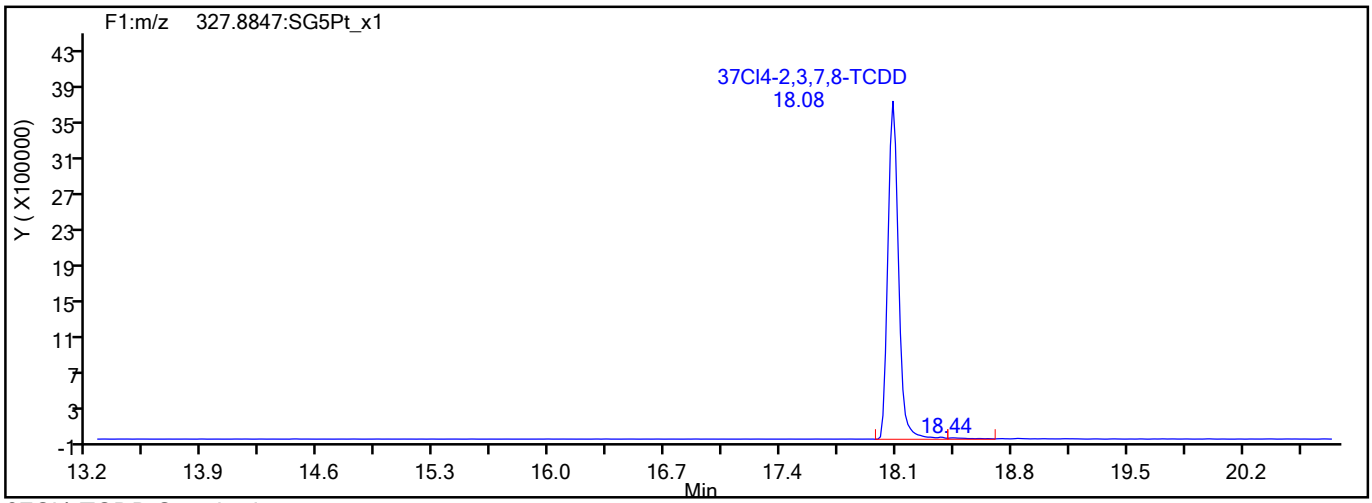

37Cl4-TCDD Standards

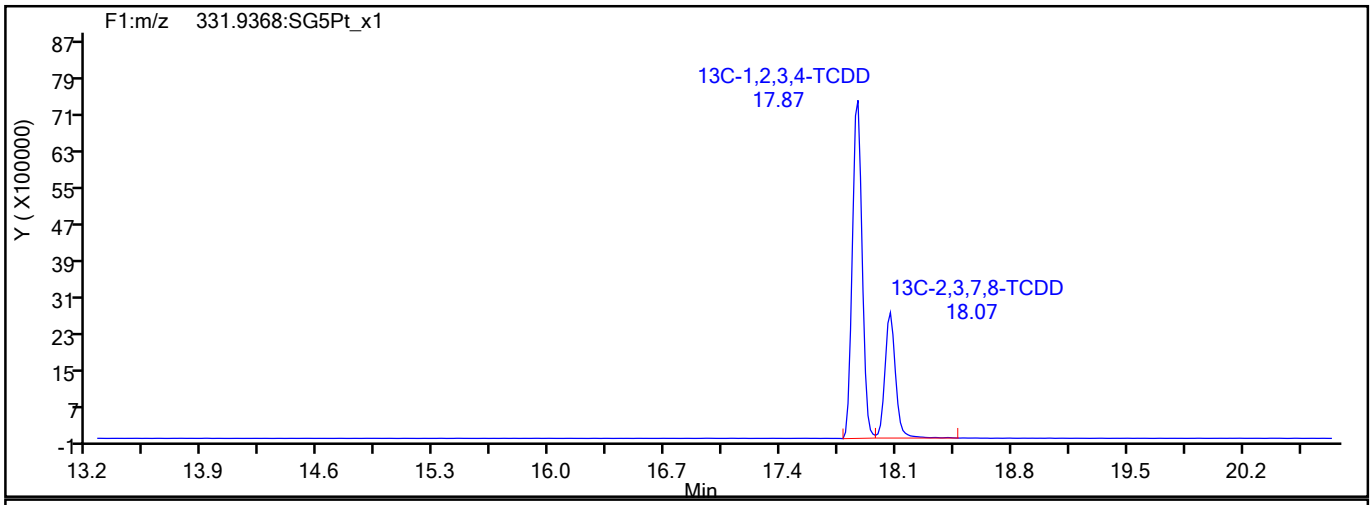

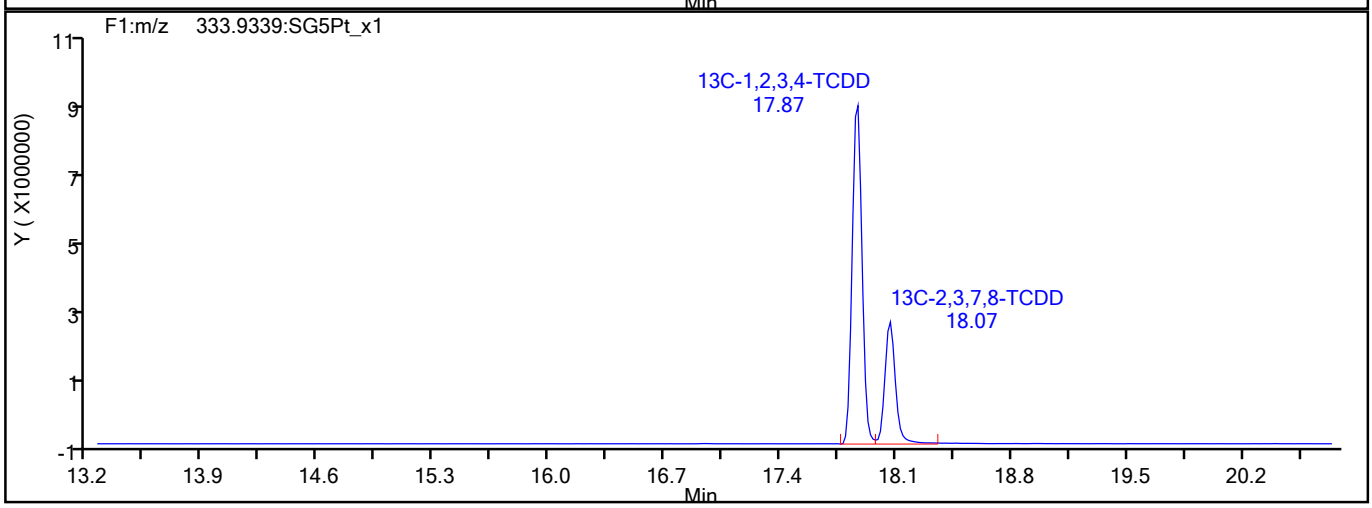

775465

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

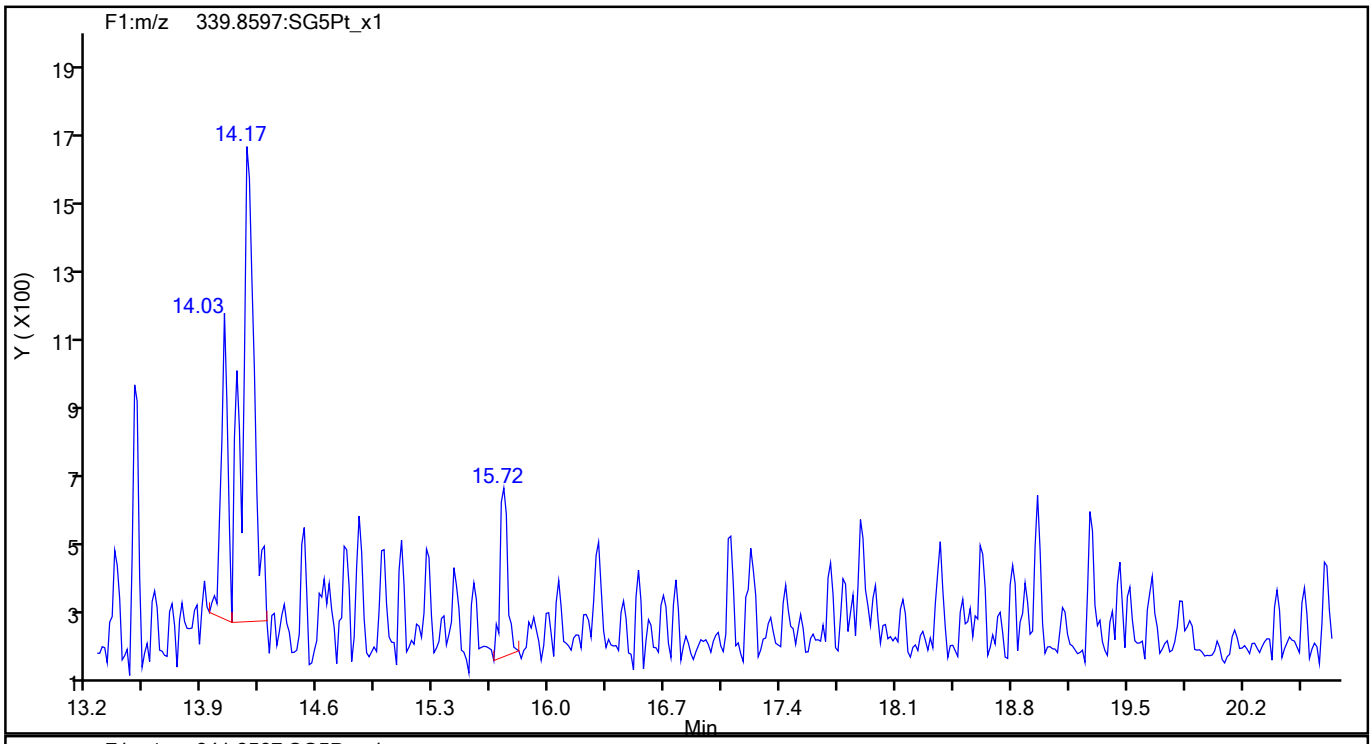

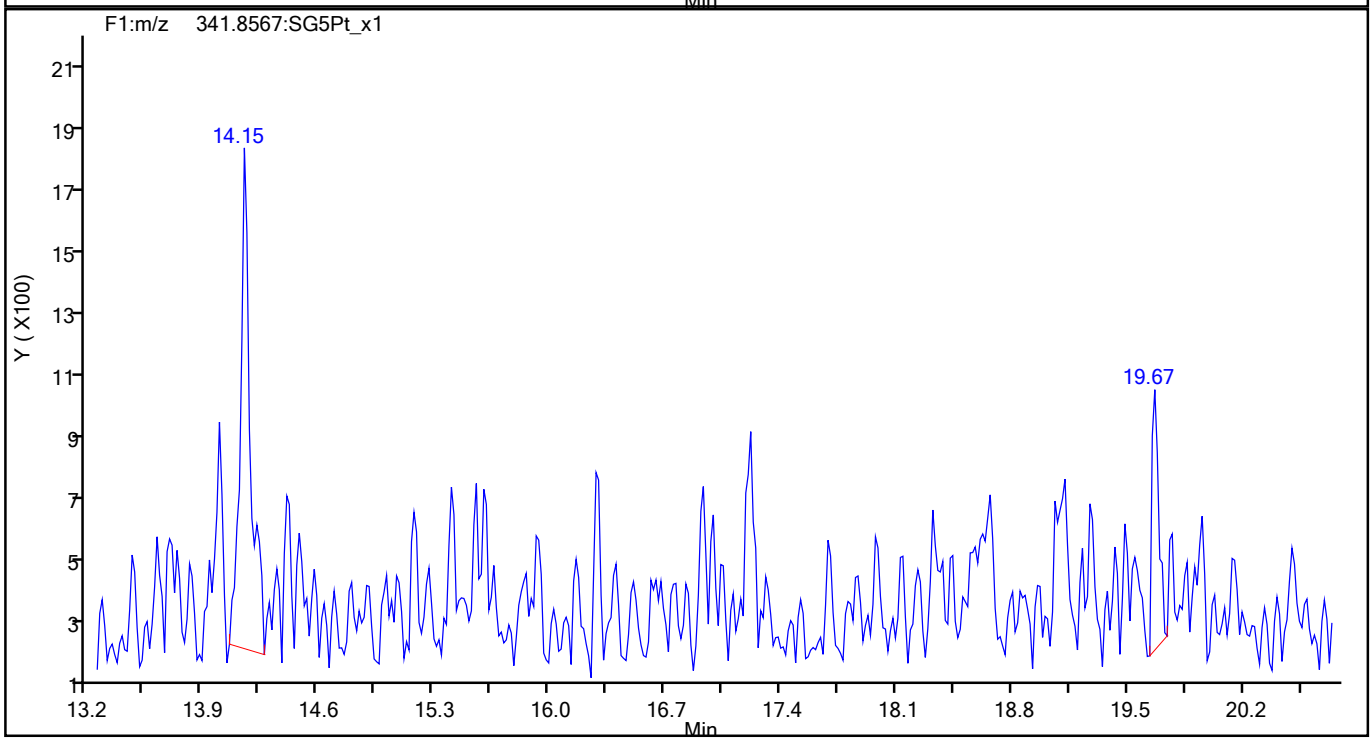

775466

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

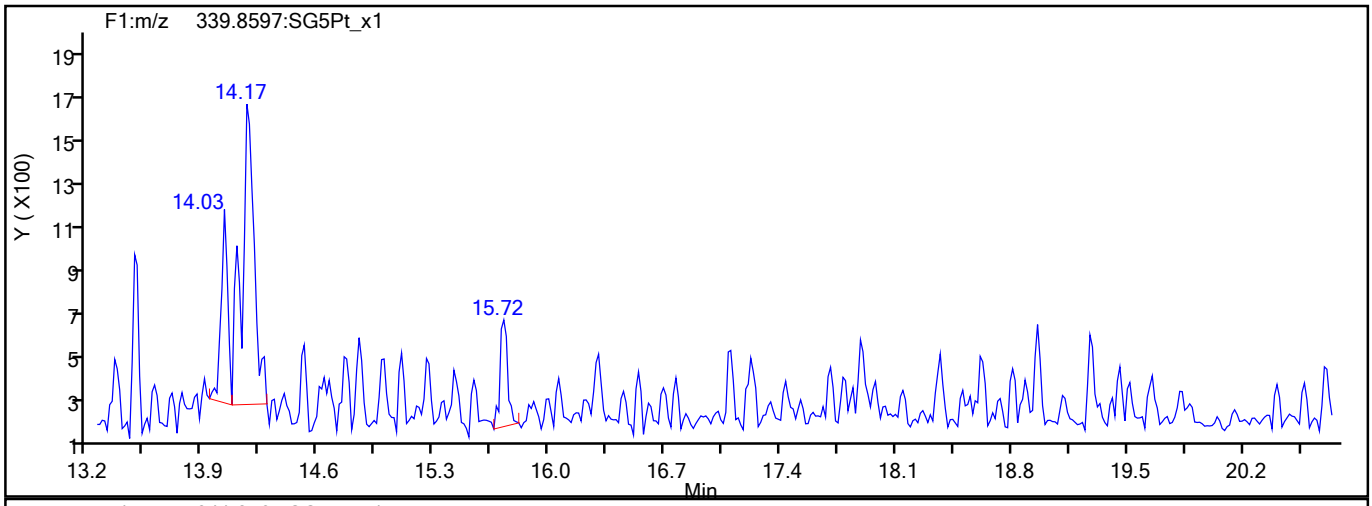

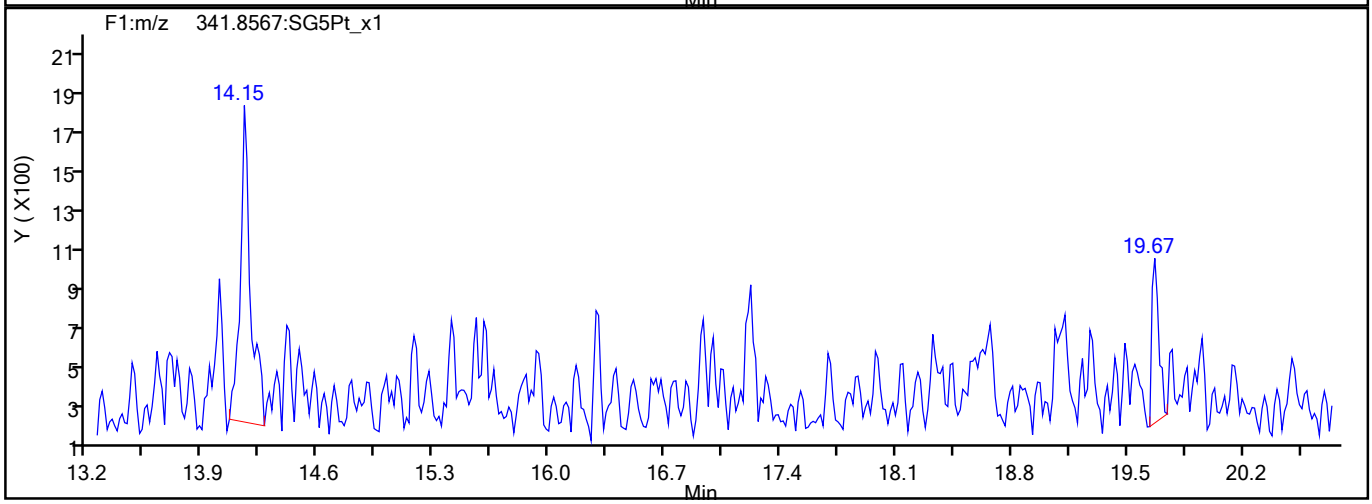

F1 PeCDFs Interference Mass

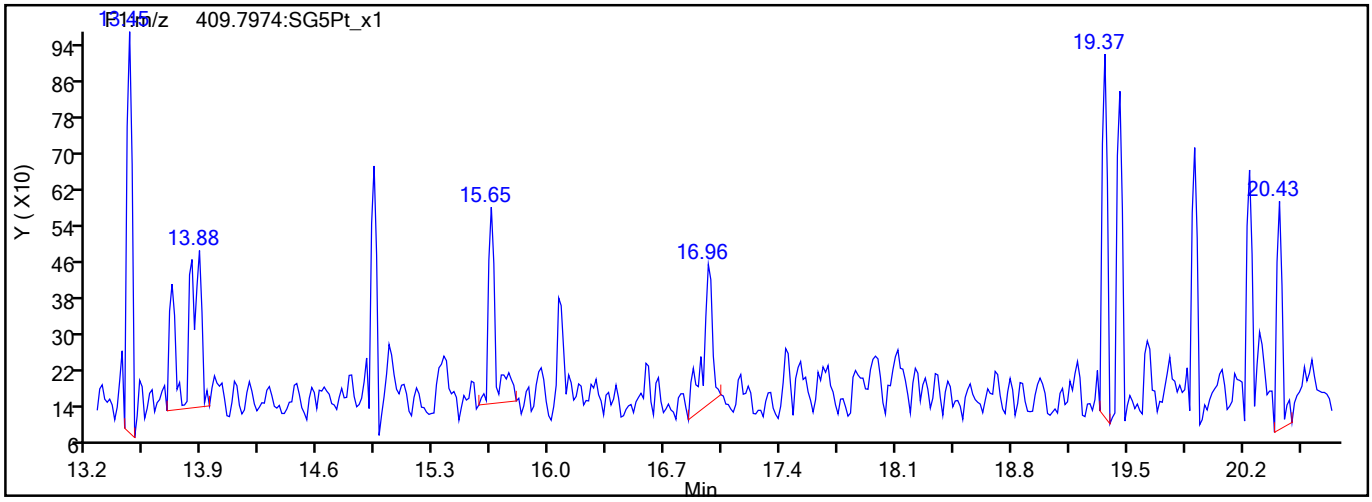

775467

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

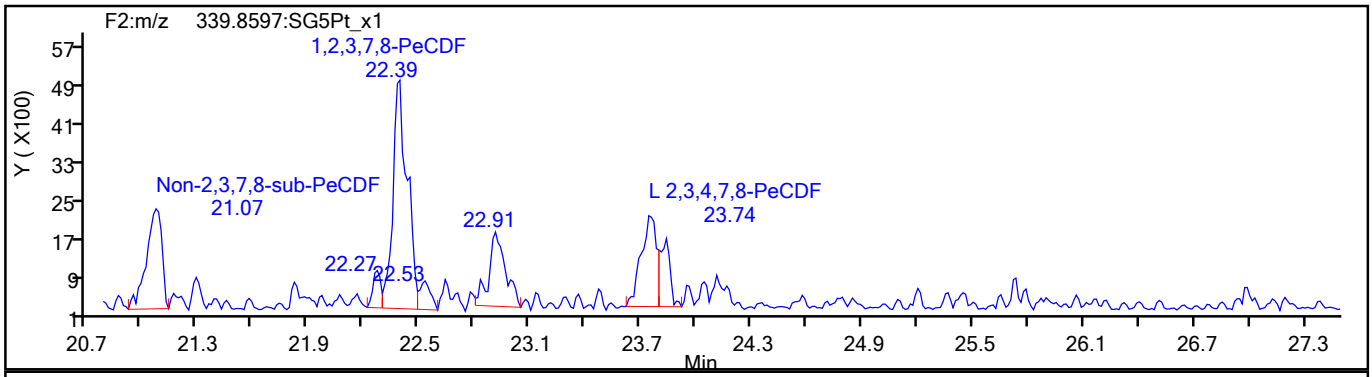

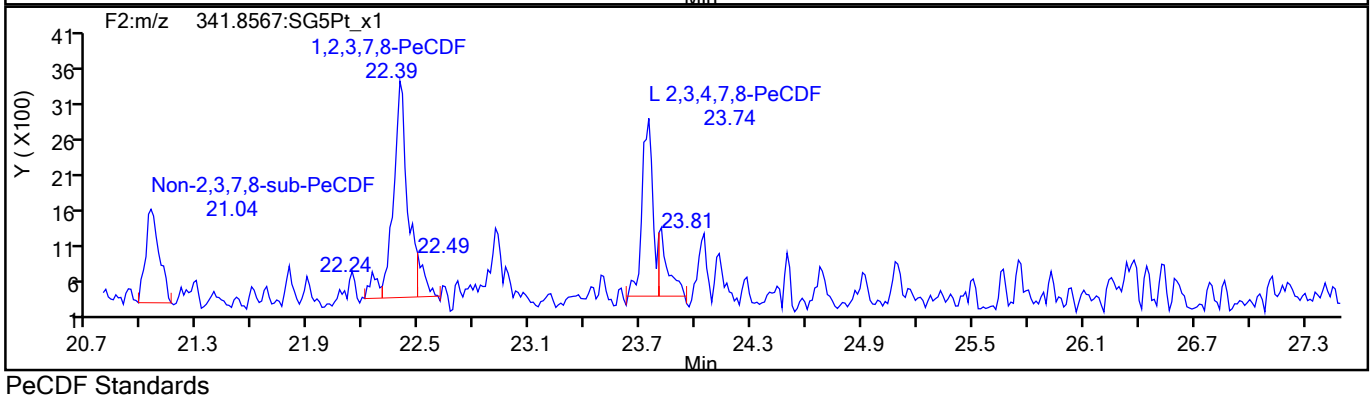

PeCDF Standards

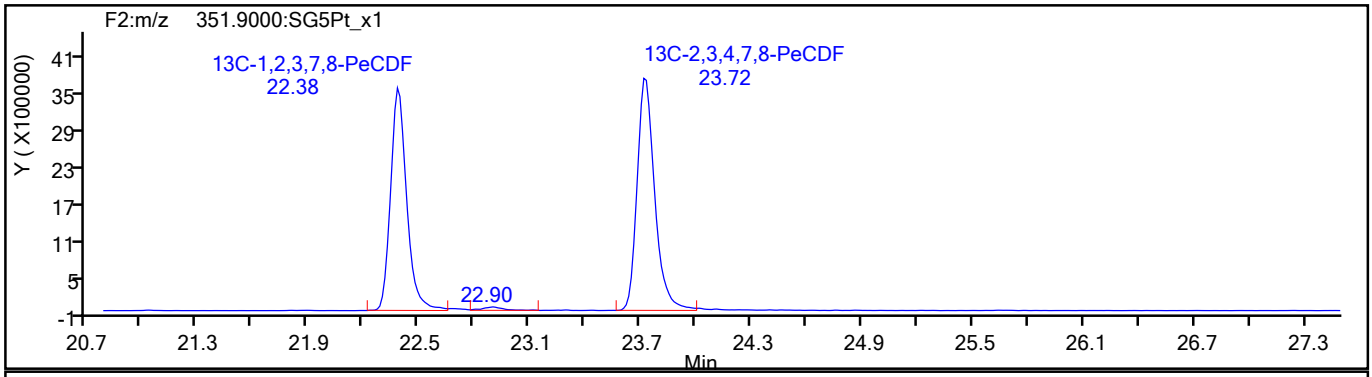

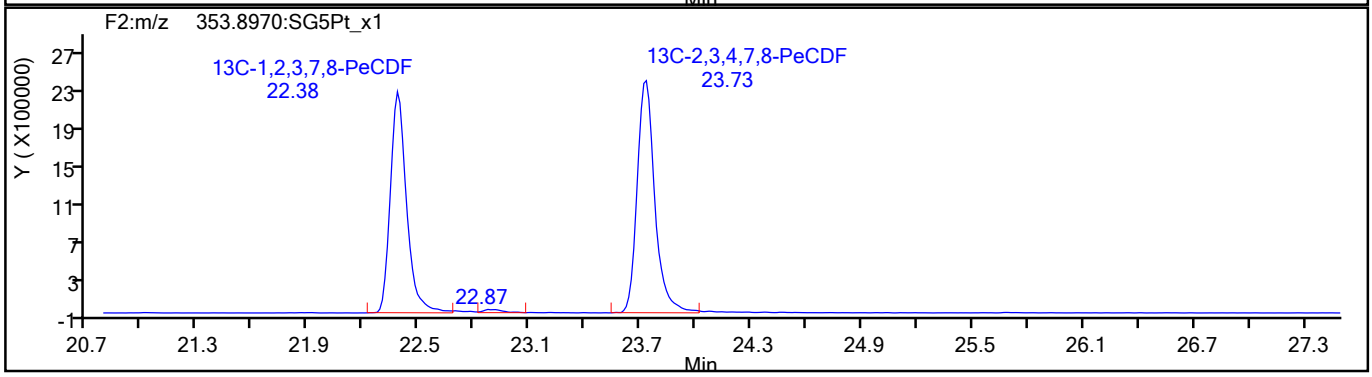

775468

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

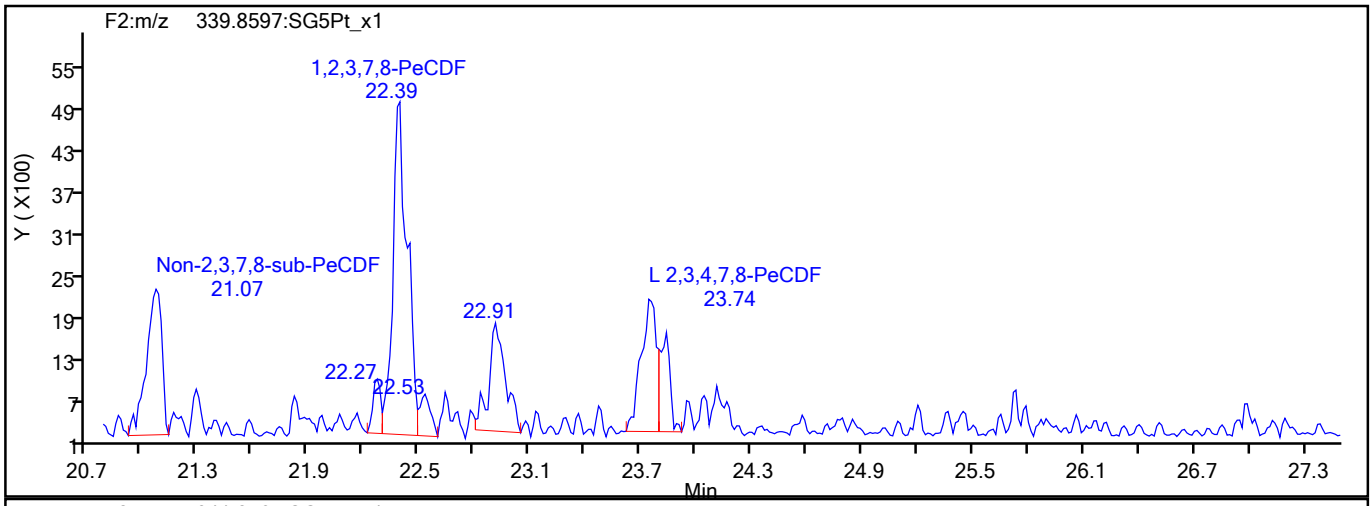

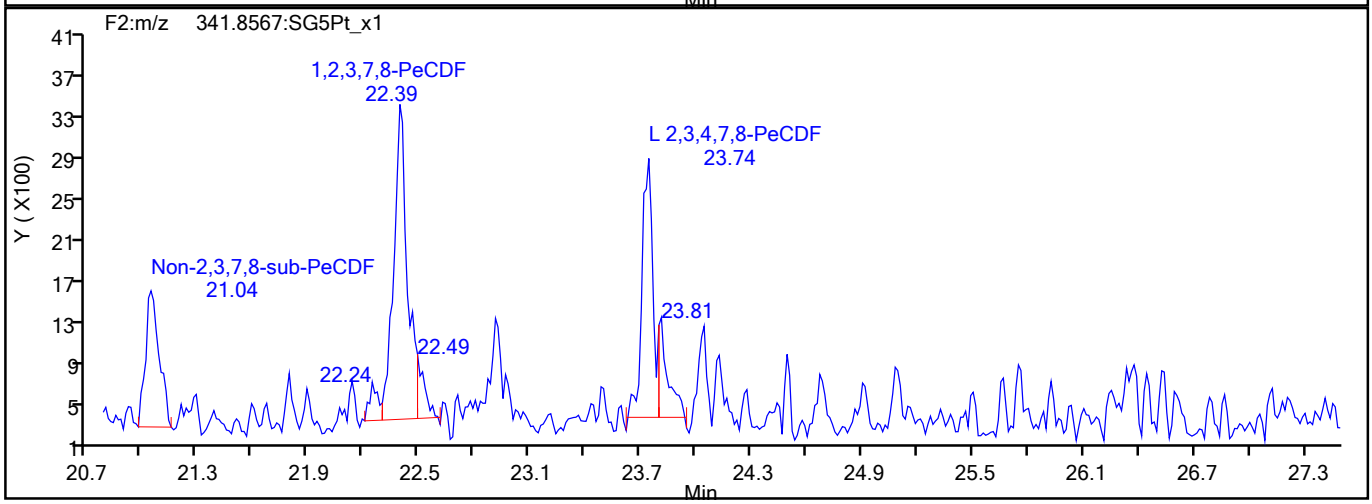

PeCDF Interference Mass

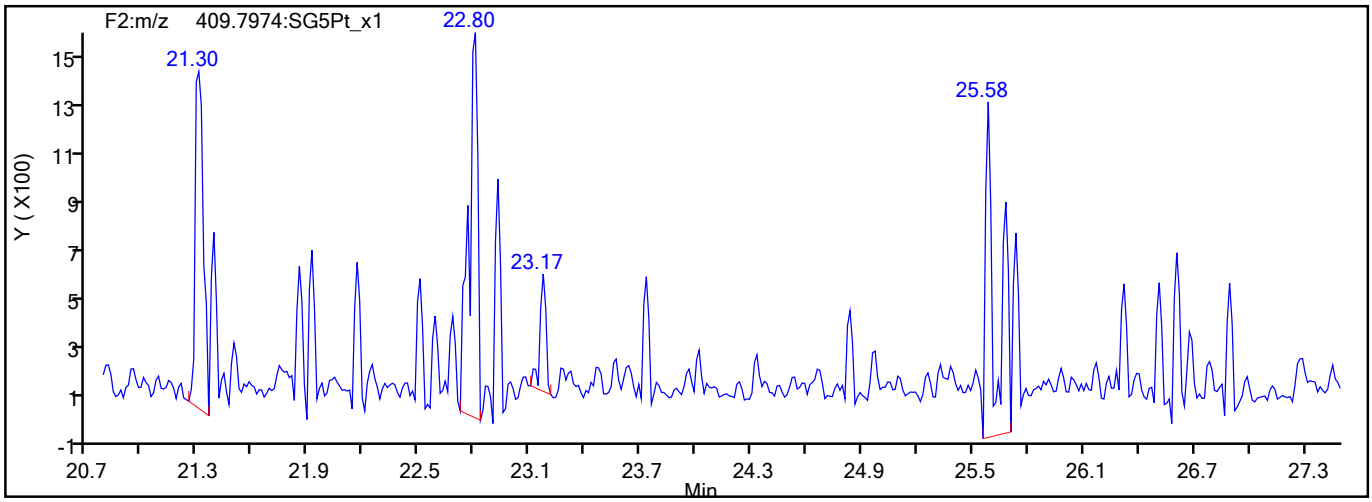

775469

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

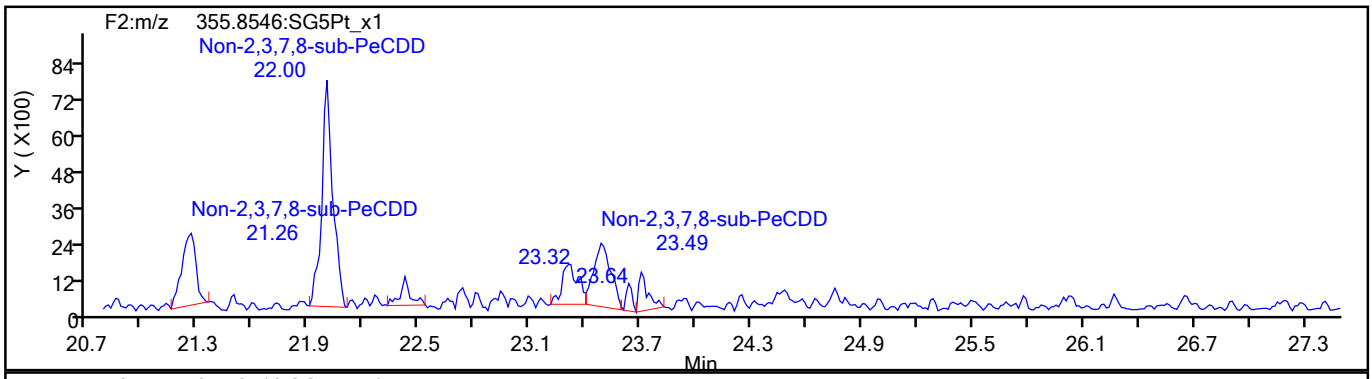

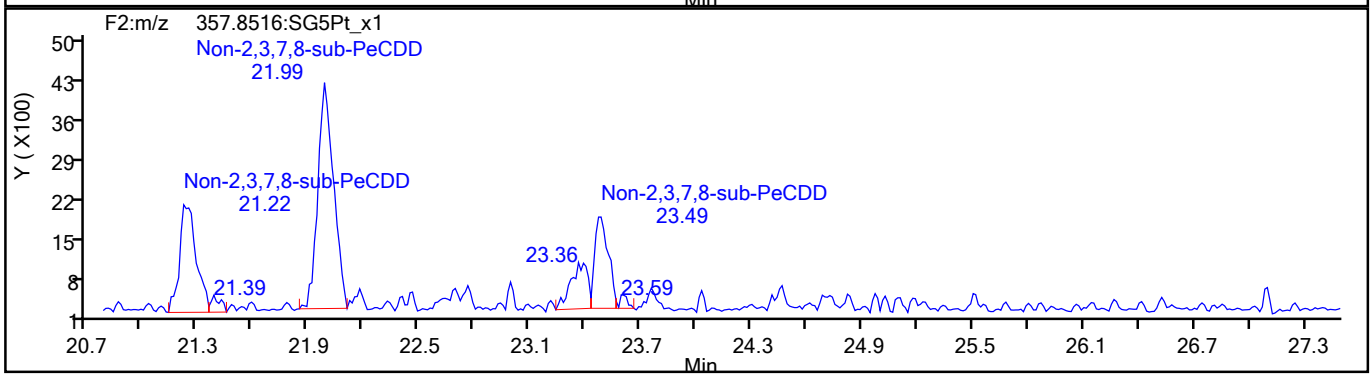

PeCDD Standards

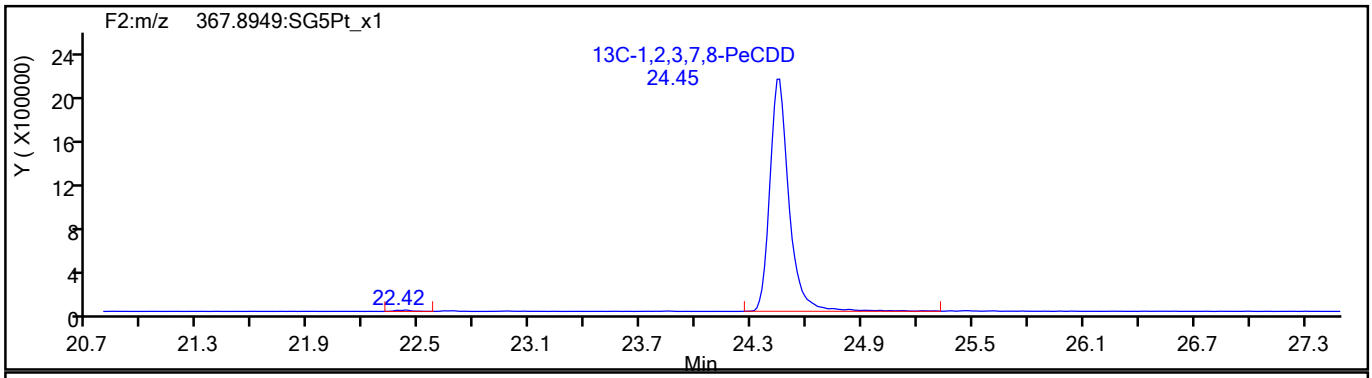

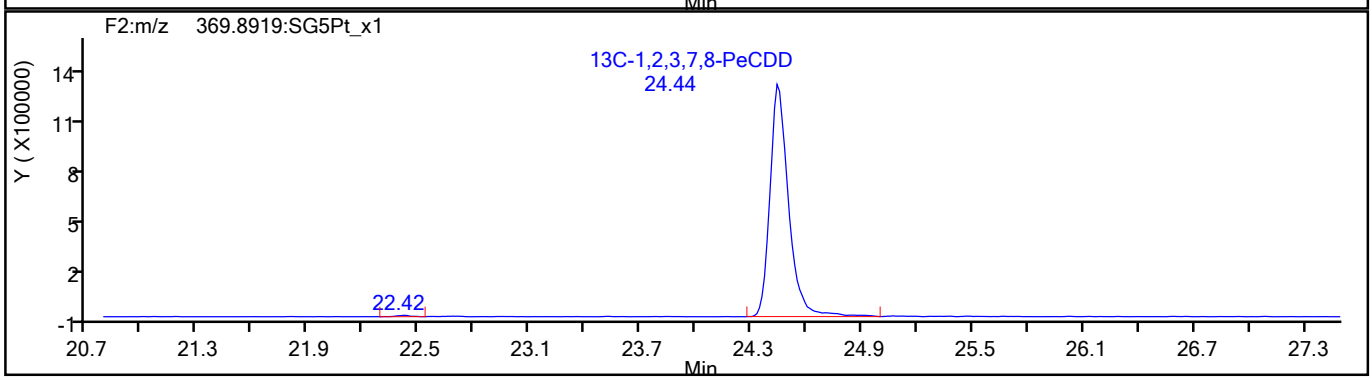

775470

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

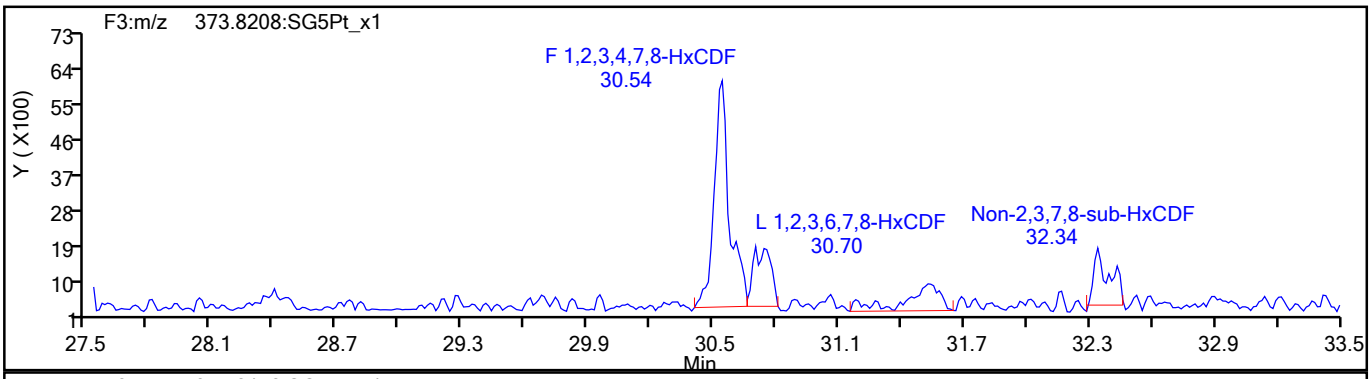

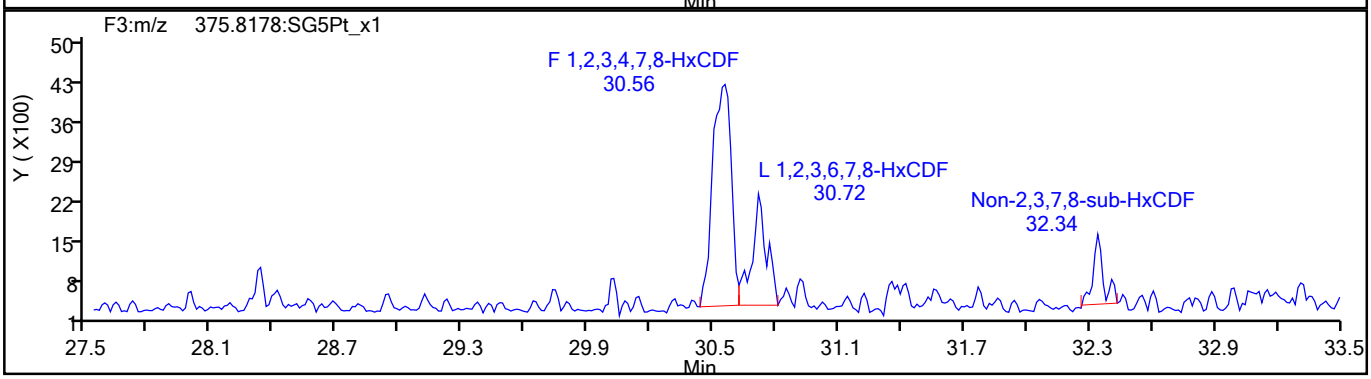

HxCDF Standards

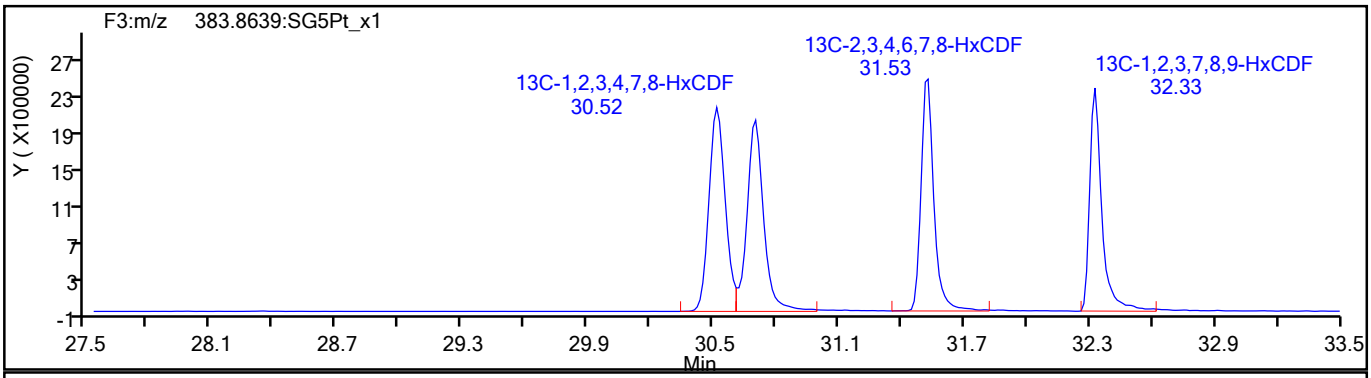

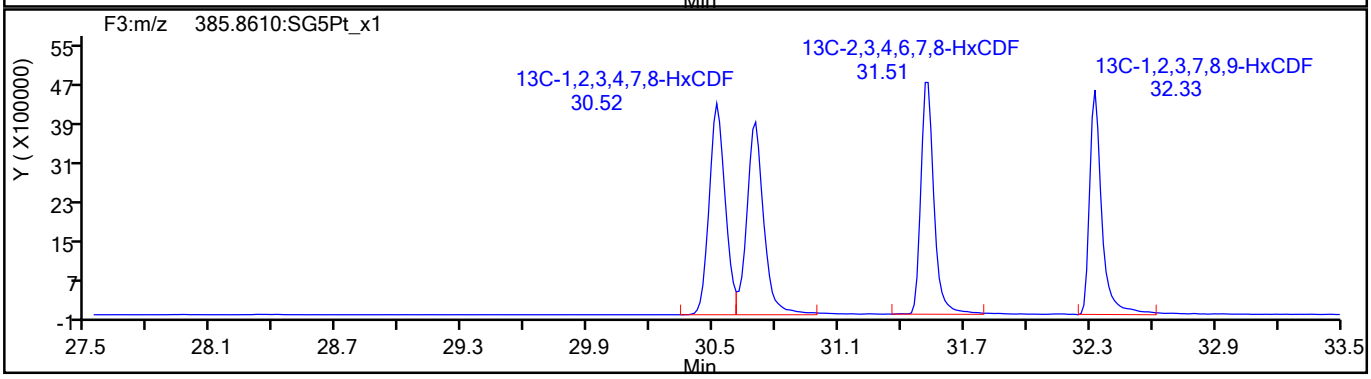

775471

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

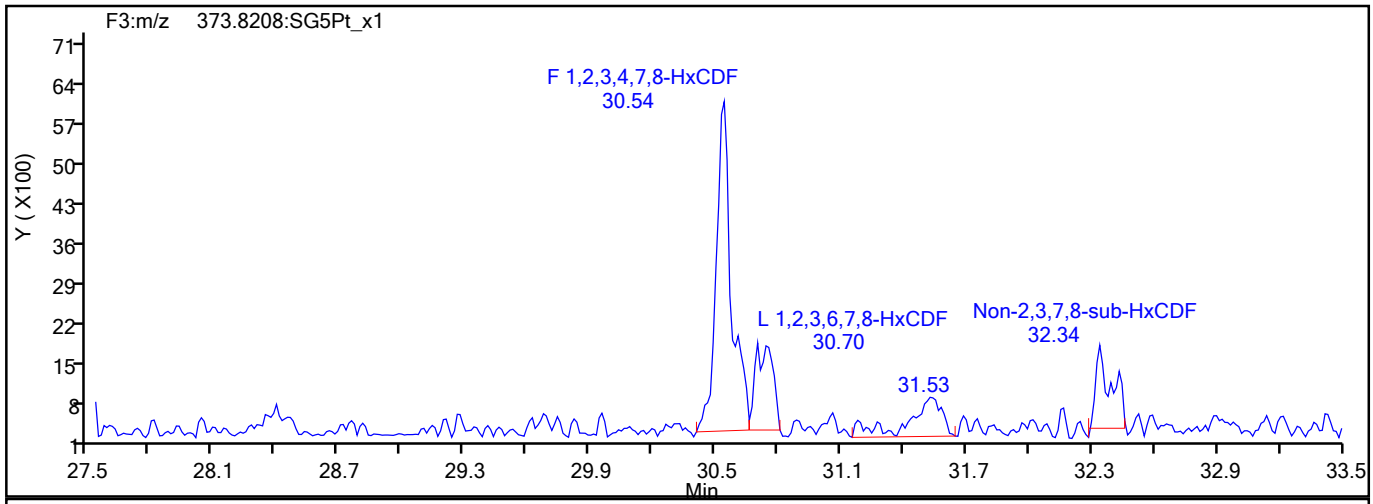

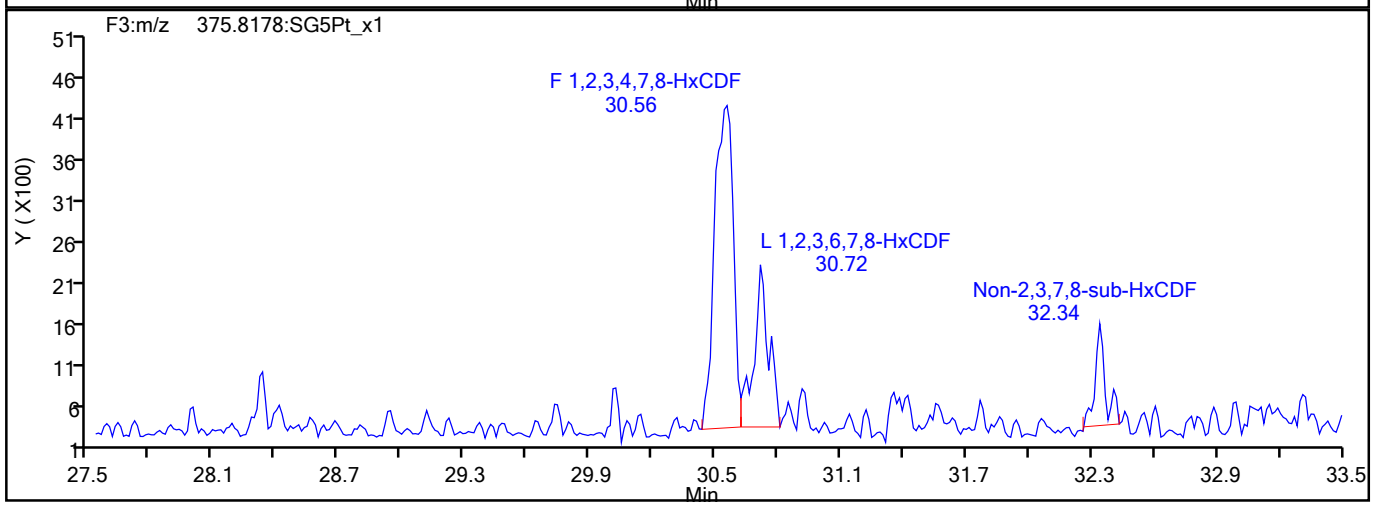

HxCDF Interference Mass

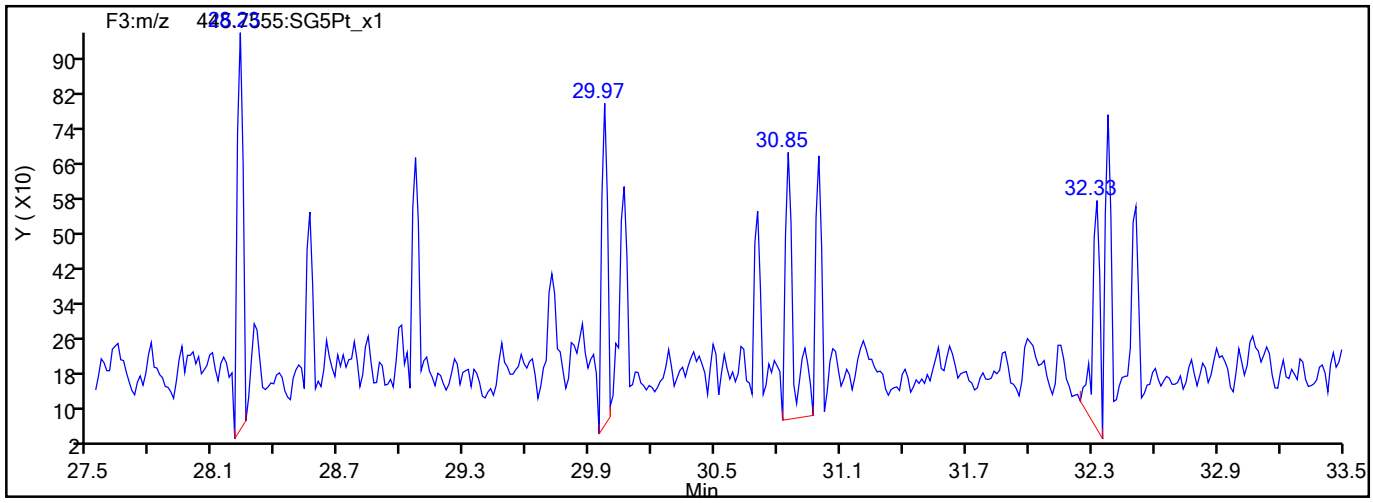

775472

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

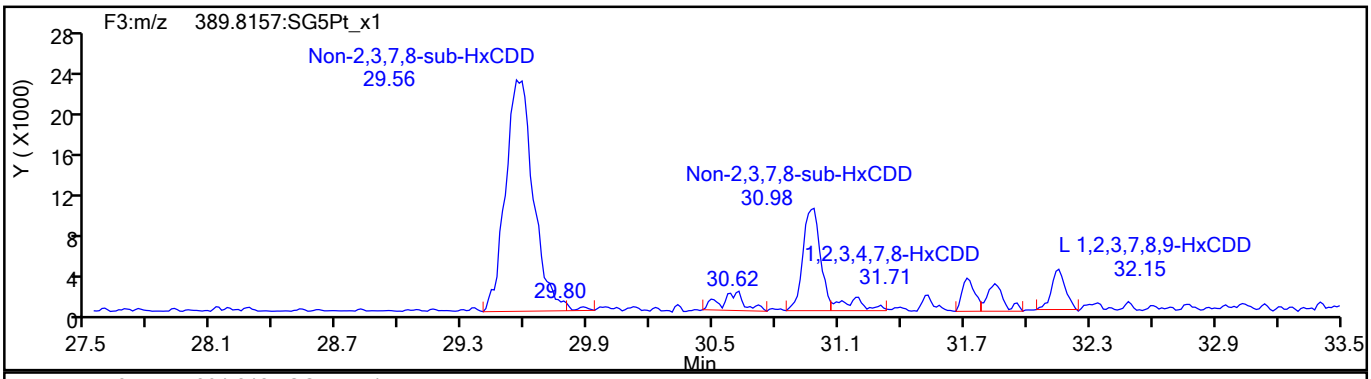

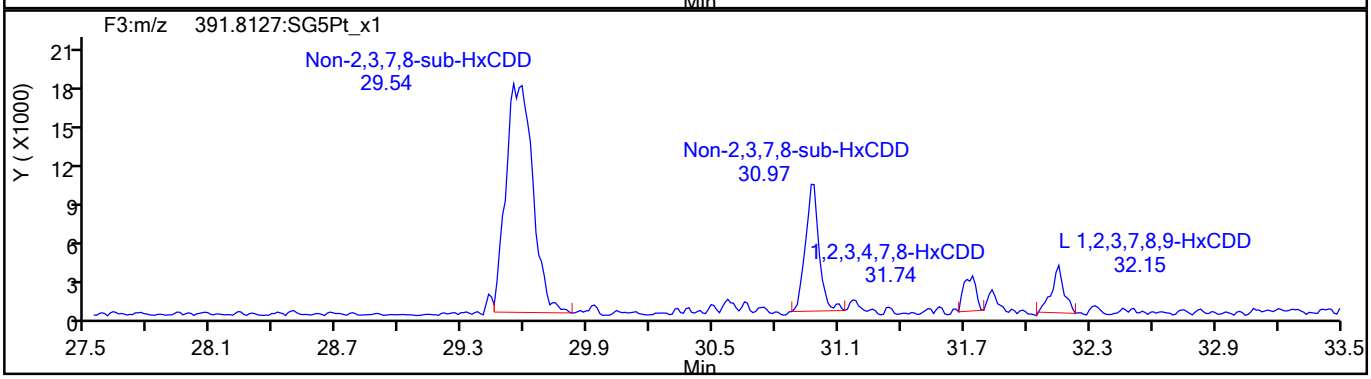

HxCDD Standards

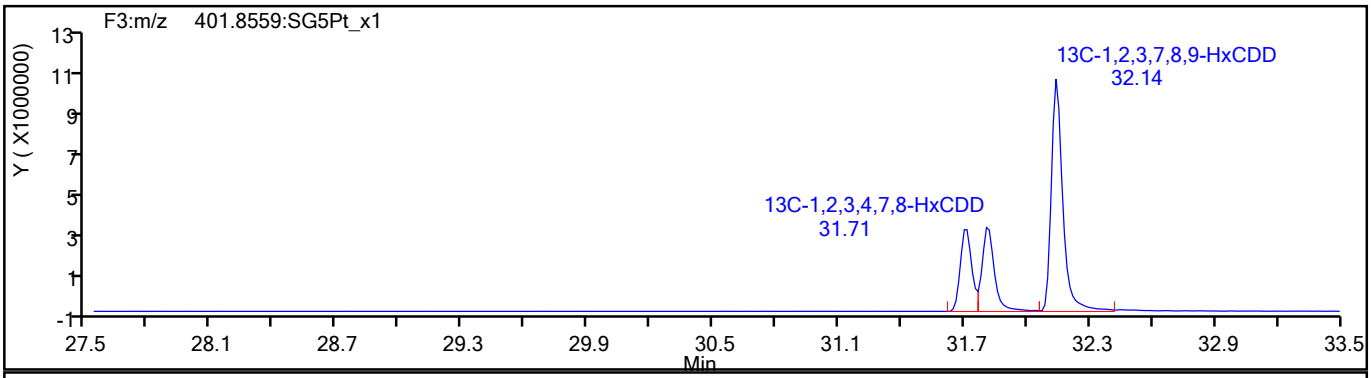

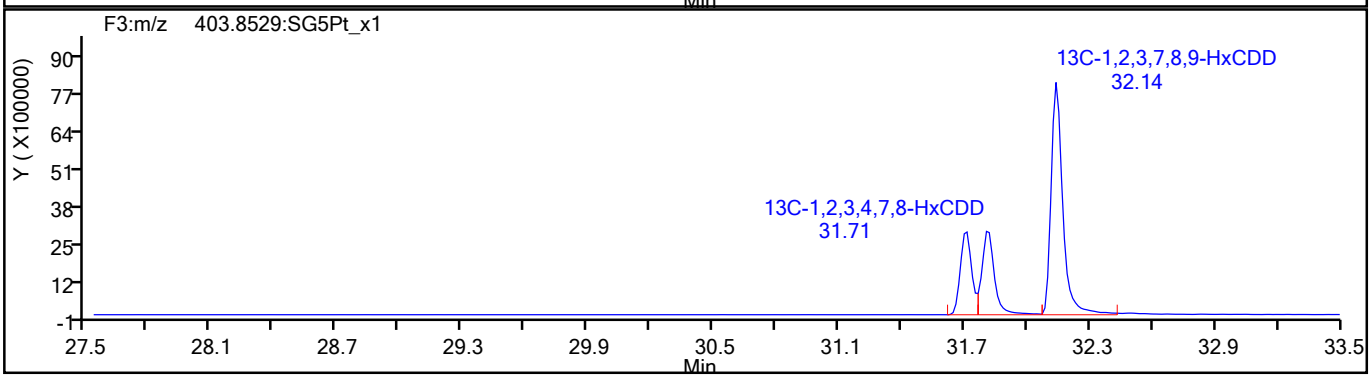

775473

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

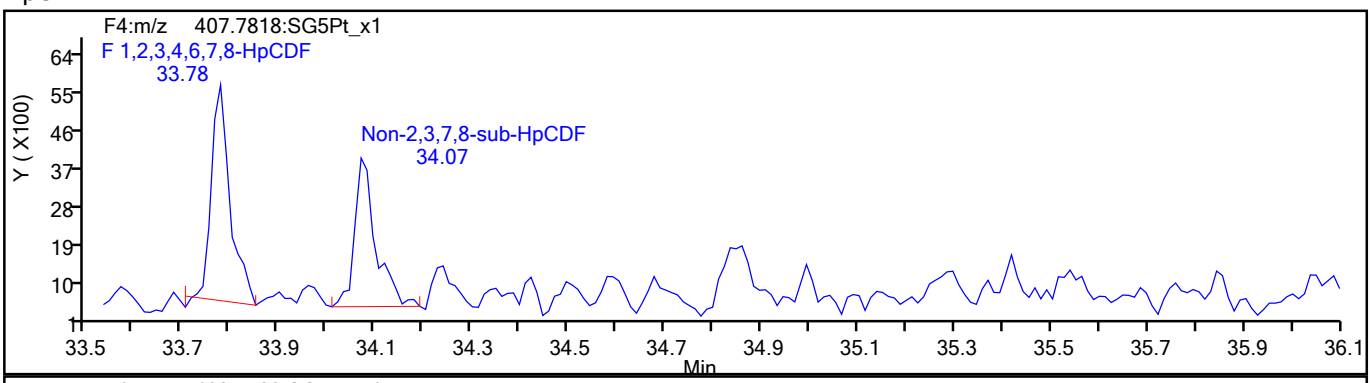

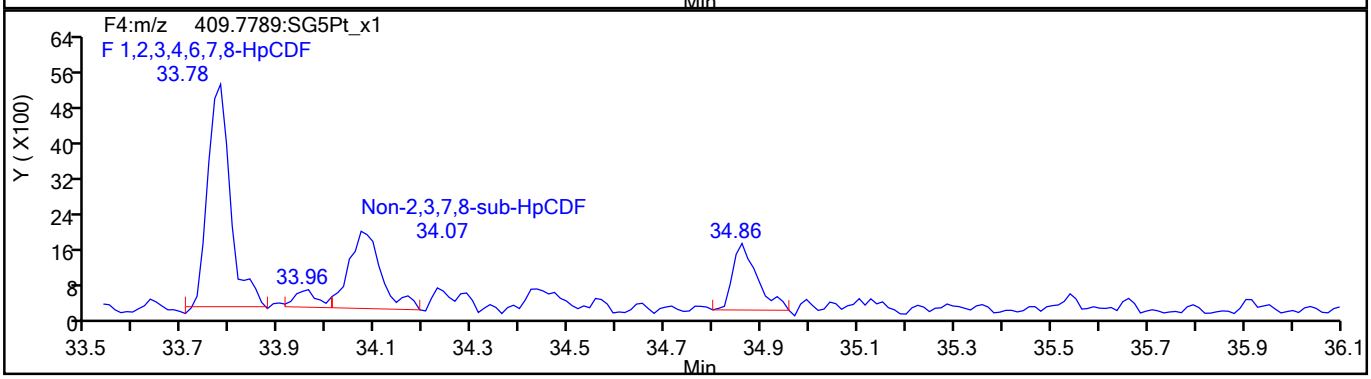

HpCDF Standards

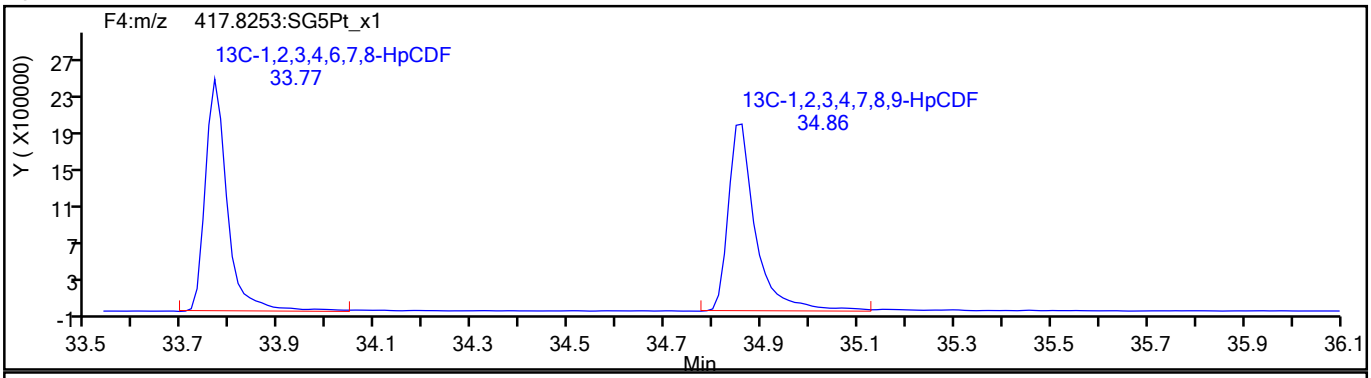

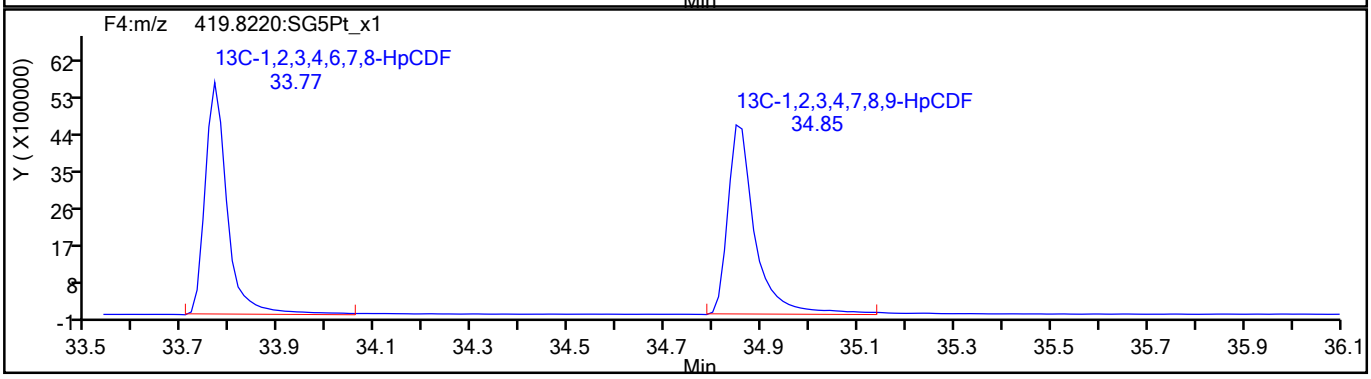

775474

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

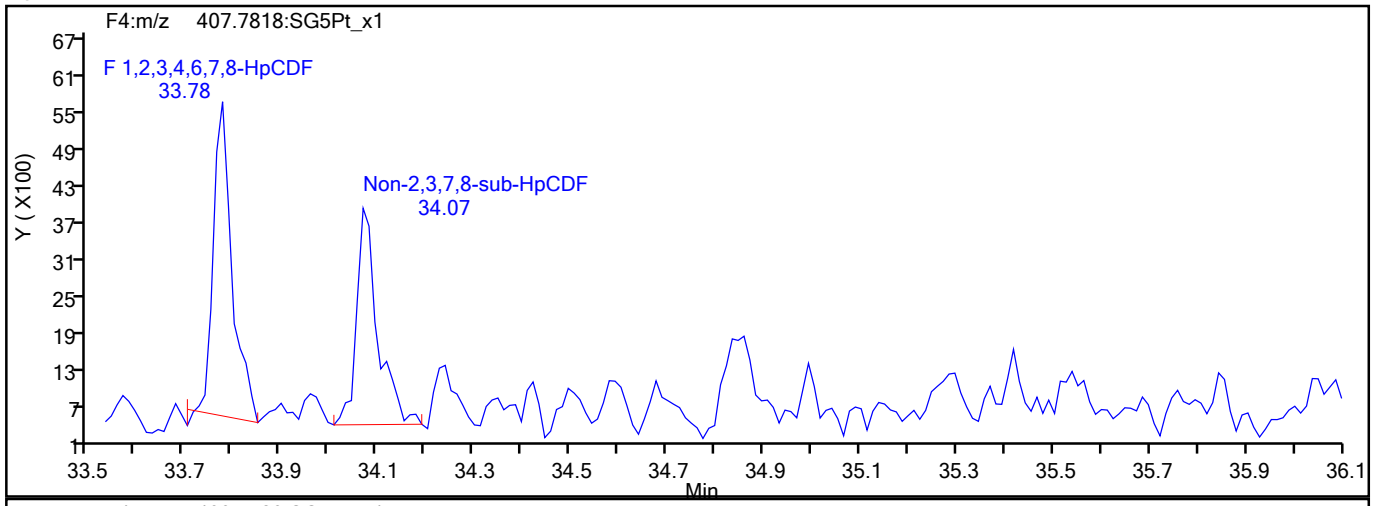

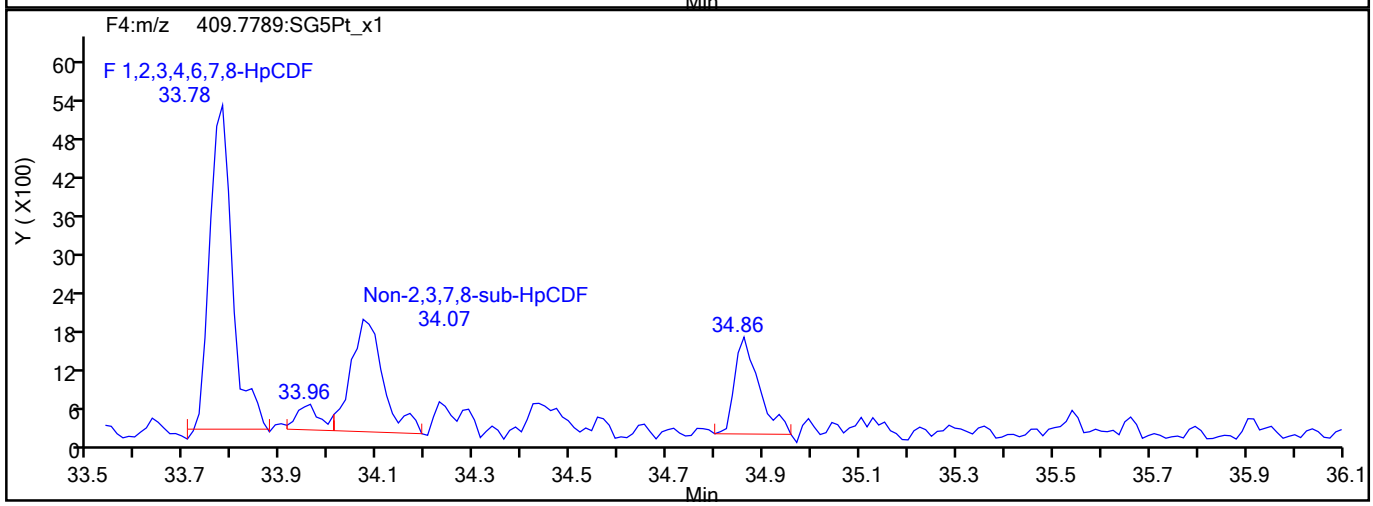

HpCDF Interference Mass

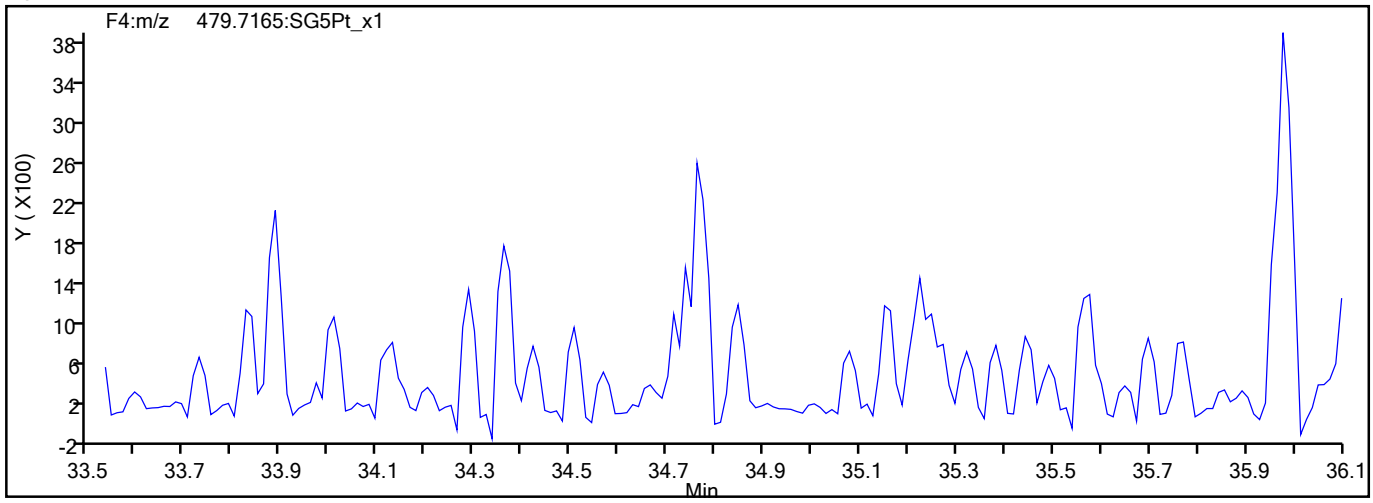

775475

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

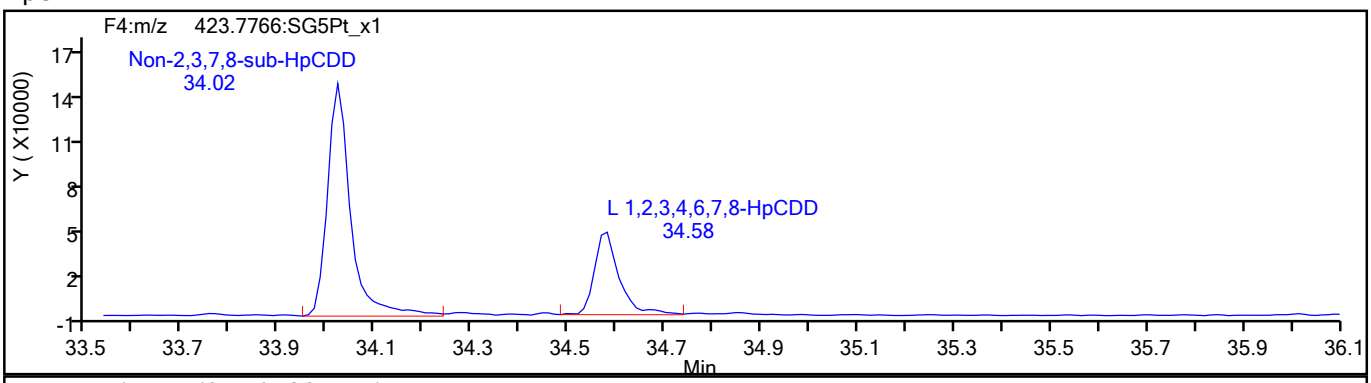

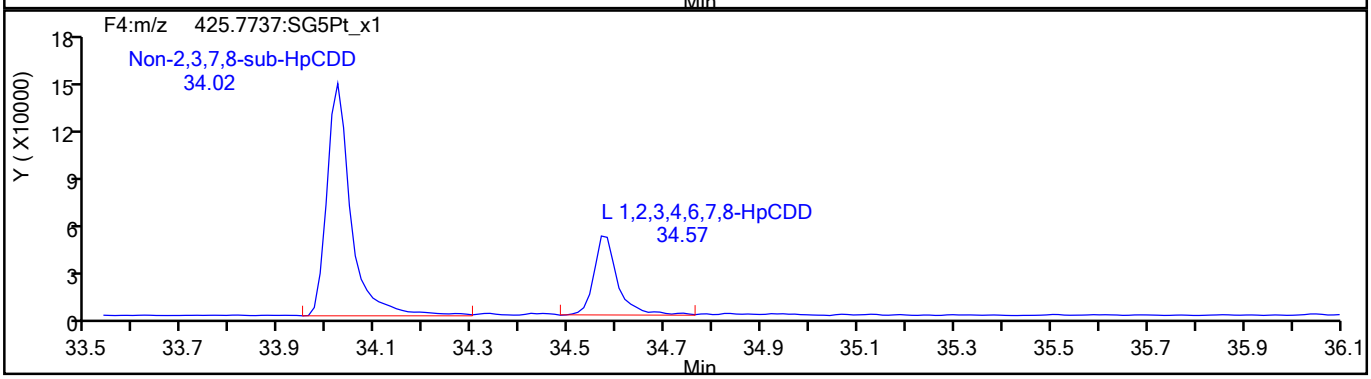

HpCDD Standards

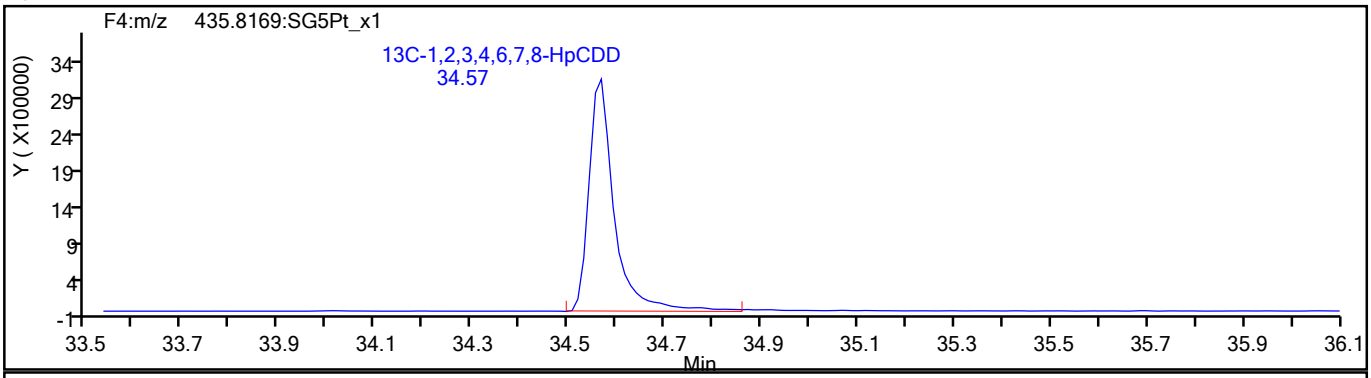

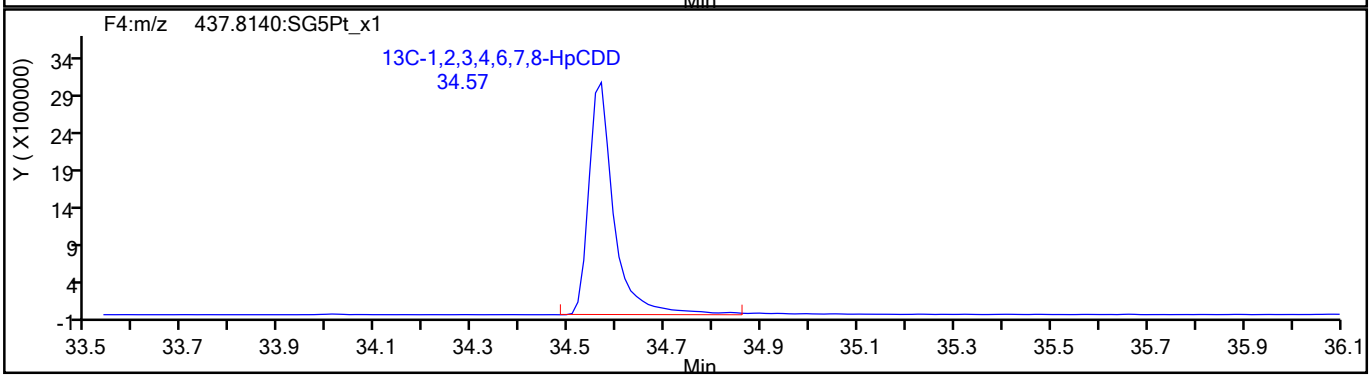

775476

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Worklist#:	516848	Sample Line#:	25
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OCDF

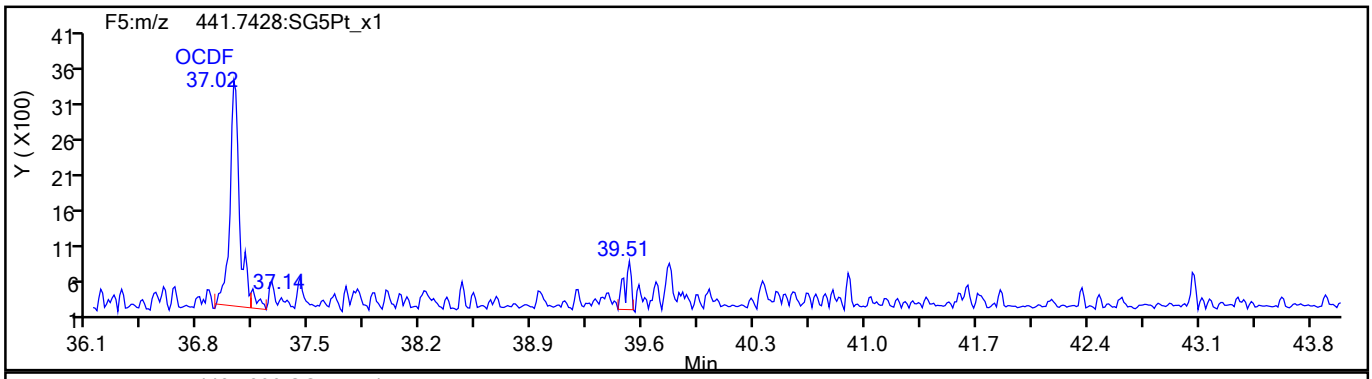

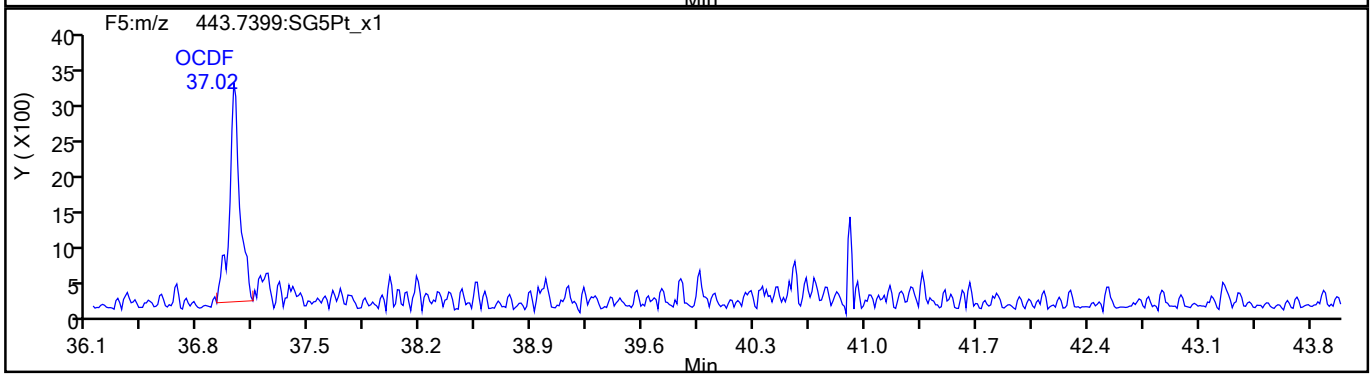

OCDF Standards

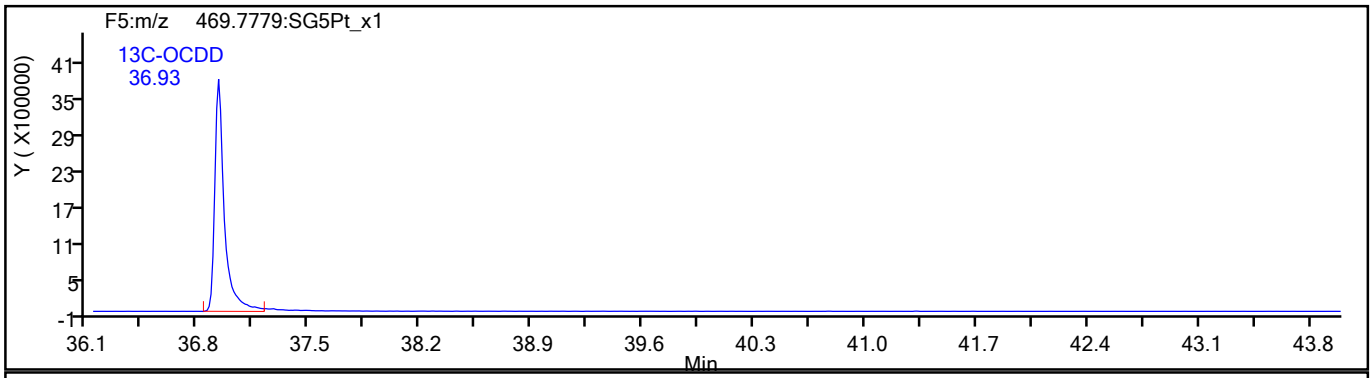

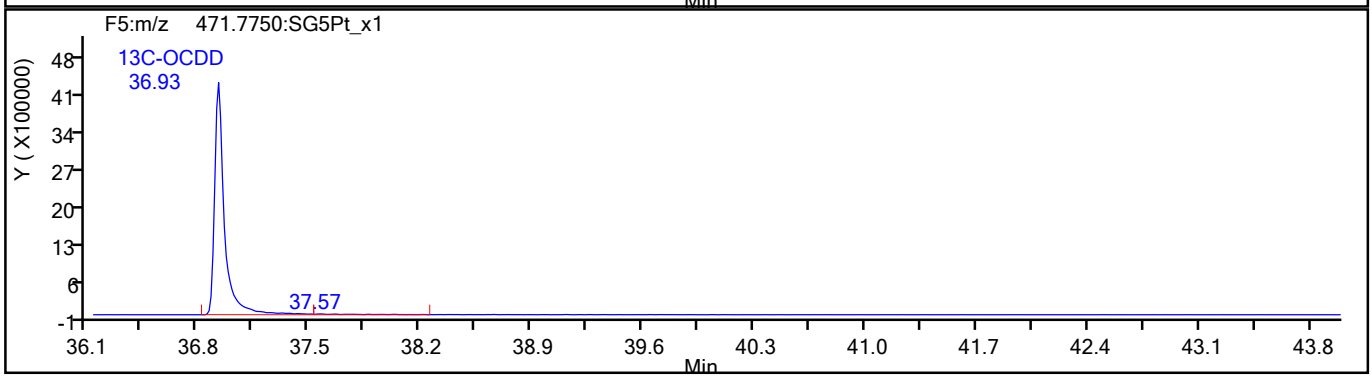

775477

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

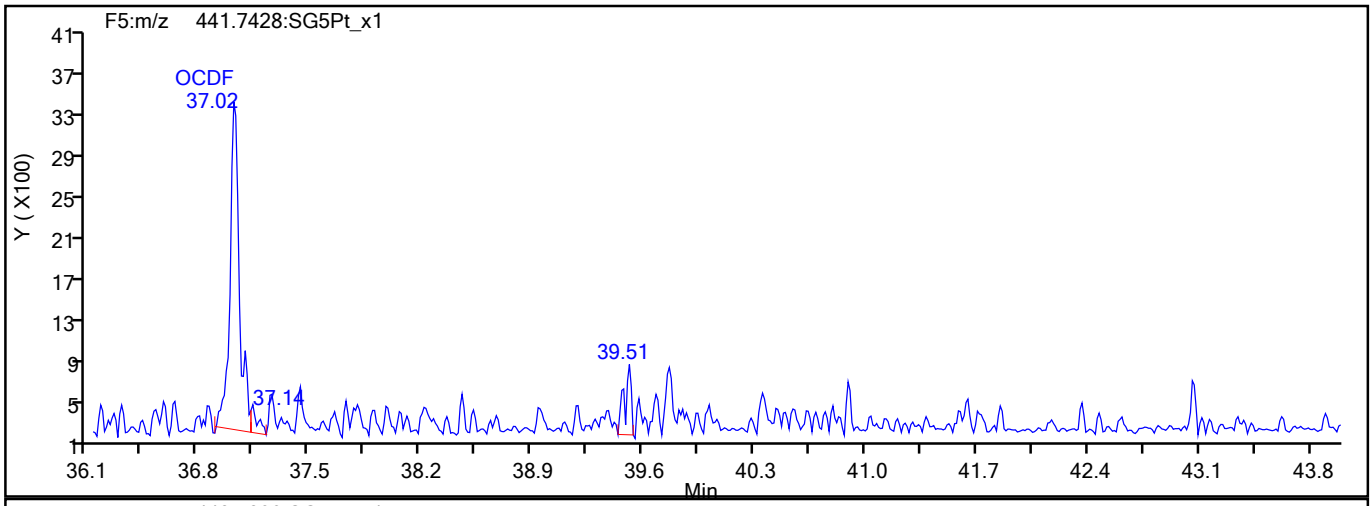

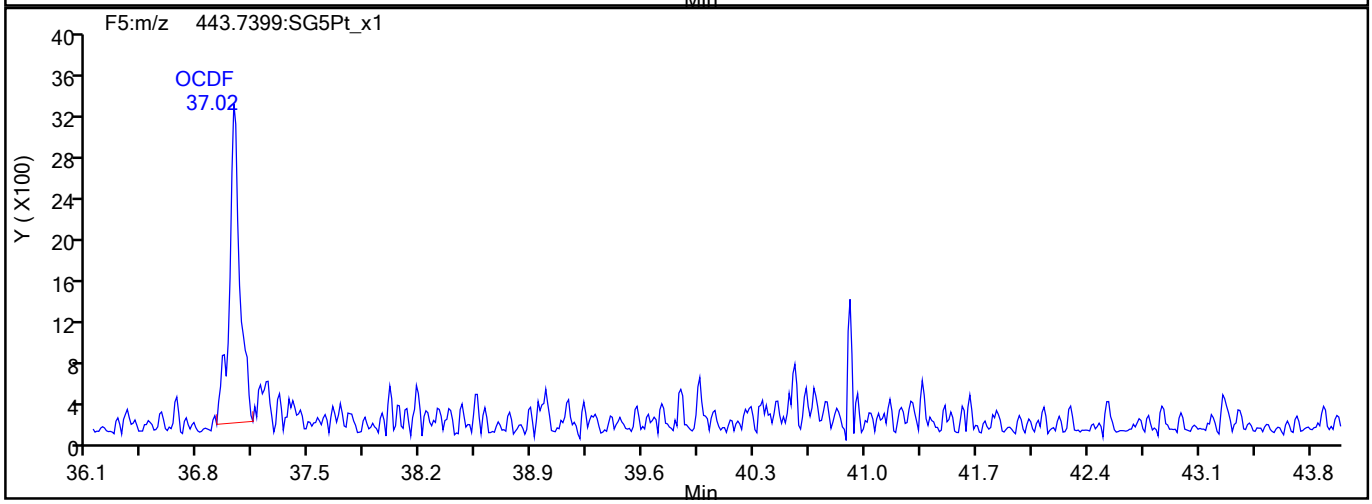

OCDF Interference Mass

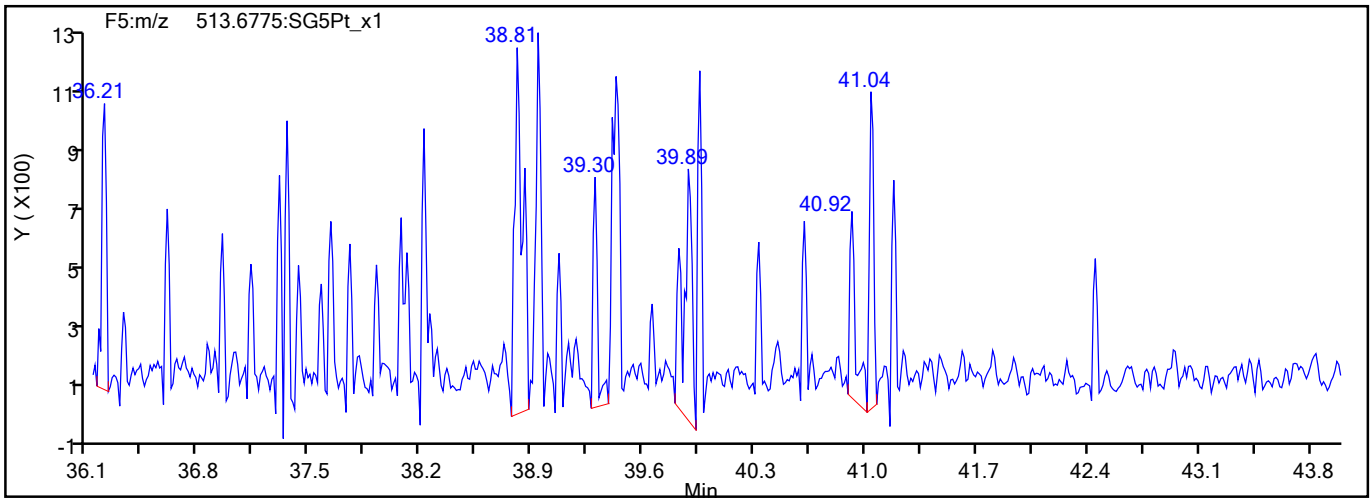

775478

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

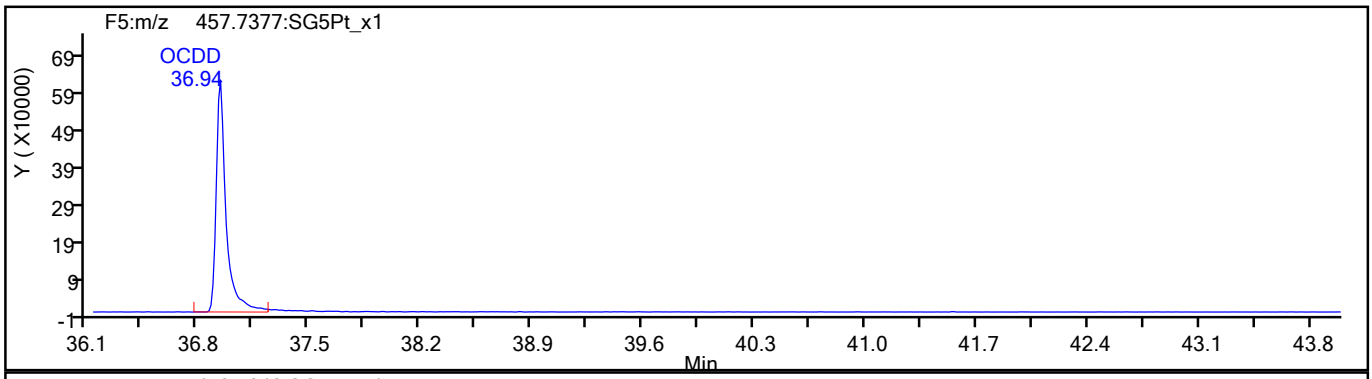

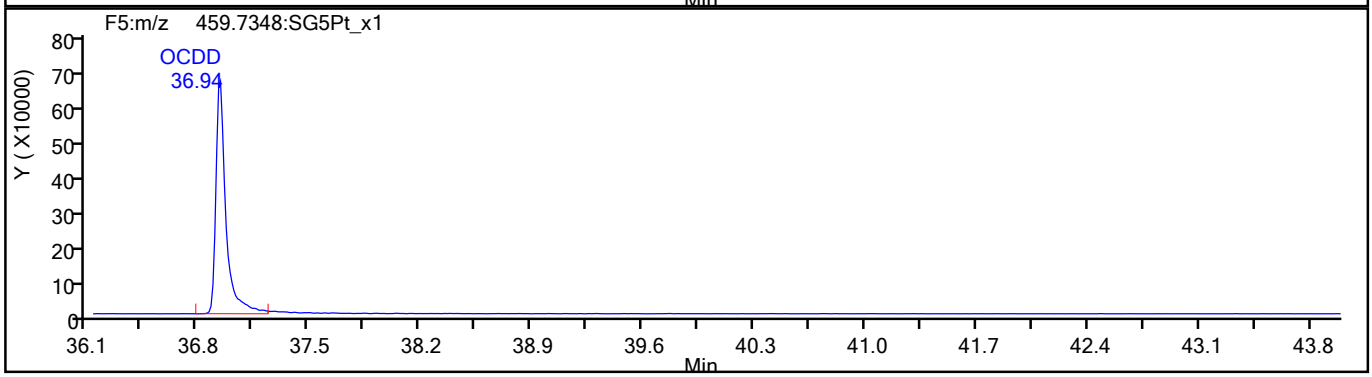

OCDD Standards

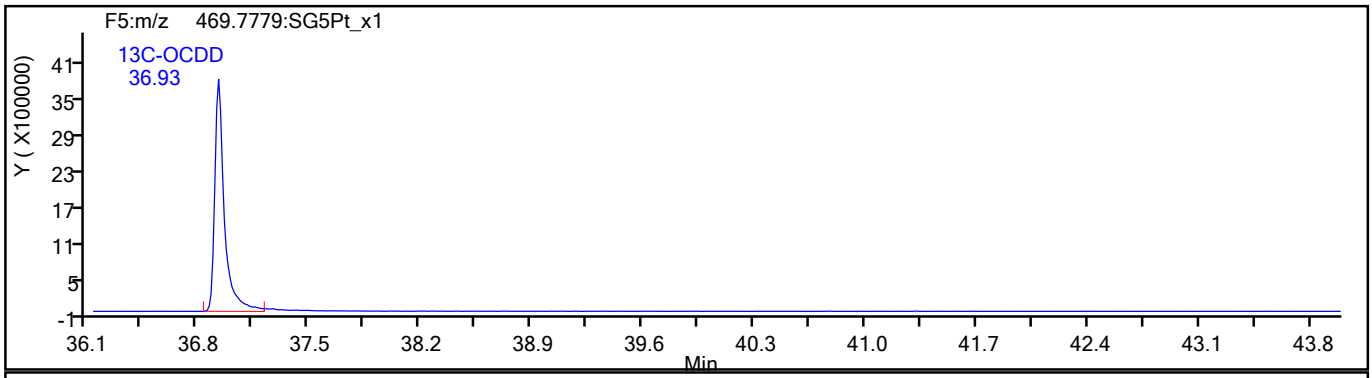

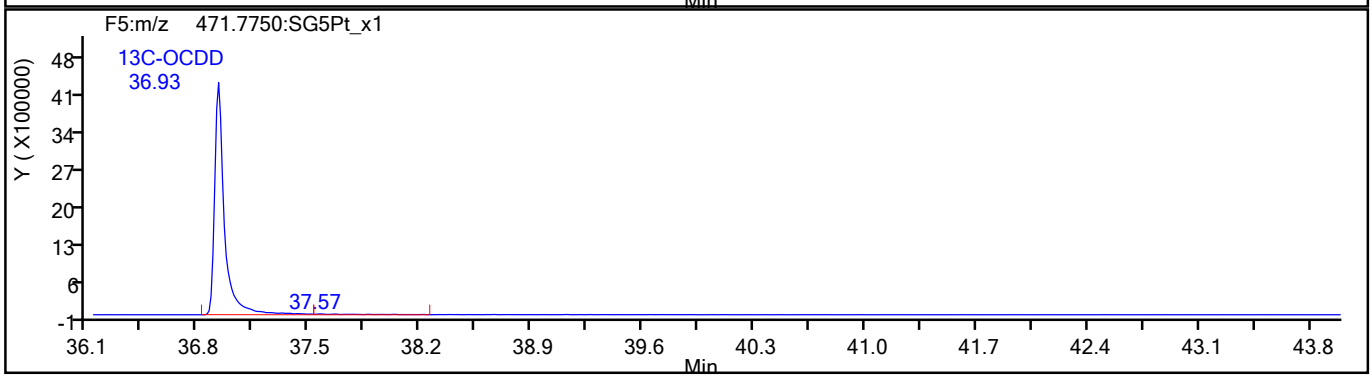

775479

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_66.d		
Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	516848	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

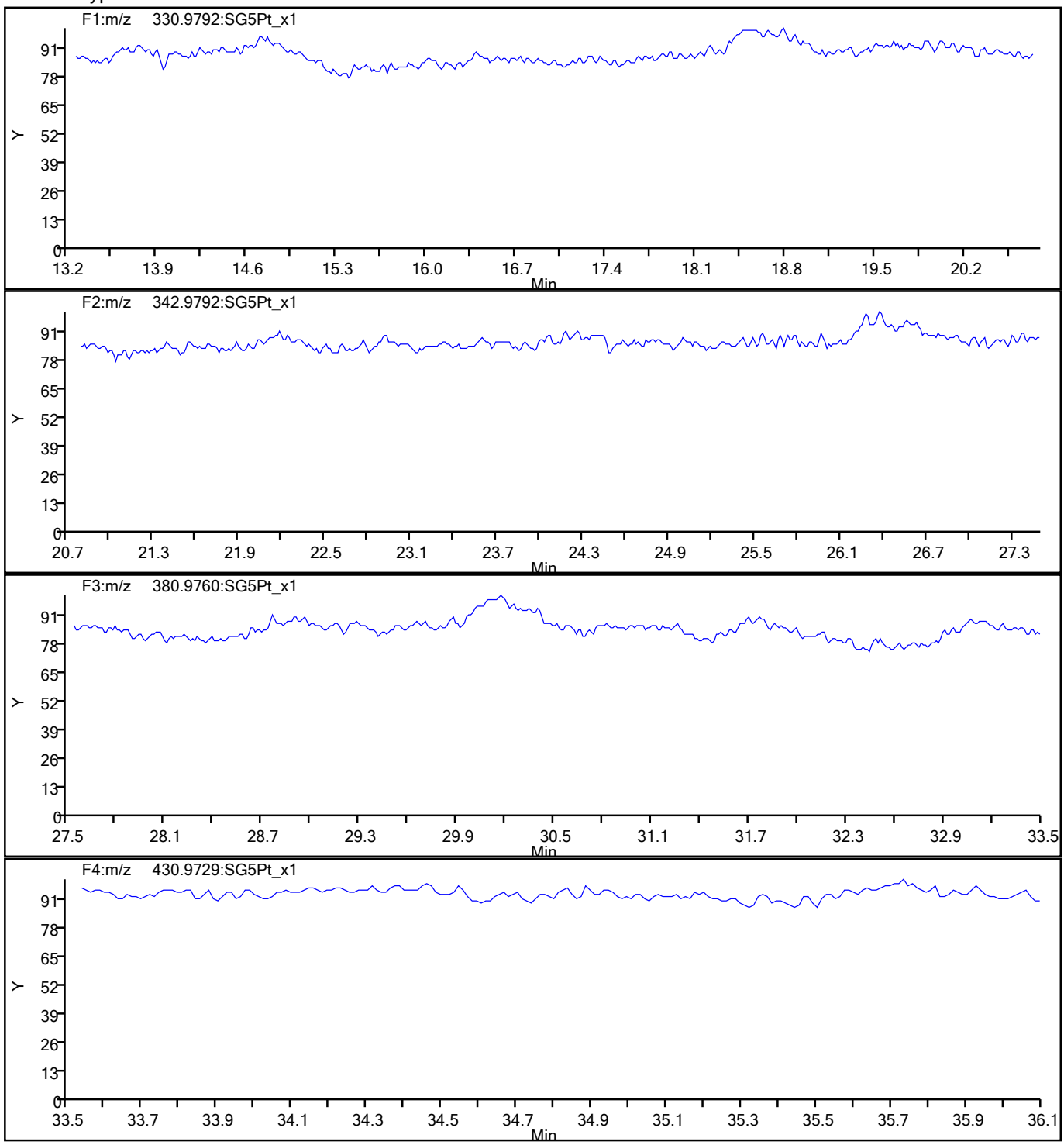

775480

Report Date: 18-Aug-2021 10:28:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 18:57:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
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Column Type:	DB-5	Column Dia:	0.32 mm

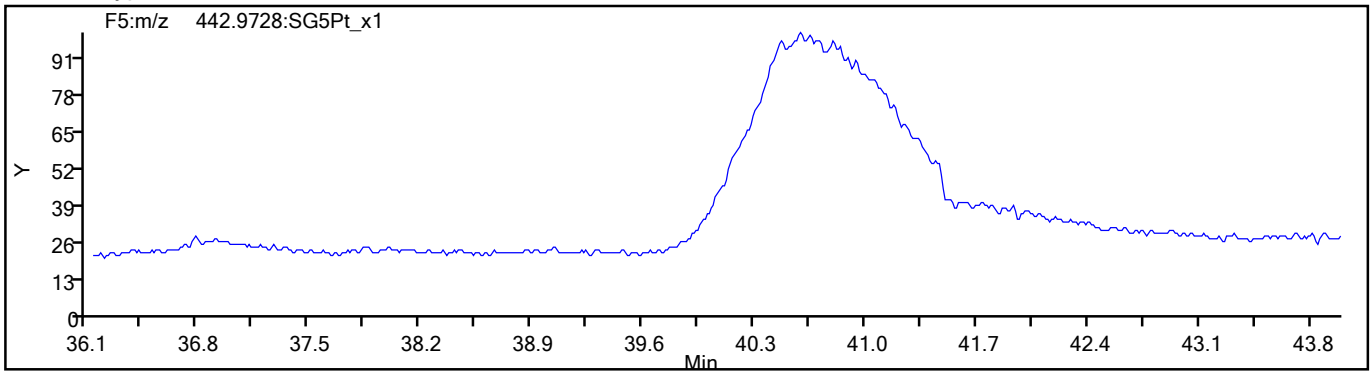

775481

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-DUP-4 RA
Lab Sample ID: 320-76769-25 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_009.d
Analysis Method: 1613B
Date Collected: 07/22/2021 00:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.26(g)
Date Analyzed: 08/23/2021 20:41
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 19.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	6.3	B	1.2	0.18

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	43		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	55		35-197

Report Date: 24-Aug-2021 09:19:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_009.d
Lims ID: 320-76769-A-25-A
Client ID: 11215702-072221-DUP-4
Sample Type: Client
Inject. Date: 23-Aug-2021 20:41:19 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-25-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:16:21

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.311	54743430	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	31731308	0.82	1.3327	43.5	43.5	0.2069	0.2069	43.49	
2,3,7,8-TCDF	17.642	822431	0.66	0.9978	2.598	2.598	0.0754	0.0754		
D 13C-2,3,7,8-TCDD	16.064	20061239	0.76	0.8749	41.9	41.9	0.4284	0.4284	41.88	
2,3,7,8-TCDD	16.078	226287	0.67	1.0570	1.067	1.067	0.1072	0.1072		
$ 37Cl4-2,3,7,8-TCDD	16.092	10327669		0.8648	21.8	21.8	0.0595	0.0595	54.54	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_009.d
Lims ID: 320-76769-A-25-A
Client ID: 11215702-072221-DUP-4
Sample Type: Client
Inject. Date: 23-Aug-2021 20:41:19 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-25-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:16:21

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.311	16.298	1		23780806	5241150	9972	24930	526		
333.9339	16.311	16.298	1		30962624	6730359	7978	19945	844	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.615	1	1.081	14332418	2752279	6842	17105	402		
317.9389	17.628	17.615	1	1.081	17398890	3318957	6360	15900	522	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.642	17.643	0	1.001	327354	59681	734	1835	81		
305.8987	17.642	17.643	0	1.001	495077	100596	1093	2732	92	0.66(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.065	0	0.985	8676594	1968790	9972	24930	197		
333.9339	16.078	16.065	1	0.986	11384645	2497426	7978	19945	313	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.078	16.079	0	1.001	91073	19352	983	2457	20		
321.8936	16.078	16.079	0	1.001	135214	32767	1042	2605	31	0.67(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.093	0	0.987	10327669	2251564	2465	6162	913		

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 09:19:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_009.d		
Injection Date:	23-Aug-2021 20:41:19	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	518979	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

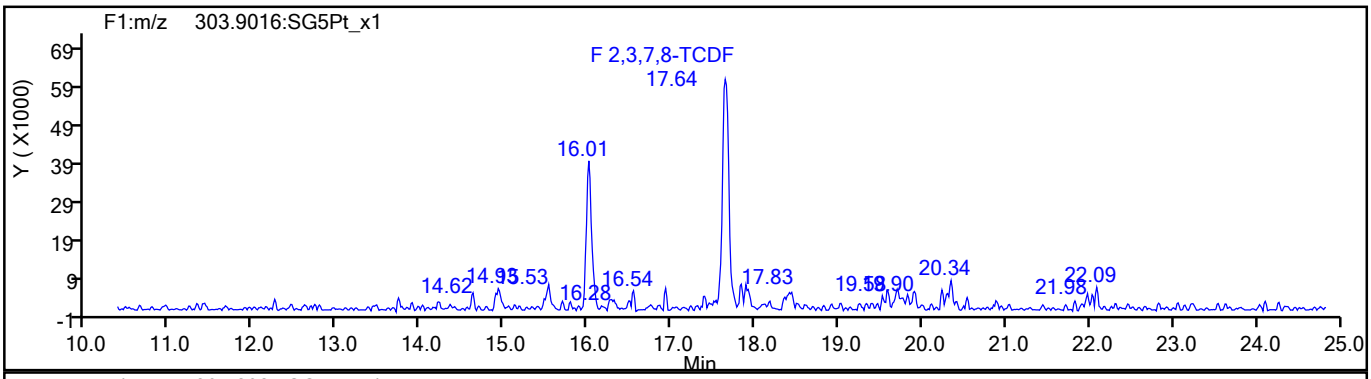

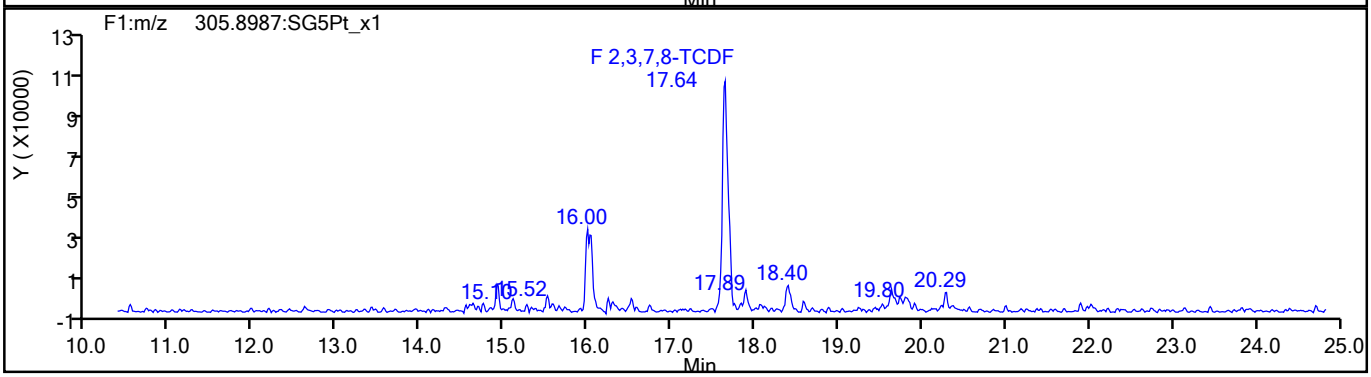

TCDF Standards

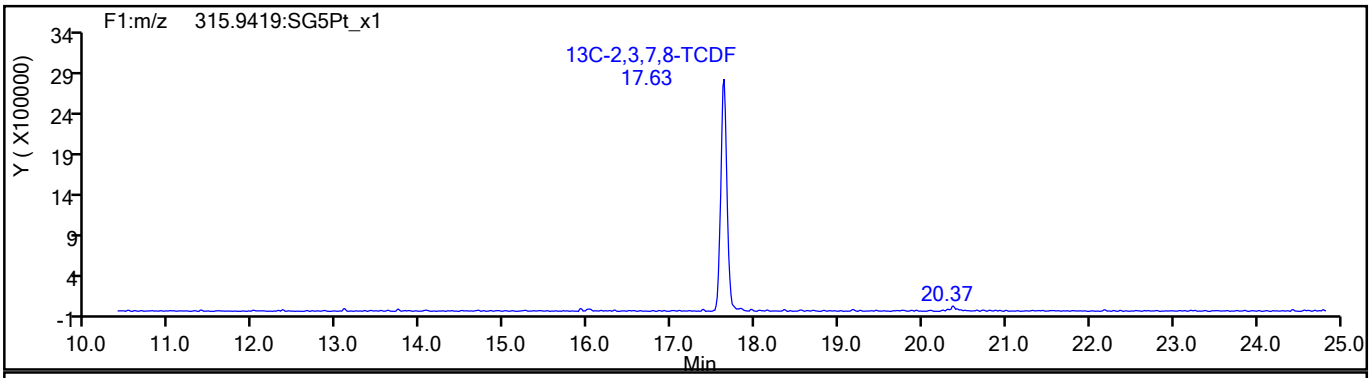

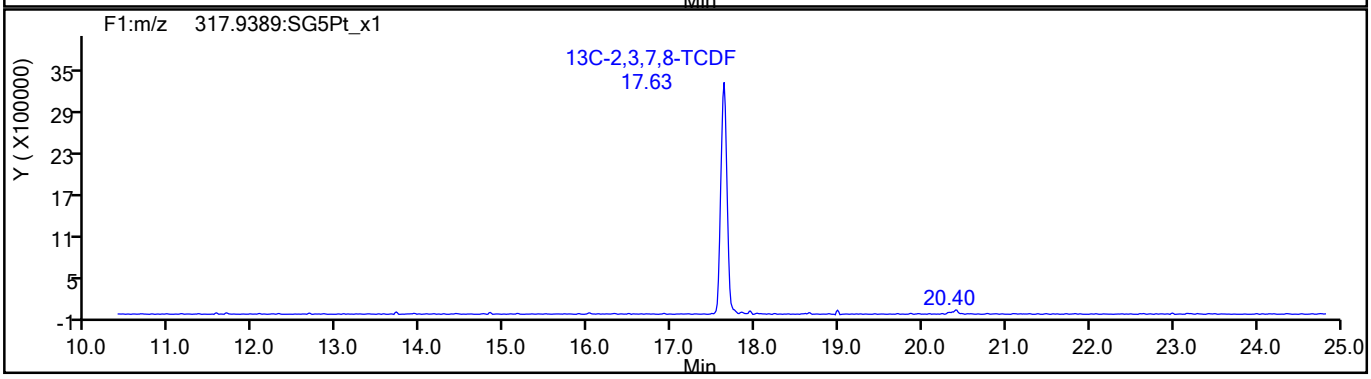

775485

Report Date: 24-Aug-2021 09:19:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_009.d		
Injection Date:	23-Aug-2021 20:41:19	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	518979	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

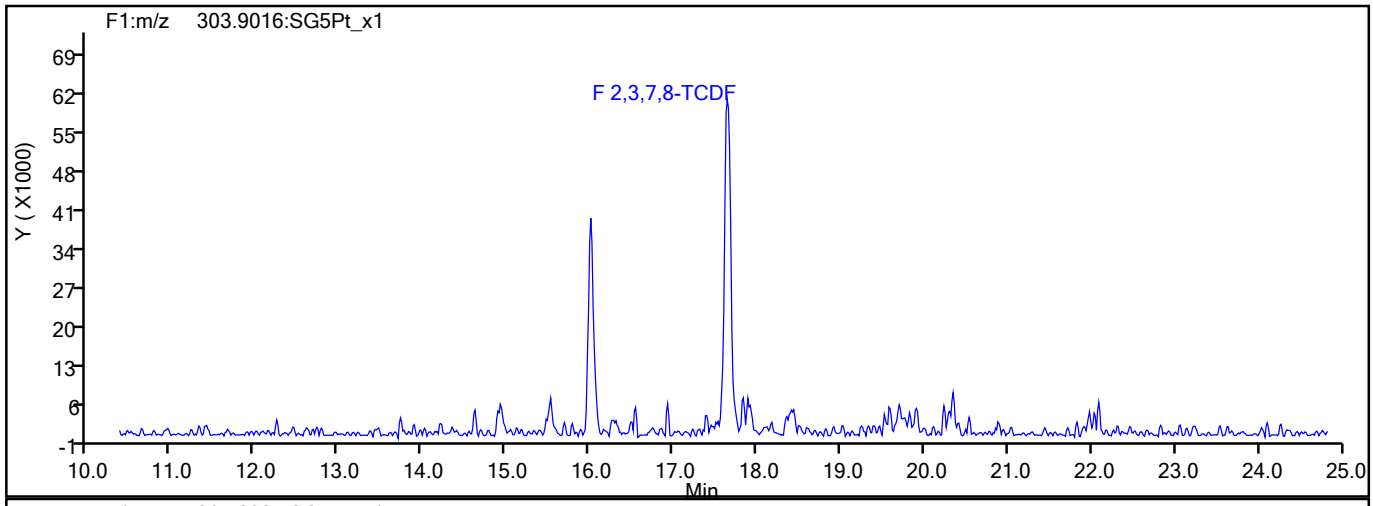

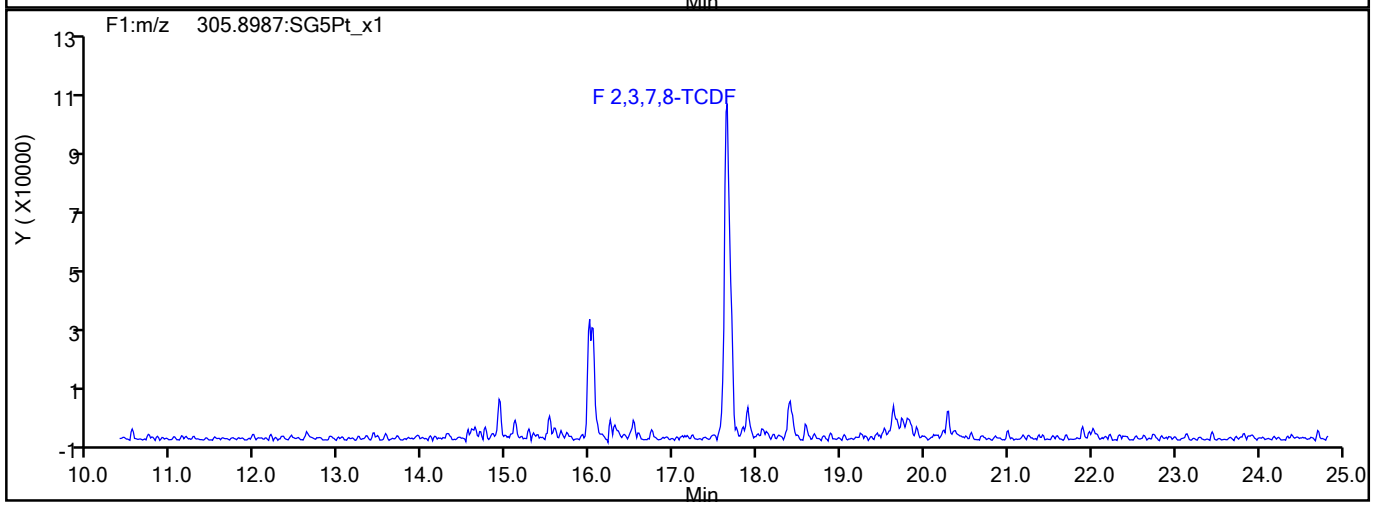

TCDF Interference Mass

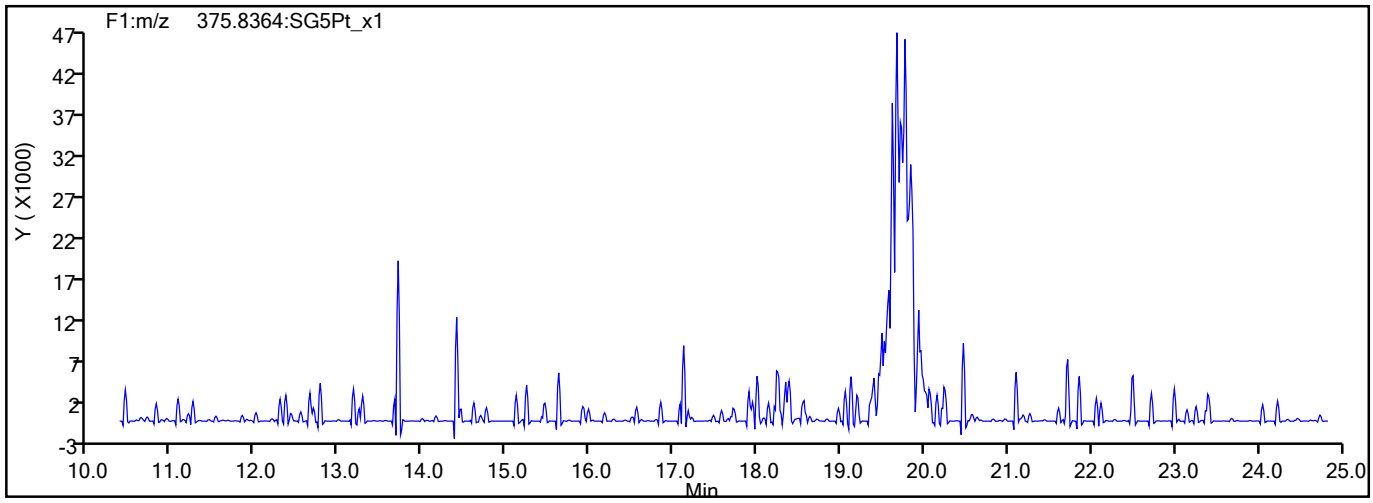

775486

Report Date: 24-Aug-2021 09:19:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_009.d		
Injection Date:	23-Aug-2021 20:41:19	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	518979	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

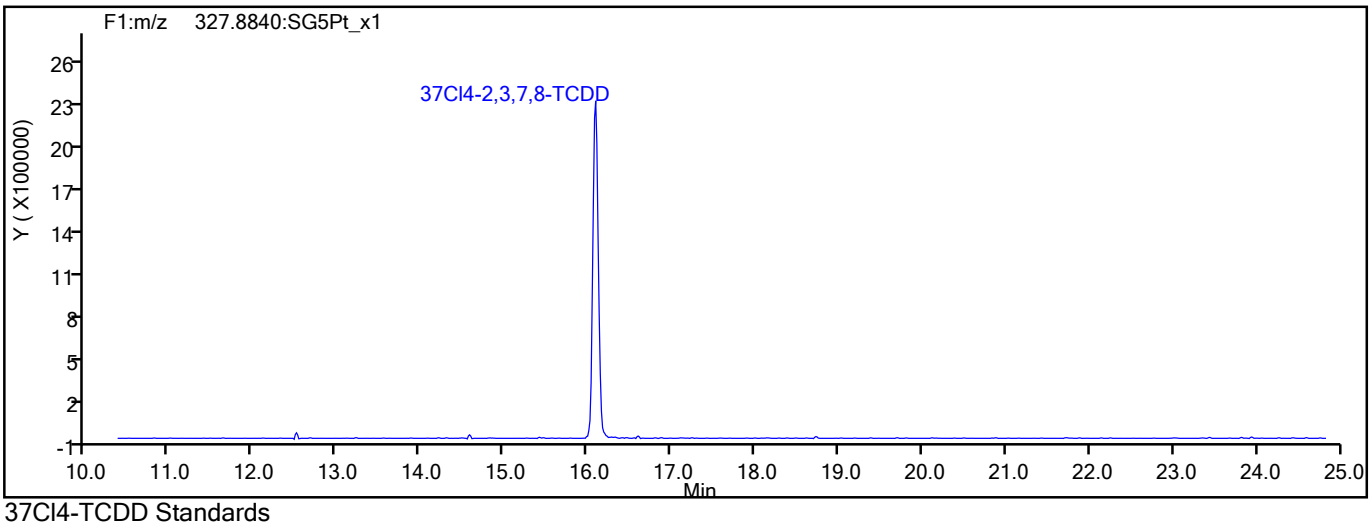

37Cl4-TCDD Standards

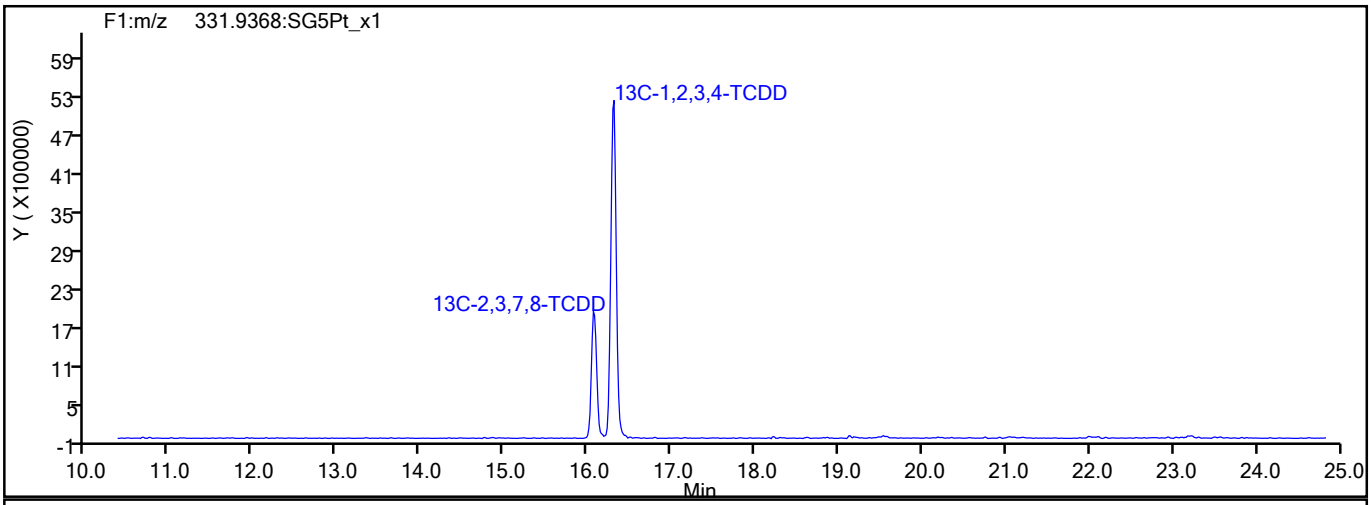

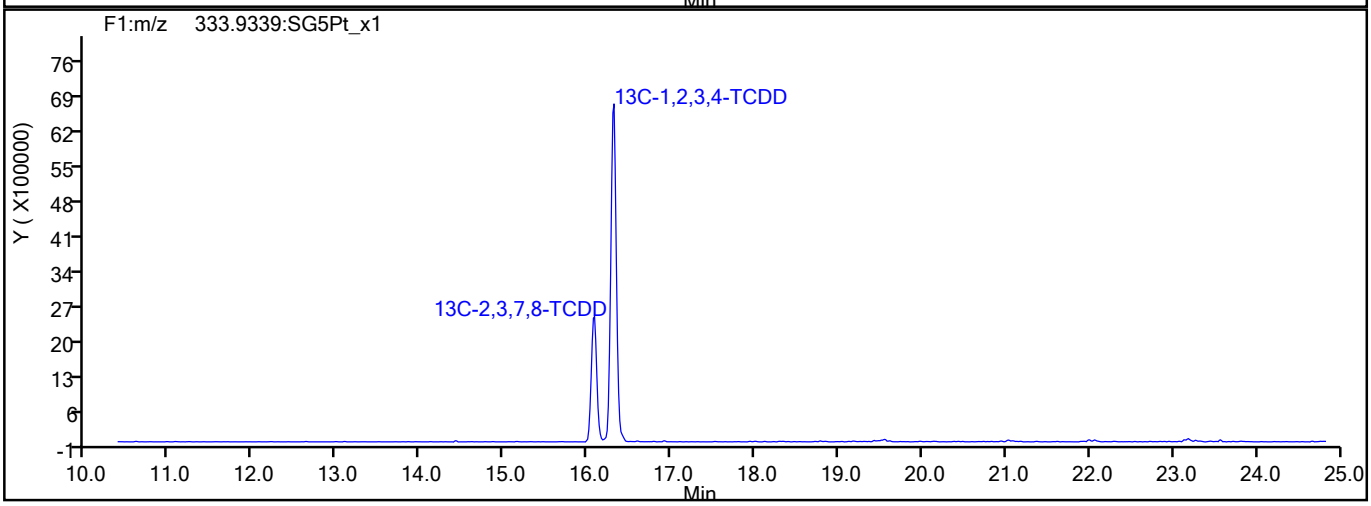

775487

Report Date: 24-Aug-2021 09:19:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_009.d		
Injection Date:	23-Aug-2021 20:41:19	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-4		
Worklist#:	518979	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

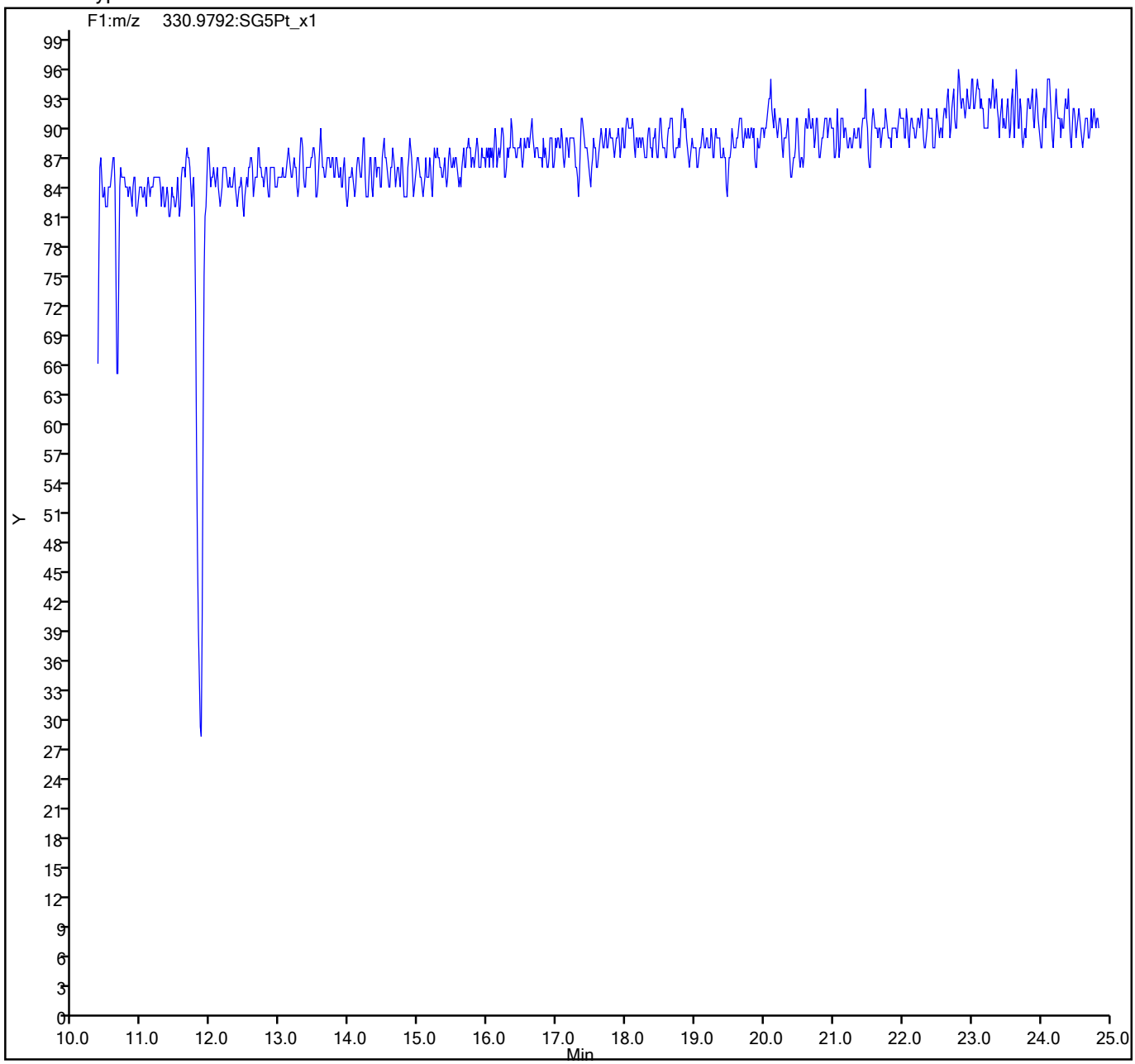

775488

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: 11215702-072221-DUP-5 Lab Sample ID: 320-76769-26

Matrix: Sediment Lab File ID: 13AU2110D5_67.d

Analysis Method: 1613B Date Collected: 07/22/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:22

Sample wt/vol: 10.54(g) Date Analyzed: 08/15/2021 19:42

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 41.9 GPC Cleanup:(Y/N) N

Analysis Batch No.: 516848 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	41000	E B G	72	72
40321-76-4	1,2,3,7,8-PeCDD	390		8.2	4.3
57117-41-6	1,2,3,7,8-PeCDF	3900	E G	28	28
57117-31-4	2,3,4,7,8-PeCDF	2600	G	27	27
39227-28-6	1,2,3,4,7,8-HxCDD	6.5	J B	8.2	0.68
57653-85-7	1,2,3,6,7,8-HxCDD	45		8.2	0.77
19408-74-3	1,2,3,7,8,9-HxCDD	16	B	8.2	0.66
70648-26-9	1,2,3,4,7,8-HxCDF	5900	E B G	18	18
57117-44-9	1,2,3,6,7,8-HxCDF	1600	B G	17	17
72918-21-9	1,2,3,7,8,9-HxCDF	86	B G	14	14
60851-34-5	2,3,4,6,7,8-HxCDF	160	G	14	14
35822-46-9	1,2,3,4,6,7,8-HpCDD	1800	B G	14	14
67562-39-4	1,2,3,4,6,7,8-HpCDF	1900	B G	11	11
55673-89-7	1,2,3,4,7,8,9-HpCDF	610	B G	12	12
3268-87-9	OCDD	21000	E B G	18	18
39001-02-0	OCDF	950	B	16	0.64
41903-57-5	Total TCDD	46000	B G	72	72
30402-14-3	Total TCDF	160000	B q G	260	260
36088-22-9	Total PeCDD	480	q	8.2	4.3
30402-15-4	Total PeCDF	10000	G	27	27
34465-46-8	Total HxCDD	250	B	8.2	0.70
55684-94-1	Total HxCDF	8800	B G	16	16
37871-00-4	Total HpCDD	3200	B G	14	14
38998-75-3	Total HpCDF	3200	B G	12	12

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: 11215702-072221-DUP-5 Lab Sample ID: 320-76769-26

Matrix: Sediment Lab File ID: 13AU2110D5_67.d

Analysis Method: 1613B Date Collected: 07/22/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:22

Sample wt/vol: 10.54(g) Date Analyzed: 08/15/2021 19:42

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 41.9 GPC Cleanup:(Y/N) N

Analysis Batch No.: 516848 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	63		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	74		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	65		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	71		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	68		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	57		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	63		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	54		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	56		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	56		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	66		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	71		26-138
114423-97-1	13C-OCDD	79		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	174		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d
Lims ID: 320-76769-A-26-A
Client ID: 11215702-072221-DUP-5
Sample Type: Client
Inject. Date: 15-Aug-2021 19:42:16 ALS Bottle#: 65 Worklist Smp#: 26
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-26-a 320-76769-a-26-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:29:37 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 17-Aug-2021 16:57:58

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.066	74245273	0.79	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.567	66187928	0.82	1.6249	54.9	54.9	1.064	1.064	54.86	
2,3,7,8-TCDF	17.598	120177192120.77		1.0239	19598	17733	78.4	78.4		REQa
A Non-2,3,7,8-sub-TCDF	17.046	214716115310.77		1.0239	31755	31683	78.4	18053		RQa
S Total TCDF					51353	49416	78.4	78.4		RQ
D 13C-2,3,7,8-TCDD	18.218	42120302	0.85	0.8993	63.1	63.1	3.457	3.457	63.08	a
2,3,7,8-TCDD	18.233	6688497983	0.79	1.2541	12662	12662	22.0	22.0		Ea
$ 37Cl4-2,3,7,8-TCDD	18.233	57273104		1.1071	69.7	69.7	0.990	0.990	174	a
A Non-2,3,7,8-sub-TCDD	17.500	692788330	0.77	1.2541	1311.5	1311.5	22.0	1186.7		a
S Total TCDD					13973	13973	22.0	22.0		
D 13C-1,2,3,7,8-PeCDF	22.626	58666838	1.64	1.2101	65.3	65.3	0.4217	0.4217	65.30	
1,2,3,7,8-PeCDF	22.653	748820867	1.58	1.0611	1202.9	1202.9	8.454	8.454		Ea
D 13C-2,3,4,7,8-PeCDF	23.935	65451772	1.56	1.2395	71.1	71.1	0.4116	0.4116	71.12	
2,3,4,7,8-PeCDF	23.962	520985265	1.58	1.0184	781.6	781.6	8.222	8.222		a
A F1 PeCDFs	20.093	3983948	1.60	1.0398	6.174	6.174	0.0625	6.174		
A Non-2,3,7,8-sub-PeCDF	23.241	682163009	1.57	1.0398	1057.2	1057.2	8.330	442.2		a
S Total PeCDF					3047.8	3047.8	8.338	8.338		
D 13C-1,2,3,7,8-PeCDD	24.631	42012972	1.64	0.7612	74.3	74.3	0.1388	0.1388	74.34	
1,2,3,7,8-PeCDD	24.658	52306385	1.60	1.0484	118.7	118.7	1.323	1.323		a
A Non-2,3,7,8-sub-PeCDD	23.349	12557234	1.55	1.0484	47.7	28.5	1.323	12.9		RQ
S Total PeCDD					166.5	147.3	1.323	1.323		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.610	61976877	0.53	1.0837	63.3	63.3	0.2915	0.2915	63.30	
1,2,3,4,7,8-HxCDF	30.636	1220550611	1.20	1.0851	1814.9	1814.9	5.509	5.509		E
D 13C-1,2,3,6,7,8-HxCDF	30.783	55453977	0.52	1.1279	54.4	54.4	0.2801	0.2801	54.42	
1,2,3,6,7,8-HxCDF	30.796	299027961	1.21	1.1260	478.9	478.9	5.190	5.190		M
D 13C-2,3,4,6,7,8-HxCDF	31.581	53718277	0.53	1.0637	55.9	55.9	0.2970	0.2970	55.89	
2,3,4,6,7,8-HxCDF	31.594	30595425	1.22	1.1675	48.8	48.8	4.165	4.165		M
D 13C-1,2,3,7,8,9-HxCDF	32.353	49363228	0.52	0.9676	56.5	56.5	0.3265	0.3265	56.47	a
1,2,3,7,8,9-HxCDF	32.367	15103849	1.20	1.1664	26.2	26.2	4.239	4.239		M
A Non-2,3,7,8-sub-HxCDF	30.197	197439938	1.22	1.1363	315.2	315.2	4.717	113.4		Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					2684.0	2684.0	4.776	4.776		
* 13C-1,2,3,7,8,9-HxCDD	32.180	90349917	1.26	6.2E+05	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	31.754	44778440	1.24	0.7334	67.6	67.6	0.2451	0.2451	67.57	
1,2,3,4,7,8-HxCDD	31.768	942267	1.14	1.0640	1.978	1.978	0.2072	0.2072		
D 13C-1,2,3,6,7,8-HxCDD	31.847	44942932	1.22	0.8802	56.5	56.5	0.2042	0.2042	56.51	
1,2,3,6,7,8-HxCDD	31.874	6198266	1.24	1.0001	13.8	13.8	0.2370	0.2370		
1,2,3,7,8,9-HxCDD	32.194	2510490	1.20	1.1325	4.941	4.941	0.2017	0.2017		
A Non-2,3,7,8-sub-HxCDD	30.882	26685279	1.23	1.0655	55.8	55.8	0.2144	33.0		M
S Total HxCDD					76.5	76.5	0.2153	0.2153		
D 13C-1,2,3,4,6,7,8-HpCDF	33.791	41984140	0.44	0.7730	60.1	60.1	0.5117	0.5117	60.11	
1,2,3,4,6,7,8-HpCDF	33.803	360463998	1.05	1.4413	595.7	595.7	3.338	3.338		
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	45079951	0.43	0.7008	71.2	71.2	0.5645	0.5645	71.20	
1,2,3,4,7,8,9-HpCDF	34.872	110055479	1.04	1.3174	185.3	185.3	3.725	3.725		
A Non-2,3,7,8-sub-HpCDF	34.319	122677488	1.05	1.3793	204.3	204.3	3.523	204.3		
S Total HpCDF					985.3	985.3	3.532	3.532		
D 13C-1,2,3,4,6,7,8-HpCDD	34.581	38885053	1.04	0.6472	66.5	66.5	0.3293	0.3293	66.50	
1,2,3,4,6,7,8-HpCDD	34.593	234605758	1.03	1.0943	551.3	551.3	4.374	4.374		
A Non-2,3,7,8-sub-HpCDD	34.301	177813614	1.04	1.0943	417.9	417.9	4.374	417.9		
S Total HpCDD					969.2	969.2	4.374	4.374		
D 13C-OCDD	36.951	63604255	0.87	0.4472	157.4	157.4	0.1664	0.1664	78.72	
OCDF	37.046	132678687	0.89	1.4382	290.1	290.1	0.1969	0.1969		
OCDD	36.951	2215769033	0.90	1.1070	6293.8	6293.8	5.509	5.509		E

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d
Lims ID: 320-76769-A-26-A
Client ID: 11215702-072221-DUP-5
Sample Type: Client
Inject. Date: 15-Aug-2021 19:42:16 ALS Bottle#: 65 Worklist Smp#: 26
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-26-a 320-76769-a-26-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:29:37 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 17-Aug-2021 16:57:58

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	18.066	17.855	13		32862924	9496706	156877	392192	61		a
333.9339	18.066	17.855	13		41382349	11890785	109087	272717	109	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.567	17.356	13	0.972	29906243	7335461	52190	130475	141		
317.9389	17.552	17.356	12	0.972	36281685	8884302	95738	239345	93	0.82(0.65-0.89)	
2,3,7,8-TCDF											REQa
303.9016	17.598	17.371	14	1.002	6491975198	1133580777	31418397854597		361		ae
	Empc Correction				5228047261	874420651	31418397854597		278		
305.8987	17.598	17.371	14	1.002	6789671951	1135611306	20652995163247		550	0.96(0.65-0.89)	e
A Non-2,3,7,8-sub-TCDF											RQa
303.9016	15.889	17.046	-69	0.904	67819841	24613598	31418397854597		8		
305.8987	15.889	17.046	-69	0.904	87476071	31941016	20652995163247		15	0.78(0.65-0.89)	
303.9016	16.131	17.046	-55	0.918	202863055	46772448	31418397854597		15		
305.8987	16.131	17.046	-55	0.918	263857285	60542397	20652995163247		29	0.77(0.65-0.89)	
303.9016	16.434	17.046	-37	0.935	397744860	85777960	31418397854597		27		
305.8987	16.434	17.046	-37	0.935	508981318	108213438	20652995163247		52	0.78(0.65-0.89)	
303.9016	16.615	17.046	-26	0.946	432813286	111210397	31418397854597		35		
305.8987	16.615	17.046	-26	0.946	561155072	145822936	20652995163247		71	0.77(0.65-0.89)	
303.9016	16.857	17.046	-11	0.960	647773817	171975991	31418397854597		55		
305.8987	16.857	17.046	-11	0.960	841751570	220423917	20652995163247		107	0.77(0.65-0.89)	
303.9016	17.129	17.046	5	0.975	5723651638	1107197194	31418397854597		352		e
305.8987	17.114	17.046	4	0.974	6510639885	1098871337	20652995163247		532	0.88(0.65-0.89)	e
303.9016	17.673	17.046	38	1.006	86398375	21698980	31418397854597		7		
305.8987	17.673	17.046	38	1.006	161339782	29668608	20652995163247		14	0.54(0.65-0.89)	
	Empc Correction				112205685	28180494	20652995163247		14		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.991	17.046	57	1.024	978165865	276437388	31418397854597		88		
305.8987	17.991	17.046	57	1.024	1281237774	360836423	20652995163247		175	0.76(0.65-0.89)	
303.9016	18.202	17.046	69	1.036	197654488	44904000	31418397854597		14		
305.8987	18.202	17.046	69	1.036	283986664	60905635	20652995163247		29	0.70(0.65-0.89)	
303.9016	19.412	17.046	142	1.105	992010702	157259584	31418397854597		50		a
305.8987	19.412	17.046	142	1.105	1293424280	202946125	20652995163247		98	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	18.218	18.051	10	1.008	19389385	4368747	156877	392192	28		a
333.9339	18.218	18.051	10	1.008	22730917	5323319	109087	272717	49	0.85(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	18.233	18.081	9	1.001	2954666128	681353350	610047	1525117	1117		a
321.8936	18.233	18.081	9	1.001	3733831855	868824718	461044	1152610	1884	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8847	18.233	18.081	9	1.009	57273104	13234857	93775	234437	141		a
A Non-2,3,7,8-sub-TCDD											a
319.8965	18.127	17.500	38	0.995	28632910	11253730	610047	1525117	18		a
321.8936	18.127	17.500	38	0.995	37320403	14146824	461044	1152610	31	0.77(0.65-0.89)	
319.8965	18.596	17.500	66	1.021	272003430	49714931	610047	1525117	81		
321.8936	18.596	17.500	66	1.021	354831587	62848338	461044	1152610	136	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.626	22.367	16	1.252	36434040	5876721	22013	55032	267		
353.8970	22.626	22.367	16	1.252	22232798	3644089	21637	54092	168	1.64(1.32-1.78)	
1,2,3,7,8-PeCDF											Ea
339.8597	22.653	22.394	16	1.001	458442842	81250458	210132	525330	387		a
341.8567	22.653	22.394	16	1.001	290378025	51594697	131501	328752	392	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.935	23.703	14	1.325	39895233	6230133	22013	55032	283		
353.8970	23.935	23.703	14	1.325	25556539	3970372	21637	54092	183	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	23.962	23.730	14	1.001	318716397	49768583	210132	525330	237		a
341.8567	23.962	23.730	14	1.001	202268868	31464282	131501	328752	239	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.715	20.093	-23	0.871	2450783	540831	1332	3330	406		
341.8567	19.715	20.093	-23	0.871	1533165	334768	1233	3082	272	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											a
339.8597	21.276	23.241	-118	0.940	174066717	47433777	210132	525330	226		
341.8567	21.276	23.241	-118	0.940	111297744	30644103	131501	328752	233	1.56(1.32-1.78)	
339.8597	22.135	23.241	-66	0.978	18757495	2314061	210132	525330	11		
341.8567	22.135	23.241	-66	0.978	11844236	1474535	131501	328752	11	1.58(1.32-1.78)	
339.8597	22.503	23.241	-44	0.995	30404761	6854410	210132	525330	33		a
341.8567	22.503	23.241	-44	0.995	19463293	4344582	131501	328752	33	1.56(1.32-1.78)	
339.8597	22.885	23.241	-21	1.011	6143613	1232662	210132	525330	6		
341.8567	22.885	23.241	-21	1.011	3781041	757362	131501	328752	6	1.62(1.32-1.78)	
339.8597	23.144	23.241	-6	1.023	115445682	22385573	210132	525330	107		
341.8567	23.144	23.241	-6	1.023	72935864	14234062	131501	328752	108	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	24.290	23.241	63	1.074	72190046	10381958	210132	525330	49		
341.8567	24.290	23.241	63	1.074	45832517	6600190	131501	328752	50	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.631	24.426	12	1.363	26114244	4926216	5516	13790	893		
369.8919	24.631	24.426	12	1.363	15898728	3026456	3525	8812	859	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											a
355.8546	24.658	24.453	12	1.001	32203362	6201866	25008	62520	248		a
357.8516	24.658	24.453	12	1.001	20103023	3933113	19106	47765	206	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.453	23.349	-113	0.871	1301441	234494	25008	62520	9		
357.8516	21.385	23.349	-118	0.868	9310690	1722586	19106	47765	90	0.14(1.32-1.78)	
	Empc Correction				839639	151286	19106	47765	8		
355.8546	22.653	23.349	-42	0.920	3277908	696244	25008	62520	28		
357.8516	22.653	23.349	-42	0.920	2402198	495794	19106	47765	26	1.36(1.32-1.78)	
355.8546	22.885	23.349	-28	0.929	1171961	214507	25008	62520	9		
357.8516	22.885	23.349	-28	0.929	734467	137484	19106	47765	7	1.60(1.32-1.78)	
355.8546	23.185	23.349	-10	0.941	1214199	213771	25008	62520	9		
357.8516	23.185	23.349	-10	0.941	729507	136780	19106	47765	7	1.66(1.32-1.78)	
355.8546	24.044	23.349	42	0.976	559711	127113	25008	62520	5		
357.8516	24.044	23.349	42	0.976	326203	74542	19106	47765	4	1.72(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.610	30.503	6	0.951	21364626	4255648	14199	35497	300		
385.8610	30.610	30.503	6	0.951	40612251	7823673	16971	42427	461	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											E
373.8208	30.636	30.529	6	1.001	665973564	129987692	158303	395757	821		
375.8178	30.623	30.529	6	1.000	554577047	109011587	130515	326287	835	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.783	30.689	6	0.957	18982385	4287982	14199	35497	302		
385.8610	30.783	30.689	6	0.957	36471592	8066903	16971	42427	475	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											M
373.8208	30.796	30.716	5	1.000	163522681	36583576	158303	395757	231		M
375.8178	30.796	30.716	5	1.000	135505280	30507697	130515	326287	234	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.581	31.514	4	0.981	18600649	5129000	14199	35497	361		
385.8610	31.568	31.514	3	0.981	35117628	9720259	16971	42427	573	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.594	31.528	4	1.000	16789722	4953080	158303	395757	31		M
375.8178	31.594	31.528	4	1.000	13805703	4077176	130515	326287	31	1.22(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											a
383.8639	32.353	32.326	2	1.005	16846543	4973905	14199	35497	350		a
385.8610	32.353	32.326	2	1.005	32516685	9631561	16971	42427	568	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.367	32.340	2	1.000	8241588	2790817	158303	395757	18		M
375.8178	32.367	32.340	2	1.000	6862261	2323315	130515	326287	18	1.20(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											Ma

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	28.559	30.197	-98	0.933	38980110	5893044	158303	395757	37		
375.8178	28.559	30.197	-98	0.933	32073670	4837400	130515	326287	37	1.22(1.05-1.43)	
373.8208	29.864	30.197	-20	0.976	22729689	4049285	158303	395757	26		
375.8178	29.864	30.197	-20	0.976	18477564	3271544	130515	326287	25	1.23(1.05-1.43)	
373.8208	31.488	30.197	77	1.029	11331760	3137701	158303	395757	20		M
375.8178	31.488	30.197	77	1.029	9358332	2543039	130515	326287	19	1.21(1.05-1.43)	
373.8208	32.460	30.197	136	1.060	35274982	10896916	158303	395757	69		M
375.8178	32.446	30.197	135	1.060	29213831	9345325	130515	326287	72	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	32.180	32.140	2		50340233	13777521	9197	22992	1498		a
403.8529	32.180	32.140	2		40009684	10889525	8539	21347	1275	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.754	31.701	3	0.987	24796907	7416492	9197	22992	806		
403.8529	31.754	31.701	3	0.987	19981533	6007248	8539	21347	704	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.768	31.714	3	1.000	501047	161546	6578	16445	25		
391.8127	31.768	31.714	3	1.000	441220	139228	5260	13150	26	1.14(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.847	31.807	2	0.990	24711948	6883610	9197	22992	748		
403.8529	31.847	31.807	2	0.990	20230984	5600767	8539	21347	656	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.874	31.820	3	1.001	3434467	967809	6578	16445	147		
391.8127	31.861	31.820	2	1.000	2763799	757711	5260	13150	144	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.194	32.153	2	1.014	1369025	341791	6578	16445	52		
391.8127	32.194	32.153	2	1.014	1141465	262687	5260	13150	50	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											M
389.8157	29.731	30.882	-69	0.934	4486966	593164	6578	16445	90		
391.8127	29.731	30.882	-69	0.934	3769815	498556	5260	13150	95	1.19(1.05-1.43)	
389.8157	30.676	30.882	-12	0.963	1418949	327532	6578	16445	50		
391.8127	30.676	30.882	-12	0.963	1228220	270049	5260	13150	51	1.16(1.05-1.43)	
389.8157	31.035	30.882	9	0.975	8821581	1923565	6578	16445	292		
391.8127	31.035	30.882	9	0.975	6959748	1519040	5260	13150	289	1.27(1.05-1.43)	M
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.791	33.766	1	1.050	12885460	4430400	14115	35287	314		
419.8220	33.791	33.766	1	1.050	29098680	9968777	24916	62290	400	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.803	33.778	1	1.000	184222414	62025601	151314	378285	410		
409.7789	33.803	33.778	1	1.000	176241584	58042467	125810	314525	461	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.847	1	1.083	13613485	4276580	14115	35287	303		
419.8220	34.860	34.847	1	1.083	31466466	9839806	24916	62290	395	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.860	1	1.000	56168333	17924931	151314	378285	118		
409.7789	34.872	34.860	1	1.000	53887146	17192015	125810	314525	137	1.04(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.095	34.319	-13	1.009	62774229	23566013	151314	378285	156		
409.7789	34.095	34.319	-13	1.009	59903259	22397241	125810	314525	178	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.581	34.568	1	1.075	19780306	6366636	12086	30215	527		
437.8140	34.581	34.568	1	1.075	19104747	6139650	8941	22352	687	1.04(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.593	34.580	1	1.000	119156397	37364604	117020	292550	319		
425.7737	34.581	34.580	0	1.000	115449361	36361839	122427	306067	297	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.046	34.301	-15	0.985	90498387	32901366	117020	292550	281		
425.7737	34.034	34.301	-16	0.984	87315227	31604359	122427	306067	258	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.951	36.926	1	1.148	29670548	8310454	3523	8807	2359		
471.7750	36.951	36.926	1	1.148	33933707	9436339	3820	9550	2470	0.87(0.76-1.02)	
OCDF											
441.7428	37.046	37.022	1	1.003	62368263	16422509	3680	9200	4463		
443.7399	37.034	37.022	1	1.002	70310424	18953977	6370	15925	2976	0.89(0.76-1.02)	
OCDD											E
457.7377	36.951	36.938	1	1.000	1047076804	295619116	102143	255357	2894		
459.7348	36.951	36.938	1	1.000	1168692229	335074825	114330	285825	2931	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Lims ID:	320-76769-A-26-A		
Client ID:	11215702-072221-DUP-5		
Inject. Date:	15-Aug-2021 19:42:16	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	26

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	66187928	16219763

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	66187928	16219763

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.889	67819841	24613598	87476071	31941016	229.1	0.78	
16.131	202863055	46772448	263857285	60542397	688.7	0.77	
16.434	397744860	85777960	508981318	108213438	1337.9	0.78	
16.615	432813286	111210397	561155072	145822936	1466.7	0.77	
16.857	647773817	171975991	841751570	220423917	2197.9	0.77	
17.129	5723651638	1107197194	6510639885	1098871337	18053	0.88	
17.673	86398375	21698980	161339782	29668608	365.6	0.54	RQ
17.673	86398375	21698980	112205685	28180494	293.1		Empc Correction
17.991	978165865	276437388	1281237774	360836423	3333.9	0.76	
18.202	197654488	44904000	283986664	60905635	710.7	0.70	
19.412	992010702	157259584	1293424280	202946125	3372.3	0.77	a
Signal Totals:	9726895927	2047847540	11744715604	2318683718			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	21520745628	4368019372				0.82	RQa
	21471611531	4366531258					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 31755 = (21520745628 * 100.000) / (66187928 * 1.024)

Empc Amount: 31683 = (21471611531 * 100.000) / (66187928 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d
Lims ID: 320-76769-A-26-A
Client ID: 11215702-072221-DUP-5
Inject. Date: 15-Aug-2021 19:42:16 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 26

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	42120302	9692066

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	42120302	9692066

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.127	28632910	11253730	37320403	14146824	124.9	0.77	a
18.596	272003430	49714931	354831587	62848338	1186.7	0.77	
Signal Totals:							
	300636340	60968661	392151990	76995162			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	692788330	137963823				0.77	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1311.5 = (692788330 * 100.000) / (42120302 * 1.254)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d
Lims ID: 320-76769-A-26-A
Client ID: 11215702-072221-DUP-5
Inject. Date: 15-Aug-2021 19:42:16 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 26

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	58666838	9520810
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	65451772	10200505

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	62059305	9860657

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.715	2450783	540831	1533165	334768	6.17	1.60	
Signal Totals:							
	2450783	540831	1533165	334768			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3983948	875599				1.60	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.174 = (3983948 * 100.000) / (62059305 * 1.040)

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d
Lims ID: 320-76769-A-26-A
Client ID: 11215702-072221-DUP-5
Inject. Date: 15-Aug-2021 19:42:16 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 26

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	58666838	9520810
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	65451772	10200505

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	62059305	9860657

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.276	174066717	47433777	111297744	30644103	442.2	1.56	
22.135	18757495	2314061	11844236	1474535	47.4	1.58	
22.503	30404761	6854410	19463293	4344582	77.3	1.56	a
22.885	6143613	1232662	3781041	757362	15.4	1.62	
23.144	115445682	22385573	72935864	14234062	291.9	1.58	
24.290	72190046	10381958	45832517	6600190	182.9	1.58	
Signal Totals:							
	417008314	90602441	265154695	58054834			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	682163009	148657275				1.57	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1057.2 = (682163009 * 100.000) / (62059305 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Lims ID:	320-76769-A-26-A		
Client ID:	11215702-072221-DUP-5		
Inject. Date:	15-Aug-2021 19:42:16	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	26

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	42012972	7952672

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	42012972	7952672

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.453	1301441	234494	9310690	1722586	24.1	0.14	RQ
21.453	1301441	234494	839639	151286	4.86		Empc Correction
22.653	3277908	696244	2402198	495794	12.9	1.36	
22.885	1171961	214507	734467	137484	4.33	1.60	
23.185	1214199	213771	729507	136780	4.41	1.66	
24.044	559711	127113	326203	74542	2.01	1.72	
Signal Totals:							
	7525220	1486129	5032014	995886			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	21028285	4053315				0.56	RQ
	12557234	2482015					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 47.740 = (21028285 * 100.000) / (42012972 * 1.048)

Empc Amount: 28.508 = (12557234 * 100.000) / (42012972 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d
Lims ID: 320-76769-A-26-A
Client ID: 11215702-072221-DUP-5
Inject. Date: 15-Aug-2021 19:42:16 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 26

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	61976877	12079321
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	55453977	12354885
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	53718277	14849259
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	49363228	14605466

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	55128089	13472232

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.559	38980110	5893044	32073670	4837400	113.4	1.22	
29.864	22729689	4049285	18477564	3271544	65.8	1.23	
31.488	11331760	3137701	9358332	2543039	33.0	1.21	Ma
32.460	35274982	10896916	29213831	9345325	103.0	1.21	Ma
Signal Totals:	108316541	23976946	89123397	19997308			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	197439938	43974254				1.22	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 315.199 = (197439938 * 100.000) / (55128089 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d
Lims ID: 320-76769-A-26-A
Client ID: 11215702-072221-DUP-5
Inject. Date: 15-Aug-2021 19:42:16 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 26

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	44778440	13423740
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	44942932	12484377
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	44860686	12954058

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.731	4486966	593164	3769815	498556	17.3	1.19	
30.676	1418949	327532	1228220	270049	5.54	1.16	
31.035	8821581	1923565	6959748	1519040	33.0	1.27	M
Signal Totals:							
	14727496	2844261	11957783	2287645			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	26685279	5131906				1.23	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 55.826 = (26685279 * 100.000) / (44860686 * 1.066)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d
Lims ID: 320-76769-A-26-A
Client ID: 11215702-072221-DUP-5
Inject. Date: 15-Aug-2021 19:42:16 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 26

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	41984140	14399177
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	45079951	14116386

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	43532045	14257781

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.095	62774229	23566013	59903259	22397241	204.3	1.05	
Signal Totals:							
	62774229	23566013	59903259	22397241			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	122677488	45963254				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 204.308 = (122677488 * 100.000) / (43532045 * 1.379)

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d
Lims ID: 320-76769-A-26-A
Client ID: 11215702-072221-DUP-5
Inject. Date: 15-Aug-2021 19:42:16 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 26

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	38885053	12506286

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	38885053	12506286

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.046	90498387	32901366	87315227	31604359	417.9	1.04	
Signal Totals:							
	90498387	32901366	87315227	31604359			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	177813614	64505725				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 417.873 = (177813614 * 100.000) / (38885053 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.37
Area: 229008293
Amount: 767.9516
Amount Units: pg/ul

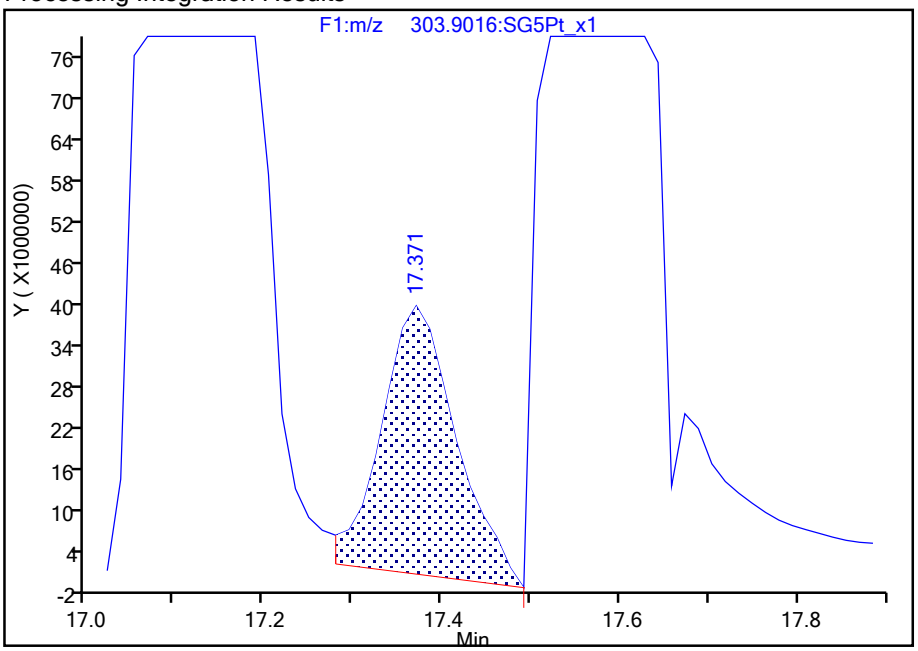

Manual Integration Results

RT: 17.60
Area: 6491975198
Amount: 19598
Amount Units: pg/ul

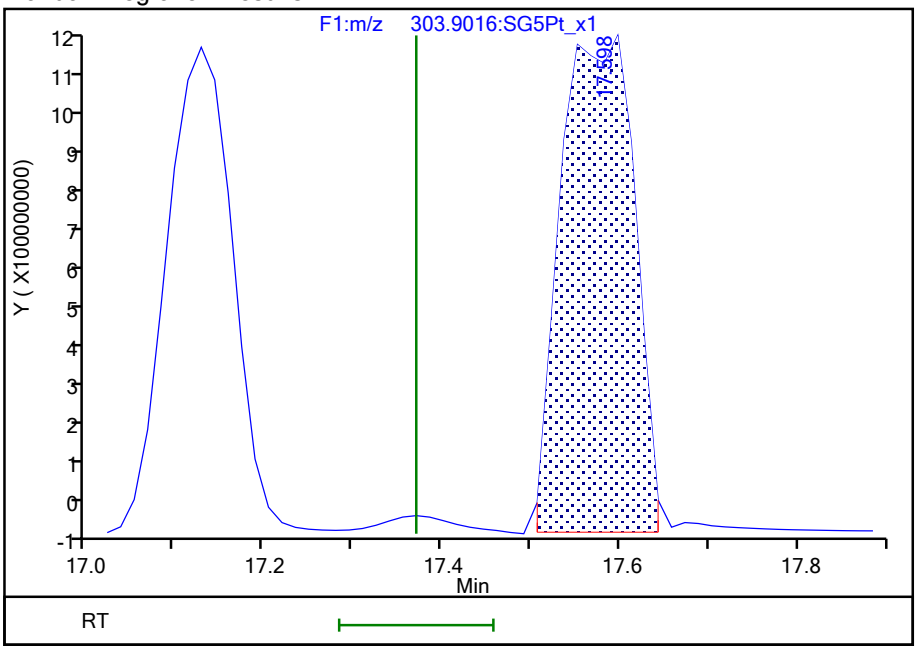

Reviewer: bennettd, 17-Aug-2021 16:57:38

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

775508

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 2

Processing Integration Results

RT: 18.07
Area: 41382349
Amount: 111.1955
Amount Units: pg/ul

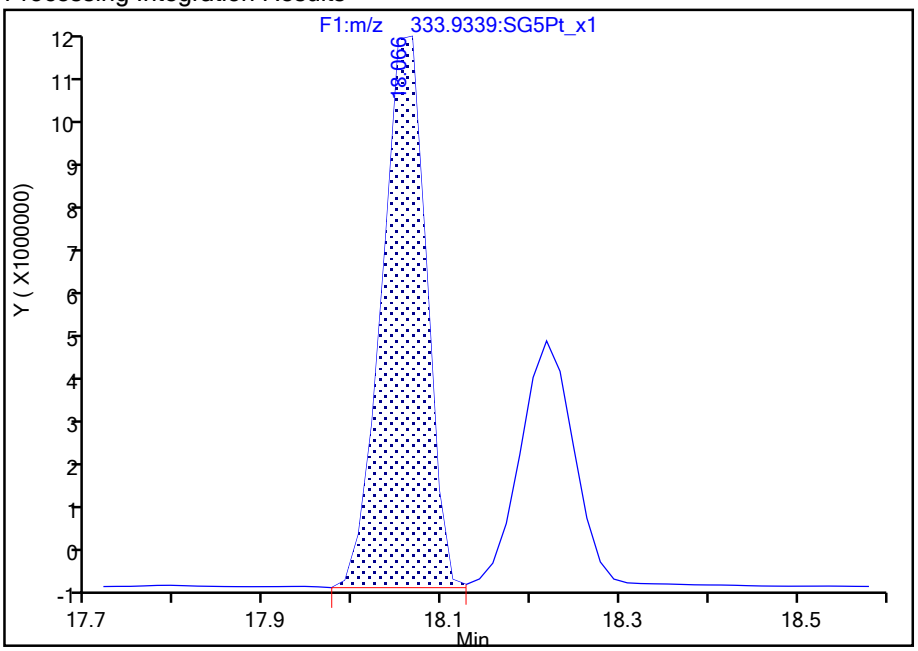

Manual Integration Results

RT: 18.22
Area: 22730917
Amount: 63.082667
Amount Units: pg/ul

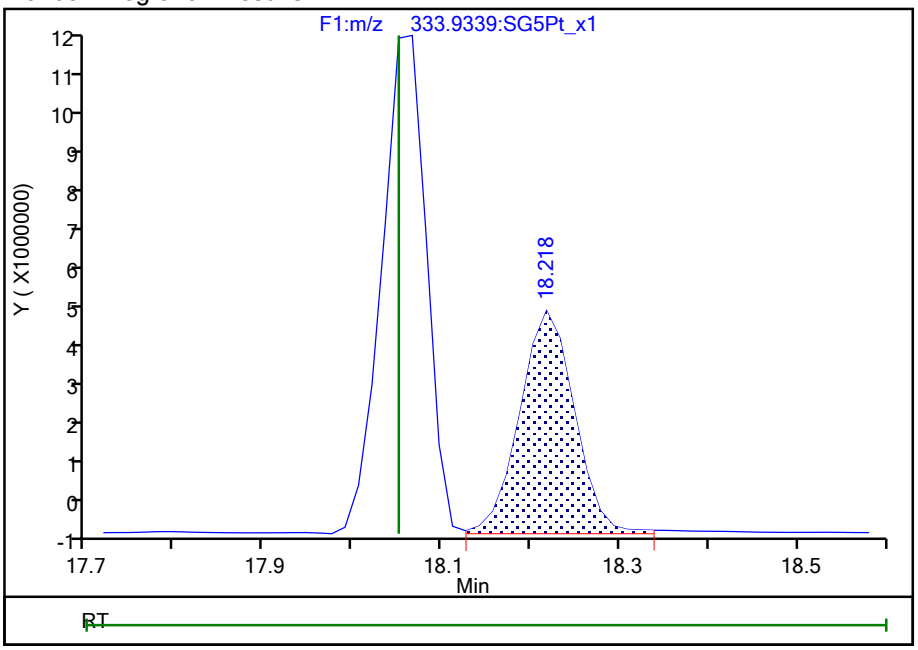

Reviewer: dadunj, 18-Aug-2021 12:52:00

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 3

Processing Integration Results

RT: 18.07
Area: 74245273
Amount: 111.1955
Amount Units: pg/ul

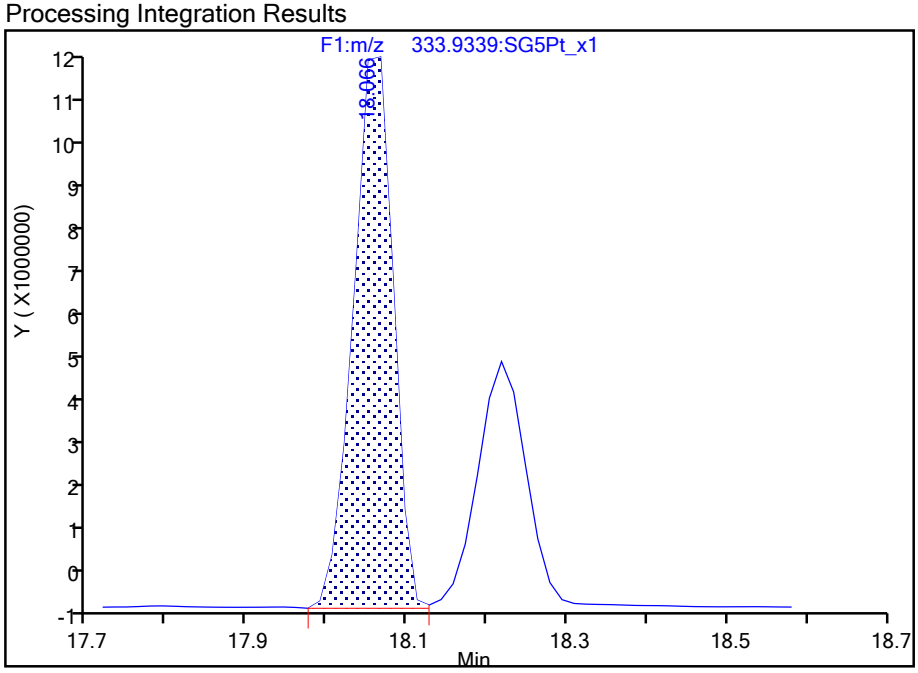

Manual Integration Results

RT: 18.22
Area: 42120302
Amount: 63.082667
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 12:52:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 18.07
Area: 32862924
Amount: 111.1955
Amount Units: pg/ul

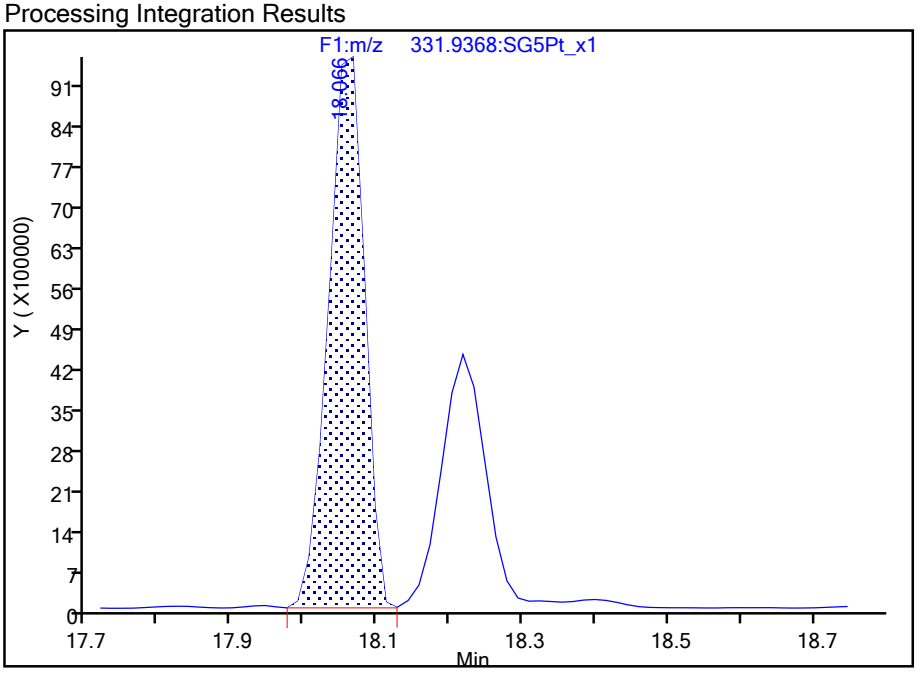

Manual Integration Results

RT: 18.22
Area: 19389385
Amount: 63.082667
Amount Units: pg/ul

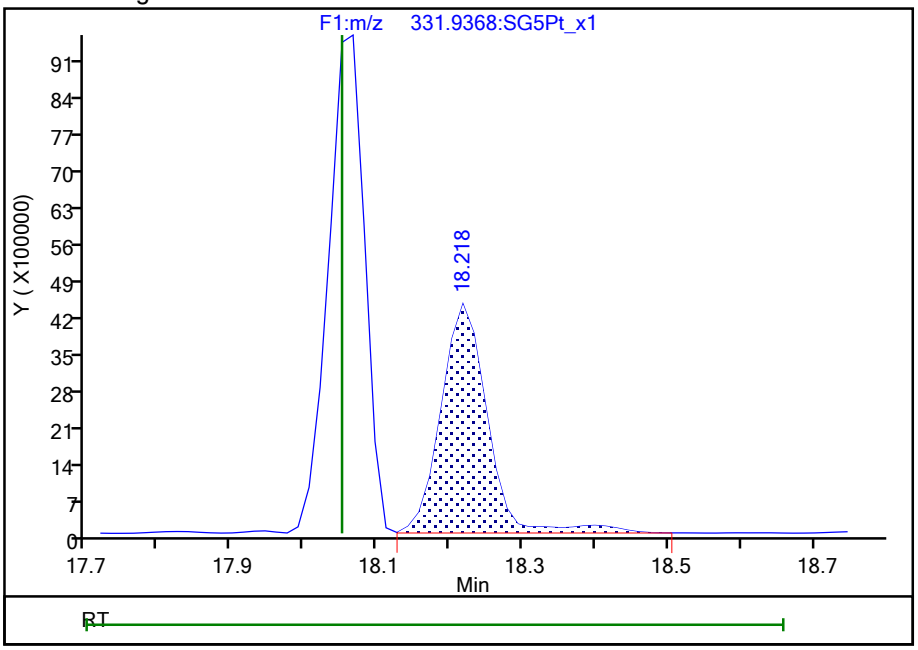

Reviewer: dadunj, 18-Aug-2021 12:52:01
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

775511

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.13
Area: 37320403
Amount: 124.8550
Amount Units: pg/ul

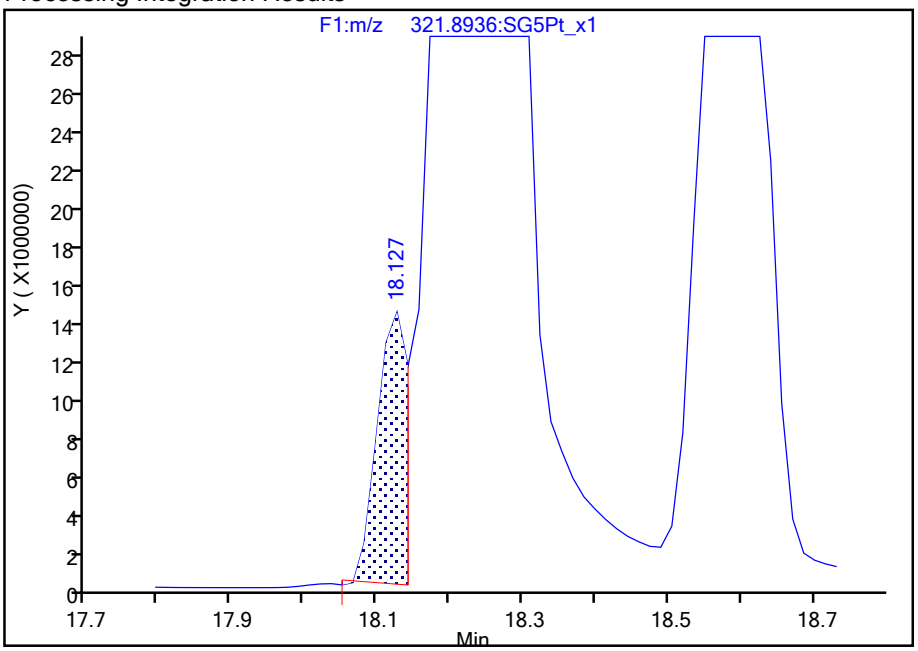

Manual Integration Results

RT: 18.23
Area: 3733831855
Amount: 12662
Amount Units: pg/ul

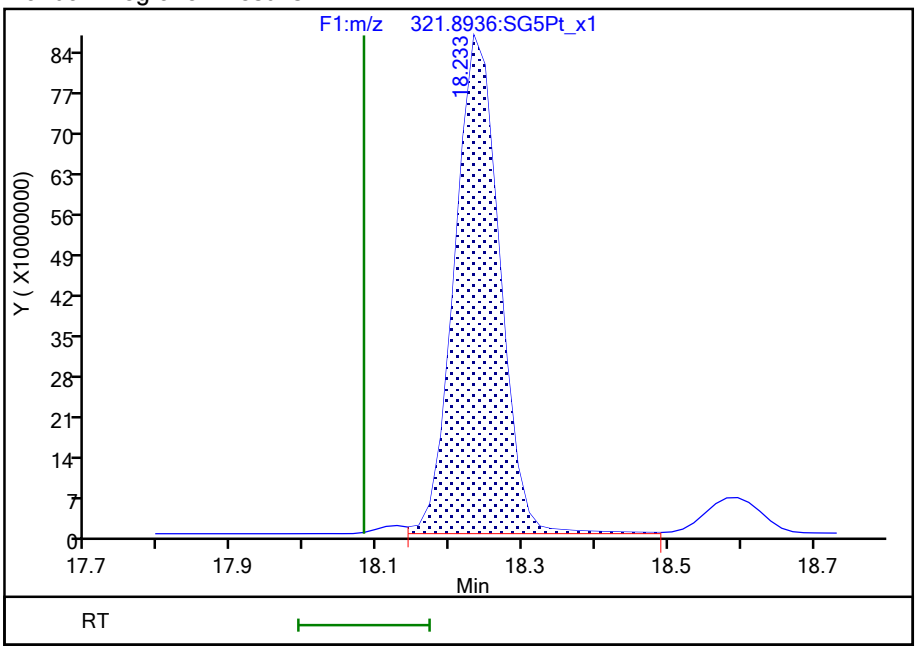

Reviewer: dadunj, 18-Aug-2021 11:43:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

RT: 18.13
Area: 65953313
Amount: 124.8550
Amount Units: pg/ul

Processing Integration Results

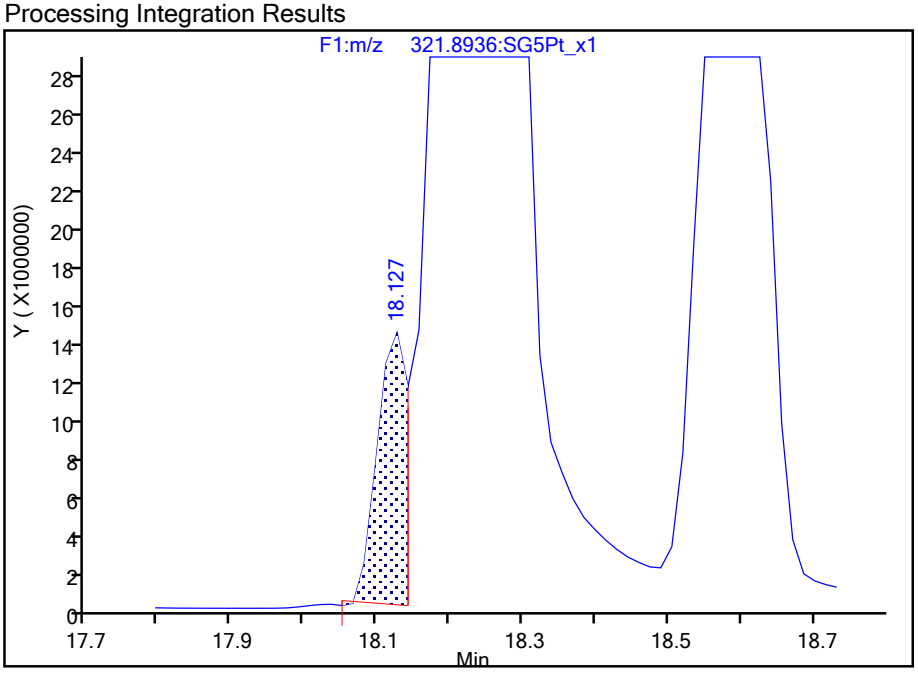

Manual Integration Results

RT: 18.23
Area: 6688497983
Amount: 12662
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 11:43:55
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.13
Area: 28632910
Amount: 124.8550
Amount Units: pg/ul

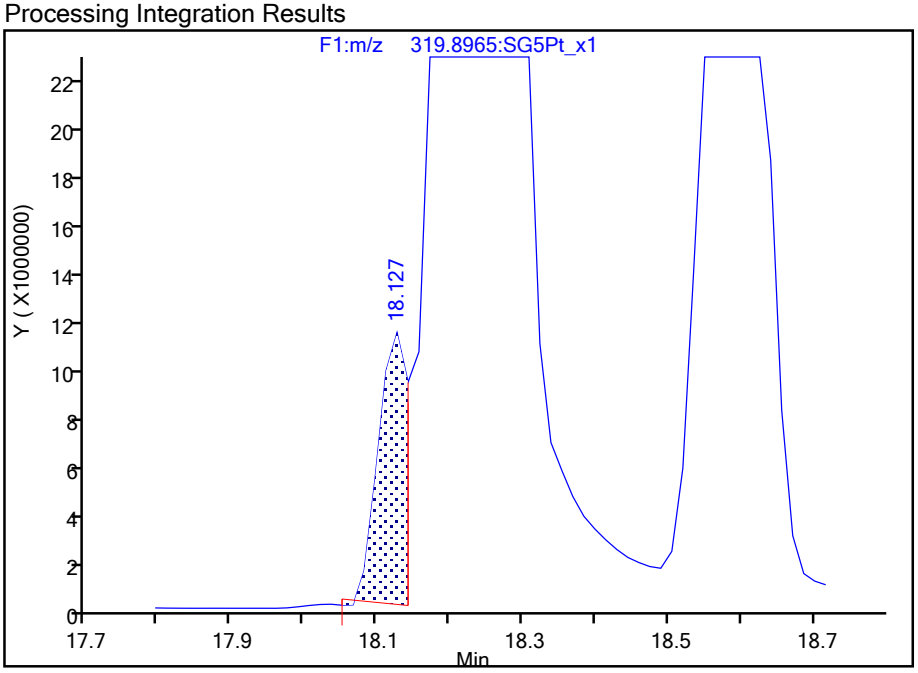

Manual Integration Results

RT: 18.23
Area: 2954666128
Amount: 12662
Amount Units: pg/ul

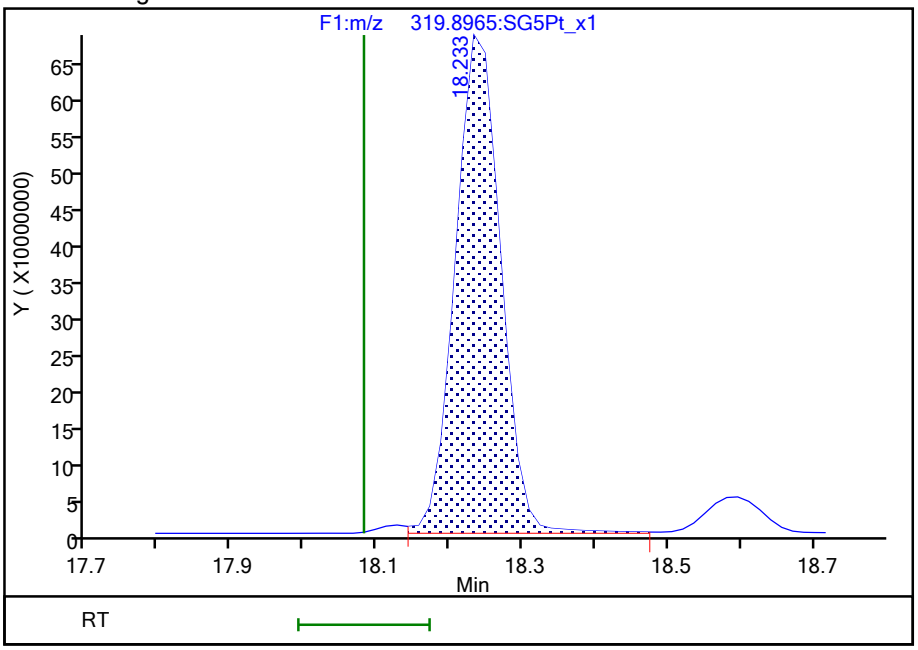

Reviewer: dadunj, 18-Aug-2021 11:43:57
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

RT: 18.13
Area: 1373359
Amount: 1.670745
Amount Units: pg/ul

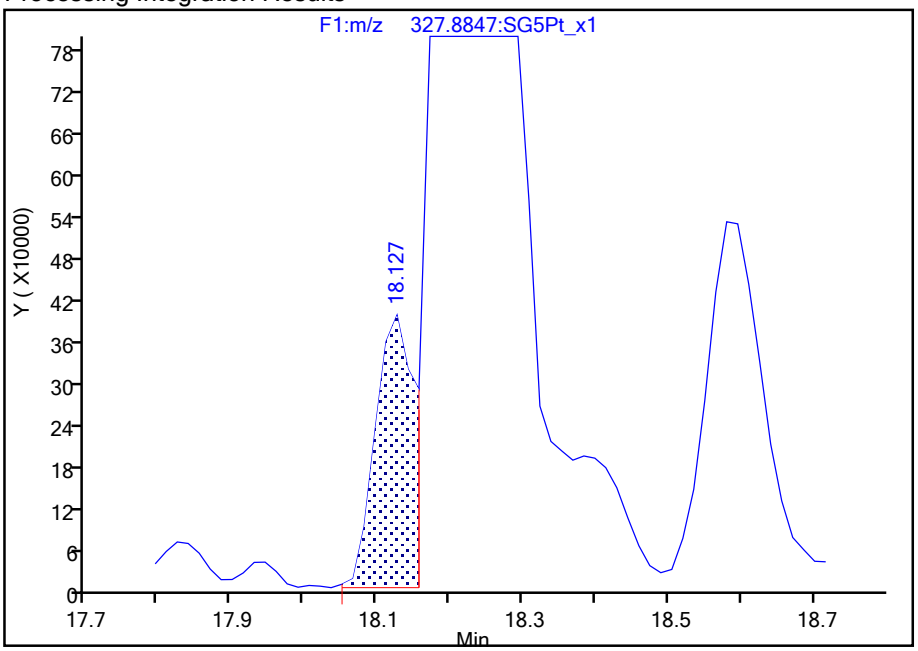

Manual Integration Results

RT: 18.23
Area: 57273104
Amount: 69.674986
Amount Units: pg/ul

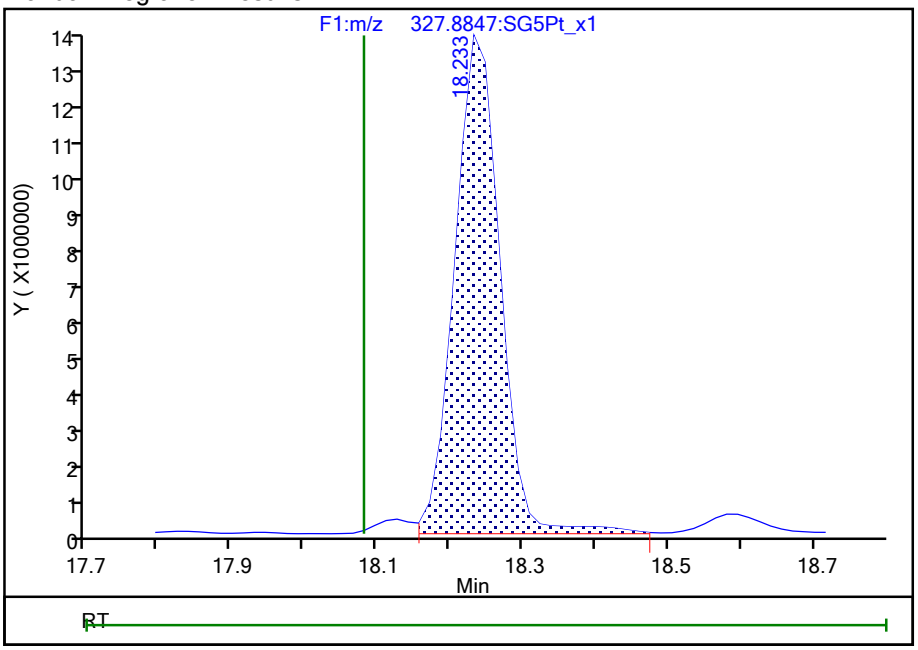

Reviewer: dadunj, 18-Aug-2021 12:52:15

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.50
Area: 19463293
Amount: 80.104926
Amount Units: pg/ul

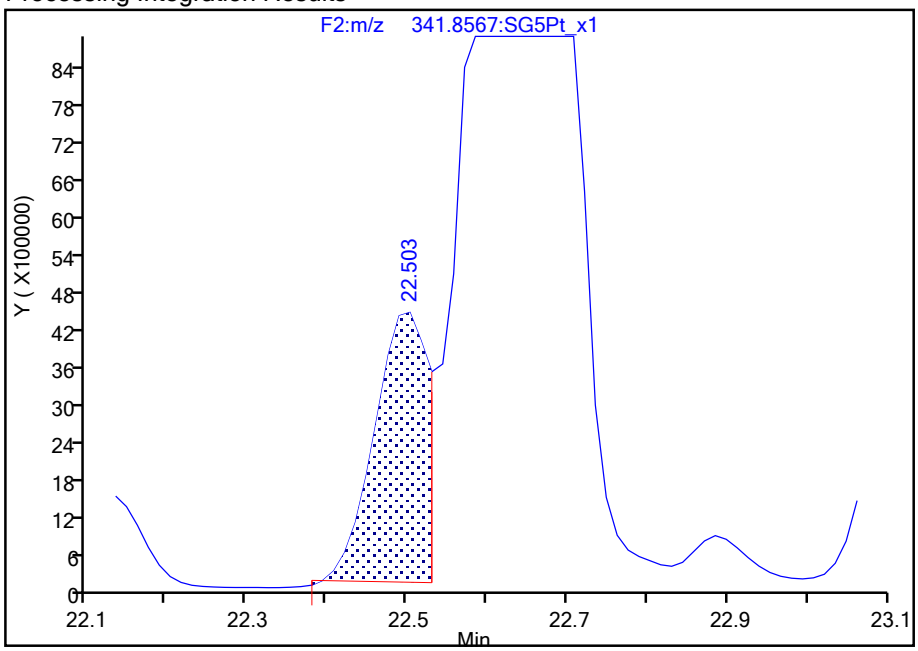

Manual Integration Results

RT: 22.65
Area: 290378025
Amount: 1202.8590
Amount Units: pg/ul

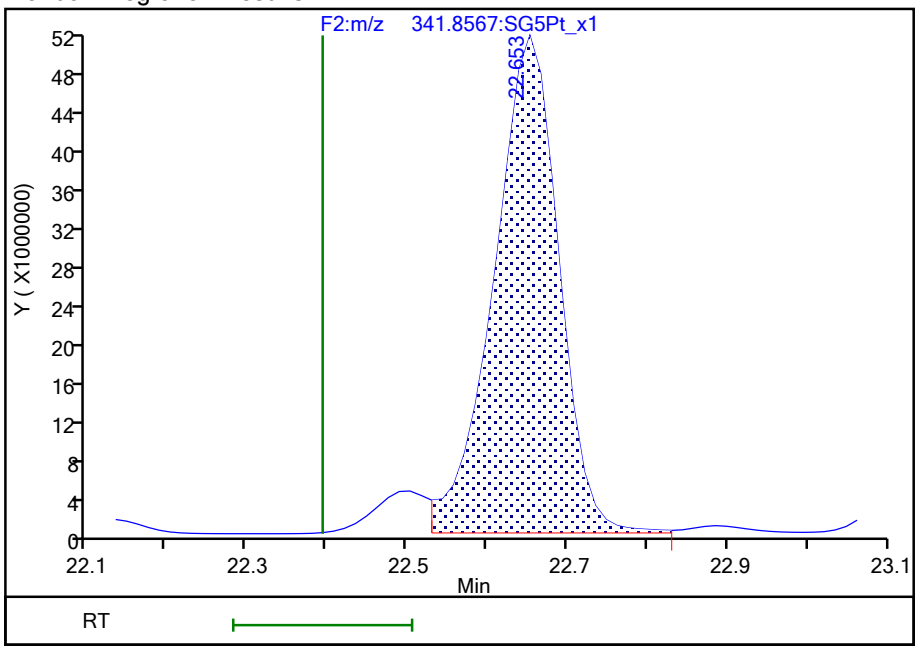

Reviewer: dadunj, 18-Aug-2021 11:44:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

RT: 22.50
Area: 49868054
Amount: 80.104926
Amount Units: pg/ul

Processing Integration Results

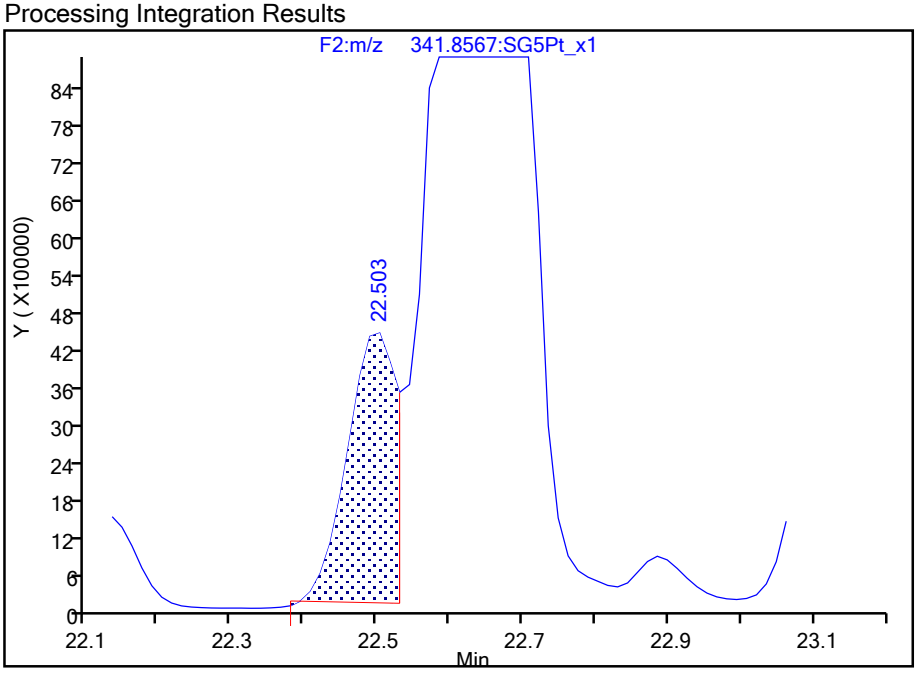

Manual Integration Results

RT: 22.65
Area: 748820867
Amount: 1202.8590
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 11:44:13
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.50
Area: 30404761
Amount: 80.104926
Amount Units: pg/ul

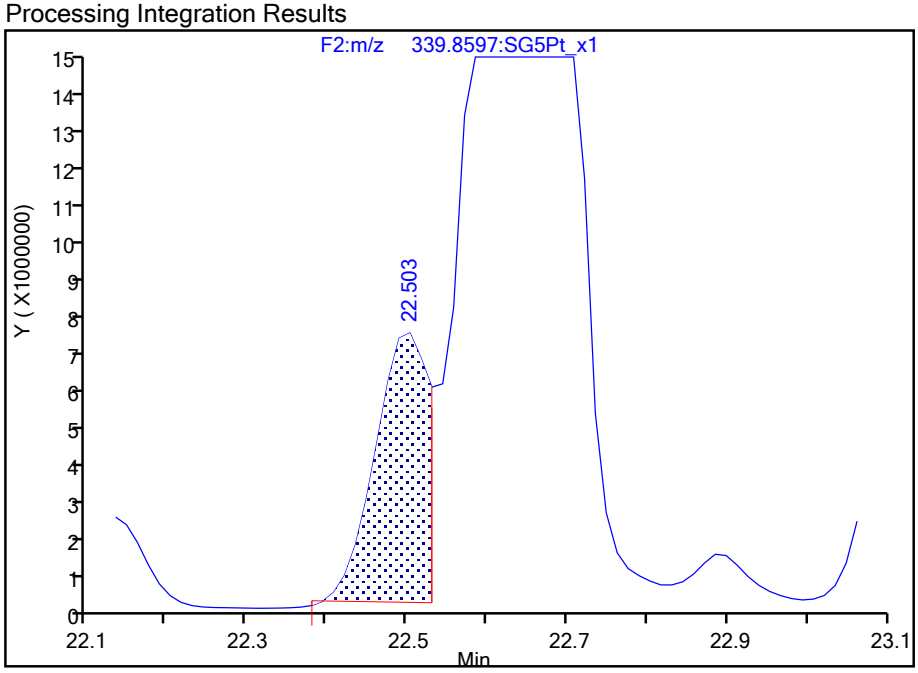

Manual Integration Results

RT: 22.65
Area: 458442842
Amount: 1202.8590
Amount Units: pg/ul

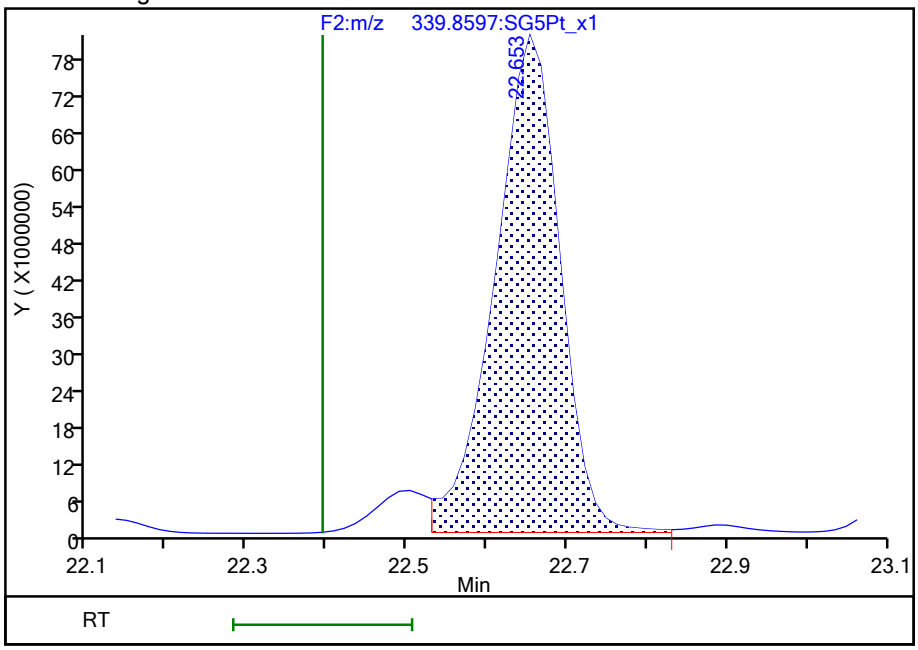

Reviewer: dadunj, 18-Aug-2021 11:44:17
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Not Detected
Expected RT: 23.73

Processing Integration Results

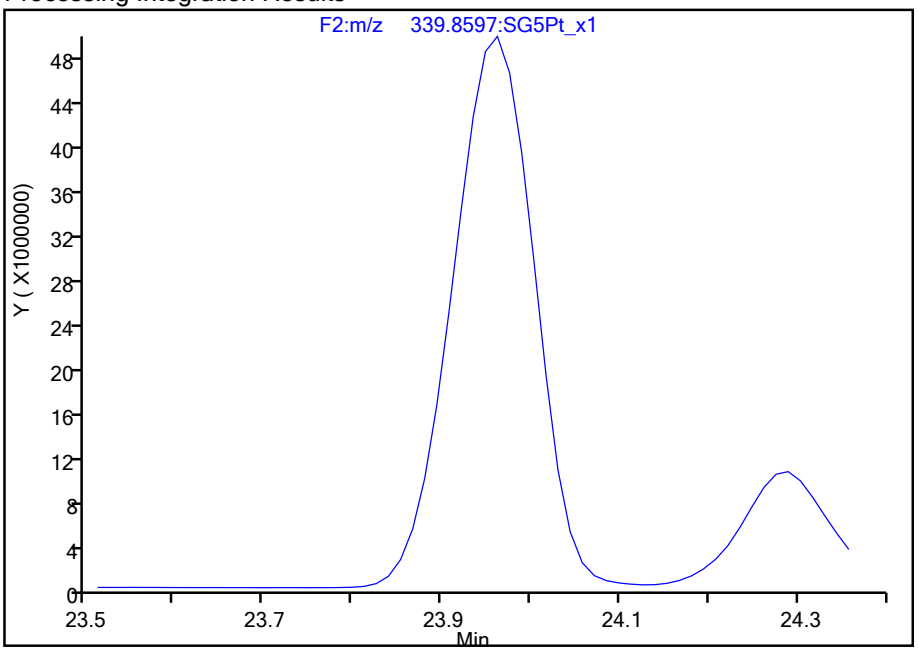

RT: 23.96
Area: 318716397
Amount: 781.5881
Amount Units: pg/ul

Manual Integration Results

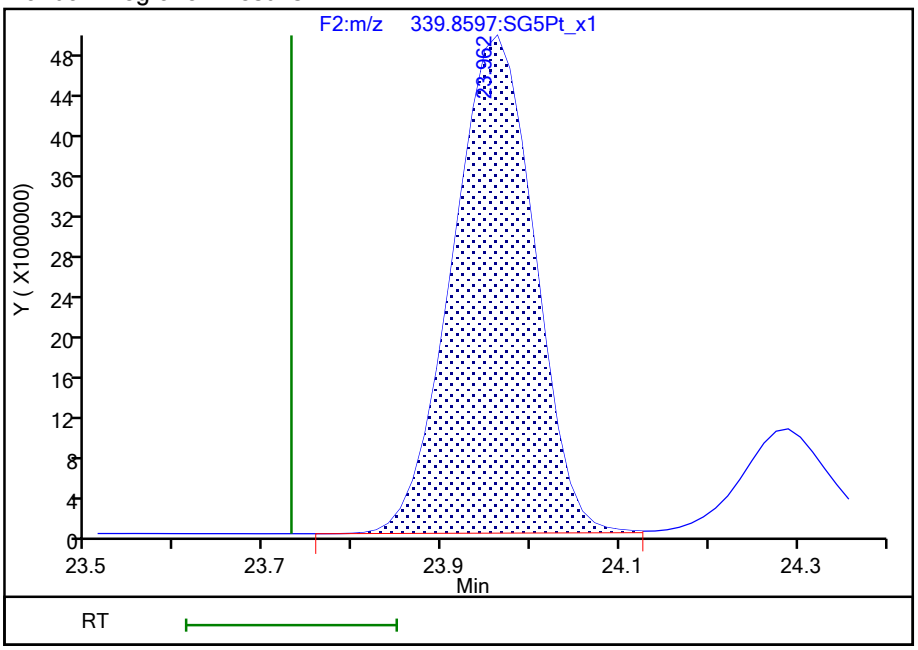

Reviewer: dadunj, 18-Aug-2021 11:44:22
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.45

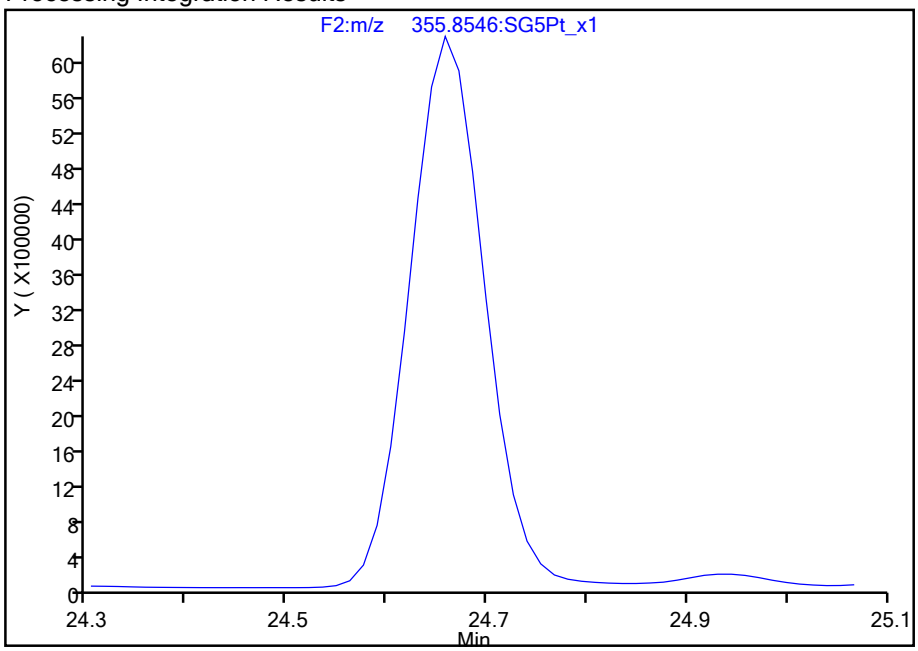

Manual Integration Results

RT: 24.66
Area: 32203362
Amount: 118.7495
Amount Units: pg/ul

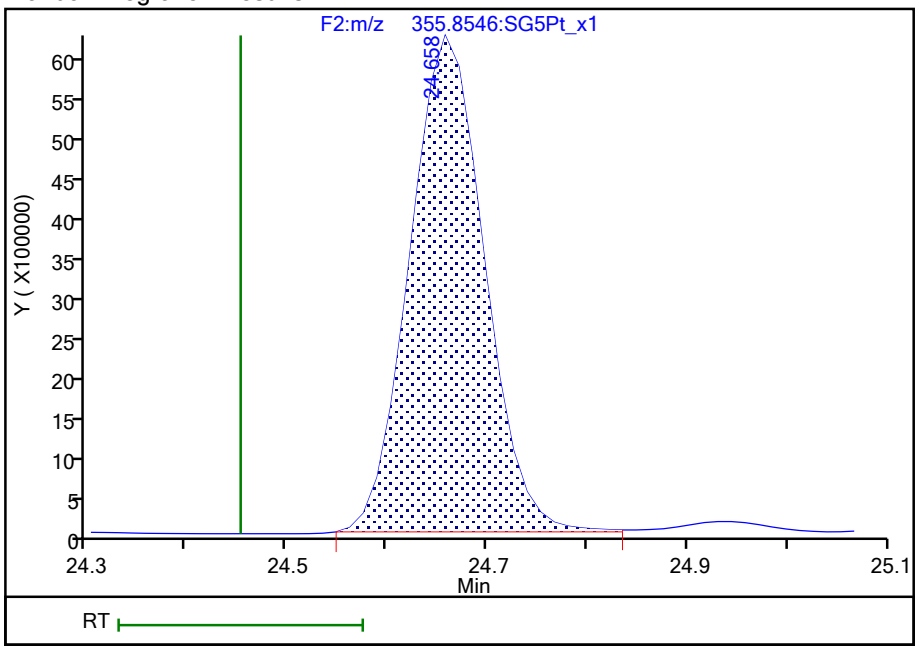

Reviewer: dadunj, 18-Aug-2021 11:45:06
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

775520

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.80
Area: 163798816
Amount: 479.3324
Amount Units: pg/ul

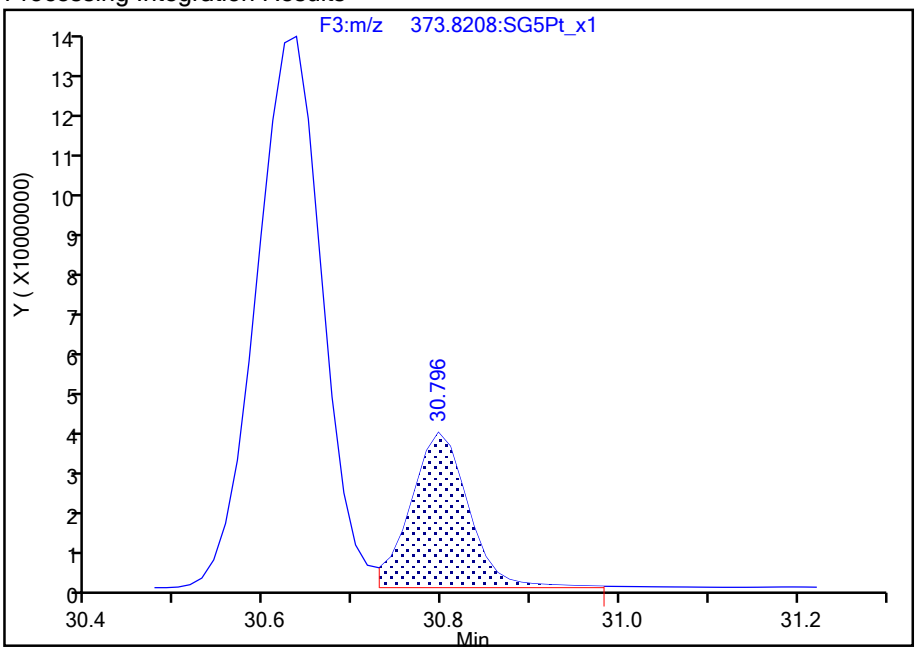

Manual Integration Results

RT: 30.80
Area: 163522681
Amount: 478.8902
Amount Units: pg/ul

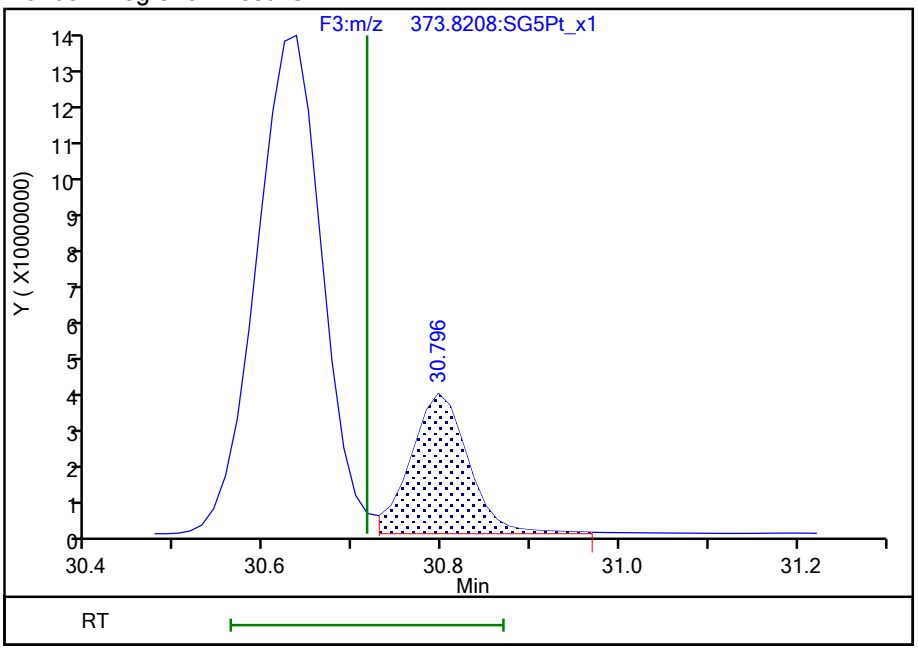

Reviewer: dadunj, 18-Aug-2021 11:45:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.59
Area: 28120651
Amount: 81.769491
Amount Units: pg/ul

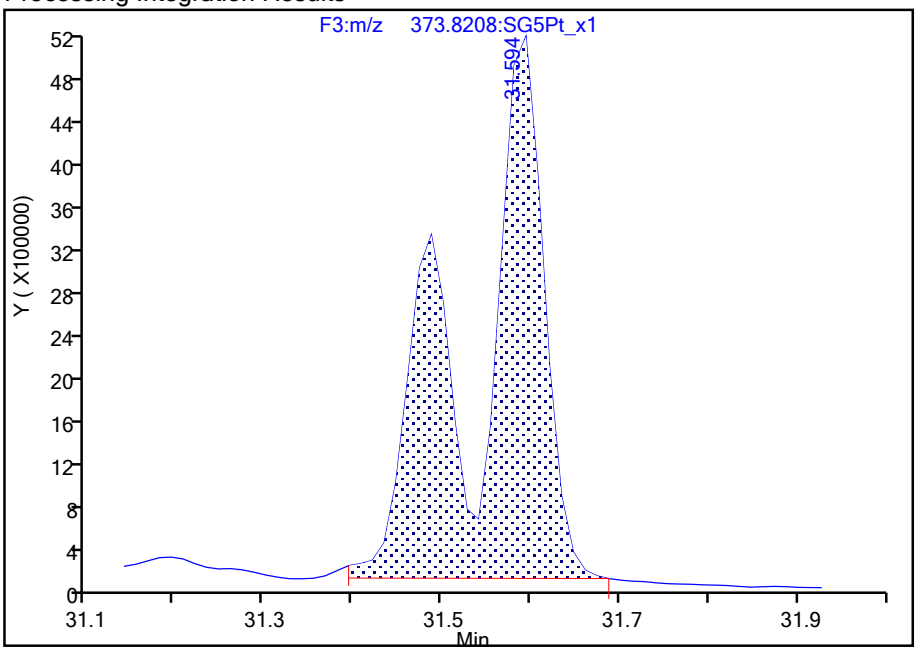

Manual Integration Results

RT: 31.59
Area: 16789722
Amount: 48.782378
Amount Units: pg/ul

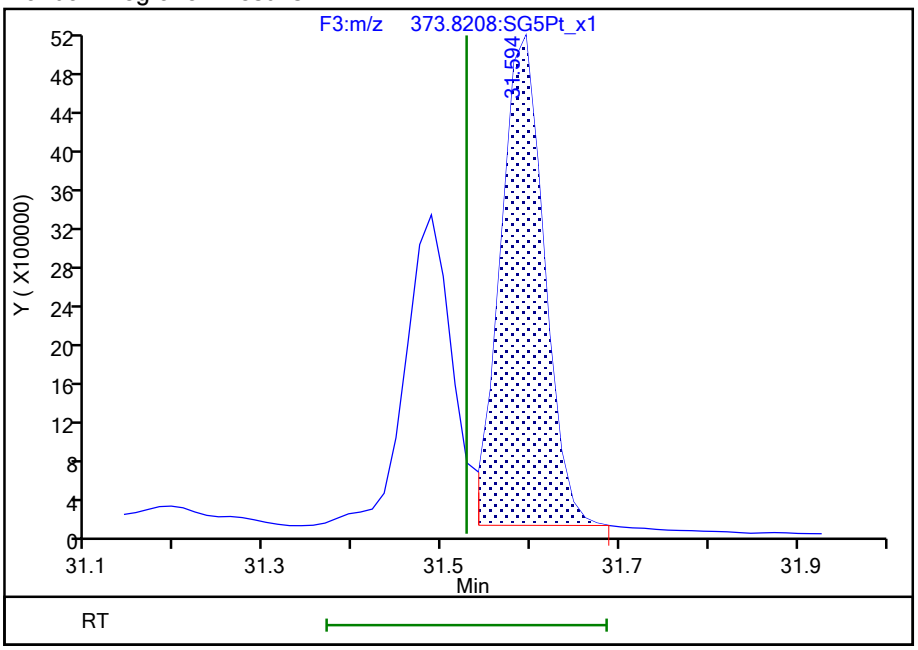

Reviewer: dadunj, 18-Aug-2021 11:45:48

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.59
Area: 23163694
Amount: 81.769491
Amount Units: pg/ul

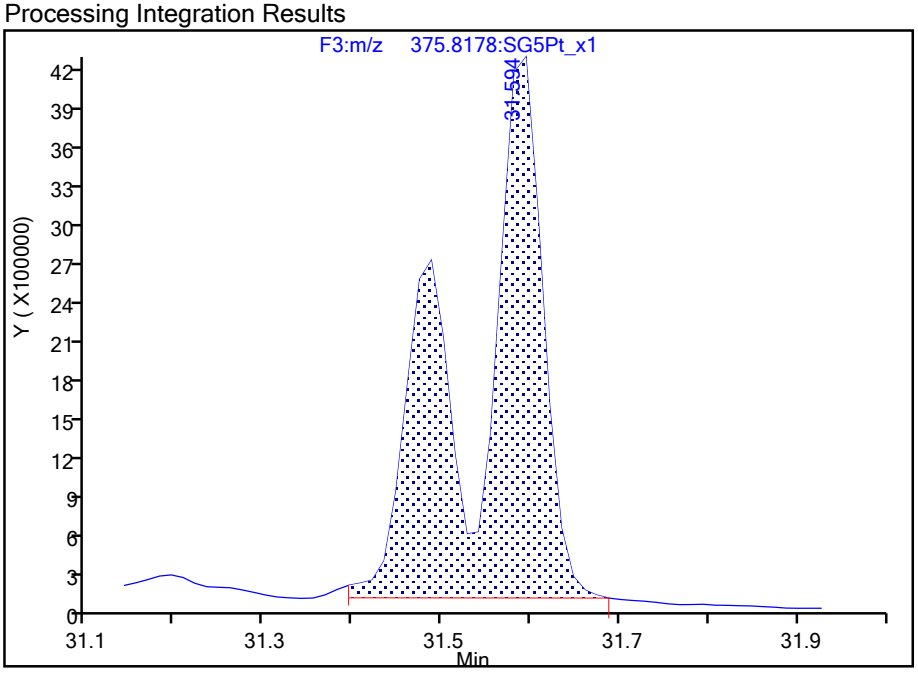

Manual Integration Results

RT: 31.59
Area: 13805703
Amount: 48.782378
Amount Units: pg/ul

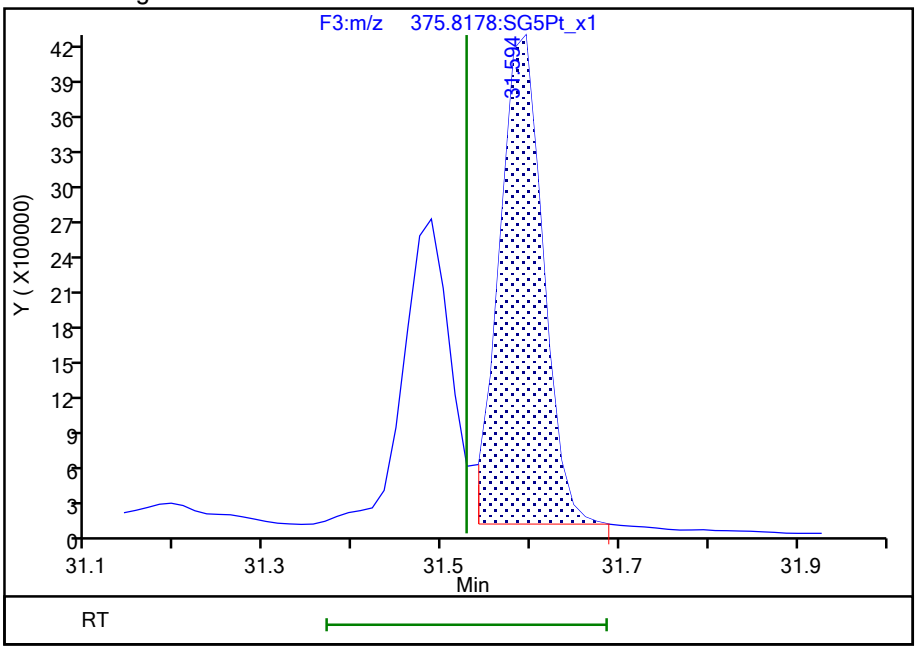

Reviewer: dadunj, 18-Aug-2021 11:45:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,7,8,9-HxCDF, CAS: 116843-04-0

Signal: 1

Processing Integration Results

RT: 31.58
Area: 18600649
Amount: 61.448738
Amount Units: pg/ul

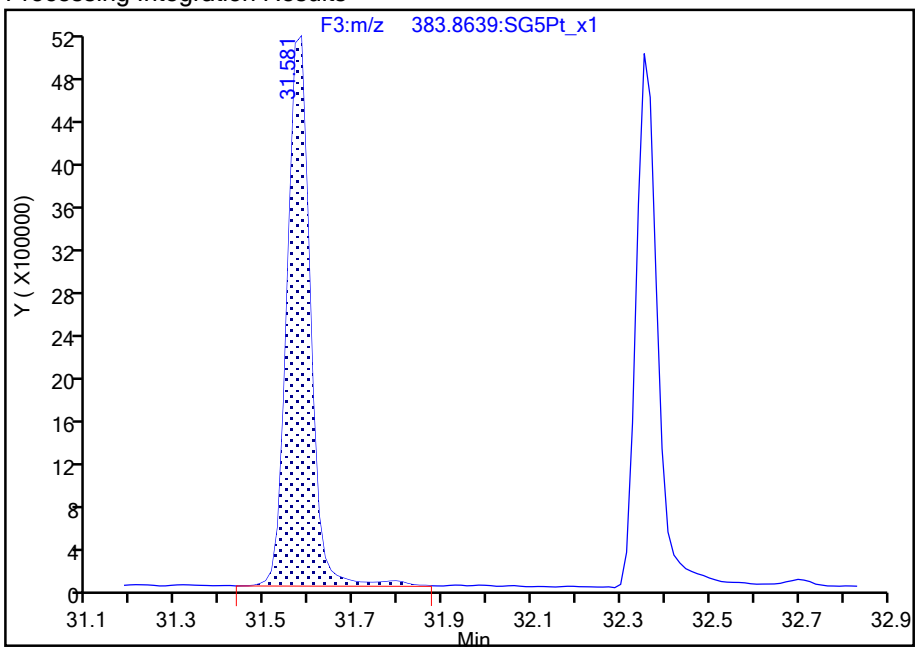

Manual Integration Results

RT: 32.35
Area: 16846543
Amount: 56.466965
Amount Units: pg/ul

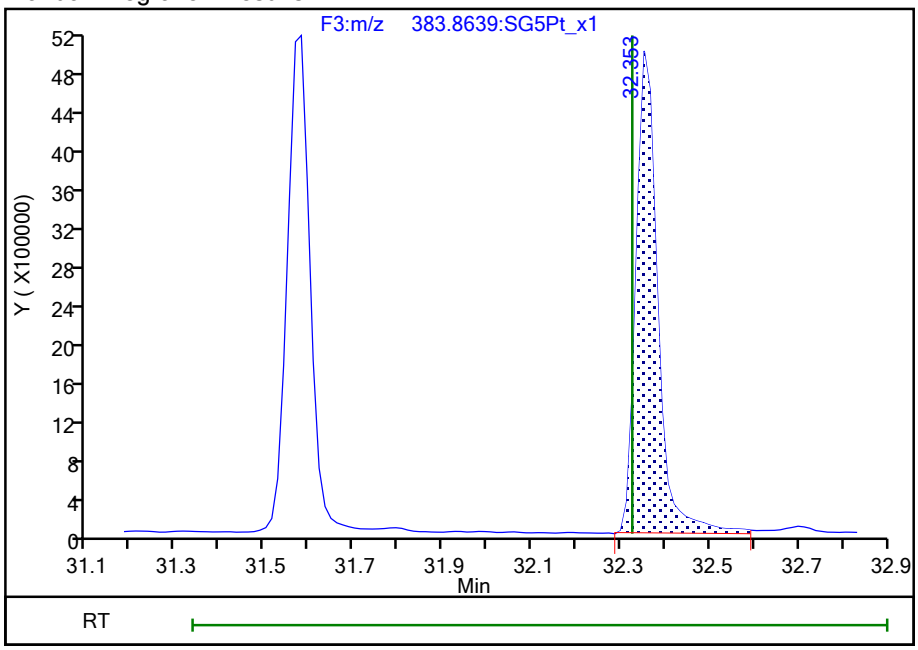

Reviewer: dadunj, 18-Aug-2021 11:46:40

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.46
Area: 43516027
Amount: 127.0330
Amount Units: pg/ul

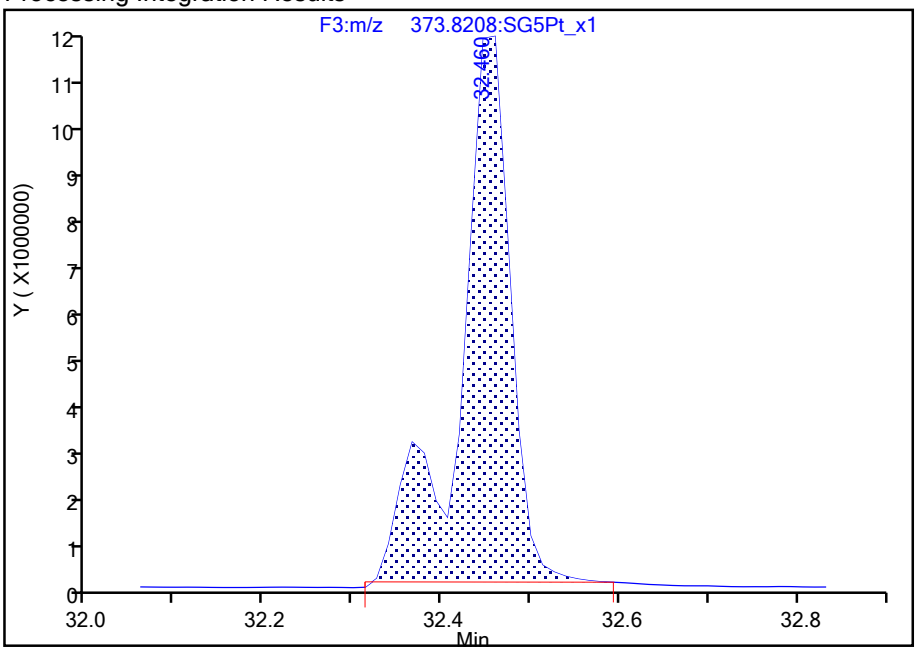

Manual Integration Results

RT: 32.37
Area: 8241588
Amount: 26.233406
Amount Units: pg/ul

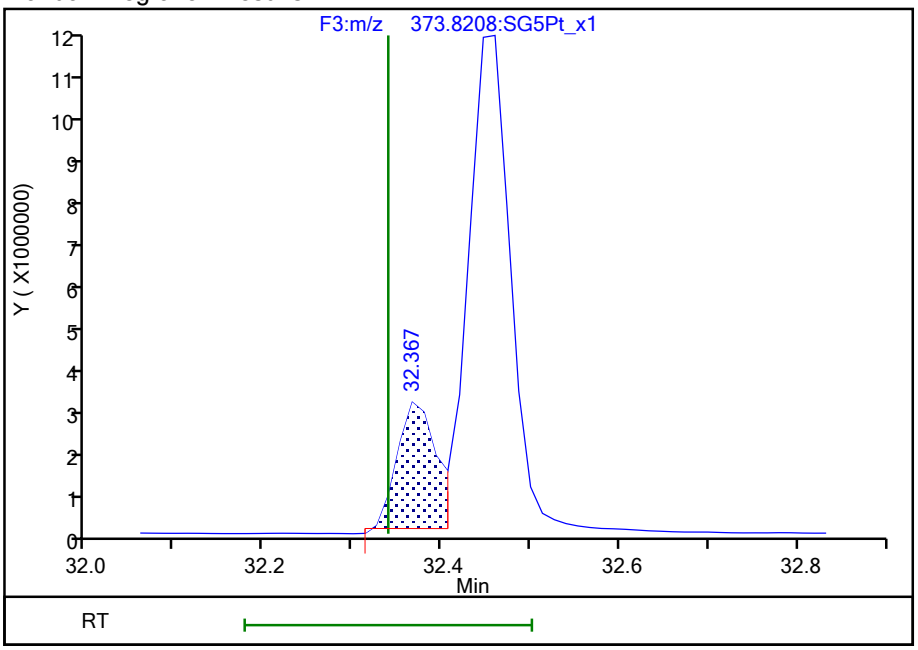

Reviewer: dadunj, 18-Aug-2021 11:46:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.45
Area: 36075729
Amount: 127.0330
Amount Units: pg/ul

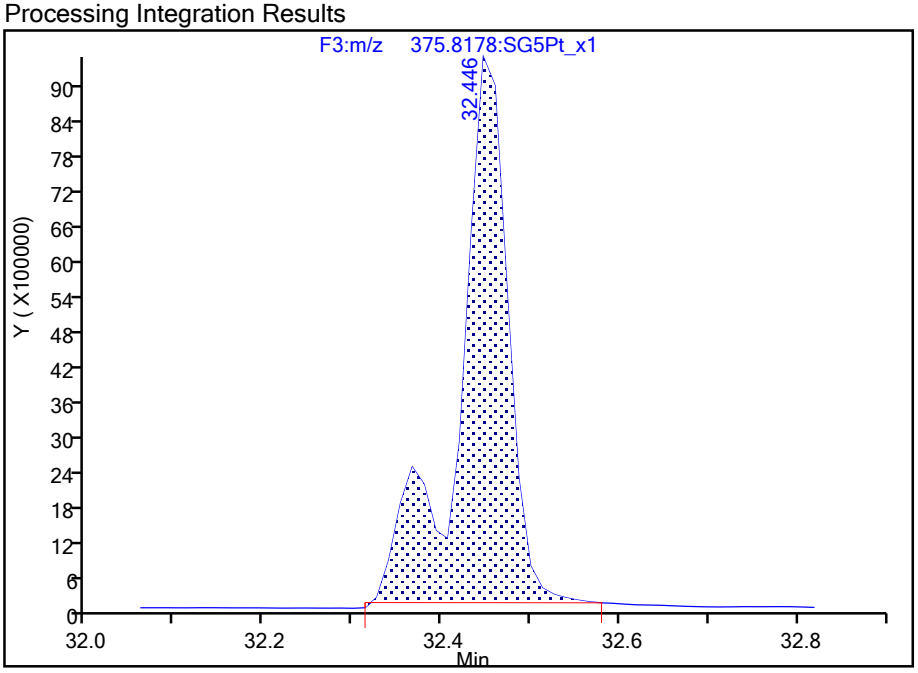

Manual Integration Results

RT: 32.37
Area: 6862261
Amount: 26.233406
Amount Units: pg/ul

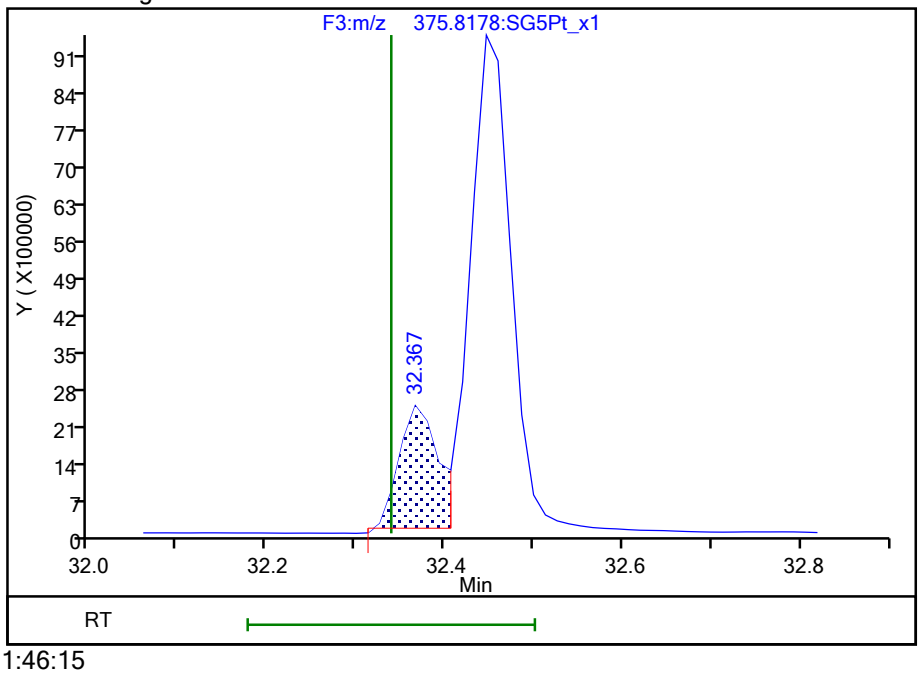

Reviewer: dadunj, 18-Aug-2021 11:46:15
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

775526

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

Not Detected
RT: 27.94- 32.45

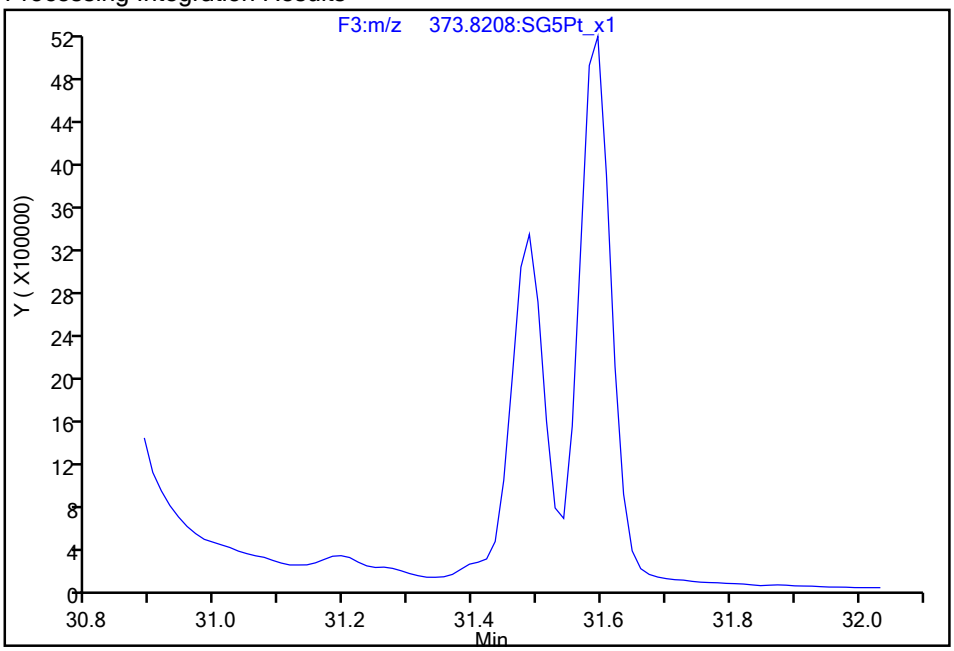

Manual Integration Results

RT = 31.488 Area = 11331760 M

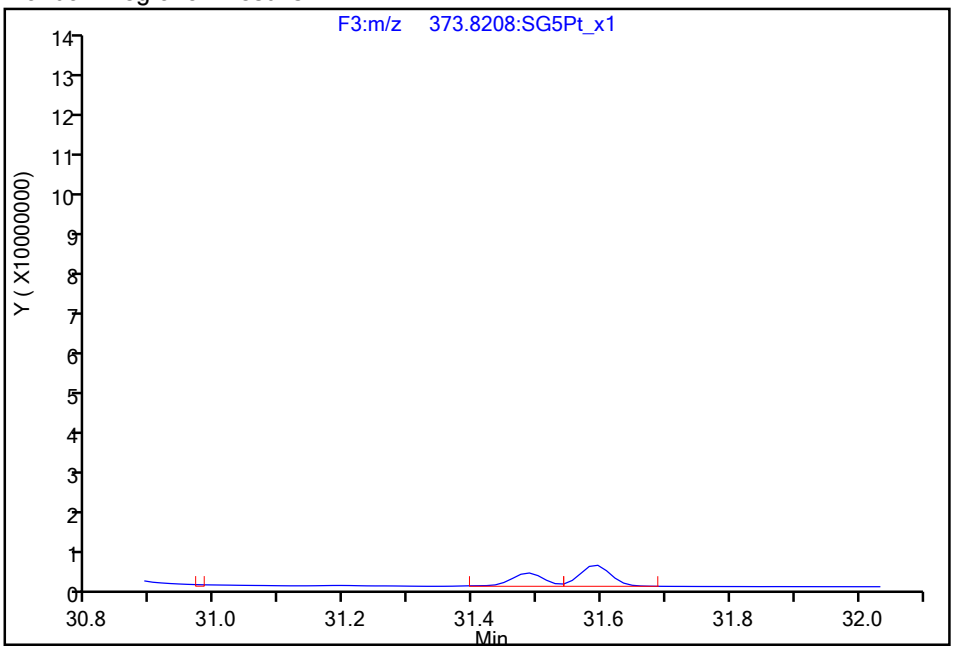

Reviewer: dadunj, 18-Aug-2021 11:46:26

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.460 Area = 43516027

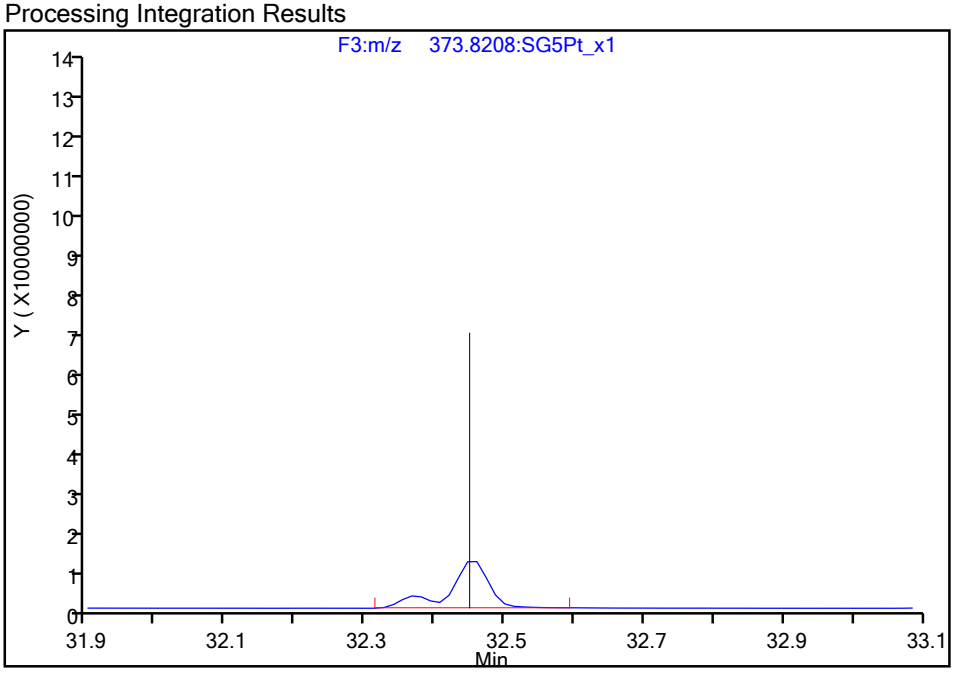

Manual Integration Results

RT = 32.460 Area = 35274982 M

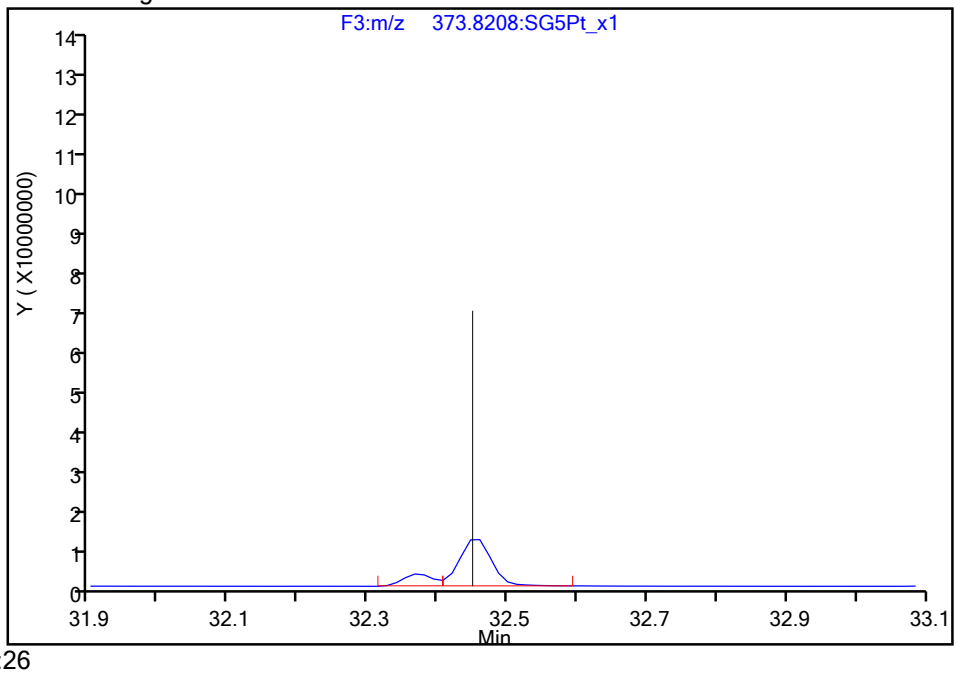

Reviewer: dadunj, 18-Aug-2021 11:46:26

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

775528

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d				
Injection Date:	15-Aug-2021 19:42:16	Instrument ID:	10D5		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:	DB	ALS Bottle#:	65	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (29.36- 32.41)

Signal: 2

Processing Integration Results

RT = 31.035 Area = 7258316

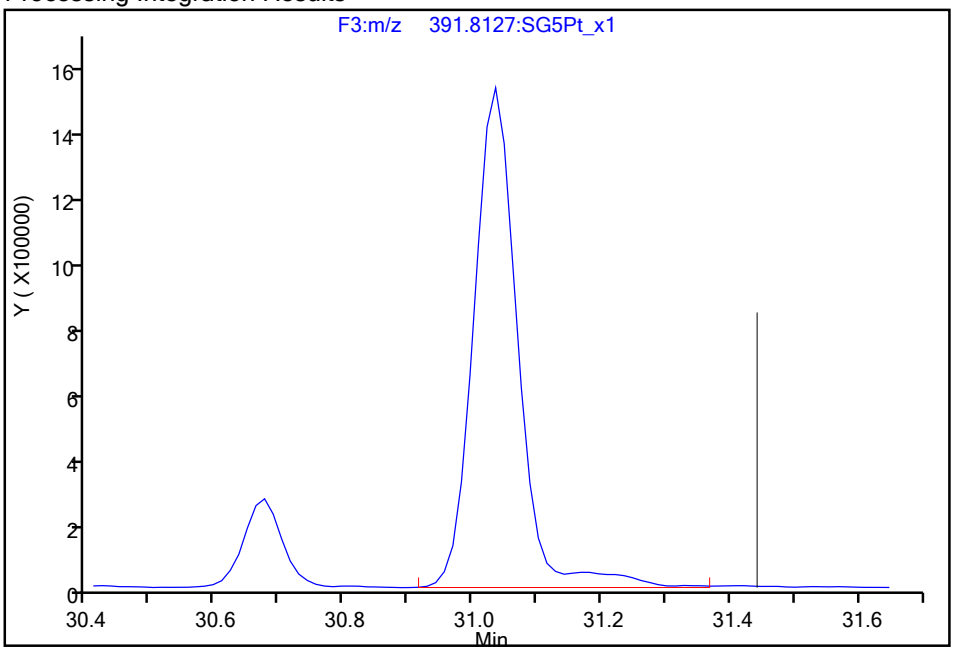

Manual Integration Results

RT = 31.035 Area = 6959748 M

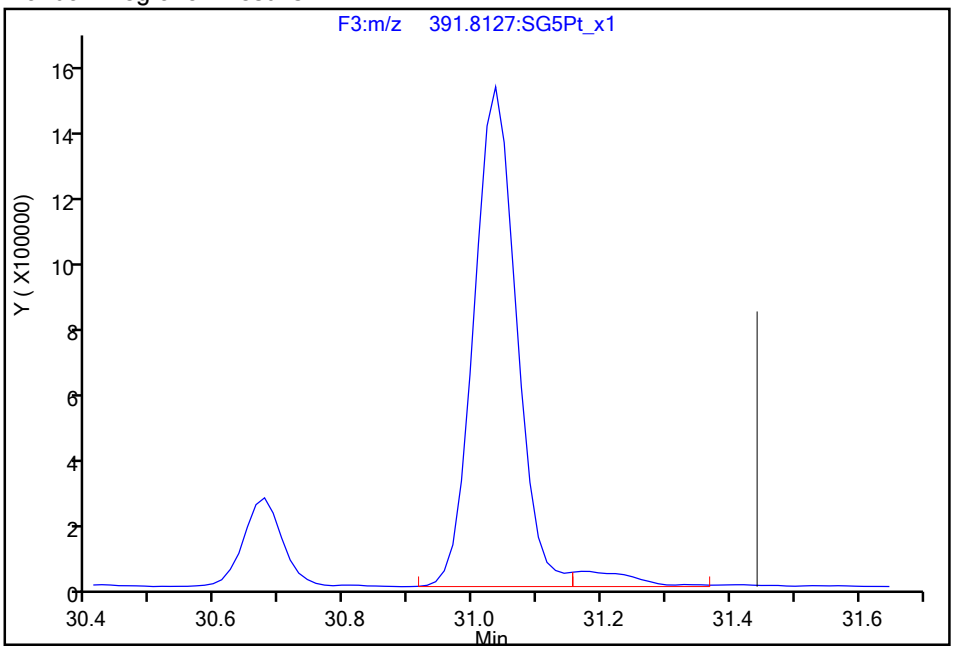

Reviewer: dadunj, 18-Aug-2021 11:47:07

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

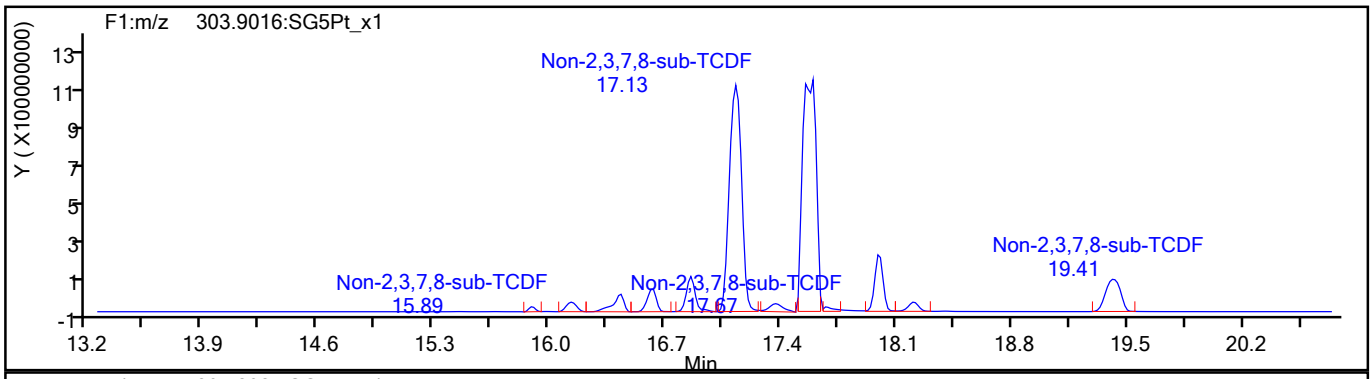

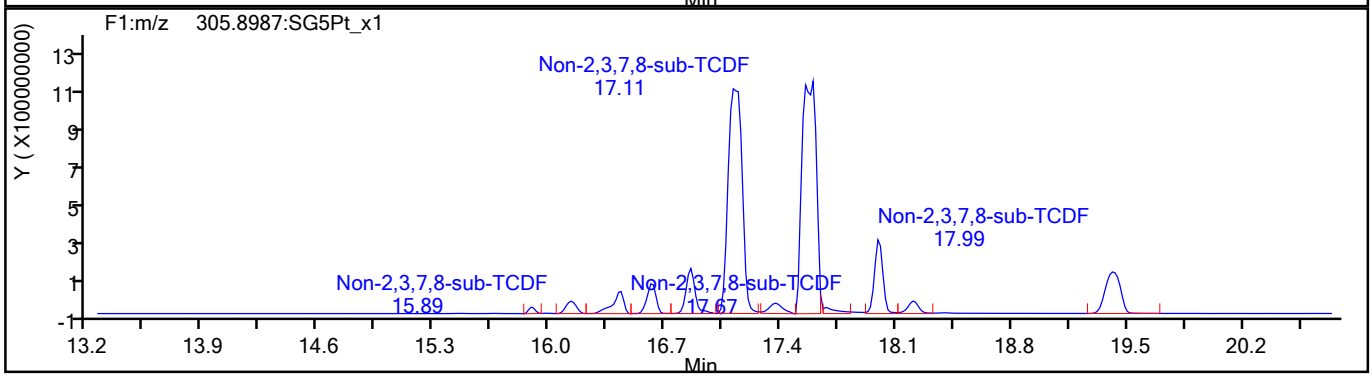

TCDF Standards

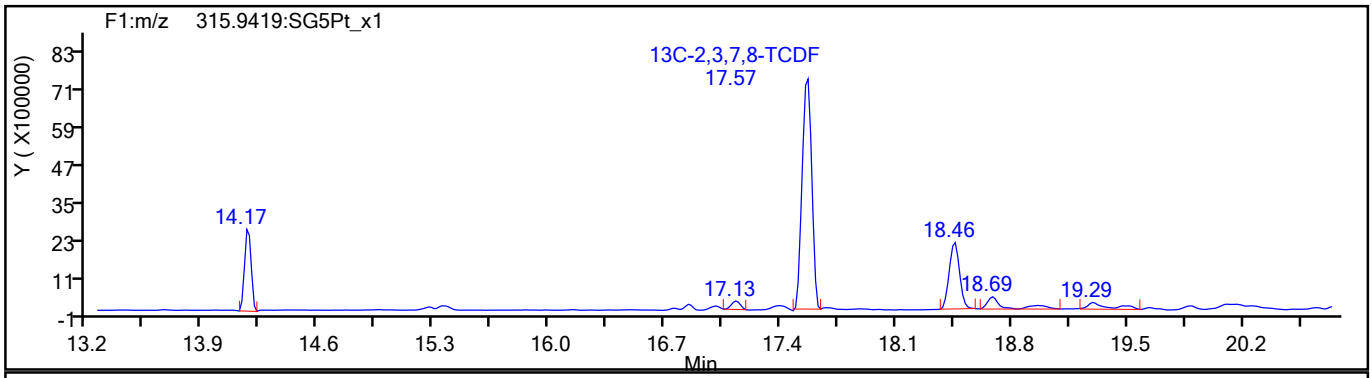

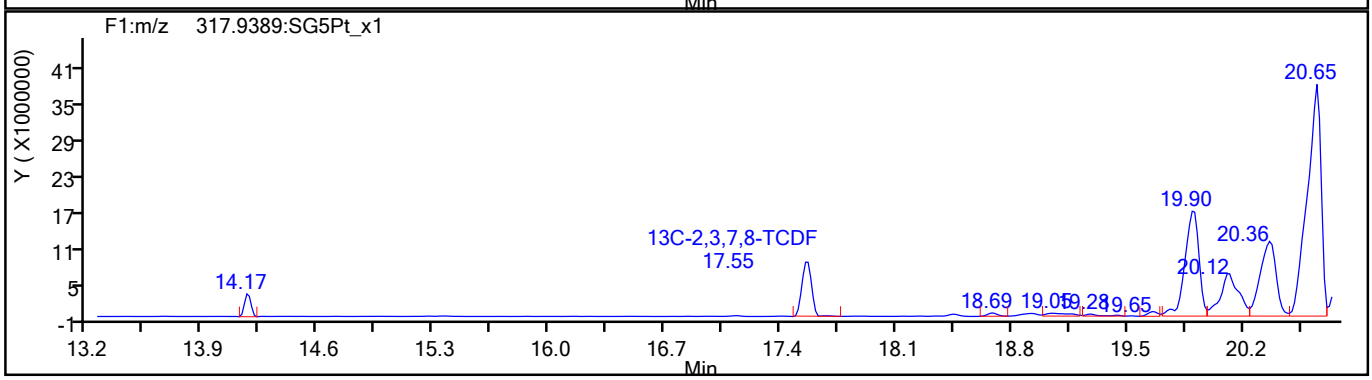

775530

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

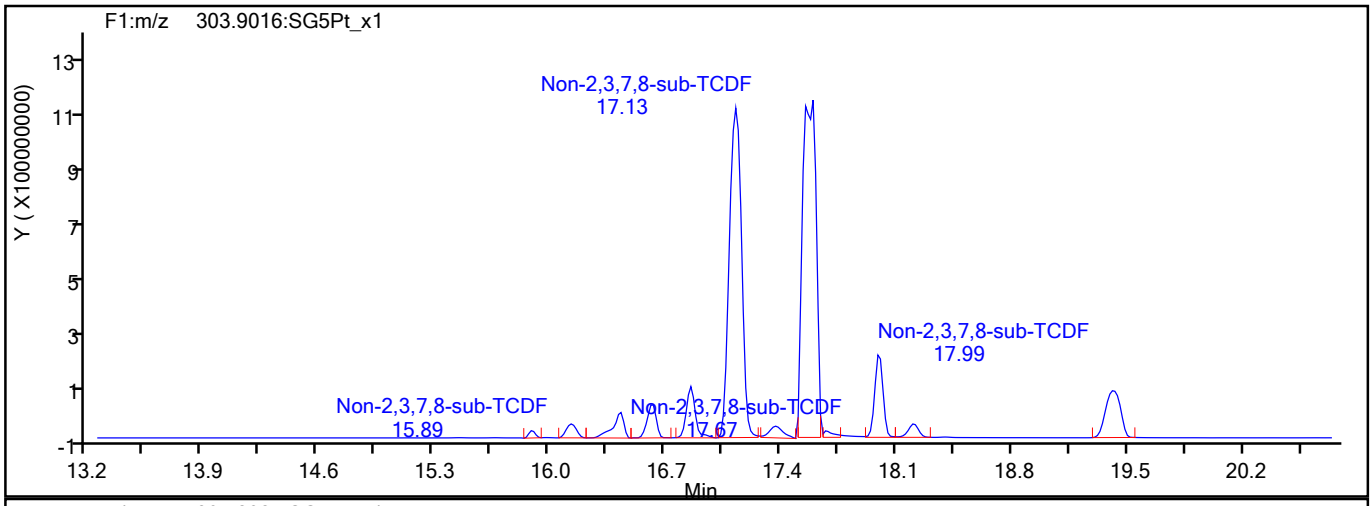

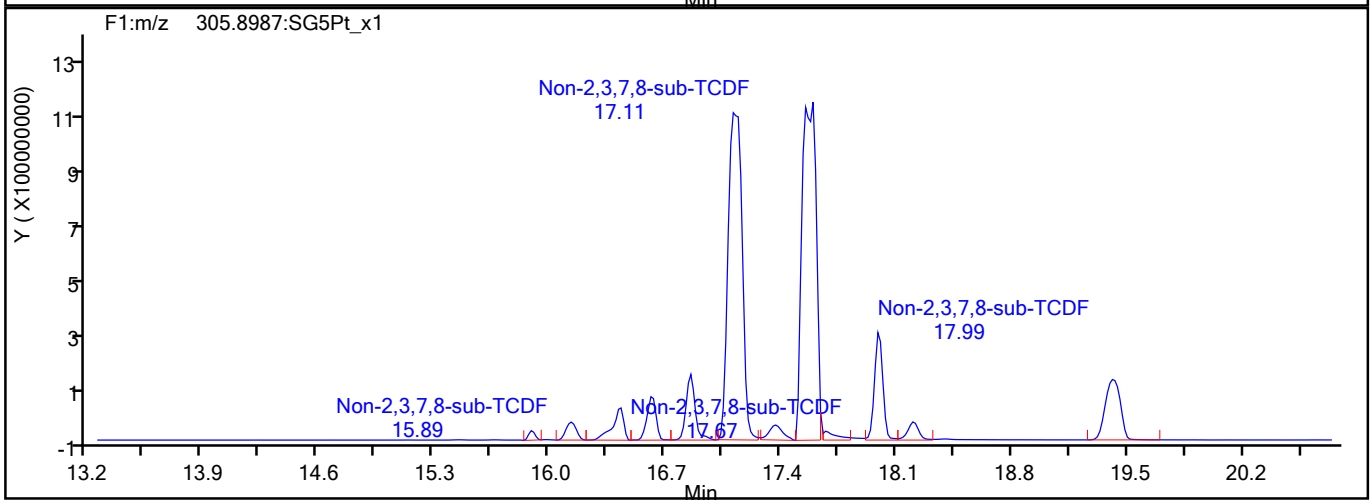

TCDF Interference Mass

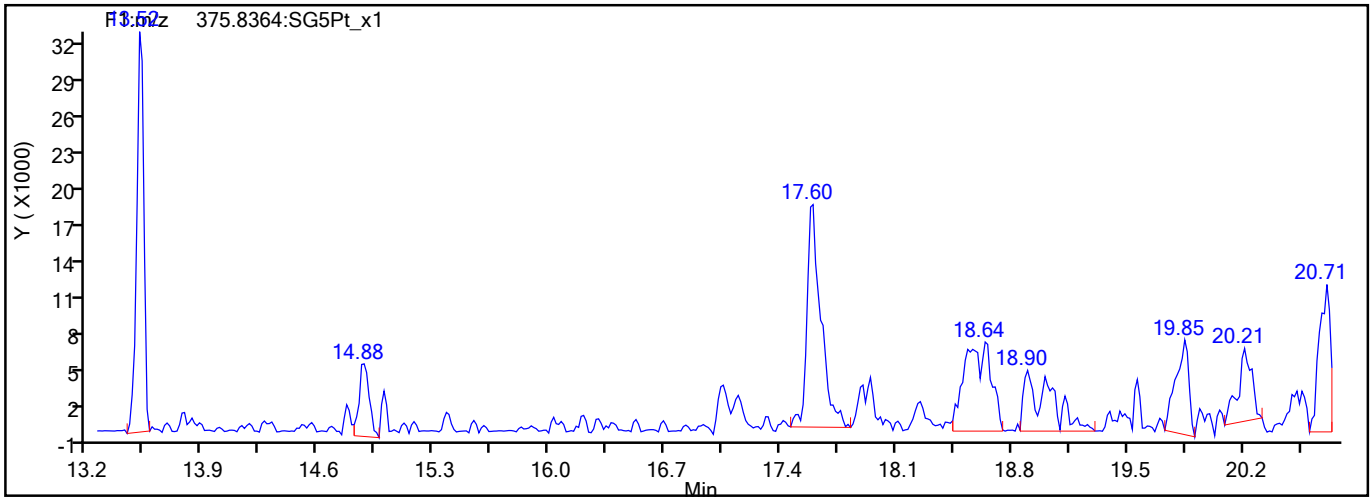

775531

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

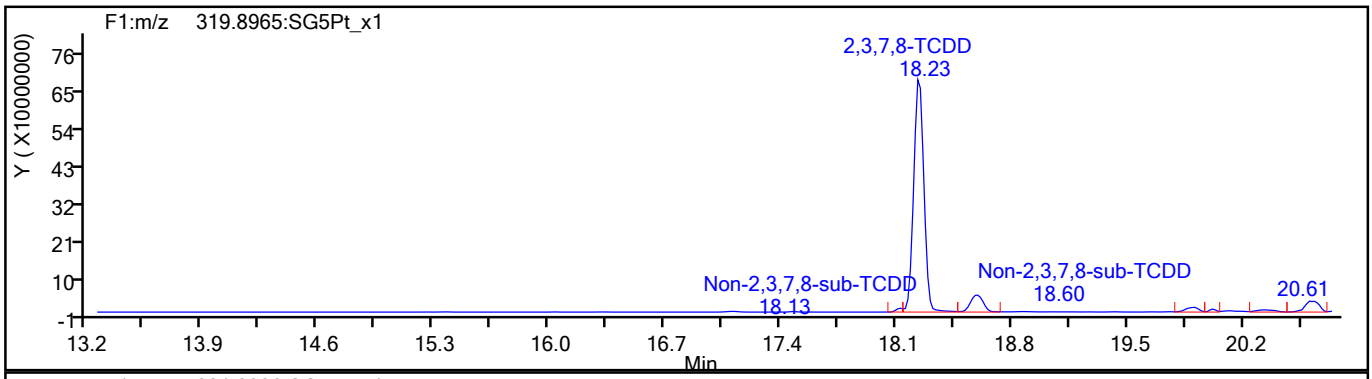

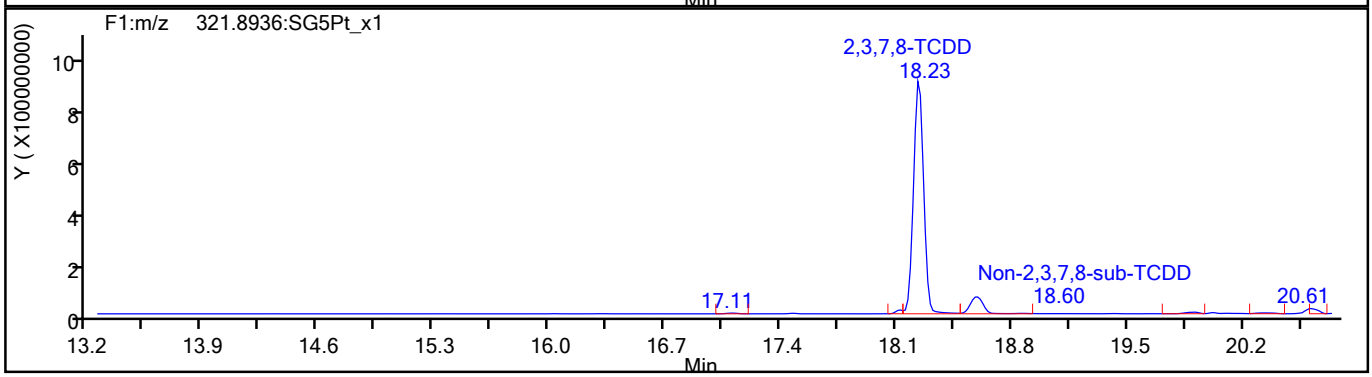

TCDD Standards

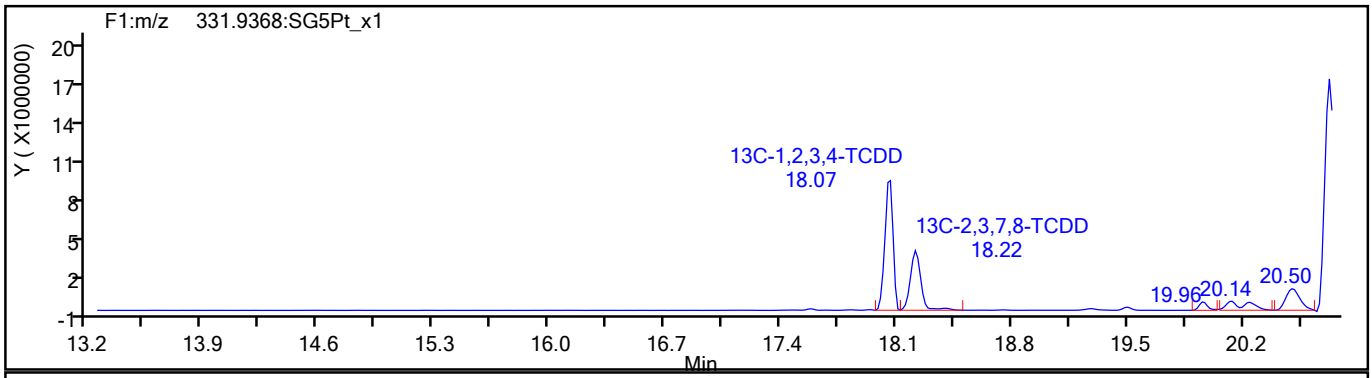

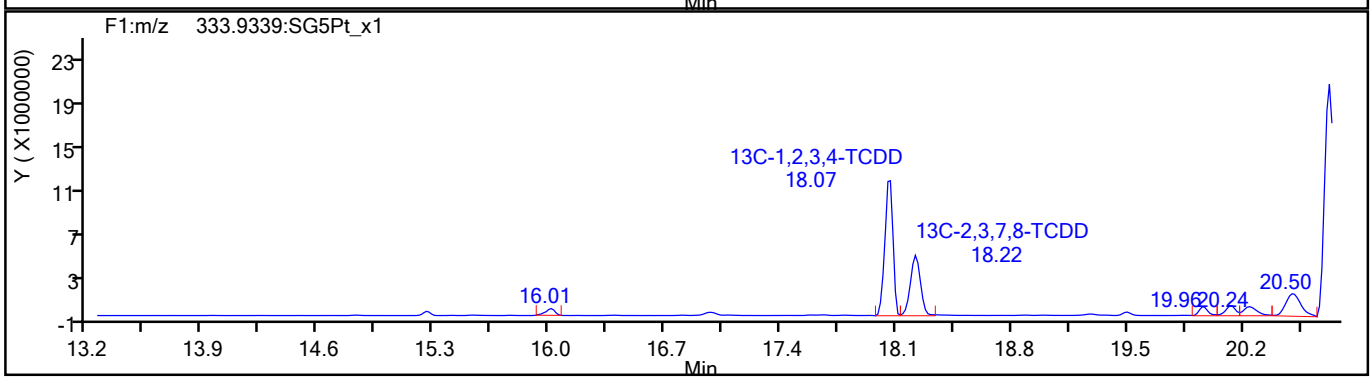

775532

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

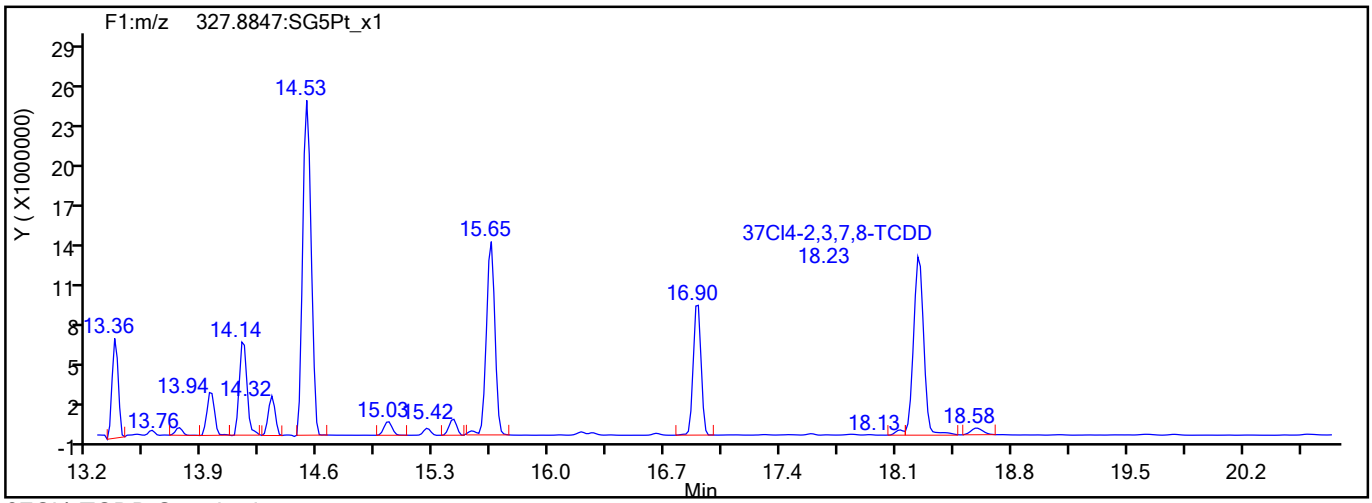

37Cl4-TCDD Standards

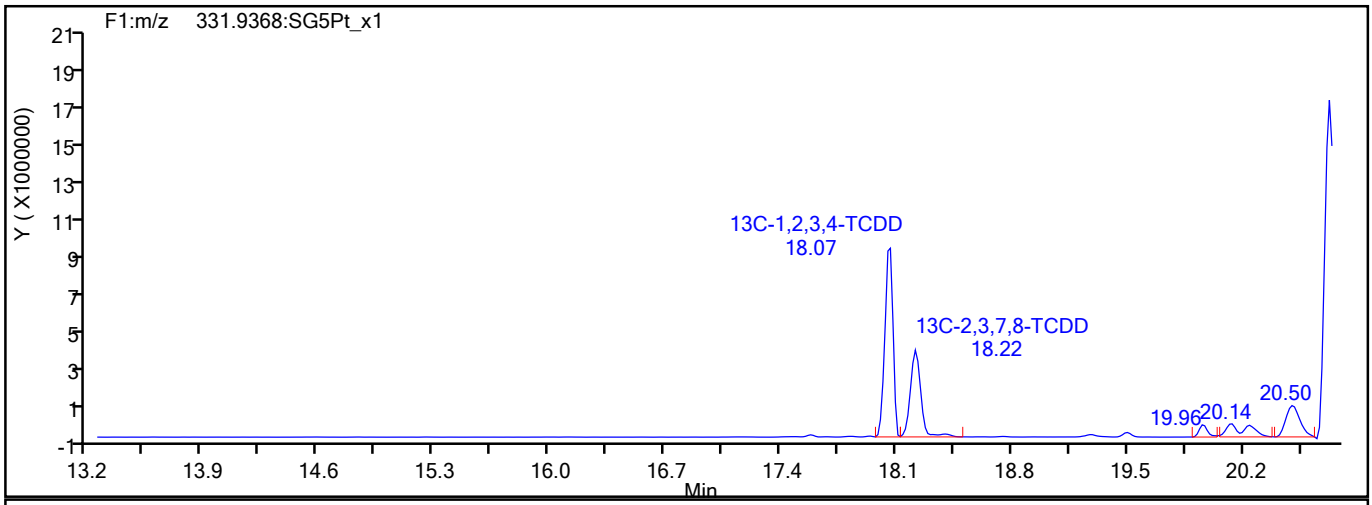

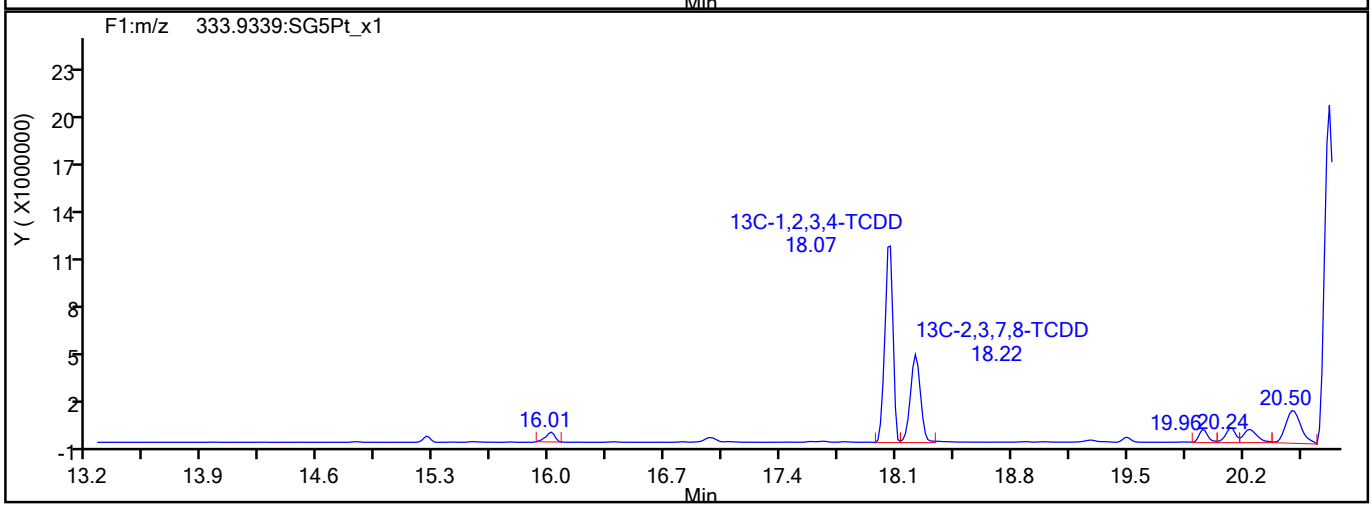

775533

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

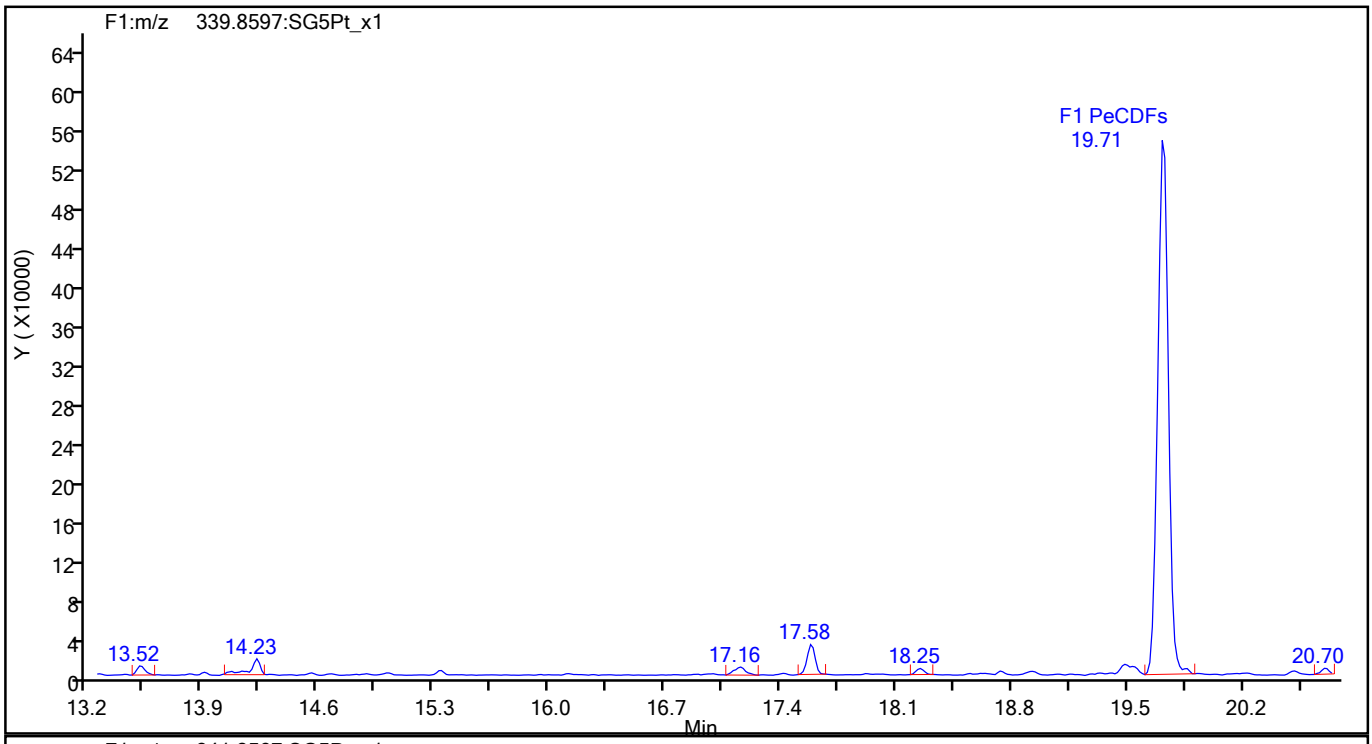

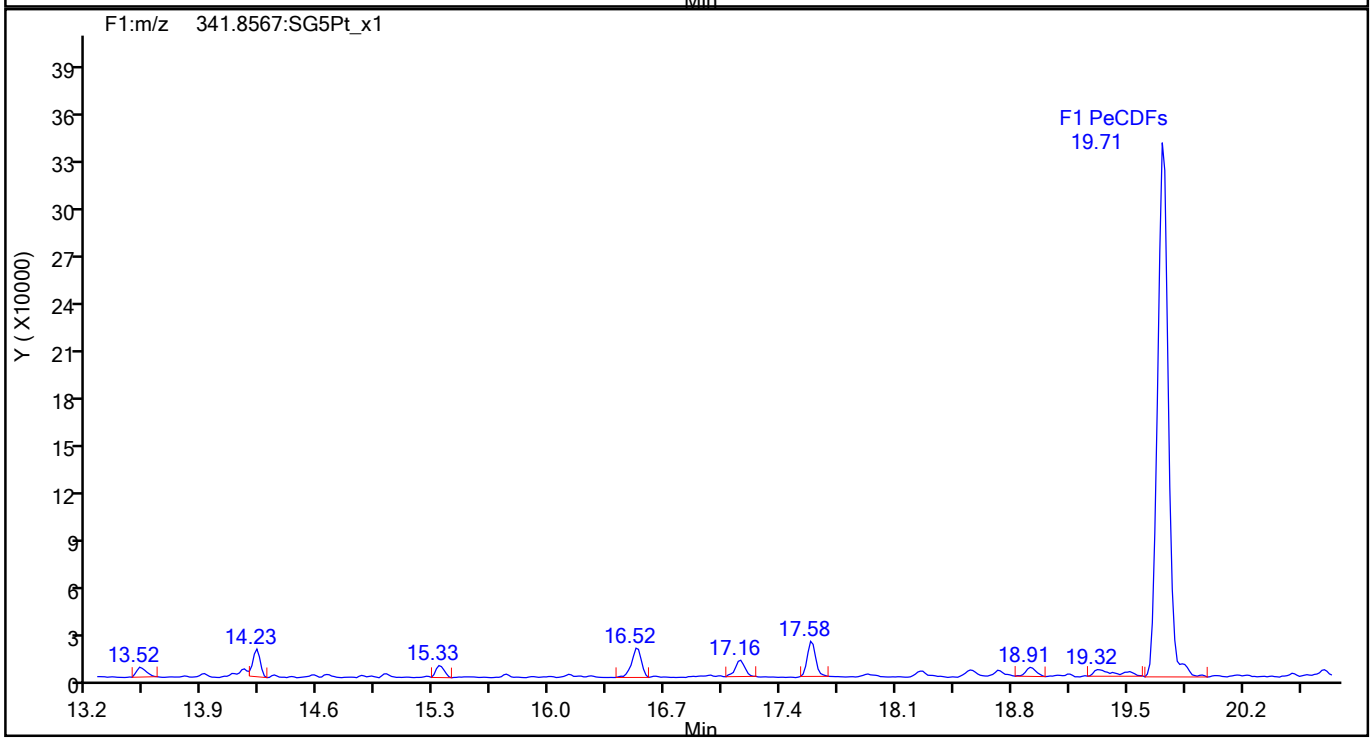

775534

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

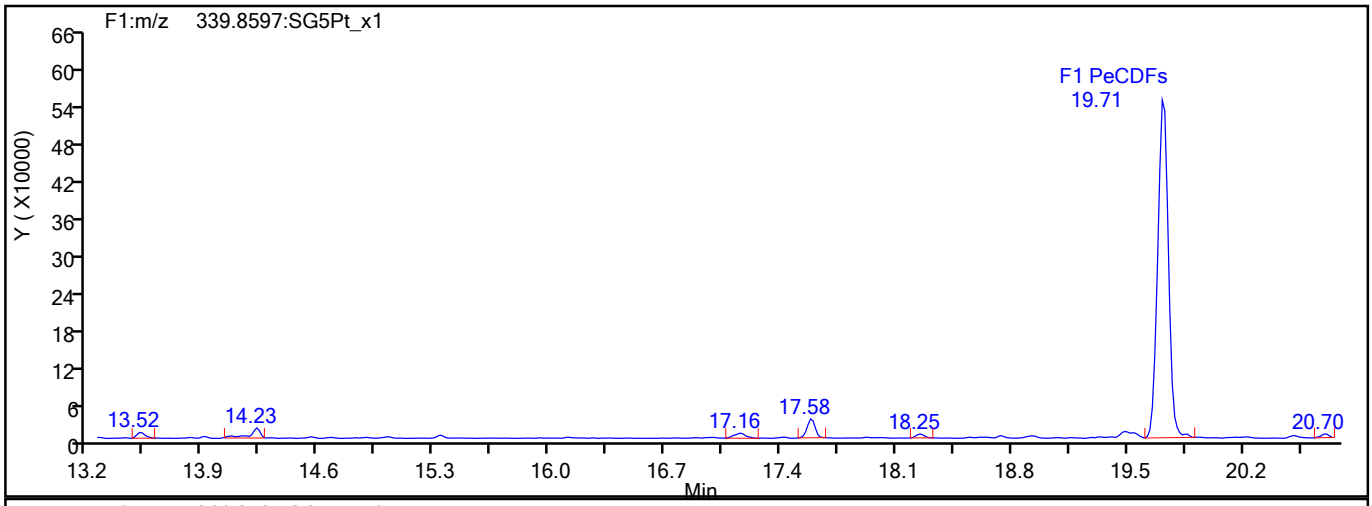

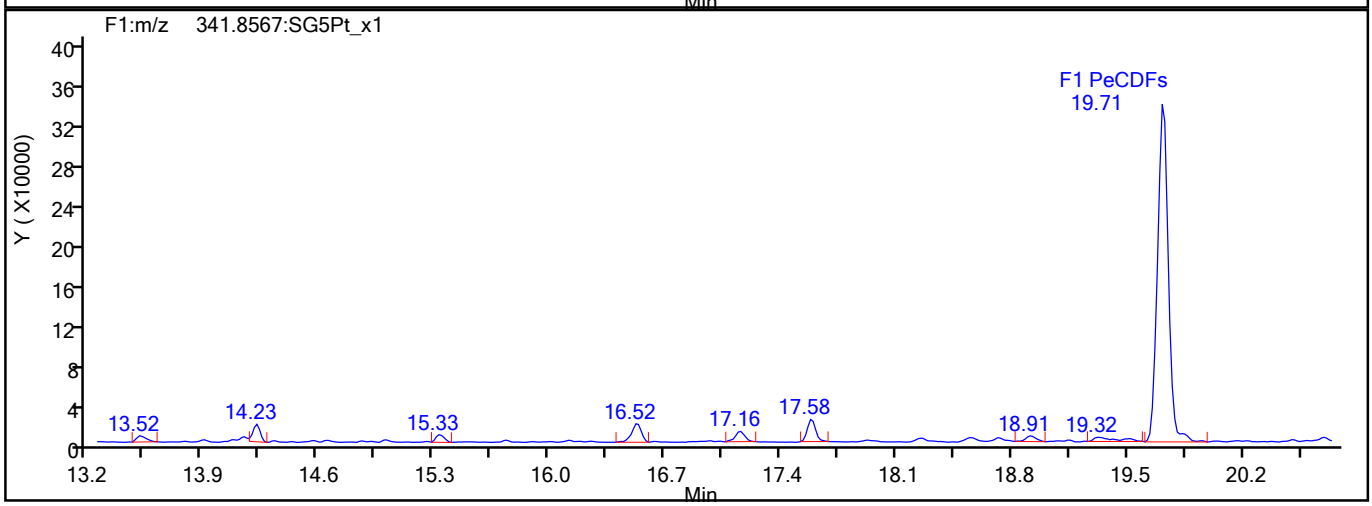

F1 PeCDFs Interference Mass

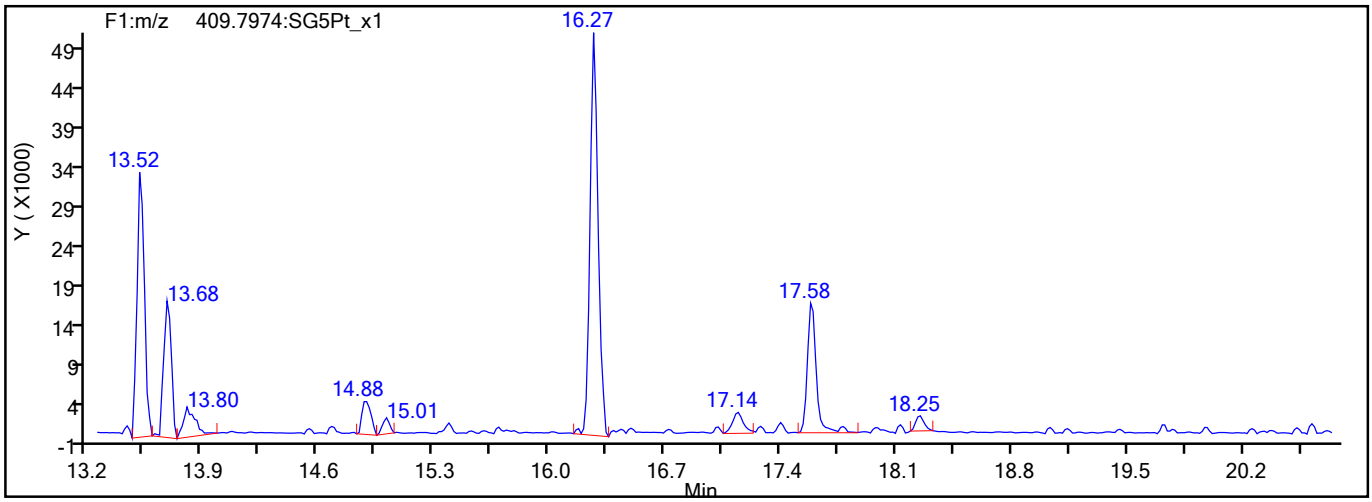

775535

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

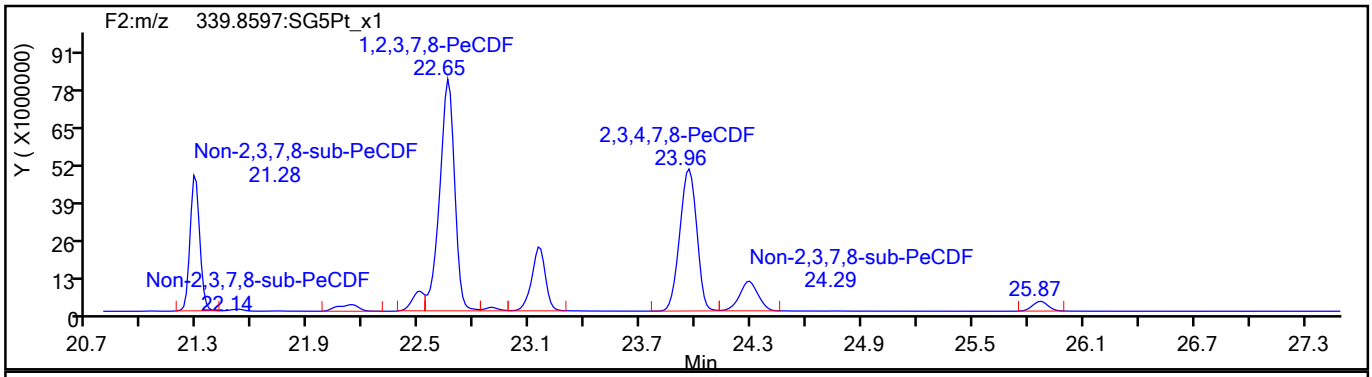

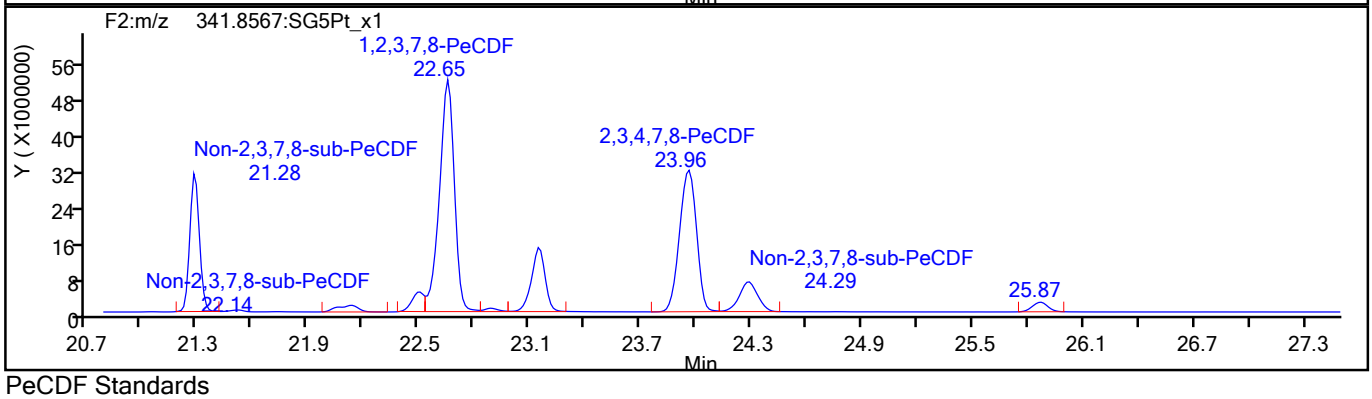

PeCDF Standards

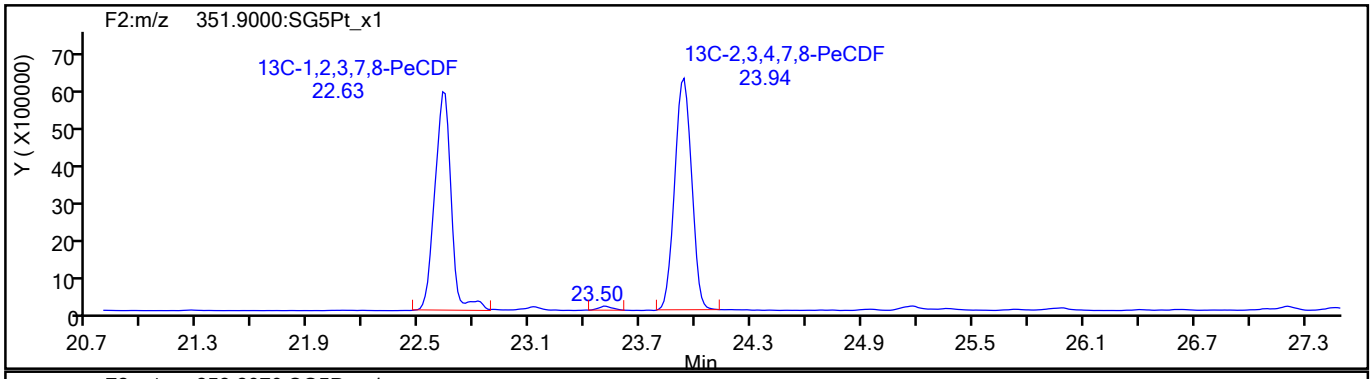

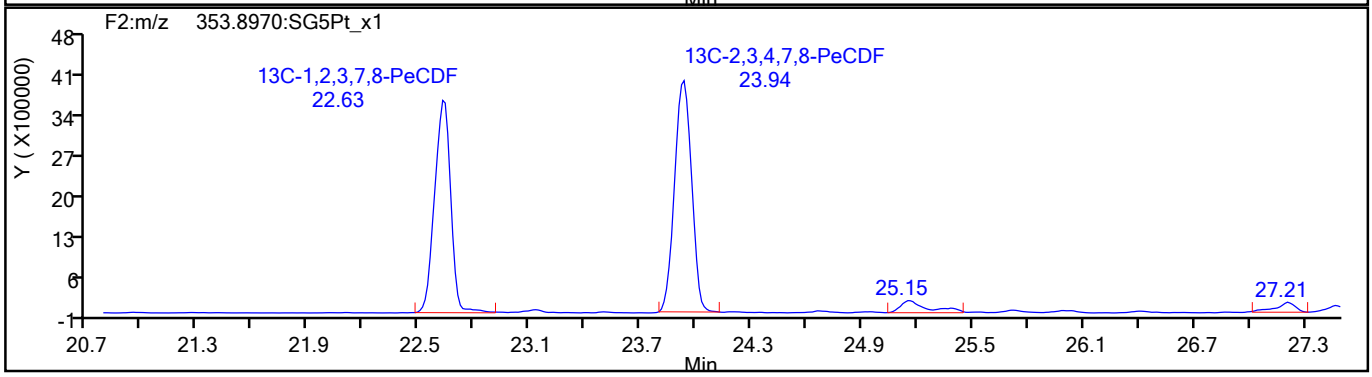

775536

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

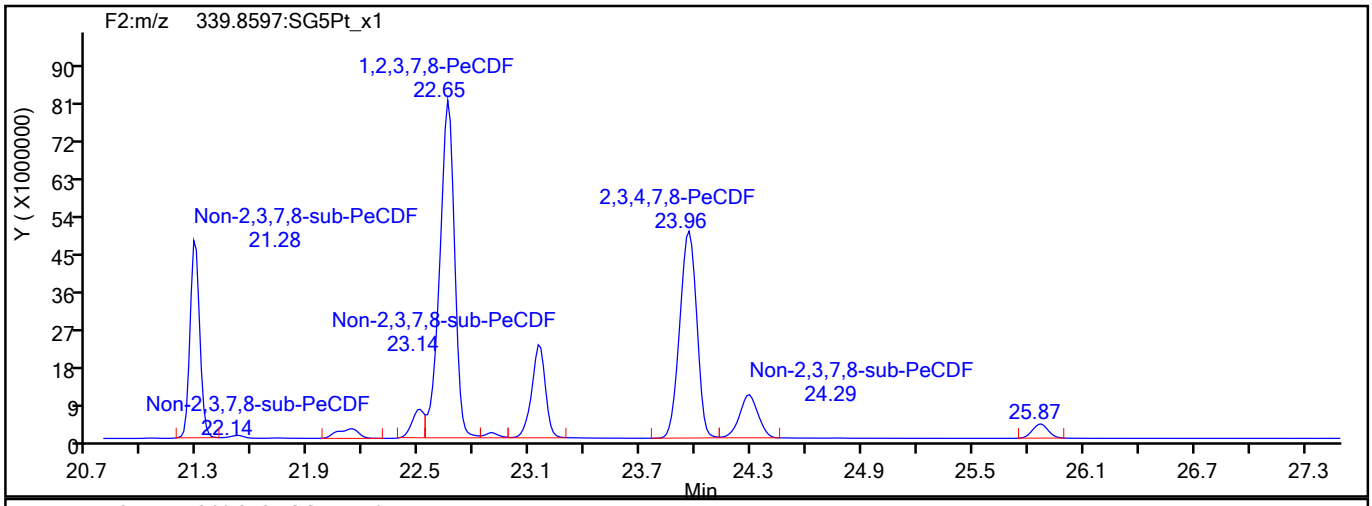

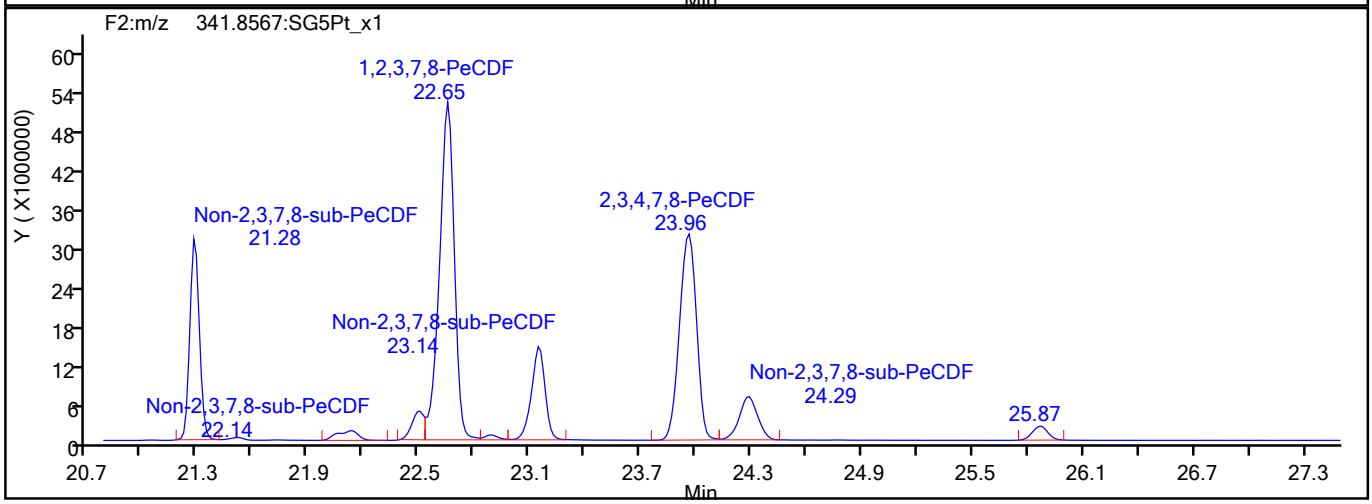

PeCDF Interference Mass

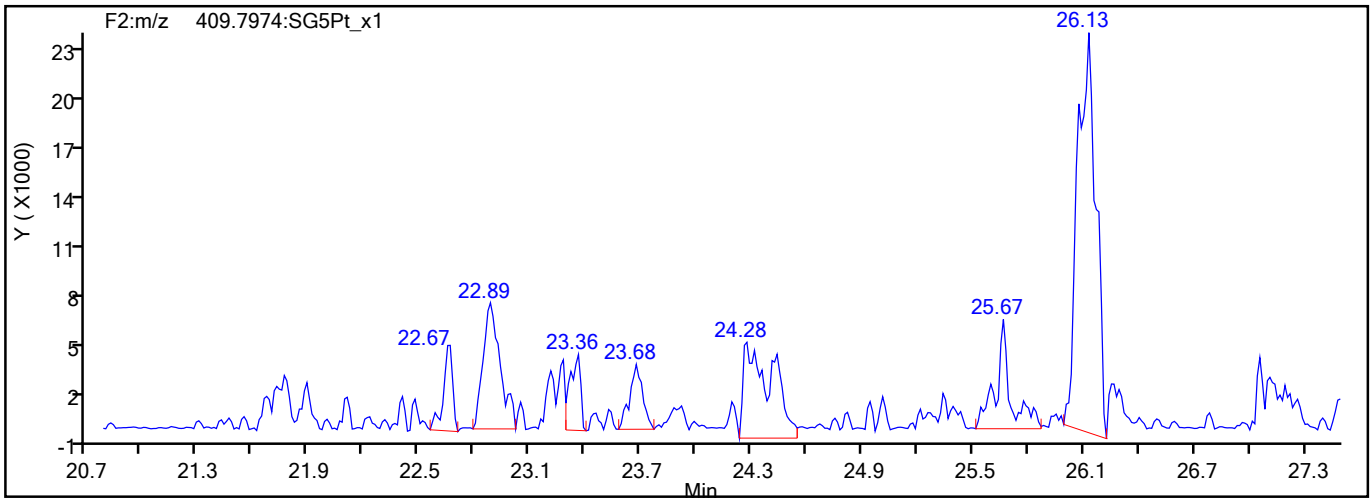

775537

Report Date: 18-Aug-2021 10:29:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

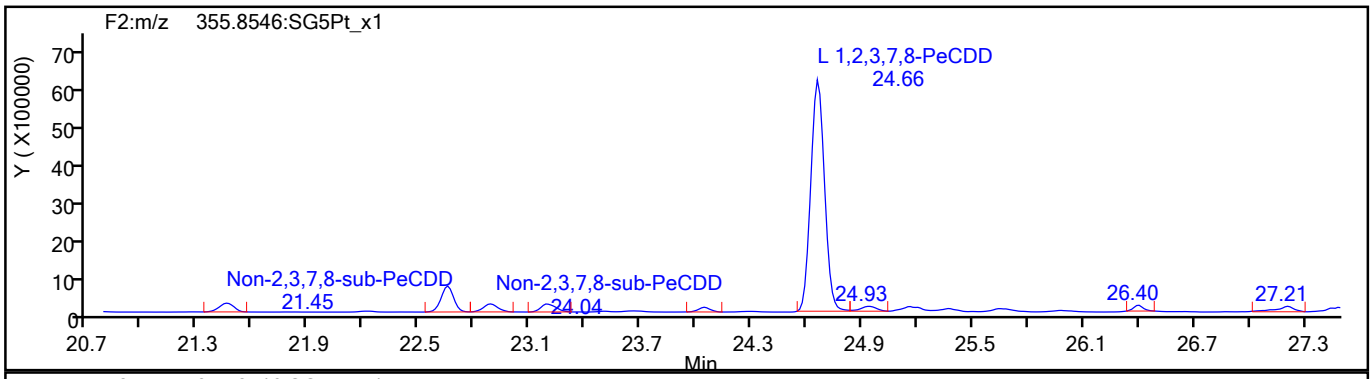

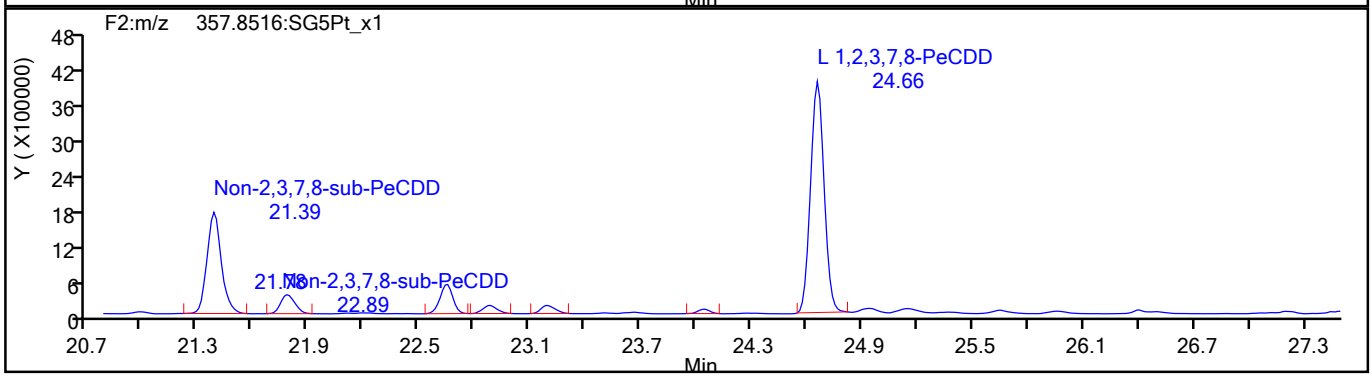

PeCDD Standards

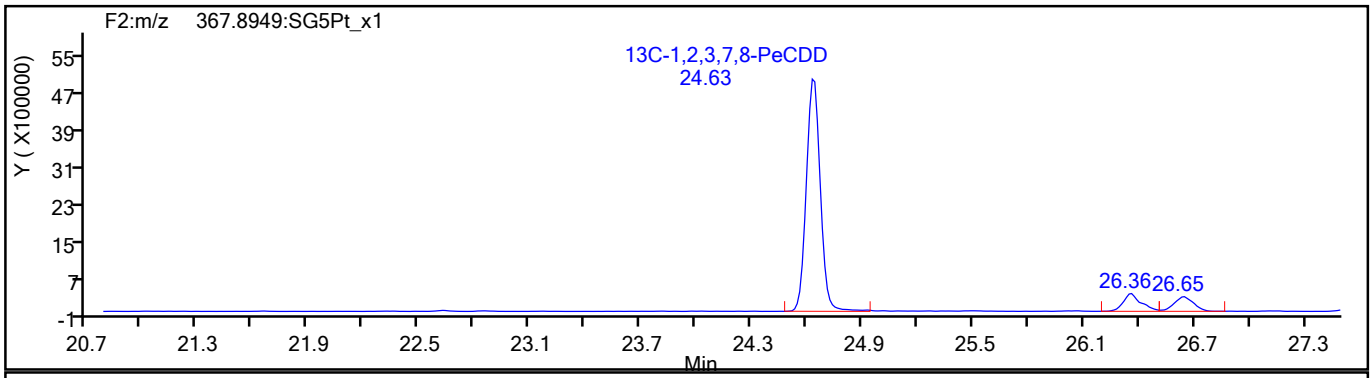

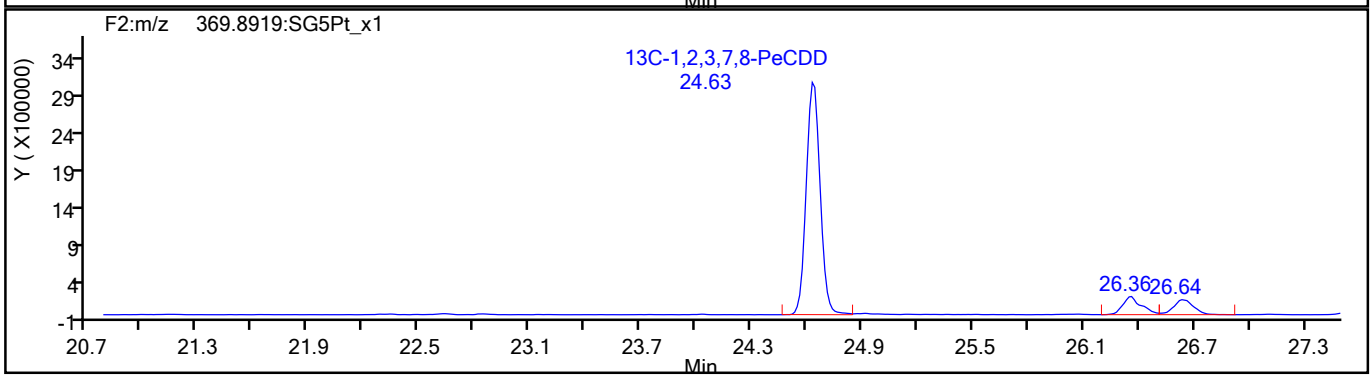

775538

Report Date: 18-Aug-2021 10:29:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

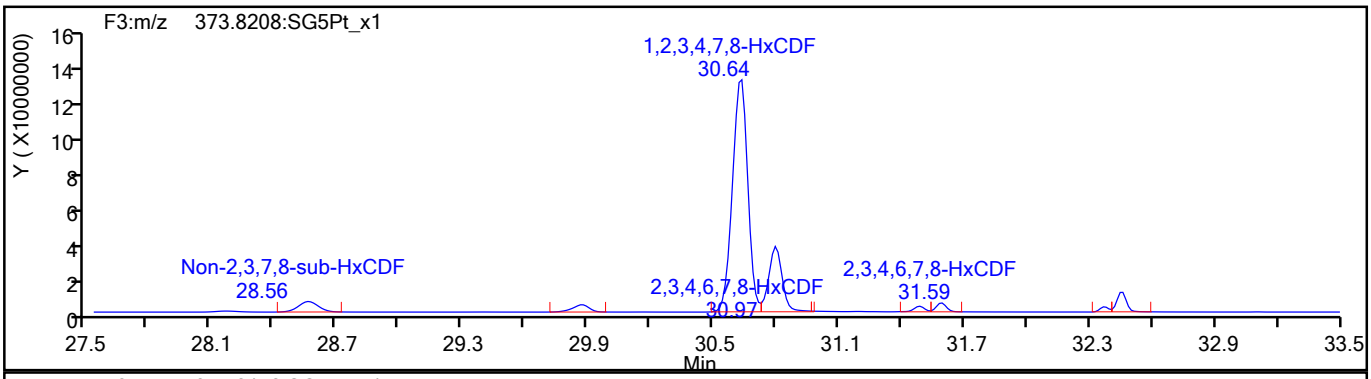

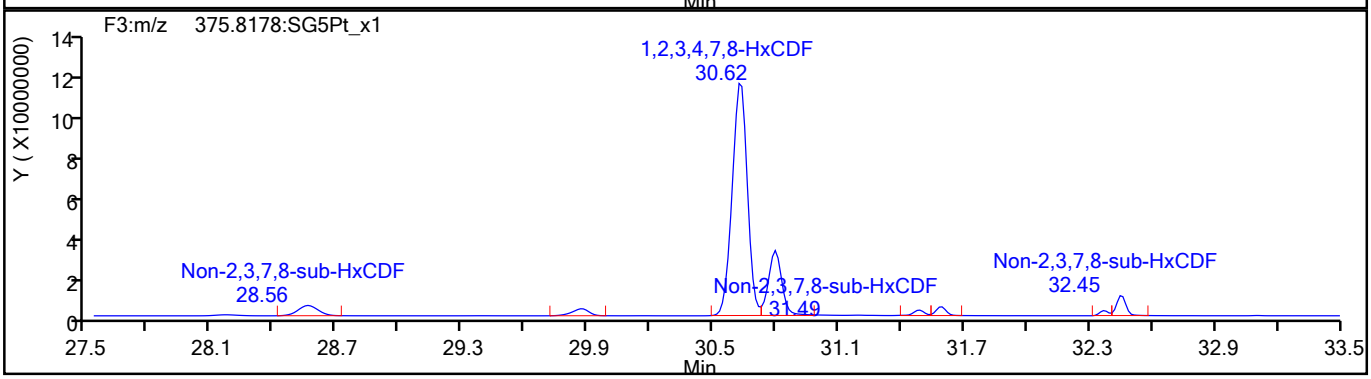

HxCDF Standards

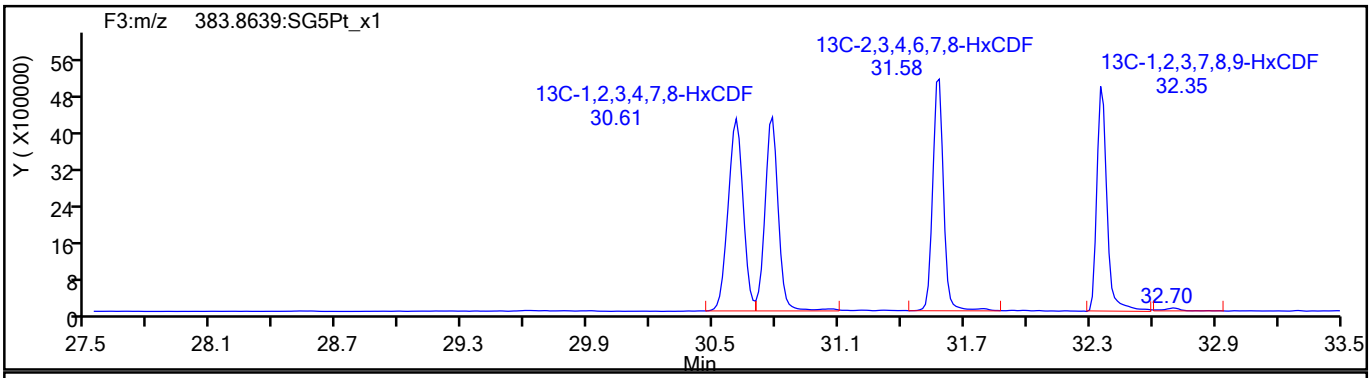

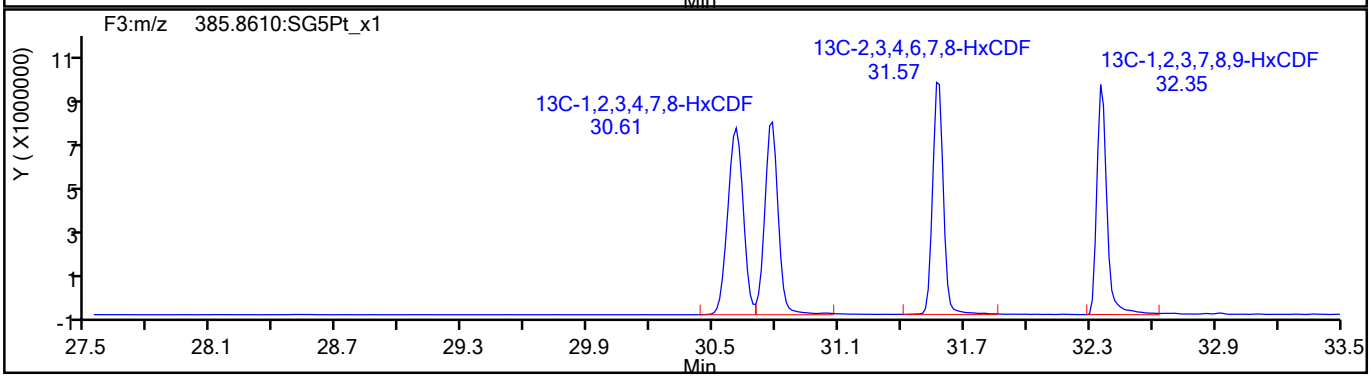

775539

Report Date: 18-Aug-2021 10:29:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

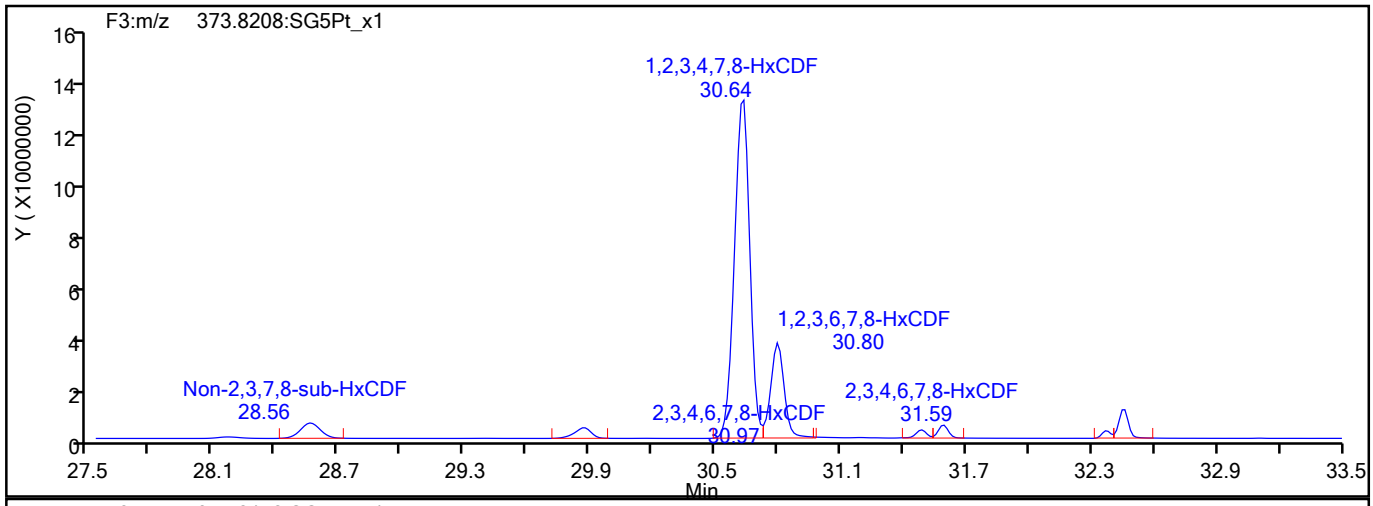

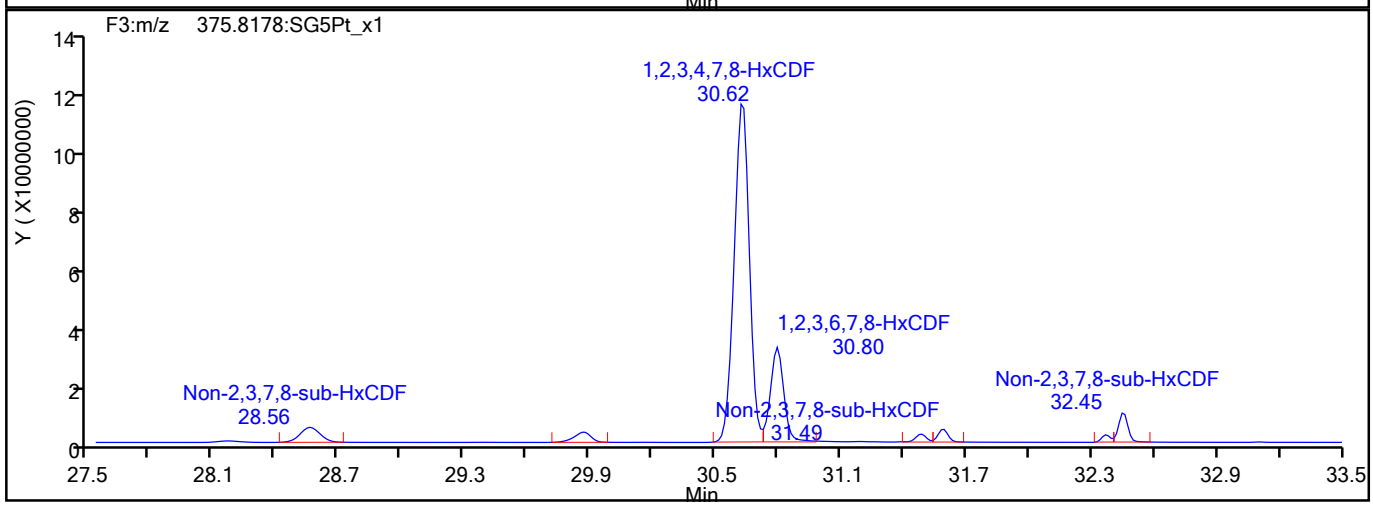

HxCDF Interference Mass

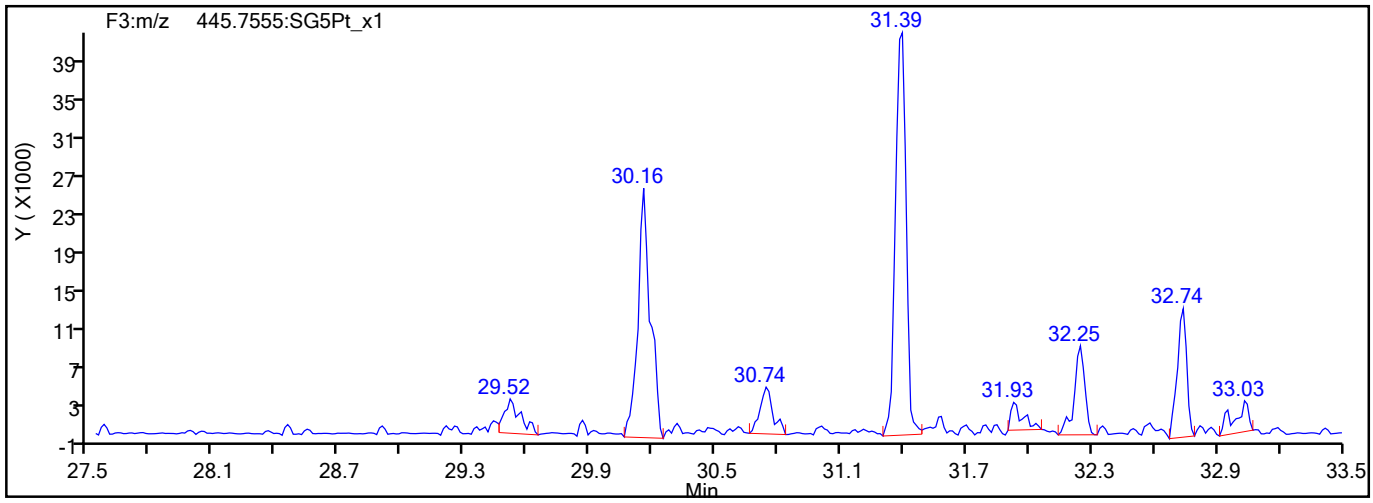

775540

Report Date: 18-Aug-2021 10:29:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

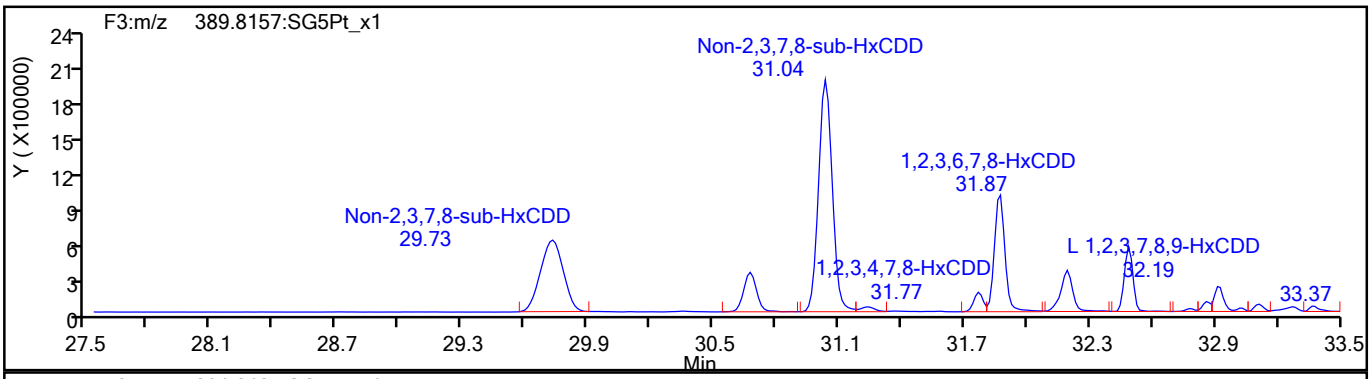

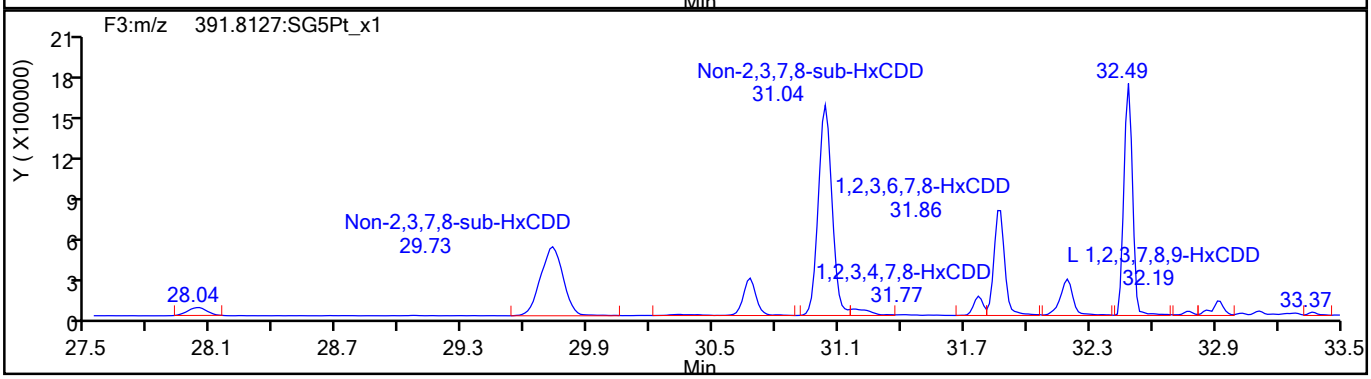

HxCDD Standards

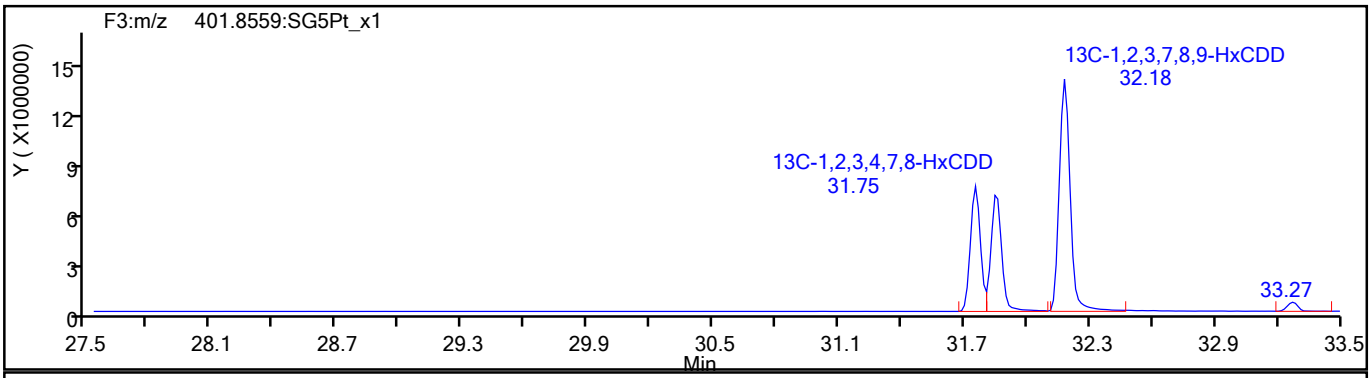

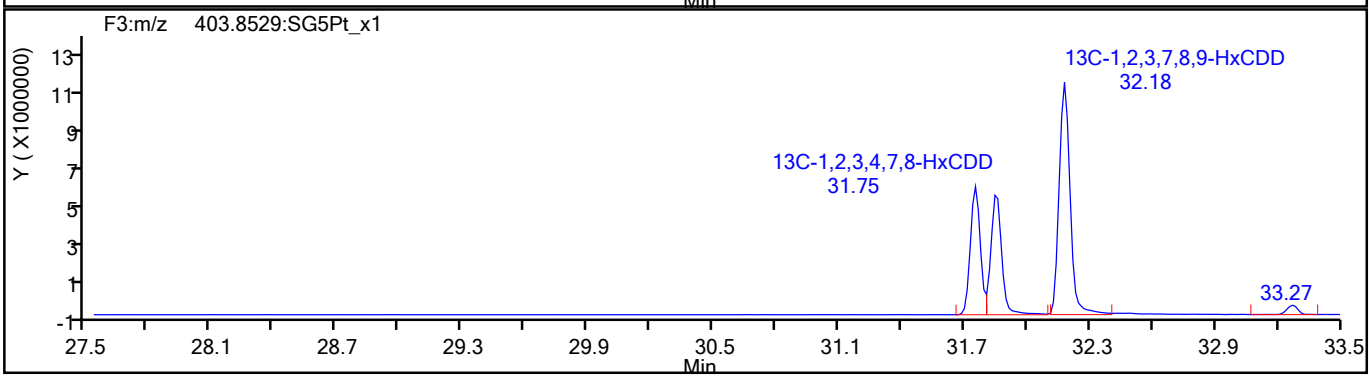

775541

Report Date: 18-Aug-2021 10:29:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

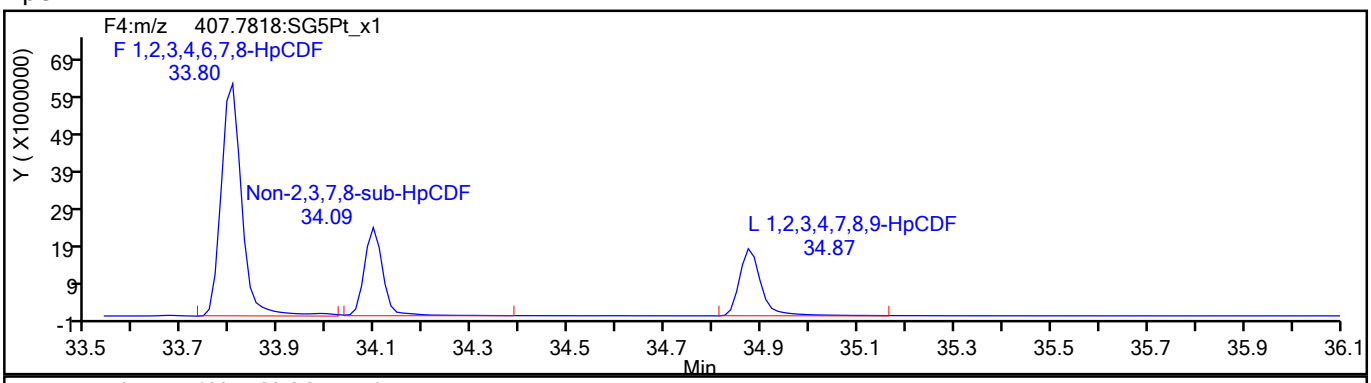

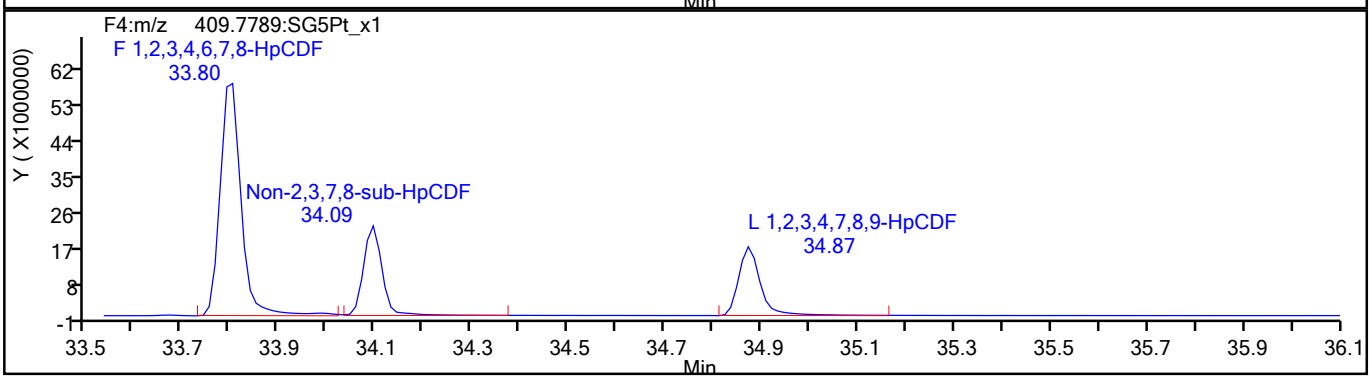

HpCDF Standards

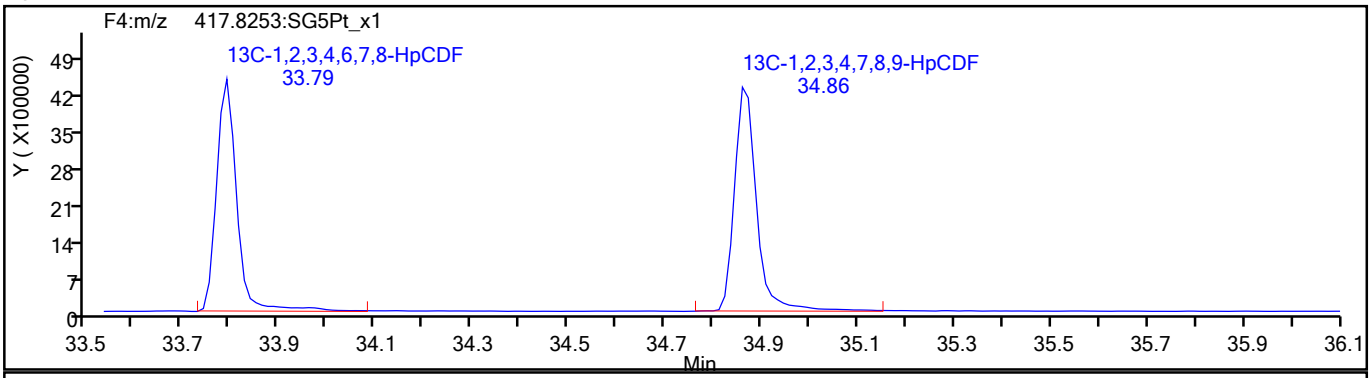

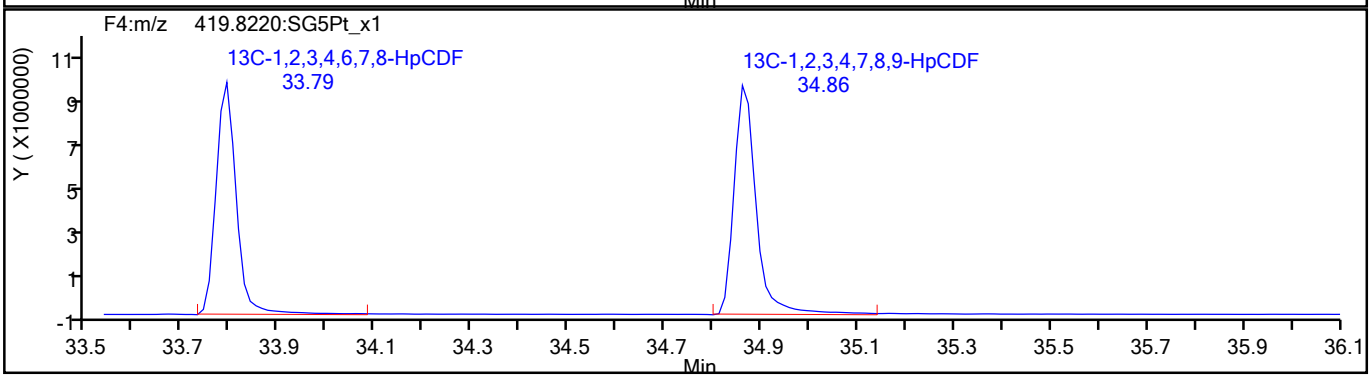

775542

Report Date: 18-Aug-2021 10:29:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

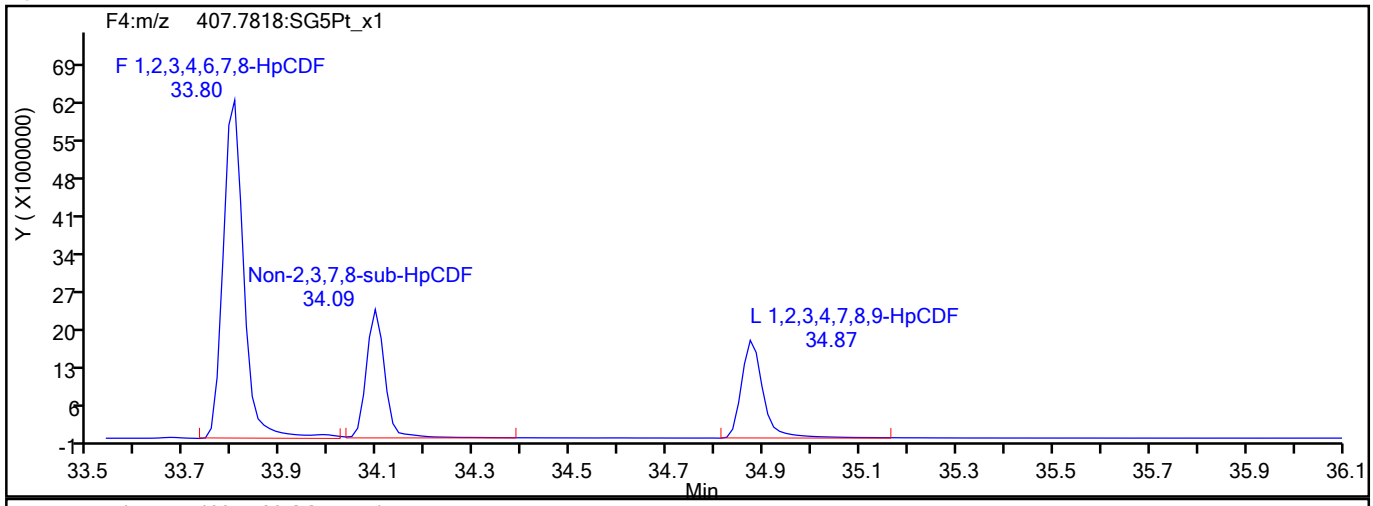

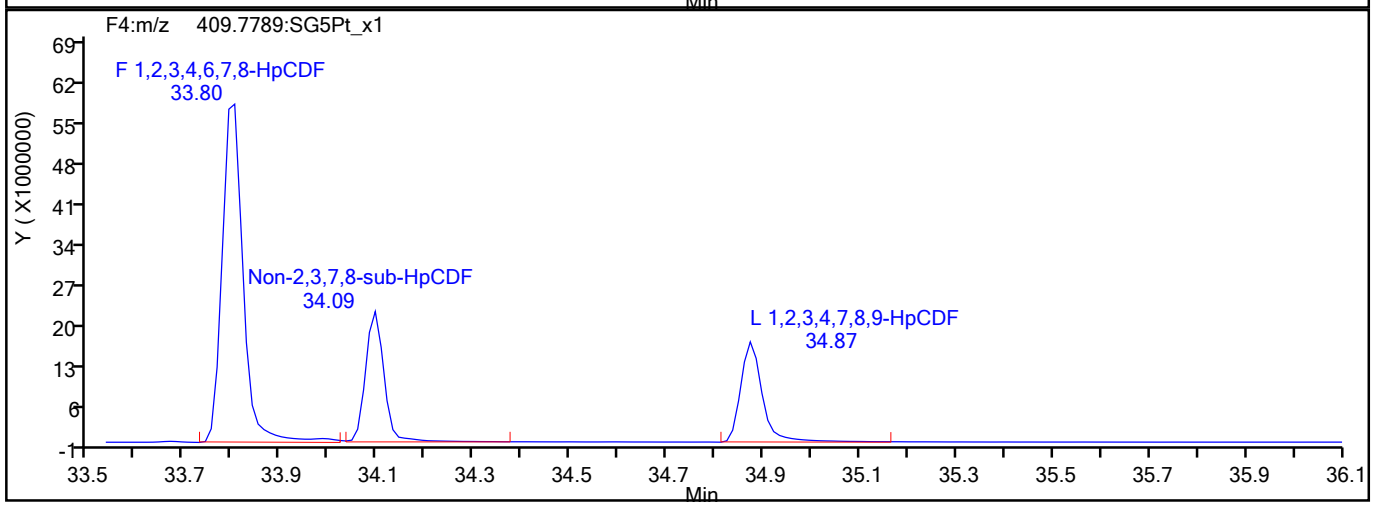

HpCDF Interference Mass

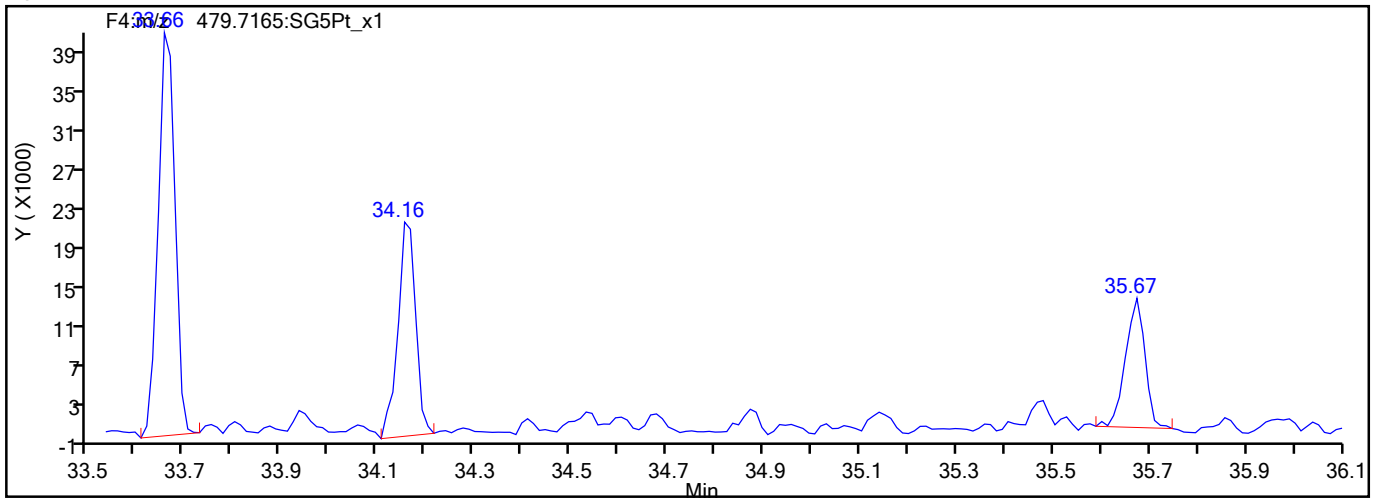

775543

Report Date: 18-Aug-2021 10:29:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

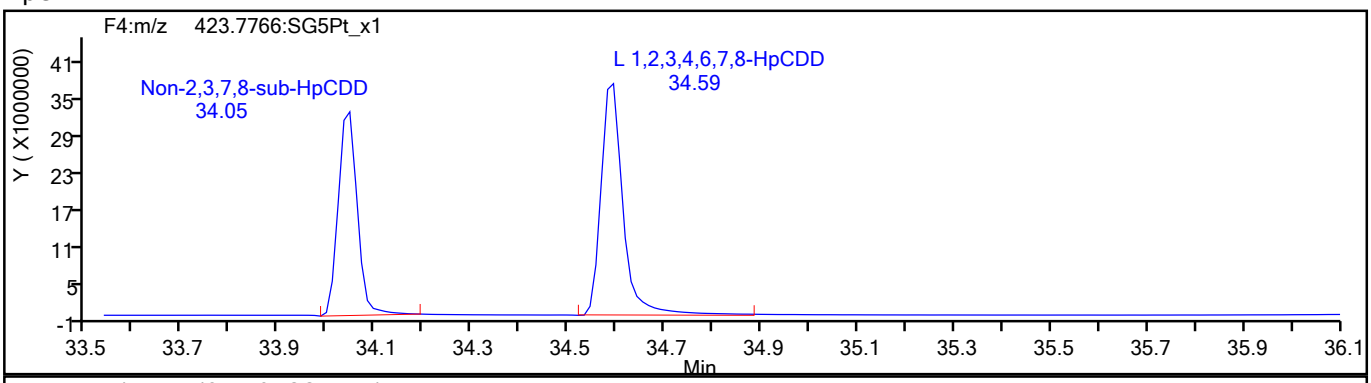

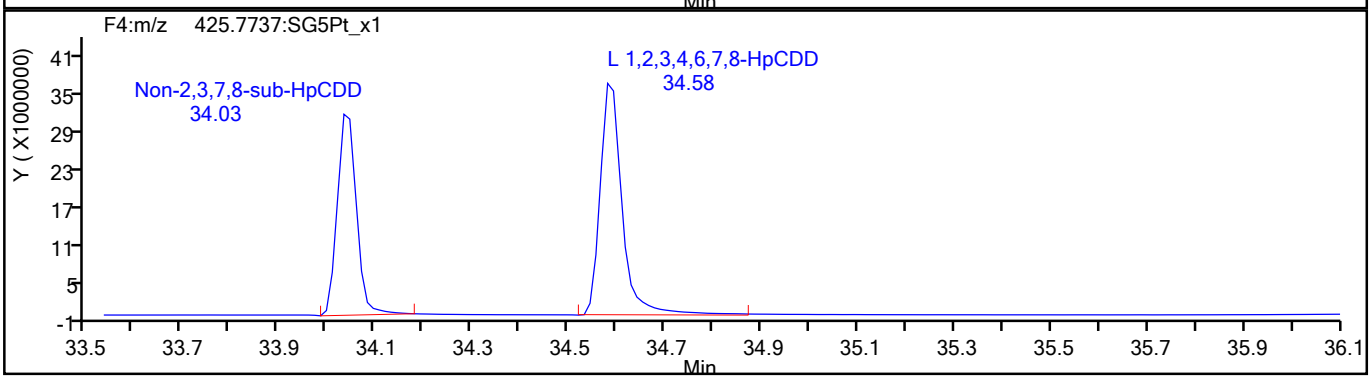

HpCDD Standards

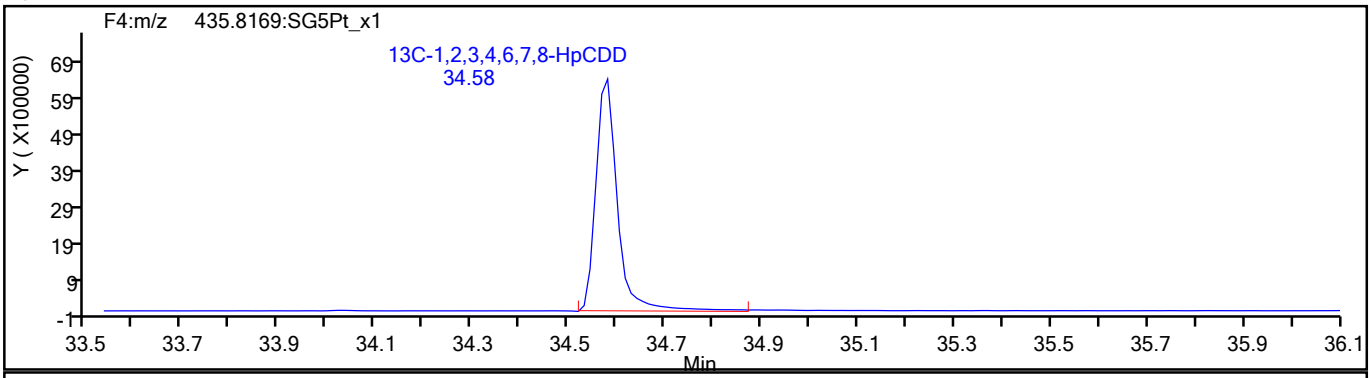

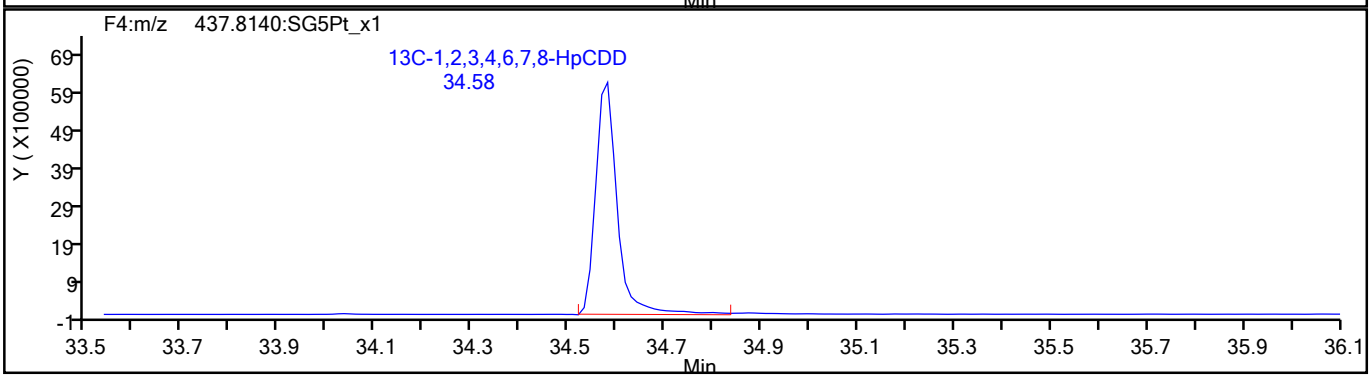

775544

Report Date: 18-Aug-2021 10:29:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

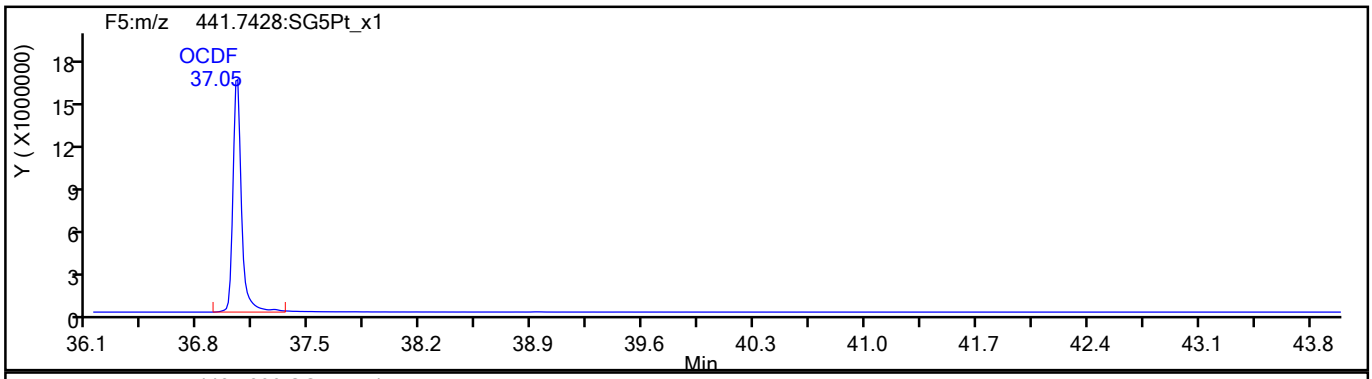

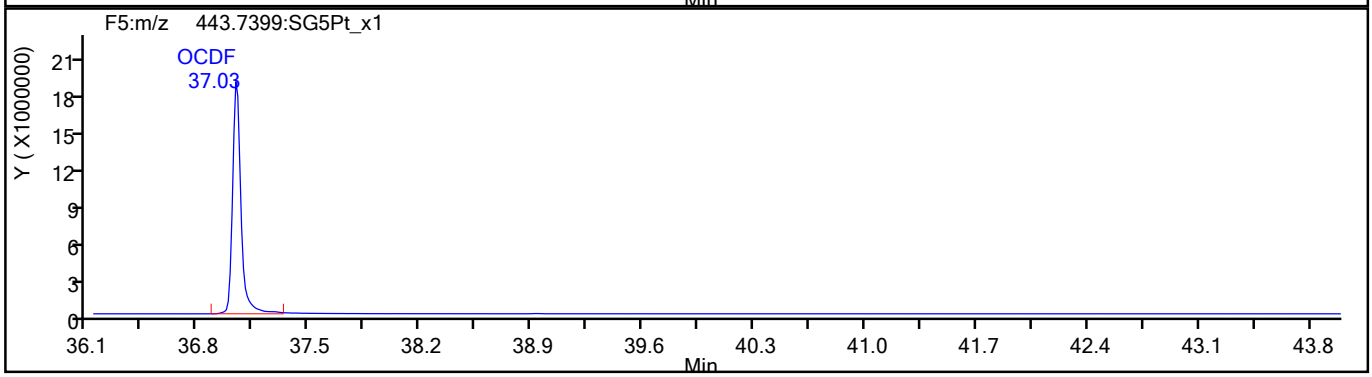

OCDF Standards

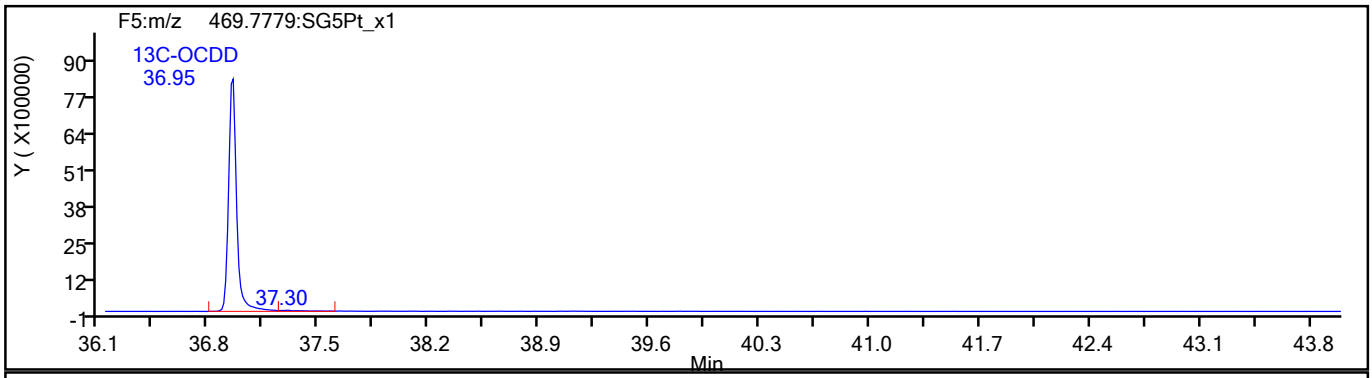

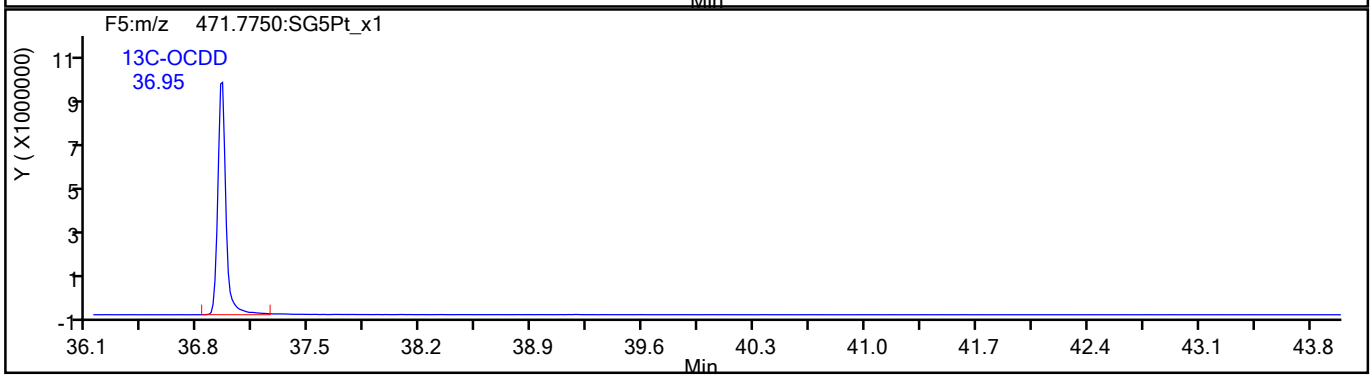

775545

Report Date: 18-Aug-2021 10:29:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

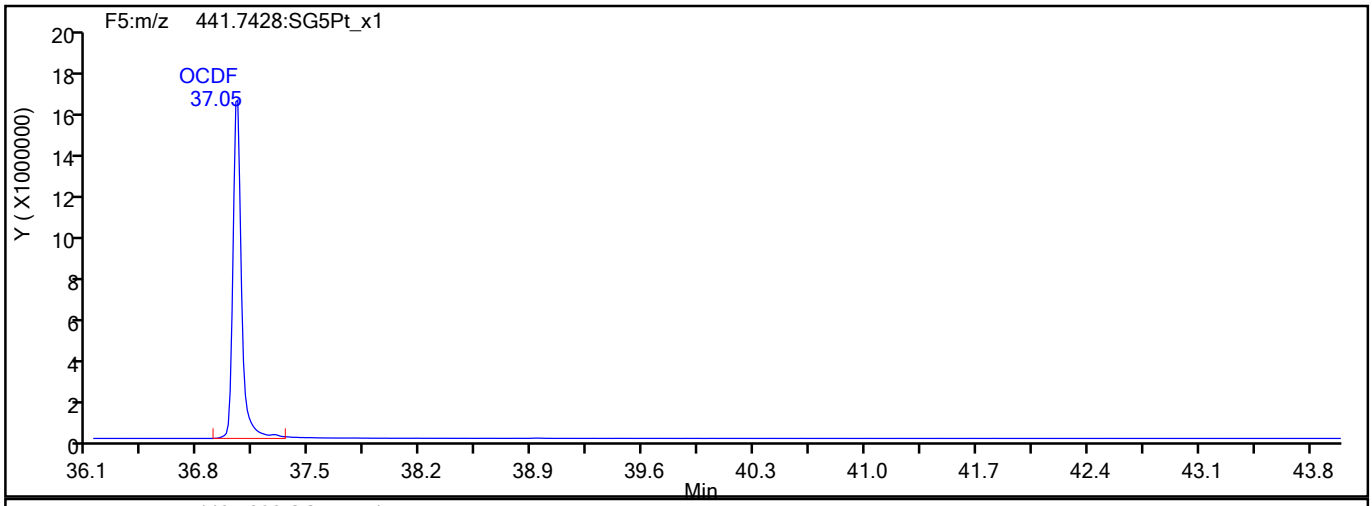

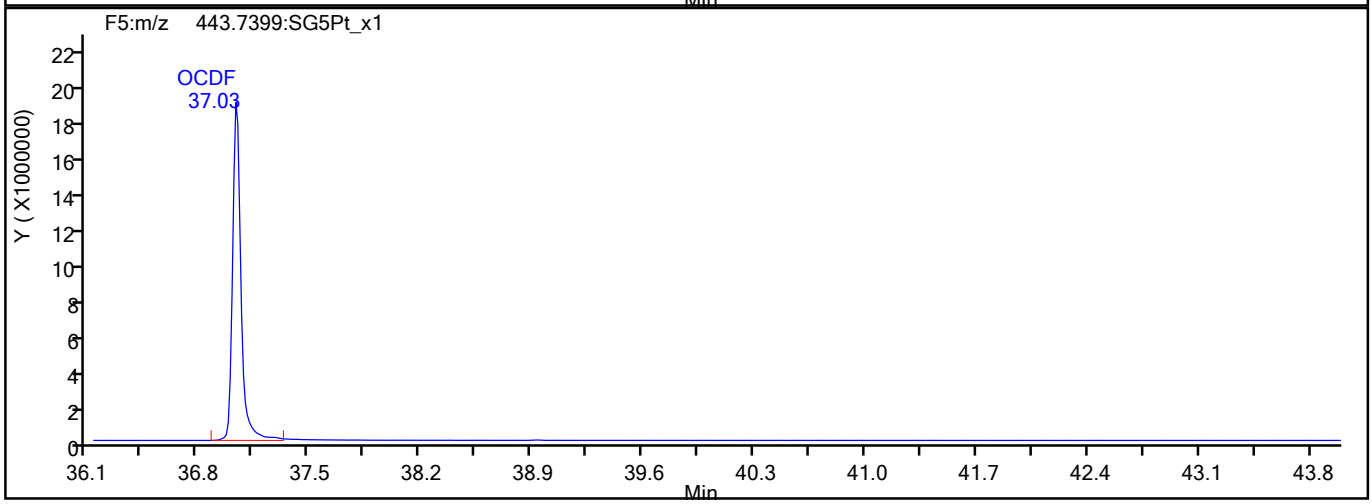

OCDF Interference Mass

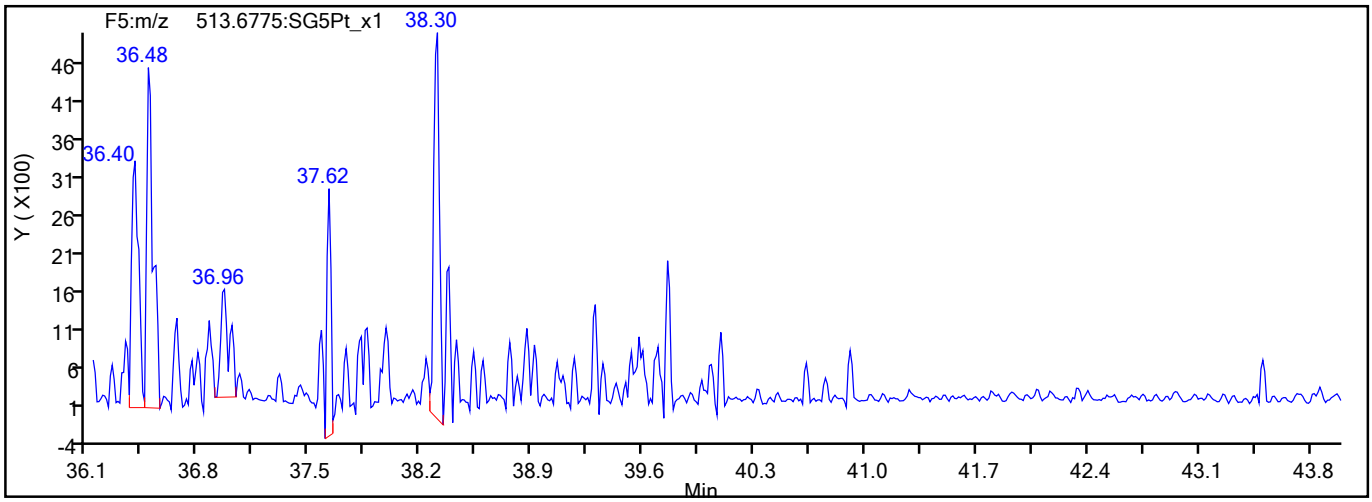

775546

Report Date: 18-Aug-2021 10:29:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

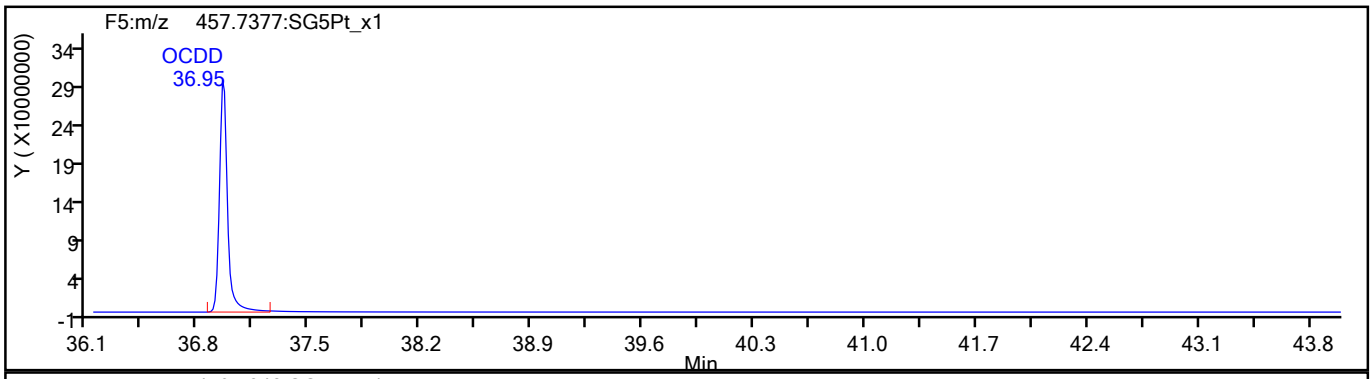

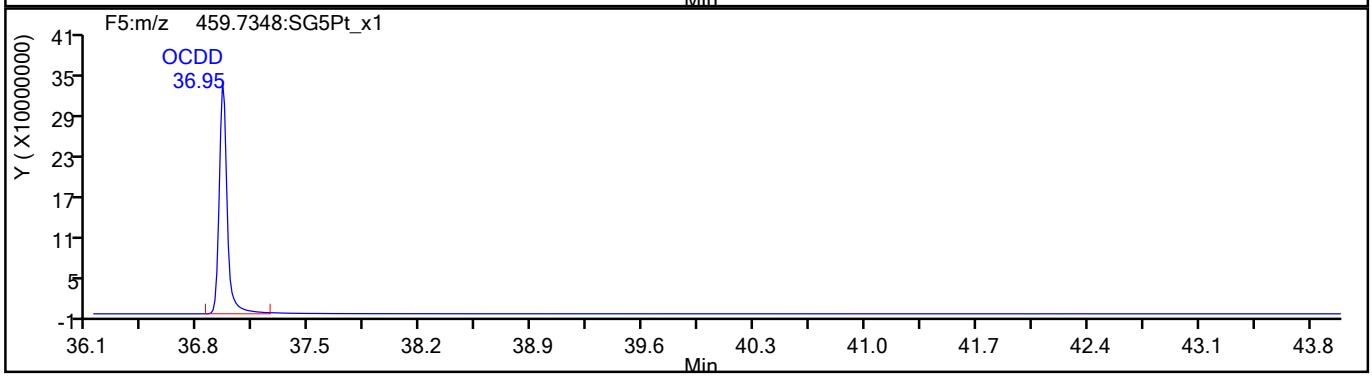

OCDD Standards

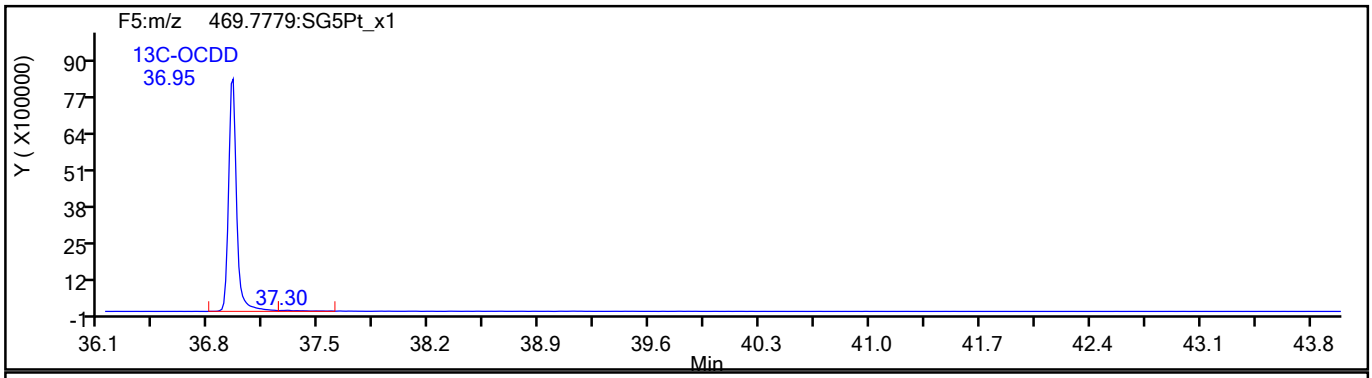

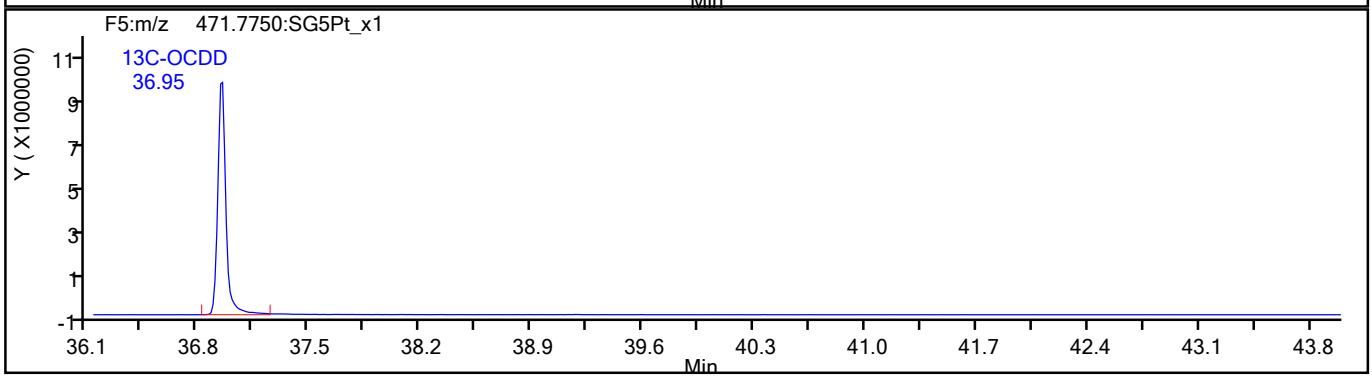

775547

Report Date: 18-Aug-2021 10:29:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

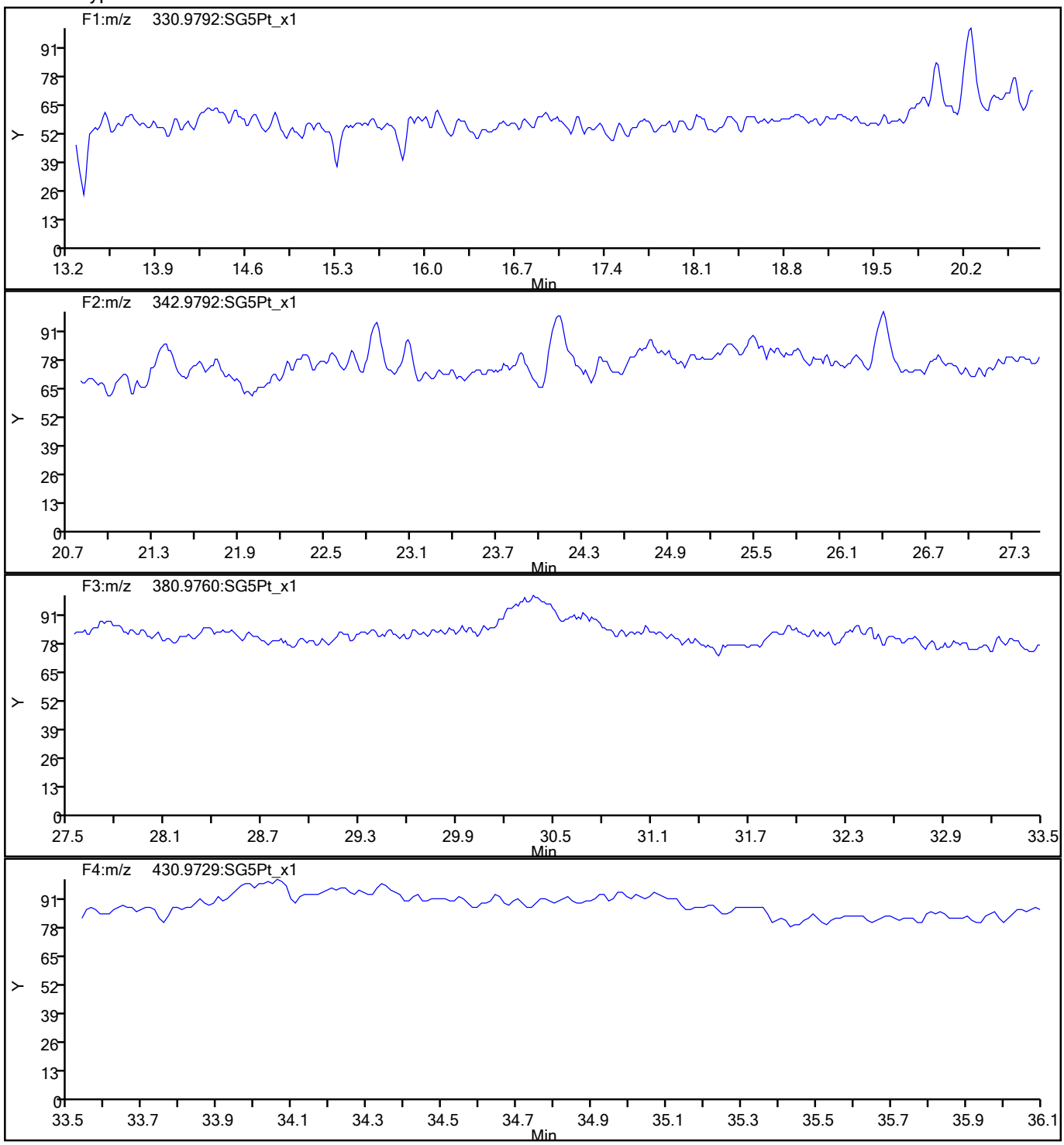

775548

Report Date: 18-Aug-2021 10:29:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_67.d		
Injection Date:	15-Aug-2021 19:42:16	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	516848	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

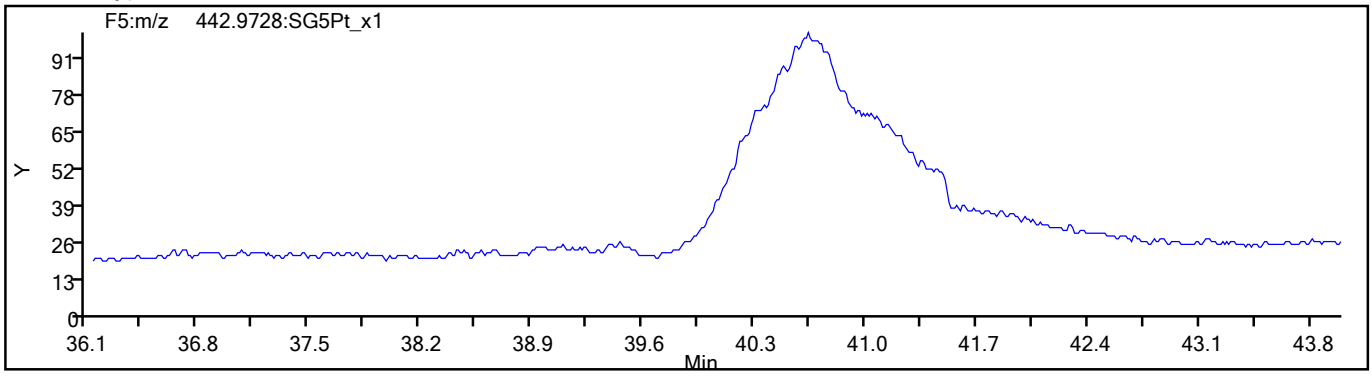

775549

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: 11215702-072221-DUP-5 RA Lab Sample ID: 320-76769-26 RA

Matrix: Sediment Lab File ID: 24AU2111D2_008.d

Analysis Method: 1613B Date Collected: 07/22/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:22

Sample wt/vol: 10.54(g) Date Analyzed: 08/24/2021 12:57

Con. Extract Vol.: 20.0(uL) Dilution Factor: 5

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 41.9 GPC Cleanup:(Y/N) N

Analysis Batch No.: 519438 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	160000	E B G	120	120

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	59		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	152		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_008.d
Lims ID: 320-76769-A-26-A
Client ID: 11215702-072221-DUP-5
Sample Type: Client
Inject. Date: 24-Aug-2021 12:57:03 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-26-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:58:34

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.343	9536203	0.77	7.2E+05	20.0	20.0				nM
D 13C-2,3,7,8-TCDF	17.673	7515016	0.76	1.3327	11.8	11.8	0.9478	0.9478	59.13	M
2,3,7,8-TCDF	17.687	3570126178	0.79	0.9978	9522.2	9522.2	7.549	7.549		E
D 13C-2,3,7,8-TCDD	16.110	4634746	0.70	0.8749	11.1	11.1	29.7	29.7	55.55	nMa
$ 37Cl4-2,3,7,8-TCDD	16.124	5025589		0.8648	12.2	12.2	0.3810	0.3810	152	a
2,3,7,8-TCDD	16.124	763825825	0.80	1.0570	3118.4	3118.4	11.1	11.1		Ea
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_008.d
Lims ID: 320-76769-A-26-A
Client ID: 11215702-072221-DUP-5
Sample Type: Client
Inject. Date: 24-Aug-2021 12:57:03 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-26-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:58:34

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											nM
331.9368	16.343	16.283	4		4134279	891445	516956	1292390	2		M
333.9339	16.343	16.283	4		5401924	1188158	565203	1413007	2	0.77(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.673	17.613	4	1.081	3233748	600123	24119	60297	25		M
317.9389	17.687	17.613	4	1.082	4281268	780347	28416	71040	27	0.76(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.687	17.641	3	1.001	1576173057	299084889	92013	230032	3250		
305.8987	17.687	17.641	3	1.001	1993953121	377917476	115953	289882	3259	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nMa
331.9368	16.110	16.050	4	0.986	1913162	461876	516956	1292390	1		M
333.9339	16.110	16.050	4	0.986	2721584	654922	565203	1413007	1	0.70(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.124	16.063	4	0.987	5025589	1122044	13704	34260	82		a
2,3,7,8-TCDD											Ea
319.8965	16.124	16.077	3	1.001	338330700	74987618	158835	397087	472		a
321.8936	16.124	16.077	3	1.001	425495125	93604068	102501	256252	913	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_008.d				
Injection Date:	24-Aug-2021 12:57:03	Instrument ID:	11D2		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.69
Area: 7954850
Amount: 18.383614
Amount Units: pg/ul

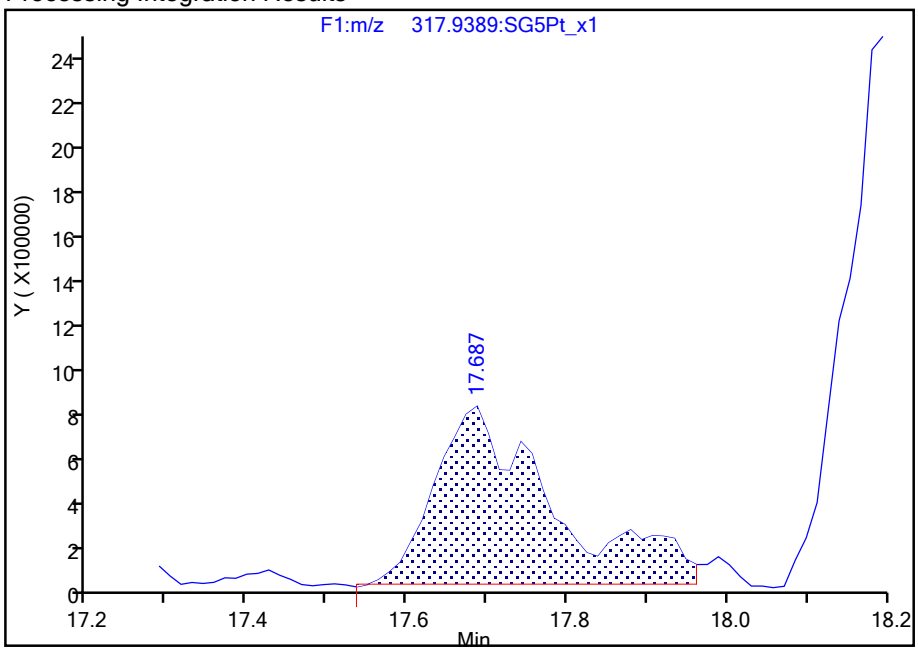

Manual Integration Results

RT: 17.69
Area: 4281268
Amount: 11.826509
Amount Units: pg/ul

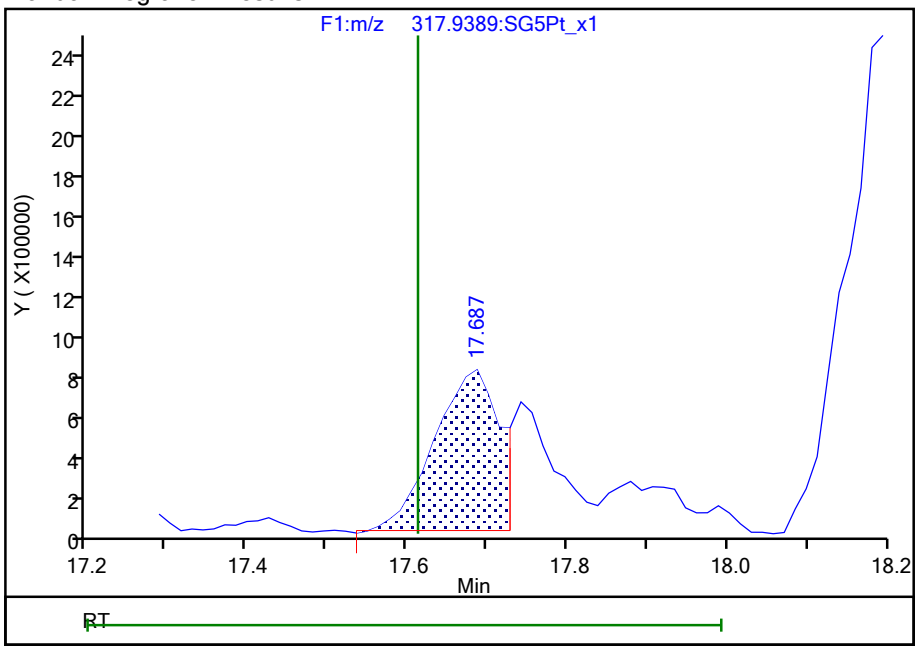

Reviewer: bennettd, 24-Aug-2021 16:58:19

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_008.d				
Injection Date:	24-Aug-2021 12:57:03	Instrument ID:	11D2		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.67
Area: 3726801
Amount: 18.383614
Amount Units: pg/ul

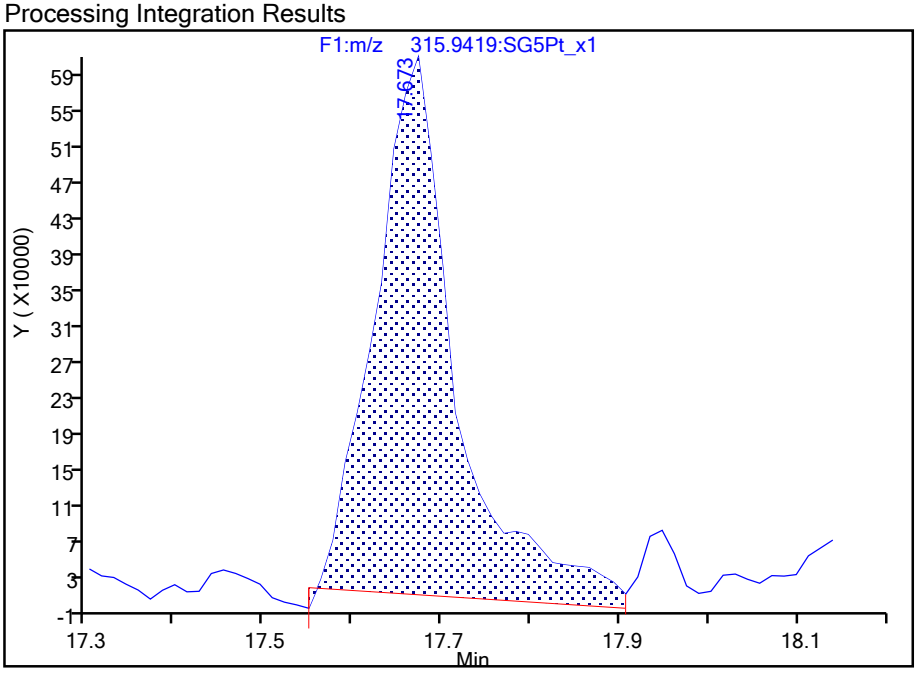

Manual Integration Results

RT: 17.67
Area: 3233748
Amount: 11.826509
Amount Units: pg/ul

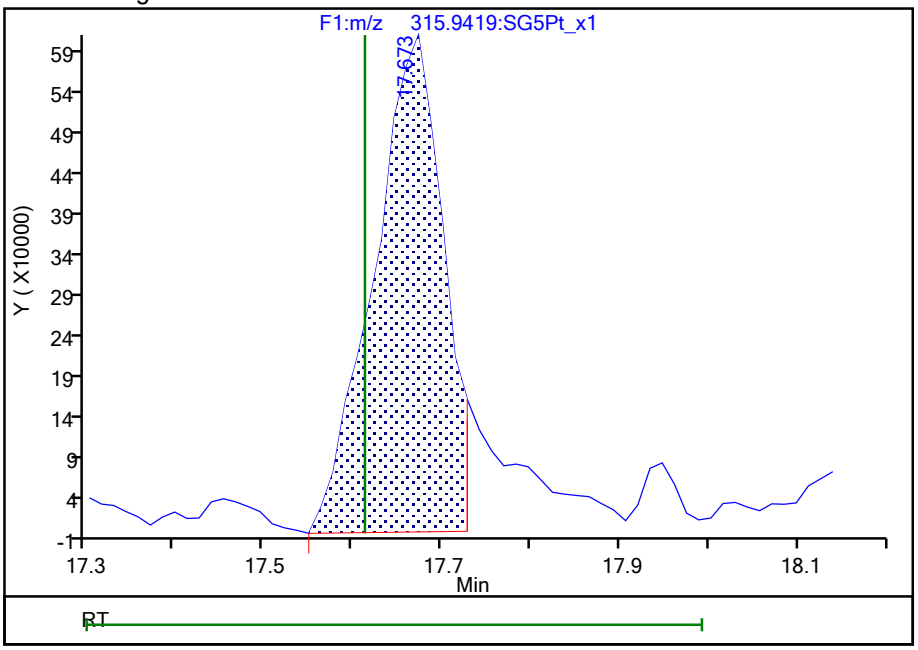

Reviewer: bennettd, 24-Aug-2021 16:58:23

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_008.d				
Injection Date:	24-Aug-2021 12:57:03	Instrument ID:	11D2		
Lims ID:	320-76769-A-26-A	Lab Sample ID:	320-76769-26		
Client ID:	11215702-072221-DUP-5				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.06

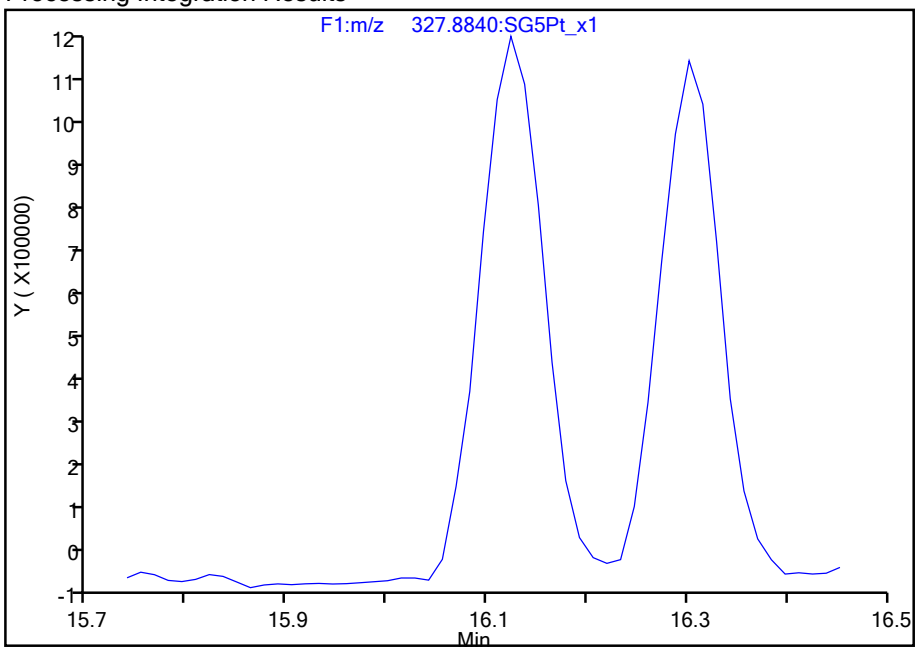

Manual Integration Results

RT: 16.12
Area: 5025589
Amount: 12.187585
Amount Units: pg/ul

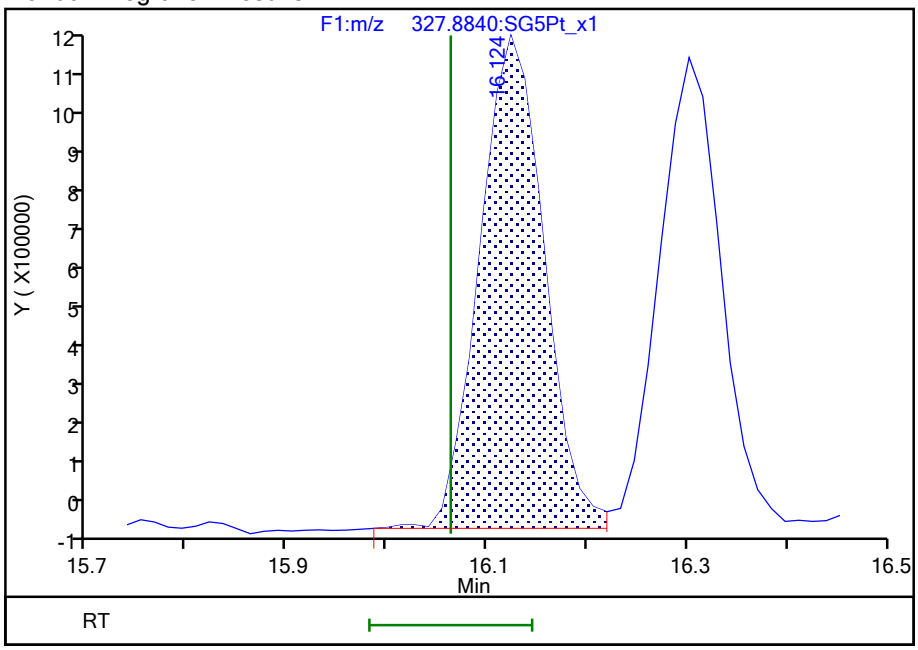

Reviewer: bennettd, 24-Aug-2021 16:57:46
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

775555

Report Date: 24-Aug-2021 17:07:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_008.d		
Injection Date:	24-Aug-2021 12:57:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	519438	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

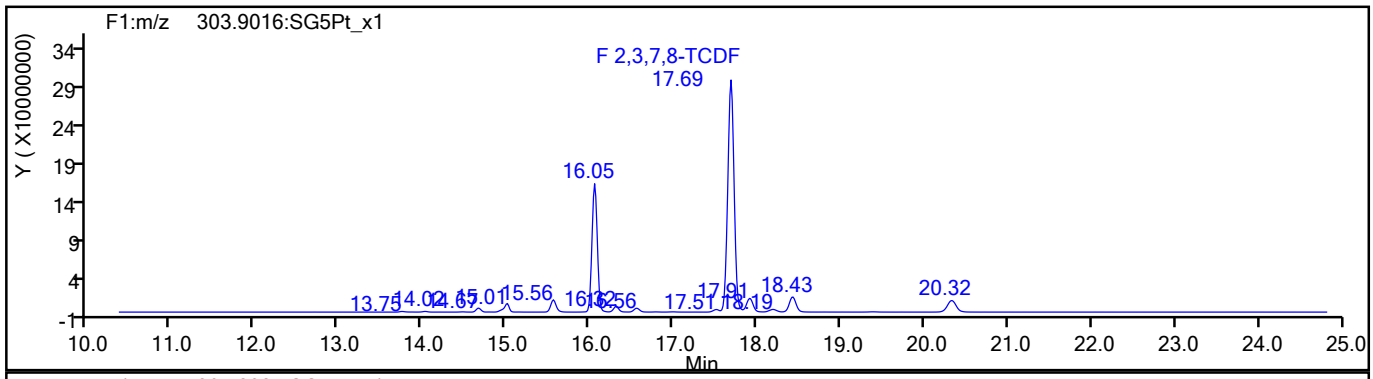

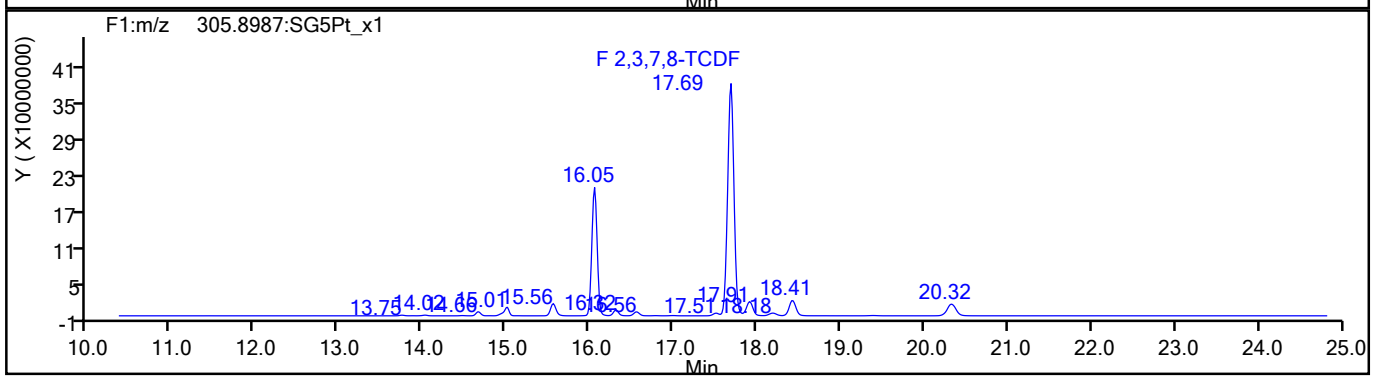

TCDF Standards

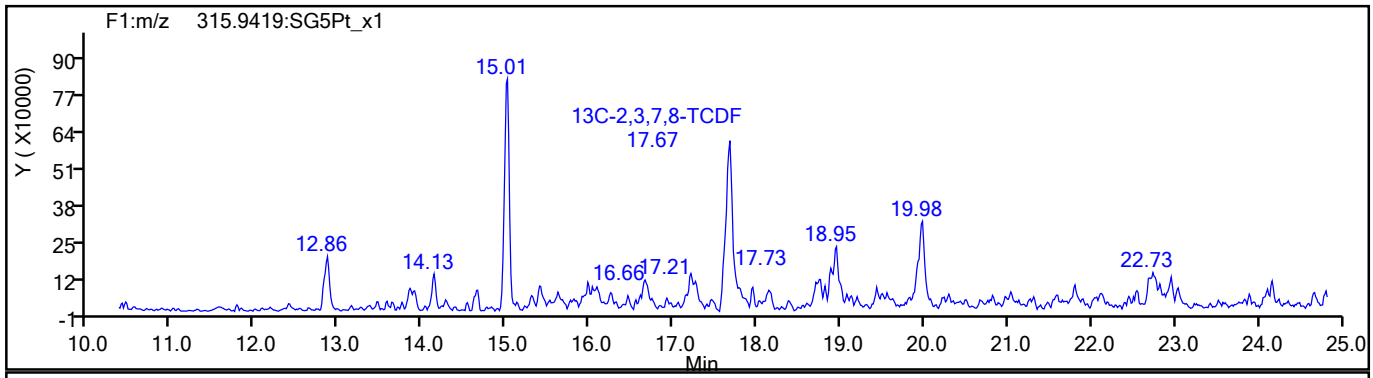

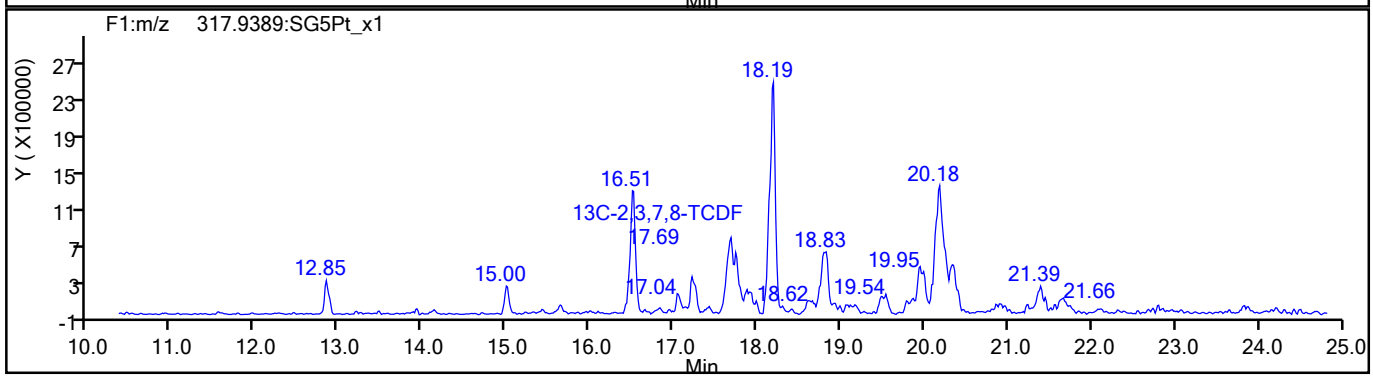

775556

Report Date: 24-Aug-2021 17:07:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_008.d		
Injection Date:	24-Aug-2021 12:57:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	519438	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

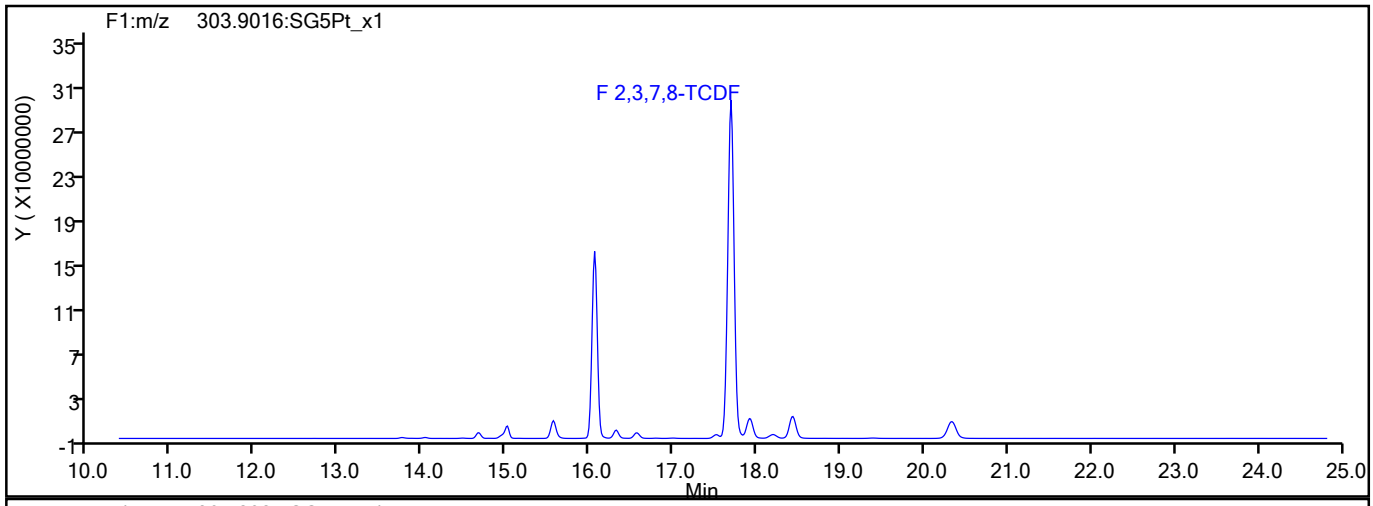

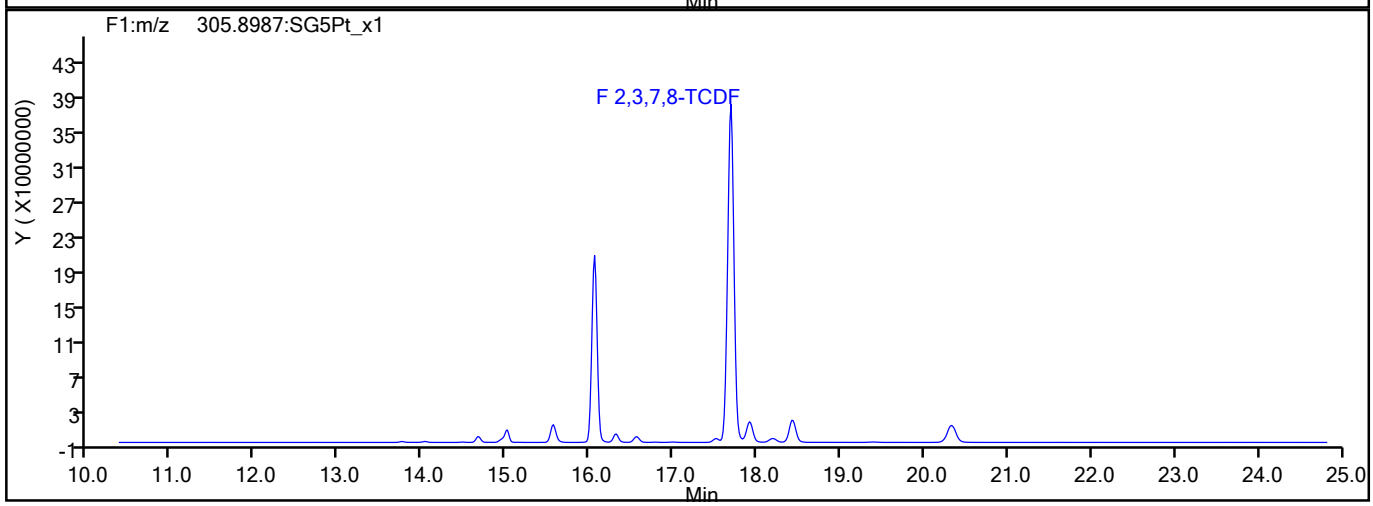

TCDF Interference Mass

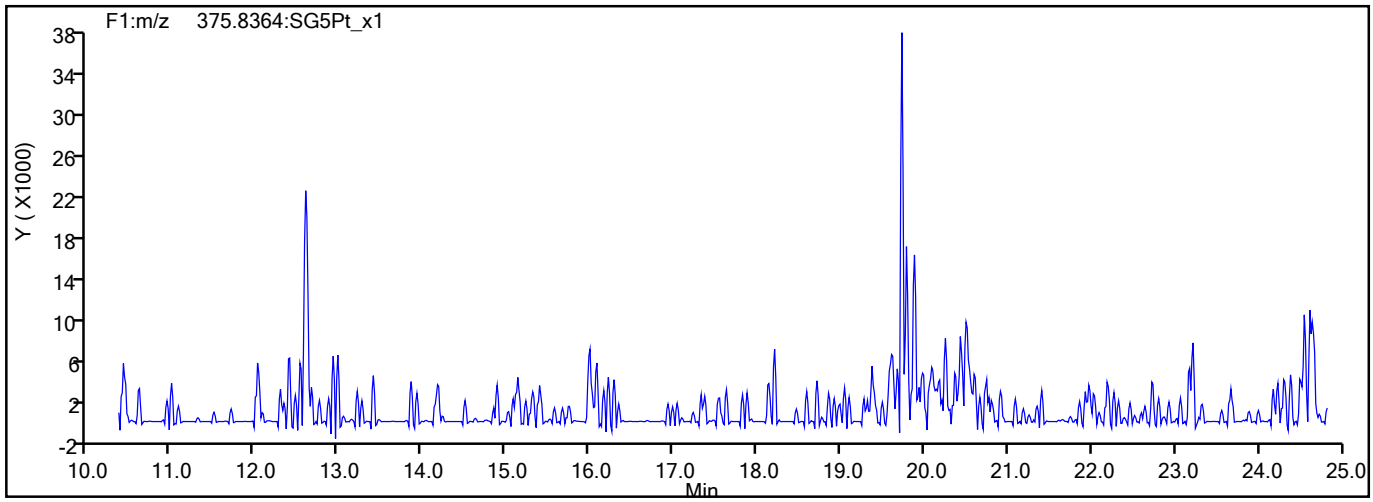

775557

Report Date: 24-Aug-2021 17:07:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_008.d		
Injection Date:	24-Aug-2021 12:57:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	519438	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

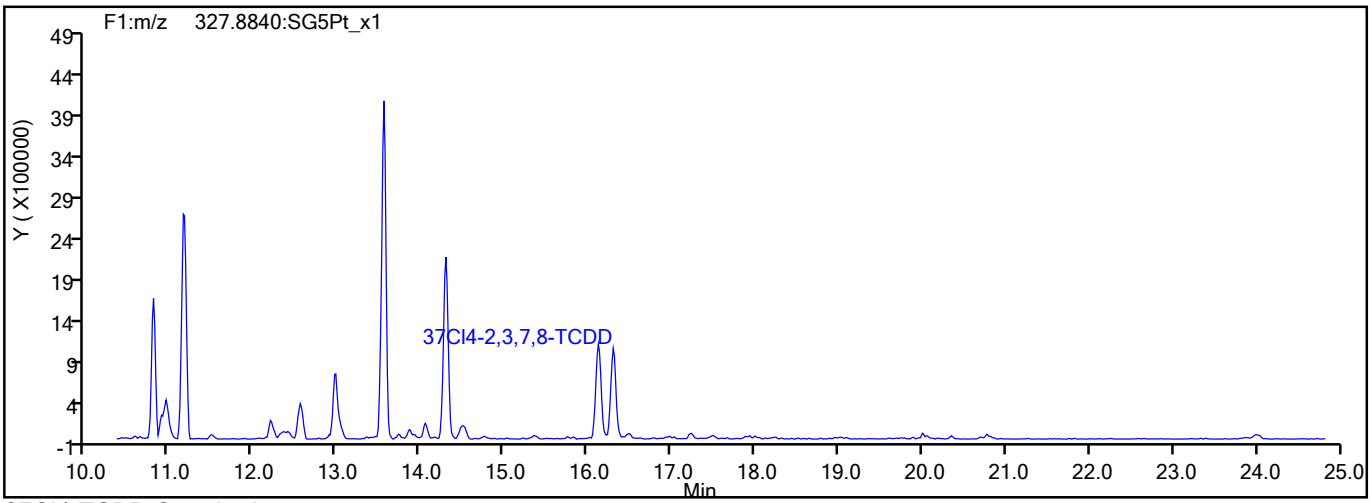

37Cl4-TCDD Standards

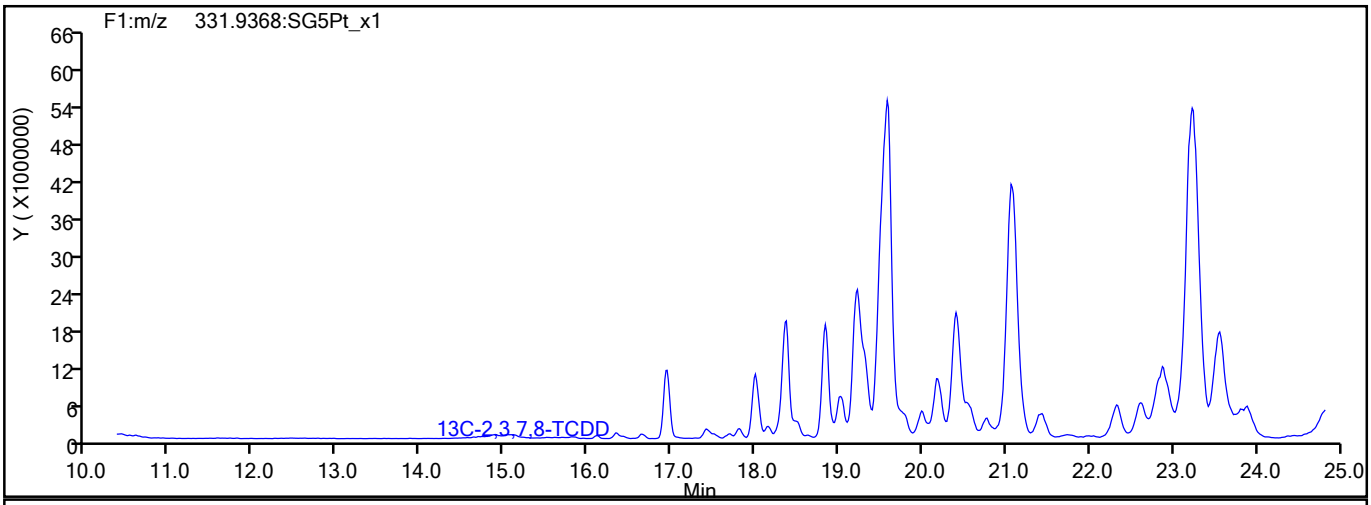

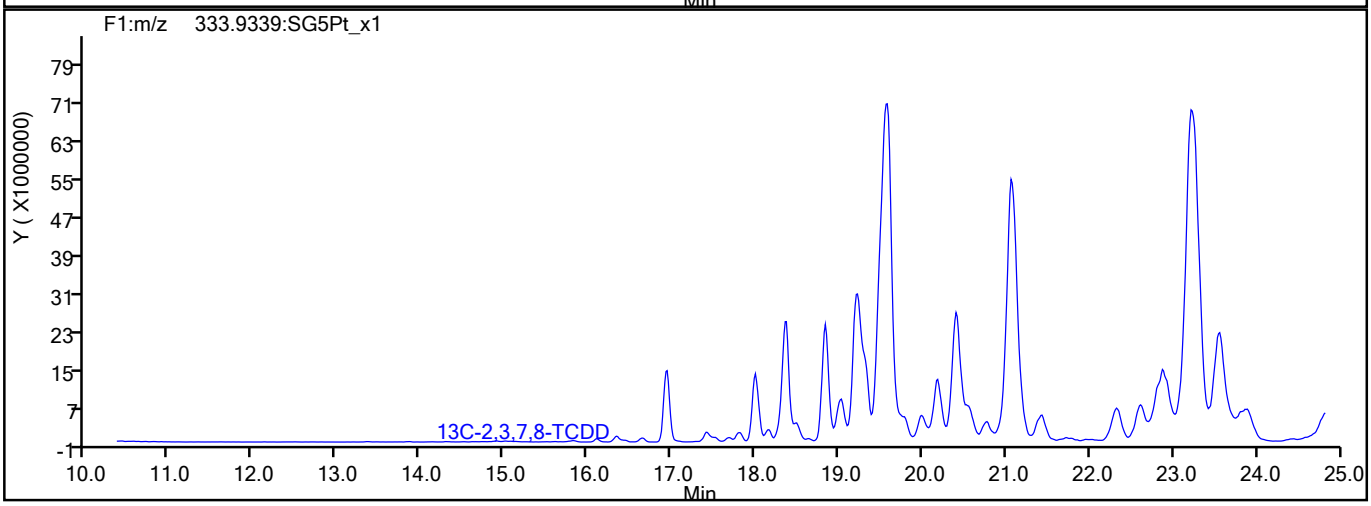

775558

Report Date: 24-Aug-2021 17:07:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_008.d		
Injection Date:	24-Aug-2021 12:57:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-DUP-5		
Worklist#:	519438	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

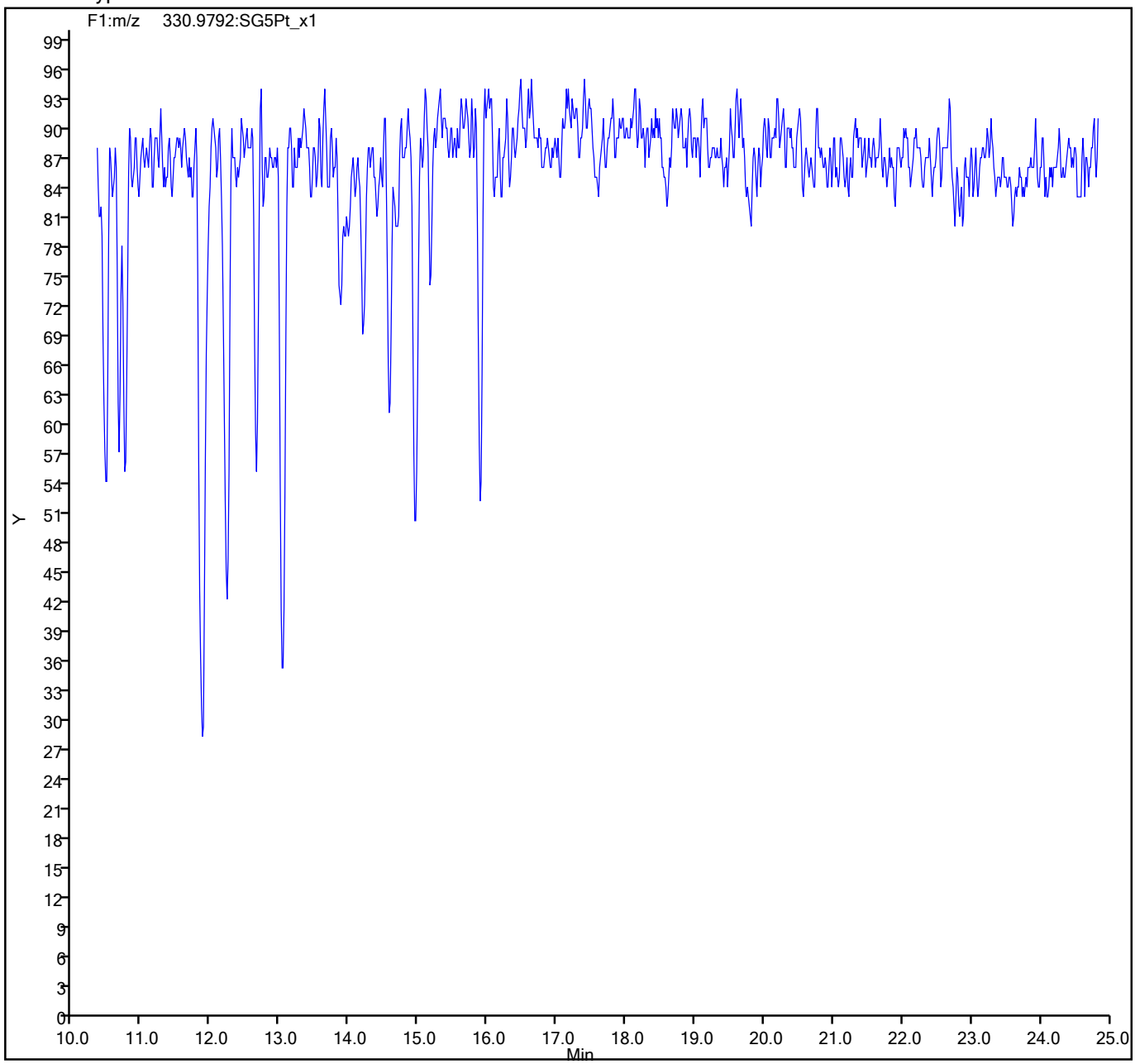

775559

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (0-2)
Lab Sample ID: 320-76769-27
Matrix: Sediment
Lab File ID: 17au21dfs1_40.d
Analysis Method: 1613B
Date Collected: 07/22/2021 15:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.65(g)
Date Analyzed: 08/18/2021 20:24
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2100	E G	1.9	1.9
40321-76-4	1,2,3,7,8-PeCDD	20		6.2	0.56
57117-41-6	1,2,3,7,8-PeCDF	310		6.2	1.9
57117-31-4	2,3,4,7,8-PeCDF	160		6.2	2.0
39227-28-6	1,2,3,4,7,8-HxCDD	0.96	J	6.2	0.19
57653-85-7	1,2,3,6,7,8-HxCDD	1.8	J	6.2	0.21
19408-74-3	1,2,3,7,8,9-HxCDD	2.0	J	6.2	0.19
70648-26-9	1,2,3,4,7,8-HxCDF	500	F1	6.2	1.5
57117-44-9	1,2,3,6,7,8-HxCDF	130		6.2	1.6
72918-21-9	1,2,3,7,8,9-HxCDF	8.1		6.2	1.6
60851-34-5	2,3,4,6,7,8-HxCDF	16		6.2	1.5
35822-46-9	1,2,3,4,6,7,8-HpCDD	51	B F1 F2	6.2	0.31
67562-39-4	1,2,3,4,6,7,8-HpCDF	150		6.2	0.51
55673-89-7	1,2,3,4,7,8,9-HpCDF	46		6.2	0.51
3268-87-9	OCDD	1200	B F2	12	0.92
39001-02-0	OCDF	72		12	0.19
41903-57-5	Total TCDD	2300	G	1.9	1.9
30402-14-3	Total TCDF	13000	G	5.8	5.8
36088-22-9	Total PeCDD	22	q	6.2	0.56
30402-15-4	Total PeCDF	720	q	6.2	1.9
34465-46-8	Total HxCDD	22	q	6.2	0.20
55684-94-1	Total HxCDF	740		6.2	1.5
37871-00-4	Total HpCDD	120	B	6.2	0.31
38998-75-3	Total HpCDF	230		6.2	0.51

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (0-2)
Lab Sample ID: 320-76769-27
Matrix: Sediment
Lab File ID: 17au21dfs1_40.d
Analysis Method: 1613B
Date Collected: 07/22/2021 15:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.65(g)
Date Analyzed: 08/18/2021 20:24
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	52		25-164
89059-46-1	13C-2,3,7,8-TCDF	54		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	50		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	50		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	52		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	67		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	58		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	58		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	57		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	63		26-138
114423-97-1	13C-OCDD	64		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	70		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d
Lims ID: 320-76769-A-27-A
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: Client
Inject. Date: 18-Aug-2021 20:24:00 ALS Bottle#: 0 Worklist Smp#: 37
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:21:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:05:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.426	1301116	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.471	941088	0.88	1.3459	53.7	53.7	0.4287	0.4287	53.74	
2,3,7,8-TCDF	20.488	30443030	0.82	1.0802	2994.7	2994.7	2.365	2.365		E
A Non-2,3,7,8-sub-TCDF	19.878	21196894	0.81	1.0802	2085.2	2085.2	2.365	1166.3		Ma
S Total TCDF					5079.9	5079.9	2.365	2.365		
D 13C-2,3,7,8-TCDD	21.788	625368	0.89	0.9317	51.6	51.6	0.7450	0.7450	51.59	
2,3,7,8-TCDD	21.831	5677867	0.79	1.0753	844.3	844.3	0.7530	0.7530		E
$ 37Cl4-2,3,7,8-TCDD	21.831	368866		1.0083	28.1	28.1	0.1919	0.1919	70.29	
A Non-2,3,7,8-sub-TCDD	20.707	507578	0.79	1.0753	75.5	75.5	0.7530	65.2		
S Total TCDD					919.8	919.8	0.7530	0.7530		
D 13C-1,2,3,7,8-PeCDF	27.283	736560	1.59	1.1405	49.6	49.6	0.1198	0.1198	49.64	
1,2,3,7,8-PeCDF	27.308	975479	1.60	1.0543	125.6	125.6	0.7607	0.7607		
D 13C-2,3,4,7,8-PeCDF	28.790	767064	1.65	1.1253	52.4	52.4	0.1214	0.1214	52.39	
2,3,4,7,8-PeCDF	28.815	496557	1.61	1.0079	64.2	64.2	0.8094	0.8094		M
A F1 PeCDFs	24.648	7307	1.65	1.0311	0.9426	0.9426	0.009048	0.9426		
A Non-2,3,7,8-sub-PeCDF	28.125	769224	1.55	1.0311	99.6	99.2	0.7844	43.6		RQ
S Total PeCDF					290.4	290.0	0.7850	0.7850		RQ
D 13C-1,2,3,7,8-PeCDD	29.607	462069	1.66	0.7165	49.6	49.6	0.1050	0.1050	49.57	
1,2,3,7,8-PeCDD	29.615	40111	1.69	1.0465	8.295	8.295	0.2287	0.2287		
A Non-2,3,7,8-sub-PeCDD	28.489	2777	1.55	1.0465	7.933	0.5743	0.2287	0.5743		RQ
S Total PeCDD					16.2	8.869	0.2287	0.2287		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.916	666132	0.53	0.9648	67.2	67.2	0.1965	0.1965	67.24	
1,2,3,4,7,8-HxCDF	34.941	1552158	1.27	1.1474	203.1	203.1	0.5953	0.5953		
D 13C-1,2,3,6,7,8-HxCDF	35.084	641999	0.54	1.0708	58.4	58.4	0.1771	0.1771	58.39	
1,2,3,6,7,8-HxCDF	35.093	408712	1.30	1.2178	52.3	52.3	0.6420	0.6420		
D 13C-2,3,4,6,7,8-HxCDF	35.901	577685	0.54	1.0413	54.0	54.0	0.1821	0.1821	54.03	
2,3,4,6,7,8-HxCDF	35.918	45419	1.26	1.2145	6.474	6.474	0.6193	0.6193		
D 13C-1,2,3,7,8,9-HxCDF	36.802	530409	0.52	0.9731	53.1	53.1	0.1948	0.1948	53.08	
1,2,3,7,8,9-HxCDF	36.811	21474	1.25	1.2401	3.265	3.265	0.6283	0.6283		
A Non-2,3,7,8-sub-HxCDF	35.028	254344	1.30	1.2049	34.9	34.9	0.6198	13.1		
S Total HxCDF					300.0	300.0	0.6212	0.6212		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.600	1026842	1.23	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.112	455466	1.19	0.7587	58.5	58.5	0.1394	0.1394	58.46	
1,2,3,4,7,8-HxCDD	36.129	1871	1.27	1.0608	0.3872	0.3872	0.0783	0.0783		
D 13C-1,2,3,6,7,8-HxCDD	36.230	476020	1.36	0.8593	54.0	54.0	0.1230	0.1230	53.95	
1,2,3,6,7,8-HxCDD	36.263	3468	1.25	0.9933	0.7334	0.7334	0.0842	0.0842		
1,2,3,7,8,9-HxCDD	36.600	4226	1.05	1.1094	0.8179	0.8179	0.0751	0.0751		
A Non-2,3,7,8-sub-HxCDD	35.394	33314	1.24	1.0545	6.910	6.783	0.0791	3.281		RQ
S Total HxCDD					8.849	8.722	0.0792	0.0792		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.615	433264	0.45	0.7359	57.3	57.3	0.1649	0.1649	57.33	
1,2,3,4,6,7,8-HpCDF	38.624	369375	1.05	1.4421	59.1	59.1	0.2056	0.2056		
D 13C-1,2,3,4,7,8,9-HpCDF	39.870	441258	0.46	0.6854	62.7	62.7	0.1770	0.1770	62.70	
1,2,3,4,7,8,9-HpCDF	39.878	107916	1.07	1.3092	18.7	18.7	0.2045	0.2045		
A Non-2,3,7,8-sub-HpCDF	39.258	82520	0.98	1.3756	13.7	13.7	0.2045	13.7		
S Total HpCDF					91.5	91.5	0.2050	0.2050		
D 13C-1,2,3,4,6,7,8-HpCDD	39.558	401342	1.09	0.6745	57.9	57.9	0.1058	0.1058	57.94	
1,2,3,4,6,7,8-HpCDD	39.567	87774	1.07	1.0503	20.8	20.8	0.1248	0.1248		
A Non-2,3,7,8-sub-HpCDD	39.258	124862	1.05	1.0503	29.6	29.6	0.1248	29.6		
S Total HpCDD					50.4	50.4	0.1248	0.1248		
D 13C-OCDD	42.055	713480	0.90	0.5446	127.6	127.6	0.1679	0.1679	63.79	
OCDF	42.156	137051	0.95	1.3168	29.2	29.2	0.0770	0.0770		
OCDD	42.063	1773699	0.90	1.0620	468.2	468.2	0.3705	0.3705		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 20-Aug-2021 09:21:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d
Lims ID: 320-76769-A-27-A
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: Client
Inject. Date: 18-Aug-2021 20:24:00 ALS Bottle#: 0 Worklist Smp#: 37
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:21:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:05:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.426	21.427	0		582948	79937	162	405	493		
333.9338	21.426	21.427	0		718168	99430	336	840	296	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.471	20.401	4	0.955	440933	65184	197	492	331		
317.9389	20.462	20.401	4	0.955	500155	71024	217	542	327	0.88(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.488	20.436	3	1.001	13682559	1831332	602	1505	3042		
305.8987	20.488	20.436	3	1.001	16760471	2235895	790	1975	2830	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											Ma
303.9016	17.502	19.878	-142	0.855	80215	12021	602	1505	20		
305.8987	17.493	19.878	-143	0.855	101802	15700	790	1975	20	0.79(0.65-0.89)	
303.9016	17.958	19.878	-115	0.877	273015	44104	602	1505	73		
305.8987	17.958	19.878	-115	0.877	339755	53804	790	1975	68	0.80(0.65-0.89)	
303.9016	18.440	19.878	-86	0.901	424150	53392	602	1505	89		
305.8987	18.440	19.878	-86	0.901	519071	67016	790	1975	85	0.82(0.65-0.89)	
303.9016	18.862	19.878	-61	0.921	374330	44513	602	1505	74		M
305.8987	18.862	19.878	-61	0.921	483777	54539	790	1975	69	0.77(0.65-0.89)	
303.9016	19.258	19.878	-37	0.941	722535	93163	602	1505	155		
305.8987	19.249	19.878	-38	0.940	886212	117152	790	1975	148	0.82(0.65-0.89)	M
303.9016	19.757	19.878	-7	0.965	5300030	768197	602	1505	1276		
305.8987	19.757	19.878	-7	0.965	6556198	930812	790	1975	1178	0.81(0.65-0.89)	
303.9016	20.153	19.878	16	0.984	197402	25224	602	1505	42		
305.8987	20.170	19.878	17	0.985	241908	30377	790	1975	38	0.82(0.65-0.89)	
303.9016	21.271	19.878	83	1.039	924206	125521	602	1505	209		
305.8987	21.271	19.878	83	1.039	1127440	151026	790	1975	191	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.693	19.878	109	1.060	309072	35813	602	1505	59		
305.8987	21.693	19.878	109	1.060	374630	44530	790	1975	56	0.83(0.65-0.89)	
303.9016	23.655	19.878	226	1.156	868434	152513	602	1505	253		
305.8987	23.655	19.878	226	1.156	1092712	191359	790	1975	242	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.788	21.743	3	1.017	293782	40478	162	405	250		
333.9338	21.788	21.743	3	1.017	331586	41892	336	840	125	0.89(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	21.831	21.777	3	1.002	2513752	314862	140	350	2249		
321.8936	21.831	21.777	3	1.002	3164115	400783	127	317	3156	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.831	21.849	-1	1.019	368866	48303	139	347	348		
A Non-2,3,7,8-sub-TCDD											
319.8965	19.757	20.707	-57	0.907	8737	1061	140	350	8		
321.8936	19.765	20.707	-56	0.907	10744	1339	127	317	11	0.81(0.65-0.89)	
319.8965	21.641	20.707	56	0.993	20841	3876	140	350	28		
321.8936	21.632	20.707	55	0.993	28603	5230	127	317	41	0.73(0.65-0.89)	
319.8965	22.493	20.707	107	1.032	194496	22901	140	350	164		
321.8936	22.502	20.707	107	1.033	244157	30394	127	317	239	0.80(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.283	27.288	0	1.273	452516	64561	56	140	1153		
353.8970	27.283	27.288	0	1.273	284044	43553	42	105	1037	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.308	27.313	0	1.001	599577	85951	212	530	405		
341.8567	27.317	27.313	0	1.001	375902	52301	135	337	387	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.790	28.795	0	1.344	478059	67468	56	140	1205		
353.8970	28.798	28.795	0	1.344	289005	38811	42	105	924	1.65(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	28.815	28.820	0	1.001	306178	41954	212	530	198		
341.8567	28.807	28.820	-1	1.001	190379	25631	135	337	190	1.61(1.32-1.78)	M
A F1 PeCDFs											
339.8597	24.077	24.648	-34	0.882	4551	979	1	2	979		
341.8567	24.120	24.648	-32	0.884	2756	455	3	7	152	1.65(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.834	28.125	-137	0.947	208917	32615	212	530	154		
341.8567	25.826	28.125	-138	0.947	128947	20436	135	337	151	1.62(1.32-1.78)	
339.8597	26.778	28.125	-81	0.981	18353	2197	212	530	10		
	Empc Correction				15544	2033	212	530	10		
341.8567	26.736	28.125	-83	0.980	10029	1312	135	337	10	1.83(1.32-1.78)	
339.8597	27.157	28.125	-58	0.995	21410	5625	212	530	27		
341.8567	27.165	28.125	-57	0.996	14228	3785	135	337	28	1.50(1.32-1.78)	
339.8597	27.881	28.125	-15	1.022	130181	19039	212	530	90		
341.8567	27.881	28.125	-15	1.022	80253	11502	135	337	85	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	29.135	28.125	60	1.068	77028	9512	212	530	45		
341.8567	29.152	28.125	61	1.069	46856	5930	135	337	44	1.64(1.32-1.78)	
339.8597	30.879	28.125	165	1.132	22031	2581	212	530	12		
341.8567	30.845	28.125	163	1.131	13800	1921	135	337	14	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.607	29.612	0	1.382	288234	38523	34	85	1133		
369.8919	29.598	29.612	-1	1.381	173835	22895	20	50	1145	1.66(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.615	29.637	-1	1.000	25180	3528	21	52	168		
357.8516	29.607	29.637	-2	1.000	14931	1982	38	95	52	1.69(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.104	28.489	-143	0.882	1688	289	21	52	14		
357.8516	26.146	28.489	-140	0.883	36674	6151	38	95	162	0.05(1.32-1.78)	
	Empc Correction				1089	186	38	95	5		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.916	34.942	-2	0.954	230539	46571	53	132	879		
385.8610	34.924	34.942	-1	0.954	435593	85189	117	292	728	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.941	34.959	-1	1.001	868969	160284	170	425	943		
375.8178	34.933	34.959	-2	1.000	683189	124711	190	475	656	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.084	35.111	-2	0.959	224775	40046	53	132	756		
385.8610	35.084	35.111	-2	0.959	417224	75063	117	292	642	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.093	35.119	-2	1.000	230648	41026	170	425	241		
375.8178	35.093	35.119	-2	1.000	178064	31423	190	475	165	1.30(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.901	35.919	-1	0.981	203319	41186	53	132	777		
385.8610	35.893	35.919	-2	0.981	374366	78481	117	292	671	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.918	35.936	-1	1.000	25305	5026	170	425	30		
375.8178	35.910	35.936	-2	1.000	20114	3740	190	475	20	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.802	36.811	-1	1.006	181550	41081	53	132	775		
385.8610	36.802	36.811	-1	1.006	348859	74422	117	292	636	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.811	36.828	-1	1.000	11916	3306	170	425	19		
375.8178	36.811	36.828	-1	1.000	9558	2559	190	475	13	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	33.442	35.028	-95	0.958	53619	7842	170	425	46		
375.8178	33.442	35.028	-95	0.958	41372	6183	190	475	33	1.30(1.05-1.43)	
373.8208	34.318	35.028	-43	0.983	23190	4015	170	425	24		
375.8178	34.309	35.028	-43	0.983	18427	3337	190	475	18	1.26(1.05-1.43)	
373.8208	35.792	35.028	46	1.025	17044	3574	170	425	21		
375.8178	35.809	35.028	47	1.026	12962	2691	190	475	14	1.31(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	36.912	35.028	113	1.057	49801	10765	170	425	63		
375.8178	36.912	35.028	113	1.057	37929	8580	190	475	45	1.31(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.600	36.609	-1		566622	121136	45	112	2692		
403.8529	36.600	36.609	-1		460220	103027	50	125	2061	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.112	36.129	-1	0.987	247871	54806	45	112	1218		
403.8529	36.112	36.129	-1	0.987	207595	43918	50	125	878	1.19(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.129	36.146	-1	1.000	1048	363	13	32	28		
391.8127	36.129	36.146	-1	1.000	823	224	20	50	11	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.230	36.247	-1	0.990	274374	54354	45	112	1208		
403.8529	36.230	36.247	-1	0.990	201646	43642	50	125	873	1.36(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.263	36.264	0	1.001	1927	425	13	32	33		
391.8127	36.230	36.264	-2	1.000	1541	355	20	50	18	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.600	36.626	-2	1.014	2166	490	13	32	38		
391.8127	36.600	36.626	-2	1.014	2060	404	20	50	20	1.05(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	34.234	35.394	-69	0.945	8412	1473	13	32	113		
391.8127	34.234	35.394	-69	0.945	7701	1198	20	50	60	1.09(1.05-1.43)	
389.8158	34.992	35.394	-24	0.966	1713	341	13	32	26		
391.8127	35.000	35.394	-24	0.966	1549	344	20	50	17	1.11(1.05-1.43)	
389.8158	35.362	35.394	-2	0.976	7342	1226	13	32	94		
391.8127	35.345	35.394	-3	0.976	5756	1165	20	50	58	1.28(1.05-1.43)	
389.8158	35.565	35.394	10	0.982	466	138	13	32	11		
391.8127	35.522	35.394	8	0.980	1000	231	20	50	12	0.47(1.05-1.43)	
	Empc Correction				375	111	20	50	6		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.615	38.626	-1	1.055	135426	32509	37	92	879		
419.8220	38.615	38.626	-1	1.055	297838	75422	72	180	1048	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.624	38.630	0	1.000	189561	47345	70	175	676		
409.7788	38.624	38.630	0	1.000	179814	44836	58	145	773	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.870	39.880	-1	1.089	139120	38906	37	92	1052		
419.8220	39.870	39.880	-1	1.089	302138	80643	72	180	1120	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.878	39.885	0	1.000	55900	14429	70	175	206		
409.7788	39.878	39.885	0	1.000	52016	14355	58	145	248	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.986	39.258	-16	1.010	40941	10258	70	175	147		
409.7788	38.986	39.258	-16	1.010	41579	9997	58	145	172	0.98(0.88-1.20)	

Report Date: 20-Aug-2021 09:21:03 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.558	39.569	-1	1.081	209002	59596	32	80	1862		
437.8140	39.558	39.569	-1	1.081	192340	52539	32	80	1642	1.09(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.567	39.582	-1	1.000	45287	11851	28	70	423		
425.7737	39.567	39.582	-1	1.000	42487	11421	31	77	368	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.927	39.258	-20	0.984	64089	15793	28	70	564		
425.7737	38.927	39.258	-20	0.984	60773	15744	31	77	508	1.05(0.88-1.20)	
13C-OCDD											
469.7780	42.055	42.072	-1	1.149	338450	77351	54	135	1432		
471.7750	42.055	42.072	-1	1.149	375030	90400	28	70	3229	0.90(0.76-1.02)	
OCDF											
441.7428	42.156	42.165	-1	1.002	66943	15251	16	40	953		
443.7399	42.156	42.165	-1	1.002	70108	16754	18	45	931	0.95(0.76-1.02)	
OCDD											
457.7377	42.063	42.081	-1	1.000	841707	195843	62	155	3159		
459.7348	42.063	42.081	-1	1.000	931992	217991	70	175	3114	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Lims ID:	320-76769-A-27-A		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 20:24:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	37

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	941088	136208

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	941088	136208

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.502	80215	12021	101802	15700	17.9	0.79	
17.958	273015	44104	339755	53804	60.3	0.80	
18.440	424150	53392	519071	67016	92.8	0.82	
18.862	374330	44513	483777	54539	84.4	0.77	Ma
19.258	722535	93163	886212	117152	158.3	0.82	M
19.757	5300030	768197	6556198	930812	1166.3	0.81	
20.153	197402	25224	241908	30377	43.2	0.82	
21.271	924206	125521	1127440	151026	201.8	0.82	
21.693	309072	35813	374630	44530	67.3	0.83	
23.655	868434	152513	1092712	191359	192.9	0.79	
Signal Totals:	9473389	1354461	11723505	1656315			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	21196894	3010776				0.81	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2085.2 = (21196894 * 100.000) / (941088 * 1.080)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Lims ID:	320-76769-A-27-A		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 20:24:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	37

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	625368	82370

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	625368	82370

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.757	8737	1061	10744	1339	2.90	0.81	
21.641	20841	3876	28603	5230	7.35	0.73	
22.493	194496	22901	244157	30394	65.2	0.80	
Signal Totals:							
	224074	27838	283504	36963			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	507578	64801				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 75.478 = (507578 * 100.000) / (625368 * 1.075)

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Lims ID:	320-76769-A-27-A		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 20:24:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	37

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	736560	108114
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	767064	106279

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	751812	107196

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.077	4551	979	2756	455	0.9426	1.65	
Signal Totals:							
	4551	979	2756	455			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7307	1434				1.65	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.9426 = (7307 * 100.000) / (751812 * 1.031)

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Lims ID:	320-76769-A-27-A		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 20:24:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	37

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	736560	108114
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	767064	106279

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	751812	107196

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.834	208917	32615	128947	20436	43.6	1.62	
26.778	18353	2197	10029	1312	3.66	1.83	RQ
26.778	15544	2033	10029	1312	3.30		Empc Correction
27.157	21410	5625	14228	3785	4.60	1.50	
27.881	130181	19039	80253	11502	27.1	1.62	
29.135	77028	9512	46856	5930	16.0	1.64	
30.879	22031	2581	13800	1921	4.62	1.60	
Signal Totals:							
	475111	71405	294113	44886			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	772033	116455				1.62	RQ
	769224	116291					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 99.596 = (772033 * 100.000) / (751812 * 1.031)

Empc Amount: 99.234 = (769224 * 100.000) / (751812 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Lims ID:	320-76769-A-27-A		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 20:24:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	37

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	462069	61418

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	462069	61418

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.104	1688	289	36674	6151	7.93	0.05	RQ
26.104	1688	289	1089	186	0.5743		Empc Correction
Signal Totals:							
	1688	289	1089	186			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	38362	6440				0.05	RQ
	2777	475					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 7.933 = (38362 * 100.000) / (462069 * 1.046)

Empc Amount: 0.5743 = (2777 * 100.000) / (462069 * 1.046)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Lims ID:	320-76769-A-27-A		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 20:24:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	37

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	666132	131760
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	641999	115109
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	577685	119667
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	530409	115503

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	604056	120509

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.442	53619	7842	41372	6183	13.1	1.30	
34.318	23190	4015	18427	3337	5.72	1.26	
35.792	17044	3574	12962	2691	4.12	1.31	
36.912	49801	10765	37929	8580	12.1	1.31	
Signal Totals:							
	143654	26196	110690	20791			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	254344	46987				1.30	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 34.944 = (254344 * 100.000) / (604056 * 1.205)

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Lims ID:	320-76769-A-27-A		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 20:24:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	37

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	455466	98724
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	476020	97996
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	465743	98360

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.234	8412	1473	7701	1198	3.28	1.09	
34.992	1713	341	1549	344	0.6642	1.11	
35.362	7342	1226	5756	1165	2.67	1.28	
35.565	466	138	1000	231	0.2985	0.47	RQ
35.565	466	138	375	111	0.1712		Empc Correction
Signal Totals:							
	17933	3178	15381	2818			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	33939	6116				1.12	RQ
	33314	5996					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 6.910 = (33939 * 100.000) / (465743 * 1.055)

Empc Amount: 6.783 = (33314 * 100.000) / (465743 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Lims ID:	320-76769-A-27-A		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 20:24:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	37

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	433264	107931
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	441258	119549

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	437261	113740

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.986	40941	10258	41579	9997	13.7	0.98	
Signal Totals:							
	40941	10258	41579	9997			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	82520	20255				0.98	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.719 = (82520 * 100.000) / (437261 * 1.376)

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Lims ID:	320-76769-A-27-A		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 20:24:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	37

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	401342	112135

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	401342	112135

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.927	64089	15793	60773	15744	29.6	1.05	
Signal Totals:							
	64089	15793	60773	15744			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	124862	31537				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 29.621 = (124862 * 100.000) / (401342 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d				
Injection Date:	18-Aug-2021 20:24:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-A	Lab Sample ID:	320-76769-27		
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	37
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.13- 23.63)

Signal: 1

Processing Integration Results

RT = 18.862 Area = 374330

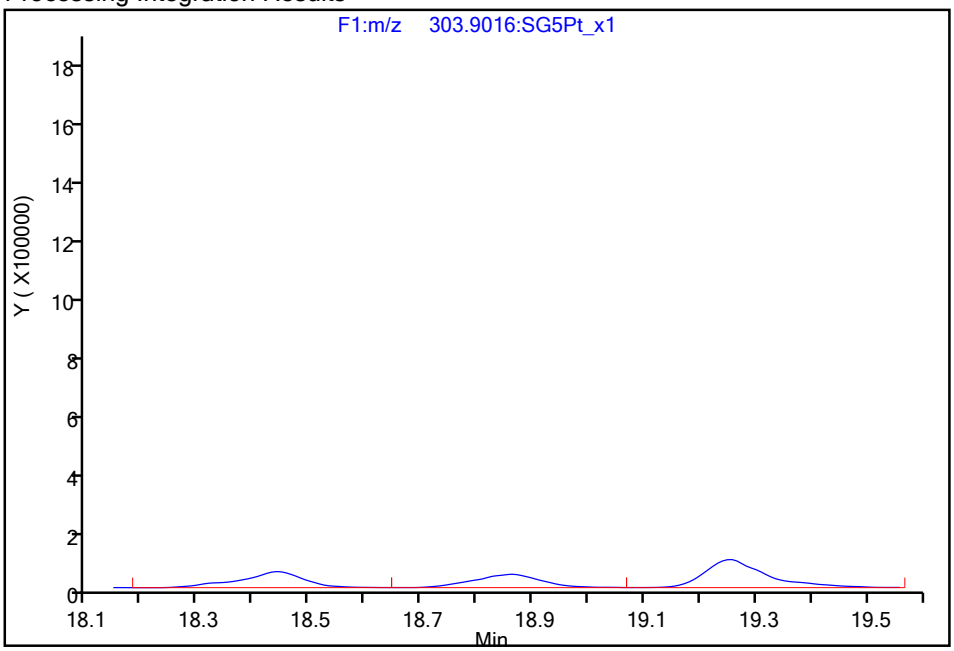

Manual Integration Results

RT = 18.862 Area = 374330

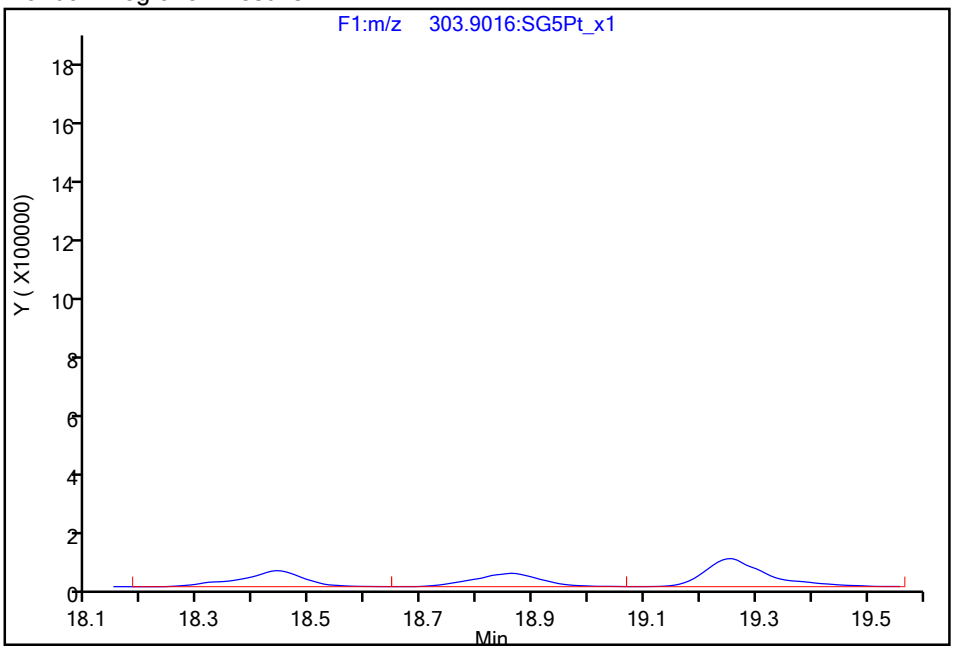

Reviewer: dadunj, 20-Aug-2021 09:18:23

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d				
Injection Date:	18-Aug-2021 20:24:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-A	Lab Sample ID:	320-76769-27		
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	37
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (16.13- 23.63)

Signal: 2

Processing Integration Results

RT = 19.240 Area = 334050

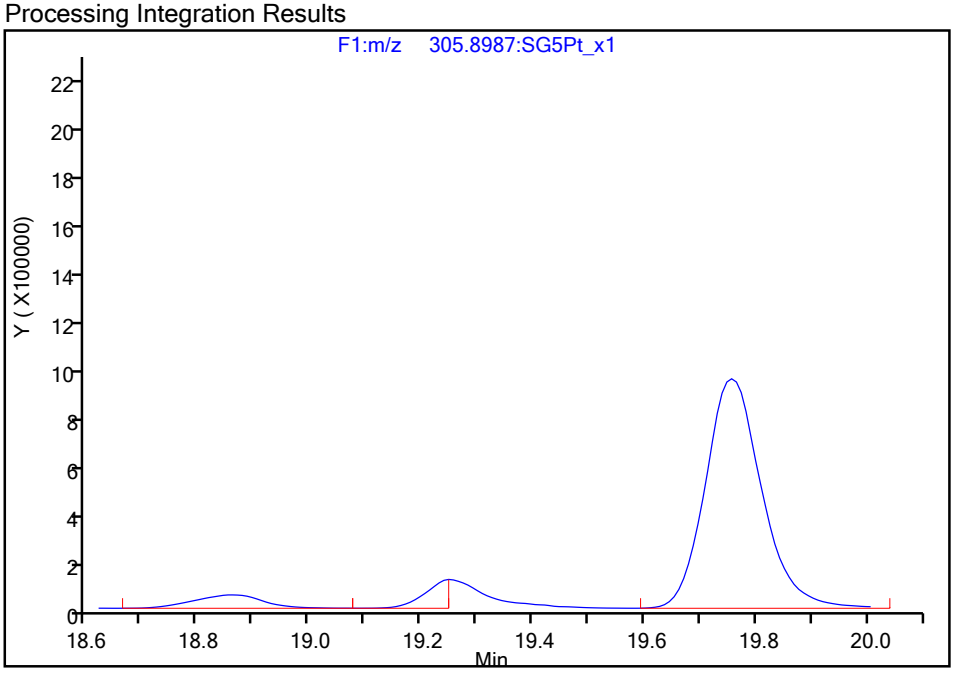

Manual Integration Results

RT = 19.249 Area = 886212 M

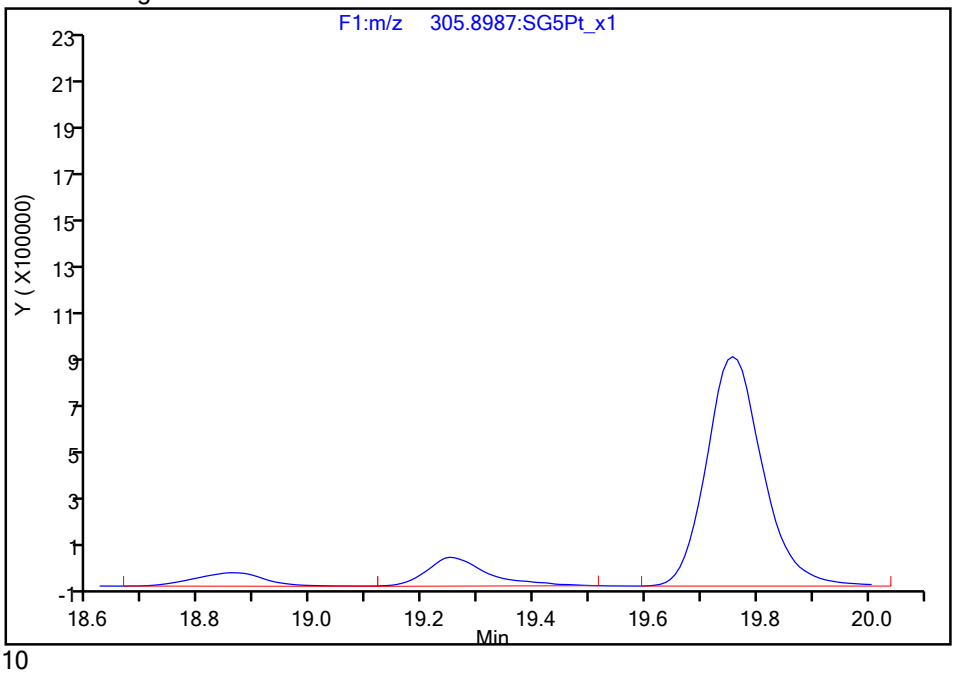

Reviewer: dadunj, 20-Aug-2021 09:18:10

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d				
Injection Date:	18-Aug-2021 20:24:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-A	Lab Sample ID:	320-76769-27		
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	37
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 28.81
Area: 187181
Amount: 63.816242
Amount Units: pg/ul

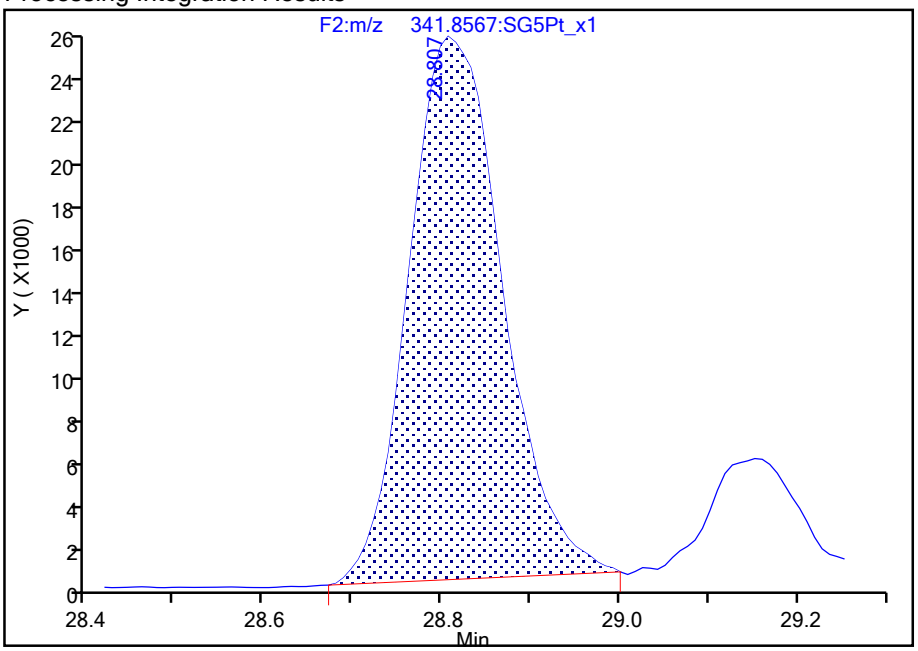

Manual Integration Results

RT: 28.81
Area: 190379
Amount: 64.229905
Amount Units: pg/ul

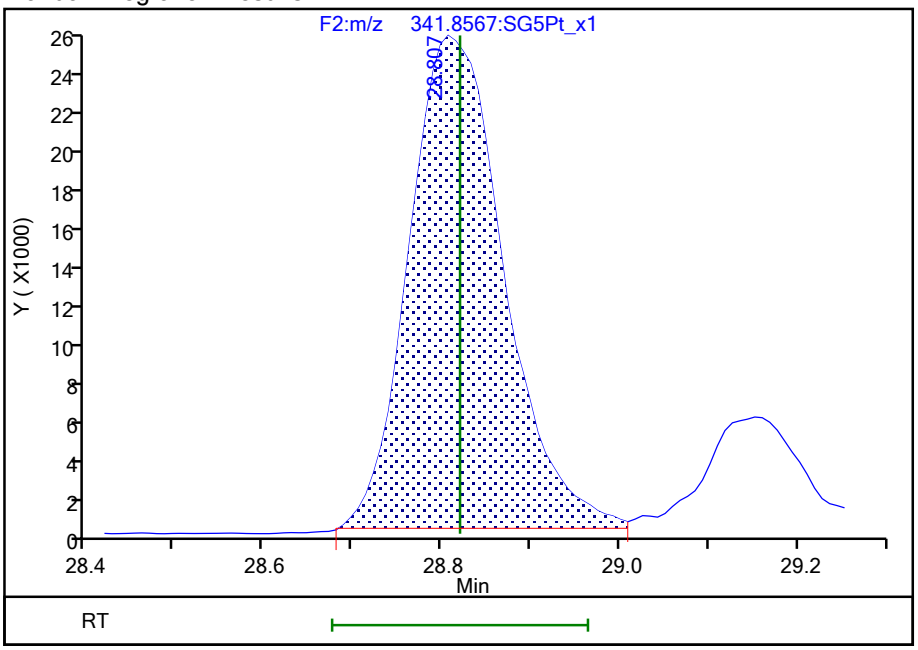

Reviewer: dadunj, 20-Aug-2021 09:19:29

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Injection Date:	18-Aug-2021 20:24:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	37
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

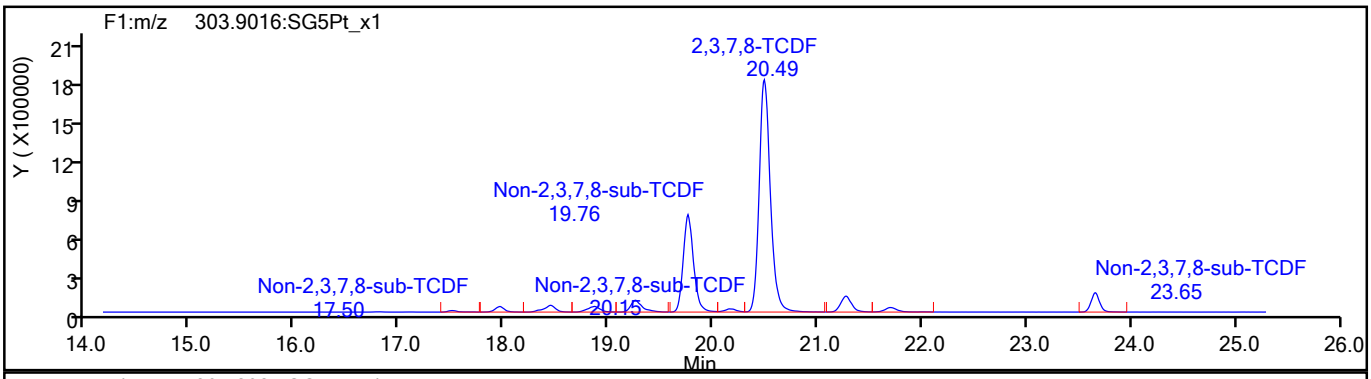

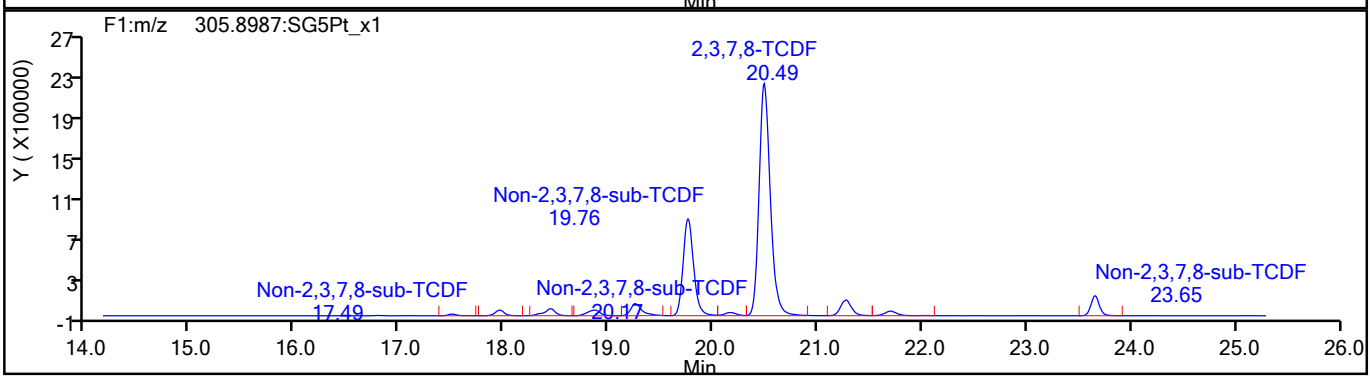

TCDF Standards

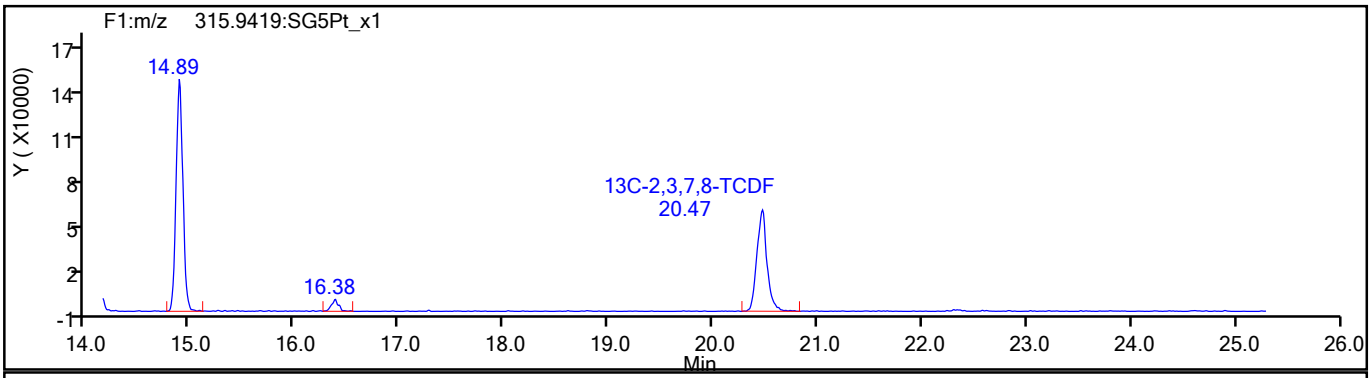

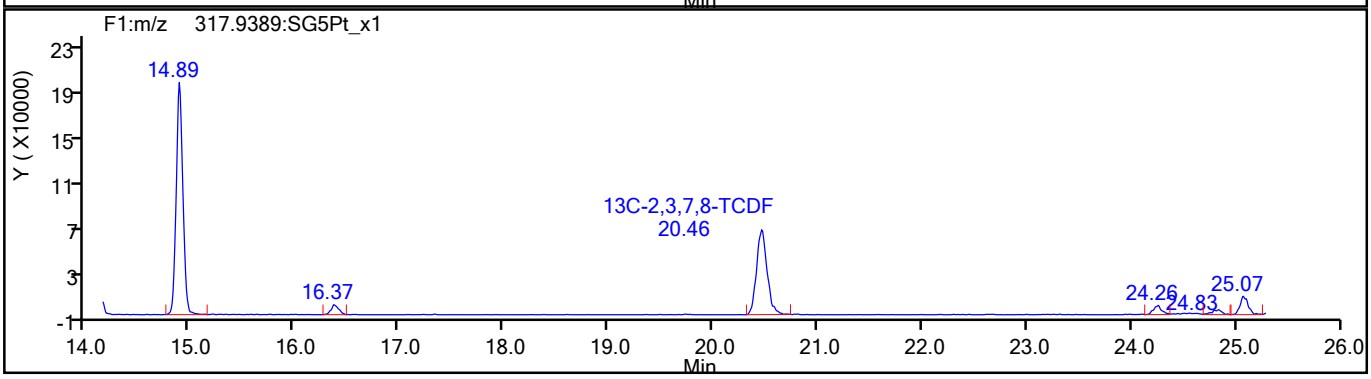

775581

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Injection Date:	18-Aug-2021 20:24:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	37
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

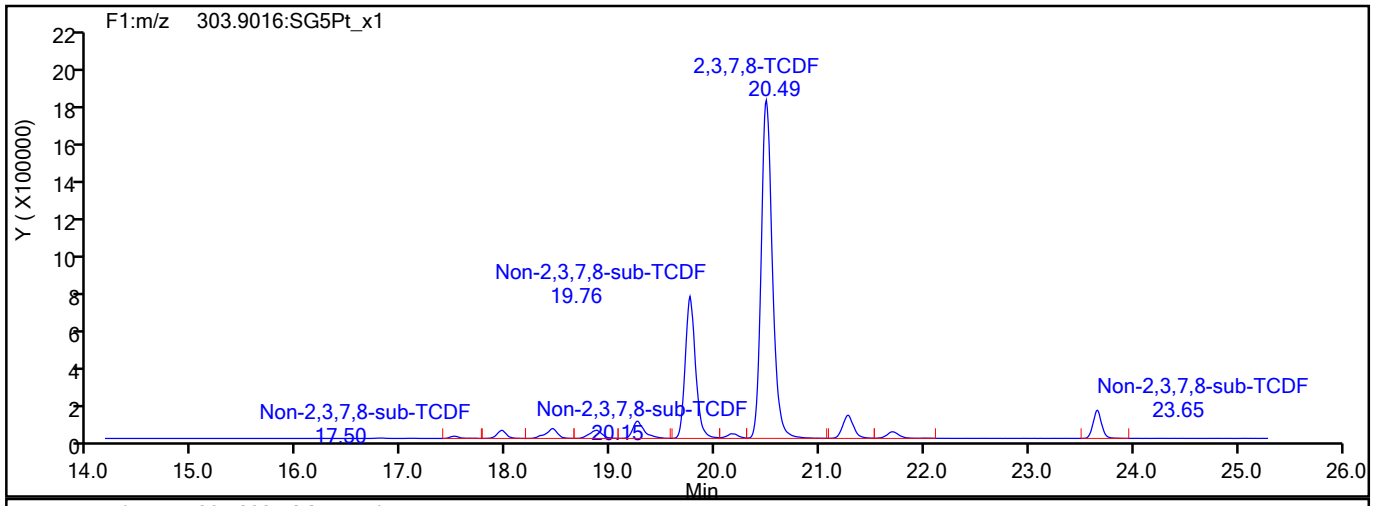

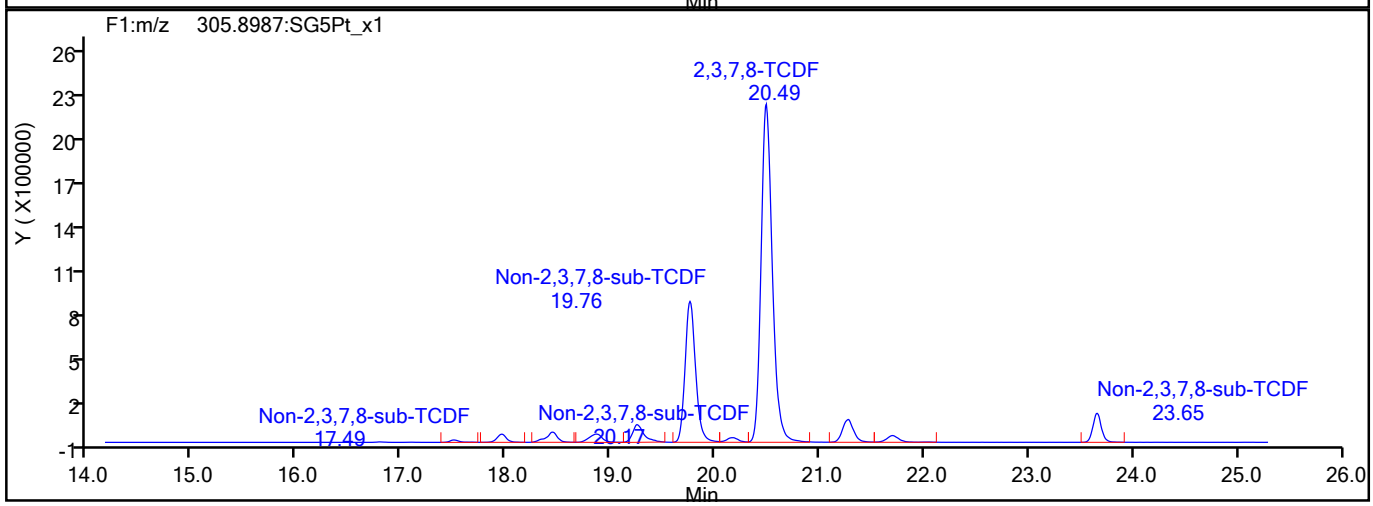

TCDF Interference Mass

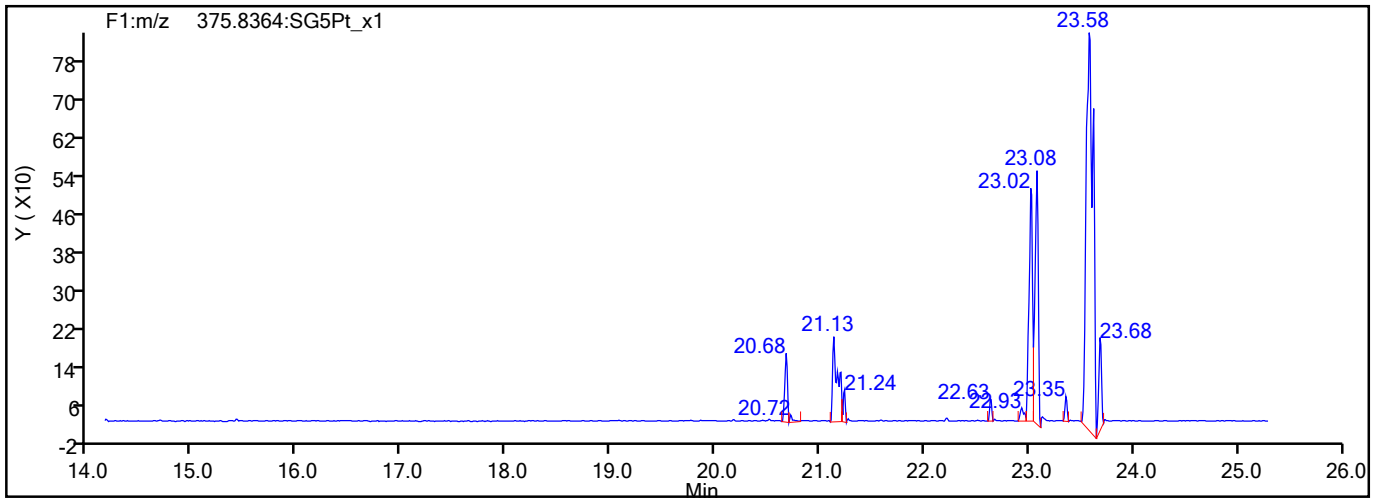

775582

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Injection Date:	18-Aug-2021 20:24:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	37
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

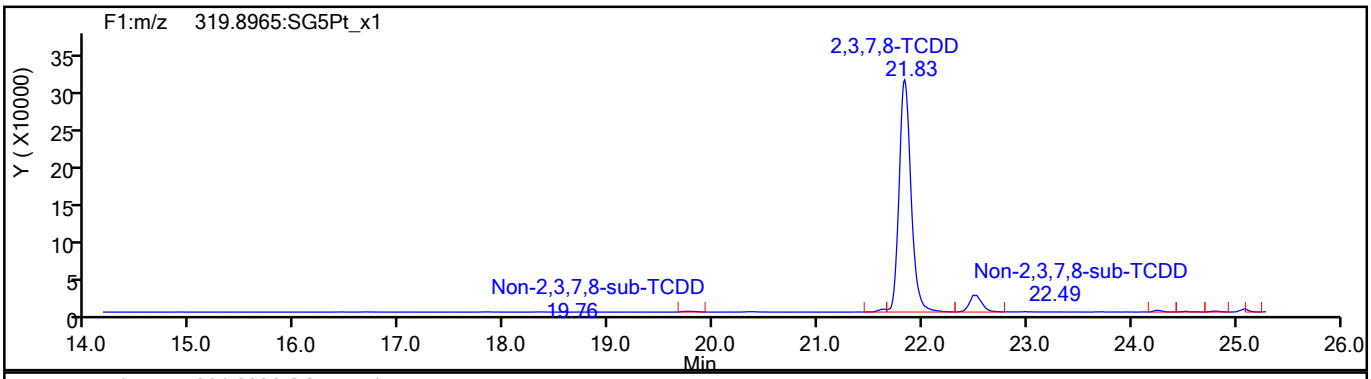

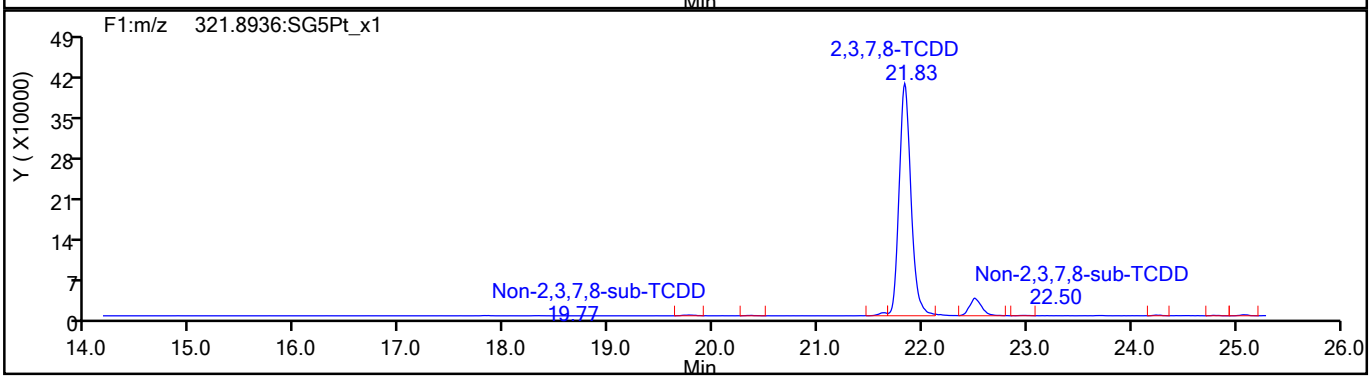

TCDD Standards

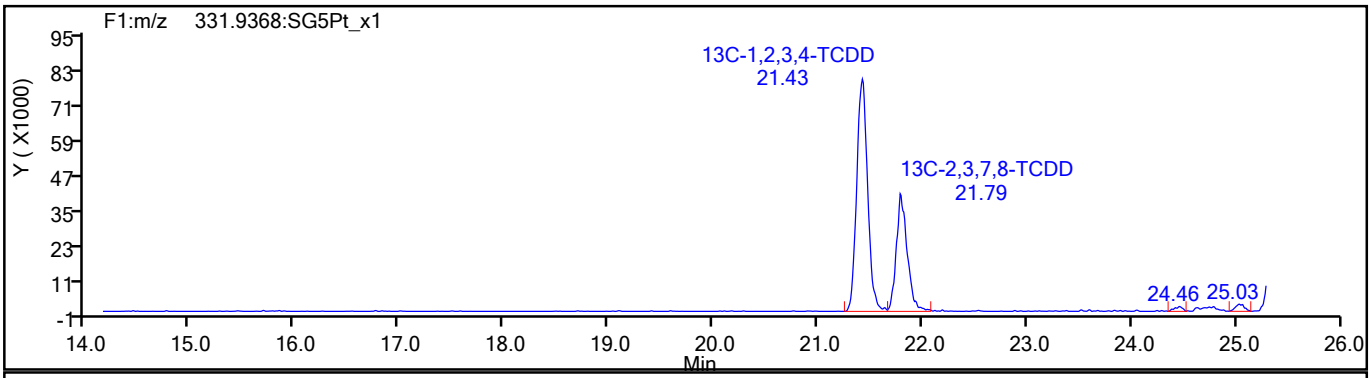

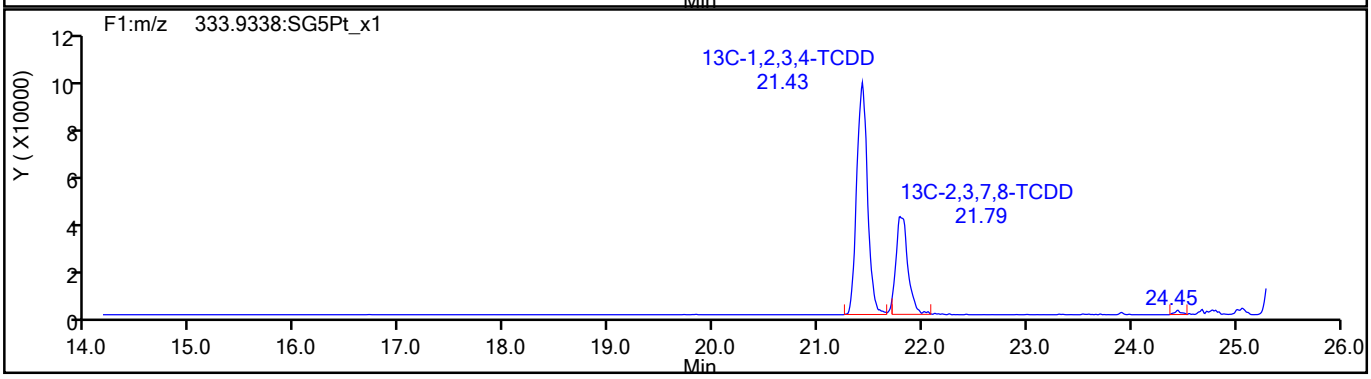

775583

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Injection Date:	18-Aug-2021 20:24:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	37
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

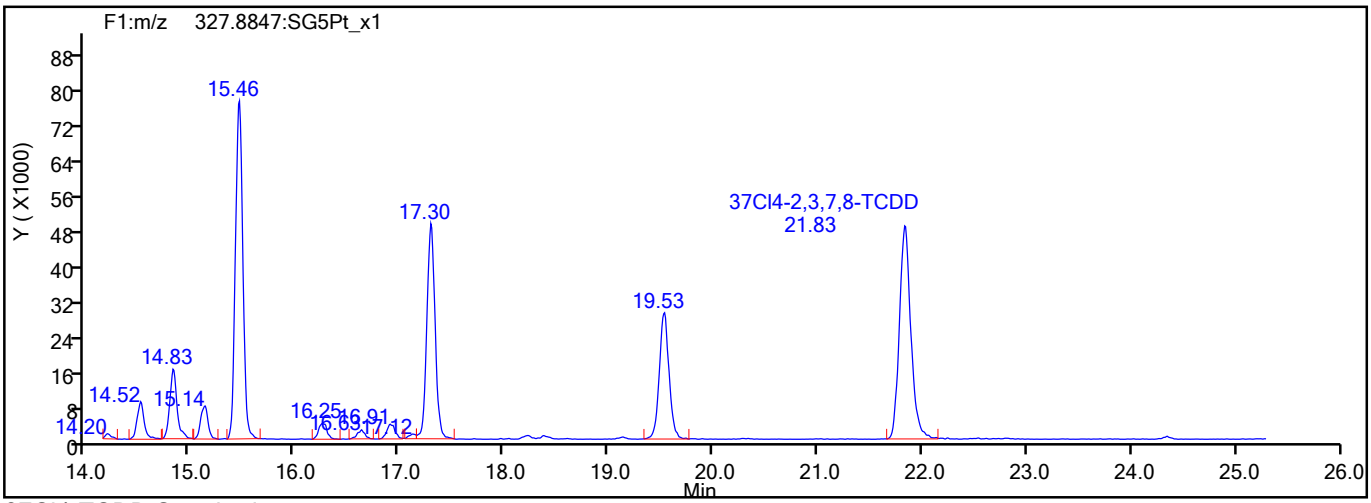

37Cl4-TCDD Standards

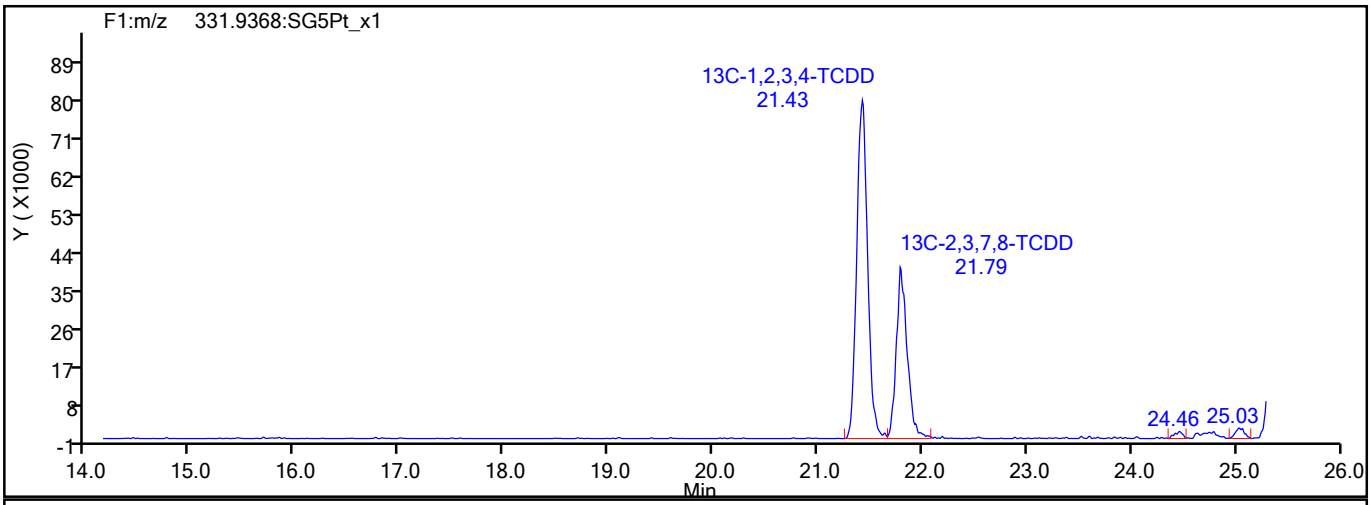

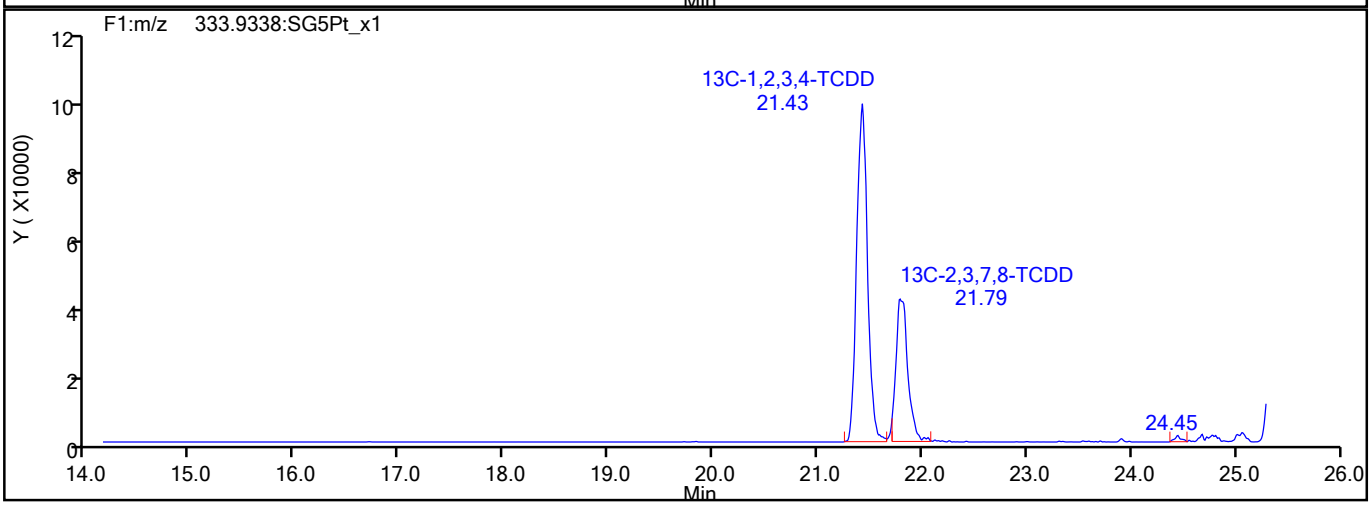

775584

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Injection Date:	18-Aug-2021 20:24:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	37
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

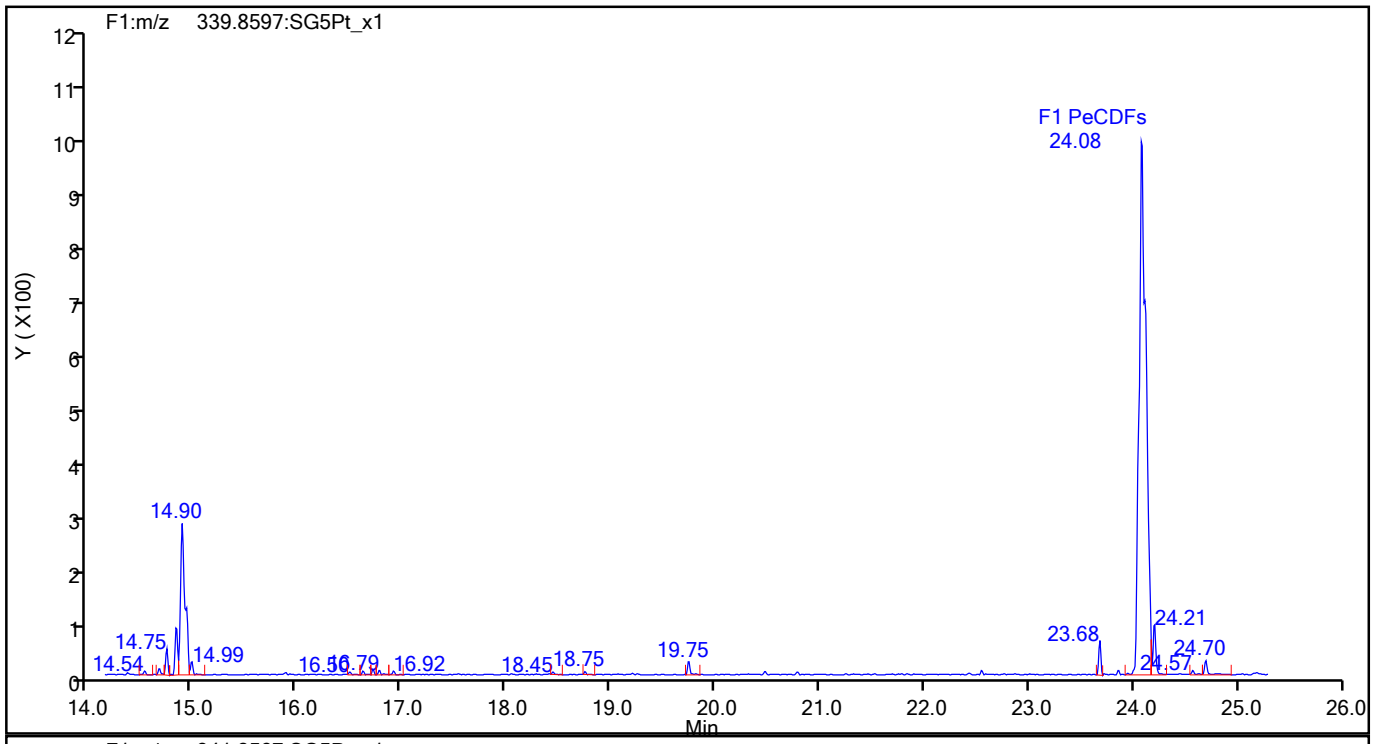

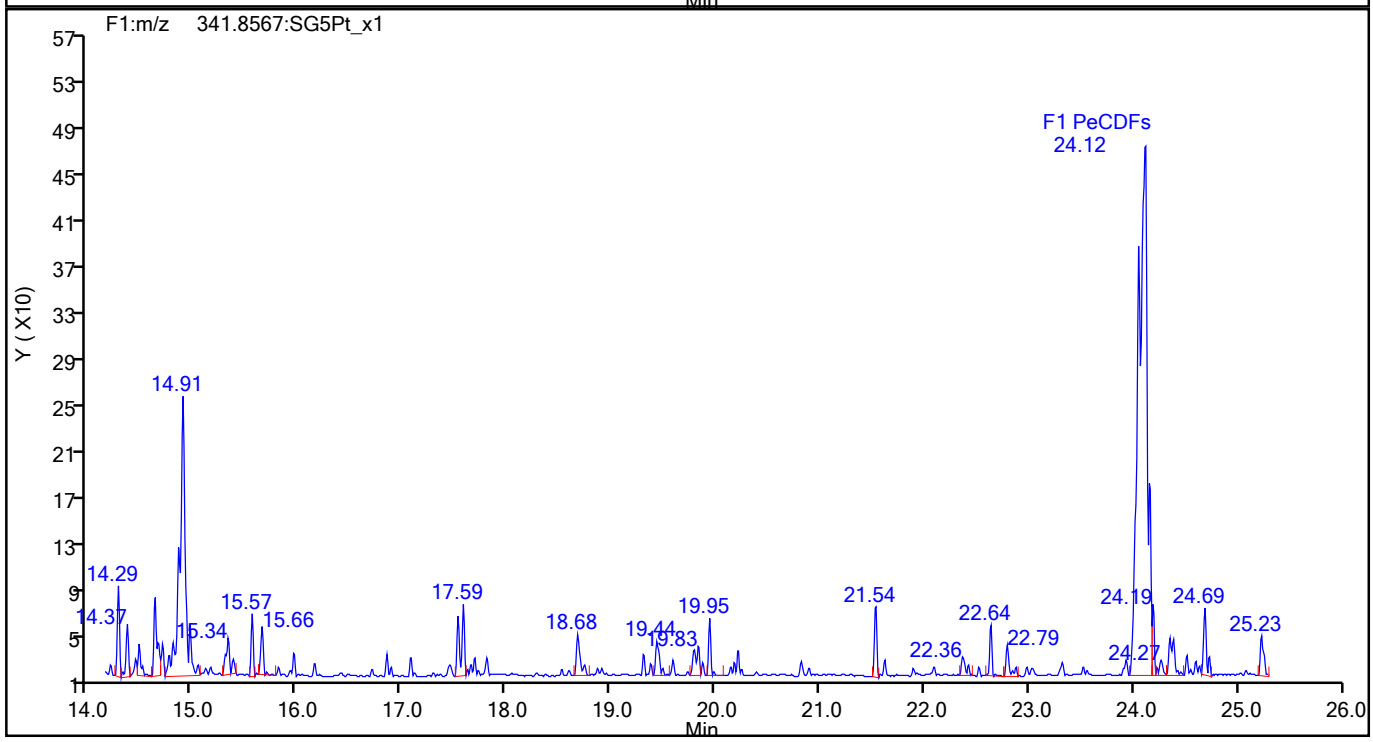

775585

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	37
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

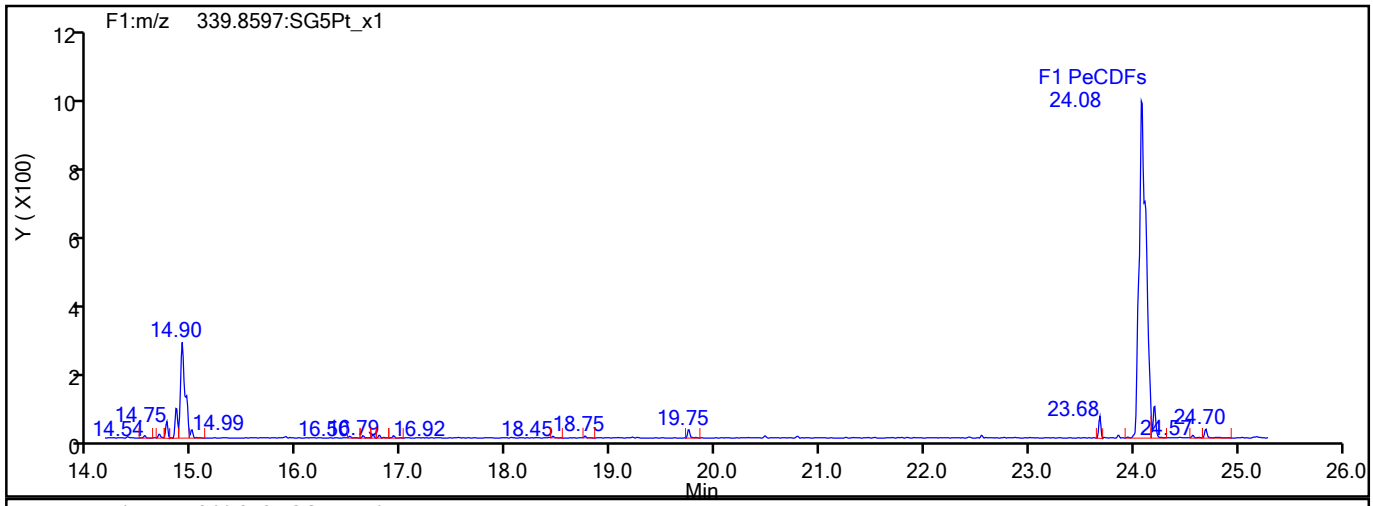

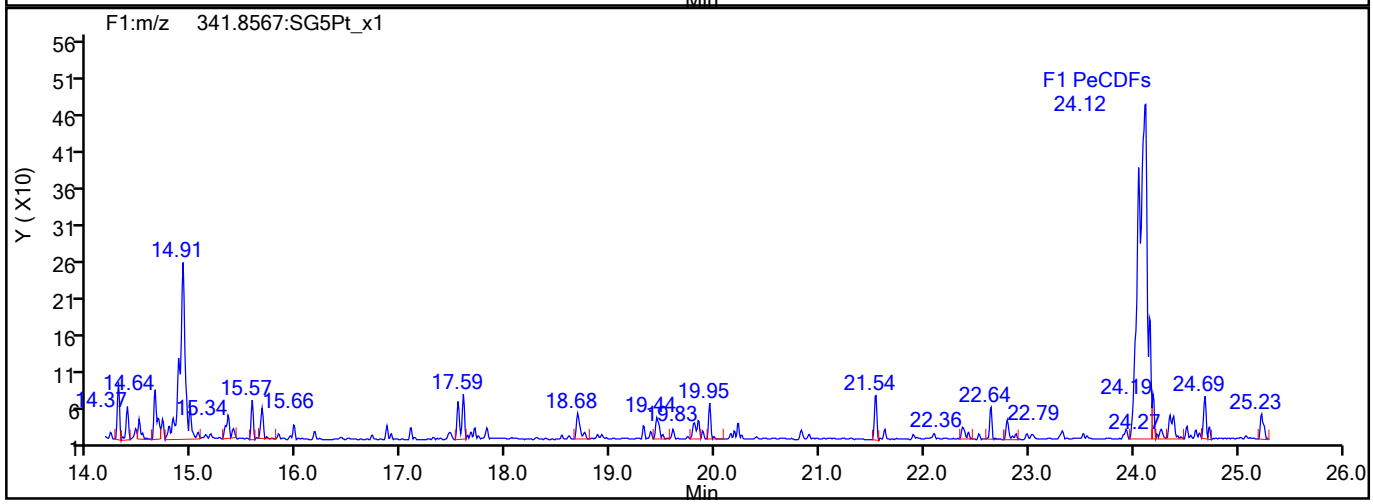

F1 PeCDFs Interference Mass

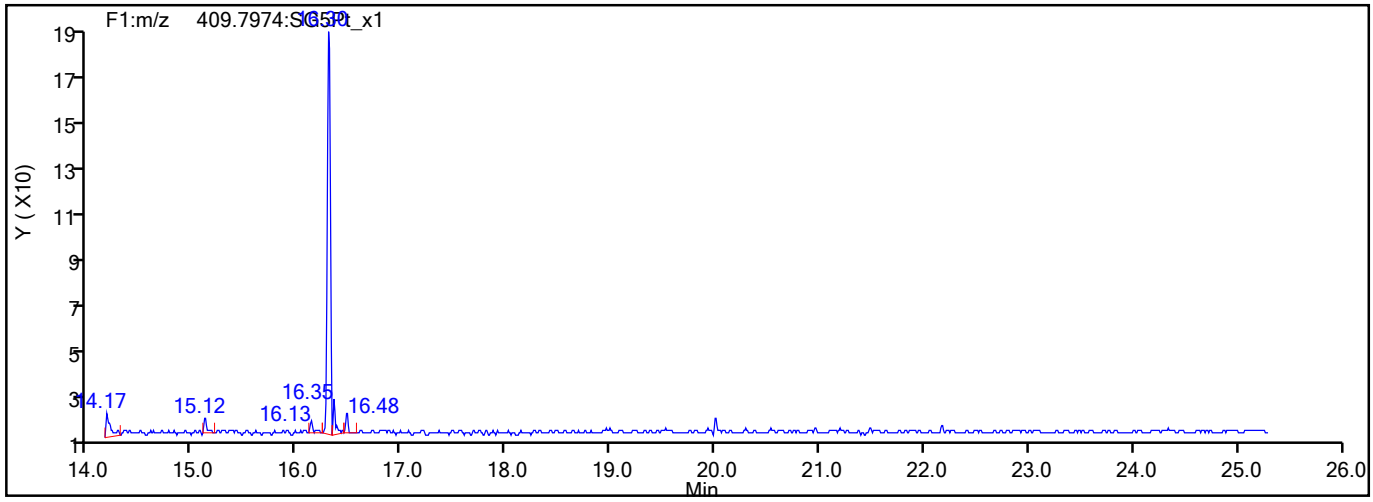

775586

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
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PeCDF

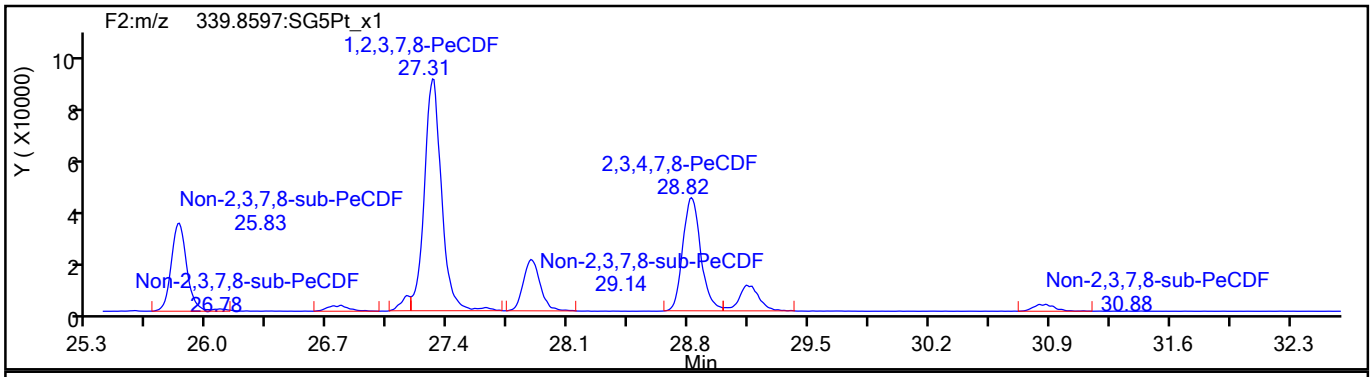

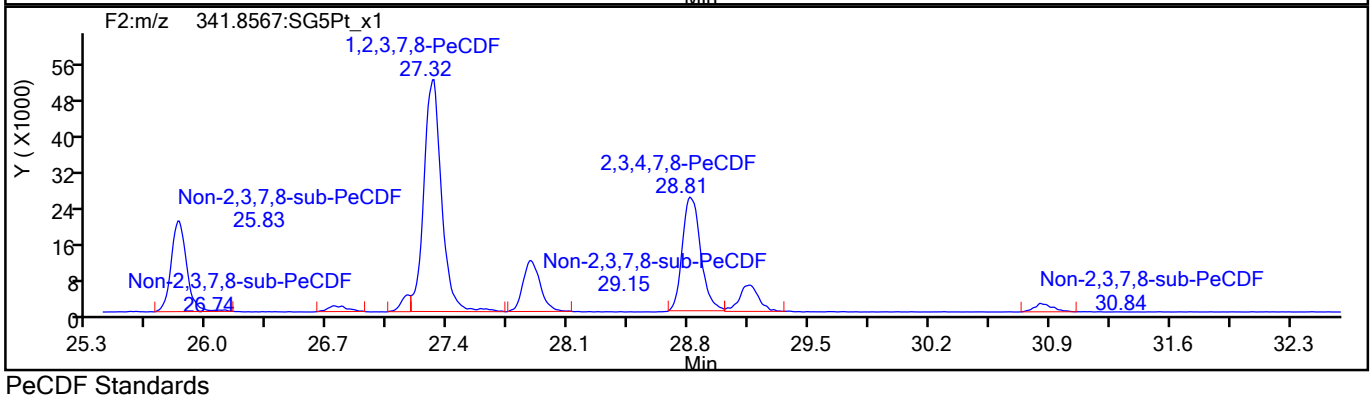

PeCDF Standards

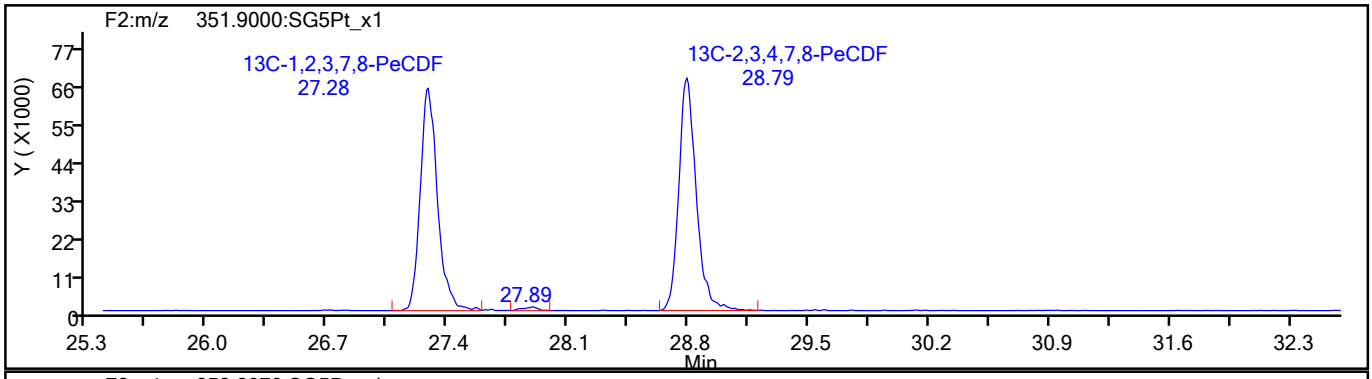

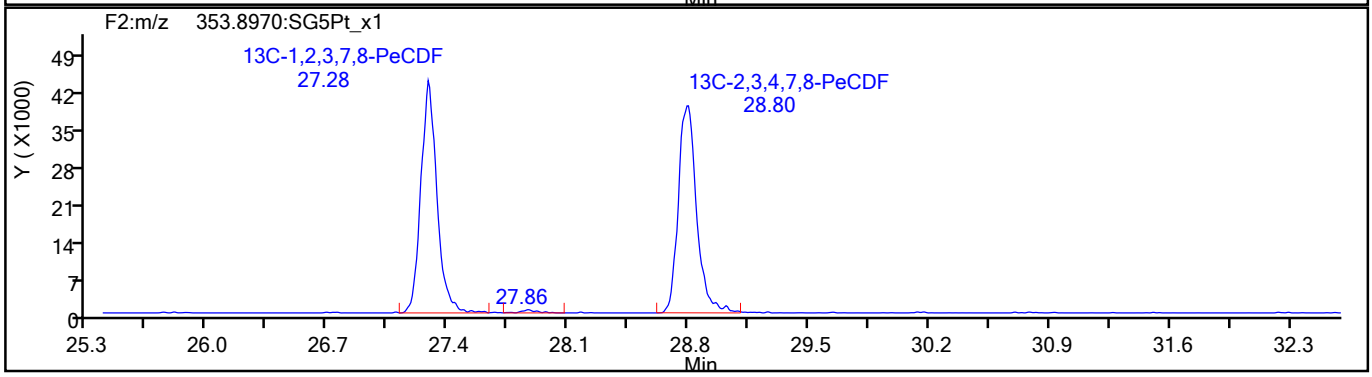

775587

Report Date: 20-Aug-2021 09:21:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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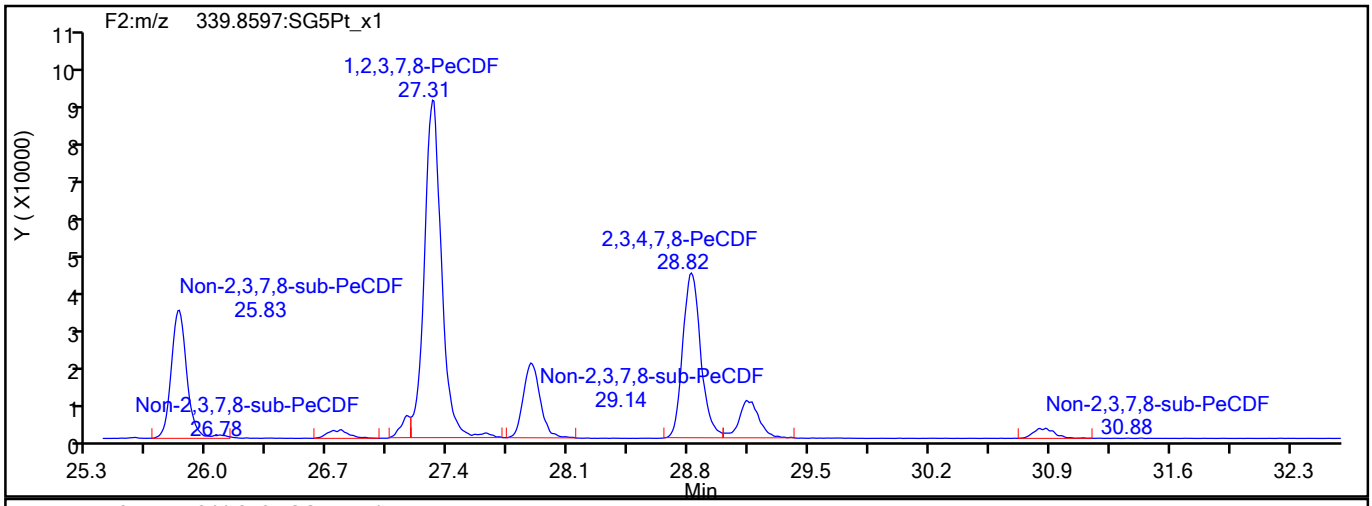

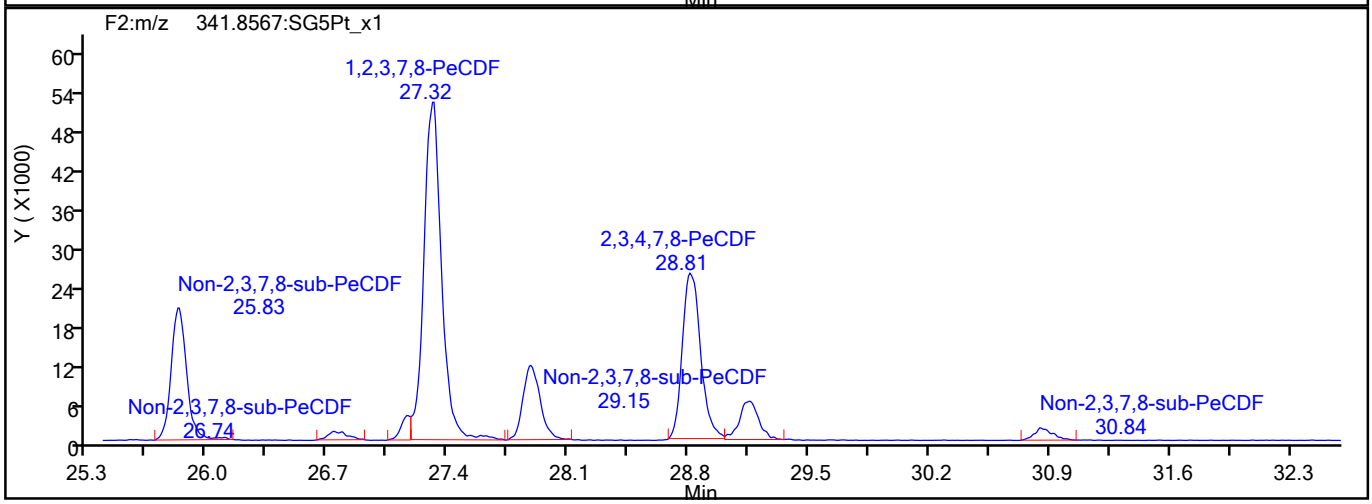

PeCDF Interference Mass

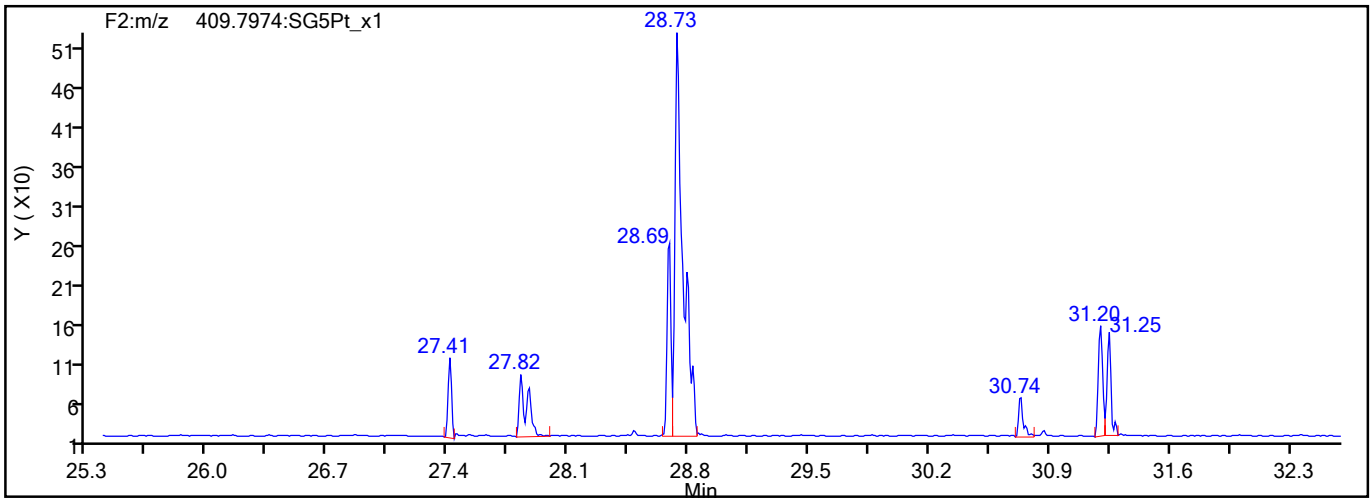

775588

Report Date: 20-Aug-2021 09:21:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
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PeCDD

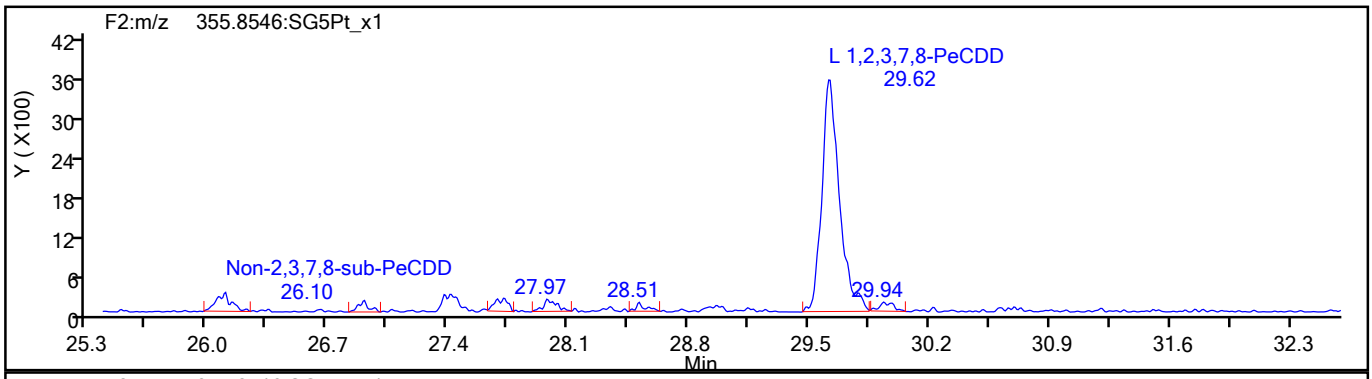

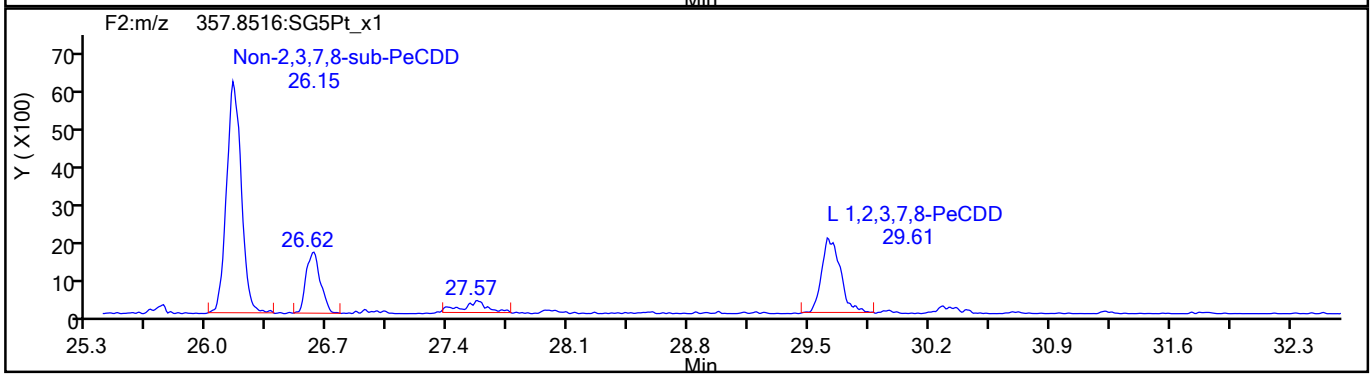

PeCDD Standards

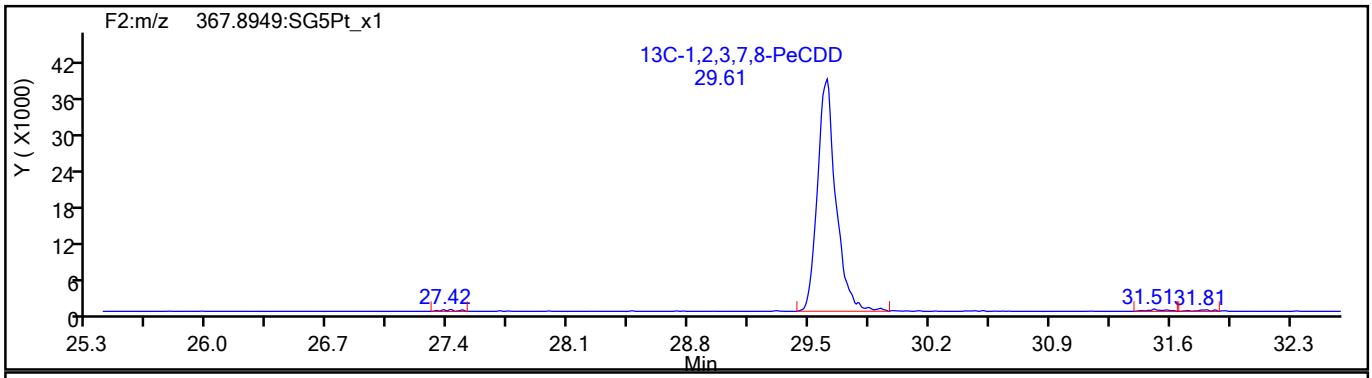

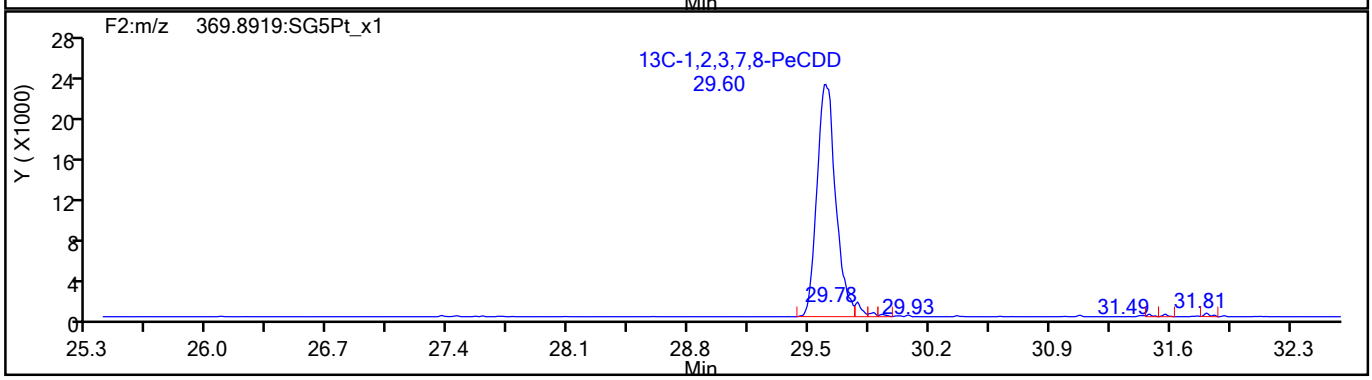

775589

Report Date: 20-Aug-2021 09:21:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

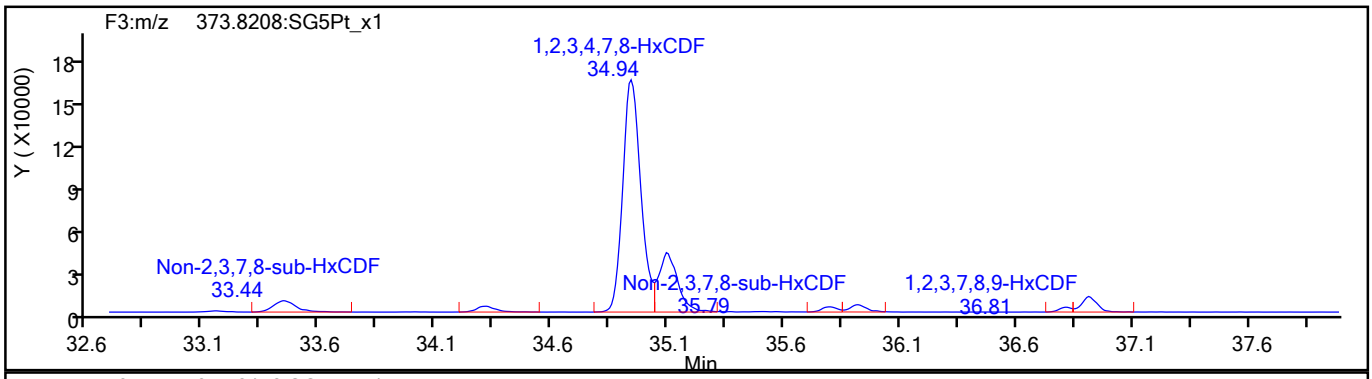

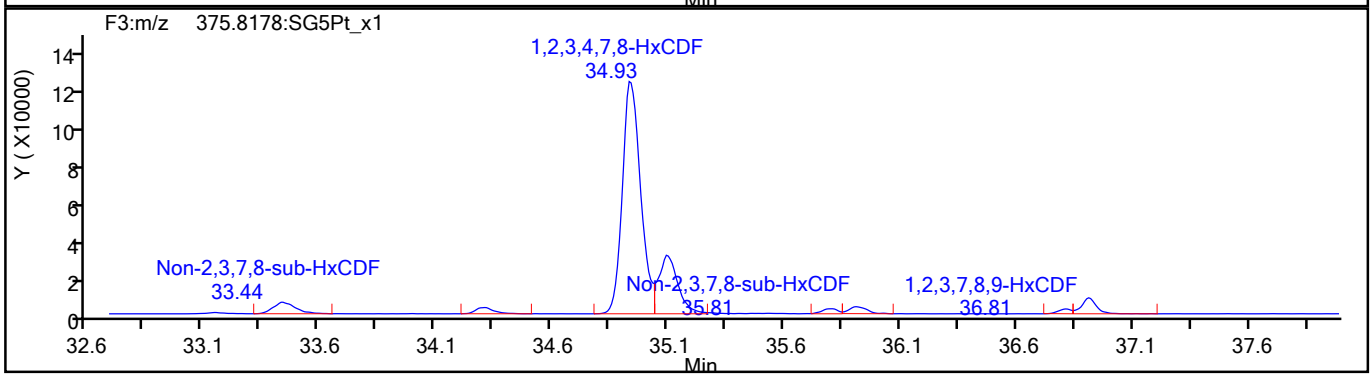

HxCDF Standards

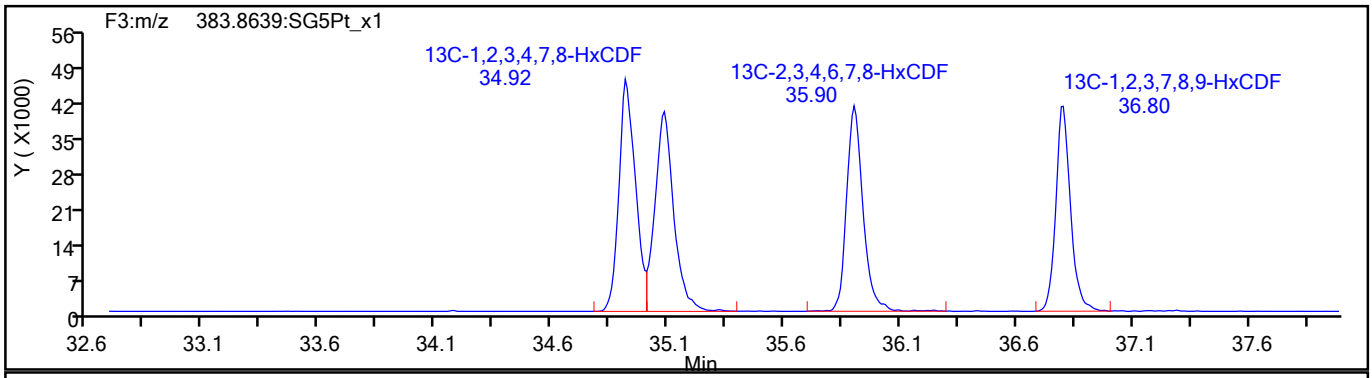

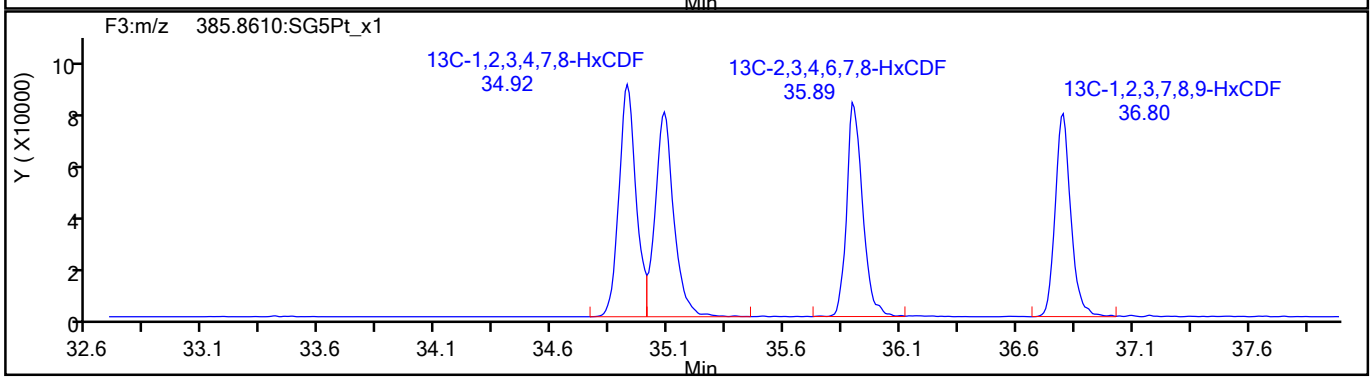

775590

Report Date: 20-Aug-2021 09:21:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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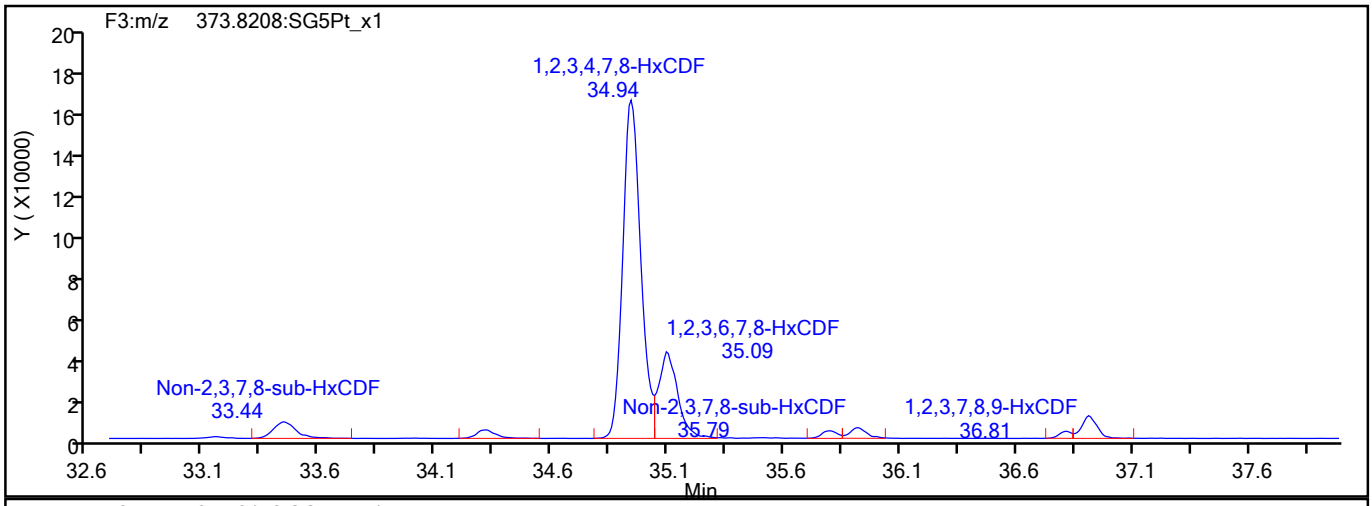

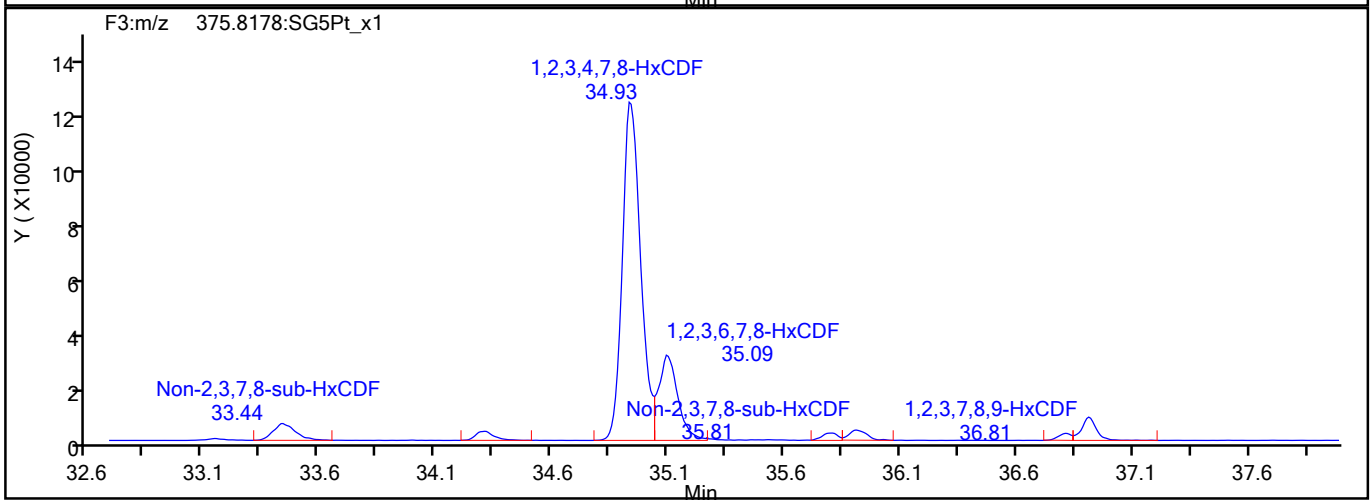

HxCDF Interference Mass

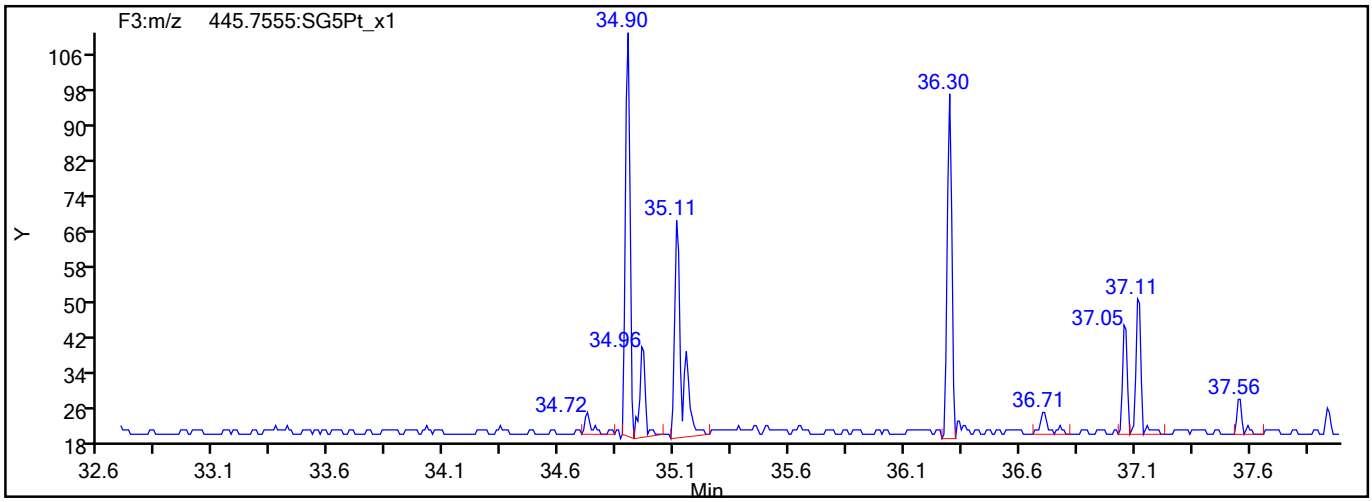

775591

Report Date: 20-Aug-2021 09:21:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

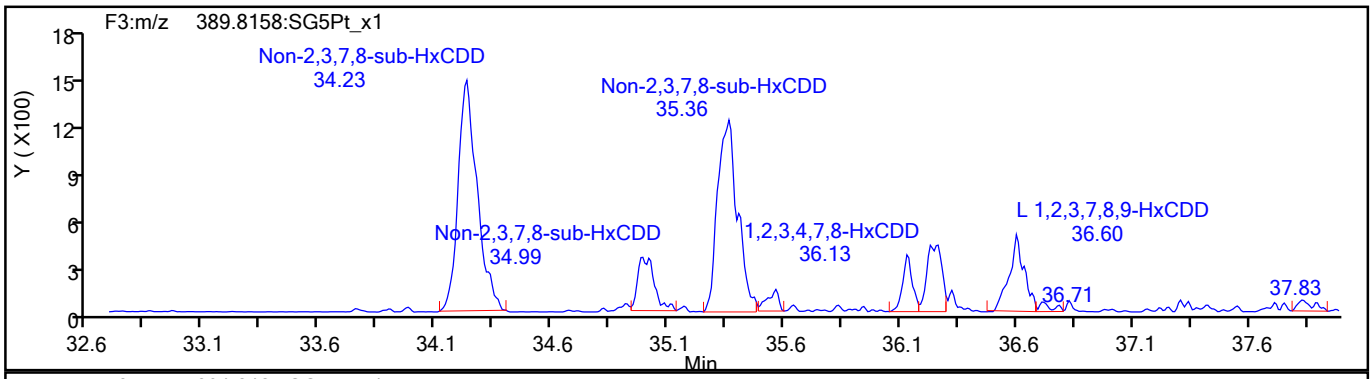

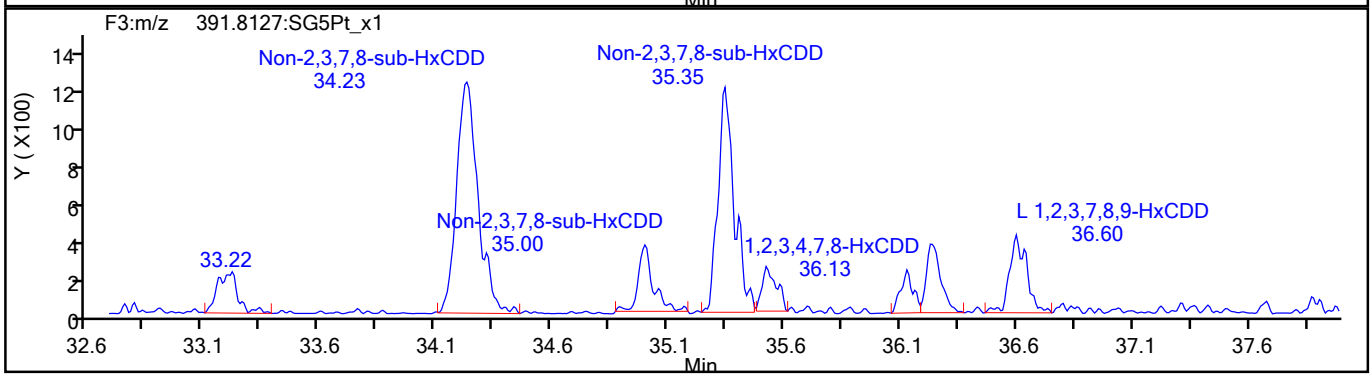

HxCDD Standards

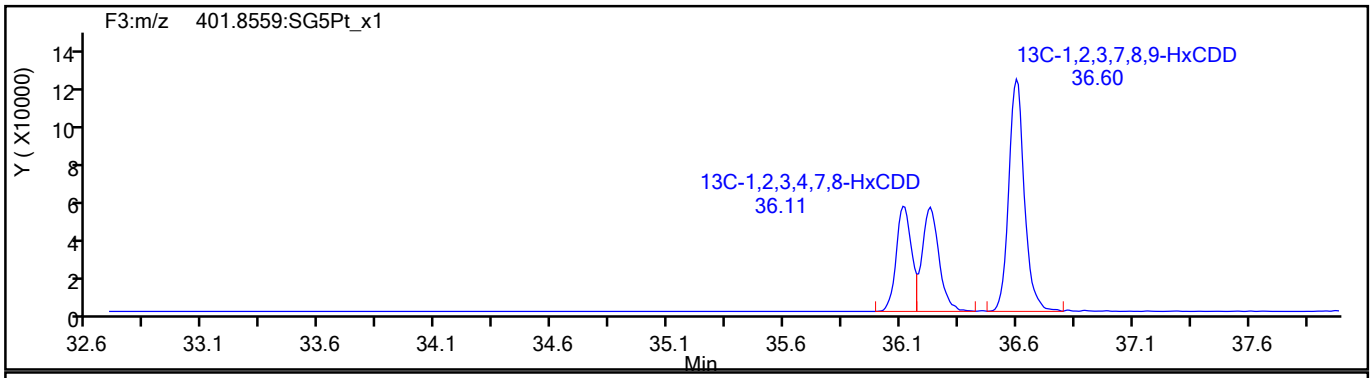

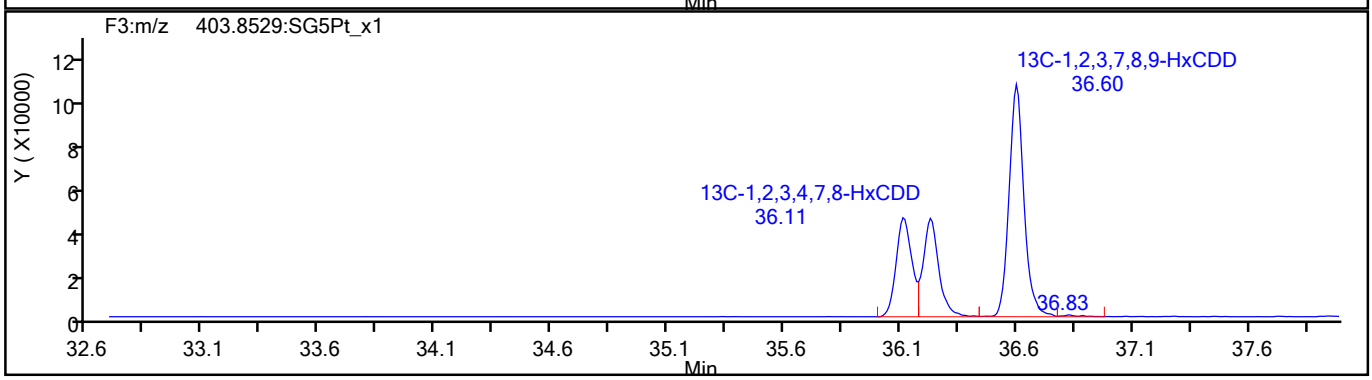

775592

Report Date: 20-Aug-2021 09:21:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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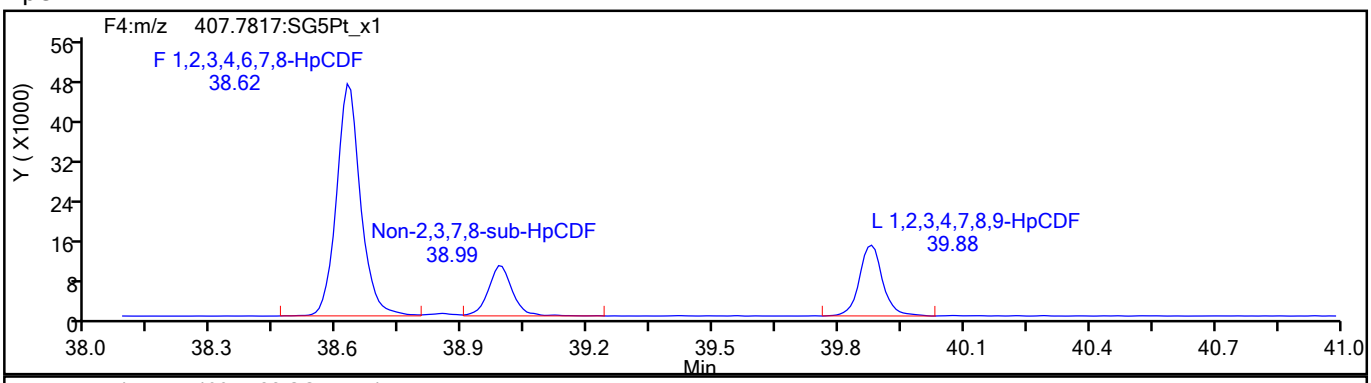

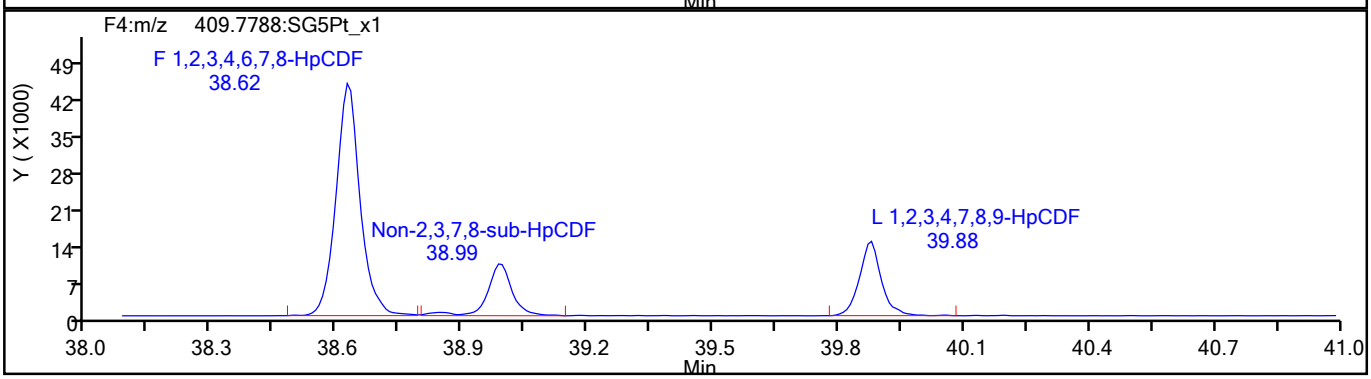

HpCDF Standards

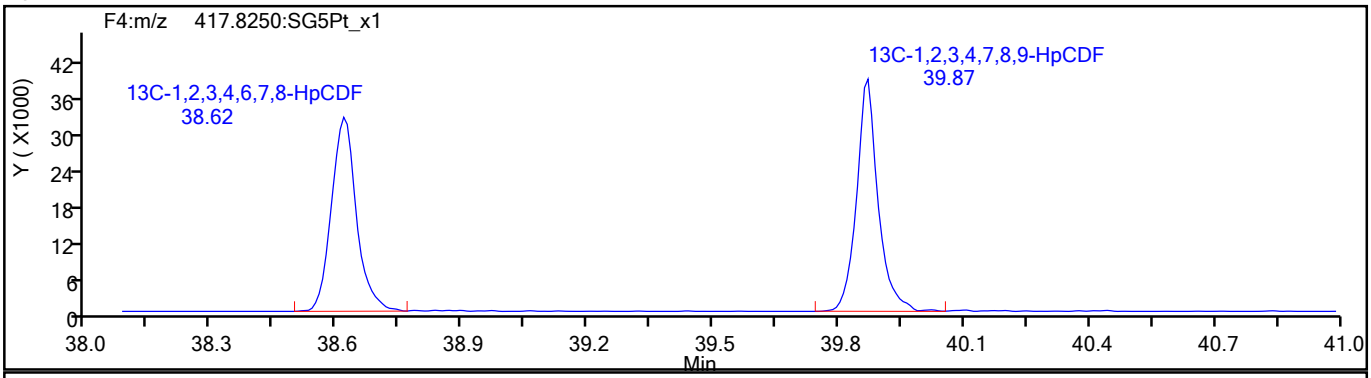

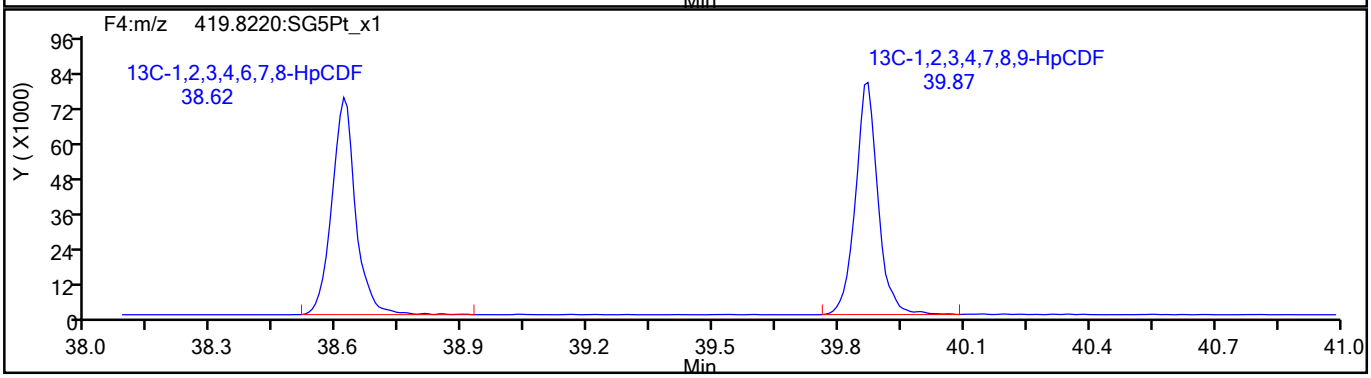

775593

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Eurofins TestAmerica, Sacramento

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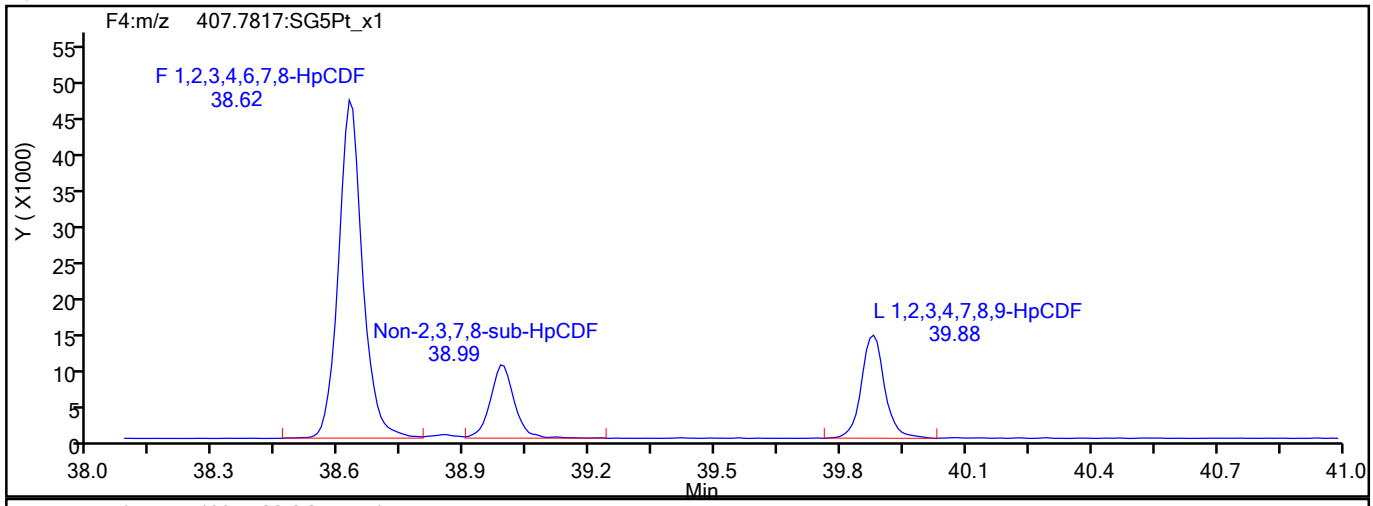

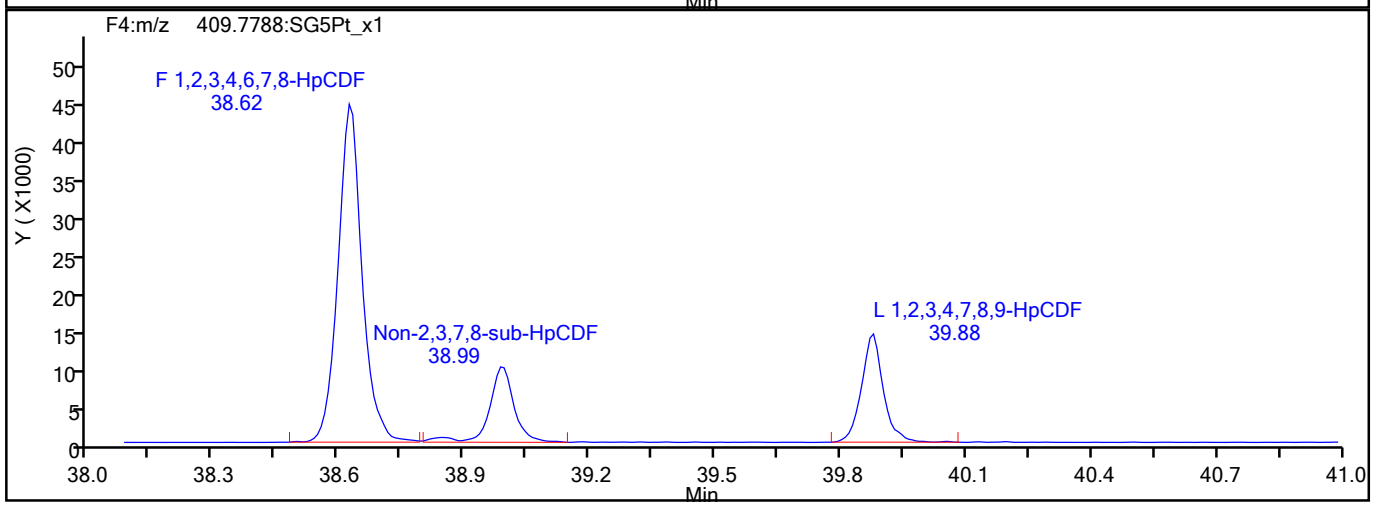

HpCDF Interference Mass

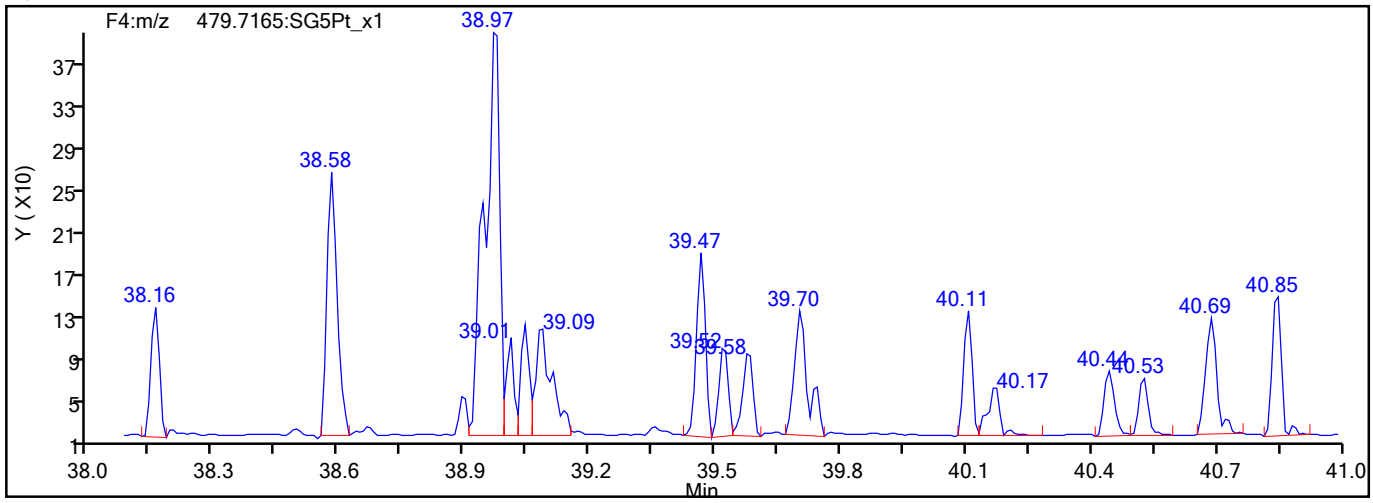

775594

Report Date: 20-Aug-2021 09:21:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDD

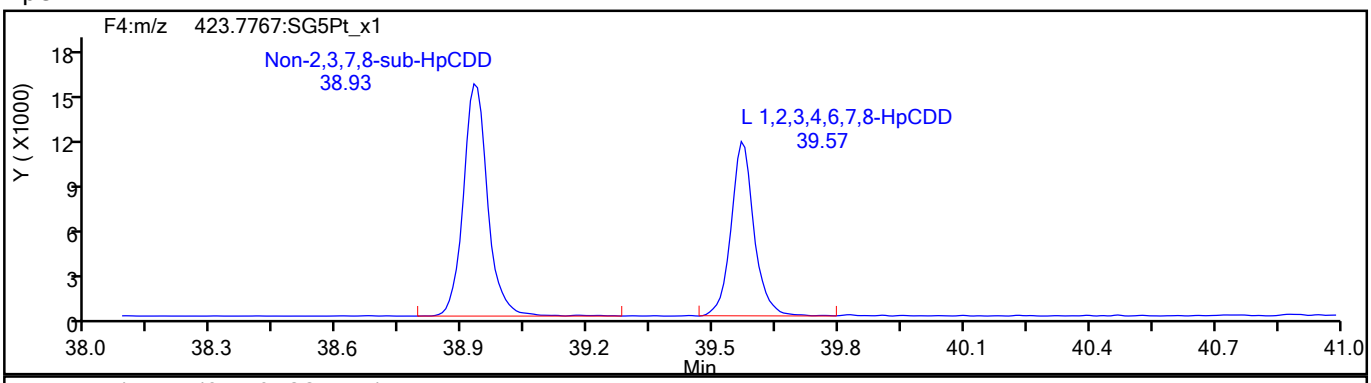

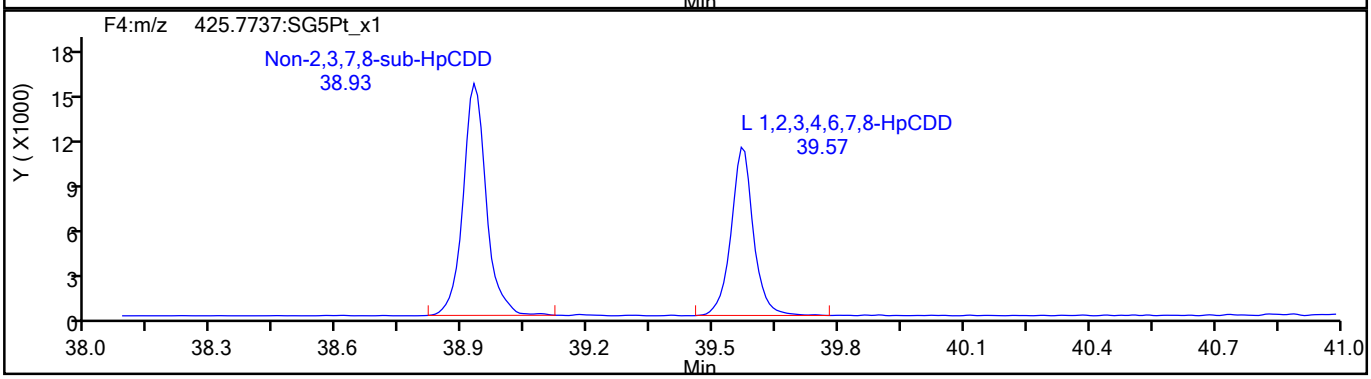

HpCDD Standards

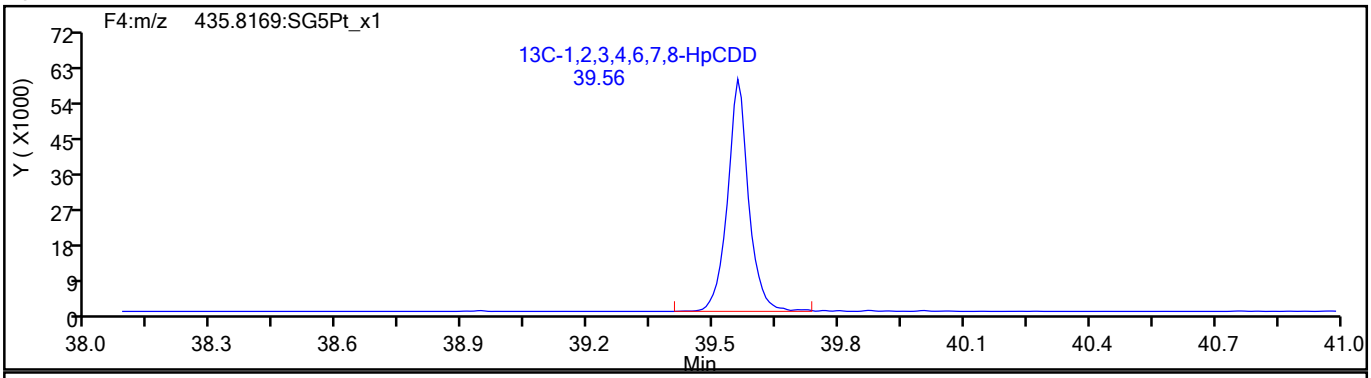

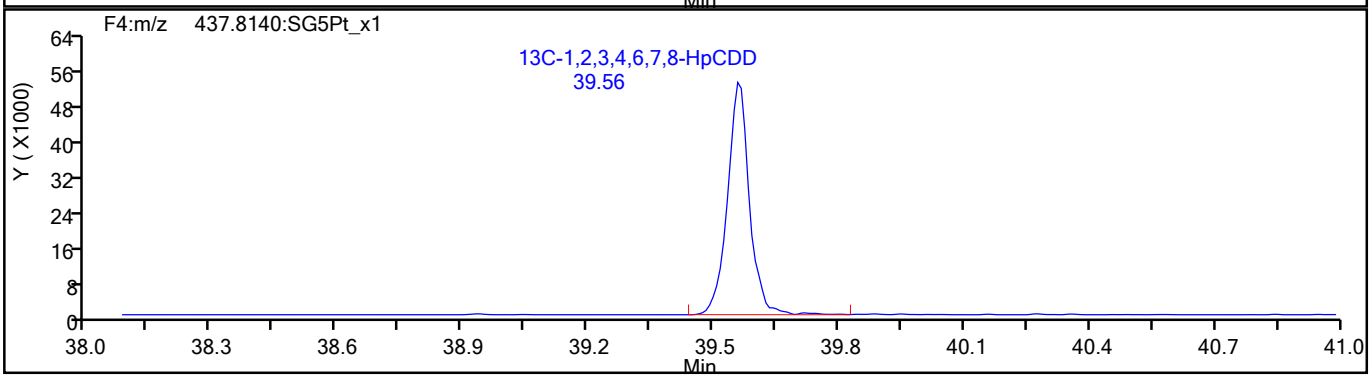

775595

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	37
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

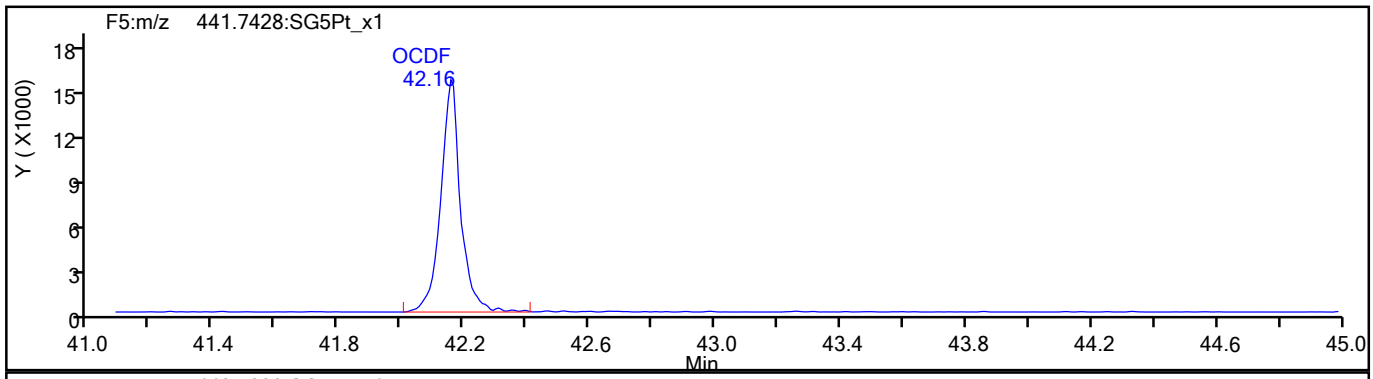

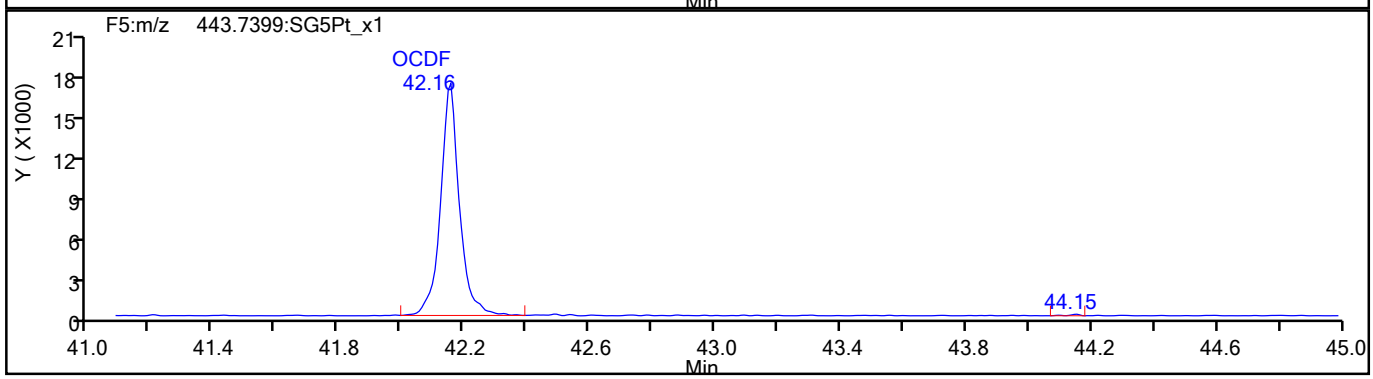

OCDF Standards

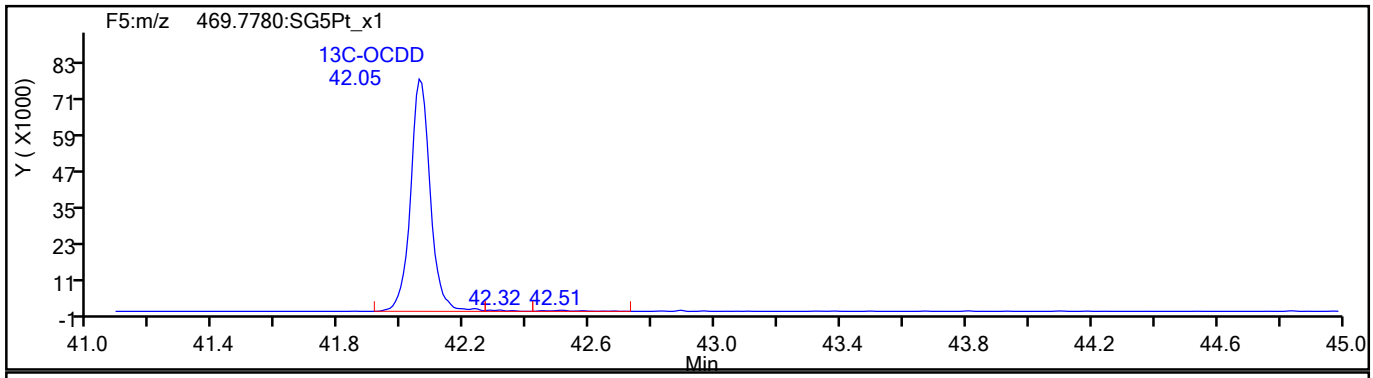

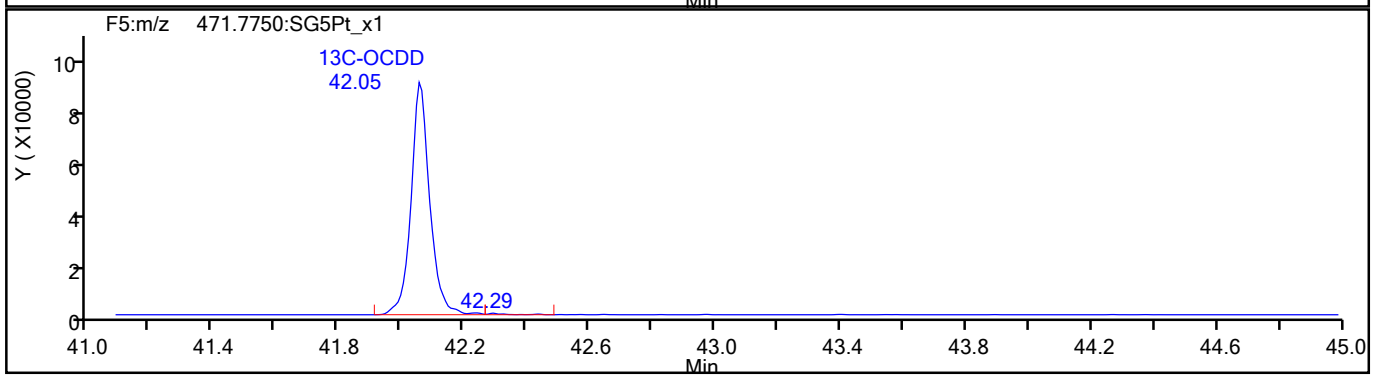

775596

Report Date: 20-Aug-2021 09:21:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Injection Date:	18-Aug-2021 20:24:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	37
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

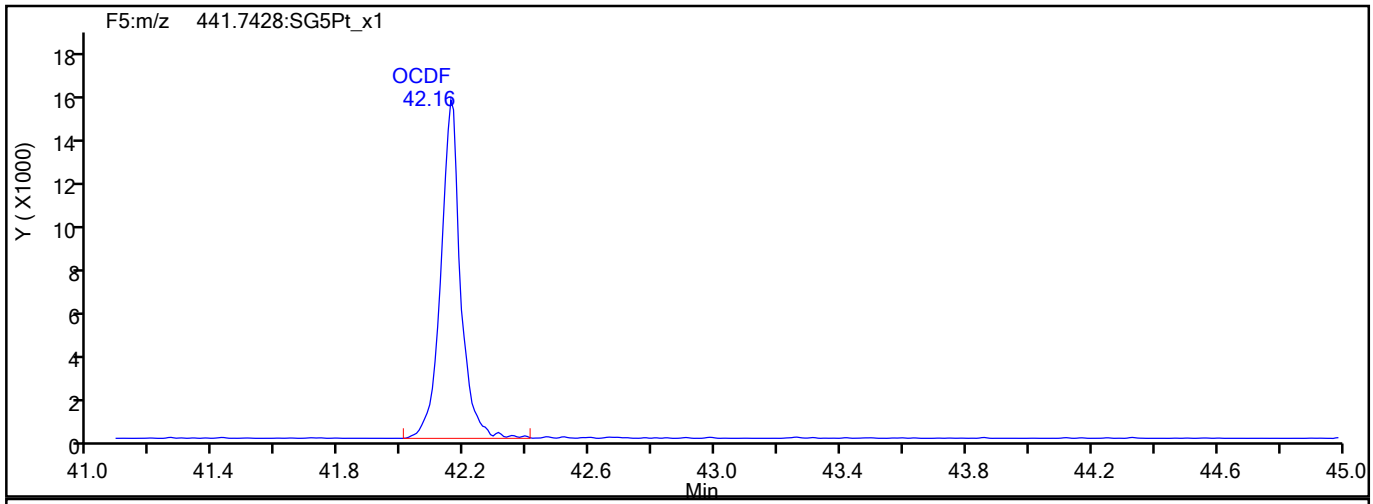

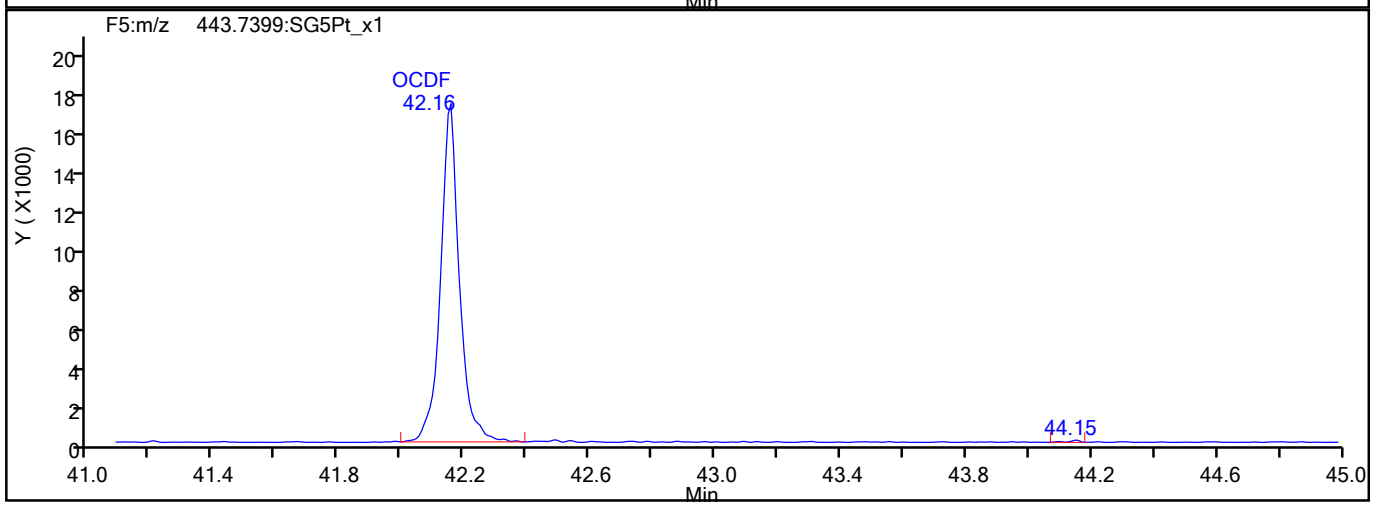

OCDF Interference Mass

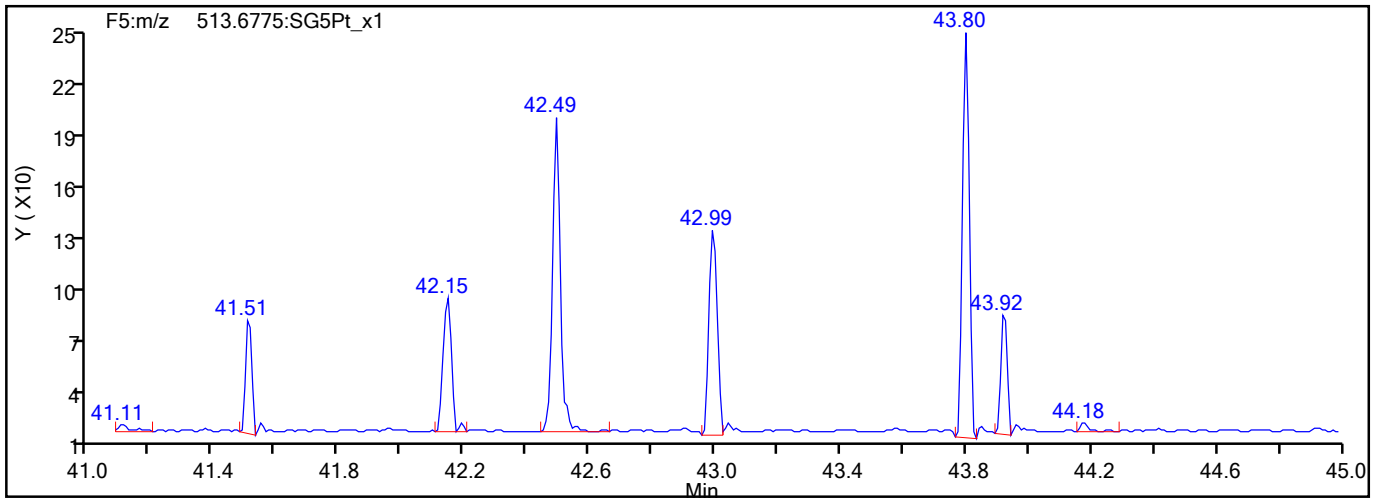

775597

Report Date: 20-Aug-2021 09:21:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Injection Date:	18-Aug-2021 20:24:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	37
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

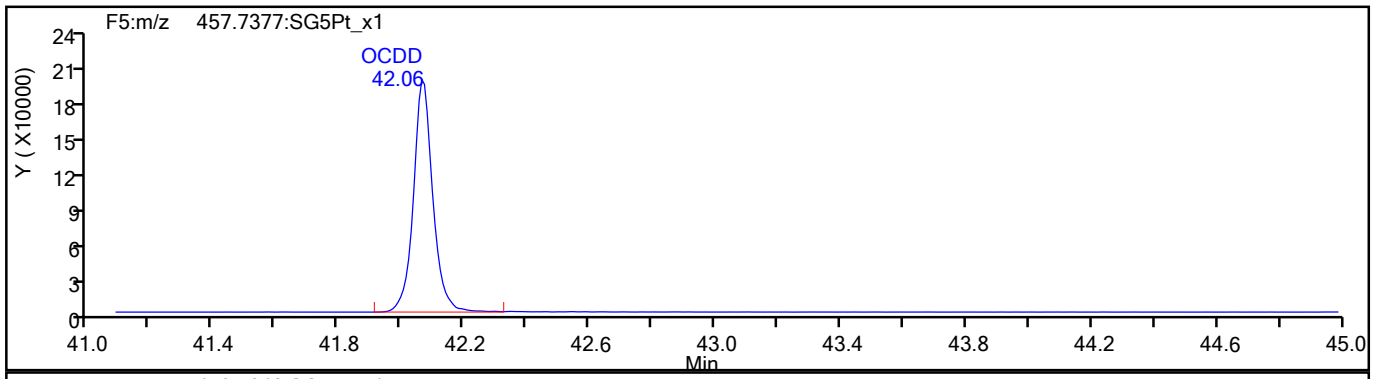

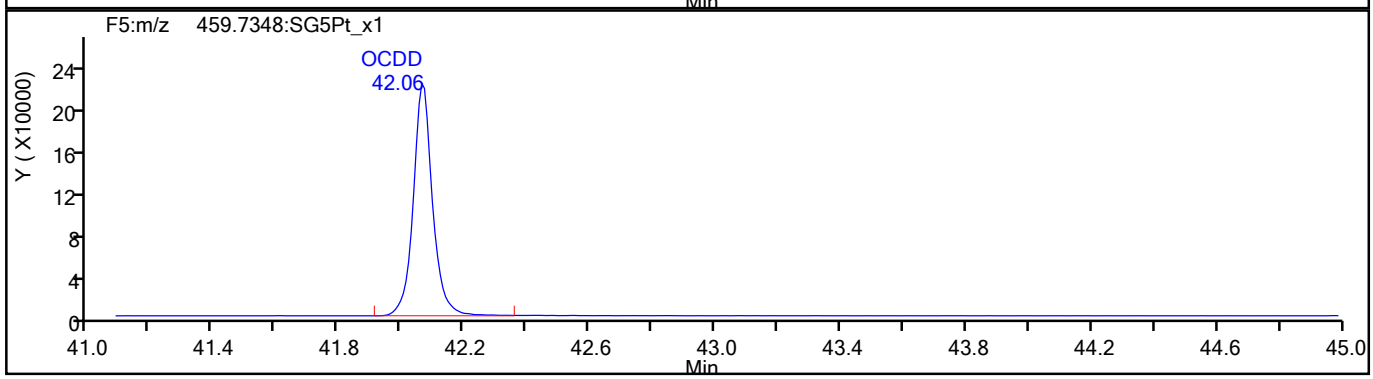

OCDD Standards

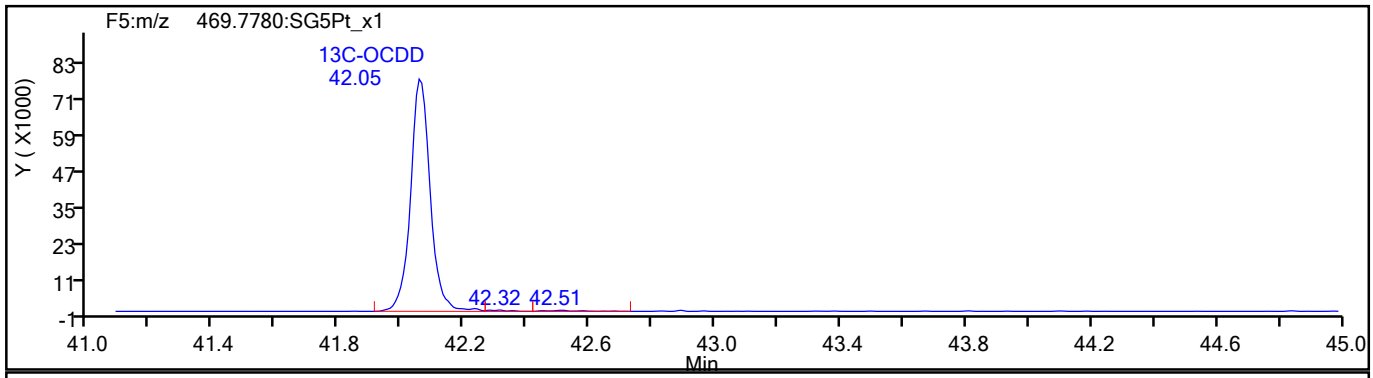

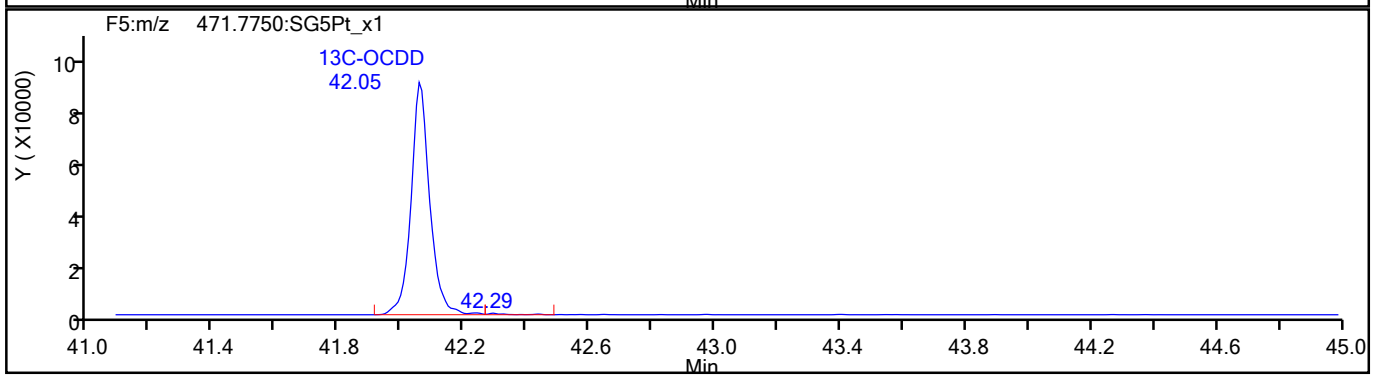

775598

Report Date: 20-Aug-2021 09:21:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Injection Date:	18-Aug-2021 20:24:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	37
Column Type:	DB-5	Column Dia:	0.32 mm

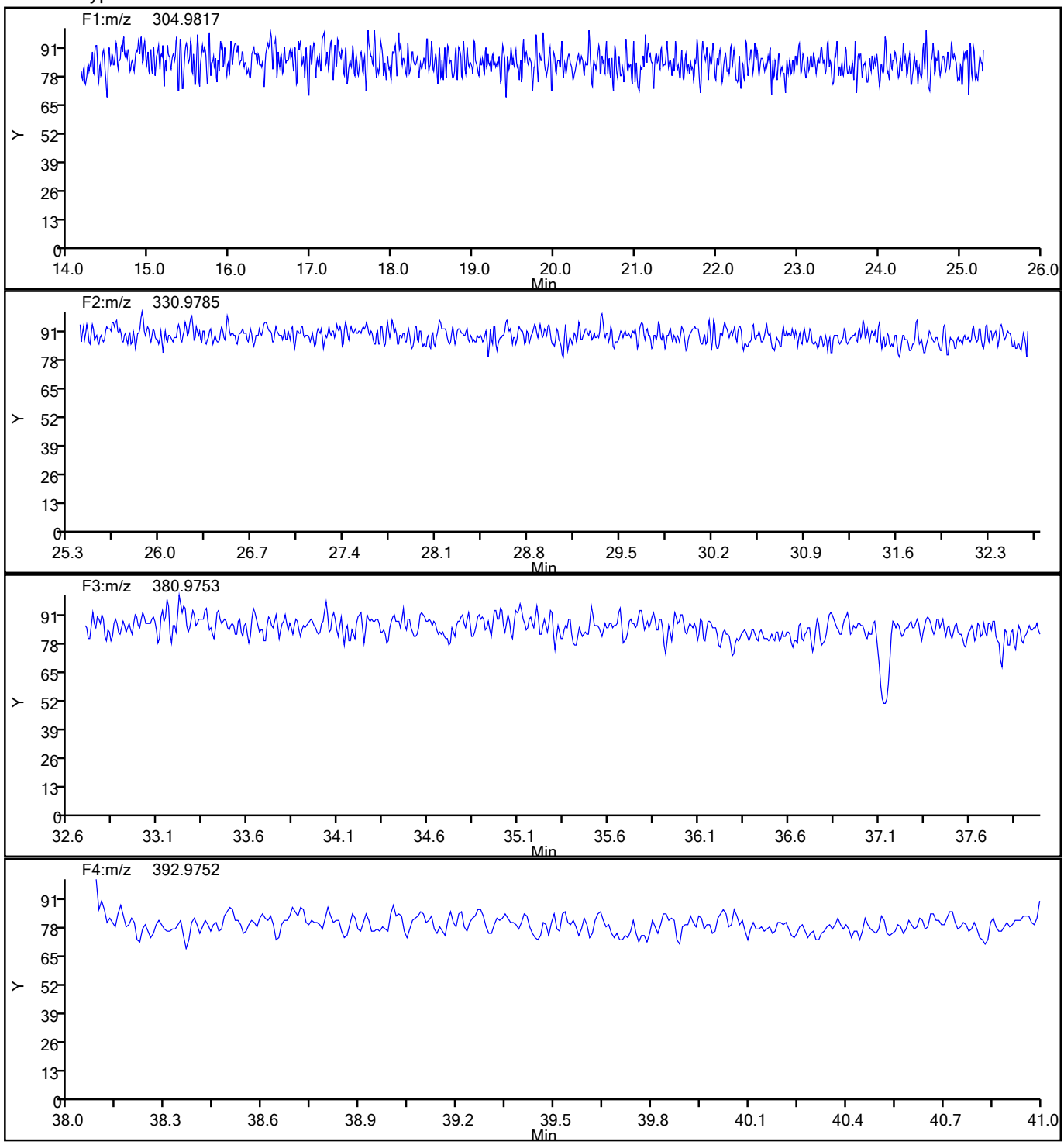

775599

Report Date: 20-Aug-2021 09:21:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_40.d		
Injection Date:	18-Aug-2021 20:24:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	37
Column Type:	DB-5	Column Dia:	0.32 mm

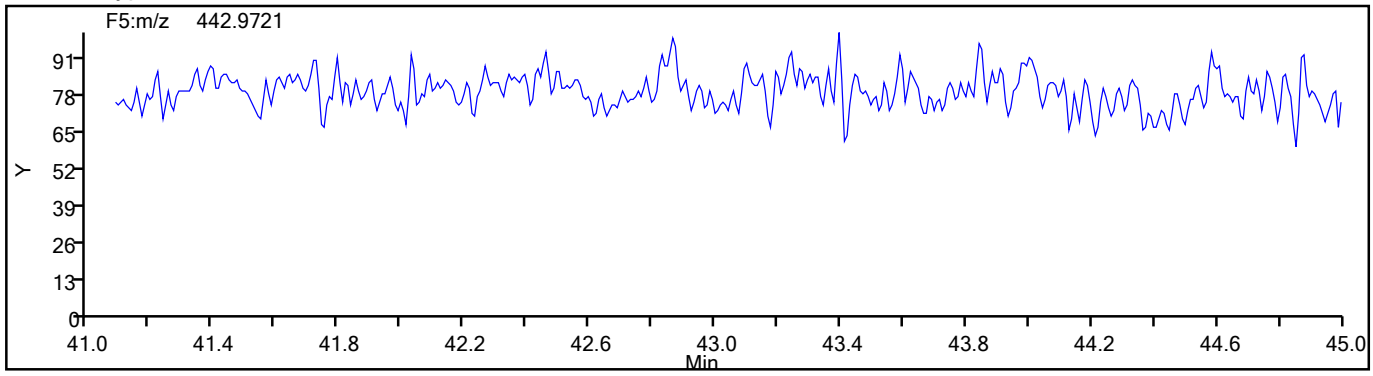

775600

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) RA
Lab Sample ID: 320-76769-27 RA
Matrix: Sediment
Lab File ID: 24AU2111D2_010.d
Analysis Method: 1613B
Date Collected: 07/22/2021 15:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.65(g)
Date Analyzed: 08/24/2021 14:13
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	7600	E G	6.4	6.4

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	59		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	76		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_010.d
Lims ID: 320-76769-A-27-A
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: Client
Inject. Date: 24-Aug-2021 14:13:38 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 17:06:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.313	40338892	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	31576366	0.74	1.3327	58.7	58.7	0.8947	0.8947	58.74	M
2,3,7,8-TCDF	17.658	968594138	0.79	0.9978	3074.2	3074.2	2.595	2.595		E
D 13C-2,3,7,8-TCDD	16.080	18752343	0.77	0.8749	53.1	53.1	10.2	10.2	53.13	
$ 37Cl4-2,3,7,8-TCDD	16.108	10612773		0.8648	30.4	30.4	0.3230	0.3230	76.05	
2,3,7,8-TCDD	16.108	200923522	0.79	1.0570	1013.7	1013.7	3.599	3.599		E
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Report Date: 24-Aug-2021 17:07:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_010.d
Lims ID: 320-76769-A-27-A
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: Client
Inject. Date: 24-Aug-2021 14:13:38 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 17:06:11

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.313	16.283	2		17348081	3848990	156530	391325	25		
333.9339	16.313	16.283	2		22990811	5137565	165239	413097	31	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											M
315.9419	17.644	17.613	2	1.082	13474265	2523957	20575	51437	123		
317.9389	17.644	17.613	2	1.082	18102101	3394550	22287	55717	152	0.74(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.658	17.641	1	1.001	426628537	81733007	37546	93865	2177		
305.8987	17.658	17.641	1	1.001	541965601	102951280	23765	59412	4332	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.080	16.050	2	0.986	8174847	1844327	156530	391325	12		
333.9339	16.080	16.050	2	0.986	10577496	2468132	165239	413097	15	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.108	16.063	3	0.987	10612773	2339018	10042	25105	233		
2,3,7,8-TCDD											E
319.8965	16.108	16.077	2	1.002	88473867	19690436	38368	95920	513		
321.8936	16.108	16.077	2	1.002	112449655	24553766	27252	68130	901	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_010.d				
Injection Date:	24-Aug-2021 14:13:38	Instrument ID:	11D2		
Lims ID:	320-76769-A-27-A	Lab Sample ID:	320-76769-27		
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.64
Area: 18532642
Amount: 59.537680
Amount Units: pg/ul

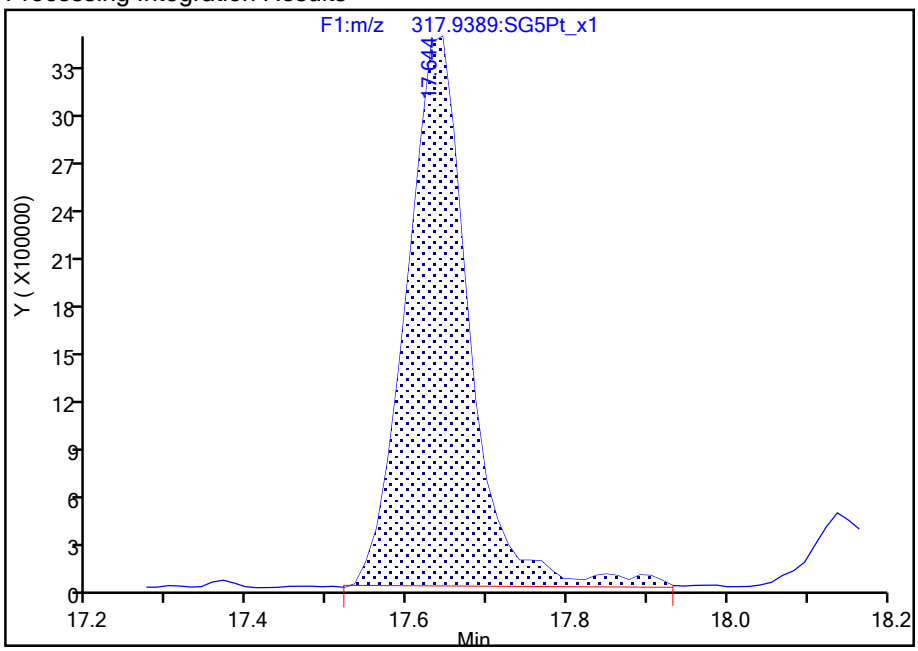

Manual Integration Results

RT: 17.64
Area: 18102101
Amount: 58.736808
Amount Units: pg/ul

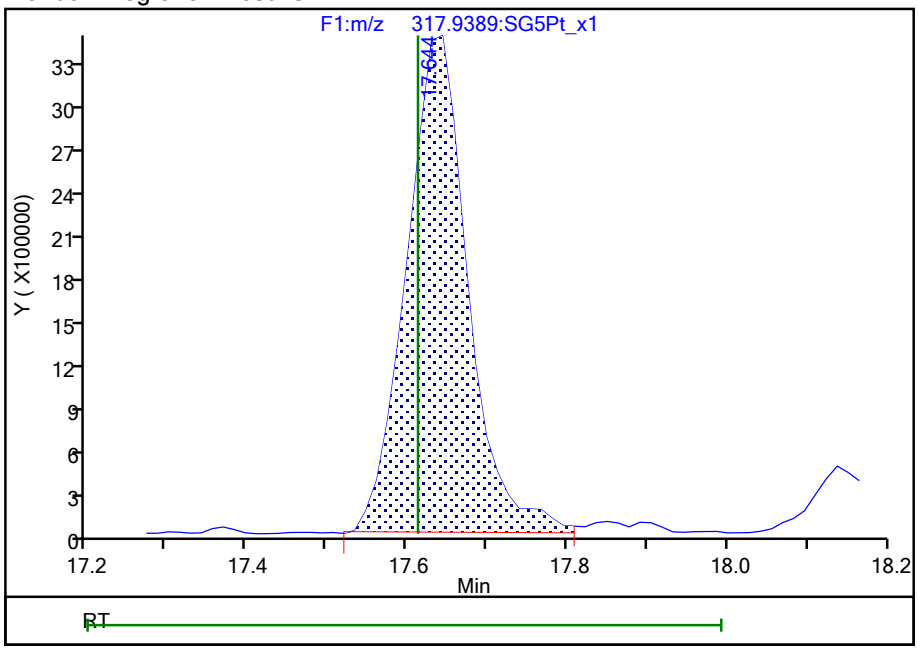

Reviewer: bennettd, 24-Aug-2021 17:06:01

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 24-Aug-2021 17:07:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_010.d		
Injection Date:	24-Aug-2021 14:13:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

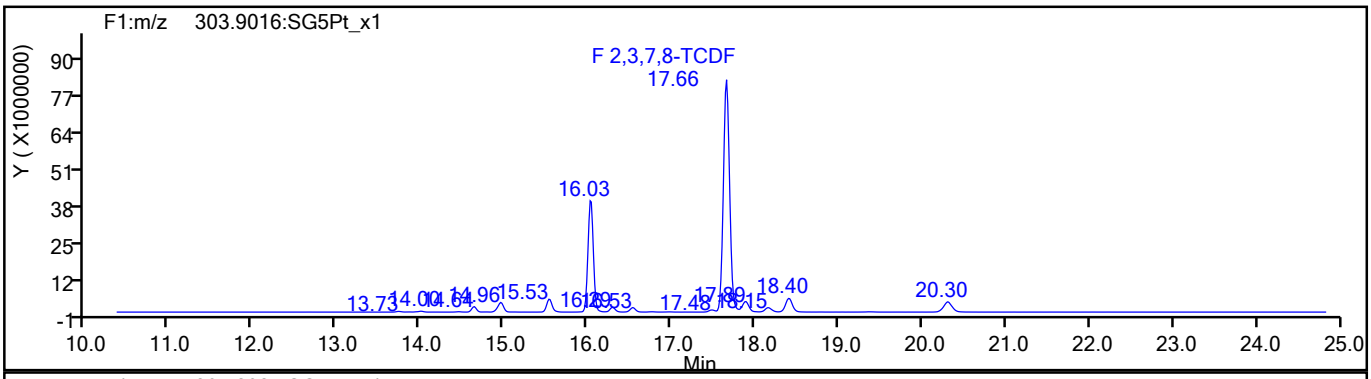

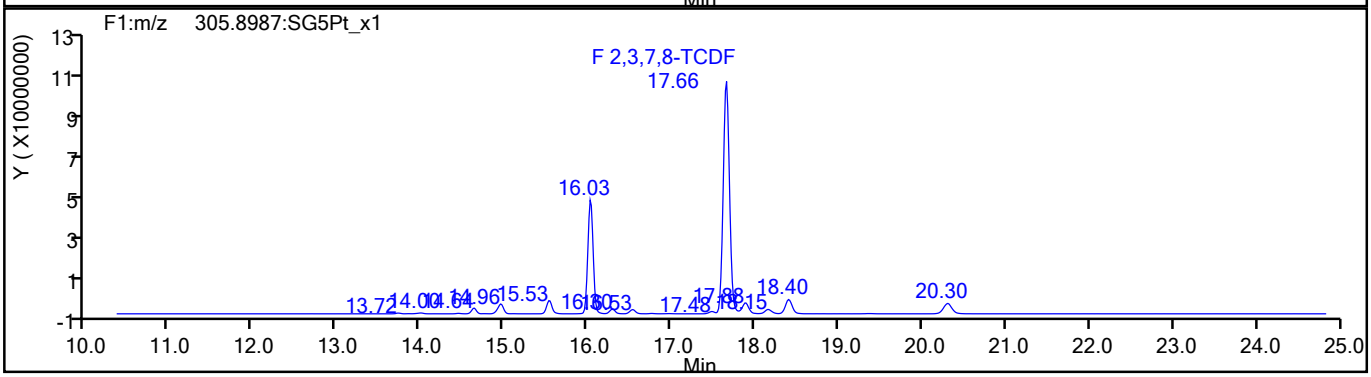

TCDF Standards

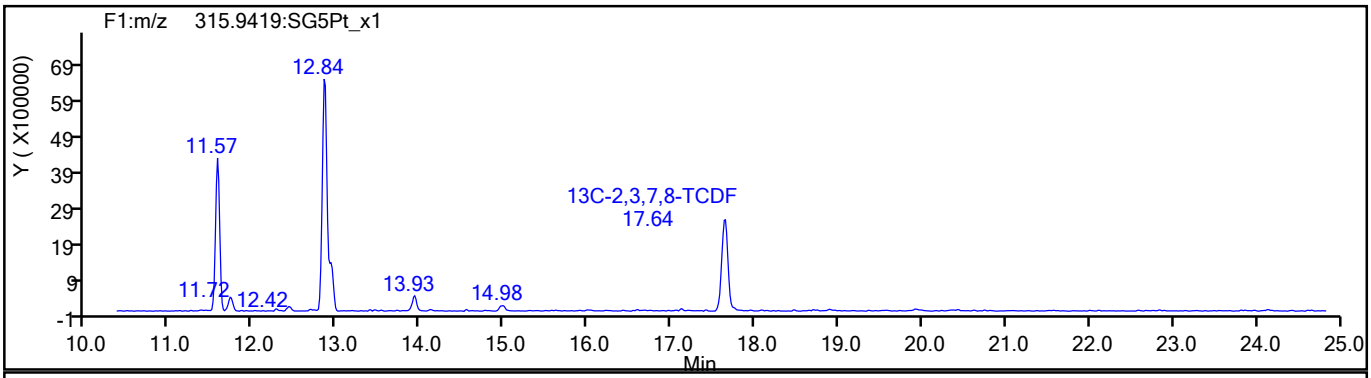

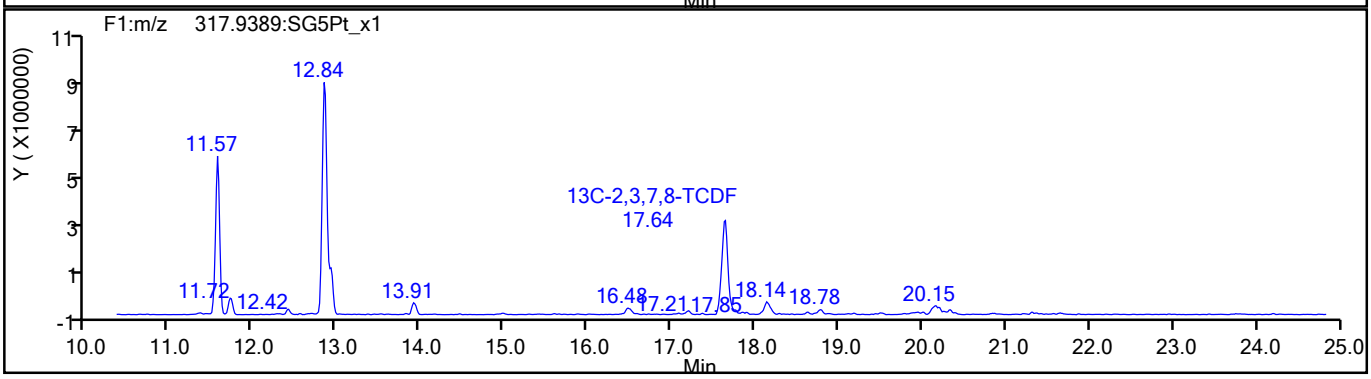

775605

Report Date: 24-Aug-2021 17:07:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_010.d		
Injection Date:	24-Aug-2021 14:13:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

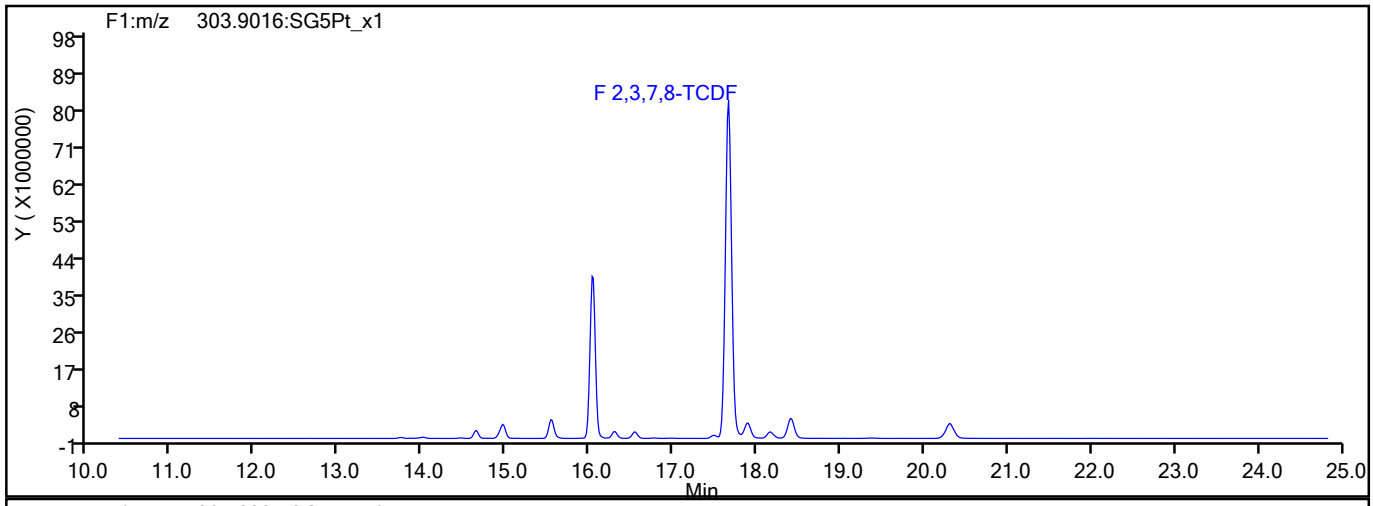

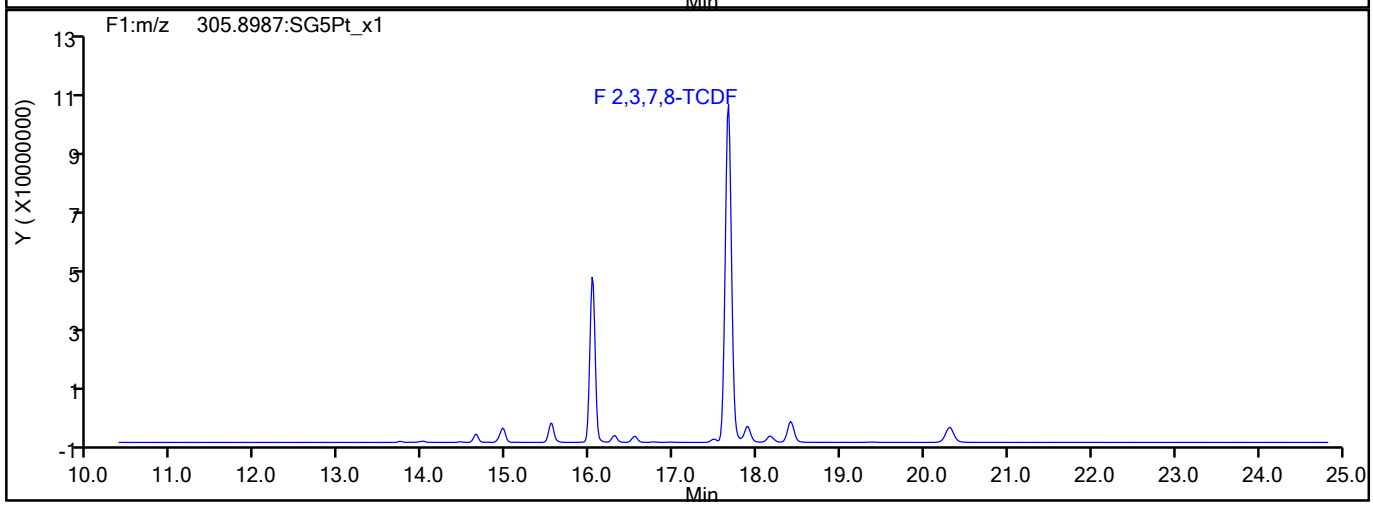

TCDF Interference Mass

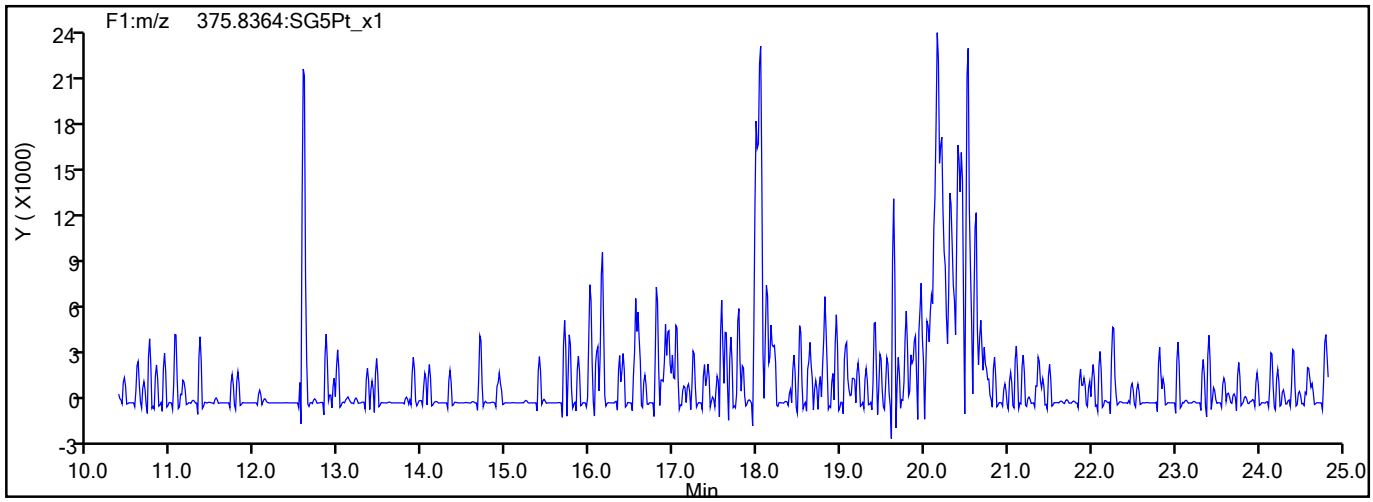

775606

Report Date: 24-Aug-2021 17:07:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_010.d		
Injection Date:	24-Aug-2021 14:13:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

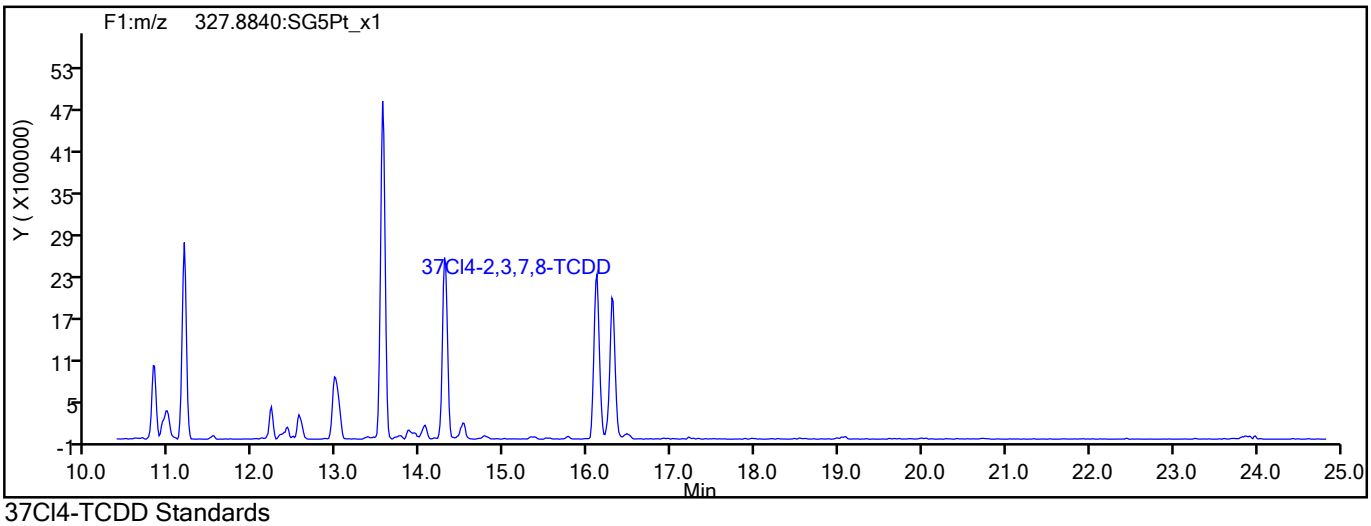

37Cl4-TCDD Standards

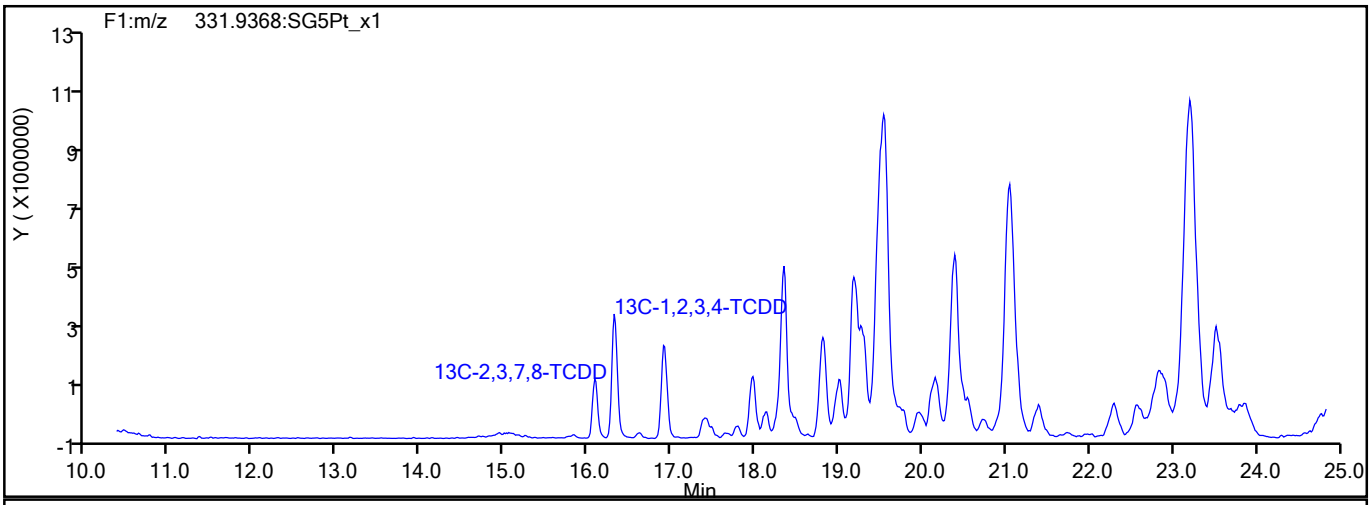

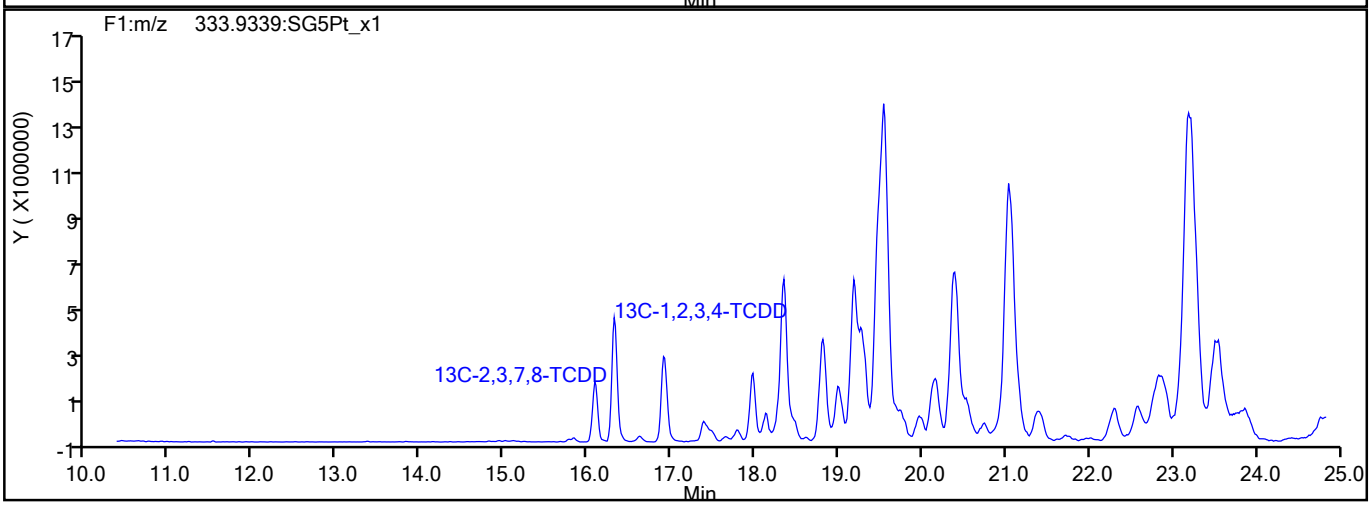

775607

Report Date: 24-Aug-2021 17:07:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_010.d		
Injection Date:	24-Aug-2021 14:13:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

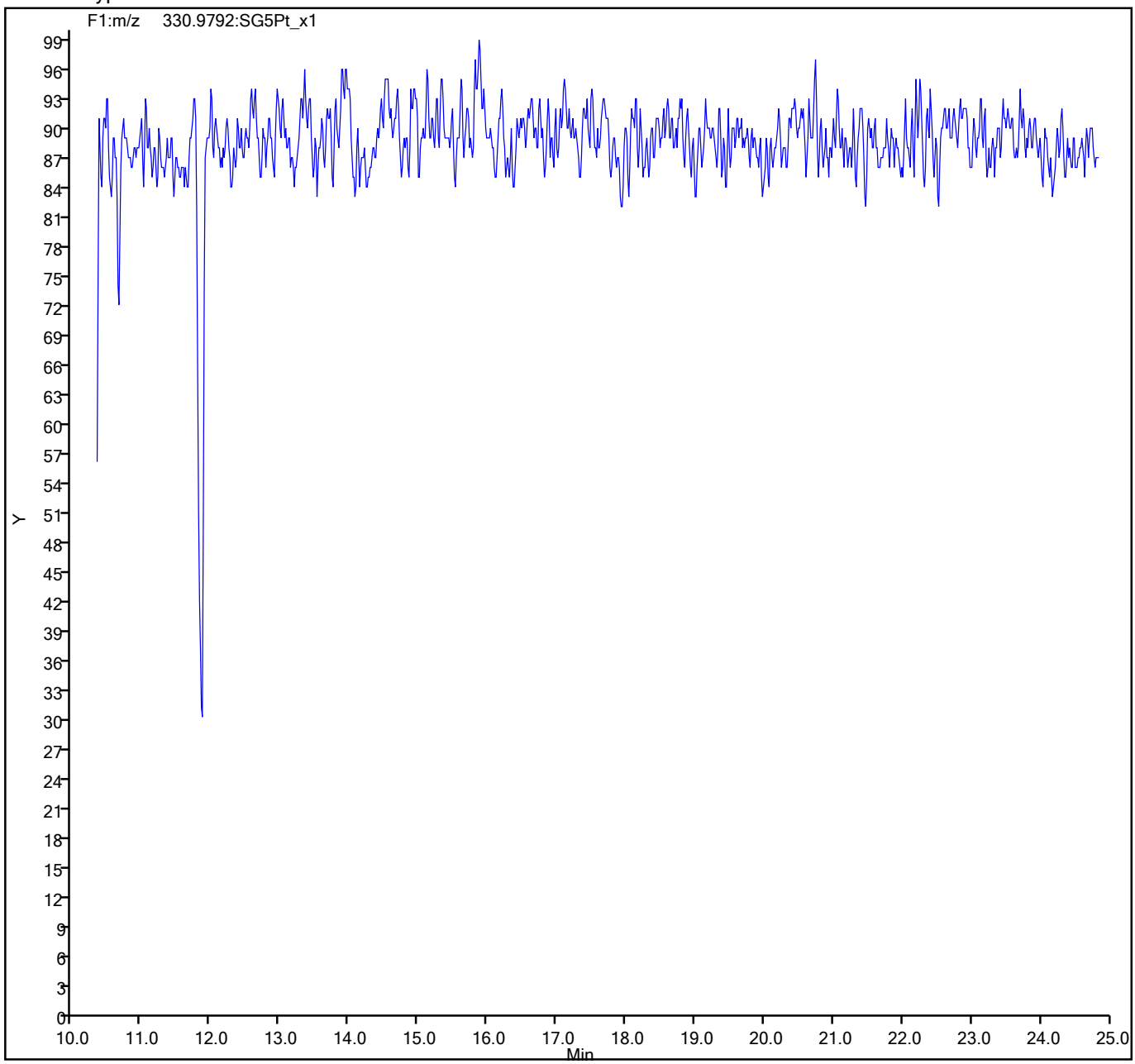

775608

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (2-4)
Lab Sample ID: 320-76769-28
Matrix: Sediment
Lab File ID: 13AU2110D5_68.d
Analysis Method: 1613B
Date Collected: 07/22/2021 15:55
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.29(g)
Date Analyzed: 08/15/2021 20:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 49.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	36000	E B G	82	82
40321-76-4	1,2,3,7,8-PeCDD	270		9.6	4.1
57117-41-6	1,2,3,7,8-PeCDF	6000	E G	36	36
57117-31-4	2,3,4,7,8-PeCDF	2600	G	38	38
39227-28-6	1,2,3,4,7,8-HxCDD	3.6	J B	9.6	0.44
57653-85-7	1,2,3,6,7,8-HxCDD	18		9.6	0.49
19408-74-3	1,2,3,7,8,9-HxCDD	9.1	J B	9.6	0.42
70648-26-9	1,2,3,4,7,8-HxCDF	8400	E B G	21	21
57117-44-9	1,2,3,6,7,8-HxCDF	2300	B G	18	18
72918-21-9	1,2,3,7,8,9-HxCDF	140	B G	15	15
60851-34-5	2,3,4,6,7,8-HxCDF	260	G	15	15
35822-46-9	1,2,3,4,6,7,8-HpCDD	350	B	9.6	3.3
67562-39-4	1,2,3,4,6,7,8-HpCDF	2300	B G	13	13
55673-89-7	1,2,3,4,7,8,9-HpCDF	780	B G	14	14
3268-87-9	OCDD	4500	B	19	3.9
39001-02-0	OCDF	910	B	19	0.77
41903-57-5	Total TCDD	40000	B G	82	82
30402-14-3	Total TCDF	160000	B q G	210	210
36088-22-9	Total PeCDD	300	q	9.6	4.1
30402-15-4	Total PeCDF	13000	q G	37	37
34465-46-8	Total HxCDD	110	B	9.6	0.45
55684-94-1	Total HxCDF	13000	B G	17	17
37871-00-4	Total HpCDD	690	B	9.6	3.3
38998-75-3	Total HpCDF	3600	B G	13	13

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (2-4)
Lab Sample ID: 320-76769-28
Matrix: Sediment
Lab File ID: 13AU2110D5_68.d
Analysis Method: 1613B
Date Collected: 07/22/2021 15:55
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.29(g)
Date Analyzed: 08/15/2021 20:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 49.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516848
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	53		25-164
89059-46-1	13C-2,3,7,8-TCDF	42		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	57		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	52		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	57		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	53		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	45		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	49		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	43		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	46		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	44		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	53		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	48		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	57		26-138
114423-97-1	13C-OCDD	61		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	128		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d
Lims ID: 320-76769-A-28-A
Client ID: 11215702-072221-SS-SJSB076 (2-4)
Sample Type: Client
Inject. Date: 15-Aug-2021 20:27:17 ALS Bottle#: 66 Worklist Smp#: 27
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-28-a 320-76769-a-28-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:30:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 17-Aug-2021 16:59:08

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.172	65909635	0.82	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.658	45296612	0.81	1.6249	42.3	42.3	1.770	1.770	42.29	
2,3,7,8-TCDF	17.674	9061725642	0.77	1.0239	20984	19538	55.4	55.4		REQa
A Non-2,3,7,8-sub-TCDF	17.046	102800790550.78		1.0239	22165	22165	55.4	13221		a
S Total TCDF					43149	41703	55.4	55.4		RQ
D 13C-2,3,7,8-TCDD	18.324	31176323	0.83	0.8993	52.6	52.6	0.6495	0.6495	52.60	Ma
2,3,7,8-TCDD	18.354	3711450033	0.79	1.2541	9492.5	9492.5	21.3	21.3		Ea
$ 37Cl4-2,3,7,8-TCDD	18.354	37302913		1.1071	51.1	51.1	0.8860	0.8860	128	
A Non-2,3,7,8-sub-TCDD	17.500	384548268	0.73	1.2541	983.5	983.5	21.3	872.7		
S Total TCDD					10476	10476	21.3	21.3		
D 13C-1,2,3,7,8-PeCDF	22.762	41338017	1.50	1.2101	51.8	51.8	0.3900	0.3900	51.83	
1,2,3,7,8-PeCDF	22.776	691783285	1.58	1.0611	1577.1	1577.1	9.350	9.350		Ea
D 13C-2,3,4,7,8-PeCDF	24.044	46648916	1.57	1.2395	57.1	57.1	0.3807	0.3807	57.10	
2,3,4,7,8-PeCDF	24.085	320264518	1.58	1.0184	674.1	674.1	9.895	9.895		a
A F1 PeCDFs	20.093	2853098	1.61	1.0398	6.237	6.237	0.0735	6.237		
A Non-2,3,7,8-sub-PeCDF	23.241	516526533	1.55	1.0398	1130.8	1129.2	9.617	518.9		RQ
S Total PeCDF					3388.2	3386.6	9.623	9.623		RQ
D 13C-1,2,3,7,8-PeCDD	24.740	28638740	1.60	0.7612	57.1	57.1	0.1503	0.1503	57.08	
1,2,3,7,8-PeCDD	24.767	21428238	1.65	1.0484	71.4	71.4	1.072	1.072		a
A Non-2,3,7,8-sub-PeCDD	23.349	1713563	1.55	1.0484	6.459	5.707	1.072	3.561		RQ
S Total PeCDD					77.8	77.1	1.072	1.072		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.689	46440433	0.51	1.0837	49.5	49.5	0.2438	0.2438	49.49	
1,2,3,4,7,8-HxCDF	30.703	1106313761	1.21	1.0851	2195.3	2195.3	5.584	5.584		Ea
D 13C-1,2,3,6,7,8-HxCDF	30.849	41709406	0.51	1.1279	42.7	42.7	0.2343	0.2343	42.71	
1,2,3,6,7,8-HxCDF	30.862	281328869	1.22	1.1260	599.0	599.0	4.653	4.653		a
D 13C-2,3,4,6,7,8-HxCDF	31.621	40787776	0.52	1.0637	44.3	44.3	0.2484	0.2484	44.28	a
2,3,4,6,7,8-HxCDF	31.634	32258231	1.22	1.1675	67.7	67.7	3.859	3.859		a
D 13C-1,2,3,7,8,9-HxCDF	32.393	38637423	0.51	0.9676	46.1	46.1	0.2731	0.2731	46.12	a
1,2,3,7,8,9-HxCDF	32.406	16054191	1.19	1.1664	35.6	35.6	3.912	3.912		
A Non-2,3,7,8-sub-HxCDF	30.197	186796586	1.22	1.1363	392.4	392.4	4.417	146.9		a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					3290.1	3290.1	4.502	4.502		
* 13C-1,2,3,7,8,9-HxCDD	32.220	86586291	1.23	6.2E+05	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	31.794	33365406	1.24	0.7334	52.5	52.5	0.3201	0.3201	52.54	
1,2,3,4,7,8-HxCDD	31.807	336394	1.25	1.0640	0.9475	0.9475	0.1154	0.1154		
D 13C-1,2,3,6,7,8-HxCDD	31.900	34417665	1.25	0.8802	45.2	45.2	0.2667	0.2667	45.16	
1,2,3,6,7,8-HxCDD	31.914	1594115	1.16	1.0001	4.631	4.631	0.1285	0.1285		
1,2,3,7,8,9-HxCDD	32.233	907025	1.35	1.1325	2.363	2.363	0.1109	0.1109		
A Non-2,3,7,8-sub-HxCDD	30.882	7914946	1.22	1.0655	21.9	21.9	0.1178	14.1		M
S Total HxCDD					29.9	29.9	0.1182	0.1182		
D 13C-1,2,3,4,6,7,8-HpCDF	33.815	32158281	0.43	0.7730	48.0	48.0	0.4539	0.4539	48.04	
1,2,3,4,6,7,8-HpCDF	33.827	278612316	1.04	1.4413	601.1	601.1	3.321	3.321		
D 13C-1,2,3,4,7,8,9-HpCDF	34.884	34604749	0.45	0.7008	57.0	57.0	0.5007	0.5007	57.03	
1,2,3,4,7,8,9-HpCDF	34.896	93426282	1.05	1.3174	204.9	204.9	3.555	3.555		
A Non-2,3,7,8-sub-HpCDF	34.319	60464336	1.05	1.3793	131.3	131.3	3.432	131.3		
S Total HpCDF					937.4	937.4	3.438	3.438		
D 13C-1,2,3,4,6,7,8-HpCDD	34.592	29562347	1.00	0.6472	52.8	52.8	0.3112	0.3112	52.75	
1,2,3,4,6,7,8-HpCDD	34.605	29609644	1.05	1.0943	91.5	91.5	0.8641	0.8641		
A Non-2,3,7,8-sub-HpCDD	34.301	28850609	1.03	1.0943	89.2	89.2	0.8641	89.2		
S Total HpCDD					180.7	180.7	0.8641	0.8641		
D 13C-OCDD	36.950	47067348	0.88	0.4472	121.6	121.6	0.2659	0.2659	60.78	
OCDF	37.046	80787395	0.88	1.4382	238.7	238.7	0.2014	0.2014		
OCDD	36.962	305608802	0.89	1.1070	1173.1	1173.1	1.016	1.016		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 18-Aug-2021 10:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d
Lims ID: 320-76769-A-28-A
Client ID: 11215702-072221-SS-SJSB076 (2-4)
Sample Type: Client
Inject. Date: 15-Aug-2021 20:27:17 ALS Bottle#: 66 Worklist Smp#: 27
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-28-a 320-76769-a-28-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:30:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 17-Aug-2021 16:59:08

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	18.172	17.855	19		29711087	9212360	14706	36765	626		a
333.9339	18.172	17.855	19		36198548	11244209	33089	82722	340	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.658	17.356	18	0.972	20255044	6276668	37153	92882	169		
317.9389	17.658	17.356	18	0.972	25041568	7773754	198136	495340	39	0.81(0.65-0.89)	
2,3,7,8-TCDF											REQa
303.9016	17.674	17.371	18	1.001	4612746653	1157108241	14036323509080		824		ae
	Empc Correction				3942106587	879976281	14036323509080		627		
305.8987	17.674	17.371	18	1.001	5119619055	1142826428	17826854456712		641	0.90(0.65-0.89)	e
A Non-2,3,7,8-sub-TCDF											a
303.9016	15.965	17.046	-65	0.904	27880304	8575769	14036323509080		6		
305.8987	15.965	17.046	-65	0.904	43138560	11789396	17826854456712		7	0.65(0.65-0.89)	
303.9016	16.237	17.046	-48	0.920	102431728	23967949	14036323509080		17		
305.8987	16.237	17.046	-48	0.920	131534807	30487774	17826854456712		17	0.78(0.65-0.89)	
303.9016	16.524	17.046	-31	0.936	184382255	41187256	14036323509080		29		
305.8987	16.509	17.046	-32	0.935	235166424	51785652	17826854456712		29	0.78(0.65-0.89)	
303.9016	16.736	17.046	-19	0.948	183181061	51125078	14036323509080		36		
305.8987	16.736	17.046	-19	0.948	235695912	67072978	17826854456712		38	0.78(0.65-0.89)	
303.9016	16.963	17.046	-5	0.961	279255640	70470322	14036323509080		50		
305.8987	16.948	17.046	-6	0.960	360866492	89623615	17826854456712		50	0.77(0.65-0.89)	
303.9016	17.220	17.046	10	0.975	2684488080	542129293	14036323509080		386		
305.8987	17.220	17.046	10	0.975	3447532096	698832510	17826854456712		392	0.78(0.65-0.89)	
303.9016	17.477	17.046	26	0.990	137872638	18987889	14036323509080		14		
305.8987	17.477	17.046	26	0.990	177872010	24647542	17826854456712		14	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.112	17.046	64	1.026	376953077	99004470	14036323509080		71		
305.8987	18.112	17.046	64	1.026	481939364	125033106	17826854456712		70	0.78(0.65-0.89)	
303.9016	18.324	17.046	77	1.038	89308486	19302882	14036323509080		14		
305.8987	18.324	17.046	77	1.038	111933323	24752531	17826854456712		14	0.80(0.65-0.89)	
303.9016	19.518	17.046	148	1.105	432823310	74035425	14036323509080		53		a
305.8987	19.518	17.046	148	1.105	555823488	95065389	17826854456712		53	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											Ma
331.9368	18.324	18.051	16	1.008	14120941	3401888	14706	36765	231		M
333.9339	18.324	18.051	16	1.008	17055382	4212931	33089	82722	127	0.83(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	18.354	18.081	16	1.002	1634708398	393754515	493045	1232612	799		a
321.8936	18.354	18.081	16	1.002	2076741635	493548496	322160	805400	1532	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.081	16	1.010	37302913	8679607	80263	200657	108		
A Non-2,3,7,8-sub-TCDD											
319.8965	18.233	17.500	44	0.995	18043843	5151174	493045	1232612	10		
321.8936	18.233	17.500	44	0.995	25287528	6922994	322160	805400	21	0.71(0.65-0.89)	
319.8965	18.687	17.500	71	1.020	143927543	27265350	493045	1232612	55		
321.8936	18.687	17.500	71	1.020	197289354	34920018	322160	805400	108	0.73(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.367	24	1.253	24774888	4568176	21228	53070	215		
353.8970	22.762	22.367	24	1.253	16563129	2964168	17388	43470	170	1.50(1.32-1.78)	
1,2,3,7,8-PeCDF											Ea
339.8597	22.776	22.394	23	1.001	423724886	78936250	183865	459662	429		a
341.8567	22.776	22.394	23	1.001	268058399	50012735	115073	287682	435	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.044	23.703	20	1.323	28475300	4530923	21228	53070	213		
353.8970	24.044	23.703	20	1.323	18173616	2885075	17388	43470	166	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	24.085	23.730	21	1.002	196275835	30810831	183865	459662	168		a
341.8567	24.072	23.730	20	1.001	123988683	19570193	115073	287682	170	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.836	20.093	-15	0.871	1758554	421984	1081	2702	390		
341.8567	19.836	20.093	-15	0.871	1094544	273773	1204	3010	227	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.399	23.241	-110	0.940	144578251	34333250	183865	459662	187		
341.8567	21.399	23.241	-110	0.940	92796586	22170767	115073	287682	193	1.56(1.32-1.78)	
339.8597	22.626	23.241	-37	0.994	21061033	4443755	183865	459662	24		
341.8567	22.626	23.241	-37	0.994	12949406	2745697	115073	287682	24	1.63(1.32-1.78)	
339.8597	23.021	23.241	-13	1.011	3675186	812698	183865	459662	4		
	Empc Correction				2938537	722994	183865	459662	4		
341.8567	23.021	23.241	-13	1.011	1895831	466448	115073	287682	4	1.94(1.32-1.78)	
339.8597	23.281	23.241	2	1.023	93968056	18590255	183865	459662	101		
341.8567	23.281	23.241	2	1.023	58685184	11753893	115073	287682	102	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	24.413	23.241	70	1.072	53845187	7950151	183865	459662	43		
341.8567	24.413	23.241	70	1.072	33808462	4979085	115073	287682	43	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.740	24.426	19	1.361	17617404	3374483	5658	14145	596		
369.8919	24.753	24.426	20	1.362	11021336	2113891	3702	9255	571	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											a
355.8546	24.767	24.453	19	1.001	13355485	2526694	13650	34125	185		a
357.8516	24.767	24.453	19	1.001	8072753	1587375	11030	27575	144	1.65(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	22.776	23.349	-34	0.921	649890	132683	13650	34125	10		
357.8516	22.776	23.349	-34	0.921	572887	83062	11030	27575	8	1.13(1.32-1.78)	
	Empc Correction				419283	85601	11030	27575	8		
355.8546	23.008	23.349	-20	0.930	463970	94884	13650	34125	7		
	Empc Correction				391688	81294	13650	34125	6		
357.8516	23.008	23.349	-20	0.930	252702	52448	11030	27575	5	1.84(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.689	30.503	11	0.952	15721176	3082087	11734	29335	263		
385.8610	30.689	30.503	11	0.952	30719257	6051709	12926	32315	468	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											Ea
373.8208	30.703	30.529	10	1.000	606226751	122526959	121750	304375	1006		a
375.8178	30.703	30.529	10	1.000	500087010	101350780	99636	249090	1017	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.849	30.689	10	0.957	14118974	3657012	11734	29335	312		
385.8610	30.849	30.689	10	0.957	27590432	6907173	12926	32315	534	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											a
373.8208	30.862	30.716	9	1.000	154685120	37428499	121750	304375	307		a
375.8178	30.862	30.716	9	1.000	126643749	30826623	99636	249090	309	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											a
383.8639	31.621	31.514	6	0.981	14014681	4233229	11734	29335	361		a
385.8610	31.621	31.514	6	0.981	26773095	8050748	12926	32315	623	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											a
373.8208	31.634	31.528	6	1.000	17731462	5121873	121750	304375	42		a
375.8178	31.634	31.528	6	1.000	14526769	4218661	99636	249090	42	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											a
383.8639	32.393	32.326	4	1.005	13008702	4108049	11734	29335	350		a
385.8610	32.393	32.326	4	1.005	25628721	8021805	12926	32315	621	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.406	32.340	4	1.000	8723013	3274015	121750	304375	27		
375.8178	32.406	32.340	4	1.000	7331178	2706163	99636	249090	27	1.19(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											a
373.8208	28.719	30.197	-88	0.936	36562458	6432325	121750	304375	53		
375.8178	28.719	30.197	-88	0.936	29994552	5325231	99636	249090	53	1.22(1.05-1.43)	
373.8208	29.984	30.197	-13	0.977	16462711	3173022	121750	304375	26		
375.8178	29.971	30.197	-14	0.977	13410118	2607155	99636	249090	26	1.23(1.05-1.43)	
373.8208	31.541	30.197	81	1.028	11202556	3096445	121750	304375	25		a
375.8178	31.541	30.197	81	1.028	9237501	2487980	99636	249090	25	1.21(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	32.486	30.197	137	1.059	38363364	11668793	121750	304375	96		a
375.8178	32.486	30.197	137	1.059	31563326	9617362	99636	249090	97	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	32.220	32.140	5		47727658	12872915	11720	29300	1098		a
403.8529	32.220	32.140	5		38858633	10458114	10188	25470	1027	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.794	31.701	6	0.987	18462436	5704418	11720	29300	487		
403.8529	31.794	31.701	6	0.987	14902970	4606455	10188	25470	452	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.807	31.714	6	1.000	186900	59367	2480	6200	24		
391.8127	31.807	31.714	6	1.000	149494	46447	2583	6457	18	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.900	31.807	6	0.990	19121405	5480492	11720	29300	468		
403.8529	31.900	31.807	6	0.990	15296260	4371019	10188	25470	429	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.914	31.820	6	1.000	857354	245293	2480	6200	99		
391.8127	31.900	31.820	5	1.000	736761	211663	2583	6457	82	1.16(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.233	32.153	5	1.014	521778	116853	2480	6200	47		
391.8127	32.233	32.153	5	1.014	385247	88027	2583	6457	34	1.35(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											M
389.8157	29.864	30.882	-61	0.936	1214936	162583	2480	6200	66		
391.8127	29.851	30.882	-62	0.936	993573	137066	2583	6457	53	1.22(1.05-1.43)	
389.8157	30.743	30.882	-8	0.964	349279	85821	2480	6200	35		
391.8127	30.743	30.882	-8	0.964	265009	66508	2583	6457	26	1.32(1.05-1.43)	
389.8157	31.089	30.882	12	0.975	2777897	623014	2480	6200	251		
391.8127	31.089	30.882	12	0.975	2314252	493381	2583	6457	191	1.20(1.05-1.43)	M
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.815	33.766	3	1.049	9735119	3425085	11241	28102	305		
419.8220	33.815	33.766	3	1.049	22423162	7823823	21507	53767	364	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.827	33.778	3	1.000	141977348	47898262	130590	326475	367		
409.7789	33.815	33.778	2	1.000	136634968	46358355	84774	211935	547	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.884	34.847	2	1.083	10687379	3588973	11241	28102	319		
419.8220	34.884	34.847	2	1.083	23917370	7906095	21507	53767	368	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.896	34.860	2	1.000	47816647	15530601	130590	326475	119		
409.7789	34.896	34.860	2	1.000	45609635	14612195	84774	211935	172	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.119	34.319	-12	1.009	30934239	11888976	130590	326475	91		
409.7789	34.119	34.319	-12	1.009	29530097	11185526	84774	211935	132	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.592	34.568	1	1.074	14767673	4840031	9596	23990	504		
437.8140	34.592	34.568	1	1.074	14794674	4781953	9200	23000	520	1.00(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.605	34.580	1	1.000	15173398	5018849	18405	46012	273		
425.7737	34.605	34.580	1	1.000	14436246	4803784	17989	44972	267	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.058	34.301	-15	0.985	14667808	5389967	18405	46012	293		
425.7737	34.058	34.301	-15	0.985	14182801	5375149	17989	44972	299	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.950	36.926	1	1.147	22085895	6192028	5549	13872	1116		
471.7750	36.950	36.926	1	1.147	24981453	7032730	5548	13870	1268	0.88(0.76-1.02)	
OCDF											
441.7428	37.046	37.022	1	1.003	37809478	10417078	3460	8650	3011		
443.7399	37.046	37.022	1	1.003	42977917	11998051	4200	10500	2857	0.88(0.76-1.02)	
OCDD											
457.7377	36.962	36.938	1	1.000	144202312	40646822	15045	37612	2702		
459.7348	36.962	36.938	1	1.000	161406490	45443679	14707	36767	3090	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Aug-2021 10:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d
Lims ID: 320-76769-A-28-A
Client ID: 11215702-072221-SS-SJSB076 (2-4)
Inject. Date: 15-Aug-2021 20:27:17 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 27

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	45296612	14050422

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	45296612	14050422

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.965	27880304	8575769	43138560	11789396	153.1	0.65	
16.237	102431728	23967949	131534807	30487774	504.5	0.78	
16.524	184382255	41187256	235166424	51785652	904.6	0.78	
16.736	183181061	51125078	235695912	67072978	903.1	0.78	
16.963	279255640	70470322	360866492	89623615	1380.2	0.77	
17.220	2684488080	542129293	3447532096	698832510	13221	0.78	
17.477	137872638	18987889	177872010	24647542	680.8	0.78	
18.112	376953077	99004470	481939364	125033106	1851.9	0.78	
18.324	89308486	19302882	111933323	24752531	433.9	0.80	
19.518	432823310	74035425	555823488	95065389	2131.6	0.78	a
Signal Totals:	4498576579	948786333	5781502476	1219090493			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10280079055	2167876826				0.78	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 22165 = (10280079055 * 100.000) / (45296612 * 1.024)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d
Lims ID: 320-76769-A-28-A
Client ID: 11215702-072221-SS-SJSB076 (2-4)
Inject. Date: 15-Aug-2021 20:27:17 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 27

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	31176323	7614819

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	31176323	7614819

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.233	18043843	5151174	25287528	6922994	110.8	0.71	
18.687	143927543	27265350	197289354	34920018	872.7	0.73	
Signal Totals:							
	161971386	32416524	222576882	41843012			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	384548268	74259536				0.73	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 983.528 = (384548268 * 100.000) / (31176323 * 1.254)

Report Date: 18-Aug-2021 10:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Lims ID:	320-76769-A-28-A		
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Inject. Date:	15-Aug-2021 20:27:17	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	27

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	41338017	7532344
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	46648916	7415998

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	43993466	7474171

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.836	1758554	421984	1094544	273773	6.24	1.61	
Signal Totals:							
	1758554	421984	1094544	273773			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2853098	695757				1.61	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 6.237 = (2853098 * 100.000) / (43993466 * 1.040)

Report Date: 18-Aug-2021 10:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Lims ID:	320-76769-A-28-A		
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Inject. Date:	15-Aug-2021 20:27:17	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	27

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	41338017	7532344
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	46648916	7415998

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	43993466	7474171

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.399	144578251	34333250	92796586	22170767	518.9	1.56	
22.626	21061033	4443755	12949406	2745697	74.4	1.63	
23.021	3675186	812698	1895831	466448	12.2	1.94	RQ
23.021	2938537	722994	1895831	466448	10.6		Empc Correction
23.281	93968056	18590255	58685184	11753893	333.7	1.60	
24.413	53845187	7950151	33808462	4979085	191.6	1.59	
Signal Totals:							
	316391064	66040405	200135469	42115890			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	517263182	108245999				1.58	RQ
	516526533	108156295					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1130.8 = (517263182 * 100.000) / (43993466 * 1.040)
Empc Amount: 1129.2 = (516526533 * 100.000) / (43993466 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Lims ID:	320-76769-A-28-A		
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Inject. Date:	15-Aug-2021 20:27:17	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516848	Lims Sample ID:	27

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	28638740	5488374

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	28638740	5488374

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.776	649890	132683	572887	83062	4.07	1.13	RQ
22.776	649890	132683	419283	85601	3.56		Empc Correction
23.008	463970	94884	252702	52448	2.39	1.84	RQ
23.008	391688	81294	252702	52448	2.15		Empc Correction
Signal Totals:							
	1041578	213977	671985	138049			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1939449	363077				1.35	RQ
	1713563	352026					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.459 = (1939449 * 100.000) / (28638740 * 1.048)
Empc Amount: 5.707 = (1713563 * 100.000) / (28638740 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d
Lims ID: 320-76769-A-28-A
Client ID: 11215702-072221-SS-SJSB076 (2-4)
Inject. Date: 15-Aug-2021 20:27:17 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 27

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	46440433	9133796
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	41709406	10564185
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	40787776	12283977
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	38637423	12129854

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	41893759	11027953

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.719	36562458	6432325	29994552	5325231	139.8	1.22	
29.984	16462711	3173022	13410118	2607155	62.8	1.23	
31.541	11202556	3096445	9237501	2487980	42.9	1.21	a
32.486	38363364	11668793	31563326	9617362	146.9	1.22	a
Signal Totals:	102591089	24370585	84205497	20037728			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	186796586	44408313				1.22	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 392.413 = (186796586 * 100.000) / (41893759 * 1.136)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d
Lims ID: 320-76769-A-28-A
Client ID: 11215702-072221-SS-SJSB076 (2-4)
Inject. Date: 15-Aug-2021 20:27:17 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 27

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	33365406	10310873
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	34417665	9851511
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	33891535	10081192

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.864	1214936	162583	993573	137066	6.12	1.22	
30.743	349279	85821	265009	66508	1.70	1.32	
31.089	2777897	623014	2314252	493381	14.1	1.20	M
Signal Totals:							
	4342112	871418	3572834	696955			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7914946	1568373				1.22	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 21.917 = (7914946 * 100.000) / (33891535 * 1.066)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 10:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d
Lims ID: 320-76769-A-28-A
Client ID: 11215702-072221-SS-SJSB076 (2-4)
Inject. Date: 15-Aug-2021 20:27:17 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 27

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	32158281	11248908
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	34604749	11495068

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	33381515	11371988

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.119	30934239	11888976	29530097	11185526	131.3	1.05	
Signal Totals:							
	30934239	11888976	29530097	11185526			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	60464336	23074502				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 131.318 = (60464336 * 100.000) / (33381515 * 1.379)

Report Date: 18-Aug-2021 10:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d
Lims ID: 320-76769-A-28-A
Client ID: 11215702-072221-SS-SJSB076 (2-4)
Inject. Date: 15-Aug-2021 20:27:17 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 27

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	29562347	9621984

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	29562347	9621984

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.058	14667808	5389967	14182801	5375149	89.2	1.03	
Signal Totals:							
	14667808	5389967	14182801	5375149			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28850609	10765116				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 89.182 = (28850609 * 100.000) / (29562347 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Not Detected
Expected RT: 17.37

Processing Integration Results

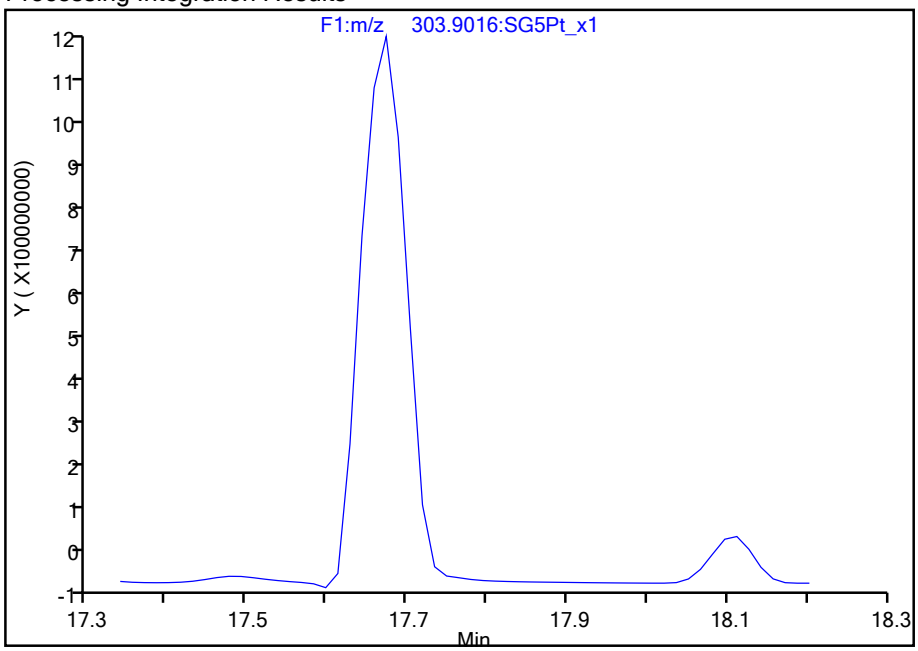

Manual Integration Results

RT: 17.67
Area: 4612746653
Amount: 20984
Amount Units: pg/ul

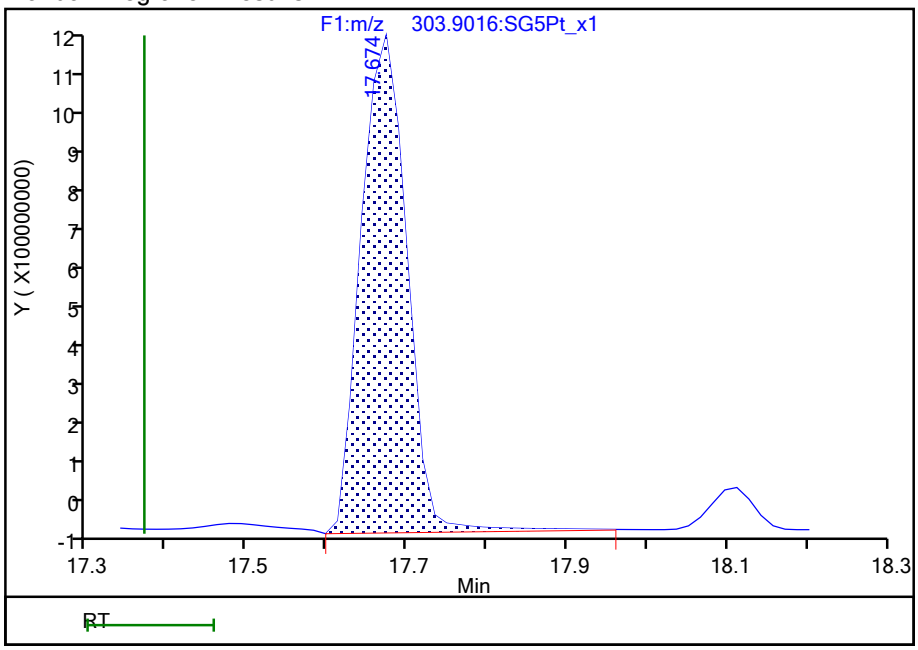

Reviewer: bennettd, 17-Aug-2021 16:58:30
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 18.17
Area: 29711087
Amount: 111.1955
Amount Units: pg/ul

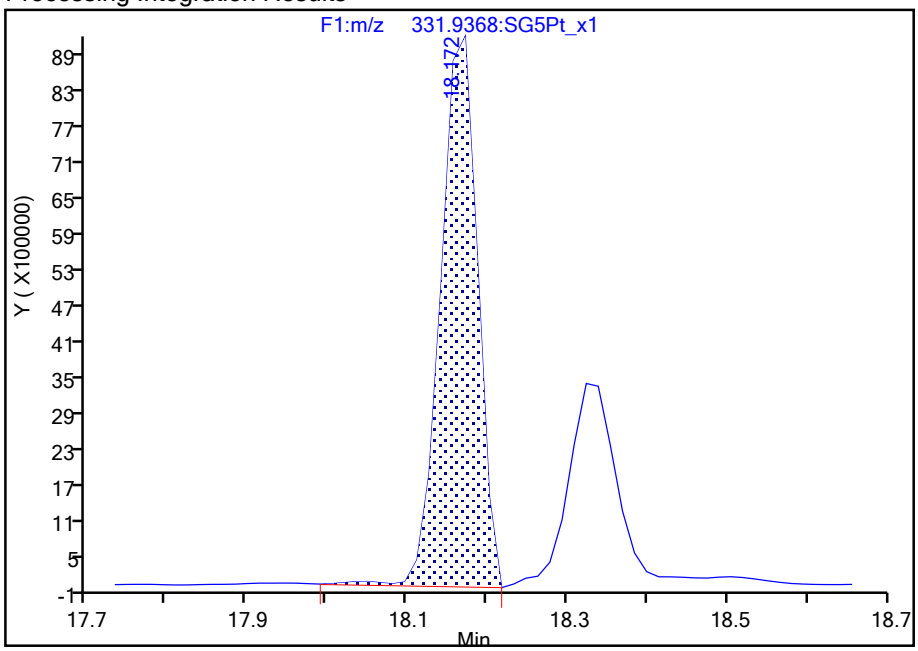

Manual Integration Results

RT: 18.32
Area: 14120941
Amount: 52.597289
Amount Units: pg/ul

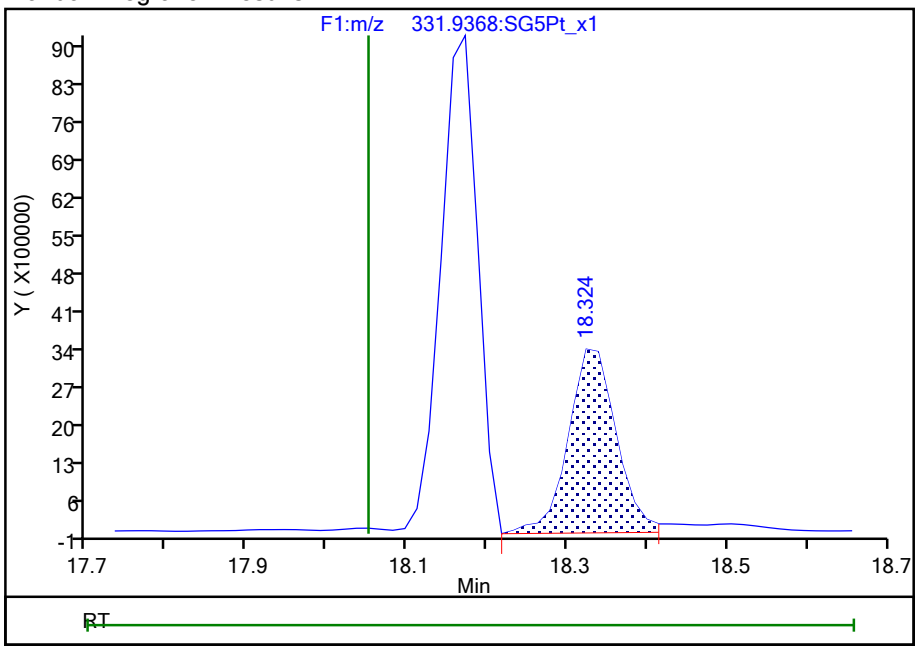

Reviewer: dadunj, 18-Aug-2021 12:22:23

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Not Detected
Expected RT: 18.08

Processing Integration Results

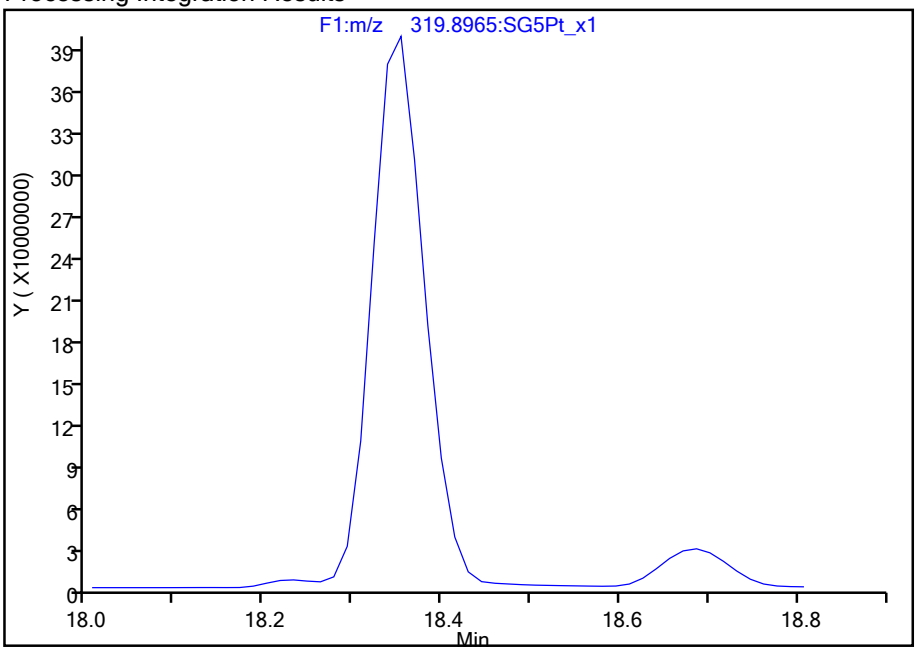

Manual Integration Results

RT: 18.35
Area: 1634708398
Amount: 9492.4800
Amount Units: pg/ul

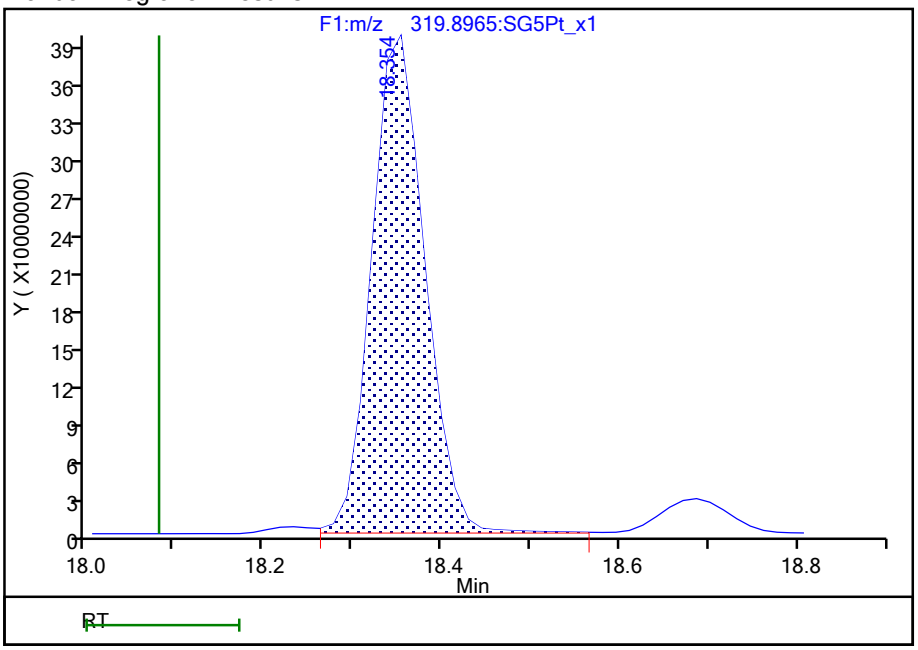

Reviewer: bennettd, 17-Aug-2021 16:58:20
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

775629

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 22.39

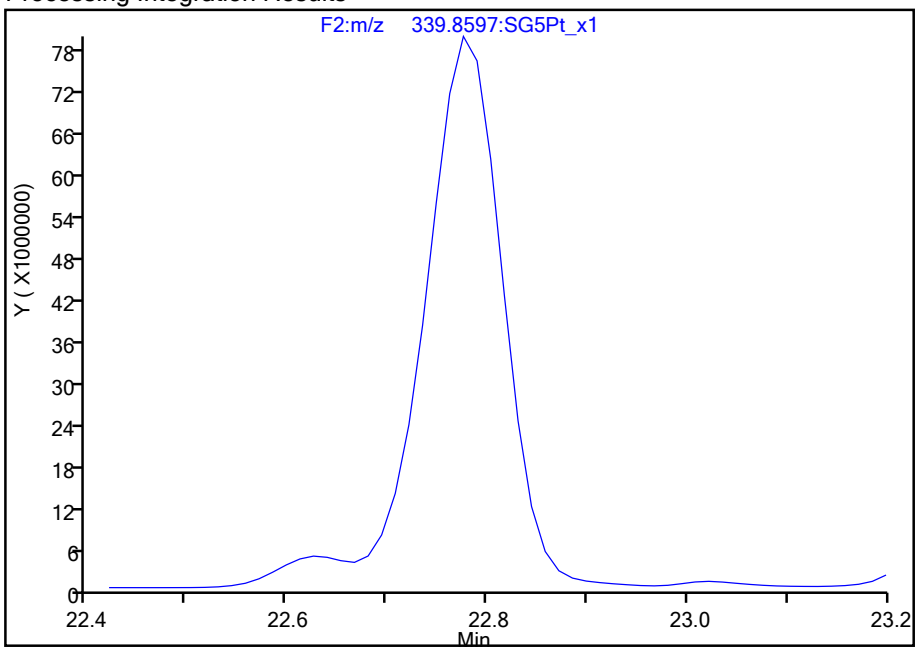

Manual Integration Results

RT: 22.78
Area: 423724886
Amount: 1577.0661
Amount Units: pg/ul

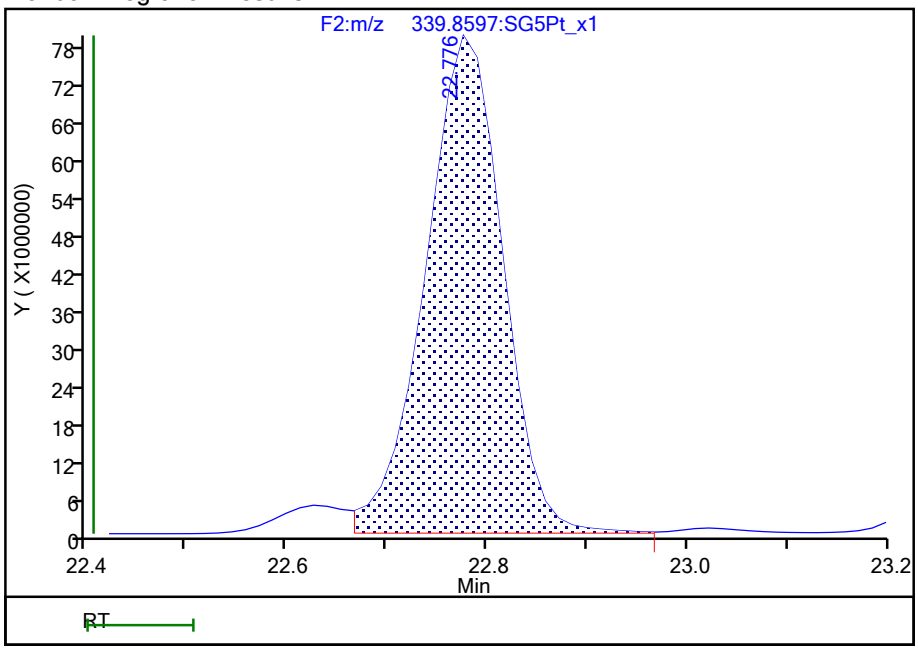

Reviewer: dadunj, 18-Aug-2021 11:48:33
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Not Detected
Expected RT: 23.73

Processing Integration Results

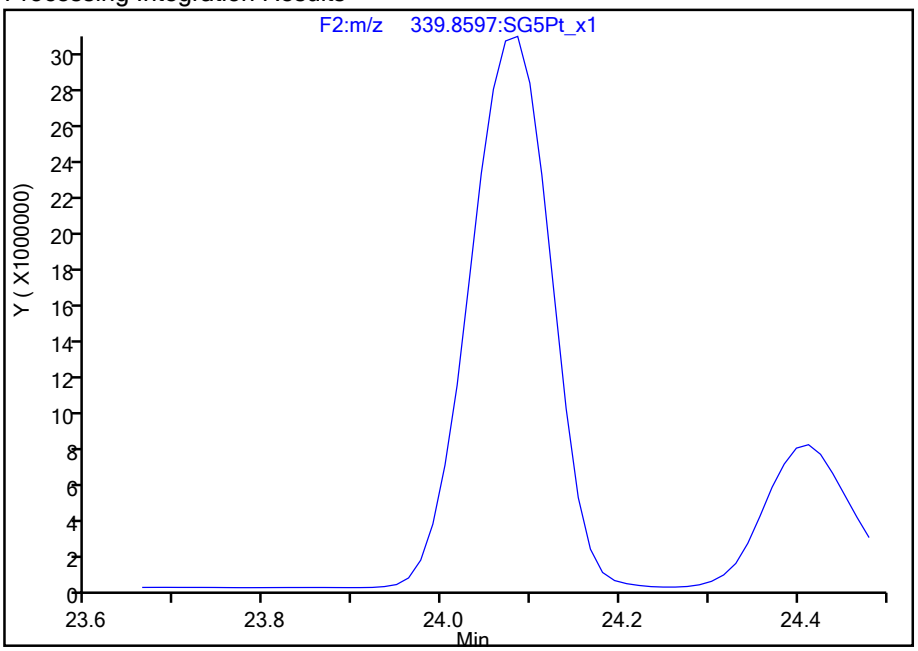

Manual Integration Results

RT: 24.09
Area: 196275835
Amount: 674.1262
Amount Units: pg/ul

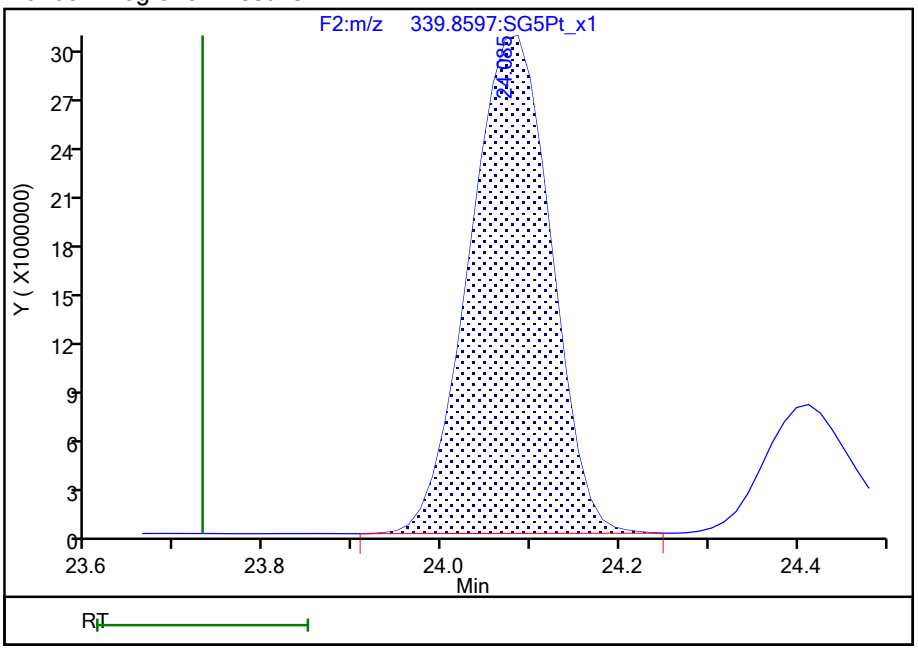

Reviewer: dadunj, 18-Aug-2021 11:48:38
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

775631

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Not Detected
Expected RT: 24.45

Processing Integration Results

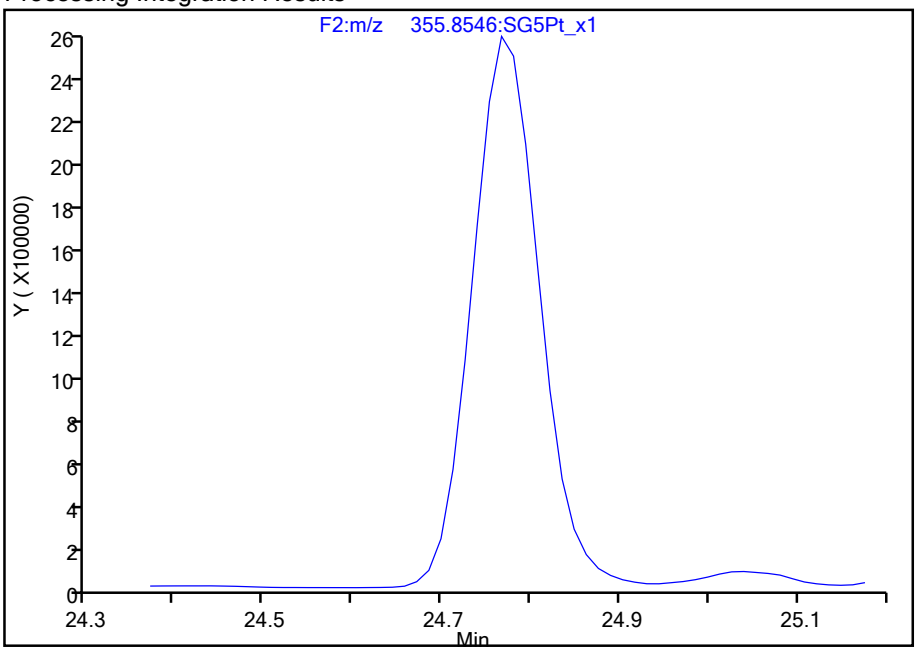

RT: 24.77
Area: 13355485
Amount: 71.366256
Amount Units: pg/ul

Manual Integration Results

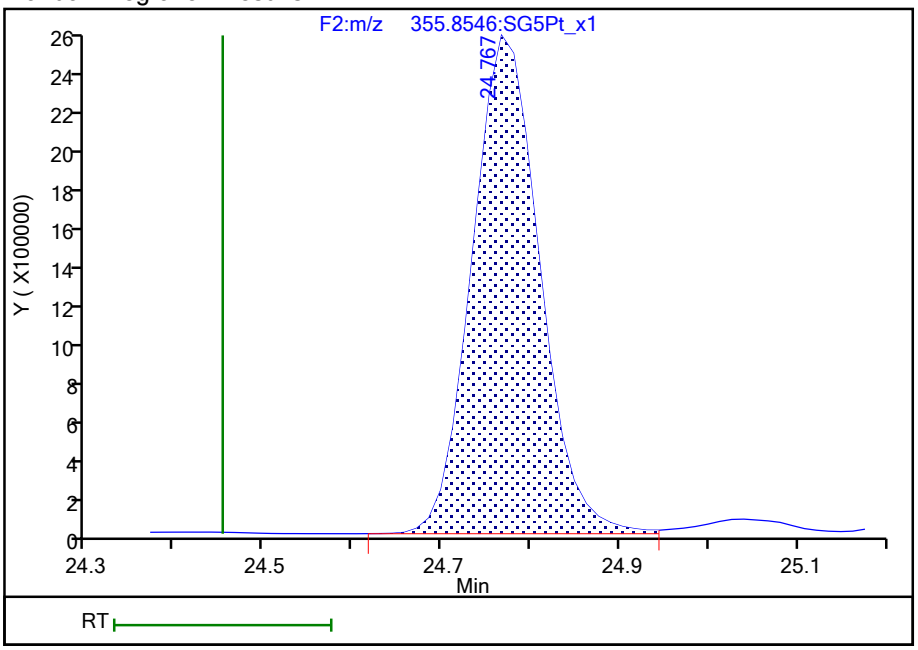

Reviewer: dadunj, 18-Aug-2021 11:49:05
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Not Detected
Expected RT: 30.53

Processing Integration Results

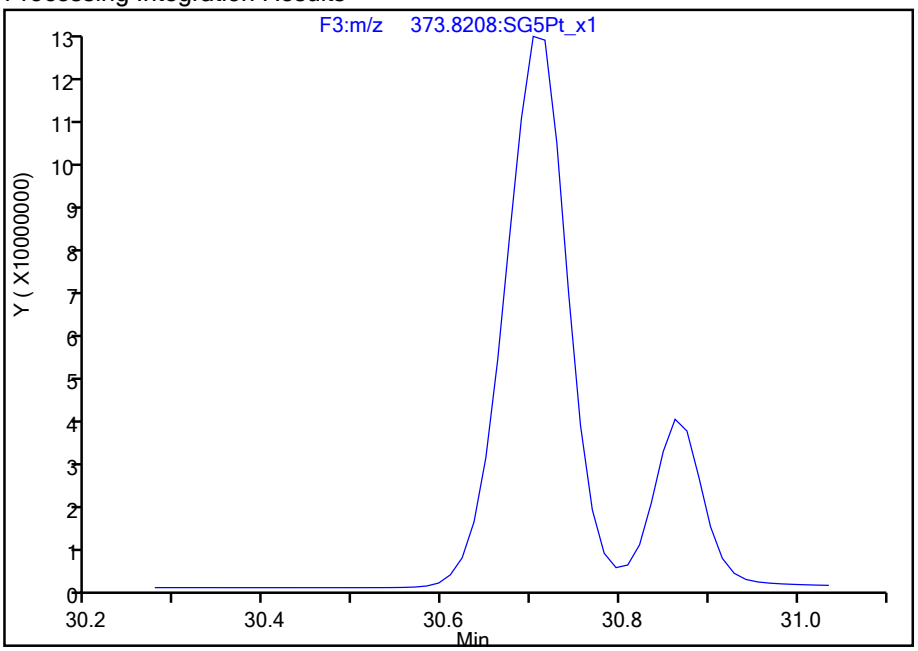

RT: 30.70
Area: 606226751
Amount: 2195.3389
Amount Units: pg/ul

Manual Integration Results

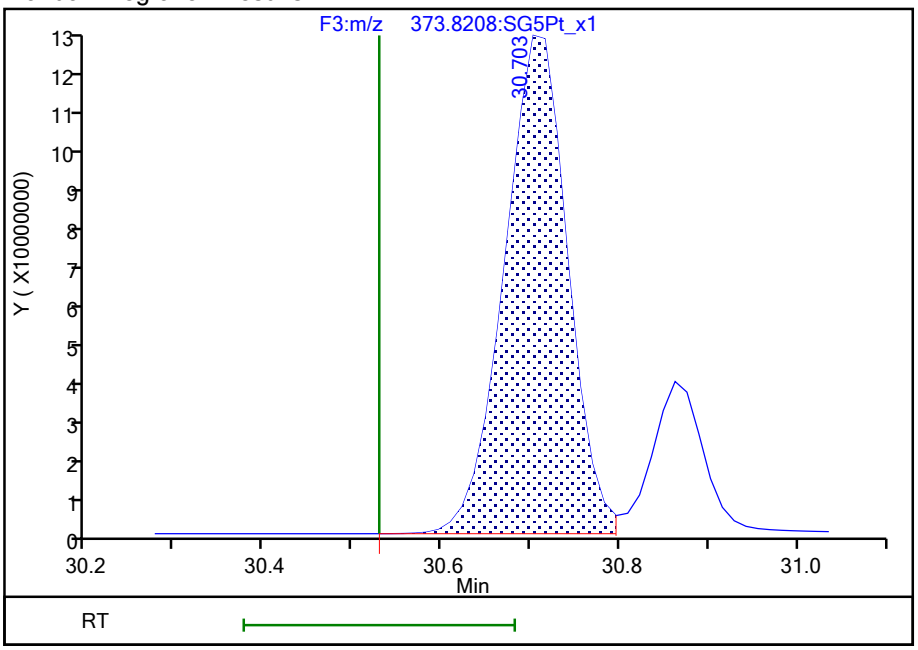

Reviewer: dadunj, 18-Aug-2021 11:49:17
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.70
Area: 606226751
Amount: 2355.5980
Amount Units: pg/ul

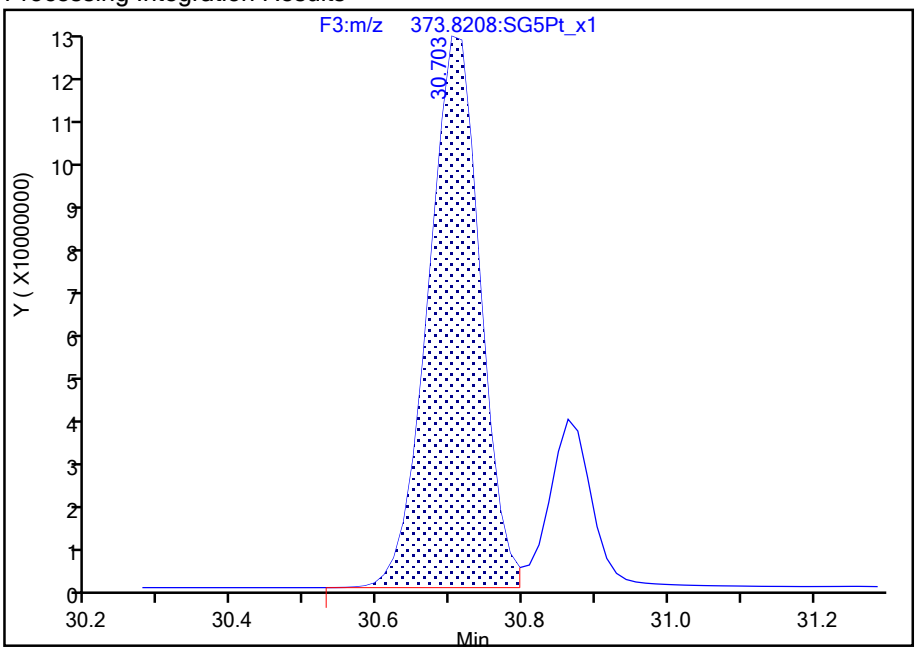

Manual Integration Results

RT: 30.86
Area: 154685120
Amount: 599.0143
Amount Units: pg/ul

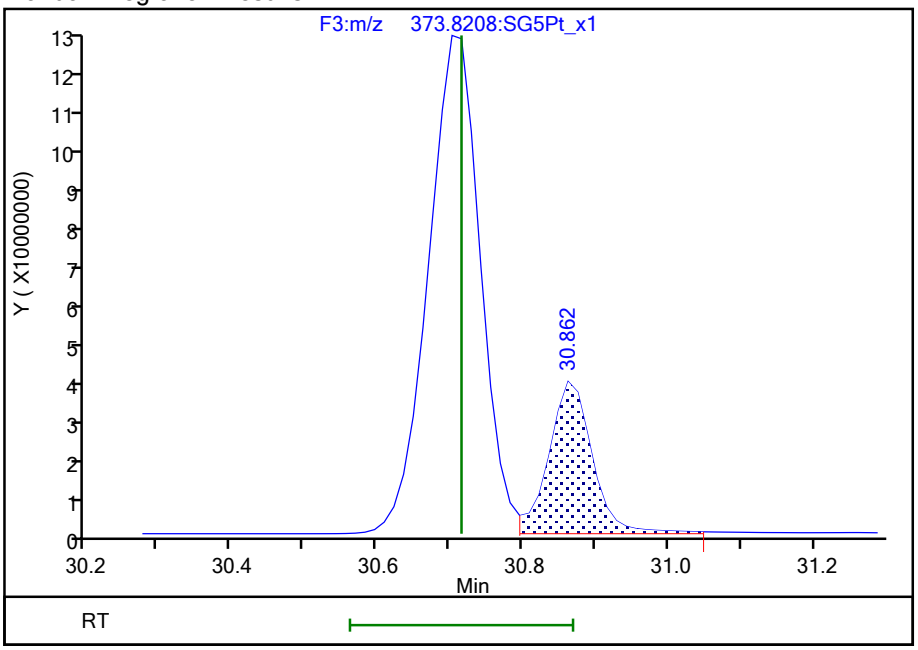

Reviewer: dadunj, 18-Aug-2021 11:49:20

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-2,3,4,6,7,8-HxCDF, CAS: 116843-05-1

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.51

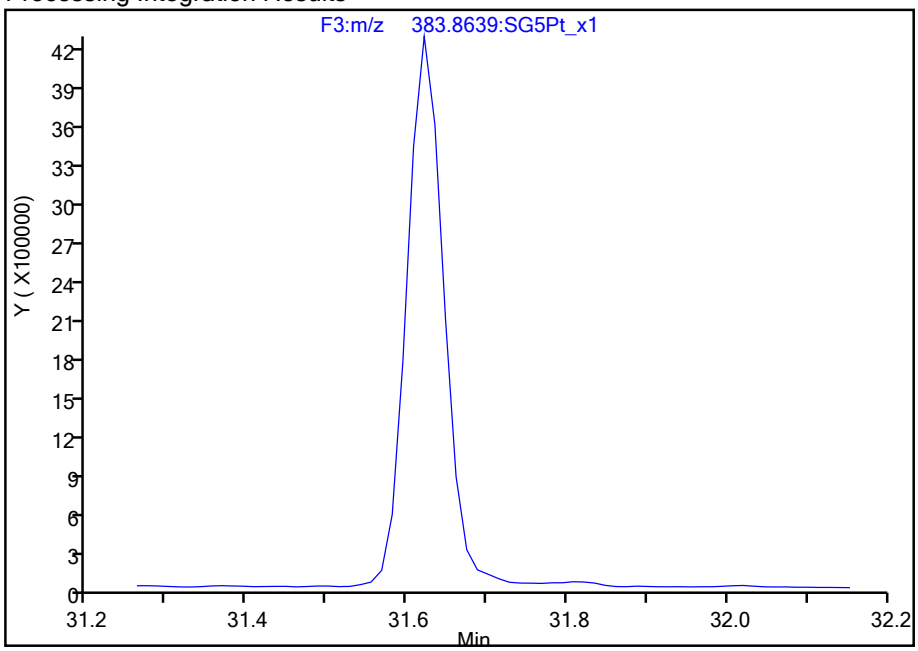

Manual Integration Results

RT: 31.62
Area: 14014681
Amount: 44.284278
Amount Units: pg/ul

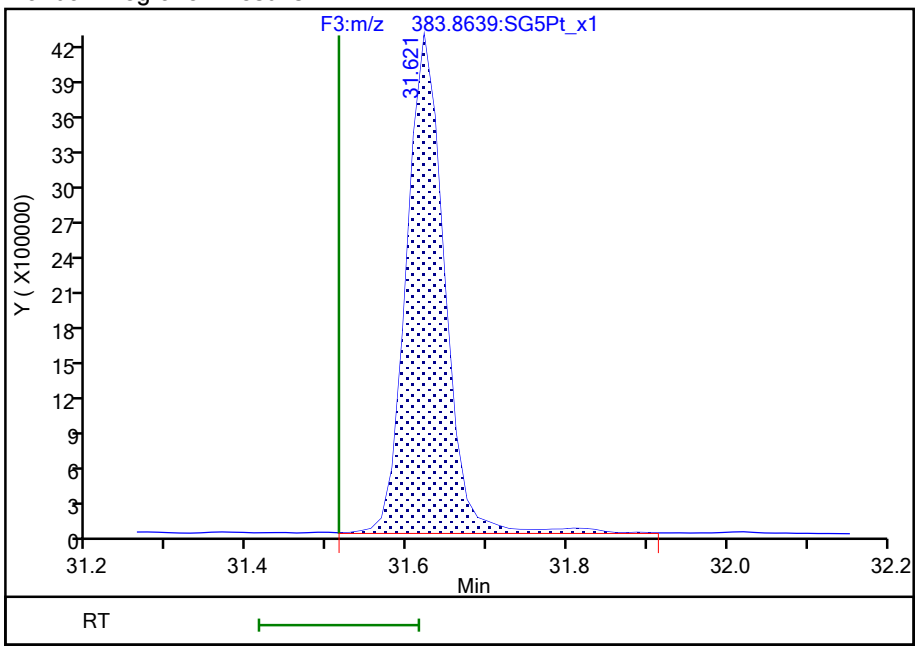

Reviewer: dadunj, 18-Aug-2021 11:49:31
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.54
Area: 9237501
Amount: 0
Amount Units: pg/ul

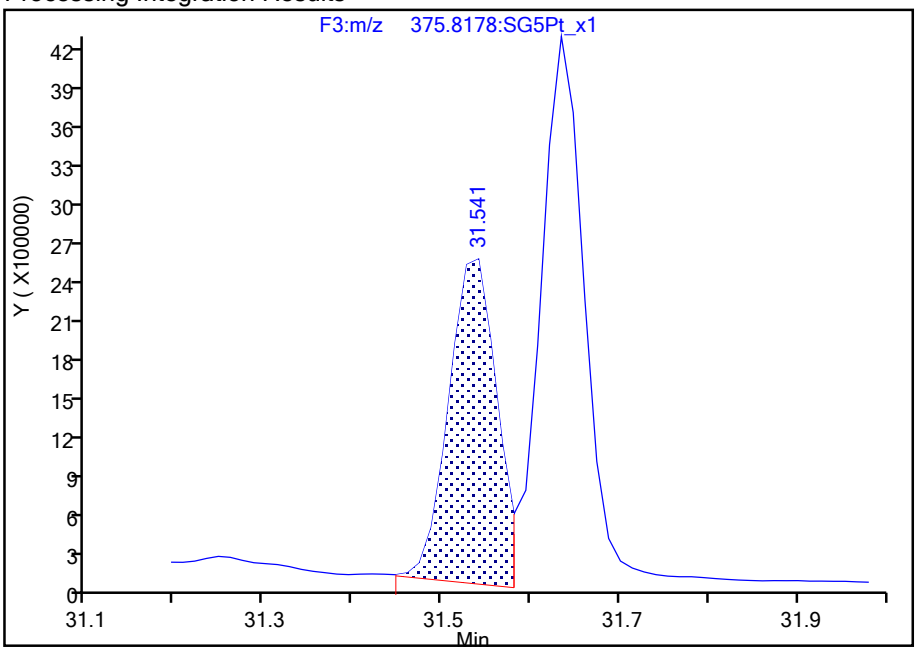

Manual Integration Results

RT: 31.63
Area: 14526769
Amount: 67.739046
Amount Units: pg/ul

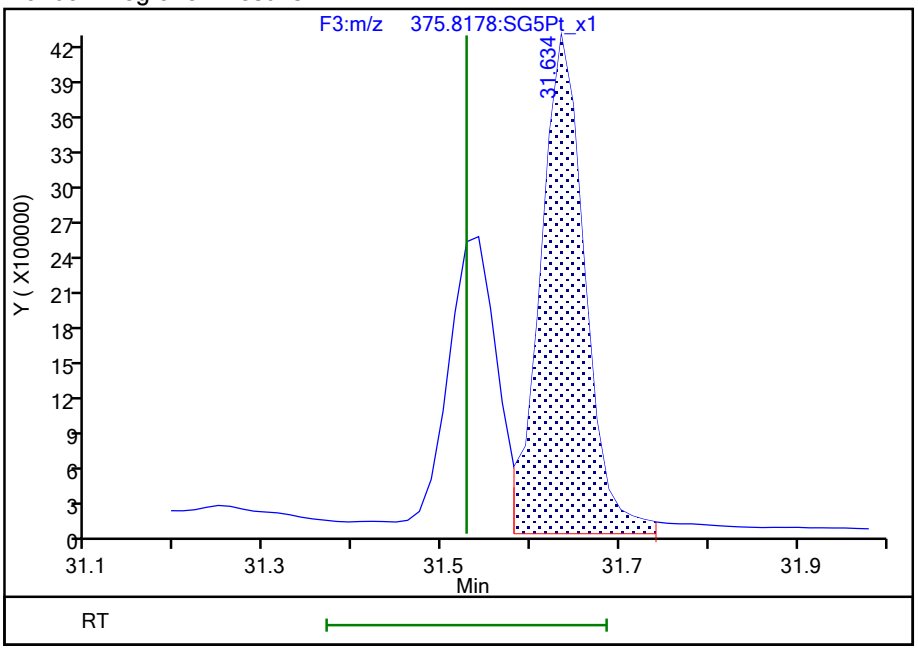

Reviewer: dadunj, 18-Aug-2021 11:49:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 3

RT: 31.54
Area: 20440057
Amount: 0
Amount Units: pg/ul

Processing Integration Results

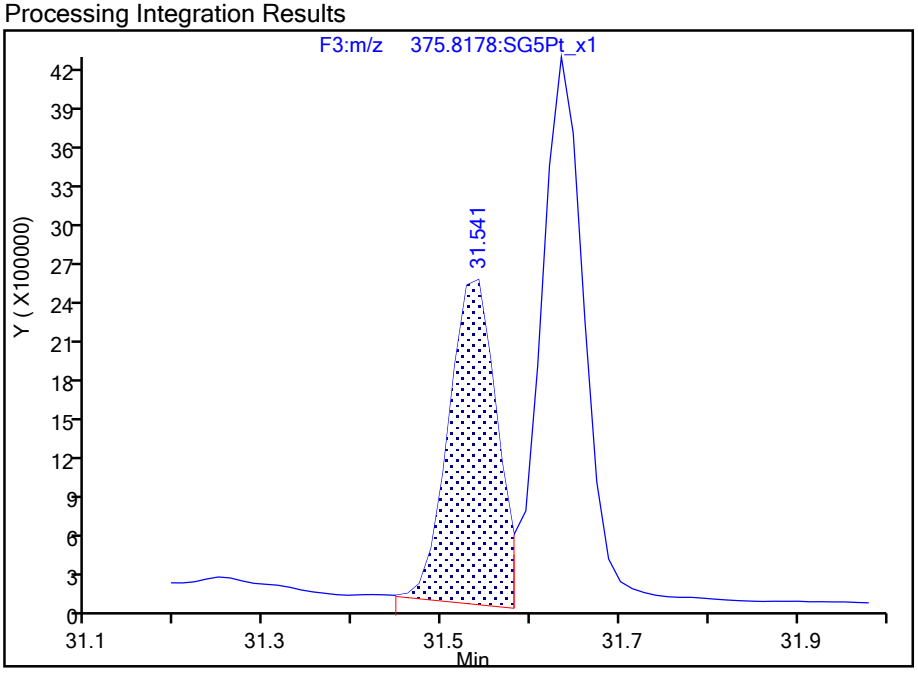

Manual Integration Results

RT: 31.63
Area: 32258231
Amount: 67.739046
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 11:49:23
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.54
Area: 11202556
Amount: 0
Amount Units: pg/ul

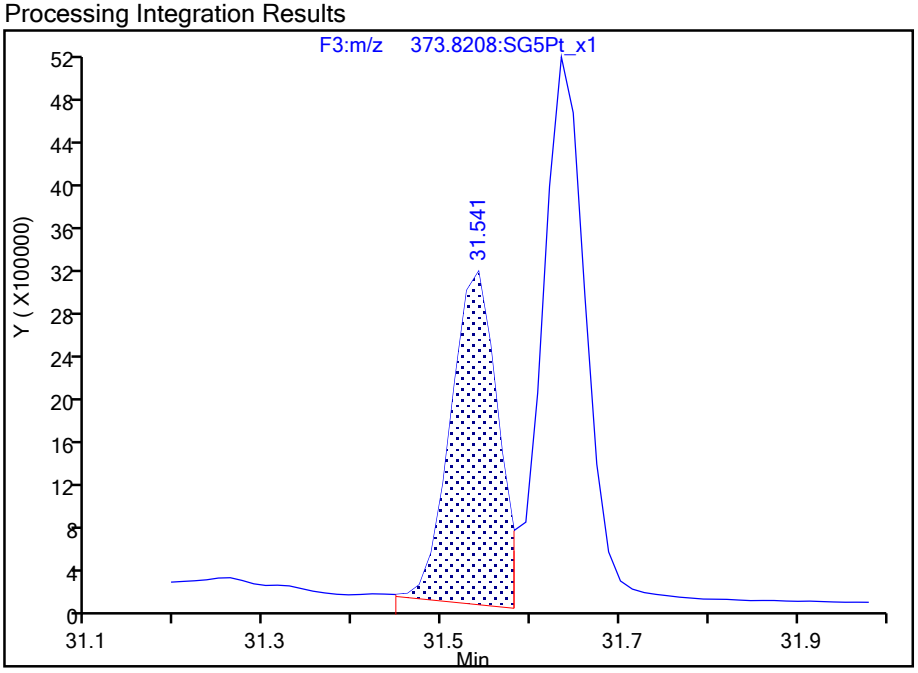

Manual Integration Results

RT: 31.63
Area: 17731462
Amount: 67.739046
Amount Units: pg/ul

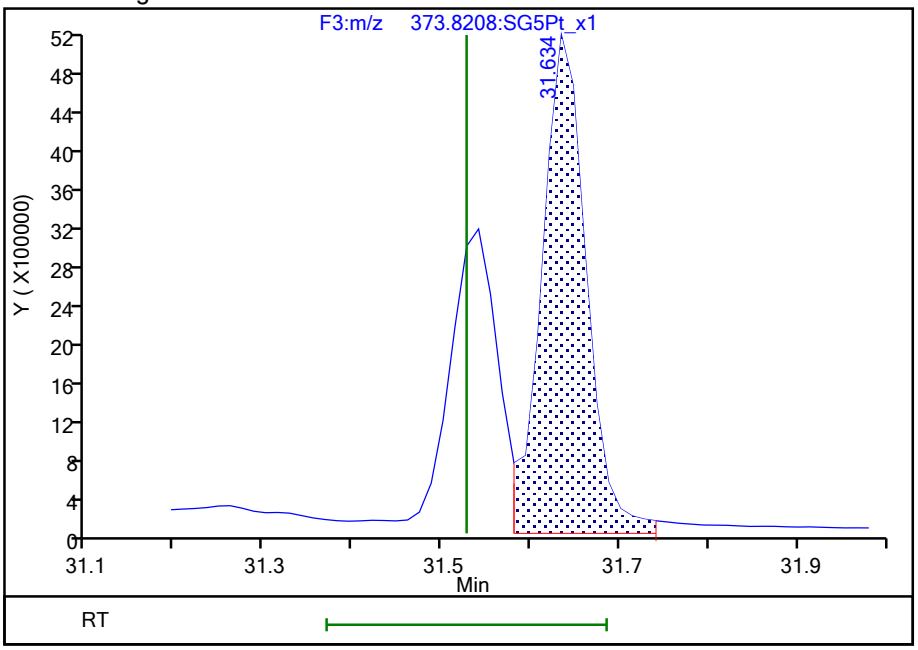

Reviewer: dadunj, 18-Aug-2021 11:49:24
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,7,8,9-HxCDF, CAS: 116843-04-0

Signal: 1

Processing Integration Results

RT: 31.62
Area: 14014681
Amount: 0
Amount Units: pg/ul

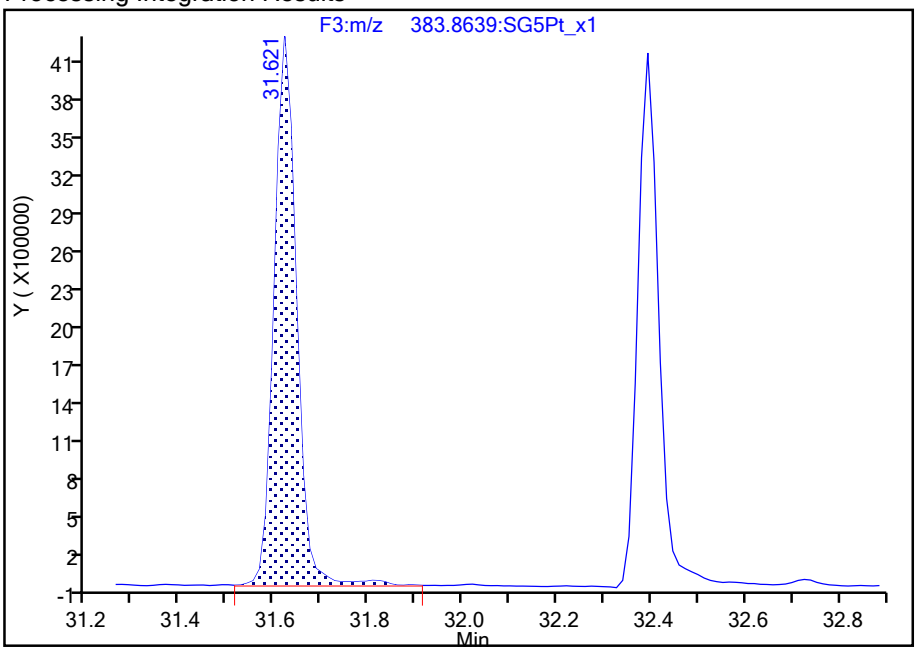

Manual Integration Results

RT: 32.39
Area: 13008702
Amount: 46.118765
Amount Units: pg/ul

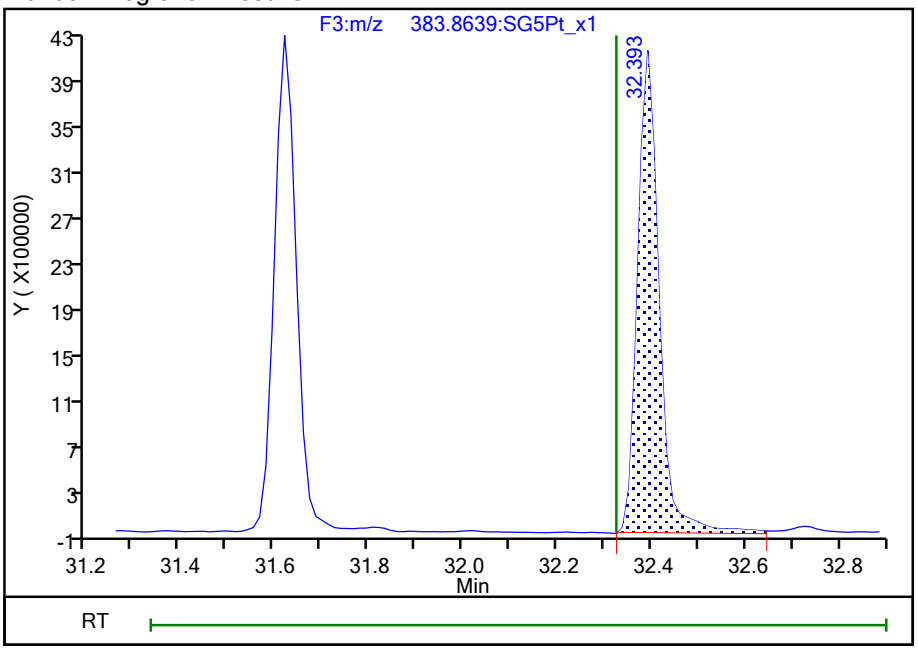

Reviewer: dadunj, 18-Aug-2021 11:49:37

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d				
Injection Date:	15-Aug-2021 20:27:17	Instrument ID:	10D5		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:	DB	ALS Bottle#:	66	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (29.36- 32.41)

Signal: 2

Processing Integration Results

RT = 31.089 Area = 2440726

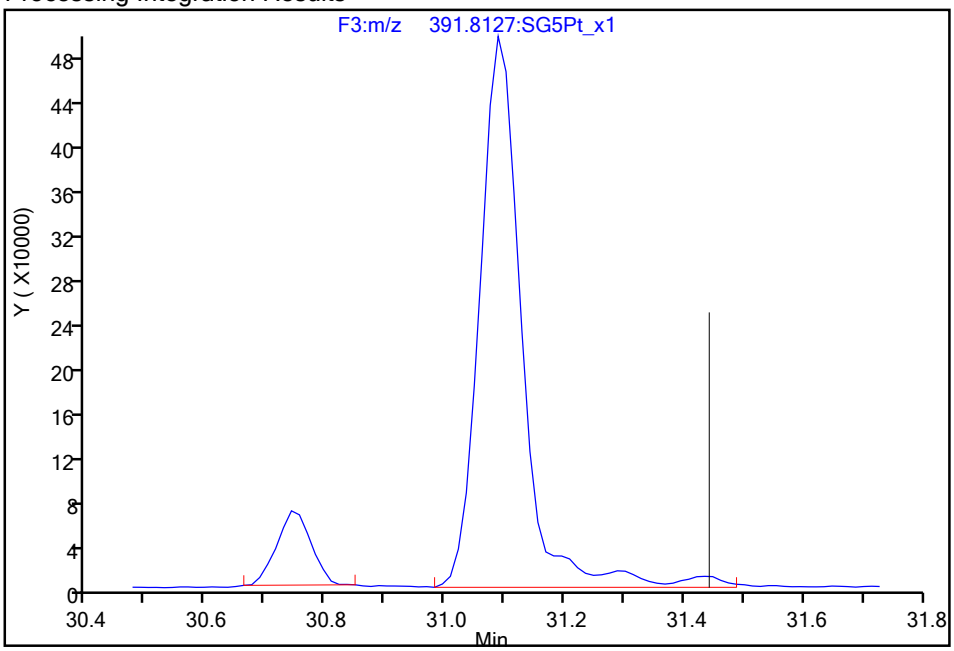

Manual Integration Results

RT = 31.089 Area = 2314252 M

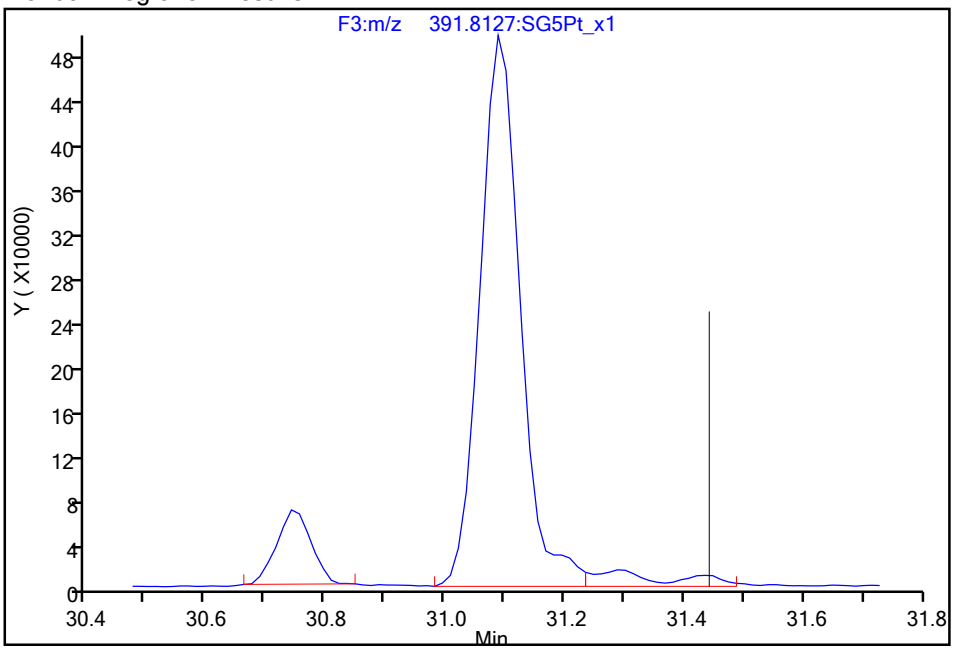

Reviewer: dadunj, 18-Aug-2021 11:50:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	516848	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

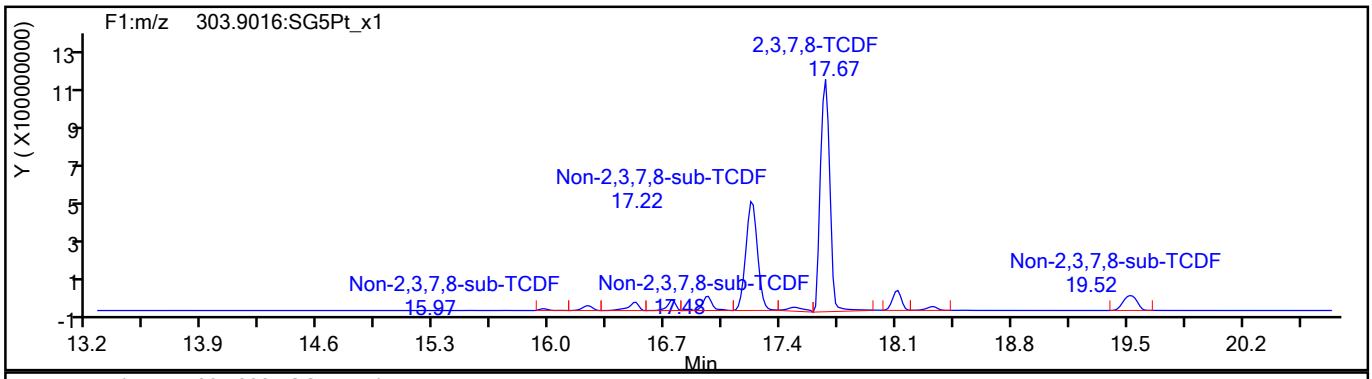

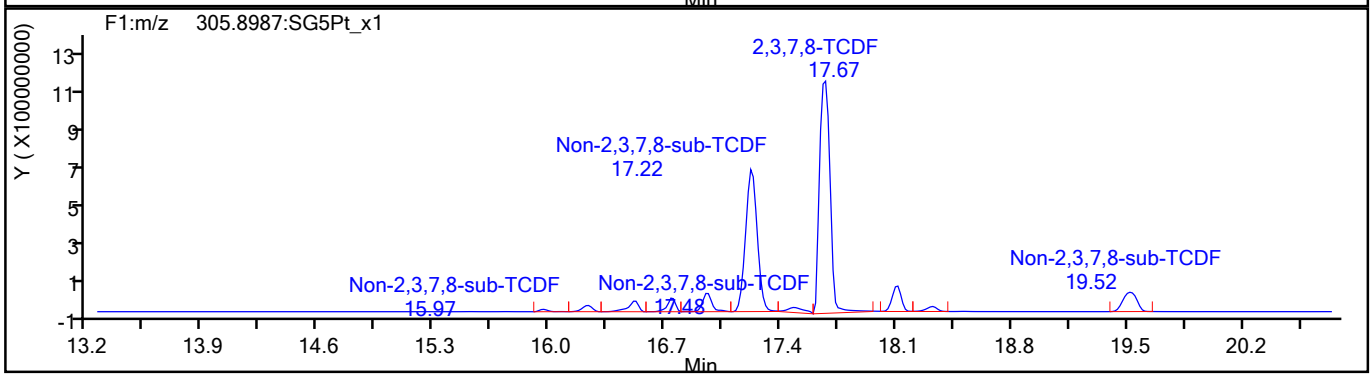

TCDF Standards

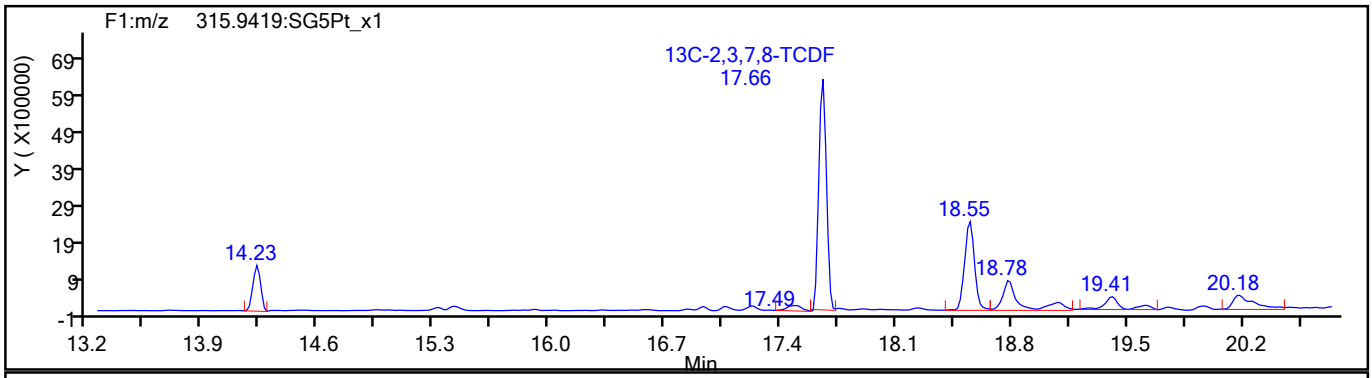

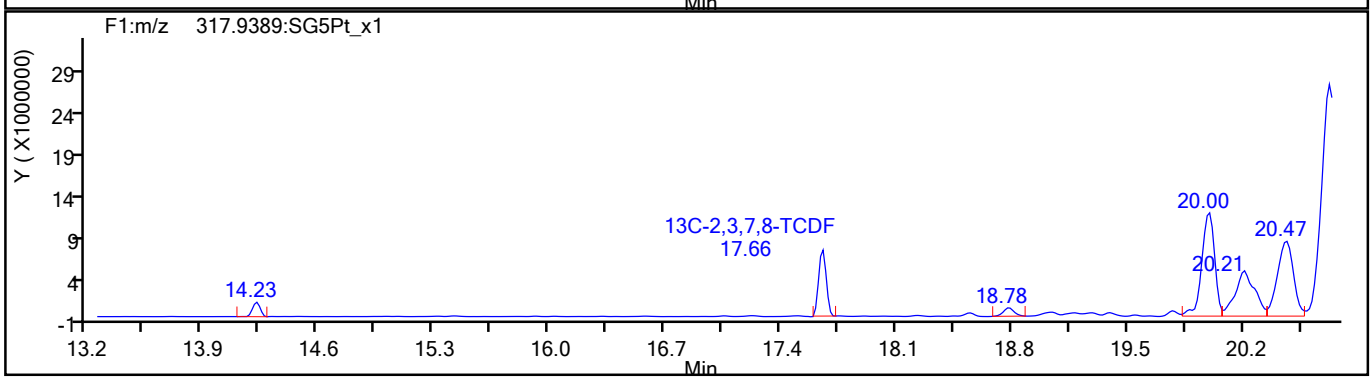

775641

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	516848	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

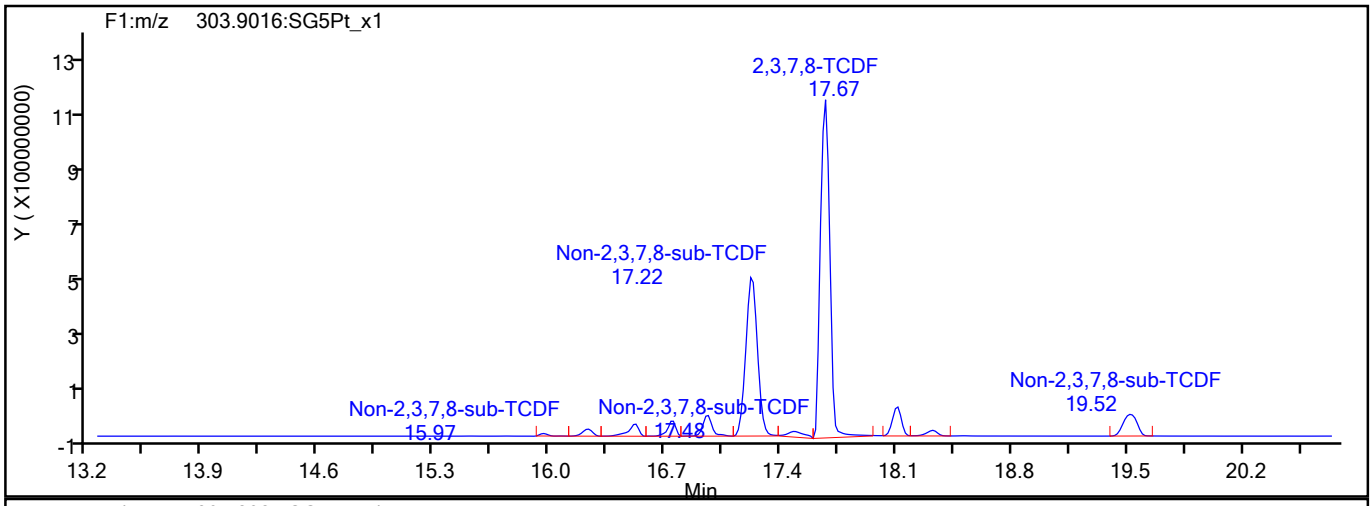

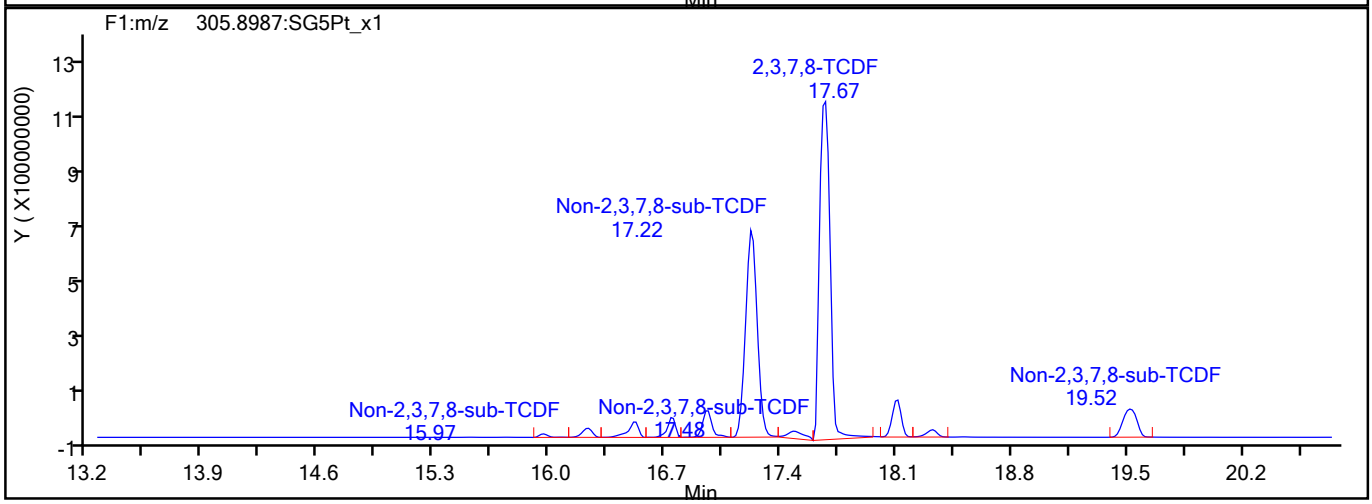

TCDF Interference Mass

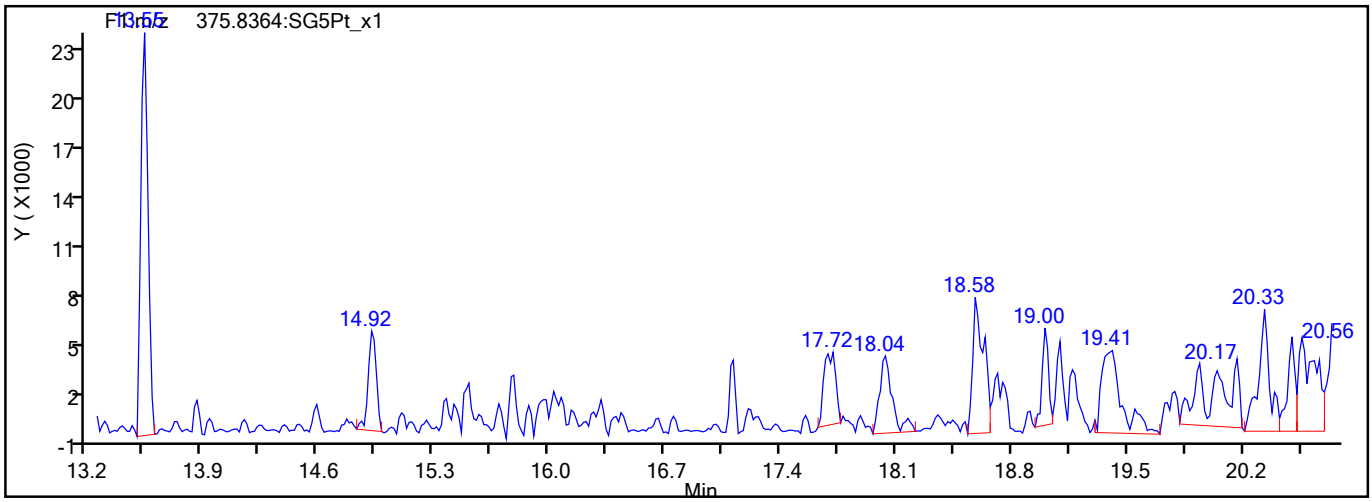

775642

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	516848	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

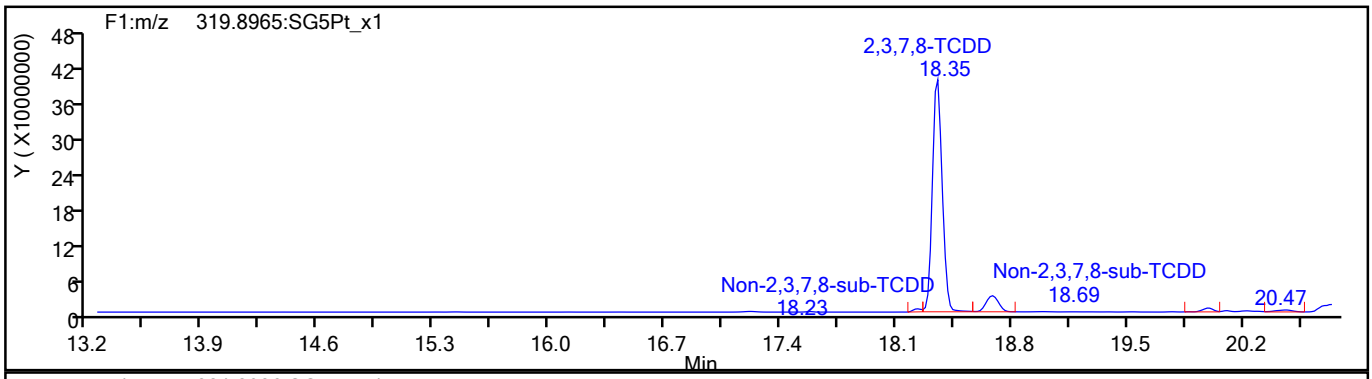

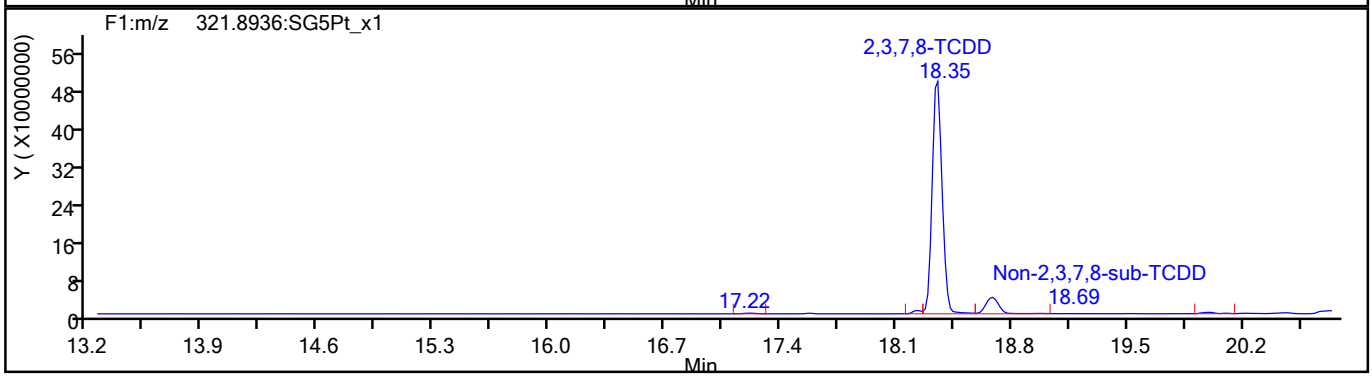

TCDD Standards

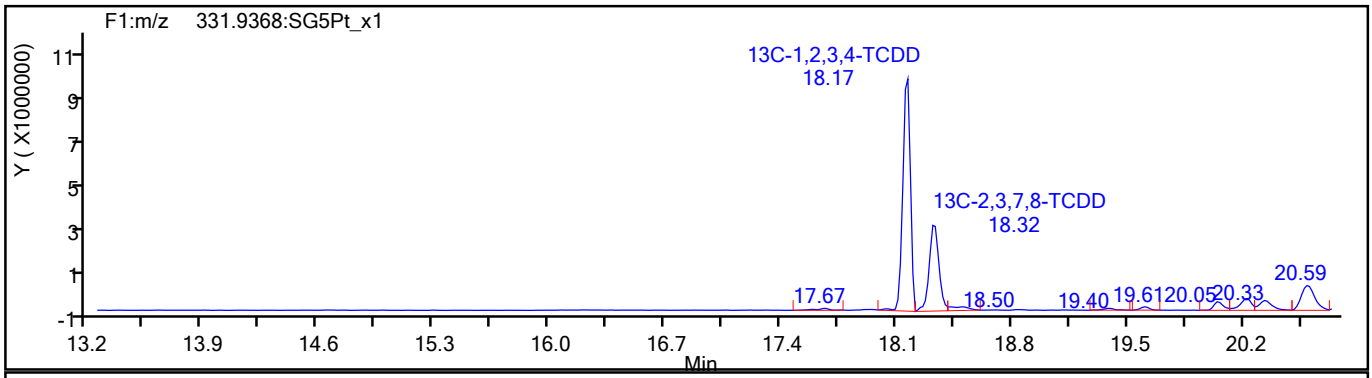

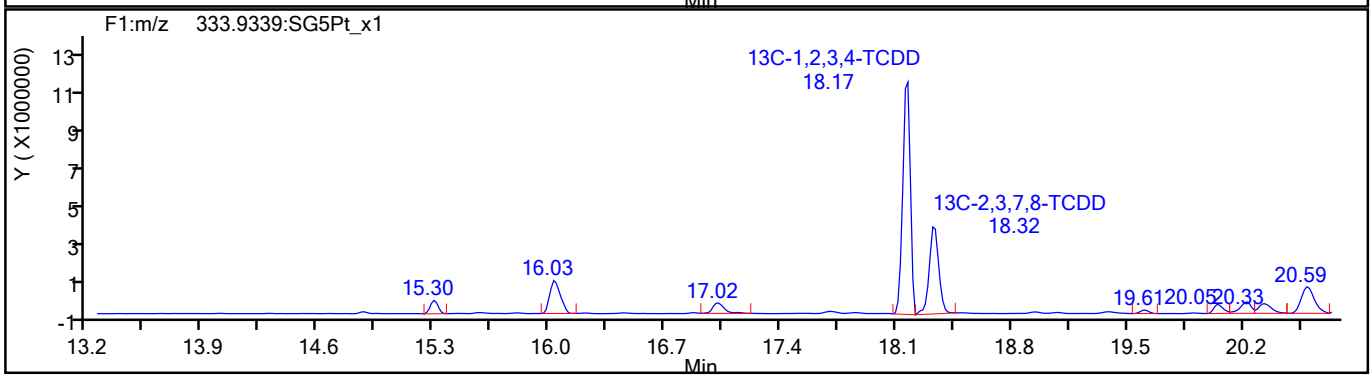

775643

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	516848	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

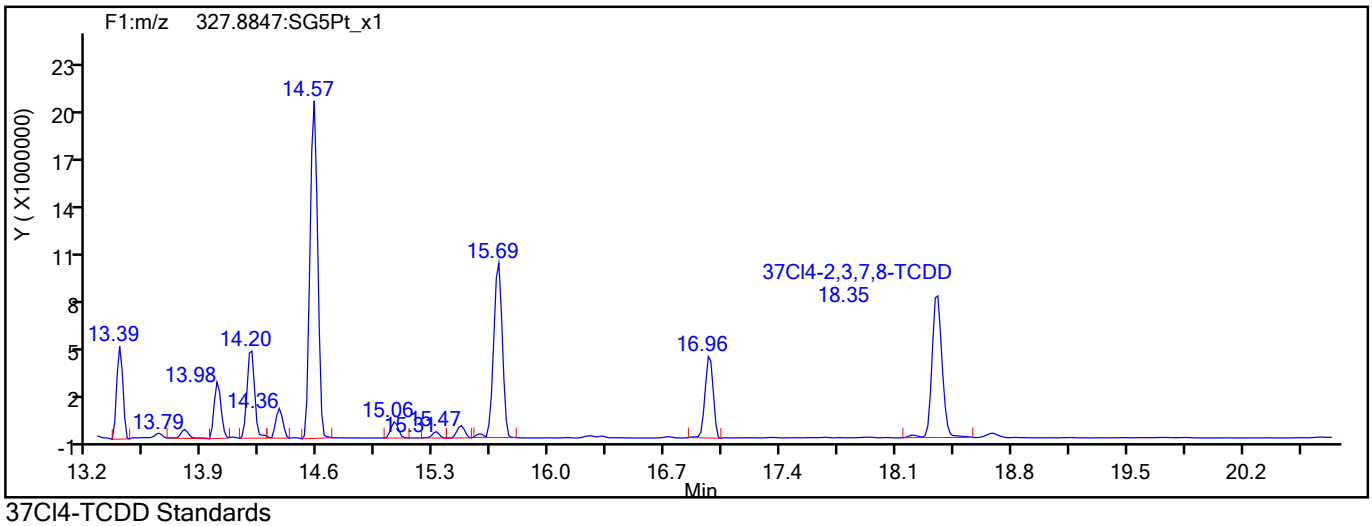

37Cl4-TCDD Standards

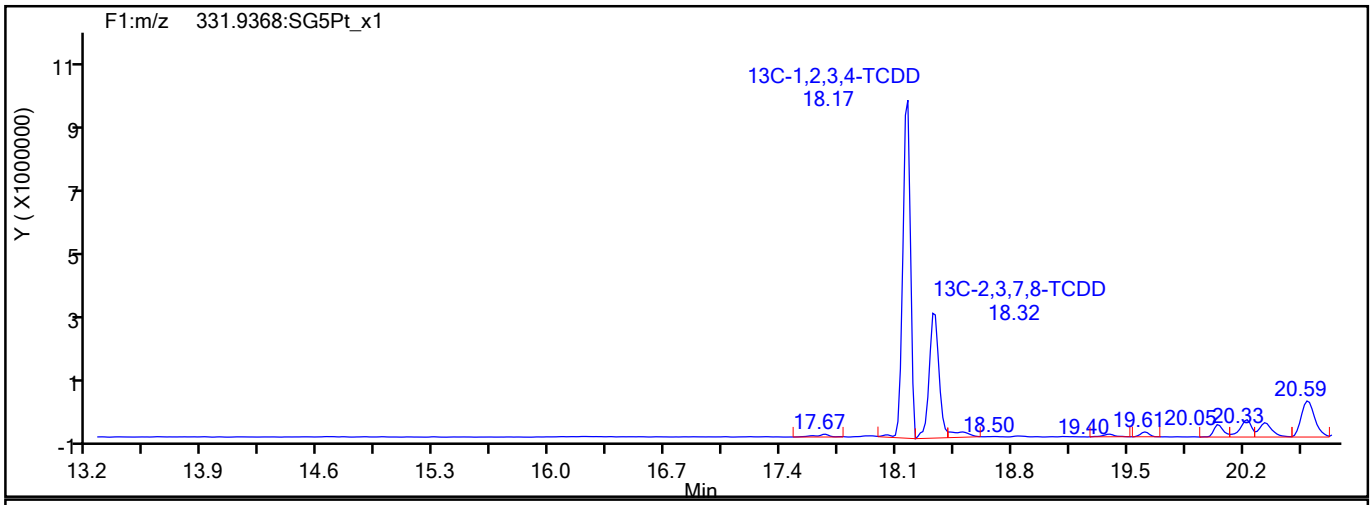

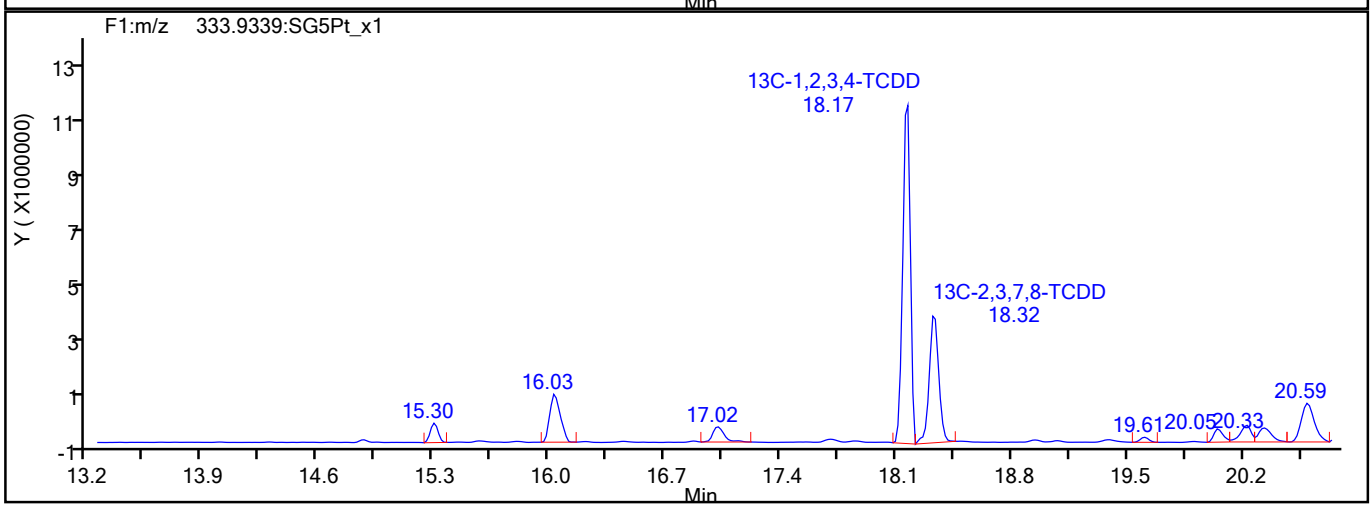

775644

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	516848	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

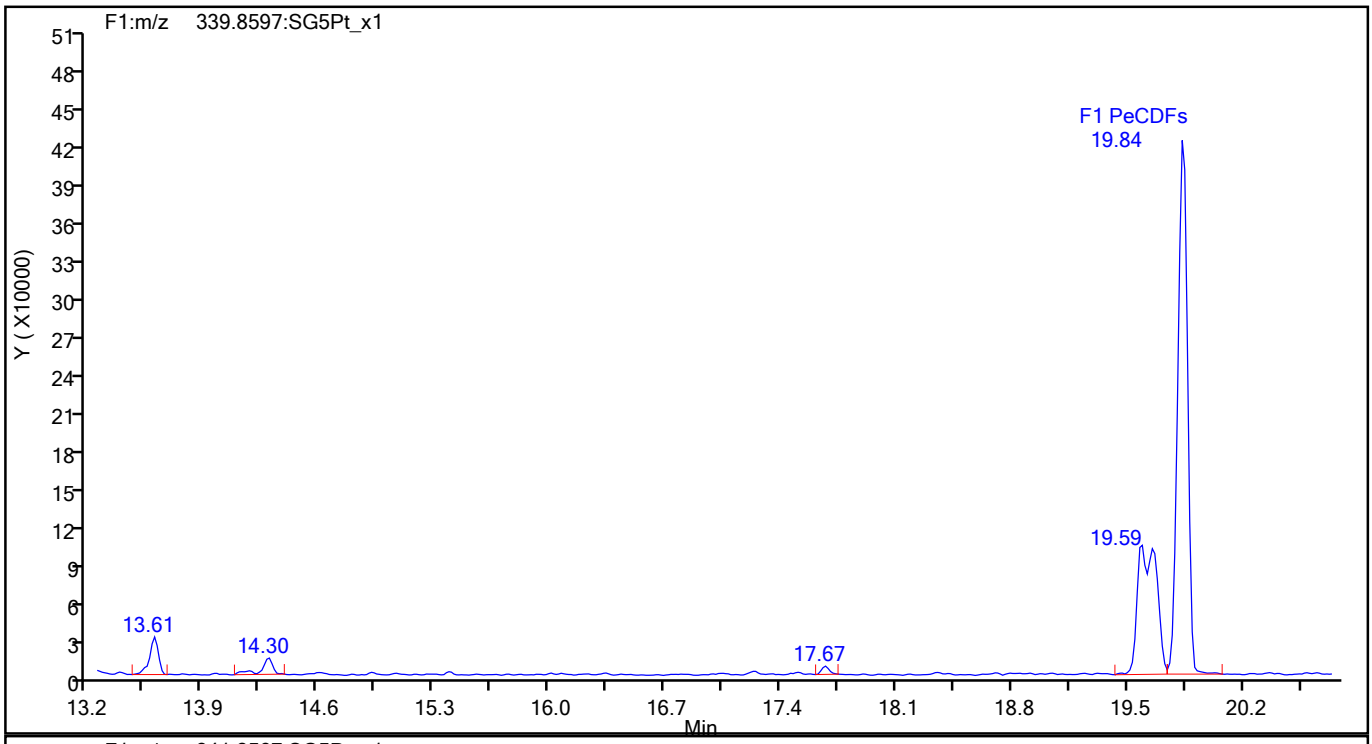

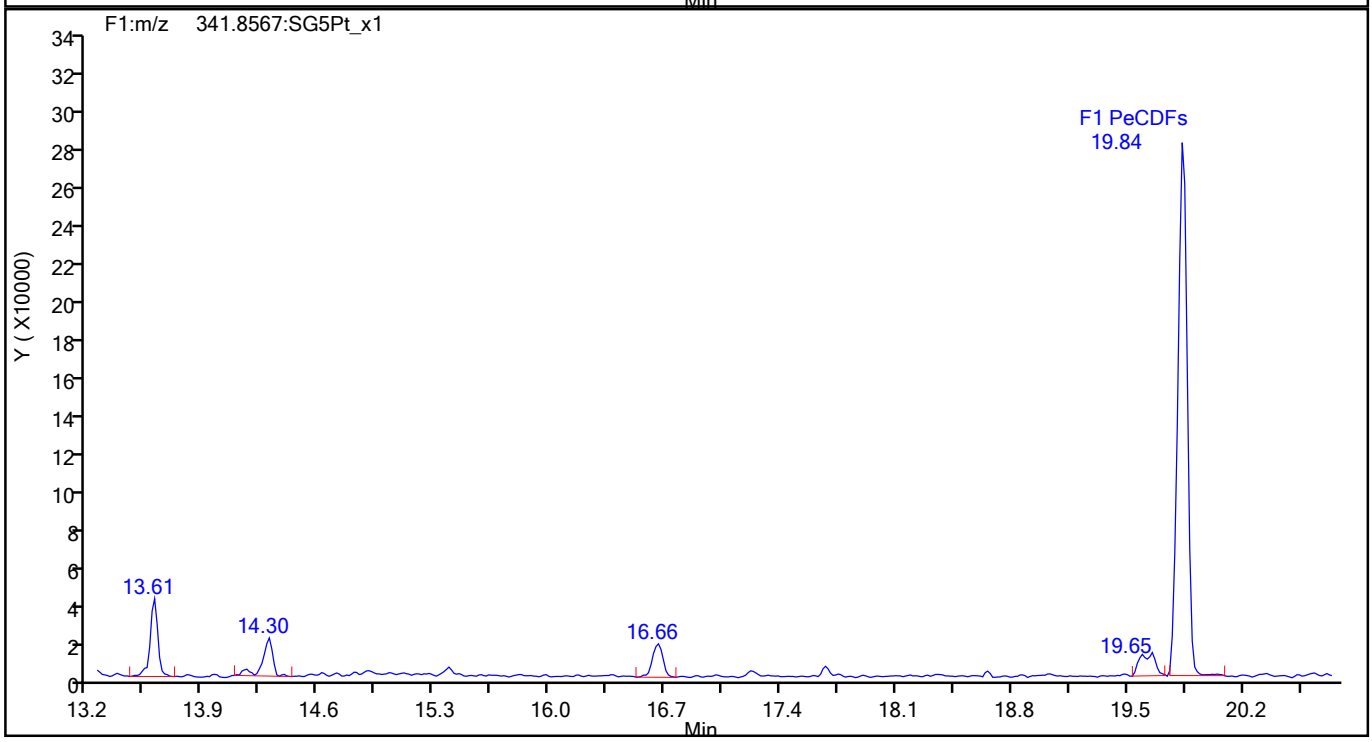

775645

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	516848	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

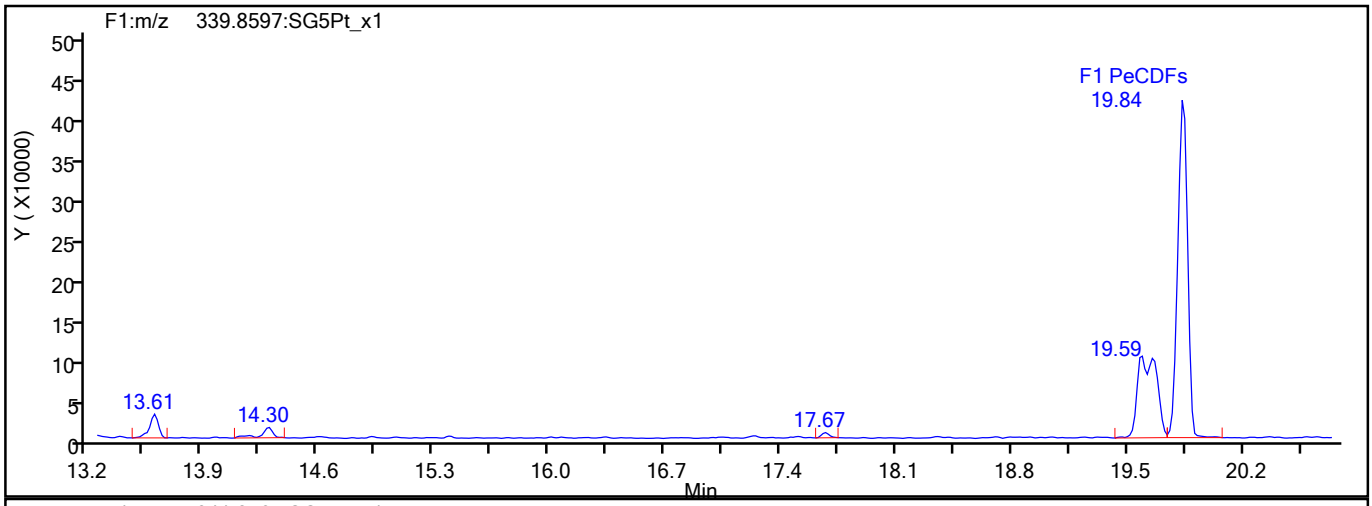

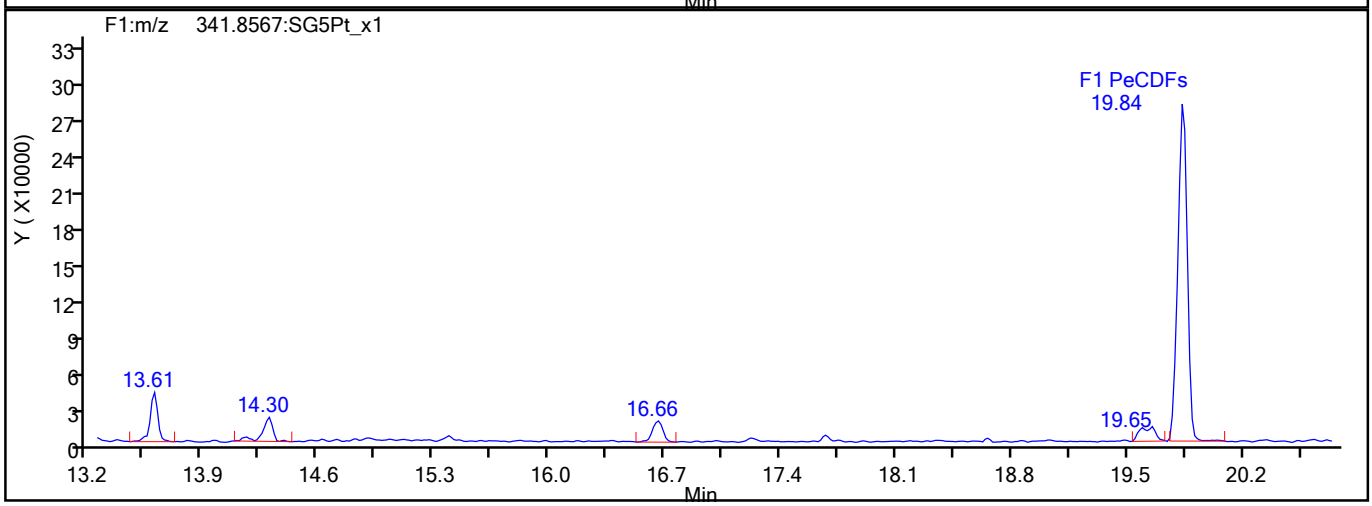

F1 PeCDFs Interference Mass

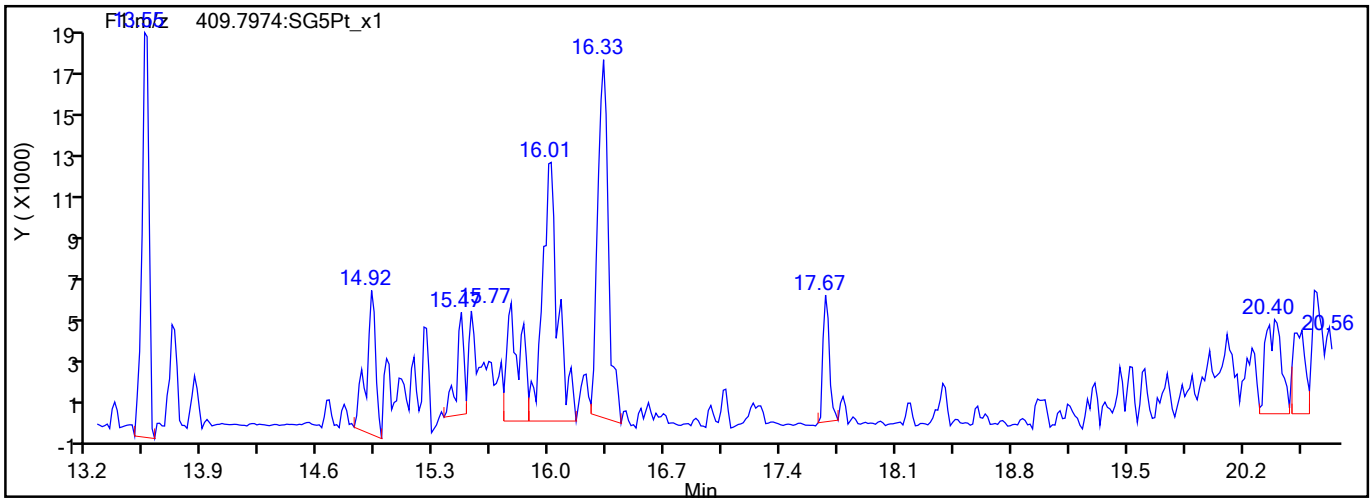

775646

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	516848	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

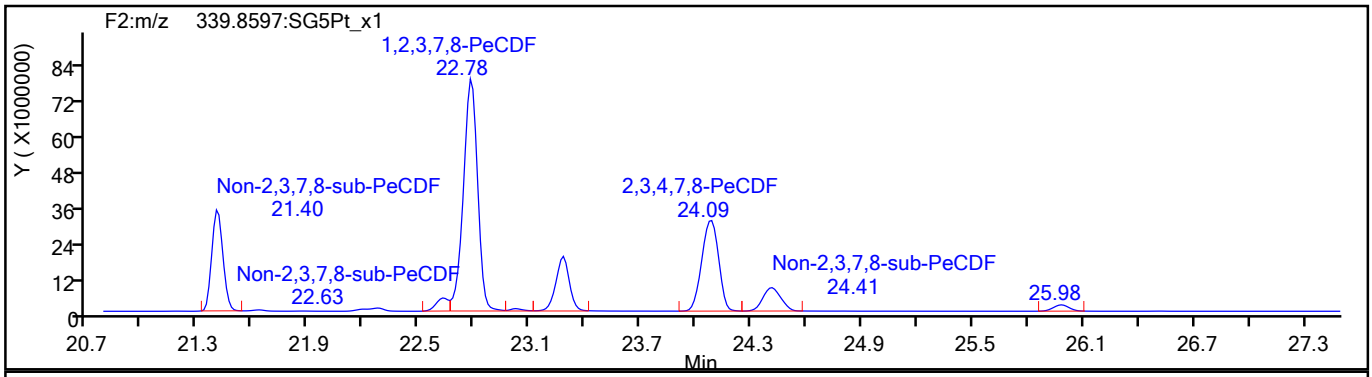

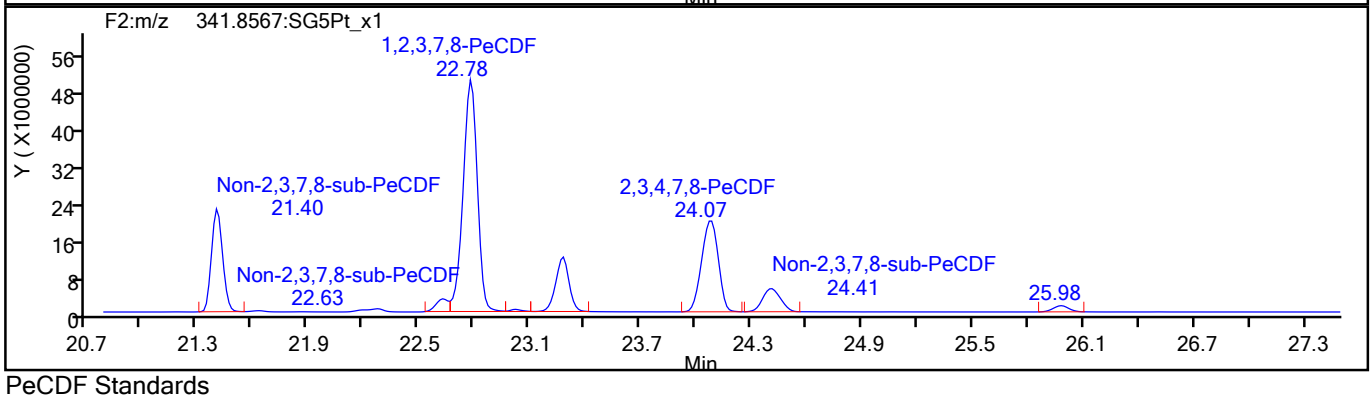

PeCDF Standards

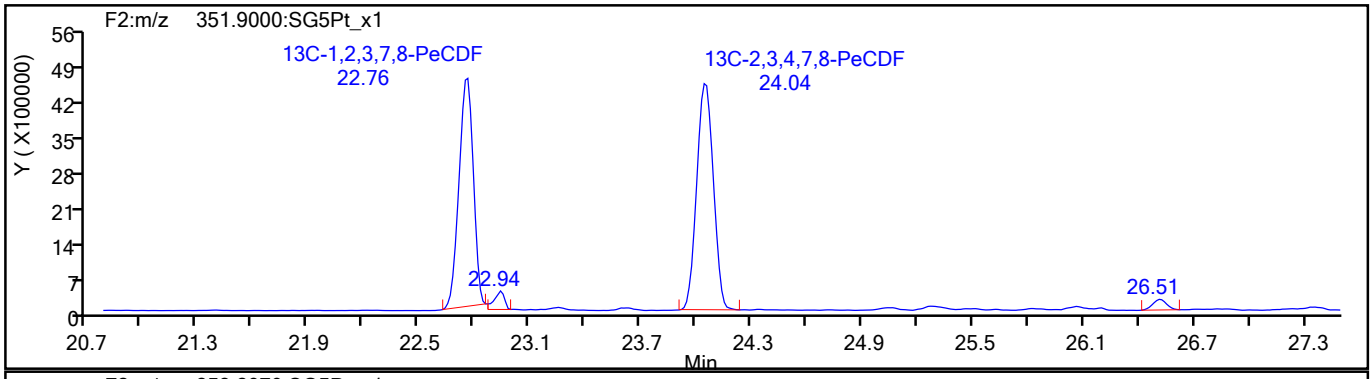

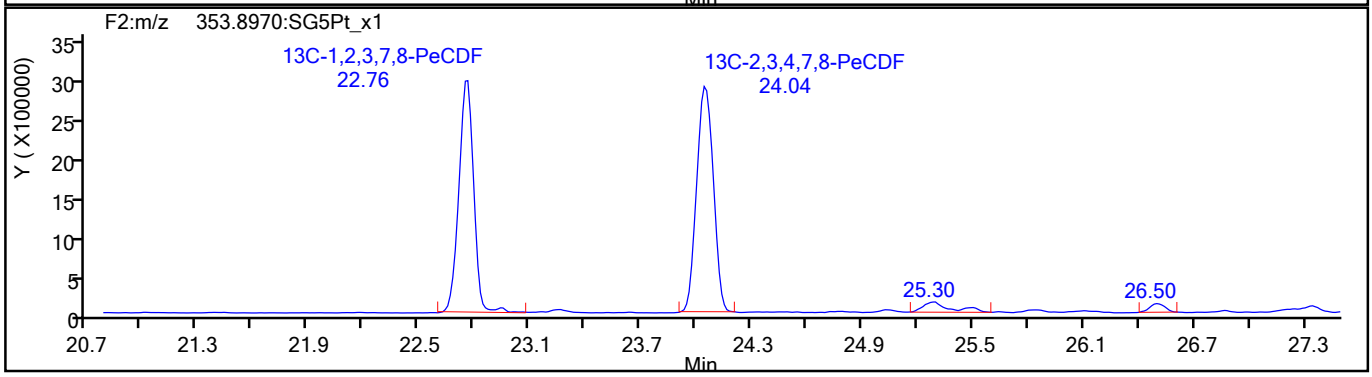

775647

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	516848	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

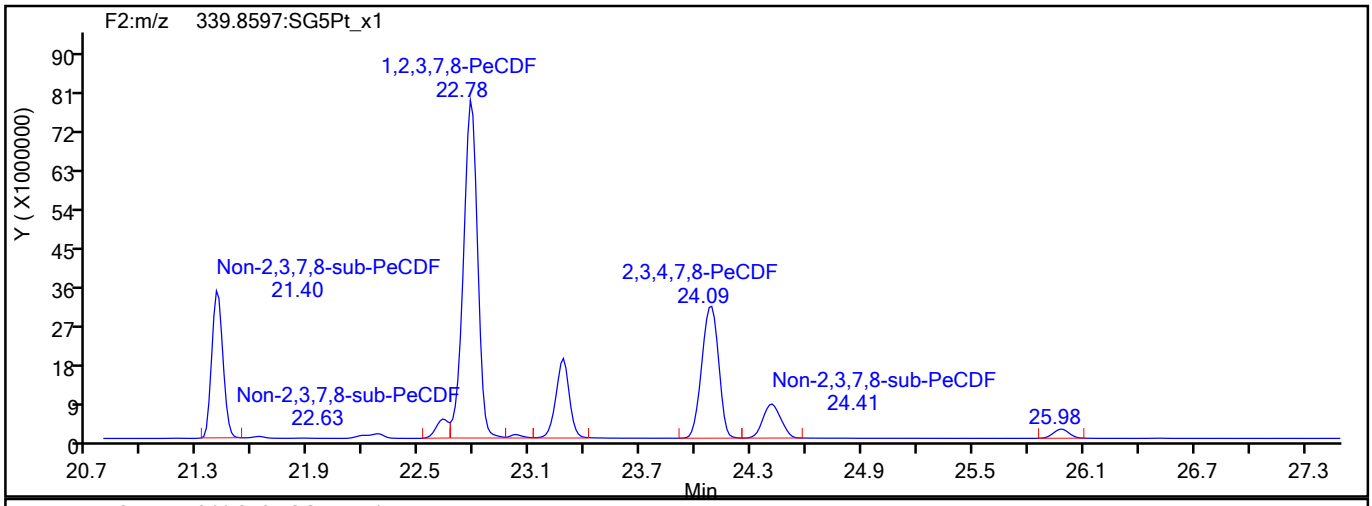

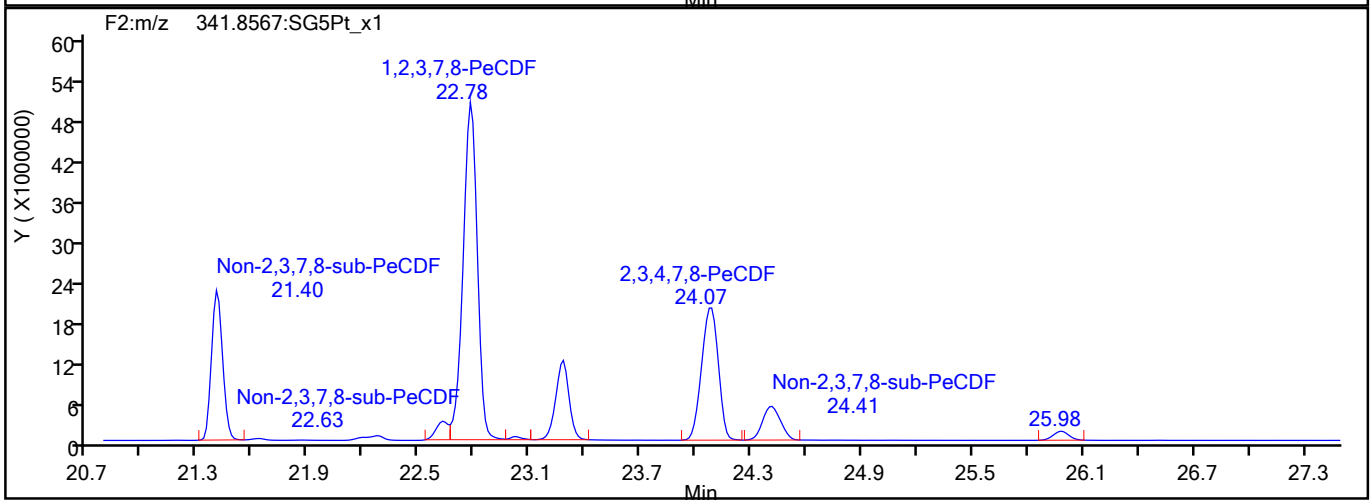

PeCDF Interference Mass

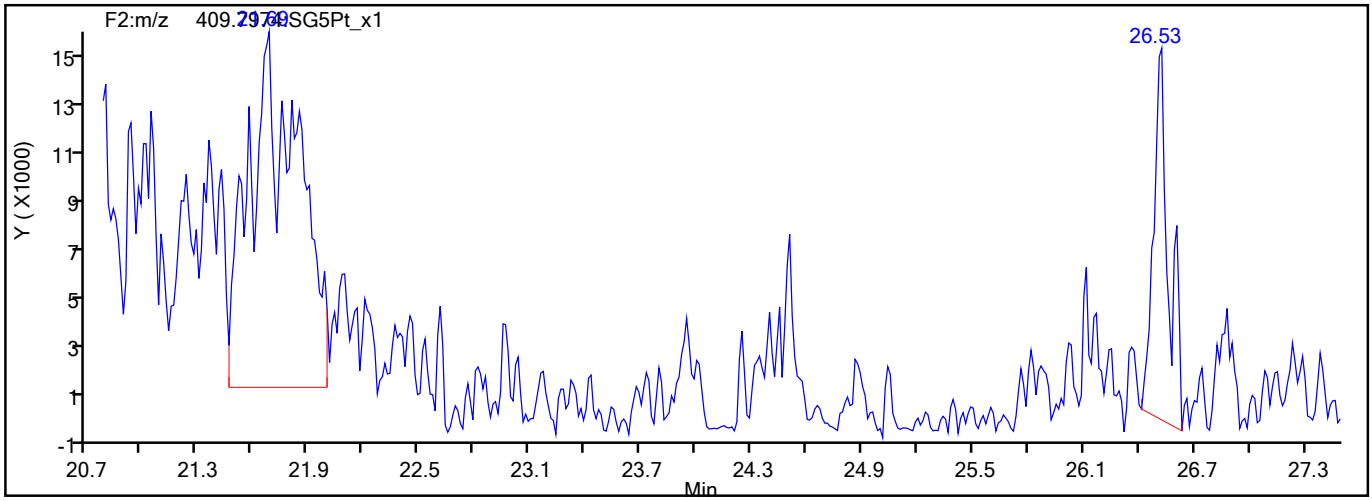

775648

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

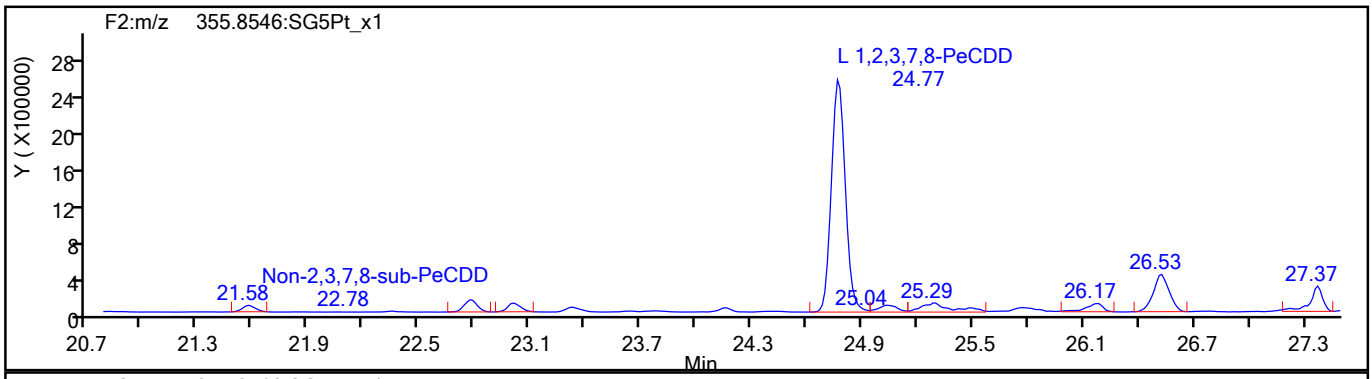

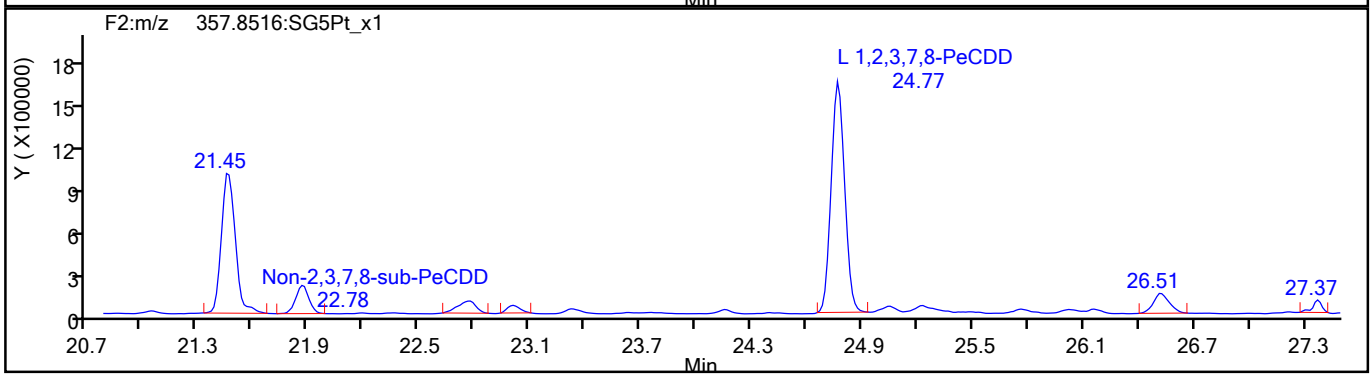

PeCDD Standards

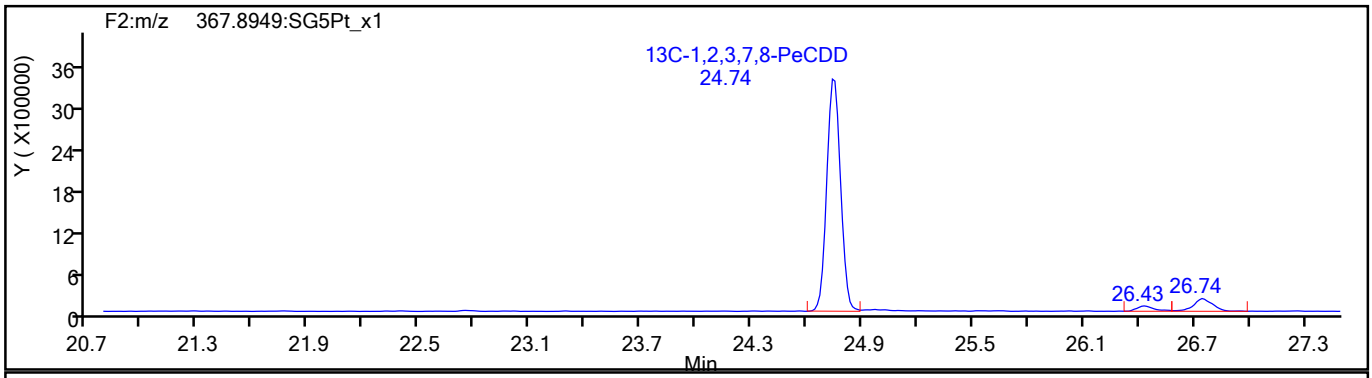

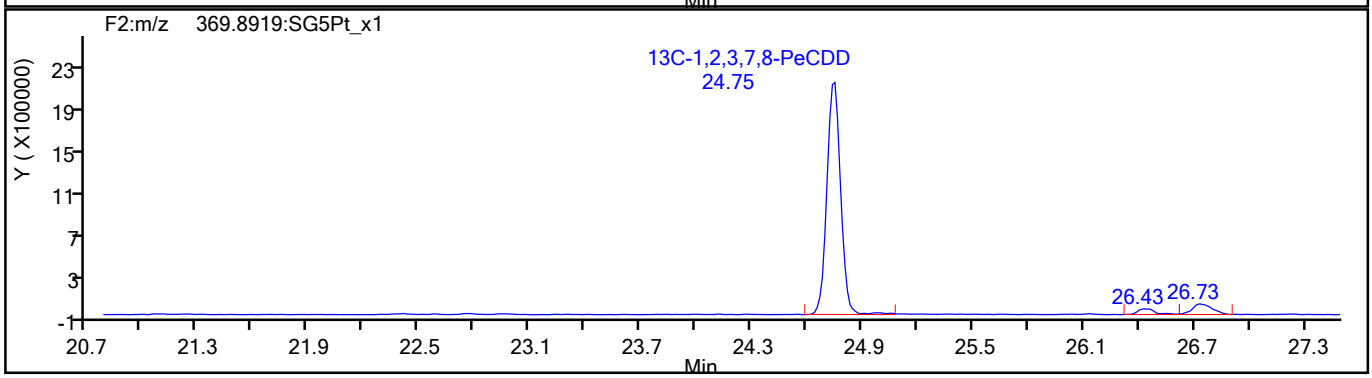

775649

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

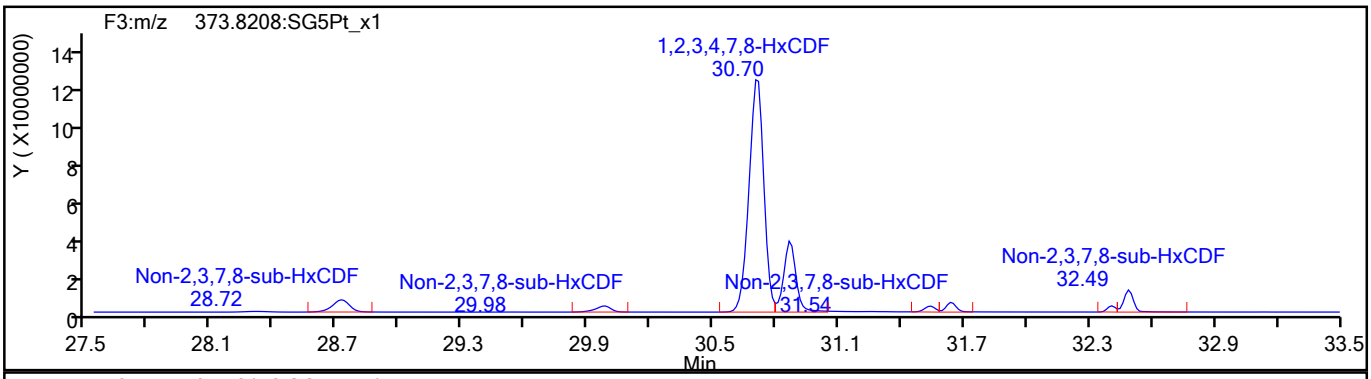

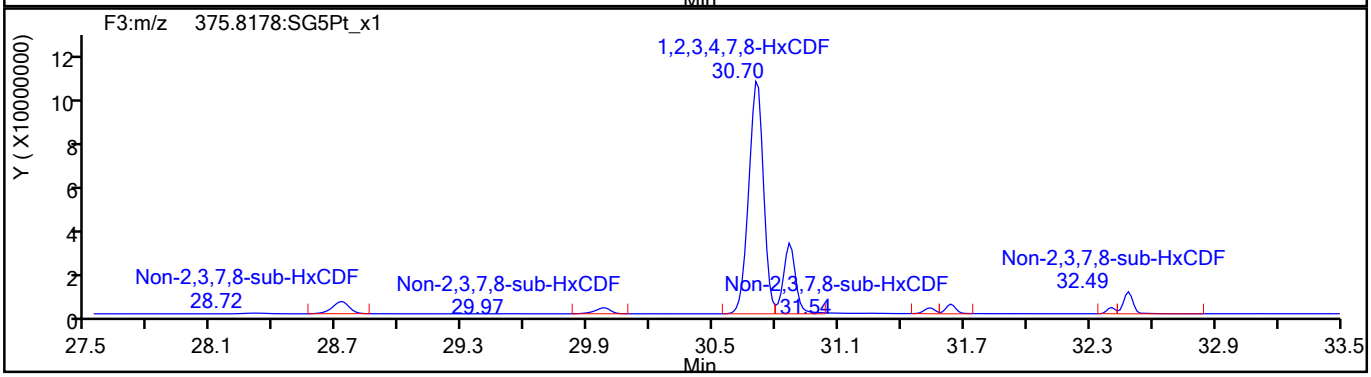

HxCDF Standards

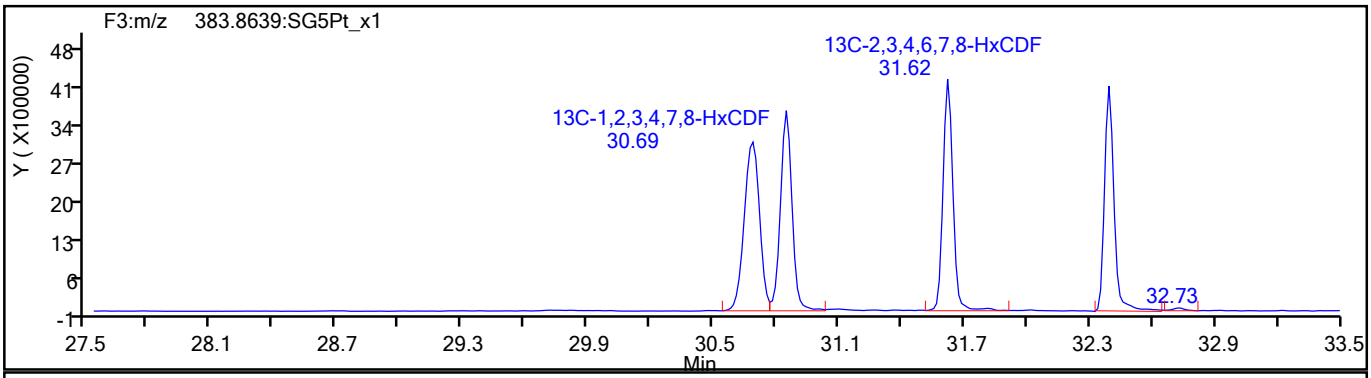

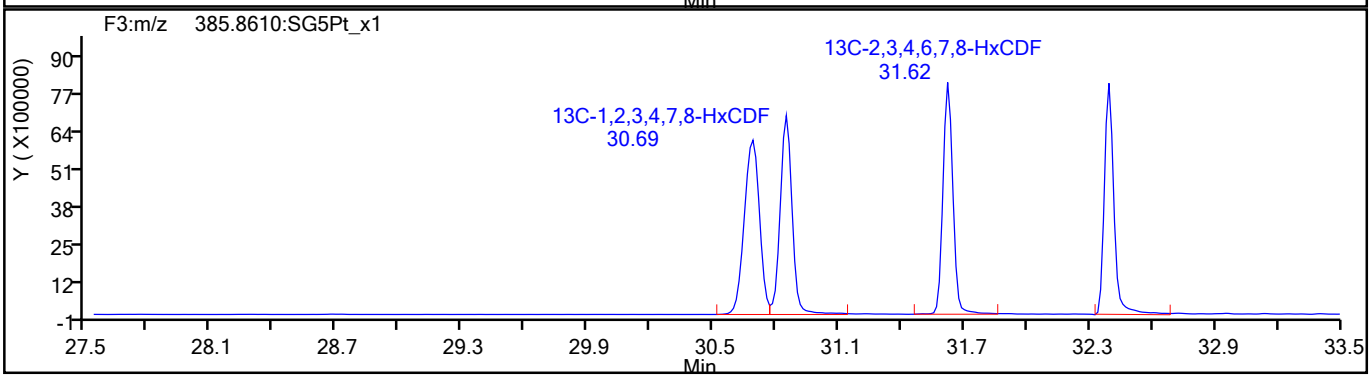

775650

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
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HxCDF

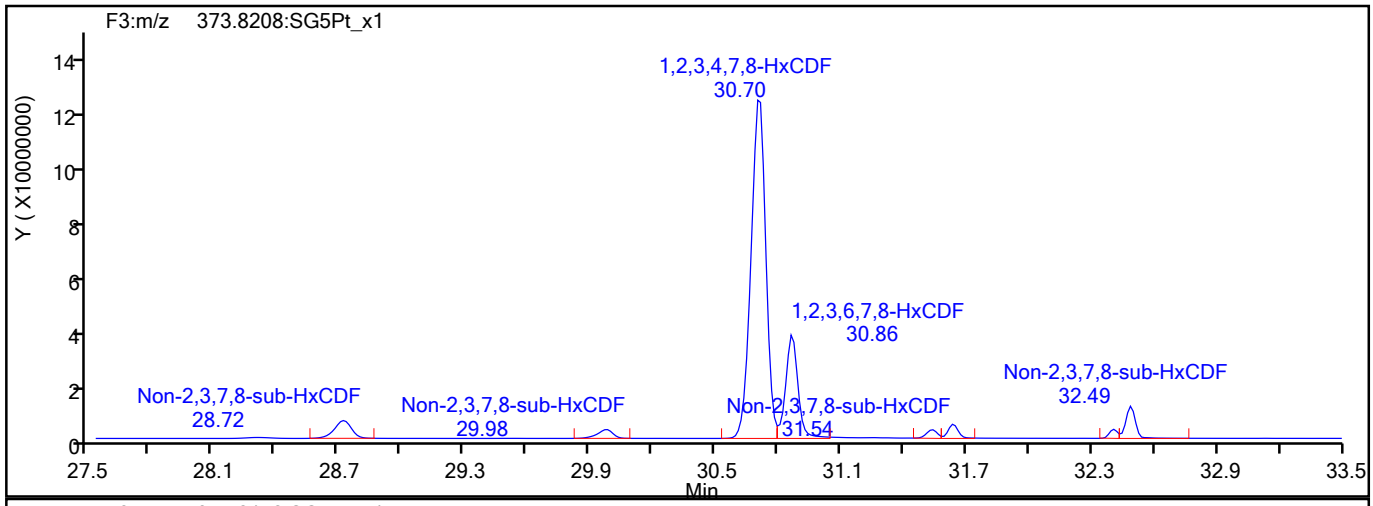

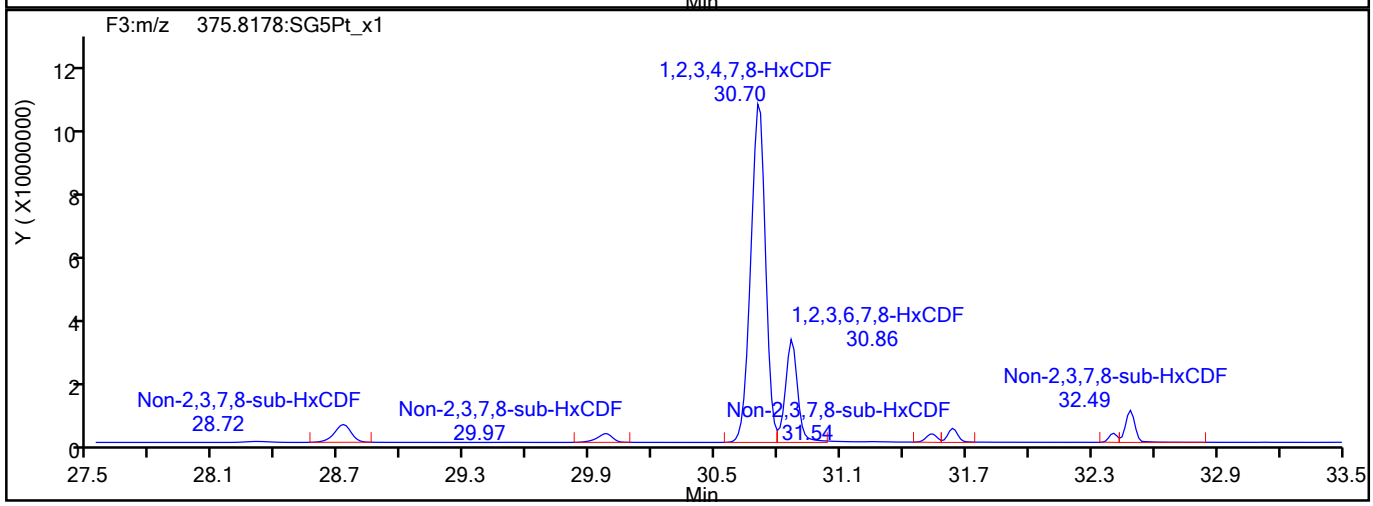

HxCDF Interference Mass

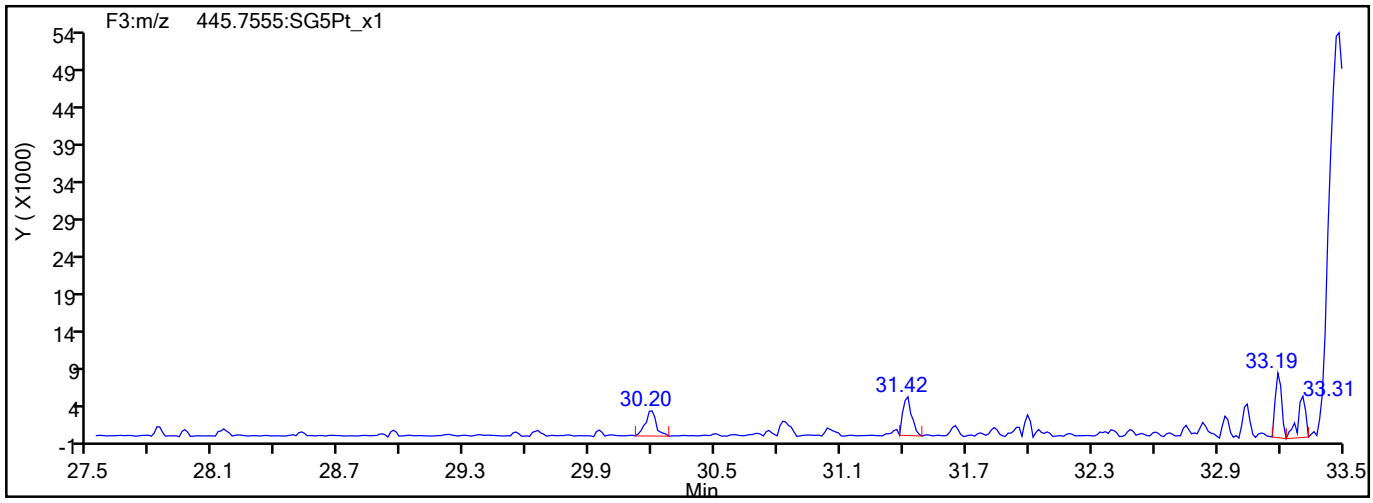

775651

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

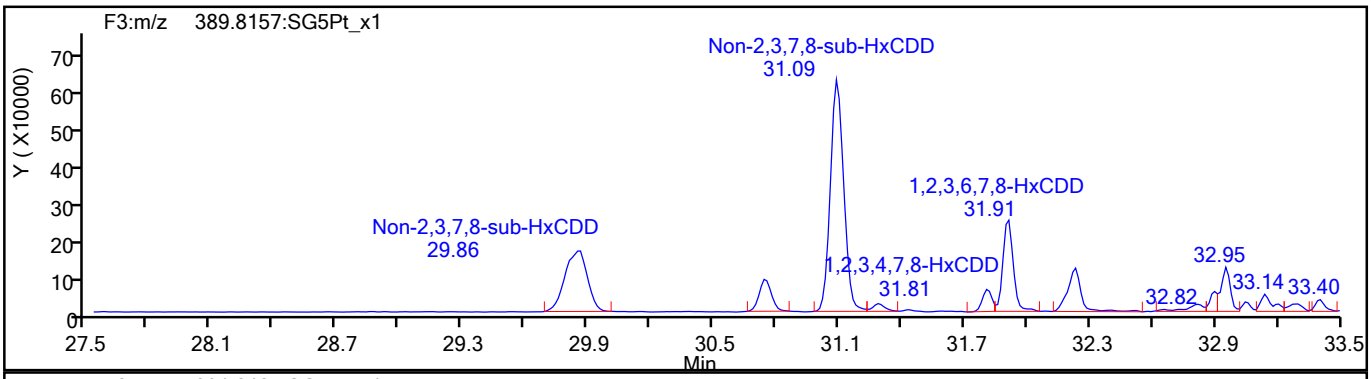

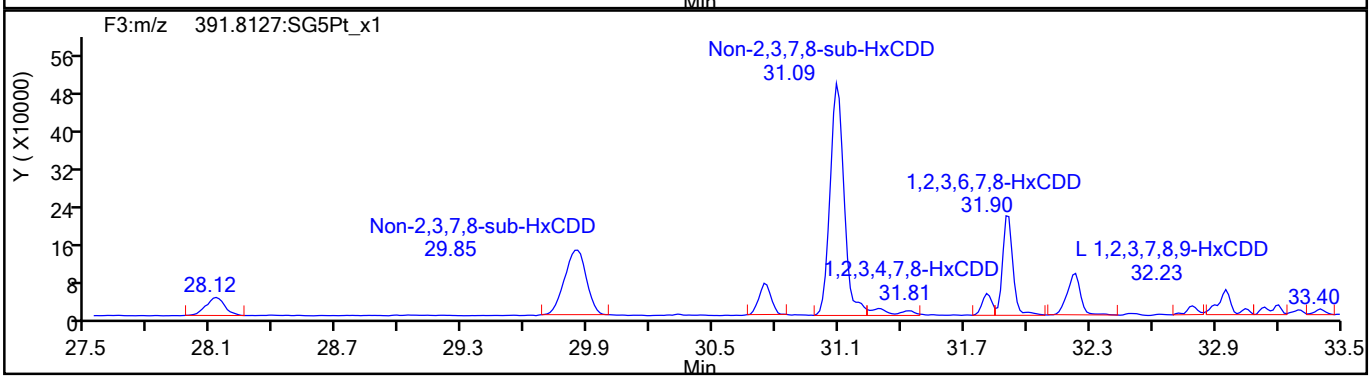

HxCDD Standards

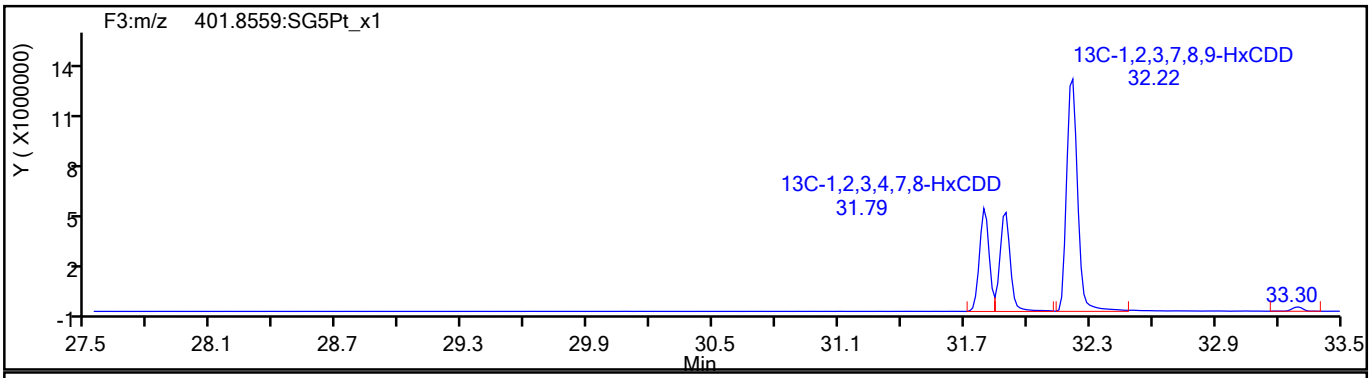

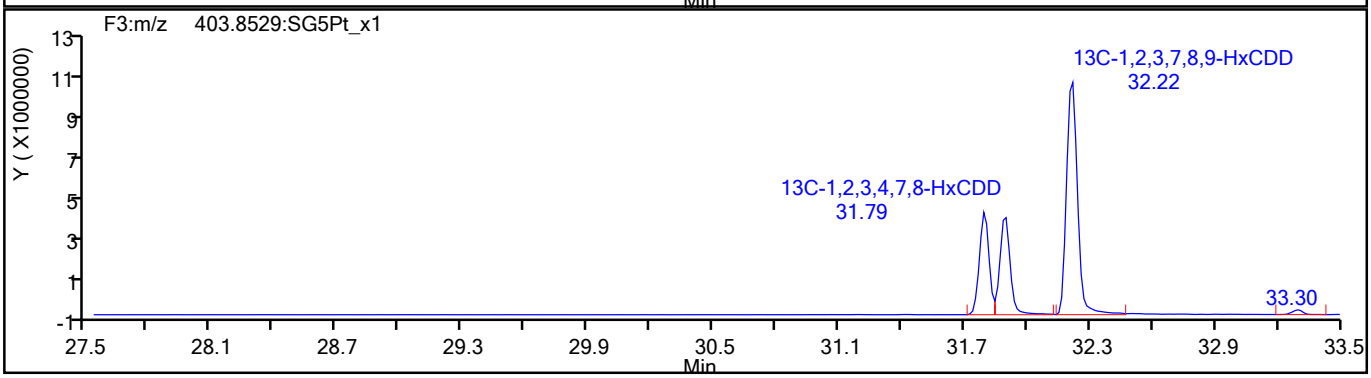

775652

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
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HpCDF

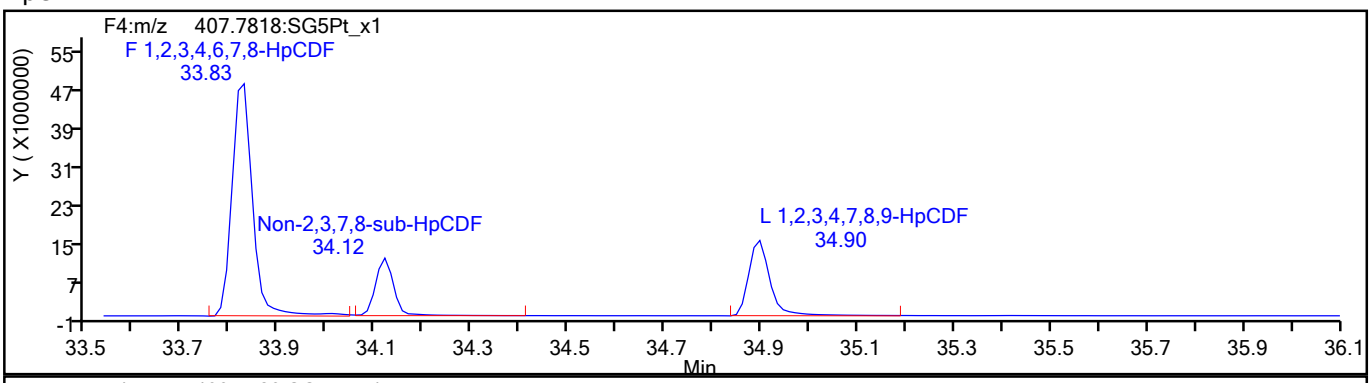

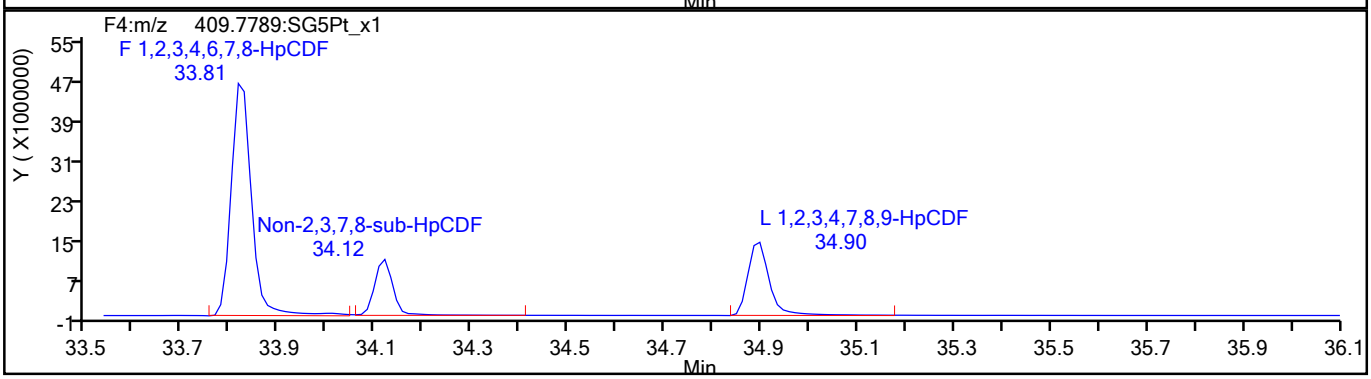

HpCDF Standards

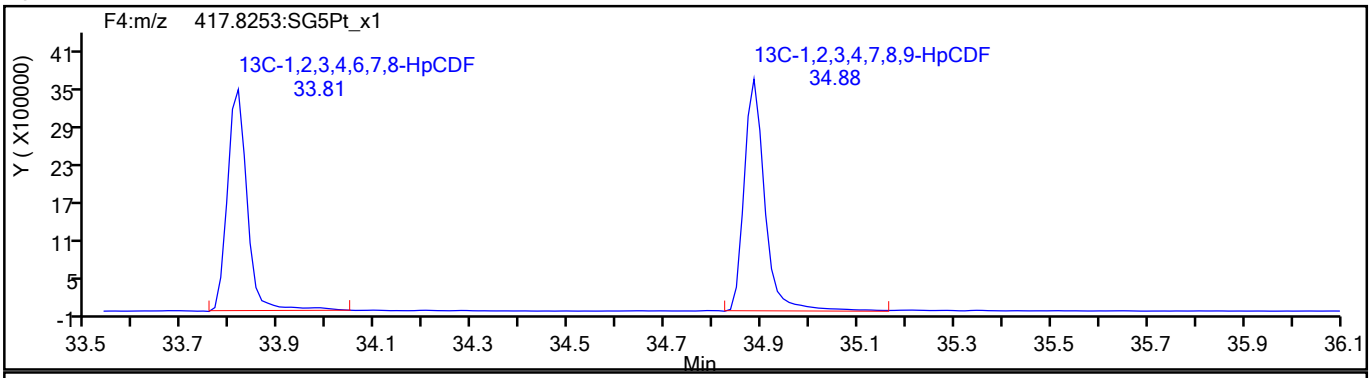

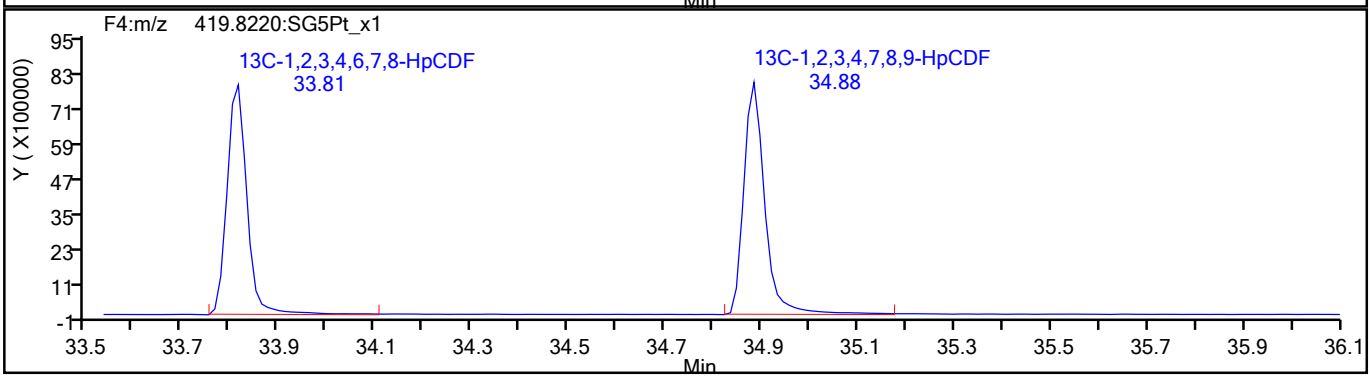

775653

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
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HpCDF

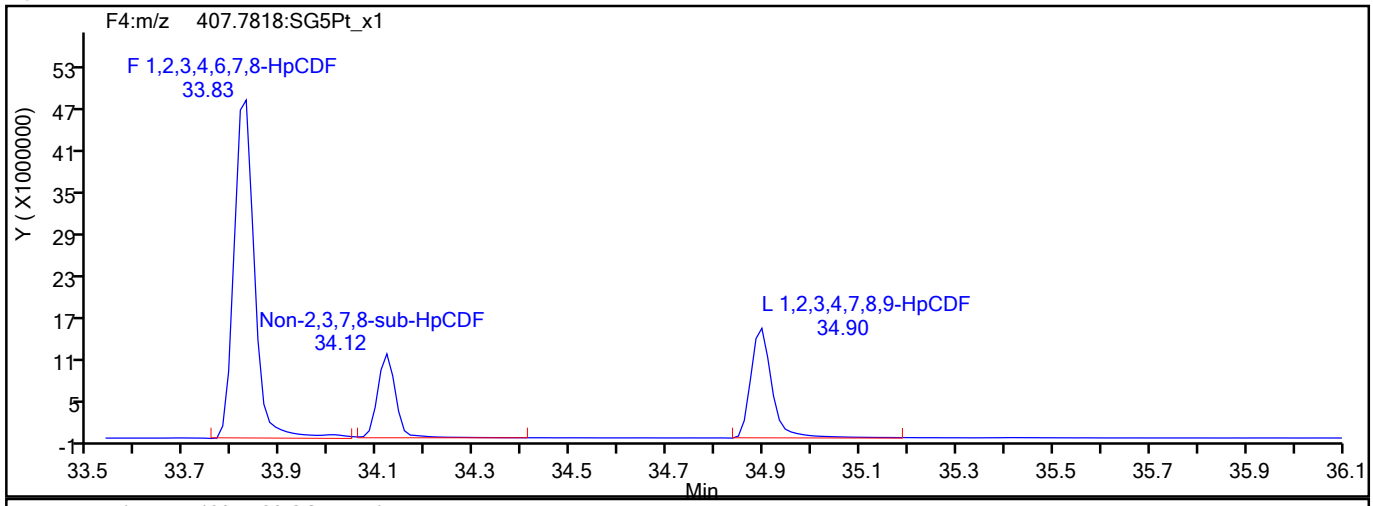

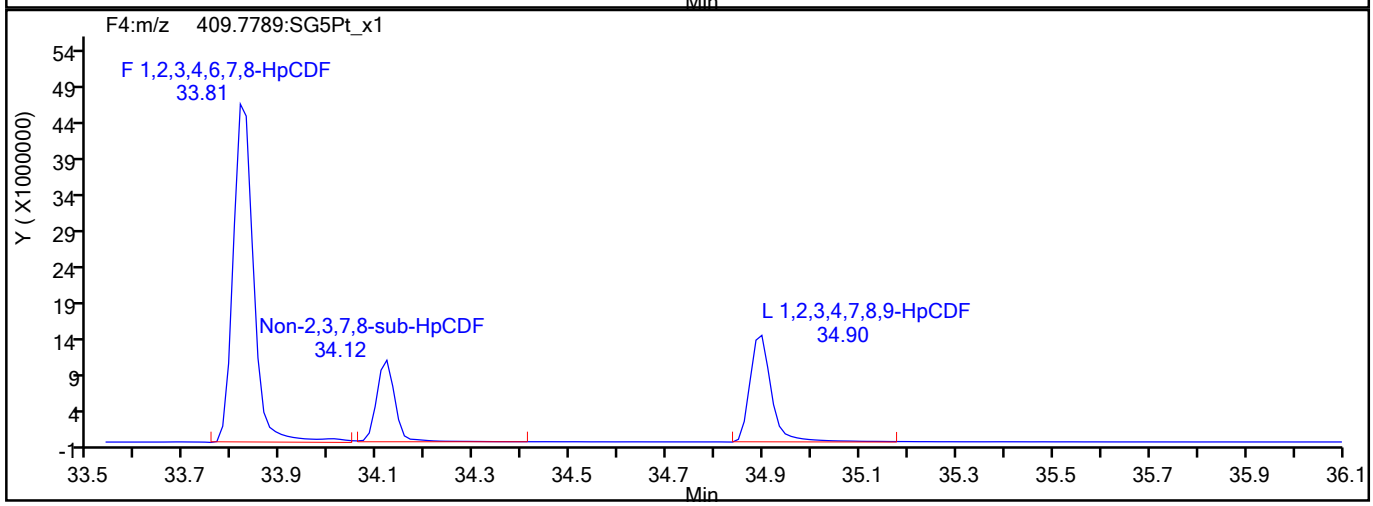

HpCDF Interference Mass

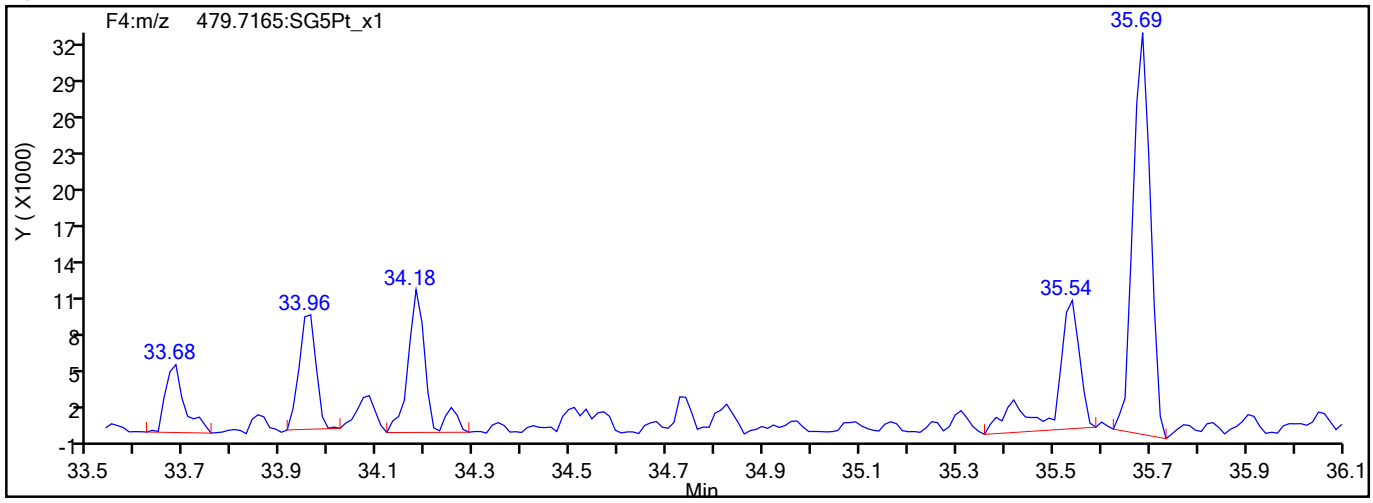

775654

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	516848	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

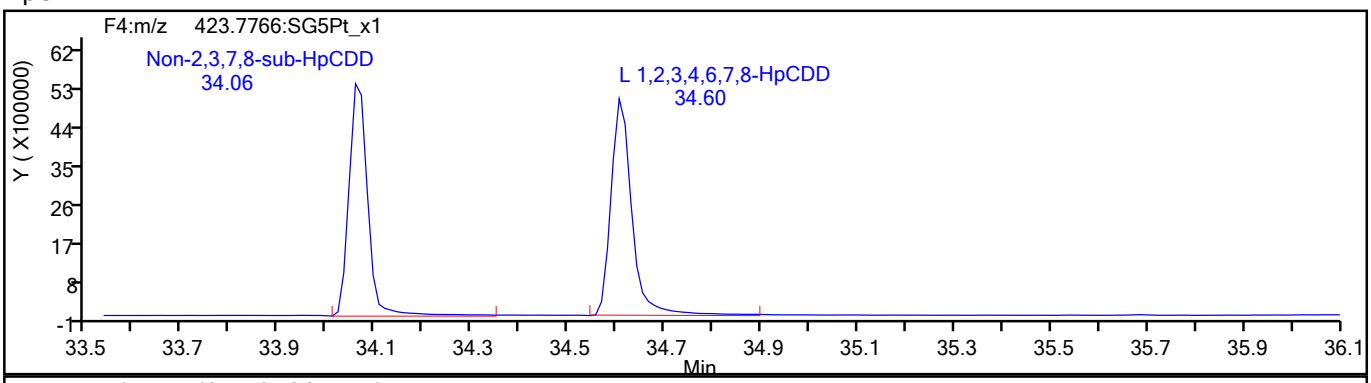

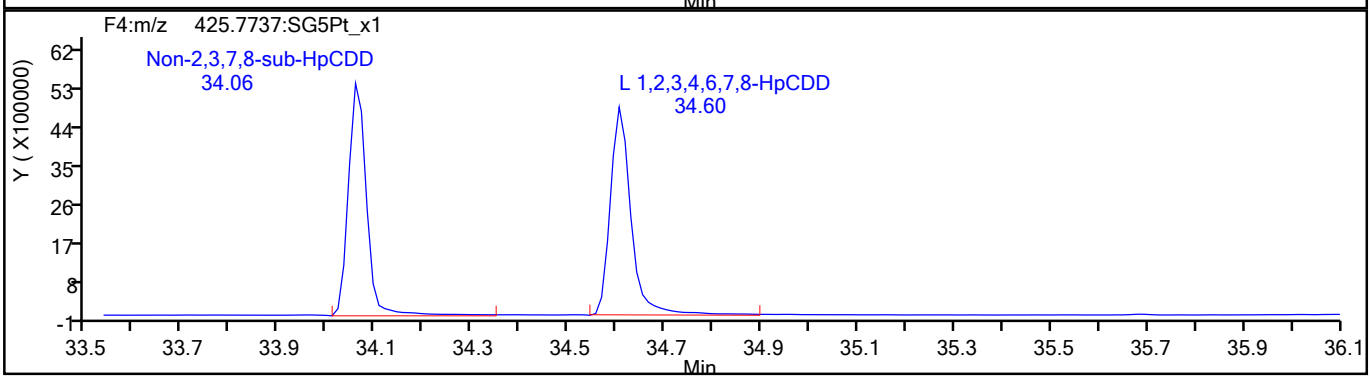

HpCDD Standards

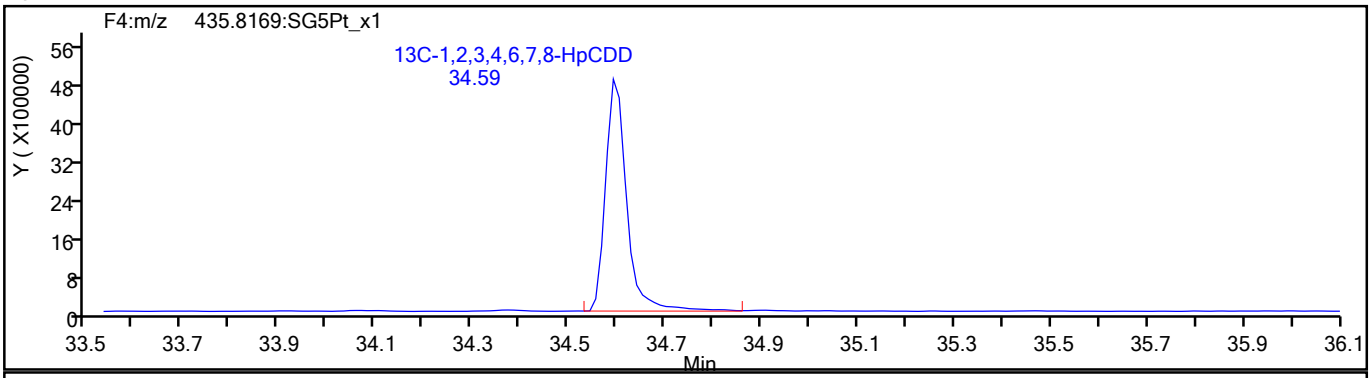

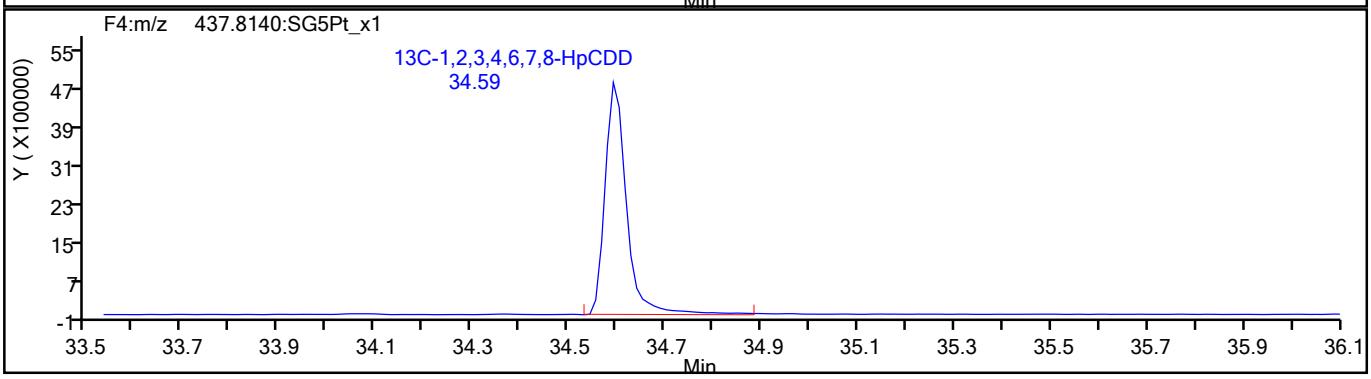

775655

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
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OCDF

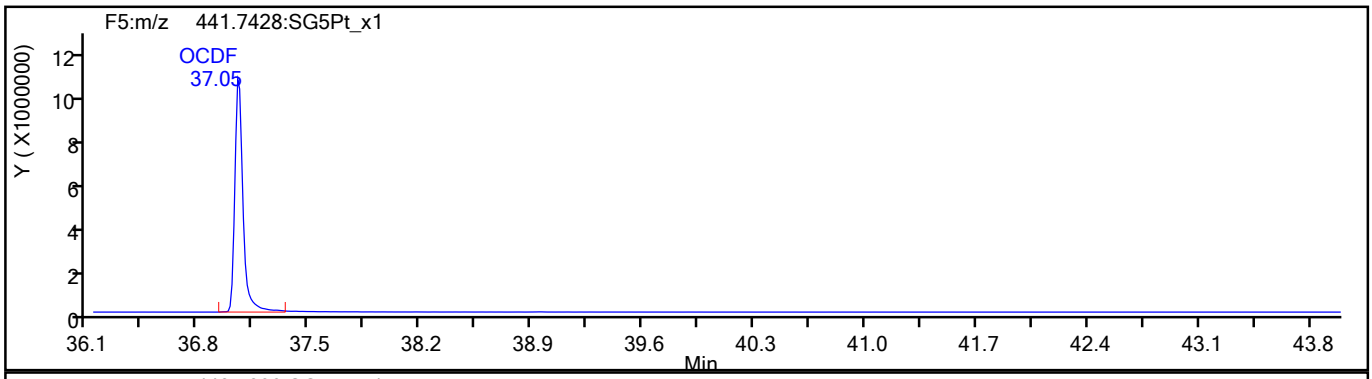

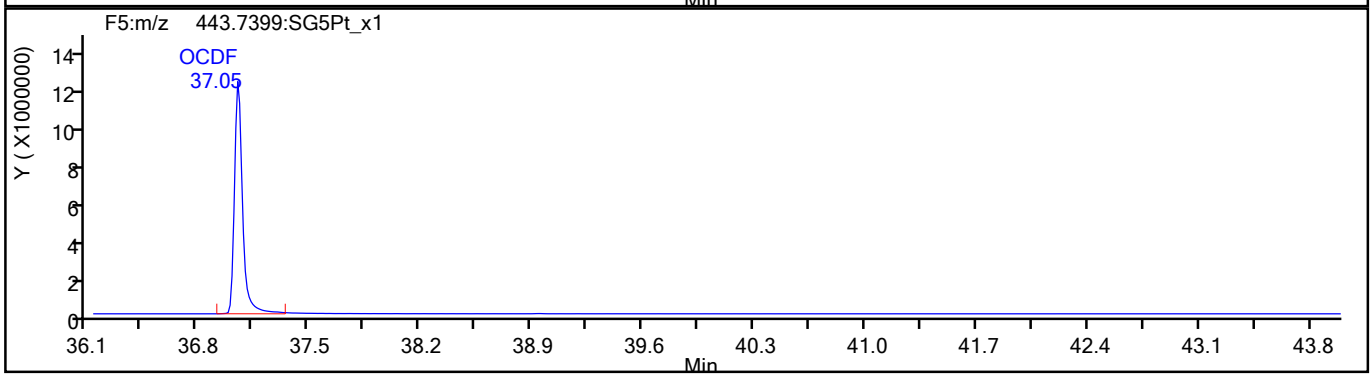

OCDF Standards

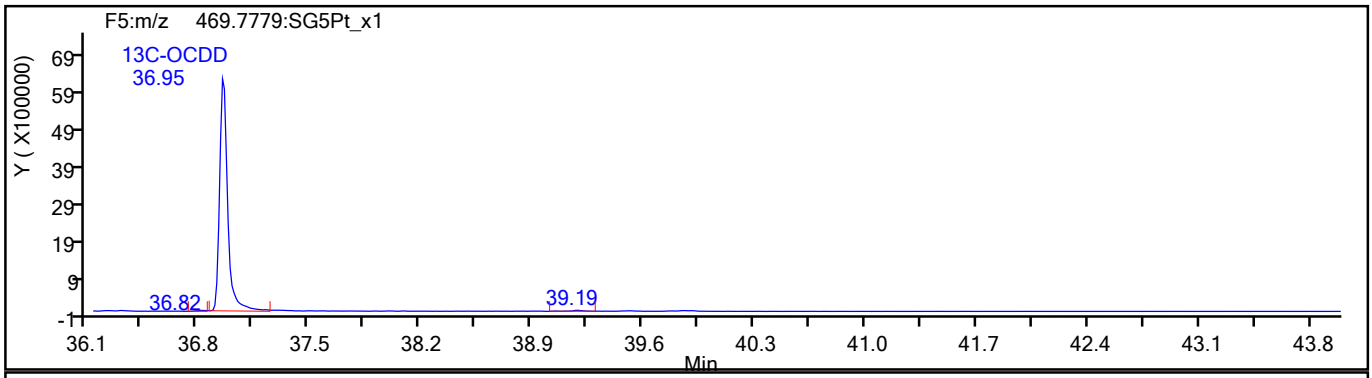

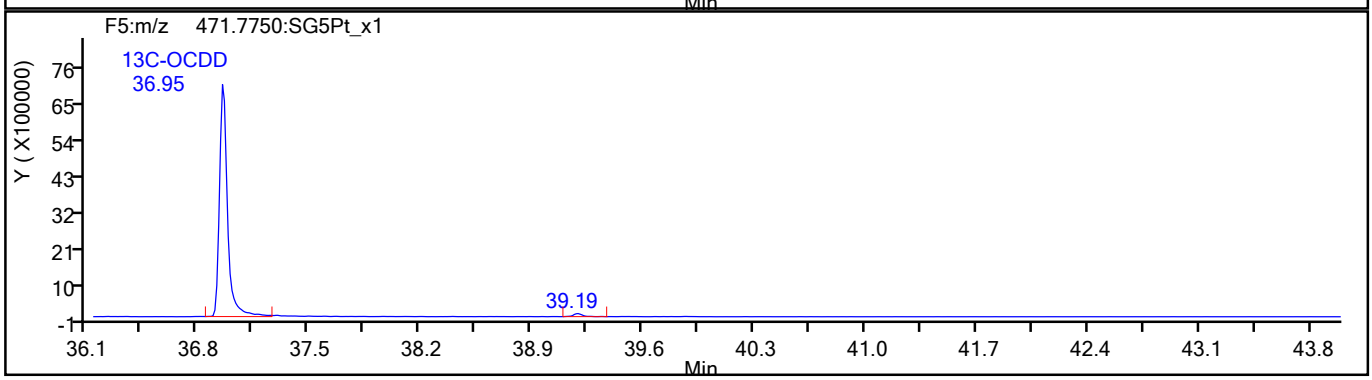

775656

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
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OCDF

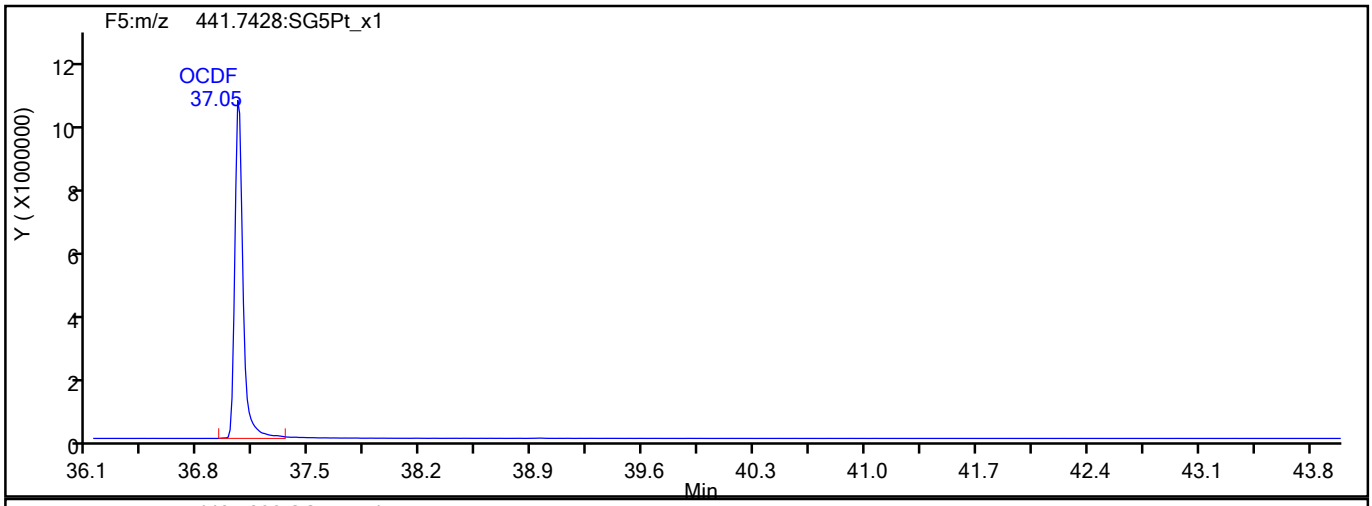

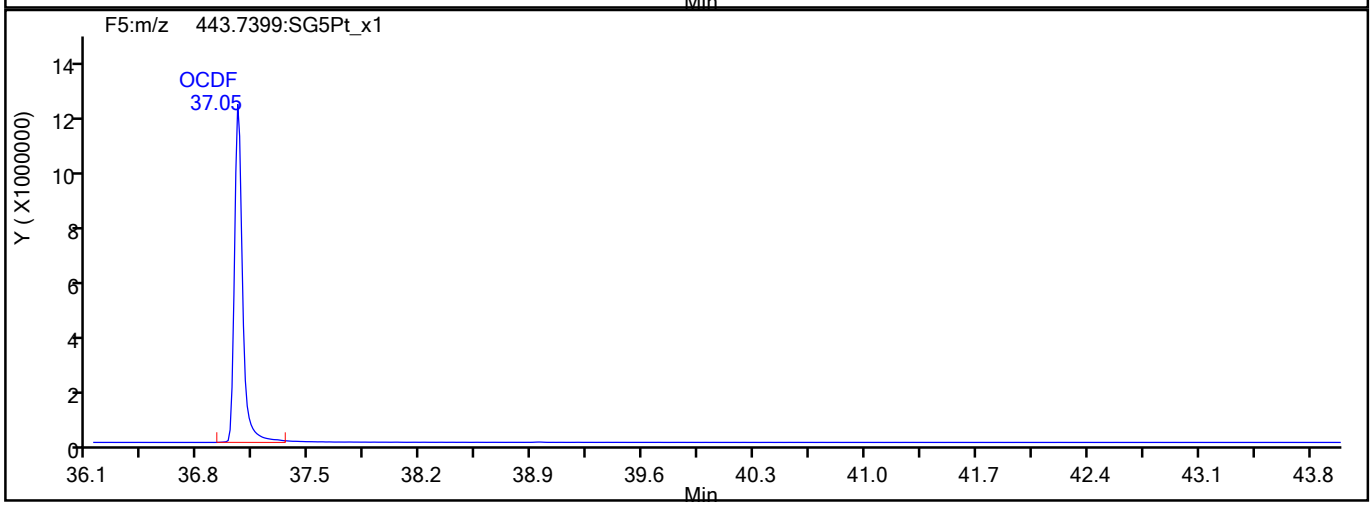

OCDF Interference Mass

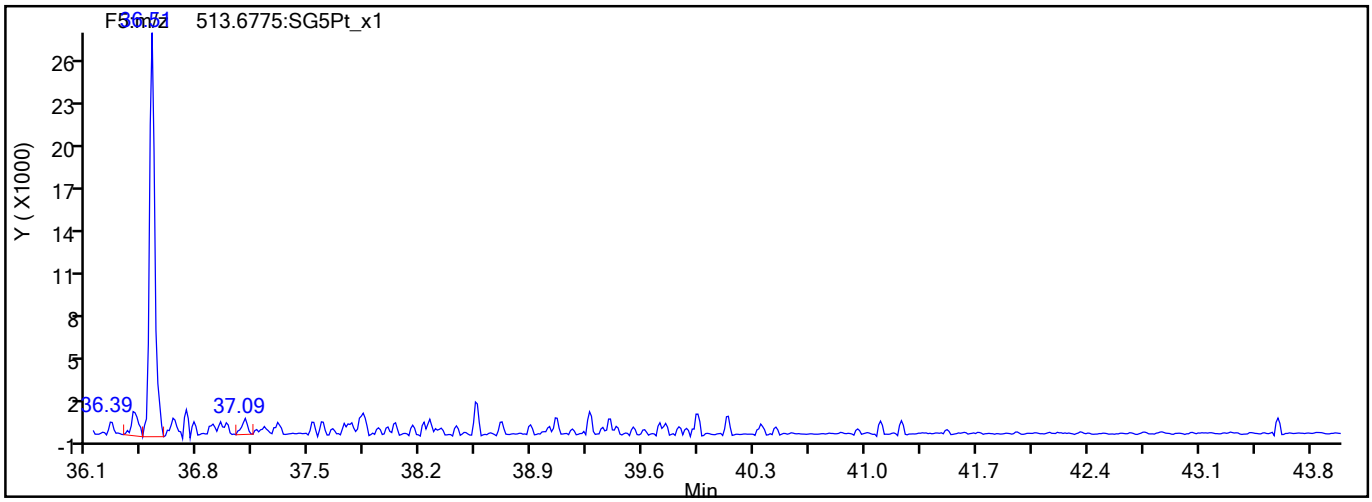

775657

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	516848	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

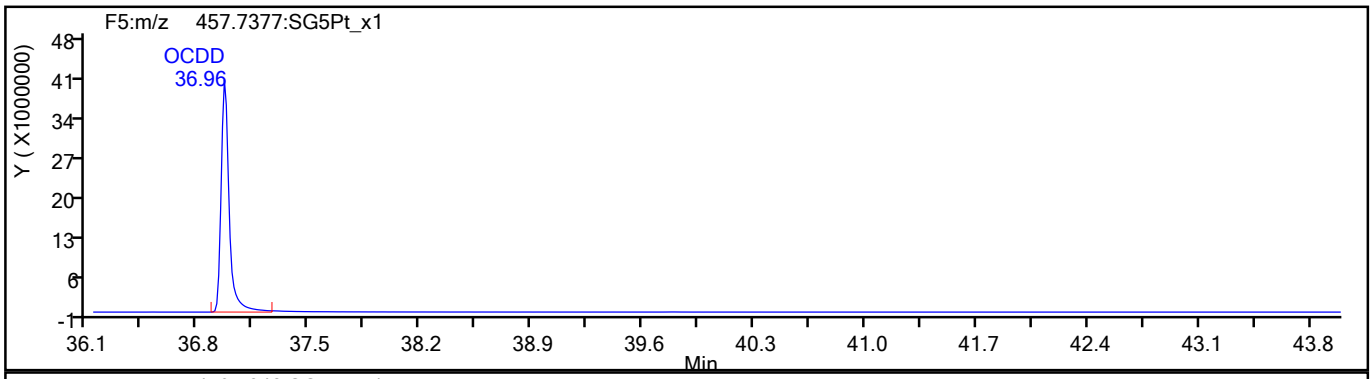

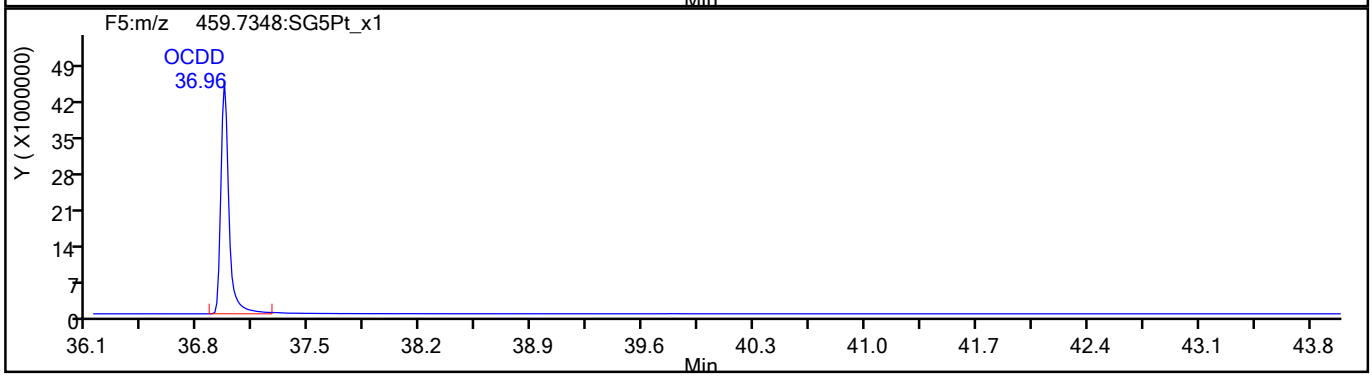

OCDD Standards

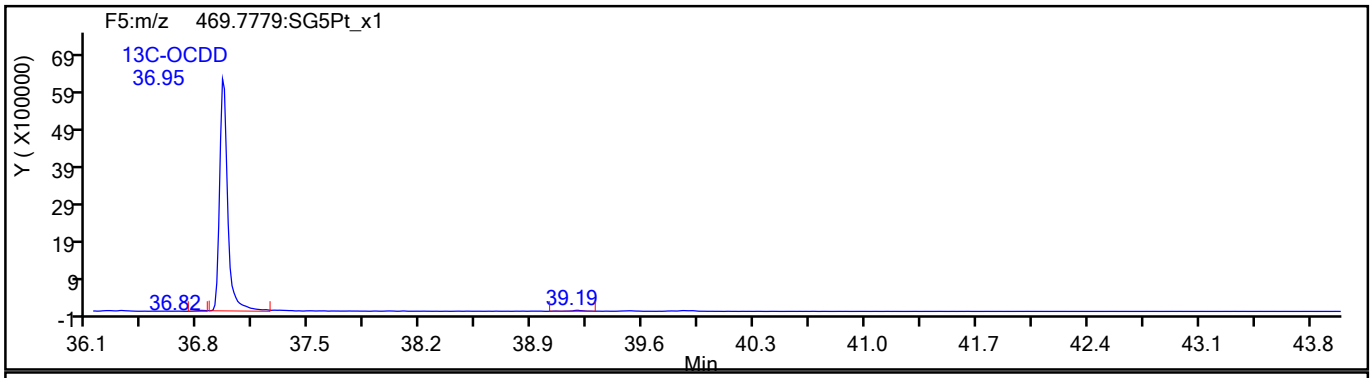

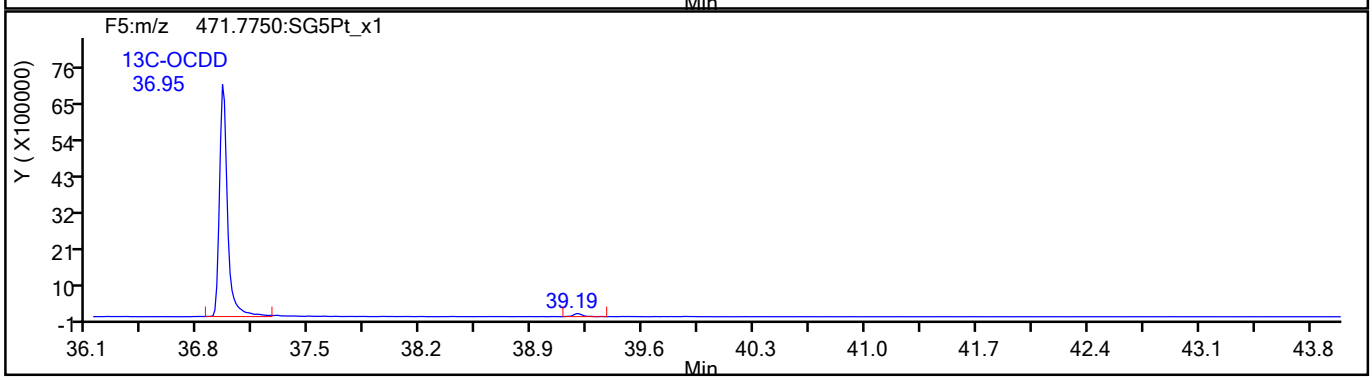

775658

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	516848	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

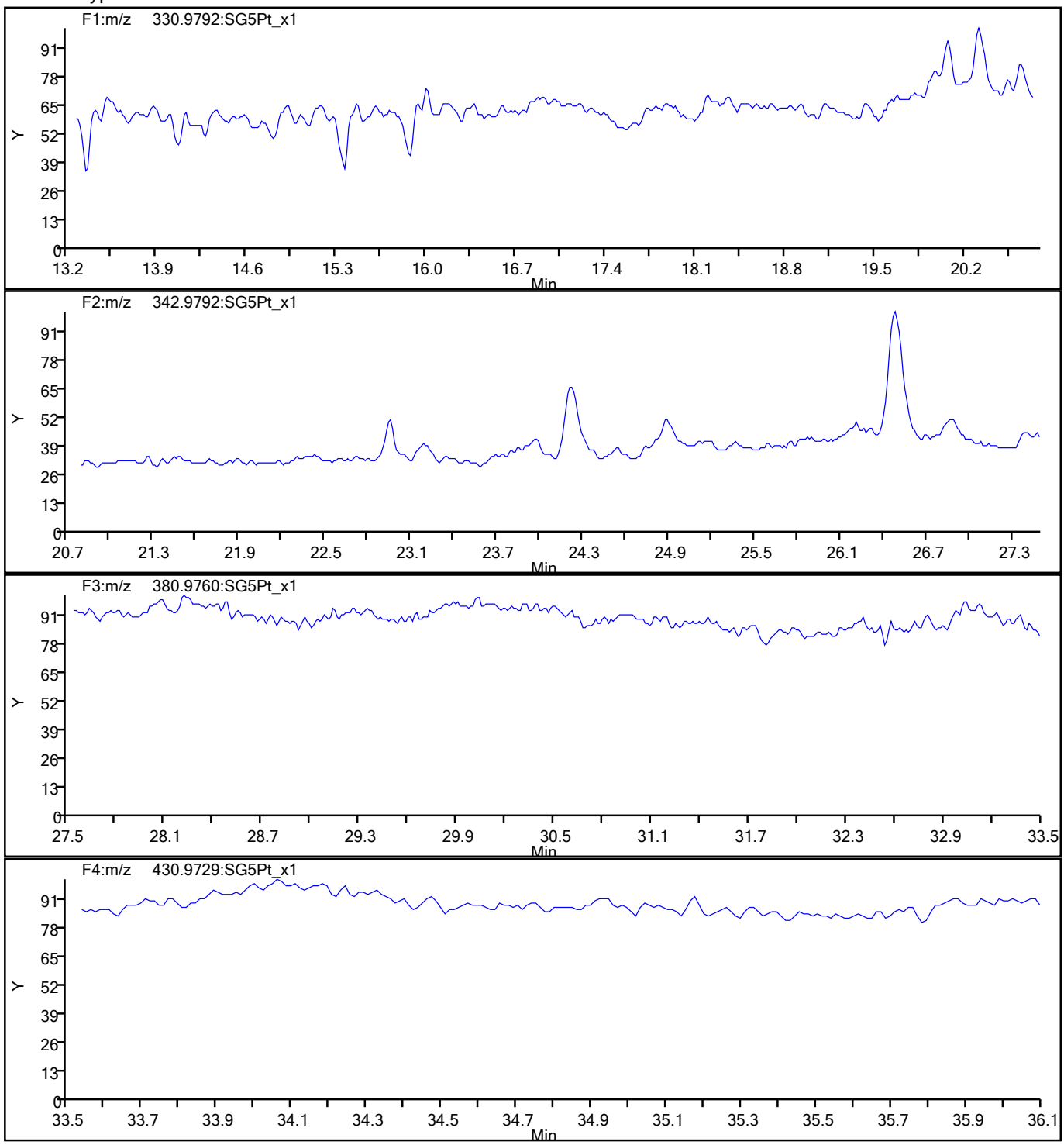

775659

Report Date: 18-Aug-2021 10:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_68.d		
Injection Date:	15-Aug-2021 20:27:17	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	516848	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

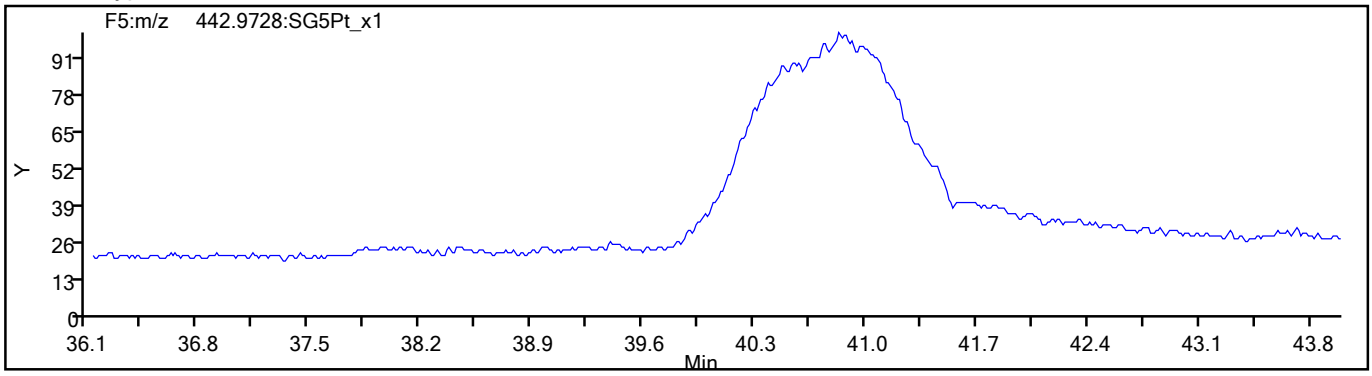

775660

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (2-4) RA
Lab Sample ID: 320-76769-28 RA
Matrix: Sediment
Lab File ID: 24AU2111D2_009.d
Analysis Method: 1613B
Date Collected: 07/22/2021 15:55
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.29(g)
Date Analyzed: 08/24/2021 13:35
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 49.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	110000	E B G	92	92

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	47		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	129		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_009.d
Lims ID: 320-76769-A-28-A
Client ID: 11215702-072221-SS-SJSB076 (2-4)
Sample Type: Client
Inject. Date: 24-Aug-2021 13:35:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-28-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 17:05:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.356	2398531	0.88	7.2E+05	20.0	20.0				nM
D 13C-2,3,7,8-TCDF	17.701	1513396	0.78	1.3327	9.469	9.469	2.297	2.297	47.35	M
2,3,7,8-TCDF	17.714	420086641	0.78	0.9978	5563.8	5563.8	4.819	4.819		E
D 13C-2,3,7,8-TCDD	16.123	918422	0.70	0.8749	8.753	8.753	32.4	32.4	43.77	nMa
$ 37Cl4-2,3,7,8-TCDD	16.151	1068931		0.8648	10.3	10.3	0.6440	0.6440	129	a
2,3,7,8-TCDD	16.137	111897225	0.78	1.0570	2305.3	2305.3	12.0	12.0		Ea
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 24-Aug-2021 17:07:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_009.d
Lims ID: 320-76769-A-28-A
Client ID: 11215702-072221-SS-SJSB076 (2-4)
Sample Type: Client
Inject. Date: 24-Aug-2021 13:35:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-28-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 17:05:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											nM
331.9368	16.356	16.283	4		1121194	241721	138123	345307	2		M
333.9339	16.356	16.283	4		1277337	296316	166446	416115	2	0.88(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.701	17.613	5	1.082	664326	146040	14530	36325	10		M
317.9389	17.701	17.613	5	1.082	849070	184343	18406	46015	10	0.78(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.714	17.641	4	1.001	184028423	34300686	14776	36940	2321		
305.8987	17.701	17.641	4	1.000	236058218	43282023	16998	42495	2546	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											nMa
331.9368	16.123	16.050	4	0.986	379522	86378	138123	345307	1		M
333.9339	16.137	16.050	5	0.987	538900	109365	166446	416115	1	0.70(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.151	16.063	5	0.987	1068931	229667	5993	14982	38		a
2,3,7,8-TCDD											Ea
319.8965	16.137	16.077	4	1.001	49009226	11069787	29584	73960	374		a
321.8936	16.137	16.077	4	1.001	62887999	14030180	20245	50612	693	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_009.d				
Injection Date:	24-Aug-2021 13:35:20	Instrument ID:	11D2		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.70
Area: 596736
Amount: 14.986150
Amount Units: pg/ul

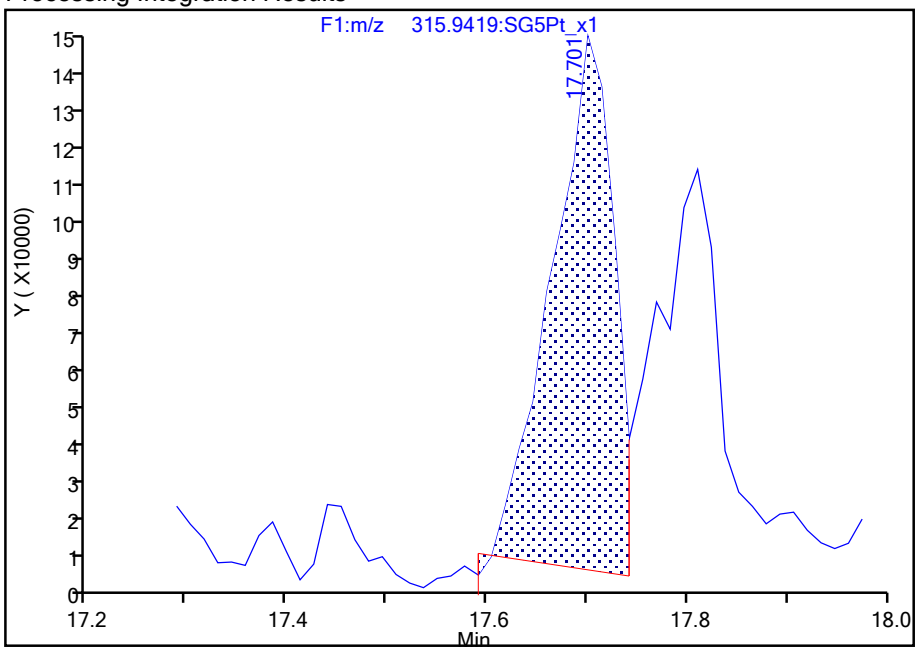

Manual Integration Results

RT: 17.70
Area: 664326
Amount: 9.469115
Amount Units: pg/ul

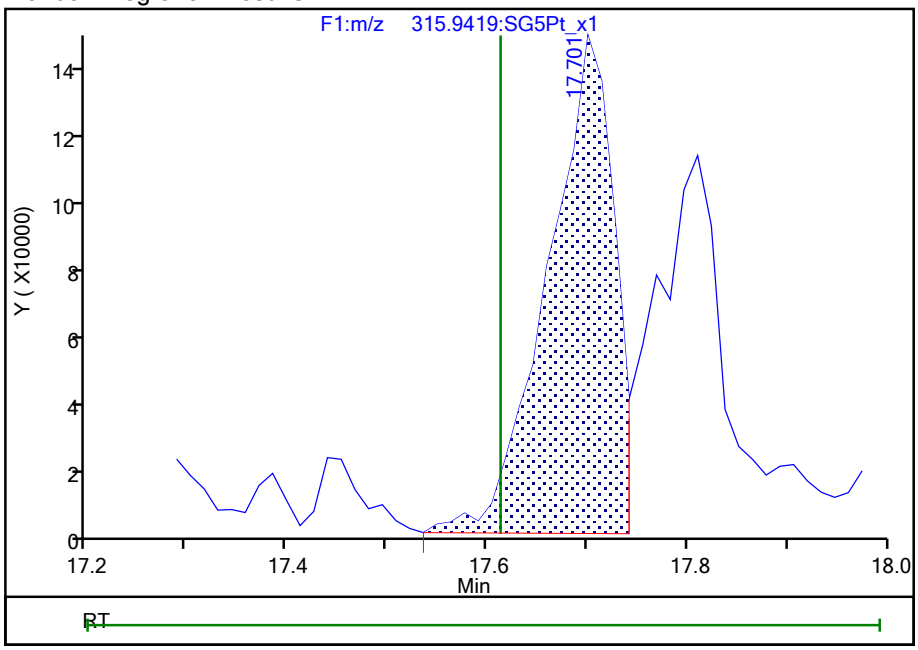

Reviewer: bennettd, 24-Aug-2021 17:05:04

Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_009.d				
Injection Date:	24-Aug-2021 13:35:20	Instrument ID:	11D2		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.70
Area: 1798417
Amount: 14.986150
Amount Units: pg/ul

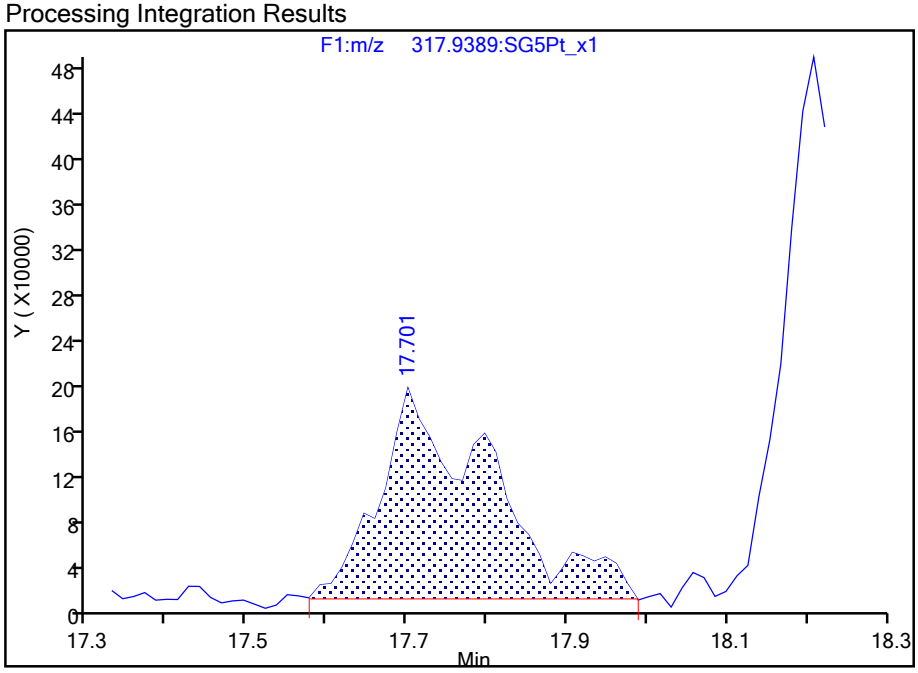

Manual Integration Results

RT: 17.70
Area: 849070
Amount: 9.469115
Amount Units: pg/ul

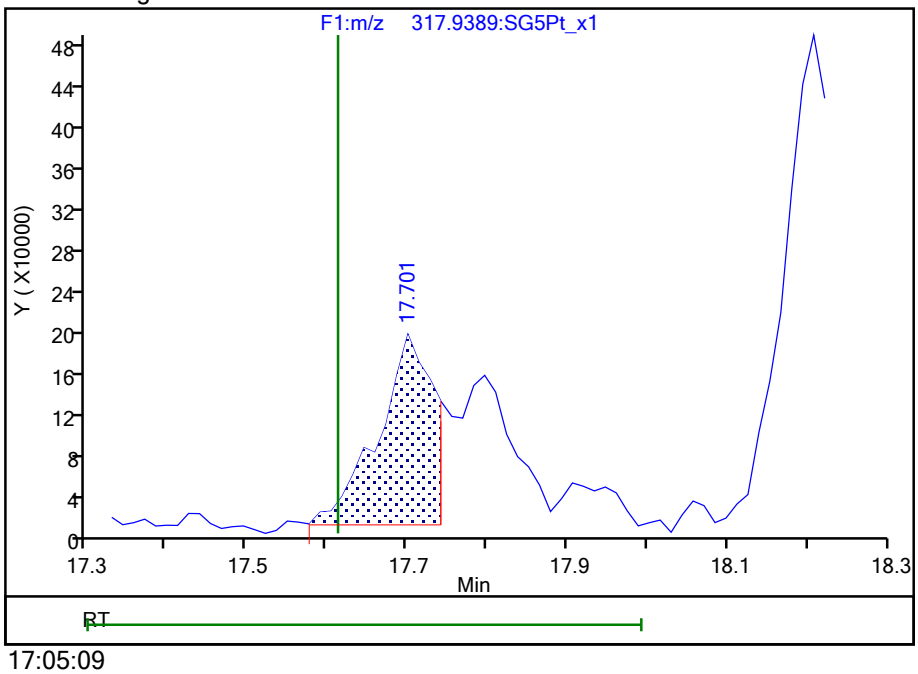

Reviewer: bennettd, 24-Aug-2021 17:05:09

Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_009.d				
Injection Date:	24-Aug-2021 13:35:20	Instrument ID:	11D2		
Lims ID:	320-76769-A-28-A	Lab Sample ID:	320-76769-28		
Client ID:	11215702-072221-SS-SJSB076 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.06

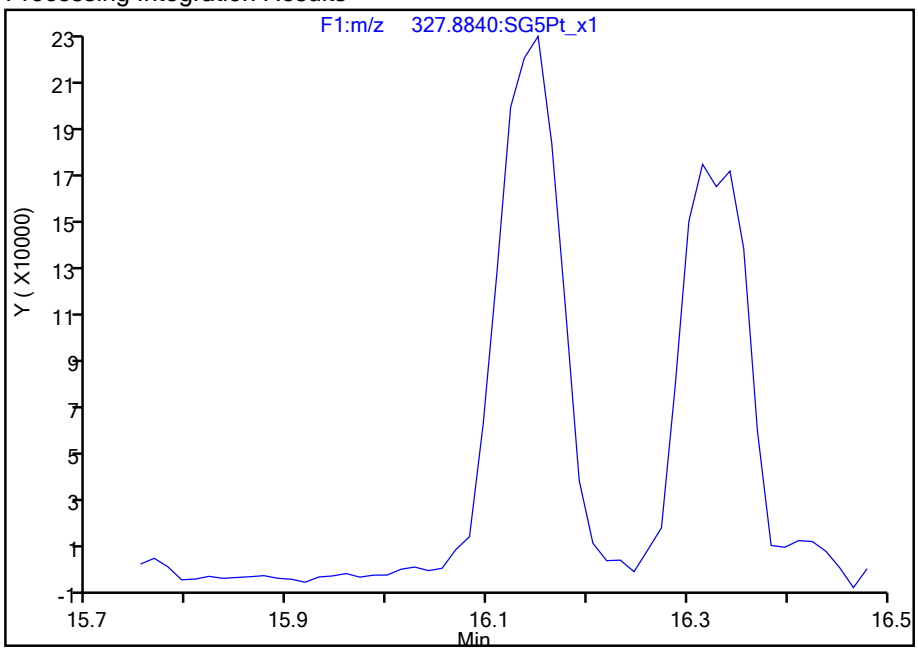

Manual Integration Results

RT: 16.15
Area: 1068931
Amount: 10.306484
Amount Units: pg/ul

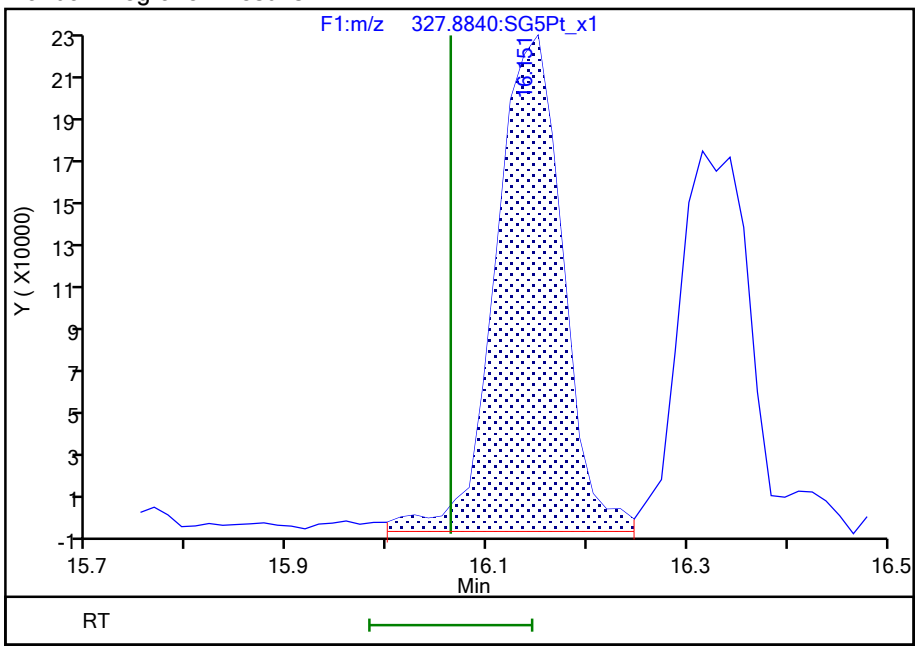

Reviewer: bennettd, 24-Aug-2021 17:01:51
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Report Date: 24-Aug-2021 17:07:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_009.d		
Injection Date:	24-Aug-2021 13:35:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	519438	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

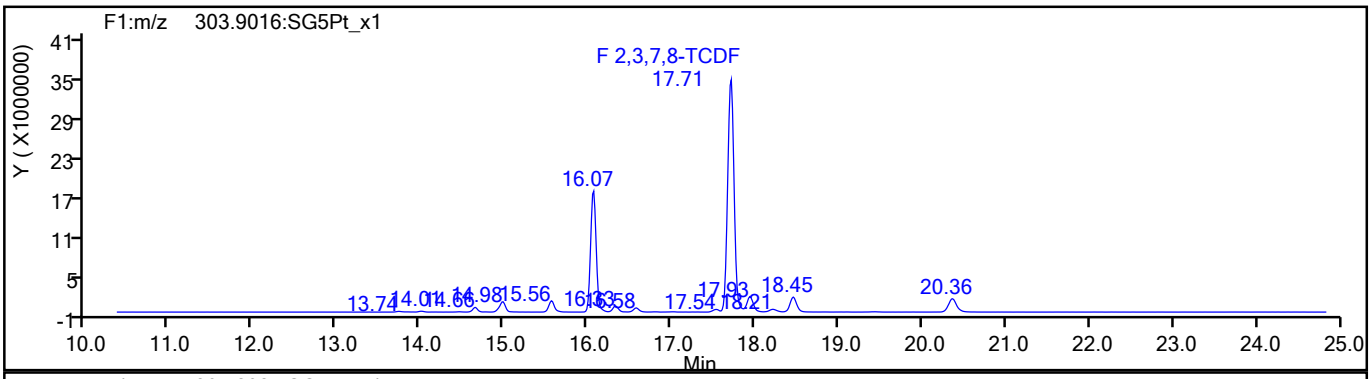

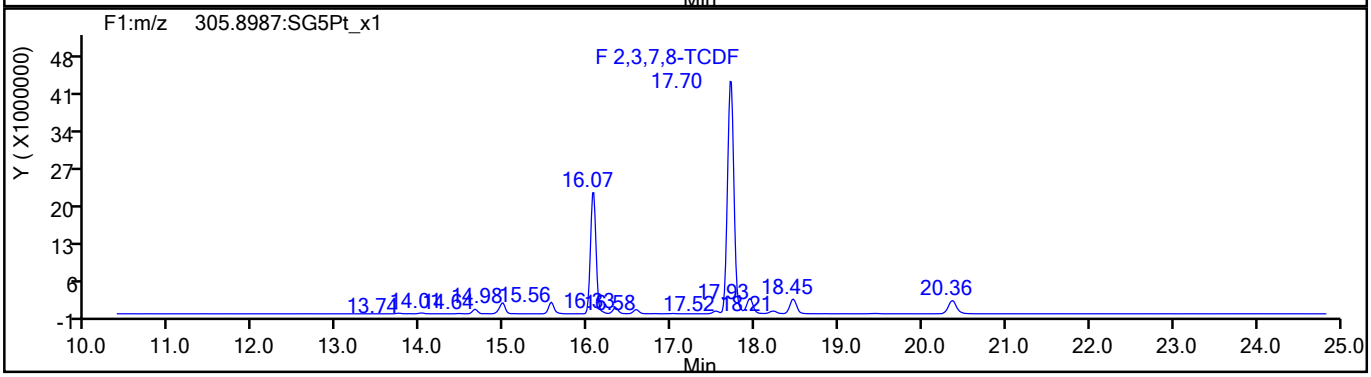

TCDF Standards

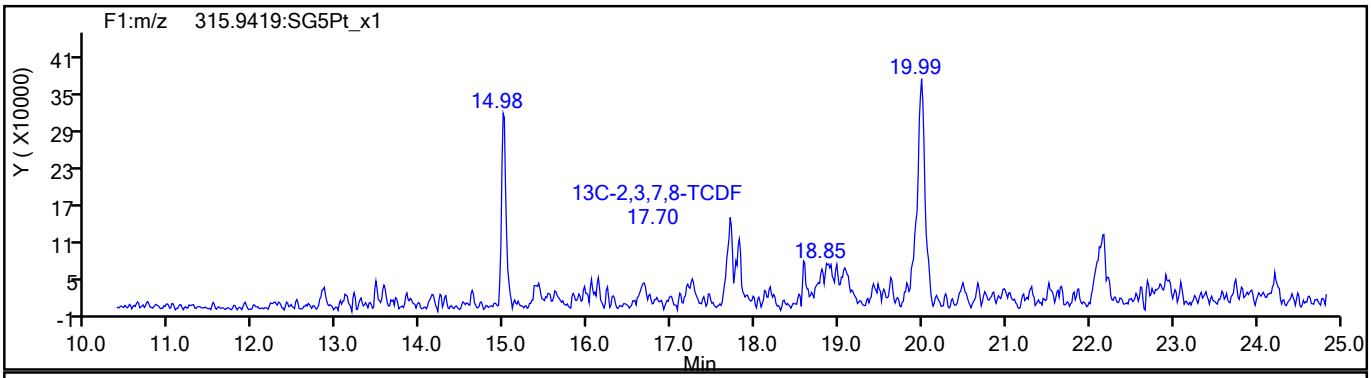

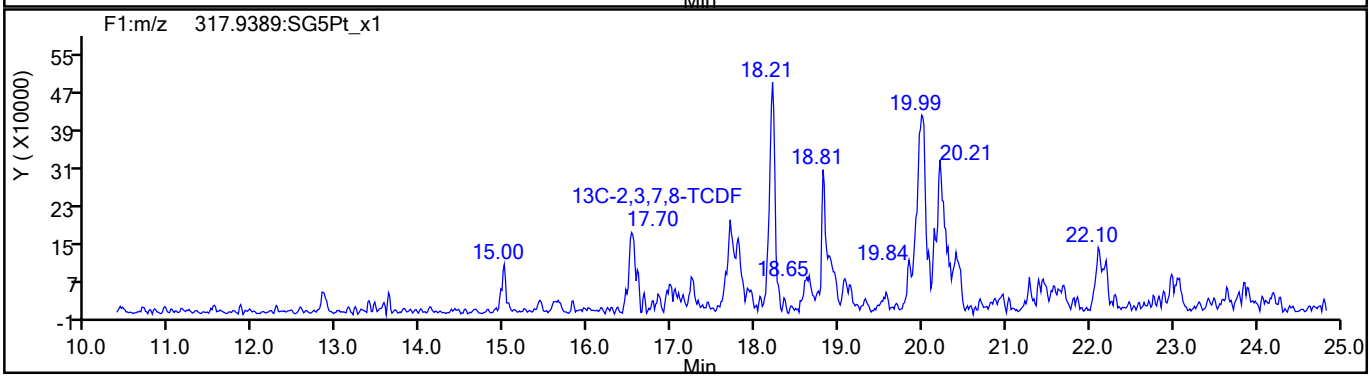

775667

Report Date: 24-Aug-2021 17:07:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_009.d		
Injection Date:	24-Aug-2021 13:35:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	519438	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

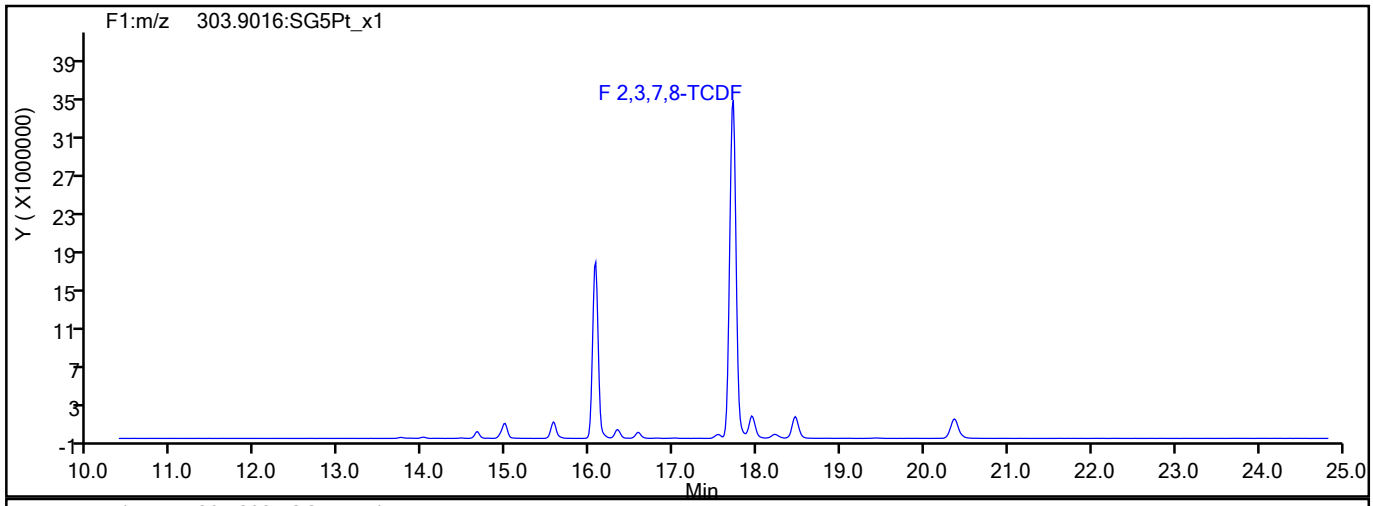

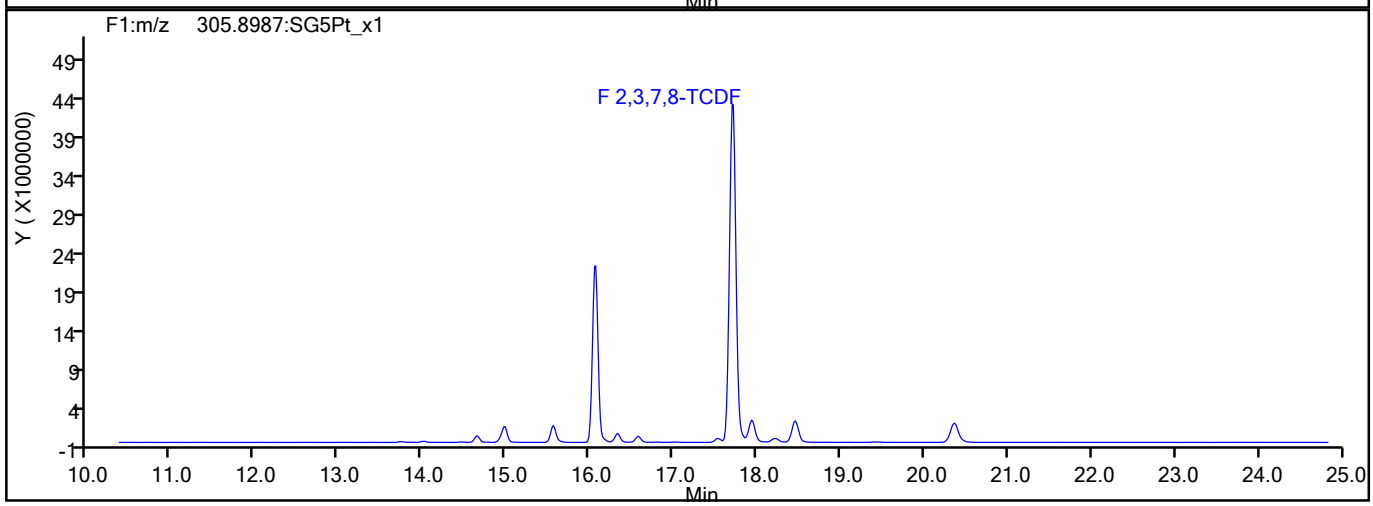

TCDF Interference Mass

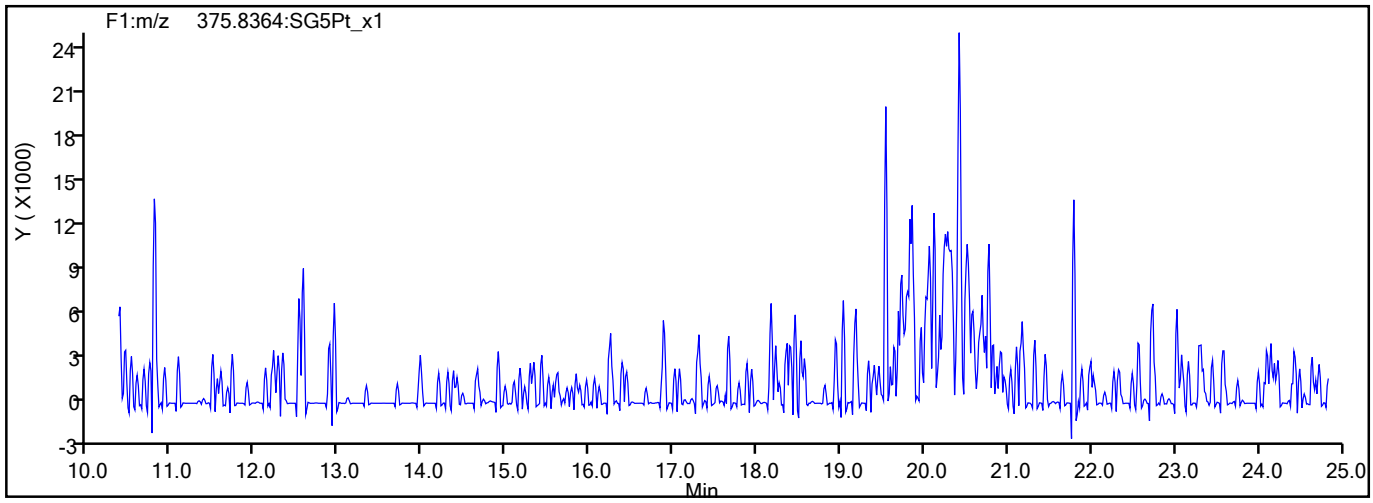

775668

Report Date: 24-Aug-2021 17:07:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_009.d		
Injection Date:	24-Aug-2021 13:35:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	519438	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

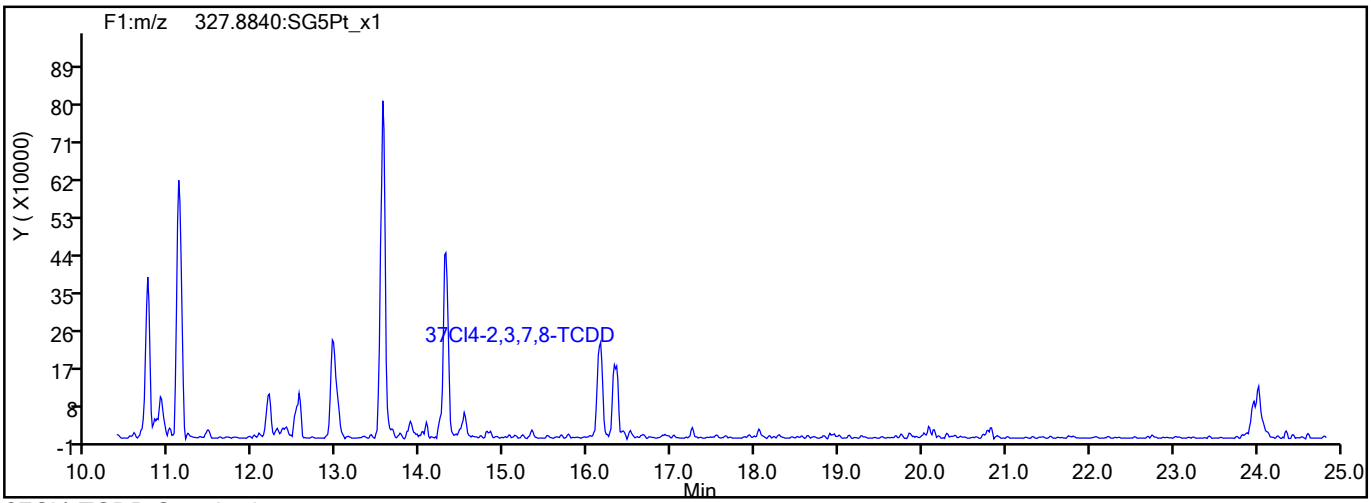

37Cl4-TCDD Standards

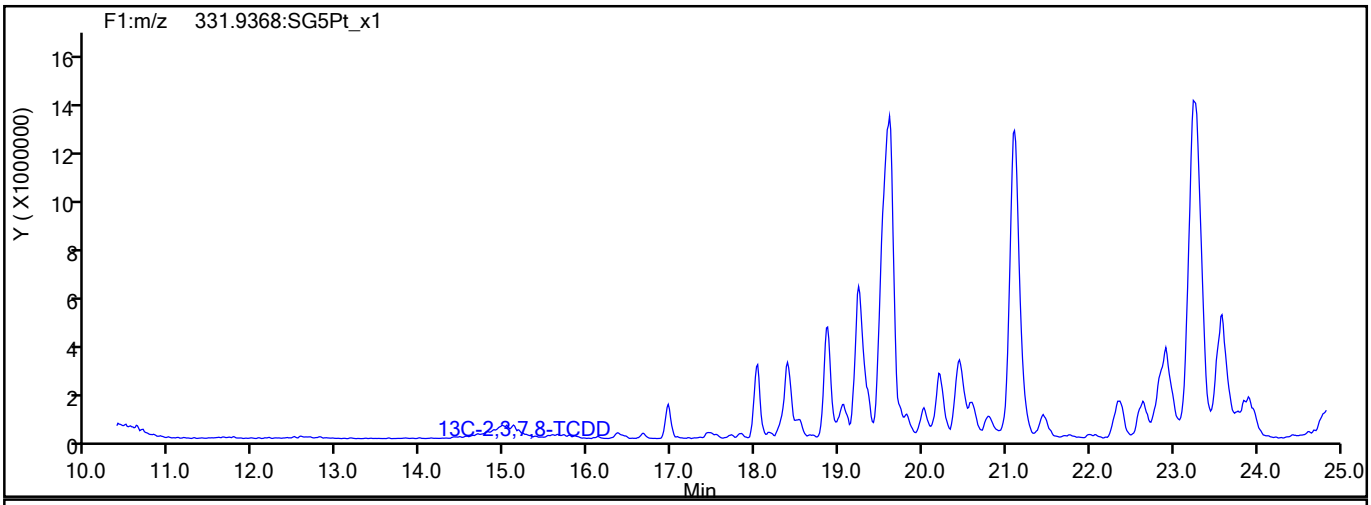

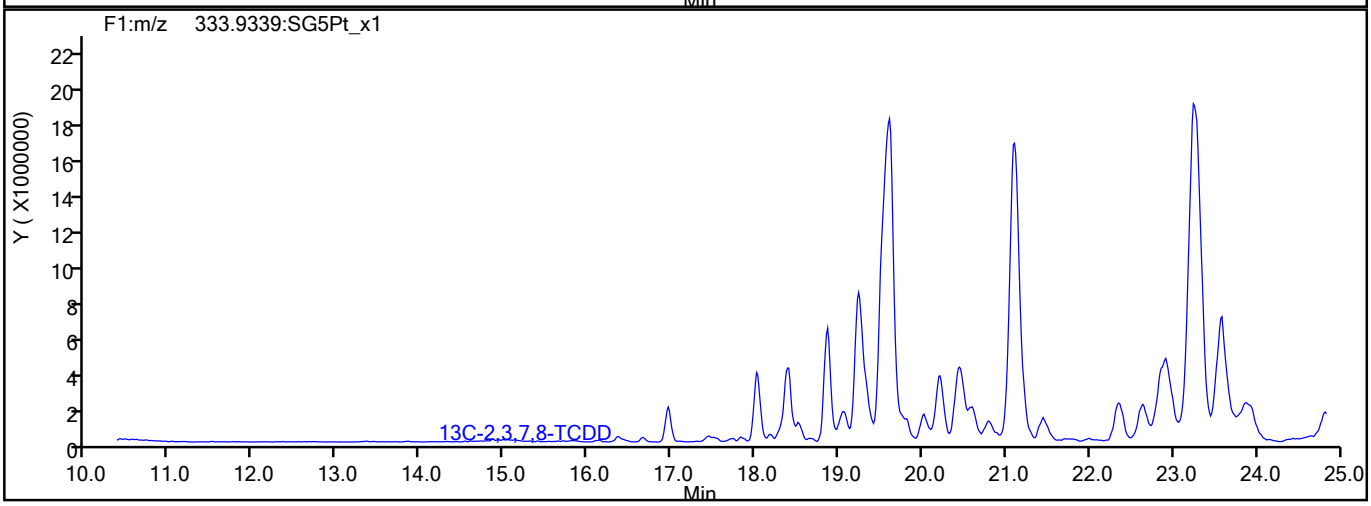

775669

Report Date: 24-Aug-2021 17:07:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_009.d		
Injection Date:	24-Aug-2021 13:35:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (2-4)		
Worklist#:	519438	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

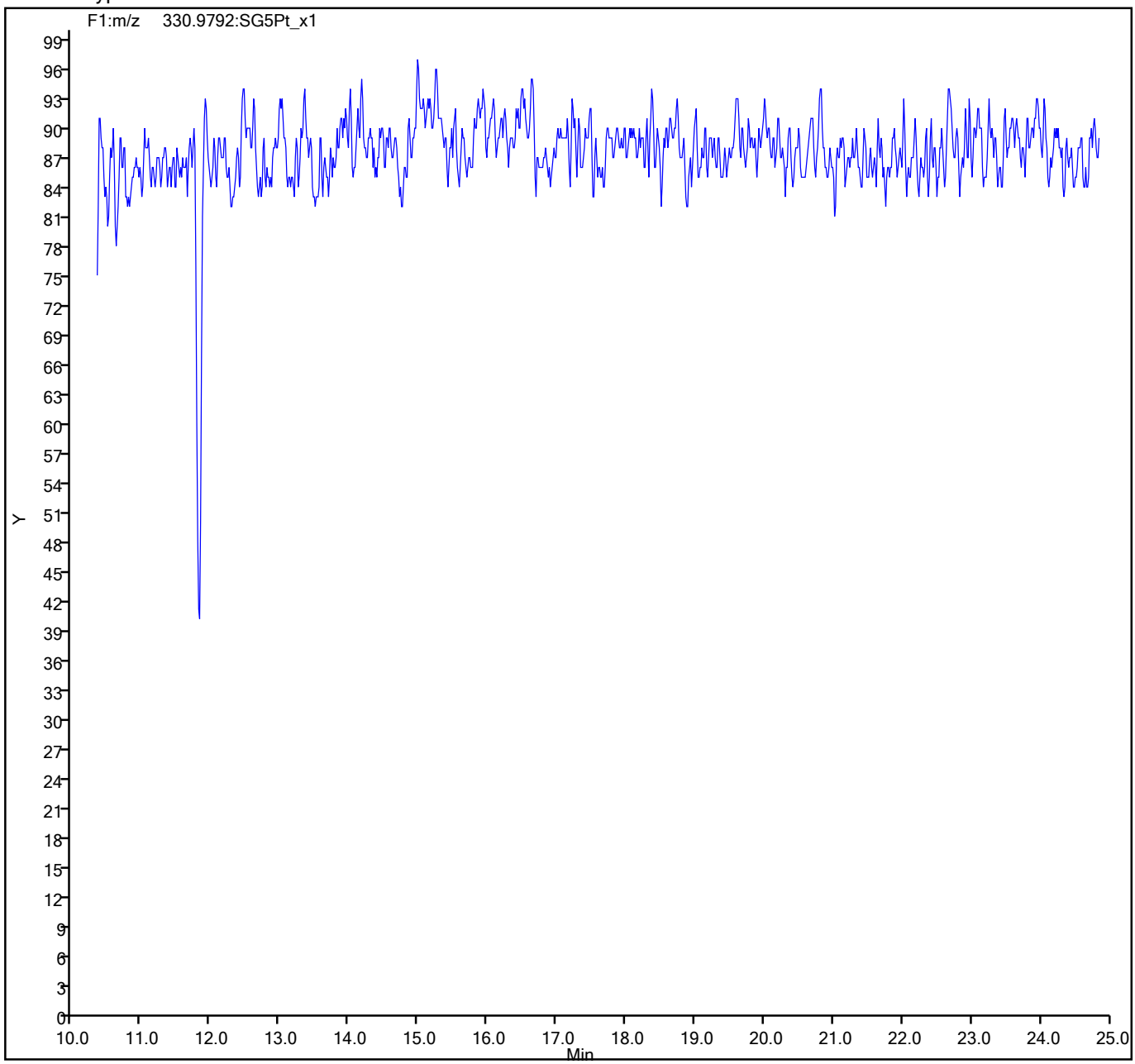

775670

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (4-6)
Lab Sample ID: 320-76769-29
Matrix: Sediment
Lab File ID: 17au21dfs1_43.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.98(g)
Date Analyzed: 08/18/2021 22:48
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 56.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	45000	E G	41	41
40321-76-4	1,2,3,7,8-PeCDD	420		11	5.1
57117-41-6	1,2,3,7,8-PeCDF	6400	E G	27	27
57117-31-4	2,3,4,7,8-PeCDF	3200	G	19	19
39227-28-6	1,2,3,4,7,8-HxCDD	7.0	J	11	1.0
57653-85-7	1,2,3,6,7,8-HxCDD	35		11	1.1
19408-74-3	1,2,3,7,8,9-HxCDD	13		11	1.0
70648-26-9	1,2,3,4,7,8-HxCDF	11000	E G	21	21
57117-44-9	1,2,3,6,7,8-HxCDF	3000	G	16	16
72918-21-9	1,2,3,7,8,9-HxCDF	210	G	15	15
60851-34-5	2,3,4,6,7,8-HxCDF	360	G	18	18
35822-46-9	1,2,3,4,6,7,8-HpCDD	1200	B	11	2.6
67562-39-4	1,2,3,4,6,7,8-HpCDF	2900		11	5.5
55673-89-7	1,2,3,4,7,8,9-HpCDF	1000		11	5.1
3268-87-9	OCDD	16000	E B	23	7.5
39001-02-0	OCDF	1400		23	1.7
41903-57-5	Total TCDD	50000	G	41	41
30402-14-3	Total TCDF	230000	q G	320	320
36088-22-9	Total PeCDD	420		11	5.1
30402-15-4	Total PeCDF	16000	G	23	23
34465-46-8	Total HxCDD	260		11	1.1
55684-94-1	Total HxCDF	16000	G	17	17
37871-00-4	Total HpCDD	2200	B	11	2.6
38998-75-3	Total HpCDF	4600		11	5.3

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (4-6)
Lab Sample ID: 320-76769-29
Matrix: Sediment
Lab File ID: 17au21dfs1_43.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.98(g)
Date Analyzed: 08/18/2021 22:48
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 56.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	55		25-164
89059-46-1	13C-2,3,7,8-TCDF	52		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	67		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	42		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	54		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	60		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	68		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	56		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	61		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	53		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	61		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	53		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	59		26-138
114423-97-1	13C-OCDD	64		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	125		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d
Lims ID: 320-76769-A-29-A
Client ID: 11215702-072221-SS-SJSB076 (4-6)
Sample Type: Client
Inject. Date: 18-Aug-2021 22:48:00 ALS Bottle#: 0 Worklist Smp#: 40
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-29-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:56:55 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1618

First Level Reviewer: krenns Date: 23-Aug-2021 10:56:55

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	22.425	685324	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	21.409	480879	0.79	1.3459	52.1	52.1	1.639	1.639	52.14	
2,3,7,8-TCDF	21.427	161733862	0.77	1.0802	33542	31136	70.1	70.1		REQa
A Non-2,3,7,8-sub-TCDF	19.878	93981899	0.77	1.0802	19355	18093	70.1	12983		RQa
S Total TCDF					52898	49229	70.1	70.1		RQ
D 13C-2,3,7,8-TCDD	22.890	352445	0.80	0.9317	55.2	55.2	0.8128	0.8128	55.20	M
2,3,7,8-TCDD	22.915	36843464	0.79	1.0753	9721.2	9721.2	8.890	8.890		Ea
$ 37Cl4-2,3,7,8-TCDD	22.907	345494		1.0083	50.0	50.0	1.327	1.327	125	a
A Non-2,3,7,8-sub-TCDD	20.707	4554444	0.79	1.0753	1201.7	1201.7	8.890	1074.5		
S Total TCDD					10923	10923	8.890	8.890		
D 13C-1,2,3,7,8-PeCDF	28.105	328032	1.62	1.1405	42.0	42.0	0.6528	0.6528	41.97	
1,2,3,7,8-PeCDF	28.122	4856580	1.62	1.0543	1404.3	1404.3	5.984	5.984		EM
D 13C-2,3,4,7,8-PeCDF	29.493	412917	1.57	1.1253	53.5	53.5	0.6616	0.6616	53.54	
2,3,4,7,8-PeCDF	29.527	2925049	1.63	1.0079	702.9	702.9	4.233	4.233		a
A F1 PeCDFs	24.648	46011	1.39	1.0311	12.0	12.0	0.0562	12.0		a
A Non-2,3,7,8-sub-PeCDF	28.125	5311117	1.64	1.0311	1390.4	1390.4	4.937	631.2		Ma
S Total PeCDF					3509.6	3509.6	5.109	5.109		
D 13C-1,2,3,7,8-PeCDD	30.310	327734	1.50	0.7165	66.7	66.7	0.1500	0.1500	66.75	
1,2,3,7,8-PeCDD	30.327	313104	1.54	1.0465	91.3	91.3	1.101	1.101		a
A Non-2,3,7,8-sub-PeCDD	28.489						1.101	91.3		U
S Total PeCDD					91.3	91.3	1.101	1.101		
D 13C-1,2,3,4,7,8-HxCDF	35.245	494964	0.53	0.9648	67.6	67.6	0.3383	0.3383	67.59	
1,2,3,4,7,8-HxCDF	35.271	13019515	1.36	1.1474	2292.5	2292.5	4.532	4.532		Ea
D 13C-1,2,3,6,7,8-HxCDF	35.388	459072	0.54	1.0708	56.5	56.5	0.3048	0.3048	56.48	
1,2,3,6,7,8-HxCDF	35.397	3634328	1.36	1.2178	650.1	650.1	3.481	3.481		a
D 13C-2,3,4,6,7,8-HxCDF	36.146	417636	0.54	1.0413	52.8	52.8	0.3135	0.3135	52.84	a
2,3,4,6,7,8-HxCDF	36.163	398070	1.34	1.2145	78.5	78.5	3.855	3.855		a
D 13C-1,2,3,7,8,9-HxCDF	36.987	448256	0.53	0.9731	60.7	60.7	0.3355	0.3355	60.69	a
1,2,3,7,8,9-HxCDF	36.995	257832	1.42	1.2401	46.4	46.4	3.224	3.224		
A Non-2,3,7,8-sub-HxCDF	35.028	2339329	1.31	1.2049	426.7	426.7	3.722	162.3		a
S Total HxCDF					3494.2	3494.2	3.773	3.773		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.794	759002	1.19	1.8E+04	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	36.339	344624	1.27	0.7587	59.8	59.8	0.1792	0.1792	59.85	
1,2,3,4,7,8-HxCDD	36.356	5537	1.06	1.0608	1.515	1.515	0.2246	0.2246		a
D 13C-1,2,3,6,7,8-HxCDD	36.440	349507	1.21	0.8593	53.6	53.6	0.1582	0.1582	53.59	
1,2,3,6,7,8-HxCDD	36.457	26663	1.17	0.9933	7.680	7.680	0.2493	0.2493		a
1,2,3,7,8,9-HxCDD	36.819	10640	1.29	1.1094	2.763	2.763	0.2189	0.2189		Ma
A Non-2,3,7,8-sub-HxCDD	35.394	164499	1.23	1.0545	44.9	44.9	0.2303	24.7		Ma
S Total HxCDD					56.9	56.9	0.2309	0.2309		
D 13C-1,2,3,4,6,7,8-HpCDF	38.741	293704	0.46	0.7359	52.6	52.6	0.3841	0.3841	52.58	
1,2,3,4,6,7,8-HpCDF	38.749	2636992	1.07	1.4421	622.6	622.6	1.205	1.205		
D 13C-1,2,3,4,7,8,9-HpCDF	39.944	306953	0.45	0.6854	59.0	59.0	0.4125	0.4125	59.01	
1,2,3,4,7,8,9-HpCDF	39.953	880764	1.08	1.3092	219.2	219.2	1.117	1.117		
A Non-2,3,7,8-sub-HpCDF	39.258	672625	1.04	1.3756	162.8	162.8	1.154	162.8		
S Total HpCDF					1004.6	1004.6	1.161	1.161		
D 13C-1,2,3,4,6,7,8-HpCDD	39.650	314685	1.01	0.6745	61.5	61.5	0.4262	0.4262	61.47	
1,2,3,4,6,7,8-HpCDD	39.658	842049	1.02	1.0503	254.8	254.8	0.5682	0.5682		
A Non-2,3,7,8-sub-HpCDD	39.258	720822	1.03	1.0503	218.1	218.1	0.5682	218.1		
S Total HpCDD					472.9	472.9	0.5682	0.5682		
D 13C-OCDD	42.127	525106	0.91	0.5446	127.0	127.0	0.4124	0.4124	63.51	
OCDF	42.220	1030140	0.98	1.3168	298.0	298.0	0.3728	0.3728		
OCDD	42.136	9545468	0.89	1.0620	3423.4	3423.4	1.642	1.642		E

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 23-Aug-2021 10:56:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d
Lims ID: 320-76769-A-29-A
Client ID: 11215702-072221-SS-SJSB076 (4-6)
Sample Type: Client
Inject. Date: 18-Aug-2021 22:48:00 ALS Bottle#: 0 Worklist Smp#: 40
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-29-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:56:55 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1618

First Level Reviewer: krenns Date: 23-Aug-2021 10:56:55

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	22.425	21.427	60		304469	53395	196	490	272		a
333.9338	22.425	21.427	60		380855	64797	162	405	400	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	21.409	20.401	60	0.955	211635	37210	410	1025	91		
317.9389	21.409	20.401	60	0.955	269244	46442	633	1582	73	0.79(0.65-0.89)	
2,3,7,8-TCDF											REQa
303.9016	21.427	20.436	59	1.001	82858453	12672749	15588	38970	813		a
	Empc Correction				70358797	10796878	15588	38970	693		
305.8987	21.427	20.436	59	1.001	91375065	14021920	9760	24400	1437	0.91(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQa
303.9016	18.811	19.878	-64	0.879	1580868	226875	15588	38970	15		
	Empc Correction				1319257	186969	15588	38970	12		
305.8987	18.793	19.878	-65	0.878	1713321	242817	9760	24400	25	0.92(0.65-0.89)	
303.9016	19.310	19.878	-34	0.902	2400192	313183	15588	38970	20		
305.8987	19.310	19.878	-34	0.902	2920431	353998	9760	24400	36	0.82(0.65-0.89)	
303.9016	19.791	19.878	-5	0.924	1860063	369612	15588	38970	24		
305.8987	19.791	19.878	-5	0.924	2118303	399329	9760	24400	41	0.88(0.65-0.89)	
303.9016	20.067	19.878	11	0.937	2815900	439190	15588	38970	28		
	Empc Correction				2393050	365080	15588	38970	23		
305.8987	20.067	19.878	11	0.937	3107858	474131	9760	24400	49	0.91(0.65-0.89)	
303.9016	20.574	19.878	42	0.961	34466813	2736899	15588	38970	176		a
	Empc Correction				29338539	2316770	15588	38970	149		
305.8987	20.574	19.878	42	0.961	38101999	3008793	9760	24400	308	0.90(0.65-0.89)	
303.9016	22.321	19.878	146	1.043	4532864	727734	15588	38970	47		
	Empc Correction				3788611	591806	15588	38970	38		
305.8987	22.321	19.878	146	1.043	4920275	768580	9760	24400	79	0.92(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											M
331.9368	22.890	21.743	69	1.021	156585	13808	196	490	70		M
333.9338	22.898	21.743	69	1.021	195860	20605	162	405	127	0.80(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	22.915	21.777	68	1.001	16249761	1779115	629	1572	2828		a
321.8936	22.907	21.777	68	1.001	20593703	2266825	687	1717	3300	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8847	22.907	21.849	63	1.021	345494	42587	633	1582	67		a
A Non-2,3,7,8-sub-TCDD											
319.8965	21.340	20.707	38	0.932	26842	6132	629	1572	10		
321.8936	21.340	20.707	38	0.932	37302	9851	687	1717	14	0.72(0.65-0.89)	
319.8965	22.511	20.707	108	0.983	192435	32958	629	1572	52		
321.8936	22.520	20.707	109	0.984	225544	42697	687	1717	62	0.85(0.65-0.89)	
319.8965	23.346	20.707	158	1.020	1793789	234812	629	1572	373		
321.8936	23.346	20.707	158	1.020	2278532	302163	687	1717	440	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	28.105	27.288	49	1.253	202615	26018	214	535	122		
353.8970	28.105	27.288	49	1.253	125417	18523	138	345	134	1.62(1.32-1.78)	
1,2,3,7,8-PeCDF											EM
339.8597	28.122	27.313	48	1.001	3005950	456594	701	1752	651		M
341.8567	28.122	27.313	48	1.001	1850630	283336	423	1057	670	1.62(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	29.493	28.795	42	1.315	252494	40750	214	535	190		
353.8970	29.502	28.795	42	1.316	160423	25110	138	345	182	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	29.527	28.820	42	1.001	1813593	264650	701	1752	378		a
341.8567	29.527	28.820	42	1.001	1111456	163648	423	1057	387	1.63(1.32-1.78)	
A F1 PeCDFs											a
339.8597	24.817	24.648	10	0.883	26745	6023	6	15	1004		a
341.8567	24.808	24.648	10	0.883	19266	4048	7	17	578	1.39(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											Ma
339.8597	26.573	28.125	-93	0.945	1503117	294826	701	1752	421		
341.8567	26.573	28.125	-93	0.945	907871	184980	423	1057	437	1.66(1.32-1.78)	
339.8597	27.507	28.125	-37	0.979	84859	11425	701	1752	16		
341.8567	27.507	28.125	-37	0.979	54459	6911	423	1057	16	1.56(1.32-1.78)	
339.8597	27.979	28.125	-9	0.996	234619	45523	701	1752	65		M
341.8567	27.979	28.125	-9	0.996	146460	30563	423	1057	72	1.60(1.32-1.78)	
339.8597	28.652	28.125	32	1.019	848845	127131	701	1752	181		
341.8567	28.652	28.125	32	1.019	518122	78407	423	1057	185	1.64(1.32-1.78)	
339.8597	29.855	28.125	104	1.062	631459	83349	701	1752	119		
341.8567	29.855	28.125	104	1.062	381306	49758	423	1057	118	1.66(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	30.310	29.612	42	1.352	196675	30821	31	77	994		
369.8919	30.310	29.612	42	1.352	131059	20552	20	50	1028	1.50(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											a
355.8546	30.327	29.637	41	1.001	189926	28777	89	222	323		a
357.8516	30.335	29.637	42	1.001	123178	18886	148	370	128	1.54(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.489	28.489	0	0.940	189926	28777	89	222			
357.8516	28.489	28.489	0	0.940	123178	18886	148	370		1.54(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	35.245	34.942	18	0.958	170804	35004	109	272	321		
385.8610	35.254	34.942	19	0.958	324160	67775	109	272	622	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											Ea
373.8208	35.271	34.959	19	1.001	7497158	1574291	1229	3072	1281		a
375.8178	35.271	34.959	19	1.001	5522357	1147386	909	2272	1262	1.36(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.388	35.111	17	0.962	160332	44968	109	272	413		
385.8610	35.388	35.111	17	0.962	298740	81136	109	272	744	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											a
373.8208	35.397	35.119	17	1.000	2091997	567738	1229	3072	462		a
375.8178	35.397	35.119	17	1.000	1542331	424930	909	2272	467	1.36(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											a
383.8639	36.146	35.919	14	0.982	146547	40074	109	272	368		a
385.8610	36.146	35.919	14	0.982	271089	74093	109	272	680	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											a
373.8208	36.163	35.936	14	1.000	228165	61917	1229	3072	50		a
375.8178	36.163	35.936	14	1.000	169905	46249	909	2272	51	1.34(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											a
383.8639	36.987	36.811	11	1.005	155574	45934	109	272	421		a
385.8610	36.987	36.811	11	1.005	292682	87745	109	272	805	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.995	36.828	10	1.000	151379	46117	1229	3072	38		
375.8178	36.995	36.828	10	1.000	106453	35475	909	2272	39	1.42(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											a
373.8208	33.958	35.028	-64	0.963	503711	157450	1229	3072	128		
375.8178	33.958	35.028	-64	0.963	386060	120402	909	2272	132	1.30(1.05-1.43)	
373.8208	34.698	35.028	-20	0.984	224284	55993	1229	3072	46		
375.8178	34.698	35.028	-20	0.984	167685	42484	909	2272	47	1.34(1.05-1.43)	
373.8208	36.045	35.028	61	1.023	135734	31235	1229	3072	25		a
375.8178	36.045	35.028	61	1.023	102046	22636	909	2272	25	1.33(1.05-1.43)	
373.8208	37.088	35.028	123	1.052	463203	122209	1229	3072	99		a
375.8178	37.088	35.028	123	1.052	356606	93225	909	2272	103	1.30(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	36.794	36.609	11		412654	89830	48	120	1871		a
403.8529	36.794	36.609	11		346348	77129	43	107	1794	1.19(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.339	36.129	13	0.988	193116	49678	48	120	1035		
403.8529	36.339	36.129	13	0.988	151508	38482	43	107	895	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDD											a
389.8158	36.356	36.146	13	1.000	2854	759	44	110	17		a
391.8127	36.365	36.146	13	1.001	2683	796	40	100	20	1.06(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.440	36.247	12	0.990	191300	46108	48	120	961		
403.8529	36.449	36.247	12	0.991	158207	38688	43	107	900	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											a
389.8158	36.457	36.264	12	1.000	14371	3674	44	110	84		a
391.8127	36.457	36.264	12	1.000	12292	3102	40	100	78	1.17(1.05-1.43)	
1,2,3,7,8,9-HxCDD											Ma
389.8158	36.819	36.626	12	1.013	5989	1385	44	110	31		a
391.8127	36.802	36.626	11	1.013	4651	1115	40	100	28	1.29(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											Ma
389.8158	34.631	35.394	-46	0.950	34020	6678	44	110	152		
391.8127	34.631	35.394	-46	0.950	25636	5240	40	100	131	1.33(1.05-1.43)	
389.8158	35.313	35.394	-5	0.969	6108	1393	44	110	32		
391.8127	35.313	35.394	-5	0.969	4632	1150	40	100	29	1.32(1.05-1.43)	
389.8158	35.616	35.394	13	0.977	48627	9638	44	110	219		
391.8127	35.616	35.394	13	0.977	41686	8062	40	100	202	1.17(1.05-1.43)	
389.8158	35.826	35.394	26	0.983	794	227	44	110	5		
391.8127	35.809	35.394	25	0.983	756	279	40	100	7	1.05(1.05-1.43)	
389.8158	36.743	35.394	81	1.008	1300	589	44	110	13		M
391.8127	36.760	35.394	82	1.009	940	470	40	100	12	1.38(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.741	38.626	7	1.053	92109	24397	111	277	220		
419.8220	38.741	38.626	7	1.053	201595	55325	78	195	709	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.749	38.630	7	1.000	1362556	379630	282	705	1346		
409.7788	38.749	38.630	7	1.000	1274436	351740	272	680	1293	1.07(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.944	39.880	4	1.086	95853	29963	111	277	270		
419.8220	39.944	39.880	4	1.086	211100	64773	78	195	830	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.953	39.885	4	1.000	456448	138292	282	705	490		
409.7788	39.953	39.885	4	1.000	424316	126865	272	680	466	1.08(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.094	39.258	-10	1.009	343675	104926	282	705	372		
409.7788	39.094	39.258	-10	1.009	328950	99700	272	680	367	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.650	39.569	5	1.078	158328	48326	120	300	403		
437.8140	39.650	39.569	5	1.078	156357	44681	72	180	621	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.658	39.582	5	1.000	425505	130897	111	277	1179		
425.7737	39.658	39.582	5	1.000	416544	130173	111	277	1173	1.02(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.035	39.258	-13	0.985	365540	121134	111	277	1091		
425.7737	39.035	39.258	-13	0.985	355282	116473	111	277	1049	1.03(0.88-1.20)	
13C-OCDD											
469.7780	42.127	42.072	3	1.145	250633	64173	87	217	738		
471.7750	42.127	42.072	3	1.145	274473	73132	63	157	1161	0.91(0.76-1.02)	
OCDF											
441.7428	42.220	42.165	3	1.002	509768	126862	66	165	1922		
443.7399	42.220	42.165	3	1.002	520372	127579	69	172	1849	0.98(0.76-1.02)	
OCDD											E
457.7377	42.136	42.081	3	1.000	4492702	1147188	232	580	4945		
459.7348	42.136	42.081	3	1.000	5052766	1272504	247	617	5152	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Report Date: 23-Aug-2021 10:56:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Lims ID:	320-76769-A-29-A		
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Inject. Date:	18-Aug-2021 22:48:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	40

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	480879	83652

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	480879	83652

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.811	1580868	226875	1713321	242817	634.2	0.92	RQ
18.811	1319257	186969	1713321	242817	583.8		Empc Correction
19.310	2400192	313183	2920431	353998	1024.3	0.82	
19.791	1860063	369612	2118303	399329	765.9	0.88	
20.067	2815900	439190	3107858	474131	1140.4	0.91	RQ
20.067	2393050	365080	3107858	474131	1059.0		Empc Correction
20.574	34466813	2736899	38101999	3008793	13971	0.90	RQa
20.574	29338539	2316770	38101999	3008793	12983		Empc Correction
22.321	4532864	727734	4920275	768580	1819.9	0.92	RQ
22.321	3788611	591806	4920275	768580	1676.6		Empc Correction
Signal Totals:							
	41099712	4143420	52882187	5247648			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	100538887	10061141				0.90	RQa
	93981899	9391068					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 19355 = (100538887 * 100.000) / (480879 * 1.080)

Empc Amount: 18093 = (93981899 * 100.000) / (480879 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 23-Aug-2021 10:56:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Lims ID:	320-76769-A-29-A		
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Inject. Date:	18-Aug-2021 22:48:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	40

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	352445	34413

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	352445	34413

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.340	26842	6132	37302	9851	16.9	0.72	
22.511	192435	32958	225544	42697	110.3	0.85	
23.346	1793789	234812	2278532	302163	1074.5	0.79	
Signal Totals:							
	2013066	273902	2541378	354711			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4554444	628613				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1201.7 = (4554444 * 100.000) / (352445 * 1.075)

Report Date: 23-Aug-2021 10:56:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Lims ID:	320-76769-A-29-A		
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Inject. Date:	18-Aug-2021 22:48:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	40

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	328032	44541
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	412917	65860

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	370474	55200

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.817	26745	6023	19266	4048	12.0	1.39	a
Signal Totals:							
	26745	6023	19266	4048			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	46011	10071				1.39	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 12.045 = (46011 * 100.000) / (370474 * 1.031)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 23-Aug-2021 10:56:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Lims ID:	320-76769-A-29-A		
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Inject. Date:	18-Aug-2021 22:48:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	40

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	328032	44541
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	412917	65860

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	370474	55200

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
26.573	1503117	294826	907871	184980	631.2	1.66	
27.507	84859	11425	54459	6911	36.5	1.56	
27.979	234619	45523	146460	30563	99.8	1.60	Ma
28.652	848845	127131	518122	78407	357.9	1.64	
29.855	631459	83349	381306	49758	265.1	1.66	
Signal Totals:							
	3302899	562254	2008218	350619			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5311117	912873				1.64	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1390.4 = (5311117 * 100.000) / (370474 * 1.031)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 23-Aug-2021 10:56:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Lims ID:	320-76769-A-29-A		
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Inject. Date:	18-Aug-2021 22:48:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	40

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	327734	51373

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	327734	51373

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.327	189926	28777	123178	18886	91.3	1.54	

Compound is Marked ND

Report Date: 23-Aug-2021 10:56:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Lims ID:	320-76769-A-29-A		
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Inject. Date:	18-Aug-2021 22:48:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	40

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	494964	102779
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	459072	126104
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	417636	114167
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	448256	133679

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	454982	119182

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.958	503711	157450	386060	120402	162.3	1.30	
34.698	224284	55993	167685	42484	71.5	1.34	
36.045	135734	31235	102046	22636	43.4	1.33	a
37.088	463203	122209	356606	93225	149.5	1.30	a
Signal Totals:							
	1326932	366887	1012397	278747			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2339329	645634				1.31	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 426.708 = (2339329 * 100.000) / (454982 * 1.205)

QC Flag Legend

Review Flags

a - User Assigned ID

Report Date: 23-Aug-2021 10:56:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Lims ID:	320-76769-A-29-A		
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Inject. Date:	18-Aug-2021 22:48:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	40

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	344624	88160
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	349507	84796
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	347065	86478

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.631	34020	6678	25636	5240	16.3	1.33	
35.313	6108	1393	4632	1150	2.93	1.32	
35.616	48627	9638	41686	8062	24.7	1.17	
35.826	794	227	756	279	0.4235	1.05	
36.743	1300	589	940	470	0.6120	1.38	Ma
Signal Totals:							
	90849	18525	73650	15201			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	164499	33726				1.23	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 44.947 = (164499 * 100.000) / (347065 * 1.055)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 23-Aug-2021 10:56:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Lims ID:	320-76769-A-29-A		
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Inject. Date:	18-Aug-2021 22:48:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	40

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	293704	79722
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	306953	94736

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	300328	87229

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
39.094	343675	104926	328950	99700	162.8	1.04	
Signal Totals:							
	343675	104926	328950	99700			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	672625	204626				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 162.810 = (672625 * 100.000) / (300328 * 1.376)

Report Date: 23-Aug-2021 10:56:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Lims ID:	320-76769-A-29-A		
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Inject. Date:	18-Aug-2021 22:48:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	40

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	314685	93007

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	314685	93007

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
39.035	365540	121134	355282	116473	218.1	1.03	
Signal Totals:							
	365540	121134	355282	116473			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	720822	237607				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 218.091 = (720822 * 100.000) / (314685 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.57
Area: 34466813
Amount: 13971
Amount Units: pg/ul

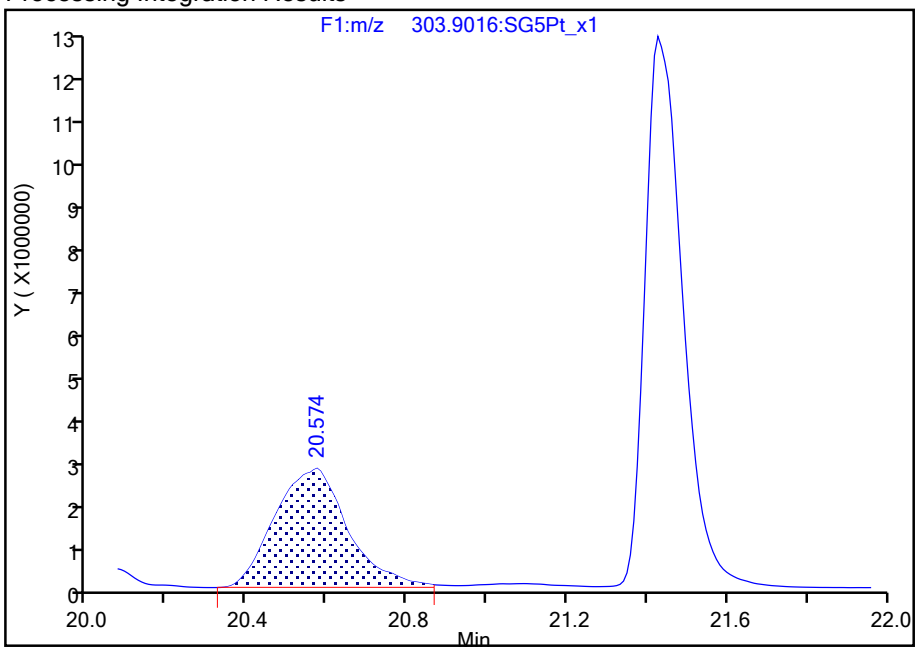

Manual Integration Results

RT: 21.43
Area: 82858453
Amount: 33542
Amount Units: pg/ul

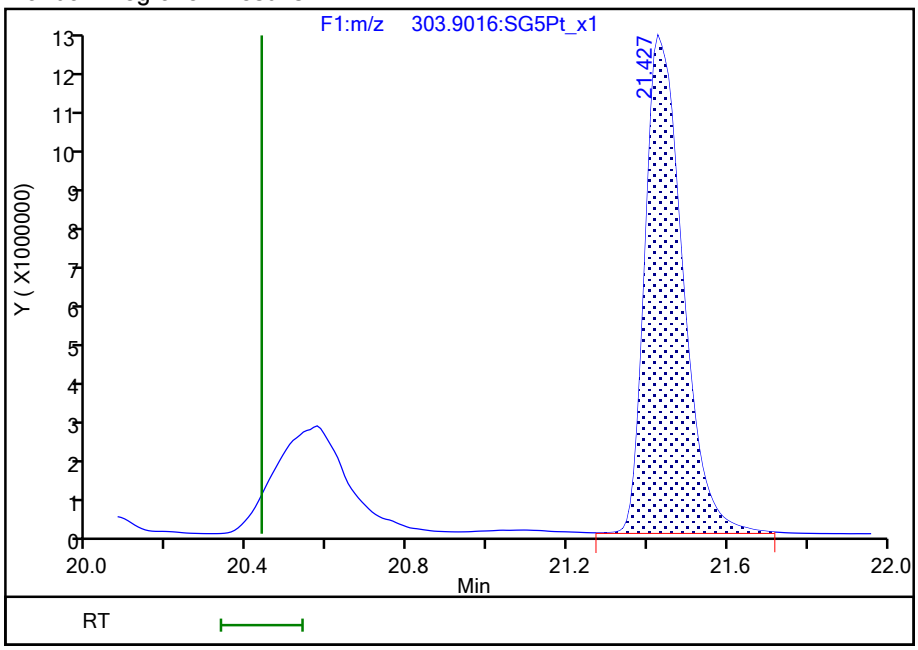

Reviewer: stephensk, 19-Aug-2021 11:07:27

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.74

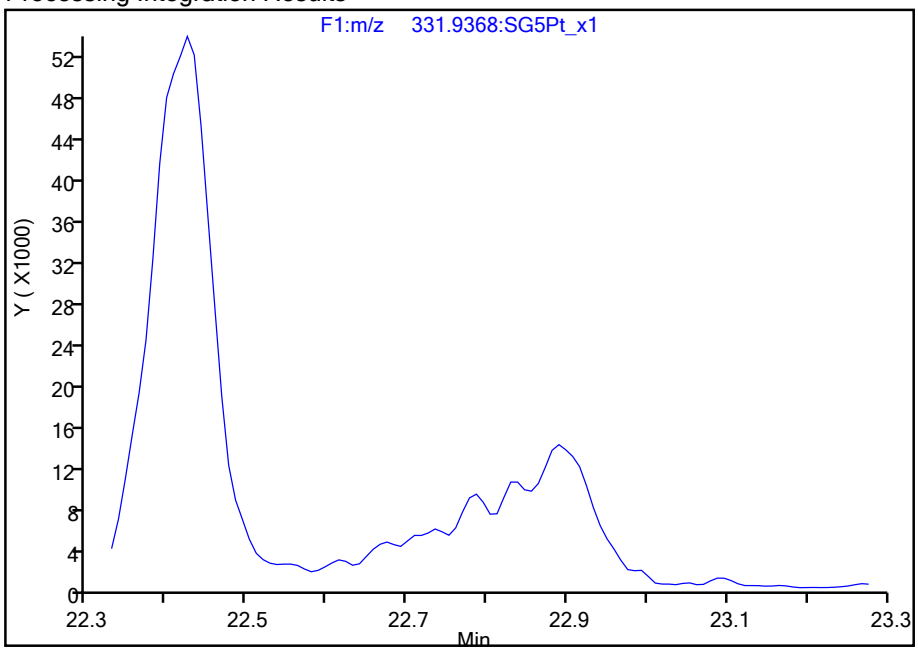

Manual Integration Results

RT: 22.89
Area: 156585
Amount: 55.199556
Amount Units: pg/ul

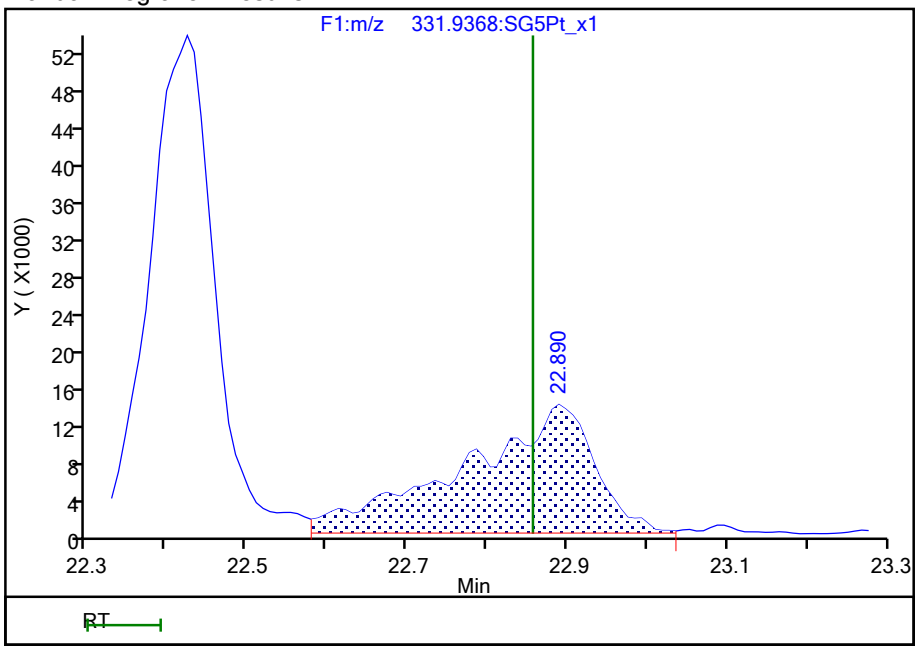

Reviewer: stephensk, 19-Aug-2021 11:07:47

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 2

Not Detected
Expected RT: 21.74

Processing Integration Results

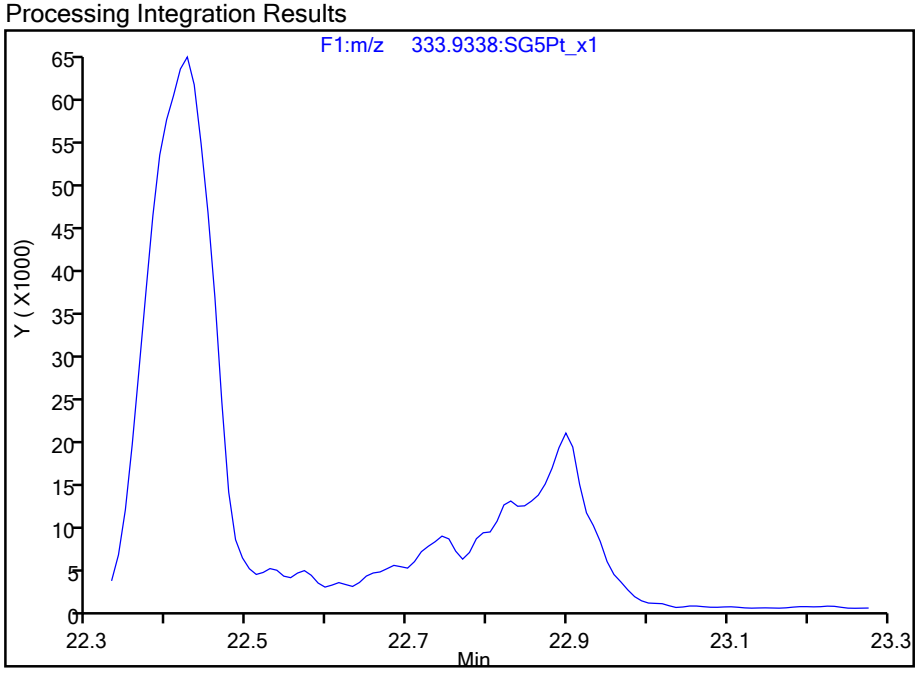

Manual Integration Results

RT: 22.90
Area: 195860
Amount: 55.199556
Amount Units: pg/ul

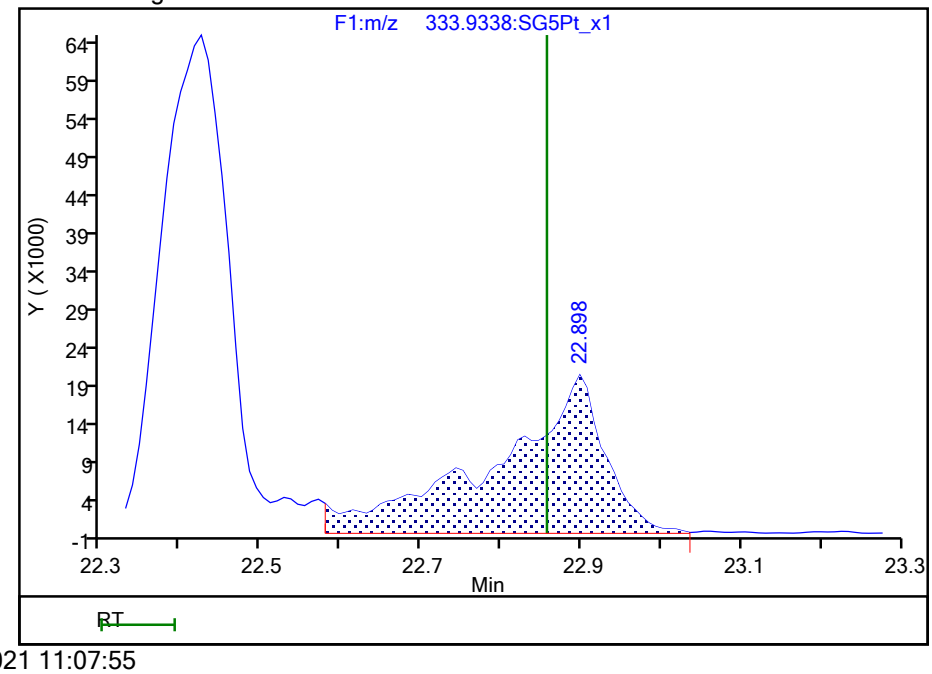

Reviewer: stephensk, 19-Aug-2021 11:07:55
Audit Action: Manually Integrated Audit Reason: Poor chromatography

775692

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.78

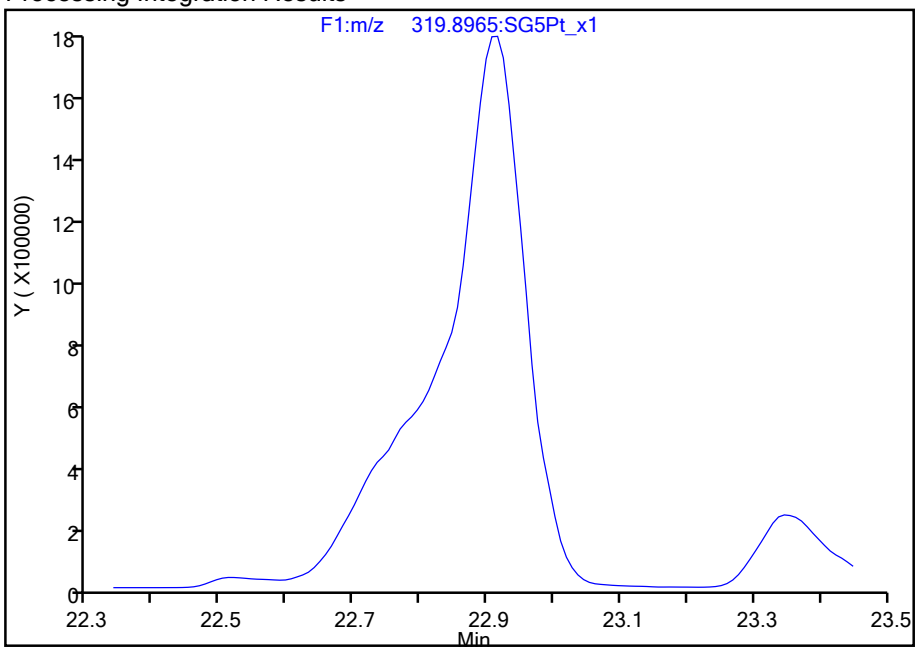

Manual Integration Results

RT: 22.92
Area: 16249761
Amount: 9721.2203
Amount Units: pg/ul

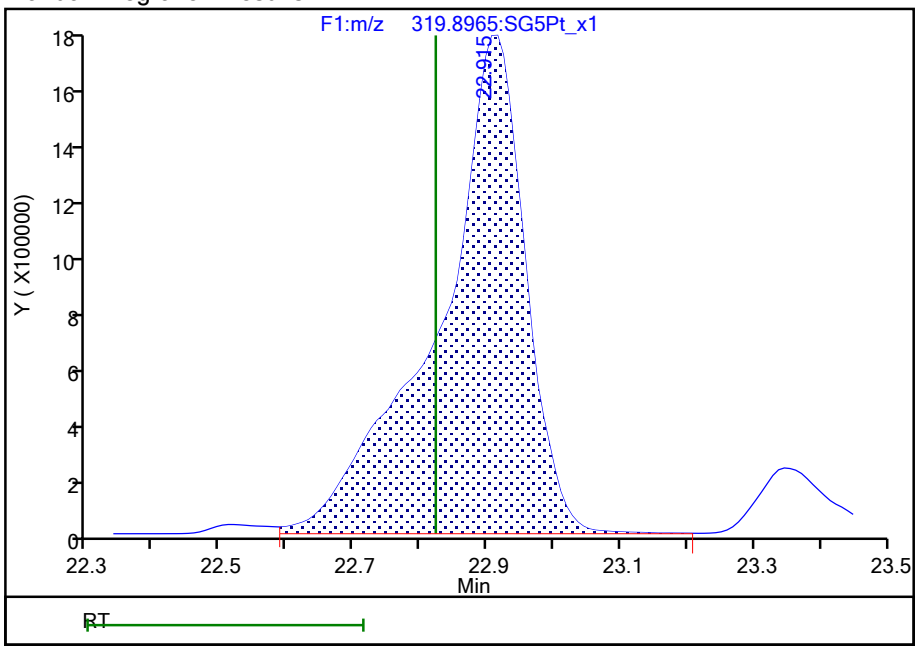

Reviewer: stephensk, 19-Aug-2021 11:08:04
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.85

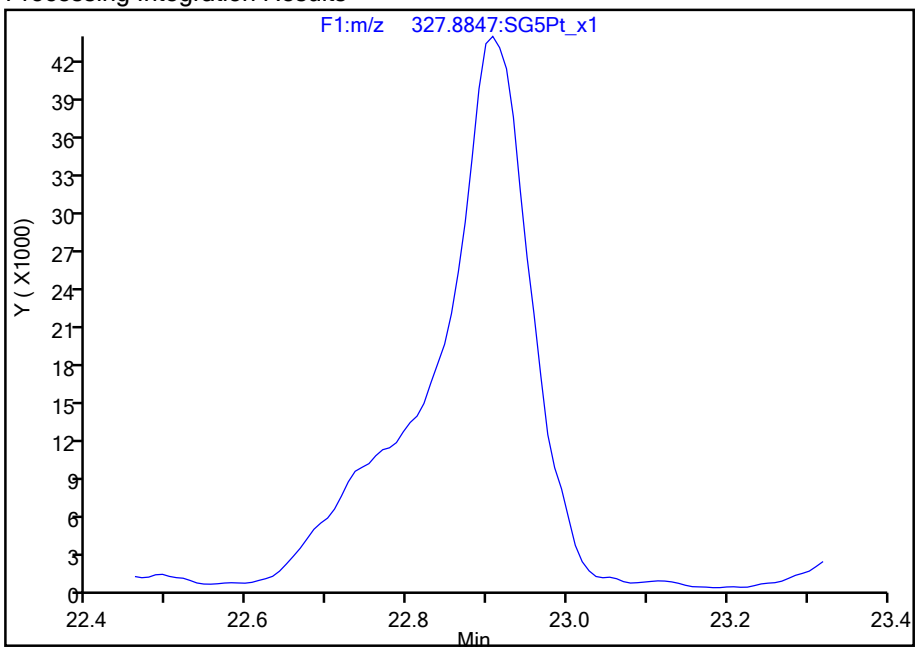

Manual Integration Results

RT: 22.91
Area: 345494
Amount: 49.998501
Amount Units: pg/ul

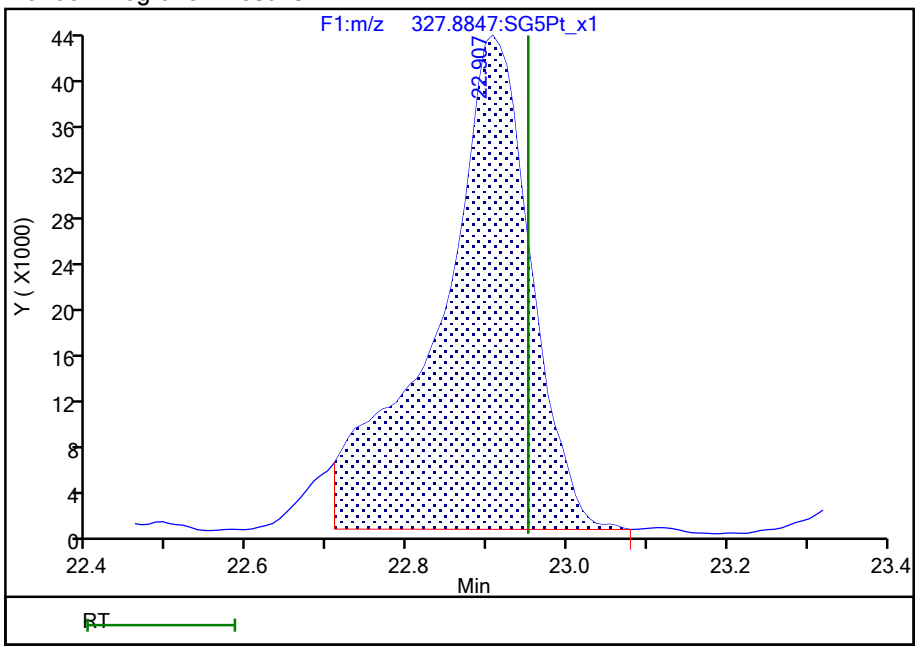

Reviewer: stephensk, 19-Aug-2021 11:08:56
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 27.31

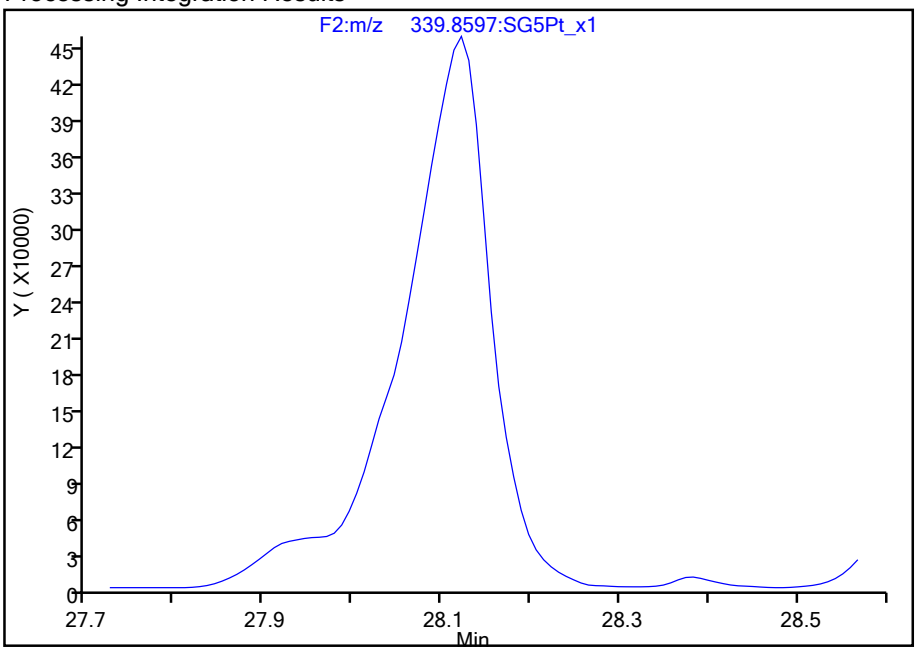

Manual Integration Results

RT: 28.12
Area: 3005950
Amount: 1404.3178
Amount Units: pg/ul

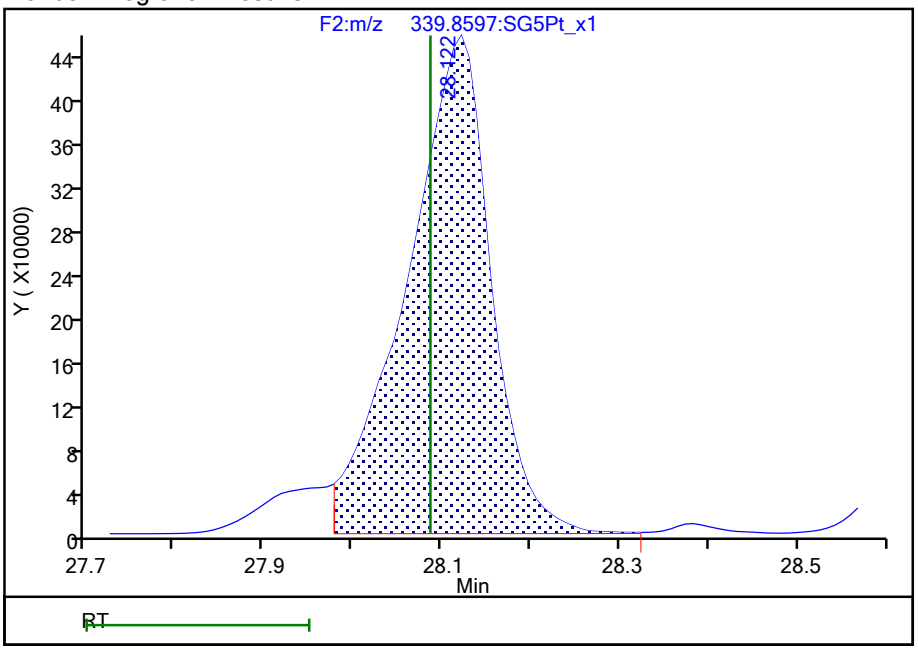

Reviewer: dadunj, 20-Aug-2021 09:33:03
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Not Detected
Expected RT: 27.31

Processing Integration Results

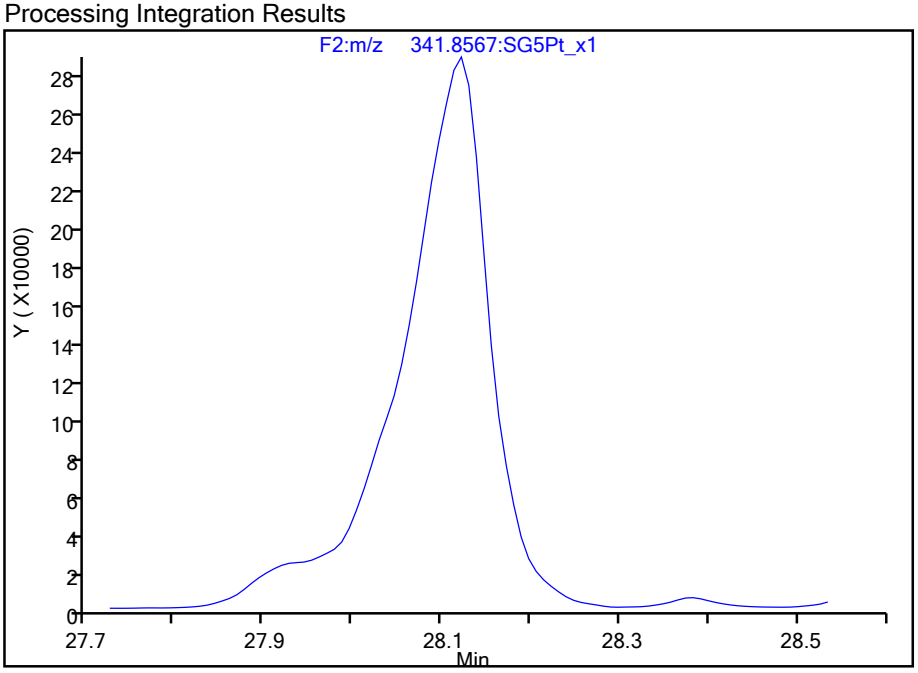

Manual Integration Results

RT: 28.12
Area: 1850630
Amount: 1404.3178
Amount Units: pg/ul

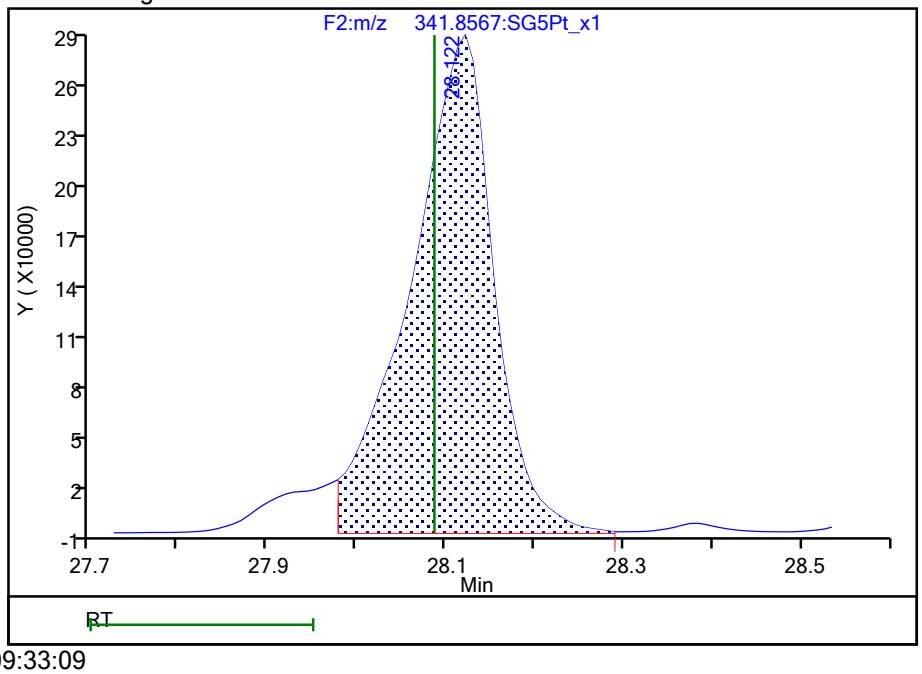

Reviewer: dadunj, 20-Aug-2021 09:33:09
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

775696

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 28.82

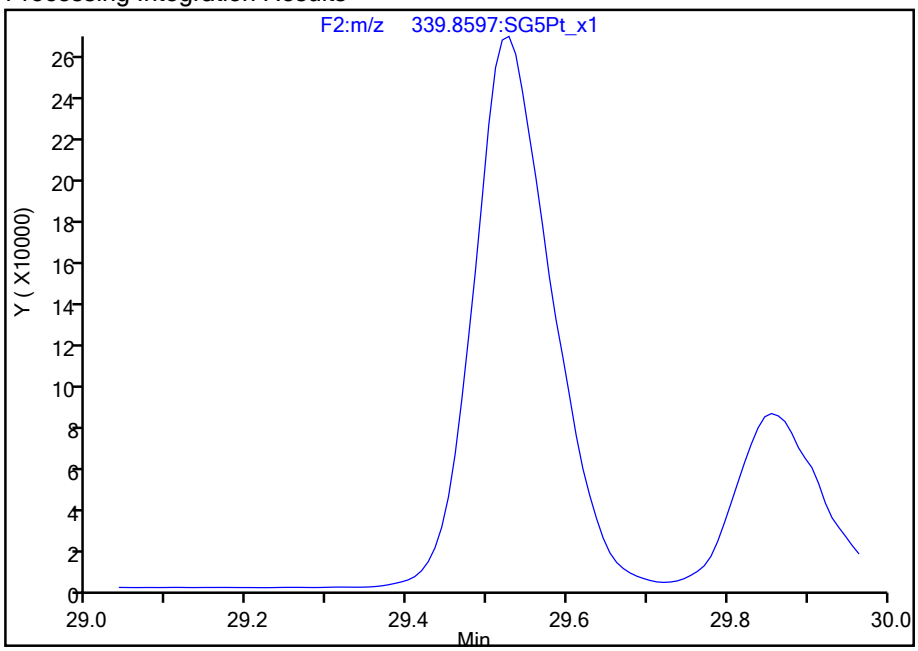

Manual Integration Results

RT: 29.53
Area: 1813593
Amount: 702.8621
Amount Units: pg/ul

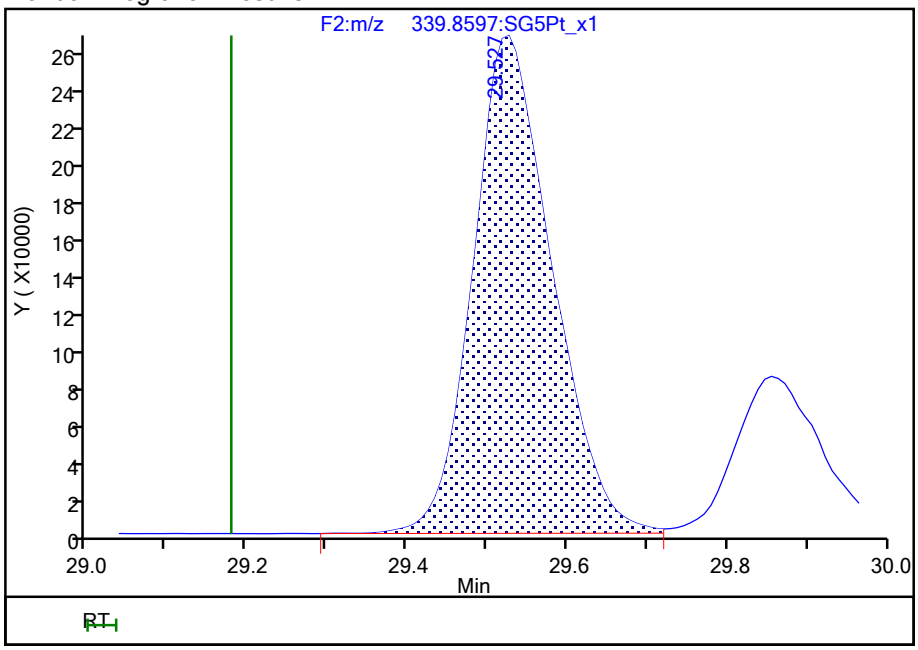

Reviewer: stephensk, 19-Aug-2021 11:09:11
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Report Date: 23-Aug-2021 10:56:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.38- 30.87)

Signal: 1

Not Detected

RT: 25.38- 30.87

Processing Integration Results

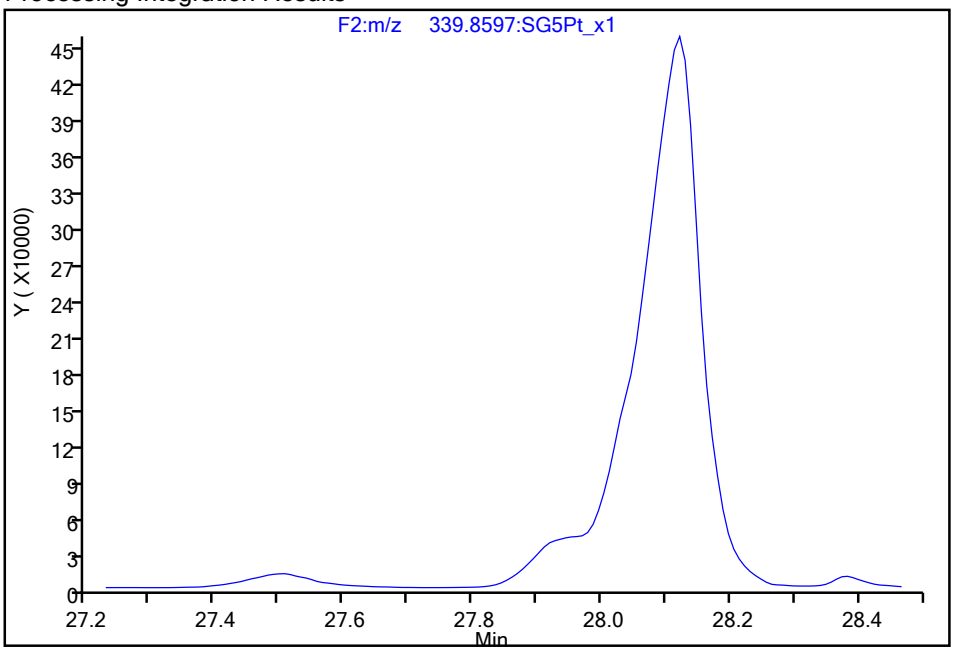

RT = 27.979 Area = 234619 M

Manual Integration Results

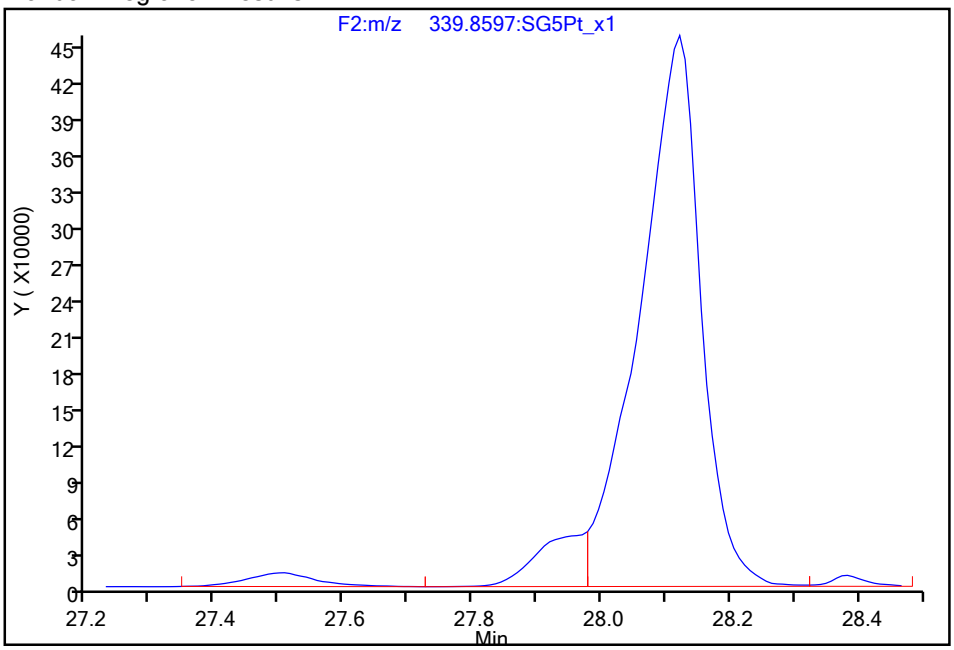

Reviewer: dadunj, 20-Aug-2021 09:33:35

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 29.64

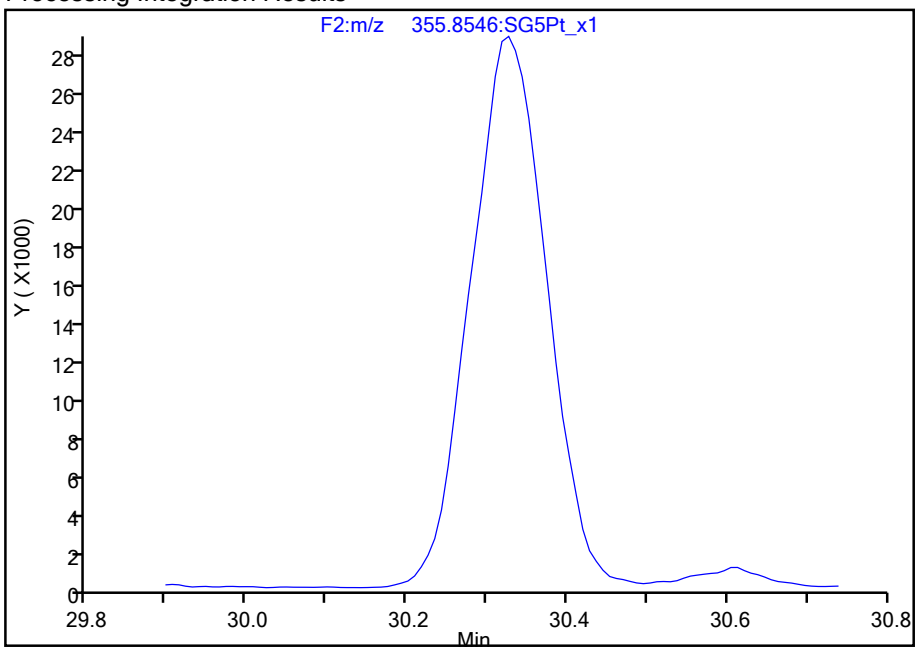

Manual Integration Results

RT: 30.33
Area: 189926
Amount: 91.291228
Amount Units: pg/ul

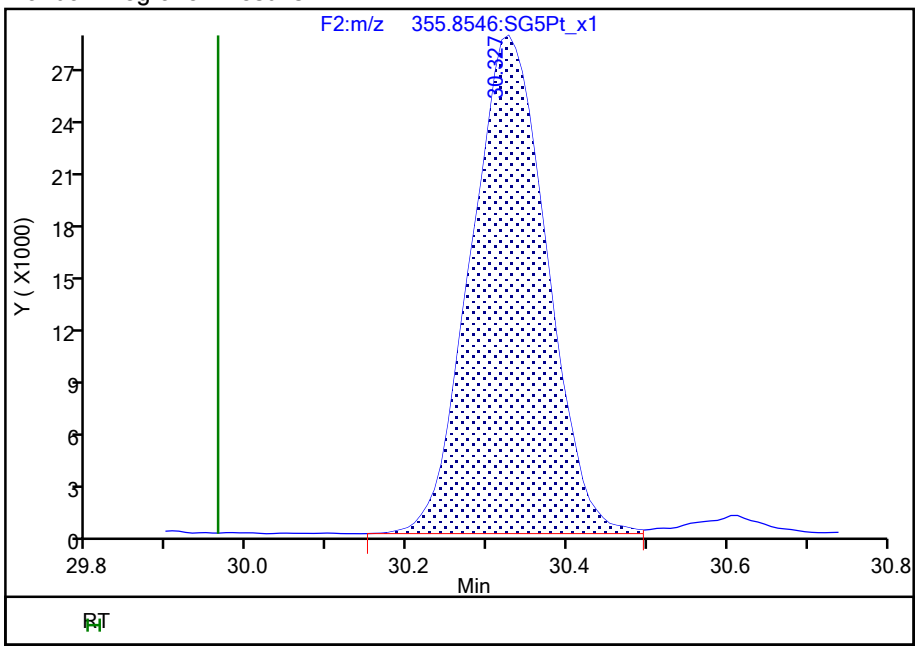

Reviewer: stephensk, 19-Aug-2021 11:09:24
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

775699

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 34.96

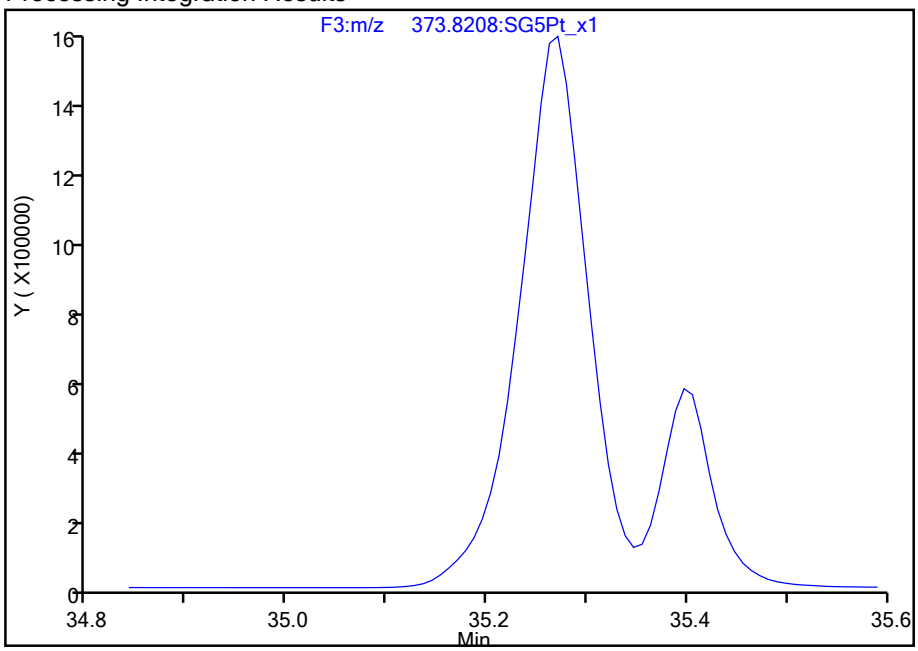

Manual Integration Results

RT: 35.27
Area: 7497158
Amount: 2292.5214
Amount Units: pg/ul

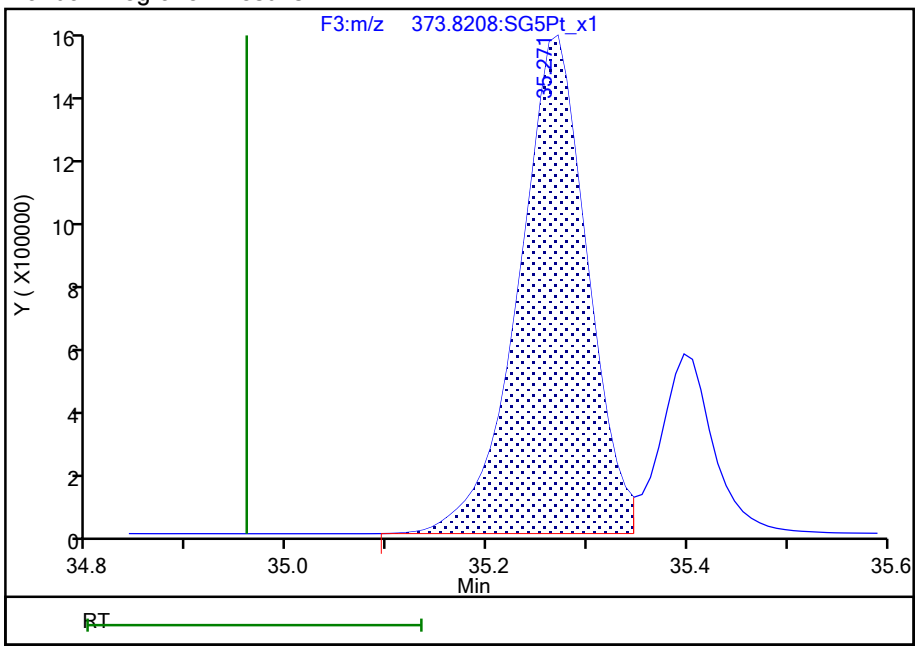

Reviewer: stephensk, 19-Aug-2021 11:09:34
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

775700

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 35.27
Area: 7497158
Amount: 2328.8415
Amount Units: pg/ul

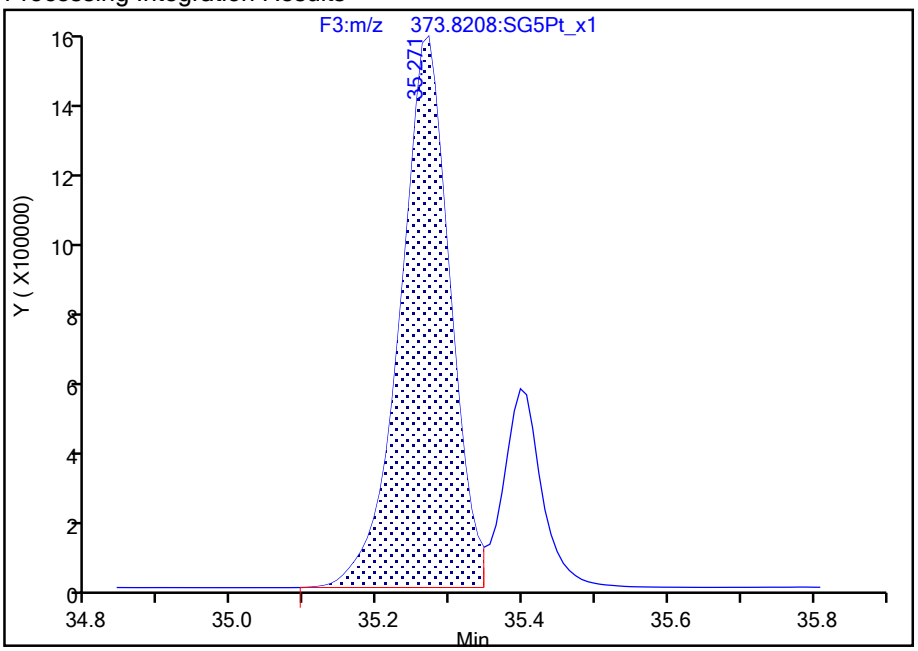

Manual Integration Results

RT: 35.40
Area: 2091997
Amount: 650.0836
Amount Units: pg/ul

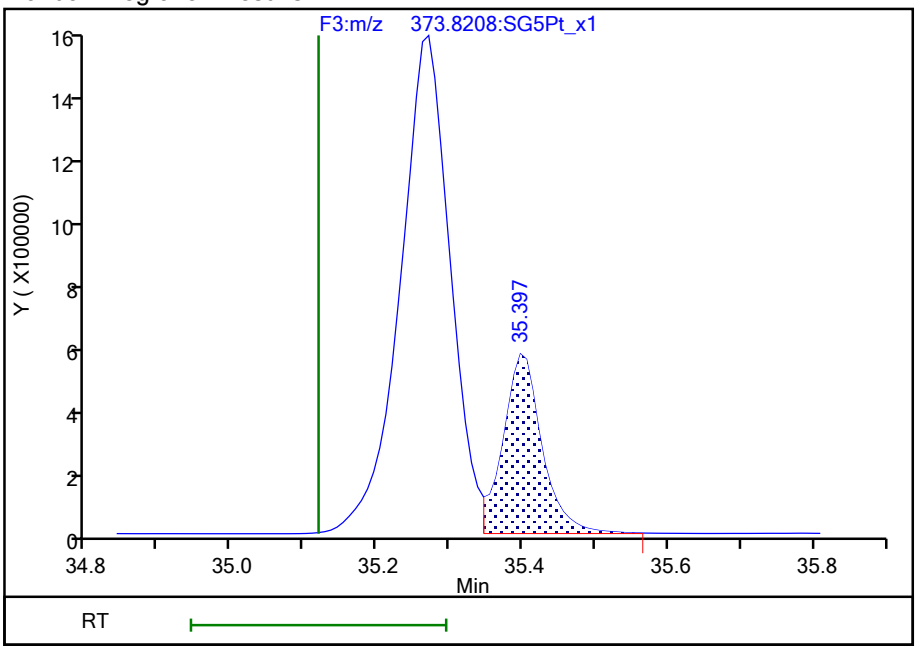

Reviewer: stephensk, 19-Aug-2021 11:09:52

Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-2,3,4,6,7,8-HxCDF, CAS: 116843-05-1

Signal: 1

Not Detected
Expected RT: 35.92

Processing Integration Results

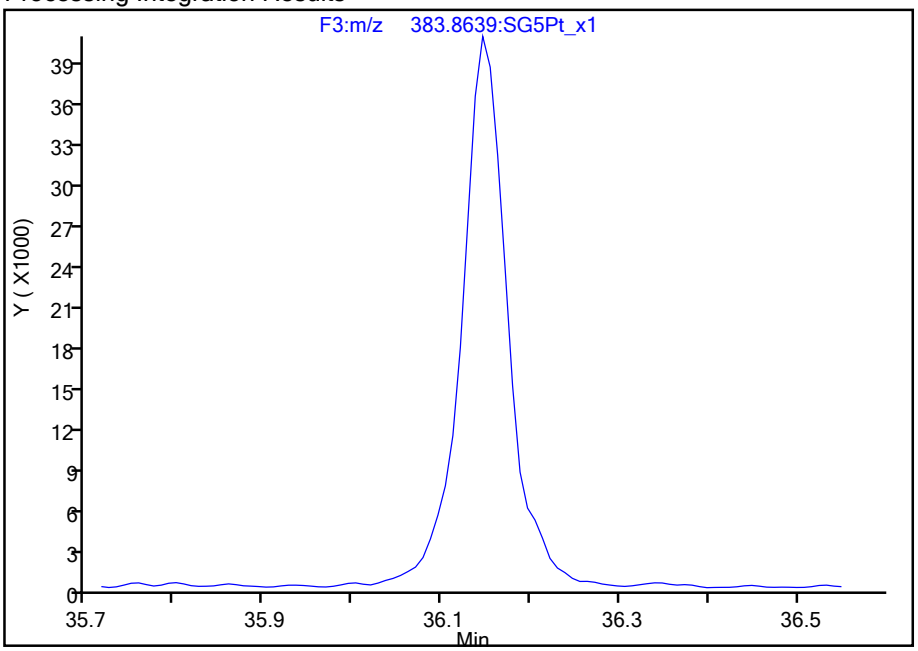

Manual Integration Results

RT: 36.15
Area: 146547
Amount: 52.841722
Amount Units: pg/ul

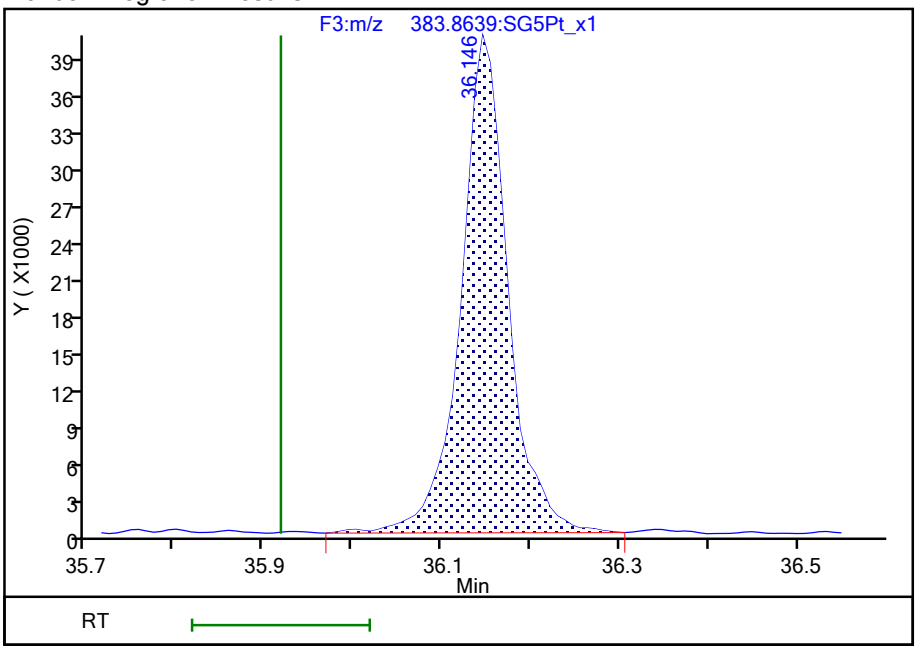

Reviewer: stephensk, 19-Aug-2021 11:10:06
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 36.04
Area: 135734
Amount: 46.880338
Amount Units: pg/ul

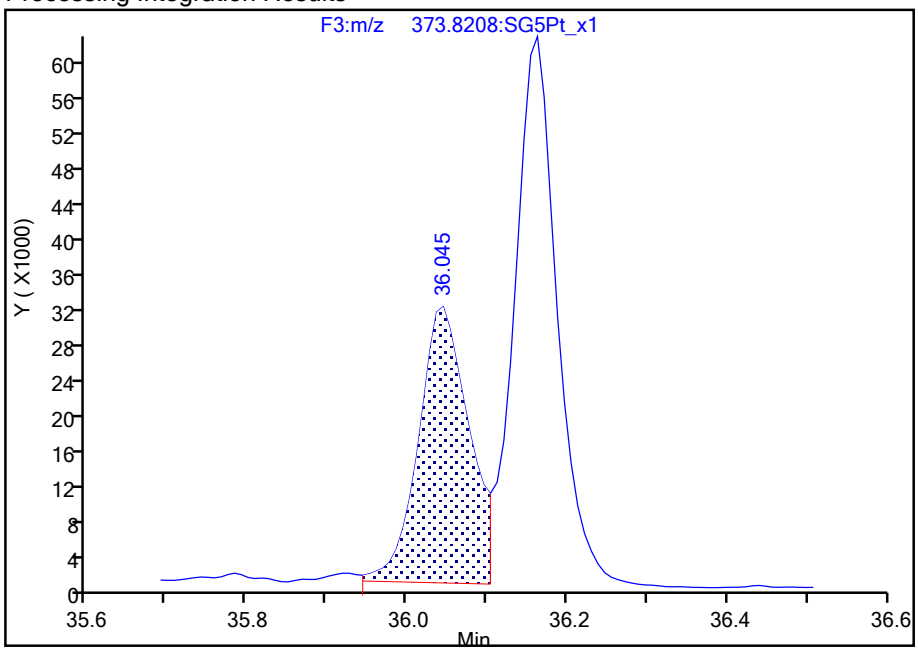

Manual Integration Results

RT: 36.16
Area: 228165
Amount: 78.482867
Amount Units: pg/ul

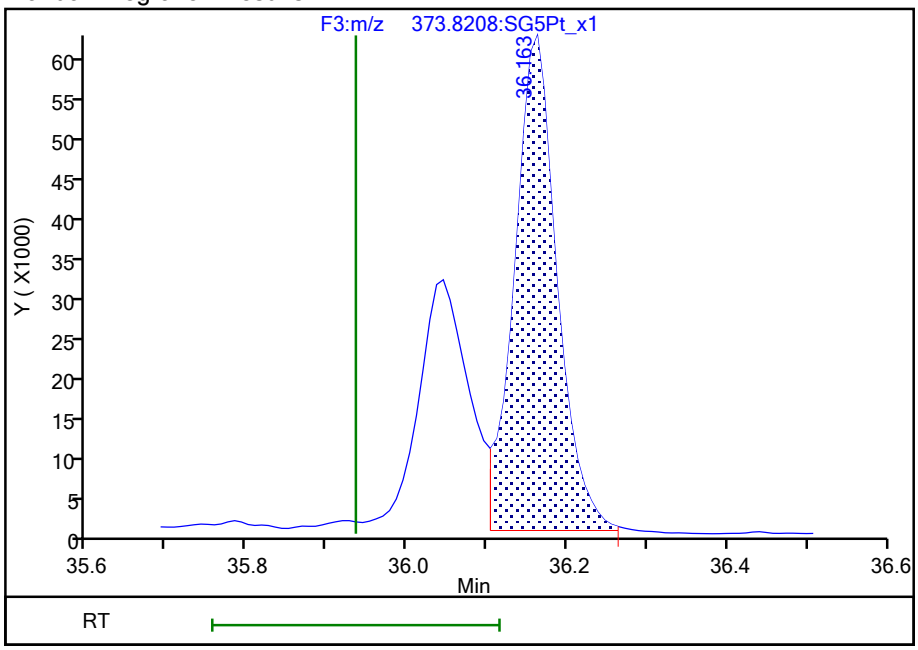

Reviewer: stephensk, 19-Aug-2021 11:10:13

Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDF, CAS: 116843-04-0

Signal: 1

Processing Integration Results

RT: 36.15
Area: 146547
Amount: 56.546722
Amount Units: pg/ul

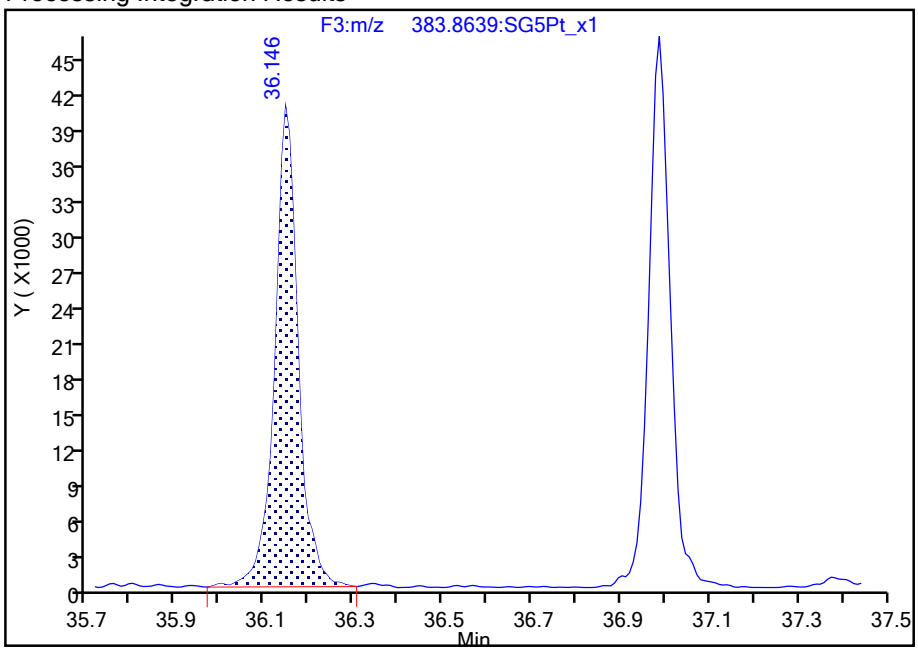

Manual Integration Results

RT: 36.99
Area: 155574
Amount: 60.692583
Amount Units: pg/ul

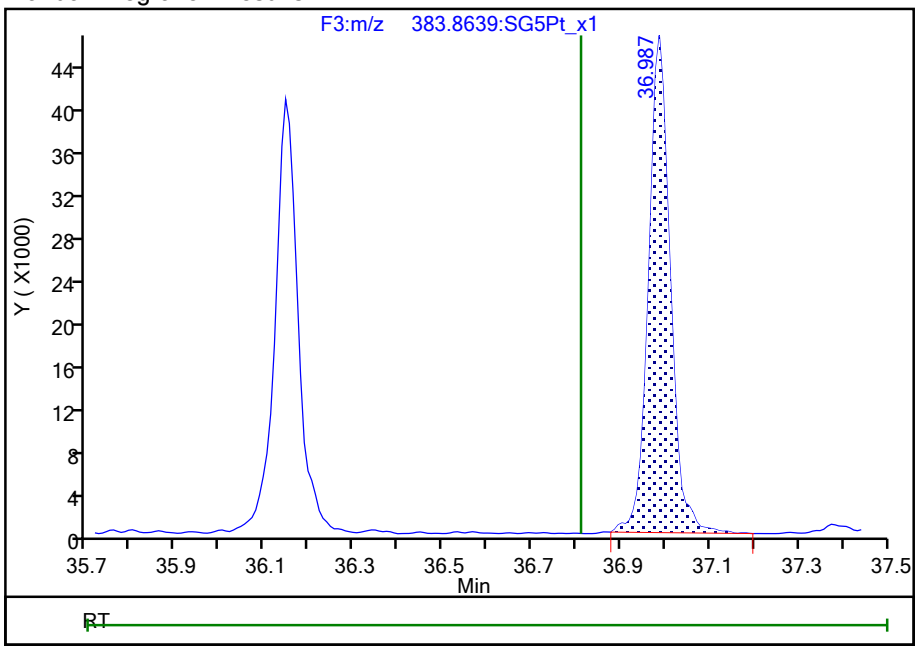

Reviewer: stephensk, 19-Aug-2021 11:10:19

Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 36.15

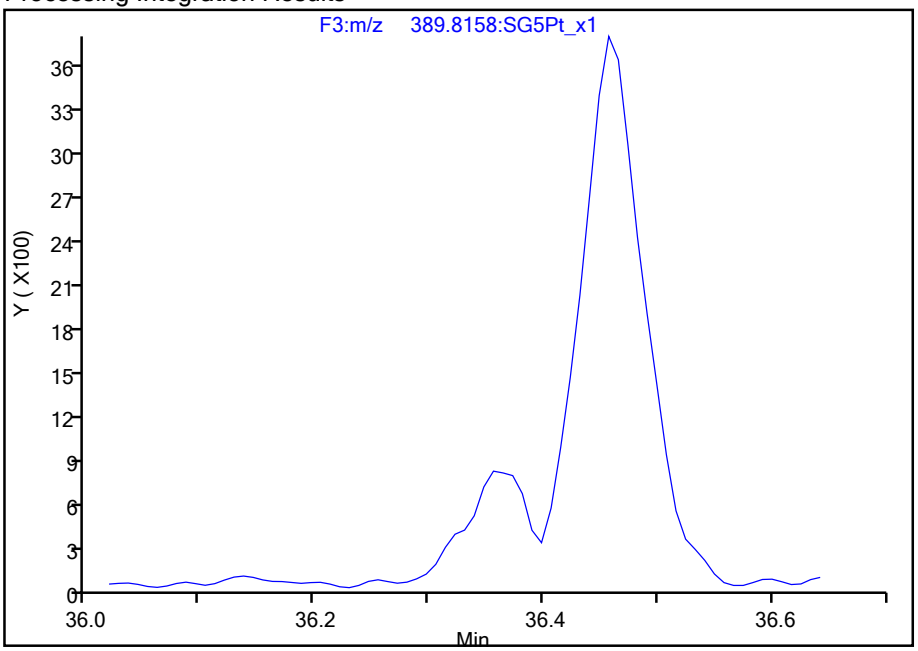

Manual Integration Results

RT: 36.36
Area: 2854
Amount: 1.514606
Amount Units: pg/ul

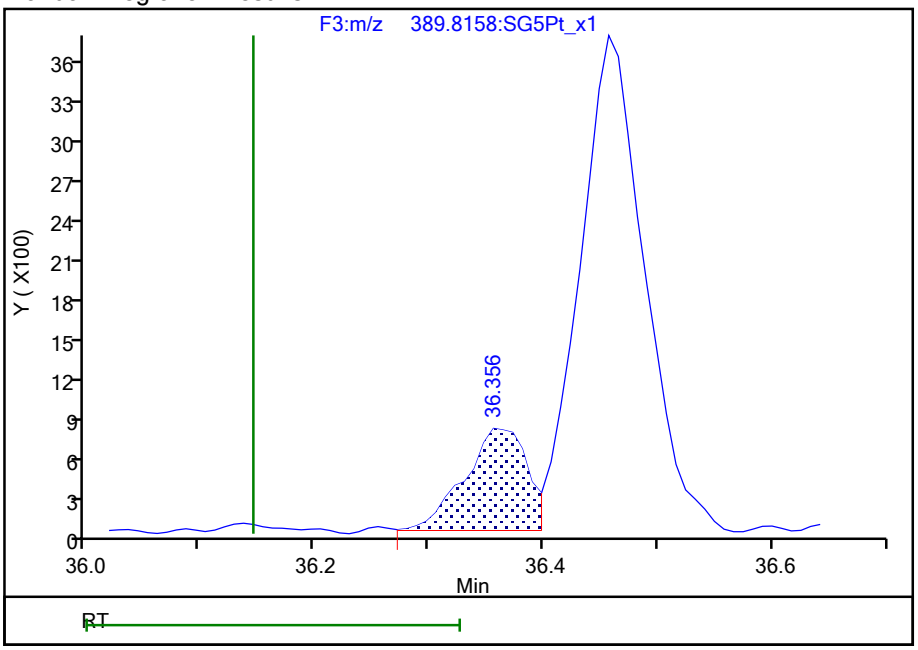

Reviewer: stephensk, 19-Aug-2021 11:10:34
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 36.36
Area: 2854
Amount: 1.594850
Amount Units: pg/ul

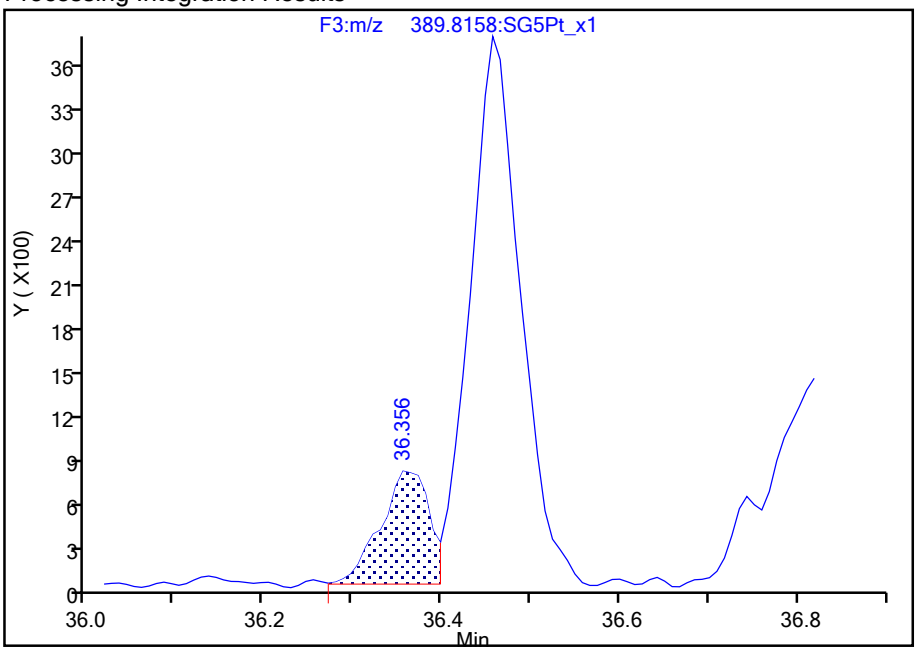

Manual Integration Results

RT: 36.46
Area: 14371
Amount: 7.679880
Amount Units: pg/ul

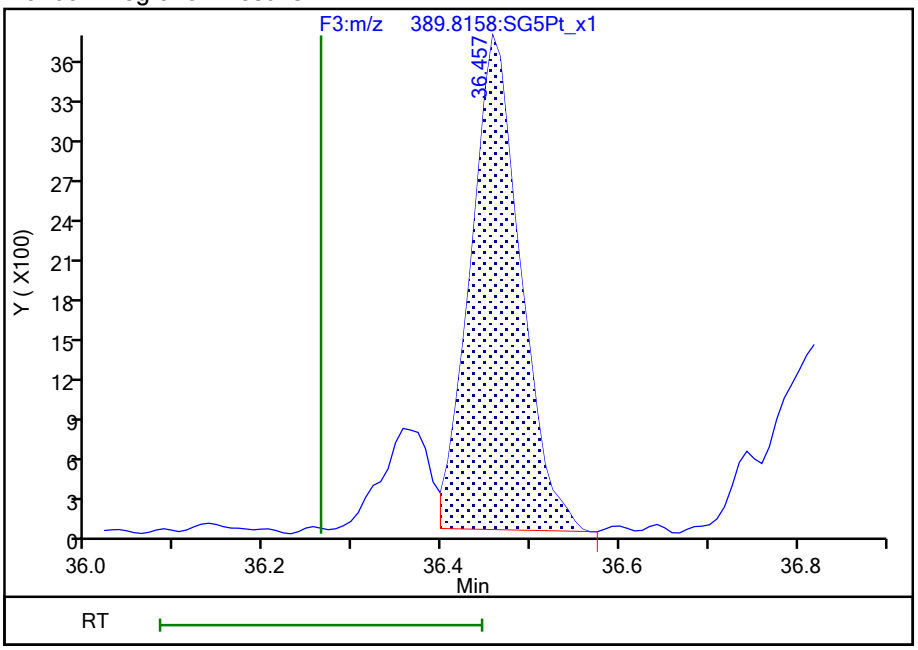

Reviewer: stephensk, 19-Aug-2021 11:10:42

Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 36.46
Area: 14371
Amount: 6.924706
Amount Units: pg/ul

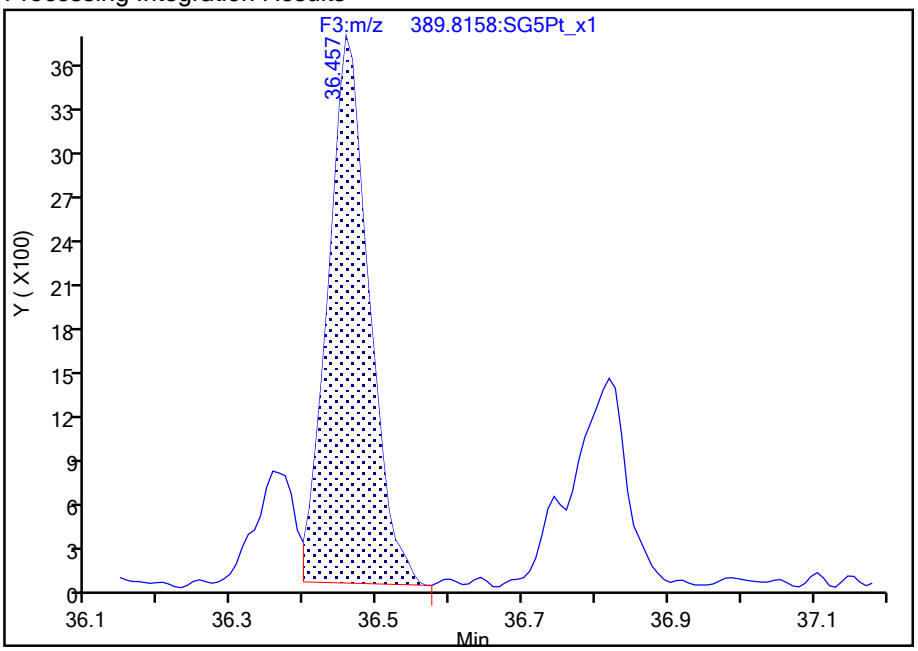

Manual Integration Results

RT: 36.82
Area: 5989
Amount: 2.763338
Amount Units: pg/ul

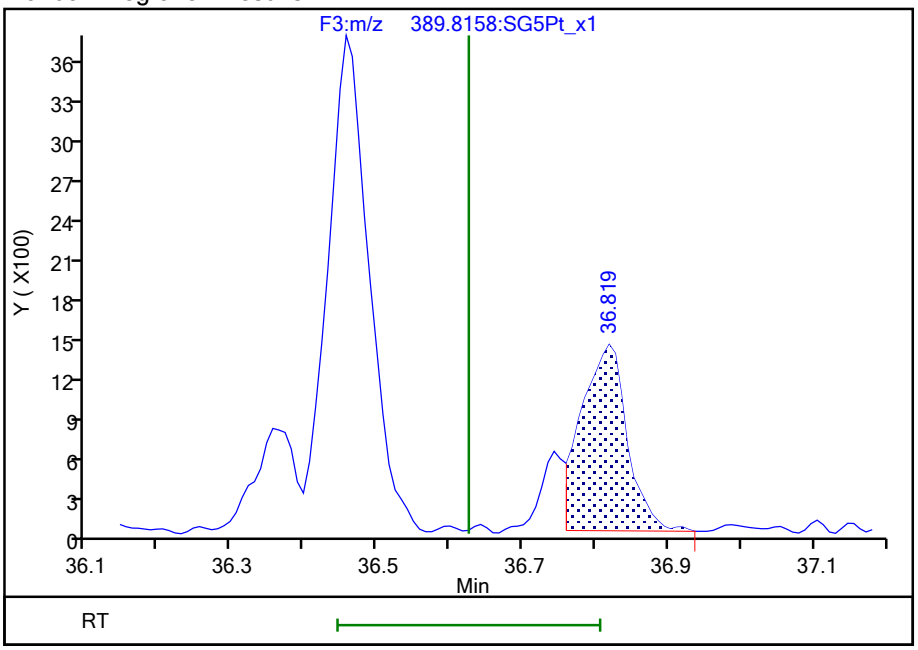

Reviewer: stephensk, 19-Aug-2021 11:10:49

Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 36.46
Area: 12292
Amount: 6.924706
Amount Units: pg/ul

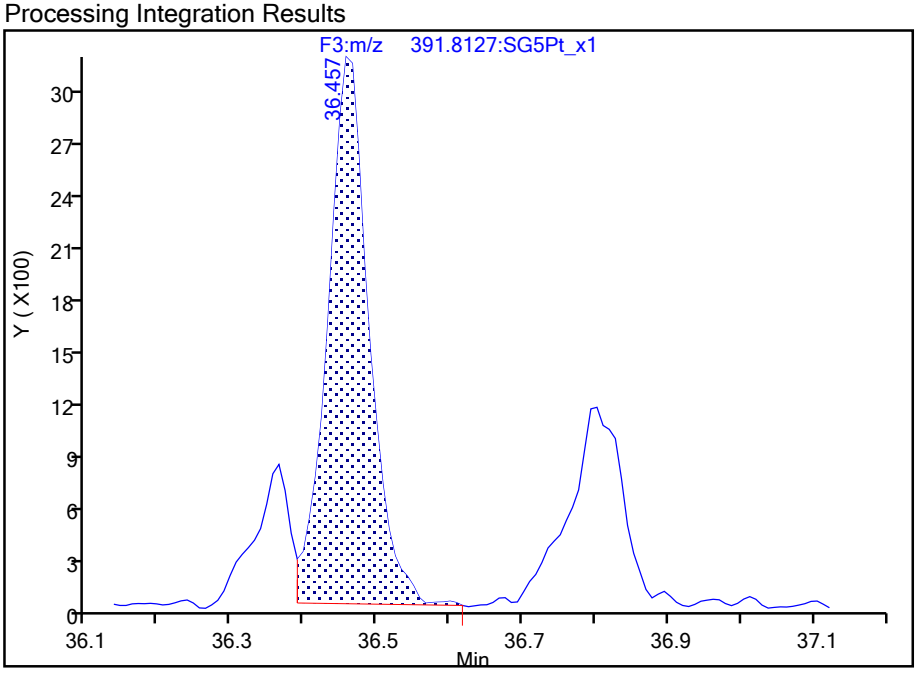

Manual Integration Results

RT: 36.80
Area: 4651
Amount: 2.763338
Amount Units: pg/ul

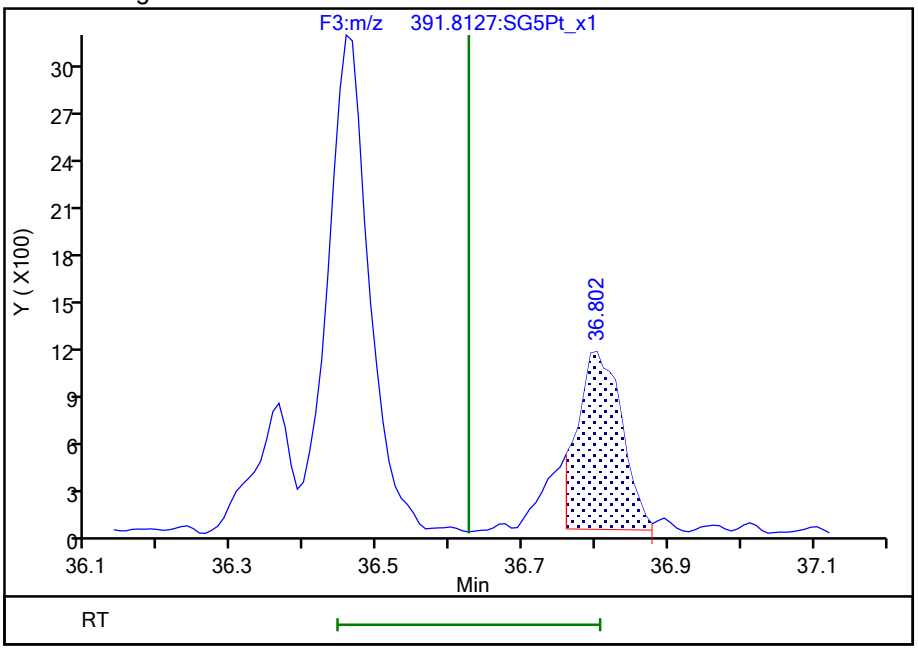

Reviewer: dadunj, 20-Aug-2021 09:34:43
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

775708

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d				
Injection Date:	18-Aug-2021 22:48:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	40
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.19- 36.59)

Signal: 1

Processing Integration Results

RT = 36.743 Area = 1300

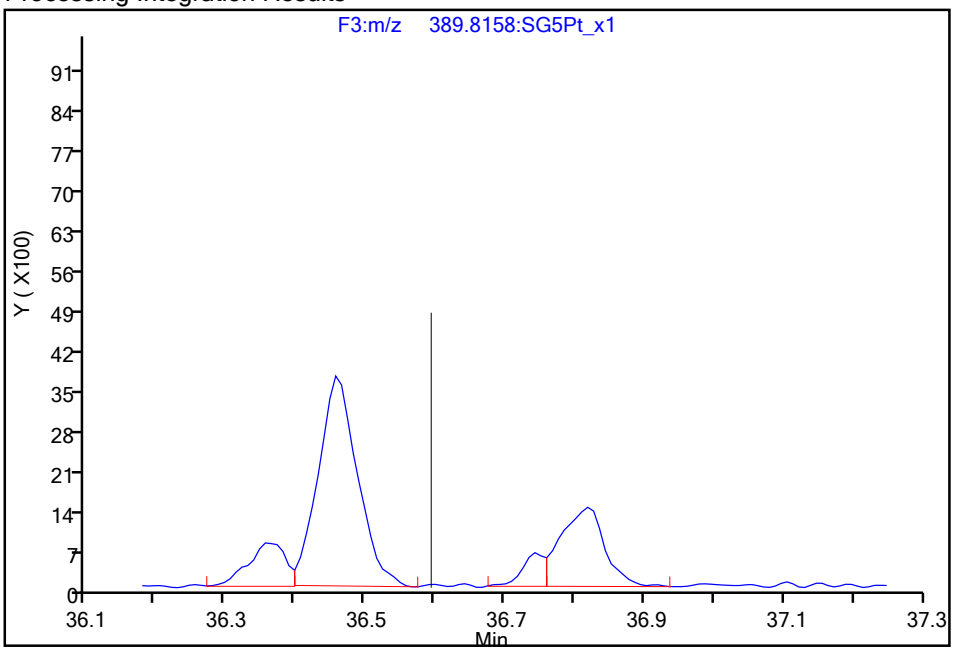

Manual Integration Results

RT = 36.743 Area = 1300

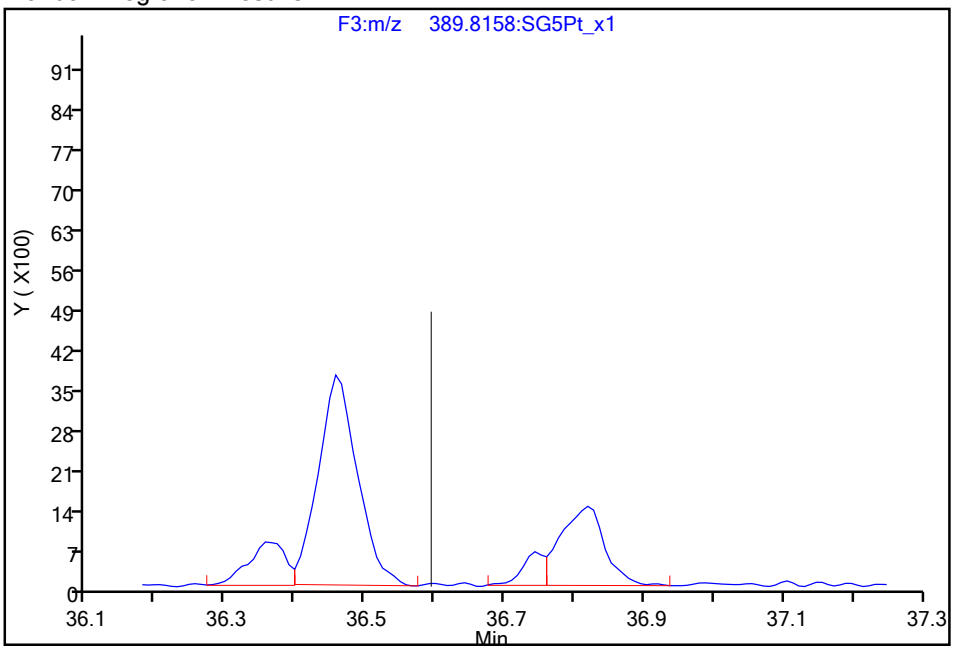

Reviewer: dadunj, 20-Aug-2021 09:34:54

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 23-Aug-2021 10:56:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

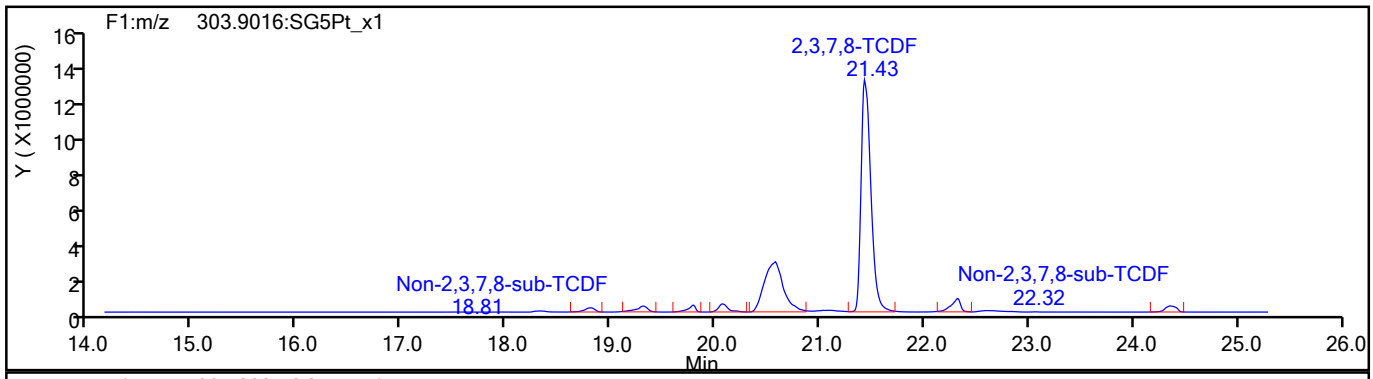

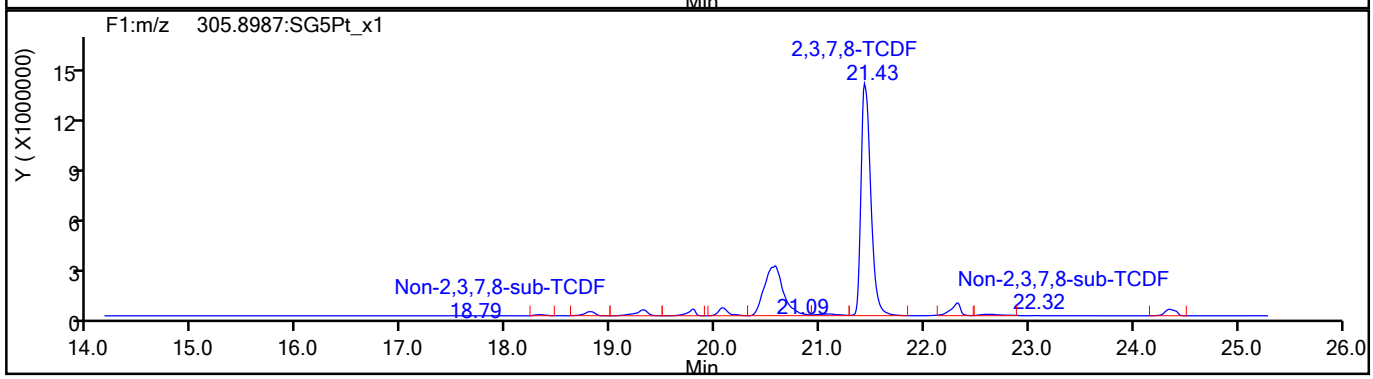

TCDF Standards

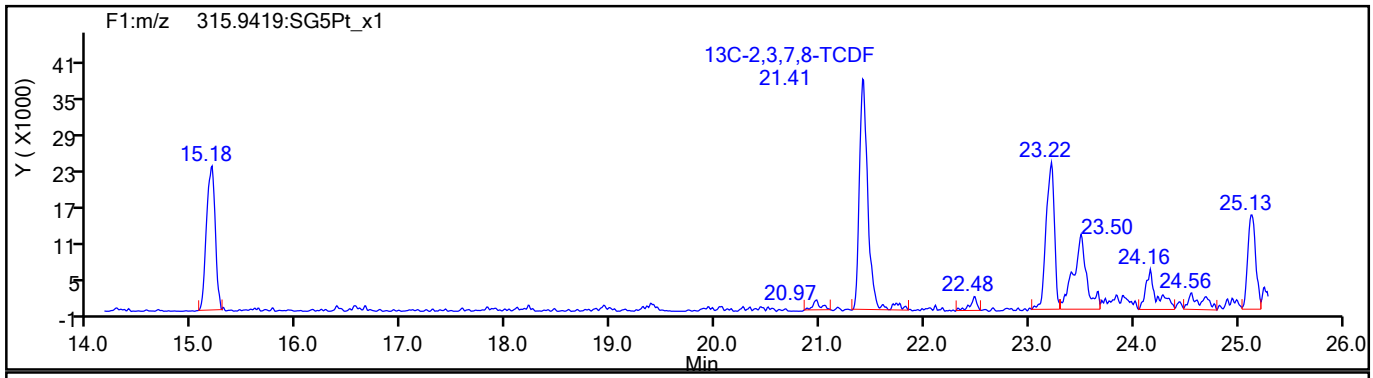

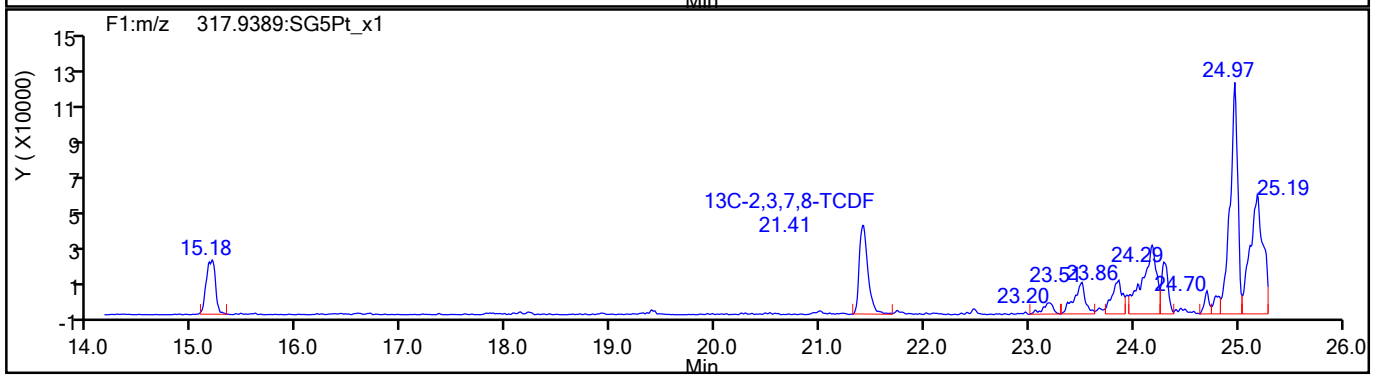

775710

Report Date: 23-Aug-2021 10:56:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

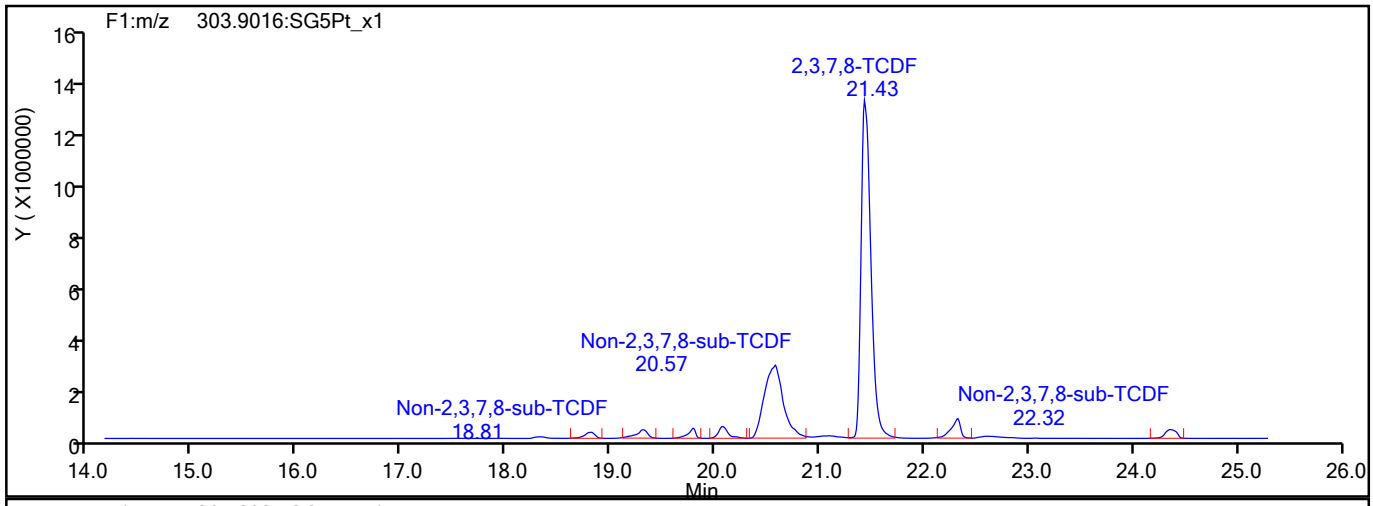

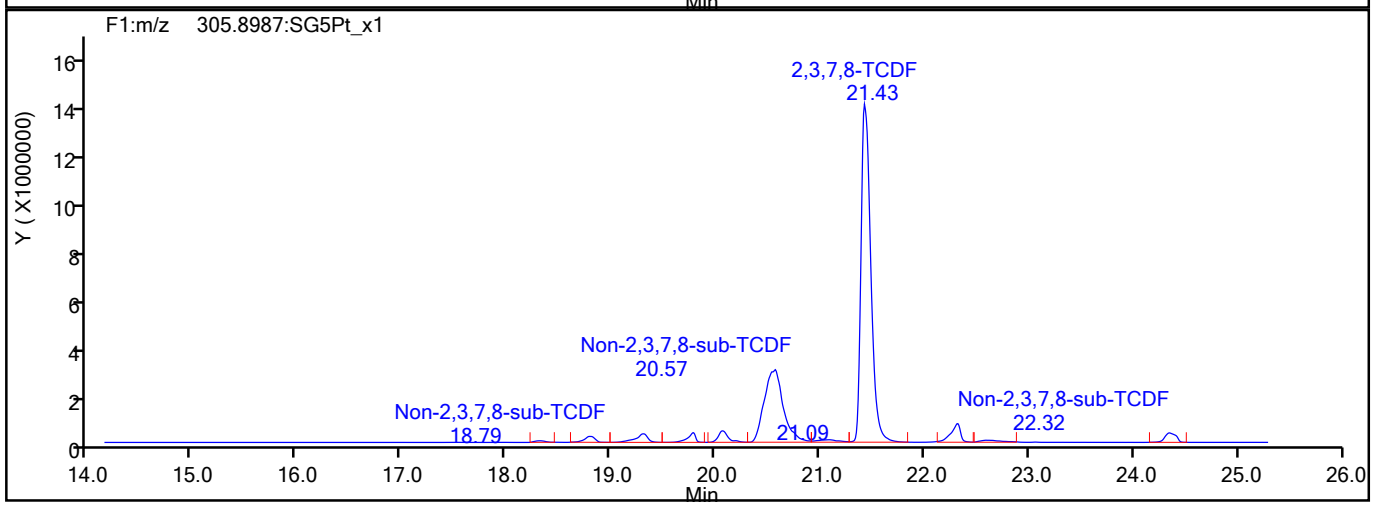

TCDF Interference Mass

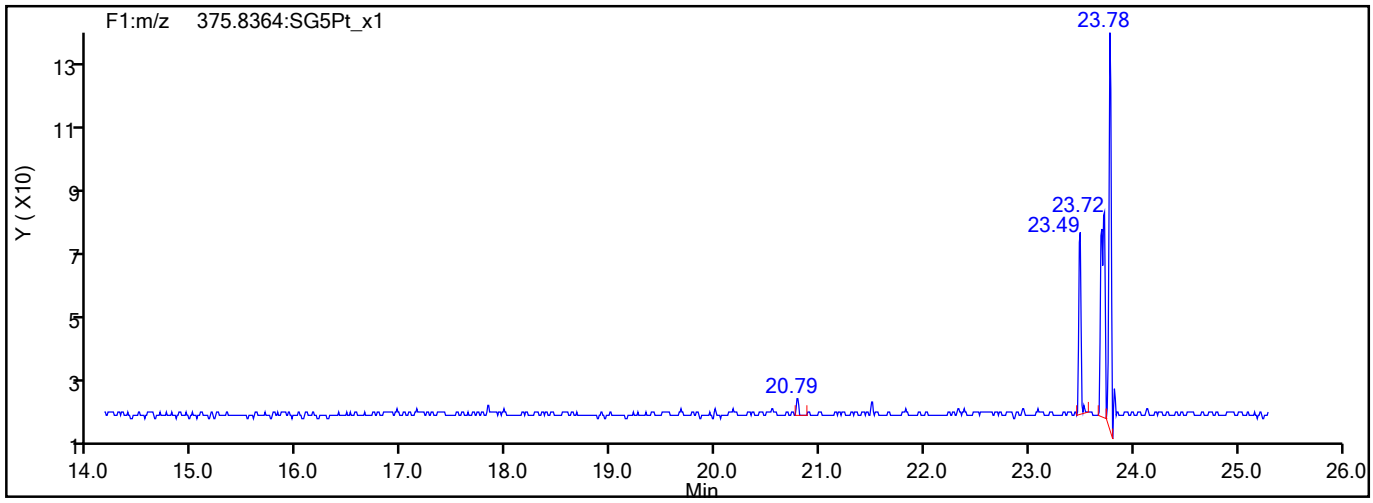

775711

Report Date: 23-Aug-2021 10:56:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

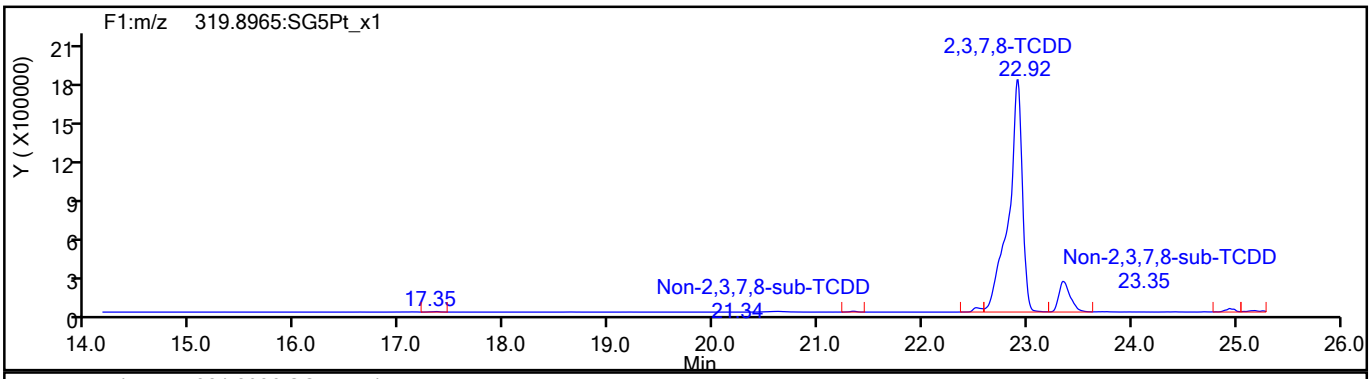

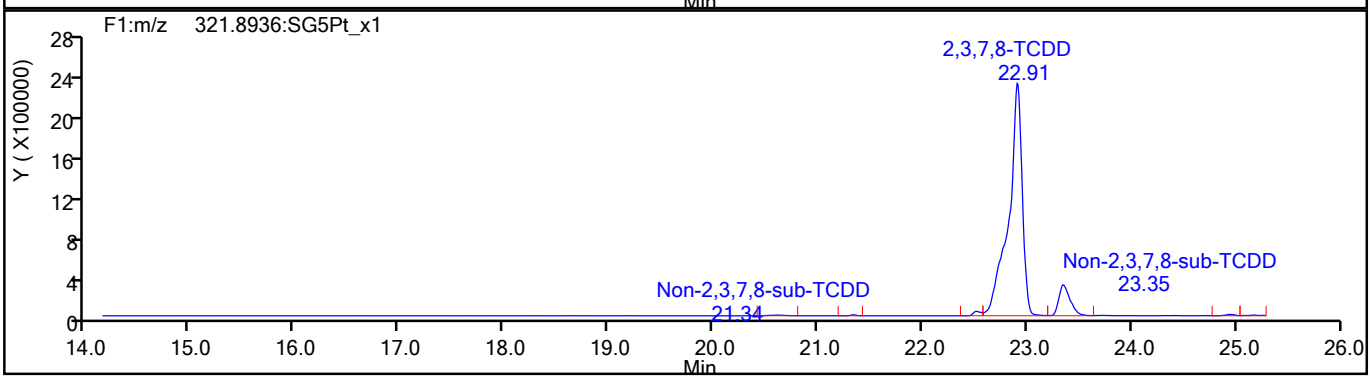

TCDD Standards

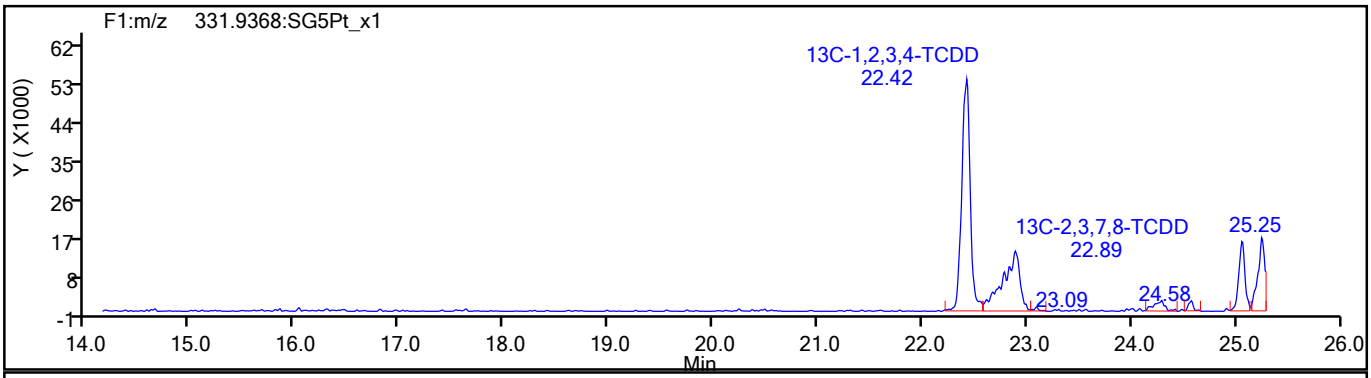

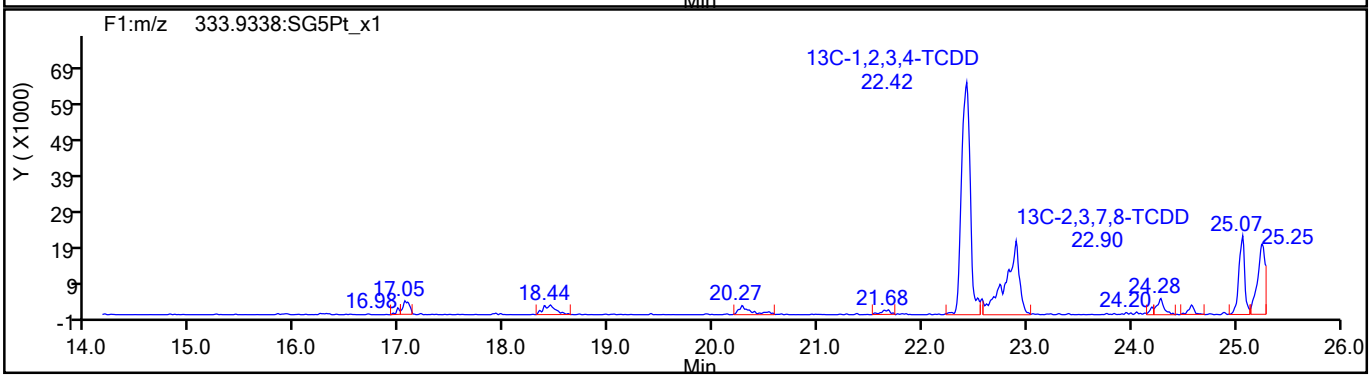

775712

Report Date: 23-Aug-2021 10:56:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

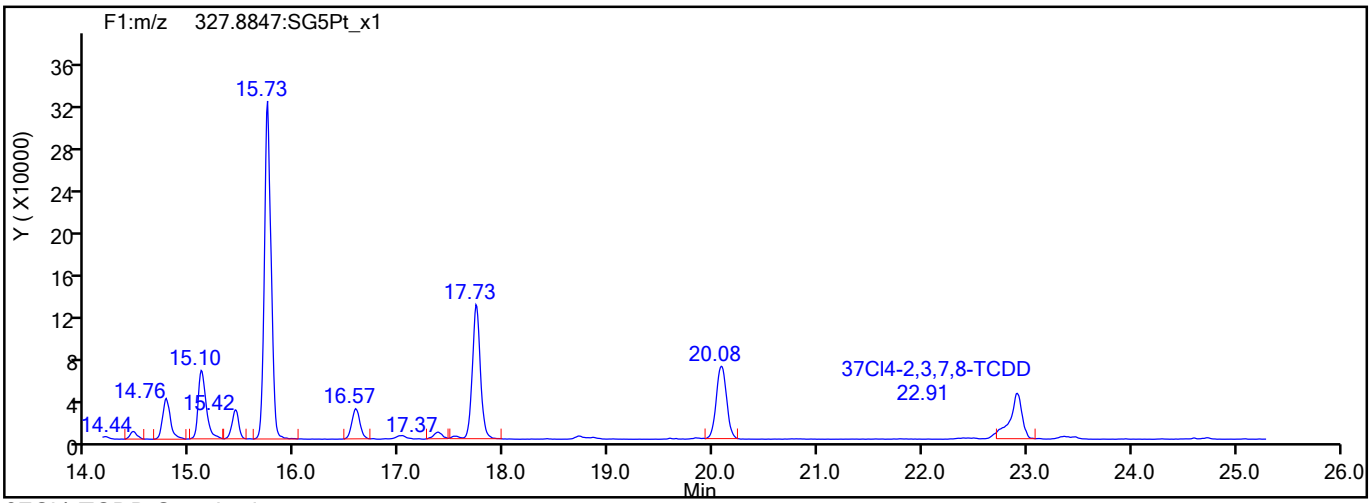

37Cl4-TCDD Standards

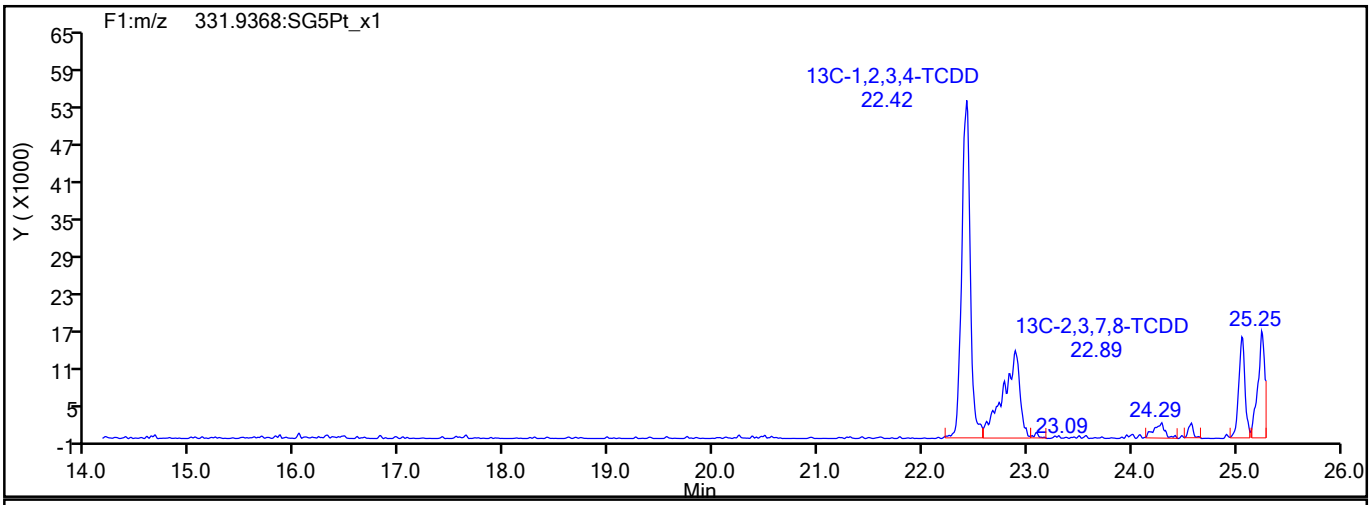

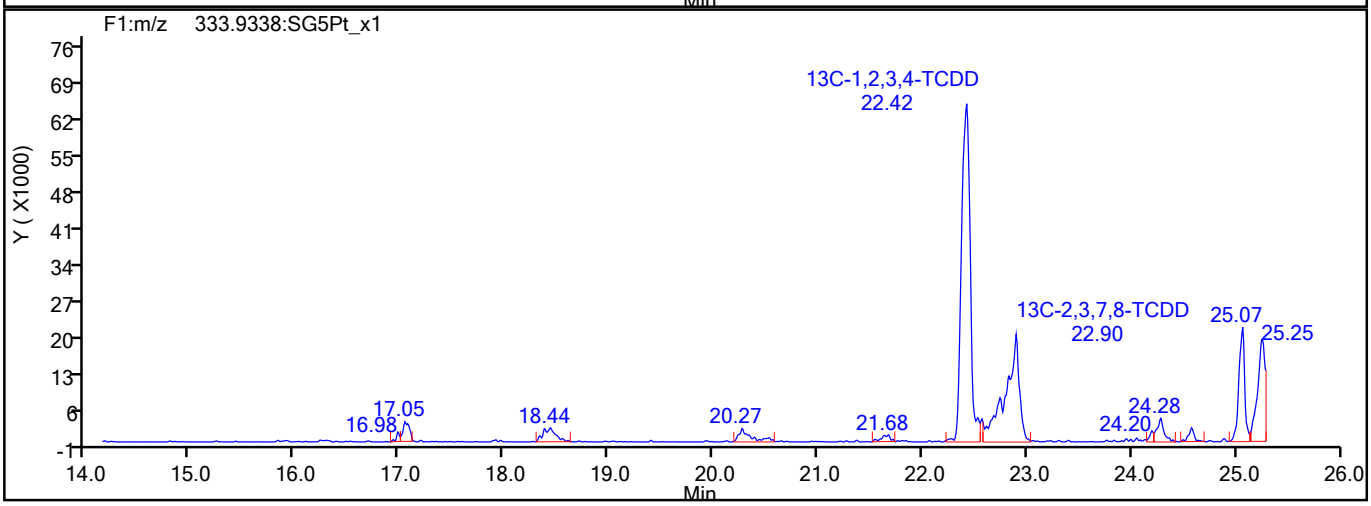

775713

Report Date: 23-Aug-2021 10:56:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

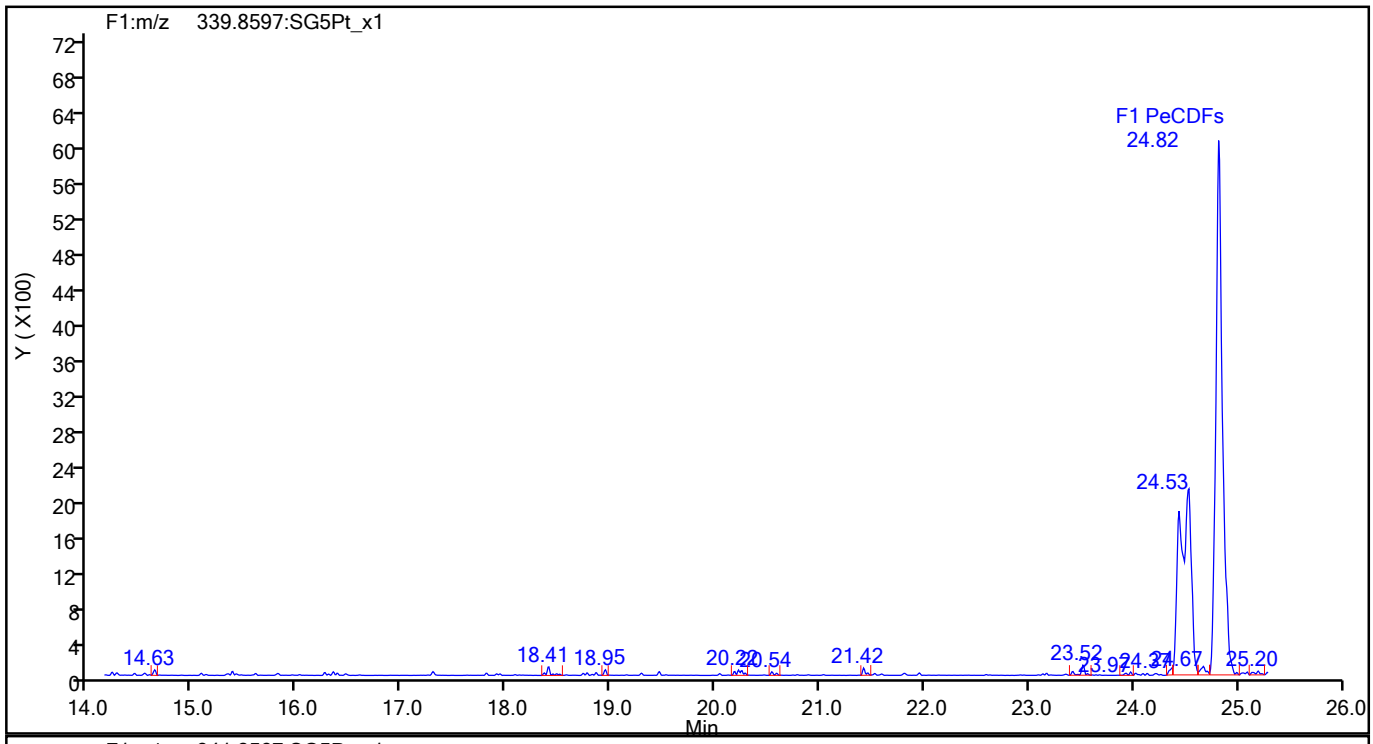

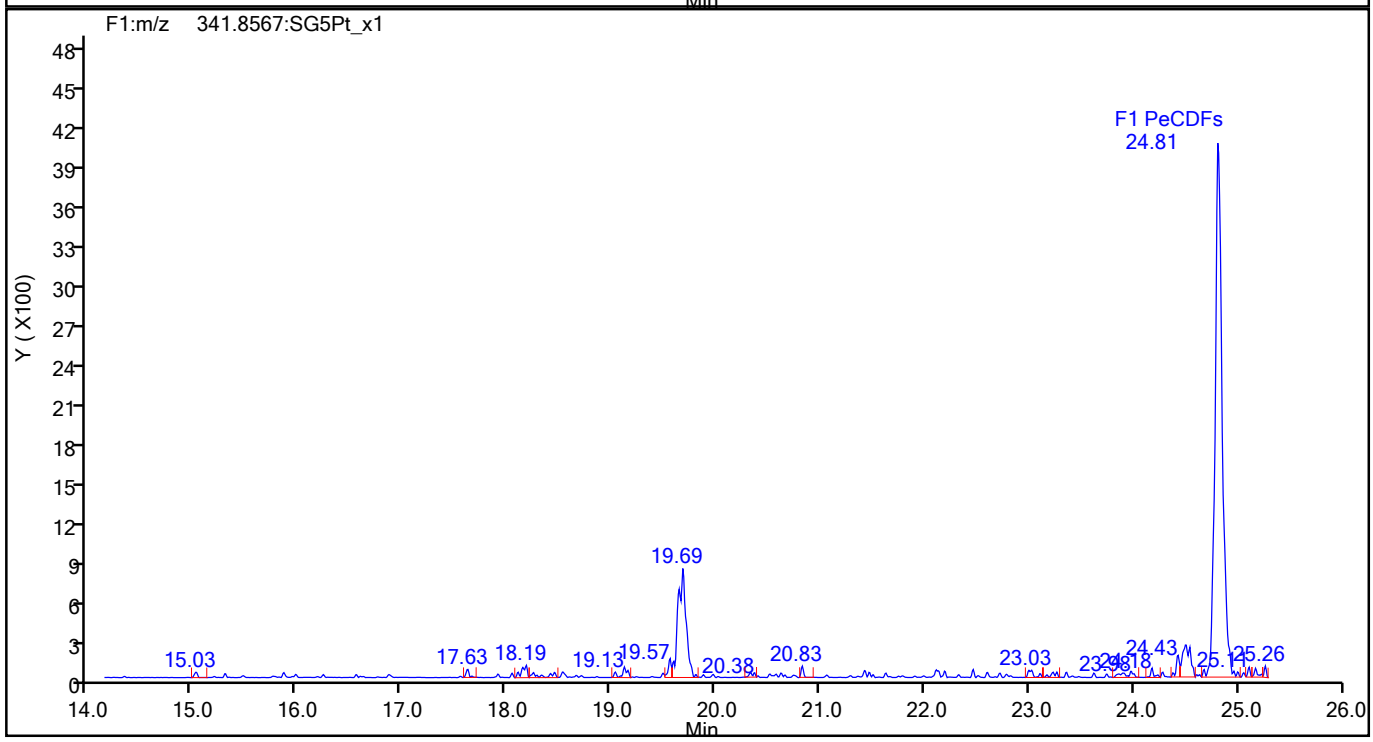

775714

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

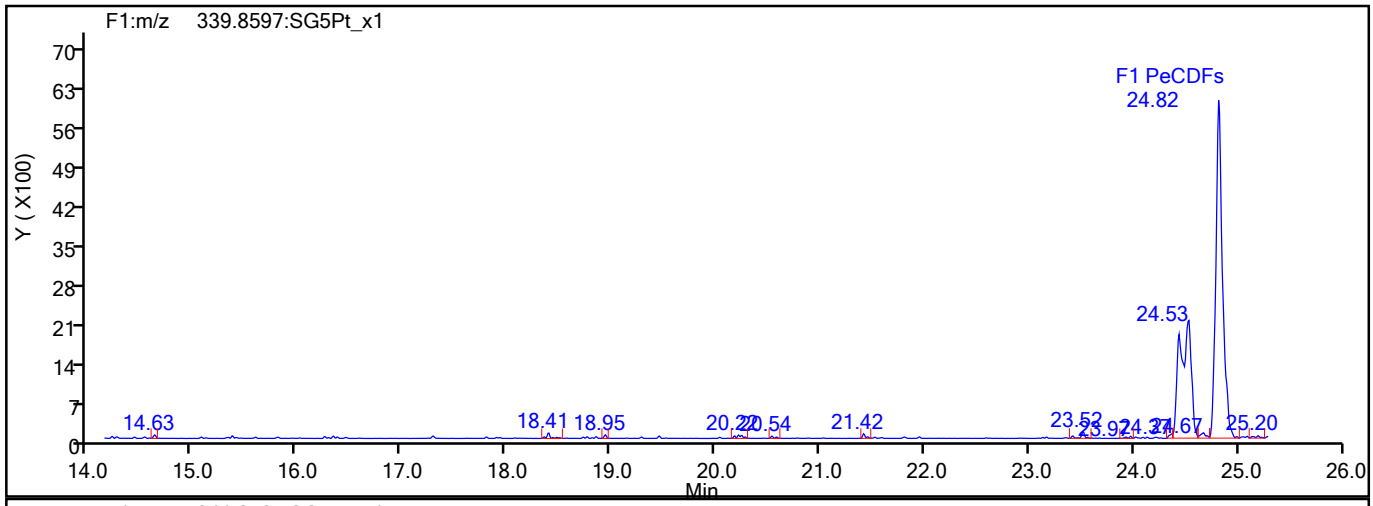

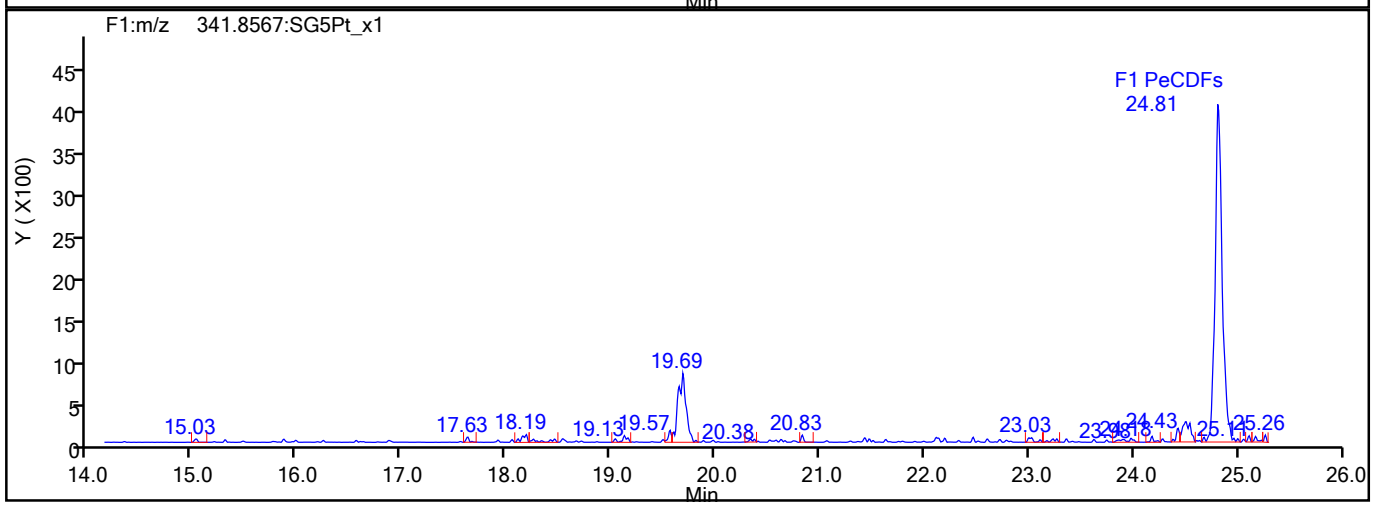

F1 PeCDFs Interference Mass

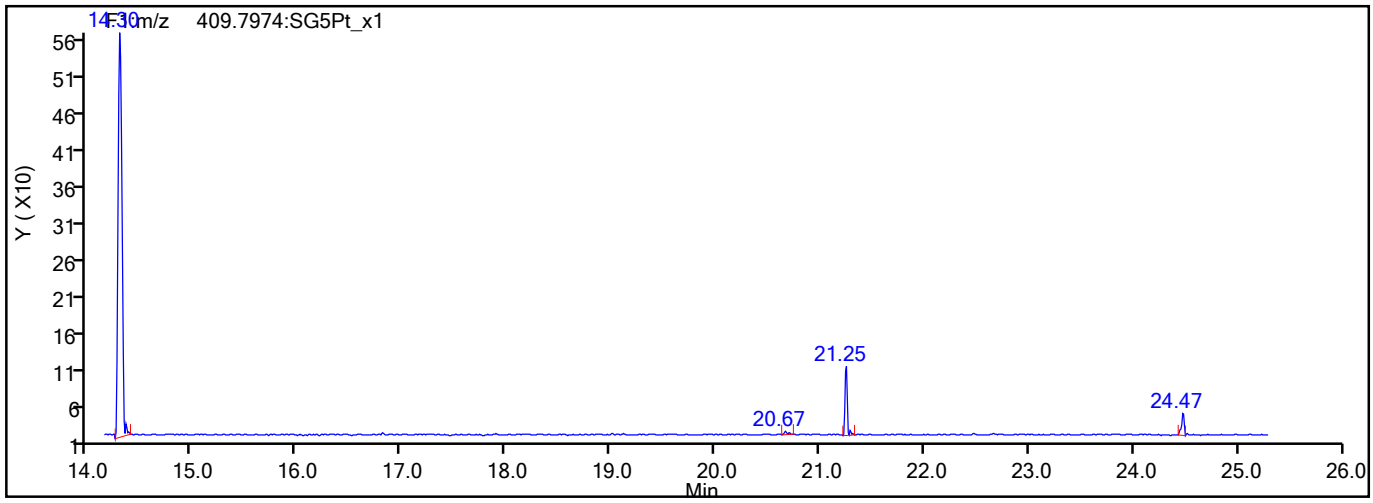

775715

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

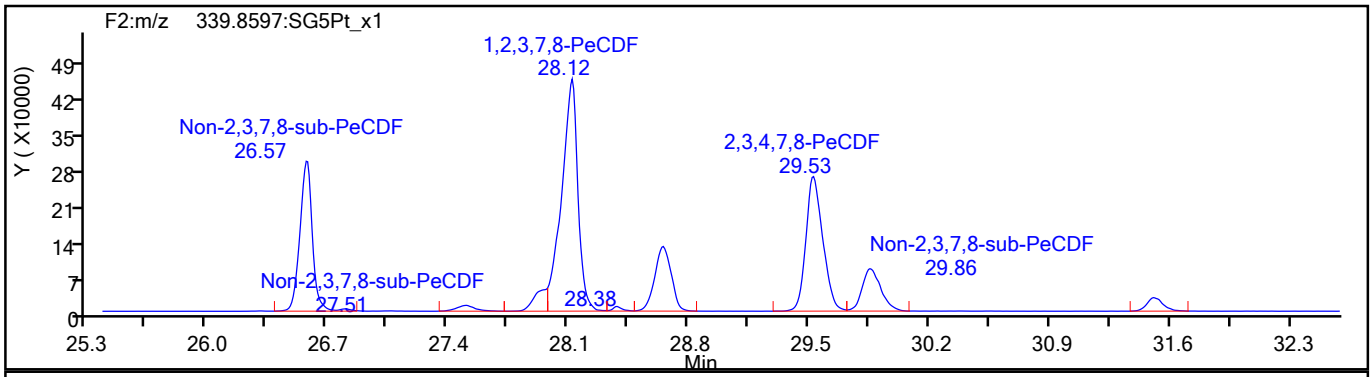

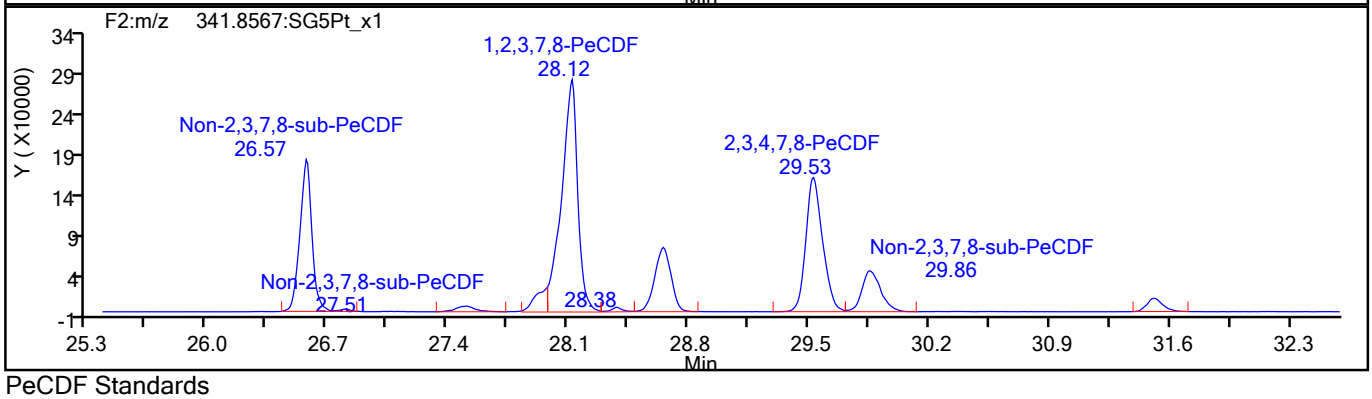

PeCDF Standards

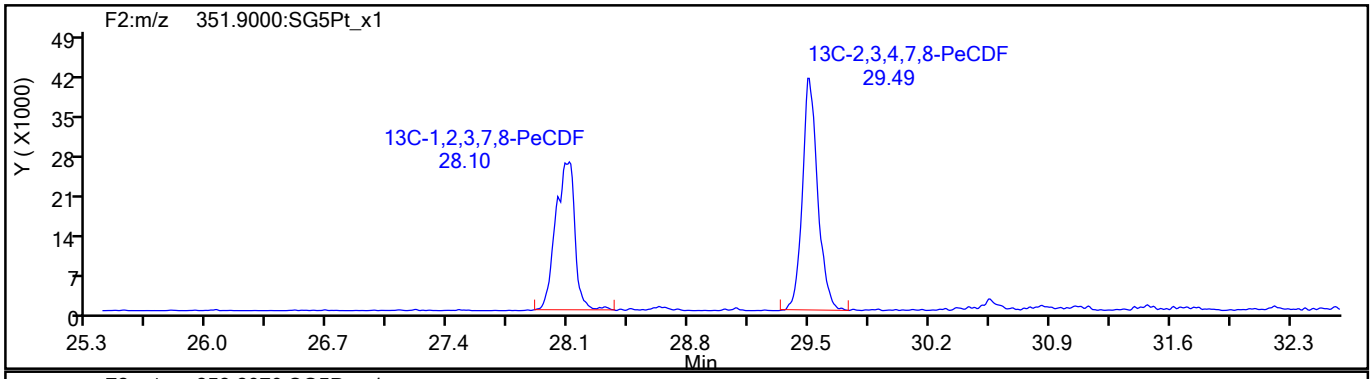

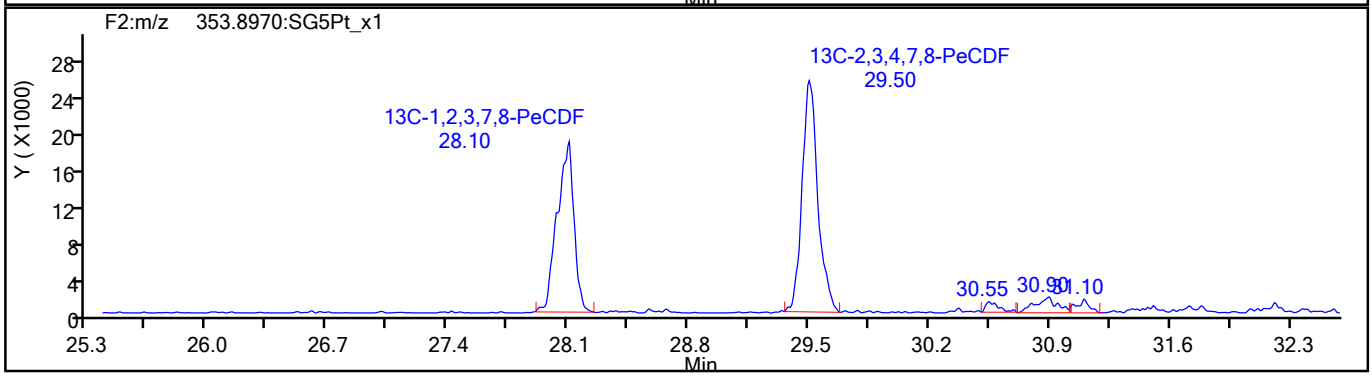

775716

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

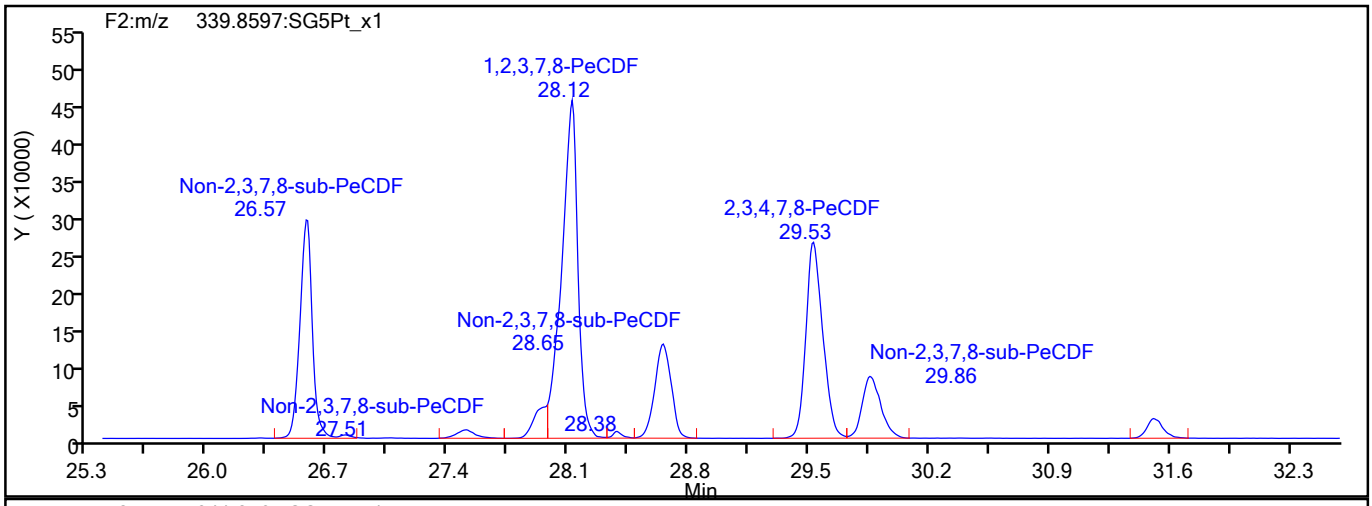

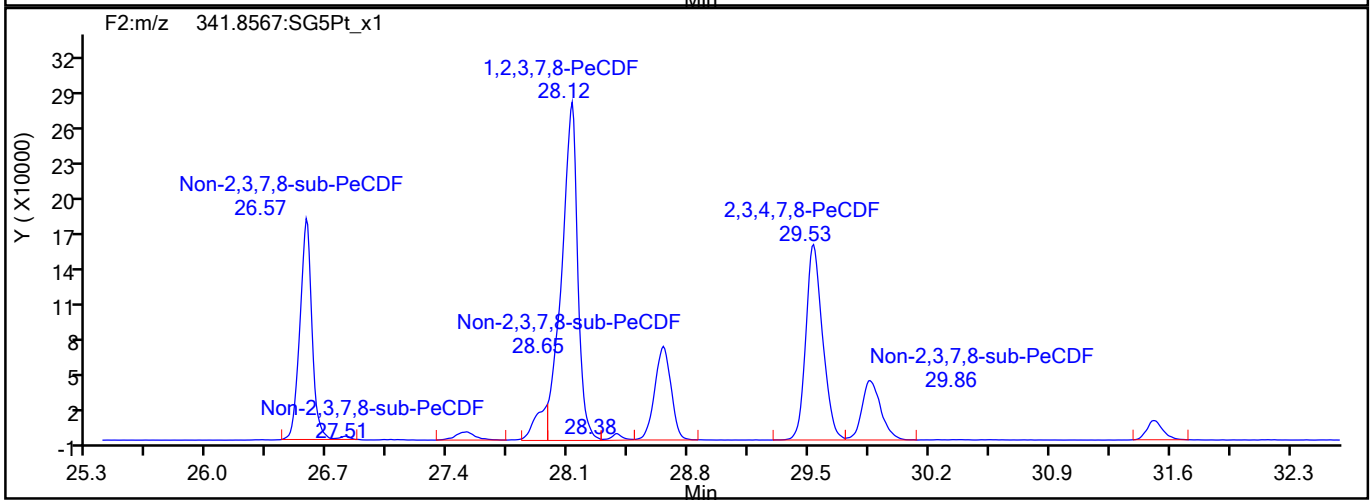

PeCDF Interference Mass

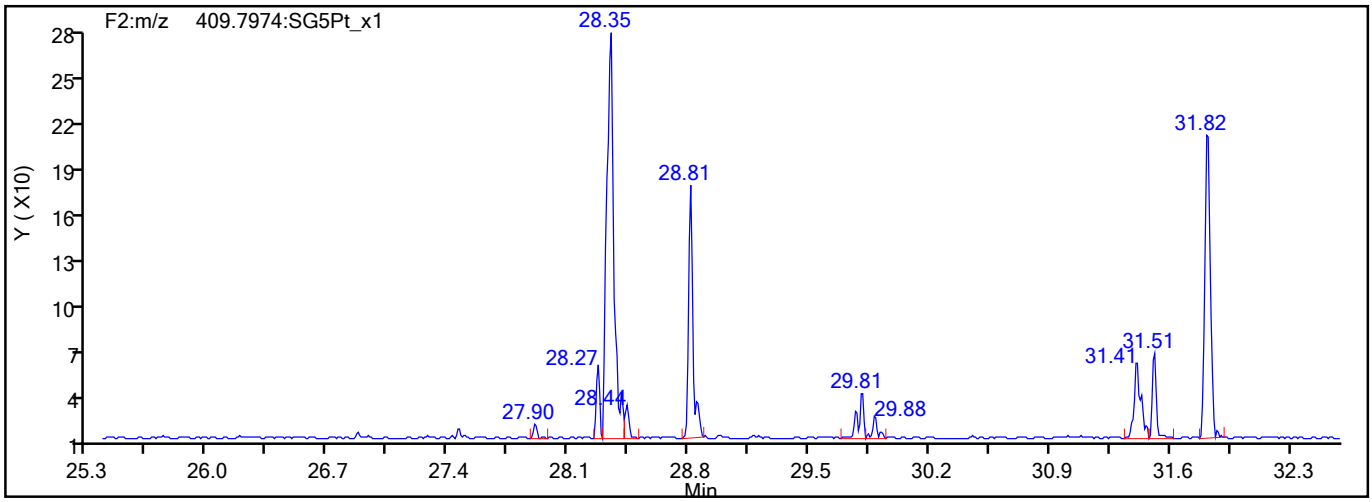

775717

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

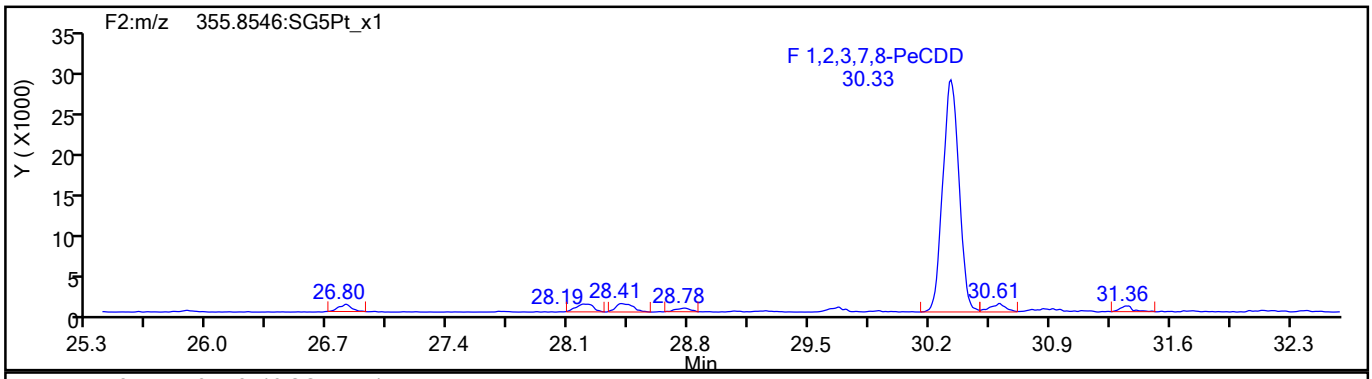

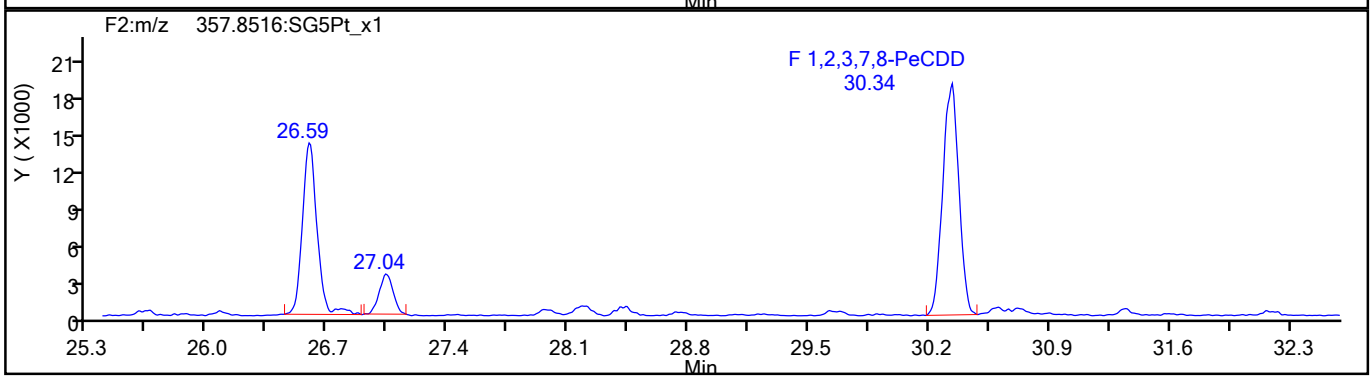

PeCDD Standards

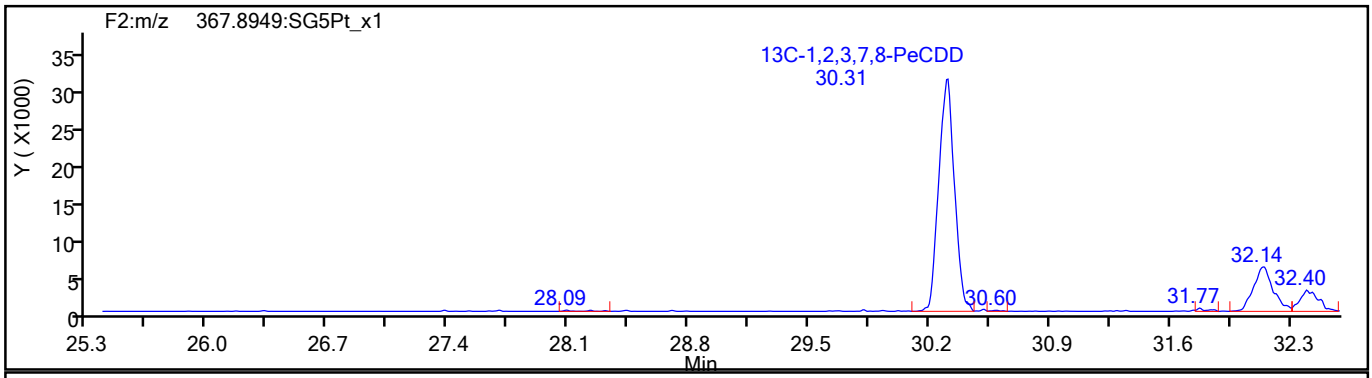

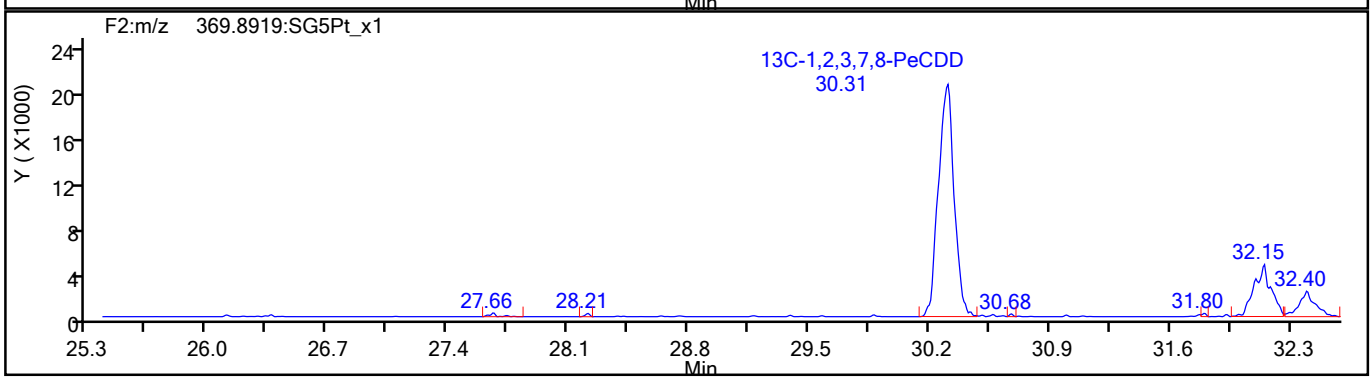

775718

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

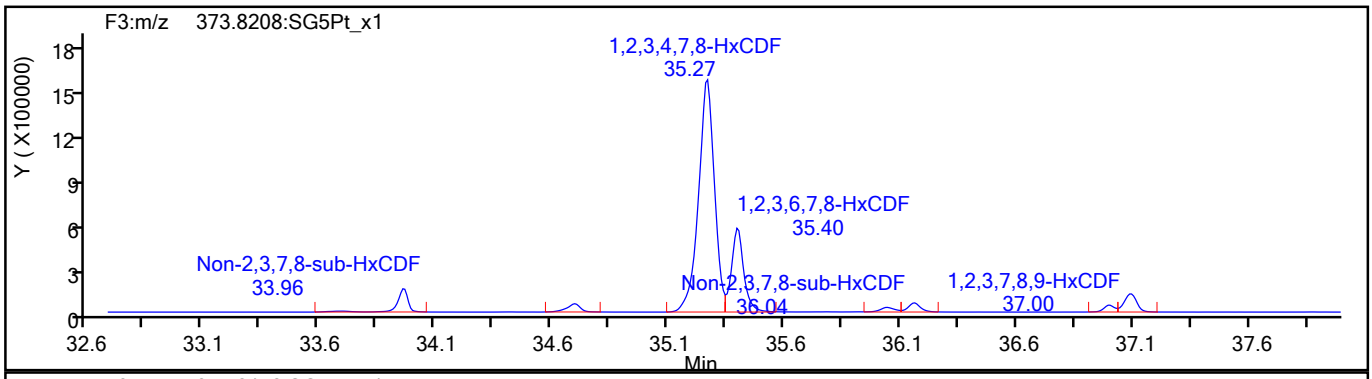

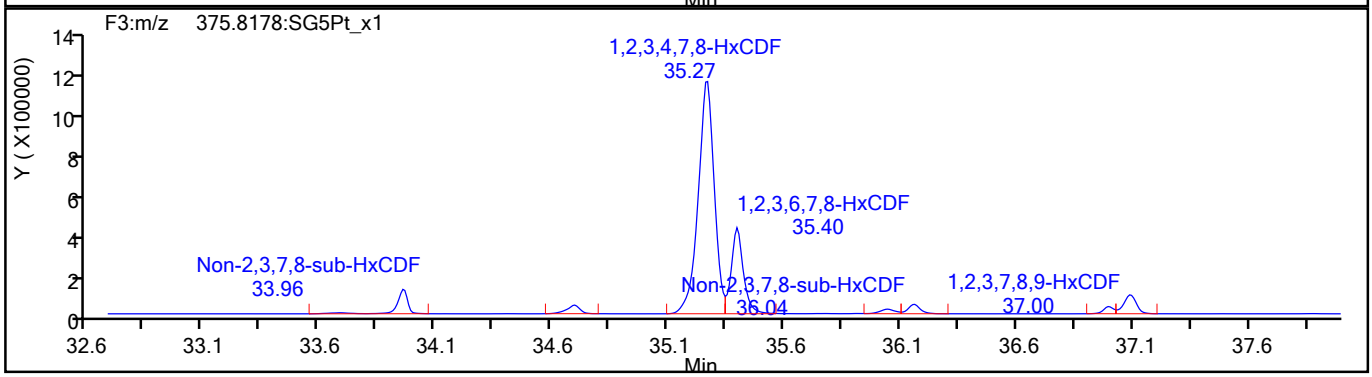

HxCDF Standards

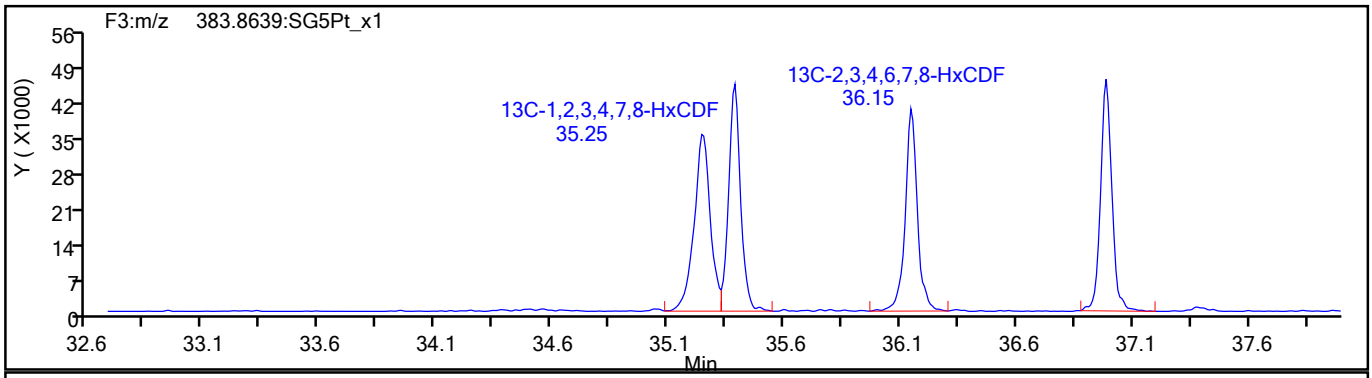

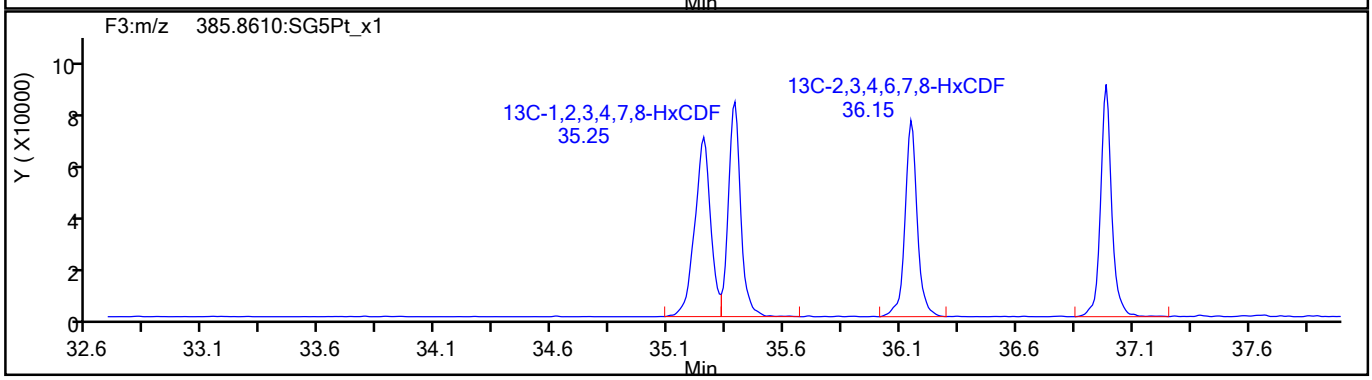

775719

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

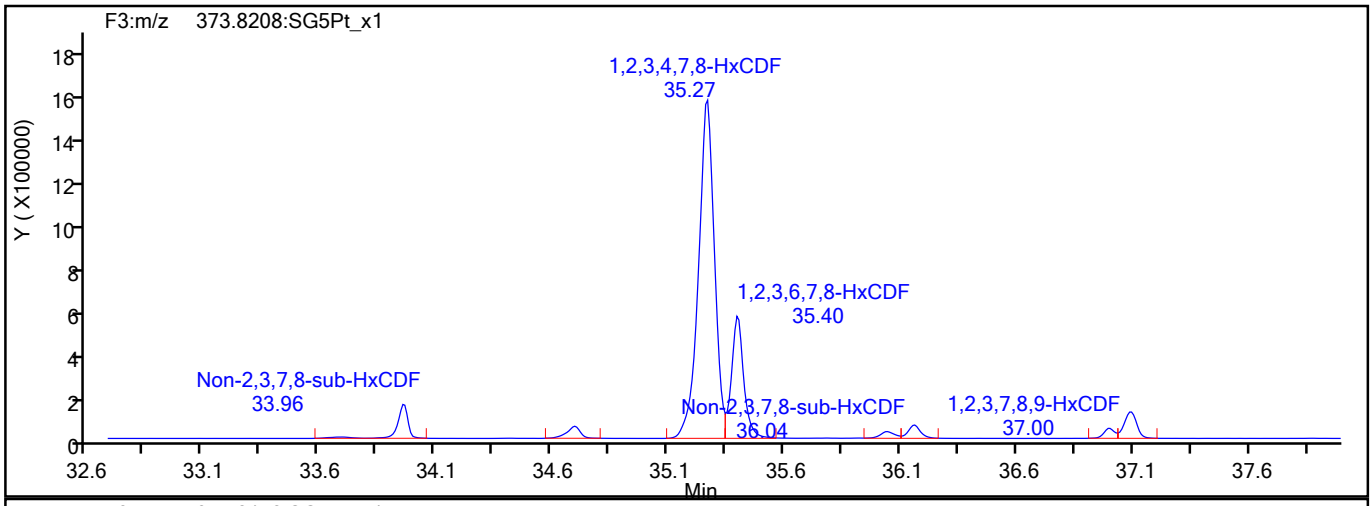

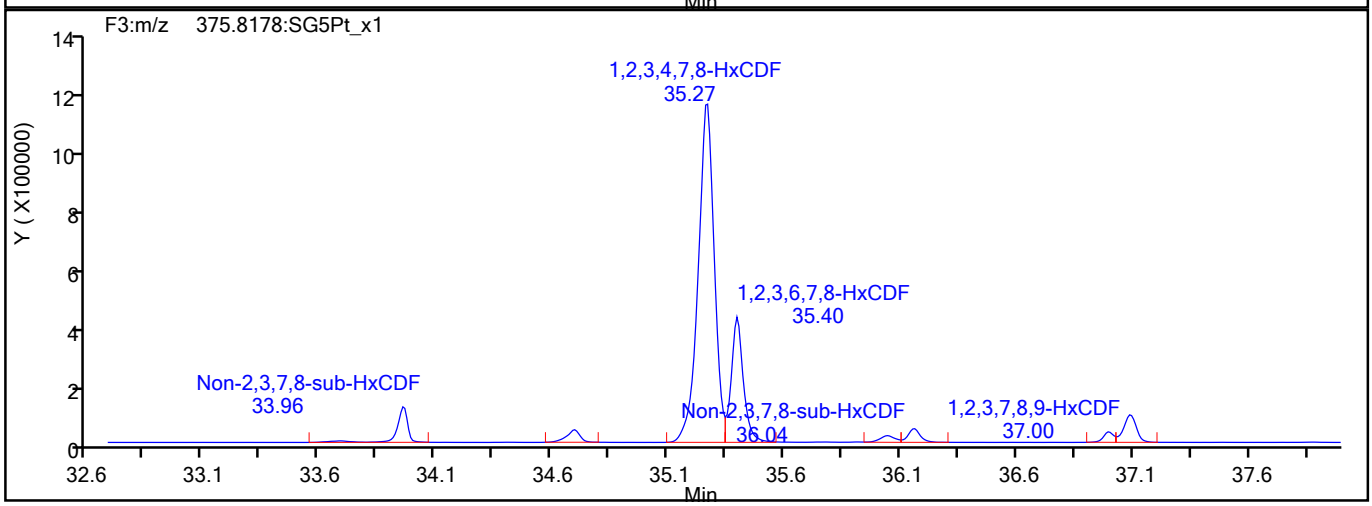

HxCDF Interference Mass

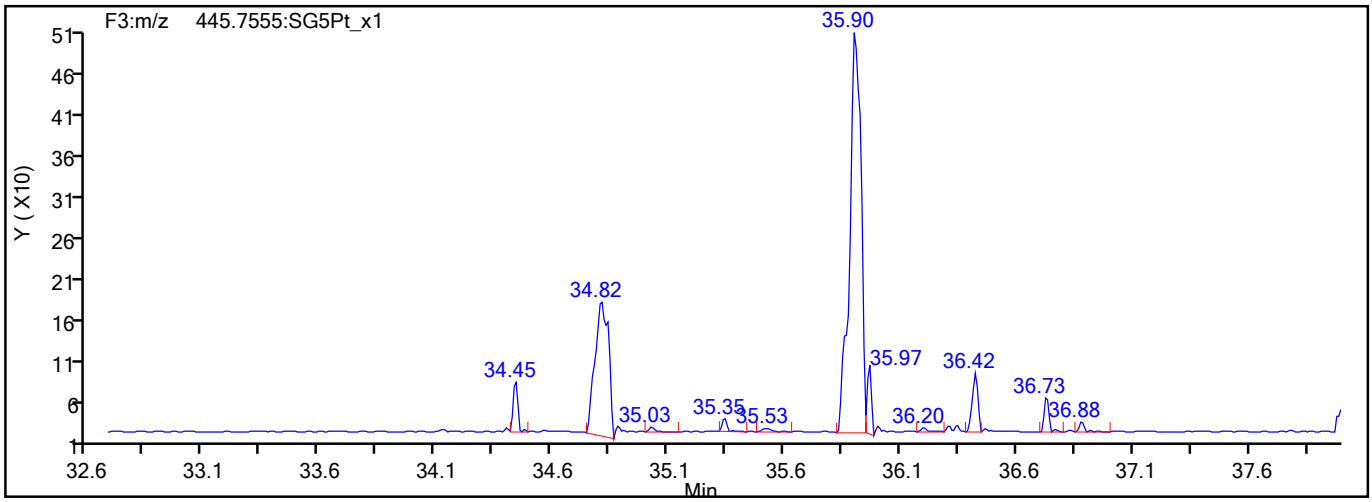

775720

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

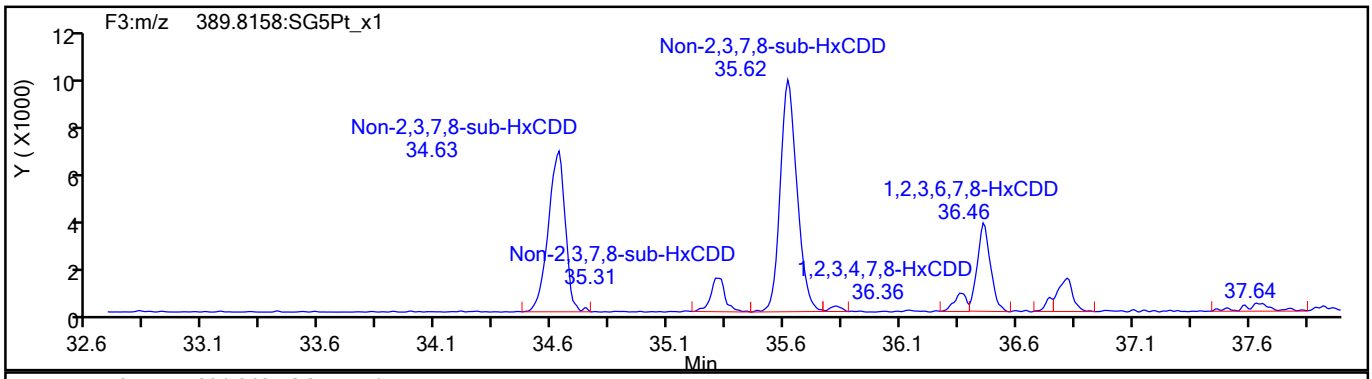

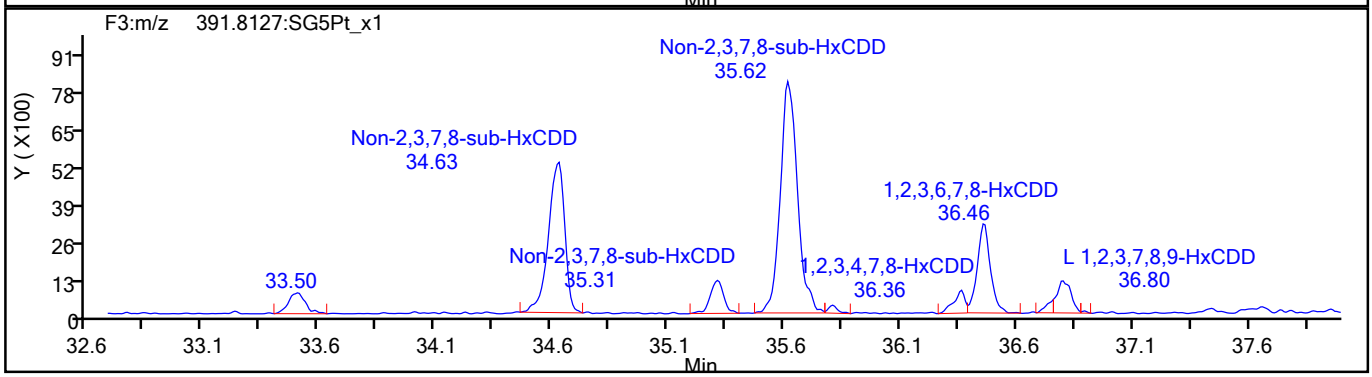

HxCDD Standards

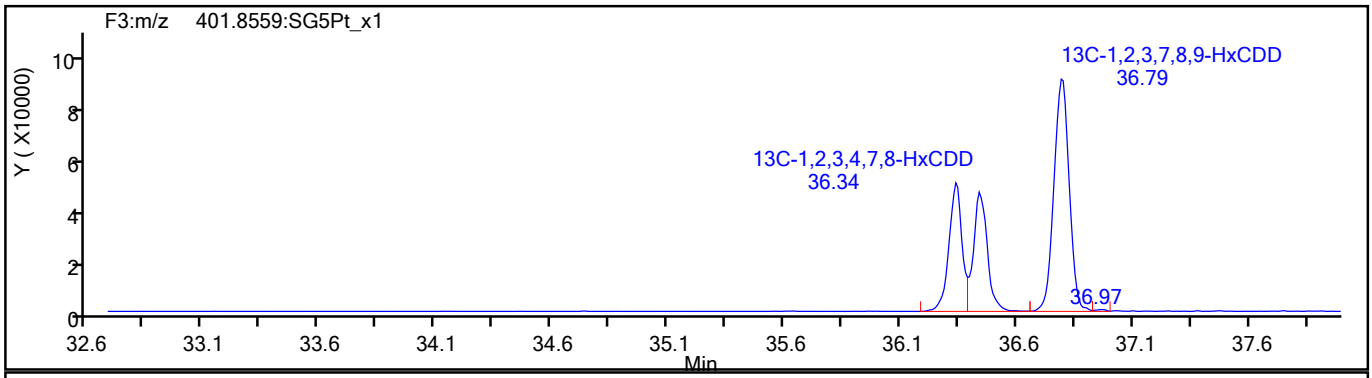

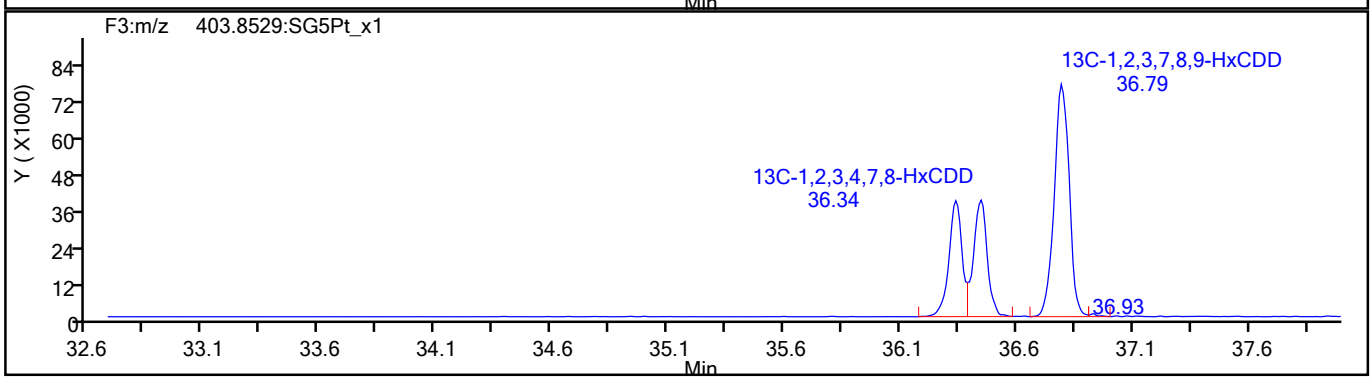

775721

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

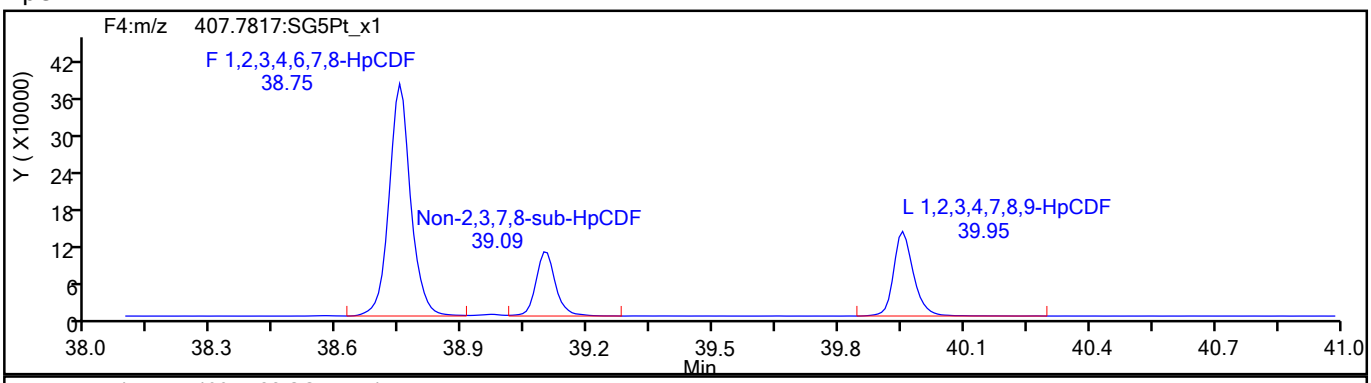

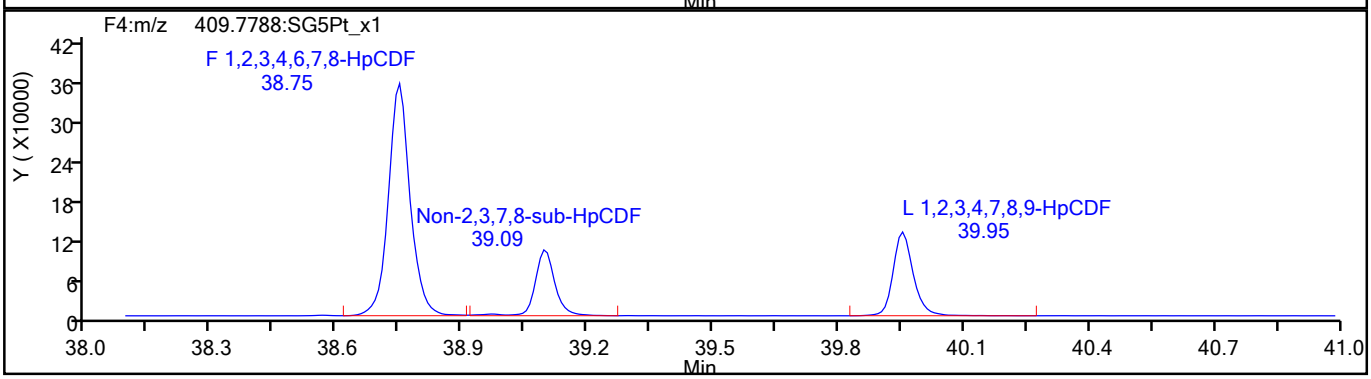

HpCDF Standards

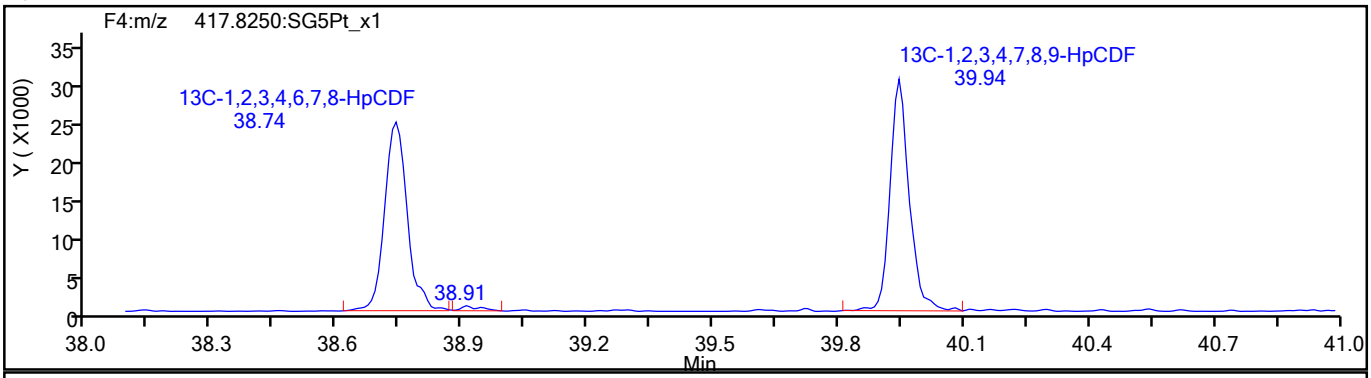

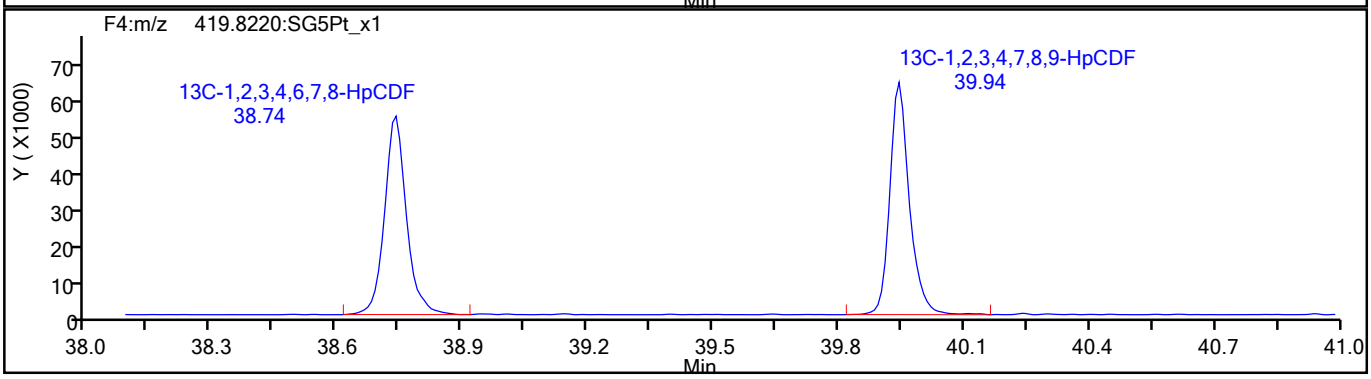

775722

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

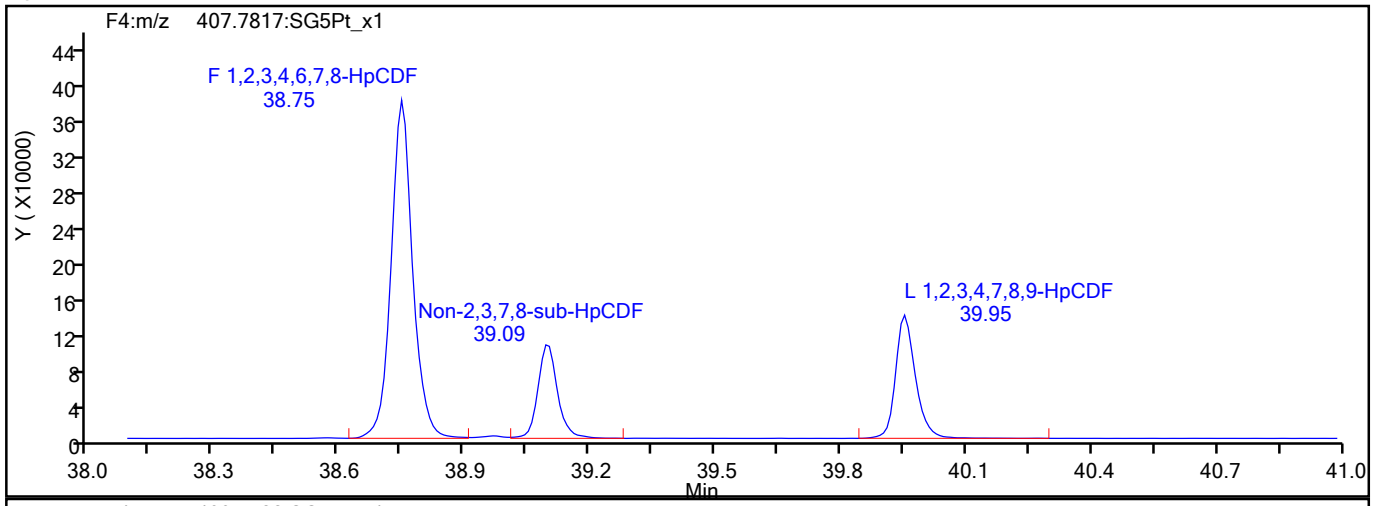

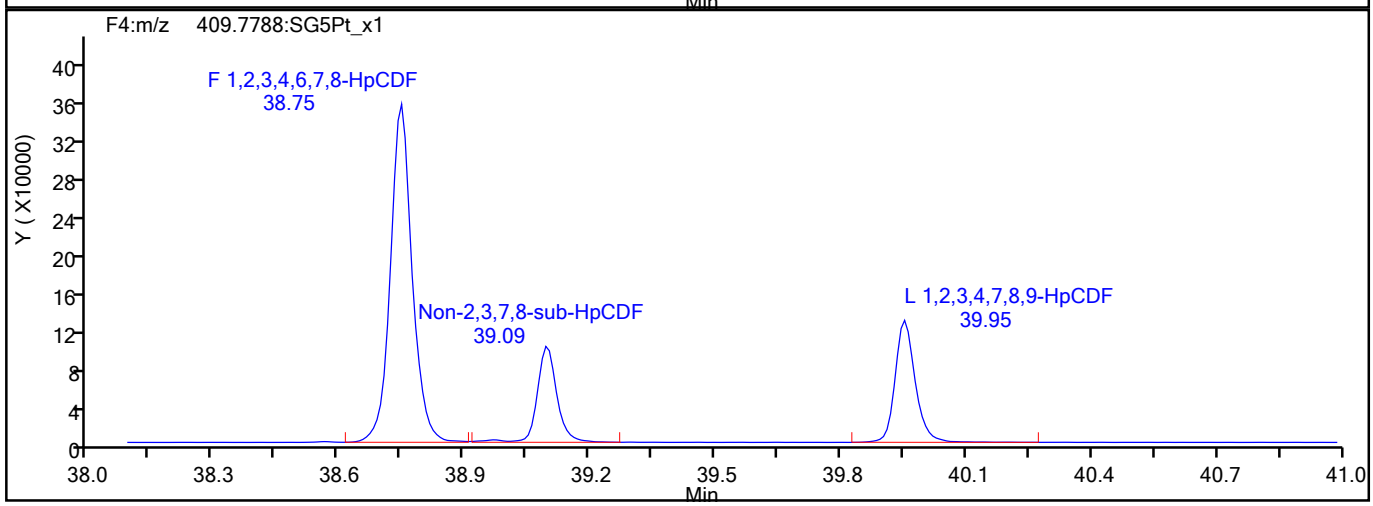

HpCDF Interference Mass

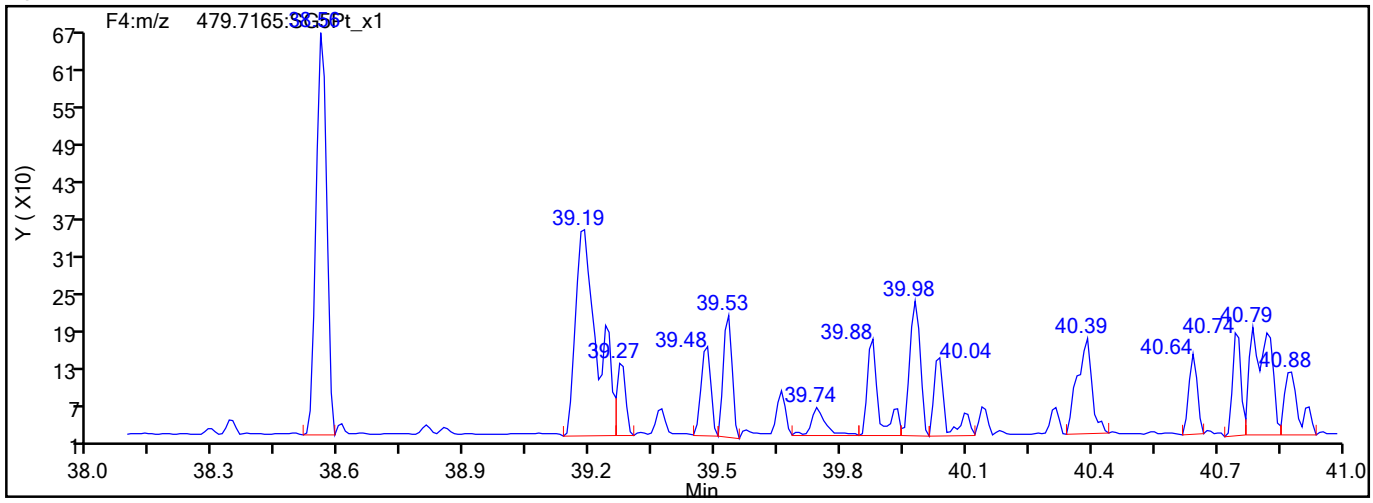

775723

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

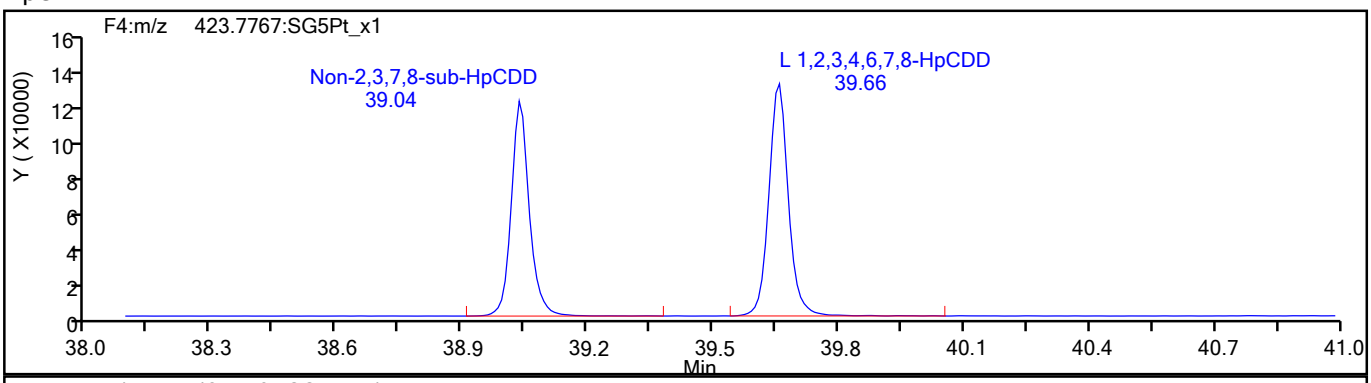

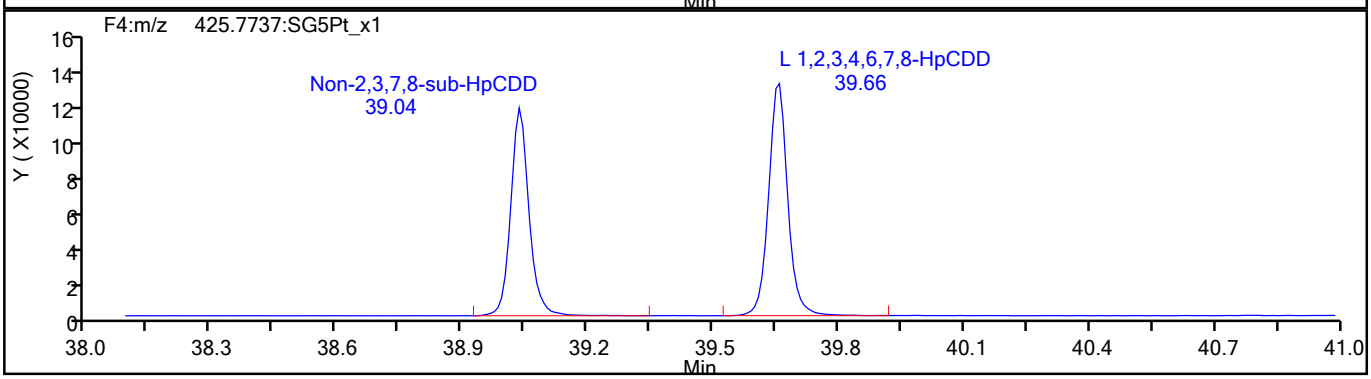

HpCDD Standards

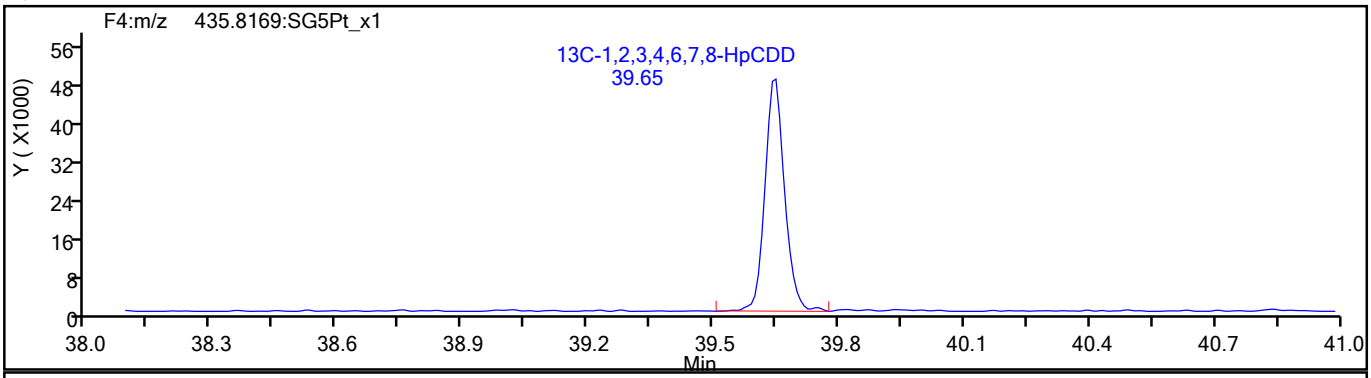

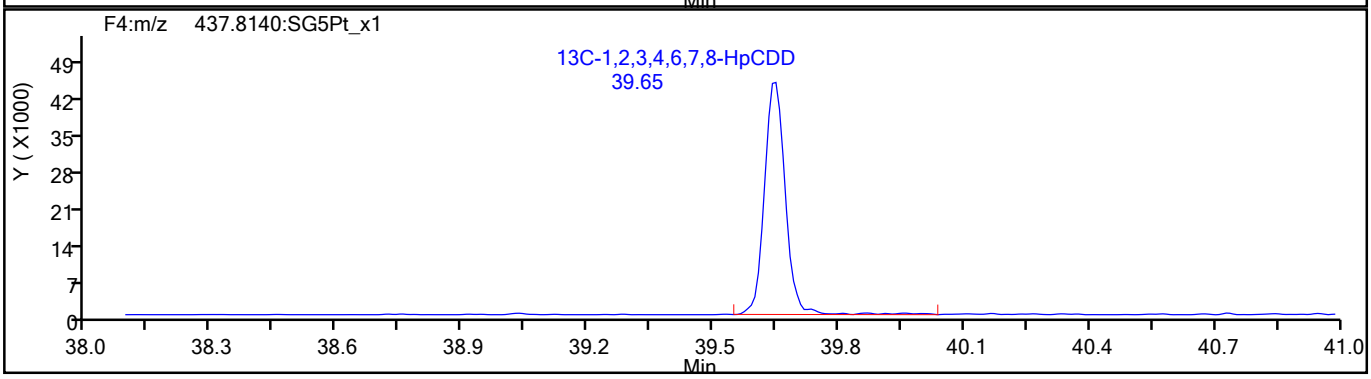

775724

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

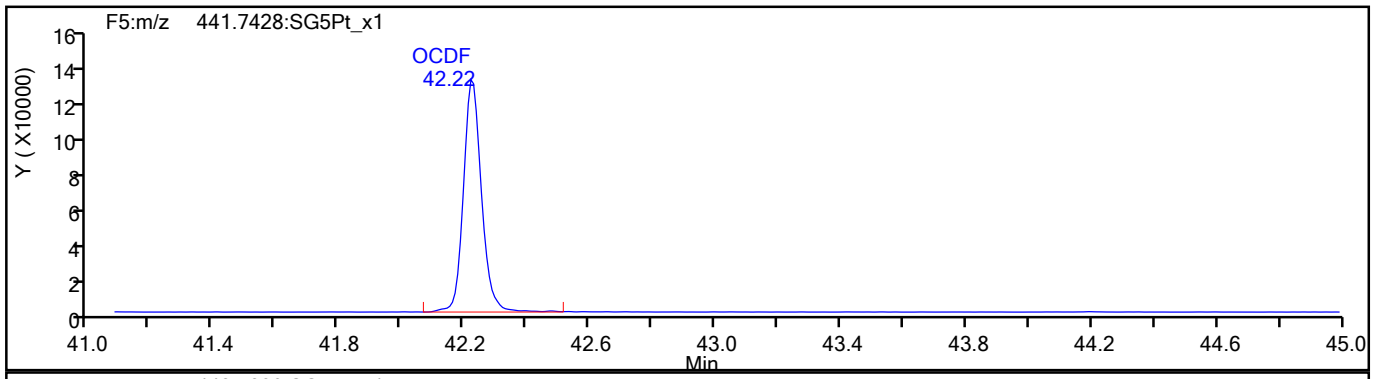

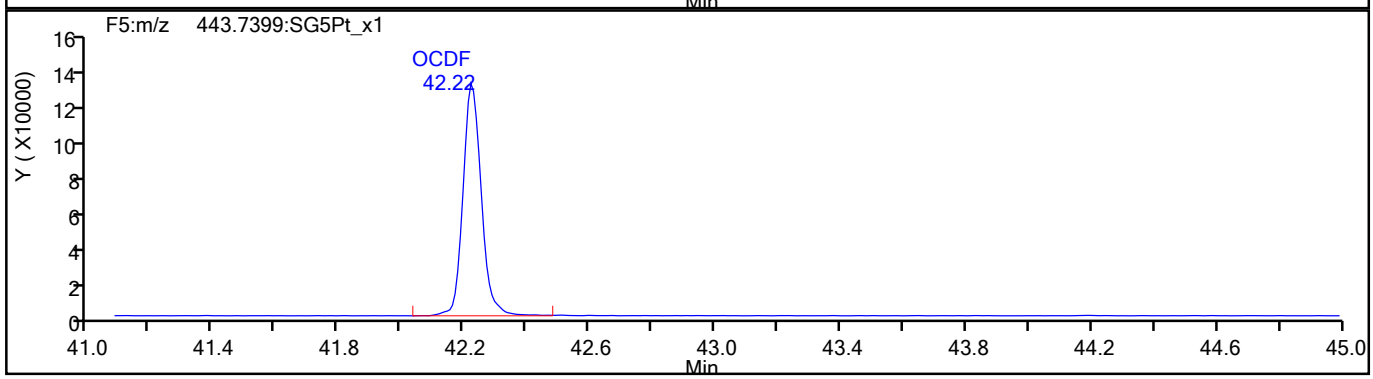

OCDF Standards

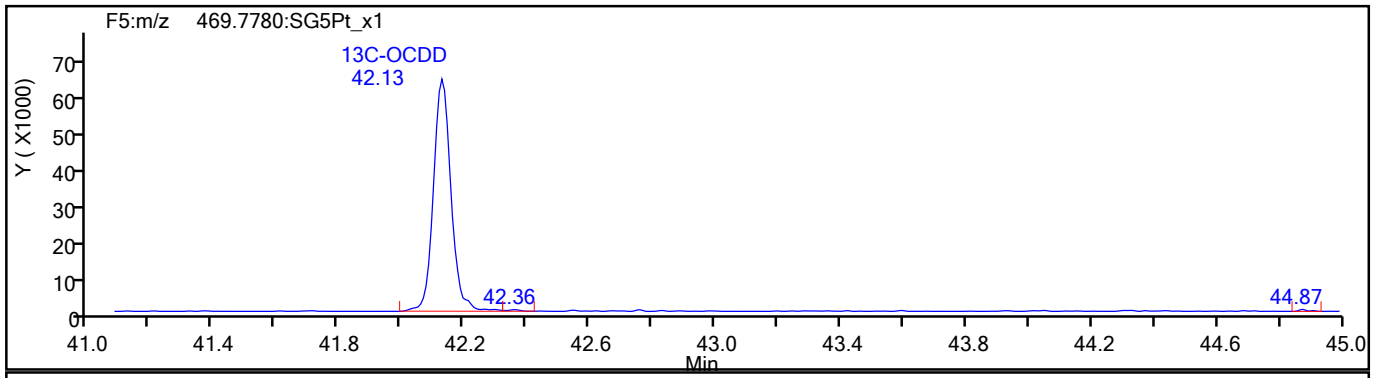

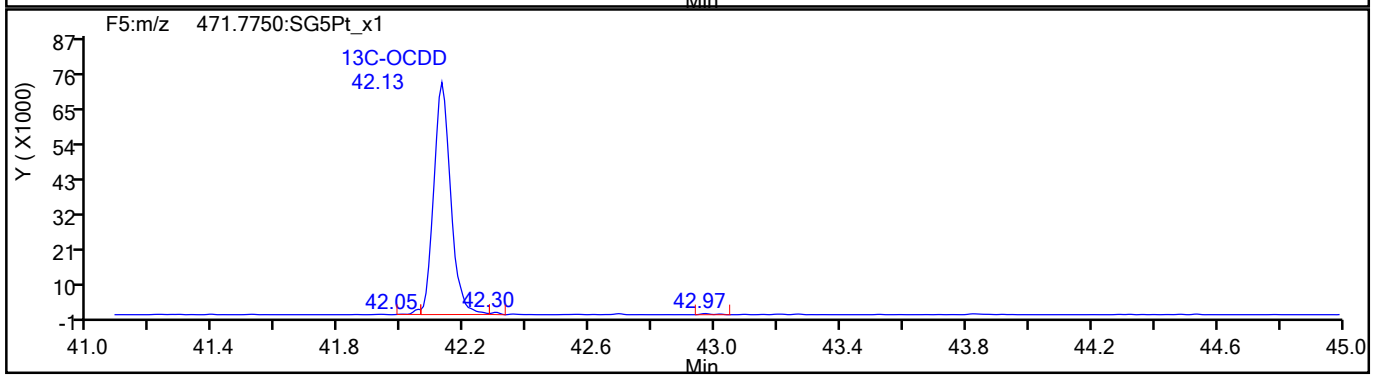

775725

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

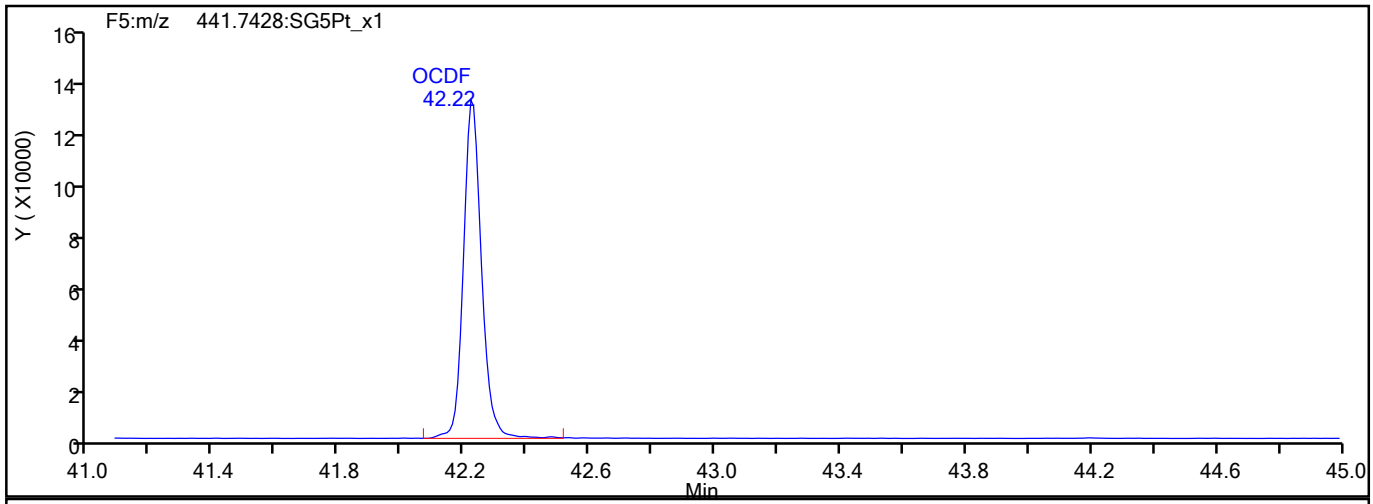

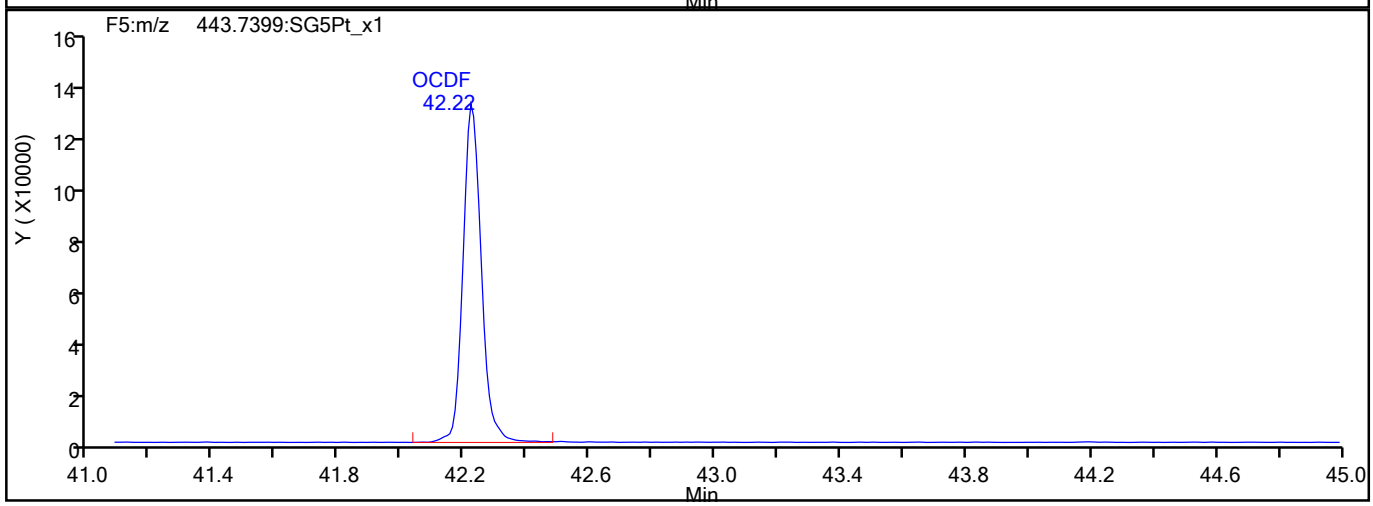

OCDF Interference Mass

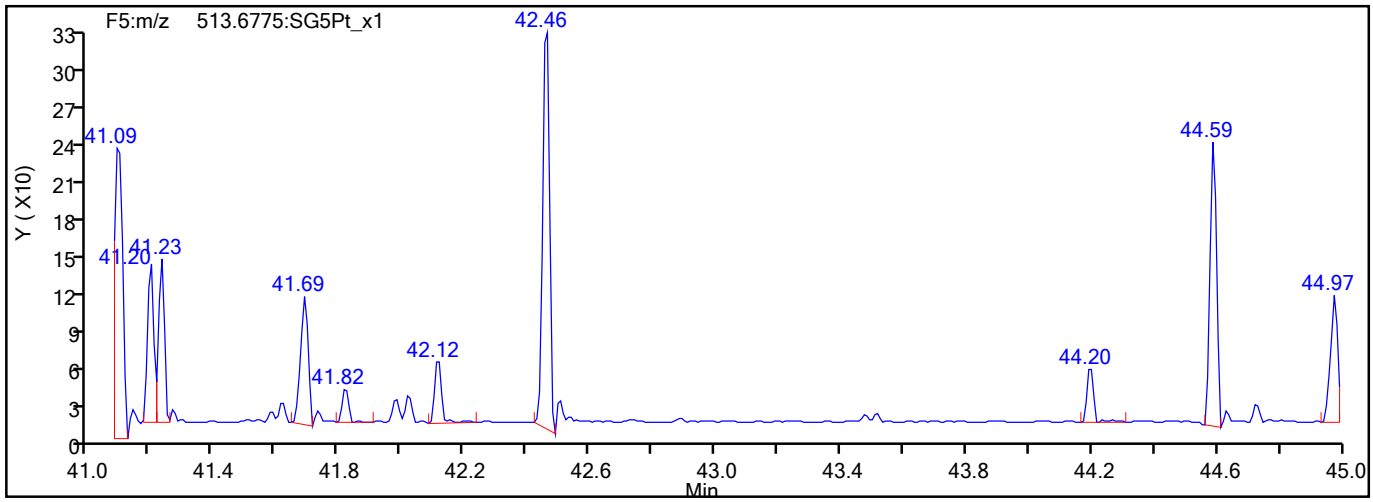

775726

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

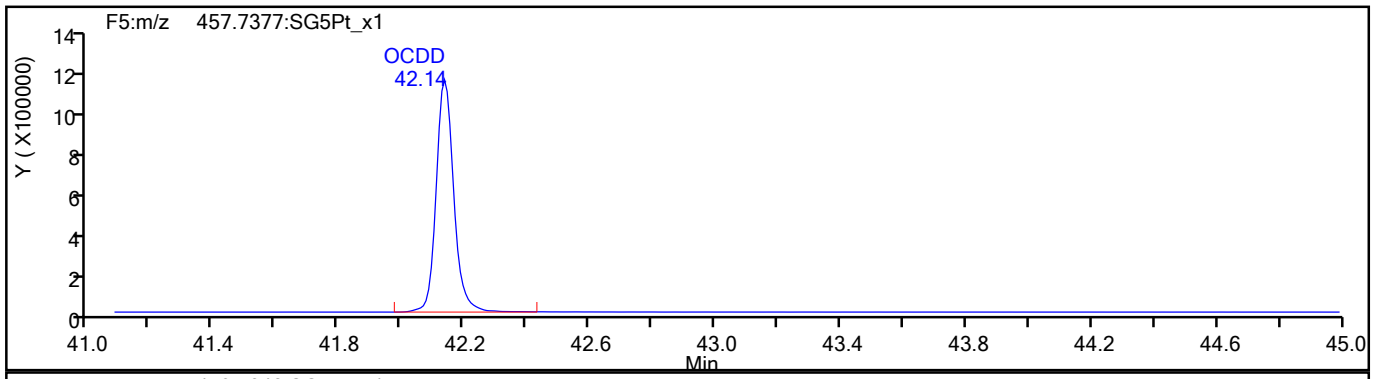

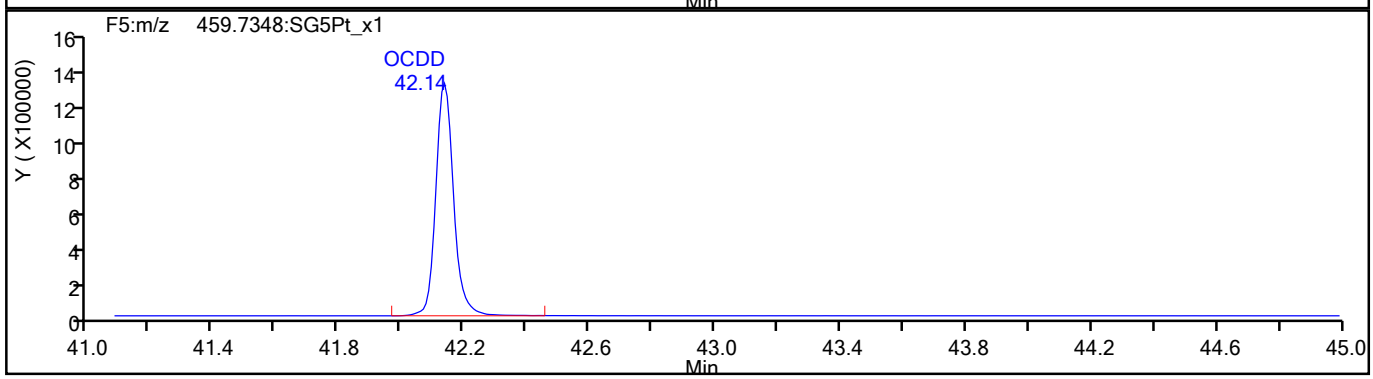

OCDD Standards

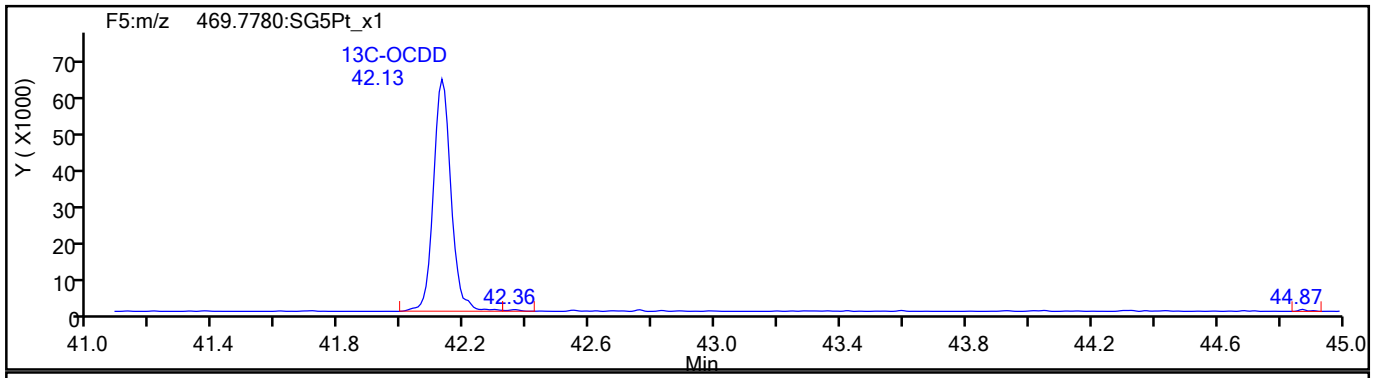

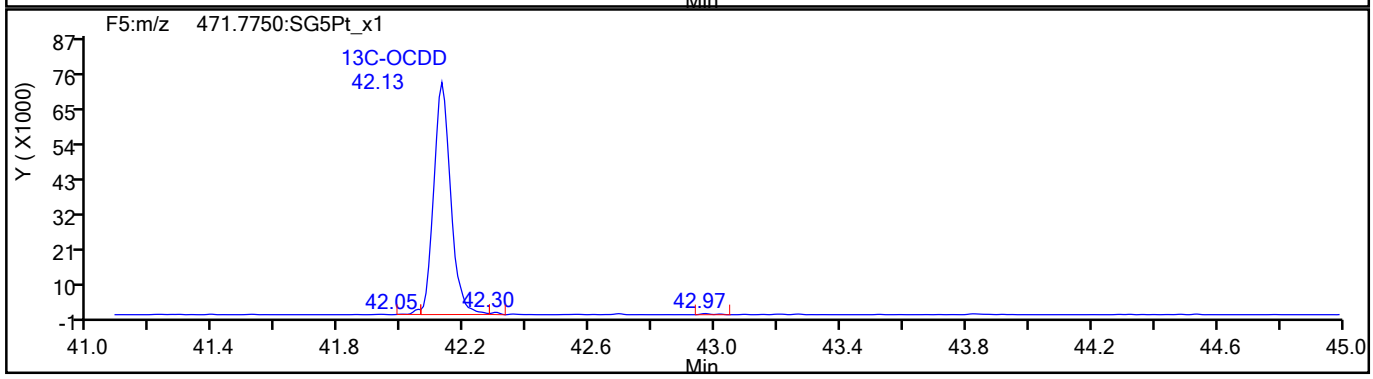

775727

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

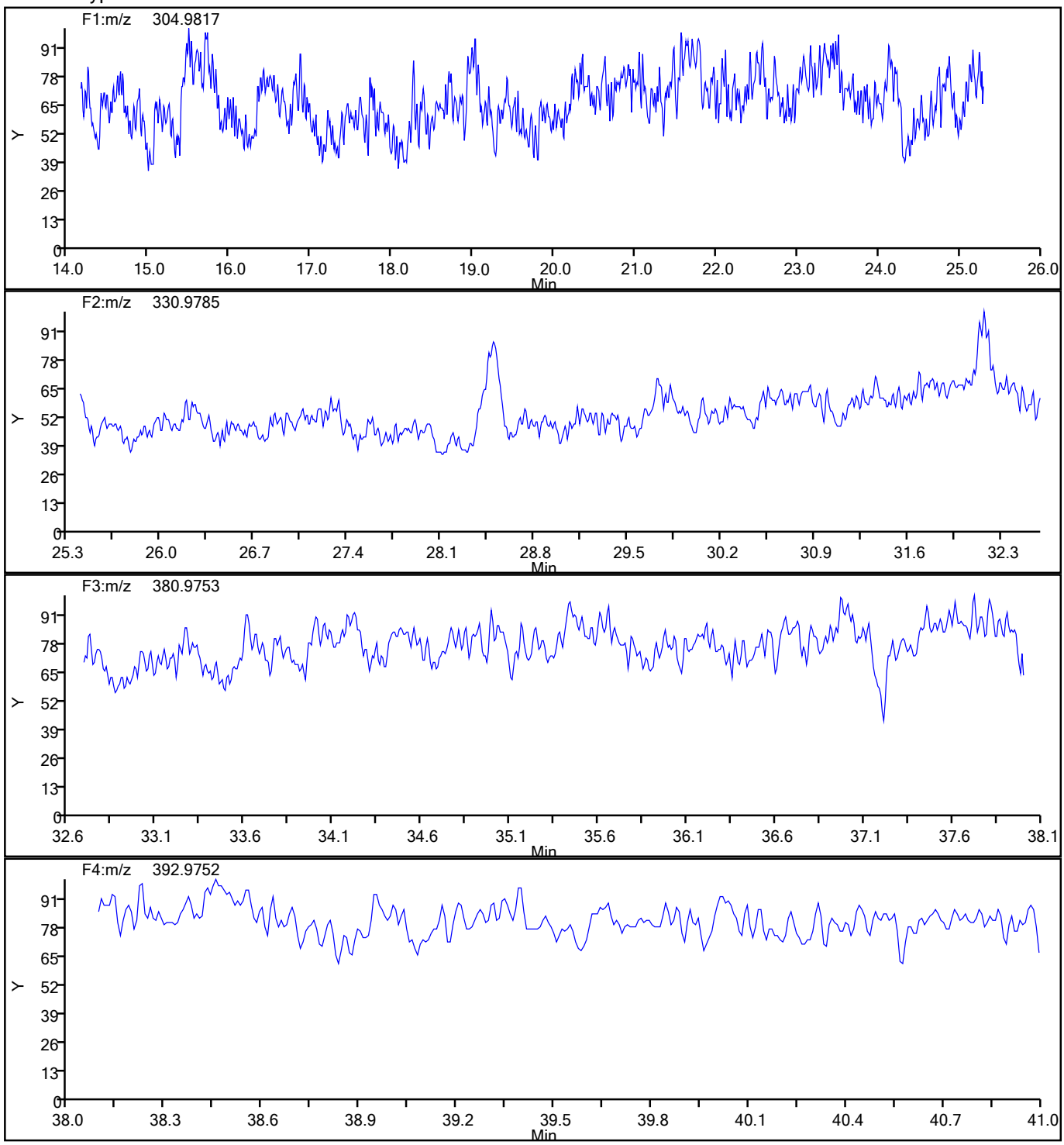

775728

Report Date: 23-Aug-2021 10:56:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_43.d		
Injection Date:	18-Aug-2021 22:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	517461	Sample Line#:	40
Column Type:	DB-5	Column Dia:	0.32 mm

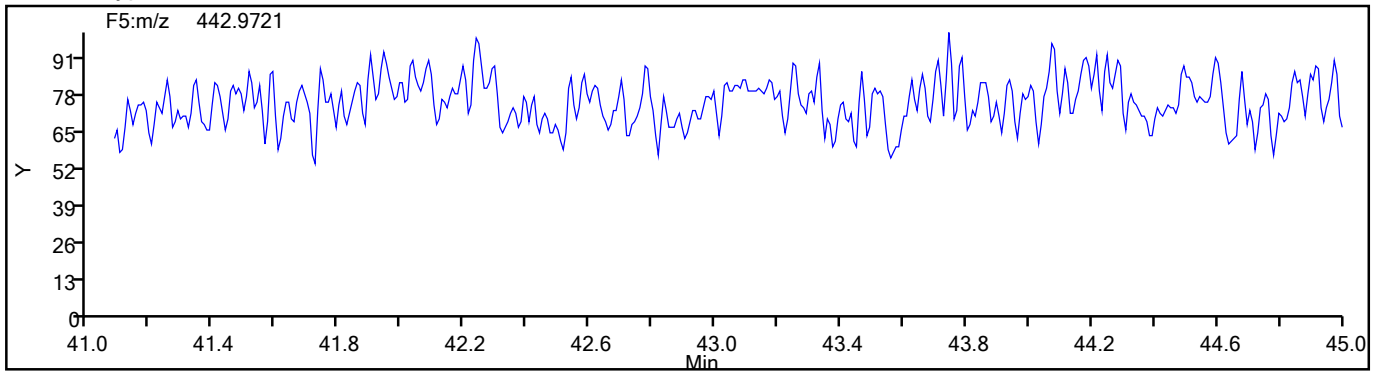

775729

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (4-6) RA
Lab Sample ID: 320-76769-29 RA
Matrix: Sediment
Lab File ID: 24AU21A11D2_017.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.98(g)
Date Analyzed: 08/25/2021 02:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 56.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	150000	G E	140	140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	44		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	114		35-197

Report Date: 25-Aug-2021 09:02:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_017.d
Lims ID: 320-76769-A-29-A
Client ID: 11215702-072221-SS-SJSB076 (4-6)
Sample Type: Client
Inject. Date: 25-Aug-2021 02:50:51 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-29-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:34:36

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.379	12149781	0.72	7.2E+05	20.0	20.0				nM
D 13C-2,3,7,8-TCDF	17.696	7078356	0.69	1.3327	8.743	8.743	2.510	2.510	43.72	a
2,3,7,8-TCDF	17.737	2252678220	0.81	0.9978	6379.0	6379.0	6.260	6.260		Ea
D 13C-2,3,7,8-TCDD	16.146	4367049	0.86	0.8749	8.216	8.216	27.9	27.9	41.08	nM
$ 37Cl4-2,3,7,8-TCDD	16.159	4796292		0.8648	9.129	9.129	0.4241	0.4241	114	a
2,3,7,8-TCDD	16.159	626729709	0.81	1.0570	2715.5	2715.5	11.0	11.0		Ea
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 25-Aug-2021 09:02:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_017.d
Lims ID: 320-76769-A-29-A
Client ID: 11215702-072221-SS-SJSB076 (4-6)
Sample Type: Client
Inject. Date: 25-Aug-2021 02:50:51 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-29-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:34:36

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											nM
331.9368	16.379	16.285	6		5088215	1124713	592251	1480627	2		M
333.9339	16.379	16.285	6		7061566	1406688	644627	1611567	2	0.72(0.65-0.89)	M
13C-2,3,7,8-TCDF											a
315.9419	17.696	17.601	6	1.080	2899626	558877	85636	214090	7		a
317.9389	17.709	17.601	6	1.081	4178730	724240	83708	209270	9	0.69(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.737	17.629	6	1.002	1007680888	175337843	72415	181037	2421		a
305.8987	17.723	17.629	6	1.002	1244997332	217462917	87870	219675	2475	0.81(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.146	16.051	6	0.986	2012921	379051	592251	1480627	1		M
333.9339	16.146	16.051	6	0.986	2354128	521897	644627	1611567	1	0.86(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											a
327.8840	16.159	16.065	6	0.987	4796292	1125976	18570	46425	61		a
2,3,7,8-TCDD											Ea
319.8965	16.159	16.079	5	1.001	279595027	60970920	127540	318850	478		a
321.8936	16.159	16.079	5	1.001	347134682	76432705	82554	206385	926	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_017.d				
Injection Date:	25-Aug-2021 02:50:51	Instrument ID:	11D2		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 18.63
Area: 4683281
Amount: 2.076891
Amount Units: pg/ul

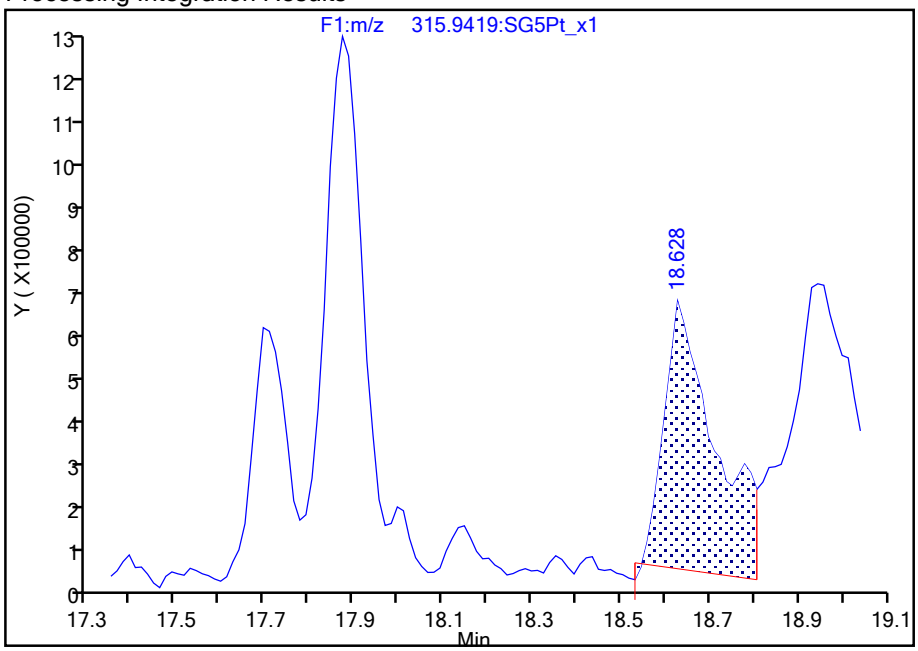

Manual Integration Results

RT: 17.70
Area: 2899626
Amount: 8.743113
Amount Units: pg/ul

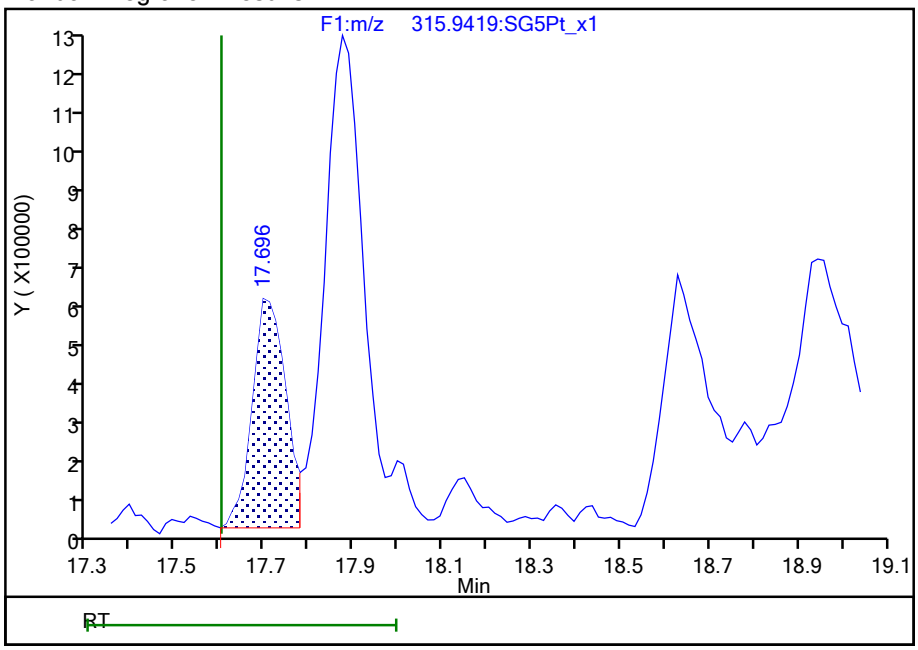

Reviewer: stephensk, 25-Aug-2021 08:33:34

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_017.d				
Injection Date:	25-Aug-2021 02:50:51	Instrument ID:	11D2		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Not Detected
Expected RT: 17.63

Processing Integration Results

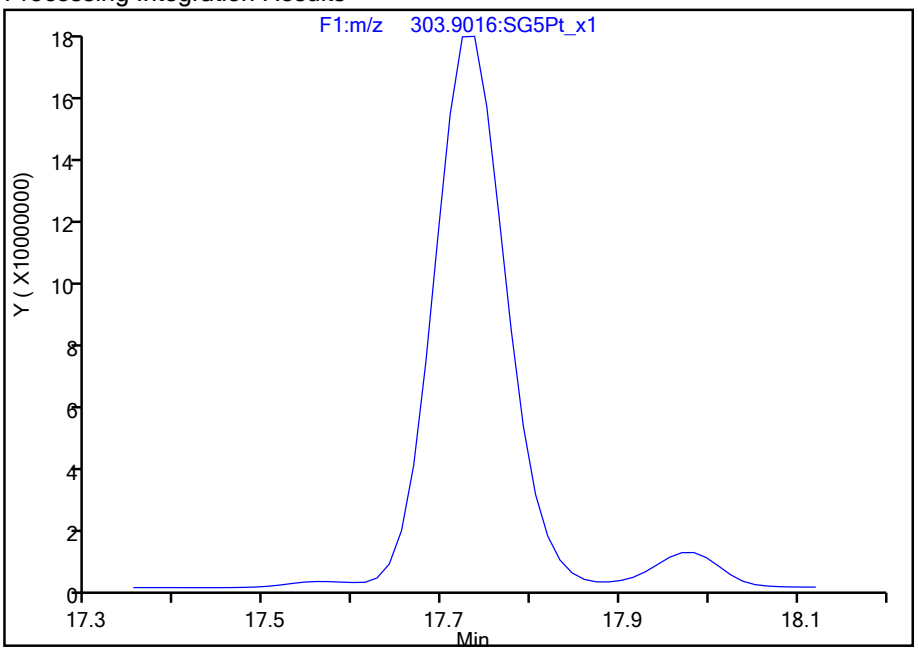

Manual Integration Results

RT: 17.74
Area: 1007680888
Amount: 6378.9663
Amount Units: pg/ul

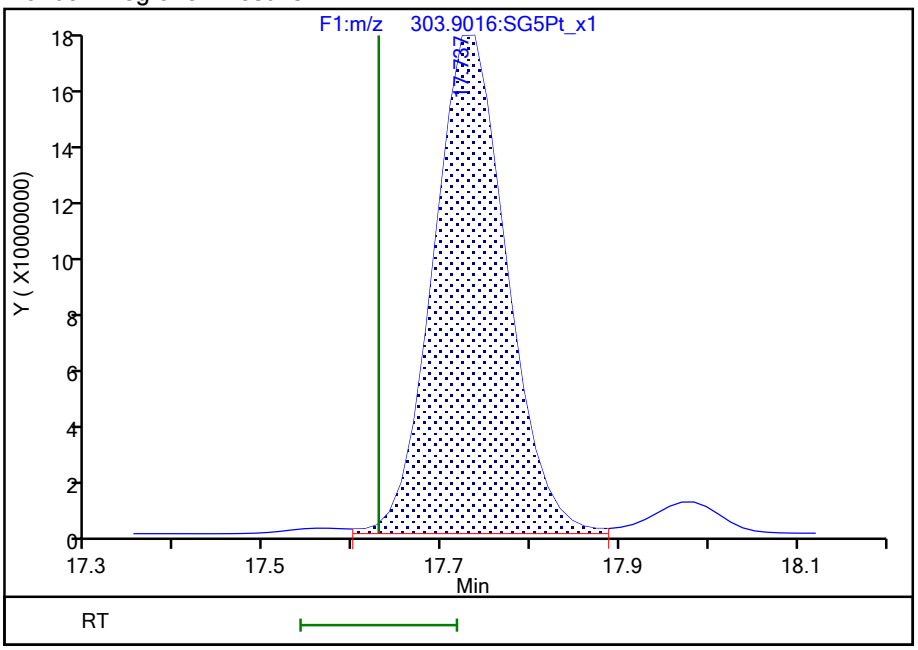

Reviewer: stephensk, 25-Aug-2021 08:34:12
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_017.d				
Injection Date:	25-Aug-2021 02:50:51	Instrument ID:	11D2		
Lims ID:	320-76769-A-29-A	Lab Sample ID:	320-76769-29		
Client ID:	11215702-072221-SS-SJSB076 (4-6)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Not Detected
Expected RT: 16.07

Processing Integration Results

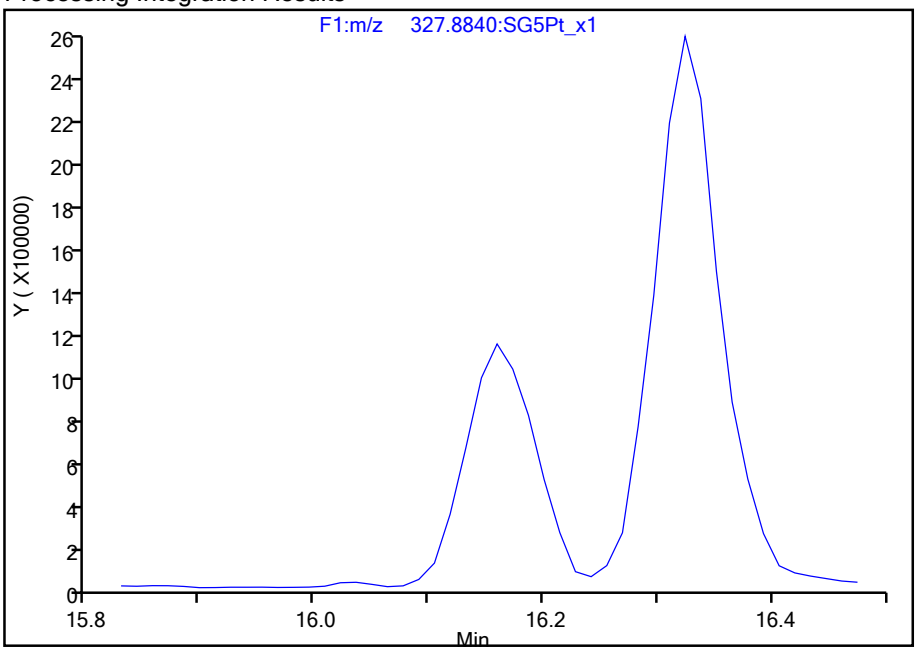

RT: 16.16
Area: 4796292
Amount: 9.129424
Amount Units: pg/ul

Manual Integration Results

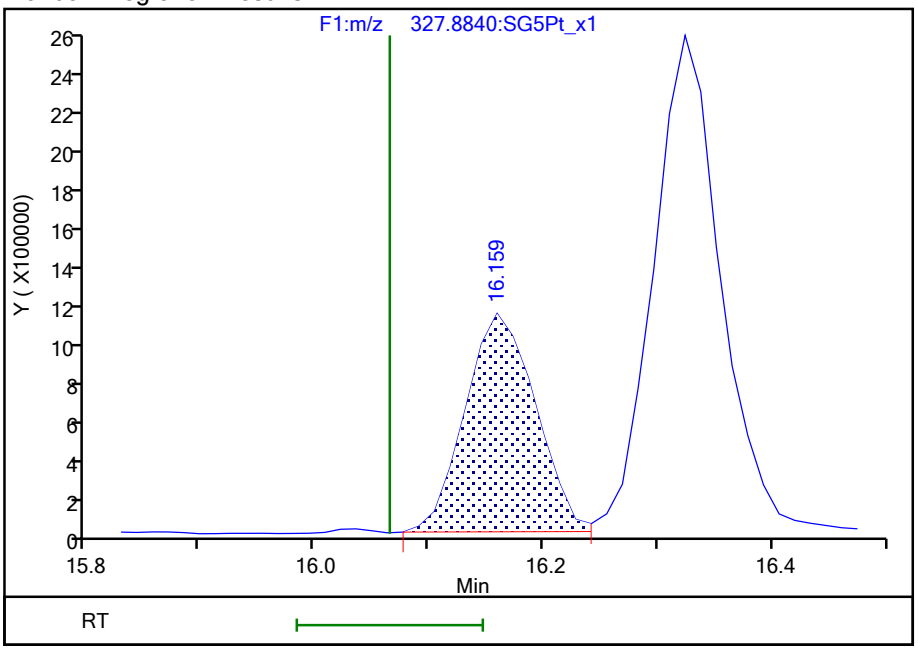

Reviewer: stephensk, 25-Aug-2021 08:57:24
Audit Action: Assigned Compound ID Audit Reason: Retention Time Shift

Report Date: 25-Aug-2021 09:02:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_017.d		
Injection Date:	25-Aug-2021 02:50:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	519540	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

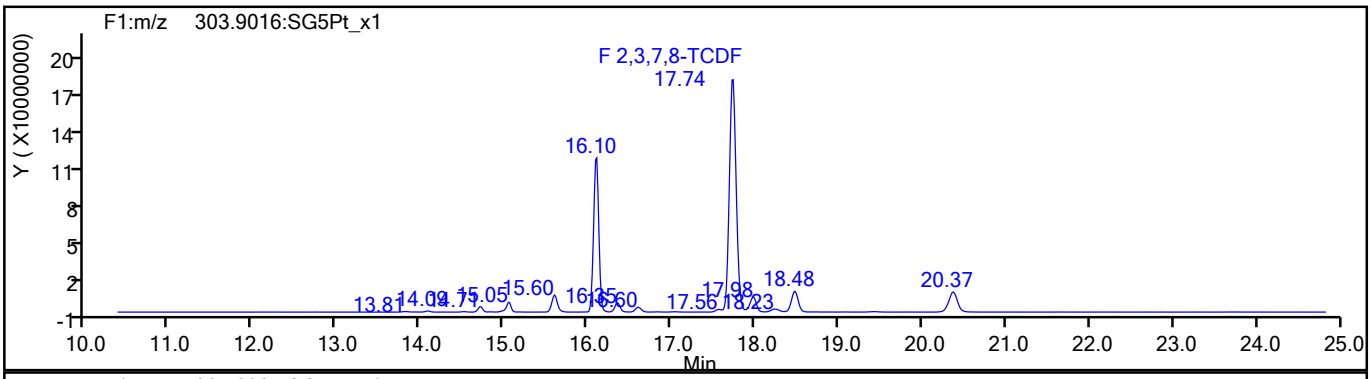

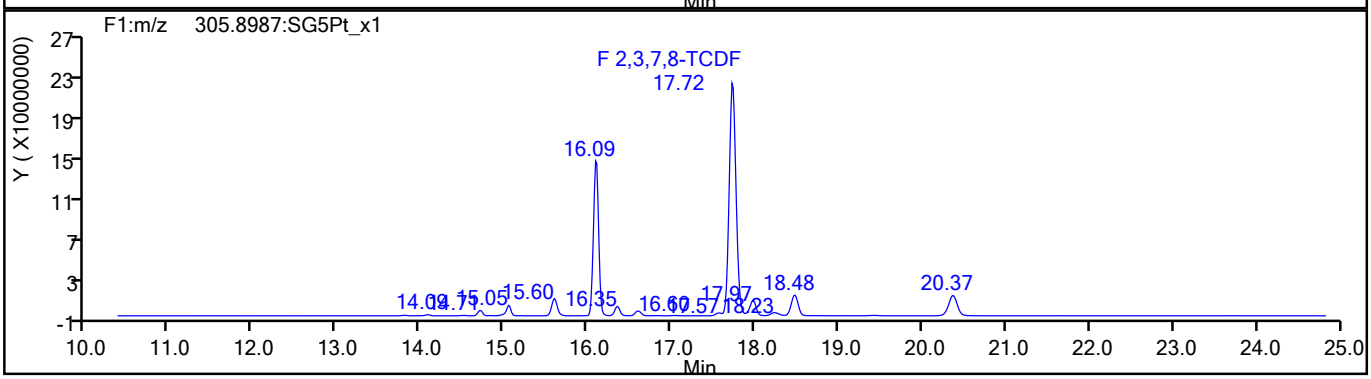

TCDF Standards

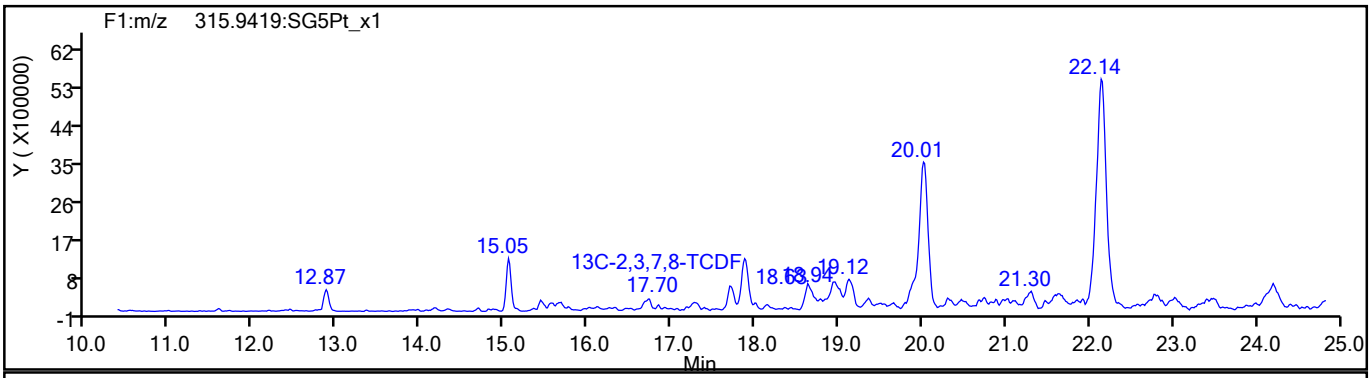

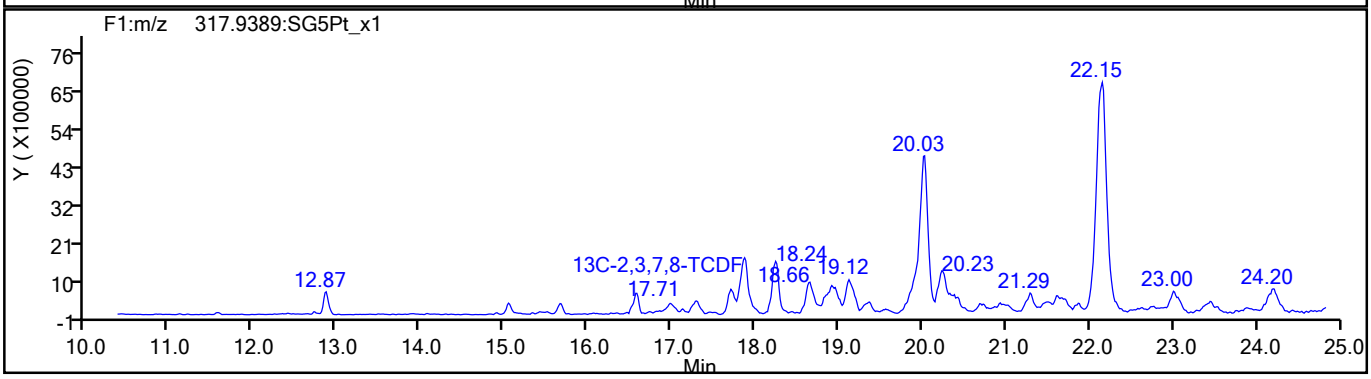

775736

Report Date: 25-Aug-2021 09:02:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_017.d		
Injection Date:	25-Aug-2021 02:50:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	519540	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

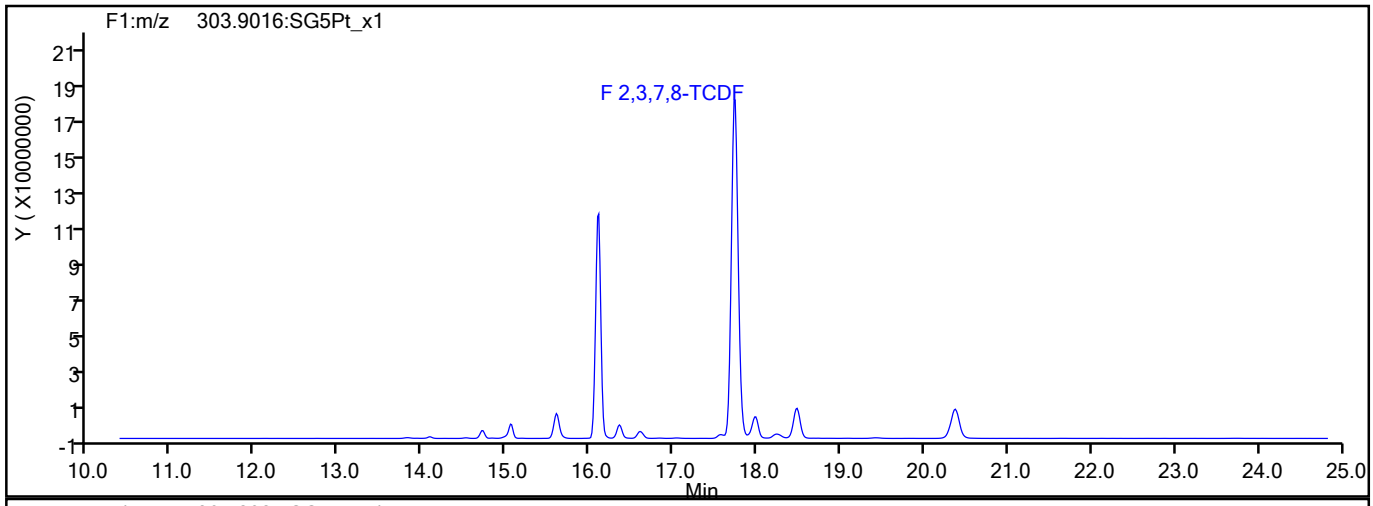

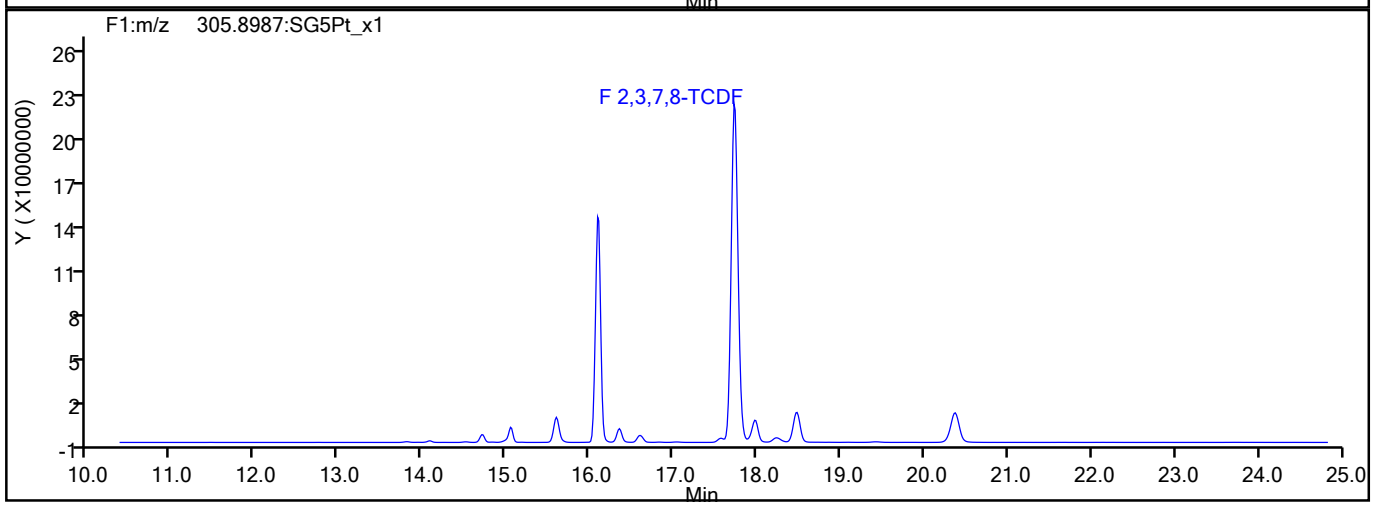

TCDF Interference Mass

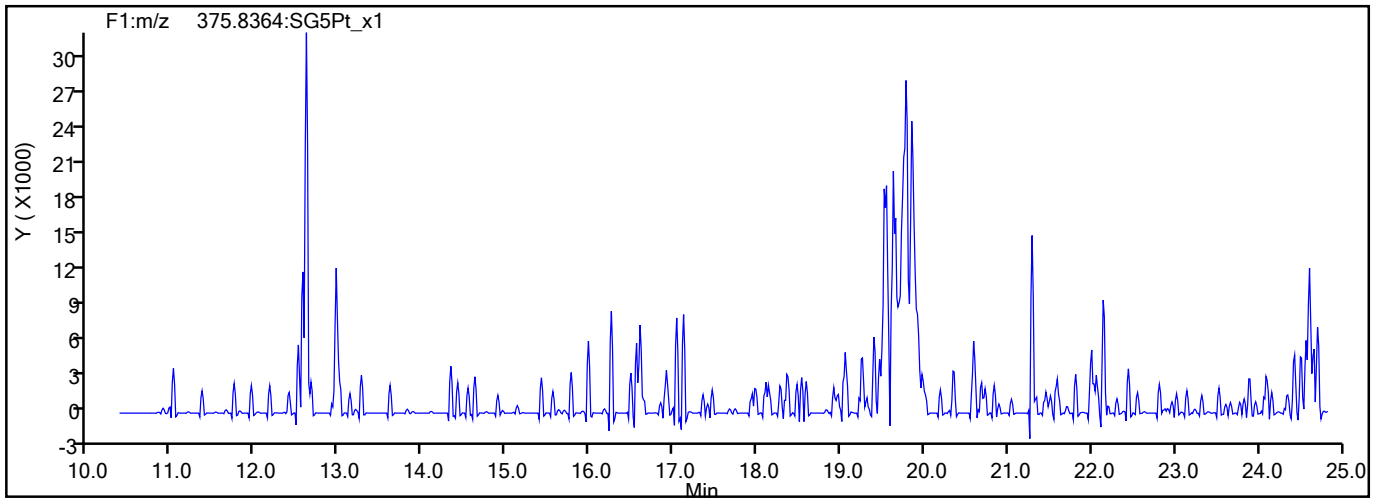

775737

Report Date: 25-Aug-2021 09:02:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_017.d		
Injection Date:	25-Aug-2021 02:50:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	519540	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

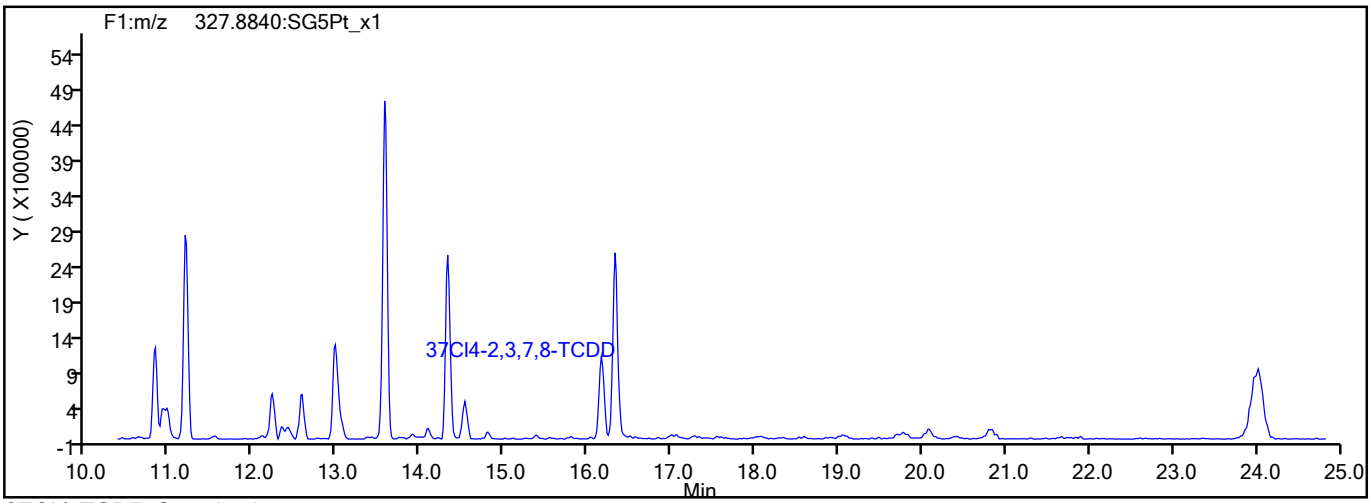

37Cl4-TCDD Standards

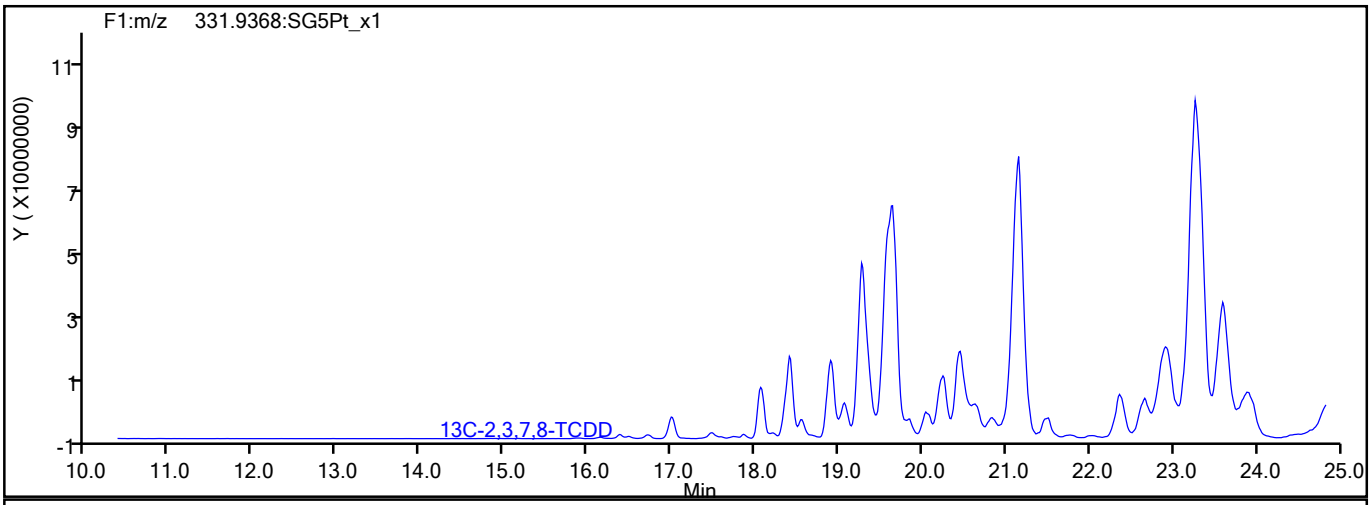

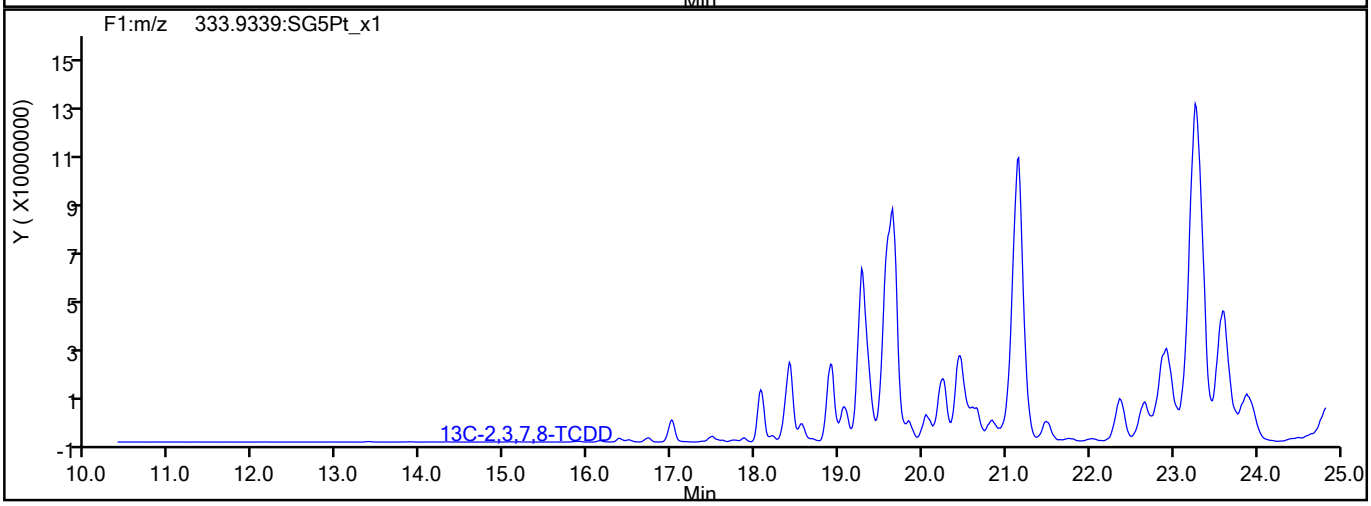

775738

Report Date: 25-Aug-2021 09:02:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_017.d		
Injection Date:	25-Aug-2021 02:50:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (4-6)		
Worklist#:	519540	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

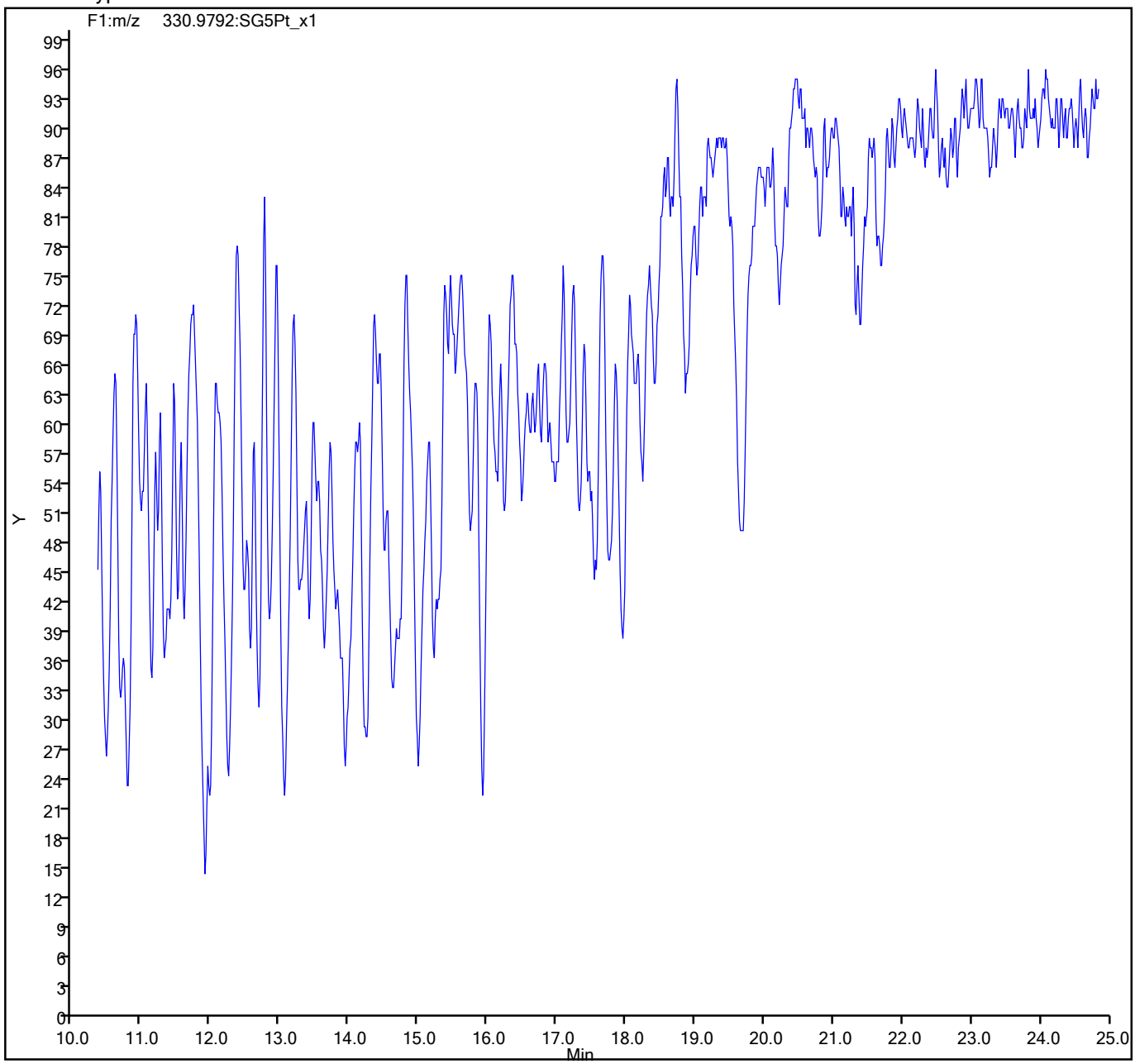

775739

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (6-8)
Lab Sample ID: 320-76769-30
Matrix: Sediment
Lab File ID: 17au21dfs1_12.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.73(g)
Date Analyzed: 08/17/2021 22:36
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517196
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	150		1.3	0.29
40321-76-4	1,2,3,7,8-PeCDD	1.5	J	6.7	0.073
57117-41-6	1,2,3,7,8-PeCDF	17		6.7	0.24
57117-31-4	2,3,4,7,8-PeCDF	9.7		6.7	0.26
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.7	0.051
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.7	0.054
19408-74-3	1,2,3,7,8,9-HxCDD	0.24	J q	6.7	0.049
70648-26-9	1,2,3,4,7,8-HxCDF	24		6.7	0.15
57117-44-9	1,2,3,6,7,8-HxCDF	6.8		6.7	0.15
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.7	0.14
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.7	0.15
35822-46-9	1,2,3,4,6,7,8-HpCDD	6.4	J B	6.7	0.11
67562-39-4	1,2,3,4,6,7,8-HpCDF	6.6	J	6.7	0.086
55673-89-7	1,2,3,4,7,8,9-HpCDF	2.5	J	6.7	0.083
3268-87-9	OCDD	150	B	13	0.26
39001-02-0	OCDF	3.6	J q	13	0.083
41903-57-5	Total TCDD	160	q	1.3	0.29
30402-14-3	Total TCDF	930		1.3	1.2
36088-22-9	Total PeCDD	1.5	J	6.7	0.073
30402-15-4	Total PeCDF	38		6.7	0.25
34465-46-8	Total HxCDD	3.6	J q	6.7	0.051
55684-94-1	Total HxCDF	31		6.7	0.15
37871-00-4	Total HpCDD	19	B	6.7	0.11
38998-75-3	Total HpCDF	11		6.7	0.084

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (6-8)
Lab Sample ID: 320-76769-30
Matrix: Sediment
Lab File ID: 17au21dfs1_12.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.73(g)
Date Analyzed: 08/17/2021 22:36
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517196
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	61		25-164
89059-46-1	13C-2,3,7,8-TCDF	60		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	60		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	59		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	64		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	68		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	64		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	74		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	63		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	62		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	61		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	74		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	69		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	77		26-138
114423-97-1	13C-OCDD	74		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	70		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d
Lims ID: 320-76769-A-30-A
Client ID: 11215702-072221-SS-SJSB076 (6-8)
Sample Type: Client
Inject. Date: 17-Aug-2021 22:36:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-30-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:36:27 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 18-Aug-2021 10:34:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.455	1025142	0.82	2.1E+04	100.0	100.0				a
2,3,7,8-TCDF	20.526	1820055	0.79	1.0802	204.8	204.8	0.4572	0.4572		E
D 13C-2,3,7,8-TCDF	20.491	822605	0.78	1.3459	59.6	59.6	0.1420	0.1420	59.62	
A Non-2,3,7,8-sub-TCDF	19.916	1272568	0.79	1.0802	143.2	143.2	0.4572	91.3		
S Total TCDF					348.0	348.0	0.4572	0.4572		
D 13C-2,3,7,8-TCDD	21.842	582485	0.85	0.9317	61.0	61.0	0.1702	0.1702	60.99	
2,3,7,8-TCDD	21.885	353036	0.80	1.0753	56.4	56.4	0.1076	0.1076		
$ 37Cl4-2,3,7,8-TCDD	21.885	287569		1.0083	27.8	27.8	0.0408	0.0408	69.55	
A Non-2,3,7,8-sub-TCDD	20.750	29653	0.77	1.0753	4.868	4.734	0.1076	4.386		RQ
S Total TCDD					61.2	61.1	0.1076	0.1076		RQ
D 13C-1,2,3,7,8-PeCDF	27.316	687635	1.60	1.1405	58.8	58.8	0.1309	0.1309	58.81	
1,2,3,7,8-PeCDF	27.341	45345	1.65	1.0543	6.255	6.255	0.0908	0.0908		M
D 13C-2,3,4,7,8-PeCDF	28.840	743784	1.54	1.1253	64.5	64.5	0.1326	0.1326	64.47	
2,3,4,7,8-PeCDF	28.857	27022	1.47	1.0079	3.605	3.605	0.0982	0.0982		
A F1 PeCDFs	24.676						0.0185	0.0185		
A Non-2,3,7,8-sub-PeCDF	28.167	32646	1.49	1.0311	4.424	4.424	0.0944	2.134		
S Total PeCDF					14.3	14.3	0.0945	0.0945		
D 13C-1,2,3,7,8-PeCDD	29.631	443402	1.61	0.7165	60.4	60.4	0.3975	0.3975	60.37	
1,2,3,7,8-PeCDD	29.690	2585	1.43	1.0465	0.5571	0.5571	0.0274	0.0274		M
A Non-2,3,7,8-sub-PeCDD	28.556						0.0274	0.1233		RQU
S Total PeCDD					0.5571	0.5571	0.0274	0.0274		
D 13C-1,2,3,4,7,8-HxCDF	34.966	692111	0.54	0.9648	73.6	73.6	0.1900	0.1900	73.56	
1,2,3,4,7,8-HxCDF	34.983	70691	1.23	1.1474	8.902	8.902	0.0572	0.0572		
D 13C-1,2,3,6,7,8-HxCDF	35.126	660178	0.53	1.0708	63.2	63.2	0.1712	0.1712	63.23	
1,2,3,6,7,8-HxCDF	35.142	20408	1.33	1.2178	2.538	2.538	0.0570	0.0570		
D 13C-2,3,4,6,7,8-HxCDF	35.942	619255	0.53	1.0413	61.0	61.0	0.1761	0.1761	60.99	
2,3,4,6,7,8-HxCDF	35.959						0.0547	0.0547		RQU
D 13C-1,2,3,7,8,9-HxCDF	36.826	583694	0.51	0.9731	61.5	61.5	0.1884	0.1884	61.51	
1,2,3,7,8,9-HxCDF	36.953						0.0532	0.0532		RQU
A Non-2,3,7,8-sub-HxCDF	35.074						0.0555	0.1154		RQU
S Total HxCDF					11.4	11.4	0.0555	0.0555		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.633	975120	1.29	1.8E+04	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	36.145	500611	1.31	0.7587	67.7	67.7	0.1373	0.1373	67.67	
1,2,3,4,7,8-HxCDD	36.161						0.0191	0.0191		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.271	533216	1.23	0.8593	63.6	63.6	0.1212	0.1212	63.64	
1,2,3,6,7,8-HxCDD	36.161						0.0202	0.0202		RQU
1,2,3,7,8,9-HxCDD	36.650	517	1.24	1.1094	0.1275	0.0902	0.0182	0.0182		RQ
A Non-2,3,7,8-sub-HxCDD	35.432	6816	1.24	1.0545	1.301	1.250	0.0191	0.9767		RQ
S Total HxCDD					1.429	1.341	0.0192	0.0192		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.640	493636	0.47	0.7359	68.8	68.8	0.2350	0.2350	68.79	
1,2,3,4,6,7,8-HpCDF	38.649	17610	0.95	1.4421	2.474	2.474	0.0320	0.0320		
1,2,3,4,7,8,9-HpCDF	39.895	6305	1.12	1.3092	0.9299	0.9299	0.0311	0.0311		M
D 13C-1,2,3,4,7,8,9-HpCDF	39.887	517936	0.44	0.6854	77.5	77.5	0.2523	0.2523	77.50	
A Non-2,3,7,8-sub-HpCDF	39.277	4869	0.89	1.3756	0.6998	0.6998	0.0314	0.6998		
S Total HpCDF					4.103	4.103	0.0315	0.0315		
D 13C-1,2,3,4,6,7,8-HpCDD	39.584	487597	1.08	0.6745	74.1	74.1	0.1712	0.1712	74.13	
1,2,3,4,6,7,8-HpCDD	39.600	12192	0.90	1.0503	2.381	2.381	0.0401	0.0401		
A Non-2,3,7,8-sub-HpCDD	39.277	24644	0.94	1.0503	4.812	4.812	0.0401	4.812		
S Total HpCDD					7.193	7.193	0.0401	0.0401		
D 13C-OCDD	42.089	785839	0.91	0.5446	148.0	148.0	0.1579	0.1579	73.99	
OCDF	42.182	6907	0.89	1.3168	1.433	1.335	0.0311	0.0311		RQM
OCDD	42.089	238706	0.89	1.0620	57.2	57.2	0.0960	0.0960		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d
Lims ID: 320-76769-A-30-A
Client ID: 11215702-072221-SS-SJSB076 (6-8)
Sample Type: Client
Inject. Date: 17-Aug-2021 22:36:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-30-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:36:27 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 18-Aug-2021 10:34:18

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.455	21.483	-2		463041	61955	53	132	1169		a
333.9338	21.464	21.483	-1		562101	76748	35	87	2193	0.82(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.526	20.482	3	1.002	803631	104067	40	100	2602		
305.8987	20.517	20.482	2	1.001	1016424	134696	184	460	732	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.491	20.594	-6	0.955	359289	50524	54	135	936		
317.9389	20.491	20.594	-6	0.955	463316	62870	52	130	1209	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.969	19.916	-117	0.877	11858	1858	40	100	46		
305.8987	17.978	19.916	-116	0.877	13776	2335	184	460	13	0.86(0.65-0.89)	
303.9016	18.477	19.916	-86	0.902	19760	2619	40	100	65		
305.8987	18.468	19.916	-87	0.901	27845	3725	184	460	20	0.71(0.65-0.89)	
303.9016	18.908	19.916	-60	0.923	23181	2587	40	100	65		
305.8987	18.882	19.916	-62	0.921	26320	3769	184	460	20	0.88(0.65-0.89)	
303.9016	19.295	19.916	-37	0.942	37060	4899	40	100	122		
305.8987	19.304	19.916	-37	0.942	46117	6422	184	460	35	0.80(0.65-0.89)	
303.9016	19.794	19.916	-7	0.966	356227	51157	40	100	1279		
305.8987	19.794	19.916	-7	0.966	455032	66203	184	460	360	0.78(0.65-0.89)	
303.9016	21.300	19.916	83	1.039	59004	8166	40	100	204		
305.8987	21.300	19.916	83	1.039	70872	9168	184	460	50	0.83(0.65-0.89)	
303.9016	23.691	19.916	226	1.156	56388	9678	40	100	242		
305.8987	23.691	19.916	226	1.156	69128	12769	184	460	69	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.842	21.790	3	1.018	268139	35043	53	132	661		
333.9338	21.842	21.790	3	1.018	314346	40147	35	87	1147	0.85(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											
319.8965	21.885	21.825	4	1.002	156991	19502	21	52	929		
321.8936	21.885	21.825	4	1.002	196045	24333	14	35	1738	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.885	21.905	-1	1.020	287569	36526	23	57	1588		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	19.786	20.750	-58	0.906	503	108	21	52	5		
321.8936	19.777	20.750	-58	0.905	1015	164	14	35	12	0.50(0.65-0.89)	
	Empc Correction				653	140	14	35	10		
319.8965	22.547	20.750	108	1.032	12053	1724	21	52	82		
321.8936	22.556	20.750	108	1.033	15422	2026	14	35	145	0.78(0.65-0.89)	
319.8965	22.745	20.750	119	1.041	531	171	21	52	8		
	Empc Correction				320	137	21	52	7		
321.8936	22.702	20.750	117	1.039	416	178	14	35	13	1.28(0.65-0.89)	
319.8965	23.751	20.750	180	1.087	391	155	21	52	7		
	Empc Correction				124	43	21	52	2		
321.8936	23.751	20.750	180	1.087	162	57	14	35	4	2.41(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.316	27.343	-2	1.273	422898	64209	48	120	1338		
353.8970	27.316	27.343	-2	1.273	264737	42377	35	87	1211	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.341	27.368	-2	1.001	28249	4515	24	60	188		
341.8567	27.333	27.368	-2	1.001	17096	2489	17	42	146	1.65(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.840	28.867	-2	1.344	450522	62995	48	120	1312		
353.8970	28.840	28.867	-2	1.344	293262	40098	35	87	1146	1.54(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.857	28.884	-2	1.001	16094	2492	24	60	104		
341.8567	28.865	28.884	-1	1.001	10928	1553	17	42	91	1.47(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.676						7	17			
341.8567	24.676						1	2			
A Non-2,3,7,8-sub-PeCDF											
339.8597	25.859	28.167	-138	0.947	9240	1577	24	60	66		
341.8567	25.867	28.167	-138	0.947	6506	1120	17	42	66	1.42(1.32-1.78)	
339.8597	27.939	28.167	-14	1.023	6620	1008	24	60	42		
341.8567	27.914	28.167	-15	1.022	4165	586	17	42	34	1.59(1.32-1.78)	
339.8597	29.210	28.167	62	1.069	3659	482	24	60	20		
341.8567	29.193	28.167	61	1.069	2456	404	17	42	24	1.49(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.631	29.667	-2	1.381	273350	35055	149	372	235		
369.8919	29.640	29.667	-2	1.381	170052	24155	9	22	2684	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											M
355.8546	29.690	29.692	0	1.002	1520	244	6	15	41		
357.8516	29.673	29.692	-1	1.001	1065	151	1	2	151	1.43(1.32-1.78)	M

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.928	28.556	-97	0.909	348	75	6	15	13		
357.8516	26.937	28.556	-97	0.909	267	75	1	2	75	1.30(1.32-1.78)	
	Empc Correction				224	48	1	2	48		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.966	34.974	-1	0.954	242604	45596	59	147	773		
385.8610	34.957	34.974	-1	0.954	449507	86898	103	257	844	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.983	35.000	-1	1.000	38988	7712	18	45	428		
375.8178	34.983	35.000	-1	1.000	31703	6037	17	42	355	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.126	35.134	-1	0.959	229782	46396	59	147	786		
385.8610	35.117	35.134	-1	0.959	430396	78879	103	257	766	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.142	35.151	-1	1.000	11644	2120	18	45	118		
375.8178	35.134	35.151	-1	1.000	8764	1584	17	42	93	1.33(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.942	35.951	-1	0.981	213923	45330	59	147	768		
385.8610	35.934	35.951	-1	0.981	405332	85611	103	257	831	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQU
373.8208	35.968						18	45			
375.8178	35.968						17	42			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.826	36.843	-1	1.005	196157	44843	59	147	760		
385.8610	36.826	36.843	-1	1.005	387537	87083	103	257	845	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQU
373.8208	36.852						18	45			
375.8178	36.852						17	42			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.450	35.074	-97	0.957	492	242	18	45	13		
375.8178	33.458	35.074	-97	0.957	1863	301	17	42	18	0.26(1.05-1.43)	
	Empc Correction				396	195	17	42	11		
13C-1,2,3,7,8,9-HxCDD											a
401.8559	36.633	36.641	0		548742	123984	51	127	2431		a
403.8529	36.633	36.641	0		426378	96887	41	102	2363	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.145	36.161	-1	0.987	283720	61567	51	127	1207		
403.8529	36.153	36.161	0	0.987	216891	46744	41	102	1140	1.31(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.178						5	12			
391.8127	36.178						4	10			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.271	36.279	0	0.990	294143	60000	51	127	1176		
403.8529	36.271	36.279	0	0.990	239073	49806	41	102	1215	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8158	36.296						5	12			
391.8127	36.296						4	10			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDD											RQ
389.8158	36.650	36.658	0	1.014	500	120	5	12	24		
	Empc Correction				286	80	5	12	16		
391.8127	36.658	36.658	0	1.014	231	65	4	10	16	2.16(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	34.283	35.432	-69	0.945	3117	512	5	12	102		
391.8127	34.275	35.432	-69	0.945	2207	553	4	10	138	1.41(1.05-1.43)	
389.8158	35.370	35.432	-4	0.975	826	194	5	12	39		
391.8127	35.395	35.432	-2	0.976	943	221	4	10	55	0.88(1.05-1.43)	
	Empc Correction				666	156	4	10	39		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.640	38.647	0	1.055	158898	38608	45	112	858		
419.8220	38.640	38.647	0	1.055	334738	85101	108	270	788	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.649	38.654	0	1.000	8592	2097	18	45	117		
409.7788	38.649	38.654	0	1.000	9018	2356	5	12	471	0.95(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											M
407.7817	39.895	39.900	0	1.000	3328	821	18	45	46		M
409.7788	39.904	39.900	0	1.000	2977	806	5	12	161	1.12(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.887	39.901	-1	1.089	159097	43124	45	112	958		
419.8220	39.887	39.901	-1	1.089	358839	96801	108	270	896	0.44(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.028	39.277	-15	1.010	2298	550	18	45	31		
409.7788	39.011	39.277	-16	1.010	2571	604	5	12	121	0.89(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.584	39.590	0	1.081	253116	66444	56	140	1187		
437.8140	39.584	39.590	0	1.081	234481	64277	46	115	1397	1.08(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.600	39.597	0	1.000	5769	1434	13	32	110		
425.7737	39.592	39.597	0	1.000	6423	1710	9	22	190	0.90(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.952	39.277	-19	0.984	11937	3045	13	32	234		
425.7737	38.960	39.277	-19	0.984	12707	3394	9	22	377	0.94(0.88-1.20)	
13C-OCDD											
469.7780	42.089	42.094	0	1.149	373604	85433	36	90	2373		
471.7750	42.081	42.094	-1	1.149	412235	95028	40	100	2376	0.91(0.76-1.02)	
OCDF											RQM
441.7428	42.182	42.187	0	1.002	3759	967	4	10	242		M
	Empc Correction				3252	995	4	10	249		
443.7399	42.182	42.187	0	1.002	3655	1119	11	27	102	1.03(0.76-1.02)	M
OCDD											
457.7377	42.089	42.103	-1	1.000	112342	26285	20	50	1314		
459.7348	42.089	42.103	-1	1.000	126364	30551	17	42	1797	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 19-Aug-2021 12:36:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Lims ID:	320-76769-A-30-A		
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Inject. Date:	17-Aug-2021 22:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	11

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	822605	113394

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	822605	113394

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.969	11858	1858	13776	2335	2.88	0.86	
18.477	19760	2619	27845	3725	5.36	0.71	
18.908	23181	2587	26320	3769	5.57	0.88	
19.295	37060	4899	46117	6422	9.36	0.80	
19.794	356227	51157	455032	66203	91.3	0.78	
21.300	59004	8166	70872	9168	14.6	0.83	
23.691	56388	9678	69128	12769	14.1	0.82	
Signal Totals:							
	563478	80964	709090	104391			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1272568	185355				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 143.215 = (1272568 * 100.000) / (822605 * 1.080)

Report Date: 19-Aug-2021 12:36:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Lims ID:	320-76769-A-30-A		
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Inject. Date:	17-Aug-2021 22:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	11

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	582485	75190

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	582485	75190

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.786	503	108	1015	164	0.2423	0.50	RQ
19.786	503	108	653	140	0.1846		Empc Correction
22.547	12053	1724	15422	2026	4.39	0.78	
22.745	531	171	416	178	0.1512	1.28	RQ
22.745	320	137	416	178	0.1175		Empc Correction
23.751	391	155	162	57	0.0883	2.41	RQ
23.751	124	43	162	57	0.0457		Empc Correction
Signal Totals:							
	13000	2012	16653	2401			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	30493	4583				0.79	RQ
	29653	4413					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.868 = (30493 * 100.000) / (582485 * 1.075)

Empc Amount: 4.734 = (29653 * 100.000) / (582485 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 12:36:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Lims ID:	320-76769-A-30-A		
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Inject. Date:	17-Aug-2021 22:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	11

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	687635	106586
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	743784	103093

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	715709	104839

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.859	9240	1577	6506	1120	2.13	1.42	
27.939	6620	1008	4165	586	1.46	1.59	
29.210	3659	482	2456	404	0.8287	1.49	
Signal Totals:							
	19519	3067	13127	2110			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	32646	5177				1.49	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.424 = (32646 * 100.000) / (715709 * 1.031)

Report Date: 19-Aug-2021 12:36:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Lims ID:	320-76769-A-30-A		
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Inject. Date:	17-Aug-2021 22:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	11

Non-2,3,7,8-sub-PeCDD, RT: 28.556

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	443402	59210

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	443402	59210

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.928	348	75	267	75	0.1325	1.30	RQ
26.928	348	75	224	48	0.1233		Empc Correction
27.467	148	46	98	30	0.0530	1.51	
28.621	224	86	54	23	0.0599	4.15	RQ
28.621	83	35	54	23	0.0295		Empc Correction
30.271	226	46	38	20	0.0569	5.95	RQ
30.271	58	30	38	20	0.0207		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:36:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Lims ID:	320-76769-A-30-A		
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Inject. Date:	17-Aug-2021 22:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	11

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	692111	132494
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	660178	125275
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	619255	130941
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	583694	131926

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	638809	130159

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.450	492	242	1863	301	0.3060	0.26	RQ
33.450	492	242	396	195	0.1154		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:36:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Lims ID:	320-76769-A-30-A		
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Inject. Date:	17-Aug-2021 22:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	11

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	500611	108311
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	533216	109806
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	516913	109058

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.283	3117	512	2207	553	0.9767	1.41	
35.370	826	194	943	221	0.3245	0.88	RQ
35.370	826	194	666	156	0.2737		Empc Correction
Signal Totals:							
	3943	706	2873	709			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7093	1480				1.25	RQ
	6816	1415					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.301 = (7093 * 100.000) / (516913 * 1.055)

Empc Amount: 1.250 = (6816 * 100.000) / (516913 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 12:36:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Lims ID:	320-76769-A-30-A		
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Inject. Date:	17-Aug-2021 22:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	11

Non-2,3,7,8-sub-HpCDF, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	493636	123709
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	517936	139925

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	505786	131817

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
39.028	2298	550	2571	604	0.6998	0.89	
Signal Totals:							
	2298	550	2571	604			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4869	1154				0.89	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.6998 = (4869 * 100.000) / (505786 * 1.376)

Report Date: 19-Aug-2021 12:36:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Lims ID:	320-76769-A-30-A		
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Inject. Date:	17-Aug-2021 22:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	11

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	487597	130721

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	487597	130721

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.952	11937	3045	12707	3394	4.81	0.94	
Signal Totals:							
	11937	3045	12707	3394			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	24644	6439				0.94	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.812 = (24644 * 100.000) / (487597 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d				
Injection Date:	17-Aug-2021 22:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-30-A	Lab Sample ID:	320-76769-30		
Client ID:	11215702-072221-SS-SJSB076 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.33
Area: 15229
Amount: 5.997395
Amount Units: pg/ul

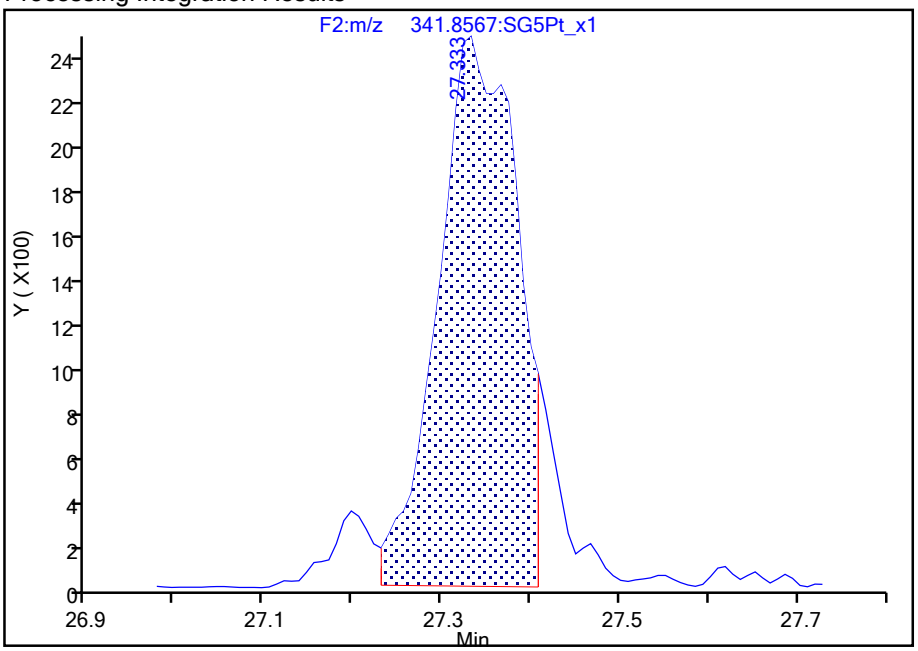

Manual Integration Results

RT: 27.33
Area: 17096
Amount: 6.254931
Amount Units: pg/ul

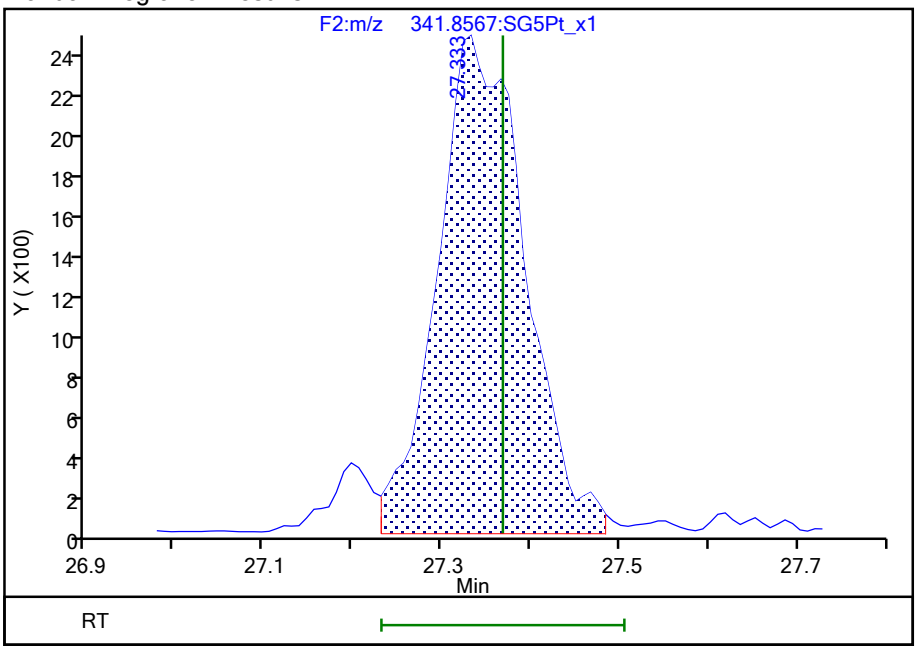

Reviewer: dadunj, 19-Aug-2021 12:32:03

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d				
Injection Date:	17-Aug-2021 22:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-30-A	Lab Sample ID:	320-76769-30		
Client ID:	11215702-072221-SS-SJSB076 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 2

Processing Integration Results

RT: 29.67
Area: 481
Amount: 0.431232
Amount Units: pg/ul

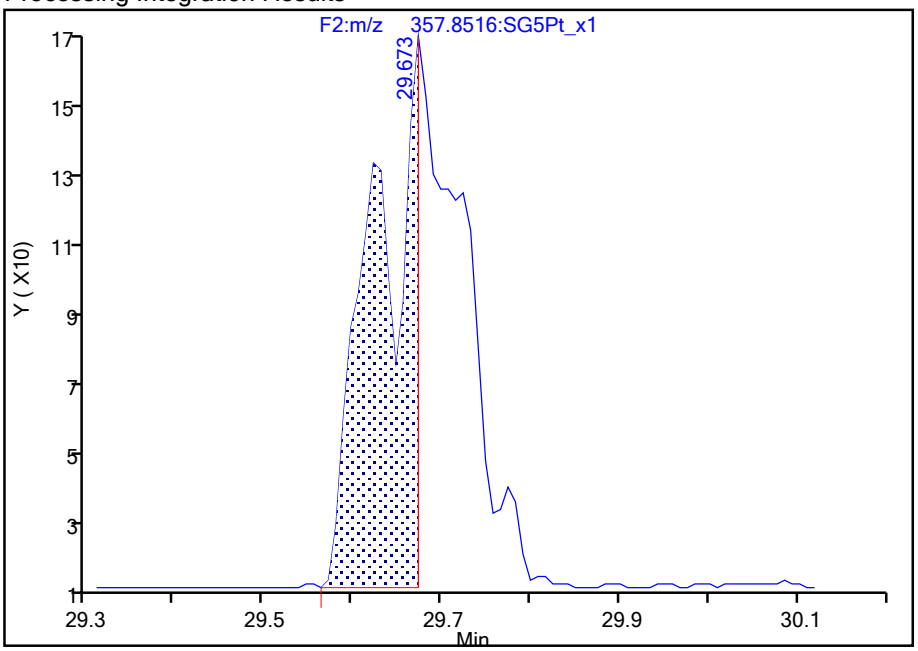

Manual Integration Results

RT: 29.67
Area: 1065
Amount: 0.557089
Amount Units: pg/ul

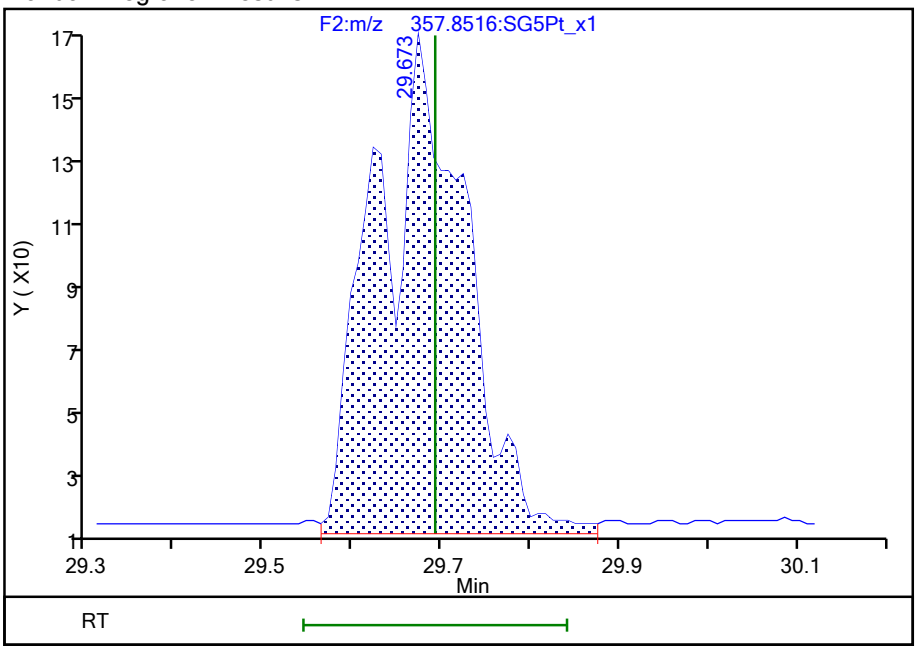

Reviewer: dadunj, 19-Aug-2021 12:32:16

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d				
Injection Date:	17-Aug-2021 22:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-30-A	Lab Sample ID:	320-76769-30		
Client ID:	11215702-072221-SS-SJSB076 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 39.90
Area: 3564
Amount: 0.964666
Amount Units: pg/ul

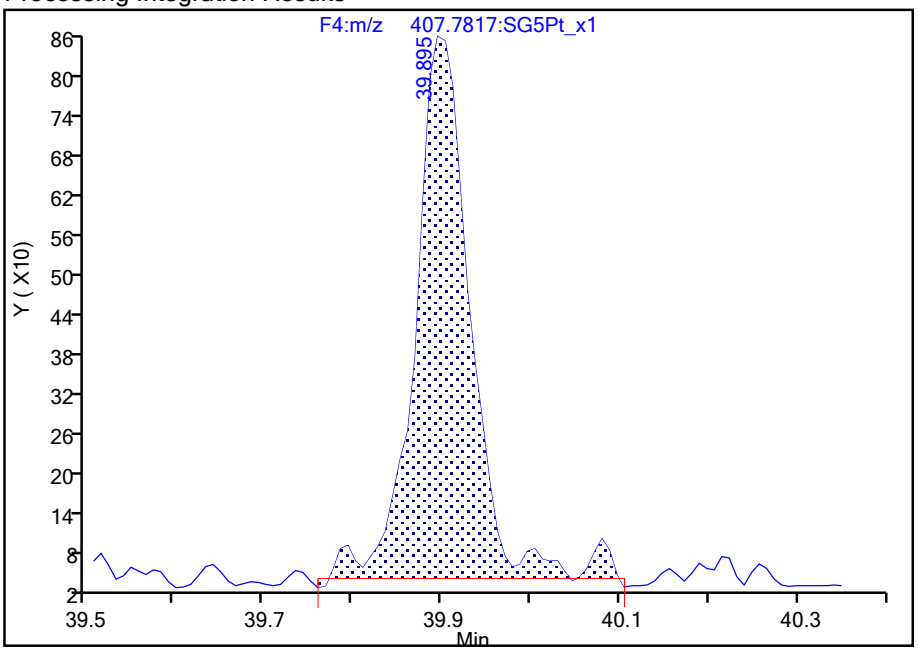

Manual Integration Results

RT: 39.90
Area: 3328
Amount: 0.929861
Amount Units: pg/ul

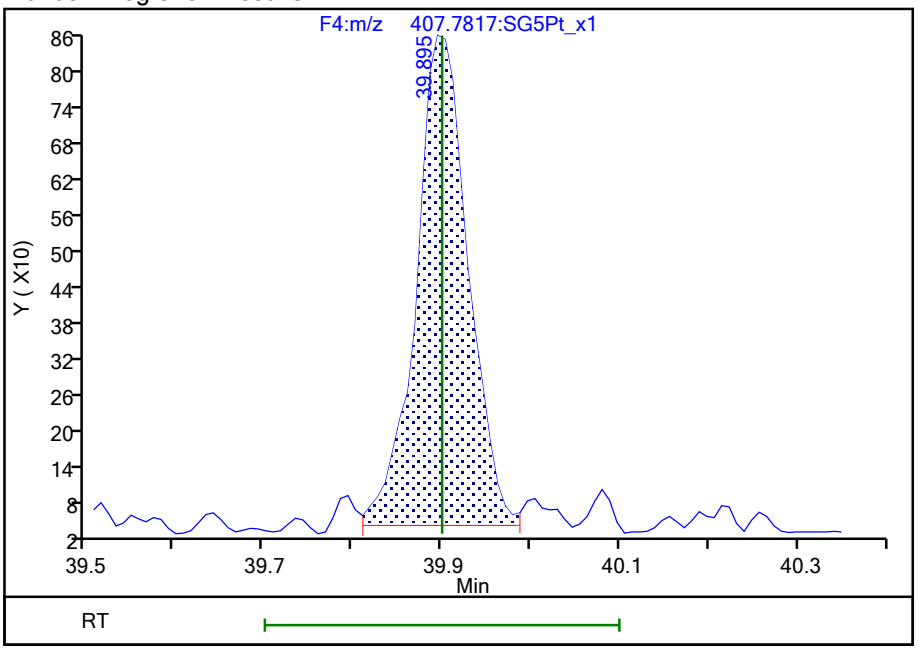

Reviewer: dadunj, 19-Aug-2021 12:33:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d				
Injection Date:	17-Aug-2021 22:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-30-A	Lab Sample ID:	320-76769-30		
Client ID:	11215702-072221-SS-SJSB076 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 42.18
Area: 3969
Amount: 1.569594
Amount Units: pg/ul

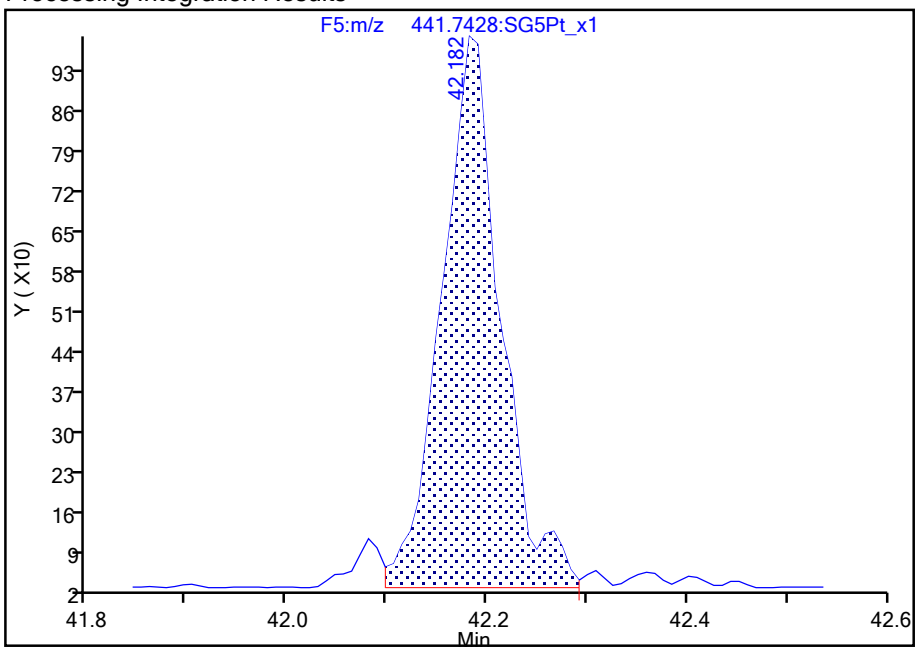

Manual Integration Results

RT: 42.18
Area: 3759
Amount: 1.432948
Amount Units: pg/ul

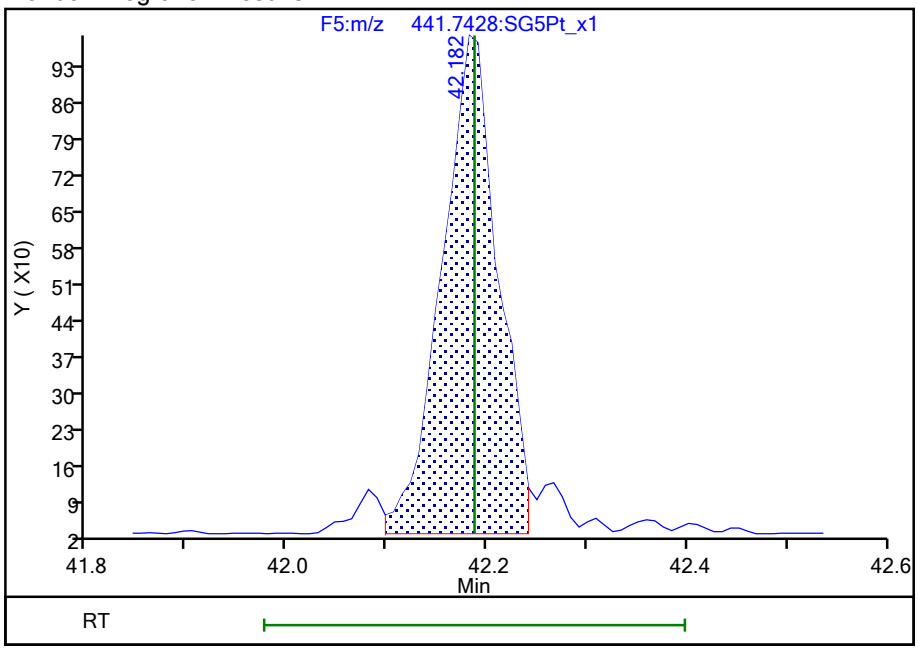

Reviewer: dadunj, 19-Aug-2021 12:36:19

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d				
Injection Date:	17-Aug-2021 22:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-30-A	Lab Sample ID:	320-76769-30		
Client ID:	11215702-072221-SS-SJSB076 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 42.18
Area: 4152
Amount: 1.569594
Amount Units: pg/ul

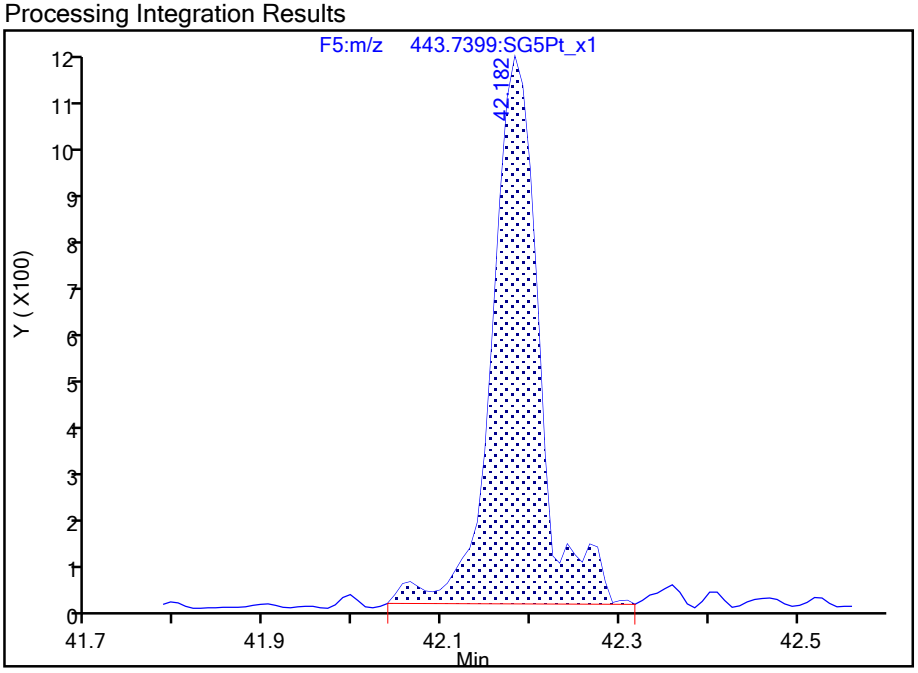

Manual Integration Results

RT: 42.18
Area: 3655
Amount: 1.432948
Amount Units: pg/ul

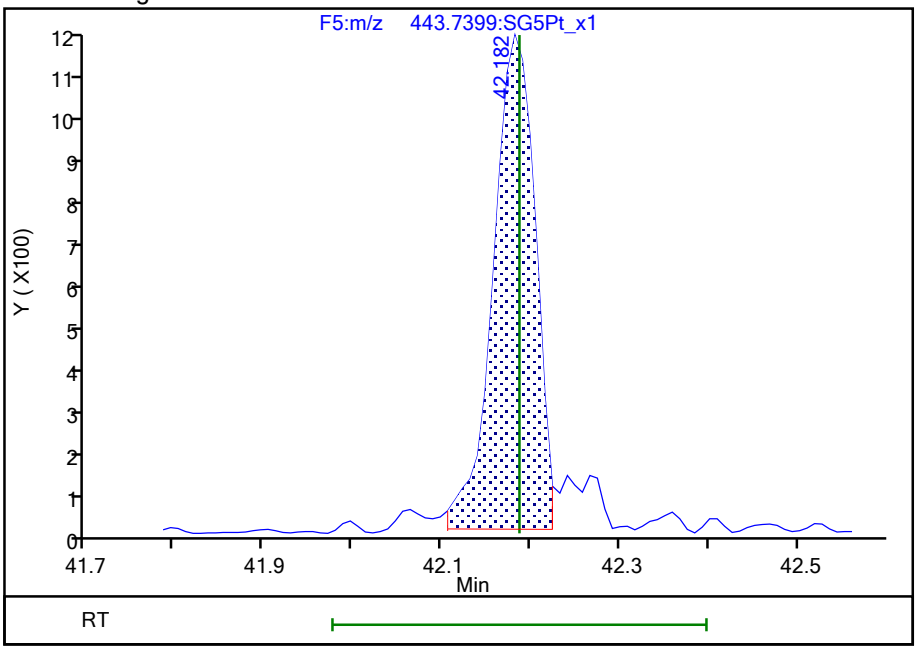

Reviewer: dadunj, 19-Aug-2021 12:36:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 19-Aug-2021 12:36:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

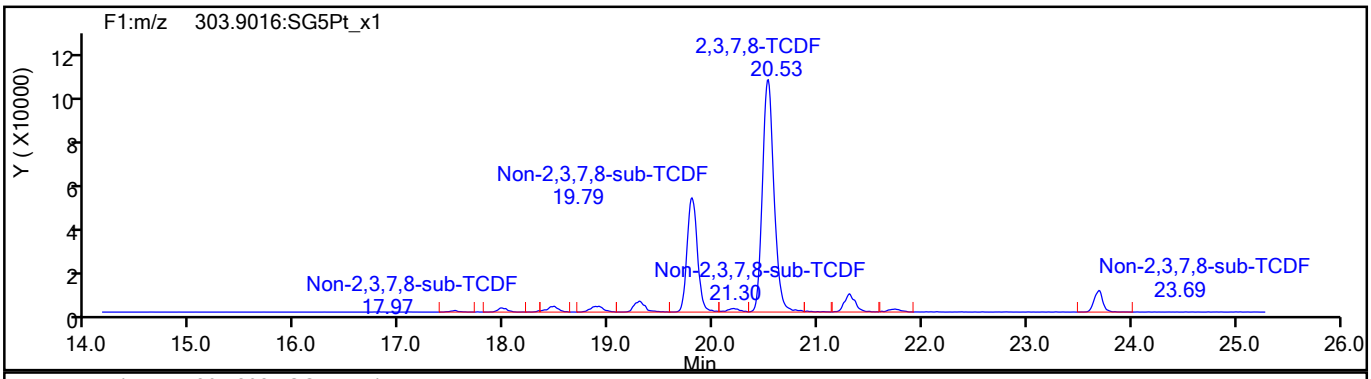

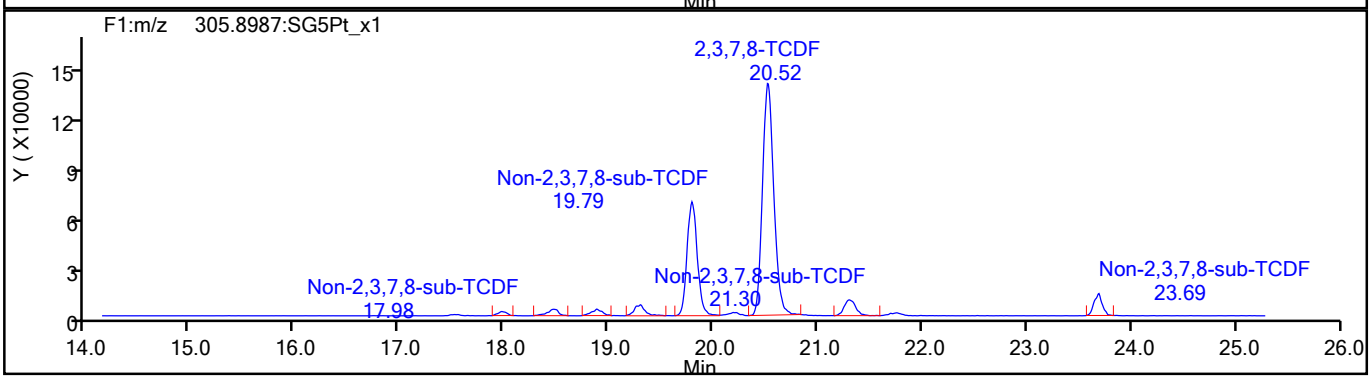

TCDF Standards

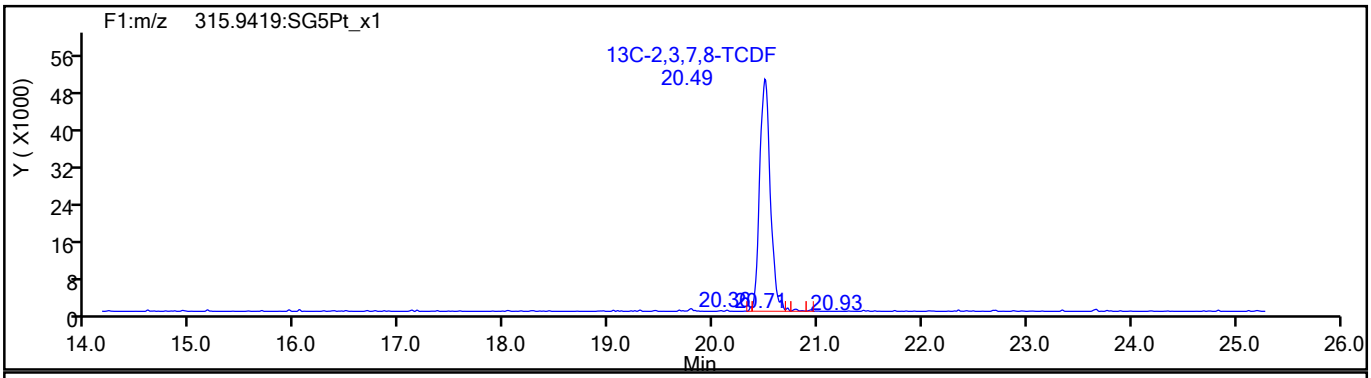

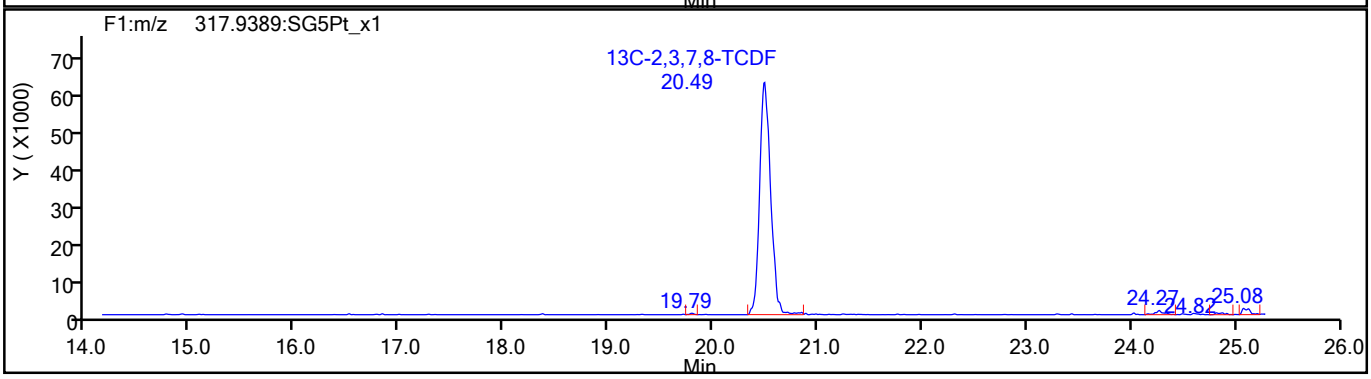

775762

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

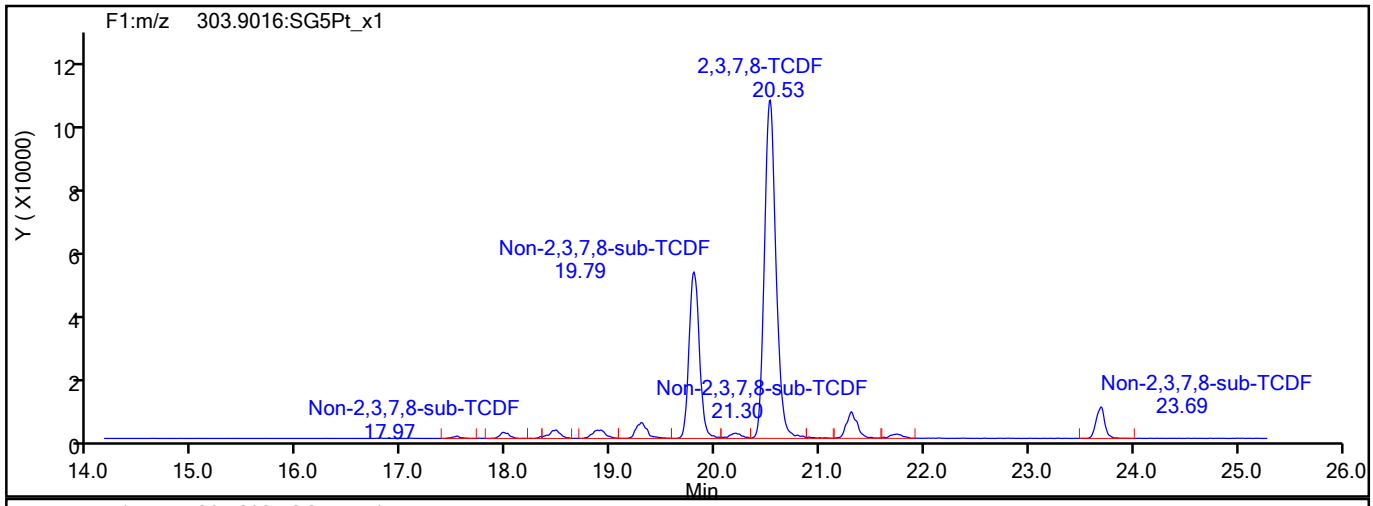

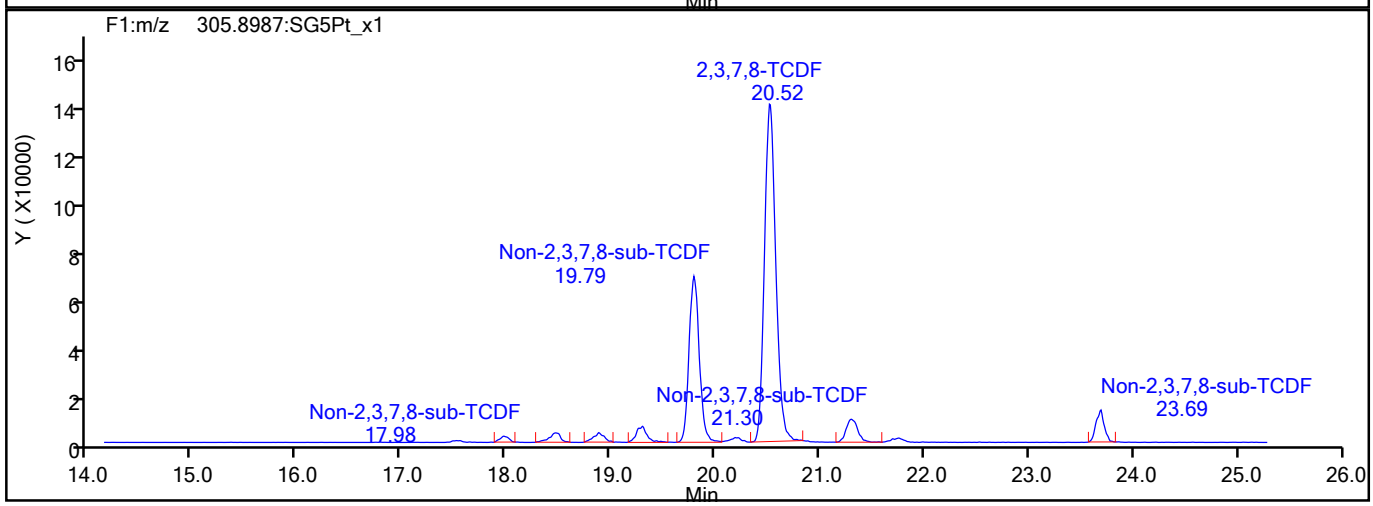

TCDF Interference Mass

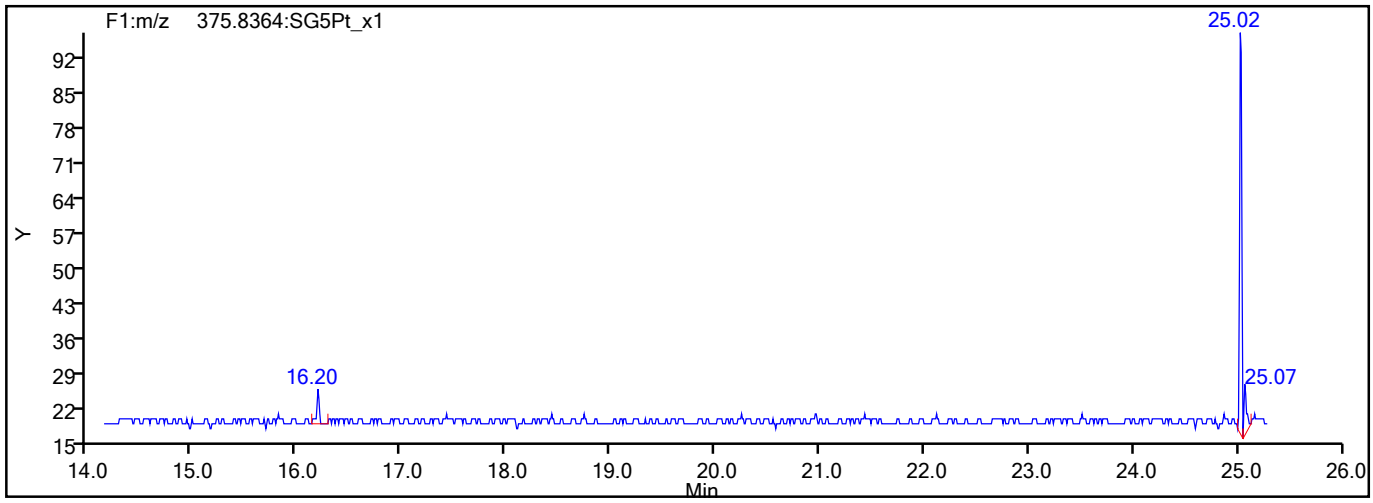

775763

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

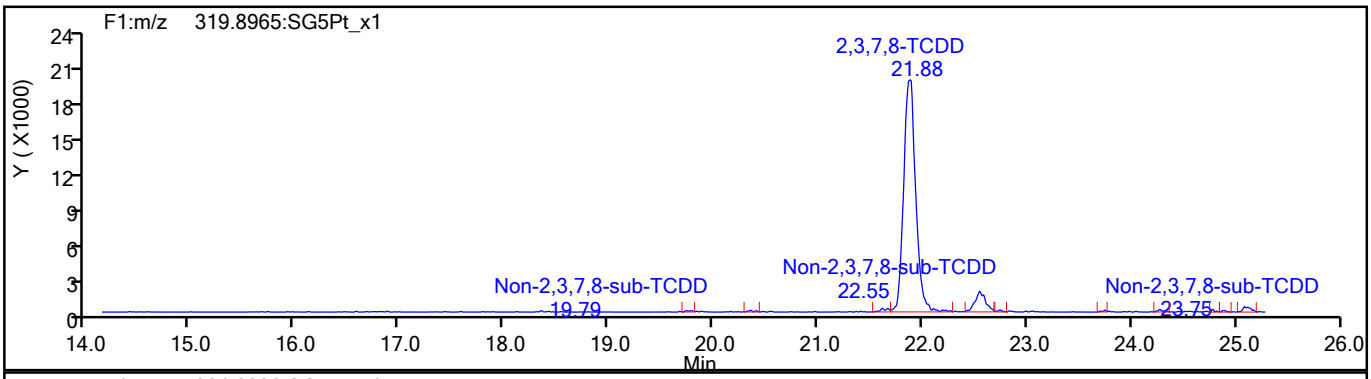

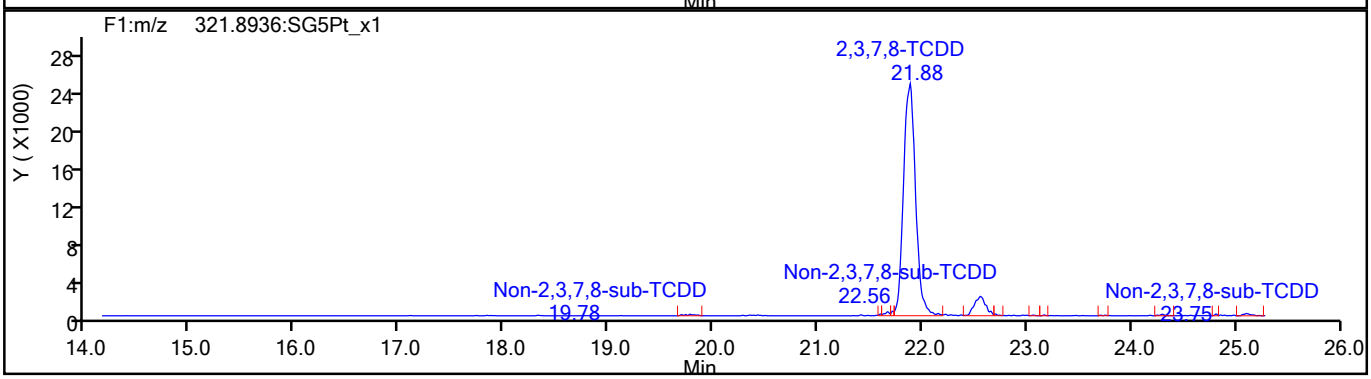

TCDD Standards

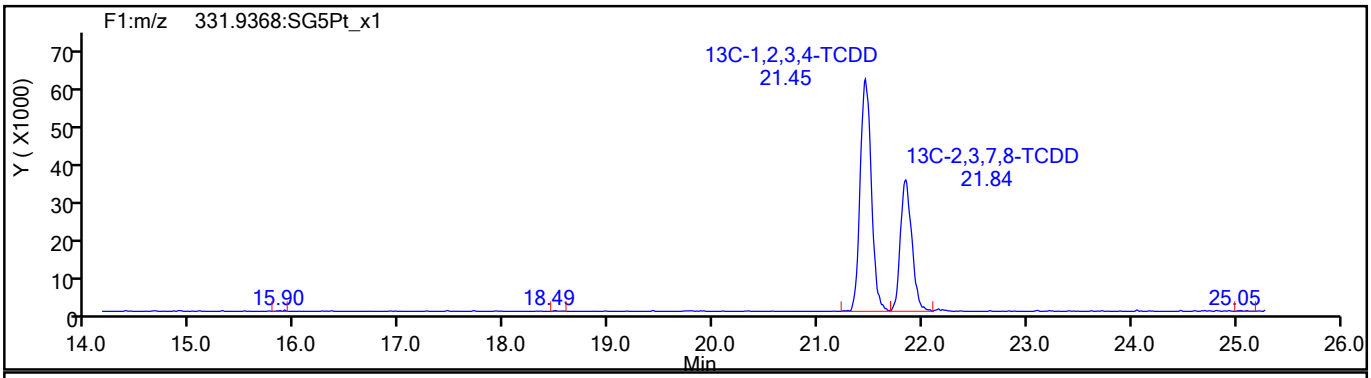

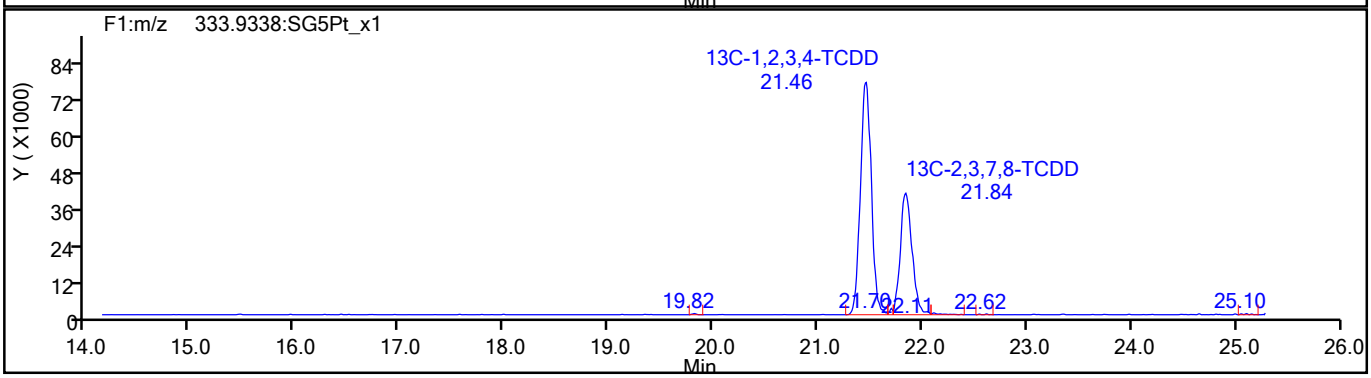

775764

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

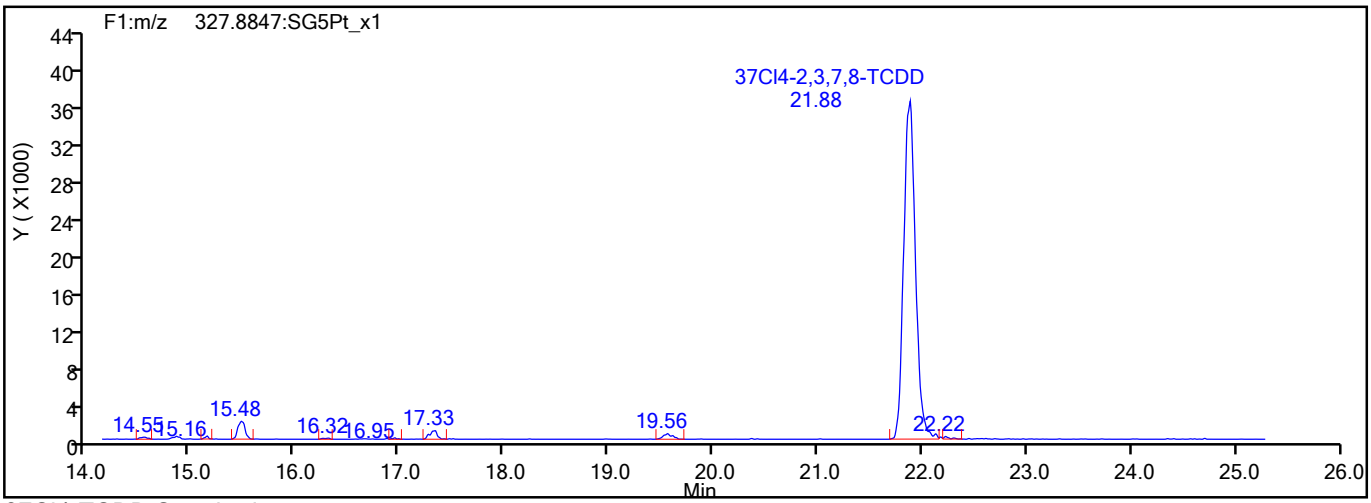

37Cl4-TCDD Standards

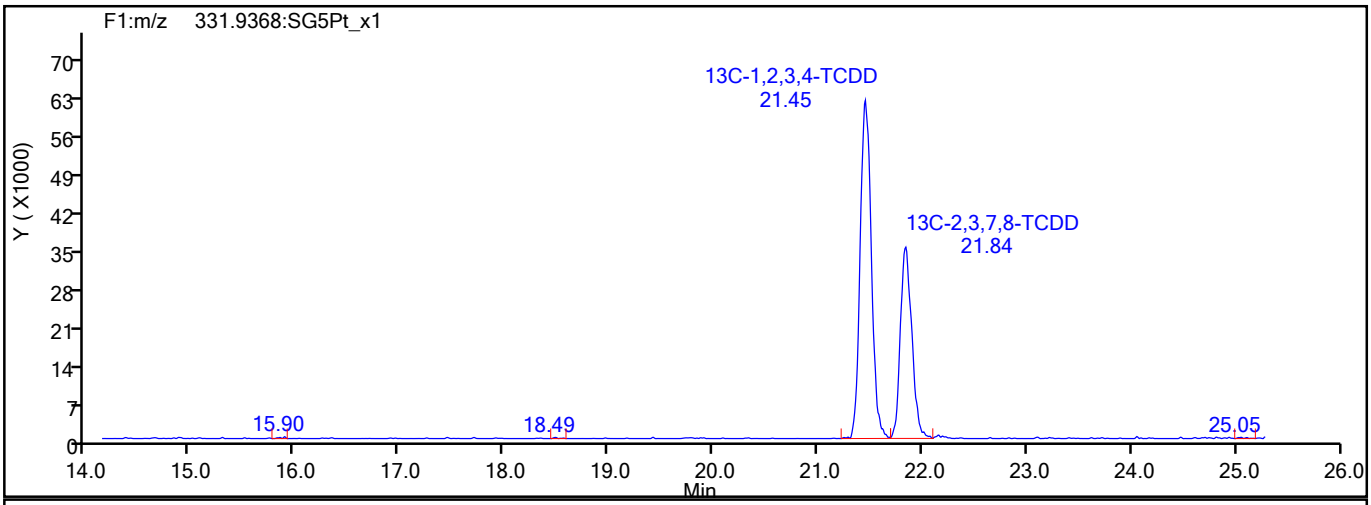

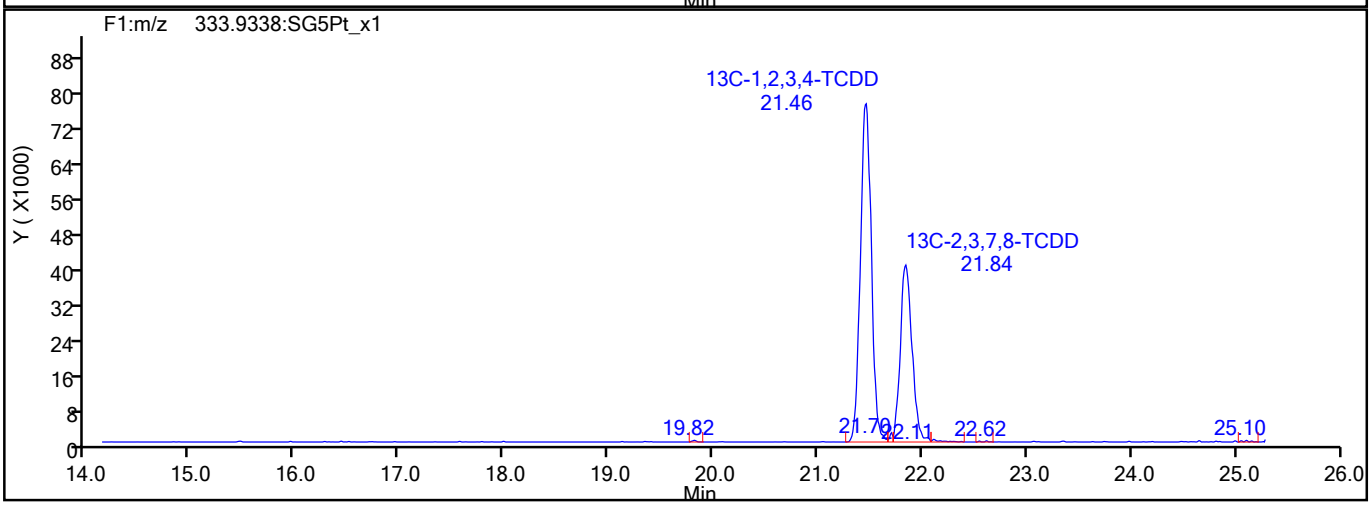

775765

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

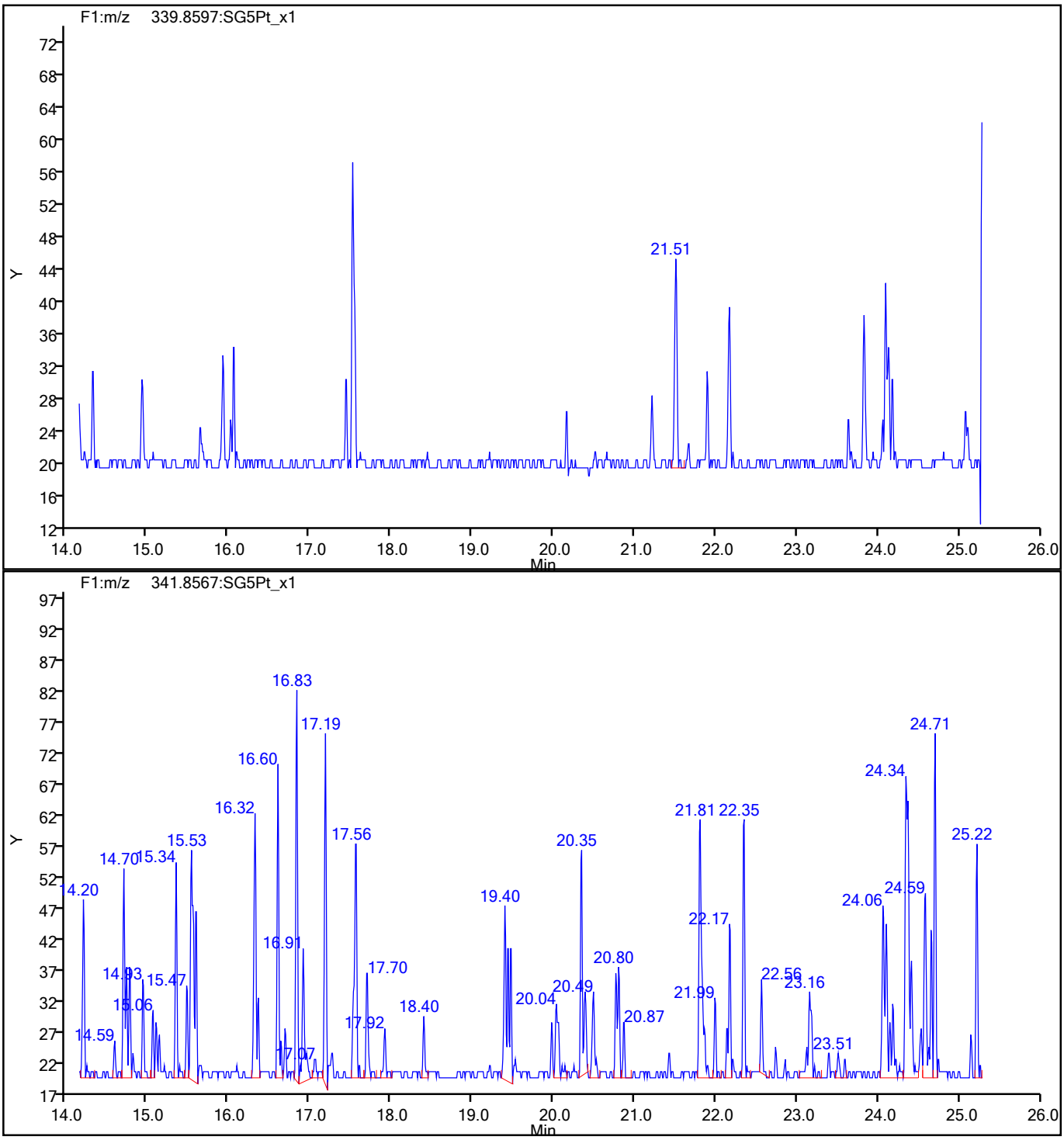

775766

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

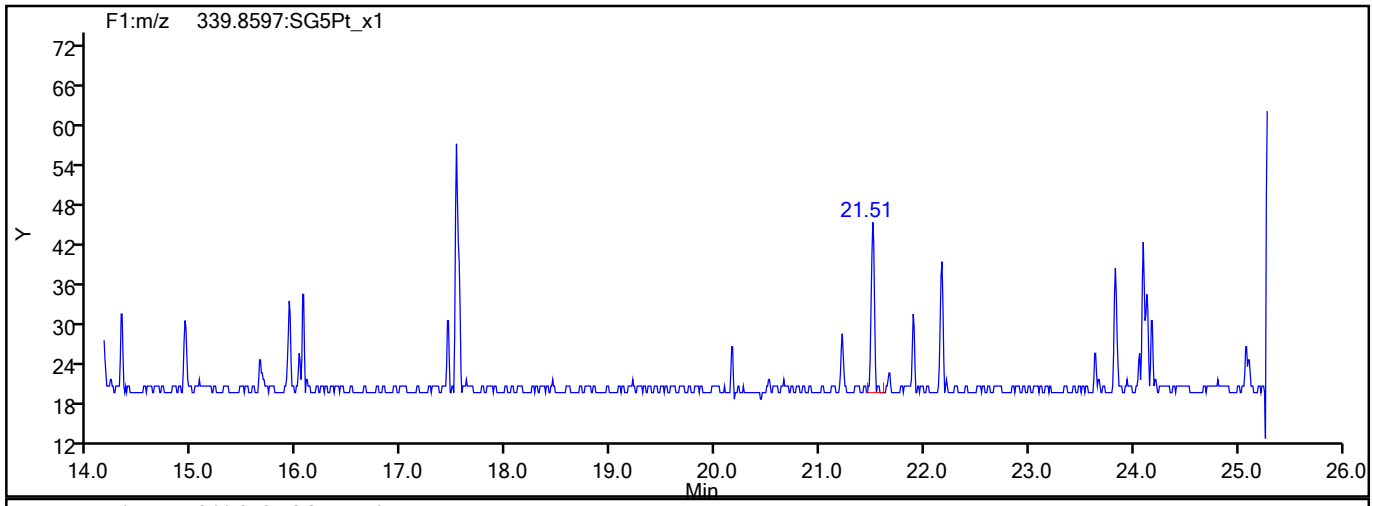

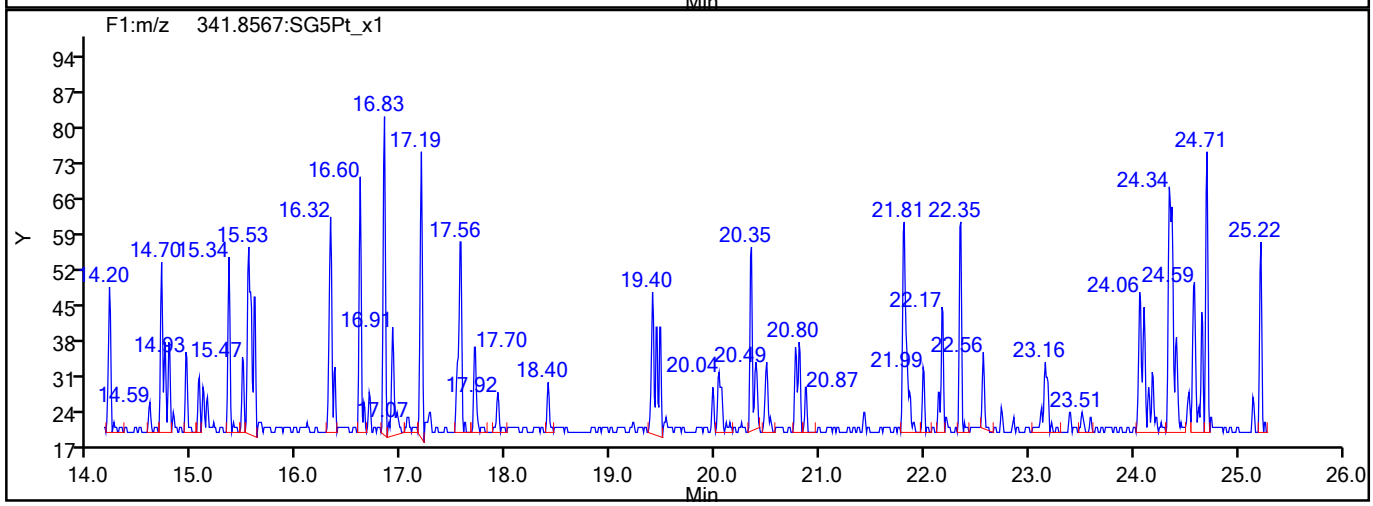

F1 PeCDFs Interference Mass

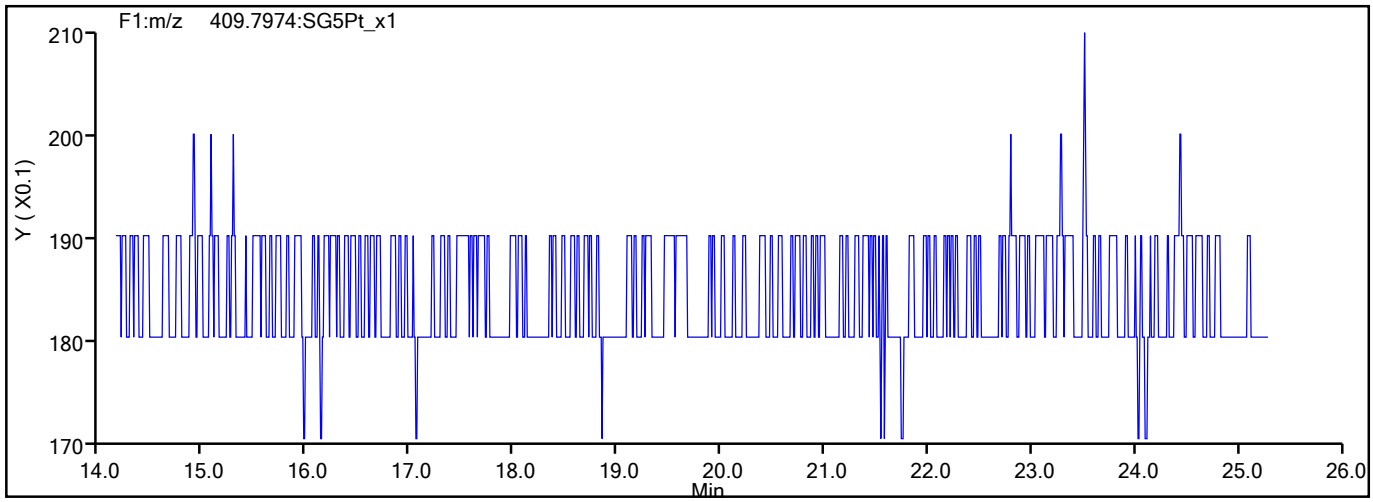

775767

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

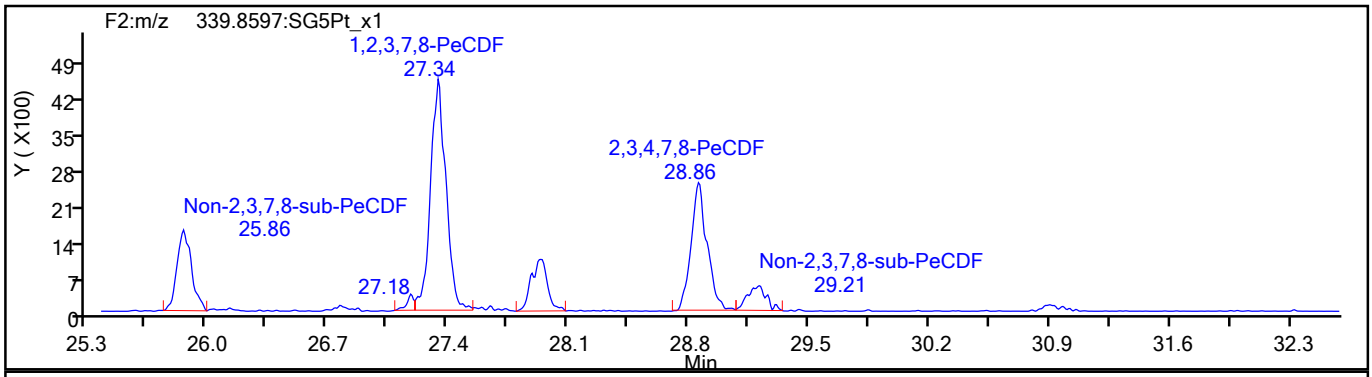

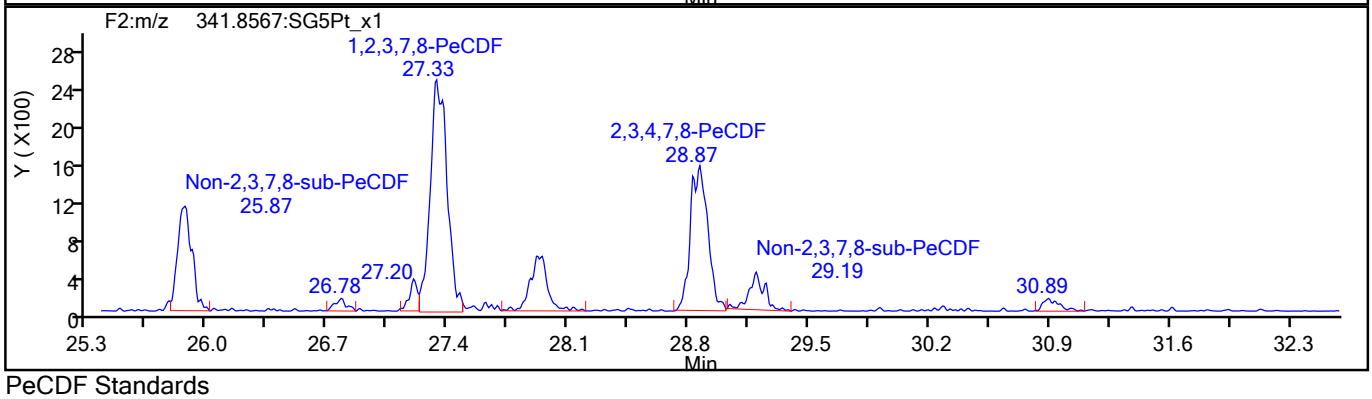

PeCDF Standards

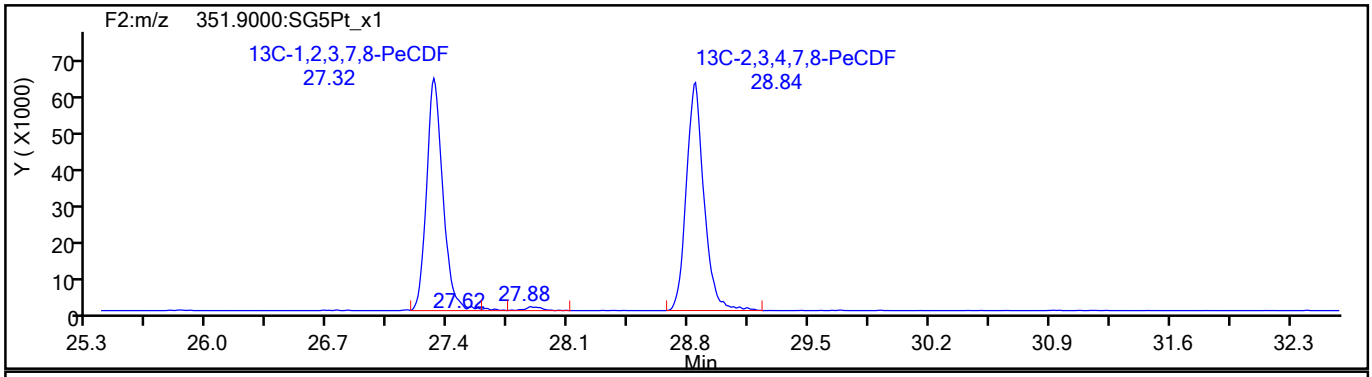

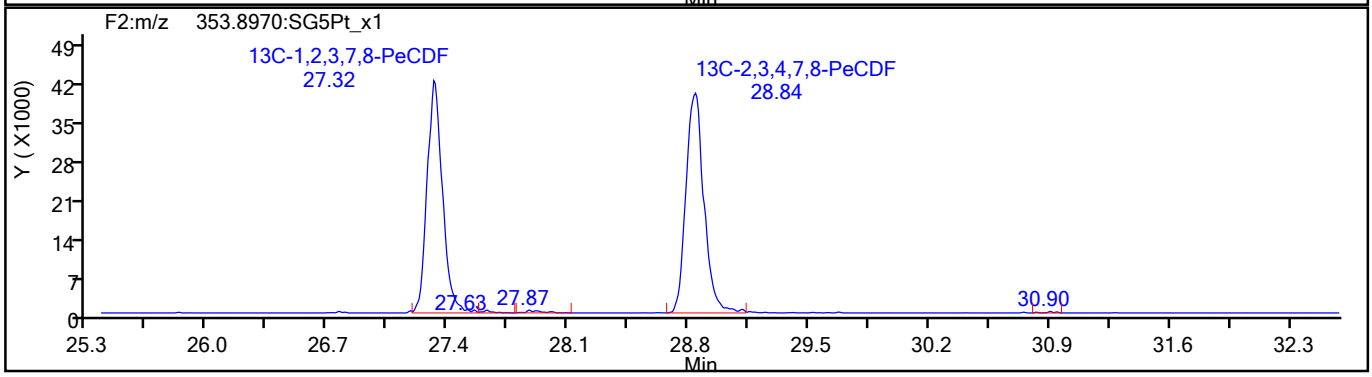

775768

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

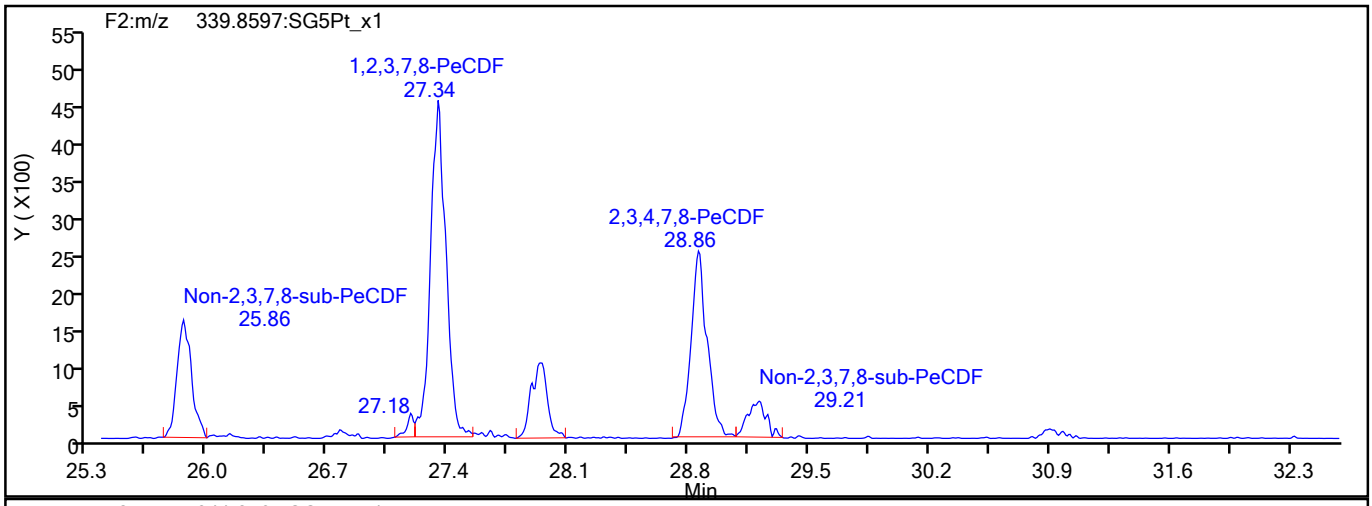

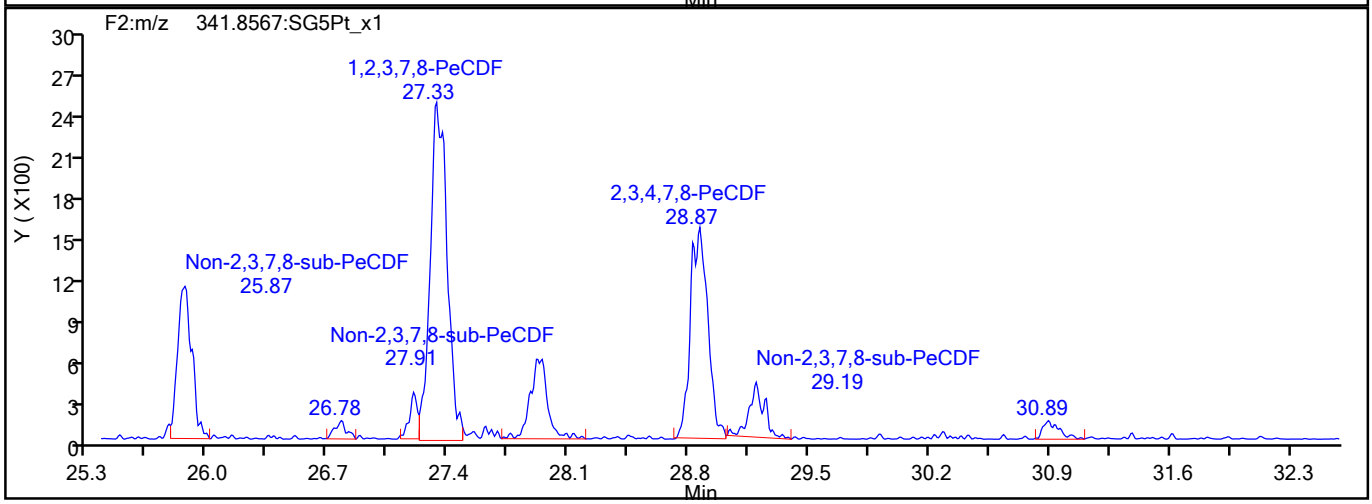

PeCDF Interference Mass

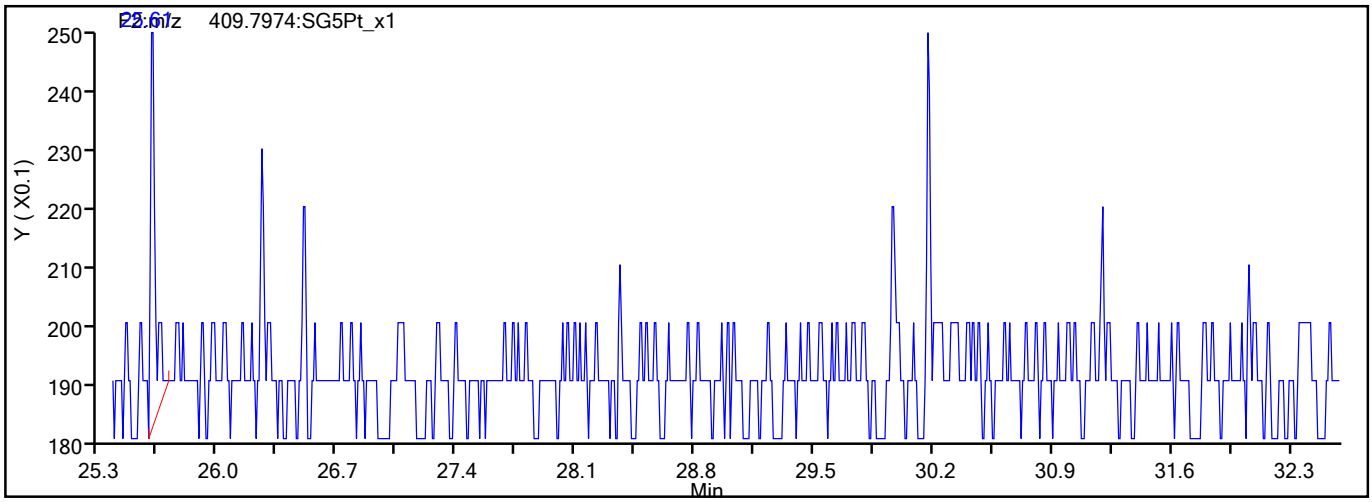

775769

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

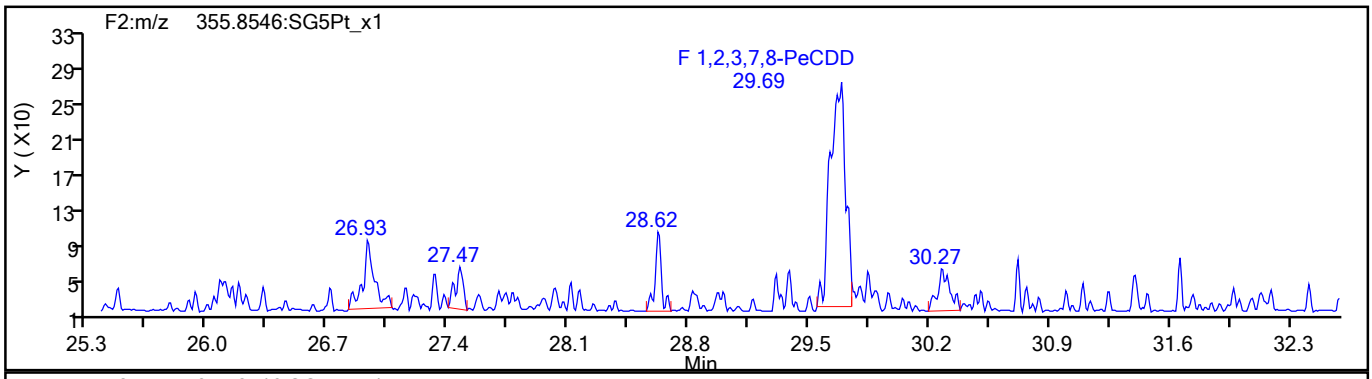

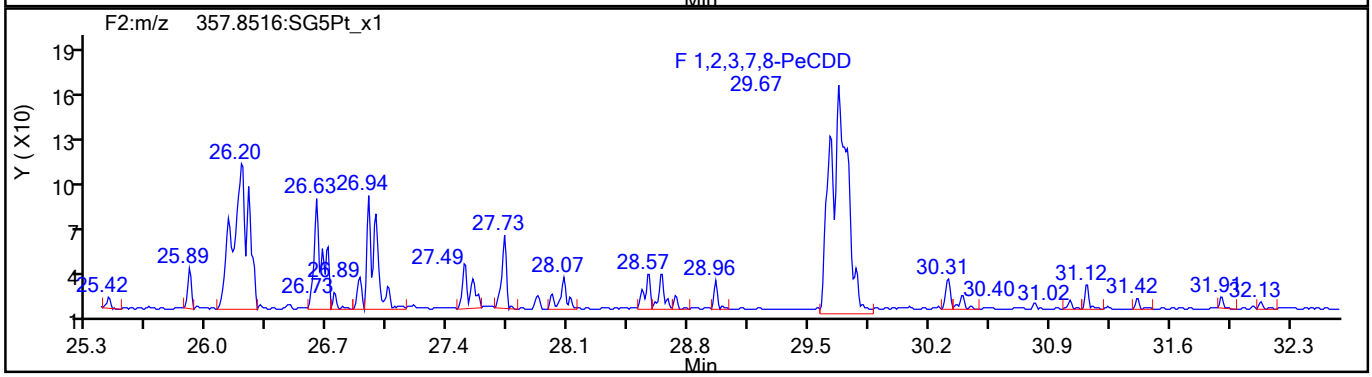

PeCDD Standards

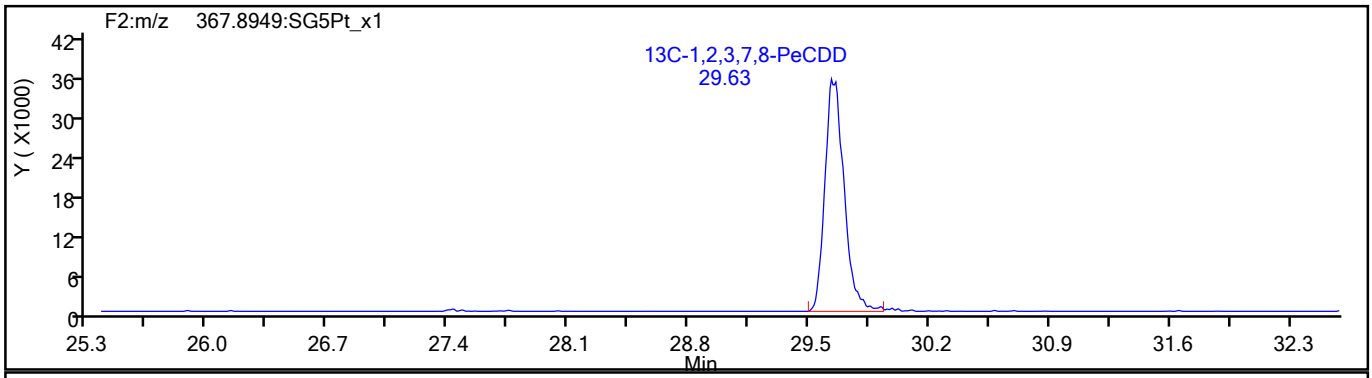

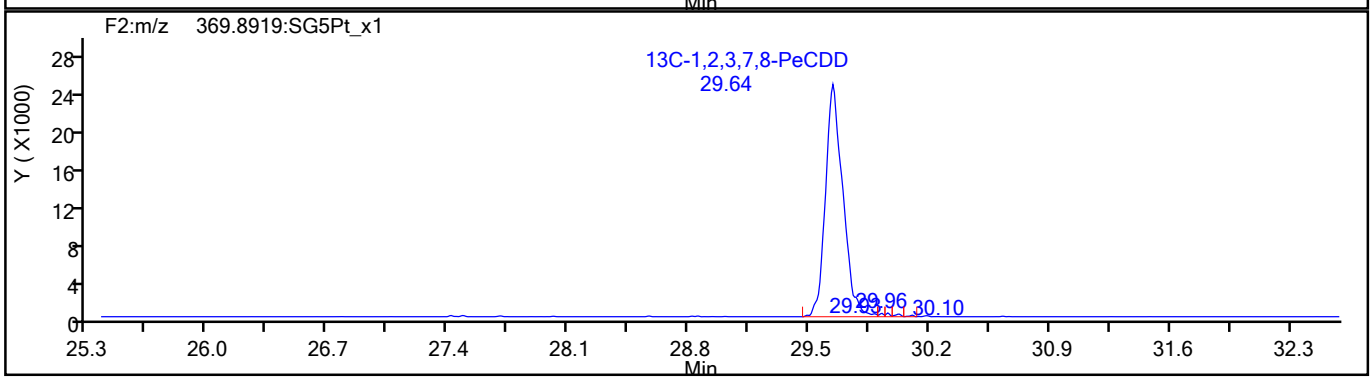

775770

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

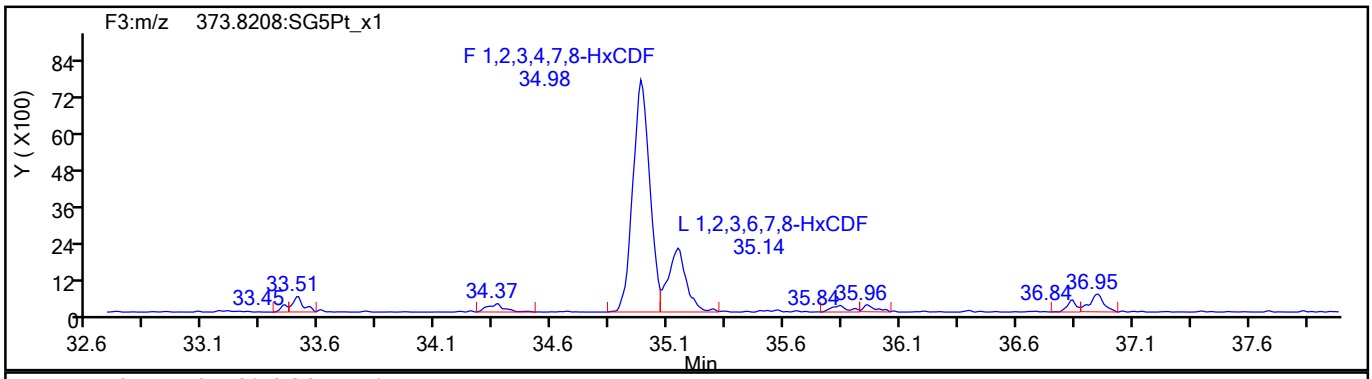

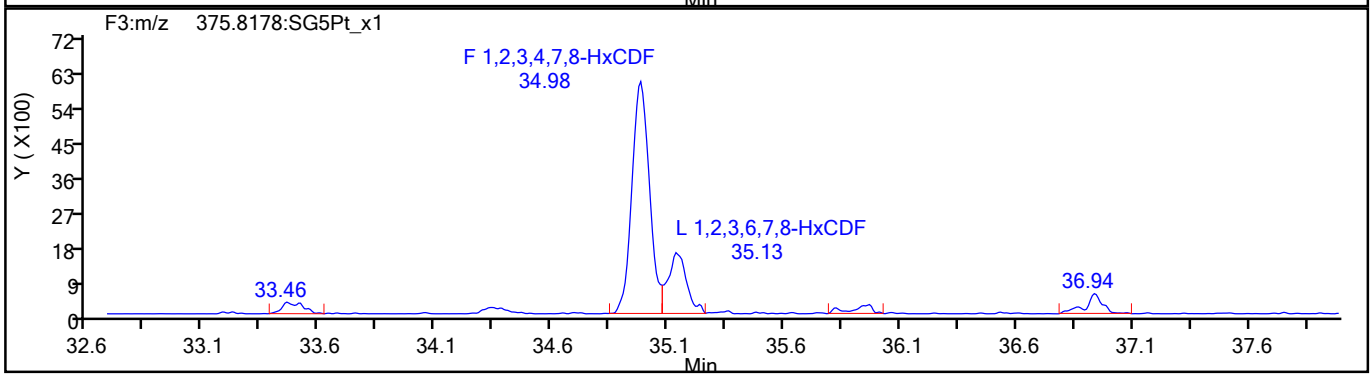

HxCDF Standards

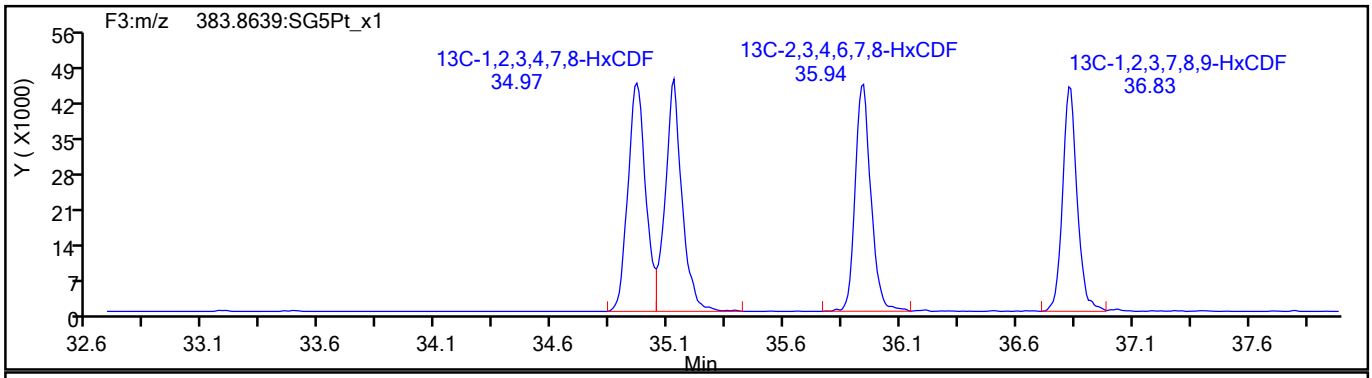

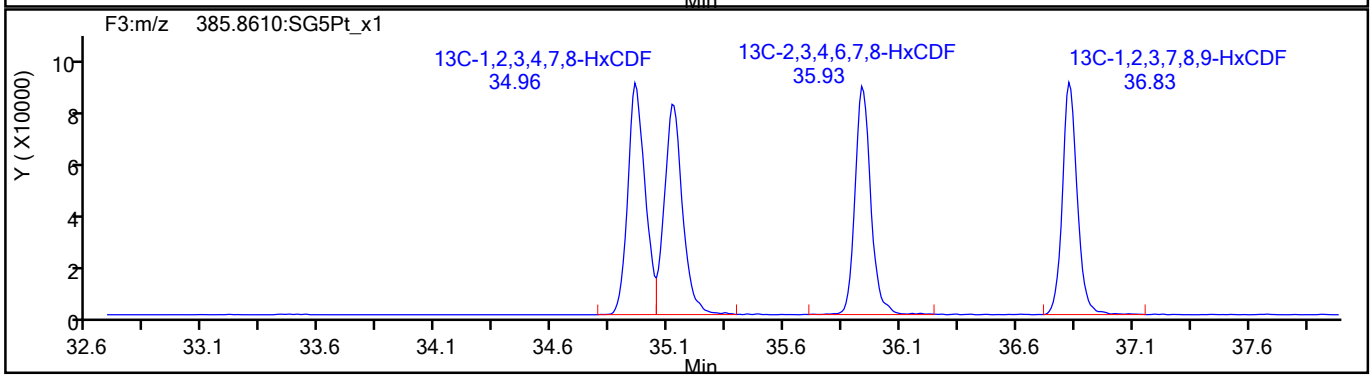

775771

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

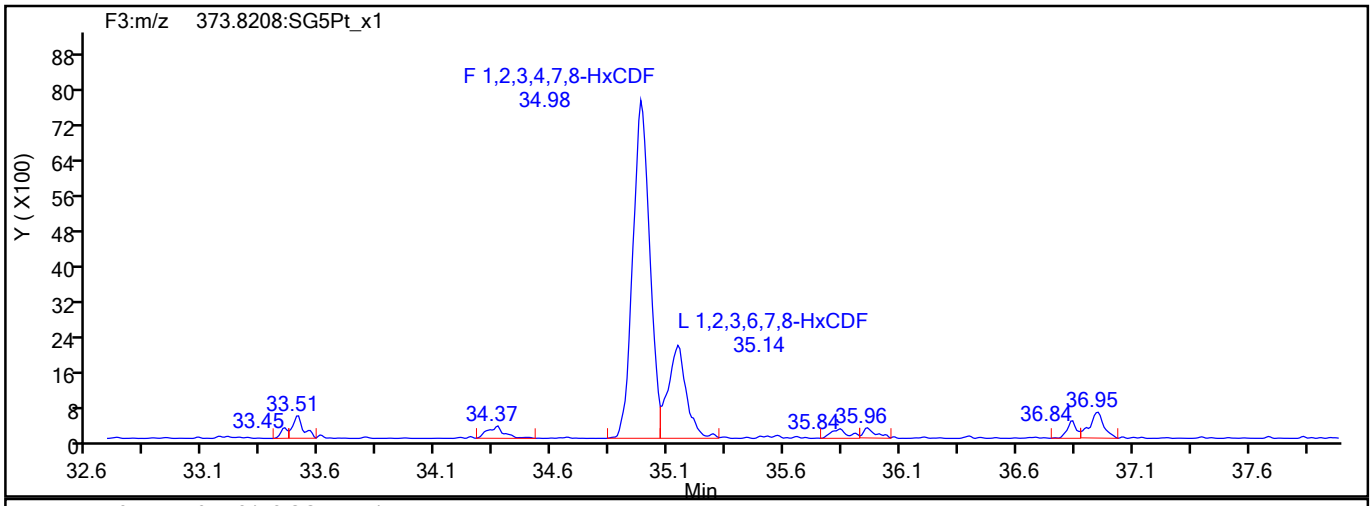

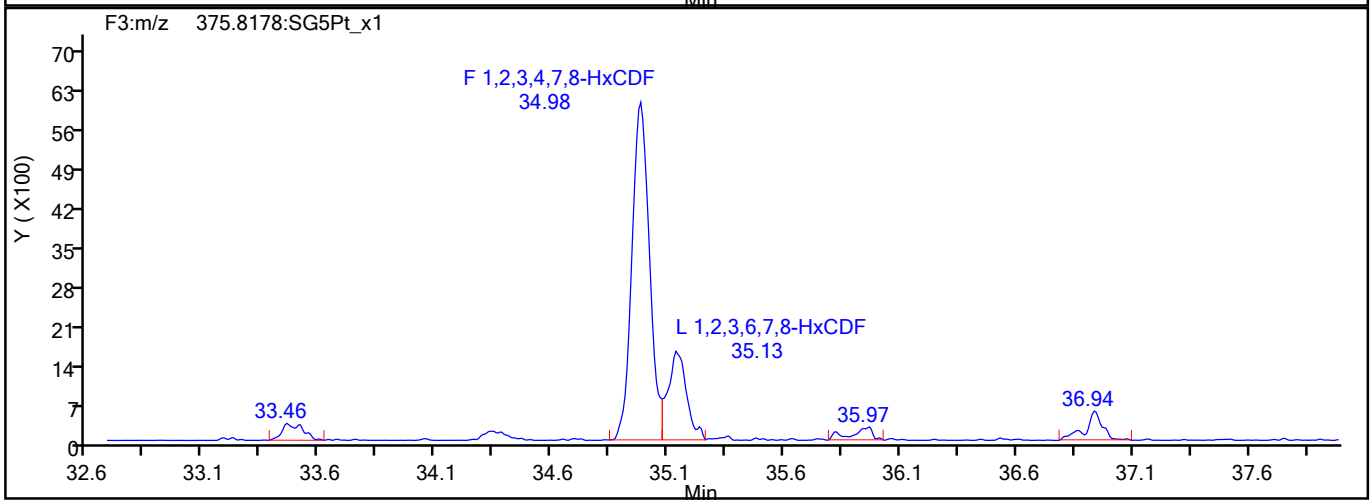

HxCDF Interference Mass

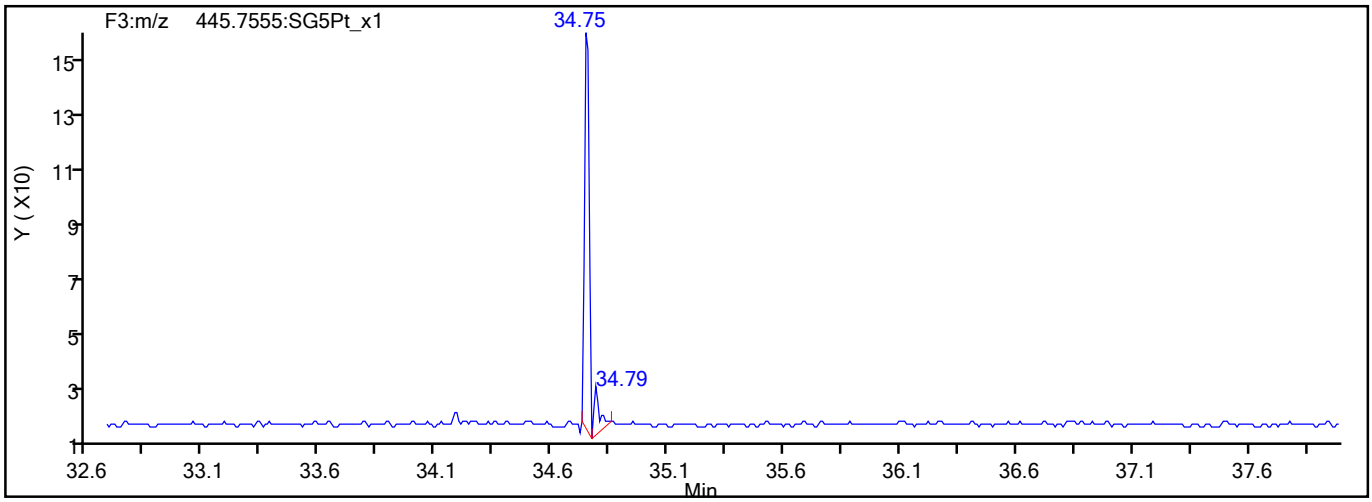

775772

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

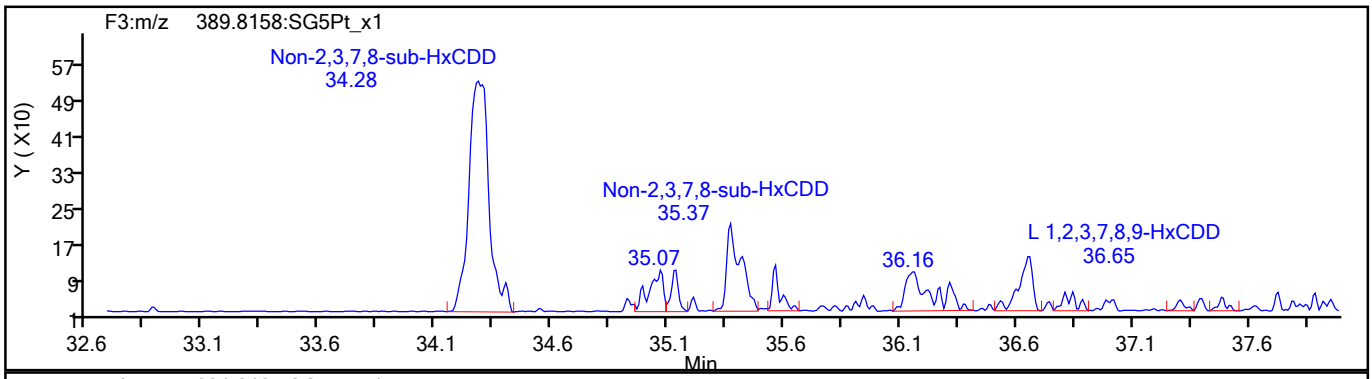

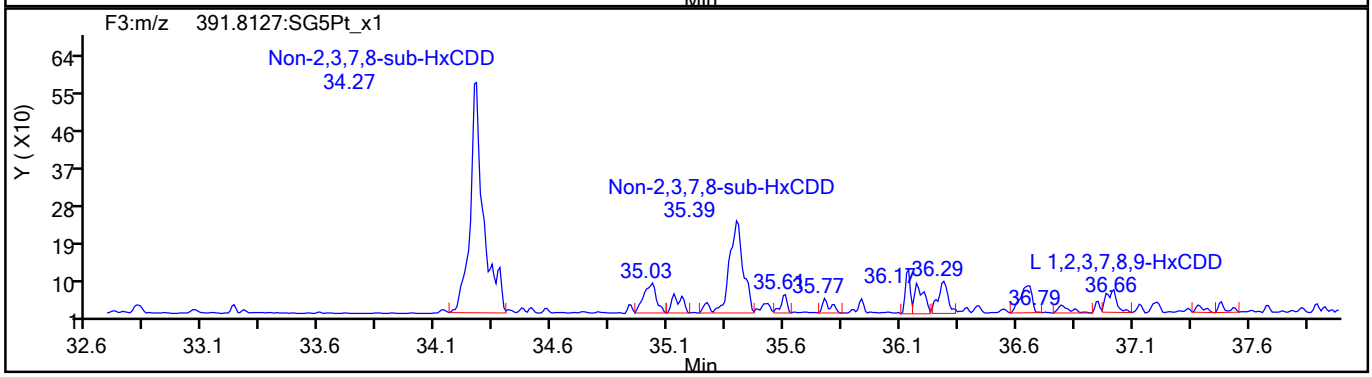

HxCDD Standards

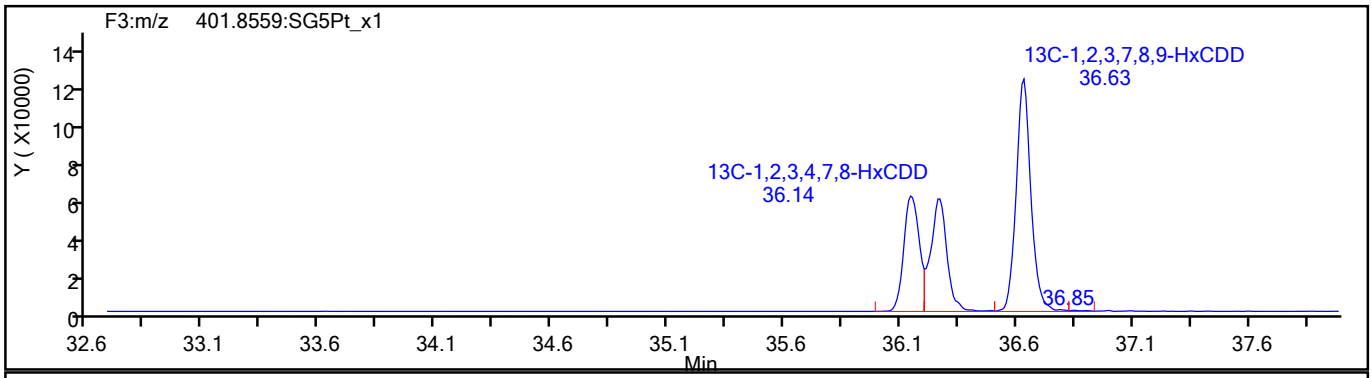

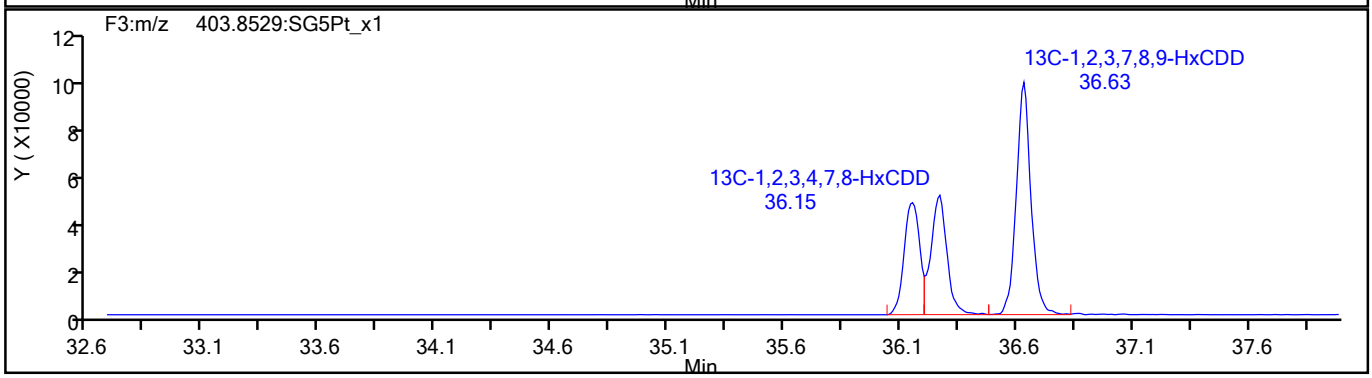

775773

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

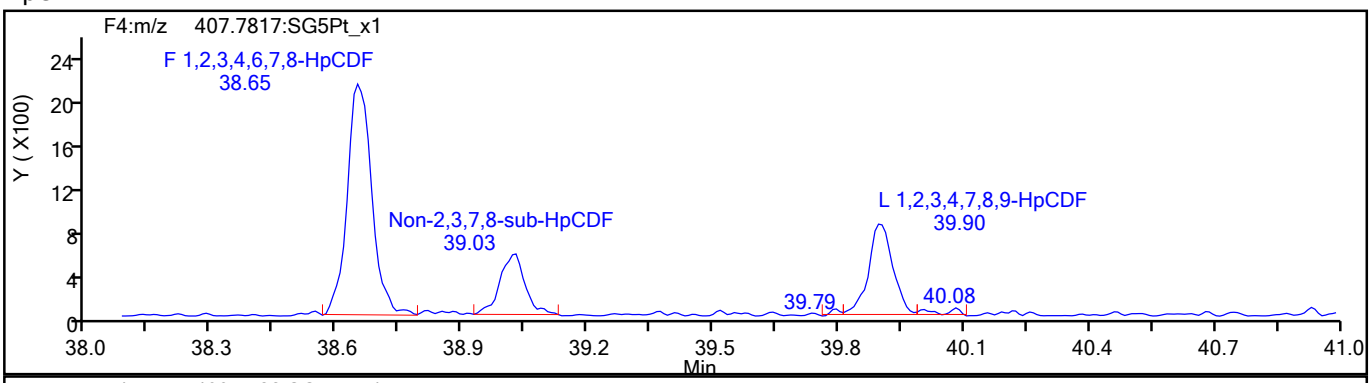

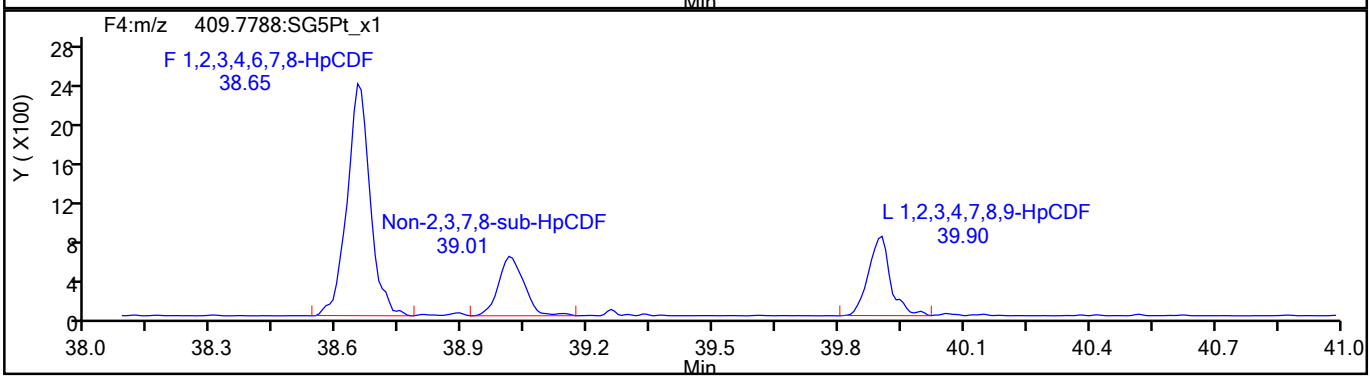

HpCDF Standards

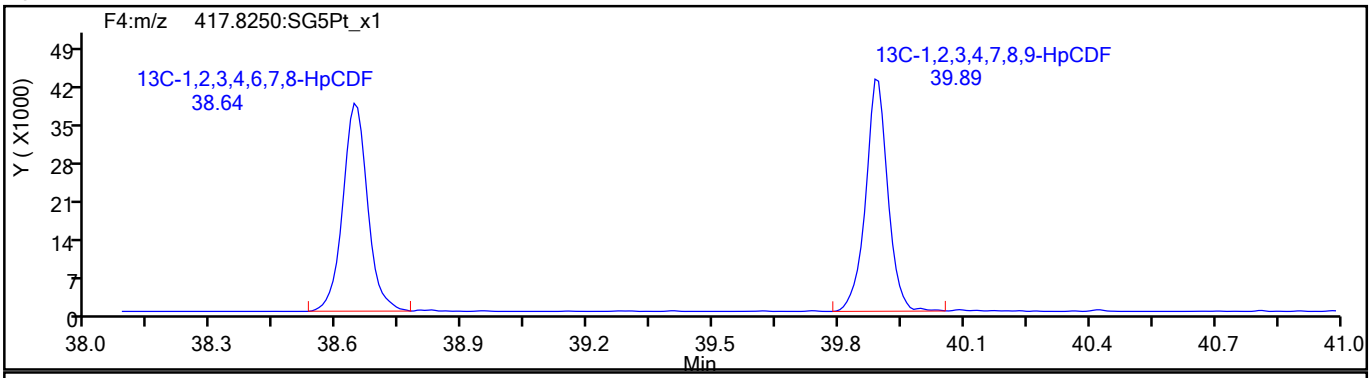

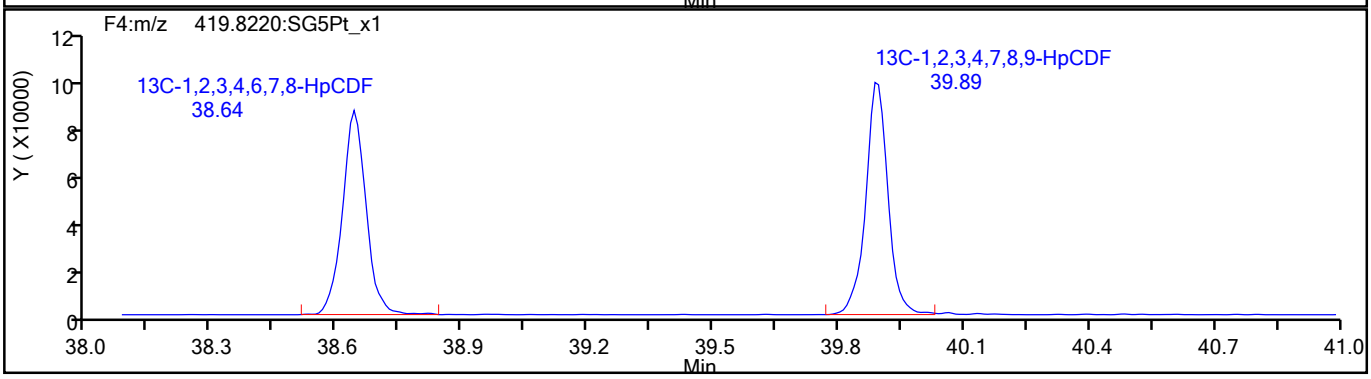

775774

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

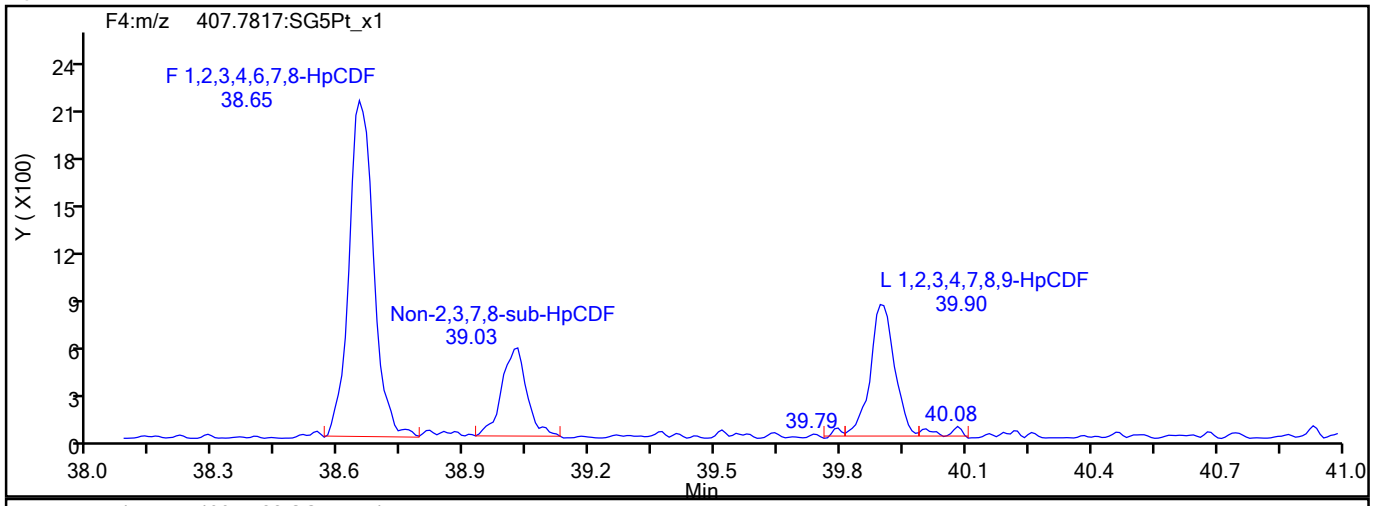

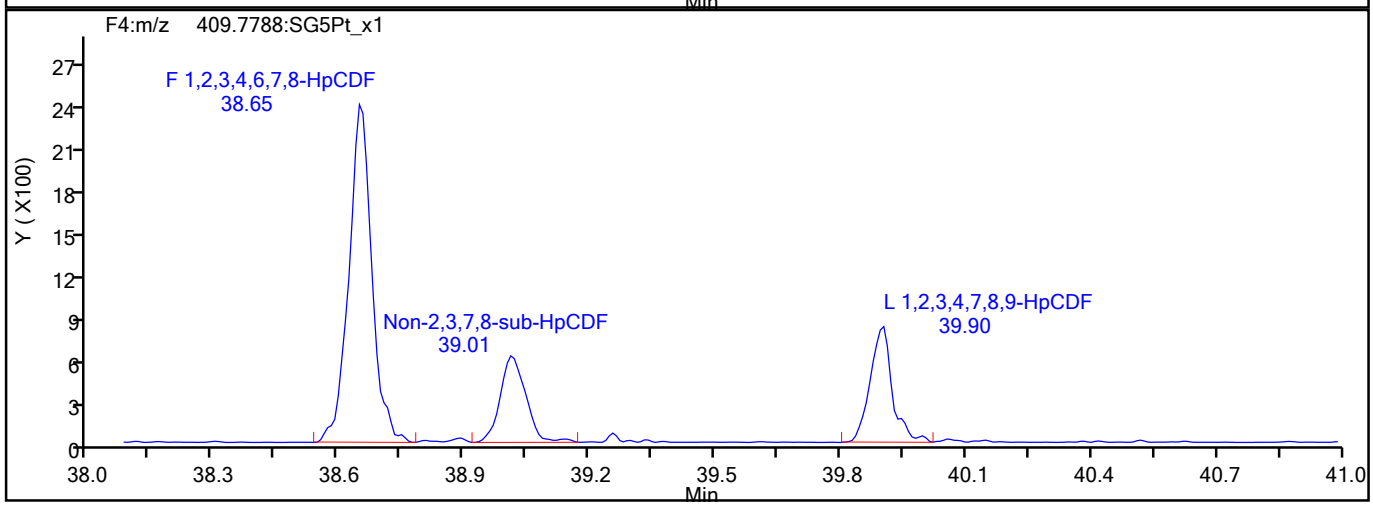

HpCDF Interference Mass

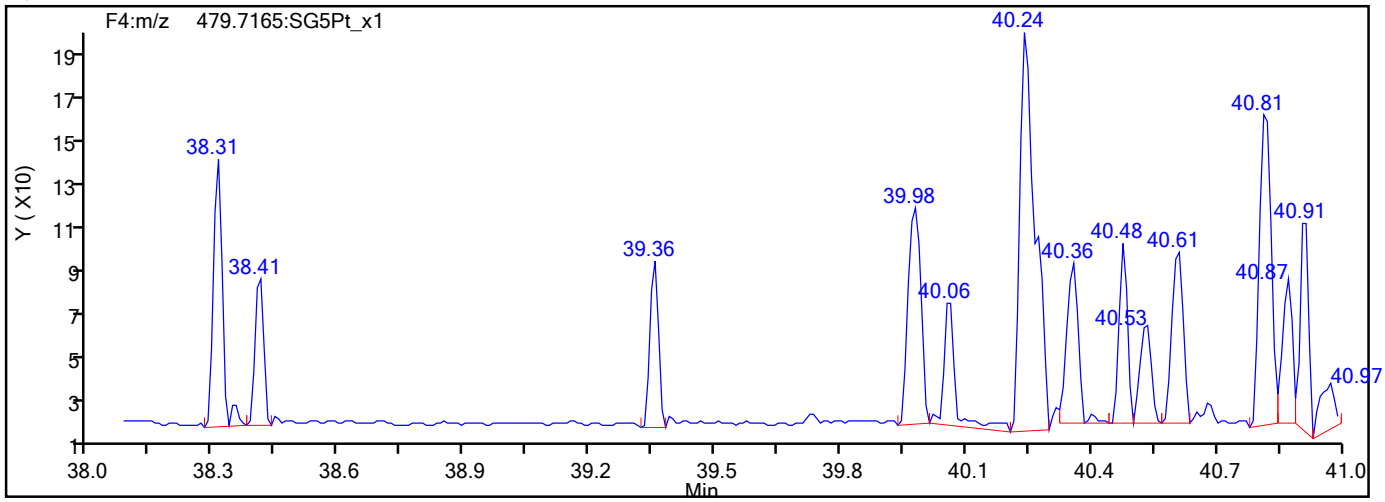

775775

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

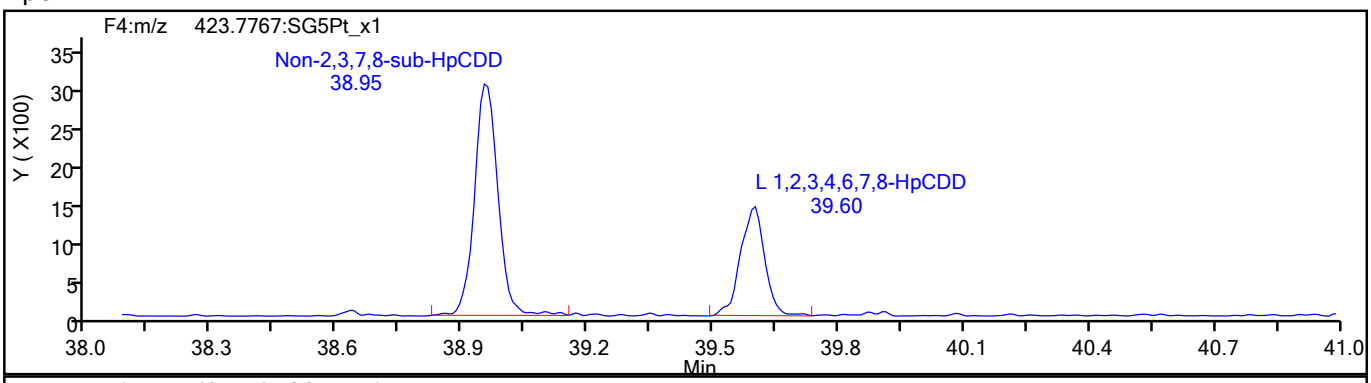

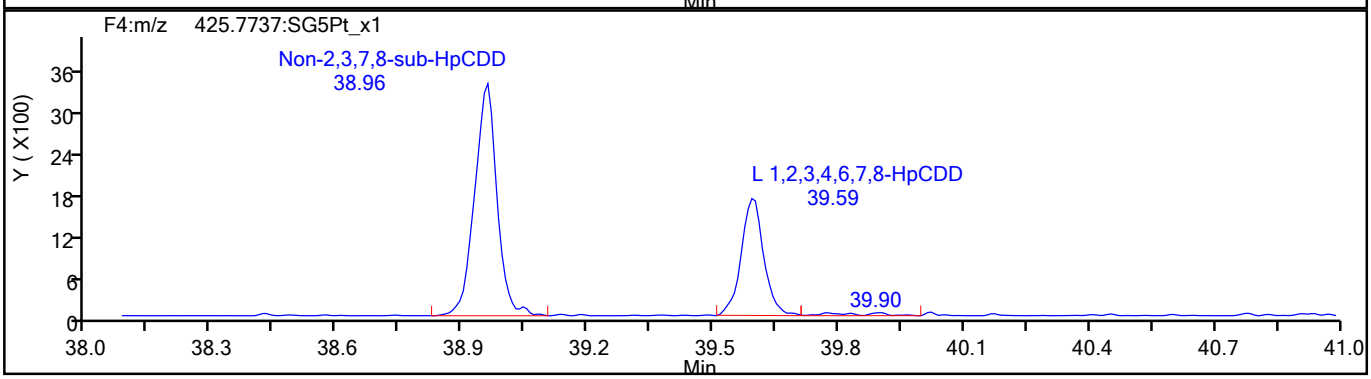

HpCDD Standards

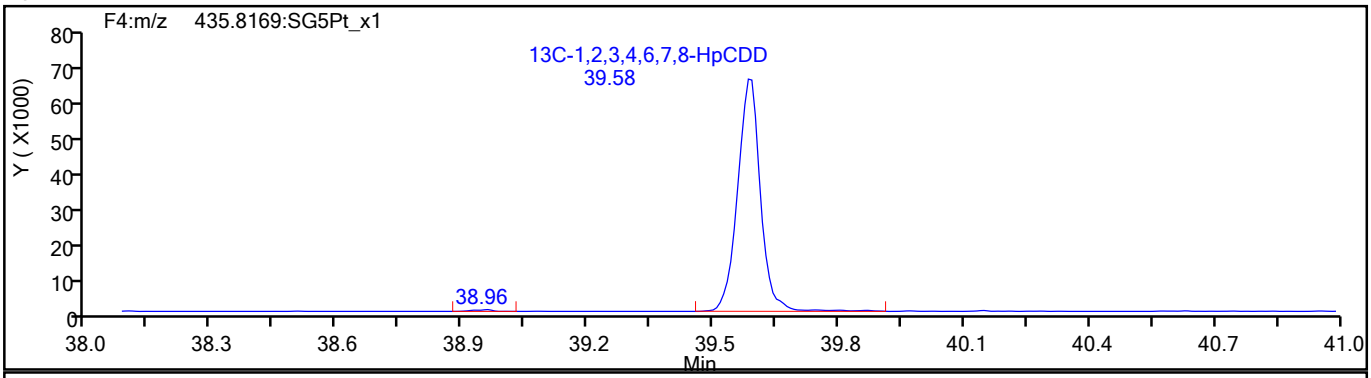

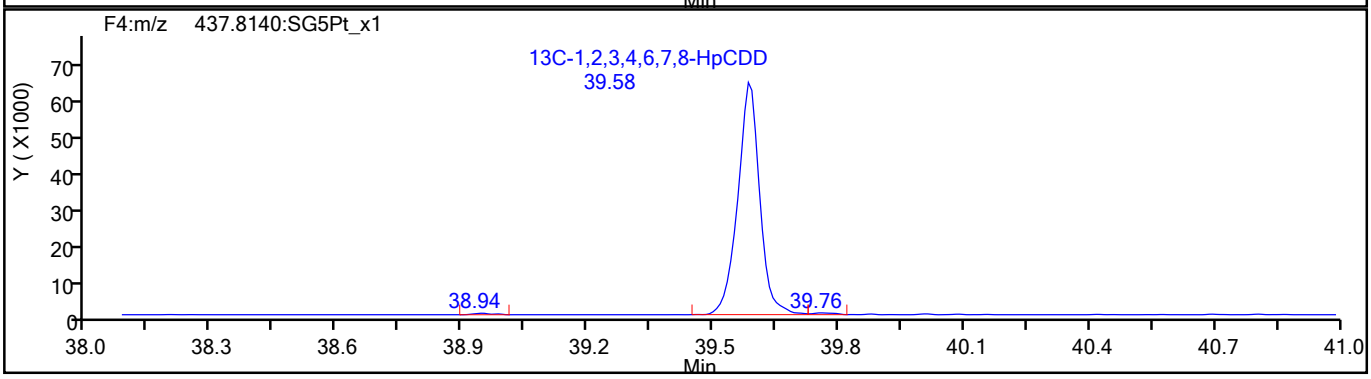

775776

Report Date: 19-Aug-2021 12:36:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

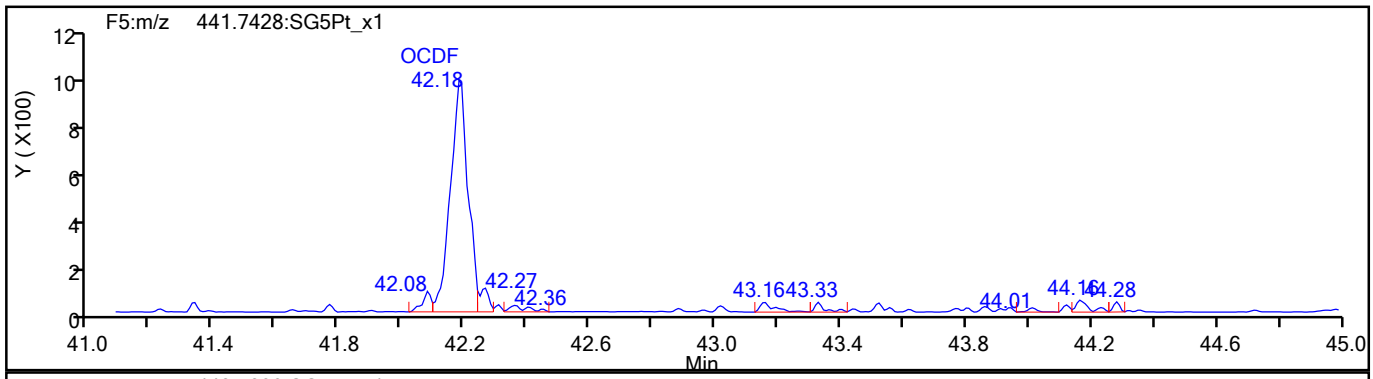

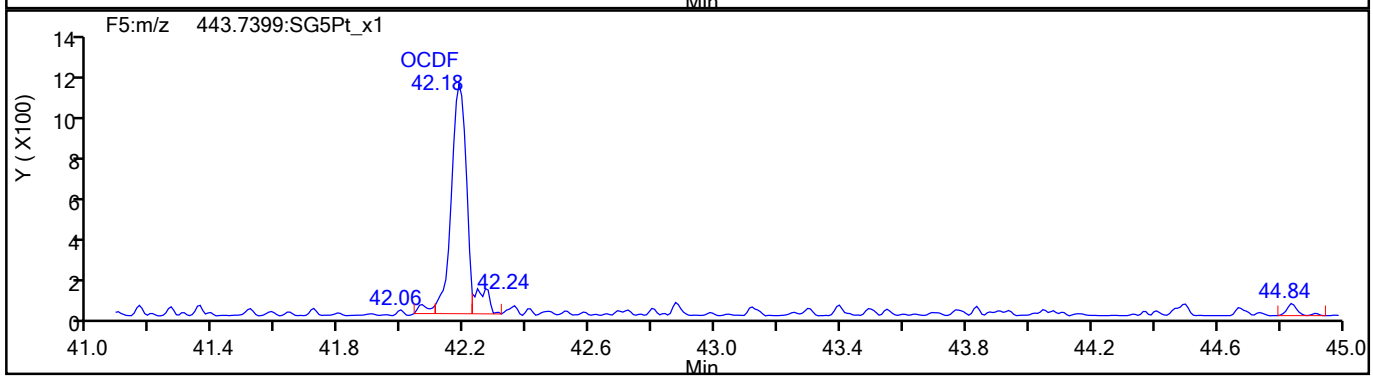

OCDF Standards

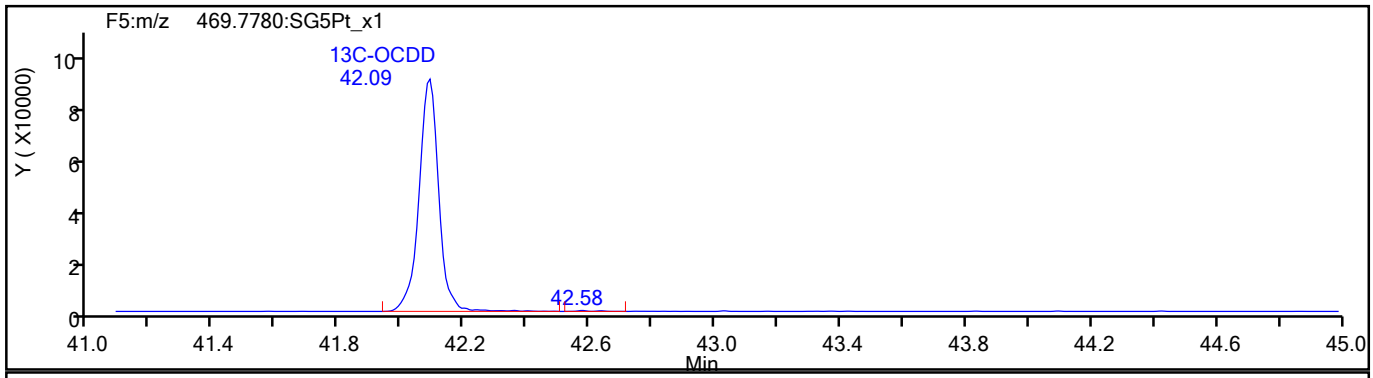

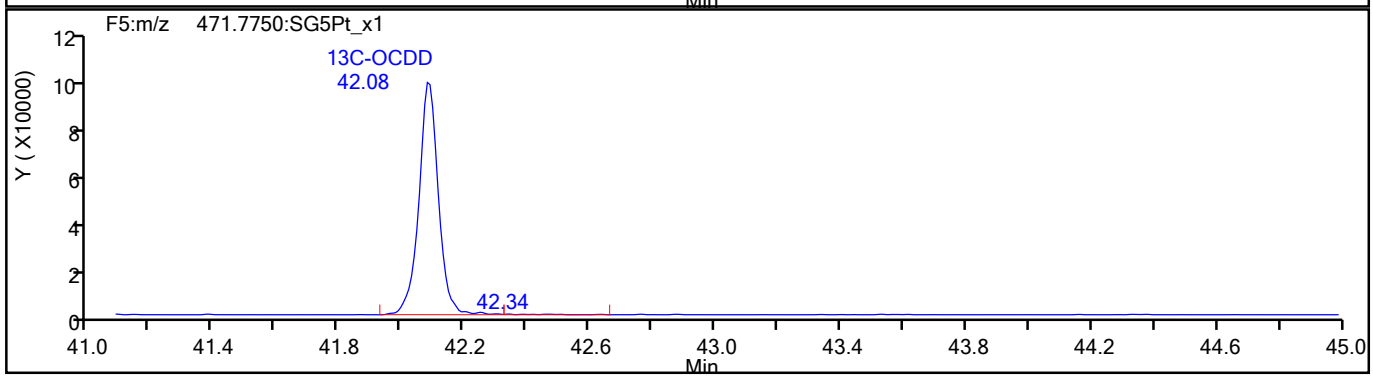

775777

Report Date: 19-Aug-2021 12:36:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

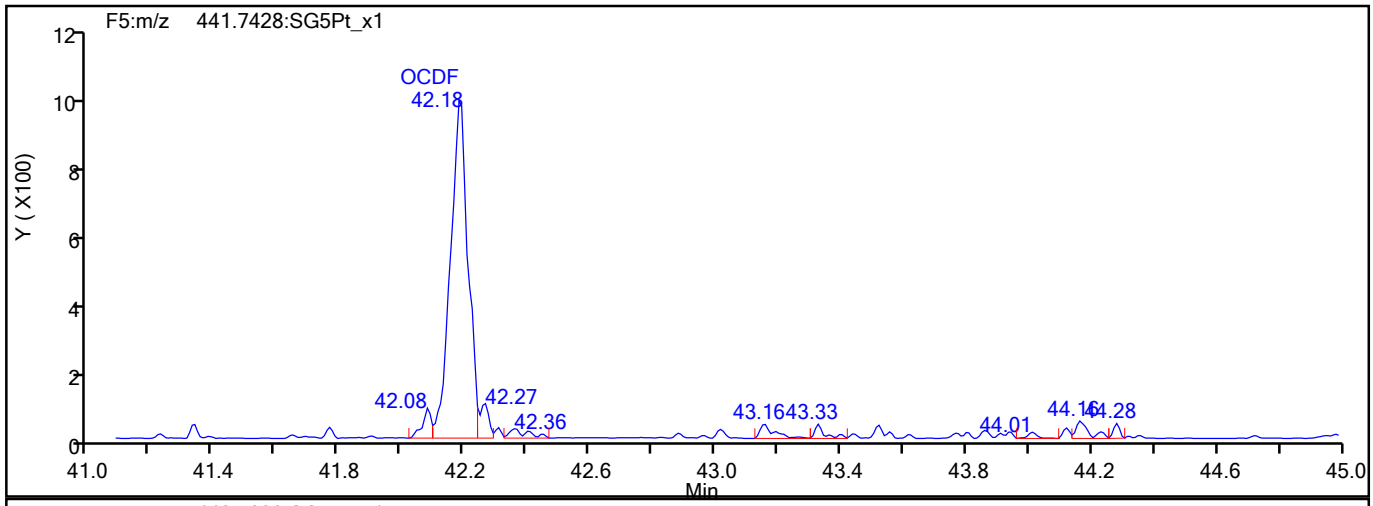

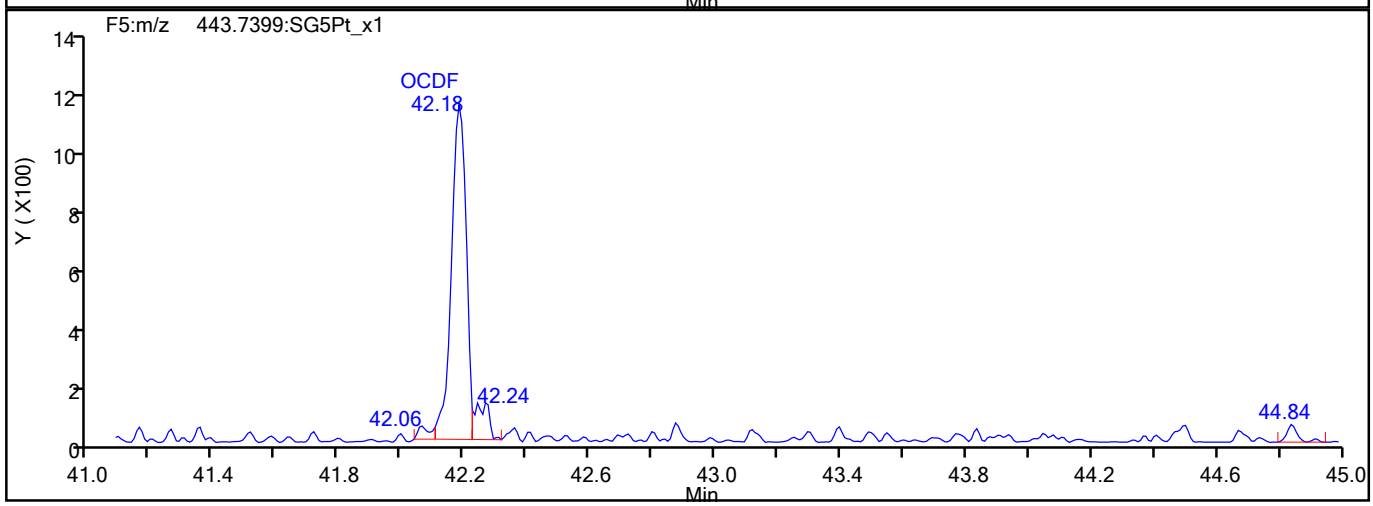

OCDF Interference Mass

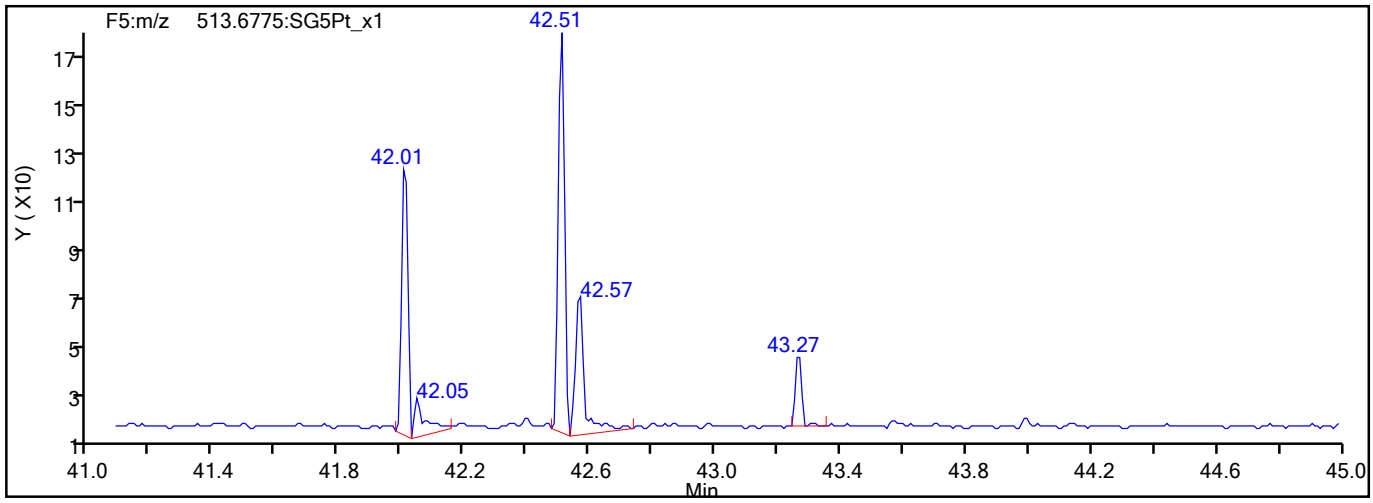

775778

Report Date: 19-Aug-2021 12:36:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

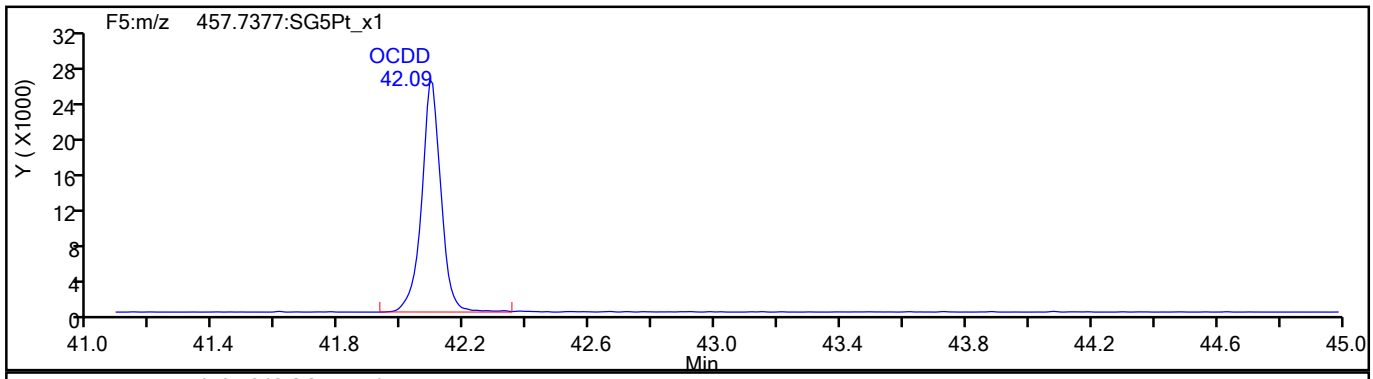

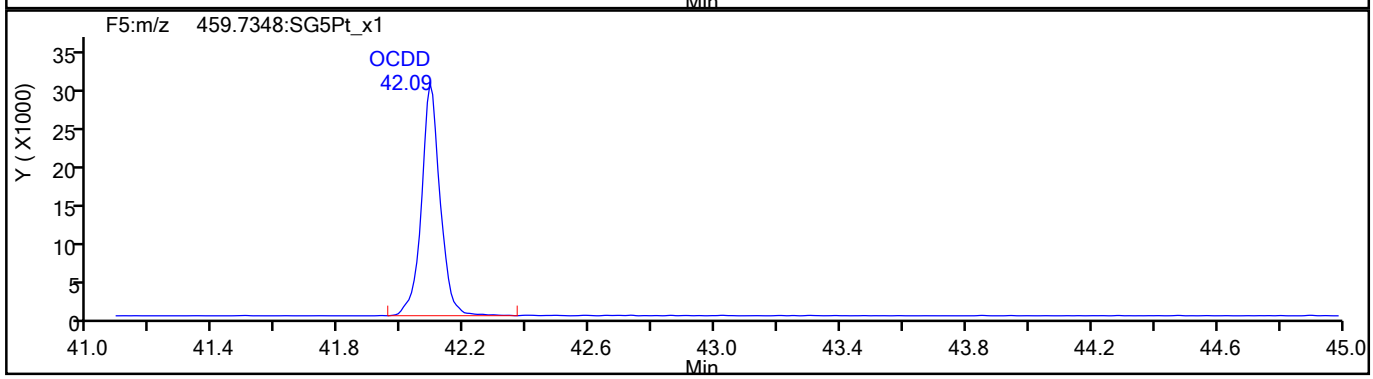

OCDD Standards

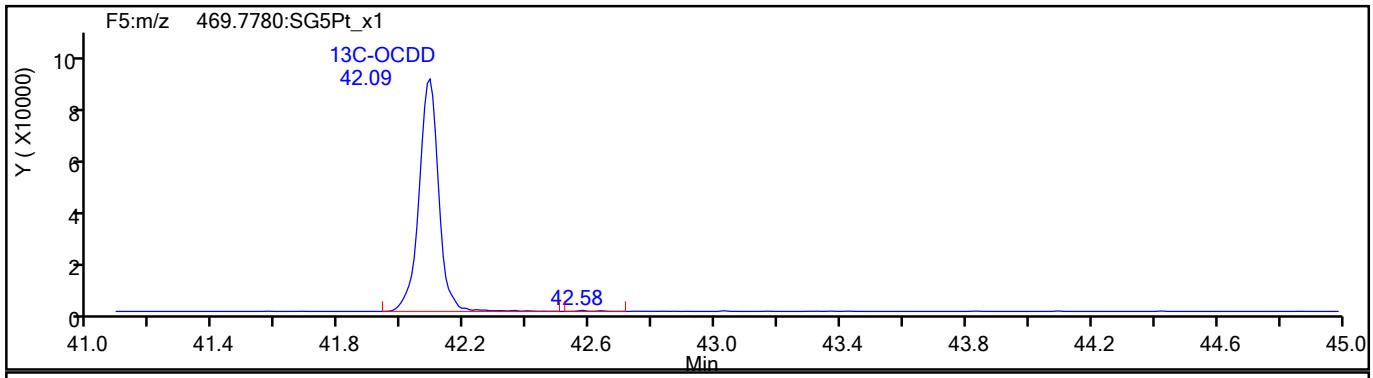

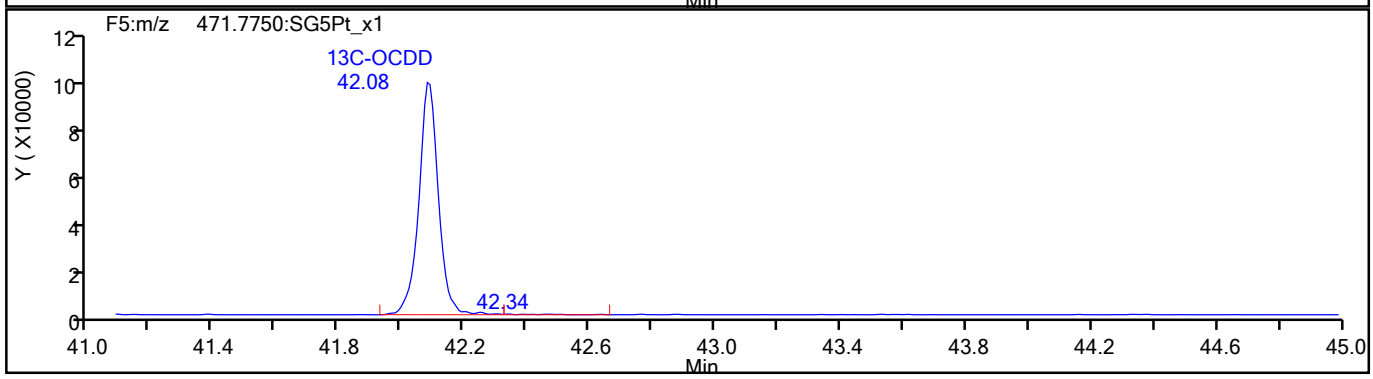

775779

Report Date: 19-Aug-2021 12:36:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

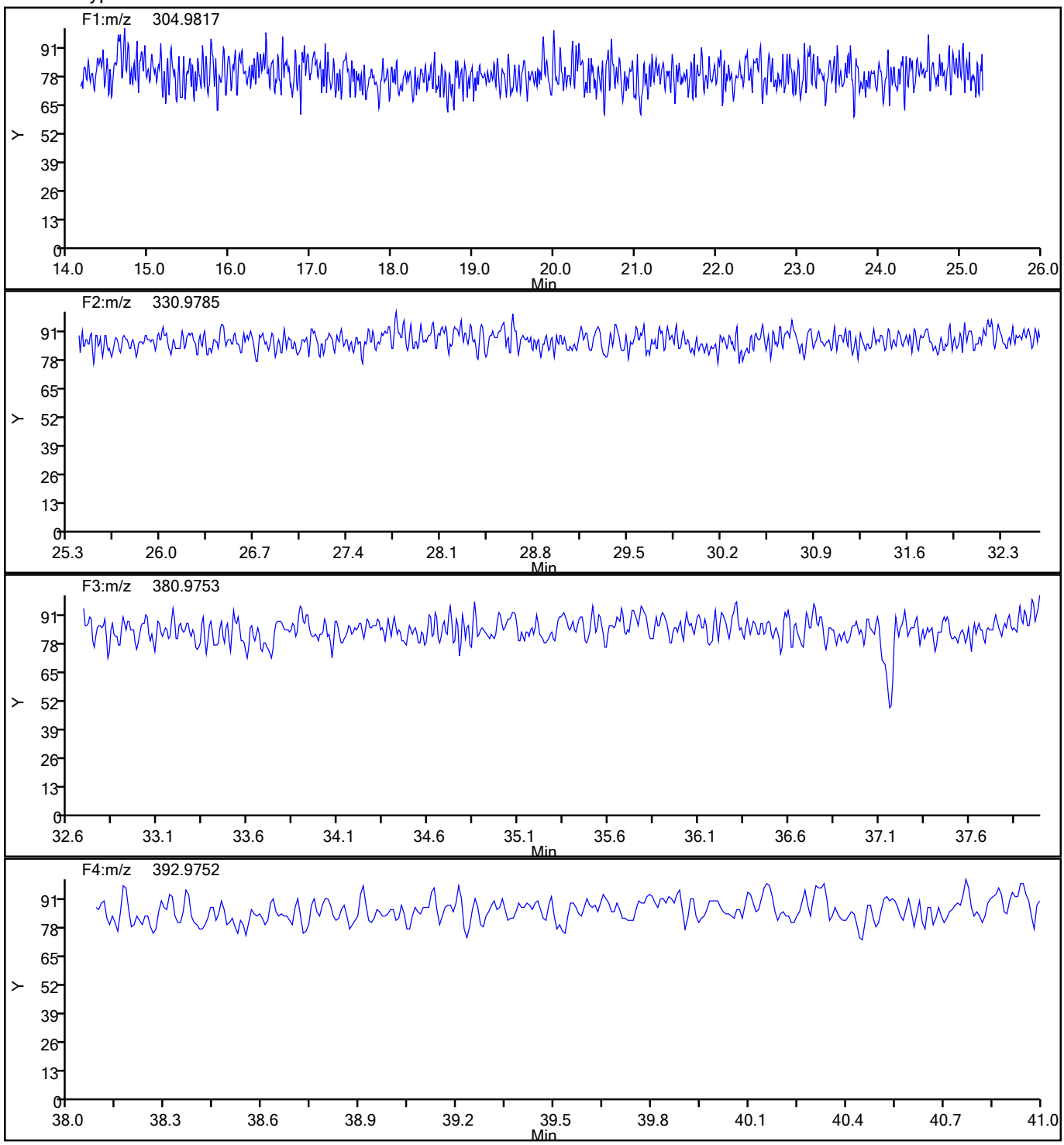

775780

Report Date: 19-Aug-2021 12:36:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_12.d		
Injection Date:	17-Aug-2021 22:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	517196	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

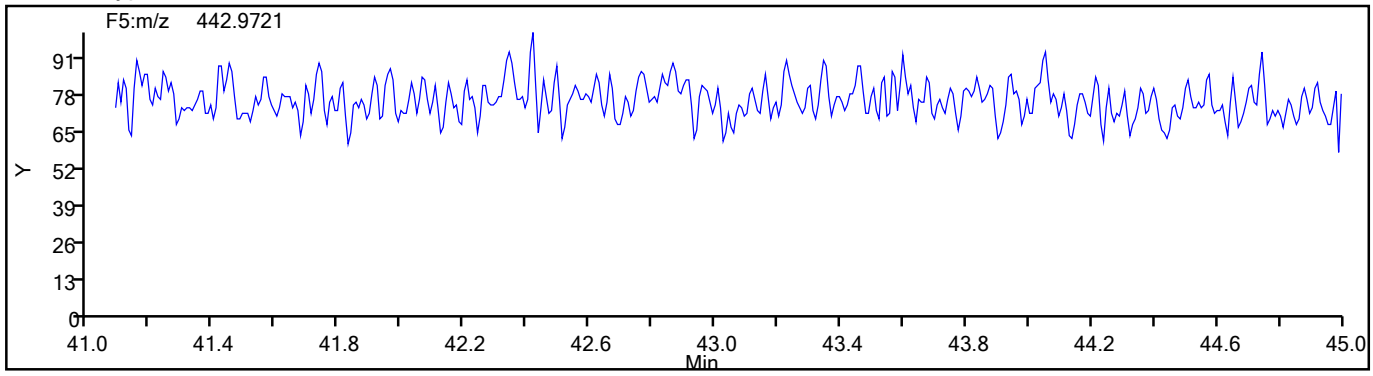

775781

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (6-8) RA
Lab Sample ID: 320-76769-30 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_017.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.73(g)
Date Analyzed: 08/24/2021 01:48
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	540		1.3	0.71

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	69		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	76		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_017.d
Lims ID: 320-76769-A-30-A
Client ID: 11215702-072221-SS-SJSB076 (6-8)
Sample Type: Client
Inject. Date: 24-Aug-2021 01:48:19 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-30-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:19:12

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.314	38887233	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.631	35851080	0.80	1.3327	69.2	69.2	0.2994	0.2994	69.18	
2,3,7,8-TCDF	17.659	71501676	0.77	0.9978	199.9	199.9	0.2645	0.2645		
D 13C-2,3,7,8-TCDD	16.081	21311754	0.82	0.8749	62.6	62.6	2.156	2.156	62.64	
2,3,7,8-TCDD	16.095	14066822	0.80	1.0570	62.4	62.4	0.3085	0.3085		
$ 37Cl4-2,3,7,8-TCDD	16.095	10215136		0.8648	30.4	30.4	0.0667	0.0667	75.94	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_017.d
Lims ID: 320-76769-A-30-A
Client ID: 11215702-072221-SS-SJSB076 (6-8)
Sample Type: Client
Inject. Date: 24-Aug-2021 01:48:19 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-30-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:19:12

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.314	16.298	1		17077029	3796247	32070	80175	118		
333.9339	16.314	16.298	1		21810204	4793977	32741	81852	146	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.631	17.615	1	1.081	15913985	2861392	6980	17450	410		
317.9389	17.631	17.615	1	1.081	19937095	3615267	6730	16825	537	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.659	17.643	1	1.002	31119377	5995597	2964	7410	2023		
305.8987	17.659	17.643	1	1.002	40382299	7612023	3872	9680	1966	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.081	16.065	1	0.986	9578260	2282529	32070	80175	71		
333.9339	16.081	16.065	1	0.986	11733494	2761734	32741	81852	84	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.095	16.079	1	1.001	6230524	1439523	3638	9095	396		
321.8936	16.095	16.079	1	1.001	7836298	1757820	2942	7355	597	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.093	0	0.987	10215136	2212087	1982	4955	1116		

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 09:19:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_017.d		
Injection Date:	24-Aug-2021 01:48:19	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	518979	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

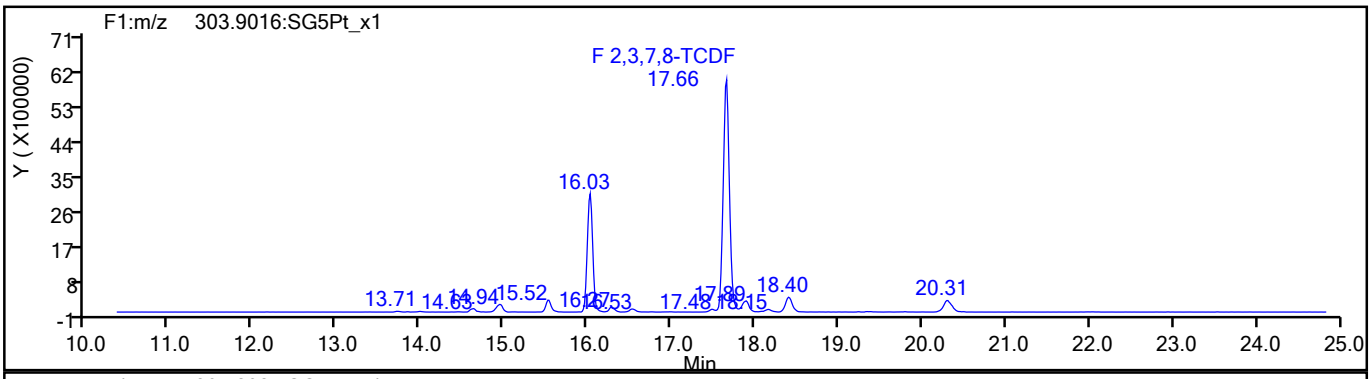

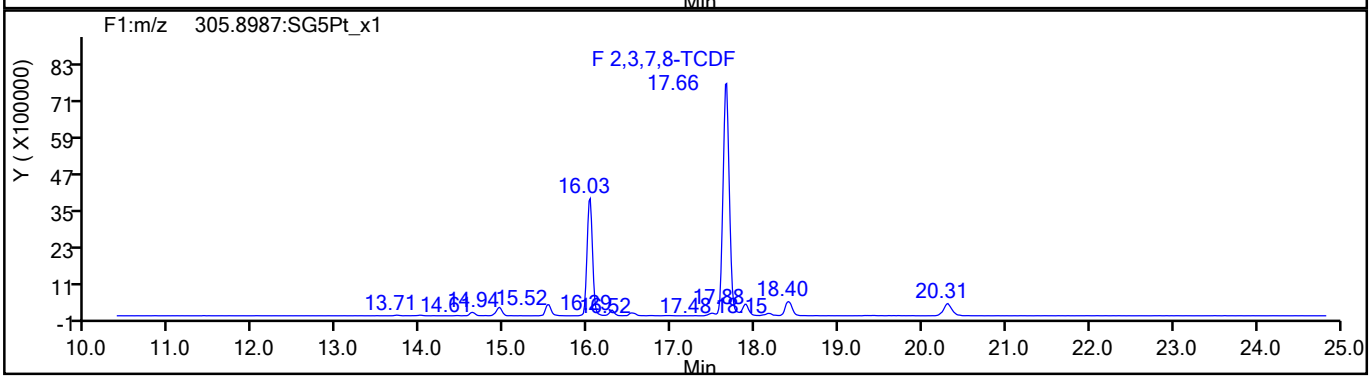

TCDF Standards

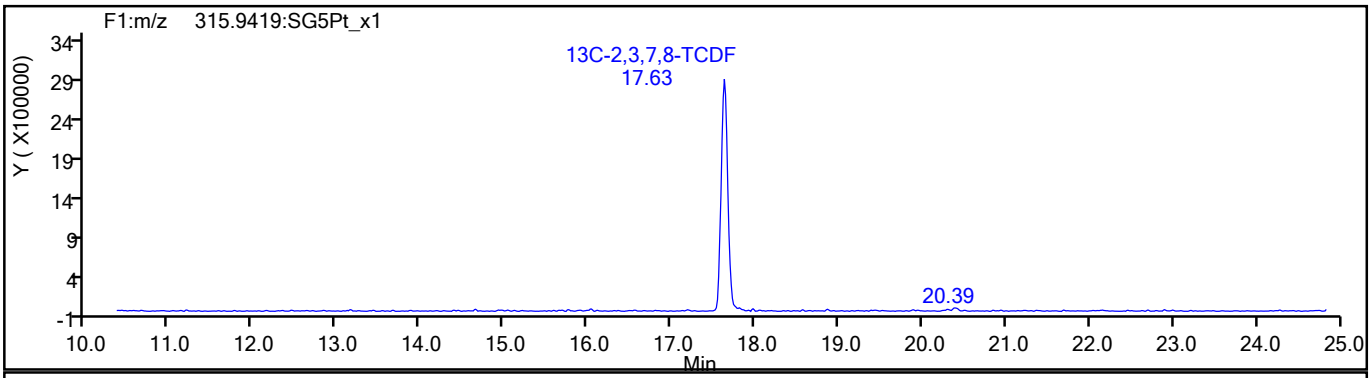

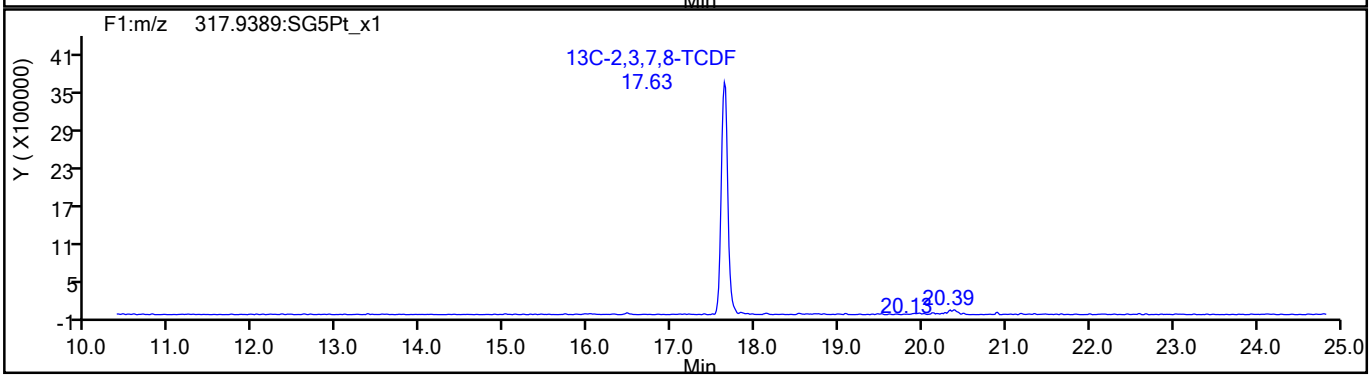

775785

Report Date: 24-Aug-2021 09:19:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_017.d		
Injection Date:	24-Aug-2021 01:48:19	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	518979	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

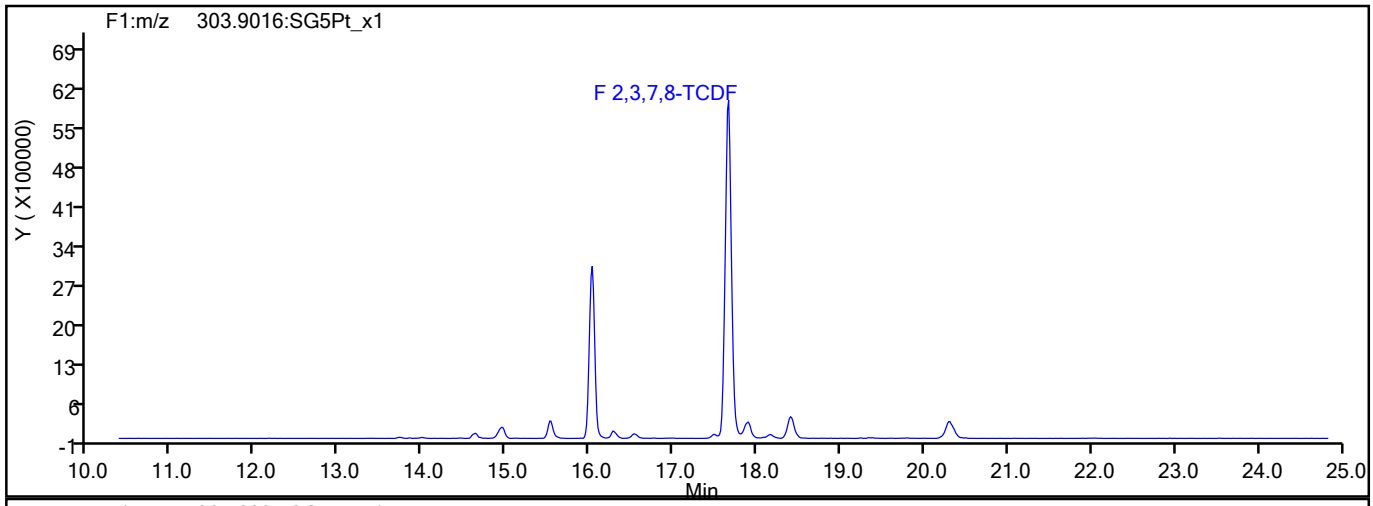

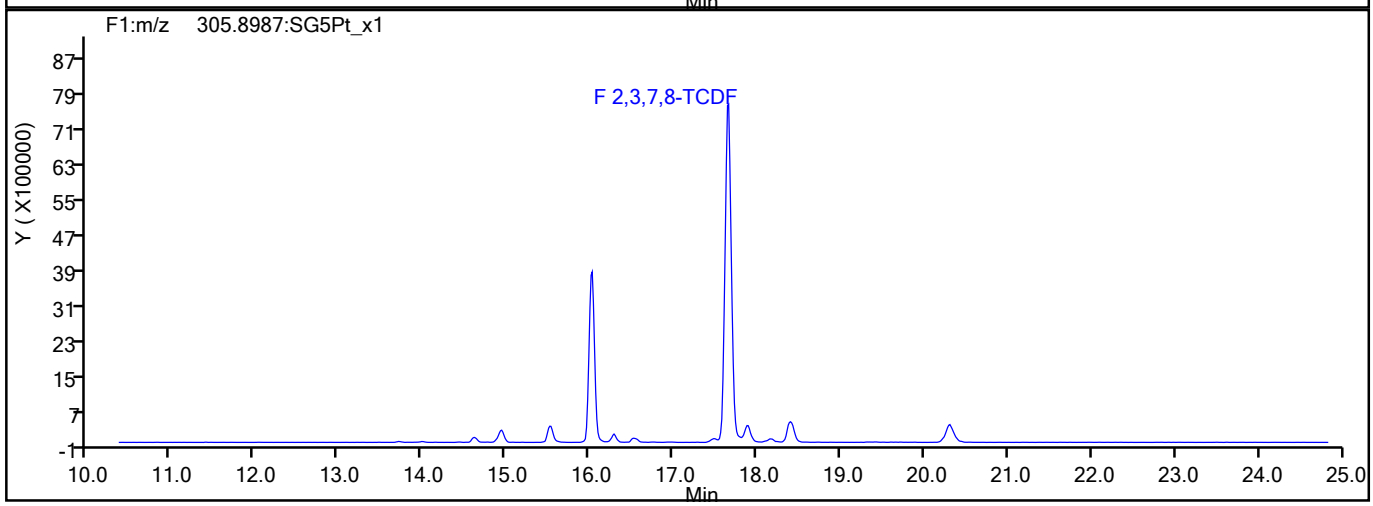

TCDF Interference Mass

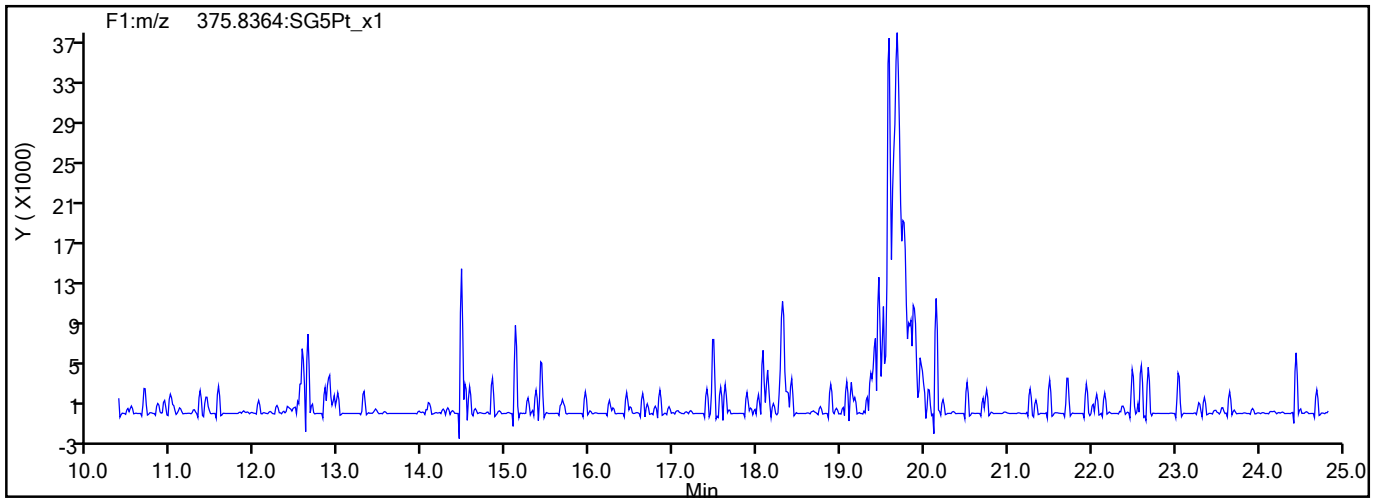

775786

Report Date: 24-Aug-2021 09:19:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_017.d		
Injection Date:	24-Aug-2021 01:48:19	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	518979	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

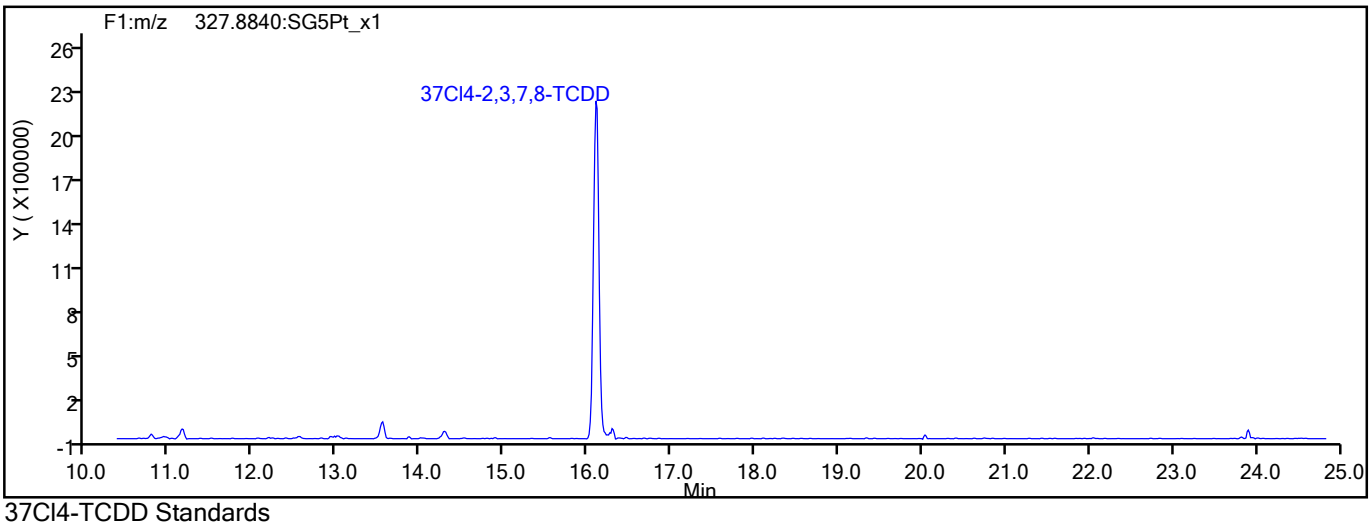

37Cl4-TCDD Standards

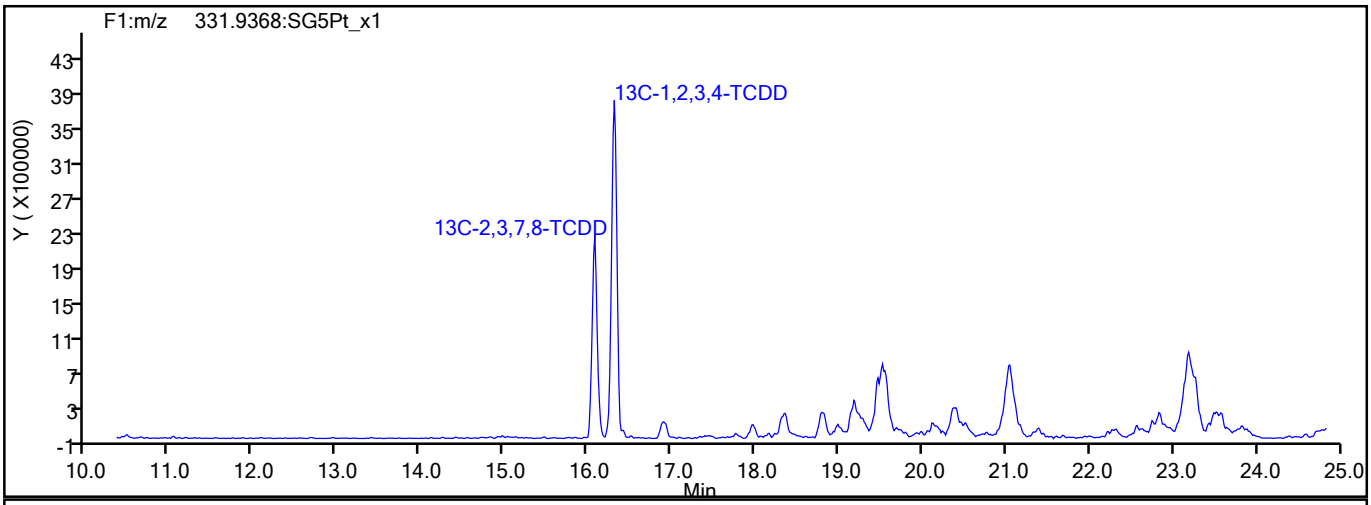

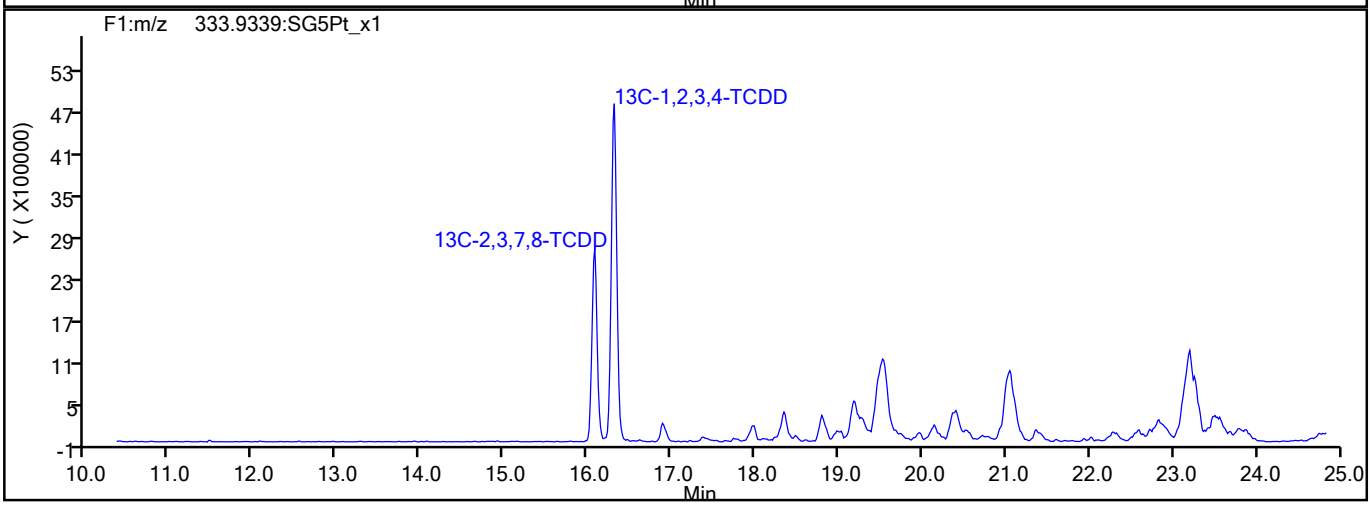

775787

Report Date: 24-Aug-2021 09:19:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_017.d		
Injection Date:	24-Aug-2021 01:48:19	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (6-8)		
Worklist#:	518979	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

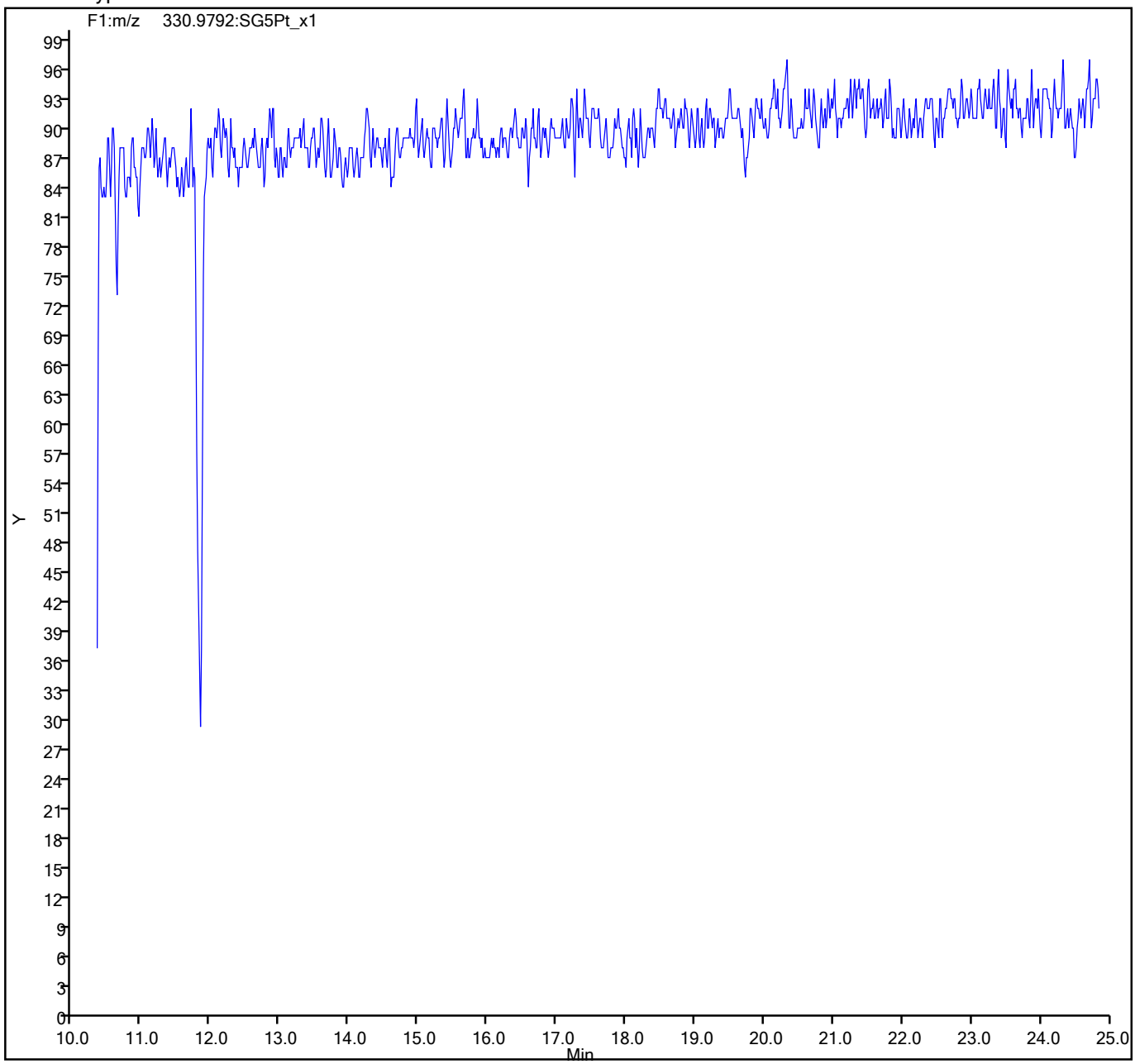

775788

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (8-10)
Lab Sample ID: 320-76769-31
Matrix: Sediment
Lab File ID: 18AU2110D5_5.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.24(g)
Date Analyzed: 08/18/2021 17:19
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	7.9		1.2	0.086
40321-76-4	1,2,3,7,8-PeCDD	0.19	J	6.0	0.073
57117-41-6	1,2,3,7,8-PeCDF	0.96	J	6.0	0.049
57117-31-4	2,3,4,7,8-PeCDF	0.54	J	6.0	0.051
39227-28-6	1,2,3,4,7,8-HxCDD	0.28	J	6.0	0.098
57653-85-7	1,2,3,6,7,8-HxCDD	0.19	J q	6.0	0.10
19408-74-3	1,2,3,7,8,9-HxCDD	0.28	J q	6.0	0.092
70648-26-9	1,2,3,4,7,8-HxCDF	1.1	J	6.0	0.087
57117-44-9	1,2,3,6,7,8-HxCDF	0.30	J q	6.0	0.085
72918-21-9	1,2,3,7,8,9-HxCDF	0.13	J	6.0	0.082
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.0	0.073
35822-46-9	1,2,3,4,6,7,8-HpCDD	3.4	J B	6.0	0.14
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.43	J q	6.0	0.070
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.16	J	6.0	0.082
3268-87-9	OCDD	84	B	12	0.19
39001-02-0	OCDF	0.35	J	12	0.083
41903-57-5	Total TCDD	8.8		1.2	0.086
30402-14-3	Total TCDF	51	q	1.2	0.13
36088-22-9	Total PeCDD	0.40	J	6.0	0.073
30402-15-4	Total PeCDF	2.1	J	6.0	0.050
34465-46-8	Total HxCDD	3.9	J q	6.0	0.098
55684-94-1	Total HxCDF	1.5	J q	6.0	0.082
37871-00-4	Total HpCDD	12	B	6.0	0.14
38998-75-3	Total HpCDF	0.72	J q	6.0	0.076

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (8-10)
Lab Sample ID: 320-76769-31
Matrix: Sediment
Lab File ID: 18AU2110D5_5.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.24(g)
Date Analyzed: 08/18/2021 17:19
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	62		25-164
89059-46-1	13C-2,3,7,8-TCDF	58		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	64		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	60		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	65		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	70		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	63		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	78		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	71		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	60		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	66		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	56		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	51		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	61		26-138
114423-97-1	13C-OCDD	62		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	73		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d
Lims ID: 320-76769-A-31-A
Client ID: 11215702-072221-SS-SJSB076 (8-10)
Sample Type: Client
Inject. Date: 18-Aug-2021 17:19:37 ALS Bottle#: 6 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-31-A 320-76769-A-31-A RI
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:47 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:36:58

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.840	130802544	0.82	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.341	122925792	0.76	1.6249	57.8	57.8	0.1085	0.1085	57.84	
2,3,7,8-TCDF	17.356	15875458	0.76	1.0239	12.6	12.6	0.0559	0.0559		
A Non-2,3,7,8-sub-TCDF	17.159	10969211	0.77	1.0239	8.757	8.715	0.0559	5.403		RQM
S Total TCDF					21.4	21.3	0.0559	0.0559		RQ
D 13C-2,3,7,8-TCDD	18.036	73372503	0.82	0.8993	62.4	62.4	0.1779	0.1779	62.37	
$ 37Cl4-2,3,7,8-TCDD	18.052	42435322		1.1071	29.3	29.3	0.0521	0.0521	73.26	
2,3,7,8-TCDD	18.052	3014042	0.75	1.2541	3.275	3.275	0.0360	0.0360		
A Non-2,3,7,8-sub-TCDD	17.620	349421	0.76	1.2541	0.3797	0.3797	0.0360	0.2897		
S Total TCDD					3.655	3.655	0.0360	0.0360		
D 13C-1,2,3,7,8-PeCDF	22.340	95142064	1.56	1.2101	60.1	60.1	0.1403	0.1403	60.11	
1,2,3,7,8-PeCDF	22.367	403969	1.55	1.0611	0.4001	0.4001	0.0202	0.0202		
D 13C-2,3,4,7,8-PeCDF	23.676	104847228	1.56	1.2395	64.7	64.7	0.1370	0.1370	64.67	
2,3,4,7,8-PeCDF	23.703	238516	1.64	1.0184	0.2234	0.2234	0.0212	0.0212		
A F1 PeCDFs	20.229						0.0148	0.0148		
A Non-2,3,7,8-sub-PeCDF	23.445	264611	1.50	1.0398	0.2545	0.2545	0.0207	0.1170		
S Total PeCDF					0.8780	0.8780	0.0207	0.0207		
D 13C-1,2,3,7,8-PeCDD	24.399	63392146	1.60	0.7612	63.7	63.7	0.0676	0.0676	63.67	
1,2,3,7,8-PeCDD	24.426	51403	1.76	1.0484	0.0773	0.0773	0.0305	0.0305		
A Non-2,3,7,8-sub-PeCDD	23.696	58812	1.63	1.0484	0.0885	0.0885	0.0305	0.0885		M
S Total PeCDD					0.1658	0.1658	0.0305	0.0305		
D 13C-1,2,3,4,7,8-HxCDF	30.490	89148275	0.53	1.0837	77.7	77.7	0.2548	0.2548	77.74	
1,2,3,4,7,8-HxCDF	30.503	431577	1.30	1.0851	0.4461	0.4461	0.0364	0.0364		
D 13C-1,2,3,6,7,8-HxCDF	30.663	85329767	0.52	1.1279	71.5	71.5	0.2448	0.2448	71.49	
1,2,3,6,7,8-HxCDF	30.689	118505	1.24	1.1260	0.1346	0.1233	0.0356	0.0356		RQM
D 13C-2,3,4,6,7,8-HxCDF	31.501	73749482	0.52	1.0637	65.5	65.5	0.2596	0.2596	65.52	
2,3,4,6,7,8-HxCDF	31.488						0.0303	0.0303		
D 13C-1,2,3,7,8,9-HxCDF	32.300	61507536	0.52	0.9676	60.1	60.1	0.2854	0.2854	60.07	
1,2,3,7,8,9-HxCDF	32.326	39581	1.36	1.1664	0.0552	0.0552	0.0341	0.0341		M
A Non-2,3,7,8-sub-HxCDF	30.410						0.0339	0.0339		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.6359	0.6246	0.0341	0.0341		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.127	105817259	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.688	54215844	1.23	0.7334	69.9	69.9	0.2518	0.2518	69.86	
1,2,3,4,7,8-HxCDD	31.701	66683	1.11	1.0640	0.1156	0.1156	0.0410	0.0410		M
D 13C-1,2,3,6,7,8-HxCDD	31.794	58788512	1.23	0.8802	63.1	63.1	0.2098	0.2098	63.12	
1,2,3,6,7,8-HxCDD	31.794	45492	1.24	1.0001	0.0884	0.0774	0.0429	0.0429		RQMa
1,2,3,7,8,9-HxCDD	32.140	74145	1.24	1.1325	0.1266	0.1159	0.0382	0.0382		RQM
A Non-2,3,7,8-sub-HxCDD	30.816	793244	1.24	1.0655	1.325	1.318	0.0406	0.8074		RQM
S Total HxCDD					1.656	1.626	0.0407	0.0407		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	42087156	0.43	0.7730	51.5	51.5	0.4426	0.4426	51.45	
1,2,3,4,6,7,8-HpCDF	33.766	108248	1.04	1.4413	0.2088	0.1785	0.0292	0.0292		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	34.835	45466175	0.44	0.7008	61.3	61.3	0.4882	0.4882	61.31	
1,2,3,4,7,8,9-HpCDF	34.848	38776	0.95	1.3174	0.0647	0.0647	0.0343	0.0343		M
A Non-2,3,7,8-sub-HpCDF	34.283	35198	1.04	1.3793	0.0690	0.0583	0.0316	0.0583		RQM
S Total HpCDF					0.3425	0.3015	0.0317	0.0317		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.544	38625566	1.02	0.6472	56.4	56.4	0.2317	0.2317	56.40	
1,2,3,4,6,7,8-HpCDD	34.556	594296	1.02	1.0943	1.406	1.406	0.0563	0.0563		
A Non-2,3,7,8-sub-HpCDD	33.504	1477818	1.04	1.0943	3.496	3.496	0.0563	3.496		Ma
S Total HpCDD					4.902	4.902	0.0563	0.0563		
D 13C-OCDD	36.890	58897402	0.86	0.4472	124.5	124.5	0.1292	0.1292	62.24	
OCDF	36.986	62374	0.83	1.4382	0.1473	0.1473	0.0345	0.0345		M
OCDD	36.902	11435947	0.89	1.1070	35.1	35.1	0.0779	0.0779		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d
Lims ID: 320-76769-A-31-A
Client ID: 11215702-072221-SS-SJSB076 (8-10)
Sample Type: Client
Inject. Date: 18-Aug-2021 17:19:37 ALS Bottle#: 6 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-31-A 320-76769-A-31-A RI
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:47 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:36:58

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.840	17.809	2		58910754	14852031	9689	24222	1533		a
333.9339	17.840	17.809	2		71891790	18065305	11374	28435	1588	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.310	2	0.972	53256636	12795469	11968	29920	1069		
317.9389	17.341	17.310	2	0.972	69669156	16771198	11249	28122	1491	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.326	2	1.001	6853587	1600379	2754	6885	581		
305.8987	17.356	17.326	2	1.001	9021871	2100257	4010	10025	524	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	15.693	17.159	-88	0.905	37640	9644	2754	6885	4		M
305.8987	15.693	17.159	-88	0.905	44517	11282	4010	10025	3	0.85(0.65-0.89)	M
303.9016	15.935	17.159	-73	0.919	77242	20367	2754	6885	7		
305.8987	15.935	17.159	-73	0.919	119928	28940	4010	10025	7	0.64(0.65-0.89)	
	Empc Correction				100314	26450	4010	10025	7		
303.9016	16.222	17.159	-56	0.935	150083	35467	2754	6885	13		
305.8987	16.222	17.159	-56	0.935	205490	44371	4010	10025	11	0.73(0.65-0.89)	
303.9016	16.449	17.159	-43	0.949	193460	52055	2754	6885	19		
	Empc Correction				160137	41568	2754	6885	15		
305.8987	16.449	17.159	-43	0.949	207971	53985	4010	10025	13	0.93(0.65-0.89)	
303.9016	16.691	17.159	-28	0.963	306755	75172	2754	6885	27		M
305.8987	16.691	17.159	-28	0.963	379070	95171	4010	10025	24	0.81(0.65-0.89)	
303.9016	16.963	17.159	-12	0.978	2948732	719261	2754	6885	261		
305.8987	16.963	17.159	-12	0.978	3851358	953632	4010	10025	238	0.77(0.65-0.89)	
303.9016	17.190	17.159	2	0.991	90880	20514	2754	6885	7		
305.8987	17.190	17.159	2	0.991	121829	26311	4010	10025	7	0.75(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.779	17.159	37	1.025	493506	109161	2754	6885	40		
305.8987	17.779	17.159	37	1.025	606063	135853	4010	10025	34	0.81(0.65-0.89)	
303.9016	18.021	17.159	52	1.039	90032	16676	2754	6885	6		
305.8987	18.006	17.159	51	1.038	128537	25419	4010	10025	6	0.70(0.65-0.89)	
303.9016	19.155	17.159	120	1.105	451238	92810	2754	6885	34		
305.8987	19.155	17.159	120	1.105	517817	108848	4010	10025	27	0.87(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.036	18.006	2	1.011	32977547	7731439	9689	24222	798		
333.9339	18.036	18.006	2	1.011	40394956	9247681	11374	28435	813	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.052	18.021	2	1.012	42435322	9752460	7592	18980	1285		
2,3,7,8-TCDD											
319.8965	18.052	18.036	1	1.001	1287347	298737	1765	4412	169		
321.8936	18.052	18.036	1	1.001	1726695	384755	1304	3260	295	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	16.917	17.620	-42	0.938	35253	8619	1765	4412	5		
321.8936	16.917	17.620	-42	0.938	47547	10461	1304	3260	8	0.74(0.65-0.89)	
319.8965	18.414	17.620	48	1.021	115311	25396	1765	4412	14		
321.8936	18.414	17.620	48	1.021	151310	32401	1304	3260	25	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.340	22.299	2	1.252	57947075	9951472	13504	33760	737		
353.8970	22.340	22.299	2	1.252	37194989	6501826	8847	22117	735	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.367	22.326	2	1.001	245549	41302	668	1670	62		
341.8567	22.367	22.326	2	1.001	158420	25854	746	1865	35	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.676	23.635	2	1.327	63821504	10034775	13504	33760	743		
353.8970	23.676	23.635	2	1.327	41025724	6344996	8847	22117	717	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.703	23.662	2	1.001	148289	22976	668	1670	34		
341.8567	23.690	23.662	2	1.001	90227	13402	746	1865	18	1.64(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.229						424	1060			
341.8567	20.229						586	1465			
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.031	23.445	-145	0.941	72656	12619	668	1670	19		
341.8567	21.031	23.445	-145	0.941	49001	10321	746	1865	14	1.48(1.32-1.78)	
339.8597	22.885	23.445	-34	1.024	48643	8916	668	1670	13		
341.8567	22.885	23.445	-34	1.024	30525	4969	746	1865	7	1.59(1.32-1.78)	
339.8597	24.031	23.445	35	1.076	37579	4930	668	1670	7		
341.8567	24.003	23.445	33	1.074	26207	3651	746	1865	5	1.43(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.399	24.358	2	1.368	39040759	5765382	4036	10090	1428		
369.8919	24.399	24.358	2	1.368	24351387	3670459	2737	6842	1341	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											
355.8546	24.426	24.385	2	1.001	32751	5281	617	1542	9		
357.8516	24.426	24.385	2	1.001	18652	2960	592	1480	5	1.76(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											M
355.8546	21.972	23.696	-103	0.901	36490	7551	617	1542	12		M
357.8516	21.944	23.696	-105	0.899	22322	4282	592	1480	7	1.63(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.490	30.450	2	0.949	30778345	5711868	11172	27930	511		
385.8610	30.490	30.450	2	0.949	58369930	10541496	19780	49450	533	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.503	30.463	2	1.000	243545	42696	1726	4315	25		
375.8178	30.503	30.463	2	1.000	188032	33677	842	2105	40	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.663	30.636	2	0.954	29206388	5512048	11172	27930	493		
385.8610	30.663	30.636	2	0.954	56123379	10524873	19780	49450	532	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQM
373.8208	30.689	30.649	2	1.001	65601	12269	1726	4315	7		
375.8178	30.702	30.649	3	1.001	63686	11380	842	2105	14	1.03(1.05-1.43)	M
	Empc Correction				52904	9894	842	2105	12		
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.501	31.475	2	0.981	25189393	6221282	11172	27930	557		
385.8610	31.501	31.475	2	0.981	48560089	11931281	19780	49450	603	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.488						1726	4315			
375.8178	31.488						842	2105			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.300	32.286	1	1.005	21011138	5552092	11172	27930	497		
385.8610	32.300	32.286	1	1.005	40496398	10606903	19780	49450	536	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.326	32.300	2	1.001	22787	6591	1726	4315	4		M
375.8178	32.326	32.300	2	1.001	16794	4346	842	2105	5	1.36(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.410						1726	4315			
375.8178	30.410						842	2105			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.127	32.100	2		58720613	15367004	12028	30070	1278		
403.8529	32.127	32.100	2		47096646	12657085	8673	21682	1459	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.688	31.661	2	0.986	29953592	8120592	12028	30070	675		
403.8529	31.688	31.661	2	0.986	24262252	6747500	8673	21682	778	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.701	31.674	2	1.000	35033	7937	1386	3465	6		M
391.8127	31.701	31.674	2	1.000	31650	8516	1207	3017	7	1.11(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.794	31.767	2	0.990	32416340	8259174	12028	30070	687		
403.8529	31.794	31.767	2	0.990	26372172	6833274	8673	21682	788	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											RQMa
389.8157	31.794	31.781	1	1.000	31658	6435	1386	3465	5		M
	Empc Correction				25183	5017	1386	3465	4		
391.8127	31.807	31.781	2	1.000	20309	4046	1207	3017	3	1.56(1.05-1.43)	
1,2,3,7,8,9-HxCDD											RQM
389.8157	32.140	32.113	2	1.014	41045	8232	1386	3465	6		M
391.8127	32.140	32.113	2	1.014	39989	8441	1207	3017	7	1.03(1.05-1.43)	M
	Empc Correction				33100	6638	1207	3017	5		
A Non-2,3,7,8-sub-HxCDD											RQM
389.8157	29.505	30.816	-79	0.928	267363	27909	1386	3465	20		
391.8127	29.505	30.816	-79	0.928	218710	26781	1207	3017	22	1.22(1.05-1.43)	
389.8157	30.569	30.816	-15	0.961	48036	7774	1386	3465	6		M
391.8127	30.583	30.816	-14	0.962	33946	5498	1207	3017	5	1.42(1.05-1.43)	M
389.8157	30.942	30.816	8	0.973	93373	16955	1386	3465	12		
391.8127	30.929	30.816	7	0.973	76154	15111	1207	3017	13	1.23(1.05-1.43)	M
389.8157	31.155	30.816	20	0.980	30813	5651	1386	3465	4		
391.8127	31.142	30.816	20	0.979	29502	6206	1207	3017	5	1.04(1.05-1.43)	M
	Empc Correction				24849	4557	1207	3017	4		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.730	1	1.051	12677611	4296603	13775	34437	312		
419.8220	33.754	33.730	1	1.051	29409545	9923953	24574	61435	404	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7818	33.766	33.742	1	1.000	73573	23517	1419	3547	17		M
	Empc Correction				55185	17229	1419	3547	12		
409.7789	33.754	33.742	1	1.000	53063	16567	971	2427	17	1.39(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.835	34.811	1	1.084	13910659	4081330	13775	34437	296		
419.8220	34.835	34.811	1	1.084	31555516	9125700	24574	61435	371	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.848	34.824	1	1.000	18902	5992	1419	3547	4		
409.7789	34.835	34.824	1	1.000	19874	5242	971	2427	5	0.95(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDF											RQM
407.7818	34.058	34.283	-13	1.009	24391	6303	1419	3547	4		M
	Empc Correction				17944	6030	1419	3547	4		
409.7789	34.058	34.283	-13	1.009	17254	5799	971	2427	6	1.41(0.88-1.20)	M
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.544	34.520	1	1.075	19484110	6289979	8867	22167	709		
437.8140	34.544	34.520	1	1.075	19141456	6083904	7946	19865	766	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.556	34.532	1	1.000	299898	87958	1644	4110	54		
425.7737	34.556	34.532	1	1.000	294398	91285	1403	3507	65	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											Ma
423.7766	34.009	33.504	30	0.985	754269	250160	1644	4110	152		M
425.7737	33.997	33.504	30	0.984	723549	243182	1403	3507	173	1.04(0.88-1.20)	M
13C-OCDD											
469.7779	36.890	36.878	1	1.148	27229523	6899354	3171	7927	2176		
471.7750	36.890	36.878	1	1.148	31667879	7992022	3305	8262	2418	0.86(0.76-1.02)	

Report Date: 19-Aug-2021 13:24:04 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											M
441.7428	36.986	36.974	1	1.003	28282	5447	572	1430	10		M
443.7399	36.998	36.974	1	1.003	34092	6767	907	2267	7	0.83(0.76-1.02)	M
OCDD											
457.7377	36.902	36.890	1	1.000	5384594	1372187	1120	2800	1225		
459.7348	36.902	36.890	1	1.000	6051353	1581792	1448	3620	1092	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d
Lims ID: 320-76769-A-31-A
Client ID: 11215702-072221-SS-SJSB076 (8-10)
Inject. Date: 18-Aug-2021 17:19:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDF, RT: 17.159

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	122925792	29566667

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	122925792	29566667

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.693	37640	9644	44517	11282	0.0653	0.85	M
15.935	77242	20367	119928	28940	0.1567	0.64	RQ
15.935	77242	20367	100314	26450	0.1411		Empc Correction
16.222	150083	35467	205490	44371	0.2825	0.73	
16.449	193460	52055	207971	53985	0.3189	0.93	RQ
16.449	160137	41568	207971	53985	0.2925		Empc Correction
16.691	306755	75172	379070	95171	0.5449	0.81	M
16.963	2948732	719261	3851358	953632	5.40	0.77	
17.190	90880	20514	121829	26311	0.1690	0.75	
17.779	493506	109161	606063	135853	0.8736	0.81	
18.021	90032	16676	128537	25419	0.1737	0.70	
19.155	451238	92810	517817	108848	0.7699	0.87	
Signal Totals:							
	4806245	1140640	6162966	1481322			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11022148	2634939				0.78	RQM
	10969211	2621962					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 8.757 = (11022148 * 100.000) / (122925792 * 1.024)
Empc Amount: 8.715 = (10969211 * 100.000) / (122925792 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 13:24:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d
Lims ID: 320-76769-A-31-A
Client ID: 11215702-072221-SS-SJSB076 (8-10)
Inject. Date: 18-Aug-2021 17:19:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDD, RT: 17.620

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	73372503	16979120

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	73372503	16979120

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.917	35253	8619	47547	10461	0.0900	0.74	
18.414	115311	25396	151310	32401	0.2897	0.76	
Signal Totals:							
	150564	34015	198857	42862			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	349421	76877				0.76	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3797 = (349421 * 100.000) / (73372503 * 1.254)

Report Date: 19-Aug-2021 13:24:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d
Lims ID: 320-76769-A-31-A
Client ID: 11215702-072221-SS-SJSB076 (8-10)
Inject. Date: 18-Aug-2021 17:19:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 5

Non-2,3,7,8-sub-PeCDF, RT: 23.445

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	95142064	16453298
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	104847228	16379771

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	99994646	16416534

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.031	72656	12619	49001	10321	0.1170	1.48	
22.885	48643	8916	30525	4969	0.0761	1.59	
24.031	37579	4930	26207	3651	0.0613	1.43	
Signal Totals:							
	158878	26465	105733	18941			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	264611	45406				1.50	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2545 = (264611 * 100.000) / (99994646 * 1.040)

Report Date: 19-Aug-2021 13:24:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Lims ID:	320-76769-A-31-A		
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Inject. Date:	18-Aug-2021 17:19:37	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	5

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	63392146	9435841

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	63392146	9435841

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.972	36490	7551	22322	4282	0.0885	1.63	M
Signal Totals:							
	36490	7551	22322	4282			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	58812	11833				1.63	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0885 = (58812 * 100.000) / (63392146 * 1.048)

QC Flag Legend

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d
Lims ID: 320-76769-A-31-A
Client ID: 11215702-072221-SS-SJSB076 (8-10)
Inject. Date: 18-Aug-2021 17:19:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 5

Non-2,3,7,8-sub-HxCDF, RT: 30.410

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	89148275	16253364
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	85329767	16036921
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	73749482	18152563
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	61507536	16158995

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d
Lims ID: 320-76769-A-31-A
Client ID: 11215702-072221-SS-SJSB076 (8-10)
Inject. Date: 18-Aug-2021 17:19:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 5

Non-2,3,7,8-sub-HxCDD, RT: 30.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	54215844	14868092
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	58788512	15092448
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	56502178	14980270

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.505	267363	27909	218710	26781	0.8074	1.22	
30.569	48036	7774	33946	5498	0.1362	1.42	M
30.942	93373	16955	76154	15111	0.2816	1.23	M
31.155	30813	5651	29502	6206	0.1002	1.04	RQM
31.155	30813	5651	24849	4557	0.0925		Empc Correction
Signal Totals:							
	439585	58289	353659	51947			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	797897	111885				1.23	RQM
	793244	110236					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.325 = (797897 * 100.000) / (56502178 * 1.066)
Empc Amount: 1.318 = (793244 * 100.000) / (56502178 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d
Lims ID: 320-76769-A-31-A
Client ID: 11215702-072221-SS-SJSB076 (8-10)
Inject. Date: 18-Aug-2021 17:19:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 5

Non-2,3,7,8-sub-HpCDF, RT: 34.283

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	42087156	14220556
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	45466175	13207030

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	43776665	13713793

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.058	24391	6303	17254	5799	0.0690	1.41	RQM
34.058	17944	6030	17254	5799	0.0583		Empc Correction
Signal Totals:							
	17944	6030	17254	5799			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	41645	12102				1.41	RQM
	35198	11829					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0690 = (41645 * 100.000) / (43776665 * 1.379)
Empc Amount: 0.0583 = (35198 * 100.000) / (43776665 * 1.379)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d
Lims ID: 320-76769-A-31-A
Client ID: 11215702-072221-SS-SJSB076 (8-10)
Inject. Date: 18-Aug-2021 17:19:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 5

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	38625566	12373883

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	38625566	12373883

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.009	754269	250160	723549	243182	3.50	1.04	M
Signal Totals:							
	754269	250160	723549	243182			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1477818	493342				1.04	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.496 = (1477818 * 100.000) / (38625566 * 1.094)

QC Flag Legend

Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.86- 19.46)

Signal: 1

Processing Integration Results

Not Detected
RT: 14.86- 19.46

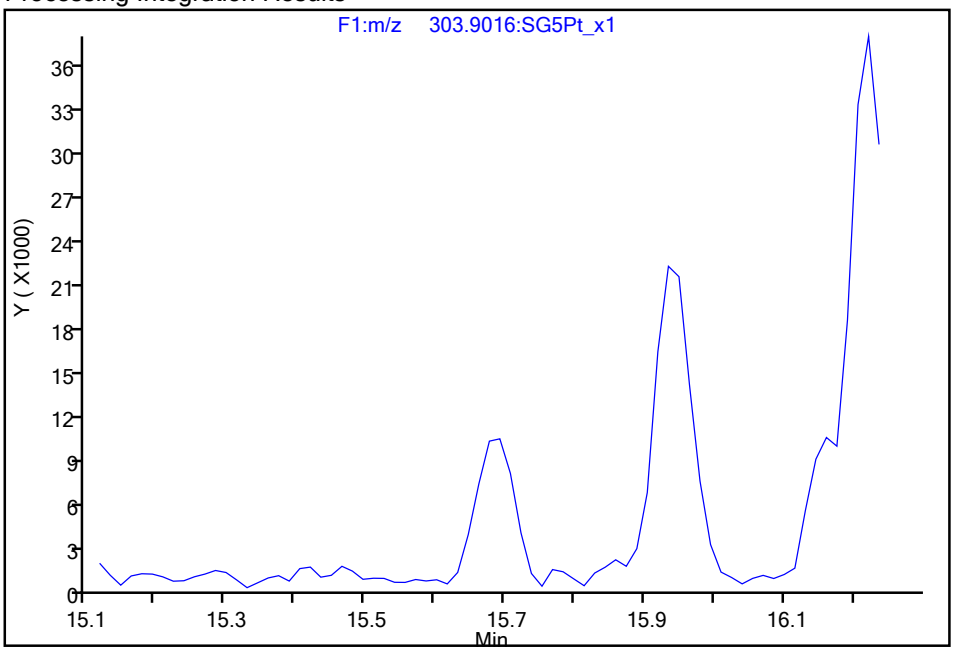

Manual Integration Results

RT = 15.693 Area = 37640 M

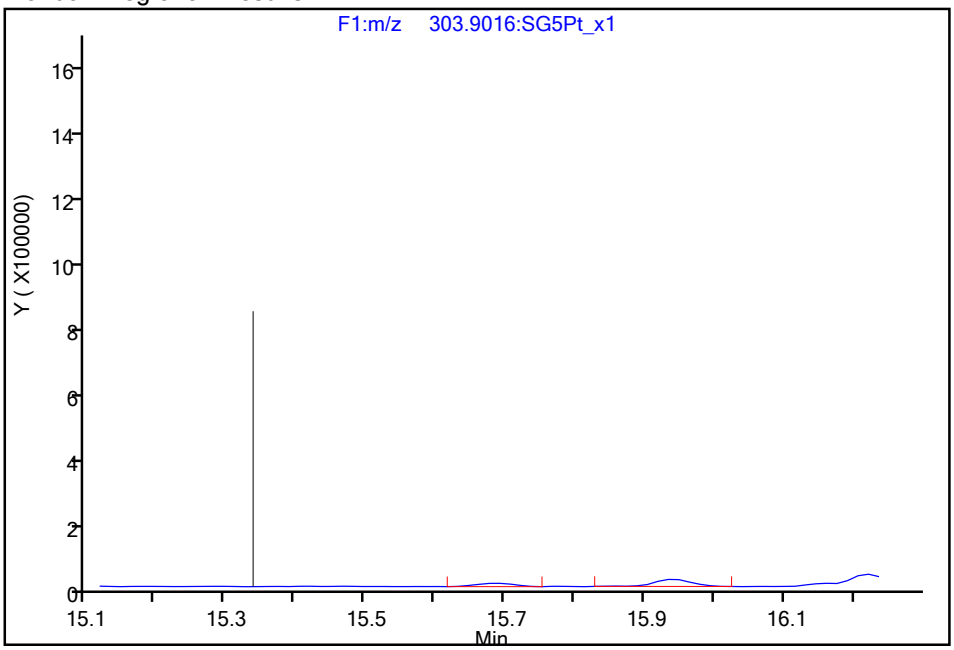

Reviewer: bennettd, 19-Aug-2021 12:29:51

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.86- 19.46)

Signal: 2

Not Detected
RT: 14.86- 19.46

Processing Integration Results

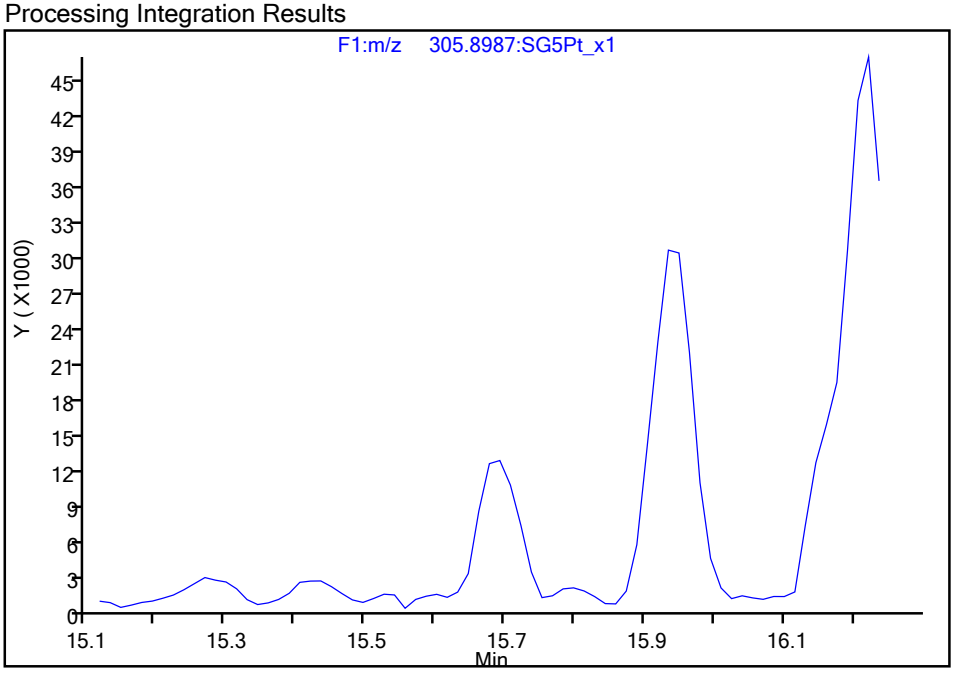

RT = 15.693 Area = 44517 M

Manual Integration Results

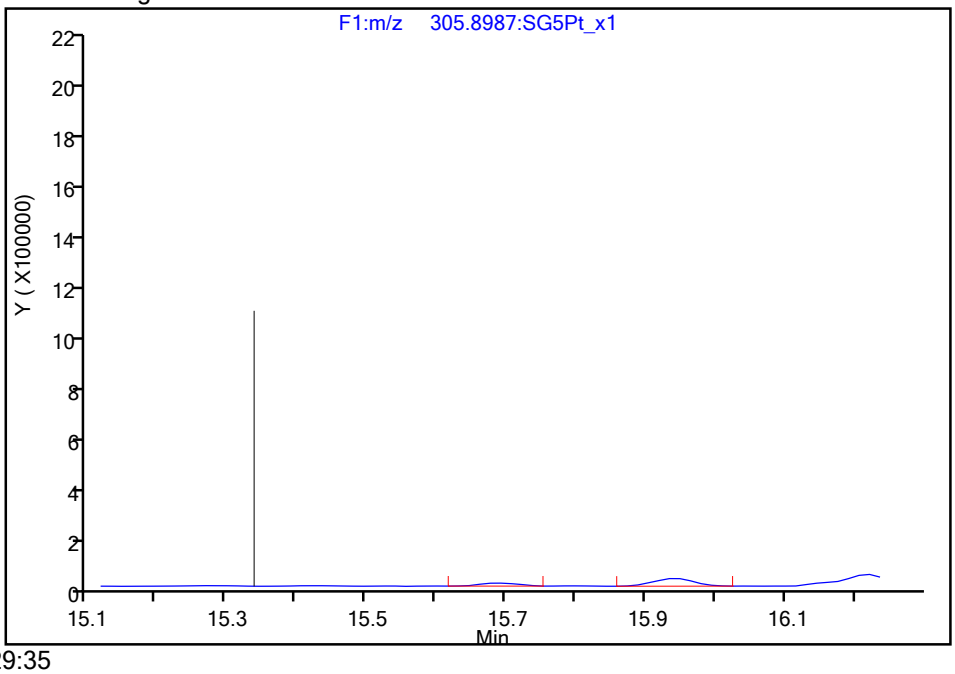

Reviewer: bennettd, 19-Aug-2021 12:29:35
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.86- 19.46)

Signal: 1

Processing Integration Results

RT = 16.676 Area = 141205

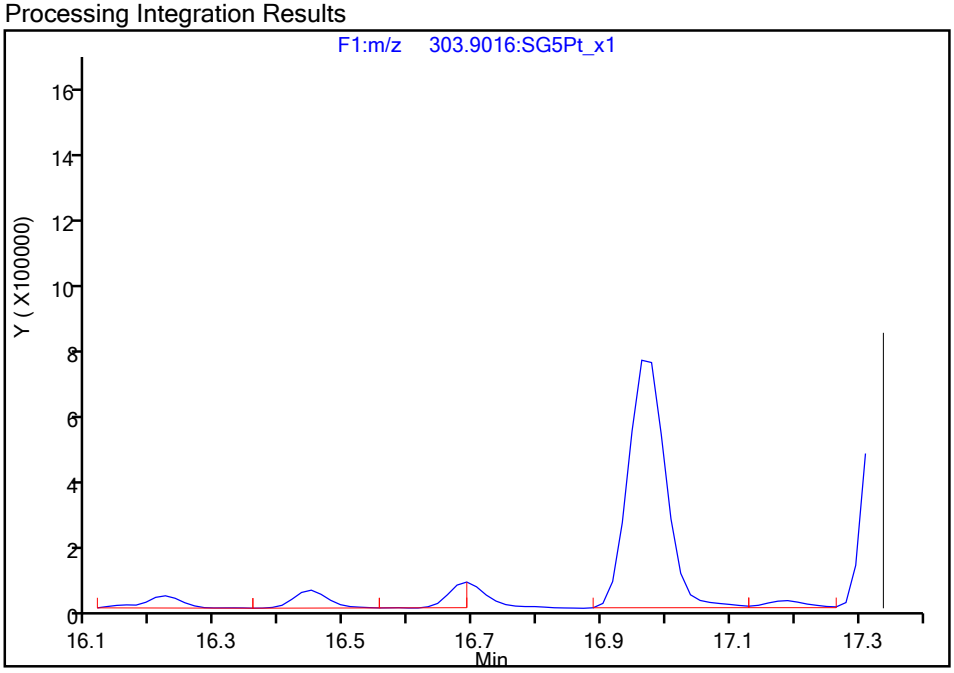

Manual Integration Results

RT = 16.691 Area = 306755 M

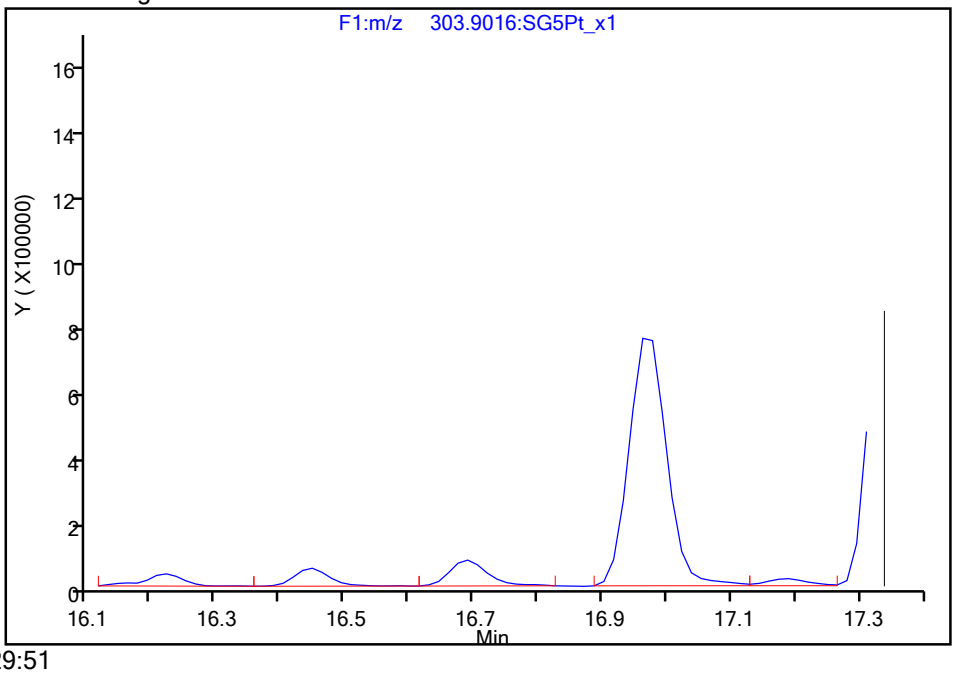

Reviewer: bennettd, 19-Aug-2021 12:29:51

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 21.972 Area = 33981

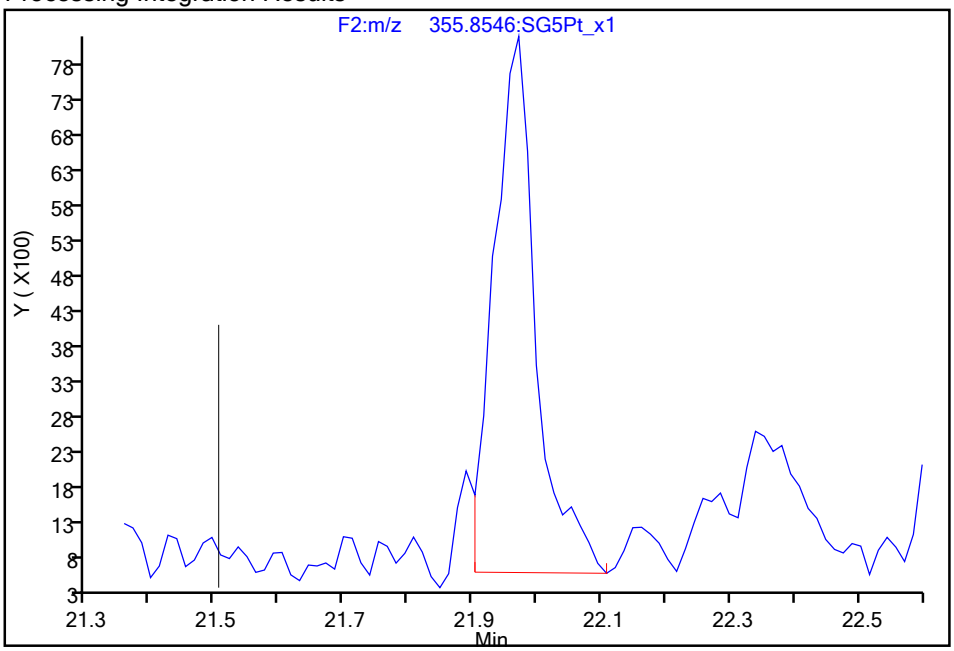

Manual Integration Results

RT = 21.972 Area = 36490 M

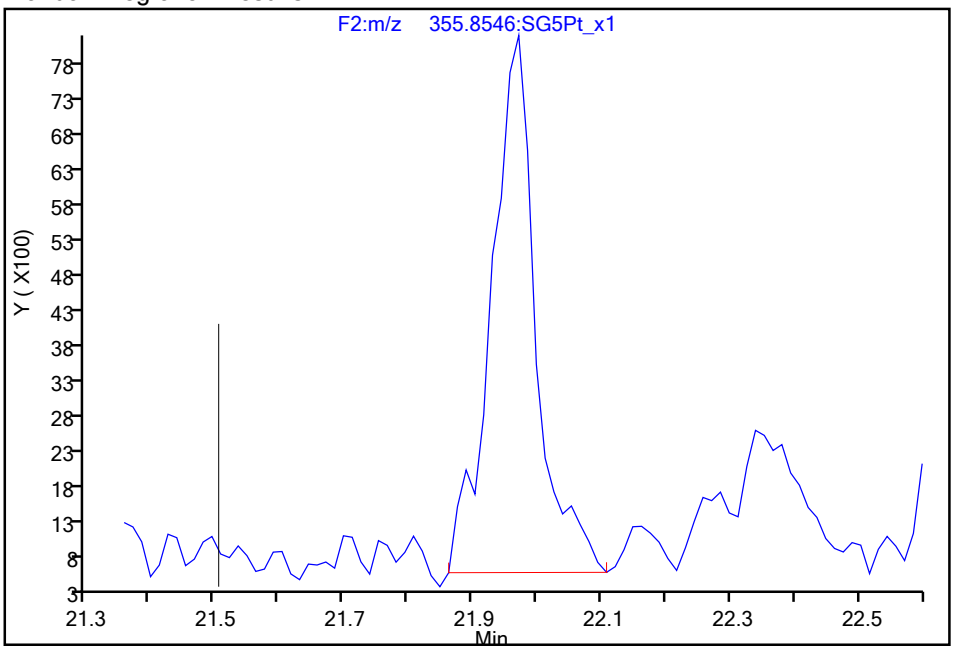

Reviewer: bennettd, 19-Aug-2021 12:30:56

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 30.70
Area: 69617
Amount: 0.140731
Amount Units: pg/ul

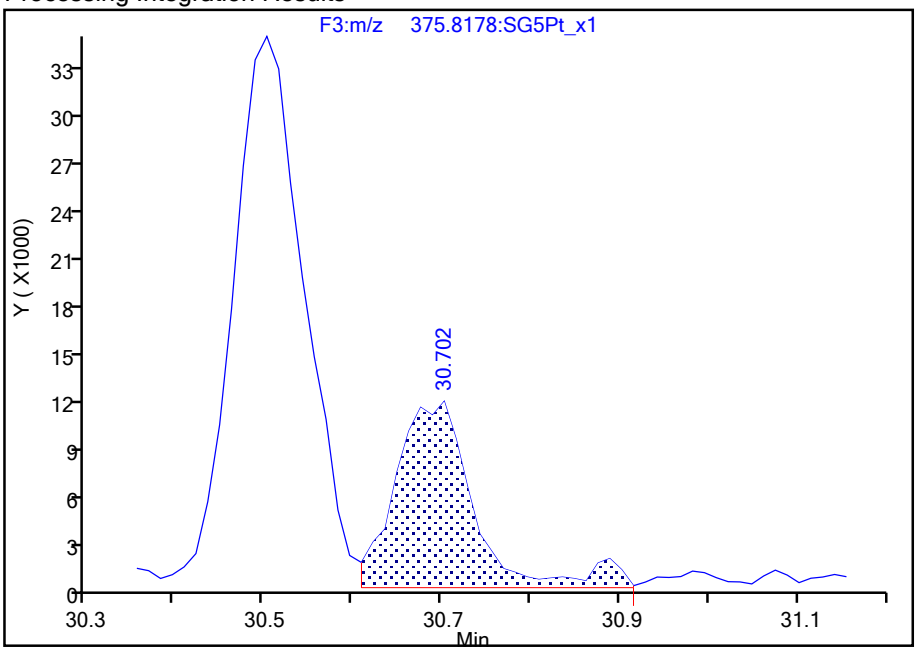

Manual Integration Results

RT: 30.70
Area: 63686
Amount: 0.134559
Amount Units: pg/ul

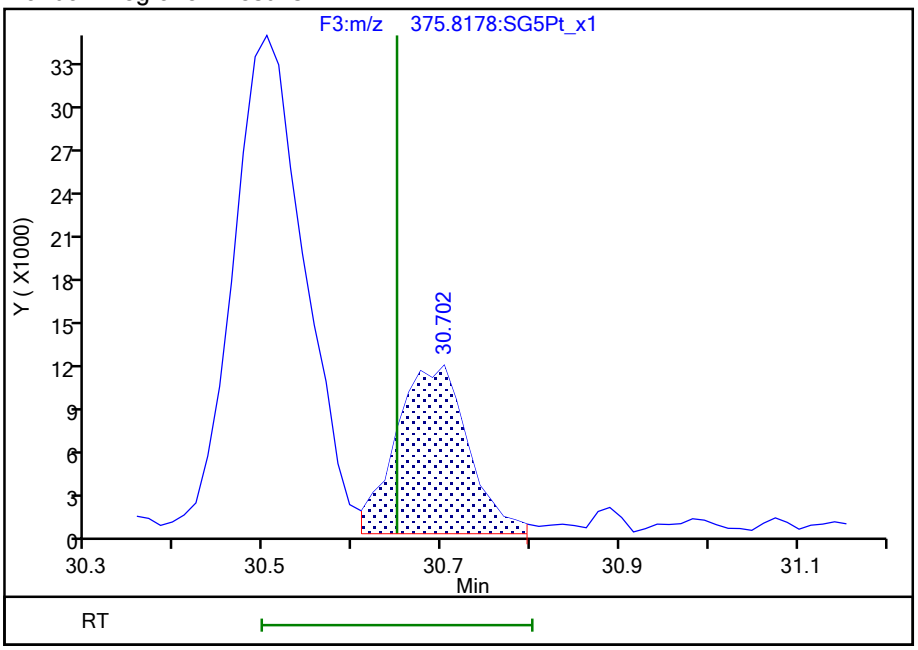

Reviewer: bennettd, 19-Aug-2021 12:31:57

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.33
Area: 49682
Amount: 0.110826
Amount Units: pg/ul

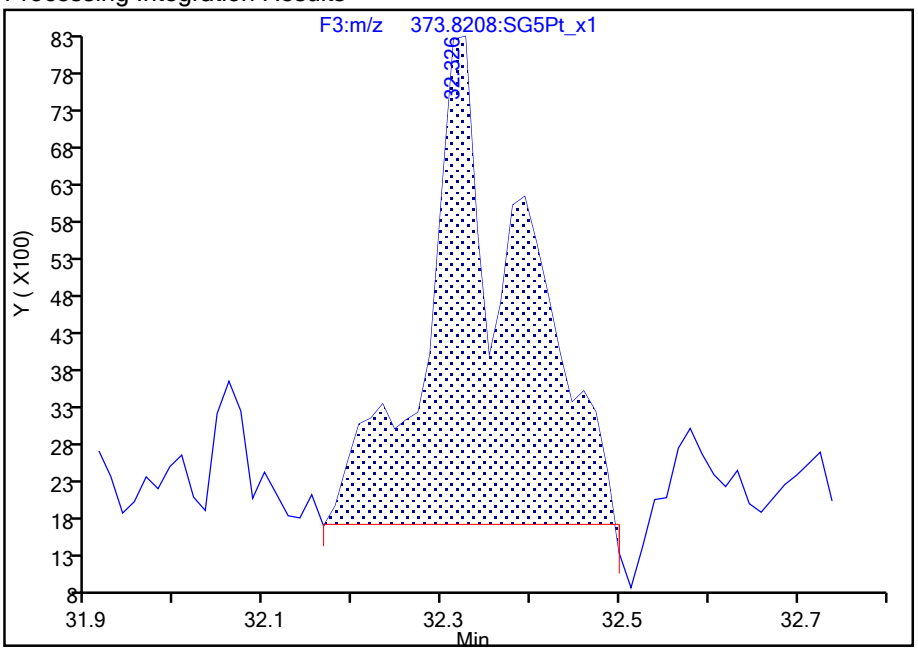

Manual Integration Results

RT: 32.33
Area: 22787
Amount: 0.055173
Amount Units: pg/ul

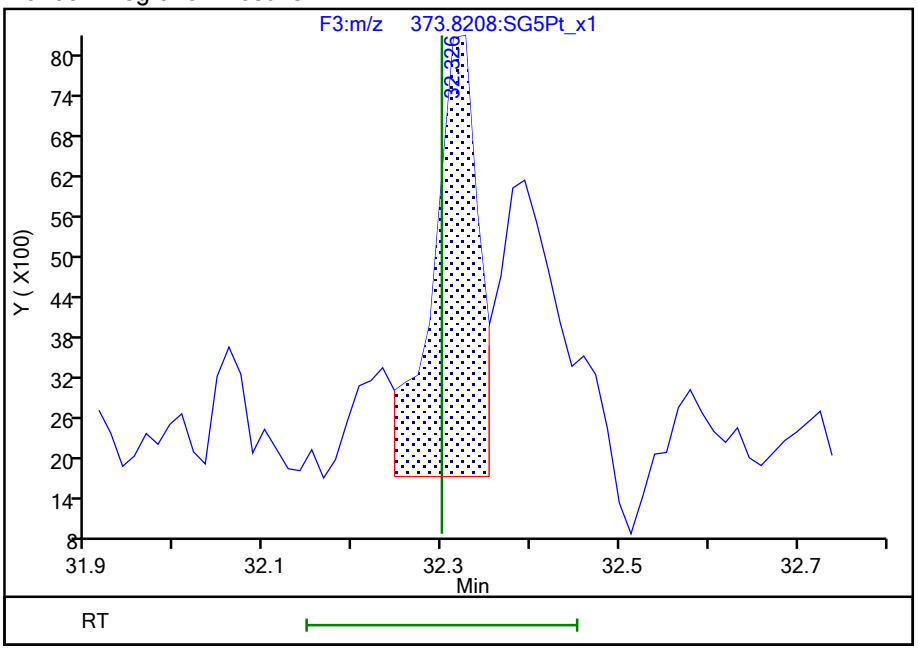

Reviewer: bennettd, 19-Aug-2021 12:32:25

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.33
Area: 29824
Amount: 0.110826
Amount Units: pg/ul

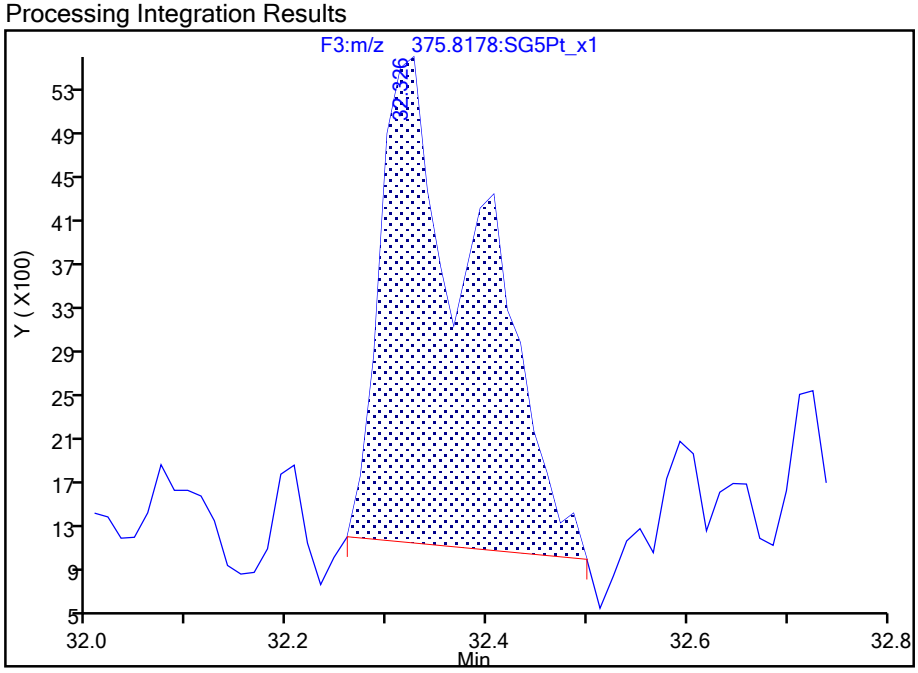

Manual Integration Results

RT: 32.33
Area: 16794
Amount: 0.055173
Amount Units: pg/ul

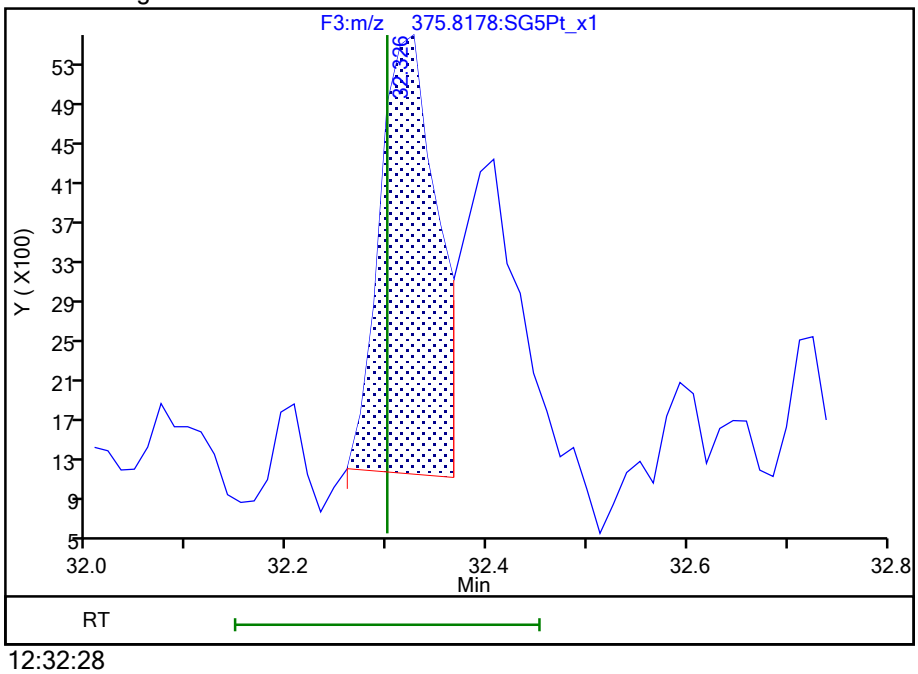

Reviewer: bennettd, 19-Aug-2021 12:32:28

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.70
Area: 66691
Amount: 0.205679
Amount Units: pg/ul

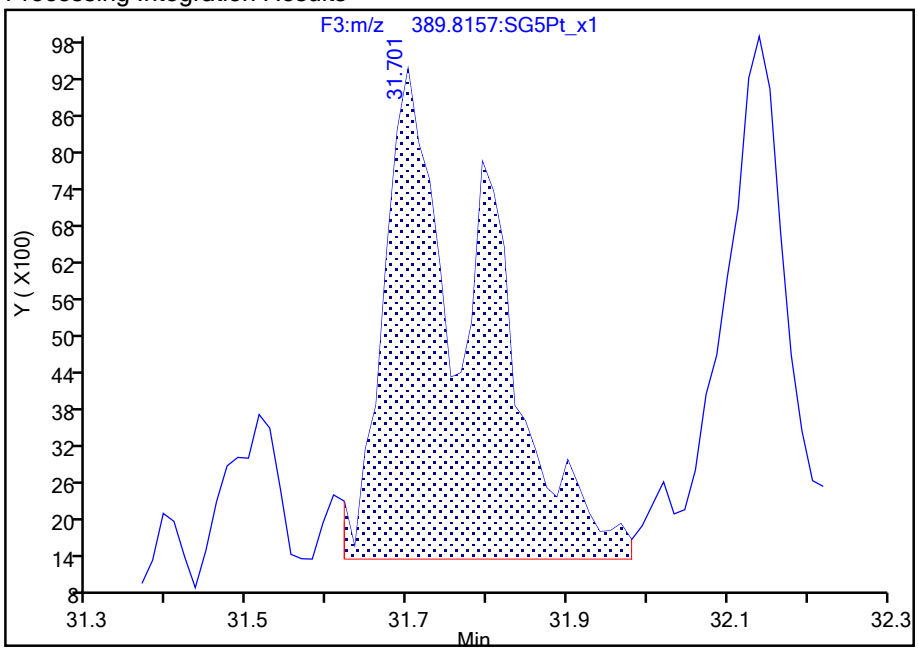

Manual Integration Results

RT: 31.70
Area: 35033
Amount: 0.115593
Amount Units: pg/ul

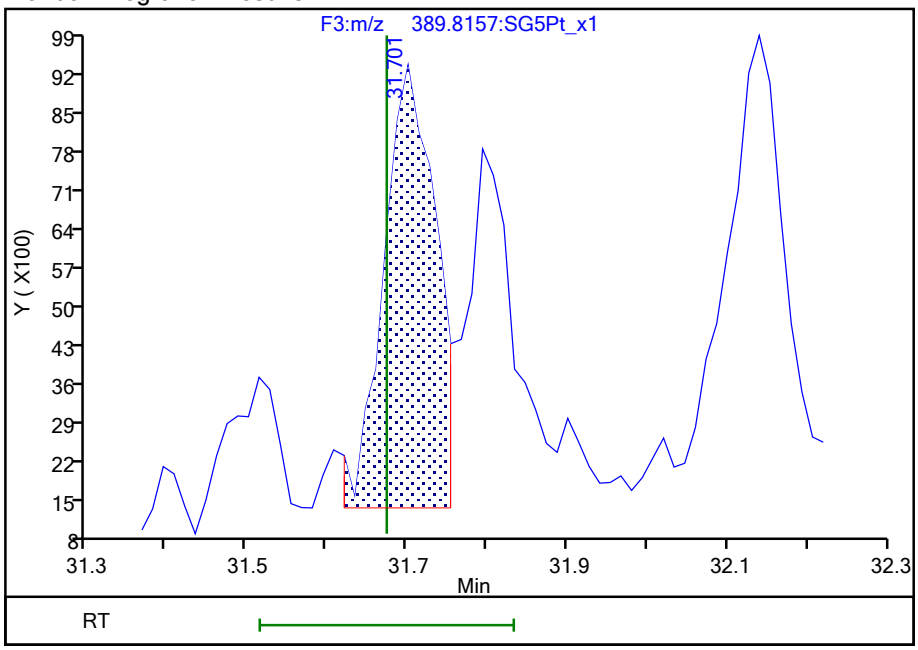

Reviewer: bennettd, 19-Aug-2021 12:32:49

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.70
Area: 51960
Amount: 0.205679
Amount Units: pg/ul

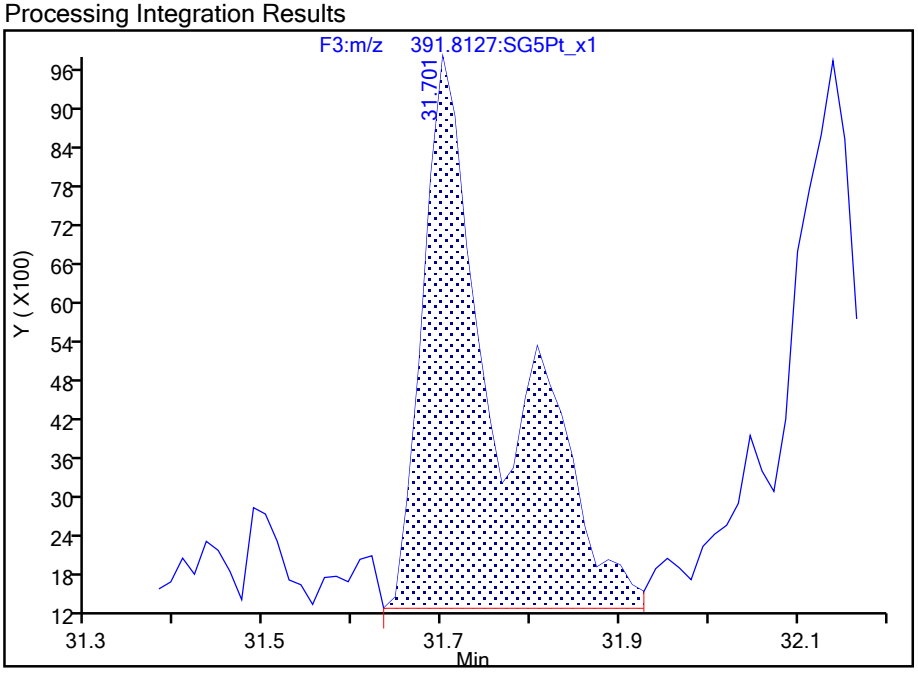

Manual Integration Results

RT: 31.70
Area: 31650
Amount: 0.115593
Amount Units: pg/ul

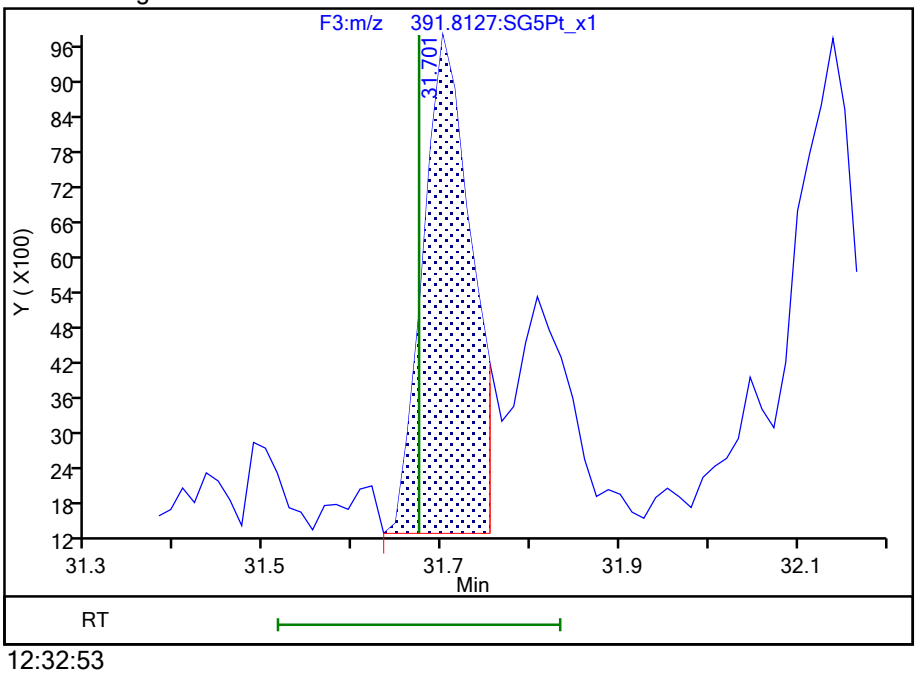

Reviewer: bennettd, 19-Aug-2021 12:32:53

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.70
Area: 51960
Amount: 0.201811
Amount Units: pg/ul

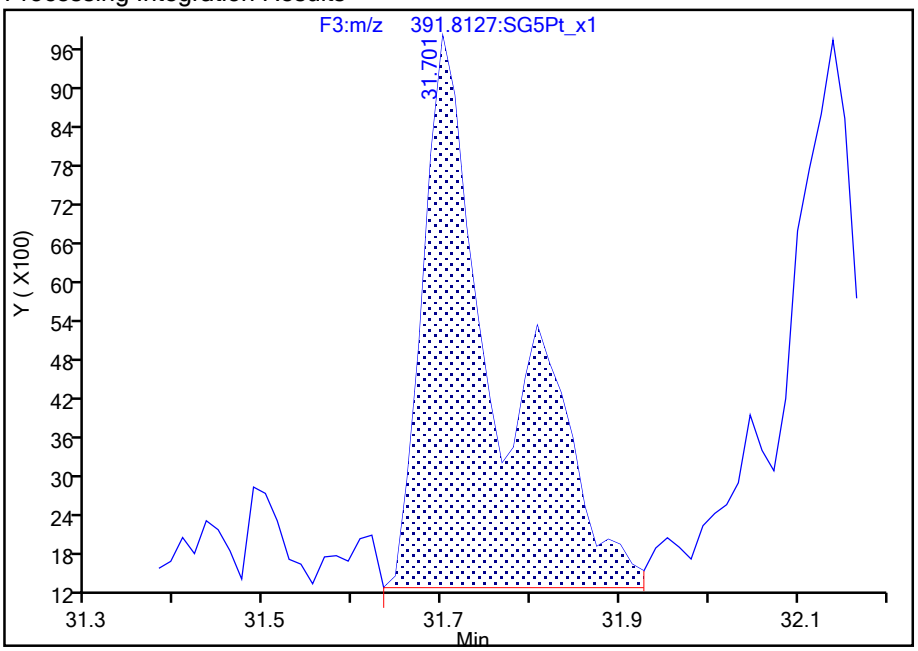

Manual Integration Results

RT: 31.81
Area: 20309
Amount: 0.088390
Amount Units: pg/ul

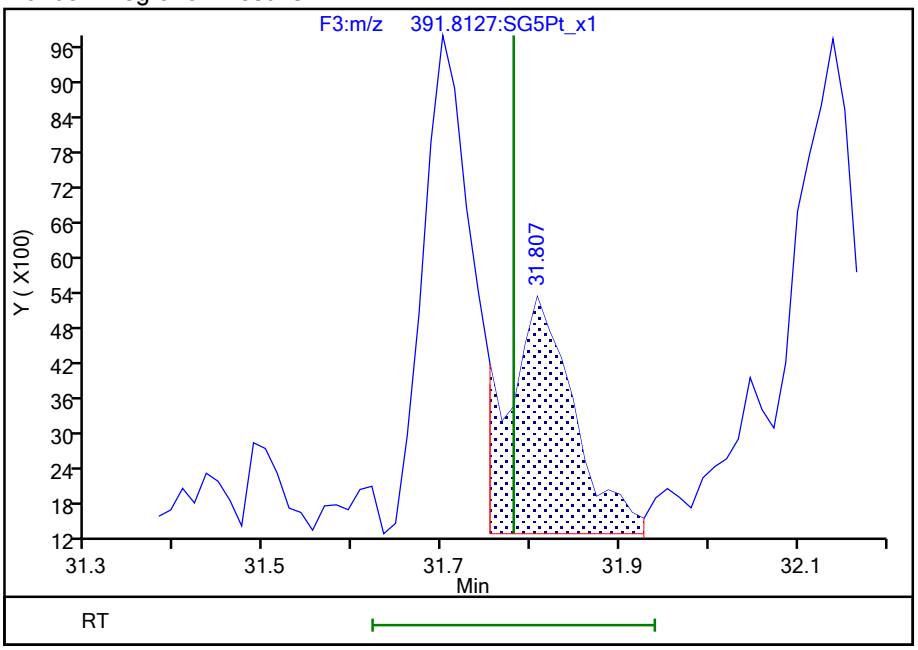

Reviewer: bennettd, 19-Aug-2021 12:32:53

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.70
Area: 66691
Amount: 0.201811
Amount Units: pg/ul

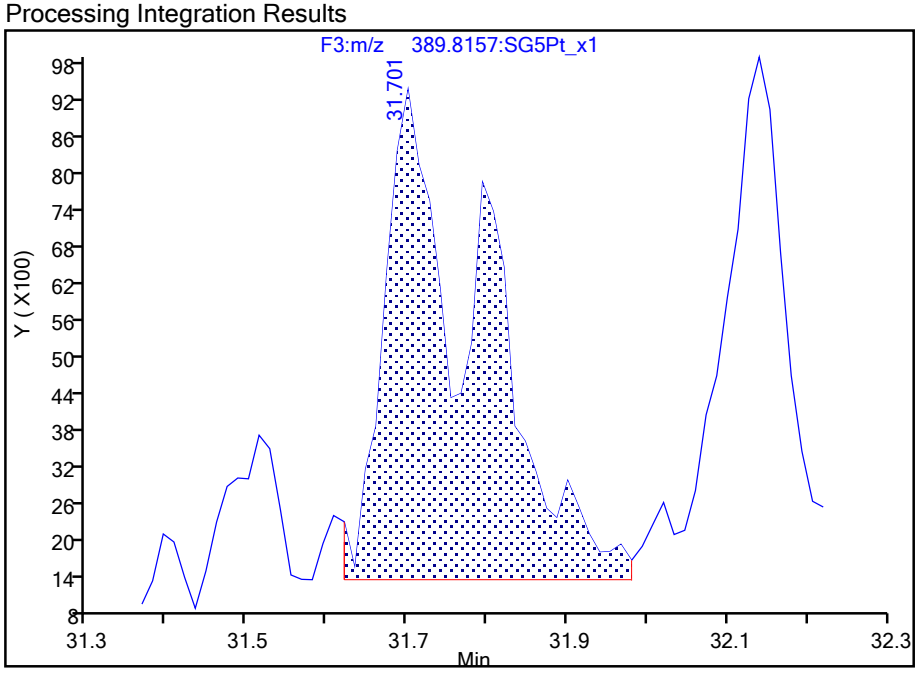

Manual Integration Results

RT: 31.79
Area: 31658
Amount: 0.088390
Amount Units: pg/ul

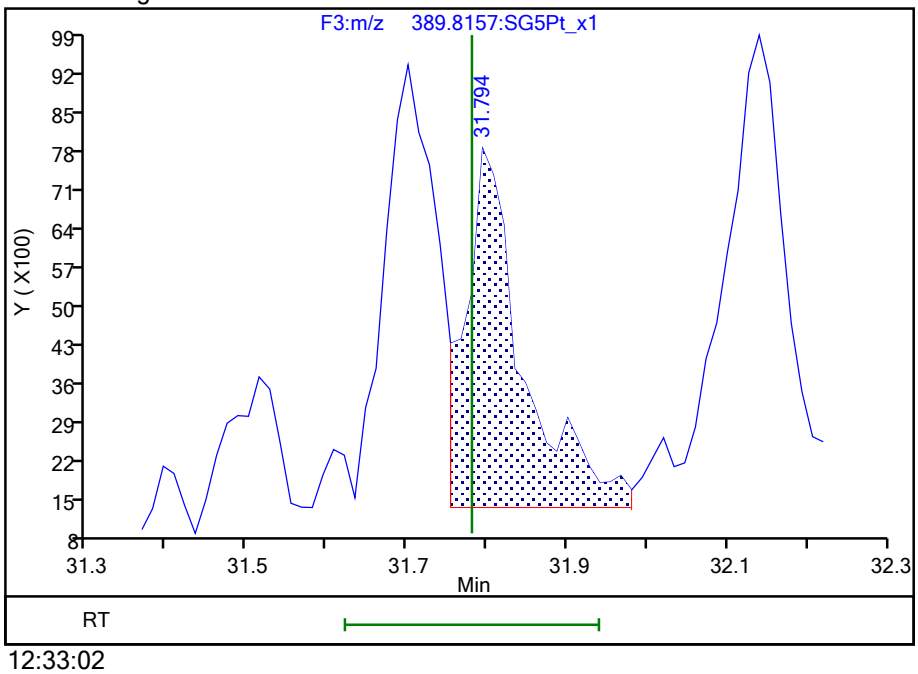

Reviewer: bennettd, 19-Aug-2021 12:33:02

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 32.14
Area: 64683
Amount: 0.175871
Amount Units: pg/ul

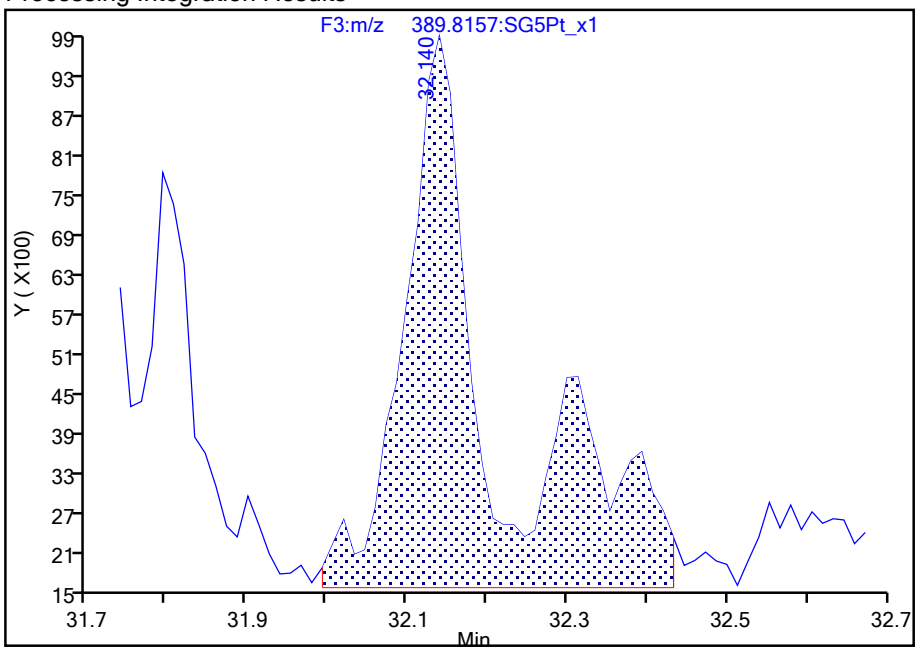

Manual Integration Results

RT: 32.14
Area: 41045
Amount: 0.126635
Amount Units: pg/ul

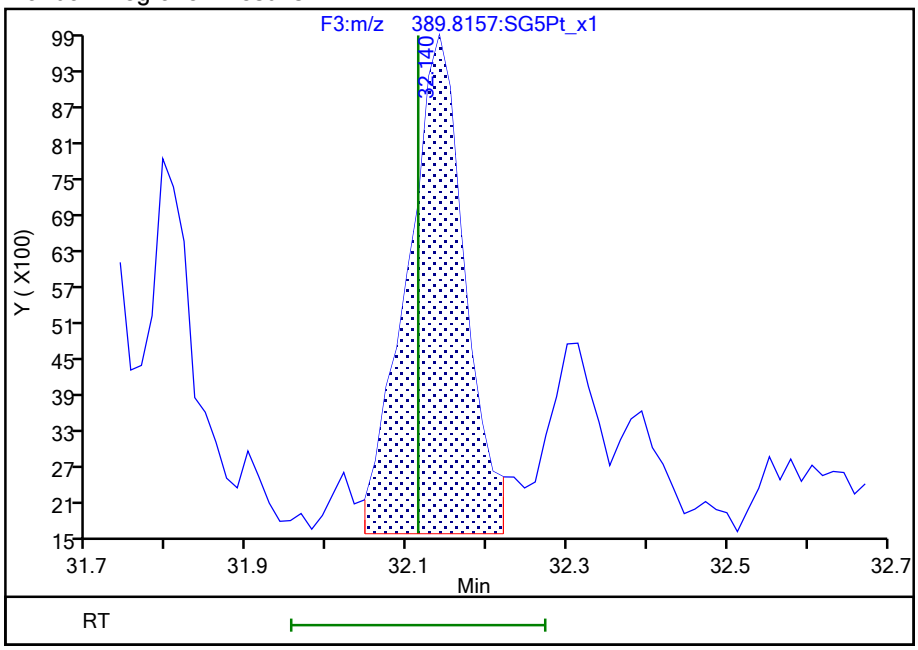

Reviewer: bennettd, 19-Aug-2021 12:33:29

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 32.14
Area: 47857
Amount: 0.175871
Amount Units: pg/ul

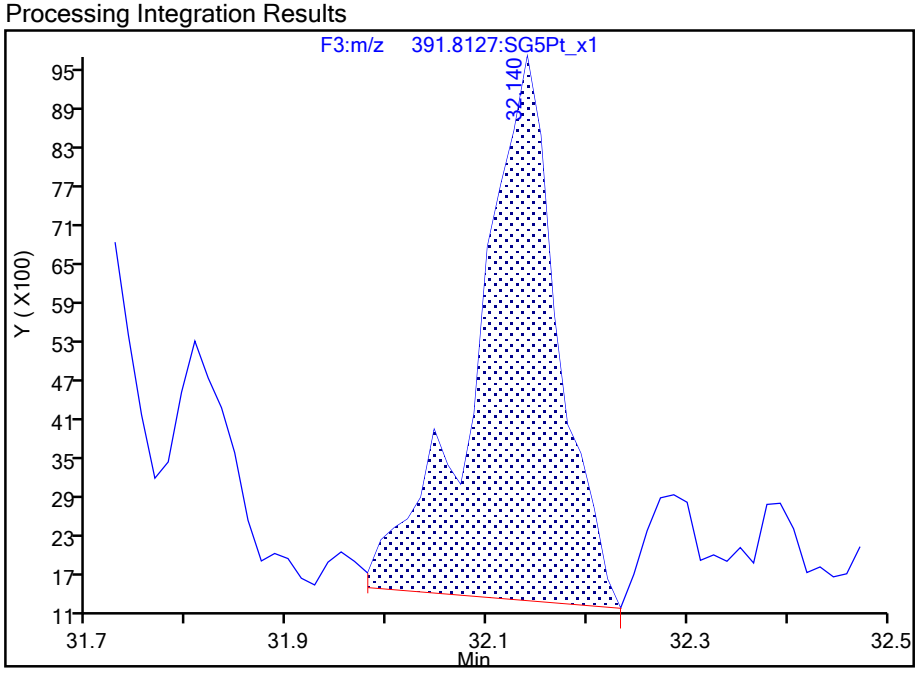

Manual Integration Results

RT: 32.14
Area: 39989
Amount: 0.126635
Amount Units: pg/ul

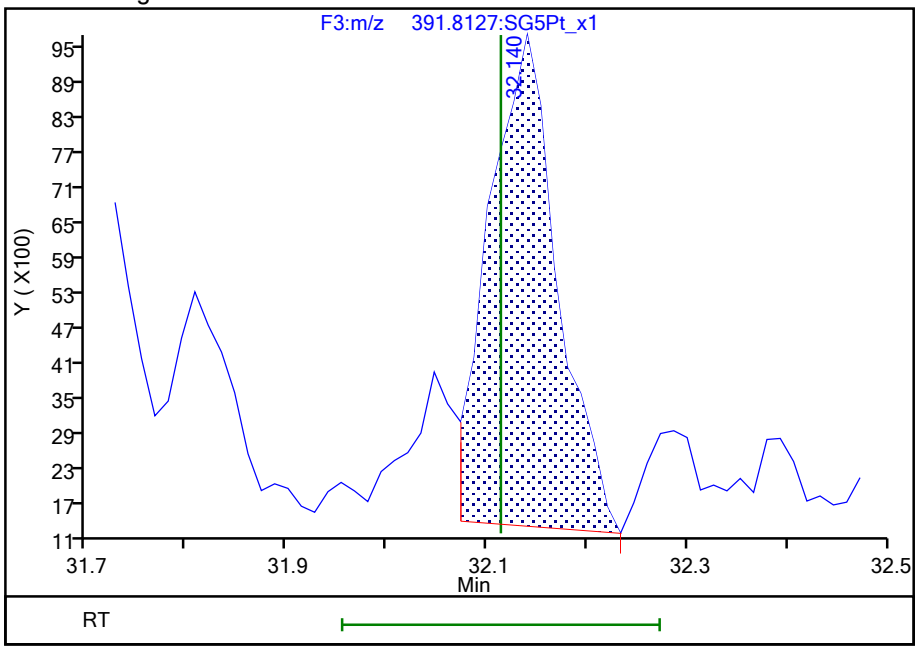

Reviewer: bennettd, 19-Aug-2021 12:33:35

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (29.26- 32.37)

Signal: 1

Processing Integration Results

RT = 30.569 Area = 58814

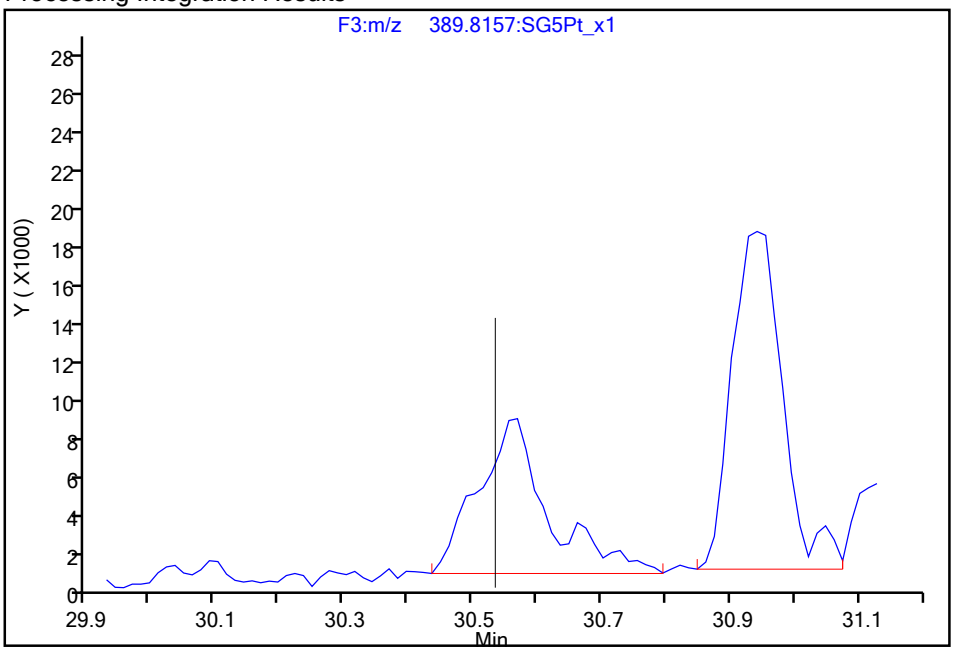

Manual Integration Results

RT = 30.569 Area = 48036 M

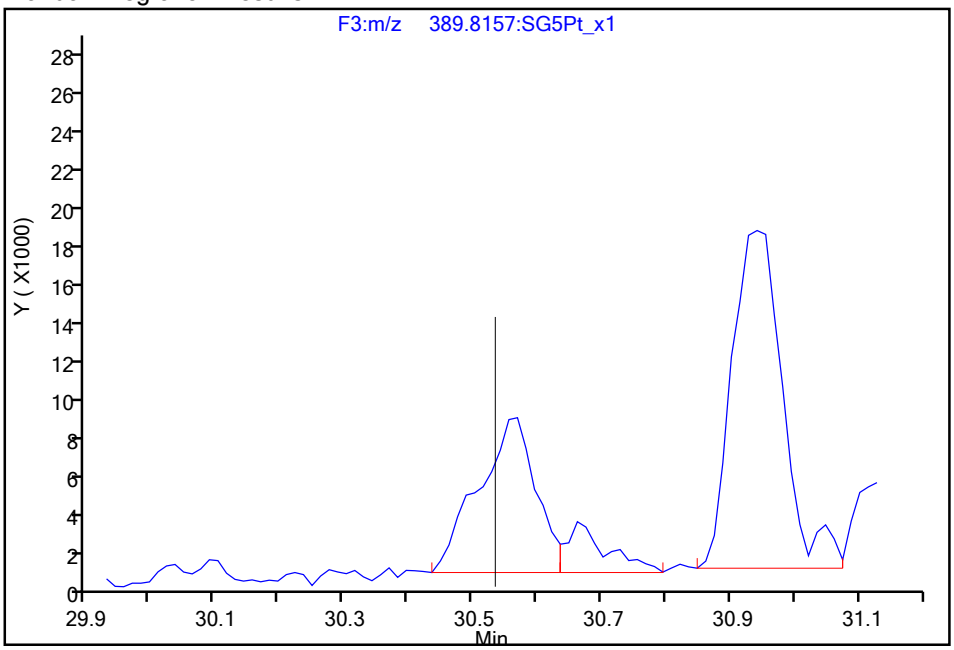

Reviewer: bennettd, 19-Aug-2021 12:34:16

Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (29.26- 32.37)

Signal: 2

Not Detected

RT: 29.26- 32.37

Processing Integration Results

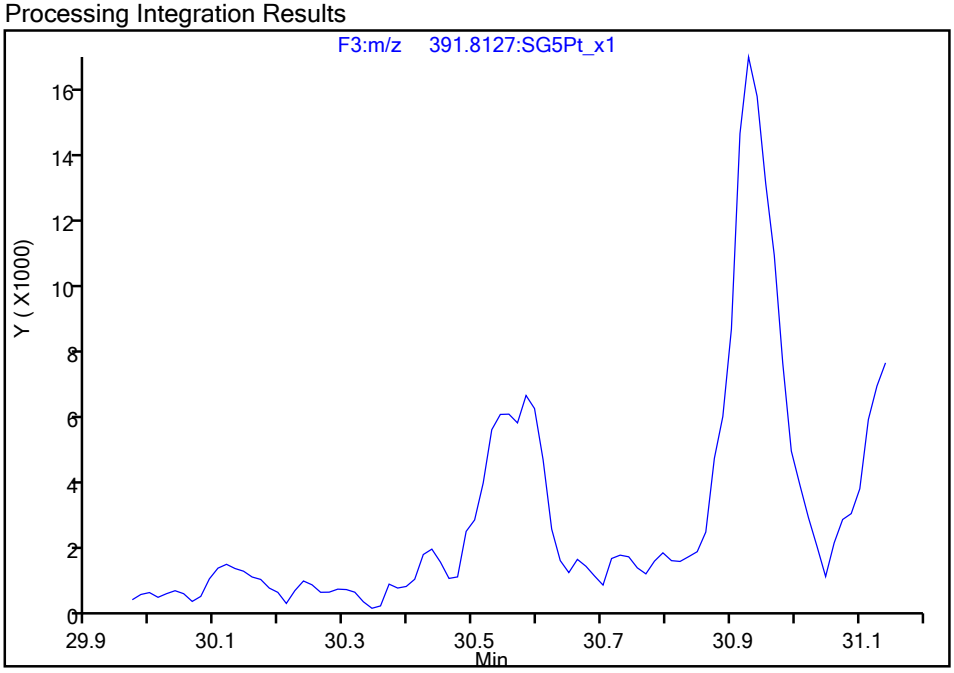

RT = 30.583 Area = 33946 M

Manual Integration Results

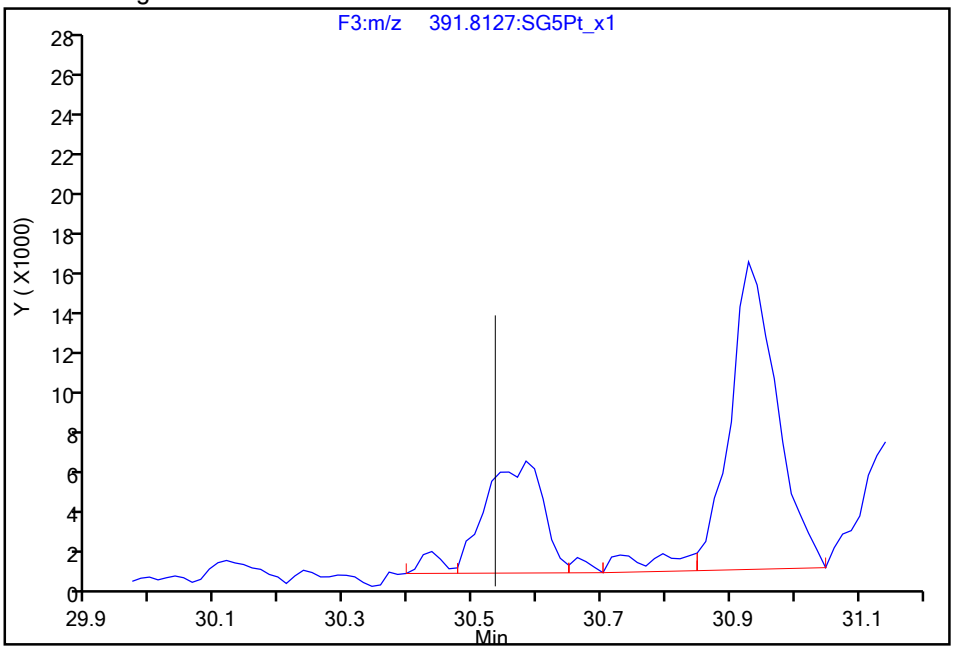

Reviewer: bennettd, 19-Aug-2021 12:34:44

Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (29.26- 32.37)

Signal: 2

Processing Integration Results

RT = 30.929 Area = 81723

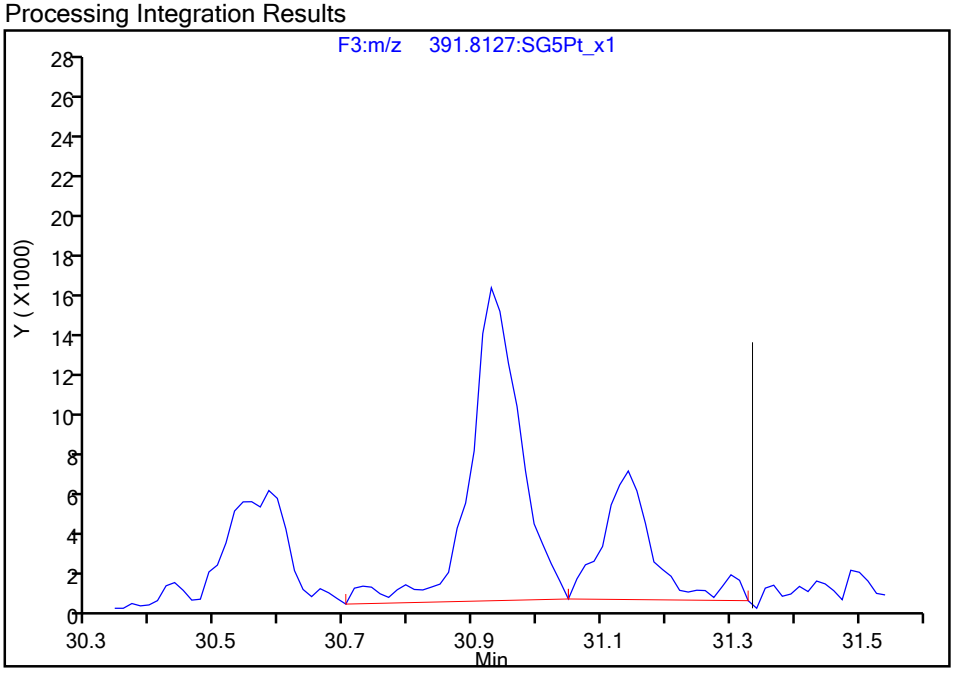

Manual Integration Results

RT = 30.929 Area = 76154 M

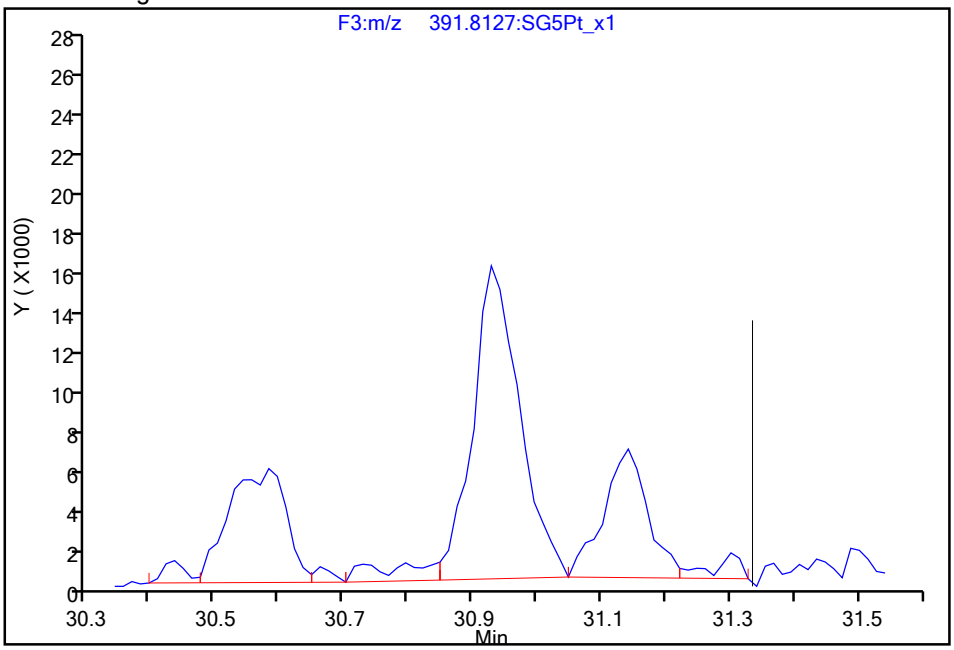

Reviewer: bennettd, 19-Aug-2021 12:34:44

Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (29.26- 32.37)

Signal: 2

Processing Integration Results

RT = 31.142 Area = 33176

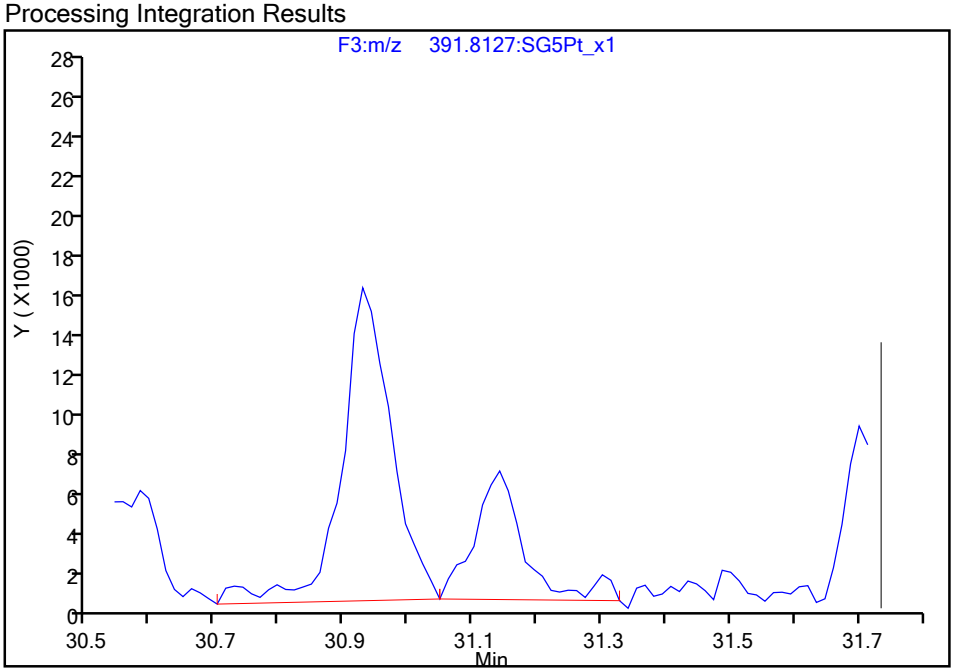

Manual Integration Results

RT = 31.142 Area = 29502 M

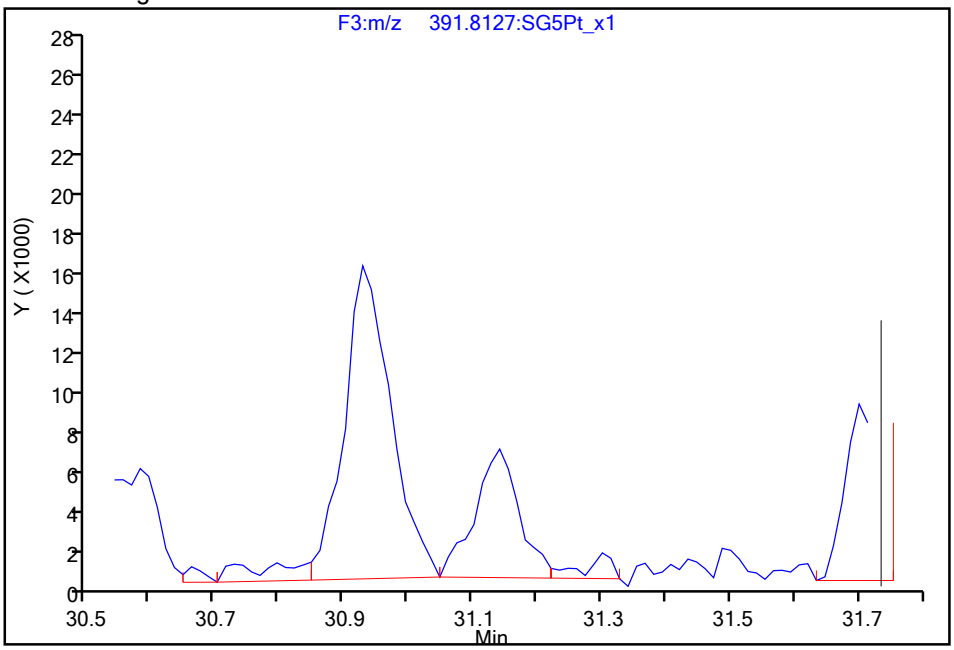

Reviewer: bennettd, 19-Aug-2021 12:34:44

Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.75
Area: 58505
Amount: 0.221736
Amount Units: pg/ul

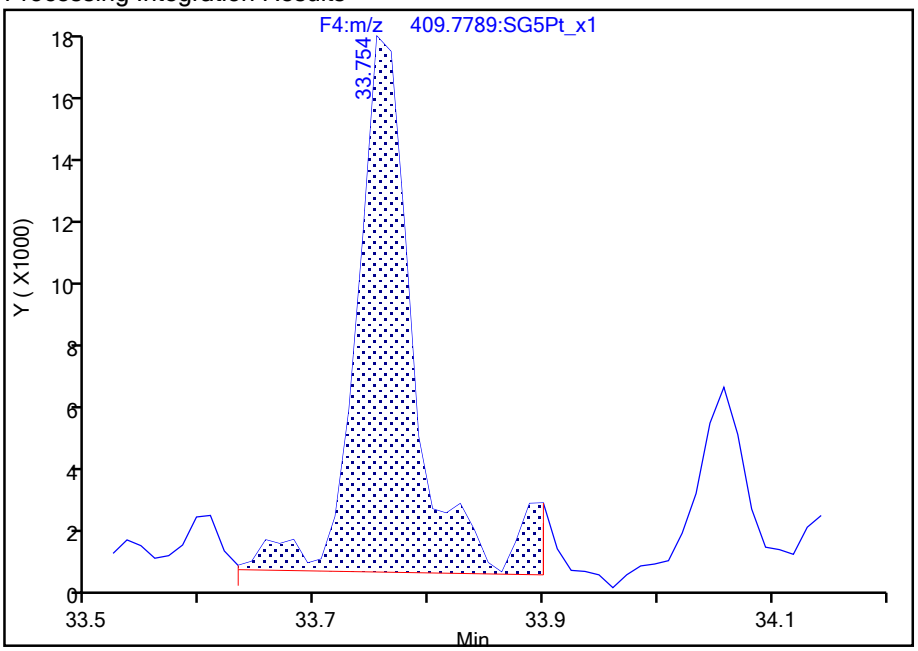

Manual Integration Results

RT: 33.75
Area: 53063
Amount: 0.208764
Amount Units: pg/ul

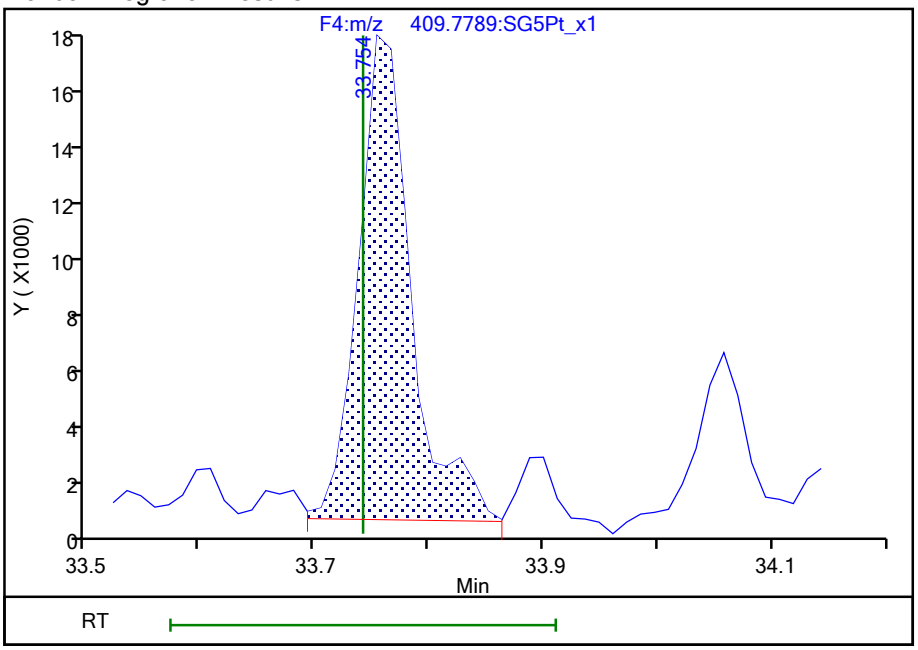

Reviewer: bennettd, 19-Aug-2021 12:35:01

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.77
Area: 76000
Amount: 0.221736
Amount Units: pg/ul

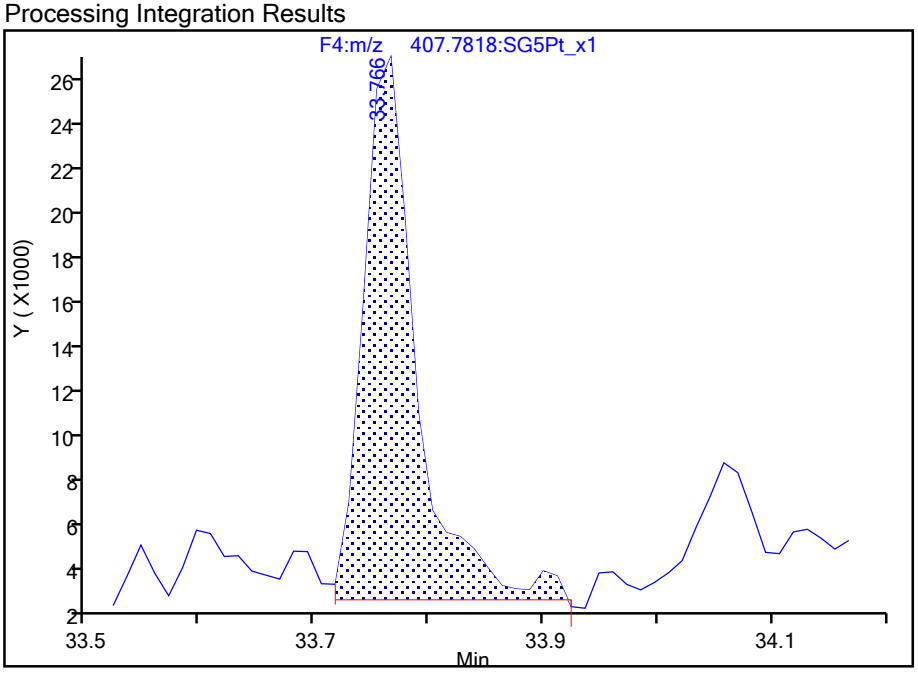

Manual Integration Results

RT: 33.77
Area: 73573
Amount: 0.208764
Amount Units: pg/ul

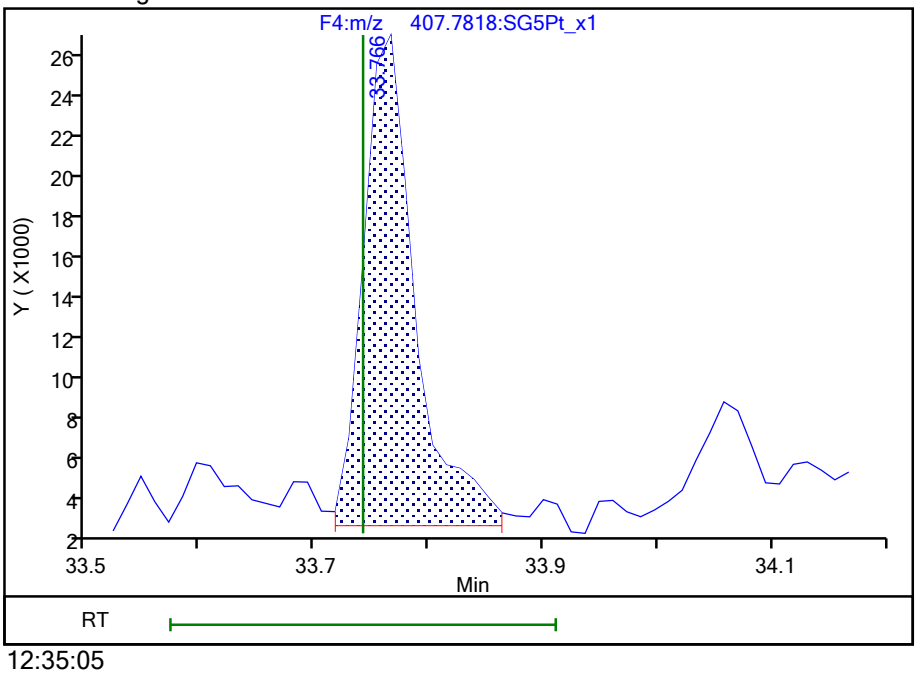

Reviewer: bennettd, 19-Aug-2021 12:35:05

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 2

Processing Integration Results

RT: 34.84
Area: 21249
Amount: 0.067034
Amount Units: pg/ul

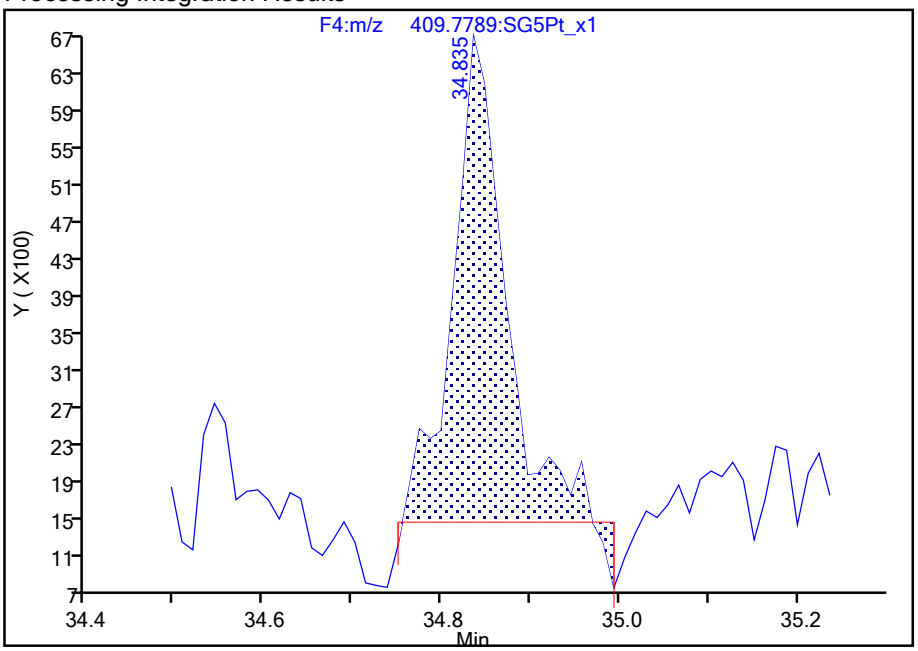

Manual Integration Results

RT: 34.84
Area: 19874
Amount: 0.064738
Amount Units: pg/ul

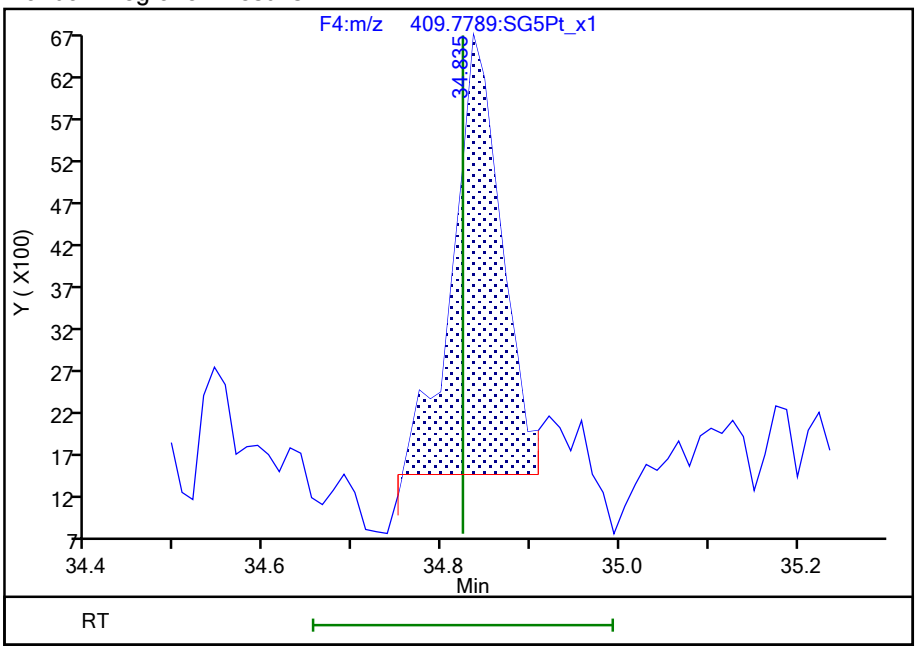

Reviewer: bennettd, 19-Aug-2021 12:35:14

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7818, RT: (33.71- 34.85)

Signal: 1

Processing Integration Results

RT = 34.058 Area = 47521

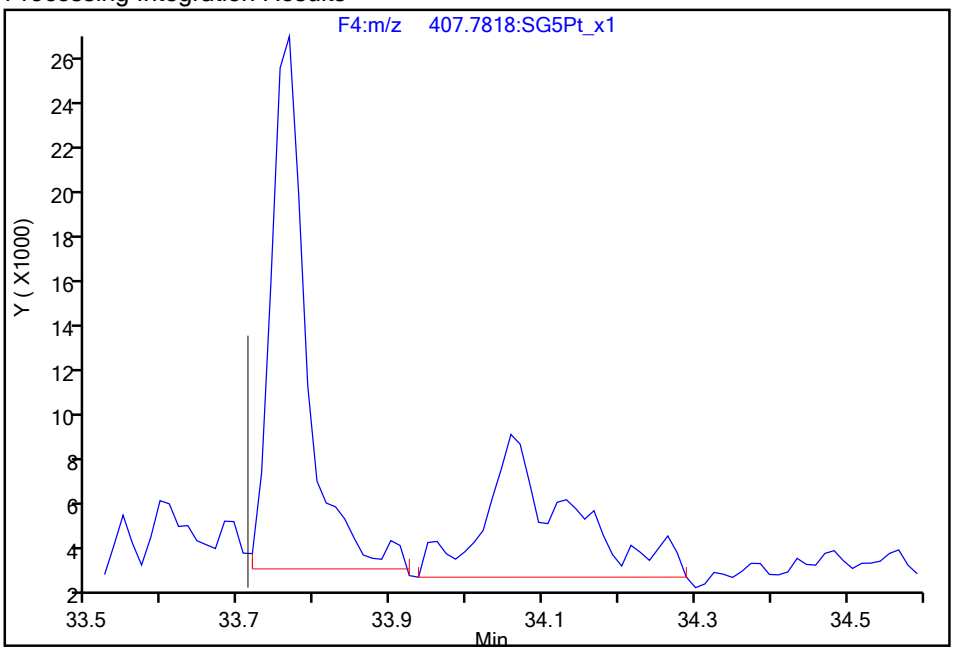

Manual Integration Results

RT = 34.058 Area = 24391 M

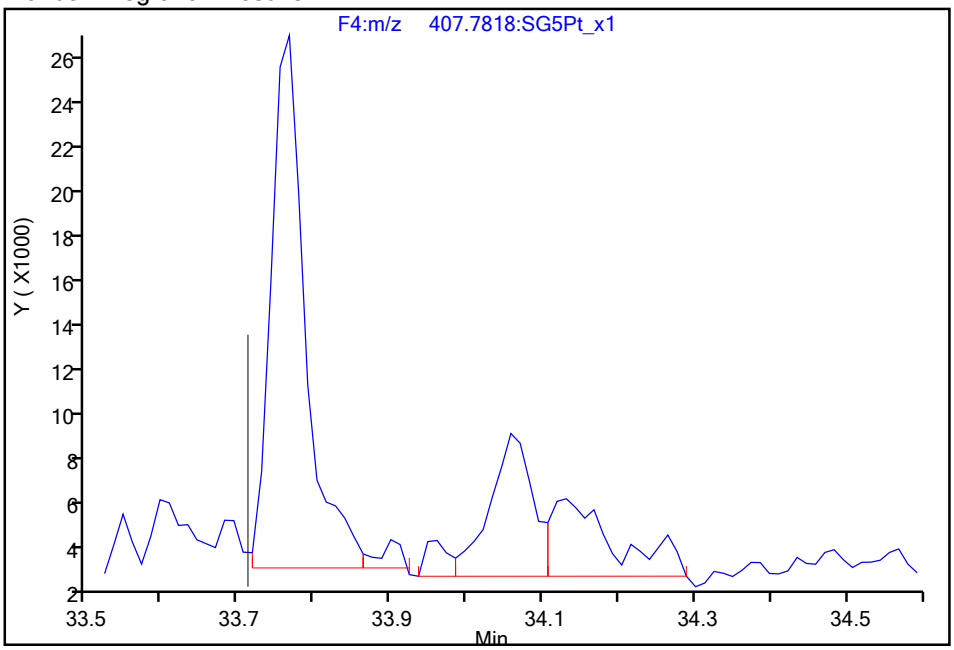

Reviewer: bennettd, 19-Aug-2021 12:35:27

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 2, m/z: 409.7789, RT: (33.71- 34.85)

Signal: 2

Processing Integration Results

RT = 34.058 Area = 29748

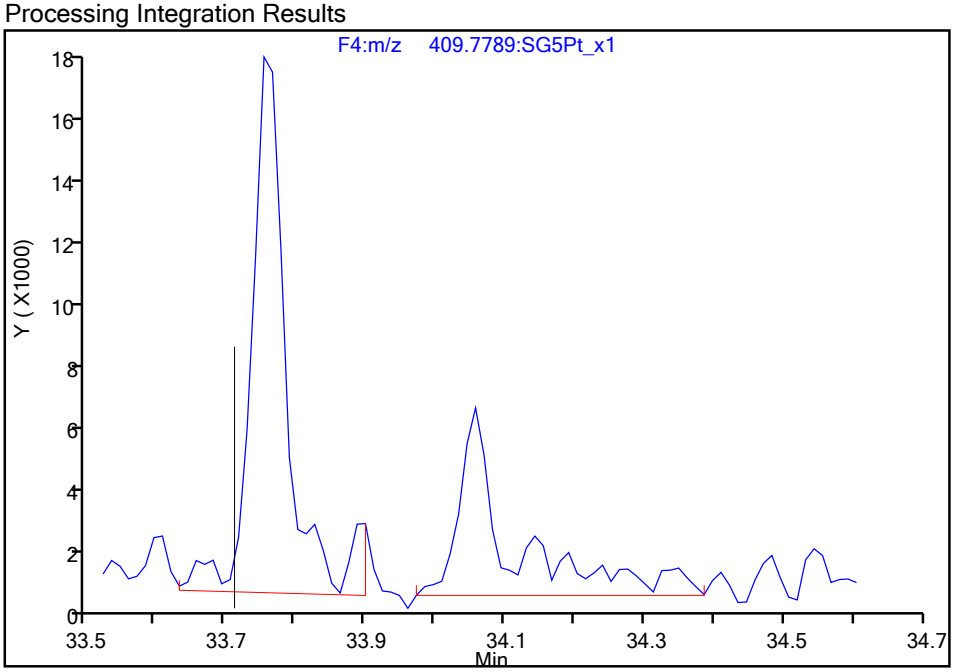

Manual Integration Results

RT = 34.058 Area = 17254 M

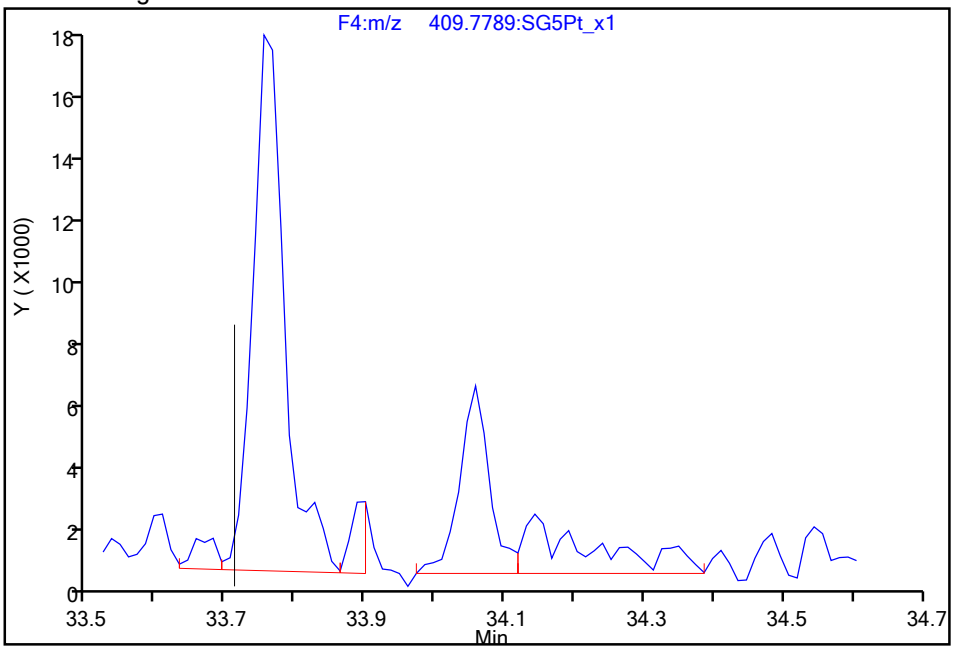

Reviewer: bennettd, 19-Aug-2021 12:35:21

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

775829

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 1, m/z: 423.7766, RT: (33.05- 33.95)

Signal: 1

Processing Integration Results

RT = 34.009 Area = 787013

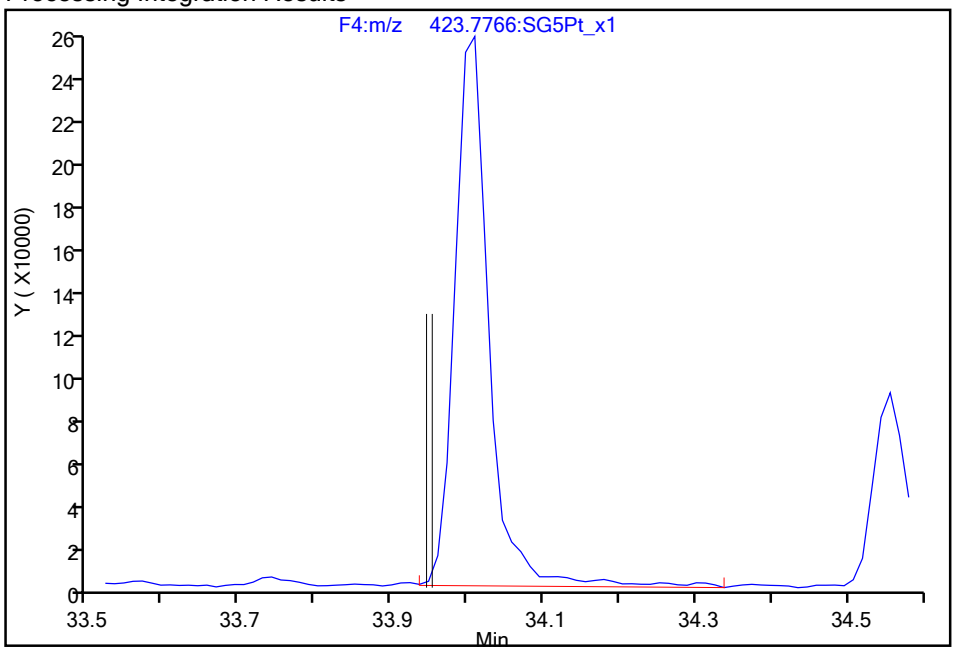

Manual Integration Results

RT = 34.009 Area = 754269 M

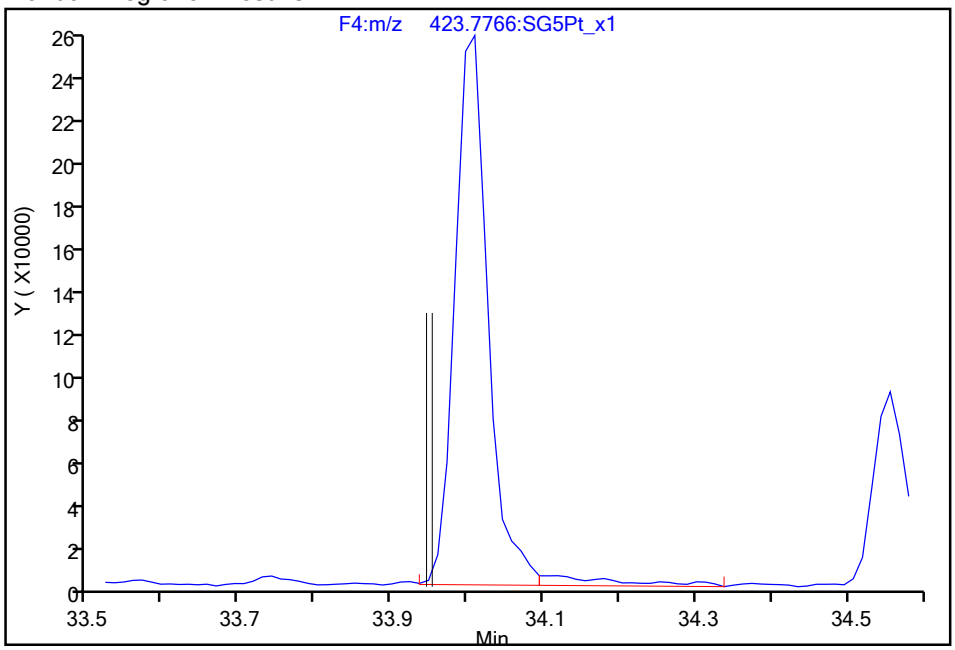

Reviewer: bennettd, 19-Aug-2021 12:35:55

Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 2, m/z: 425.7737, RT: (33.05- 33.95)

Signal: 2

Processing Integration Results

RT = 33.997 Area = 753475

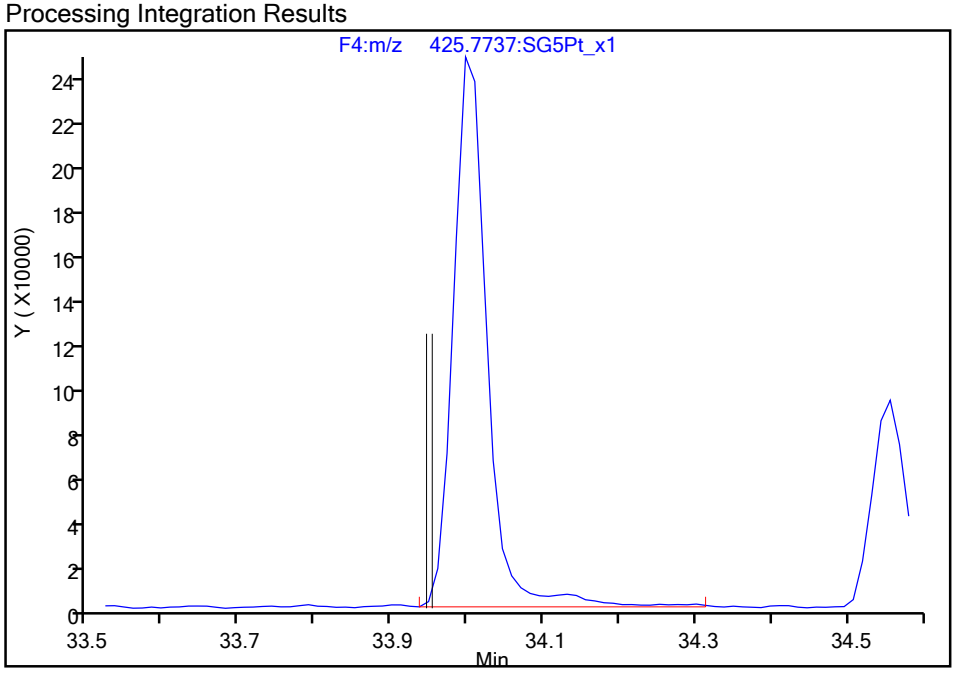

Manual Integration Results

RT = 33.997 Area = 723549 M

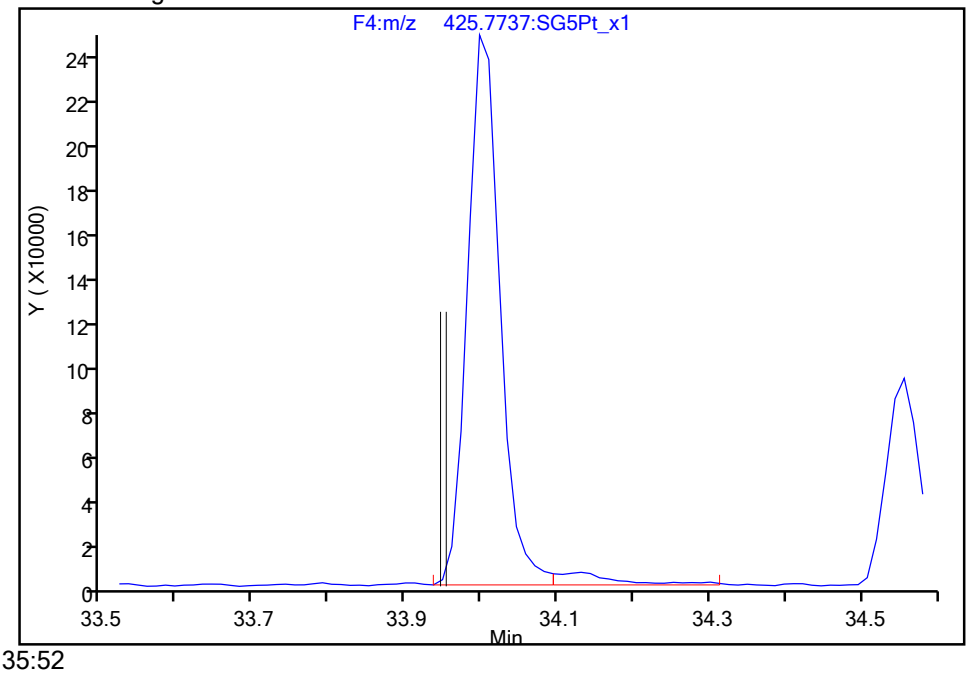

Reviewer: bennettd, 19-Aug-2021 12:35:52

Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.00
Area: 41532
Amount: 0.245153
Amount Units: pg/ul

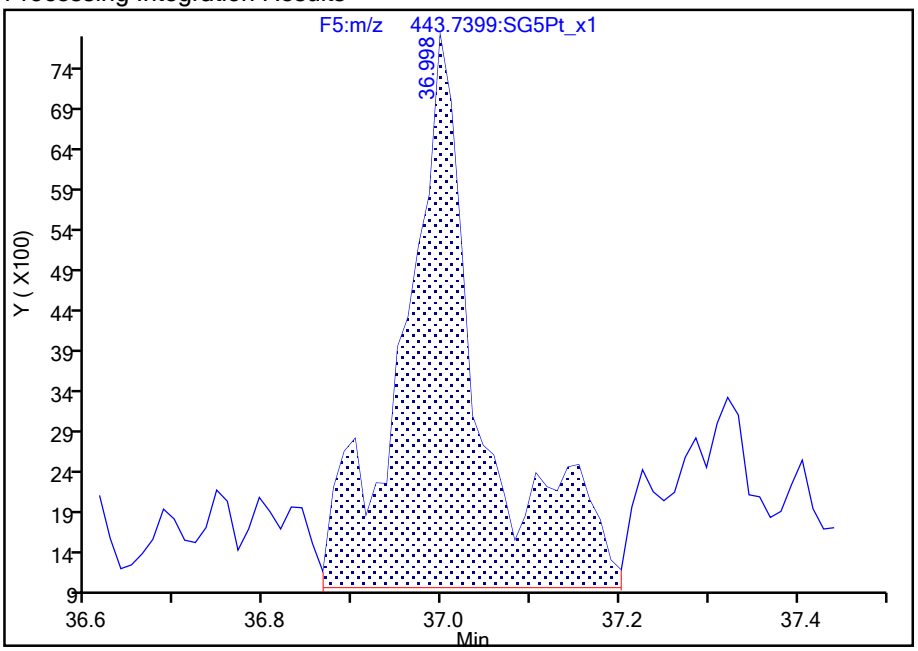

Manual Integration Results

RT: 37.00
Area: 34092
Amount: 0.147275
Amount Units: pg/ul

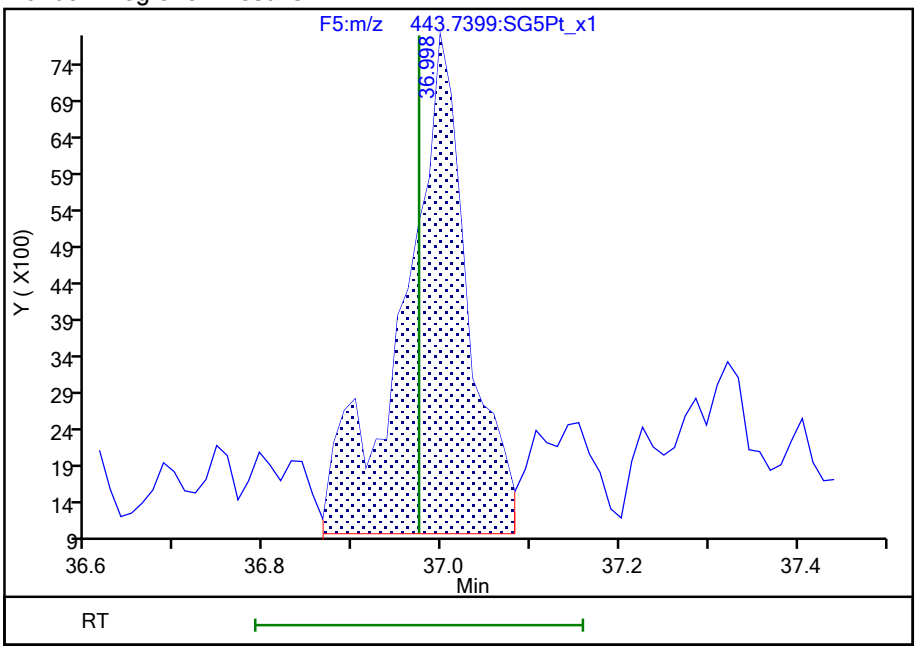

Reviewer: bennettd, 19-Aug-2021 12:36:20

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d				
Injection Date:	18-Aug-2021 17:19:37	Instrument ID:	10D5		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.99
Area: 62295
Amount: 0.245153
Amount Units: pg/ul

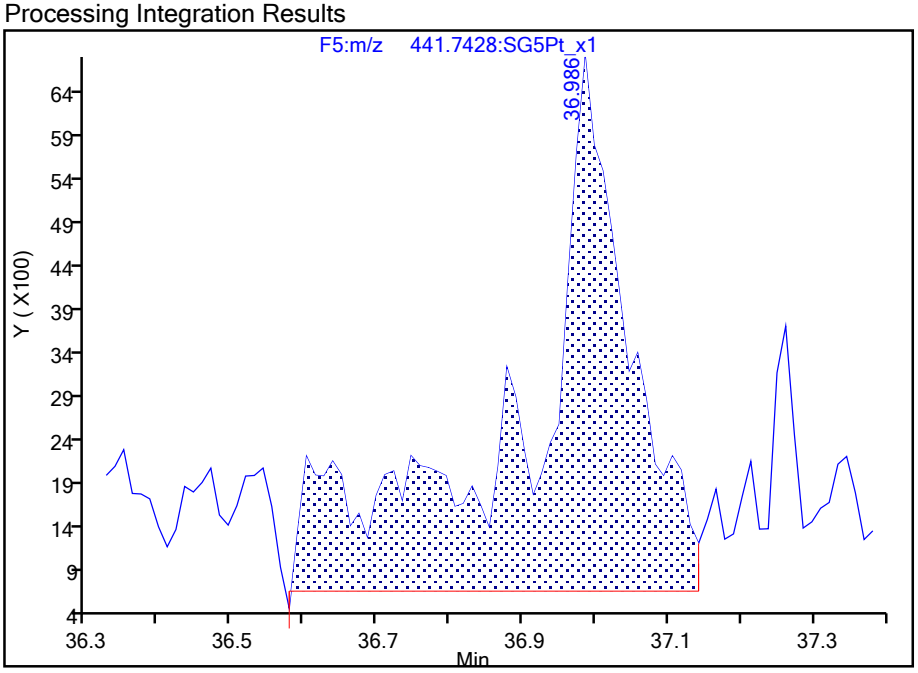

Manual Integration Results

RT: 36.99
Area: 28282
Amount: 0.147275
Amount Units: pg/ul

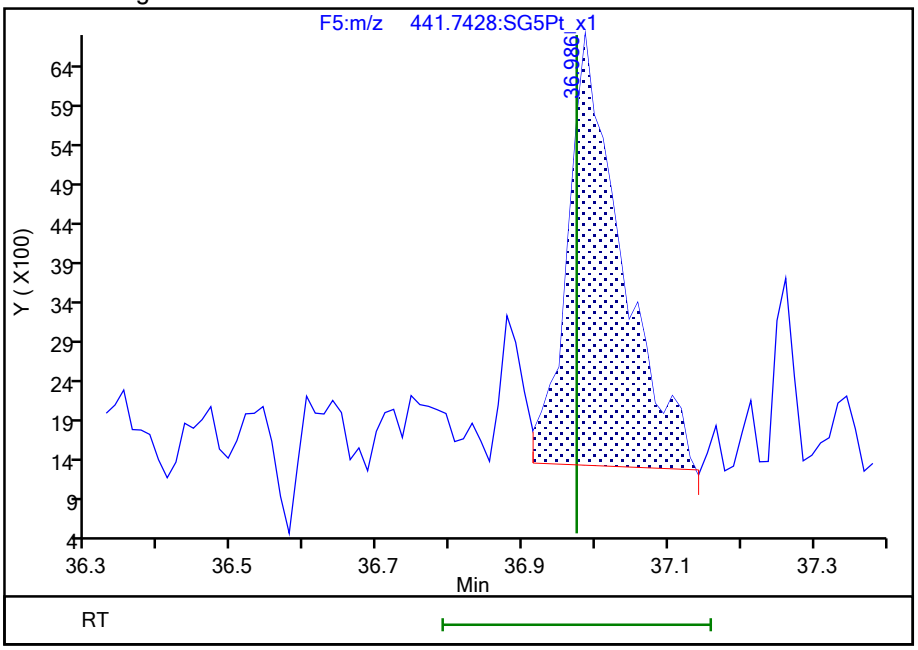

Reviewer: bennettd, 19-Aug-2021 12:36:47
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

775833

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

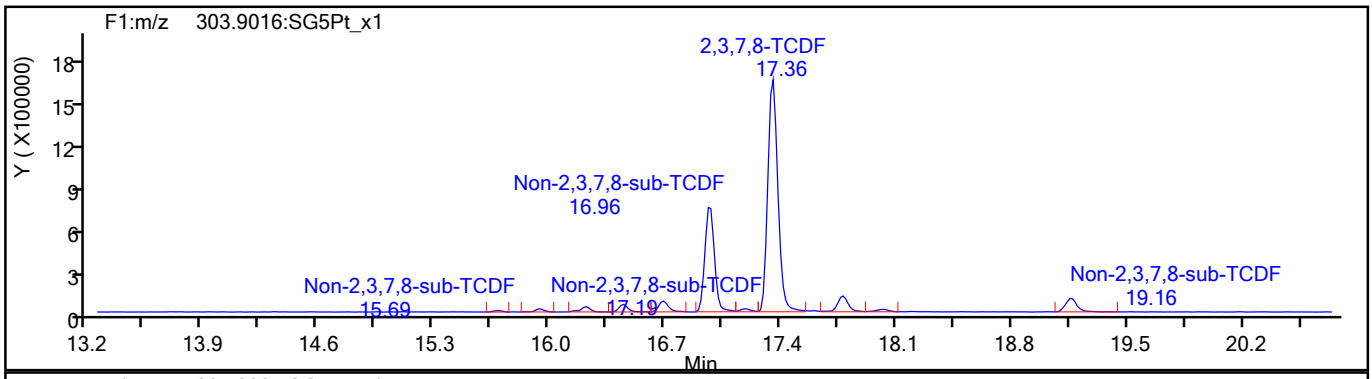

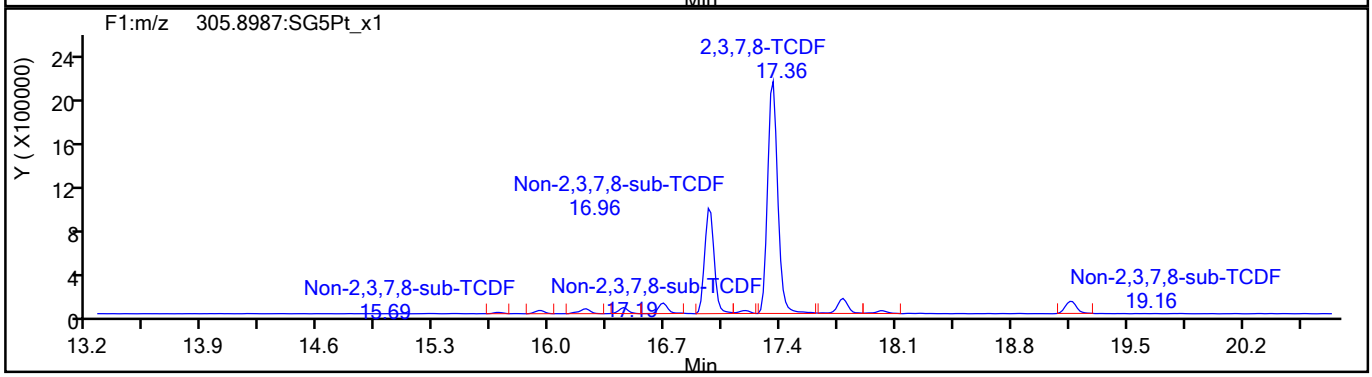

TCDF Standards

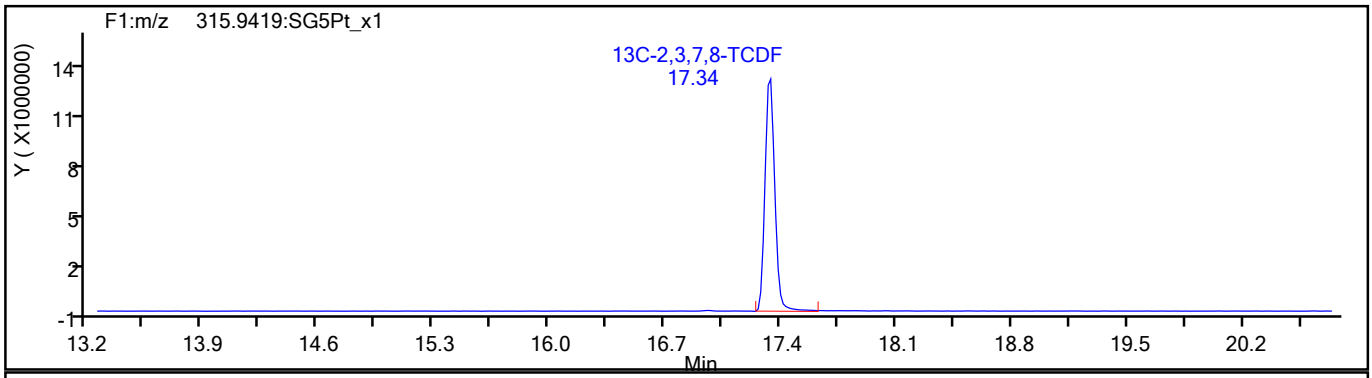

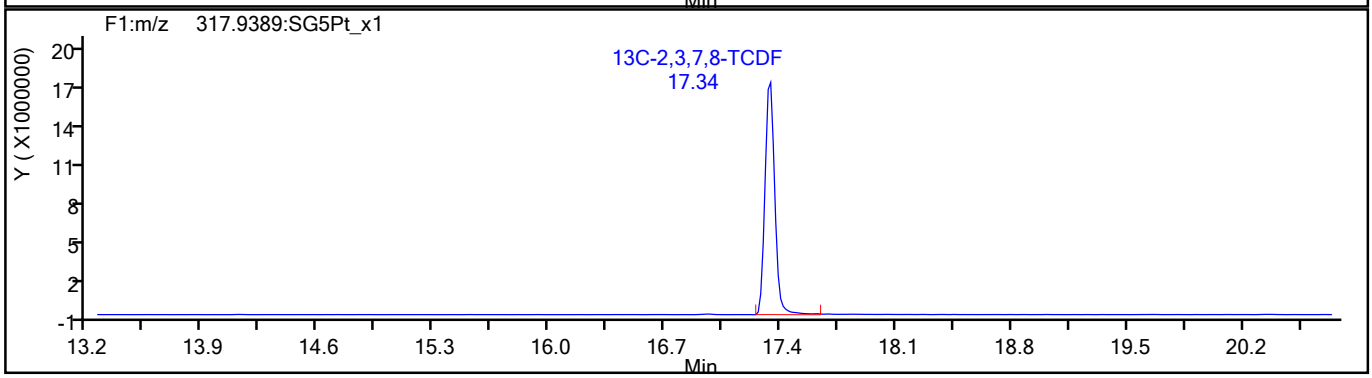

775834

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

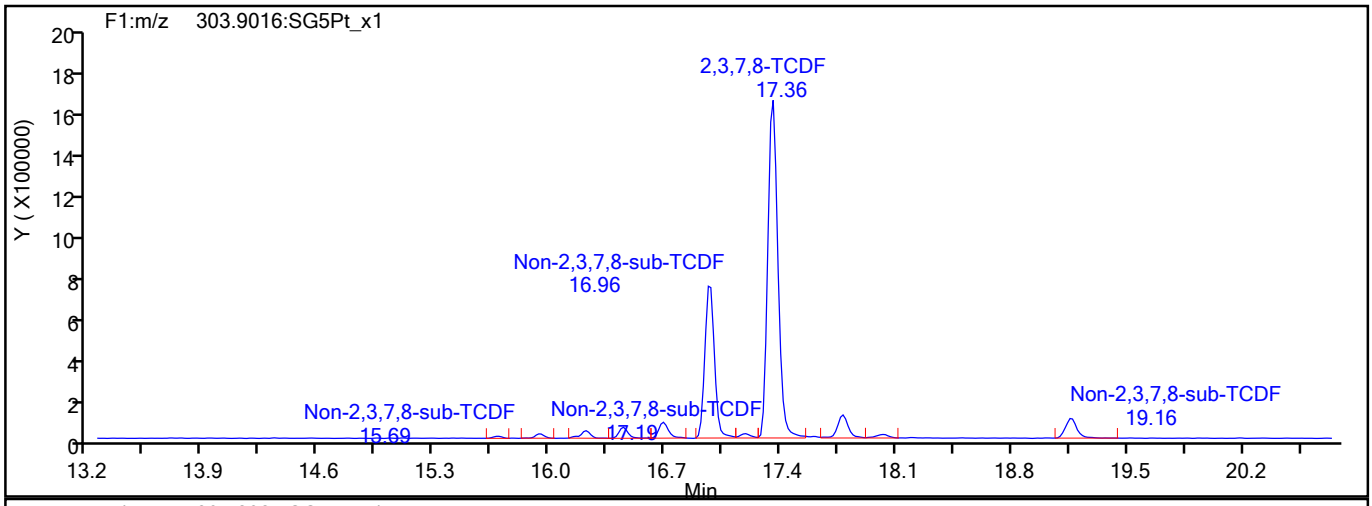

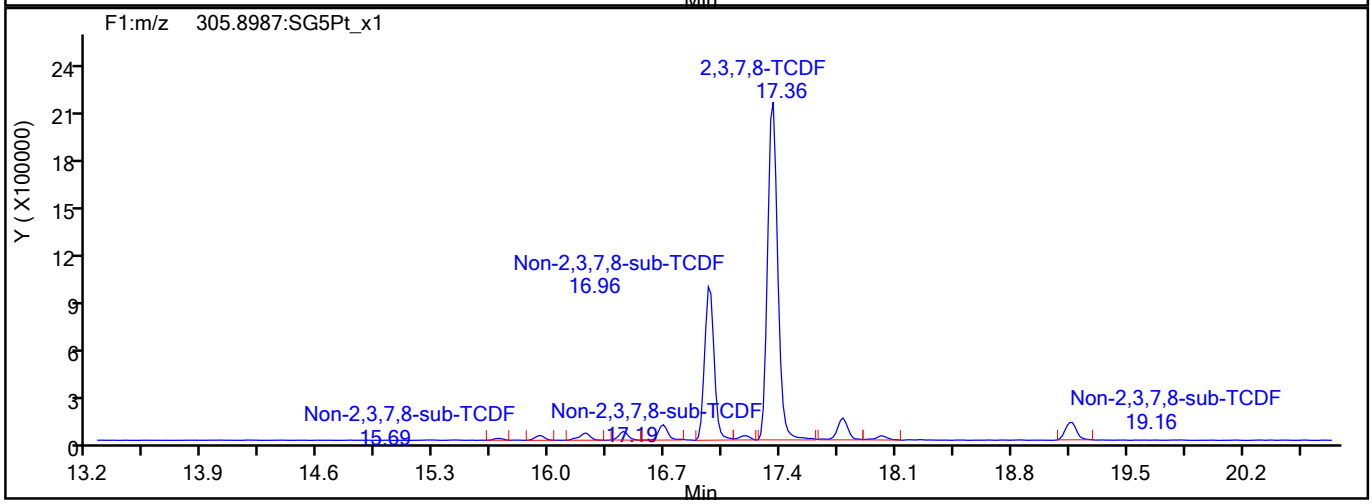

TCDF Interference Mass

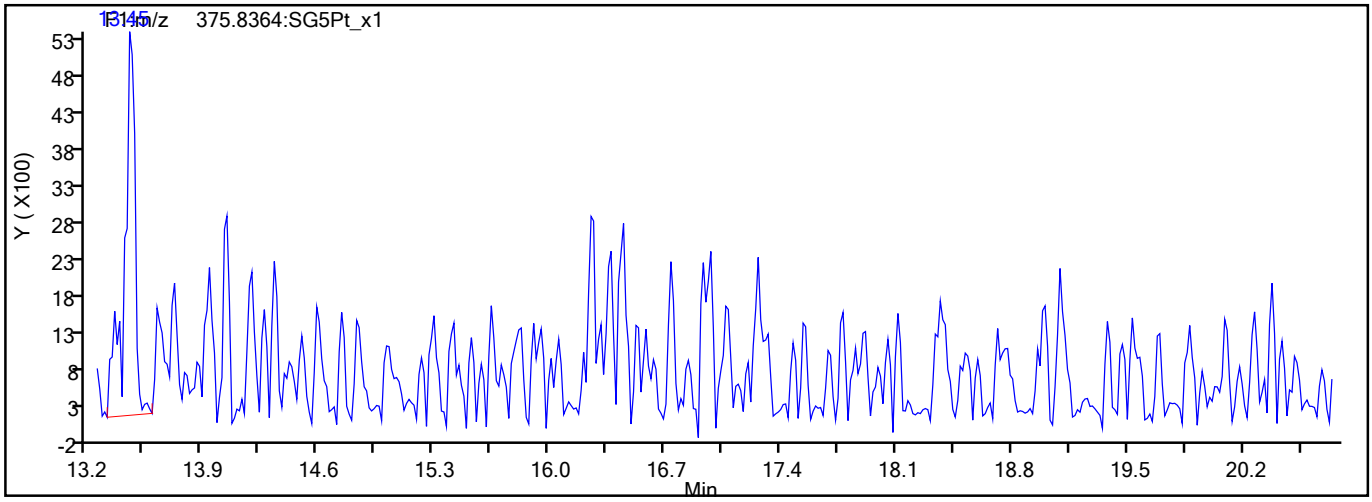

775835

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

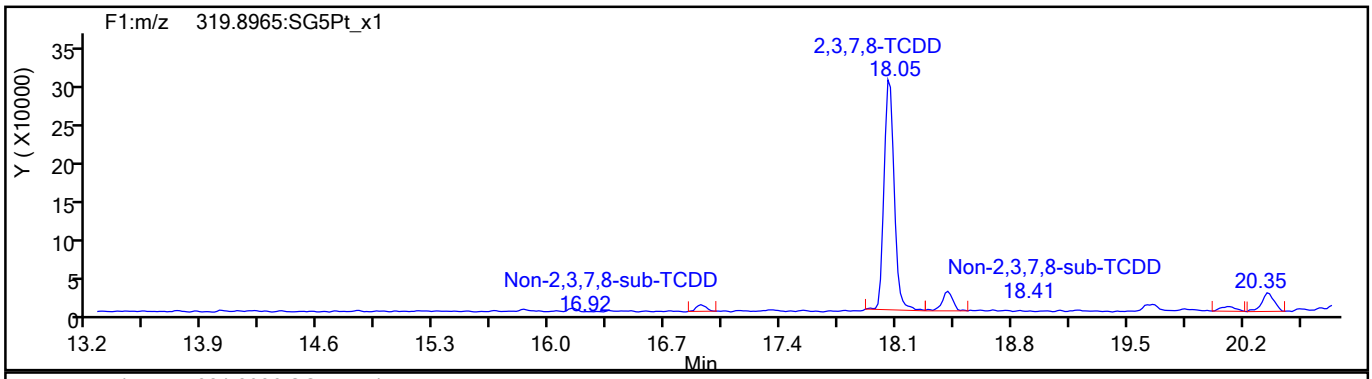

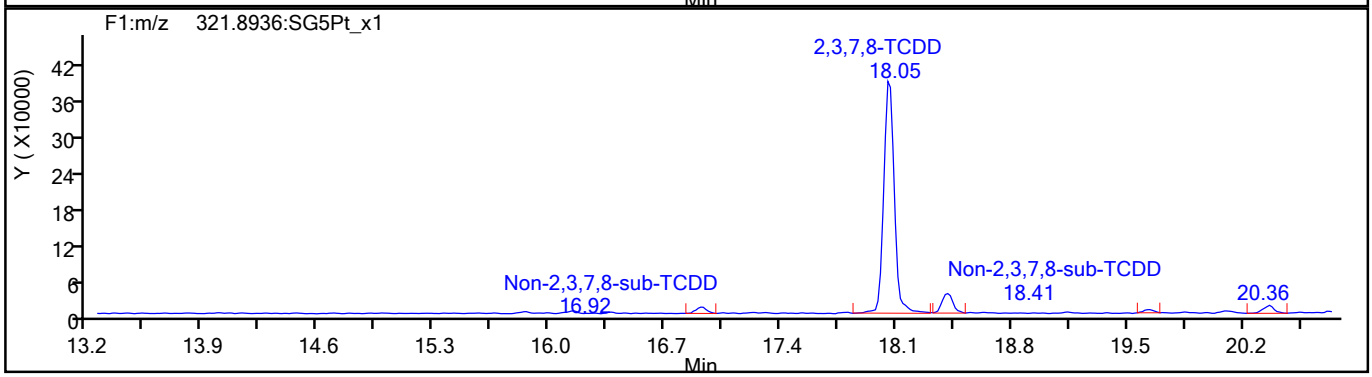

TCDD Standards

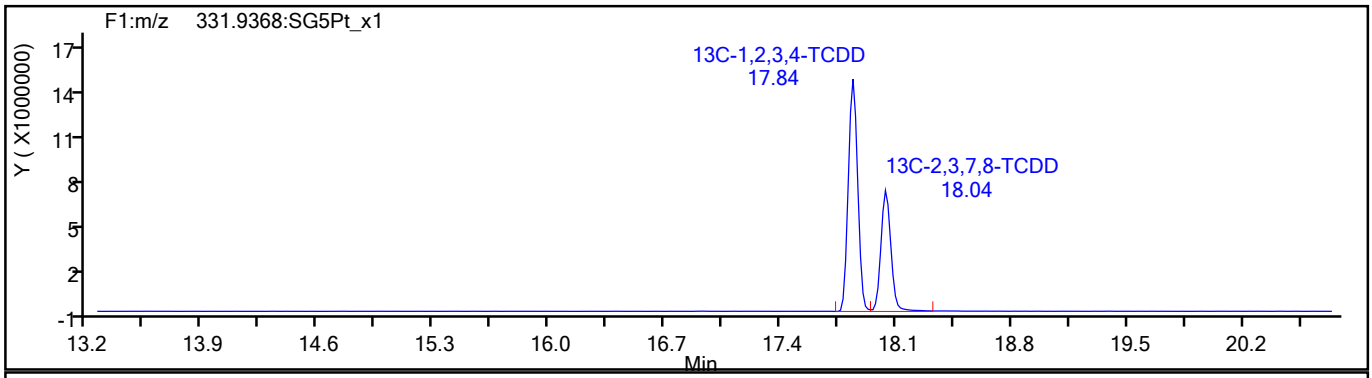

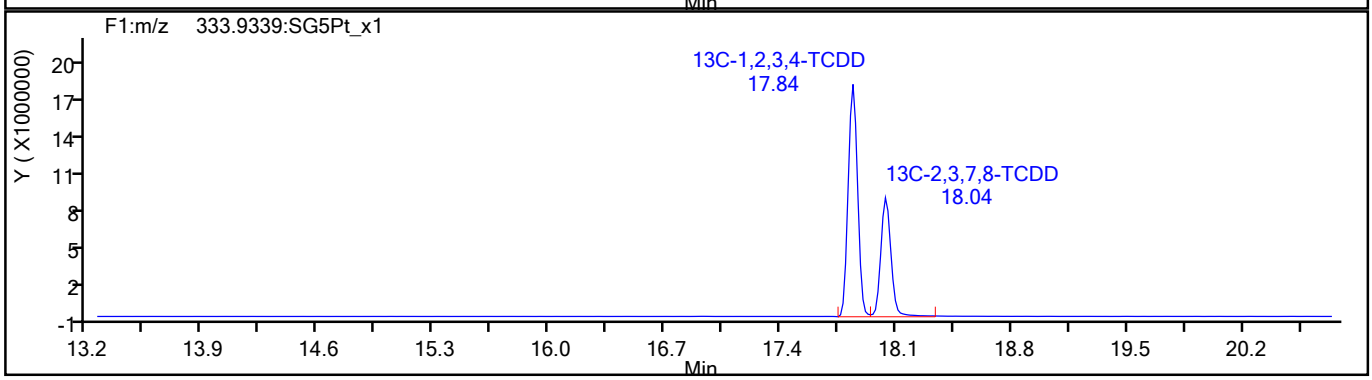

775836

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

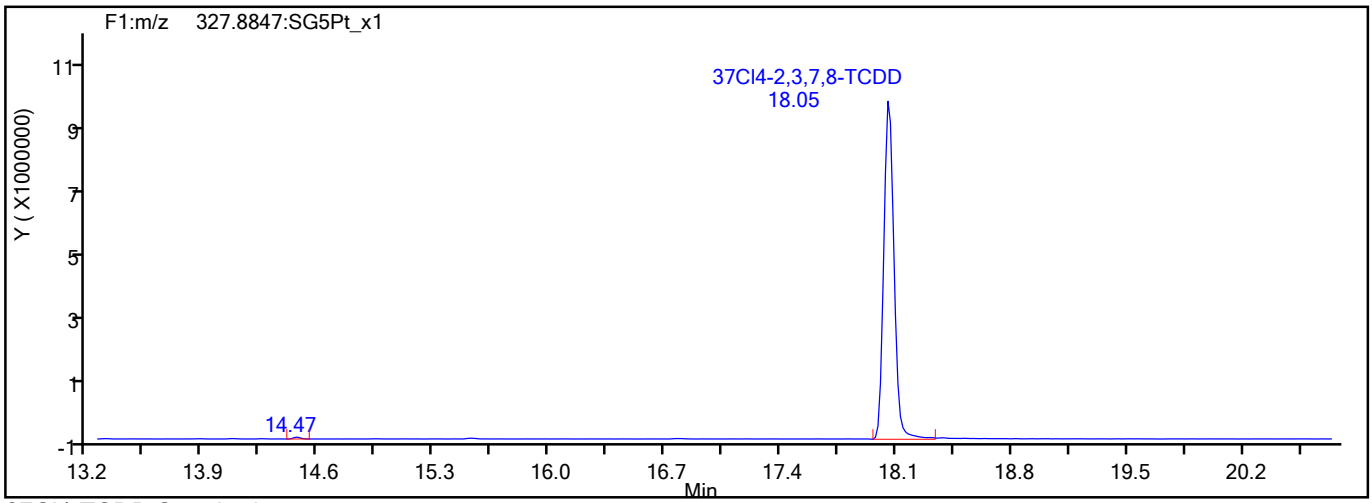

37Cl4-TCDD Standards

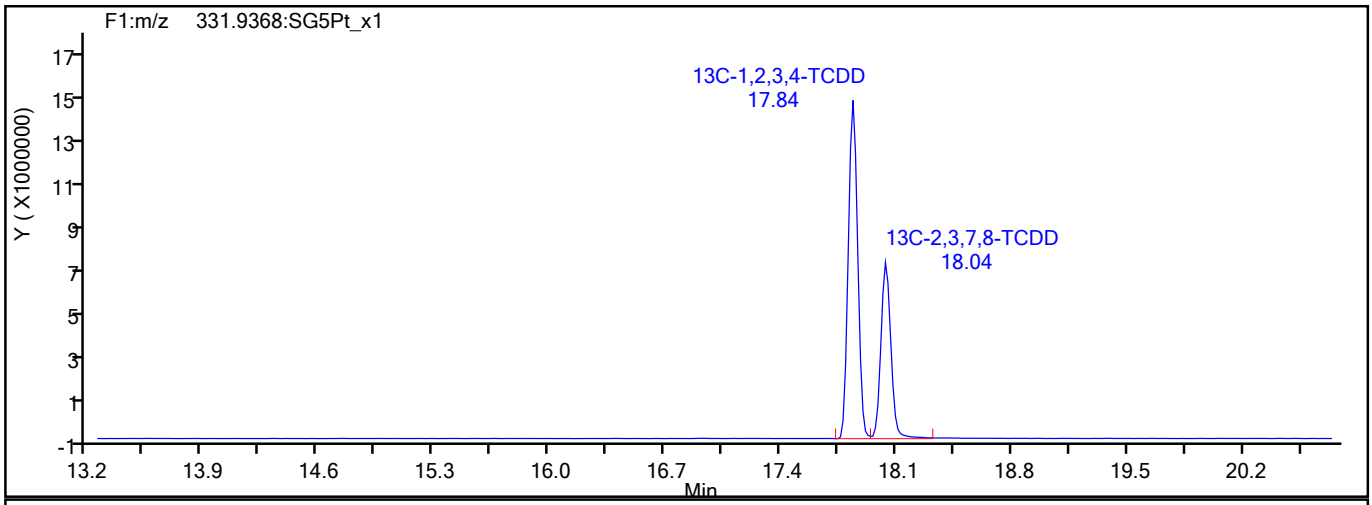

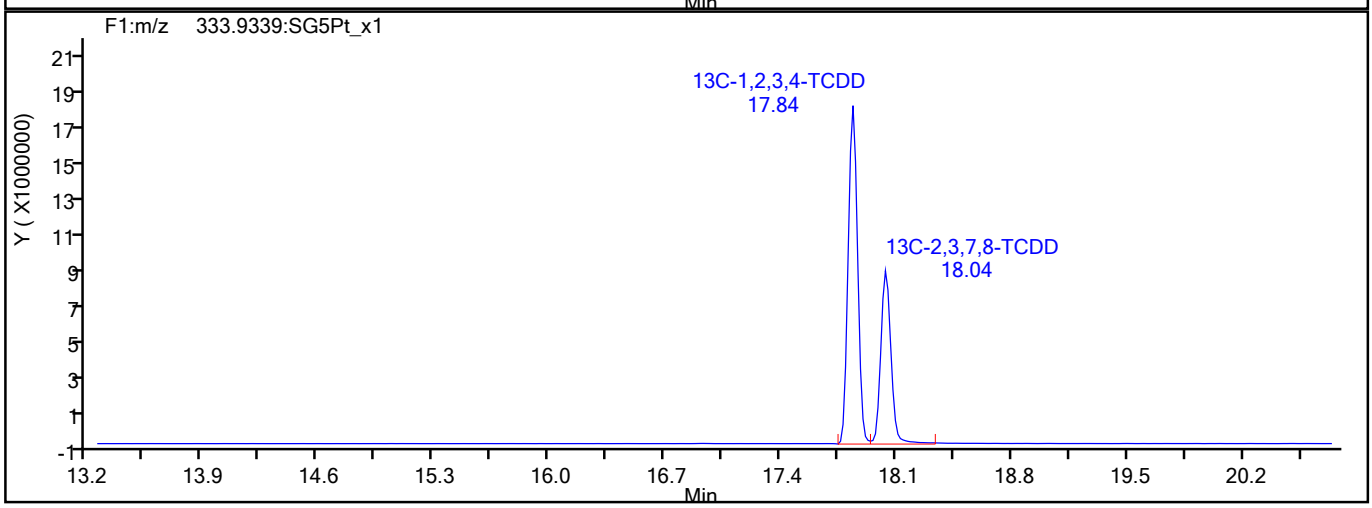

775837

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

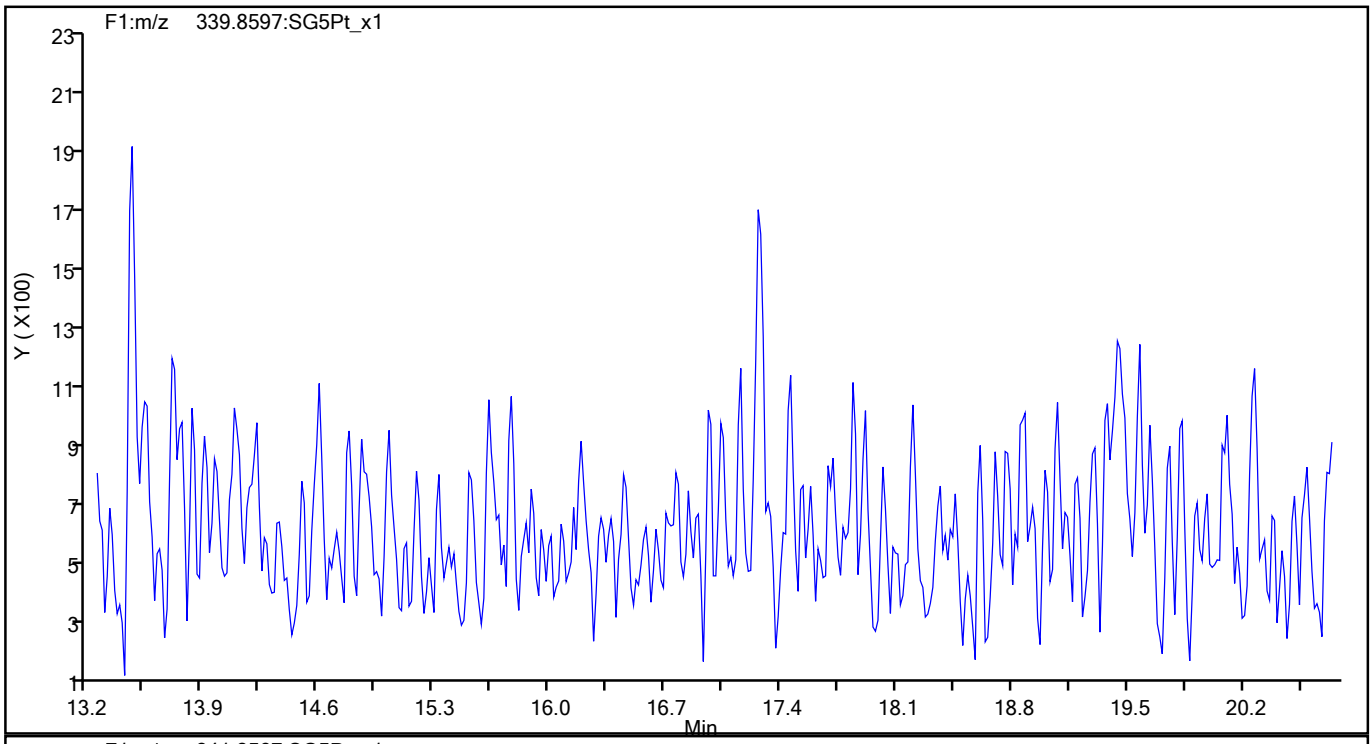

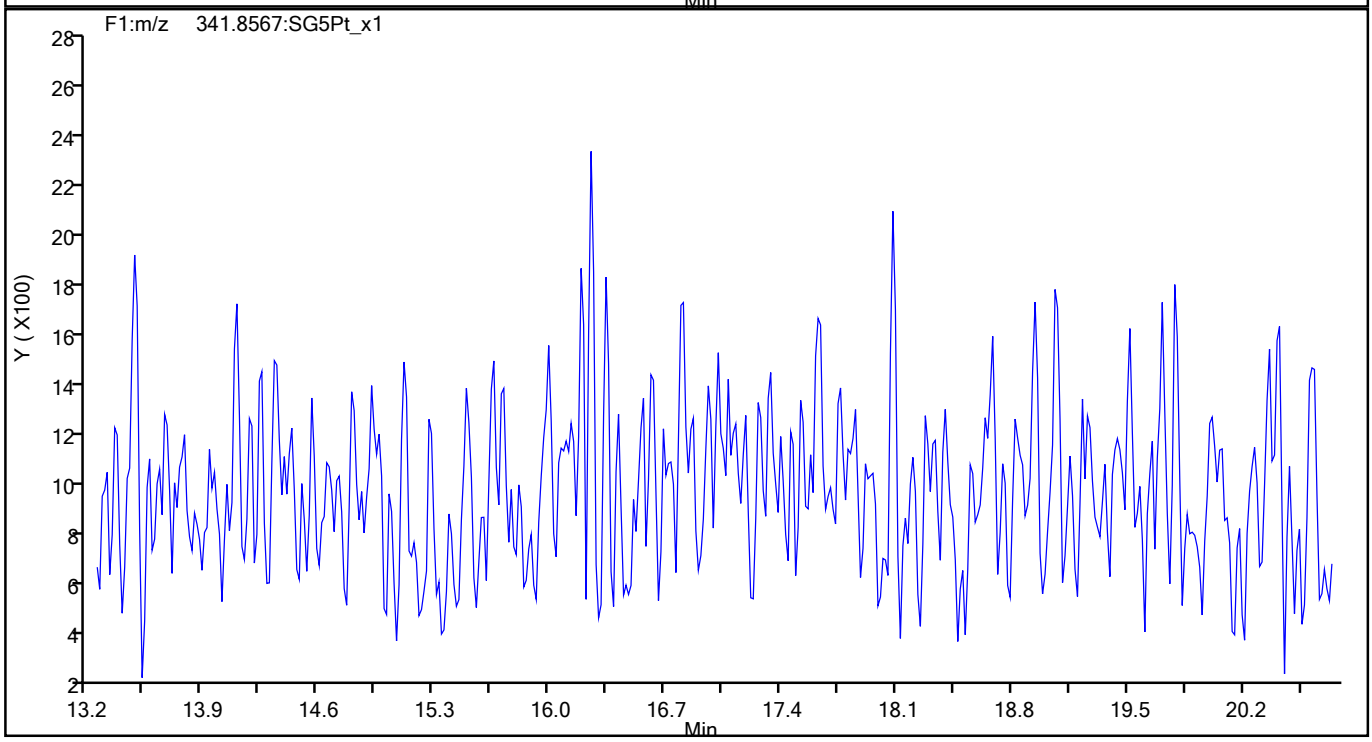

775838

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

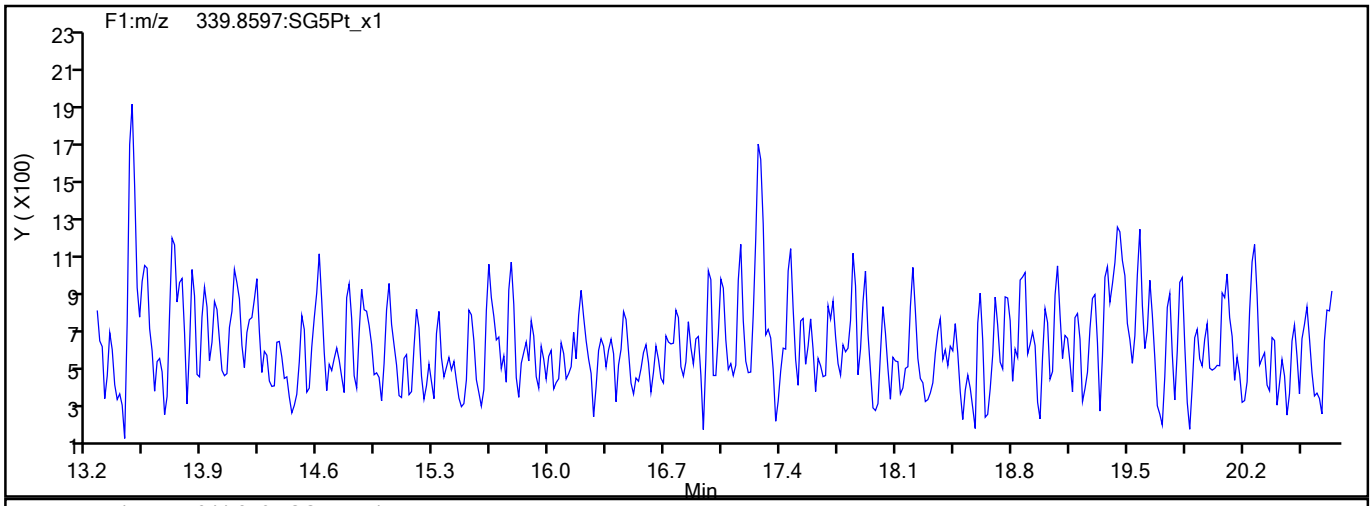

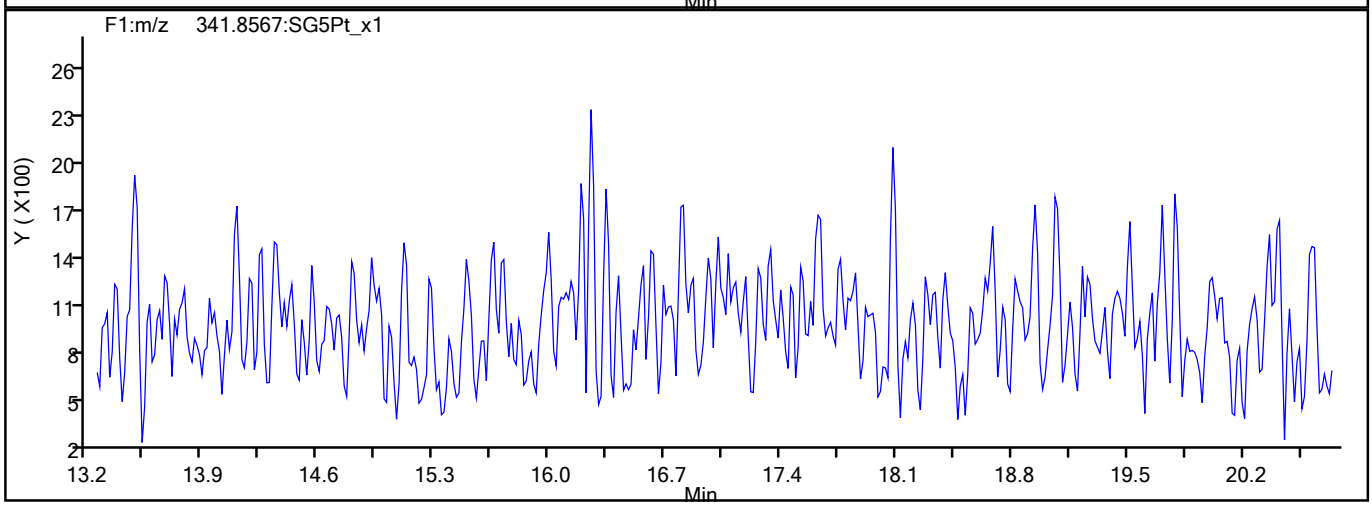

F1 PeCDFs Interference Mass

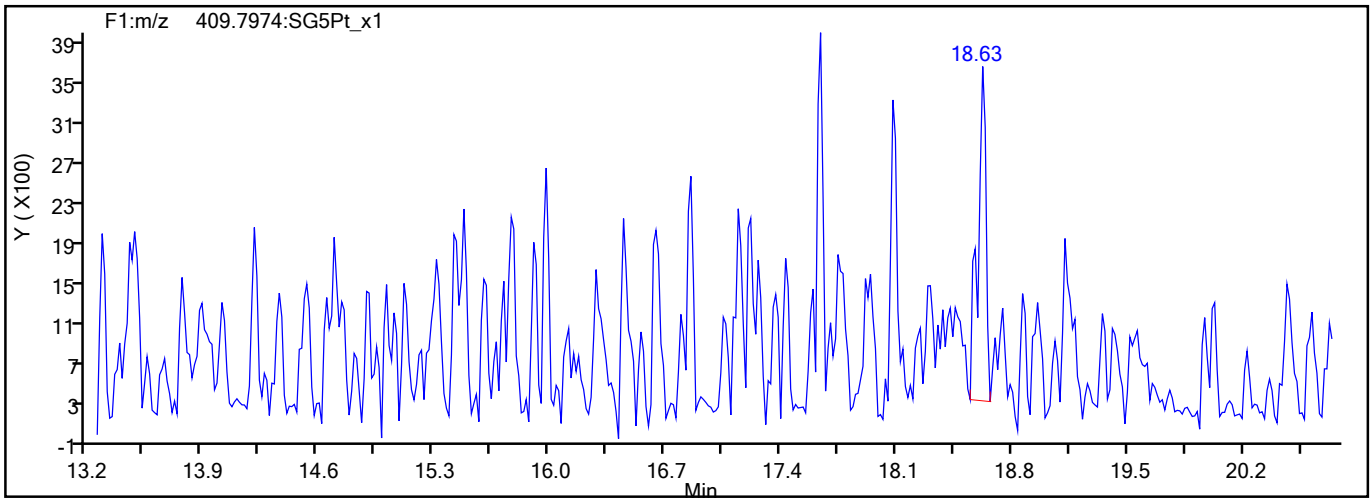

775839

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

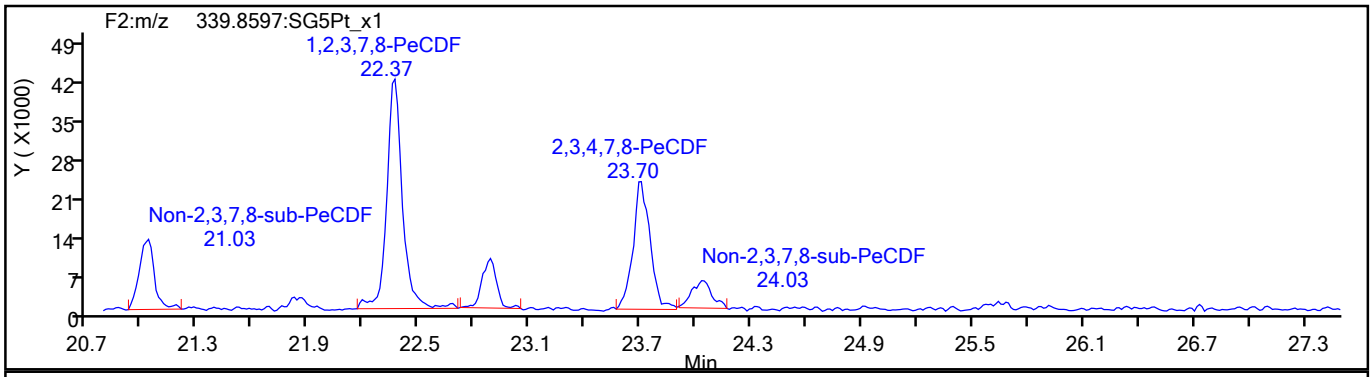

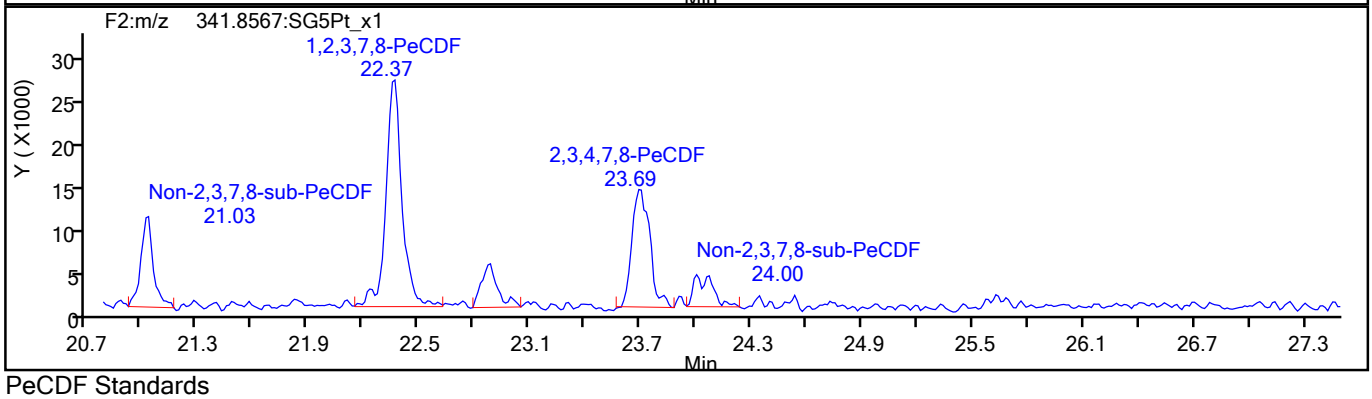

PeCDF Standards

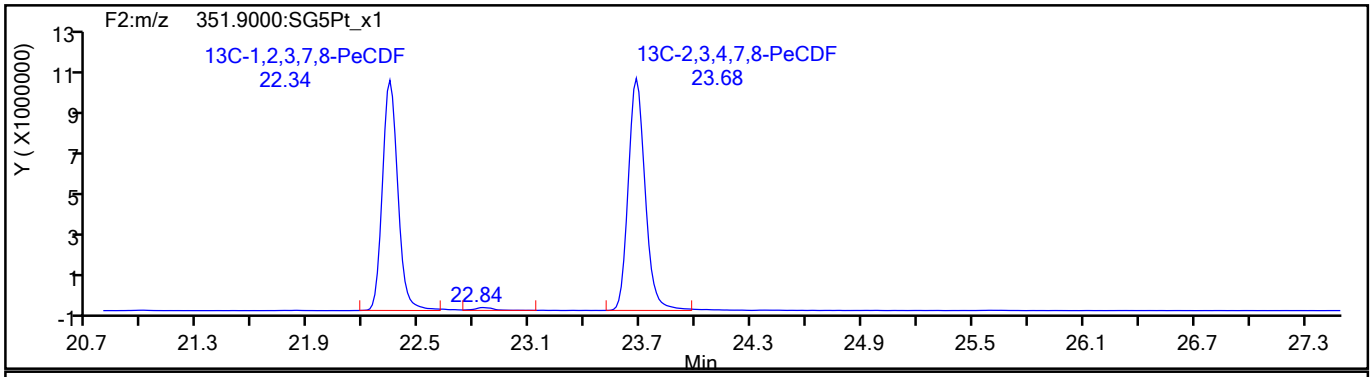

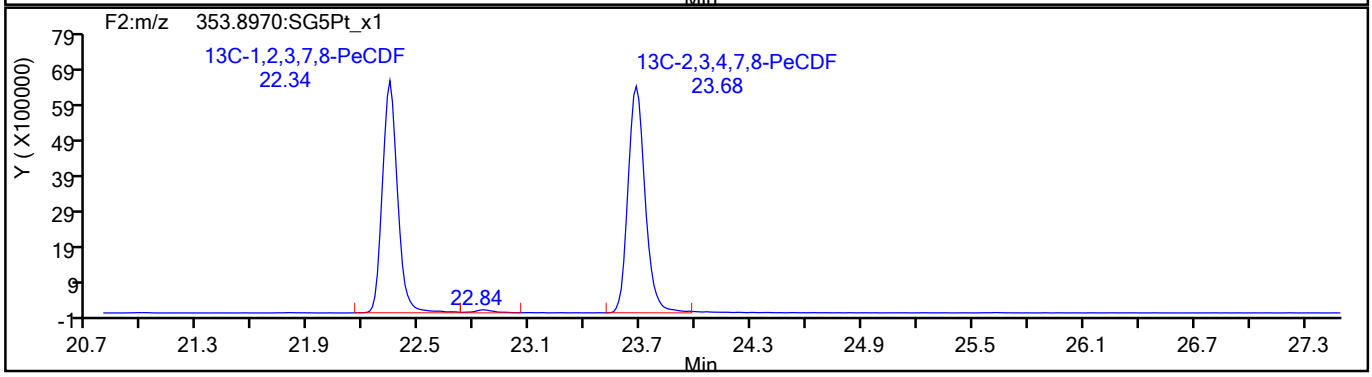

775840

Report Date: 19-Aug-2021 13:24:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

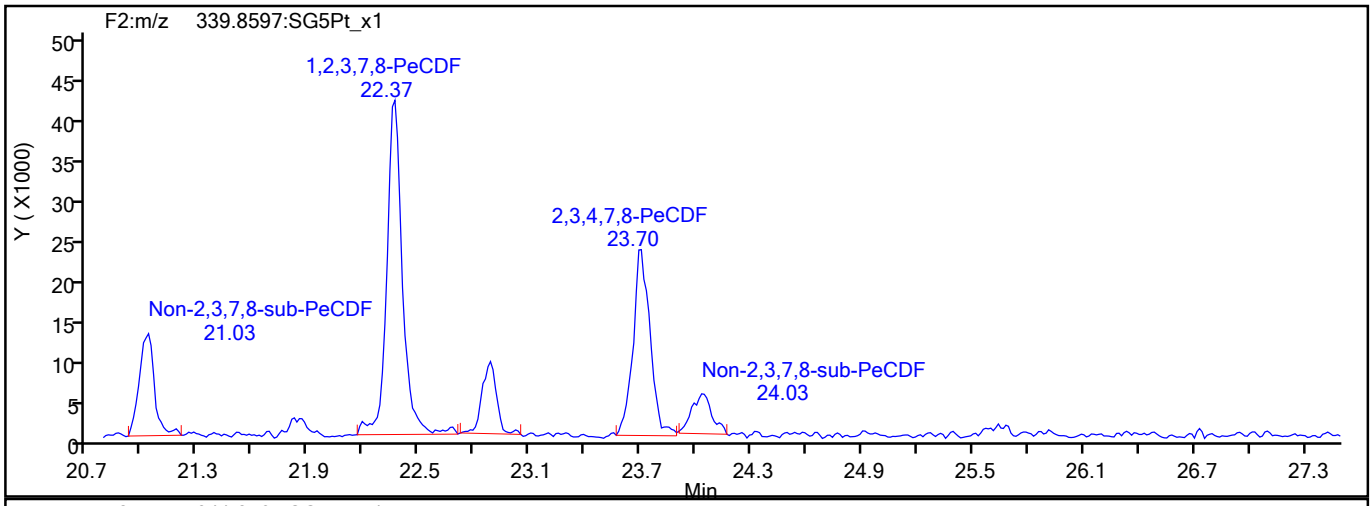

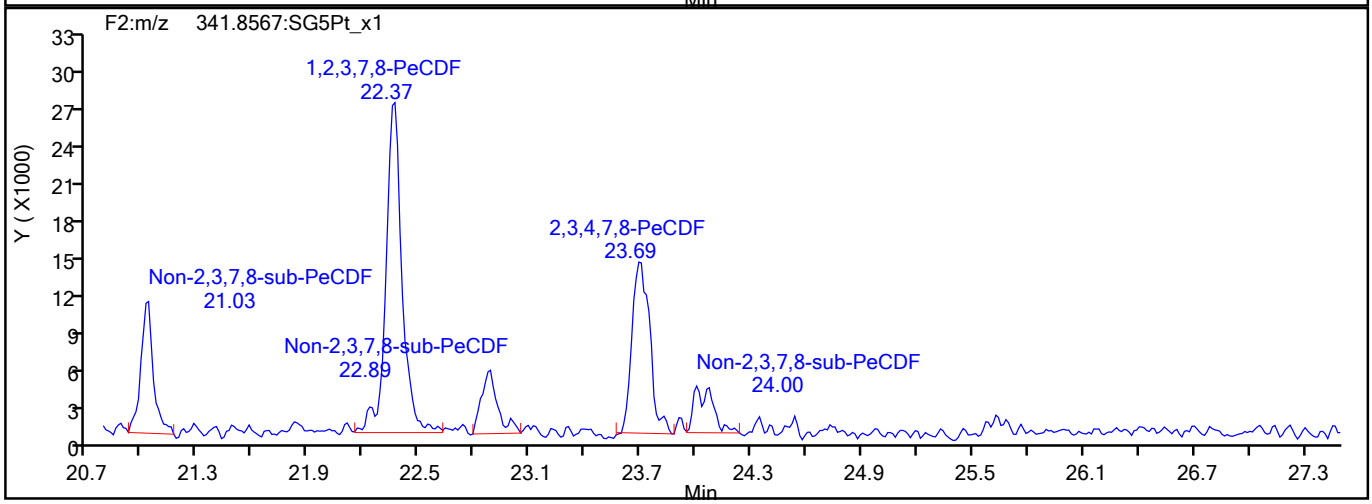

PeCDF Interference Mass

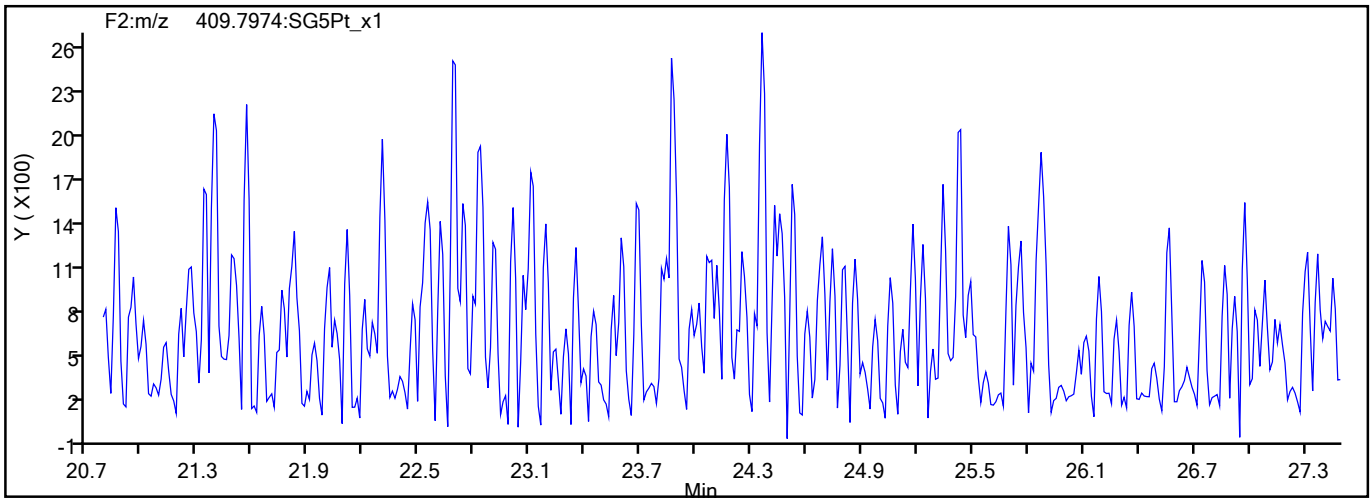

775841

Report Date: 19-Aug-2021 13:24:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

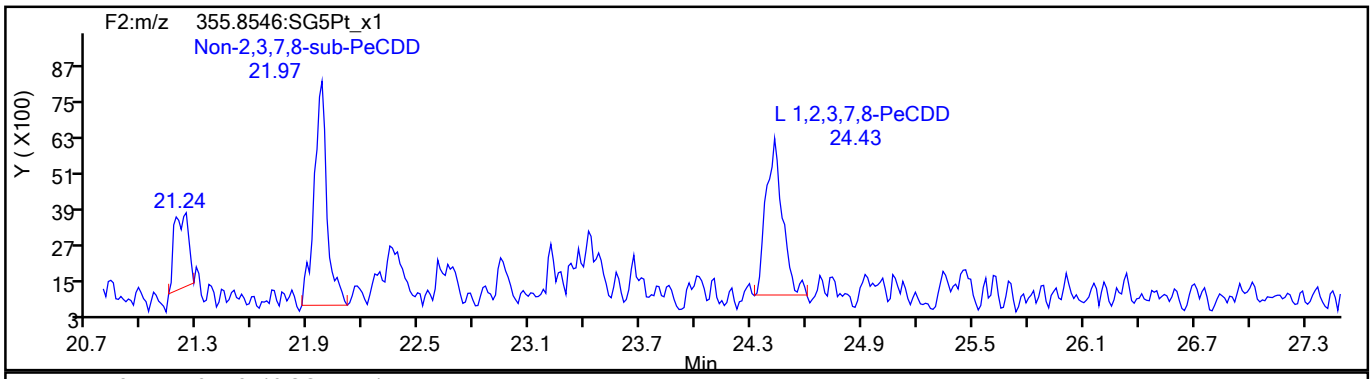

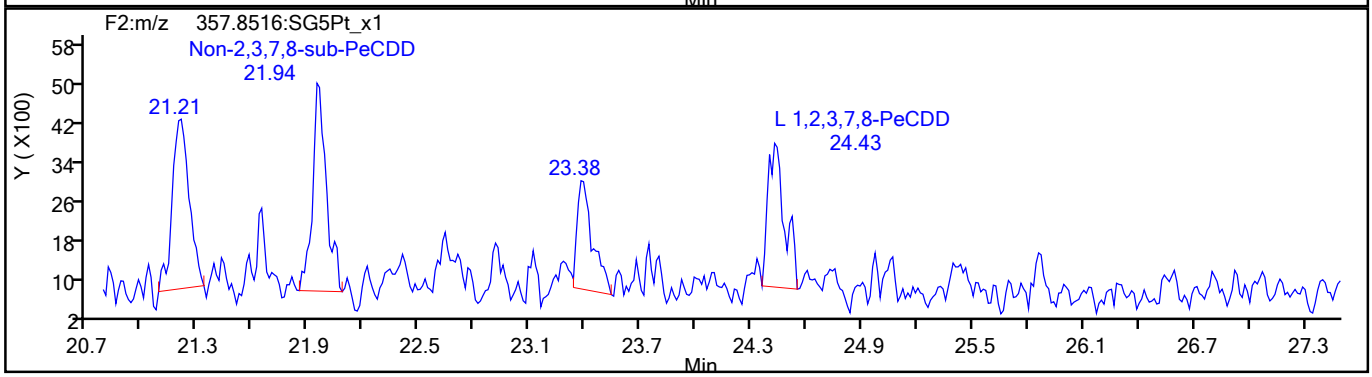

PeCDD Standards

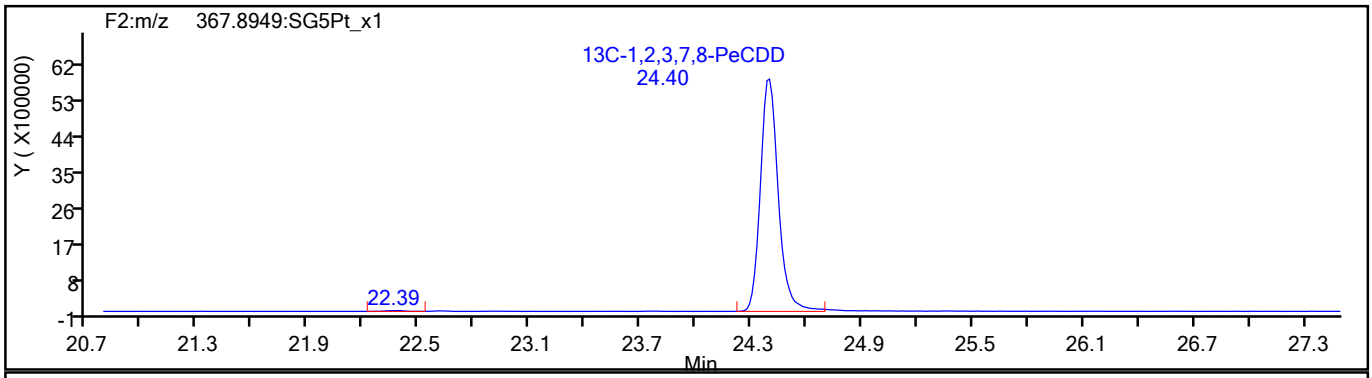

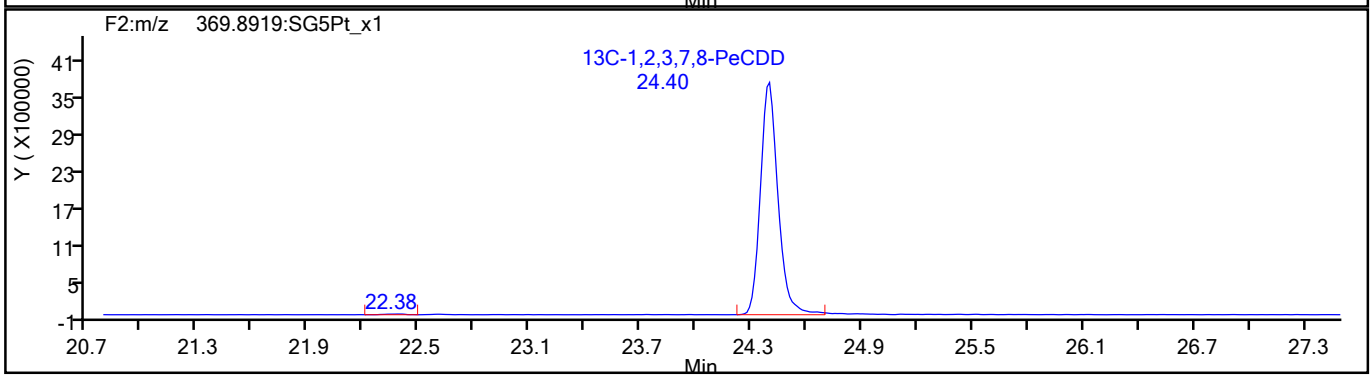

775842

Report Date: 19-Aug-2021 13:24:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

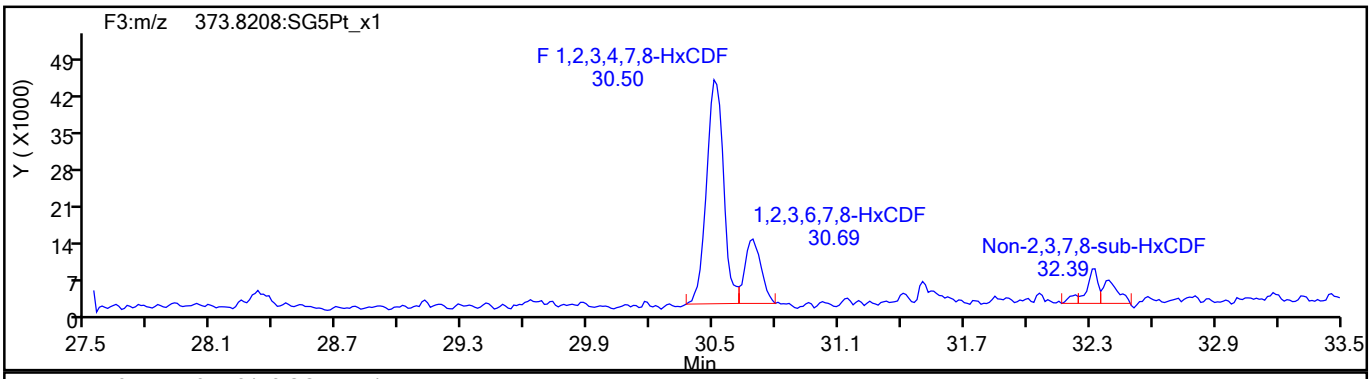

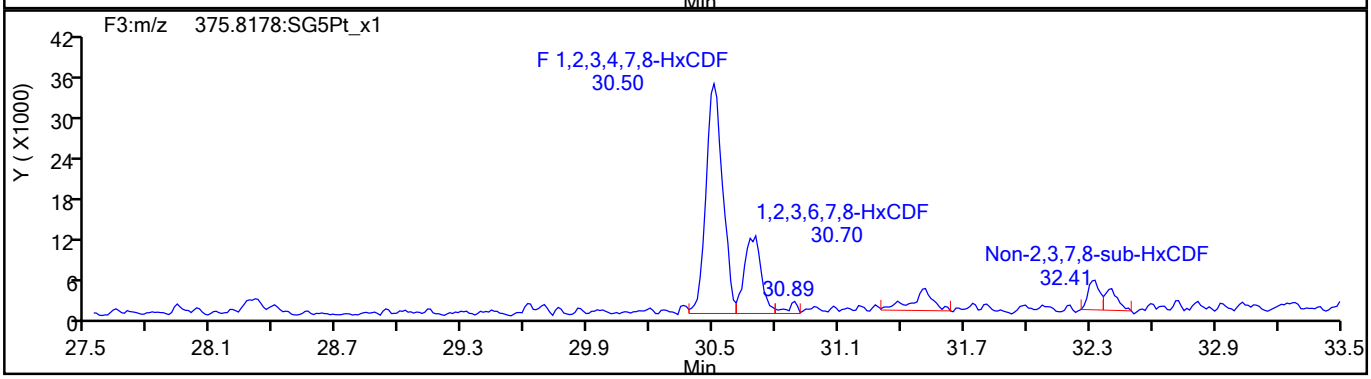

HxCDF Standards

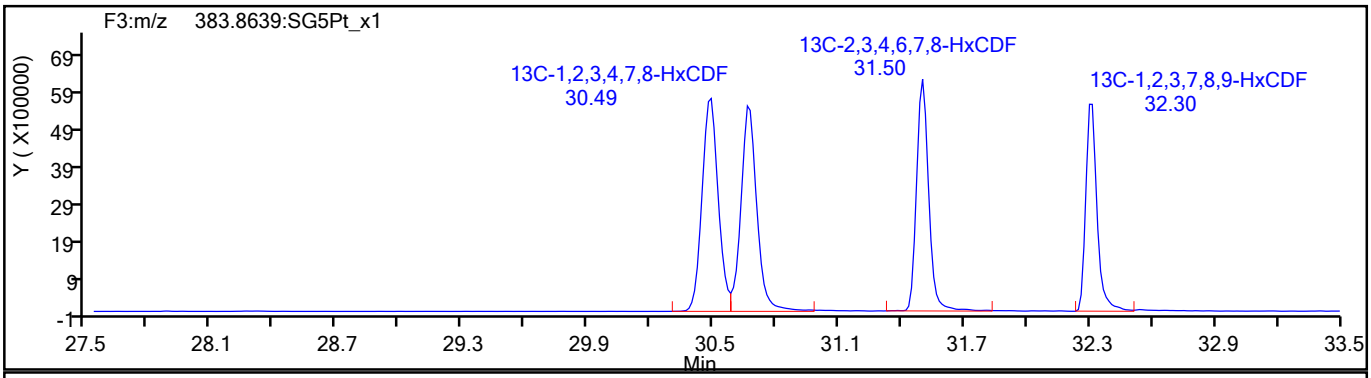

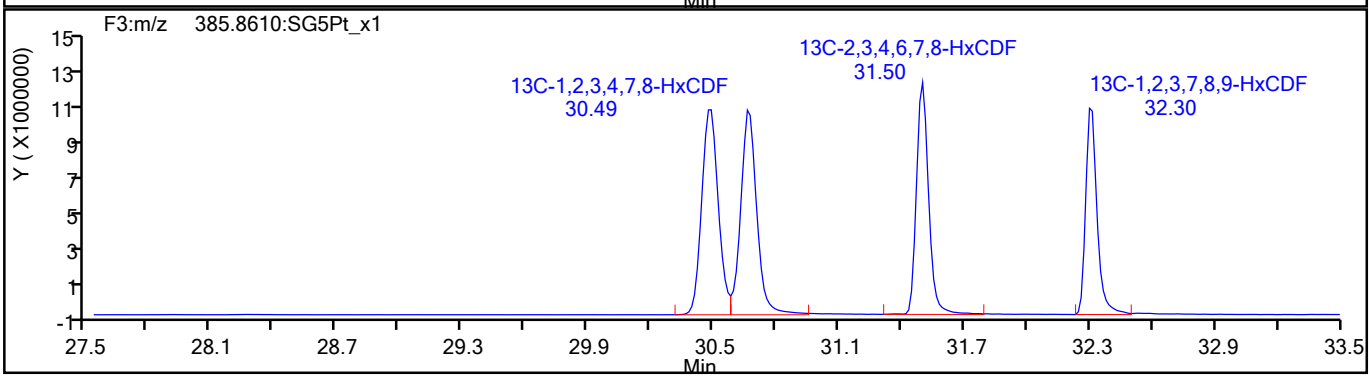

775843

Report Date: 19-Aug-2021 13:24:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

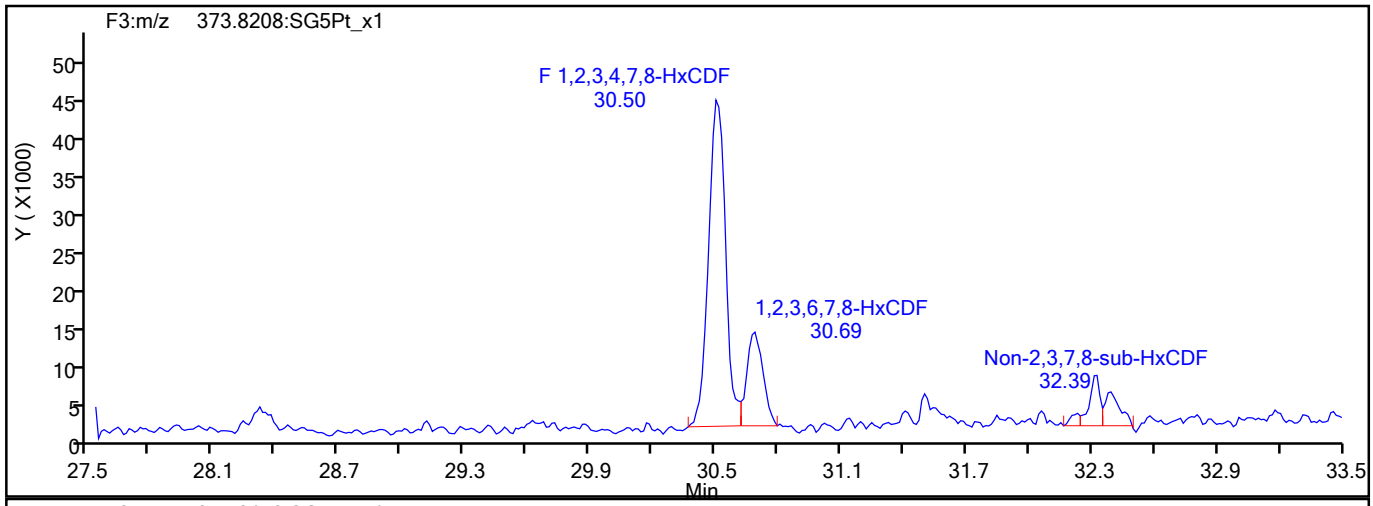

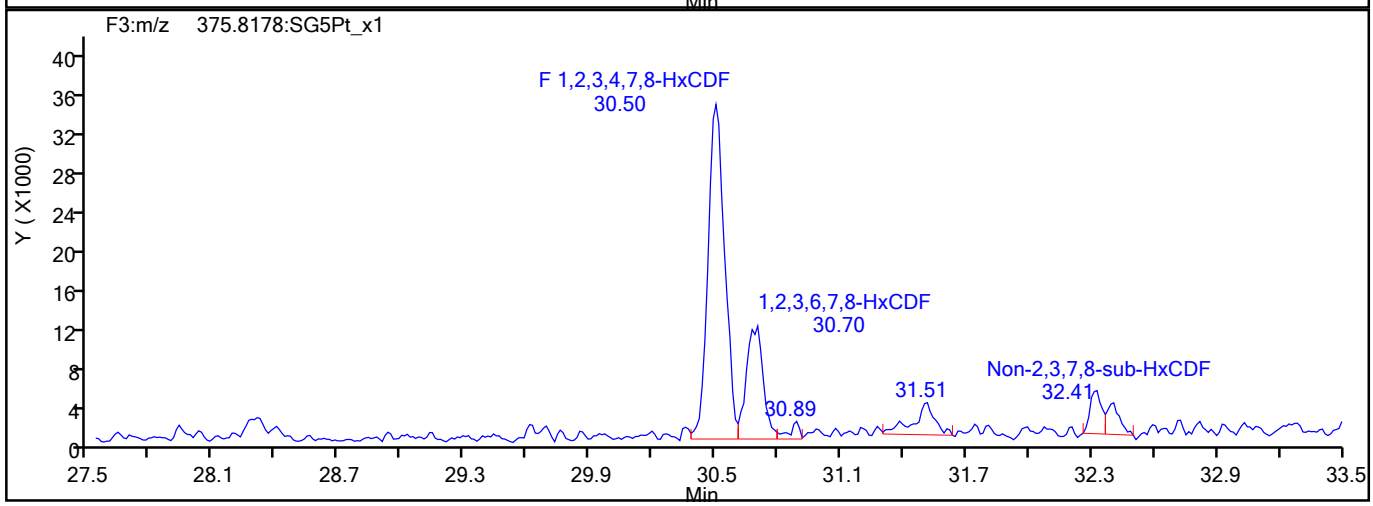

HxCDF Interference Mass

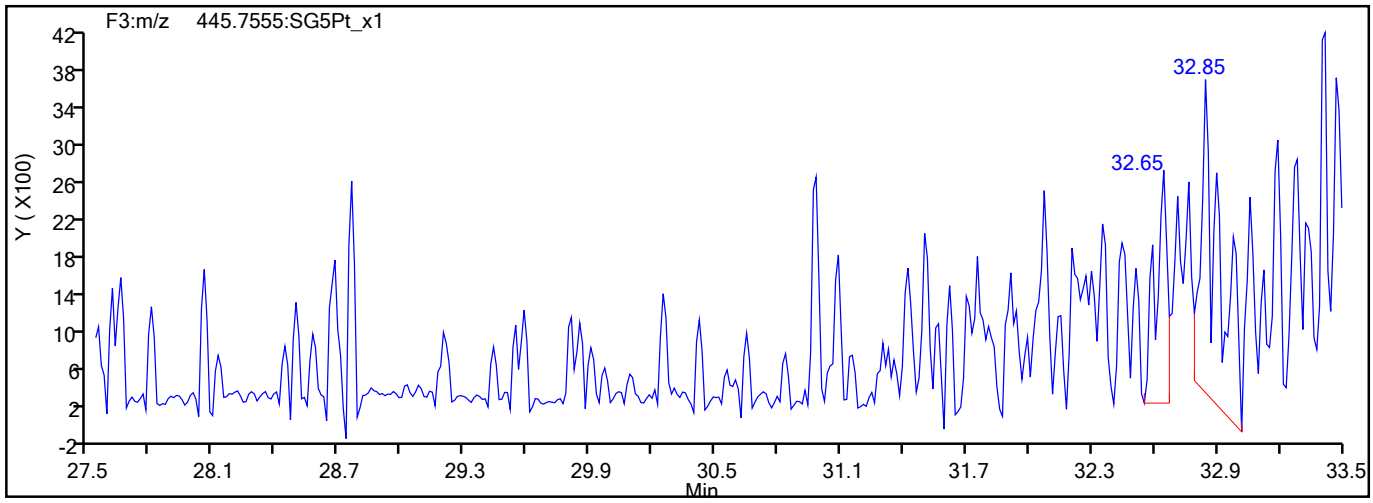

775844

Report Date: 19-Aug-2021 13:24:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

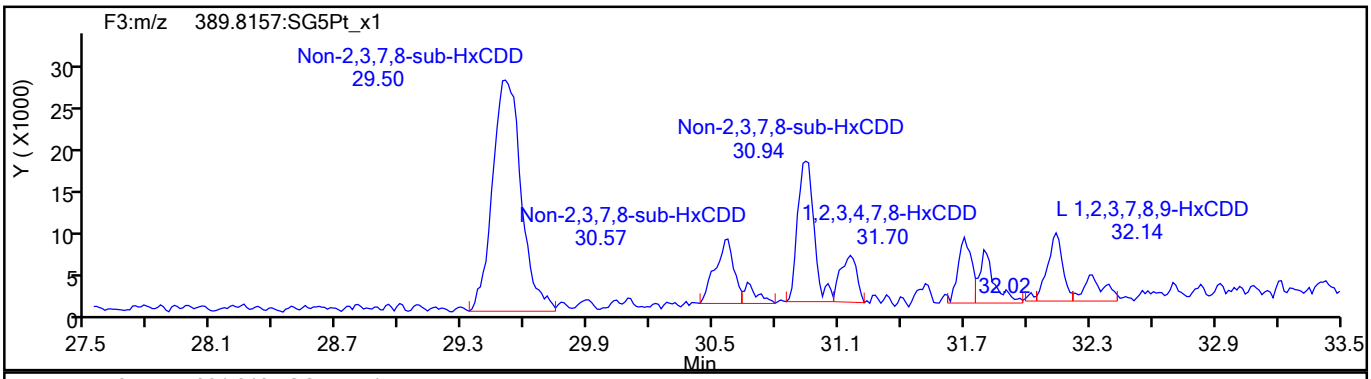

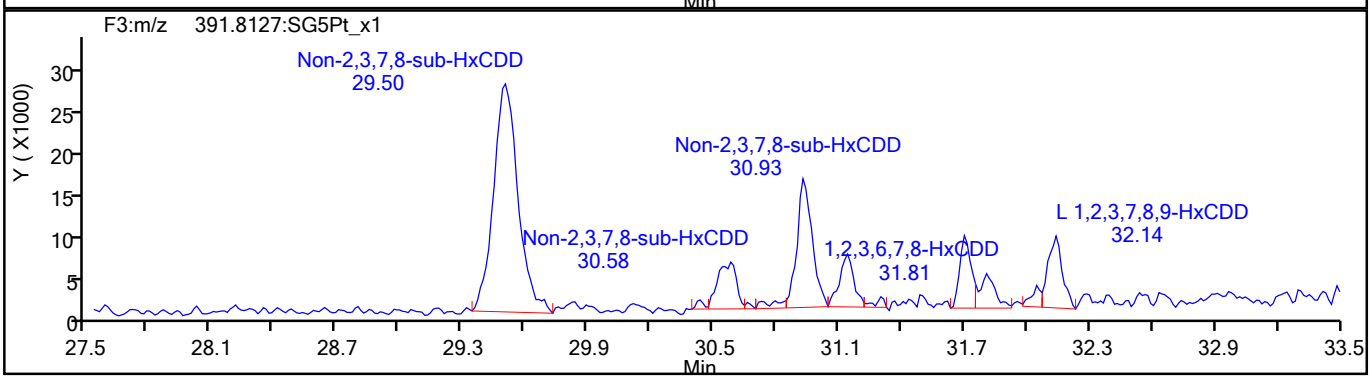

HxCDD Standards

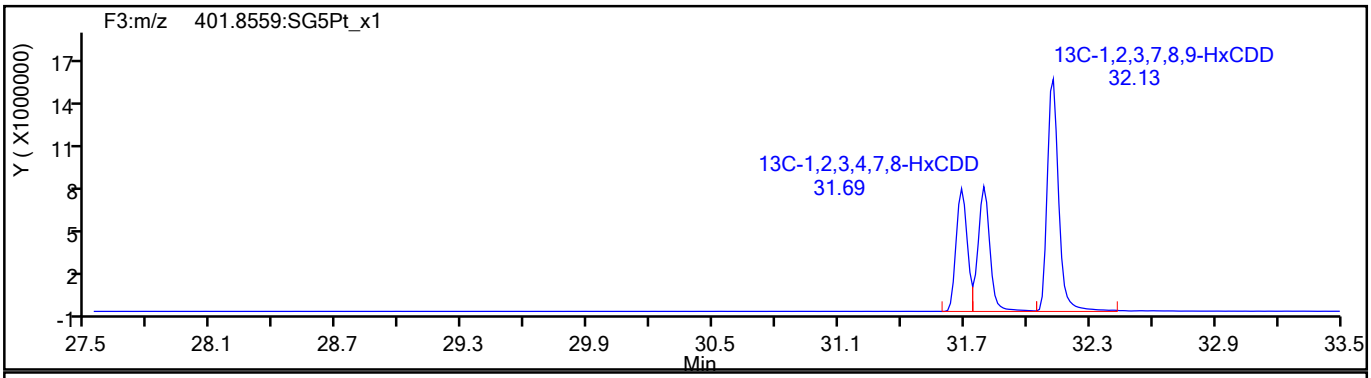

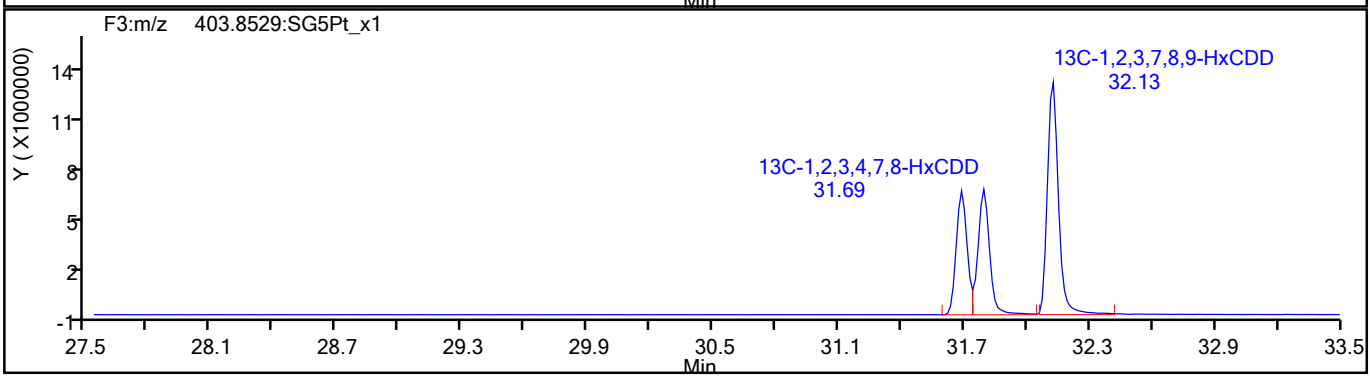

775845

Report Date: 19-Aug-2021 13:24:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

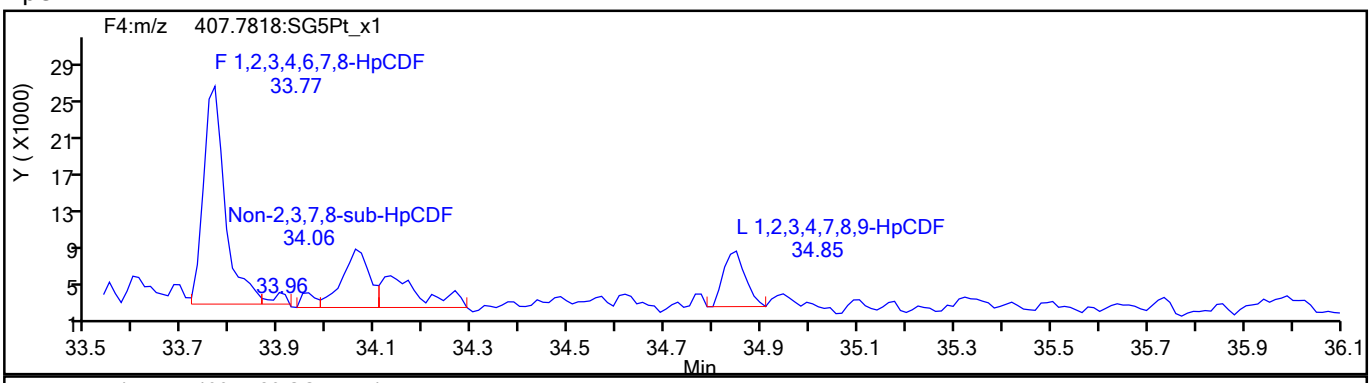

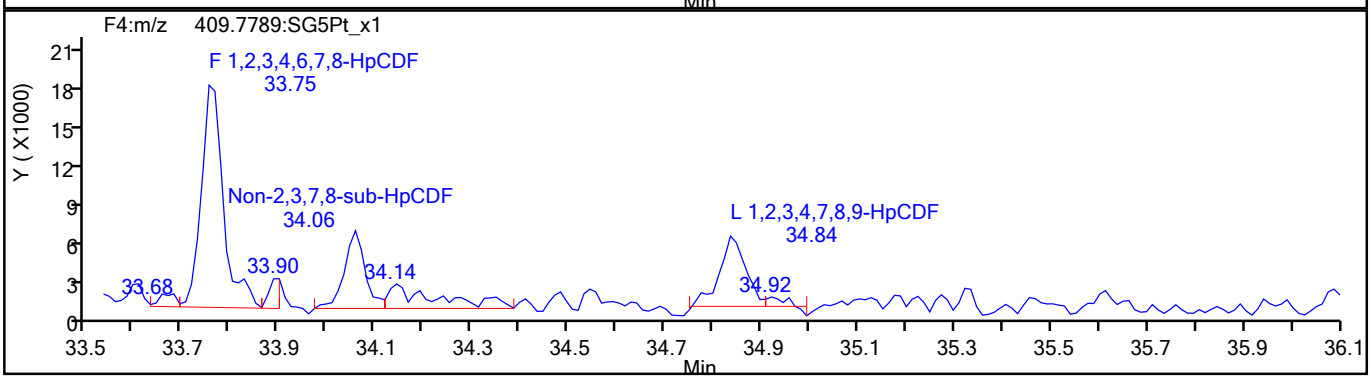

HpCDF Standards

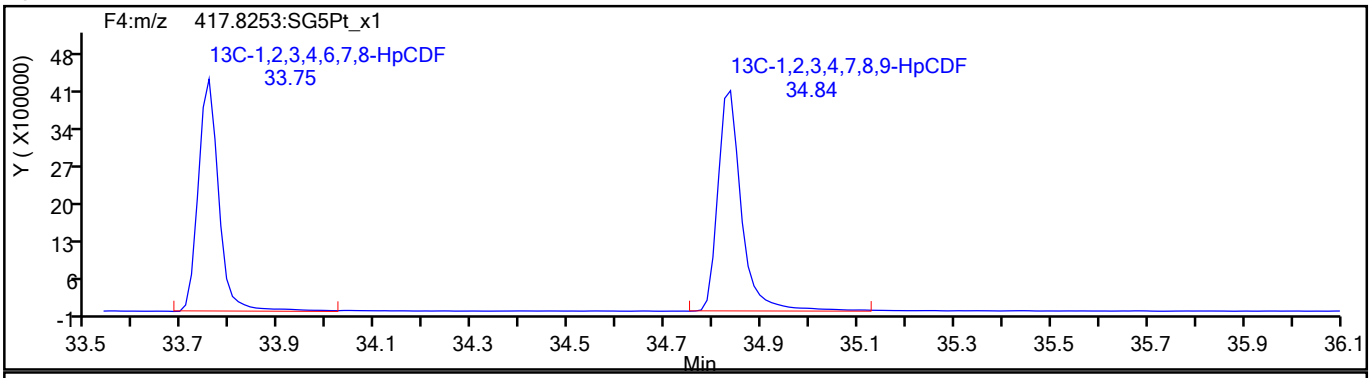

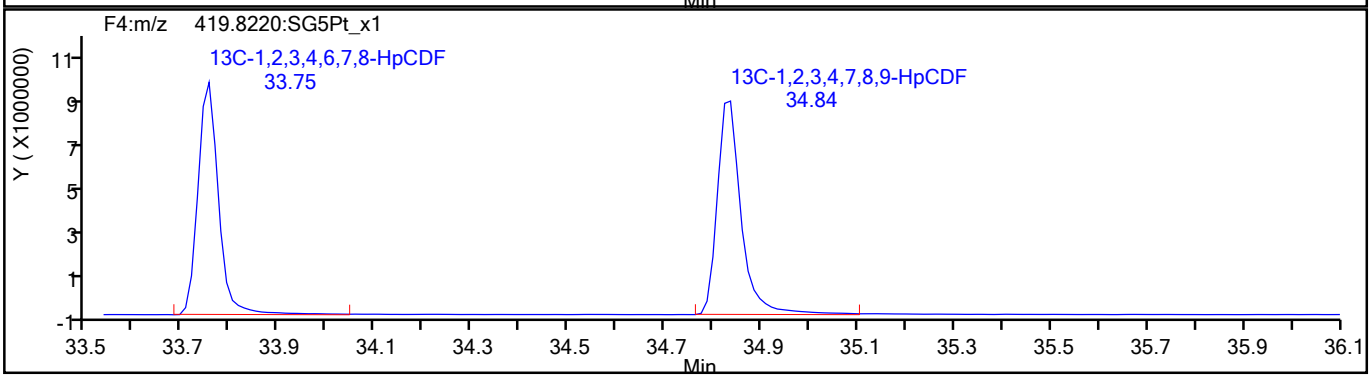

775846

Report Date: 19-Aug-2021 13:24:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

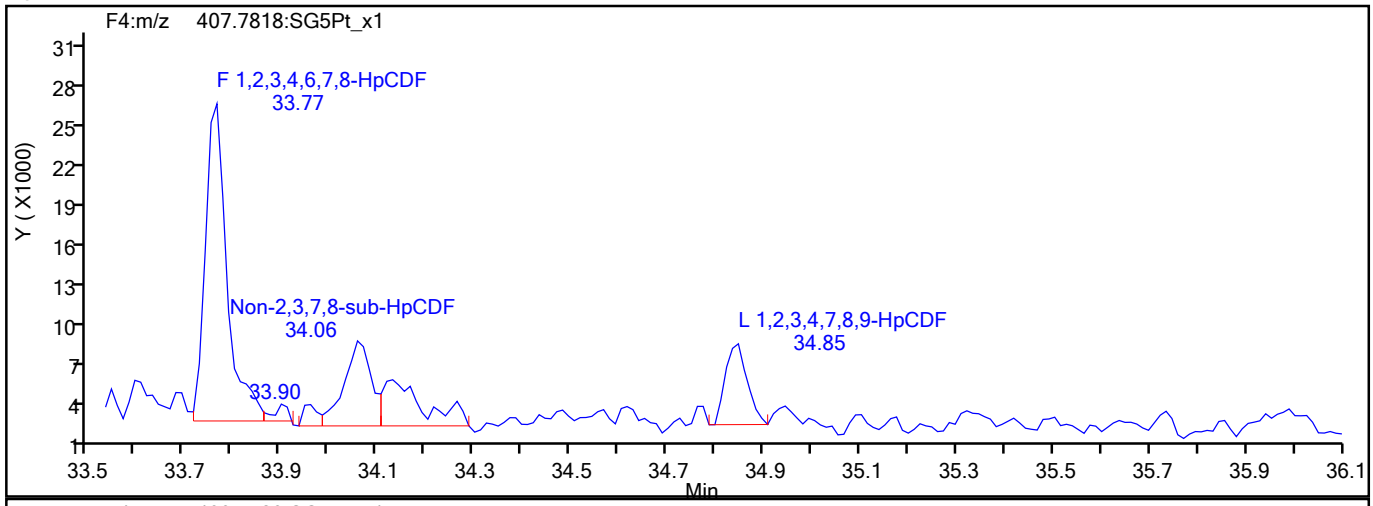

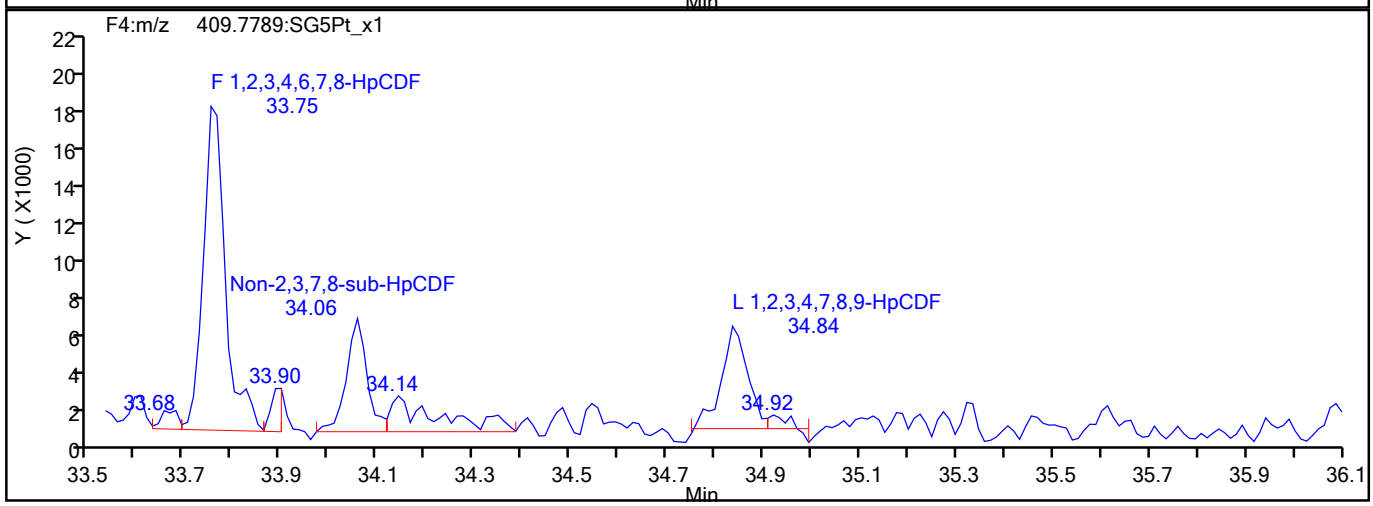

HpCDF Interference Mass

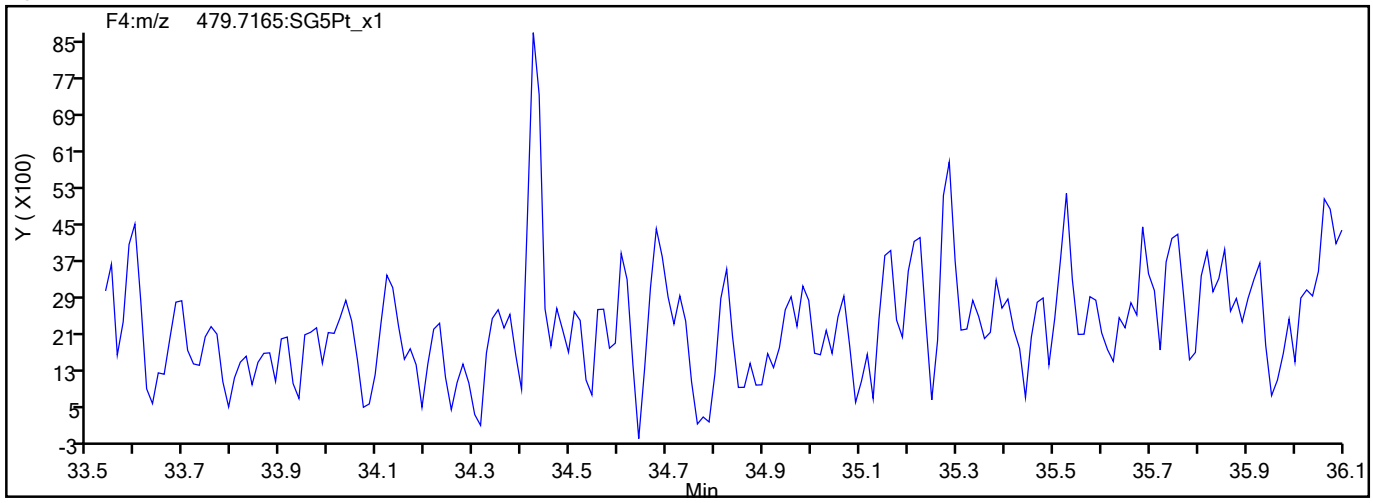

775847

Report Date: 19-Aug-2021 13:24:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

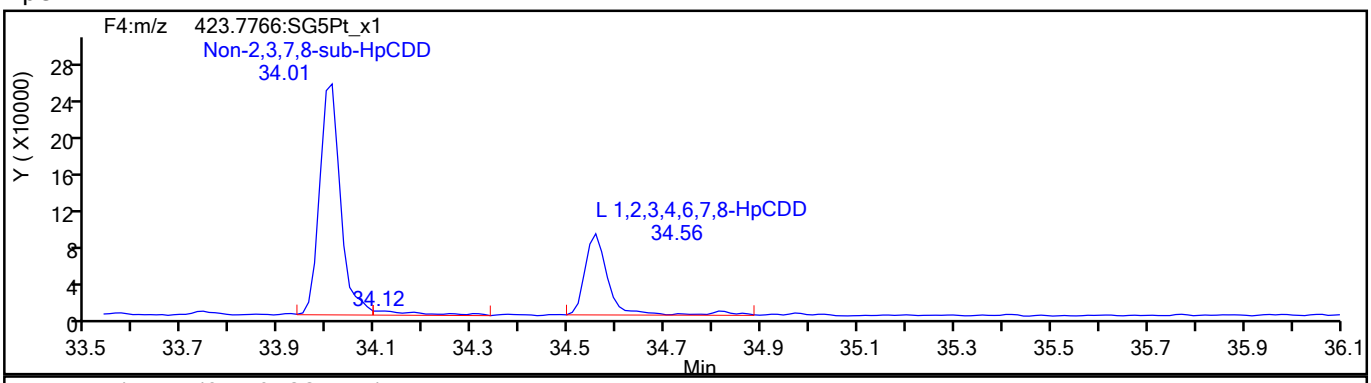

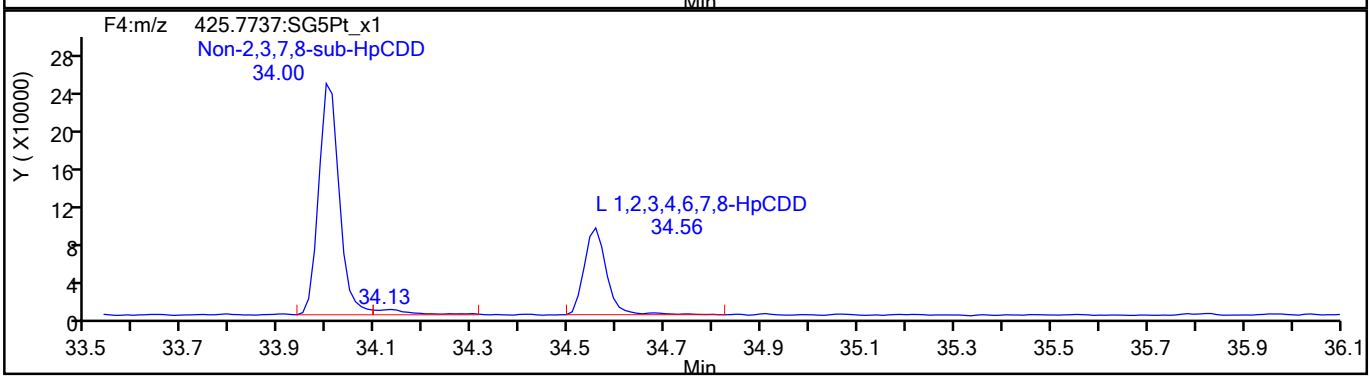

HpCDD Standards

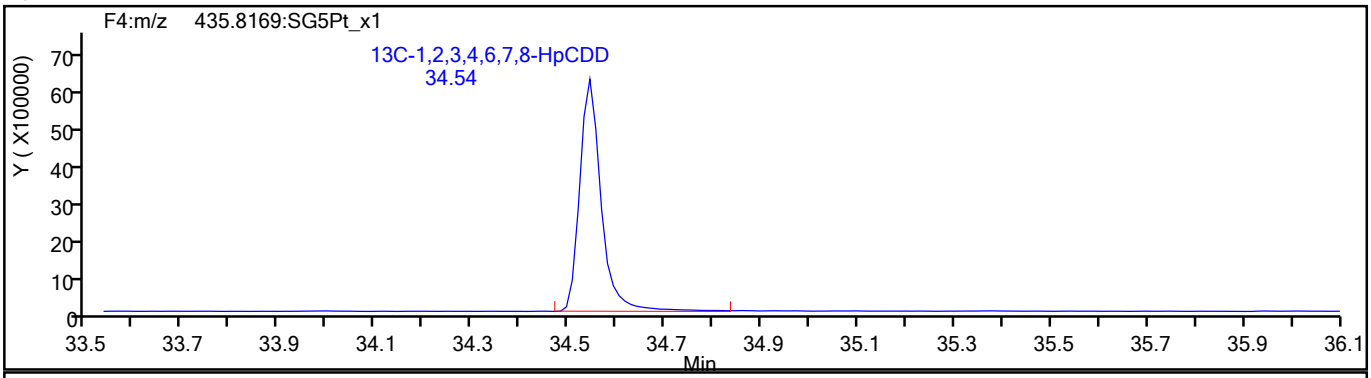

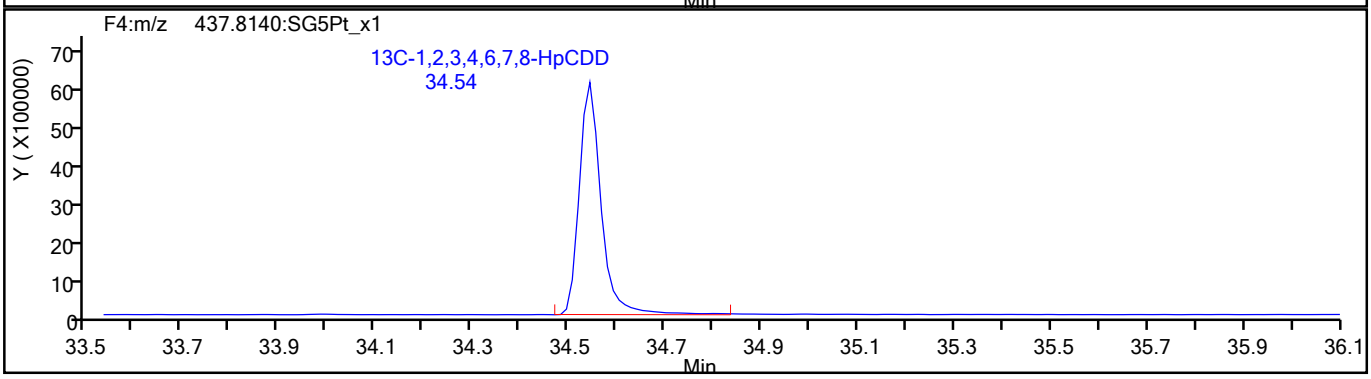

775848

Report Date: 19-Aug-2021 13:24:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

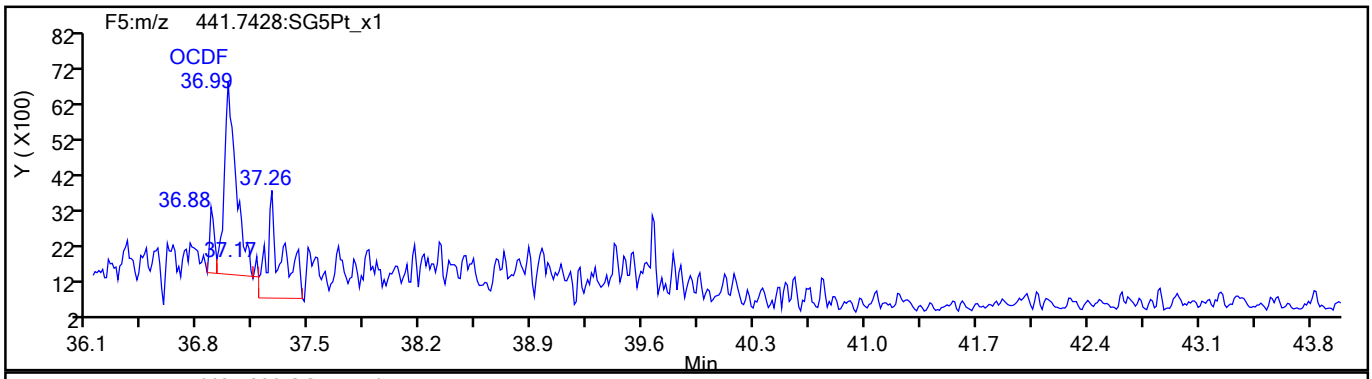

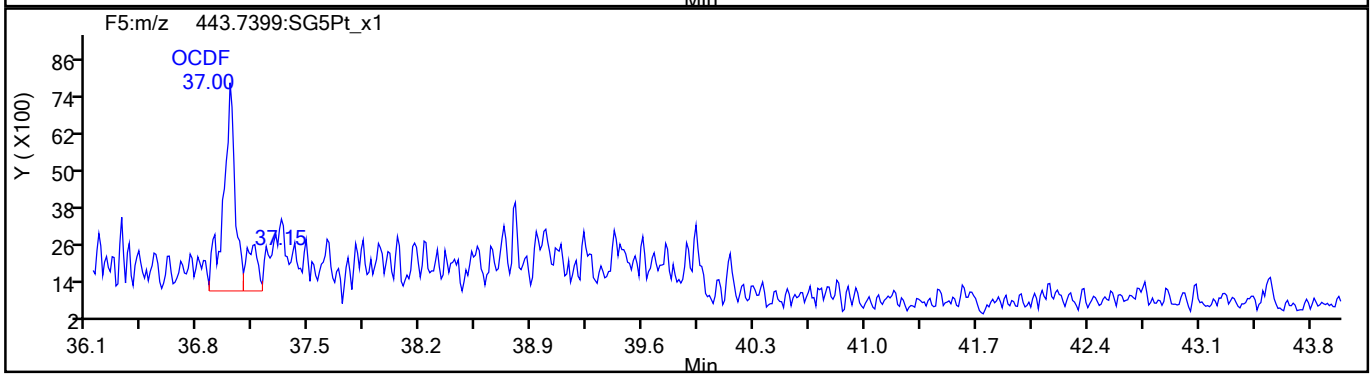

OCDF Standards

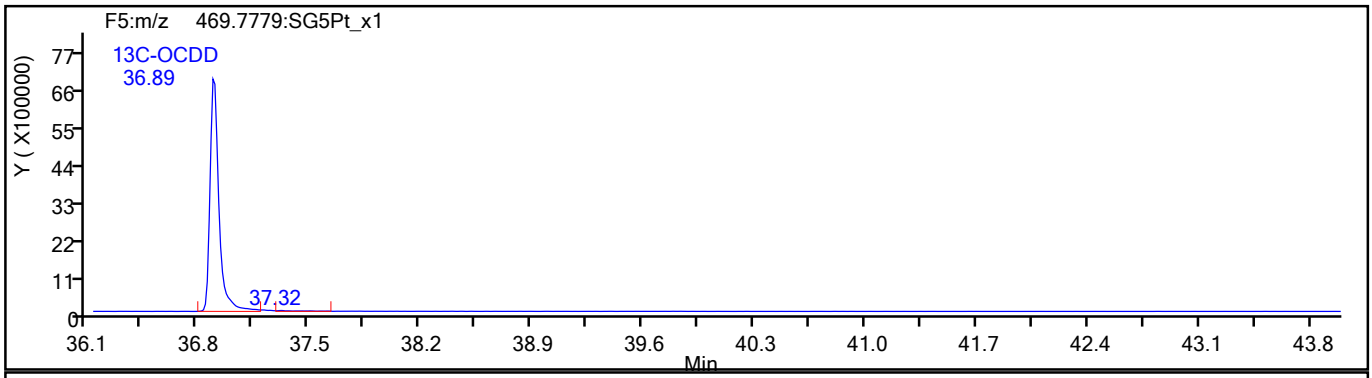

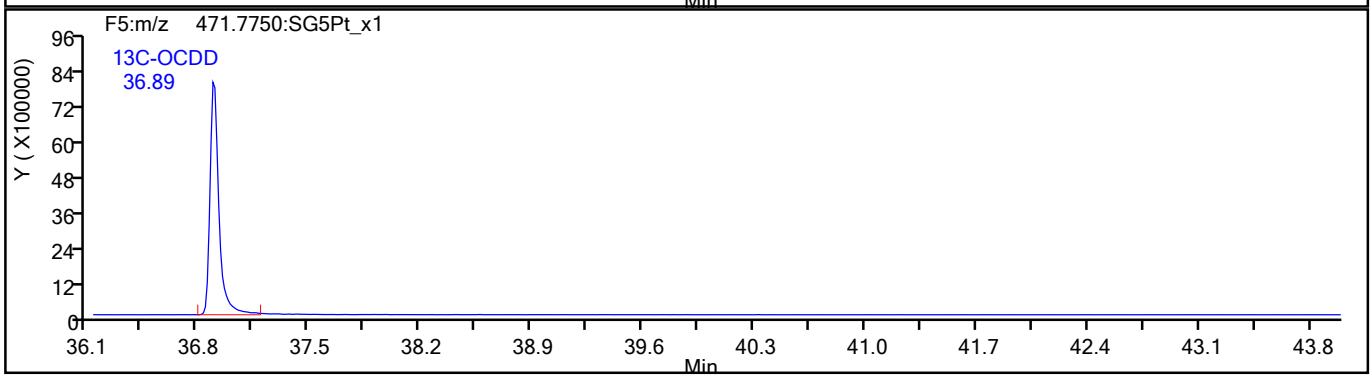

775849

Report Date: 19-Aug-2021 13:24:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

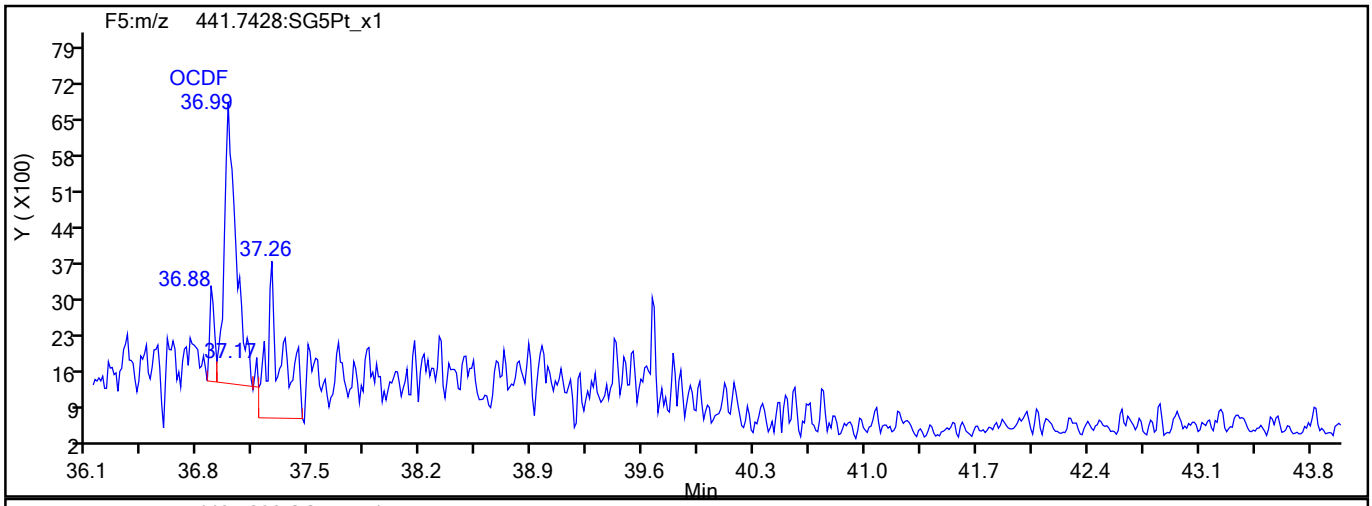

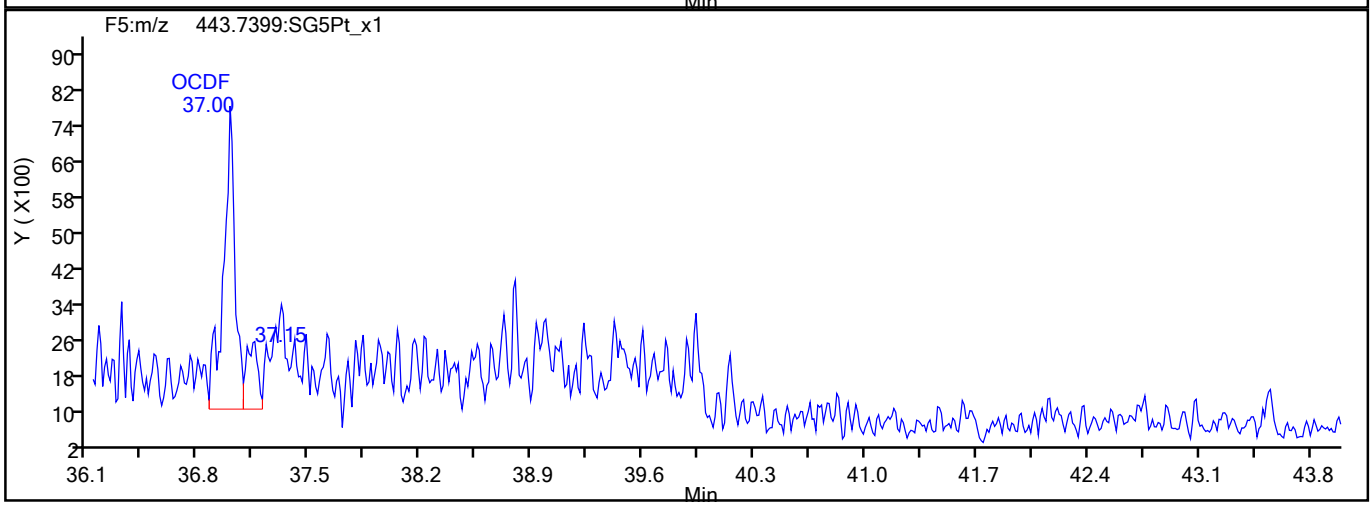

OCDF Interference Mass

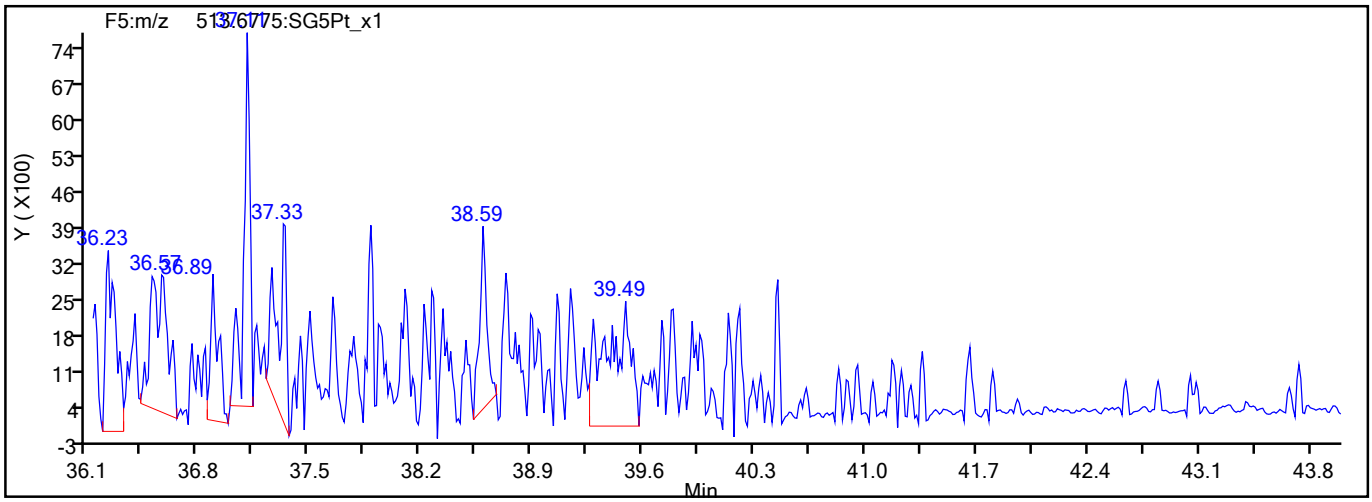

775850

Report Date: 19-Aug-2021 13:24:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

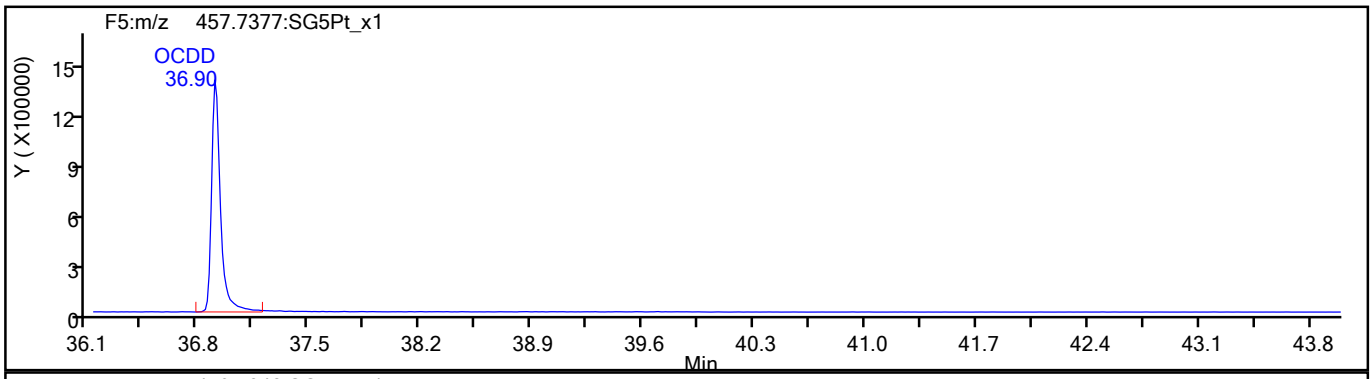

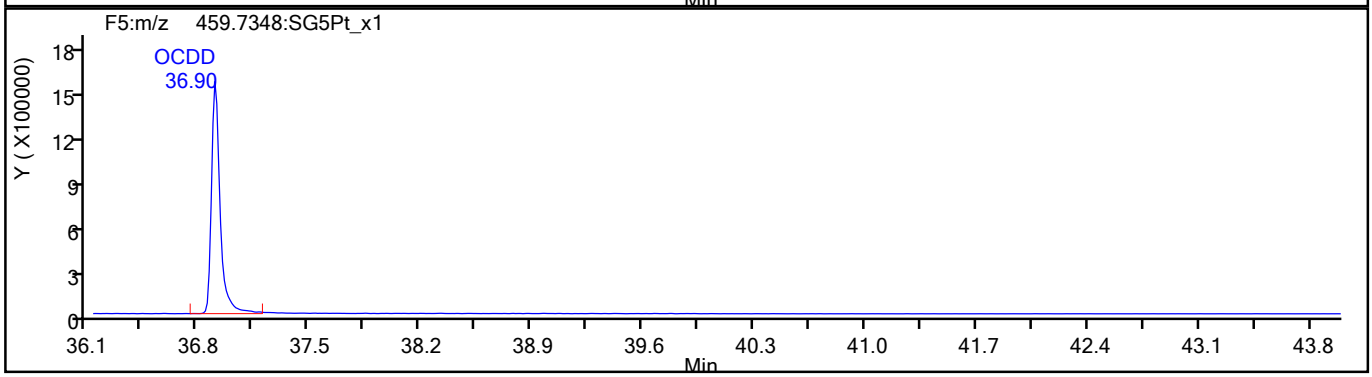

OCDD Standards

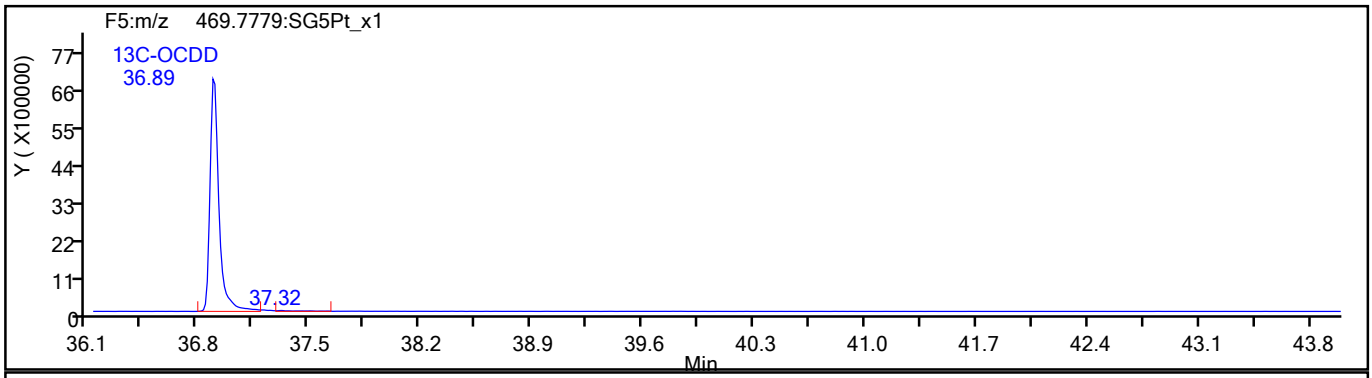

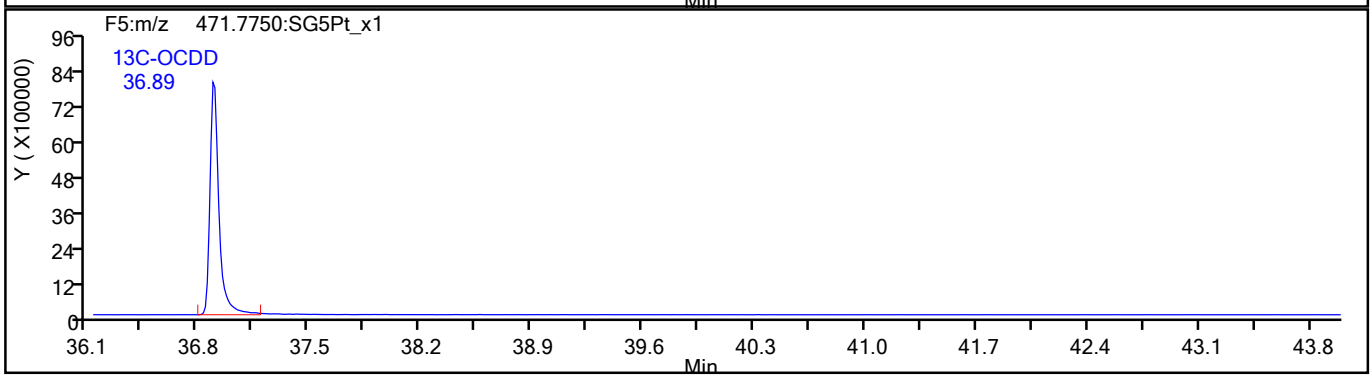

775851

Report Date: 19-Aug-2021 13:24:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

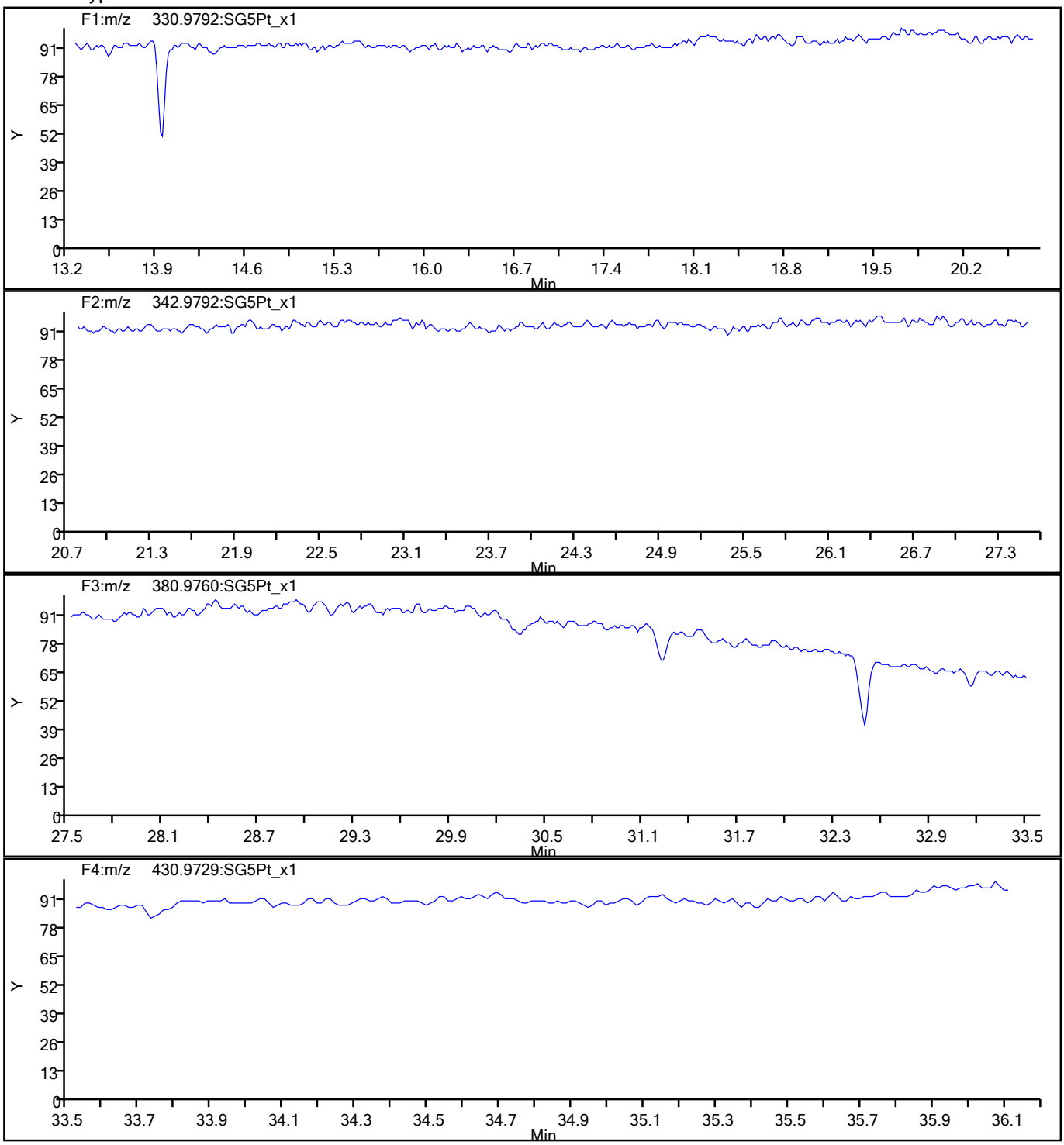

775852

Report Date: 19-Aug-2021 13:24:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_5.d		
Injection Date:	18-Aug-2021 17:19:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	517729	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

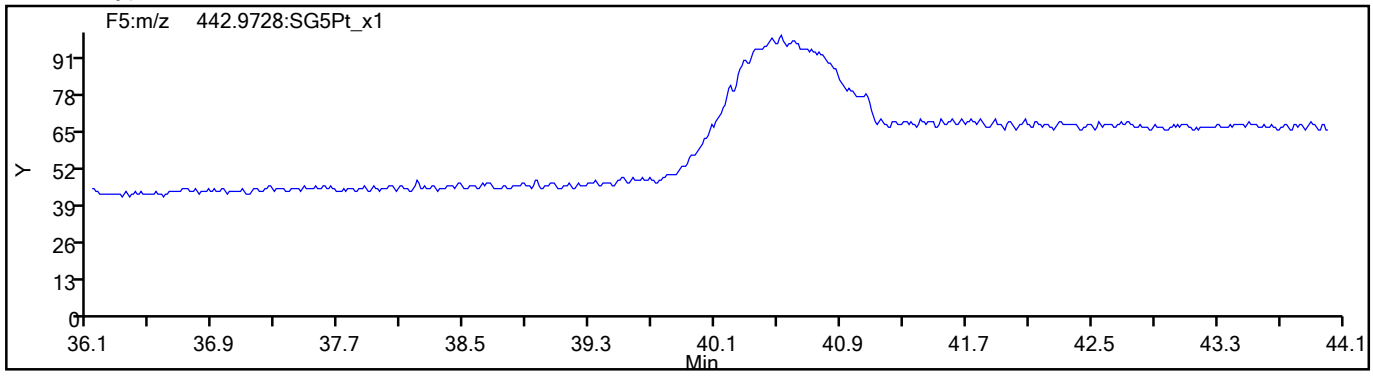

775853

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (8-10) RA
Lab Sample ID: 320-76769-31 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_013.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.24(g)
Date Analyzed: 08/23/2021 23:14
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	28		1.2	0.26

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	66		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	75		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_013.d
Lims ID: 320-76769-A-31-A
Client ID: 11215702-072221-SS-SJSB076 (8-10)
Sample Type: Client
Inject. Date: 23-Aug-2021 23:14:49 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-31-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:18:16

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.300	41125186	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.630	36243752	0.85	1.3327	66.1	66.1	0.2852	0.2852	66.13	
2,3,7,8-TCDF	17.644	4185368	0.83	0.9978	11.6	11.6	0.1097	0.1097		M
D 13C-2,3,7,8-TCDD	16.080	22939012	0.75	0.8749	63.8	63.8	0.5978	0.5978	63.75	
2,3,7,8-TCDD	16.094	876960	0.78	1.0570	3.617	3.617	0.1006	0.1006		
$ 37Cl4-2,3,7,8-TCDD	16.094	10725832		0.8648	30.2	30.2	0.0798	0.0798	75.39	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_013.d
Lims ID: 320-76769-A-31-A
Client ID: 11215702-072221-SS-SJSB076 (8-10)
Sample Type: Client
Inject. Date: 23-Aug-2021 23:14:49 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-31-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:18:16

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.300	16.298	0		17946340	3785535	8928	22320	424		
333.9339	16.314	16.298	1		23178846	4952879	9353	23382	530	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.630	17.615	1	1.082	16600970	3133367	6993	17482	448		
317.9389	17.630	17.615	1	1.082	19642782	3520378	6291	15727	560	0.85(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.644	17.643	0	1.001	1895679	364191	1133	2832	321		
305.8987	17.644	17.643	0	1.001	2289689	451006	1781	4452	253	0.83(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.080	16.065	1	0.987	9857587	2239888	8928	22320	251		
333.9339	16.067	16.065	0	0.986	13081425	2906974	9353	23382	311	0.75(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.094	16.079	1	1.001	383655	90850	1097	2742	83		
321.8936	16.094	16.079	1	1.001	493305	118333	1093	2732	108	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.094	16.093	0	0.987	10725832	2453467	2413	6032	1017		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_013.d				
Injection Date:	23-Aug-2021 23:14:49	Instrument ID:	11D2		
Lims ID:	320-76769-A-31-A	Lab Sample ID:	320-76769-31		
Client ID:	11215702-072221-SS-SJSB076 (8-10)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.64
Area: 2314017
Amount: 11.640487
Amount Units: pg/ul

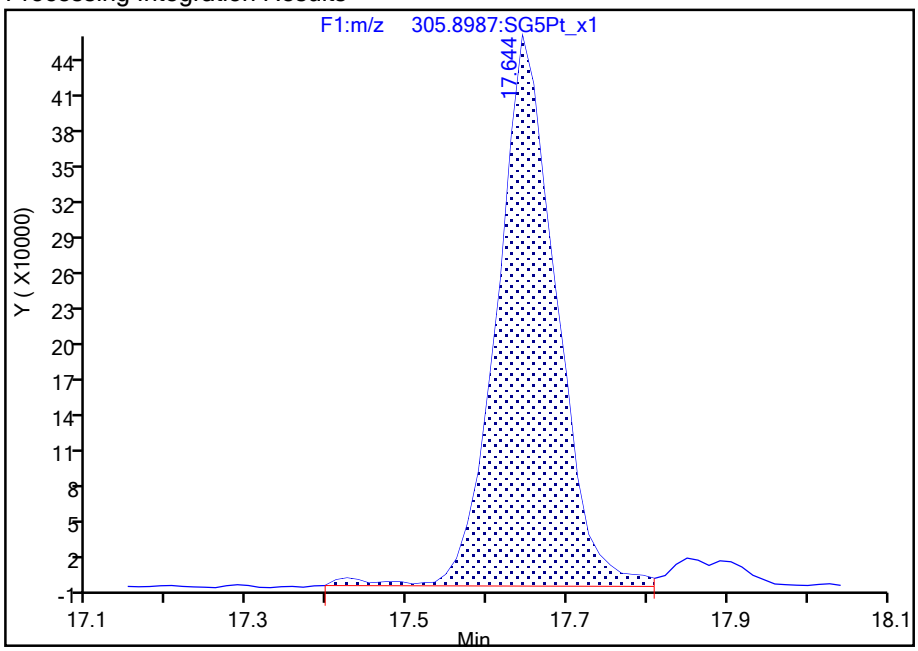

Manual Integration Results

RT: 17.64
Area: 2289689
Amount: 11.573216
Amount Units: pg/ul

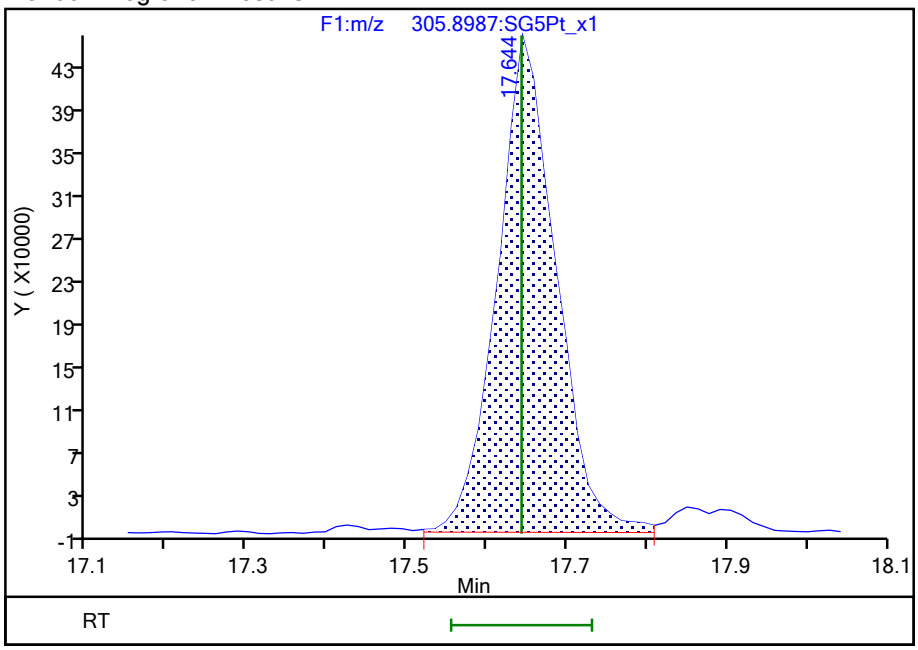

Reviewer: bennettd, 24-Aug-2021 09:18:09

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 24-Aug-2021 09:19:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_013.d		
Injection Date:	23-Aug-2021 23:14:49	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	518979	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

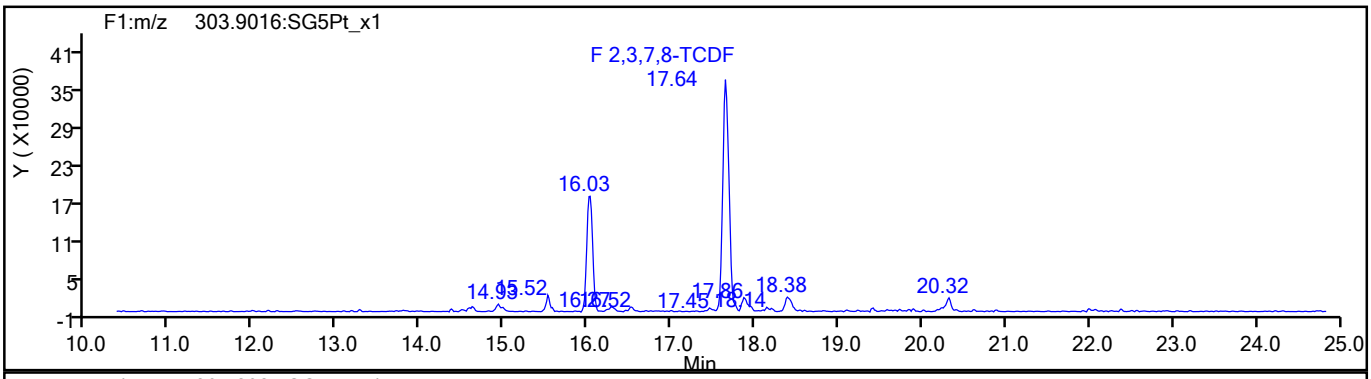

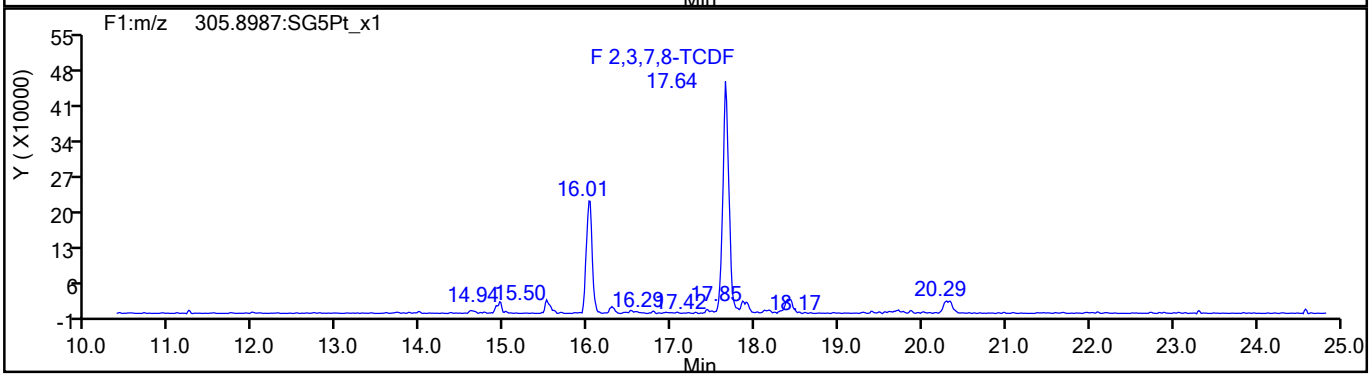

TCDF Standards

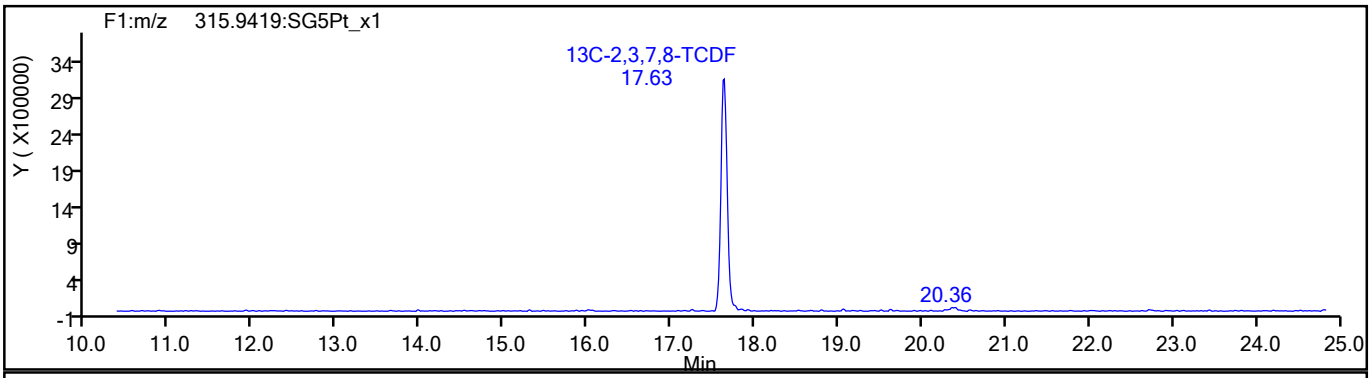

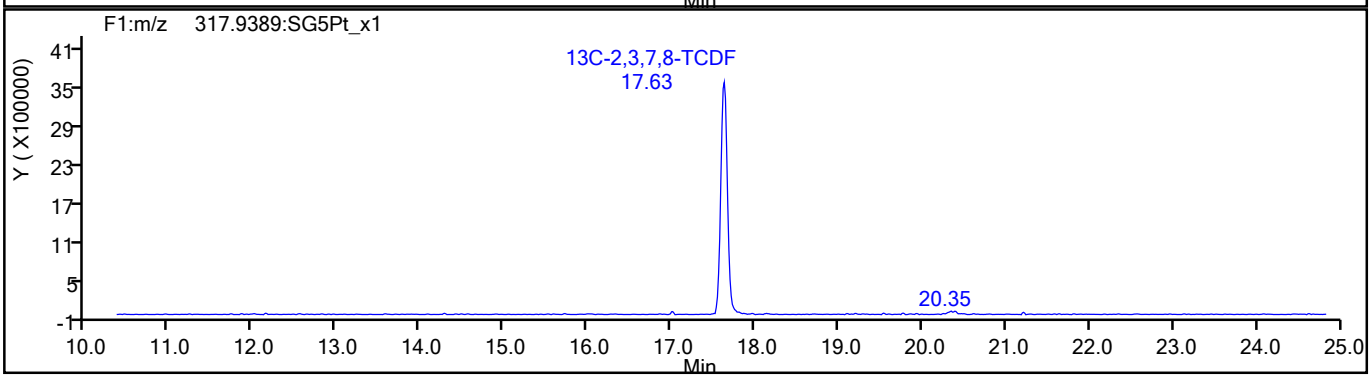

775858

Report Date: 24-Aug-2021 09:19:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_013.d		
Injection Date:	23-Aug-2021 23:14:49	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	518979	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

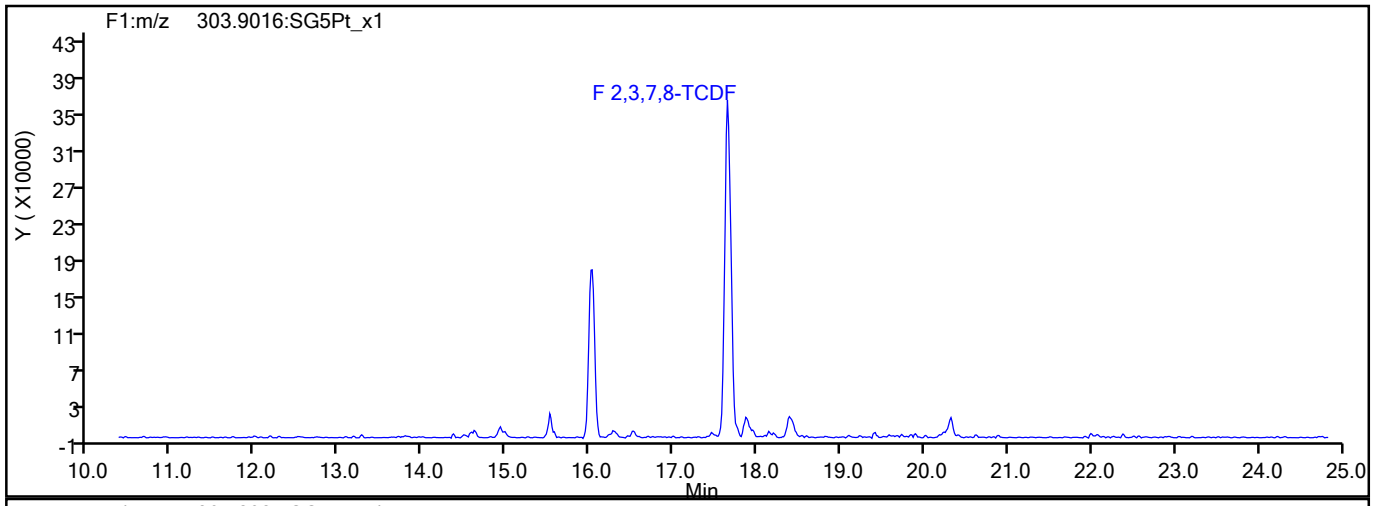

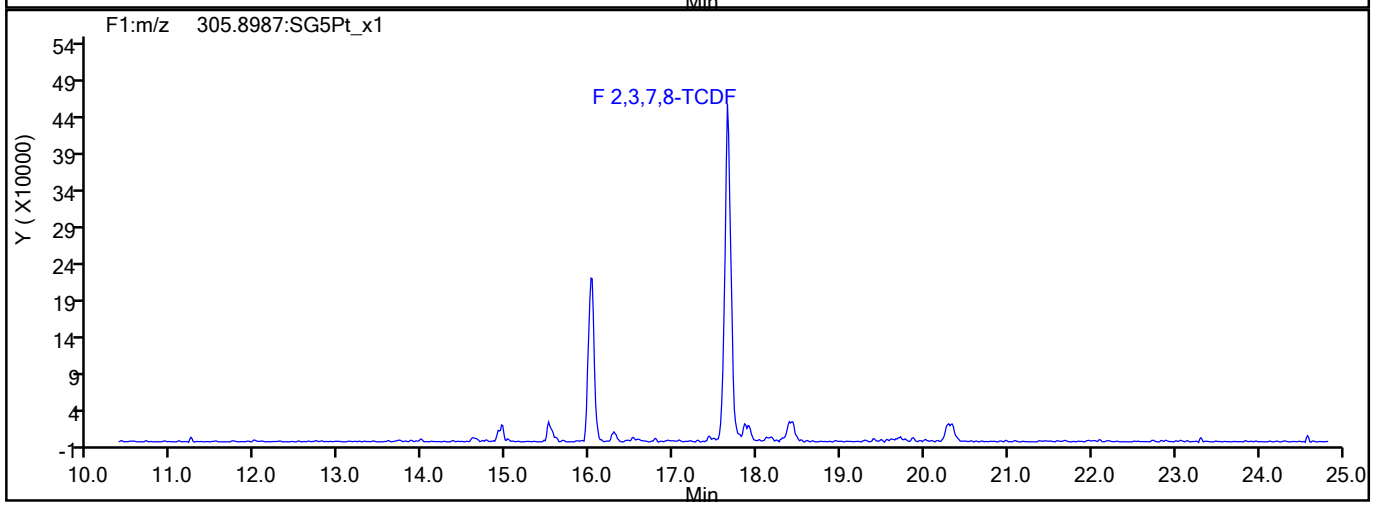

TCDF Interference Mass

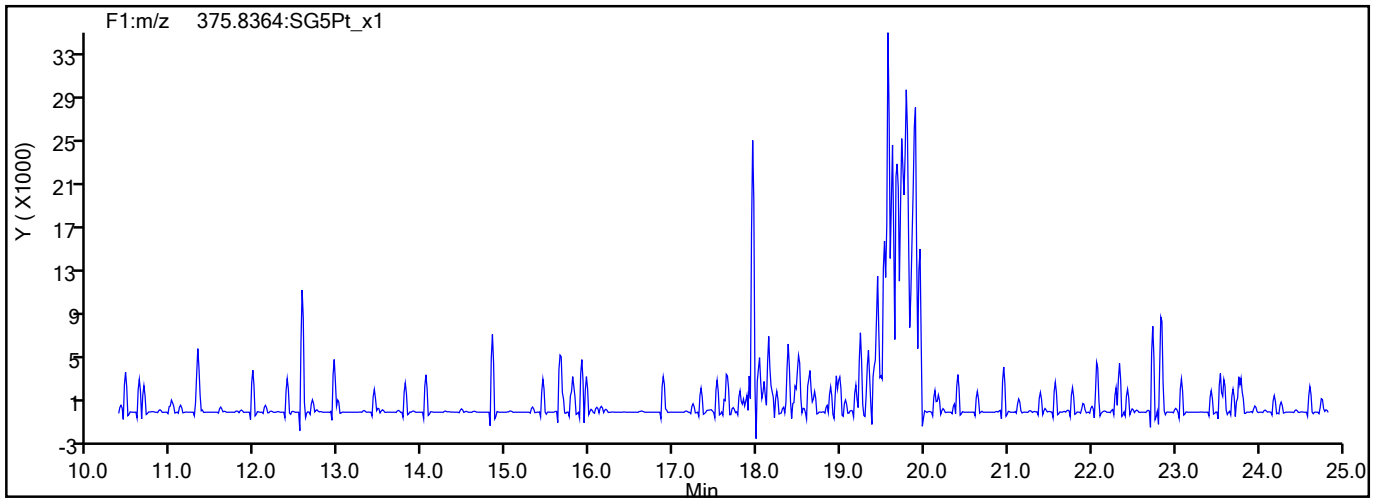

775859

Report Date: 24-Aug-2021 09:19:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_013.d		
Injection Date:	23-Aug-2021 23:14:49	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	518979	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

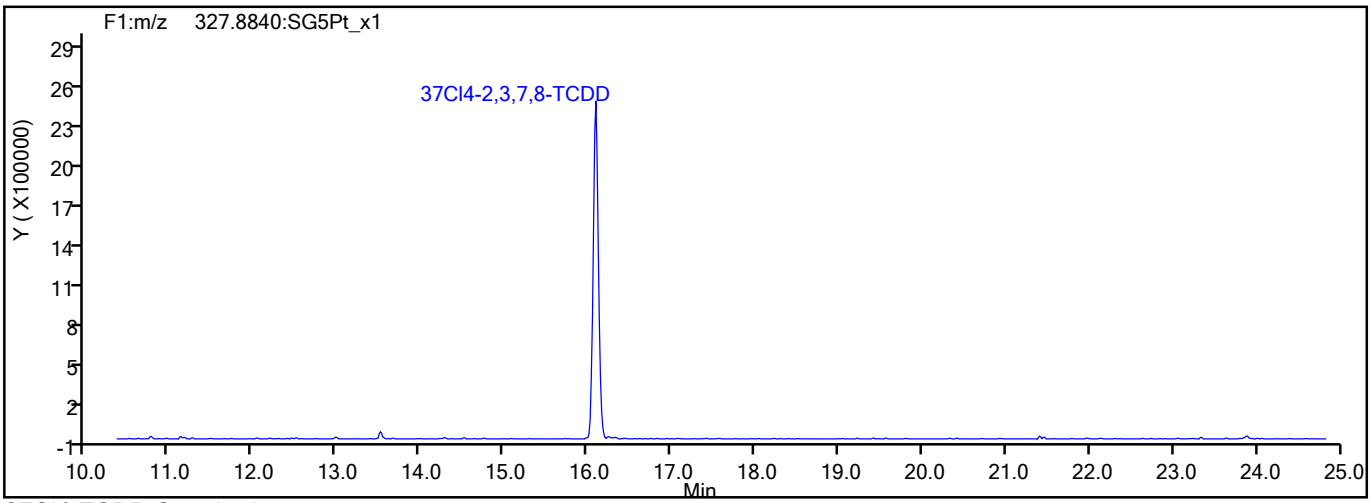

37Cl4-TCDD Standards

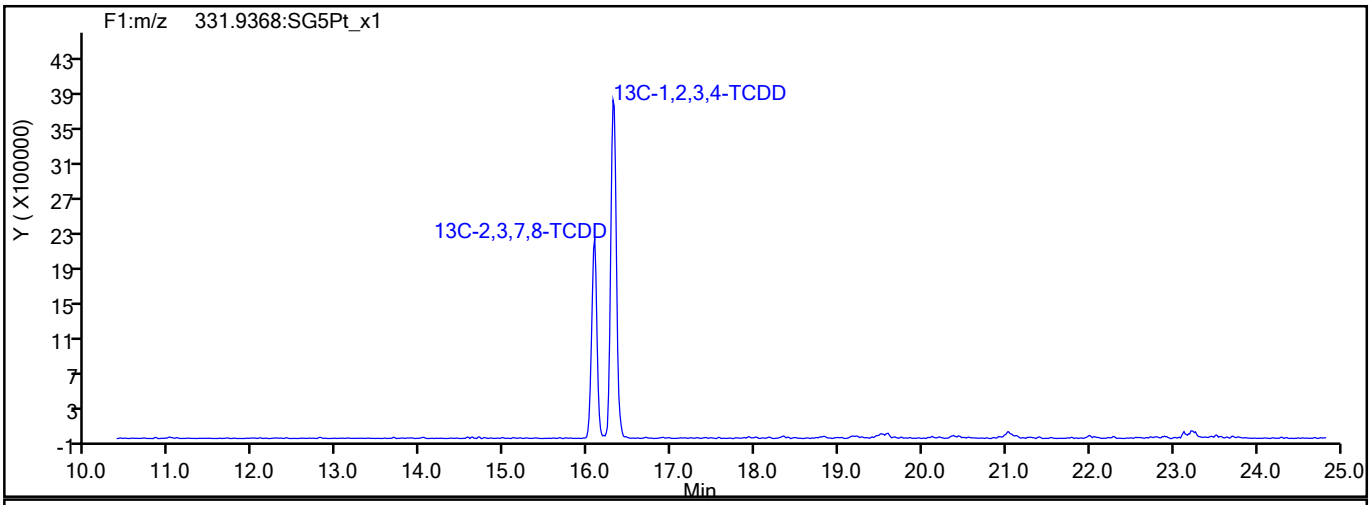

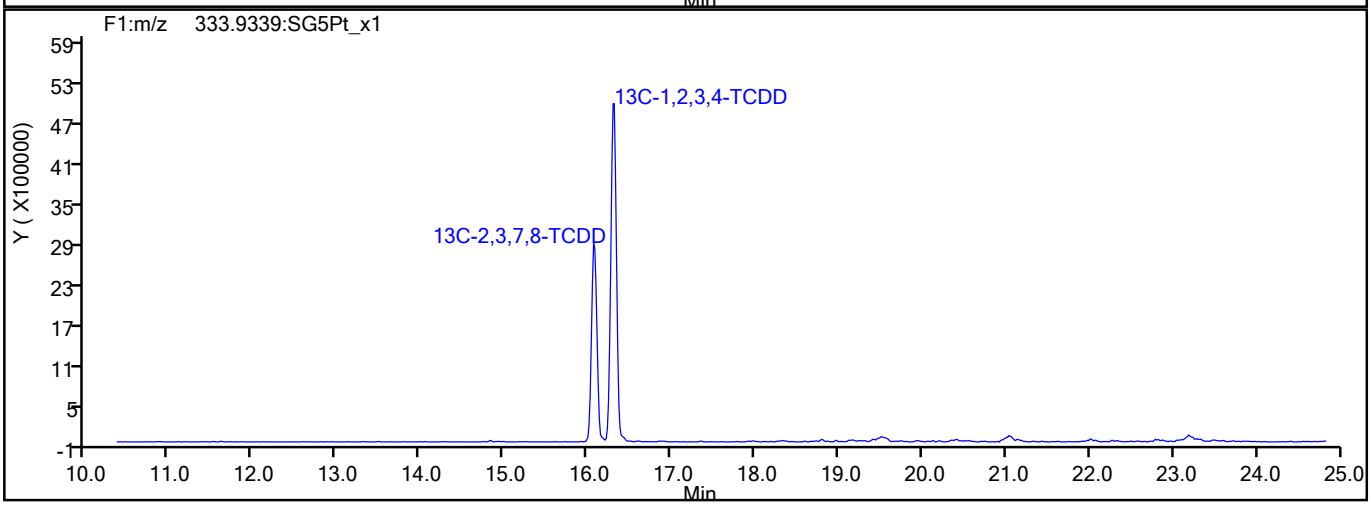

775860

Report Date: 24-Aug-2021 09:19:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_013.d		
Injection Date:	23-Aug-2021 23:14:49	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (8-10)		
Worklist#:	518979	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

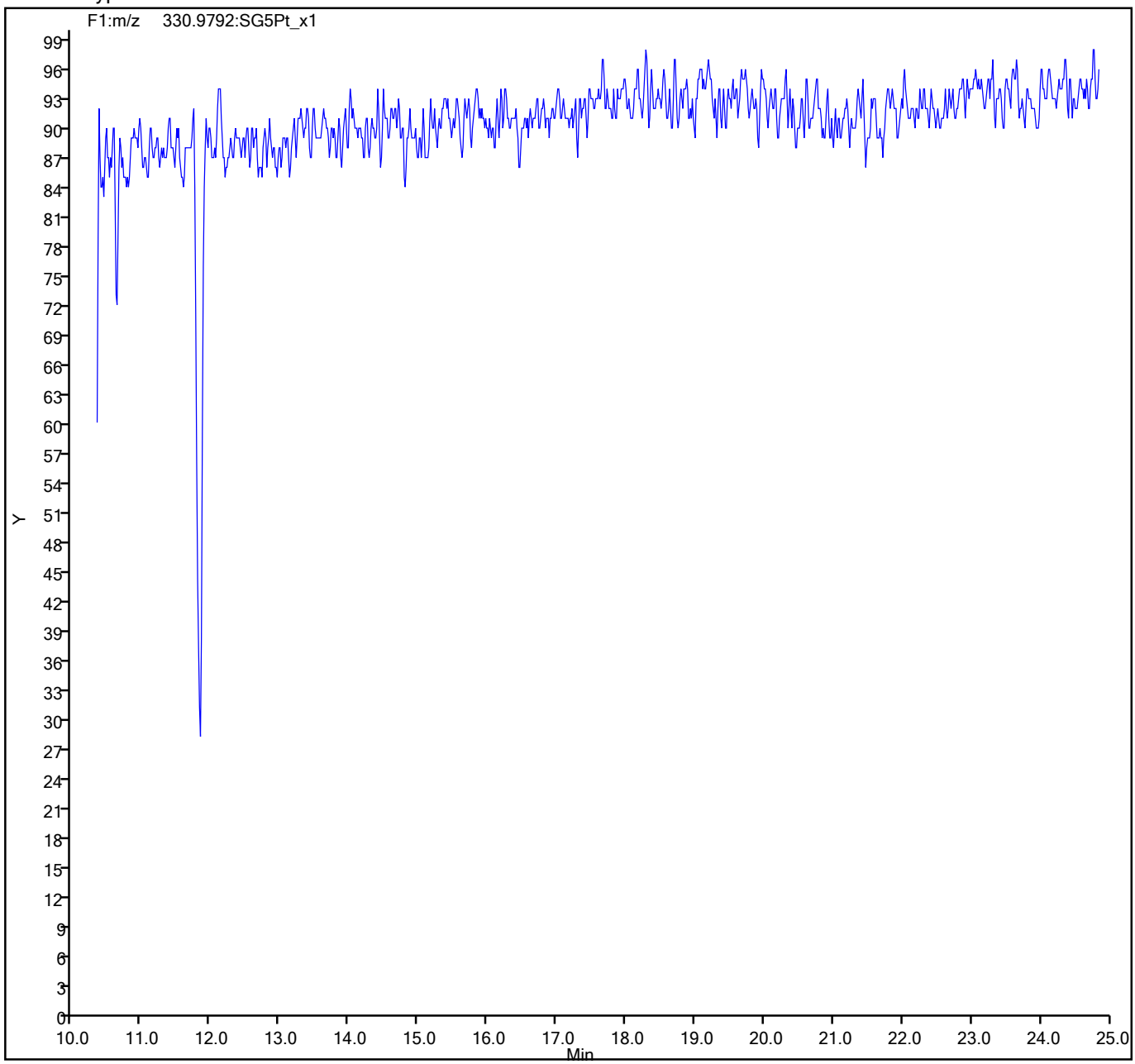

775861

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (10-12)
Lab Sample ID: 320-76769-32
Matrix: Sediment
Lab File ID: 17au21dfs1_14.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.57(g)
Date Analyzed: 08/18/2021 00:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517196
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	110		1.3	0.57
40321-76-4	1,2,3,7,8-PeCDD	0.98	J q	6.4	0.070
57117-41-6	1,2,3,7,8-PeCDF	14		6.4	0.17
57117-31-4	2,3,4,7,8-PeCDF	7.5		6.4	0.18
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.4	0.071
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.4	0.082
19408-74-3	1,2,3,7,8,9-HxCDD	0.29	J q	6.4	0.071
70648-26-9	1,2,3,4,7,8-HxCDF	19		6.4	0.090
57117-44-9	1,2,3,6,7,8-HxCDF	4.4	J	6.4	0.093
72918-21-9	1,2,3,7,8,9-HxCDF	0.35	J q	6.4	0.085
60851-34-5	2,3,4,6,7,8-HxCDF	0.59	J q	6.4	0.083
35822-46-9	1,2,3,4,6,7,8-HpCDD	8.9	B	6.4	0.11
67562-39-4	1,2,3,4,6,7,8-HpCDF	5.2	J	6.4	0.097
55673-89-7	1,2,3,4,7,8,9-HpCDF	1.8	J	6.4	0.092
3268-87-9	OCDD	200	B	13	0.28
39001-02-0	OCDF	2.7	J q	13	0.078
41903-57-5	Total TCDD	120	q	1.3	0.57
30402-14-3	Total TCDF	640	q	1.3	1.2
36088-22-9	Total PeCDD	0.98	J q	6.4	0.070
30402-15-4	Total PeCDF	32		6.4	0.17
34465-46-8	Total HxCDD	3.4	J q	6.4	0.075
55684-94-1	Total HxCDF	27	q	6.4	0.088
37871-00-4	Total HpCDD	24	B	6.4	0.11
38998-75-3	Total HpCDF	8.5	q	6.4	0.095

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (10-12)
Lab Sample ID: 320-76769-32
Matrix: Sediment
Lab File ID: 17au21dfs1_14.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.57(g)
Date Analyzed: 08/18/2021 00:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517196
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	56		25-164
89059-46-1	13C-2,3,7,8-TCDF	53		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	55		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	54		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	59		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	61		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	65		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	56		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	56		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	56		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	62		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	73		26-138
114423-97-1	13C-OCDD	71		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d
Lims ID: 320-76769-A-32-A
Client ID: 11215702-072221-SS-SJSB076 (10-12)
Sample Type: Client
Inject. Date: 18-Aug-2021 00:12:00 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-32-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:39:58 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 18-Aug-2021 08:33:29

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.449	979373	0.78	2.1E+04	100.0	100.0				a
2,3,7,8-TCDF	20.520	1087593	0.79	1.0802	143.3	143.3	0.4867	0.4867		
D 13C-2,3,7,8-TCDF	20.494	702608	0.77	1.3459	53.3	53.3	0.1451	0.1451	53.30	
A Non-2,3,7,8-sub-TCDF	19.916	824363	0.77	1.0802	109.0	108.6	0.4867	66.0		RQ
S Total TCDF					252.3	251.9	0.4867	0.4867		RQ
D 13C-2,3,7,8-TCDD	21.844	507095	0.80	0.9317	55.6	55.6	0.1685	0.1685	55.58	
2,3,7,8-TCDD	21.887	235981	0.75	1.0753	43.3	43.3	0.2233	0.2233		
$ 37Cl4-2,3,7,8-TCDD	21.887	284163		1.0083	28.8	28.8	0.0433	0.0433	71.94	
A Non-2,3,7,8-sub-TCDD	20.750	23652	0.77	1.0753	4.431	4.337	0.2233	3.741		RQ
S Total TCDD					47.7	47.6	0.2233	0.2233		RQ
D 13C-1,2,3,7,8-PeCDF	27.330	607837	1.58	1.1405	54.4	54.4	0.1121	0.1121	54.42	
1,2,3,7,8-PeCDF	27.346	33923	1.60	1.0543	5.294	5.294	0.0656	0.0656		
D 13C-2,3,4,7,8-PeCDF	28.845	646857	1.61	1.1253	58.7	58.7	0.1136	0.1136	58.69	
2,3,4,7,8-PeCDF	28.854	19056	1.51	1.0079	2.923	2.923	0.0694	0.0694		
A F1 PeCDFs	24.676						0.007615	0.0417		U
A Non-2,3,7,8-sub-PeCDF	28.167	27018	1.55	1.0311	4.177	4.177	0.0674	1.790		
S Total PeCDF					12.4	12.4	0.0675	0.0675		
D 13C-1,2,3,7,8-PeCDD	29.654	383043	1.59	0.7165	54.6	54.6	0.0663	0.0663	54.59	
1,2,3,7,8-PeCDD	29.696	1536	1.55	1.0465	0.4306	0.3832	0.0273	0.0273		RQM
A Non-2,3,7,8-sub-PeCDD	28.556						0.0273	0.0481		RQU
S Total PeCDD					0.4306	0.3832	0.0273	0.0273		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.961	601997	0.53	0.9648	65.4	65.4	0.2003	0.2003	65.39	
1,2,3,4,7,8-HxCDF	34.986	50629	1.28	1.1474	7.330	7.330	0.0353	0.0353		
D 13C-1,2,3,6,7,8-HxCDF	35.130	575896	0.55	1.0708	56.4	56.4	0.1805	0.1805	56.37	
1,2,3,6,7,8-HxCDF	35.146	12164	1.14	1.2178	1.734	1.734	0.0363	0.0363		
D 13C-2,3,4,6,7,8-HxCDF	35.946	552098	0.55	1.0413	55.6	55.6	0.1856	0.1856	55.57	
2,3,4,6,7,8-HxCDF	35.955	1535	1.24	1.2145	0.2622	0.2289	0.0324	0.0324		RQ
D 13C-1,2,3,7,8,9-HxCDF	36.839	515678	0.54	0.9731	55.5	55.5	0.1986	0.1986	55.54	
1,2,3,7,8,9-HxCDF	36.856	863	1.24	1.2401	0.1496	0.1349	0.0334	0.0334		RQ
A Non-2,3,7,8-sub-HxCDF	35.074	8625	1.24	1.2049	1.342	1.275	0.0343	0.5128		RQ
S Total HxCDF					10.8	10.7	0.0344	0.0344		RQ

Report Date: 19-Aug-2021 12:39:58 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.637	954134	1.25	1.8E+04	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	36.165	443663	1.29	0.7587	61.3	61.3	0.1381	0.1381	61.29	
1,2,3,4,7,8-HxCDD	36.300						0.0279	0.0279		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.275	445734	1.24	0.8593	54.4	54.4	0.1219	0.1219	54.37	
1,2,3,6,7,8-HxCDD	36.300						0.0322	0.0322		RQU
1,2,3,7,8,9-HxCDD	36.654	558	1.24	1.1094	0.1403	0.1131	0.0277	0.0277		RQM
A Non-2,3,7,8-sub-HxCDD	35.432	5706	1.16	1.0545	1.217	1.217	0.0292	0.6325		M
S Total HxCDD					1.357	1.330	0.0293	0.0293		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.654	421559	0.45	0.7359	60.0	60.0	0.2183	0.2183	60.03	
1,2,3,4,6,7,8-HpCDF	38.662	12253	1.12	1.4421	2.016	2.016	0.0380	0.0380		
1,2,3,4,7,8,9-HpCDF	39.917	4304	1.11	1.3092	0.6926	0.6926	0.0360	0.0360		
D 13C-1,2,3,4,7,8,9-HpCDF	39.900	474700	0.43	0.6854	72.6	72.6	0.2344	0.2344	72.59	
A Non-2,3,7,8-sub-HpCDF	39.277	3676	1.04	1.3756	0.7384	0.5963	0.0368	0.5963		RQM
S Total HpCDF					3.447	3.304	0.0370	0.0370		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	39.597	396205	1.05	0.6745	61.6	61.6	0.1519	0.1519	61.56	
1,2,3,4,6,7,8-HpCDD	39.605	14434	1.17	1.0503	3.469	3.469	0.0426	0.0426		
A Non-2,3,7,8-sub-HpCDD	39.277	24941	0.99	1.0503	5.993	5.993	0.0426	5.993		
S Total HpCDD					9.462	9.462	0.0426	0.0426		
D 13C-OCDD	42.094	738844	0.87	0.5446	142.2	142.2	0.1556	0.1556	71.09	
OCDF	42.195	5111	0.89	1.3168	1.178	1.051	0.0303	0.0303		RQM
OCDD	42.103	313471	0.90	1.0620	79.9	79.9	0.1097	0.1097		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d
Lims ID: 320-76769-A-32-A
Client ID: 11215702-072221-SS-SJSB076 (10-12)
Sample Type: Client
Inject. Date: 18-Aug-2021 00:12:00 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-32-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:39:58 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 18-Aug-2021 08:33:29

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.449	21.483	-2		429414	55198	55	137	1004		a
333.9338	21.458	21.483	-2		549959	75415	27	67	2793	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.520	20.482	2	1.001	478709	60709	98	245	619		
305.8987	20.528	20.482	3	1.002	608884	81465	109	272	747	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.494	20.594	-6	0.955	306495	42975	64	160	671		
317.9389	20.494	20.594	-6	0.955	396113	55364	38	95	1457	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	17.999	19.916	-115	0.878	7583	1210	98	245	12		
305.8987	17.973	19.916	-116	0.877	10217	1752	109	272	16	0.74(0.65-0.89)	
303.9016	18.472	19.916	-86	0.901	11073	1662	98	245	17		
305.8987	18.498	19.916	-85	0.903	17562	2542	109	272	23	0.63(0.65-0.89)	
	Empc Correction				14380	2158	109	272	20		
303.9016	18.894	19.916	-61	0.922	14382	1874	98	245	19		
305.8987	18.885	19.916	-62	0.921	17765	2231	109	272	20	0.81(0.65-0.89)	
303.9016	19.307	19.916	-36	0.942	24180	3469	98	245	35		
305.8987	19.290	19.916	-37	0.941	29635	4399	109	272	40	0.82(0.65-0.89)	
303.9016	19.806	19.916	-7	0.966	221535	33314	98	245	340		
305.8987	19.797	19.916	-7	0.966	279445	43086	109	272	395	0.79(0.65-0.89)	
303.9016	20.184	19.916	16	0.985	6355	1033	98	245	11		
305.8987	20.193	19.916	17	0.985	8980	1188	109	272	11	0.71(0.65-0.89)	
303.9016	21.320	19.916	84	1.040	34141	4701	98	245	48		
305.8987	21.311	19.916	84	1.040	43838	6068	109	272	56	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.707	19.916	107	1.059	6179	976	98	245	10		
305.8987	21.750	19.916	110	1.061	8485	1360	109	272	12	0.73(0.65-0.89)	
303.9016	23.685	19.916	226	1.156	36295	6970	98	245	71		
305.8987	23.685	19.916	226	1.156	49895	8659	109	272	79	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.844	21.790	3	1.018	225492	32384	55	137	589		
333.9338	21.862	21.790	4	1.019	281603	37170	27	67	1377	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.887	21.825	4	1.002	101130	12973	15	37	865		
321.8936	21.870	21.825	3	1.001	134851	16335	52	130	314	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.887	21.905	-1	1.020	284163	35292	23	57	1534		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	19.754	20.750	-60	0.904	1415	286	15	37	19		
321.8936	19.763	20.750	-59	0.905	2348	396	52	130	8	0.60(0.65-0.89)	
	Empc Correction				1837	371	52	130	7		
319.8965	22.576	20.750	109	1.033	8810	1261	15	37	84		
321.8936	22.558	20.750	108	1.033	11590	1479	52	130	28	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.330	27.343	-1	1.274	371842	54115	46	115	1176		
353.8970	27.321	27.343	-1	1.274	235995	35543	21	52	1693	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.346	27.368	-1	1.001	20874	3363	14	35	240		
341.8567	27.338	27.368	-2	1.000	13049	2090	11	27	190	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.845	28.867	-1	1.345	398981	56009	46	115	1218		
353.8970	28.845	28.867	-1	1.345	247876	32637	21	52	1554	1.61(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.854	28.884	-2	1.000	11458	1614	14	35	115		
341.8567	28.871	28.884	-1	1.001	7598	1140	11	27	104	1.51(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.090	24.676	-35	0.881	160	79	2	5	40		
341.8567	24.133	24.676	-33	0.883	110	34	1	2	34	1.45(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	25.873	28.167	-137	0.947	6982	1184	14	35	85		
341.8567	25.857	28.167	-138	0.946	4594	704	11	27	64	1.52(1.32-1.78)	
339.8597	27.212	28.167	-57	0.996	1171	308	14	35	22		
341.8567	27.220	28.167	-57	0.996	742	216	11	27	20	1.58(1.32-1.78)	
339.8597	27.927	28.167	-14	1.022	5357	1021	14	35	73		
341.8567	27.927	28.167	-14	1.022	3342	541	11	27	49	1.60(1.32-1.78)	
339.8597	29.207	28.167	62	1.069	2913	440	14	35	31		
341.8567	29.191	28.167	61	1.068	1917	384	11	27	35	1.52(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.654	29.667	-1	1.383	234961	31413	18	45	1745		
369.8919	29.645	29.667	-1	1.382	148082	21114	7	17	3016	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											RQM
355.8546	29.696	29.692	0	1.001	934	201	4	10	50		M
357.8516	29.687	29.692	0	1.001	792	199	2	5	100	1.18(1.32-1.78)	
	Empc Correction				602	129	2	5	65		
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.151	28.556	-144	0.882	123	46	4	10	12		
357.8516	26.092	28.556	-148	0.880	70	41	2	5	21	1.76(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.961	34.974	-1	0.954	208170	39122	73	182	536		
385.8610	34.970	34.974	0	0.954	393827	76974	93	232	828	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.986	35.000	-1	1.001	28431	5515	10	25	552		
375.8178	34.995	35.000	0	1.001	22198	4381	9	22	487	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.130	35.134	0	0.959	204053	38245	73	182	524		
385.8610	35.121	35.134	-1	0.959	371843	68009	93	232	731	0.55(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.146	35.151	0	1.000	6470	1233	10	25	123		
375.8178	35.146	35.151	0	1.000	5694	1090	9	22	121	1.14(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.946	35.951	0	0.981	196113	41262	73	182	565		
385.8610	35.946	35.951	0	0.981	355985	78045	93	232	839	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQ
373.8208	35.955	35.968	-1	1.000	850	205	10	25	21		
375.8178	35.955	35.968	-1	1.000	908	242	9	22	27	0.94(1.05-1.43)	
	Empc Correction				685	165	9	22	18		
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.839	36.843	0	1.006	179839	38881	73	182	533		
385.8610	36.839	36.843	0	1.006	335839	74651	93	232	803	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQ
373.8208	36.856	36.852	0	1.000	478	116	10	25	12		
375.8178	36.830	36.852	-1	1.000	479	127	9	22	14	1.00(1.05-1.43)	
	Empc Correction				385	93	9	22	10		
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	33.479	35.074	-96	0.958	1462	257	10	25	26		
375.8178	33.496	35.074	-95	0.958	1280	200	9	22	22	1.14(1.05-1.43)	
373.8208	34.346	35.074	-44	0.982	831	181	10	25	18		
375.8178	34.363	35.074	-43	0.983	816	206	9	22	23	1.02(1.05-1.43)	
	Empc Correction				670	145	9	22	16		
373.8208	35.845	35.074	46	1.025	810	201	10	25	20		
	Empc Correction				505	172	10	25	17		
375.8178	35.837	35.074	46	1.025	408	139	9	22	15	1.99(1.05-1.43)	
373.8208	36.957	35.074	113	1.057	1877	420	10	25	42		
375.8178	36.957	35.074	113	1.057	1592	460	9	22	51	1.18(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	36.637	36.641	0		530231	119515	48	120	2490		a
403.8529	36.637	36.641	0		423903	95219	42	105	2267	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.165	36.161	0	0.987	249603	57435	48	120	1197		
403.8529	36.165	36.161	0	0.987	194060	43854	42	105	1044	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.178						6	15			
391.8127	36.178						6	15			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.275	36.279	0	0.990	246404	53220	48	120	1109		
403.8529	36.266	36.279	-1	0.990	199330	40613	42	105	967	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8158	36.296						6	15			
391.8127	36.296						6	15			
1,2,3,7,8,9-HxCDD											RQM
389.8158	36.654	36.658	0	1.014	309	105	6	15	18		M
391.8127	36.654	36.658	0	1.014	383	72	6	15	12	0.81(1.05-1.43)	M
	Empc Correction				249	84	6	15	14		
A Non-2,3,7,8-sub-HxCDD											M
389.8158	34.287	35.432	-69	0.945	1637	285	6	15	48		
391.8127	34.254	35.432	-71	0.944	1329	288	6	15	48	1.23(1.05-1.43)	
389.8158	35.399	35.432	-2	0.976	848	196	6	15	33		
391.8127	35.407	35.432	-1	0.976	788	169	6	15	28	1.08(1.05-1.43)	
389.8158	35.593	35.432	10	0.981	579	176	6	15	29		M
391.8127	35.567	35.432	8	0.981	525	111	6	15	19	1.10(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.654	38.647	0	1.055	131642	35192	49	122	718		
419.8220	38.654	38.647	0	1.055	289917	74424	89	222	836	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.662	38.654	0	1.000	6461	1829	16	40	114		
409.7788	38.662	38.654	0	1.000	5792	1564	8	20	196	1.12(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.917	39.900	1	1.000	2269	595	16	40	37		
409.7788	39.900	39.900	0	1.000	2035	605	8	20	76	1.11(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.900	39.901	0	1.089	143446	37399	49	122	763		
419.8220	39.900	39.901	0	1.089	331254	89890	89	222	1010	0.43(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											RQM
407.7817	39.024	39.277	-15	1.010	2750	688	16	40	43		M
	Empc Correction				1874	445	16	40	28		
409.7788	39.024	39.277	-15	1.010	1802	428	8	20	54	1.53(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.597	39.590	0	1.081	202620	52313	41	102	1276		
437.8140	39.588	39.590	0	1.081	193585	48192	47	117	1025	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.605	39.597	1	1.000	7785	2102	12	30	175		
425.7737	39.605	39.597	1	1.000	6649	1869	6	15	312	1.17(0.88-1.20)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.965	39.277	-19	0.984	12429	3684	12	30	307		
425.7737	38.965	39.277	-19	0.984	12512	3268	6	15	545	0.99(0.88-1.20)	
13C-OCDD											
469.7780	42.094	42.094	0	1.149	343163	81548	37	92	2204		
471.7750	42.094	42.094	0	1.149	395681	93631	36	90	2601	0.87(0.76-1.02)	
OCDF											RQM
441.7428	42.195	42.187	0	1.002	2407	585	3	7	195		M
443.7399	42.178	42.187	-1	1.002	3321	799	11	27	73	0.72(0.76-1.02)	
	Empc Correction				2704	657	11	27	60		
OCDD											
457.7377	42.103	42.103	0	1.000	148100	36616	21	52	1744		
459.7348	42.103	42.103	0	1.000	165371	40065	20	50	2003	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Lims ID:	320-76769-A-32-A		
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Inject. Date:	18-Aug-2021 00:12:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	13

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	702608	98339

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	702608	98339

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.999	7583	1210	10217	1752	2.35	0.74	
18.472	11073	1662	17562	2542	3.77	0.63	RQ
18.472	11073	1662	14380	2158	3.35		Empc Correction
18.894	14382	1874	17765	2231	4.24	0.81	
19.307	24180	3469	29635	4399	7.09	0.82	
19.806	221535	33314	279445	43086	66.0	0.79	
20.184	6355	1033	8980	1188	2.02	0.71	
21.320	34141	4701	43838	6068	10.3	0.78	
21.707	6179	976	8485	1360	1.93	0.73	
23.685	36295	6970	49895	8659	11.4	0.73	
Signal Totals:							
	361723	55209	462640	70901			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	827545	126494				0.78	RQ
	824363	126110					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 109.038 = (827545 * 100.000) / (702608 * 1.080)

Empc Amount: 108.619 = (824363 * 100.000) / (702608 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Lims ID:	320-76769-A-32-A		
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Inject. Date:	18-Aug-2021 00:12:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	13

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	507095	69554

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	507095	69554

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.754	1415	286	2348	396	0.6901	0.60	RQ
19.754	1415	286	1837	371	0.5964		Empc Correction
22.576	8810	1261	11590	1479	3.74	0.76	
Signal Totals:							
	10225	1547	13427	1850			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	24163	3422				0.73	RQ
	23652	3397					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.431 = (24163 * 100.000) / (507095 * 1.075)

Empc Amount: 4.337 = (23652 * 100.000) / (507095 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Lims ID:	320-76769-A-32-A		
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Inject. Date:	18-Aug-2021 00:12:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	13

F1 PeCDFs, RT: 24.676

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	607837	89658
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	646857	88646

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	627347	89152

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.090	160	79	110	34	0.0417	1.45	
24.184	34	18	23	11	0.008812	1.48	

Compound is Marked ND

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Lims ID:	320-76769-A-32-A		
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Inject. Date:	18-Aug-2021 00:12:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	13

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	607837	89658
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	646857	88646

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	627347	89152

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.873	6982	1184	4594	704	1.79	1.52	
27.212	1171	308	742	216	0.2957	1.58	
27.927	5357	1021	3342	541	1.34	1.60	
29.207	2913	440	1917	384	0.7467	1.52	
Signal Totals:							
	16423	2953	10595	1845			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	27018	4798				1.55	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.177 = (27018 * 100.000) / (627347 * 1.031)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Lims ID:	320-76769-A-32-A		
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Inject. Date:	18-Aug-2021 00:12:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	13

Non-2,3,7,8-sub-PeCDD, RT: 28.556

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	383043	52527

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	383043	52527

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.151	123	46	70	41	0.0481	1.76	
26.976	179	53	66	23	0.0611	2.71	RQ
26.976	102	35	66	23	0.0419		Empc Correction
27.414	333	46	33	22	0.0913	10.09	RQ
27.414	51	34	33	22	0.0210		Empc Correction

Compound is Marked ND

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Lims ID:	320-76769-A-32-A		
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Inject. Date:	18-Aug-2021 00:12:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	13

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	601997	116096
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	575896	106254
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	552098	119307
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	515678	113532

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	561417	113797

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.479	1462	257	1280	200	0.4053	1.14	
34.346	831	181	816	206	0.2435	1.02	RQ
34.346	831	181	670	145	0.2219		Empc Correction
35.845	810	201	408	139	0.1801	1.99	RQ
35.845	505	172	408	139	0.1350		Empc Correction
36.957	1877	420	1592	460	0.5128	1.18	
Signal Totals:							
	4675	1030	3950	944			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9076	2064				1.22	RQ
	8625	1974					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.342 = (9076 * 100.000) / (561417 * 1.205)

Empc Amount: 1.275 = (8625 * 100.000) / (561417 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Lims ID:	320-76769-A-32-A		
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Inject. Date:	18-Aug-2021 00:12:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	13

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	443663	101289
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	445734	93833
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	444698	97561

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.287	1637	285	1329	288	0.6325	1.23	
35.399	848	196	788	169	0.3489	1.08	
35.593	579	176	525	111	0.2354	1.10	M
Signal Totals:							
	3064	657	2642	568			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5706	1225				1.16	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.217 = (5706 * 100.000) / (444698 * 1.055)

QC Flag Legend

Review Flags

M - Manually Integrated

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Lims ID:	320-76769-A-32-A		
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Inject. Date:	18-Aug-2021 00:12:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	13

Non-2,3,7,8-sub-HpCDF, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	421559	109616
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	474700	127289

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	448129	118452

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
39.024	2750	688	1802	428	0.7384	1.53	RQM
39.024	1874	445	1802	428	0.5963		Empc Correction
Signal Totals:							
	1874	445	1802	428			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4552	1116				1.53	RQM
	3676	873					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7384 = (4552 * 100.000) / (448129 * 1.376)
Empc Amount: 0.5963 = (3676 * 100.000) / (448129 * 1.376)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 12:39:58 Chrom Revision: 2.3 13-May-2021 07:57:40

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Lims ID:	320-76769-A-32-A		
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Inject. Date:	18-Aug-2021 00:12:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	13

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	396205	100505

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	396205	100505

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.965	12429	3684	12512	3268	5.99	0.99	
Signal Totals:							
	12429	3684	12512	3268			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	24941	6952				0.99	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 5.993 = (24941 * 100.000) / (396205 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d				
Injection Date:	18-Aug-2021 00:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-32-A	Lab Sample ID:	320-76769-32		
Client ID:	11215702-072221-SS-SJSB076 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

RT: 29.70
Area: 469
Amount: 0.314579
Amount Units: pg/ul

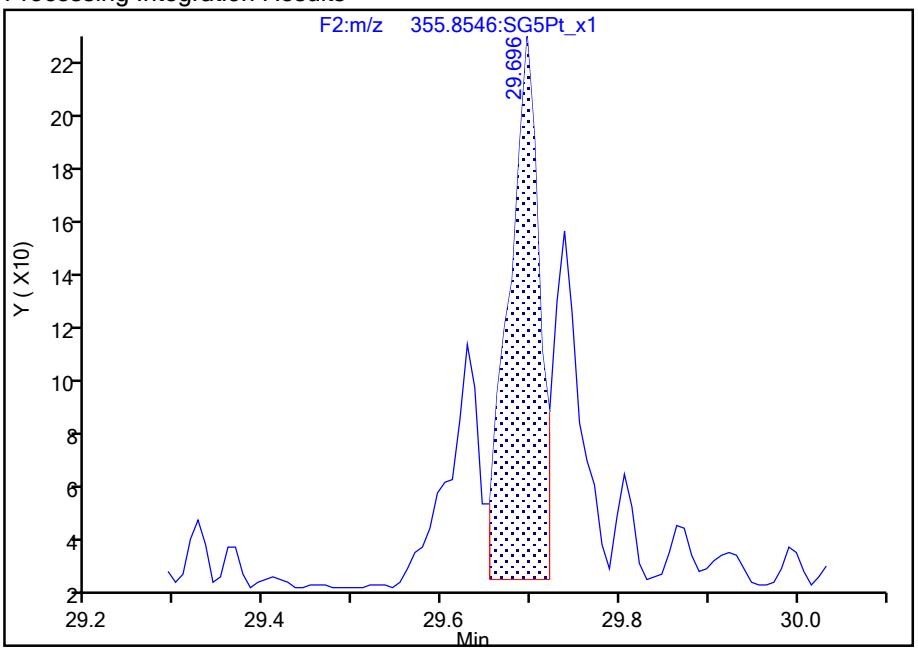

Manual Integration Results

RT: 29.70
Area: 934
Amount: 0.430581
Amount Units: pg/ul

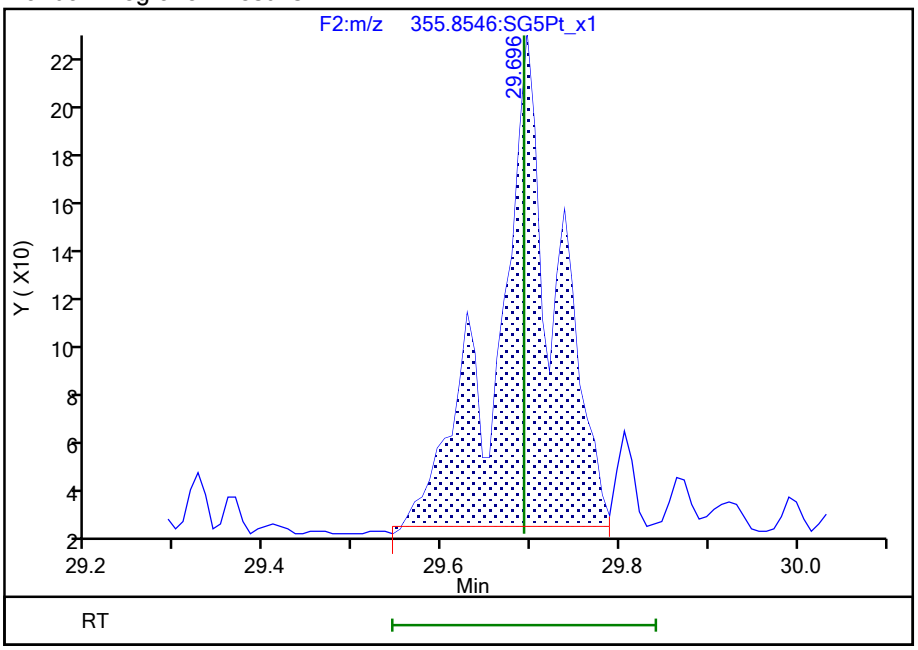

Reviewer: dadunj, 19-Aug-2021 12:37:59

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d				
Injection Date:	18-Aug-2021 00:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-32-A	Lab Sample ID:	320-76769-32		
Client ID:	11215702-072221-SS-SJSB076 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 36.65
Area: 489
Amount: 0.169856
Amount Units: pg/ul

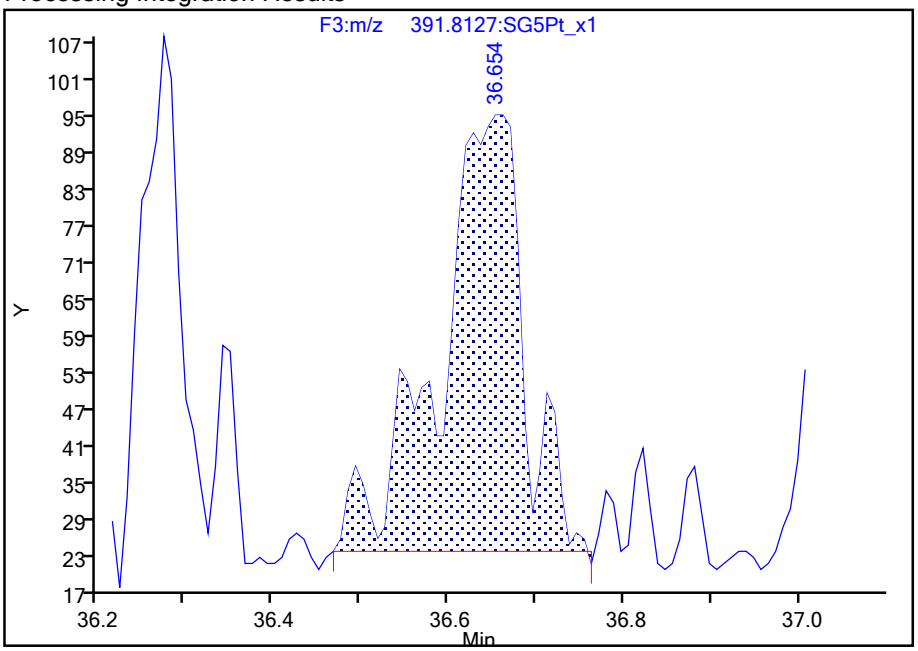

Manual Integration Results

RT: 36.65
Area: 383
Amount: 0.140263
Amount Units: pg/ul

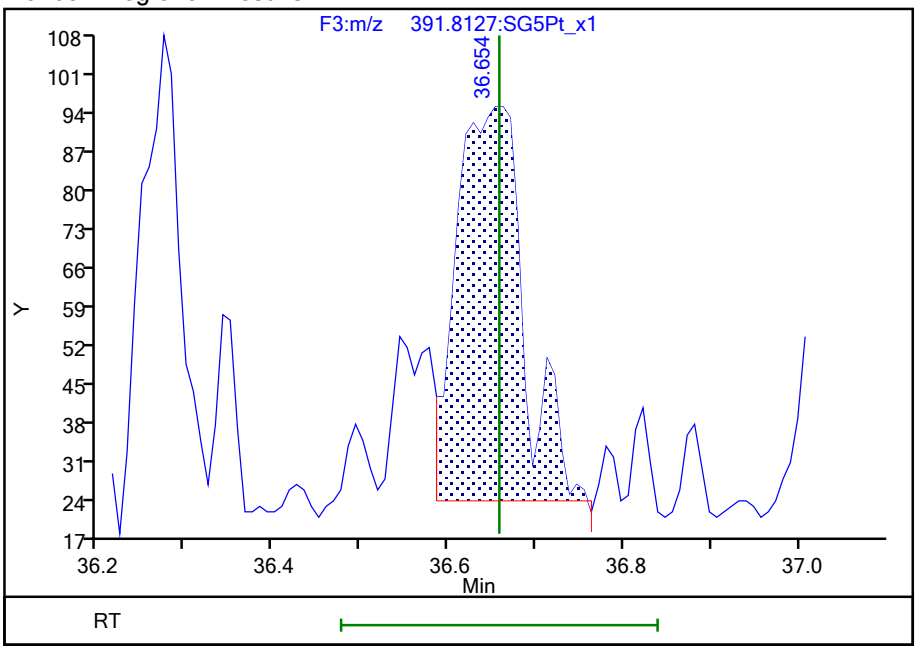

Reviewer: dadunj, 19-Aug-2021 12:38:41

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d				
Injection Date:	18-Aug-2021 00:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-32-A	Lab Sample ID:	320-76769-32		
Client ID:	11215702-072221-SS-SJSB076 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 36.65
Area: 349
Amount: 0.169856
Amount Units: pg/ul

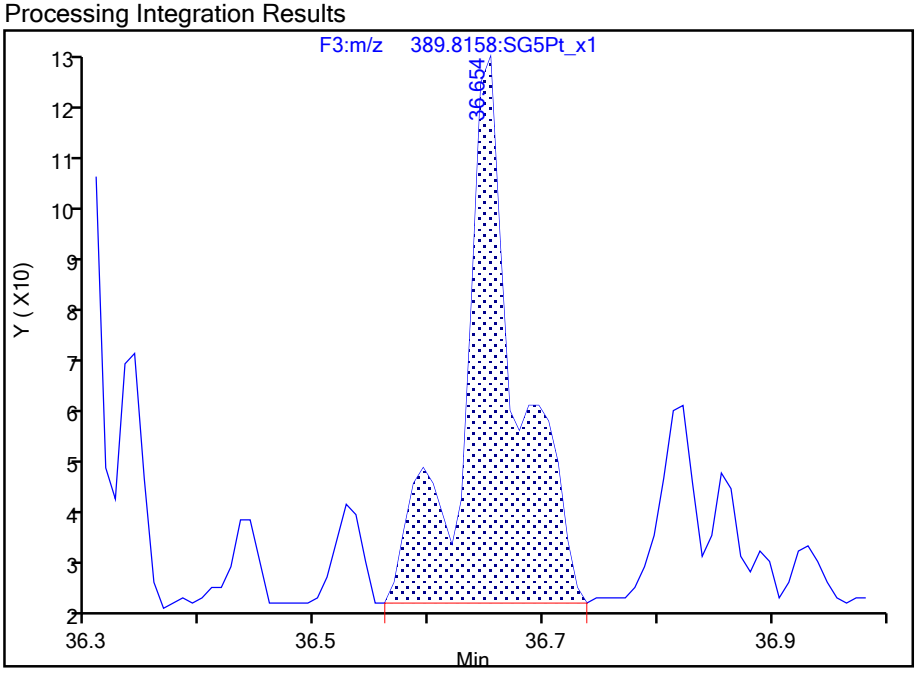

Manual Integration Results

RT: 36.65
Area: 309
Amount: 0.140263
Amount Units: pg/ul

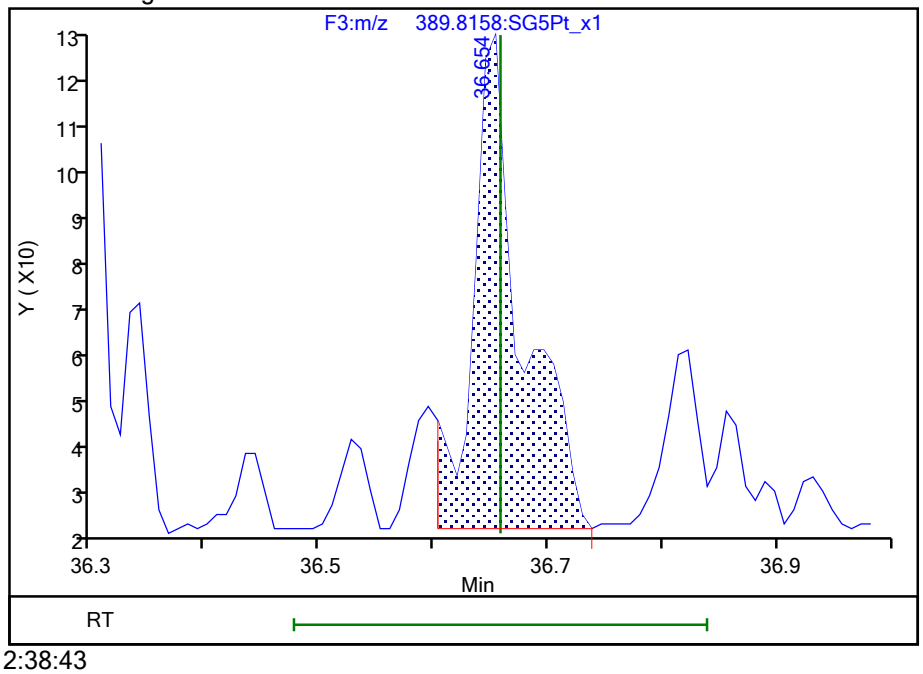

Reviewer: dadunj, 19-Aug-2021 12:38:43

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d				
Injection Date:	18-Aug-2021 00:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-32-A	Lab Sample ID:	320-76769-32		
Client ID:	11215702-072221-SS-SJSB076 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.24- 36.62)

Signal: 1

Processing Integration Results

RT = 35.593 Area = 686

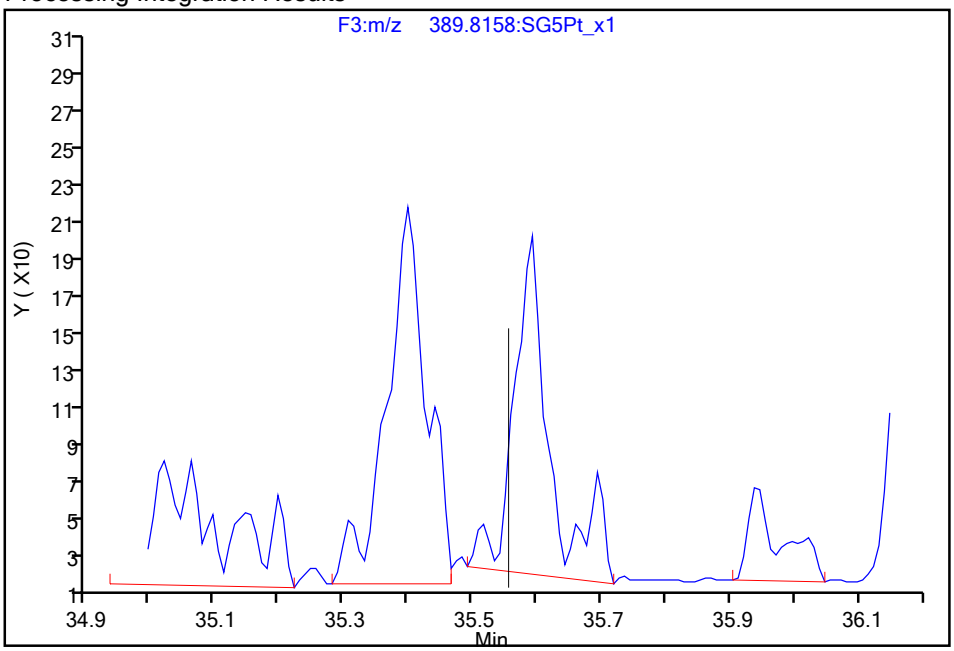

Manual Integration Results

RT = 35.593 Area = 579 M

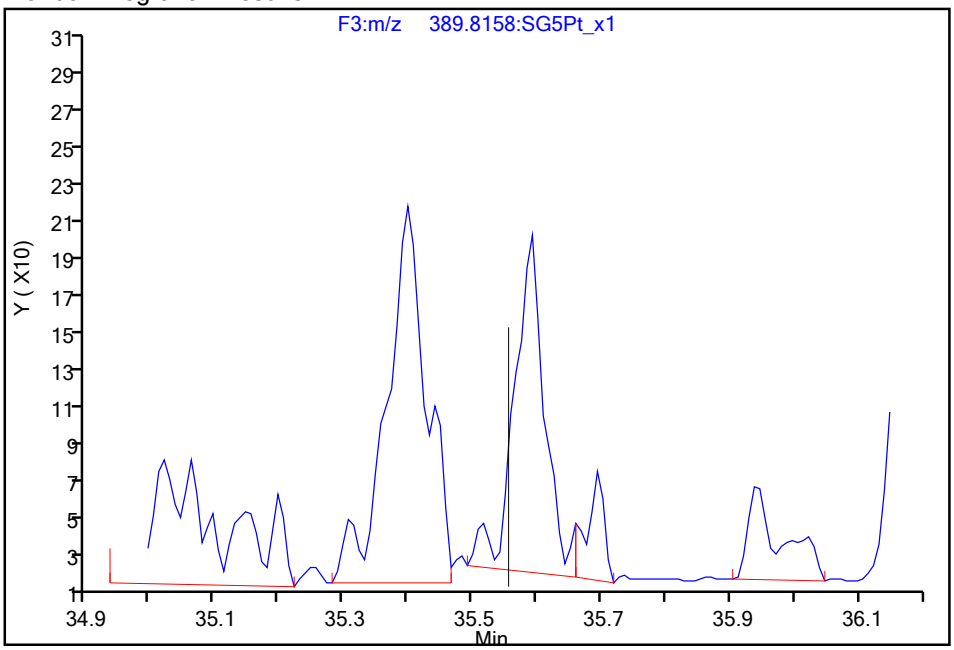

Reviewer: dadunj, 19-Aug-2021 12:38:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 19-Aug-2021 12:39:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d				
Injection Date:	18-Aug-2021 00:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-32-A	Lab Sample ID:	320-76769-32		
Client ID:	11215702-072221-SS-SJSB076 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7817, RT: (38.62- 39.93)

Signal: 1

Processing Integration Results

RT = 39.024 Area = 3013

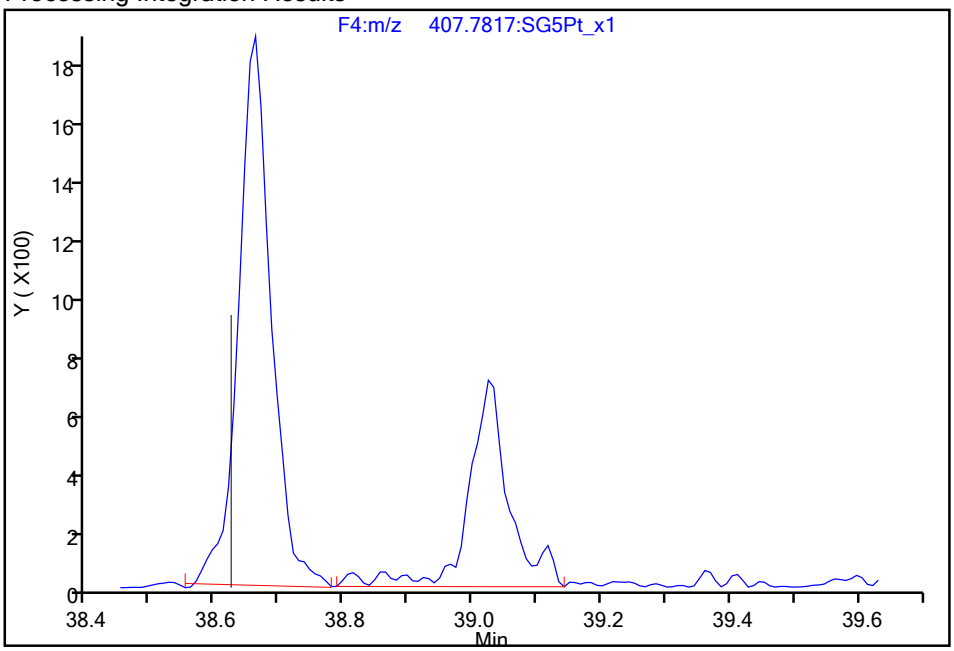

Manual Integration Results

RT = 39.024 Area = 2750 M

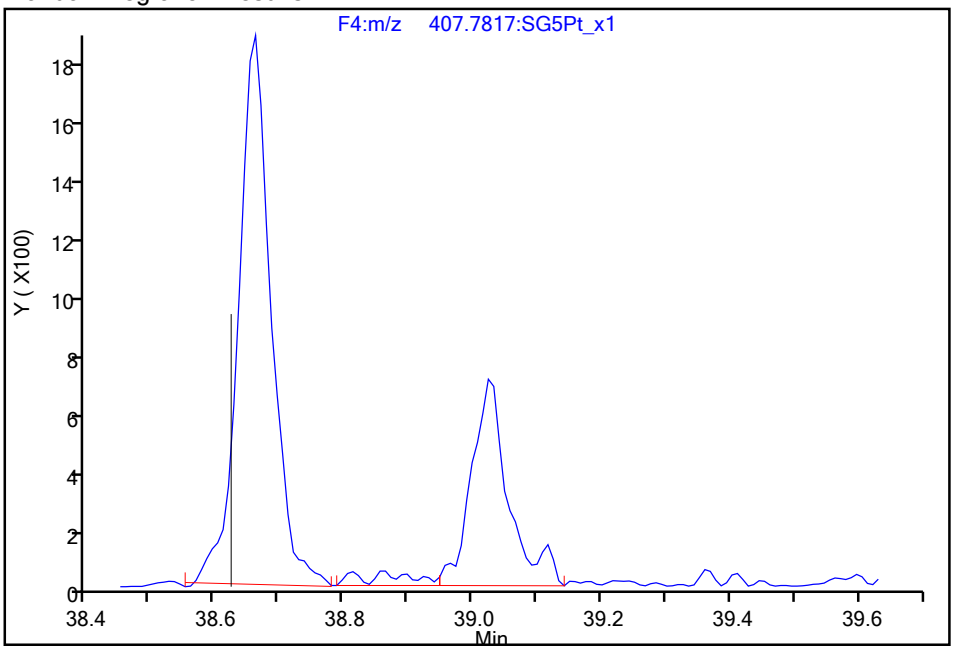

Reviewer: dadunj, 19-Aug-2021 12:39:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d				
Injection Date:	18-Aug-2021 00:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-32-A	Lab Sample ID:	320-76769-32		
Client ID:	11215702-072221-SS-SJSB076 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 42.20
Area: 2589
Amount: 1.214916
Amount Units: pg/ul

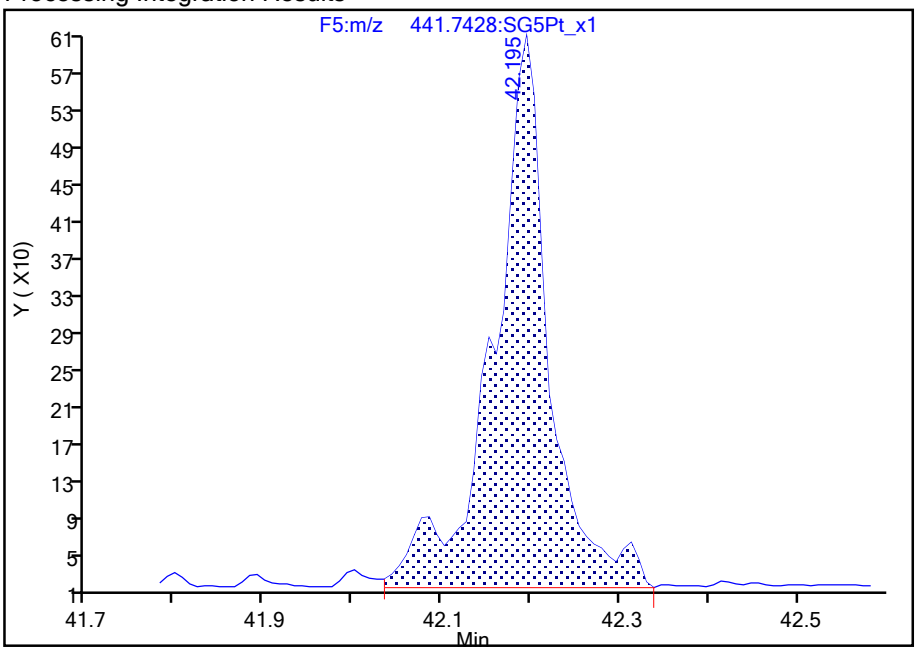

Manual Integration Results

RT: 42.20
Area: 2407
Amount: 1.177502
Amount Units: pg/ul

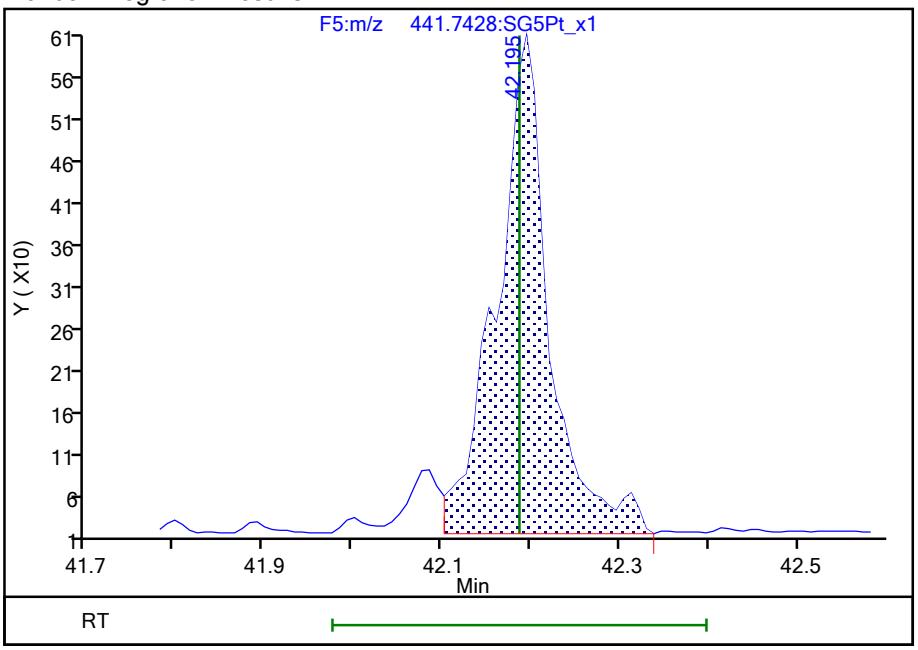

Reviewer: dadunj, 19-Aug-2021 12:39:14

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Injection Date:	18-Aug-2021 00:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	517196	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

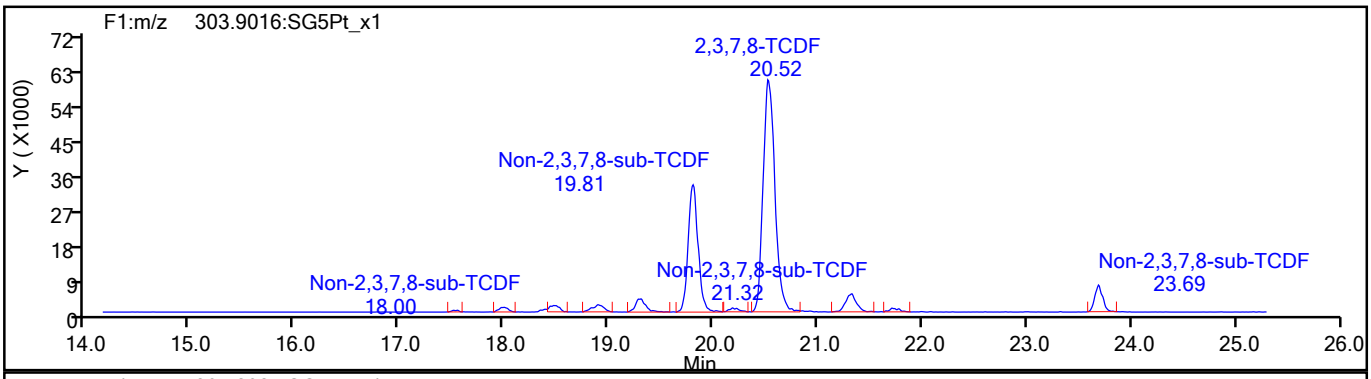

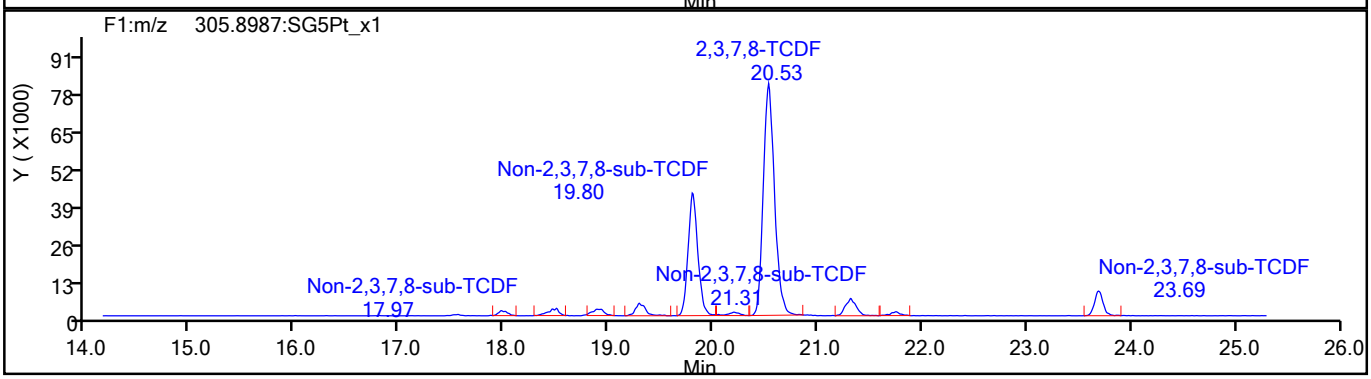

TCDF Standards

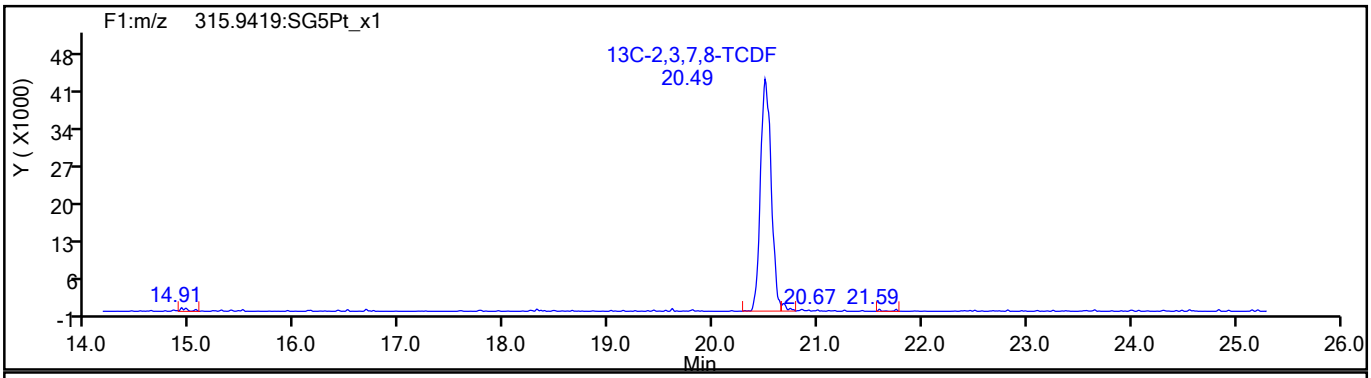

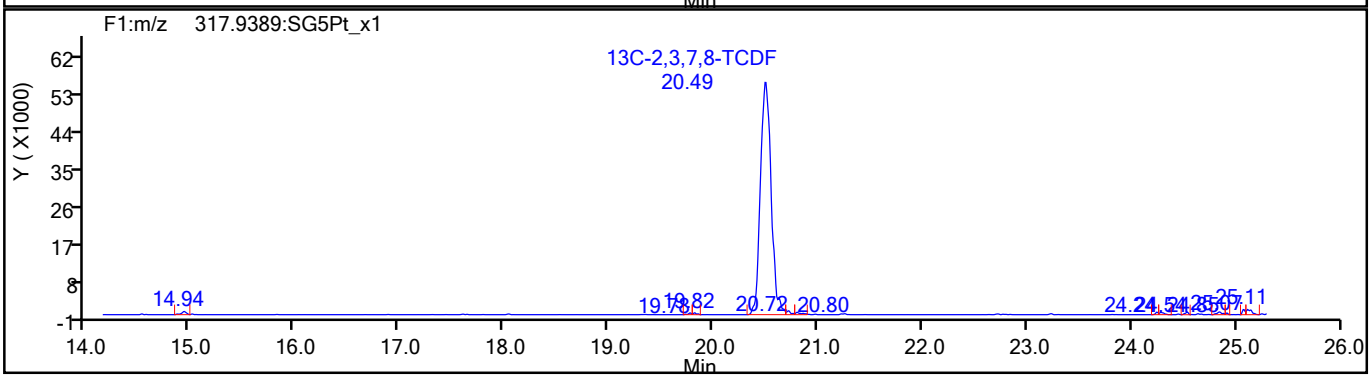

775888

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Injection Date:	18-Aug-2021 00:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	517196	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

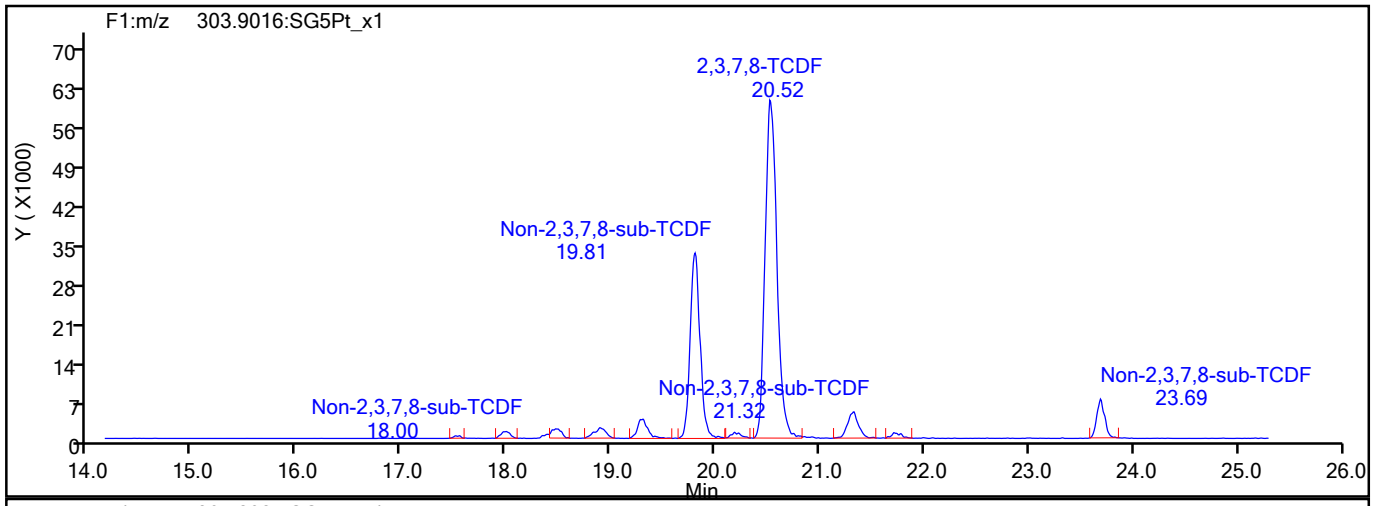

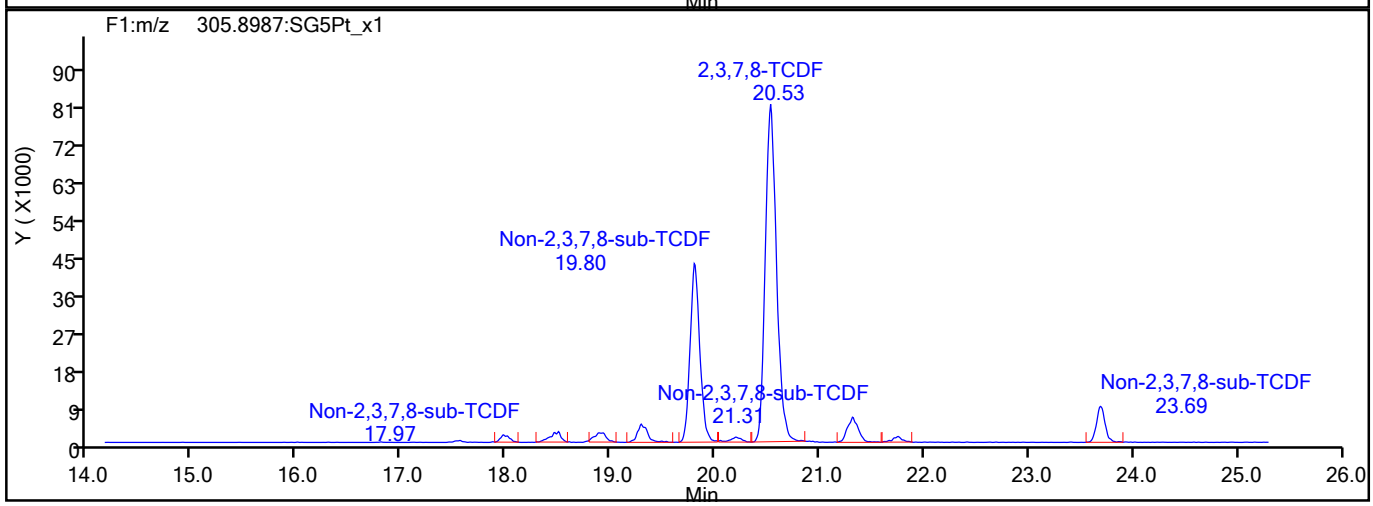

TCDF Interference Mass

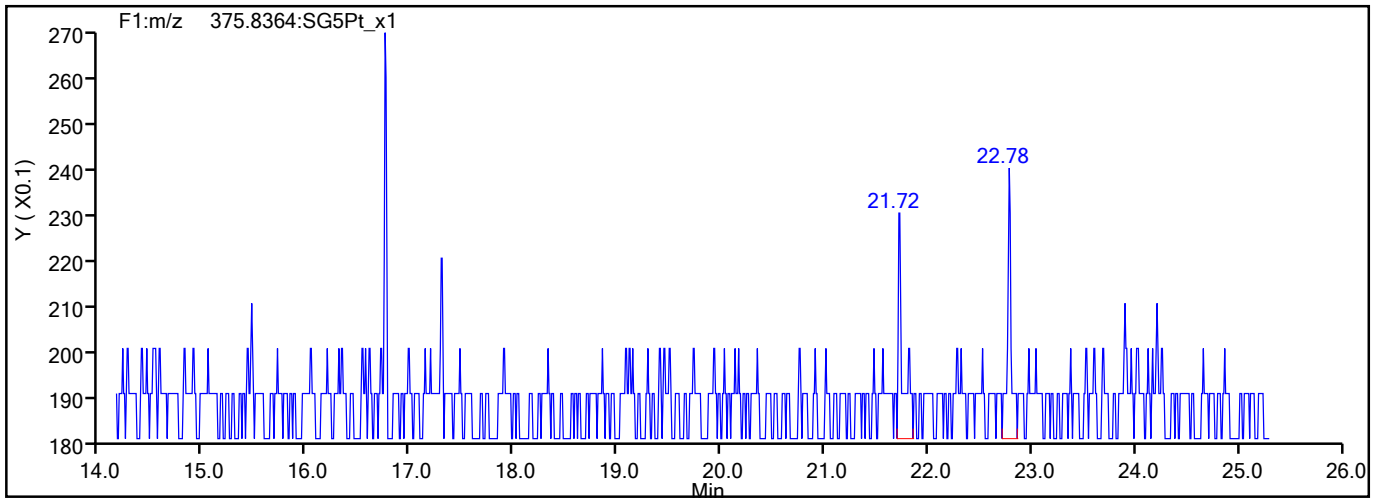

775889

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Injection Date:	18-Aug-2021 00:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	517196	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

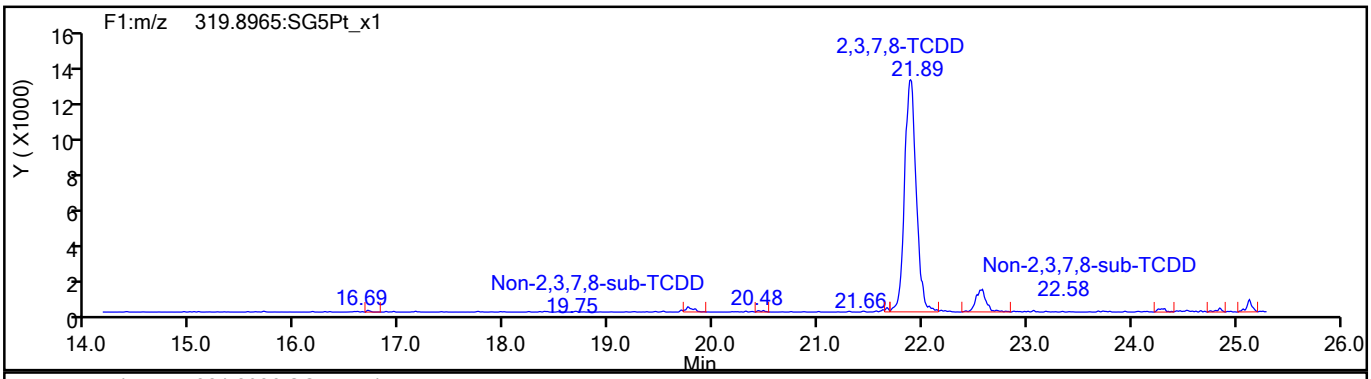

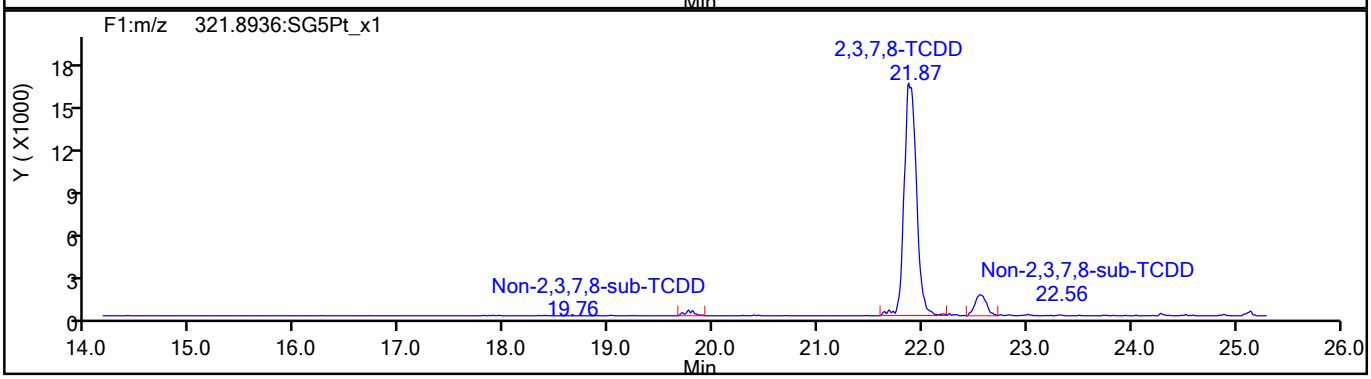

TCDD Standards

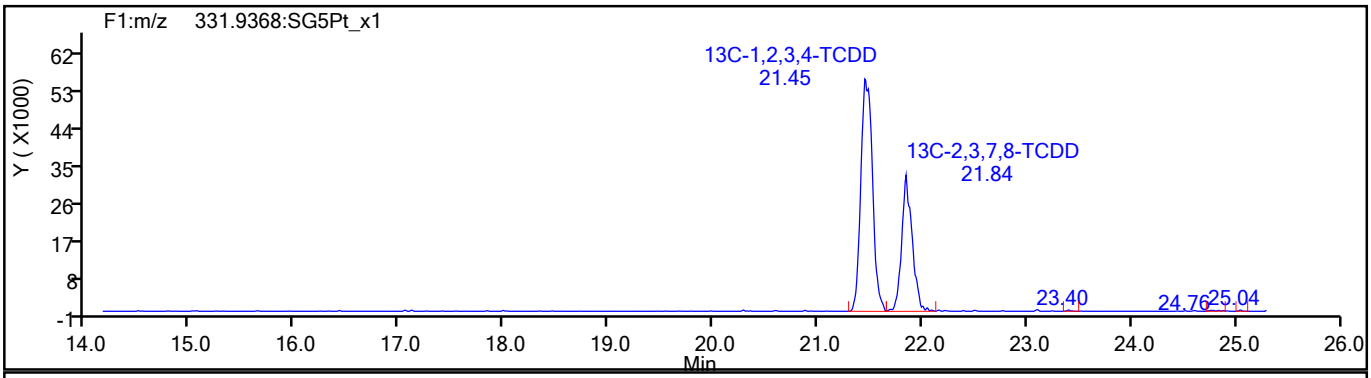

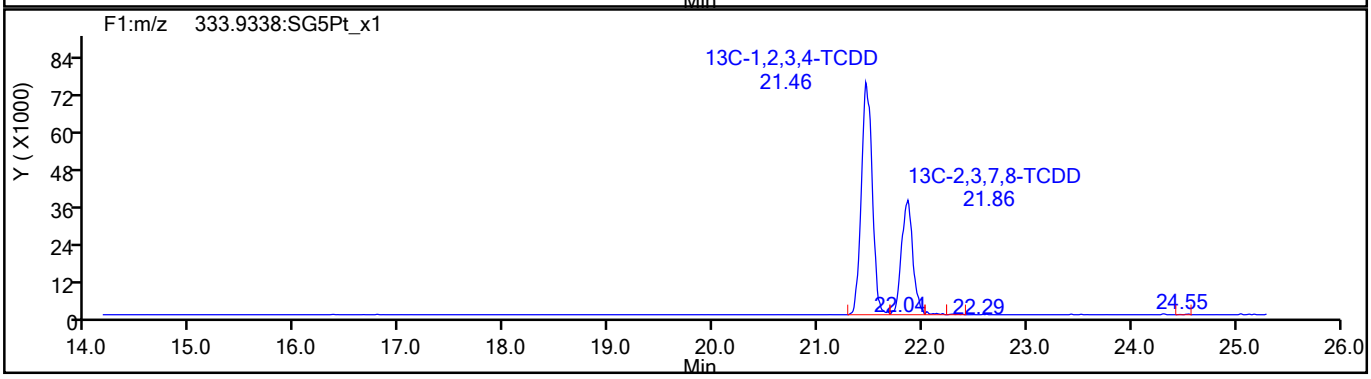

775890

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Injection Date:	18-Aug-2021 00:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	517196	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

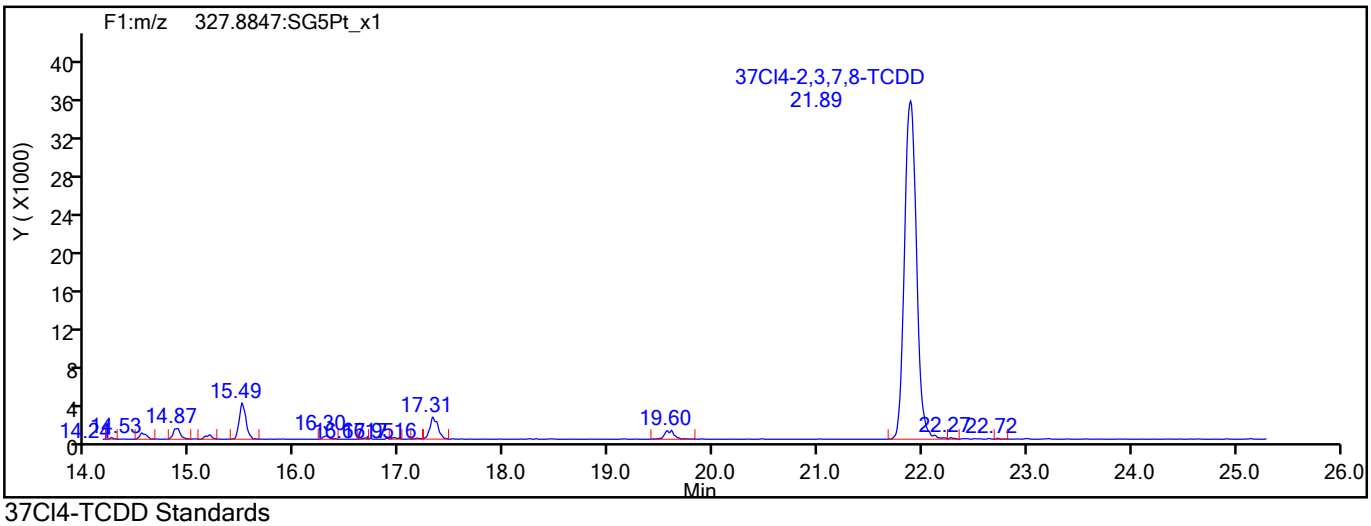

37Cl4-TCDD Standards

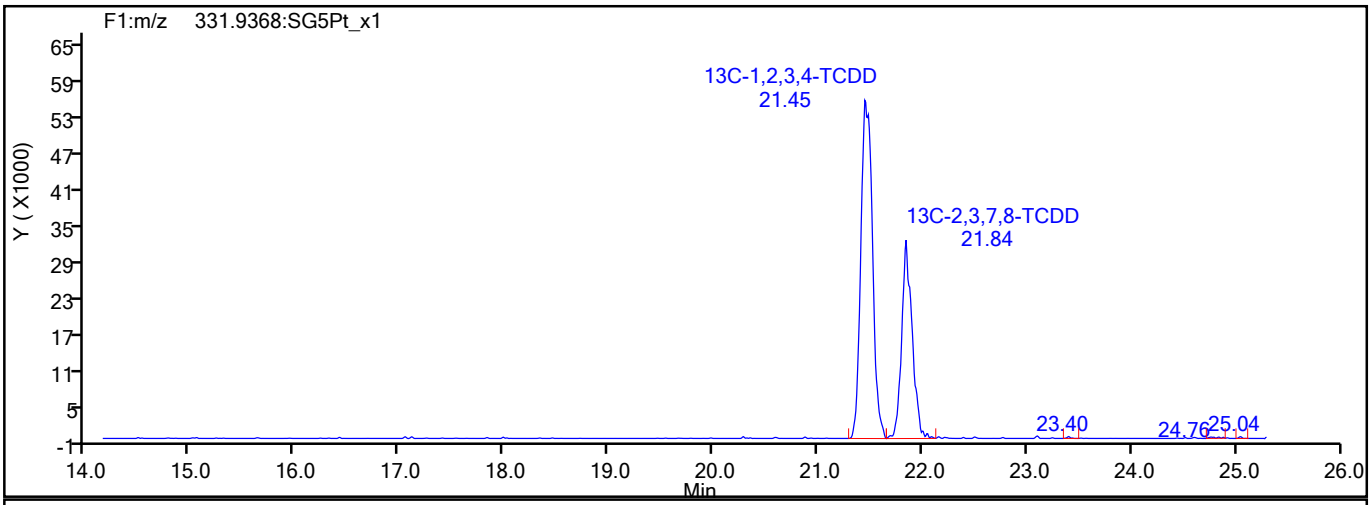

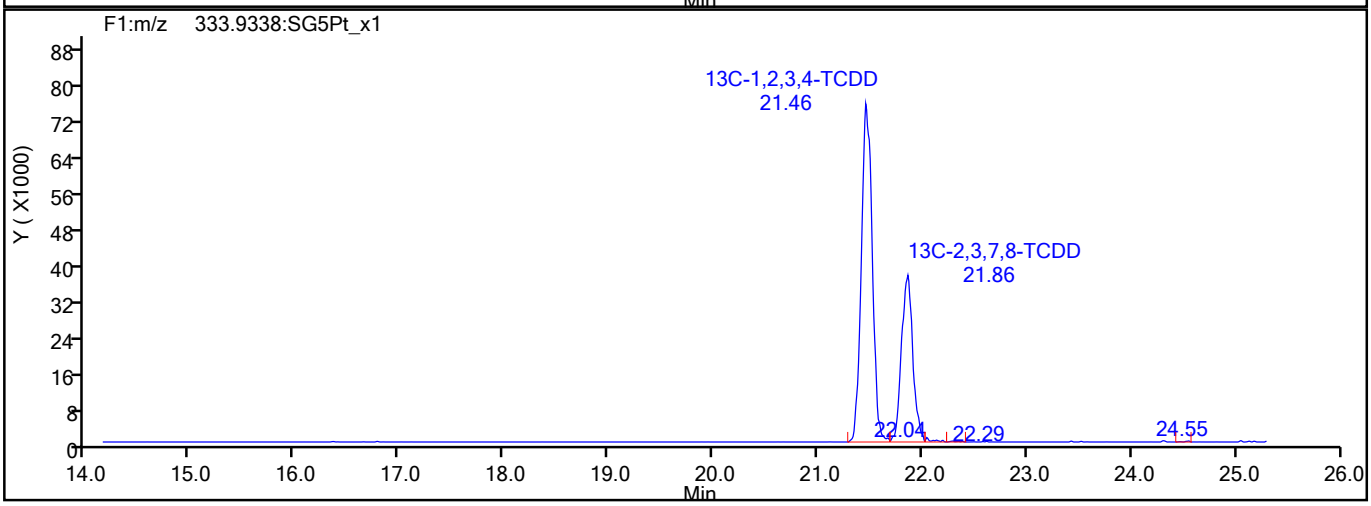

775891

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Injection Date:	18-Aug-2021 00:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	517196	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

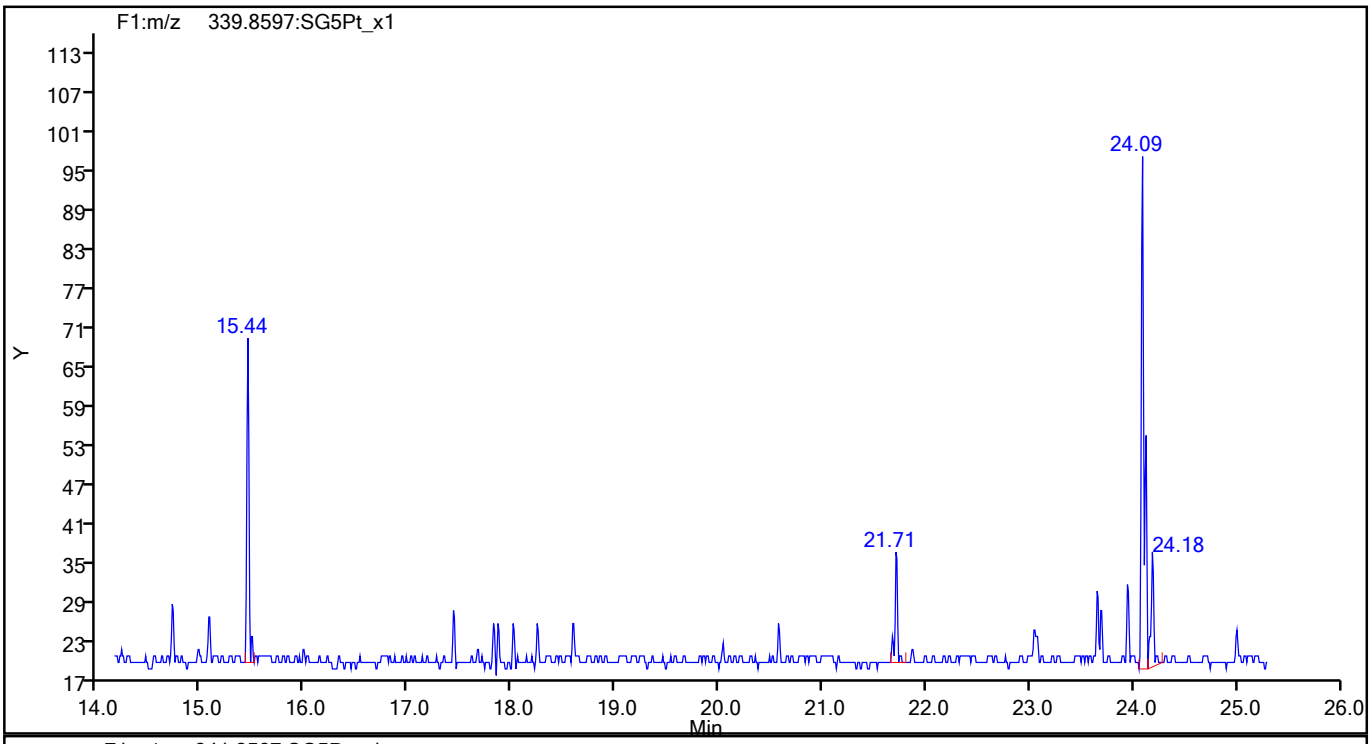

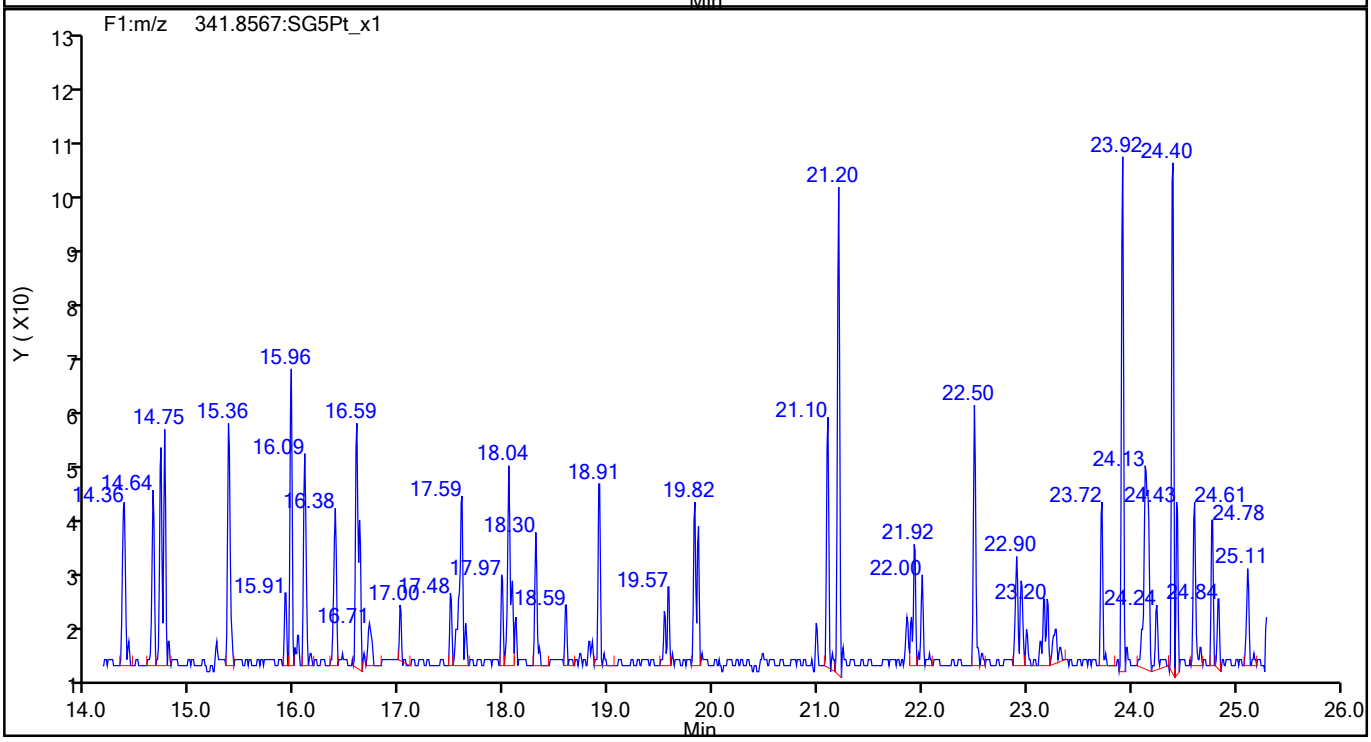

775892

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Injection Date:	18-Aug-2021 00:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	517196	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

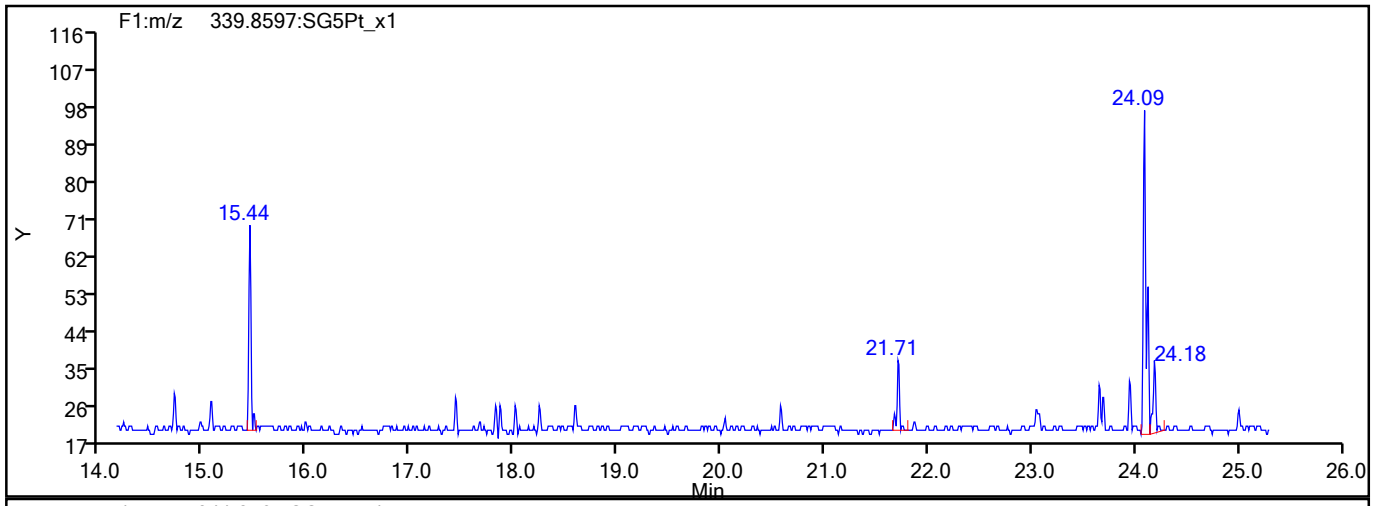

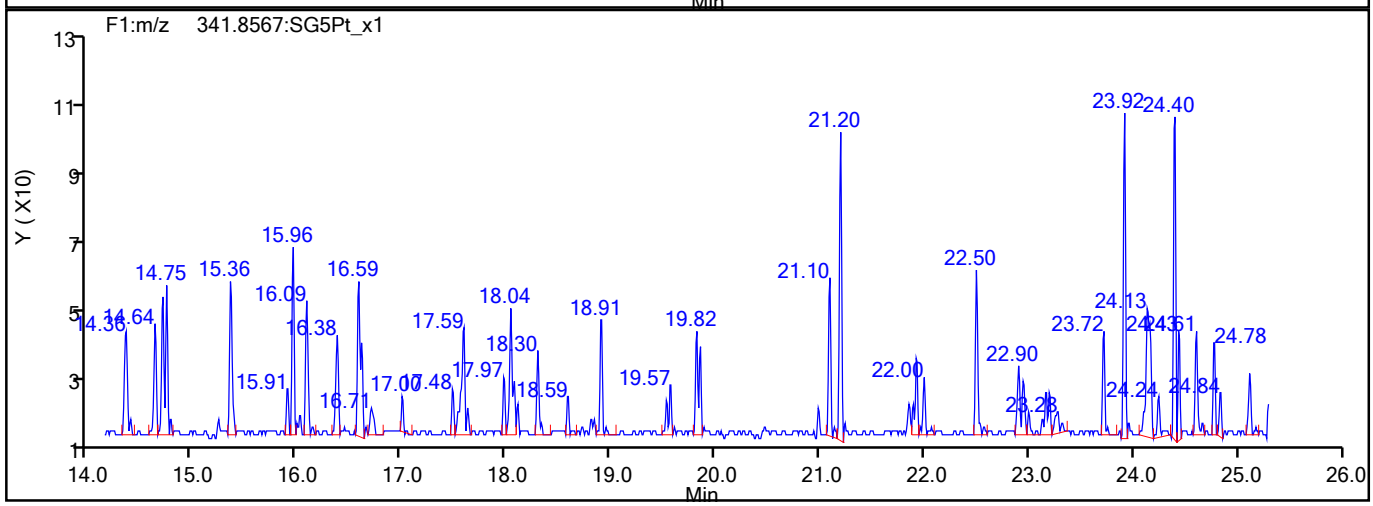

F1 PeCDFs Interference Mass

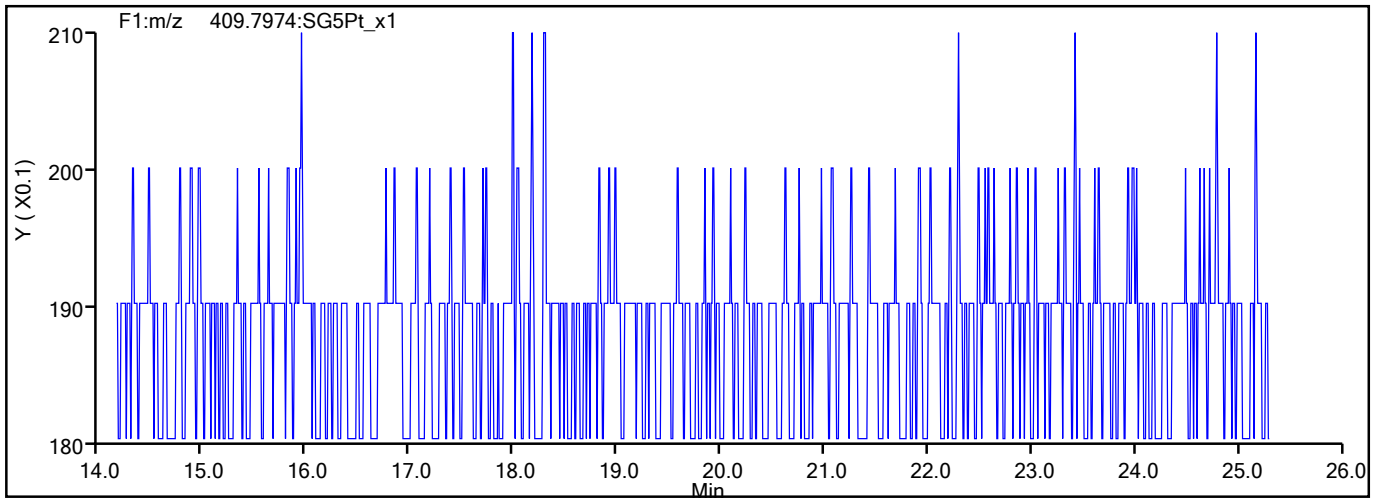

775893

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	517196	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

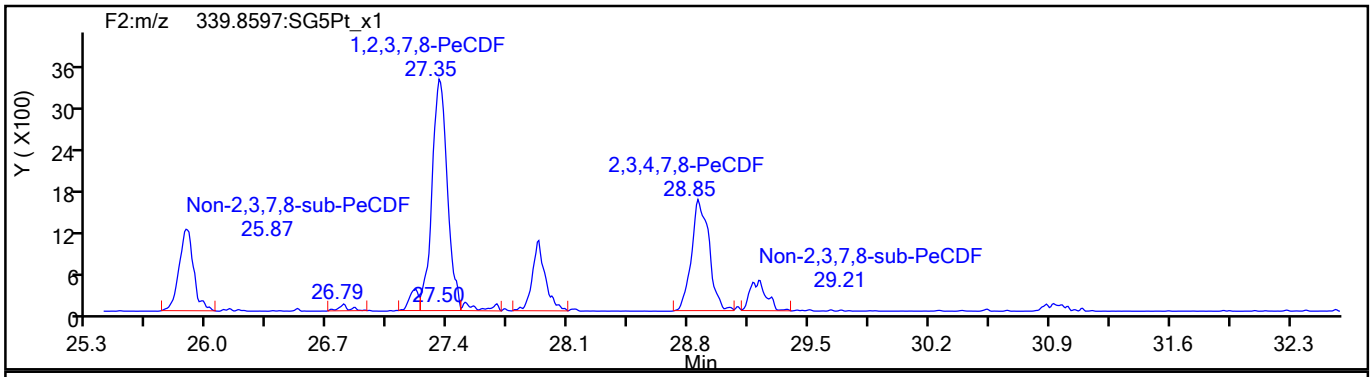

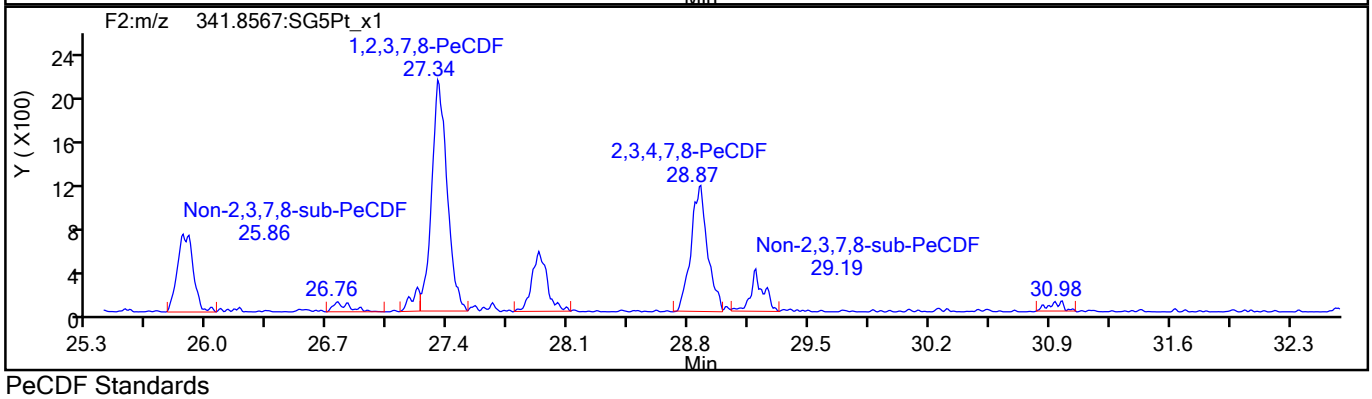

PeCDF Standards

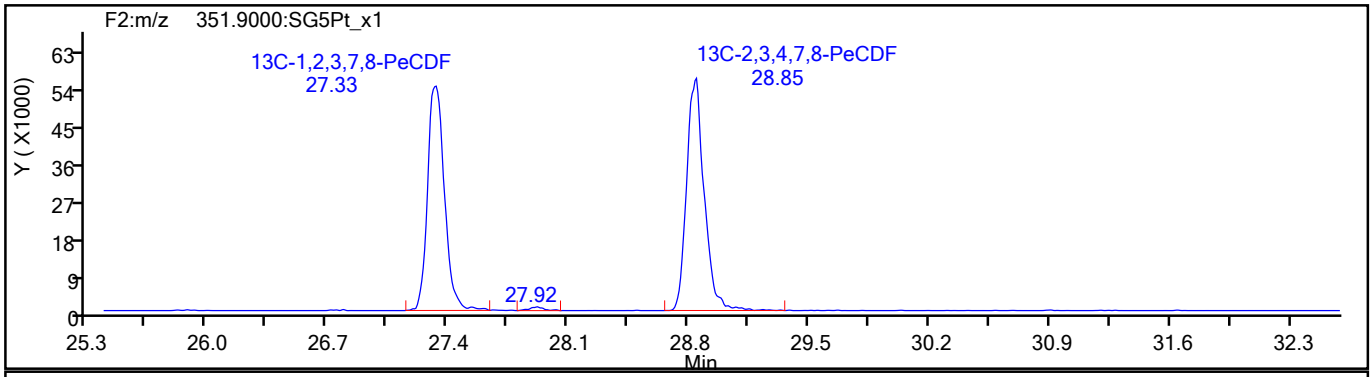

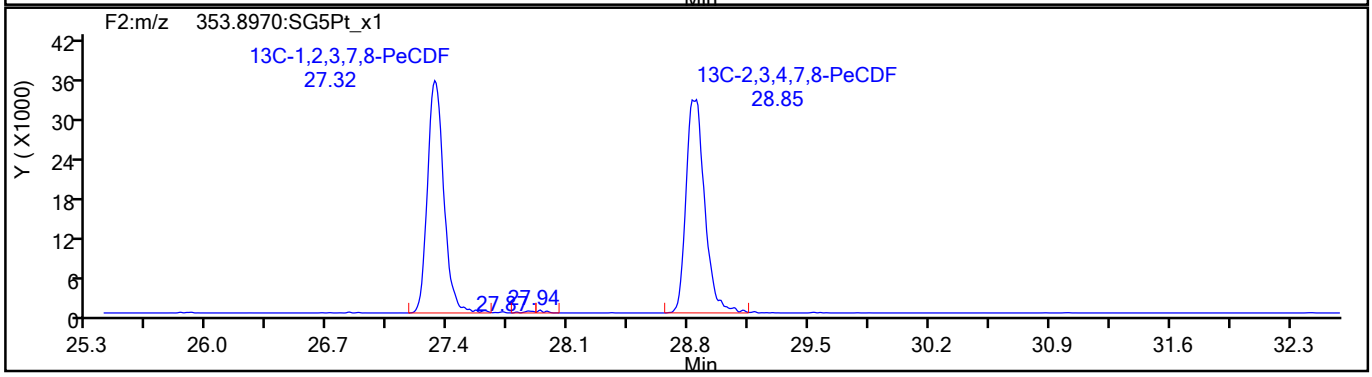

775894

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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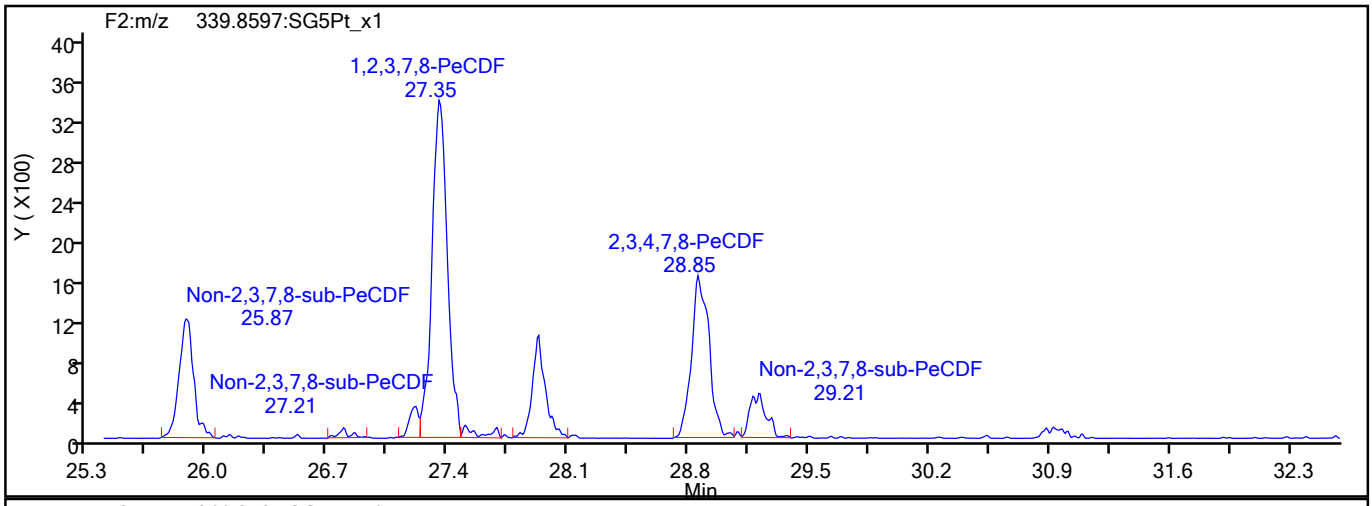

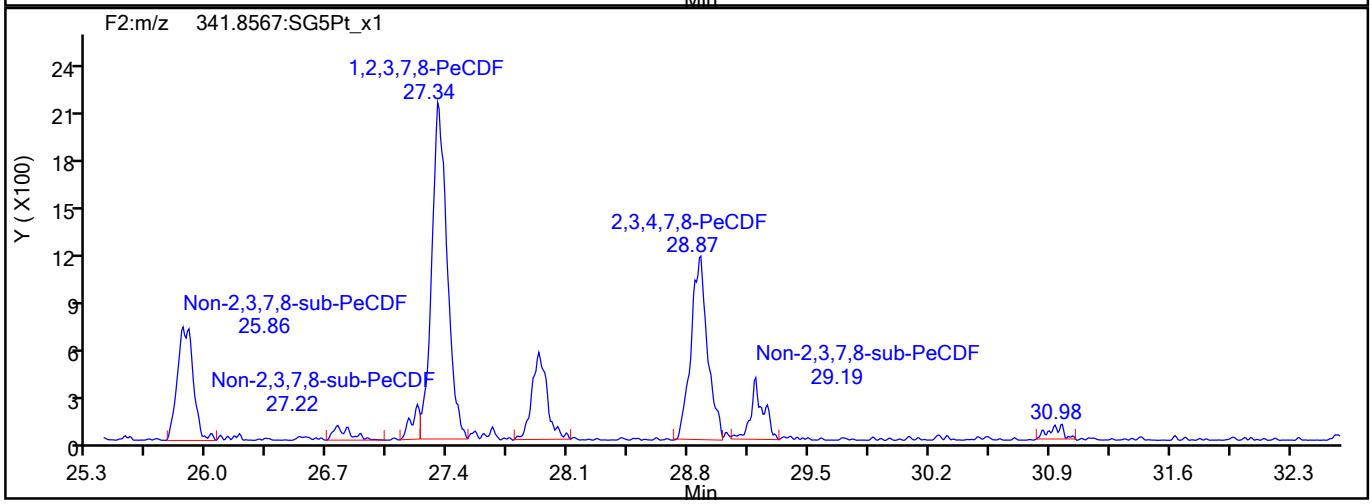

PeCDF Interference Mass

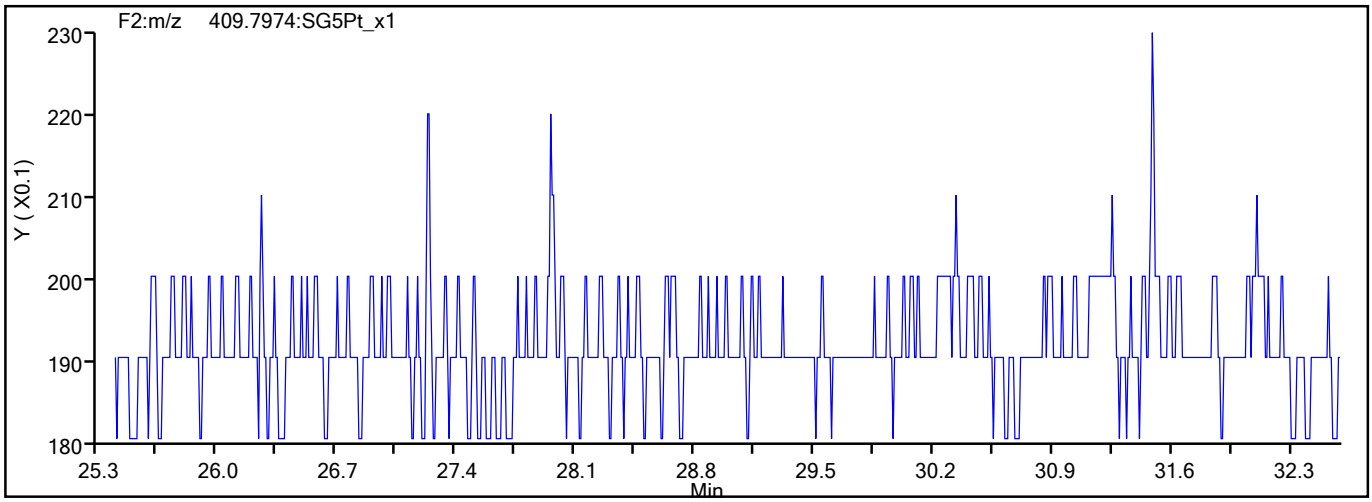

775895

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

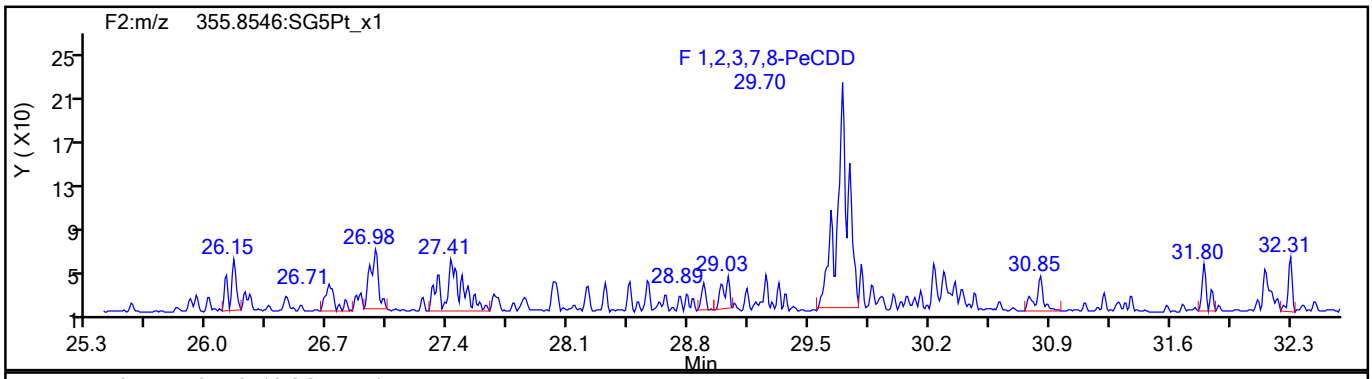

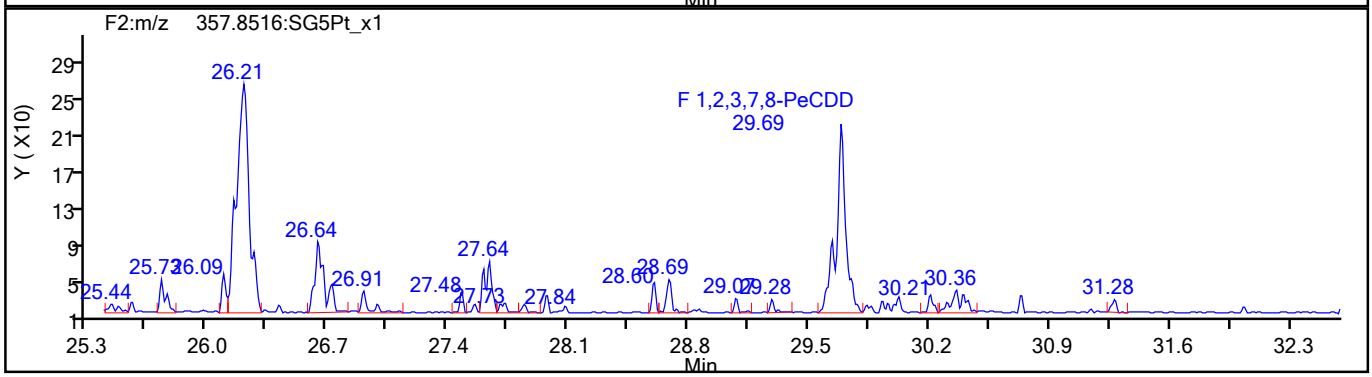

PeCDD Standards

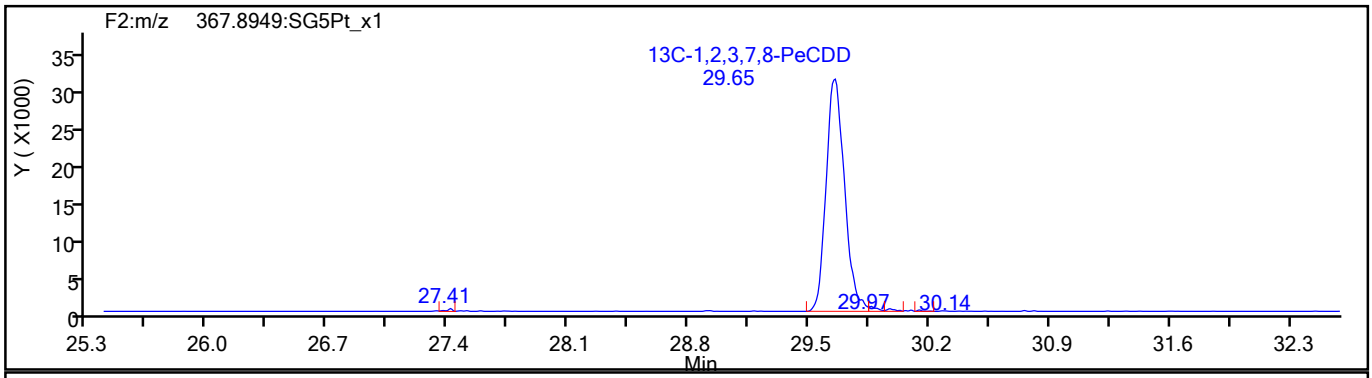

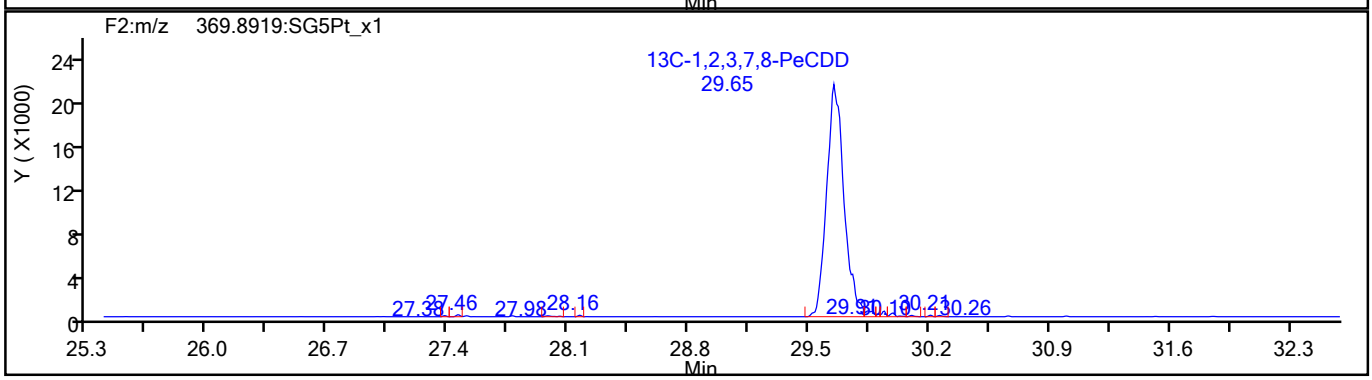

775896

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

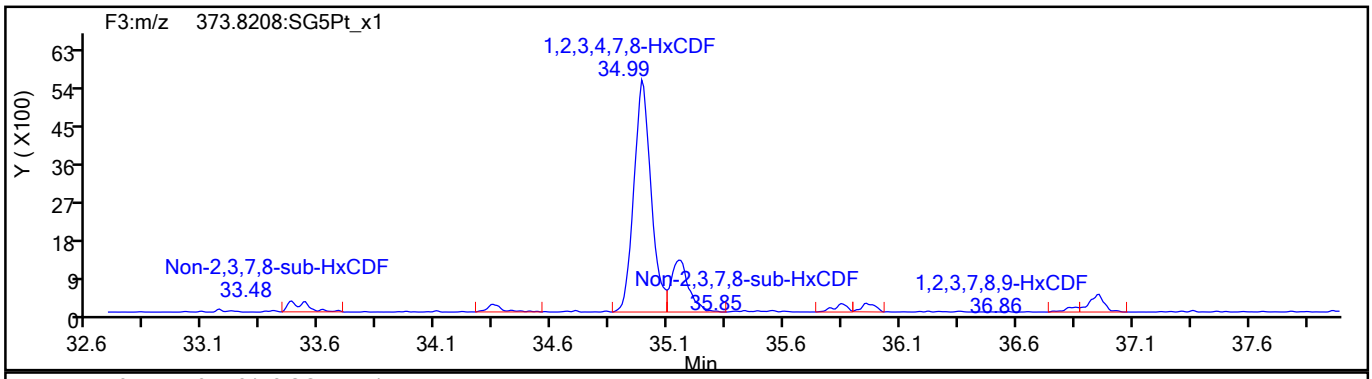

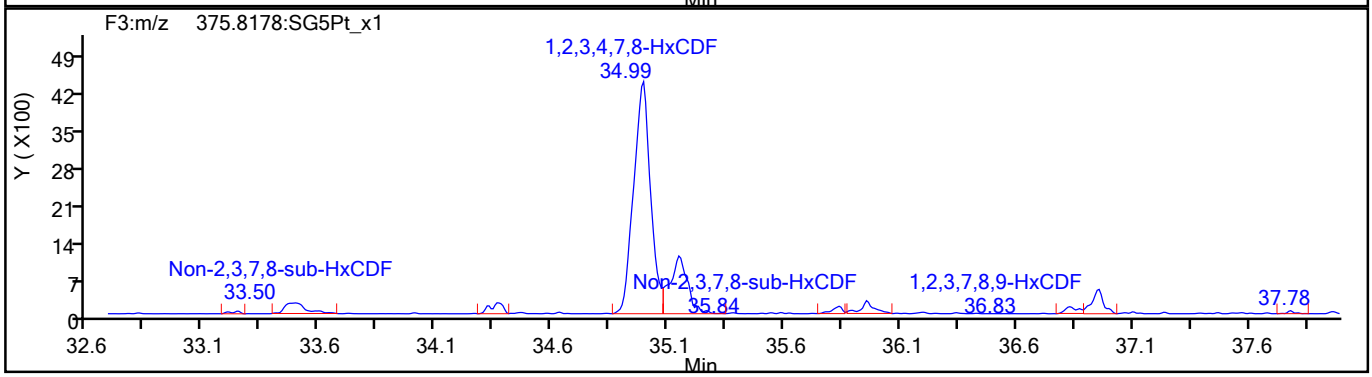

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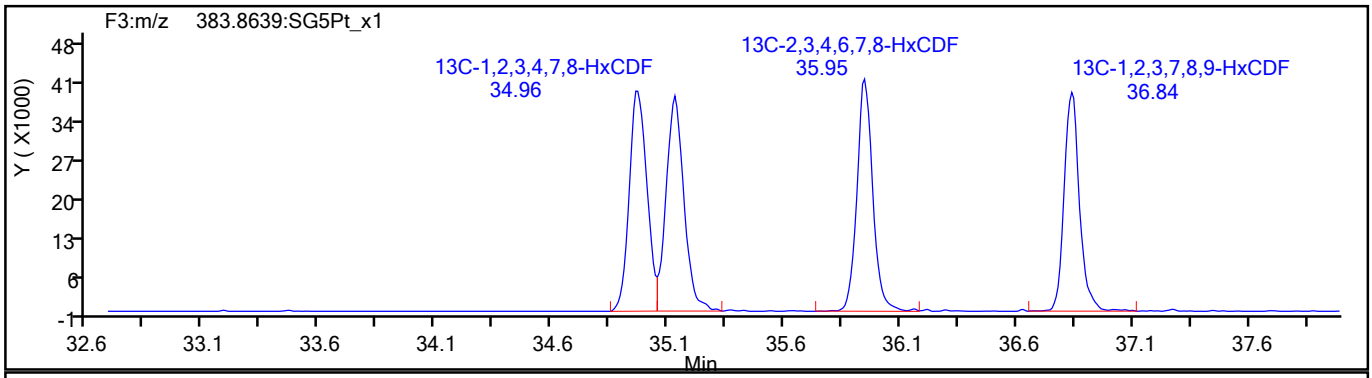

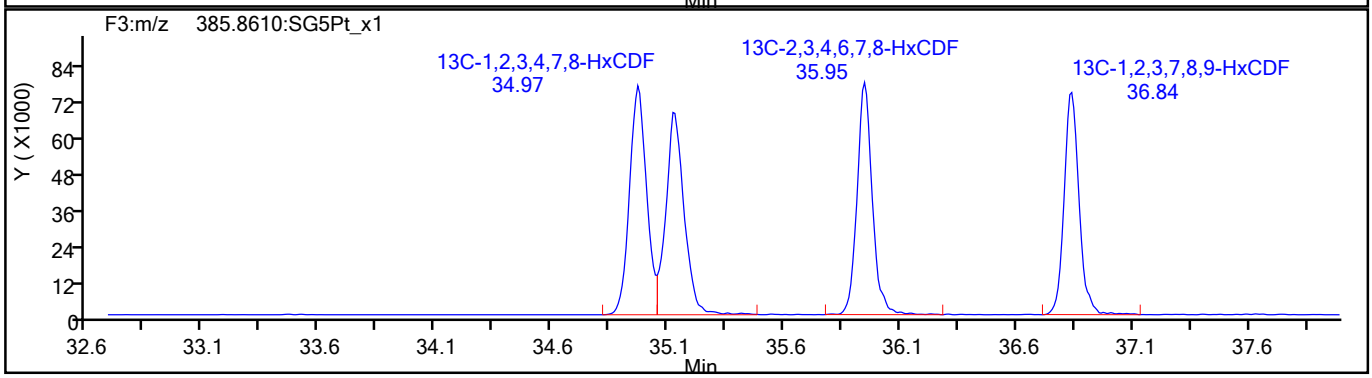

775897

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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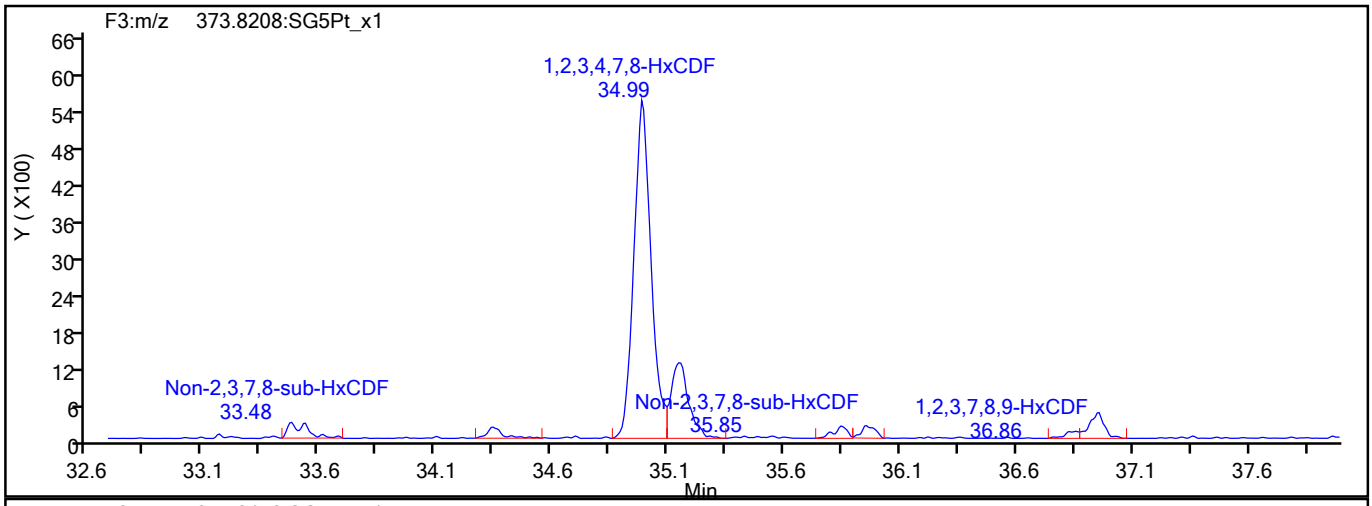

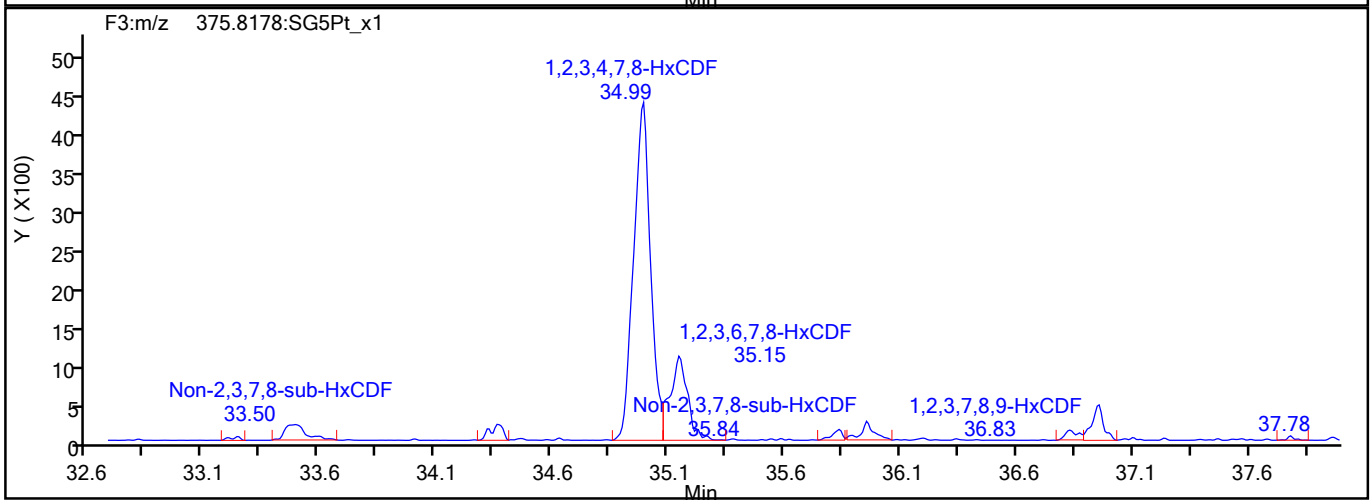

HxCDF Interference Mass

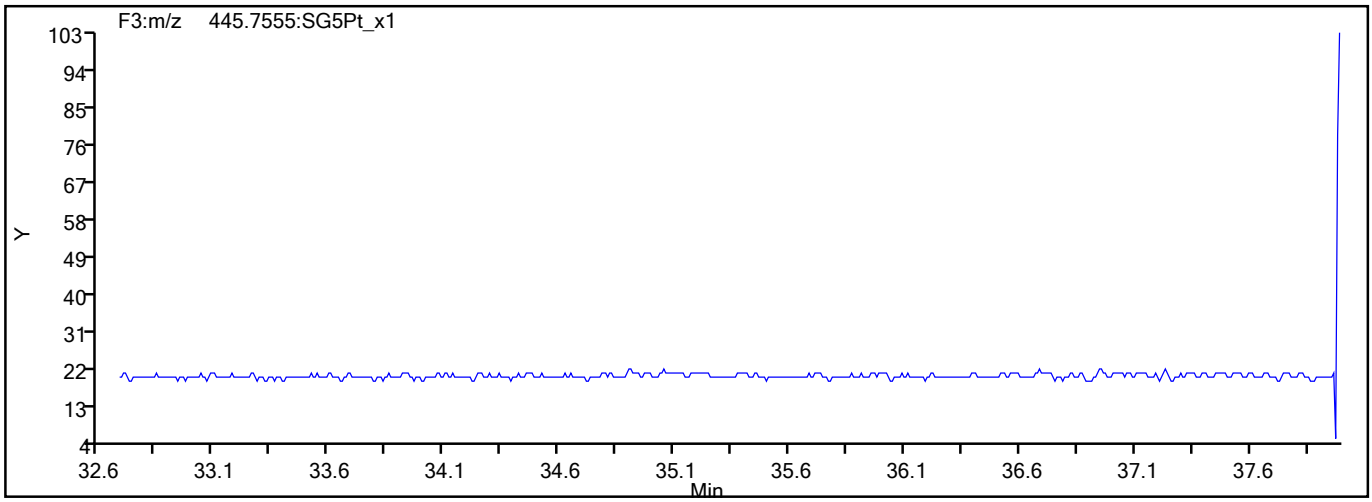

775898

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

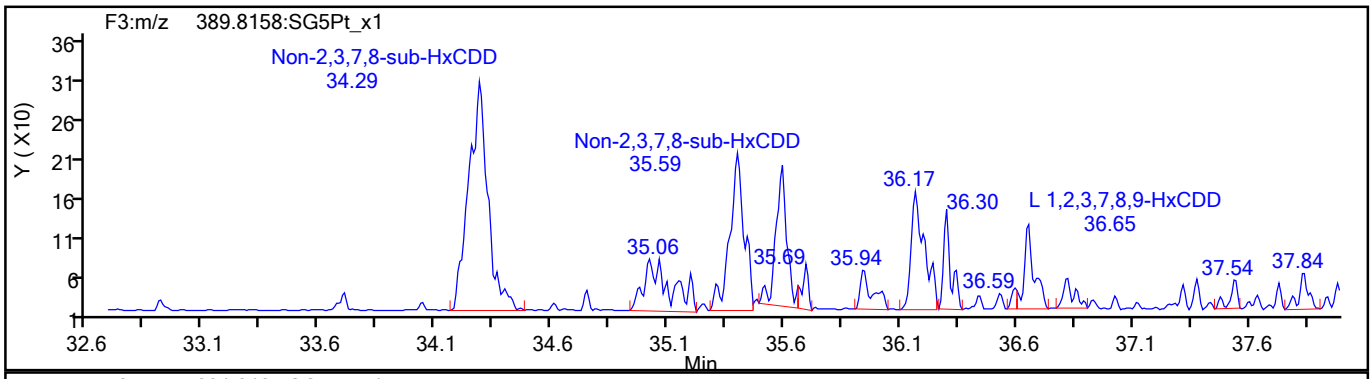

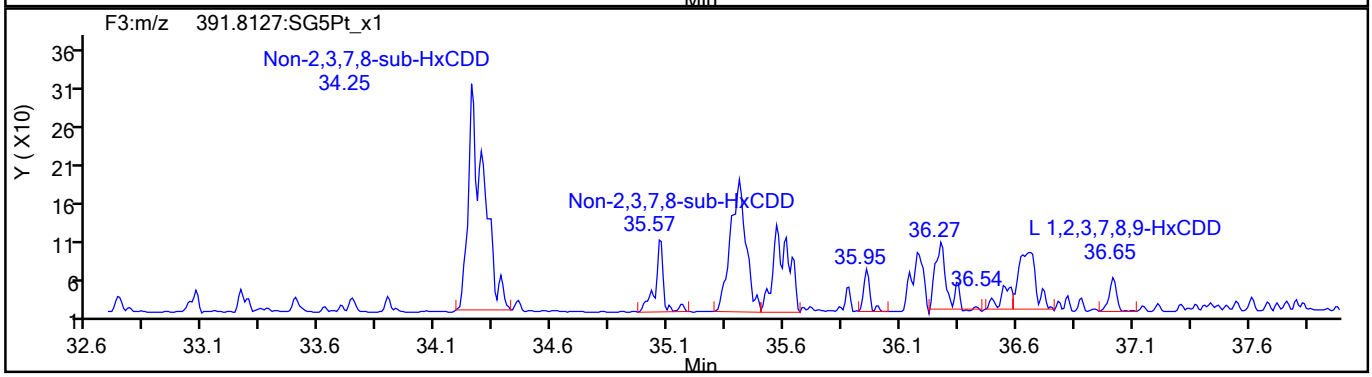

HxCDD Standards

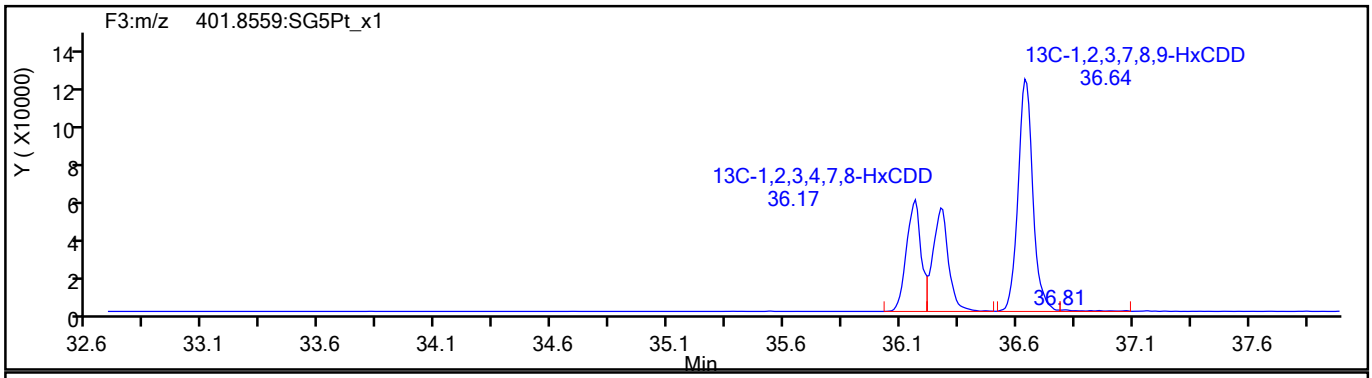

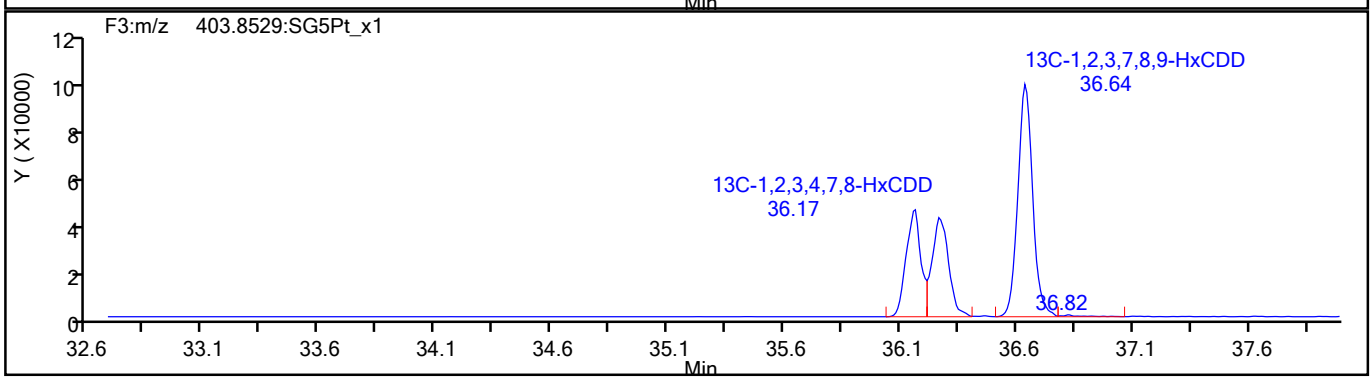

775899

Report Date: 19-Aug-2021 12:39:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

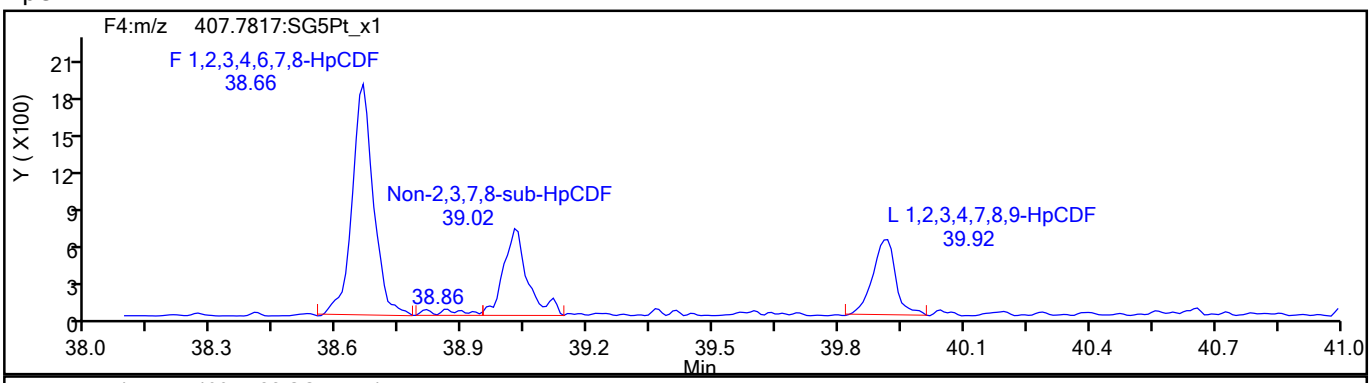

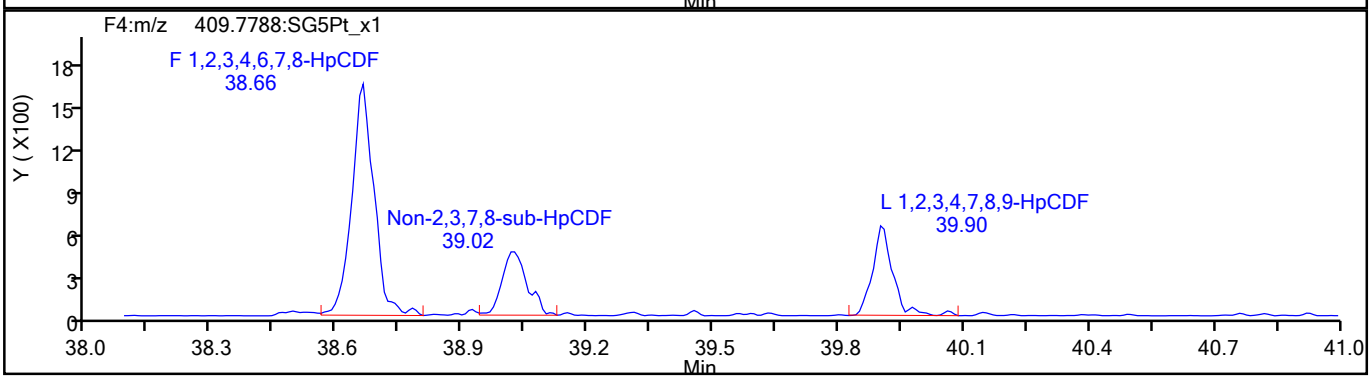

HpCDF Standards

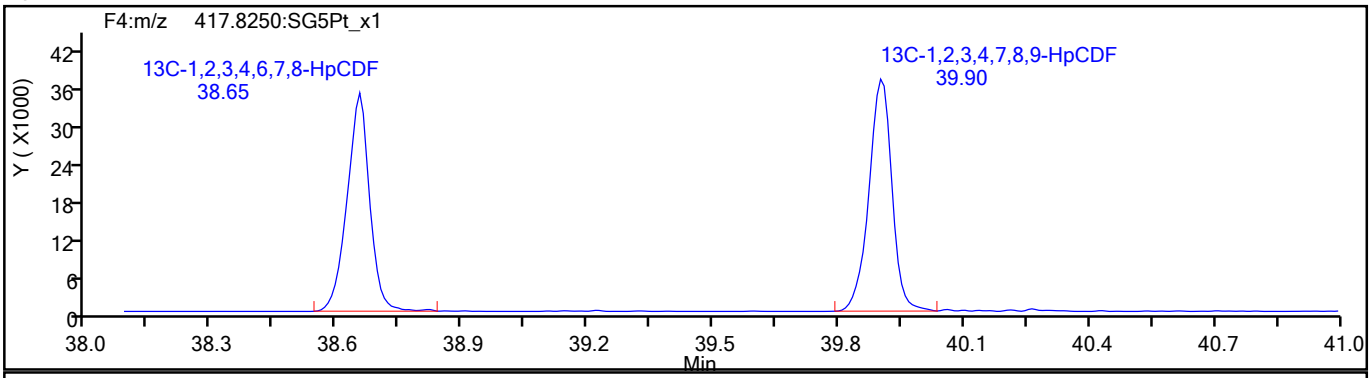

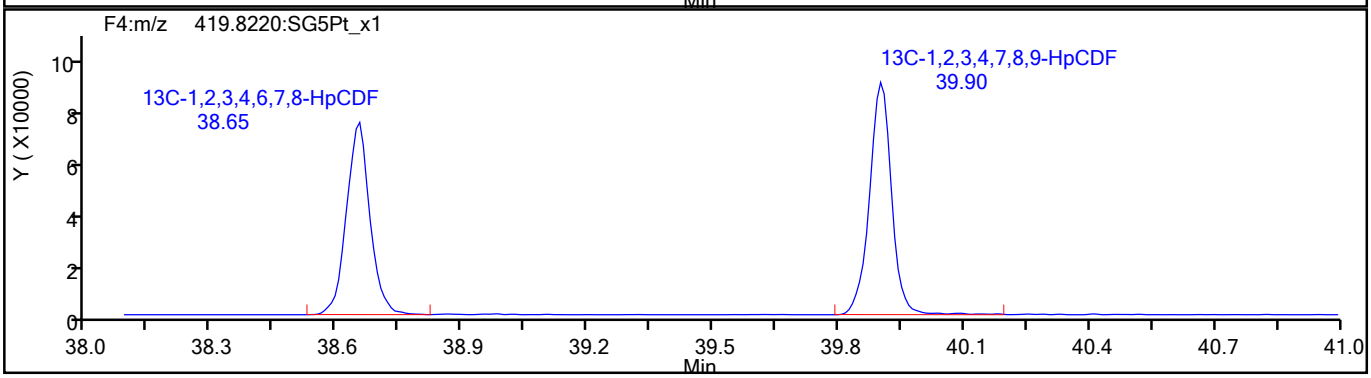

775900

Report Date: 19-Aug-2021 12:40:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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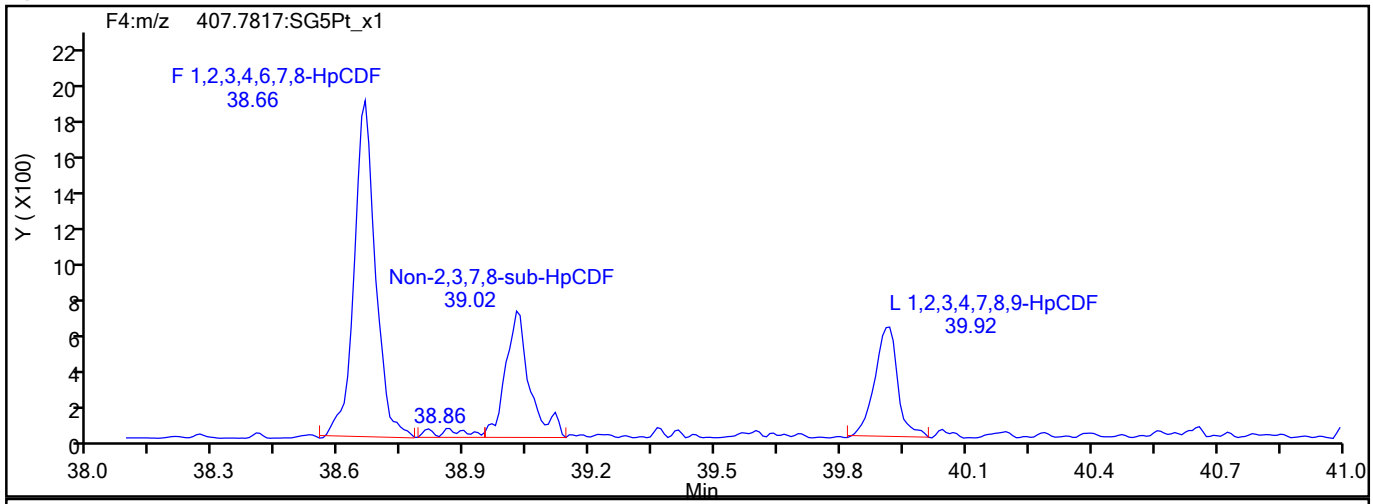

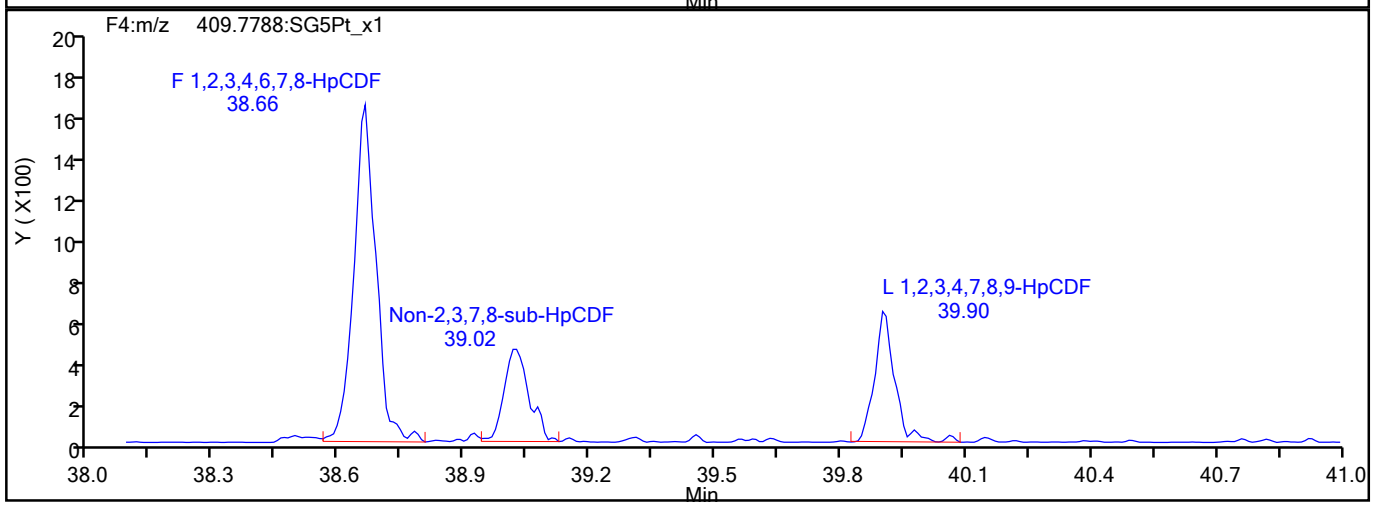

HpCDF Interference Mass

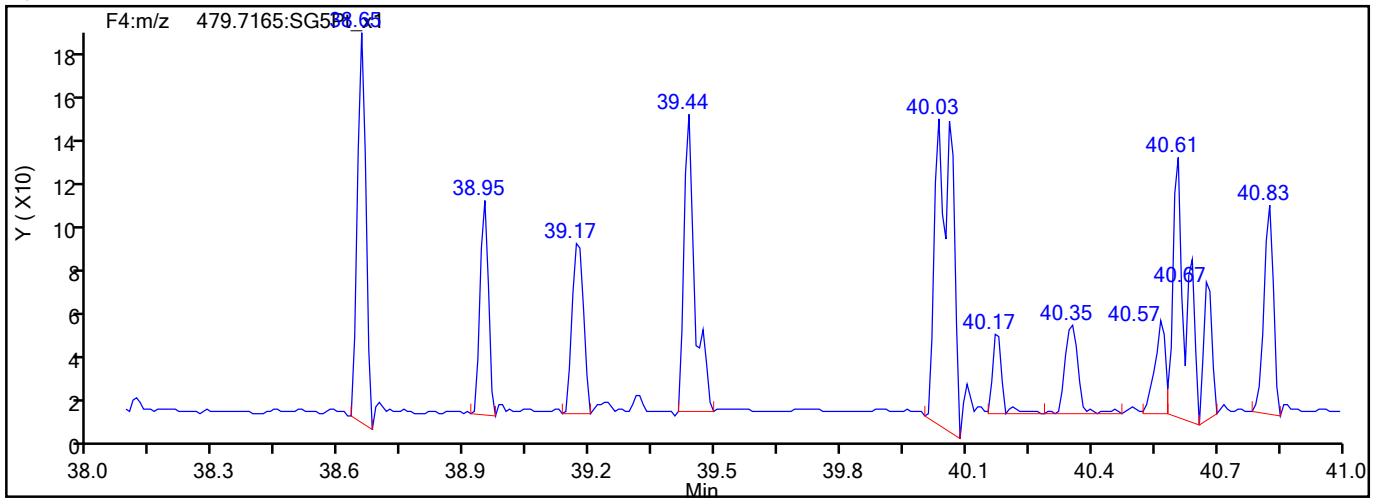

775901

Report Date: 19-Aug-2021 12:40:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
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HpCDD

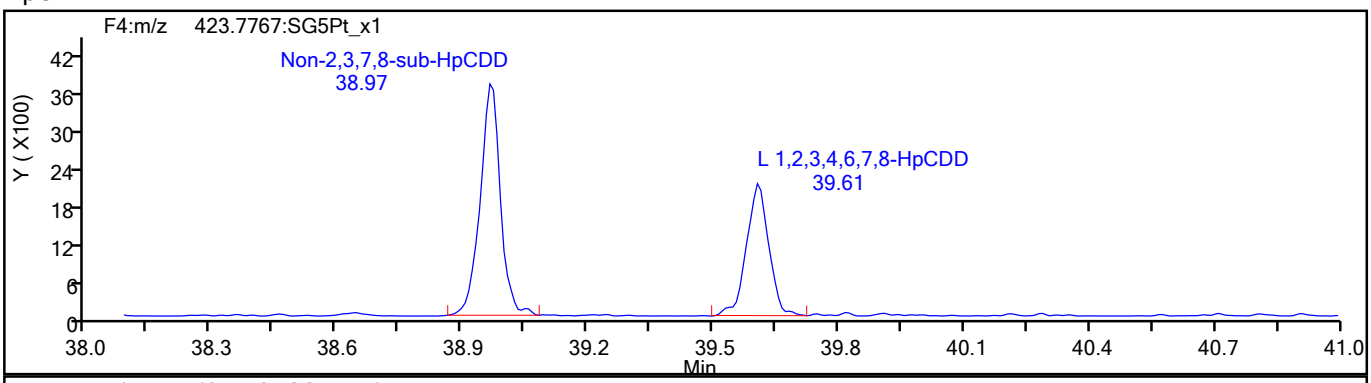

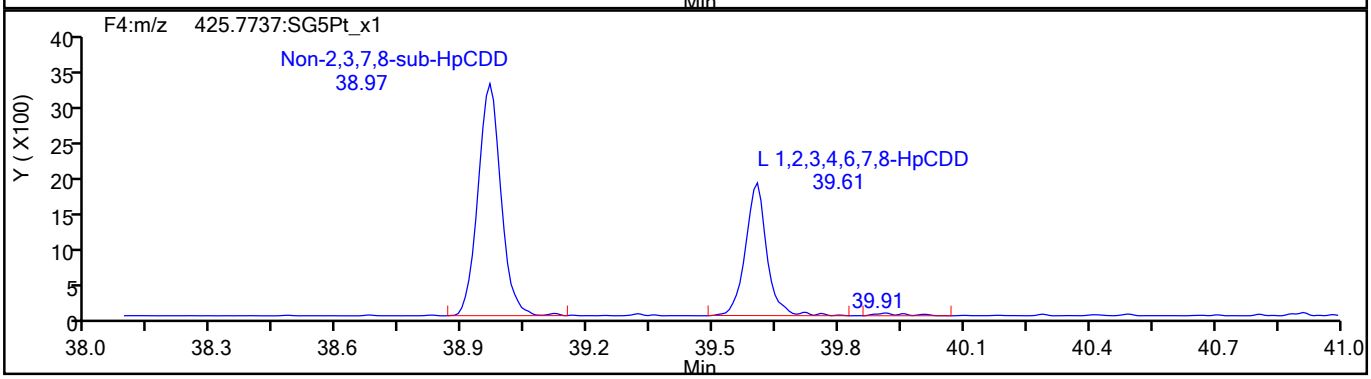

HpCDD Standards

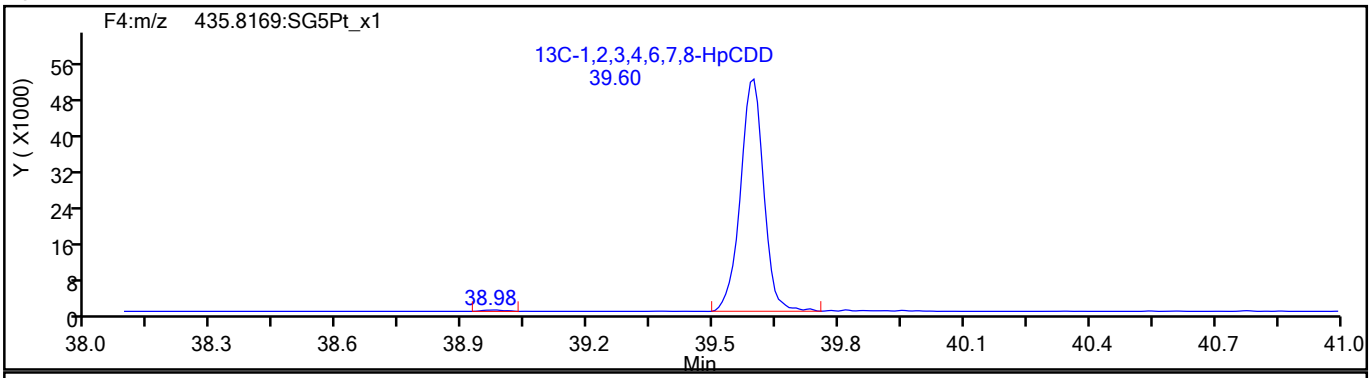

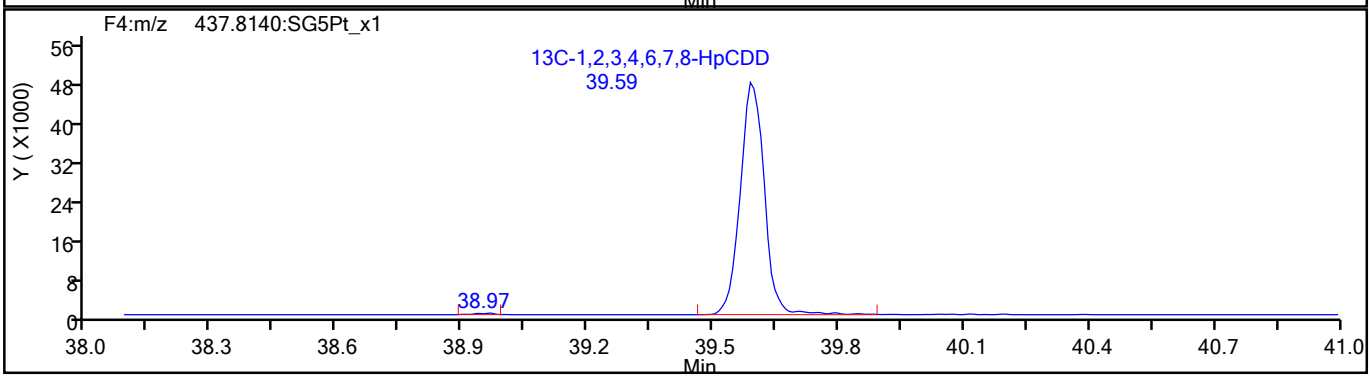

775902

Report Date: 19-Aug-2021 12:40:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

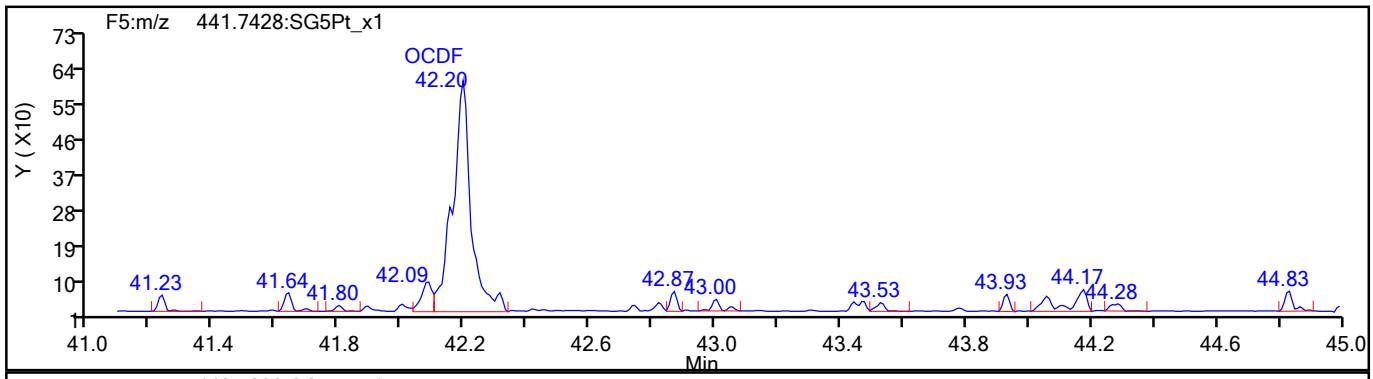

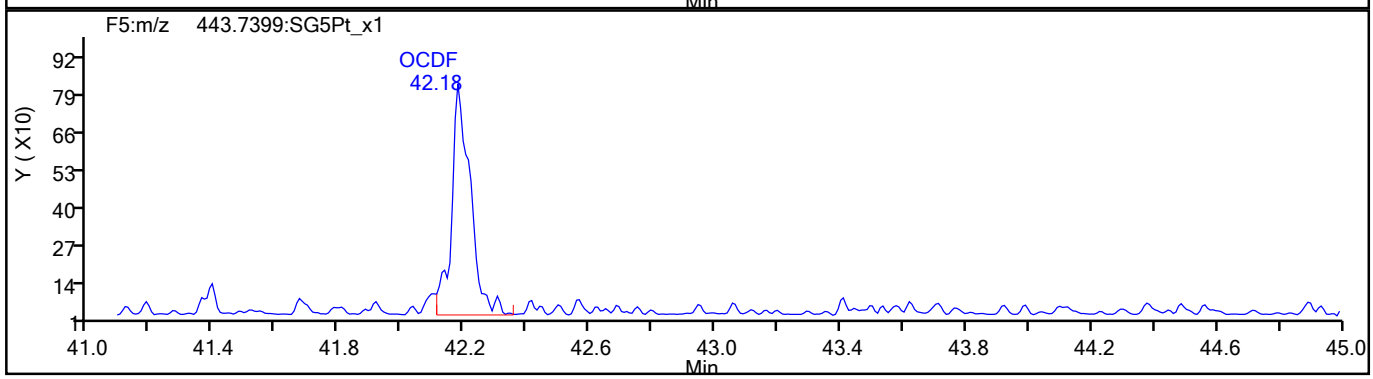

OCDF Standards

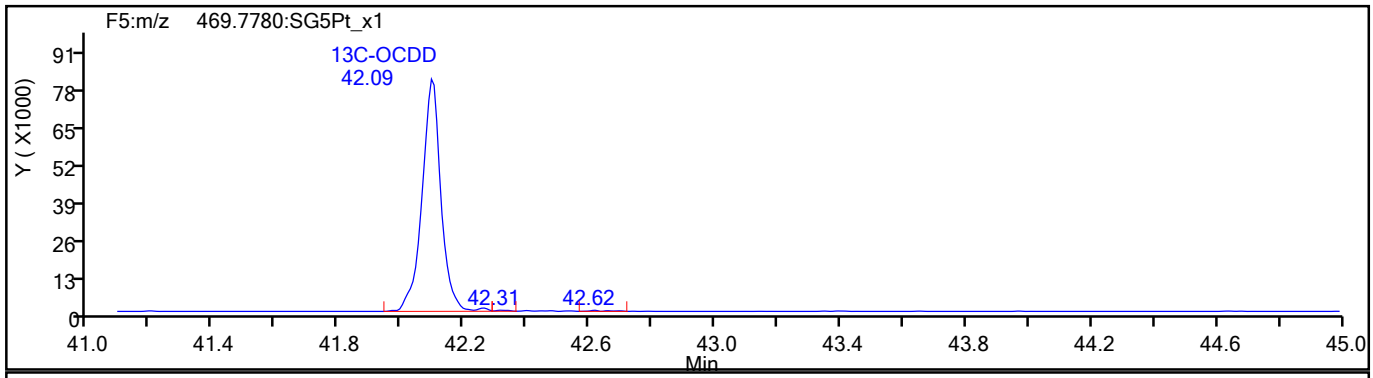

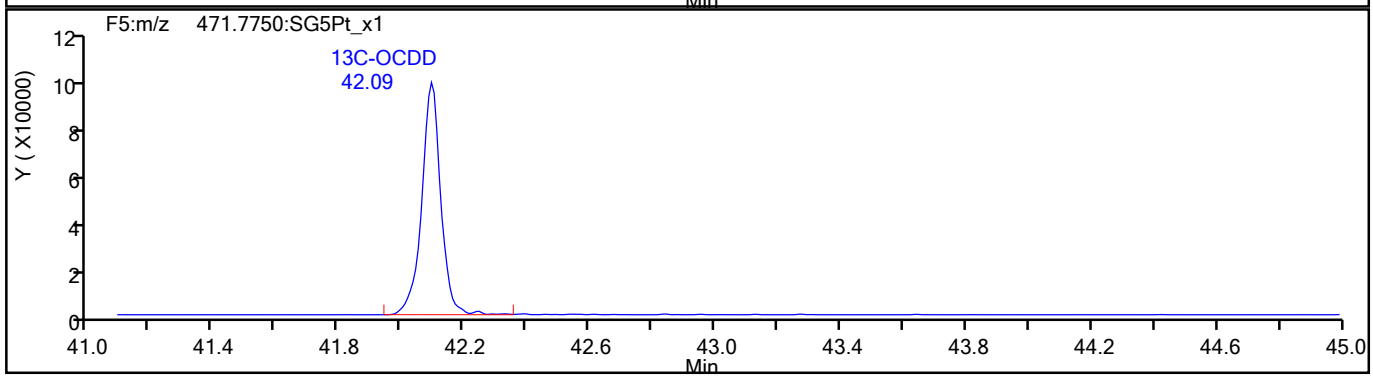

775903

Report Date: 19-Aug-2021 12:40:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Injection Date:	18-Aug-2021 00:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	517196	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

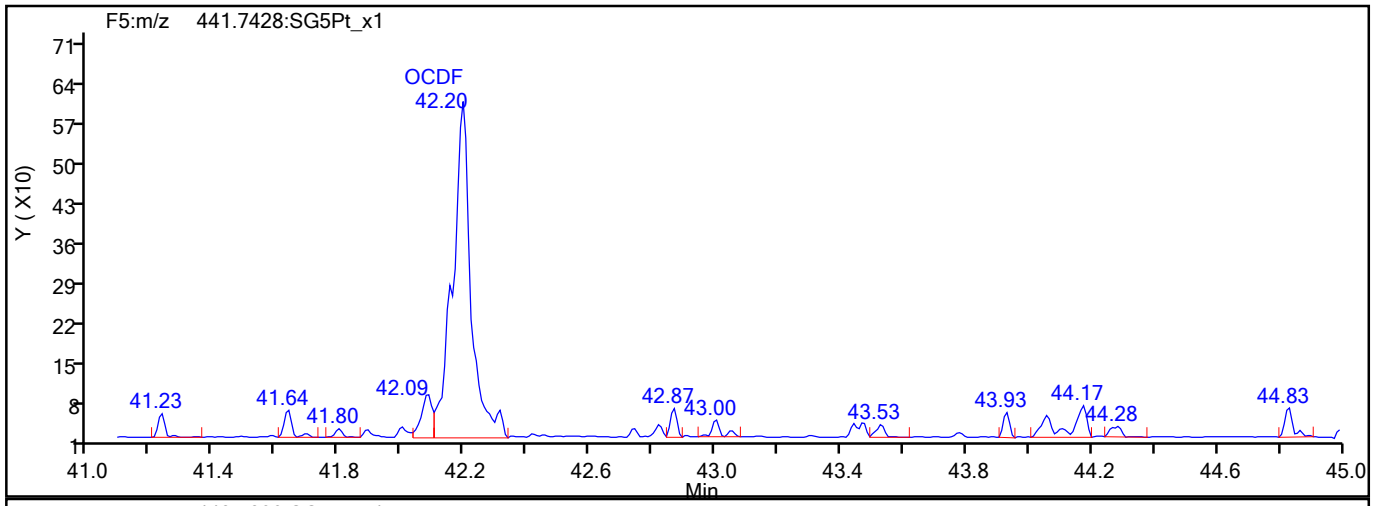

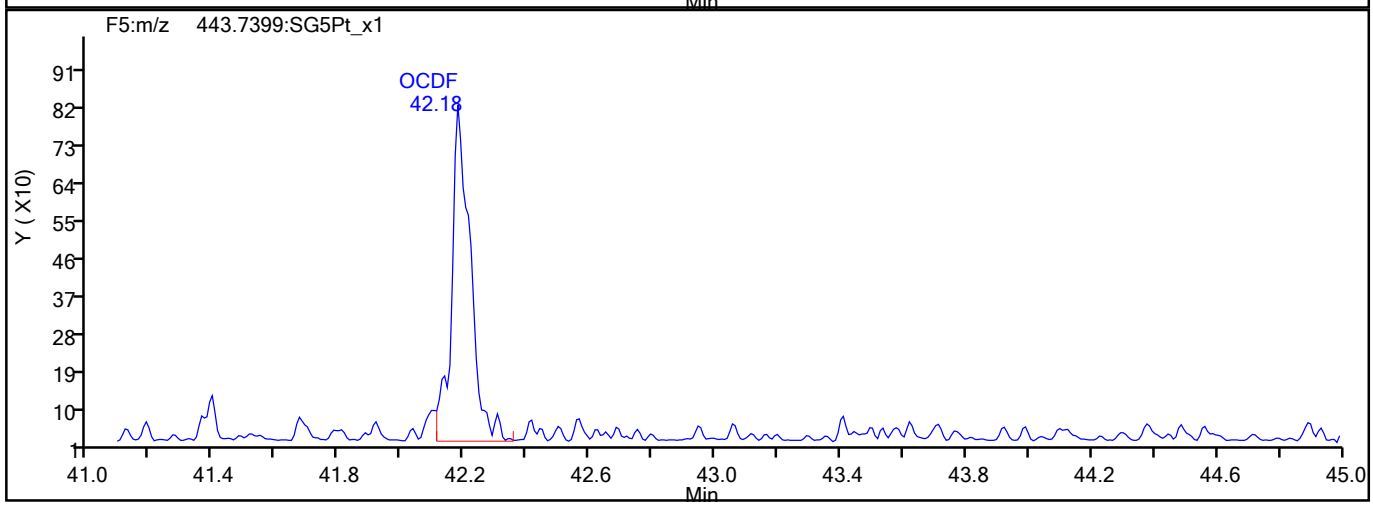

OCDF Interference Mass

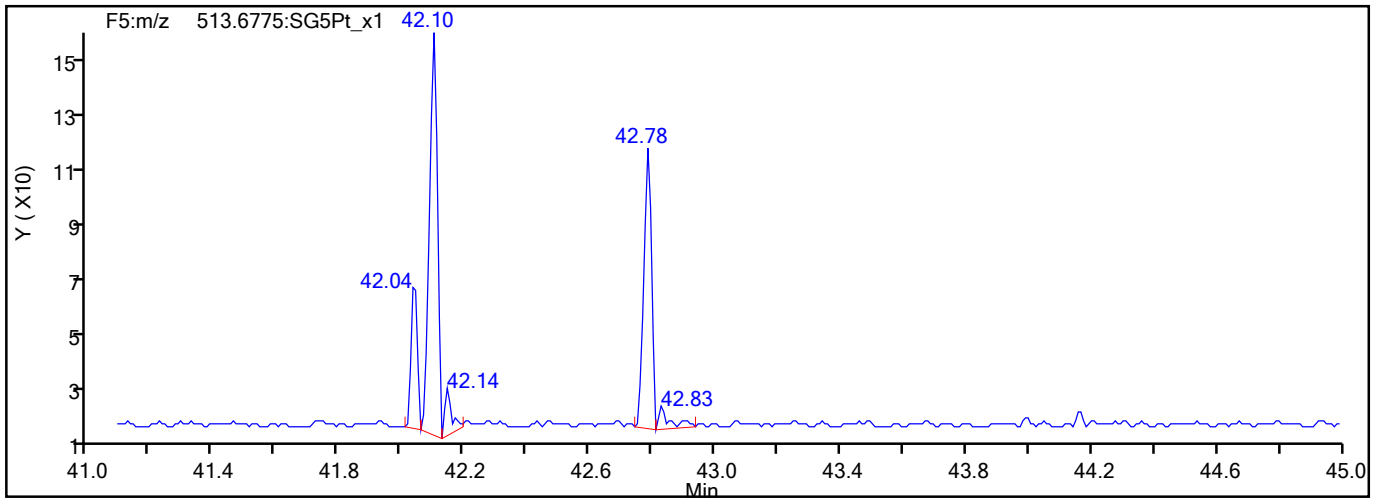

775904

Report Date: 19-Aug-2021 12:40:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Injection Date:	18-Aug-2021 00:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	517196	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

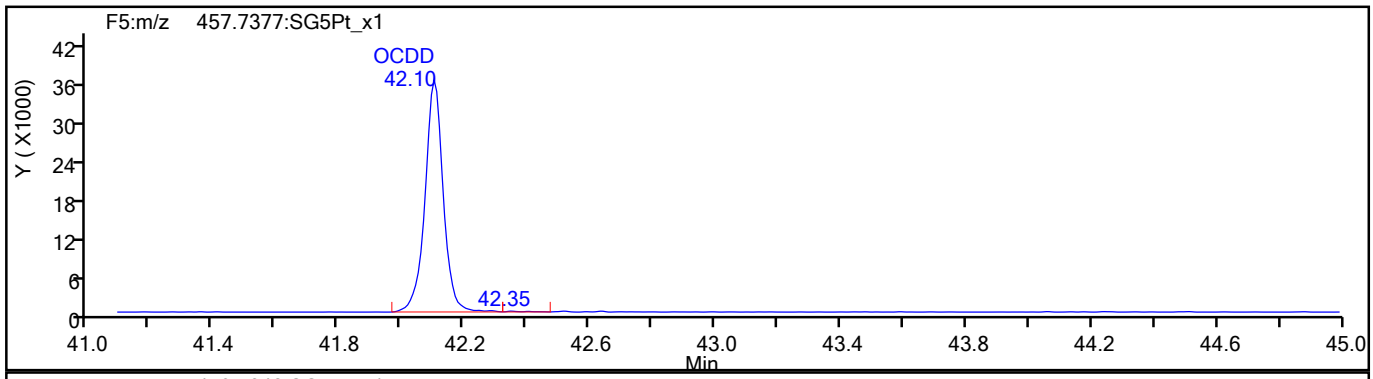

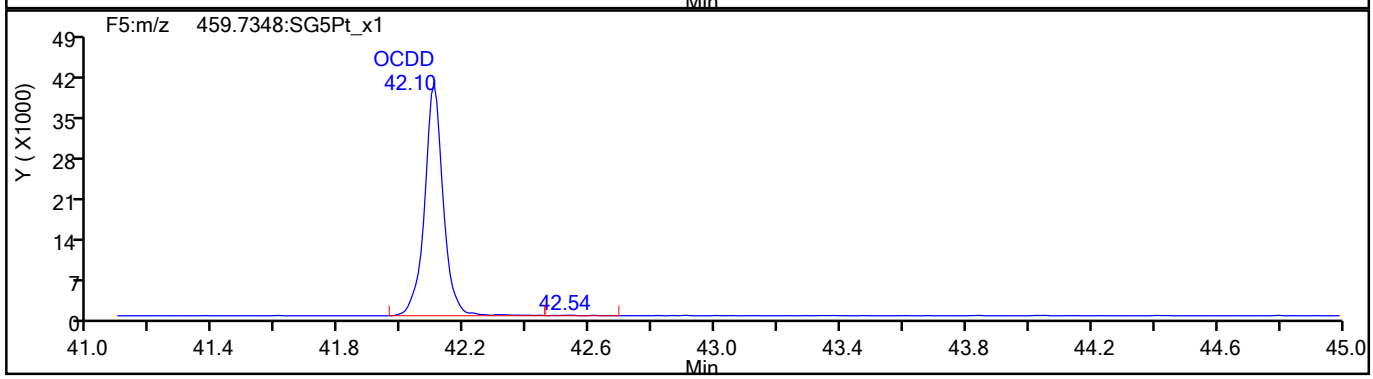

OCDD Standards

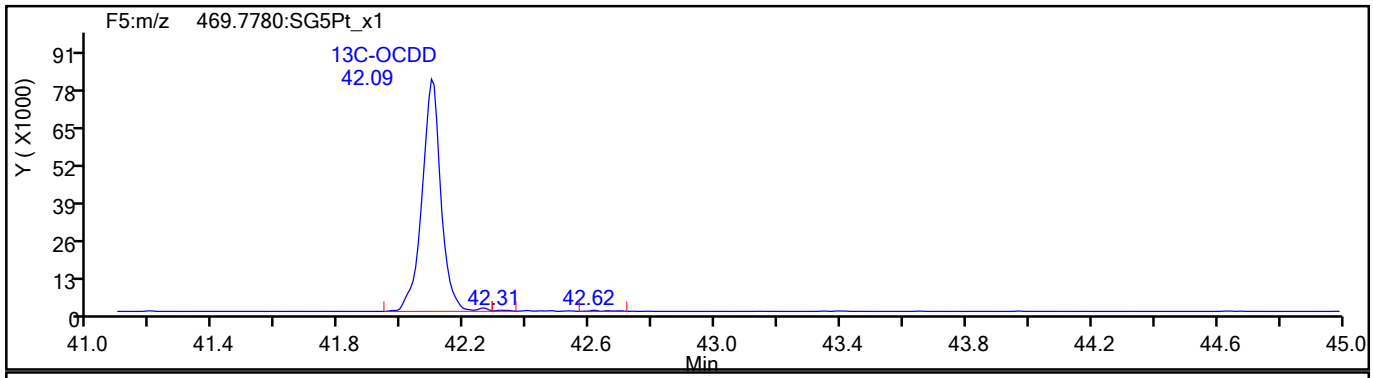

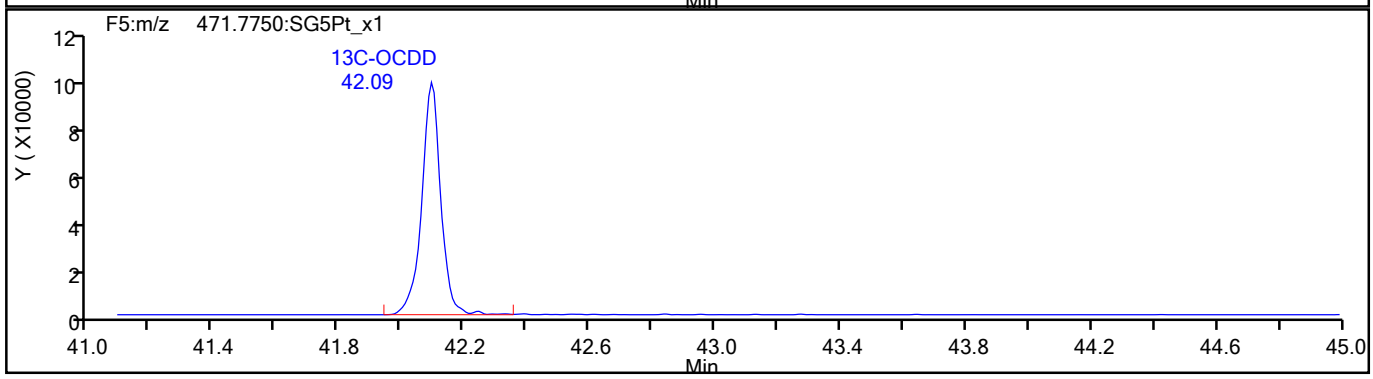

775905

Report Date: 19-Aug-2021 12:40:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Injection Date:	18-Aug-2021 00:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	517196	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

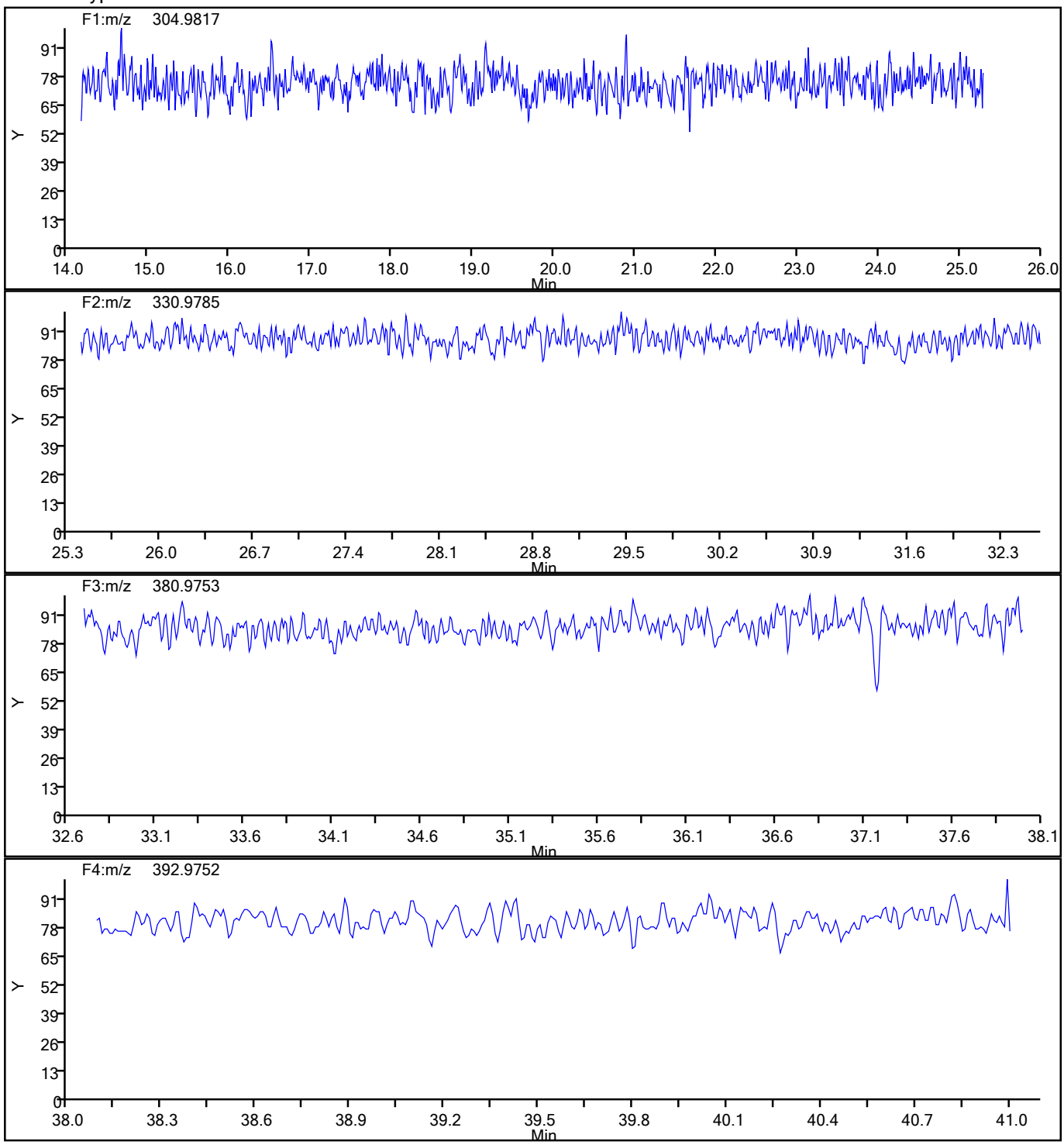

775906

Report Date: 19-Aug-2021 12:40:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_14.d		
Injection Date:	18-Aug-2021 00:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	517196	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

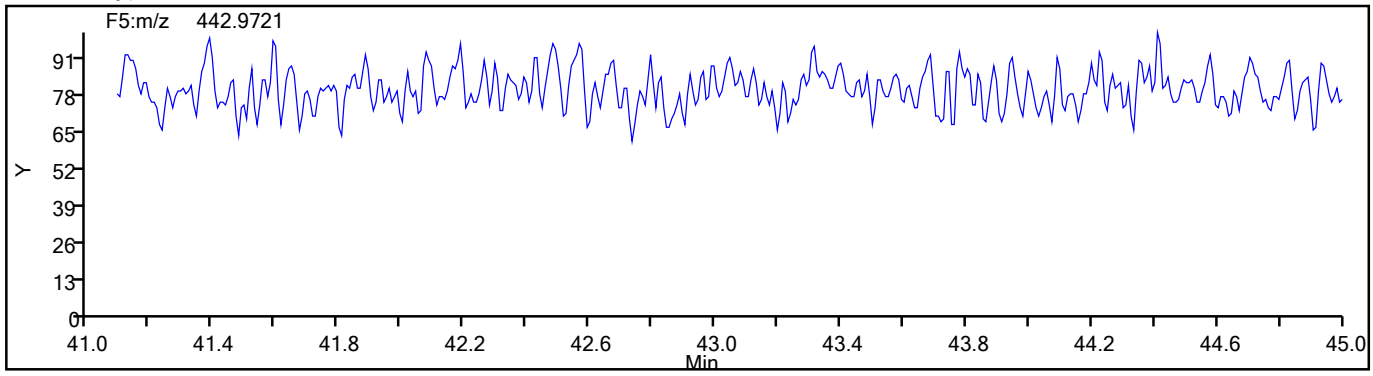

775907

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (10-12) RA
Lab Sample ID: 320-76769-32 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_016.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.57(g)
Date Analyzed: 08/24/2021 01:09
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	360		1.3	0.65

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	57		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	77		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_016.d
Lims ID: 320-76769-A-32-A
Client ID: 11215702-072221-SS-SJSB076 (10-12)
Sample Type: Client
Inject. Date: 24-Aug-2021 01:09:57 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-32-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:18:48

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.293	48441341	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.610	36579453	0.83	1.3327	56.7	56.7	0.2709	0.2709	56.66	
2,3,7,8-TCDF	17.623	51323838	0.78	0.9978	140.6	140.6	0.2527	0.2527		
D 13C-2,3,7,8-TCDD	16.046	23703894	0.77	0.8749	55.9	55.9	1.746	1.746	55.93	
2,3,7,8-TCDD	16.074	11553482	0.78	1.0570	46.1	46.1	0.2767	0.2767		
$ 37Cl4-2,3,7,8-TCDD	16.074	12973898		0.8648	31.0	31.0	0.1487	0.1487	77.42	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Report Date: 24-Aug-2021 09:19:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_016.d
Lims ID: 320-76769-A-32-A
Client ID: 11215702-072221-SS-SJSB076 (10-12)
Sample Type: Client
Inject. Date: 24-Aug-2021 01:09:57 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-32-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:18:48

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.293	16.298	0		20854846	4494924	34196	85490	131		
333.9339	16.293	16.298	0		27586495	5966278	29725	74312	201	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.610	17.615	0	1.081	16541281	3149536	7760	19400	406		
317.9389	17.610	17.615	0	1.081	20038172	3740796	7349	18372	509	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.623	17.643	-1	1.001	22527478	4323598	3789	9472	1141		
305.8987	17.623	17.643	-1	1.001	28796360	5349426	3161	7902	1692	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.046	16.065	-1	0.985	10324753	2324901	34196	85490	68		
333.9339	16.046	16.065	-1	0.985	13379141	3015625	29725	74312	101	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.074	16.079	0	1.002	5061099	1150368	3703	9257	311		
321.8936	16.074	16.079	0	1.002	6492383	1443909	2546	6365	567	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.074	16.093	-1	0.987	12973898	2983824	5382	13455	554		

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 09:19:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_016.d		
Injection Date:	24-Aug-2021 01:09:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	518979	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

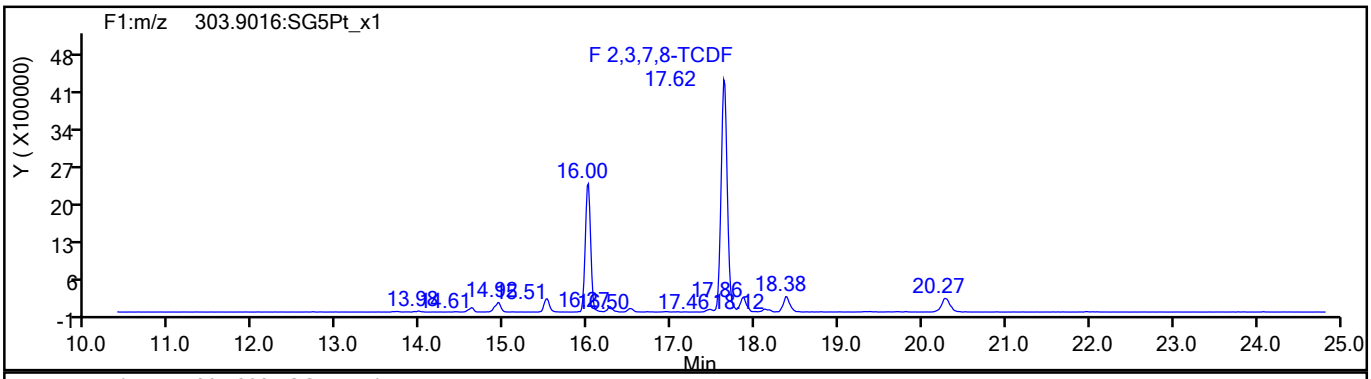

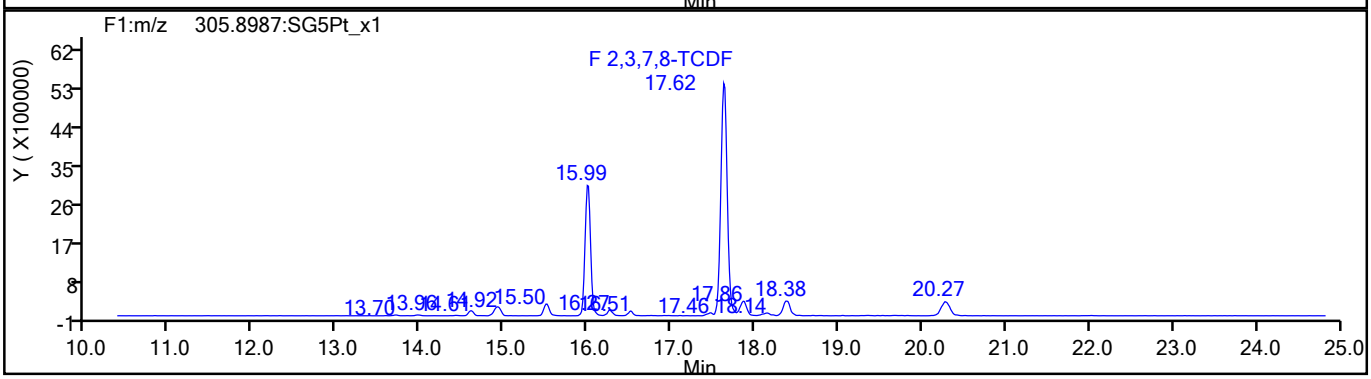

TCDF Standards

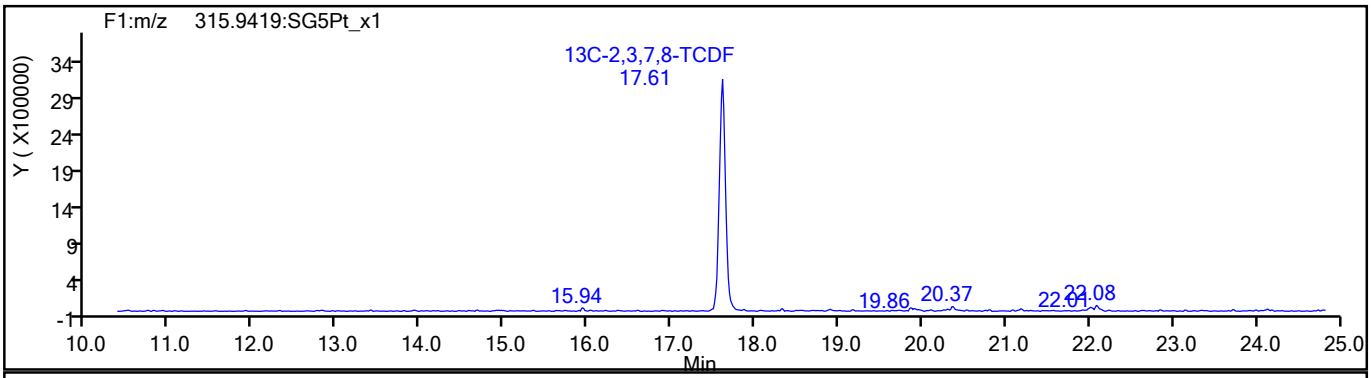

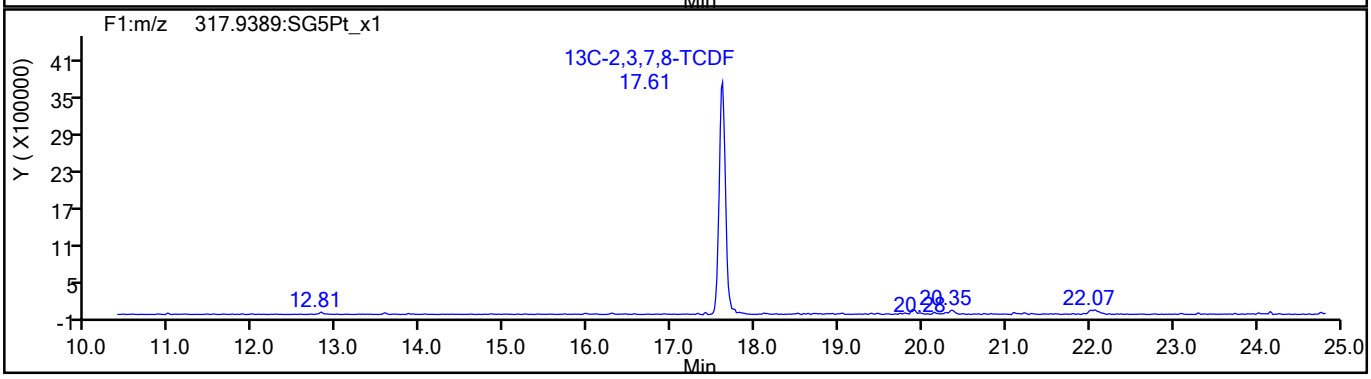

775911

Report Date: 24-Aug-2021 09:19:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_016.d		
Injection Date:	24-Aug-2021 01:09:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	518979	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

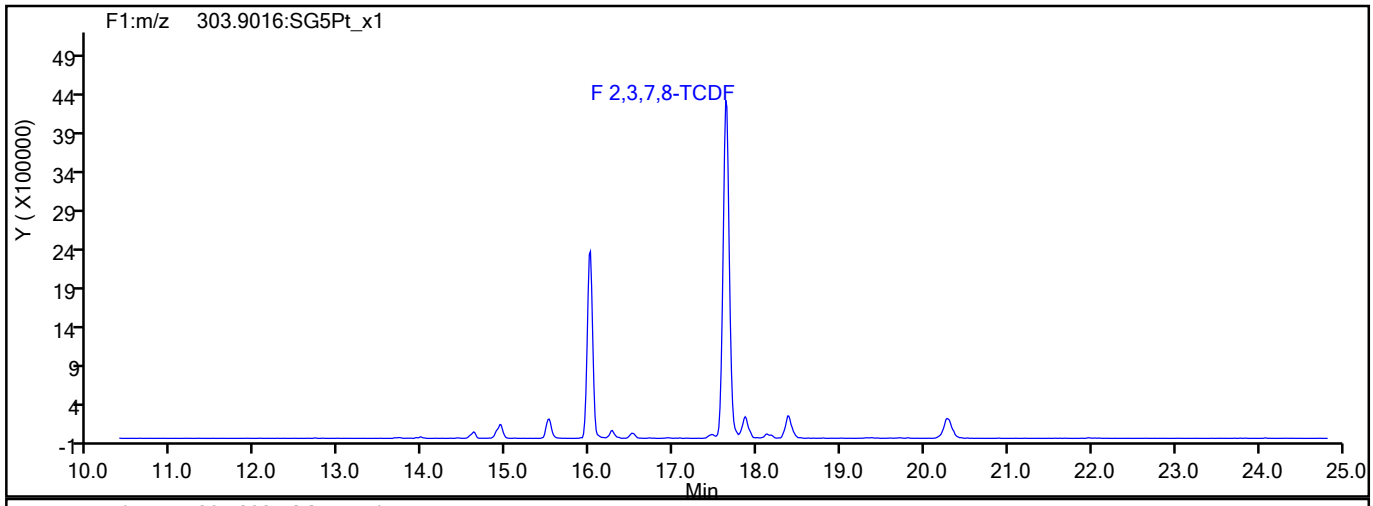

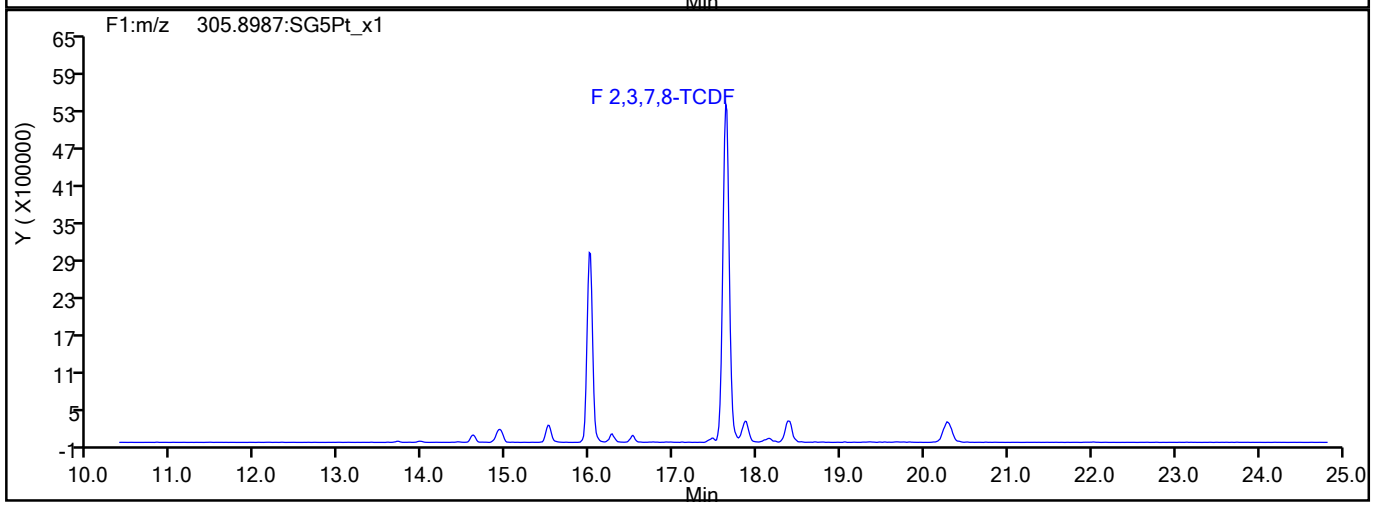

TCDF Interference Mass

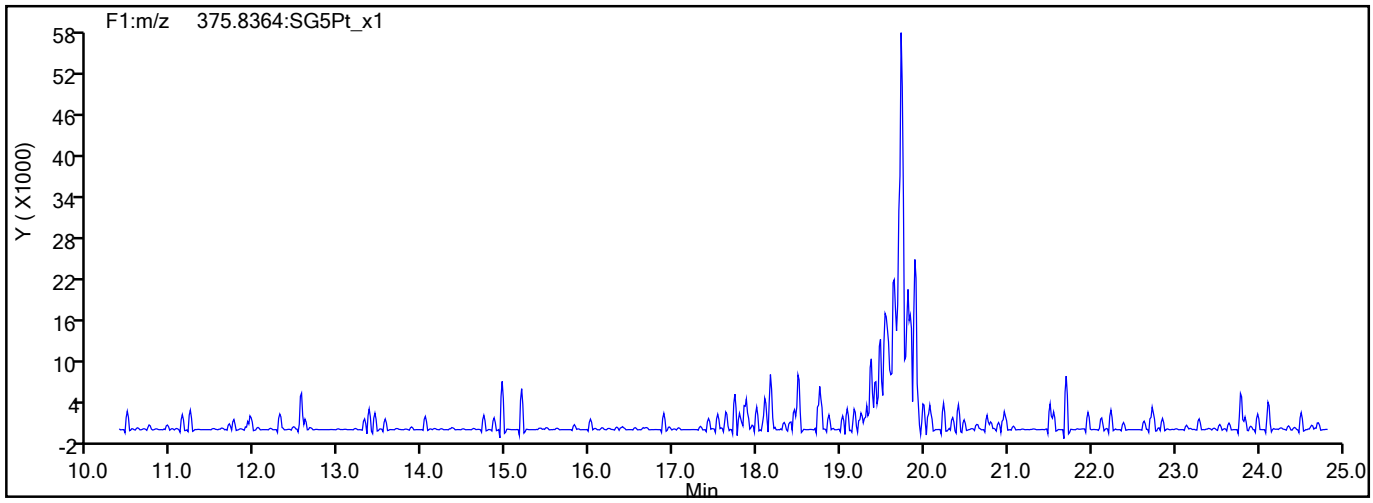

775912

Report Date: 24-Aug-2021 09:19:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_016.d		
Injection Date:	24-Aug-2021 01:09:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	518979	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

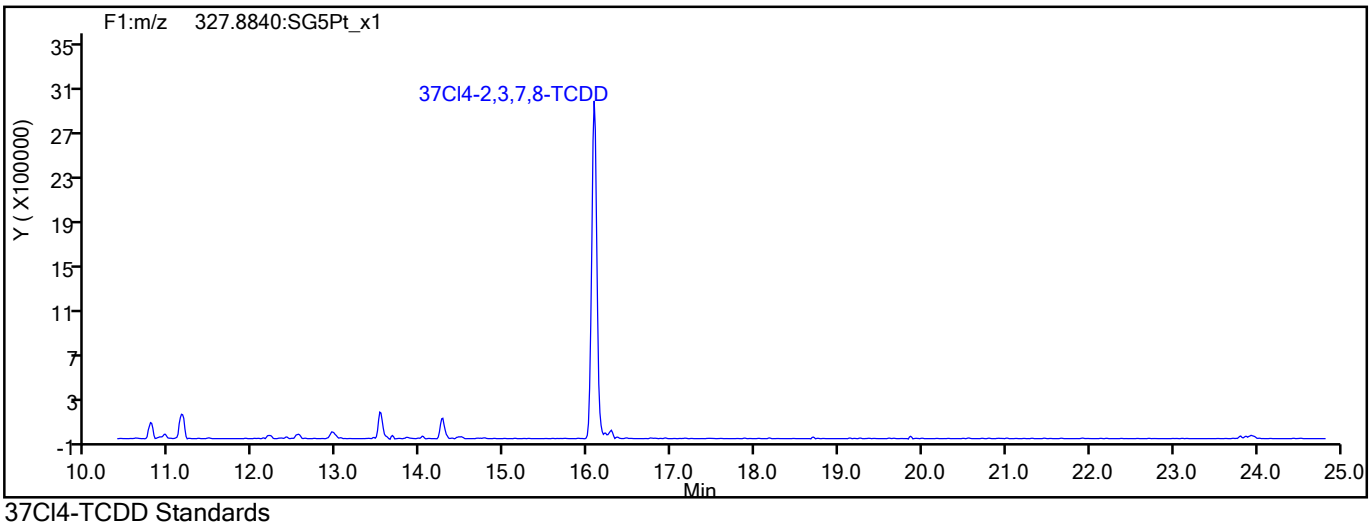

37Cl4-TCDD Standards

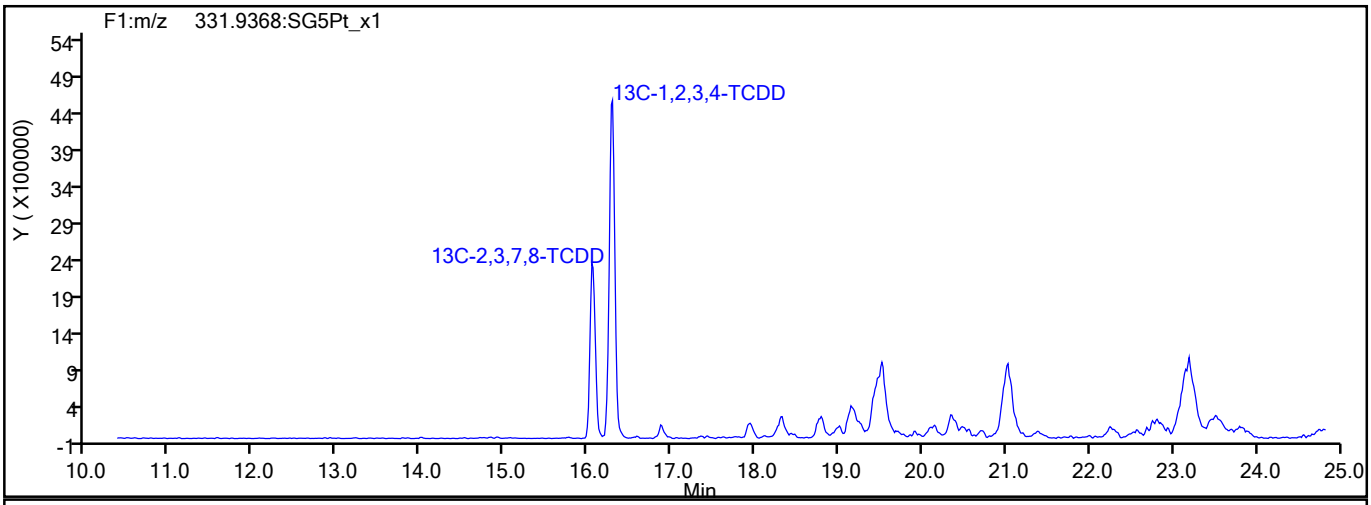

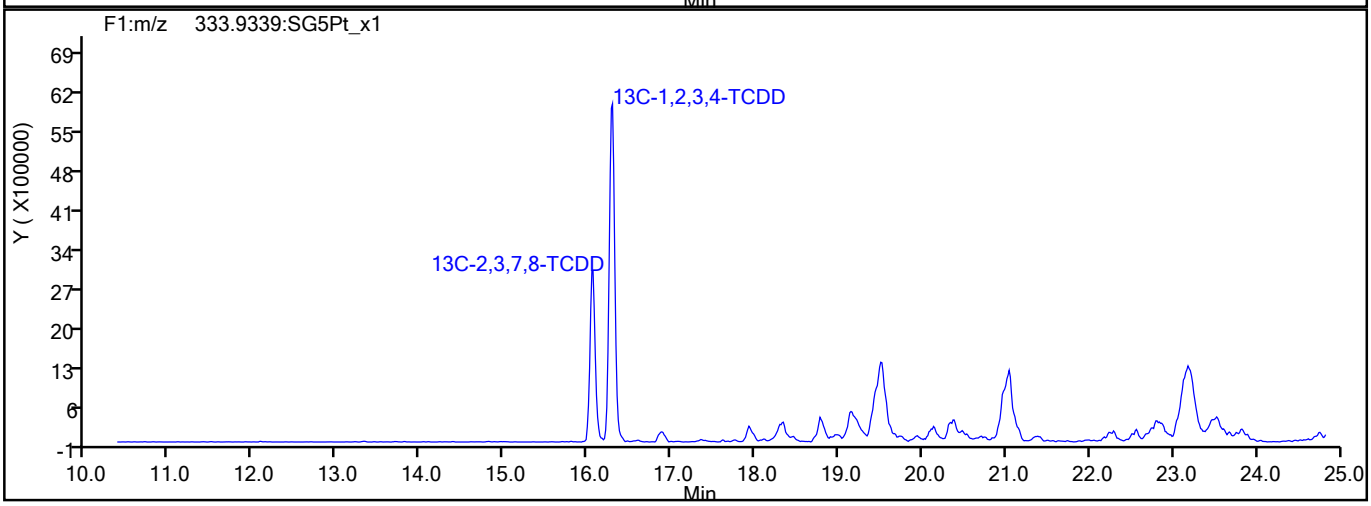

775913

Report Date: 24-Aug-2021 09:19:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_016.d		
Injection Date:	24-Aug-2021 01:09:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (10-12)		
Worklist#:	518979	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

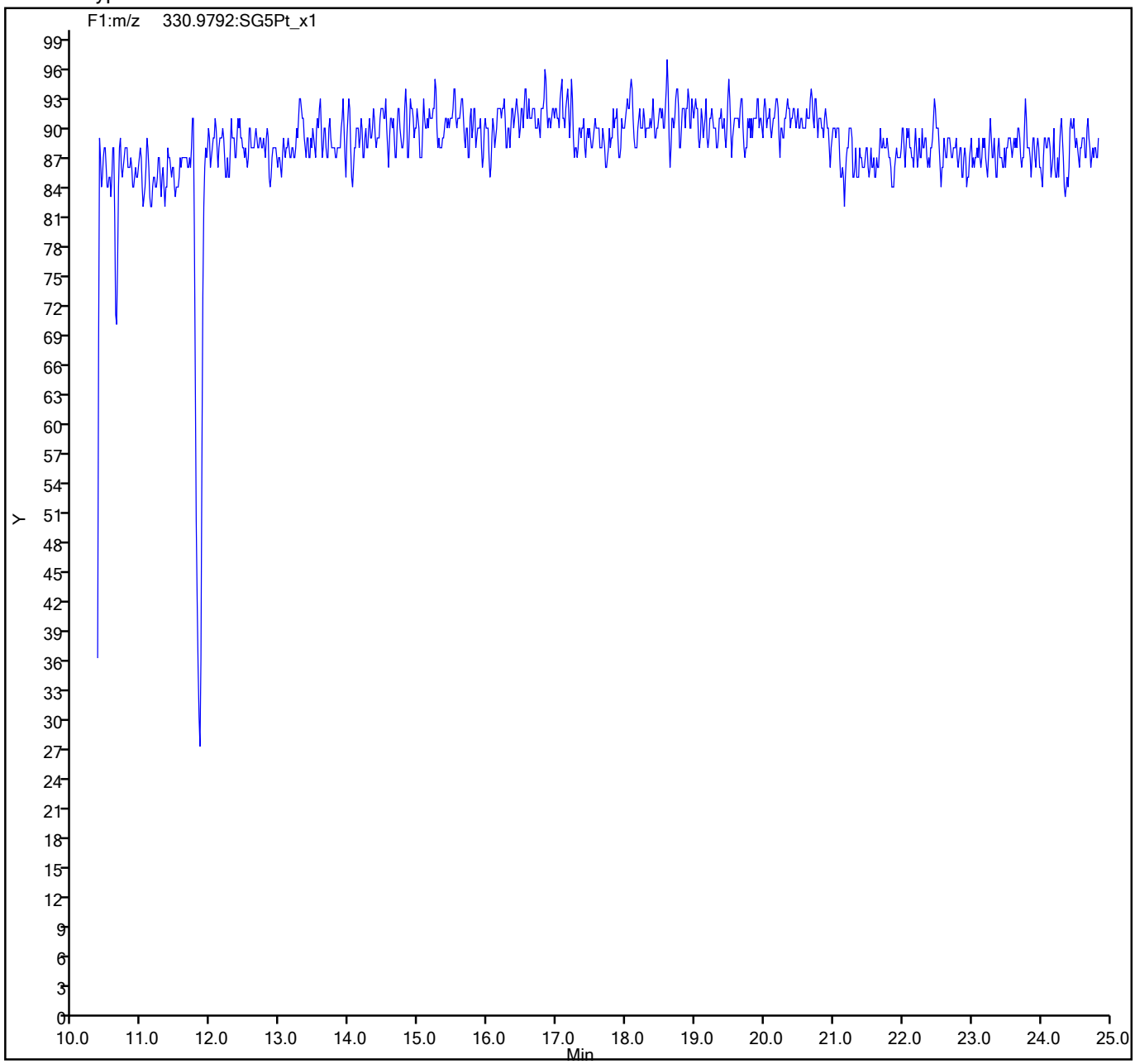

775914

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (12-14)
Lab Sample ID: 320-76769-33
Matrix: Sediment
Lab File ID: 17au21dfs1_20.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.23(g)
Date Analyzed: 08/18/2021 04:31
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 33.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517281
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	15		1.5	0.12
40321-76-4	1,2,3,7,8-PeCDD	ND		7.3	0.21
57117-41-6	1,2,3,7,8-PeCDF	2.1	J	7.3	0.064
57117-31-4	2,3,4,7,8-PeCDF	0.95	J	7.3	0.074
39227-28-6	1,2,3,4,7,8-HxCDD	0.61	J q	7.3	0.10
57653-85-7	1,2,3,6,7,8-HxCDD	0.85	J	7.3	0.11
19408-74-3	1,2,3,7,8,9-HxCDD	1.5	J q	7.3	0.098
70648-26-9	1,2,3,4,7,8-HxCDF	3.0	J	7.3	0.049
57117-44-9	1,2,3,6,7,8-HxCDF	0.87	J	7.3	0.050
72918-21-9	1,2,3,7,8,9-HxCDF	ND		7.3	0.046
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.3	0.044
35822-46-9	1,2,3,4,6,7,8-HpCDD	19	B	7.3	0.19
67562-39-4	1,2,3,4,6,7,8-HpCDF	1.0	J	7.3	0.069
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.42	J	7.3	0.060
3268-87-9	OCDD	350	B	15	0.45
39001-02-0	OCDF	0.58	J	15	0.11
41903-57-5	Total TCDD	17	q	1.5	0.12
30402-14-3	Total TCDF	78	q	1.5	0.23
36088-22-9	Total PeCDD	0.68	J q	7.3	0.21
30402-15-4	Total PeCDF	4.0	J q	7.3	0.069
34465-46-8	Total HxCDD	17	q	7.3	0.10
55684-94-1	Total HxCDF	3.8	J	7.3	0.047
37871-00-4	Total HpCDD	69	B	7.3	0.19
38998-75-3	Total HpCDF	1.7	J q	7.3	0.065

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (12-14)
Lab Sample ID: 320-76769-33
Matrix: Sediment
Lab File ID: 17au21dfs1_20.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.23(g)
Date Analyzed: 08/18/2021 04:31
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 33.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517281
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	55		25-164
89059-46-1	13C-2,3,7,8-TCDF	53		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	51		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	52		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	52		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	56		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	52		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	62		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	55		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	53		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	65		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	58		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	72		26-138
114423-97-1	13C-OCDD	65		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	71		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d
Lims ID: 320-76769-A-33-A
Client ID: 11215702-072221-SS-SJSB076 (12-14)
Sample Type: Client
Inject. Date: 18-Aug-2021 04:31:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-33-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:42:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 18-Aug-2021 14:02:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.423	1046844	0.80	2.1E+04	100.0	100.0				a
2,3,7,8-TCDF	20.493	131741	0.78	1.0802	16.4	16.4	0.0793	0.0793		
D 13C-2,3,7,8-TCDF	20.468	742841	0.78	1.3459	52.7	52.7	0.1059	0.1059	52.72	a
A Non-2,3,7,8-sub-TCDF	19.916	83925	0.77	1.0802	10.6	10.5	0.0793	7.151		RQ
S Total TCDF					27.0	26.9	0.0793	0.0793		RQ
D 13C-2,3,7,8-TCDD	21.819	535064	0.77	0.9317	54.9	54.9	0.2477	0.2477	54.86	
2,3,7,8-TCDD	21.844	30065	0.76	1.0753	5.225	5.225	0.0406	0.0406		
$ 37Cl4-2,3,7,8-TCDD	21.836	300698		1.0083	28.5	28.5	0.0255	0.0255	71.22	
A Non-2,3,7,8-sub-TCDD	20.750	3333	0.77	1.0753	0.7233	0.5793	0.0406	0.5793		RQa
S Total TCDD					5.949	5.805	0.0406	0.0406		RQ
D 13C-1,2,3,7,8-PeCDF	27.293	615696	1.53	1.1405	51.6	51.6	0.1250	0.1250	51.57	
1,2,3,7,8-PeCDF	27.326	4694	1.59	1.0543	0.7231	0.7231	0.0220	0.0220		
D 13C-2,3,4,7,8-PeCDF	28.807	616274	1.65	1.1253	52.3	52.3	0.1266	0.1266	52.31	
2,3,4,7,8-PeCDF	28.816	2027	1.67	1.0079	0.3263	0.3263	0.0255	0.0255		M
A F1 PeCDFs	24.676						0.007524	0.0146		RQU
A Non-2,3,7,8-sub-PeCDF	28.167	2084	1.55	1.0311	0.3648	0.3281	0.0236	0.1845		RQa
S Total PeCDF					1.414	1.378	0.0237	0.0237		RQ
D 13C-1,2,3,7,8-PeCDD	29.616	381532	1.47	0.7165	50.9	50.9	0.1038	0.1038	50.87	
1,2,3,7,8-PeCDD	29.692						0.0715	0.0715		
A Non-2,3,7,8-sub-PeCDD	28.556	937	1.55	1.0465	0.2850	0.2347	0.0715	0.2347		RQa
S Total PeCDD					0.2850	0.2347	0.0715	0.0715		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.946	595692	0.51	0.9648	62.2	62.2	0.2116	0.2116	62.15	
1,2,3,4,7,8-HxCDF	34.972	6926	1.31	1.1474	1.013	1.013	0.0167	0.0167		
D 13C-1,2,3,6,7,8-HxCDF	35.106	589086	0.52	1.0708	55.4	55.4	0.1906	0.1906	55.38	
1,2,3,6,7,8-HxCDF	35.132	2147	1.24	1.2178	0.2993	0.2993	0.0170	0.0170		
D 13C-2,3,4,6,7,8-HxCDF	35.923	551766	0.51	1.0413	53.3	53.3	0.1960	0.1960	53.34	
2,3,4,6,7,8-HxCDF	35.968						0.0151	0.0151		
D 13C-1,2,3,7,8,9-HxCDF	36.815	510604	0.52	0.9731	52.8	52.8	0.2098	0.2098	52.82	
1,2,3,7,8,9-HxCDF	36.852						0.0157	0.0157		
A Non-2,3,7,8-sub-HxCDF	35.074						0.0161	0.0776		RQU
S Total HxCDF					1.313	1.313	0.0161	0.0161		

Report Date: 19-Aug-2021 12:42:39 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.621	993361	1.25	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.142	422334	1.29	0.7587	56.0	56.0	0.1481	0.1481	56.04	
1,2,3,4,7,8-HxCDD	36.175	938	1.24	1.0608	0.2431	0.2094	0.0347	0.0347		RQ
D 13C-1,2,3,6,7,8-HxCDD	36.260	443799	1.24	0.8593	52.0	52.0	0.1308	0.1308	51.99	
1,2,3,6,7,8-HxCDD	36.285	1287	1.07	0.9933	0.2919	0.2919	0.0379	0.0379		
1,2,3,7,8,9-HxCDD	36.638	2387	1.24	1.1094	0.5757	0.4968	0.0336	0.0336		RQ
A Non-2,3,7,8-sub-HxCDD	35.432	21328	1.24	1.0545	4.843	4.670	0.0353	3.207		RQ
S Total HxCDD					5.954	5.668	0.0354	0.0354		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.628	421162	0.43	0.7359	57.6	57.6	0.2100	0.2100	57.61	
1,2,3,4,6,7,8-HpCDF	38.645	2101	1.13	1.4421	0.3459	0.3459	0.0236	0.0236		M
1,2,3,4,7,8,9-HpCDF	39.891	919	1.16	1.3092	0.1441	0.1441	0.0207	0.0207		
D 13C-1,2,3,4,7,8,9-HpCDF	39.882	487273	0.47	0.6854	71.6	71.6	0.2255	0.2255	71.57	
A Non-2,3,7,8-sub-HpCDF	39.277	509	1.04	1.3756	0.1170	0.0815	0.0219	0.0815		RQM
S Total HpCDF					0.6070	0.5715	0.0221	0.0221		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	39.579	434930	1.05	0.6745	64.9	64.9	0.1578	0.1578	64.91	
1,2,3,4,6,7,8-HpCDD	39.588	30267	1.05	1.0503	6.626	6.626	0.0650	0.0650		
A Non-2,3,7,8-sub-HpCDD	39.277	78440	1.05	1.0503	17.2	17.2	0.0650	17.2		
S Total HpCDD					23.8	23.8	0.0650	0.0650		
D 13C-OCDD	42.076	703155	0.89	0.5446	130.0	130.0	0.1727	0.1727	64.99	
OCDF	42.160	927	0.81	1.3168	0.2002	0.2002	0.0385	0.0385		M
OCDD	42.084	448507	0.91	1.0620	120.1	120.1	0.1549	0.1549		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 19-Aug-2021 12:42:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d
Lims ID: 320-76769-A-33-A
Client ID: 11215702-072221-SS-SJSB076 (12-14)
Sample Type: Client
Inject. Date: 18-Aug-2021 04:31:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-33-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:42:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 18-Aug-2021 14:02:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.423	21.483	-4		465759	64731	118	295	549		a
333.9338	21.423	21.483	-4		581085	79111	15	37	5274	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.493	20.482	1	1.001	57872	8254	15	37	550		
305.8987	20.476	20.482	0	1.000	73869	9656	21	52	460	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											a
315.9419	20.468	20.594	-8	0.955	324922	45836	53	132	865		a
317.9389	20.468	20.594	-8	0.955	417919	59187	29	72	2041	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	17.044	19.916	-172	0.833	350	79	15	37	5		
305.8987	17.044	19.916	-172	0.833	604	118	21	52	6	0.58(0.65-0.89)	
	Empc Correction				454	102	21	52	5		
303.9016	18.816	19.916	-66	0.919	1809	286	15	37	19		
	Empc Correction				1493	217	15	37	14		
305.8987	18.833	19.916	-65	0.920	1939	283	21	52	13	0.93(0.65-0.89)	
303.9016	19.263	19.916	-39	0.941	1785	446	15	37	30		
305.8987	19.246	19.916	-40	0.940	3067	502	21	52	24	0.58(0.65-0.89)	
	Empc Correction				2318	579	21	52	28		
303.9016	19.770	19.916	-9	0.966	25424	4008	15	37	267		
305.8987	19.770	19.916	-9	0.966	31959	4691	21	52	223	0.80(0.65-0.89)	
303.9016	21.285	19.916	82	1.040	4031	571	15	37	38		
305.8987	21.259	19.916	80	1.039	4827	712	21	52	34	0.84(0.65-0.89)	
303.9016	23.669	19.916	225	1.156	4347	794	15	37	53		
305.8987	23.677	19.916	225	1.157	4998	852	21	52	41	0.87(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											
331.9368	21.819	21.790	2	1.018	232399	28082	118	295	238		
333.9338	21.819	21.790	2	1.018	302665	40637	15	37	2709	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.844	21.825	1	1.001	12967	1741	8	20	218		
321.8936	21.827	21.825	0	1.000	17098	2182	4	10	546	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.836	21.905	-4	1.019	300698	38289	15	37	2553		
A Non-2,3,7,8-sub-TCDD											RQa
319.8965	19.710	20.750	-62	0.903	1450	234	8	20	29		a
321.8936	19.736	20.750	-61	0.905	2712	493	4	10	123	0.53(0.65-0.89)	
	Empc Correction				1883	303	4	10	76		
13C-1,2,3,7,8-PeCDF											
351.9000	27.293	27.343	-3	1.274	372333	57891	57	142	1016		
353.8970	27.301	27.343	-3	1.274	243363	36854	25	62	1474	1.53(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.326	27.368	-3	1.001	2884	441	3	7	147		
341.8567	27.326	27.368	-3	1.001	1810	294	6	15	49	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.807	28.867	-4	1.345	383815	52597	57	142	923		
353.8970	28.807	28.867	-4	1.345	232459	33128	25	62	1325	1.65(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	28.816	28.884	-4	1.000	1267	242	3	7	81		
341.8567	28.816	28.884	-4	1.000	760	144	6	15	24	1.67(1.32-1.78)	M
A F1 PeCDFs											U
339.8597	24.116	24.676	-34	0.884	46	24	1	2	24		
341.8567	24.133	24.676	-33	0.884	73	39	2	5	20	0.63(1.32-1.78)	
	Empc Correction				29	15	2	5	8		
A Non-2,3,7,8-sub-PeCDF											RQa
339.8597	25.820	28.167	-141	0.946	859	152	3	7	51		a
	Empc Correction				712	153	3	7	51		
341.8567	25.837	28.167	-140	0.947	460	99	6	15	17	1.87(1.32-1.78)	
339.8597	27.882	28.167	-17	1.022	640	122	3	7	41		a
	Empc Correction				554	127	3	7	42		
341.8567	27.899	28.167	-16	1.022	358	82	6	15	14	1.79(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.616	29.667	-3	1.382	227128	30567	36	90	849		
369.8919	29.624	29.667	-3	1.383	154404	22890	7	17	3270	1.47(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.692						13	32			
357.8516	29.692						3	7			
A Non-2,3,7,8-sub-PeCDD											RQa
355.8546	26.897	28.556	-99	0.908	570	147	13	32	11		a
357.8516	26.947	28.556	-96	0.910	568	109	3	7	36	1.00(1.32-1.78)	
	Empc Correction				367	94	3	7	31		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.946	34.974	-2	0.954	202393	40362	64	160	631		
385.8610	34.946	34.974	-2	0.954	393299	74446	114	285	653	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.972	35.000	-2	1.001	3928	794	5	12	159		
375.8178	34.963	35.000	-2	1.000	2998	772	4	10	193	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.106	35.134	-2	0.959	202659	36286	64	160	567		
385.8610	35.098	35.134	-2	0.958	386427	69961	114	285	614	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.132	35.151	-1	1.001	1187	303	5	12	61		
375.8178	35.132	35.151	-1	1.001	960	219	4	10	55	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.923	35.951	-2	0.981	185823	39971	64	160	625		
385.8610	35.923	35.951	-2	0.981	365943	80359	114	285	705	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.968						5	12			
375.8178	35.968						4	10			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.815	36.843	-2	1.005	173843	39452	64	160	616		
385.8610	36.815	36.843	-2	1.005	336761	73577	114	285	645	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.852						5	12			
375.8178	36.852						4	10			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.448	35.074	-97	0.957	260	62	5	12	12		
	Empc Correction				207	69	5	12	14		
375.8178	33.473	35.074	-96	0.958	167	56	4	10	14	1.56(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.621	36.641	-1		550997	119989	47	117	2553		
403.8529	36.621	36.641	-1		442364	98015	51	127	1922	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.142	36.161	-1	0.987	238021	52244	47	117	1112		
403.8529	36.142	36.161	-1	0.987	184313	42763	51	127	838	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQ
389.8158	36.175	36.178	0	1.001	670	185	7	17	26		
	Empc Correction				519	145	7	17	21		
391.8127	36.159	36.178	-1	1.000	419	117	7	17	17	1.60(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.260	36.279	-1	0.990	245438	51659	47	117	1099		
403.8529	36.251	36.279	-2	0.990	198361	41374	51	127	811	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.285	36.296	-1	1.001	664	145	7	17	21		
391.8127	36.285	36.296	-1	1.001	623	149	7	17	21	1.07(1.05-1.43)	
1,2,3,7,8,9-HxCDD											RQ
389.8158	36.638	36.658	-1	1.014	1700	380	7	17	54		
	Empc Correction				1321	308	7	17	44		
391.8127	36.638	36.658	-1	1.014	1066	249	7	17	36	1.59(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	34.264	35.432	-70	0.945	8171	1594	7	17	228		
391.8127	34.247	35.432	-71	0.945	6474	1107	7	17	158	1.26(1.05-1.43)	
389.8158	35.022	35.432	-25	0.966	747	164	7	17	23		
391.8127	35.005	35.432	-26	0.965	599	145	7	17	21	1.25(1.05-1.43)	
389.8158	35.376	35.432	-3	0.976	3745	888	7	17	127		
	Empc Correction				2954	584	7	17	83		
391.8127	35.367	35.432	-4	0.975	2383	471	7	17	67	1.57(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.628	38.647	-1	1.055	127414	33101	40	100	828		
419.8220	38.637	38.647	-1	1.055	293748	75759	95	237	797	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7817	38.645	38.654	-1	1.000	1115	282	13	32	22		M
409.7788	38.645	38.654	-1	1.000	986	245	2	5	123	1.13(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.891	39.900	-1	1.000	493	132	13	32	10		
409.7788	39.882	39.900	-1	1.000	426	131	2	5	66	1.16(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.882	39.901	-1	1.089	155341	42172	40	100	1054		
419.8220	39.882	39.901	-1	1.089	331932	94224	95	237	992	0.47(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											RQM
407.7817	38.982	39.277	-18	1.009	481	126	13	32	10		
	Empc Correction				259	82	13	32	6		
409.7788	39.015	39.277	-16	1.010	250	79	2	5	40	1.92(0.88-1.20)	M
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.579	39.590	-1	1.081	223238	59613	52	130	1146		
437.8140	39.579	39.590	-1	1.081	211692	57501	41	102	1402	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.588	39.597	-1	1.000	15520	4465	17	42	263		
425.7737	39.588	39.597	-1	1.000	14747	4111	15	37	274	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.948	39.277	-20	0.984	40204	10406	17	42	612		
425.7737	38.948	39.277	-20	0.984	38236	10137	15	37	676	1.05(0.88-1.20)	
13C-OCDD											
469.7780	42.076	42.094	-1	1.149	331973	73284	36	90	2036		
471.7750	42.076	42.094	-1	1.149	371182	84720	46	115	1842	0.89(0.76-1.02)	
OCDF											M
441.7428	42.160	42.187	-2	1.002	414	102	3	7	34		M
443.7399	42.185	42.187	0	1.003	513	148	13	32	11	0.81(0.76-1.02)	M
OCDD											
457.7377	42.084	42.103	-1	1.000	213967	48385	26	65	1861		
459.7348	42.084	42.103	-1	1.000	234540	55350	26	65	2129	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Lims ID:	320-76769-A-33-A		
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Inject. Date:	18-Aug-2021 04:31:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	18

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	742841	105023

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	742841	105023

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.044	350	79	604	118	0.1189	0.58	RQ
17.044	350	79	454	102	0.1002		Empc Correction
18.816	1809	286	1939	283	0.4671	0.93	RQ
18.816	1493	217	1939	283	0.4277		Empc Correction
19.263	1785	446	3067	502	0.6047	0.58	RQ
19.263	1785	446	2318	579	0.5113		Empc Correction
19.770	25424	4008	31959	4691	7.15	0.80	
21.285	4031	571	4827	712	1.10	0.84	
23.669	4347	794	4998	852	1.16	0.87	
Signal Totals:							
	37430	6115	46495	7219			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	85140	13342				0.80	RQ
	83925	13334					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 10.611 = (85140 * 100.000) / (742841 * 1.080)

Empc Amount: 10.459 = (83925 * 100.000) / (742841 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Lims ID:	320-76769-A-33-A		
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Inject. Date:	18-Aug-2021 04:31:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	18

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	535064	68719

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	535064	68719

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.710	1450	234	2712	493	0.7233	0.53	RQa
19.710	1450	234	1883	303	0.5793		Empc Correction
Signal Totals:							
	1450	234	1883	303			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4162	727				0.53	RQa
	3333	537					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7233 = (4162 * 100.000) / (535064 * 1.075)
Empc Amount: 0.5793 = (3333 * 100.000) / (535064 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Lims ID:	320-76769-A-33-A		
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Inject. Date:	18-Aug-2021 04:31:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	18

F1 PeCDFs, RT: 24.676

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	615696	94745
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	616274	85725

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	615985	90235

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.116	46	24	73	39	0.0187	0.63	RQ
24.116	46	24	29	15	0.0118		Empc Correction
24.391	57	36	323	85	0.0598	0.18	RQ
24.391	57	36	36	23	0.0146		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Lims ID:	320-76769-A-33-A		
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Inject. Date:	18-Aug-2021 04:31:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	18

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	615696	94745
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	616274	85725

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	615985	90235

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.820	859	152	460	99	0.2077	1.87	RQa
25.820	712	153	460	99	0.1845		Empc Correction
27.882	640	122	358	82	0.1571	1.79	RQa
27.882	554	127	358	82	0.1436		Empc Correction
Signal Totals:							
	1266	280	818	181			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2317	455				1.83	RQa
	2084	461					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.3648 = (2317 * 100.000) / (615985 * 1.031)

Empc Amount: 0.3281 = (2084 * 100.000) / (615985 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Lims ID:	320-76769-A-33-A		
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Inject. Date:	18-Aug-2021 04:31:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	18

Non-2,3,7,8-sub-PeCDD, RT: 28.556

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	381532	53457

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	381532	53457

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.897	570	147	568	109	0.2850	1.00	RQa
26.897	570	147	367	94	0.2347		Empc Correction
Signal Totals:							
	570	147	367	94			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1138	256				1.00	RQa
	937	241					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2850 = (1138 * 100.000) / (381532 * 1.046)
Empc Amount: 0.2347 = (937 * 100.000) / (381532 * 1.046)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Lims ID:	320-76769-A-33-A		
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Inject. Date:	18-Aug-2021 04:31:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	18

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	595692	114808
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	589086	106247
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	551766	120330
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	510604	113029

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	561787	113603

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.448	260	62	167	56	0.0631	1.56	RQ
33.448	207	69	167	56	0.0553		Empc Correction
35.940	10	0	56	47	0.009750	0.18	RnQ
35.940	10	0	8	0	0.002659		Empc Correction
36.924	291	129	335	126	0.0925	0.87	RQ
36.924	291	129	234	104	0.0776		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Lims ID:	320-76769-A-33-A		
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Inject. Date:	18-Aug-2021 04:31:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	18

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	422334	95007
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	443799	93033
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	433066	94020

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.264	8171	1594	6474	1107	3.21	1.26	
35.022	747	164	599	145	0.2947	1.25	
35.376	3745	888	2383	471	1.34	1.57	RQ
35.376	2954	584	2383	471	1.17		Empc Correction
Signal Totals:							
	11872	2342	9456	1723			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	22119	4369				1.34	RQ
	21328	4065					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.843 = (22119 * 100.000) / (433066 * 1.055)

Empc Amount: 4.670 = (21328 * 100.000) / (433066 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Lims ID:	320-76769-A-33-A		
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Inject. Date:	18-Aug-2021 04:31:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	18

Non-2,3,7,8-sub-HpCDF, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	421162	108860
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	487273	136396

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	454217	122628

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.982	481	126	250	79	0.1170	1.92	RQM
38.982	259	82	250	79	0.0815		Empc Correction
Signal Totals:							
	259	82	250	79			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	731	205				1.92	RQM
	509	161					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1170 = (731 * 100.000) / (454217 * 1.376)
Empc Amount: 0.0815 = (509 * 100.000) / (454217 * 1.376)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Lims ID:	320-76769-A-33-A		
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Inject. Date:	18-Aug-2021 04:31:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	18

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	434930	117114

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	434930	117114

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.948	40204	10406	38236	10137	17.2	1.05	
Signal Totals:							
	40204	10406	38236	10137			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	78440	20543				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 17.171 = (78440 * 100.000) / (434930 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d				
Injection Date:	18-Aug-2021 04:31:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-33-A	Lab Sample ID:	320-76769-33		
Client ID:	11215702-072221-SS-SJSB076 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 20.72
Area: 2773
Amount: 0.398395
Amount Units: pg/ul

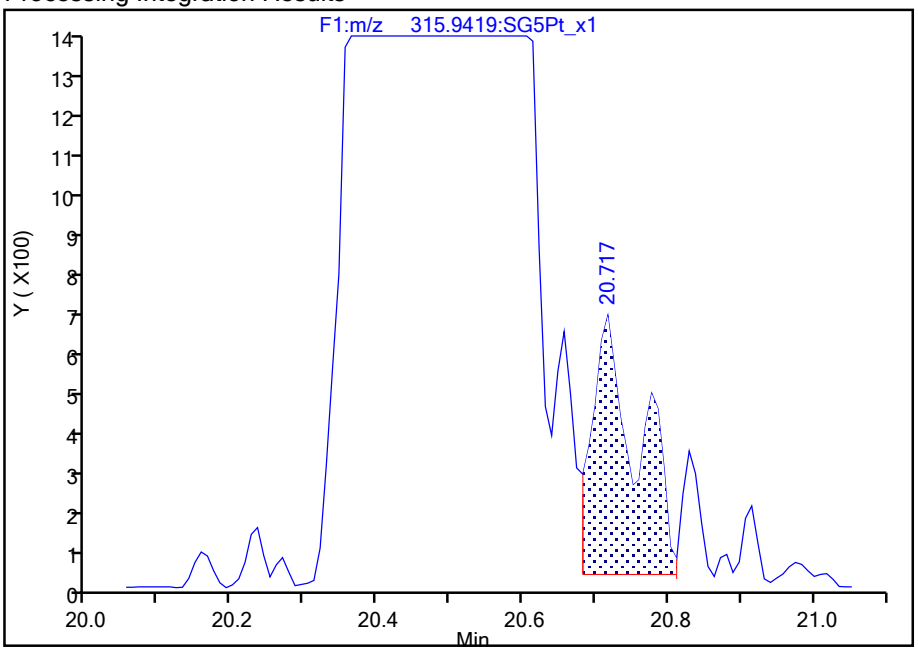

Manual Integration Results

RT: 20.47
Area: 324922
Amount: 52.724730
Amount Units: pg/ul

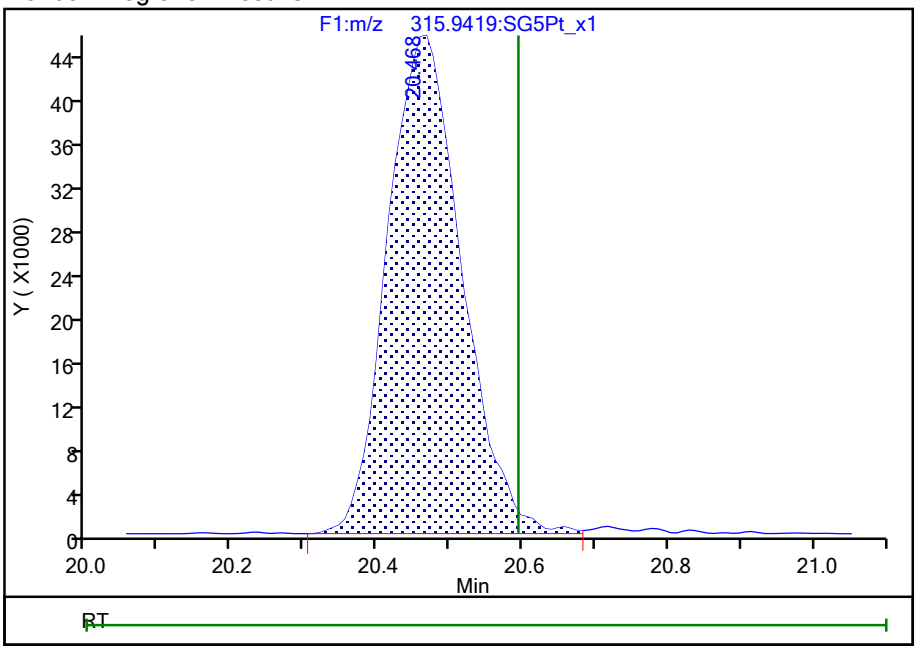

Reviewer: stephensk, 18-Aug-2021 14:01:55

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d				
Injection Date:	18-Aug-2021 04:31:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-33-A	Lab Sample ID:	320-76769-33		
Client ID:	11215702-072221-SS-SJSB076 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 28.82
Area: 424
Amount: 0.272251
Amount Units: pg/ul

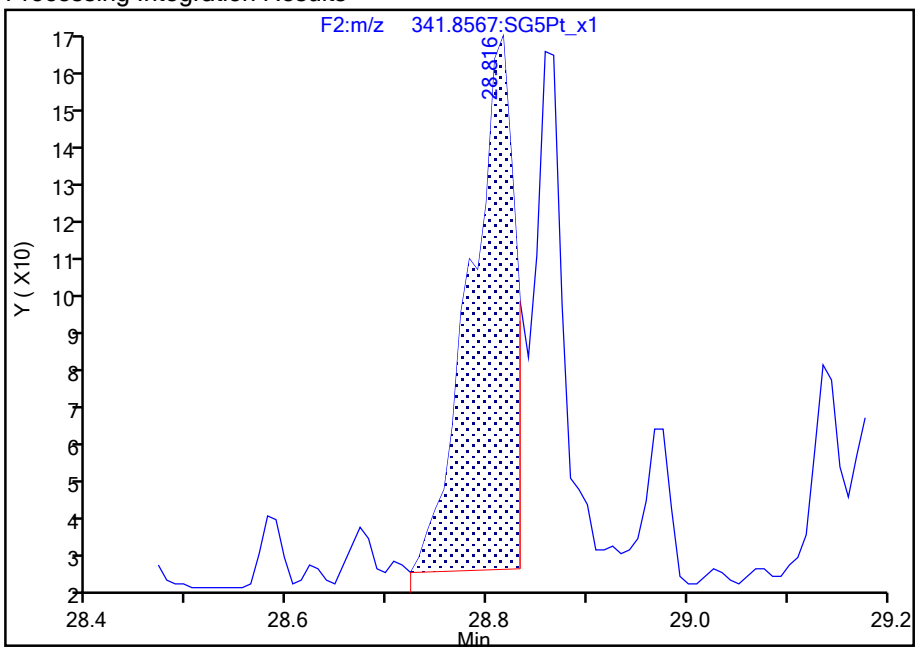

Manual Integration Results

RT: 28.82
Area: 760
Amount: 0.326347
Amount Units: pg/ul

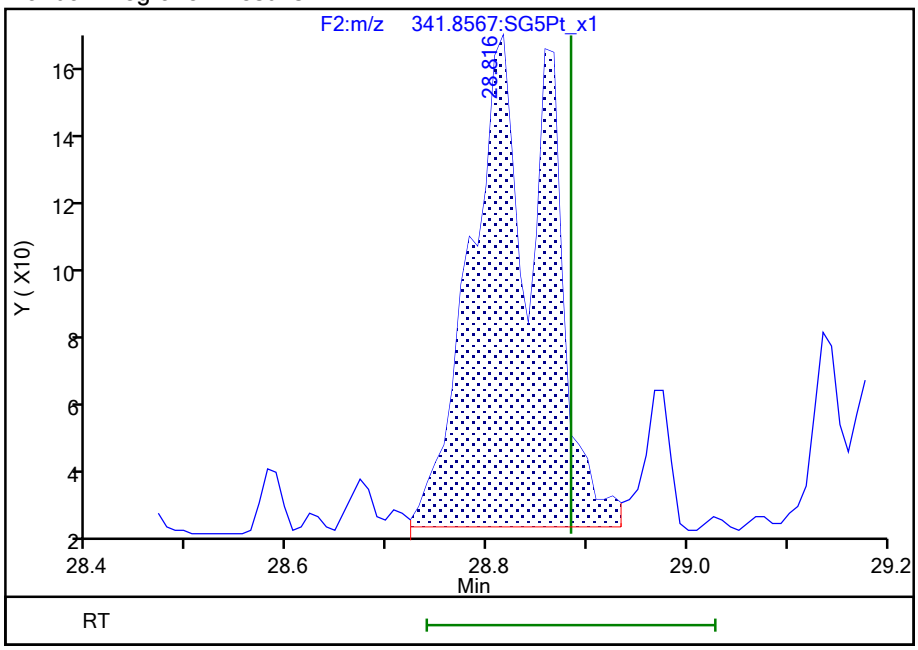

Reviewer: dadunj, 19-Aug-2021 12:40:35

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d				
Injection Date:	18-Aug-2021 04:31:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-33-A	Lab Sample ID:	320-76769-33		
Client ID:	11215702-072221-SS-SJSB076 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 38.65
Area: 1092
Amount: 0.342145
Amount Units: pg/ul

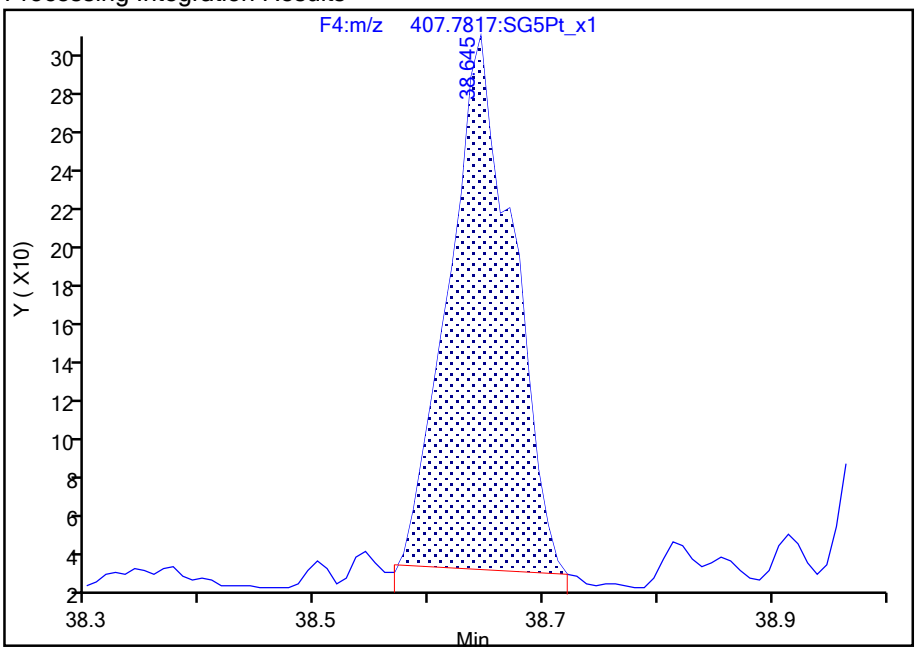

Manual Integration Results

RT: 38.65
Area: 1115
Amount: 0.345932
Amount Units: pg/ul

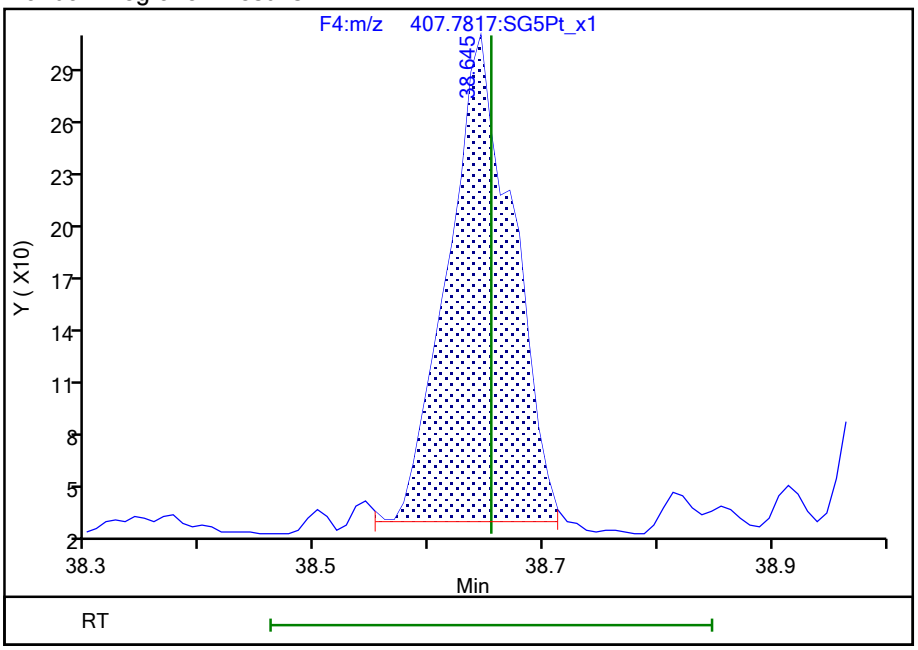

Reviewer: dadunj, 19-Aug-2021 12:41:34

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d				
Injection Date:	18-Aug-2021 04:31:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-33-A	Lab Sample ID:	320-76769-33		
Client ID:	11215702-072221-SS-SJSB076 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

Non-2,3,7,8-sub-HpCDF, Signal: 2, m/z: 409.7788, RT: (38.62- 39.93)

Signal: 2

Processing Integration Results

RT = 39.015 Area = 277

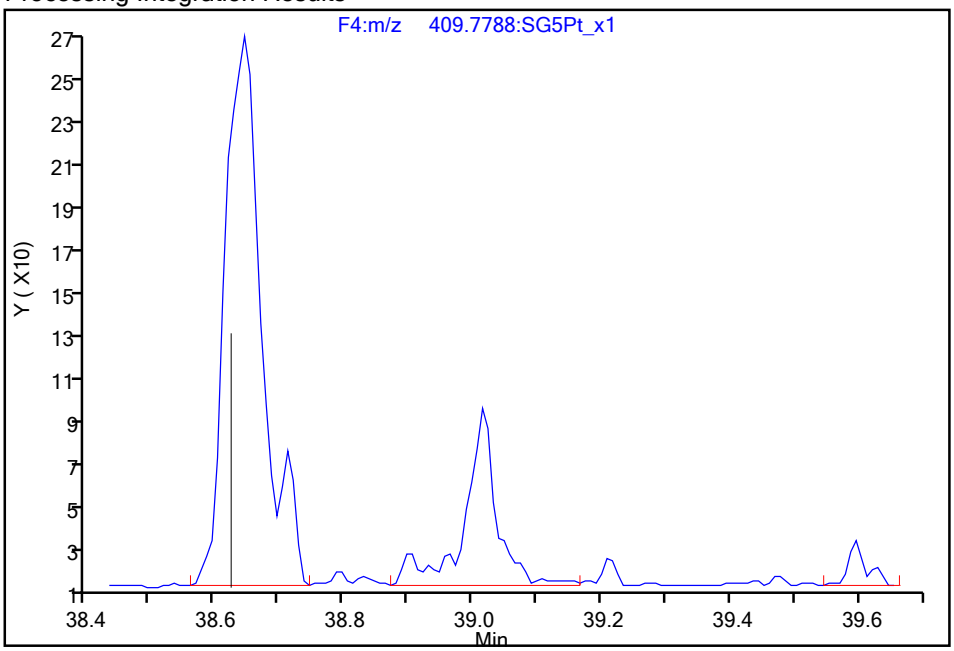

Manual Integration Results

RT = 39.015 Area = 250 M

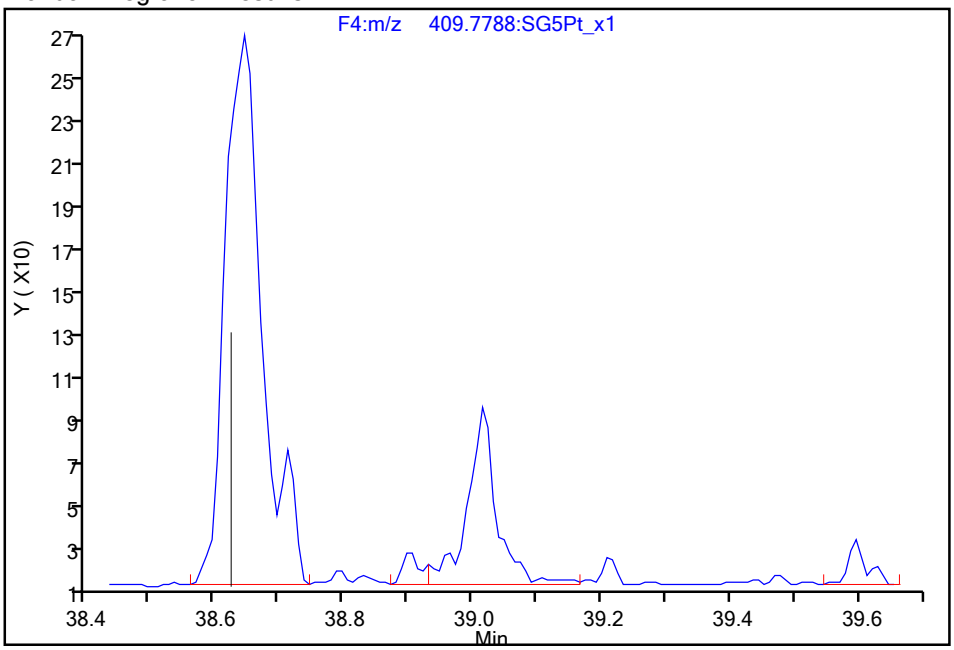

Reviewer: dadunj, 19-Aug-2021 12:41:42

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d				
Injection Date:	18-Aug-2021 04:31:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-33-A	Lab Sample ID:	320-76769-33		
Client ID:	11215702-072221-SS-SJSB076 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 42.10
Area: 754
Amount: 0.292900
Amount Units: pg/ul

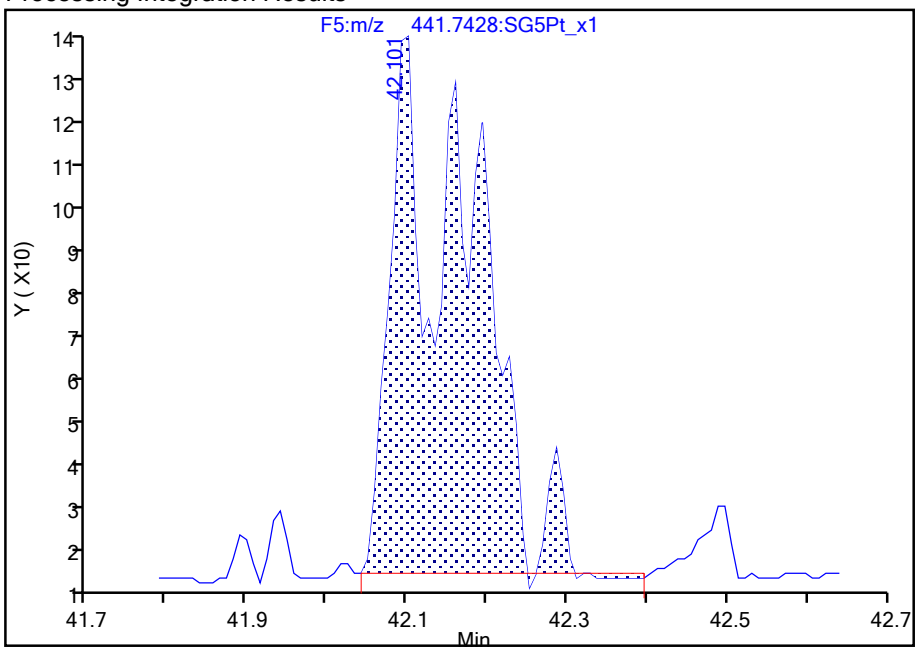

Manual Integration Results

RT: 42.16
Area: 414
Amount: 0.200235
Amount Units: pg/ul

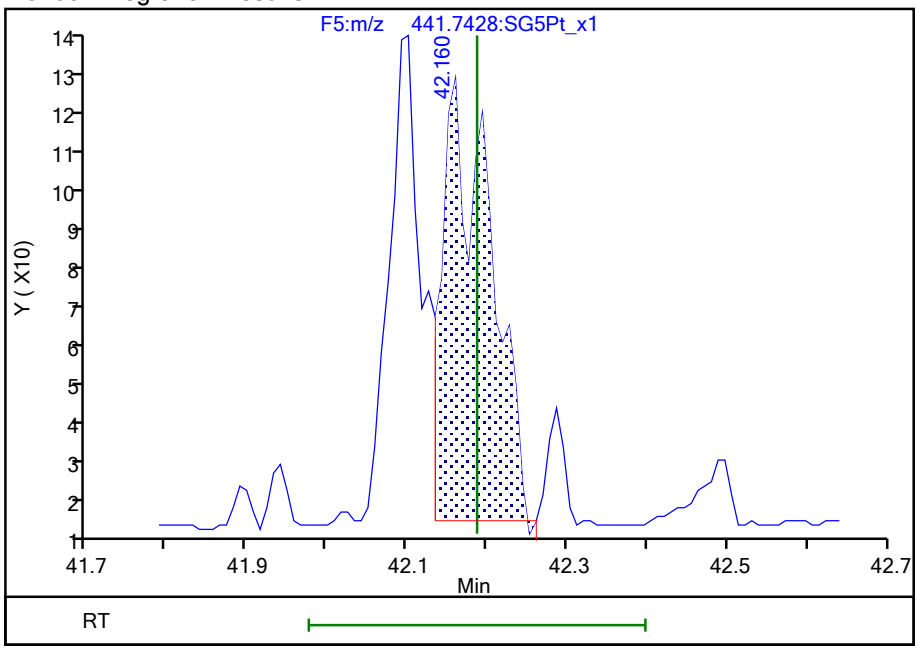

Reviewer: dadunj, 19-Aug-2021 12:41:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d				
Injection Date:	18-Aug-2021 04:31:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-33-A	Lab Sample ID:	320-76769-33		
Client ID:	11215702-072221-SS-SJSB076 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 42.19
Area: 602
Amount: 0.292900
Amount Units: pg/ul

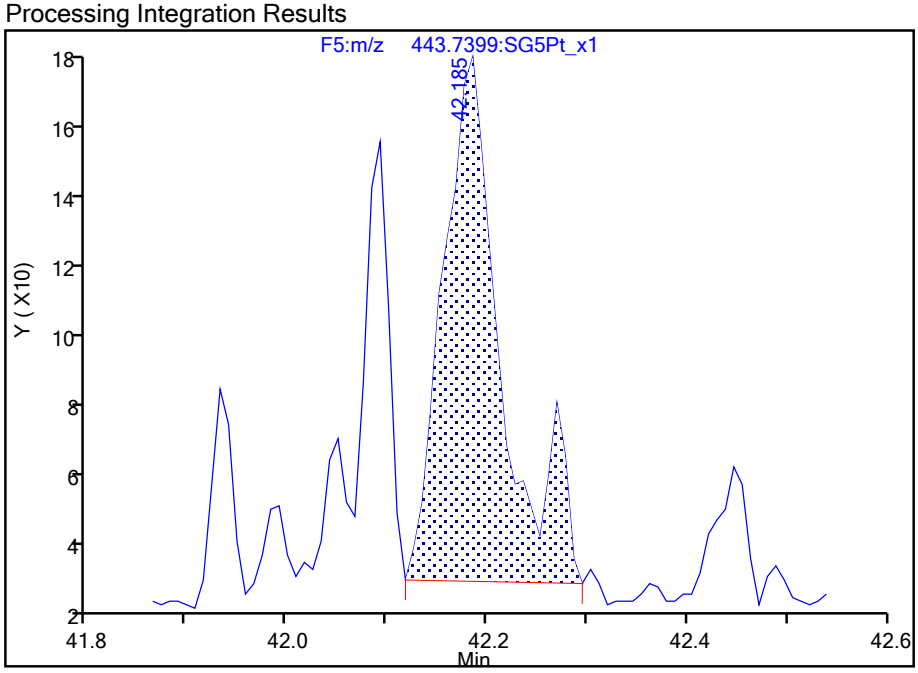

Manual Integration Results

RT: 42.19
Area: 513
Amount: 0.200235
Amount Units: pg/ul

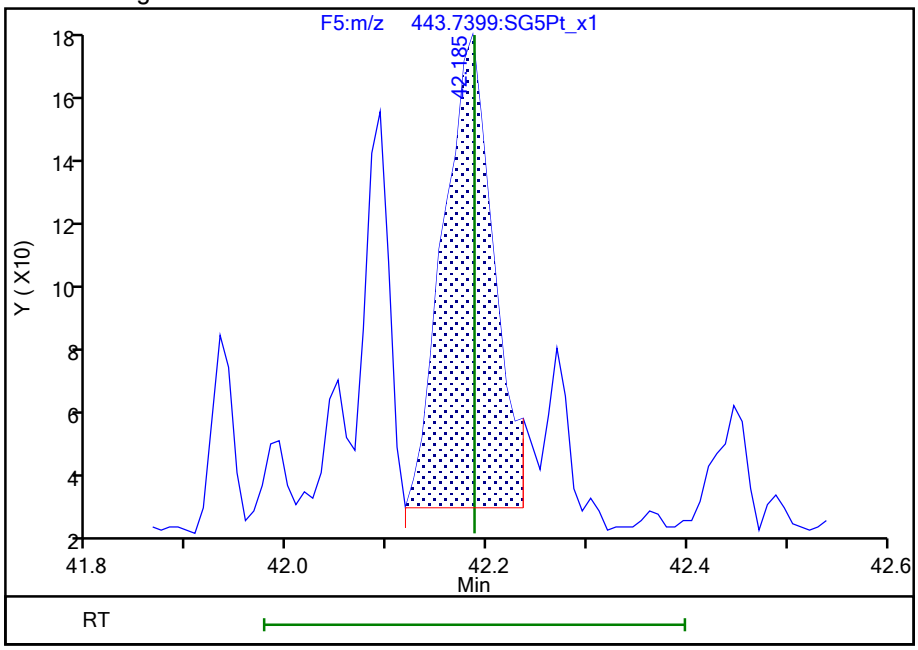

Reviewer: dadunj, 19-Aug-2021 12:41:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Injection Date:	18-Aug-2021 04:31:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

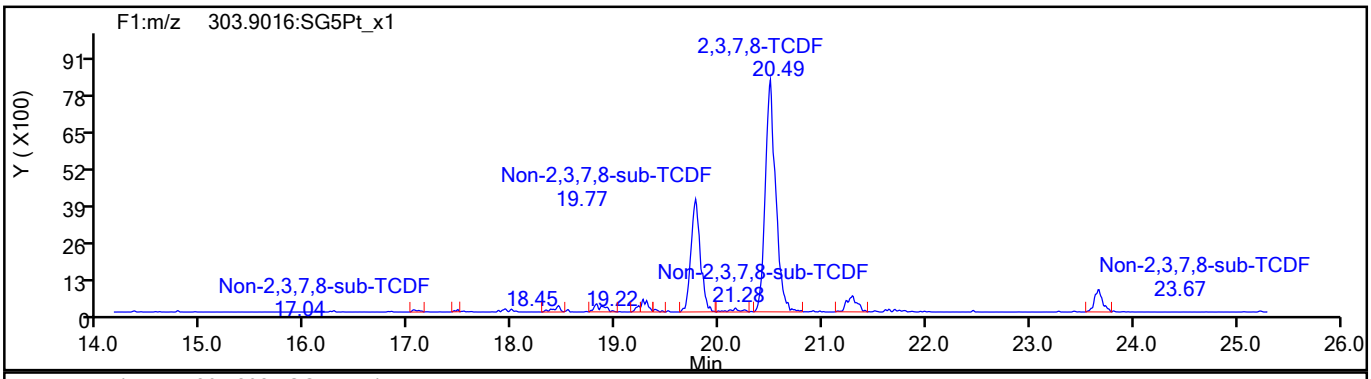

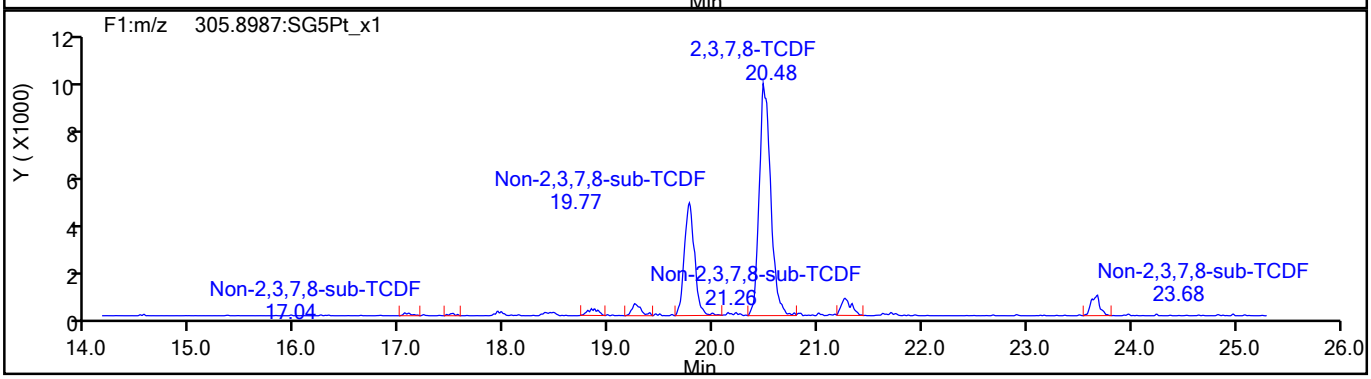

TCDF Standards

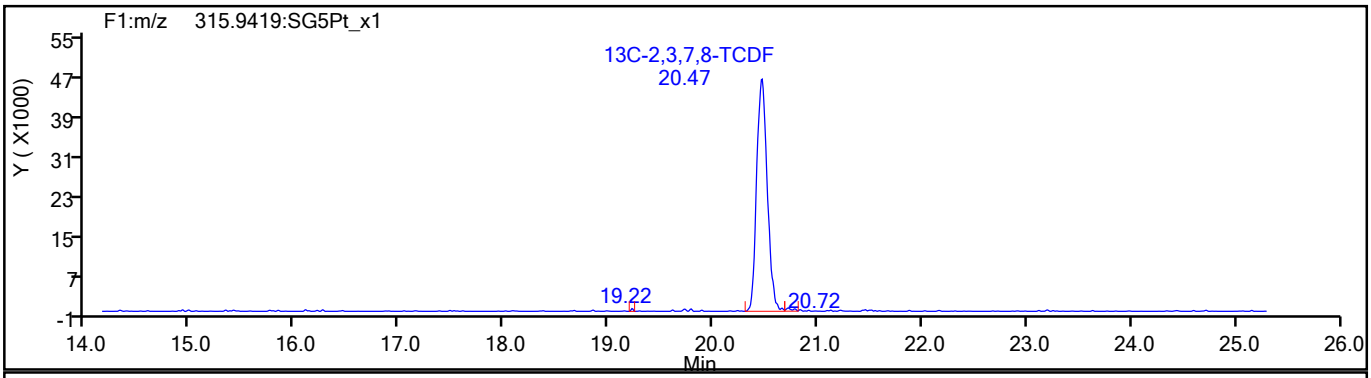

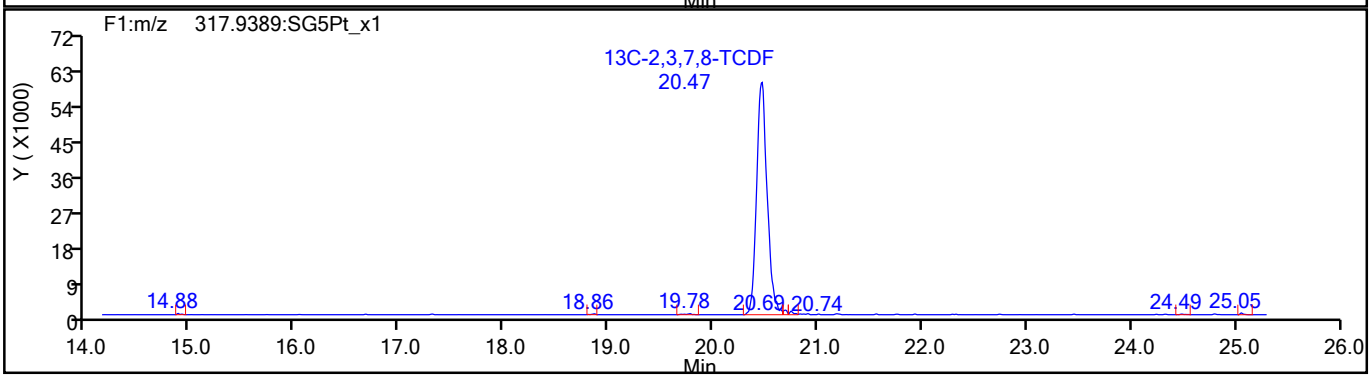

775941

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Injection Date:	18-Aug-2021 04:31:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

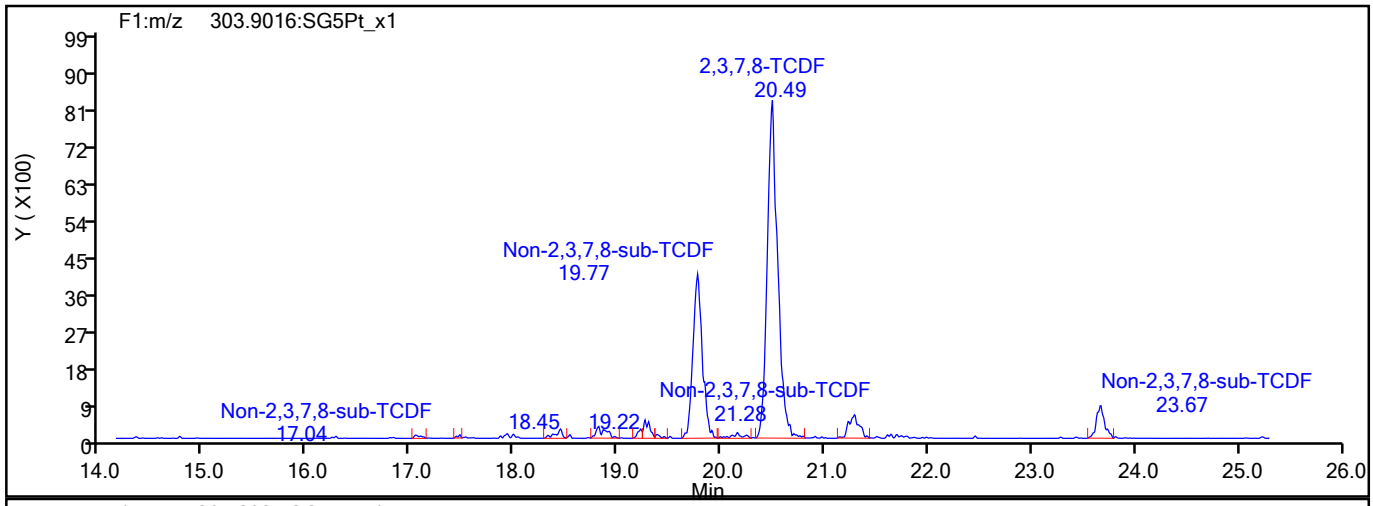

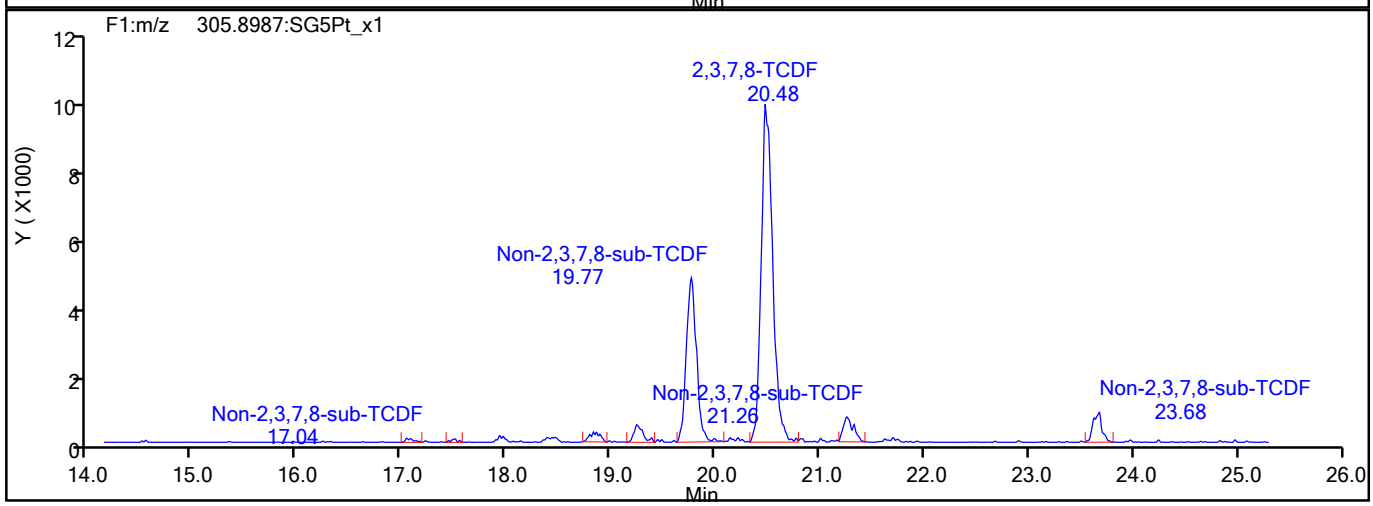

TCDF Interference Mass

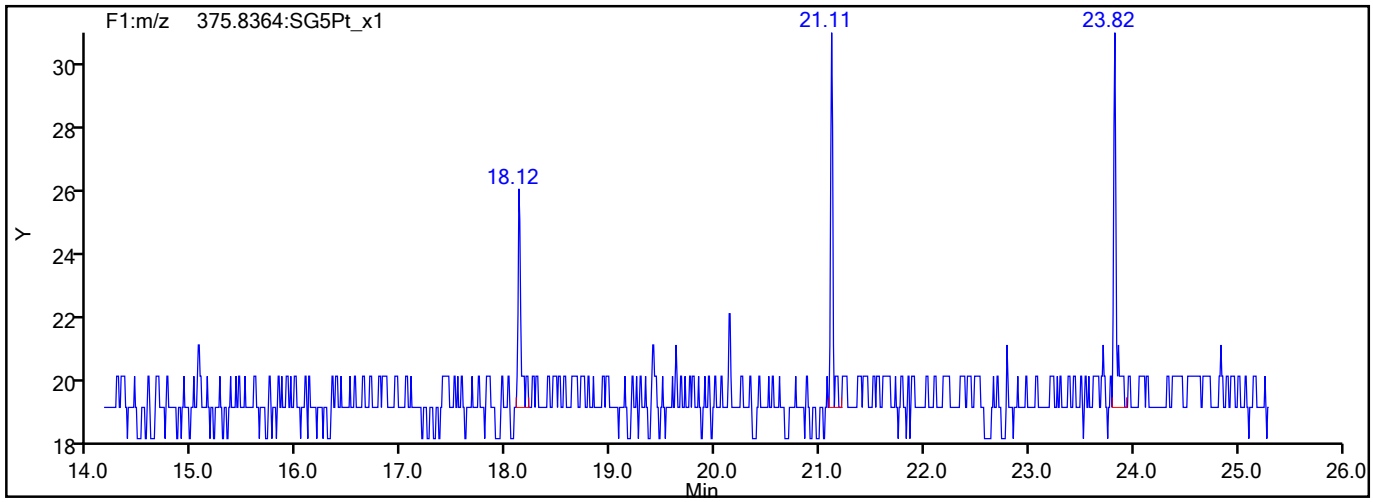

775942

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Injection Date:	18-Aug-2021 04:31:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

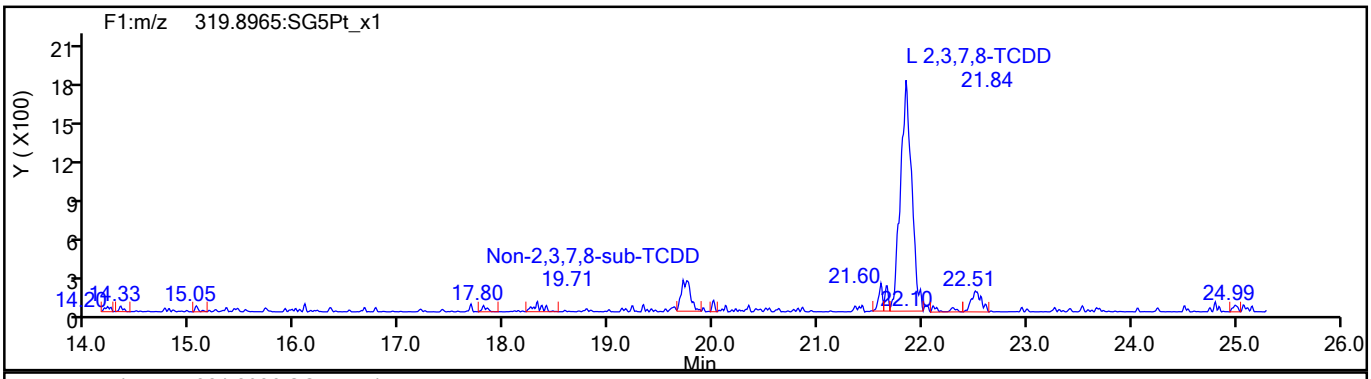

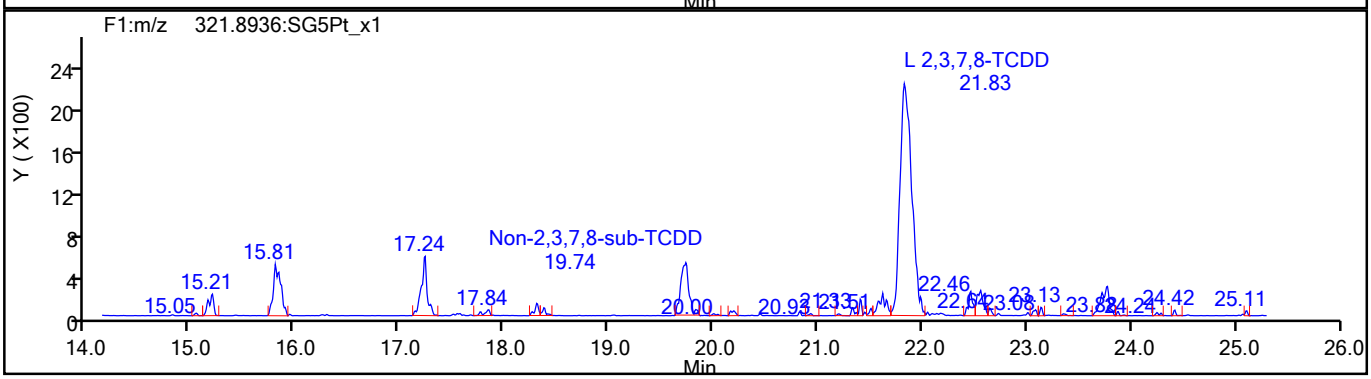

TCDD Standards

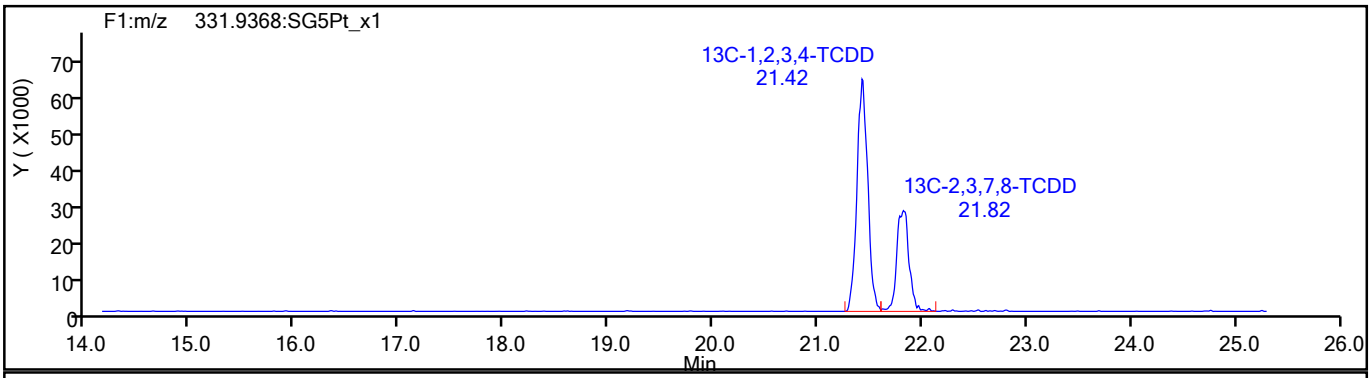

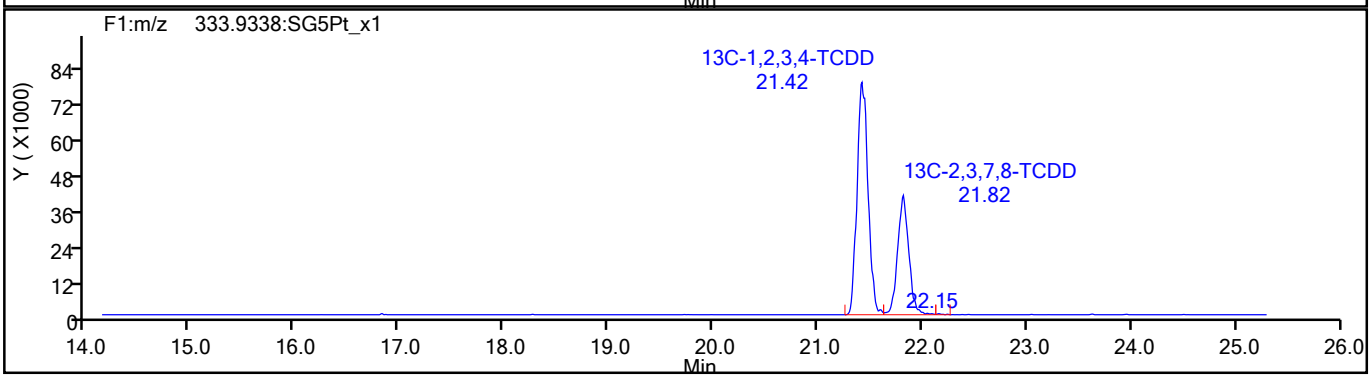

775943

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Injection Date:	18-Aug-2021 04:31:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

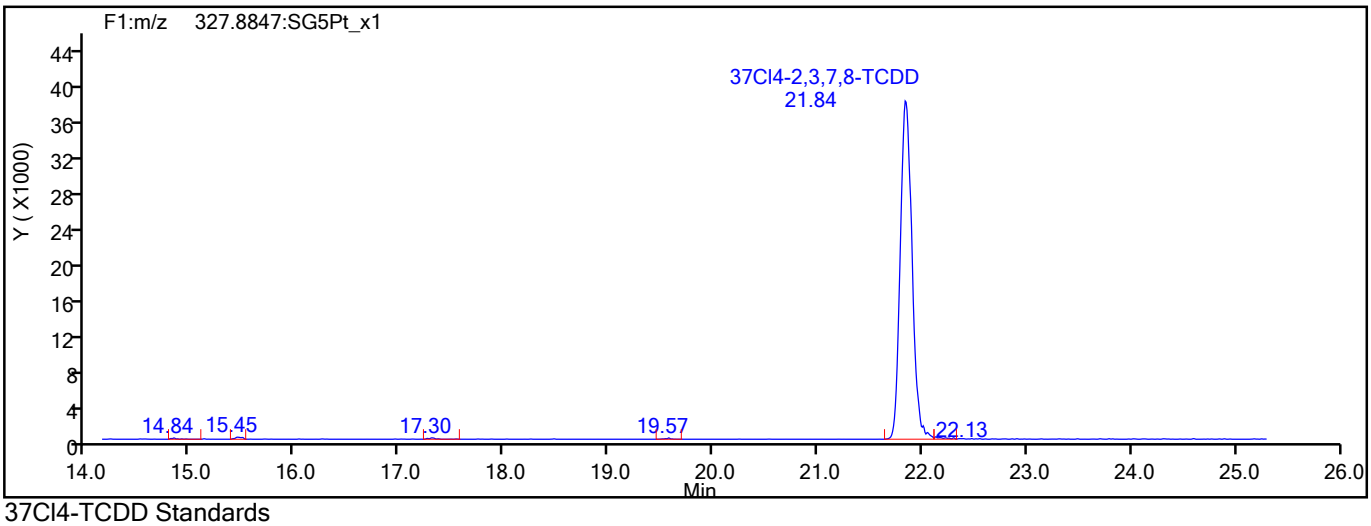

37Cl4-TCDD Standards

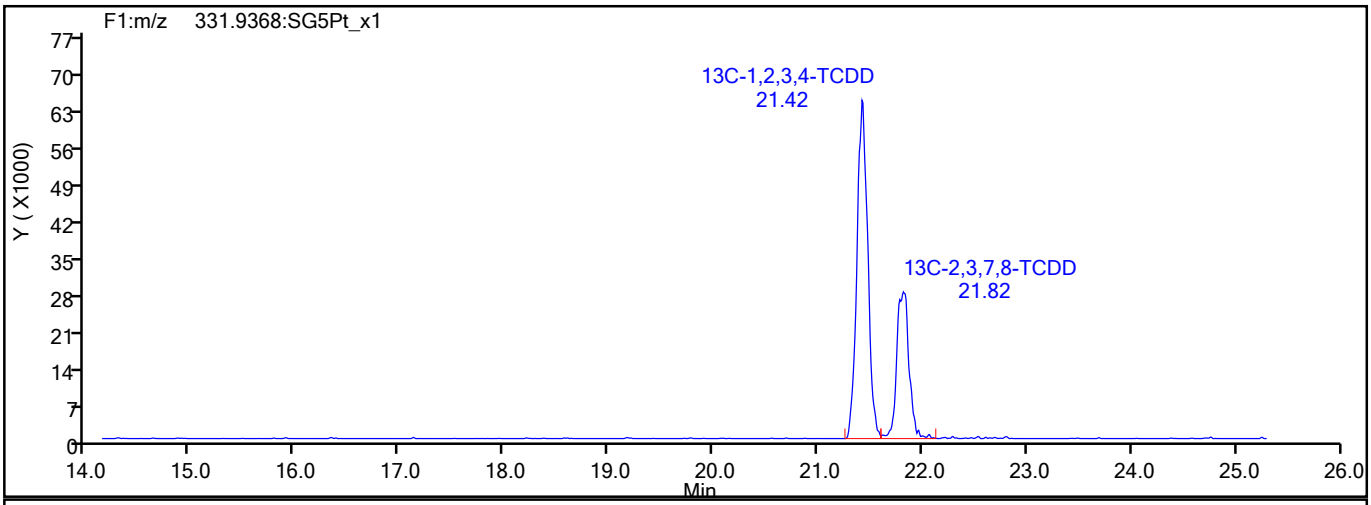

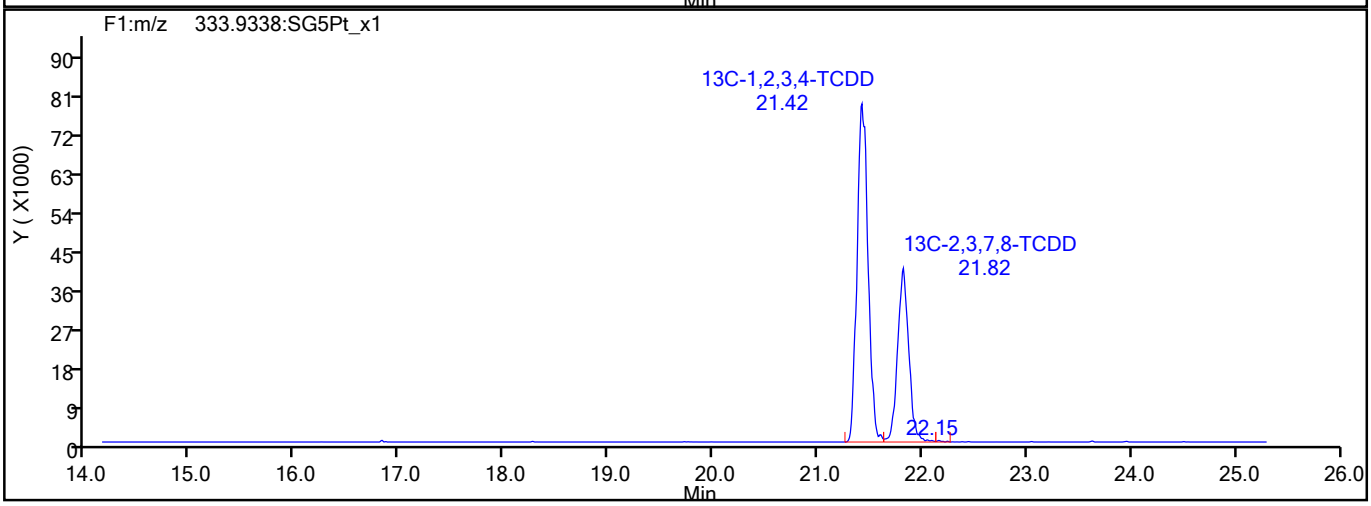

775944

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Injection Date:	18-Aug-2021 04:31:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

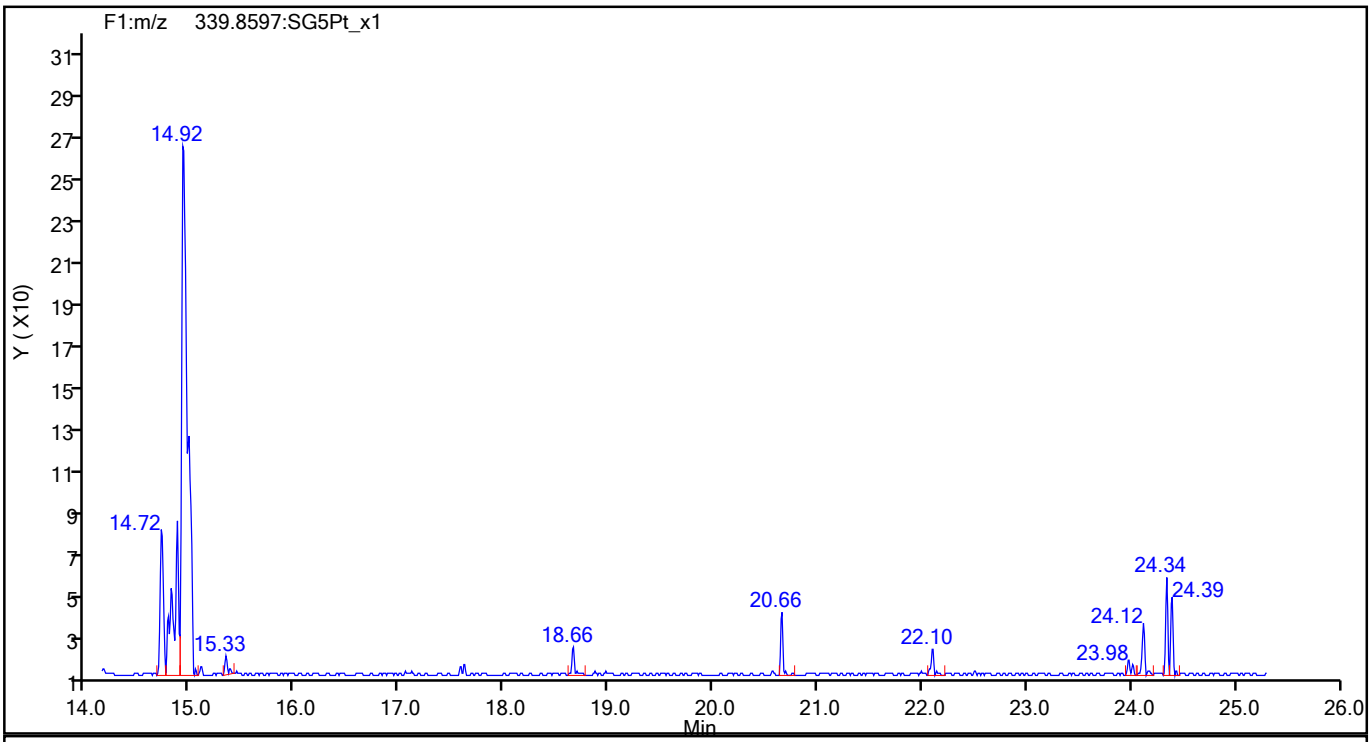

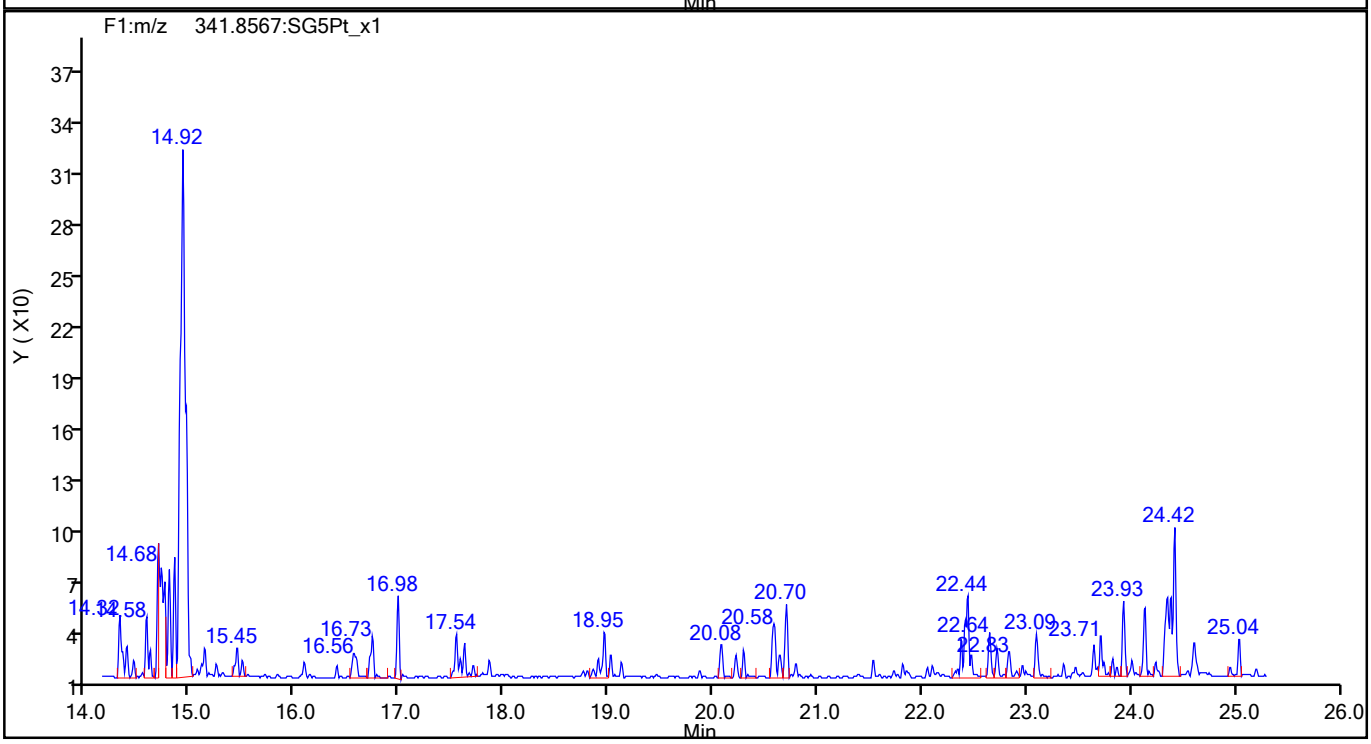

775945

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Injection Date:	18-Aug-2021 04:31:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

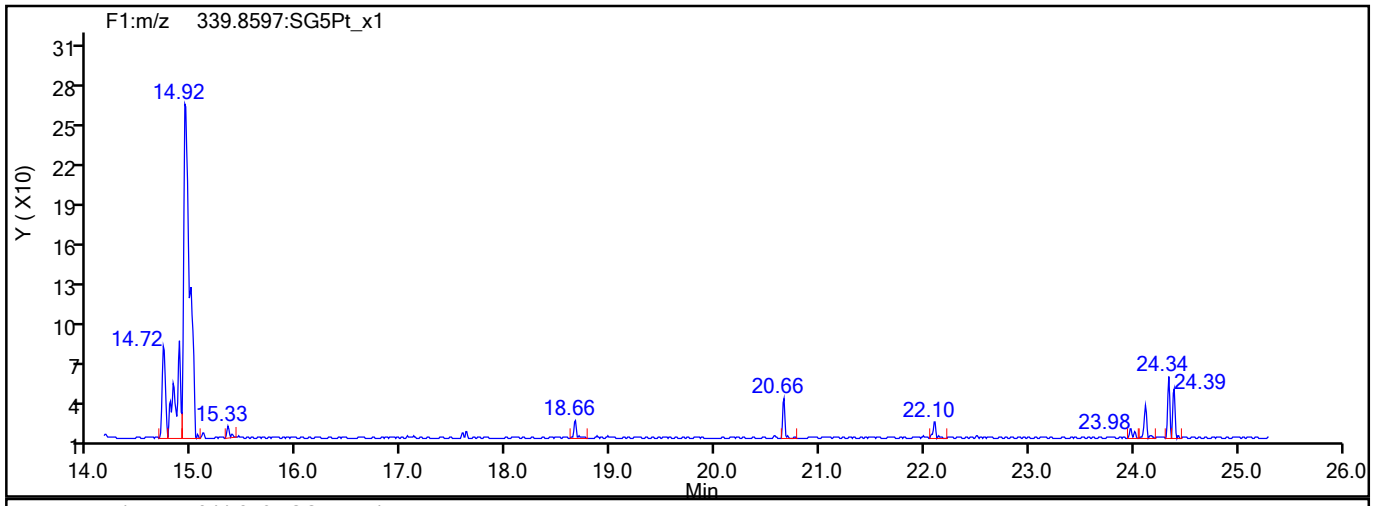

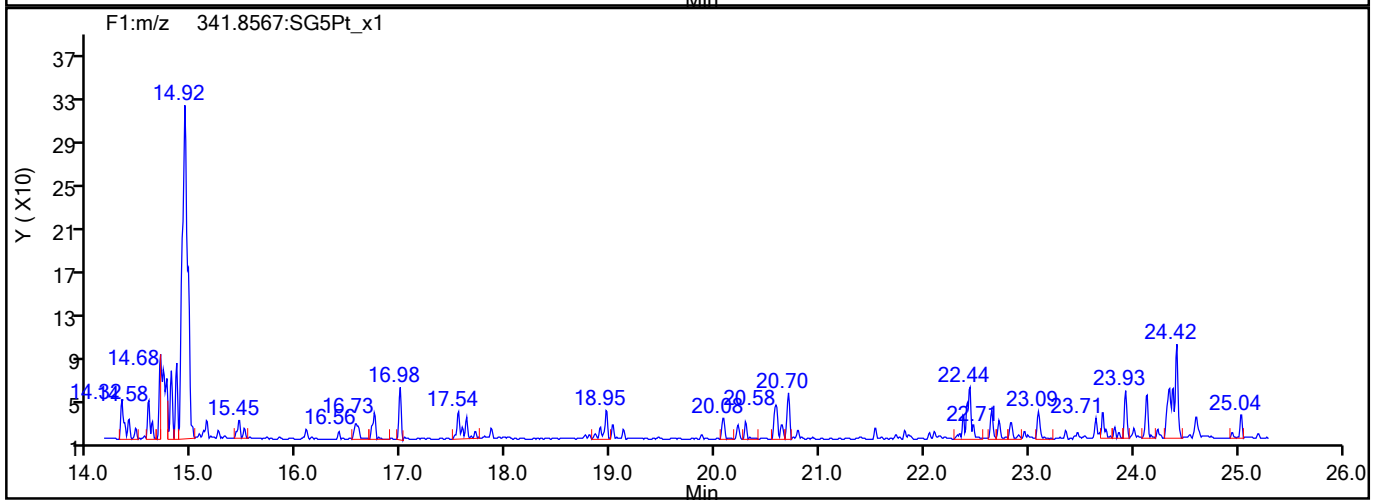

F1 PeCDFs Interference Mass

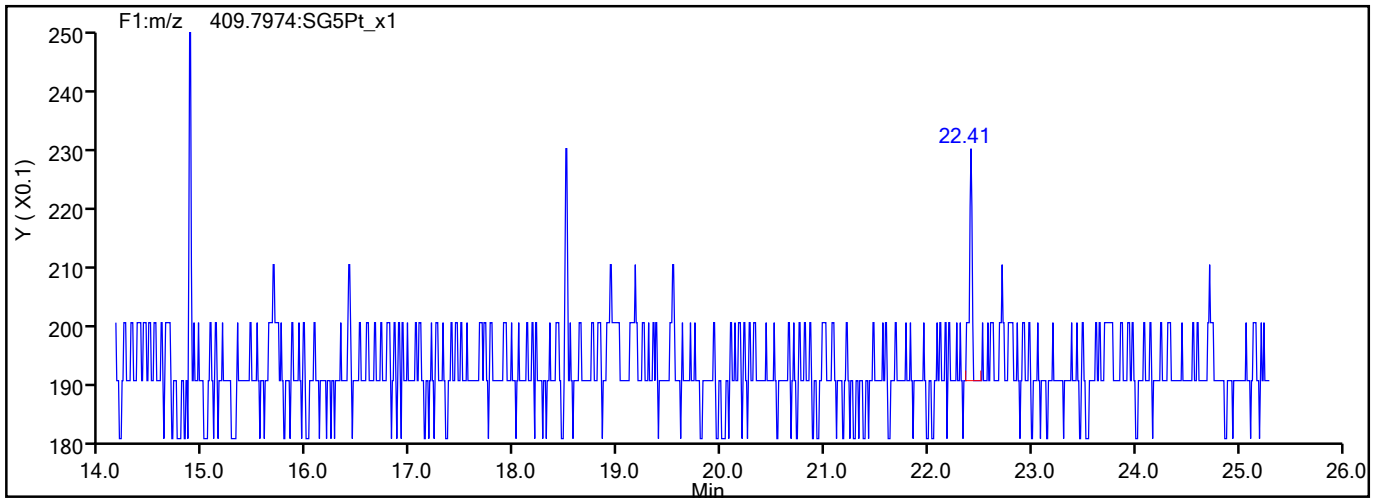

775946

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Injection Date:	18-Aug-2021 04:31:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

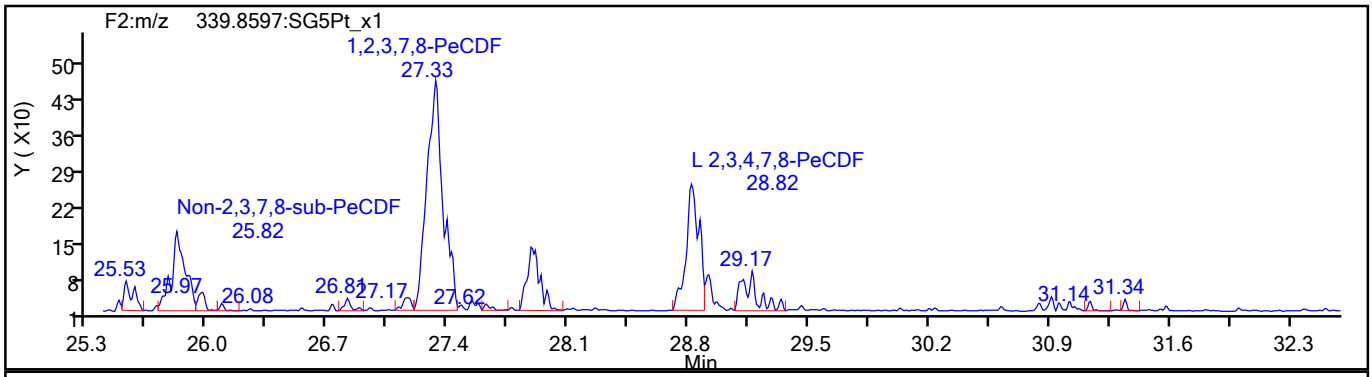

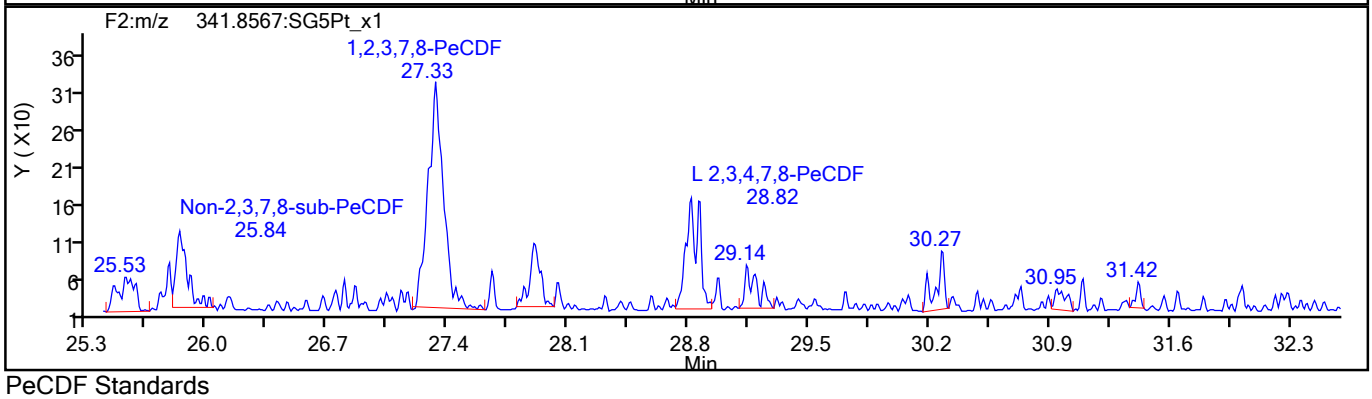

PeCDF Standards

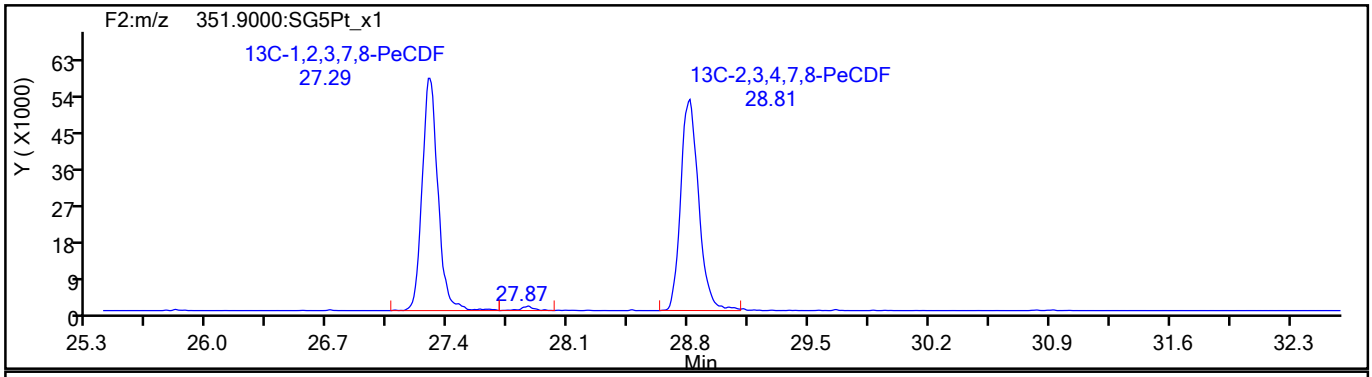

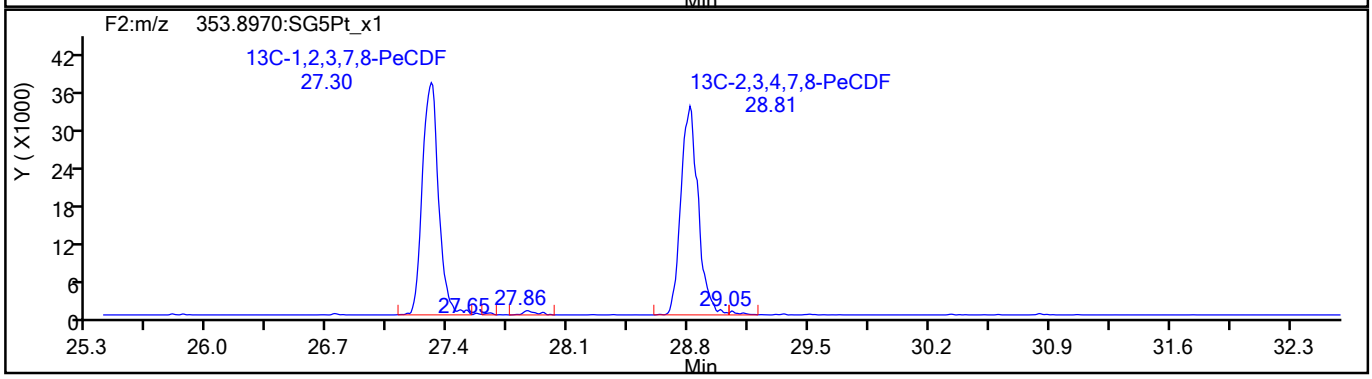

775947

Report Date: 19-Aug-2021 12:42:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

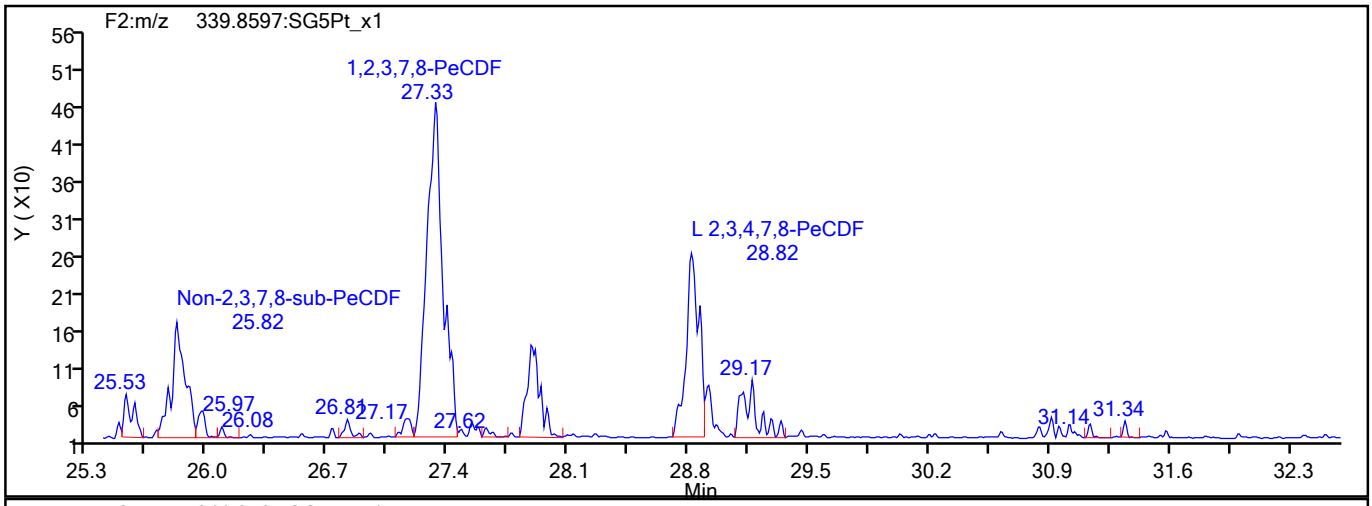

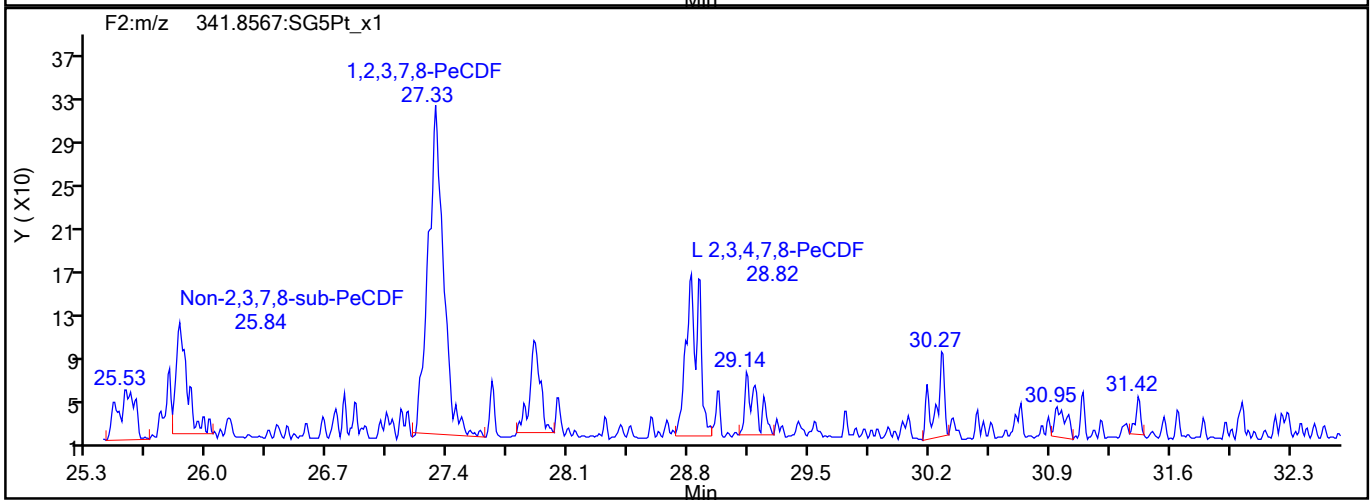

PeCDF Interference Mass

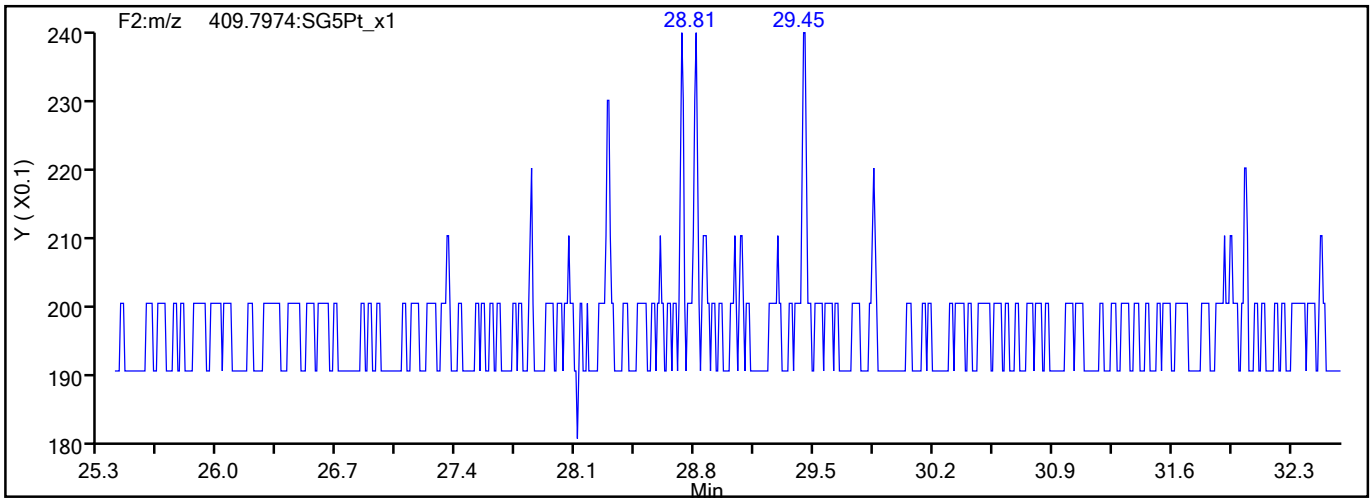

775948

Report Date: 19-Aug-2021 12:42:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

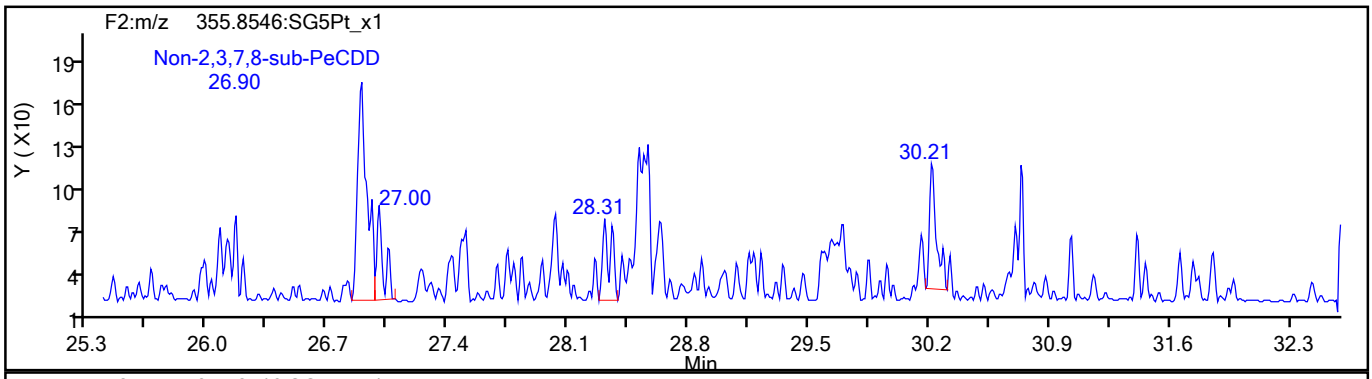

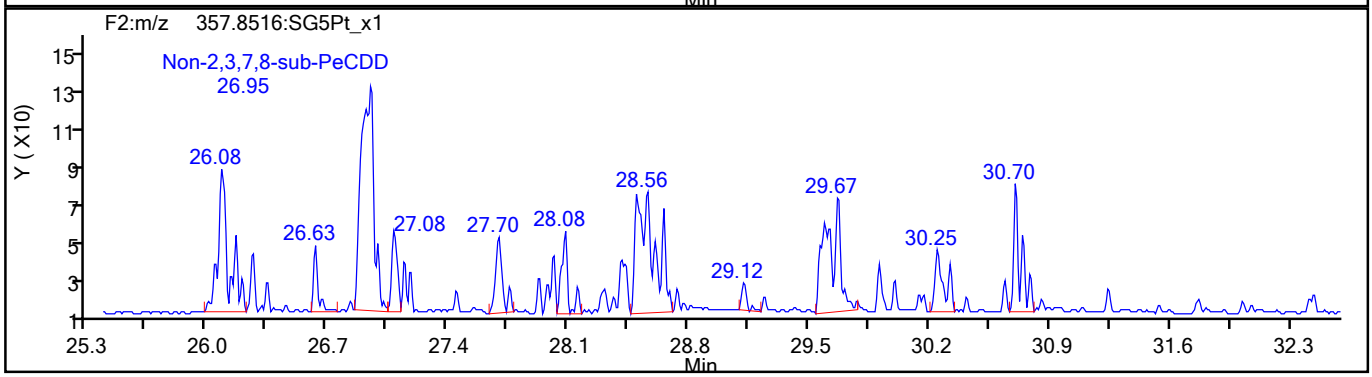

PeCDD Standards

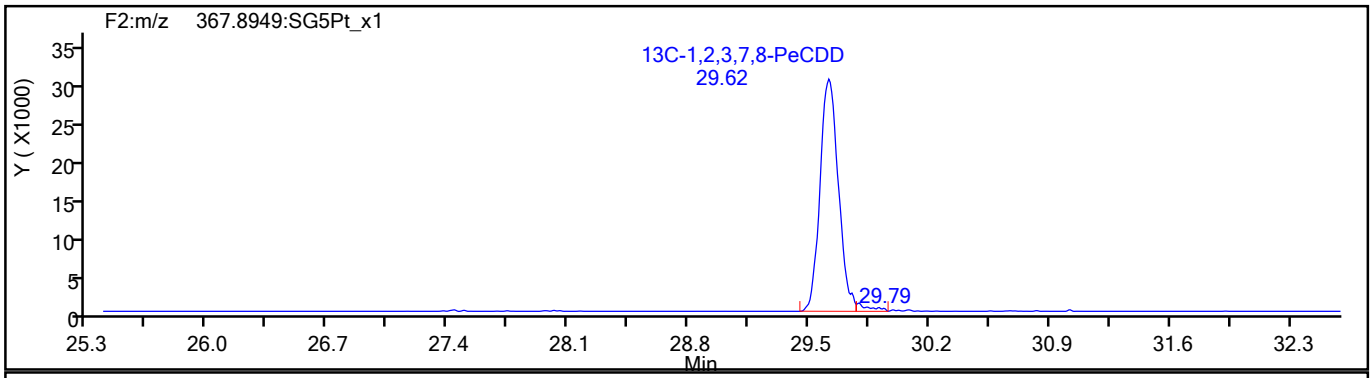

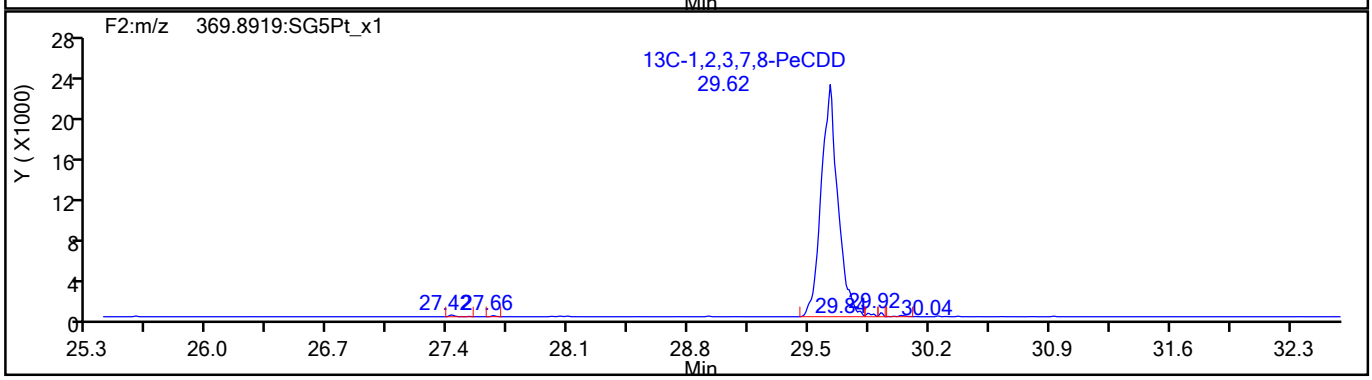

775949

Report Date: 19-Aug-2021 12:42:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

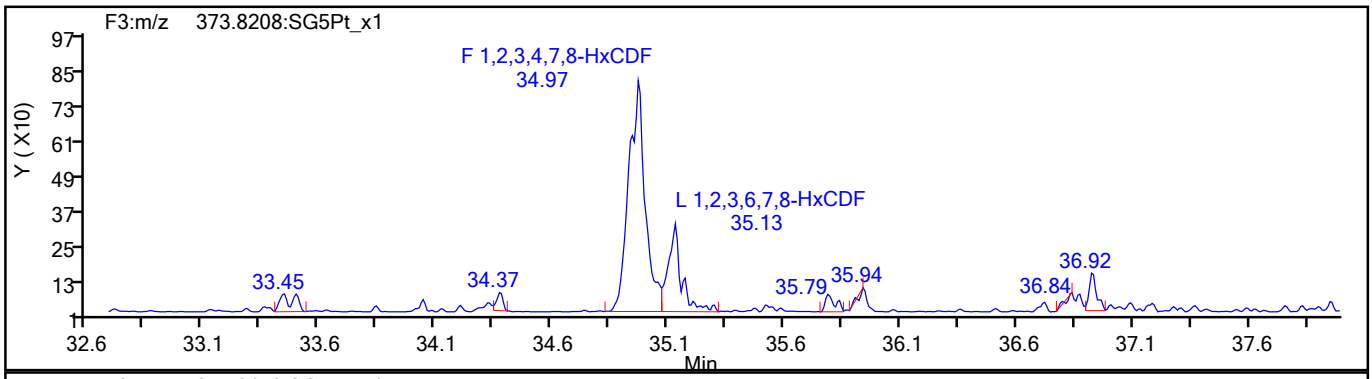

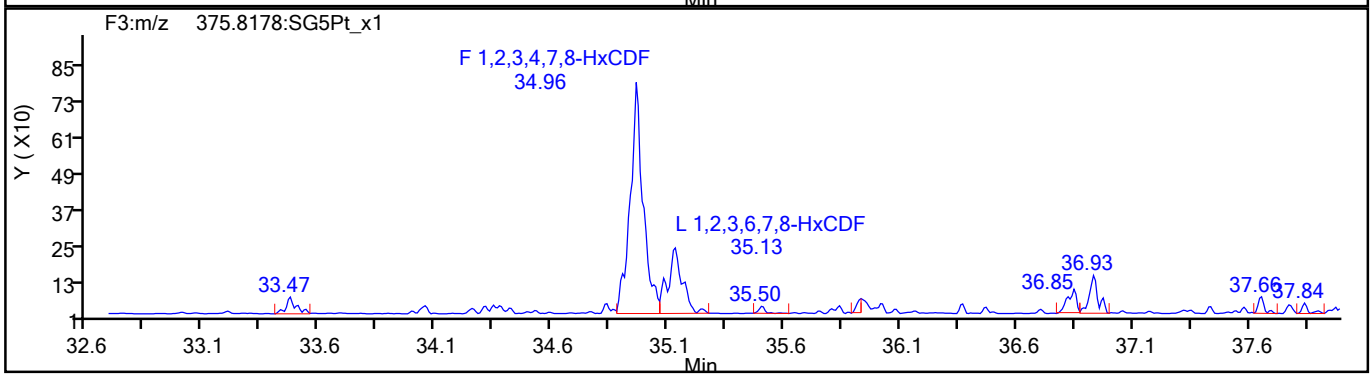

HxCDF Standards

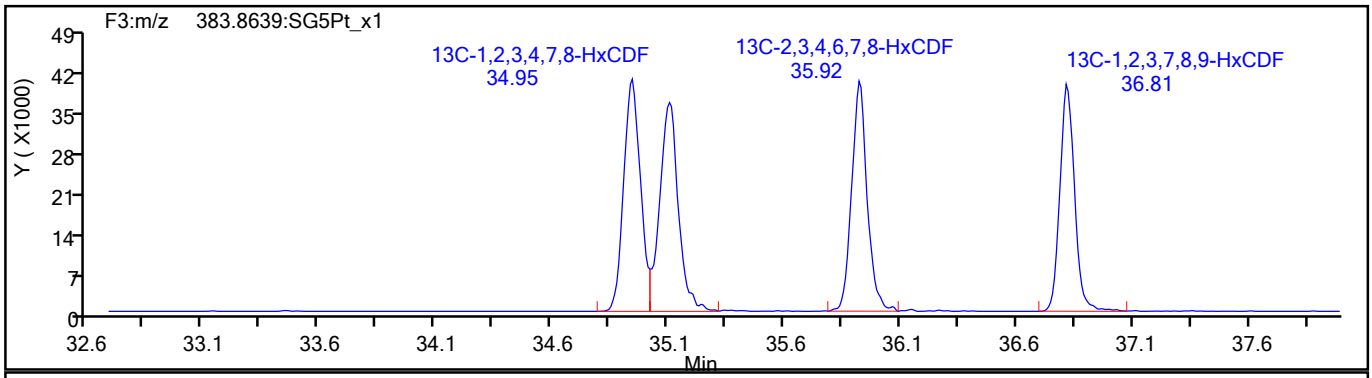

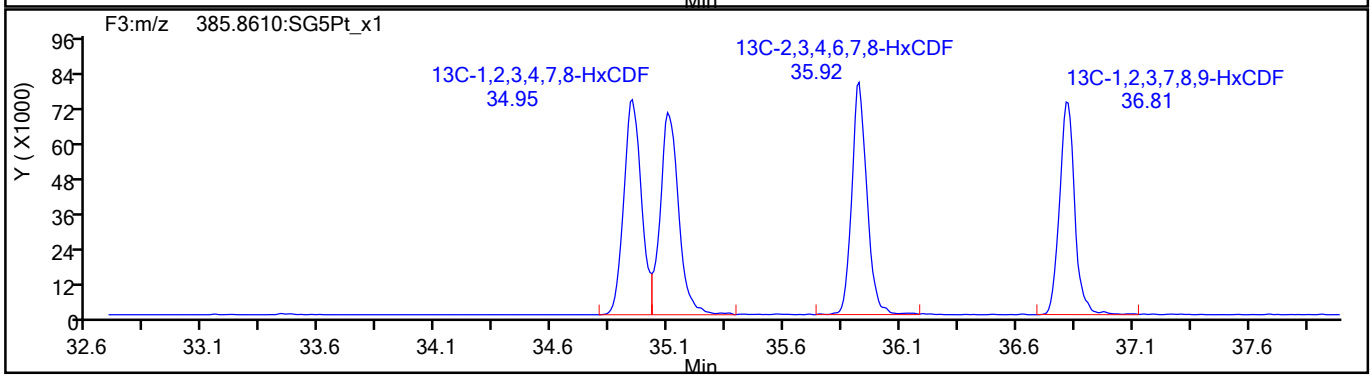

775950

Report Date: 19-Aug-2021 12:42:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

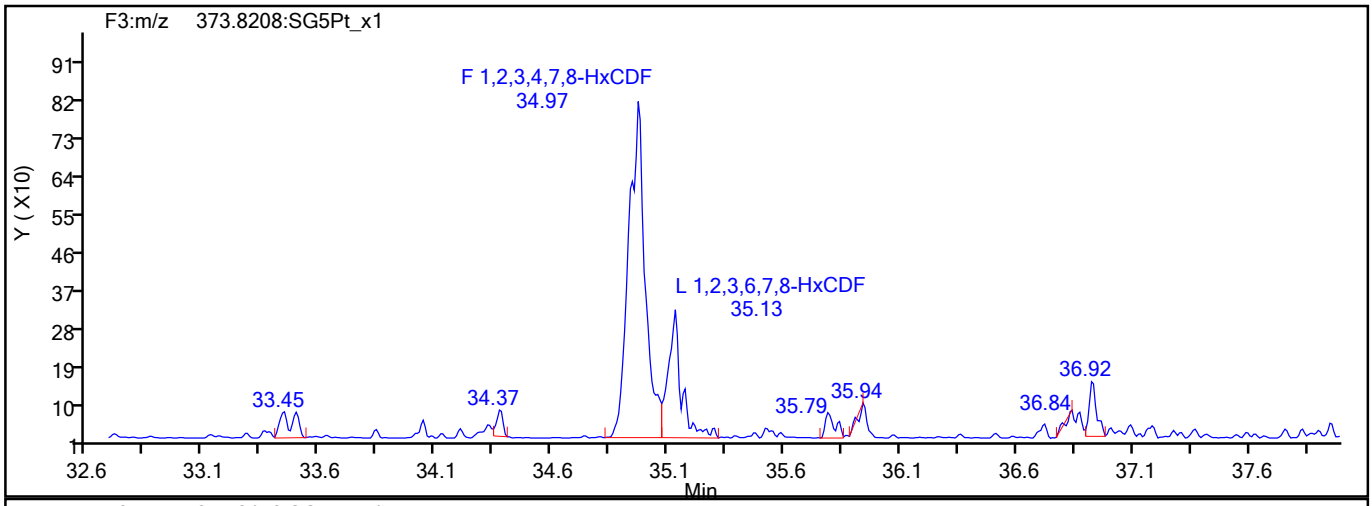

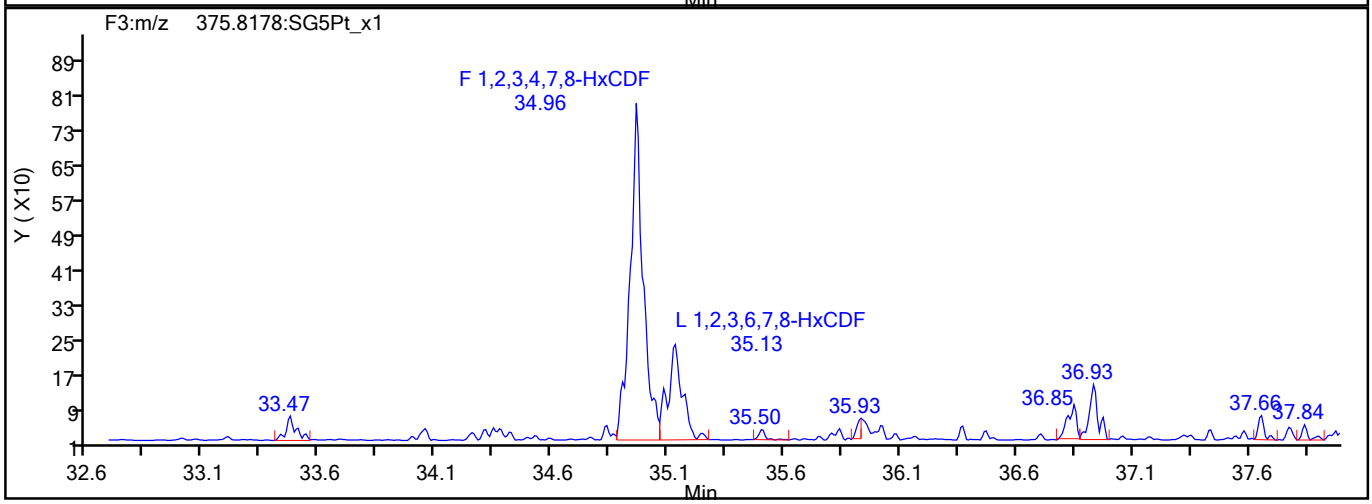

HxCDF Interference Mass

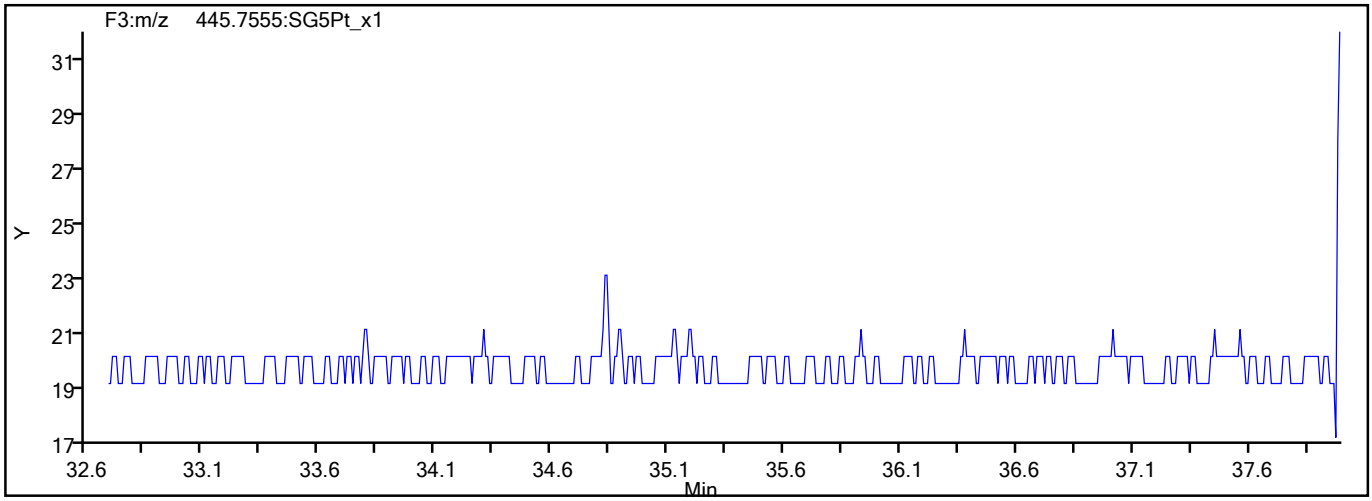

775951

Report Date: 19-Aug-2021 12:42:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
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HxCDD

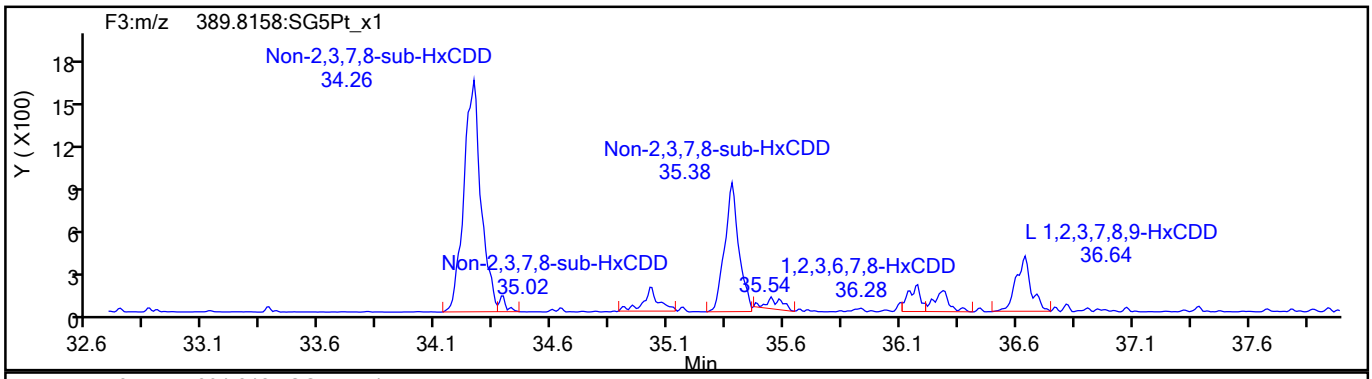

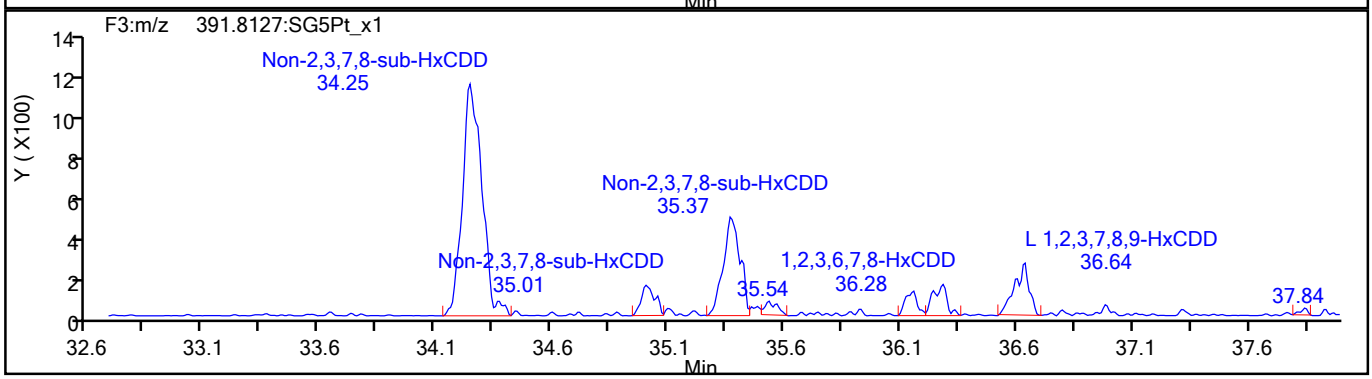

HxCDD Standards

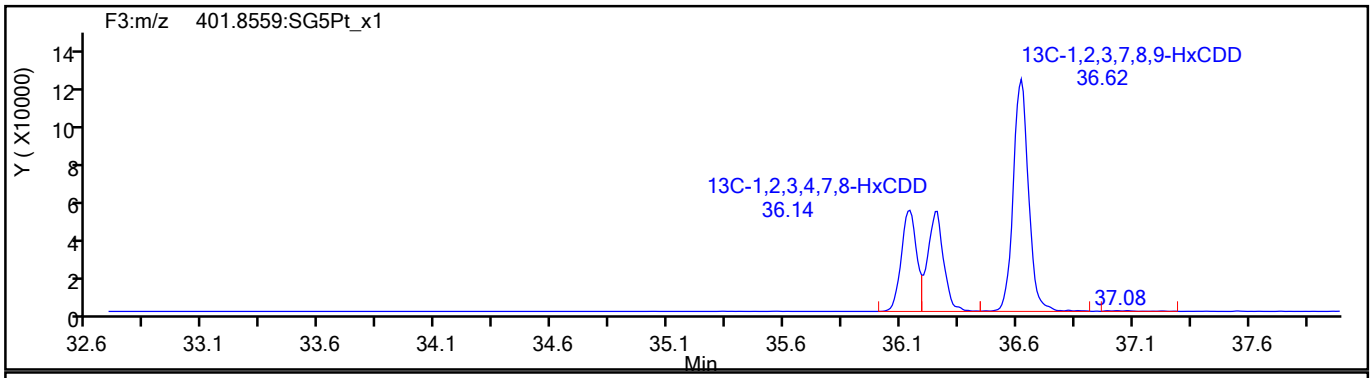

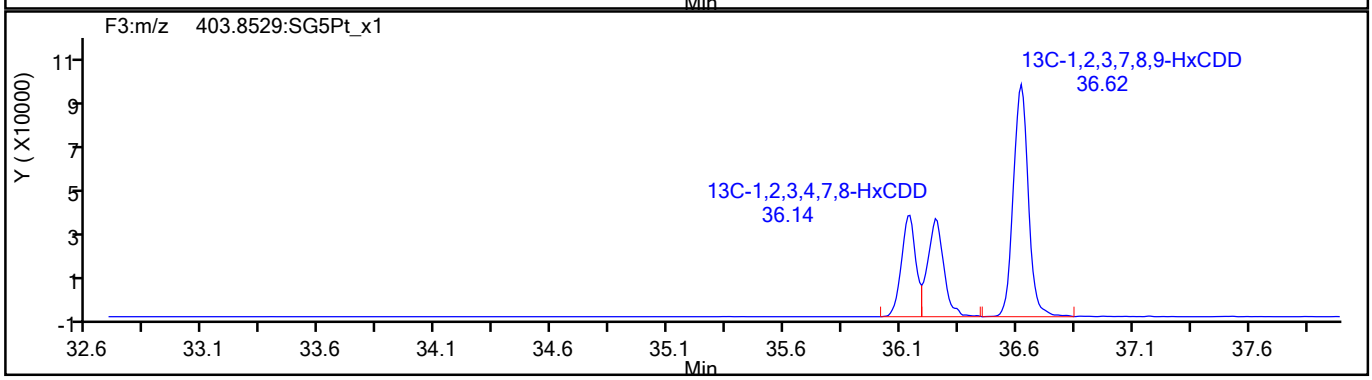

775952

Report Date: 19-Aug-2021 12:42:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
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HpCDF

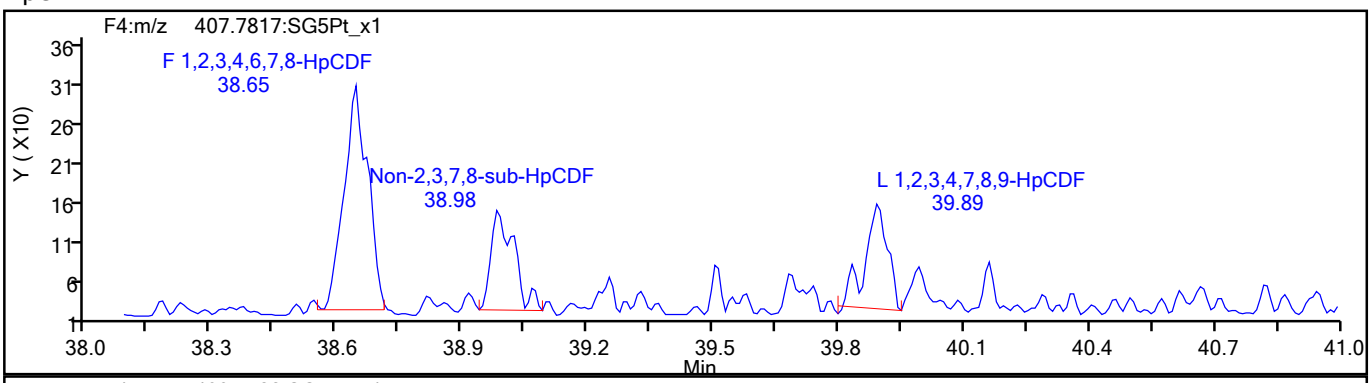

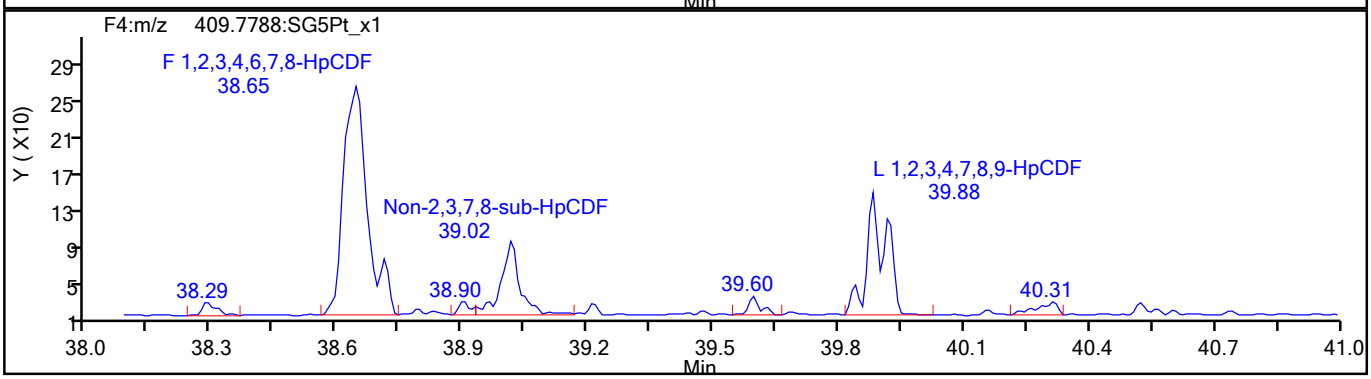

HpCDF Standards

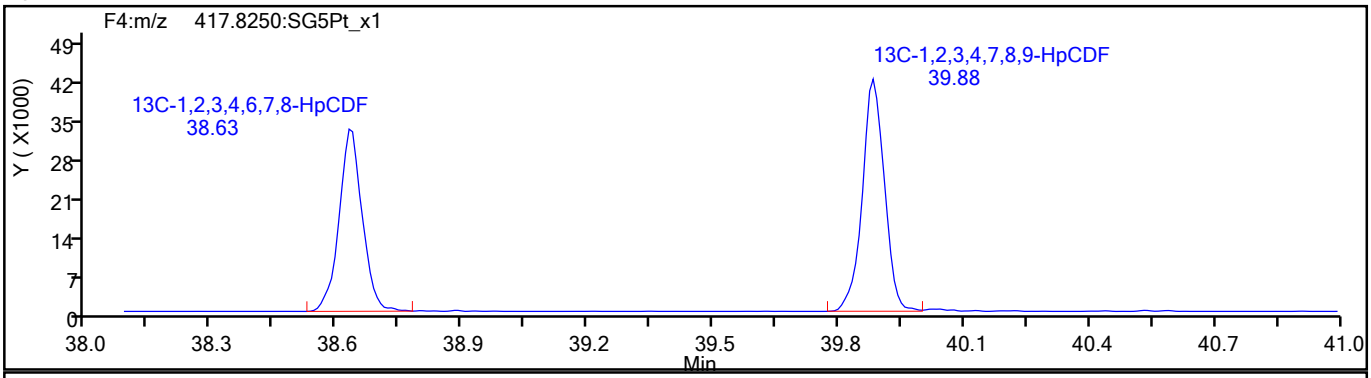

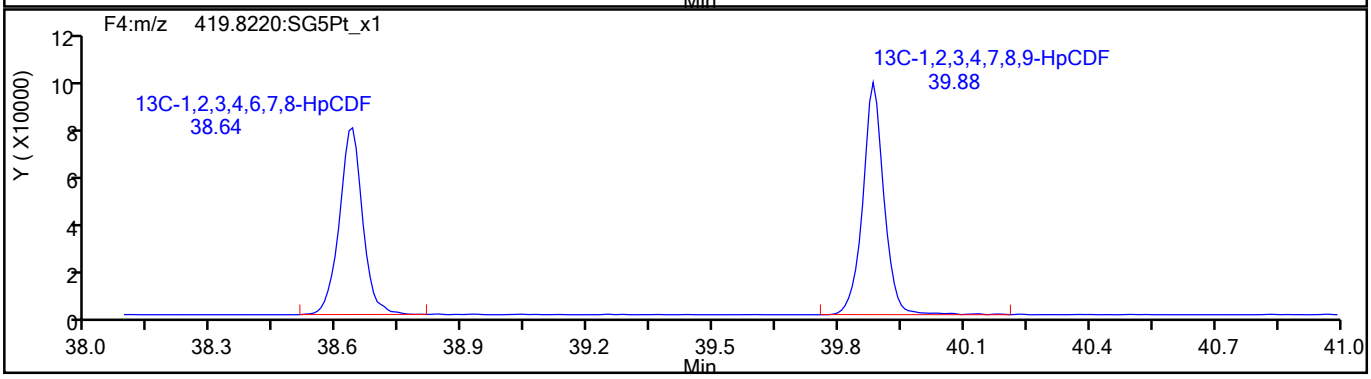

775953

Report Date: 19-Aug-2021 12:42:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
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HpCDF

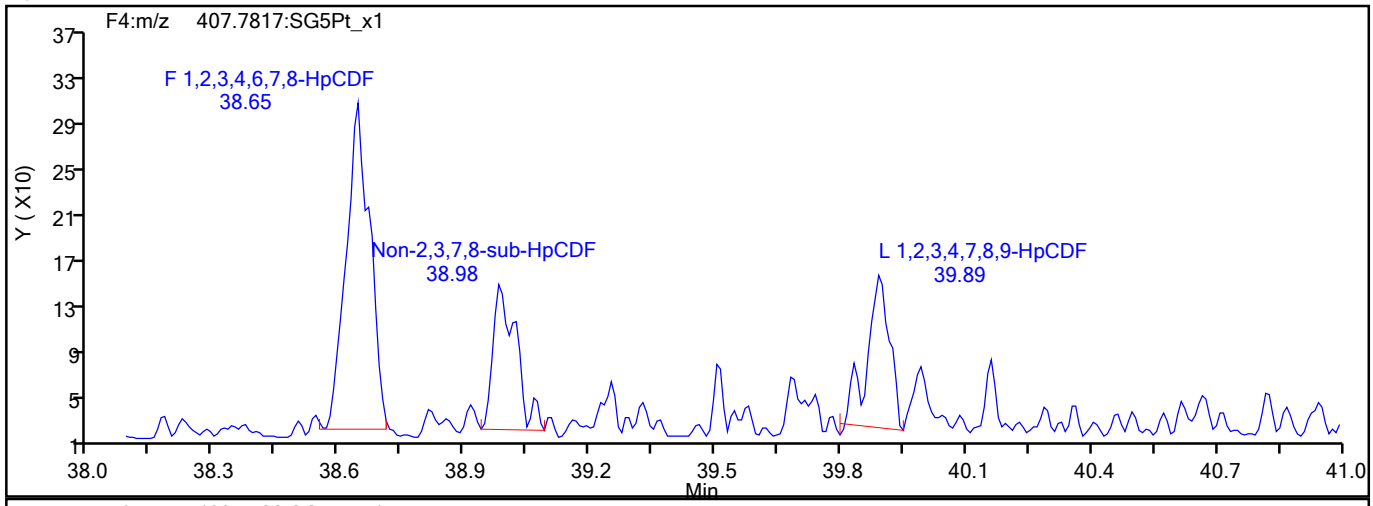

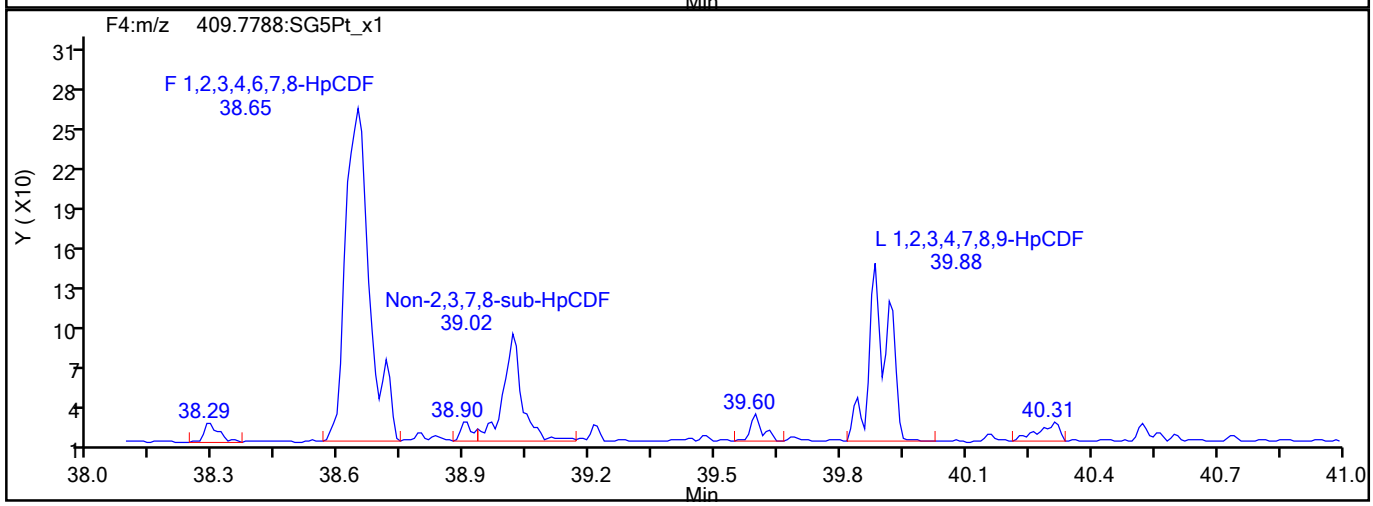

HpCDF Interference Mass

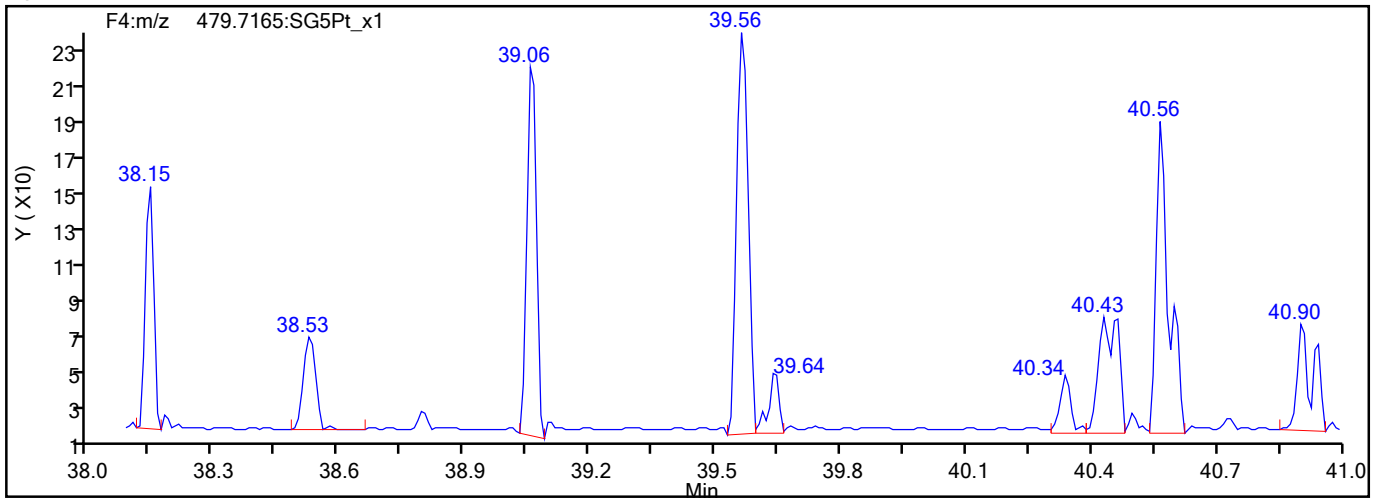

775954

Report Date: 19-Aug-2021 12:42:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

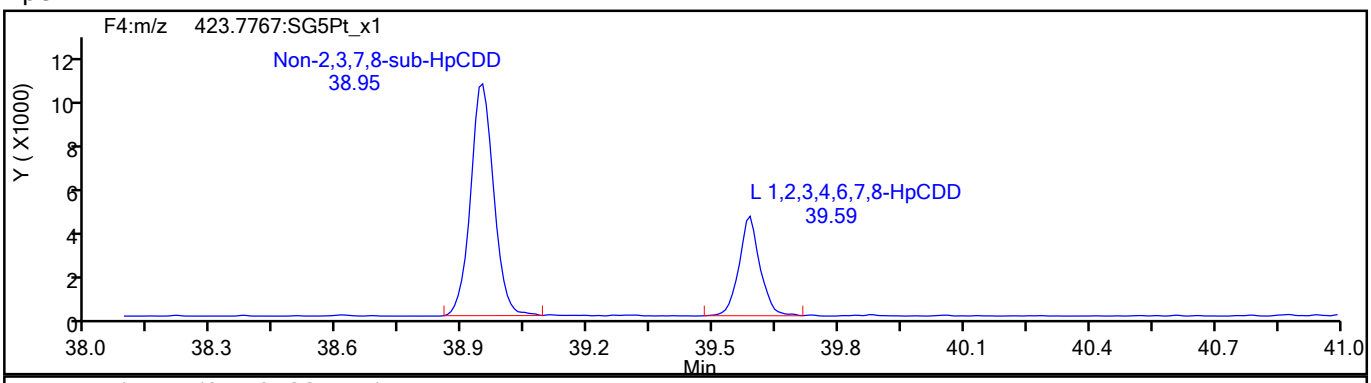

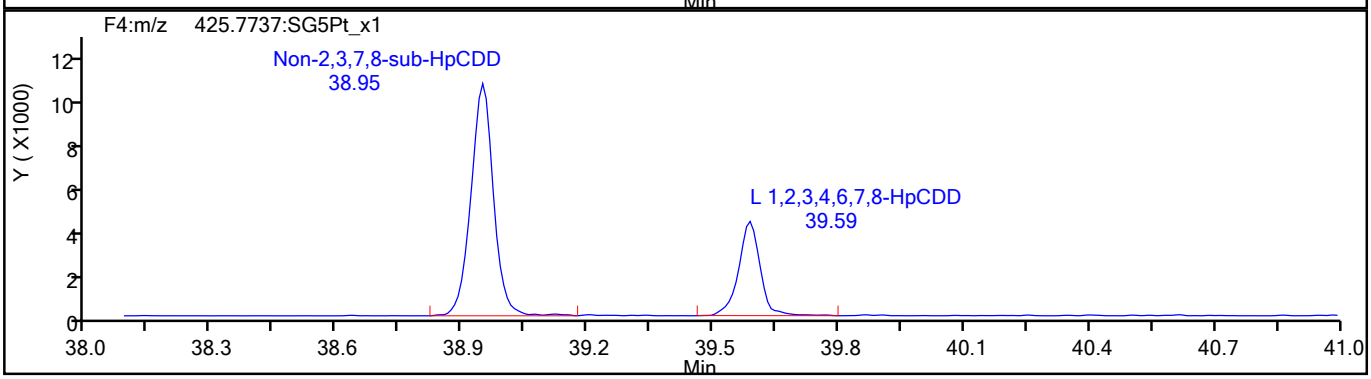

HpCDD Standards

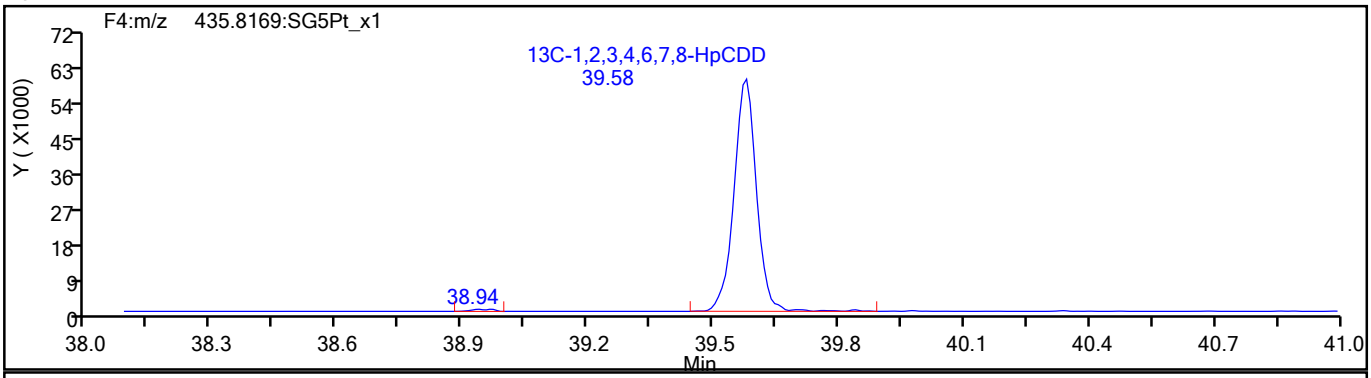

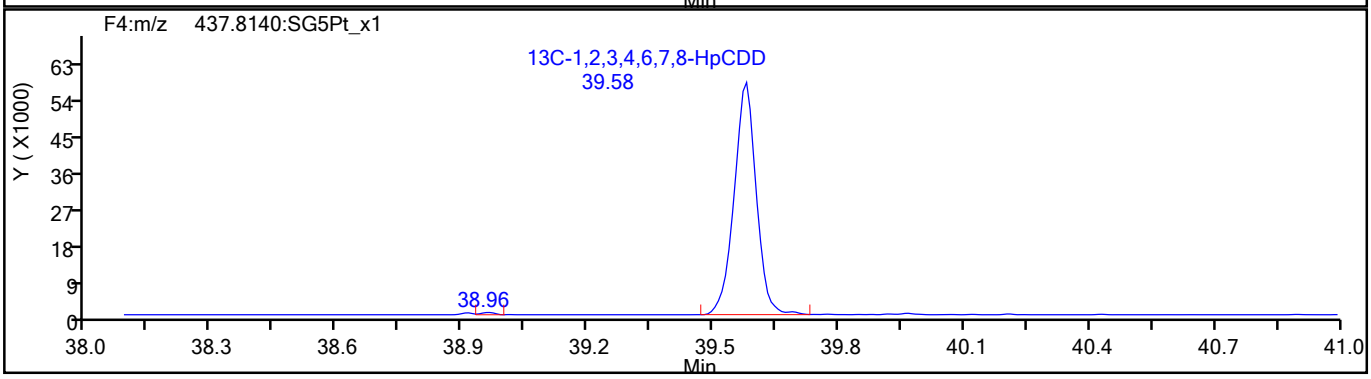

775955

Report Date: 19-Aug-2021 12:42:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

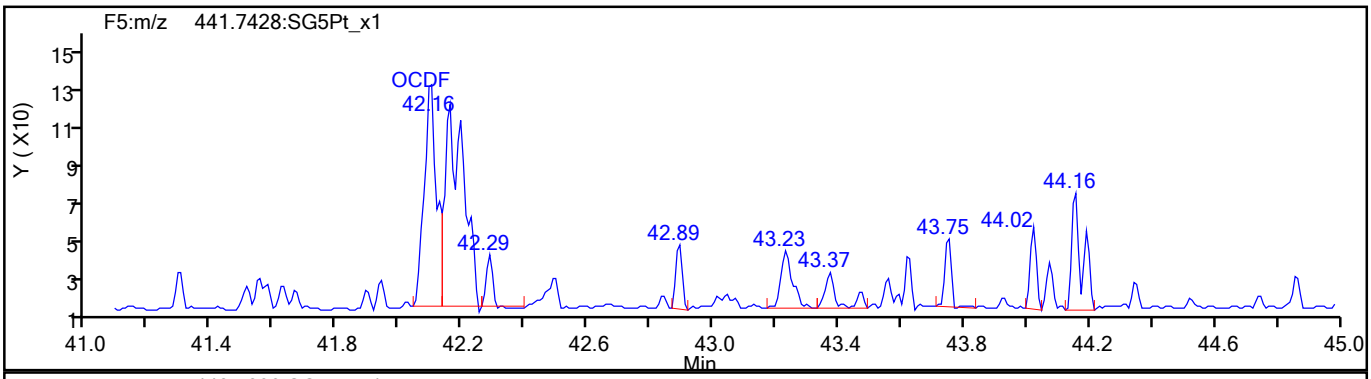

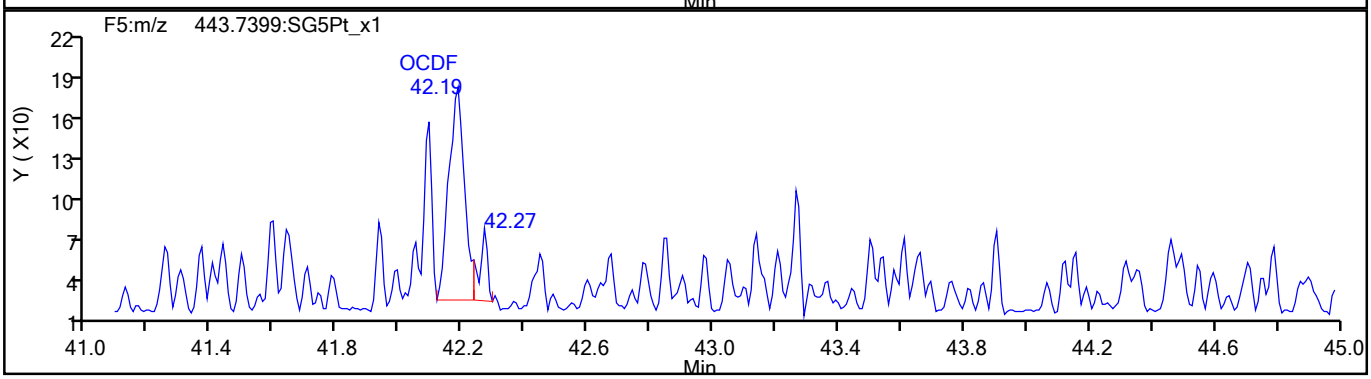

OCDF Standards

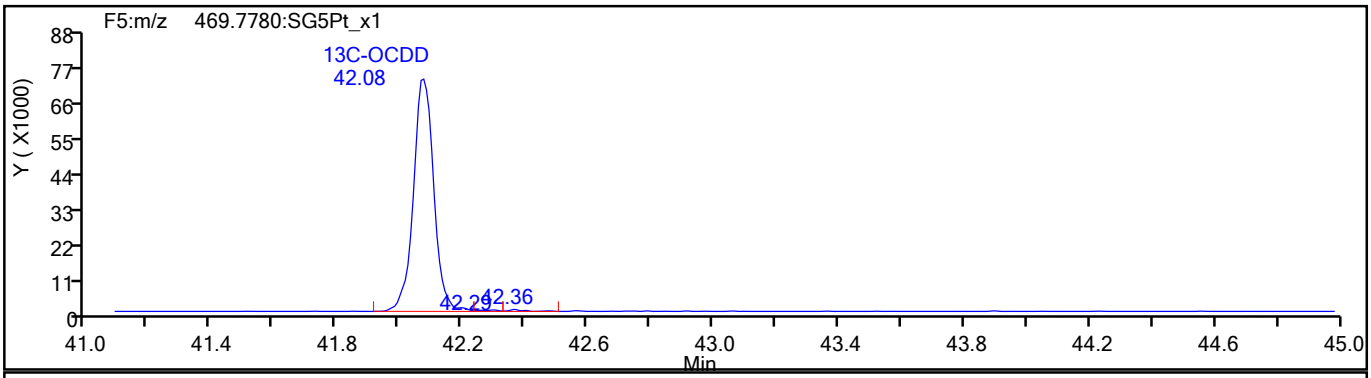

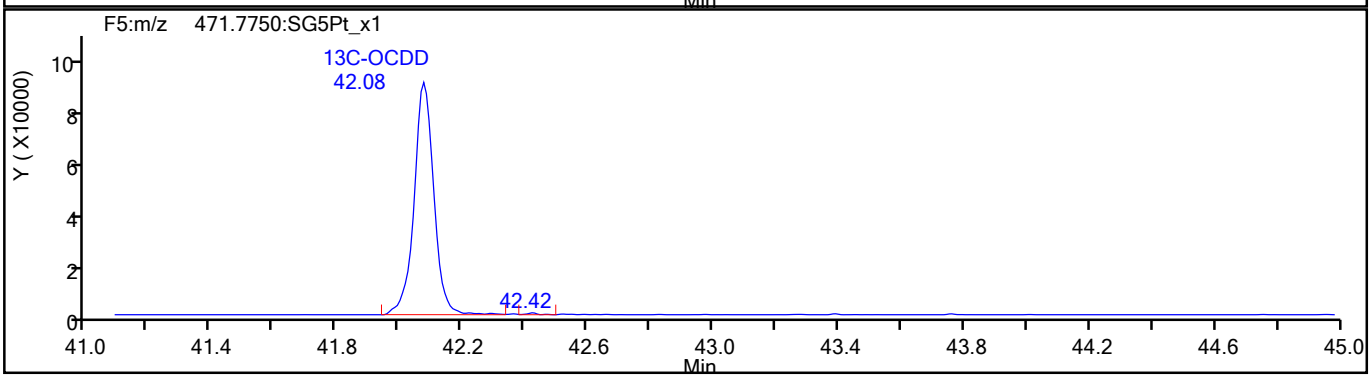

775956

Report Date: 19-Aug-2021 12:42:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

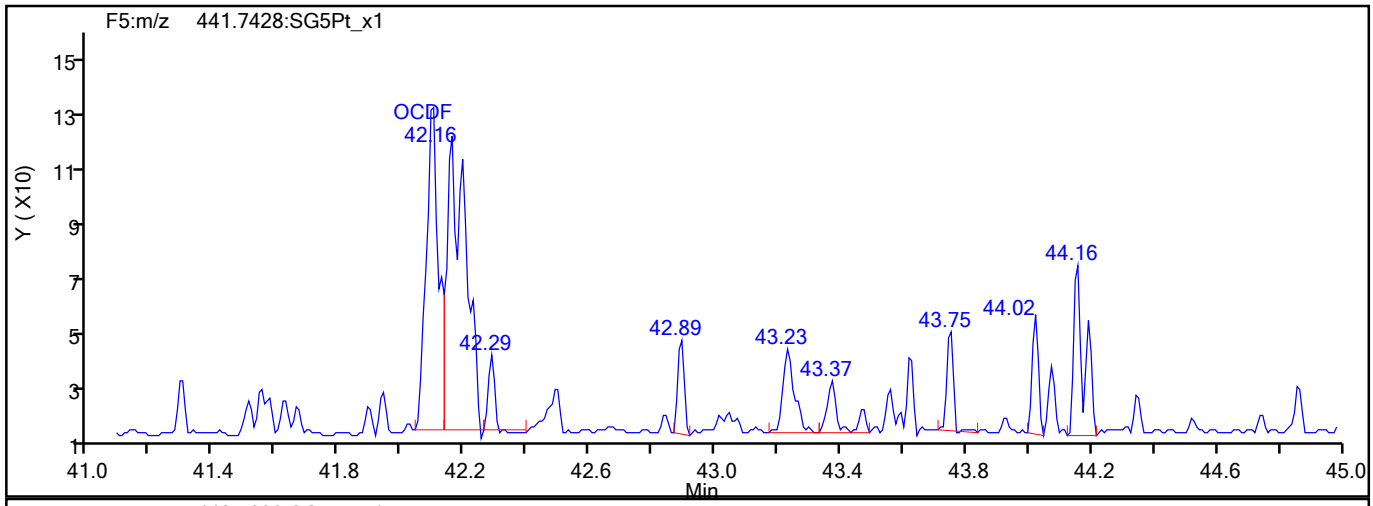

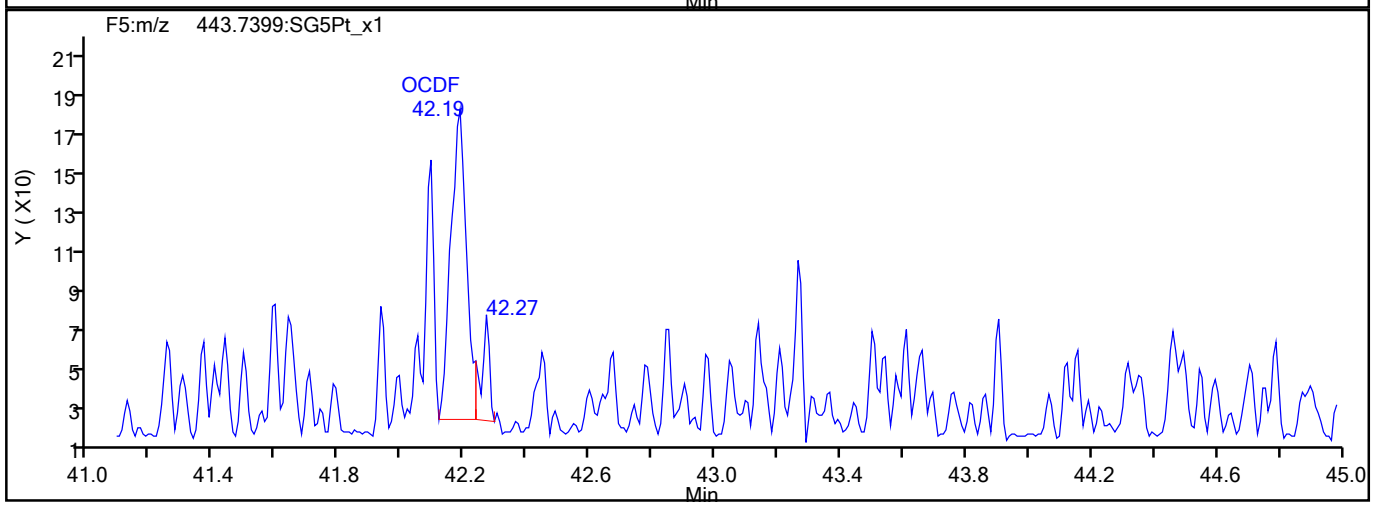

OCDF Interference Mass

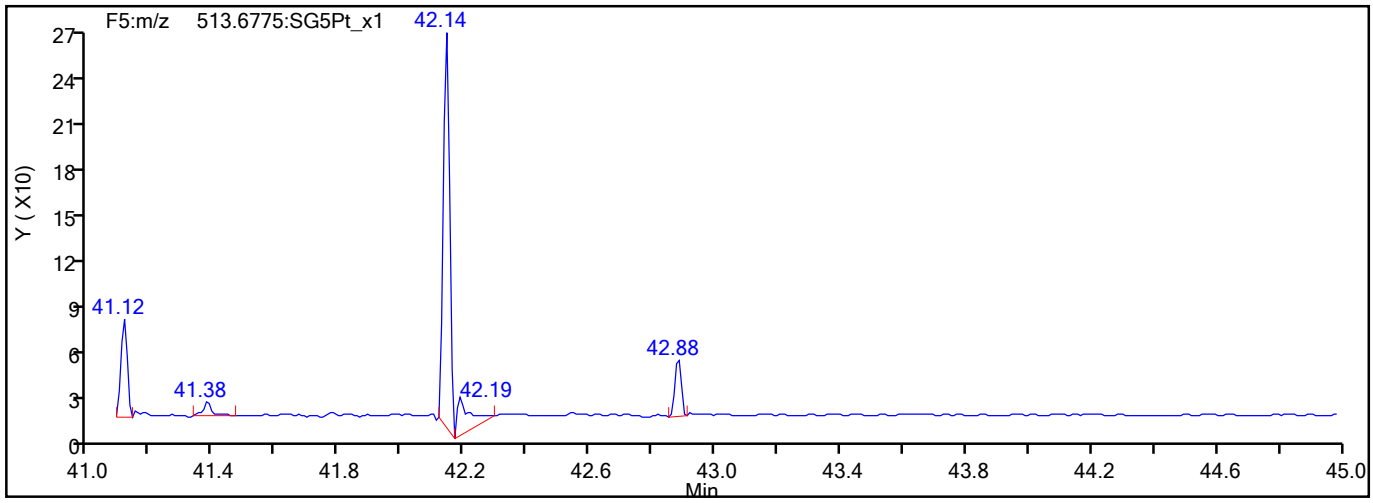

775957

Report Date: 19-Aug-2021 12:42:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Injection Date:	18-Aug-2021 04:31:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

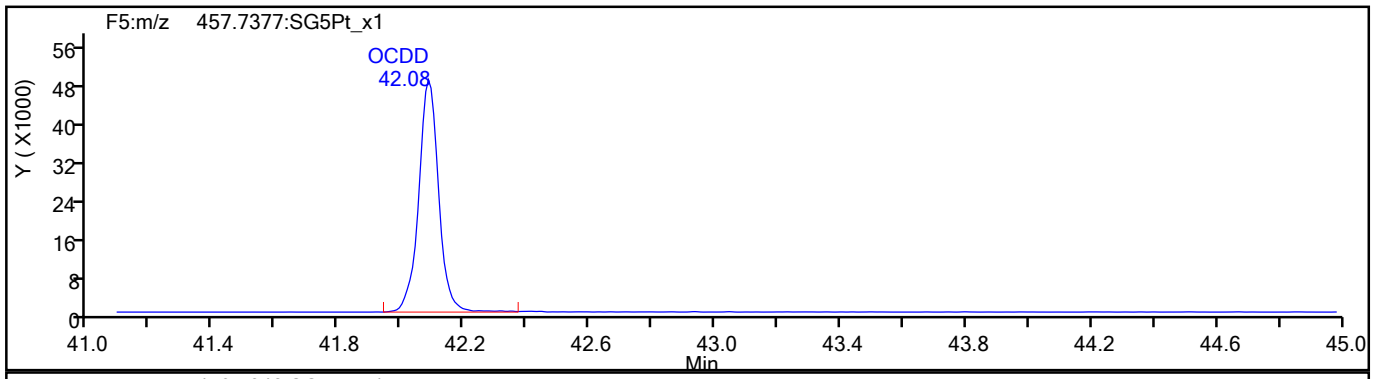

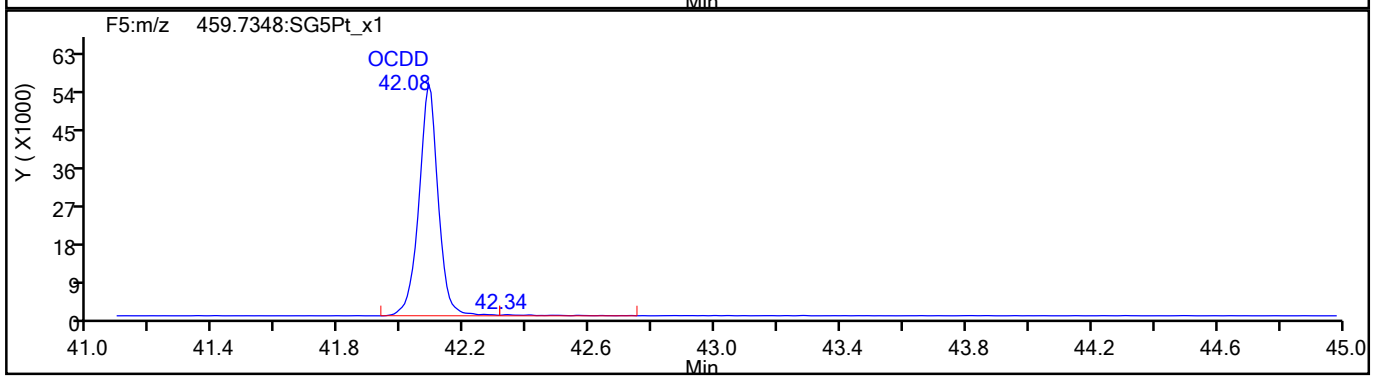

OCDD Standards

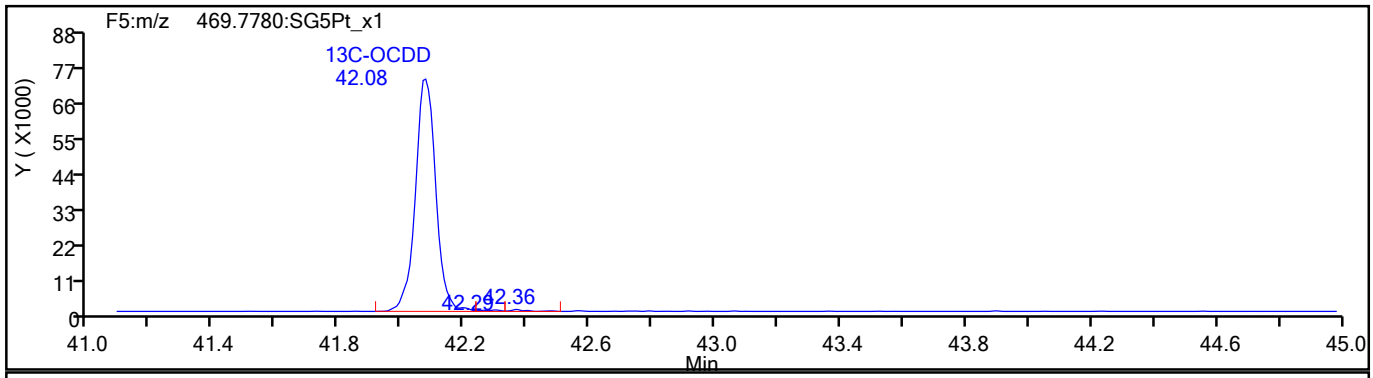

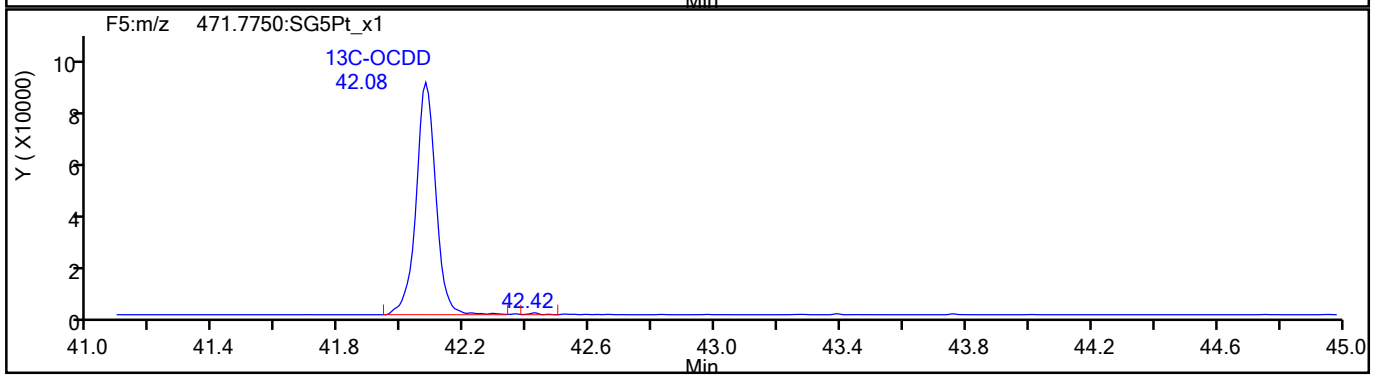

775958

Report Date: 19-Aug-2021 12:42:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Injection Date:	18-Aug-2021 04:31:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

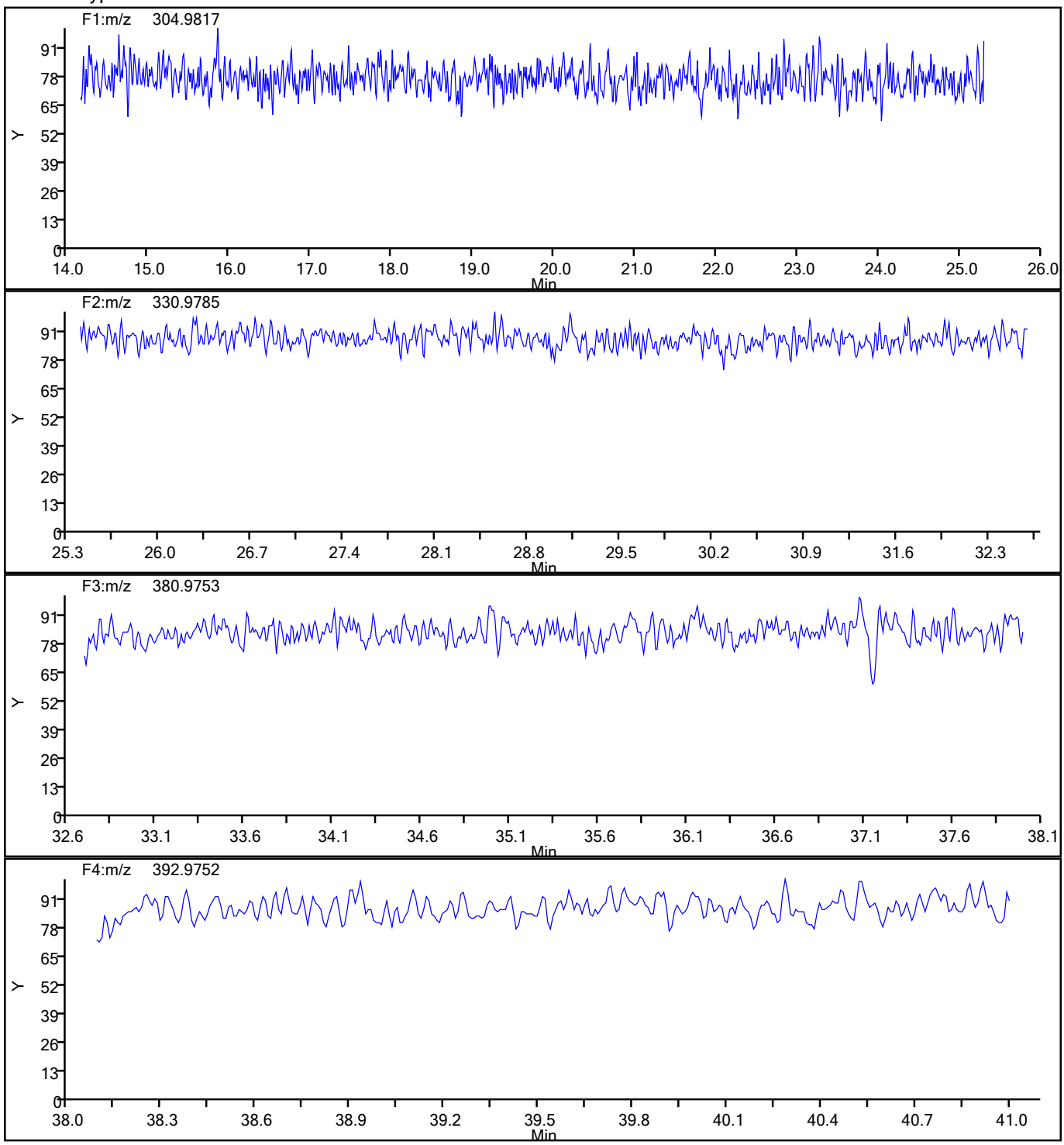

775959

Report Date: 19-Aug-2021 12:42:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_20.d		
Injection Date:	18-Aug-2021 04:31:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	517281	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

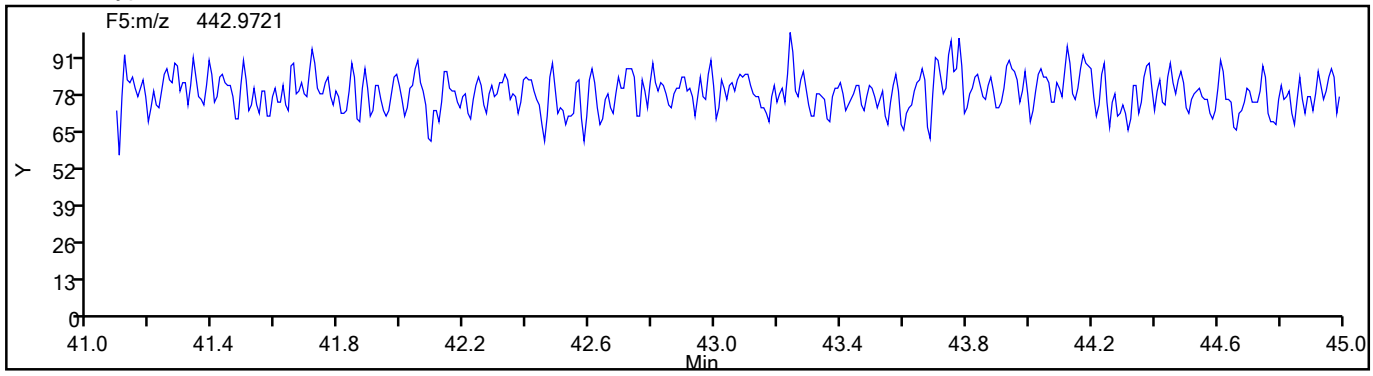

775960

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (12-14) RA
Lab Sample ID: 320-76769-33 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_014.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.23(g)
Date Analyzed: 08/23/2021 23:53
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 33.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	43		1.5	0.29

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	57		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	75		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_014.d
Lims ID: 320-76769-A-33-A
Client ID: 11215702-072221-SS-SJSB076 (12-14)
Sample Type: Client
Inject. Date: 23-Aug-2021 23:53:12 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-33-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:18:27

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.296	50724703	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	38288342	0.78	1.3327	56.6	56.6	0.2127	0.2127	56.64	
2,3,7,8-TCDF	17.640	5585626	0.73	0.9978	14.6	14.6	0.0990	0.0990		
D 13C-2,3,7,8-TCDD	16.063	23108924	0.77	0.8749	52.1	52.1	0.5904	0.5904	52.07	
2,3,7,8-TCDD	16.076	1494917	0.82	1.0570	6.120	6.120	0.1143	0.1143		
$ 37Cl4-2,3,7,8-TCDD	16.090	13102501		0.8648	29.9	29.9	0.0753	0.0753	74.67	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Report Date: 24-Aug-2021 09:19:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_014.d
Lims ID: 320-76769-A-33-A
Client ID: 11215702-072221-SS-SJSB076 (12-14)
Sample Type: Client
Inject. Date: 23-Aug-2021 23:53:12 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-33-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:18:27

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.296	16.298	0		22441936	4990744	12107	30267	412		
333.9339	16.296	16.298	0		28282767	6227950	11072	27680	562	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.615	0	1.081	16752211	3041607	7606	19015	400		
317.9389	17.613	17.615	0	1.081	21536131	4073196	5113	12782	797	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.640	17.643	0	1.002	2347891	438923	1165	2912	377		
305.8987	17.640	17.643	0	1.002	3237735	624367	1646	4115	379	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.063	16.065	0	0.986	10073042	2407445	12107	30267	199		
333.9339	16.063	16.065	0	0.986	13035882	2948806	11072	27680	266	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.076	16.079	0	1.001	672135	137480	1288	3220	107		
321.8936	16.090	16.079	1	1.002	822782	182683	1300	3250	141	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.090	16.093	0	0.987	13102501	2679899	2921	7302	917		

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 09:19:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_014.d		
Injection Date:	23-Aug-2021 23:53:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	518979	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

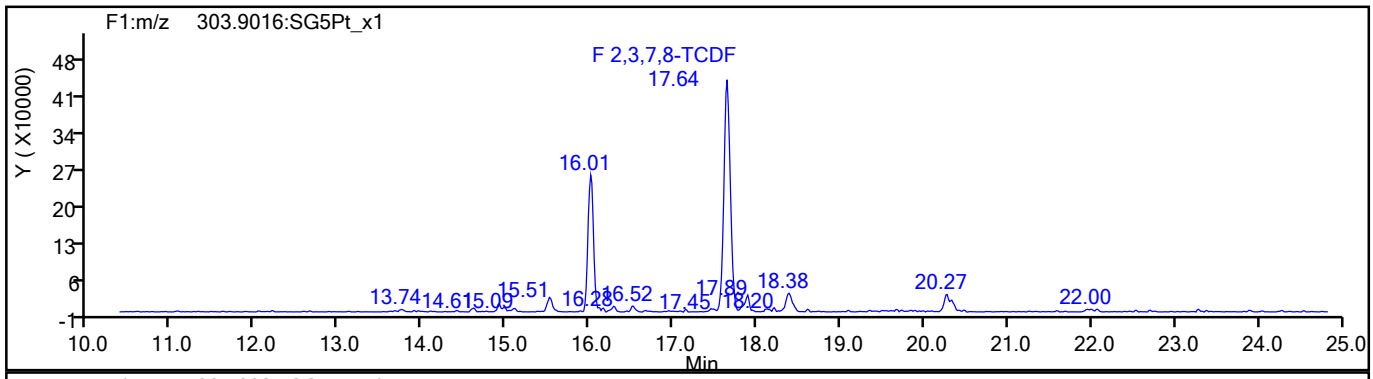

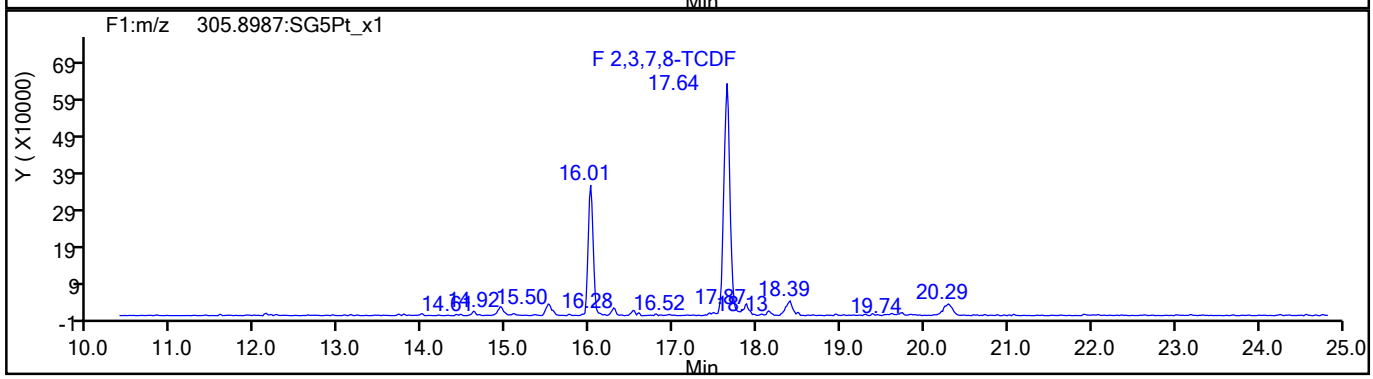

TCDF Standards

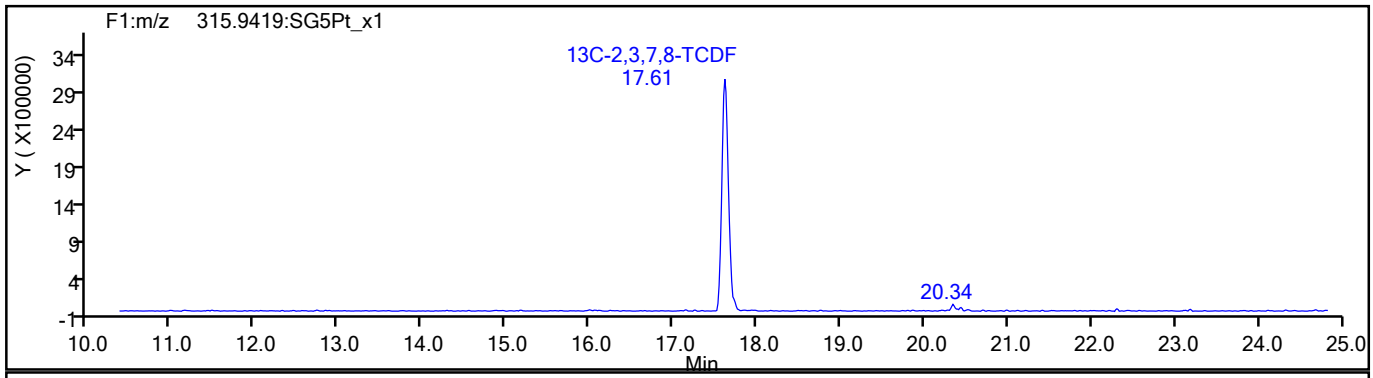

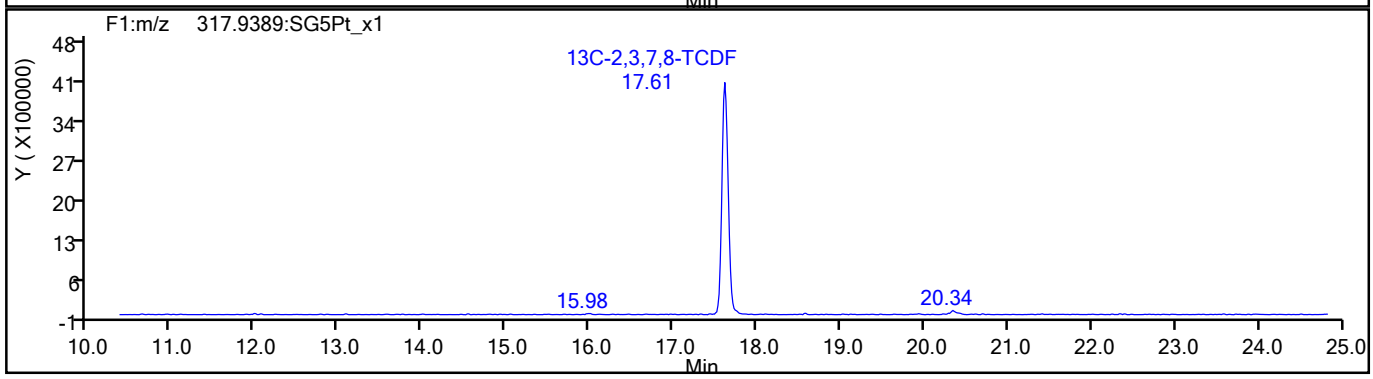

775964

Report Date: 24-Aug-2021 09:19:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_014.d		
Injection Date:	23-Aug-2021 23:53:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	518979	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

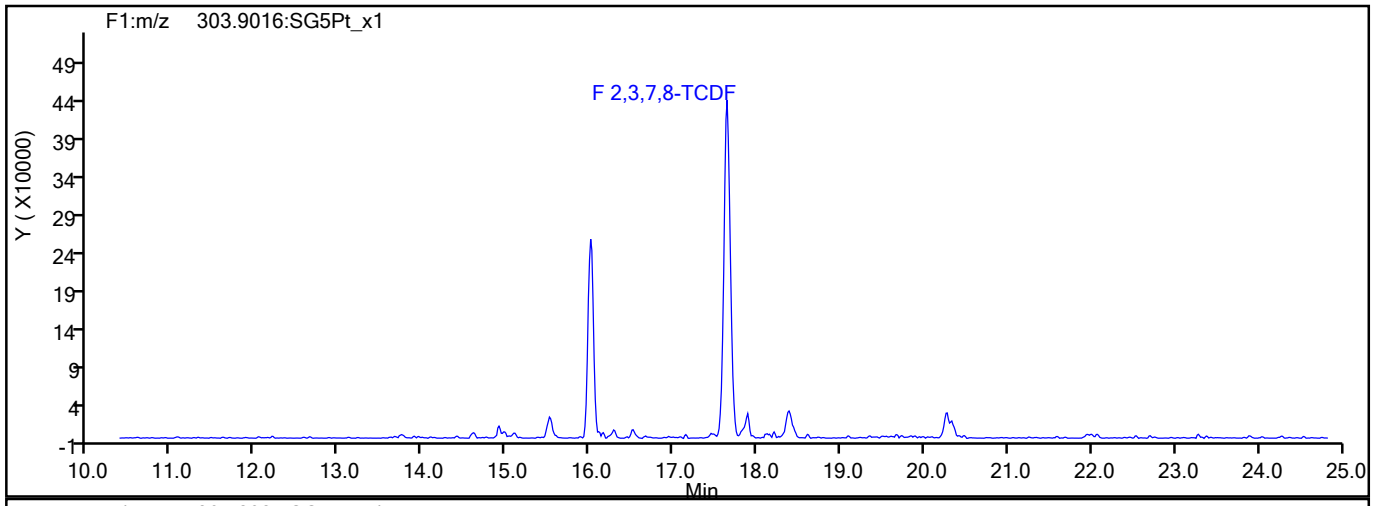

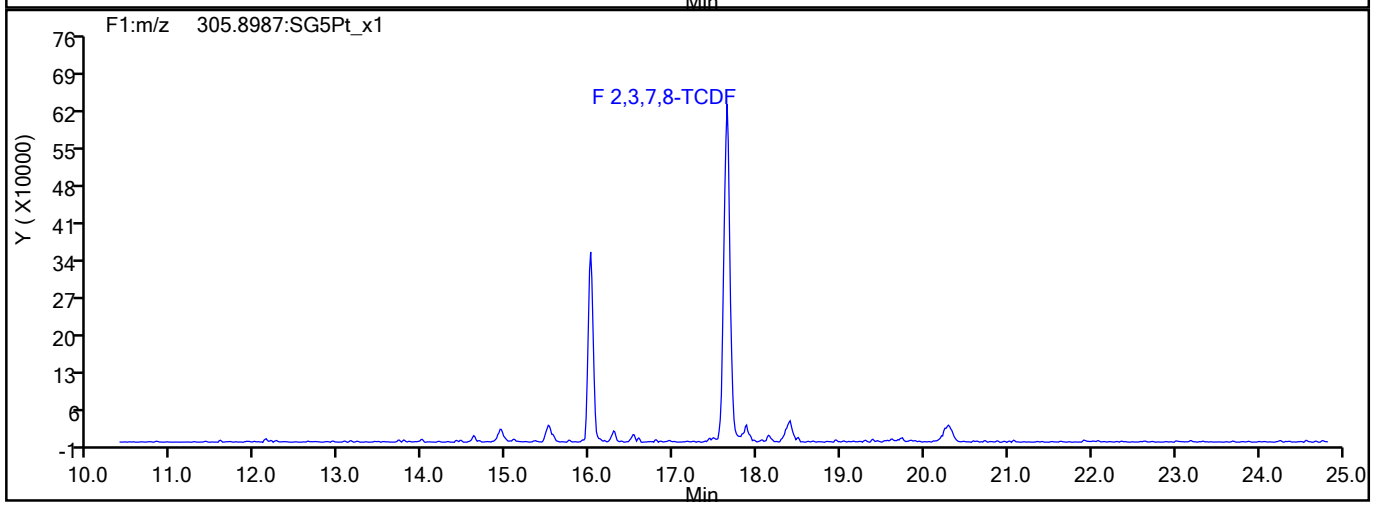

TCDF Interference Mass

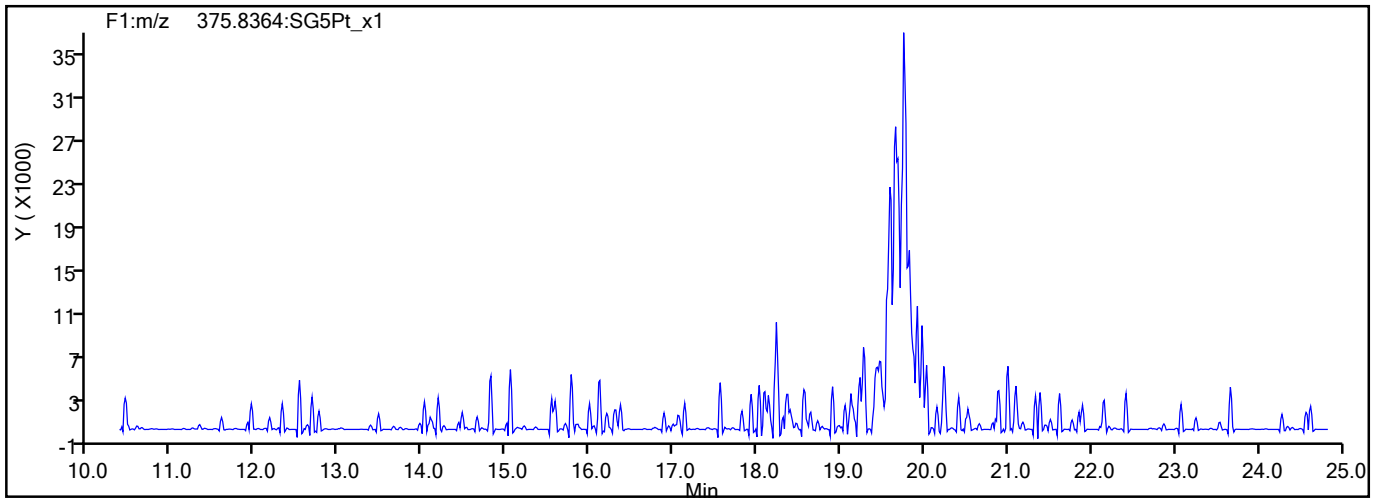

775965

Report Date: 24-Aug-2021 09:19:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_014.d		
Injection Date:	23-Aug-2021 23:53:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	518979	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

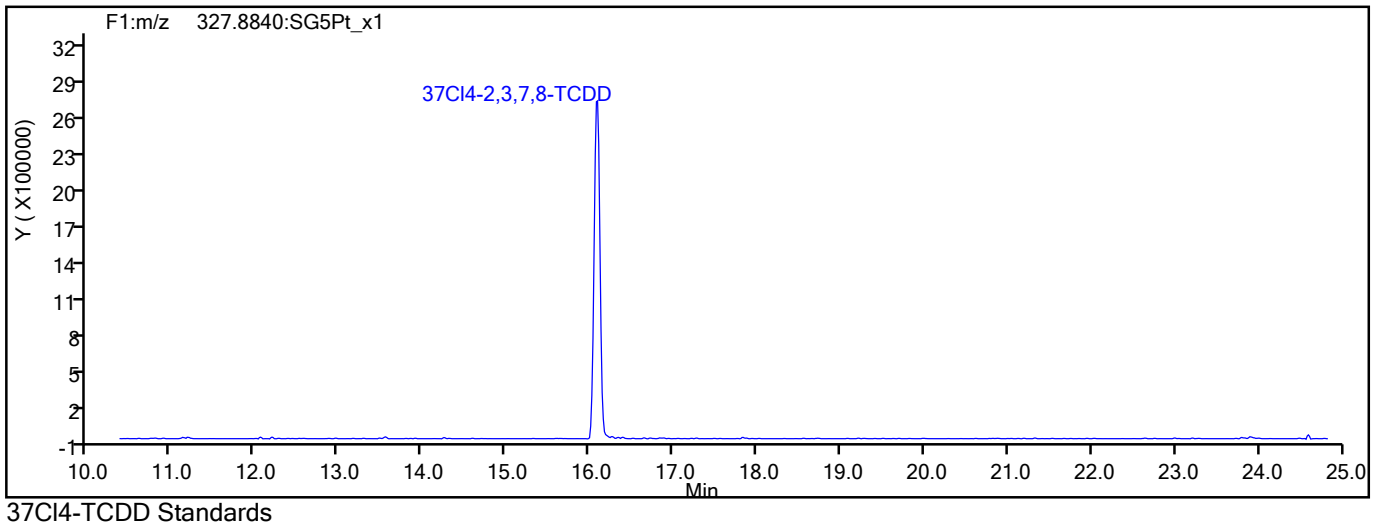

37Cl4-TCDD Standards

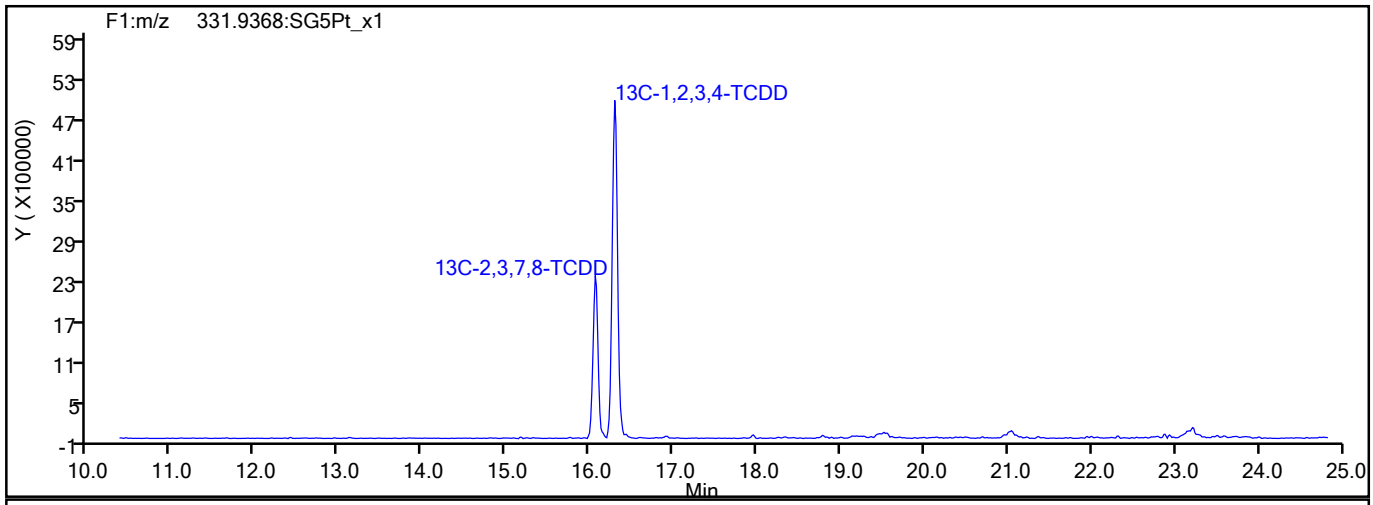

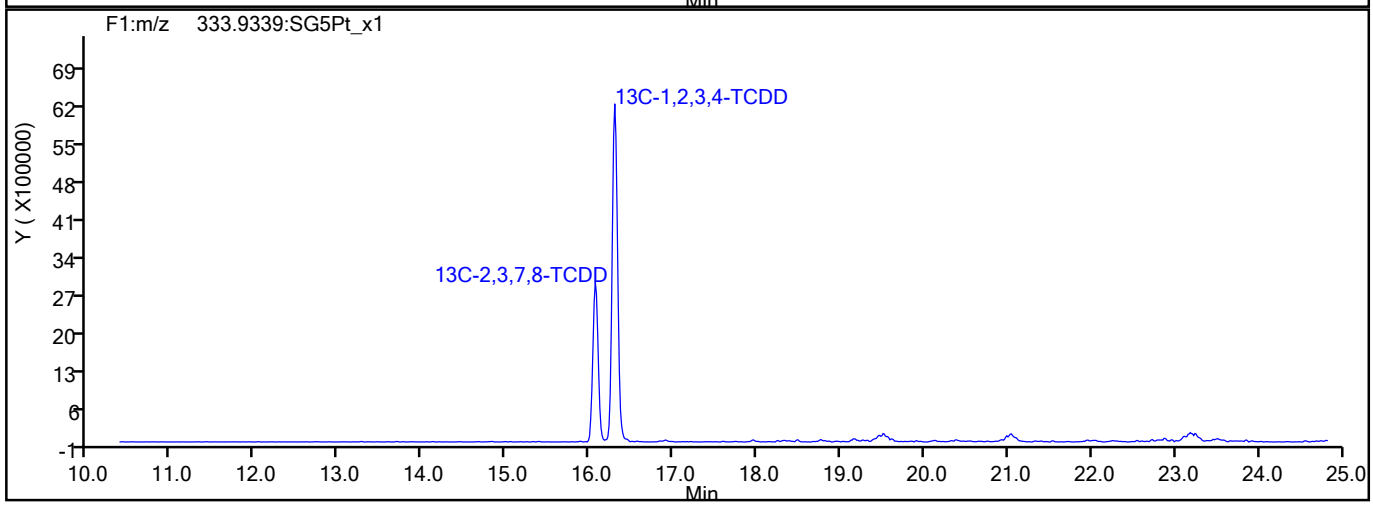

775966

Report Date: 24-Aug-2021 09:19:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_014.d		
Injection Date:	23-Aug-2021 23:53:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (12-14)		
Worklist#:	518979	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

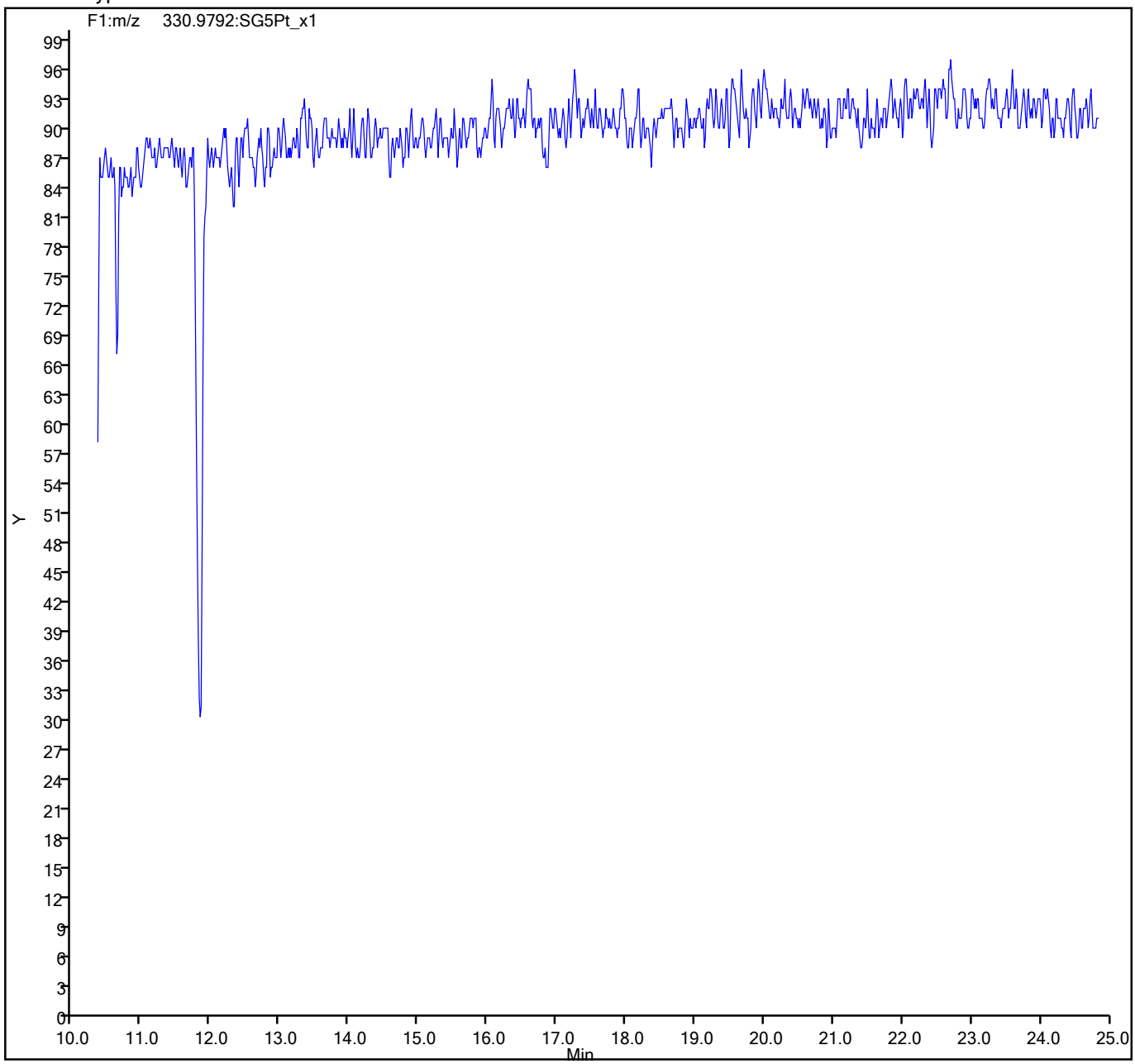

775967

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (14-16)
Lab Sample ID: 320-76769-34
Matrix: Sediment
Lab File ID: 18AU2110D5_6.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.94(g)
Date Analyzed: 08/18/2021 18:04
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 25.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	3.5		1.3	0.069
40321-76-4	1,2,3,7,8-PeCDD	0.15	J q	6.7	0.061
57117-41-6	1,2,3,7,8-PeCDF	0.72	J	6.7	0.038
57117-31-4	2,3,4,7,8-PeCDF	0.31	J	6.7	0.038
39227-28-6	1,2,3,4,7,8-HxCDD	0.31	J	6.7	0.050
57653-85-7	1,2,3,6,7,8-HxCDD	0.34	J q	6.7	0.053
19408-74-3	1,2,3,7,8,9-HxCDD	0.56	J	6.7	0.047
70648-26-9	1,2,3,4,7,8-HxCDF	1.1	J	6.7	0.038
57117-44-9	1,2,3,6,7,8-HxCDF	0.31	J	6.7	0.038
72918-21-9	1,2,3,7,8,9-HxCDF	0.065	J q	6.7	0.030
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.7	0.029
35822-46-9	1,2,3,4,6,7,8-HpCDD	10	B	6.7	0.16
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.70	J	6.7	0.036
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.084	J q	6.7	0.044
3268-87-9	OCDD	130	B	13	0.21
39001-02-0	OCDF	0.81	J	13	0.053
41903-57-5	Total TCDD	4.5	q	1.3	0.069
30402-14-3	Total TCDF	19	q	1.3	0.071
36088-22-9	Total PeCDD	0.66	J q	6.7	0.061
30402-15-4	Total PeCDF	1.5	J q	6.7	0.038
34465-46-8	Total HxCDD	7.5	q	6.7	0.050
55684-94-1	Total HxCDF	1.7	J q	6.7	0.034
37871-00-4	Total HpCDD	26	B	6.7	0.16
38998-75-3	Total HpCDF	0.90	J q	6.7	0.040

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (14-16)
Lab Sample ID: 320-76769-34
Matrix: Sediment
Lab File ID: 18AU2110D5_6.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.94(g)
Date Analyzed: 08/18/2021 18:04
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 25.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	59		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	56		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	61		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	64		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	59		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	65		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	58		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	58		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	59		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	59		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	54		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	62		26-138
114423-97-1	13C-OCDD	60		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	76		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d
Lims ID: 320-76769-A-34-A
Client ID: 11215702-072221-SS-SJSB076 (14-16)
Sample Type: Client
Inject. Date: 18-Aug-2021 18:04:34 ALS Bottle#: 7 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-34-A RI 320-76769-A-34-A RI
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:42:56

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.825	143168882	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.310	128403872	0.77	1.6249	55.2	55.2	0.1059	0.1059	55.20	
2,3,7,8-TCDF	17.341	5201868	0.76	1.0239	3.957	3.957	0.0264	0.0264		
A Non-2,3,7,8-sub-TCDF	17.159	3884136	0.77	1.0239	2.961	2.954	0.0264	1.721		RQM
S Total TCDF					6.918	6.911	0.0264	0.0264		RQ
D 13C-2,3,7,8-TCDD	18.021	76269456	0.82	0.8993	59.2	59.2	0.1849	0.1849	59.24	
2,3,7,8-TCDD	18.036	1231853	0.76	1.2541	1.288	1.288	0.0255	0.0255		
$ 37Cl4-2,3,7,8-TCDD	18.036	48166177		1.1071	30.4	30.4	0.0345	0.0345	75.97	
A Non-2,3,7,8-sub-TCDD	17.620	352137	0.77	1.2541	0.3781	0.3681	0.0255	0.1160		RQM
S Total TCDD					1.666	1.656	0.0255	0.0255		RQ
D 13C-1,2,3,7,8-PeCDF	22.326	96362433	1.55	1.2101	55.6	55.6	0.1468	0.1468	55.62	
1,2,3,7,8-PeCDF	22.340	275025	1.55	1.0611	0.2690	0.2690	0.0140	0.0140		
D 13C-2,3,4,7,8-PeCDF	23.662	108844871	1.57	1.2395	61.3	61.3	0.1433	0.1433	61.34	
2,3,4,7,8-PeCDF	23.690	125778	1.51	1.0184	0.1135	0.1135	0.0142	0.0142		
A F1 PeCDFs	20.229	17012	1.55	1.0398	0.0190	0.0159	0.0120	0.0159		RQ
A Non-2,3,7,8-sub-PeCDF	23.445	189623	1.55	1.0398	0.2085	0.1777	0.0141	0.0963		RQ
S Total PeCDF					0.6100	0.5761	0.0141	0.0141		RQ
D 13C-1,2,3,7,8-PeCDD	24.385	64391788	1.63	0.7612	59.1	59.1	0.0668	0.0668	59.08	
1,2,3,7,8-PeCDD	24.372	36808	1.55	1.0484	0.0590	0.0545	0.0228	0.0228		RQMa
A Non-2,3,7,8-sub-PeCDD	23.696	128903	1.55	1.0484	0.2214	0.1909	0.0228	0.1147		RQ
S Total PeCDD					0.2805	0.2455	0.0228	0.0228		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.463	94930978	0.52	1.0837	64.7	64.7	0.2559	0.2559	64.66	
1,2,3,4,7,8-HxCDF	30.490	417233	1.26	1.0851	0.4050	0.4050	0.0141	0.0141		
D 13C-1,2,3,6,7,8-HxCDF	30.649	89326562	0.52	1.1279	58.5	58.5	0.2459	0.2459	58.46	
1,2,3,6,7,8-HxCDF	30.676	115427	1.18	1.1260	0.1148	0.1148	0.0141	0.0141		
D 13C-2,3,4,6,7,8-HxCDF	31.488	84721804	0.53	1.0637	58.8	58.8	0.2607	0.2607	58.79	
2,3,4,6,7,8-HxCDF	31.488						0.0108	0.0108		
D 13C-1,2,3,7,8,9-HxCDF	32.286	75917000	0.52	0.9676	57.9	57.9	0.2866	0.2866	57.91	
1,2,3,7,8,9-HxCDF	32.313	21273	1.24	1.1664	0.0297	0.0240	0.0113	0.0113		RQM
A Non-2,3,7,8-sub-HxCDF	30.410	81775	1.19	1.1363	0.0835	0.0835	0.0124	0.0549		Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.6330	0.6273	0.0126	0.0126		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.113	135477666	1.21	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.674	63493393	1.24	0.7334	63.9	63.9	0.2624	0.2624	63.90	
1,2,3,4,7,8-HxCDD	31.687	78816	1.30	1.0640	0.1167	0.1167	0.0186	0.0186		
D 13C-1,2,3,6,7,8-HxCDD	31.781	70449018	1.22	0.8802	59.1	59.1	0.2187	0.2187	59.08	
1,2,3,6,7,8-HxCDD	31.794	88453	1.24	1.0001	0.1369	0.1255	0.0197	0.0197		RQM
1,2,3,7,8,9-HxCDD	32.127	158018	1.23	1.1325	0.2083	0.2083	0.0174	0.0174		M
A Non-2,3,7,8-sub-HxCDD	30.816	1657504	1.24	1.0655	2.347	2.323	0.0185	1.300		RQMa
S Total HxCDD					2.809	2.773	0.0186	0.0186		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.742	56172056	0.42	0.7730	53.6	53.6	0.6069	0.6069	53.64	
1,2,3,4,6,7,8-HpCDF	33.754	211013	1.08	1.4413	0.2606	0.2606	0.0134	0.0134		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.823	59286747	0.44	0.7008	62.4	62.4	0.6695	0.6695	62.44	
1,2,3,4,7,8,9-HpCDF	34.823	24541	1.04	1.3174	0.0439	0.0314	0.0164	0.0164		RQ
A Non-2,3,7,8-sub-HpCDF	34.283	34924	1.04	1.3793	0.0478	0.0439	0.0148	0.0439		RQ
S Total HpCDF					0.3523	0.3359	0.0149	0.0149		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.532	51601415	1.01	0.6472	58.8	58.8	0.2352	0.2352	58.85	
1,2,3,4,6,7,8-HpCDD	34.544	2146322	1.04	1.0943	3.801	3.801	0.0603	0.0603		
A Non-2,3,7,8-sub-HpCDD	33.504	3211582	1.05	1.0943	5.687	5.687	0.0603	5.687		a
S Total HpCDD					9.488	9.488	0.0603	0.0603		
D 13C-OCDD	36.878	73024343	0.87	0.4472	120.5	120.5	0.1009	0.1009	60.27	
OCDF	36.986	158547	0.90	1.4382	0.3019	0.3019	0.0195	0.0195		M
OCDD	36.890	19245011	0.88	1.1070	47.6	47.6	0.0766	0.0766		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d
Lims ID: 320-76769-A-34-A
Client ID: 11215702-072221-SS-SJSB076 (14-16)
Sample Type: Client
Inject. Date: 18-Aug-2021 18:04:34 ALS Bottle#: 7 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-34-A RI 320-76769-A-34-A RI
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:42:56

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.825	17.809	1		63835830	15760824	8434	21085	1869		
333.9339	17.825	17.809	1		79333052	19664041	15124	37810	1300	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.310	17.295	1	0.971	55819923	13250235	14975	37437	885		
317.9389	17.310	17.295	1	0.971	72583949	16979499	9397	23492	1807	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.341	17.310	2	1.002	2252079	518897	1441	3602	360		
305.8987	17.341	17.310	2	1.002	2949789	659604	1823	4557	362	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	15.406	17.159	-105	0.890	25762	6985	1441	3602	5		M
	Empc Correction				21068	5957	1441	3602	4		
305.8987	15.406	17.159	-105	0.890	27362	7737	1823	4557	4	0.94(0.65-0.89)	M
303.9016	15.663	17.159	-90	0.905	13516	3897	1441	3602	3		M
305.8987	15.663	17.159	-90	0.905	21700	5907	1823	4557	3	0.62(0.65-0.89)	M
	Empc Correction				17553	5061	1823	4557	3		
303.9016	15.920	17.159	-74	0.920	47050	12946	1441	3602	9		
305.8987	15.920	17.159	-74	0.920	56539	15042	1823	4557	8	0.83(0.65-0.89)	
303.9016	16.207	17.159	-57	0.936	76181	16400	1441	3602	11		
305.8987	16.207	17.159	-57	0.936	107378	22920	1823	4557	13	0.71(0.65-0.89)	
303.9016	16.434	17.159	-43	0.949	84356	19971	1441	3602	14		
305.8987	16.419	17.159	-44	0.948	97379	24160	1823	4557	13	0.87(0.65-0.89)	
303.9016	16.660	17.159	-30	0.962	102065	22229	1441	3602	15		
305.8987	16.676	17.159	-29	0.963	122177	24724	1823	4557	14	0.84(0.65-0.89)	
303.9016	16.948	17.159	-13	0.979	1006213	250420	1441	3602	174		
305.8987	16.948	17.159	-13	0.979	1257006	301667	1823	4557	165	0.80(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.159	17.159	0	0.991	48456	10129	1441	3602	7		
305.8987	17.174	17.159	1	0.992	59870	12529	1823	4557	7	0.81(0.65-0.89)	
303.9016	17.764	17.159	36	1.026	162783	34488	1441	3602	24		
305.8987	17.764	17.159	36	1.026	208852	45015	1823	4557	25	0.78(0.65-0.89)	
303.9016	19.140	17.159	119	1.106	166895	31103	1441	3602	22		
305.8987	19.155	17.159	120	1.107	201437	40109	1823	4557	22	0.83(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.021	18.006	1	1.011	34268676	7777578	8434	21085	922		
333.9339	18.021	18.006	1	1.011	42000780	9509399	15124	37810	629	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.036	18.021	1	1.001	533633	121426	1253	3132	97		
321.8936	18.036	18.021	1	1.001	698220	156170	960	2400	163	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.036	18.021	1	1.012	48166177	11079221	5419	13547	2045		
A Non-2,3,7,8-sub-TCDD											RQM
319.8965	15.814	17.620	-108	0.878	19630	4283	1253	3132	3		M
	Empc Correction				13895	3021	1253	3132	2		
321.8936	15.814	17.620	-108	0.878	18046	3924	960	2400	4	1.09(0.65-0.89)	M
319.8965	16.101	17.620	-91	0.893	15810	3410	1253	3132	3		M
	Empc Correction				12032	3696	1253	3132	3		
321.8936	16.101	17.620	-91	0.893	15626	4801	960	2400	5	1.01(0.65-0.89)	M
319.8965	16.902	17.620	-43	0.938	46852	12351	1253	3132	10		
321.8936	16.902	17.620	-43	0.938	56583	11675	960	2400	12	0.83(0.65-0.89)	
319.8965	17.931	17.620	19	0.995	33392	6424	1253	3132	5		
321.8936	17.915	17.620	18	0.994	44720	8832	960	2400	9	0.75(0.65-0.89)	
319.8965	18.399	17.620	47	1.021	44297	9492	1253	3132	8		
321.8936	18.399	17.620	47	1.021	66694	14362	960	2400	15	0.66(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.326	22.299	2	1.253	58580696	9776037	14888	37220	657		
353.8970	22.326	22.299	2	1.253	37781737	6213073	10284	25710	604	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.340	22.326	1	1.001	167031	22886	415	1037	55		
341.8567	22.353	22.326	2	1.001	107994	17050	534	1335	32	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.662	23.635	2	1.328	66486382	9970280	14888	37220	670		
353.8970	23.662	23.635	2	1.328	42358489	6410449	10284	25710	623	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.690	23.649	2	1.001	75764	11786	415	1037	28		
341.8567	23.690	23.649	2	1.001	50014	7223	534	1335	14	1.51(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	20.697	20.229	28	0.927	10341	1991	283	707	7		
341.8567	20.728	20.229	30	0.928	9982	2271	527	1317	4	1.04(1.32-1.78)	
	Empc Correction				6671	1284	527	1317	2		
A Non-2,3,7,8-sub-PeCDF											RQ

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	21.003	23.445	-146	0.941	77468	15012	415	1037	36		
	Empc Correction				62420	10088	415	1037	24		
341.8567	21.017	23.445	-145	0.941	40271	6509	534	1335	12	1.92(1.32-1.78)	
339.8597	22.872	23.445	-34	1.024	42401	7324	415	1037	18		
	Empc Correction				28518	4789	415	1037	12		
341.8567	22.830	23.445	-37	1.023	18399	3090	534	1335	6	2.30(1.32-1.78)	
339.8597	24.031	23.445	35	1.076	24323	3420	415	1037	8		
341.8567	24.044	23.445	36	1.077	19617	2481	534	1335	5	1.24(1.32-1.78)	
	Empc Correction				15692	2206	534	1335	4		
13C-1,2,3,7,8-PeCDD											
367.8949	24.385	24.358	2	1.368	39880246	5676600	4490	11225	1264		
369.8919	24.372	24.358	1	1.367	24511542	3491647	2720	6800	1284	1.63(1.32-1.78)	
1,2,3,7,8-PeCDD											RQMa
355.8546	24.372	24.372	0	0.999	22374	2893	549	1372	5		M
357.8516	24.440	24.372	4	1.002	17489	2481	326	815	8	1.28(1.32-1.78)	M
	Empc Correction				14434	1866	326	815	6		
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.944	23.696	-105	0.900	54860	8900	549	1372	16		
	Empc Correction				47065	9867	549	1372	18		
357.8516	21.944	23.696	-105	0.900	30365	6366	326	815	20	1.81(1.32-1.78)	
355.8546	23.403	23.696	-18	0.960	31288	4396	549	1372	8		
357.8516	23.444	23.696	-15	0.961	32957	3247	326	815	10	0.95(1.32-1.78)	
	Empc Correction				20185	2836	326	815	9		
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.463	30.436	2	0.949	32441378	5730537	13673	34182	419		
385.8610	30.463	30.436	2	0.949	62489600	10781255	25096	62740	430	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.490	30.463	2	1.001	232316	38155	606	1515	63		
375.8178	30.476	30.463	1	1.000	184917	30407	403	1007	75	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.649	30.623	2	0.954	30726941	5519645	13673	34182	404		
385.8610	30.649	30.623	2	0.954	58599621	10391004	25096	62740	414	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.676	30.649	2	1.001	62485	10141	606	1515	17		
375.8178	30.676	30.649	2	1.001	52942	8780	403	1007	22	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.488	31.461	2	0.981	29240755	6943998	13673	34182	508		
385.8610	31.488	31.461	2	0.981	55481049	13049127	25096	62740	520	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.488						606	1515			
375.8178	31.488						403	1007			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.286	32.273	1	1.005	26130608	6550010	13673	34182	479		
385.8610	32.286	32.273	1	1.005	49786392	12591306	25096	62740	502	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	32.313	32.286	2	1.001	16805	5099	606	1515	8		M
	Empc Correction				11776	3479	606	1515	6		
375.8178	32.300	32.286	1	1.000	9497	2806	403	1007	7	1.77(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	28.320	30.410	-125	0.930	28913	3972	606	1515	7		
375.8178	28.307	30.410	-126	0.929	24836	3774	403	1007	9	1.16(1.05-1.43)	
373.8208	32.393	30.410	119	1.063	15501	3535	606	1515	6		M
375.8178	32.393	30.410	119	1.063	12525	4204	403	1007	10	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.113	32.100	1		74058410	19174838	15078	37695	1272		
403.8529	32.113	32.100	1		61419256	15771451	11826	29565	1334	1.21(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.674	31.661	1	0.986	35130357	9497920	15078	37695	630		
403.8529	31.674	31.661	1	0.986	28363036	7725534	11826	29565	653	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.687	31.674	1	1.000	44535	12891	682	1705	19		
391.8127	31.687	31.674	1	1.000	34281	8786	679	1697	13	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.781	31.767	1	0.990	38769013	9489414	15078	37695	629		
403.8529	31.781	31.767	1	0.990	31680005	7797516	11826	29565	659	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQM
389.8157	31.794	31.781	1	1.000	56987	15554	682	1705	23		
	Empc Correction				48965	13370	682	1705	20		
391.8127	31.794	31.781	1	1.000	39488	10783	679	1697	16	1.44(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											M
389.8157	32.127	32.113	1	1.014	87214	20990	682	1705	31		M
391.8127	32.113	32.113	0	1.014	70804	15427	679	1697	23	1.23(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQMa
389.8157	29.478	30.816	-80	0.928	503366	60603	682	1705	89		
391.8127	29.491	30.816	-79	0.928	424062	46360	679	1697	68	1.19(1.05-1.43)	
389.8157	30.556	30.816	-16	0.961	49797	6204	682	1705	9		
	Empc Correction				39089	6146	682	1705	9		
391.8127	30.556	30.816	-16	0.961	31524	4957	679	1697	7	1.58(1.05-1.43)	
389.8157	30.915	30.816	6	0.973	349211	65298	682	1705	96		M
391.8127	30.915	30.816	6	0.973	278683	51641	679	1697	76	1.25(1.05-1.43)	
389.8157	31.128	30.816	19	0.979	17476	3218	682	1705	5		M
391.8127	31.128	30.816	19	0.979	20791	4304	679	1697	6	0.84(1.05-1.43)	
	Empc Correction				14093	2595	679	1697	4		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.742	33.718	1	1.051	16678412	5442049	27105	67762	201		
419.8220	33.742	33.718	1	1.051	39493644	12294466	38479	96197	320	0.42(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.754	33.730	1	1.000	109331	35083	701	1752	50		M
409.7789	33.754	33.730	1	1.000	101682	31738	669	1672	47	1.08(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.823	34.811	1	1.084	18064594	4956003	27105	67762	183		
419.8220	34.823	34.811	1	1.084	41222153	10932247	38479	96197	284	0.44(0.37-0.51)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8,9-HpCDF											RQ
407.7818	34.823	34.811	1	1.000	22290	4897	701	1752	7		
	Empc Correction				12511	4024	701	1752	6		
409.7789	34.823	34.811	1	1.000	12030	3870	669	1672	6	1.85(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											RQ
407.7818	34.046	34.283	-14	1.009	20906	6329	701	1752	9		
	Empc Correction				17804	6154	701	1752	9		
409.7789	34.033	34.283	-15	1.009	17120	5918	669	1672	9	1.22(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.532	34.520	1	1.075	25921080	7761787	10701	26752	725		
437.8140	34.532	34.520	1	1.075	25680335	7687201	10575	26437	727	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.544	34.532	1	1.000	1091952	316645	2014	5035	157		
425.7737	34.544	34.532	1	1.000	1054370	308420	2064	5160	149	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.985	33.504	29	0.984	1642932	498971	2014	5035	248		a
425.7737	33.985	33.504	29	0.984	1568650	495140	2064	5160	240	1.05(0.88-1.20)	
13C-OCDD											
469.7779	36.878	36.866	1	1.148	33879875	8203073	3050	7625	2690		
471.7750	36.878	36.866	1	1.148	39144468	9417969	3258	8145	2891	0.87(0.76-1.02)	
OCDF											M
441.7428	36.986	36.962	1	1.003	75232	17365	405	1012	43		M
443.7399	36.986	36.962	1	1.003	83315	17926	586	1465	31	0.90(0.76-1.02)	
OCDD											
457.7377	36.890	36.878	1	1.000	9020695	2235312	1362	3405	1641		
459.7348	36.890	36.878	1	1.000	10224316	2525980	1626	4065	1553	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 19-Aug-2021 13:08:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d
Lims ID: 320-76769-A-34-A
Client ID: 11215702-072221-SS-SJSB076 (14-16)
Inject. Date: 18-Aug-2021 18:04:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDF, RT: 17.159

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	128403872	30229734

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	128403872	30229734

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.406	25762	6985	27362	7737	0.0404	0.94	RQM
15.406	21068	5957	27362	7737	0.0368		Empc Correction
15.663	13516	3897	21700	5907	0.0268	0.62	RQM
15.663	13516	3897	17553	5061	0.0236		Empc Correction
15.920	47050	12946	56539	15042	0.0788	0.83	
16.207	76181	16400	107378	22920	0.1396	0.71	
16.434	84356	19971	97379	24160	0.1382	0.87	
16.660	102065	22229	122177	24724	0.1706	0.84	
16.948	1006213	250420	1257006	301667	1.72	0.80	
17.159	48456	10129	59870	12529	0.0824	0.81	
17.764	162783	34488	208852	45015	0.2827	0.78	
19.140	166895	31103	201437	40109	0.2802	0.83	
Signal Totals:							
	1728583	407540	2155553	498964			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3892977	908378				0.80	RQM
	3884136	906504					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.961 = (3892977 * 100.000) / (128403872 * 1.024)
Empc Amount: 2.954 = (3884136 * 100.000) / (128403872 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 13:08:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d
Lims ID: 320-76769-A-34-A
Client ID: 11215702-072221-SS-SJSB076 (14-16)
Inject. Date: 18-Aug-2021 18:04:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDD, RT: 17.620

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	76269456	17286977

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	76269456	17286977

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.814	19630	4283	18046	3924	0.0394	1.09	RQM
15.814	13895	3021	18046	3924	0.0334		Empc Correction
16.101	15810	3410	15626	4801	0.0329	1.01	RQM
16.101	12032	3696	15626	4801	0.0289		Empc Correction
16.902	46852	12351	56583	11675	0.1081	0.83	
17.931	33392	6424	44720	8832	0.0817	0.75	
18.399	44297	9492	66694	14362	0.1160	0.66	
Signal Totals:							
	150468	34984	201669	43594			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	361650	79554				0.79	RQM
	352137	78578					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3781 = (361650 * 100.000) / (76269456 * 1.254)
Empc Amount: 0.3681 = (352137 * 100.000) / (76269456 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 13:08:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d
Lims ID: 320-76769-A-34-A
Client ID: 11215702-072221-SS-SJSB076 (14-16)
Inject. Date: 18-Aug-2021 18:04:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 6

F1 PeCDFs, RT: 20.229

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	96362433	15989110
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	108844871	16380729

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	102603652	16184919

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.697	10341	1991	9982	2271	0.0190	1.04	RQ
20.697	10341	1991	6671	1284	0.0159		Empc Correction
Signal Totals:							
	10341	1991	6671	1284			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	20323	4262				1.04	RQ
	17012	3275					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0190 = (20323 * 100.000) / (102603652 * 1.040)
Empc Amount: 0.0159 = (17012 * 100.000) / (102603652 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 13:08:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d
Lims ID: 320-76769-A-34-A
Client ID: 11215702-072221-SS-SJSB076 (14-16)
Inject. Date: 18-Aug-2021 18:04:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 6

Non-2,3,7,8-sub-PeCDF, RT: 23.445

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	96362433	15989110
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	108844871	16380729

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	102603652	16184919

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.003	77468	15012	40271	6509	0.1104	1.92	RQ
21.003	62420	10088	40271	6509	0.0963		Empc Correction
22.872	42401	7324	18399	3090	0.0570	2.30	RQ
22.872	28518	4789	18399	3090	0.0440		Empc Correction
24.031	24323	3420	19617	2481	0.0412	1.24	RQ
24.031	24323	3420	15692	2206	0.0375		Empc Correction
Signal Totals:							
	115261	18297	74362	11805			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	222479	37836				1.84	RQ
	189623	30102					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2085 = (222479 * 100.000) / (102603652 * 1.040)
Empc Amount: 0.1777 = (189623 * 100.000) / (102603652 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 13:08:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d		
Lims ID:	320-76769-A-34-A		
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Inject. Date:	18-Aug-2021 18:04:34	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	6

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	64391788	9168247

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	64391788	9168247

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.944	54860	8900	30365	6366	0.1262	1.81	RQ
21.944	47065	9867	30365	6366	0.1147		Empc Correction
23.403	31288	4396	32957	3247	0.0952	0.95	RQ
23.403	31288	4396	20185	2836	0.0762		Empc Correction
Signal Totals:							
	78353	14263	50550	9202			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	149470	22909				1.36	RQ
	128903	23465					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2214 = (149470 * 100.000) / (64391788 * 1.048)
Empc Amount: 0.1909 = (128903 * 100.000) / (64391788 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 13:08:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d
Lims ID: 320-76769-A-34-A
Client ID: 11215702-072221-SS-SJSB076 (14-16)
Inject. Date: 18-Aug-2021 18:04:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 6

Non-2,3,7,8-sub-HxCDF, RT: 30.410

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	94930978	16511792
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	89326562	15910649
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	84721804	19993125
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	75917000	19141316

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	86224086	17889220

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.320	28913	3972	24836	3774	0.0549	1.16	
32.393	15501	3535	12525	4204	0.0286	1.24	Ma
Signal Totals:							
	44414	7507	37361	7978			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	81775	15485				1.19	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0835 = (81775 * 100.000) / (86224086 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d
Lims ID: 320-76769-A-34-A
Client ID: 11215702-072221-SS-SJSB076 (14-16)
Inject. Date: 18-Aug-2021 18:04:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 6

Non-2,3,7,8-sub-HxCDD, RT: 30.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	63493393	17223454
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	70449018	17286930
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	66971205	17255192

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.478	503366	60603	424062	46360	1.30	1.19	
30.556	49797	6204	31524	4957	0.1140	1.58	RQ
30.556	39089	6146	31524	4957	0.0990		Empc Correction
30.915	349211	65298	278683	51641	0.8799	1.25	M
31.128	17476	3218	20791	4304	0.0536	0.84	RQMa
31.128	17476	3218	14093	2595	0.0442		Empc Correction
Signal Totals:							
	909142	135265	748362	105553			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1674910	242585				1.22	RQMa
	1657504	240818					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.347 = (1674910 * 100.000) / (66971205 * 1.066)
Empc Amount: 2.323 = (1657504 * 100.000) / (66971205 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d
Lims ID: 320-76769-A-34-A
Client ID: 11215702-072221-SS-SJSB076 (14-16)
Inject. Date: 18-Aug-2021 18:04:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 6

Non-2,3,7,8-sub-HpCDF, RT: 34.283

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	56172056	17736515
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	59286747	15888250

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	57729401	16812382

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.046	20906	6329	17120	5918	0.0478	1.22	RQ
34.046	17804	6154	17120	5918	0.0439		Empc Correction
Signal Totals:							
	17804	6154	17120	5918			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	38026	12247				1.22	RQ
	34924	12072					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0478 = (38026 * 100.000) / (57729401 * 1.379)
Empc Amount: 0.0439 = (34924 * 100.000) / (57729401 * 1.379)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 13:08:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d
Lims ID: 320-76769-A-34-A
Client ID: 11215702-072221-SS-SJSB076 (14-16)
Inject. Date: 18-Aug-2021 18:04:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 6

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	51601415	15448988

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	51601415	15448988

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.985	1642932	498971	1568650	495140	5.69	1.05	a
Signal Totals:							
	1642932	498971	1568650	495140			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3211582	994111				1.05	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 5.687 = (3211582 * 100.000) / (51601415 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.86- 19.46)

Signal: 1

Processing Integration Results

RT = 15.406 Area = 25405

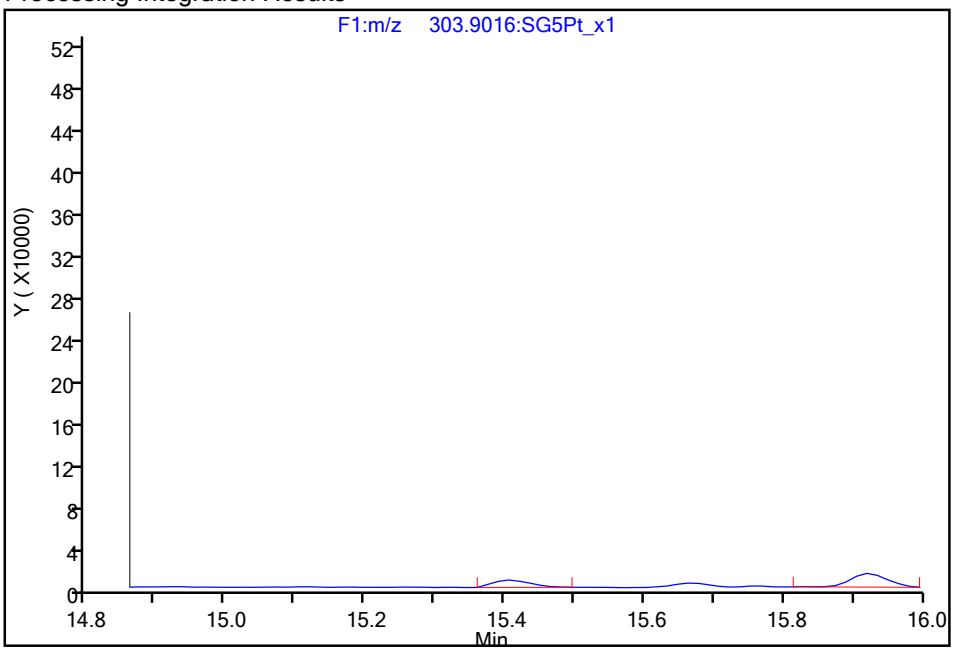

Manual Integration Results

RT = 15.406 Area = 25762 M

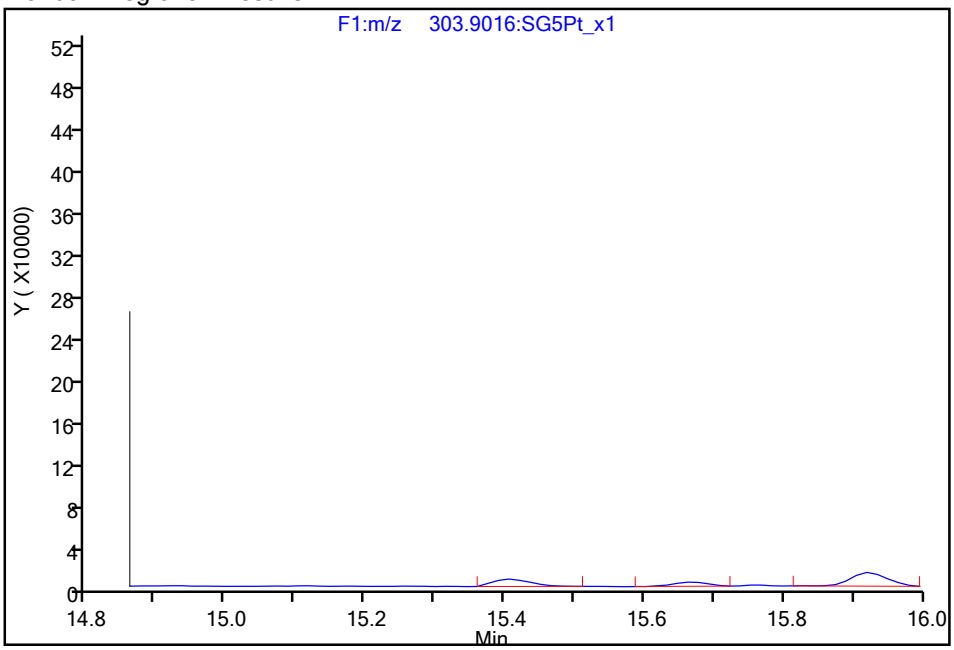

Reviewer: bennettd, 19-Aug-2021 12:37:51

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.86- 19.46)

Signal: 2

Not Detected
RT: 14.86- 19.46

Processing Integration Results

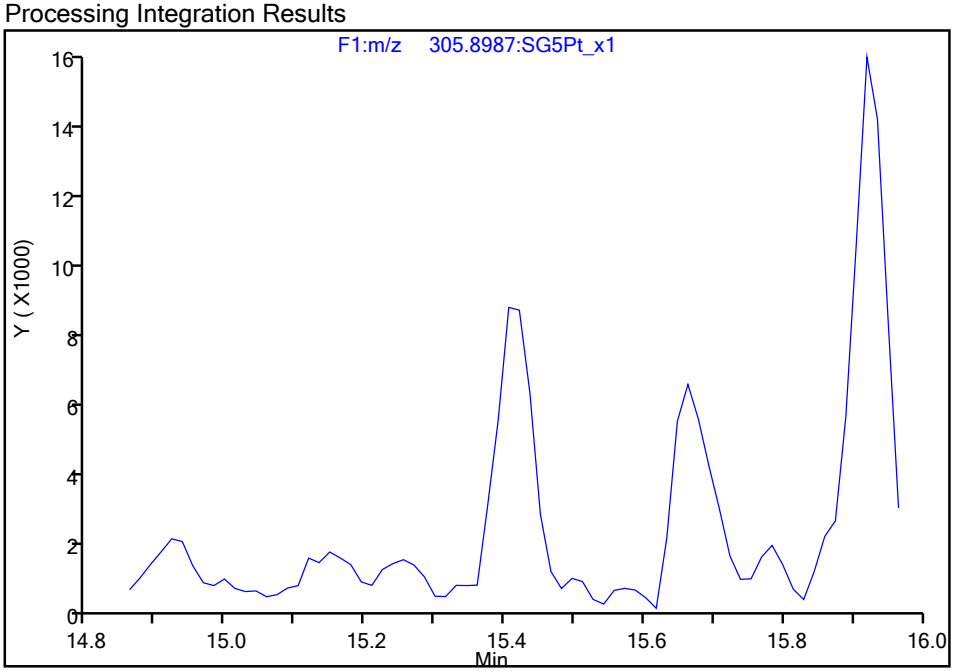

Manual Integration Results

RT = 15.406 Area = 27362 M

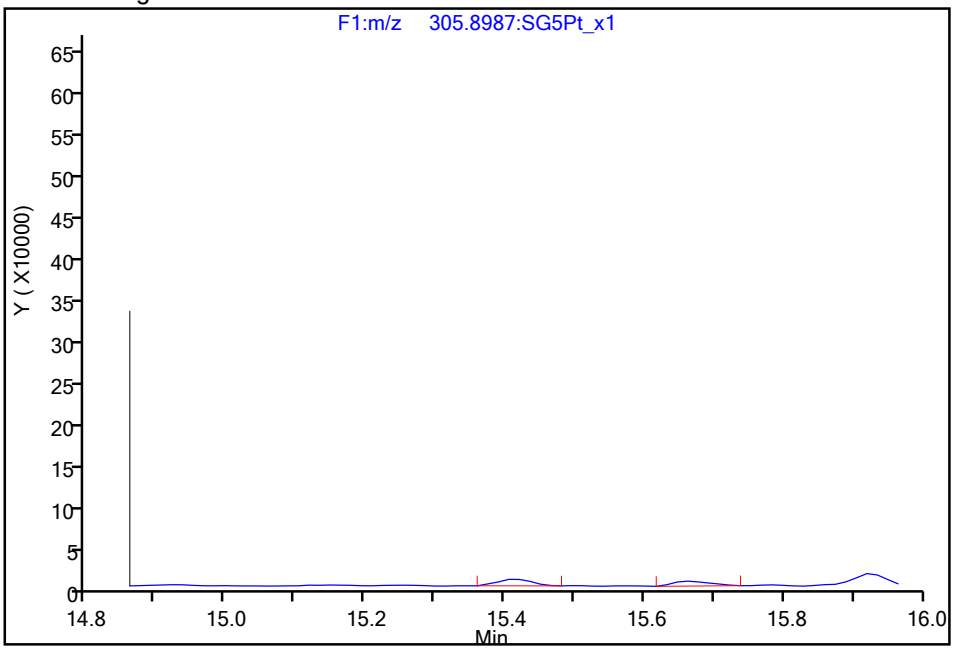

Reviewer: bennettd, 19-Aug-2021 12:38:02
Audit Action: Manually Integrated Audit Reason: Missed Peak

Report Date: 19-Aug-2021 13:08:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.86- 19.46)

Signal: 1

Not Detected

RT: 14.86- 19.46

Processing Integration Results

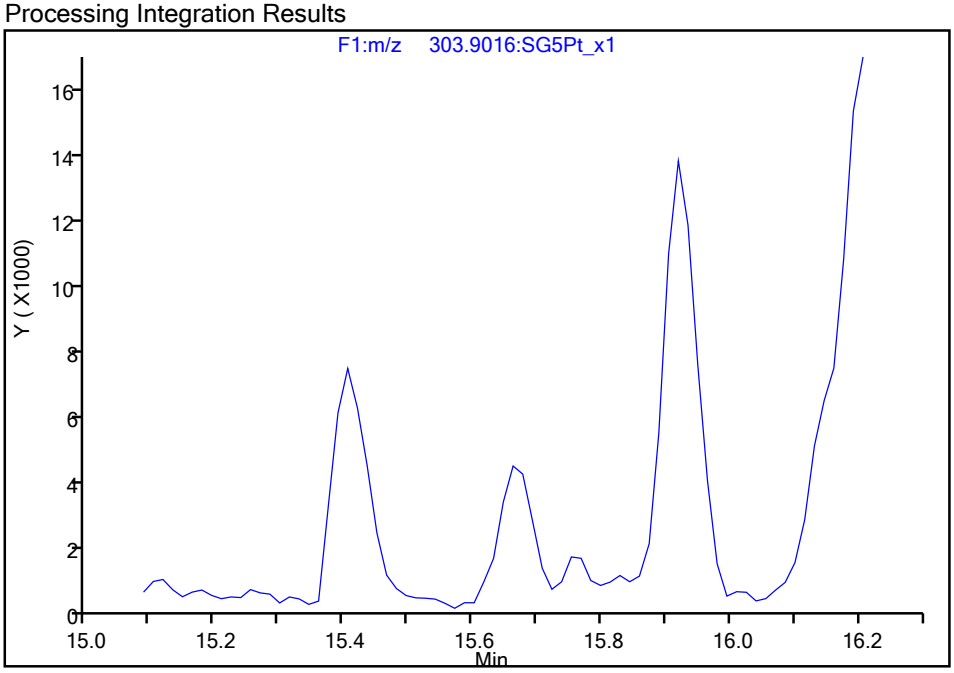

RT = 15.663 Area = 13516 M

Manual Integration Results

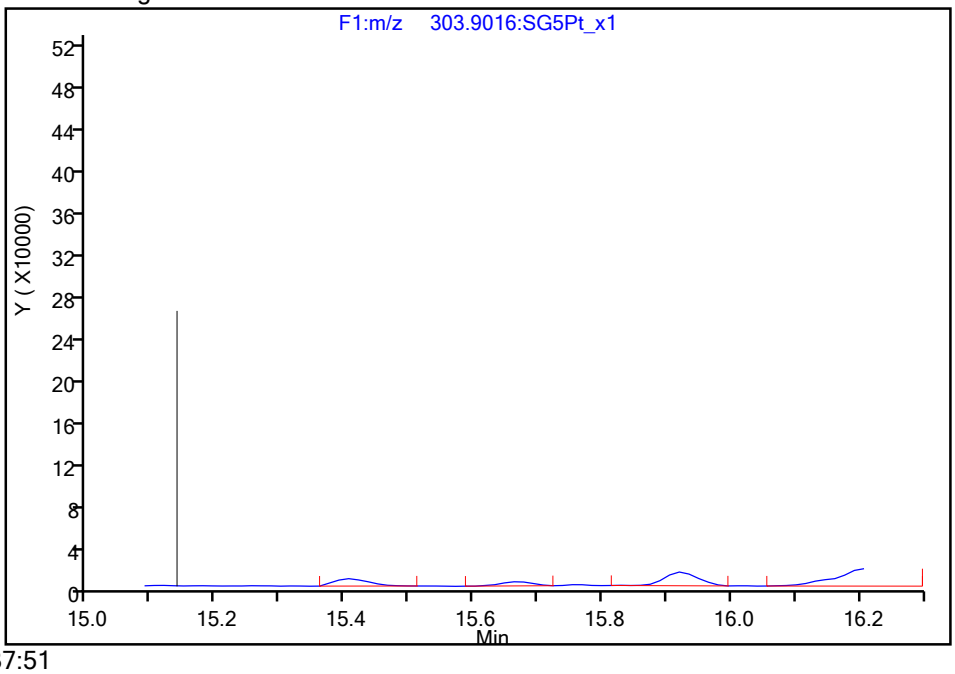

Reviewer: bennettd, 19-Aug-2021 12:37:51

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.86- 19.46)

Signal: 2

Processing Integration Results

Not Detected
RT: 14.86- 19.46

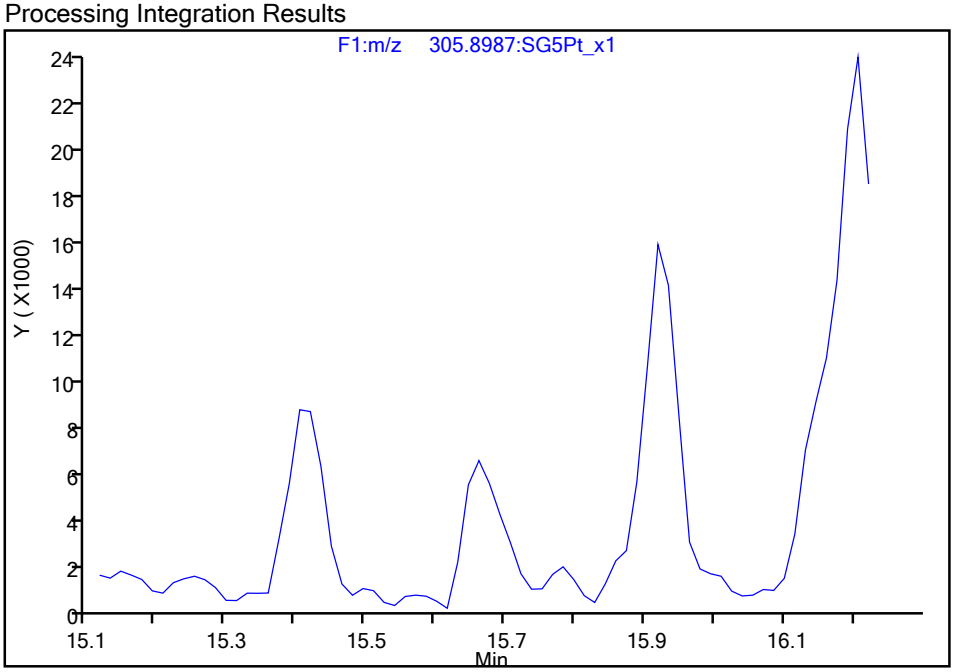

Manual Integration Results

RT = 15.663 Area = 21700 M

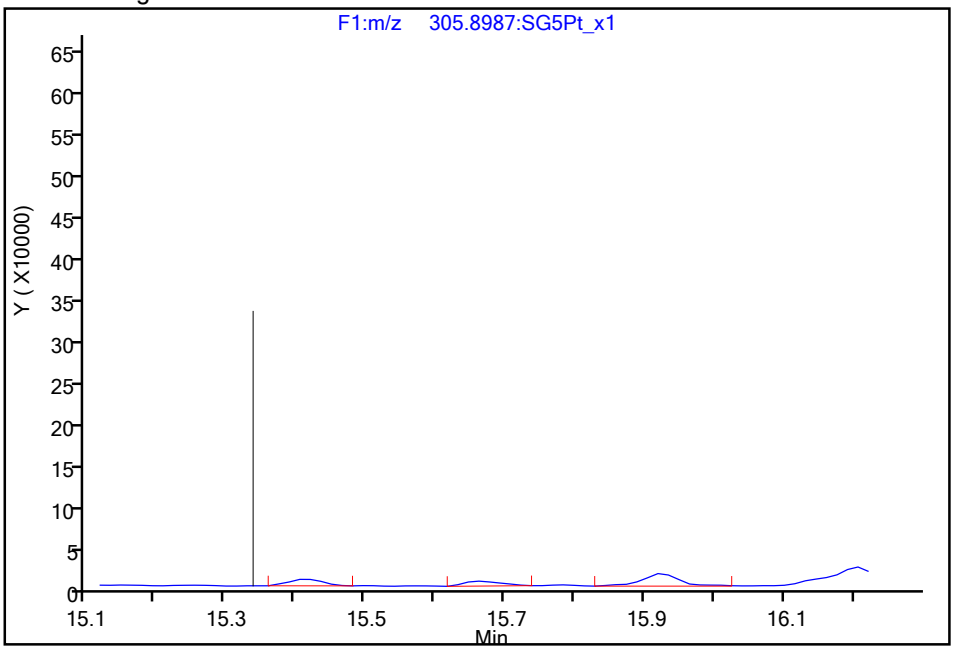

Reviewer: bennettd, 19-Aug-2021 12:38:02
Audit Action: Manually Integrated Audit Reason: Missed Peak

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.77- 19.47)

Signal: 1

Processing Integration Results

Not Detected

RT: 15.77- 19.47

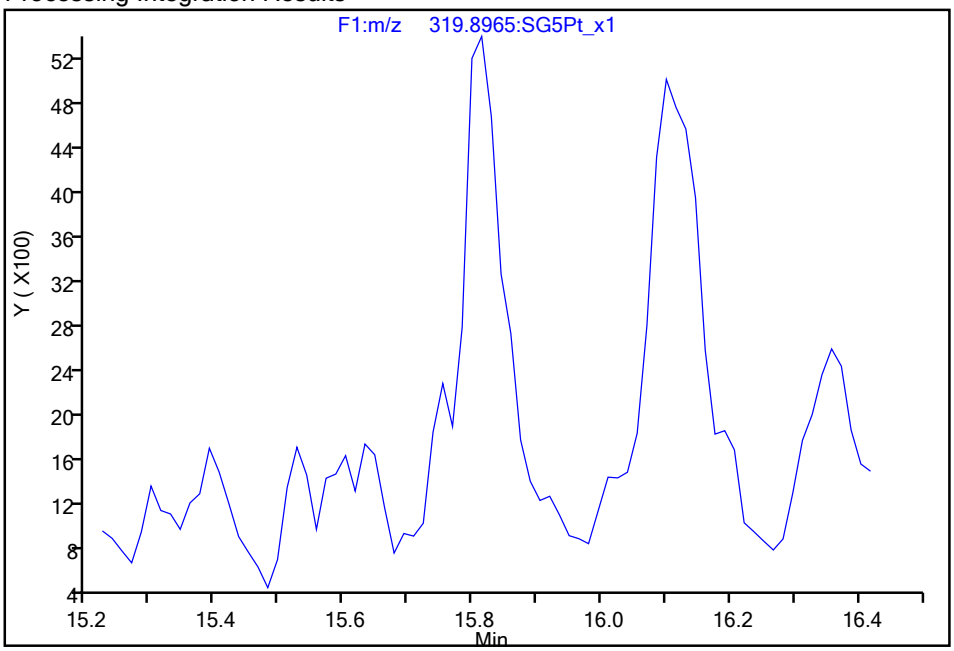

Manual Integration Results

RT = 15.814 Area = 19630 M

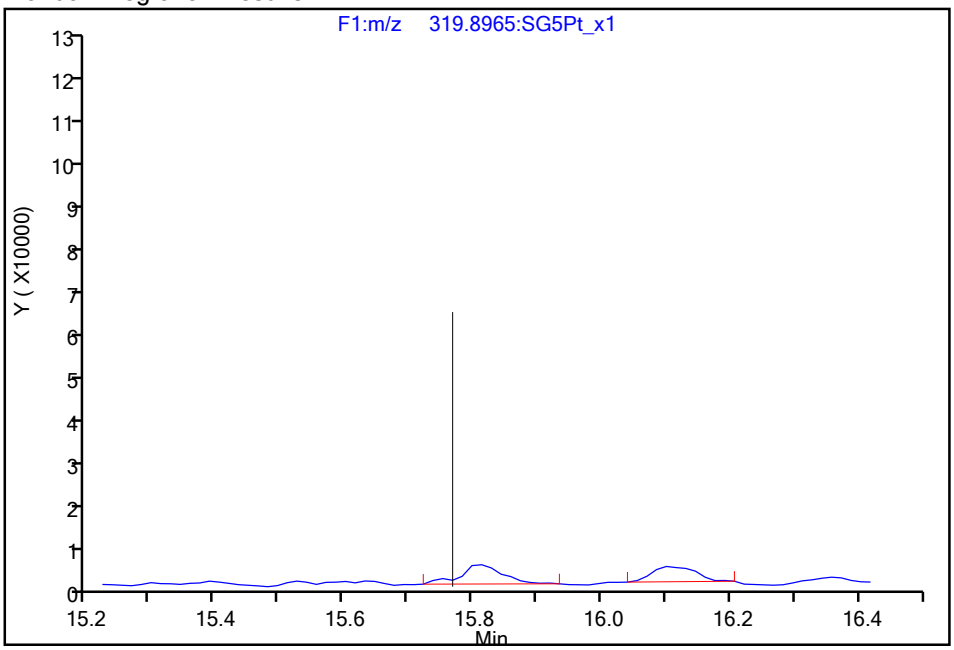

Reviewer: bennettd, 19-Aug-2021 12:38:56

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (15.77- 19.47)

Signal: 2

Processing Integration Results

RT = 15.814 Area = 18046

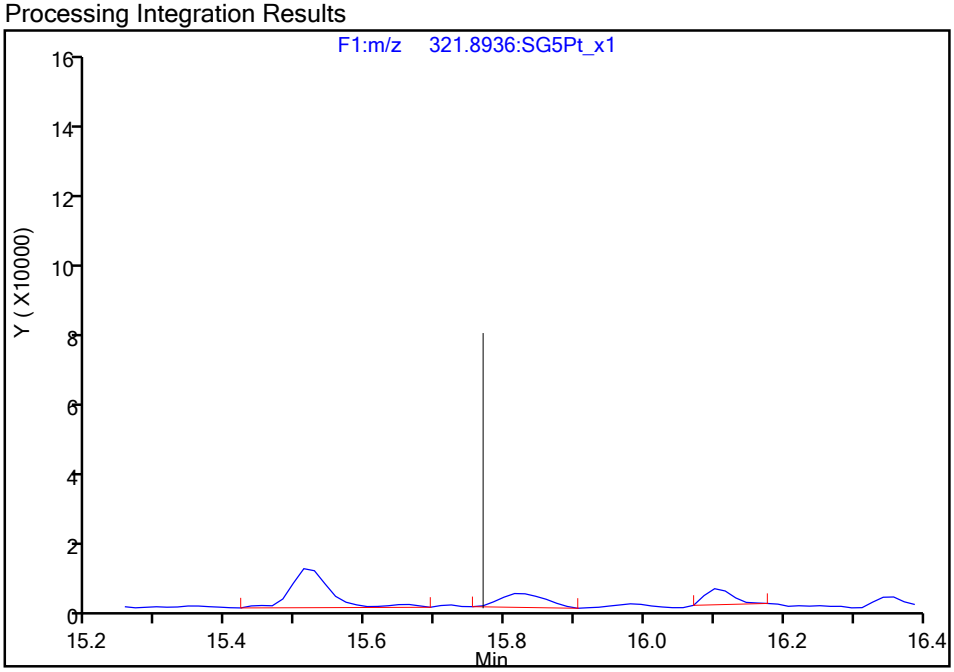

Manual Integration Results

RT = 15.814 Area = 18046 M

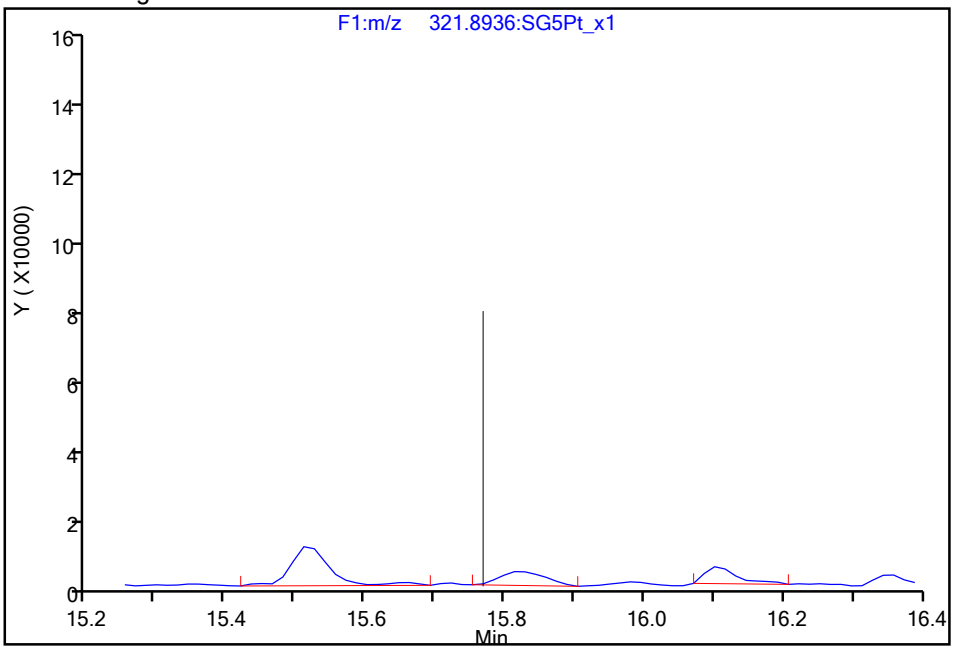

Reviewer: bennettd, 19-Aug-2021 12:39:04

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.77- 19.47)

Signal: 1

Not Detected
RT: 15.77- 19.47

Processing Integration Results

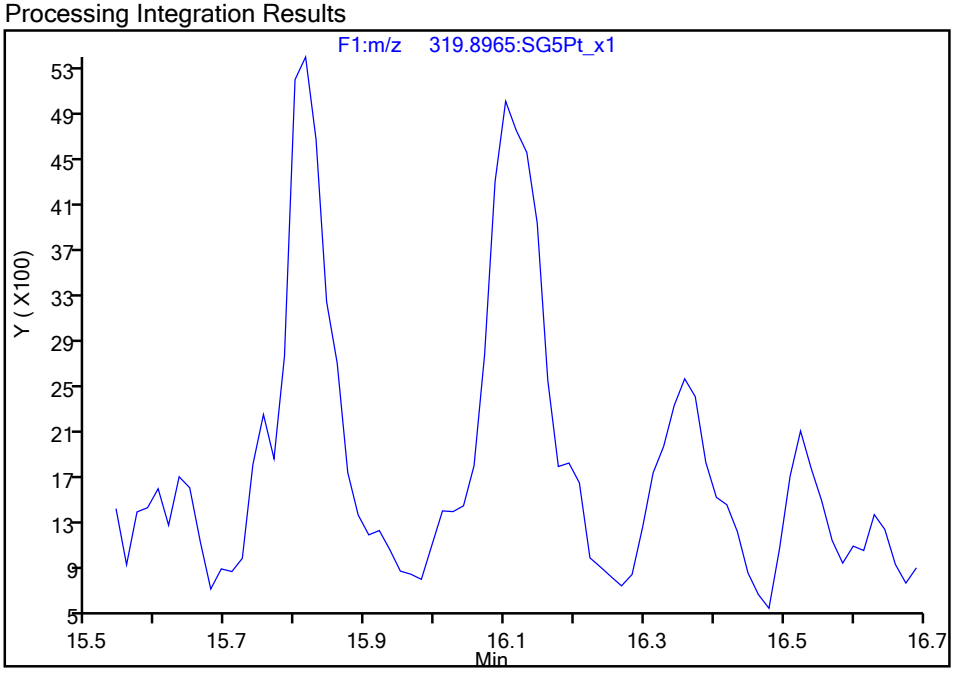

RT = 16.101 Area = 15810 M

Manual Integration Results

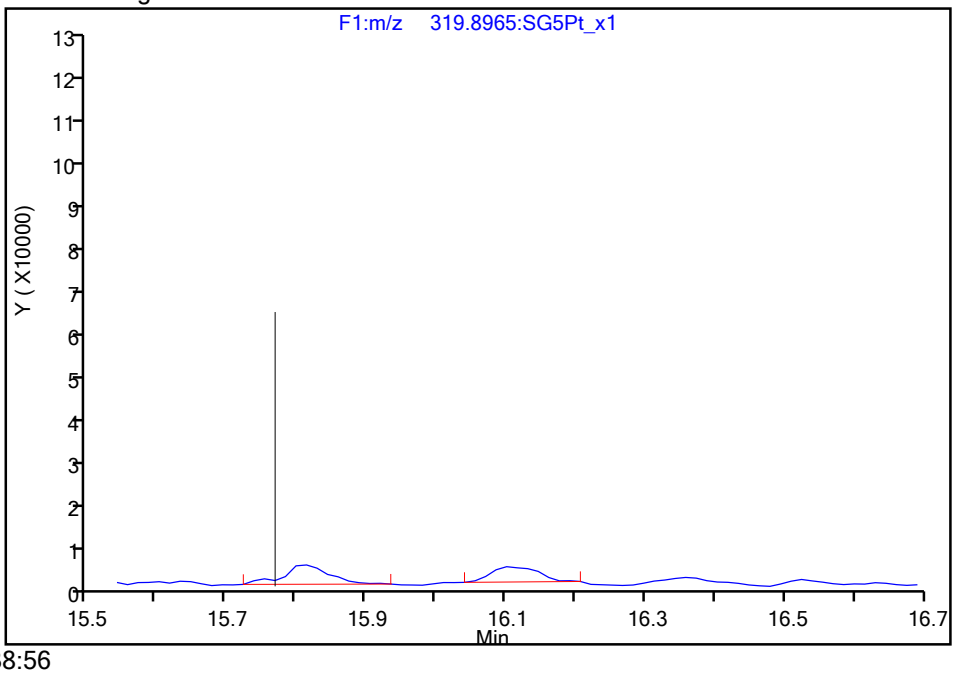

Reviewer: bennettd, 19-Aug-2021 12:38:56
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (15.77- 19.47)

Signal: 2

Processing Integration Results

RT = 16.101 Area = 12362

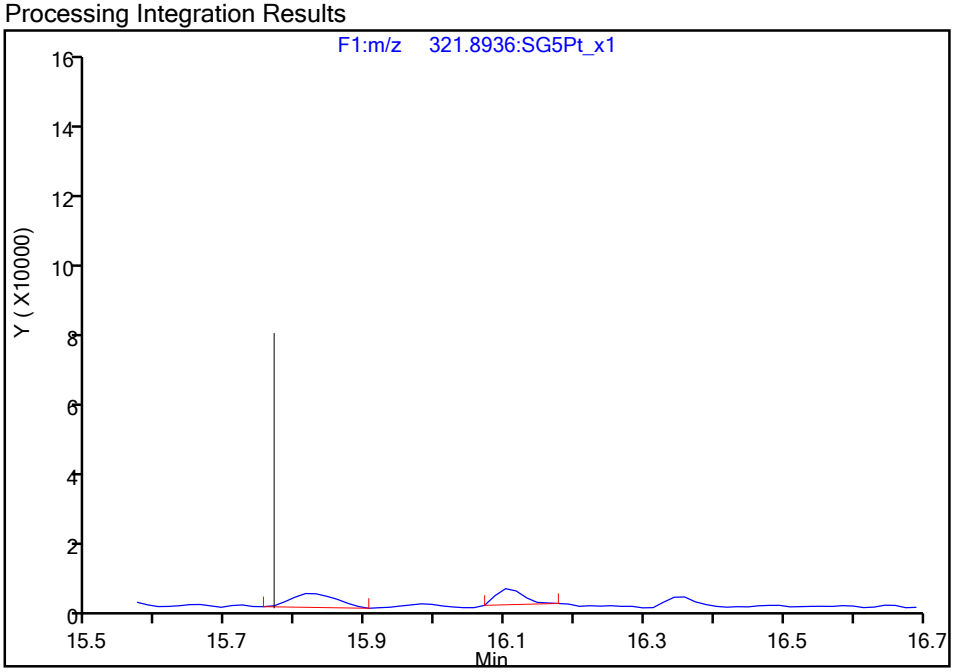

Manual Integration Results

RT = 16.101 Area = 15626 M

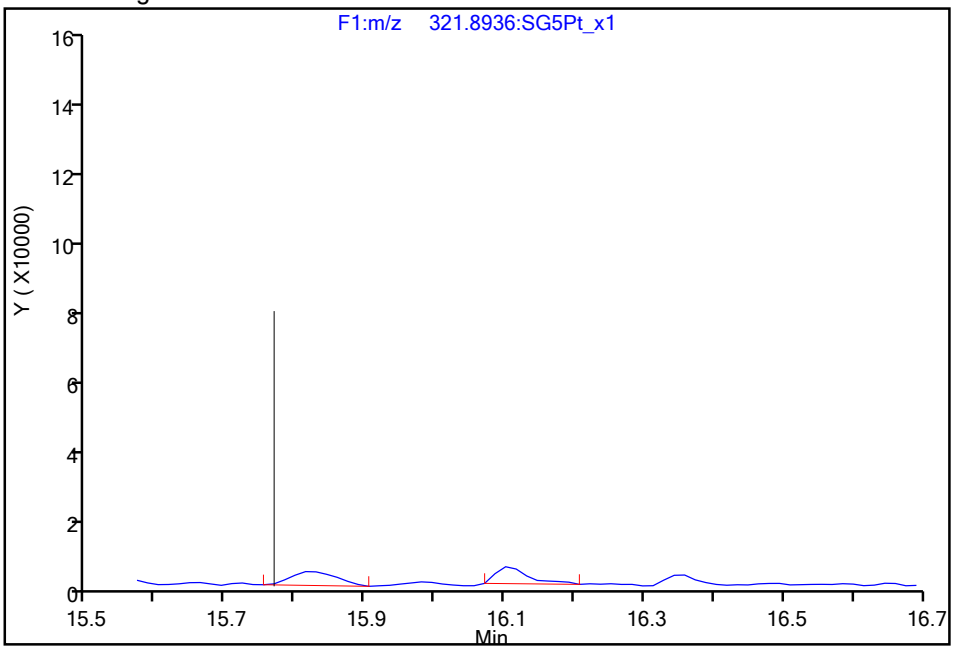

Reviewer: bennettd, 19-Aug-2021 12:39:04

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.37

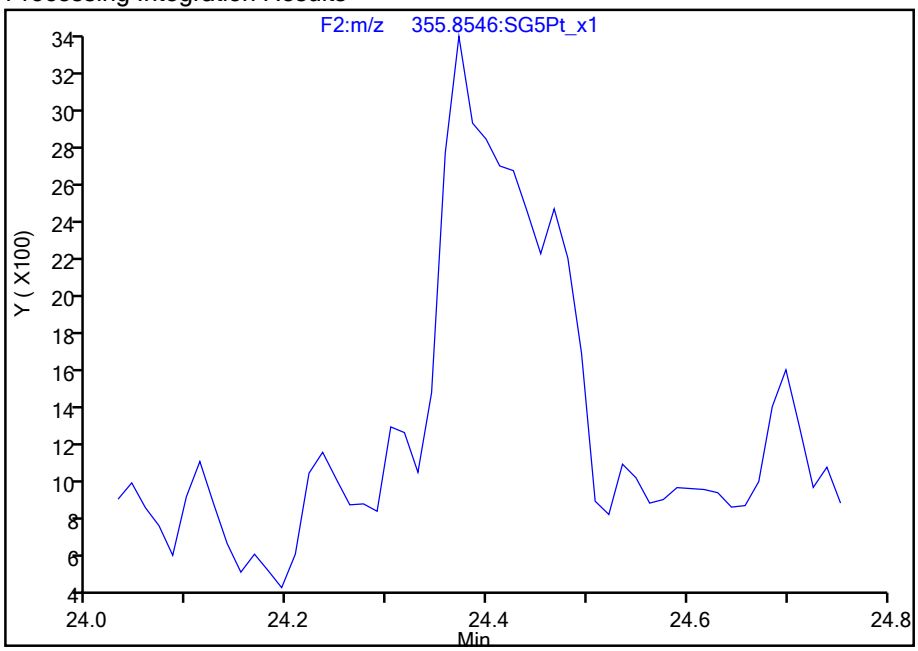

Manual Integration Results

RT: 24.37
Area: 22374
Amount: 0.059047
Amount Units: pg/ul

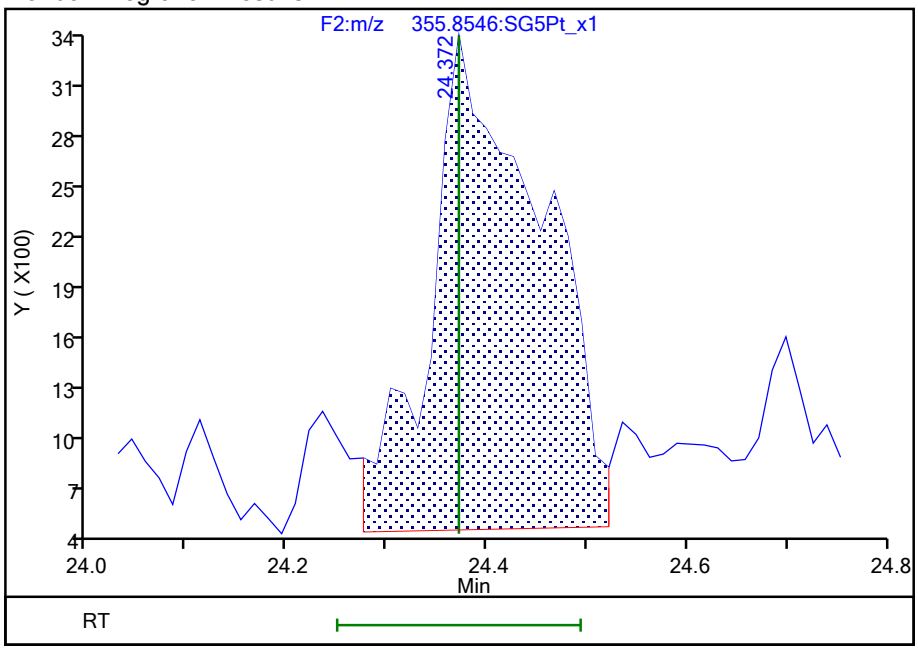

Reviewer: bennettd, 19-Aug-2021 12:40:01
Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

775997

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 2

Not Detected
Expected RT: 24.37

Processing Integration Results

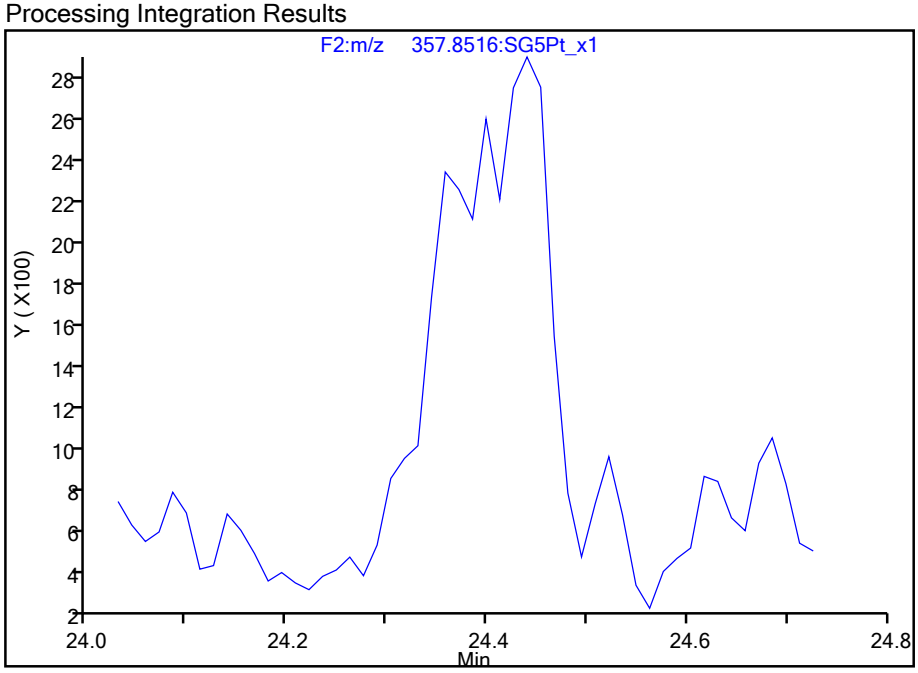

Manual Integration Results

RT: 24.44
Area: 17489
Amount: 0.059047
Amount Units: pg/ul

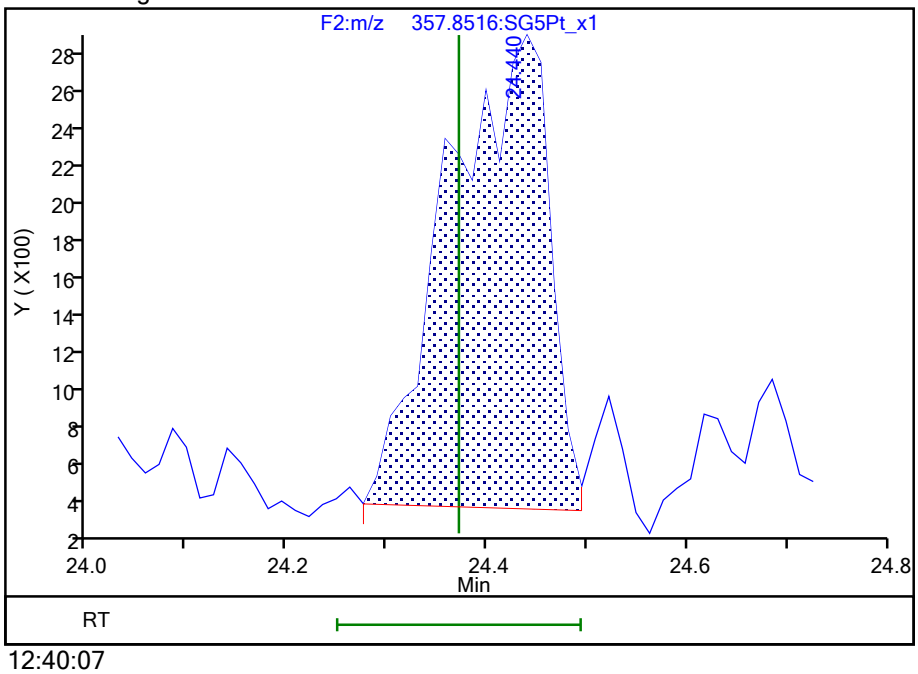

Reviewer: bennettd, 19-Aug-2021 12:40:07
Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

775998

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.31
Area: 32307
Amount: 0.047212
Amount Units: pg/ul

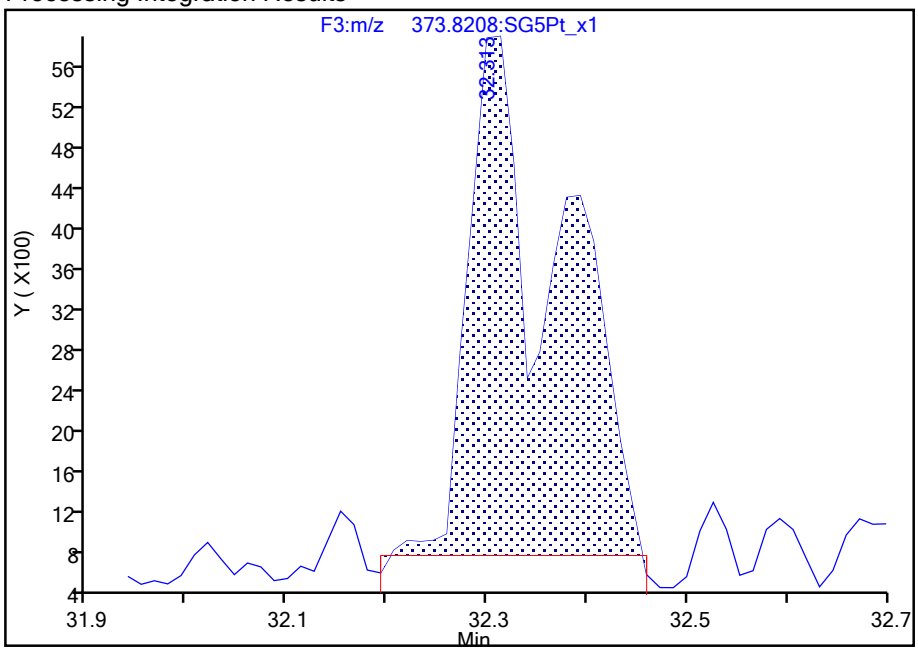

Manual Integration Results

RT: 32.31
Area: 16805
Amount: 0.029704
Amount Units: pg/ul

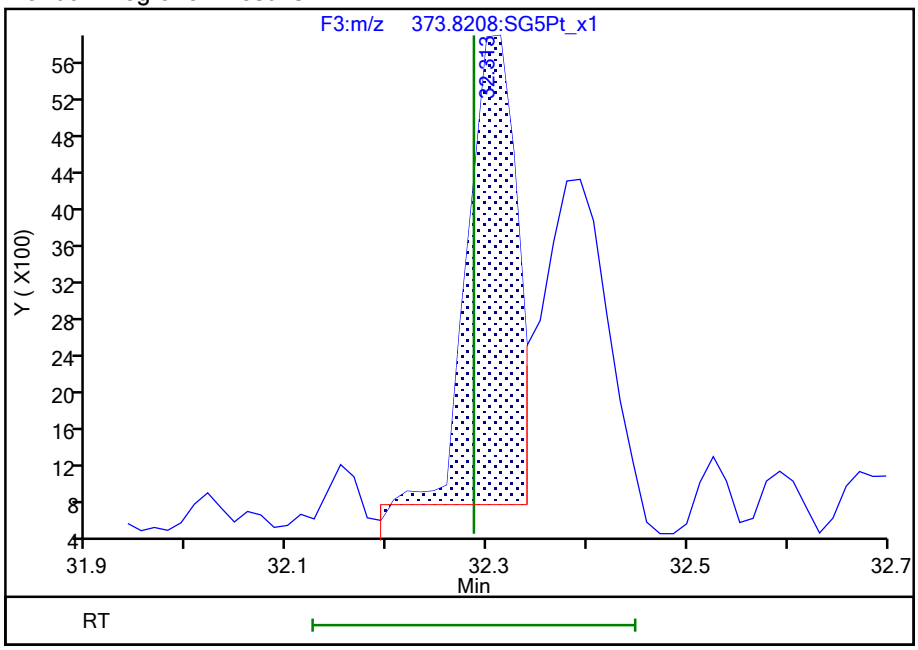

Reviewer: bennettd, 19-Aug-2021 12:40:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (28.40- 32.42)

Signal: 1

Not Detected
RT: 28.40- 32.42

Processing Integration Results

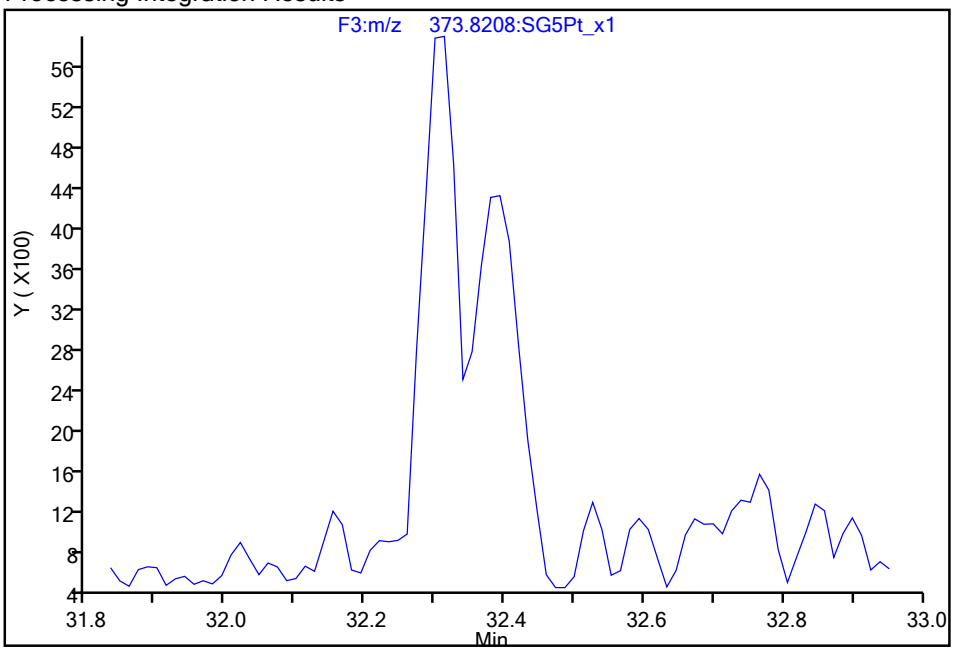

RT = 32.393 Area = 15501 M

Manual Integration Results

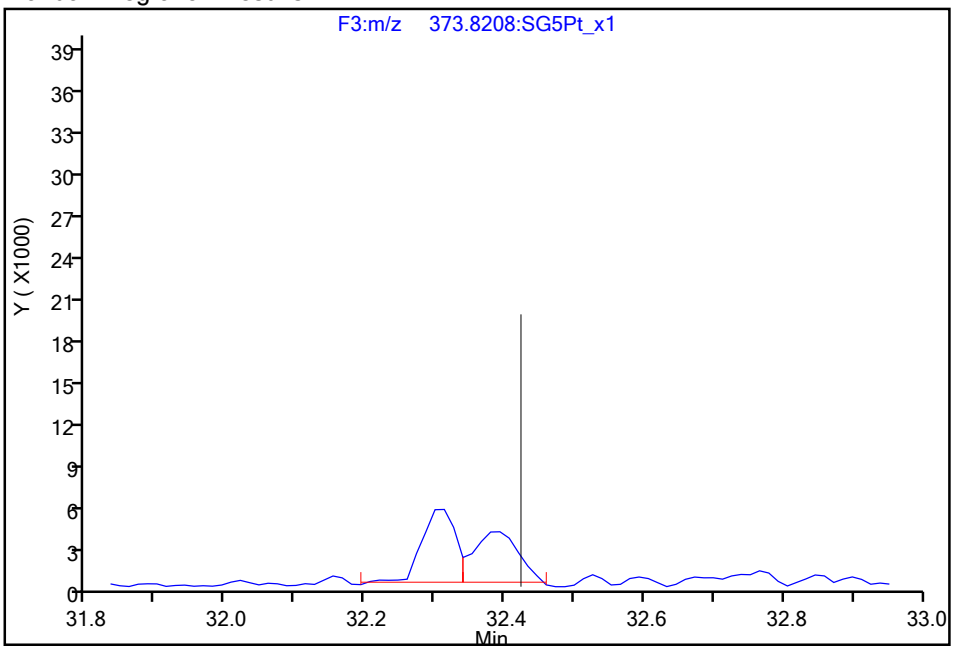

Reviewer: bennettd, 19-Aug-2021 12:41:02

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Missed Peak

776000

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.79
Area: 42654
Amount: 0.141426
Amount Units: pg/ul

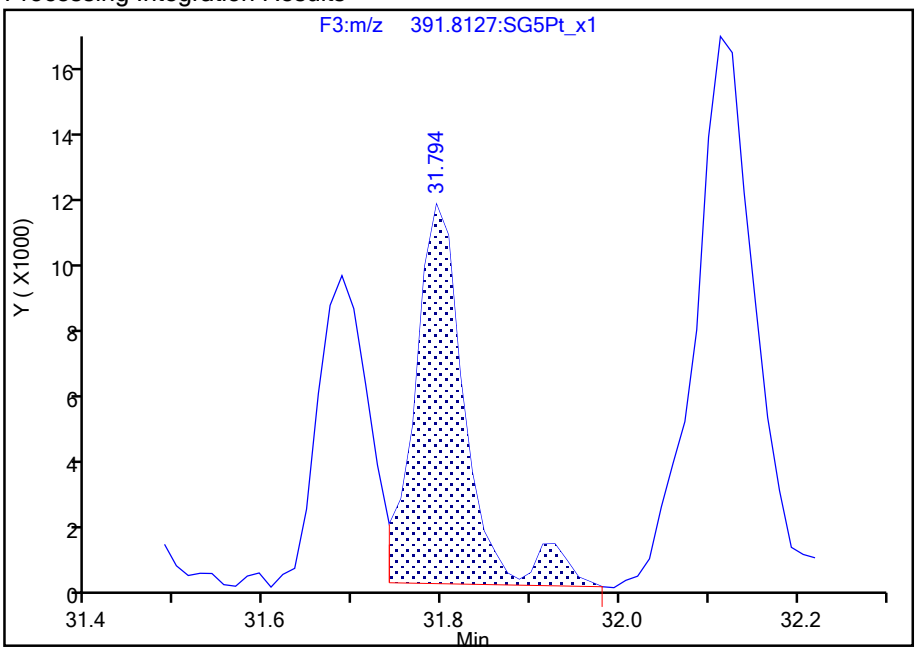

Manual Integration Results

RT: 31.79
Area: 39488
Amount: 0.136932
Amount Units: pg/ul

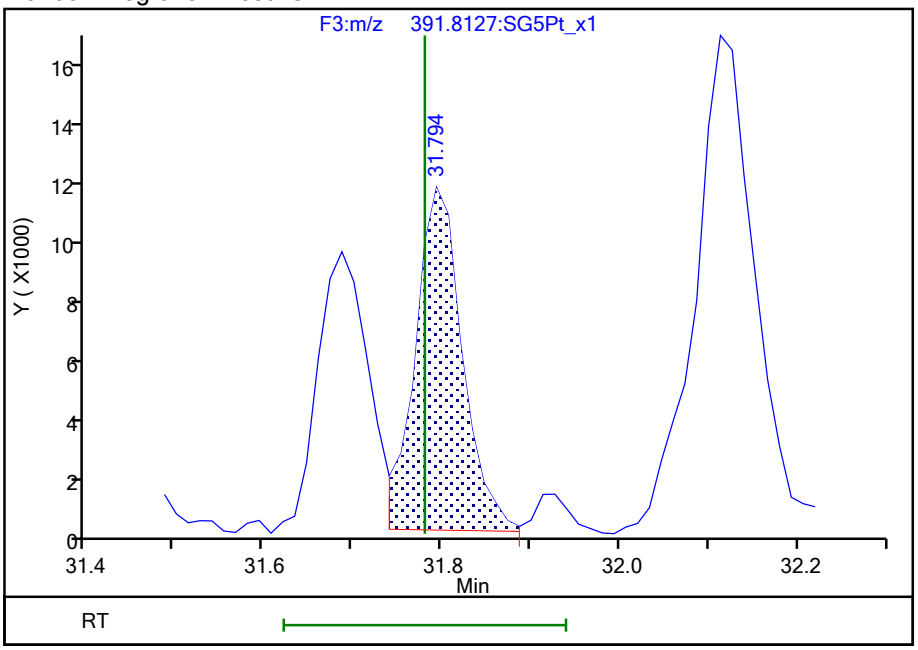

Reviewer: bennettd, 19-Aug-2021 12:41:22

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 32.13
Area: 101634
Amount: 0.236885
Amount Units: pg/ul

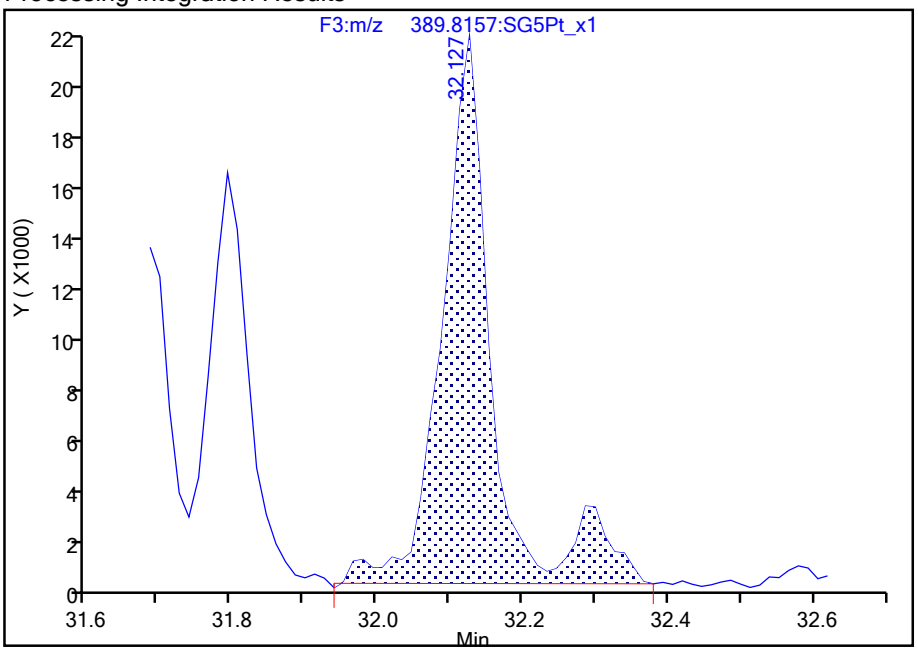

Manual Integration Results

RT: 32.13
Area: 87214
Amount: 0.208339
Amount Units: pg/ul

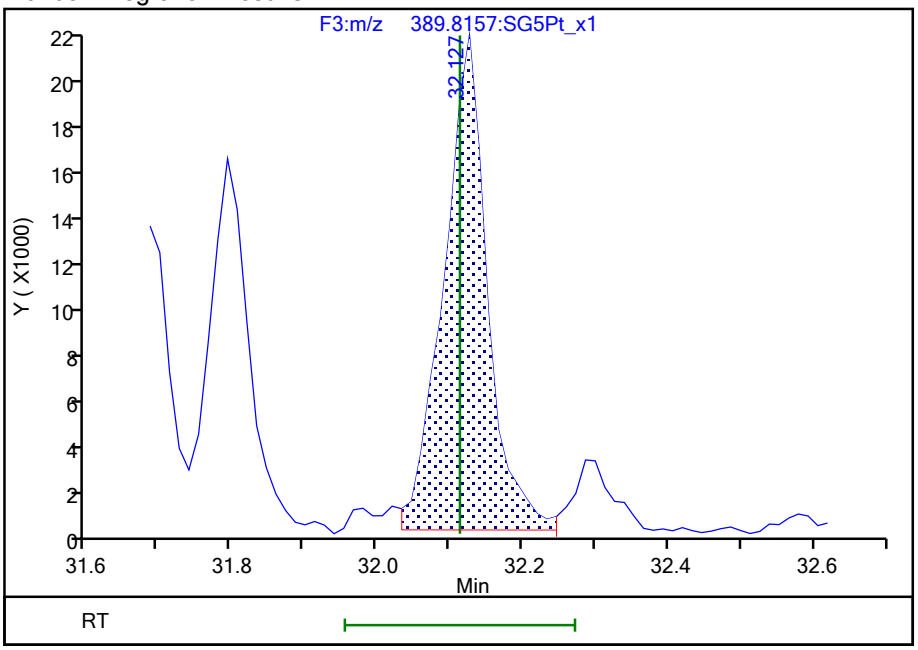

Reviewer: bennettd, 19-Aug-2021 12:41:32

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 32.11
Area: 78035
Amount: 0.236885
Amount Units: pg/ul

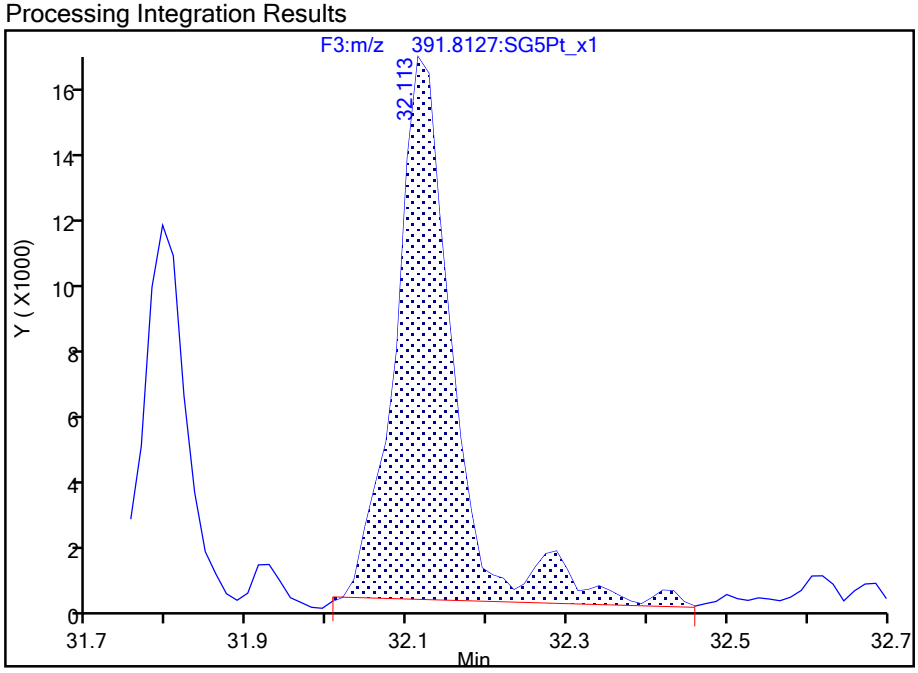

Manual Integration Results

RT: 32.11
Area: 70804
Amount: 0.208339
Amount Units: pg/ul

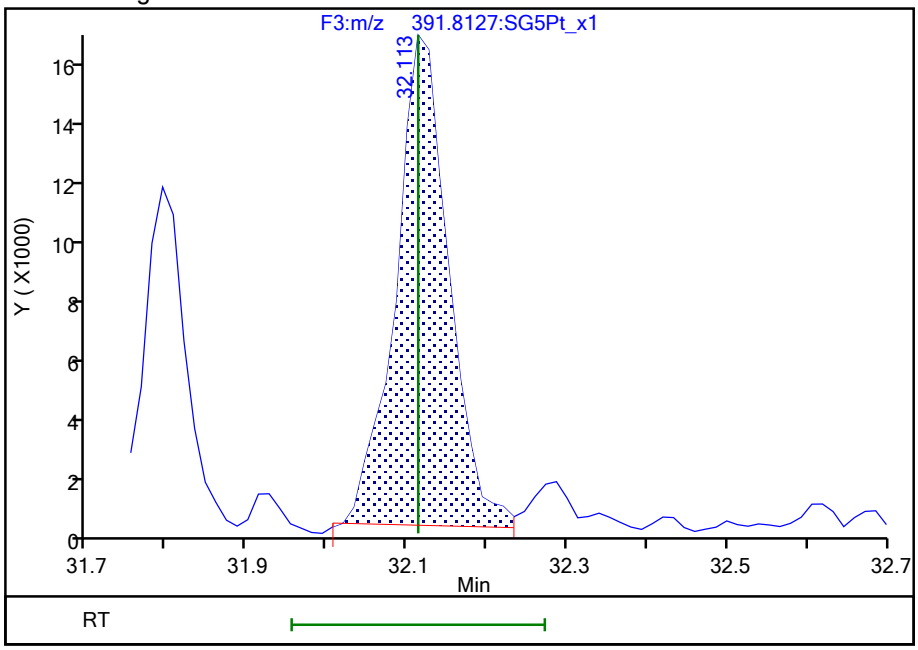

Reviewer: bennettd, 19-Aug-2021 12:41:35

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (29.26- 32.37)

Signal: 1

Processing Integration Results

RT = 30.915 Area = 366687

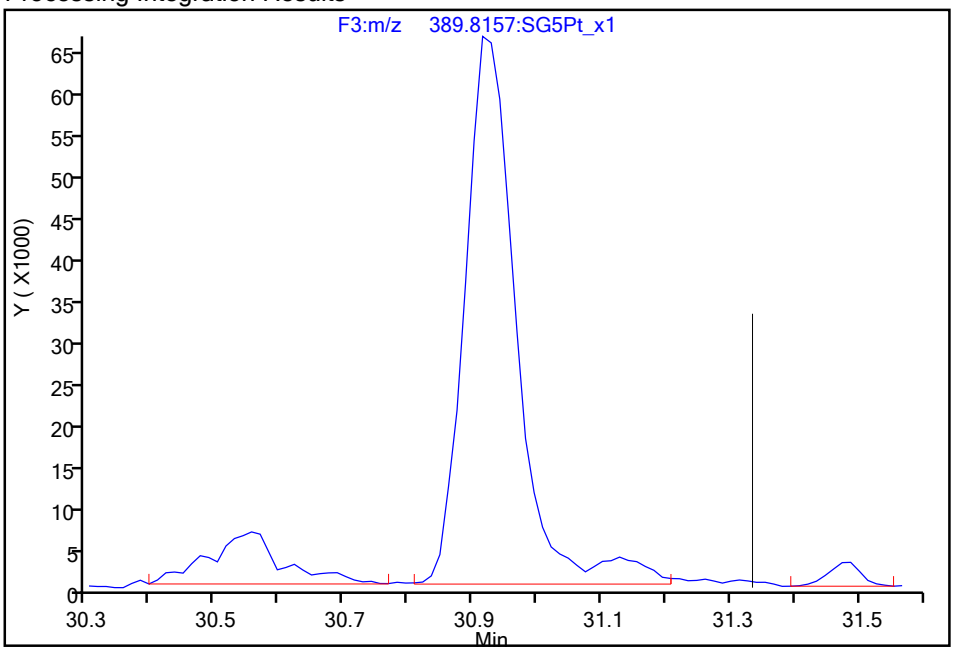

Manual Integration Results

RT = 30.915 Area = 349211 M

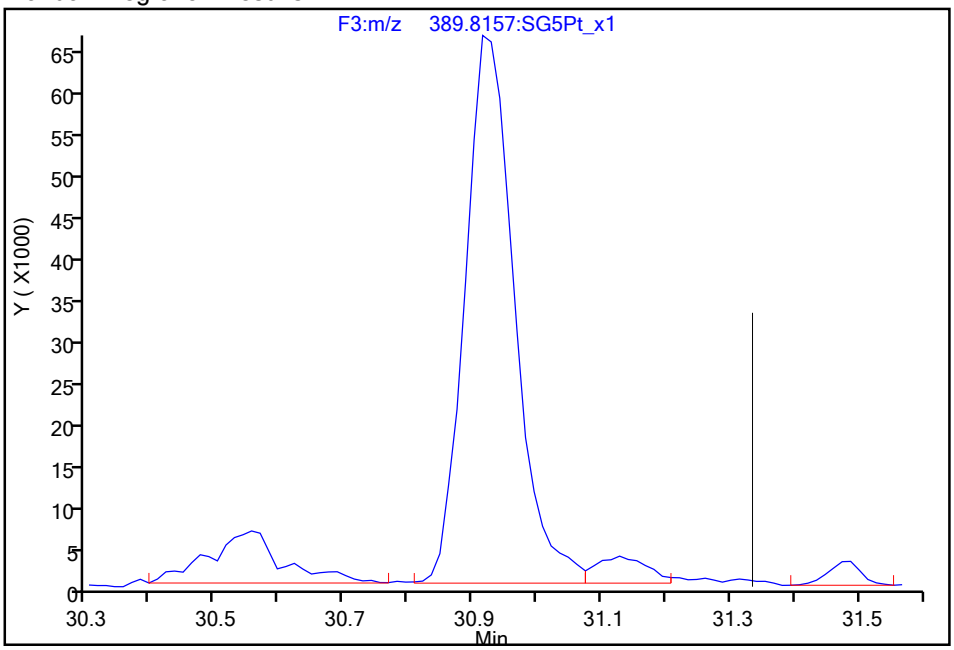

Reviewer: bennettd, 19-Aug-2021 12:41:58

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (29.26- 32.37)

Signal: 1

Not Detected
RT: 29.26- 32.37

Processing Integration Results

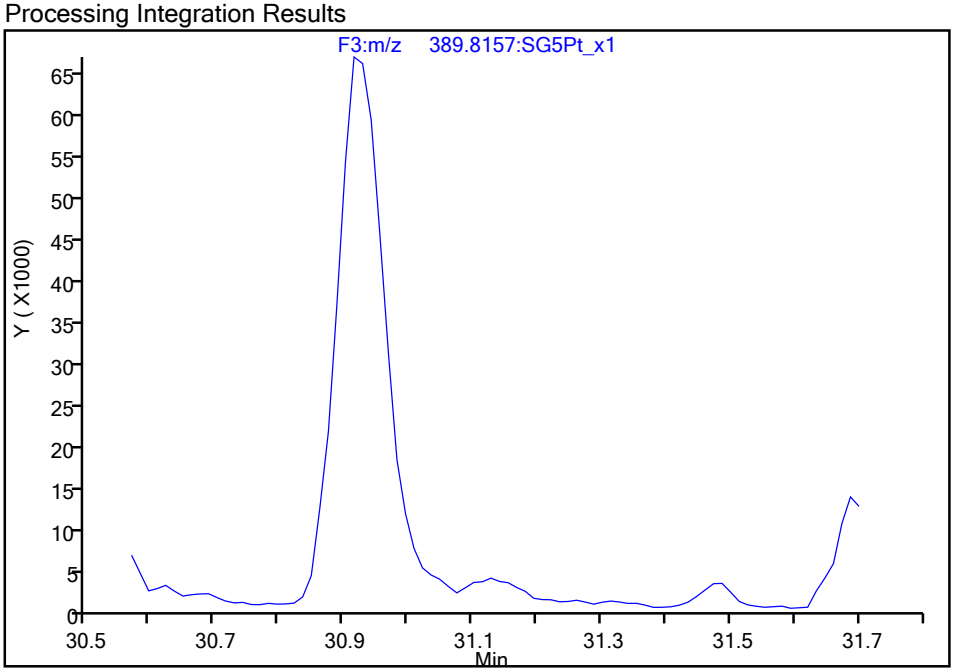

RT = 31.128 Area = 17476 M

Manual Integration Results

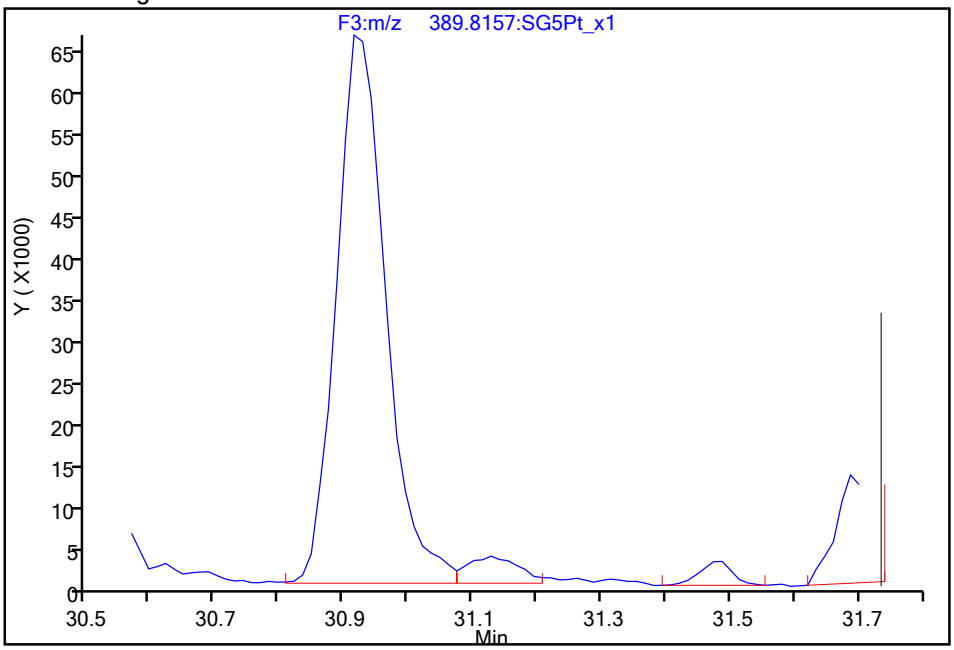

Reviewer: bennettd, 19-Aug-2021 12:41:58
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.75
Area: 115420
Amount: 0.278977
Amount Units: pg/ul

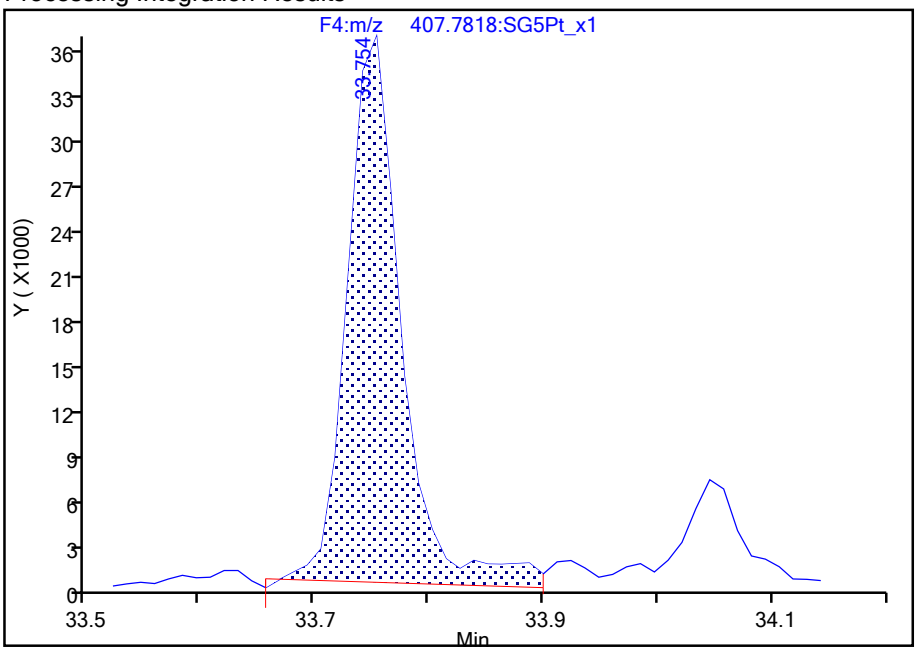

Manual Integration Results

RT: 33.75
Area: 109331
Amount: 0.260638
Amount Units: pg/ul

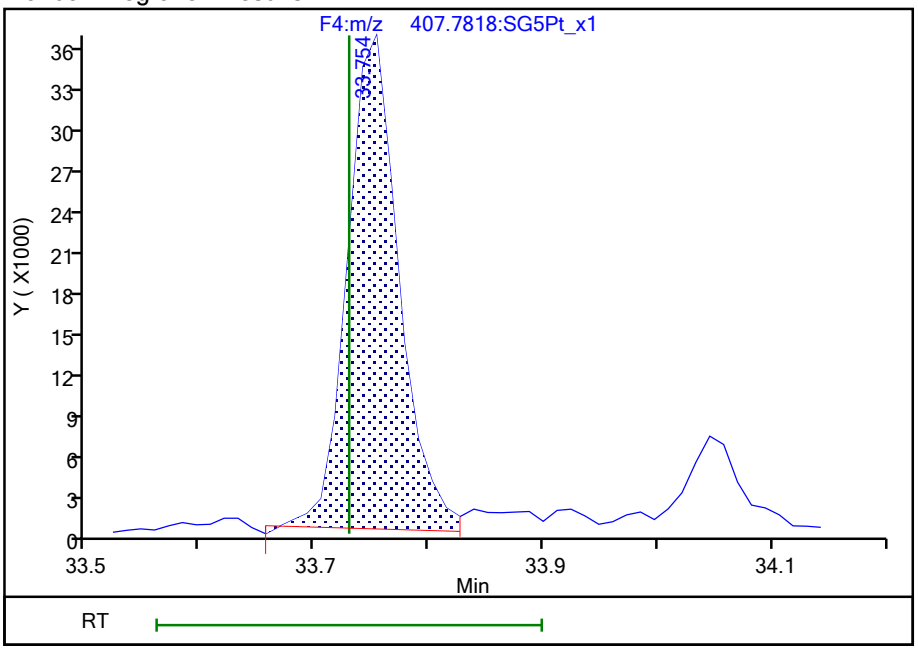

Reviewer: bennettd, 19-Aug-2021 12:42:12

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.75
Area: 110441
Amount: 0.278977
Amount Units: pg/ul

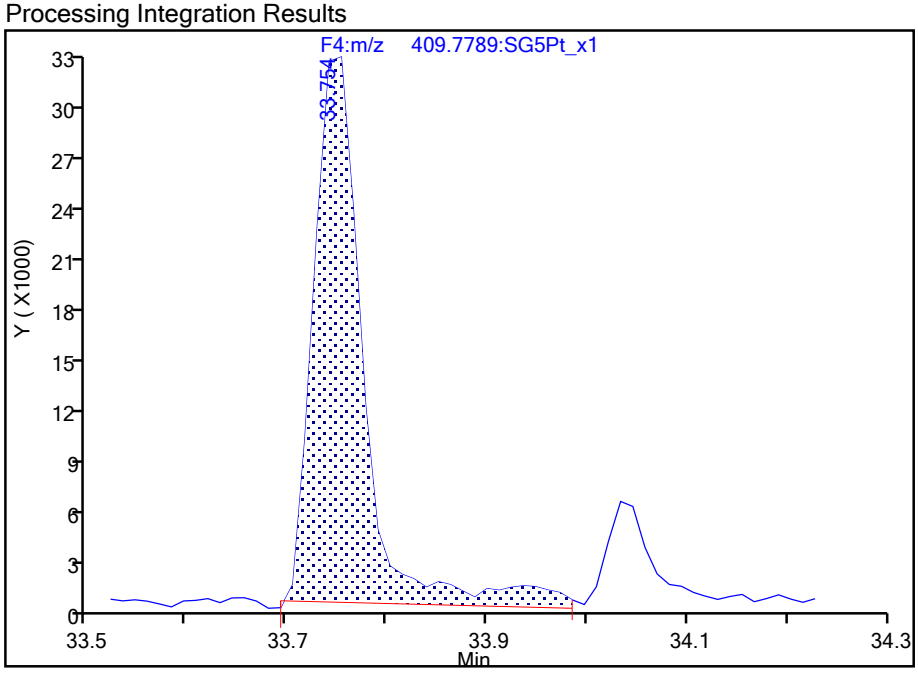

Manual Integration Results

RT: 33.75
Area: 101682
Amount: 0.260638
Amount Units: pg/ul

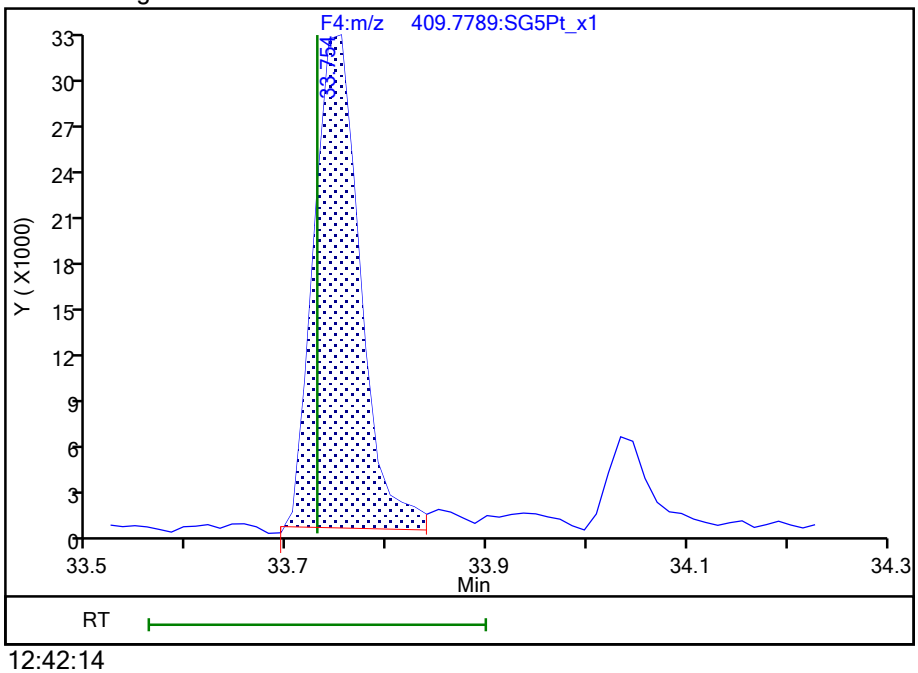

Reviewer: bennettd, 19-Aug-2021 12:42:14

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d				
Injection Date:	18-Aug-2021 18:04:34	Instrument ID:	10D5		
Lims ID:	320-76769-A-34-A	Lab Sample ID:	320-76769-34		
Client ID:	11215702-072221-SS-SJSB076 (14-16)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.99
Area: 83854
Amount: 0.318354
Amount Units: pg/ul

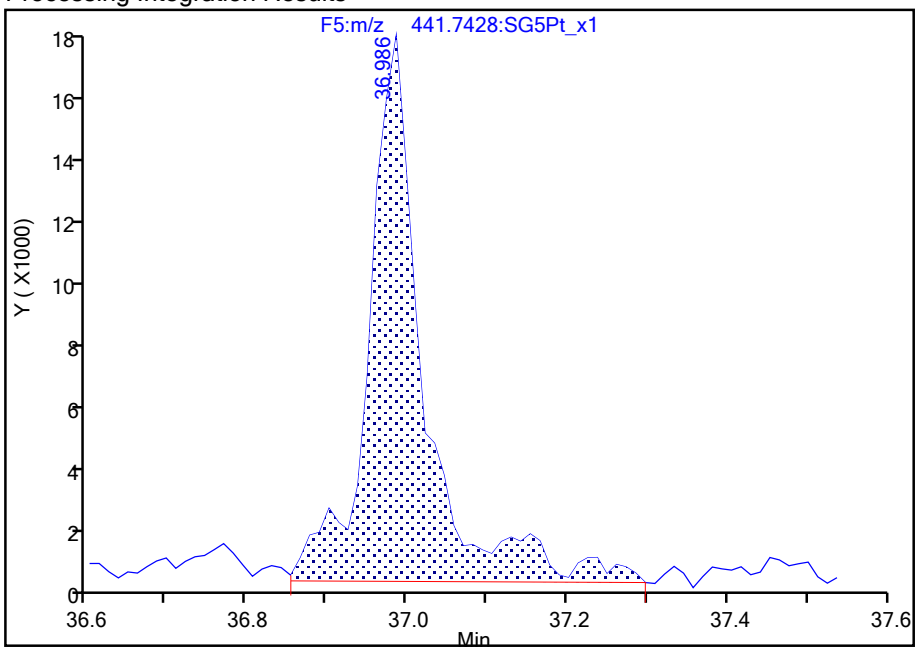

Manual Integration Results

RT: 36.99
Area: 75232
Amount: 0.301935
Amount Units: pg/ul

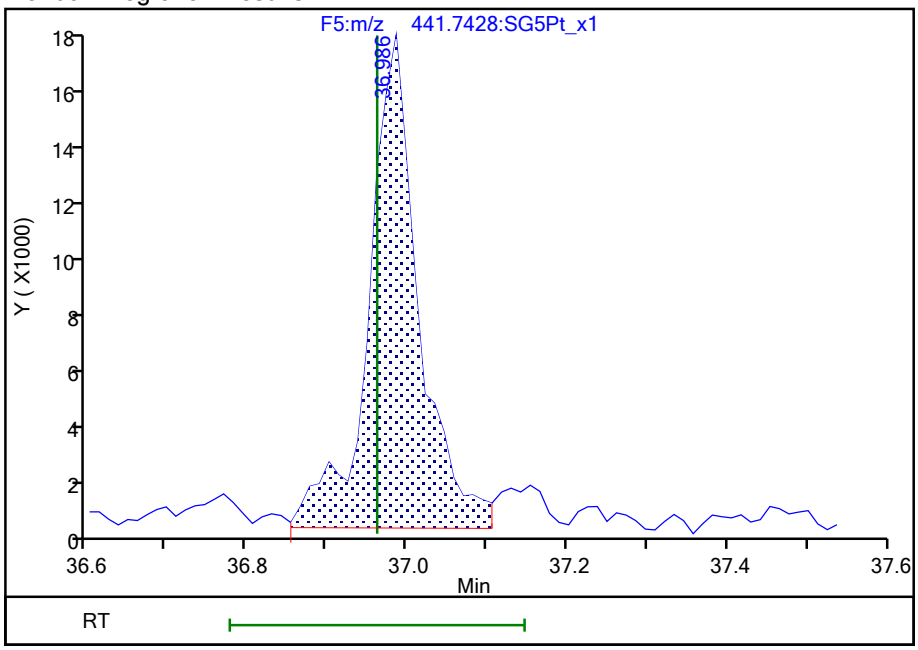

Reviewer: bennettd, 19-Aug-2021 12:42:45

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d		
Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

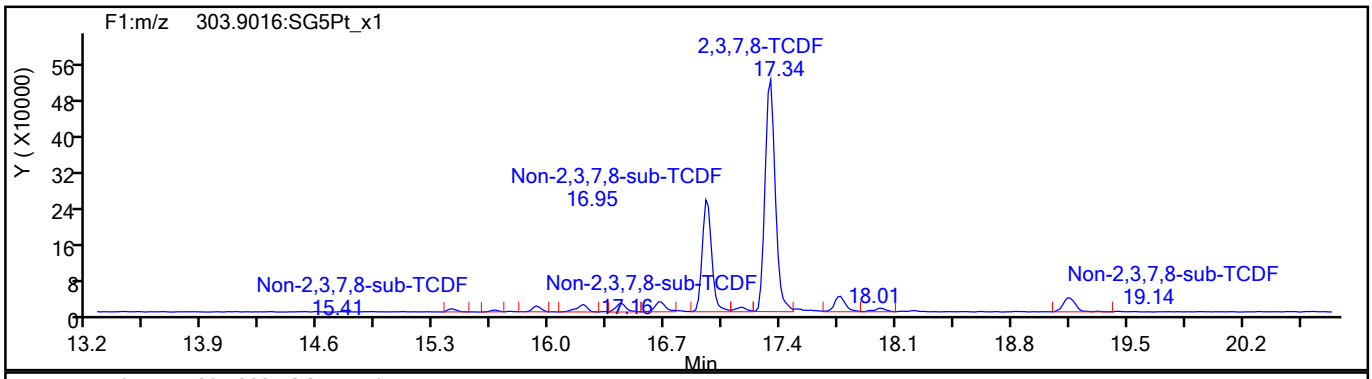

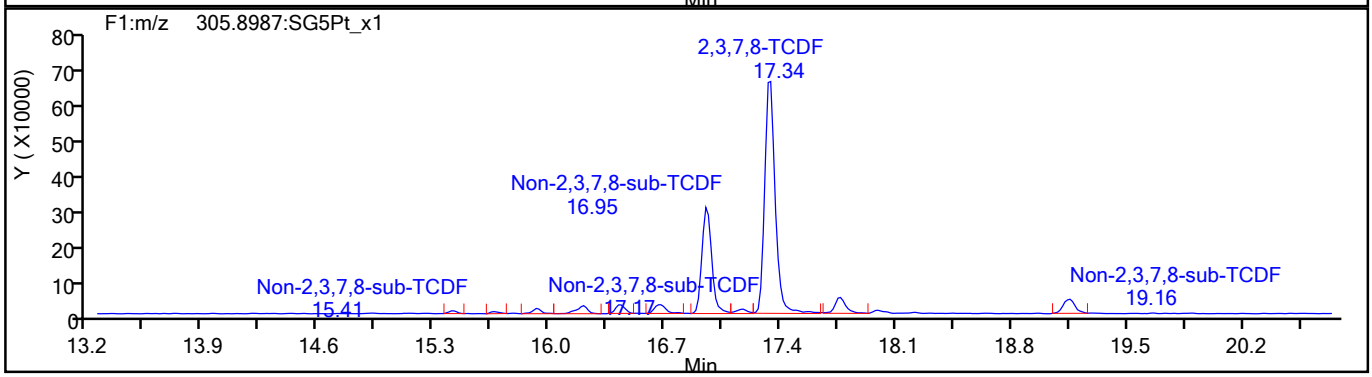

TCDF Standards

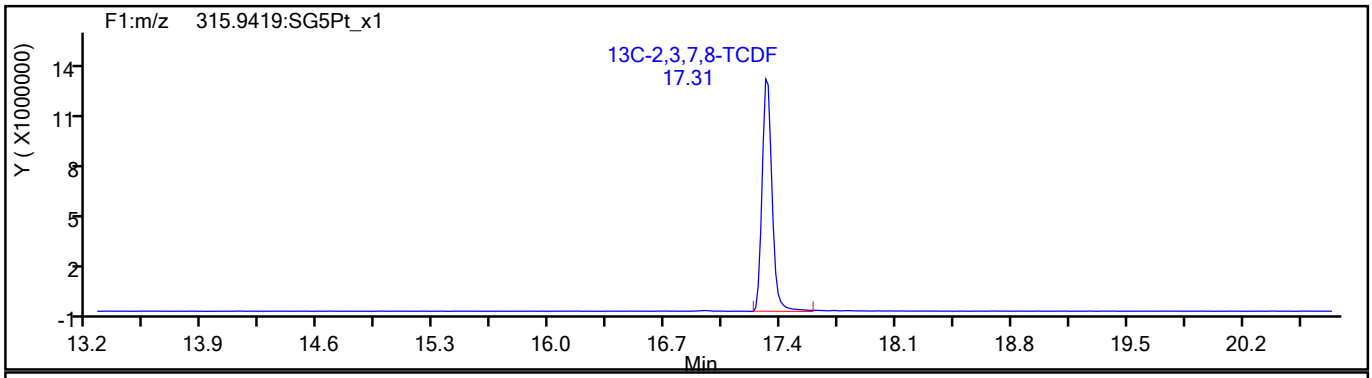

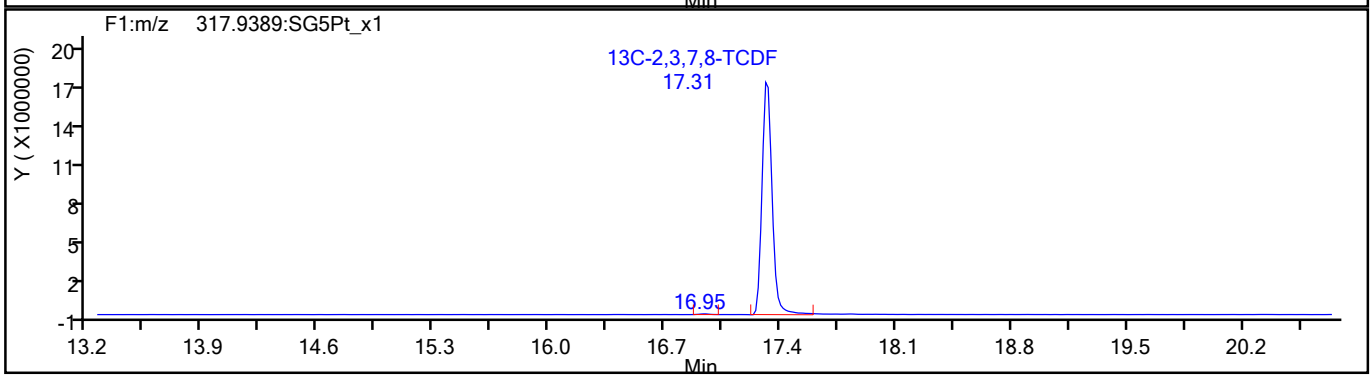

776009

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d		
Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

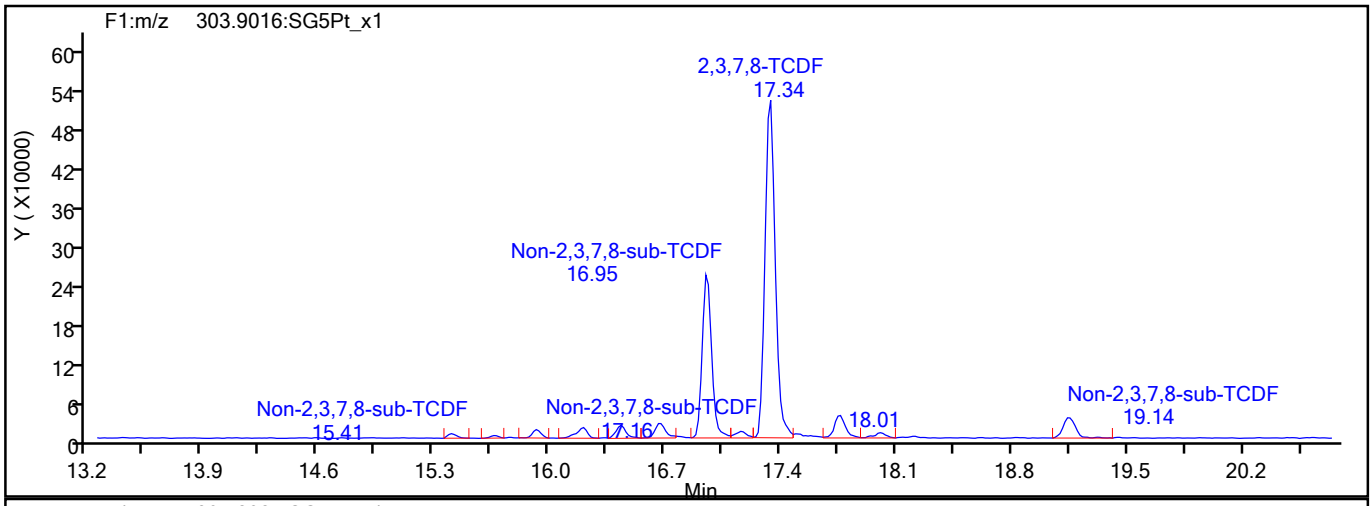

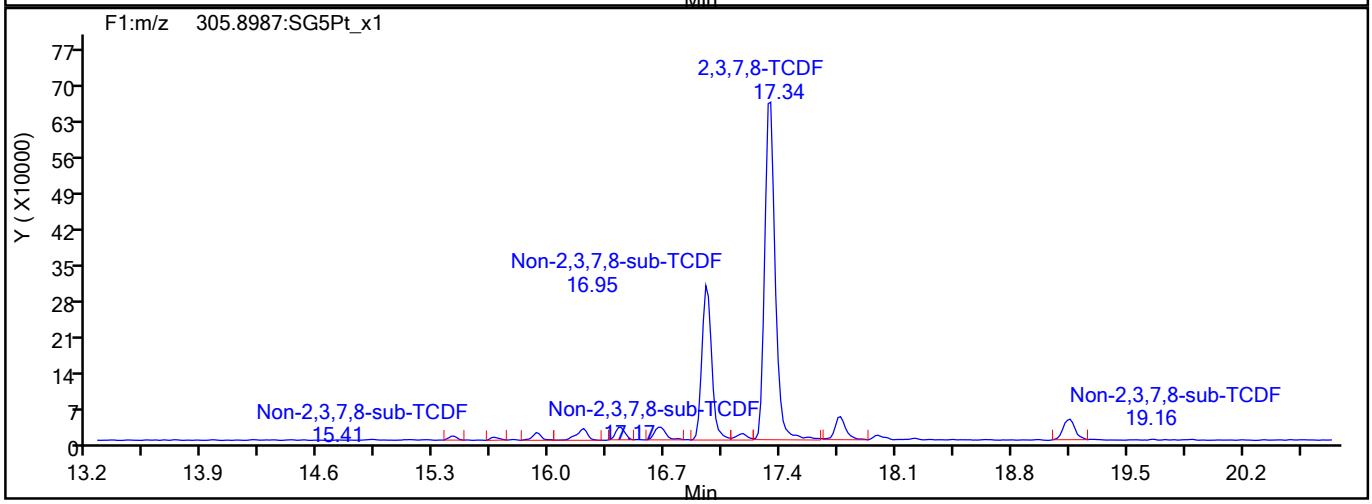

TCDF Interference Mass

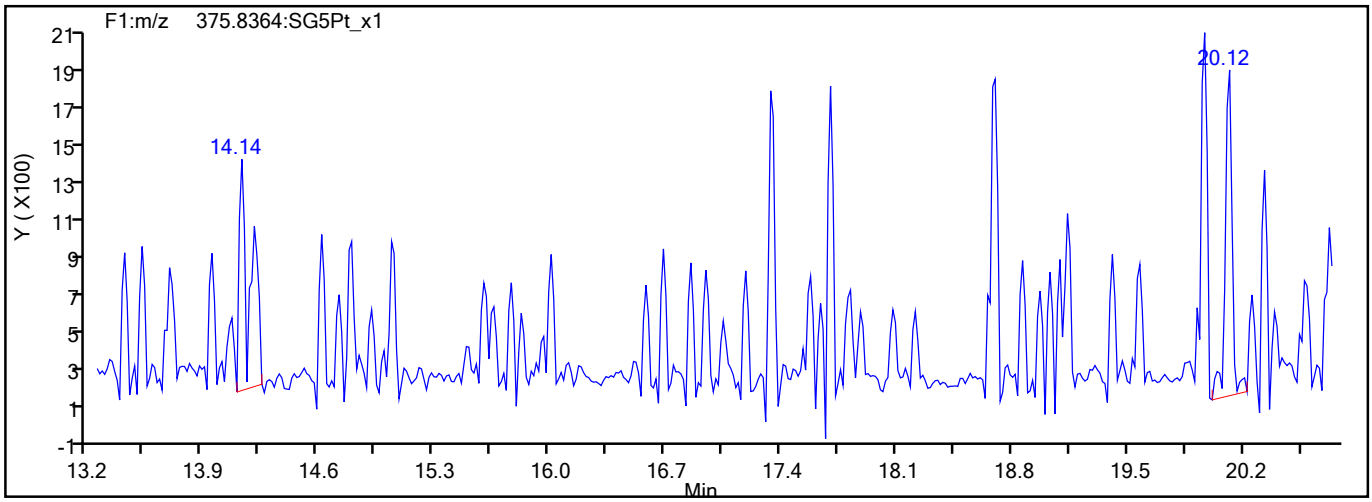

776010

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d		
Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

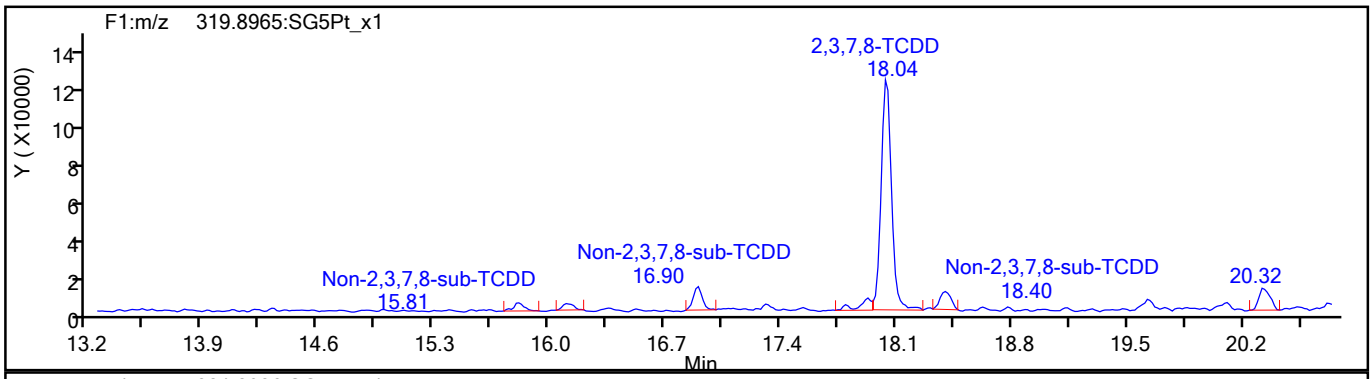

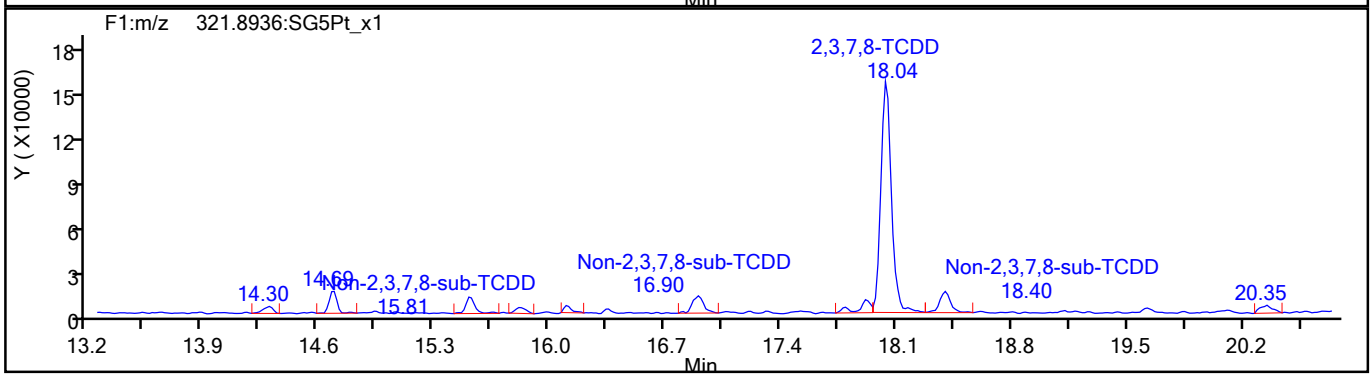

TCDD Standards

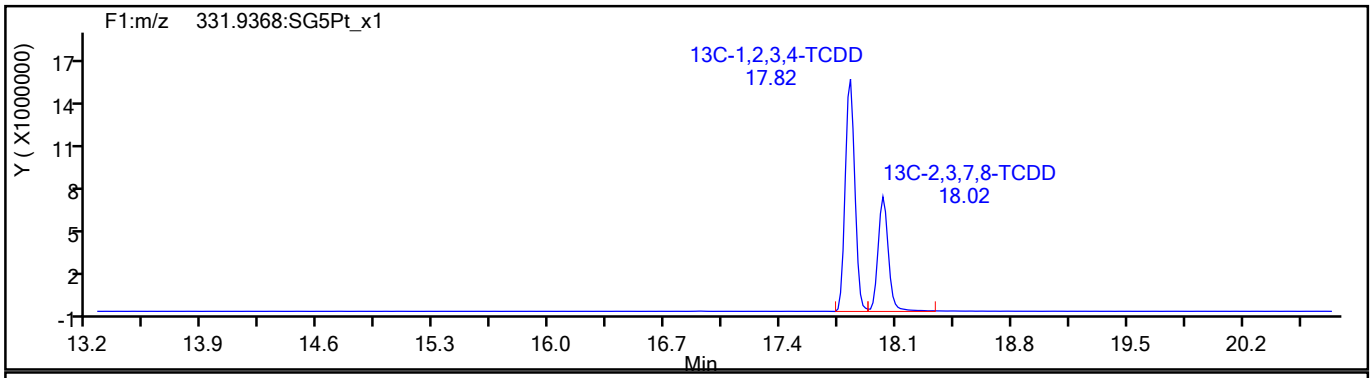

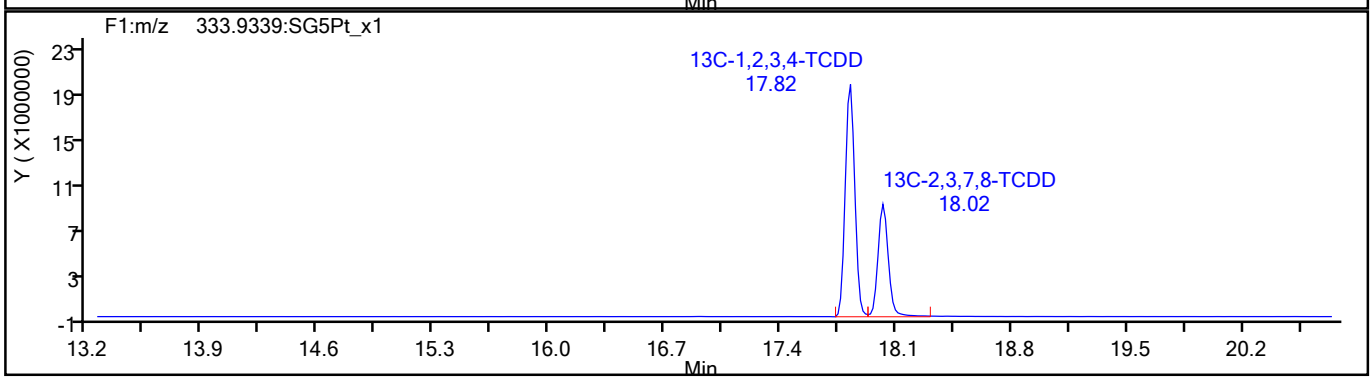

776011

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d		
Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

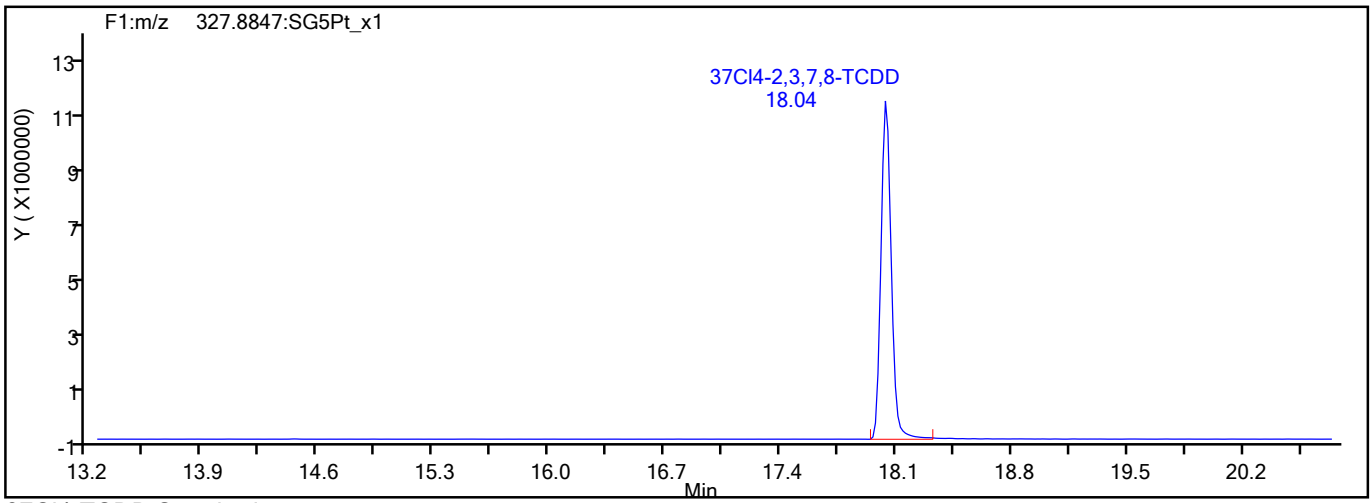

37Cl4-TCDD Standards

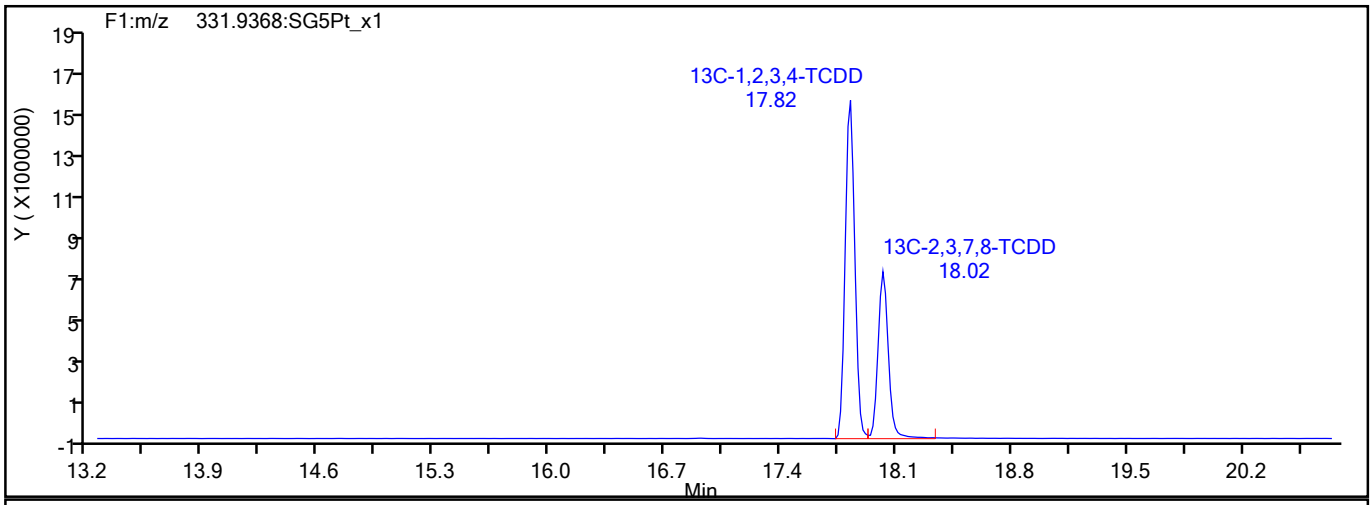

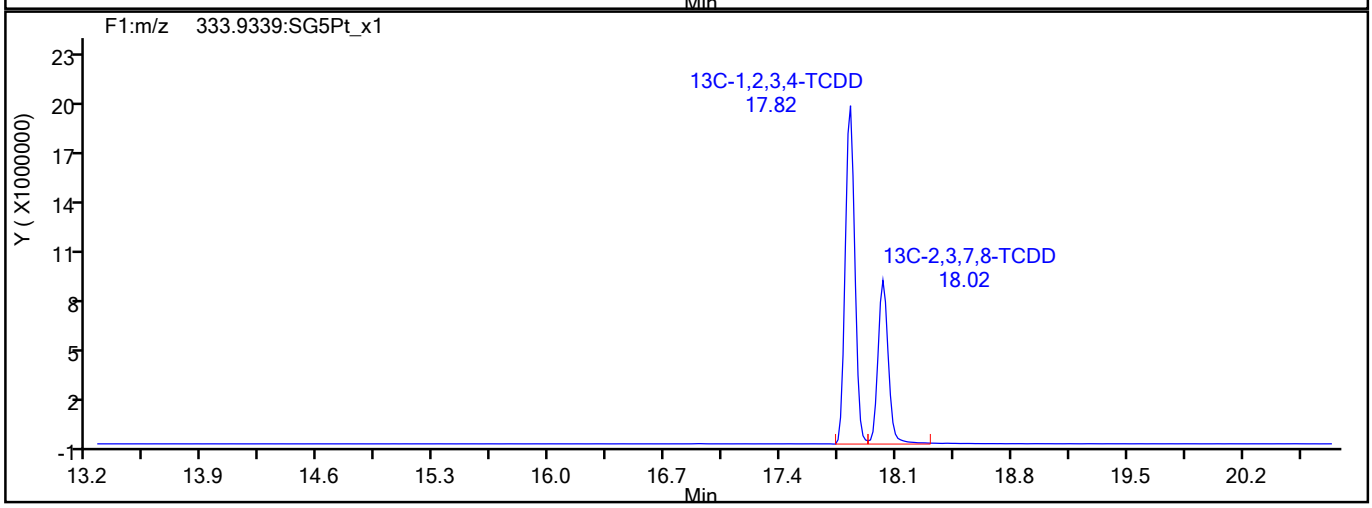

776012

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

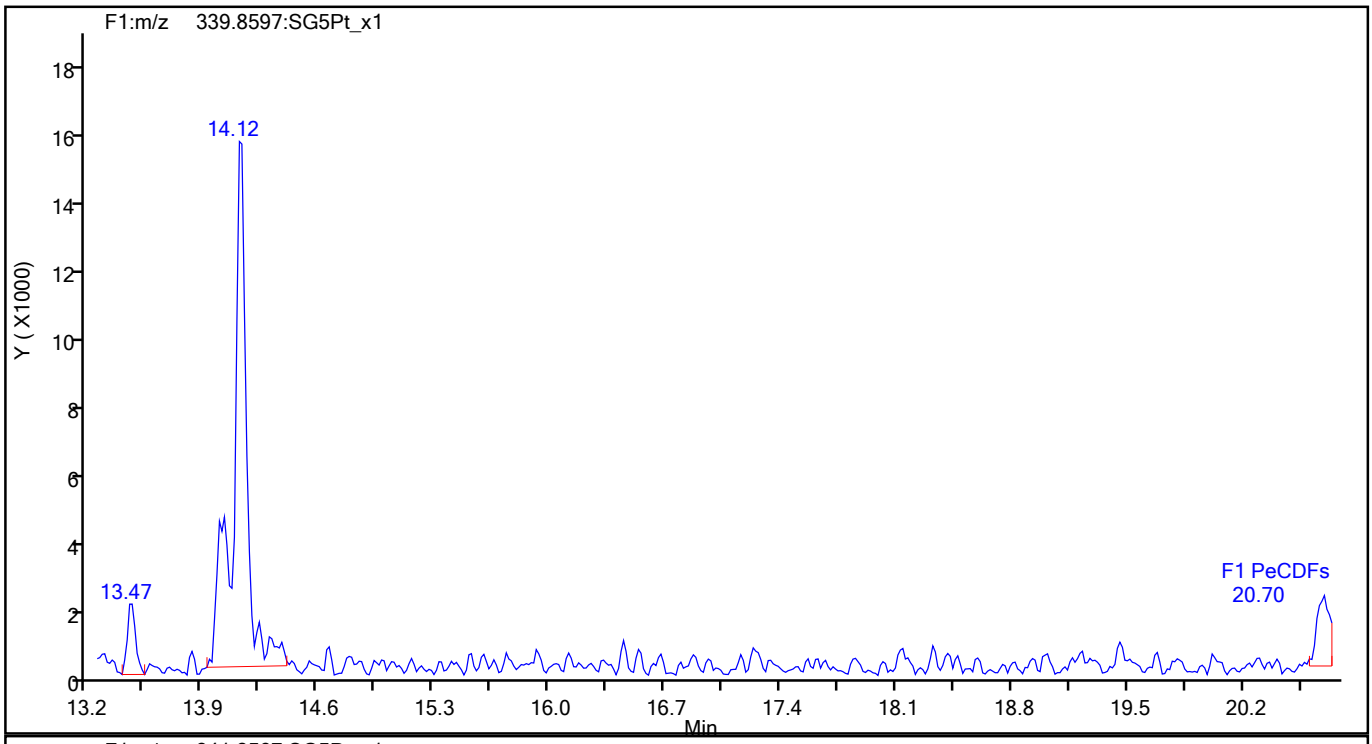

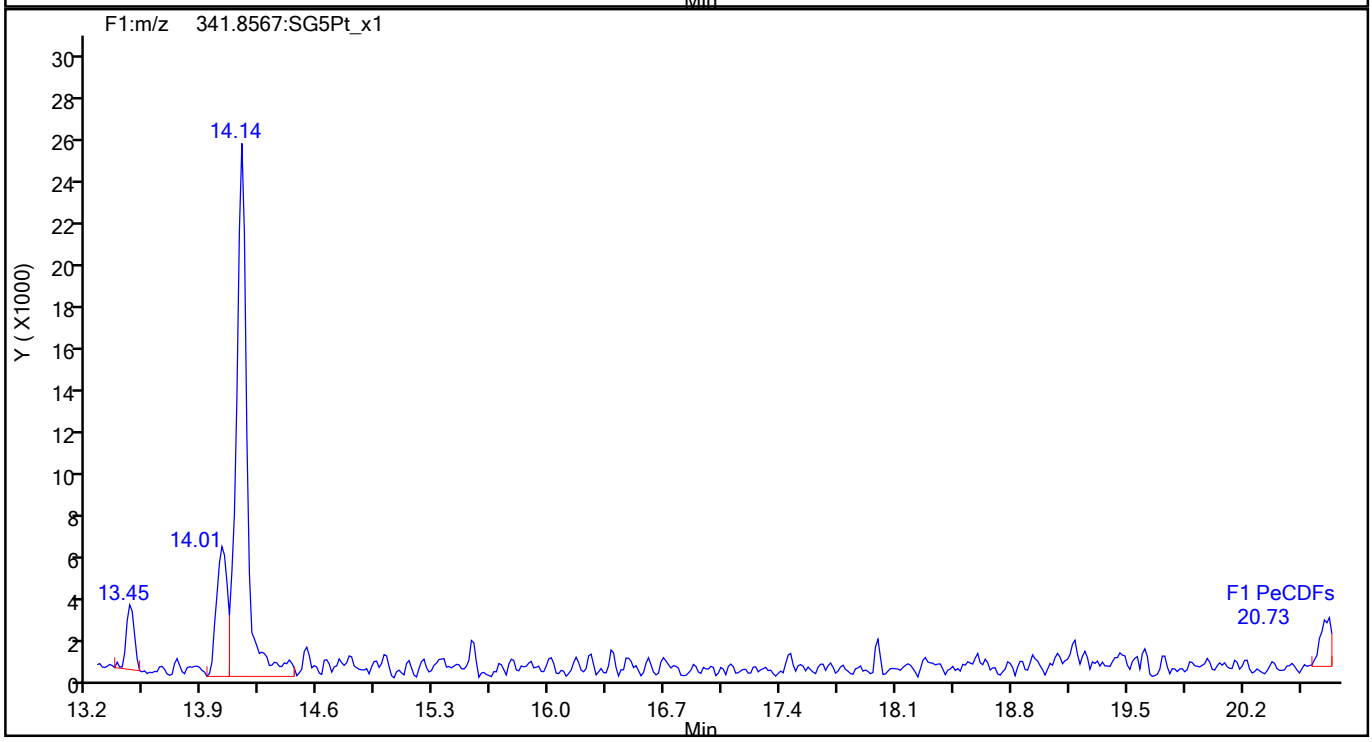

776013

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

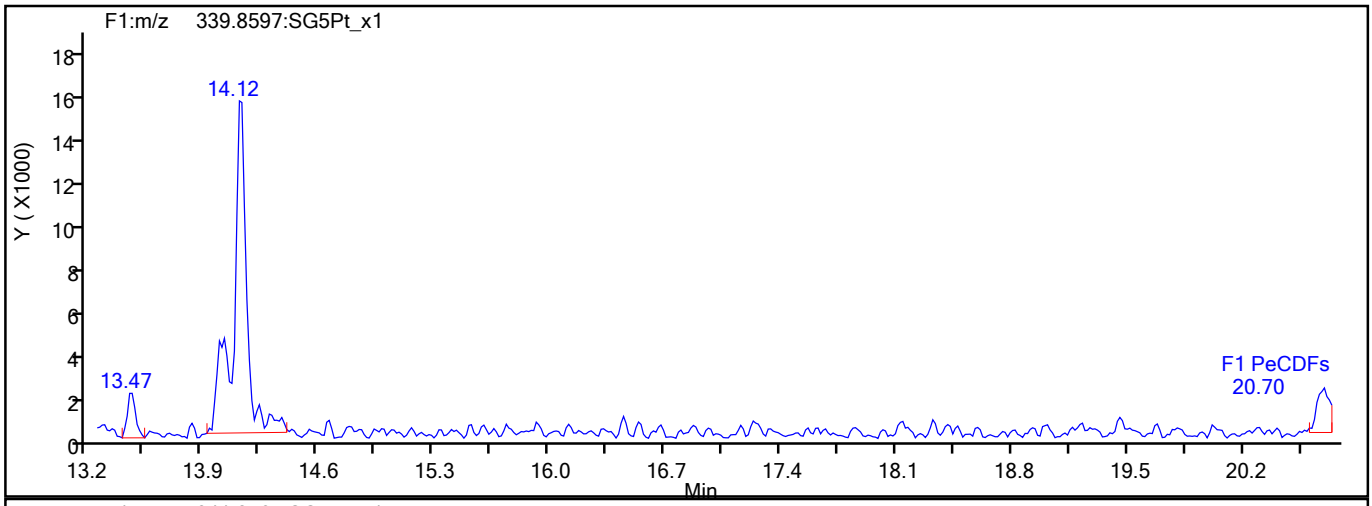

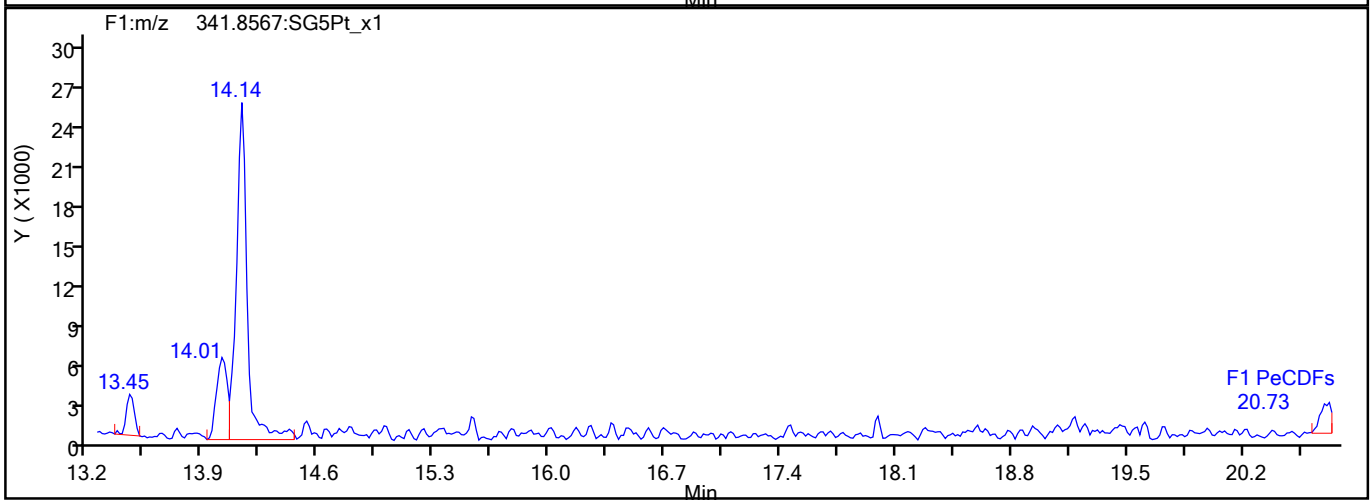

F1 PeCDFs Interference Mass

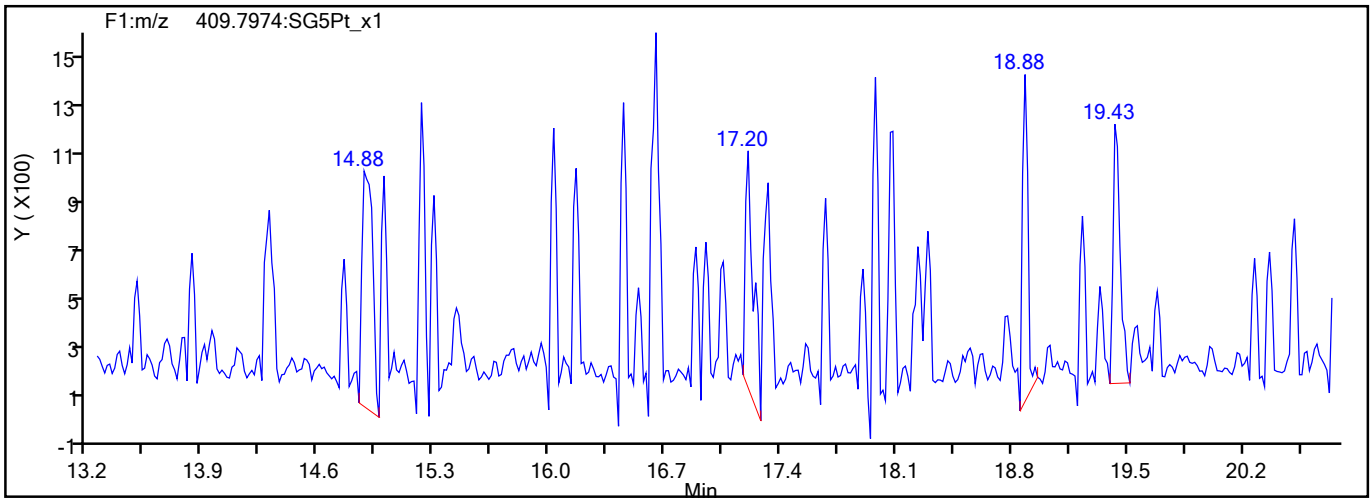

776014

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

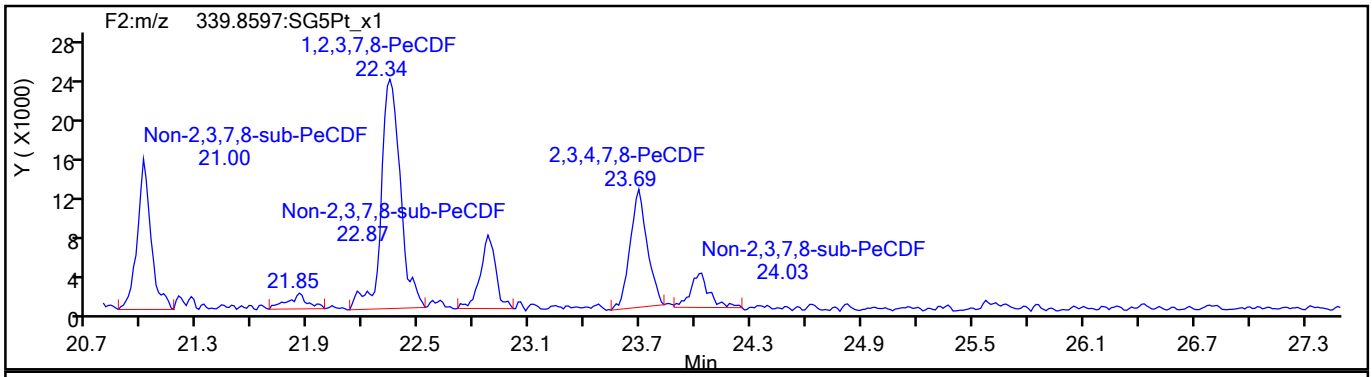

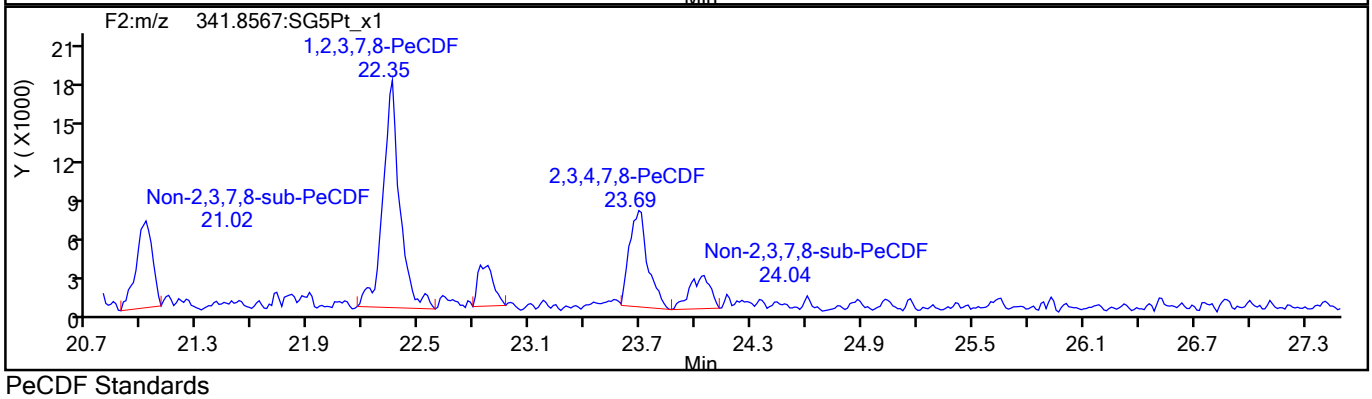

PeCDF Standards

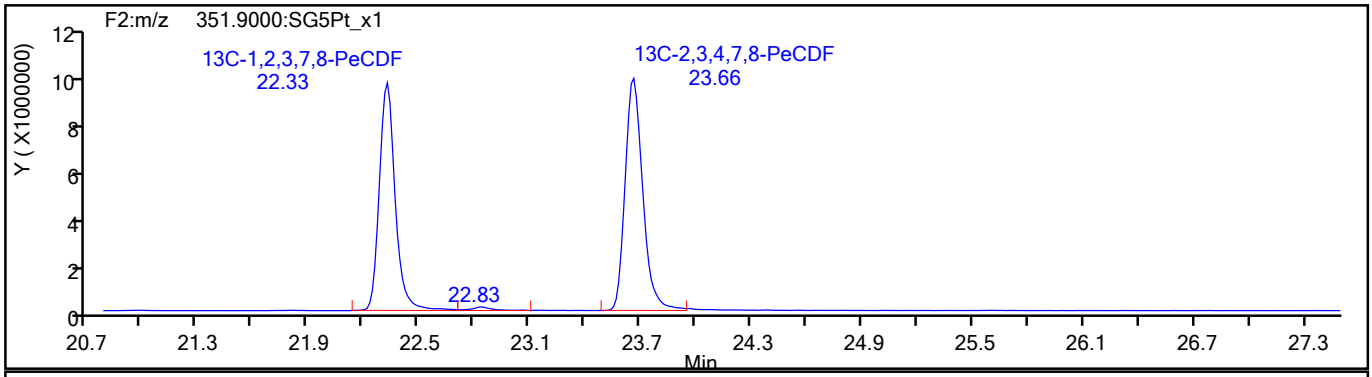

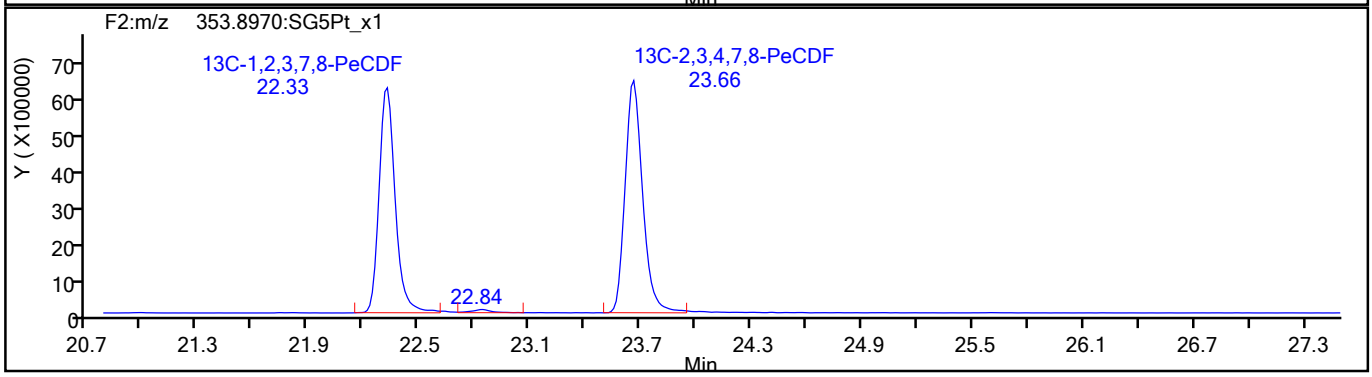

776015

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

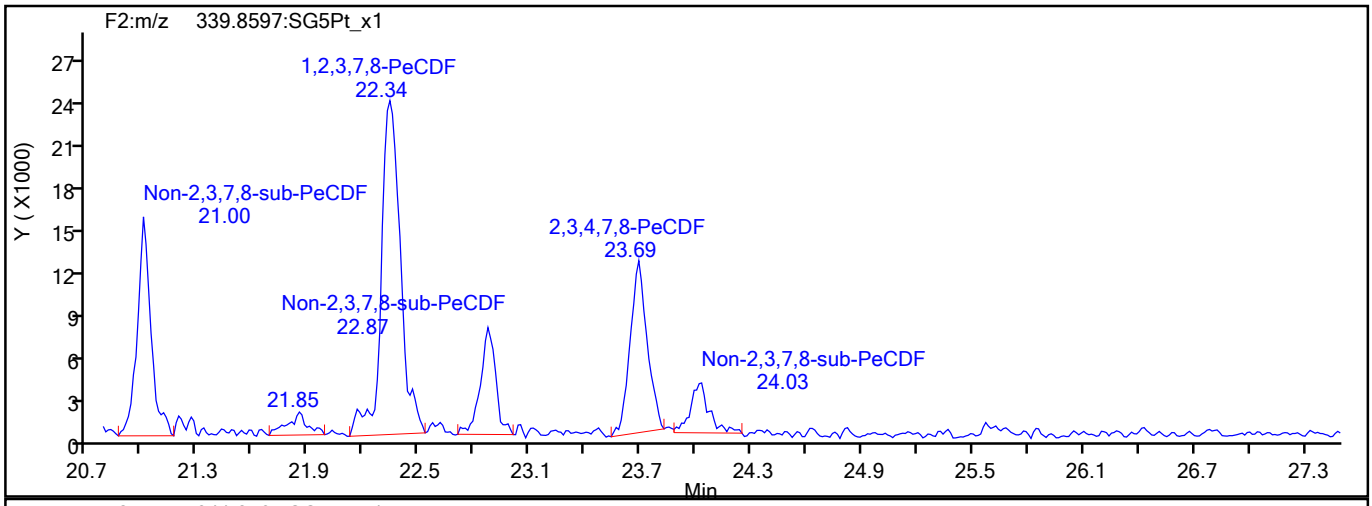

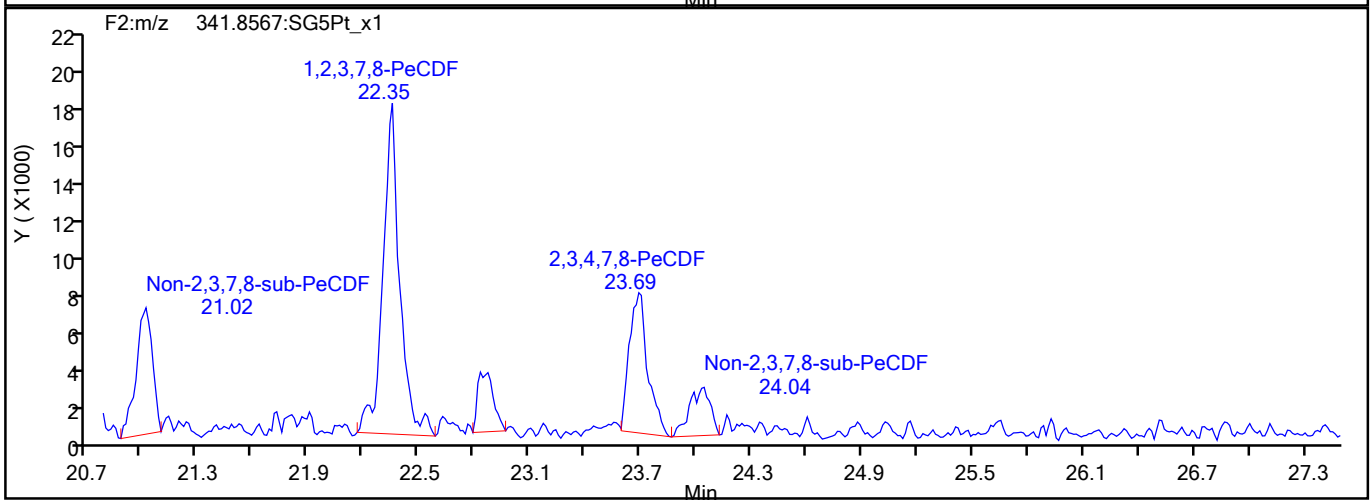

PeCDF Interference Mass

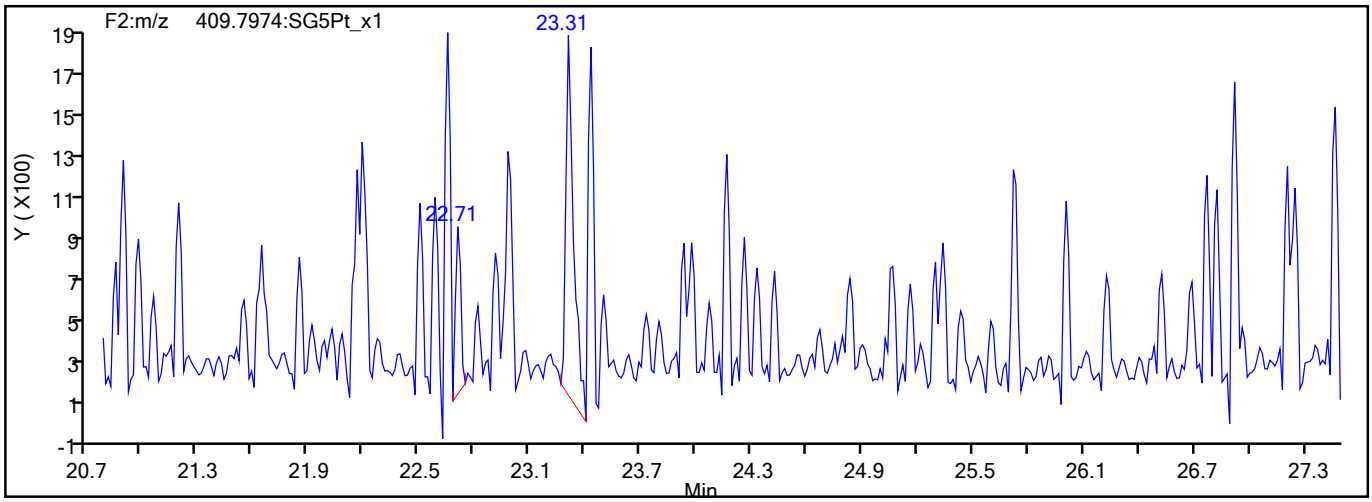

776016

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

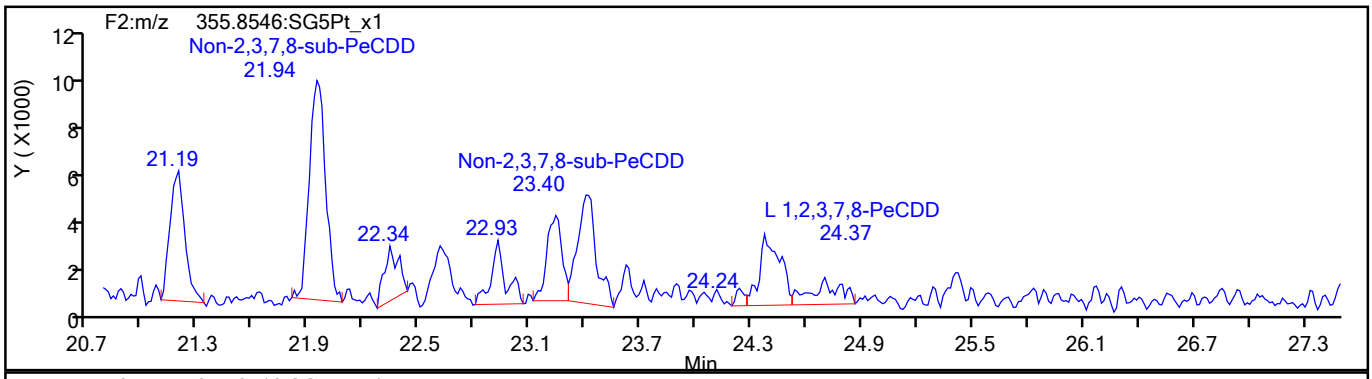

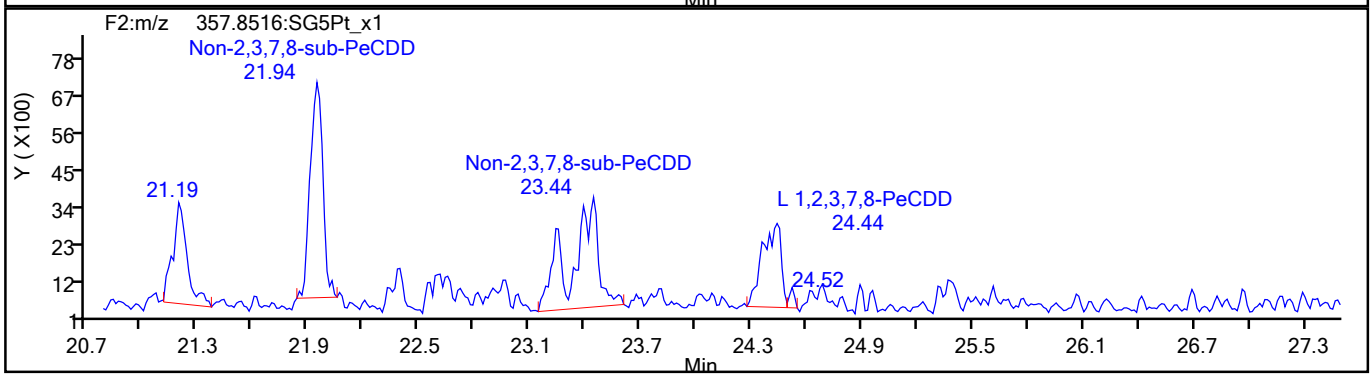

PeCDD Standards

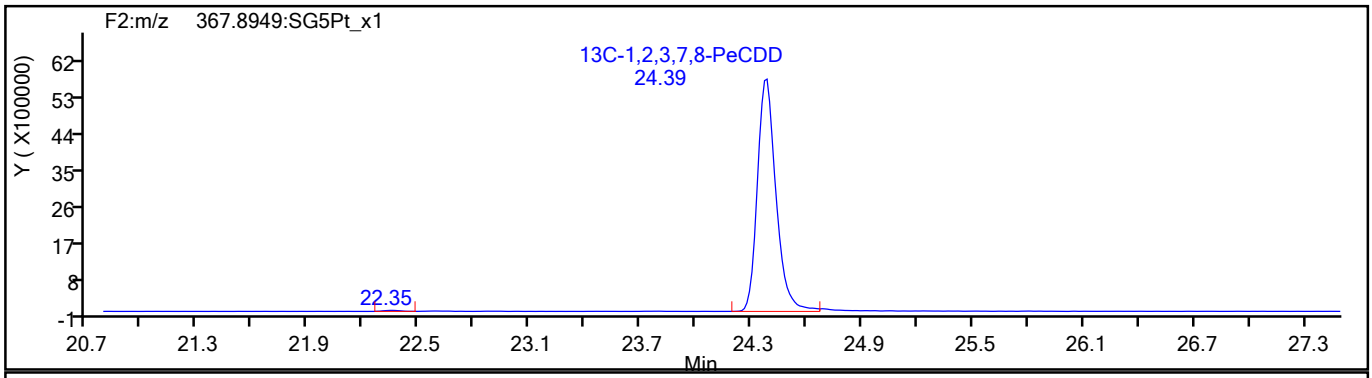

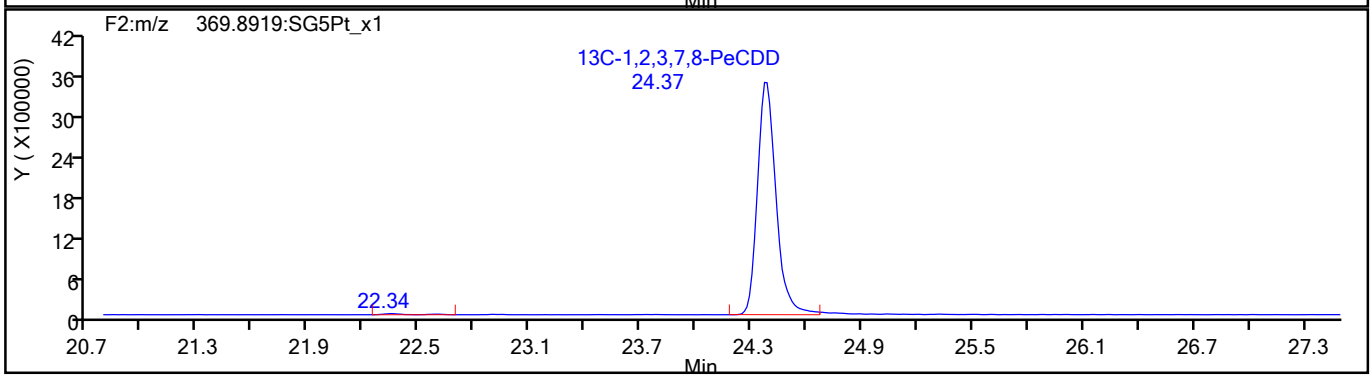

776017

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

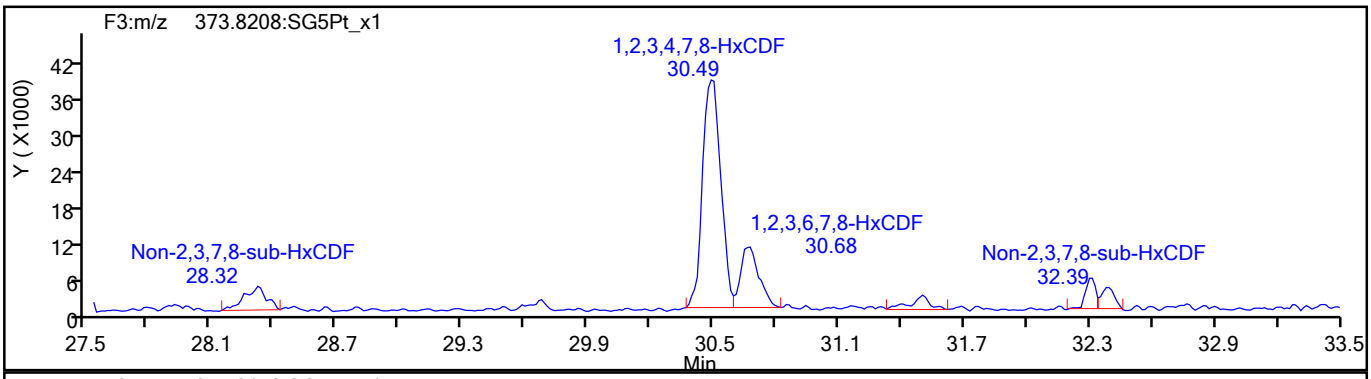

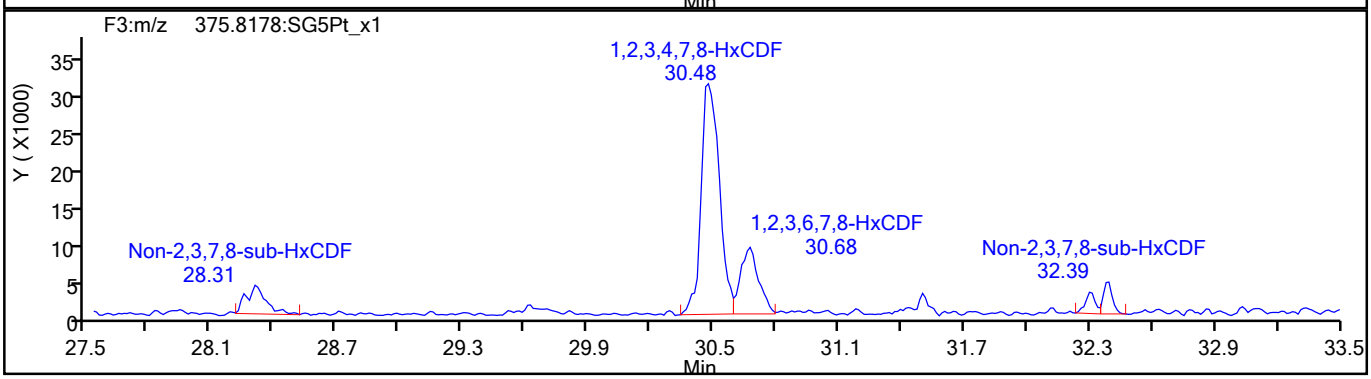

HxCDF Standards

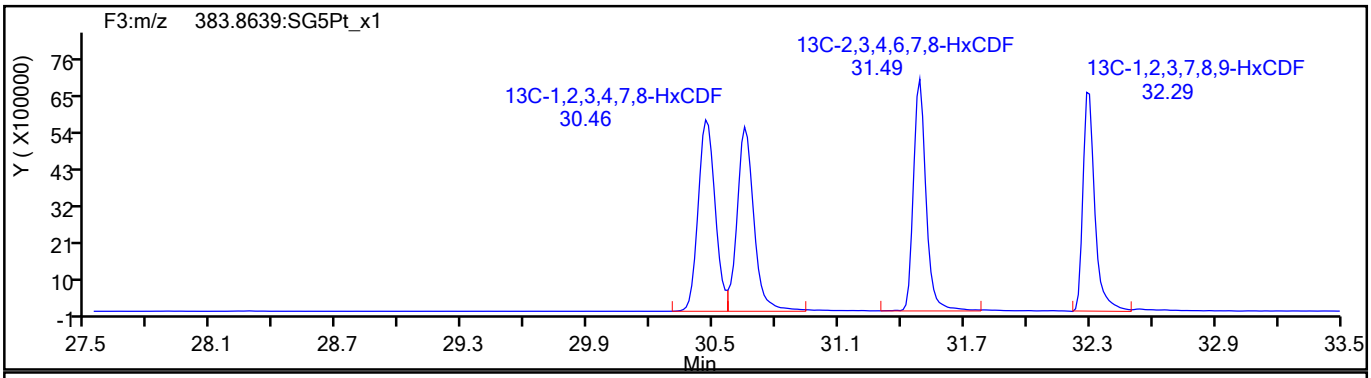

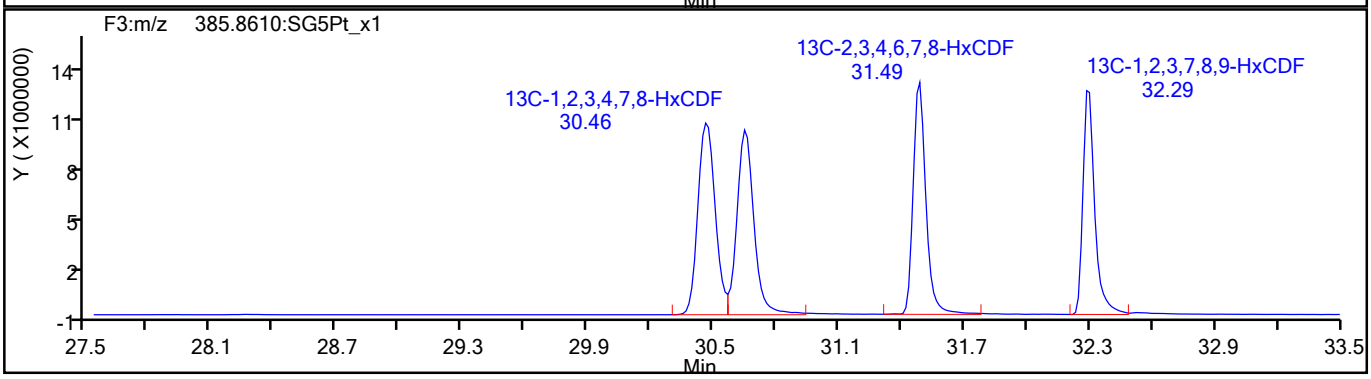

776018

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

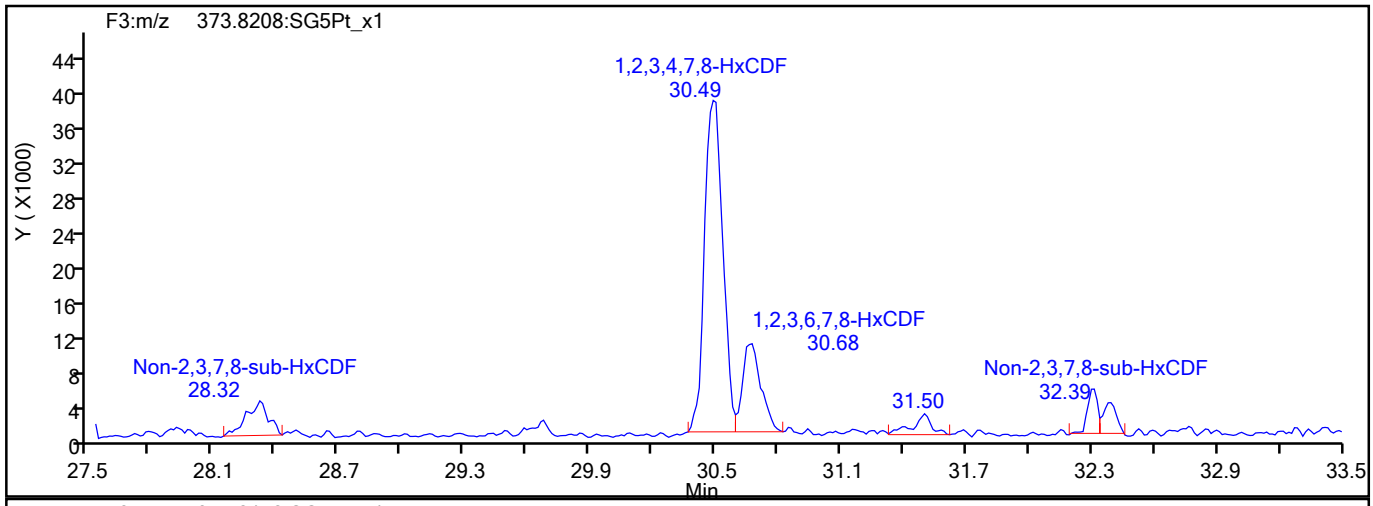

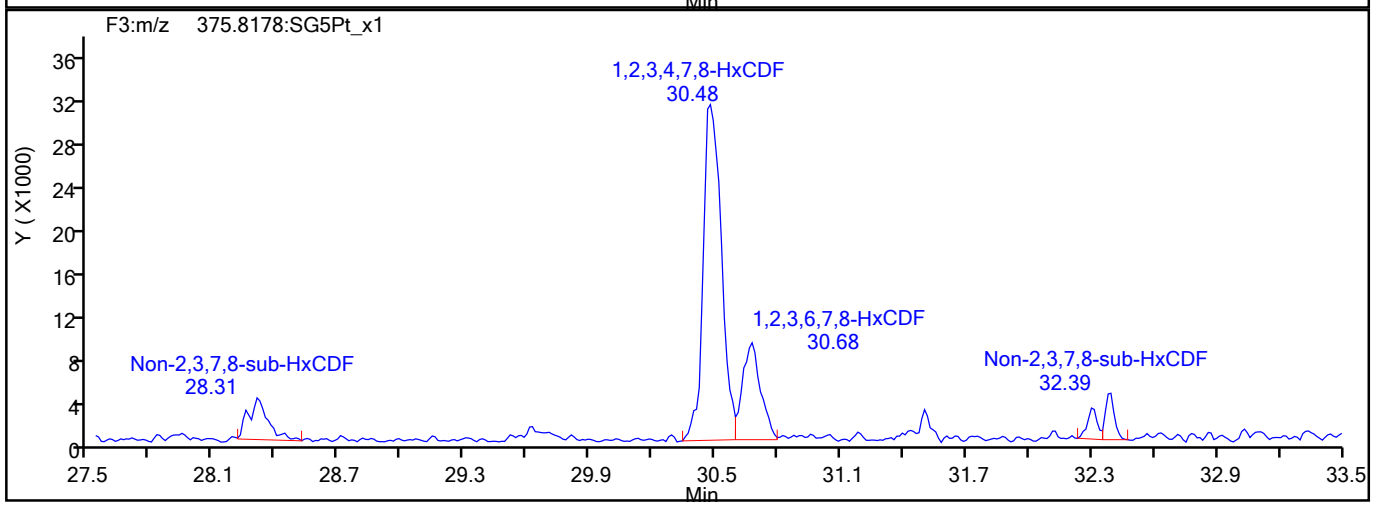

HxCDF Interference Mass

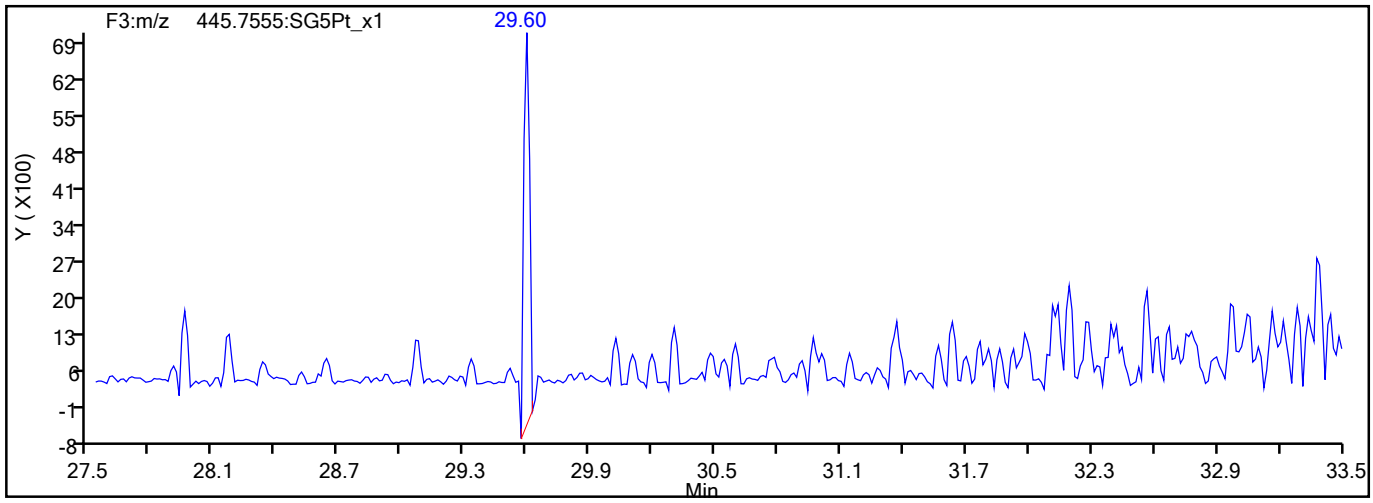

776019

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

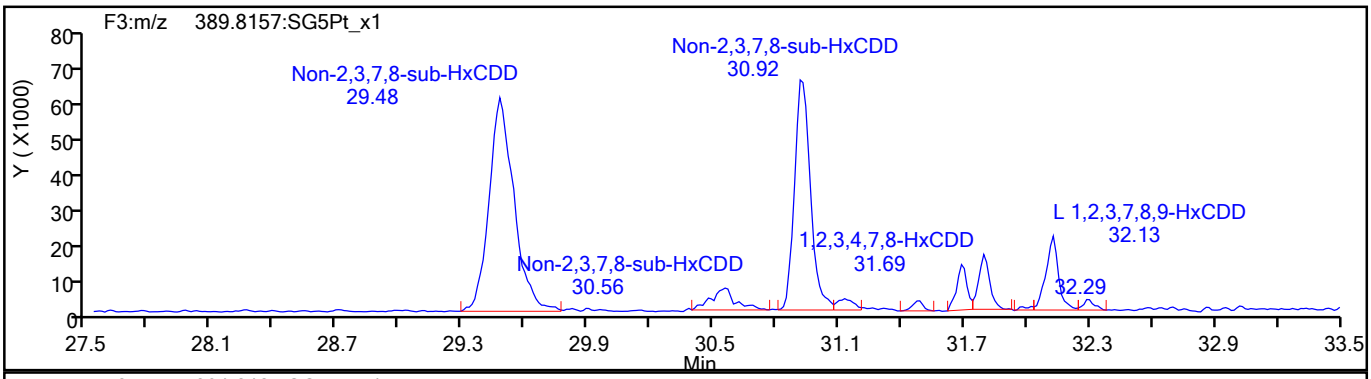

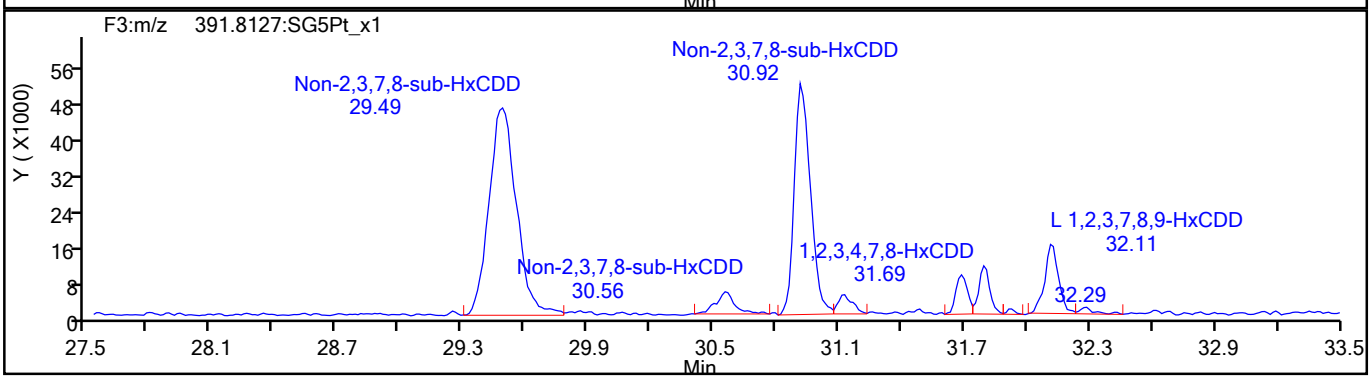

HxCDD Standards

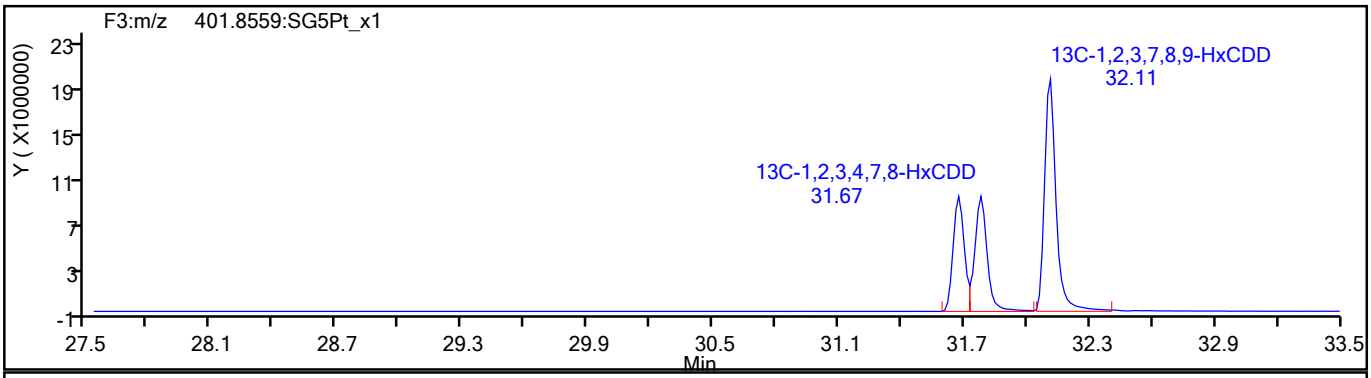

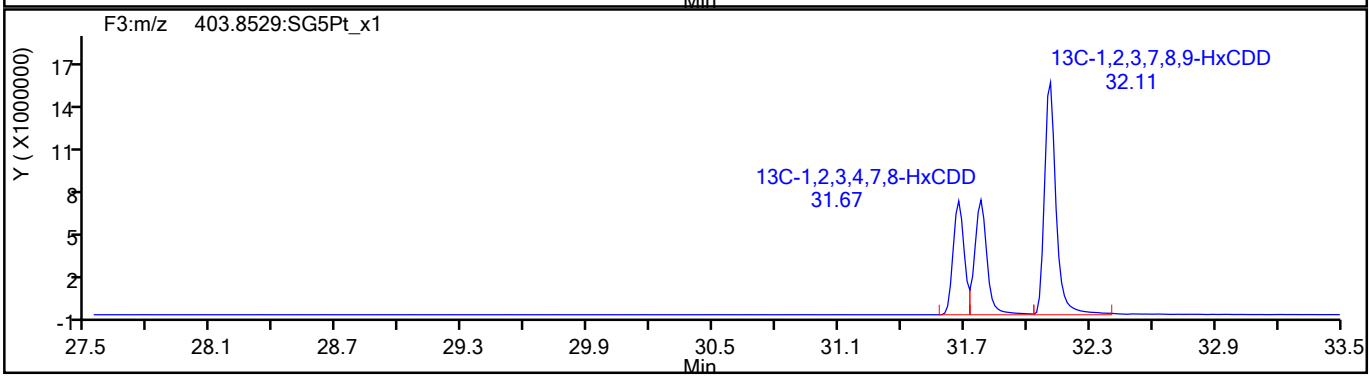

776020

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

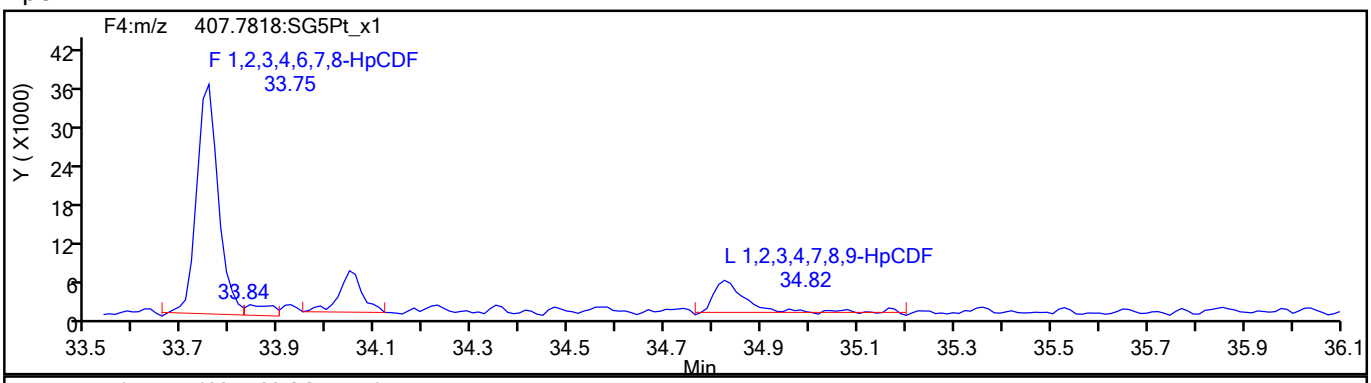

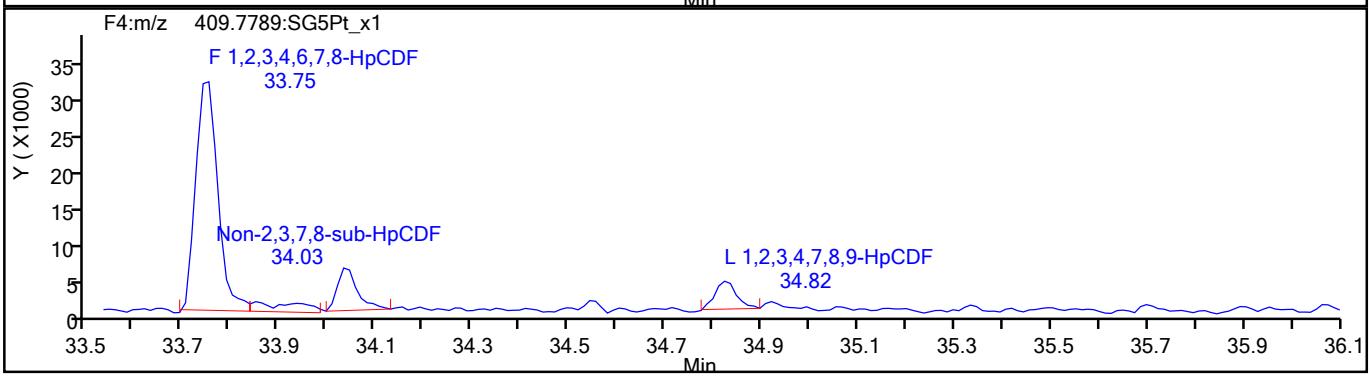

HpCDF Standards

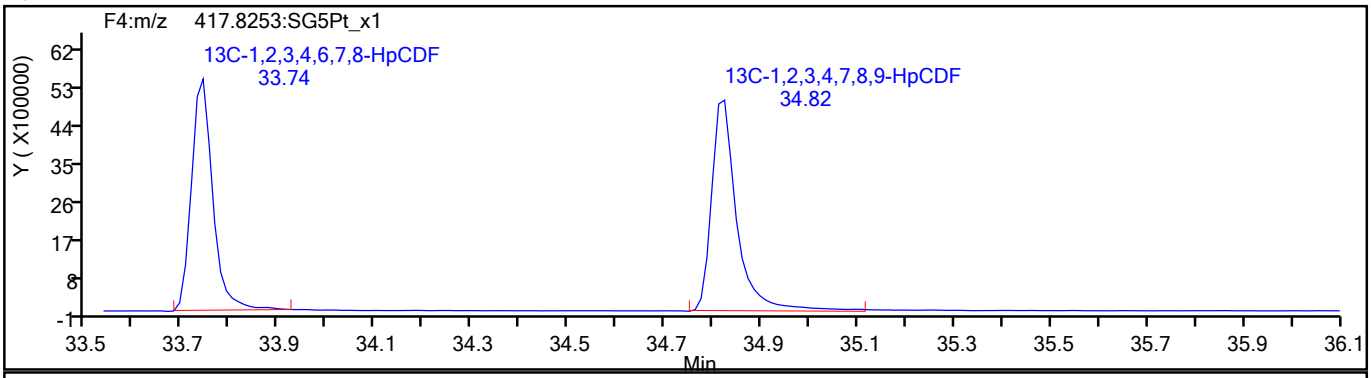

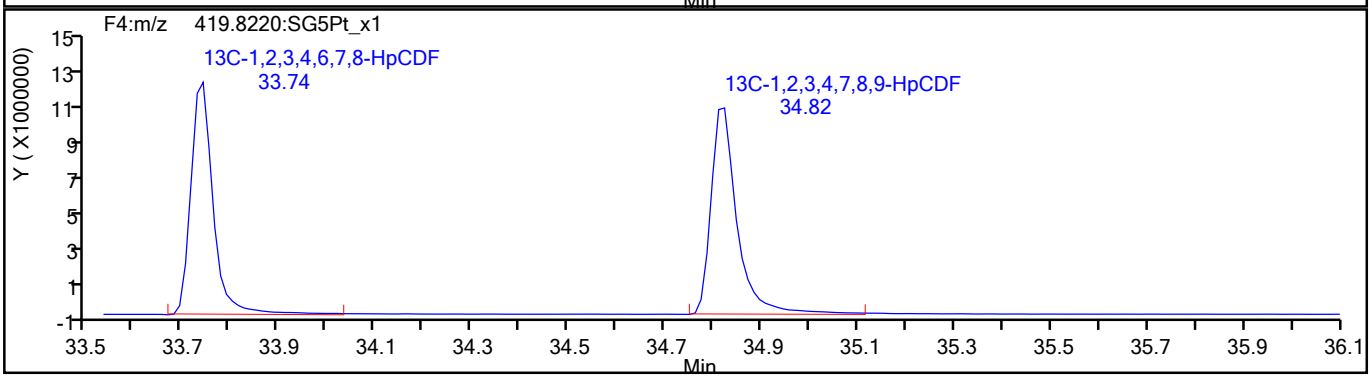

776021

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

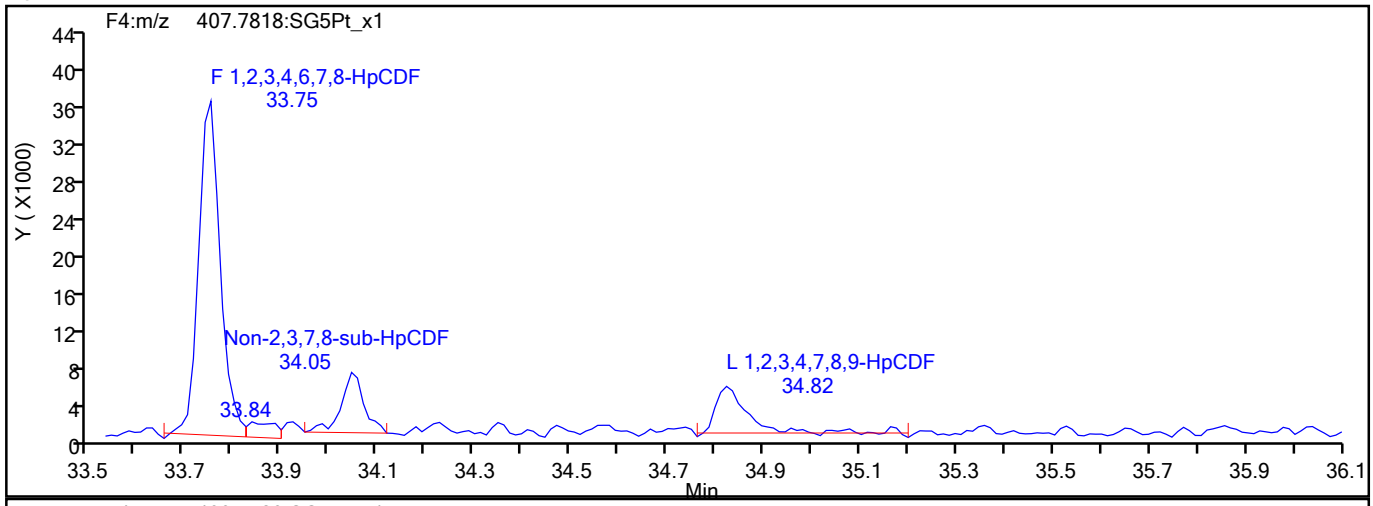

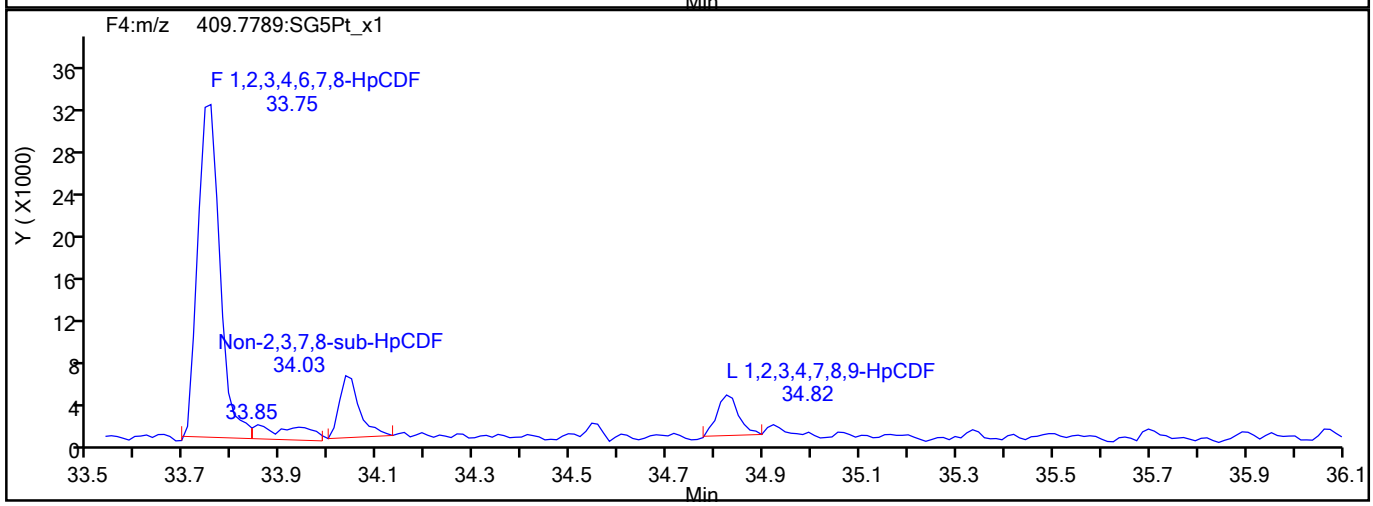

HpCDF Interference Mass

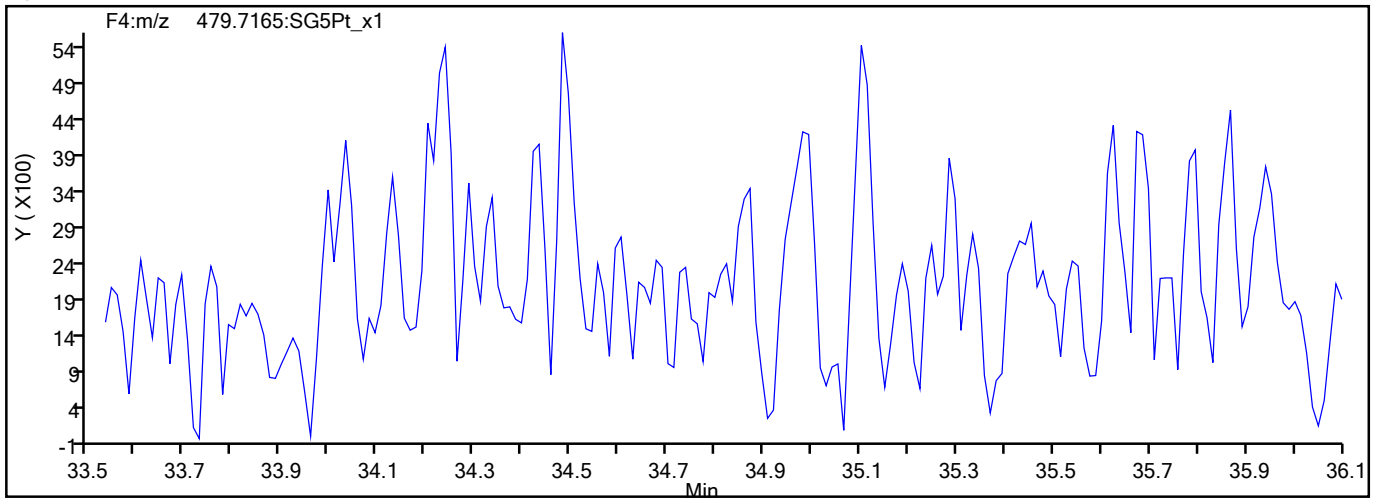

776022

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d		
Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

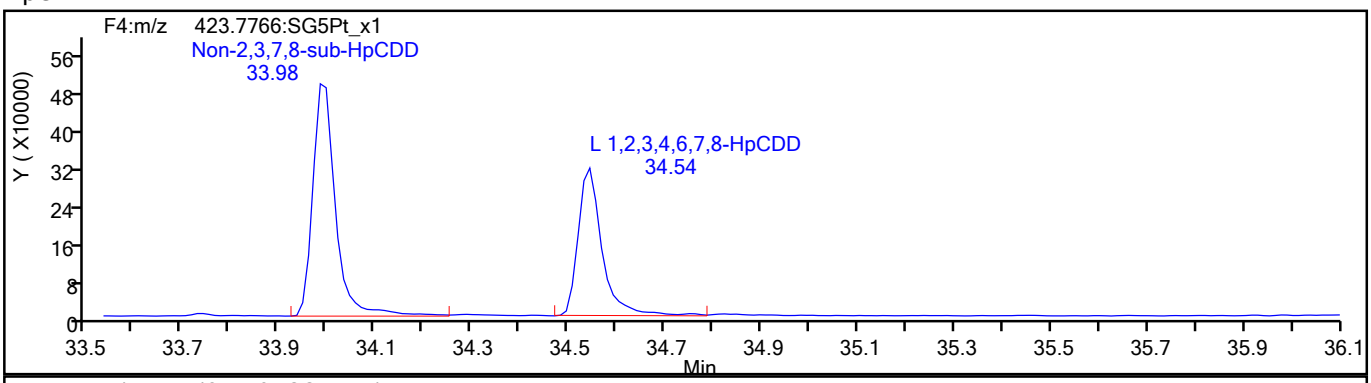

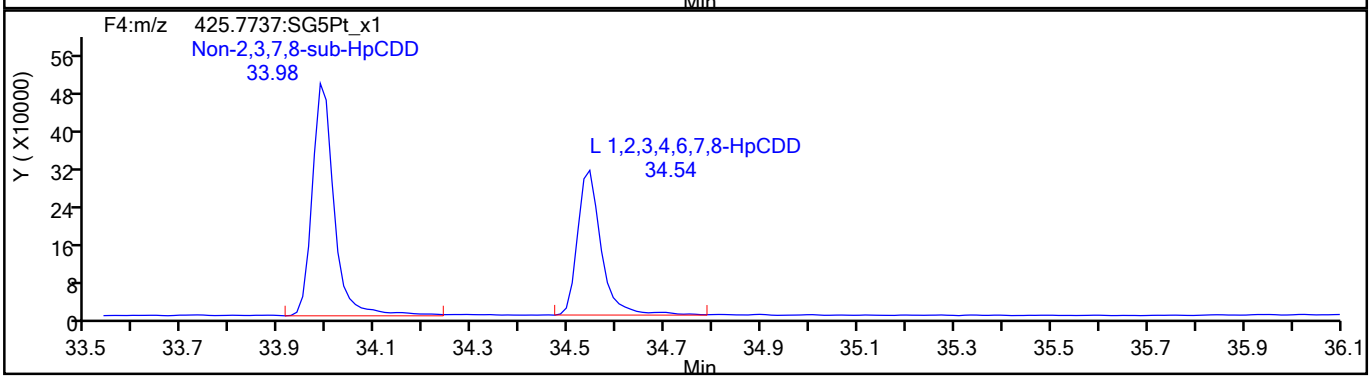

HpCDD Standards

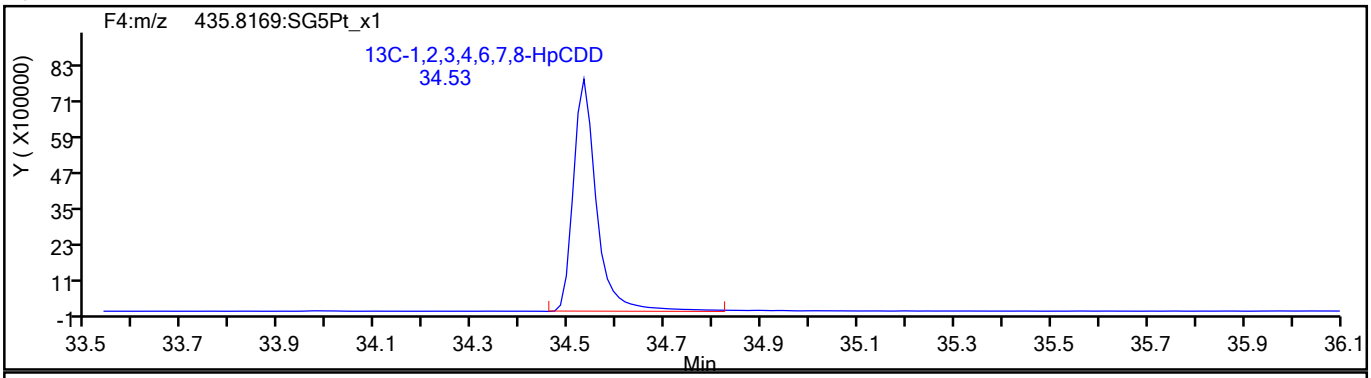

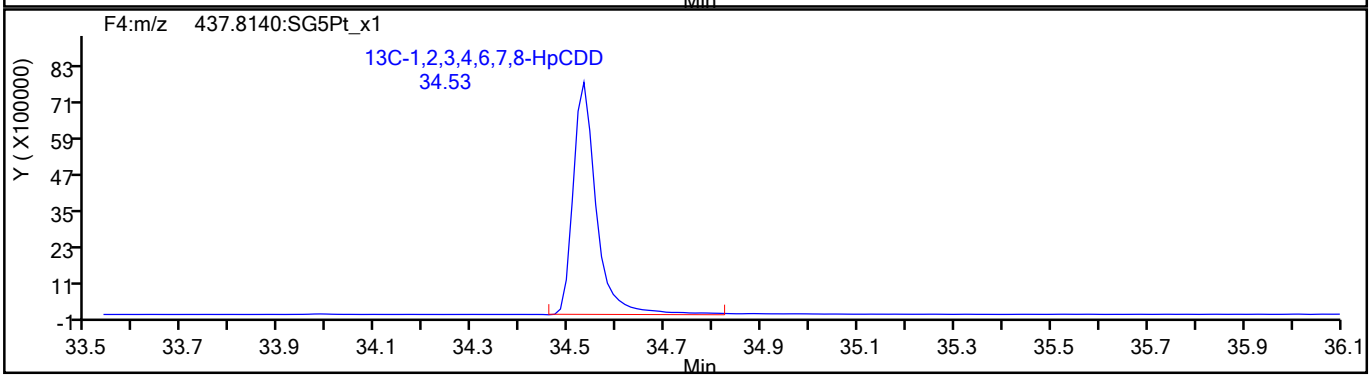

776023

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d		
Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

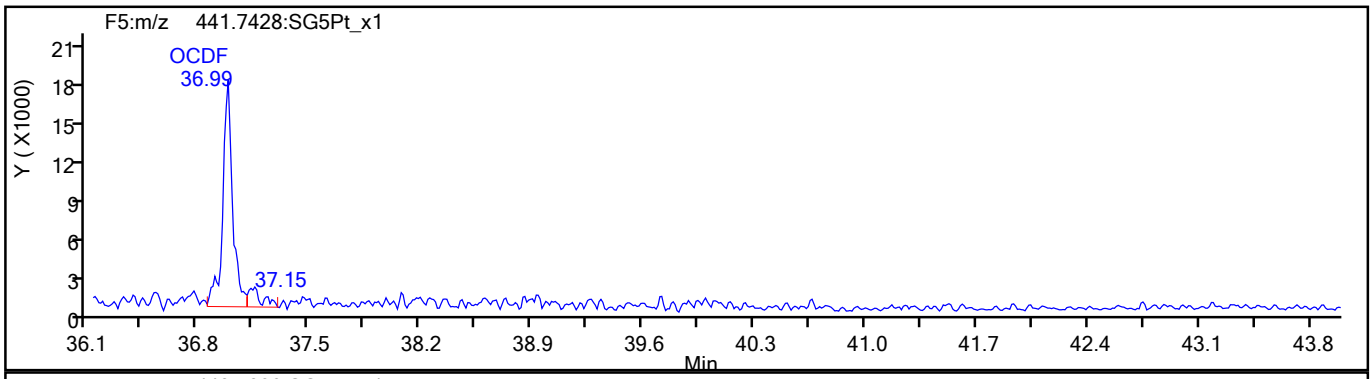

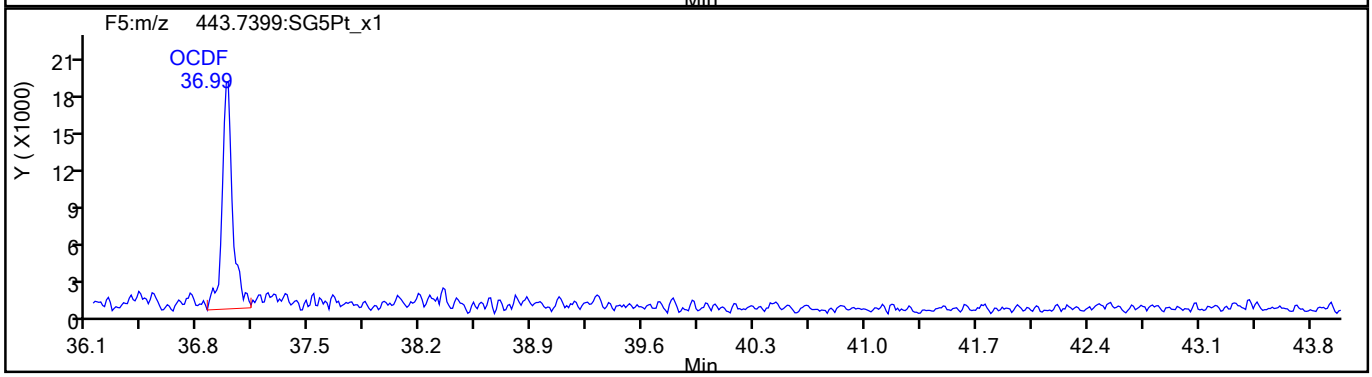

OCDF Standards

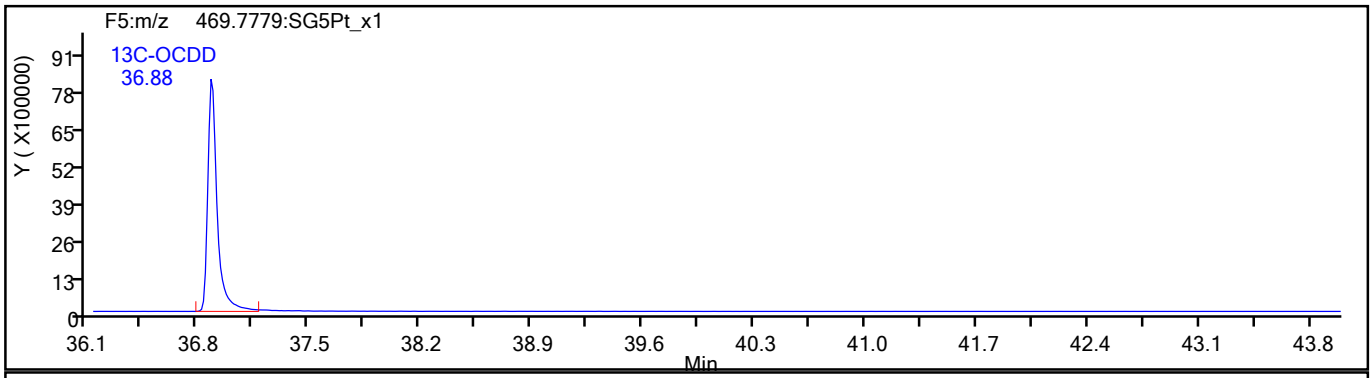

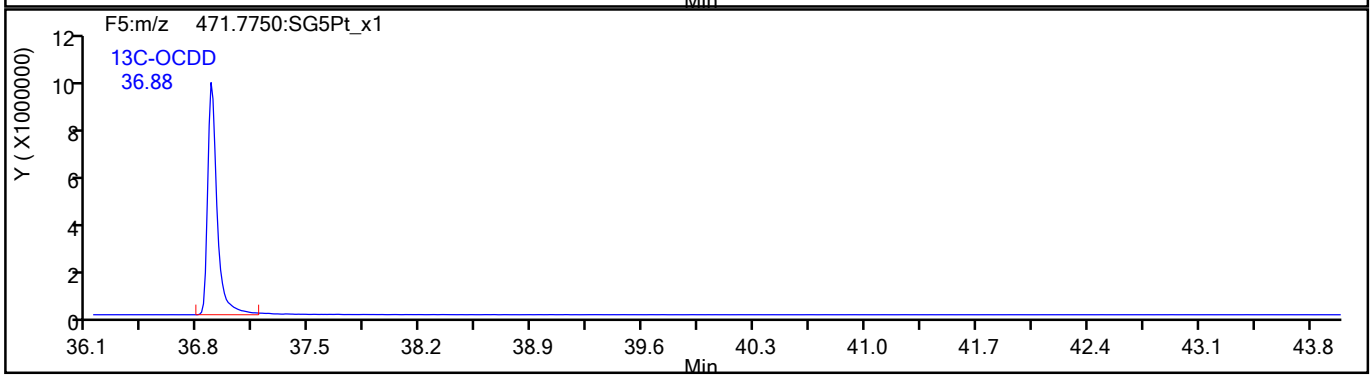

776024

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d		
Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

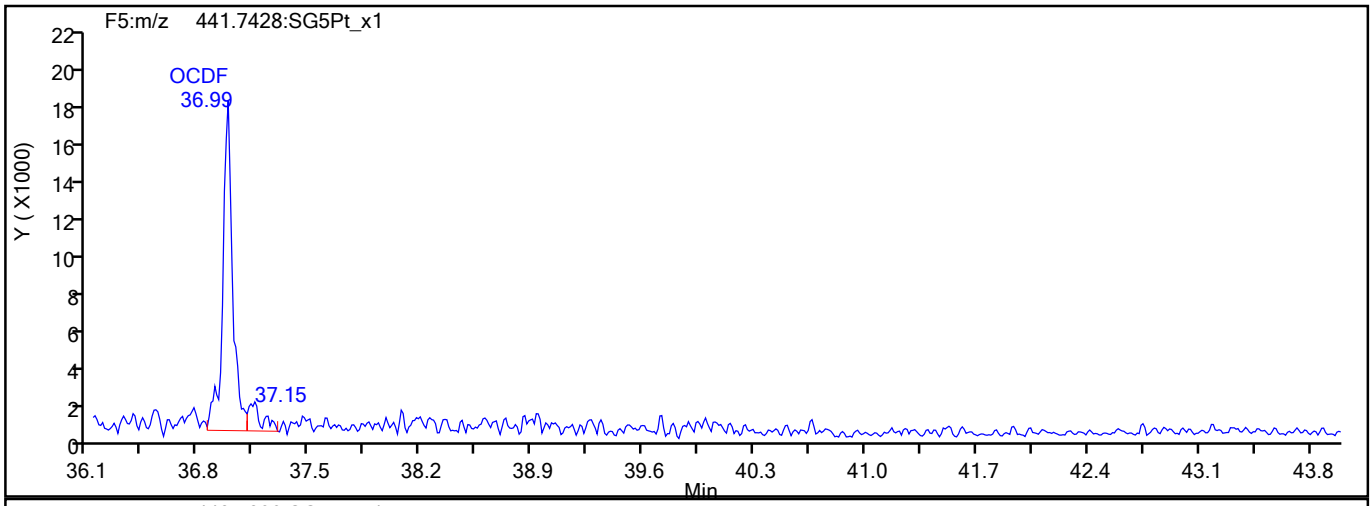

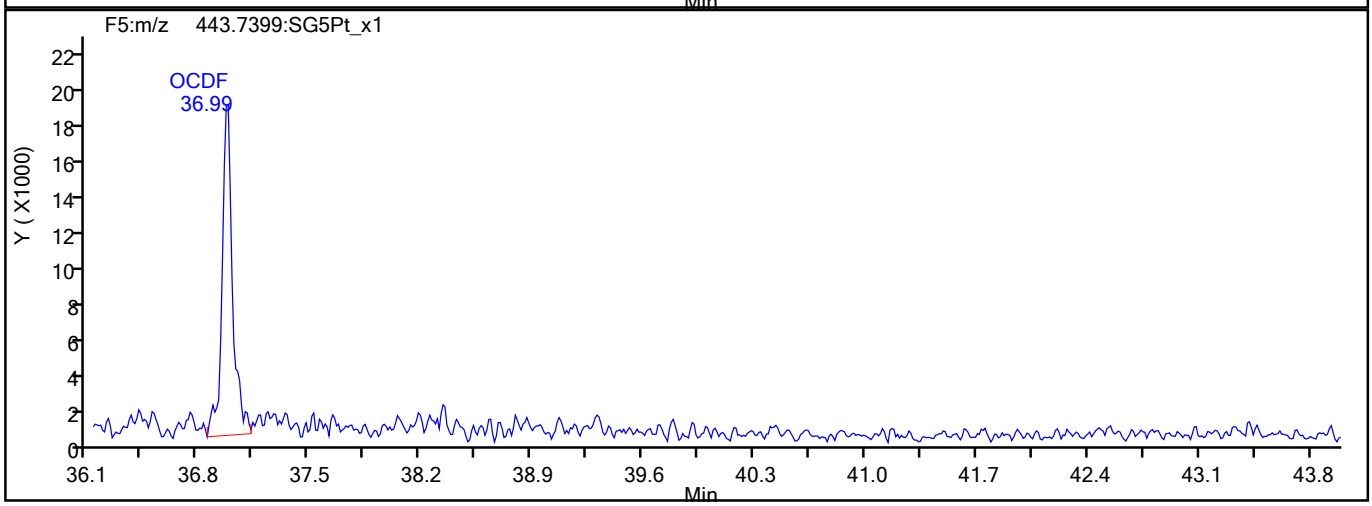

OCDF Interference Mass

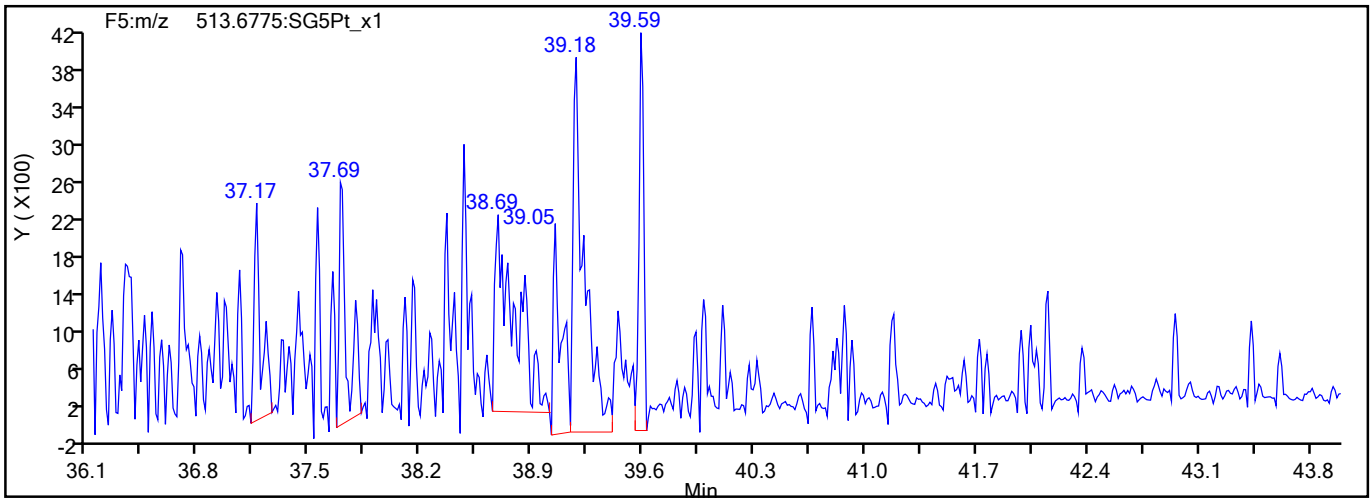

776025

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d		
Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

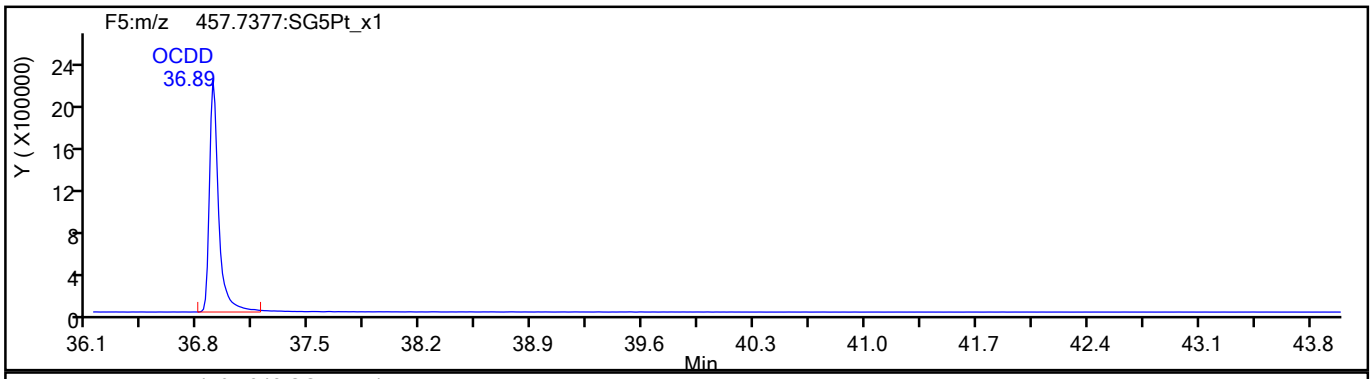

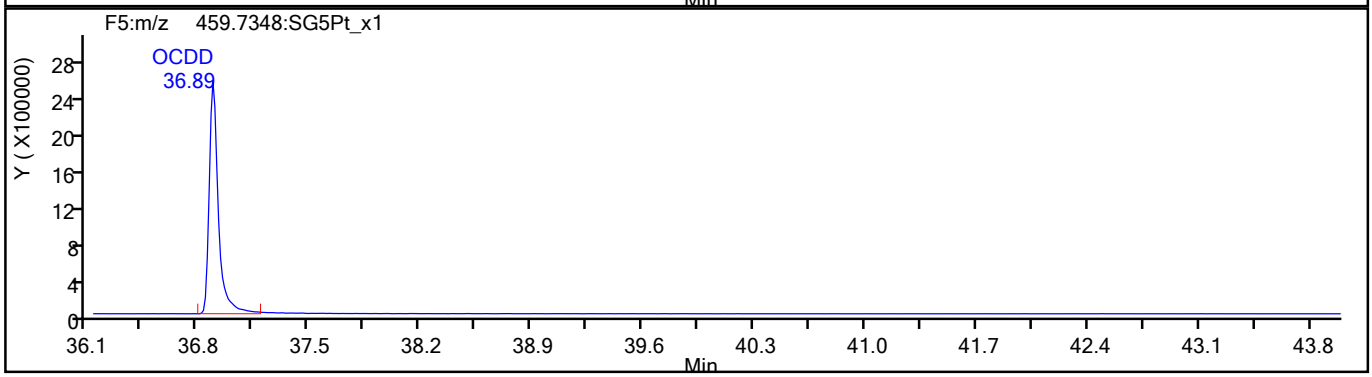

OCDD Standards

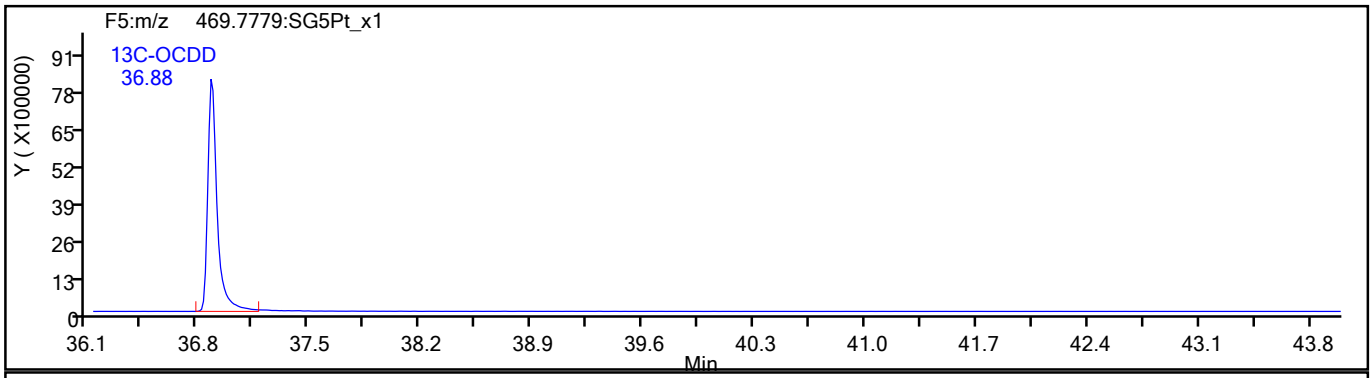

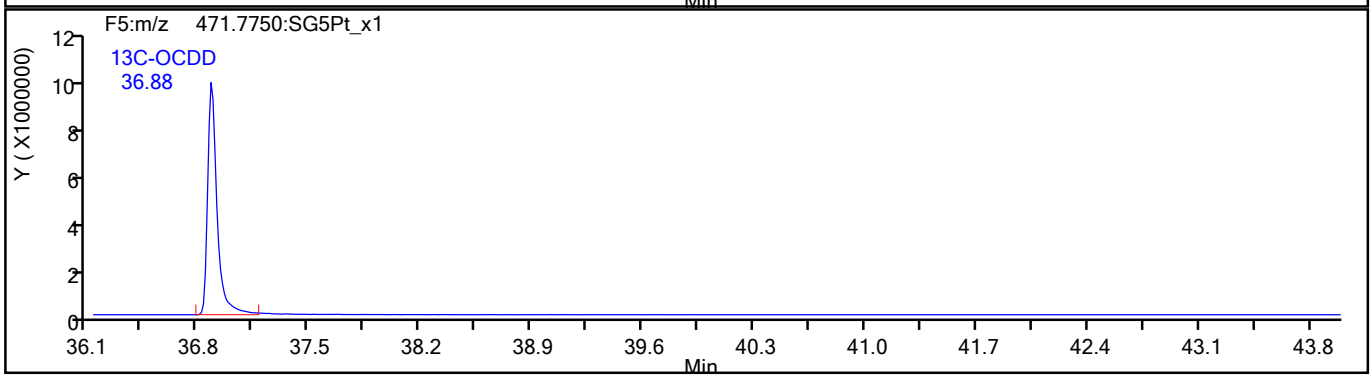

776026

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d		
Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

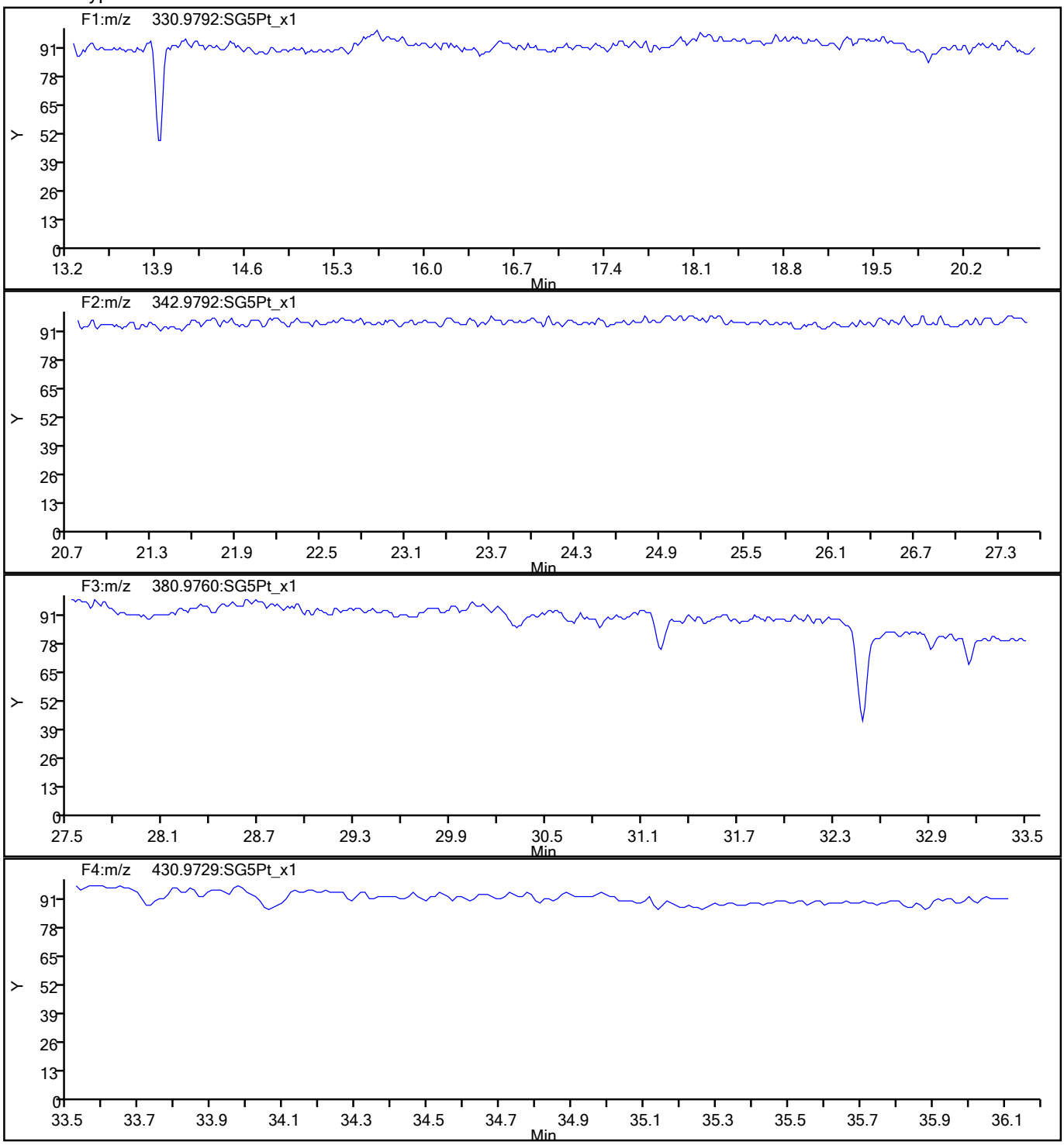

776027

Report Date: 19-Aug-2021 13:08:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_6.d		
Injection Date:	18-Aug-2021 18:04:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	517729	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

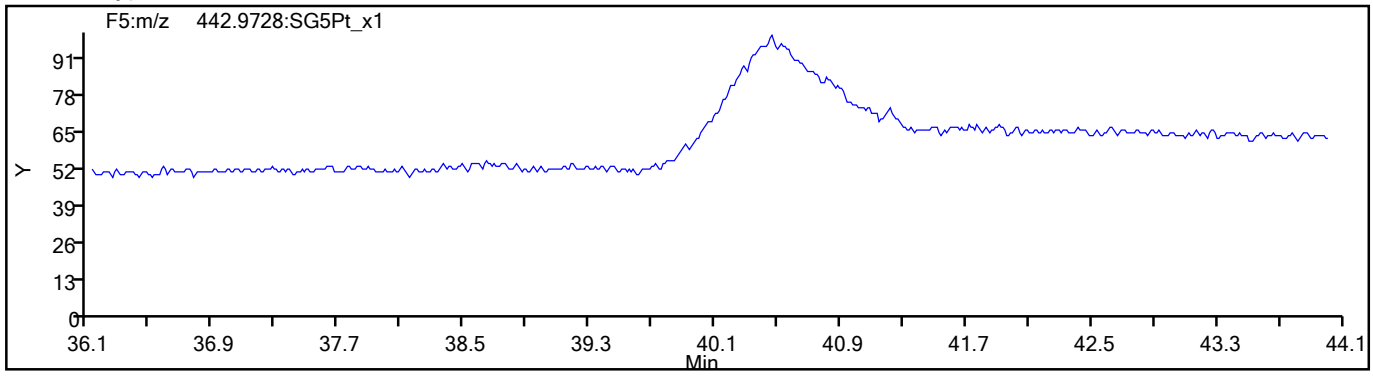

776028

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (14-16) RA
Lab Sample ID: 320-76769-34 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_011.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.94(g)
Date Analyzed: 08/23/2021 21:58
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 25.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	9.8		1.3	0.19

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	57		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	75		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_011.d
Lims ID: 320-76769-A-34-A
Client ID: 11215702-072221-SS-SJSB076 (14-16)
Sample Type: Client
Inject. Date: 23-Aug-2021 21:58:05 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-34-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:17:35

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.290	54852685	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.607	41380681	0.79	1.3327	56.6	56.6	0.1904	0.1904	56.61	
2,3,7,8-TCDF	17.635	1511169	0.79	0.9978	3.660	3.660	0.0712	0.0712		
D 13C-2,3,7,8-TCDD	16.057	26013280	0.77	0.8749	54.2	54.2	0.4471	0.4471	54.20	
2,3,7,8-TCDD	16.085	428665	0.65	1.0570	1.559	1.559	0.0654	0.0654		
$ 37Cl4-2,3,7,8-TCDD	16.071	14195615		0.8648	29.9	29.9	0.0653	0.0653	74.81	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

776030

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_011.d
Lims ID: 320-76769-A-34-A
Client ID: 11215702-072221-SS-SJSB076 (14-16)
Sample Type: Client
Inject. Date: 23-Aug-2021 21:58:05 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-34-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:17:35

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.290	16.298	0		23733345	5373740	9193	22982	585		
333.9339	16.290	16.298	0		31119340	6913319	10033	25082	689	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.607	17.615	0	1.081	18311936	3577541	6169	15422	580		
317.9389	17.607	17.615	0	1.081	23068745	4462642	6300	15750	708	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.635	17.643	0	1.002	666590	139162	980	2450	142		
305.8987	17.621	17.643	-1	1.001	844579	153579	1304	3260	118	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.057	16.065	0	0.986	11302098	2747436	9193	22982	299		
333.9339	16.057	16.065	0	0.986	14711182	3471256	10033	25082	346	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.085	16.079	0	1.002	168574	36287	875	2187	41		
321.8936	16.085	16.079	0	1.002	260091	52739	845	2112	62	0.65(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.071	16.093	-1	0.987	14195615	3137740	2774	6935	1131		

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 09:19:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_011.d		
Injection Date:	23-Aug-2021 21:58:05	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	518979	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

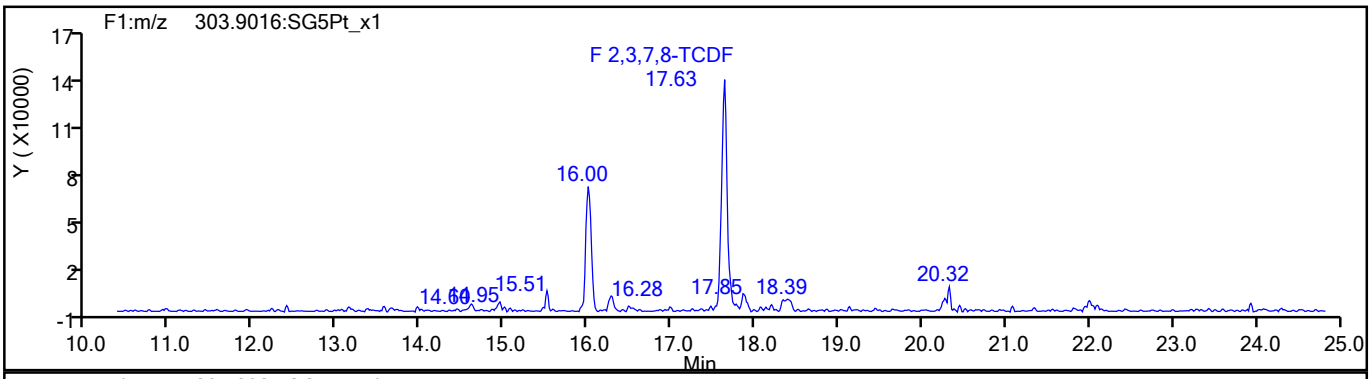

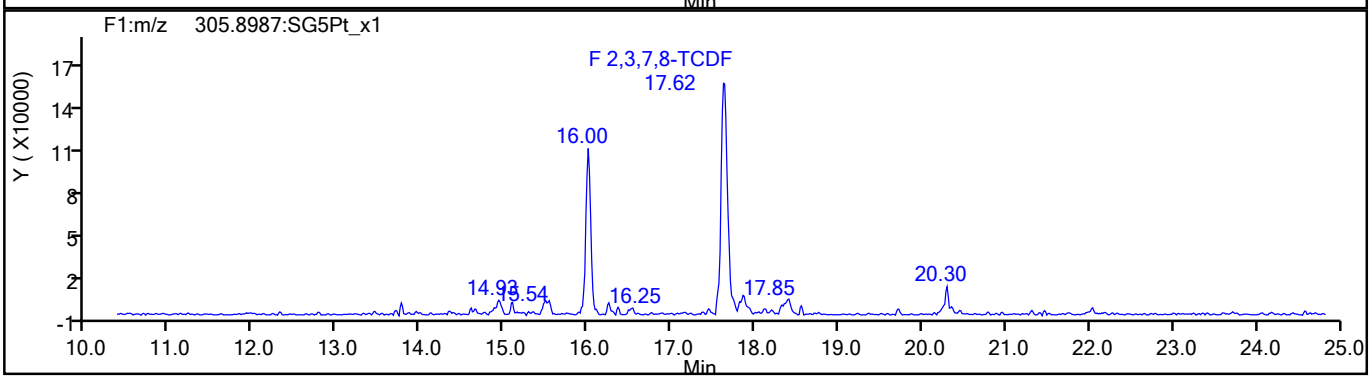

TCDF Standards

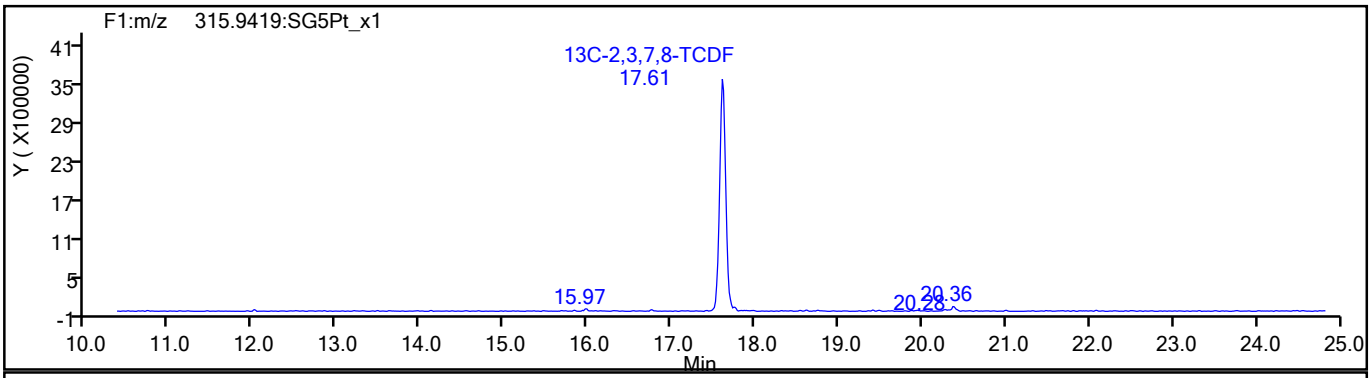

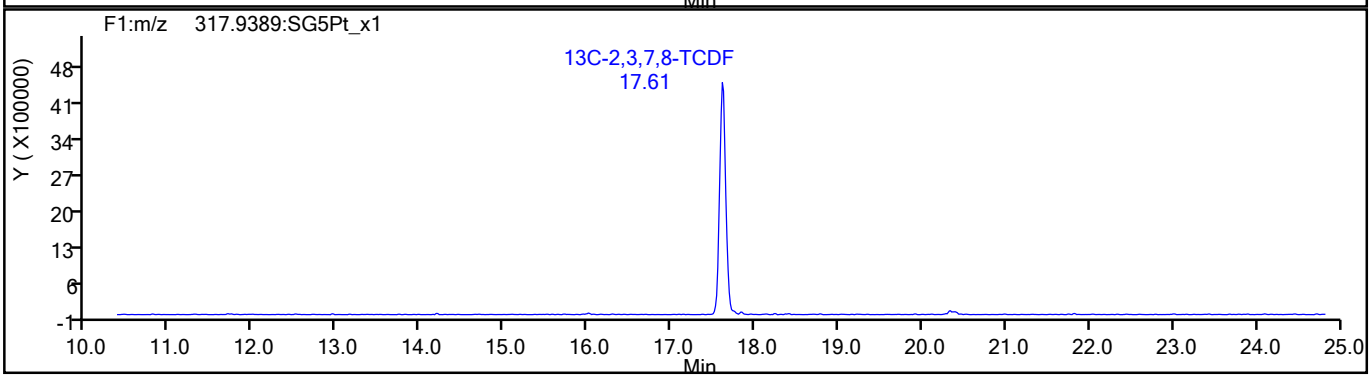

776032

Report Date: 24-Aug-2021 09:19:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_011.d		
Injection Date:	23-Aug-2021 21:58:05	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	518979	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

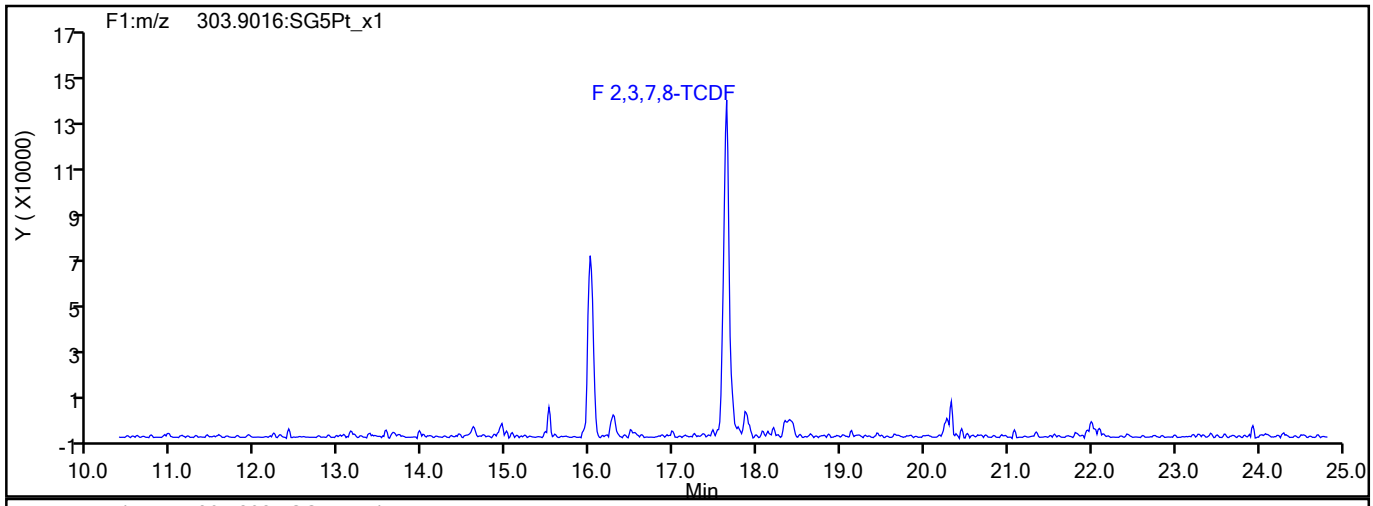

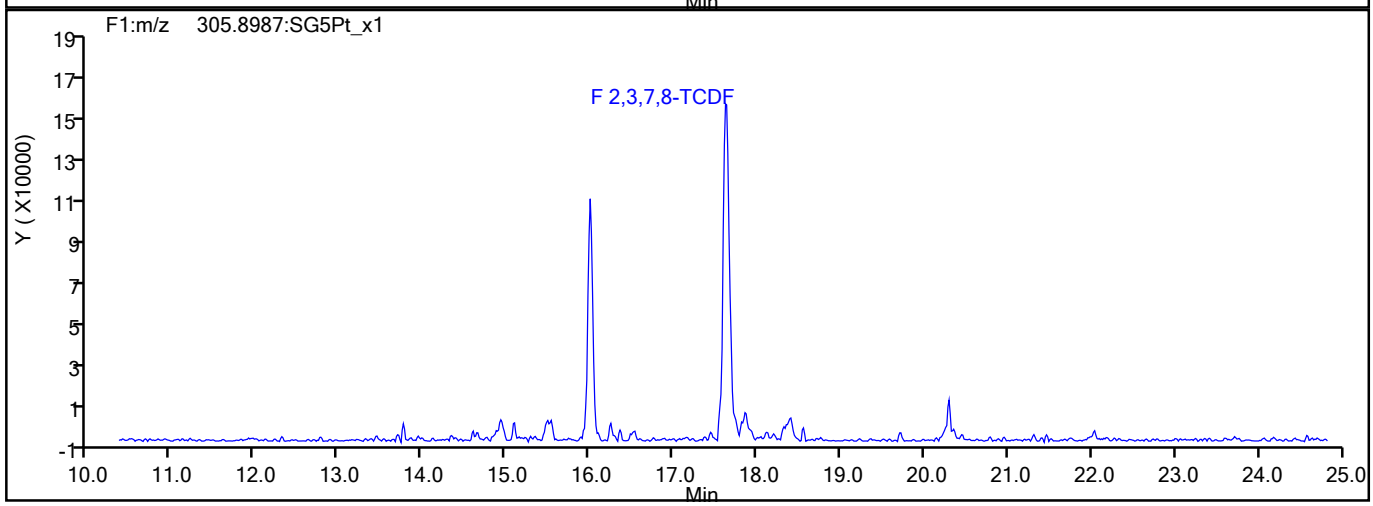

TCDF Interference Mass

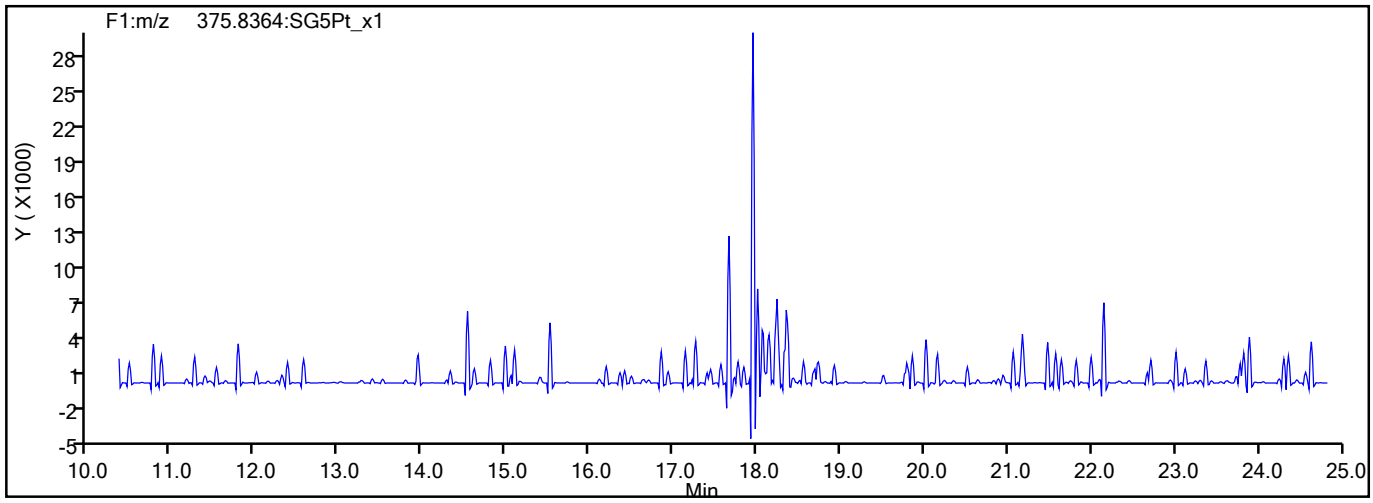

776033

Report Date: 24-Aug-2021 09:19:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_011.d		
Injection Date:	23-Aug-2021 21:58:05	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	518979	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

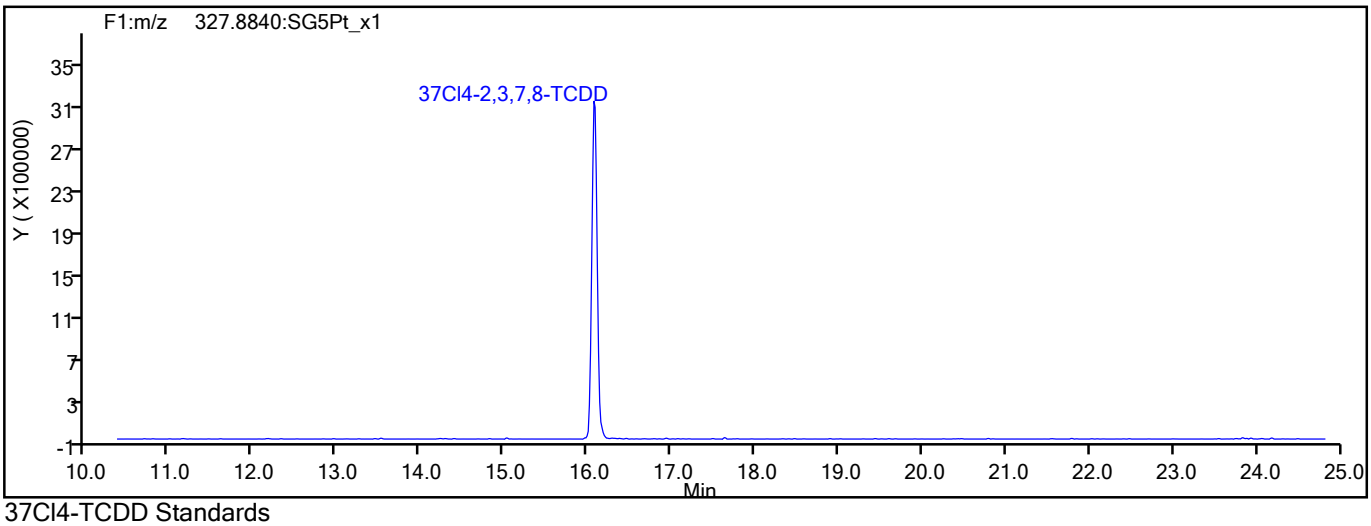

37Cl4-TCDD Standards

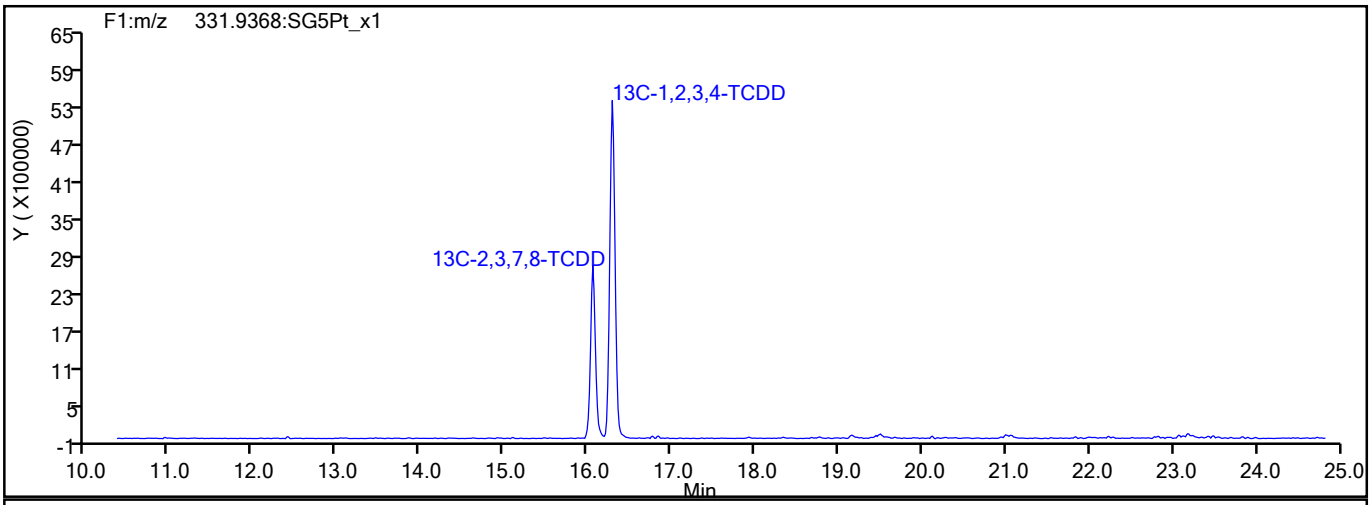

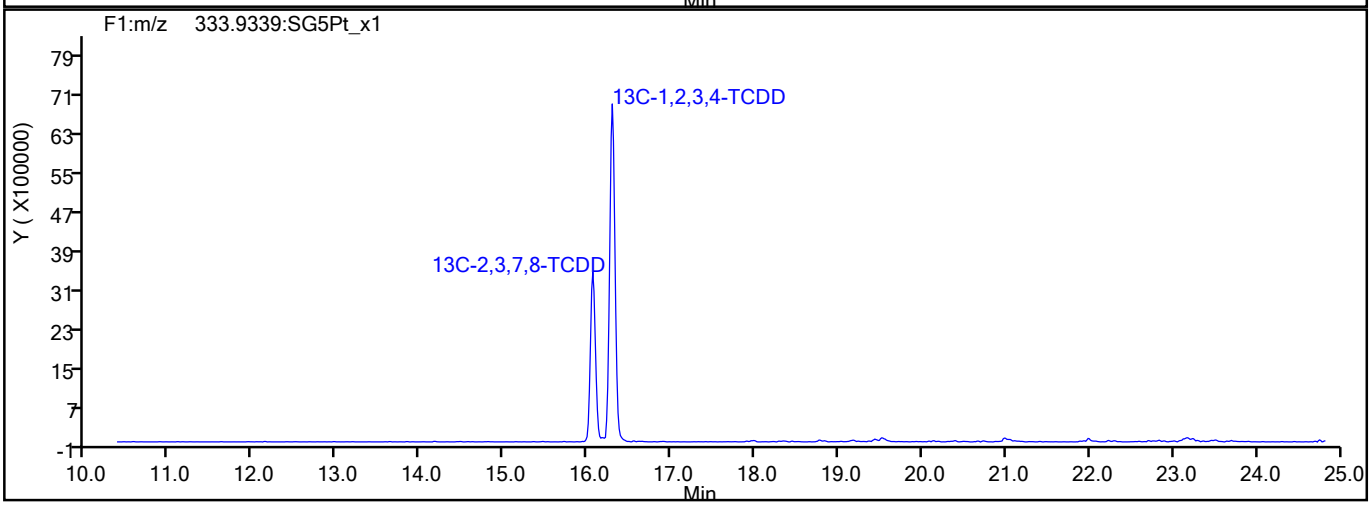

776034

Report Date: 24-Aug-2021 09:19:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_011.d		
Injection Date:	23-Aug-2021 21:58:05	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (14-16)		
Worklist#:	518979	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

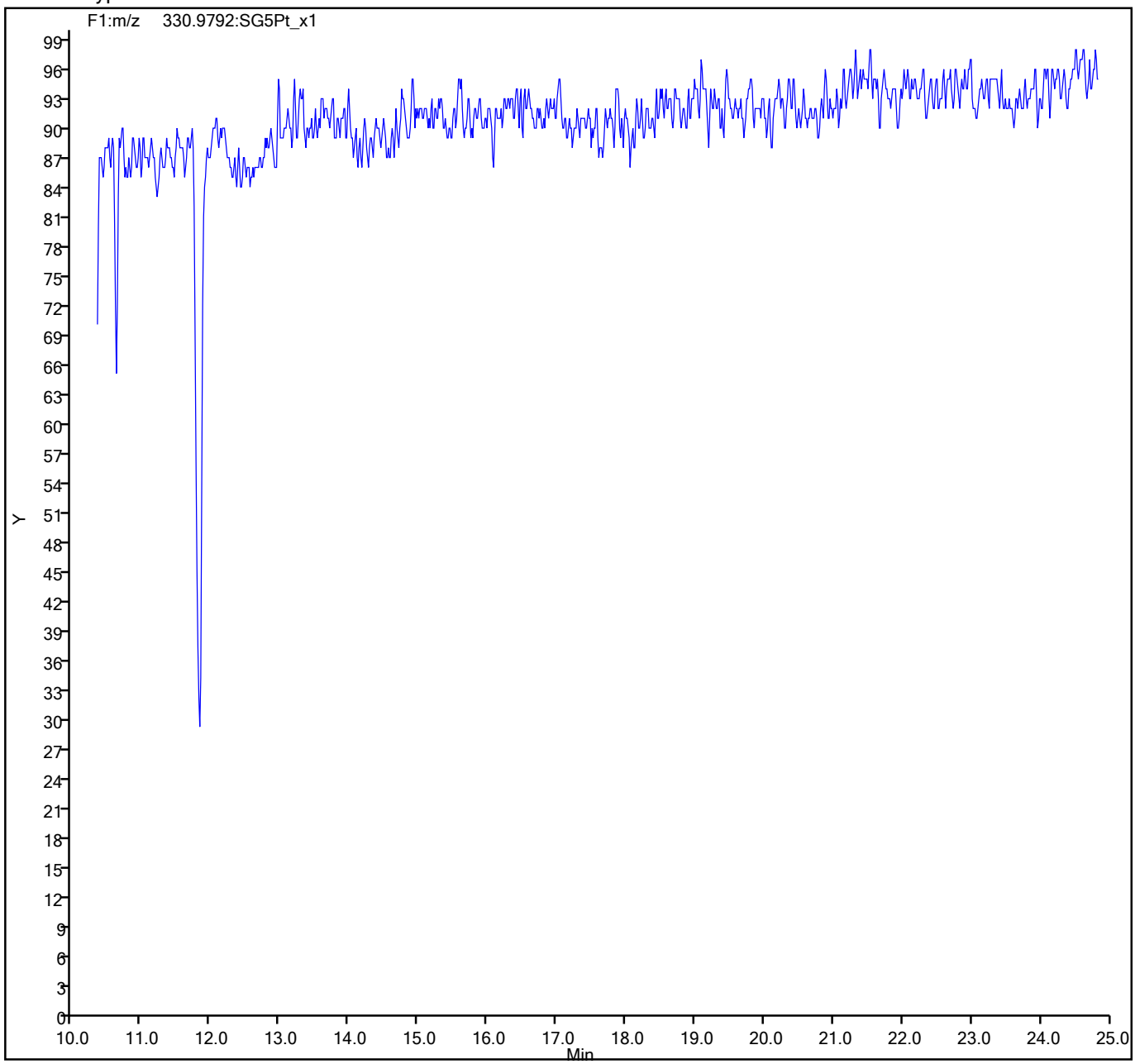

776035

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.0287	0.8698	1.0458	1.1094	1.0657	AveID		1.0239				8.9		20.0			
2,3,7,8-TCDD	1.2575	1.0971	1.2651	1.3434	1.3075	AveID		1.2541				7.5		20.0			
1,2,3,7,8-PeCDF	1.0739	0.9128	1.0891	1.1370	1.0928	AveID		1.0611				8.1		20.0			
2,3,4,7,8-PeCDF	1.0408	0.8610	1.0466	1.1082	1.0356	AveID		1.0184				9.1		20.0			
1,2,3,7,8-PeCDD	1.0578	0.9031	1.0680	1.1310	1.0823	AveID		1.0484				8.2		20.0			
1,2,3,4,7,8-HxCDF	1.1222	0.9192	1.1025	1.1936	1.0881	AveID		1.0851				9.3		20.0			
1,2,3,6,7,8-HxCDF	1.1488	0.9637	1.1546	1.1966	1.1664	AveID		1.1260				8.2		20.0			
2,3,4,6,7,8-HxCDF	1.2223	0.9863	1.1858	1.2415	1.2018	AveID		1.1675				8.9		20.0			
1,2,3,4,7,8-HxCDD	1.0979	0.8906	1.1304	1.1671	1.0341	AveID		1.0640				10.2		20.0			
1,2,3,6,7,8-HxCDD	1.0294	0.8529	1.0113	1.0930	1.0138	AveID		1.0001				8.9		20.0			
1,2,3,7,8,9-HxCDD	1.1551	0.9428	1.1999	1.2421	1.1227	AveID		1.1325				10.2		20.0			
1,2,3,7,8,9-HxCDF	1.1733	1.0136	1.1898	1.2479	1.2072	AveID		1.1664				7.7		20.0			
1,2,3,4,6,7,8-HpCDF	1.4474	1.2413	1.4986	1.5485	1.4706	AveID		1.4413				8.2		20.0			
1,2,3,4,6,7,8-HpCDD	1.1119	0.9539	1.1176	1.1675	1.1205	AveID		1.0943				7.5		20.0			
1,2,3,4,7,8,9-HpCDF	1.3136	1.1269	1.3622	1.4520	1.3321	AveID		1.3174				9.0		20.0			
OCDD	1.1009	0.9635	1.1652	1.1829	1.1226	AveID		1.1070				7.8		20.0			
OCDF	1.3863	1.1912	1.5145	1.5858	1.5129	AveID		1.4382				10.8		20.0			
13C-2,3,7,8-TCDF	1.6500	1.5631	1.6241	1.6170	1.6703	Ave		1.6249				2.5		35.0			
13C-2,3,7,8-TCDD	0.9128	0.8588	0.8965	0.8940	0.9345	Ave		0.8993				3.1		35.0			
13C-1,2,3,7,8-PeCDF	1.1977	1.1539	1.2193	1.2121	1.2674	Ave		1.2101				3.4		35.0			
13C-2,3,4,7,8-PeCDF	1.2269	1.1924	1.2487	1.2129	1.3165	Ave		1.2395				3.8		35.0			
13C-1,2,3,7,8-PeCDD	0.7558	0.7433	0.7524	0.7498	0.8049	Ave		0.7612				3.3		35.0			
13C-1,2,3,4,7,8-HxCDF	1.0875	1.1006	1.0706	1.0371	1.1225	Ave		1.0837				3.0		35.0			
13C-1,2,3,6,7,8-HxCDF	1.1466	1.1401	1.1115	1.1251	1.1163	Ave		1.1279				1.3		35.0			
13C-2,3,4,6,7,8-HxCDF	1.0781	1.0785	1.0541	1.0562	1.0518	Ave		1.0637				1.3		35.0			
13C-1,2,3,4,7,8-HxCDD	0.7413	0.7515	0.6926	0.7049	0.7769	Ave		0.7334				4.7		35.0			
13C-1,2,3,6,7,8-HxCDD	0.8884	0.8870	0.8694	0.8685	0.8876	Ave		0.8802				1.2		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9787	0.9851	0.9497	0.9522	0.9722	Ave		0.9676				1.6		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.8030	0.7818	0.7501	0.7625	0.7677	Ave		0.7730				2.6		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6554	0.6478	0.6343	0.6458	0.6528	Ave		0.6472				1.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6985	0.7093	0.6800	0.6816	0.7346	Ave		0.7008				3.2		35.0			
13C-OCDD	0.4462	0.4357	0.4273	0.4575	0.4691	Ave		0.4472				3.7		35.0			
37Cl4-2,3,7,8-TCDD	0.9705	0.9794	1.1718	1.1876	1.2264	Ave		1.1071				11.1					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	557485	1709191	10638776	44524782	204575642	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	376984	1184284	7104238	29808948	140421448	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	2112140	6620354	41588176	171023920	795873691	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	2096967	6452410	40928436	166805723	783403837	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	1312779	4219570	25165054	105236005	500555284	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	1949462	6041767	37525146	155057762	737075796	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	2104086	6561860	40802767	168618976	785709889	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	2104896	6352404	39741365	164241378	762810877	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	1300030	3996910	24891170	103044220	484857042	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	1460747	4517909	27953752	118900298	543061818	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	1503407	4612548	29794954	122394998	563888565	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	1834100	5963032	35924190	148834491	708280047	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	1856599	5795616	35740964	147892240	681312007	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	1164074	3690749	22538791	94435922	441437476	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	1465634	4773949	29450636	123968724	590555312	2.50	10.0	50.0	200	1000
OCDD		AveID	1569338	5013385	31656667	135570174	635652839	5.00	20.0	100	400	2000
OCDF		AveID	1976175	6198469	41147202	181747068	856685987	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	108384725	98246522	101724636	100332269	95980421	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	59957723	53975587	56155483	55471422	53698206	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	78674290	72525655	76368219	75205597	72829681	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	80591659	74944110	78214582	75259591	75649463	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	49643581	46721712	47124414	46524396	46251010	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	69484482	65726932	68075509	64951889	67741189	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	73262388	68089005	70677463	70459920	67363664	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	68885161	64406928	67028498	66145684	63471184	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	47363504	44877133	44039927	44144841	46886171	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	56759108	52974056	55284532	54392394	53564396	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	62528954	58828058	60389284	59636084	58669892	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	51308225	46691158	47697671	47752972	46328151	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	41876556	38689128	40333717	40442950	39395832	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	44628352	42362179	43238622	42687625	44333848	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	57018462	52034518	54338243	57303880	56623863	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	318727	1231219	7339670	29474361	140953034	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\26JL2110D5.SPL
Last Modified: Monday, July 26, 2021 16:58:03 Pacific Daylight Time
Printed: Tuesday, July 27, 2021 07:40:45 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	26JL2110D5_1	WDM HRDXNCP_00042	WDM 072621	Tray01:1	Dioxin		SMA
2	26JL2110D5_2	SB Solvent Blank C-14	SB 072621	Tray01:3			SMA
3	26JL2110D5_3	CS-2 HRDXNL2_00032	IC 072621	Tray01:4	Dioxin		SMA
4	26JL2110D5_4	CS-3 HRDXNL3_00029	IC 072621A	Tray01:5	Dioxin		SMA
5	26JL2110D5_5	CS-4 HRDXNL4_00099	IC 072621B	Tray01:2	Dioxin		SMA
6	26JL2110D5_6	CS-5 HRDXNL5_00032	IC 072621C	Tray01:6	Dioxin		SMA
7	26JL2110D5_7	CS-6 HRDXNL6_00028	IC 072621D	Tray01:7	Dioxin		SMA
8	26JL2110D5_8	SB Solvent Blank C-14	SB 072621A	Tray01:3			SMA
9	26JL2110D5_9	ICV HRDXNIC_00047	ICV 072621	Tray01:8	Dioxin		SMA
10	26JL2110D5_10	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS
11	26JL2110D5_11	WDM HRDXNCP_00042	WDM 031621C	Tray01:1	Dioxin		KSS
12	26JL2110D5_12	SB Solvent Blank C-14	SB 072621B	Tray01:3			KSS
13	26JL2110D5_13	mb 320-508015/1-a	mb 320-508015/1-a	Tray01:9	1613B/8290/Water	D255	KSS
14	26JL2110D5_14	lcs 320-508015/2-a	lcs 320-508015/2-a	Tray01:10	1613B/8290/Water		KSS
15	26JL2110D5_15	lcsd 320-508015/3-a	lcsd 320-508015/3-a	Tray01:11	1613B/8290/Water		KSS
16	26JL2110D5_16	320-76081-a-3-c	320-76081-a-3-c	Tray01:12	1613B/8290/Water		KSS
17	26JL2110D5_17	SB Solvent Blank C-14	SB 072621C	Tray01:3			KSS
18	26JL2110D5_18	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS

LOGFILE CHECKED
DB 7/27/21

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:18:21 Pacific Daylight Time

M 292.9824 R 12499

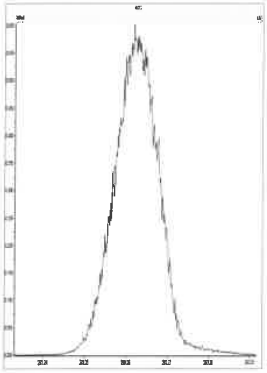

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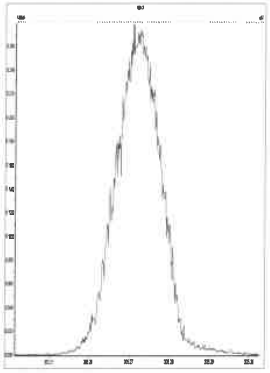

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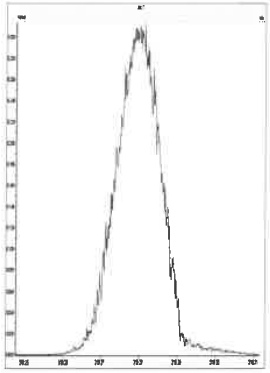

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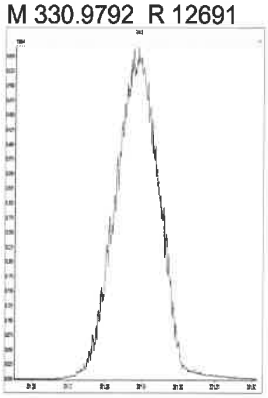

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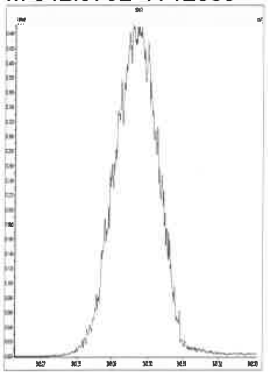

M 354.9792 R 12138

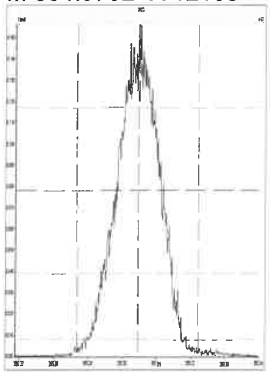

M 366.9792 R 13090

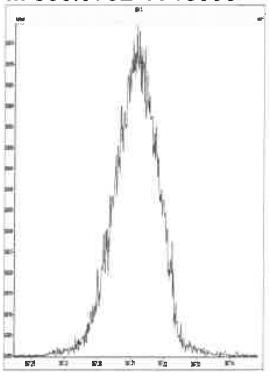

M 380.9760 R 12562

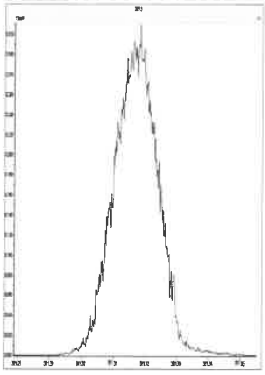

M 392.9760 R 12753

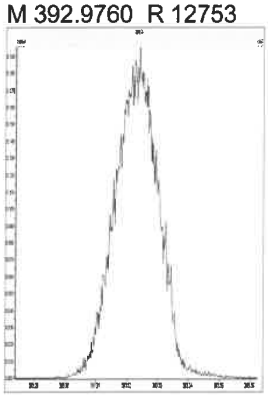

M 404.9760 R 12137

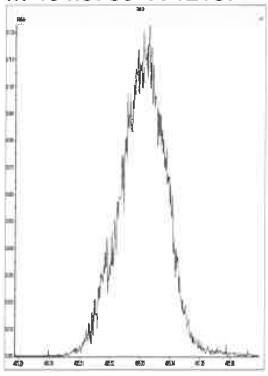

M 416.9760 R 12563

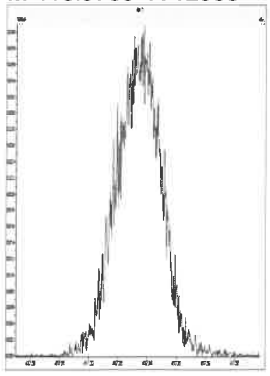

776042

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:04 Pacific Daylight Time

M 318.9792 R 13300

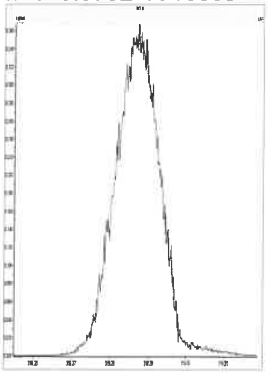

M 330.9792 R 12691

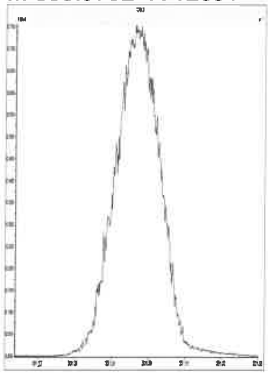

M 342.9792 R 12499

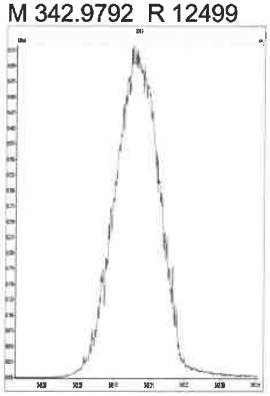

M 354.9792 R 12374

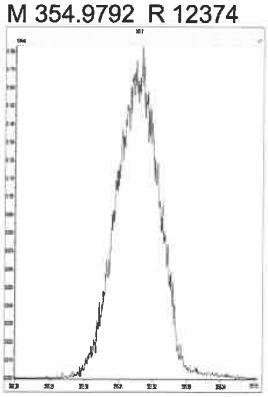

M 366.9792 R 12691

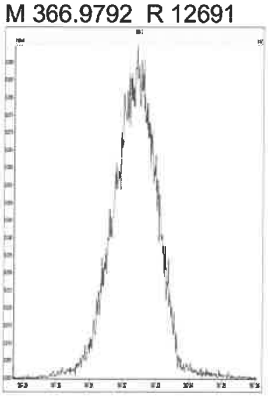

M 380.9760 R 12690

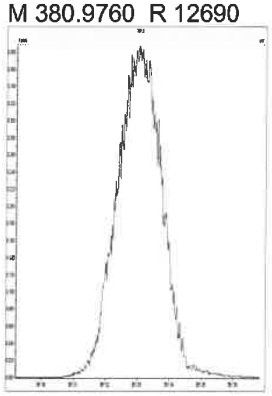

M 392.9760 R 12885

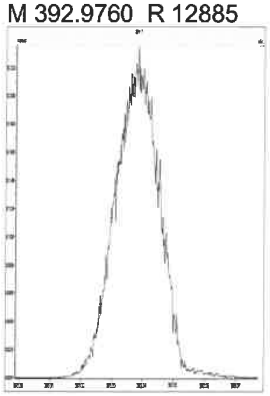

M 404.9760 R 12817

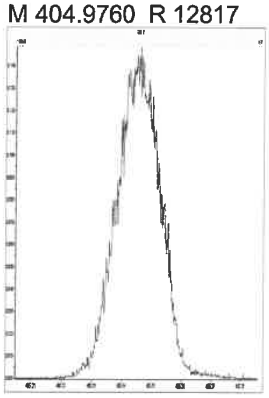

M 416.9760 R 12954

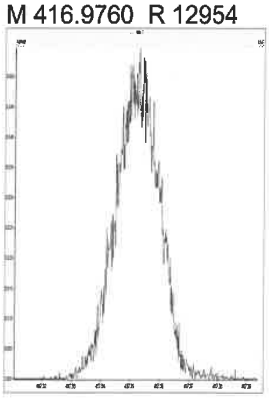

776043

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:43 Pacific Daylight Time

M 366.9792 R 12440

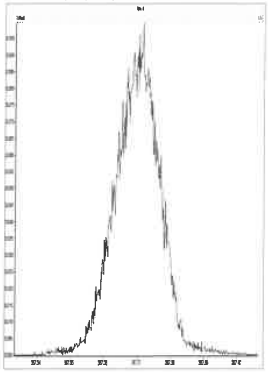

M 380.9760 R 12955

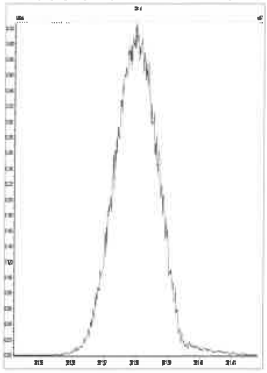

M 392.9760 R 12690

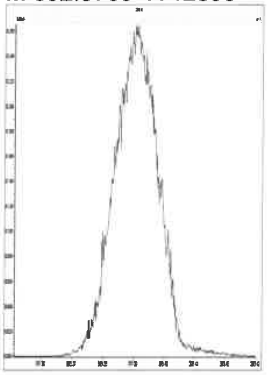

M 404.9760 R 12957

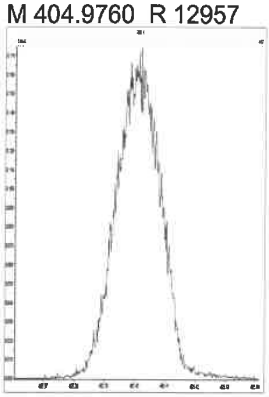

M 416.9760 R 13516

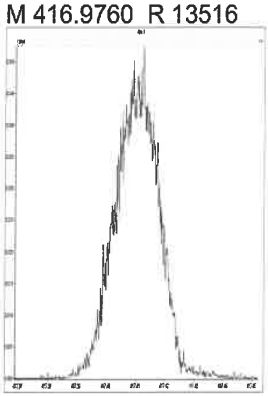

M 430.9728 R 12564

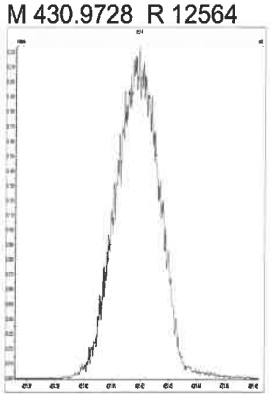

M 442.9728 R 12953

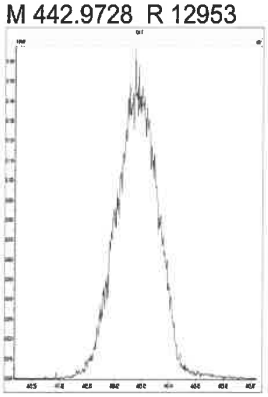

M 454.9728 R 13226

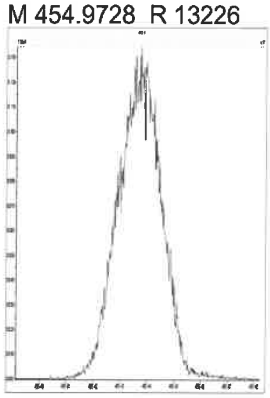

776044

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:20:01 Pacific Daylight Time

M 380.9760 R 12885

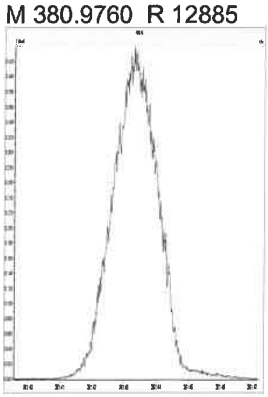

M 392.9760 R 12955

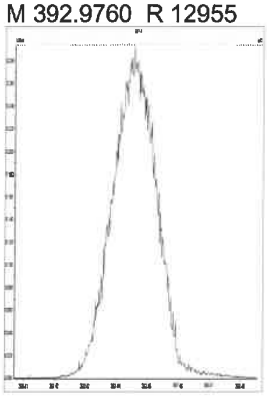

M 404.9760 R 12756

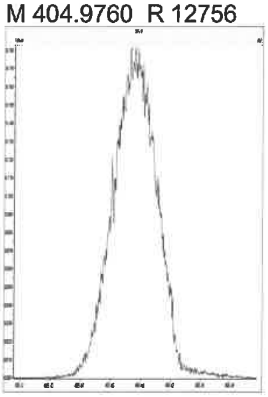

M 416.9760 R 13368

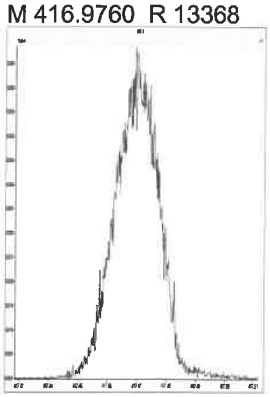

M 430.9728 R 12758

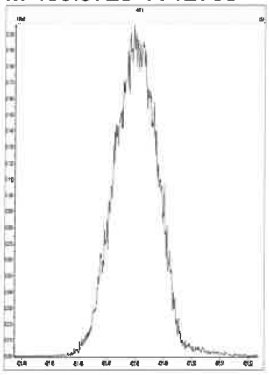

M 442.9728 R 13229

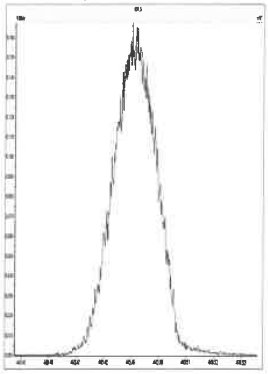

M 454.9728 R 13737

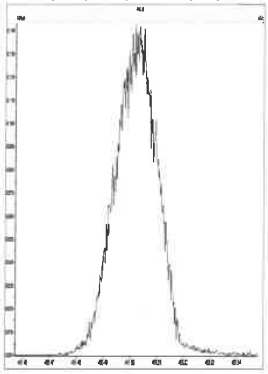

M 466.9728 R 12952

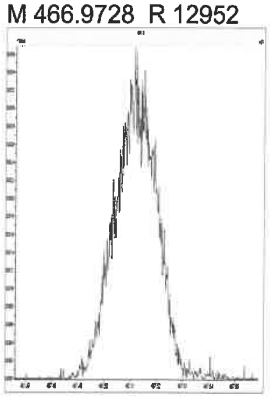

M 480.9696 R 12819

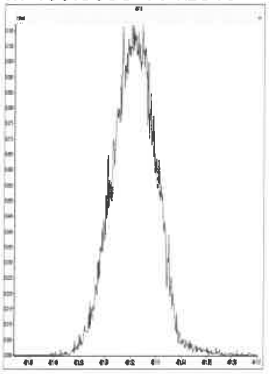

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:21:28 Pacific Daylight Time

M 380.9760 R 12630

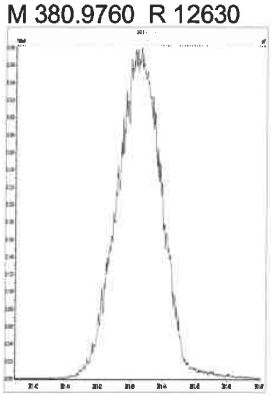

M 392.9760 R 12687

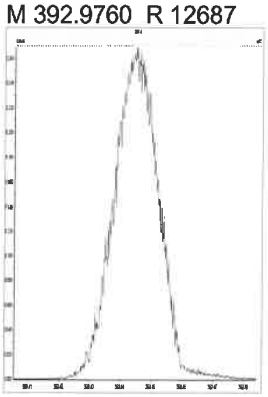

M 404.9760 R 13441

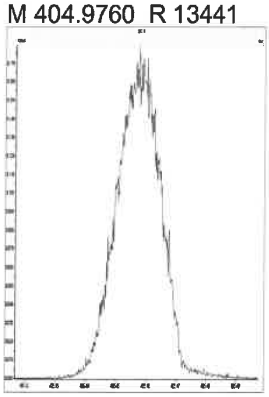

M 416.9760 R 12886

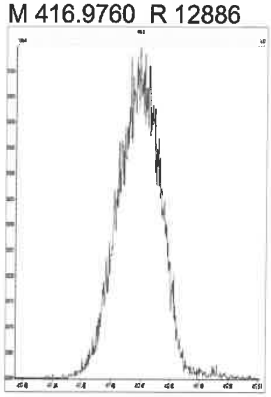

M 430.9728 R 12952

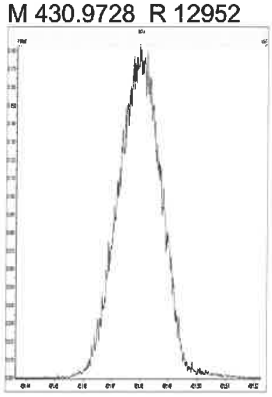

M 442.9728 R 12564

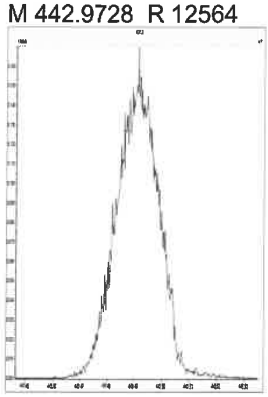

M 454.9728 R 13228

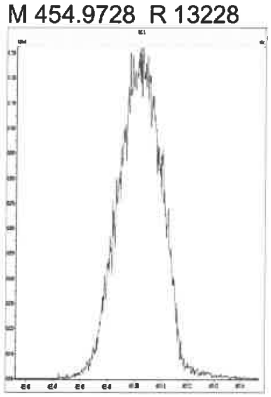

M 466.9728 R 12689

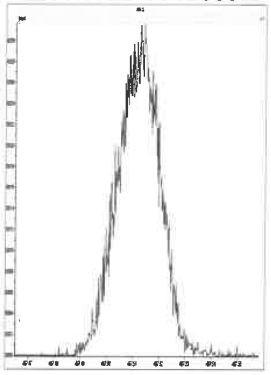

M 480.9696 R 13226

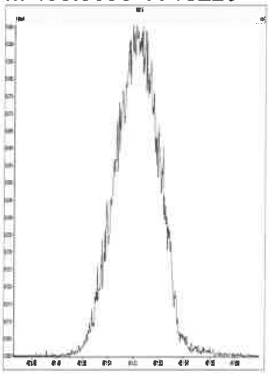

M 492.9696 R 13090

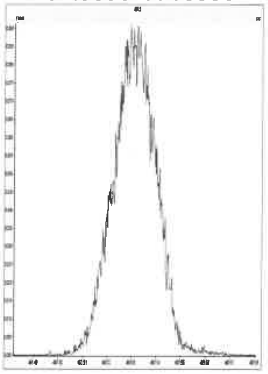

M 504.9696 R 13021

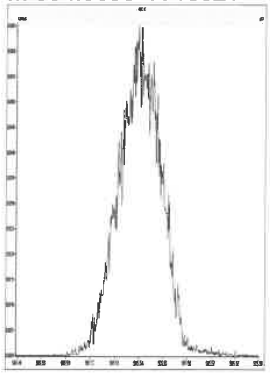

M 516.9697 R 13811

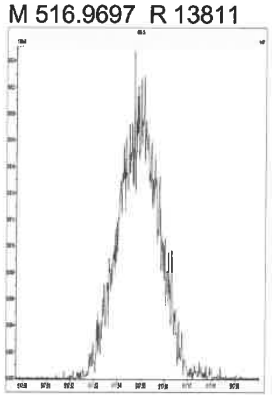

776046

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M 292.9824_R 12322

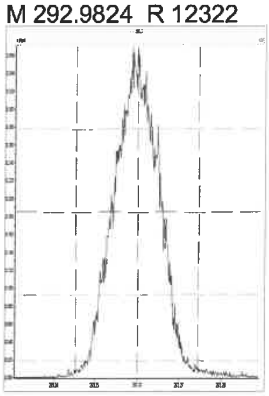

M 304.9824_R 12923

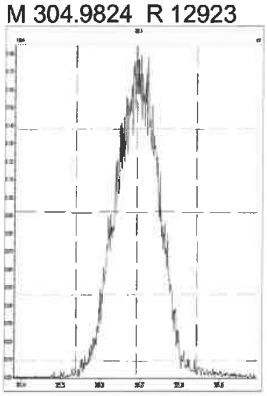

M 318.9792_R 12953

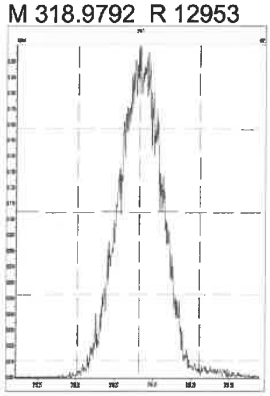

M 330.9792_R 12791

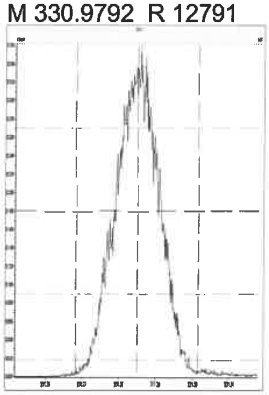

M 342.9792_R 12345

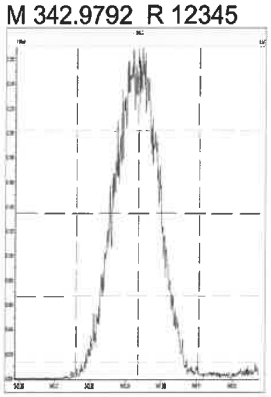

M 354.9792_R 13001

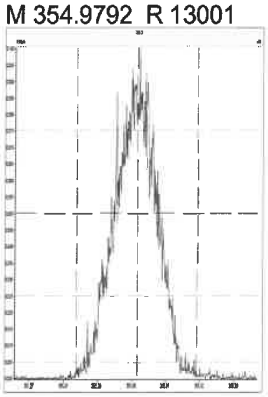

M 366.9792_R 13101

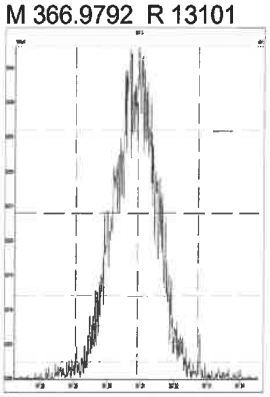

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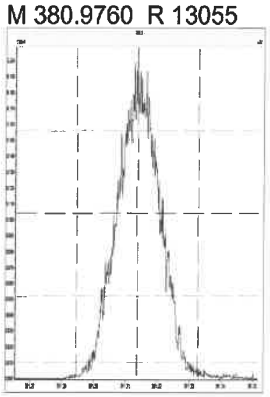

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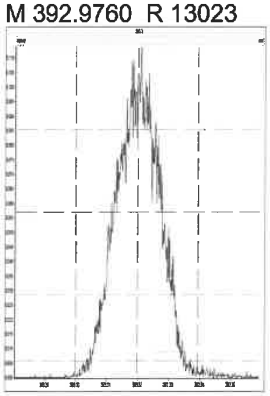

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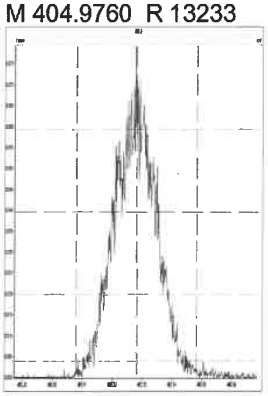

M 416.9760_R 14086

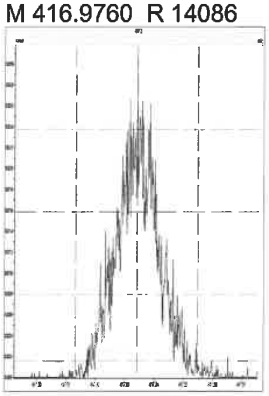

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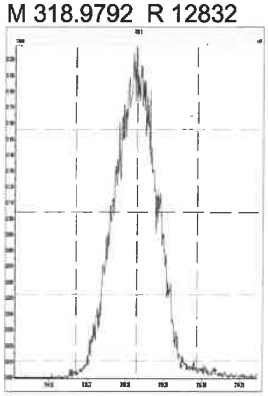

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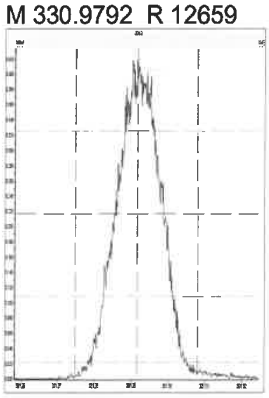

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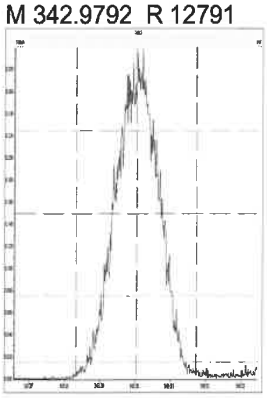

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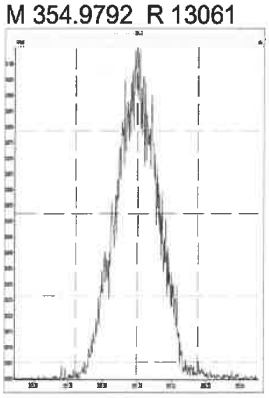

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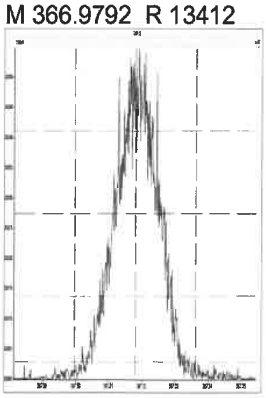

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M 380.9760 R 13021

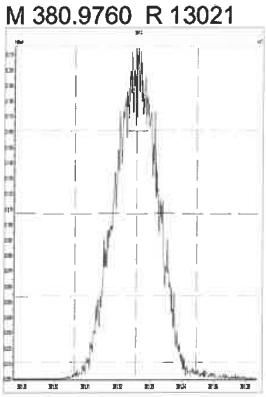

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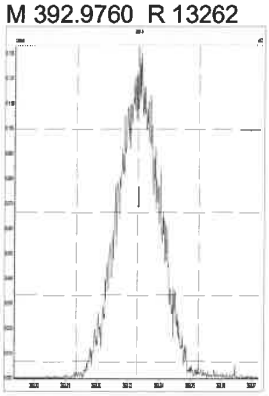

M 404.9760 R 13001

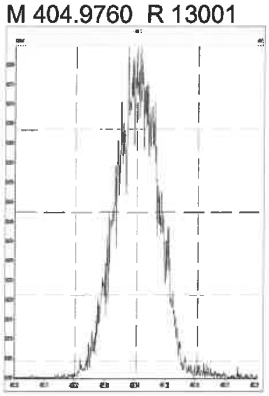

M 416.9760 R 13664

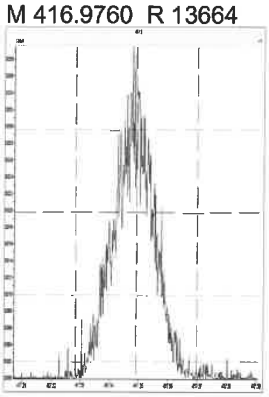

M 366.9792 R 13160

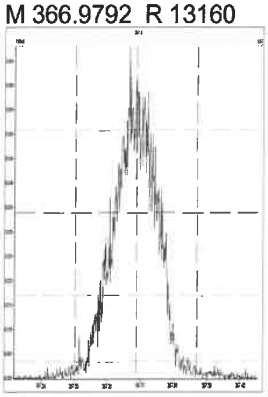

M 380.9760 R 12836

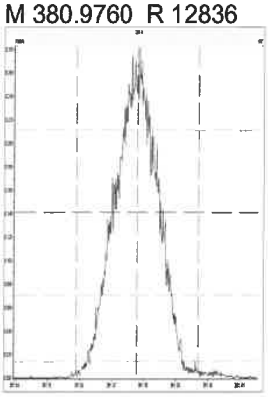

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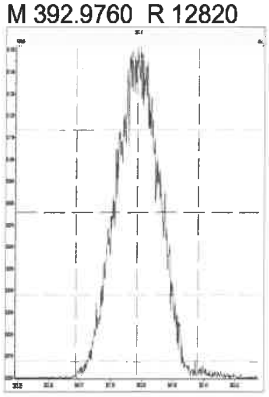

M 404.9760 R 13479

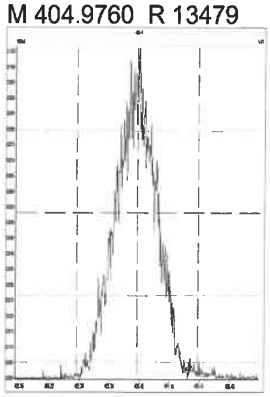

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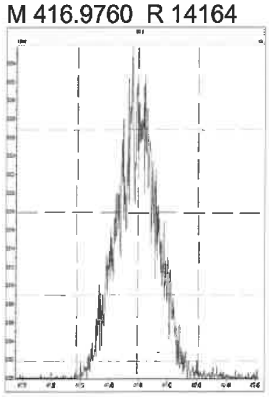

M 430.9728 R 13727

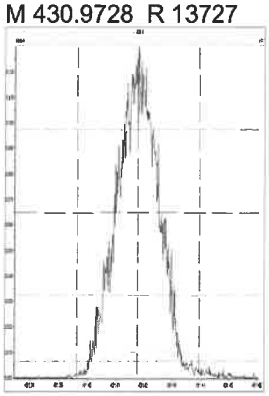

M 442.9728 R 13415

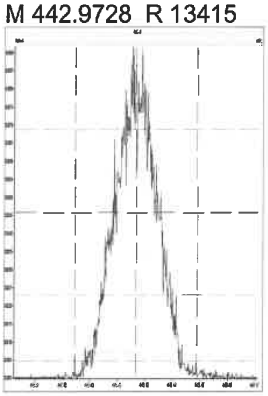

M 454.9728 R 13335

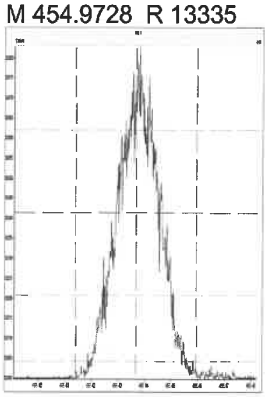

M 380.9760 R 13021

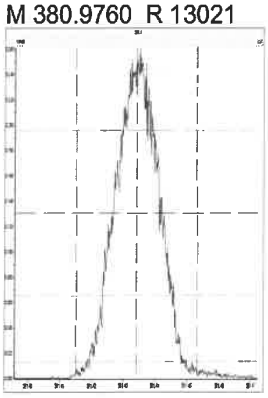

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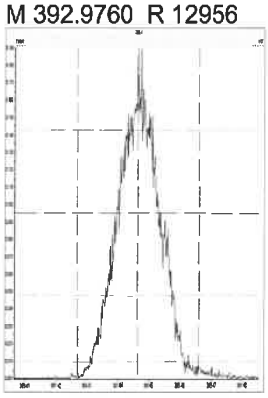

M 404.9760 R 13194

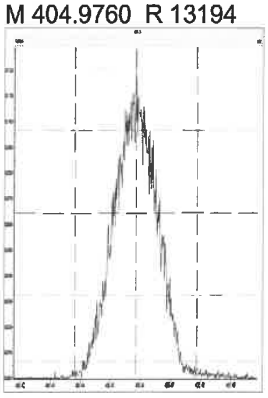

M 416.9760 R 13592

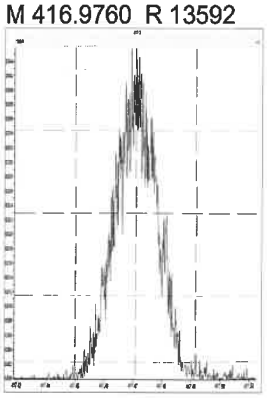

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M 430.9728 R 13192

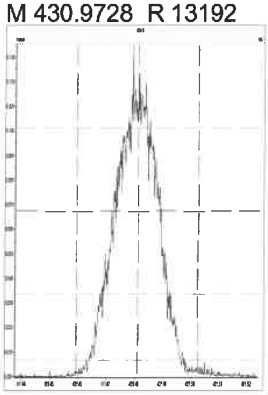

M 442.9728 R 13094

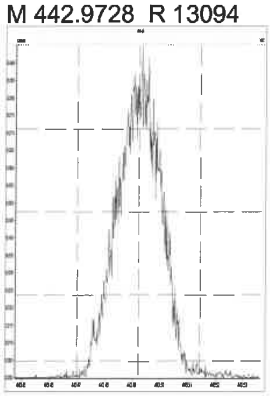

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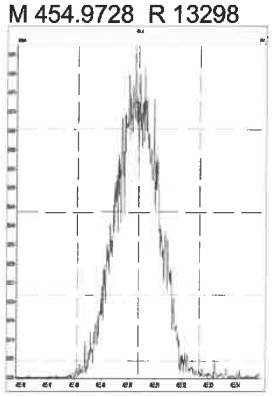

M 466.9728 R 15289

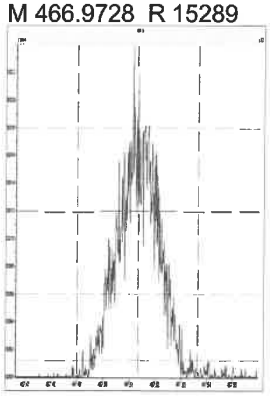

M 480.9696 R 13516

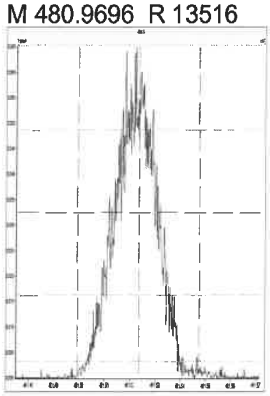

M 380.9760 R 12762

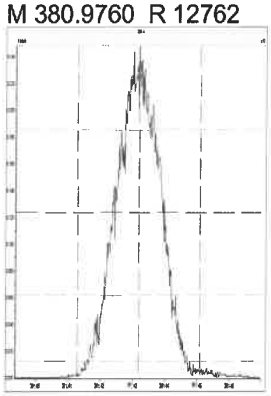

M 392.9760 R 12794

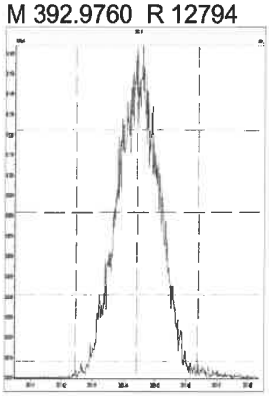

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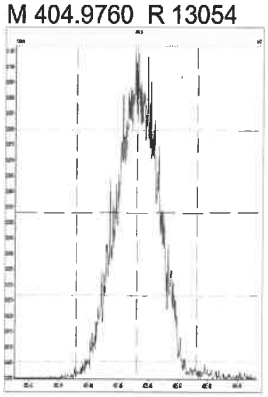

M 416.9760 R 13966

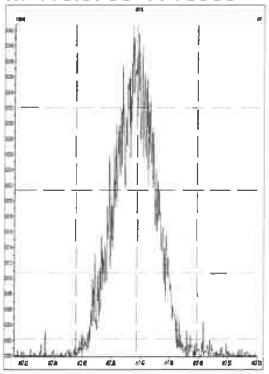

M 430.9728 R 13194

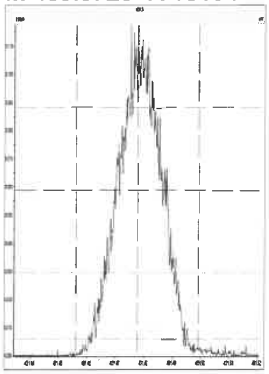

M 442.9728 R 13375

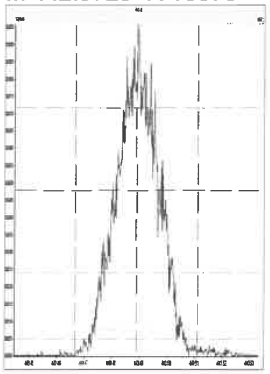

M 454.9728 R 13117

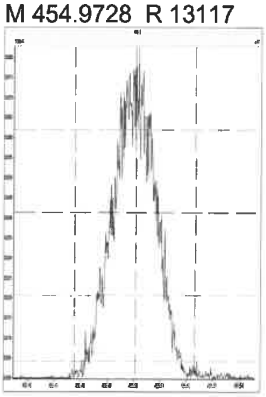

M 466.9728 R 14253

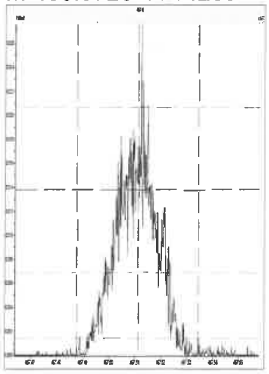

M 480.9696 R 13737

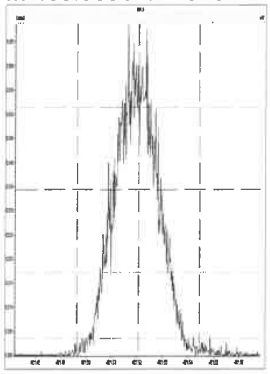

M 492.9696 R 13094

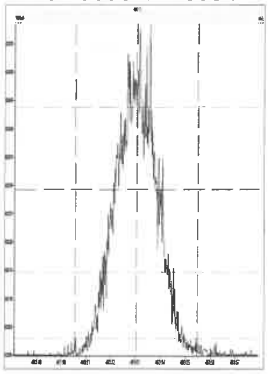

M 504.9696 R 13446

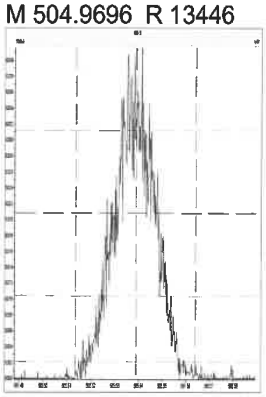

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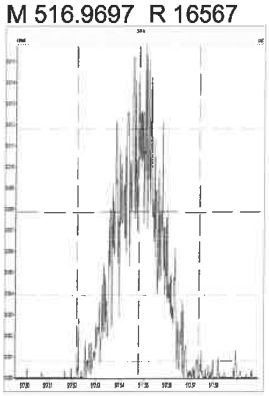

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M 292.9824 R 12376

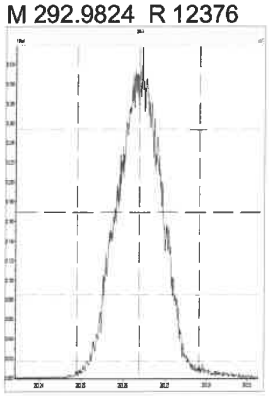

M 304.9824 R 12412

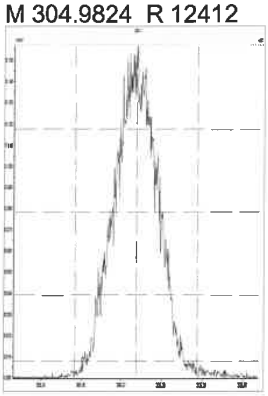

M 318.9792 R 12886

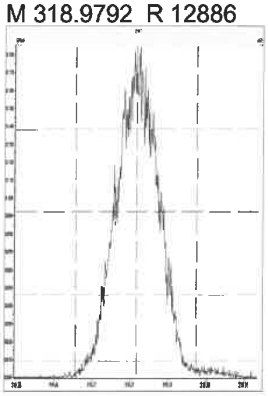

M 330.9792 R 12820

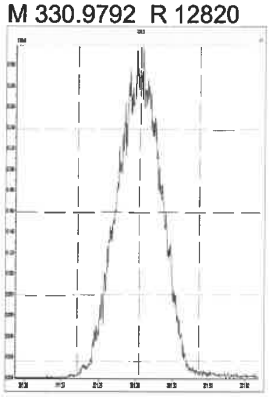

M 342.9792 R 12788

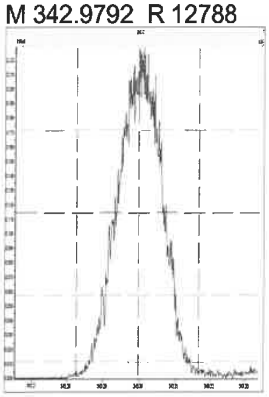

M 354.9792 R 12991

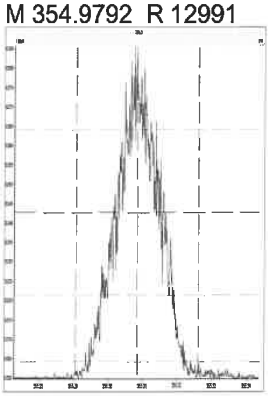

M 366.9792 R 13368

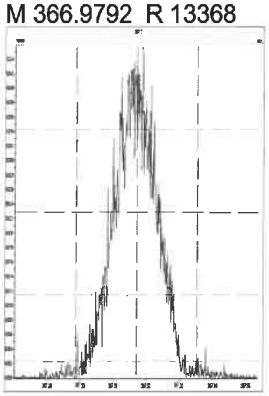

M 380.9760 R 12766

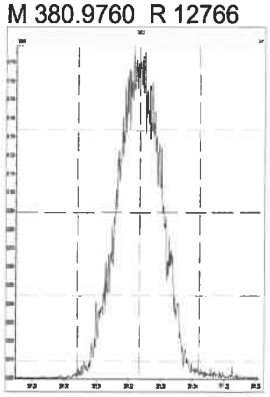

M 392.9760 R 13080

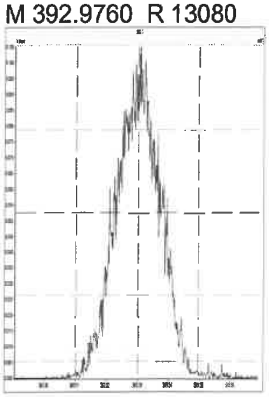

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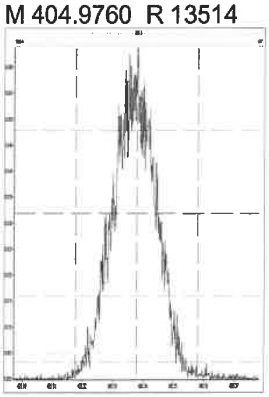

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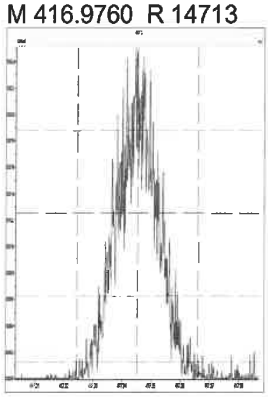

M 318.9792 R 12628

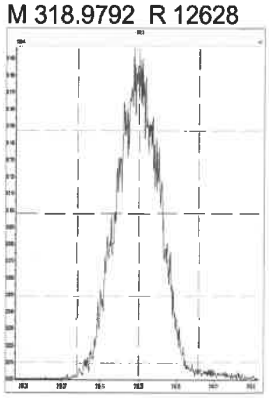

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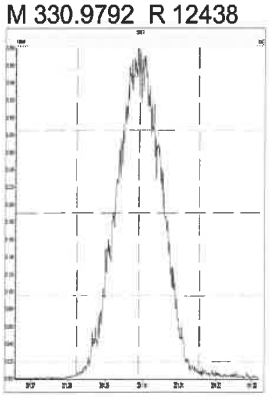

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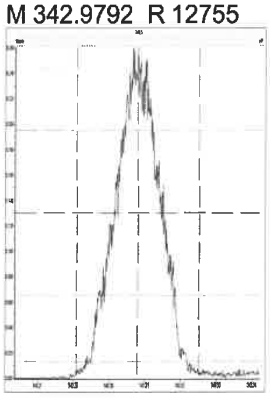

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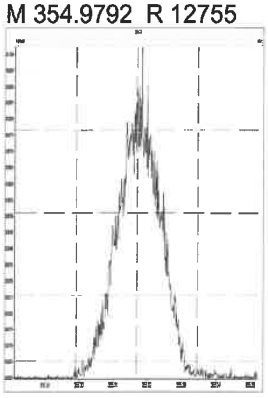

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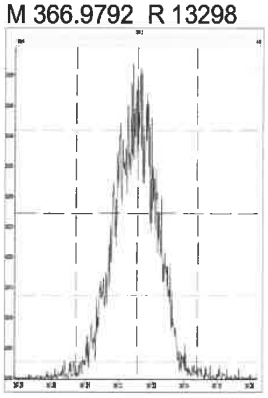

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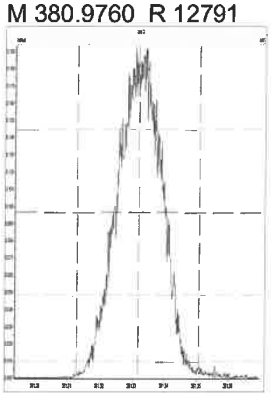

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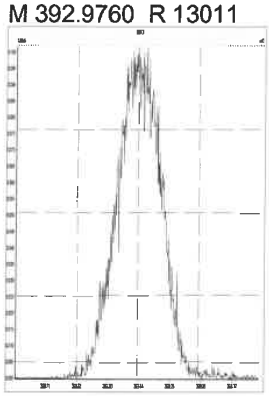

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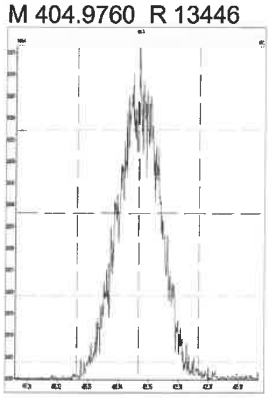

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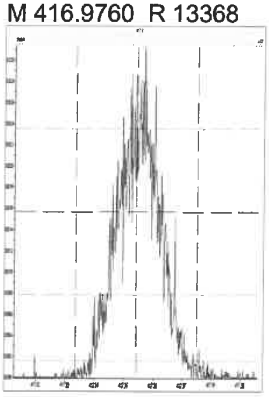

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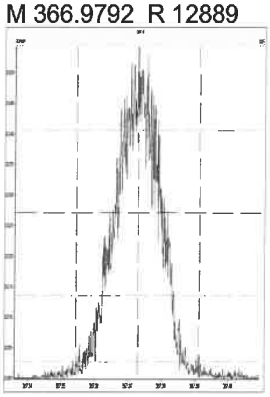

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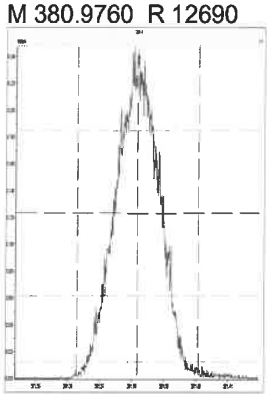

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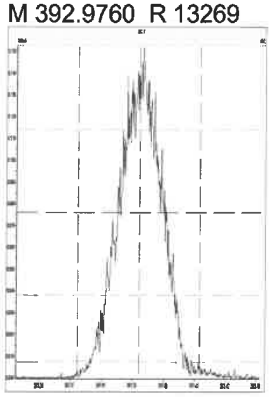

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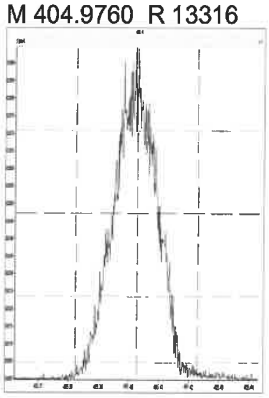

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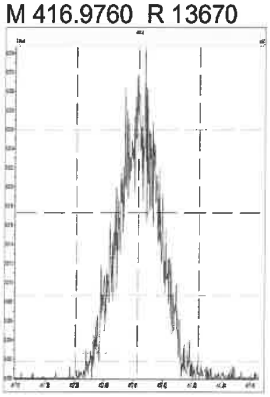

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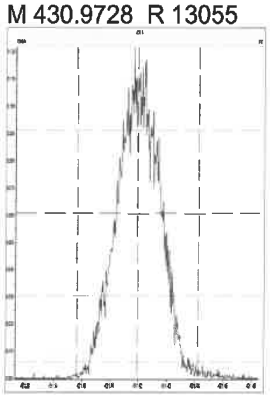

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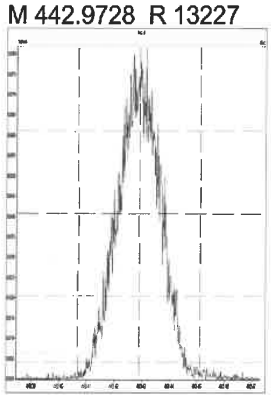

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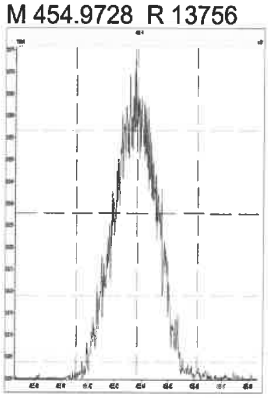

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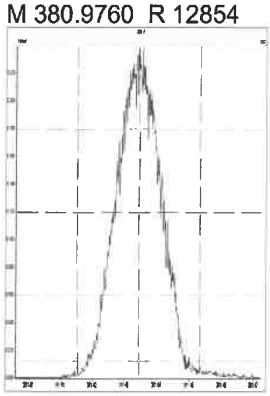

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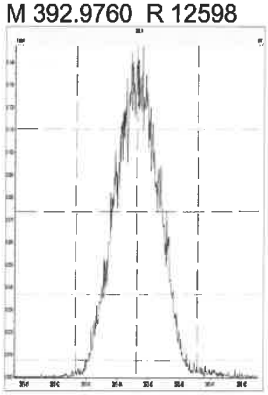

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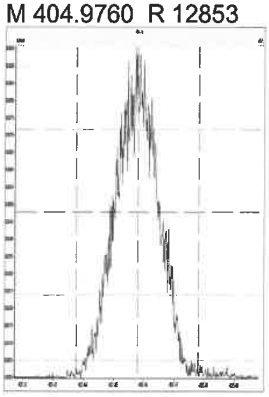

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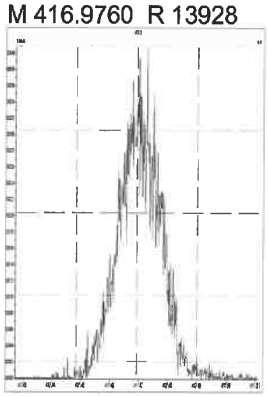

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M 430.9728 R 13266

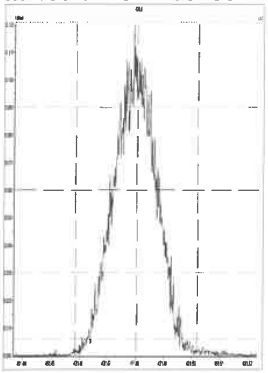

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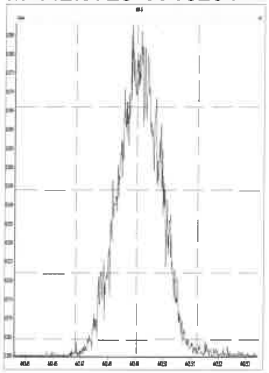

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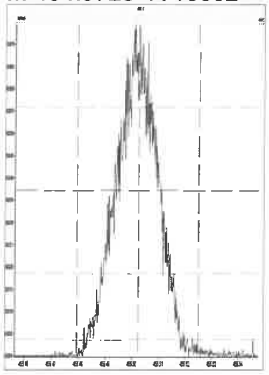

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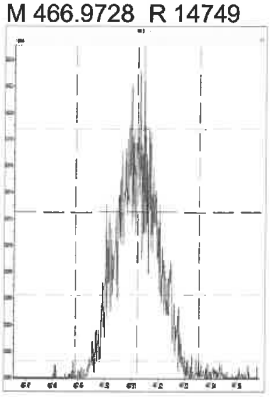

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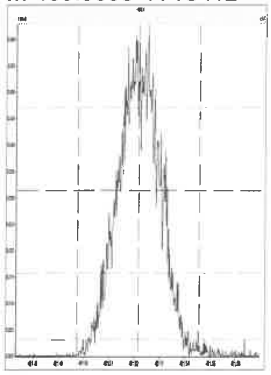

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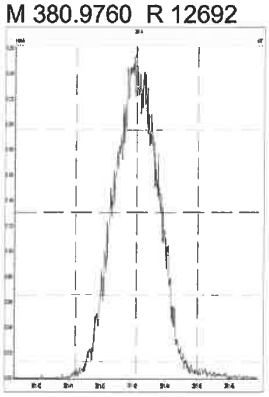

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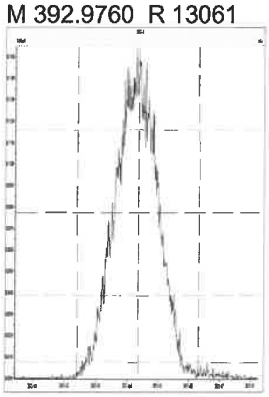

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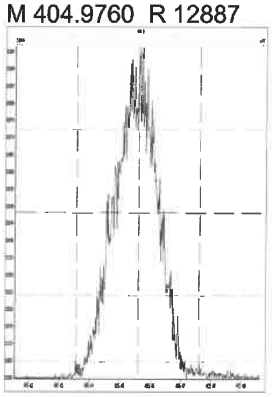

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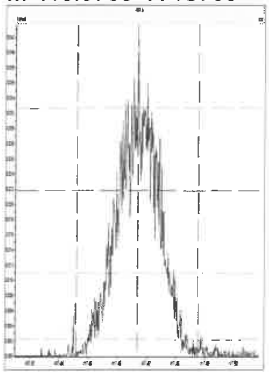

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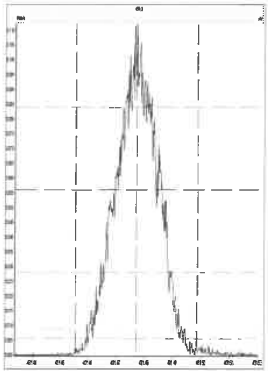

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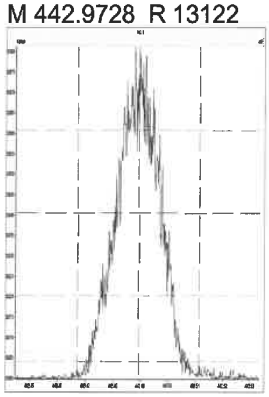

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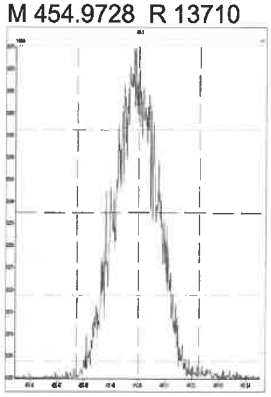

M 466.9728 R 14205

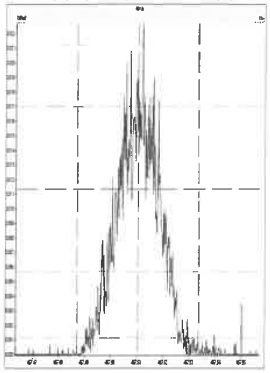

M 480.9696 R 13298

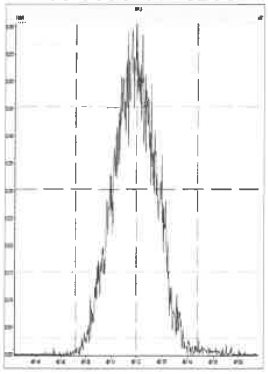

M 492.9696 R 12886

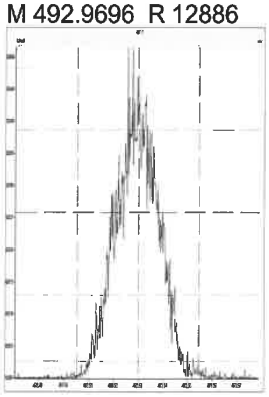

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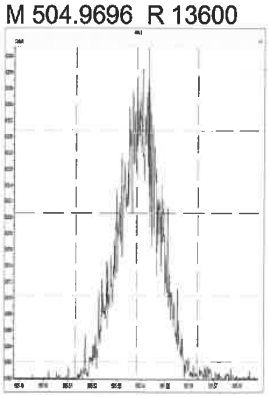

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M 516.9697 R 15872

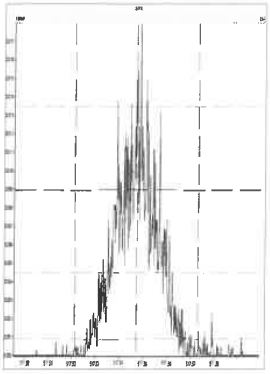

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	65685883	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	108384725	0.78	1.6249	101.5	101.5	0.1385	0.1385	102	
2,3,7,8-TCDF	17.628	557485	0.78	1.0239	0.5023	0.5023	0.009259	0.009259	100	
S Total TCDF					0.5023	0.5023	0.009259	0.009259		
D 13C-2,3,7,8-TCDD	18.338	59957723	0.80	0.8993	101.5	101.5	0.1222	0.1222	101	
$ 37Cl4-2,3,7,8-TCDD	18.338	318727		1.1071	0.4383	0.4383	0.006072	0.006072	87.65	
2,3,7,8-TCDD	18.354	376984	0.89	1.2541	0.5013	0.5013	0.0150	0.0150	100	M
S Total TCDD					0.5013	0.5013	0.0150	0.0150		
D 13C-1,2,3,7,8-PeCDF	22.749	78674290	1.60	1.2101	99.0	99.0	0.2282	0.2282	98.98	
1,2,3,7,8-PeCDF	22.776	2112140	1.63	1.0611	2.530	2.530	0.0220	0.0220	101	
D 13C-2,3,4,7,8-PeCDF	24.126	80591659	1.57	1.2395	99.0	99.0	0.2228	0.2228	98.99	
2,3,4,7,8-PeCDF	24.153	2096967	1.56	1.0184	2.555	2.555	0.0245	0.0245	102	
S Total PeCDF					5.085	5.085	0.0233	0.0233		
D 13C-1,2,3,7,8-PeCDD	24.862	49643581	1.62	0.7612	99.3	99.3	0.1197	0.1197	99.28	
1,2,3,7,8-PeCDD	24.889	1312779	1.42	1.0484	2.522	2.522	0.0218	0.0218	101	
S Total PeCDD					2.522	2.522	0.0218	0.0218		
D 13C-1,2,3,4,7,8-HxCDF	30.835	69484482	0.52	1.0837	100.4	100.4	0.5299	0.5299	100	
1,2,3,4,7,8-HxCDF	30.849	1949462	1.23	1.0851	2.586	2.586	0.0289	0.0289	103	
D 13C-1,2,3,6,7,8-HxCDF	30.995	73262388	0.52	1.1279	101.7	101.7	0.5091	0.5091	102	
1,2,3,6,7,8-HxCDF	31.022	2104086	1.18	1.1260	2.551	2.551	0.0273	0.0273	102	
D 13C-2,3,4,6,7,8-HxCDF	31.754	68885161	0.52	1.0637	101.4	101.4	0.5398	0.5398	101	
2,3,4,6,7,8-HxCDF	31.767	2104896	1.20	1.1675	2.617	2.617	0.0225	0.0225	105	
D 13C-1,2,3,7,8,9-HxCDF	32.512	62528954	0.51	0.9676	101.1	101.1	0.5935	0.5935	101	
1,2,3,7,8,9-HxCDF	32.526	1834100	1.21	1.1664	2.515	2.515	0.0244	0.0244	101	
S Total HxCDF					10.3	10.3	0.0258	0.0258		
* 13C-1,2,3,7,8,9-HxCDD	32.339	63892665	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	47363504	1.27	0.7334	101.1	101.1	0.5001	0.5001	101	
1,2,3,4,7,8-HxCDD	31.940	1300030	1.26	1.0640	2.580	2.580	0.0268	0.0268	103	
D 13C-1,2,3,6,7,8-HxCDD	32.033	56759108	1.25	0.8802	100.9	100.9	0.4167	0.4167	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	1460747	1.28	1.0001	2.573	2.573	0.0268	0.0268	103	
1,2,3,7,8,9-HxCDD	32.353	1503407	1.26	1.1325	2.550	2.550	0.0244	0.0244	102	
S Total HxCDD					7.703	7.703	0.0260	0.0260		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	51308225	0.44	0.7730	103.9	103.9	1.147	1.147	104	
1,2,3,4,6,7,8-HpCDF	33.924	1856599	1.05	1.4413	2.511	2.511	0.0321	0.0321	100	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44628352	0.44	0.7008	99.7	99.7	1.266	1.266	99.67	
1,2,3,4,7,8,9-HpCDF	35.017	1465634	1.06	1.3174	2.493	2.493	0.0442	0.0442	99.72	
S Total HpCDF					5.003	5.003	0.0381	0.0381		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	41876556	1.01	0.6472	101.3	101.3	0.6709	0.6709	101	
1,2,3,4,6,7,8-HpCDD	34.726	1164074	1.06	1.0943	2.540	2.540	0.0284	0.0284	102	
S Total HpCDD					2.540	2.540	0.0284	0.0284		
D 13C-OCDD	37.093	57018462	0.89	0.4472	199.6	199.6	0.2479	0.2479	99.79	
OCDF	37.201	1976175	0.91	1.4382	4.820	4.820	0.0196	0.0196	96.40	
OCDD	37.105	1569338	0.92	1.1070	4.973	4.973	0.0246	0.0246	99.45	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		29725607	7464659	4167	10417	1791		
333.9339	18.142	18.142	0		35960276	9003139	3074	7685	2929	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	47438761	11992473	9243	23107	1297		
317.9389	17.613	17.616	0	0.971	60945964	15328013	5578	13945	2748	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	244966	62557	418	1045	150		
305.8987	17.628	17.631	0	1.001	312519	74119	618	1545	120	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	26677109	6242710	4167	10417	1498		
333.9339	18.338	18.338	0	1.011	33280614	7789380	3074	7685	2534	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.011	318727	66577	443	1107	150		
2,3,7,8-TCDD											M
319.8965	18.354	18.357	0	1.001	177891	43427	698	1745	62		M
321.8936	18.354	18.357	0	1.001	199093	47894	356	890	135	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	48367116	8680931	10780	26950	805		
353.8970	22.749	22.754	0	1.254	30307174	5346402	7413	18532	721	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	1307686	232308	692	1730	336		
341.8567	22.762	22.779	-1	1.001	804454	137466	619	1547	222	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	49186157	7929286	10780	26950	736		
353.8970	24.126	24.129	0	1.330	31405502	5197836	7413	18532	701	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	1276283	202864	692	1730	293		
341.8567	24.153	24.156	0	1.001	820684	134634	619	1547	218	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	30684379	4744795	3870	9675	1226		
369.8919	24.862	24.865	0	1.370	18959202	2913489	2133	5332	1366	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	770345	123302	470	1175	262		
357.8516	24.889	24.892	0	1.001	542434	83964	231	577	363	1.42(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23885791	5080702	12413	31032	409		
385.8610	30.835	30.838	0	0.953	45598691	9653525	24179	60447	399	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.857	0	1.000	1073816	228005	1130	2825	202		
375.8178	30.849	30.857	0	1.000	875646	183719	720	1800	255	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	25163610	5186426	12413	31032	418		
385.8610	30.995	31.003	0	0.958	48098778	9847658	24179	60447	407	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.001	1138605	230252	1130	2825	204		
375.8178	31.008	31.022	-1	1.000	965481	194261	720	1800	270	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	23545536	6005512	12413	31032	484		
385.8610	31.754	31.756	0	0.982	45339625	11622590	24179	60447	481	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	1148495	290976	1130	2825	258		
375.8178	31.767	31.772	0	1.000	956401	245408	720	1800	341	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.512	32.523	-1	1.005	21115296	5525344	12413	31032	445		
385.8610	32.512	32.523	-1	1.005	41413658	10740911	24179	60447	444	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	1004237	260741	1130	2825	231		
375.8178	32.526	32.534	0	1.000	829863	215930	720	1800	300	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		35492157	8840472	14115	35287	626		
403.8529	32.339	32.342	0		28400508	7090007	9259	23147	766	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	26497467	7547113	14115	35287	535		
403.8529	31.927	31.929	0	0.987	20866037	5954906	9259	23147	643	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	725563	201392	885	2212	228		
391.8127	31.940	31.945	0	1.000	574467	160999	657	1642	245	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	31586686	7983088	14115	35287	566		
403.8529	32.033	32.033	0	0.991	25172422	6406461	9259	23147	692	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	819435	207367	885	2212	234		
391.8127	32.047	32.047	0	1.000	641312	163363	657	1642	249	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	837706	208716	885	2212	236		
391.8127	32.353	32.355	0	1.013	665701	168193	657	1642	256	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	15666898	4905580	16994	42485	289		
419.8220	33.912	33.914	0	1.049	35641327	11012481	39521	98802	279	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	949994	280926	1603	4007	175		
409.7789	33.924	33.926	0	1.000	906605	280503	1346	3365	208	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13532847	3927195	16994	42485	231		
419.8220	35.005	35.010	0	1.082	31095505	8744356	39521	98802	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	755406	231092	1603	4007	144		
409.7789	35.017	35.020	0	1.000	710228	201627	1346	3365	150	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	21029381	6108519	13979	34947	437		
437.8140	34.714	34.716	0	1.073	20847175	6052425	13690	34225	442	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	599401	178801	821	2052	218		
425.7737	34.726	34.726	0	1.000	564673	160703	693	1732	232	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26904388	6653832	3548	8870	1875		
471.7750	37.093	37.094	0	1.147	30114074	7334467	3515	8787	2087	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	941996	224700	300	750	749		
443.7399	37.189	37.199	-1	1.003	1034179	253612	487	1217	521	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	750544	177364	389	972	456		
459.7348	37.105	37.106	0	1.000	818794	206090	374	935	551	0.92(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.35
Area: 201476
Amount: 0.545465
Amount Units: pg/ul

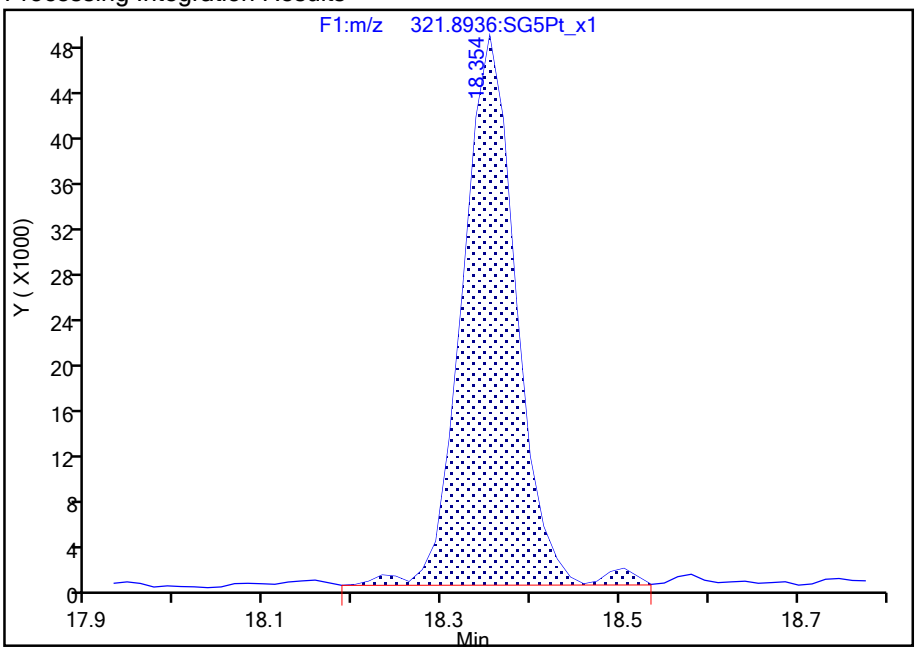

Manual Integration Results

RT: 18.35
Area: 199093
Amount: 0.501347
Amount Units: pg/ul

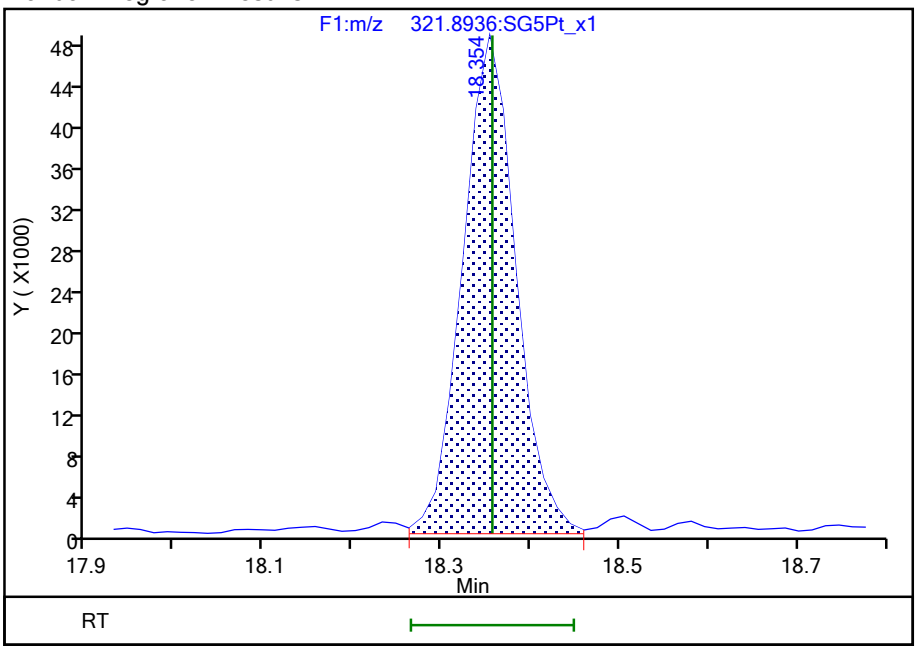

Reviewer: stephensk, 27-Jul-2021 08:15:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

Processing Integration Results

RT: 18.35
Area: 394678
Amount: 0.545465
Amount Units: pg/ul

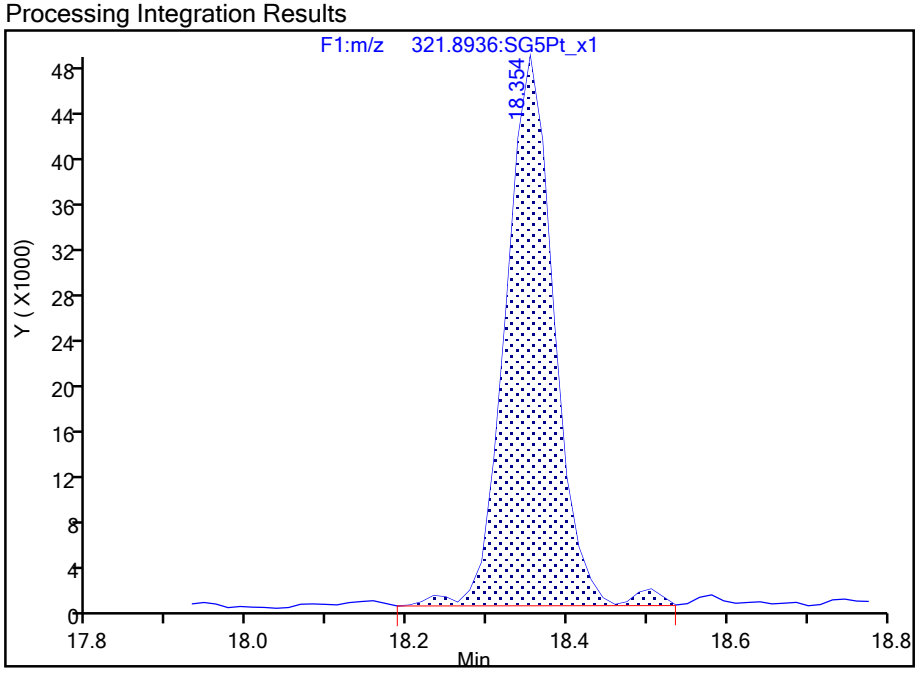

Manual Integration Results

RT: 18.35
Area: 376984
Amount: 0.501347
Amount Units: pg/ul
Reviewer: stephensk, 27-Jul-2021 08:15:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

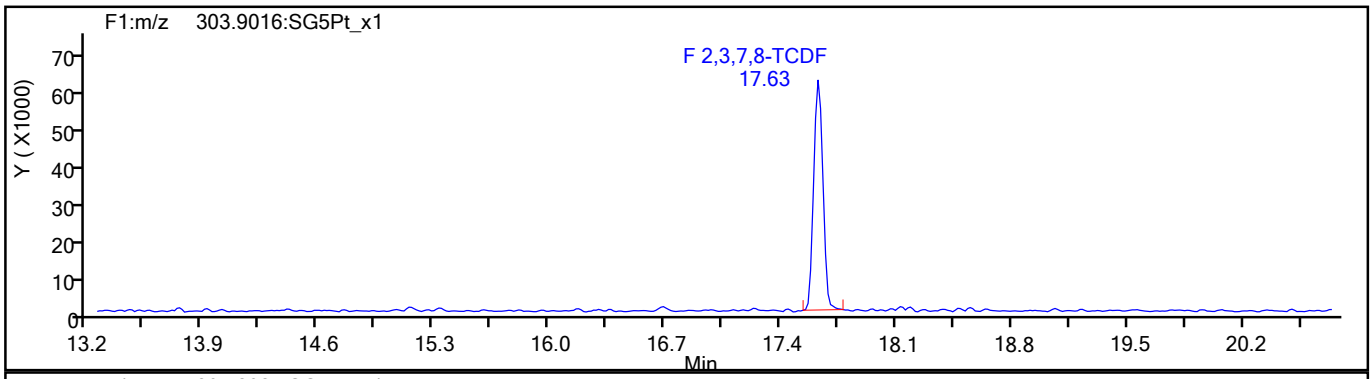

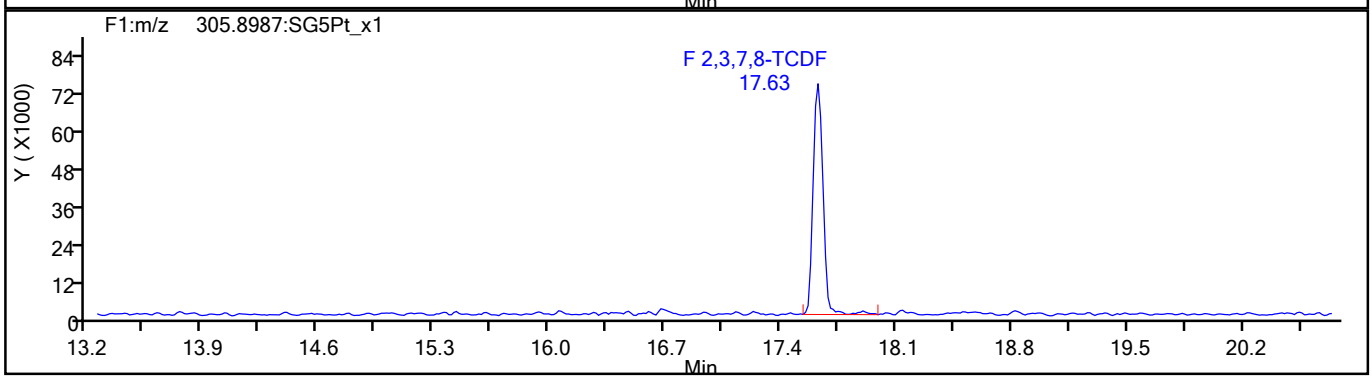

TCDF Standards

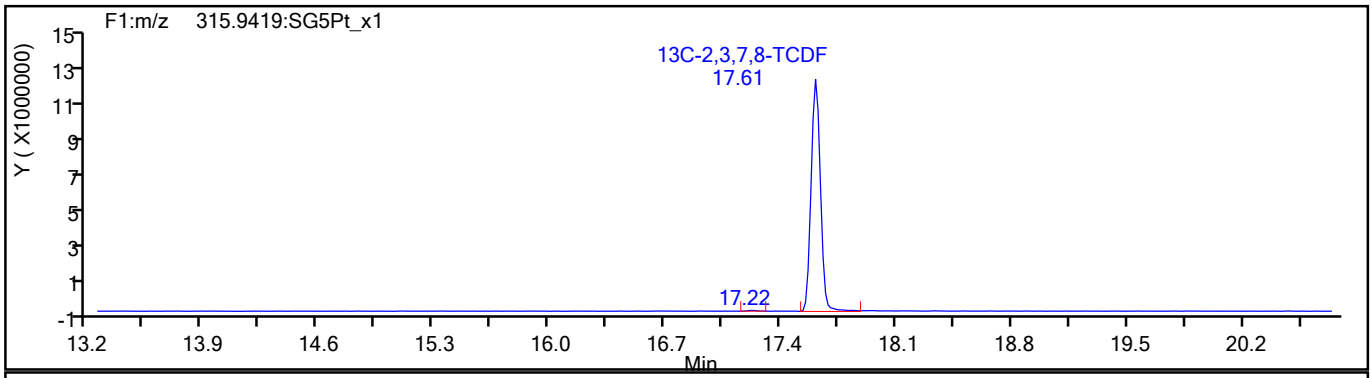

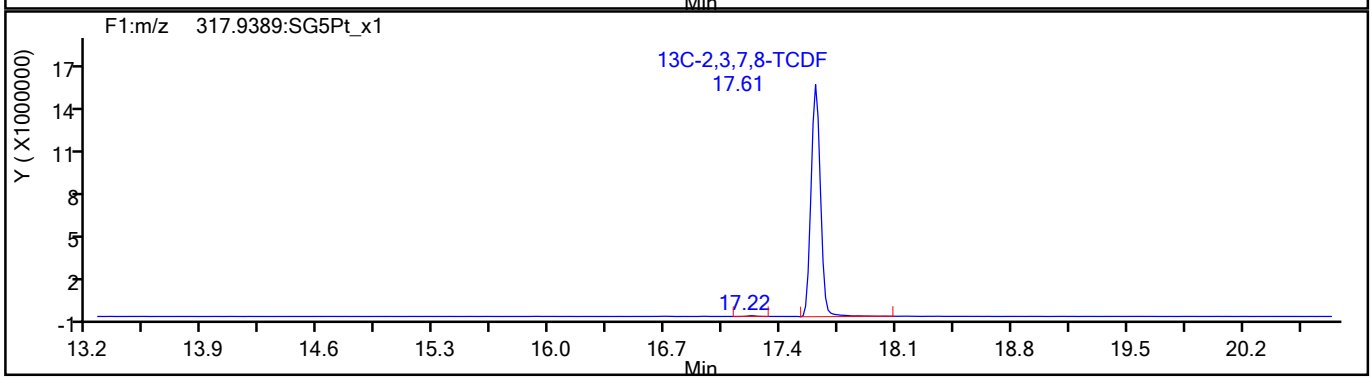

776062

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

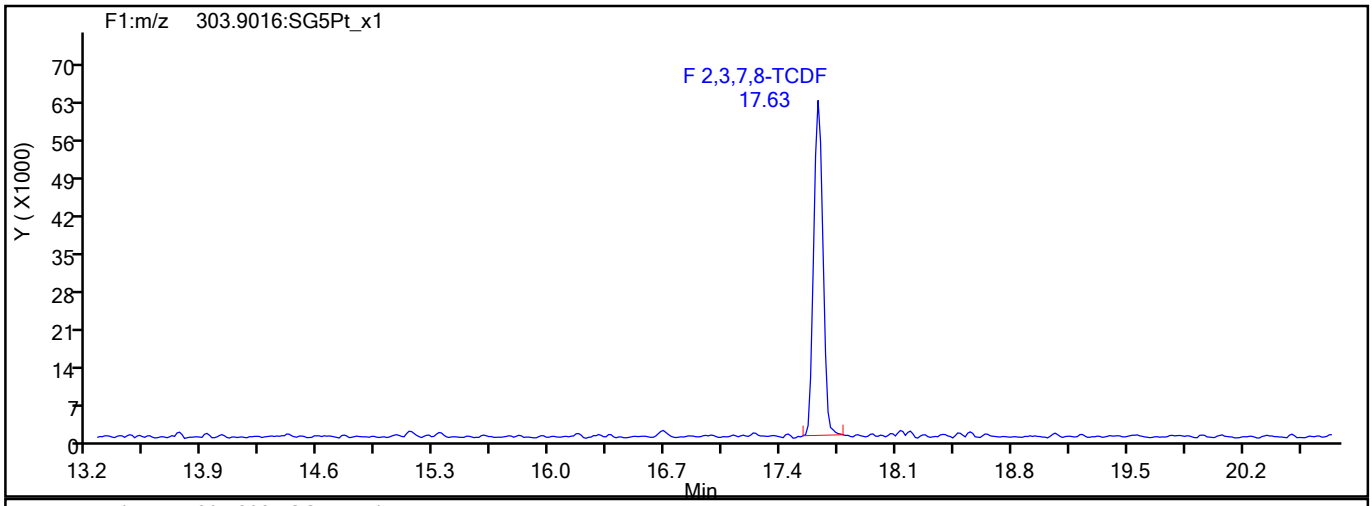

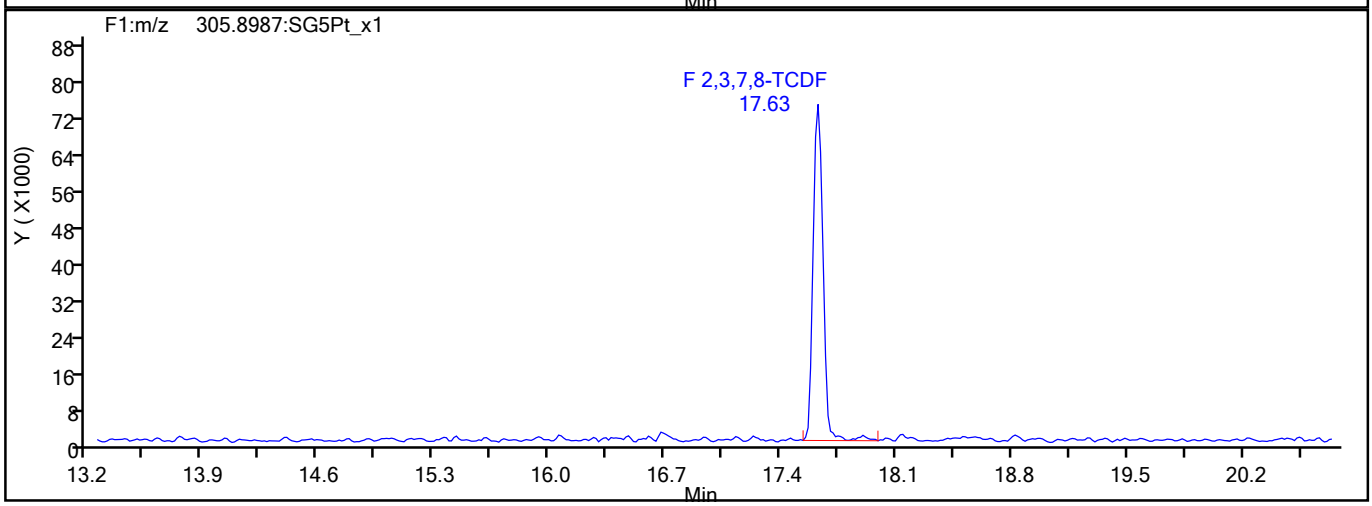

TCDF Interference Mass

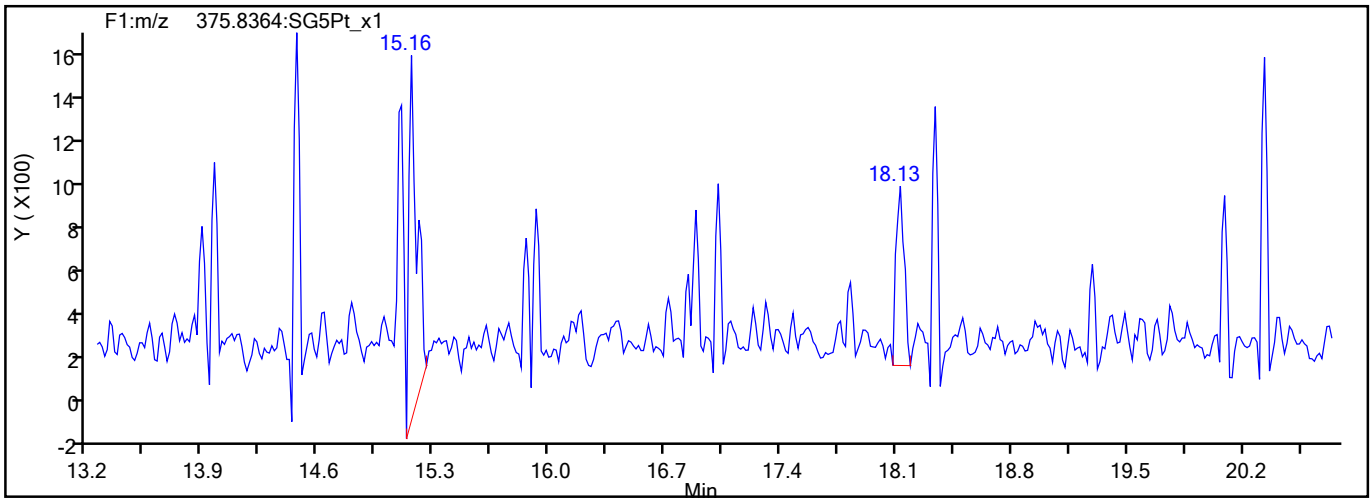

776063

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

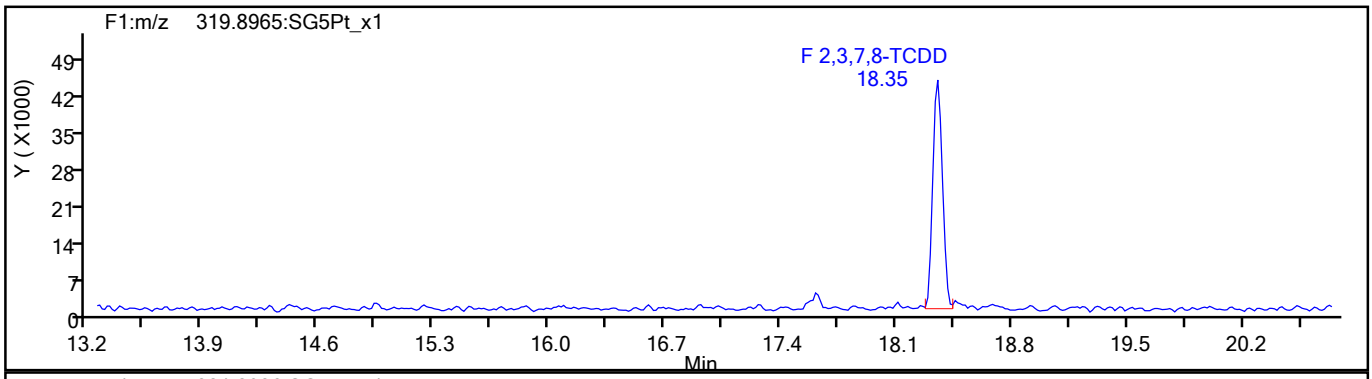

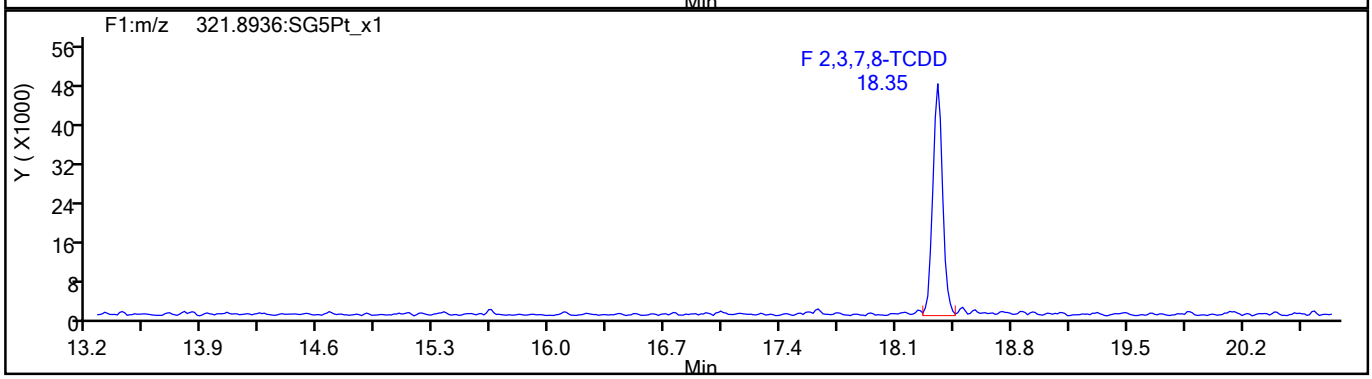

TCDD Standards

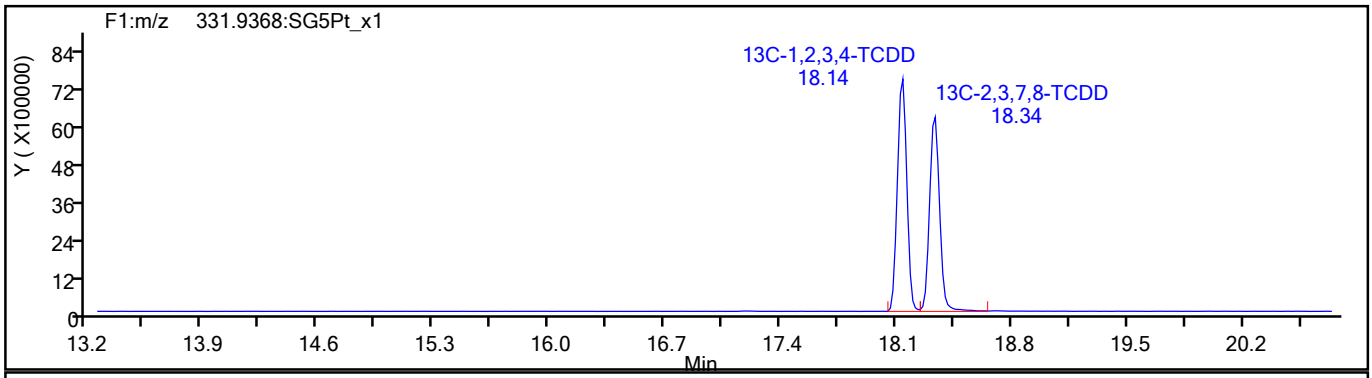

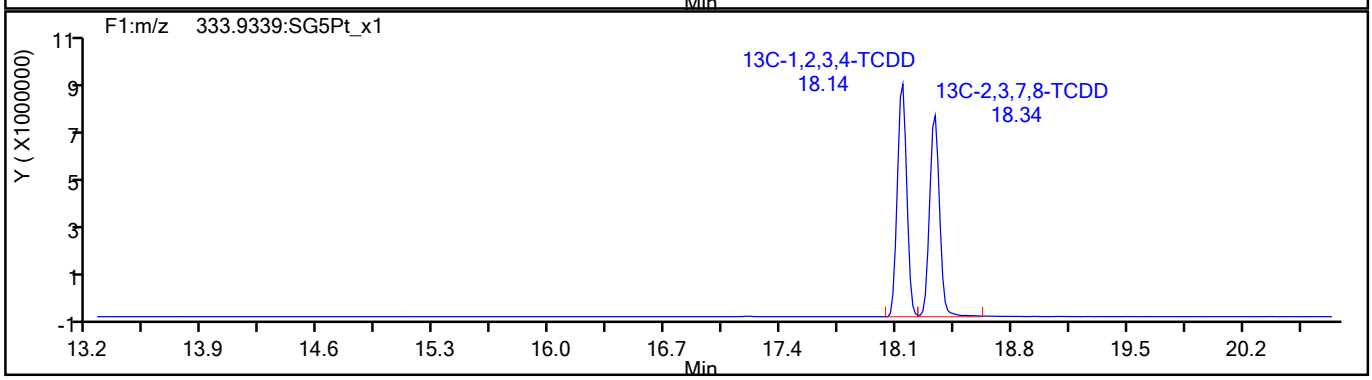

776064

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

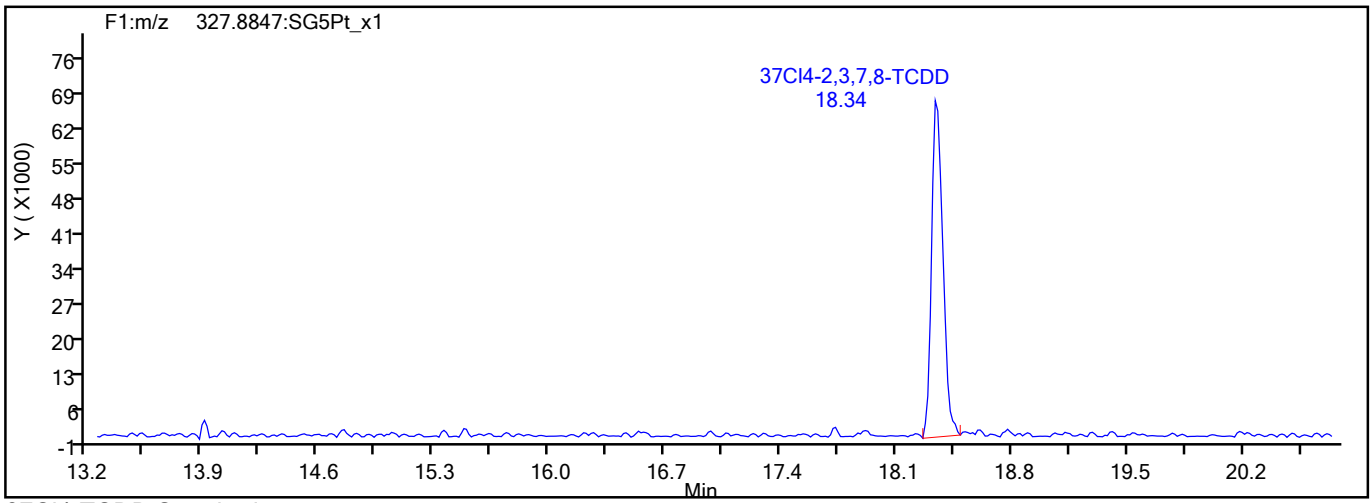

37Cl4-TCDD Standards

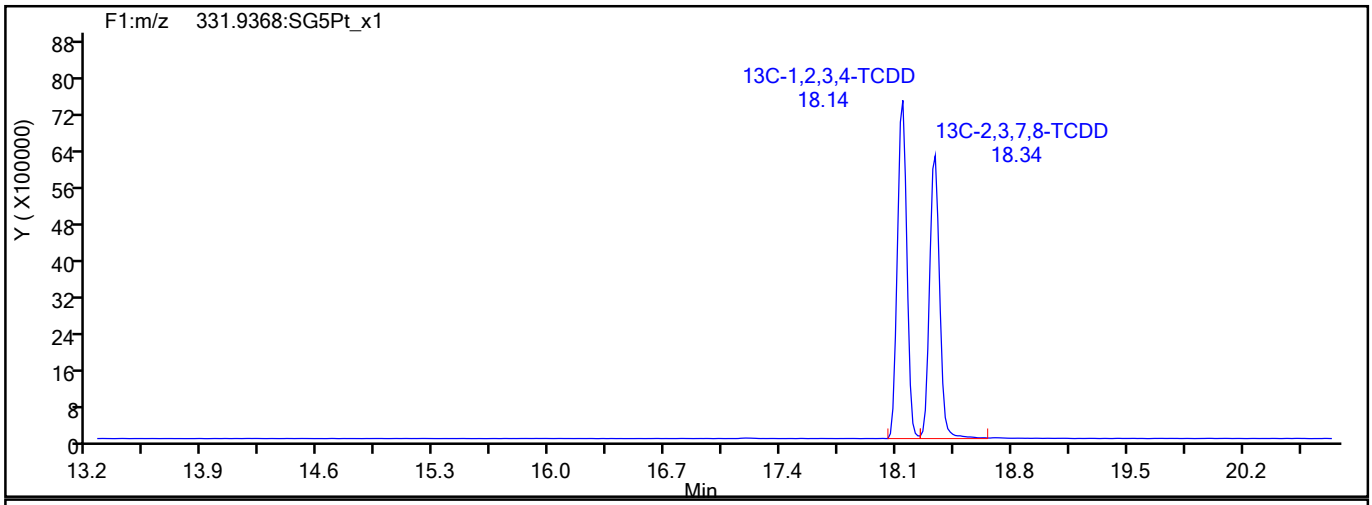

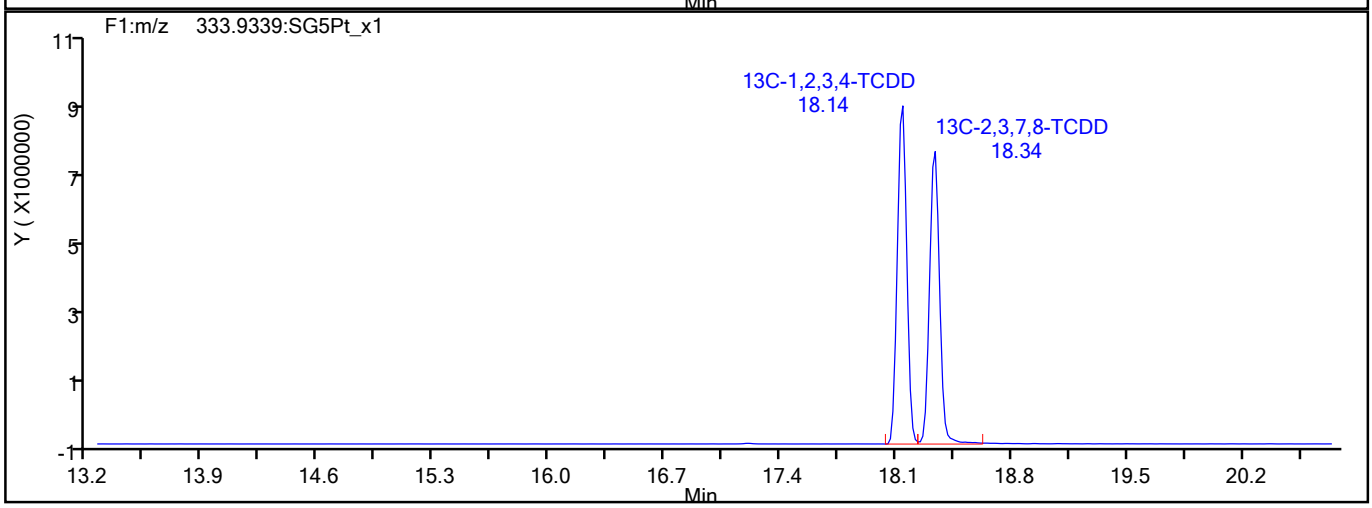

776065

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

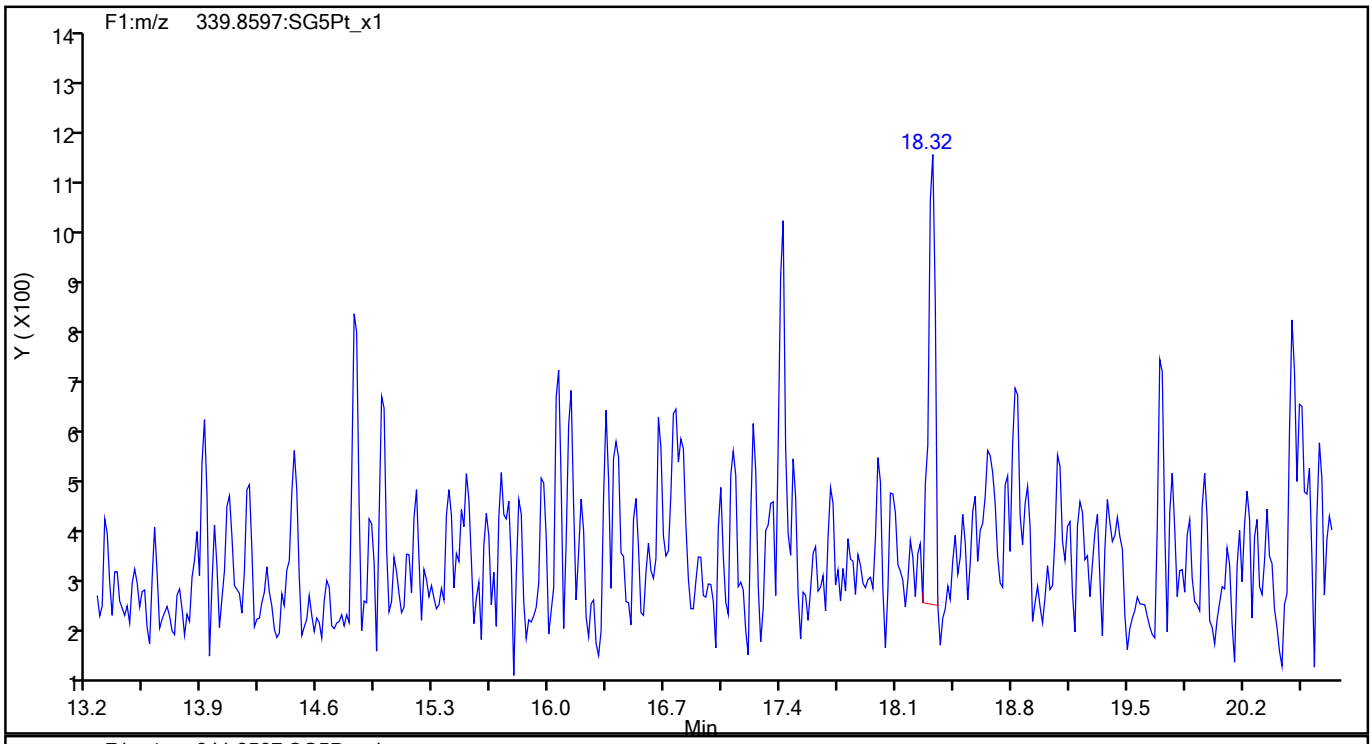

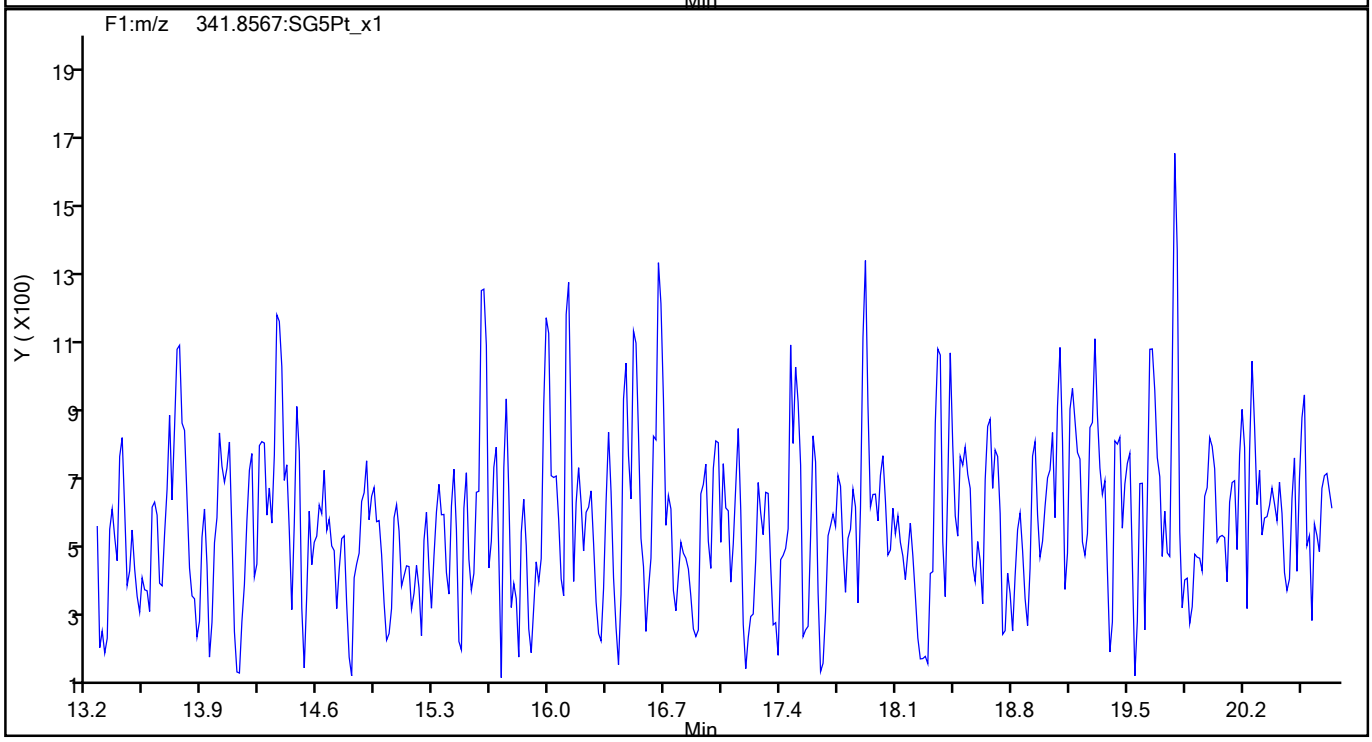

776066

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

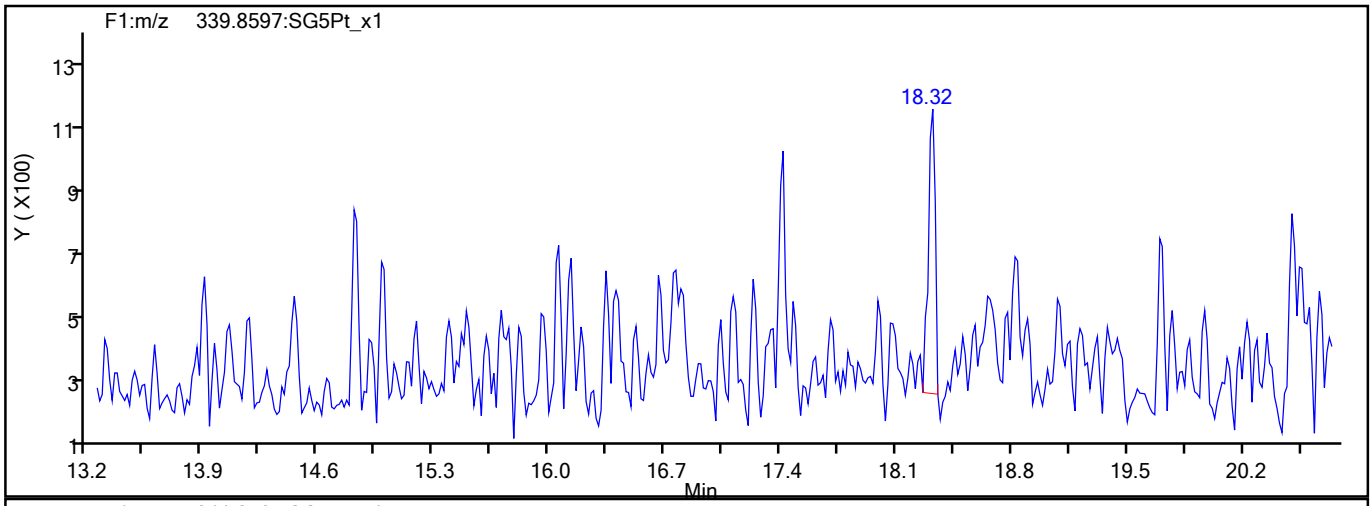

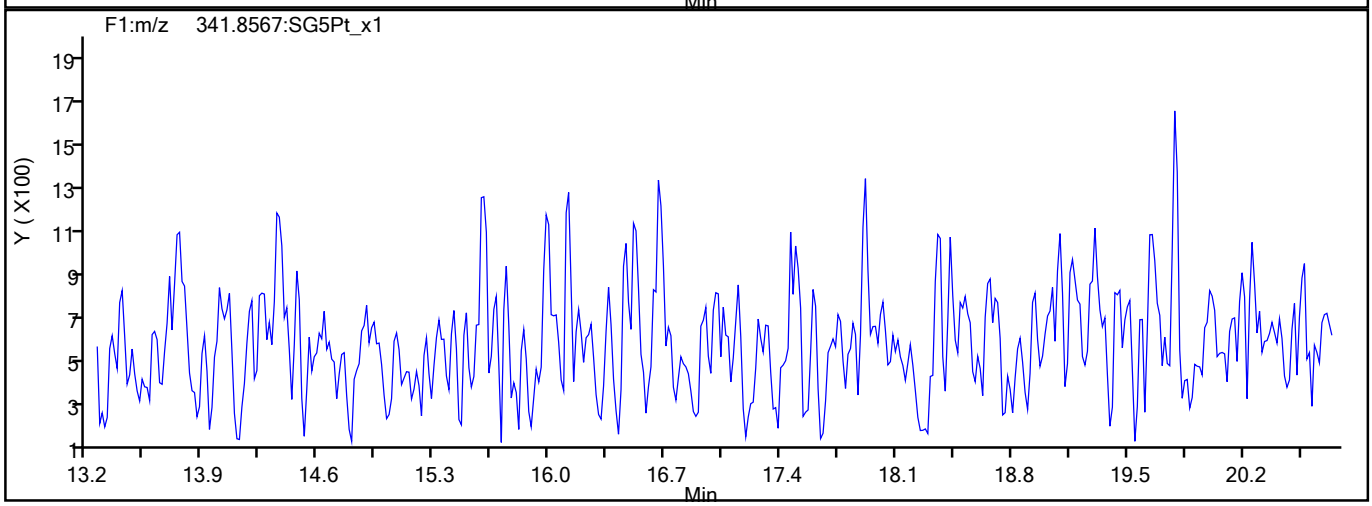

F1 PeCDFs Interference Mass

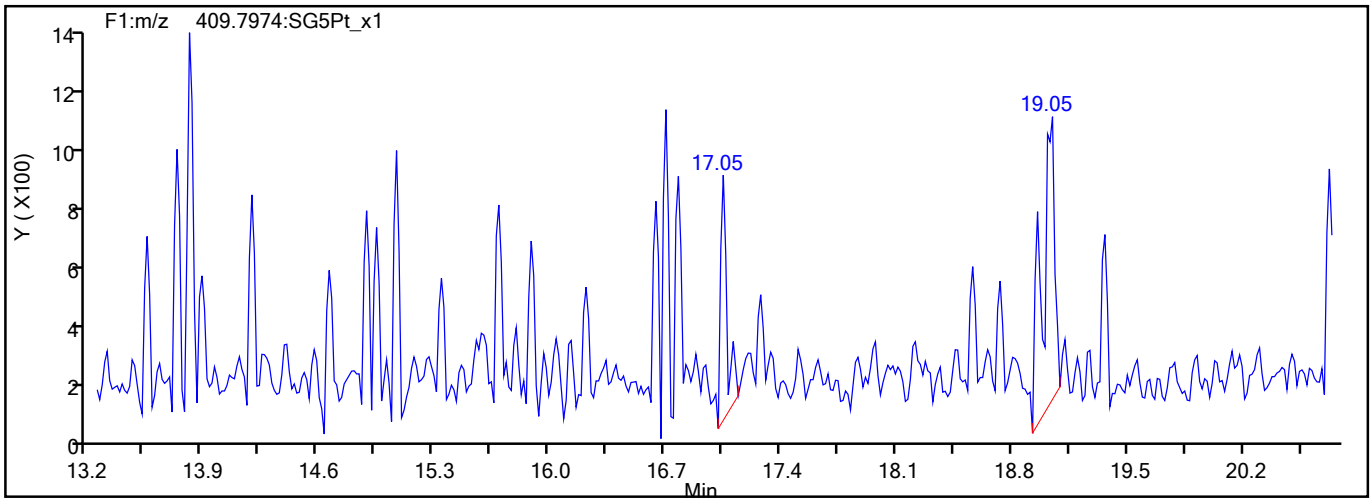

776067

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

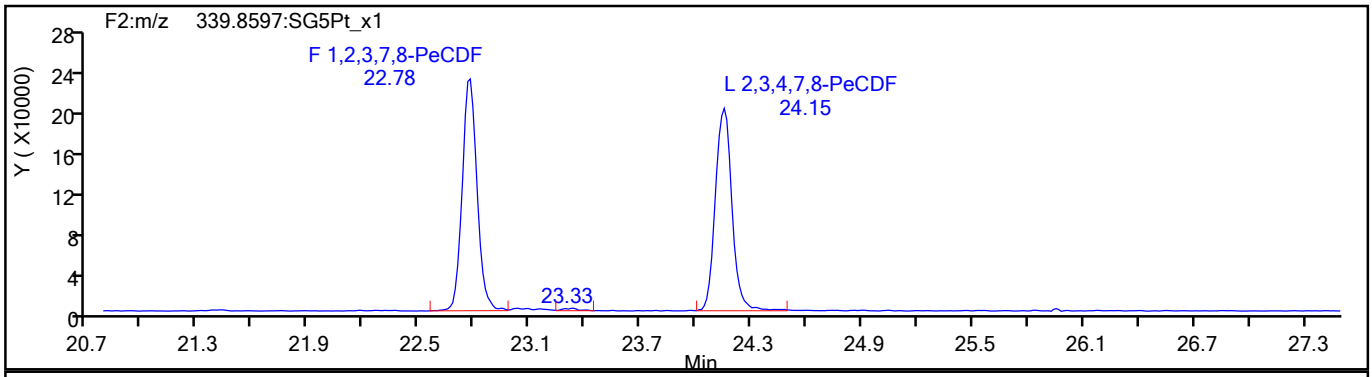

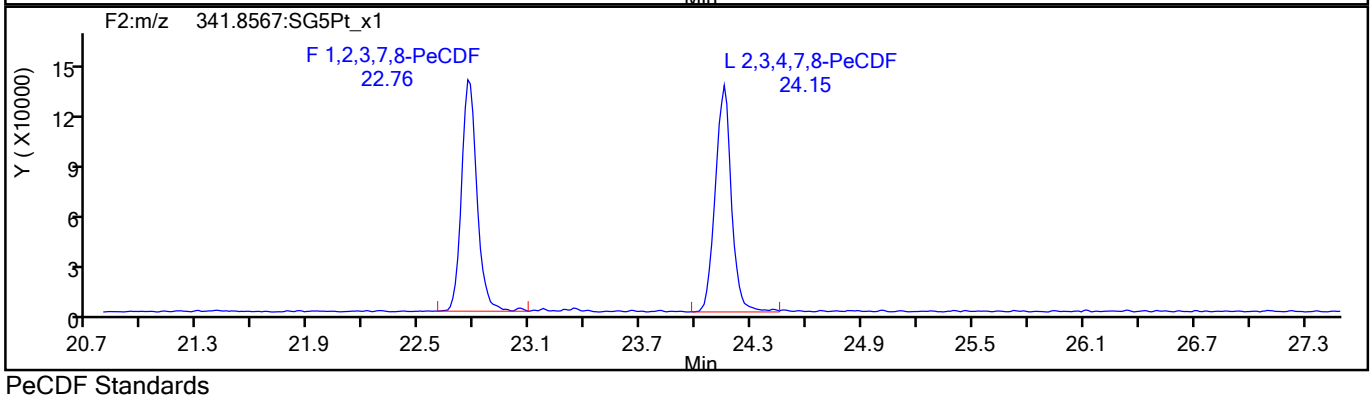

PeCDF Standards

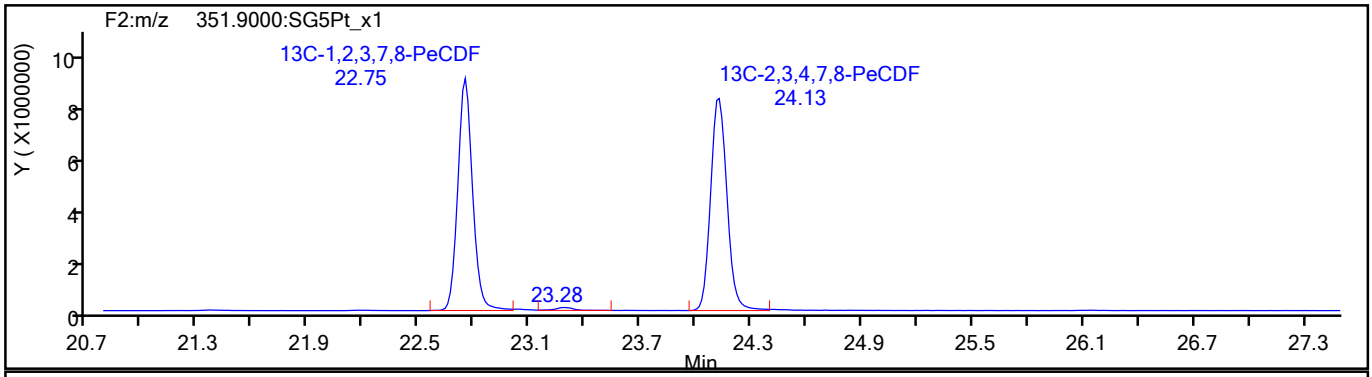

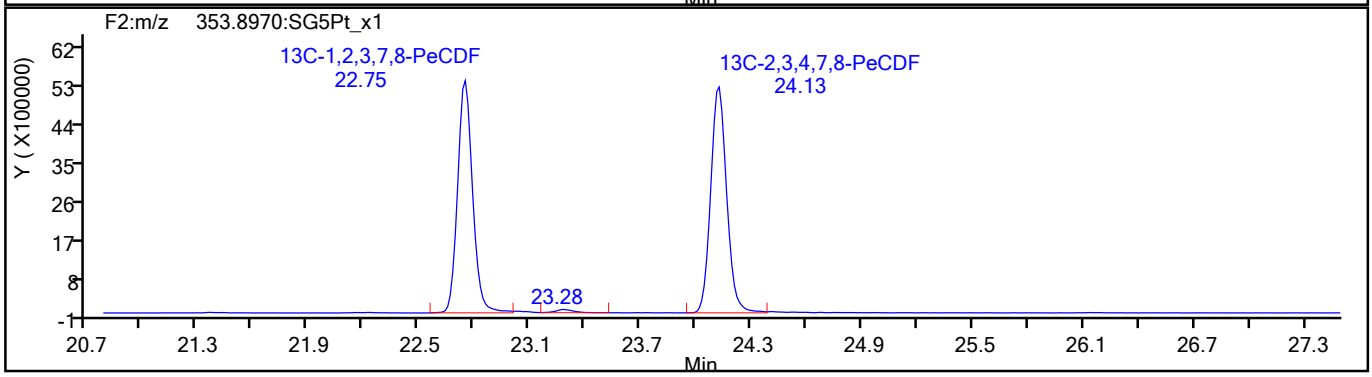

776068

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

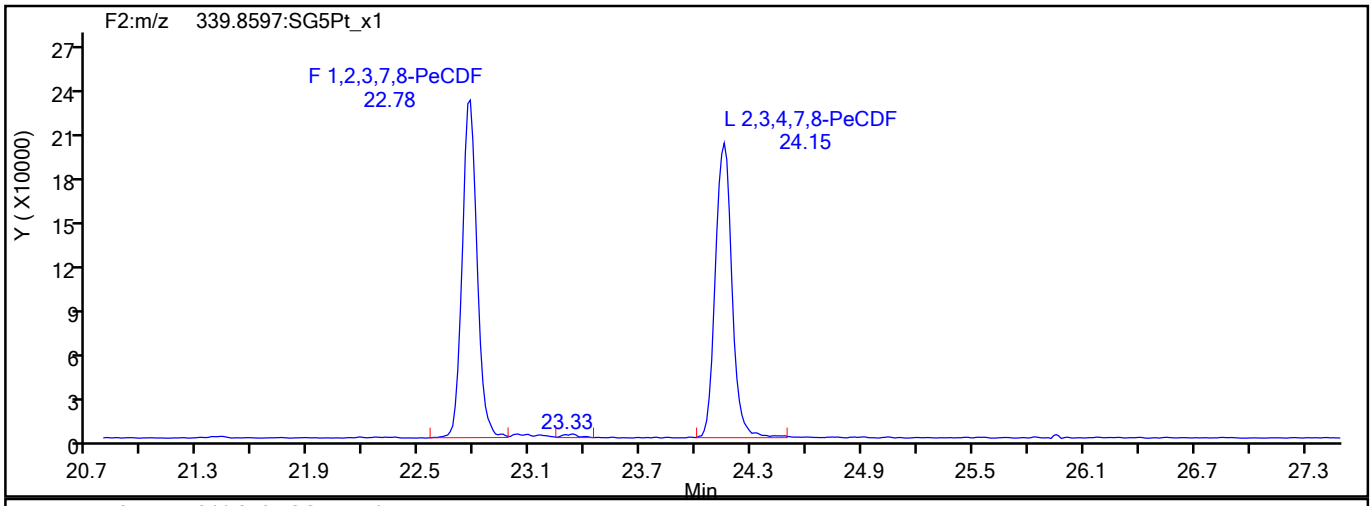

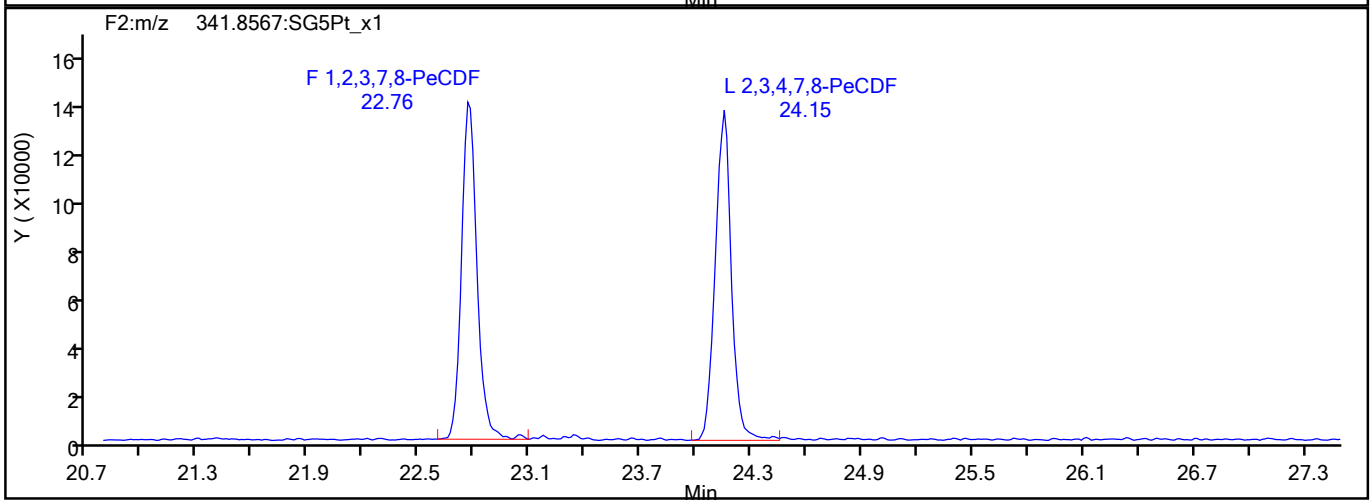

PeCDF Interference Mass

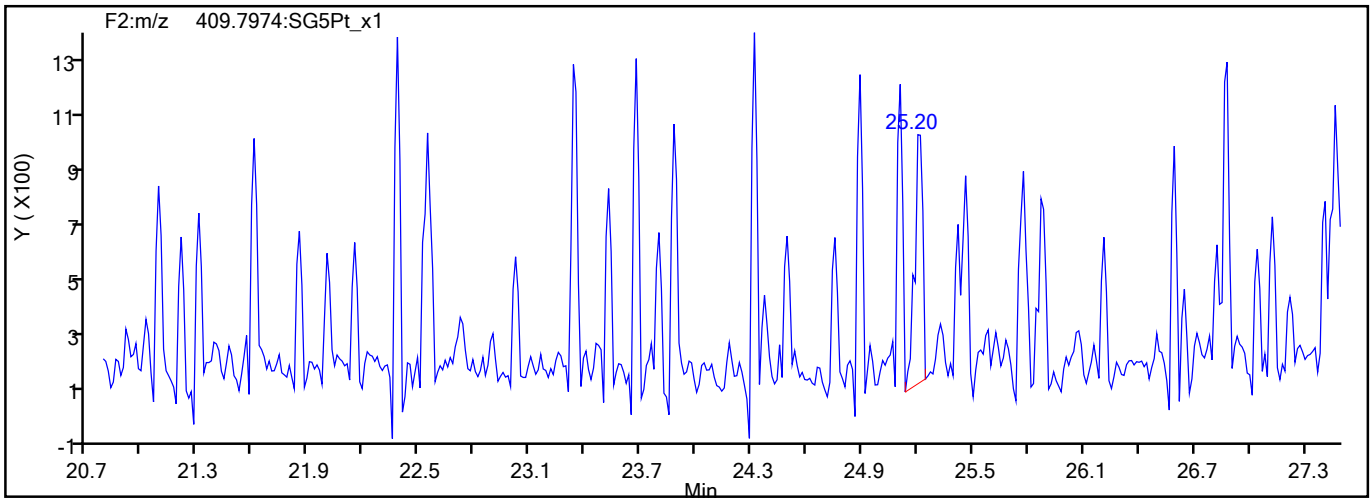

776069

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

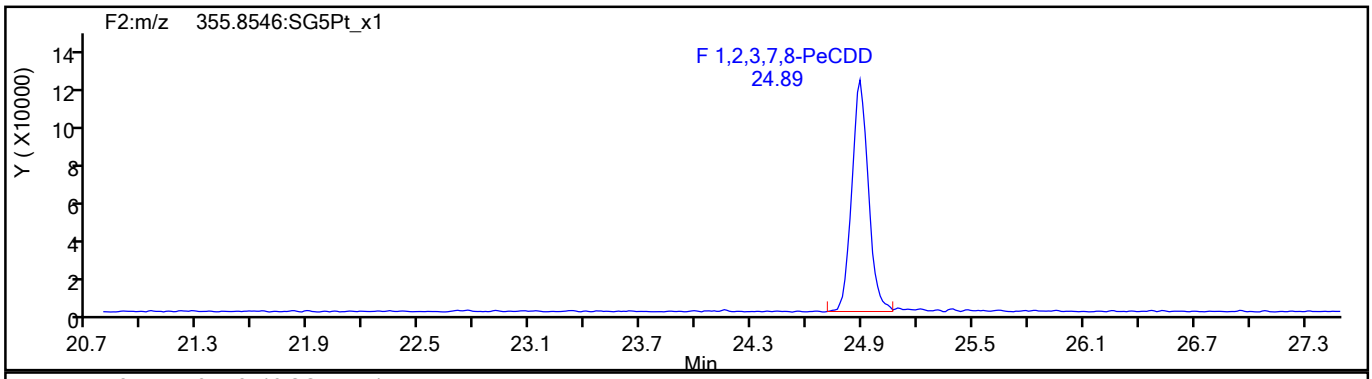

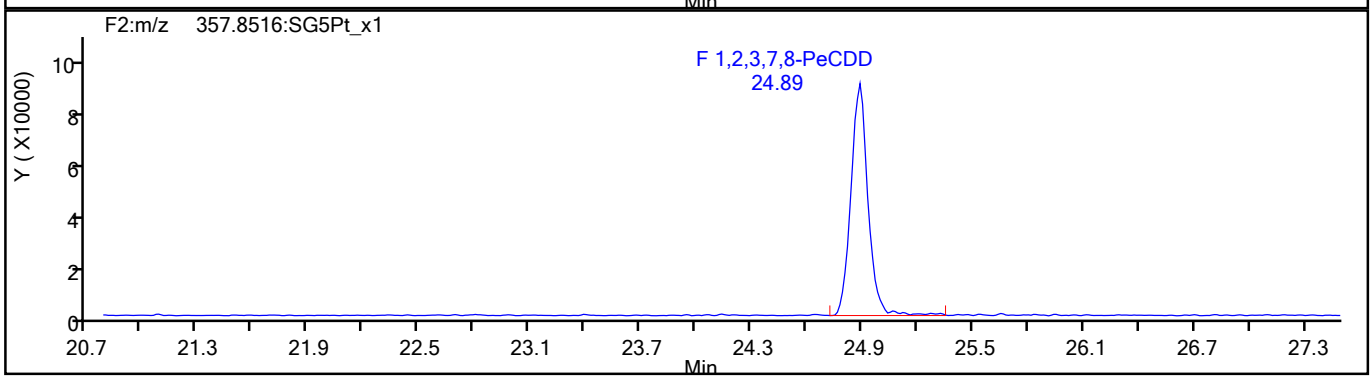

PeCDD Standards

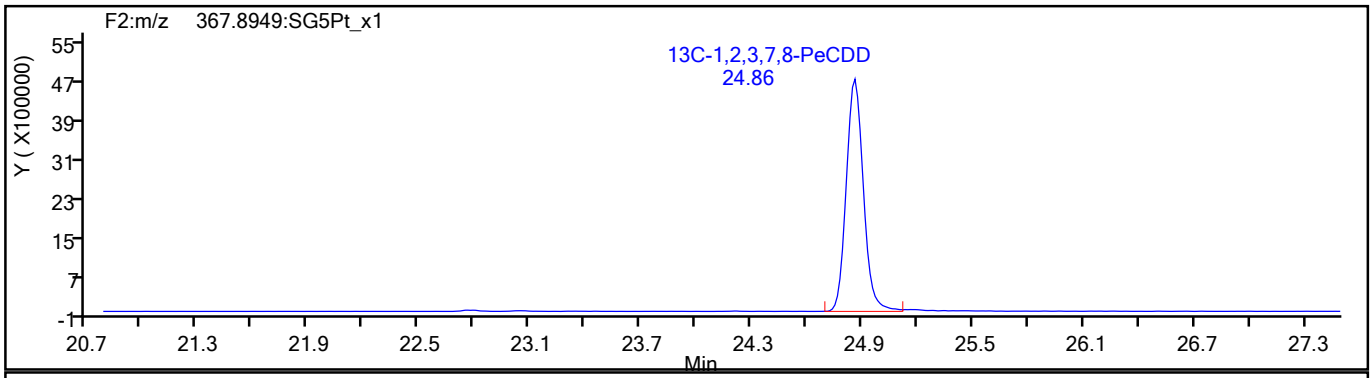

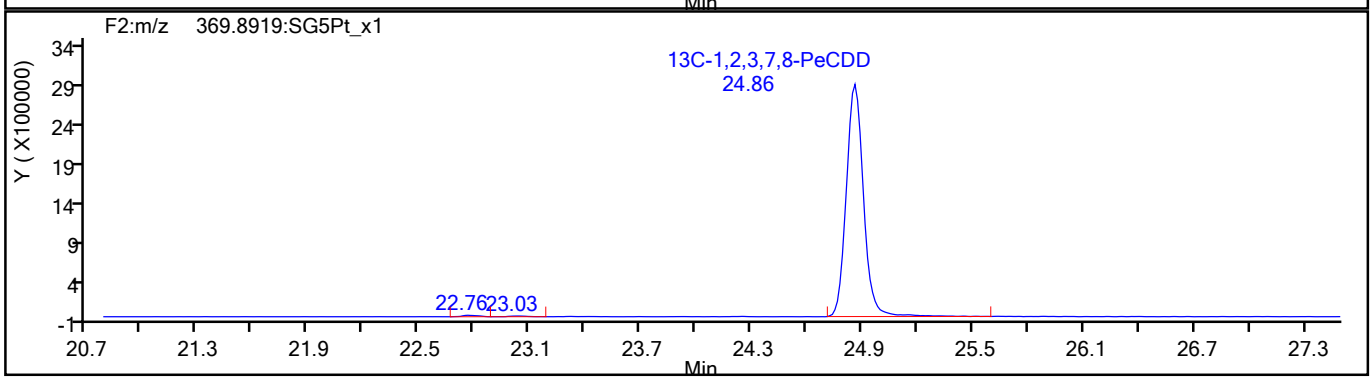

776070

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

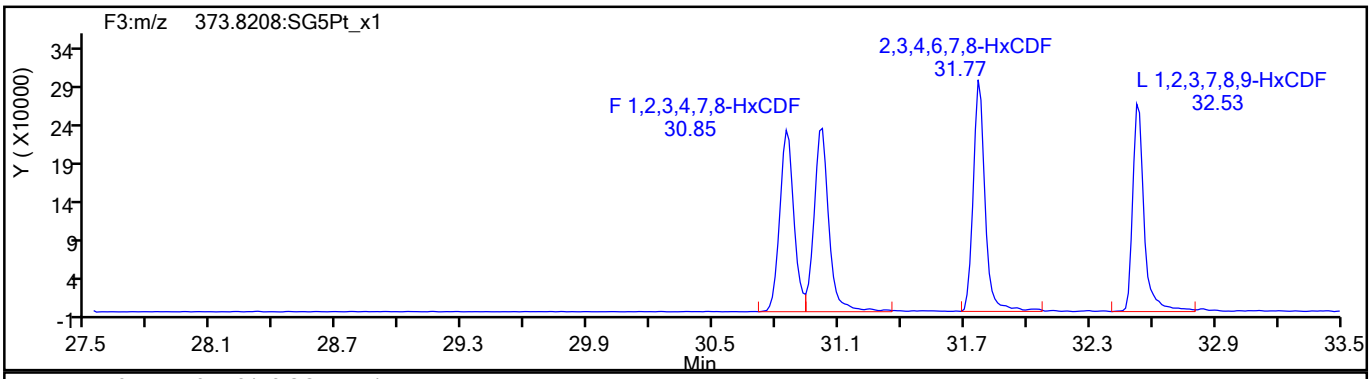

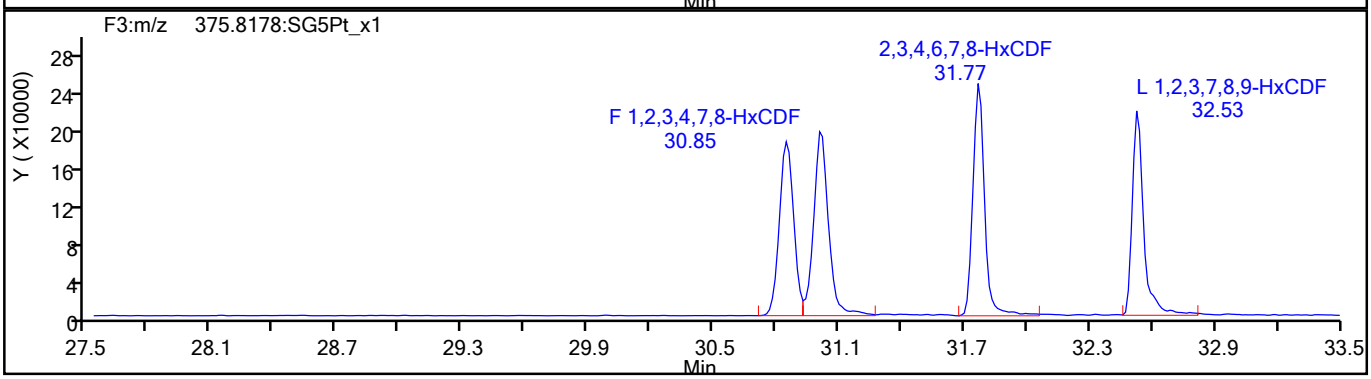

HxCDF Standards

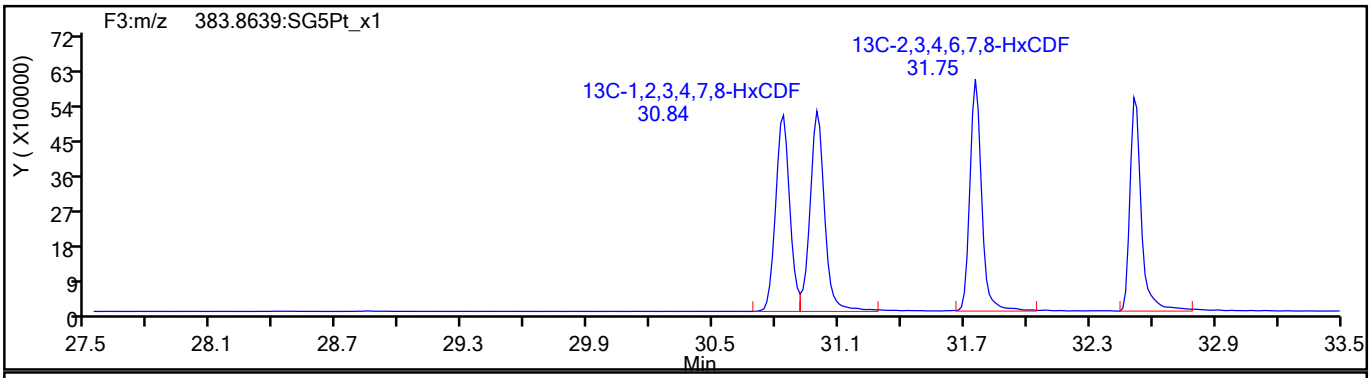

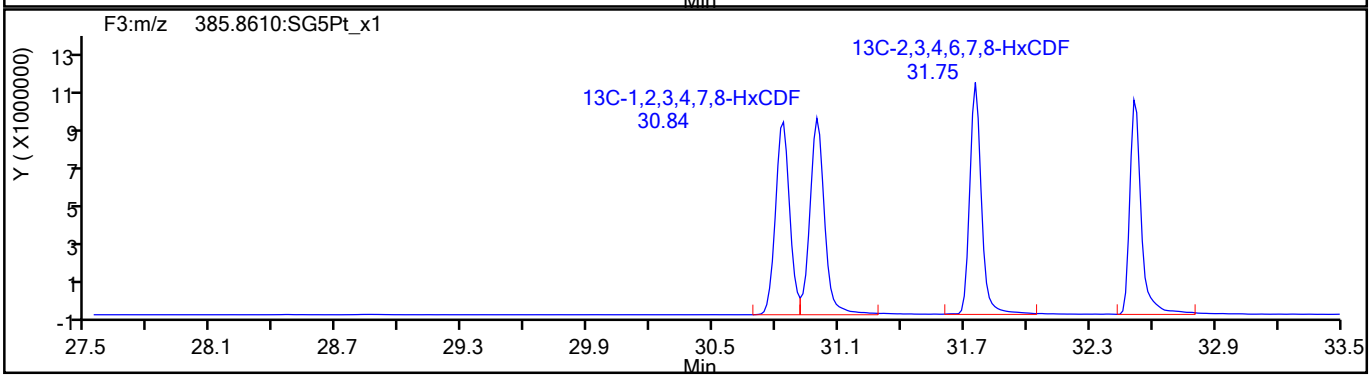

776071

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

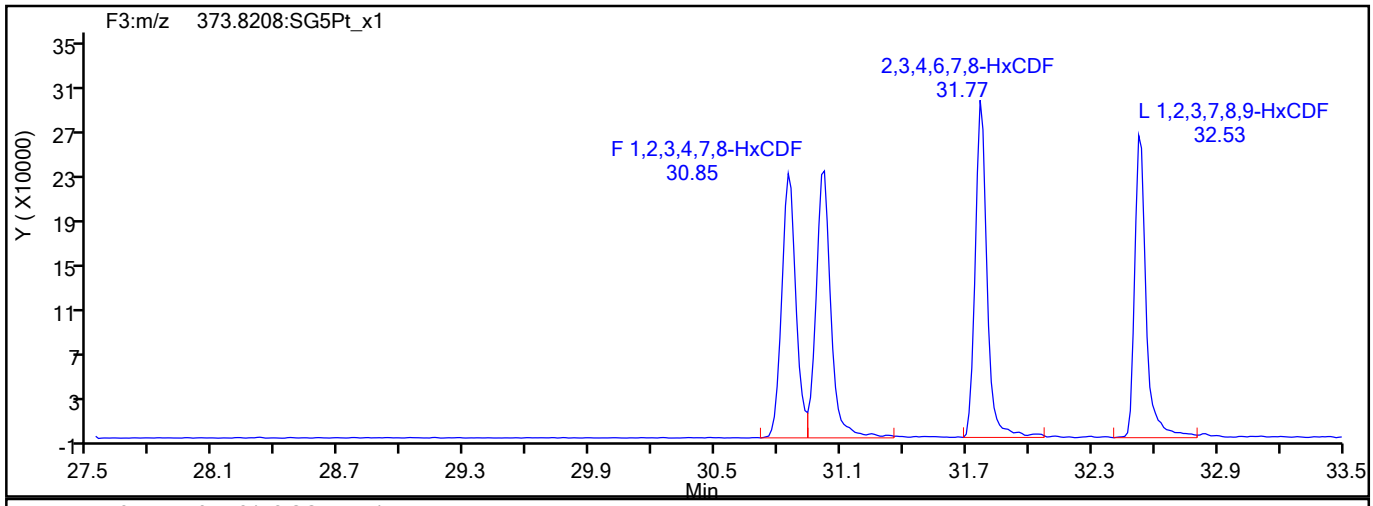

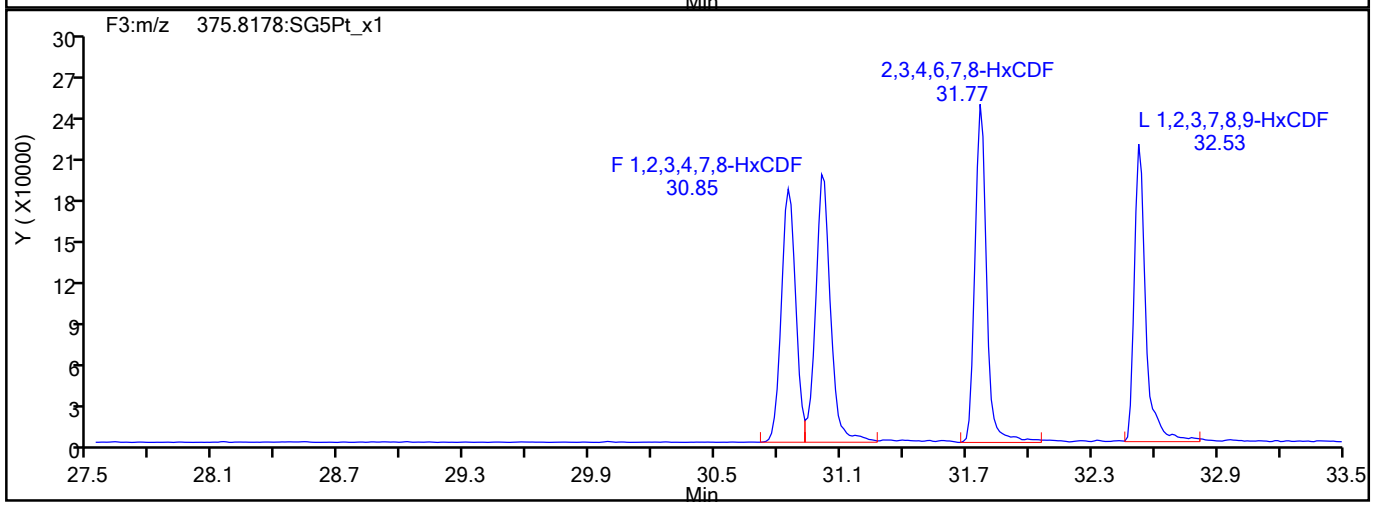

HxCDF Interference Mass

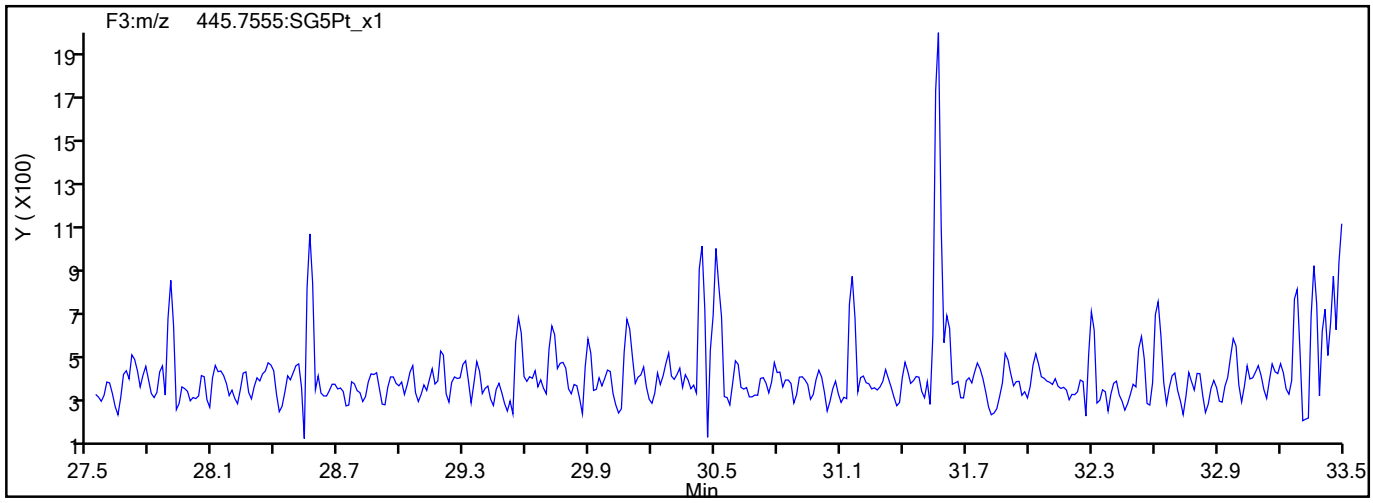

776072

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

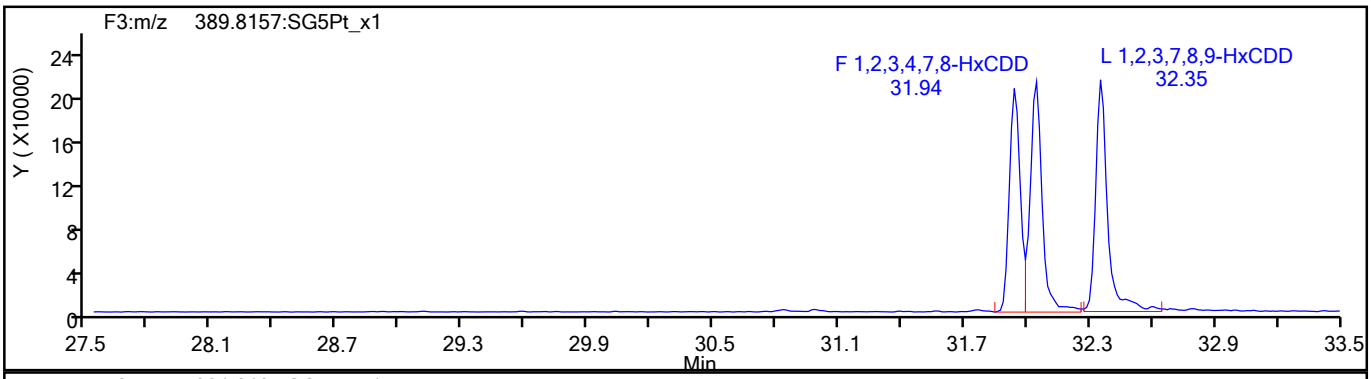

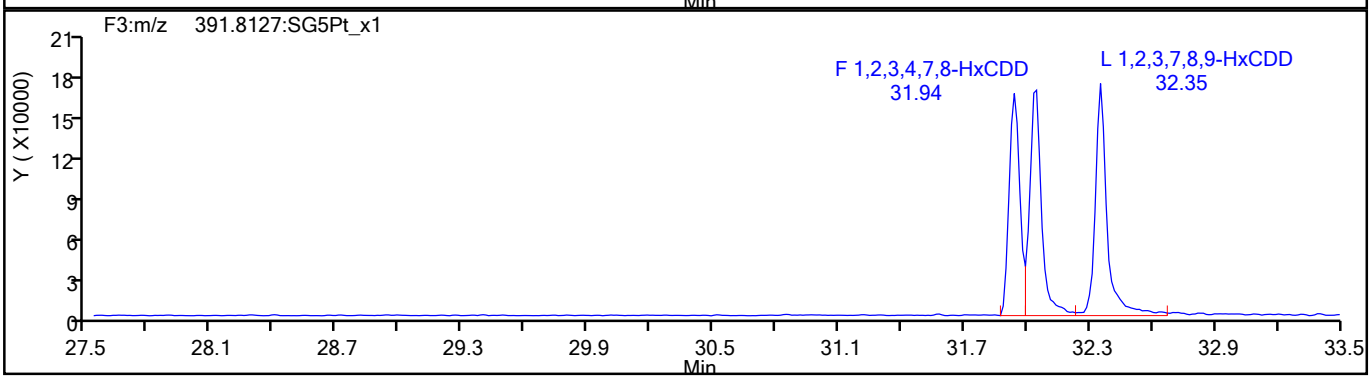

HxCDD Standards

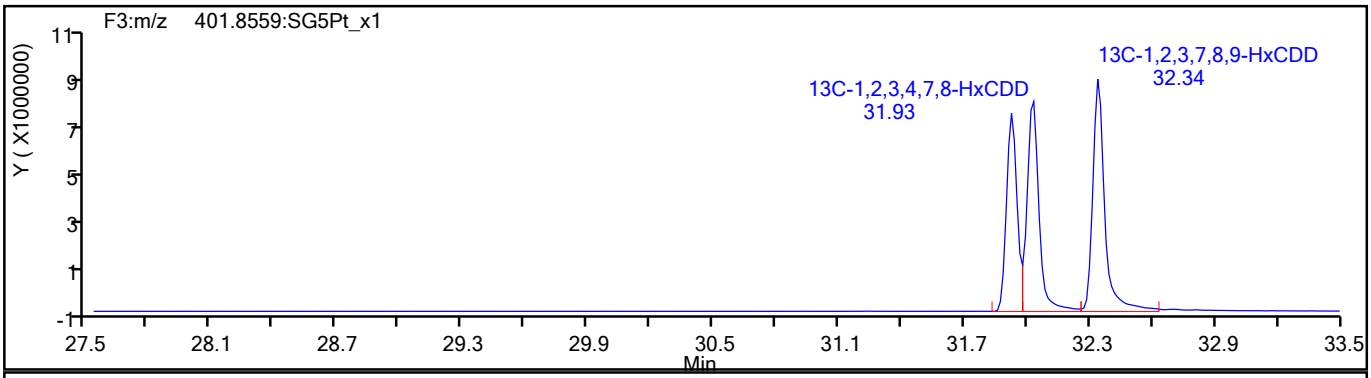

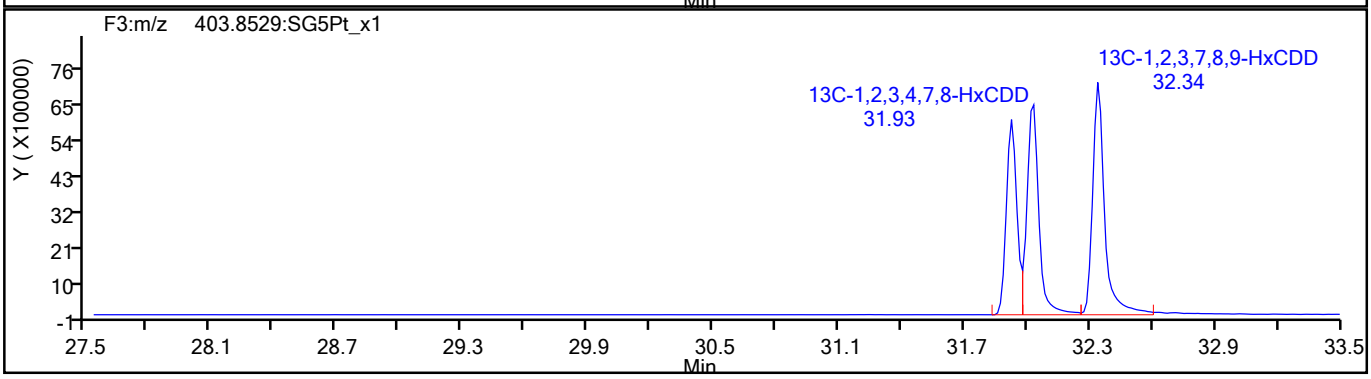

776073

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

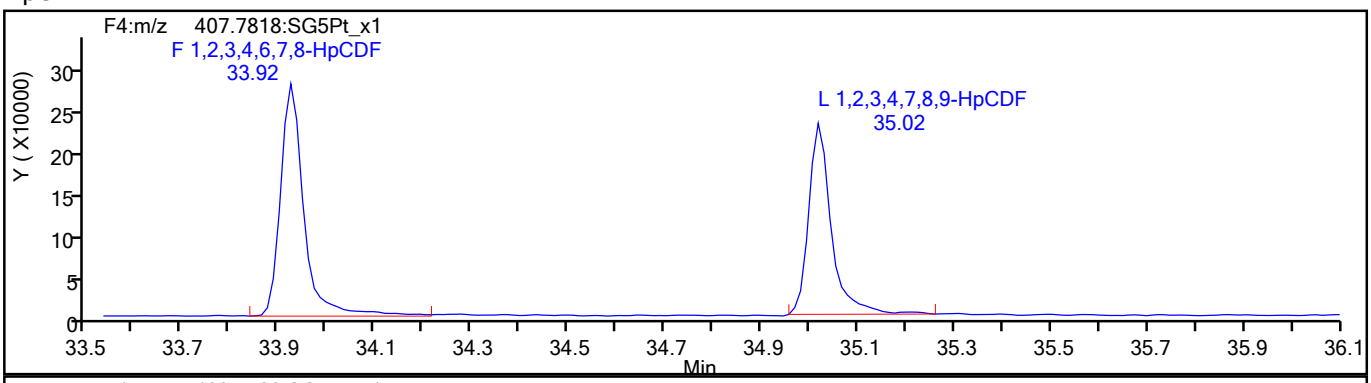

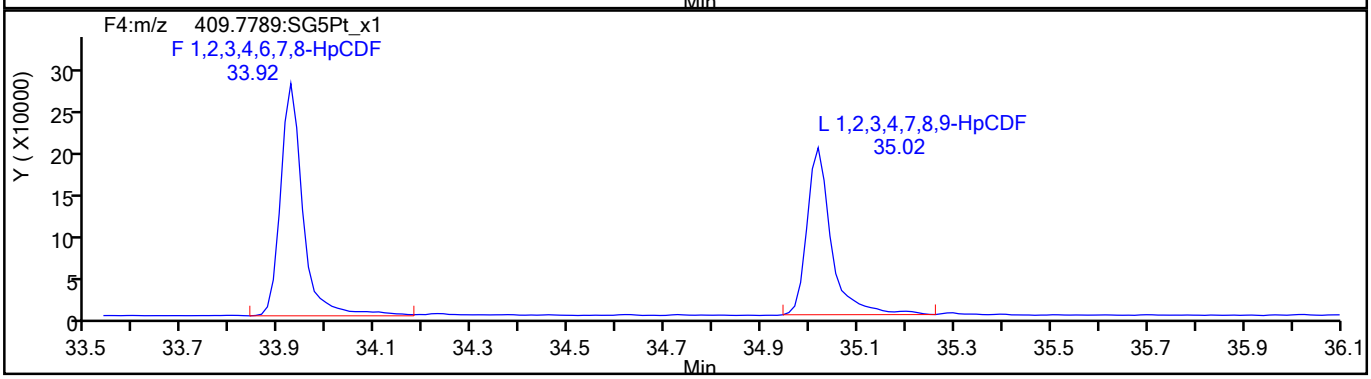

HpCDF Standards

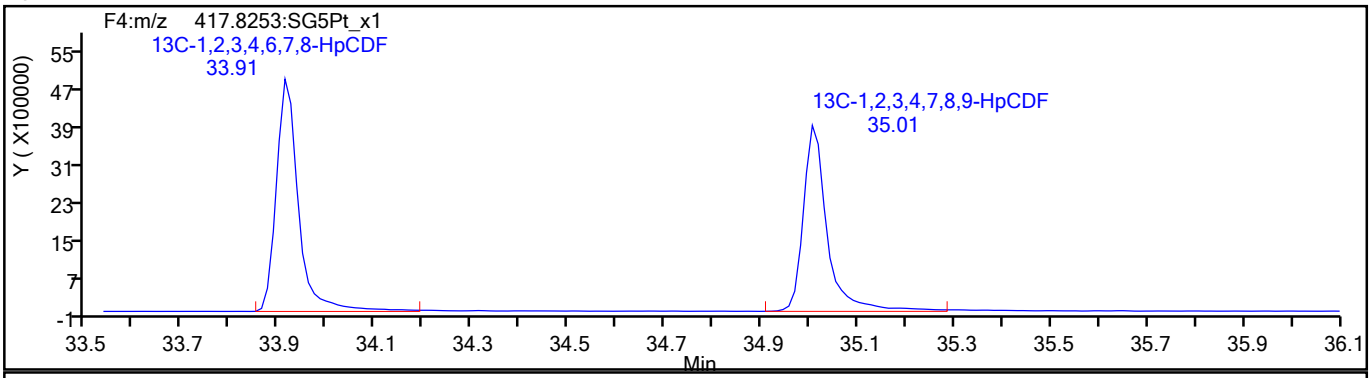

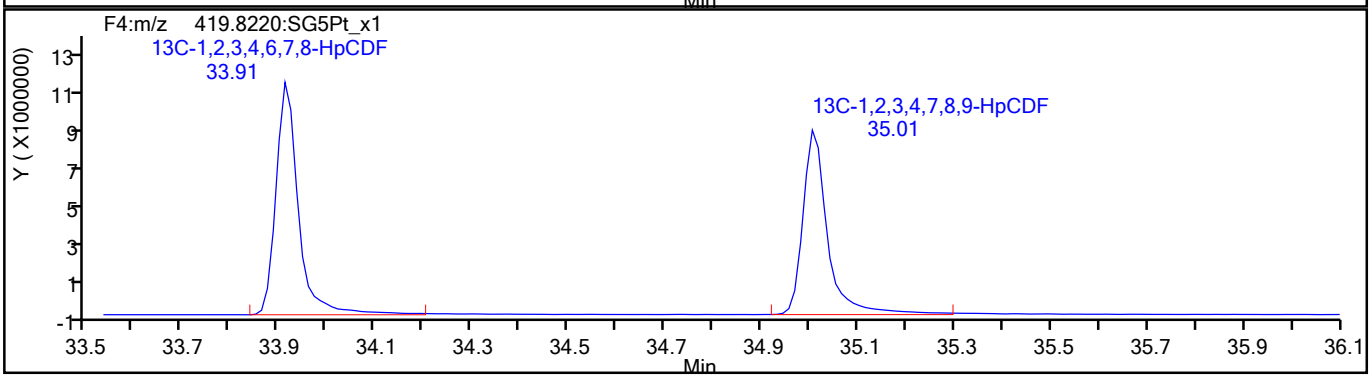

776074

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

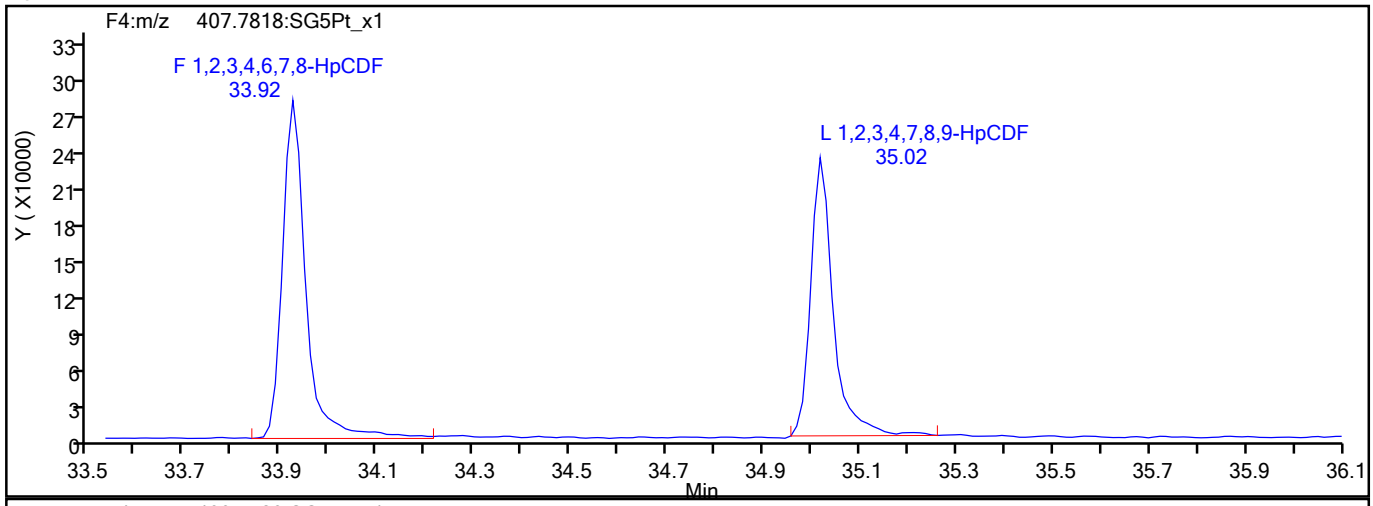

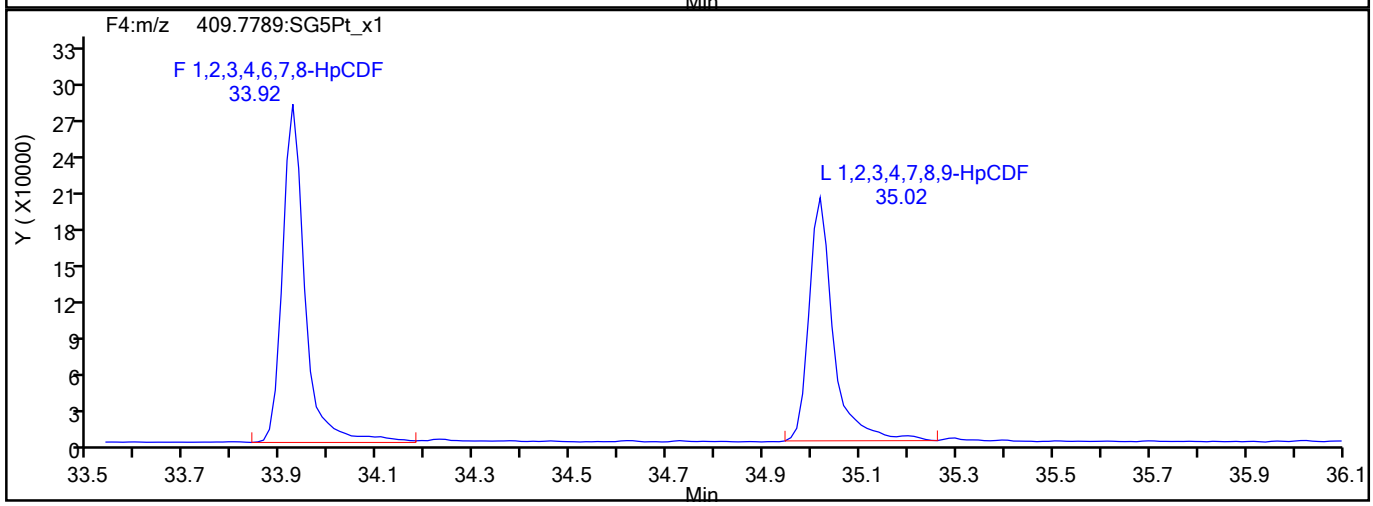

HpCDF Interference Mass

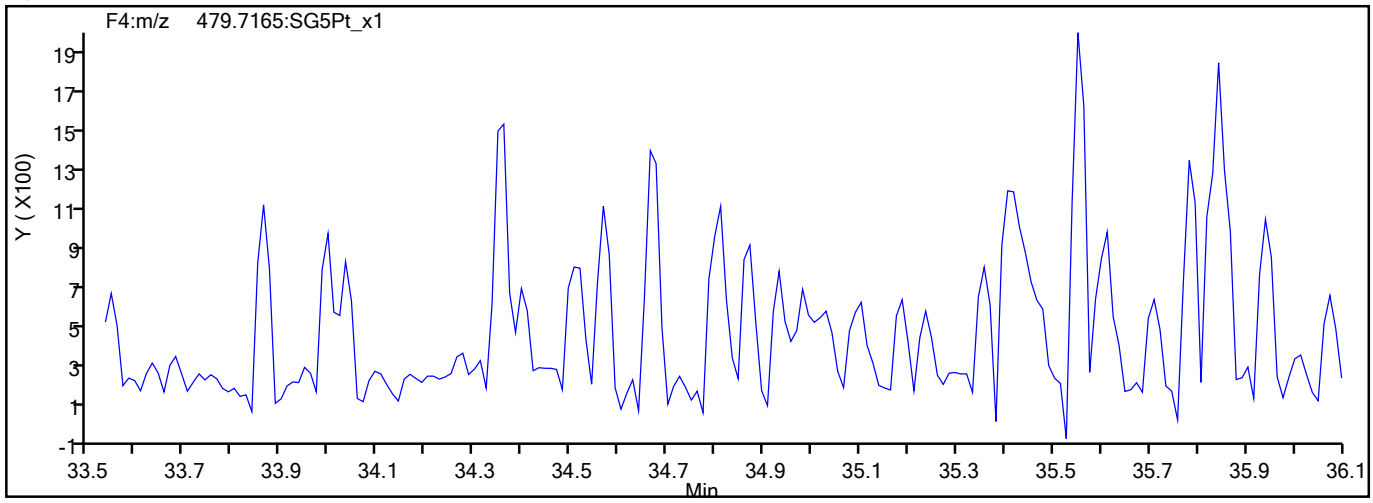

776075

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

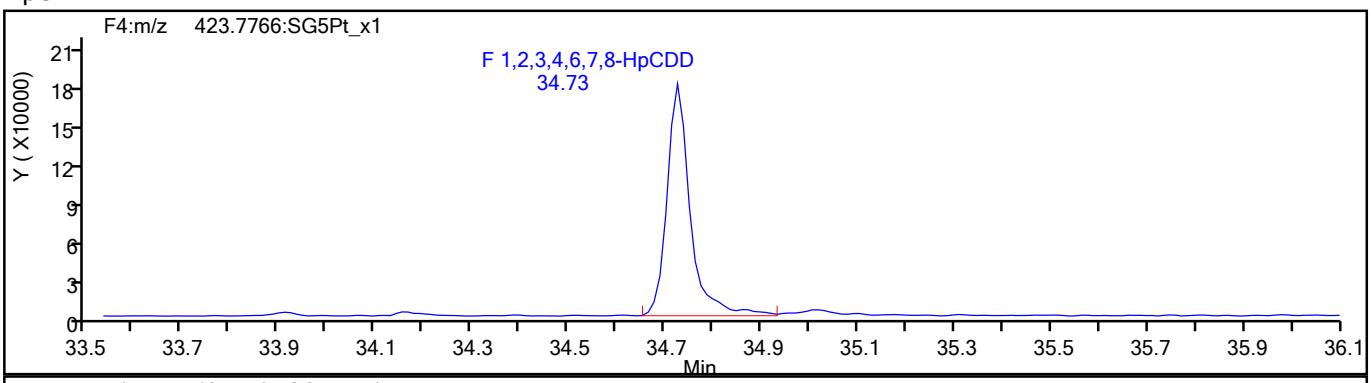

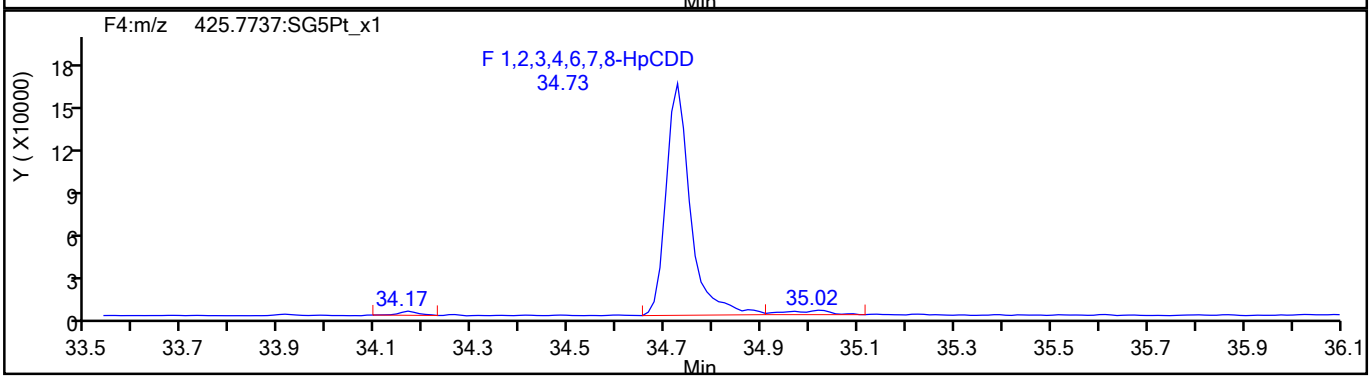

HpCDD Standards

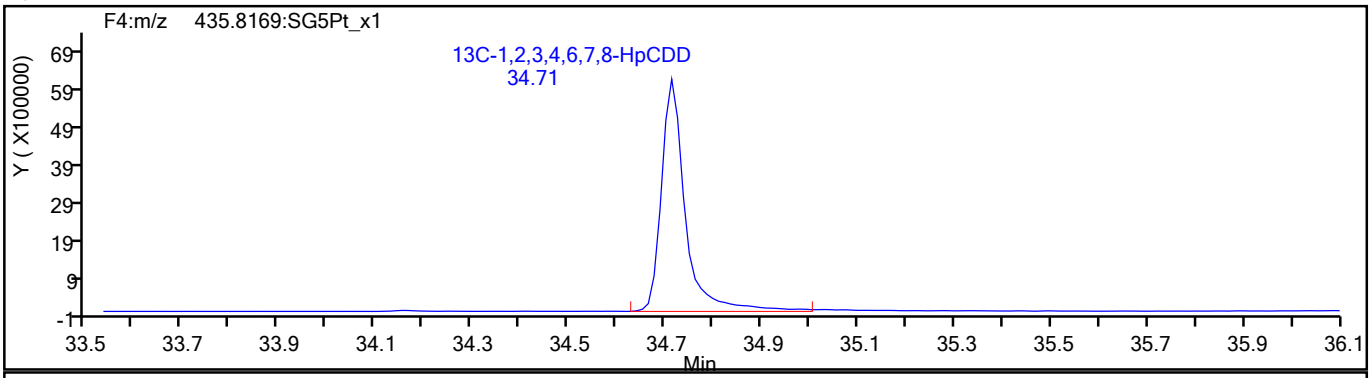

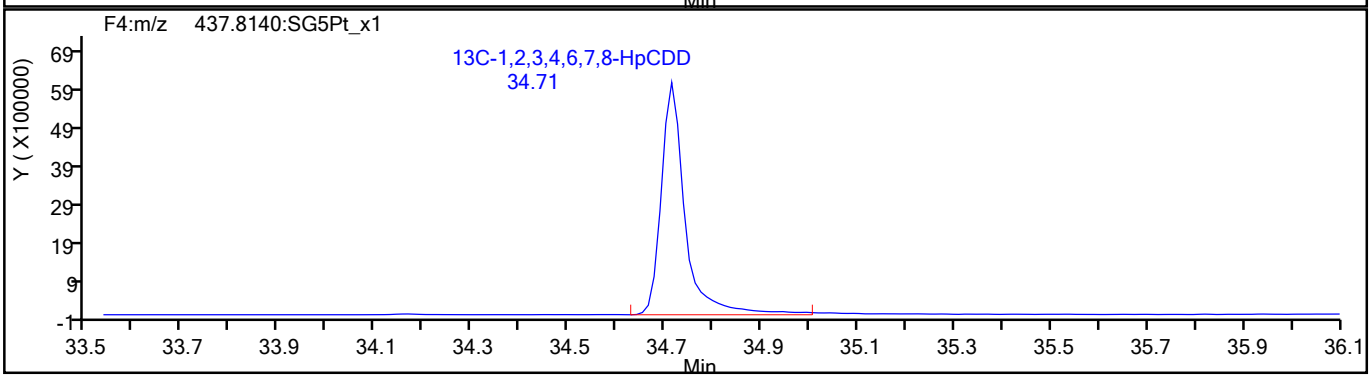

776076

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

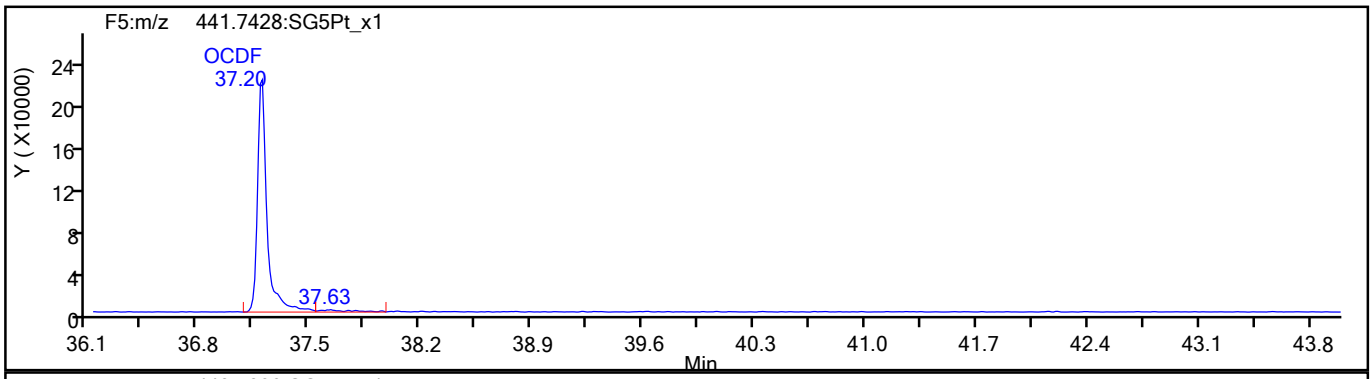

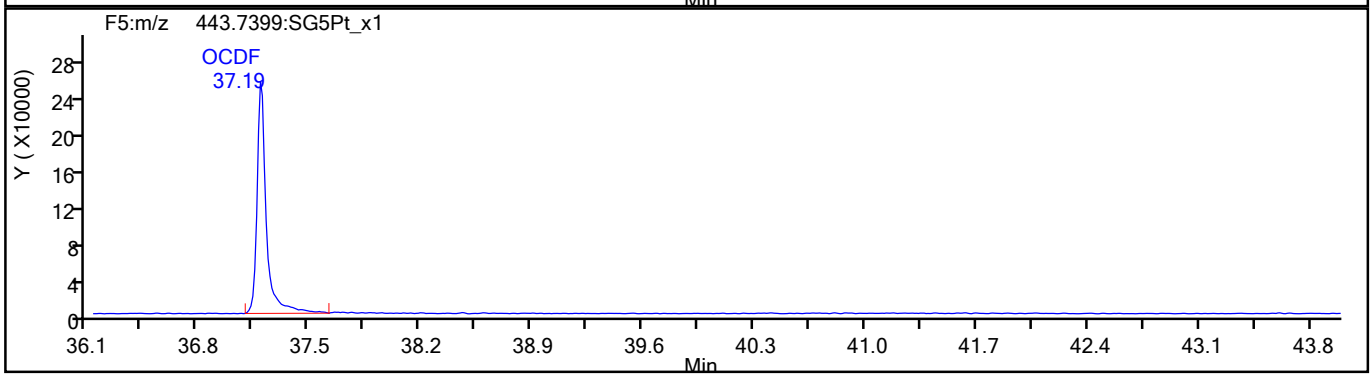

OCDF Standards

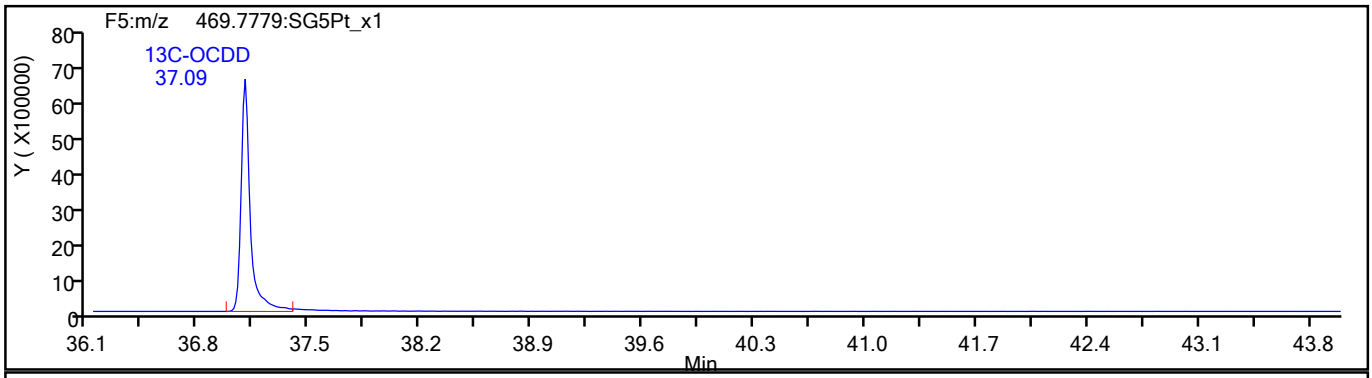

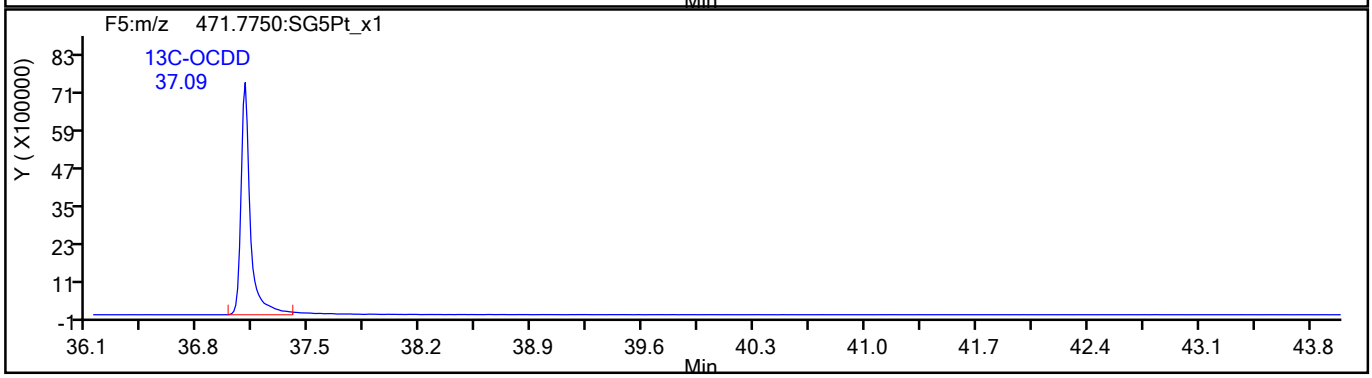

776077

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

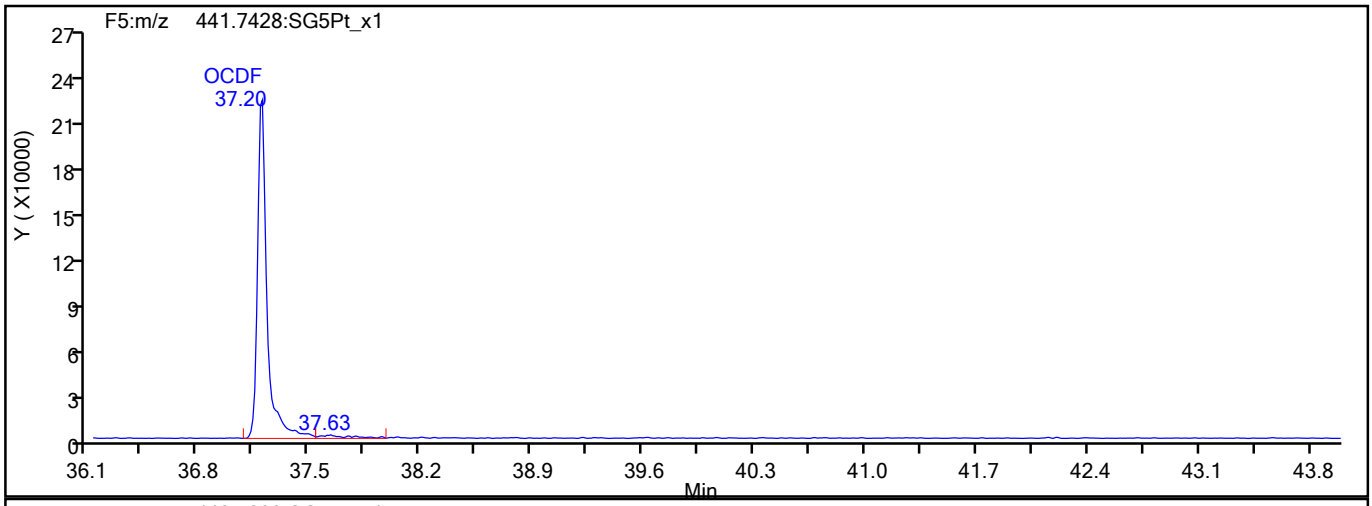

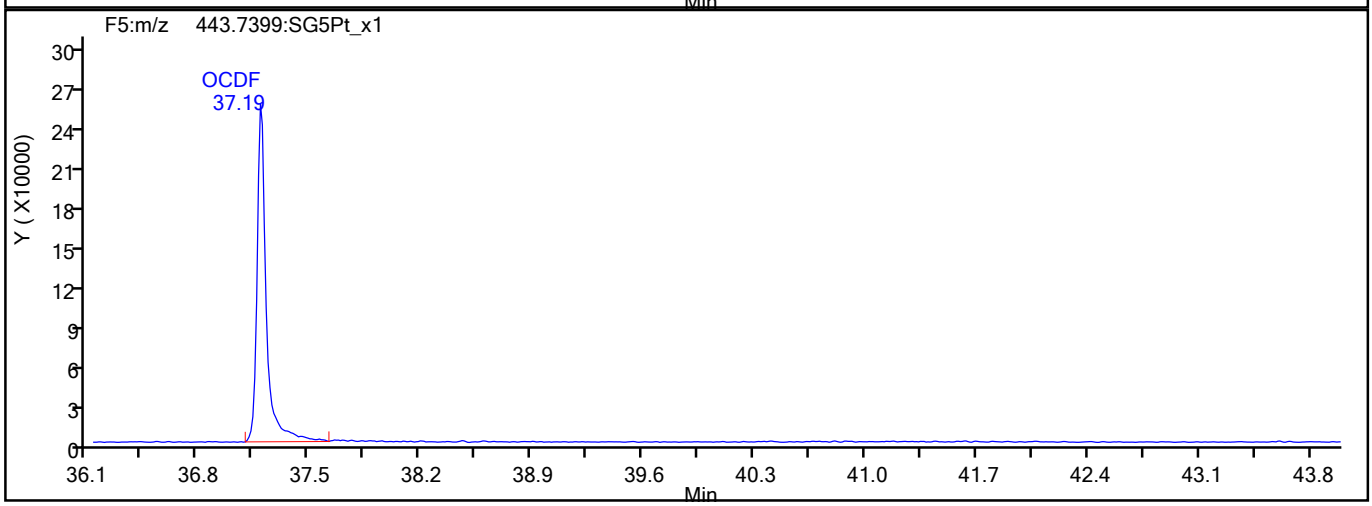

OCDF Interference Mass

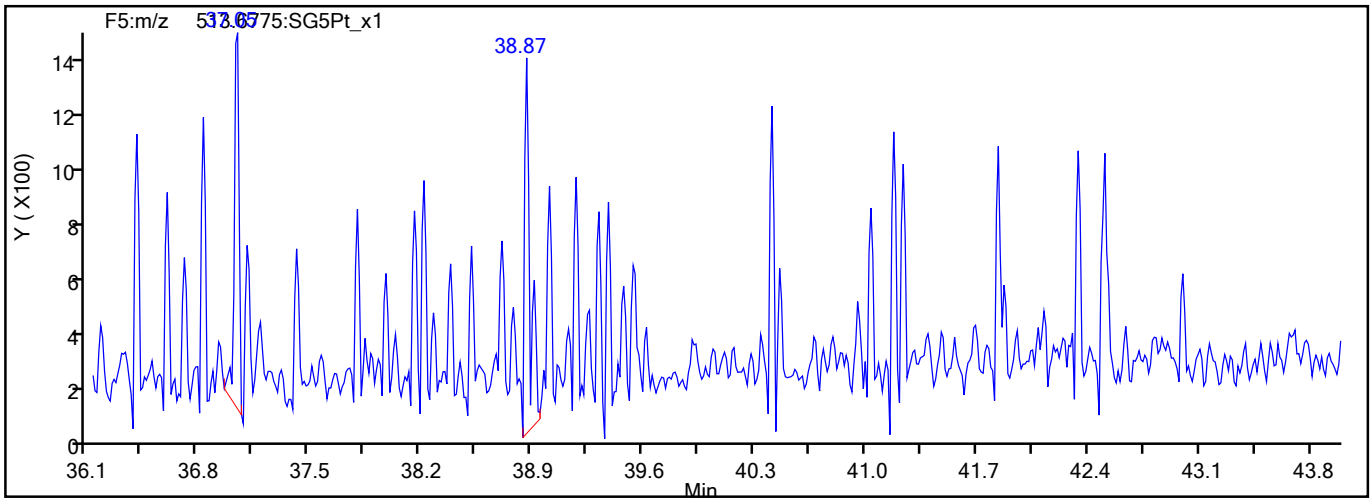

776078

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

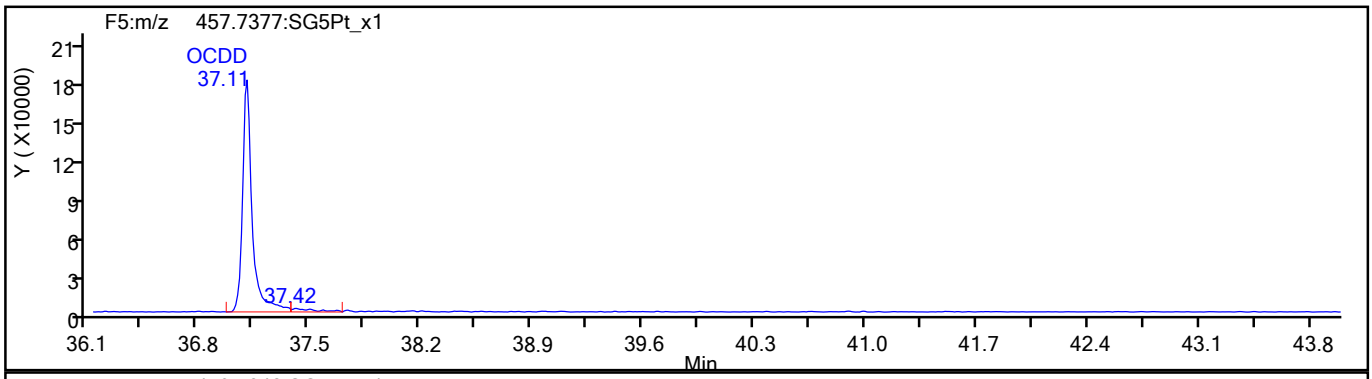

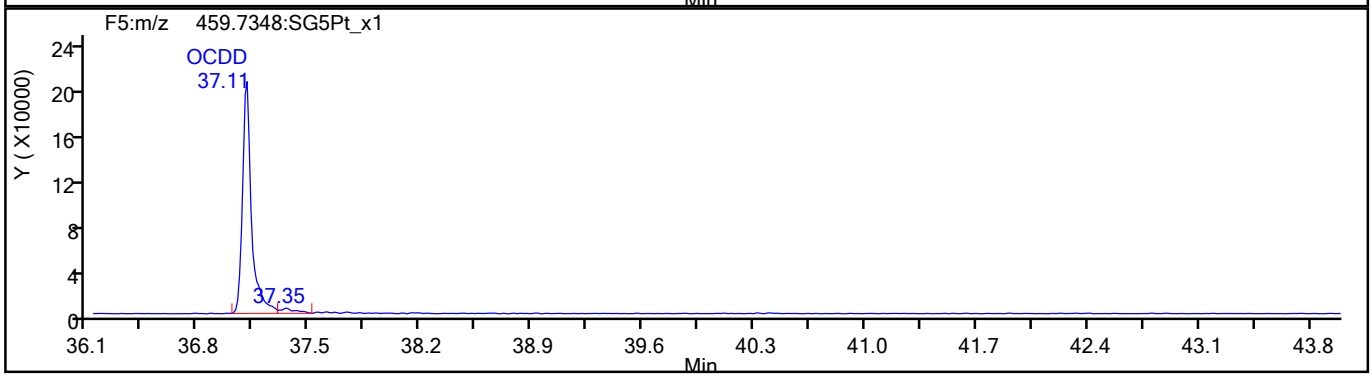

OCDD Standards

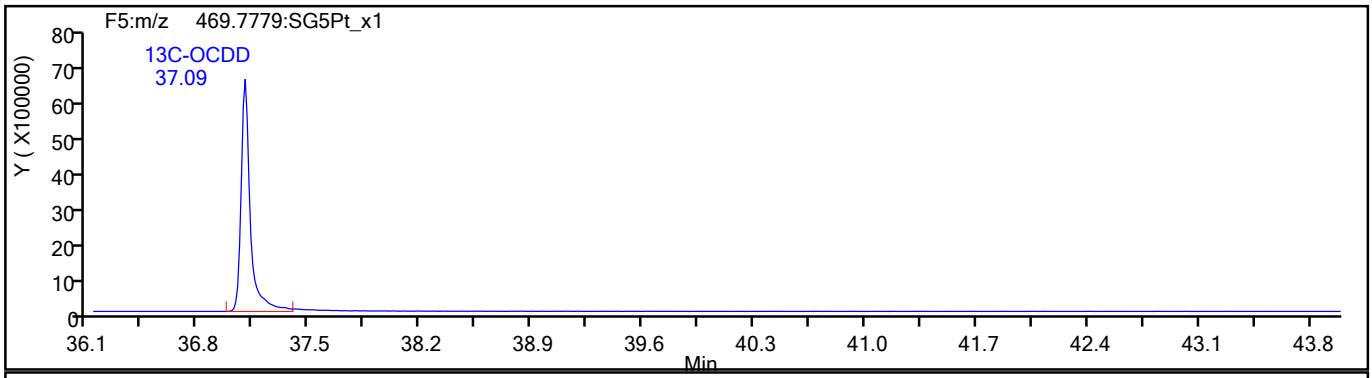

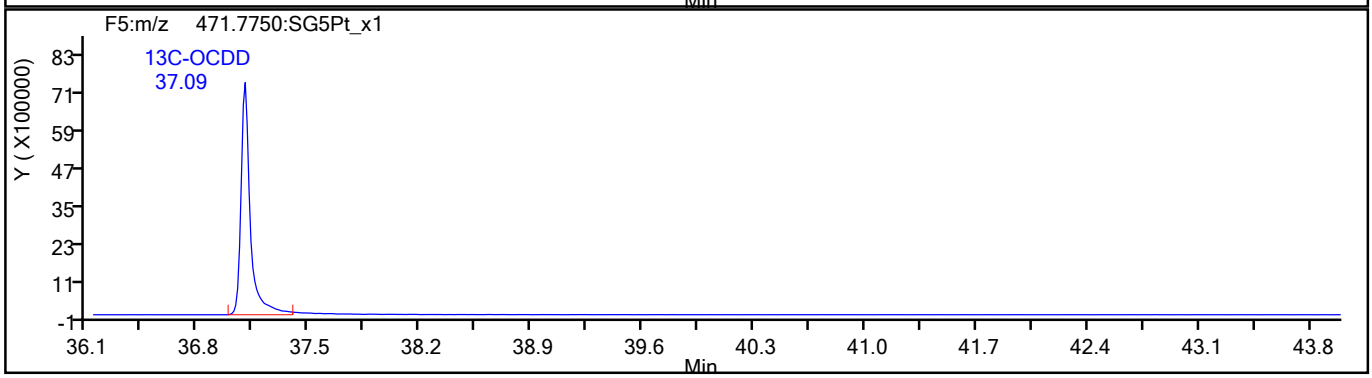

776079

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

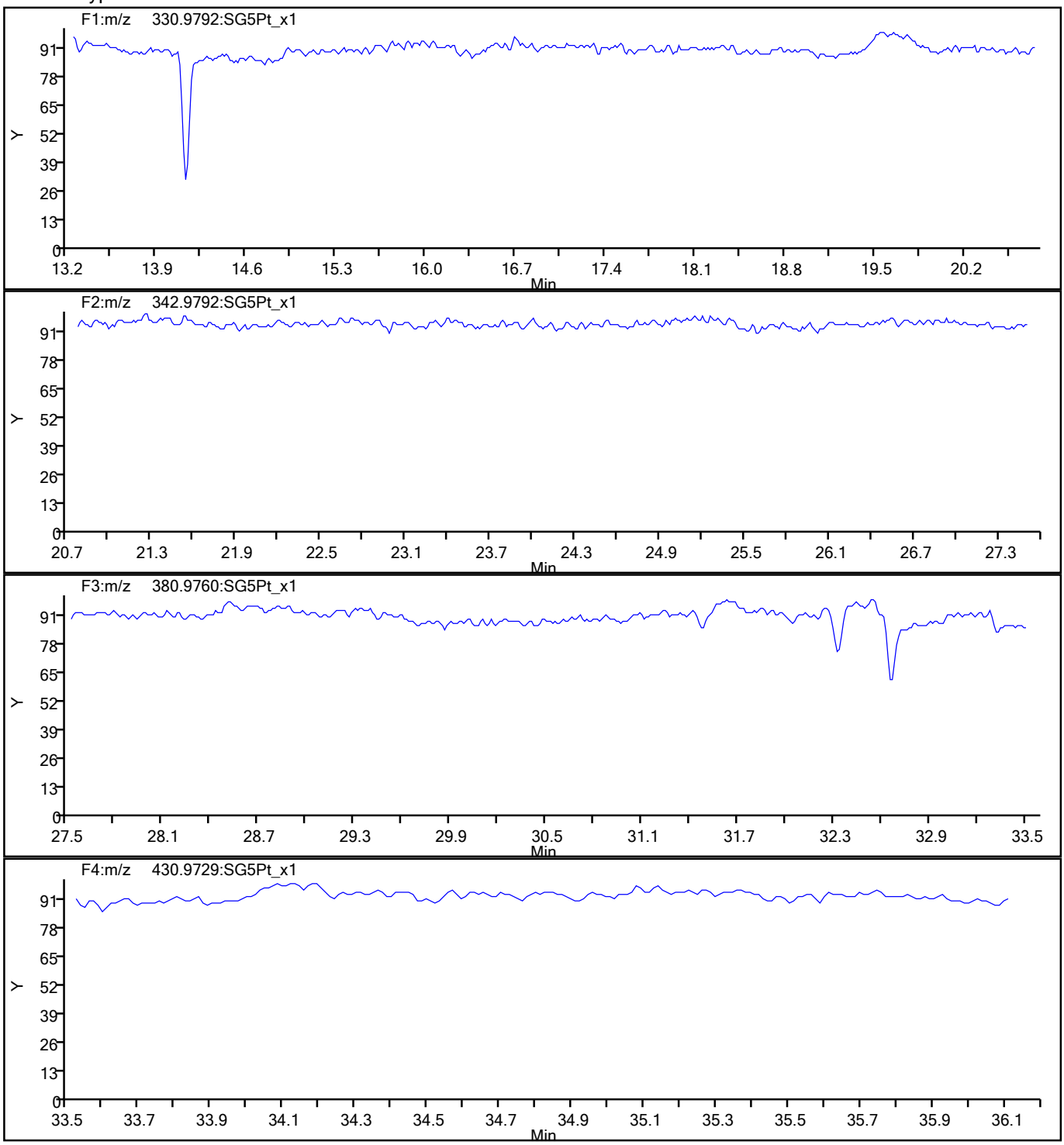

776080

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

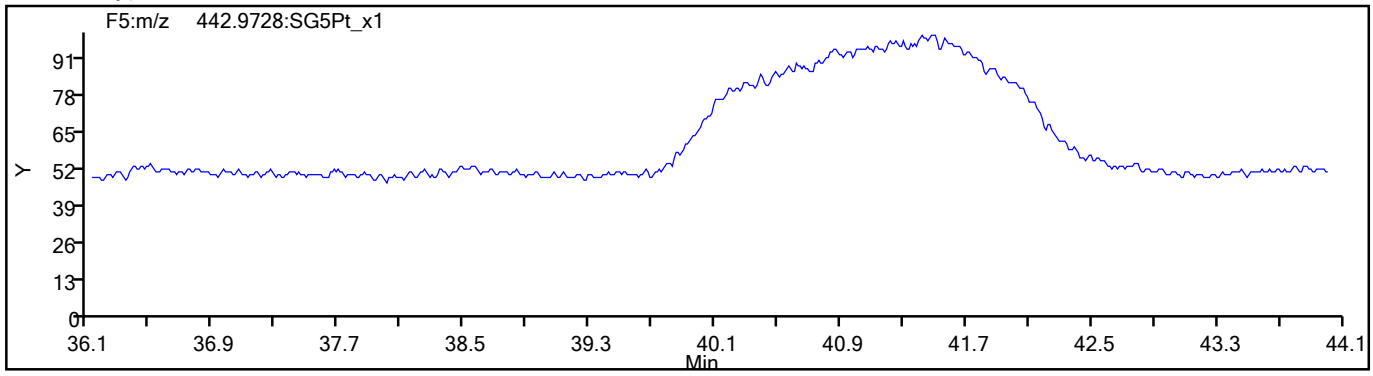

776081

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62853211	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	98246522	0.78	1.6249	96.2	96.2	0.1370	0.1370	96.20	
2,3,7,8-TCDF	17.628	1709191	0.74	1.0239	1.699	1.699	0.0115	0.0115	84.95	
S Total TCDF					1.699	1.699	0.0115	0.0115		
D 13C-2,3,7,8-TCDD	18.338	53975587	0.81	0.8993	95.5	95.5	0.1627	0.1627	95.49	
$ 37Cl4-2,3,7,8-TCDD	18.354	1231219		1.1071	1.769	1.769	0.009070	0.009070	88.47	
2,3,7,8-TCDD	18.354	1184284	0.77	1.2541	1.750	1.750	0.0187	0.0187	87.48	
S Total TCDD					1.750	1.750	0.0187	0.0187		
D 13C-1,2,3,7,8-PeCDF	22.749	72525655	1.59	1.2101	95.4	95.4	0.2163	0.2163	95.36	
1,2,3,7,8-PeCDF	22.776	6620354	1.62	1.0611	8.602	8.602	0.0369	0.0369	86.02	
D 13C-2,3,4,7,8-PeCDF	24.126	74944110	1.59	1.2395	96.2	96.2	0.2111	0.2111	96.20	a
2,3,4,7,8-PeCDF	24.153	6452410	1.61	1.0184	8.454	8.454	0.0398	0.0398	84.54	
S Total PeCDF					17.1	17.1	0.0383	0.0383		
D 13C-1,2,3,7,8-PeCDD	24.862	46721712	1.62	0.7612	97.7	97.7	0.1174	0.1174	97.65	
1,2,3,7,8-PeCDD	24.889	4219570	1.58	1.0484	8.614	8.614	0.0282	0.0282	86.14	
S Total PeCDD					8.614	8.614	0.0282	0.0282		
D 13C-1,2,3,4,7,8-HxCDF	30.835	65726932	0.51	1.0837	101.6	101.6	0.5284	0.5284	102	a
1,2,3,4,7,8-HxCDF	30.848	6041767	1.22	1.0851	8.471	8.471	0.0611	0.0611	84.71	
D 13C-1,2,3,6,7,8-HxCDF	30.995	68089005	0.53	1.1279	101.1	101.1	0.5077	0.5077	101	
1,2,3,6,7,8-HxCDF	31.021	6561860	1.24	1.1260	8.559	8.559	0.0596	0.0596	85.59	
D 13C-2,3,4,6,7,8-HxCDF	31.753	64406928	0.52	1.0637	101.4	101.4	0.5383	0.5383	101	
2,3,4,6,7,8-HxCDF	31.767	6352404	1.21	1.1675	8.448	8.448	0.0492	0.0492	84.48	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58828058	0.51	0.9676	101.8	101.8	0.5918	0.5918	102	
1,2,3,7,8,9-HxCDF	32.526	5963032	1.22	1.1664	8.691	8.691	0.0536	0.0536	86.91	
S Total HxCDF					34.2	34.2	0.0559	0.0559		
* 13C-1,2,3,7,8,9-HxCDD	32.339	59719891	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44877133	1.26	0.7334	102.5	102.5	0.4904	0.4904	102	a
1,2,3,4,7,8-HxCDD	31.940	3996910	1.25	1.0640	8.370	8.370	0.0541	0.0541	83.70	
D 13C-1,2,3,6,7,8-HxCDD	32.033	52974056	1.27	0.8802	100.8	100.8	0.4087	0.4087	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.046	4517909	1.28	1.0001	8.528	8.528	0.0541	0.0541	85.28	
1,2,3,7,8,9-HxCDD	32.353	4612548	1.27	1.1325	8.324	8.324	0.0492	0.0492	83.24	
S Total HxCDD					25.2	25.2	0.0525	0.0525		
D 13C-1,2,3,4,6,7,8-HpCDF	33.911	46691158	0.44	0.7730	101.1	101.1	1.219	1.219	101	
1,2,3,4,6,7,8-HpCDF	33.924	5795616	1.06	1.4413	8.612	8.612	0.0908	0.0908	86.12	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	42362179	0.44	0.7008	101.2	101.2	1.344	1.344	101	a
1,2,3,4,7,8,9-HpCDF	35.017	4773949	1.04	1.3174	8.554	8.554	0.1198	0.1198	85.54	
S Total HpCDF					17.2	17.2	0.1053	0.1053		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	38689128	1.01	0.6472	100.1	100.1	0.6644	0.6644	100	
1,2,3,4,6,7,8-HpCDD	34.725	3690749	1.06	1.0943	8.717	8.717	0.0588	0.0588	87.17	
S Total HpCDD					8.717	8.717	0.0588	0.0588		
D 13C-OCDD	37.093	52034518	0.88	0.4472	194.9	194.9	0.3057	0.3057	97.43	
OCDF	37.189	6198469	0.89	1.4382	16.6	16.6	0.0331	0.0331	82.83	
OCDD	37.105	5013385	0.90	1.1070	17.4	17.4	0.0477	0.0477	87.03	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28386456	7046087	6003	15007	1174		
333.9339	18.142	18.142	0		34466755	8558284	3128	7820	2736	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42972486	10763336	8679	21697	1240		
317.9389	17.613	17.616	0	0.971	55274036	13878642	5218	13045	2660	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	725190	178427	386	965	462		
305.8987	17.628	17.631	0	1.001	984001	248871	771	1927	323	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24153490	5697854	6003	15007	949		
333.9339	18.338	18.338	0	1.011	29822097	7031837	3128	7820	2248	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	1231219	295748	627	1567	472		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	516509	120344	727	1817	166		
321.8936	18.354	18.357	0	1.001	667775	162973	470	1175	347	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44514928	7853181	9659	24147	813		
353.8970	22.749	22.754	0	1.254	28010727	4960984	6675	16687	743	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	4089215	716349	1056	2640	678		
341.8567	22.776	22.779	0	1.001	2531139	446464	949	2372	470	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											a
351.9000	24.126	24.129	0	1.330	46033296	7621284	9659	24147	789		a
353.8970	24.126	24.129	0	1.330	28910814	4739818	6675	16687	710	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	3984657	653372	1056	2640	619		
341.8567	24.153	24.156	0	1.001	2467753	411895	949	2372	434	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28869986	4442492	3510	8775	1266		
369.8919	24.862	24.865	0	1.370	17851726	2719251	2068	5170	1315	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	2584600	398905	491	1227	812		
357.8516	24.889	24.892	0	1.001	1634970	246537	355	887	694	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											a
383.8639	30.835	30.838	0	0.953	22324815	4908430	11721	29302	419		a
385.8610	30.835	30.838	0	0.953	43402117	9487505	22146	55365	428	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.848	30.857	0	1.000	3322045	734549	2125	5312	346		
375.8178	30.848	30.857	0	1.000	2719722	584076	1696	4240	344	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	23443638	4852452	11721	29302	414		
385.8610	30.995	31.003	0	0.958	44645367	9390378	22146	55365	424	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.001	3628802	774738	2125	5312	365		
375.8178	31.021	31.022	0	1.001	2933058	621989	1696	4240	367	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.753	31.756	0	0.982	22116278	5724833	11721	29302	488		
385.8610	31.753	31.756	0	0.982	42290650	10891641	22146	55365	492	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	3476984	900887	2125	5312	424		
375.8178	31.767	31.772	0	1.000	2875420	748664	1696	4240	441	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	19952155	5224965	11721	29302	446		
385.8610	32.512	32.523	-1	1.005	38875903	10047992	22146	55365	454	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	3272570	870864	2125	5312	410		
375.8178	32.526	32.534	0	1.000	2690462	702575	1696	4240	414	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33208186	8207924	11753	29382	698		
403.8529	32.339	32.342	0		26511705	6578059	9521	23802	691	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	31.927	31.929	0	0.987	24991401	7247079	11753	29382	617		a
403.8529	31.927	31.929	0	0.987	19885732	5749736	9521	23802	604	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	2220855	634454	1798	4495	353		
391.8127	31.940	31.945	0	1.000	1776055	520388	1195	2987	435	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29637474	7731021	11753	29382	658		
403.8529	32.033	32.033	0	0.991	23336582	6105317	9521	23802	641	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.046	32.047	0	1.000	2539756	681391	1798	4495	379		
391.8127	32.046	32.047	0	1.000	1978153	525440	1195	2987	440	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	2578931	681238	1798	4495	379		
391.8127	32.353	32.355	0	1.013	2033617	530890	1195	2987	444	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.911	33.914	0	1.049	14324046	4548819	17096	42740	266		
419.8220	33.911	33.914	0	1.049	32367112	10373412	38619	96547	269	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	2984390	989226	3939	9847	251		
409.7789	33.924	33.926	0	1.000	2811226	912647	3871	9677	236	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											a
417.8253	35.005	35.010	0	1.082	12913204	3817815	17096	42740	223		a
419.8220	35.005	35.010	0	1.082	29448975	8551787	38619	96547	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	2430692	699814	3939	9847	178		
409.7789	35.017	35.020	0	1.000	2343257	686031	3871	9677	177	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19472945	5796031	12697	31742	456		
437.8140	34.714	34.716	0	1.073	19216183	5692167	12738	31845	447	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.725	34.726	0	1.000	1901971	557241	1605	4012	347		
425.7737	34.725	34.726	0	1.000	1788778	518346	1352	3380	383	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	24422535	6155132	2912	7280	2114		
471.7750	37.093	37.094	0	1.147	27611983	6845350	5172	12930	1324	0.88(0.76-1.02)	
OCDF											
441.7428	37.189	37.199	-1	1.003	2921445	715883	635	1587	1127		
443.7399	37.189	37.199	-1	1.003	3277024	845078	603	1507	1401	0.89(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	2373314	577341	633	1582	912		
459.7348	37.105	37.106	0	1.000	2640071	638330	739	1847	864	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.13

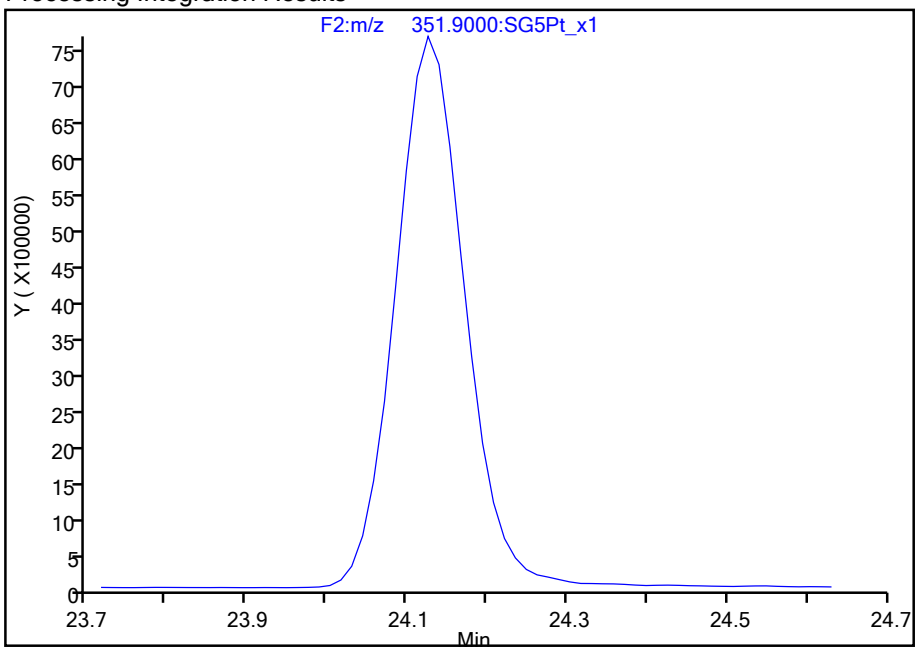

Manual Integration Results

RT: 24.13
Area: 46033296
Amount: 96.198549
Amount Units: pg/ul

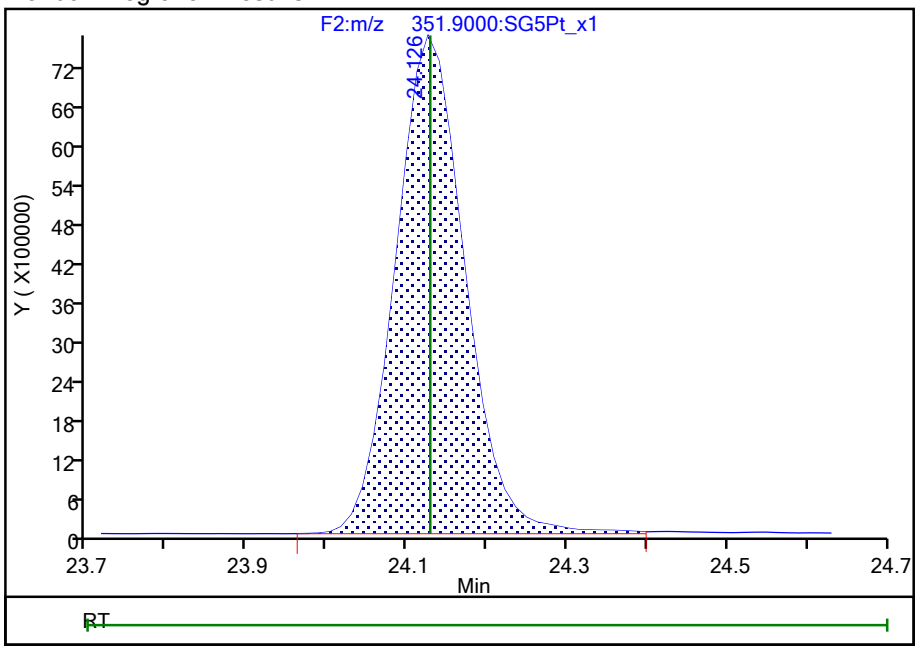

Reviewer: arghestanis, 26-Jul-2021 12:30:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDF, CAS: 114423-98-2

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.84

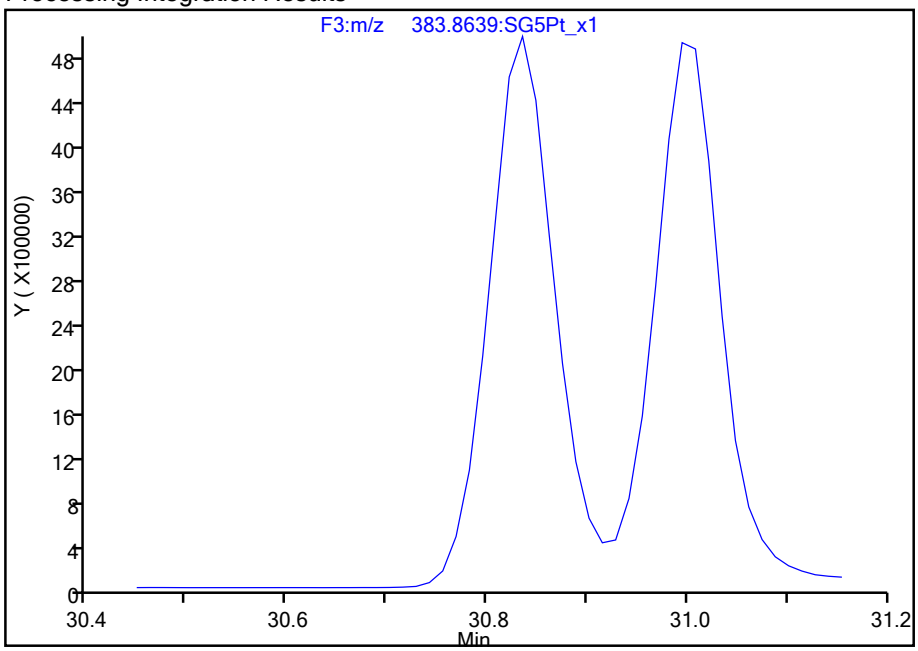

Manual Integration Results

RT: 30.84
Area: 22324815
Amount: 101.5622
Amount Units: pg/ul

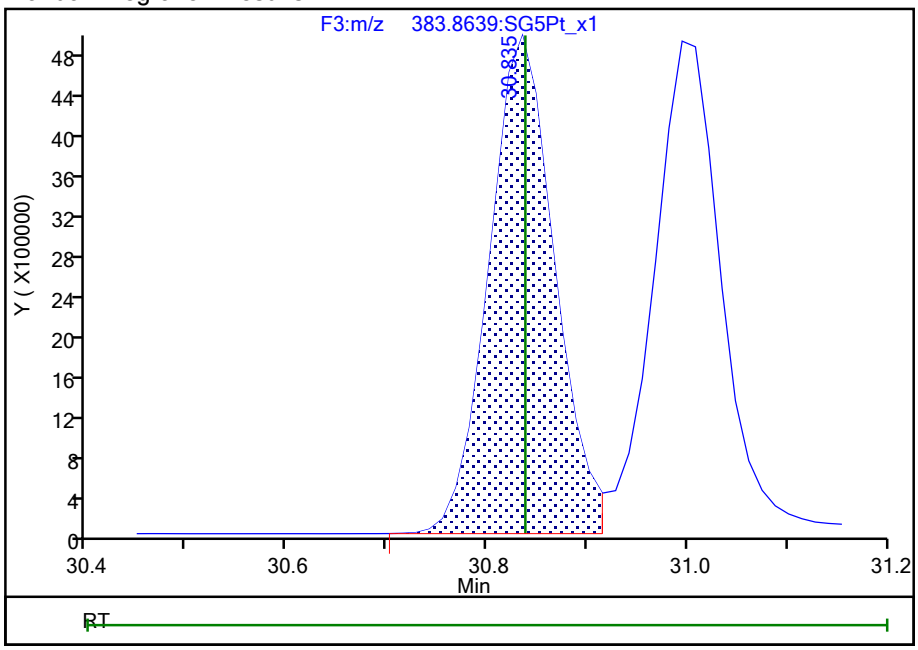

Reviewer: arghestanis, 26-Jul-2021 12:30:40
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

776088

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.93

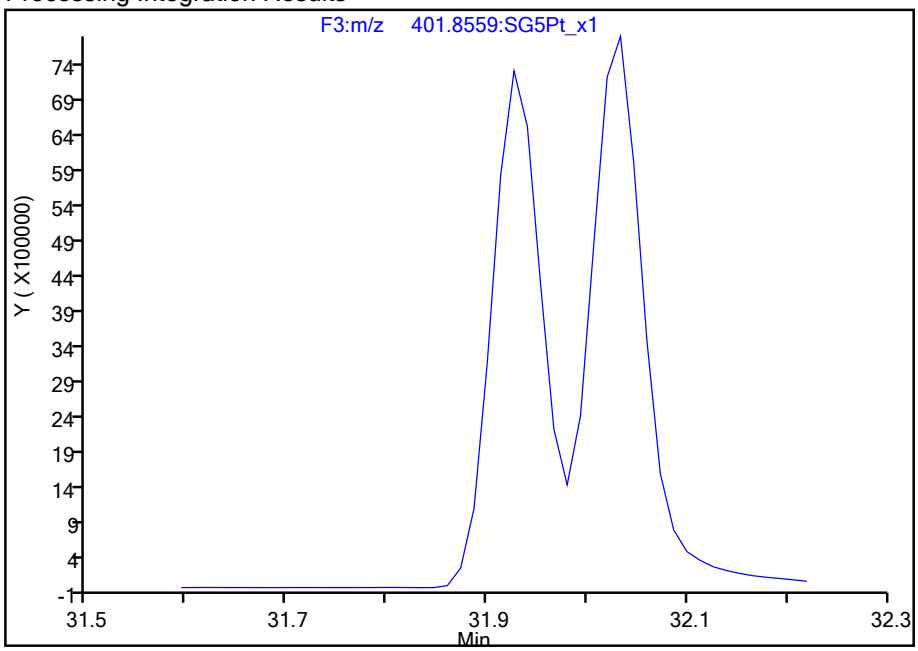

Manual Integration Results

RT: 31.93
Area: 24991401
Amount: 102.4585
Amount Units: pg/ul

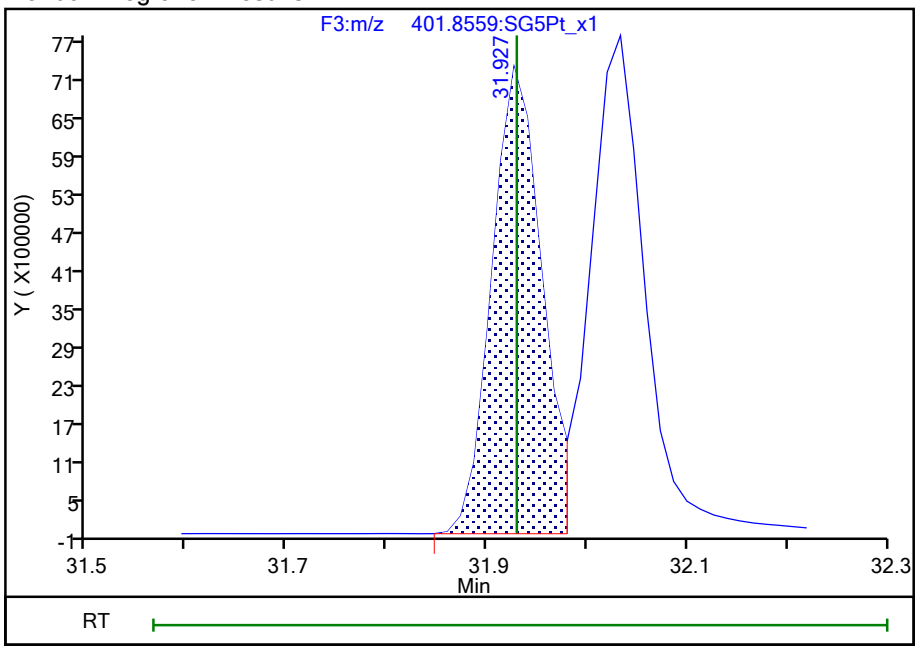

Reviewer: arghestanis, 26-Jul-2021 12:30:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

776089

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.01

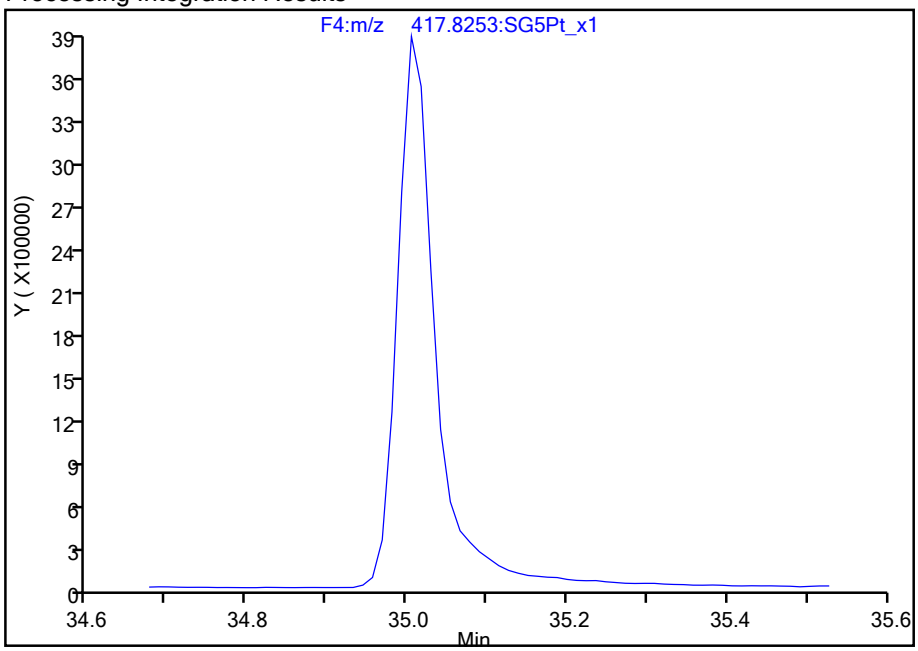

Manual Integration Results

RT: 35.01
Area: 12913204
Amount: 101.2180
Amount Units: pg/ul

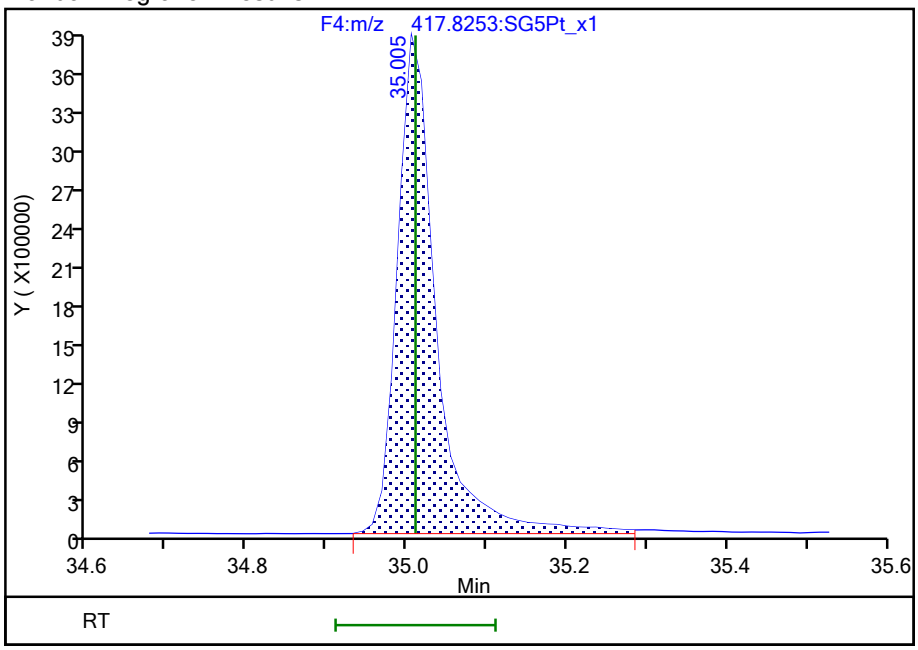

Reviewer: arghestanis, 26-Jul-2021 12:31:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

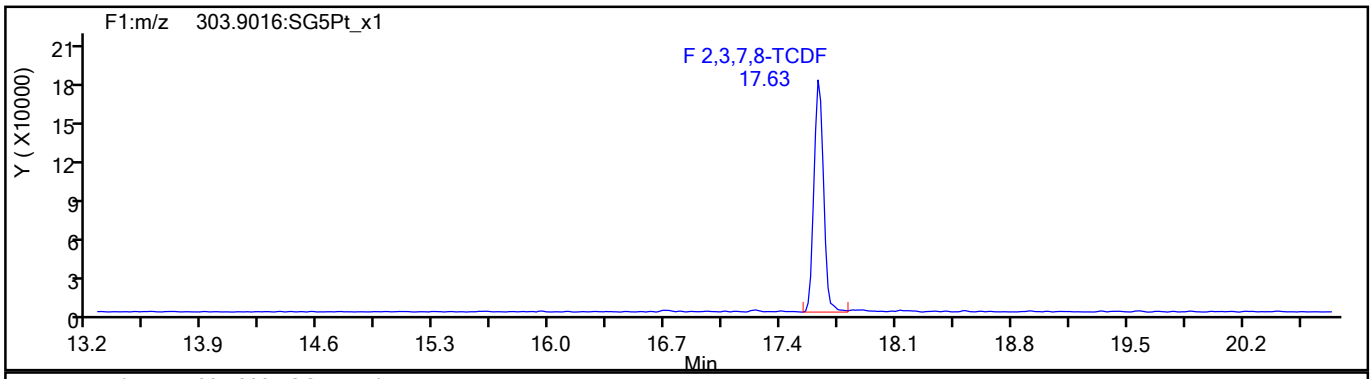

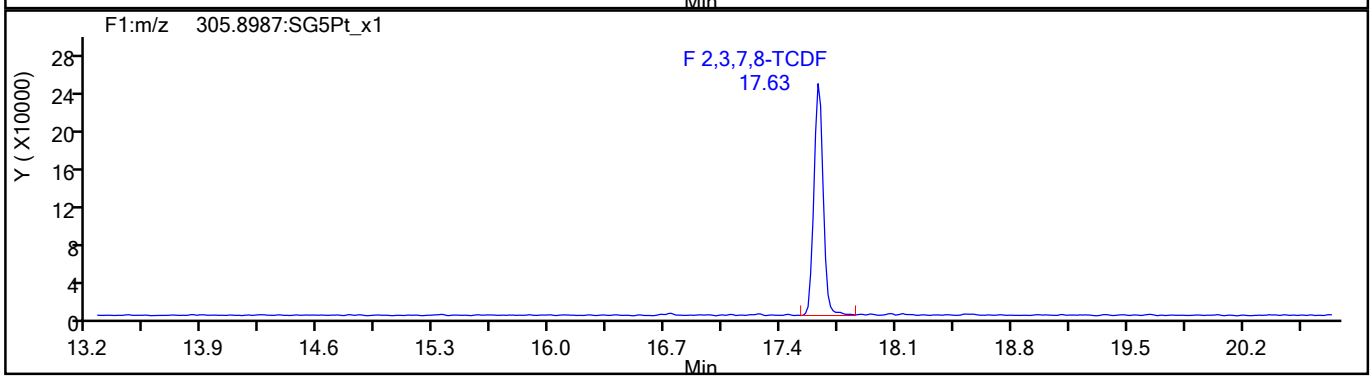

TCDF Standards

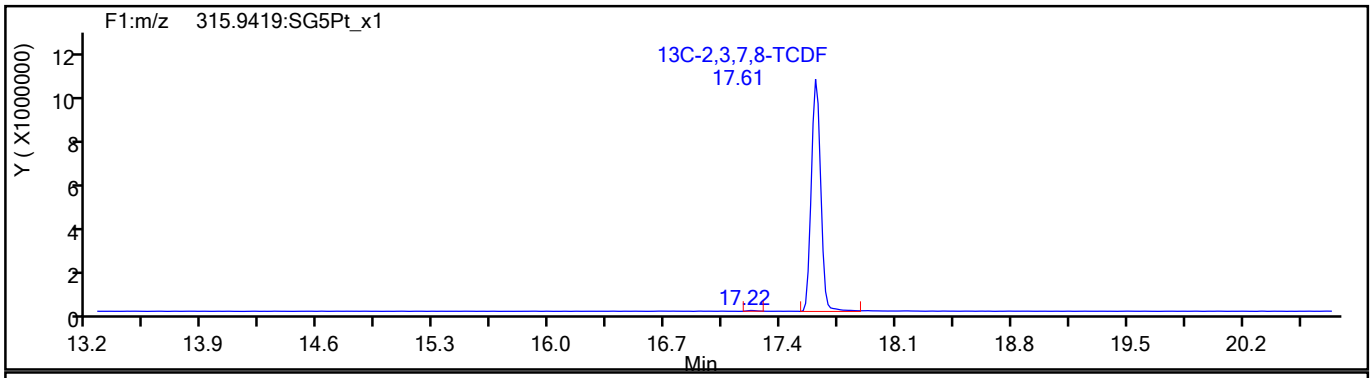

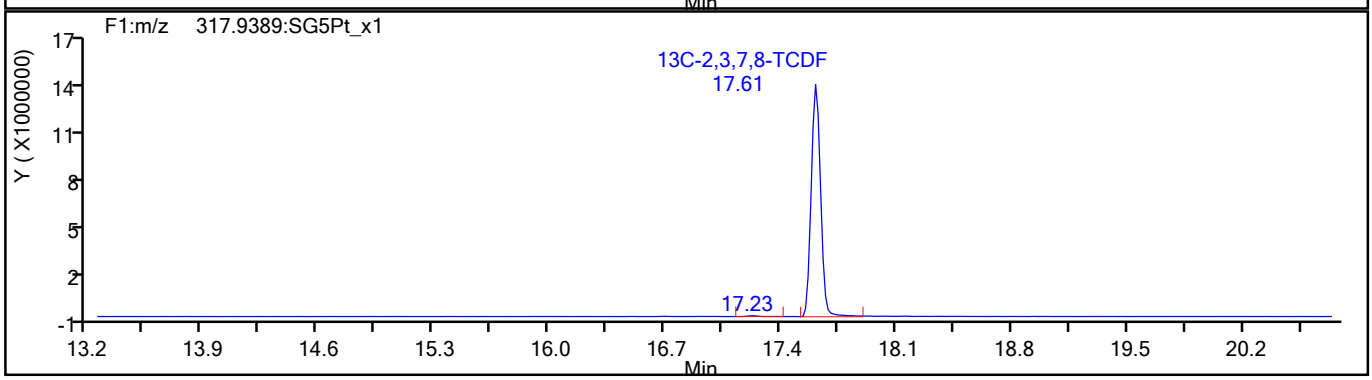

776091

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

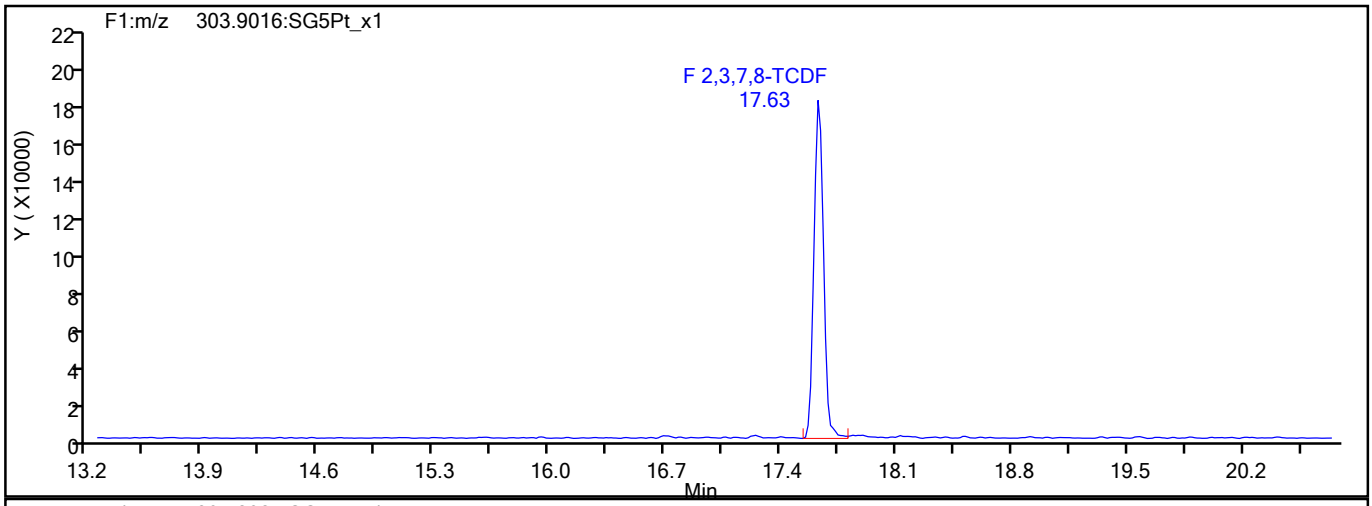

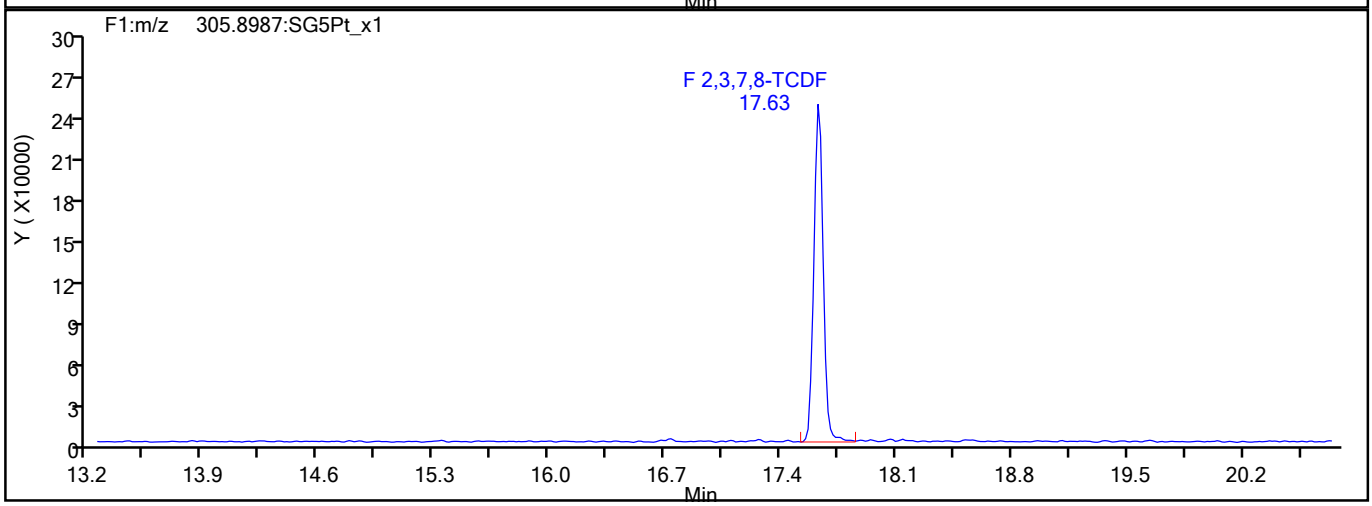

TCDF Interference Mass

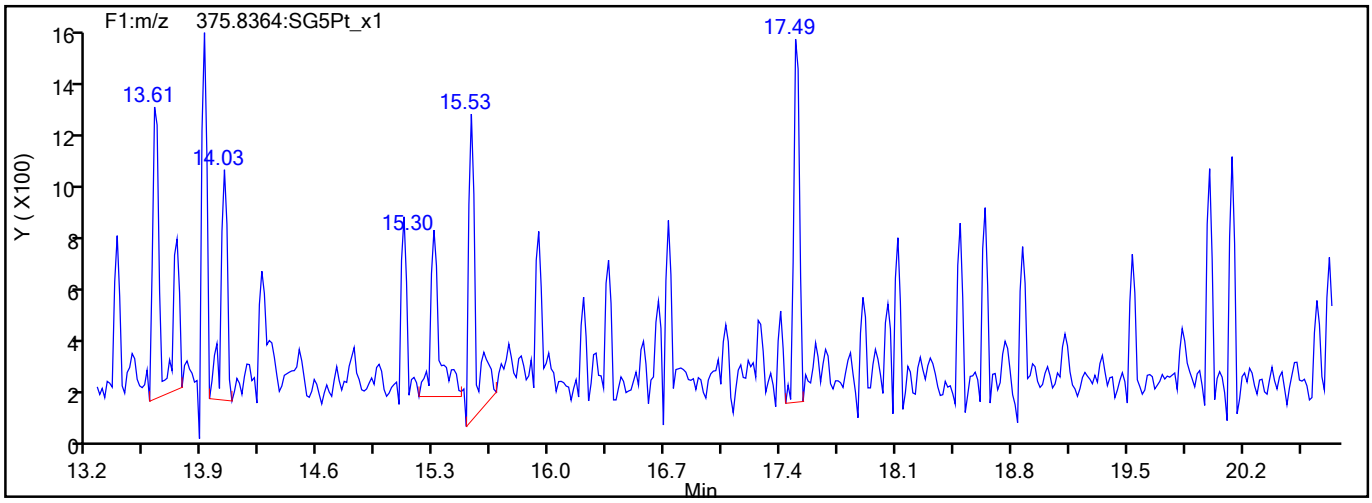

776092

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

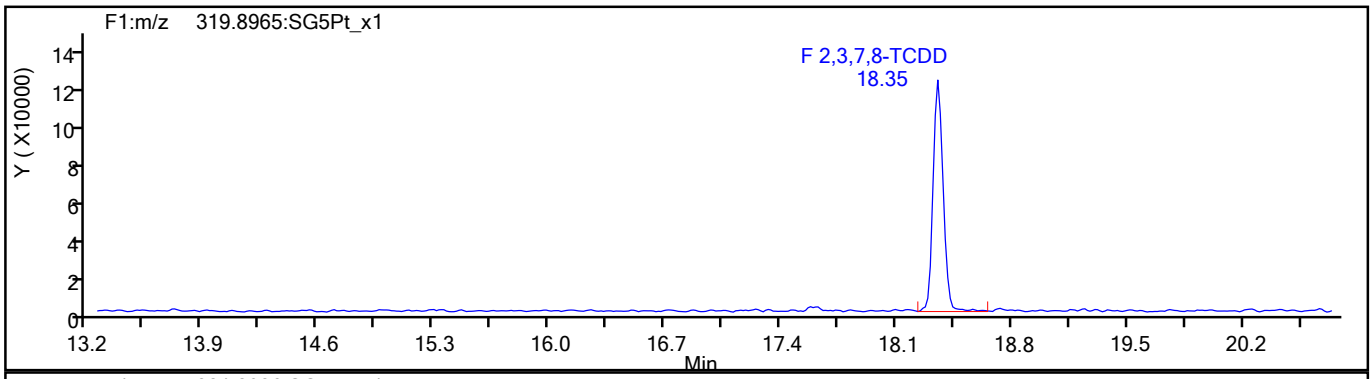

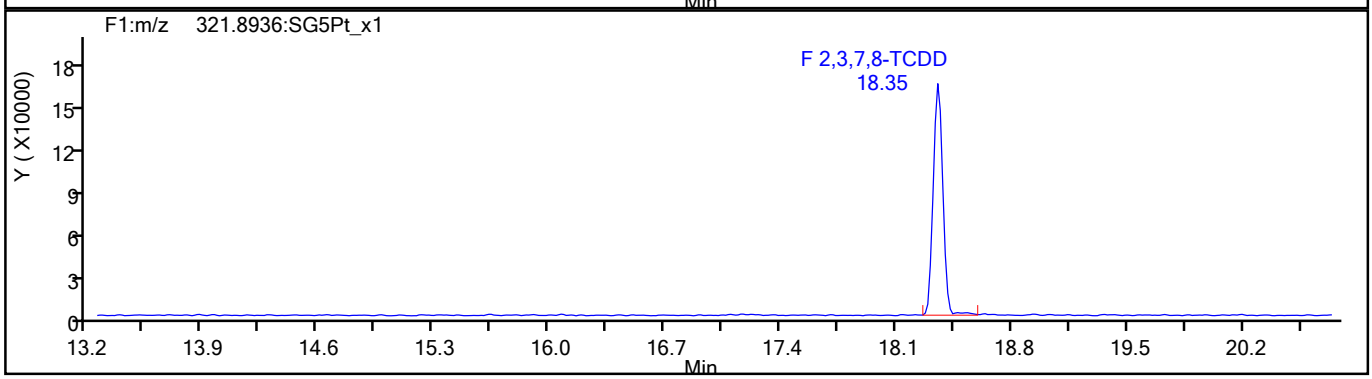

TCDD Standards

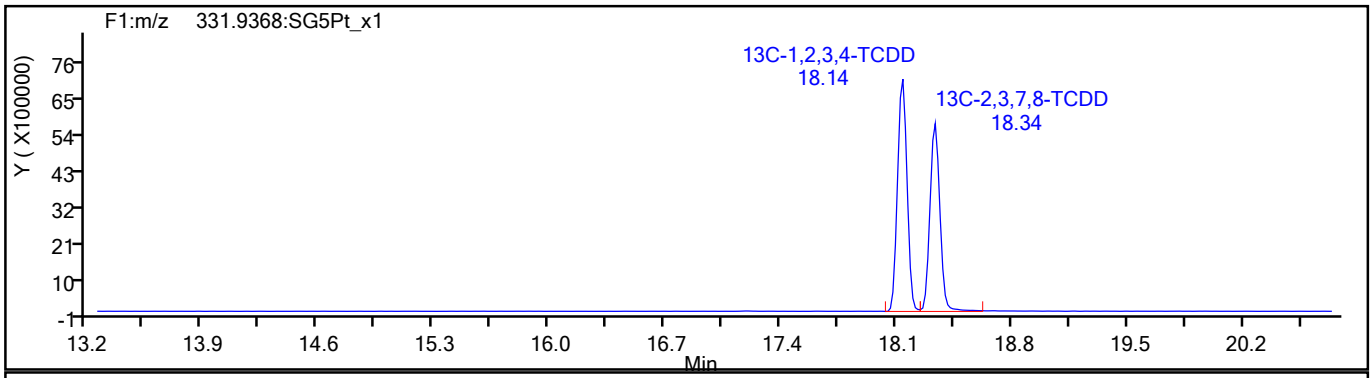

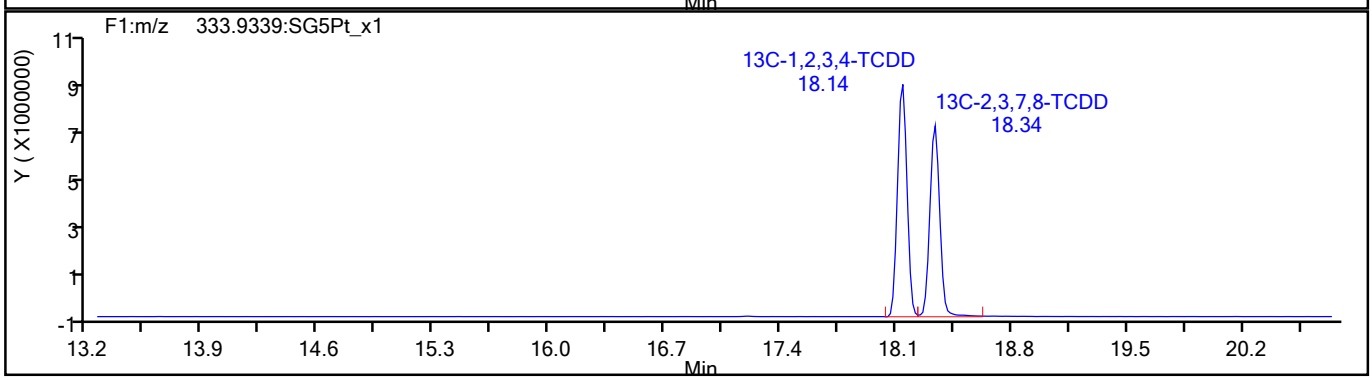

776093

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

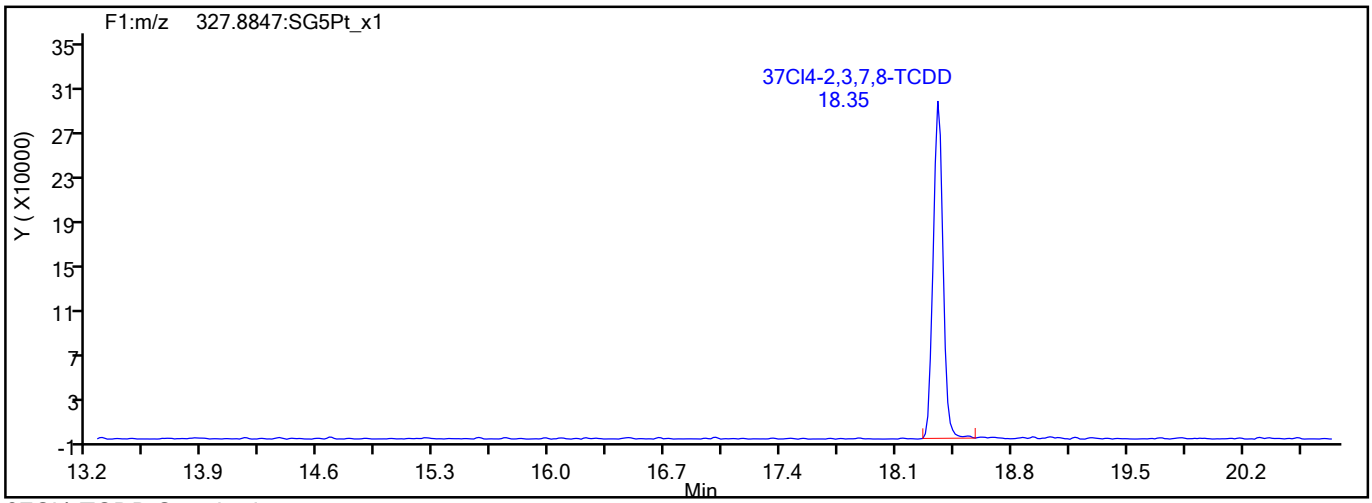

37Cl4-TCDD Standards

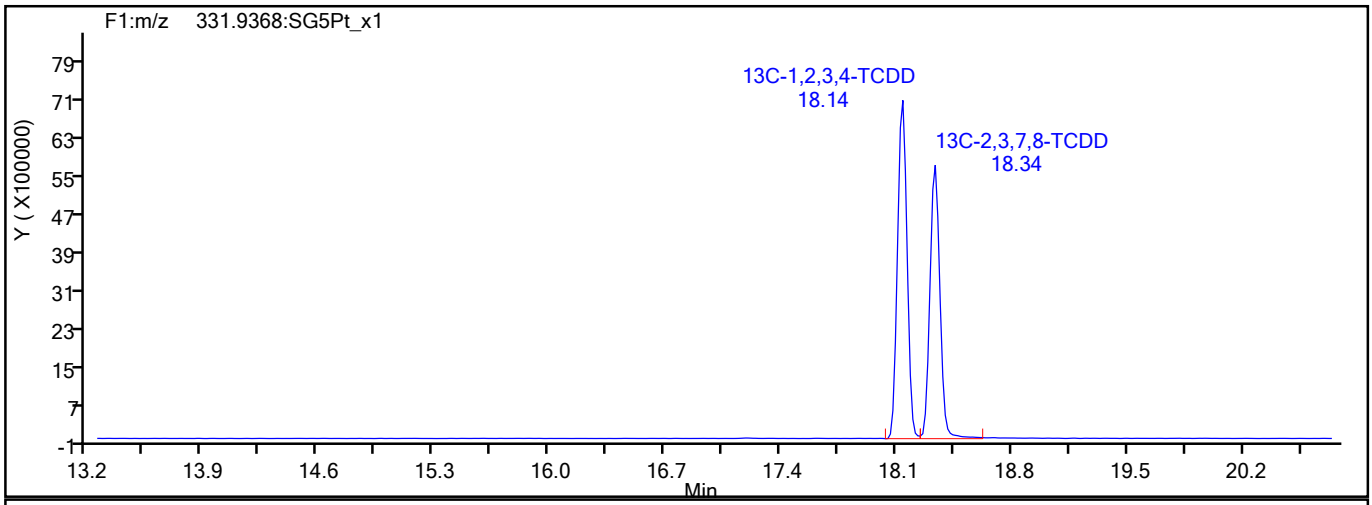

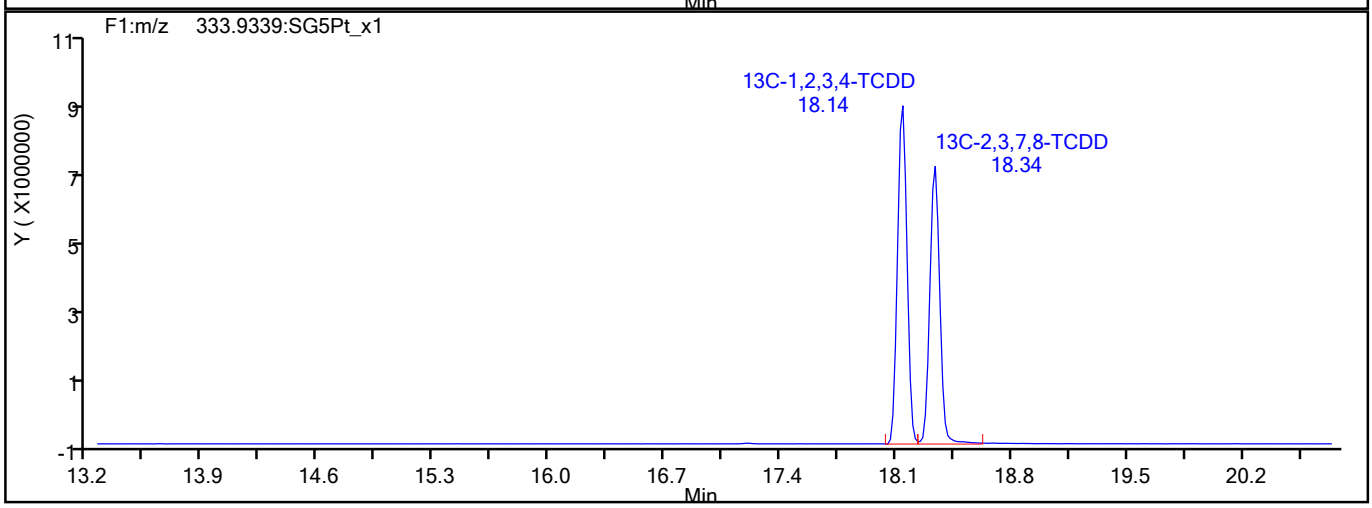

776094

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

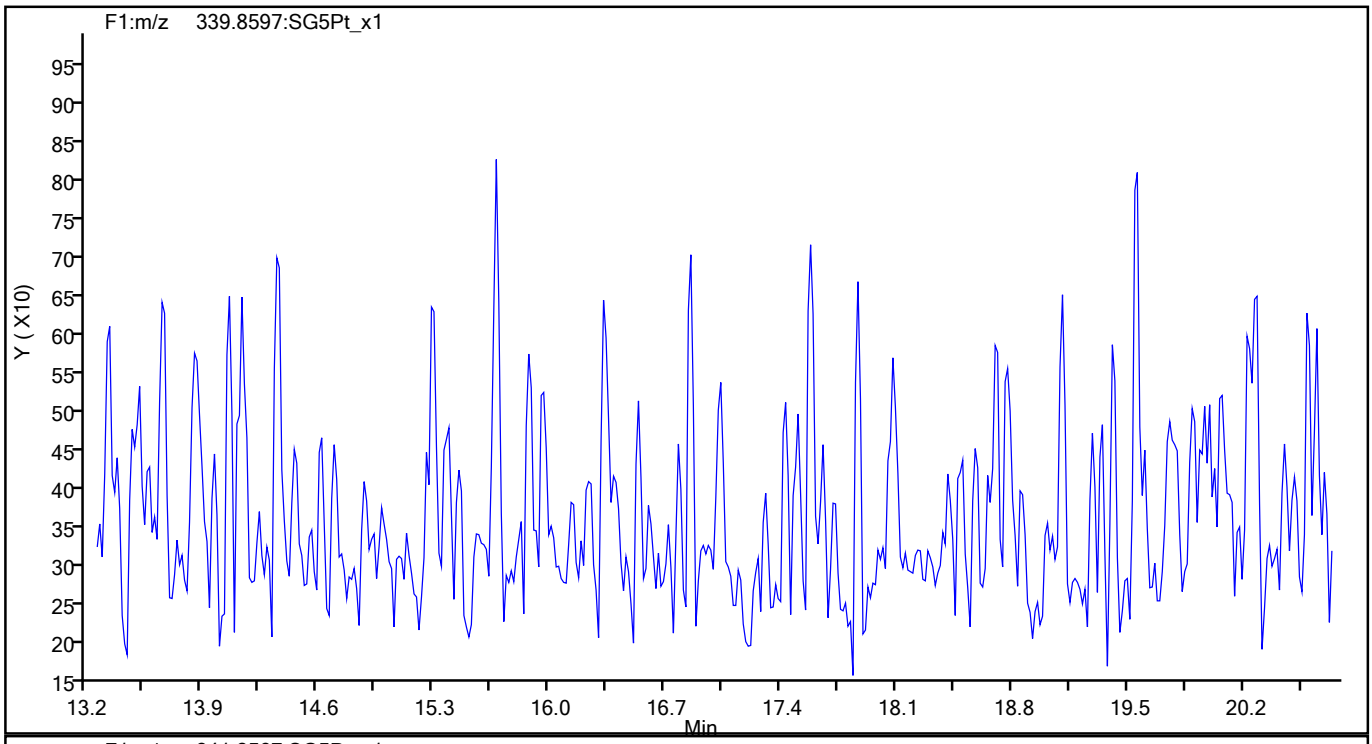

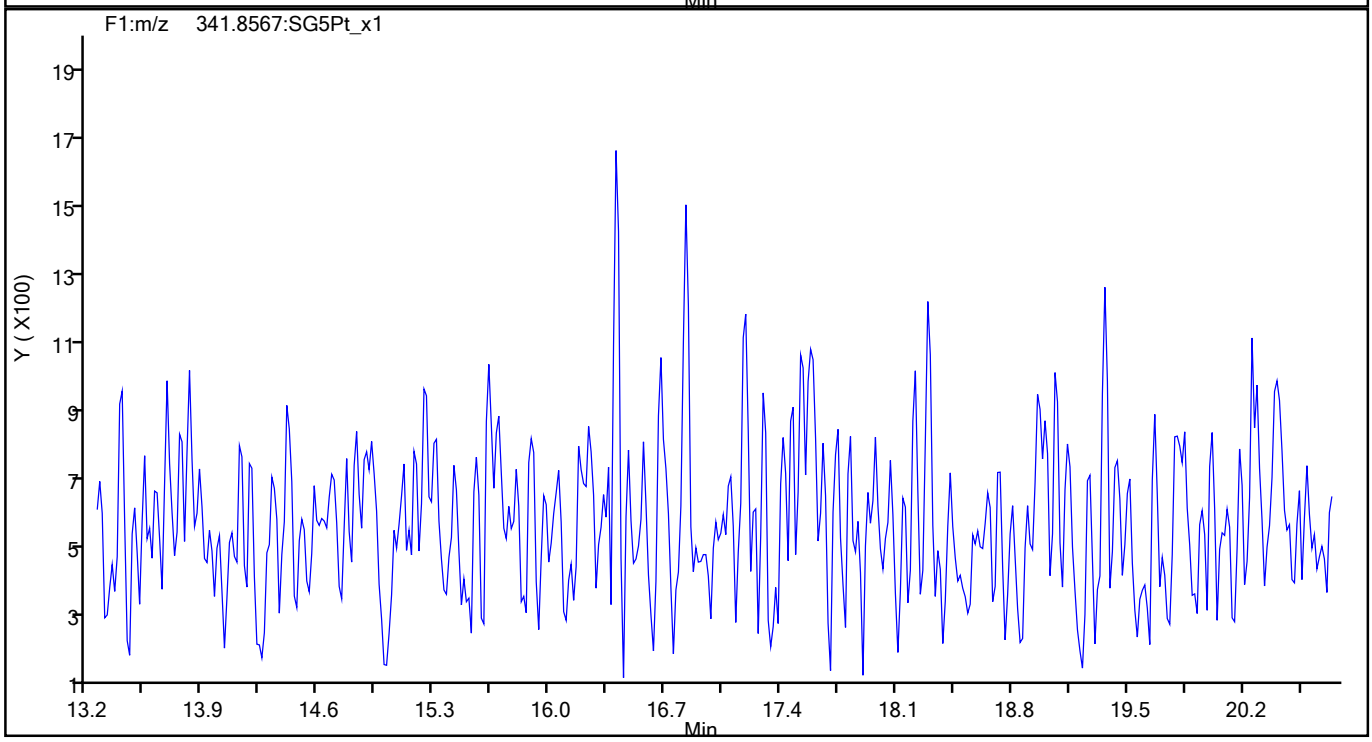

776095

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

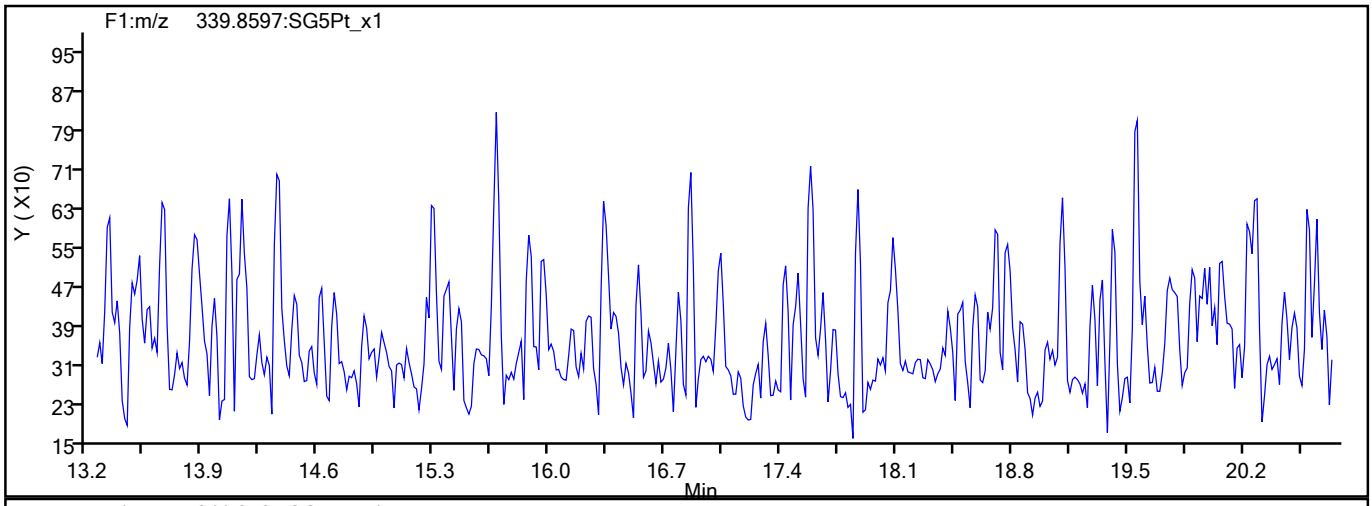

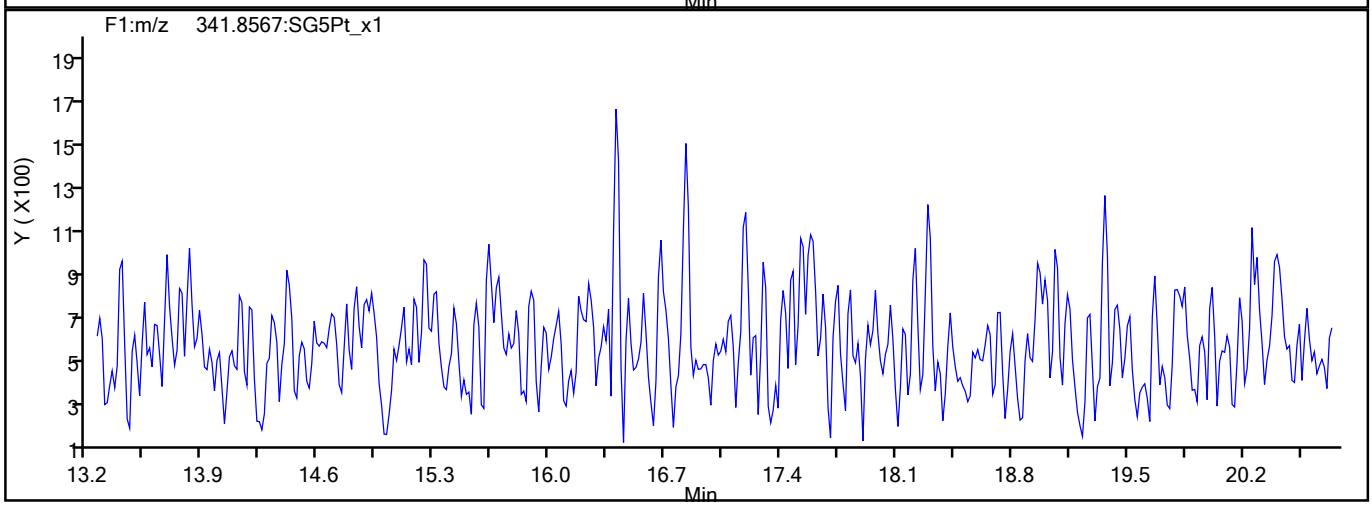

F1 PeCDFs Interference Mass

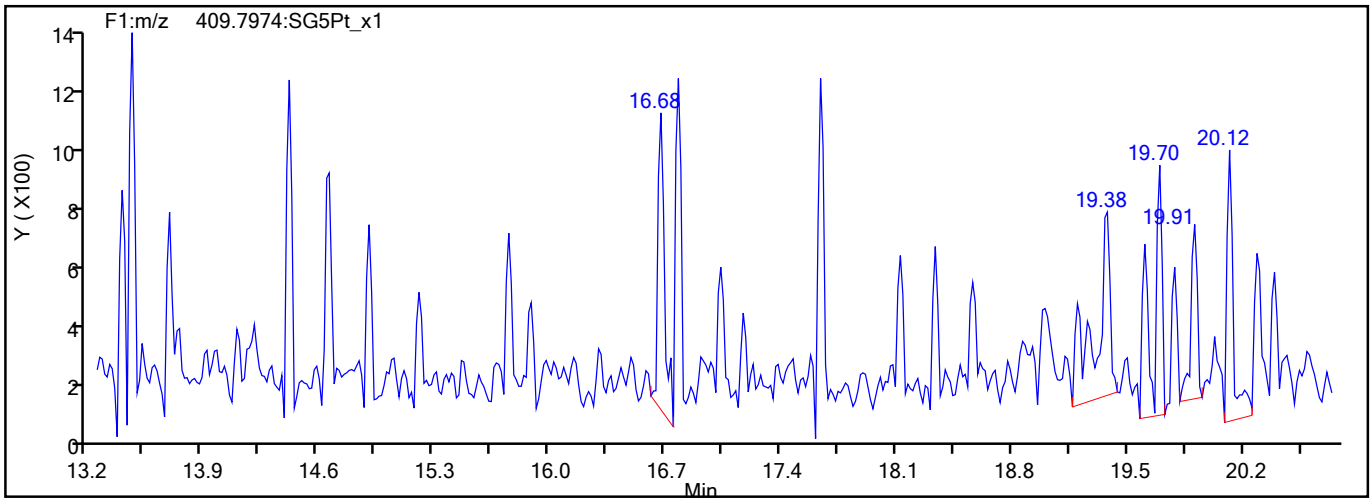

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Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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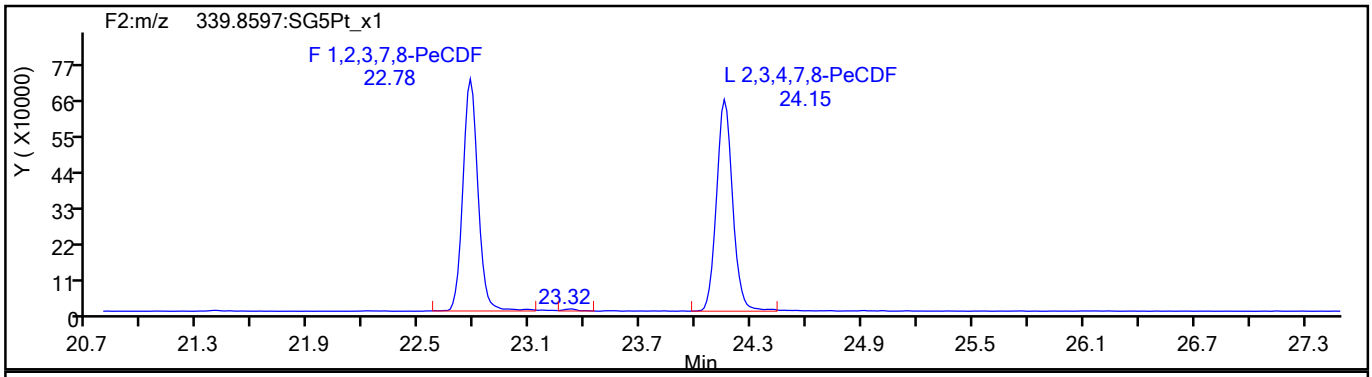

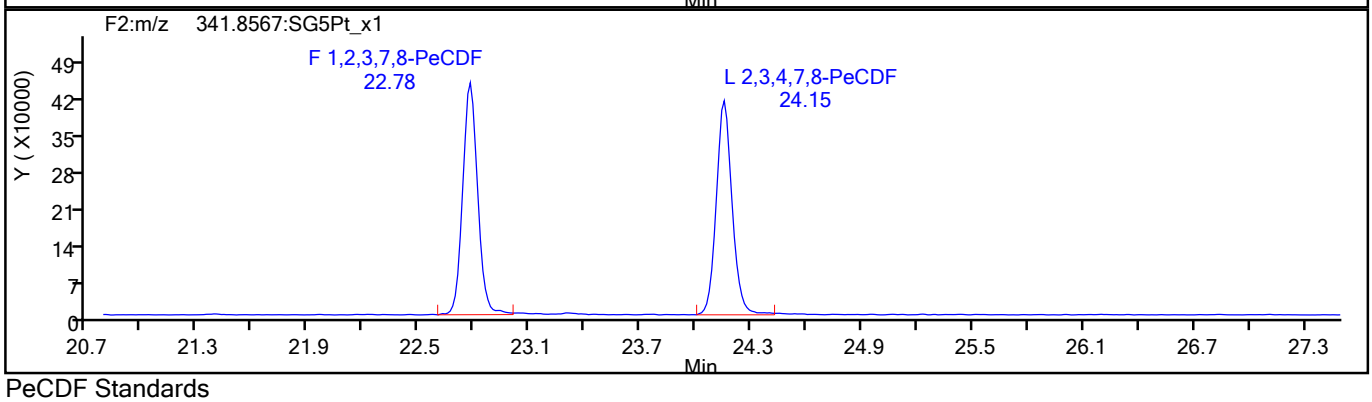

PeCDF Standards

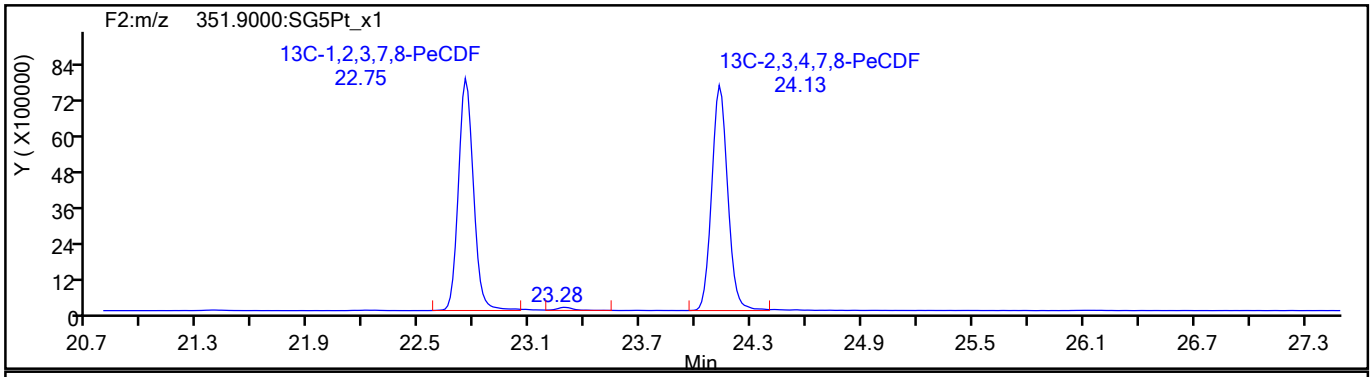

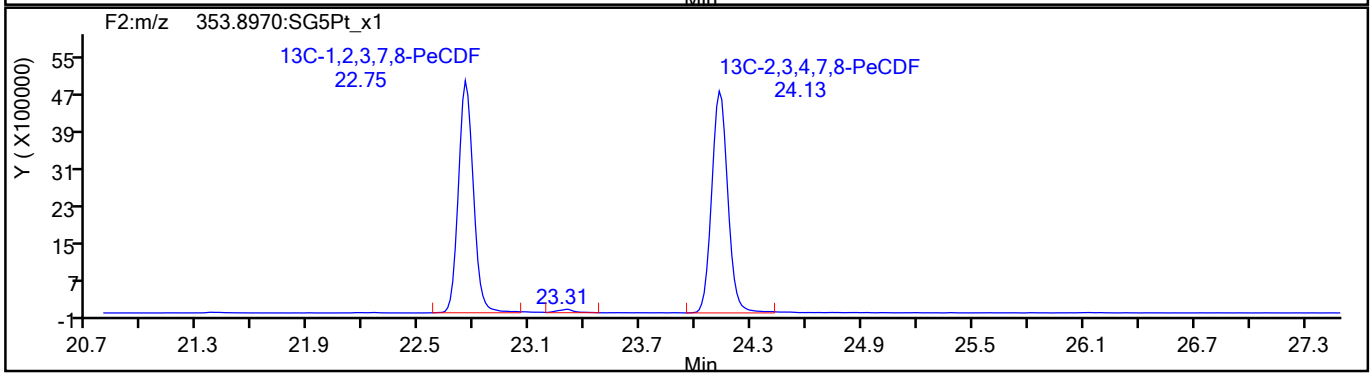

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Eurofins TestAmerica, Sacramento

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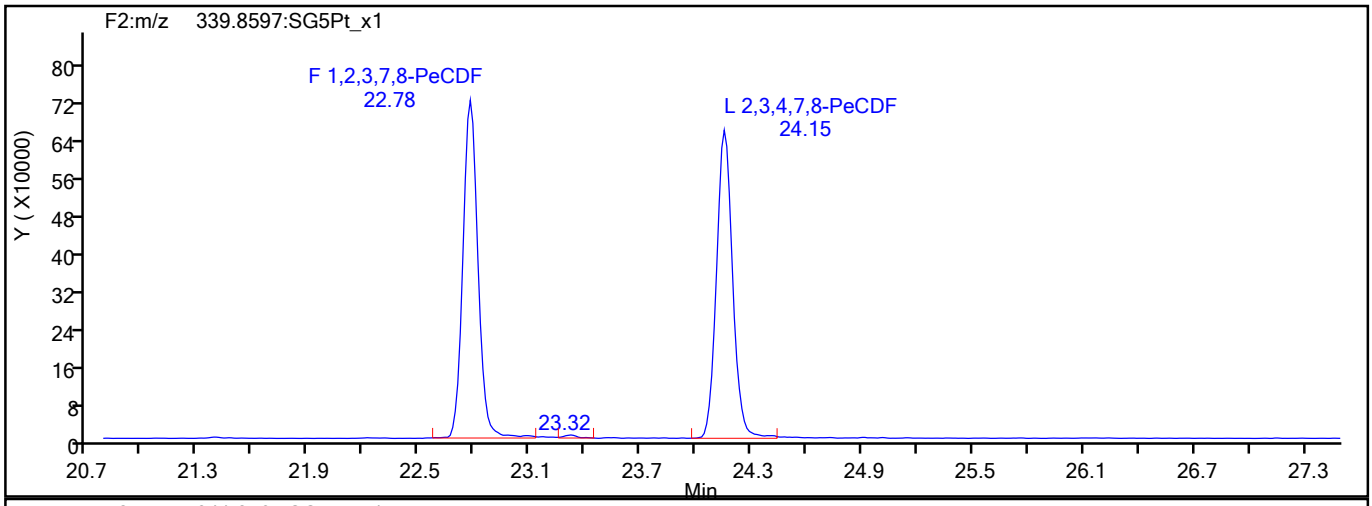

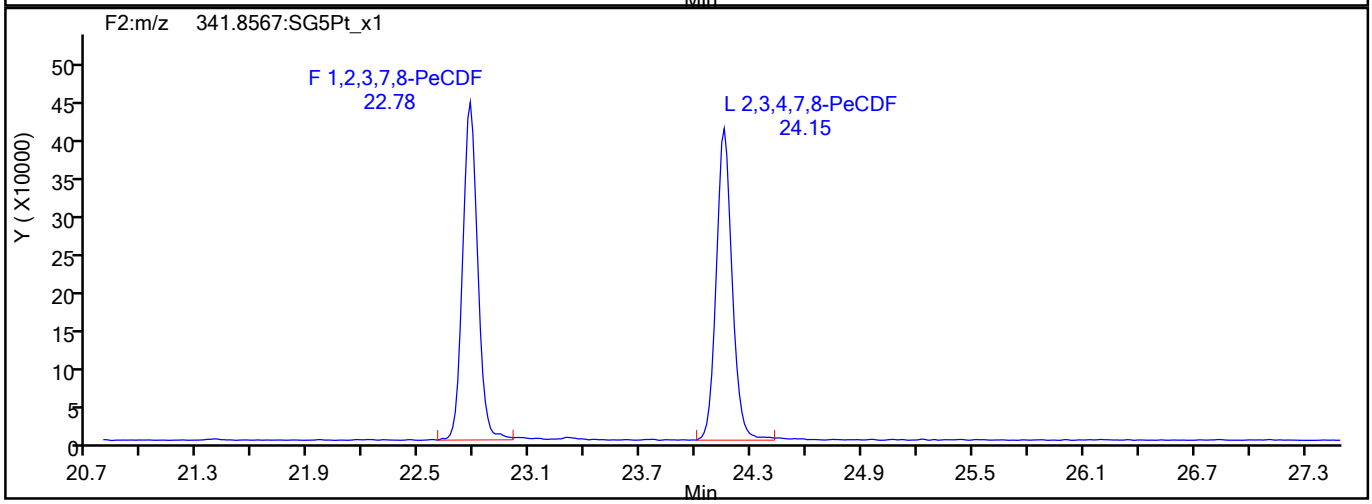

PeCDF Interference Mass

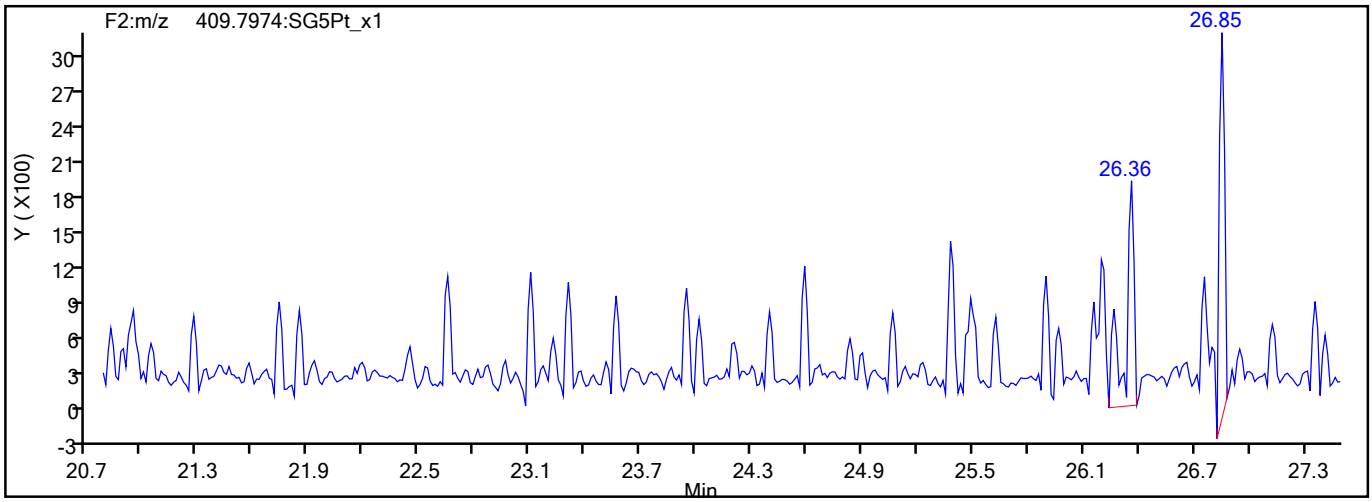

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Eurofins TestAmerica, Sacramento

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PeCDD

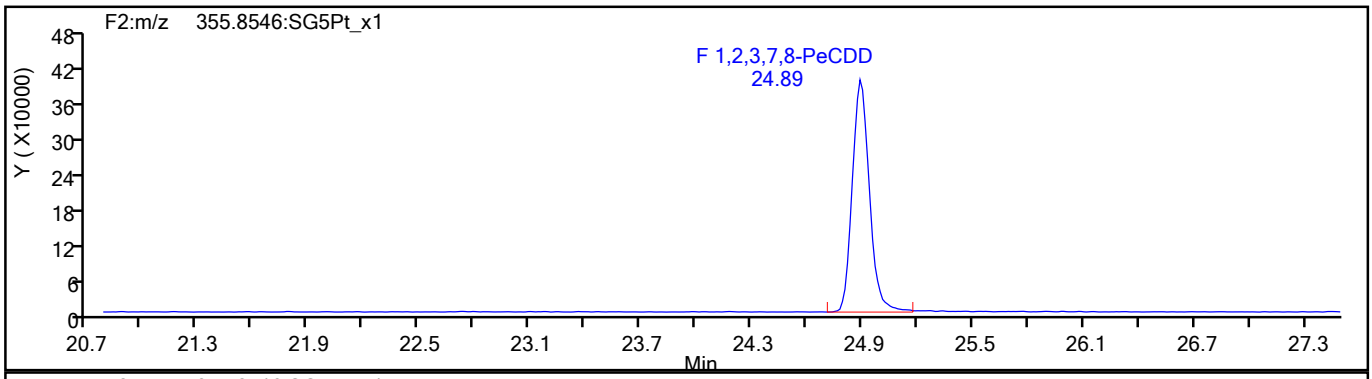

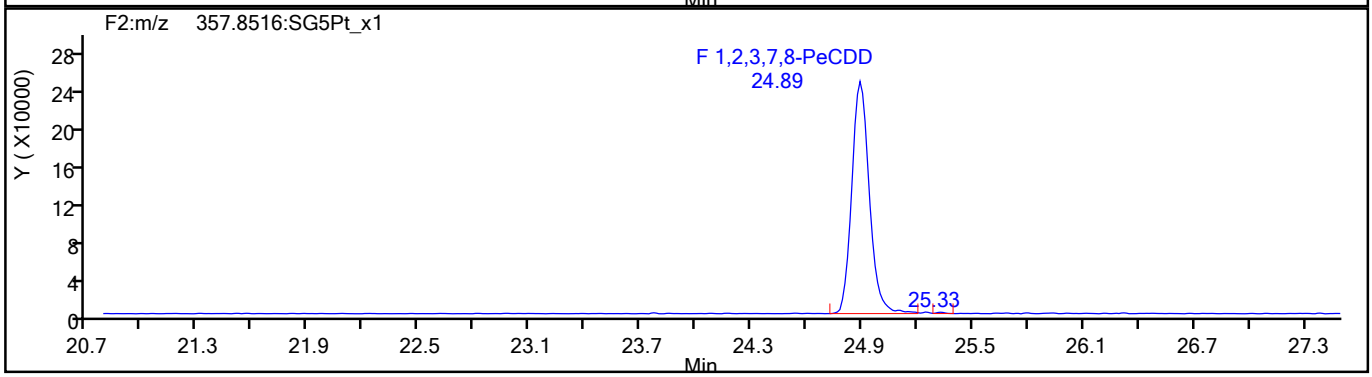

PeCDD Standards

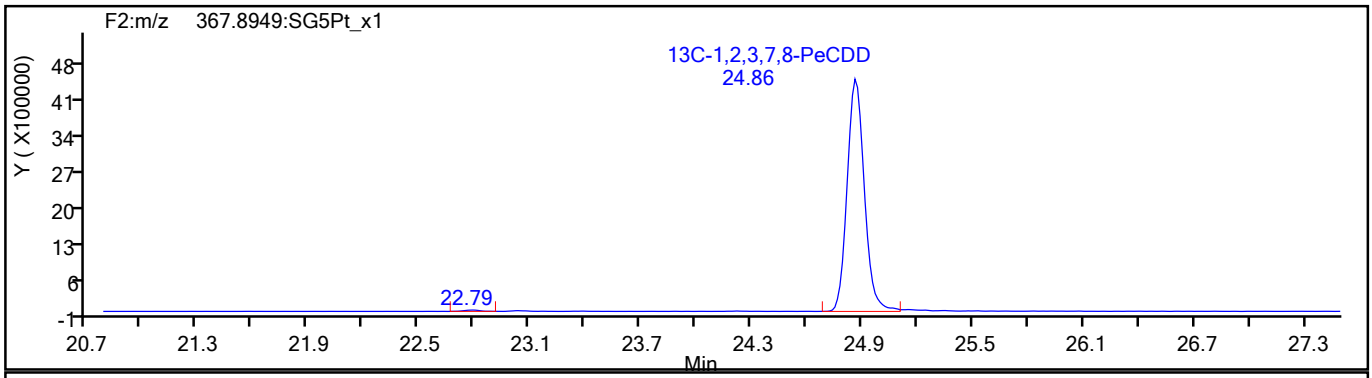

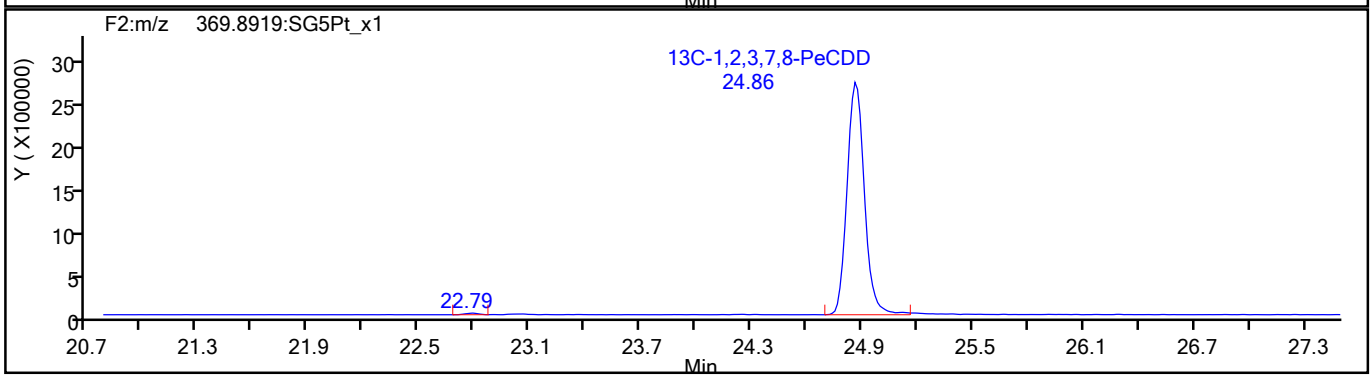

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Eurofins TestAmerica, Sacramento

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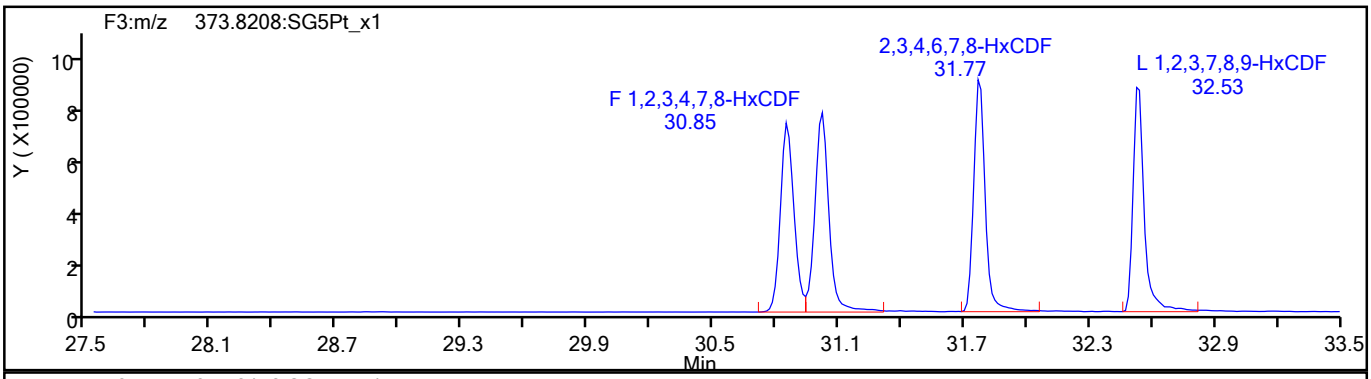

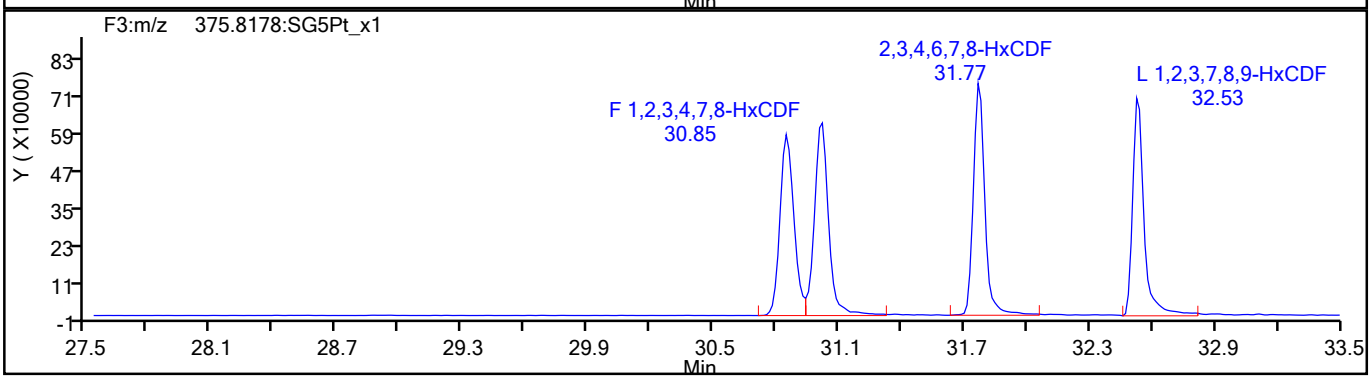

HxCDF Standards

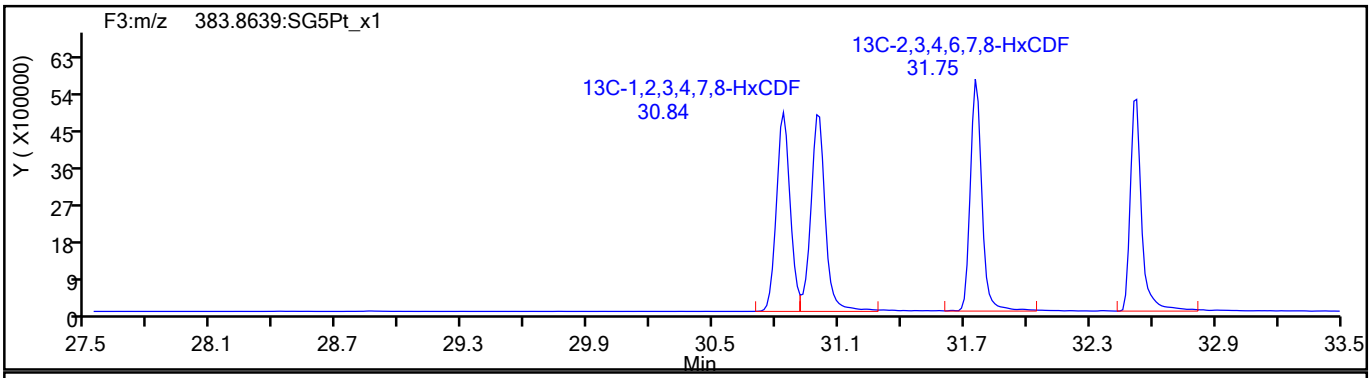

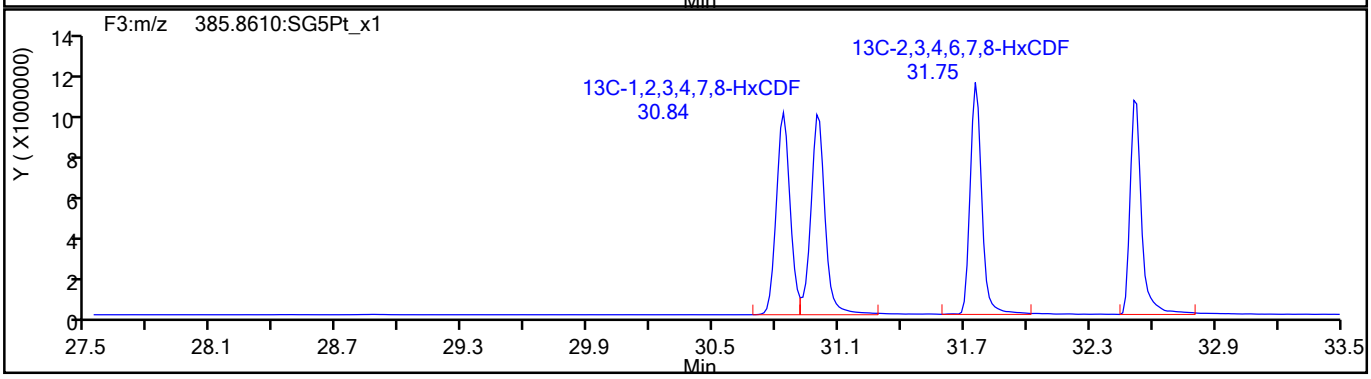

776100

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Eurofins TestAmerica, Sacramento

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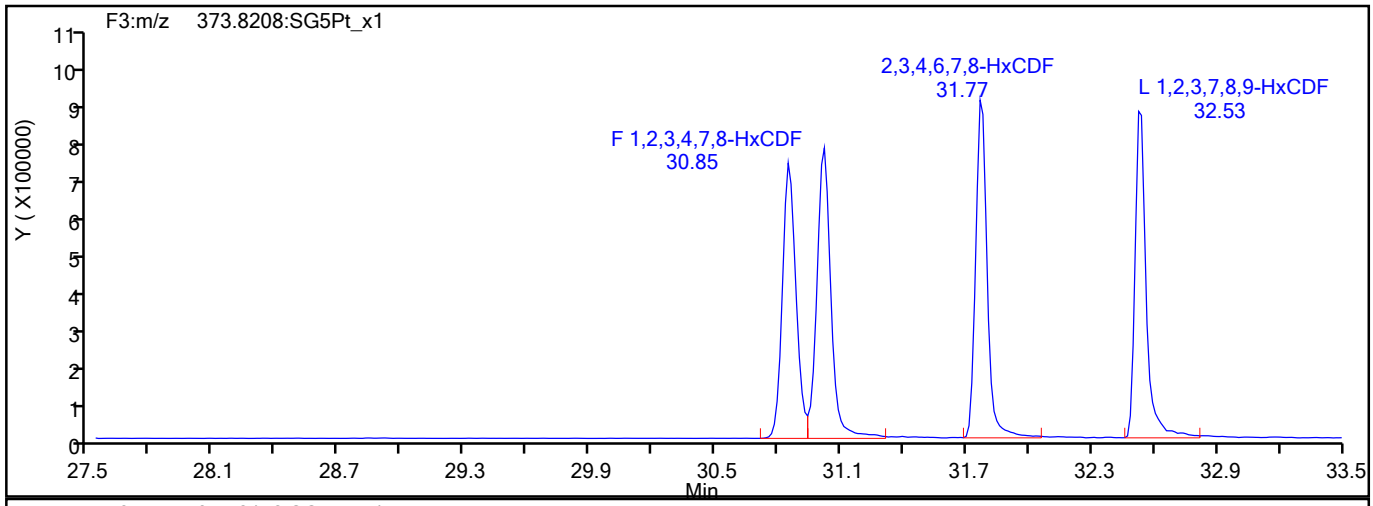

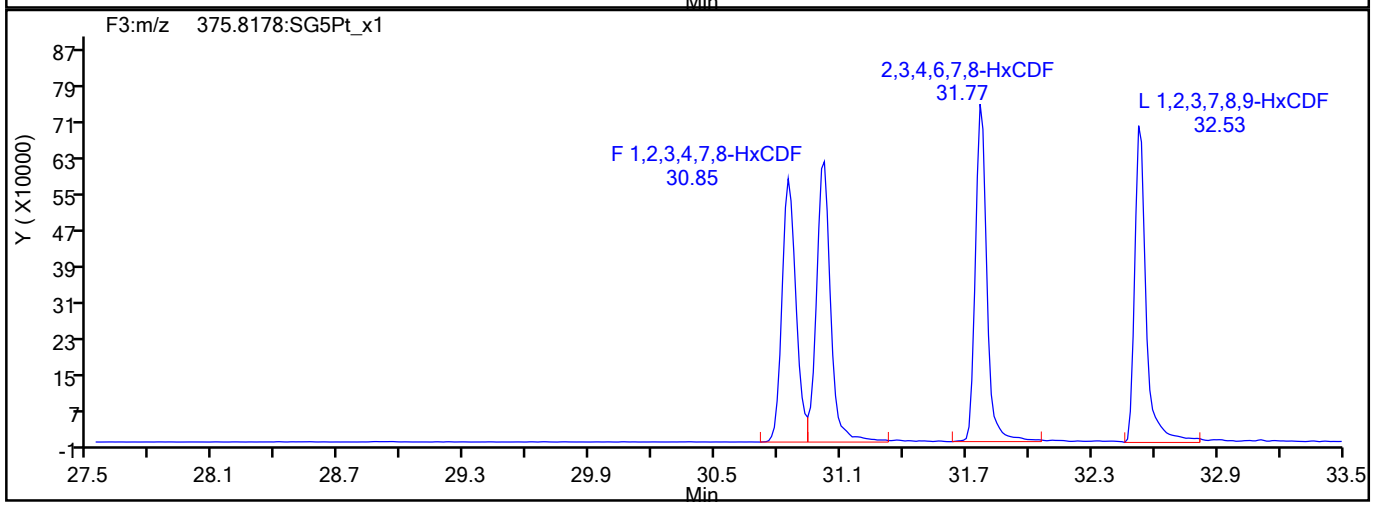

HxCDF Interference Mass

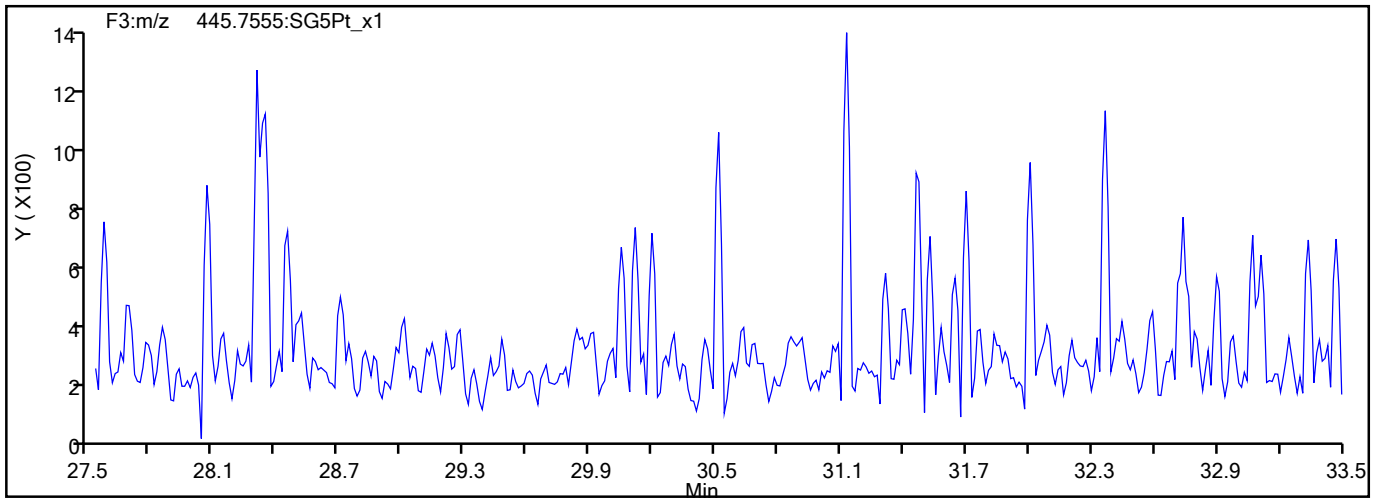

776101

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Eurofins TestAmerica, Sacramento

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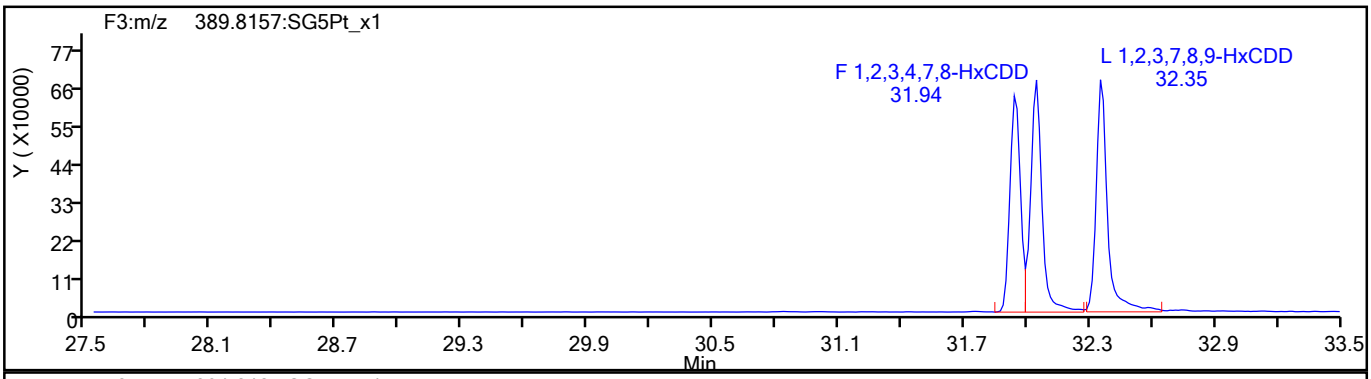

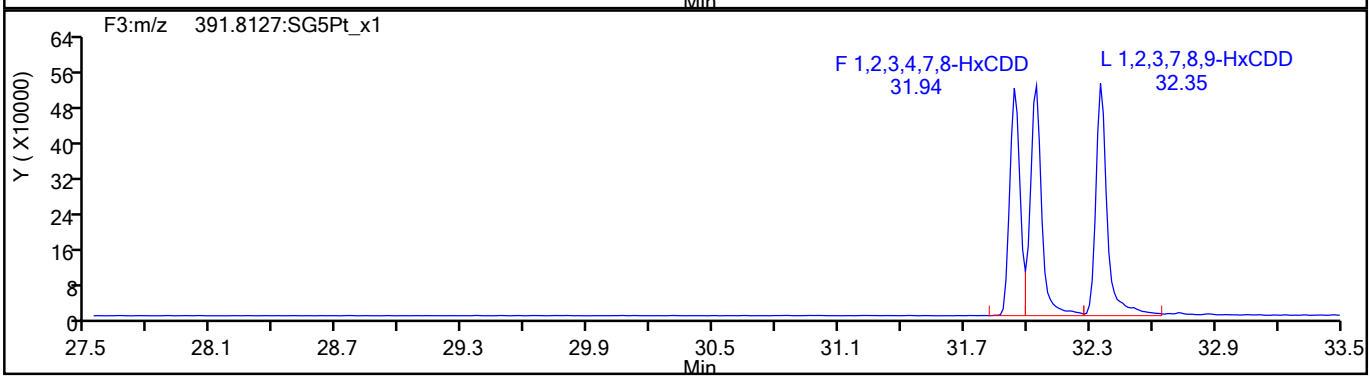

HxCDD Standards

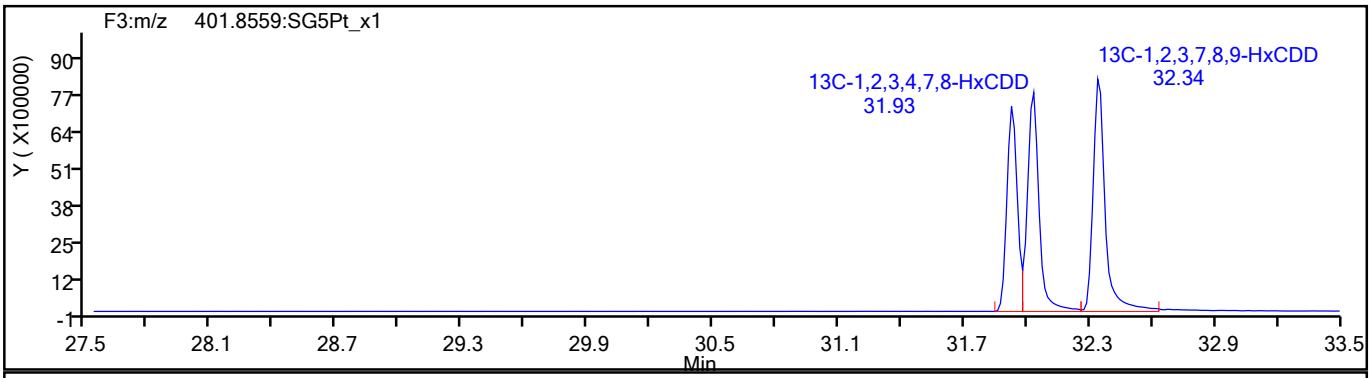

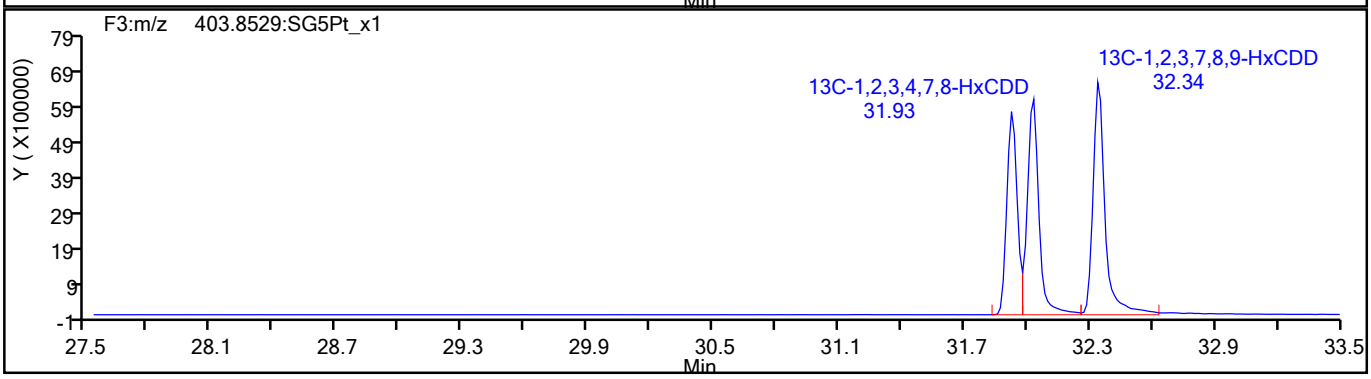

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Eurofins TestAmerica, Sacramento

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HpCDF

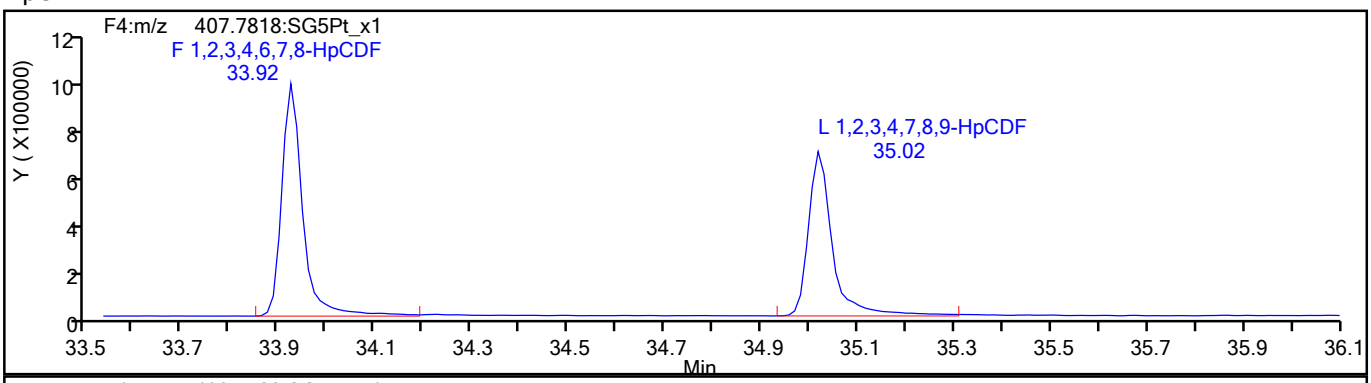

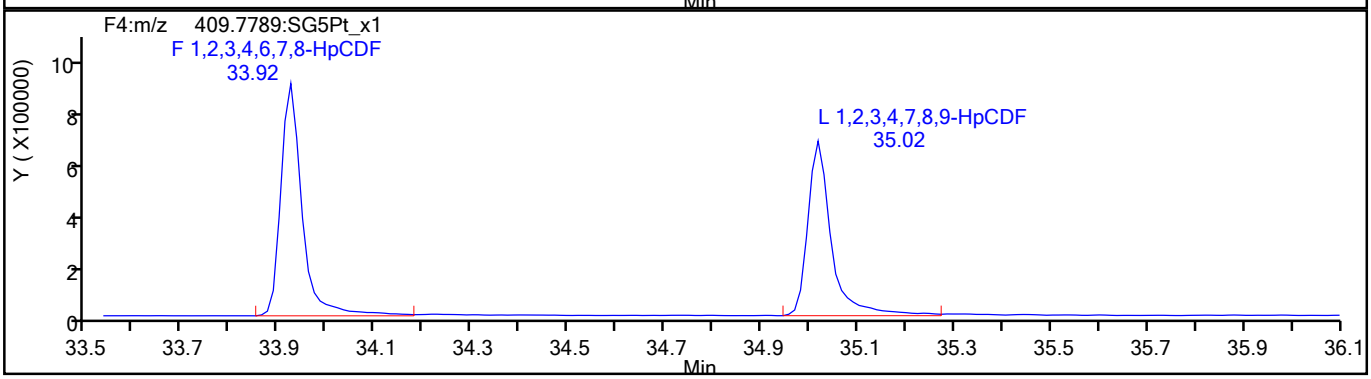

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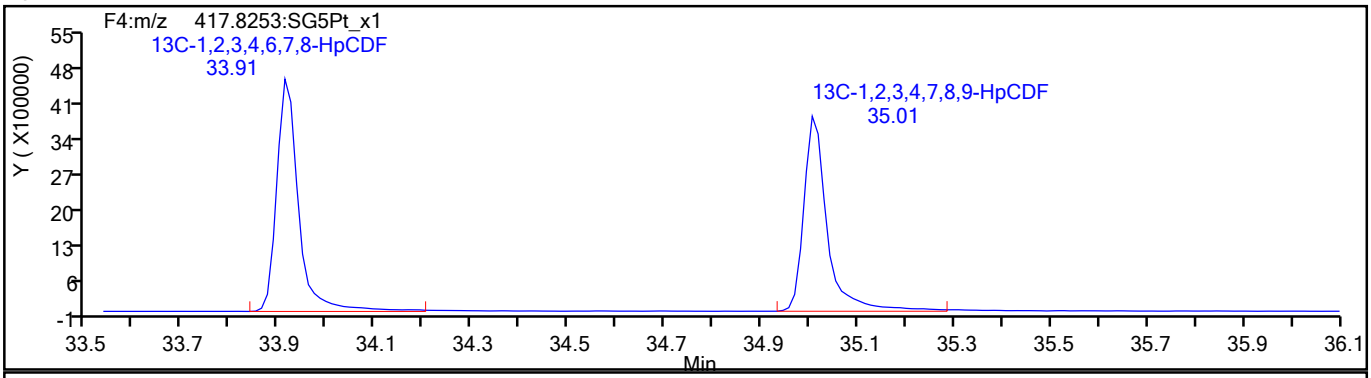

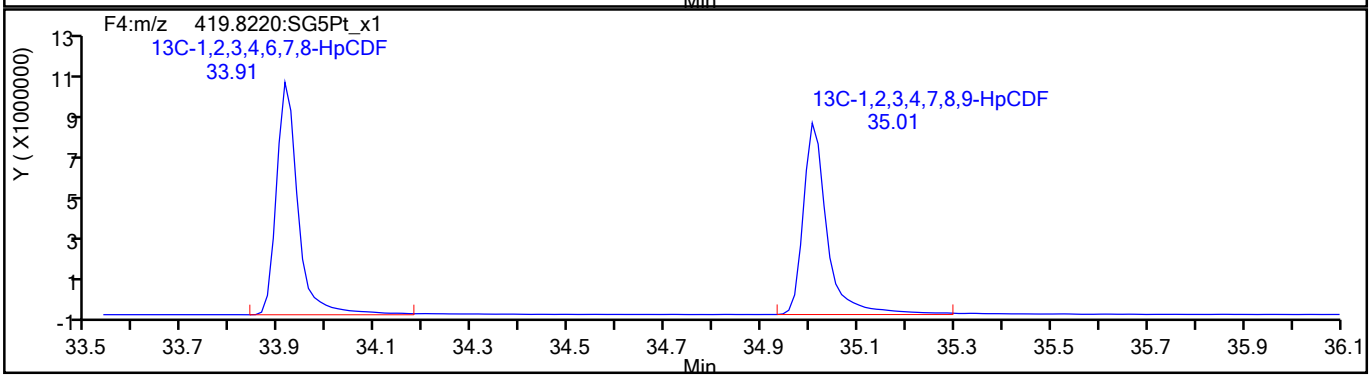

776103

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Eurofins TestAmerica, Sacramento

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HpCDF

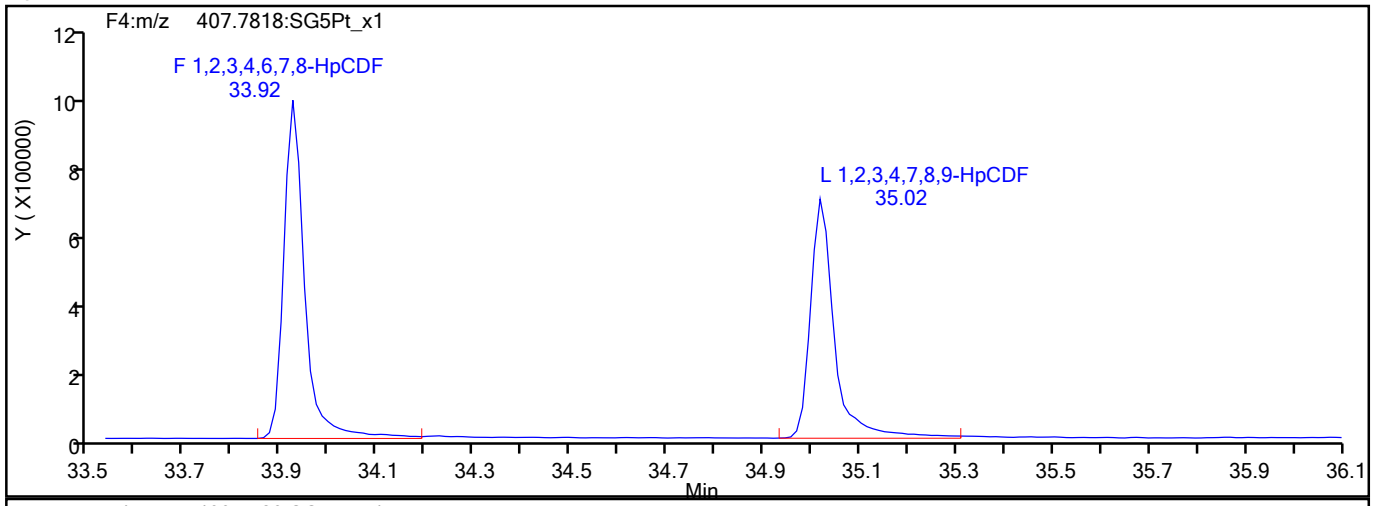

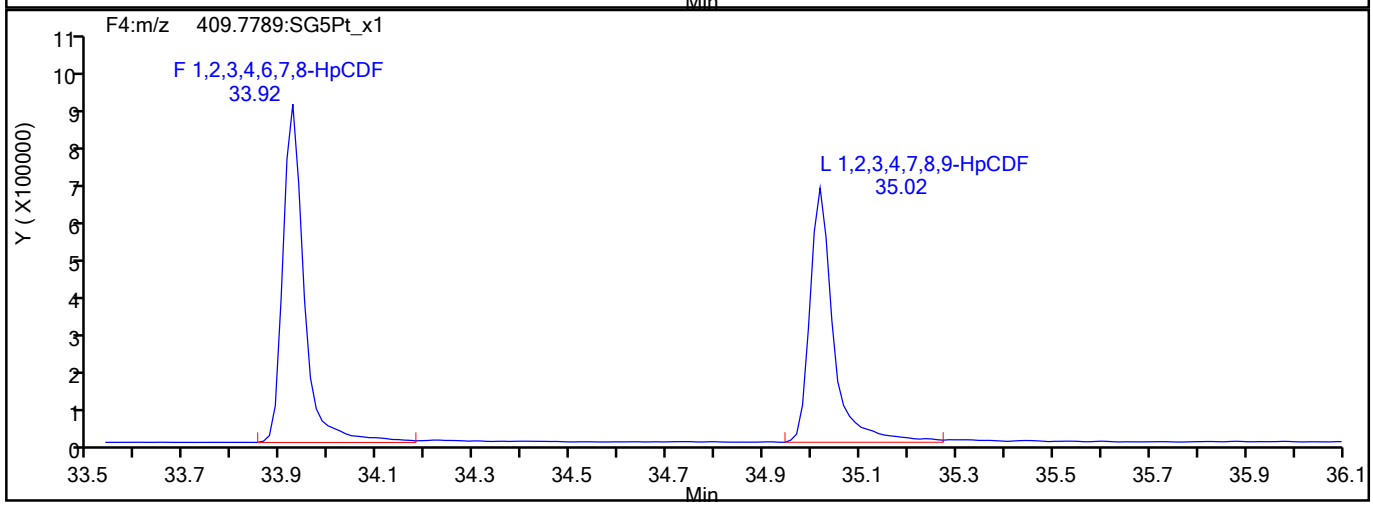

HpCDF Interference Mass

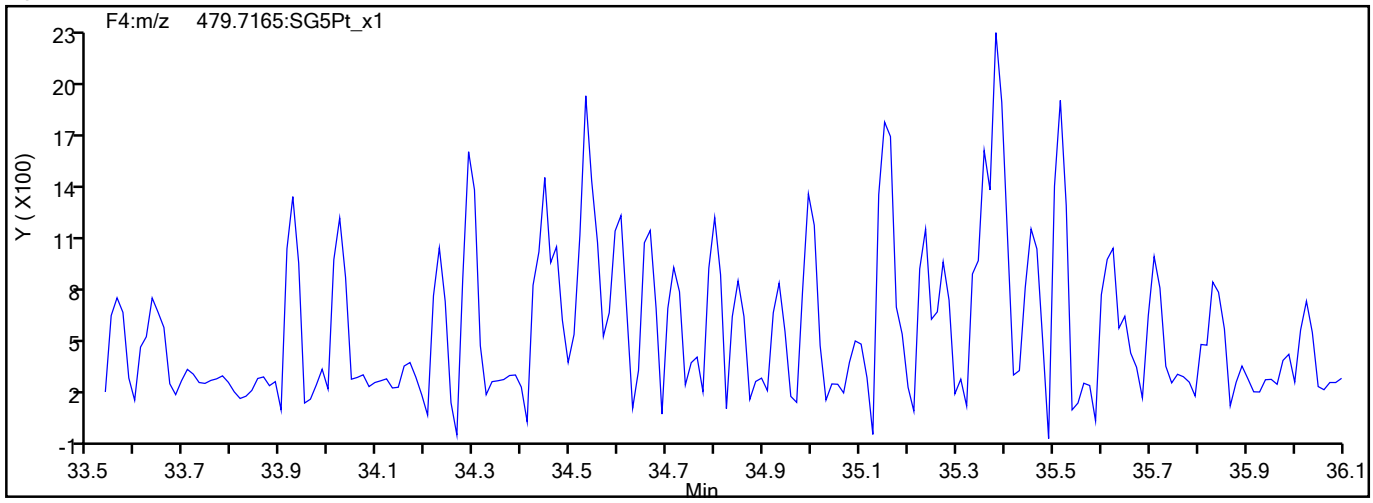

776104

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Eurofins TestAmerica, Sacramento

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HpCDD

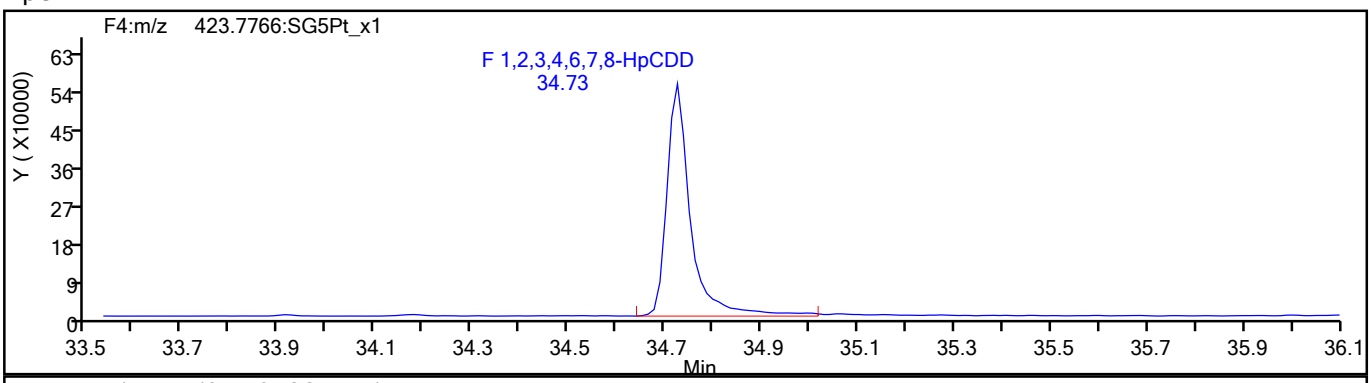

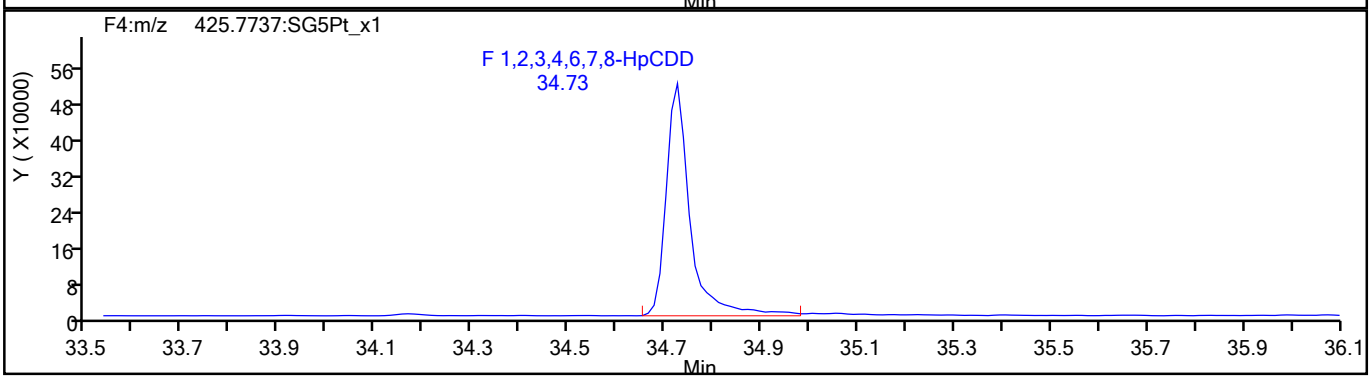

HpCDD Standards

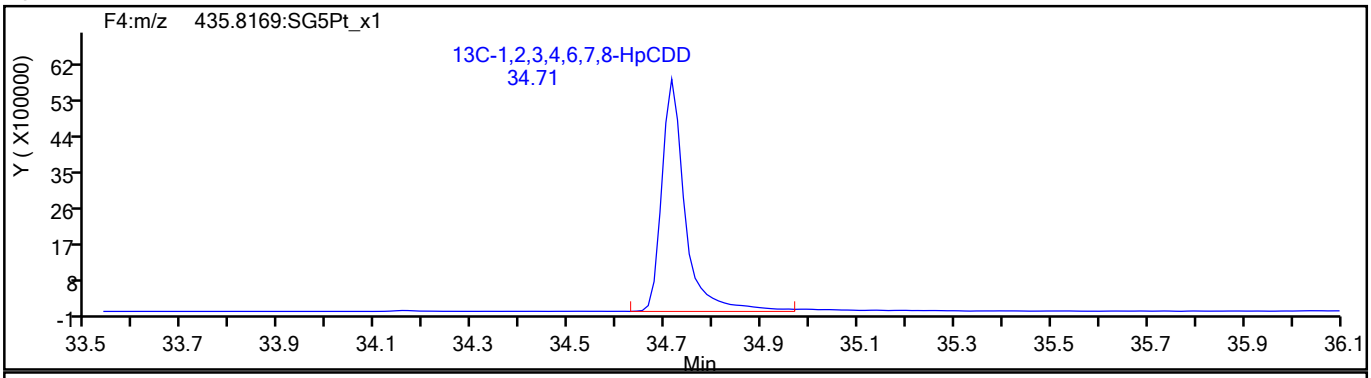

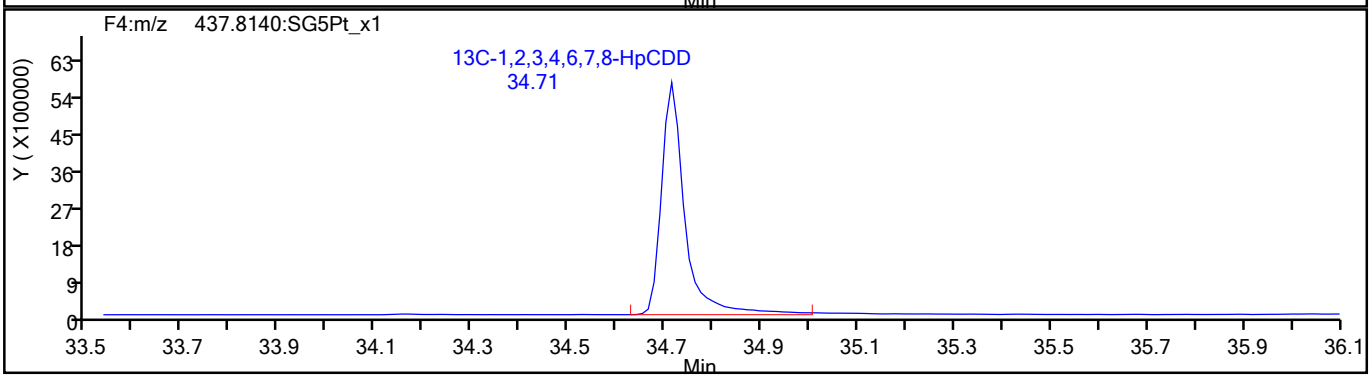

776105

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

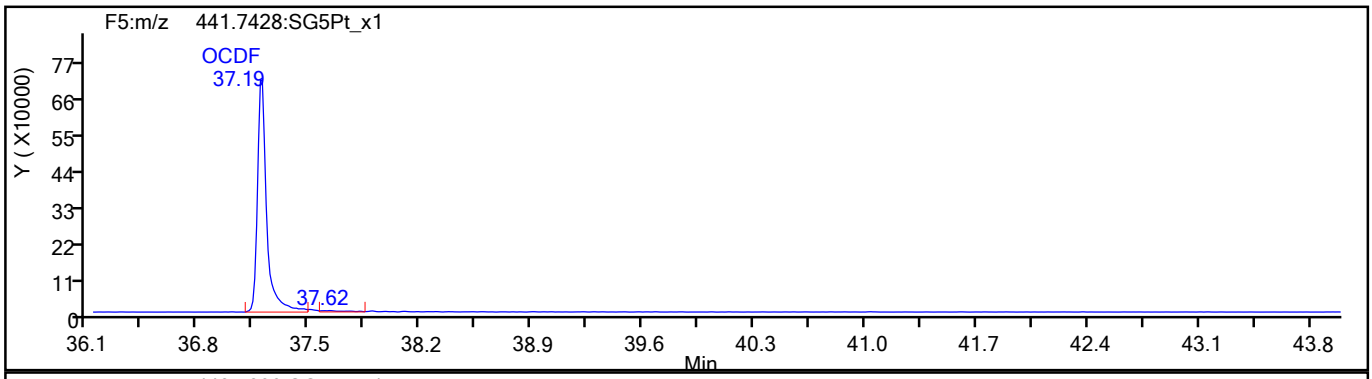

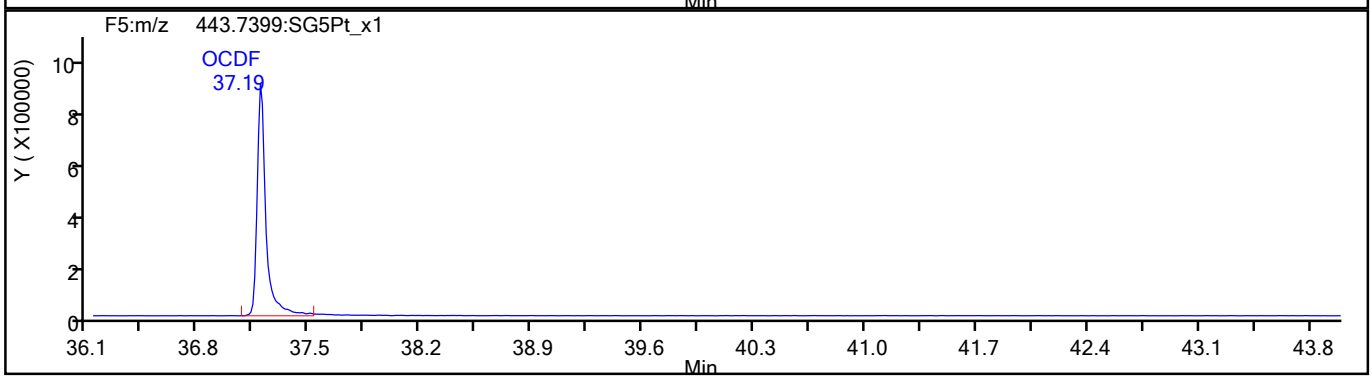

OCDF Standards

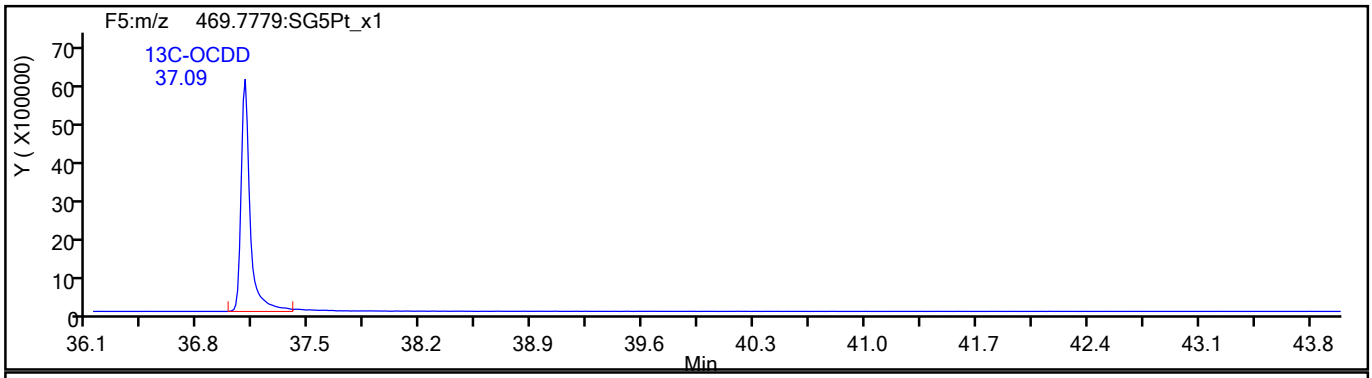

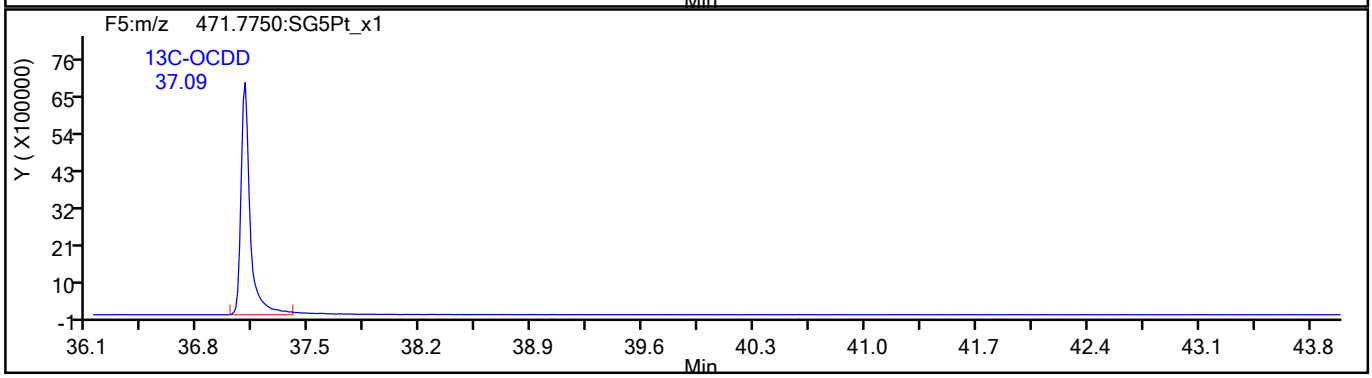

776106

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

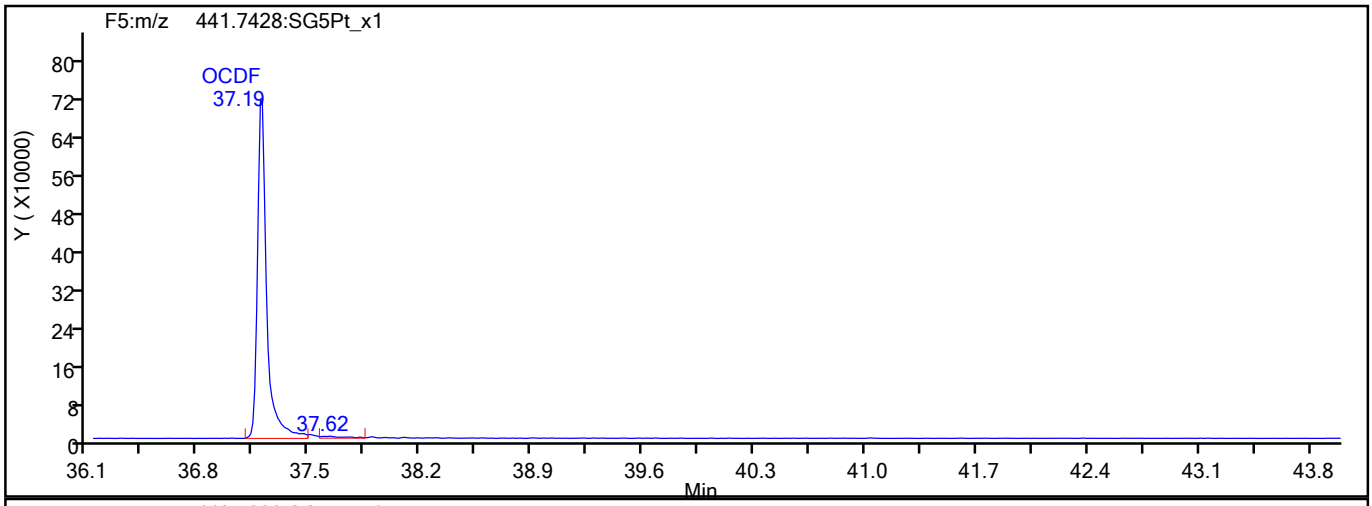

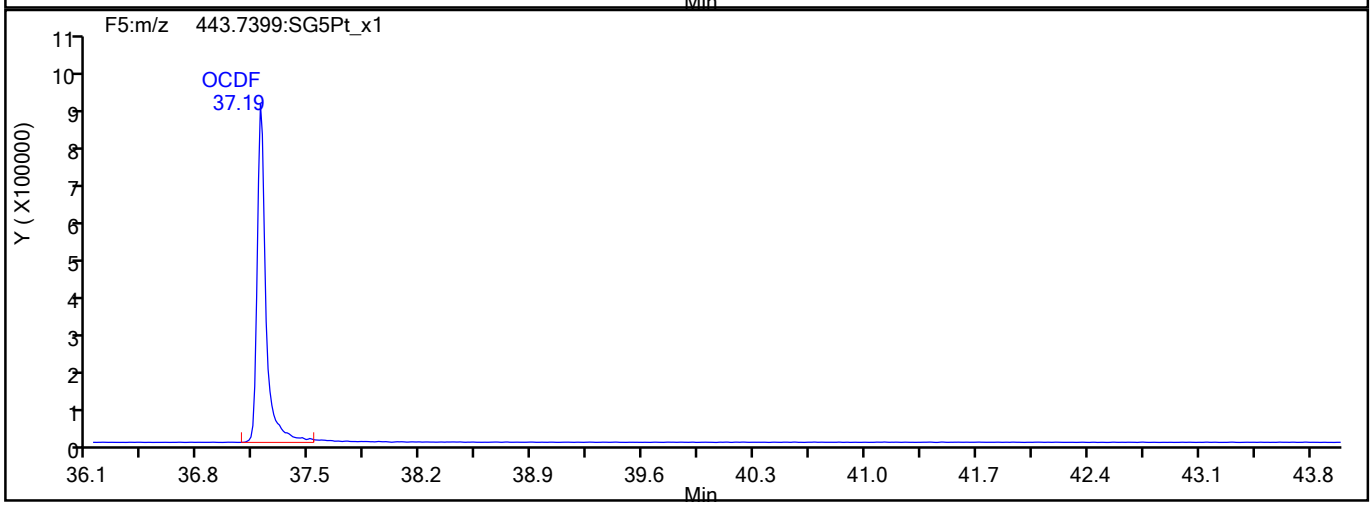

OCDF Interference Mass

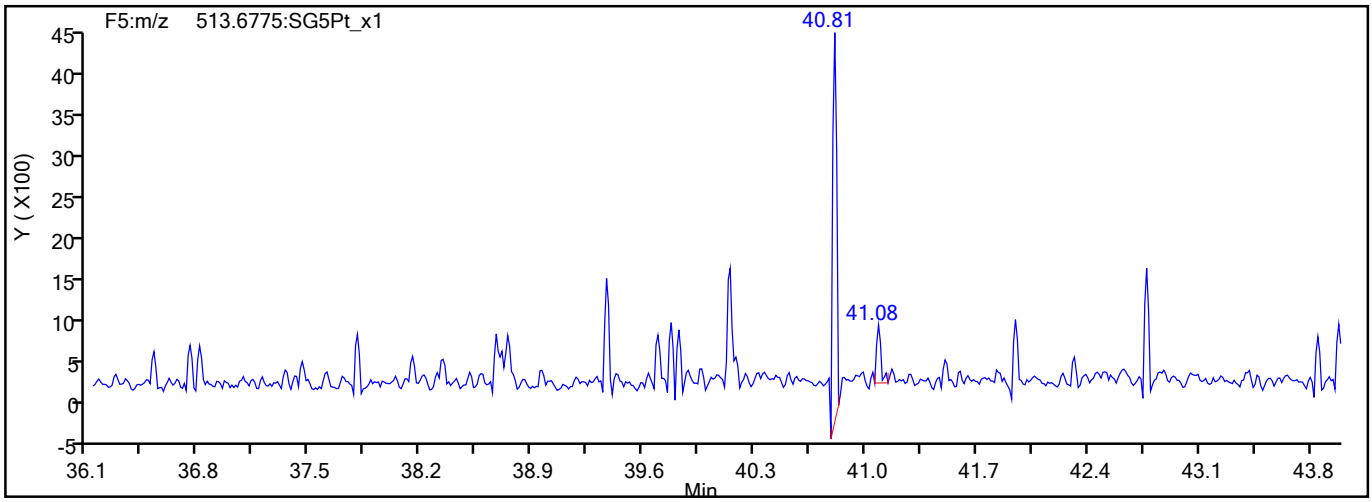

776107

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

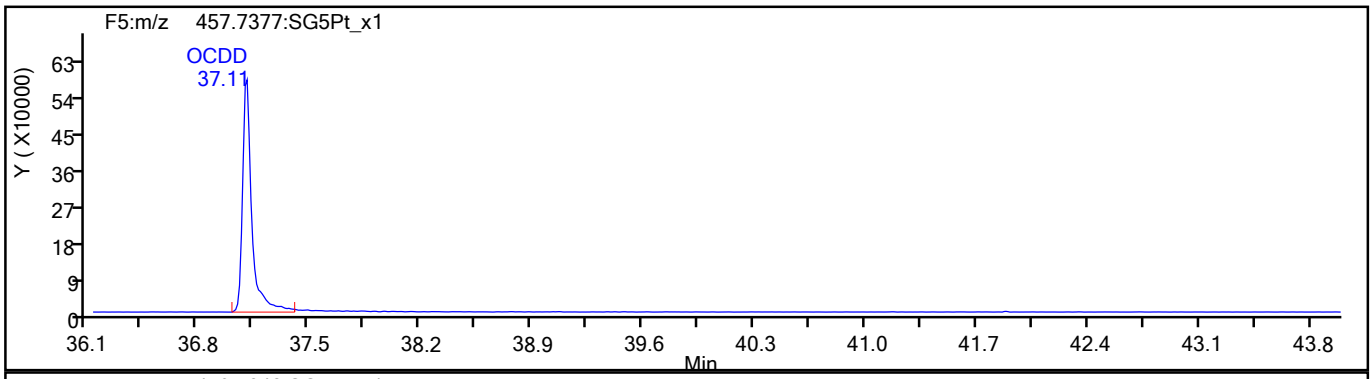

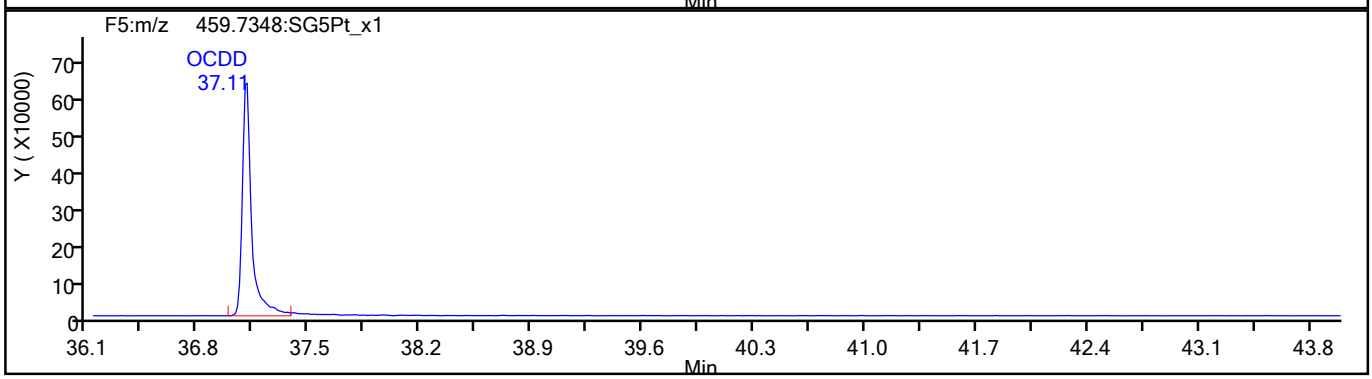

OCDD Standards

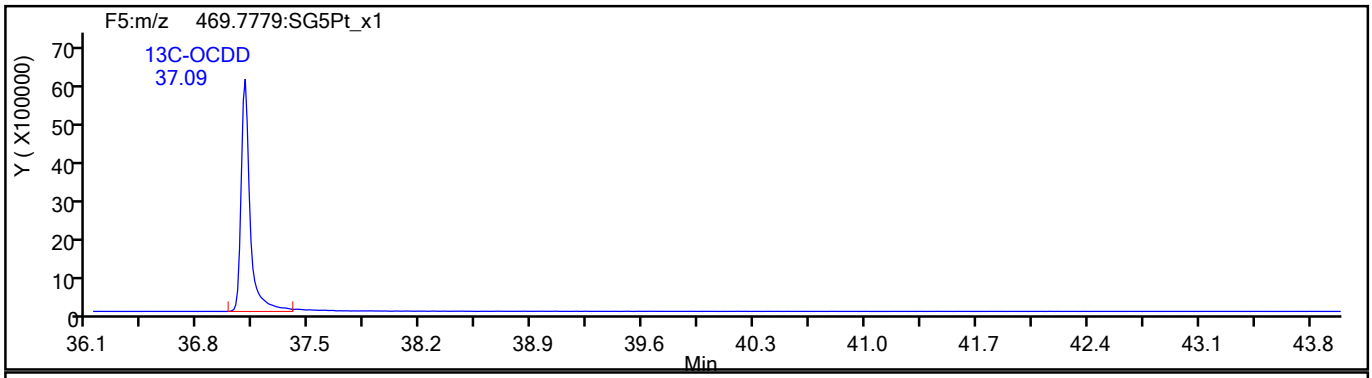

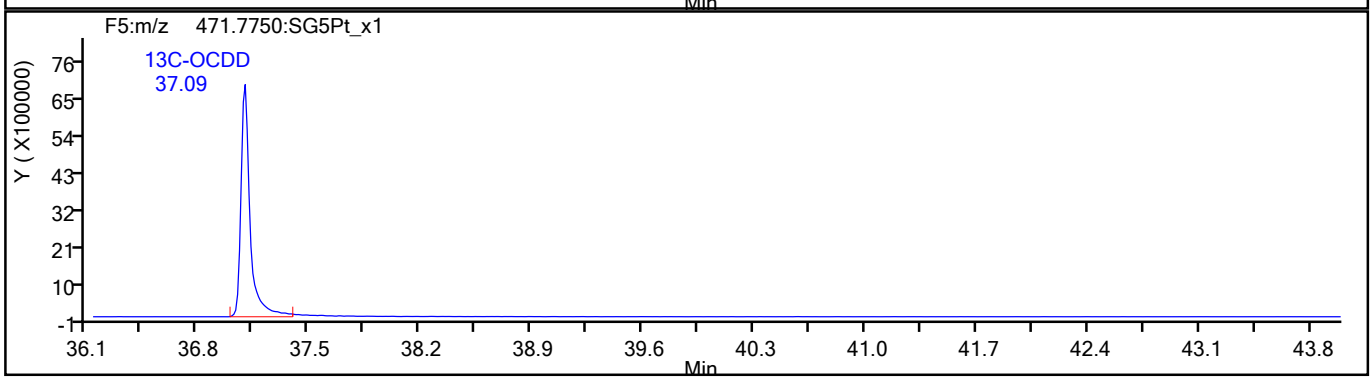

776108

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

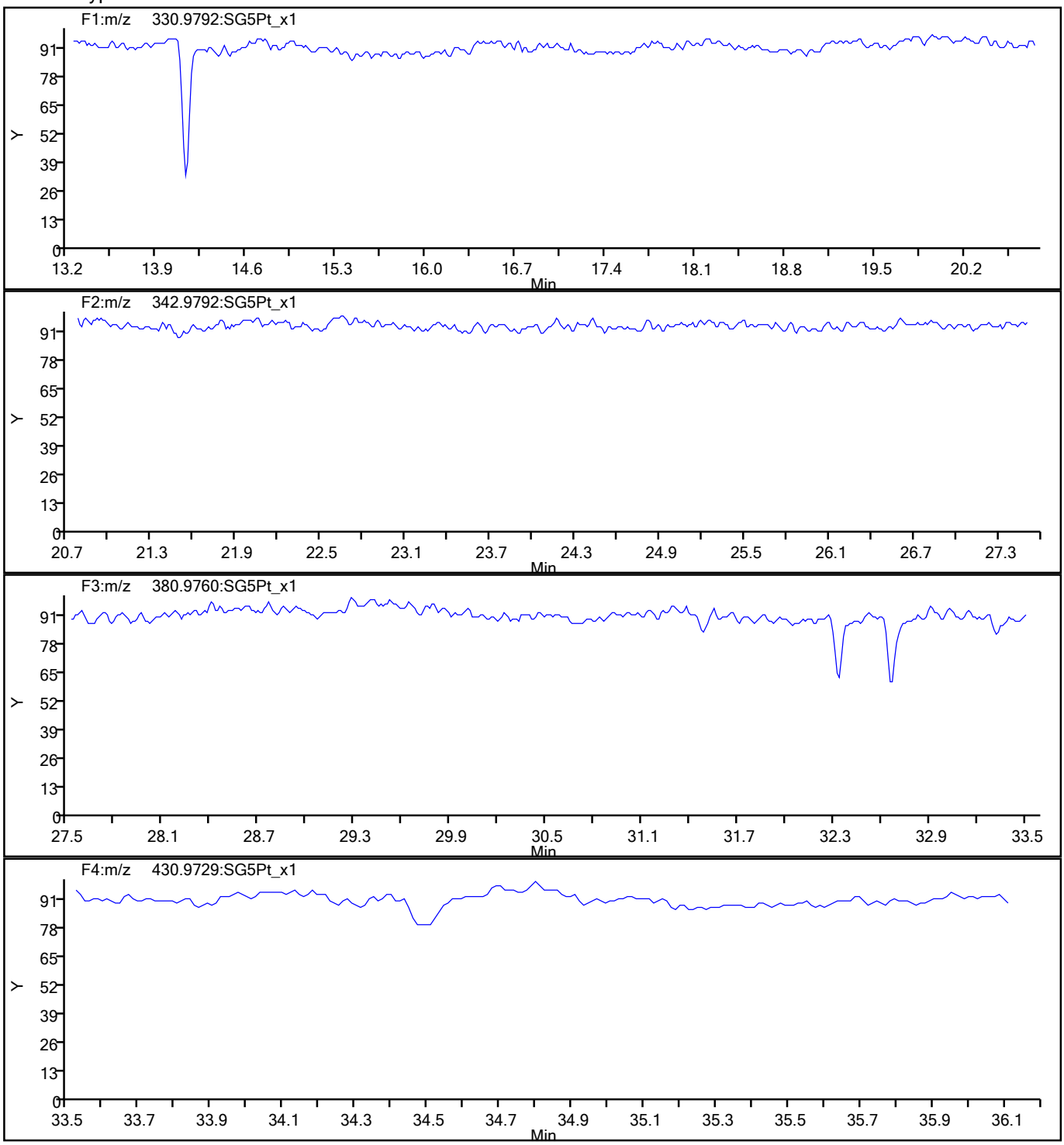

776109

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

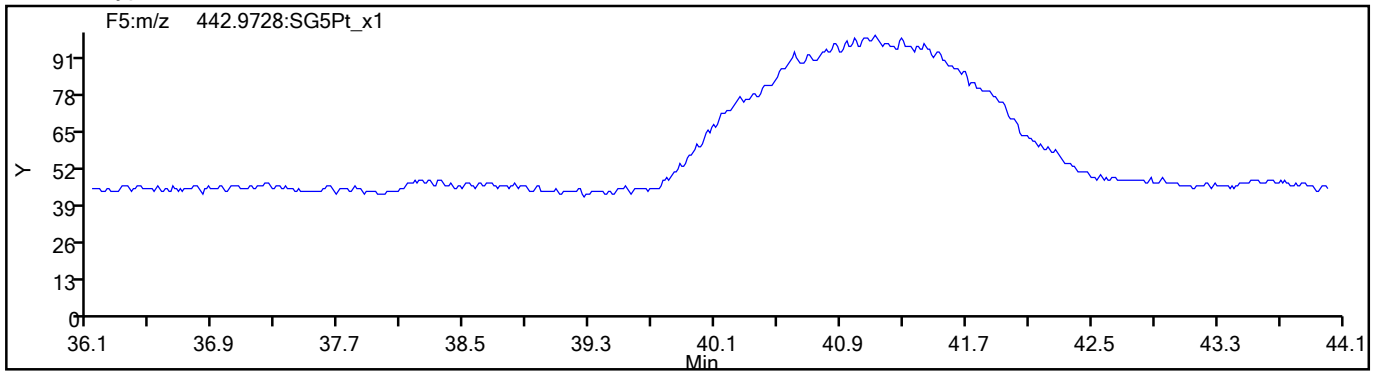

776110

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62635225	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	101724636	0.78	1.6249	99.9	99.9	0.2242	0.2242	99.95	
2,3,7,8-TCDF	17.643	10638776	0.78	1.0239	10.2	10.2	0.0283	0.0283	102	
S Total TCDF					10.2	10.2	0.0283	0.0283		
D 13C-2,3,7,8-TCDD	18.338	56155483	0.81	0.8993	99.7	99.7	0.1510	0.1510	99.69	
$ 37Cl4-2,3,7,8-TCDD	18.369	7339670		1.1071	10.6	10.6	0.0132	0.0132	106	
2,3,7,8-TCDD	18.369	7104238	0.76	1.2541	10.1	10.1	0.0224	0.0224	101	
S Total TCDD					10.1	10.1	0.0224	0.0224		
D 13C-1,2,3,7,8-PeCDF	22.762	76368219	1.58	1.2101	100.8	100.8	0.2109	0.2109	101	
1,2,3,7,8-PeCDF	22.789	41588176	1.62	1.0611	51.3	51.3	0.1508	0.1508	103	
D 13C-2,3,4,7,8-PeCDF	24.139	78214582	1.58	1.2395	100.7	100.7	0.2059	0.2059	101	
2,3,4,7,8-PeCDF	24.167	40928436	1.60	1.0184	51.4	51.4	0.1656	0.1656	103	
S Total PeCDF					102.7	102.7	0.1582	0.1582		
D 13C-1,2,3,7,8-PeCDD	24.876	47124414	1.60	0.7612	98.8	98.8	0.1214	0.1214	98.83	
1,2,3,7,8-PeCDD	24.903	25165054	1.62	1.0484	50.9	50.9	0.0669	0.0669	102	
S Total PeCDD					50.9	50.9	0.0669	0.0669		
D 13C-1,2,3,4,7,8-HxCDF	30.849	68075509	0.52	1.0837	98.8	98.8	0.4389	0.4389	98.79	
1,2,3,4,7,8-HxCDF	30.862	37525146	1.24	1.0851	50.8	50.8	0.2914	0.2914	102	
D 13C-1,2,3,6,7,8-HxCDF	31.009	70677463	0.52	1.1279	98.5	98.5	0.4217	0.4217	98.54	
1,2,3,6,7,8-HxCDF	31.022	40802767	1.21	1.1260	51.3	51.3	0.2729	0.2729	103	
D 13C-2,3,4,6,7,8-HxCDF	31.767	67028498	0.52	1.0637	99.1	99.1	0.4471	0.4471	99.10	
2,3,4,6,7,8-HxCDF	31.781	39741365	1.22	1.1675	50.8	50.8	0.2260	0.2260	102	
D 13C-1,2,3,7,8,9-HxCDF	32.526	60389284	0.52	0.9676	98.2	98.2	0.4916	0.4916	98.15	
1,2,3,7,8,9-HxCDF	32.540	35924190	1.21	1.1664	51.0	51.0	0.2363	0.2363	102	
S Total HxCDF					203.9	203.9	0.2566	0.2566		
* 13C-1,2,3,7,8,9-HxCDD	32.353	63588089	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.941	44039927	1.25	0.7334	94.4	94.4	0.3731	0.3731	94.43	
1,2,3,4,7,8-HxCDD	31.954	24891170	1.33	1.0640	53.1	53.1	0.1747	0.1747	106	
D 13C-1,2,3,6,7,8-HxCDD	32.034	55284532	1.26	0.8802	98.8	98.8	0.3109	0.3109	98.78	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	27953752	1.21	1.0001	50.6	50.6	0.1666	0.1666	101	
1,2,3,7,8,9-HxCDD	32.367	29794954	1.26	1.1325	53.0	53.0	0.1552	0.1552	106	
S Total HxCDD					156.7	156.7	0.1655	0.1655		
D 13C-1,2,3,4,6,7,8-HpCDF	33.924	47697671	0.44	0.7730	97.0	97.0	1.328	1.328	97.03	
1,2,3,4,6,7,8-HpCDF	33.937	35740964	1.05	1.4413	52.0	52.0	0.5190	0.5190	104	
D 13C-1,2,3,4,7,8,9-HpCDF	35.018	43238622	0.44	0.7008	97.0	97.0	1.465	1.465	97.03	
1,2,3,4,7,8,9-HpCDF	35.030	29450636	1.07	1.3174	51.7	51.7	0.6741	0.6741	103	
S Total HpCDF					103.7	103.7	0.5966	0.5966		
D 13C-1,2,3,4,6,7,8-HpCDD	34.726	40333717	1.03	0.6472	98.0	98.0	0.5563	0.5563	98.00	
1,2,3,4,6,7,8-HpCDD	34.726	22538791	1.03	1.0943	51.1	51.1	0.2539	0.2539	102	
S Total HpCDD					51.1	51.1	0.2539	0.2539		
D 13C-OCDD	37.094	54338243	0.87	0.4472	191.1	191.1	0.2612	0.2612	95.55	
OCDF	37.202	41147202	0.91	1.4382	105.3	105.3	0.1155	0.1155	105	
OCDD	37.106	31656667	0.89	1.1070	105.3	105.3	0.1572	0.1572	105	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28287778	7074314	3903	9757	1813		
333.9339	18.142	18.142	0		34347447	8672273	4653	11632	1864	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.616	1	0.972	44652675	10978931	8756	21890	1254		
317.9389	17.628	17.616	1	0.972	57071961	13787474	14192	35480	971	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.631	1	1.001	4665898	1145703	1759	4397	651		
305.8987	17.643	17.631	1	1.001	5972878	1458593	1111	2777	1313	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	25132336	5946858	3903	9757	1524		
333.9339	18.338	18.338	0	1.011	31023147	7337223	4653	11632	1577	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.369	18.354	1	1.012	7339670	1703834	921	2302	1850		
2,3,7,8-TCDD											
319.8965	18.369	18.357	1	1.002	3077636	720367	906	2265	795		
321.8936	18.369	18.357	1	1.002	4026602	947792	588	1470	1612	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46742521	8181774	9794	24485	835		
353.8970	22.762	22.754	0	1.255	29625698	5225925	6278	15695	832	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.789	22.779	1	1.001	25738852	4452039	5088	12720	875		
341.8567	22.789	22.779	1	1.001	15849324	2731041	3494	8735	782	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.139	24.129	1	1.331	47906018	7878060	9794	24485	804		
353.8970	24.139	24.129	1	1.331	30308564	4845446	6278	15695	772	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.167	24.156	1	1.001	25185293	4111601	5088	12720	808		
341.8567	24.167	24.156	1	1.001	15743143	2618923	3494	8735	750	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.876	24.865	1	1.371	29023498	4508866	3701	9252	1218		
369.8919	24.876	24.865	1	1.371	18100916	2812844	2121	5302	1326	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.903	24.892	1	1.001	15548746	2422000	1286	3215	1883		
357.8516	24.903	24.892	1	1.001	9616308	1489099	768	1920	1939	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.849	30.838	1	0.954	23323404	5008910	10853	27132	462		
385.8610	30.849	30.838	1	0.954	44752105	9511743	20971	52427	454	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.000	20753403	4584464	10058	25145	456		
375.8178	30.862	30.857	0	1.000	16771743	3729681	8311	20777	449	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.009	31.003	0	0.958	24213048	5206646	10853	27132	480		
385.8610	31.009	31.003	0	0.958	46464415	9739576	20971	52427	464	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	22352739	4771379	10058	25145	474		
375.8178	31.022	31.022	0	1.000	18450028	3943683	8311	20777	475	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.767	31.756	1	0.982	22835025	6015846	10853	27132	554		
385.8610	31.767	31.756	1	0.982	44193473	11391437	20971	52427	543	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.781	31.772	1	1.000	21800962	5788708	10058	25145	576		
375.8178	31.781	31.772	1	1.000	17940403	4765095	8311	20777	573	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.005	20681548	5801162	10853	27132	535		
385.8610	32.526	32.523	0	1.005	39707736	10862121	20971	52427	518	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.540	32.534	0	1.000	19691436	5514300	10058	25145	548		
375.8178	32.540	32.534	0	1.000	16232754	4594829	8311	20777	553	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.353	32.342	1		35642869	9349119	10403	26007	899		
403.8529	32.353	32.342	1		27945220	7378163	7908	19770	933	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.941	31.929	1	0.987	24473480	7240164	10403	26007	696		
403.8529	31.941	31.929	1	0.987	19566447	5775722	7908	19770	730	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.954	31.945	1	1.000	14220855	4121905	5566	13915	741		
391.8127	31.954	31.945	1	1.000	10670315	3199272	4114	10285	778	1.33(1.05-1.43)	

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Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.034	32.033	0	0.990	30876044	8117648	10403	26007	780		
403.8529	32.034	32.033	0	0.990	24408488	6404371	7908	19770	810	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	15327109	4211681	5566	13915	757		
391.8127	32.047	32.047	0	1.000	12626643	3343117	4114	10285	813	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.367	32.355	1	1.013	16583478	4368640	5566	13915	785		
391.8127	32.353	32.355	0	1.013	13211476	3519862	4114	10285	856	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.924	33.914	1	1.049	14460337	4683854	18083	45207	259		
419.8220	33.924	33.914	1	1.049	33237334	10568693	50629	126572	209	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.937	33.926	1	1.000	18301949	5790856	23497	58742	246		
409.7789	33.924	33.926	0	1.000	17439015	5585138	22139	55347	252	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.018	35.010	0	1.082	13111896	3936331	18083	45207	218		
419.8220	35.018	35.010	0	1.082	30126726	8910423	50629	126572	176	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.030	35.020	1	1.000	15206712	4448229	23497	58742	189		
409.7789	35.018	35.020	0	1.000	14243924	4117019	22139	55347	186	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.726	34.716	1	1.073	20474082	5927612	12552	31380	472		
437.8140	34.714	34.716	0	1.073	19859635	5735510	11540	28850	497	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	11412485	3410093	6511	16277	524		
425.7737	34.726	34.726	0	1.000	11126306	3358586	6451	16127	521	1.03(0.88-1.20)	
13C-OCDD											
469.7779	37.094	37.094	0	1.147	25234291	6398501	3020	7550	2119		
471.7750	37.094	37.094	0	1.147	29103952	7389026	4794	11985	1541	0.87(0.76-1.02)	
OCDF											
441.7428	37.202	37.199	0	1.003	19626693	5149784	2565	6412	2008		
443.7399	37.202	37.199	0	1.003	21520509	5563126	2015	5037	2761	0.91(0.76-1.02)	
OCDD											
457.7377	37.106	37.106	0	1.000	14916504	3846231	2276	5690	1690		
459.7348	37.106	37.106	0	1.000	16740163	4277323	2524	6310	1695	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

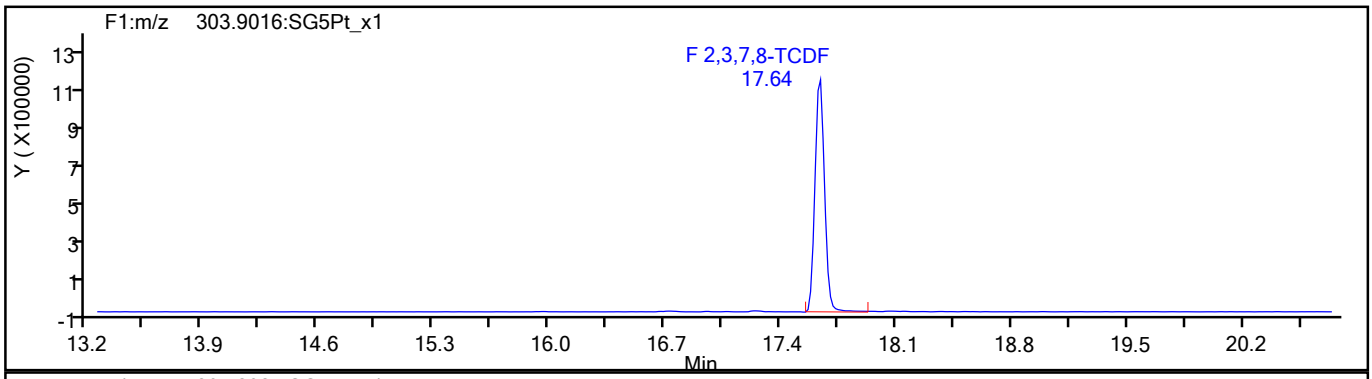

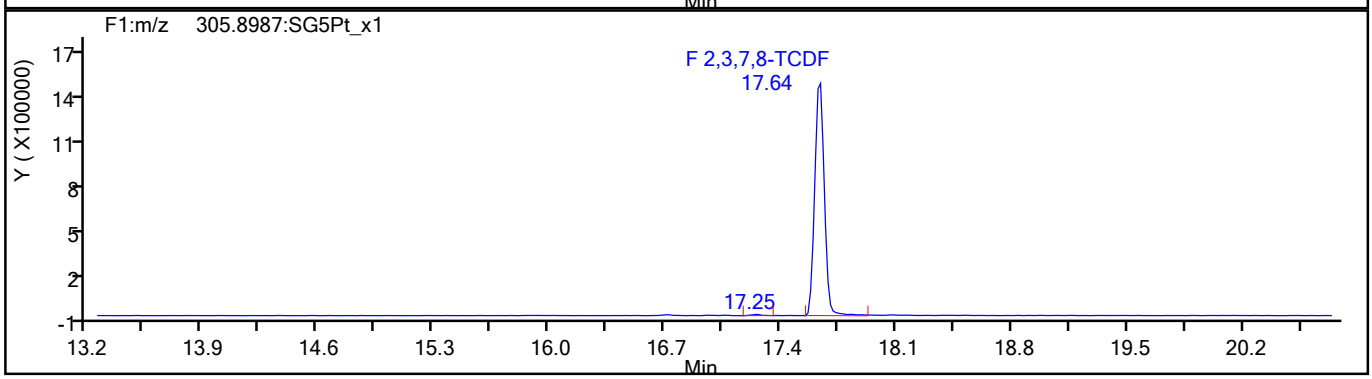

TCDF Standards

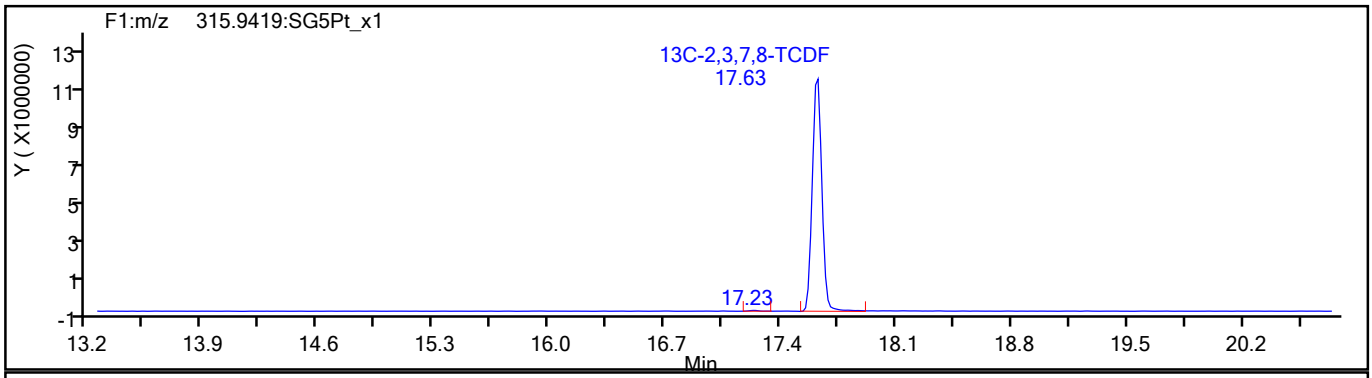

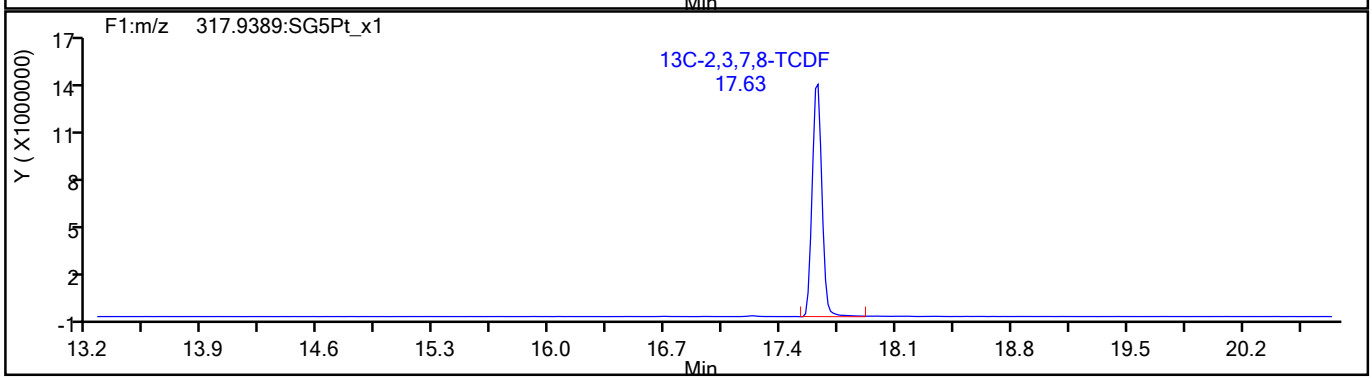

776116

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

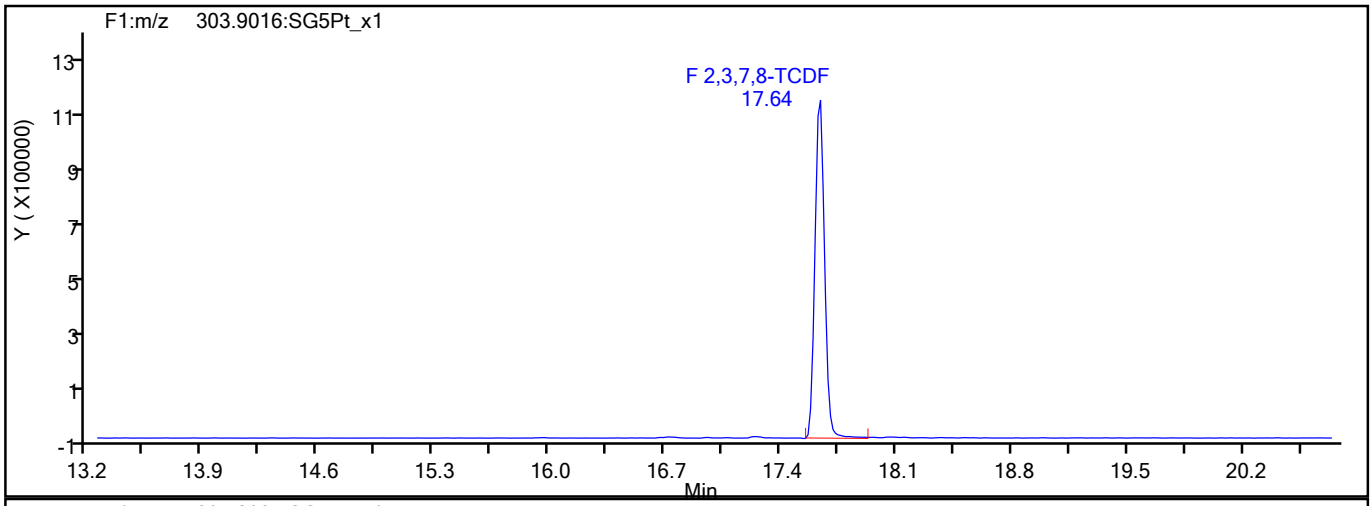

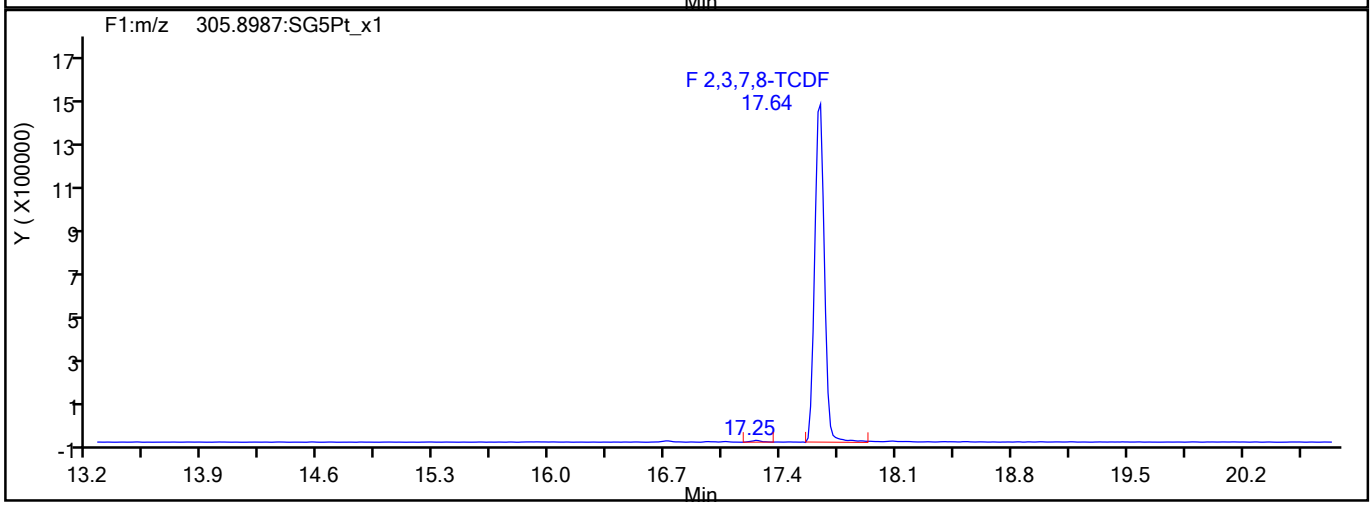

TCDF Interference Mass

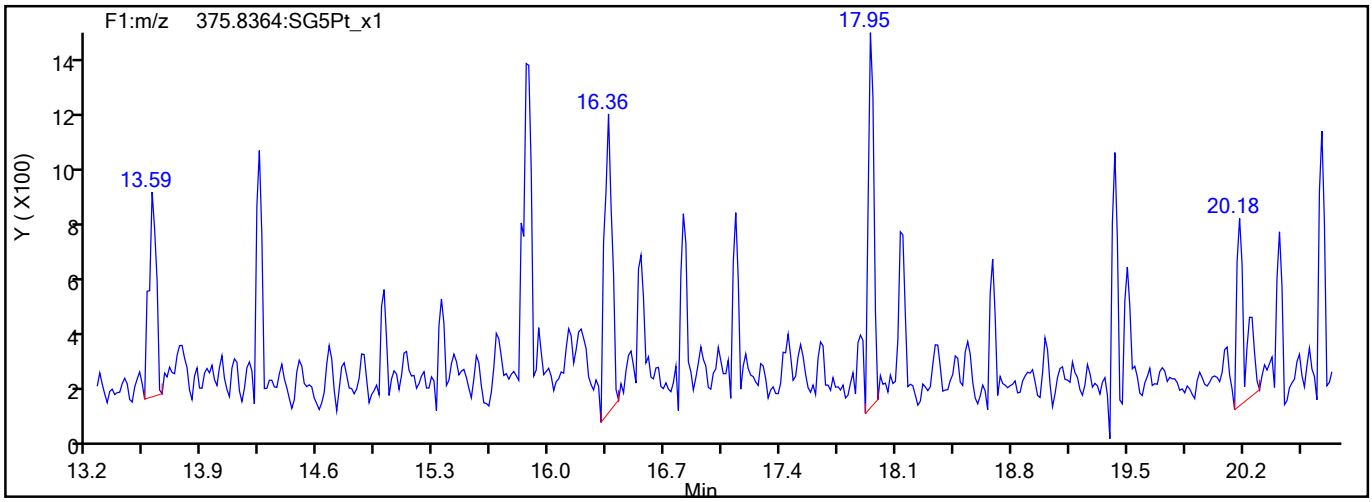

776117

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

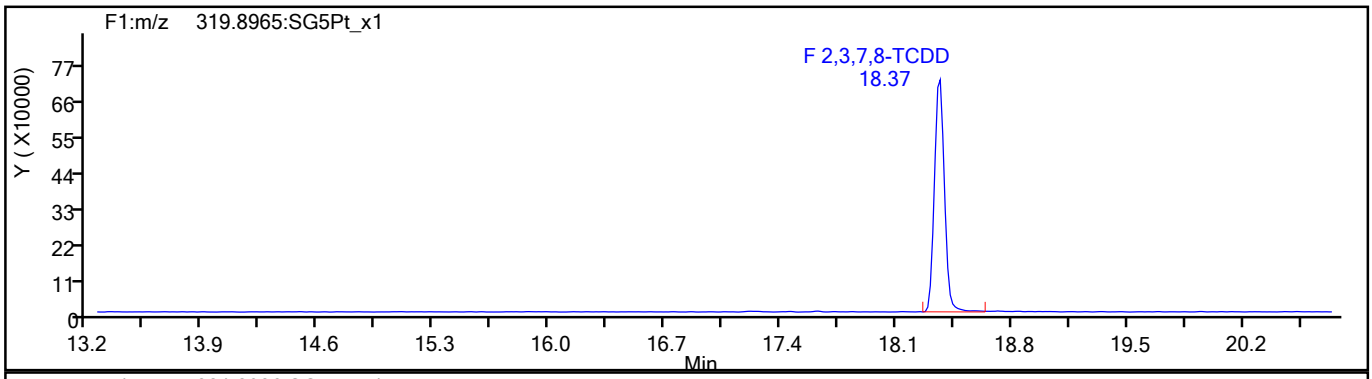

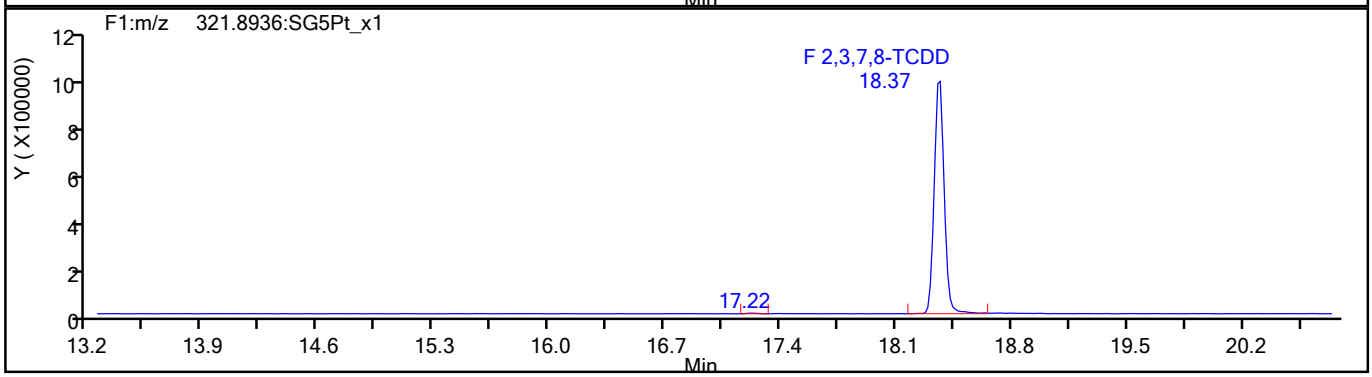

TCDD Standards

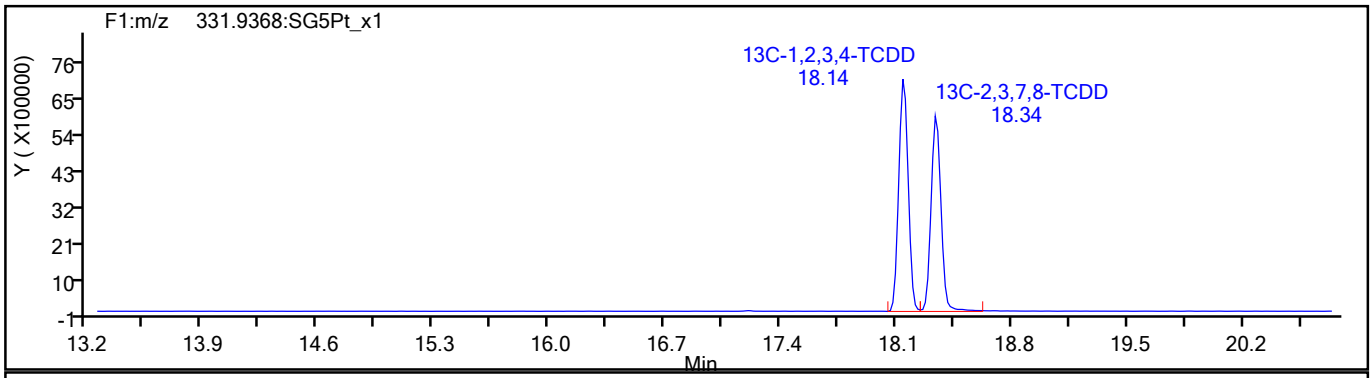

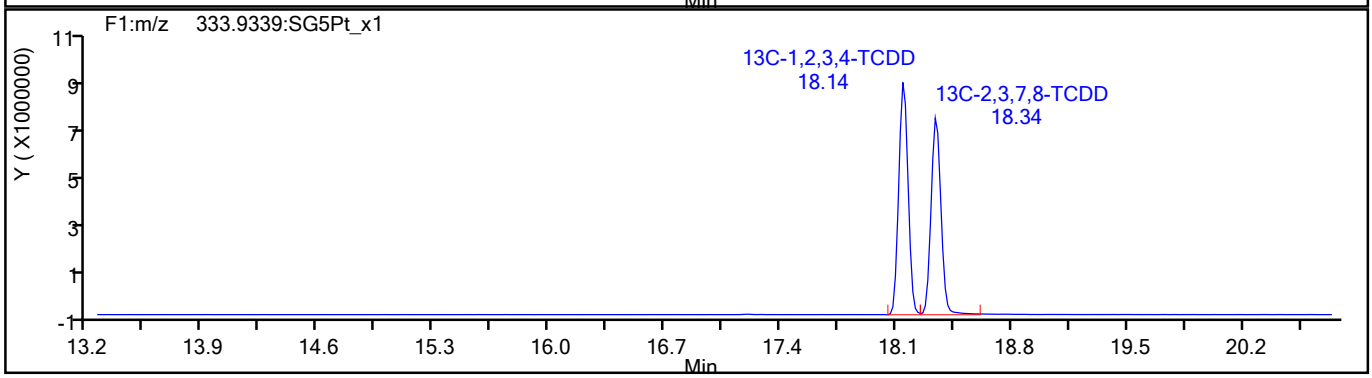

776118

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

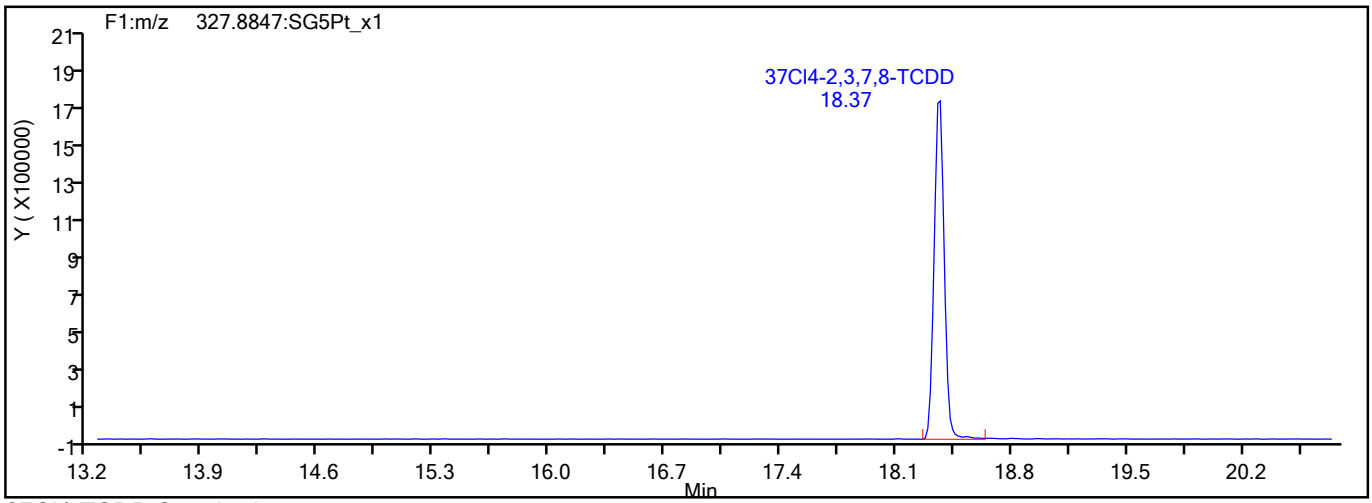

37Cl4-TCDD Standards

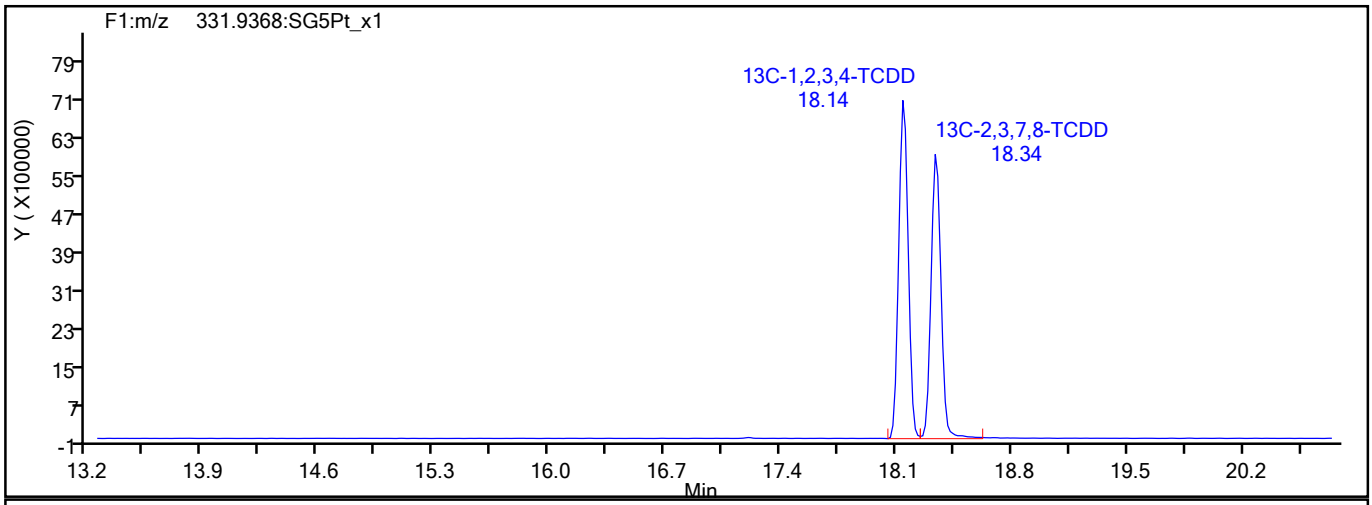

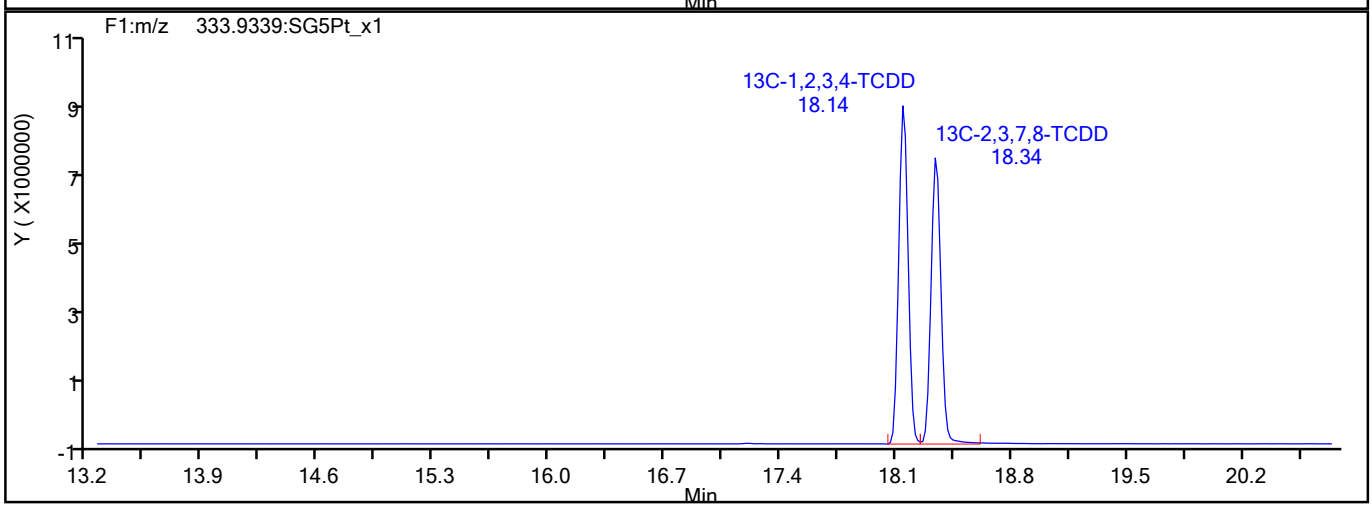

776119

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

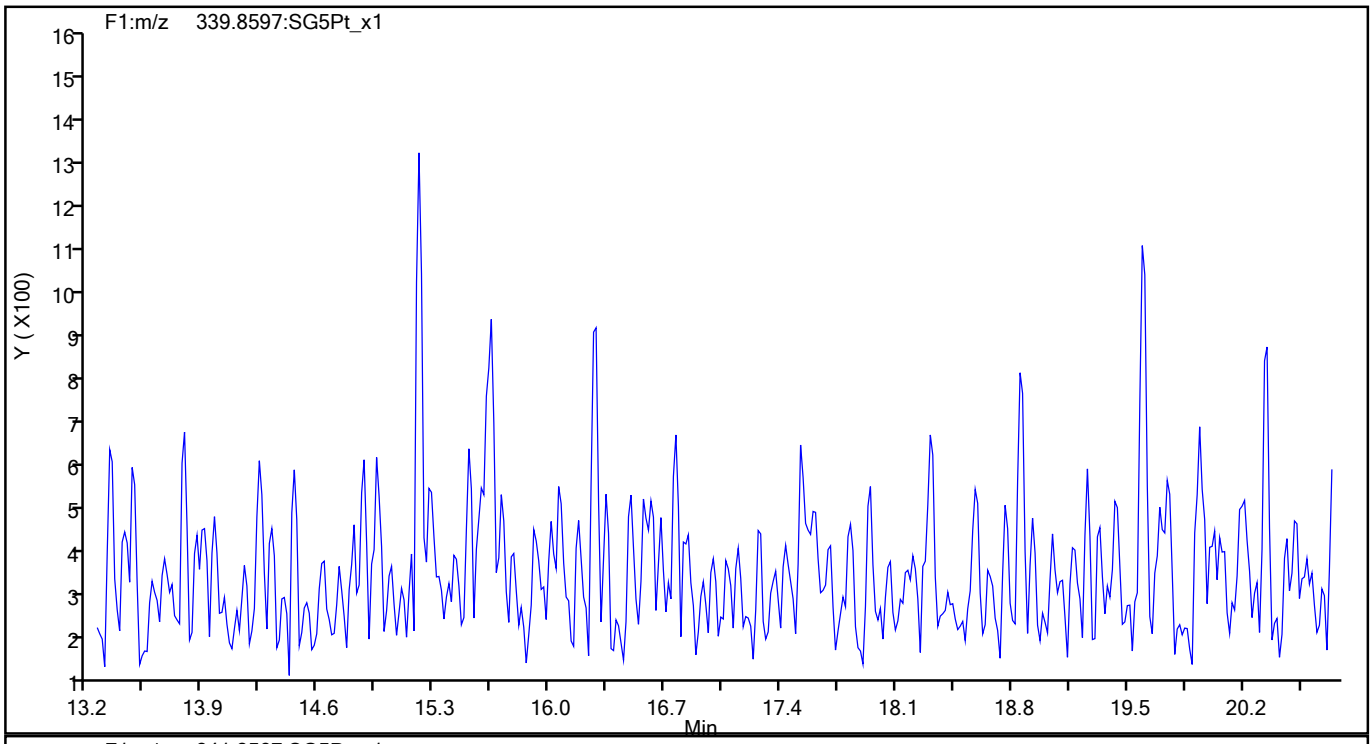

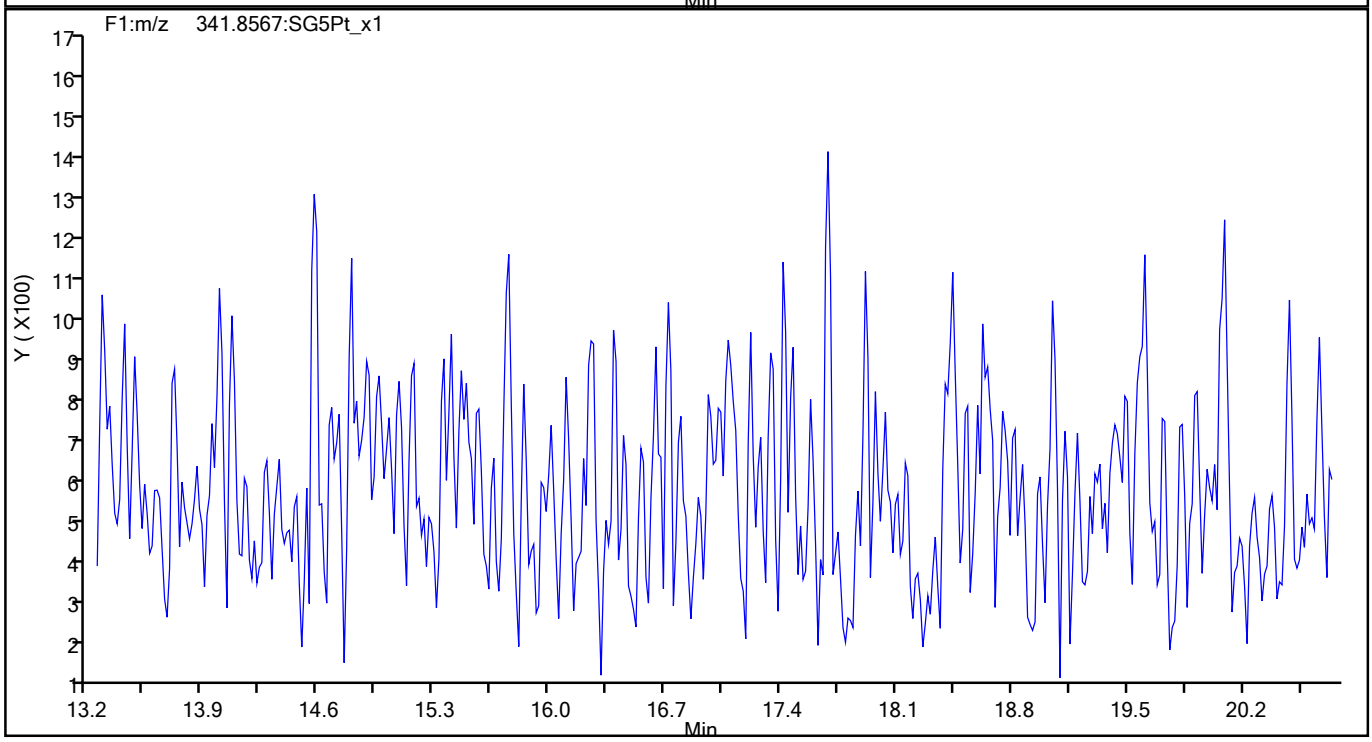

776120

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

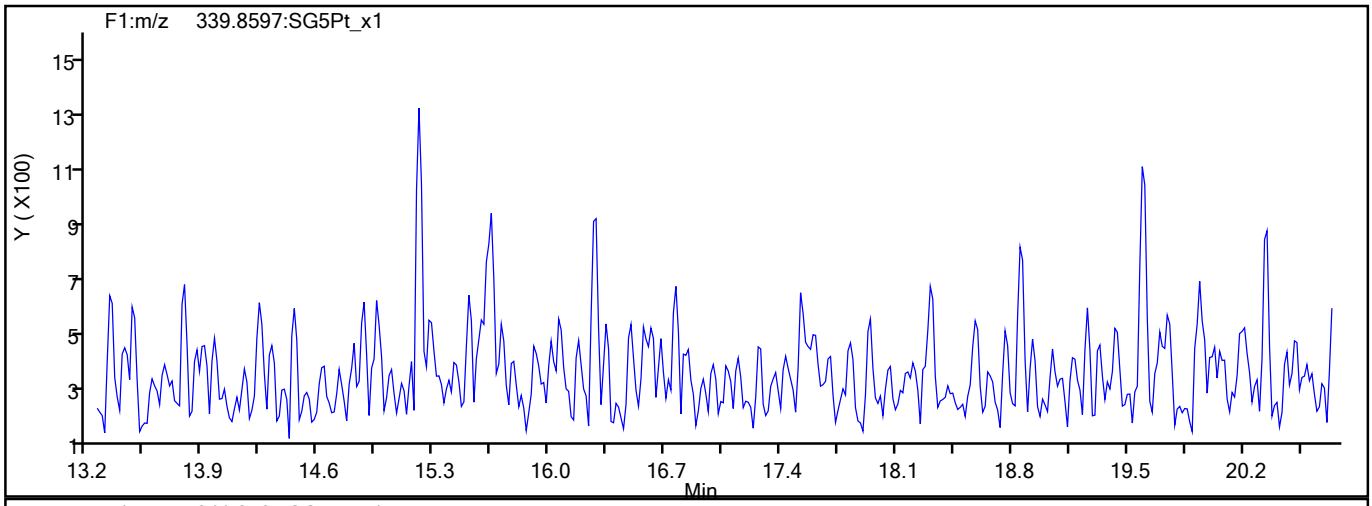

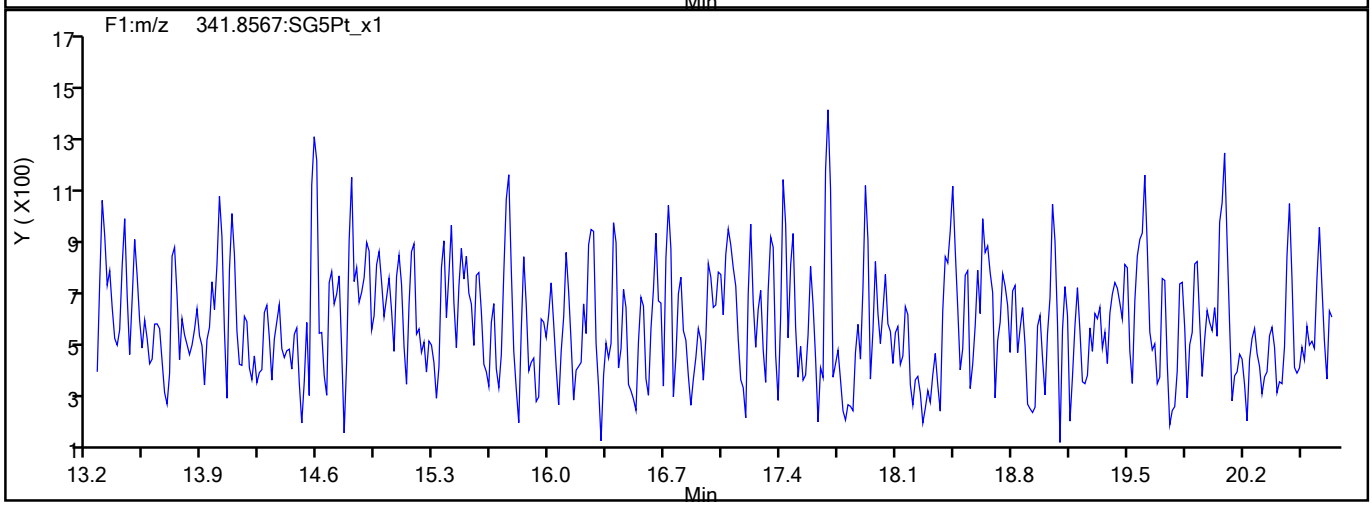

F1 PeCDFs Interference Mass

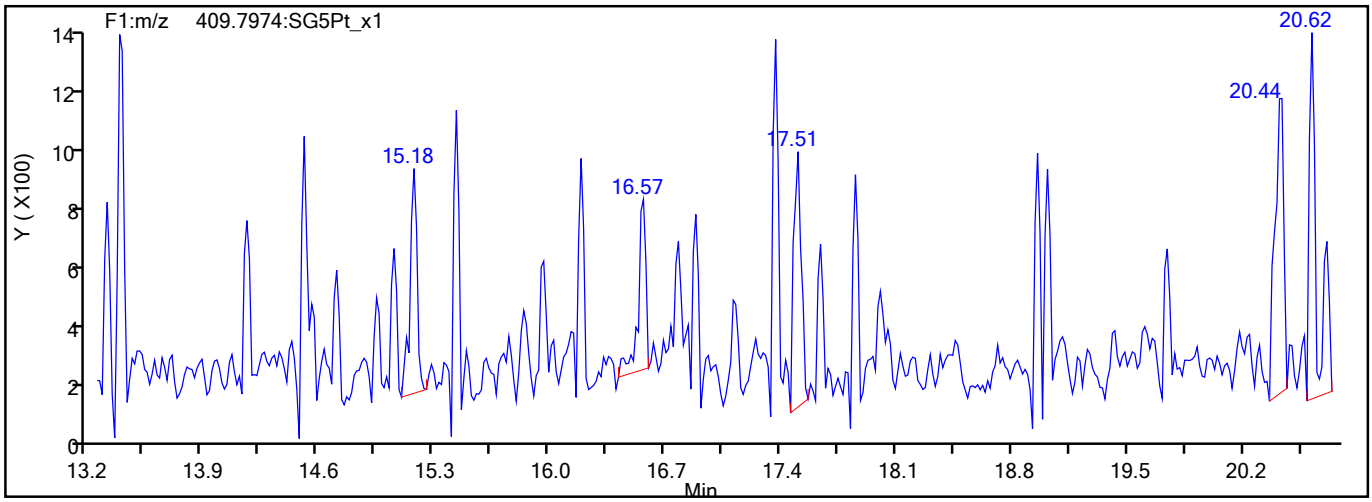

776121

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

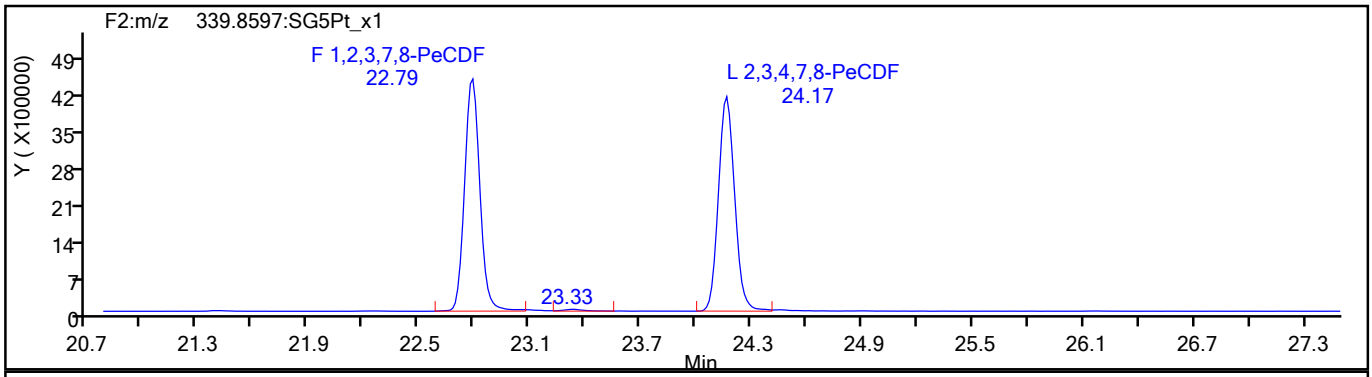

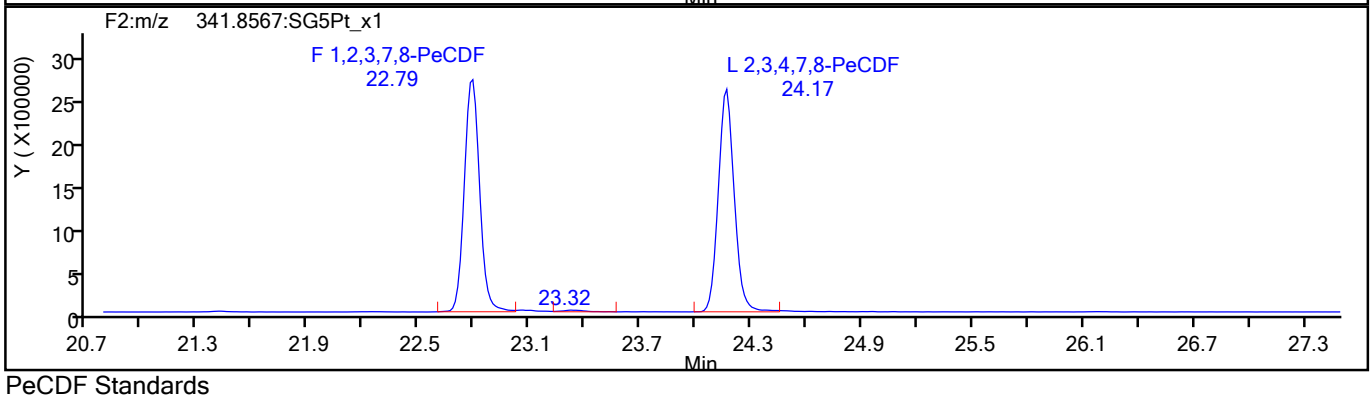

PeCDF Standards

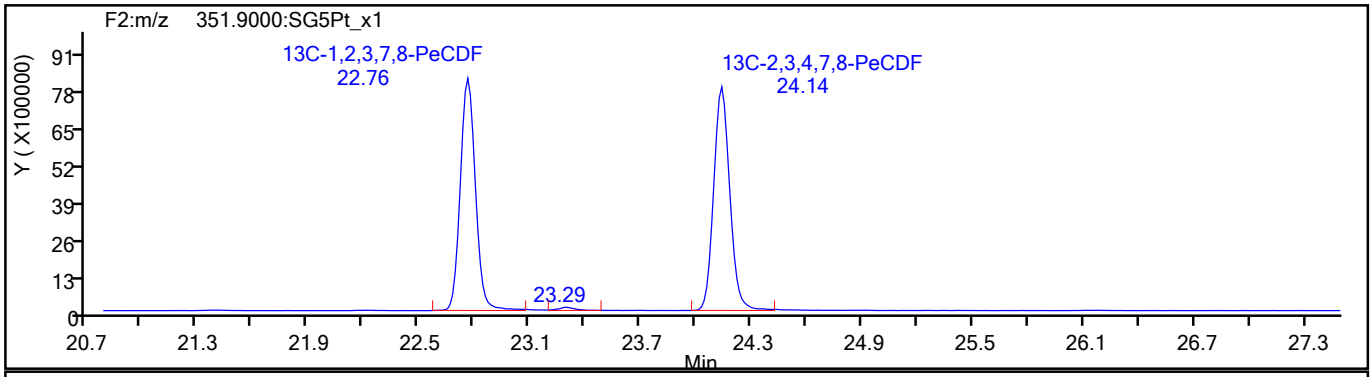

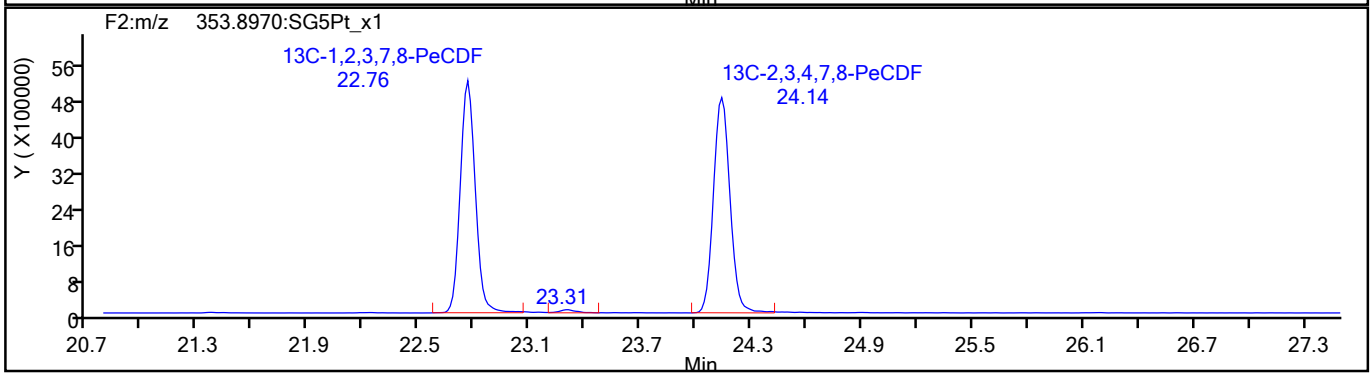

776122

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

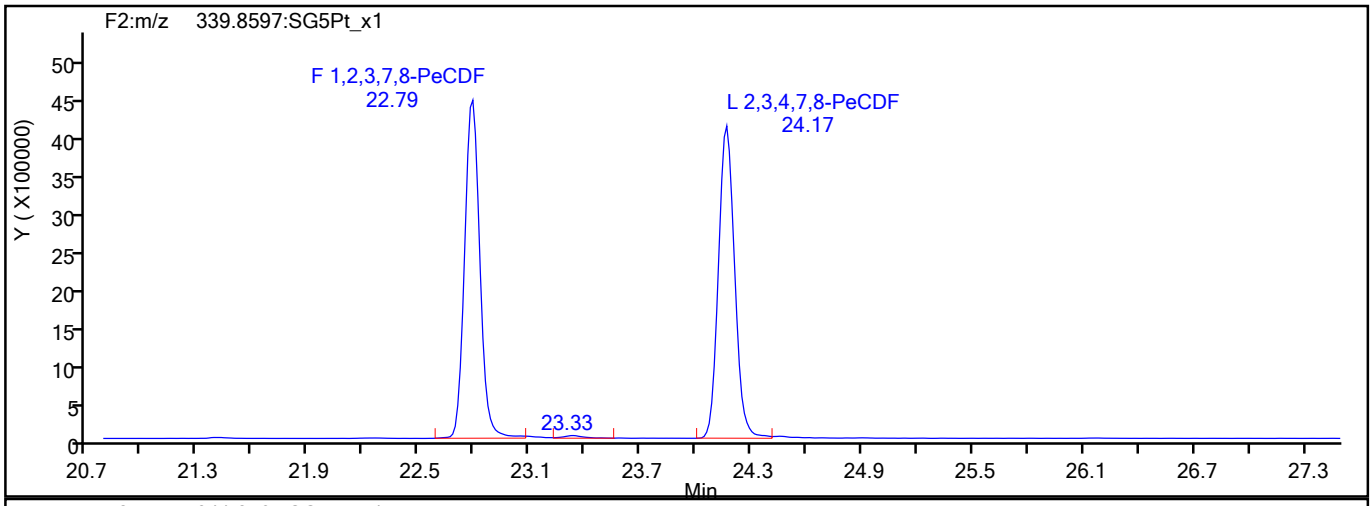

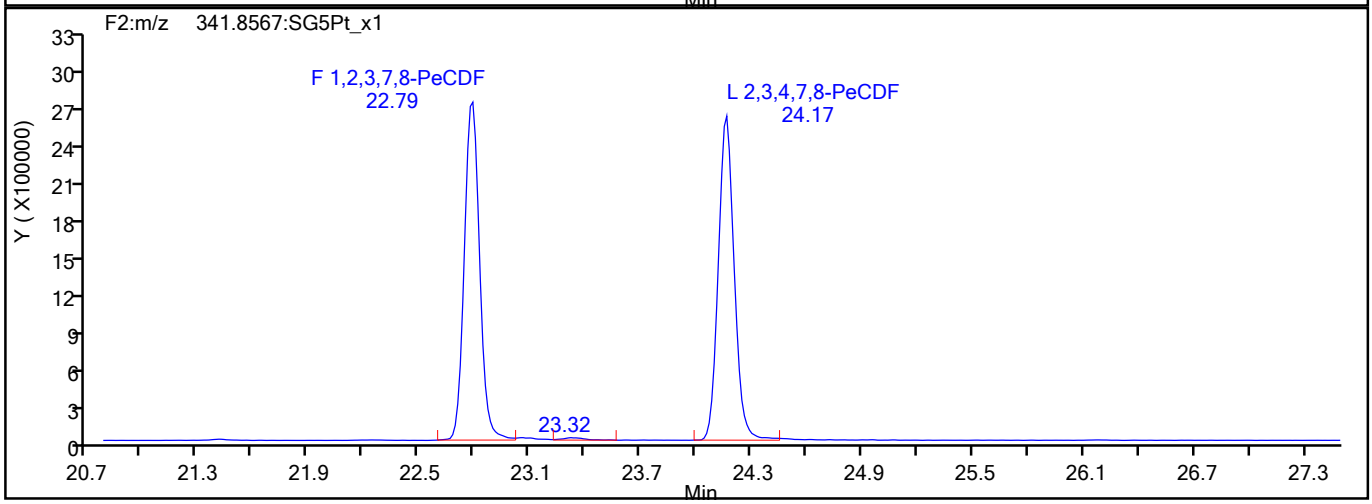

PeCDF Interference Mass

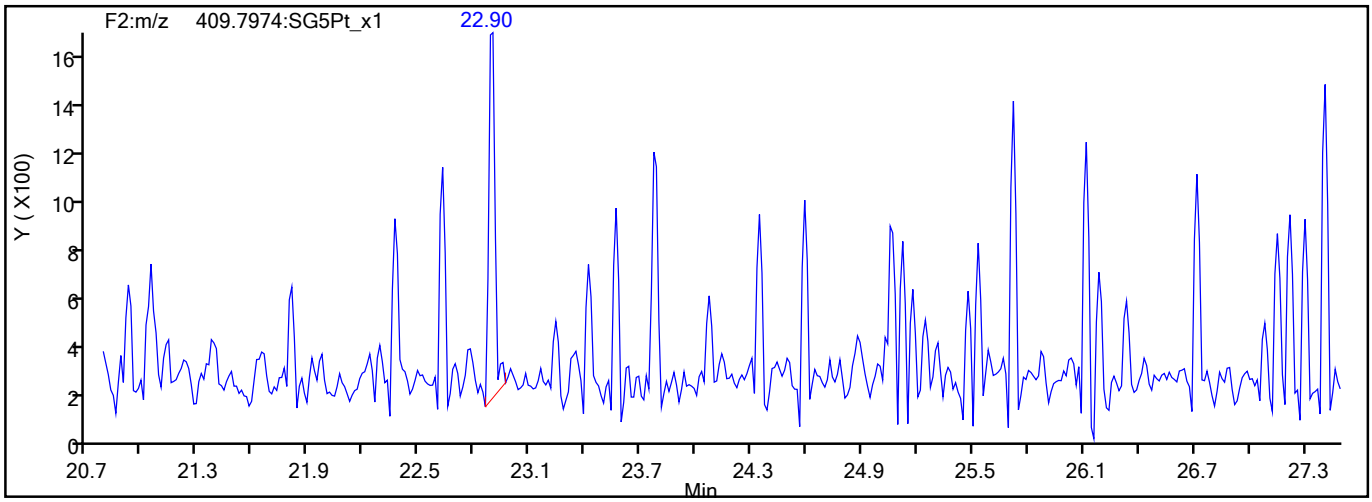

776123

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

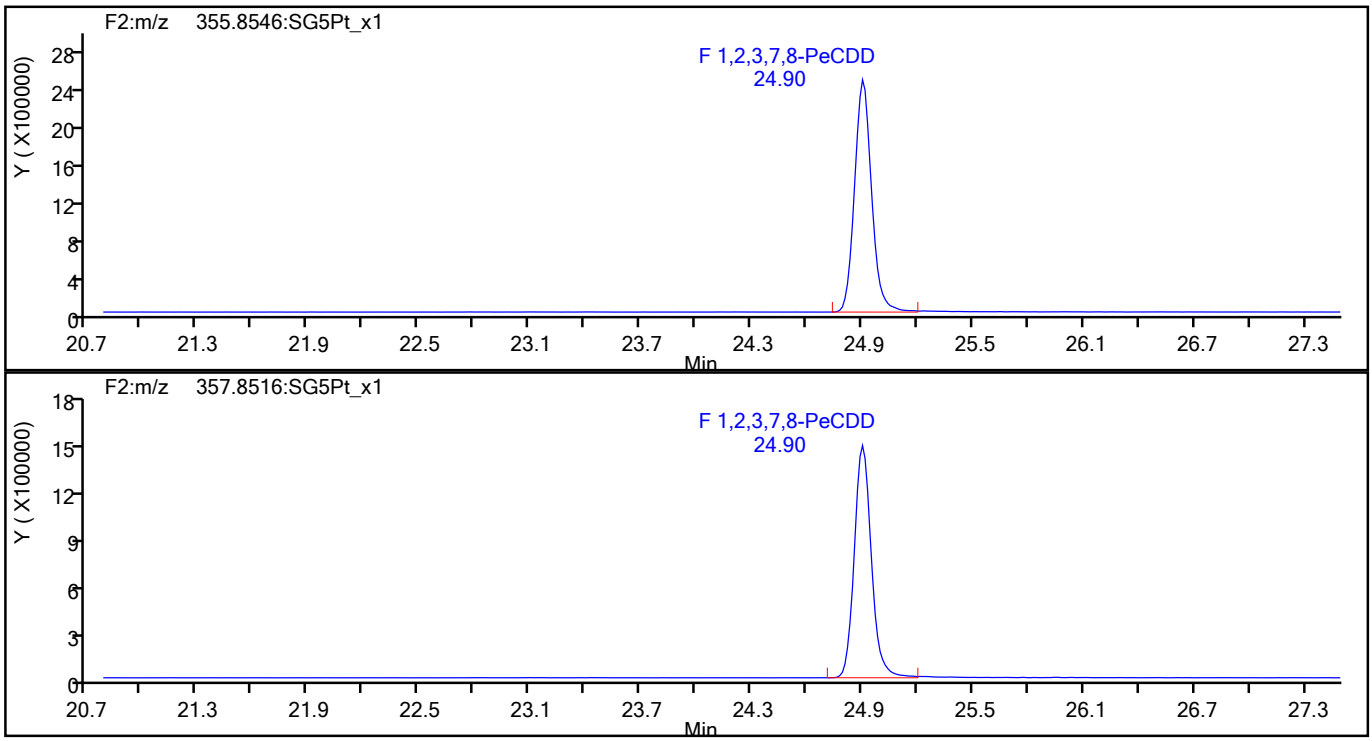

PeCDD Standards

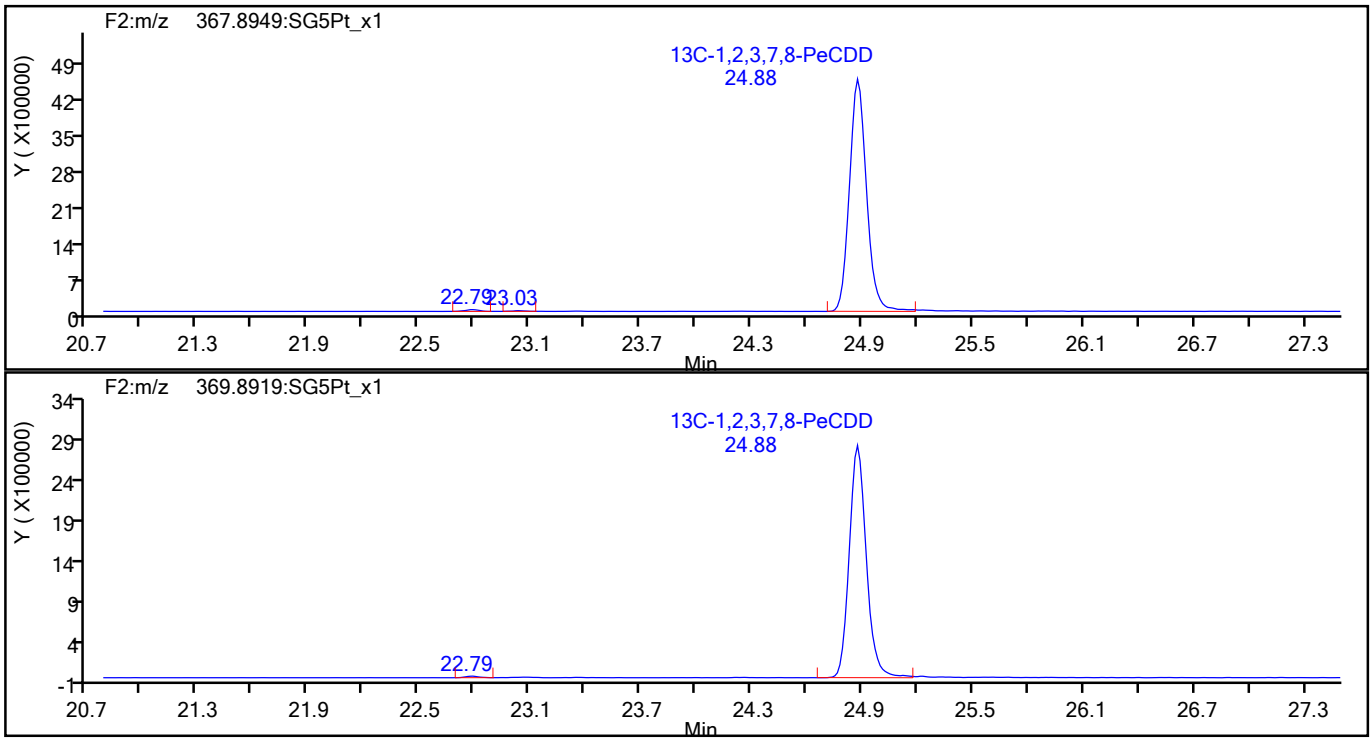

776124

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

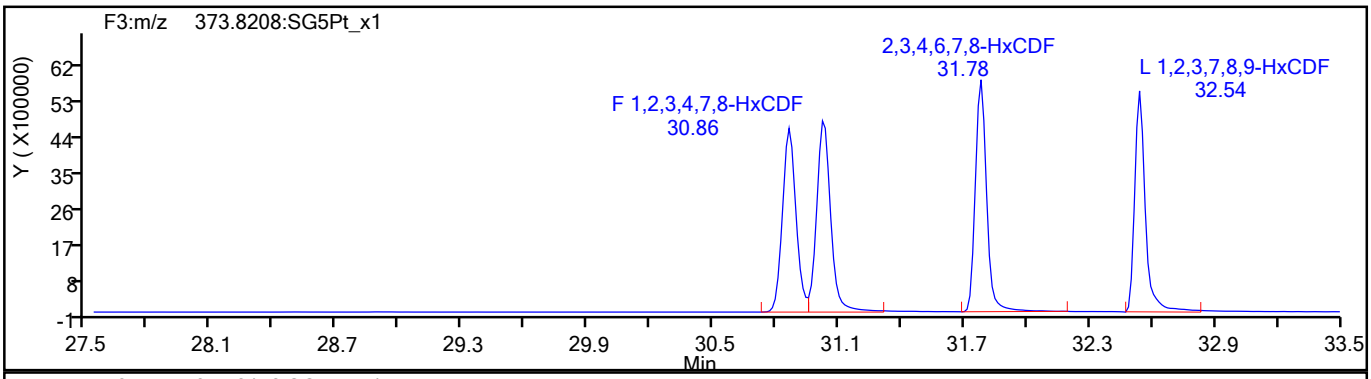

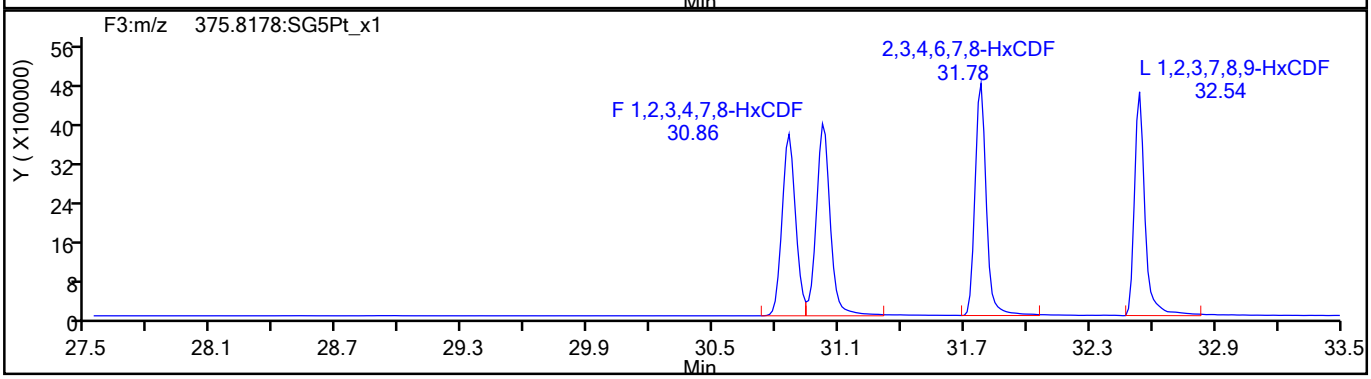

HxCDF Standards

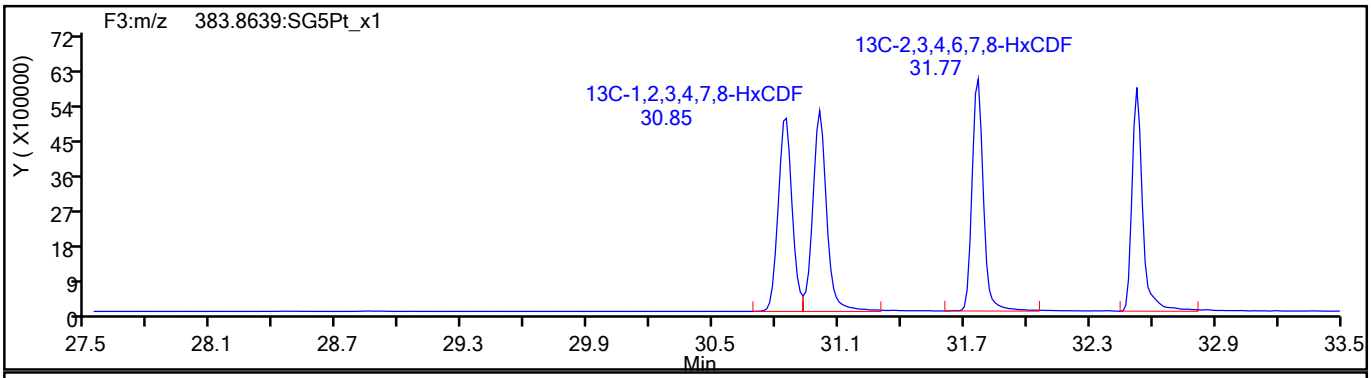

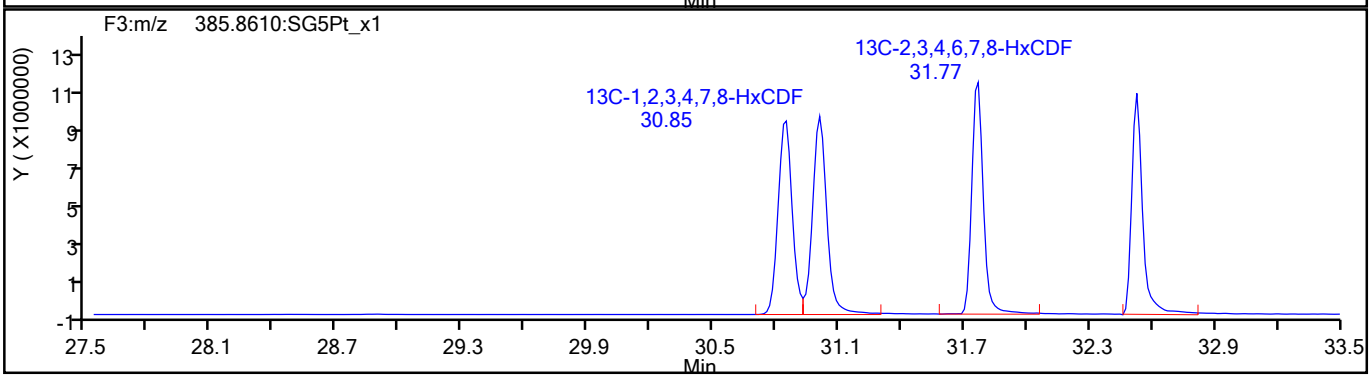

776125

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

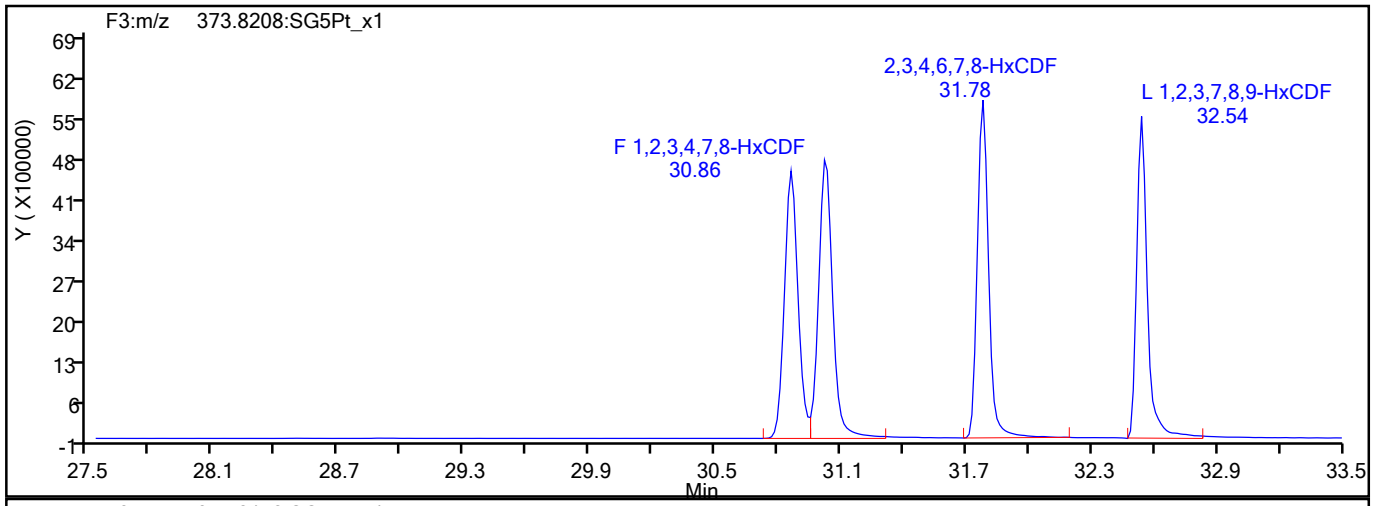

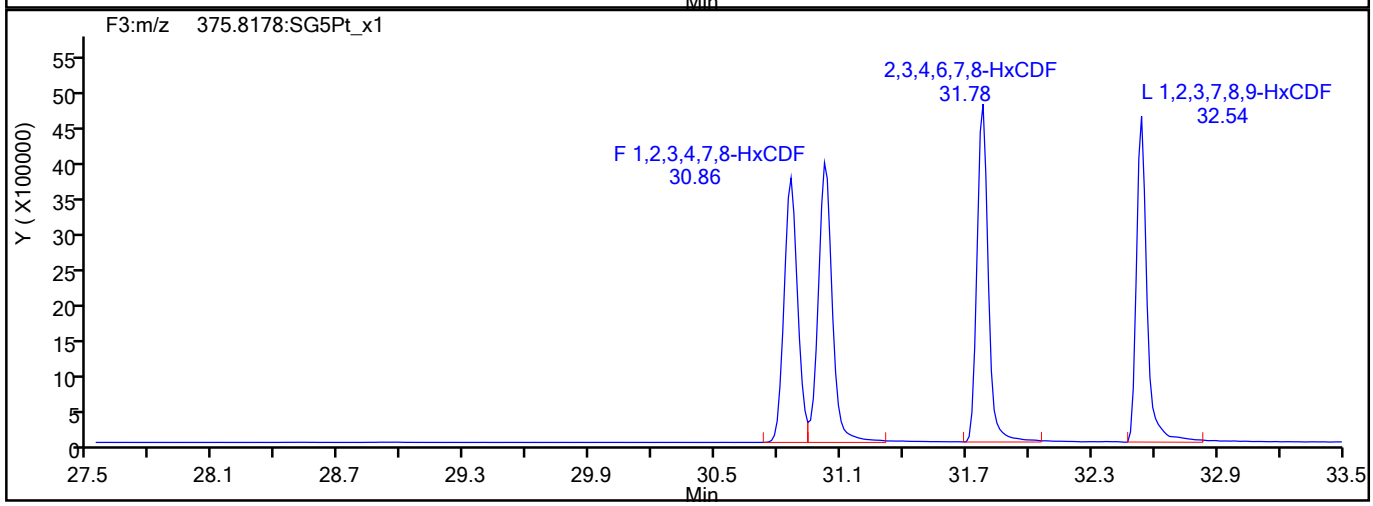

HxCDF Interference Mass

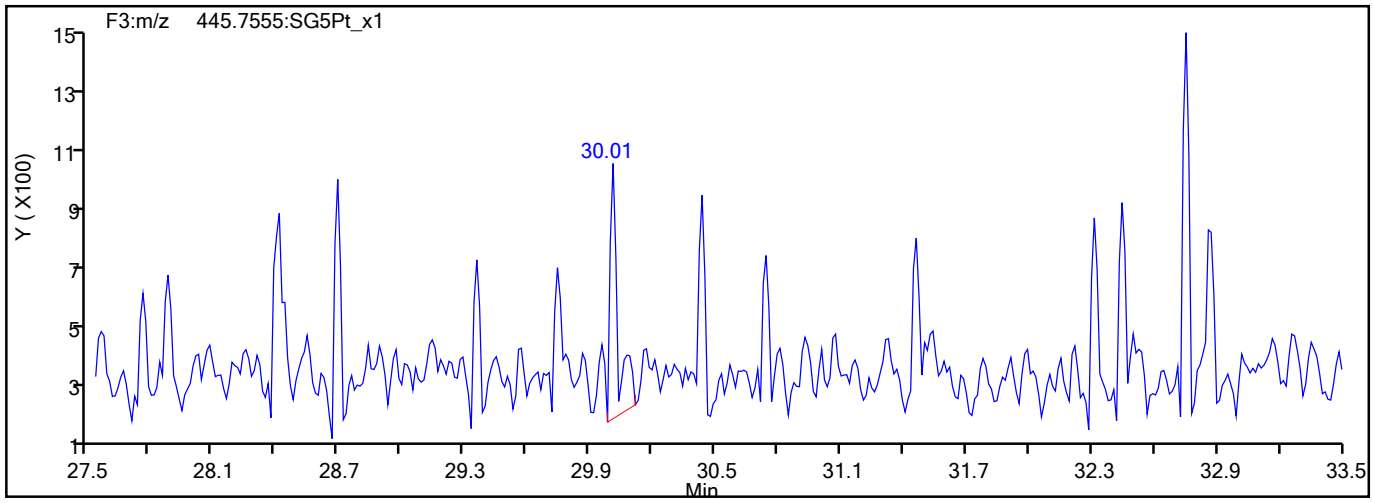

776126

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

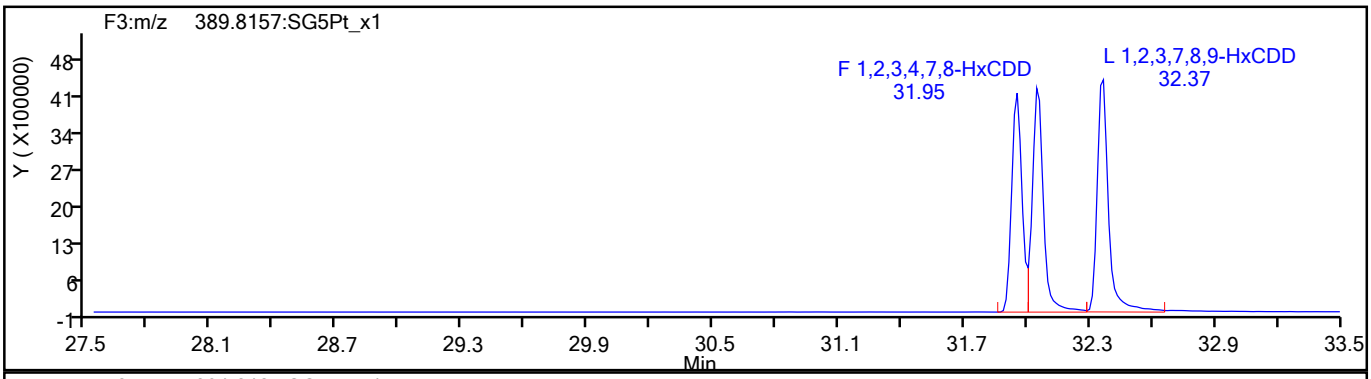

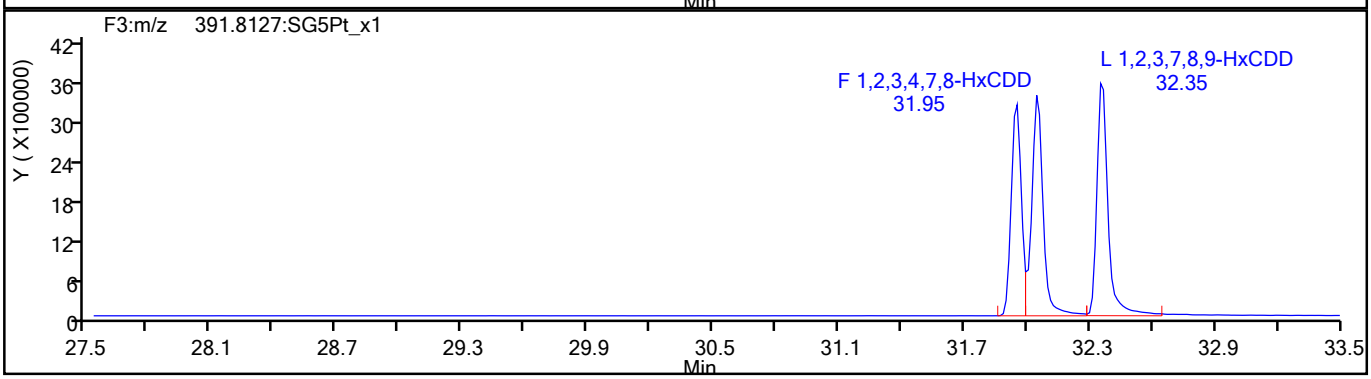

HxCDD Standards

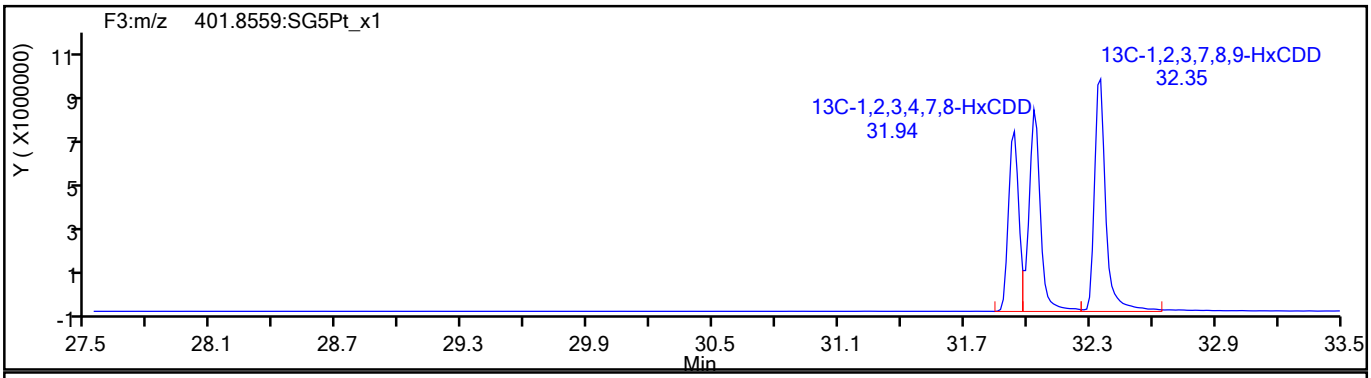

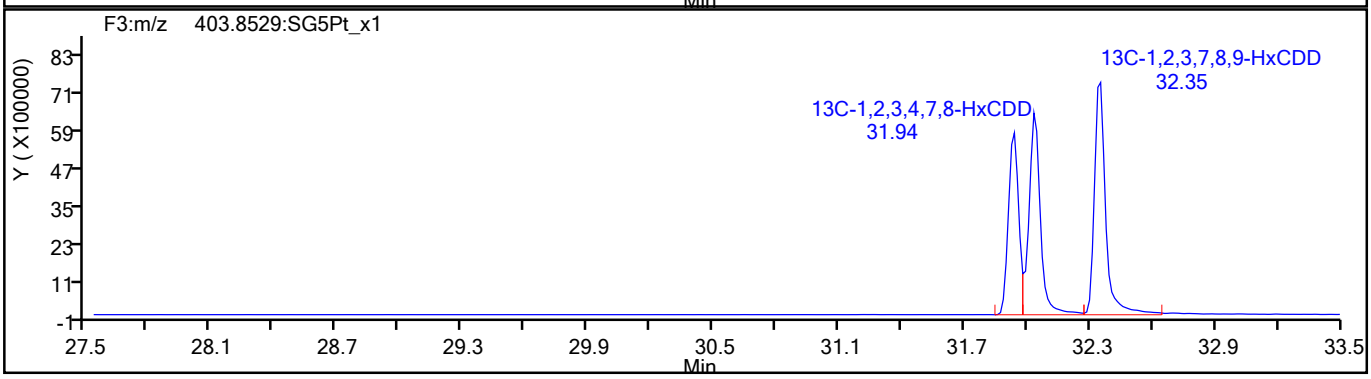

776127

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

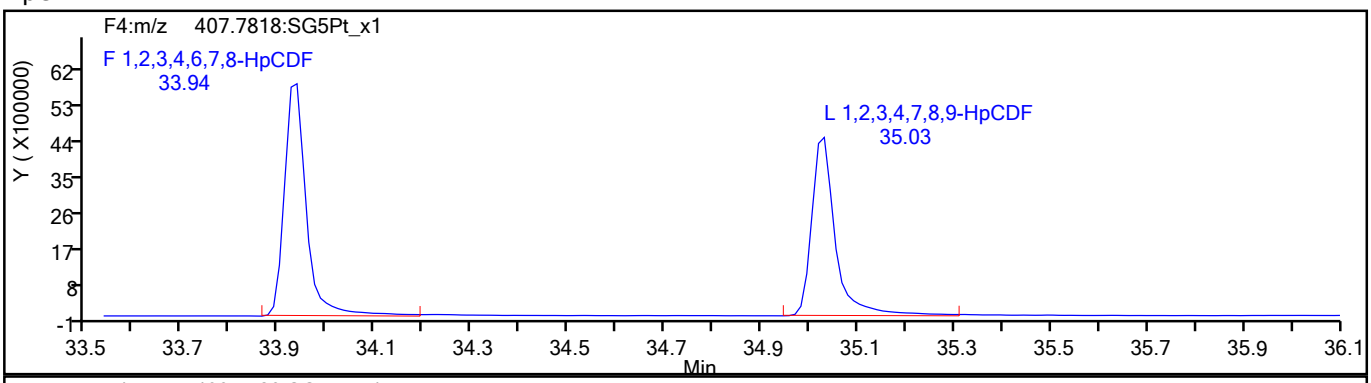

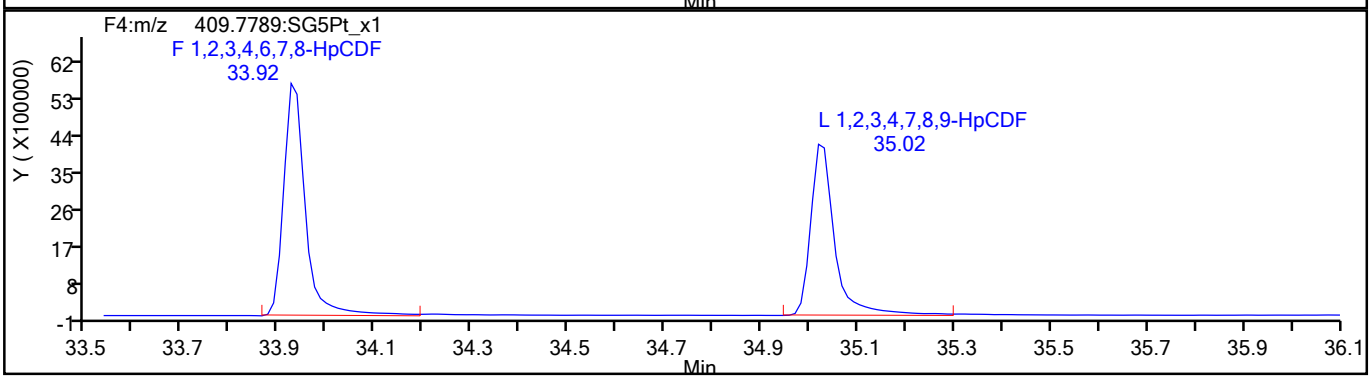

HpCDF Standards

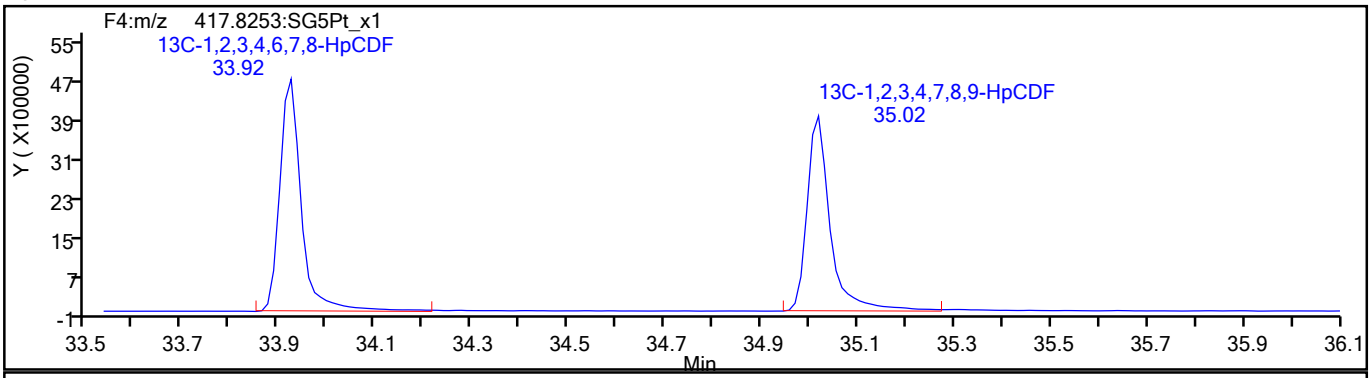

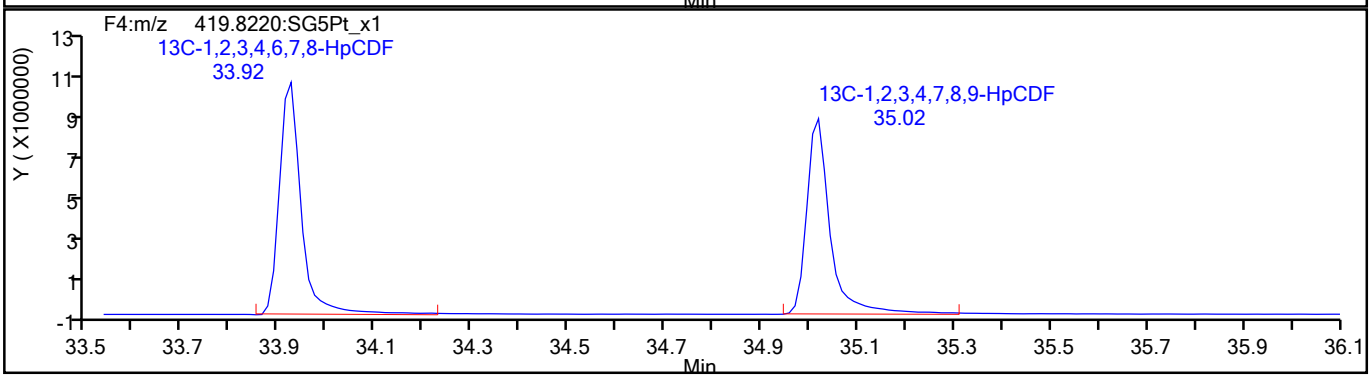

776128

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

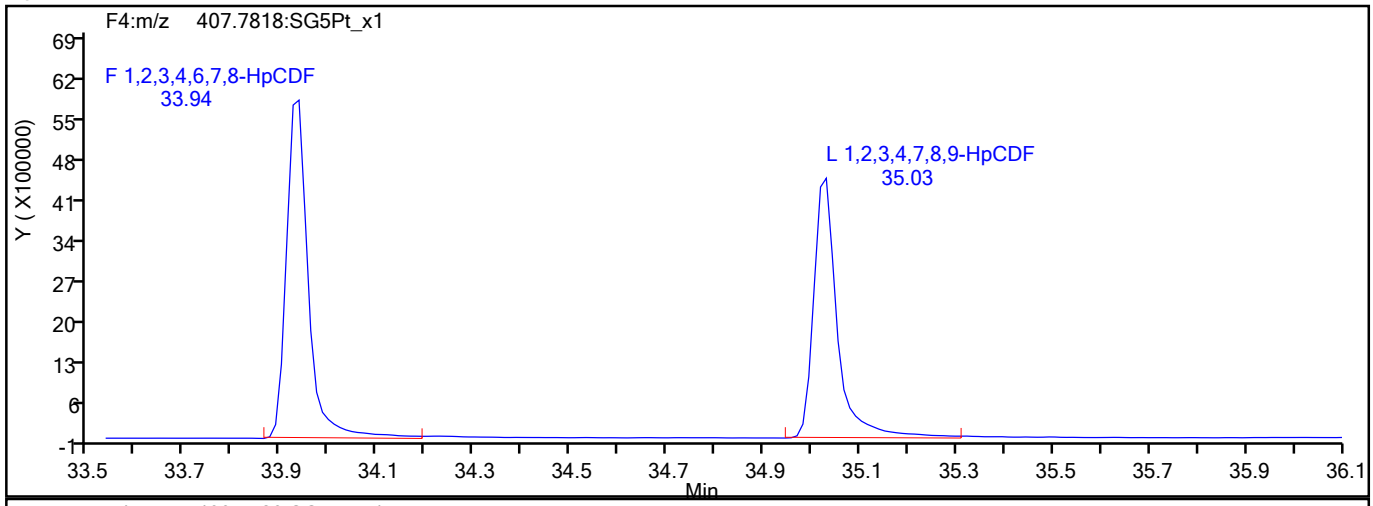

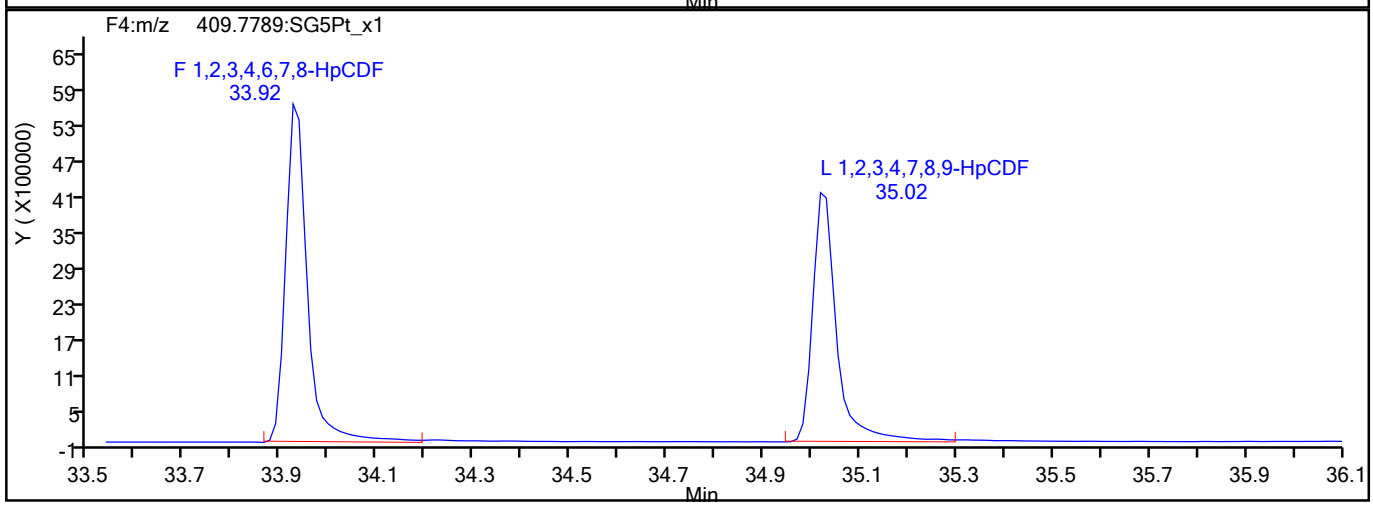

HpCDF Interference Mass

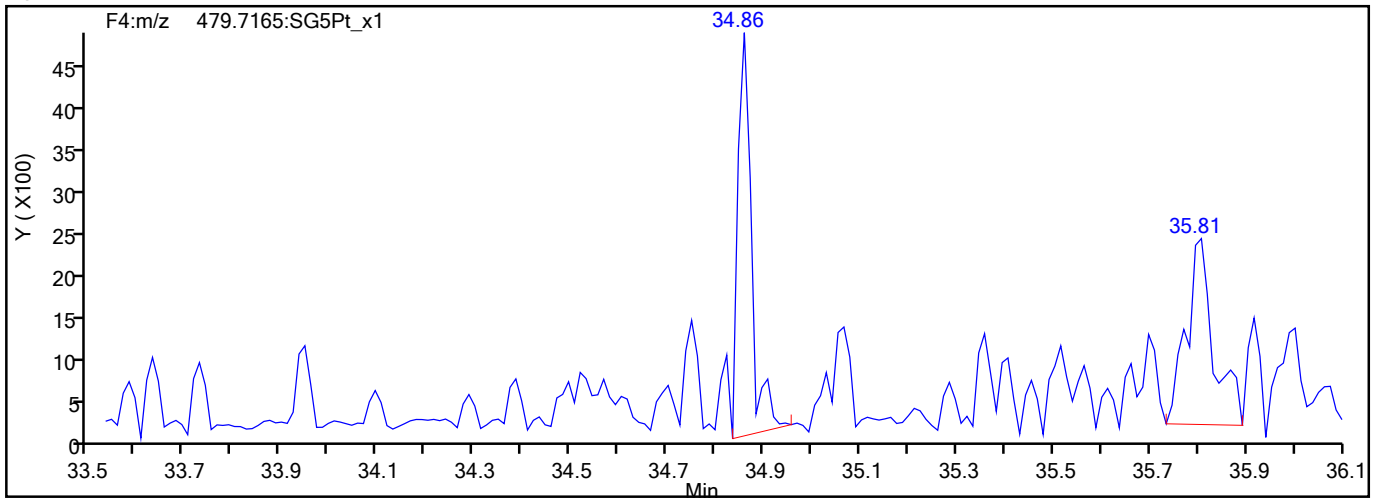

776129

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

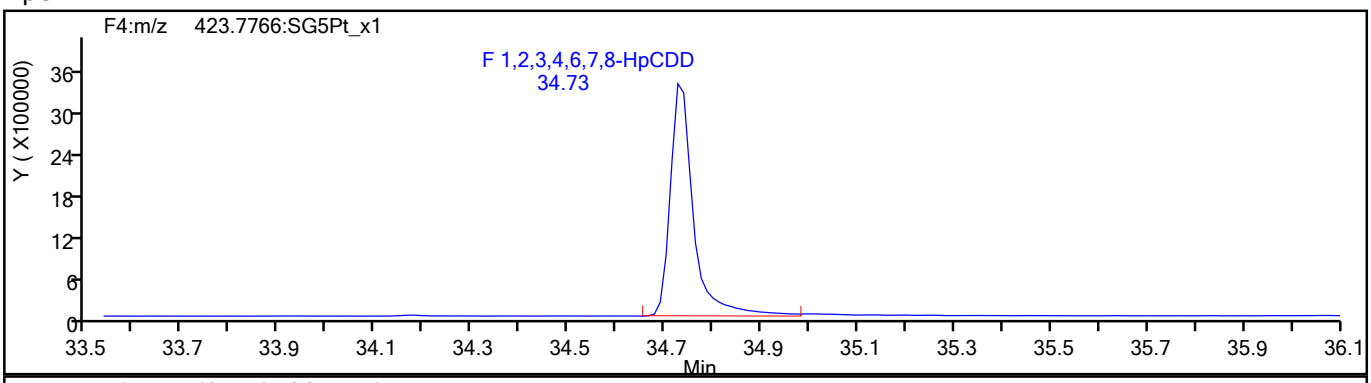

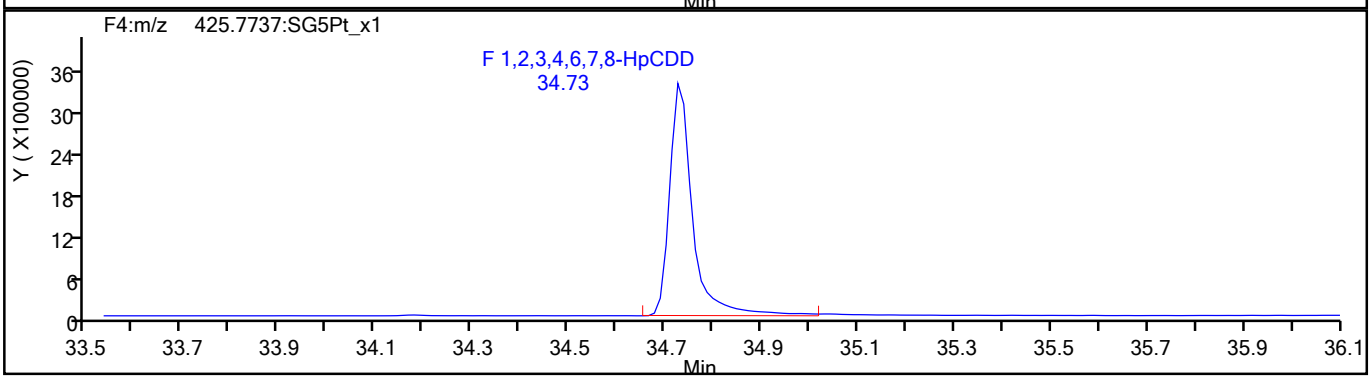

HpCDD Standards

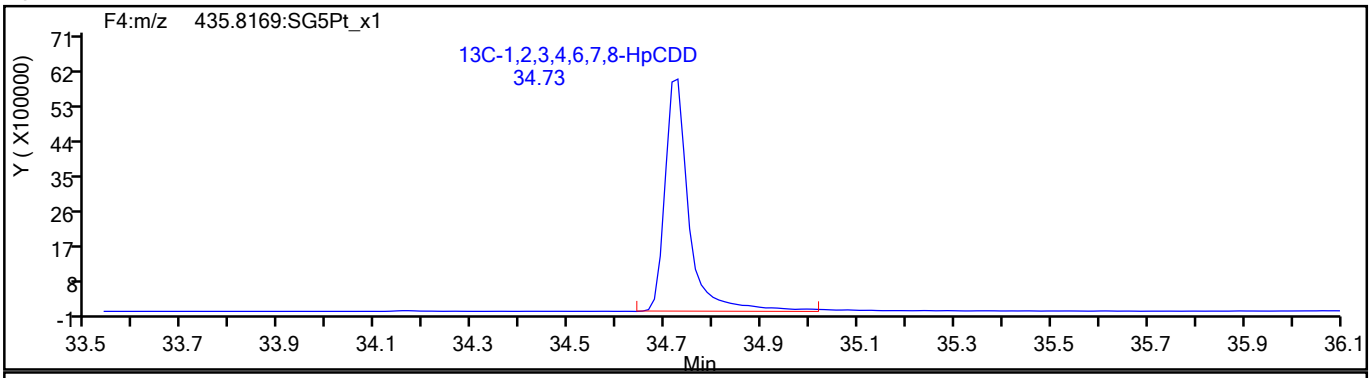

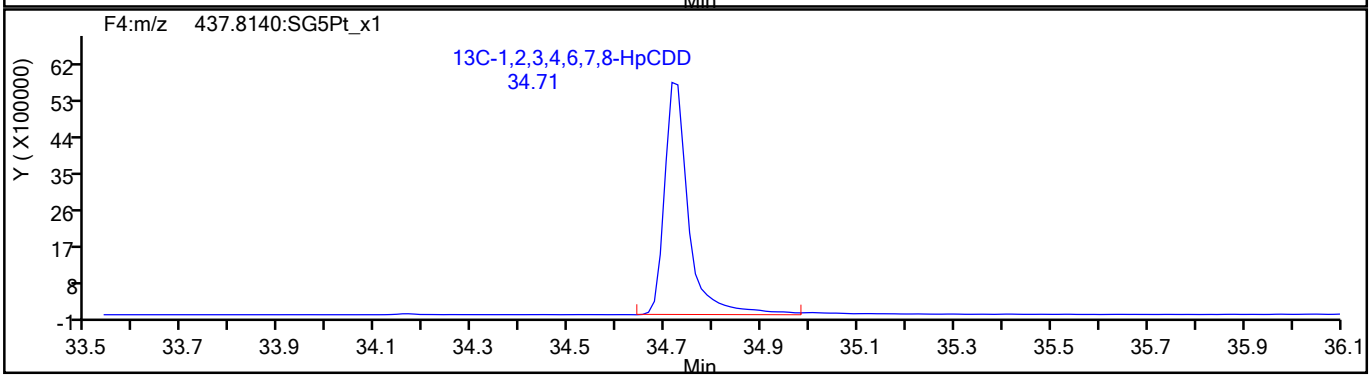

776130

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

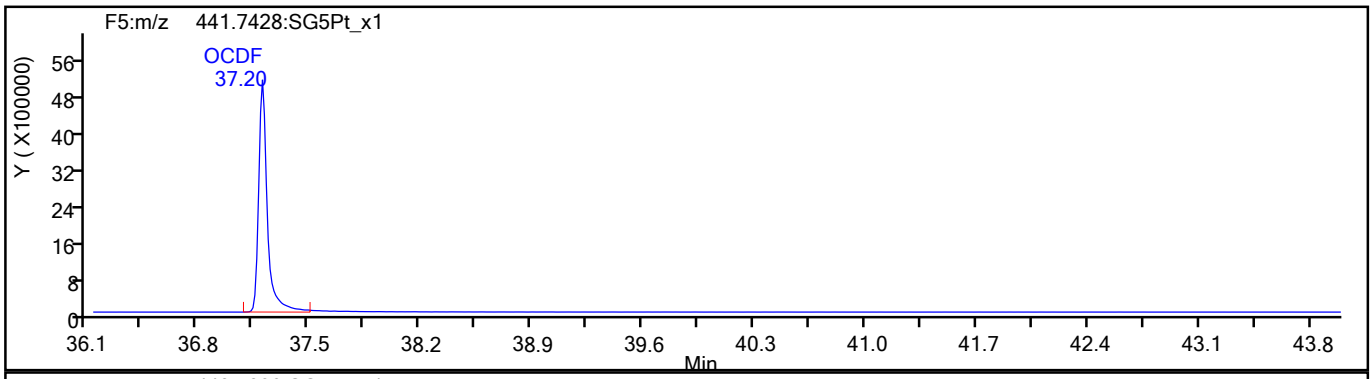

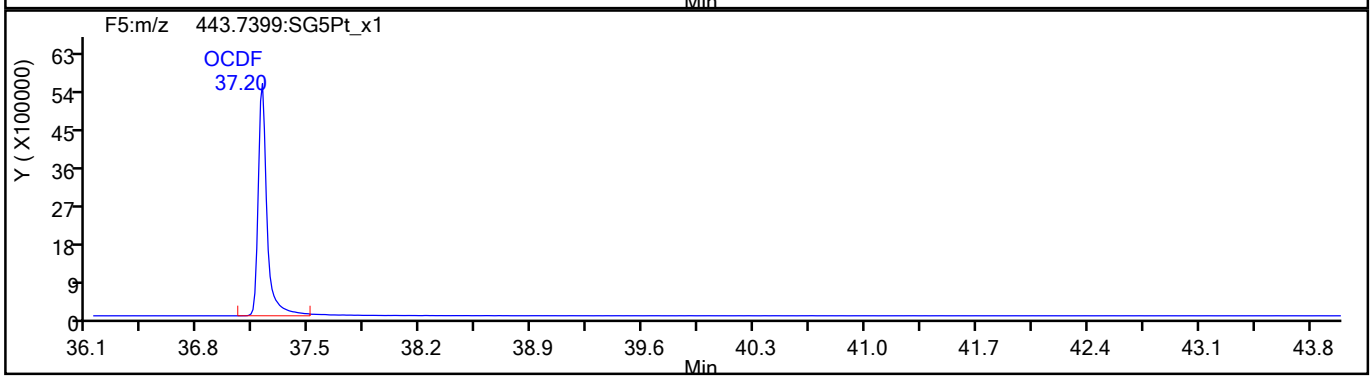

OCDF Standards

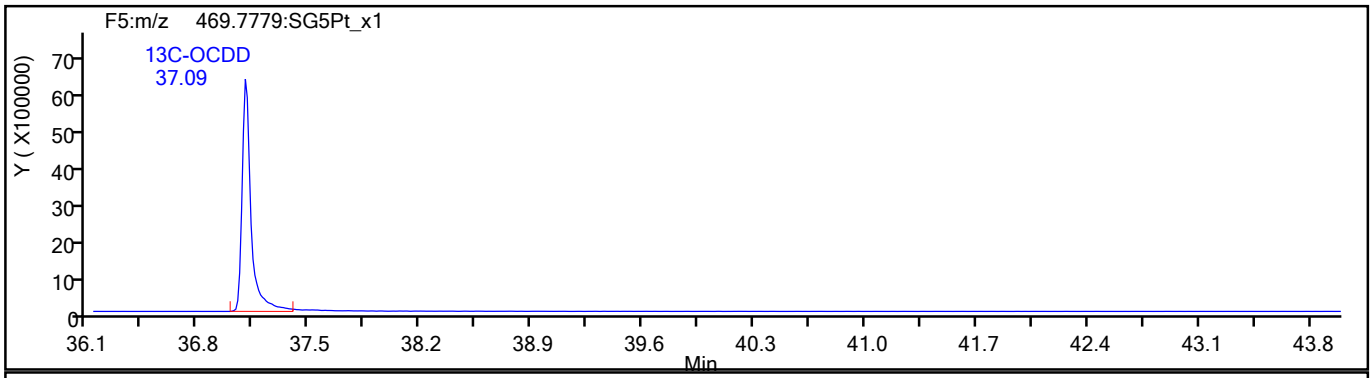

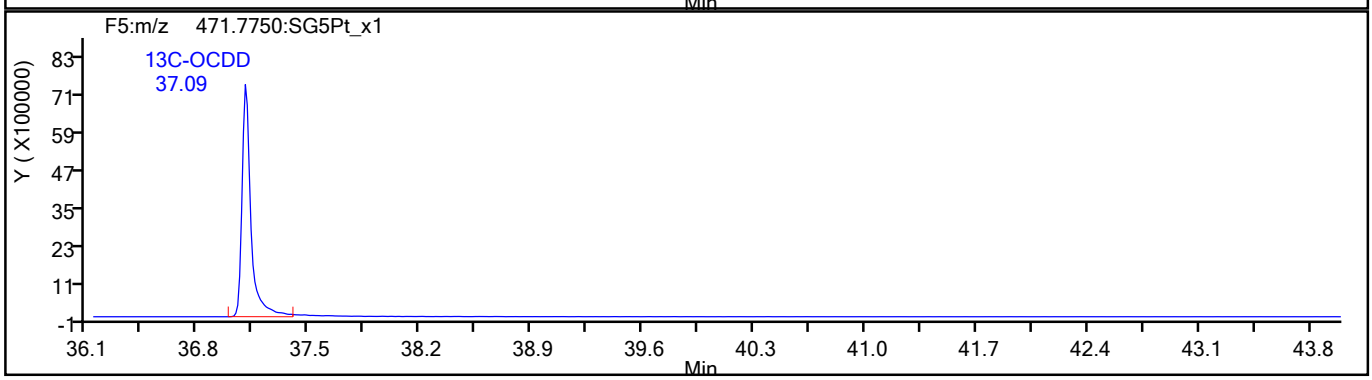

776131

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

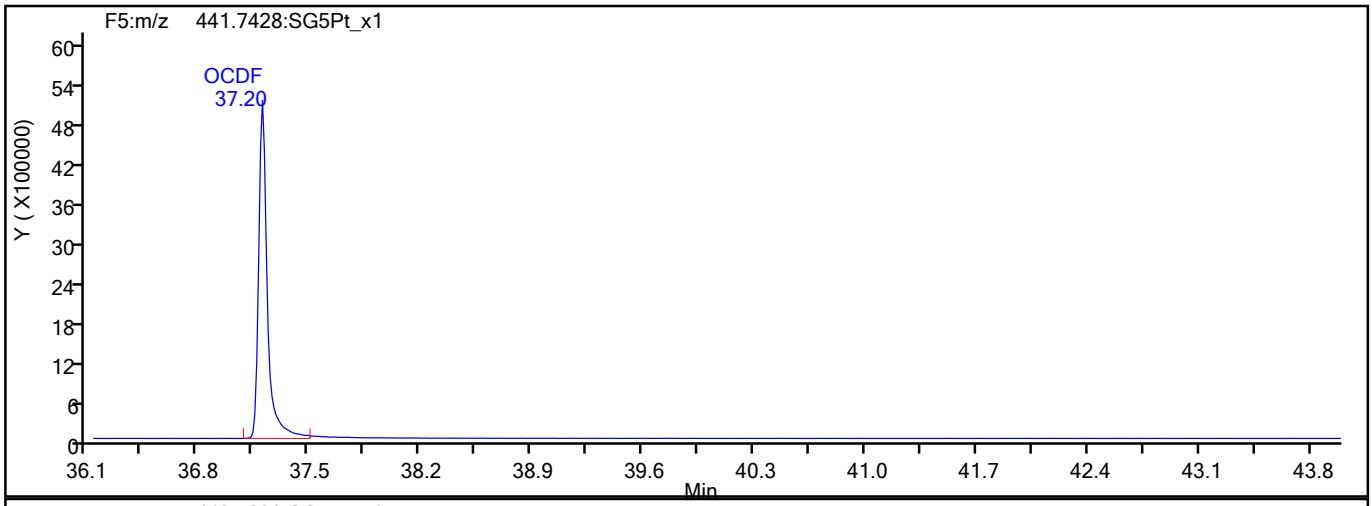

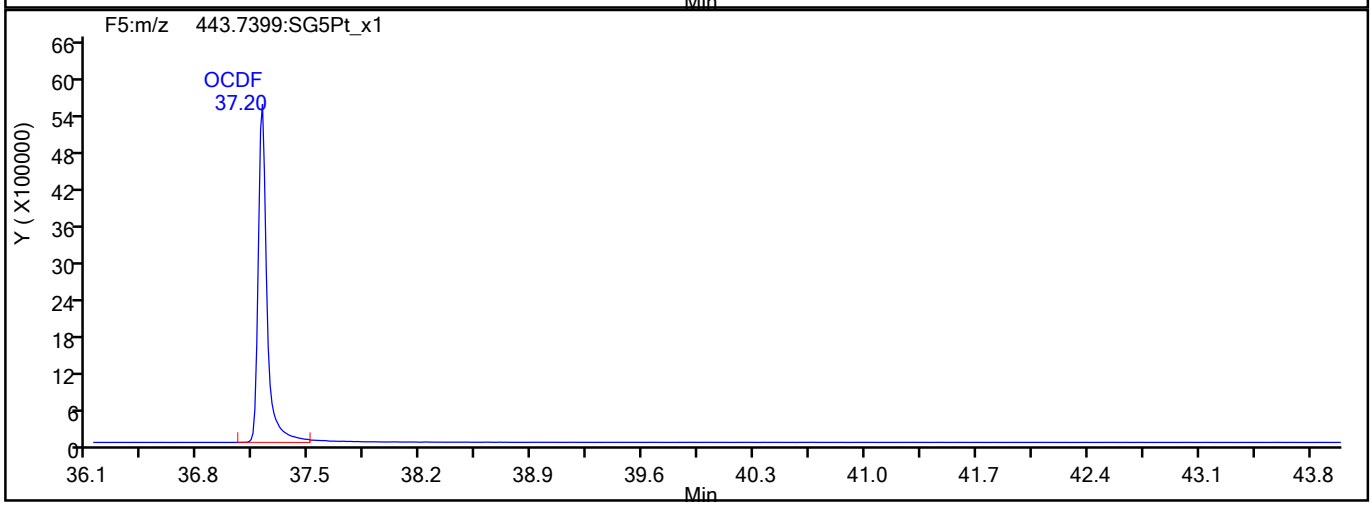

OCDF Interference Mass

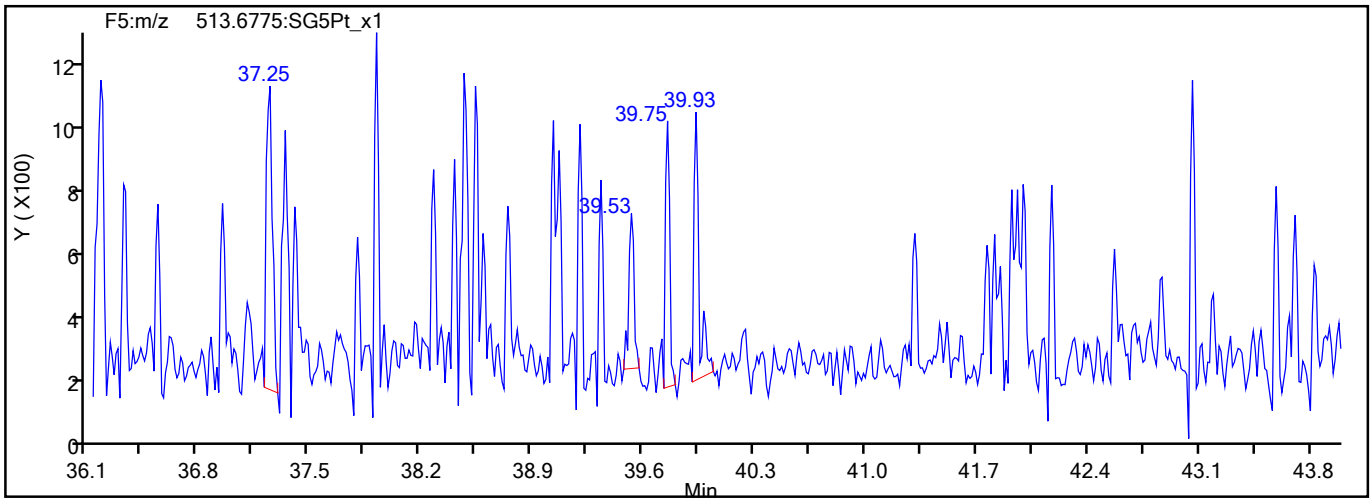

776132

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

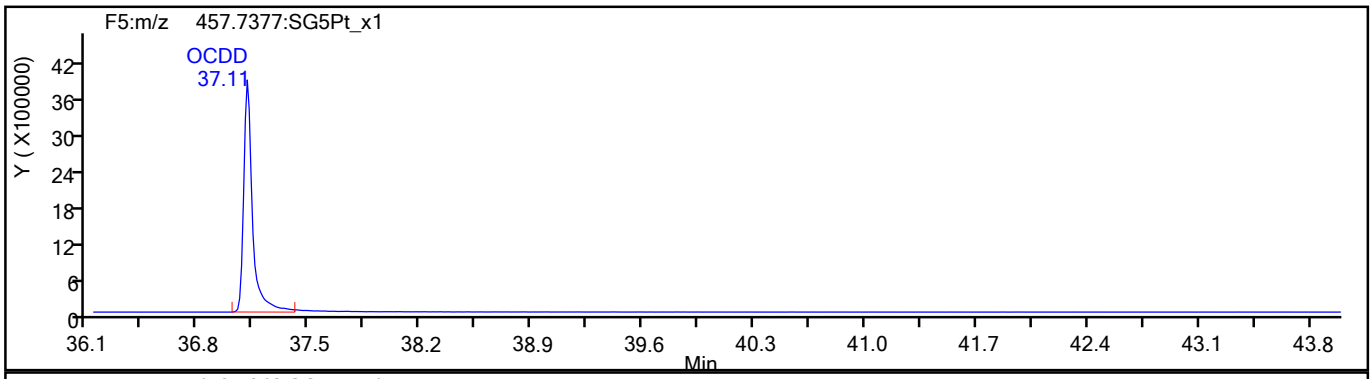

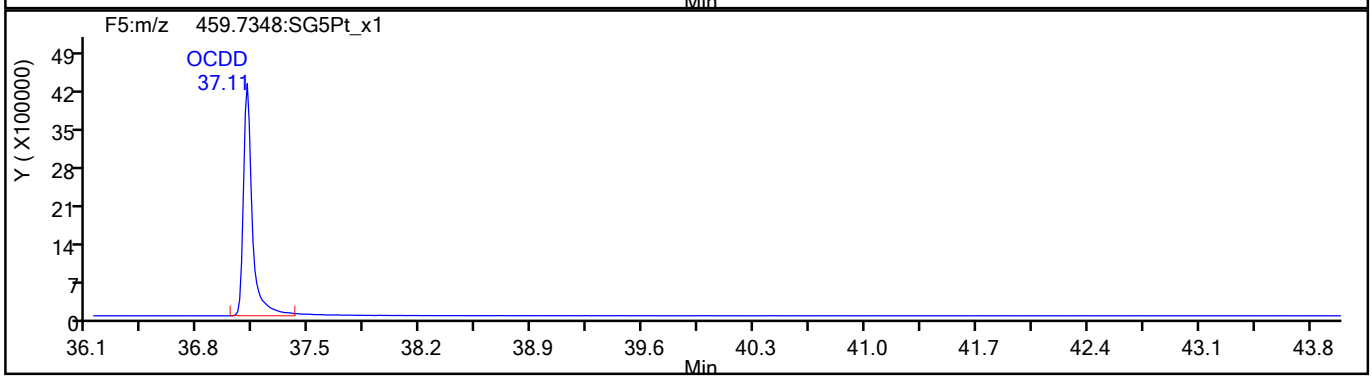

OCDD Standards

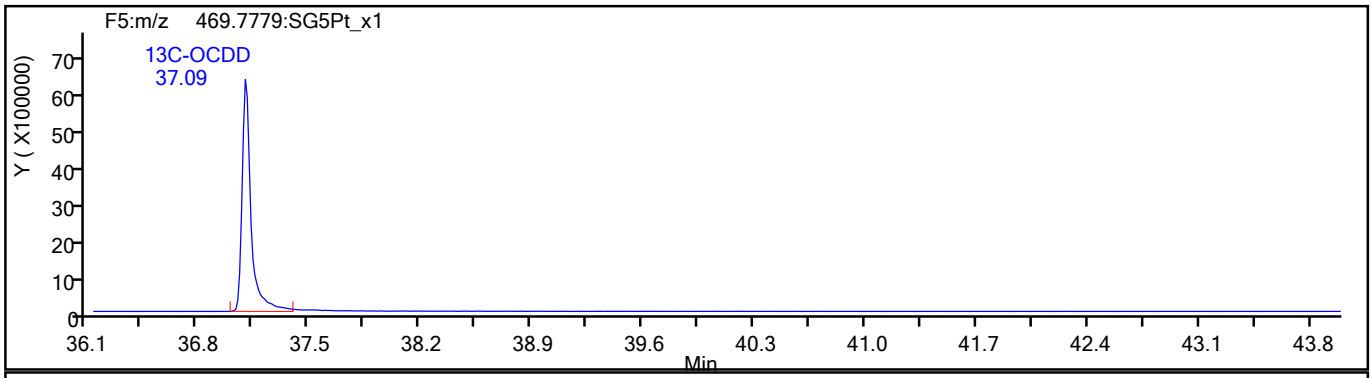

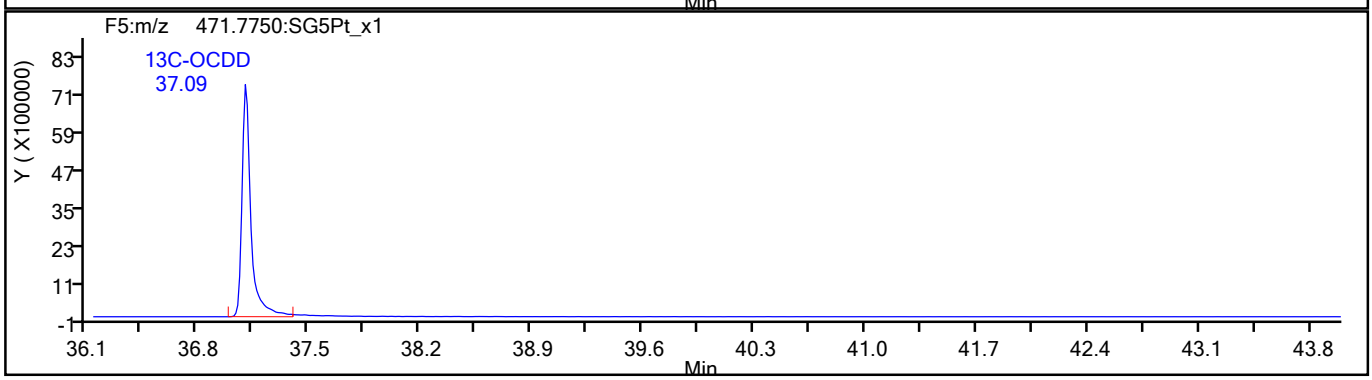

776133

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

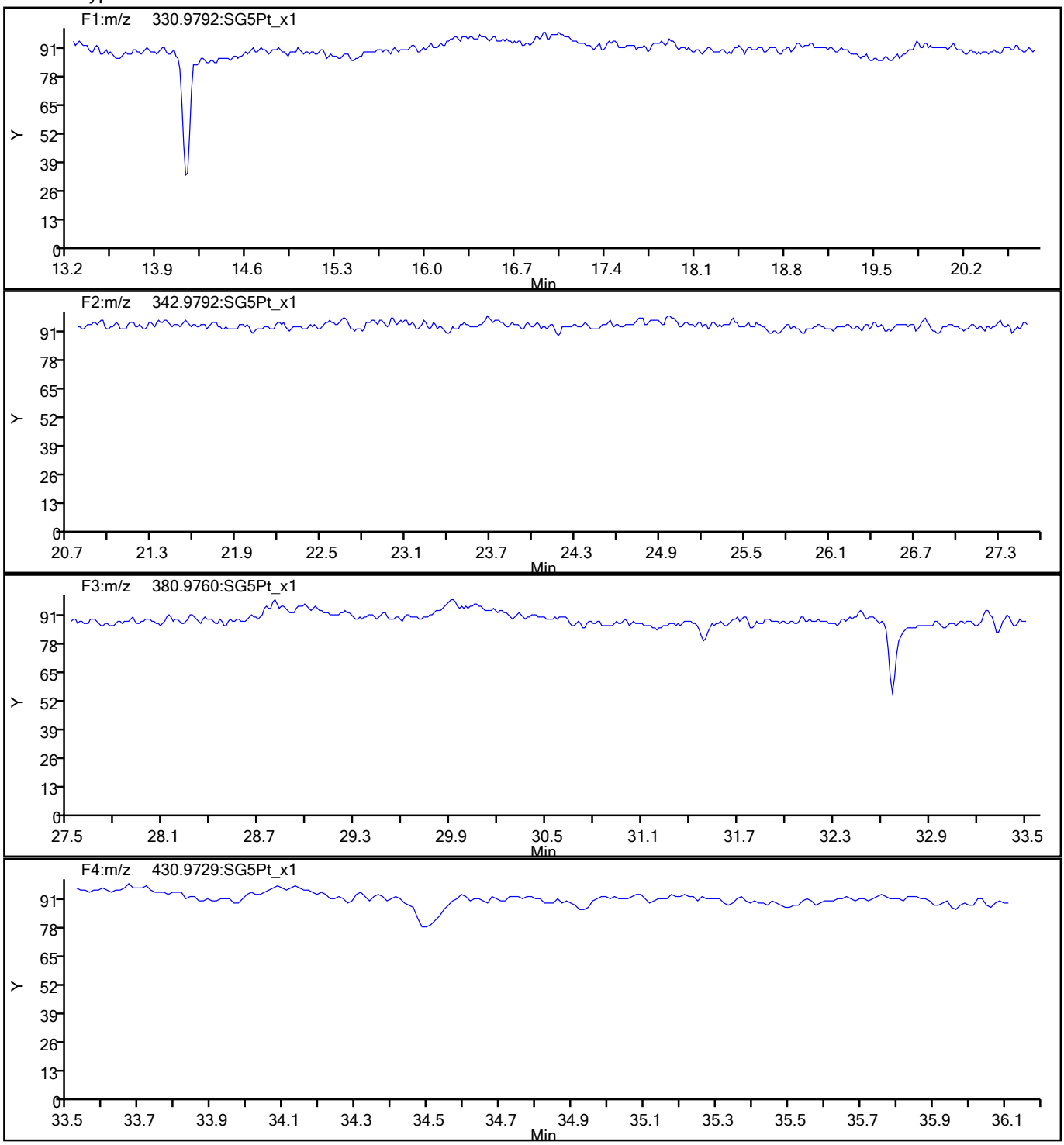

776134

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

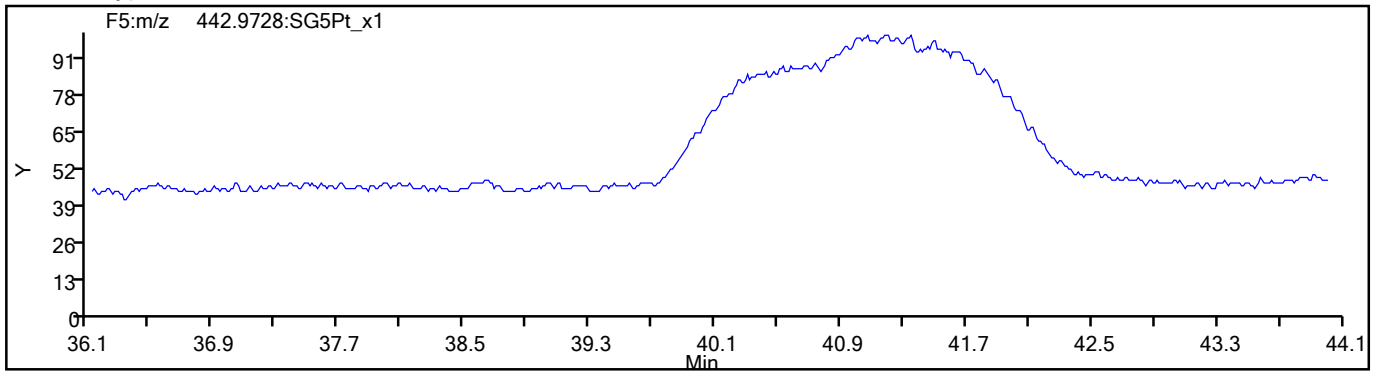

776135

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62046988	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	100332269	0.78	1.6249	99.5	99.5	0.1367	0.1367	99.52	
2,3,7,8-TCDF	17.628	44524782	0.76	1.0239	43.3	43.3	0.0503	0.0503	108	
S Total TCDF					43.3	43.3	0.0503	0.0503		
D 13C-2,3,7,8-TCDD	18.338	55471422	0.81	0.8993	99.4	99.4	0.1780	0.1780	99.41	
$ 37Cl4-2,3,7,8-TCDD	18.354	29474361		1.1071	42.9	42.9	0.0363	0.0363	107	
2,3,7,8-TCDD	18.354	29808948	0.78	1.2541	42.8	42.8	0.0471	0.0471	107	
S Total TCDD					42.8	42.8	0.0471	0.0471		
D 13C-1,2,3,7,8-PeCDF	22.762	75205597	1.60	1.2101	100.2	100.2	0.2087	0.2087	100	
1,2,3,7,8-PeCDF	22.776	171023920	1.60	1.0611	214.3	214.3	0.5904	0.5904	107	
D 13C-2,3,4,7,8-PeCDF	24.126	75259591	1.60	1.2395	97.9	97.9	0.2038	0.2038	97.86	
2,3,4,7,8-PeCDF	24.153	166805723	1.58	1.0184	217.6	217.6	0.6563	0.6563	109	
S Total PeCDF					431.9	431.9	0.6233	0.6233		
D 13C-1,2,3,7,8-PeCDD	24.862	46524396	1.64	0.7612	98.5	98.5	0.1093	0.1093	98.50	
1,2,3,7,8-PeCDD	24.889	105236005	1.57	1.0484	215.7	215.7	0.2317	0.2317	108	
S Total PeCDD					215.7	215.7	0.2317	0.2317		
D 13C-1,2,3,4,7,8-HxCDF	30.835	64951889	0.52	1.0837	95.7	95.7	0.4366	0.4366	95.70	
1,2,3,4,7,8-HxCDF	30.862	155057762	1.22	1.0851	220.0	220.0	1.165	1.165	110	
D 13C-1,2,3,6,7,8-HxCDF	31.008	70459920	0.52	1.1279	99.7	99.7	0.4194	0.4194	99.75	
1,2,3,6,7,8-HxCDF	31.022	168618976	1.23	1.1260	212.5	212.5	1.081	1.081	106	
D 13C-2,3,4,6,7,8-HxCDF	31.754	66145684	0.53	1.0637	99.3	99.3	0.4448	0.4448	99.29	
2,3,4,6,7,8-HxCDF	31.780	164241378	1.21	1.1675	212.7	212.7	0.8912	0.8912	106	
D 13C-1,2,3,7,8,9-HxCDF	32.526	59636084	0.52	0.9676	98.4	98.4	0.4890	0.4890	98.41	
1,2,3,7,8,9-HxCDF	32.539	148834491	1.23	1.1664	214.0	214.0	0.9364	0.9364	107	
S Total HxCDF					859.2	859.2	1.018	1.018		
* 13C-1,2,3,7,8,9-HxCDD	32.339	62627787	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44144841	1.25	0.7334	96.1	96.1	0.3745	0.3745	96.11	
1,2,3,4,7,8-HxCDD	31.953	103044220	1.27	1.0640	219.4	219.4	0.6488	0.6488	110	
D 13C-1,2,3,6,7,8-HxCDD	32.033	54392394	1.25	0.8802	98.7	98.7	0.3120	0.3120	98.67	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	118900298	1.28	1.0001	218.6	218.6	0.5965	0.5965	109	
1,2,3,7,8,9-HxCDD	32.353	122394998	1.26	1.1325	219.4	219.4	0.5651	0.5651	110	
S Total HxCDD					657.3	657.3	0.6034	0.6034		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	47752972	0.44	0.7730	98.6	98.6	1.001	1.001	98.64	
1,2,3,4,6,7,8-HpCDF	33.924	147892240	1.06	1.4413	214.9	214.9	2.024	2.024	107	
D 13C-1,2,3,4,7,8,9-HpCDF	35.017	42687625	0.44	0.7008	97.3	97.3	1.104	1.104	97.26	
1,2,3,4,7,8,9-HpCDF	35.017	123968724	1.06	1.3174	220.4	220.4	2.743	2.743	110	
S Total HpCDF					435.3	435.3	2.383	2.383		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	40442950	1.02	0.6472	99.8	99.8	0.5241	0.5241	99.77	
1,2,3,4,6,7,8-HpCDD	34.726	94435922	1.04	1.0943	213.4	213.4	0.9683	0.9683	107	
S Total HpCDD					213.4	213.4	0.9683	0.9683		
D 13C-OCDD	37.093	57303880	0.88	0.4472	204.6	204.6	0.2753	0.2753	102	
OCDF	37.201	181747068	0.91	1.4382	441.1	441.1	0.4159	0.4159	110	
OCDD	37.105	135570174	0.90	1.1070	427.4	427.4	0.4029	0.4029	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		27754917	7076779	4201	10502	1685		
333.9339	18.142	18.142	0		34292071	8691565	5896	14740	1474	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	43967601	10754823	8470	21175	1270		
317.9389	17.613	17.616	0	0.971	56364668	13840834	5538	13845	2499	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	19278962	4714580	2218	5545	2126		
305.8987	17.628	17.631	0	1.001	25245820	6261705	2854	7135	2194	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24807018	5848000	4201	10502	1392		
333.9339	18.338	18.338	0	1.011	30664404	7186127	5896	14740	1219	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	29474361	7040079	2537	6342	2775		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	13088265	3099418	1571	3927	1973		
321.8936	18.354	18.357	0	1.001	16720683	3961925	1508	3770	2627	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46265218	8069932	9479	23697	851		
353.8970	22.749	22.754	0	1.254	28940379	5072009	6452	16130	786	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	105236981	18677381	20013	50032	933		
341.8567	22.776	22.779	0	1.001	65786939	11693027	12919	32297	905	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46298187	7561650	9479	23697	798		
353.8970	24.126	24.129	0	1.330	28961404	4756017	6452	16130	737	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	102234081	17002363	20013	50032	850		
341.8567	24.153	24.156	0	1.001	64571642	10773383	12919	32297	834	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28884955	4397104	3175	7937	1385		
369.8919	24.862	24.865	0	1.370	17639441	2717935	2071	5177	1312	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	64347111	9837651	3945	9862	2494		
357.8516	24.889	24.892	0	1.001	40888894	6265054	2969	7422	2110	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	22237957	4900100	10775	26937	455		
385.8610	30.835	30.838	0	0.953	42713932	9213265	21190	52975	435	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	85201859	18424877	39257	98142	469		
375.8178	30.849	30.857	0	1.000	69855903	15011303	32096	80240	468	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	23996455	5001651	10775	26937	464		
385.8610	31.008	31.003	0	0.959	46463465	9659865	21190	52975	456	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	92842545	20075526	39257	98142	511		
375.8178	31.022	31.022	0	1.000	75776431	16178695	32096	80240	504	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	22792396	5861290	10775	26937	544		
385.8610	31.754	31.756	0	0.982	43353288	11282982	21190	52975	532	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.780	31.772	0	1.001	89865159	23412461	39257	98142	596		
375.8178	31.767	31.772	0	1.000	74376219	19191516	32096	80240	598	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20506438	5659225	10775	26937	525		
385.8610	32.526	32.523	0	1.006	39129646	10674002	21190	52975	504	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	82057134	22664755	39257	98142	577		
375.8178	32.539	32.534	0	1.000	66777357	17875439	32096	80240	557	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		34509982	9306847	9505	23762	979		
403.8529	32.339	32.342	0		28117805	7584182	9052	22630	838	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	24560847	6976899	9505	23762	734		
403.8529	31.927	31.929	0	0.987	19583994	5667072	9052	22630	626	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.953	31.945	0	1.001	57595942	16510469	19316	48290	855		
391.8127	31.940	31.945	0	1.000	45448278	13107381	15598	38995	840	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	30198617	8138784	9505	23762	856		
403.8529	32.033	32.033	0	0.991	24193777	6493948	9052	22630	717	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	66690137	17959920	19316	48290	930		
391.8127	32.047	32.047	0	1.000	52210161	14135061	15598	38995	906	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	68169382	18483699	19316	48290	957		
391.8127	32.353	32.355	0	1.013	54225616	14872863	15598	38995	954	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14610497	4589210	16388	40970	280		
419.8220	33.912	33.914	0	1.049	33142475	10497182	35883	89707	293	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	75936953	24520194	90693	226732	270		
409.7789	33.924	33.926	0	1.000	71955287	23549459	85368	213420	276	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.017	35.010	0	1.083	12971814	3739945	16388	40970	228		
419.8220	35.017	35.010	0	1.083	29715811	8442322	35883	89707	235	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	63647403	18553677	90693	226732	205		
409.7789	35.017	35.020	0	1.000	60321321	17850429	85368	213420	209	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	20381379	6053926	11567	28917	523		
437.8140	34.714	34.716	0	1.073	20061571	5957434	11351	28377	525	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	48165795	14539111	26079	65197	558		
425.7737	34.726	34.726	0	1.000	46270127	14041663	24831	62077	565	1.04(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26901378	6693523	3896	9740	1718		
471.7750	37.093	37.094	0	1.147	30402502	7661603	4420	11050	1733	0.88(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	86562223	22814939	9244	23110	2468		
443.7399	37.201	37.199	0	1.003	95184845	24785143	7929	19822	3126	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	64116469	16176091	6061	15152	2669		
459.7348	37.105	37.106	0	1.000	71453705	17977820	6746	16865	2665	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

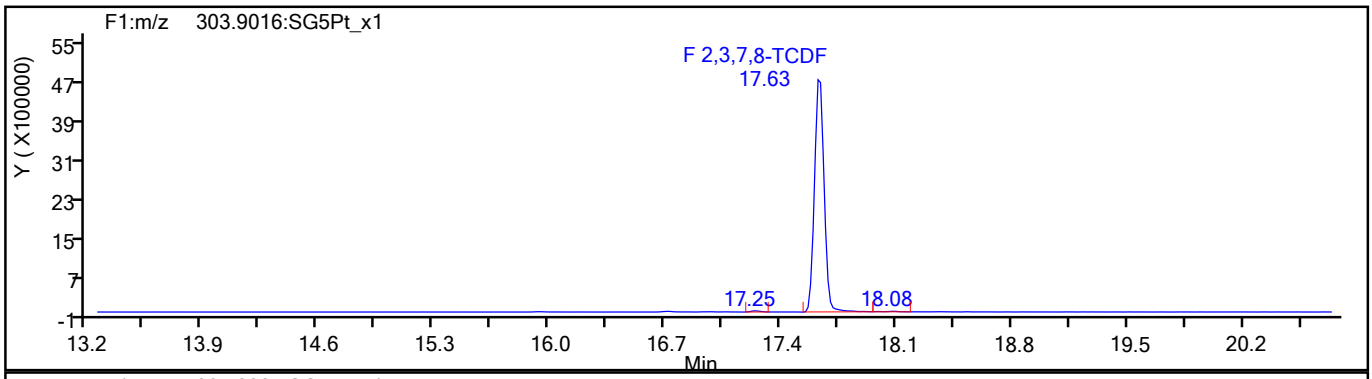

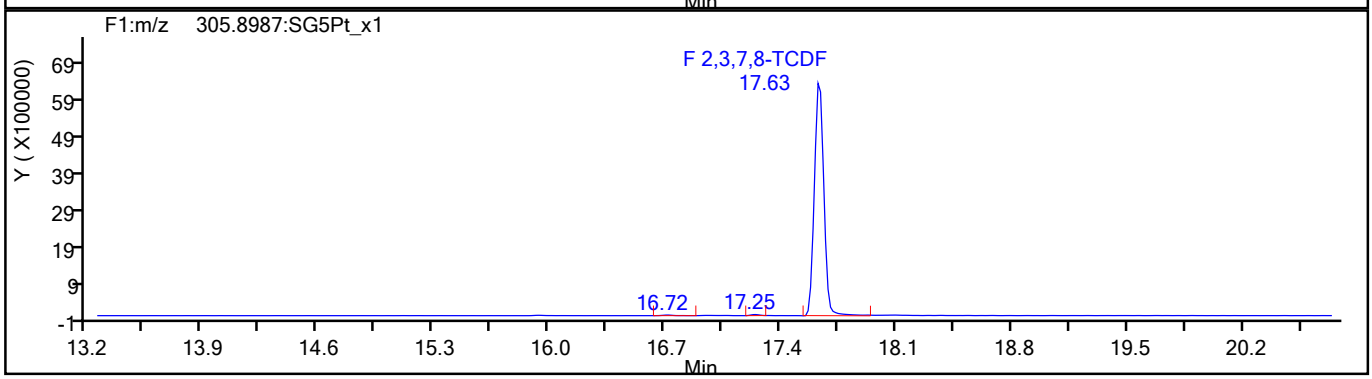

TCDF Standards

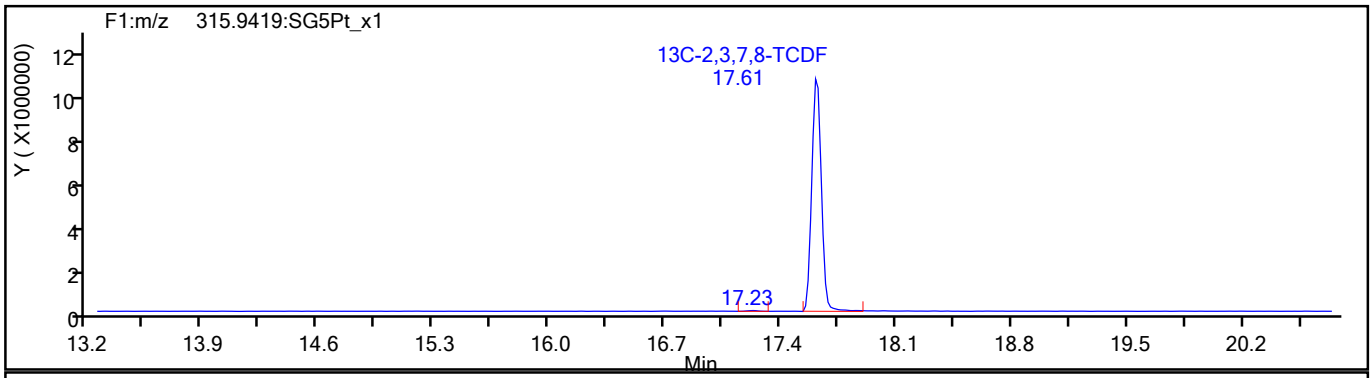

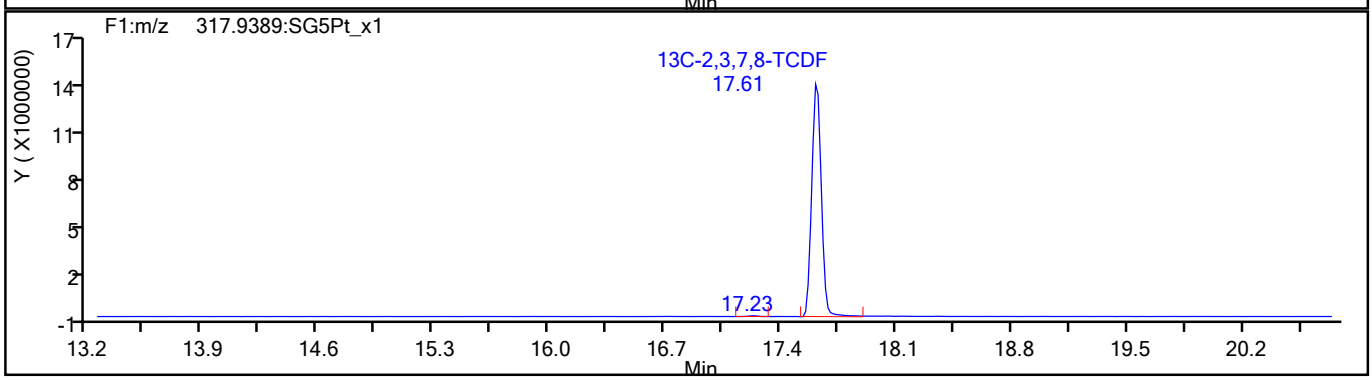

776141

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

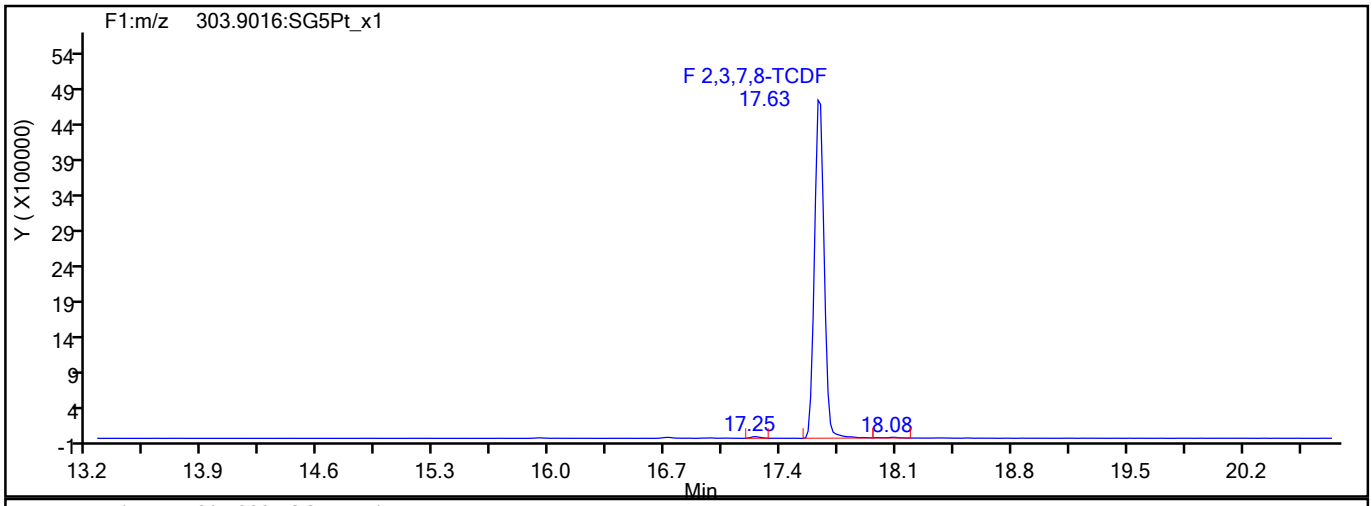

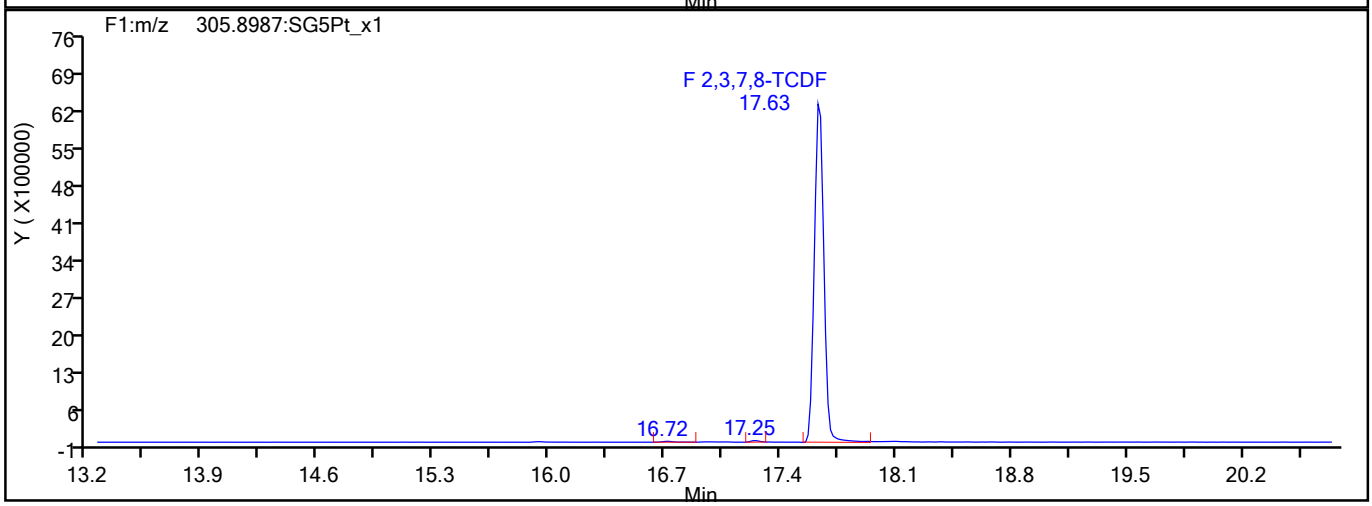

TCDF Interference Mass

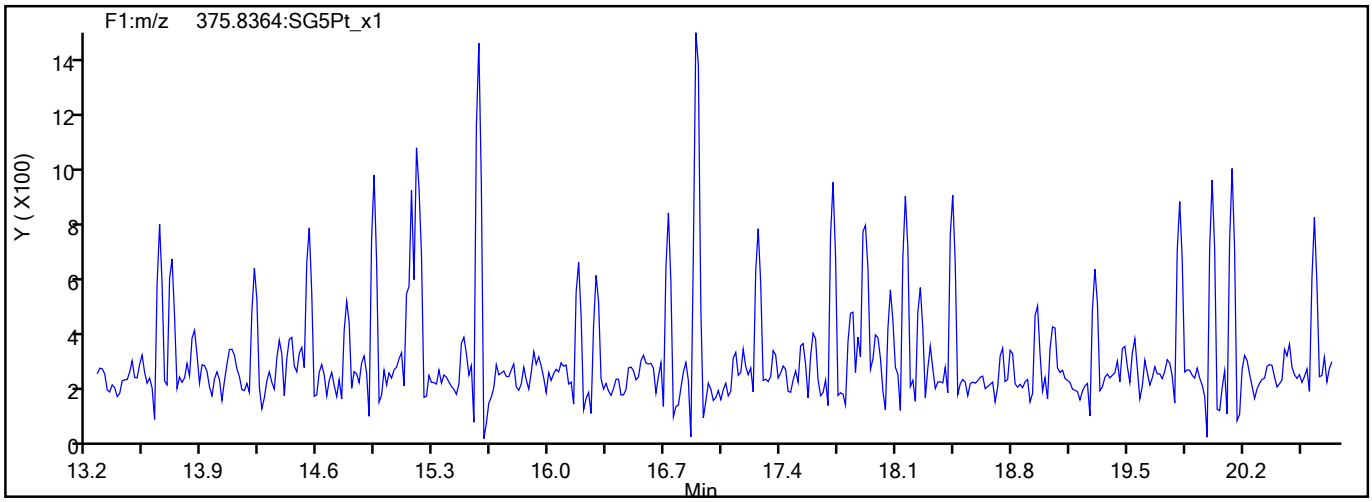

776142

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

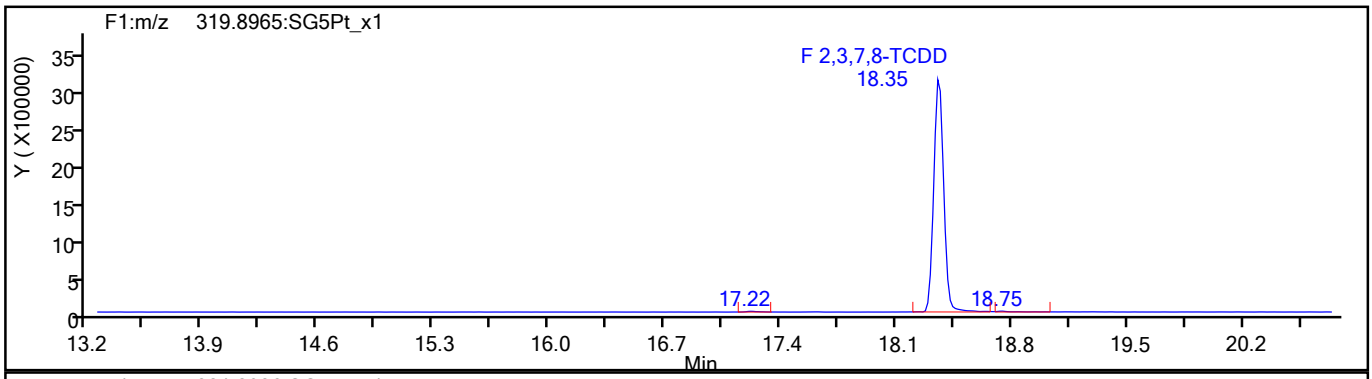

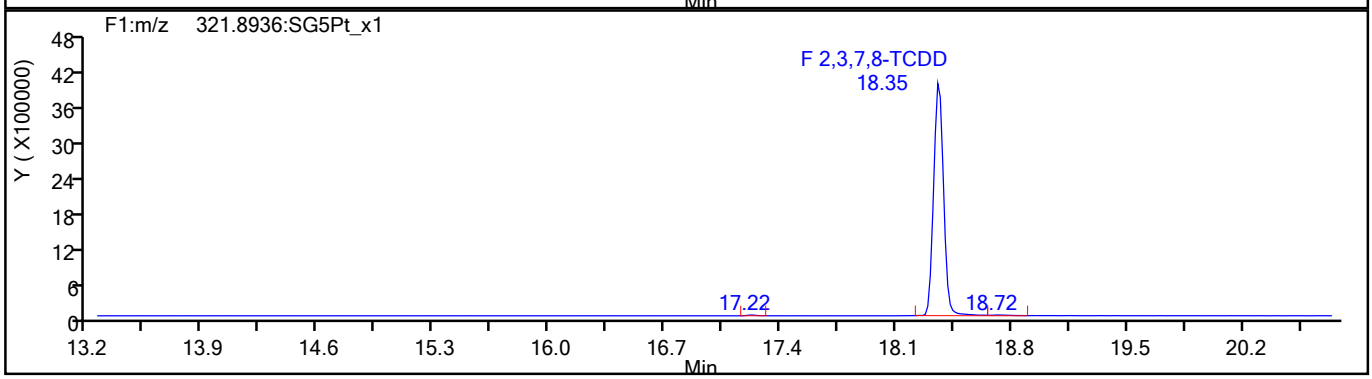

TCDD Standards

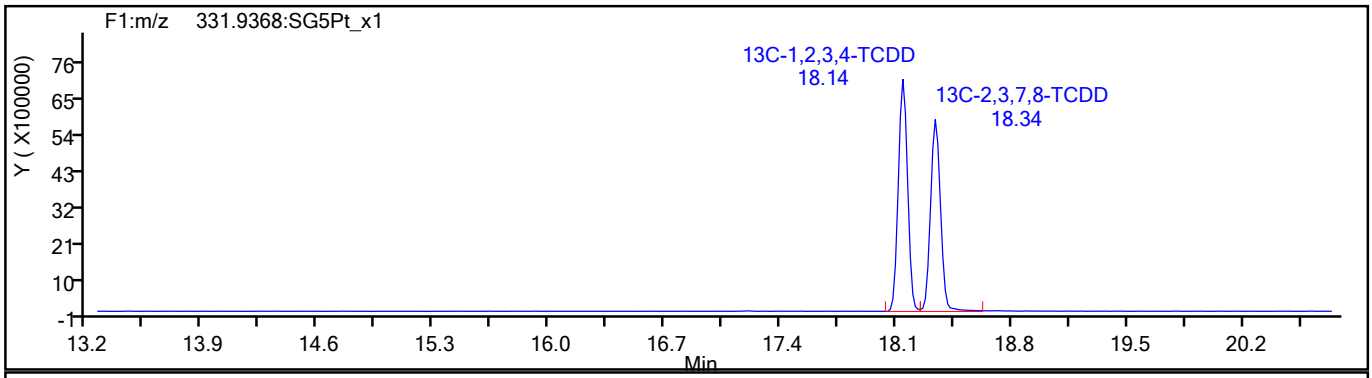

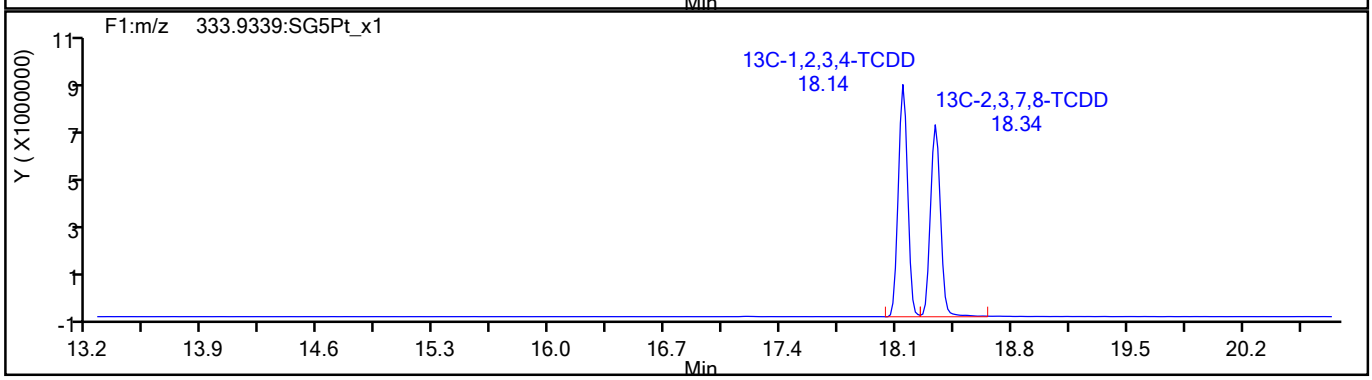

776143

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

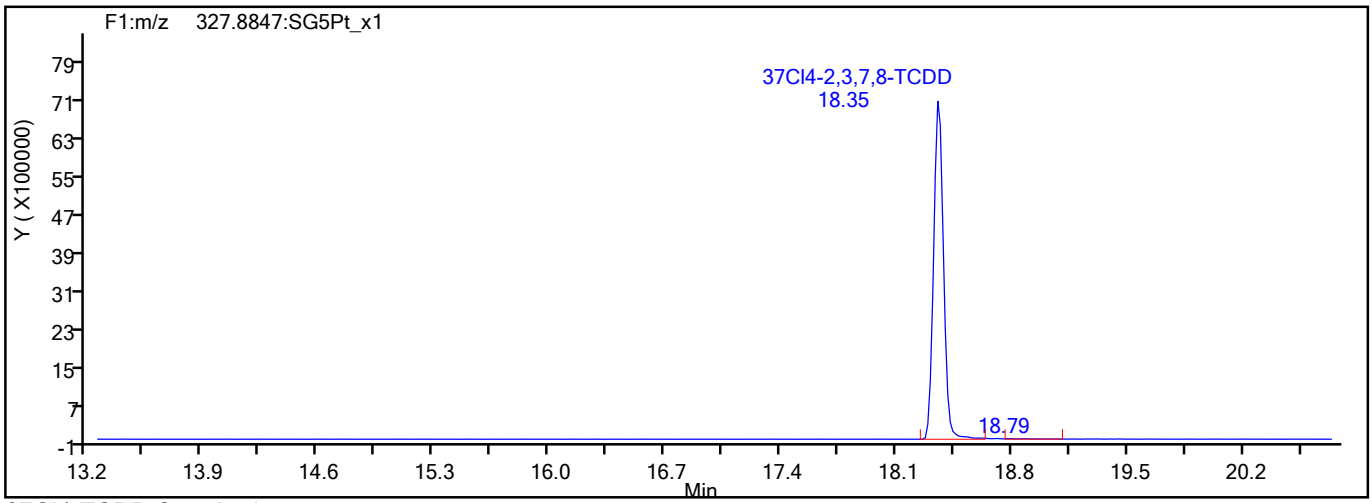

37Cl4-TCDD Standards

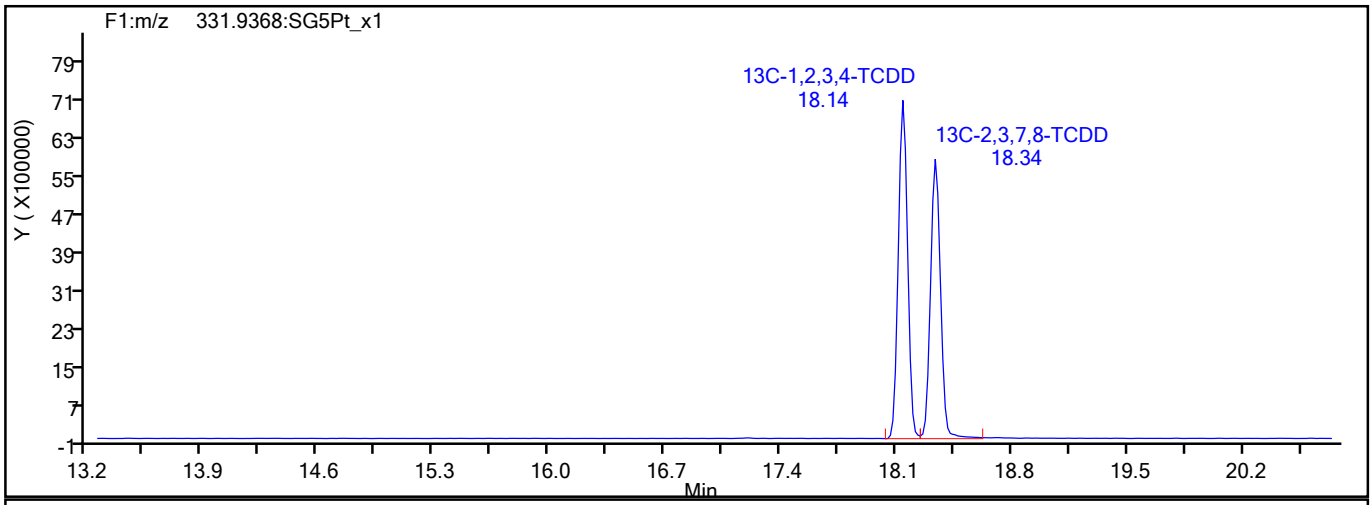

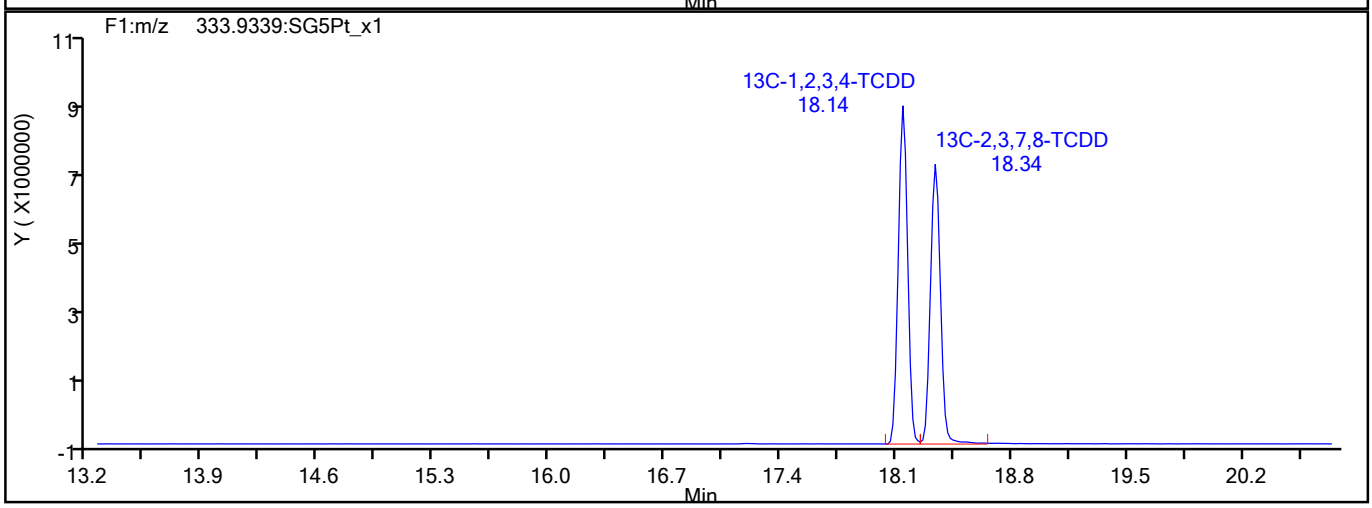

776144

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

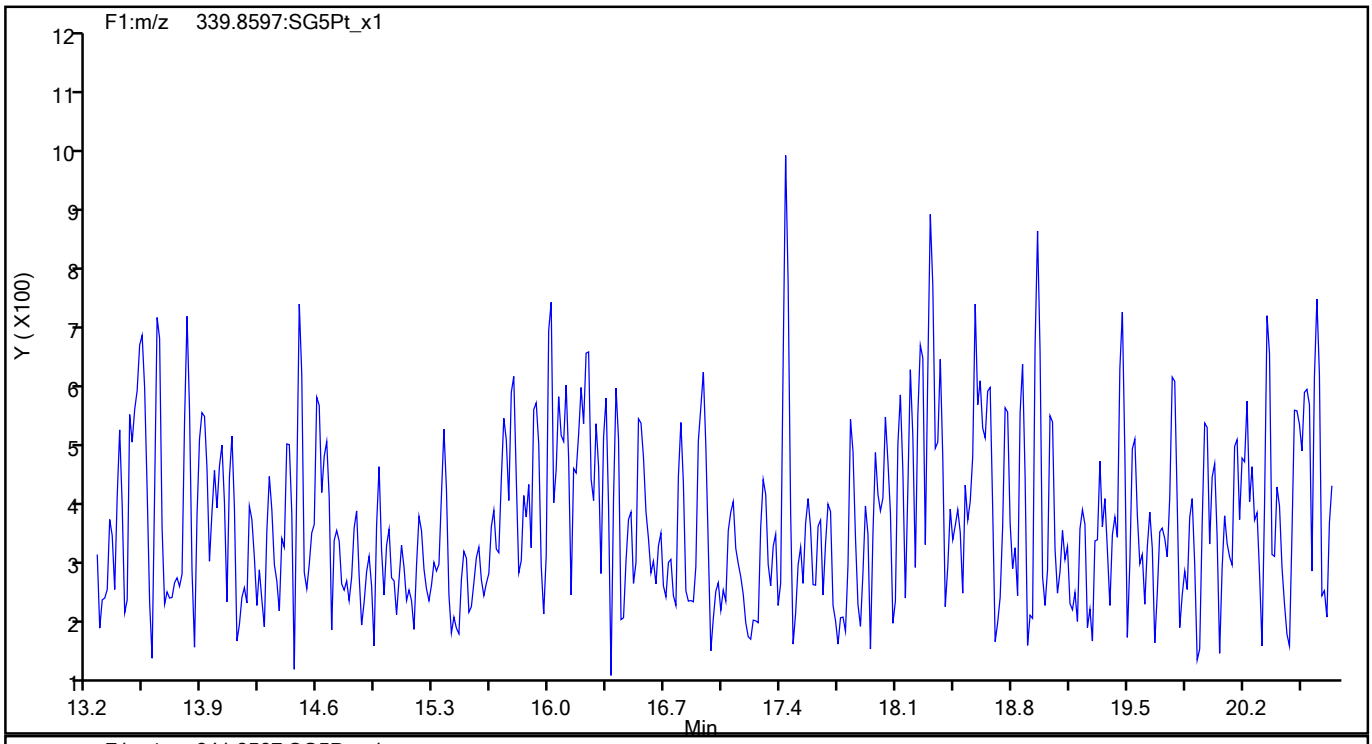

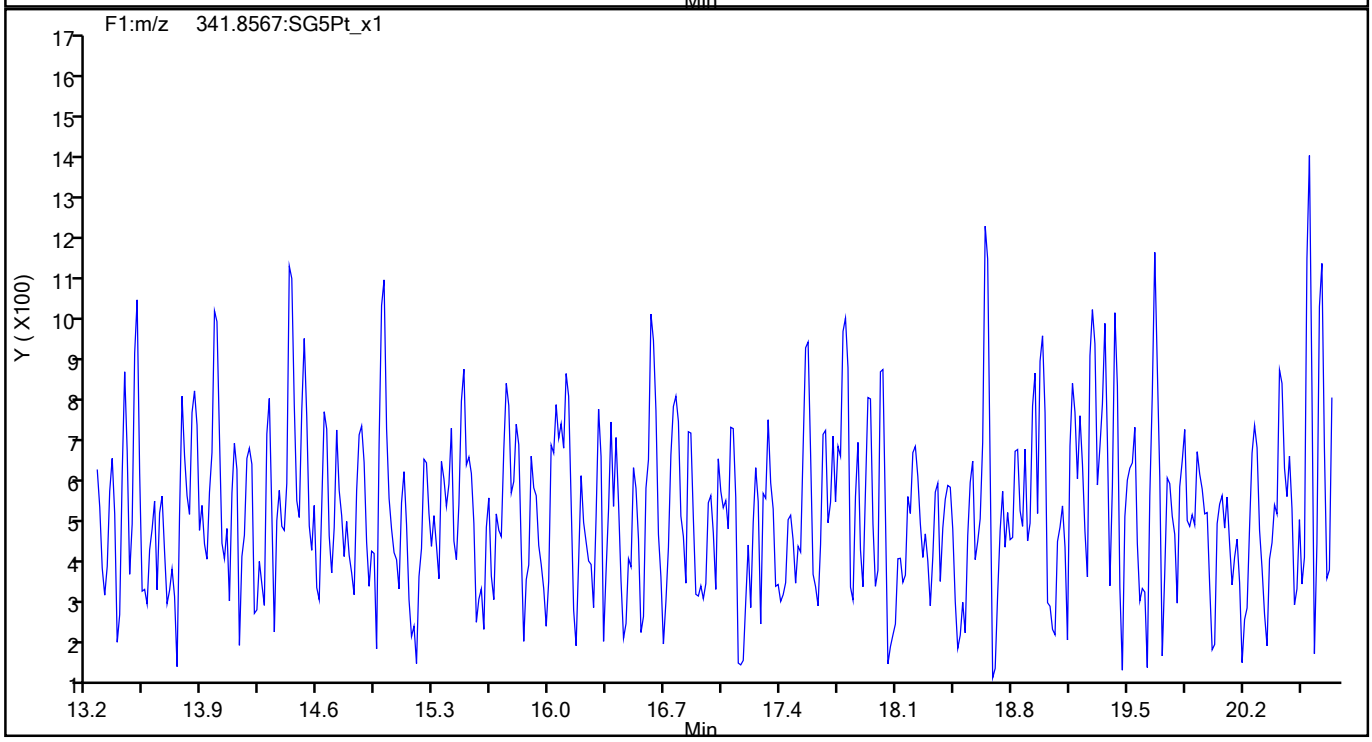

776145

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

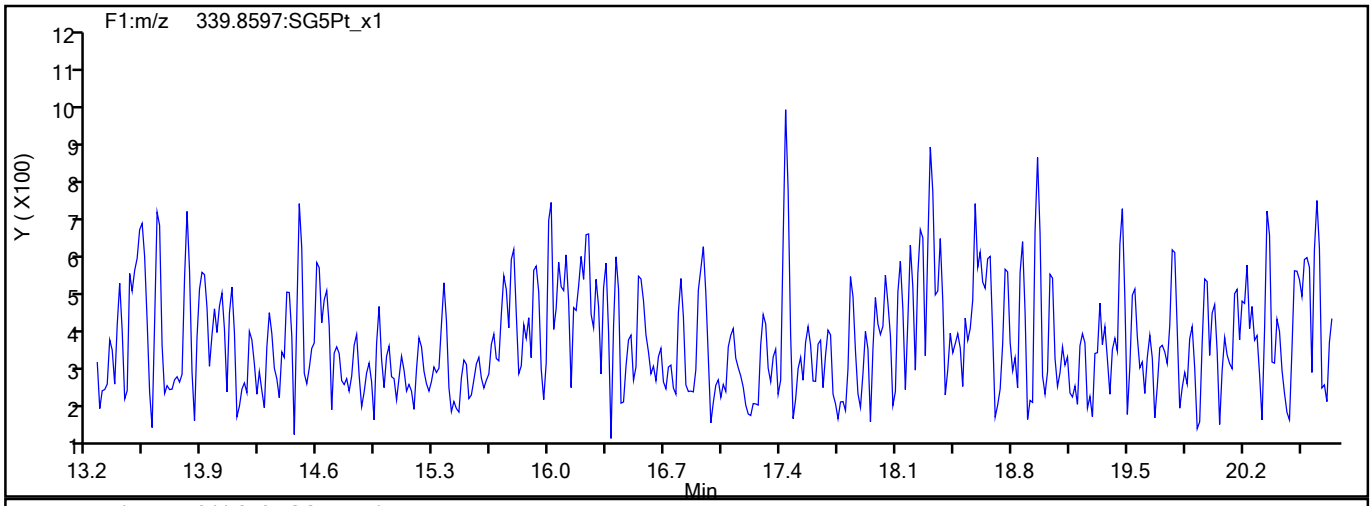

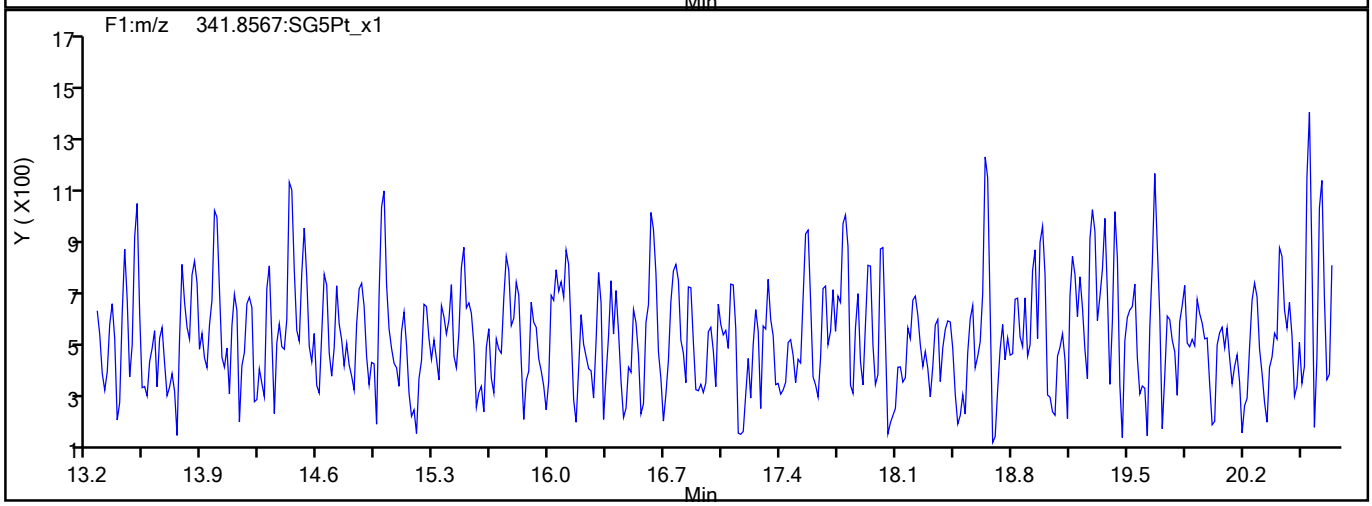

F1 PeCDFs Interference Mass

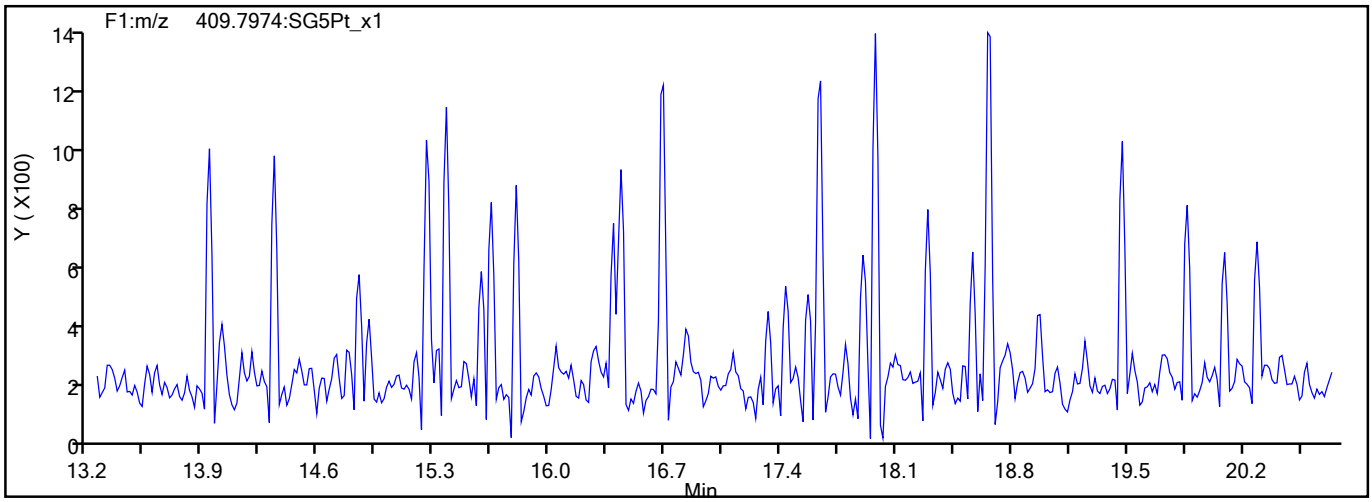

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

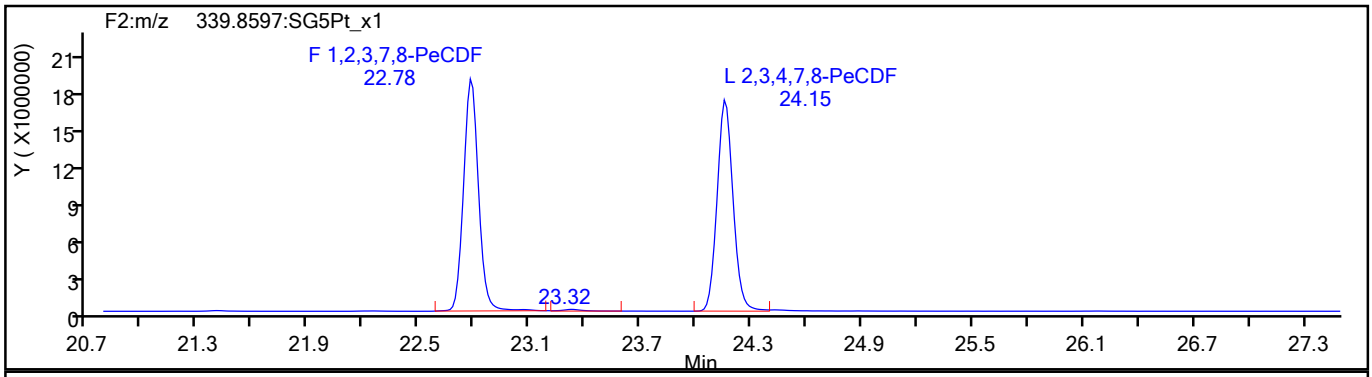

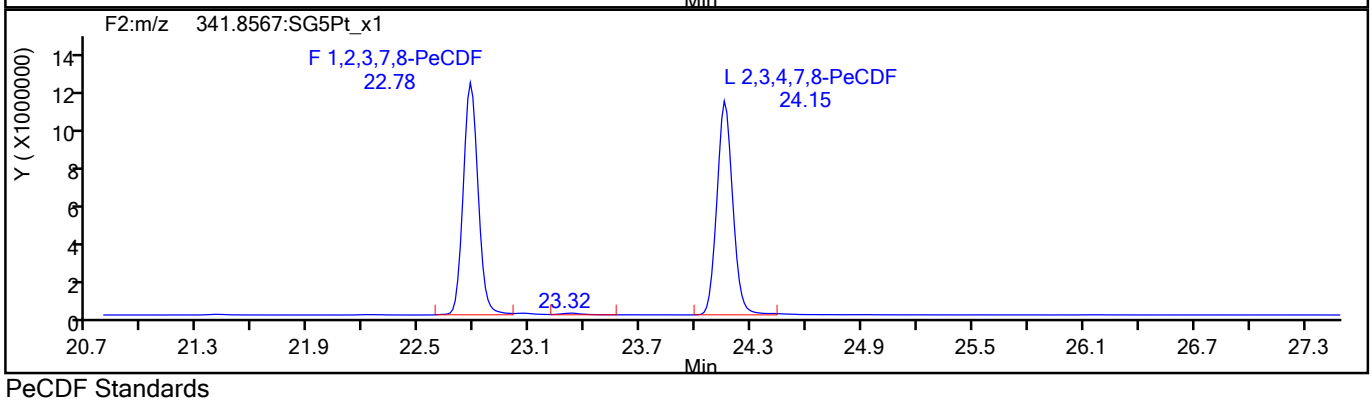

PeCDF Standards

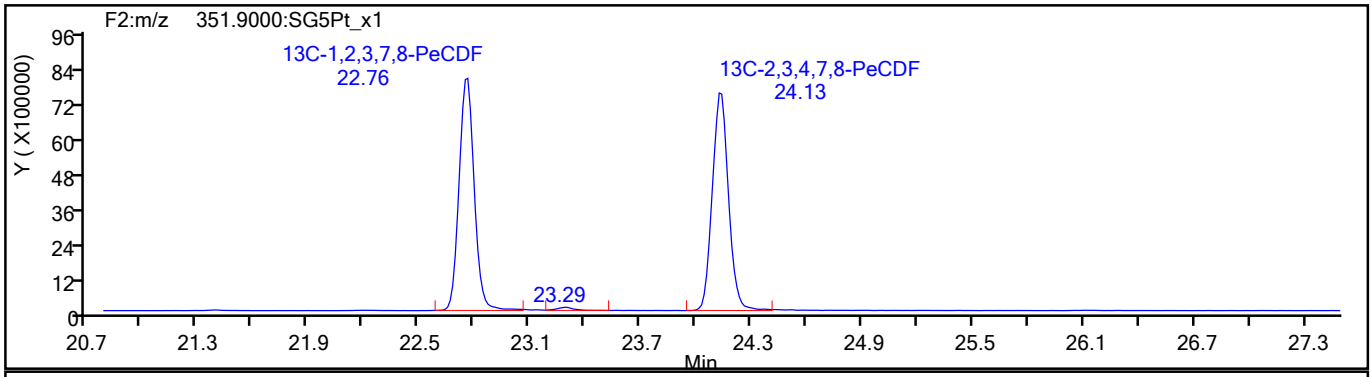

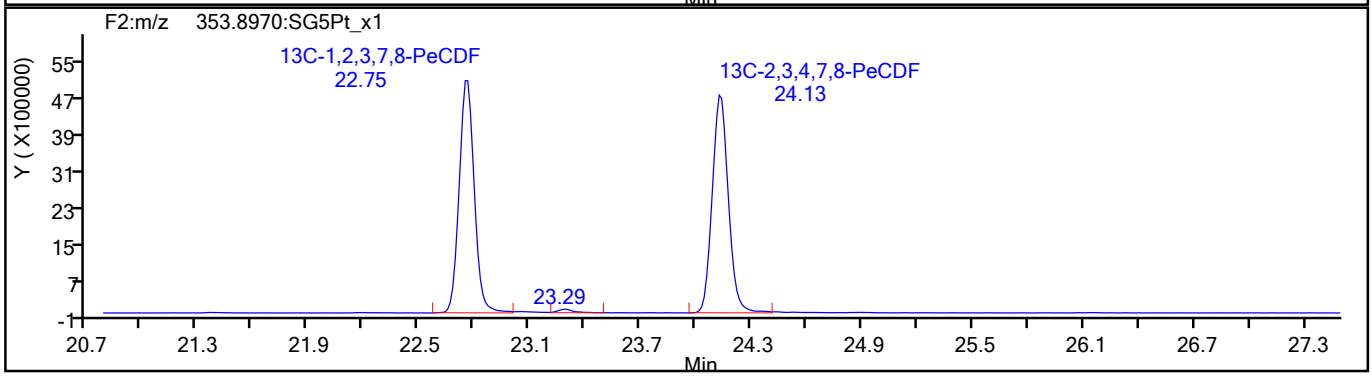

776147

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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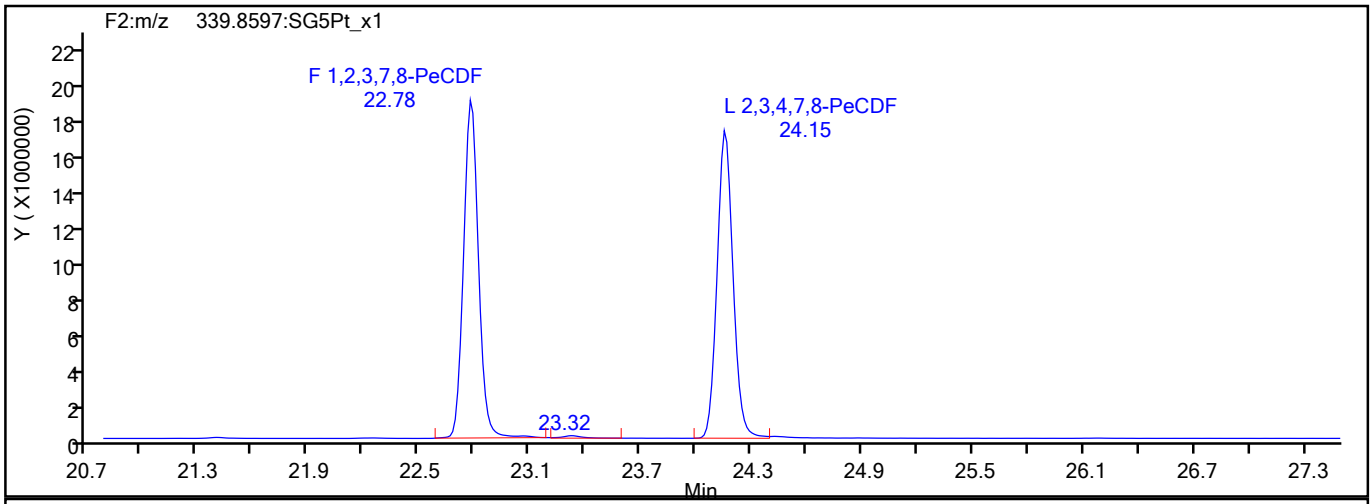

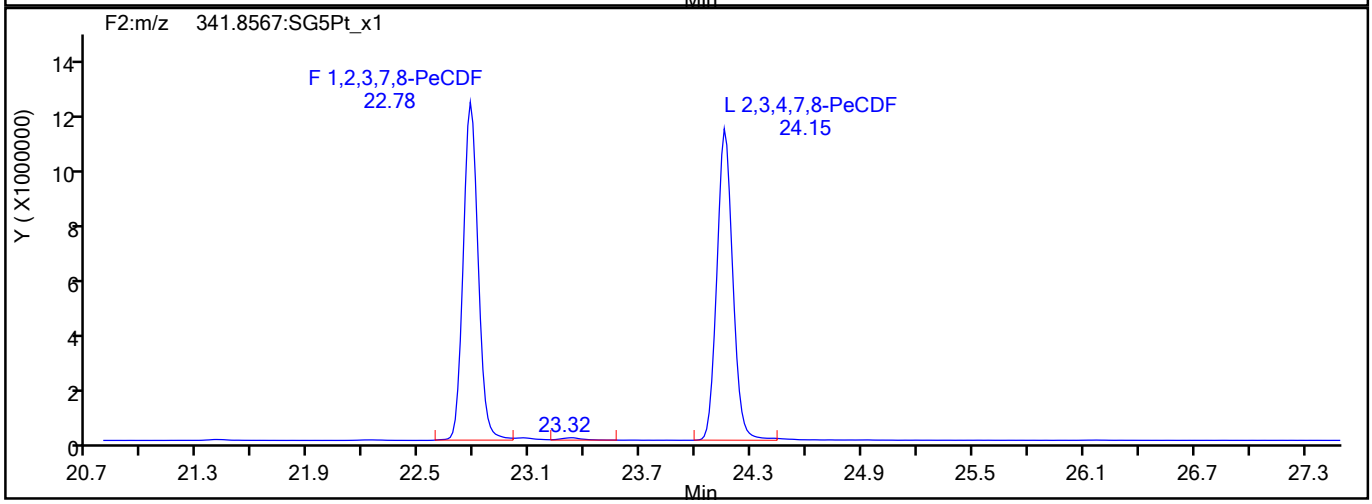

PeCDF Interference Mass

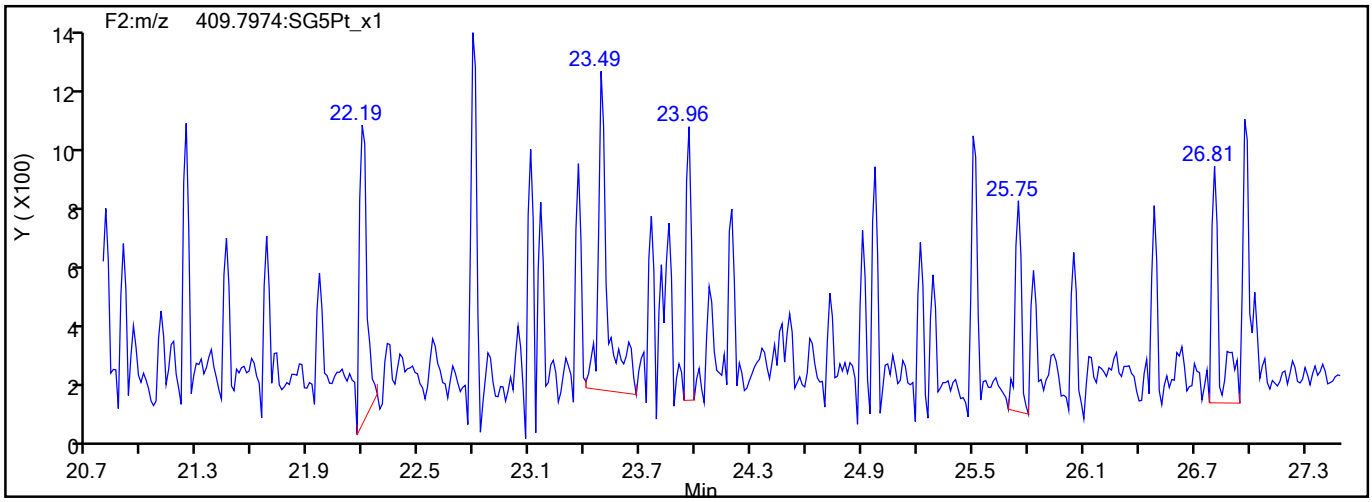

776148

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

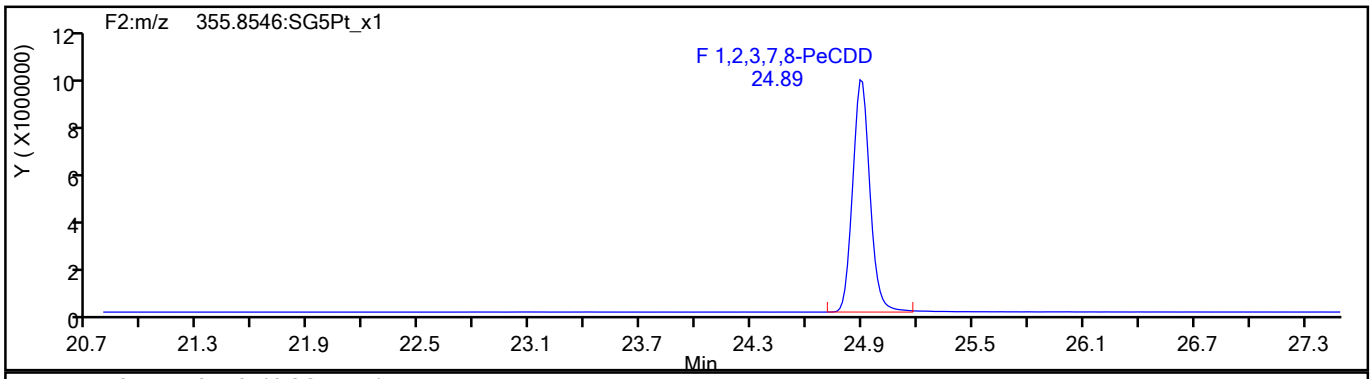

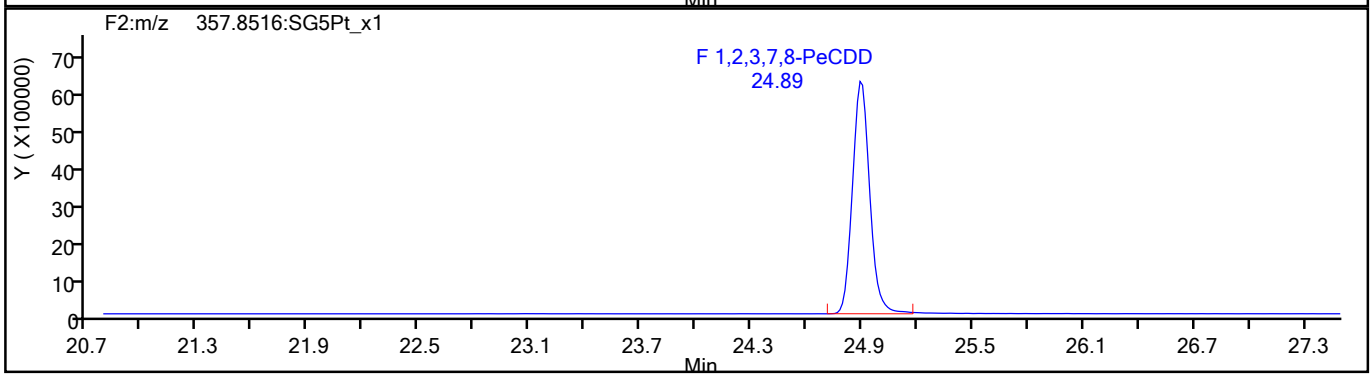

PeCDD Standards

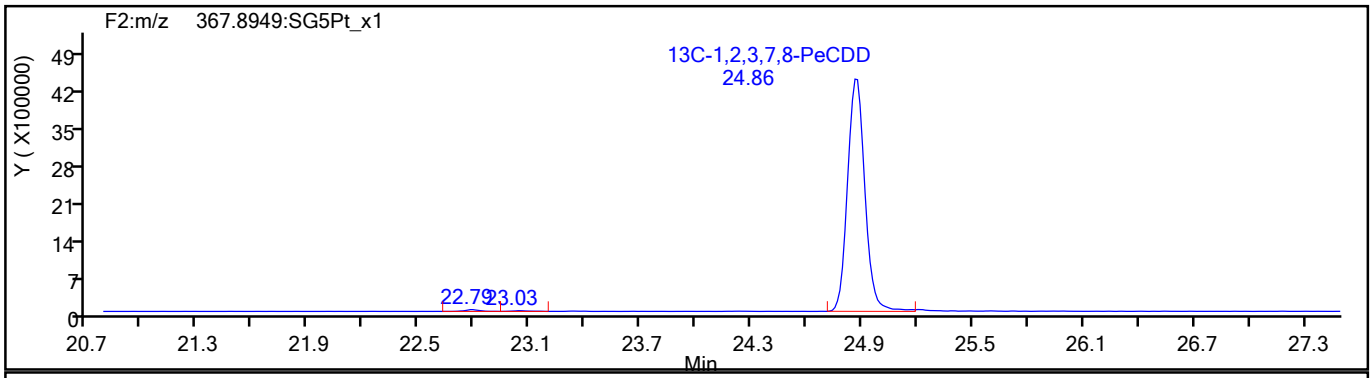

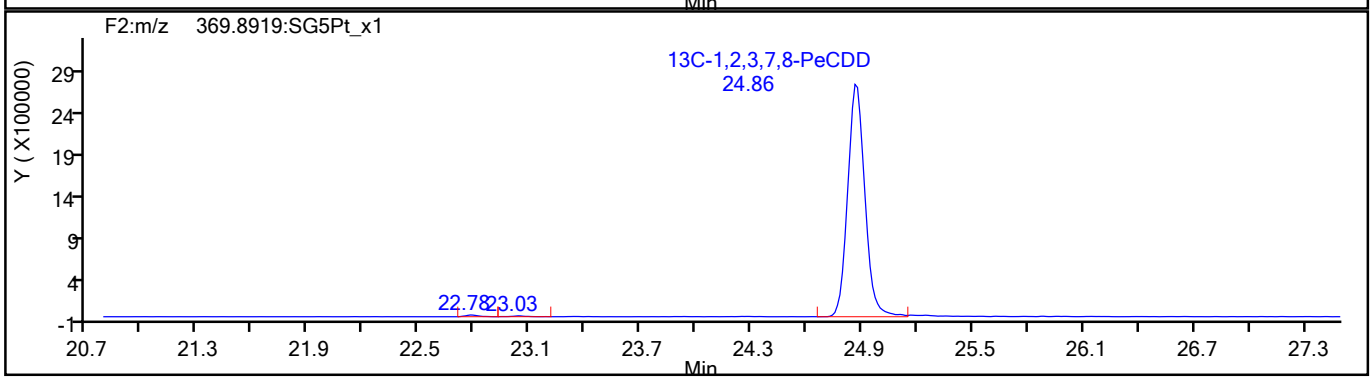

776149

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

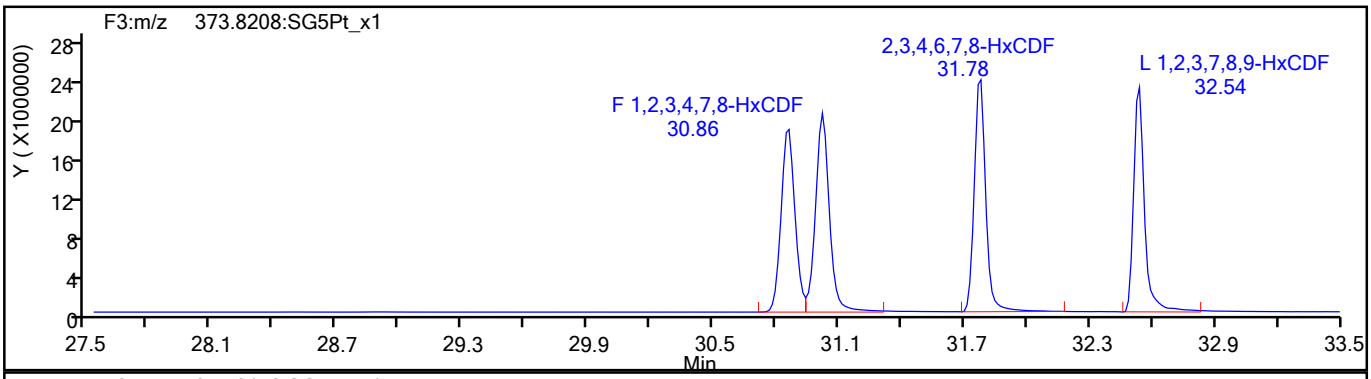

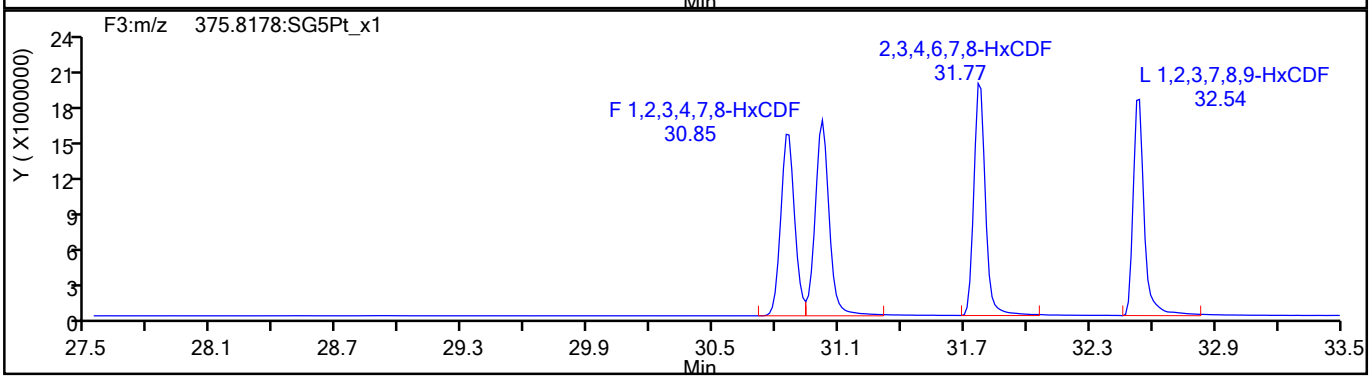

HxCDF Standards

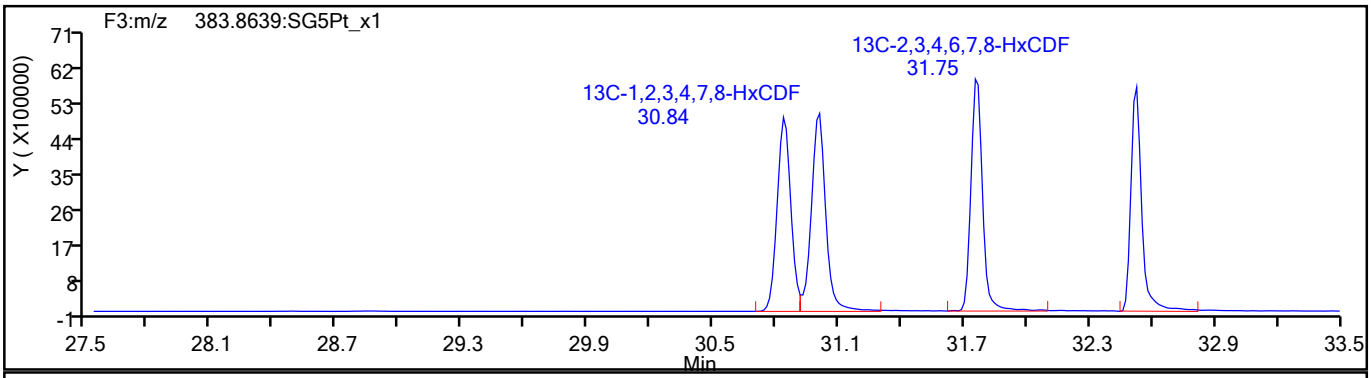

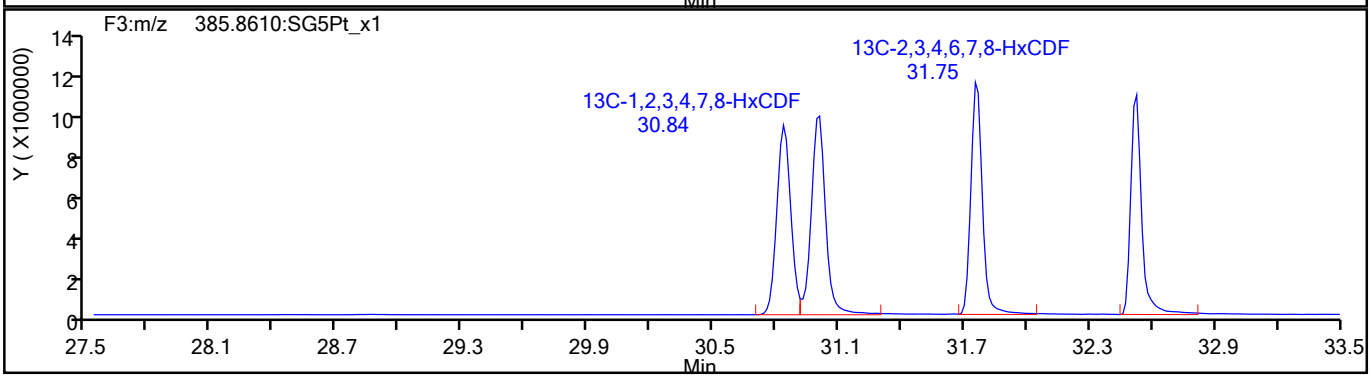

776150

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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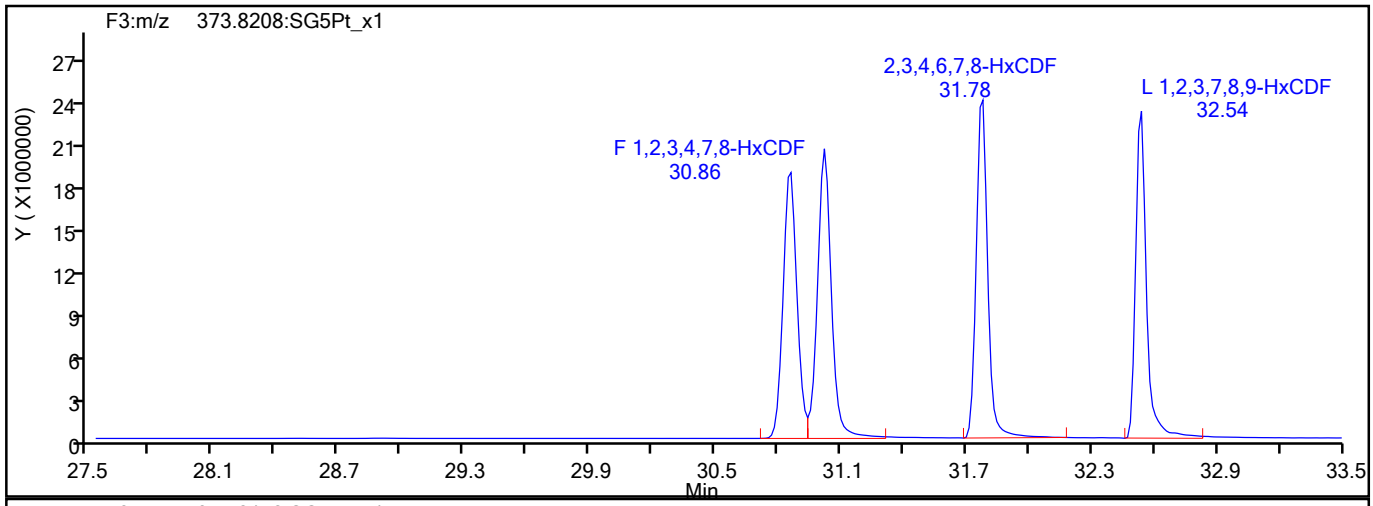

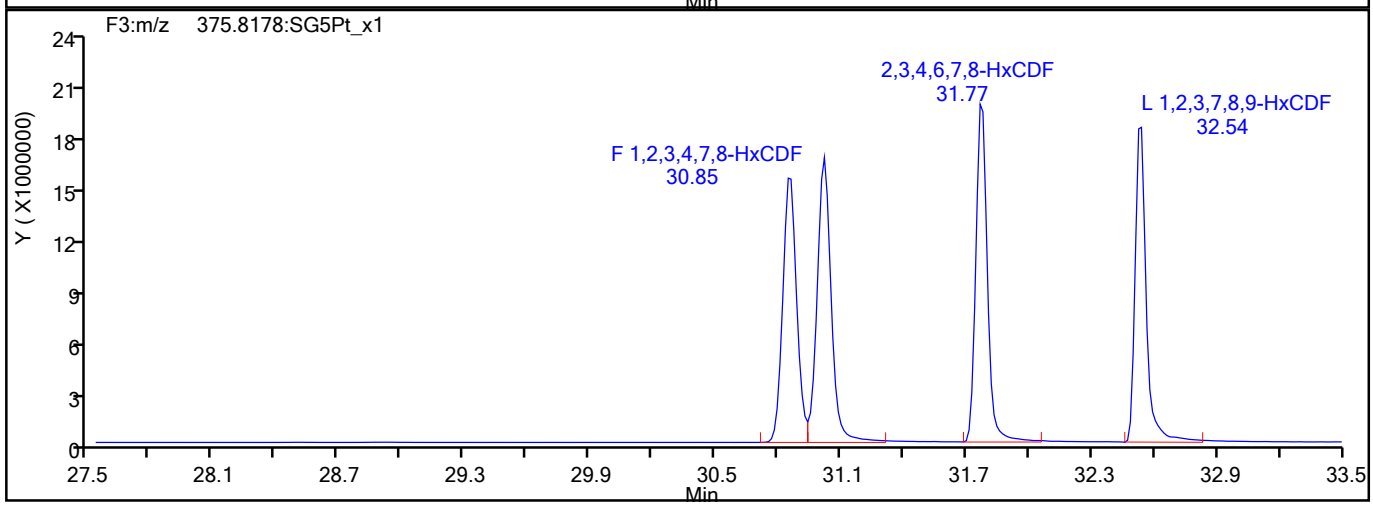

HxCDF Interference Mass

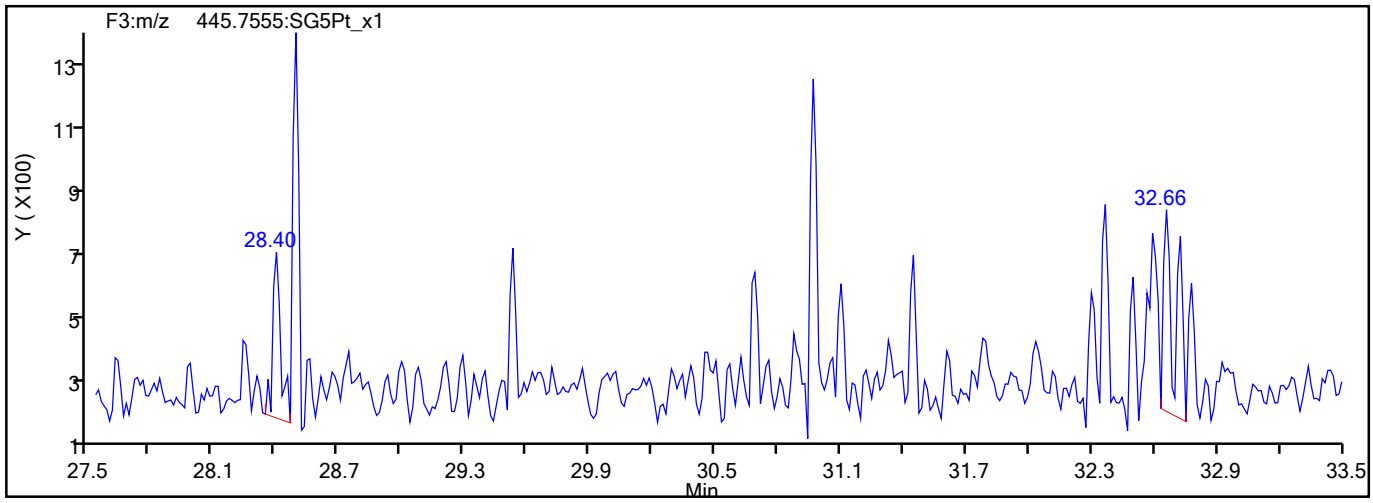

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDD

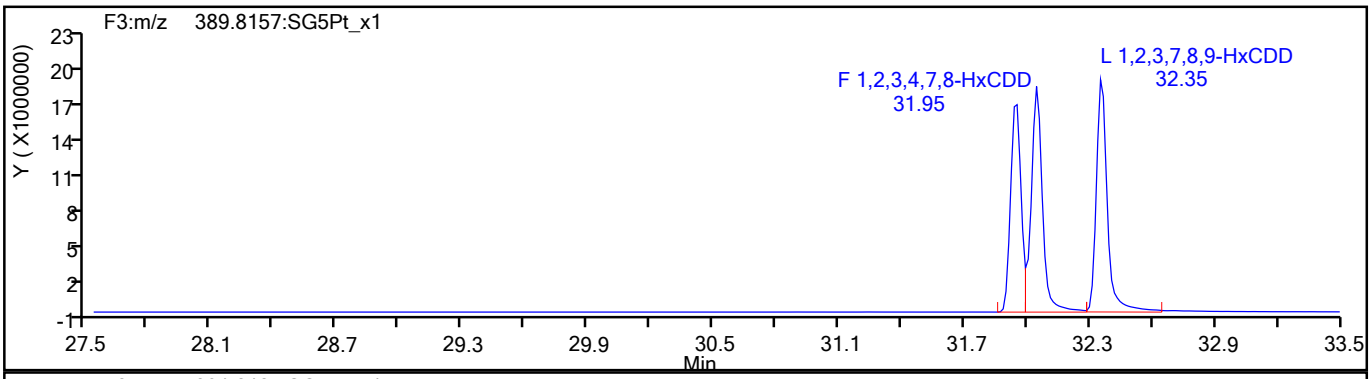

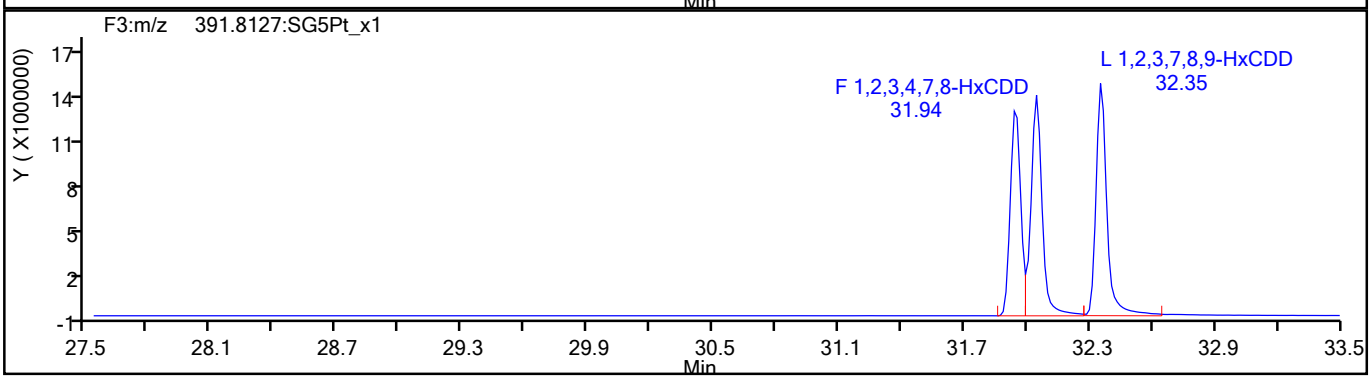

HxCDD Standards

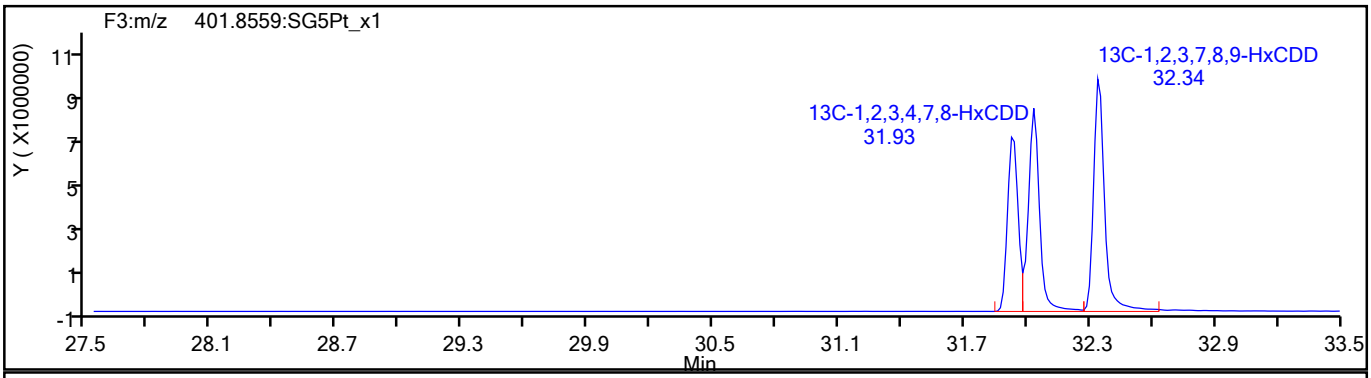

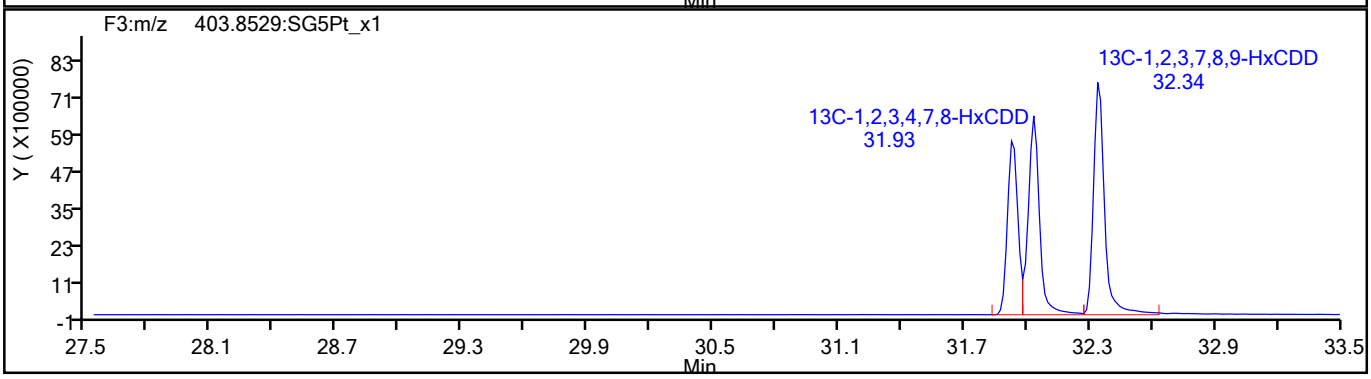

776152

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

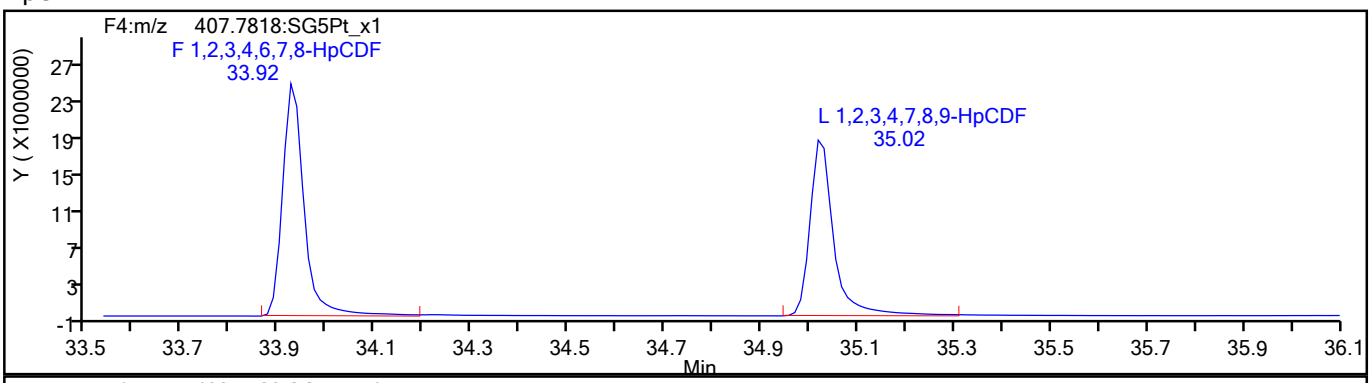

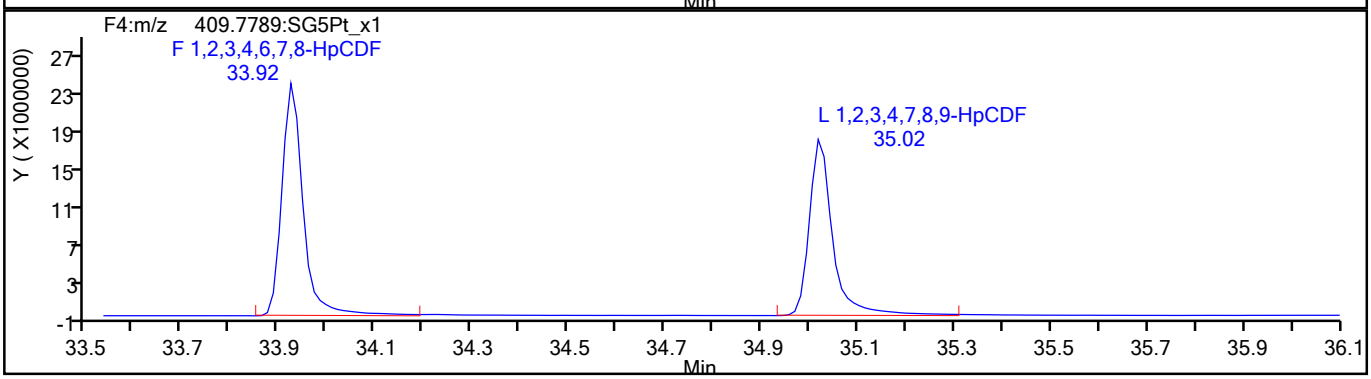

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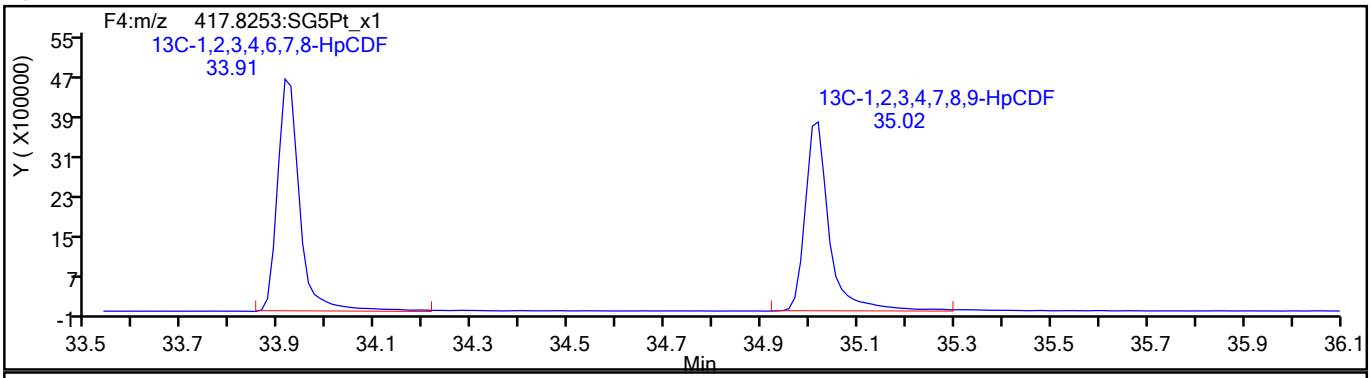

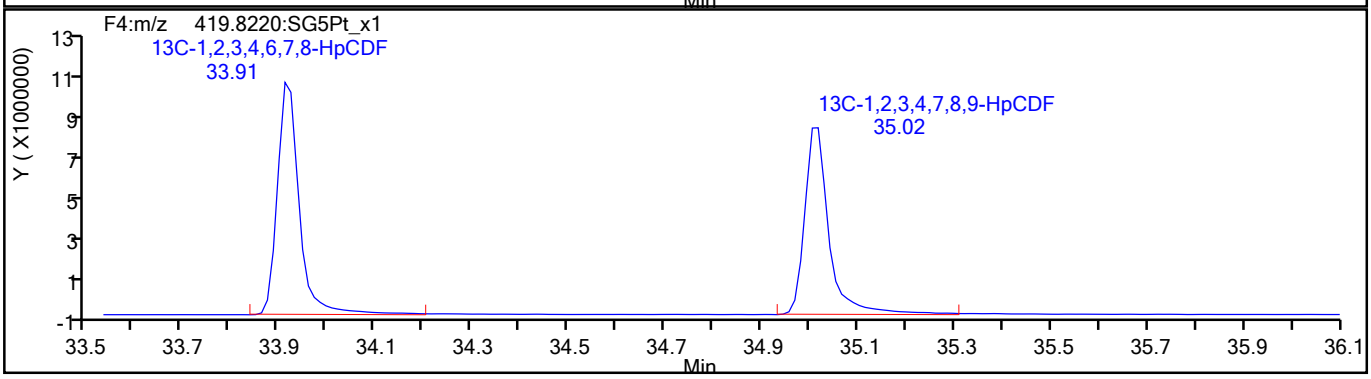

776153

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

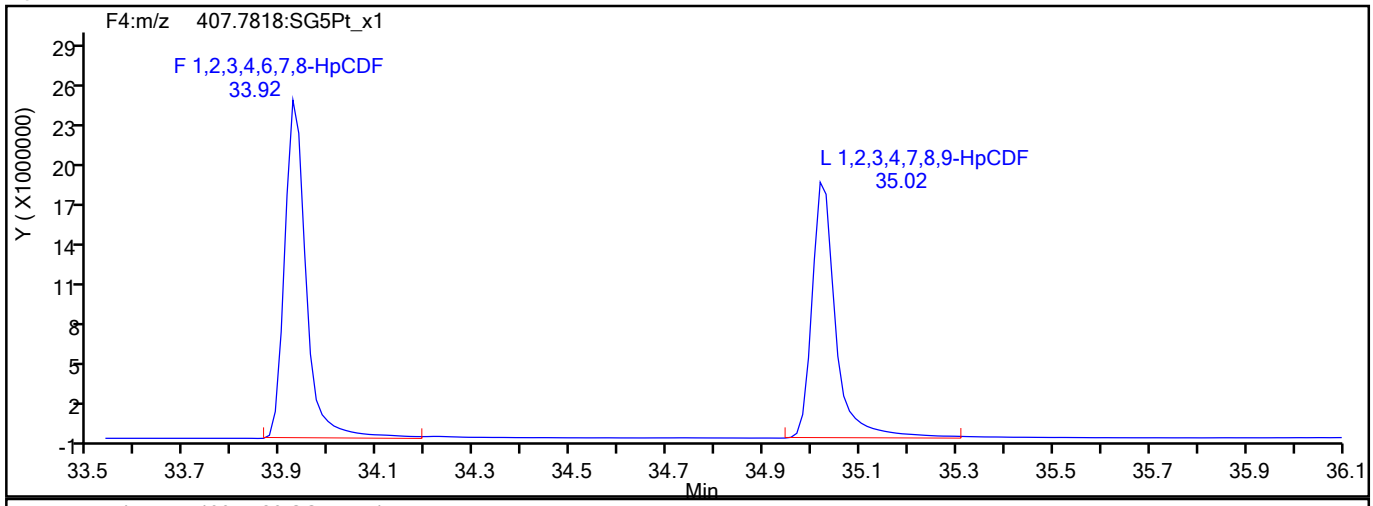

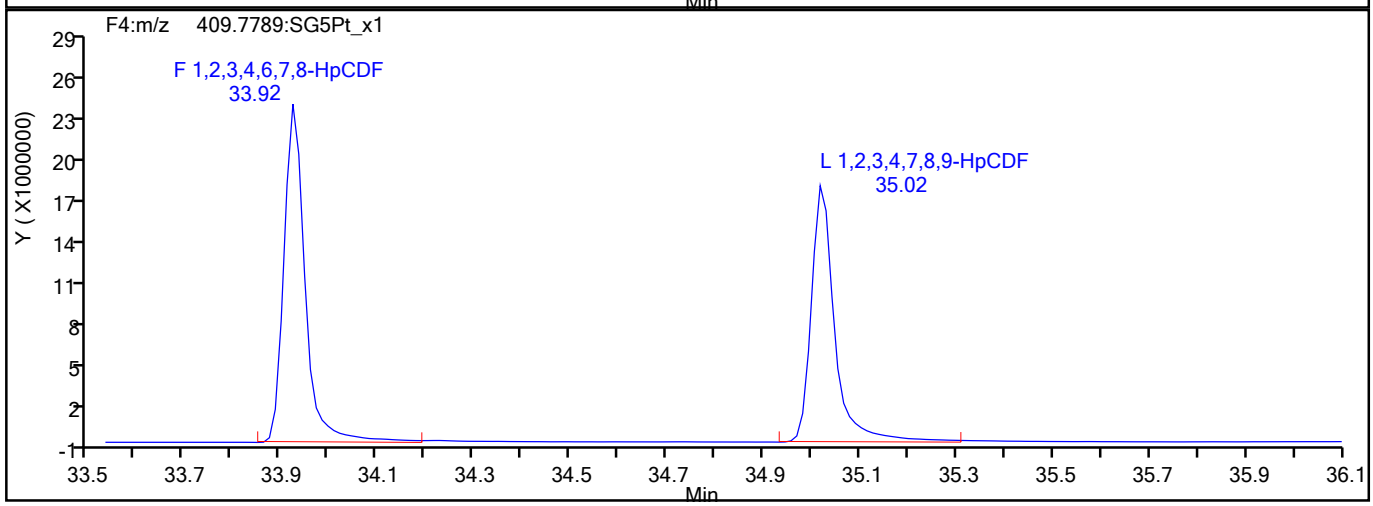

HpCDF Interference Mass

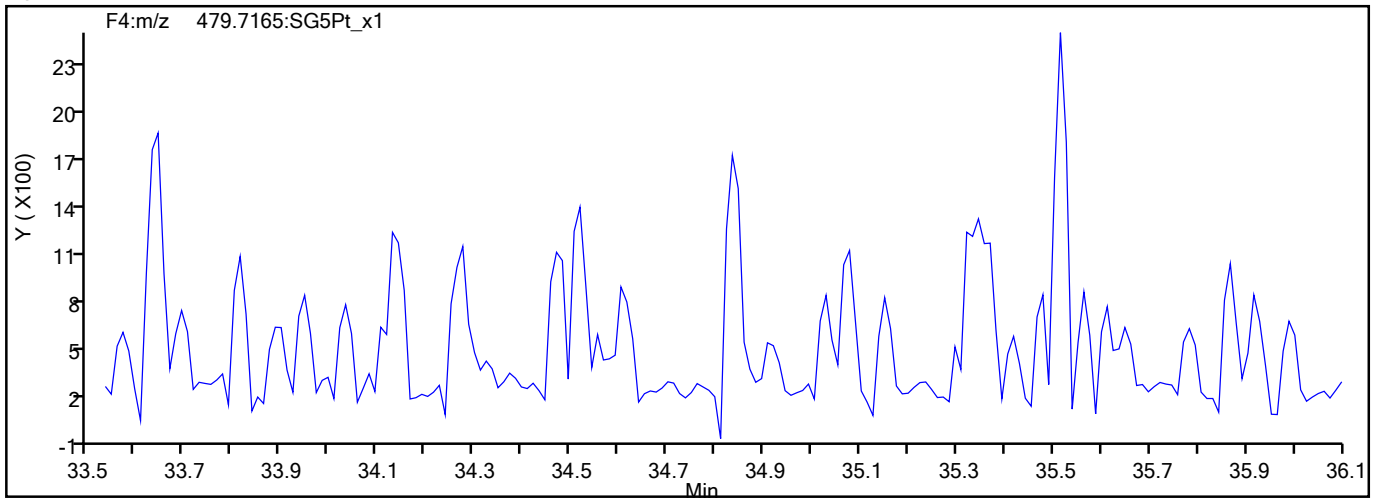

776154

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Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

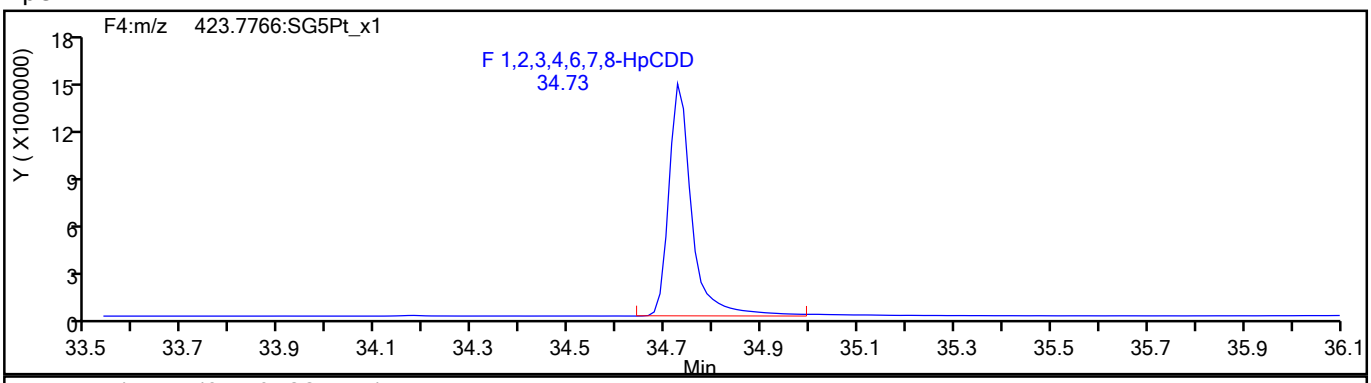

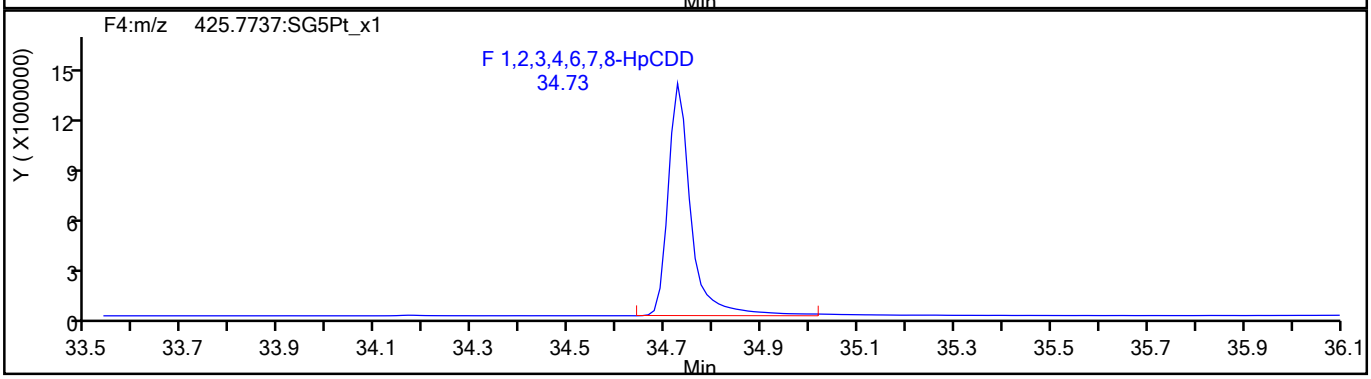

HpCDD Standards

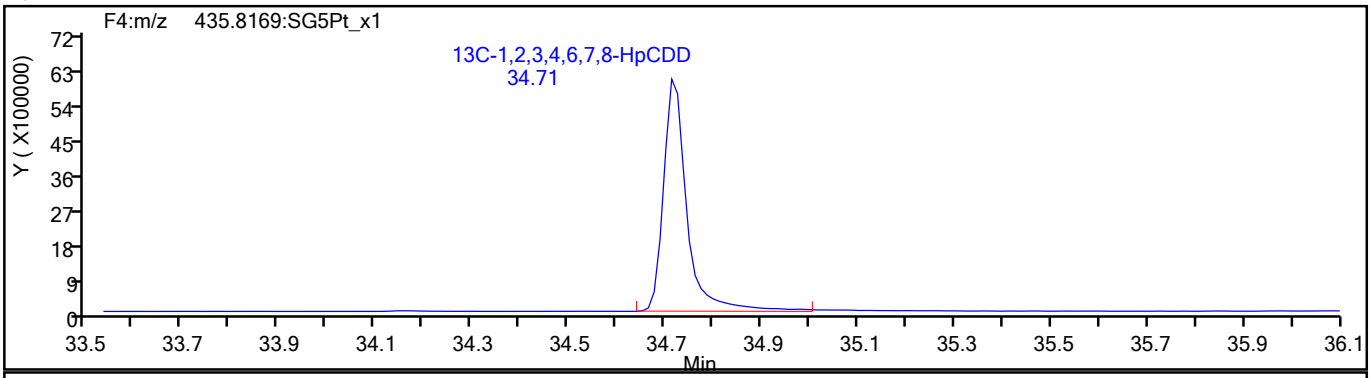

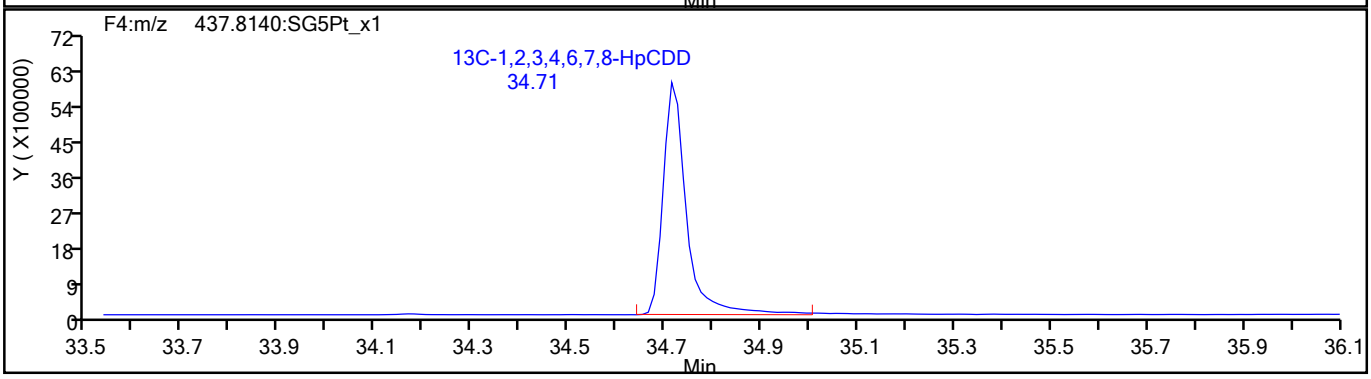

776155

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

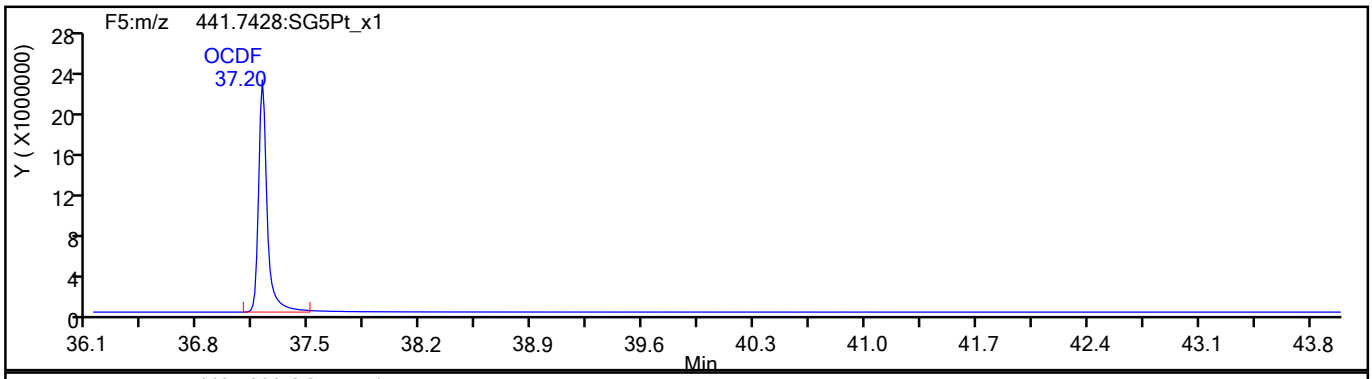

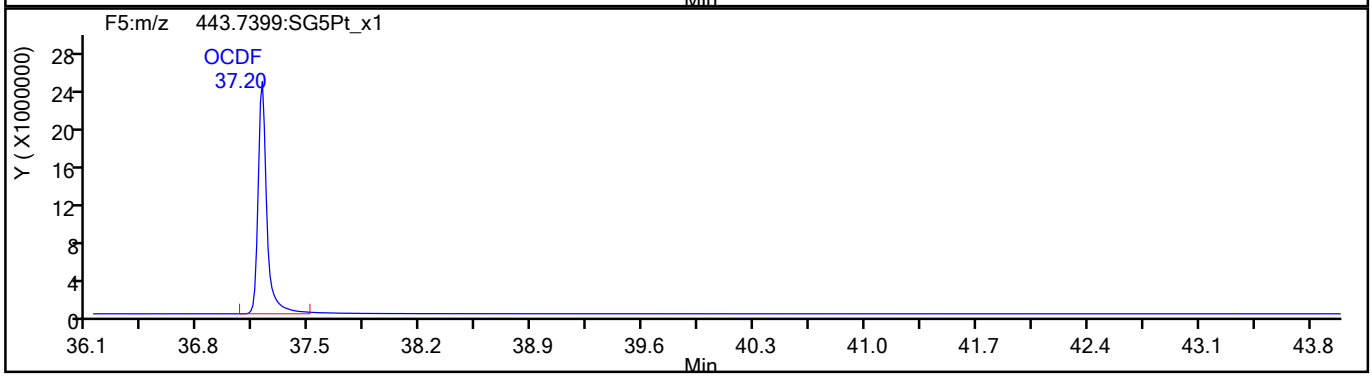

OCDF Standards

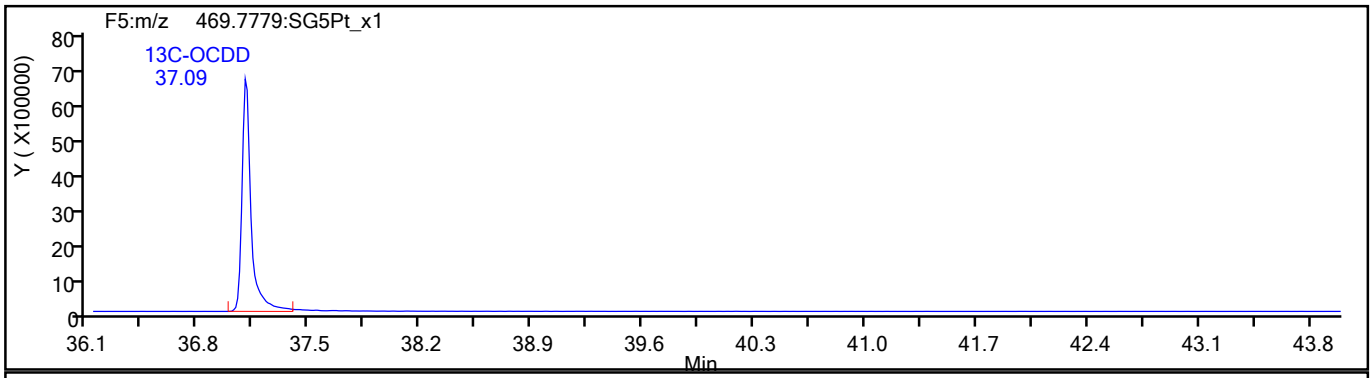

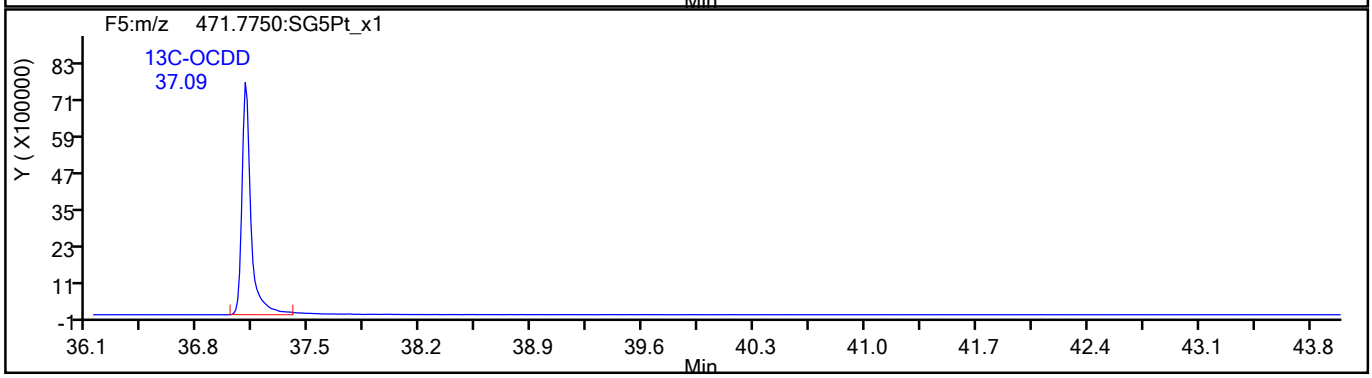

776156

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

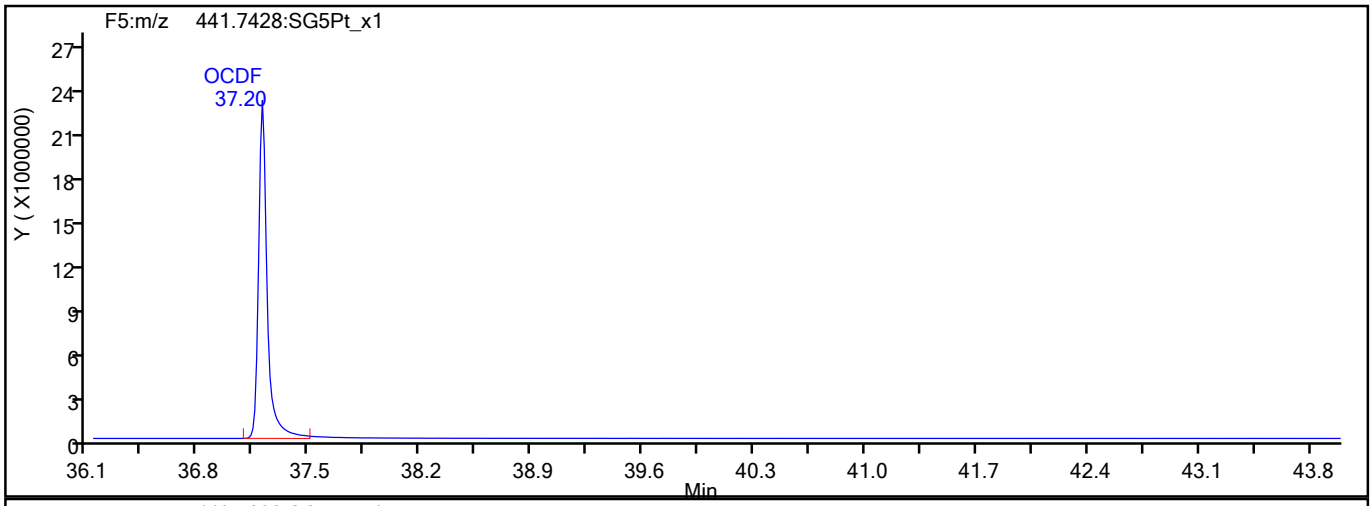

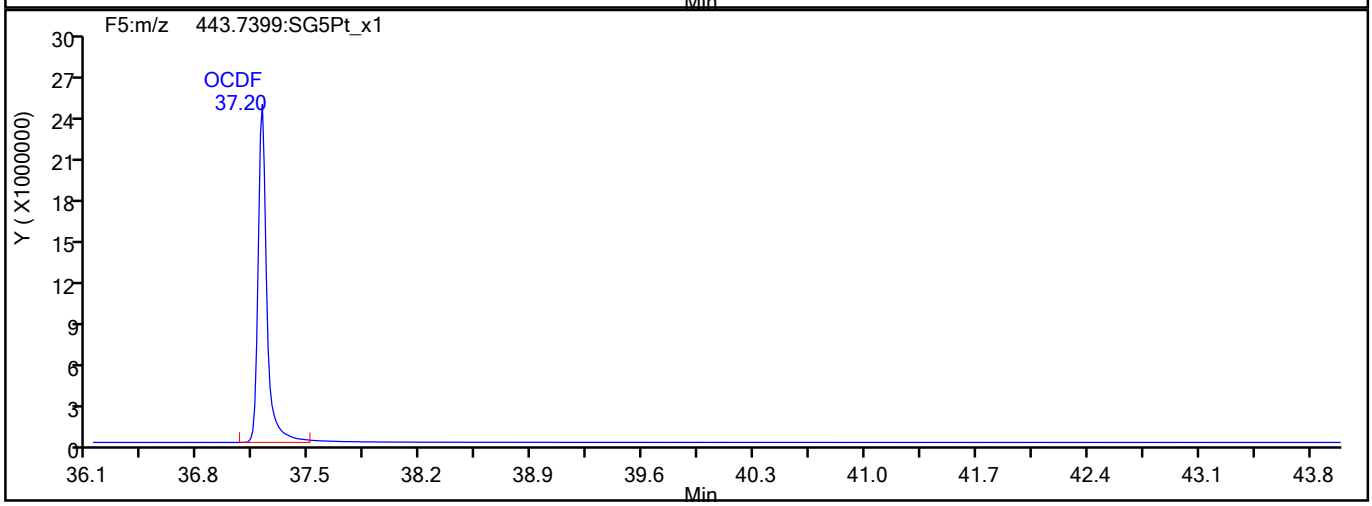

OCDF Interference Mass

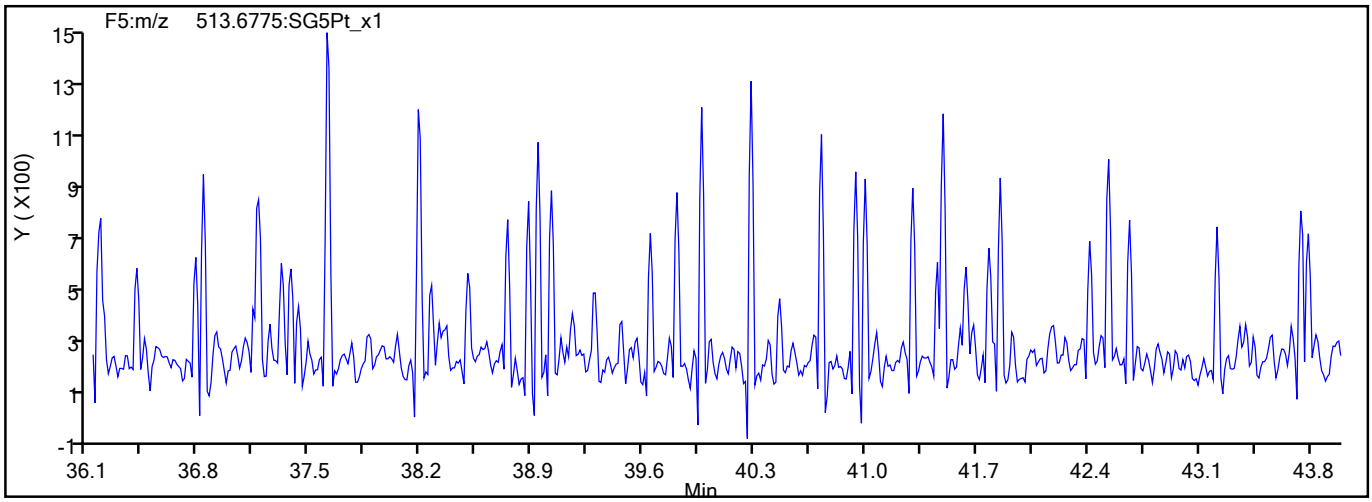

776157

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

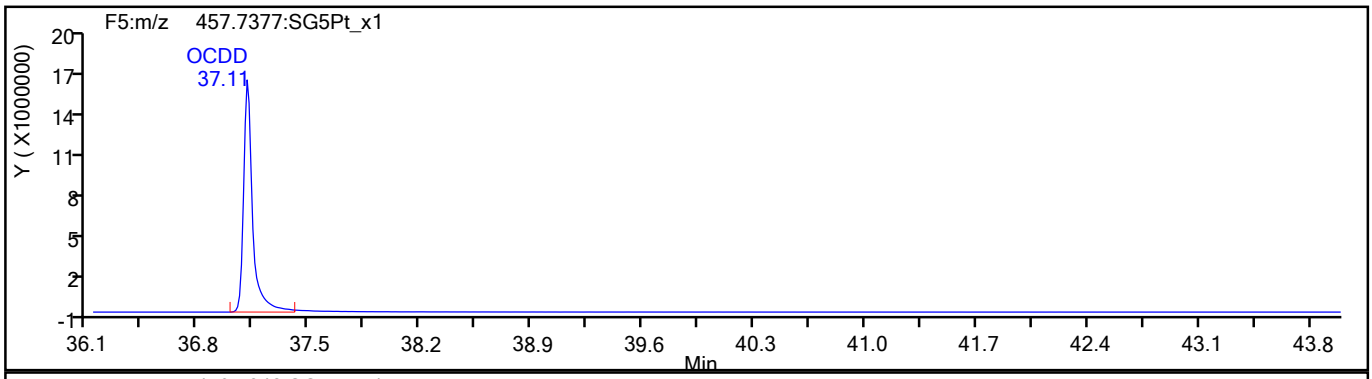

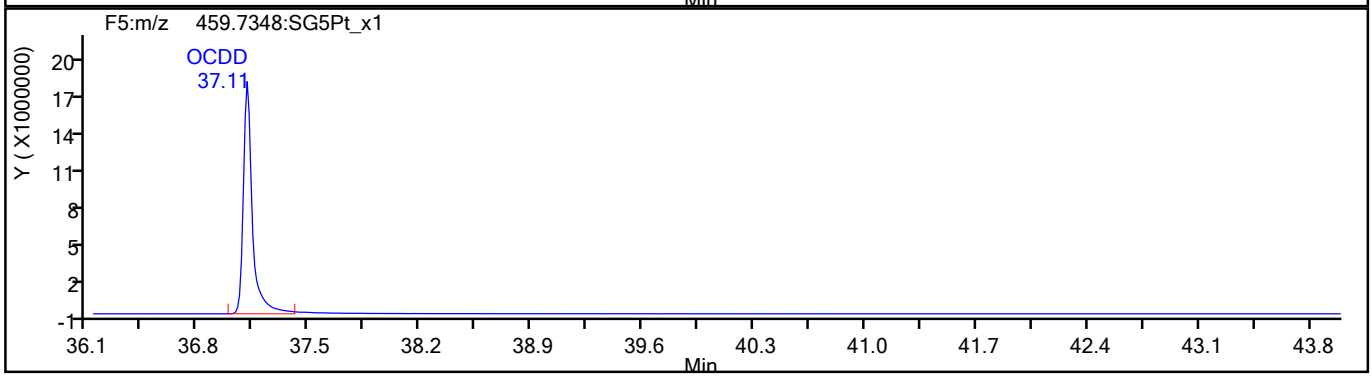

OCDD Standards

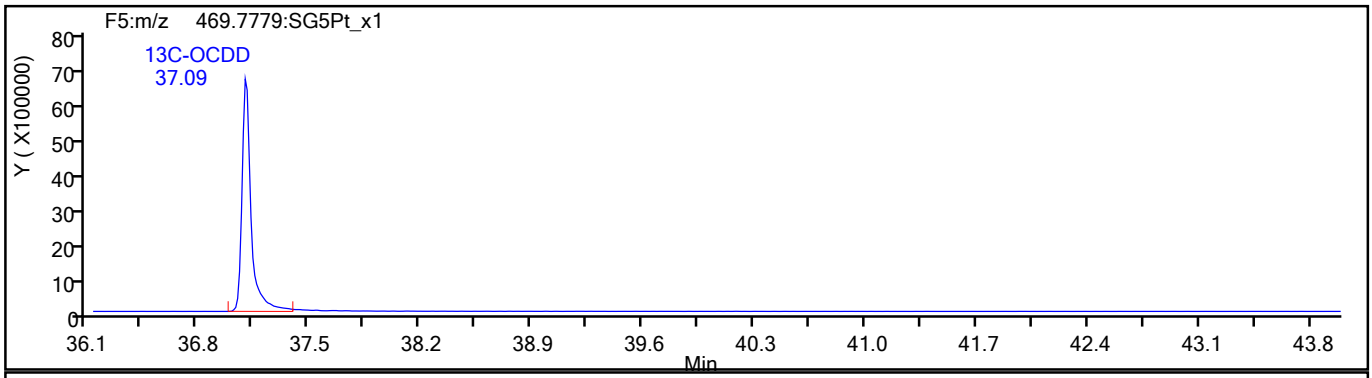

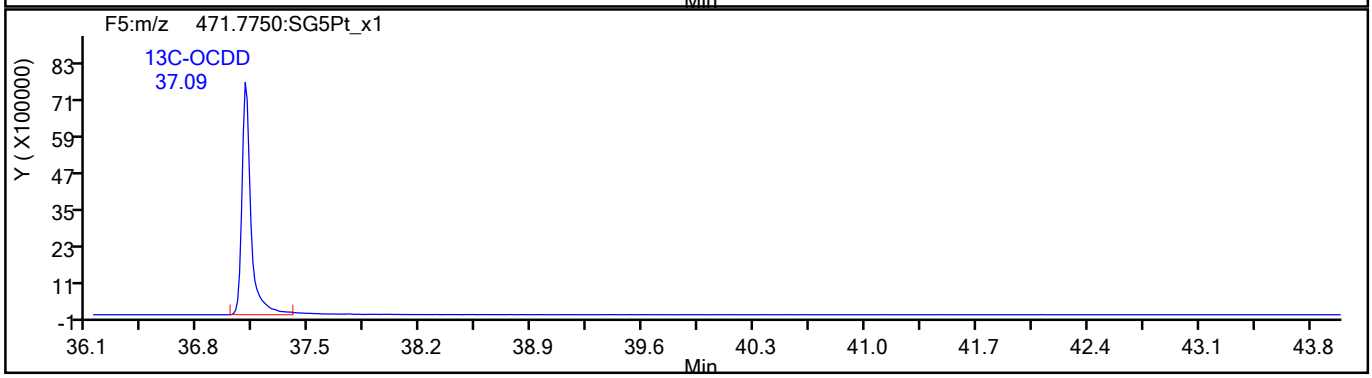

776158

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

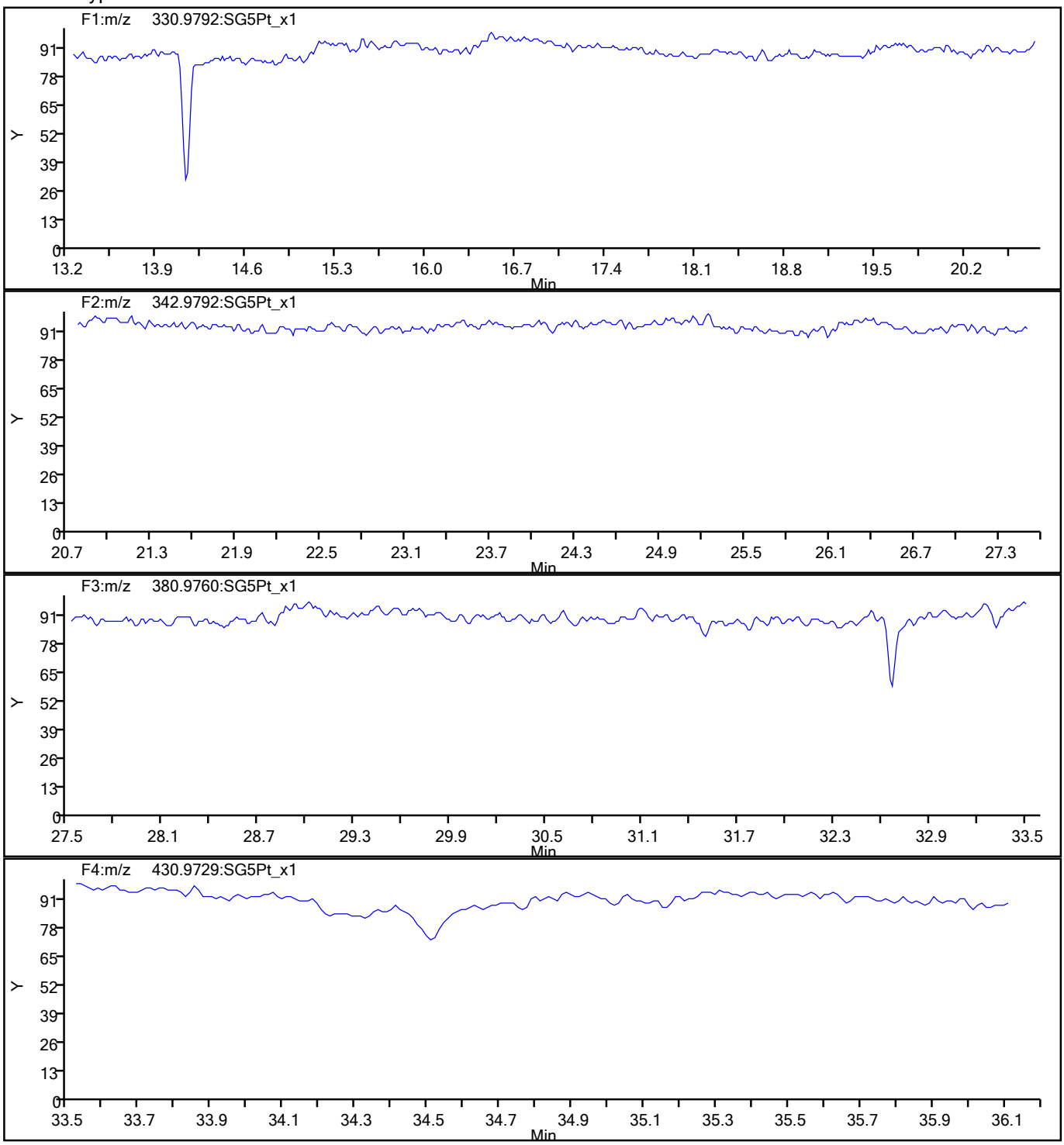

776159

Report Date: 27-Jul-2021 15:17:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

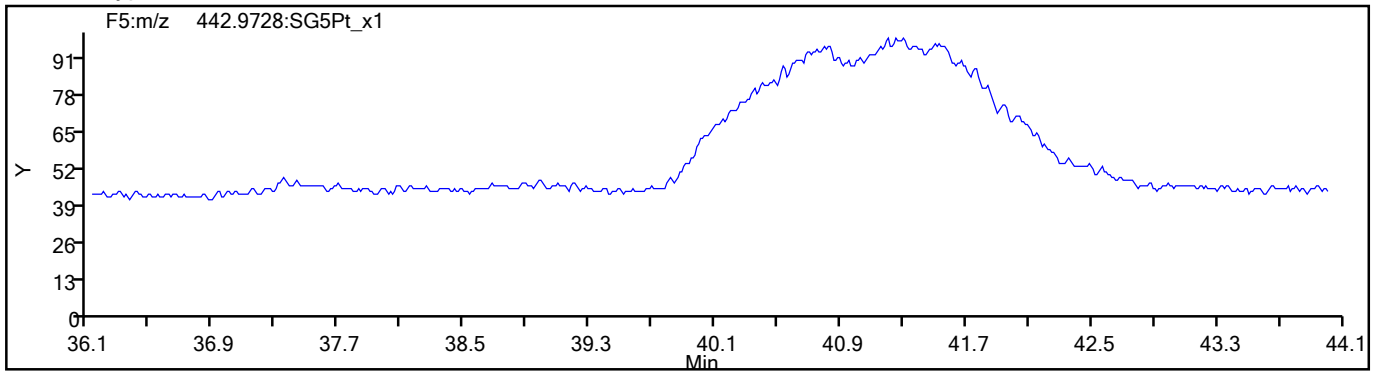

776160

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	57464333	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	95980421	0.79	1.6249	102.8	102.8	0.1660	0.1660	103	
2,3,7,8-TCDF	17.628	204575642	0.78	1.0239	208.2	208.2	0.2336	0.2336	104	
S Total TCDF					208.2	208.2	0.2336	0.2336		
D 13C-2,3,7,8-TCDD	18.338	53698206	0.83	0.8993	103.9	103.9	0.1396	0.1396	104	
$ 37Cl4-2,3,7,8-TCDD	18.354	140953034		1.1071	221.5	221.5	0.1318	0.1318	111	
2,3,7,8-TCDD	18.354	140421448	0.79	1.2541	208.5	208.5	0.1362	0.1362	104	
S Total TCDD					208.5	208.5	0.1362	0.1362		
D 13C-1,2,3,7,8-PeCDF	22.749	72829681	1.58	1.2101	104.7	104.7	0.2112	0.2112	105	
1,2,3,7,8-PeCDF	22.776	795873691	1.61	1.0611	1029.8	1029.8	2.482	2.482	103	
D 13C-2,3,4,7,8-PeCDF	24.126	75649463	1.61	1.2395	106.2	106.2	0.2062	0.2062	106	
2,3,4,7,8-PeCDF	24.153	783403837	1.59	1.0184	1016.8	1016.8	2.723	2.723	102	
S Total PeCDF					2046.7	2046.7	2.602	2.602		
D 13C-1,2,3,7,8-PeCDD	24.862	46251010	1.64	0.7612	105.7	105.7	0.1196	0.1196	106	
1,2,3,7,8-PeCDD	24.889	500555284	1.58	1.0484	1032.3	1032.3	0.8910	0.8910	103	
S Total PeCDD					1032.3	1032.3	0.8910	0.8910		
D 13C-1,2,3,4,7,8-HxCDF	30.835	67741189	0.53	1.0837	103.6	103.6	0.3784	0.3784	104	
1,2,3,4,7,8-HxCDF	30.862	737075796	1.21	1.0851	1002.7	1002.7	4.903	4.903	100	
D 13C-1,2,3,6,7,8-HxCDF	31.008	67363664	0.51	1.1279	99.0	99.0	0.3636	0.3636	98.97	
1,2,3,6,7,8-HxCDF	31.021	785709889	1.22	1.1260	1035.8	1035.8	4.873	4.873	104	
D 13C-2,3,4,6,7,8-HxCDF	31.754	63471184	0.52	1.0637	98.9	98.9	0.3855	0.3855	98.87	
2,3,4,6,7,8-HxCDF	31.767	762810877	1.21	1.1675	1029.4	1029.4	3.909	3.909	103	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58669892	0.52	0.9676	100.5	100.5	0.4238	0.4238	100	
1,2,3,7,8,9-HxCDF	32.539	708280047	1.22	1.1664	1035.0	1035.0	4.123	4.123	104	
S Total HxCDF					4103.0	4103.0	4.452	4.452		
* 13C-1,2,3,7,8,9-HxCDD	32.339	60348148	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	46886171	1.24	0.7334	105.9	105.9	0.3391	0.3391	106	
1,2,3,4,7,8-HxCDD	31.940	484857042	1.26	1.0640	971.9	971.9	2.786	2.786	97.19	
D 13C-1,2,3,6,7,8-HxCDD	32.033	53564396	1.27	0.8802	100.8	100.8	0.2826	0.2826	101	
1,2,3,6,7,8-HxCDD	32.047	543061818	1.27	1.0001	1013.8	1013.8	2.795	2.795	101	
1,2,3,7,8,9-HxCDD	32.353	563888565	1.26	1.1325	991.3	991.3	2.541	2.541	99.13	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDD					2977.0	2977.0	2.707	2.707		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	46328151	0.45	0.7730	99.3	99.3	0.9693	0.9693	99.31	
1,2,3,4,6,7,8-HpCDF	33.924	681312007	1.05	1.4413	1020.4	1020.4	8.187	8.187	102	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44333848	0.44	0.7008	104.8	104.8	1.069	1.069	105	
1,2,3,4,7,8,9-HpCDF	35.017	590555312	1.06	1.3174	1011.1	1011.1	10.5	10.5	101	
S Total HpCDF					2031.5	2031.5	9.356	9.356		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	39395832	1.02	0.6472	100.9	100.9	0.4739	0.4739	101	
1,2,3,4,6,7,8-HpCDD	34.726	441437476	1.05	1.0943	1024.0	1024.0	3.855	3.855	102	
S Total HpCDD					1024.0	1024.0	3.855	3.855		
D 13C-OCDD	37.093	56623863	0.89	0.4472	209.8	209.8	0.2327	0.2327	105	
OCDF	37.201	856685987	0.91	1.4382	2104.0	2104.0	1.905	1.905	105	
OCDD	37.105	635652839	0.90	1.1070	2028.1	2028.1	1.855	1.855	101	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		26125466	6597193	4577	11442	1441		
333.9339	18.142	18.142	0		31338867	7893522	2702	6755	2921	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42243137	10877420	7832	19580	1389		
317.9389	17.613	17.616	0	0.971	53737284	13863668	7802	19505	1777	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	89710432	22799700	10338	25845	2205		
305.8987	17.628	17.631	0	1.001	114865210	29189675	13335	33337	2189	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24360997	5757558	4577	11442	1258		
333.9339	18.338	18.338	0	1.011	29337209	6914283	2702	6755	2559	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	140953034	33738158	8459	21147	3988		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	62065087	14965631	3913	9782	3825		
321.8936	18.354	18.357	0	1.001	78356361	18744482	4747	11867	3949	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44649559	7939527	8573	21432	926		
353.8970	22.749	22.754	0	1.254	28180122	5062354	6242	15605	811	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	490871580	87021007	84135	210337	1034		
341.8567	22.776	22.779	0	1.001	305002111	54503599	52854	132135	1031	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46717935	7613965	8573	21432	888		
353.8970	24.126	24.129	0	1.330	28931528	4737188	6242	15605	759	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	480352978	79104825	84135	210337	940		
341.8567	24.153	24.156	0	1.001	303050859	50060127	52854	132135	947	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28720712	4433240	3087	7717	1436		
369.8919	24.862	24.865	0	1.370	17530298	2751802	2189	5472	1257	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	306292917	47311146	15348	38370	3083		
357.8516	24.889	24.892	0	1.001	194262367	30133208	11499	28747	2621	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23491874	5084915	9674	24185	526		
385.8610	30.835	30.838	0	0.953	44249315	9441190	17790	44475	531	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	404173144	87133654	170642	426605	511		
375.8178	30.848	30.857	0	1.000	332902652	71216591	138478	346195	514	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	22854682	4877346	9674	24185	504		
385.8610	31.008	31.003	0	0.959	44508982	9206926	17790	44475	518	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.000	431948071	93438031	170642	426605	548		
375.8178	31.021	31.022	0	1.000	353761818	76246532	138478	346195	551	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	21747421	5871662	9674	24185	607		
385.8610	31.754	31.756	0	0.982	41723763	11062051	17790	44475	622	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	417841952	110026703	170642	426605	645		
375.8178	31.767	31.772	0	1.000	344968925	92108448	138478	346195	665	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20172563	5575575	9674	24185	576		
385.8610	32.512	32.523	-1	1.005	38497329	10495423	17790	44475	590	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	388834443	107441652	170642	426605	630		
375.8178	32.526	32.534	0	1.000	319445604	89819128	138478	346195	649	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33485933	9289499	8951	22377	1038		
403.8529	32.339	32.342	0		26862215	7454274	7708	19270	967	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	25994948	7598983	8951	22377	849		
403.8529	31.927	31.929	0	0.987	20891223	6054958	7708	19270	786	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	270288224	77533273	86149	215372	900		
391.8127	31.940	31.945	0	1.000	214568818	61952830	75747	189367	818	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29946566	8106259	8951	22377	906		
403.8529	32.033	32.033	0	0.991	23617830	6373294	7708	19270	827	1.27(1.05-1.43)	

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Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	303387935	83103965	86149	215372	965		
391.8127	32.047	32.047	0	1.000	239673883	65565020	75747	189367	866	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	314172702	87971106	86149	215372	1021		
391.8127	32.353	32.355	0	1.013	249715863	70210414	75747	189367	927	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14282220	4787635	15981	39952	300		
419.8220	33.912	33.914	0	1.049	32045931	10687518	34202	85505	312	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	349397605	118035783	389676	974190	303		
409.7789	33.924	33.926	0	1.000	331914402	111658032	340706	851765	328	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13509696	4047534	15981	39952	253		
419.8220	35.005	35.010	0	1.082	30824152	9120201	34202	85505	267	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	303260617	91538482	389676	974190	235		
409.7789	35.017	35.020	0	1.000	287294695	87143866	340706	851765	256	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19890119	6131671	10444	26110	587		
437.8140	34.714	34.716	0	1.073	19505713	6051375	10100	25250	599	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	225857690	69087451	102453	256132	674		
425.7737	34.726	34.726	0	1.000	215579786	65898474	103127	257817	639	1.05(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26710485	6689918	2659	6647	2516		
471.7750	37.093	37.094	0	1.147	29913378	7452640	4311	10777	1729	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	409115360	108366645	37076	92690	2923		
443.7399	37.201	37.199	0	1.003	447570627	117808946	40434	101085	2914	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	300559615	76562352	27801	69502	2754		
459.7348	37.105	37.106	0	1.000	335093224	85854399	30277	75692	2836	0.90(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

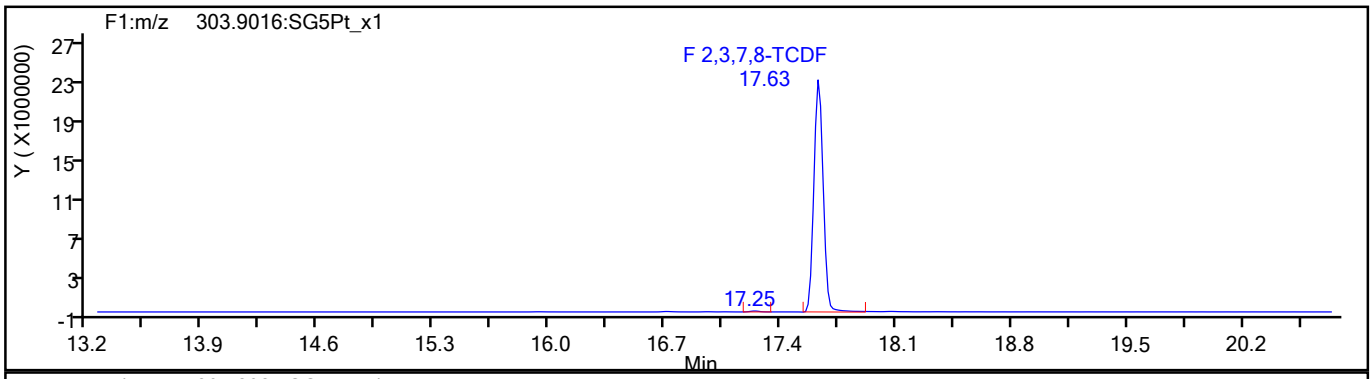

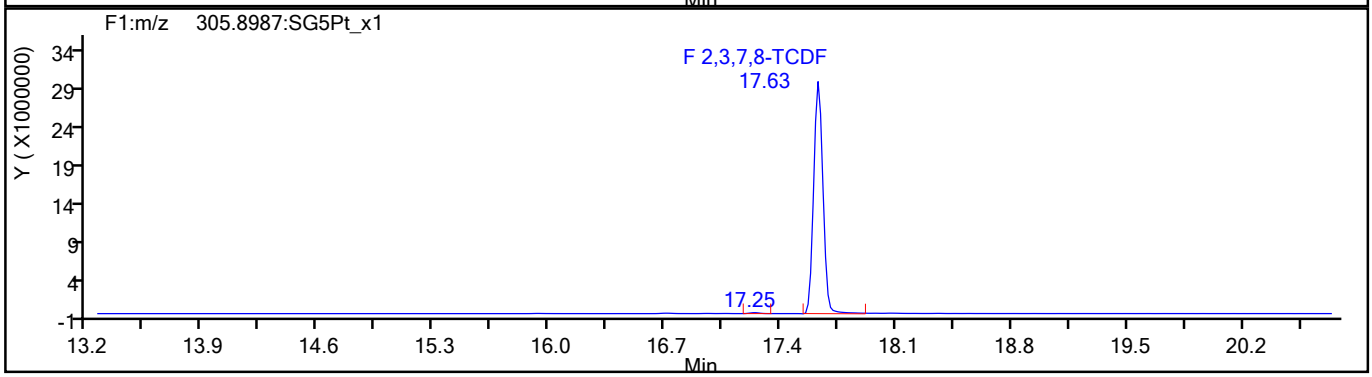

TCDF Standards

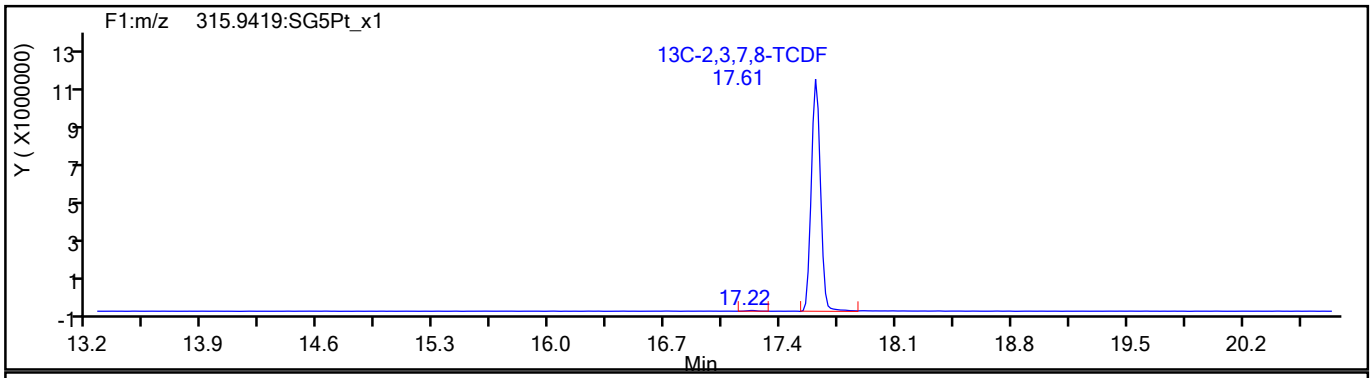

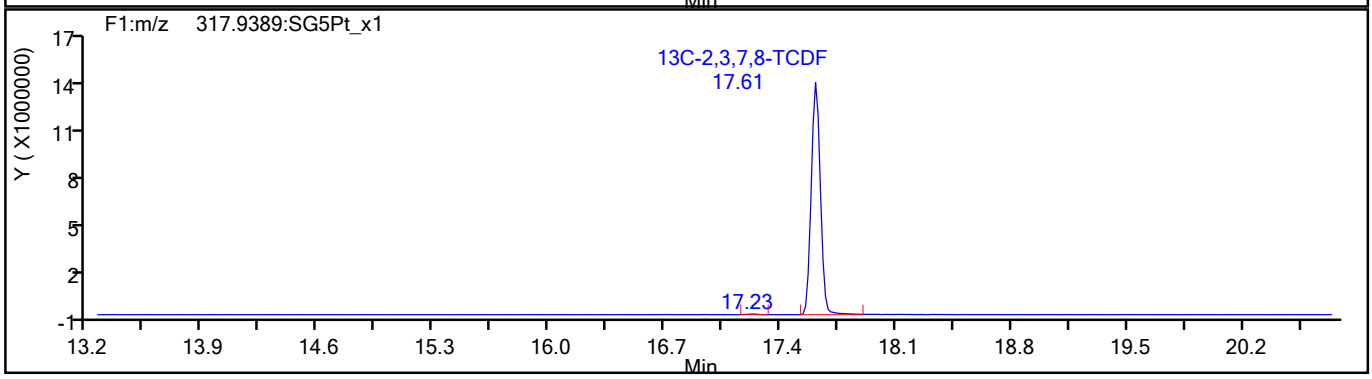

776166

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

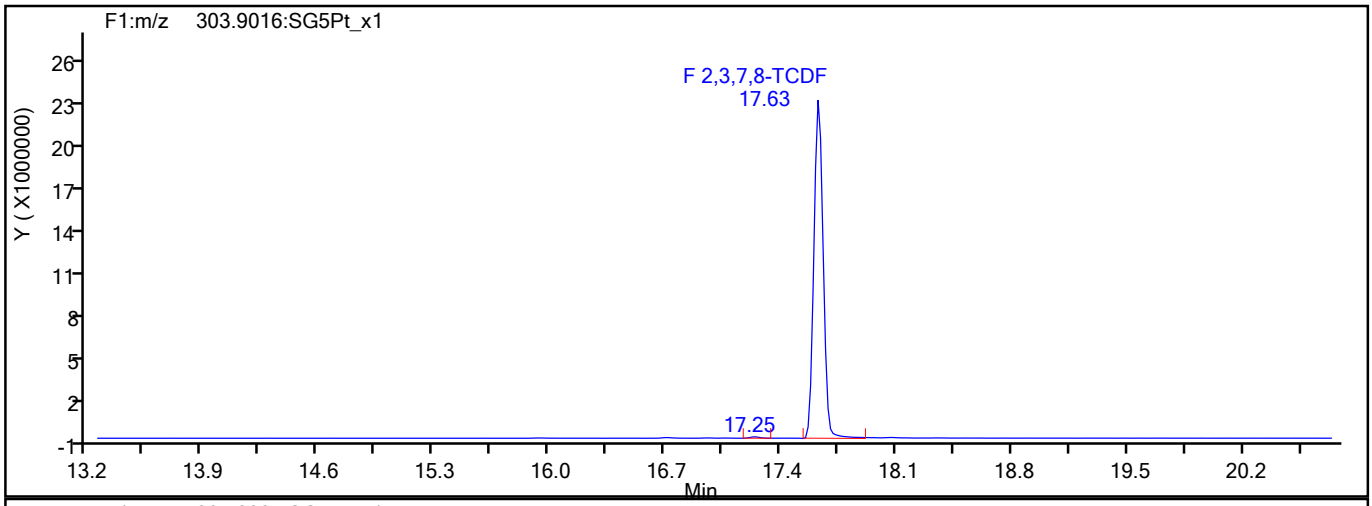

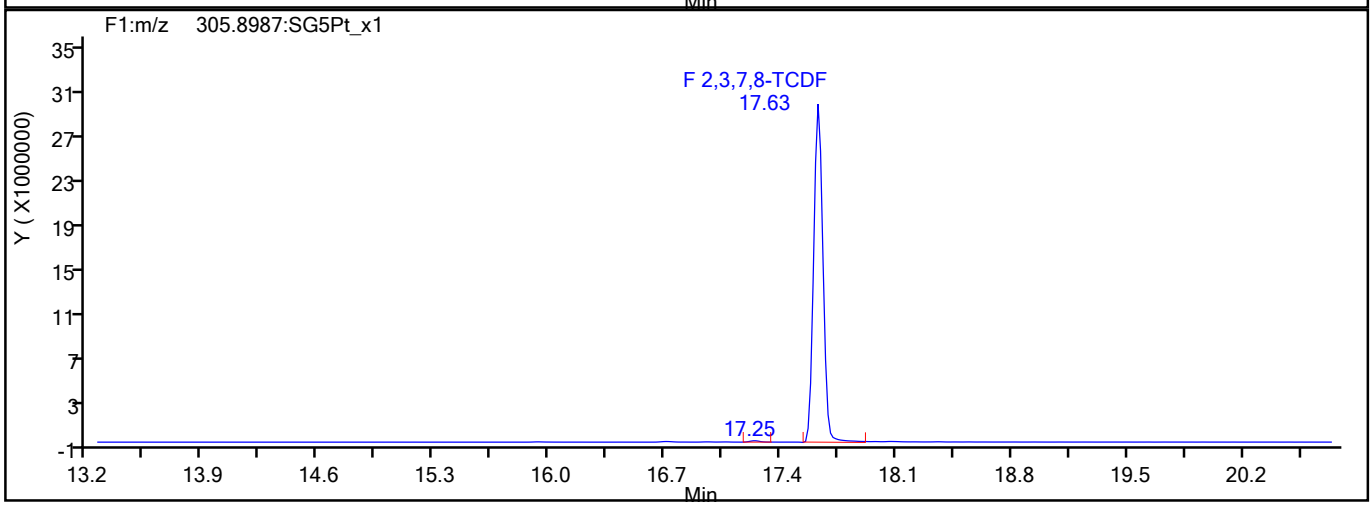

TCDF Interference Mass

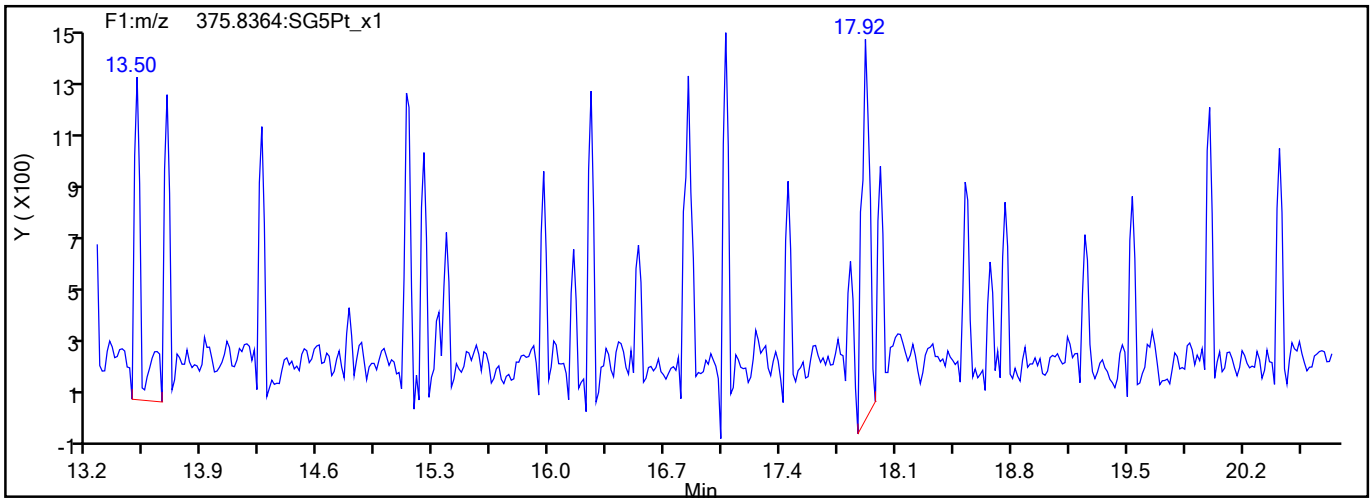

776167

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

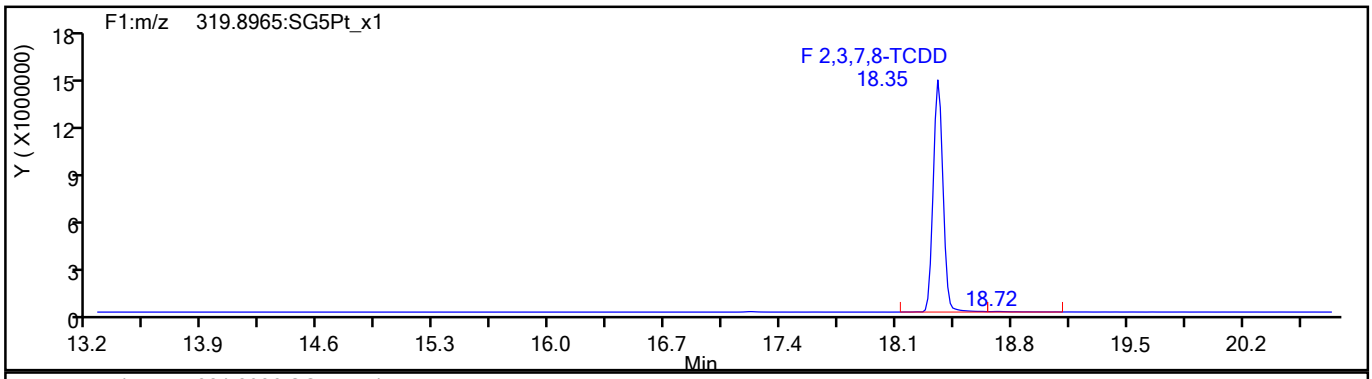

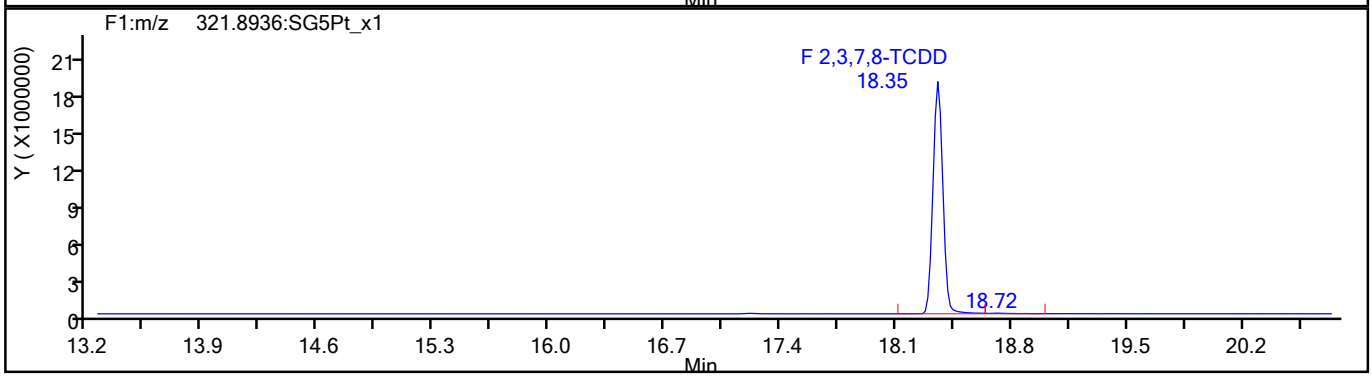

TCDD Standards

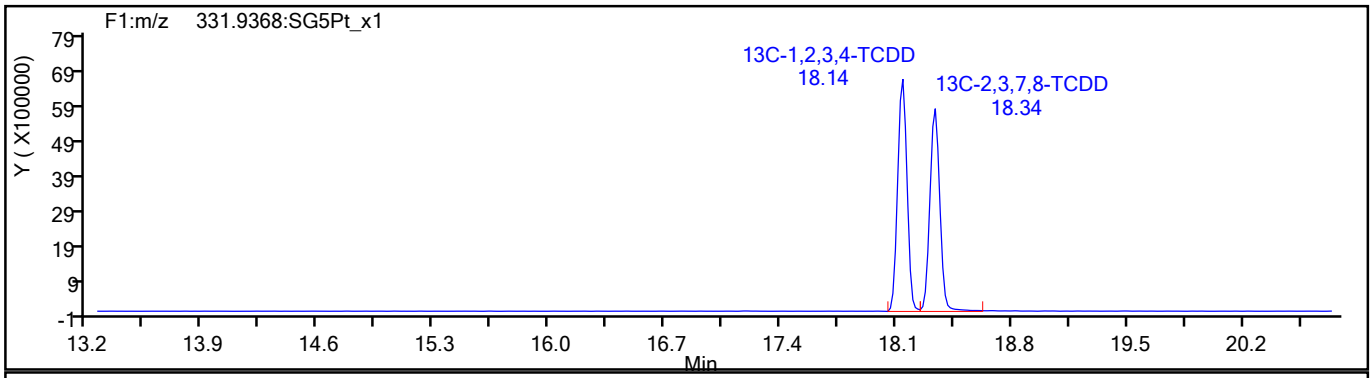

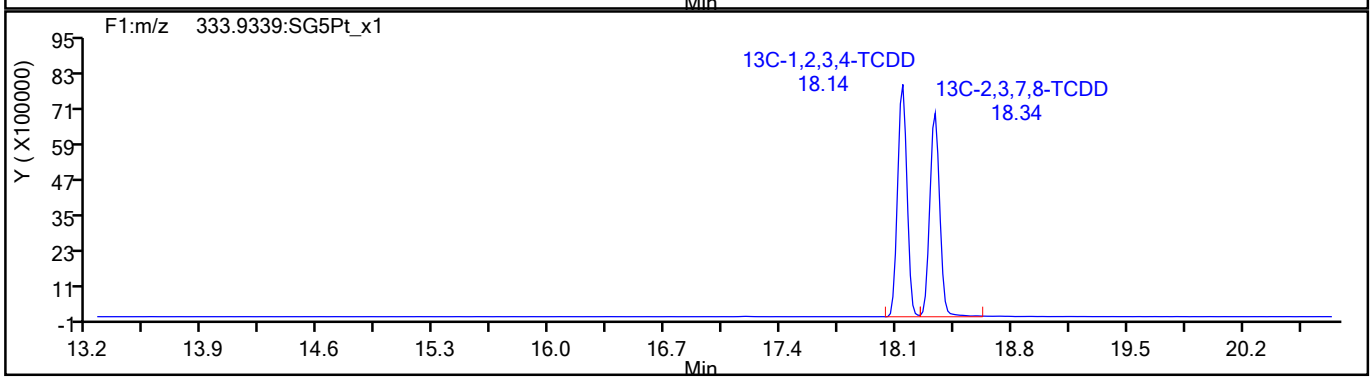

776168

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

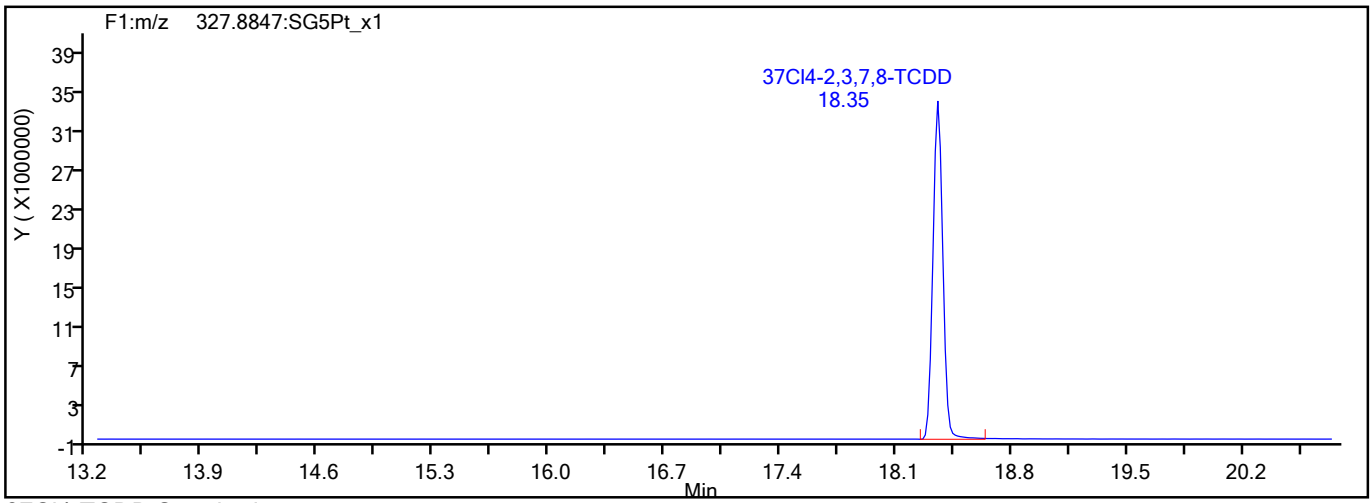

37Cl4-TCDD Standards

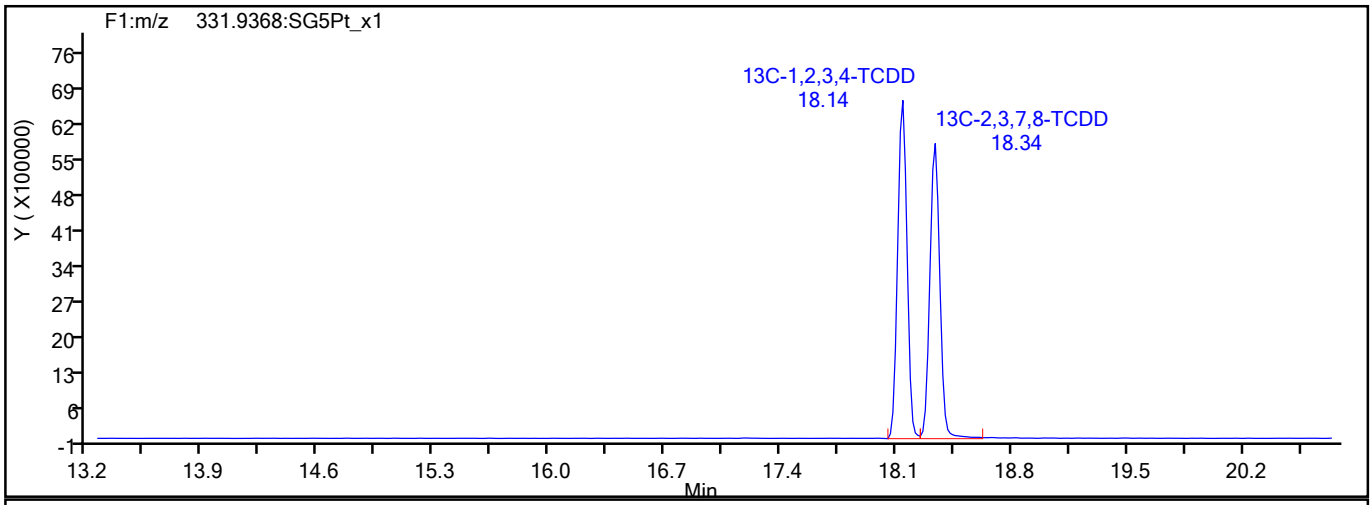

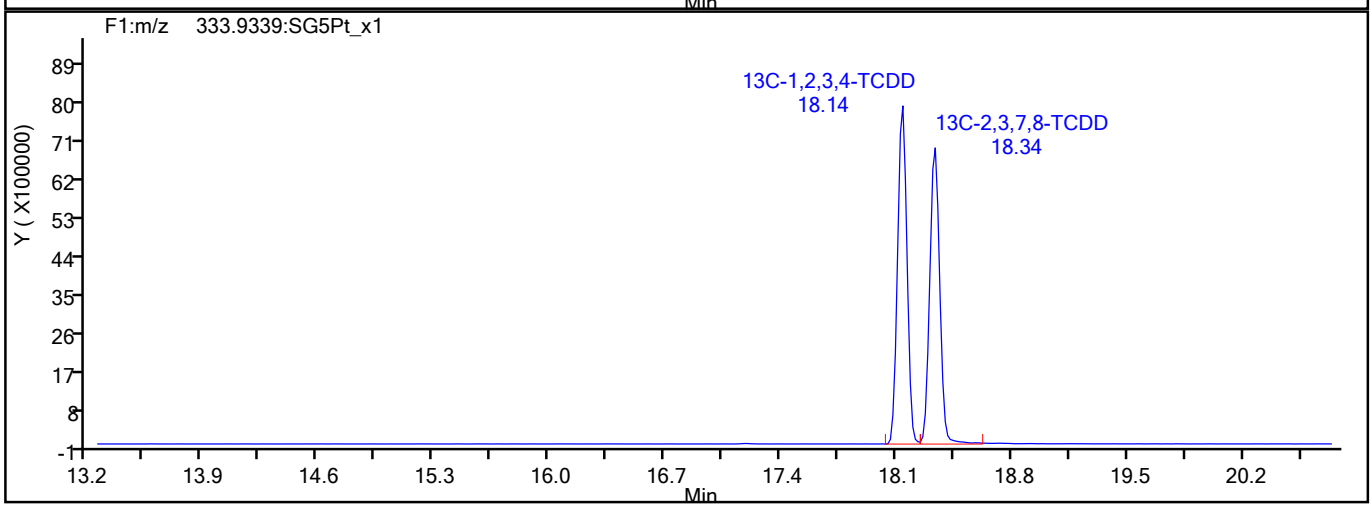

776169

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

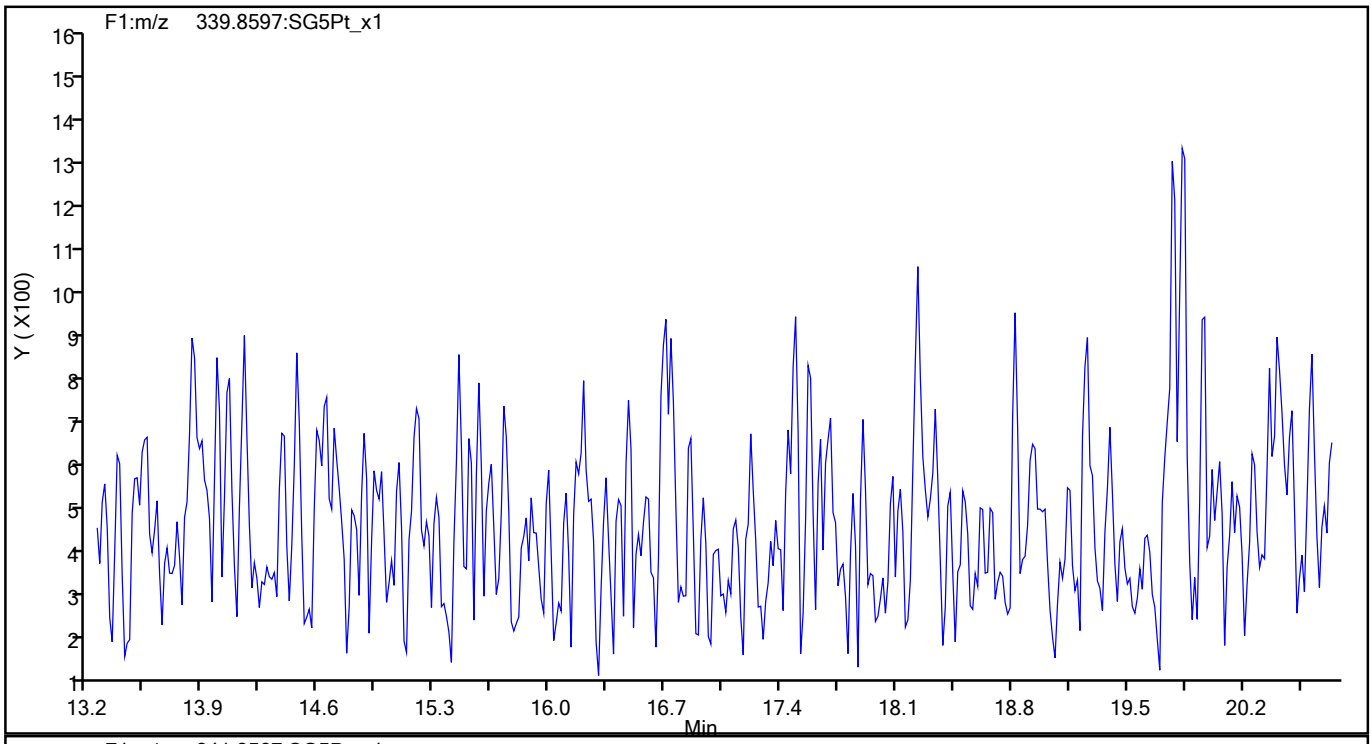

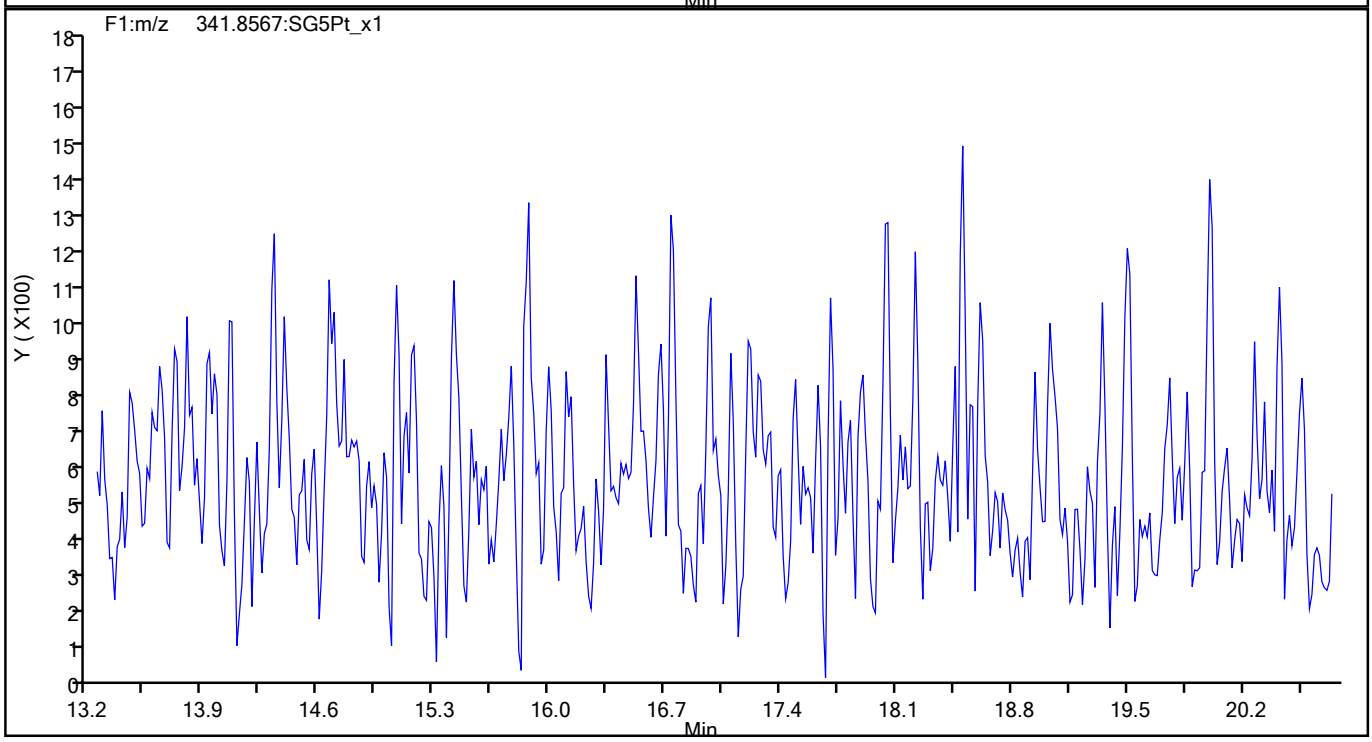

776170

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

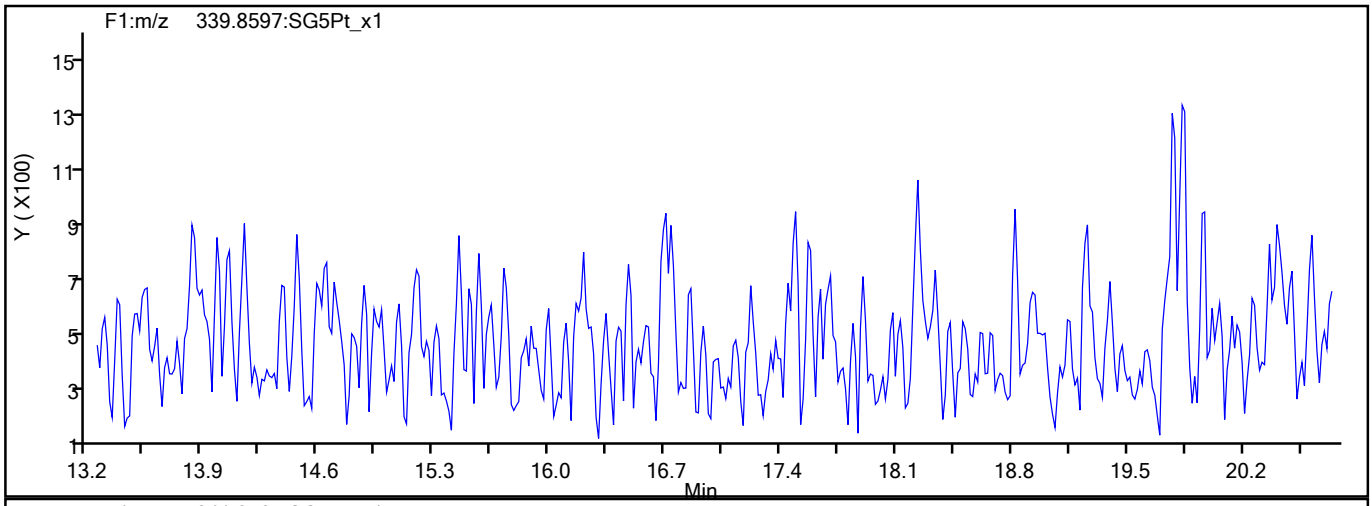

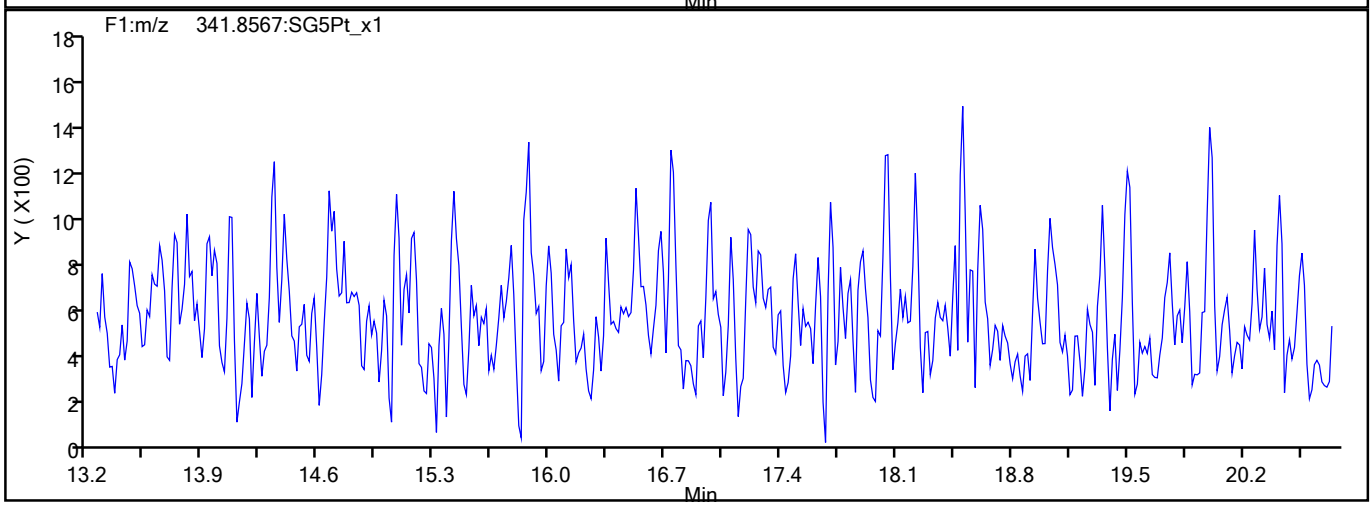

F1 PeCDFs Interference Mass

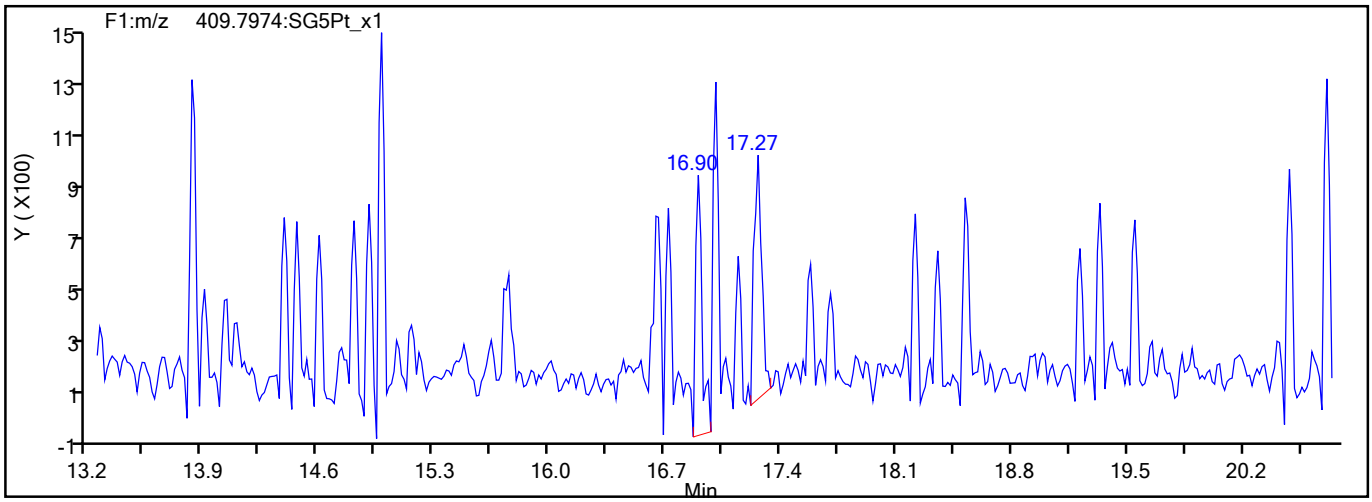

776171

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

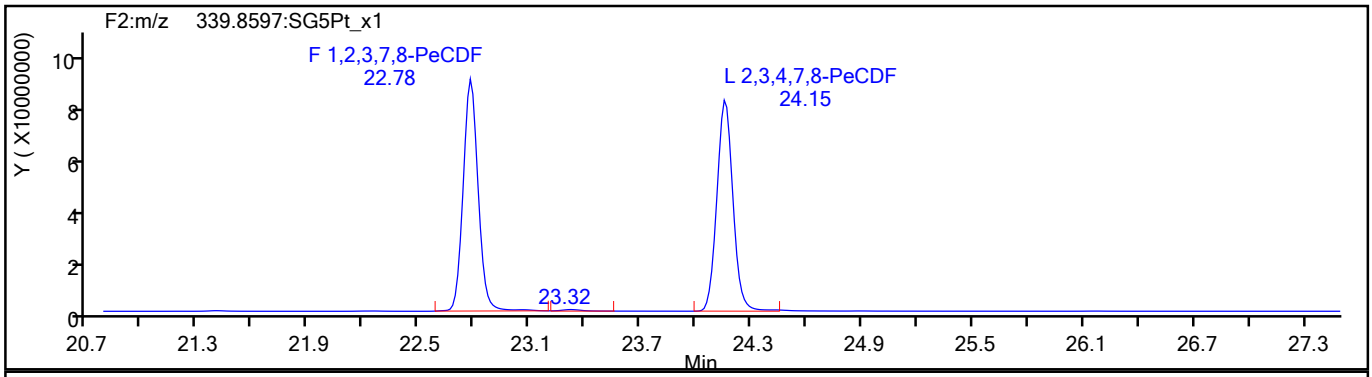

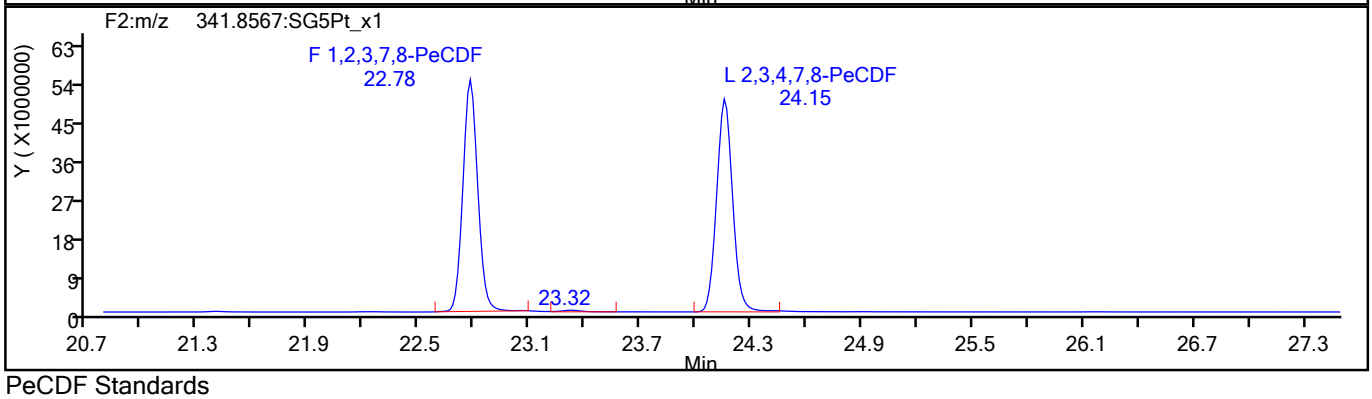

PeCDF Standards

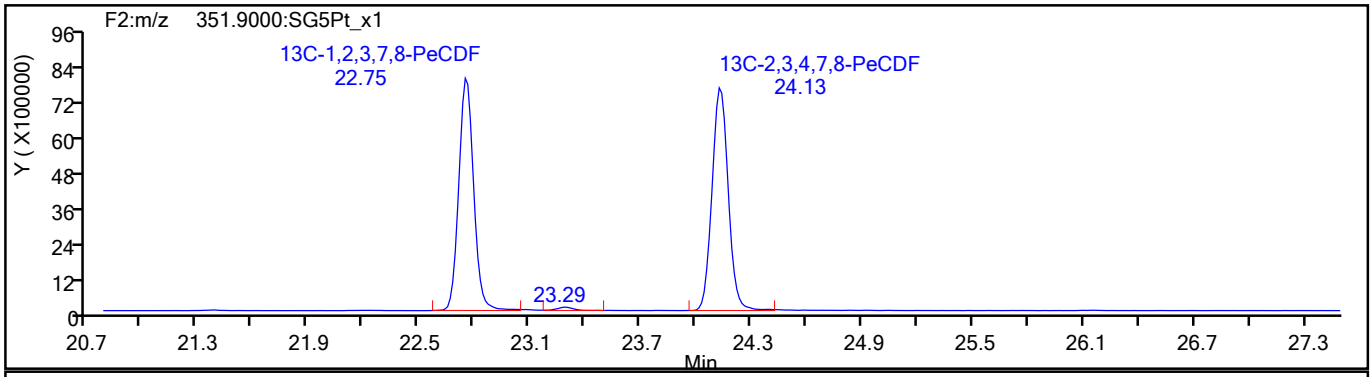

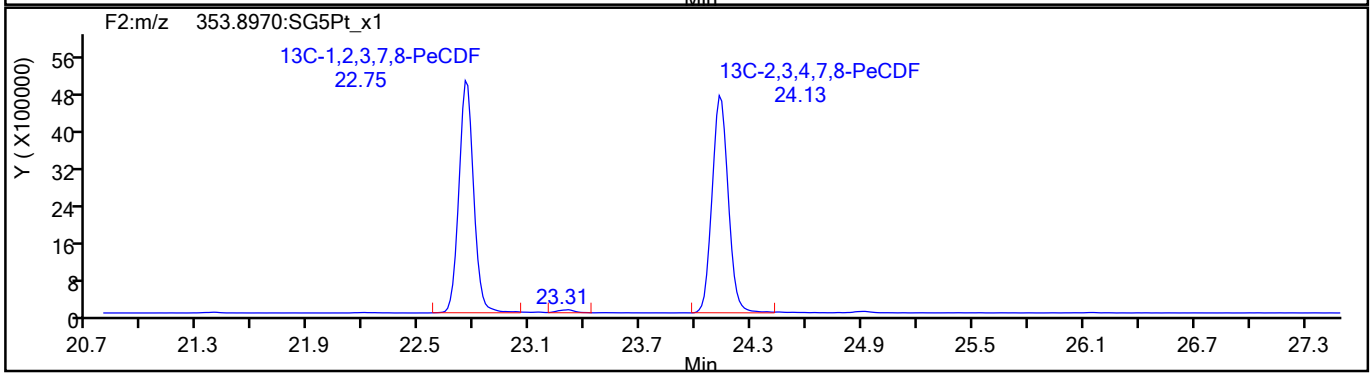

776172

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

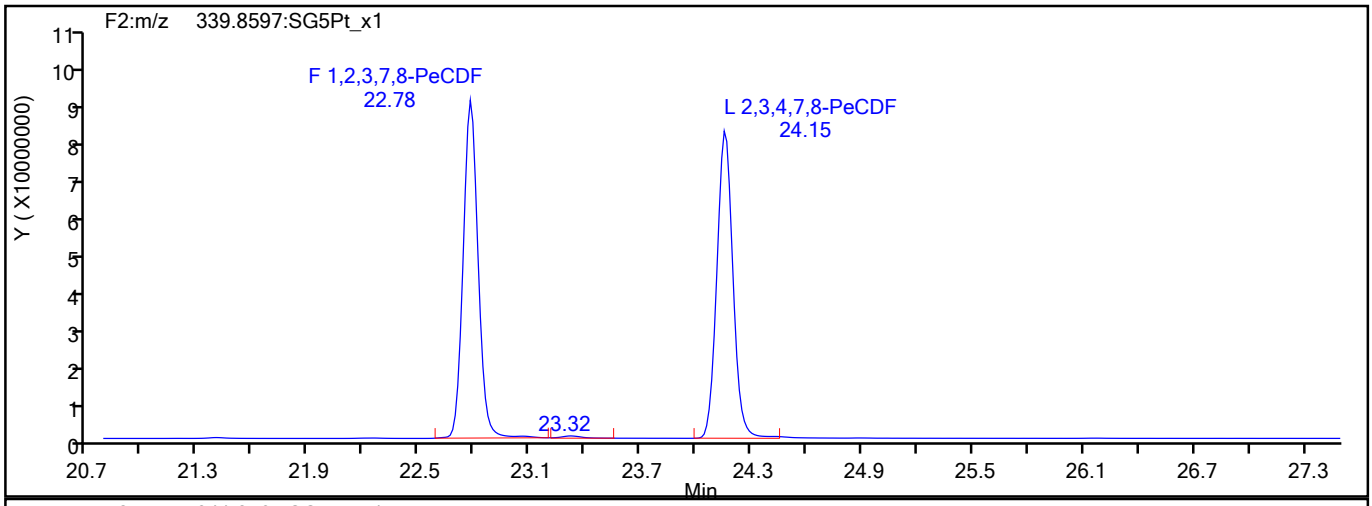

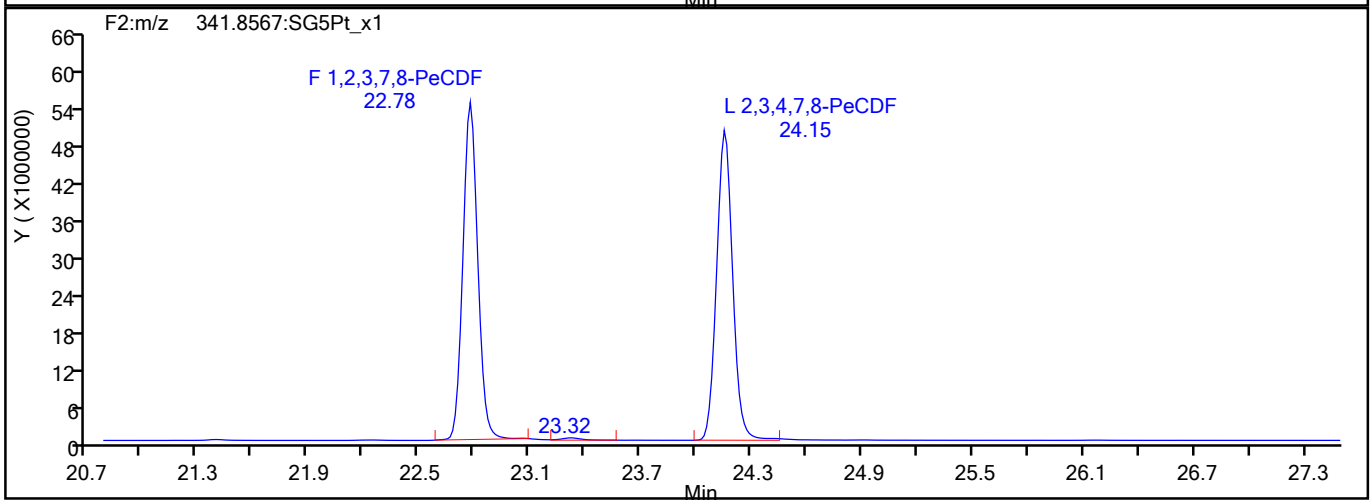

PeCDF Interference Mass

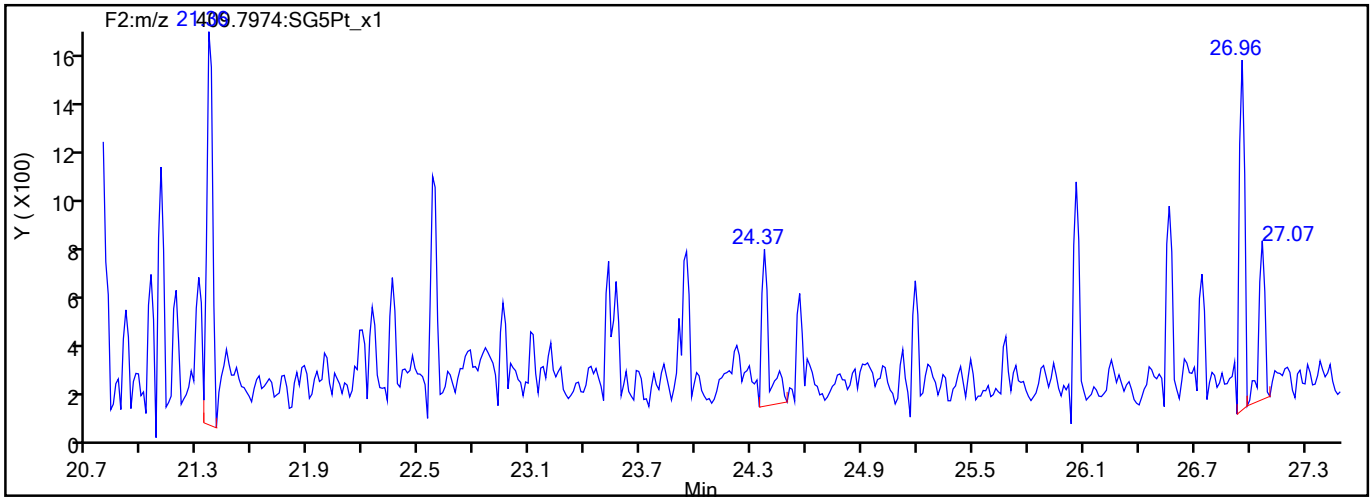

776173

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

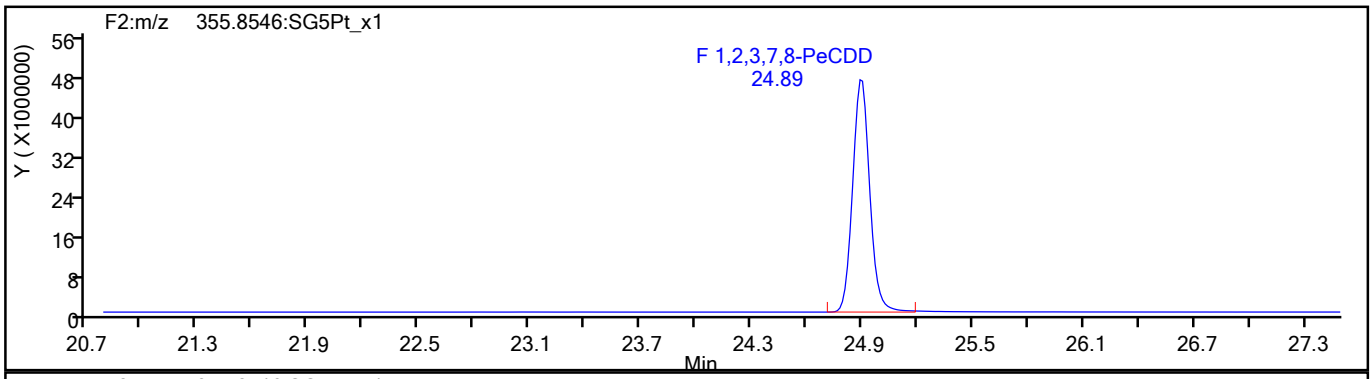

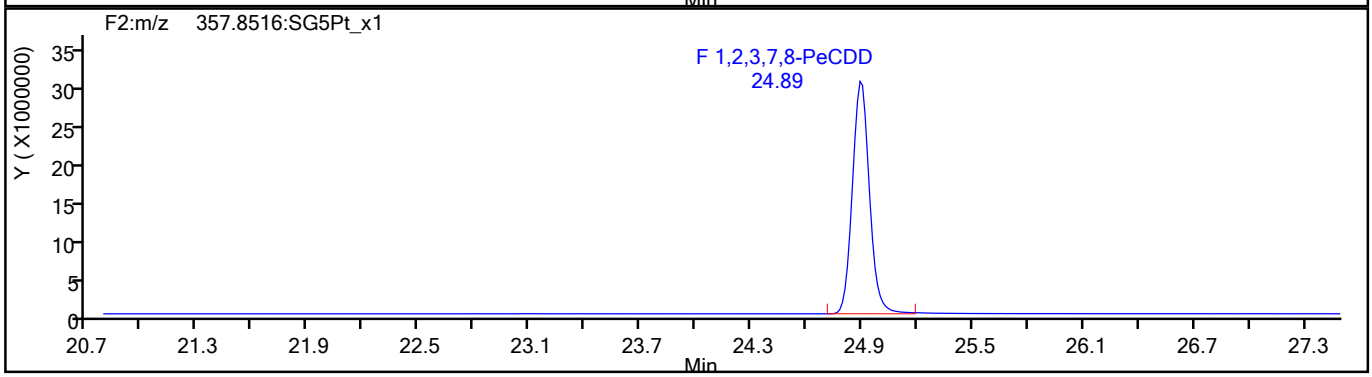

PeCDD Standards

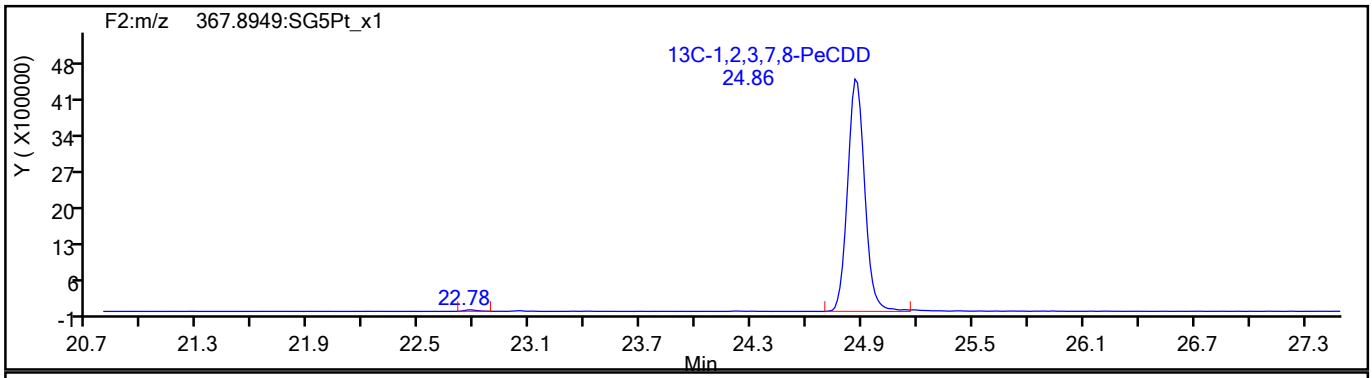

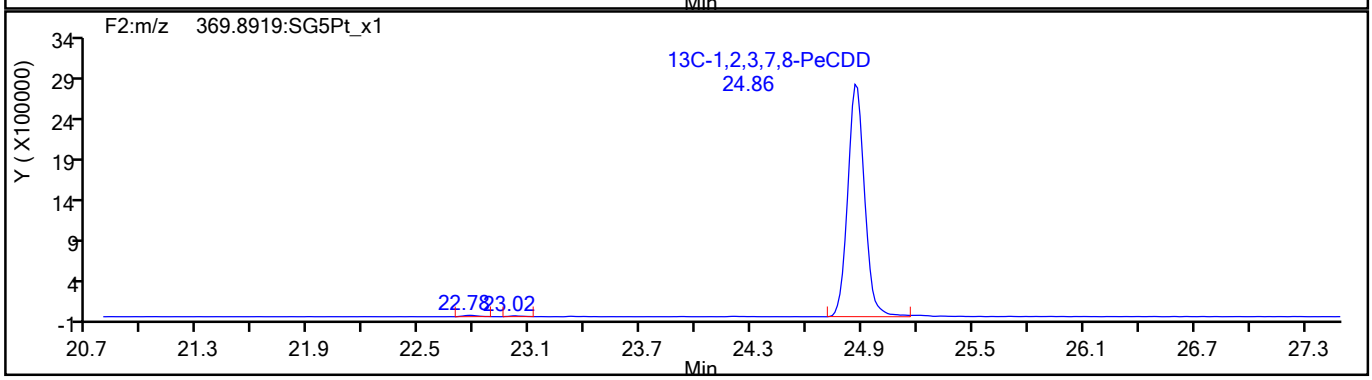

776174

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

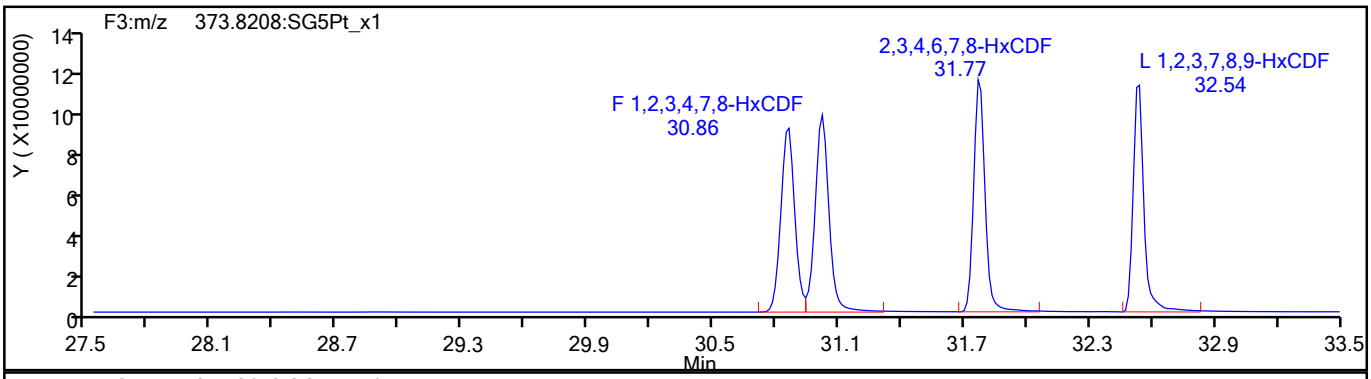

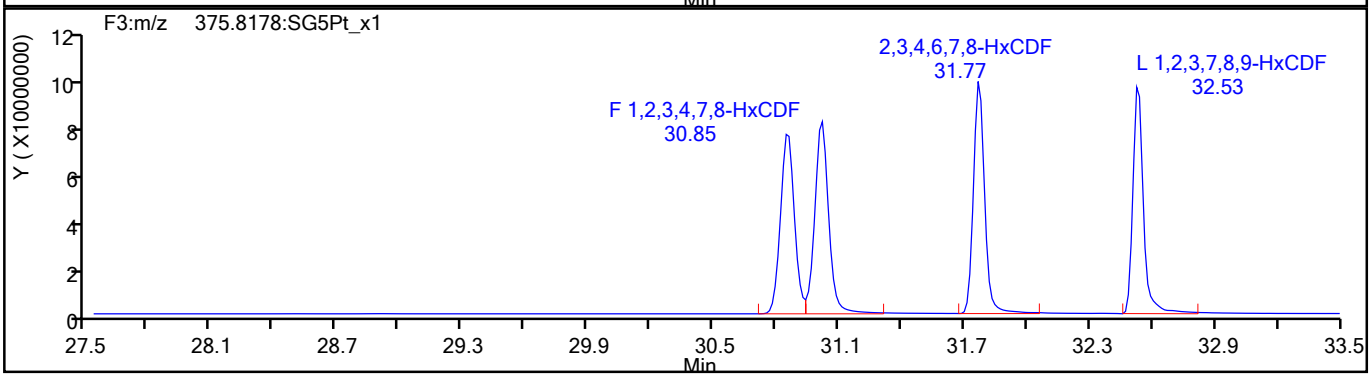

HxCDF Standards

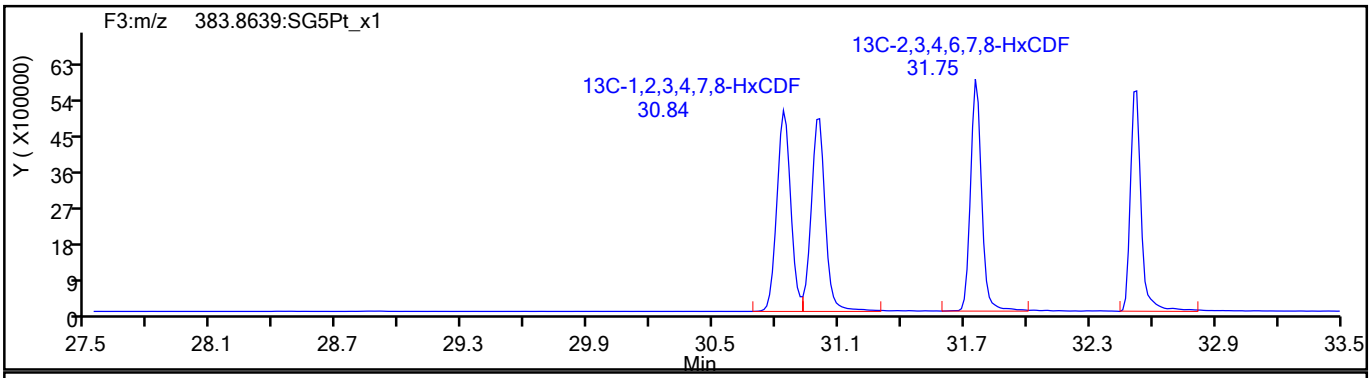

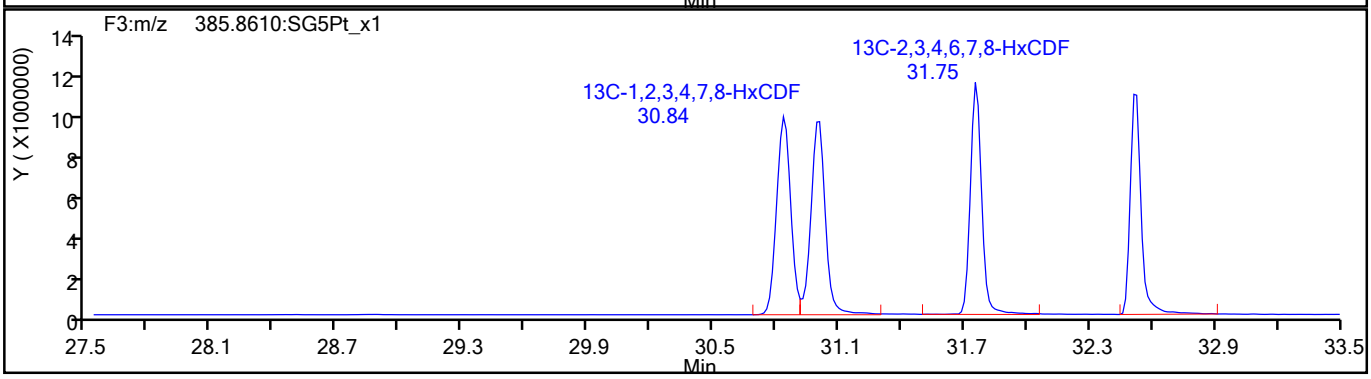

776175

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

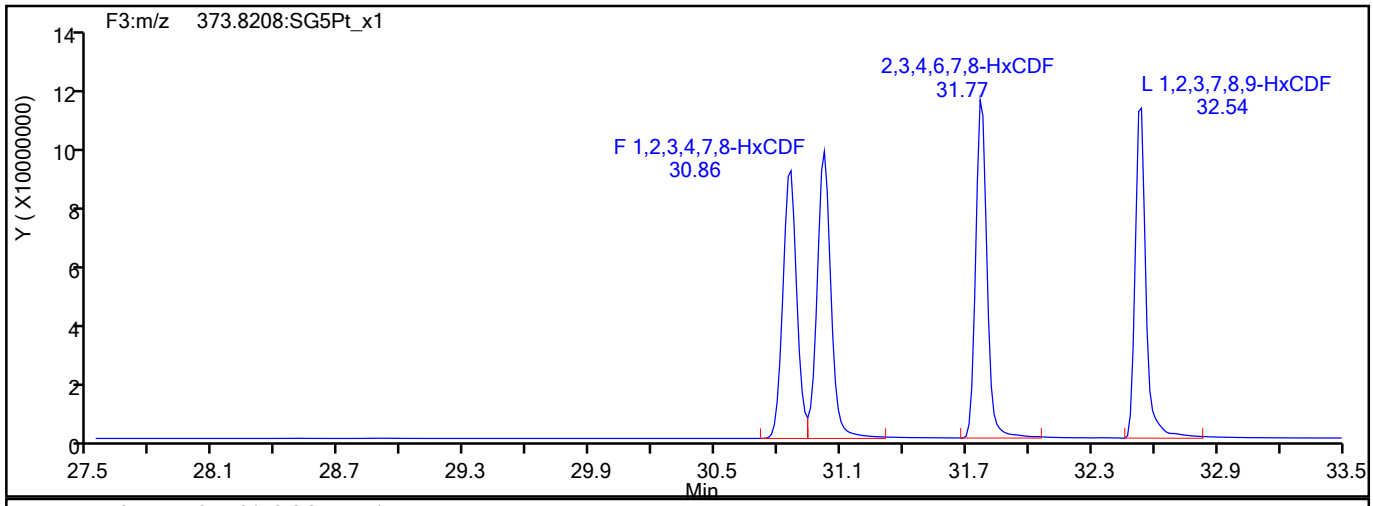

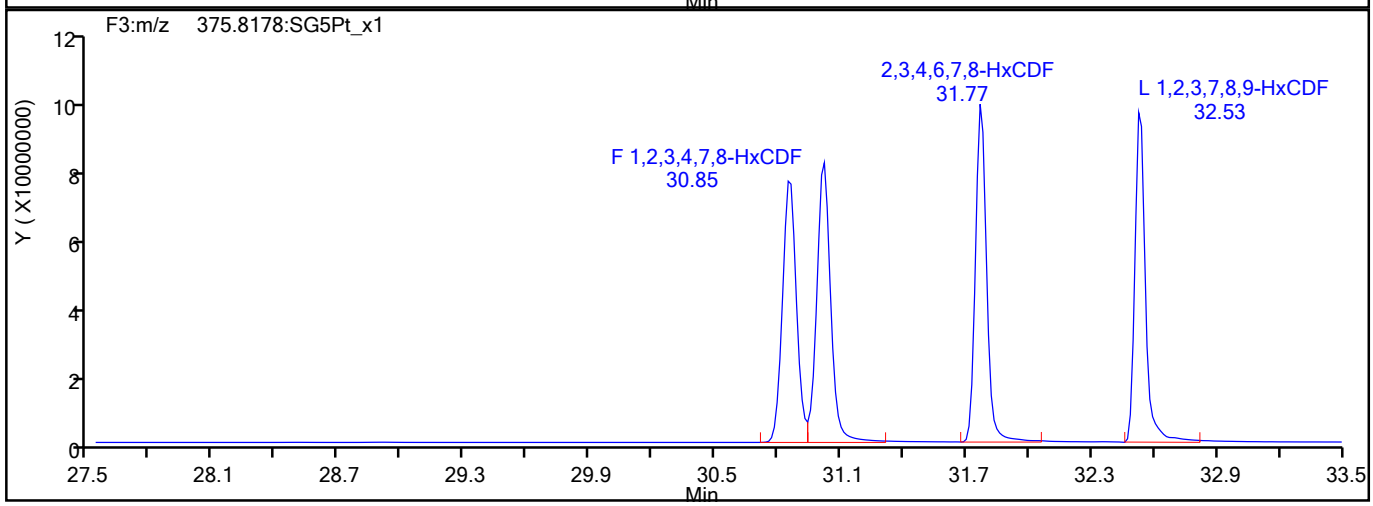

HxCDF Interference Mass

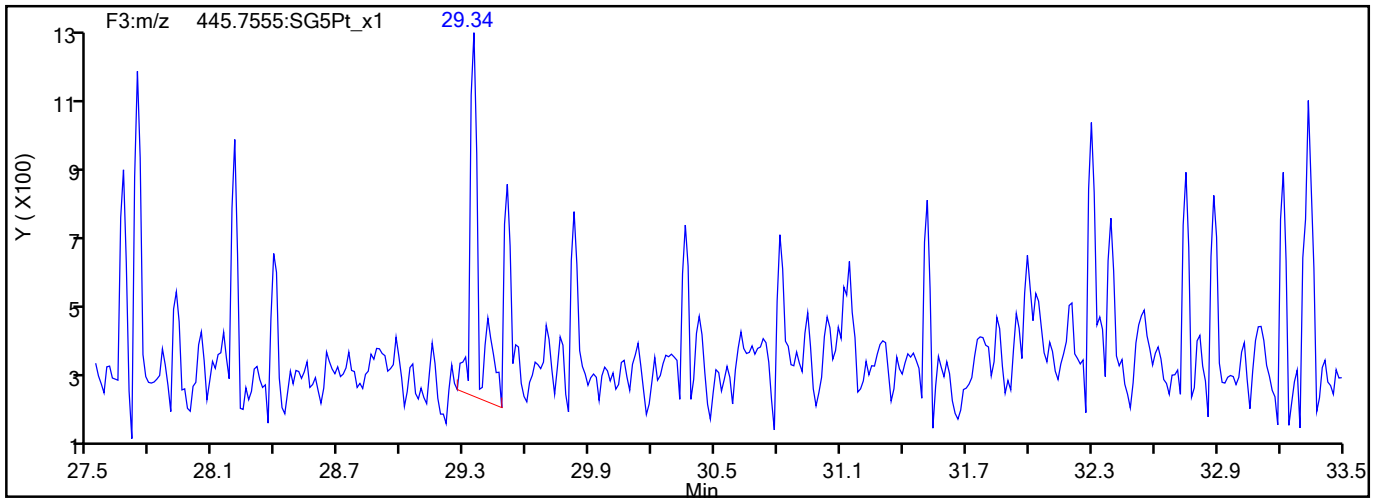

776176

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

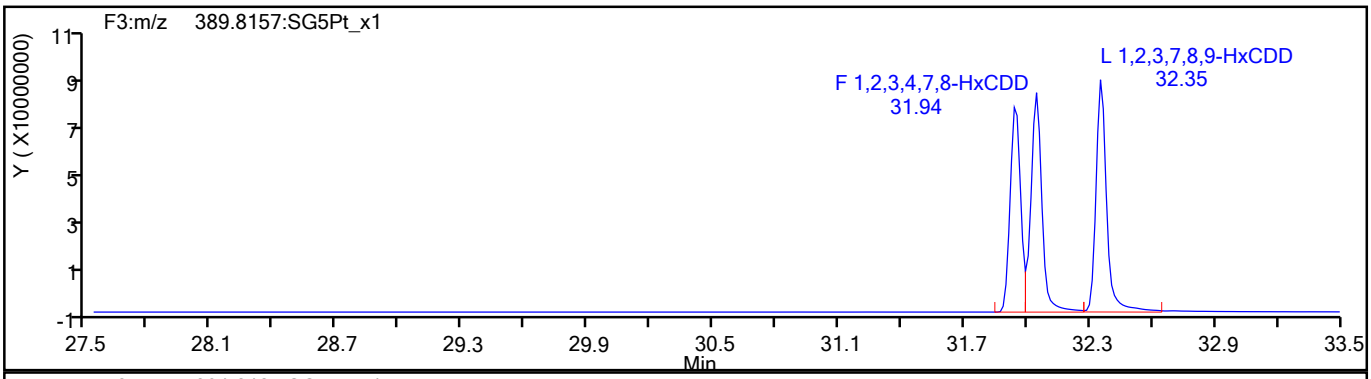

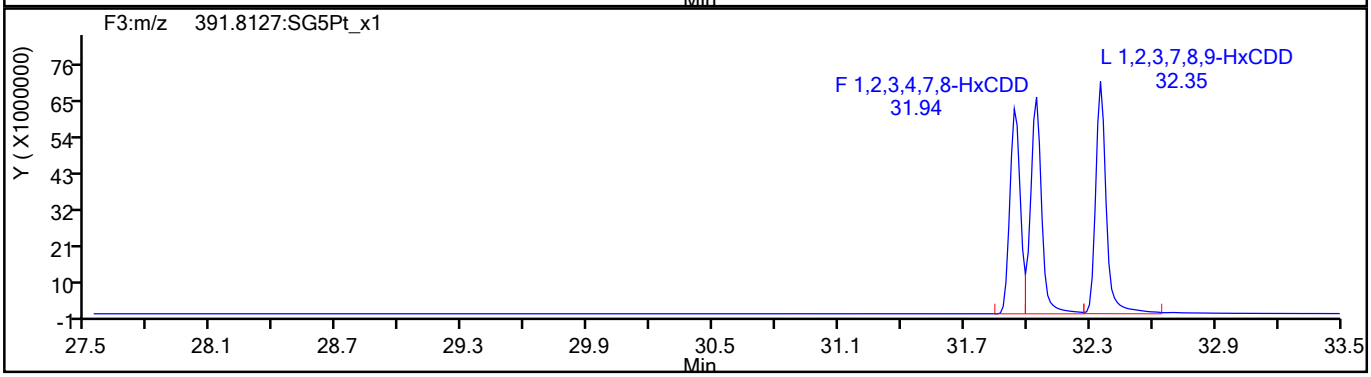

HxCDD Standards

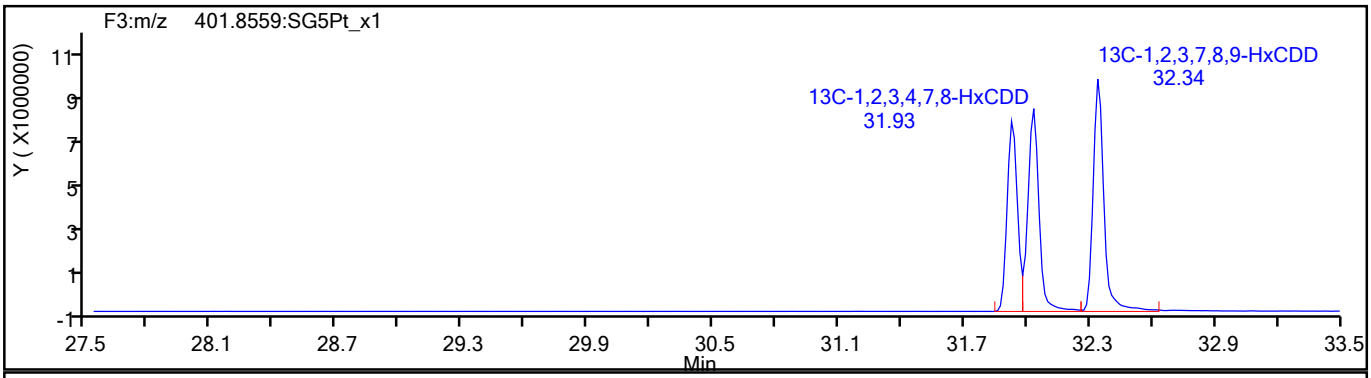

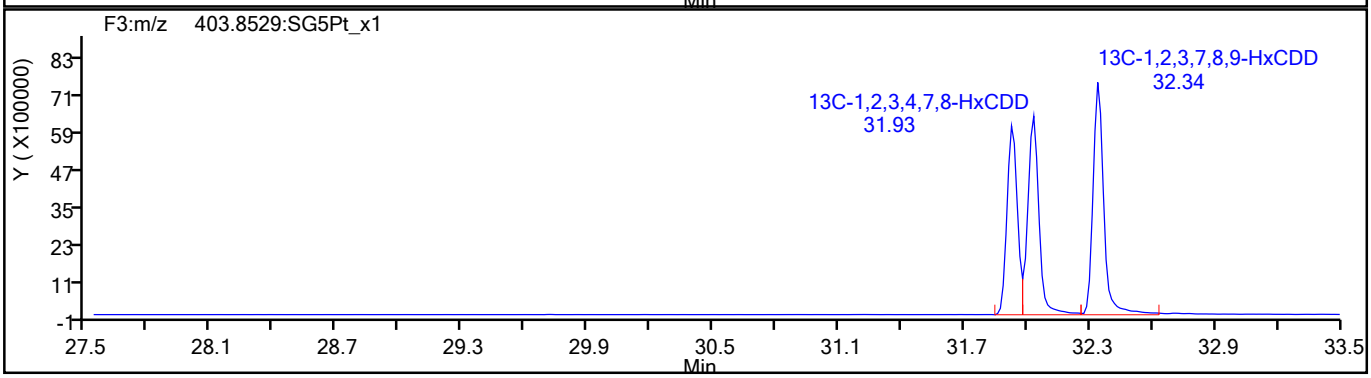

776177

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

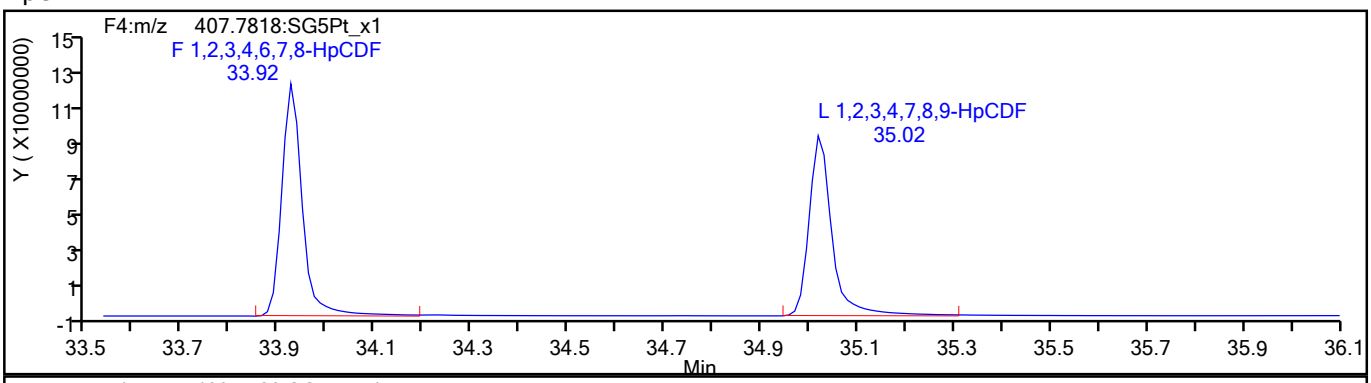

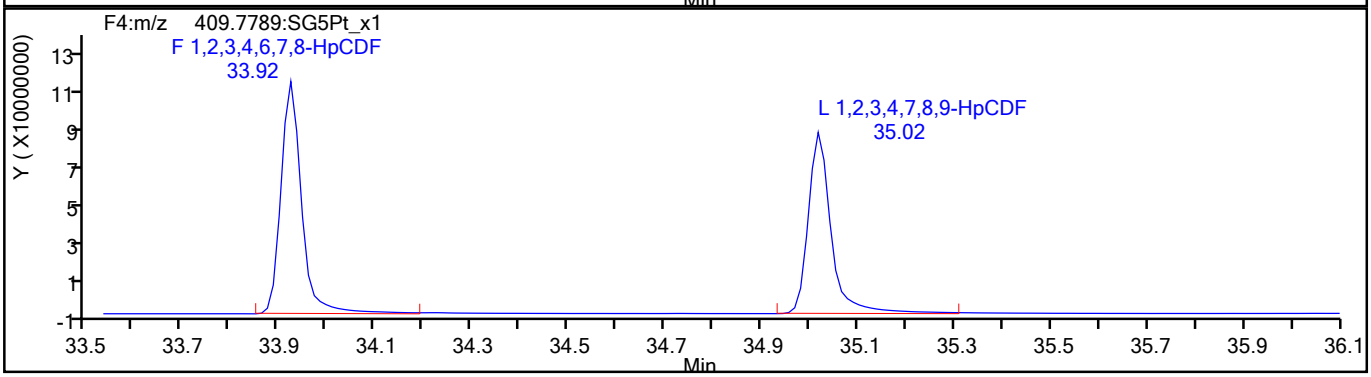

HpCDF Standards

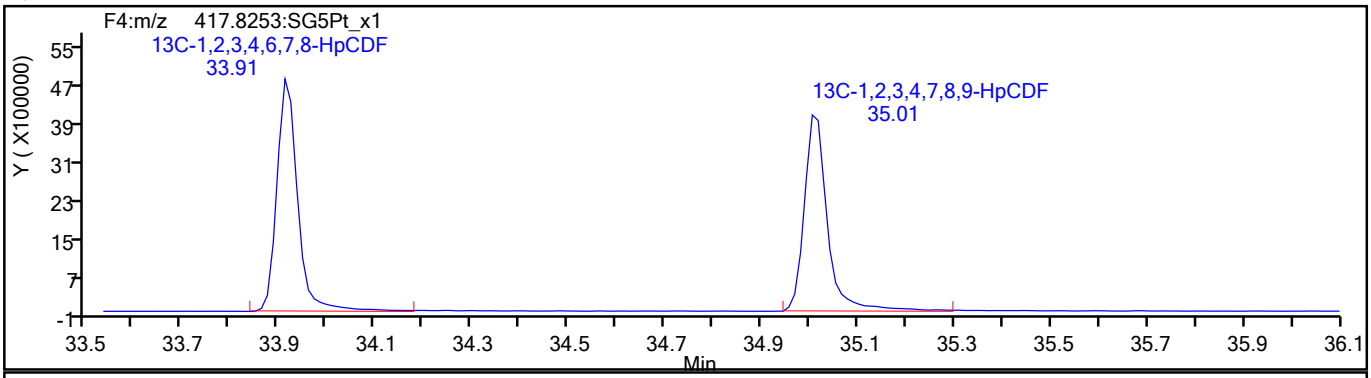

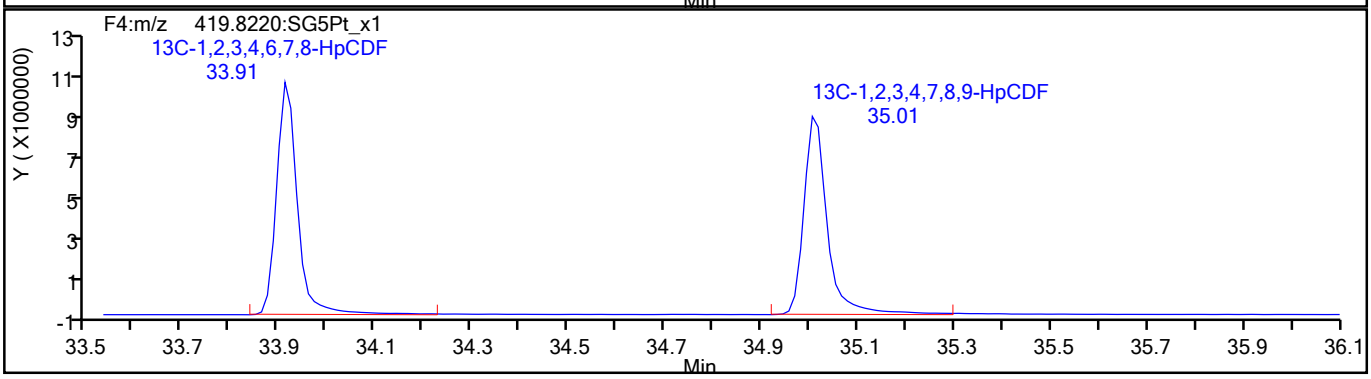

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

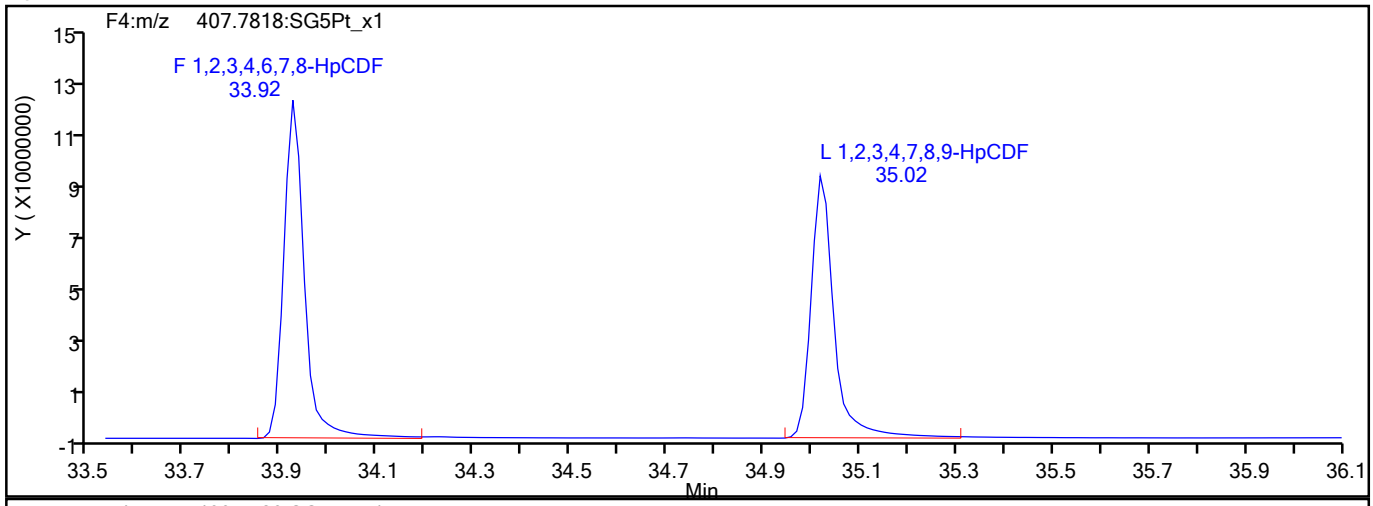

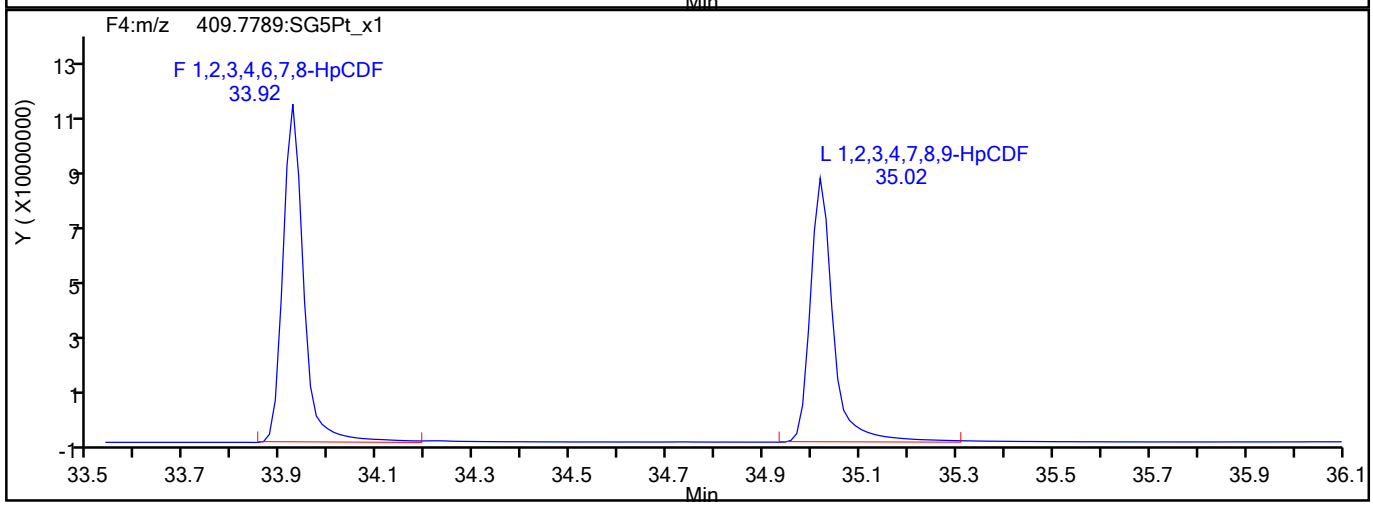

HpCDF Interference Mass

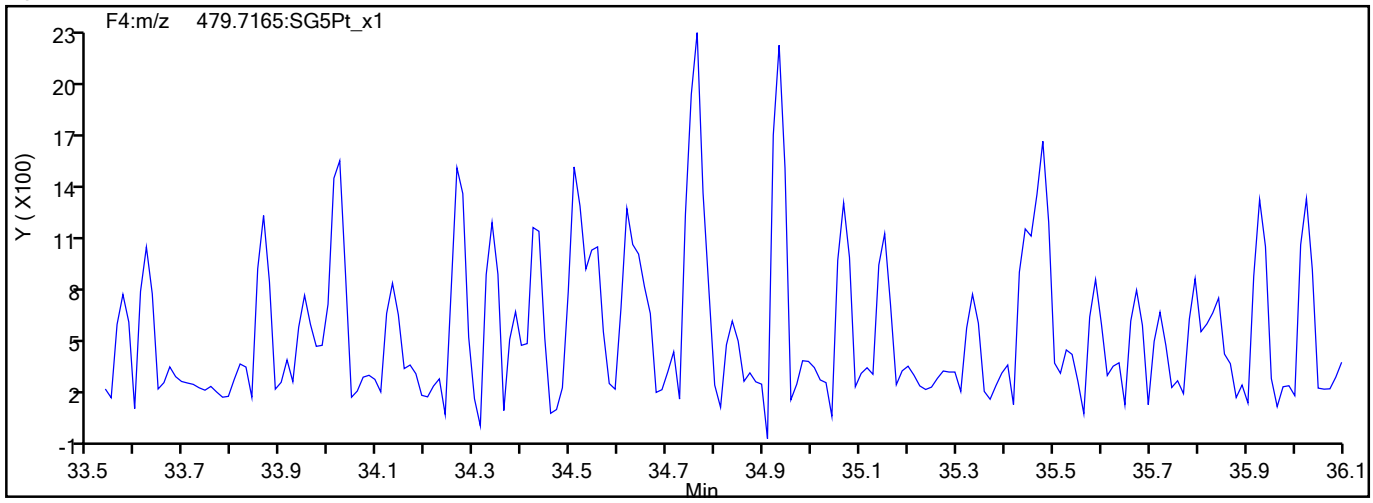

776179

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

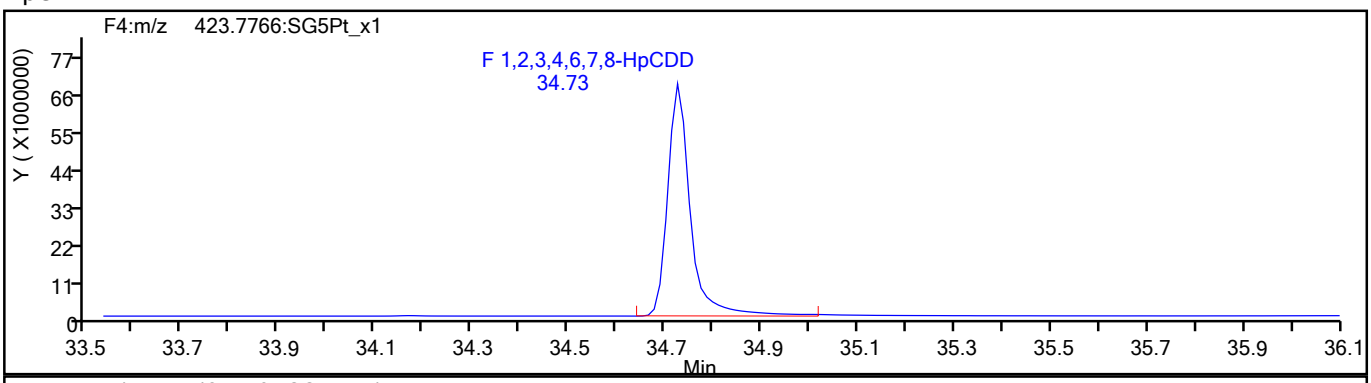

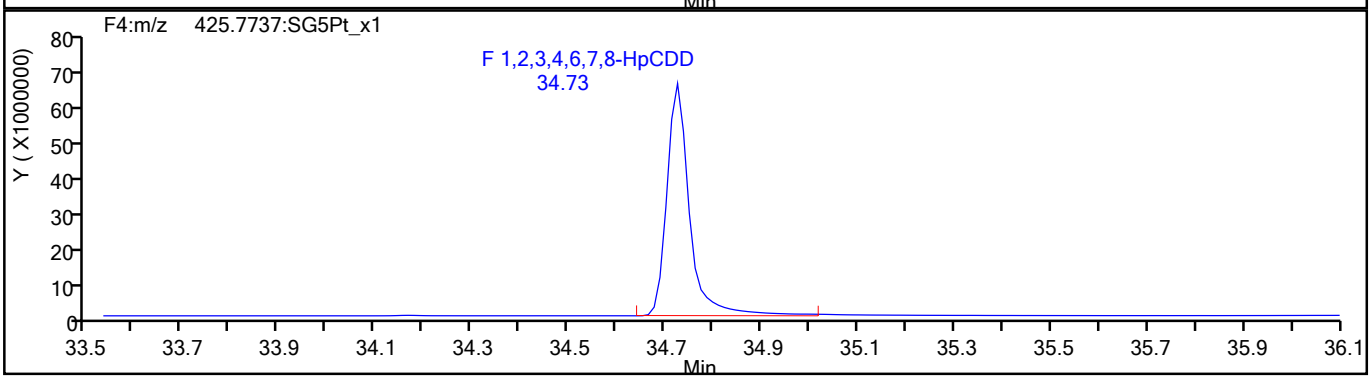

HpCDD Standards

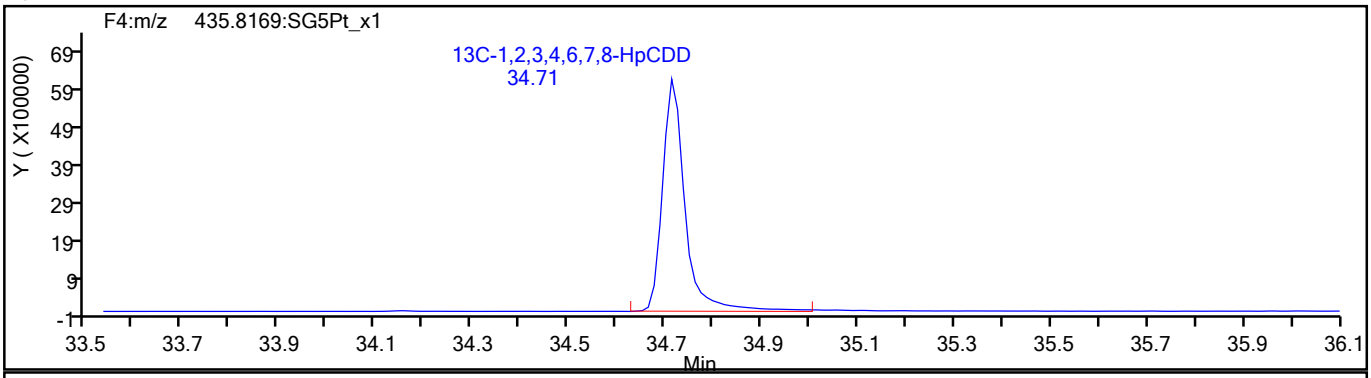

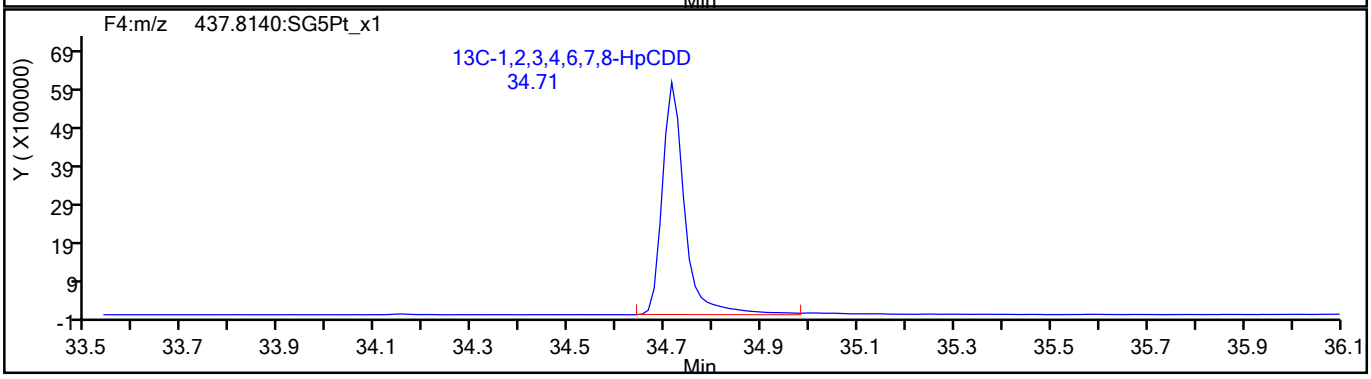

776180

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

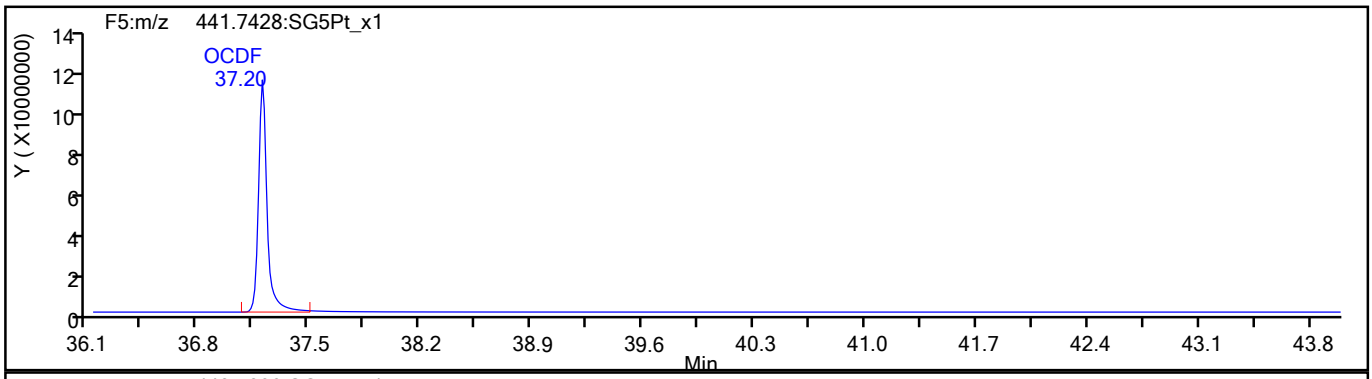

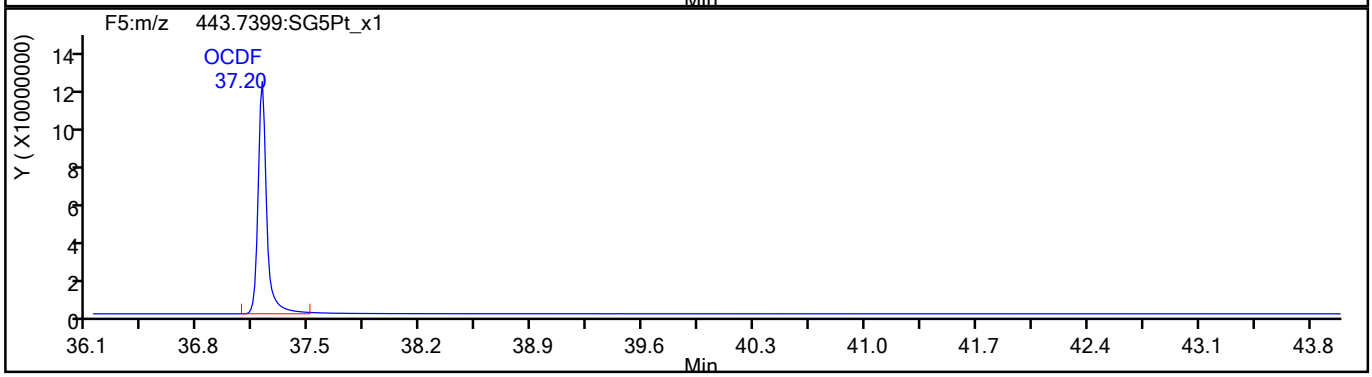

OCDF Standards

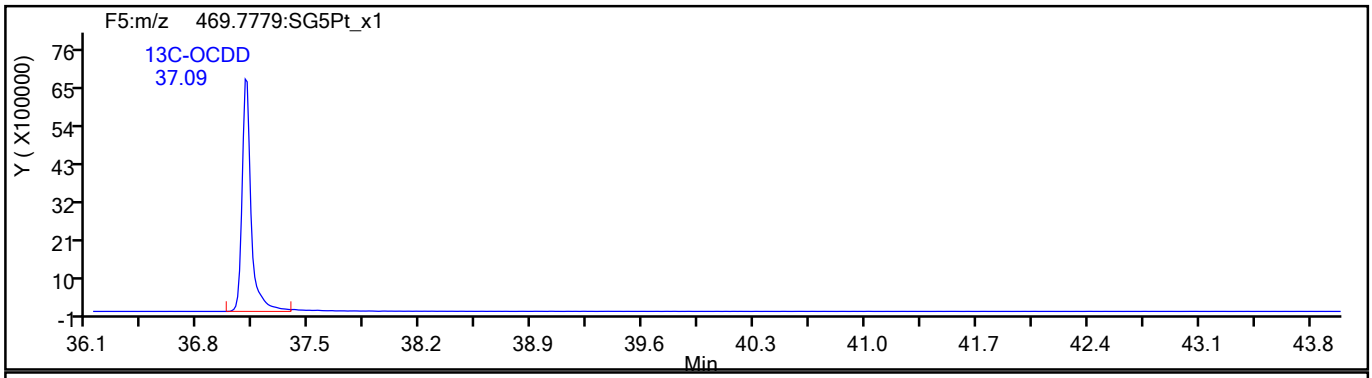

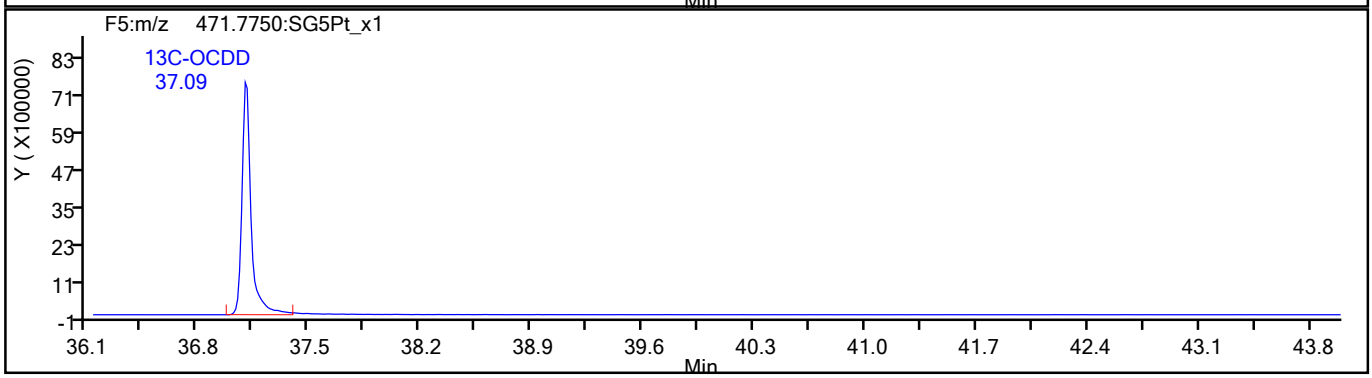

776181

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

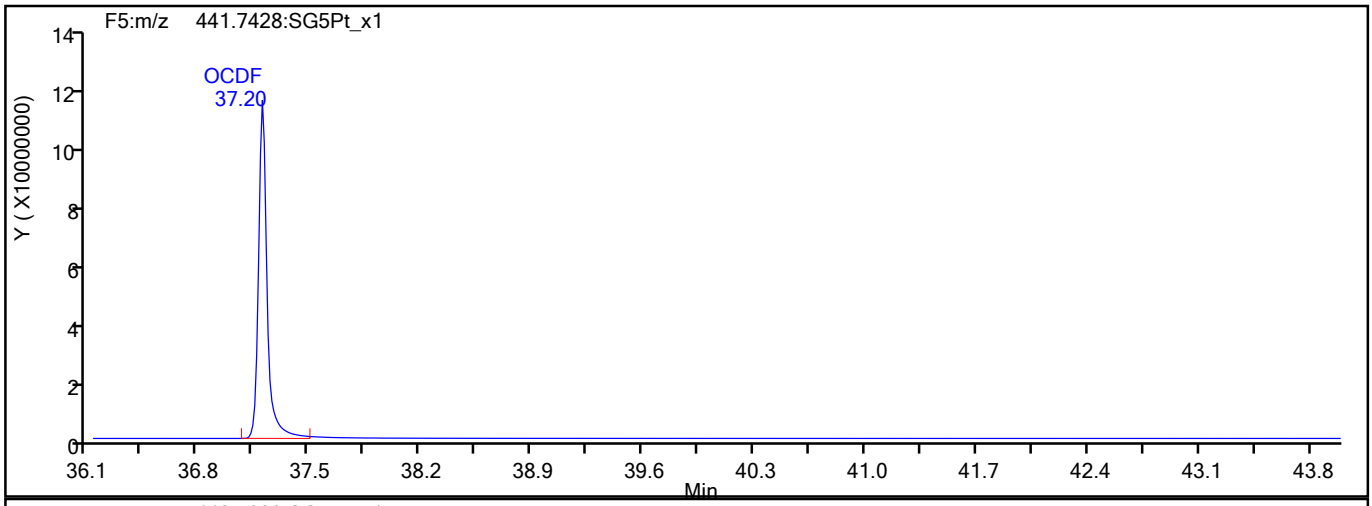

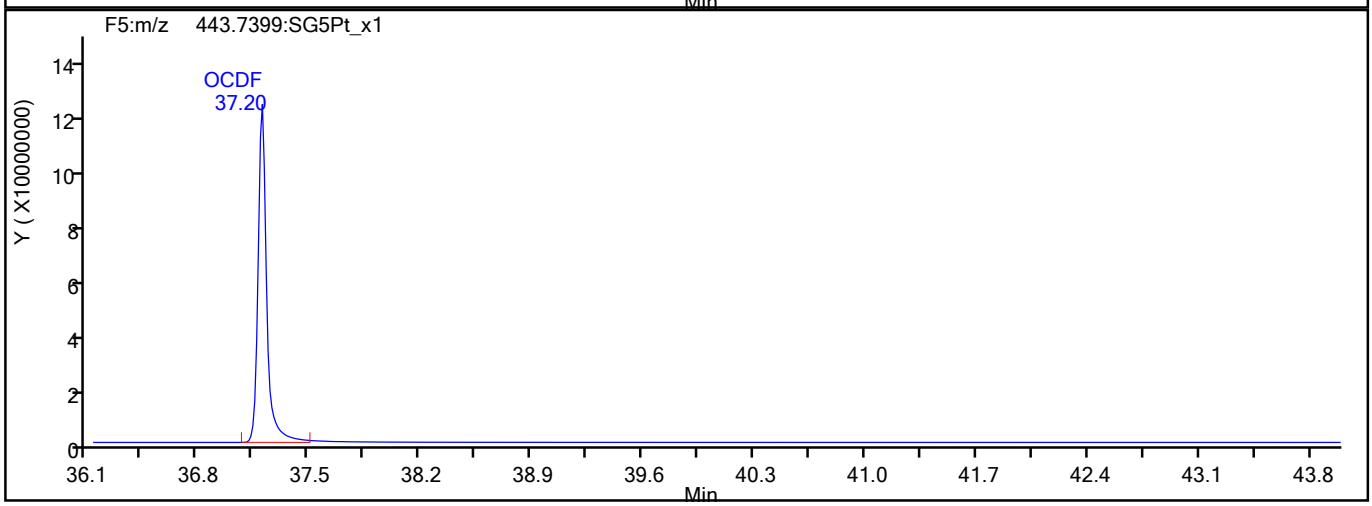

OCDF Interference Mass

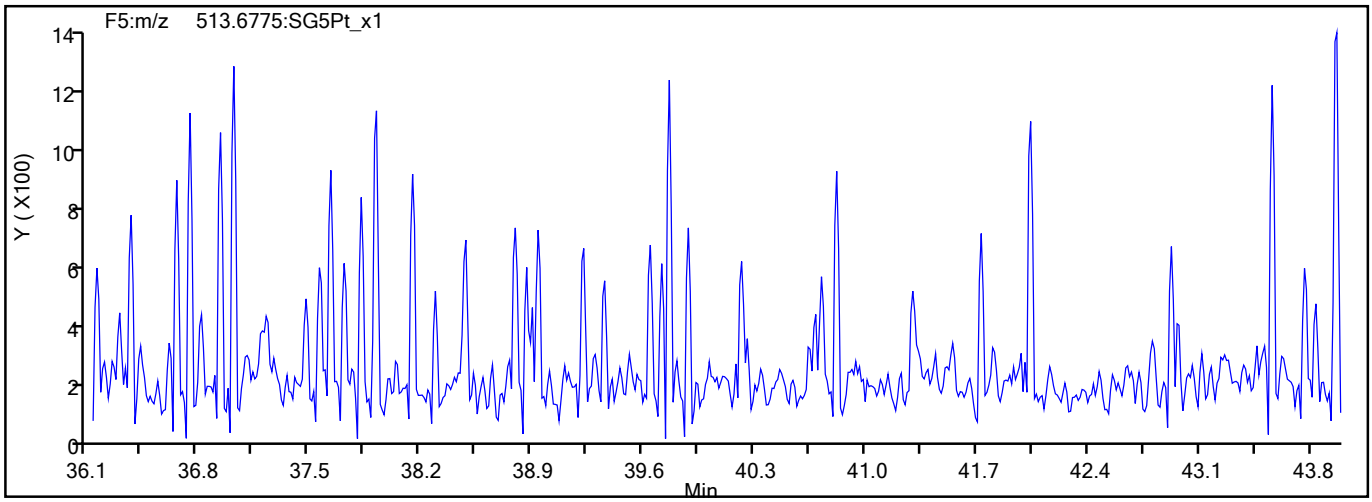

776182

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

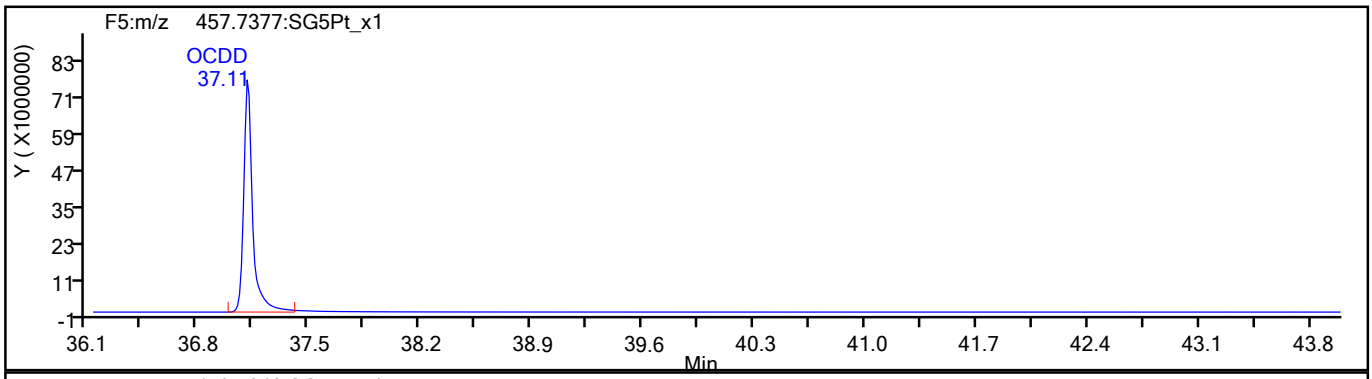

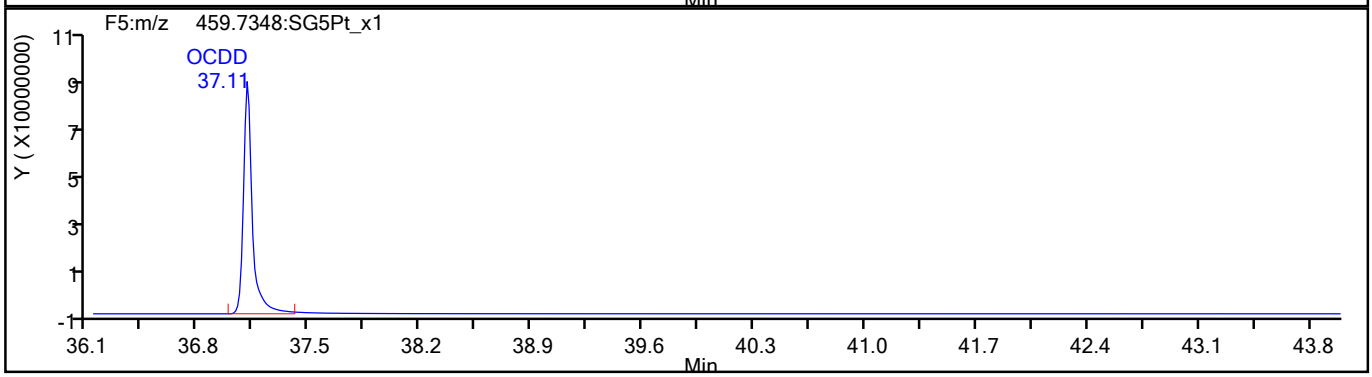

OCDD Standards

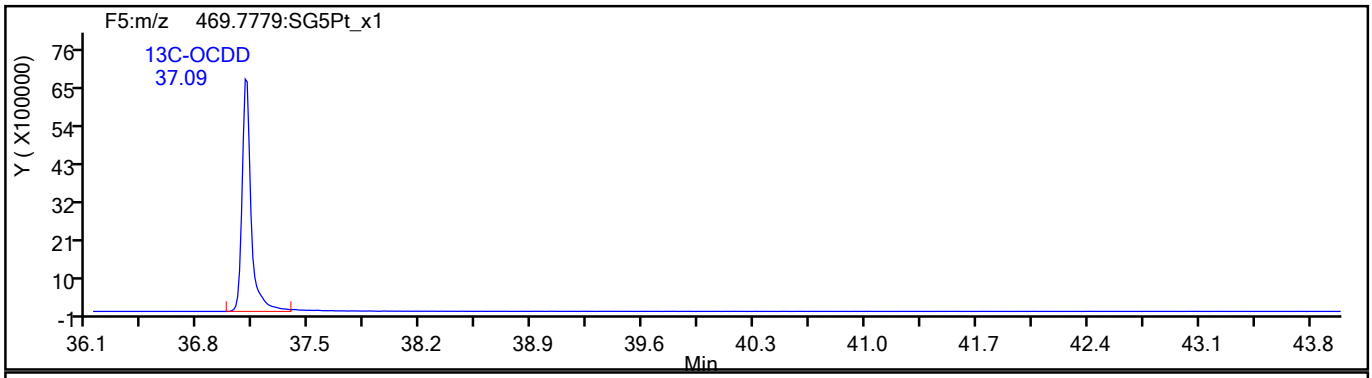

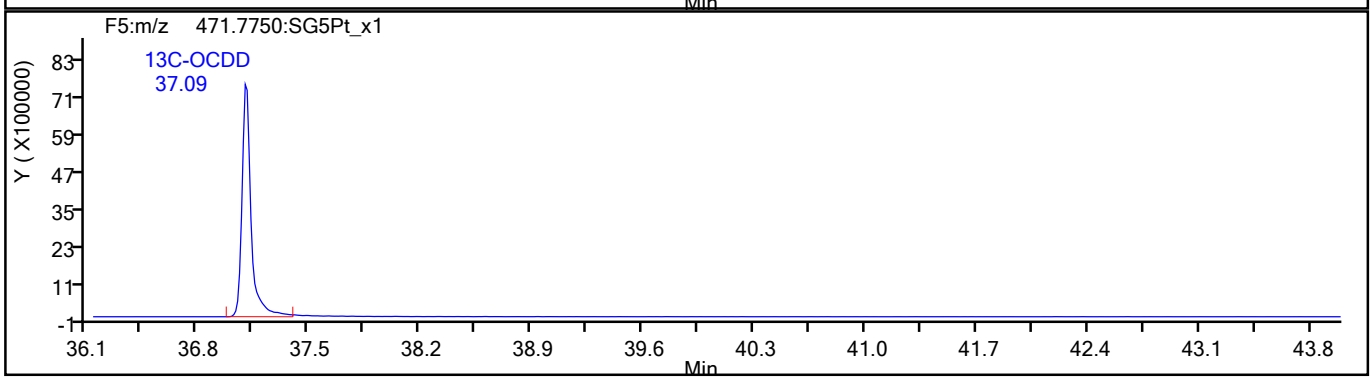

776183

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

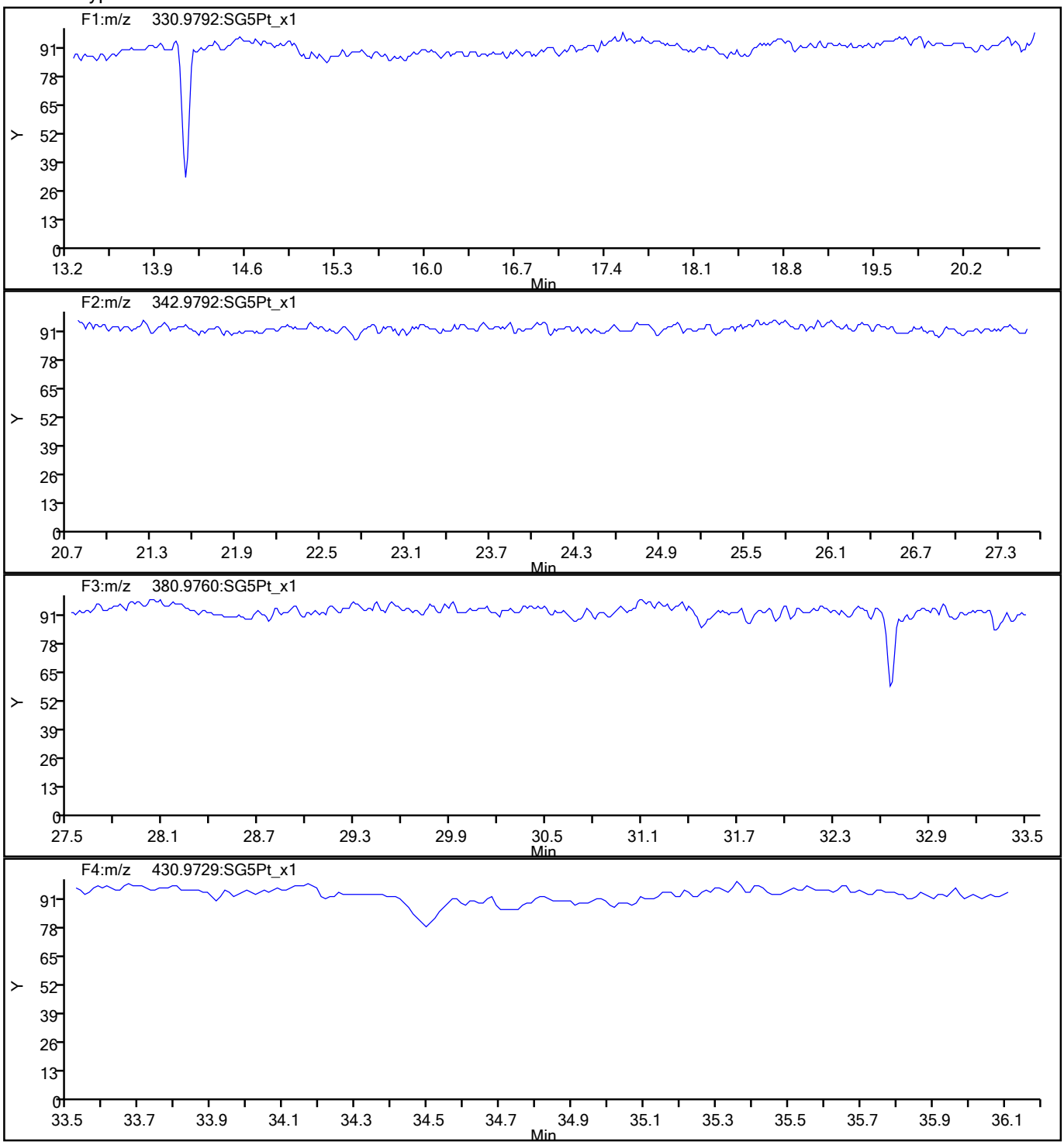

776184

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

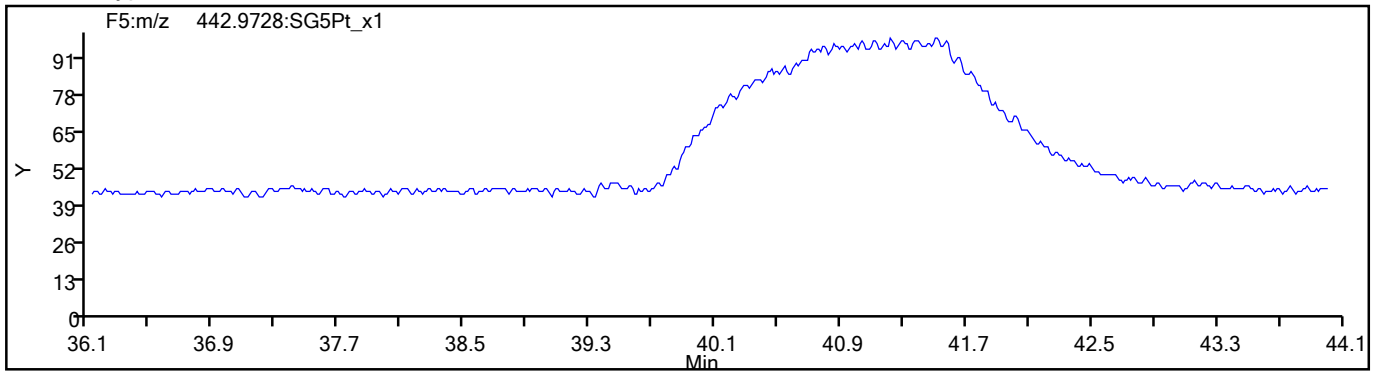

776185

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.094

Error Coefficients

Standard Error:	226000000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.779775	100.0	41876556.0	1.11191	Y
2	IC 320-510264/4	10.0	9.539499	100.0	38689128.0	0.95395	Y
3	IC 320-510264/5	50.0	55.880768	100.0	40333717.0	1.117615	Y
4	IC 320-510264/6	200.0	233.50404	100.0	40442950.0	1.16752	Y
5	IC 320-510264/7	1000.0	1120.518221	100.0	39395832.0	1.120518	Y

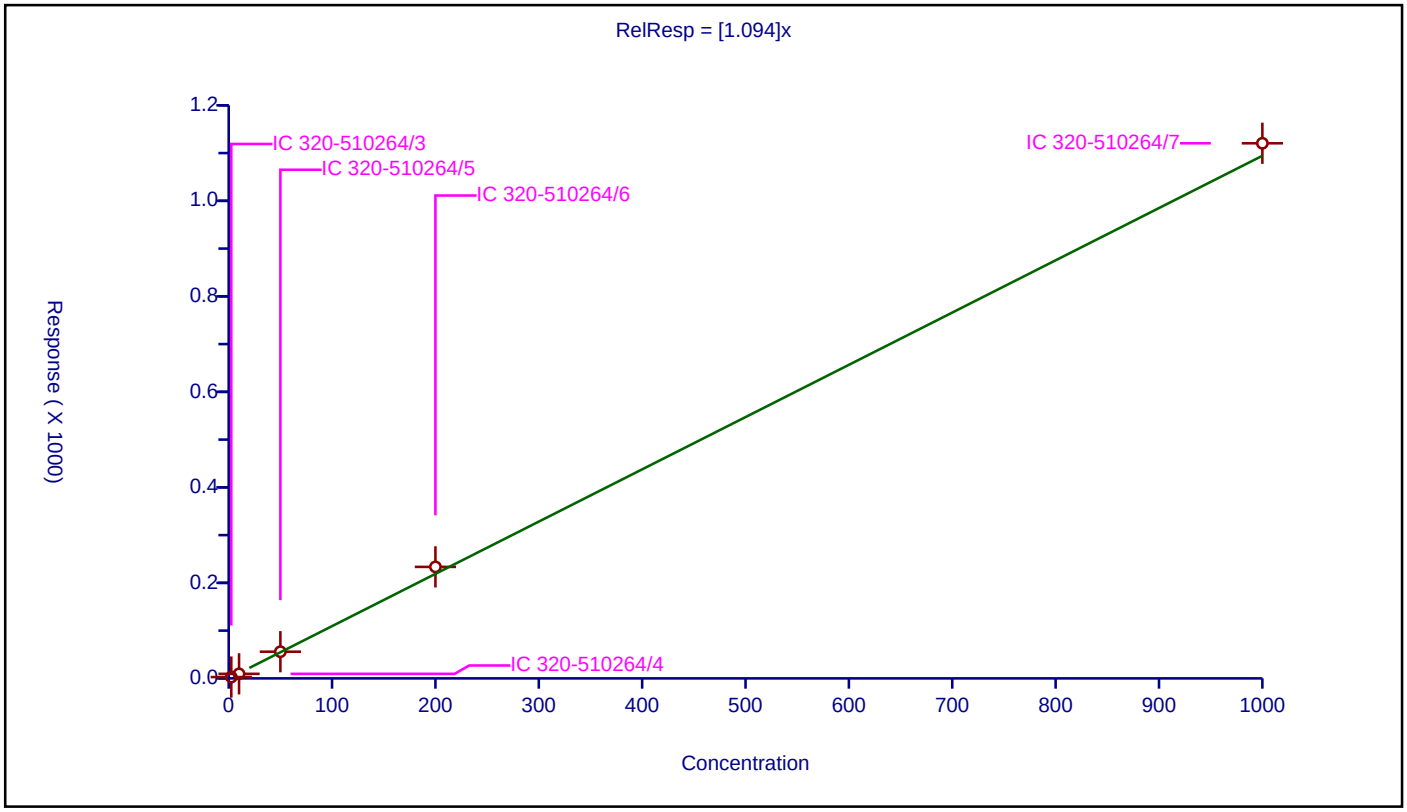

776186

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.441

Error Coefficients

Standard Error:	349000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.618521	100.0	51308225.0	1.447408	Y
2	IC 320-510264/4	10.0	12.412663	100.0	46691158.0	1.241266	Y
3	IC 320-510264/5	50.0	74.932304	100.0	47697671.0	1.498646	Y
4	IC 320-510264/6	200.0	309.702692	100.0	47752972.0	1.548513	Y
5	IC 320-510264/7	1000.0	1470.622057	100.0	46328151.0	1.470622	Y

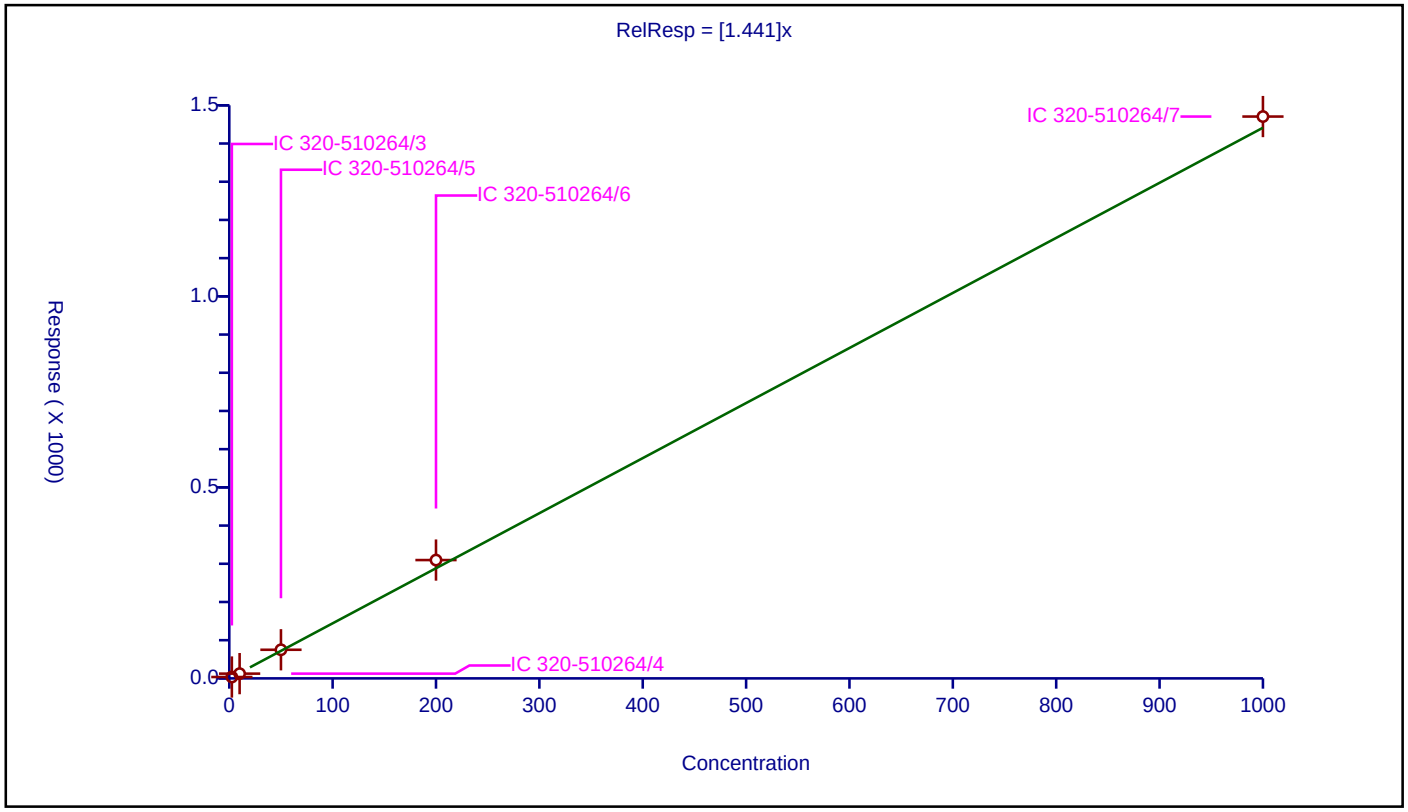

776187

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	302000000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.284087	100.0	44628352.0	1.313635	Y
2	IC 320-510264/4	10.0	11.269366	100.0	42362179.0	1.126937	Y
3	IC 320-510264/5	50.0	68.111875	100.0	43238622.0	1.362237	Y
4	IC 320-510264/6	200.0	290.409045	100.0	42687625.0	1.452045	Y
5	IC 320-510264/7	1000.0	1332.064187	100.0	44333848.0	1.332064	Y

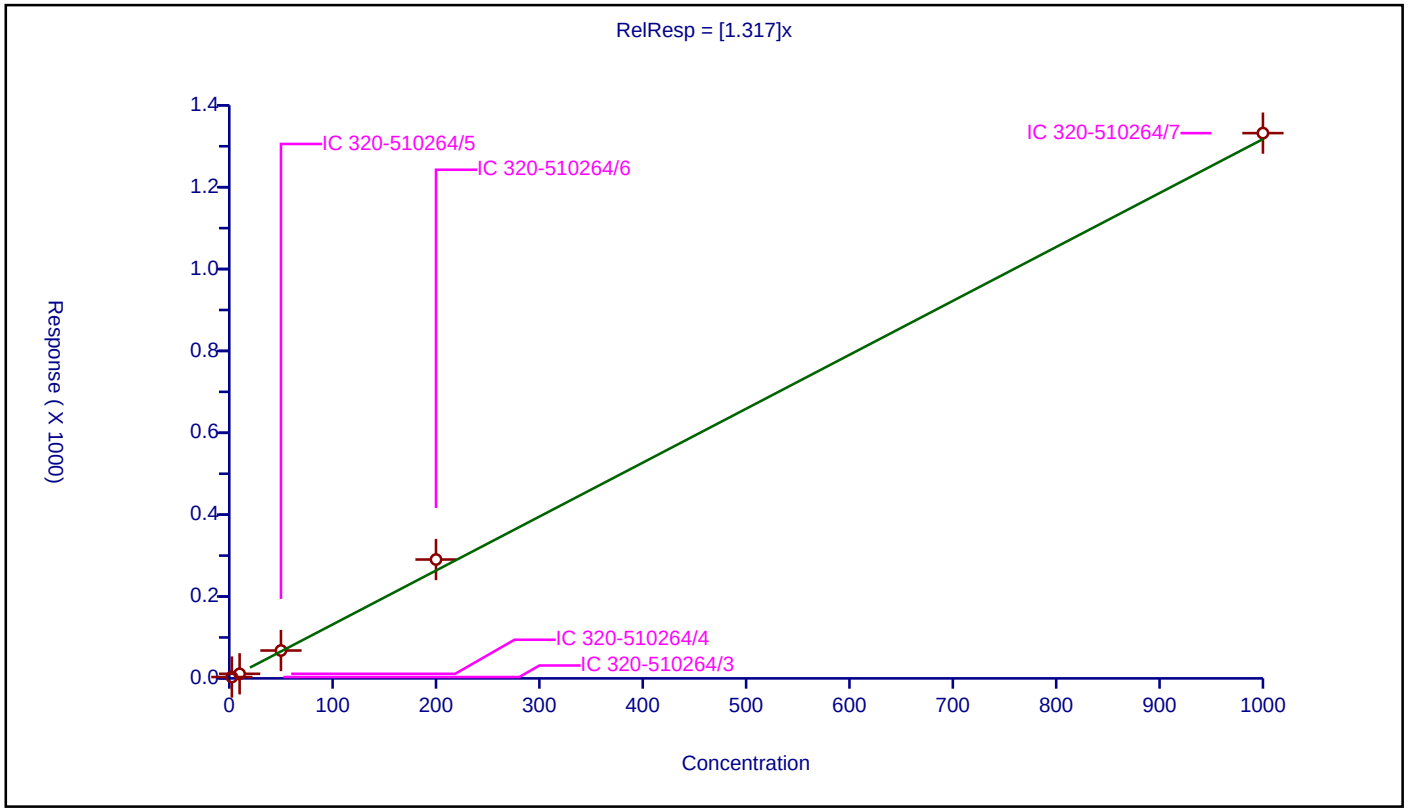

776188

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	248000000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.744793	100.0	47363504.0	1.097917	Y
2	IC 320-510264/4	10.0	8.90634	100.0	44877133.0	0.890634	Y
3	IC 320-510264/5	50.0	56.519553	100.0	44039927.0	1.130391	Y
4	IC 320-510264/6	200.0	233.423018	100.0	44144841.0	1.167115	Y
5	IC 320-510264/7	1000.0	1034.115245	100.0	46886171.0	1.034115	Y

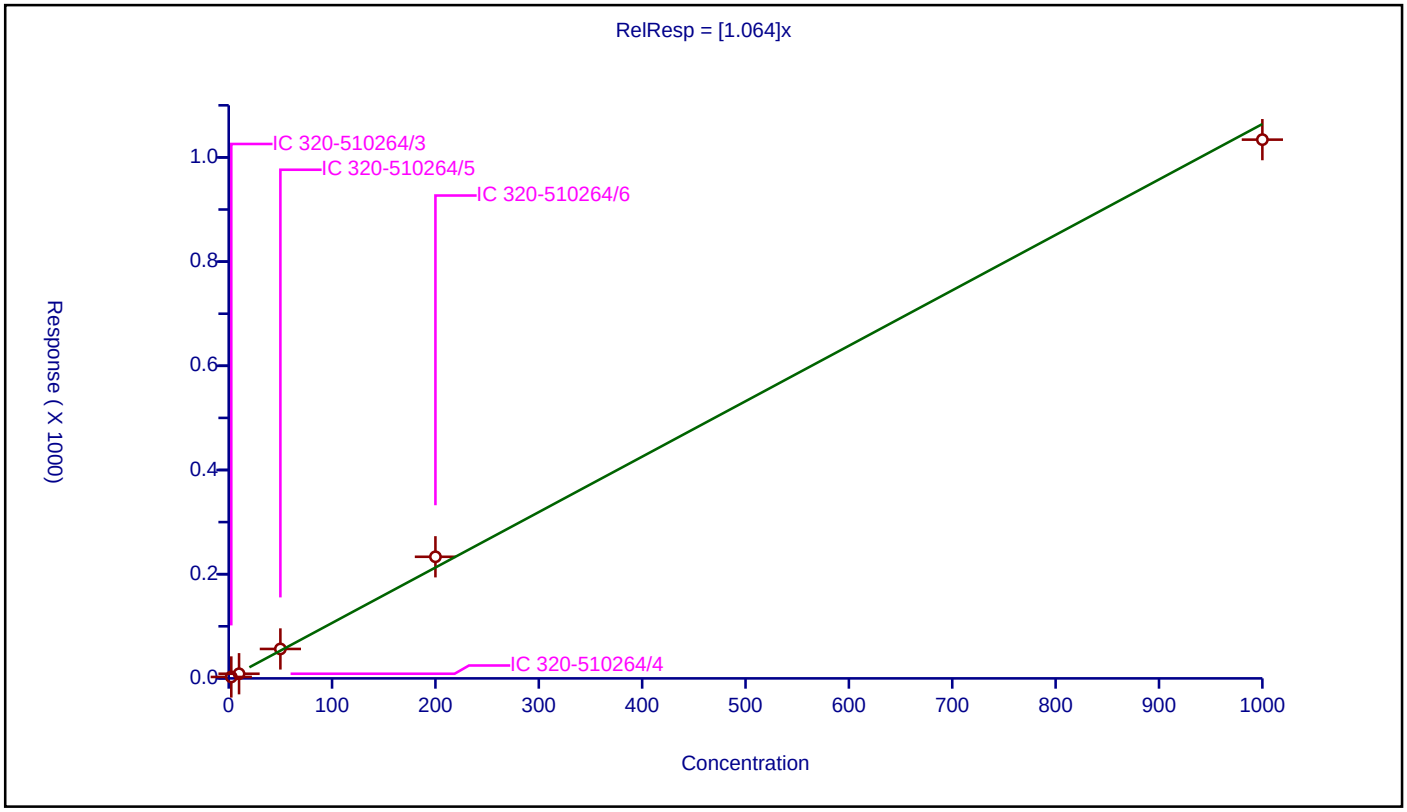

776189

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.085

Error Coefficients

Standard Error:	377000000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.805608	100.0	69484482.0	1.122243	Y
2	IC 320-510264/4	10.0	9.192224	100.0	65726932.0	0.919222	Y
3	IC 320-510264/5	50.0	55.122828	100.0	68075509.0	1.102457	Y
4	IC 320-510264/6	200.0	238.727102	100.0	64951889.0	1.193636	Y
5	IC 320-510264/7	1000.0	1088.07626	100.0	67741189.0	1.088076	Y

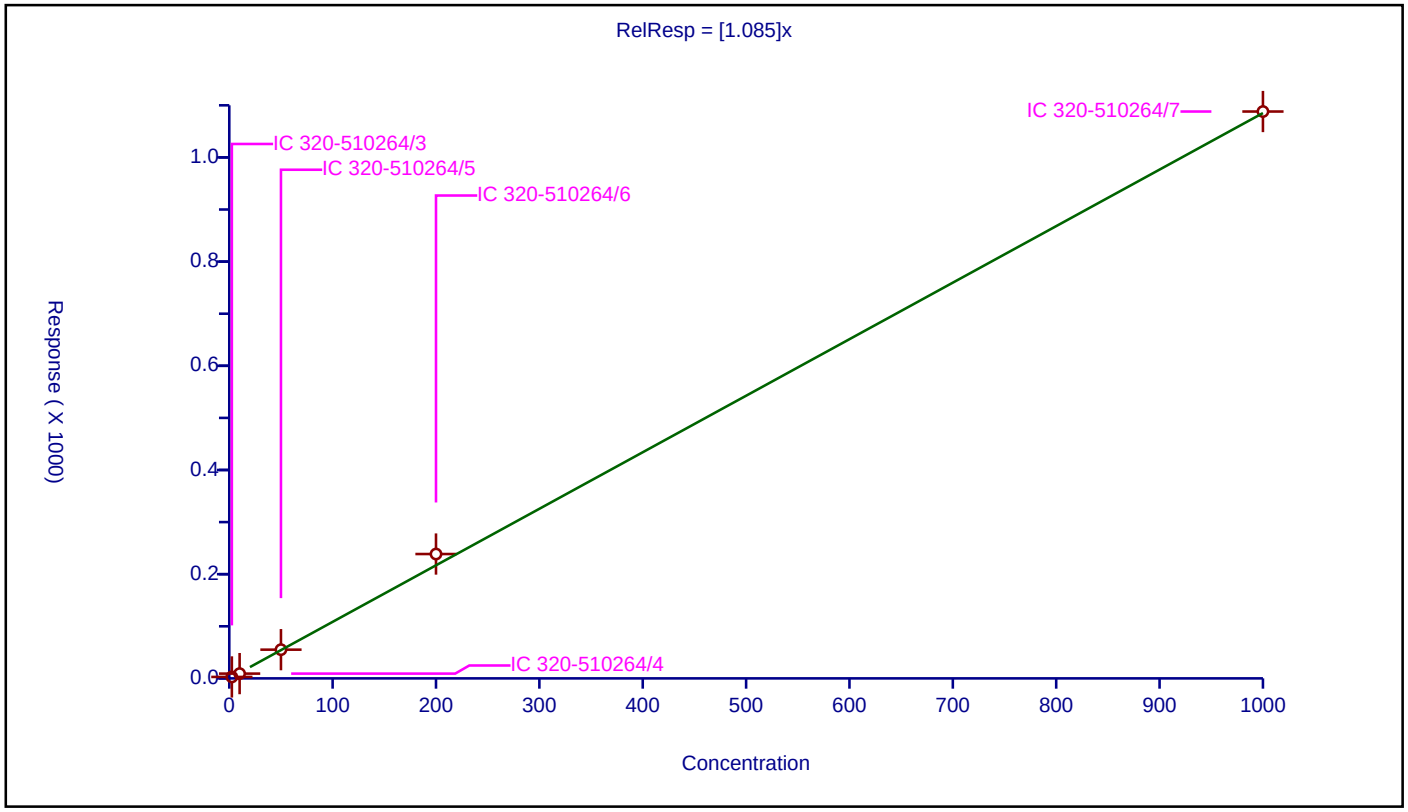

776190

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1

Error Coefficients

Standard Error:	278000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.57359	100.0	56759108.0	1.029436	Y
2	IC 320-510264/4	10.0	8.528531	100.0	52974056.0	0.852853	Y
3	IC 320-510264/5	50.0	50.563423	100.0	55284532.0	1.011268	Y
4	IC 320-510264/6	200.0	218.597288	100.0	54392394.0	1.092986	Y
5	IC 320-510264/7	1000.0	1013.848486	100.0	53564396.0	1.013848	Y

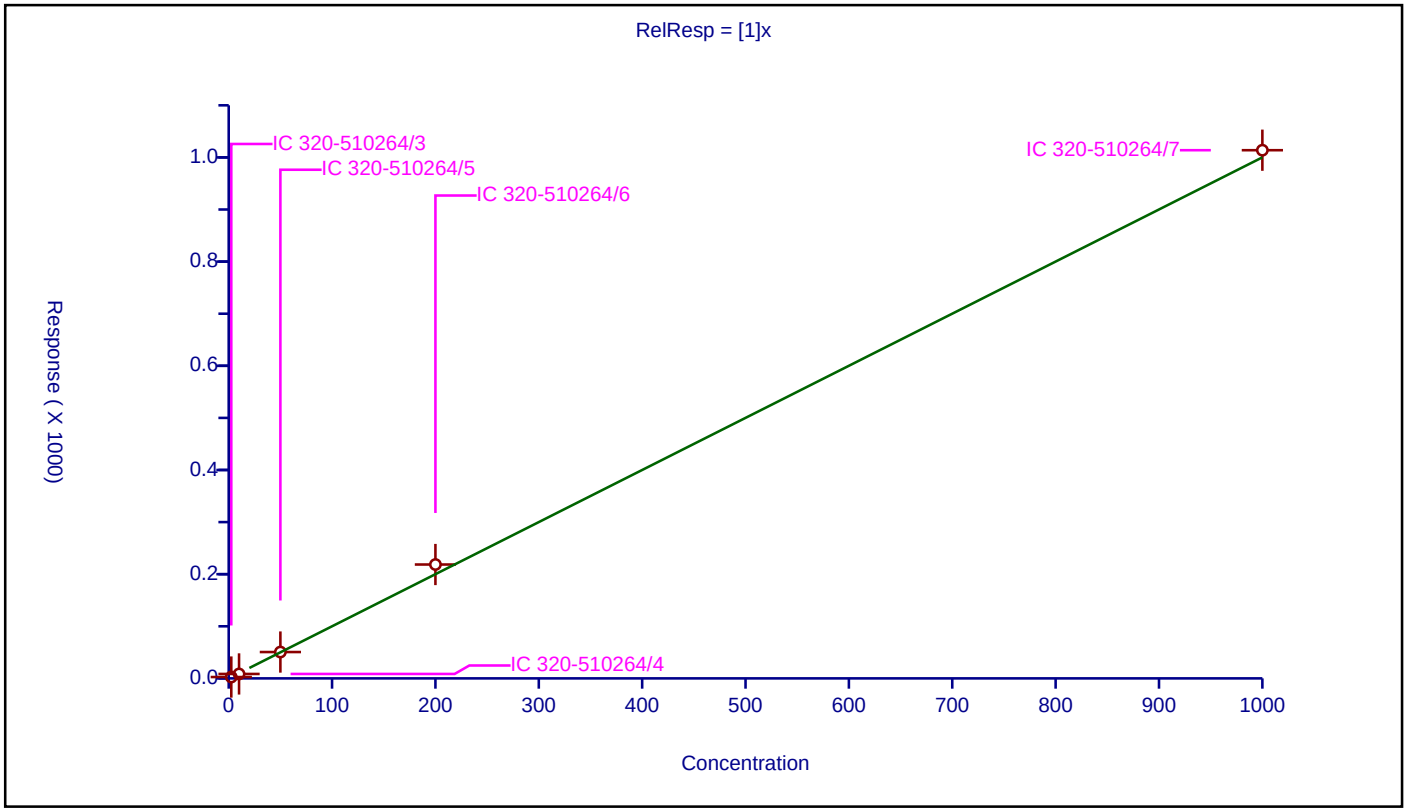

776191

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.126

Error Coefficients

Standard Error:	402000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.871987	100.0	73262388.0	1.148795	Y
2	IC 320-510264/4	10.0	9.63718	100.0	68089005.0	0.963718	Y
3	IC 320-510264/5	50.0	57.730945	100.0	70677463.0	1.154619	Y
4	IC 320-510264/6	200.0	239.311904	100.0	70459920.0	1.19656	Y
5	IC 320-510264/7	1000.0	1166.370477	100.0	67363664.0	1.16637	Y

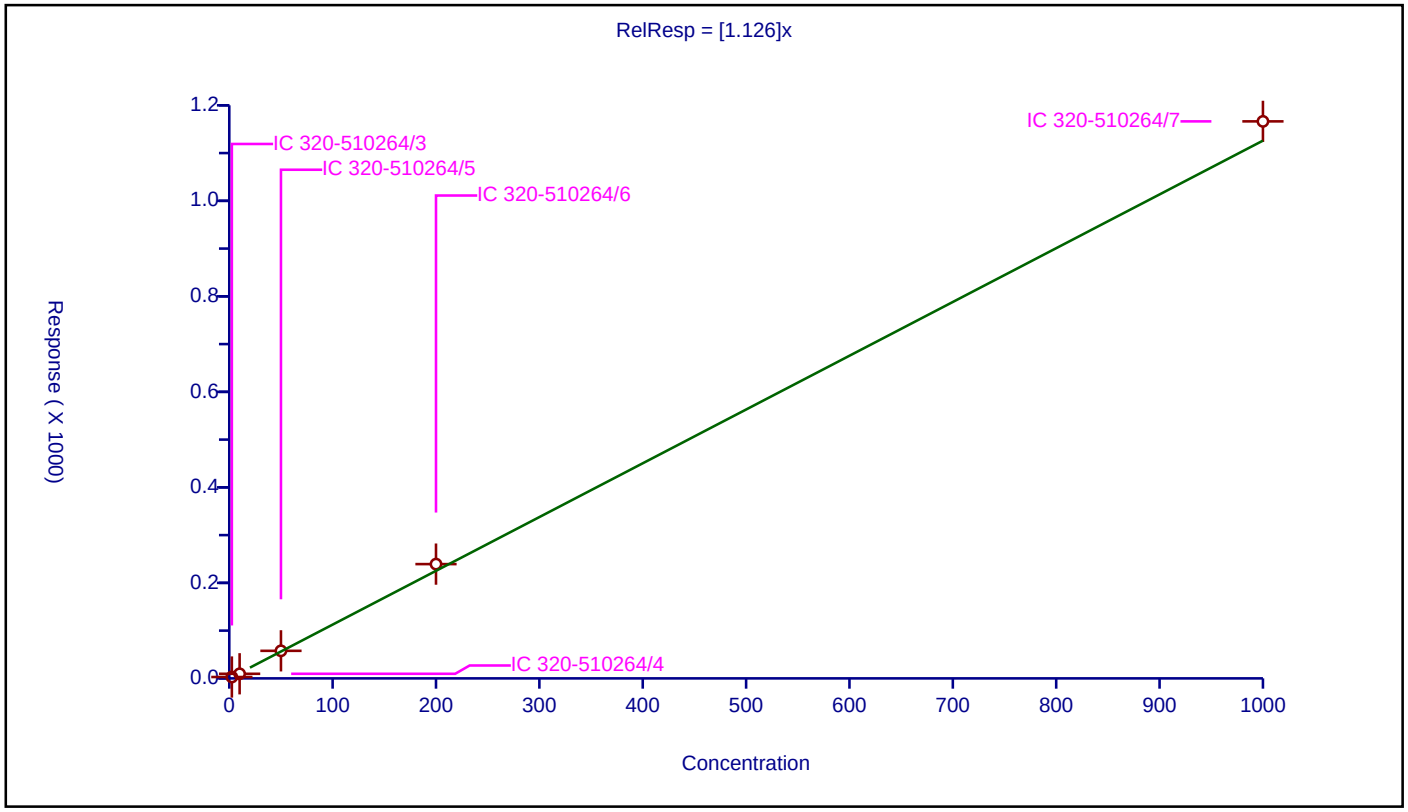

776192

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.248

Error Coefficients

Standard Error:	289000000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.174189	100.0	47363504.0	1.269675	Y
2	IC 320-510264/4	10.0	10.27817	100.0	44877133.0	1.027817	Y
3	IC 320-510264/5	50.0	67.654413	100.0	44039927.0	1.353088	Y
4	IC 320-510264/6	200.0	277.257762	100.0	44144841.0	1.386289	Y
5	IC 320-510264/7	1000.0	1202.675657	100.0	46886171.0	1.202676	Y

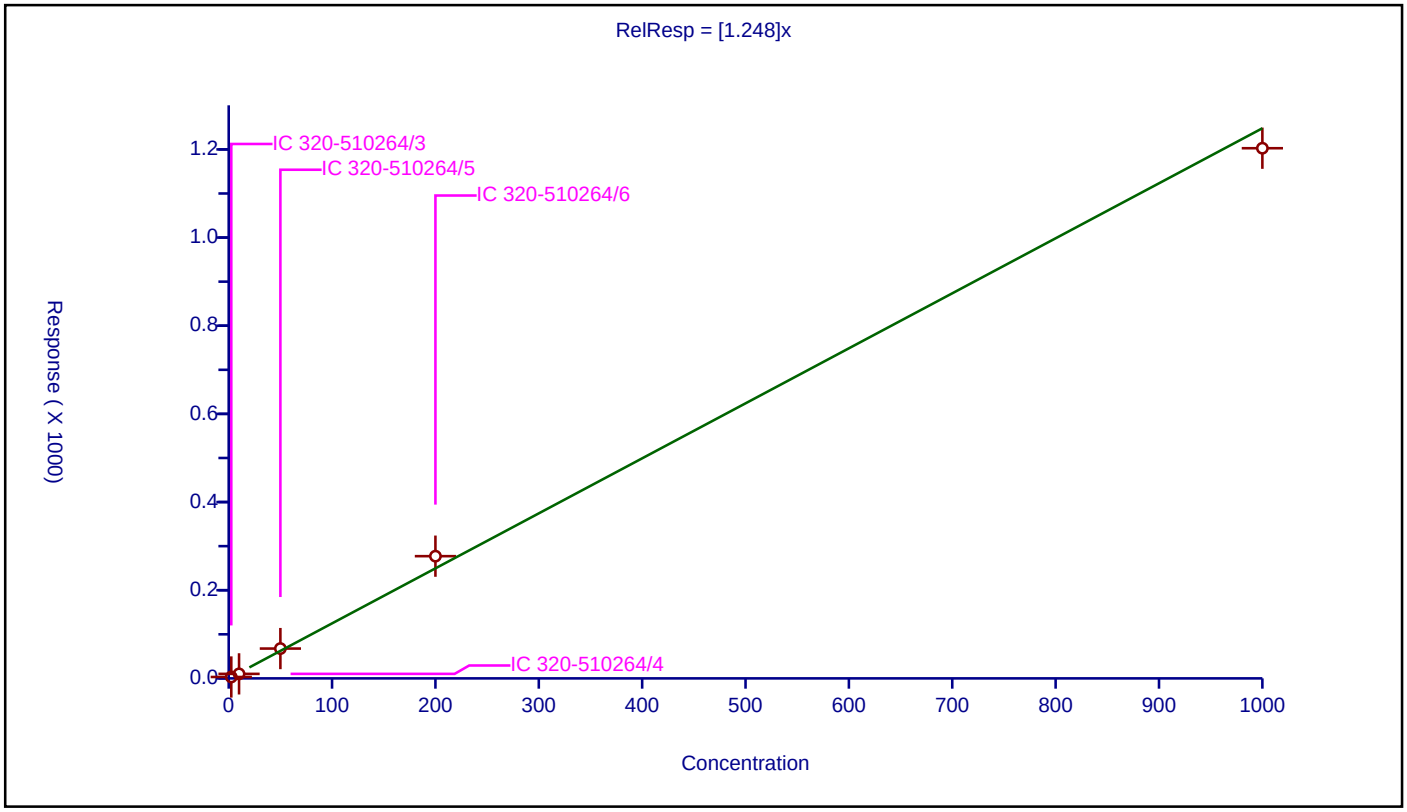

776193

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.166

Error Coefficients

Standard Error:	362000000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.933201	100.0	62528954.0	1.17328	Y
2	IC 320-510264/4	10.0	10.136374	100.0	58828058.0	1.013637	Y
3	IC 320-510264/5	50.0	59.48769	100.0	60389284.0	1.189754	Y
4	IC 320-510264/6	200.0	249.571201	100.0	59636084.0	1.247856	Y
5	IC 320-510264/7	1000.0	1207.229164	100.0	58669892.0	1.207229	Y

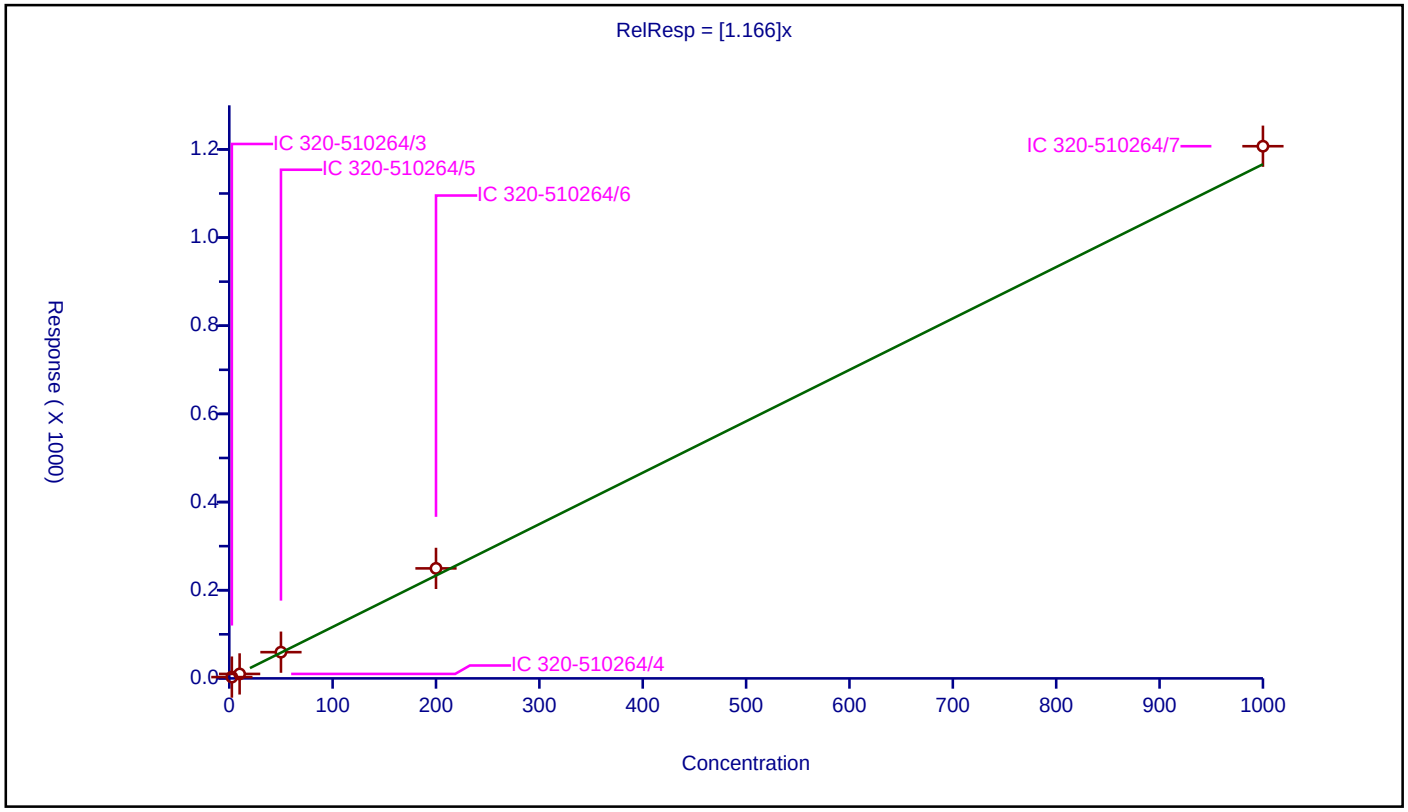

776194

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.048

Error Coefficients

Standard Error:	256000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.644408	100.0	49643581.0	1.057763	Y
2	IC 320-510264/4	10.0	9.031283	100.0	46721712.0	0.903128	Y
3	IC 320-510264/5	50.0	53.401309	100.0	47124414.0	1.068026	Y
4	IC 320-510264/6	200.0	226.195317	100.0	46524396.0	1.130977	Y
5	IC 320-510264/7	1000.0	1082.258061	100.0	46251010.0	1.082258	Y

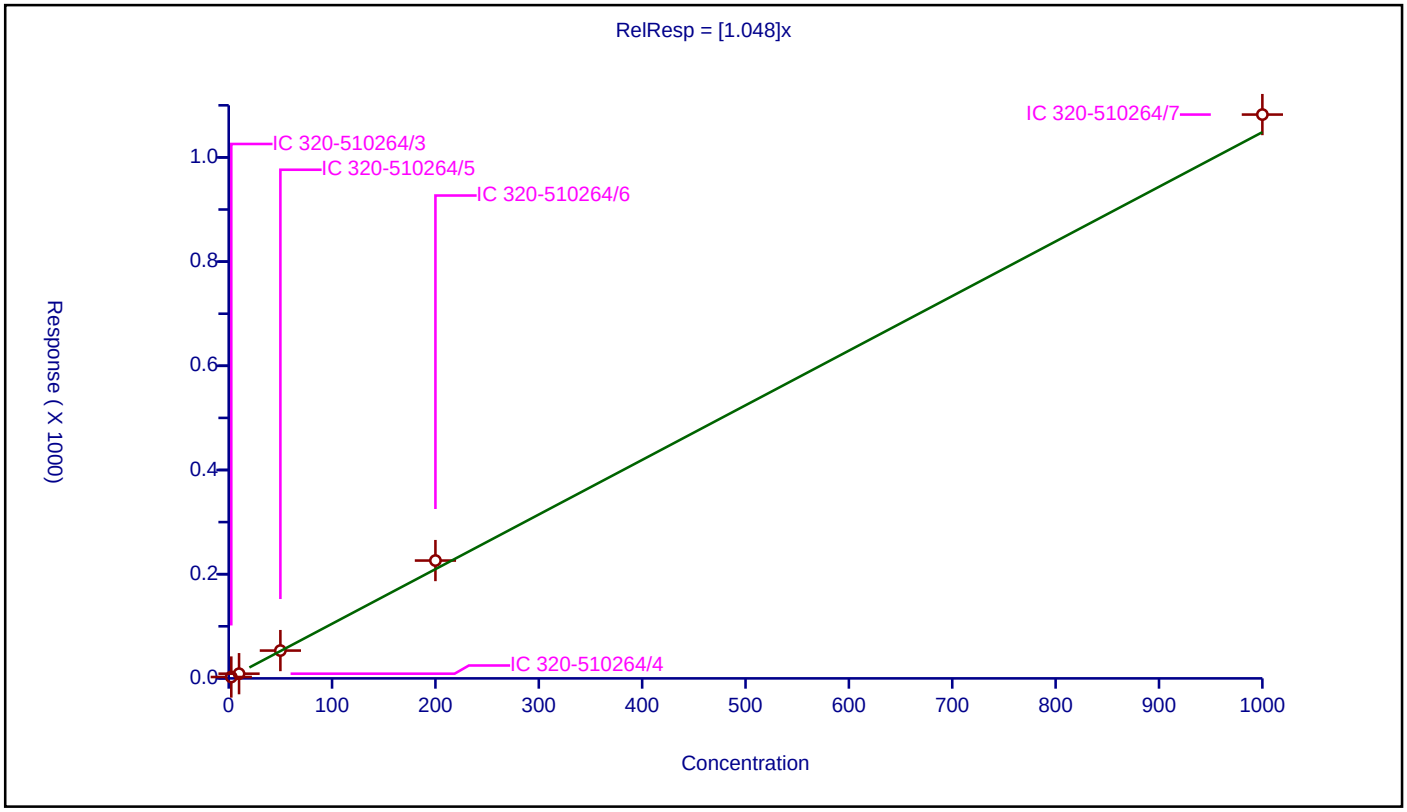

776195

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	408000000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.684664	100.0	78674290.0	1.073865	Y
2	IC 320-510264/4	10.0	9.128293	100.0	72525655.0	0.912829	Y
3	IC 320-510264/5	50.0	54.457439	100.0	76368219.0	1.089149	Y
4	IC 320-510264/6	200.0	227.4085	100.0	75205597.0	1.137042	Y
5	IC 320-510264/7	1000.0	1092.787556	100.0	72829681.0	1.092788	Y

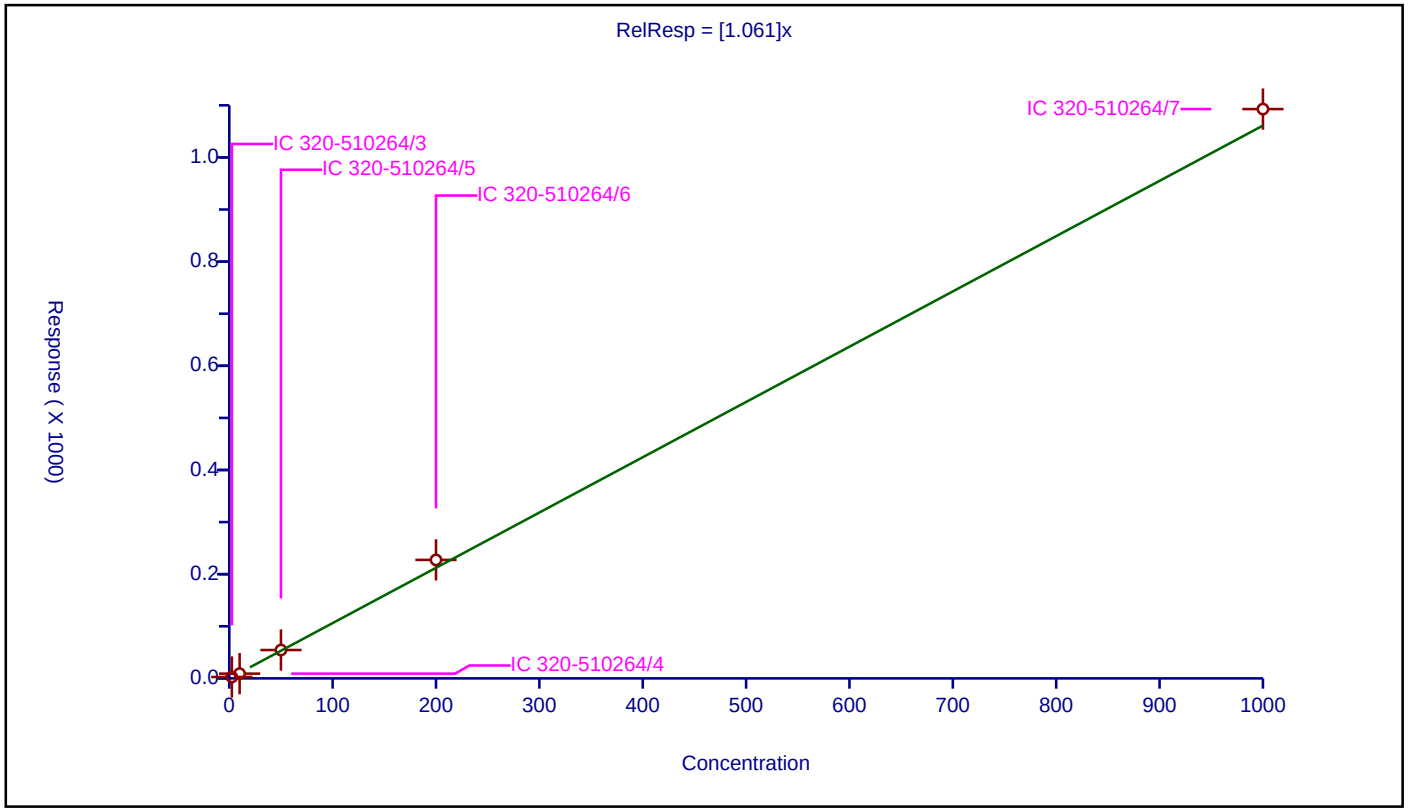

776196

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	391000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.05566	100.0	68885161.0	1.222264	Y
2	IC 320-510264/4	10.0	9.86292	100.0	64406928.0	0.986292	Y
3	IC 320-510264/5	50.0	59.290251	100.0	67028498.0	1.185805	Y
4	IC 320-510264/6	200.0	248.302486	100.0	66145684.0	1.241512	Y
5	IC 320-510264/7	1000.0	1201.822353	100.0	63471184.0	1.201822	Y

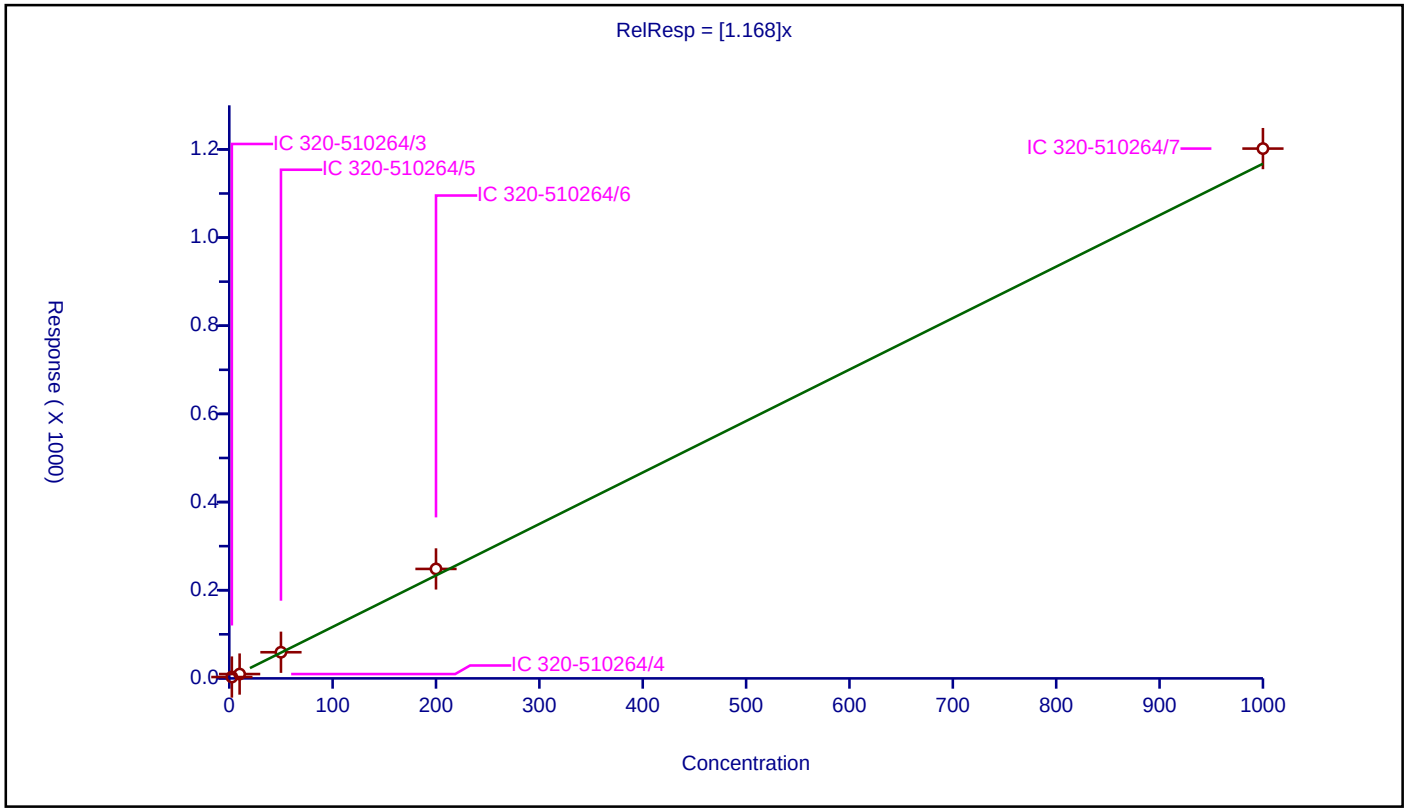

776197

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.018

Error Coefficients

Standard Error:	401000000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.601965	100.0	80591659.0	1.040786	Y
2	IC 320-510264/4	10.0	8.609629	100.0	74944110.0	0.860963	Y
3	IC 320-510264/5	50.0	52.328396	100.0	78214582.0	1.046568	Y
4	IC 320-510264/6	200.0	221.640486	100.0	75259591.0	1.108202	Y
5	IC 320-510264/7	1000.0	1035.570916	100.0	75649463.0	1.035571	Y

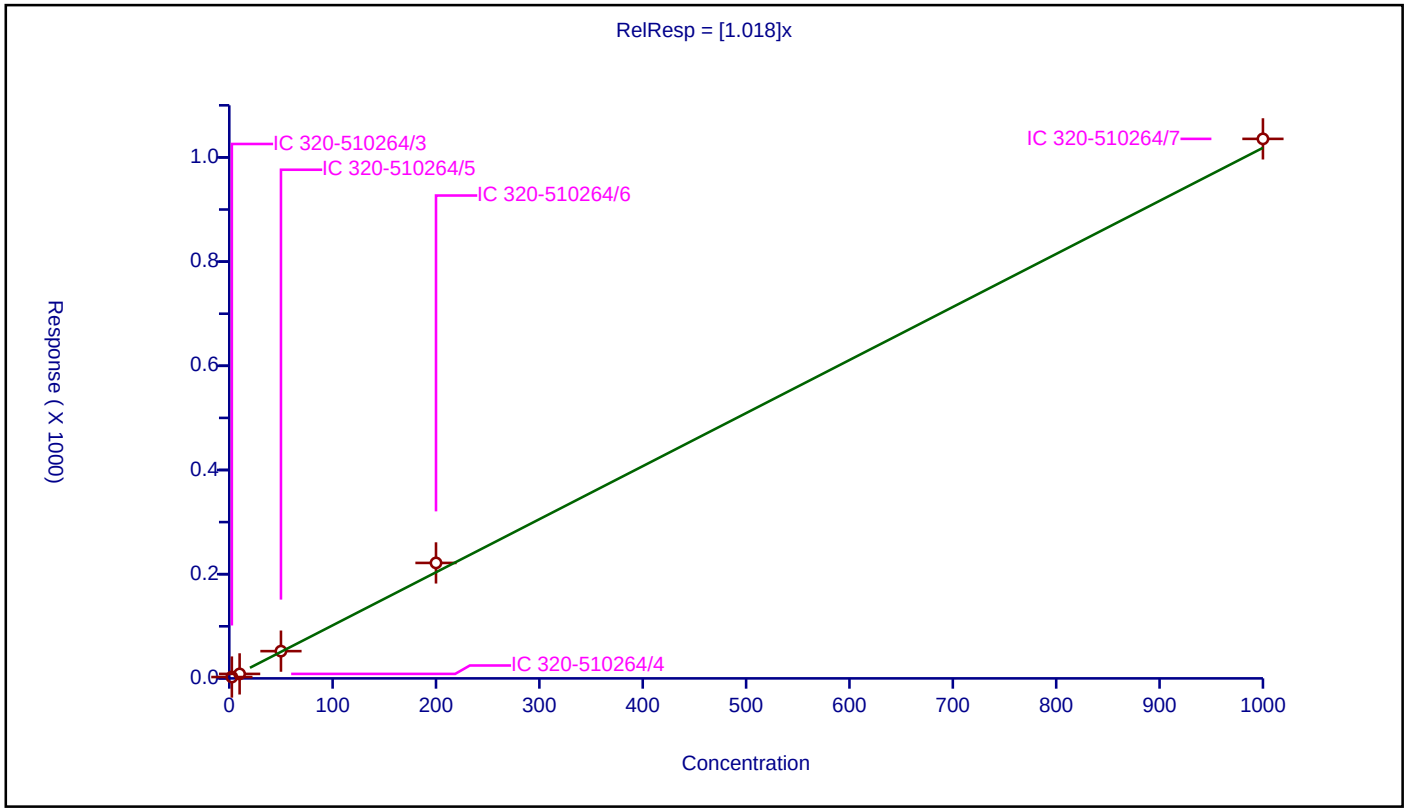

776198

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.254

Error Coefficients

Standard Error:	71900000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.62875	100.0	59957723.0	1.257499	Y
2	IC 320-510264/4	2.0	2.19411	100.0	53975587.0	1.097055	Y
3	IC 320-510264/5	10.0	12.651014	100.0	56155483.0	1.265101	Y
4	IC 320-510264/6	40.0	53.737487	100.0	55471422.0	1.343437	Y
5	IC 320-510264/7	200.0	261.501191	100.0	53698206.0	1.307506	Y

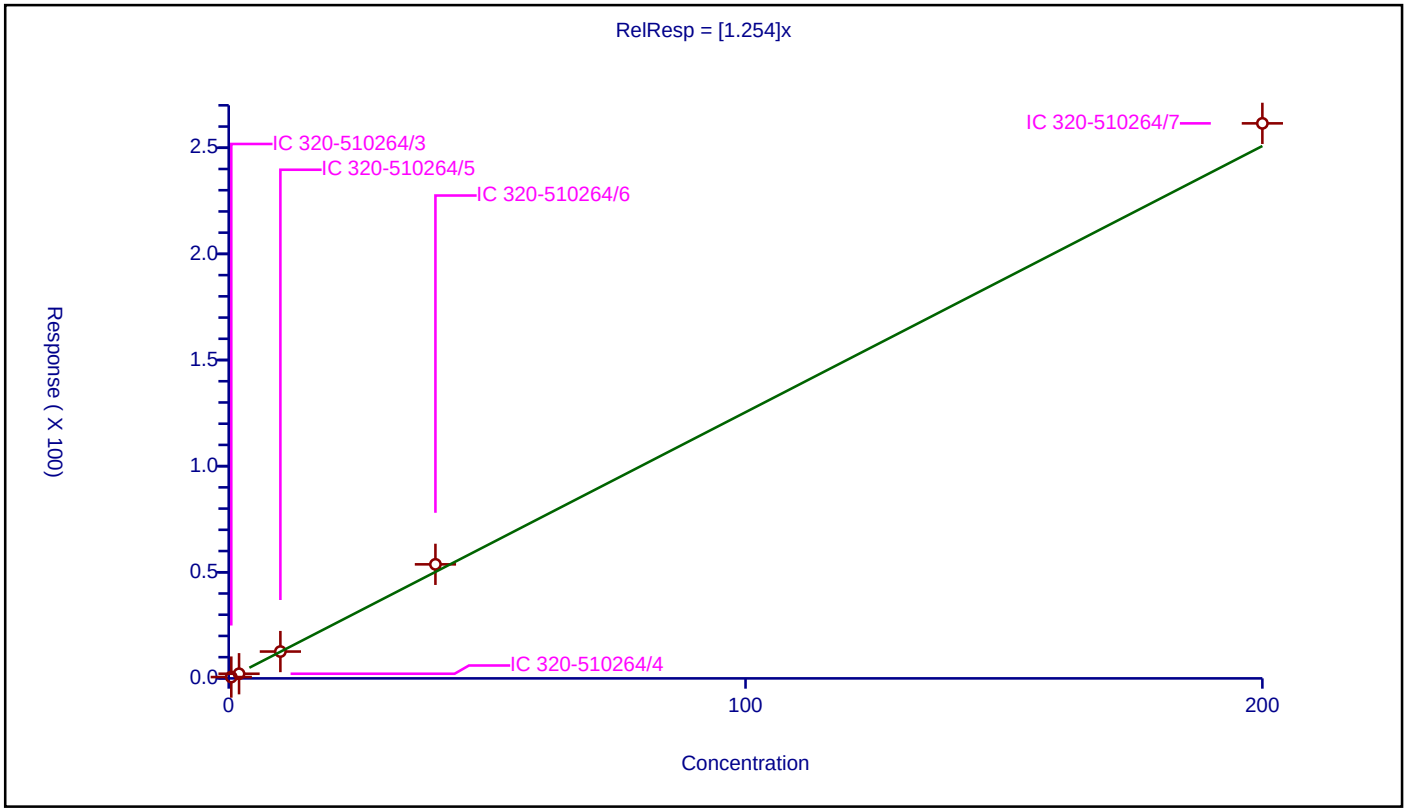

776199

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.024

Error Coefficients

Standard Error:	105000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.514358	100.0	108384725.0	1.028715	Y
2	IC 320-510264/4	2.0	1.739696	100.0	98246522.0	0.869848	Y
3	IC 320-510264/5	10.0	10.458407	100.0	101724636.0	1.045841	Y
4	IC 320-510264/6	40.0	44.37733	100.0	100332269.0	1.109433	Y
5	IC 320-510264/7	200.0	213.143097	100.0	95980421.0	1.065715	Y

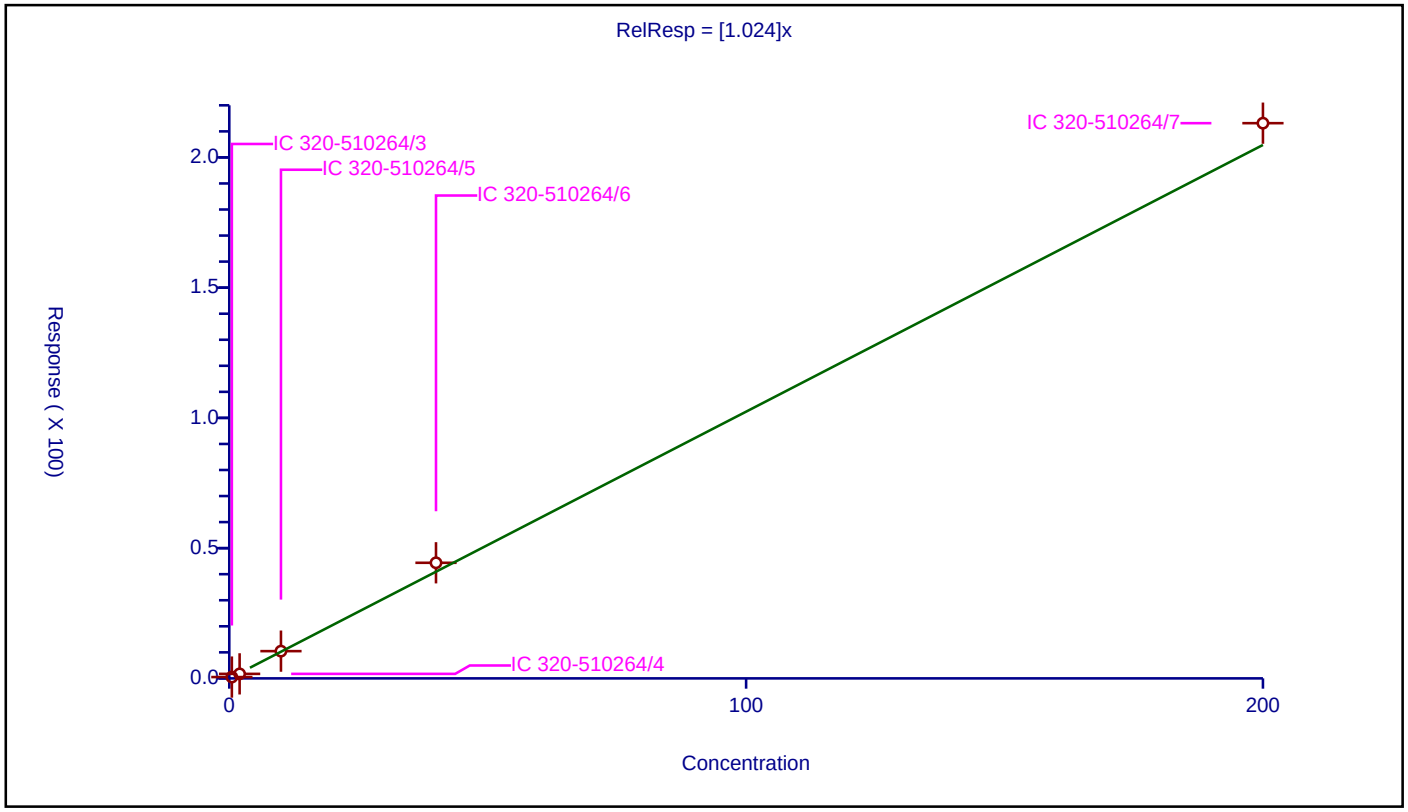

776200

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	72100000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.485229	100.0	65685883.0	0.970458	Y
2	IC 320-510264/4	2.0	1.95888	100.0	62853211.0	0.97944	Y
3	IC 320-510264/5	10.0	11.718119	100.0	62635225.0	1.171812	Y
4	IC 320-510264/6	40.0	47.503291	100.0	62046988.0	1.187582	Y
5	IC 320-510264/7	200.0	245.287862	100.0	57464333.0	1.226439	Y

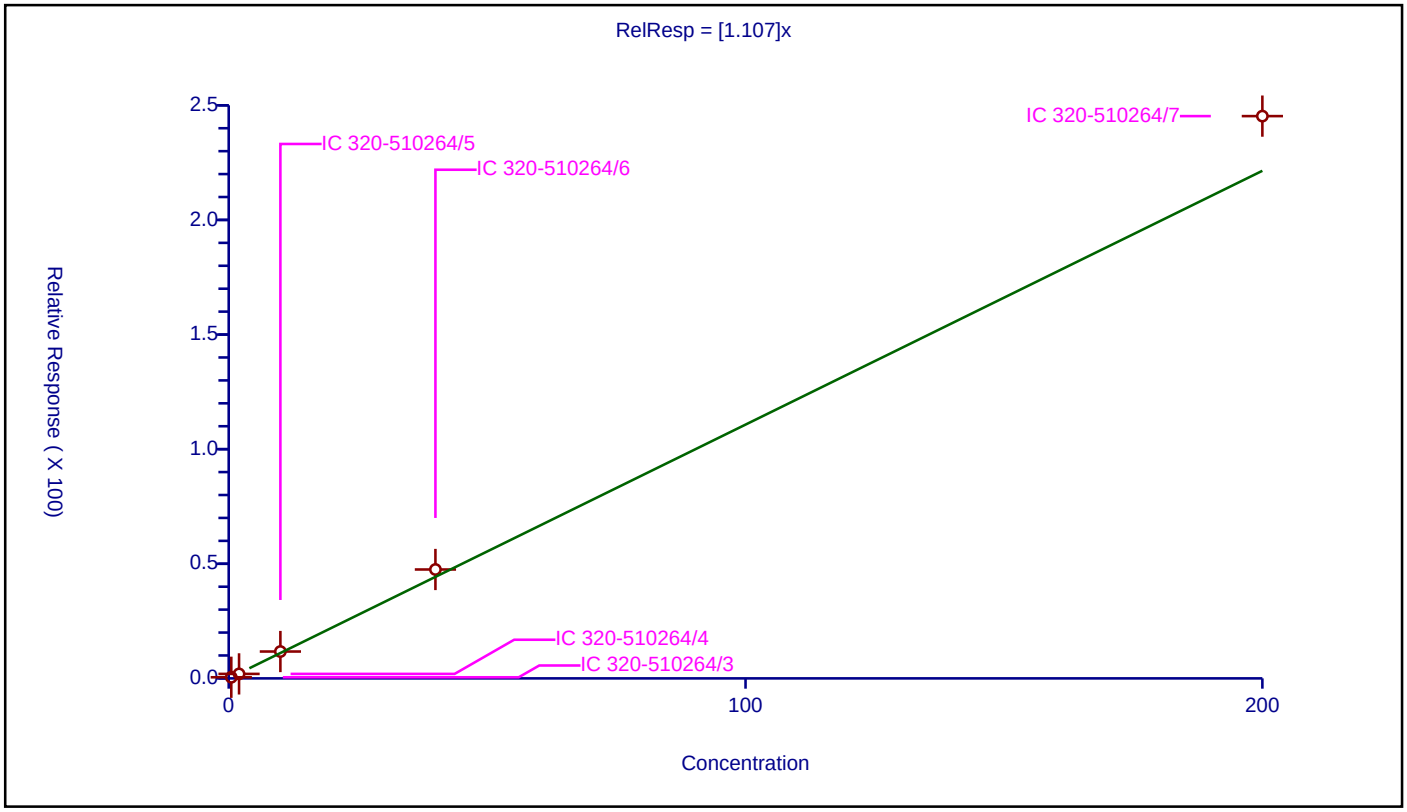

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	325000000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	5.504666	200.0	57018462.0	1.100933	Y
2	IC 320-510264/4	20.0	19.269459	200.0	52034518.0	0.963473	Y
3	IC 320-510264/5	100.0	116.51708	200.0	54338243.0	1.165171	Y
4	IC 320-510264/6	400.0	473.162285	200.0	57303880.0	1.182906	Y
5	IC 320-510264/7	2000.0	2245.176522	200.0	56623863.0	1.122588	Y

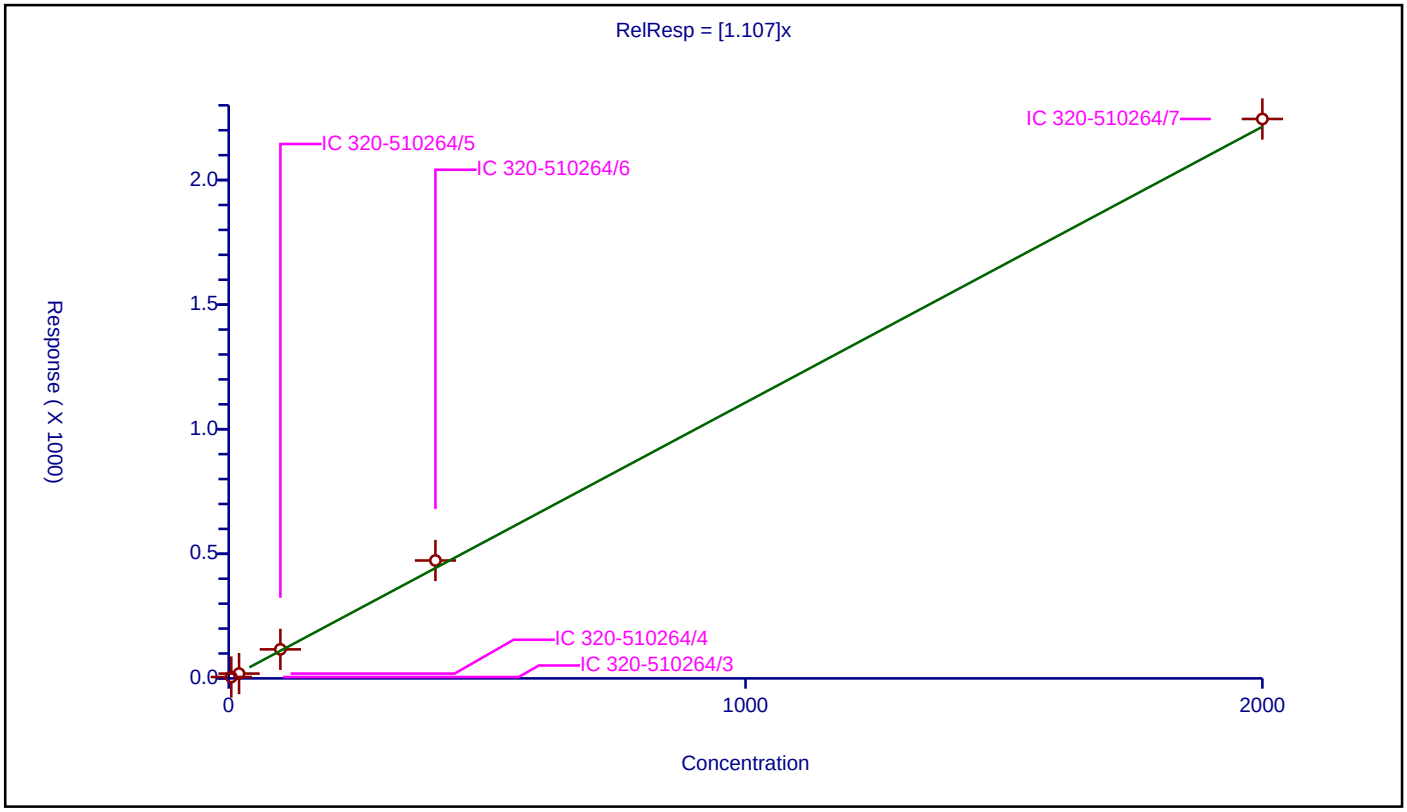

776202

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.438

Error Coefficients

Standard Error:	438000000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	6.931702	200.0	57018462.0	1.38634	Y
2	IC 320-510264/4	20.0	23.824451	200.0	52034518.0	1.191223	Y
3	IC 320-510264/5	100.0	151.448408	200.0	54338243.0	1.514484	Y
4	IC 320-510264/6	400.0	634.327267	200.0	57303880.0	1.585818	Y
5	IC 320-510264/7	2000.0	3025.883229	200.0	56623863.0	1.512942	Y

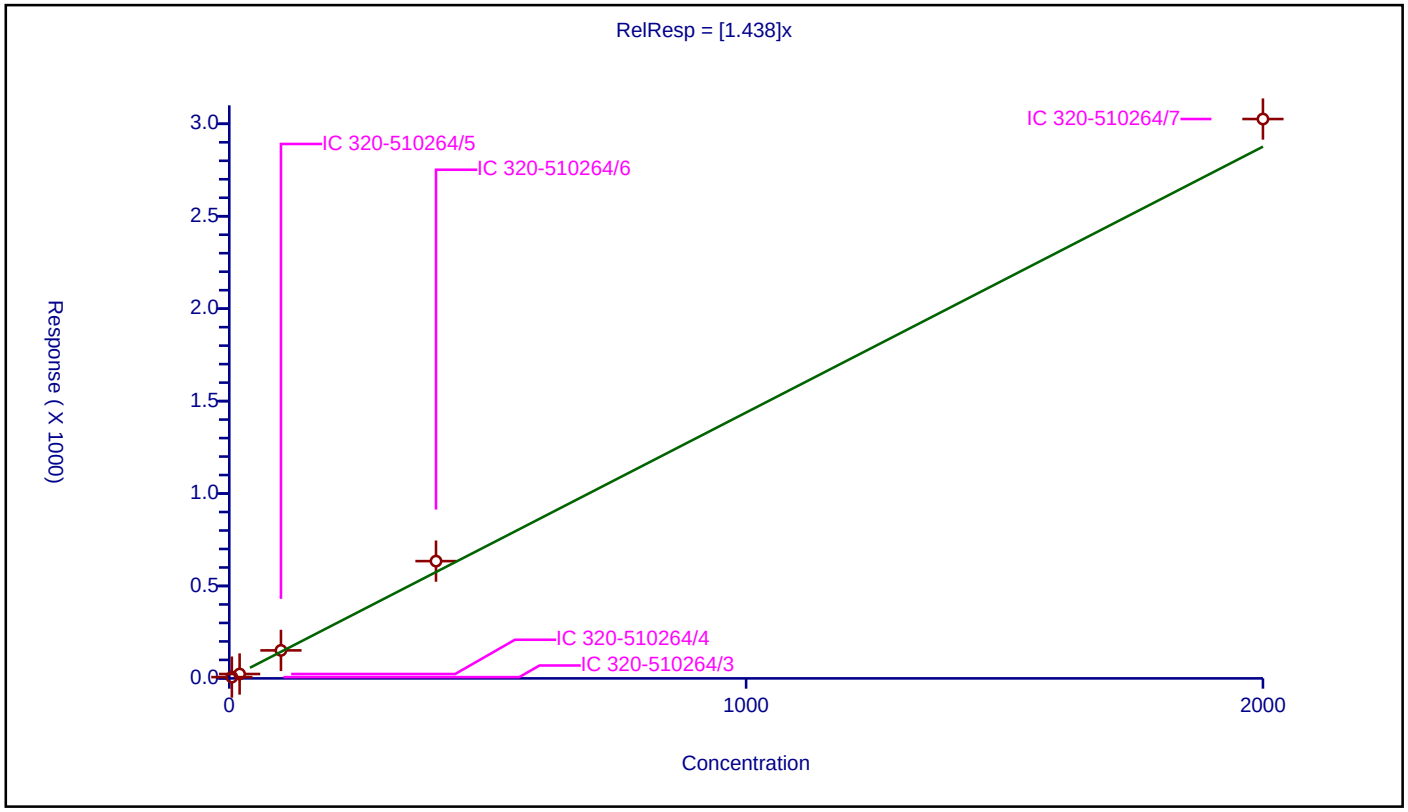

776203

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend

Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

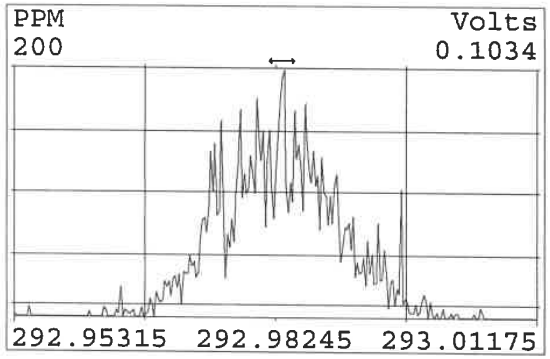

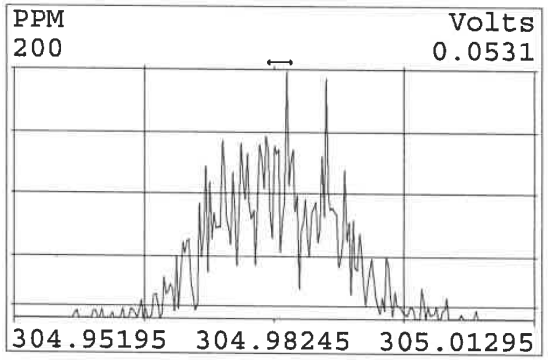

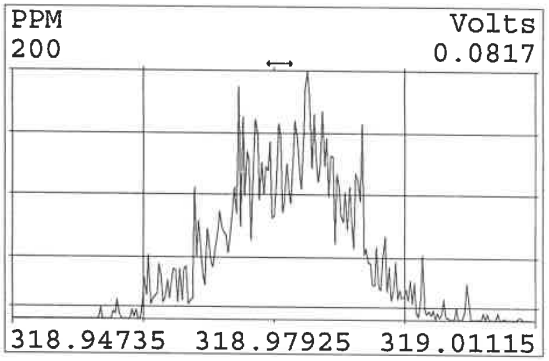

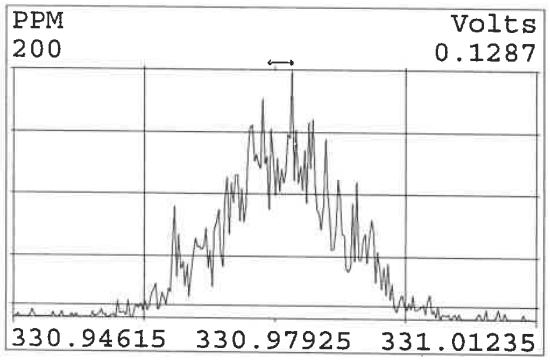

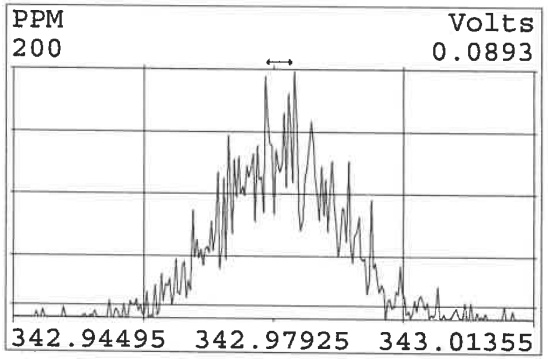

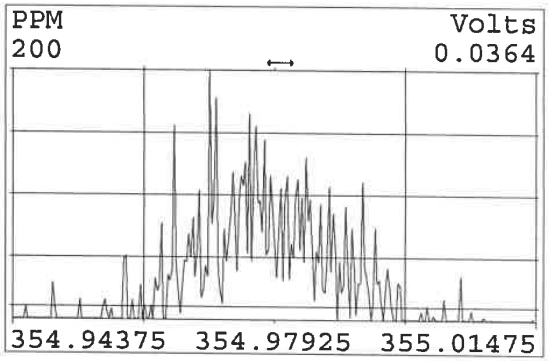

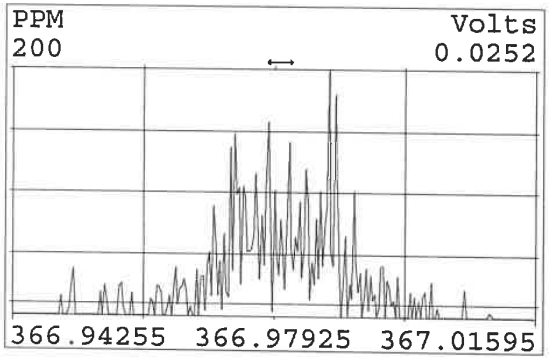

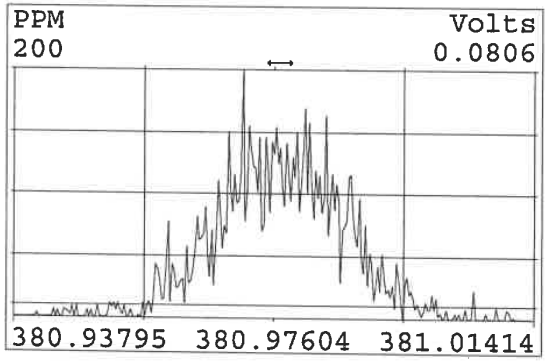

776207

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

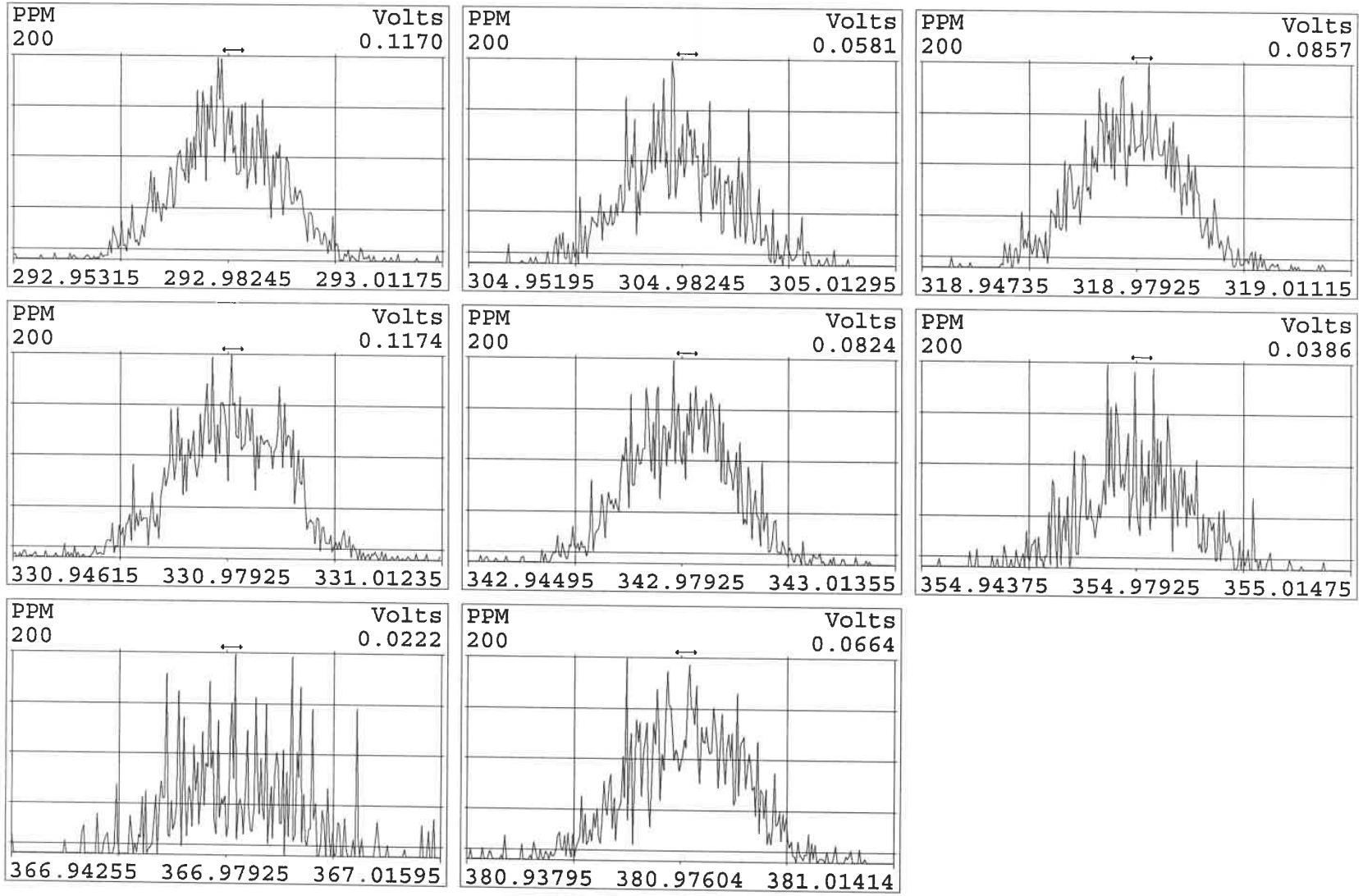

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

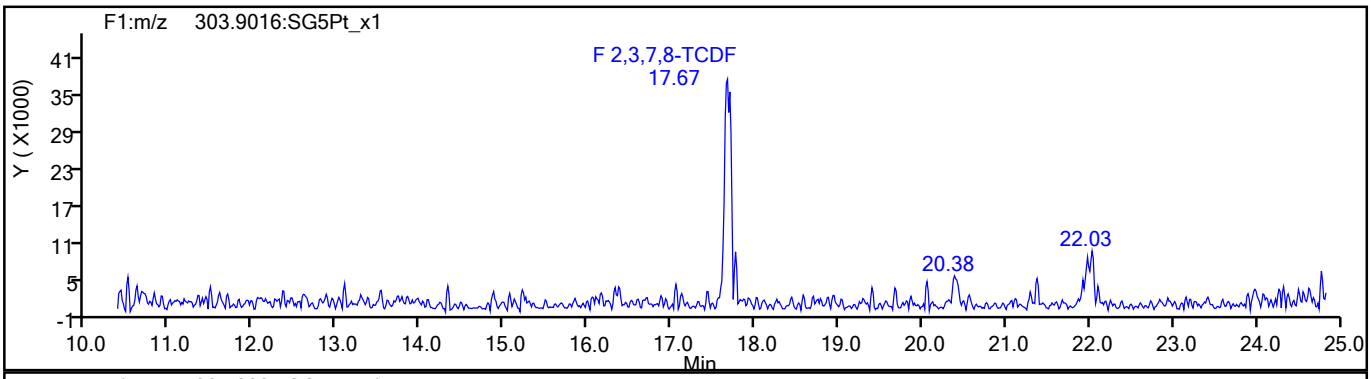

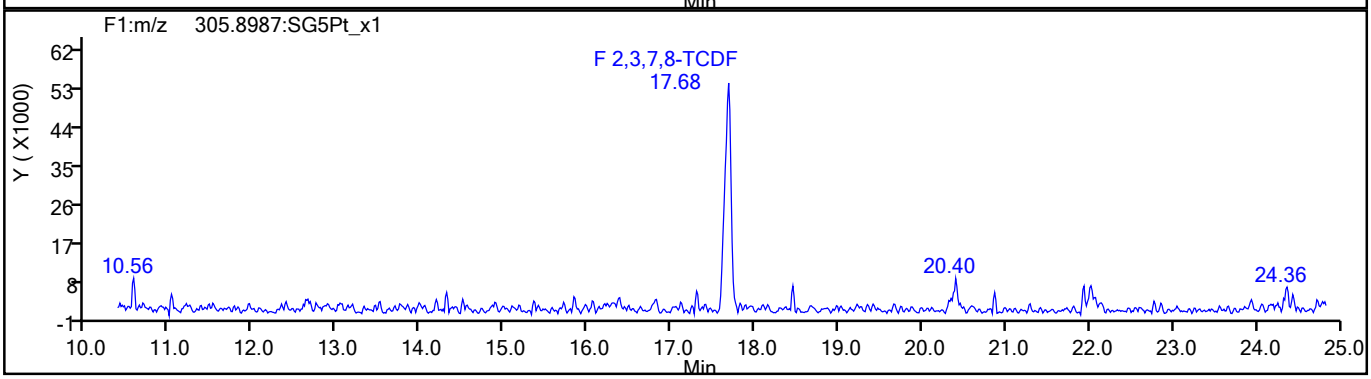

TCDF Standards

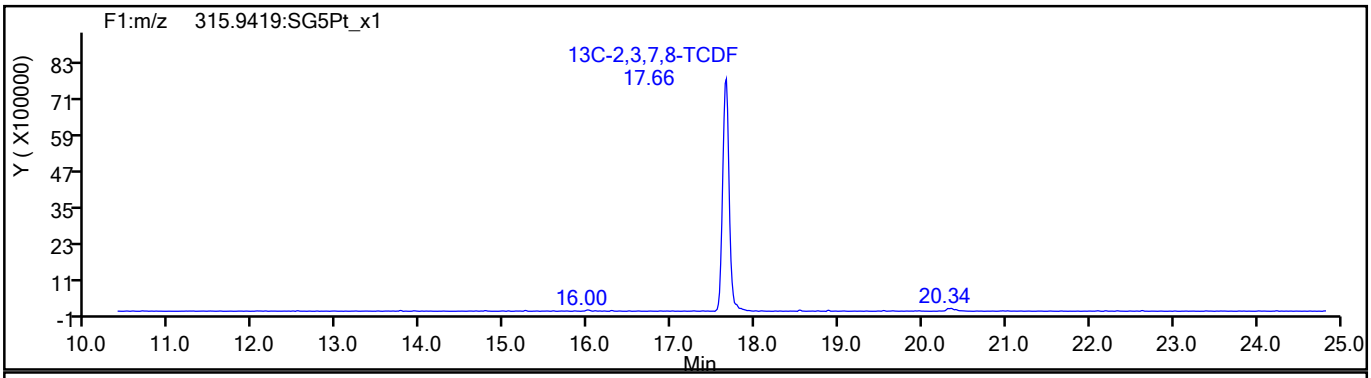

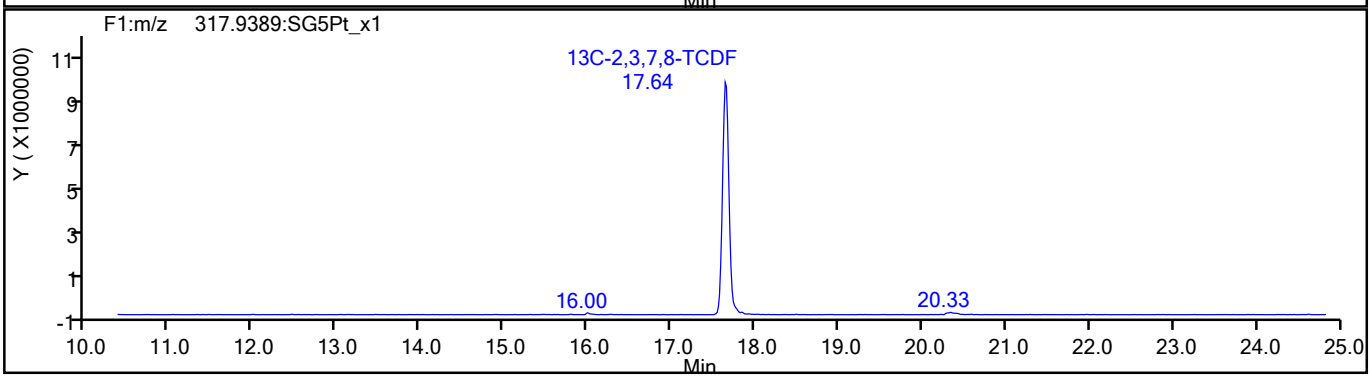

776211

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

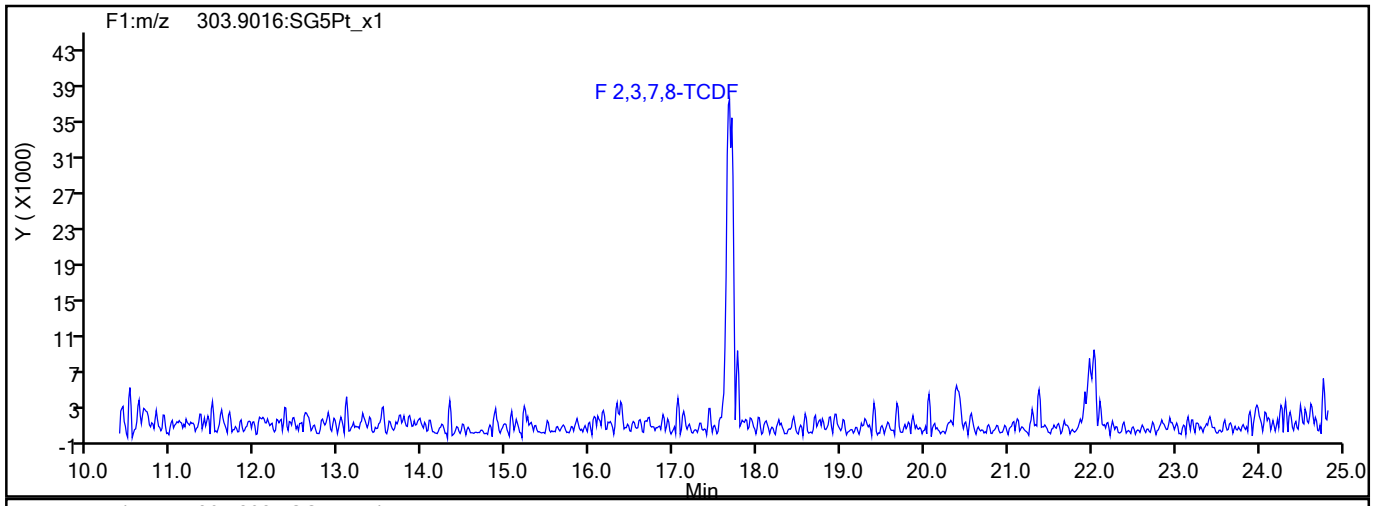

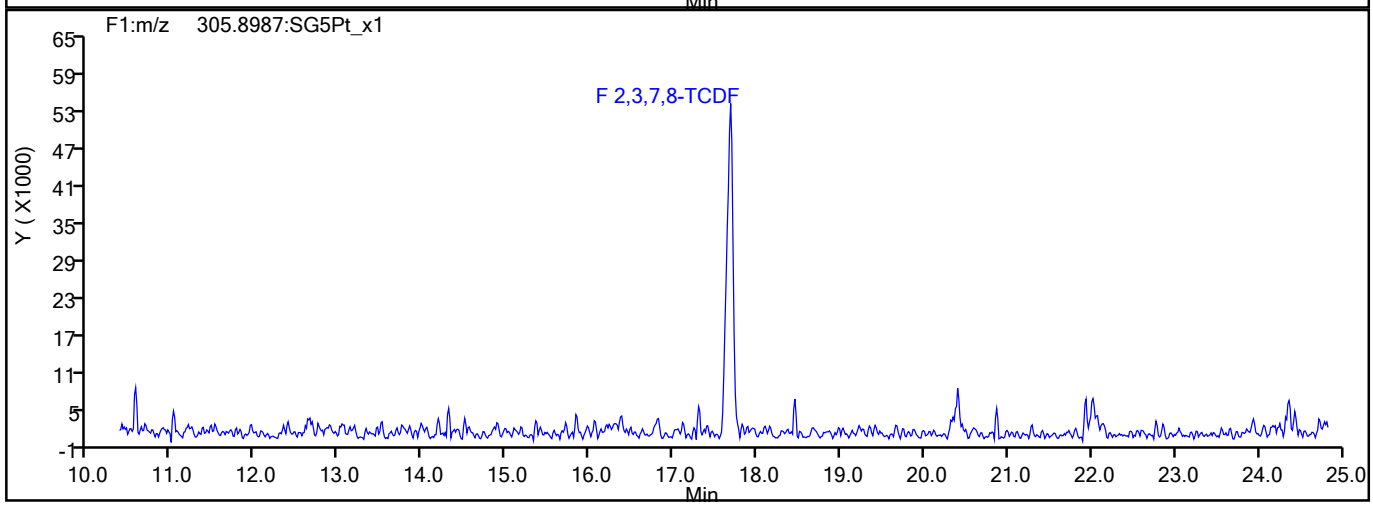

TCDF Interference Mass

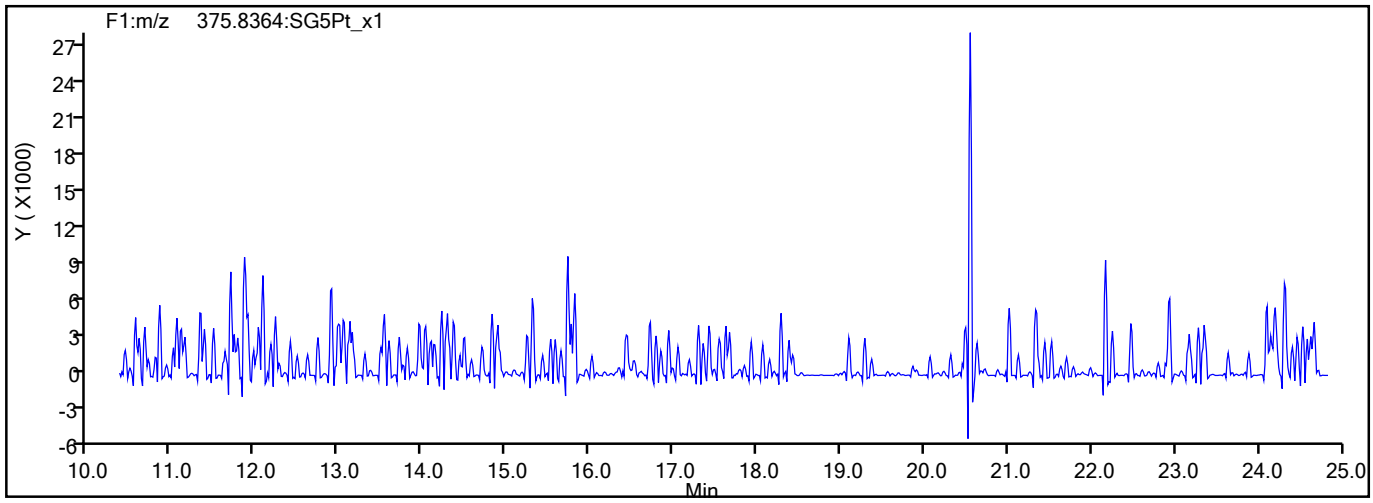

776212

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

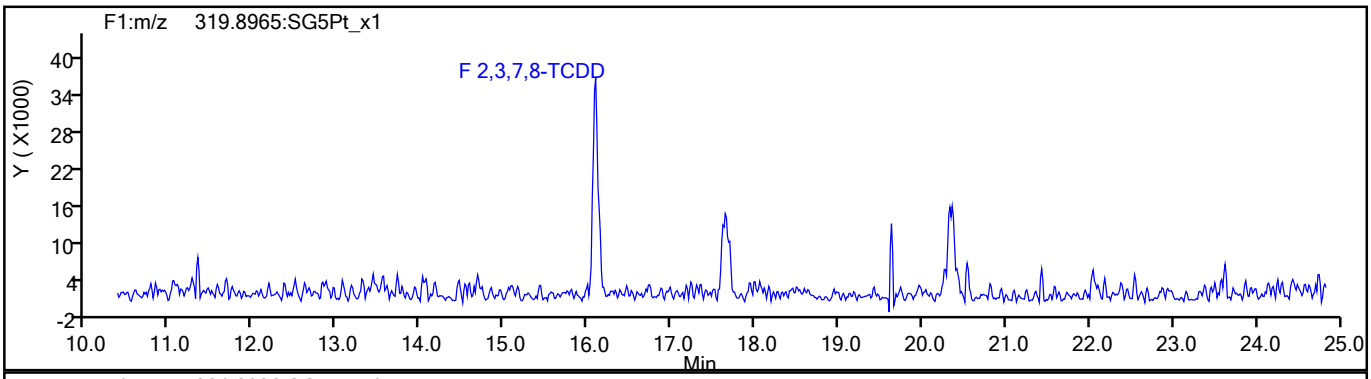

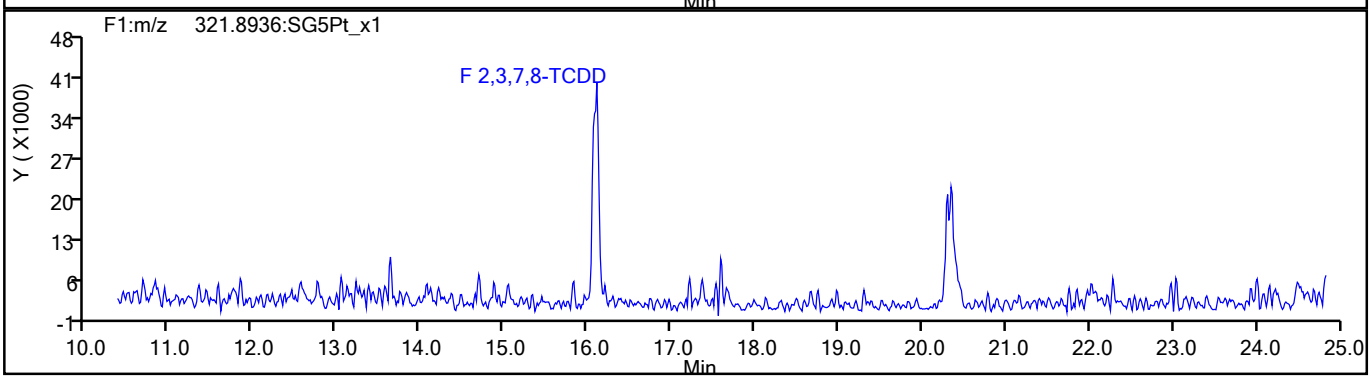

TCDD Standards

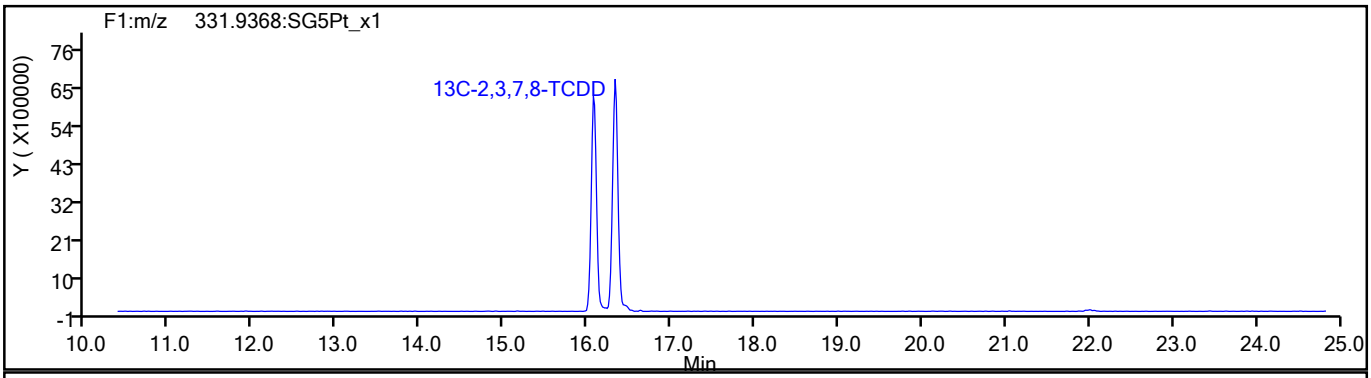

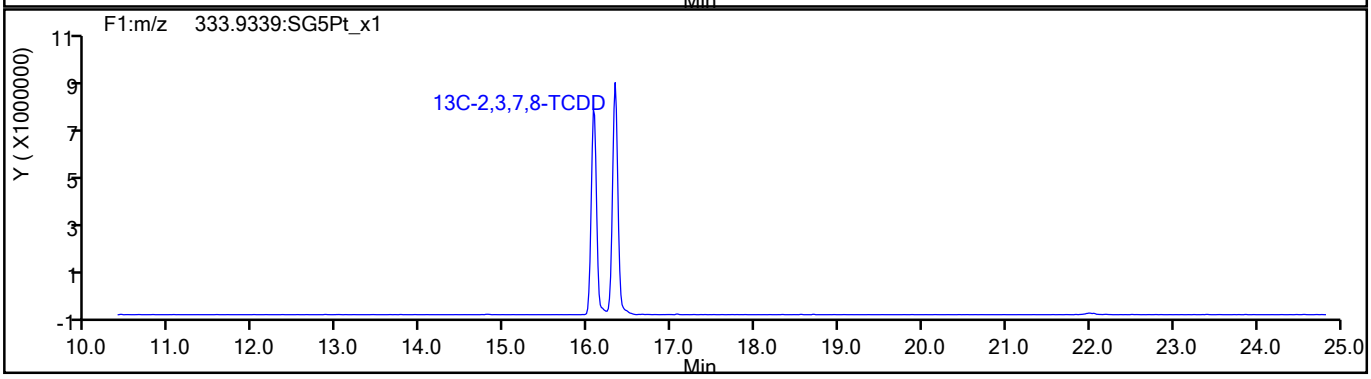

776213

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

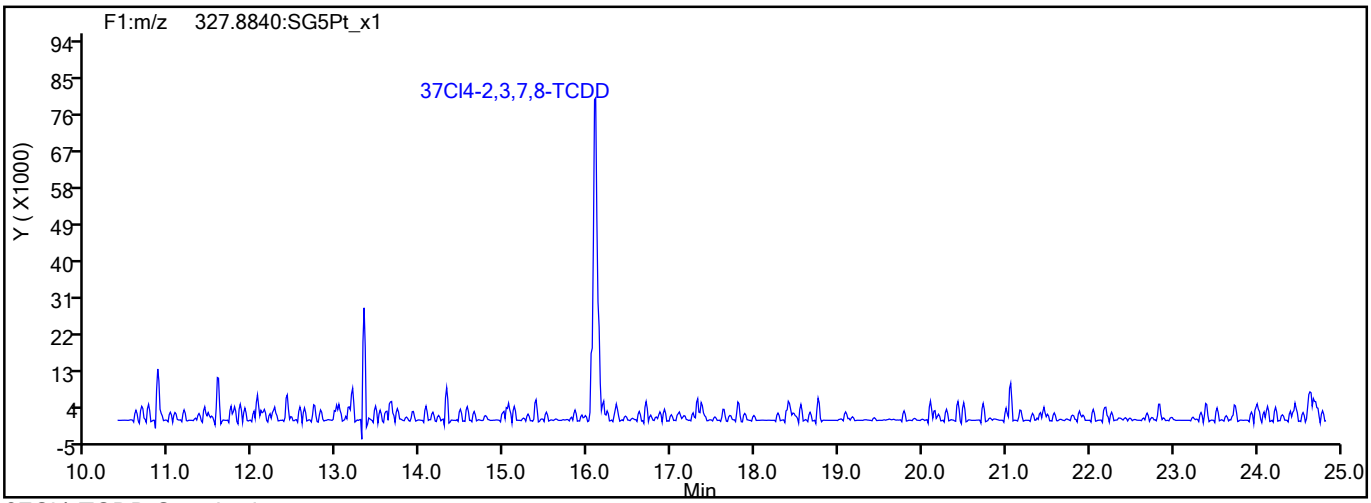

37Cl4-TCDD Standards

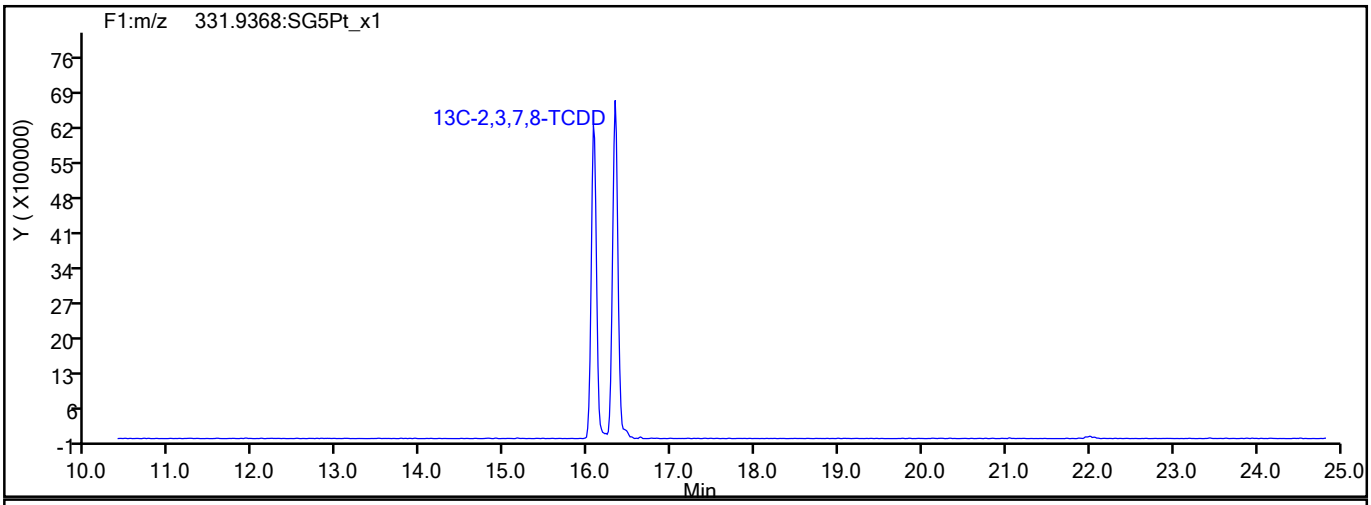

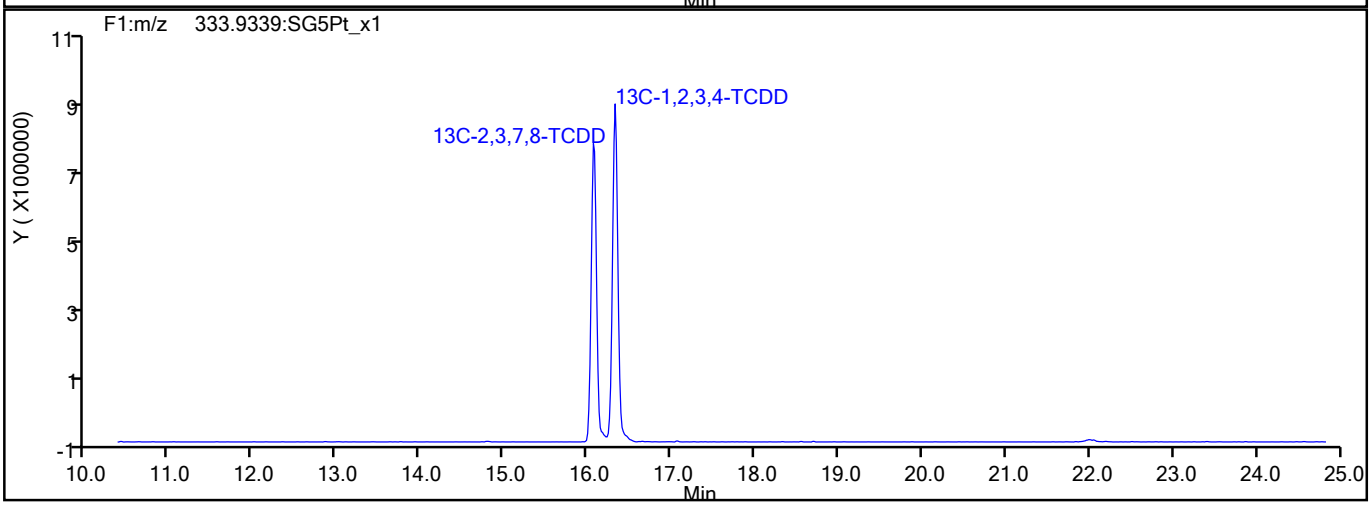

776214

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

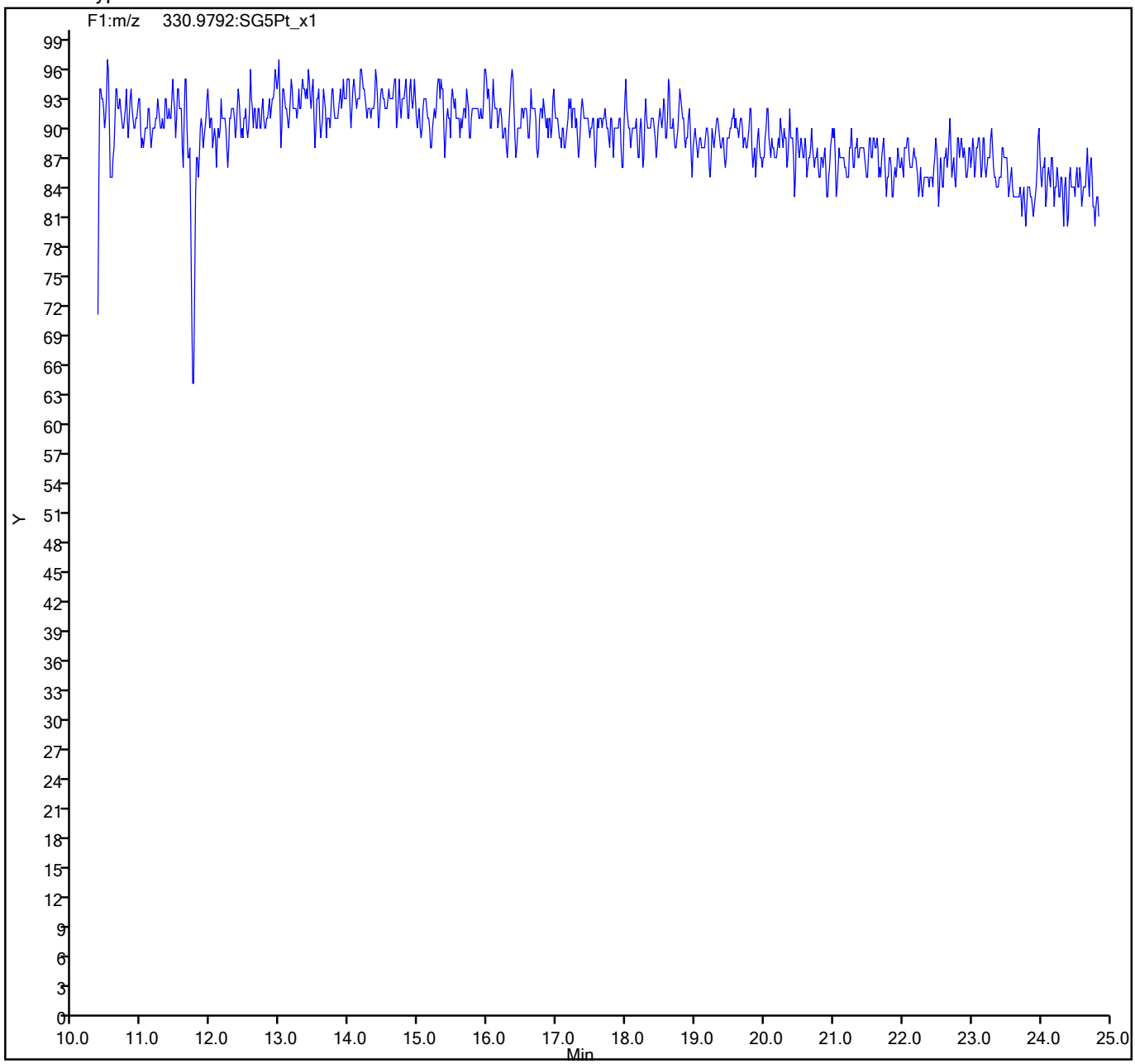

776215

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

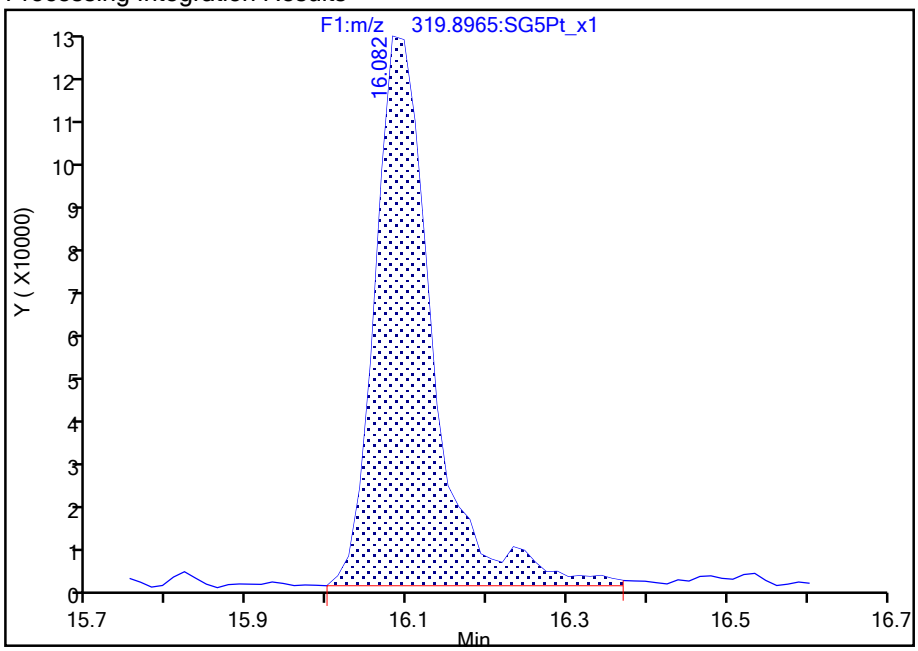

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

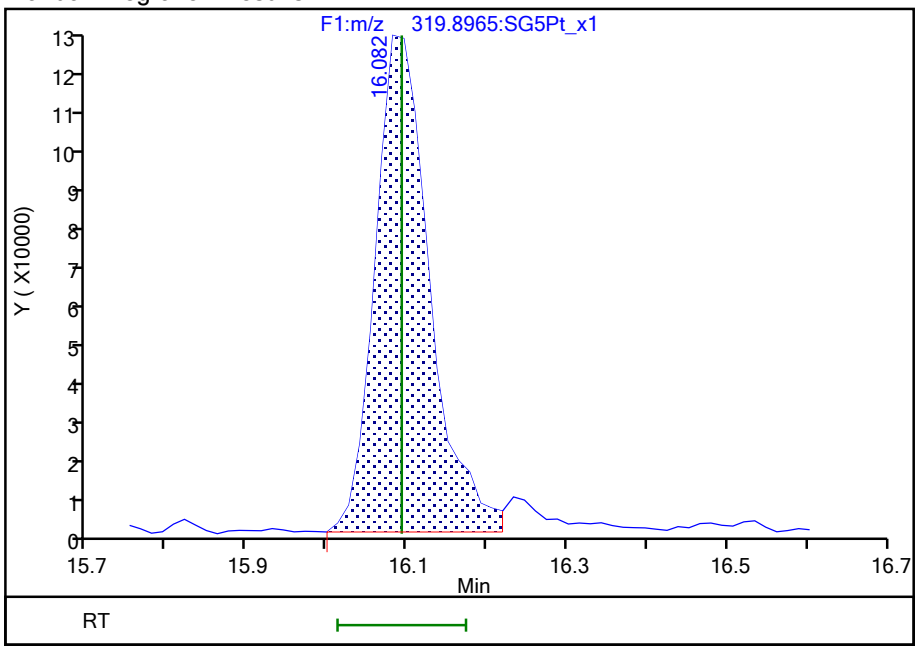

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

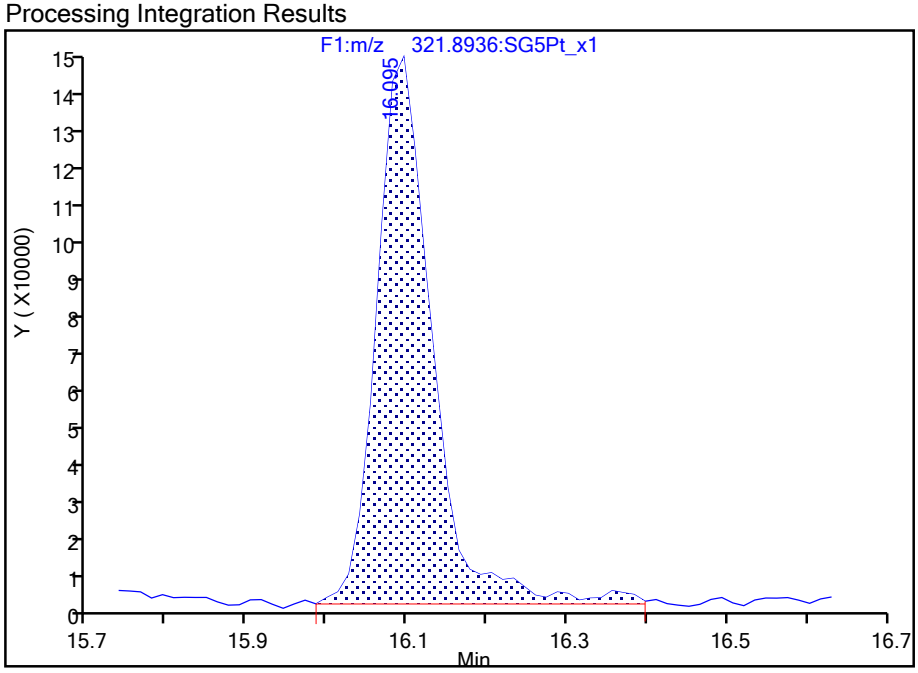

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

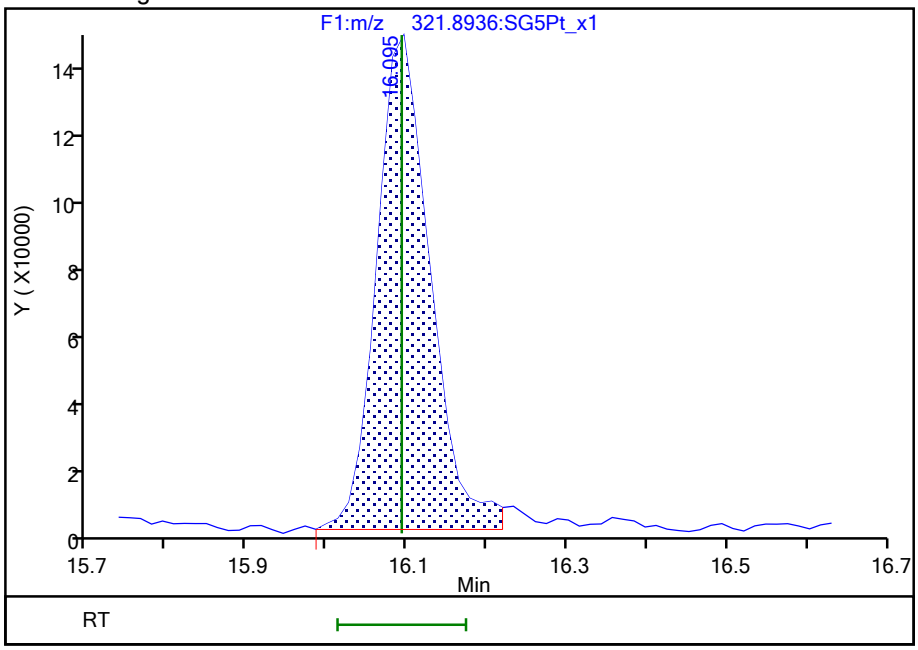

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

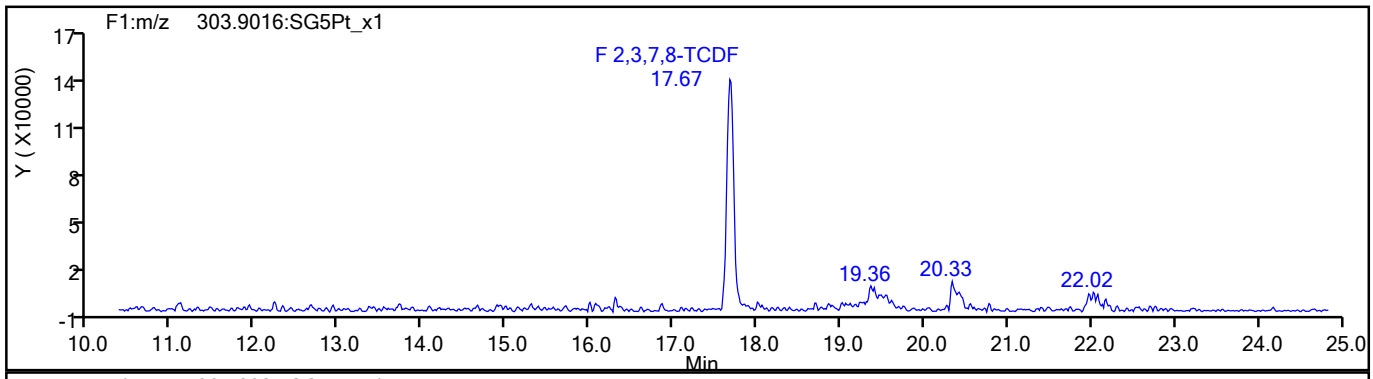

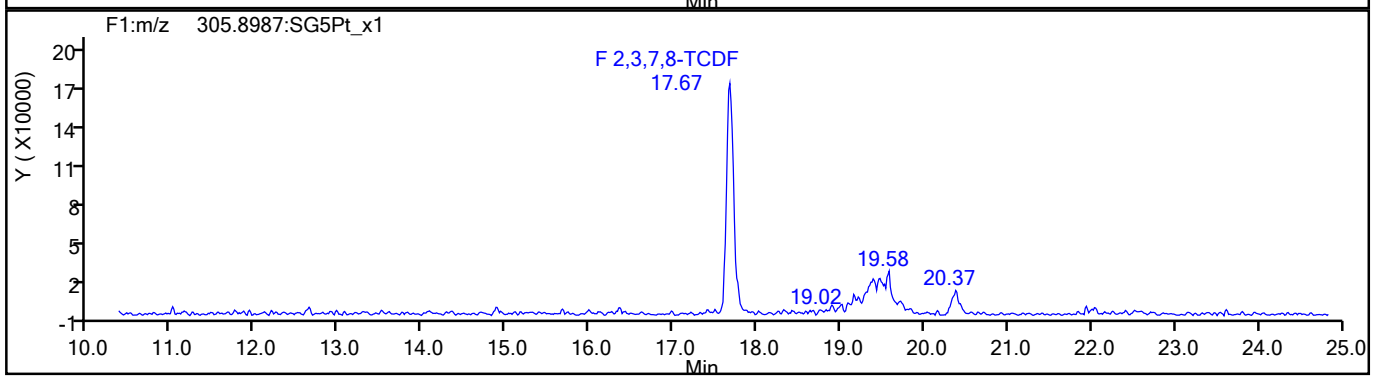

TCDF Standards

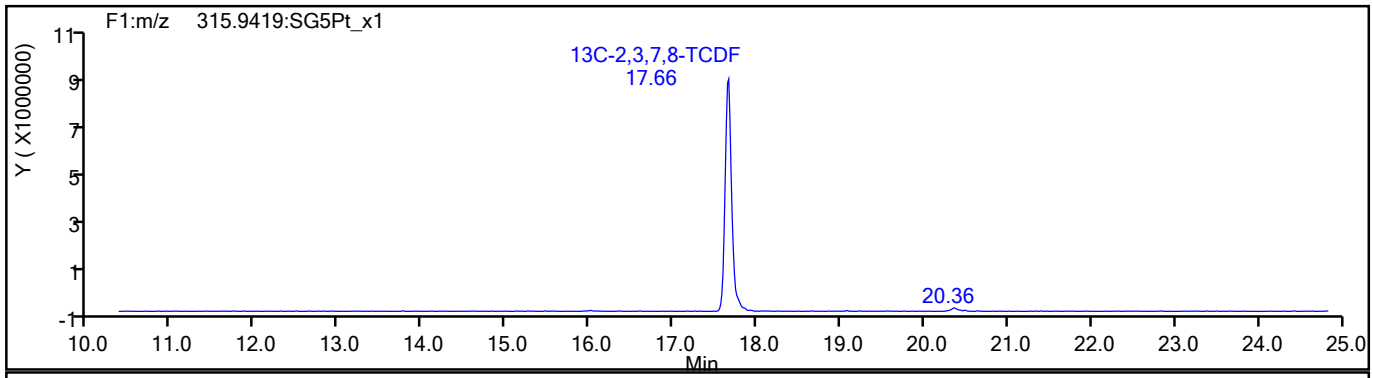

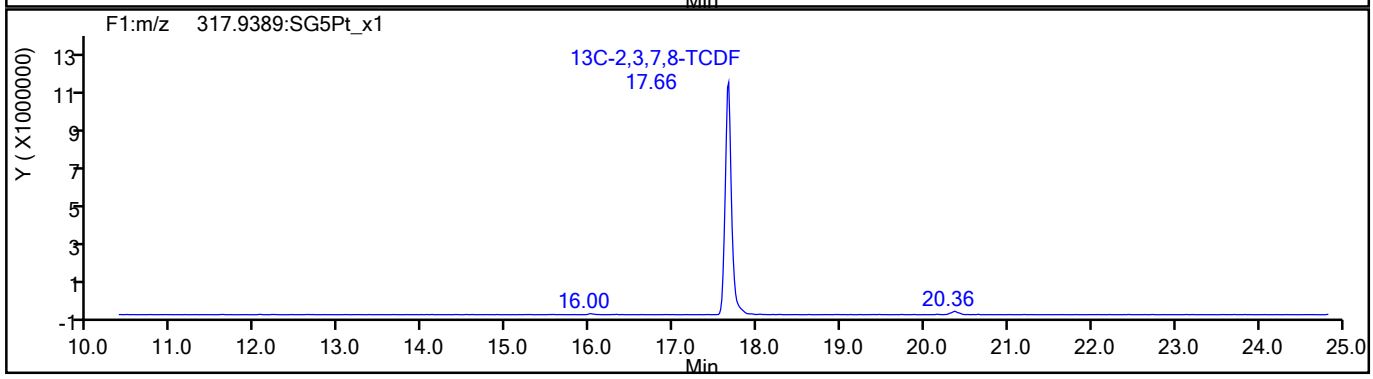

776220

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

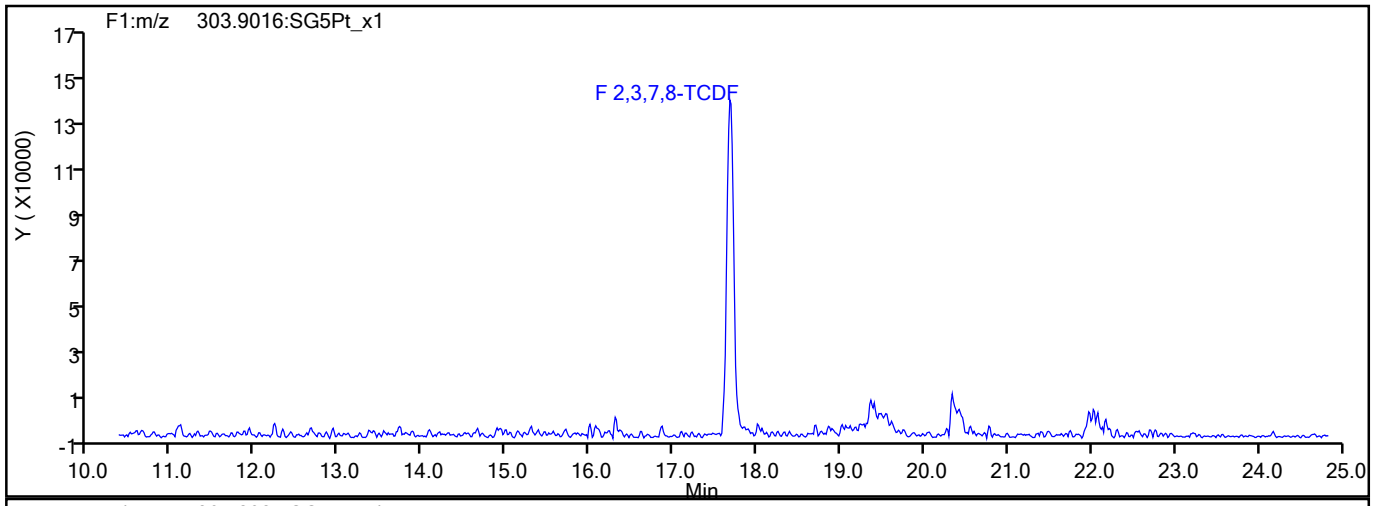

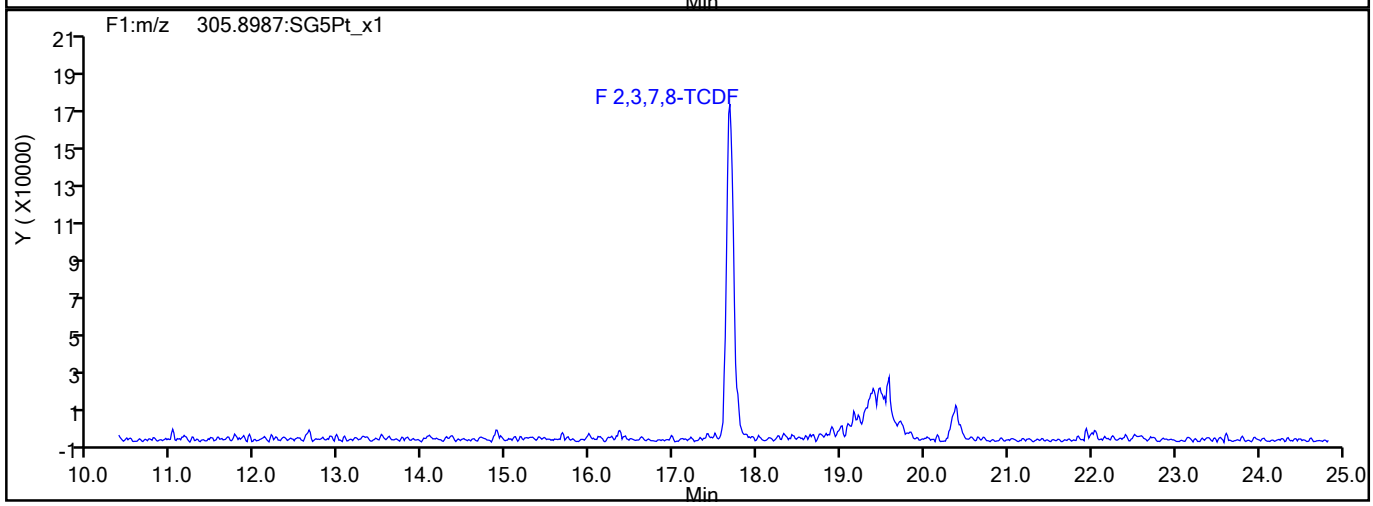

TCDF Interference Mass

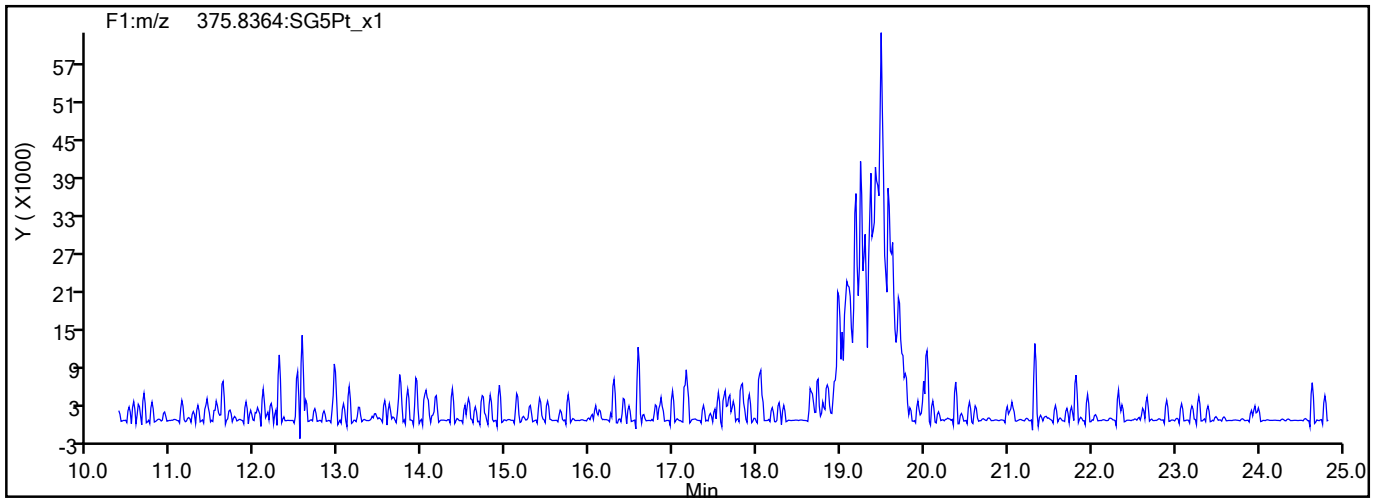

776221

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

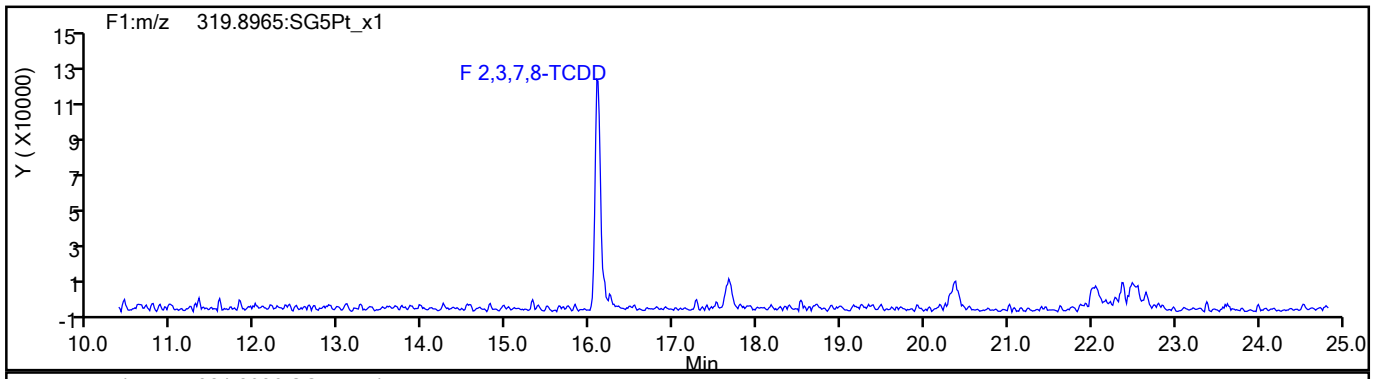

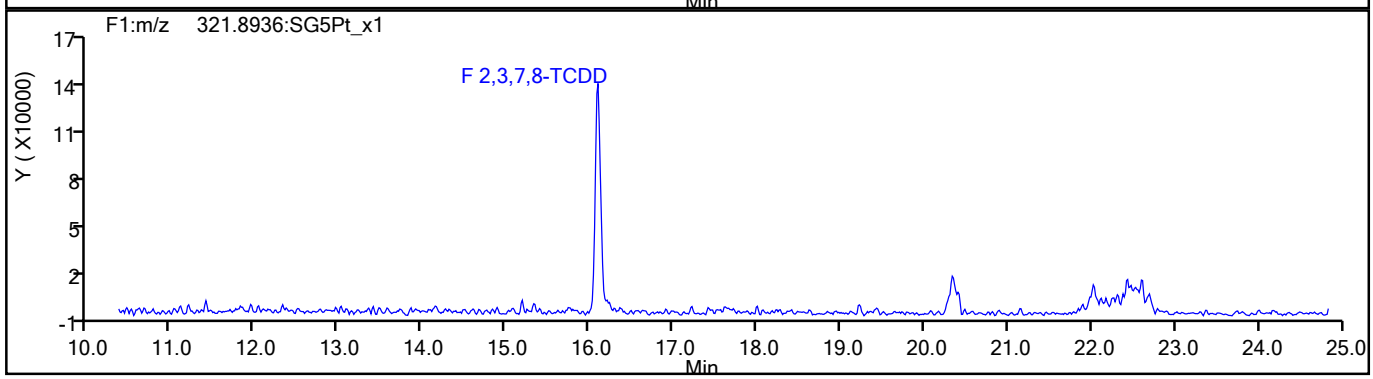

TCDD Standards

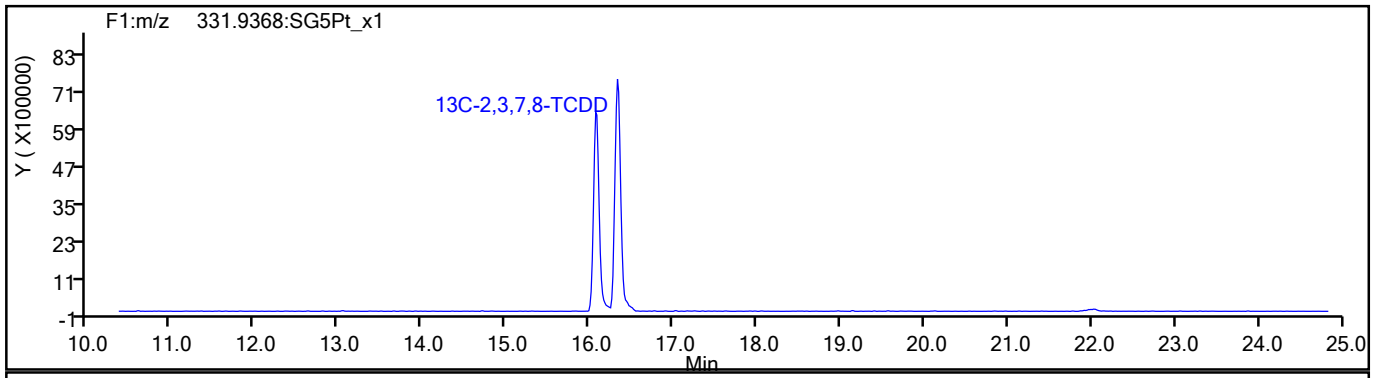

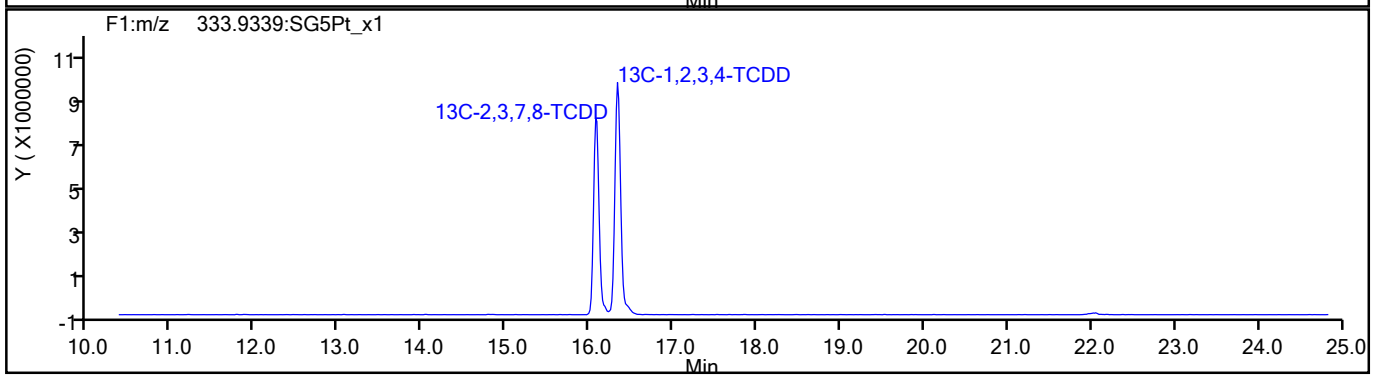

776222

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

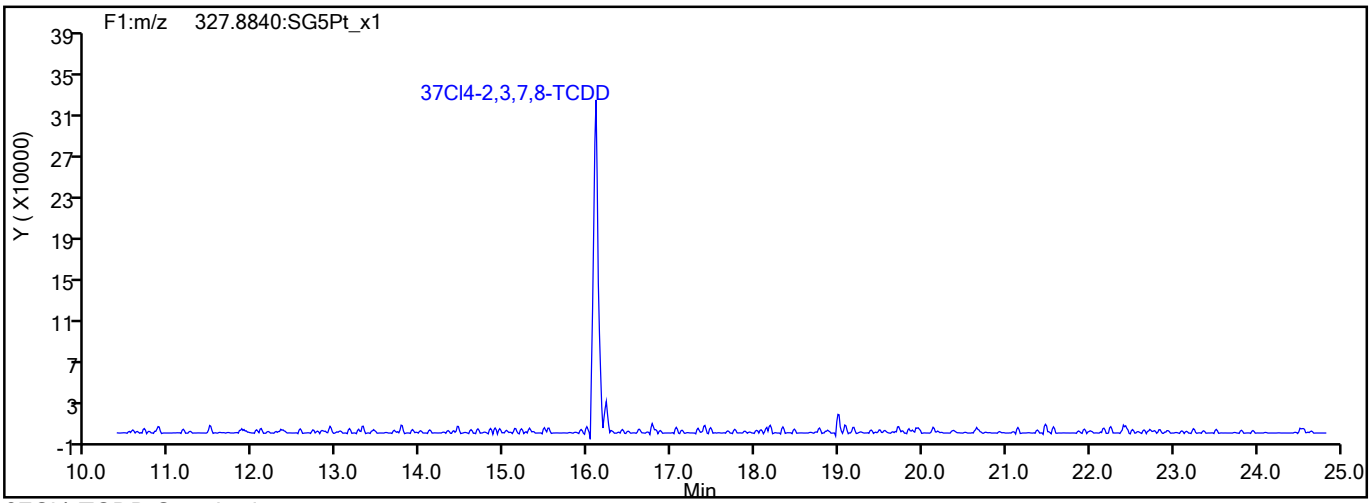

37Cl4-TCDD Standards

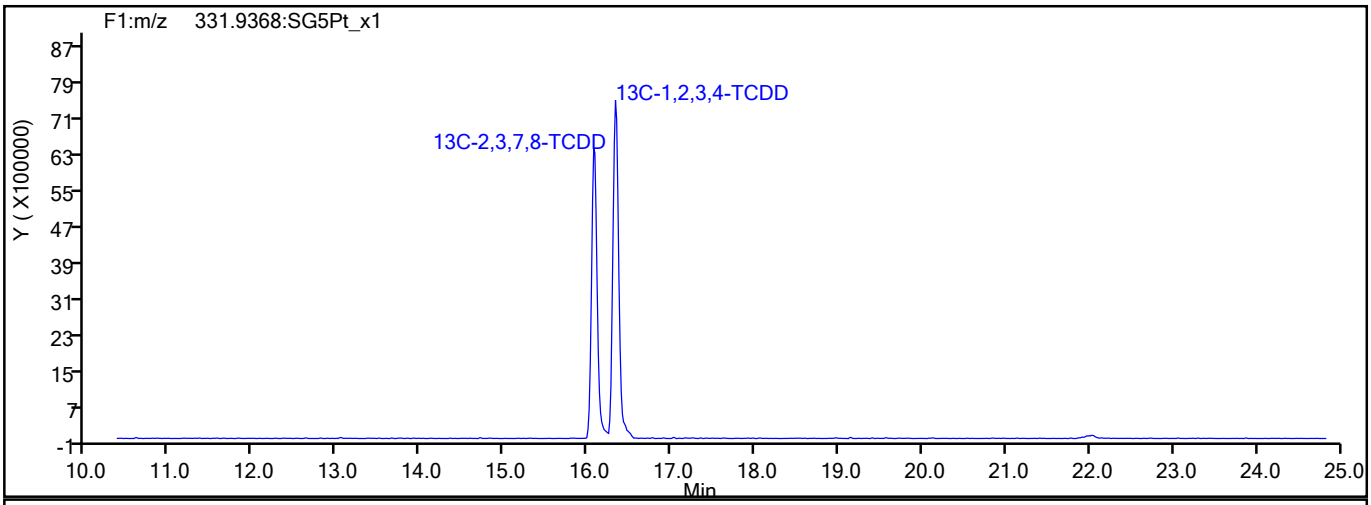

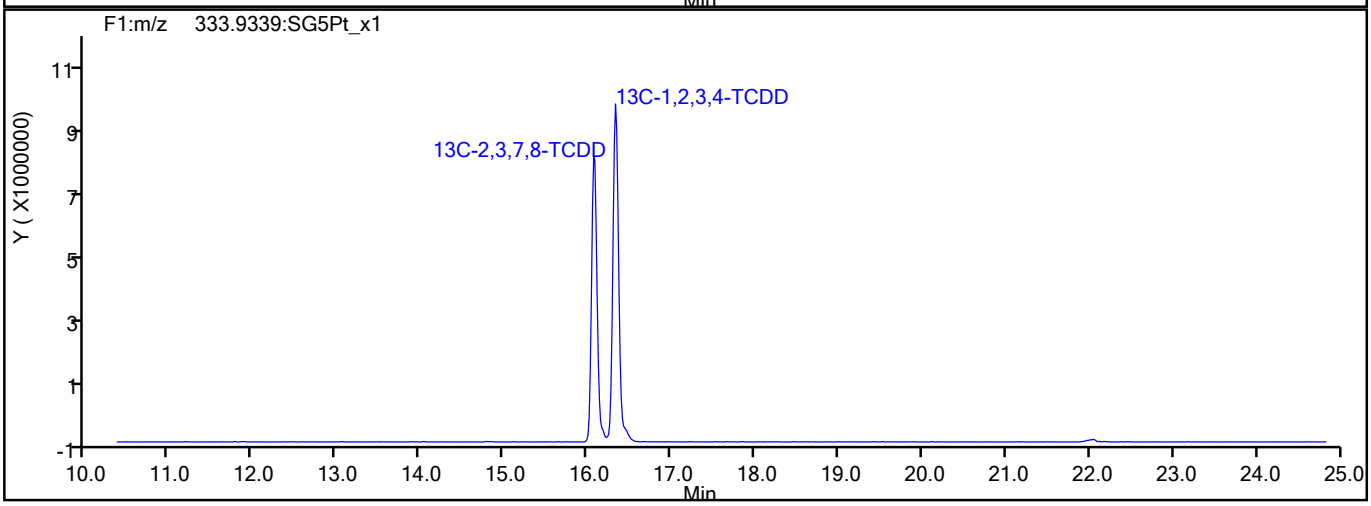

776223

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

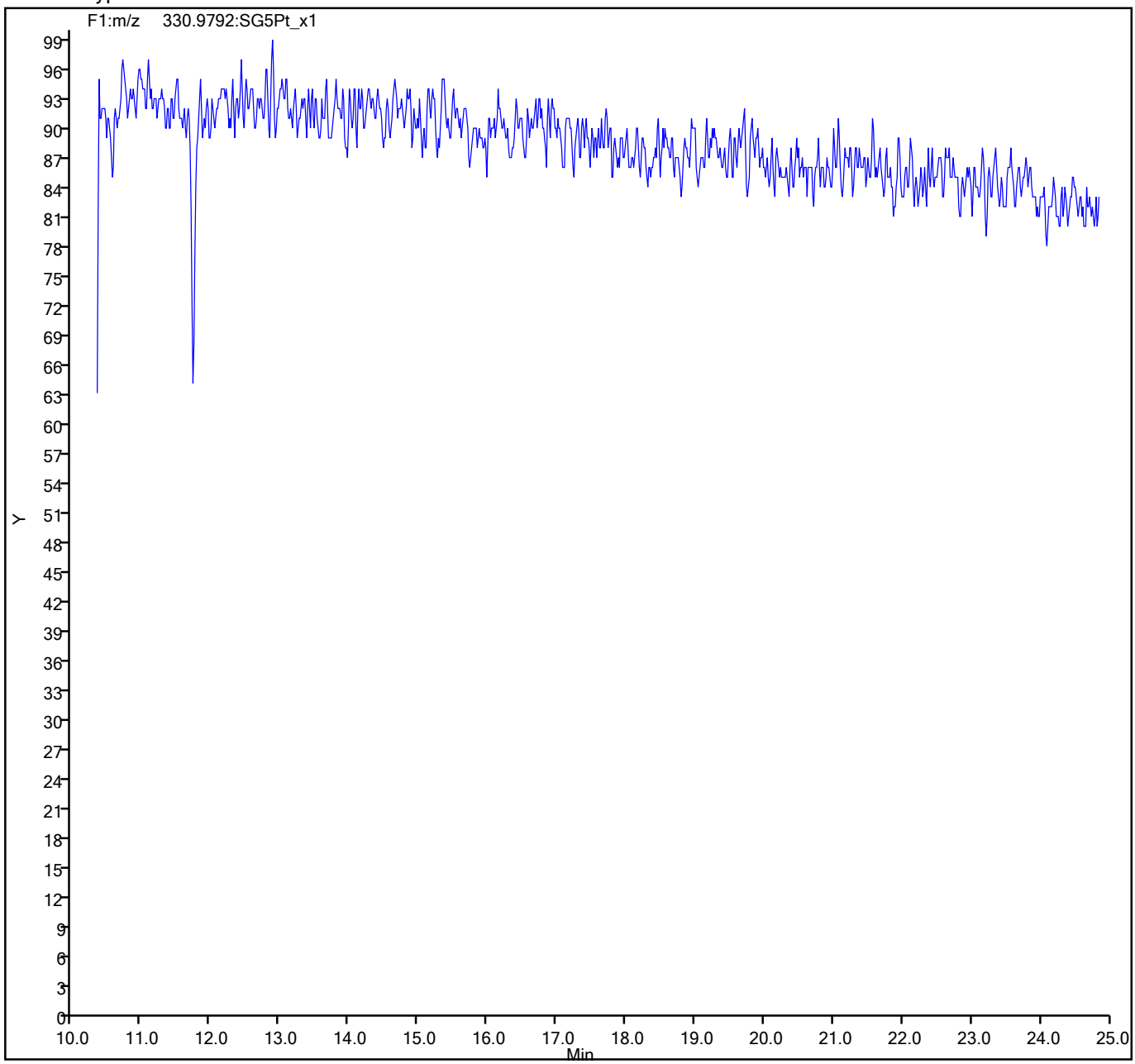

776224

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

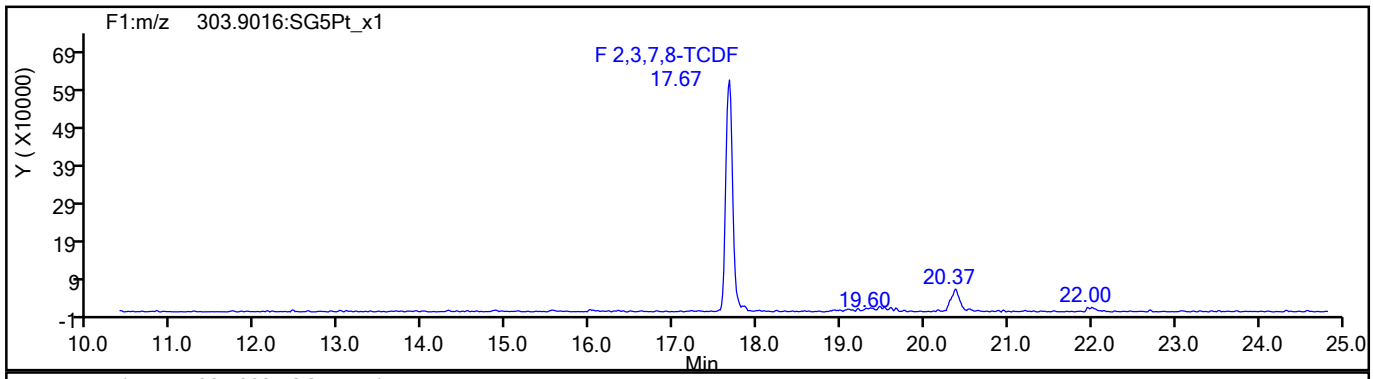

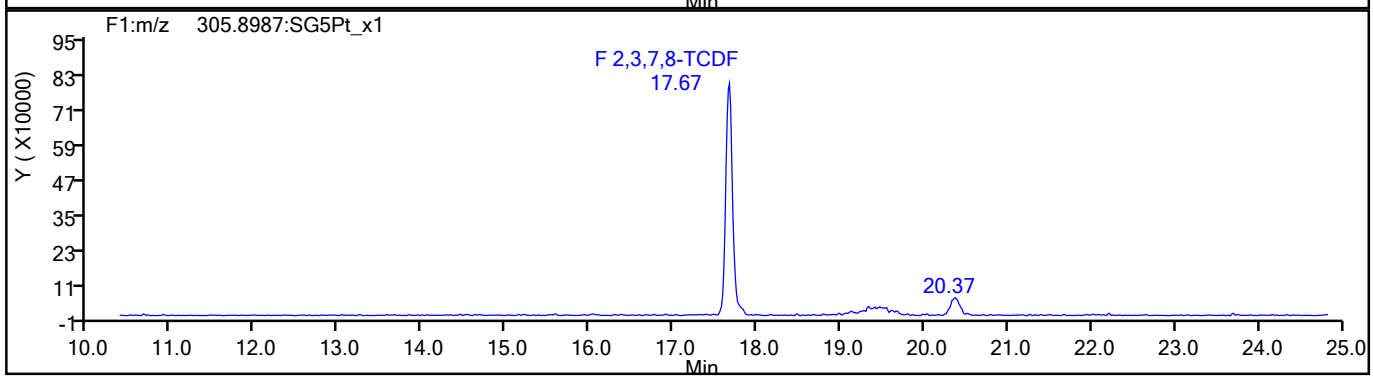

TCDF Standards

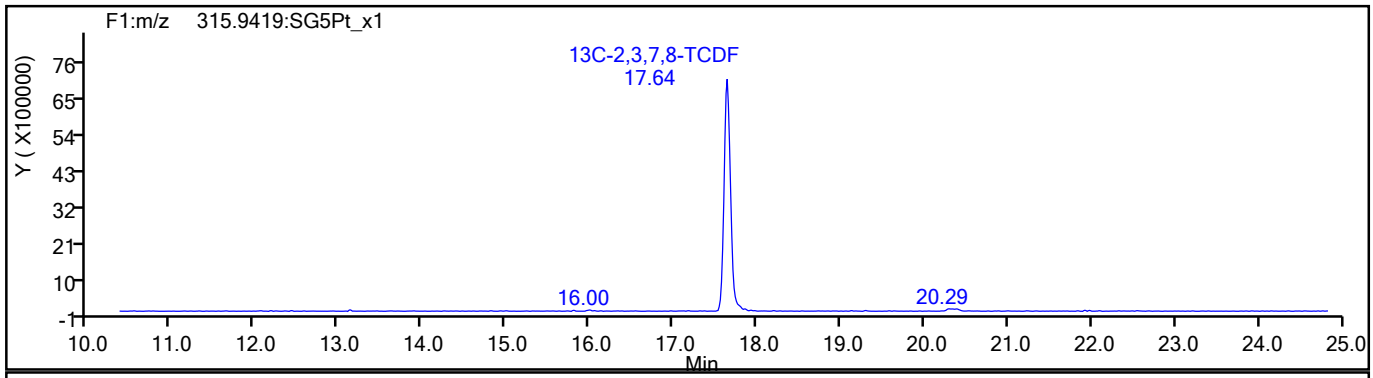

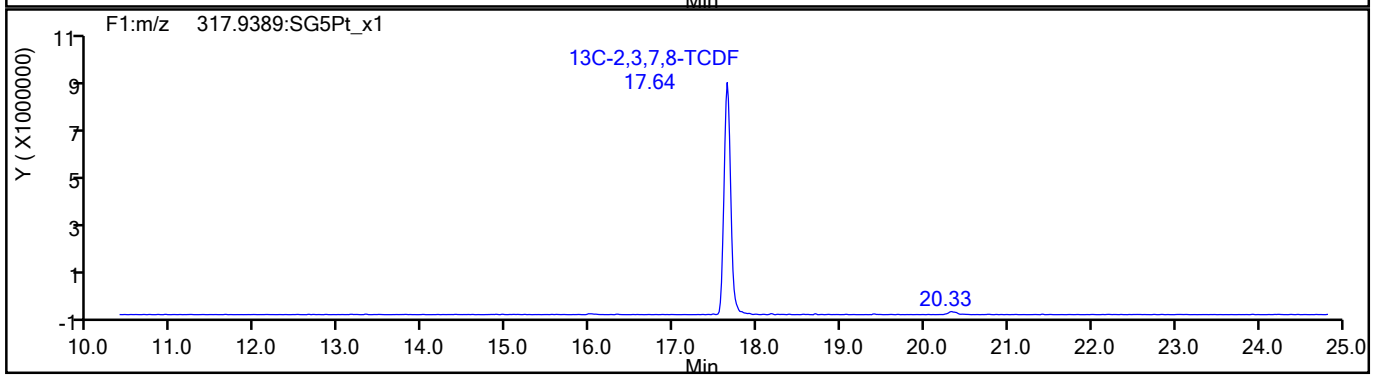

776227

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

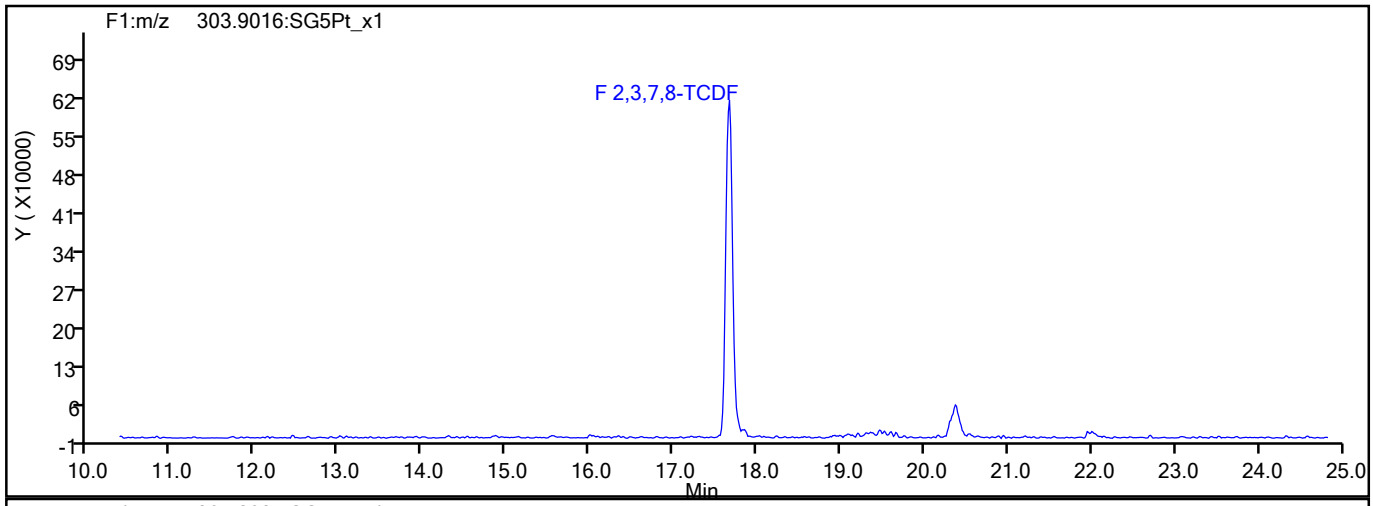

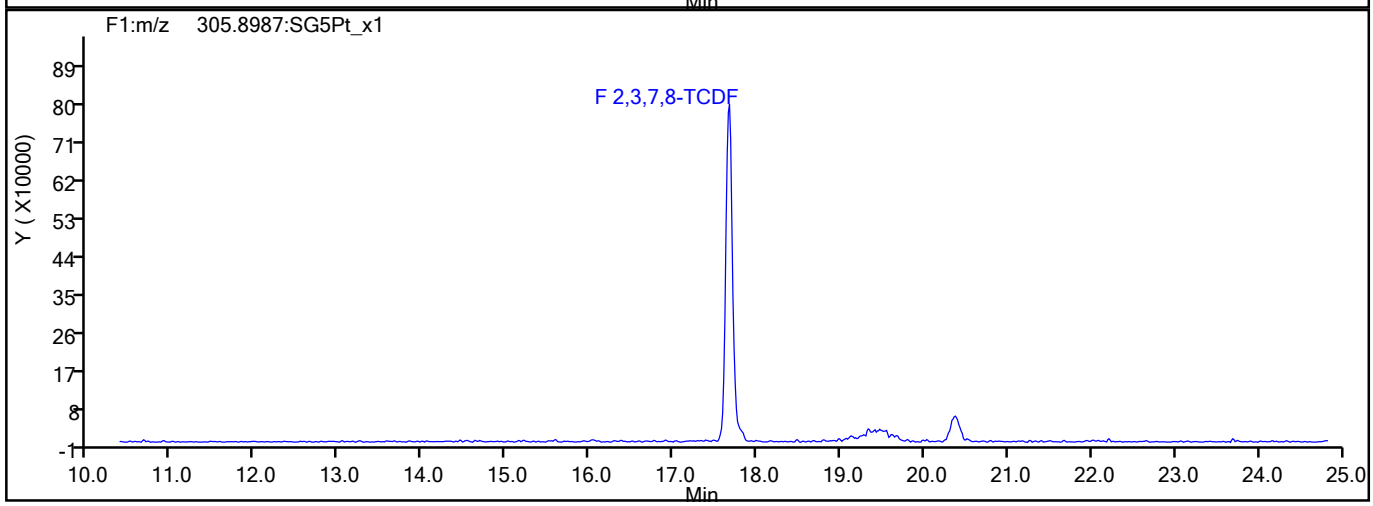

TCDF Interference Mass

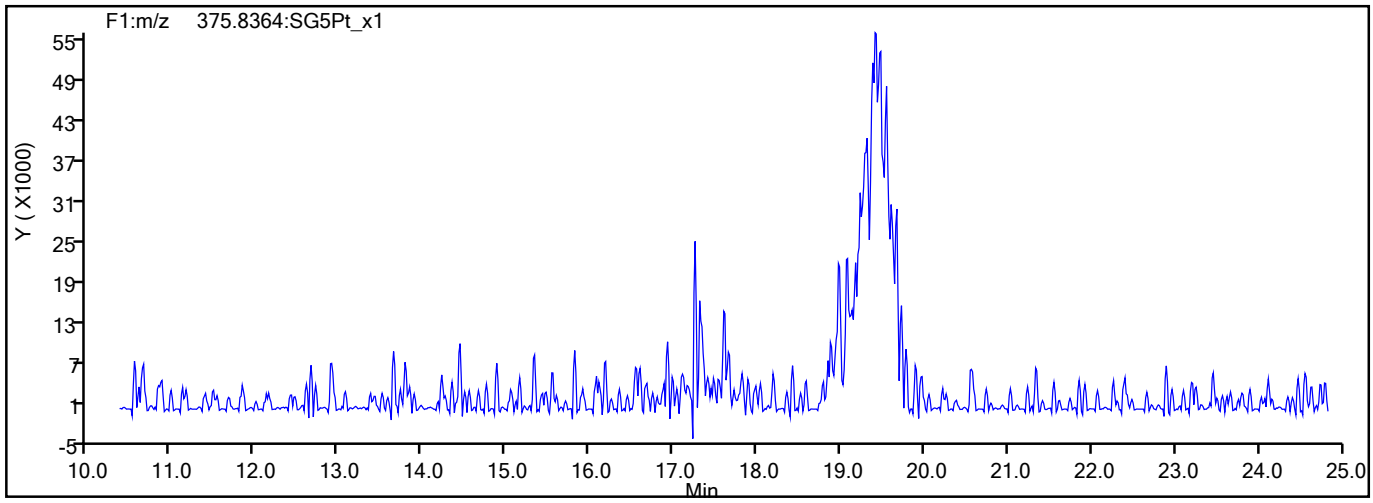

776228

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

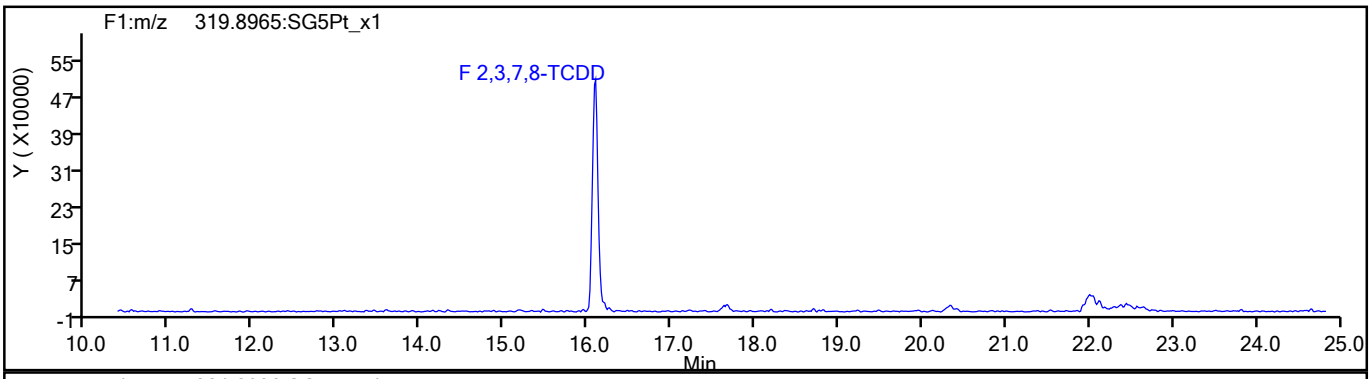

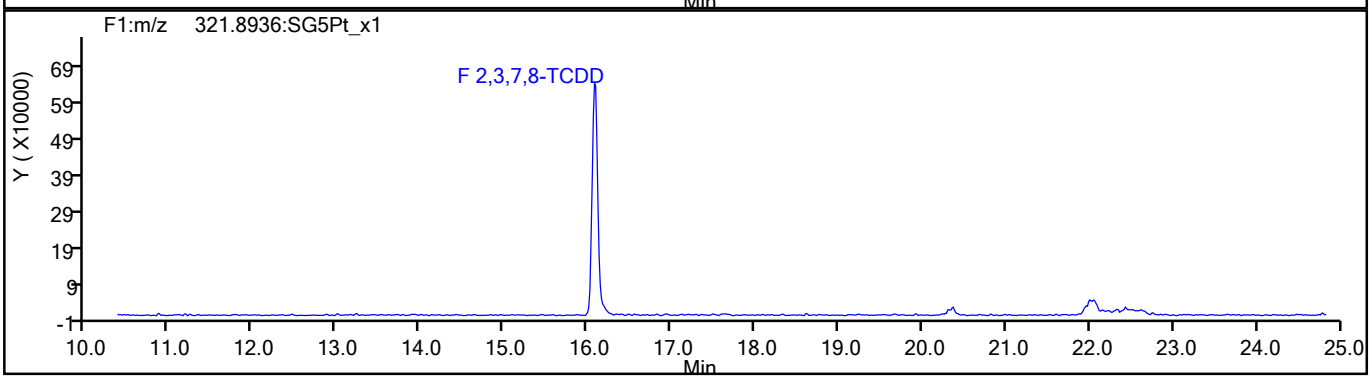

TCDD Standards

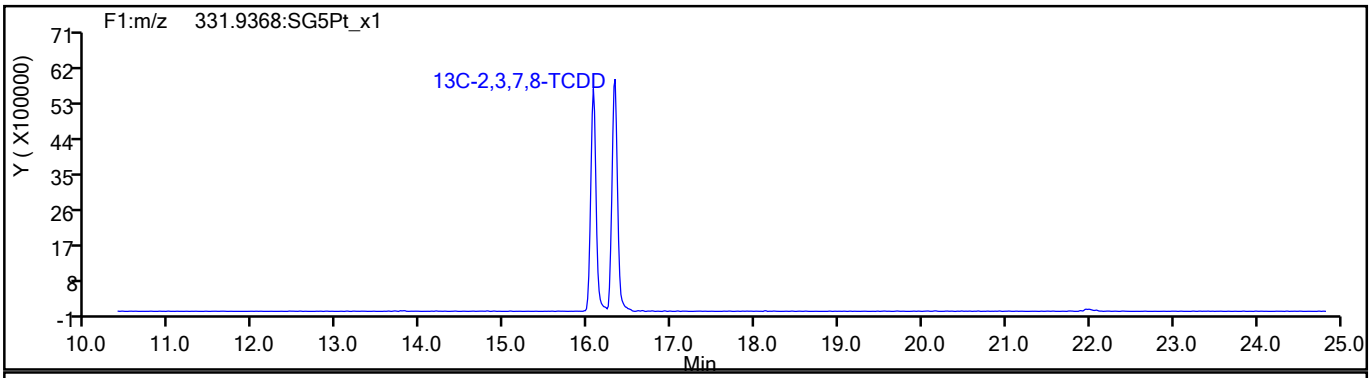

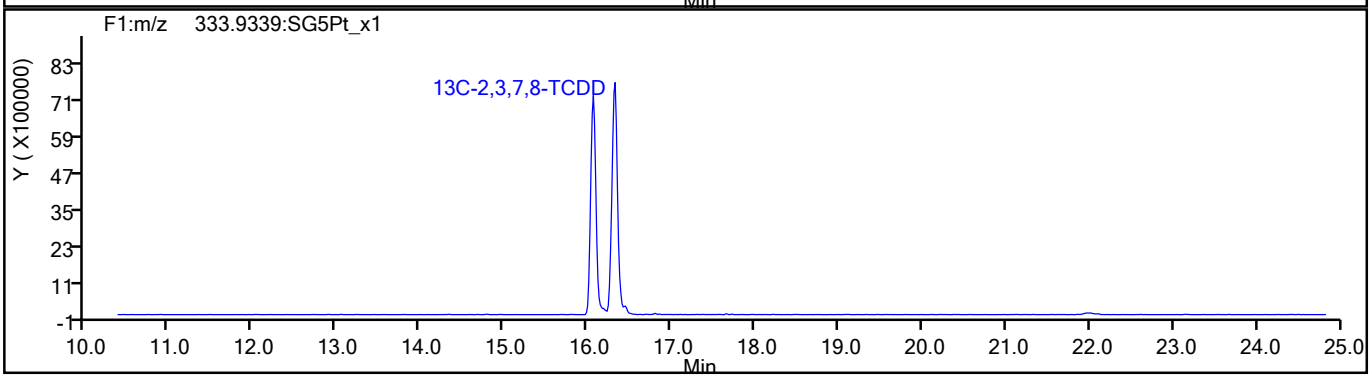

776229

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

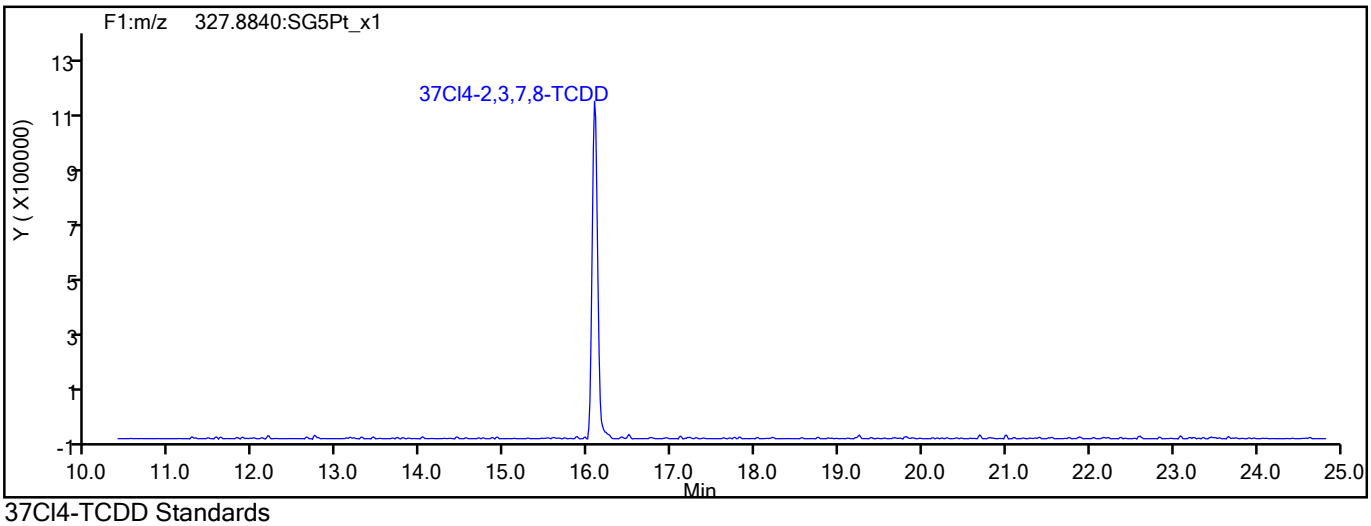

37Cl4-TCDD Standards

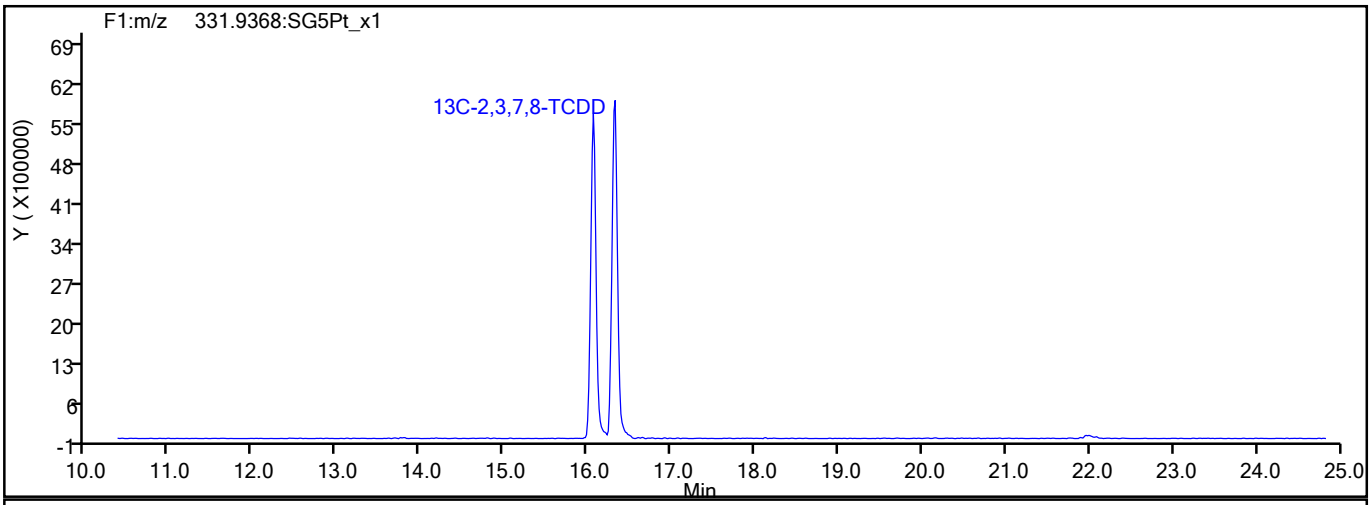

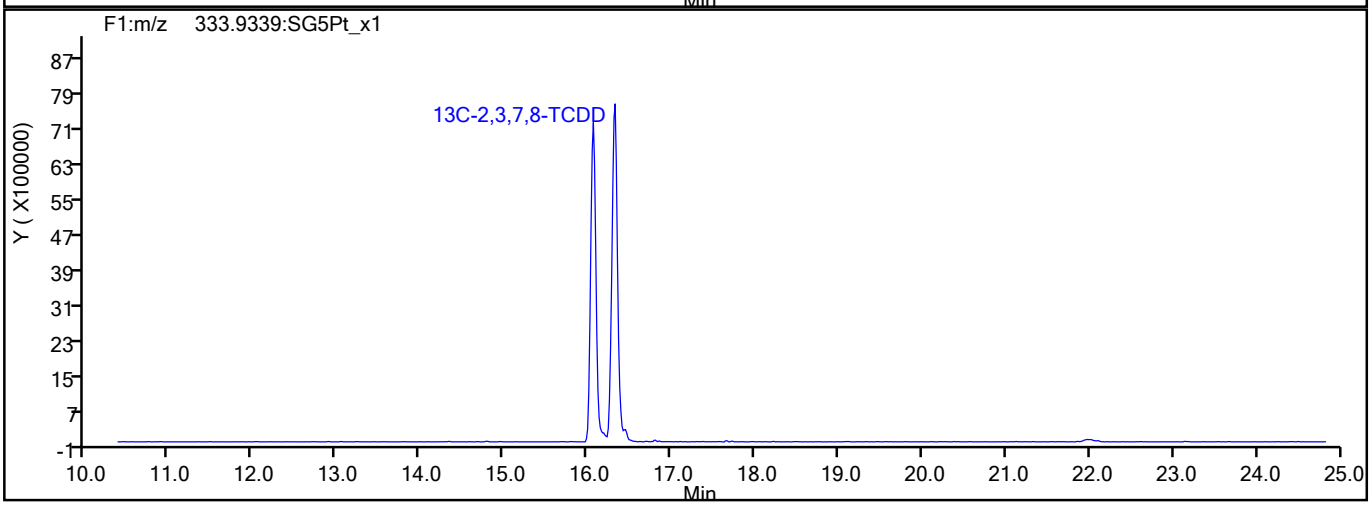

776230

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

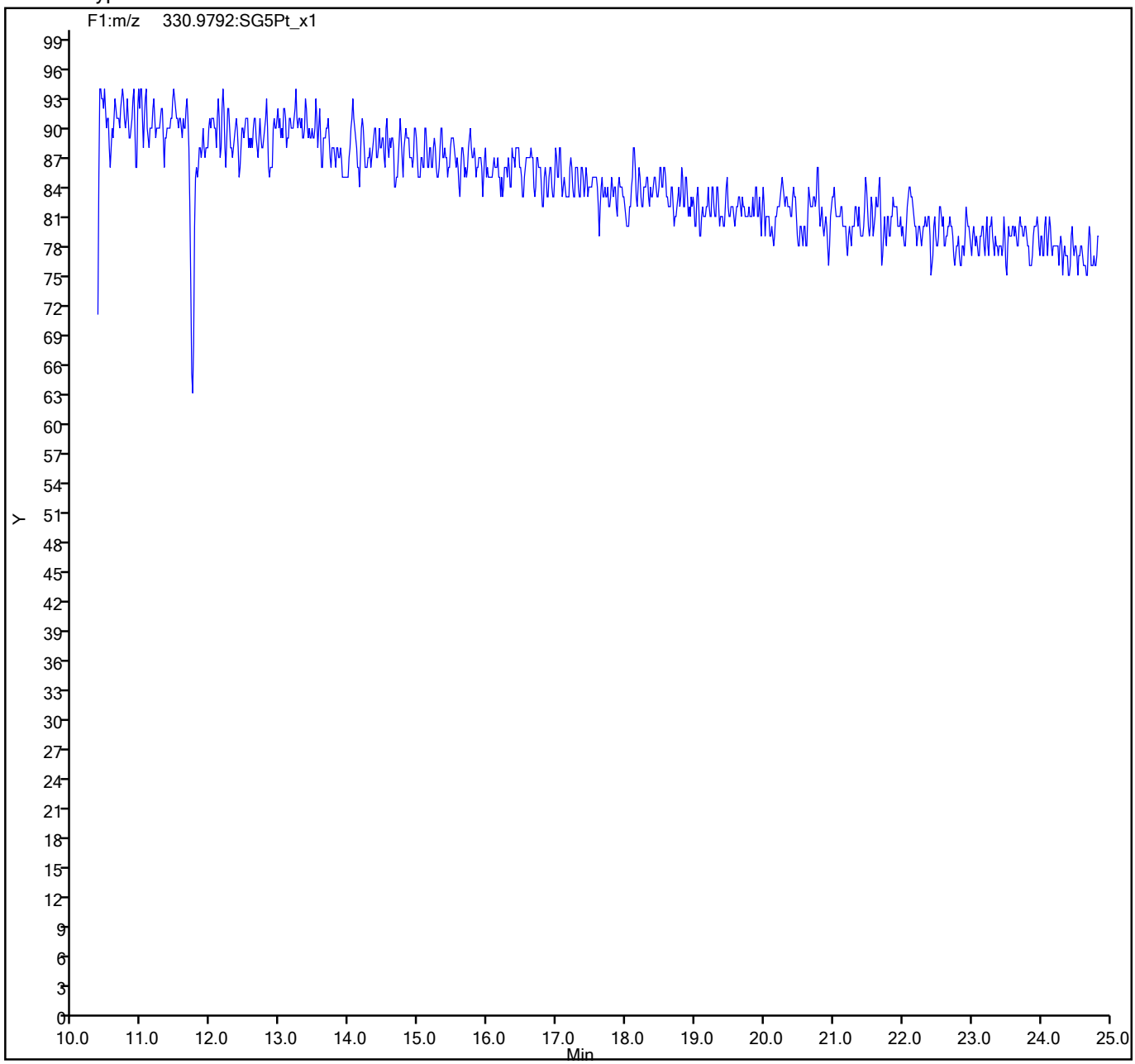

776231

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

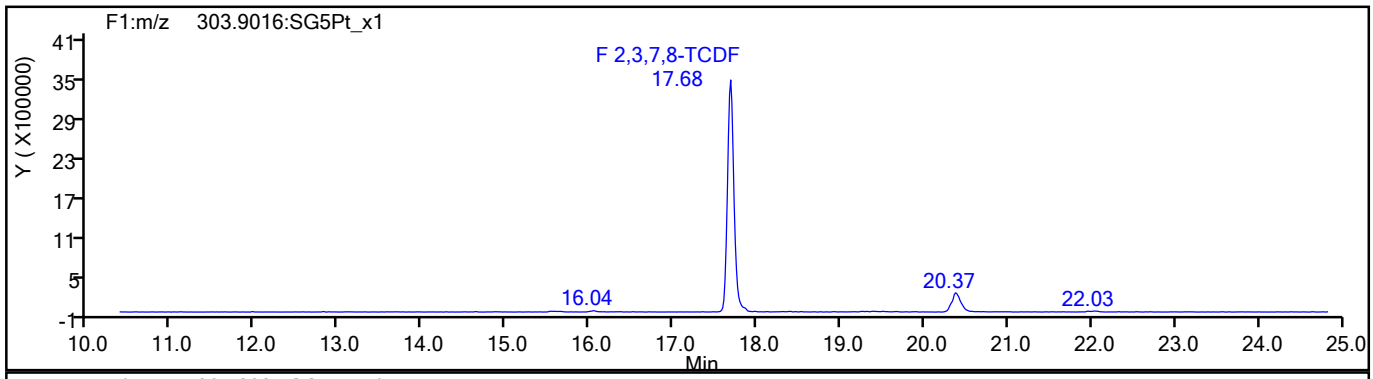

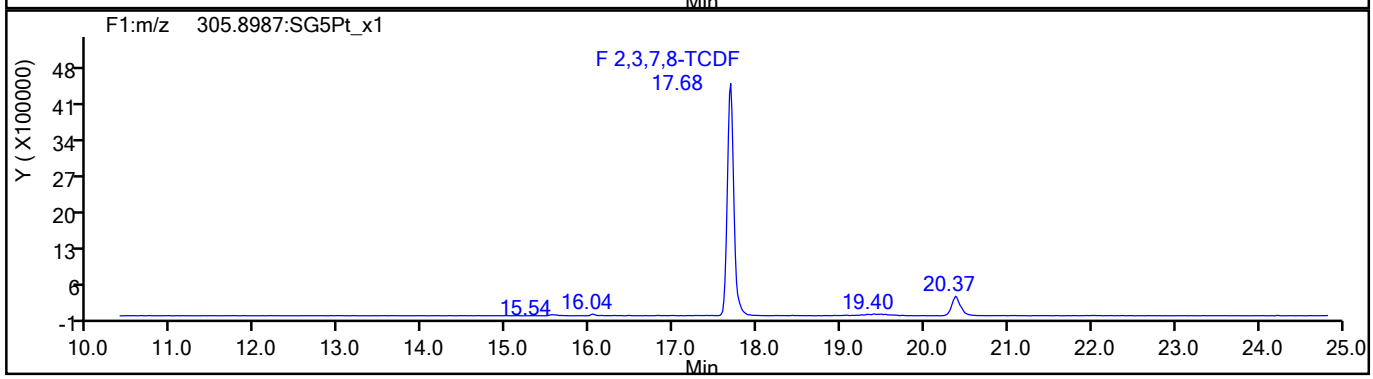

TCDF Standards

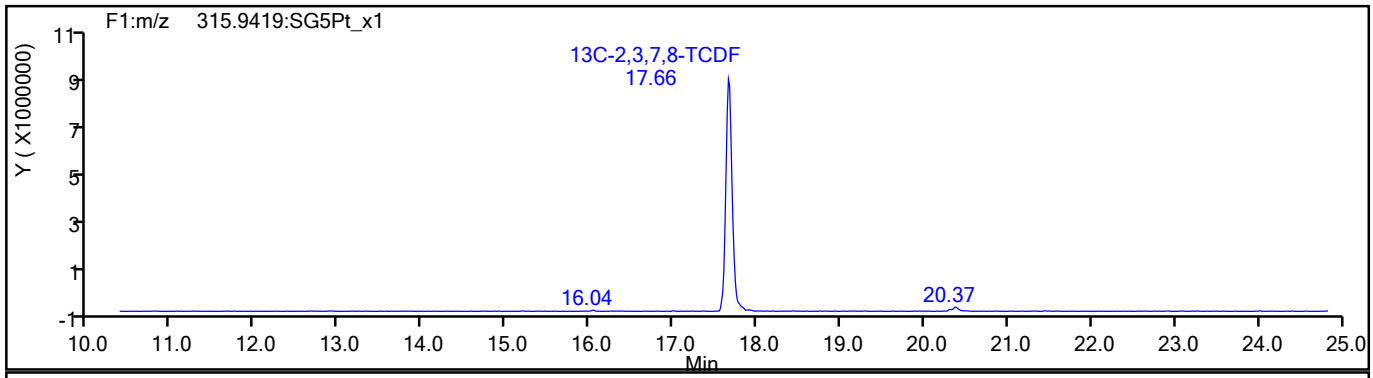

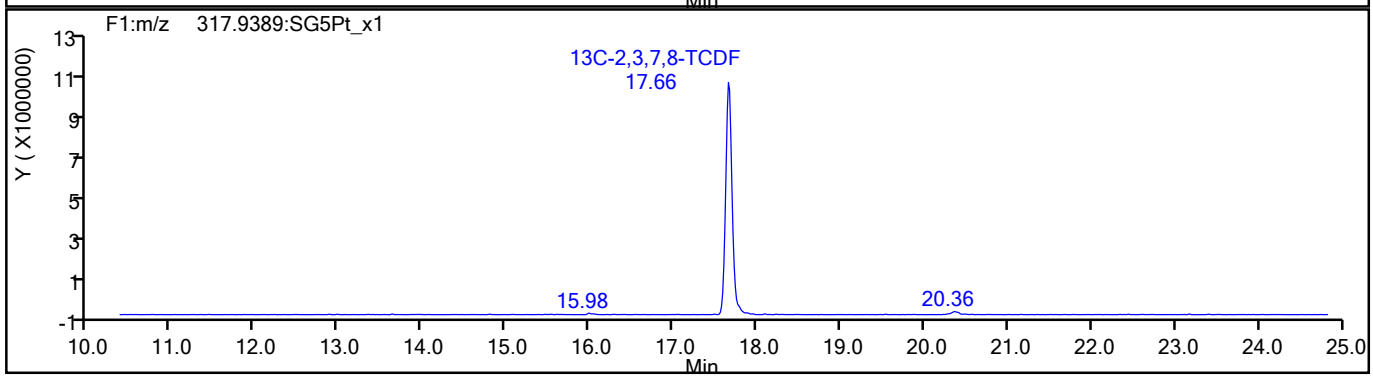

776234

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

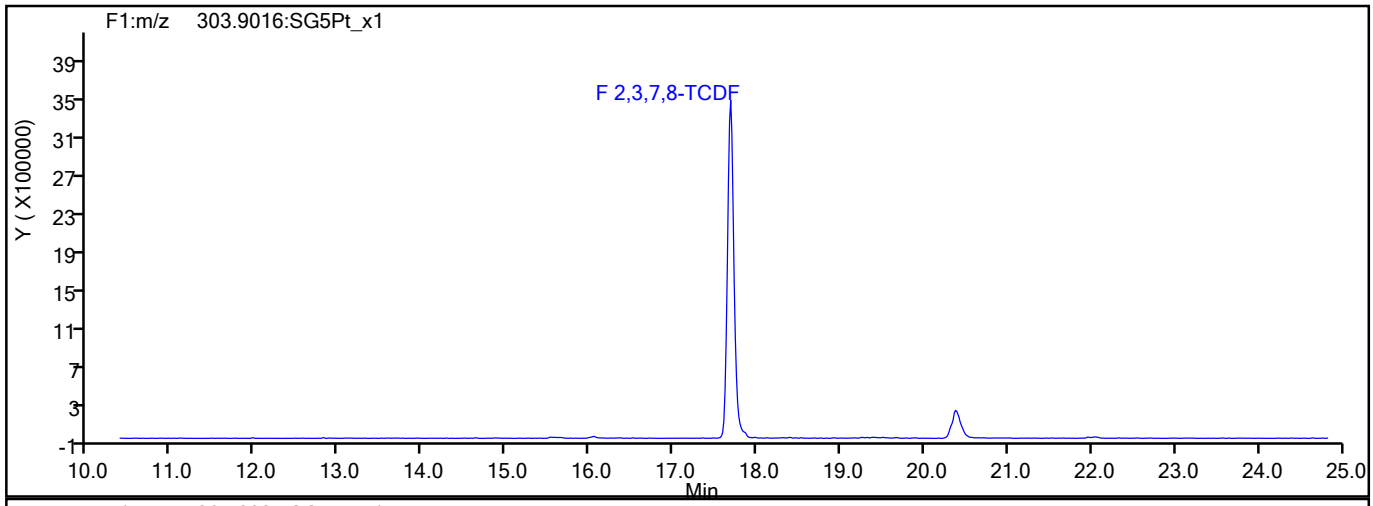

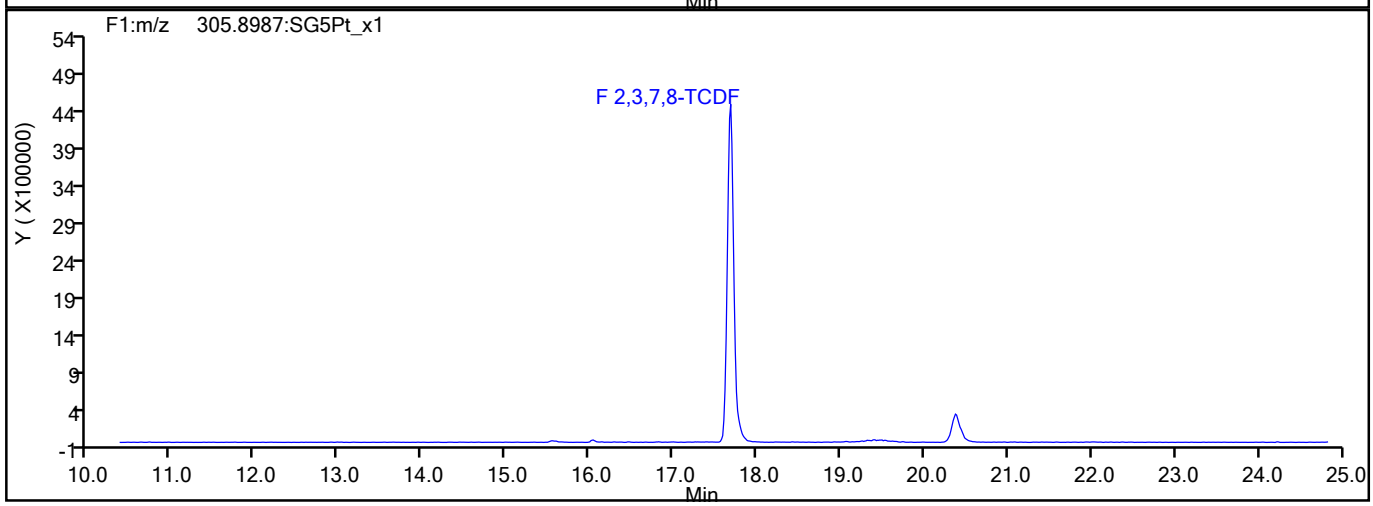

TCDF Interference Mass

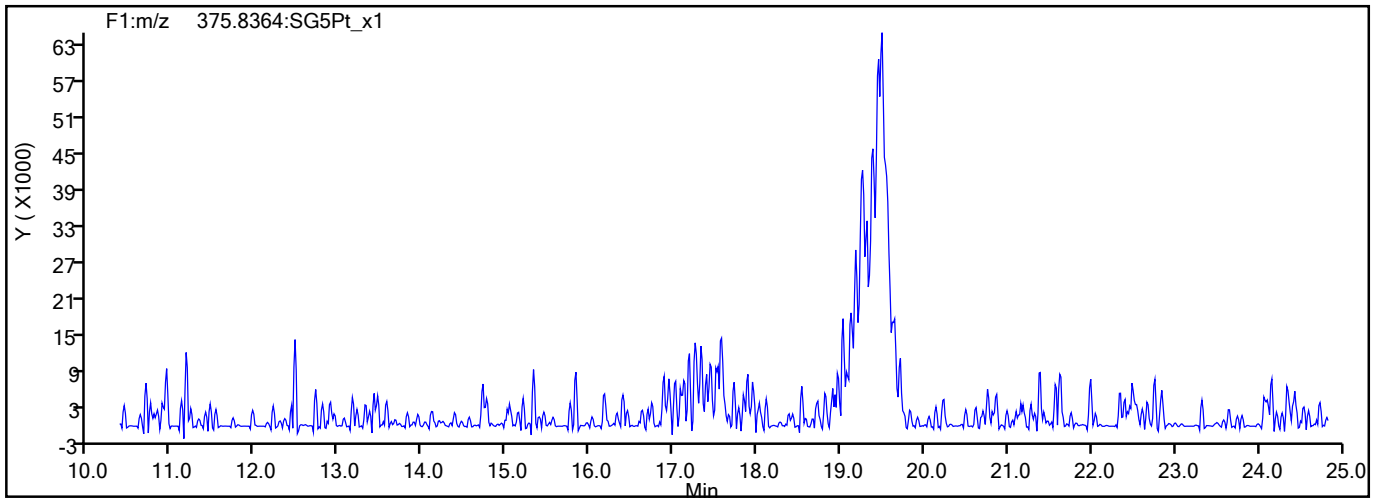

776235

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

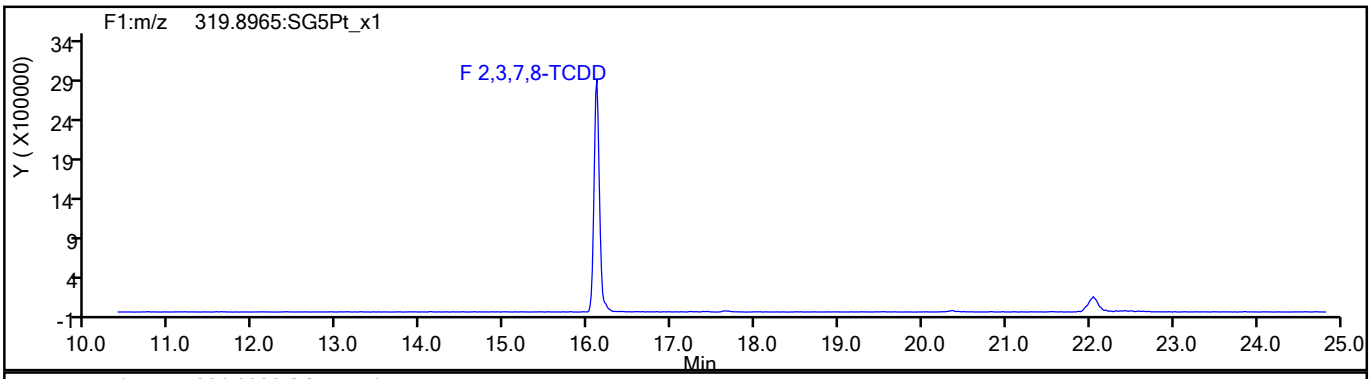

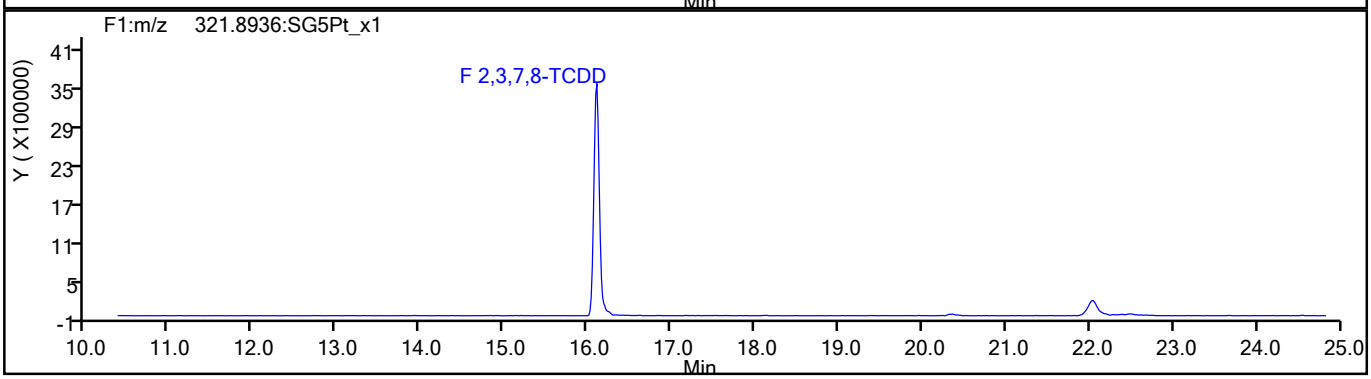

TCDD Standards

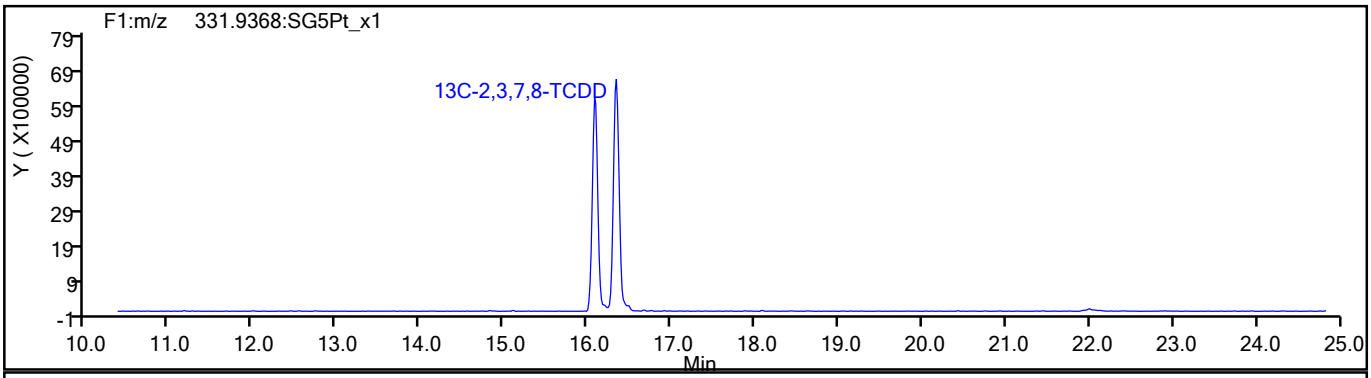

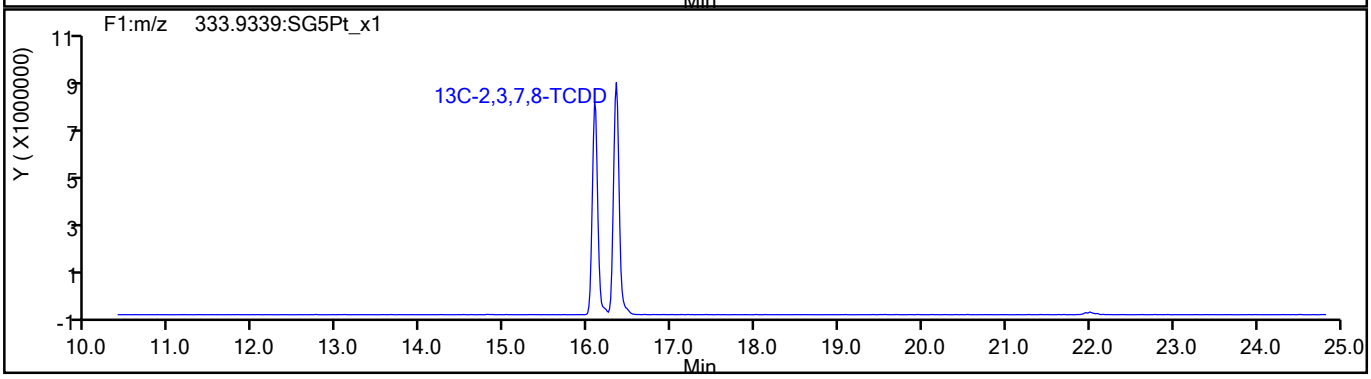

776236

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

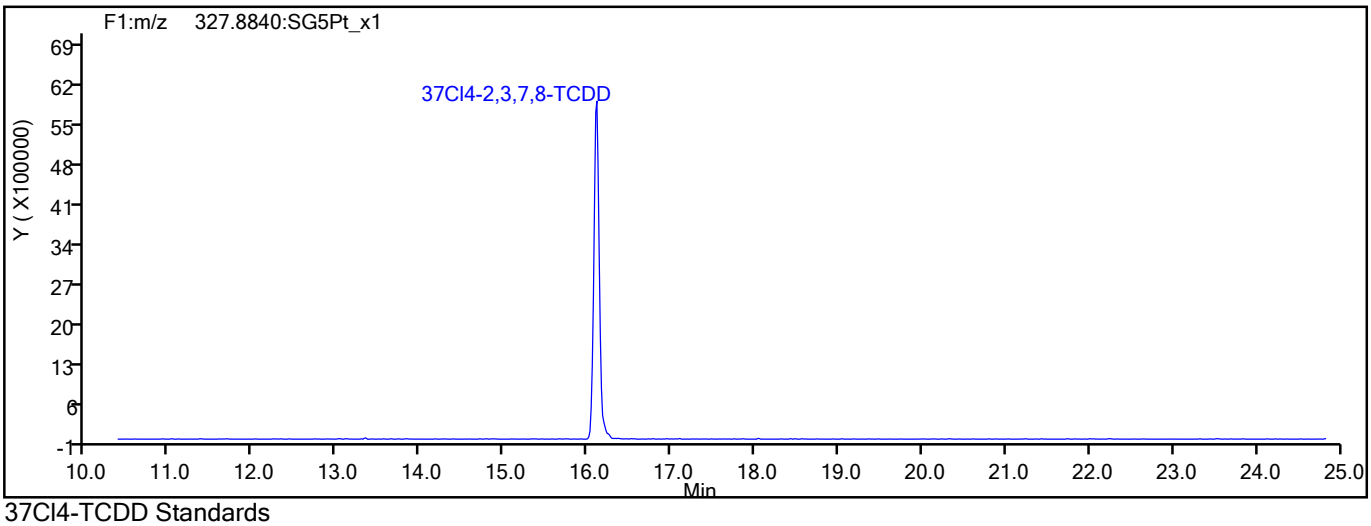

37Cl4-TCDD Standards

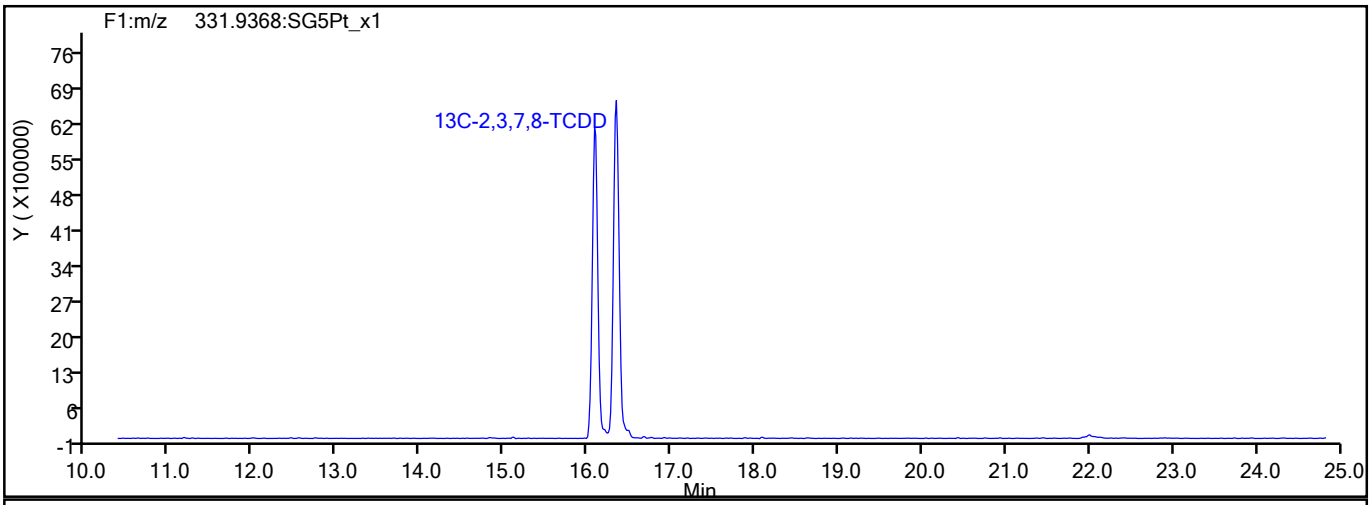

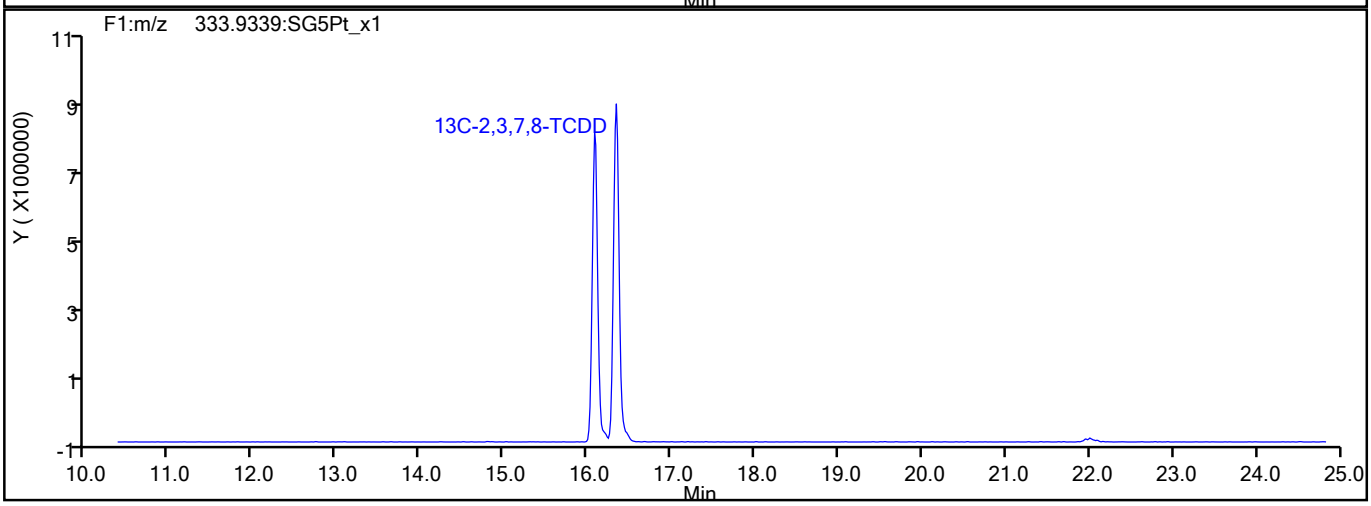

776237

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

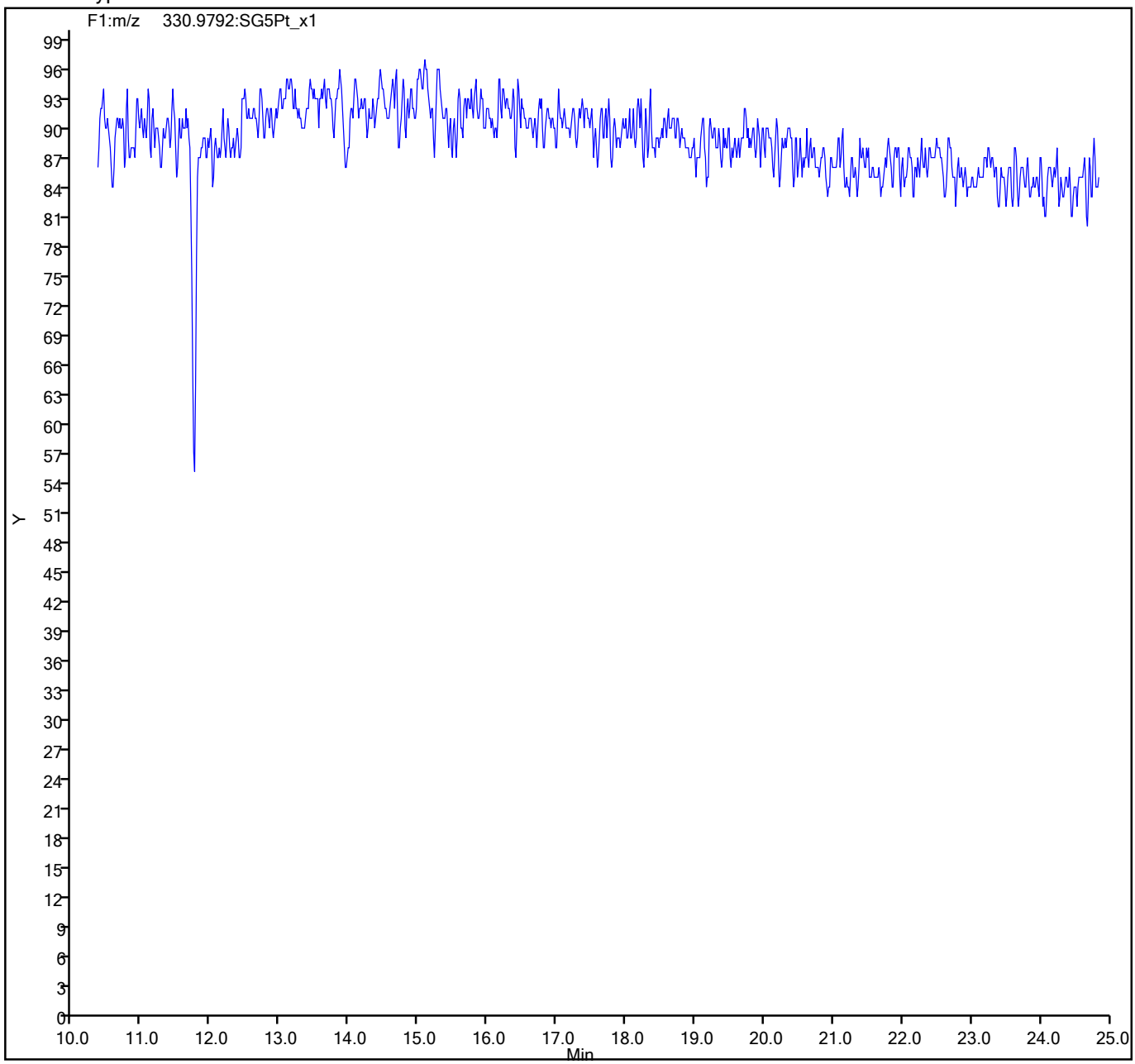

776238

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

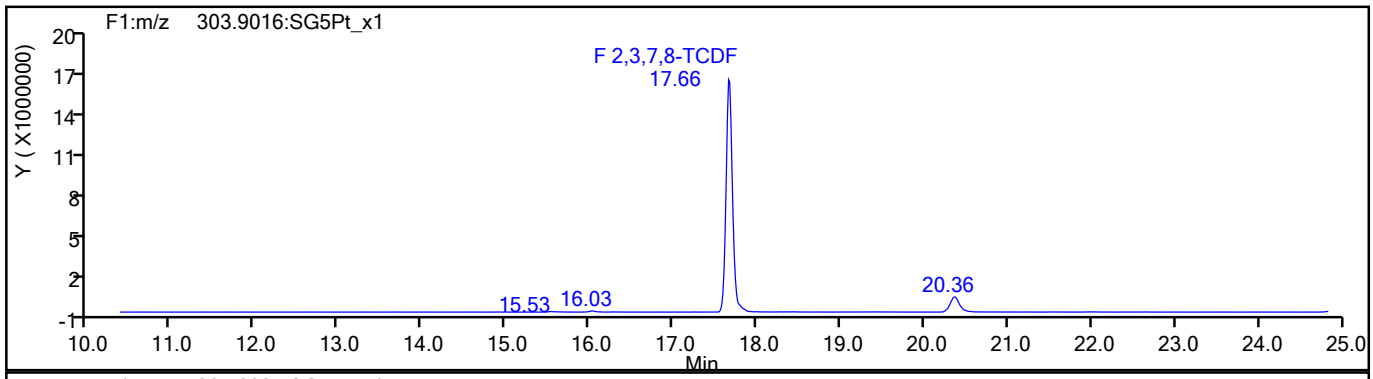

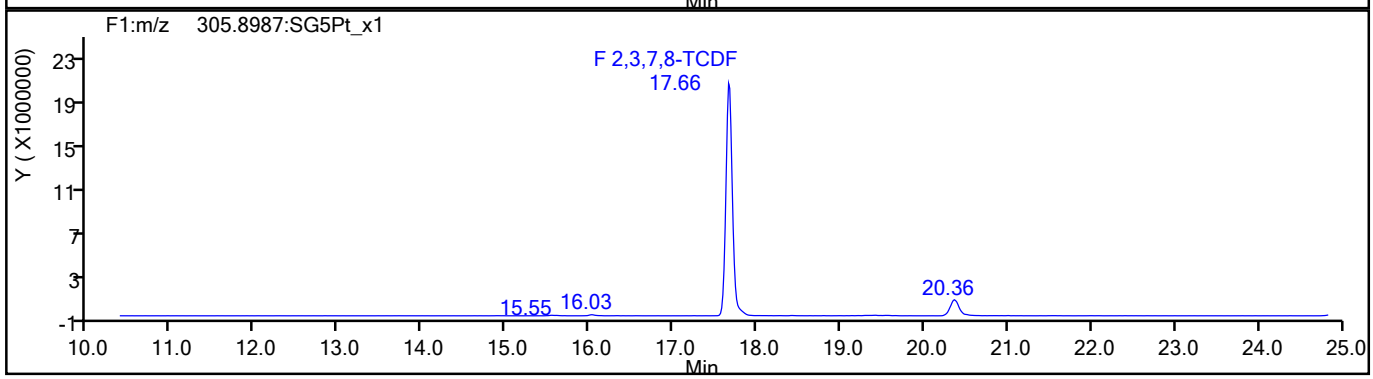

TCDF Standards

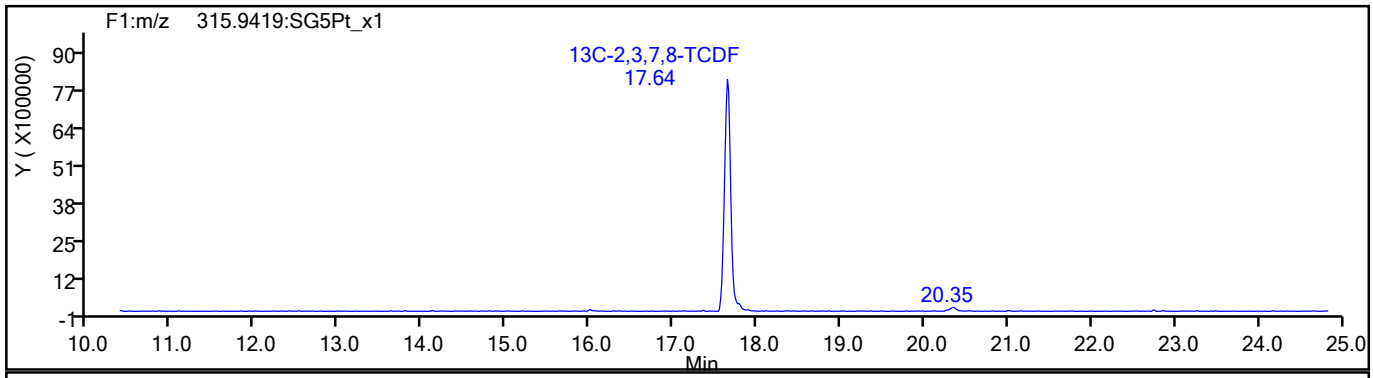

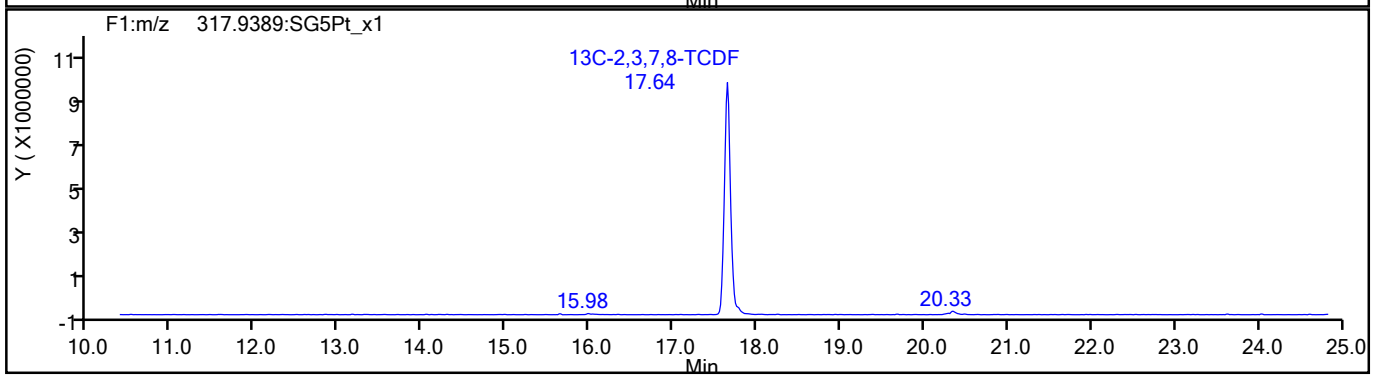

776241

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

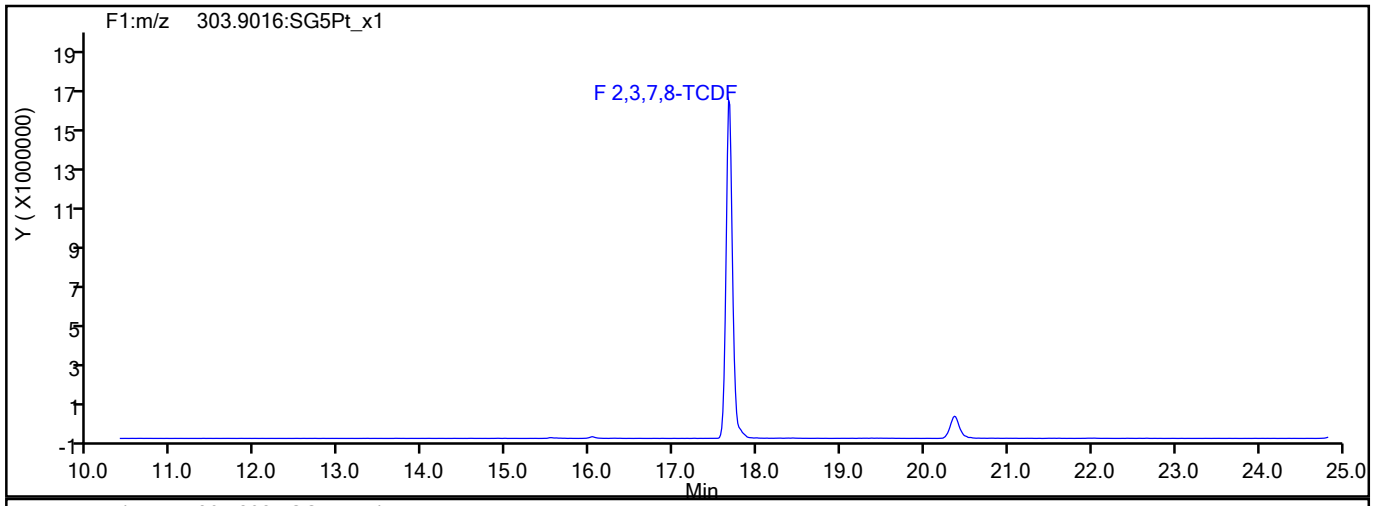

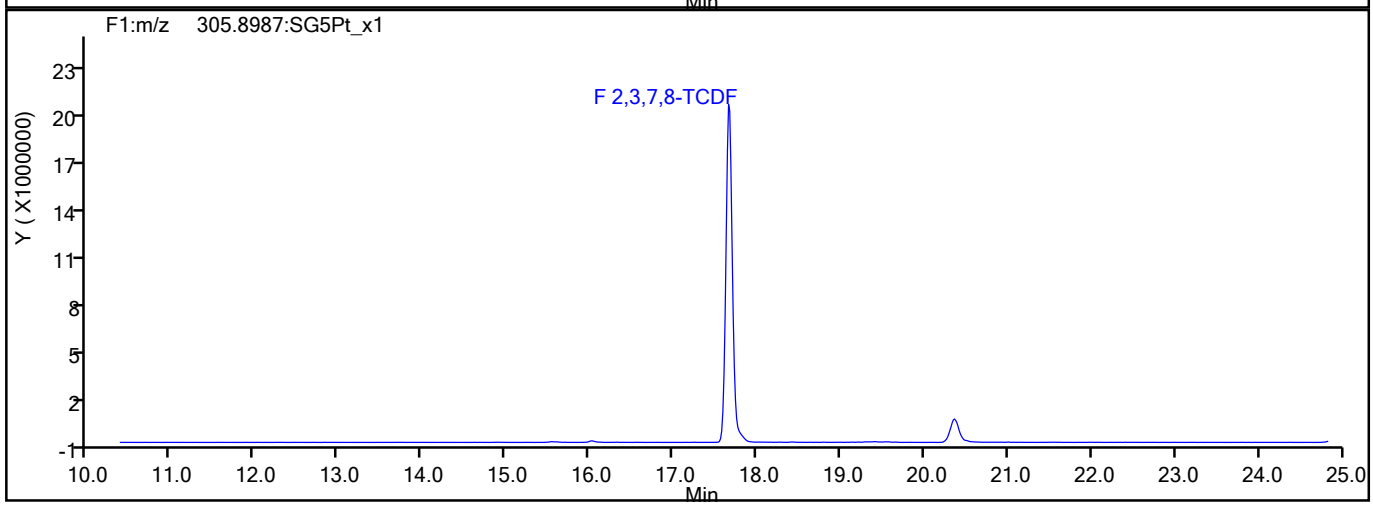

TCDF Interference Mass

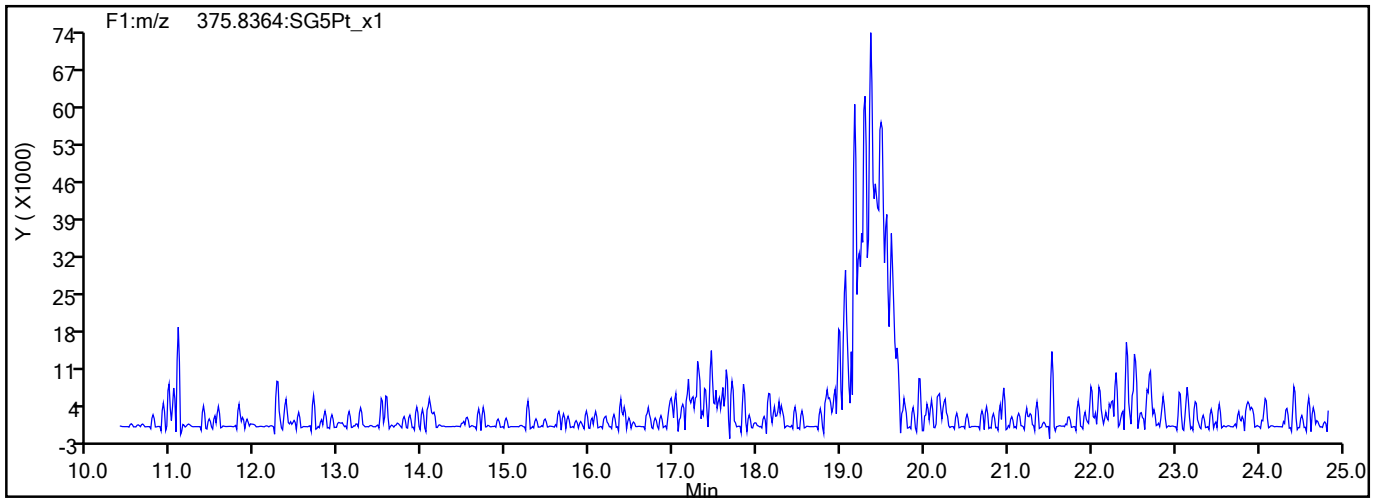

776242

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

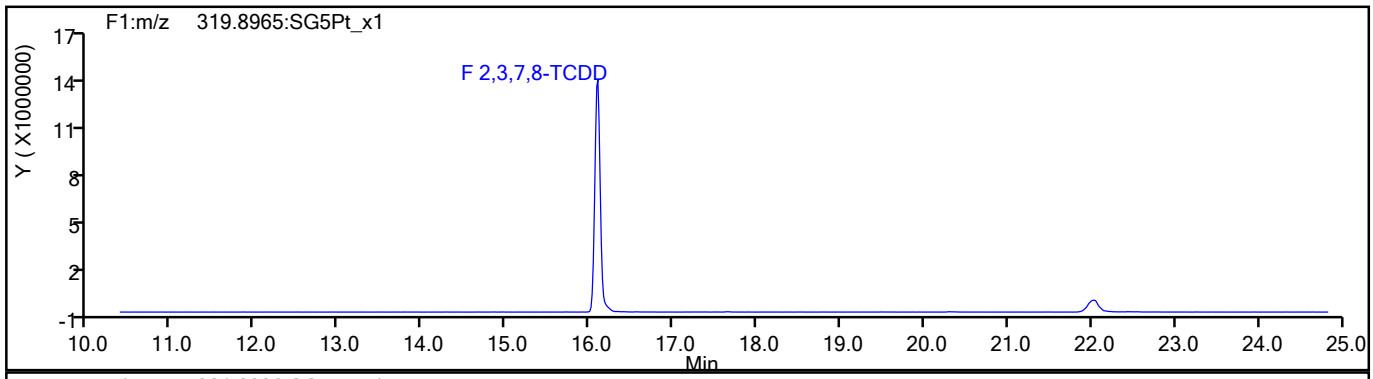

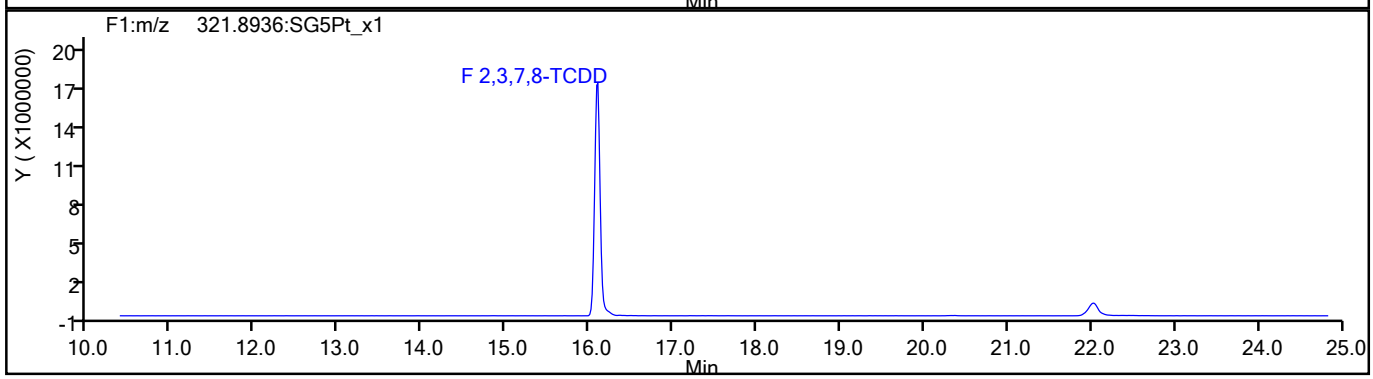

TCDD Standards

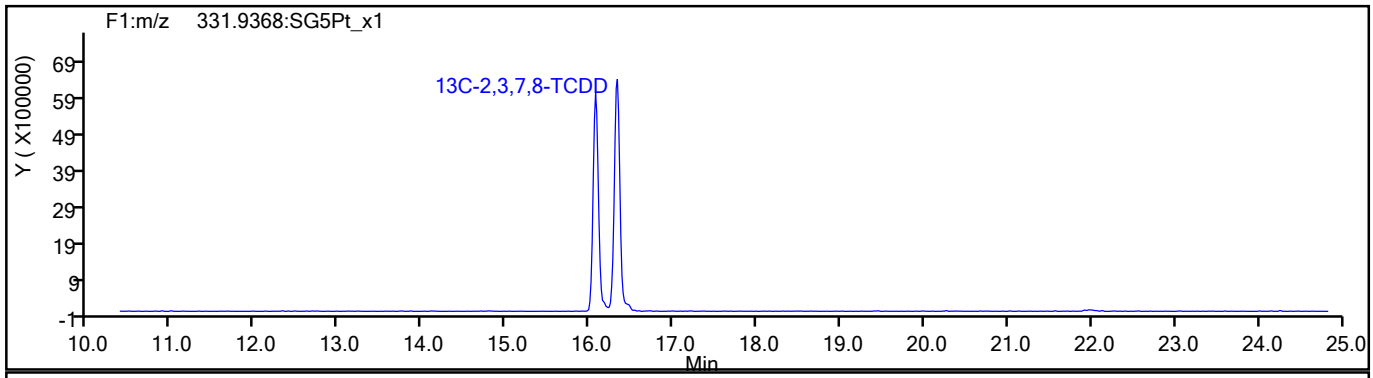

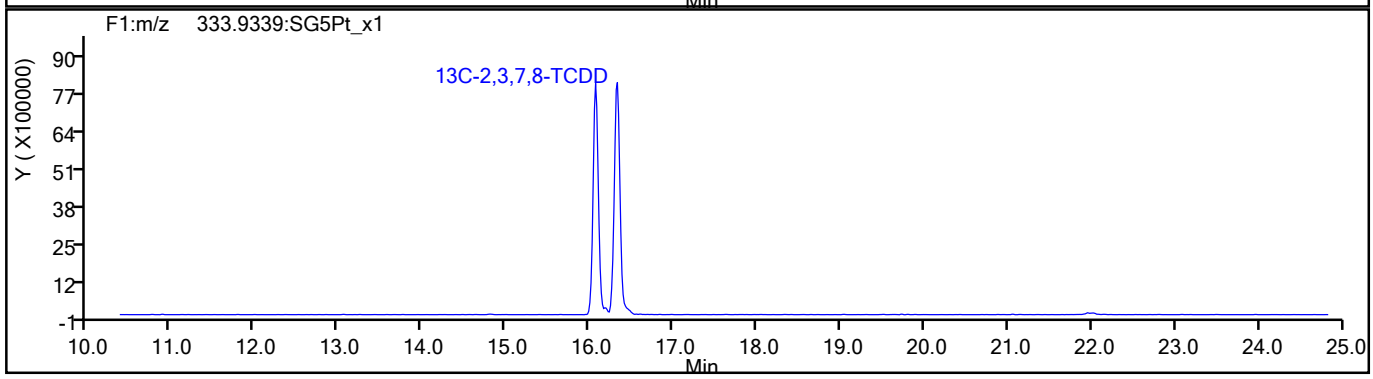

776243

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

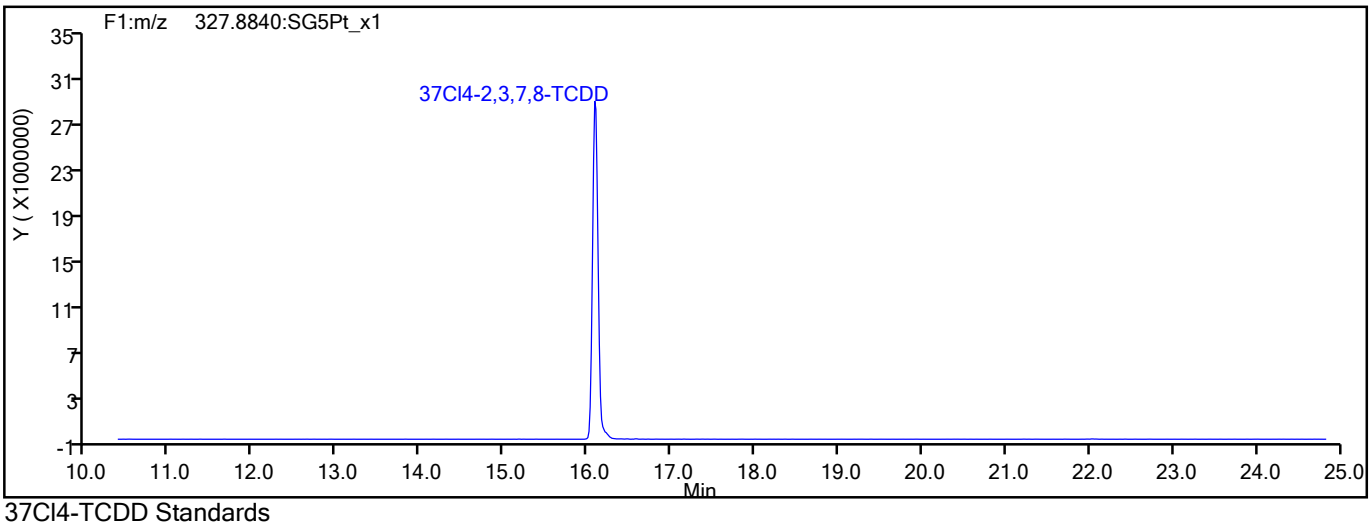

37Cl4-TCDD Standards

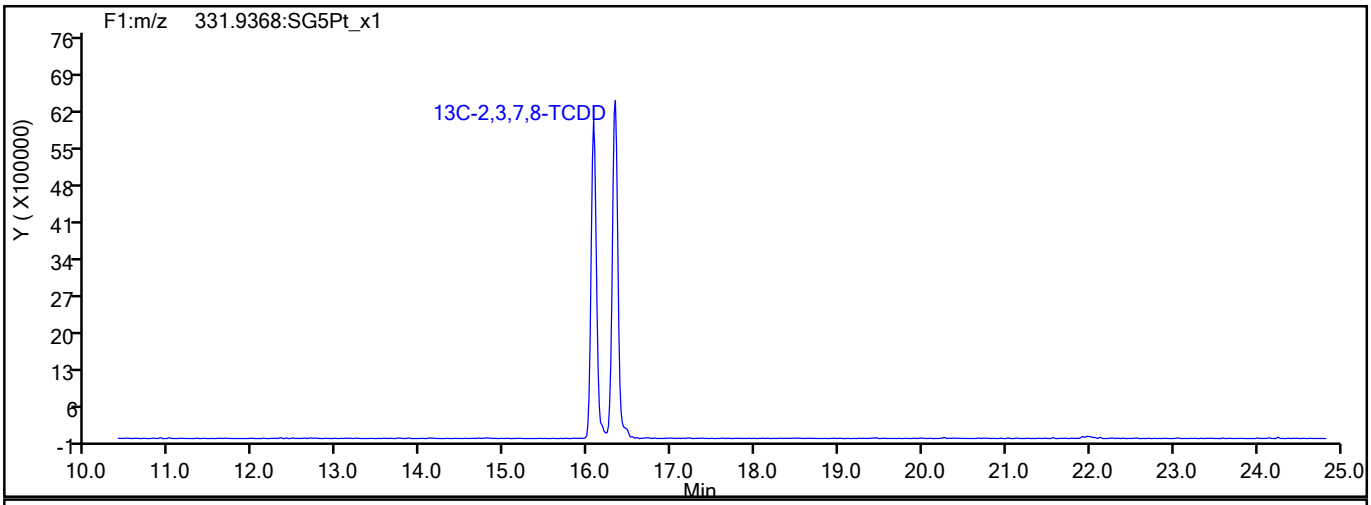

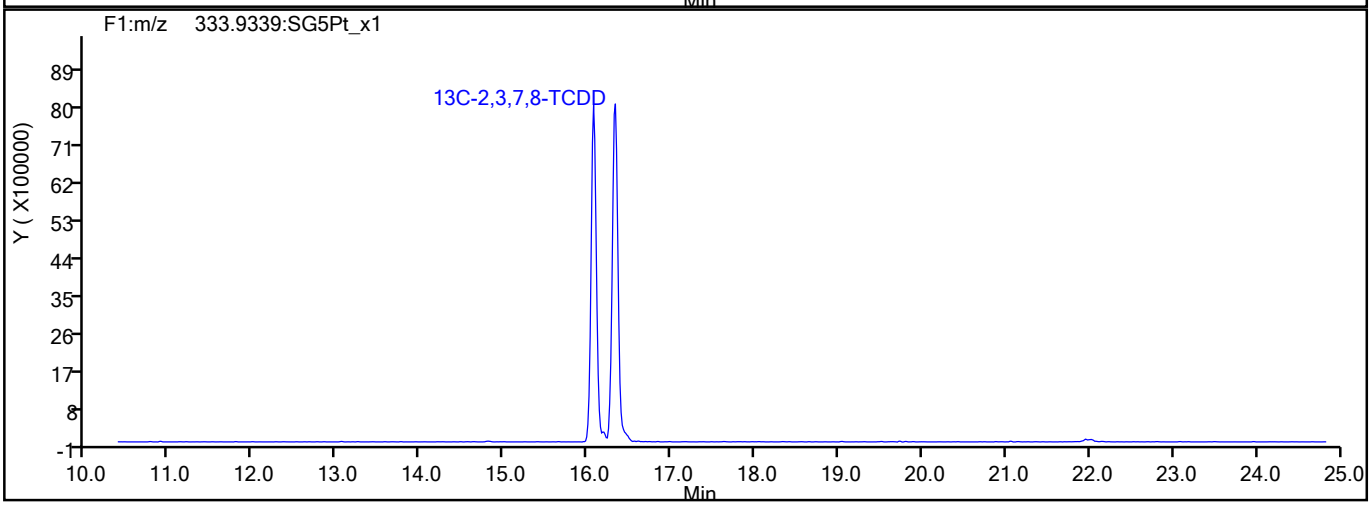

776244

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

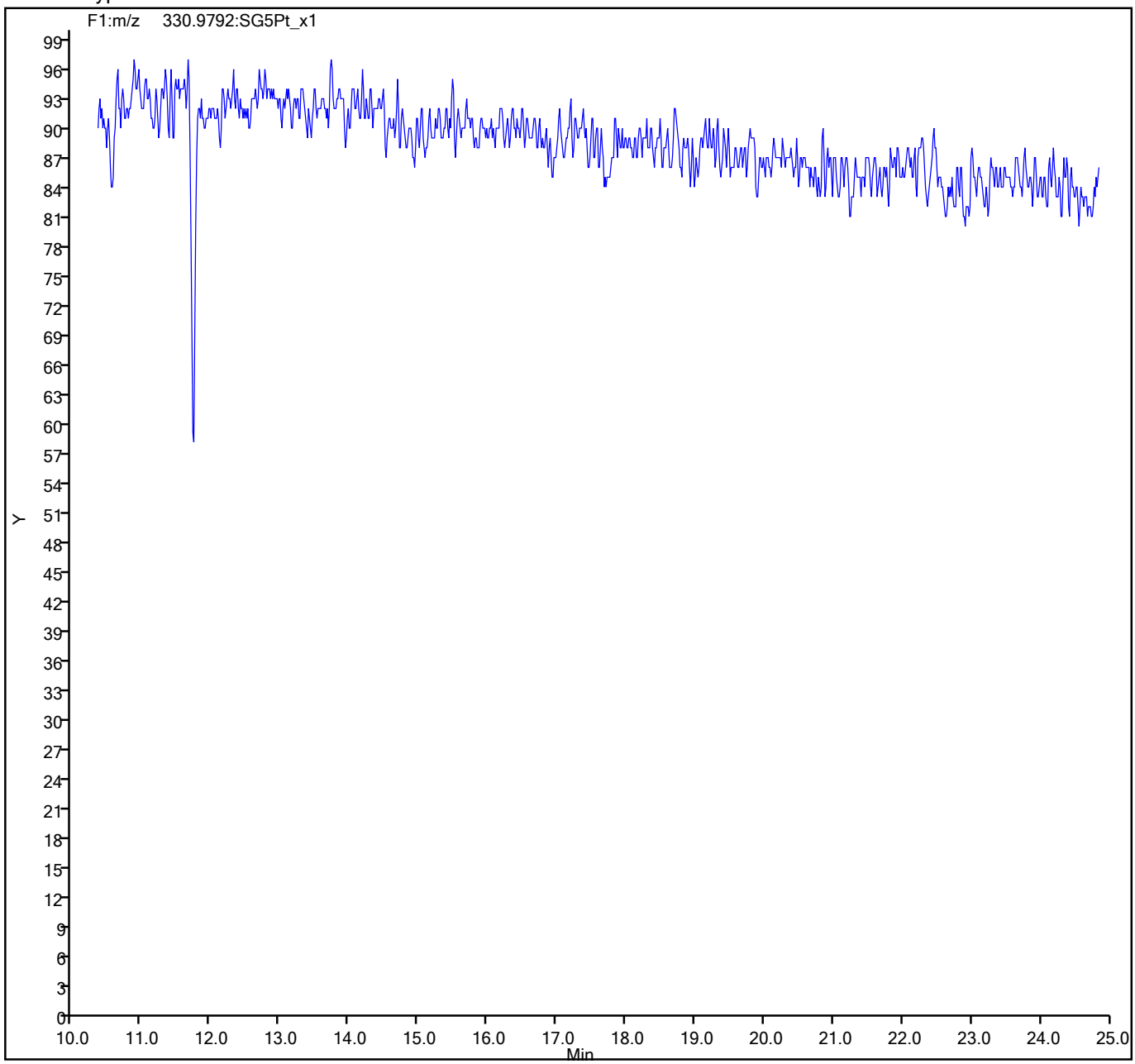

776245

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

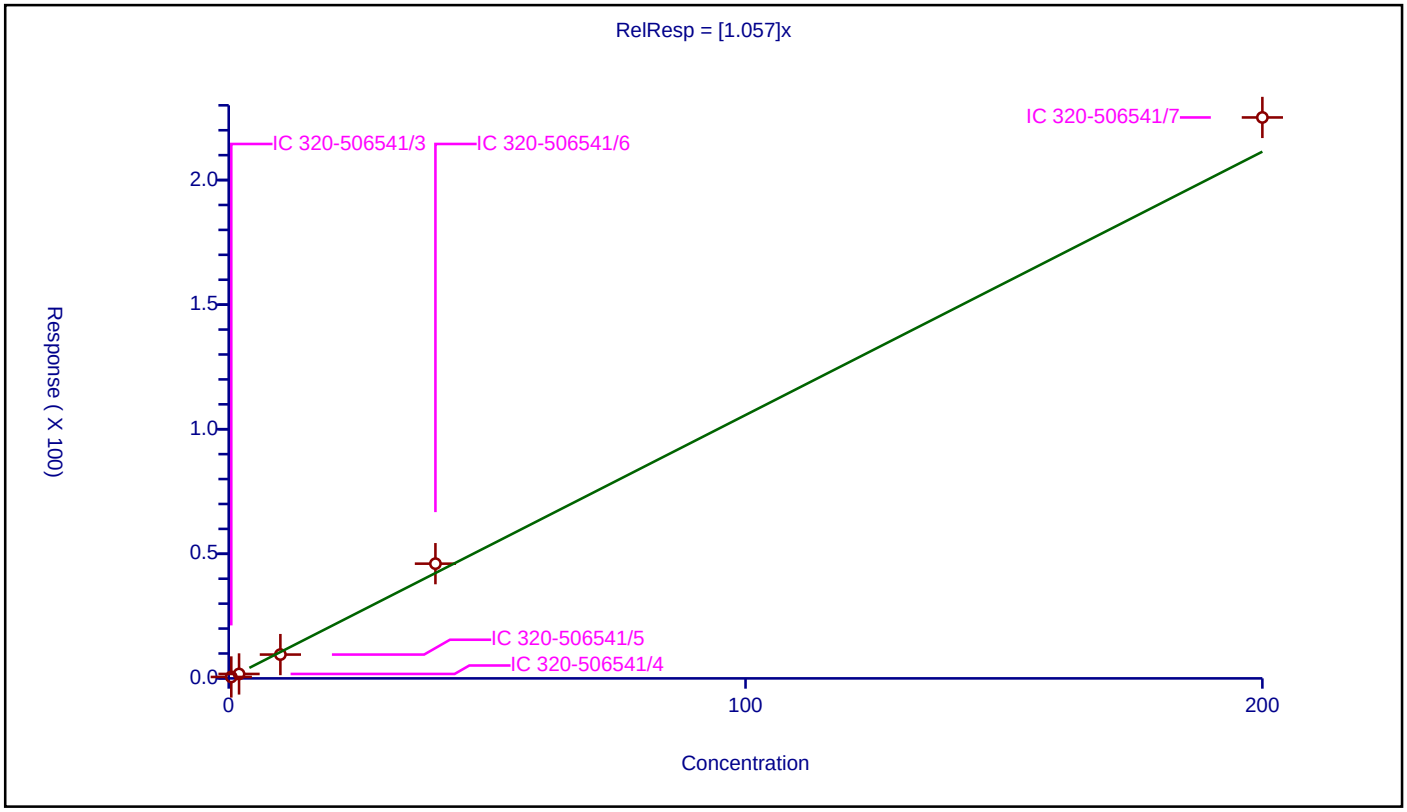

776246

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

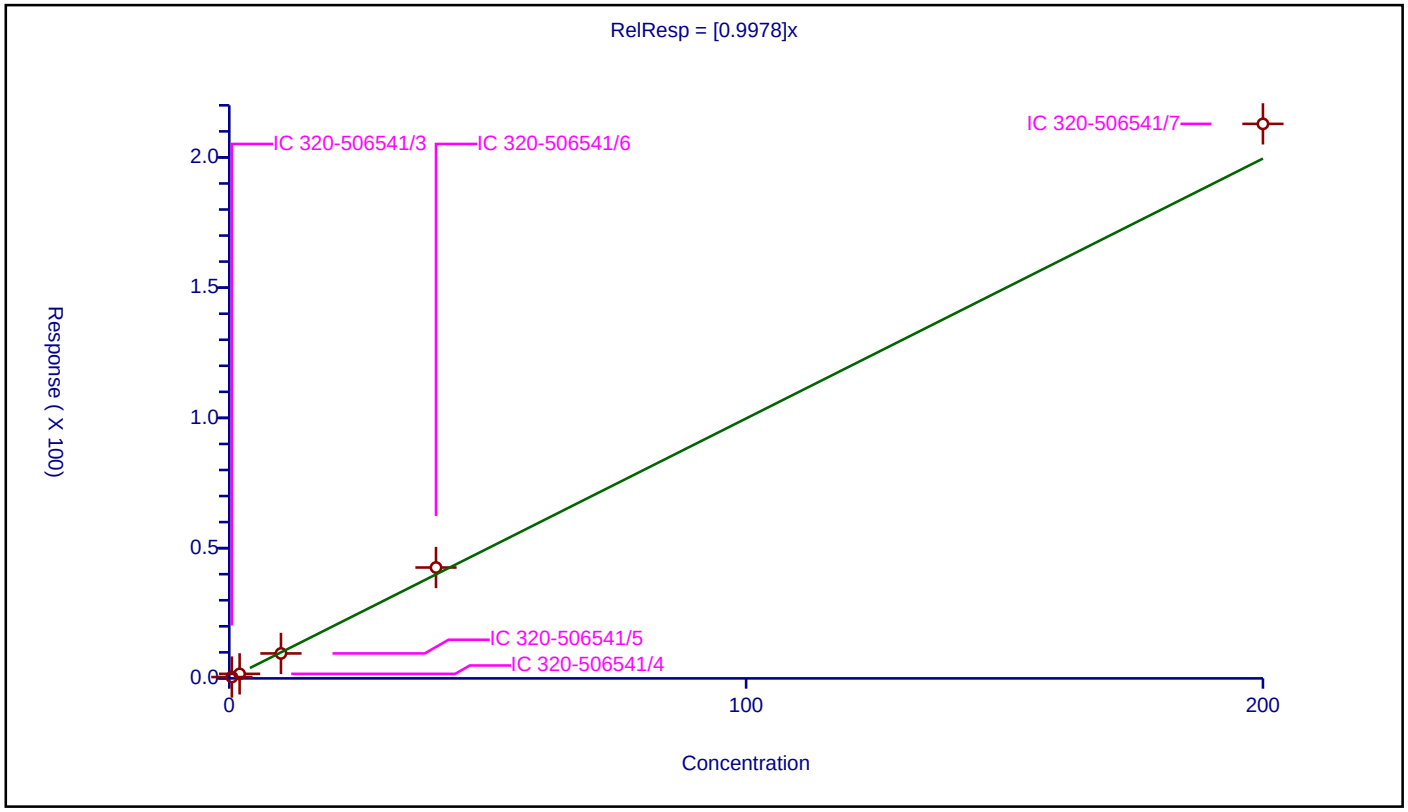

776247

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

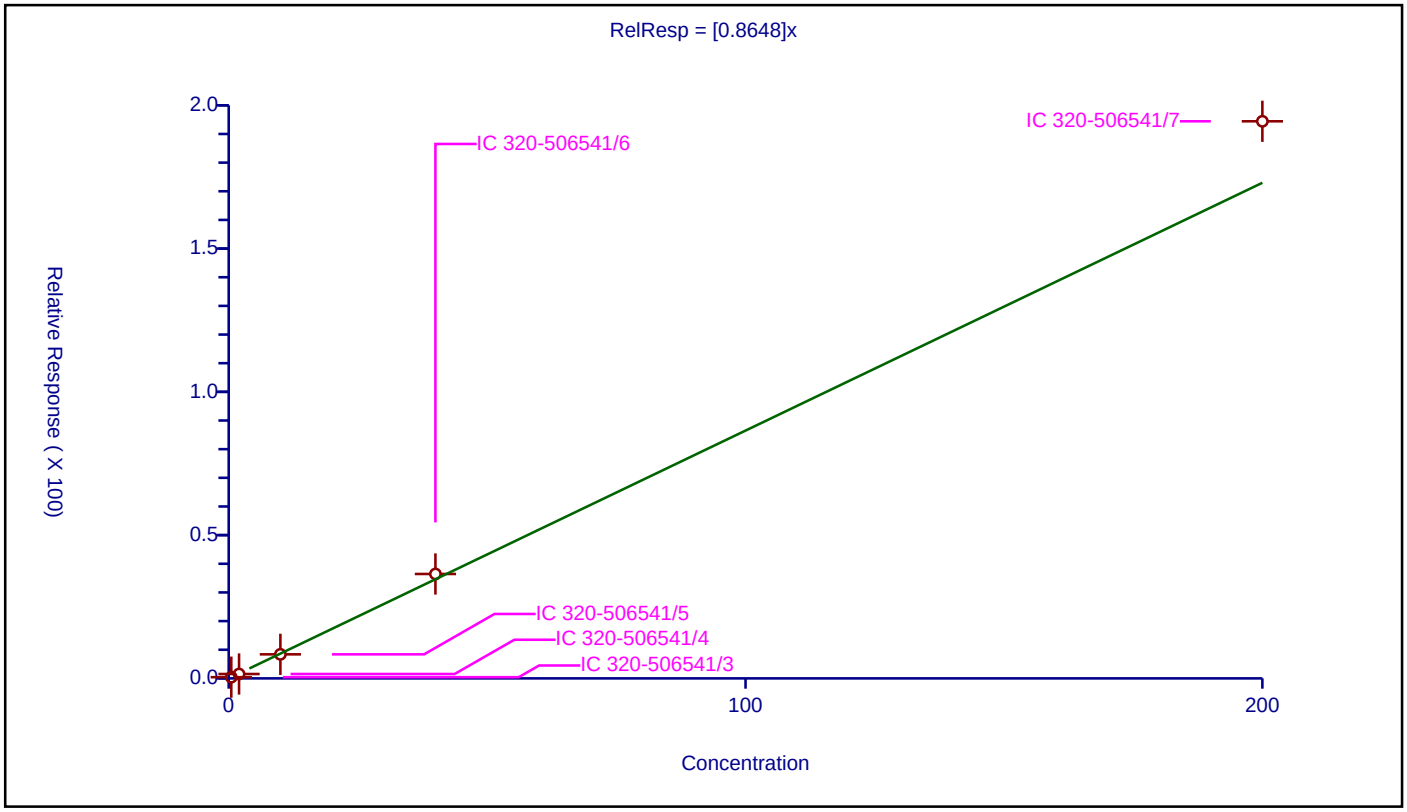

776248

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.2335	0.9635	1.0464	1.1217	1.0358	AveID		1.0802				9.5		20.0			
2,3,7,8-TCDD	1.1335	0.9559	1.0998	1.1237	1.0638	AveID		1.0753				6.7		20.0			
1,2,3,7,8-PeCDF	1.1920	0.9412	1.0373	1.0897	1.0112	AveID		1.0543				8.9		20.0			
2,3,4,7,8-PeCDF	1.1233	0.8984	0.9921	1.0636	0.9619	AveID		1.0079				8.7		20.0			
1,2,3,7,8-PeCDD	1.0719	0.9520	1.0685	1.1015	1.0385	AveID		1.0465				5.5		20.0			
1,2,3,4,7,8-HxCDF	1.2226	1.0072	1.1873	1.2073	1.1126	AveID		1.1474				7.8		20.0			
1,2,3,6,7,8-HxCDF	1.3374	1.0951	1.2359	1.2506	1.1700	AveID		1.2178				7.5		20.0			
2,3,4,6,7,8-HxCDF	1.3135	1.1007	1.2368	1.2623	1.1590	AveID		1.2145				7.0		20.0			
1,2,3,4,7,8-HxCDD	1.1235	0.9702	1.0749	1.1249	1.0104	AveID		1.0608				6.5		20.0			
1,2,3,6,7,8-HxCDD	1.0557	0.8863	1.0416	1.0264	0.9567	AveID		0.9933				7.1		20.0			
1,2,3,7,8,9-HxCDD	1.3093	0.9566	1.1202	1.1079	1.0532	AveID		1.1094				11.6		20.0			
1,2,3,7,8,9-HxCDF	1.3581	1.1239	1.2532	1.2757	1.1897	AveID		1.2401				7.1		20.0			
1,2,3,4,6,7,8-HpCDF	1.5412	1.2896	1.4855	1.5240	1.3700	AveID		1.4421				7.5		20.0			
1,2,3,4,6,7,8-HpCDD	1.1377	0.9531	1.0459	1.0970	1.0178	AveID		1.0503				6.8		20.0			
1,2,3,4,7,8,9-HpCDF	1.4057	1.1770	1.3459	1.3937	1.2235	AveID		1.3092				7.9		20.0			
OCDD	1.1328	0.9954	1.0870	1.1027	0.9920	AveID		1.0620				6.1		20.0			
OCDF	1.3392	1.1863	1.3349	1.3964	1.3271	AveID		1.3168				5.9		20.0			
13C-2,3,7,8-TCDF	1.3569	1.2925	1.2977	1.3484	1.4339	Ave		1.3459				4.2		35.0			
13C-2,3,7,8-TCDD	0.9164	0.8941	0.9478	0.9250	0.9750	Ave		0.9317				3.3		35.0			
13C-1,2,3,7,8-PeCDF	1.0773	1.0923	1.1314	1.1553	1.2461	Ave		1.1405				5.8		35.0			
13C-2,3,4,7,8-PeCDF	1.1109	1.0890	1.0480	1.1277	1.2510	Ave		1.1253				6.8		35.0			
13C-1,2,3,7,8-PeCDD	0.6866	0.6668	0.7308	0.7224	0.7758	Ave		0.7165				5.9		35.0			
13C-1,2,3,4,7,8-HxCDF	0.8656	0.8706	1.1172	0.9651	1.0057	Ave		0.9648				10.8		35.0			
13C-1,2,3,6,7,8-HxCDF	0.9280	0.9536	1.2227	1.0830	1.1668	Ave		1.0708				12.0		35.0			
13C-2,3,4,6,7,8-HxCDF	0.8692	0.9805	1.1292	1.1087	1.1190	Ave		1.0413				10.9		35.0			
13C-1,2,3,4,7,8-HxCDD	0.6435	0.7681	0.8180	0.7773	0.7866	Ave		0.7587				8.8		35.0			
13C-1,2,3,6,7,8-HxCDD	0.7368	0.8783	0.8857	0.9060	0.8896	Ave		0.8593				8.1		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9679	0.9781	1.0054	0.9456	0.9684	Ave		0.9731				2.2		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.7002	0.7170	0.7171	0.7555	0.7898	Ave		0.7359				4.9		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6351	0.6548	0.6640	0.7261	0.6926	Ave		0.6745				5.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6394	0.6623	0.6557	0.7259	0.7437	Ave		0.6854				6.8		35.0			
13C-OCDD	0.5202	0.5165	0.5084	0.5910	0.5871	Ave		0.5446				7.5		35.0			
37Cl4-2,3,7,8-TCDD	0.9654	0.9590	1.0722	1.0074	1.0375	Ave		1.0083				4.8					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	19533	50956	258022	1274052	6137031	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	12122	34971	198062	875630	4286034	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	74934	210335	1114982	5302236	26032333	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	72817	200175	987812	5051373	24861382	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	42943	129872	741897	3351337	16645947	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	46374	155611	1093397	4293581	21902419	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	54388	185321	1245549	4991420	26721257	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	50026	191527	1151149	5157631	25388405	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	31680	132244	724729	3222329	15558498	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	34082	138142	760446	3426727	16661405	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	39595	139741	786511	3436144	17279185	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	57602	195077	1038574	4445357	22553786	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	47287	164108	878086	4243438	21181967	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	31661	110761	572466	2935203	13800004	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	39382	138335	727362	3728415	17812004	2.50	10.0	50.0	200	1000
OCDD		AveID	51642	182470	910980	4803166	22803823	5.00	20.0	100	400	2000
OCDF		AveID	61051	217473	1118740	6082696	30505464	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	3167014	2644389	2465726	2839435	2962515	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	2138853	1829253	1800864	1948011	2014532	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	2514489	2234847	2149791	2432949	2574521	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	2592947	2228025	1991303	2374722	2584740	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	1602476	1364144	1388641	1521254	1602880	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	1517222	1545033	1841825	1778238	1968615	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	1626653	1692336	2015594	1995567	2283961	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	1523436	1740015	1861559	2042874	2190509	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	1127895	1363103	1348471	1432215	1539784	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	1291365	1558668	1460100	1669337	1741498	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	1696557	1735785	1657413	1742331	1895740	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	1227279	1272526	1182209	1392194	1546113	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	1113145	1162117	1094713	1337869	1355803	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	1120663	1175351	1080883	1337573	1455766	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	1823492	1833139	1676139	2177938	2298668	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

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Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	11266	39241	203726	848616	4287059	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	08JN21ADFS1_1	Resolution Check	RC 060821A	46			GRB	1.000	
2	08JN21ADFS1_2	WDM HRDXNCP_00042	WDM 060821A	1	Dioxin		GRB	1.000	
3	08JN21ADFS1_3	SB Solvent Blank C-14	SB 060821	3			GRB	1.000	
4	08JN21ADFS1_4	CS-2 HRDXNL2_00032	IC 060821	4	Dioxin		GRB	1.000	
5	08JN21ADFS1_5	CS-3 HRDXNL3_00029	IC 060821A	5	Dioxin		GRB	1.000	
6	08JN21ADFS1_6	CS-4 HRDXNL4_00099	IC 060821B	2	Dioxin		GRB	1.000	
7	08JN21ADFS1_7	CS-5 HRDXNL5_00032	IC 060821C	6	Dioxin		GRB	1.000	
8	08JN21ADFS1_8	CS-6 HRDXNL6_00028	IC 060821D	7	Dioxin		GRB	1.000	
9	08JN21ADFS1_9	Resolution Check	RC 060821B	46			GRB	1.000	
10	08JN21ADFS1_10	SB Solvent Blank C-14	SB 060821A	3			GRB	1.000	
11	08JN21ADFS1_11	ICV HRDXNIC_00047	ICV 060821	8	Dioxin		GRB	1.000	
12	08JN21ADFS1_12	Resolution Check	RC 060821C	46			GRB	1.000	
13	08JN21ADFS1_13	CCV CS-4 HRDXNL4_00099	CCV 060821A	2	Dioxin		GRB	1.000	
14	08JN21ADFS1_14	WDM HRDXNCP_00042	WDM 060821B	1	Dioxin		GRB	1.000	
15	08JN21ADFS1_15	mb 320-482224/1-a RI	mb 320-482224/1-a	10	8290/Solid	100	GRB	20.000	g
16	08JN21ADFS1_16	320-72057-a-23-a mdlv RI (7)	320-72057-a-23-a mdlv	11	8290/Solid		GRB	20.000	g
17	08JN21ADFS1_17	320-72057-a-24-a mdlv RI (8)	320-72057-a-24-a mdlv	12	8290/Solid		GRB	20.000	g
18	08JN21ADFS1_18	320-72057-a-25-a mdlv RI (9)	320-72057-a-25-a mdlv	13	8290/Solid		GRB	20.000	g
19	08JN21ADFS1_19	320-72057-a-26-a loqv RI (10)	320-72057-a-26-a loqv	14	8290/Solid		GRB	20.000	g
20	08JN21ADFS1_20	320-74542-b-3-a	320-74542-b-3-a	15	8290A/Solid	D245	GRB	10.000	g
21	08JN21ADFS1_21	320-74542-b-2-a	320-74542-b-2-a	16	8290A/Solid		GRB	10.000	g
22	08JN21ADFS1_22	320-74542-b-1-a	320-74542-b-1-a	17	8290A/Solid		GRB	10.000	g
23	08JN21ADFS1_23	lcs 320-496101/2-a	lcs 320-496101/2-a	18	8290A/Solid		GRB	10.000	g
24	08JN21ADFS1_24	lcsd 320-496101/3-a	lcsd 320-496101/3-a	19	8290A/Solid		GRB	10.000	g
25	08JN21ADFS1_25	mb 320-496101/1-a	mb 320-496101/1-a	20	8290A/Solid		GRB	10.000	
26	08JN21ADFS1_26	Resolution Check	RC 060821D	46			GRB	1.000	
27	08JN21ADFS1_27	CCV CS-4 HRDXNL4_00099	CCV 060821B	2	Dioxin		GRB	1.000	
28	08JN21ADFS1_28	Resolution Check	RC 060821E	46			GRB	1.000	
29	08JN21ADFS1_29	WDM HRDXNCP_00042	WDM 060821C	1	Dioxin		GRB	1.000	
30	08JN21ADFS1_30	SB Solvent Blank C-14	SB 060821B	3			GRB	1.000	
31	08JN21ADFS1_31	320-74542-b-4-a	320-74542-b-4-a	21	8290A/Solid	D245	GRB	10.000	g
32	08JN21ADFS1_32	320-74542-b-5-a	320-74542-b-5-a	22	8290A/Solid		GRB	10.000	g
33	08JN21ADFS1_33	320-74542-b-6-a	320-74542-b-6-a	23	8290A/Solid		GRB	10.000	g
34	08JN21ADFS1_34	320-74542-b-7-a	320-74542-b-7-a	24	8290A/Solid		GRB	10.000	g
35	08JN21ADFS1_35	320-74542-b-8-a	320-74542-b-8-a	25	8290A/Solid		GRB	10.000	g
36	08JN21ADFS1_36	320-74542-b-9-a	320-74542-b-9-a	26	8290A/Solid		GRB	10.000	g
37	08JN21ADFS1_37	SB Solvent Blank C-14	SB 060821C	3			GRB	1.000	
38	08JN21ADFS1_38	Resolution Check	RC 060821F	46			GRB	1.000	
39	08JN21ADFS1_39	CCV CS-4 HRDXNL4_00099	CCV 060821C	2	Dioxin		GRB	1.000	
40	08JN21ADFS1_40	Resolution Check	RC 060821G	46			GRB	1.000	

LOG FILE ✓'d
06/09/21
GRB

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 12:20
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10809 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10359 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10673 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10724 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10609 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10694 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10161 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10386 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10328 [5%height]

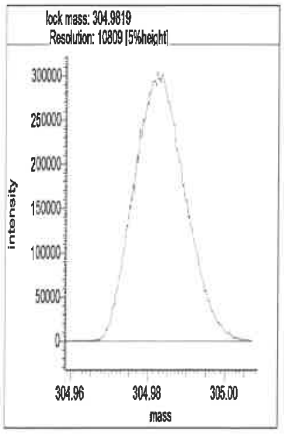

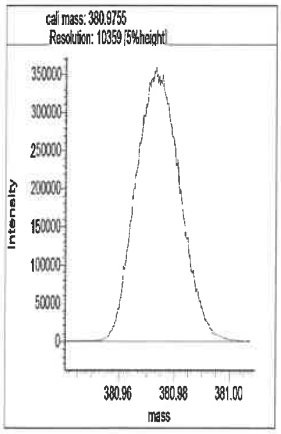

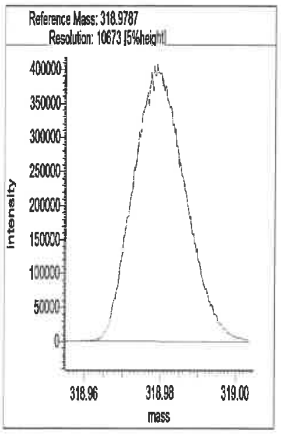

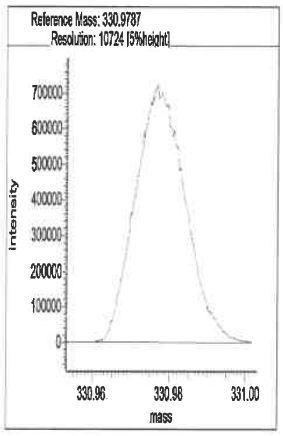

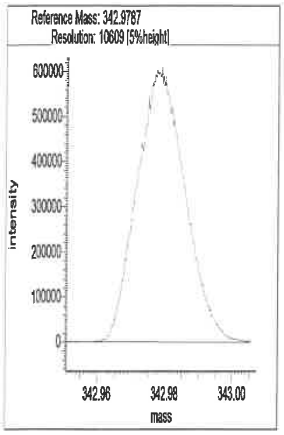

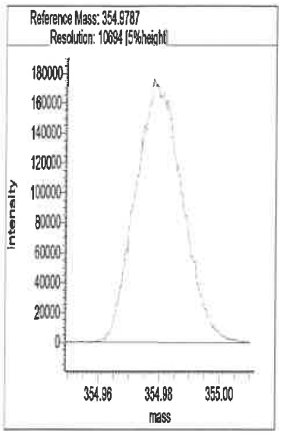

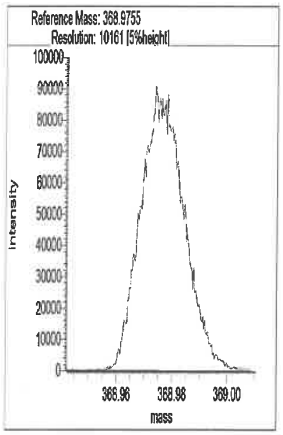

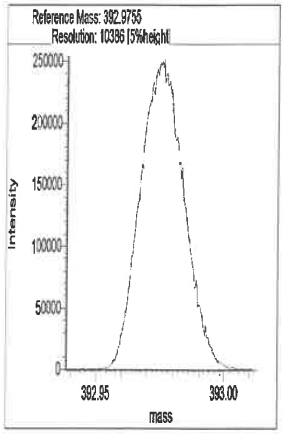

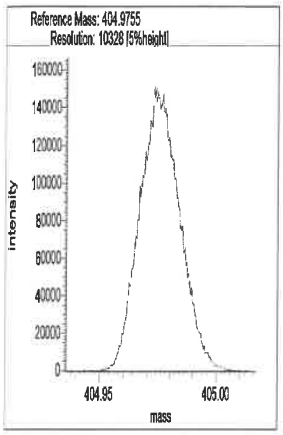

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10749 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10650 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10687 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10661 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10183 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10343 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10397 [5%height]

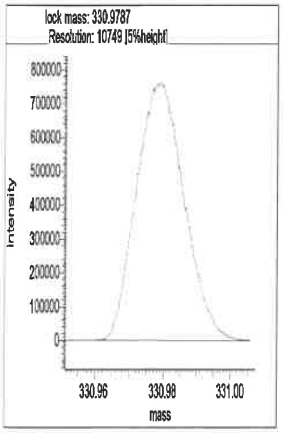

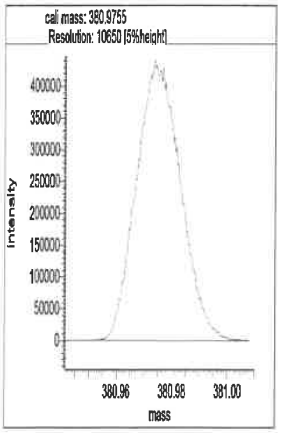

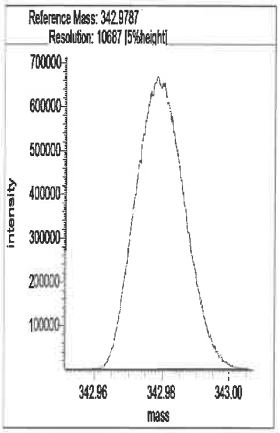

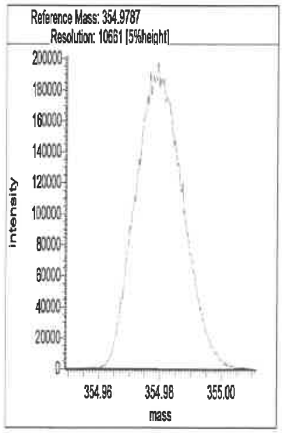

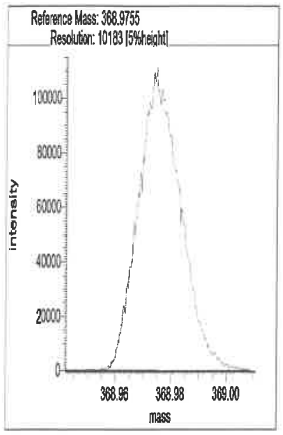

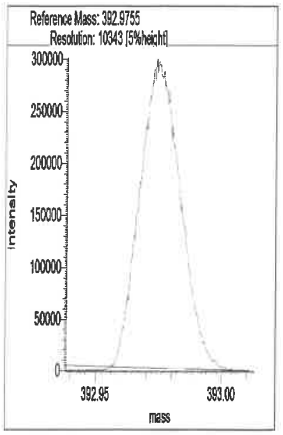

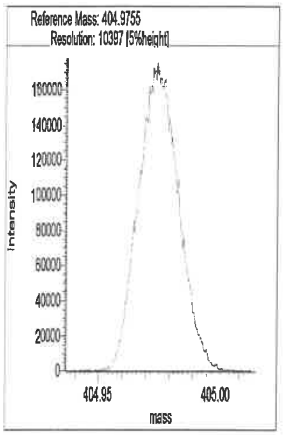

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10665 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10632 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10792 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10868 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10680 [5%height]

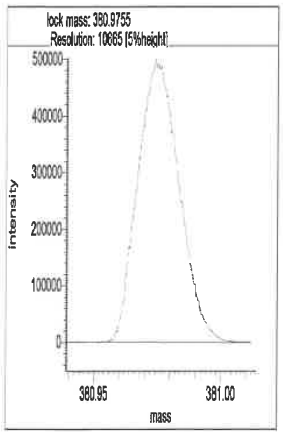

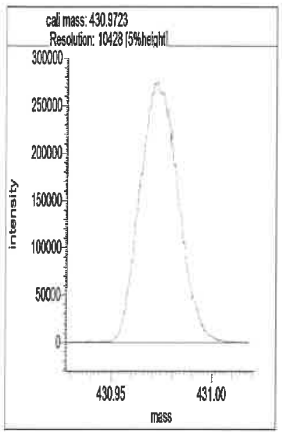

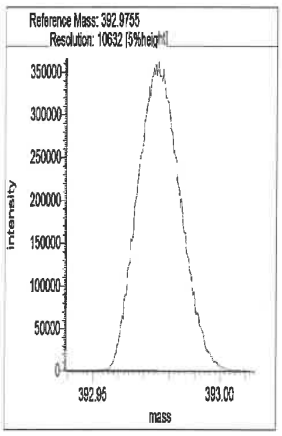

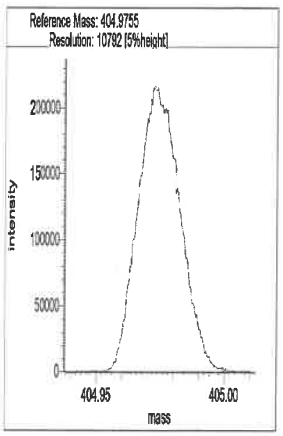

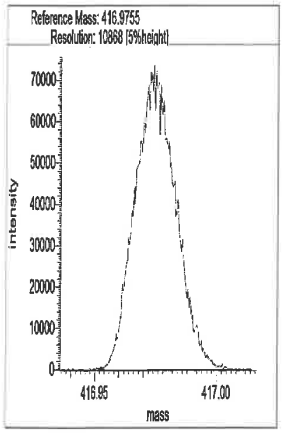

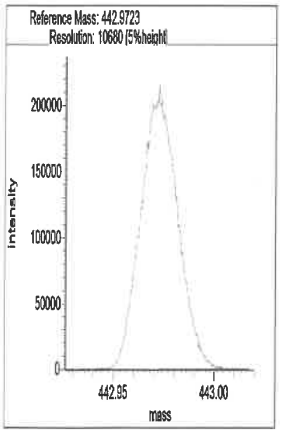

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10780 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10428 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10519 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10746 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10596 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10599 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10334 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10486 [5%height]

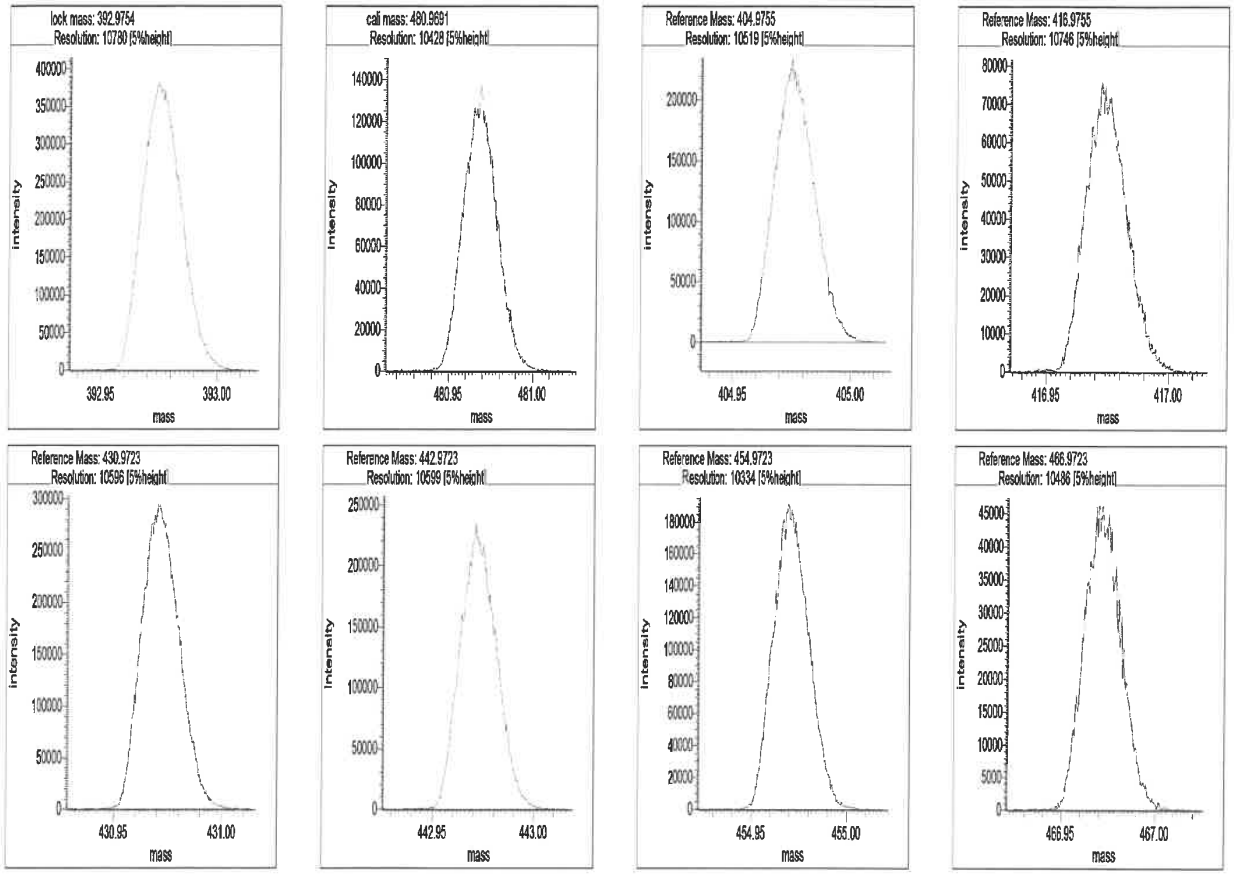

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10812 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10576 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10586 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10905 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10543 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10541 [5%height]

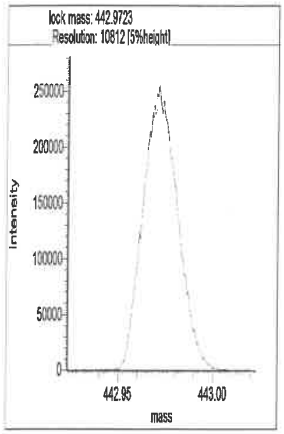
lock mass: 442.9723
Resolution: 10812 [5%height]
Intensity
mass

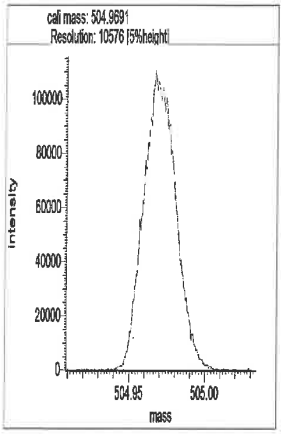
cali mass: 504.9691
Resolution: 10576 [5%height]
Intensity
mass

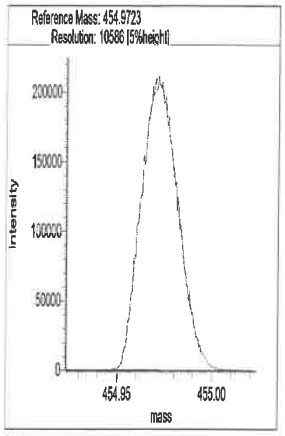
Reference Mass: 454.9723
Resolution: 10566 [5%height]
Intensity
mass

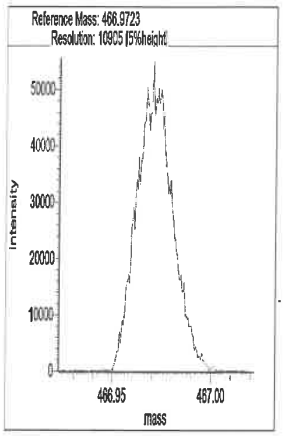
Reference Mass: 466.9723
Resolution: 10905 [5%height]
Intensity
mass

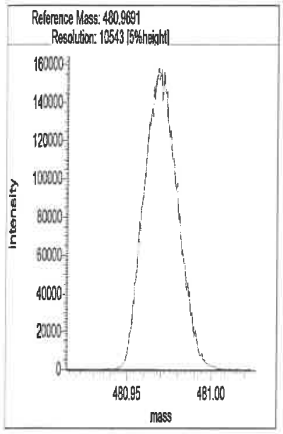
Reference Mass: 480.9691
Resolution: 10543 [5%height]
Intensity
mass

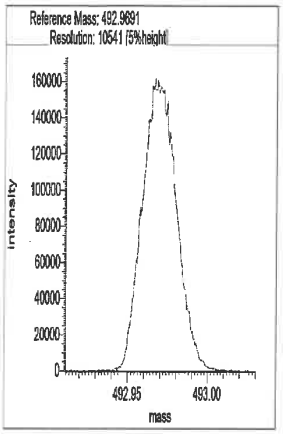
Reference Mass: 492.9691
Resolution: 10541 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 18:18
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11138 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10557 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10815 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11047 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10923 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10964 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10533 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10381 [5%height]

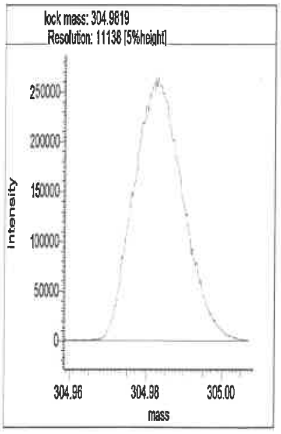

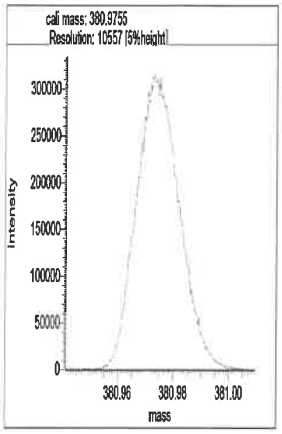

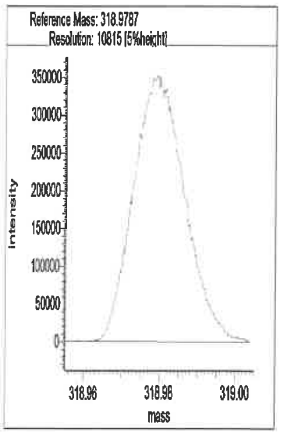

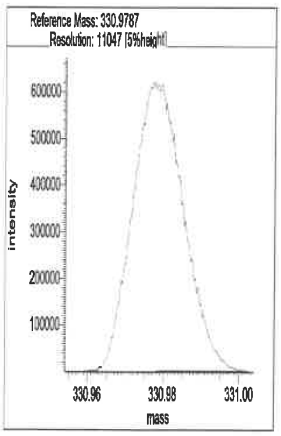

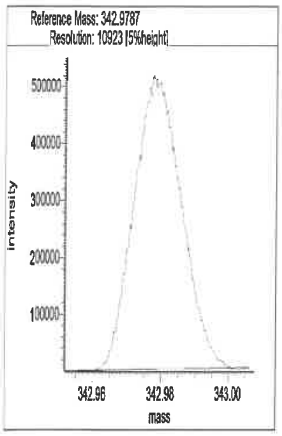

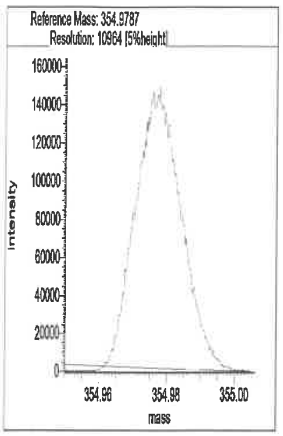

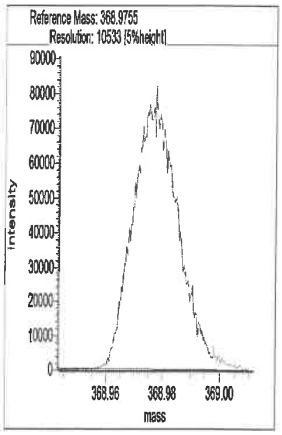

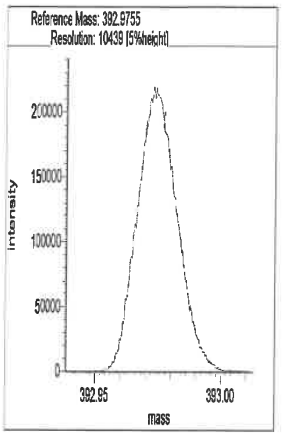

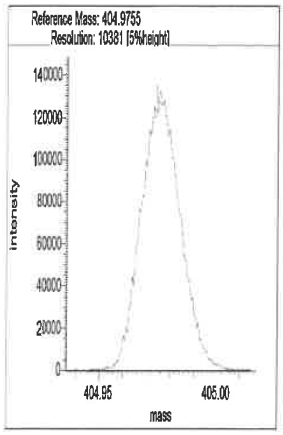

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10931 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10771 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11049 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10941 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10429 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10942 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10794 [5%height]

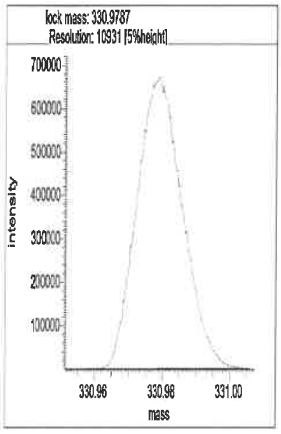

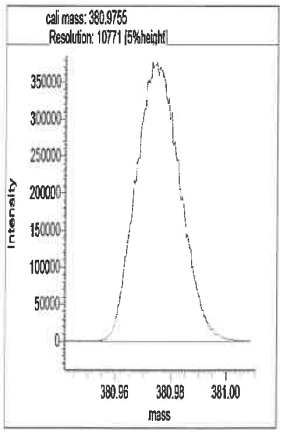

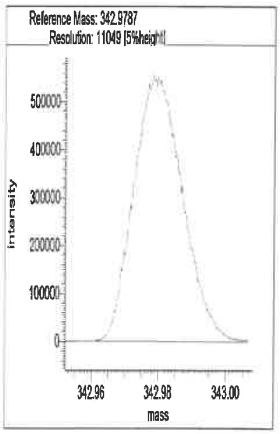

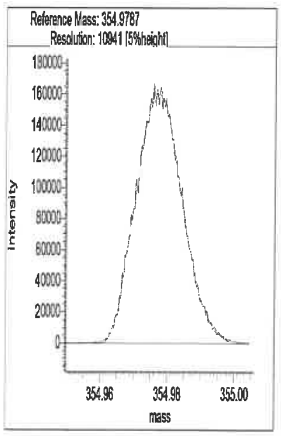

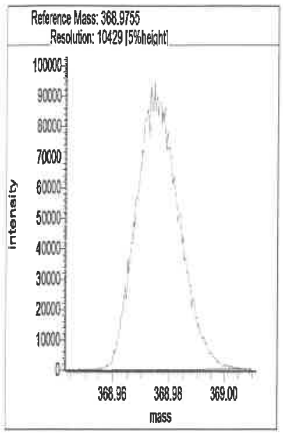

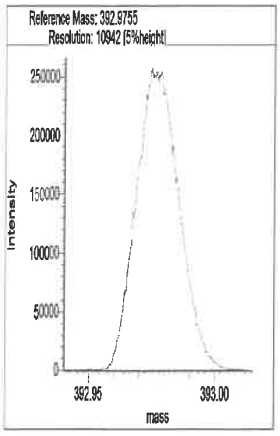

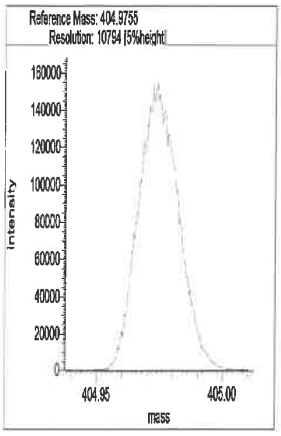

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10885 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10505 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10981 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10838 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11244 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10864 [5%height]

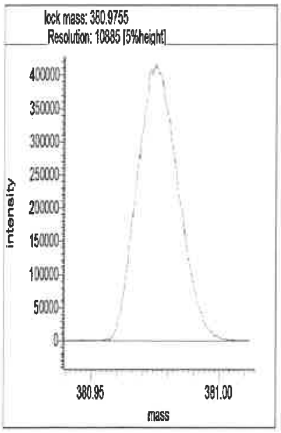

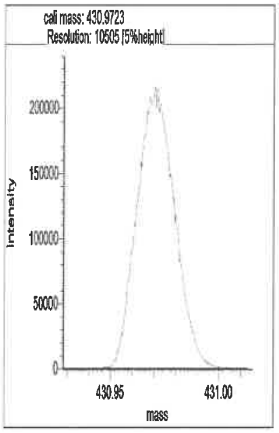

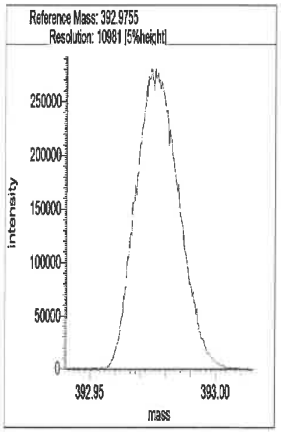

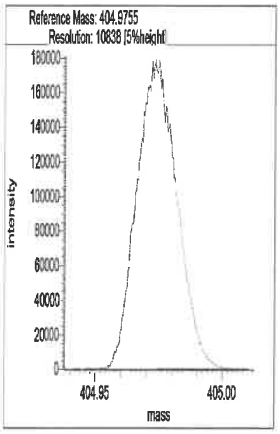

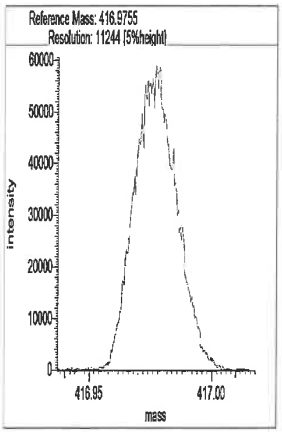

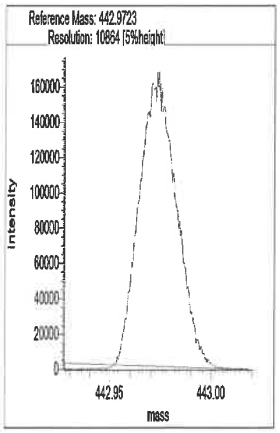

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10912 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10920 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10645 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11021 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10722 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10705 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10886 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11473 [5%height]

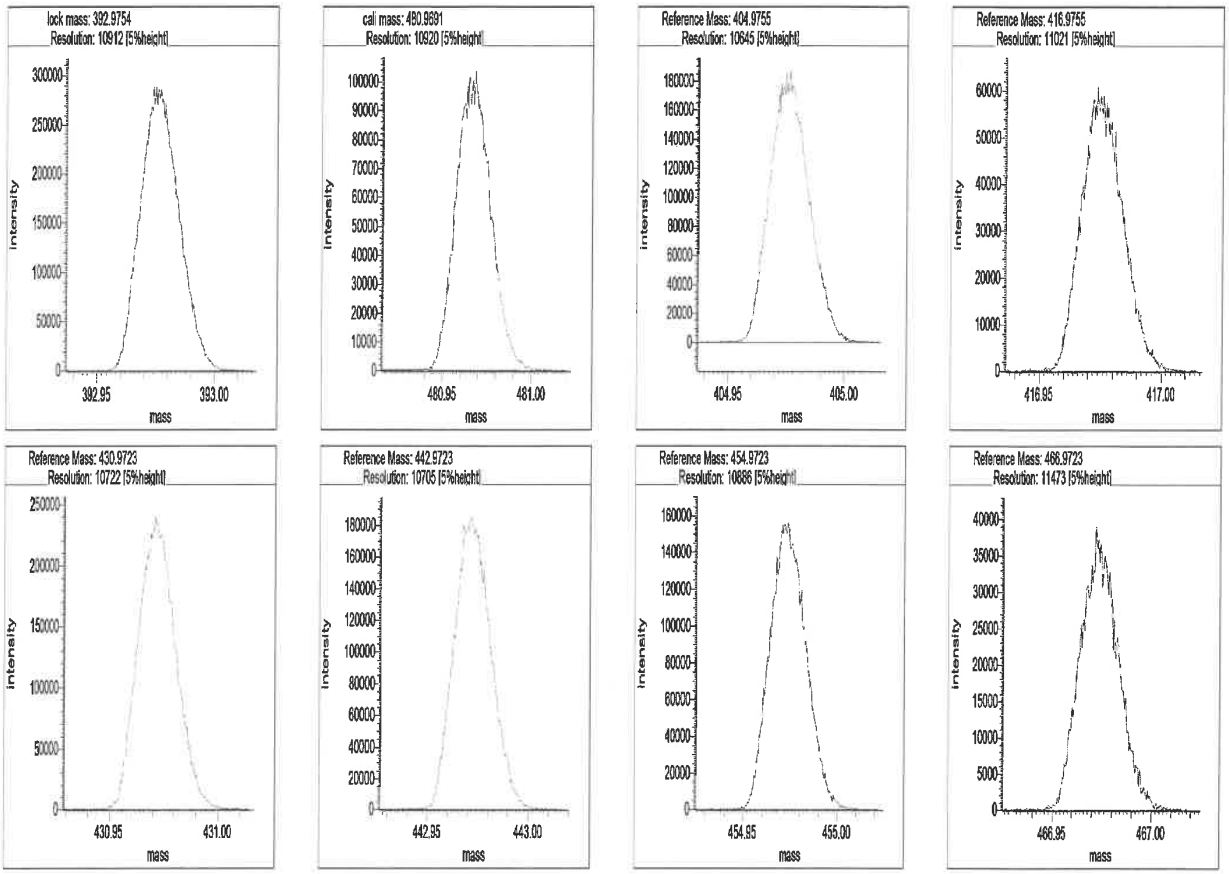

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11094 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10852 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11104 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11145 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10592 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10719 [5%height]

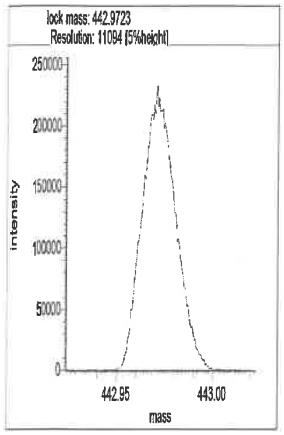
lock mass: 442.9723
Resolution: 11094 [5%height]
Intensity
mass

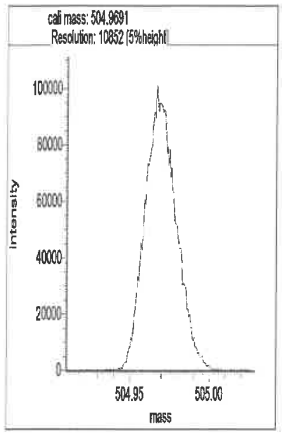
cali mass: 504.9691
Resolution: 10852 [5%height]
Intensity
mass

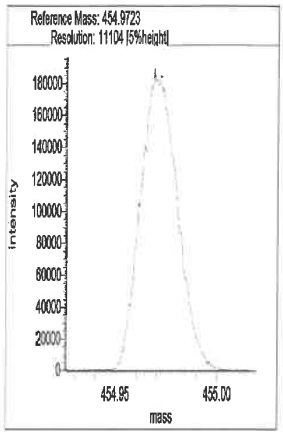
Reference Mass: 454.9723
Resolution: 11104 [5%height]
Intensity
mass

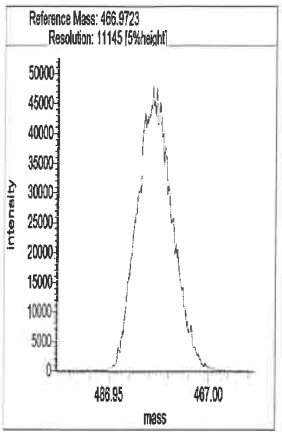
Reference Mass: 466.9723
Resolution: 11145 [5%height]
Intensity
mass

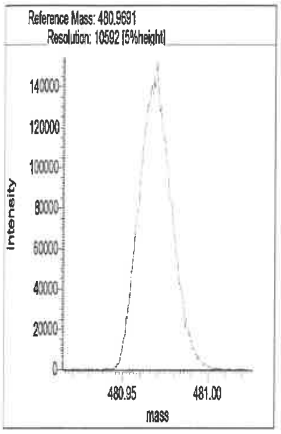
Reference Mass: 480.9691
Resolution: 10592 [5%height]
Intensity
mass

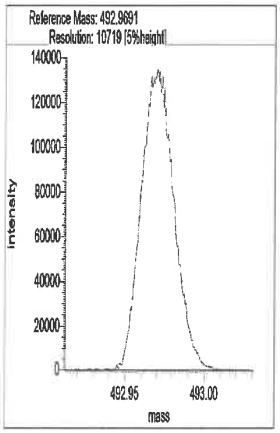
Reference Mass: 492.9691
Resolution: 10719 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 20:13
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11228 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10780 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10868 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10774 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10877 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10591 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10487 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10710 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10243 [5%height]

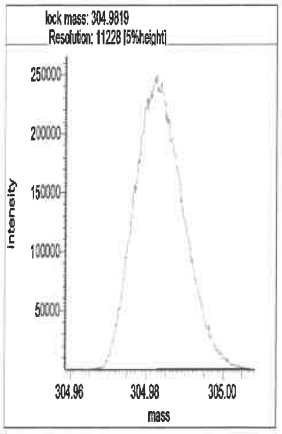

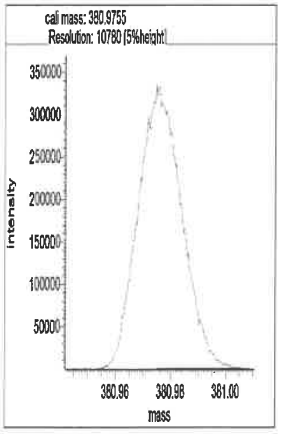

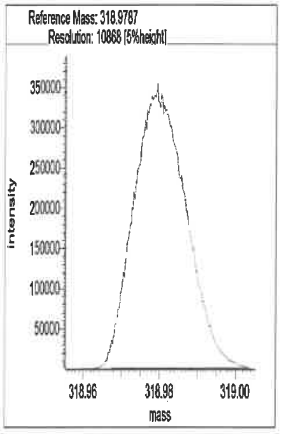

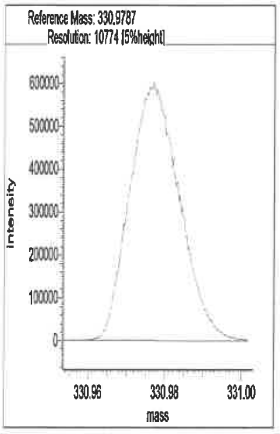

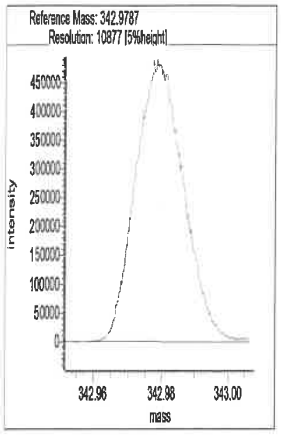

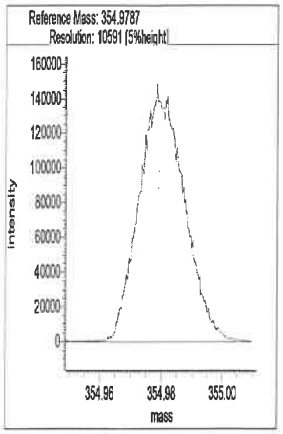

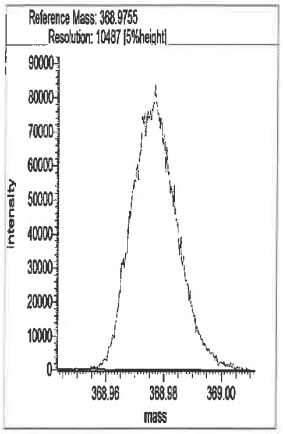

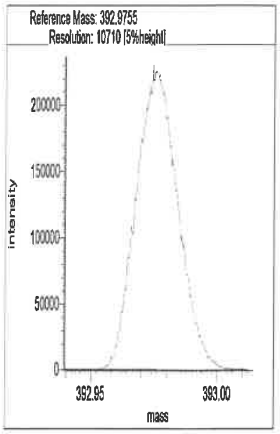

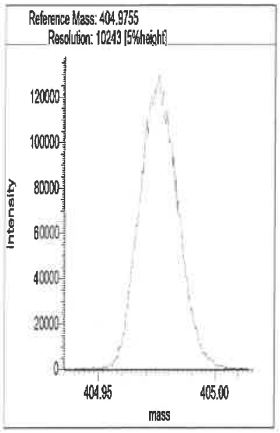

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10867 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10936 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10948 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10910 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10174 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10675 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10514 [5%height]

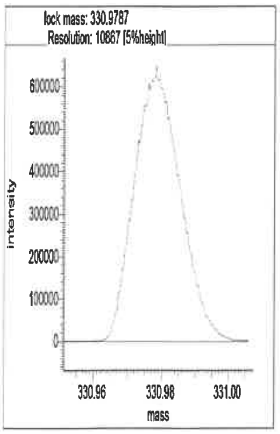

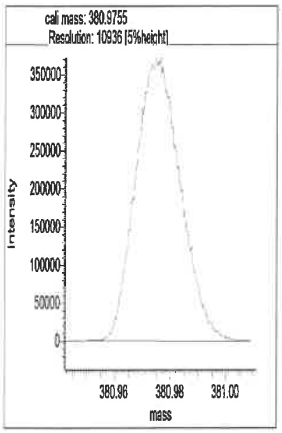

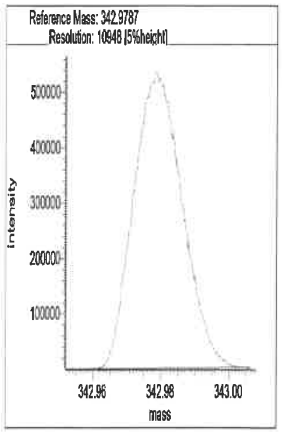

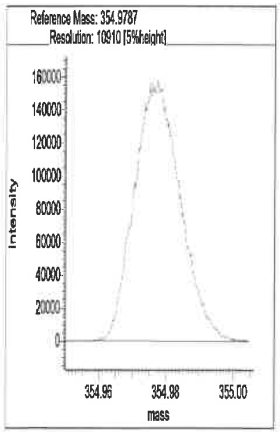

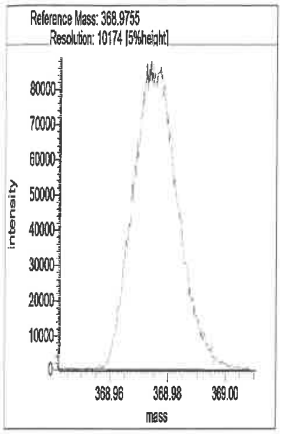

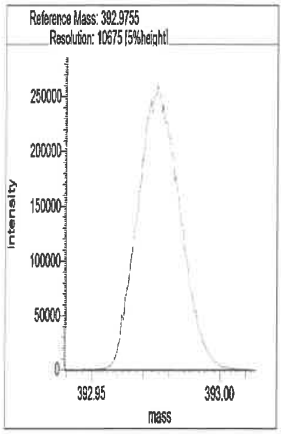

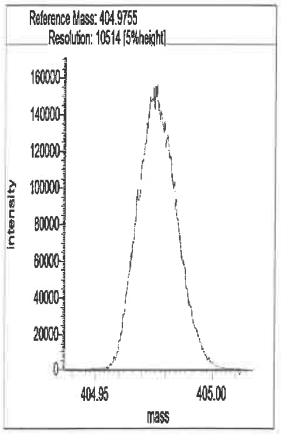

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10898 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10782 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11034 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11134 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10786 [5%height]

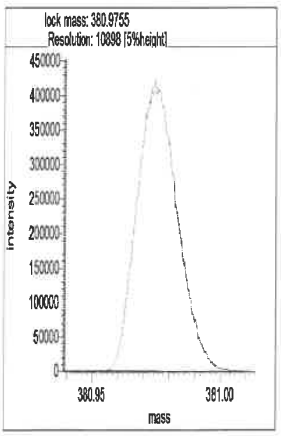

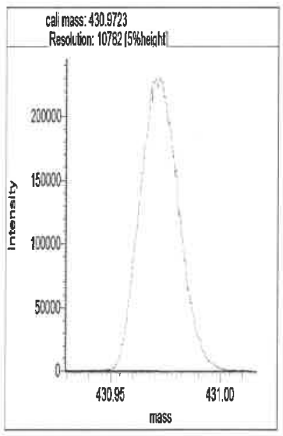

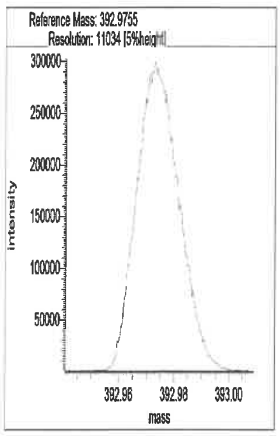

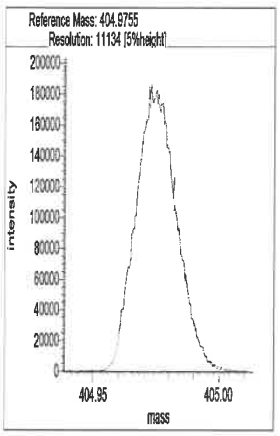

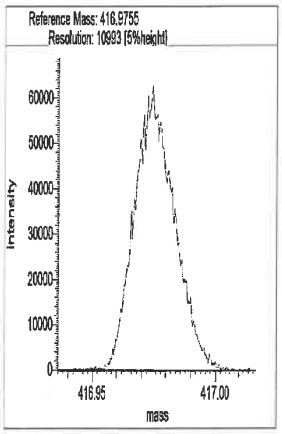

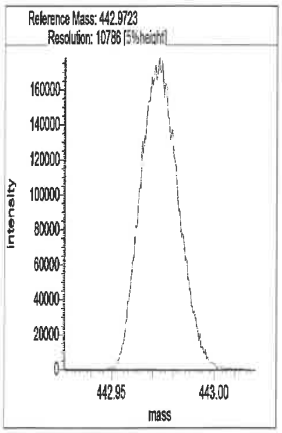

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11155 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10418 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10767 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10954 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10613 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11028 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10950 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10877 [5%height]

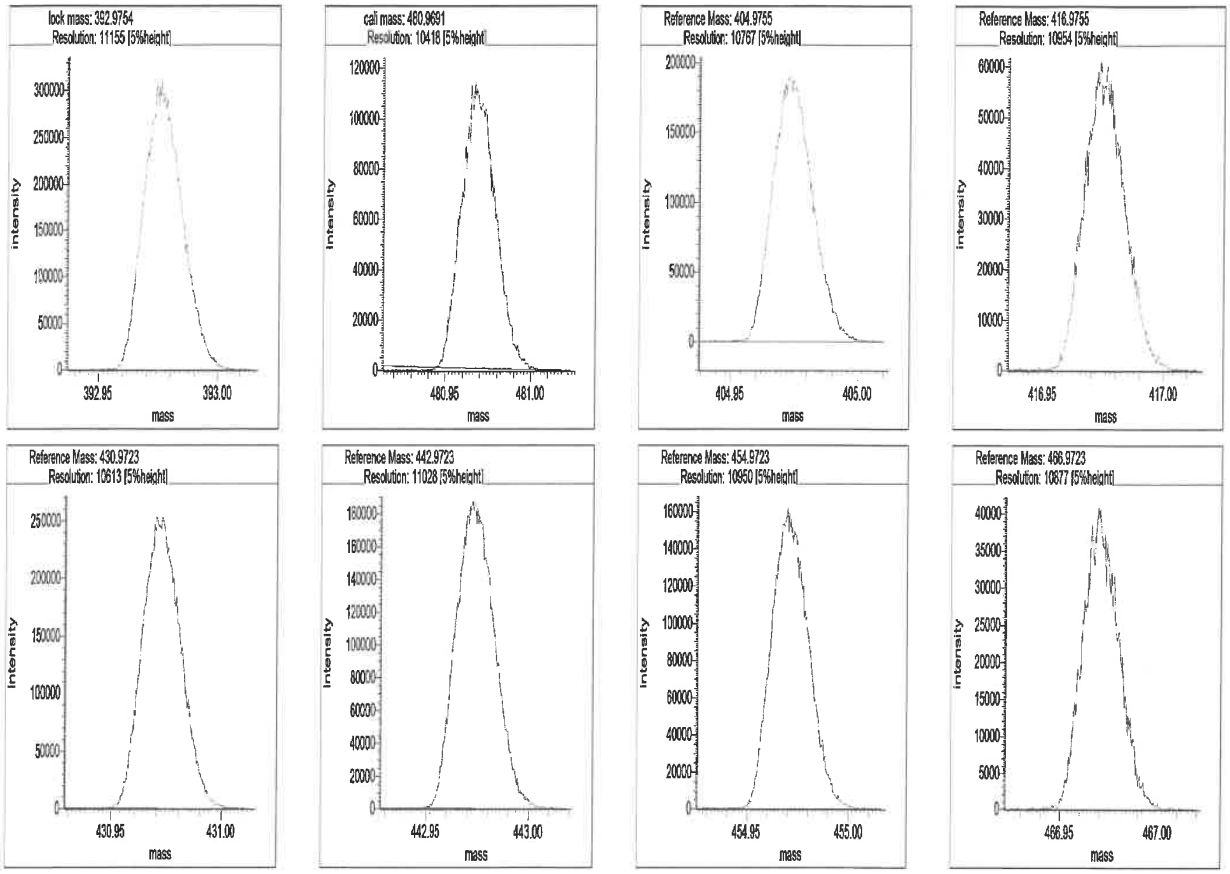

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10985 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10829 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11149 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11382 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11128 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11097 [5%height]

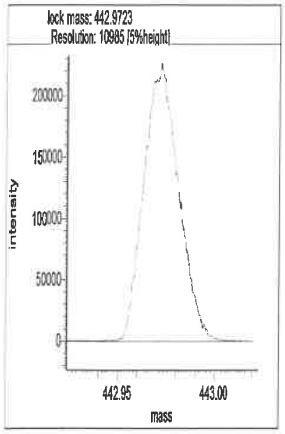
lock mass: 442.9723
Resolution: 10985 [5%height]
intensity
mass

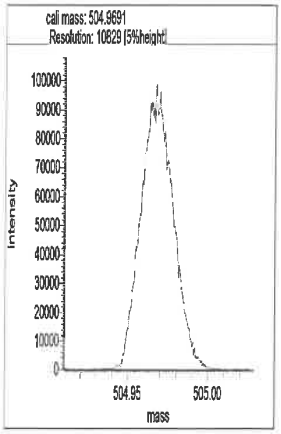
cali mass: 504.9691
Resolution: 10629 [5%height]
intensity
mass

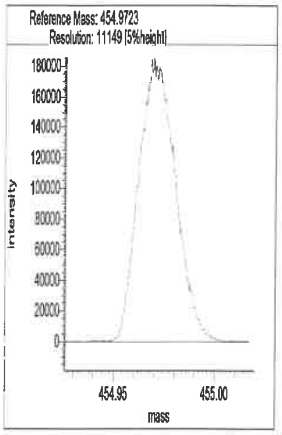
Reference Mass: 454.9723
Resolution: 11149 [5%height]
intensity
mass

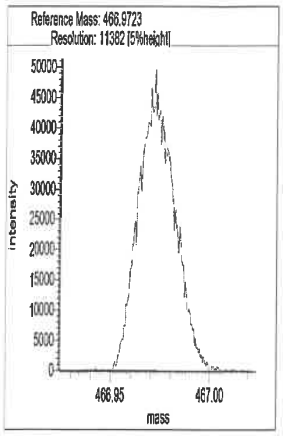
Reference Mass: 466.9723
Resolution: 11382 [5%height]
intensity
mass

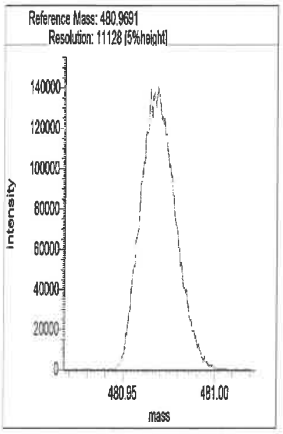
Reference Mass: 480.9691
Resolution: 11128 [5%height]
intensity
mass

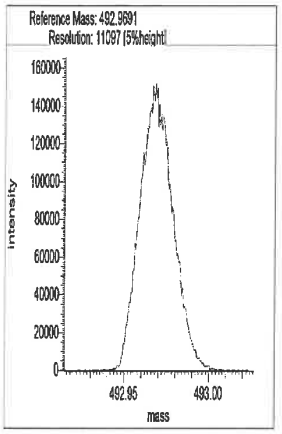
Reference Mass: 492.9691
Resolution: 11097 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.564	2334037	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.628	3167014	0.81	1.3459	100.8	100.8	0.1546	0.1546	101	
2,3,7,8-TCDF	19.662	19533	0.82	1.0802	0.5710	0.5710	0.007637	0.007637	114	
S Total TCDF					0.5710	0.5710	0.007637	0.007637		
D 13C-2,3,7,8-TCDD	20.933	2138853	0.81	0.9317	98.4	98.4	0.1772	0.1772	98.36	
$ 37Cl4-2,3,7,8-TCDD	20.941	11266		1.0083	0.4787	0.4787	0.005933	0.005933	95.74	
2,3,7,8-TCDD	20.967	12122	0.71	1.0753	0.5270	0.5270	0.0223	0.0223	105	
S Total TCDD					0.5270	0.5270	0.0223	0.0223		
D 13C-1,2,3,7,8-PeCDF	26.587	2514489	1.59	1.1405	94.5	94.5	0.3469	0.3469	94.46	
1,2,3,7,8-PeCDF	26.613	74934	1.71	1.0543	2.827	2.827	0.0199	0.0199	113	
D 13C-2,3,4,7,8-PeCDF	28.046	2592947	1.57	1.1253	98.7	98.7	0.3516	0.3516	98.72	
2,3,4,7,8-PeCDF	28.071	72817	1.61	1.0079	2.786	2.786	0.0219	0.0219	111	
S Total PeCDF					5.613	5.613	0.0209	0.0209		
D 13C-1,2,3,7,8-PeCDD	28.830	1602476	1.59	0.7165	95.8	95.8	0.1271	0.1271	95.83	
1,2,3,7,8-PeCDD	28.855	42943	1.72	1.0465	2.561	2.561	0.0215	0.0215	102	
S Total PeCDD					2.561	2.561	0.0215	0.0215		
D 13C-1,2,3,4,7,8-HxCDF	34.406	1517222	0.52	0.9648	89.7	89.7	0.3358	0.3358	89.72	
1,2,3,4,7,8-HxCDF	34.431	46374	1.30	1.1474	2.664	2.664	0.0219	0.0219	107	
D 13C-1,2,3,6,7,8-HxCDF	34.583	1626653	0.54	1.0708	86.7	86.7	0.3026	0.3026	86.67	
1,2,3,6,7,8-HxCDF	34.608	54388	1.19	1.2178	2.746	2.746	0.0201	0.0201	110	
D 13C-2,3,4,6,7,8-HxCDF	35.468	1523436	0.53	1.0413	83.5	83.5	0.3112	0.3112	83.47	
2,3,4,6,7,8-HxCDF	35.485	50026	1.25	1.2145	2.704	2.704	0.0183	0.0183	108	
D 13C-1,2,3,7,8,9-HxCDF	36.404	1696557	0.52	0.9731	99.5	99.5	0.3330	0.3330	99.47	
1,2,3,7,8,9-HxCDF	36.421	57602	1.21	1.2401	2.738	2.738	0.0145	0.0145	110	
S Total HxCDF					10.9	10.9	0.0187	0.0187		
* 13C-1,2,3,7,8,9-HxCDD	36.210	1752780	1.29	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.695	1127895	1.27	0.7587	84.8	84.8	0.2005	0.2005	84.82	
1,2,3,4,7,8-HxCDD	35.712	31680	1.20	1.0608	2.648	2.648	0.0198	0.0198	106	
D 13C-1,2,3,6,7,8-HxCDD	35.822	1291365	1.29	0.8593	85.7	85.7	0.1770	0.1770	85.74	
1,2,3,6,7,8-HxCDD	35.839	34082	1.16	0.9933	2.657	2.657	0.0196	0.0196	106	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.227	39595	1.15	1.1094	2.950	2.950	0.0182	0.0182	118	
S Total HxCDD					8.255	8.255	0.0192	0.0192		
D 13C-1,2,3,4,6,7,8-HpCDF	38.321	1227279	0.46	0.7359	95.1	95.1	0.3550	0.3550	95.14	
1,2,3,4,6,7,8-HpCDF	38.329	47287	1.05	1.4421	2.672	2.672	0.0138	0.0138	107	
D 13C-1,2,3,4,7,8,9-HpCDF	39.611	1120663	0.46	0.6854	93.3	93.3	0.3812	0.3812	93.29	
1,2,3,4,7,8,9-HpCDF	39.619	39382	1.04	1.3092	2.684	2.684	0.0149	0.0149	107	
S Total HpCDF					5.356	5.356	0.0144	0.0144		
D 13C-1,2,3,4,6,7,8-HpCDD	39.307	1113145	1.06	0.6745	94.2	94.2	0.2577	0.2577	94.15	
1,2,3,4,6,7,8-HpCDD	39.316	31661	0.99	1.0503	2.708	2.708	0.0190	0.0190	108	
S Total HpCDD					2.708	2.708	0.0190	0.0190		
D 13C-OCDD	41.797	1823492	0.90	0.5446	191.0	191.0	0.3325	0.3325	95.51	
OCDF	41.890	61051	0.95	1.3168	5.085	5.085	0.0322	0.0322	102	
OCDD	41.805	51642	0.88	1.0620	5.333	5.333	0.0182	0.0182	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.564	20.547	1		1041449	163457	148	370	1104		
333.9338	20.564	20.547	1		1292588	204311	95	237	2151	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.628	19.616	1	0.954	1415927	226149	197	492	1148		
317.9389	19.628	19.616	1	0.954	1751087	282985	109	272	2596	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.662	19.646	1	1.002	8785	1472	3	7	491		
305.8987	19.662	19.646	1	1.002	10748	1598	14	35	114	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.933	20.910	1	1.018	956834	140160	148	370	947		
333.9338	20.924	20.910	1	1.018	1182019	172842	95	237	1819	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.941	20.935	0	1.018	11266	1696	9	22	188		
2,3,7,8-TCDD											
319.8965	20.967	20.939	2	1.002	5046	703	25	62	28		
321.8936	20.950	20.939	1	1.001	7076	1165	5	12	233	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.587	26.560	2	1.293	1544614	271650	354	885	767		
353.8970	26.587	26.560	2	1.293	969875	166951	228	570	732	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.613	26.584	2	1.001	47325	8180	13	32	629		
341.8567	26.596	26.584	1	1.000	27609	5058	24	60	211	1.71(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.046	28.014	2	1.364	1584958	253357	354	885	716		
353.8970	28.037	28.014	1	1.363	1007989	162868	228	570	714	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.071	28.039	2	1.001	44929	7445	13	32	573		
341.8567	28.063	28.039	1	1.001	27888	4385	24	60	183	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.830	28.801	2	1.402	983567	149258	81	202	1843		
369.8919	28.830	28.801	2	1.402	618909	95647	53	132	1805	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.855	28.828	2	1.001	27146	4327	17	42	255		
357.8516	28.863	28.828	2	1.001	15797	2500	5	12	500	1.72(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.406	34.384	1	0.950	521957	103110	186	465	554		
385.8610	34.406	34.384	1	0.950	995265	195967	351	877	558	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.431	34.405	2	1.001	26220	5205	19	47	274		
375.8178	34.431	34.405	2	1.001	20154	4061	11	27	369	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.583	34.562	1	0.955	567371	107545	186	465	578		
385.8610	34.583	34.562	1	0.955	1059282	198264	351	877	565	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.608	34.582	2	1.001	29510	5690	19	47	299		
375.8178	34.600	34.582	1	1.000	24878	4701	11	27	427	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.468	35.444	1	0.980	527302	117266	186	465	630		
385.8610	35.468	35.444	1	0.980	996134	220962	351	877	630	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.485	35.461	1	1.000	27767	6035	19	47	318		
375.8178	35.476	35.461	1	1.000	22259	4941	11	27	449	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.404	36.388	1	1.005	582391	143633	186	465	772		
385.8610	36.404	36.388	1	1.005	1114166	273141	351	877	778	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.421	36.402	1	1.000	31508	7777	19	47	409		
375.8178	36.421	36.402	1	1.000	26094	6045	11	27	550	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.210	36.192	1		987922	232825	142	355	1640		
403.8529	36.210	36.192	1		764858	181339	110	275	1649	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.695	35.680	1	0.986	630506	153231	142	355	1079		
403.8529	35.695	35.680	1	0.986	497389	118761	110	275	1080	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.712	35.695	1	1.000	17291	4375	12	30	365		
391.8127	35.712	35.695	1	1.000	14389	3541	11	27	322	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.822	35.805	1	0.989	727495	166749	142	355	1174		
403.8529	35.822	35.805	1	0.989	563870	125792	110	275	1144	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.839	35.820	1	1.000	18295	4156	12	30	346		
391.8127	35.830	35.820	1	1.000	15787	3353	11	27	305	1.16(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.227	36.208	1	1.015	21159	5138	12	30	428		
391.8127	36.218	36.208	1	1.015	18436	4550	11	27	414	1.15(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.321	38.305	1	1.058	389255	110351	150	375	736		
419.8220	38.321	38.305	1	1.058	838024	240182	283	707	849	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.329	38.317	1	1.000	24164	7010	18	45	389		
409.7788	38.329	38.317	1	1.000	23123	6463	10	25	646	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.611	39.600	1	1.094	351407	112029	150	375	747		
419.8220	39.611	39.600	1	1.094	769256	246420	283	707	871	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.619	39.608	1	1.000	20064	6267	18	45	348		
409.7788	39.628	39.608	1	1.000	19318	5891	10	25	589	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.307	39.293	1	1.086	574080	172930	147	367	1176		
437.8140	39.307	39.293	1	1.086	539065	163690	141	352	1161	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.316	39.301	1	1.000	15770	4799	17	42	282		
425.7737	39.316	39.301	1	1.000	15891	4656	10	25	466	0.99(0.88-1.20)	
13C-OCDD											
469.7780	41.797	41.785	1	1.154	864827	245324	148	370	1658		
471.7750	41.797	41.785	1	1.154	958665	273299	152	380	1798	0.90(0.76-1.02)	
OCDF											
441.7428	41.890	41.875	1	1.002	29681	8172	14	35	584		
443.7399	41.881	41.875	0	1.002	31370	8963	30	75	299	0.95(0.76-1.02)	
OCDD											
457.7377	41.805	41.794	1	1.000	24122	6775	8	20	847		
459.7348	41.805	41.794	1	1.000	27520	7850	12	30	654	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

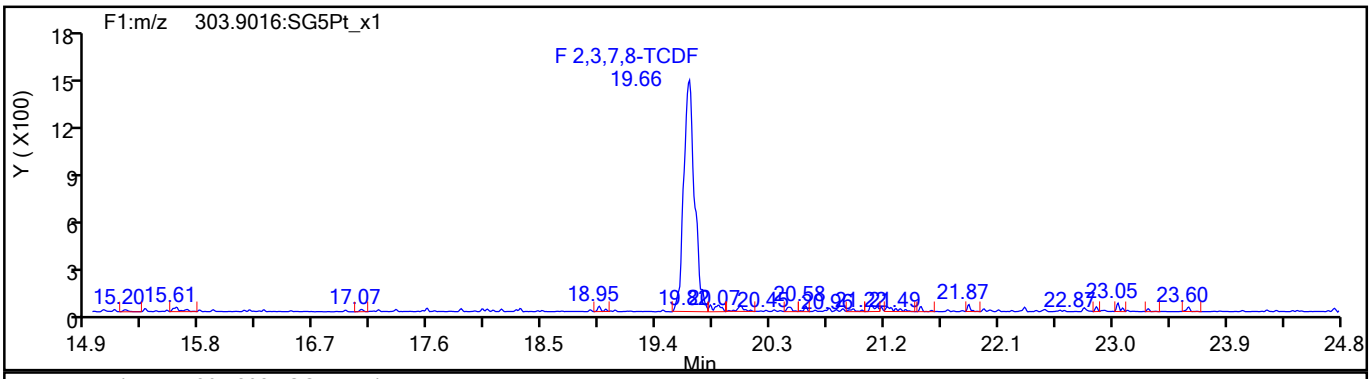

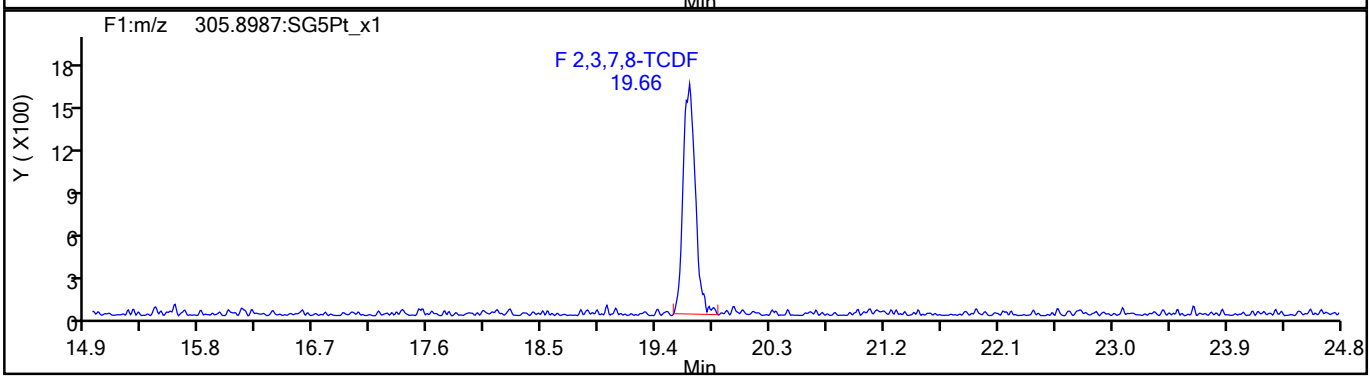

TCDF Standards

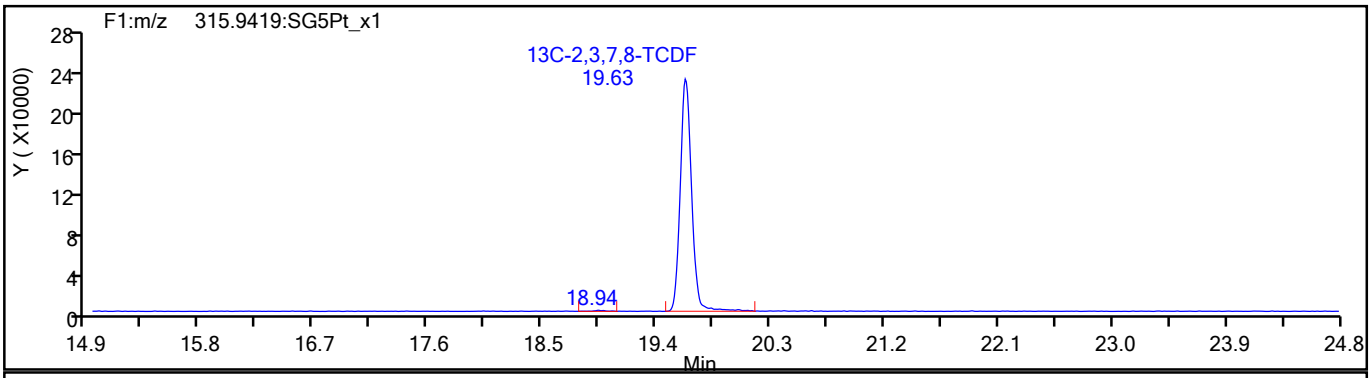

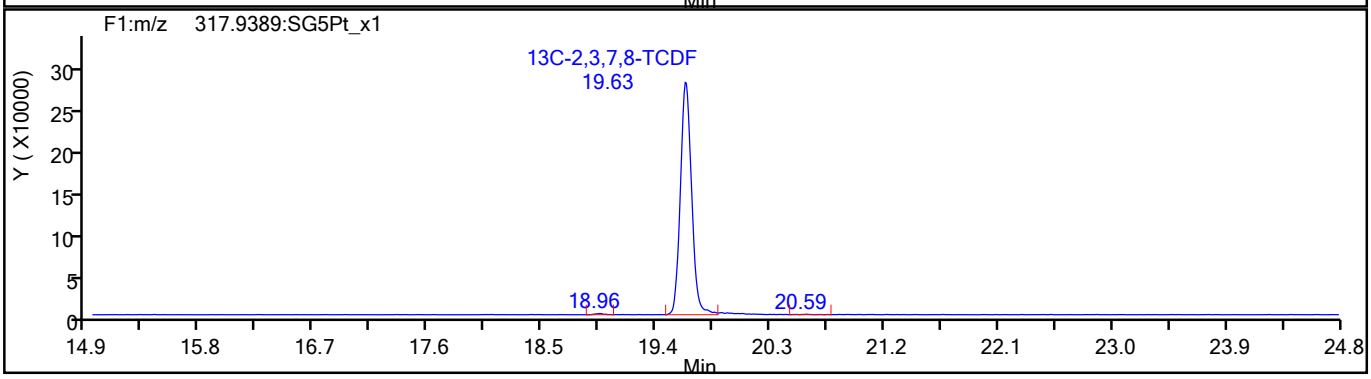

776275

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

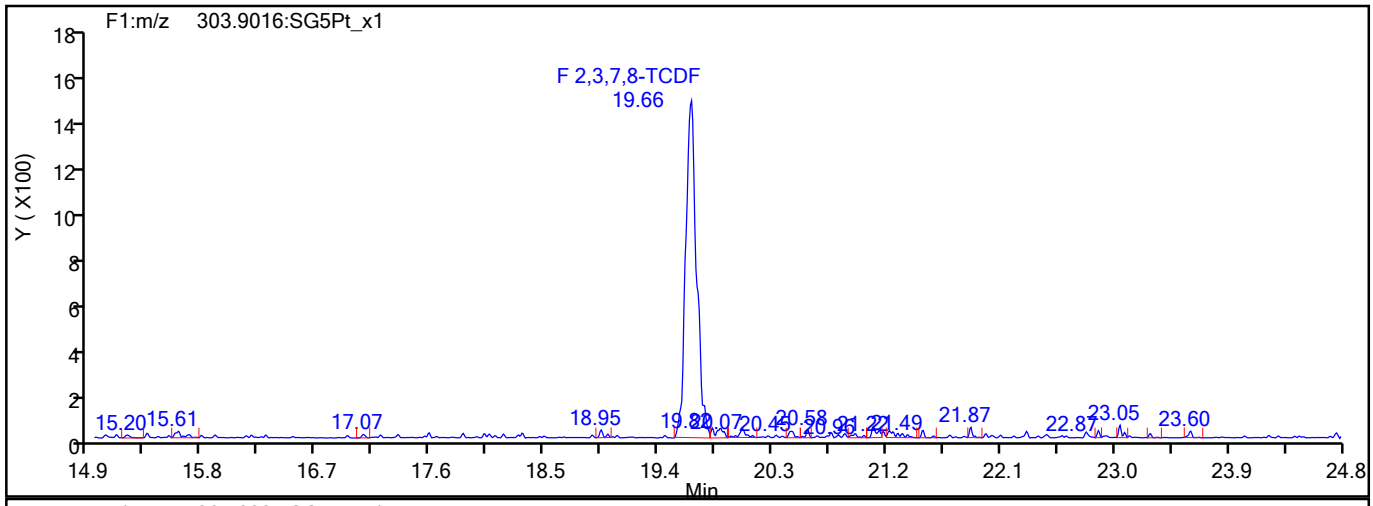

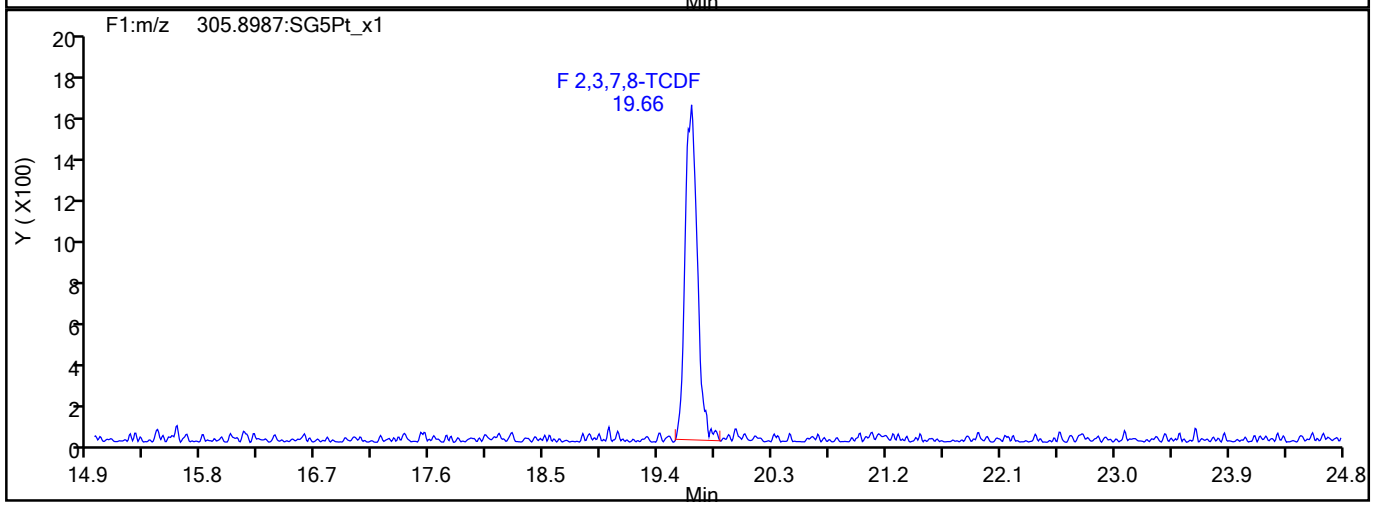

TCDF Interference Mass

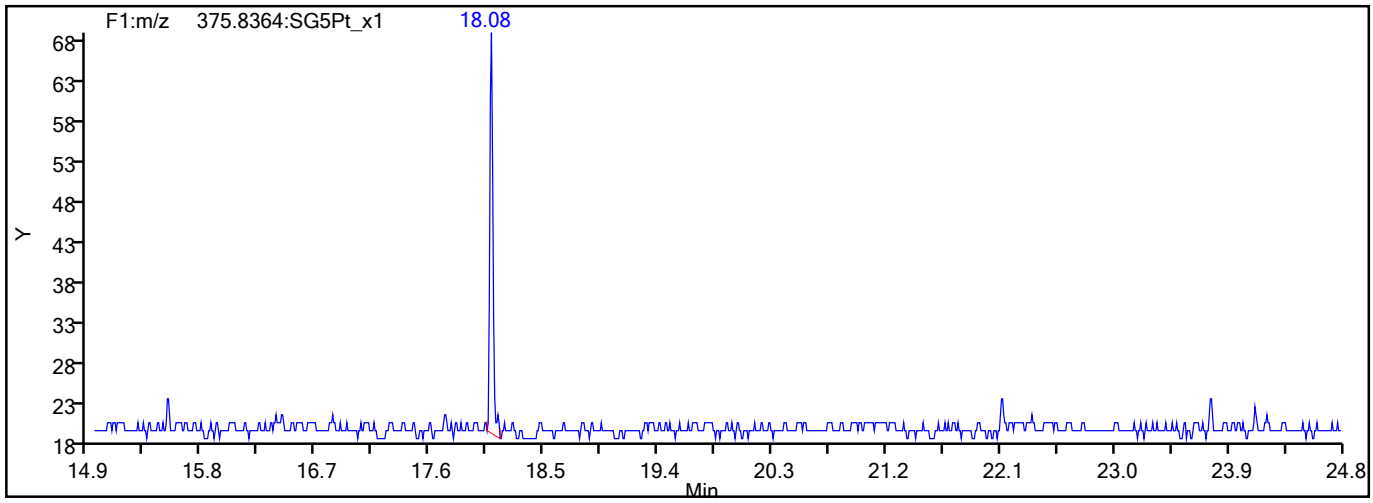

776276

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

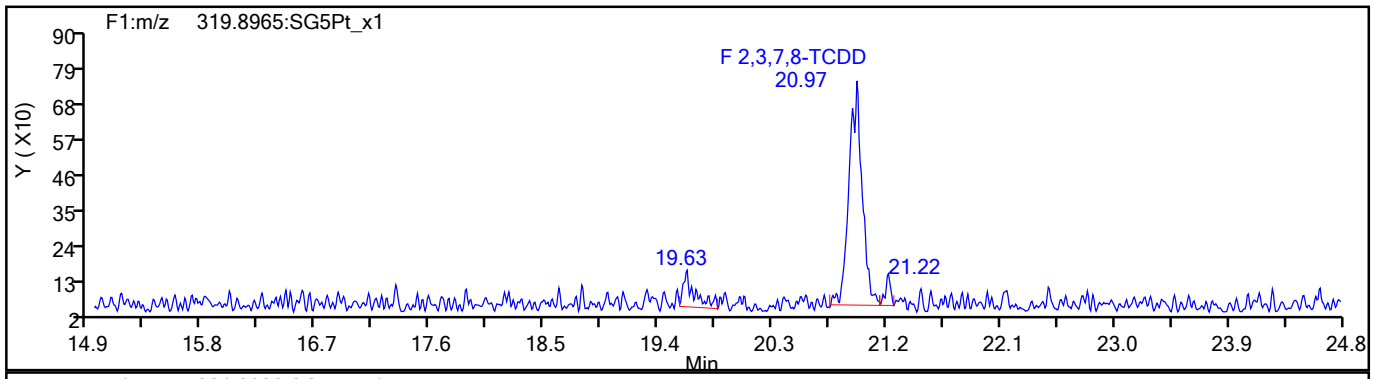

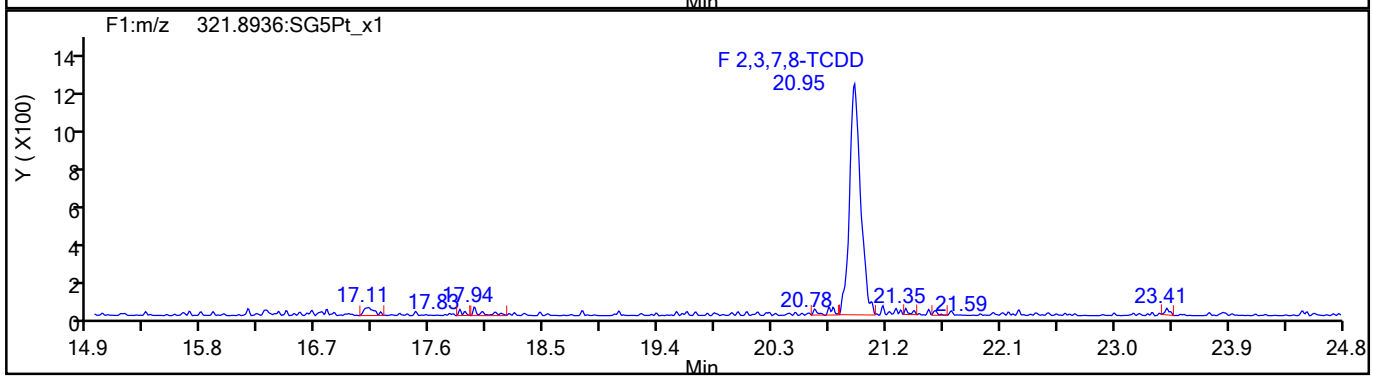

TCDD Standards

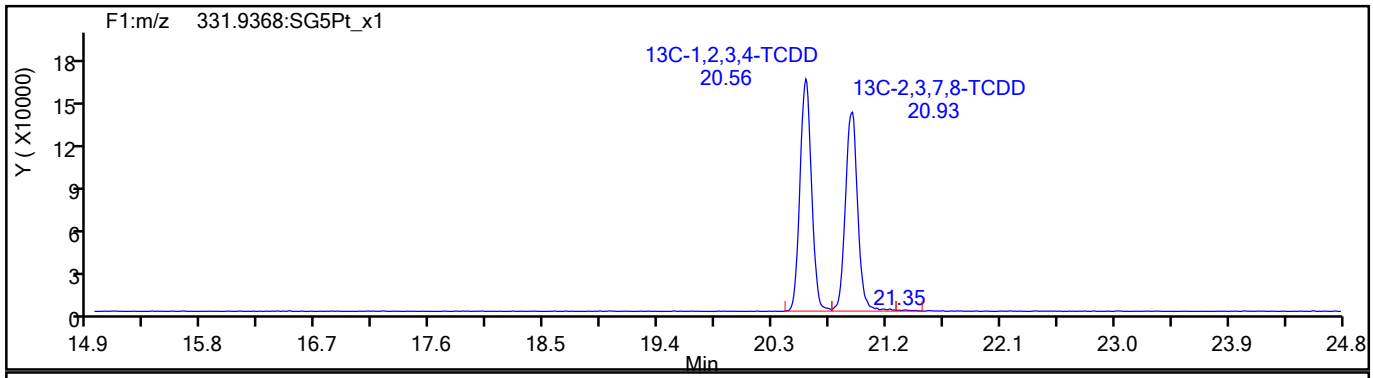

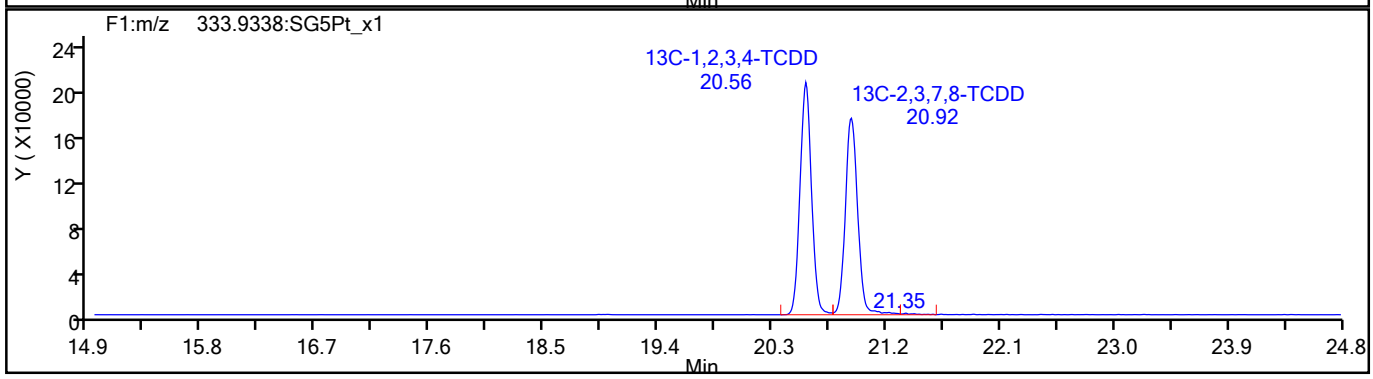

776277

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

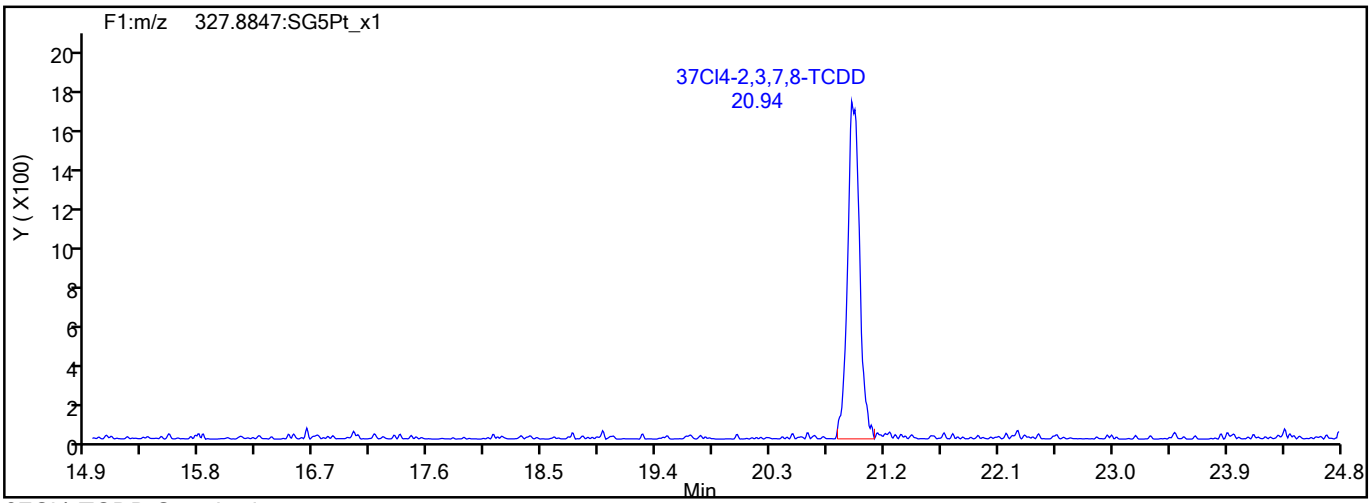

37Cl4-TCDD Standards

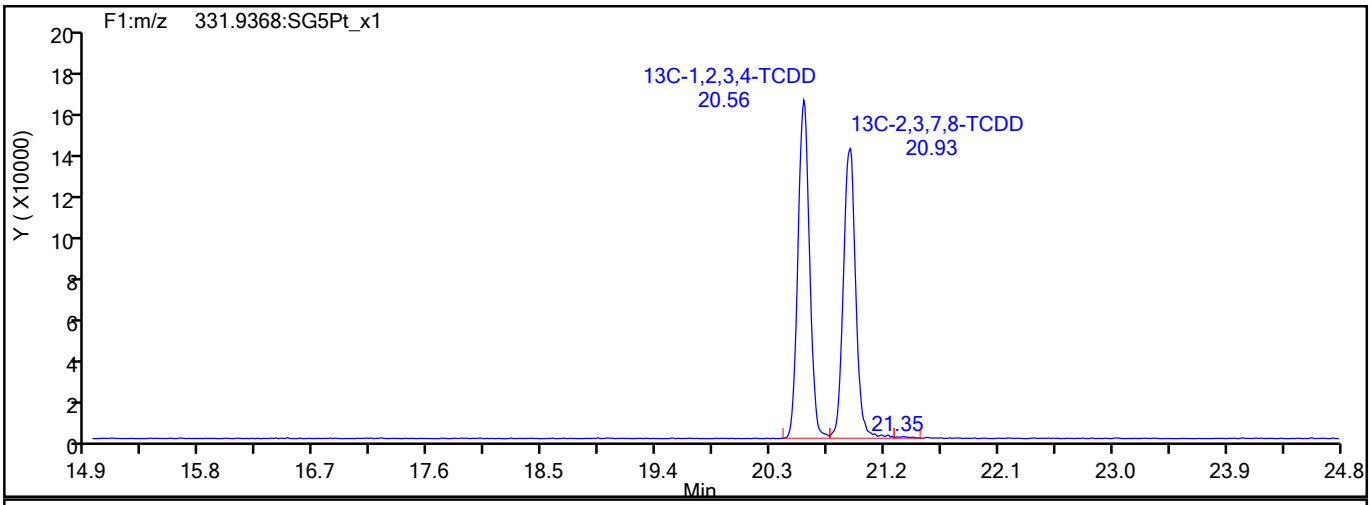

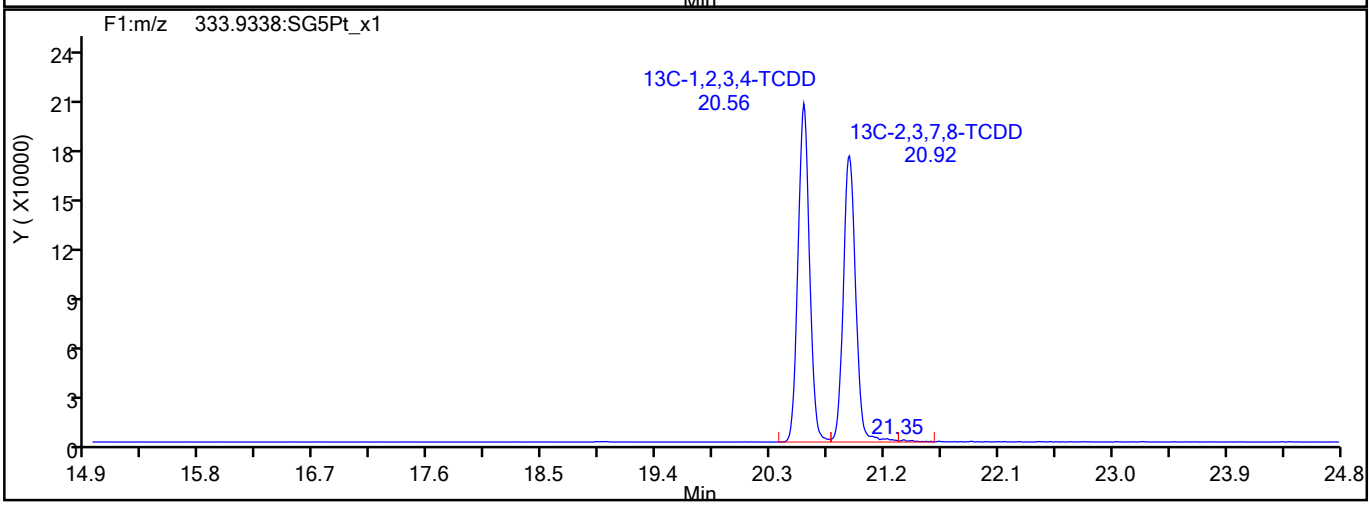

776278

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

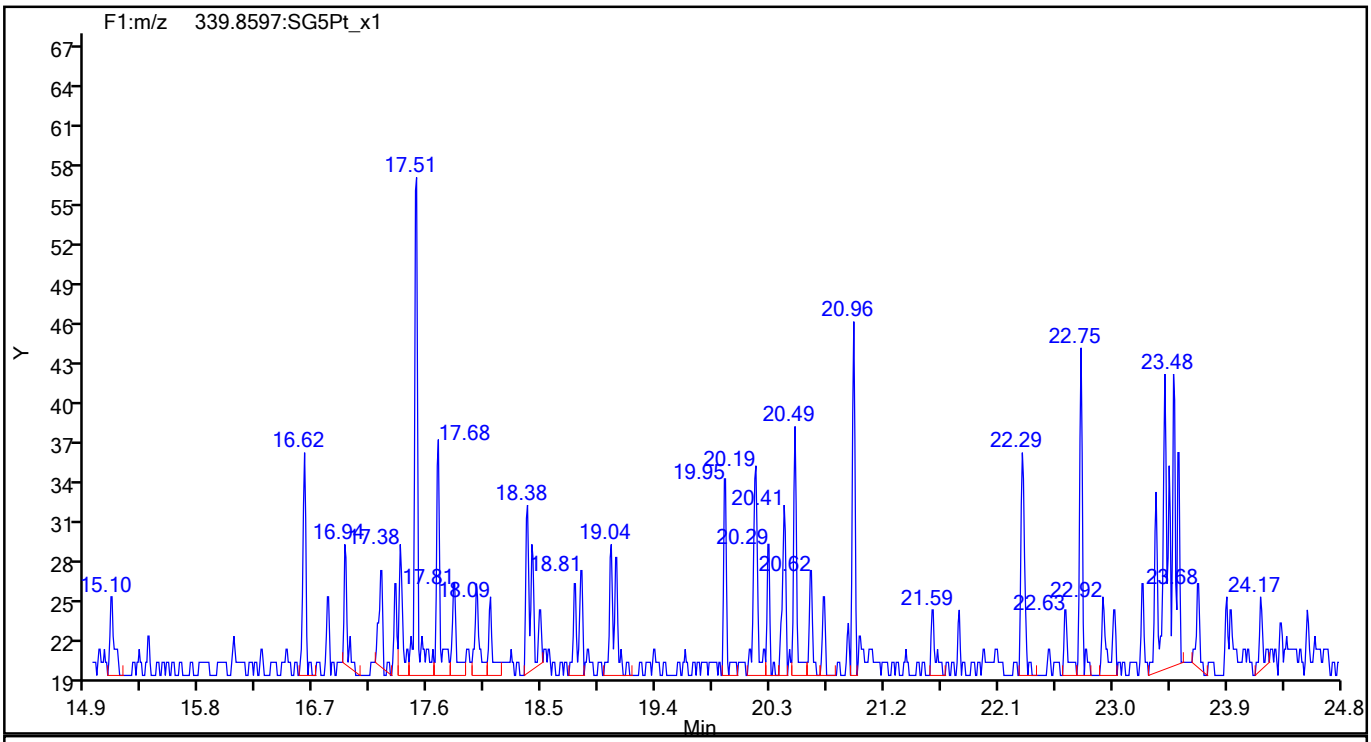

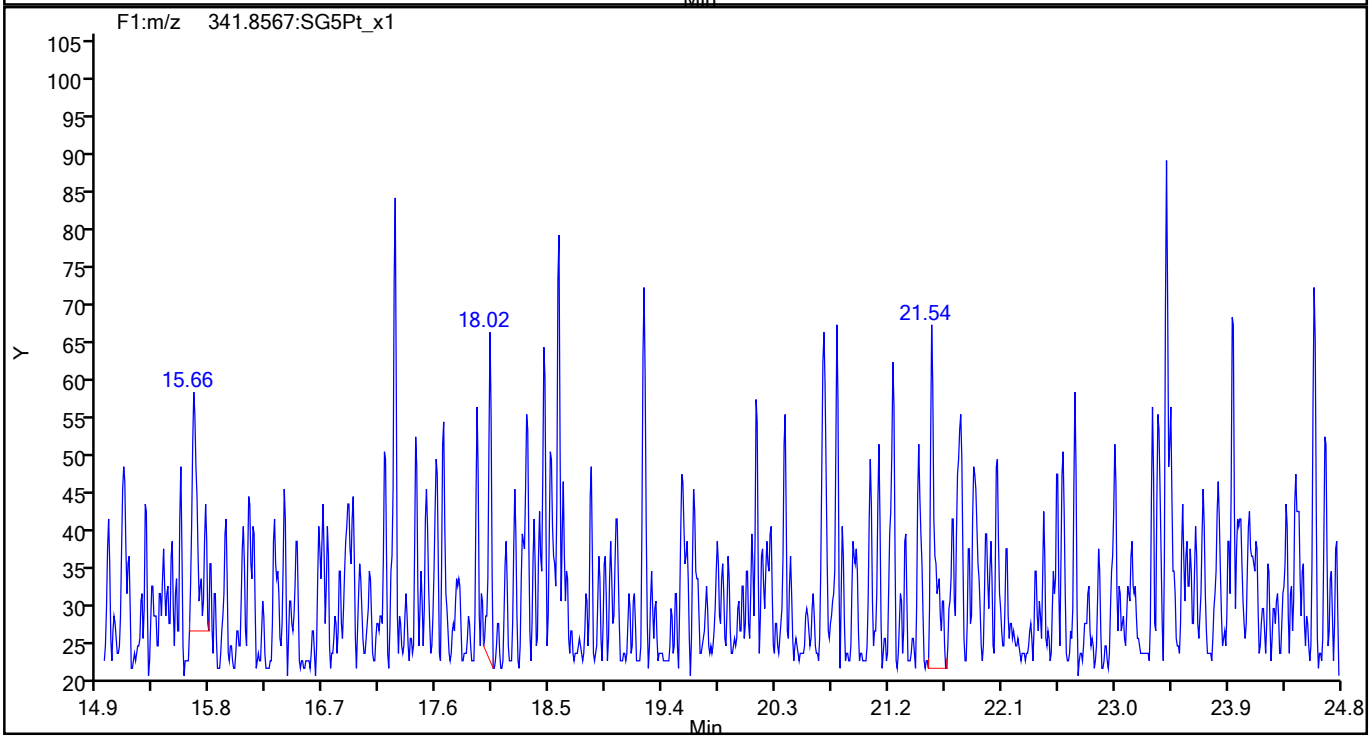

776279

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

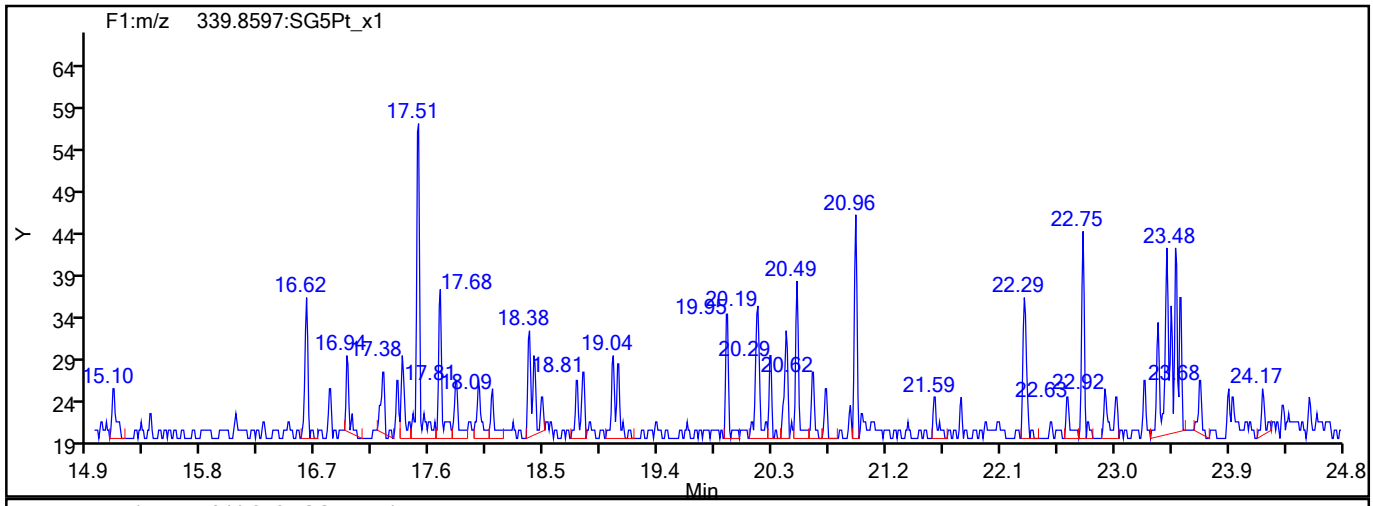

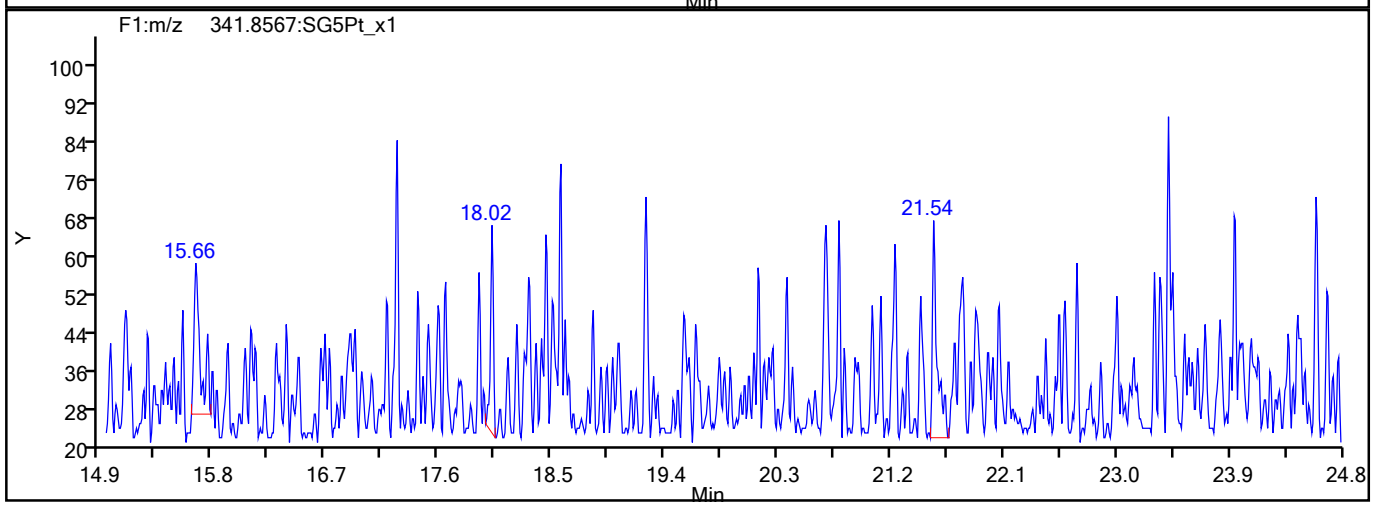

F1 PeCDFs Interference Mass

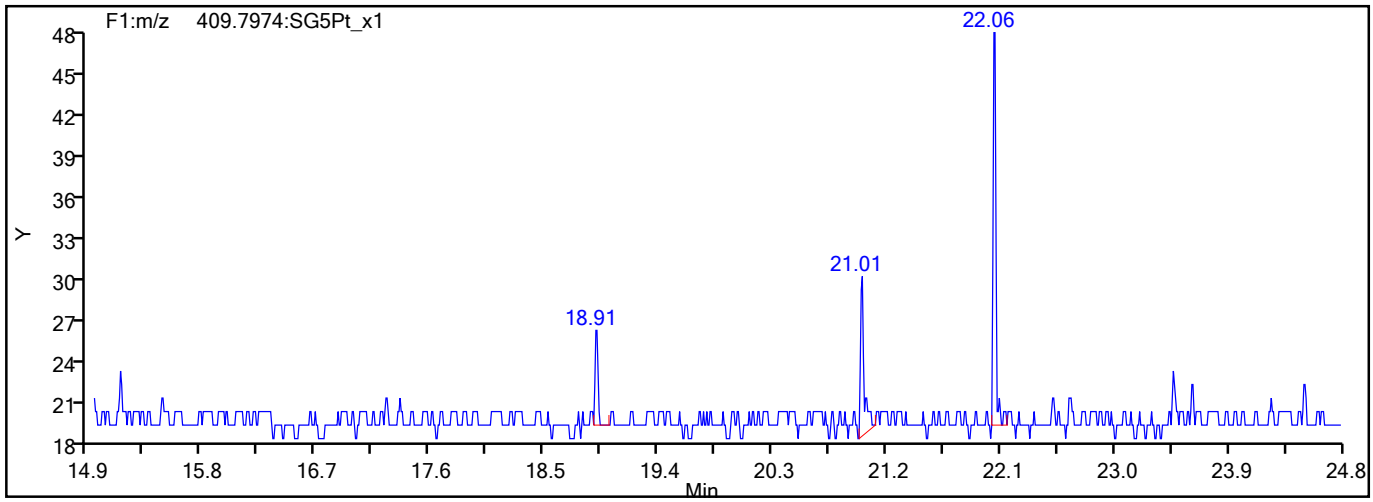

776280

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

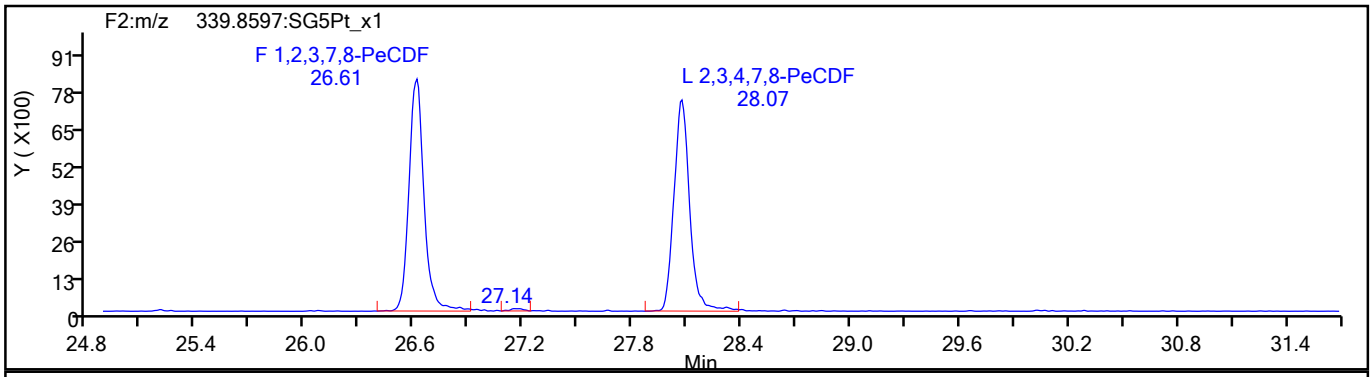

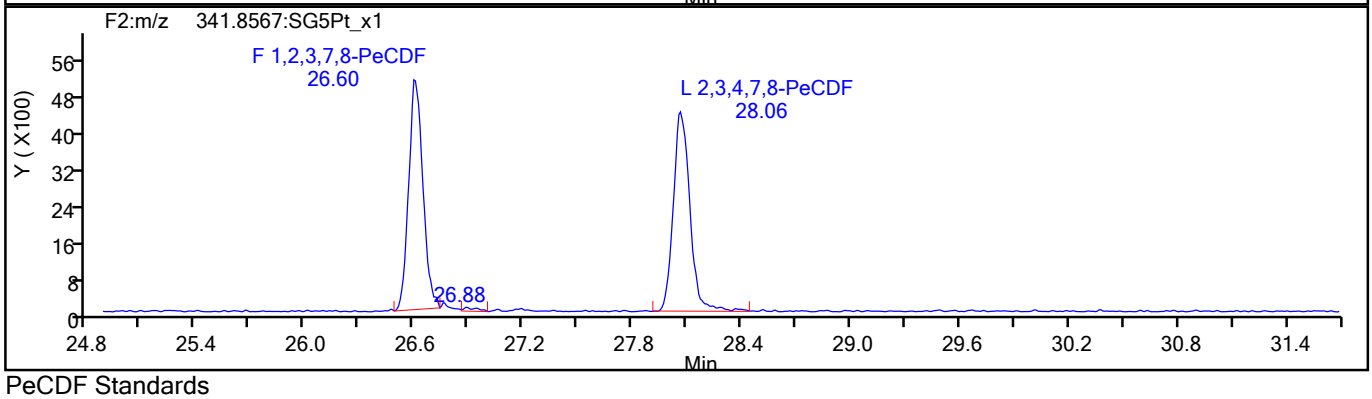

PeCDF Standards

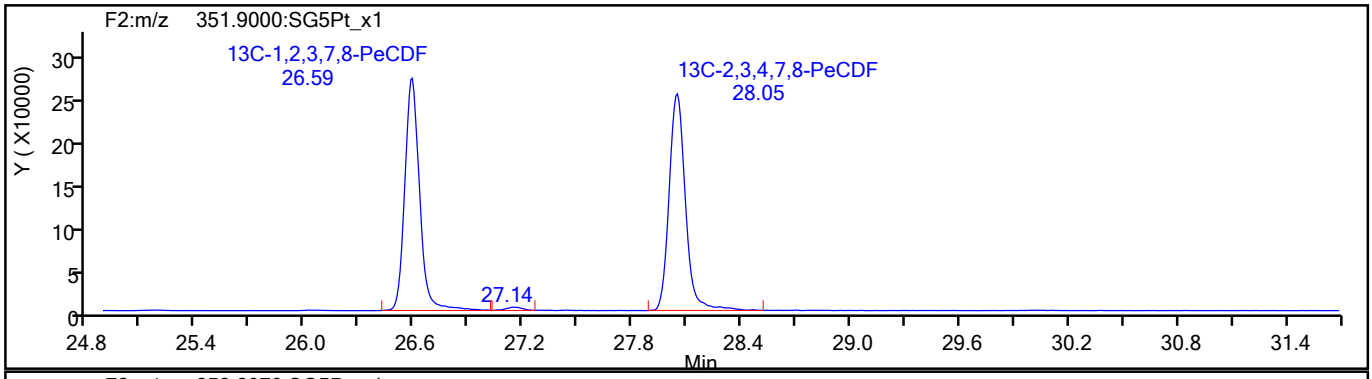

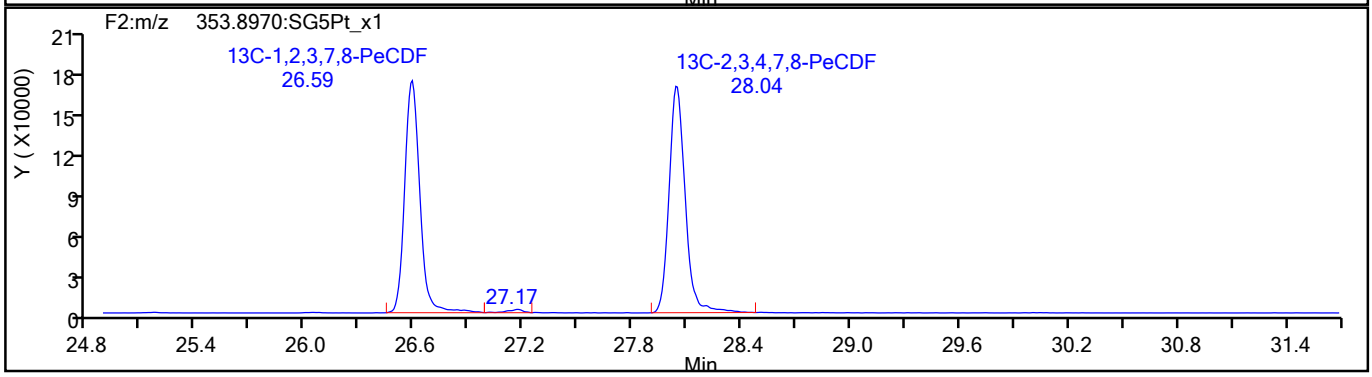

776281

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

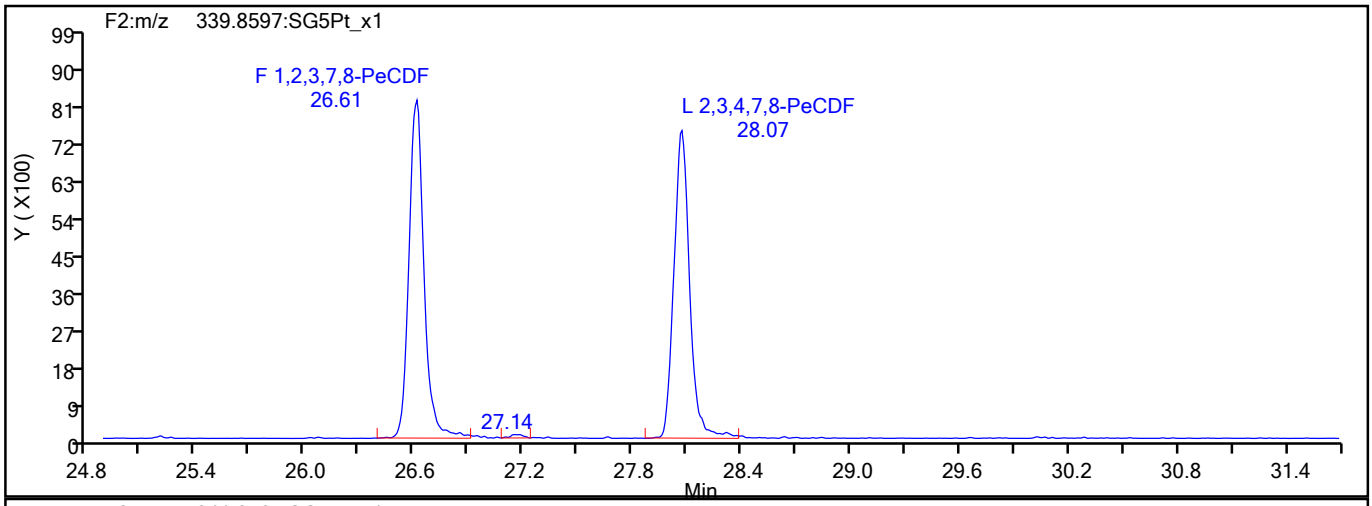

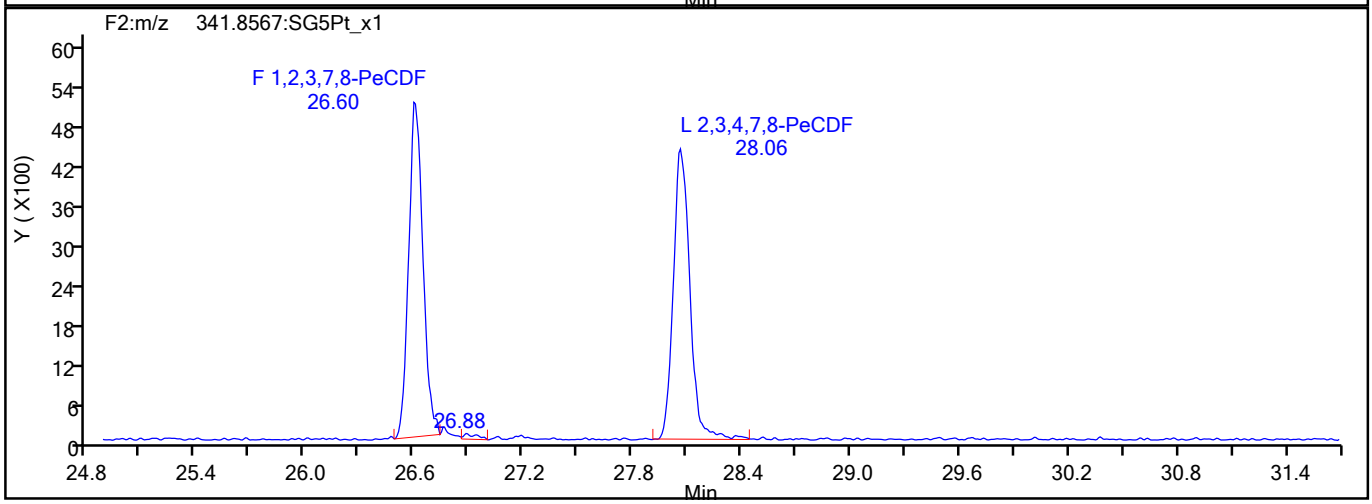

PeCDF Interference Mass

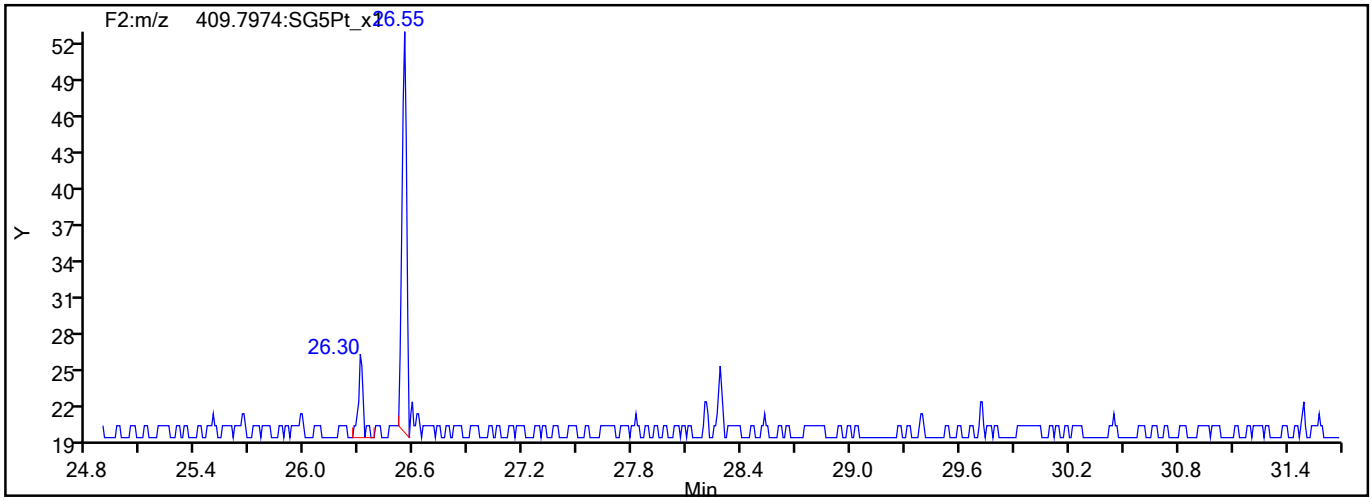

776282

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDD

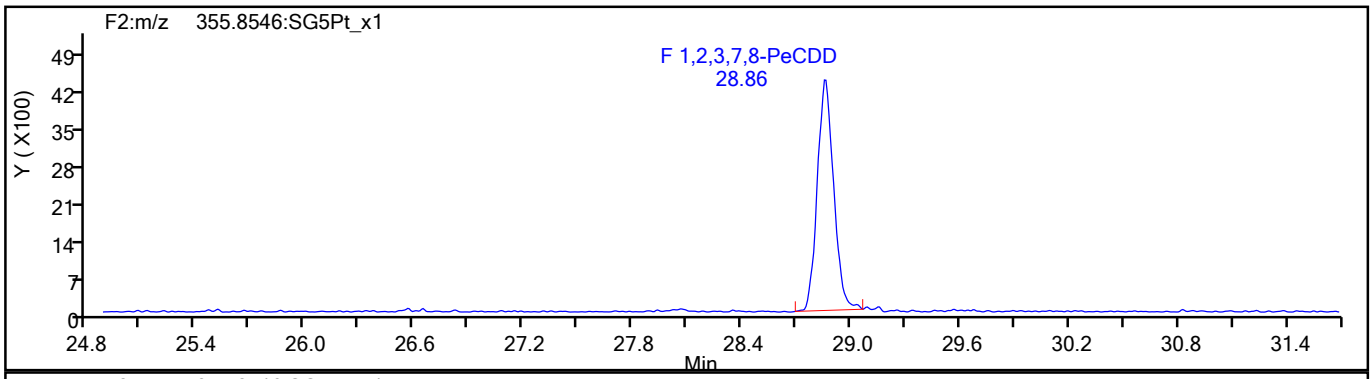

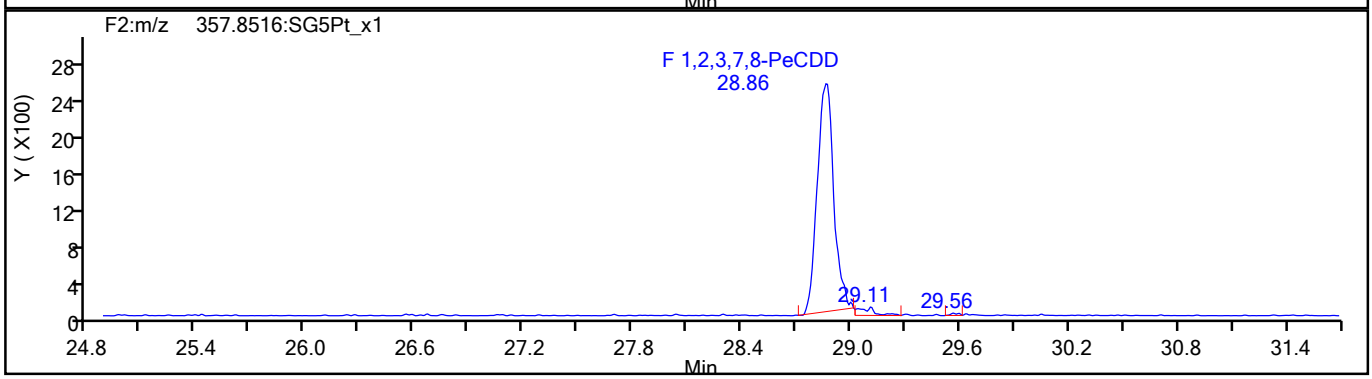

PeCDD Standards

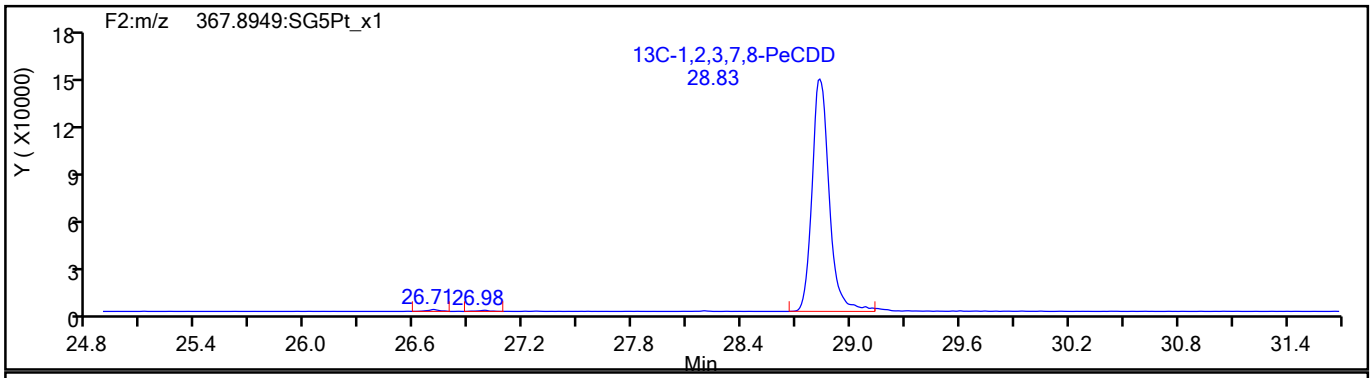

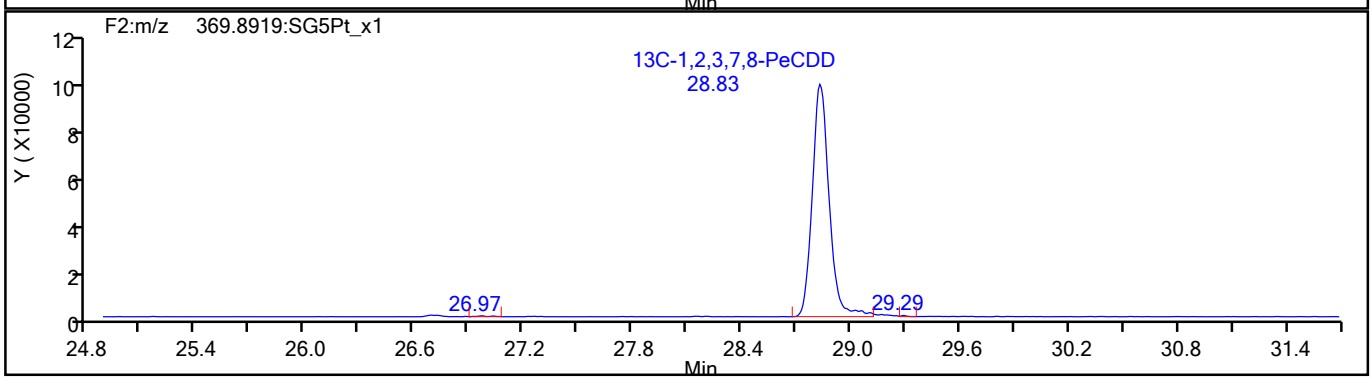

776283

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

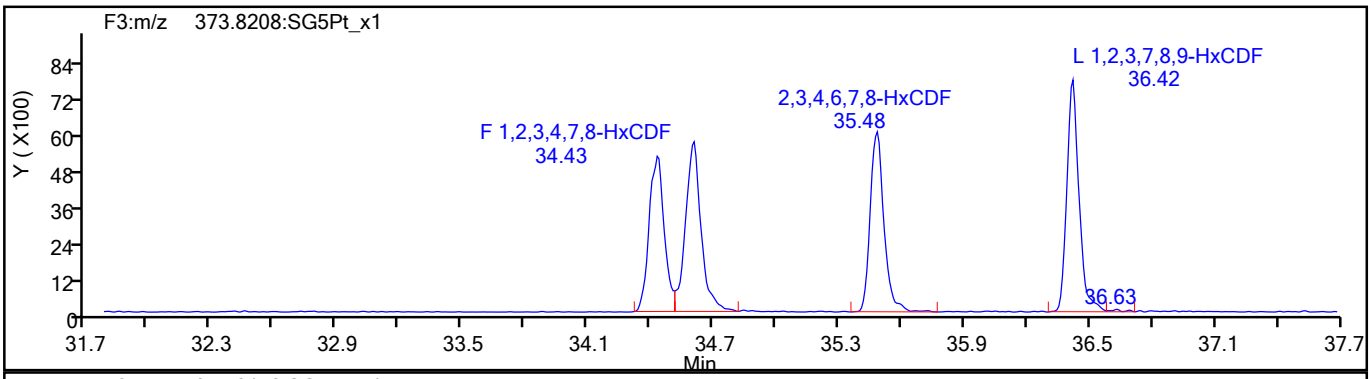

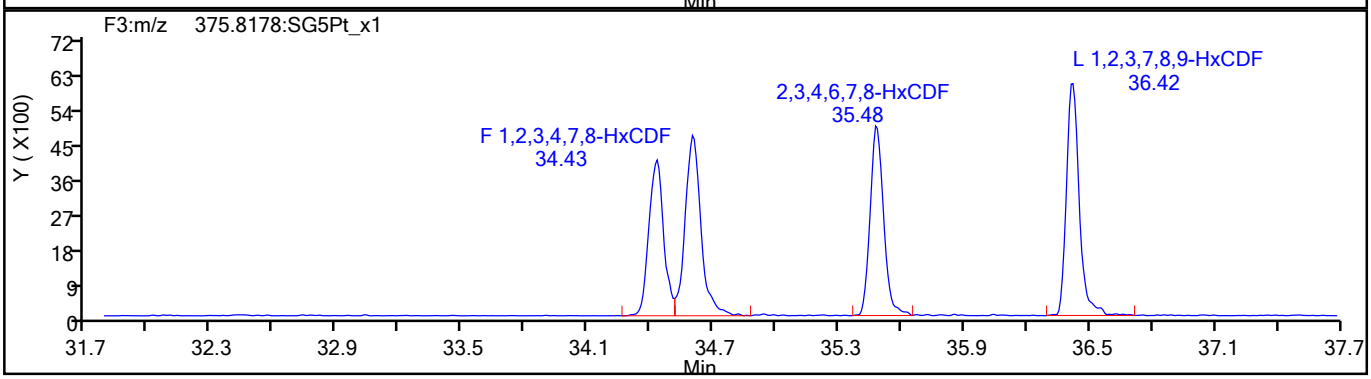

HxCDF Standards

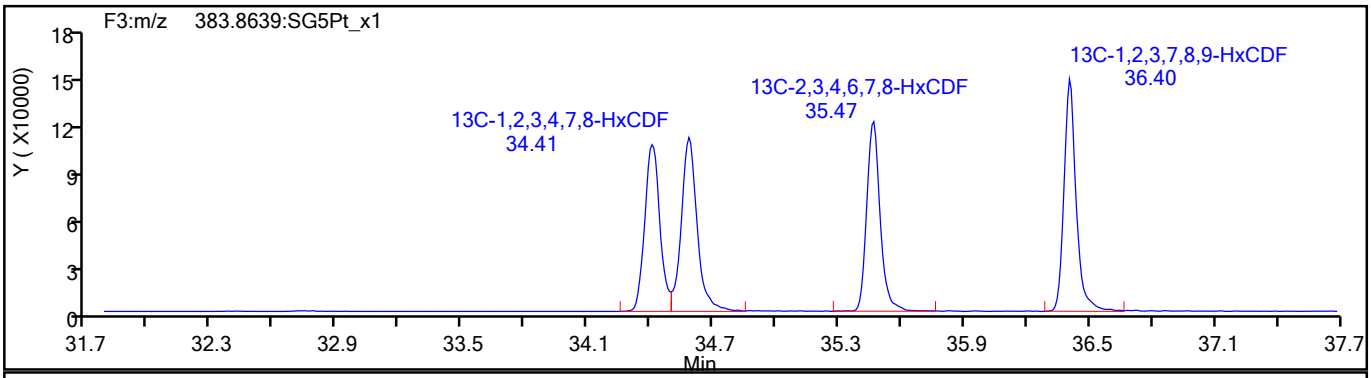

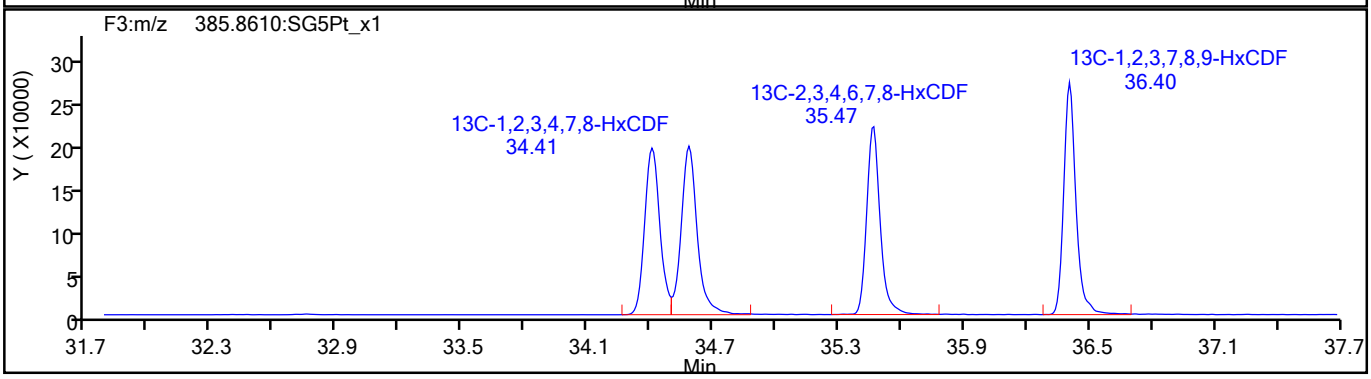

776284

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

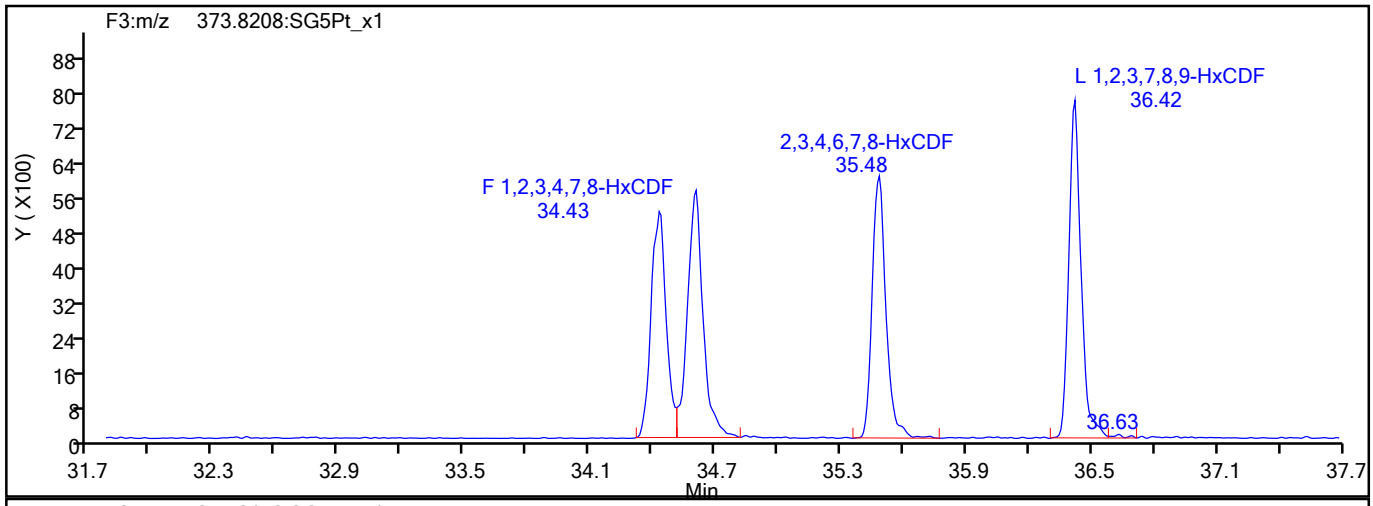

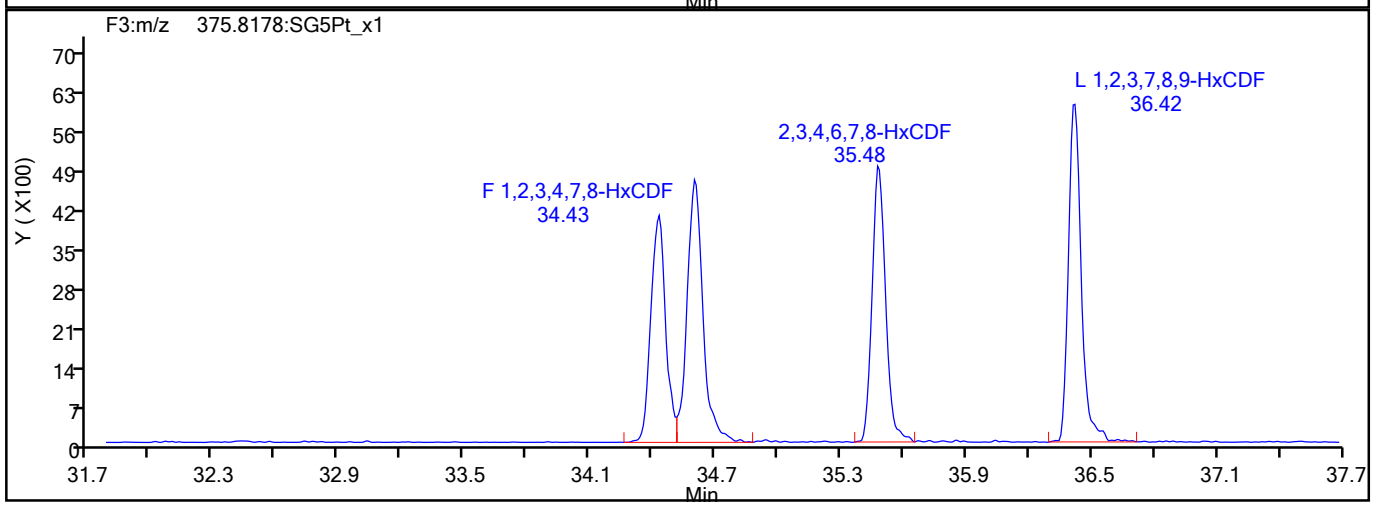

HxCDF Interference Mass

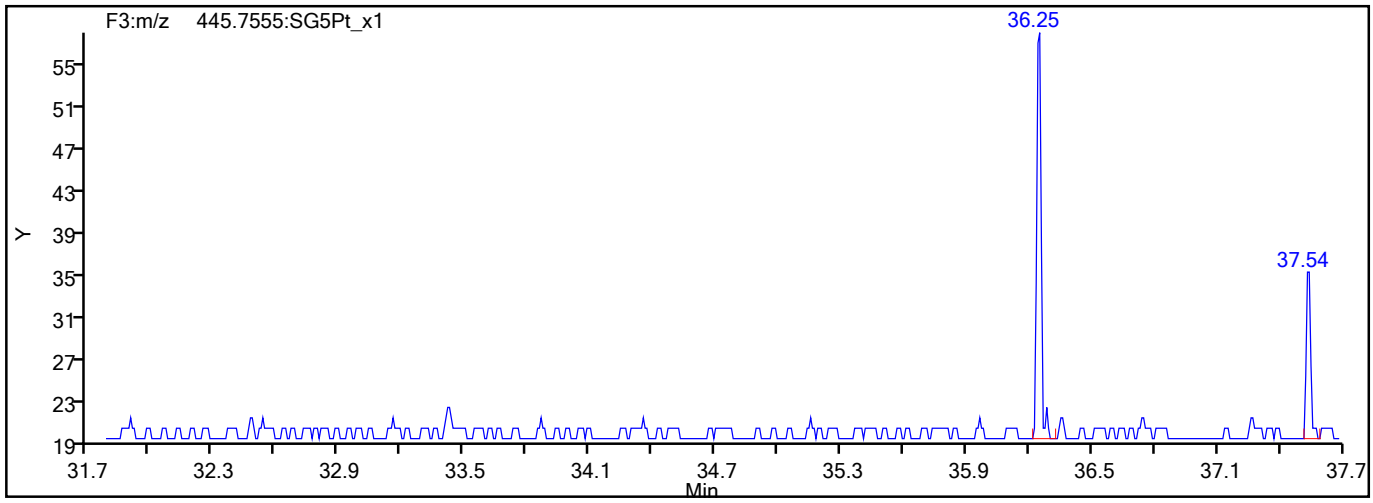

776285

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Eurofins TestAmerica, Sacramento

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HxCDD

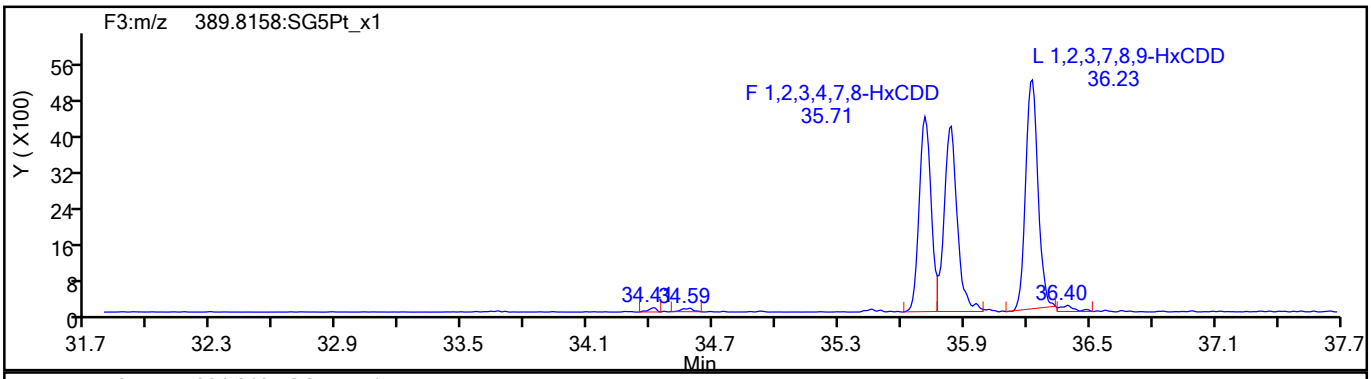

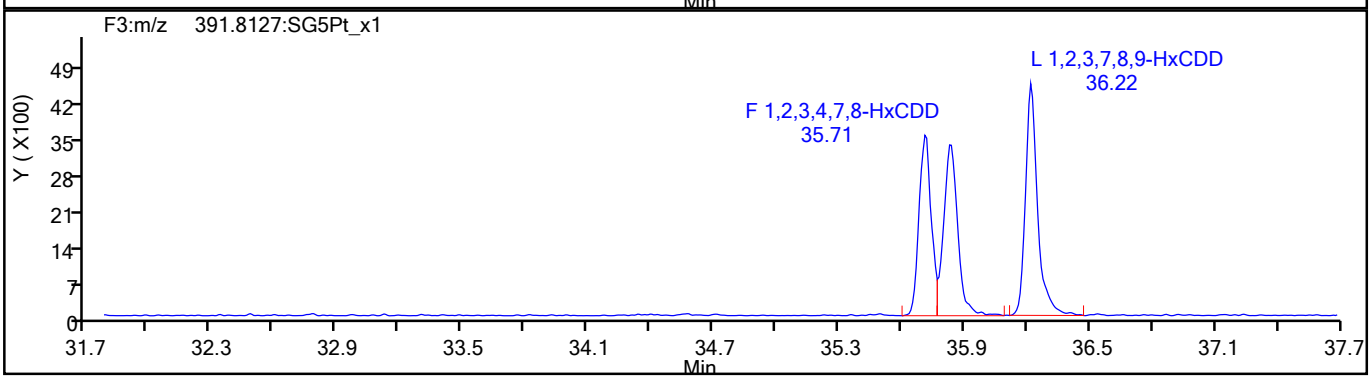

HxCDD Standards

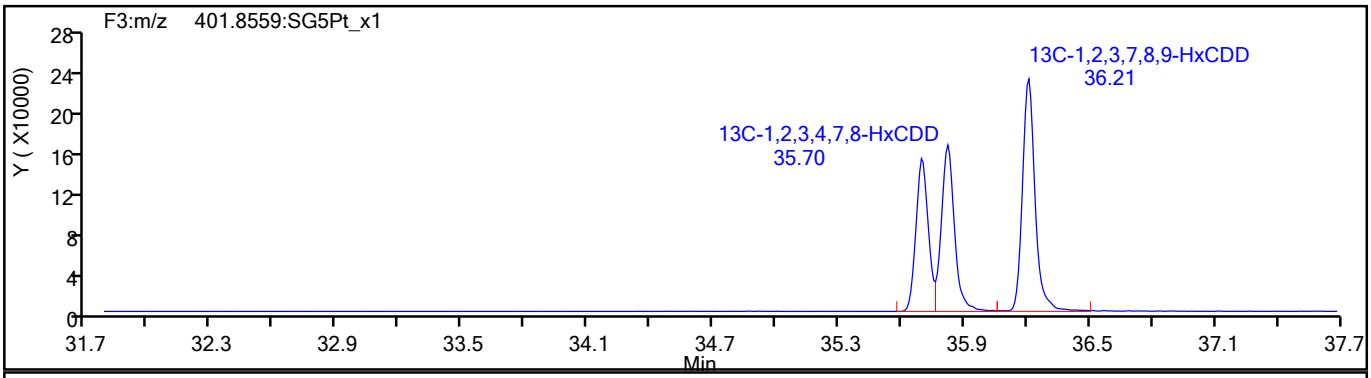

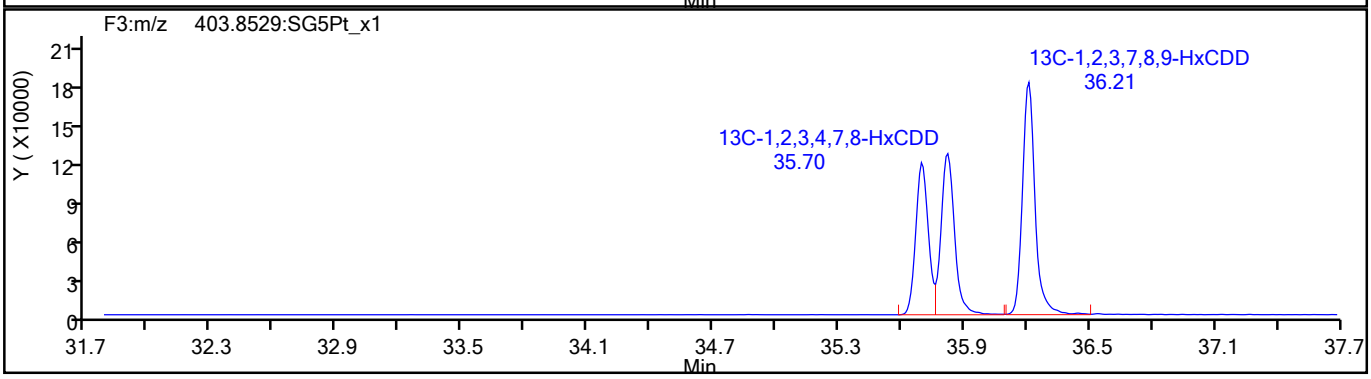

776286

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

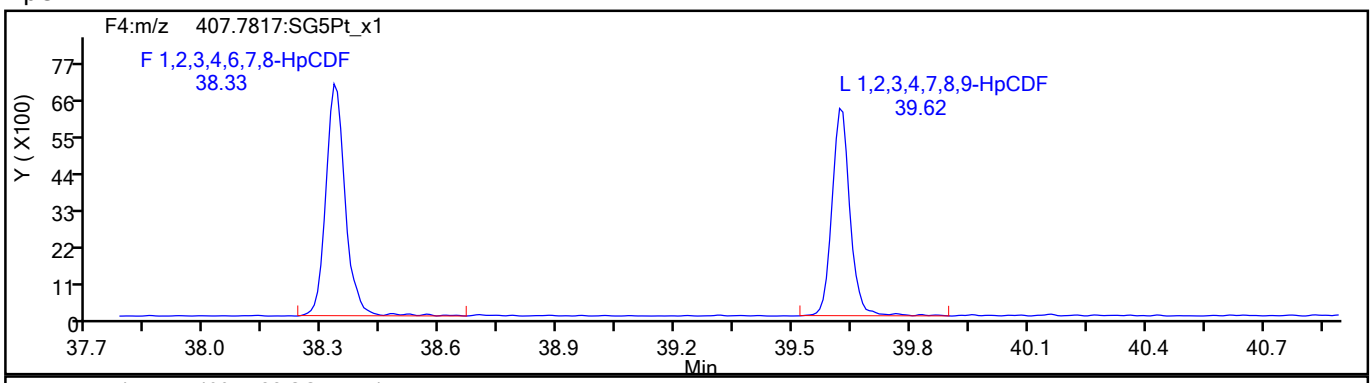

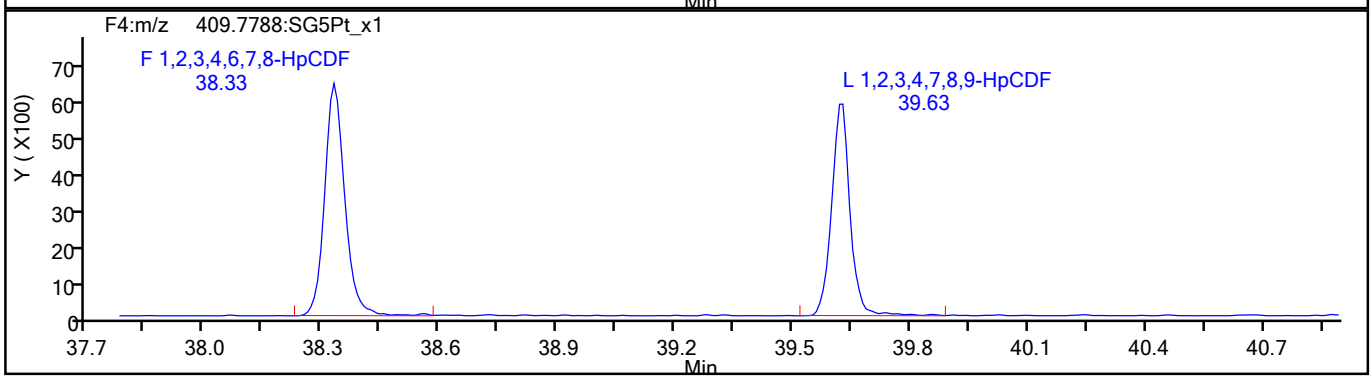

HpCDF Standards

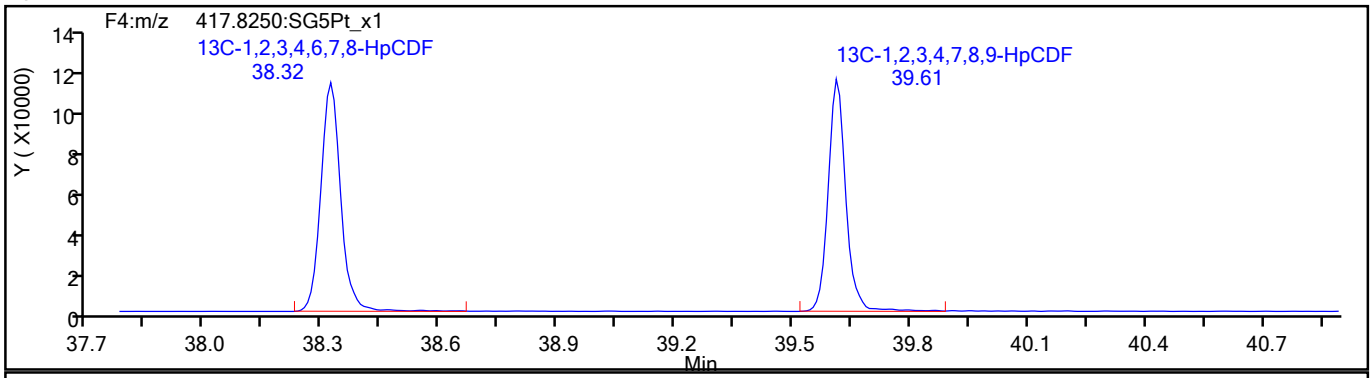

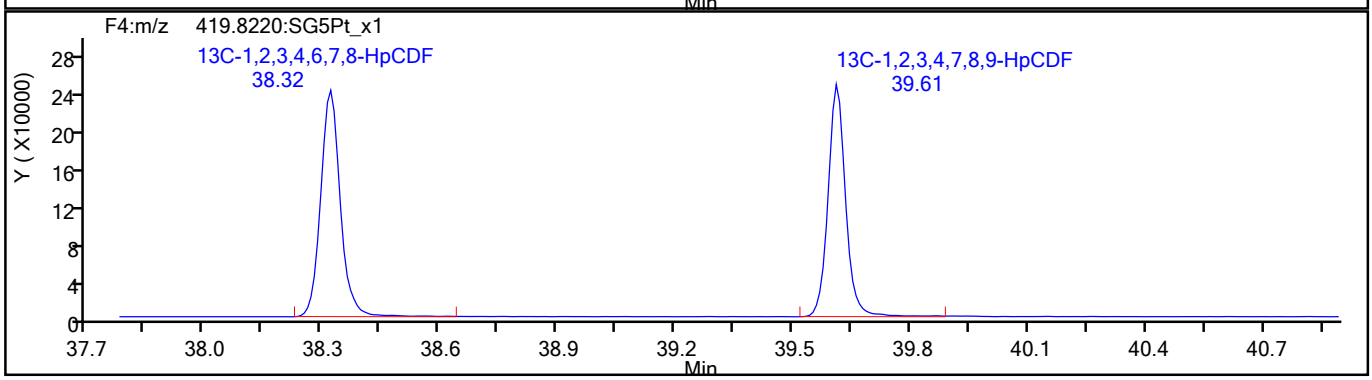

776287

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

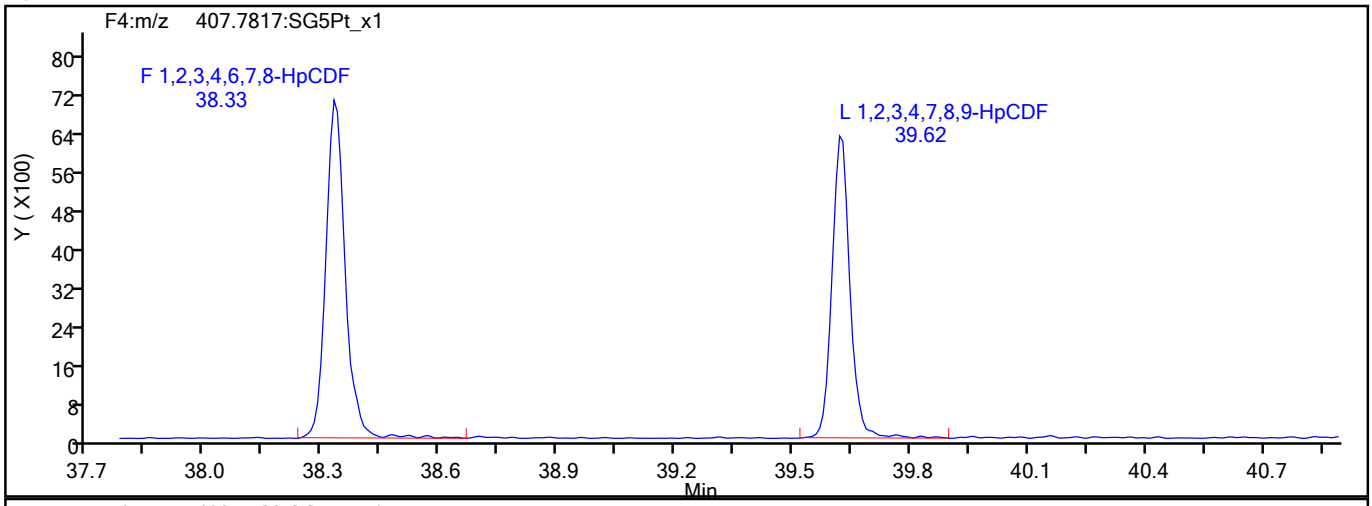

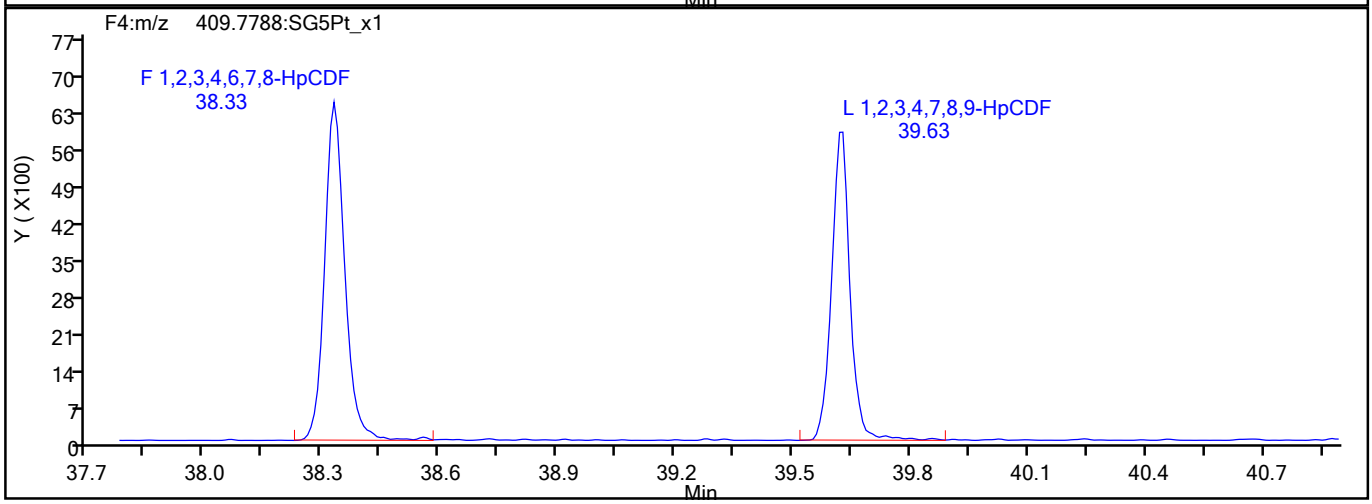

HpCDF Interference Mass

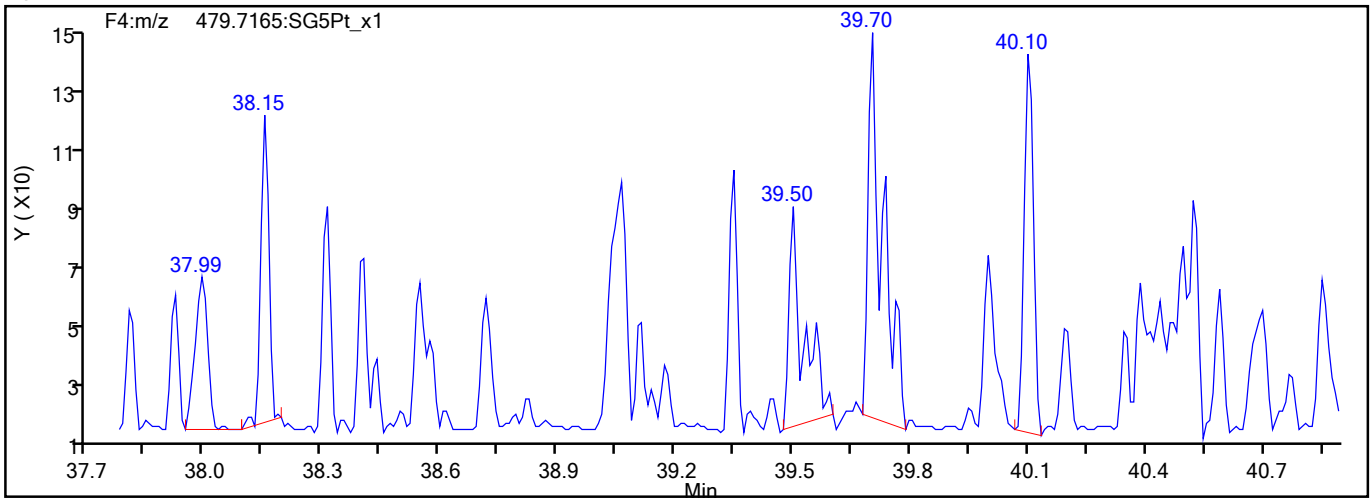

776288

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

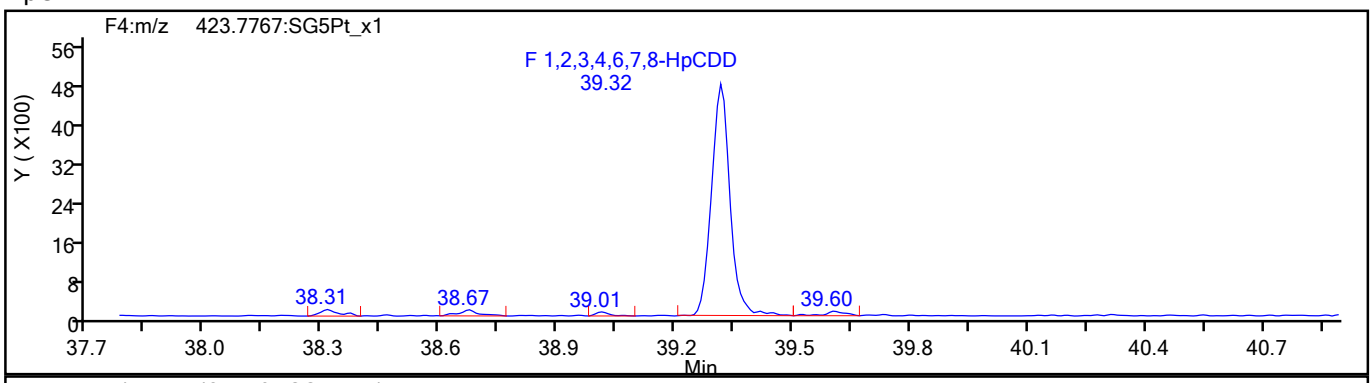

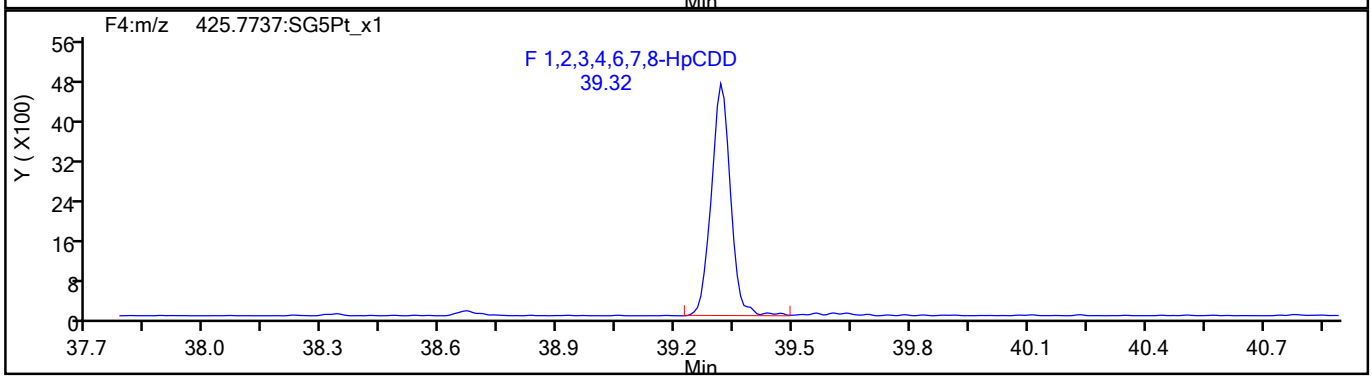

HpCDD Standards

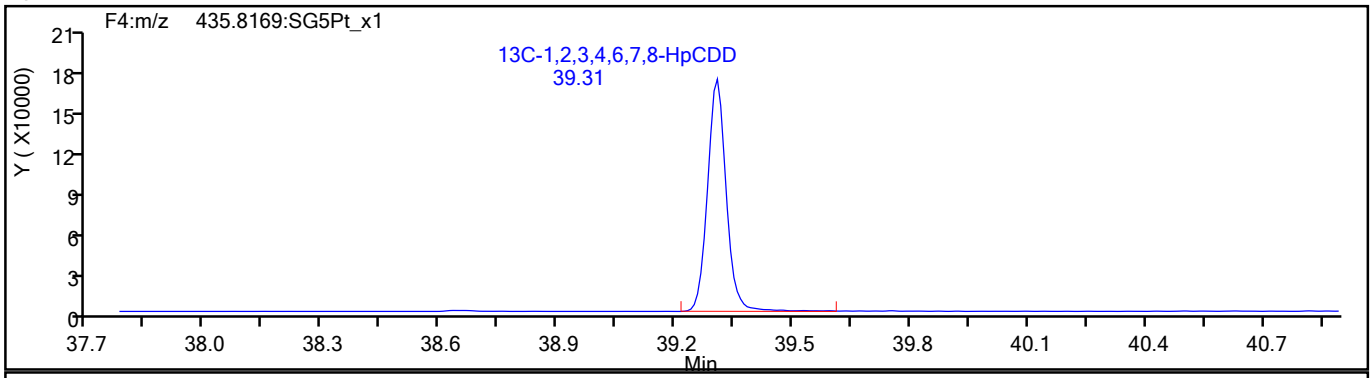

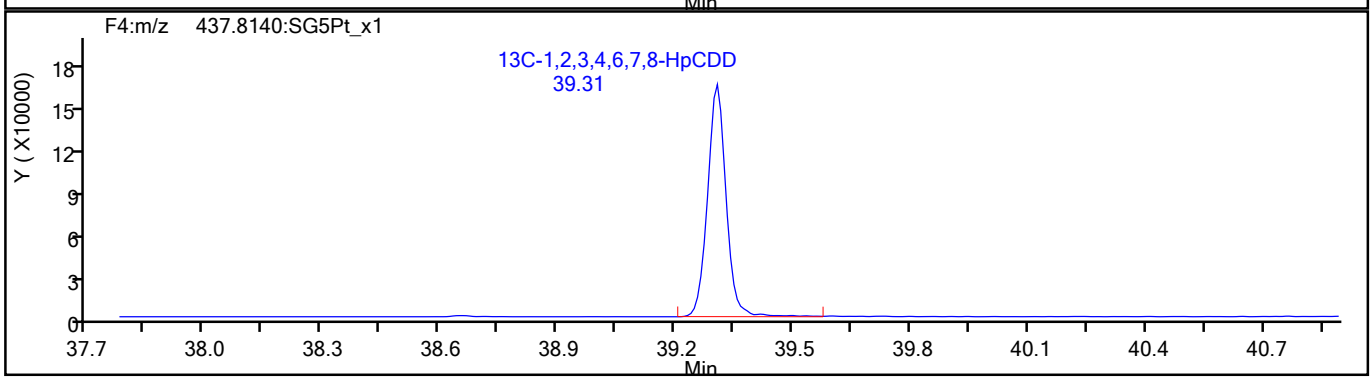

776289

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

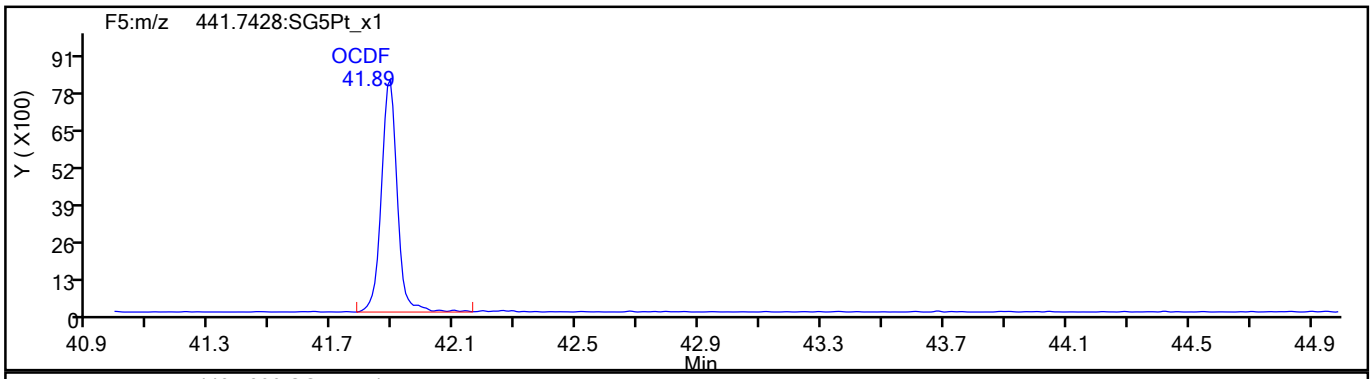

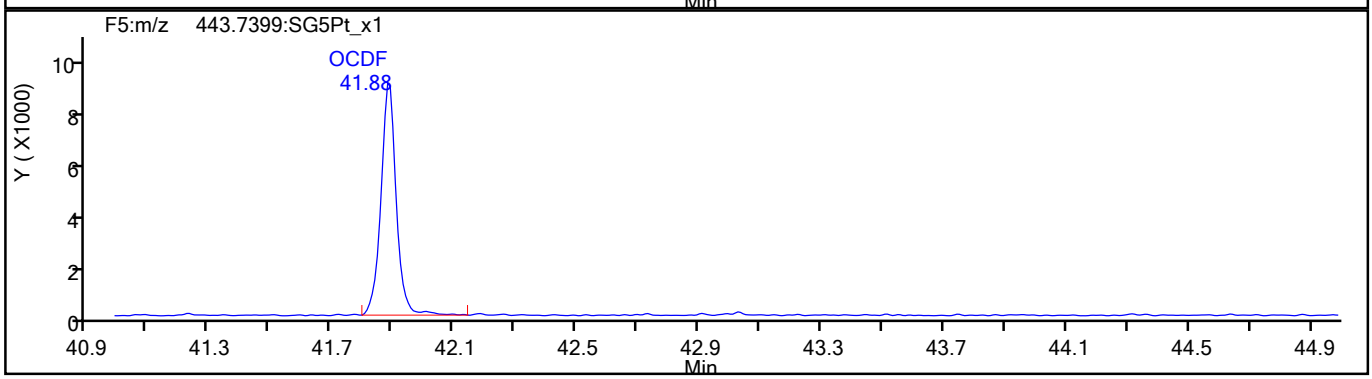

OCDF Standards

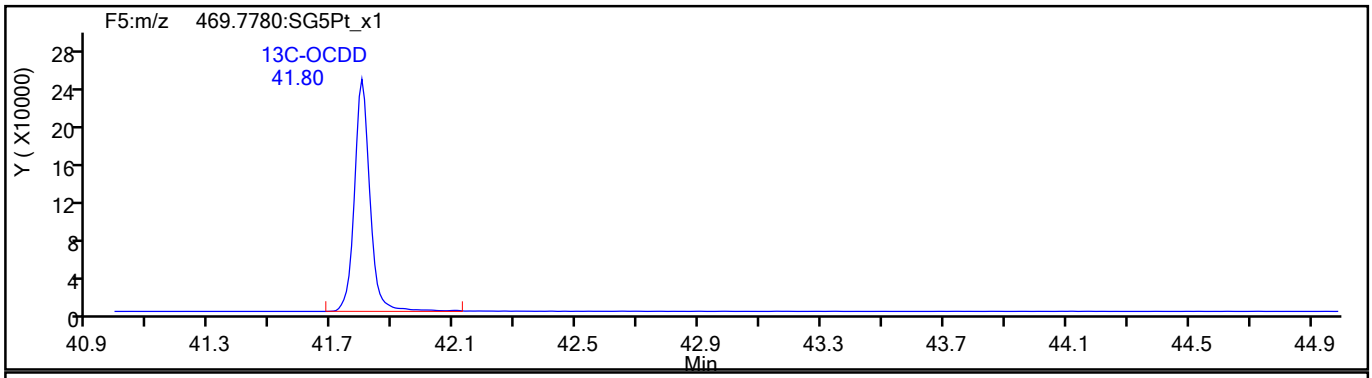

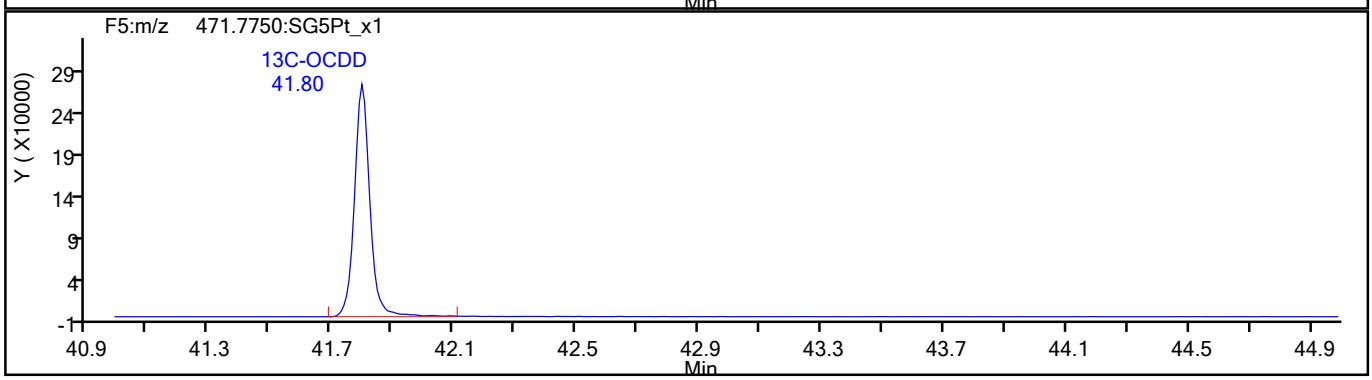

776290

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

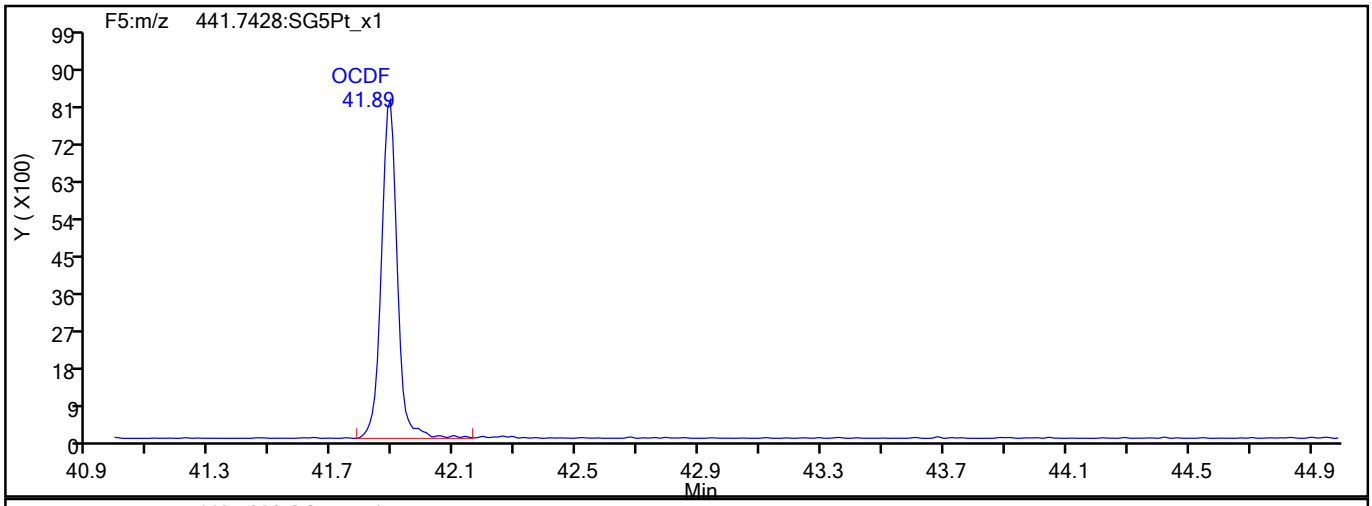

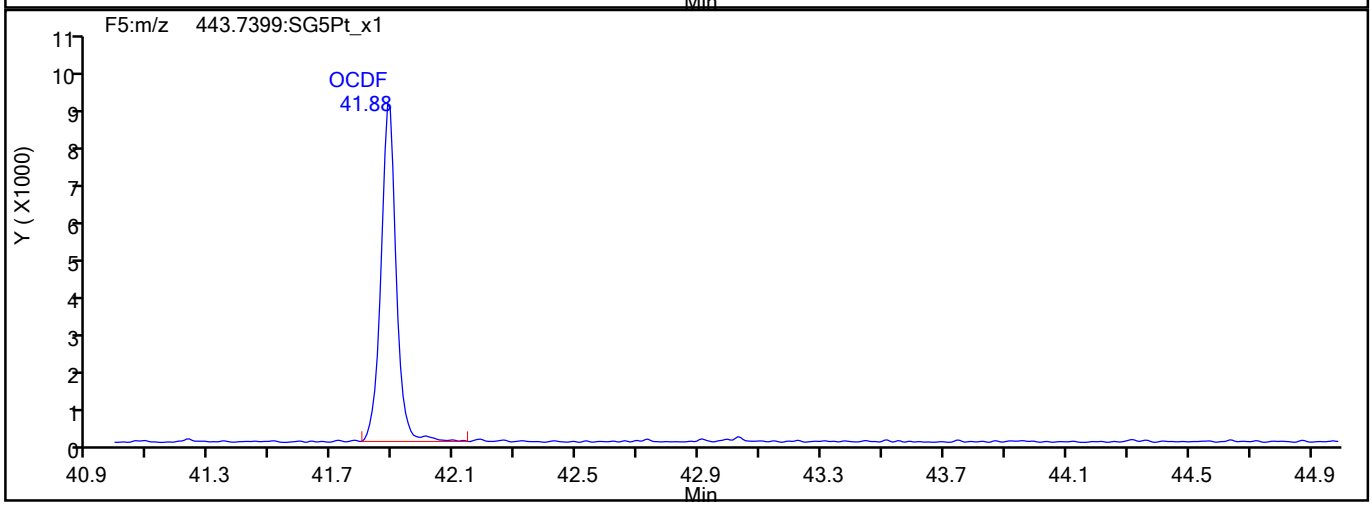

OCDF Interference Mass

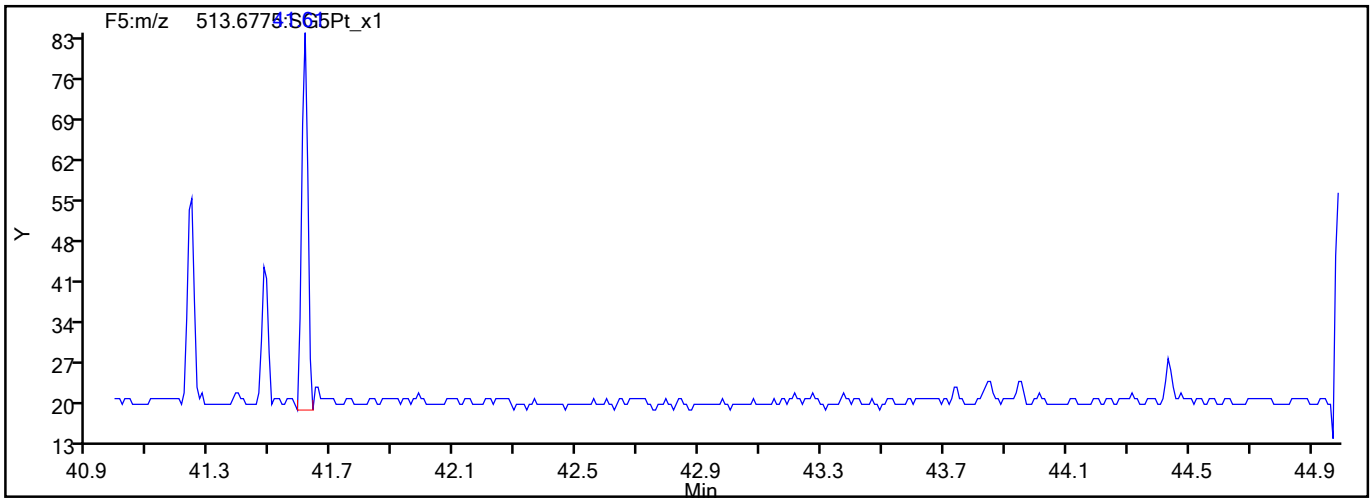

776291

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

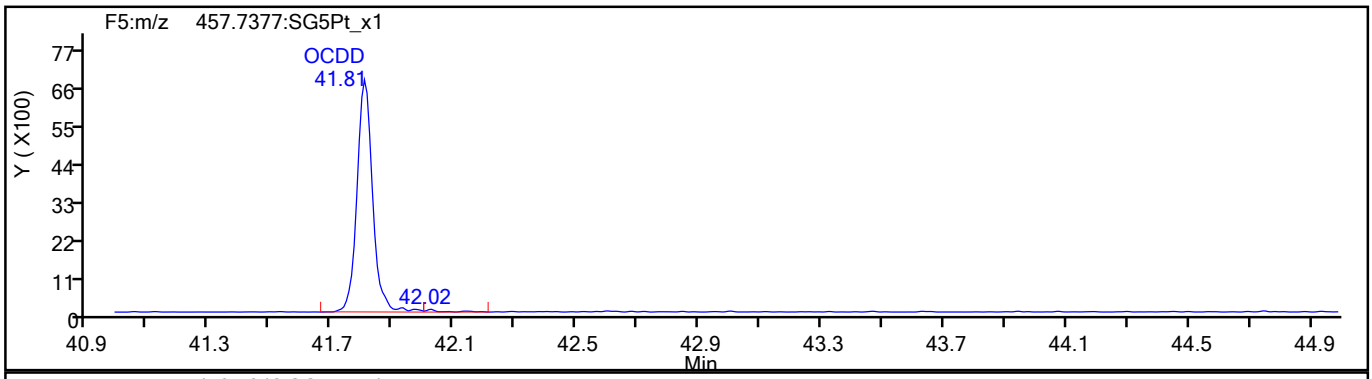

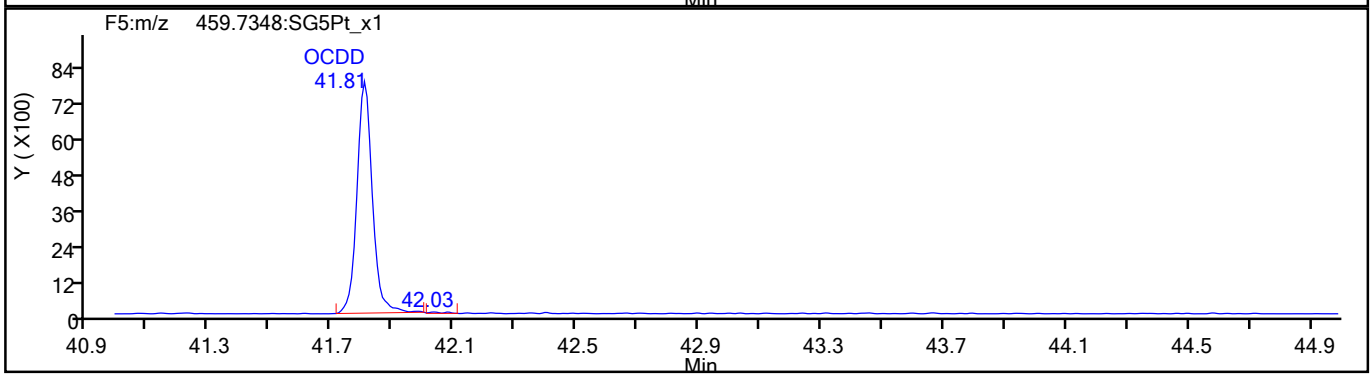

OCDD Standards

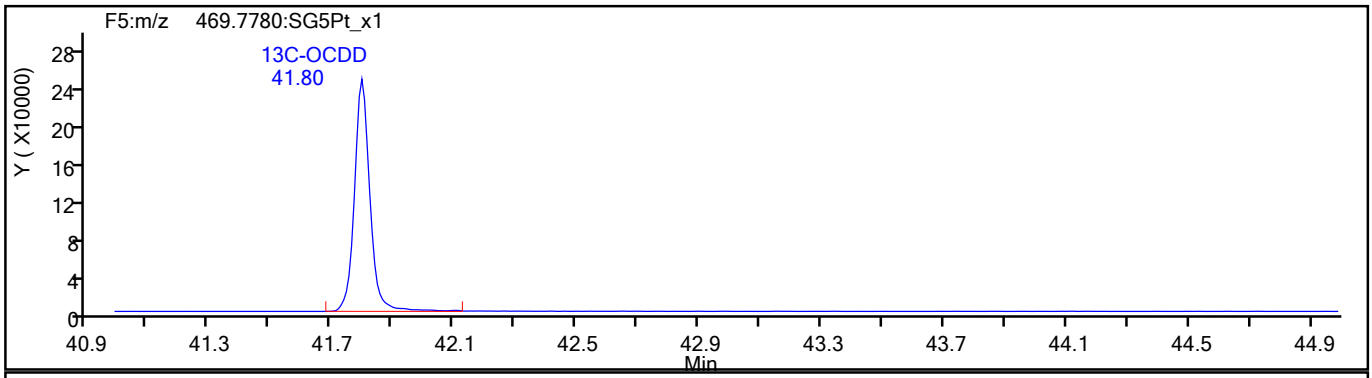

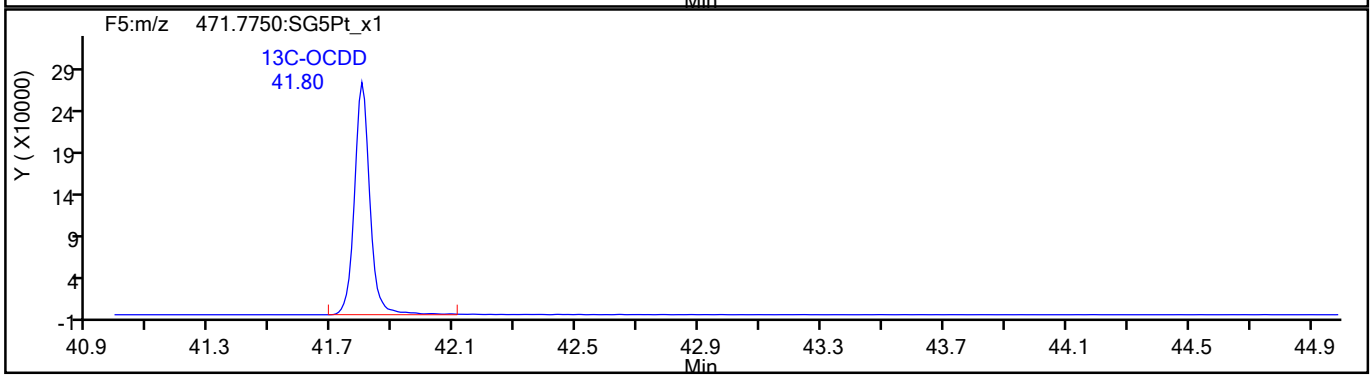

776292

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

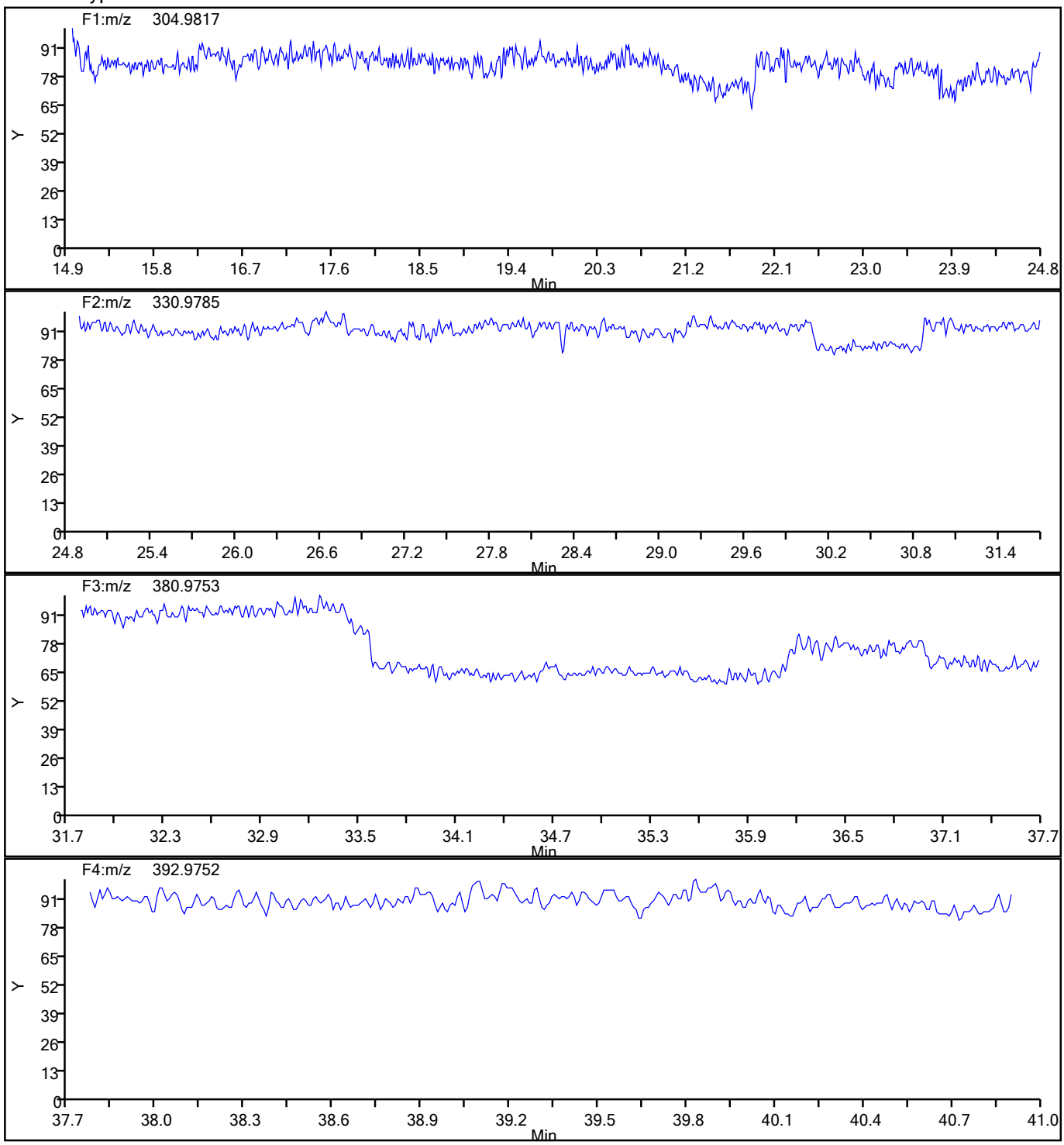

776293

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

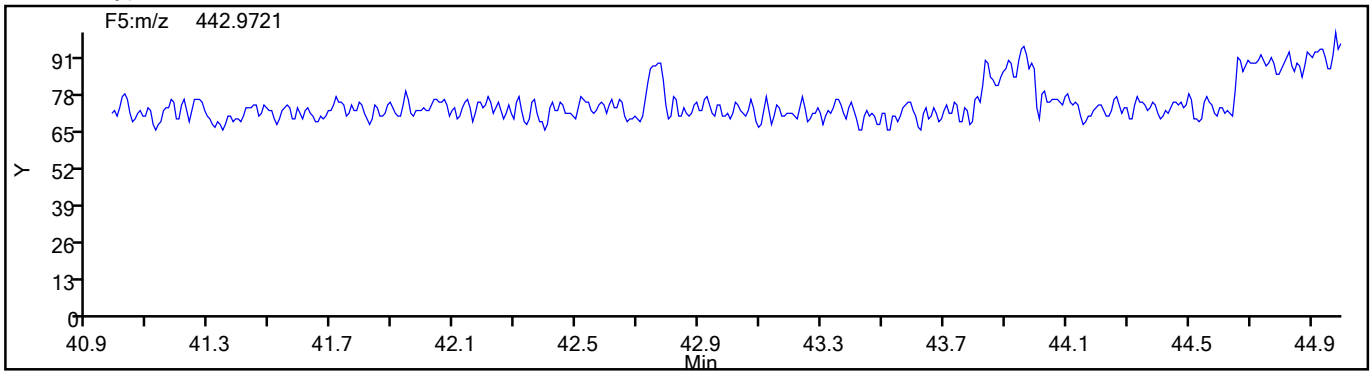

776294

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.534	2045939	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.606	2644389	0.79	1.3459	96.0	96.0	0.2067	0.2067	96.04	
2,3,7,8-TCDF	19.641	50956	0.80	1.0802	1.784	1.784	0.0111	0.0111	89.19	
S Total TCDF					1.784	1.784	0.0111	0.0111		
D 13C-2,3,7,8-TCDD	20.886	1829253	0.79	0.9317	96.0	96.0	0.1871	0.1871	95.97	
$ 37Cl4-2,3,7,8-TCDD	20.929	39241		1.0083	1.902	1.902	0.006151	0.006151	95.11	
2,3,7,8-TCDD	20.929	34971	0.82	1.0753	1.778	1.778	0.0298	0.0298	88.89	
S Total TCDD					1.778	1.778	0.0298	0.0298		
D 13C-1,2,3,7,8-PeCDF	26.541	2234847	1.61	1.1405	95.8	95.8	0.3208	0.3208	95.78	
1,2,3,7,8-PeCDF	26.566	210335	1.55	1.0543	8.927	8.927	0.0325	0.0325	89.27	
D 13C-2,3,4,7,8-PeCDF	27.991	2228025	1.61	1.1253	96.8	96.8	0.3252	0.3252	96.77	
2,3,4,7,8-PeCDF	28.016	200175	1.56	1.0079	8.914	8.914	0.0356	0.0356	89.14	
S Total PeCDF					17.8	17.8	0.0341	0.0341		
D 13C-1,2,3,7,8-PeCDD	28.784	1364144	1.60	0.7165	93.1	93.1	0.1177	0.1177	93.06	
1,2,3,7,8-PeCDD	28.809	129872	1.62	1.0465	9.097	9.097	0.0251	0.0251	90.97	
S Total PeCDD					9.097	9.097	0.0251	0.0251		
D 13C-1,2,3,4,7,8-HxCDF	34.367	1545033	0.52	0.9648	90.2	90.2	0.3810	0.3810	90.23	
1,2,3,4,7,8-HxCDF	34.384	155611	1.20	1.1474	8.778	8.778	0.0522	0.0522	87.78	
D 13C-1,2,3,6,7,8-HxCDF	34.544	1692336	0.52	1.0708	89.1	89.1	0.3433	0.3433	89.05	
1,2,3,6,7,8-HxCDF	34.569	185321	1.24	1.2178	8.992	8.992	0.0483	0.0483	89.92	
D 13C-2,3,4,6,7,8-HxCDF	35.429	1740015	0.54	1.0413	94.2	94.2	0.3530	0.3530	94.16	
2,3,4,6,7,8-HxCDF	35.446	191527	1.25	1.2145	9.063	9.063	0.0405	0.0405	90.63	
D 13C-1,2,3,7,8,9-HxCDF	36.374	1735785	0.52	0.9731	100.5	100.5	0.3778	0.3778	101	
1,2,3,7,8,9-HxCDF	36.390	195077	1.27	1.2401	9.062	9.062	0.0369	0.0369	90.62	
S Total HxCDF					35.9	35.9	0.0445	0.0445		
* 13C-1,2,3,7,8,9-HxCDD	36.180	1774694	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.665	1363103	1.28	0.7587	101.2	101.2	0.1971	0.1971	101	
1,2,3,4,7,8-HxCDD	35.682	132244	1.27	1.0608	9.146	9.146	0.0258	0.0258	91.46	
D 13C-1,2,3,6,7,8-HxCDD	35.792	1558668	1.27	0.8593	102.2	102.2	0.1740	0.1740	102	
1,2,3,6,7,8-HxCDD	35.809	138142	1.21	0.9933	8.922	8.922	0.0262	0.0262	89.22	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.196	139741	1.27	1.1094	8.622	8.622	0.0240	0.0240	86.22	
S Total HxCDD					26.7	26.7	0.0253	0.0253		
D 13C-1,2,3,4,6,7,8-HpCDF	38.291	1272526	0.47	0.7359	97.4	97.4	0.3733	0.3733	97.43	
1,2,3,4,6,7,8-HpCDF	38.308	164108	1.06	1.4421	8.943	8.943	0.0378	0.0378	89.43	
D 13C-1,2,3,4,7,8,9-HpCDF	39.589	1175351	0.46	0.6854	96.6	96.6	0.4008	0.4008	96.63	
1,2,3,4,7,8,9-HpCDF	39.598	138335	1.04	1.3092	8.990	8.990	0.0420	0.0420	89.90	
S Total HpCDF					17.9	17.9	0.0399	0.0399		
D 13C-1,2,3,4,6,7,8-HpCDD	39.286	1162117	1.05	0.6745	97.1	97.1	0.2422	0.2422	97.08	
1,2,3,4,6,7,8-HpCDD	39.294	110761	1.07	1.0503	9.075	9.075	0.0319	0.0319	90.75	
S Total HpCDD					9.075	9.075	0.0319	0.0319		
D 13C-OCDD	41.775	1833139	0.91	0.5446	189.7	189.7	0.2857	0.2857	94.83	
OCDF	41.868	217473	0.91	1.3168	18.0	18.0	0.0452	0.0452	90.09	
OCDD	41.784	182470	0.91	1.0620	18.7	18.7	0.0368	0.0368	93.73	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.534	20.547	-1		908781	140893	128	320	1101		
333.9338	20.542	20.547	0		1137158	181590	97	242	1872	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.606	19.616	-1	0.955	1167638	192853	232	580	831		
317.9389	19.615	19.616	0	0.955	1476751	240851	127	317	1896	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.641	19.646	0	1.002	22722	3787	5	12	757		
305.8987	19.632	19.646	-1	1.001	28234	4422	16	40	276	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.886	20.910	-1	1.017	809102	120100	128	320	938		
333.9338	20.895	20.910	-1	1.018	1020151	151021	97	242	1557	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.929	20.935	0	1.019	39241	6110	8	20	764		
2,3,7,8-TCDD											
319.8965	20.929	20.939	-1	1.002	15743	2433	27	67	90		
321.8936	20.929	20.939	-1	1.002	19228	3031	8	20	379	0.82(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.541	26.560	-1	1.293	1380136	237735	280	700	849		
353.8970	26.549	26.560	-1	1.293	854711	147619	192	480	769	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.566	26.584	-1	1.001	127910	22847	25	62	914		
341.8567	26.566	26.584	-1	1.001	82425	14553	28	70	520	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	27.991	28.014	-1	1.363	1373543	227507	280	700	813		
353.8970	27.991	28.014	-1	1.363	854482	140253	192	480	730	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.016	28.039	-1	1.001	121955	19987	25	62	799		
341.8567	28.016	28.039	-1	1.001	78220	12878	28	70	460	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.784	28.801	-1	1.402	839338	134094	55	137	2438		
369.8919	28.775	28.801	-2	1.401	524806	82953	54	135	1536	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.809	28.828	-1	1.001	80255	12276	18	45	682		
357.8516	28.809	28.828	-1	1.001	49617	7332	5	12	1466	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.367	34.384	-1	0.950	530041	107506	195	487	551		
385.8610	34.367	34.384	-1	0.950	1014992	209541	410	1025	511	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.384	34.405	-1	1.000	84954	17499	46	115	380		
375.8178	34.384	34.405	-1	1.000	70657	14926	30	75	498	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.544	34.562	-1	0.955	582468	111482	195	487	572		
385.8610	34.544	34.562	-1	0.955	1109868	211659	410	1025	516	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.569	34.582	-1	1.001	102510	19443	46	115	423		
375.8178	34.561	34.582	-1	1.000	82811	15785	30	75	526	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.429	35.444	-1	0.979	608469	136128	195	487	698		
385.8610	35.429	35.444	-1	0.979	1131546	250431	410	1025	611	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.446	35.461	-1	1.000	106373	23069	46	115	502		
375.8178	35.446	35.461	-1	1.000	85154	19256	30	75	642	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.374	36.388	-1	1.005	597532	142559	195	487	731		
385.8610	36.374	36.388	-1	1.005	1138253	273050	410	1025	666	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.390	36.402	-1	1.000	109103	26446	46	115	575		
375.8178	36.390	36.402	-1	1.000	85974	20436	30	75	681	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.180	36.192	-1		992912	228100	138	345	1653		
403.8529	36.180	36.192	-1		781782	183211	108	270	1696	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.665	35.680	-1	0.986	765726	187664	138	345	1360		
403.8529	35.665	35.680	-1	0.986	597377	148078	108	270	1371	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.682	35.695	-1	1.000	73908	17289	18	45	961		
391.8127	35.682	35.695	-1	1.000	58336	14382	19	47	757	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.792	35.805	-1	0.989	870562	199612	138	345	1446		
403.8529	35.792	35.805	-1	0.989	688106	154356	108	270	1429	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.809	35.820	-1	1.000	75558	17193	18	45	955		
391.8127	35.809	35.820	-1	1.000	62584	14006	19	47	737	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.196	36.208	-1	1.015	78157	18353	18	45	1020		
391.8127	36.196	36.208	-1	1.015	61584	14405	19	47	758	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.291	38.305	-1	1.058	404086	116332	150	375	776		
419.8220	38.291	38.305	-1	1.058	868440	254106	302	755	841	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.308	38.317	-1	1.000	84325	24268	44	110	552		
409.7788	38.299	38.317	-1	1.000	79783	22737	37	92	615	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.589	39.600	-1	1.094	368476	114509	150	375	763		
419.8220	39.589	39.600	-1	1.094	806875	252758	302	755	837	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	70636	21558	44	110	490		
409.7788	39.598	39.608	-1	1.000	67699	21216	37	92	573	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.286	39.293	0	1.086	594894	185269	137	342	1352		
437.8140	39.286	39.293	0	1.086	567223	172933	132	330	1310	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.294	39.301	0	1.000	57275	17734	30	75	591		
425.7737	39.294	39.301	0	1.000	53486	17016	18	45	945	1.07(0.88-1.20)	
13C-OCDD											
469.7780	41.775	41.785	-1	1.155	873143	243136	128	320	1900		
471.7750	41.775	41.785	-1	1.155	959996	268180	128	320	2095	0.91(0.76-1.02)	
OCDF											
441.7428	41.868	41.875	0	1.002	103359	30074	20	50	1504		
443.7399	41.859	41.875	-1	1.002	114114	32506	41	102	793	0.91(0.76-1.02)	
OCDD											
457.7377	41.784	41.794	-1	1.000	86745	24118	17	42	1419		
459.7348	41.784	41.794	-1	1.000	95725	27065	23	57	1177	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

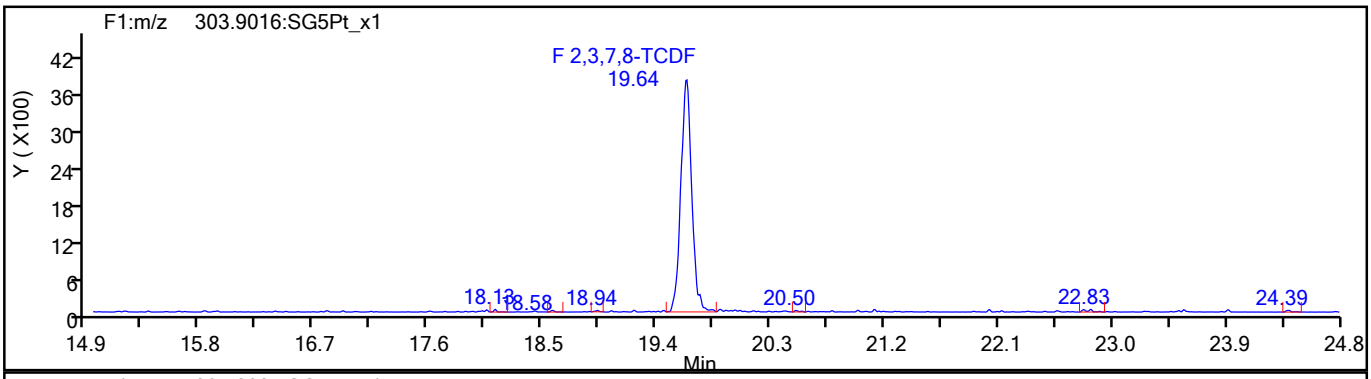

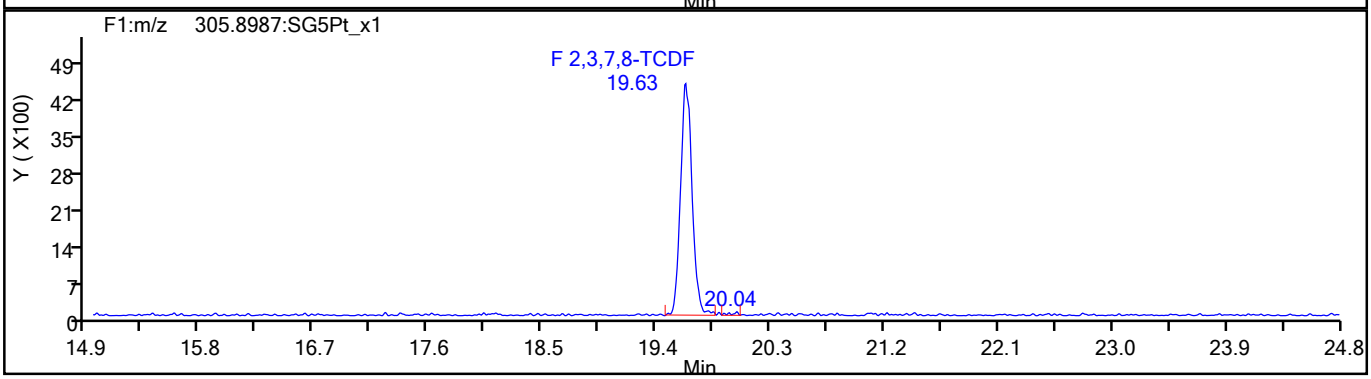

TCDF Standards

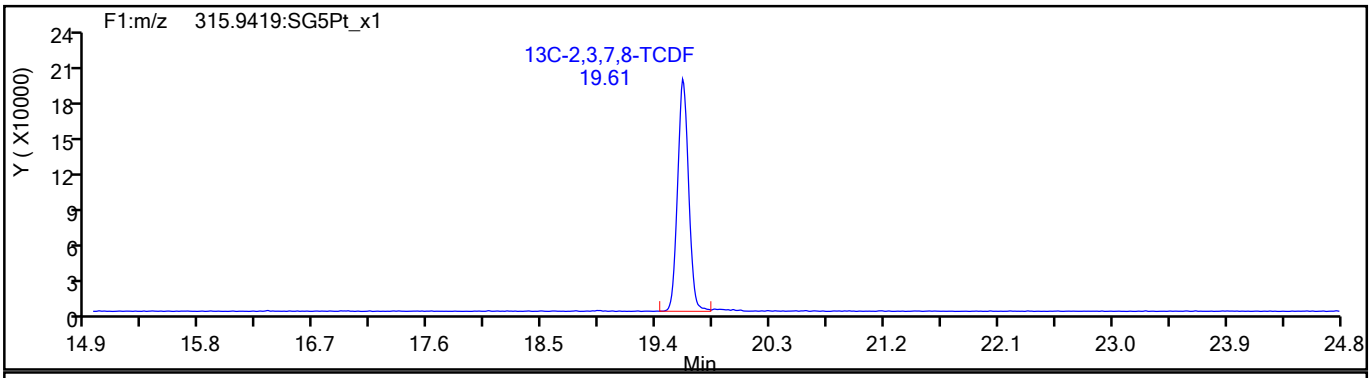

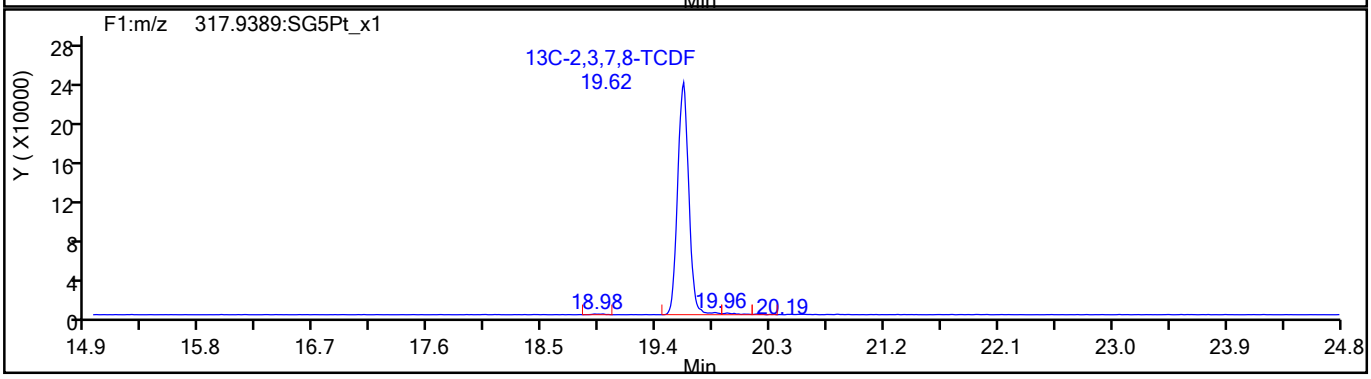

776300

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

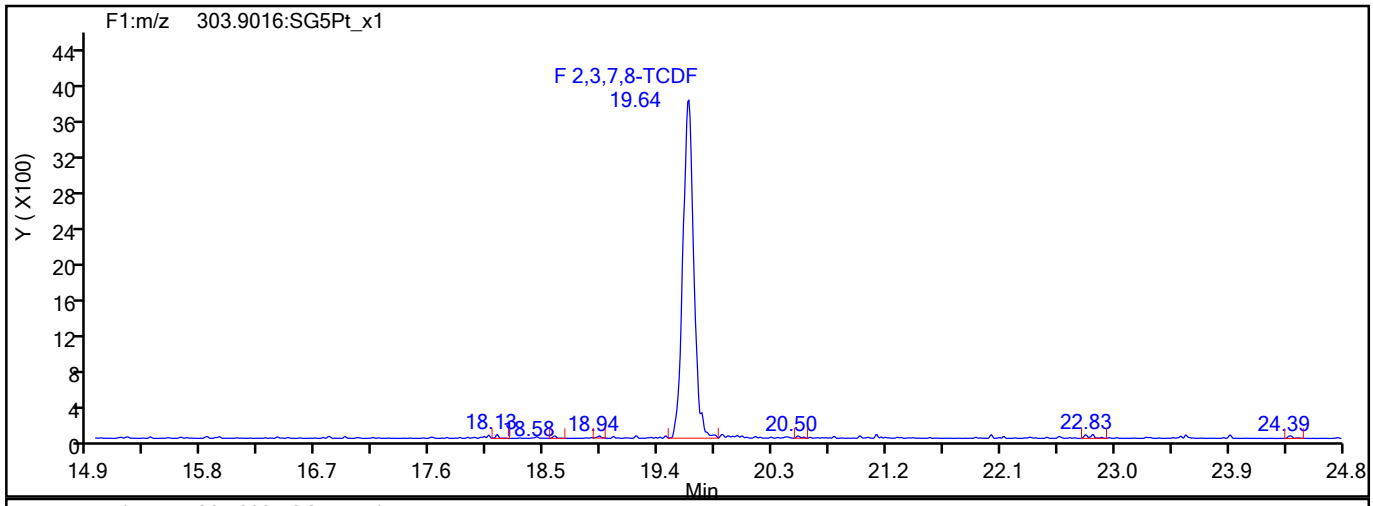

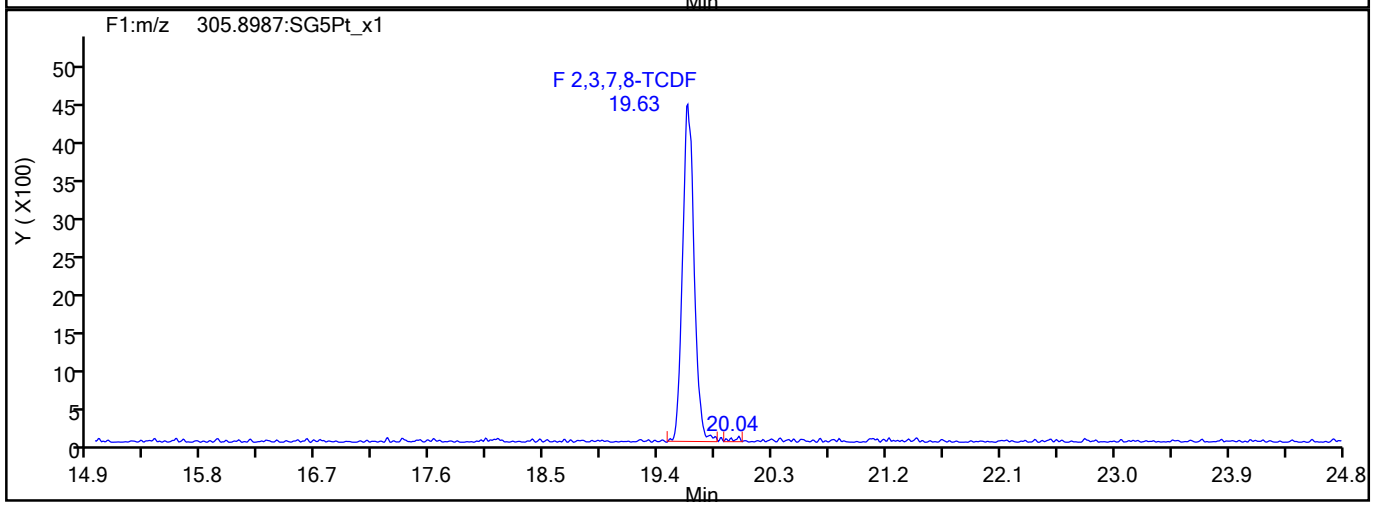

TCDF Interference Mass

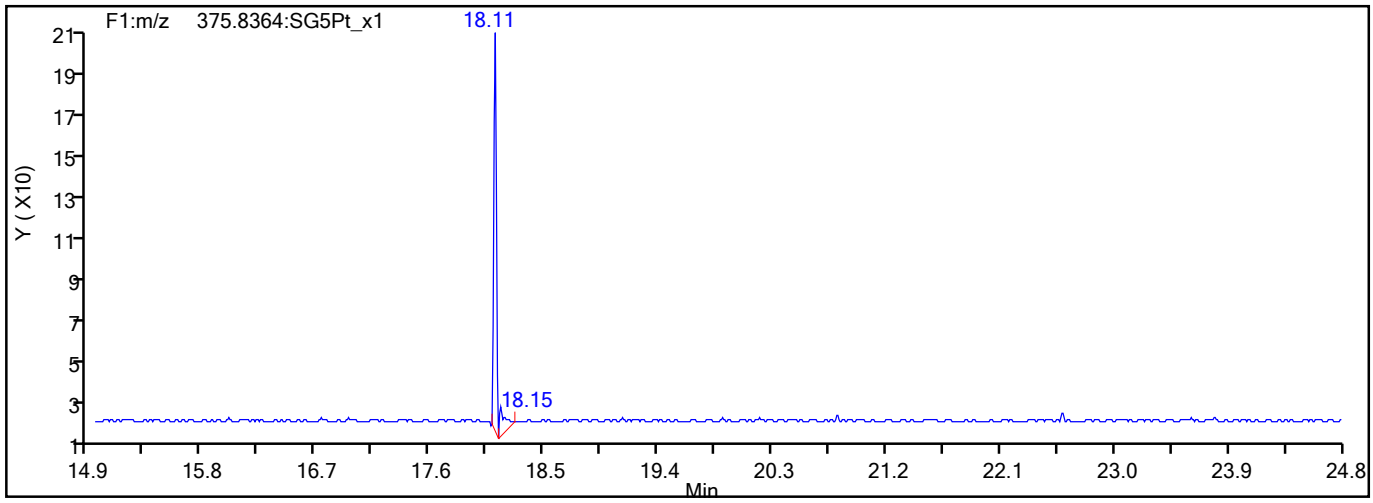

776301

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

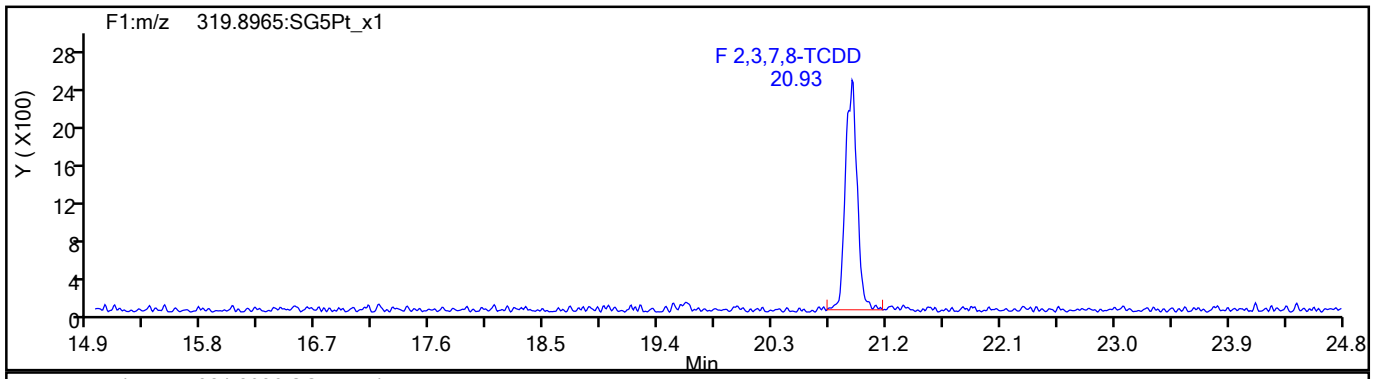

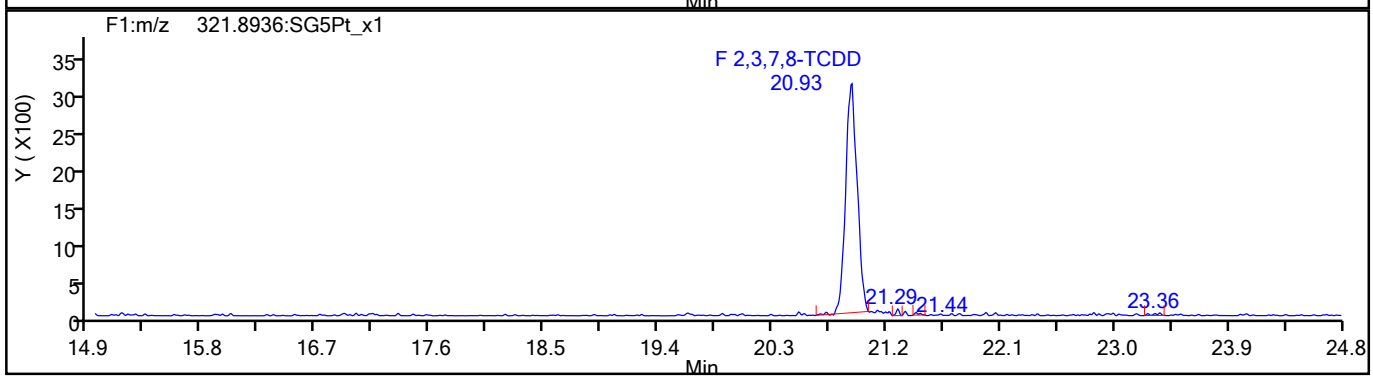

TCDD Standards

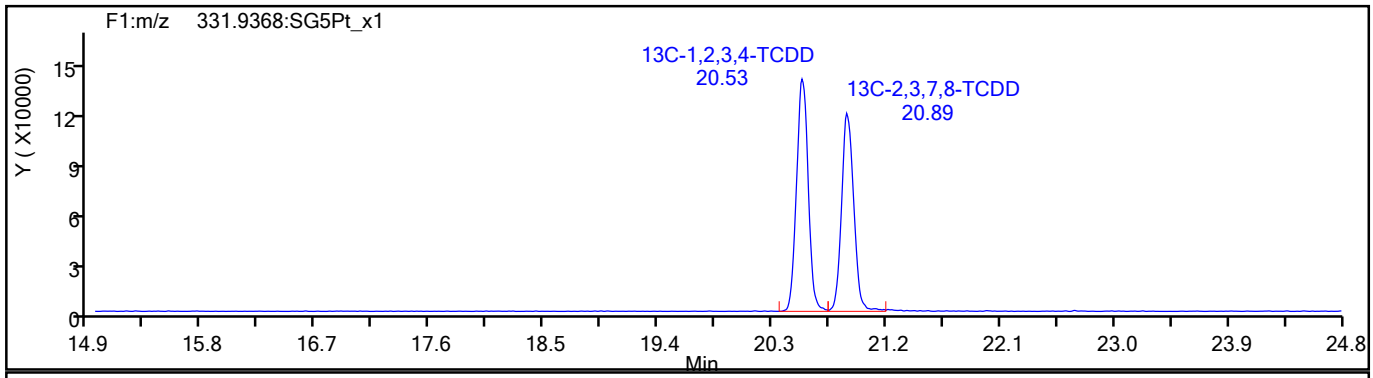

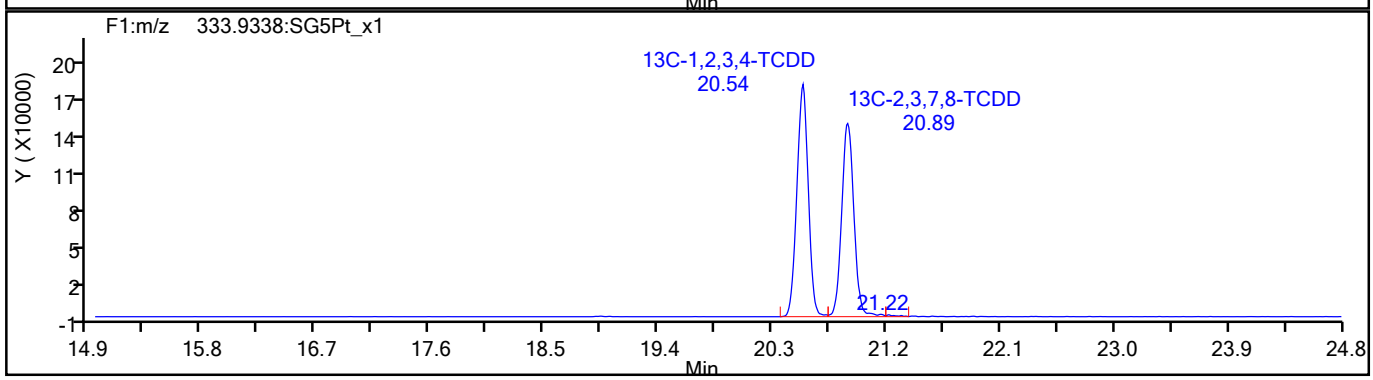

776302

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

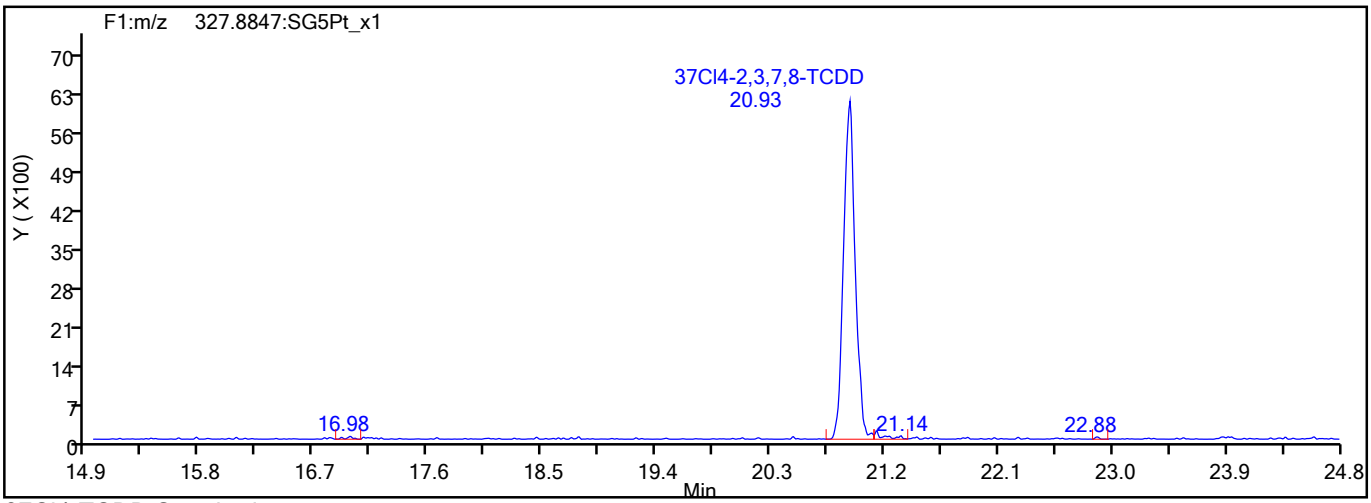

37Cl4-TCDD Standards

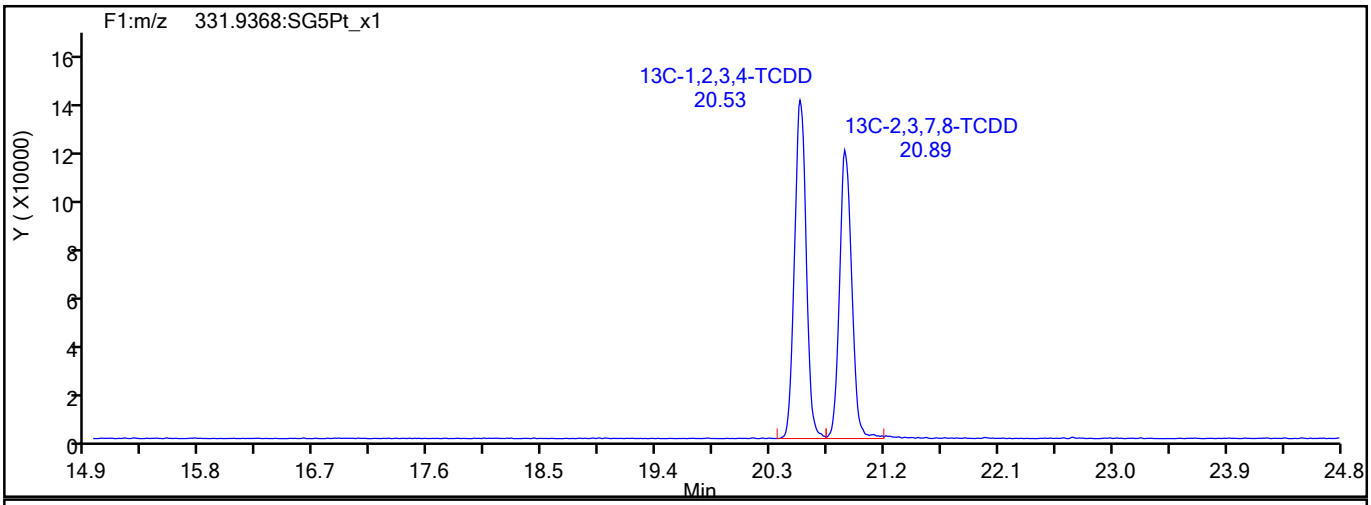

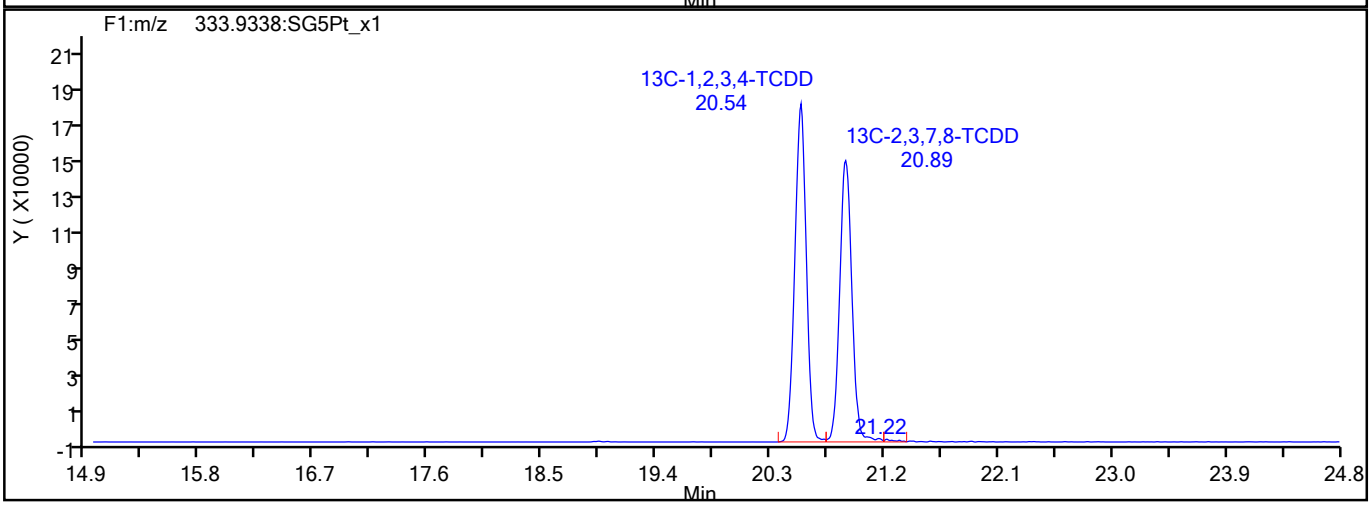

776303

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

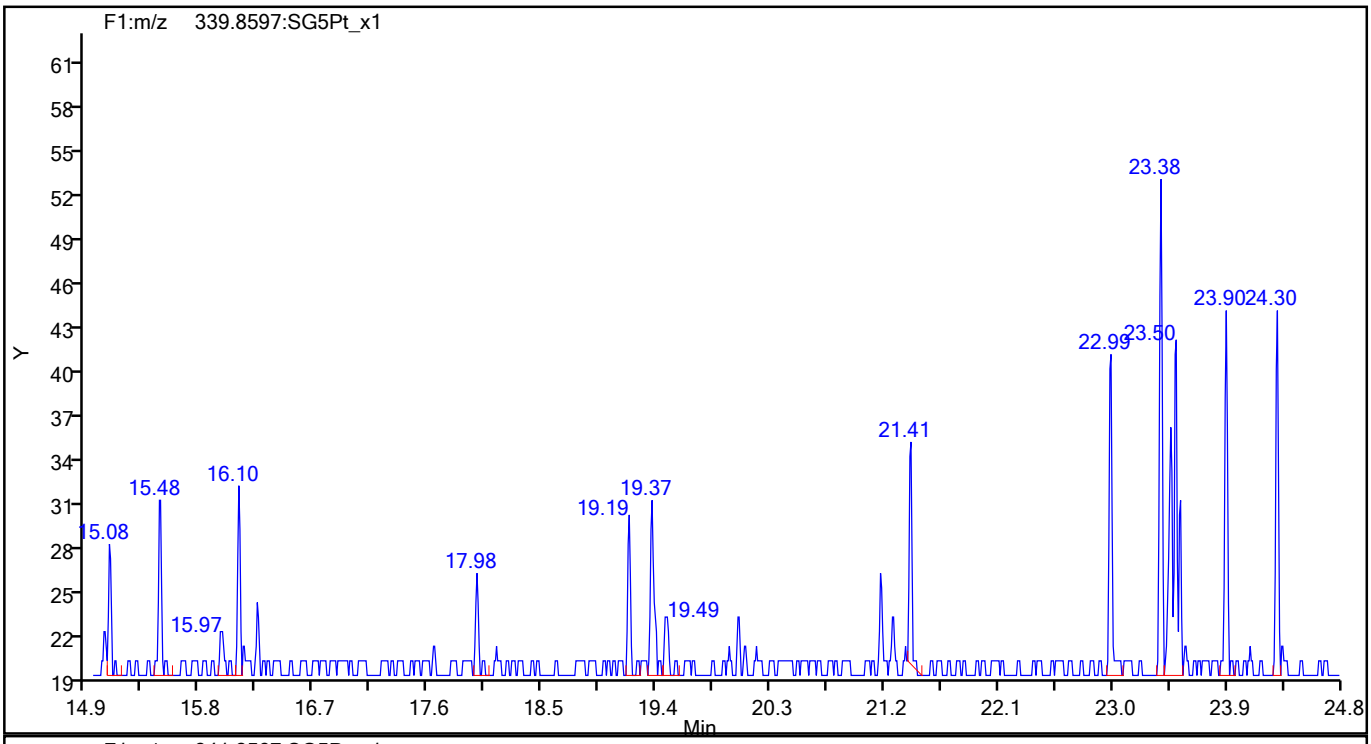

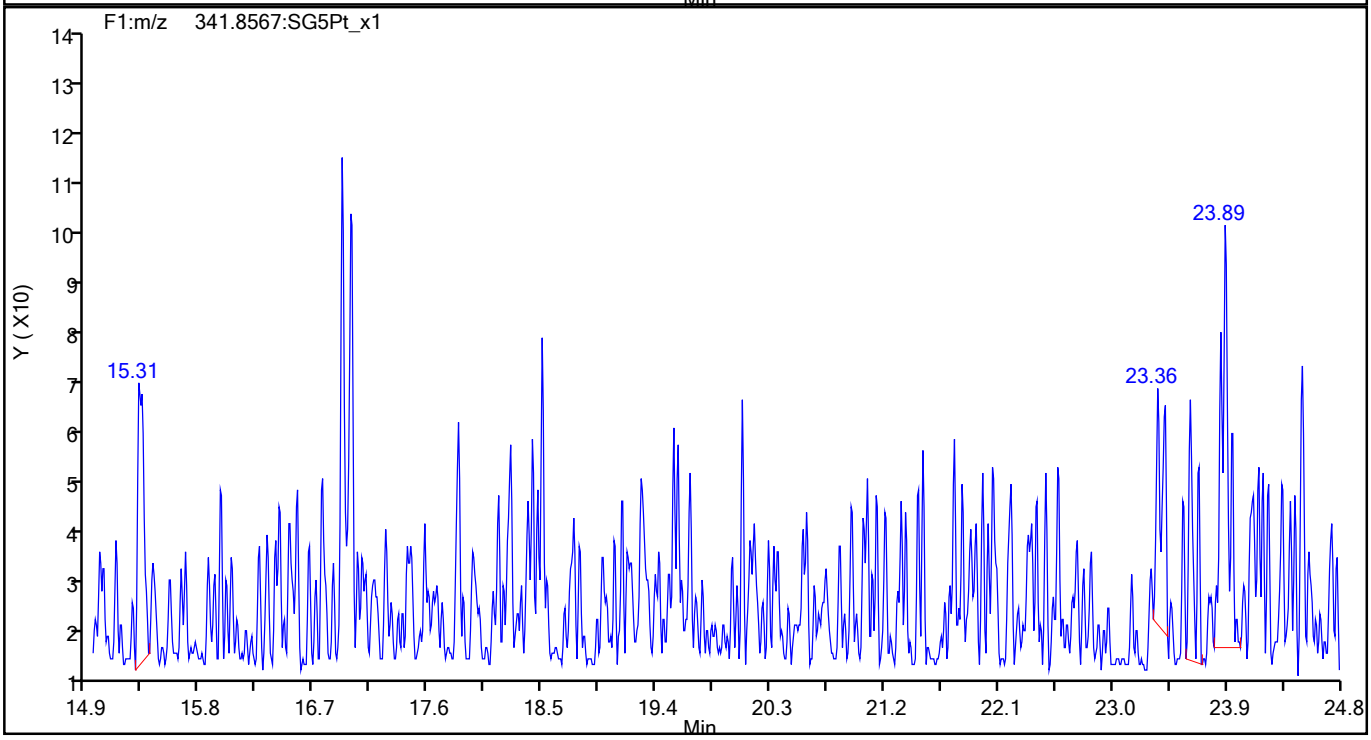

776304

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

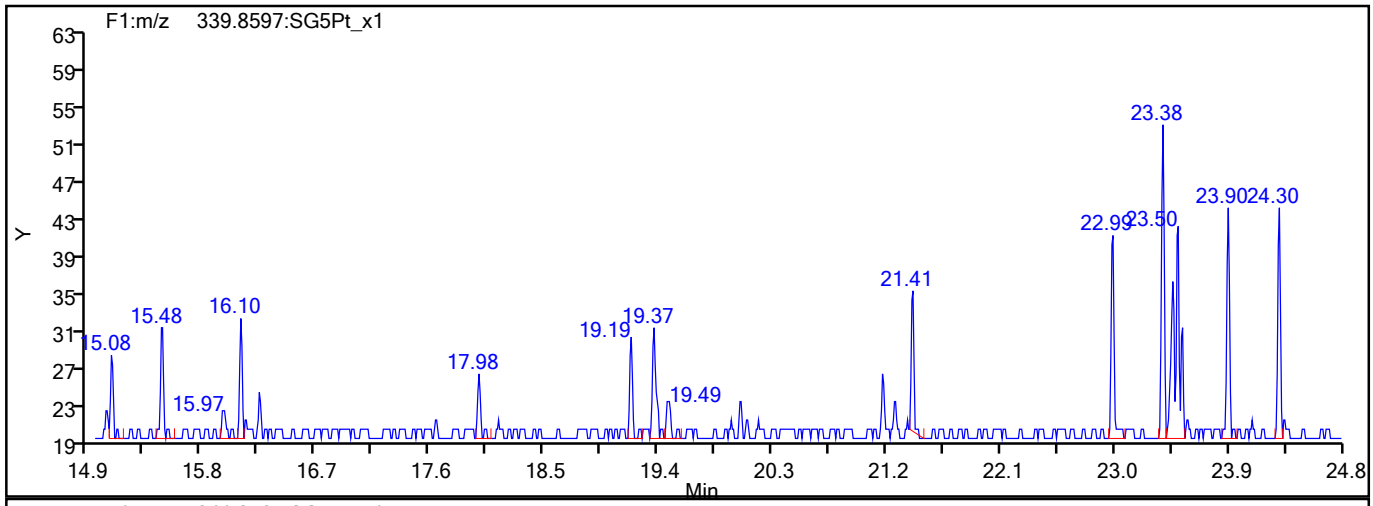

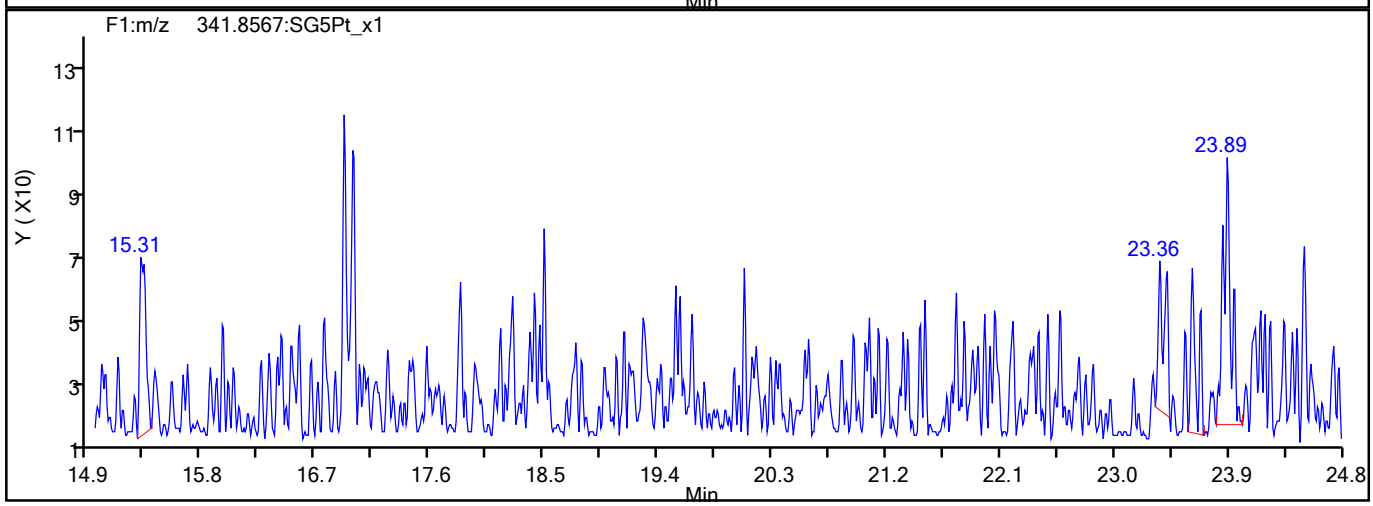

F1 PeCDFs Interference Mass

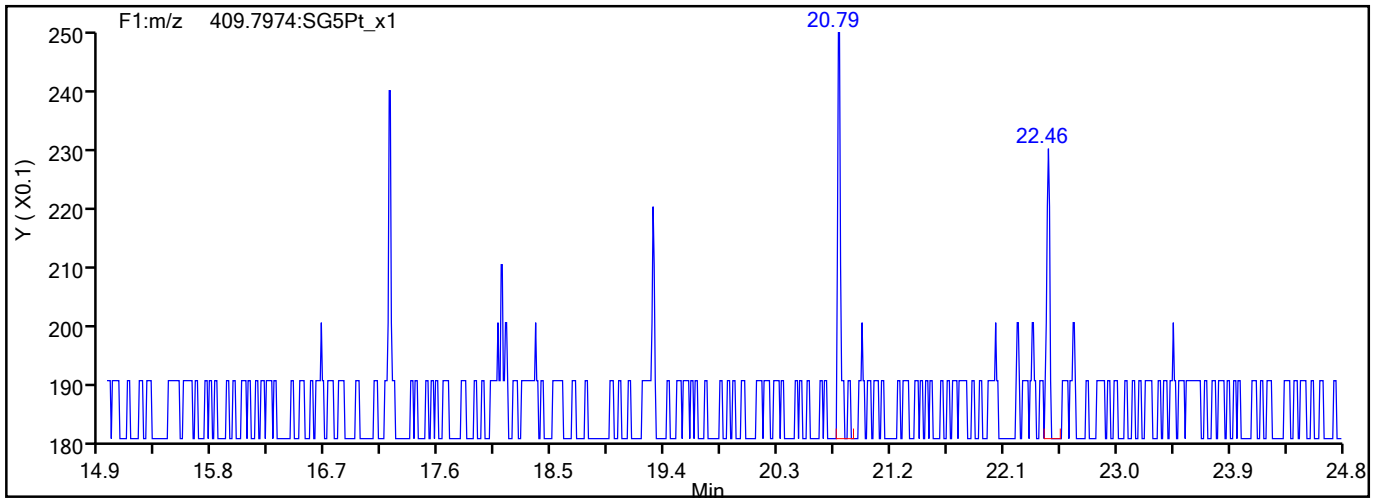

776305

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

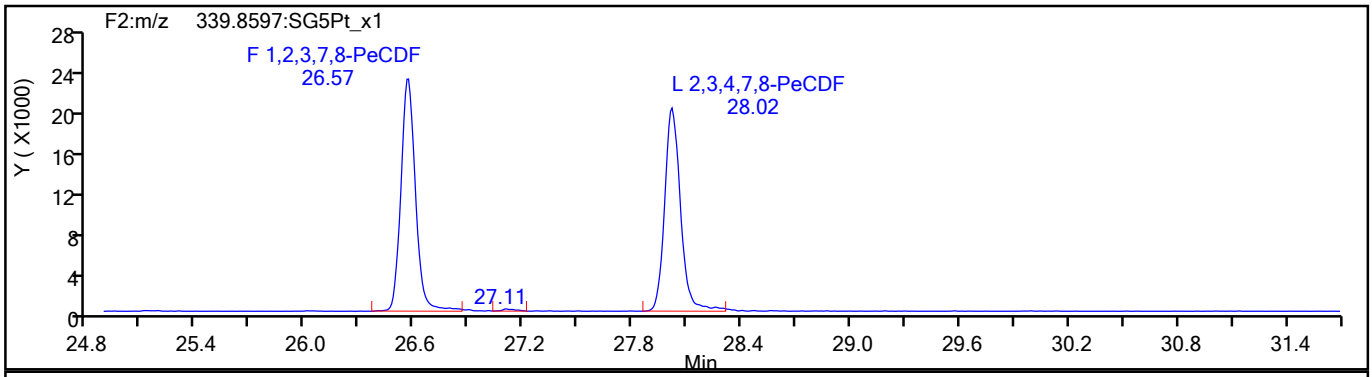

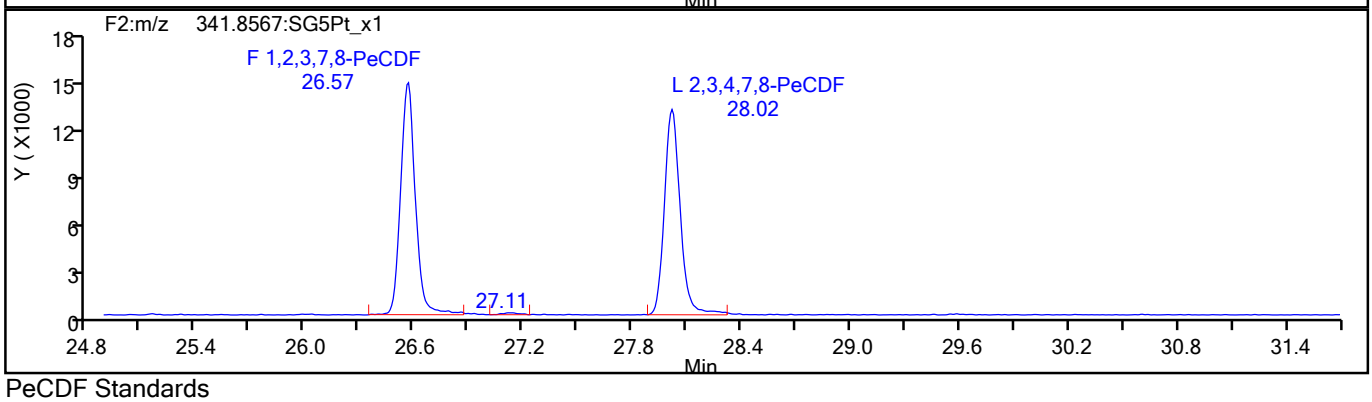

PeCDF Standards

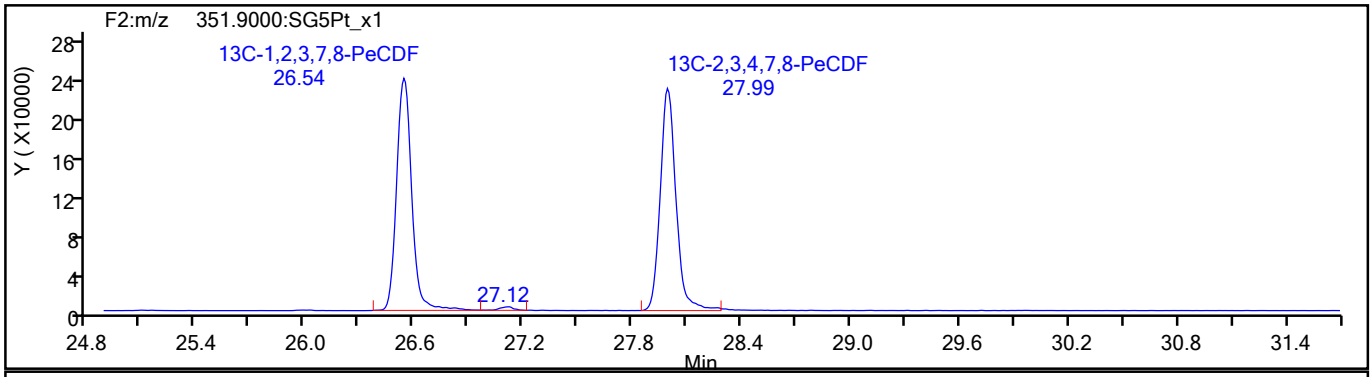

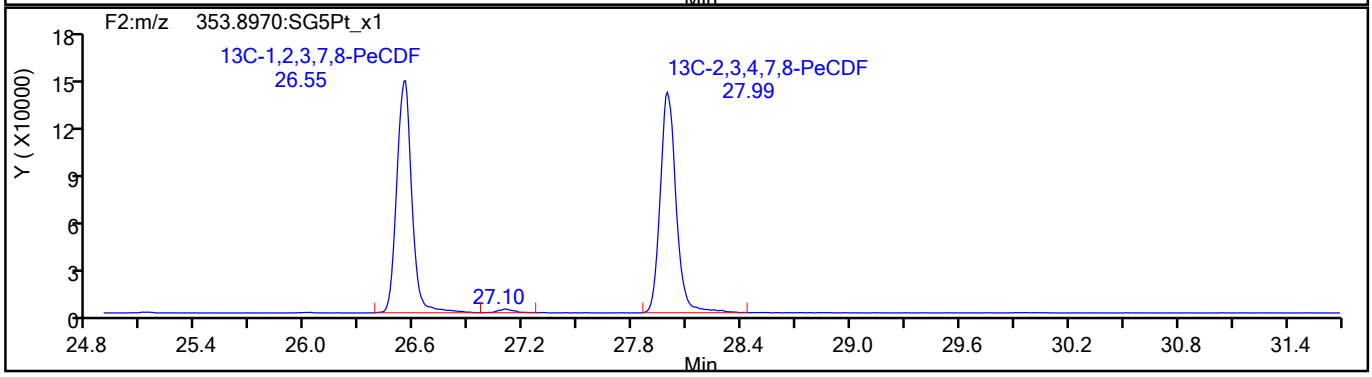

776306

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

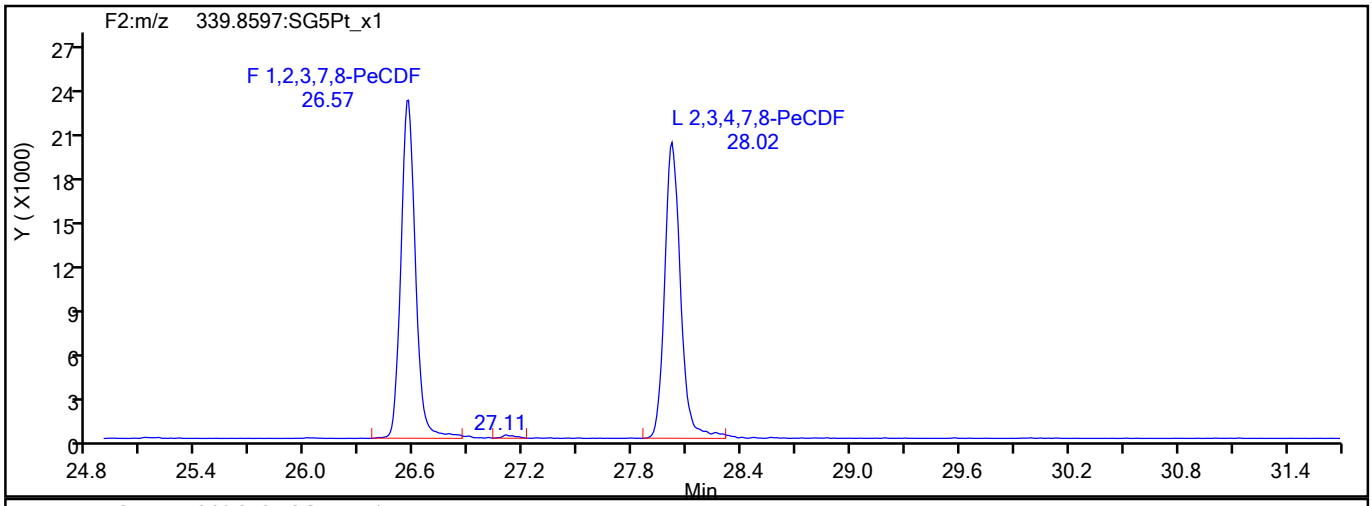

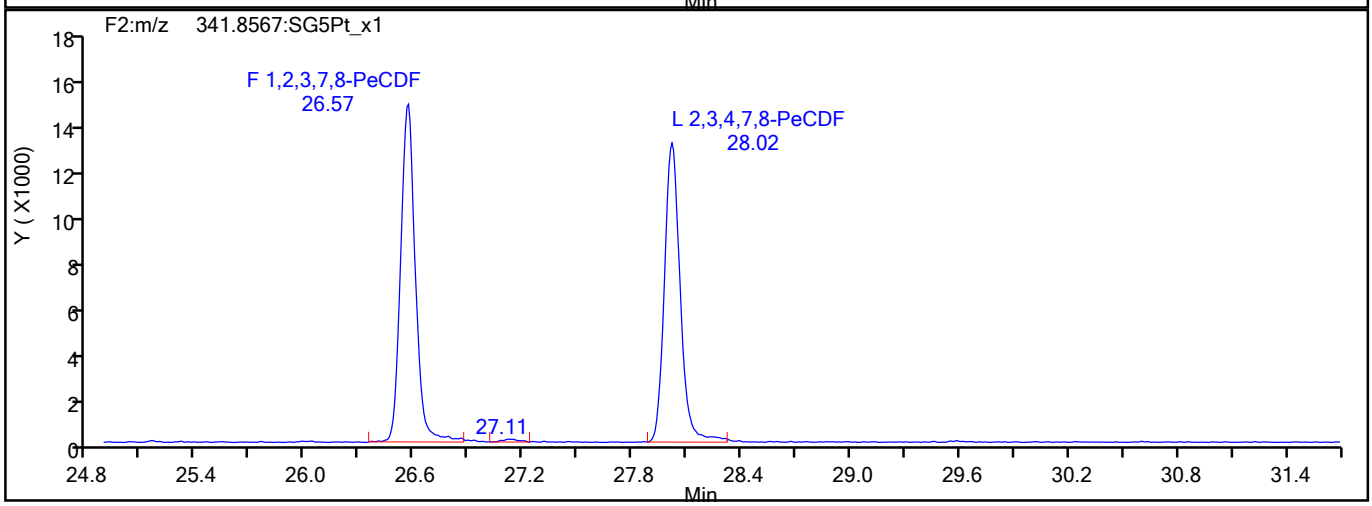

PeCDF Interference Mass

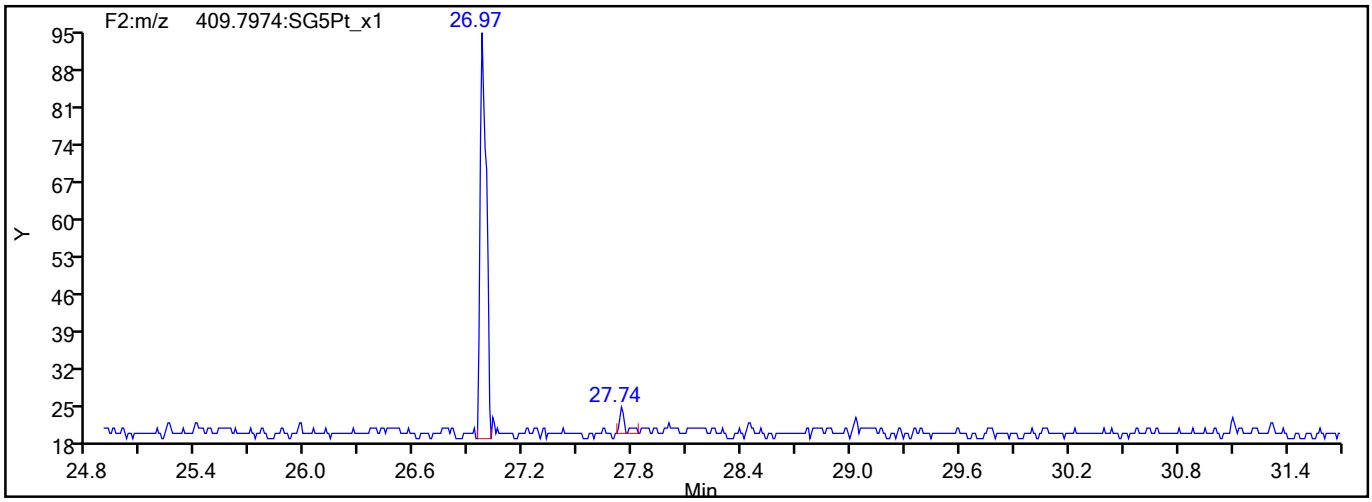

776307

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

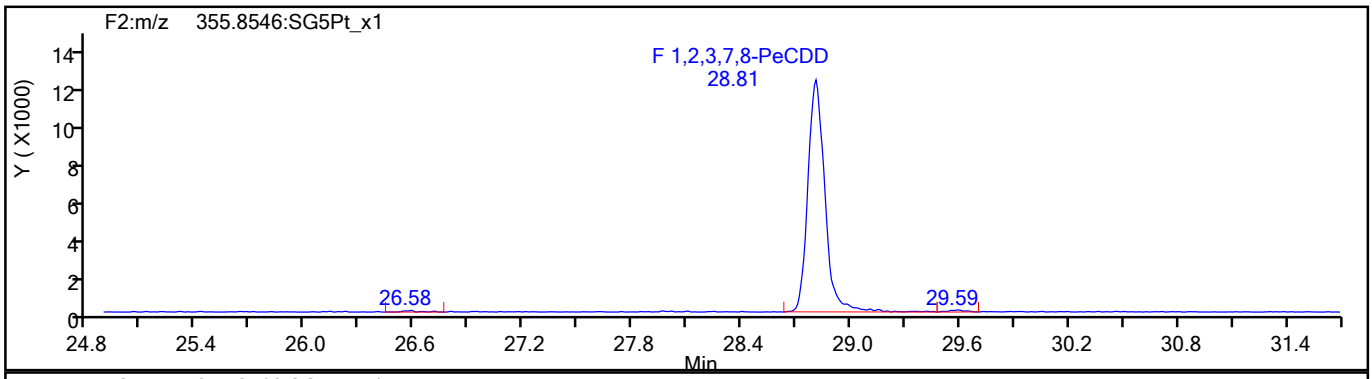

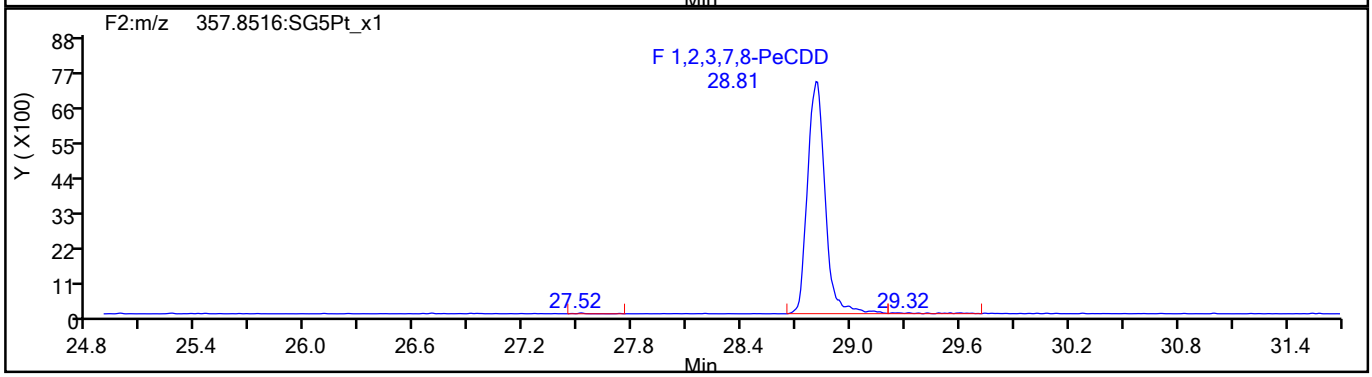

PeCDD Standards

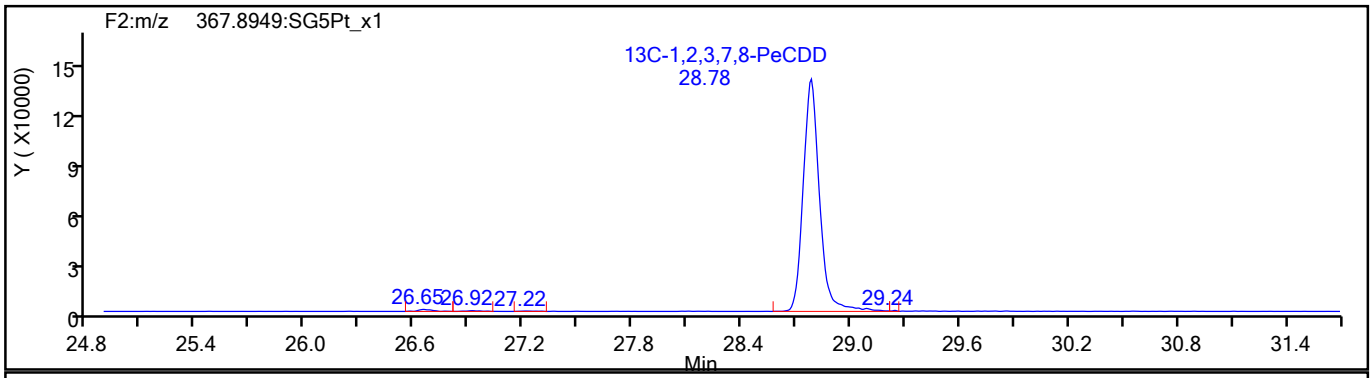

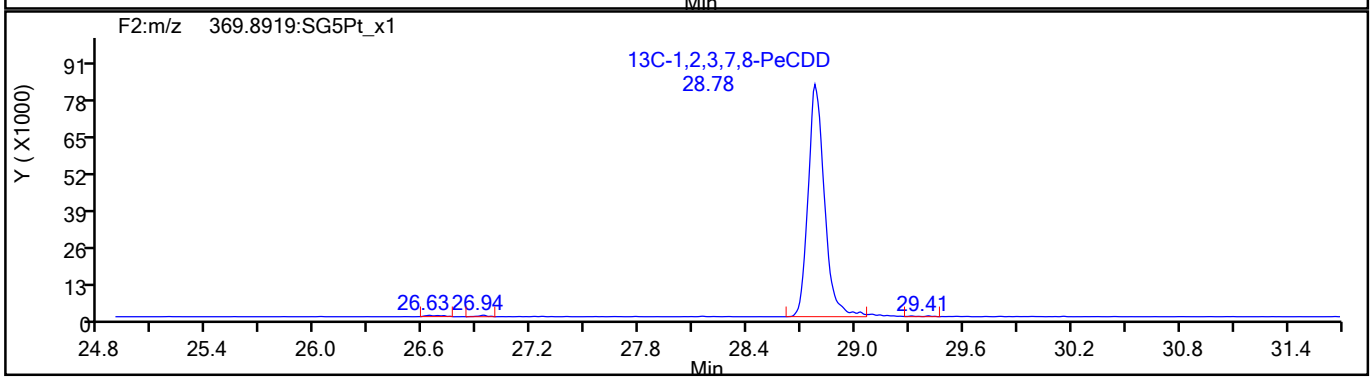

776308

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

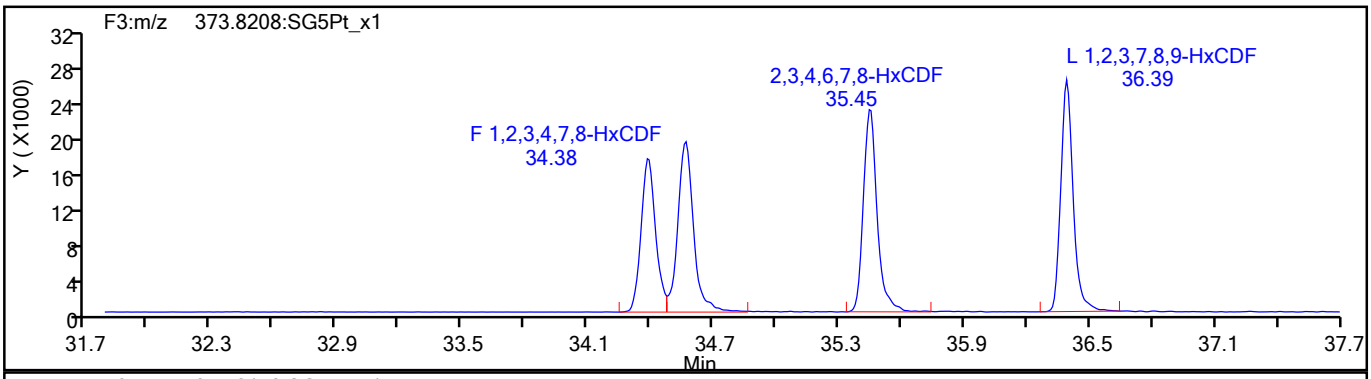

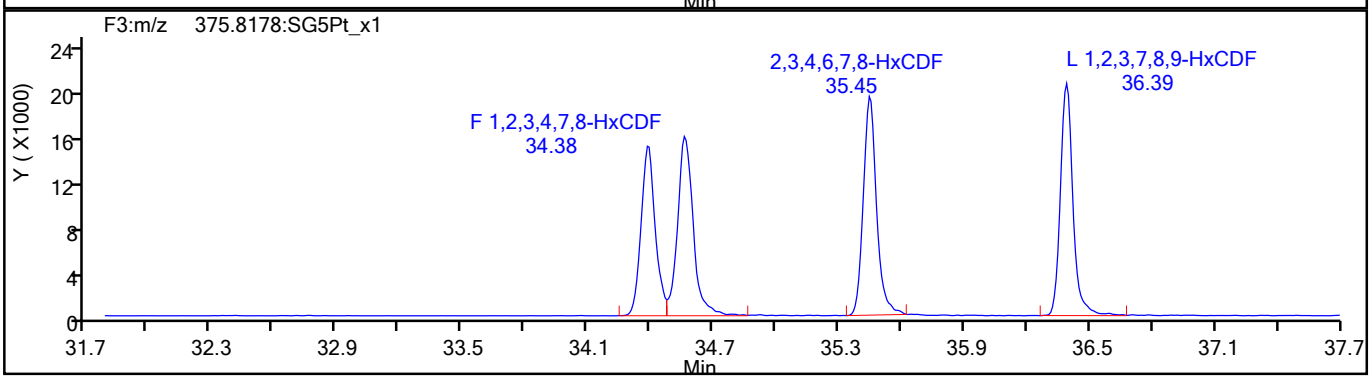

HxCDF Standards

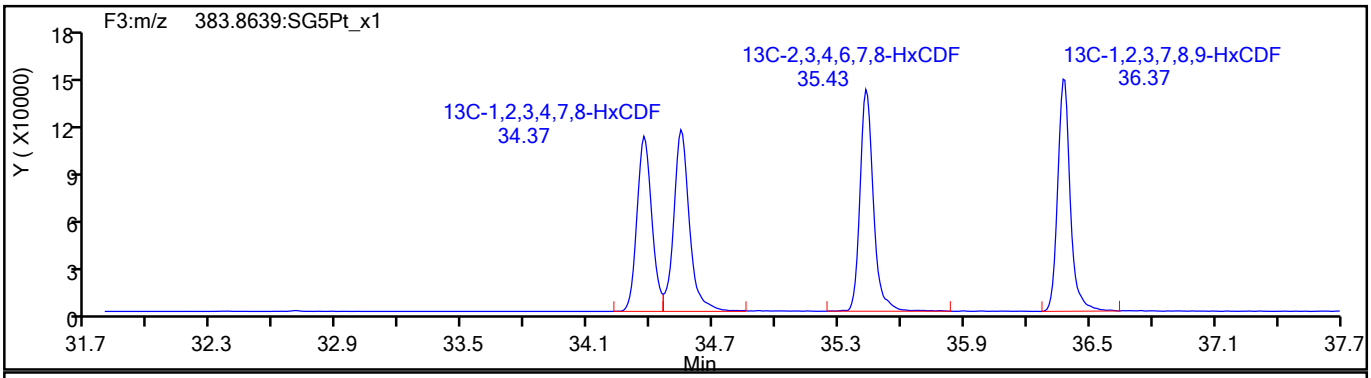

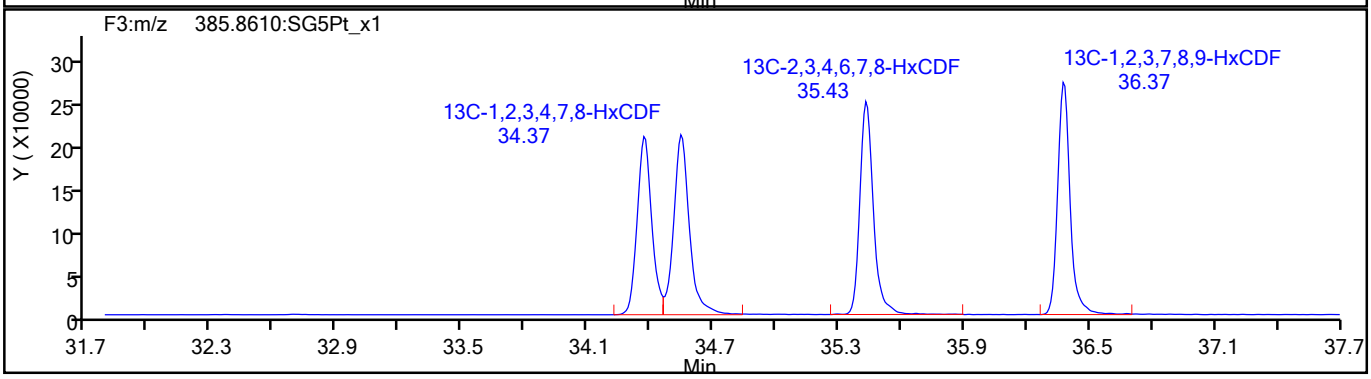

776309

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

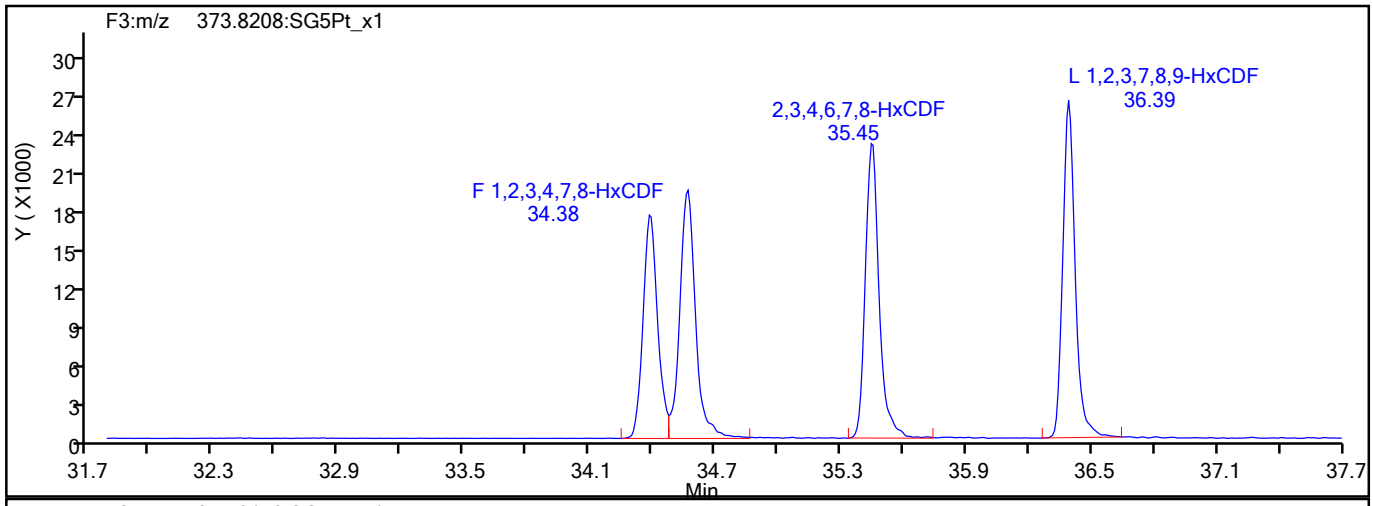

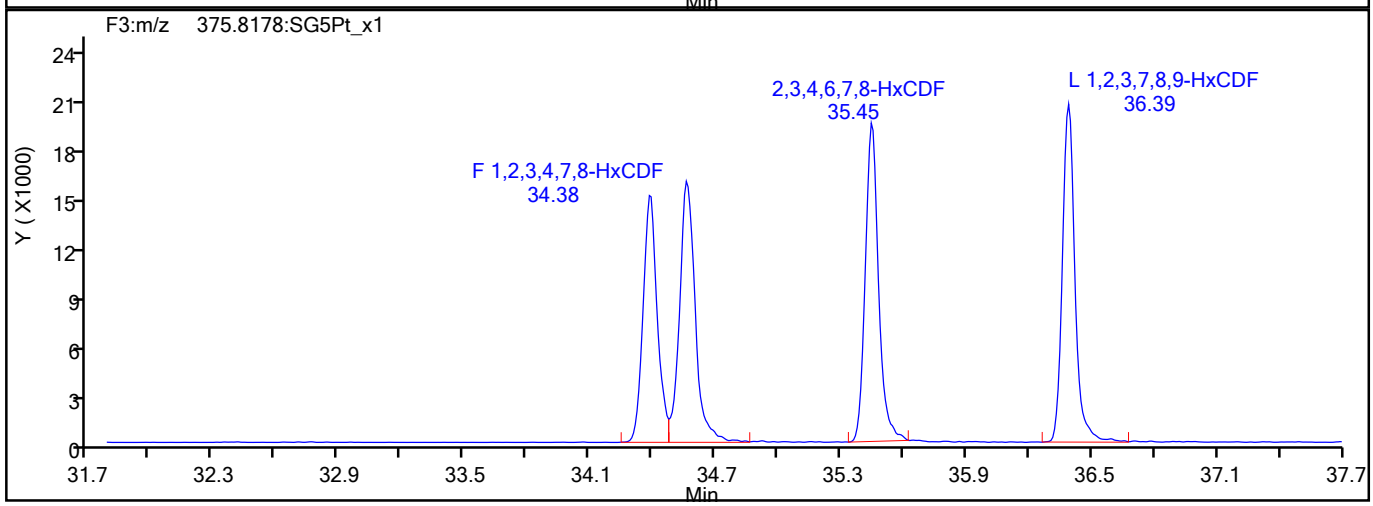

HxCDF Interference Mass

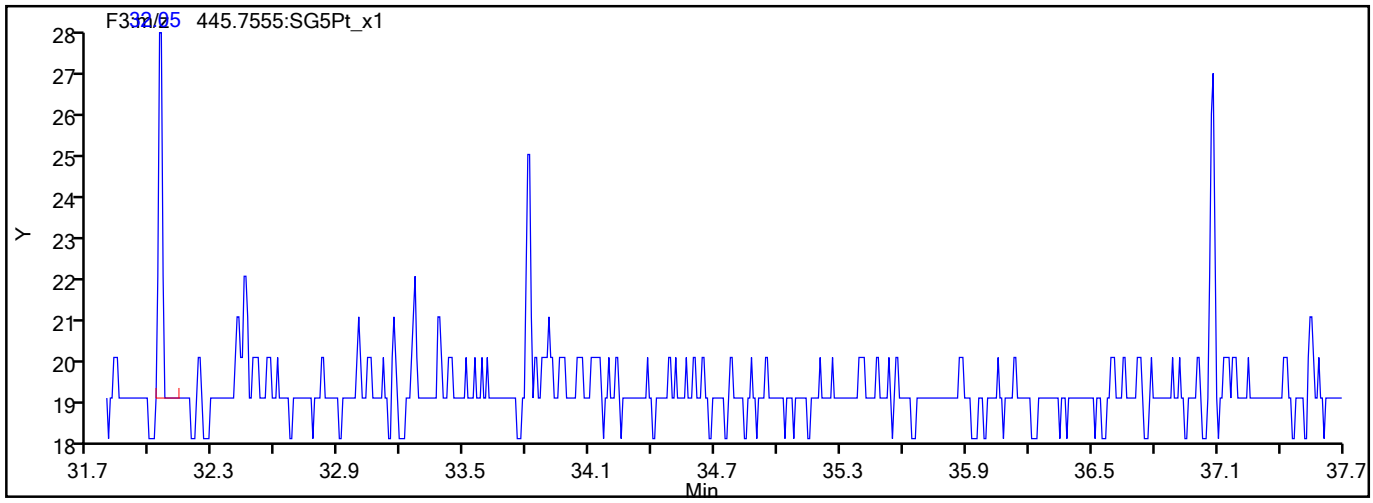

776310

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

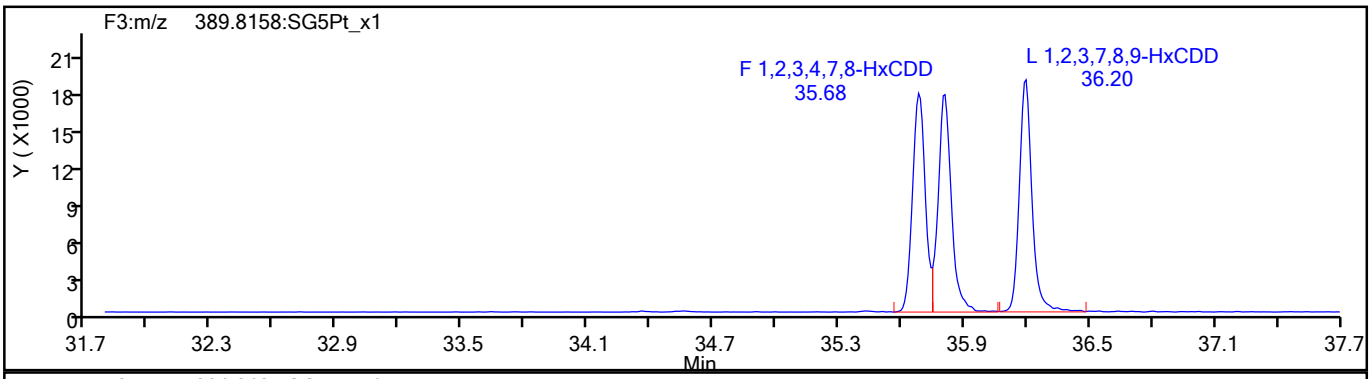

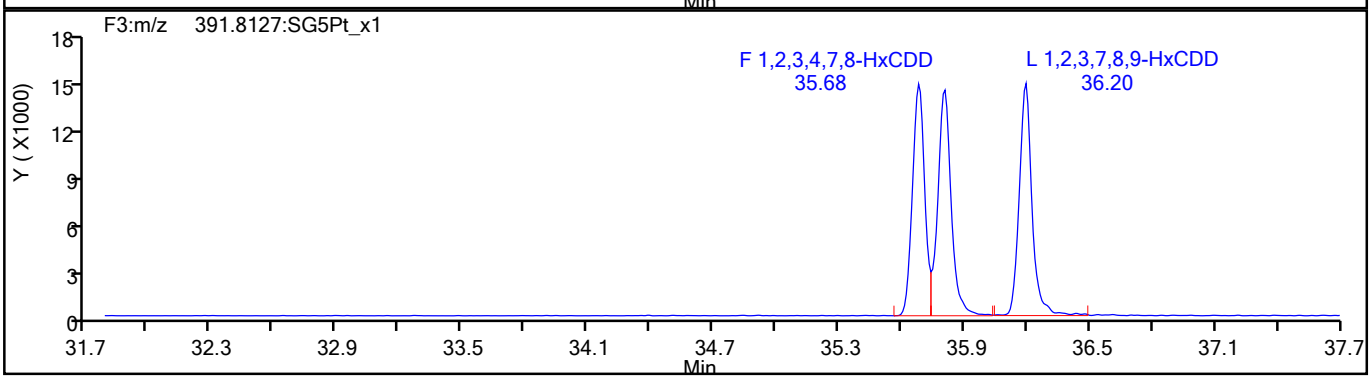

HxCDD Standards

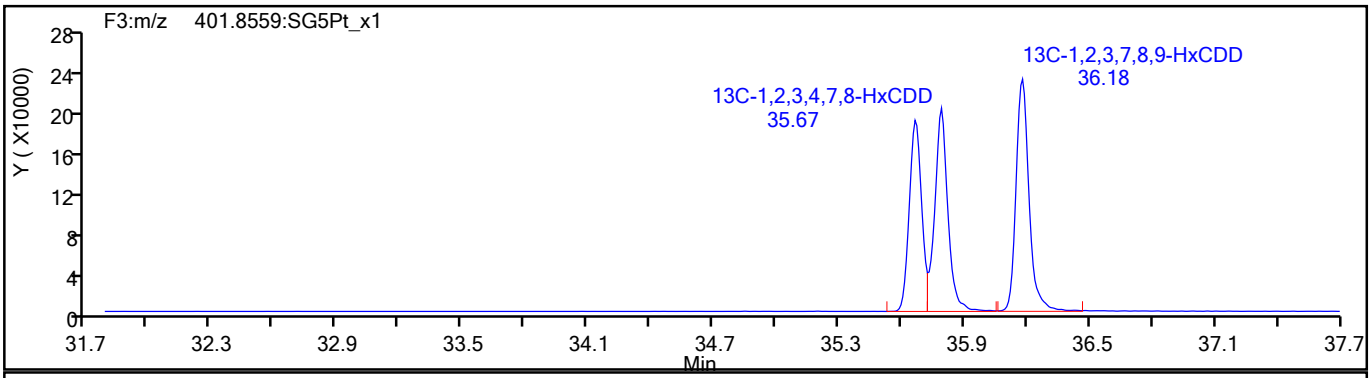

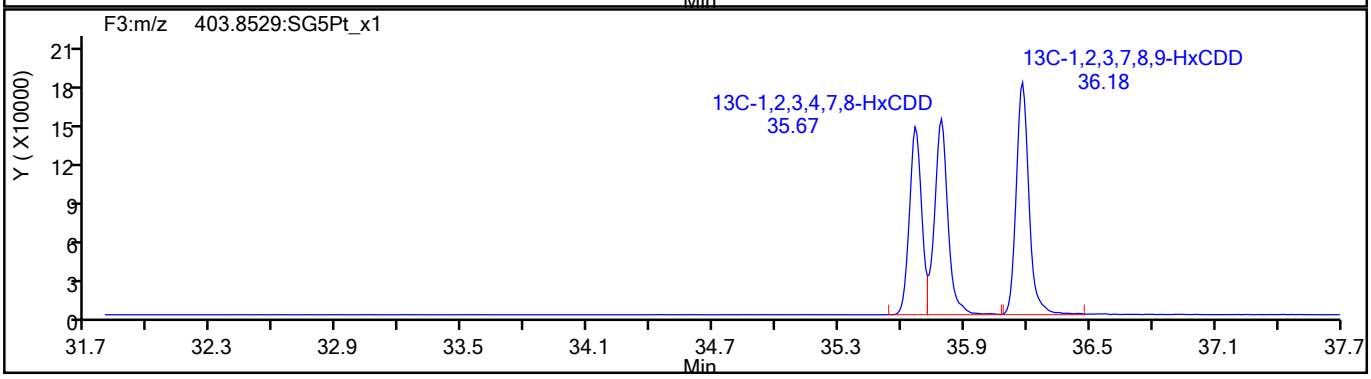

776311

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

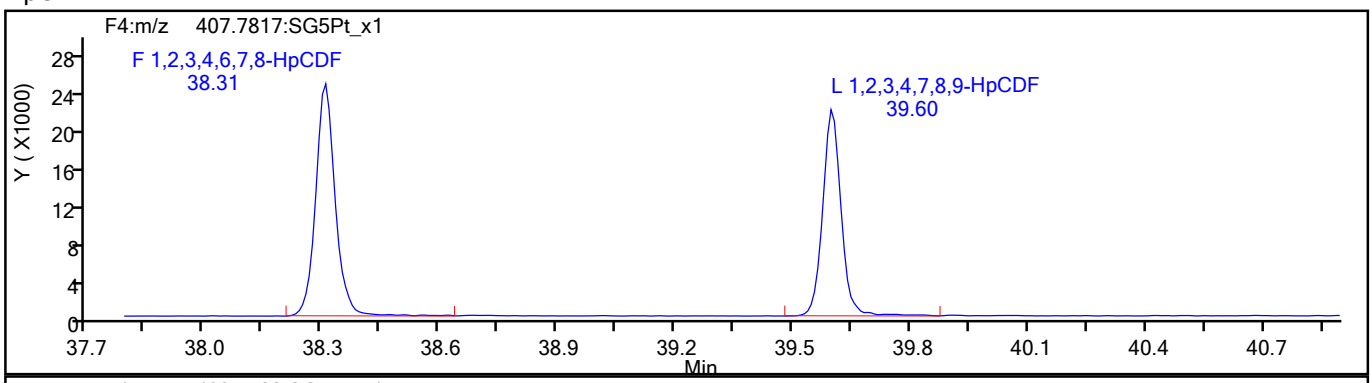

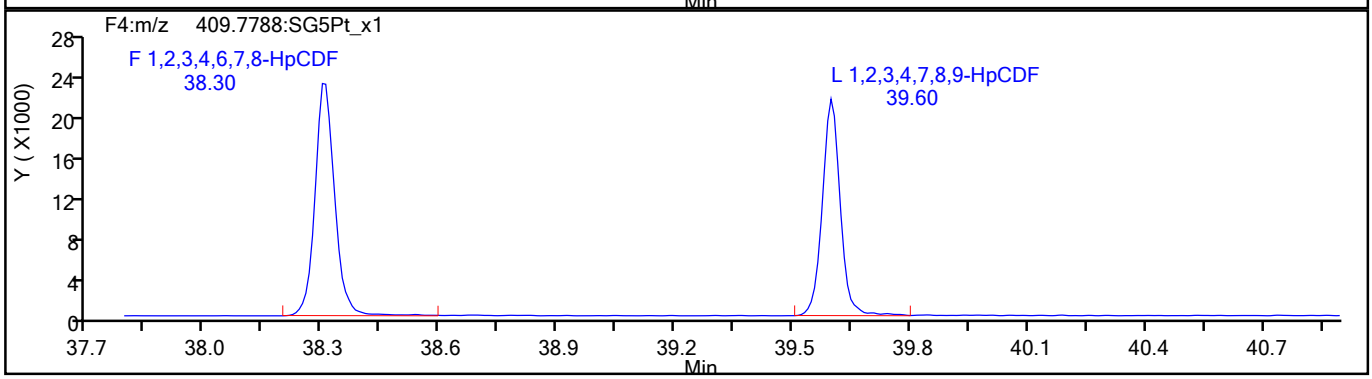

HpCDF Standards

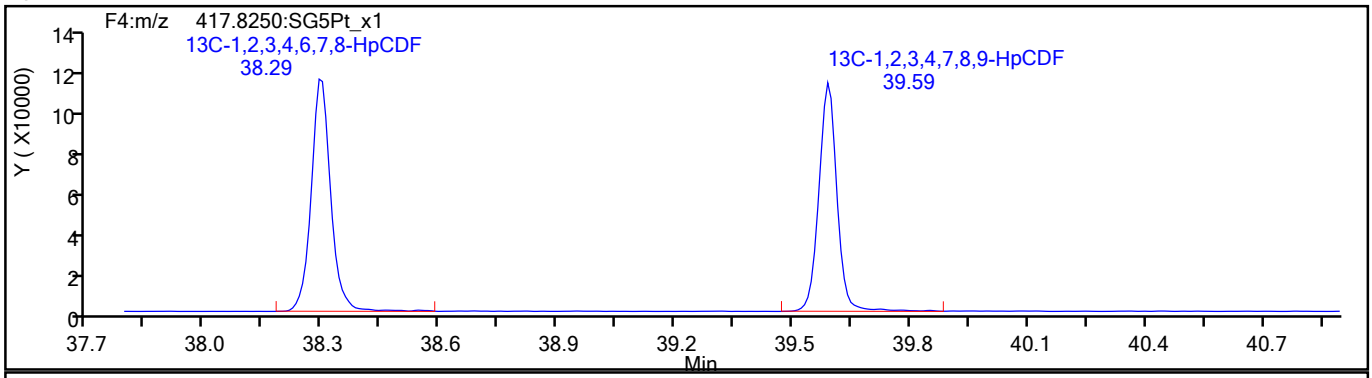

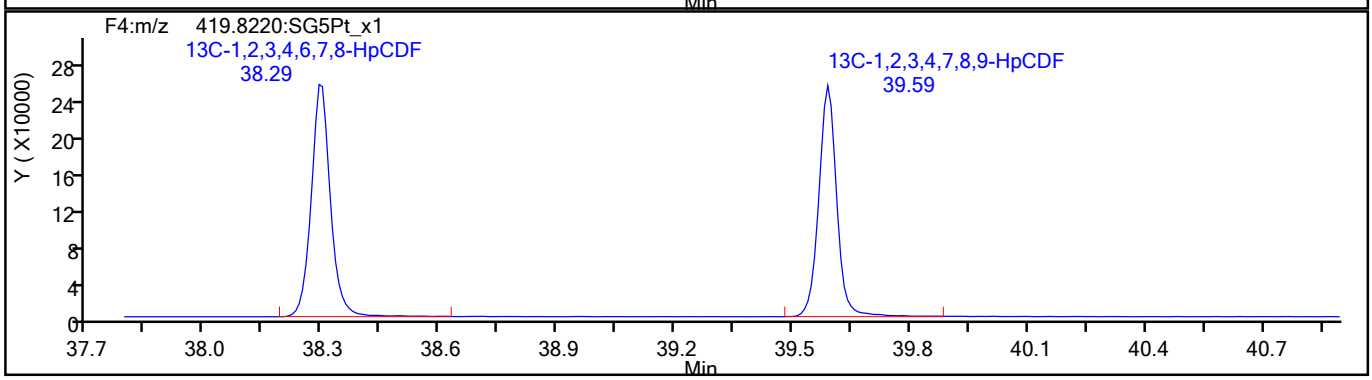

776312

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

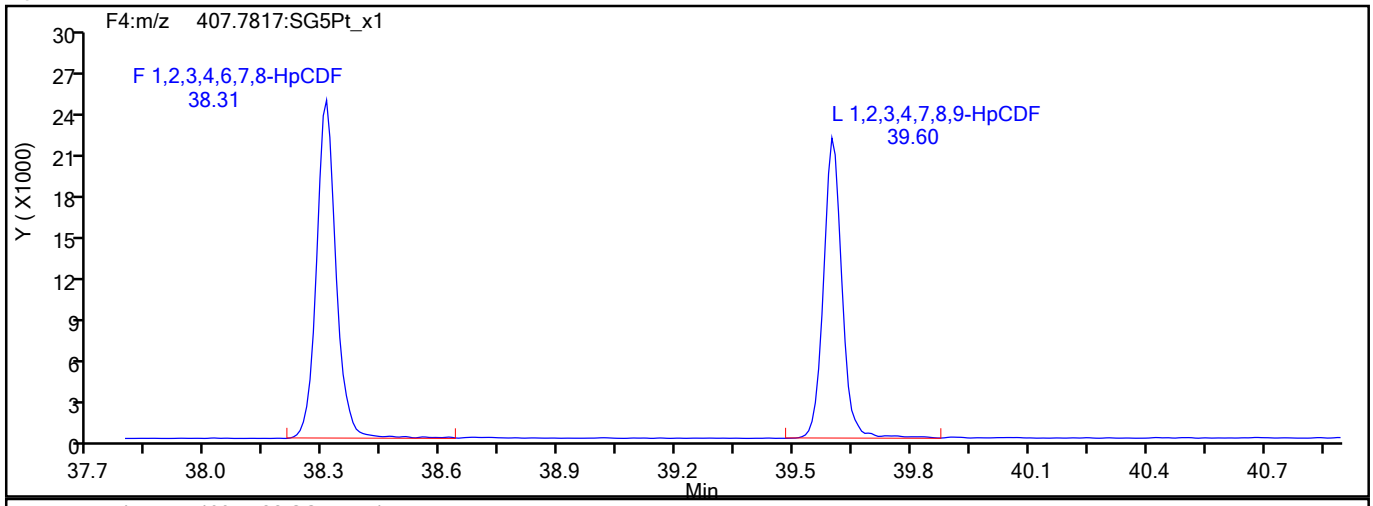

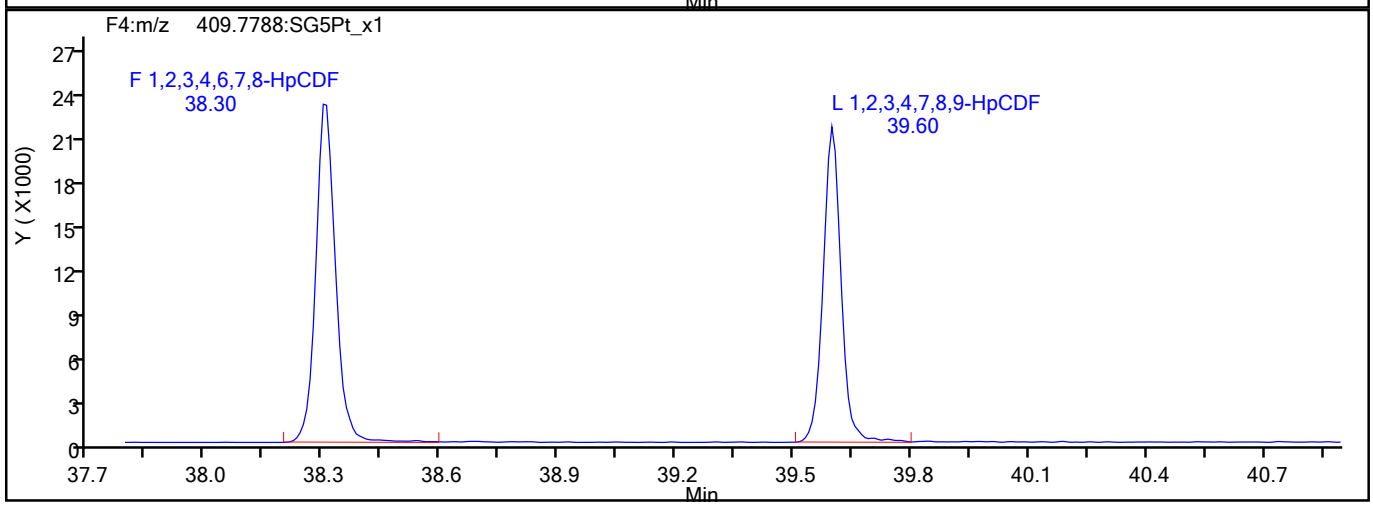

HpCDF Interference Mass

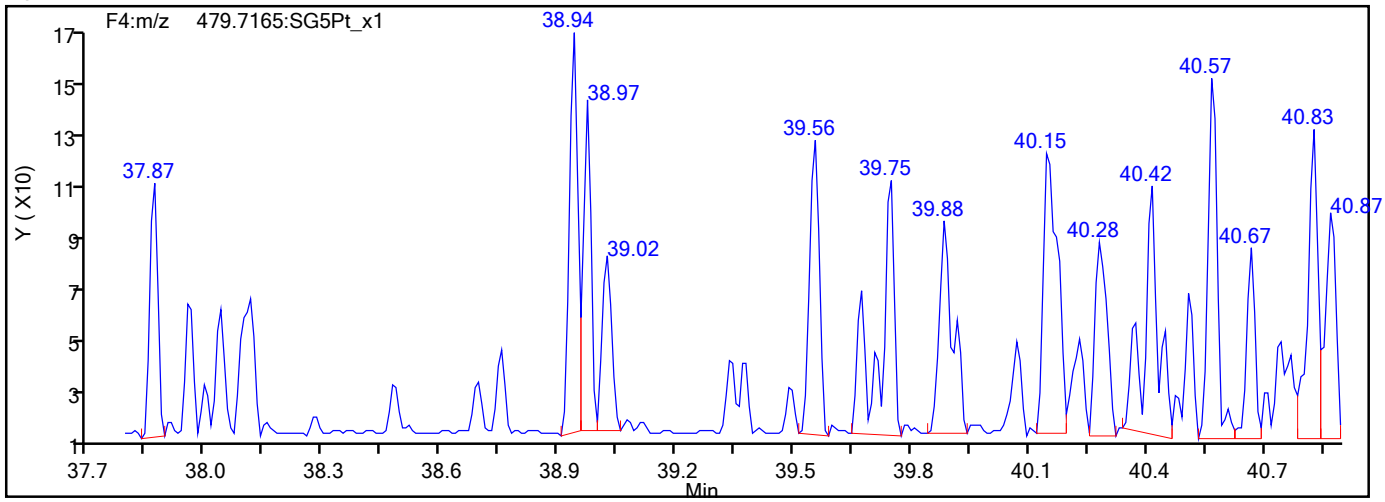

776313

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

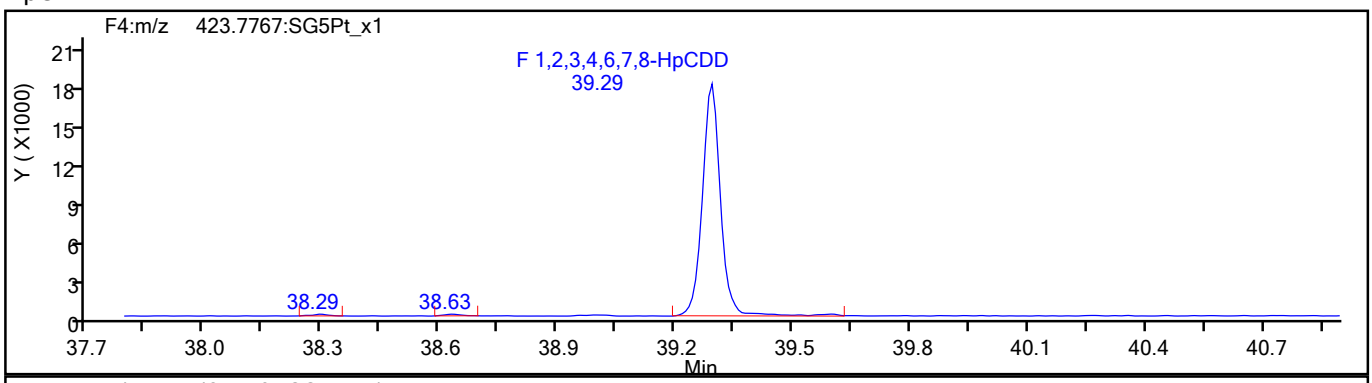

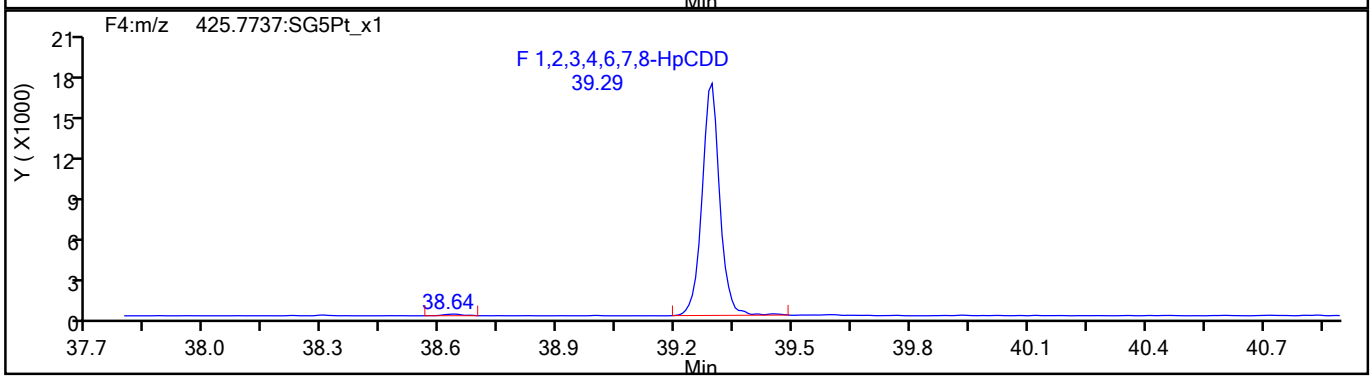

HpCDD Standards

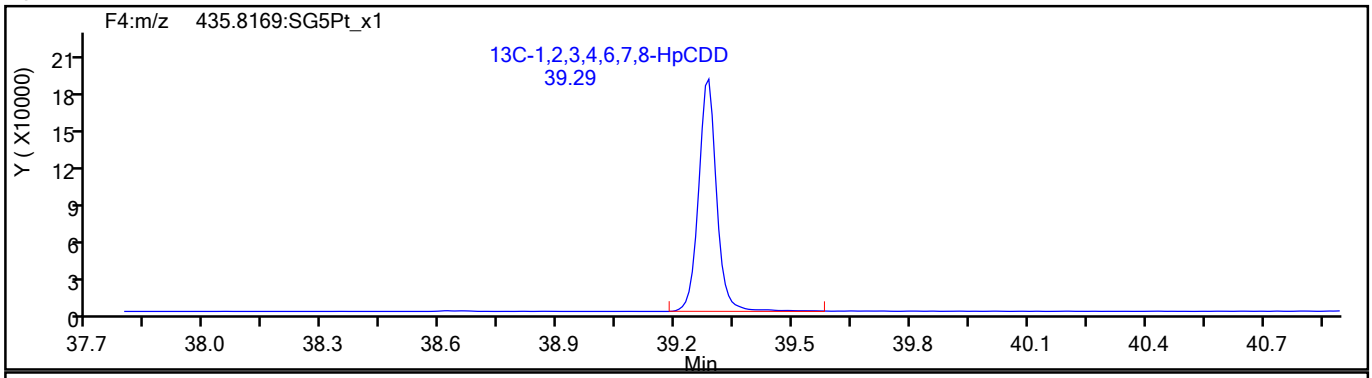

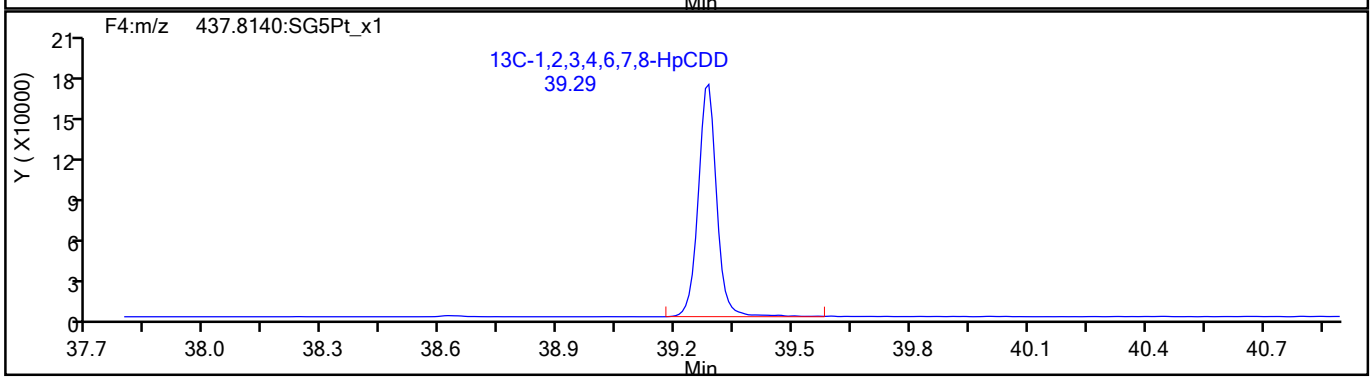

776314

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

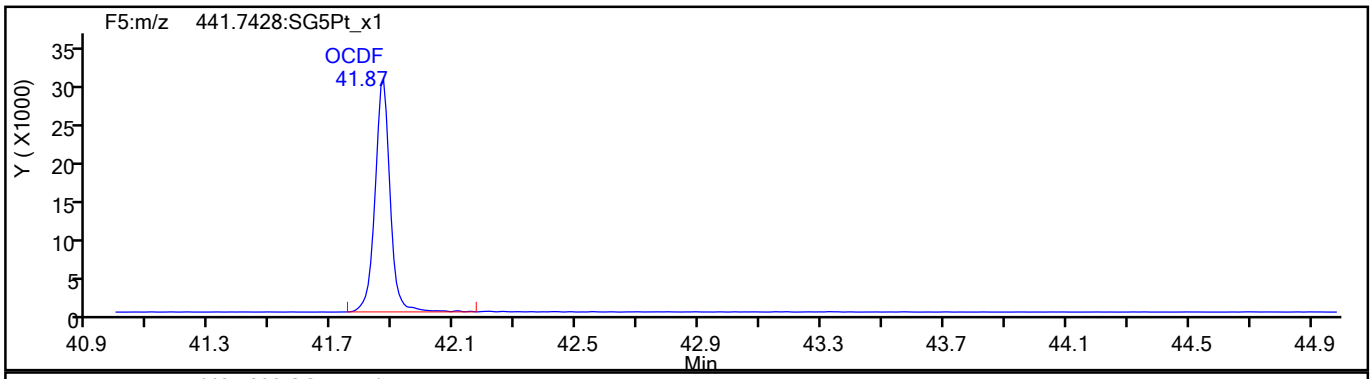

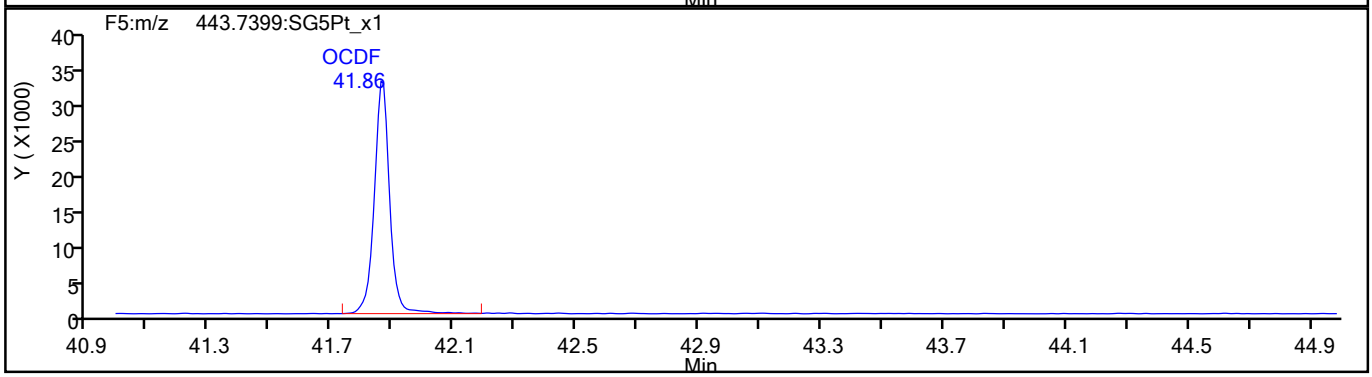

OCDF Standards

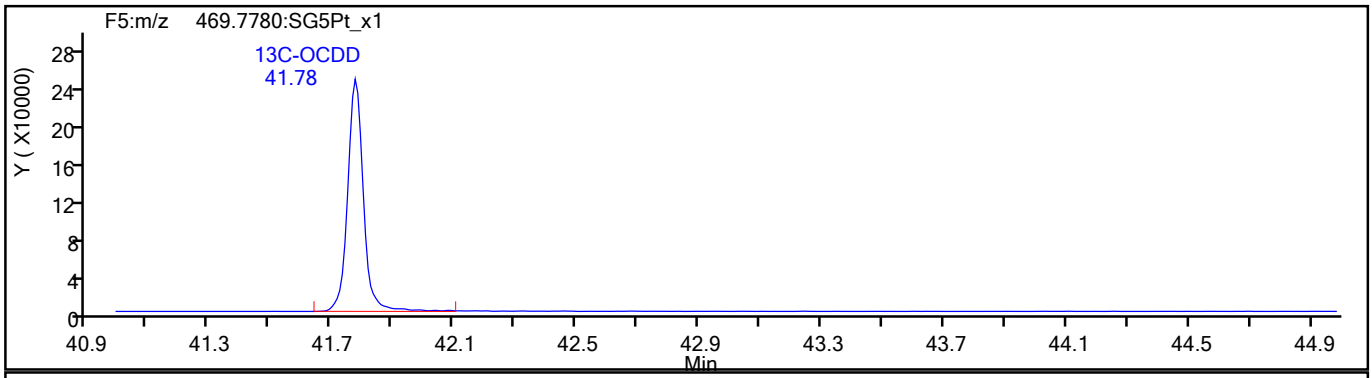

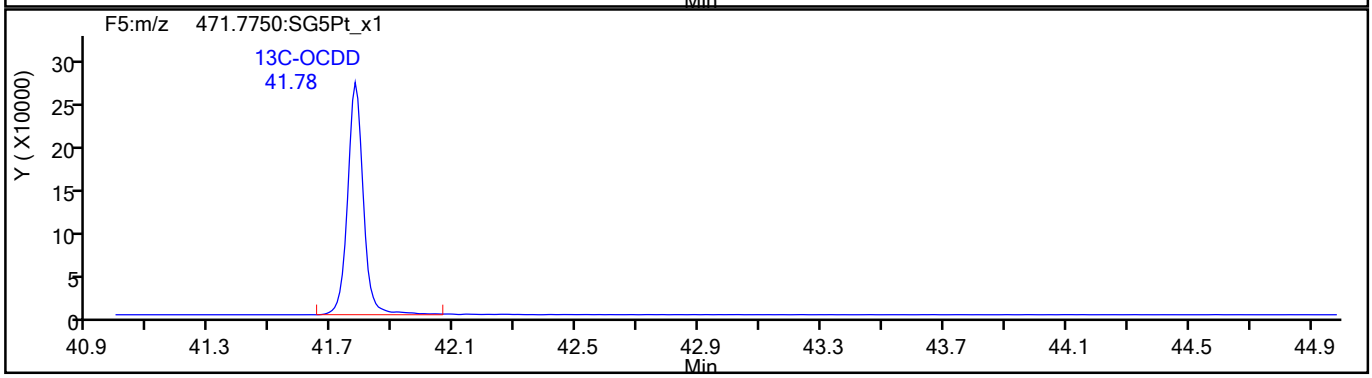

776315

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

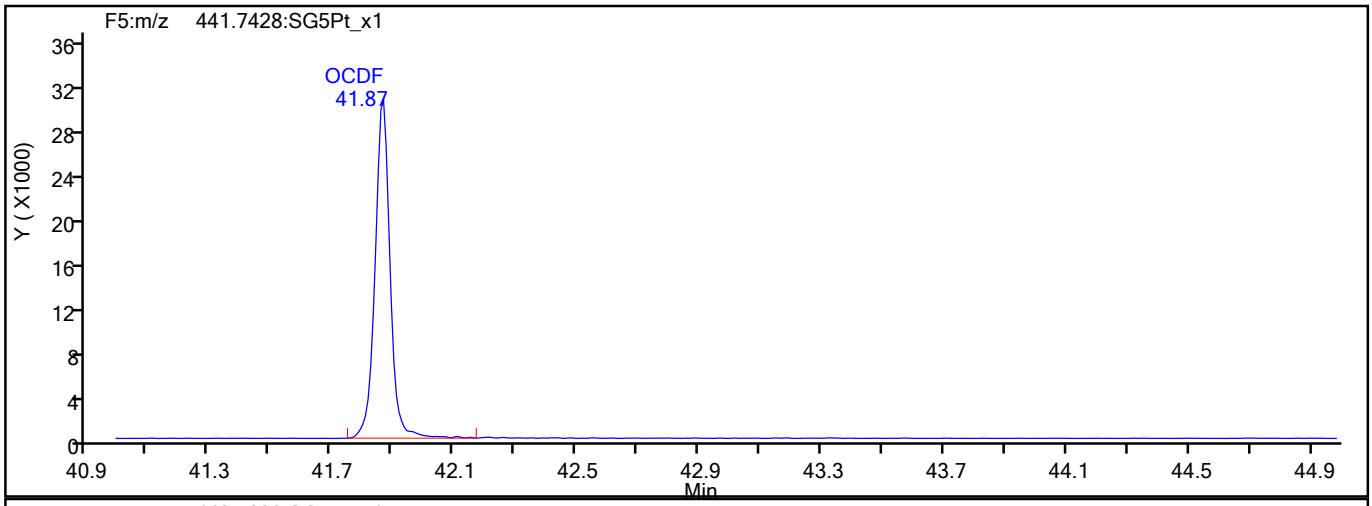

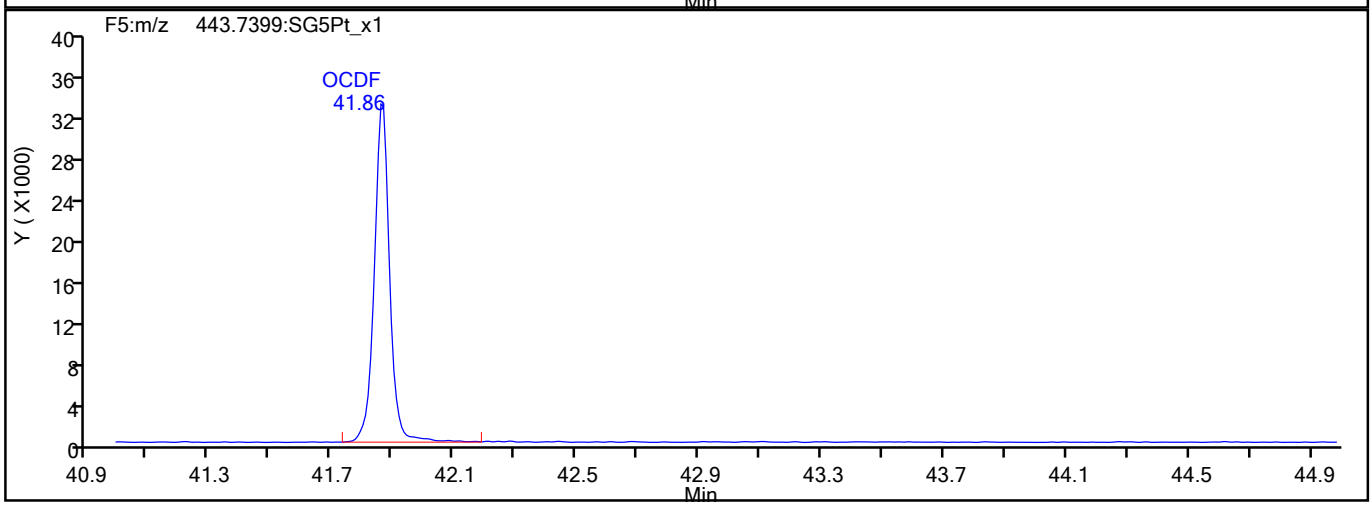

OCDF Interference Mass

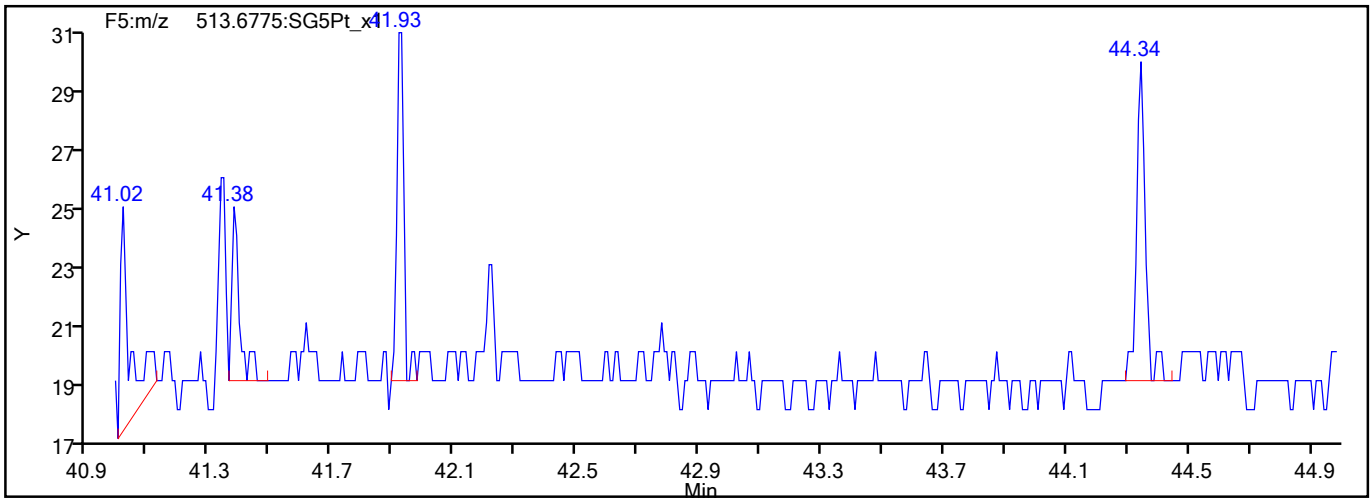

776316

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

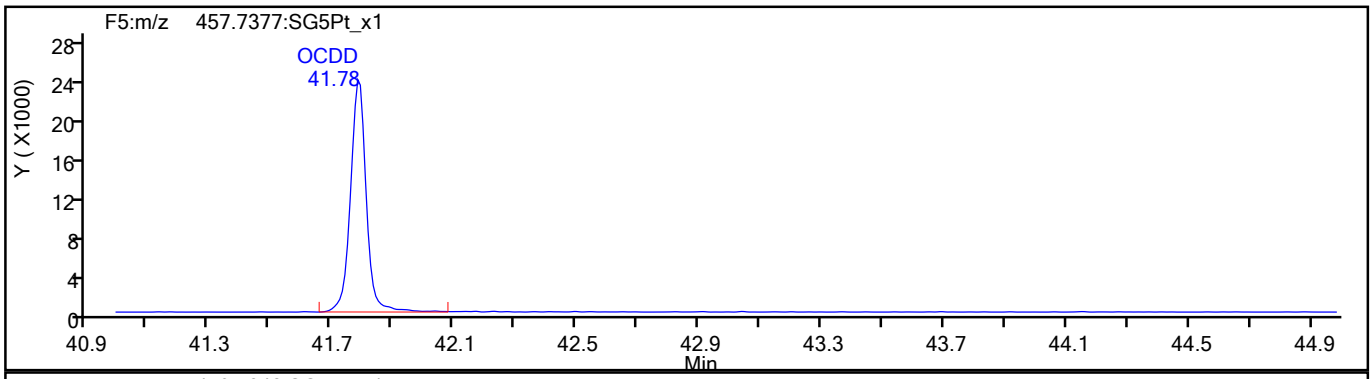

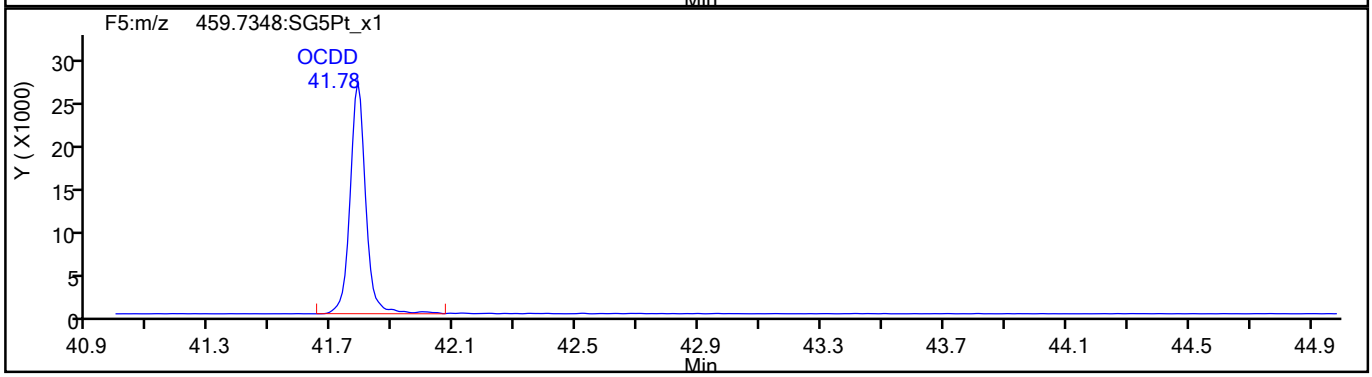

OCDD Standards

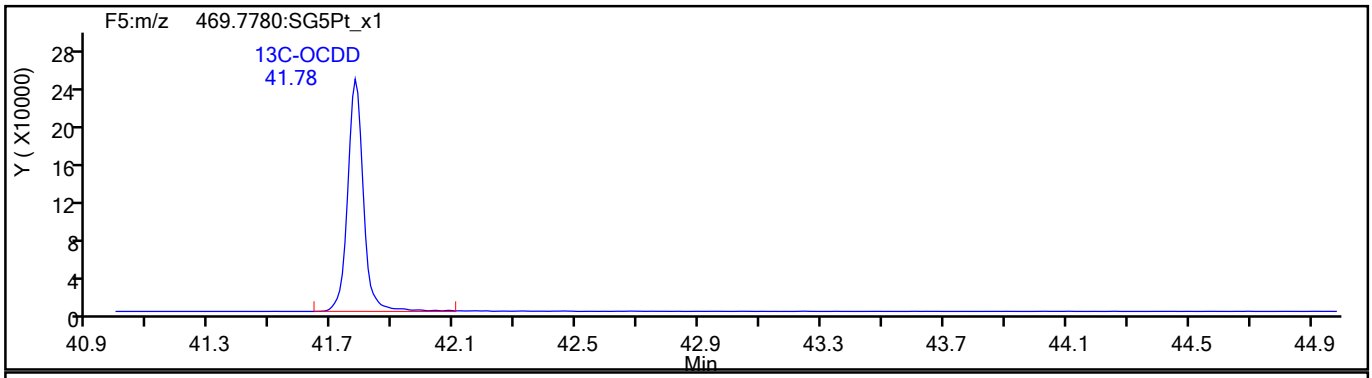

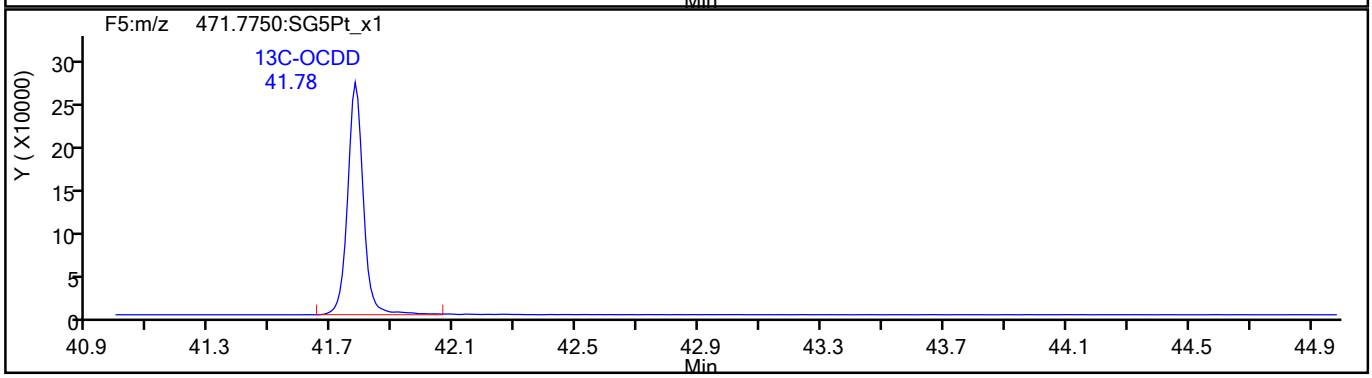

776317

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

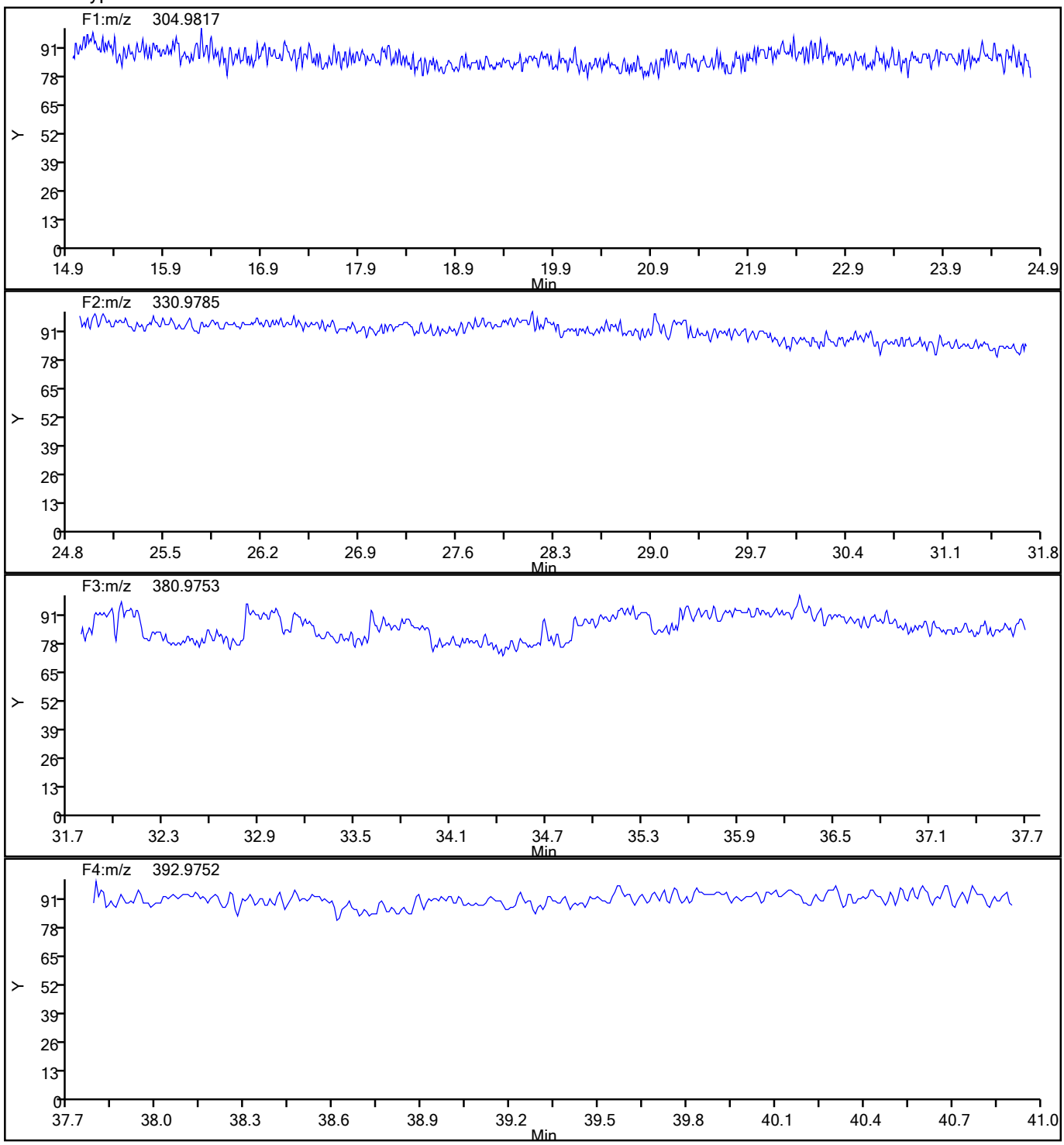

776318

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

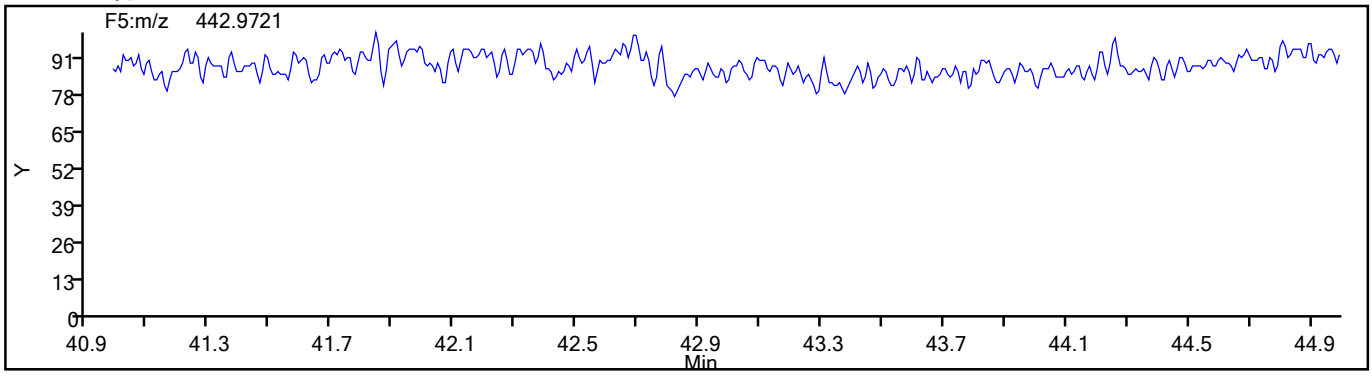

776319

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.546	1900111	0.78	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.619	2465726	0.79	1.3459	96.4	96.4	0.1978	0.1978	96.42	
2,3,7,8-TCDF	19.645	258022	0.78	1.0802	9.687	9.687	0.0168	0.0168	96.87	
S Total TCDF					9.687	9.687	0.0168	0.0168		
D 13C-2,3,7,8-TCDD	20.907	1800864	0.81	0.9317	101.7	101.7	0.1641	0.1641	102	
$ 37Cl4-2,3,7,8-TCDD	20.933	203726		1.0083	10.6	10.6	0.0134	0.0134	106	
2,3,7,8-TCDD	20.924	198062	0.75	1.0753	10.2	10.2	0.0351	0.0351	102	
S Total TCDD					10.2	10.2	0.0351	0.0351		
D 13C-1,2,3,7,8-PeCDF	26.556	2149791	1.60	1.1405	99.2	99.2	0.3269	0.3269	99.20	
1,2,3,7,8-PeCDF	26.573	1114982	1.57	1.0543	49.2	49.2	0.1379	0.1379	98.39	
D 13C-2,3,4,7,8-PeCDF	28.006	1991303	1.58	1.1253	93.1	93.1	0.3313	0.3313	93.13	
2,3,4,7,8-PeCDF	28.031	987812	1.58	1.0079	49.2	49.2	0.1665	0.1665	98.44	
S Total PeCDF					98.4	98.4	0.1522	0.1522		
D 13C-1,2,3,7,8-PeCDD	28.790	1388641	1.58	0.7165	102.0	102.0	0.1629	0.1629	102	
1,2,3,7,8-PeCDD	28.824	741897	1.57	1.0465	51.1	51.1	0.0499	0.0499	102	
S Total PeCDD					51.1	51.1	0.0499	0.0499		
D 13C-1,2,3,4,7,8-HxCDF	34.384	1841825	0.54	0.9648	115.8	115.8	0.3936	0.3936	116	
1,2,3,4,7,8-HxCDF	34.401	1093397	1.25	1.1474	51.7	51.7	0.1928	0.1928	103	
D 13C-1,2,3,6,7,8-HxCDF	34.561	2015594	0.53	1.0708	114.2	114.2	0.3547	0.3547	114	
1,2,3,6,7,8-HxCDF	34.578	1245549	1.24	1.2178	50.7	50.7	0.1720	0.1720	101	
D 13C-2,3,4,6,7,8-HxCDF	35.447	1861559	0.53	1.0413	108.4	108.4	0.3647	0.3647	108	
2,3,4,6,7,8-HxCDF	35.463	1151149	1.26	1.2145	50.9	50.9	0.1650	0.1650	102	
D 13C-1,2,3,7,8,9-HxCDF	36.399	1657413	0.54	0.9731	103.3	103.3	0.3903	0.3903	103	
1,2,3,7,8,9-HxCDF	36.408	1038574	1.24	1.2401	50.5	50.5	0.1718	0.1718	101	
S Total HxCDF					203.9	203.9	0.1754	0.1754		
* 13C-1,2,3,7,8,9-HxCDD	36.197	1648545	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.691	1348471	1.27	0.7587	107.8	107.8	0.2143	0.2143	108	
1,2,3,4,7,8-HxCDD	35.699	724729	1.28	1.0608	50.7	50.7	0.0918	0.0918	101	
D 13C-1,2,3,6,7,8-HxCDD	35.809	1460100	1.24	0.8593	103.1	103.1	0.1892	0.1892	103	
1,2,3,6,7,8-HxCDD	35.826	760446	1.23	0.9933	52.4	52.4	0.0967	0.0967	105	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.214	786511	1.27	1.1094	50.5	50.5	0.0872	0.0872	101	
S Total HxCDD					153.6	153.6	0.0919	0.0919		
D 13C-1,2,3,4,6,7,8-HpCDF	38.316	1182209	0.45	0.7359	97.4	97.4	0.3866	0.3866	97.44	
1,2,3,4,6,7,8-HpCDF	38.324	878086	1.05	1.4421	51.5	51.5	0.1699	0.1699	103	
D 13C-1,2,3,4,7,8,9-HpCDF	39.614	1080883	0.46	0.6854	95.7	95.7	0.4151	0.4151	95.66	
1,2,3,4,7,8,9-HpCDF	39.622	727362	1.05	1.3092	51.4	51.4	0.1875	0.1875	103	
S Total HpCDF					102.9	102.9	0.1787	0.1787		
D 13C-1,2,3,4,6,7,8-HpCDD	39.302	1094713	1.07	0.6745	98.4	98.4	0.2448	0.2448	98.45	
1,2,3,4,6,7,8-HpCDD	39.310	572466	1.05	1.0503	49.8	49.8	0.1044	0.1044	99.58	
S Total HpCDD					49.8	49.8	0.1044	0.1044		
D 13C-OCDD	41.794	1676139	0.90	0.5446	186.7	186.7	0.2845	0.2845	93.34	
OCDF	41.887	1118740	0.90	1.3168	101.4	101.4	0.1189	0.1189	101	
OCDD	41.803	910980	0.89	1.0620	102.4	102.4	0.1082	0.1082	102	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.546	20.547	0		832498	129736	116	290	1118		
333.9338	20.546	20.547	0		1067613	165878	65	162	2552	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.619	19.616	0	0.955	1091704	180342	213	532	847		
317.9389	19.619	19.616	0	0.955	1374022	217372	102	255	2131	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.645	19.646	0	1.001	113254	18239	10	25	1824		
305.8987	19.645	19.646	0	1.001	144768	23858	19	47	1256	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.907	20.910	0	1.018	803279	117913	116	290	1016		
333.9338	20.907	20.910	0	1.018	997585	152094	65	162	2340	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.933	20.935	0	1.019	203726	29833	16	40	1865		
2,3,7,8-TCDD											
319.8965	20.924	20.939	-1	1.001	85173	13080	31	77	422		
321.8936	20.941	20.939	0	1.002	112889	16258	10	25	1626	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.556	26.560	0	1.292	1323851	238814	266	665	898		
353.8970	26.556	26.560	0	1.292	825940	146442	175	437	837	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.573	26.584	-1	1.001	680306	120693	132	330	914		
341.8567	26.573	26.584	-1	1.001	434676	76404	92	230	830	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.006	28.014	0	1.363	1219332	203015	266	665	763		
353.8970	28.006	28.014	0	1.363	771971	130766	175	437	747	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.031	28.039	0	1.001	604266	98138	132	330	743		
341.8567	28.031	28.039	0	1.001	383546	62644	92	230	681	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.790	28.801	-1	1.401	851334	132655	82	205	1618		
369.8919	28.790	28.801	-1	1.401	537307	81623	56	140	1458	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.824	28.828	0	1.001	452903	70092	31	77	2261		
357.8516	28.824	28.828	0	1.001	288994	44853	14	35	3204	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.384	34.384	0	0.950	645542	131022	198	495	662		
385.8610	34.384	34.384	0	0.950	1196283	248690	400	1000	622	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.401	34.405	0	1.000	607111	119877	181	452	662		
375.8178	34.401	34.405	0	1.000	486286	95304	155	387	615	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.561	34.562	0	0.955	696119	139607	198	495	705		
385.8610	34.561	34.562	0	0.955	1319475	261396	400	1000	653	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.578	34.582	0	1.000	690624	134257	181	452	742		
375.8178	34.578	34.582	0	1.000	554925	106932	155	387	690	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.447	35.444	0	0.979	648311	145832	198	495	737		
385.8610	35.447	35.444	0	0.979	1213248	273234	400	1000	683	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.463	35.461	0	1.000	640849	139500	181	452	771		
375.8178	35.463	35.461	0	1.000	510300	111840	155	387	722	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.399	36.388	1	1.006	579583	134604	198	495	680		
385.8610	36.399	36.388	1	1.006	1077830	259553	400	1000	649	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.408	36.402	0	1.000	575769	139453	181	452	770		
375.8178	36.408	36.402	0	1.000	462805	111702	155	387	721	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.197	36.192	0		918631	219913	146	365	1506		
403.8529	36.197	36.192	0		729914	173739	110	275	1579	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.691	35.680	1	0.986	754120	185149	146	365	1268		
403.8529	35.691	35.680	1	0.986	594351	145418	110	275	1322	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.699	35.695	0	1.000	407415	100236	71	177	1412		
391.8127	35.699	35.695	0	1.000	317314	80745	58	145	1392	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.809	35.805	0	0.989	809032	182963	146	365	1253		
403.8529	35.809	35.805	0	0.989	651068	152224	110	275	1384	1.24(1.05-1.43)	

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.826	35.820	0	1.000	419224	96522	71	177	1359		
391.8127	35.826	35.820	0	1.000	341222	77256	58	145	1332	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.214	36.208	0	1.015	440686	104923	71	177	1478		
391.8127	36.214	36.208	0	1.015	345825	82846	58	145	1428	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.316	38.305	1	1.059	366846	105531	154	385	685		
419.8220	38.316	38.305	1	1.059	815363	231224	294	735	786	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.324	38.317	0	1.000	449936	128816	169	422	762		
409.7788	38.324	38.317	0	1.000	428150	123728	161	402	768	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.614	39.600	1	1.094	340338	106309	154	385	690		
419.8220	39.606	39.600	0	1.094	740545	229697	294	735	781	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.622	39.608	1	1.000	372140	117961	169	422	698		
409.7788	39.622	39.608	1	1.000	355222	111585	161	402	693	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.302	39.293	1	1.086	567057	176920	136	340	1301		
437.8140	39.302	39.293	1	1.086	527656	171361	124	310	1382	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.310	39.301	1	1.000	293602	91347	77	192	1186		
425.7737	39.310	39.301	1	1.000	278864	87962	76	190	1157	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.794	41.785	1	1.155	795323	226496	132	330	1716		
471.7750	41.794	41.785	1	1.155	880816	252365	112	280	2253	0.90(0.76-1.02)	
OCDF											
441.7428	41.887	41.875	1	1.002	530577	155278	73	182	2127		
443.7399	41.887	41.875	1	1.002	588163	168537	77	192	2189	0.90(0.76-1.02)	
OCDD											
457.7377	41.803	41.794	1	1.000	427984	122796	54	135	2274		
459.7348	41.803	41.794	1	1.000	482996	140394	56	140	2507	0.89(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

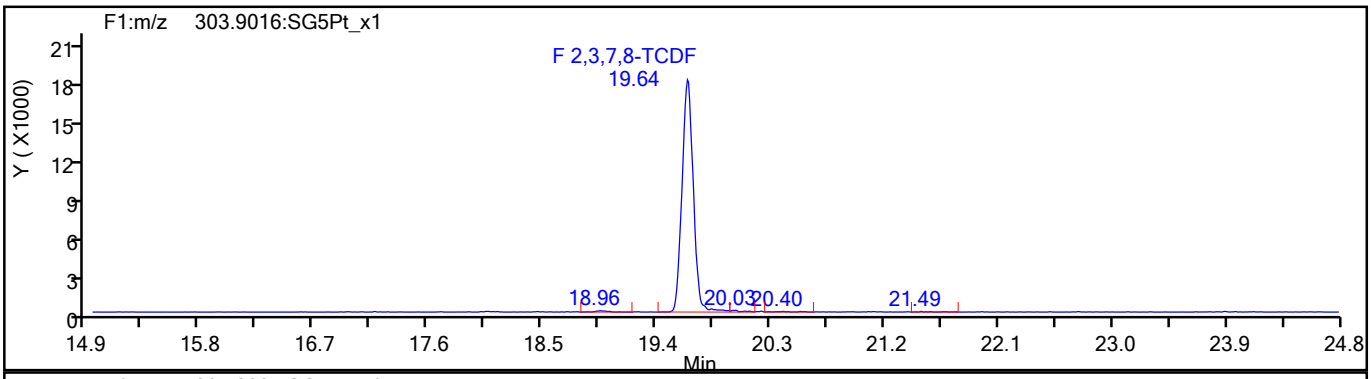

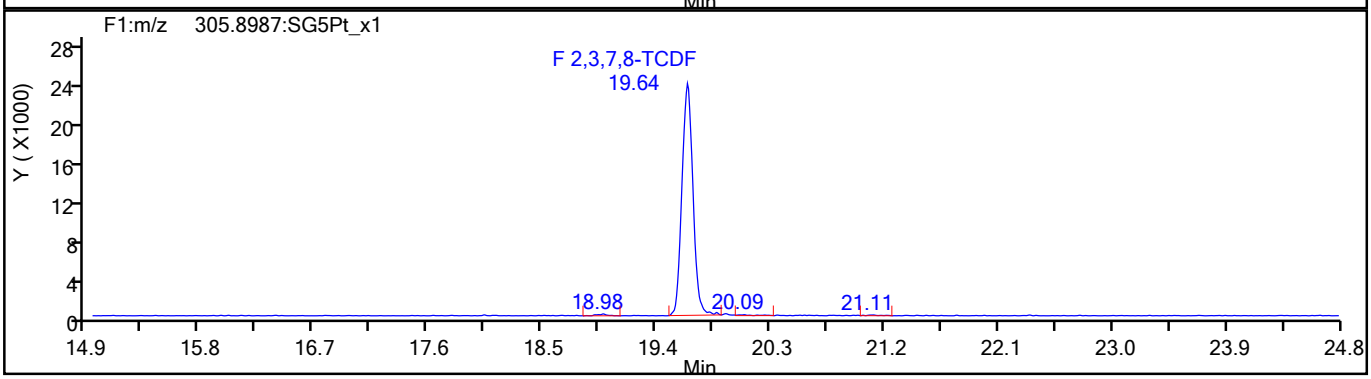

TCDF Standards

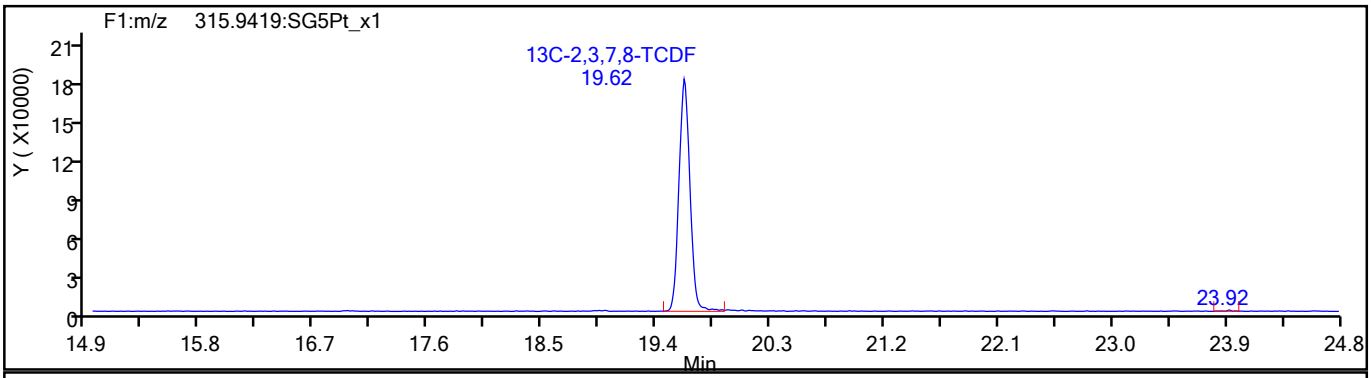

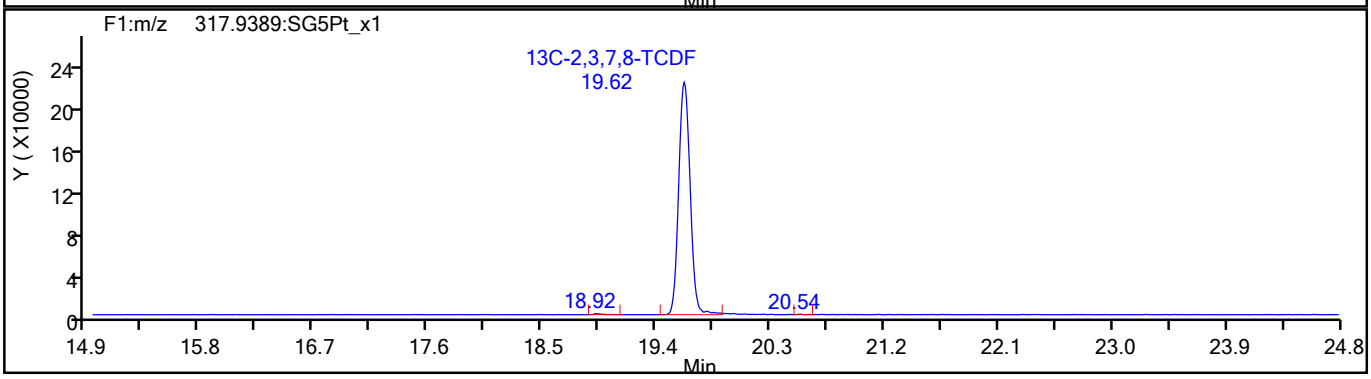

776325

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

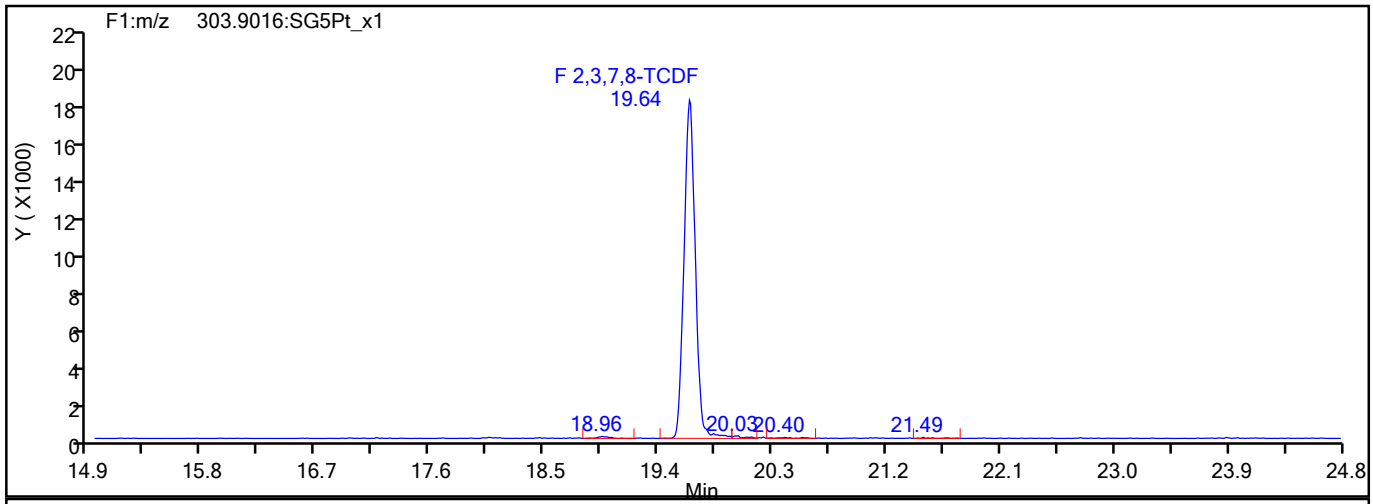

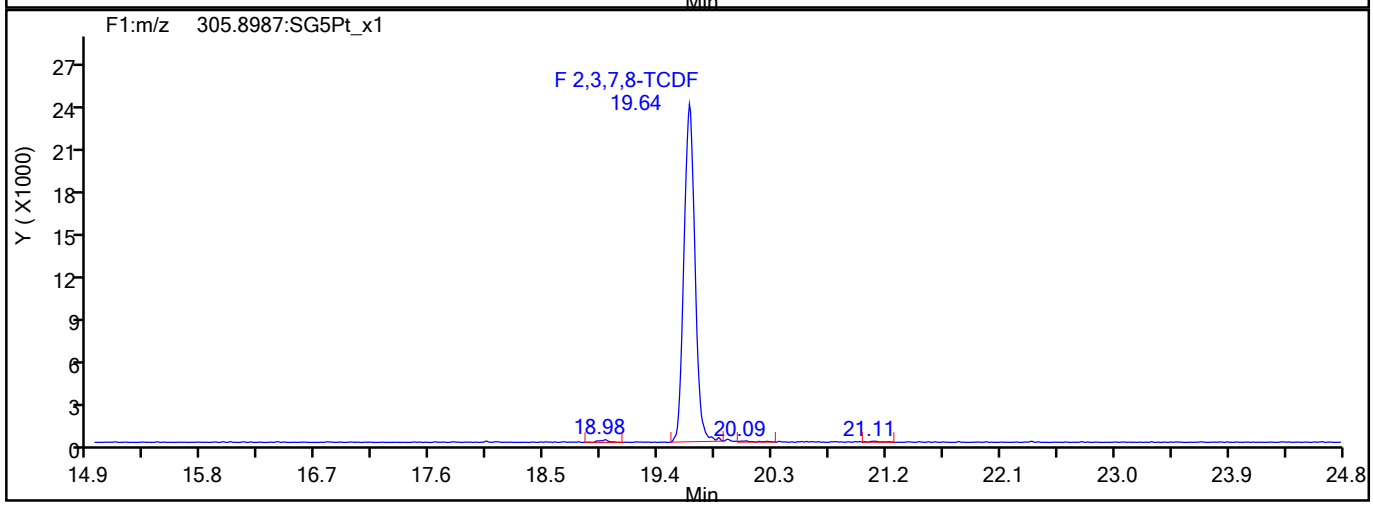

TCDF Interference Mass

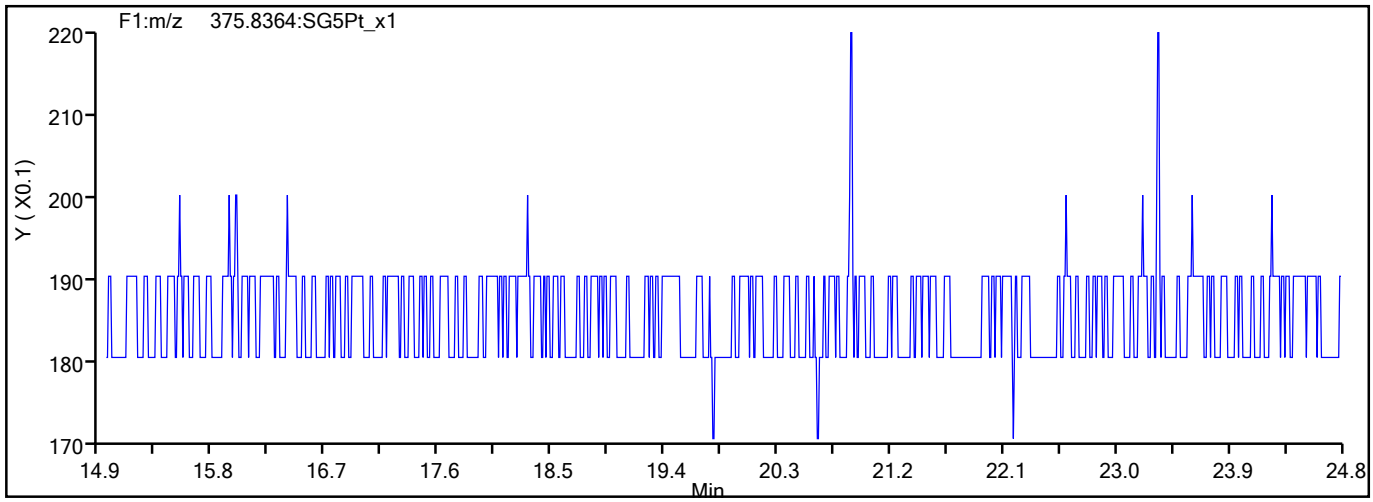

776326

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

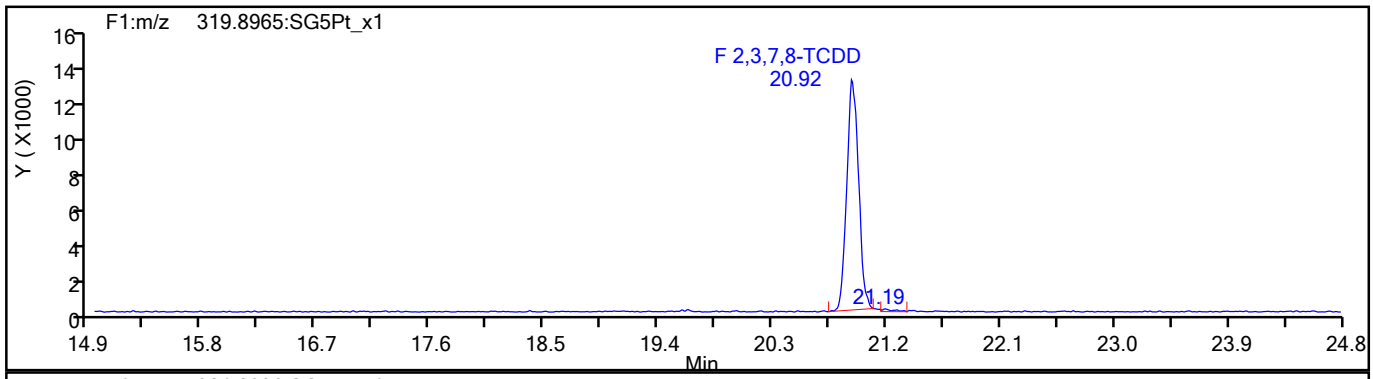

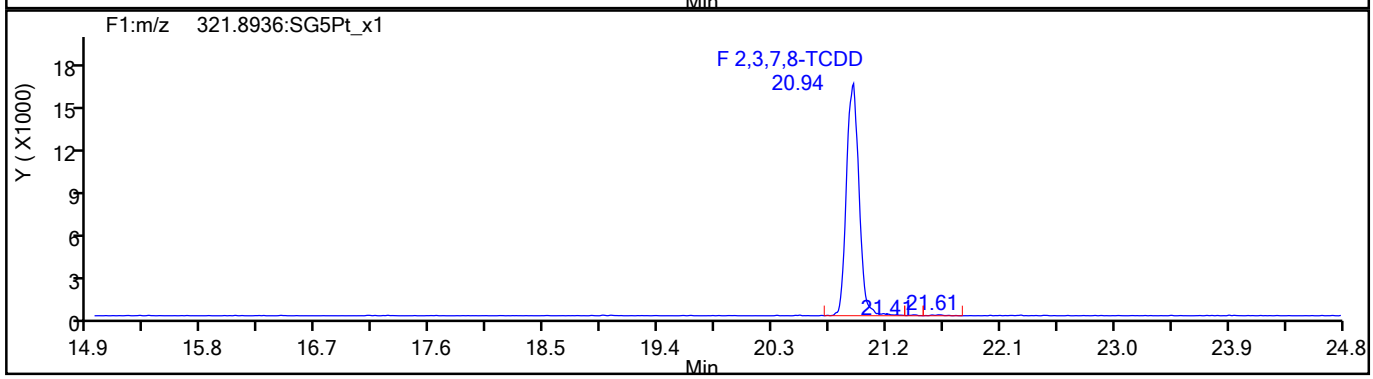

TCDD Standards

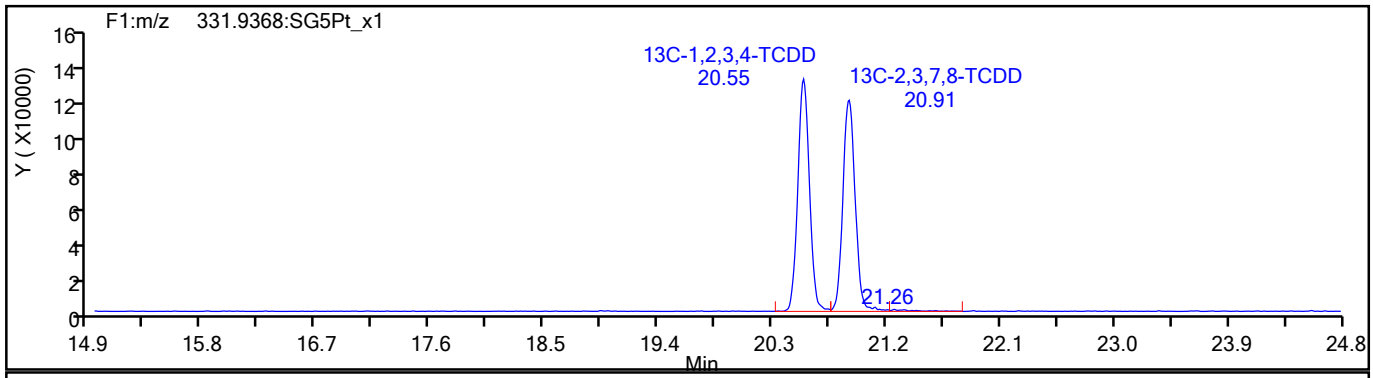

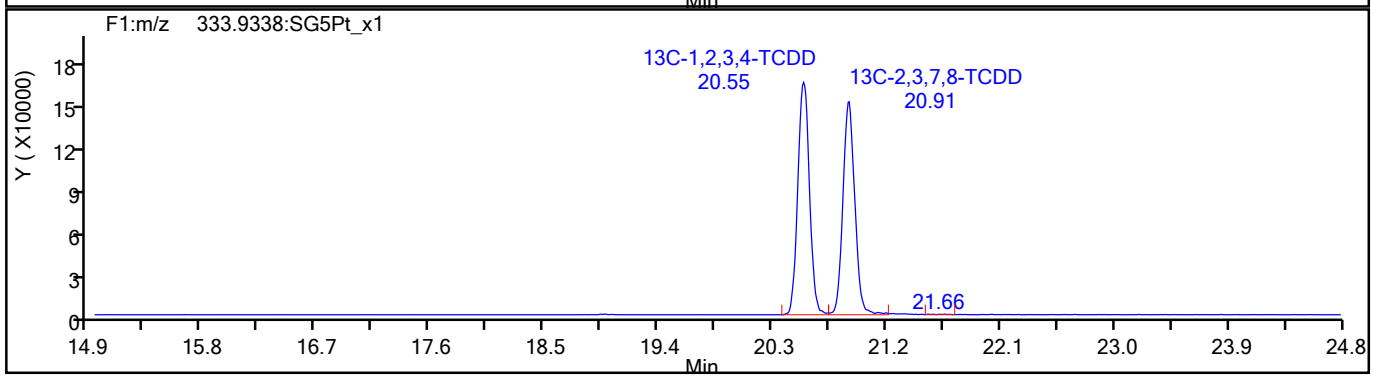

776327

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

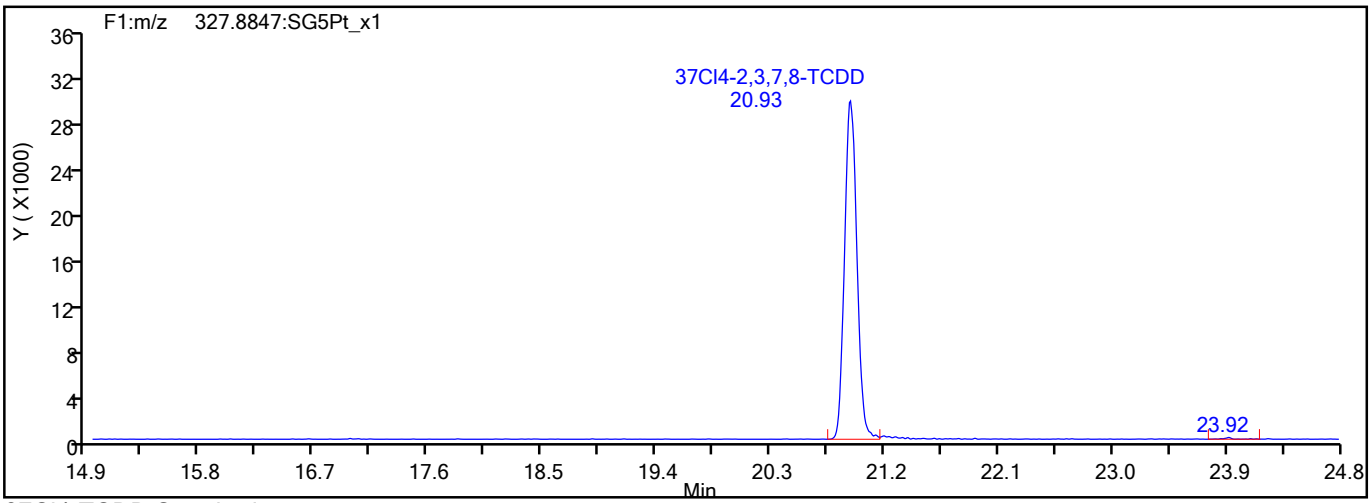

37Cl4-TCDD Standards

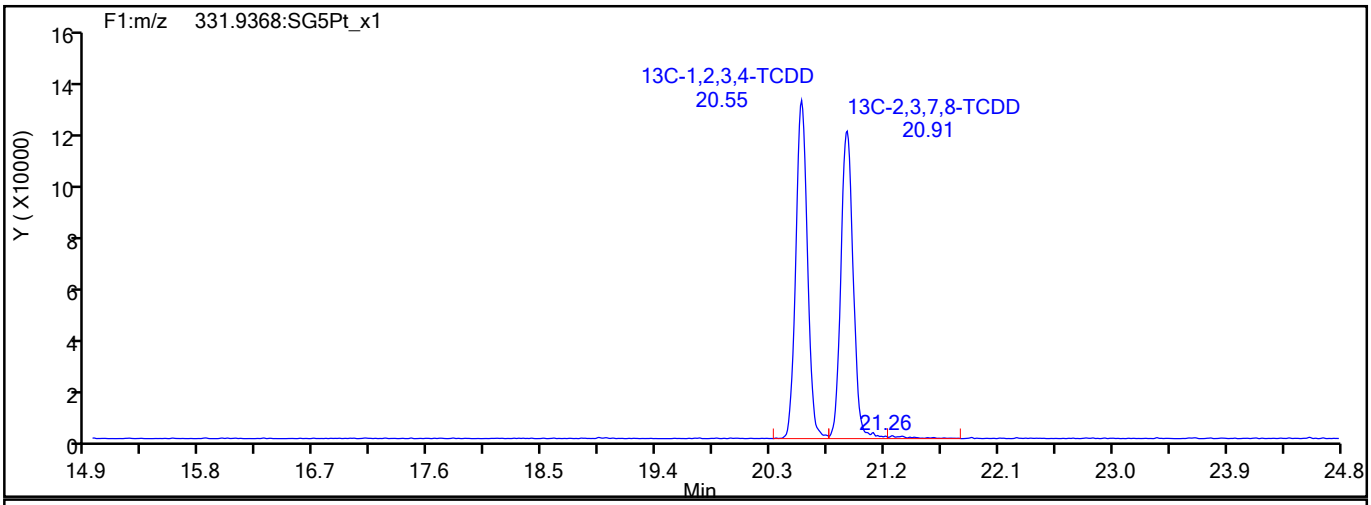

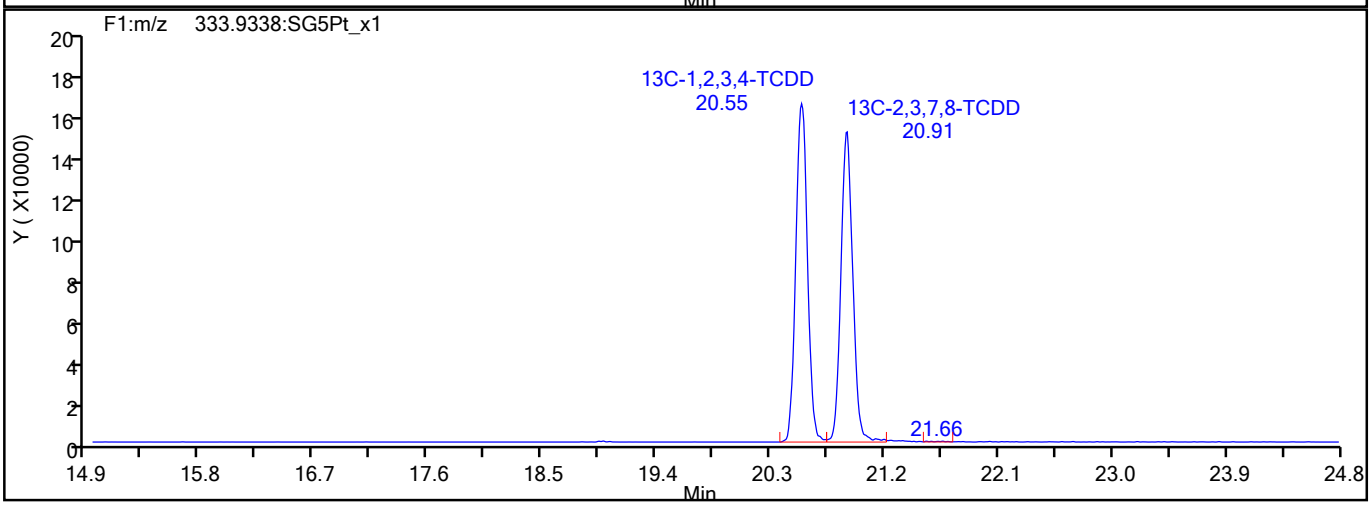

776328

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

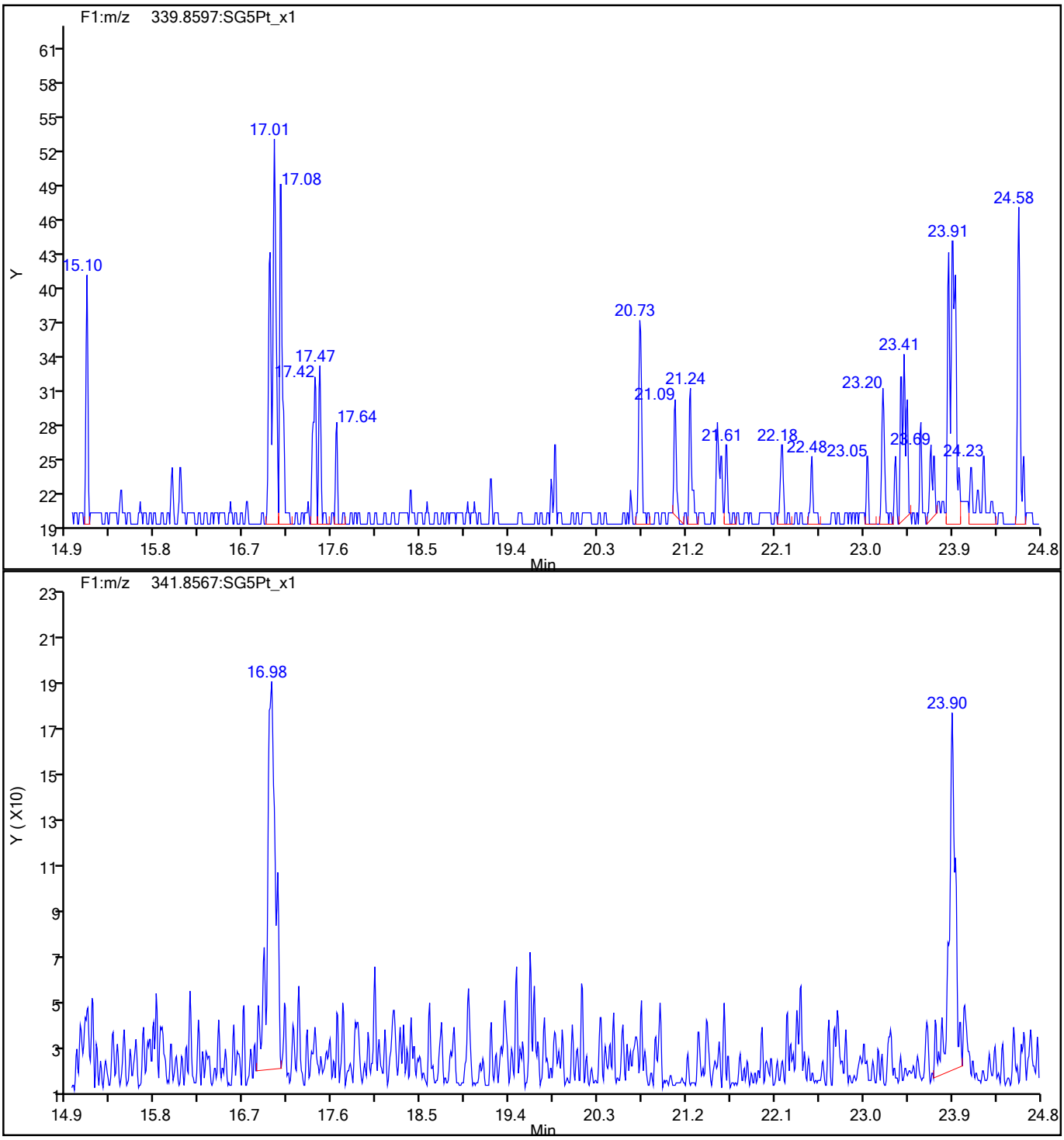

776329

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

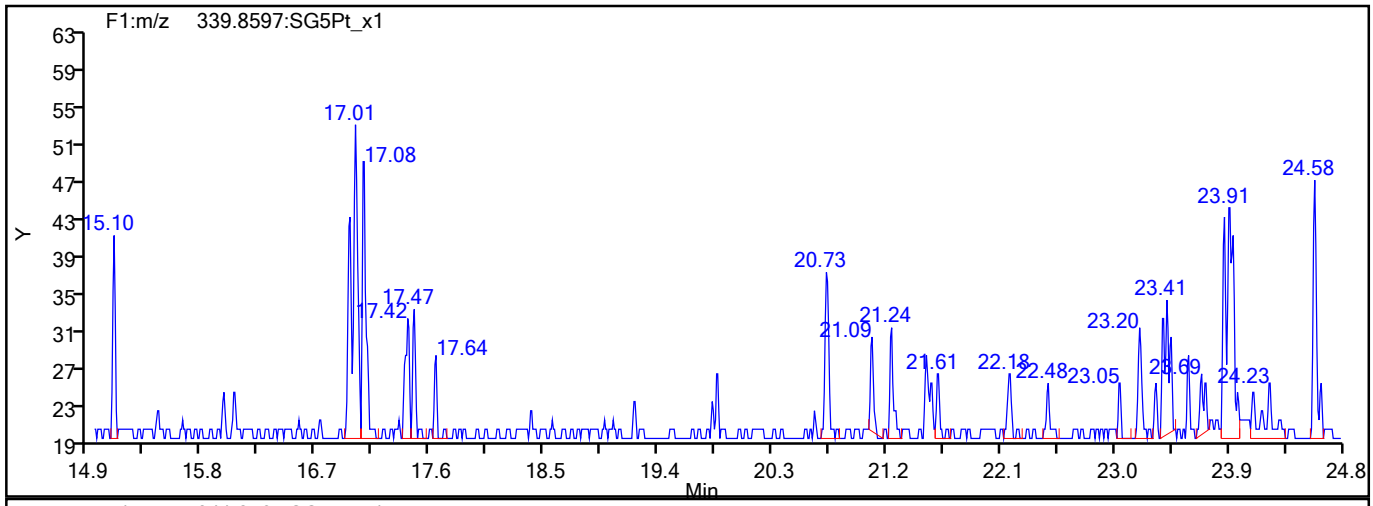

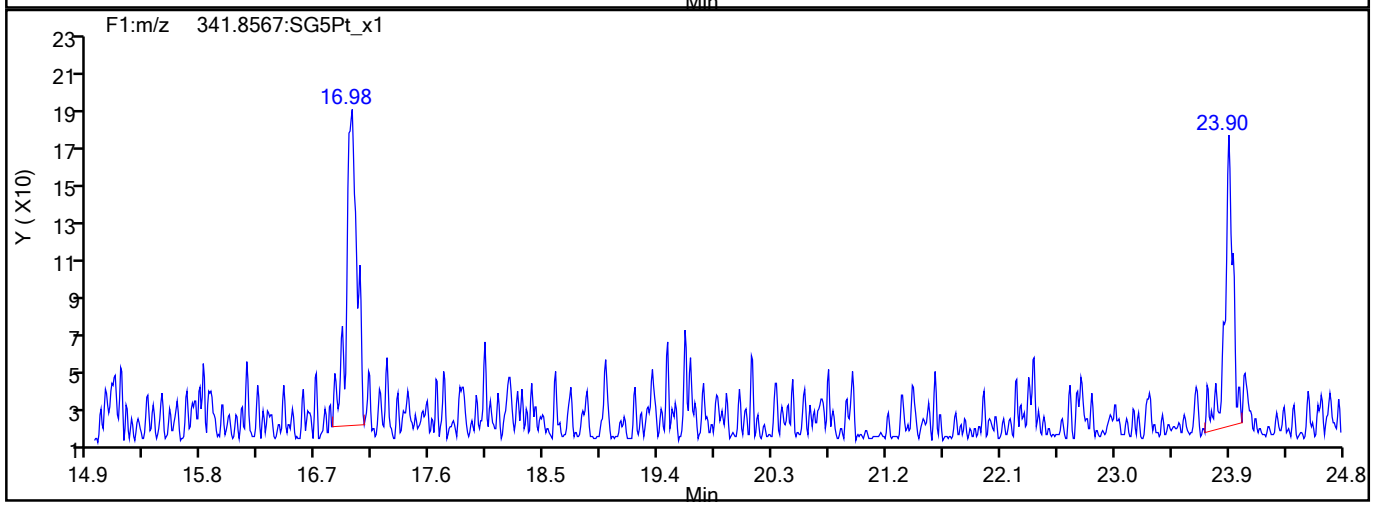

F1 PeCDFs Interference Mass

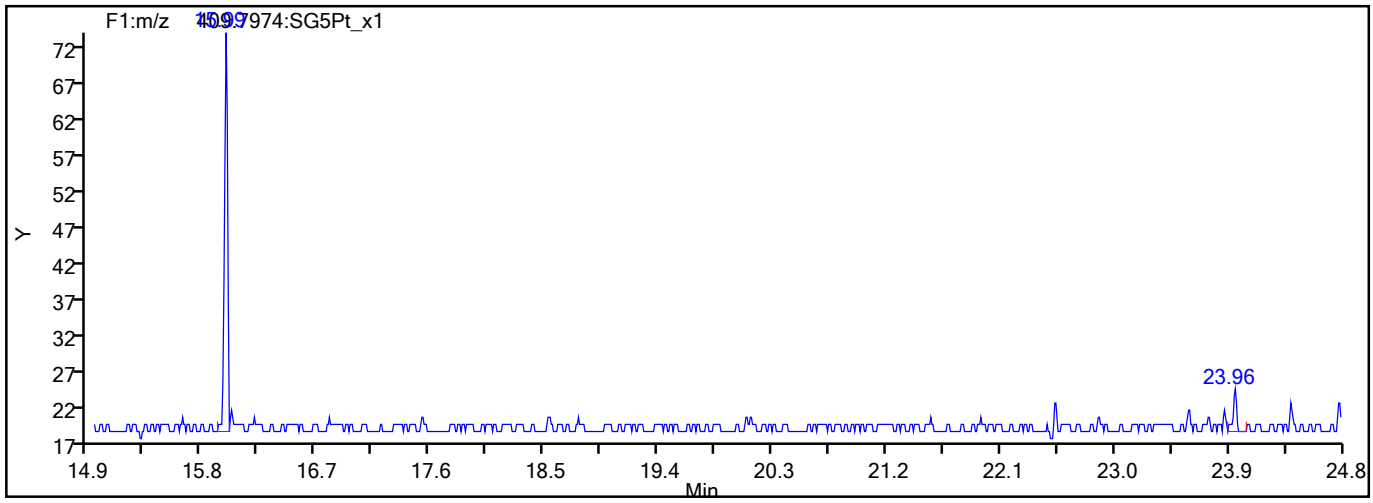

776330

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

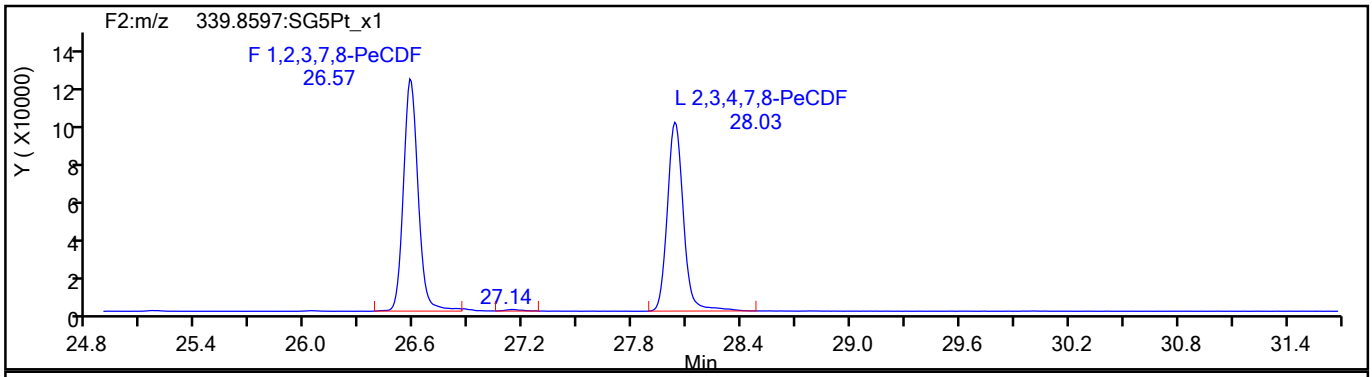

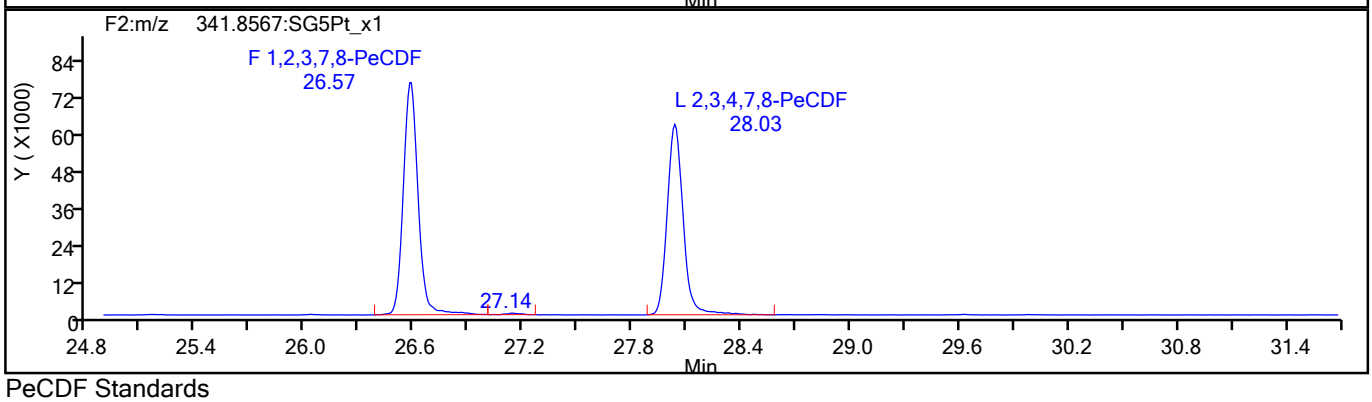

PeCDF Standards

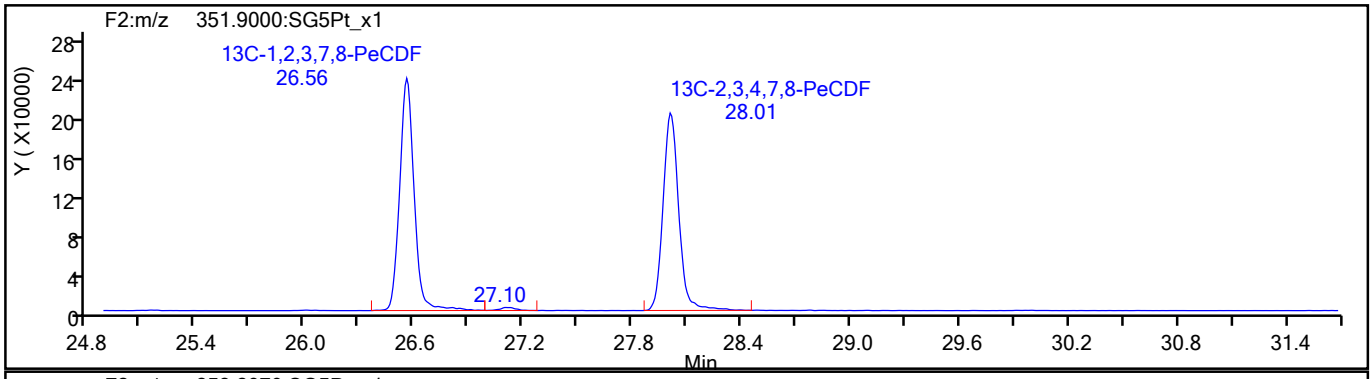

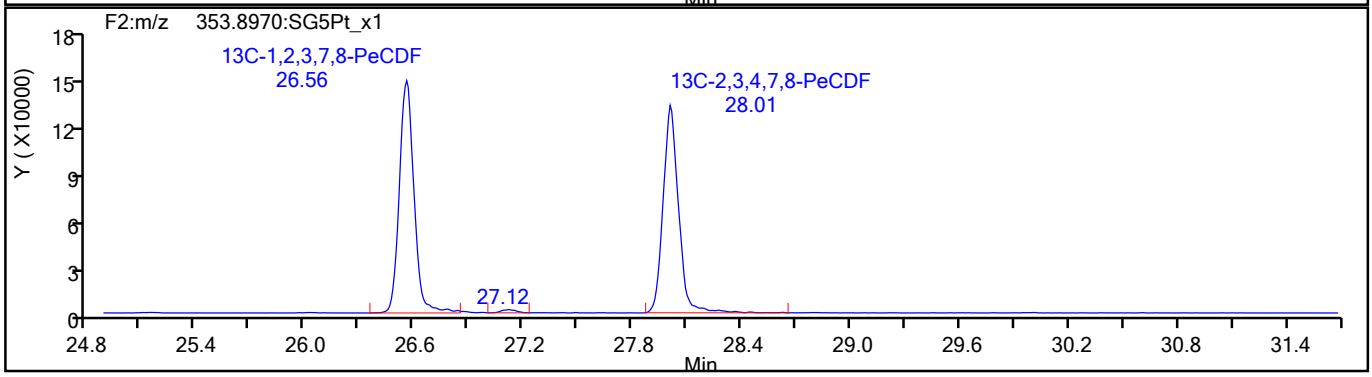

776331

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

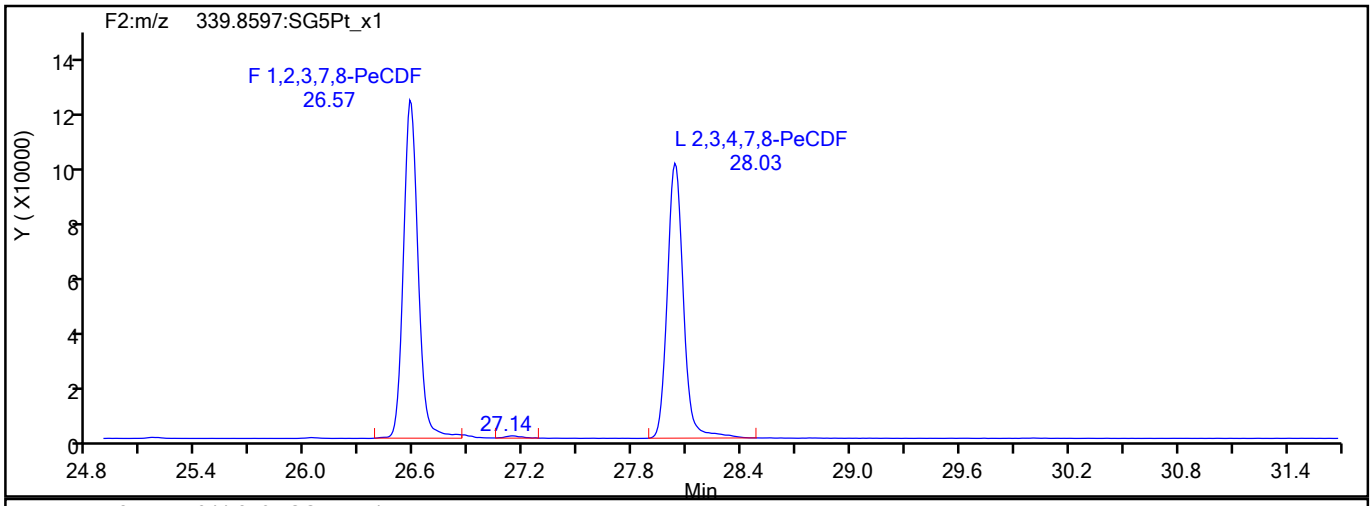

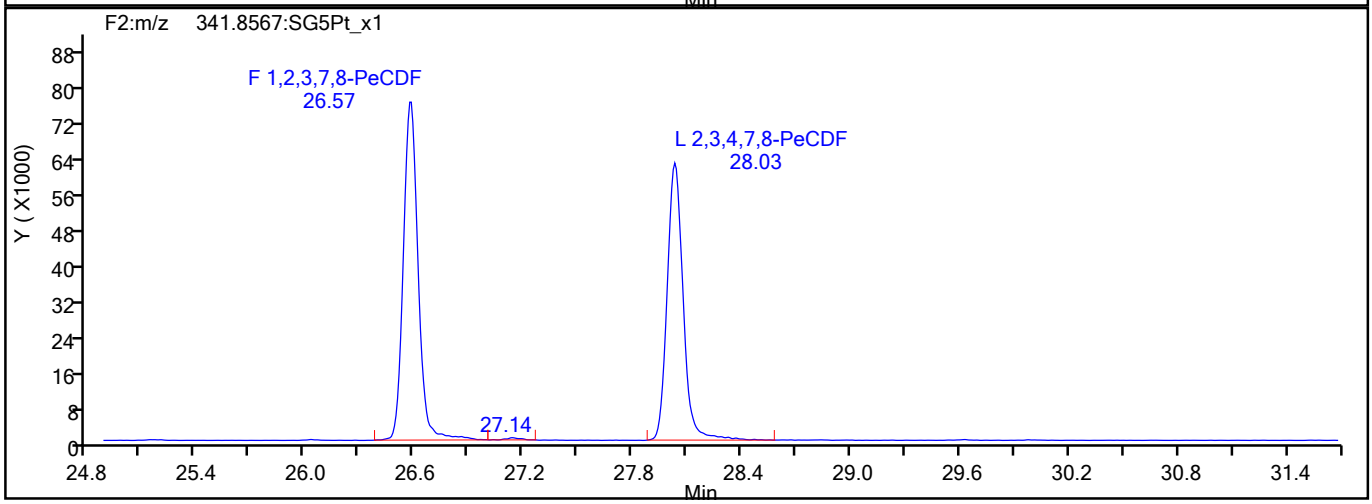

PeCDF Interference Mass

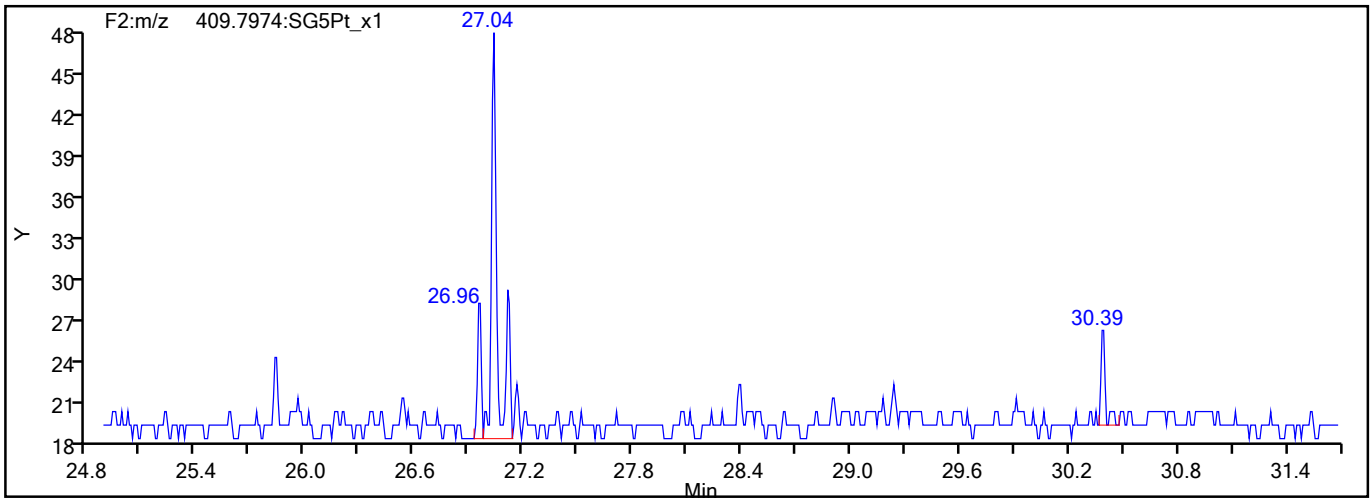

776332

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

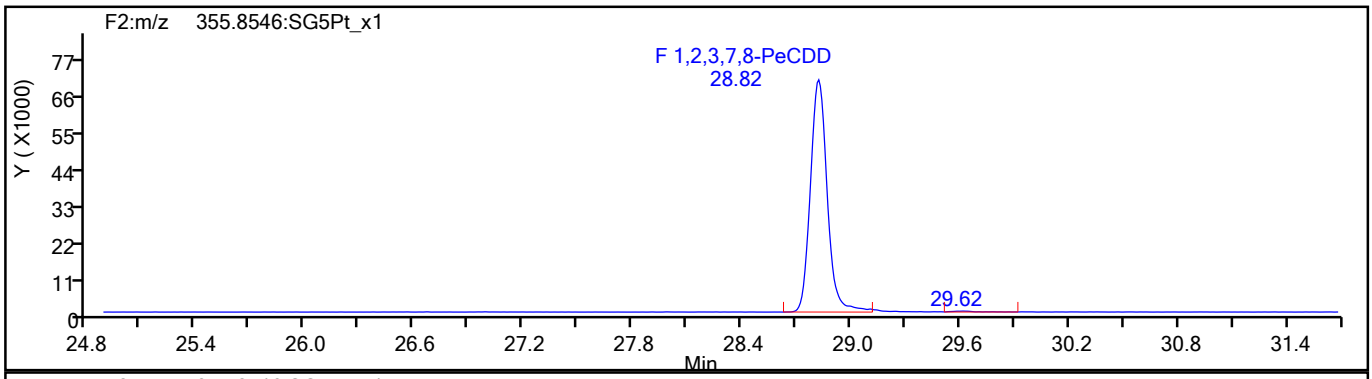

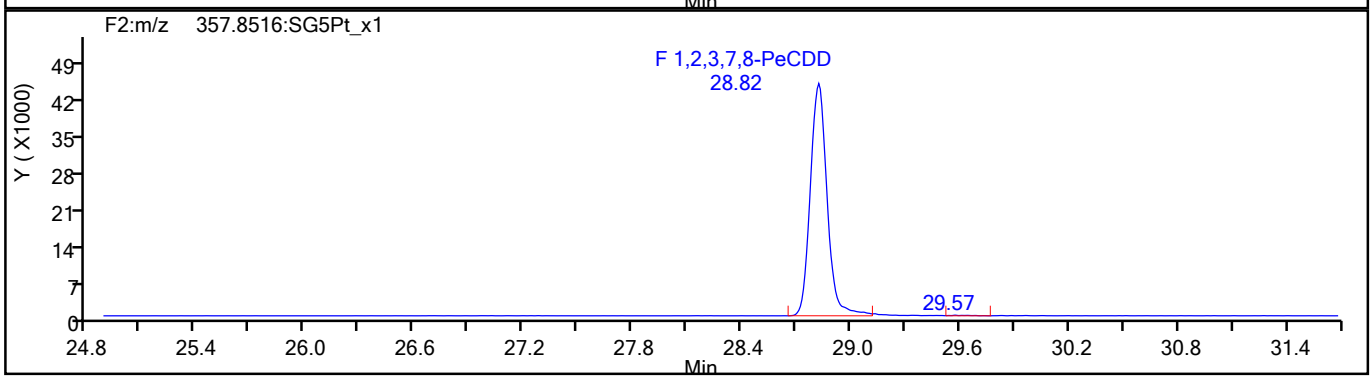

PeCDD Standards

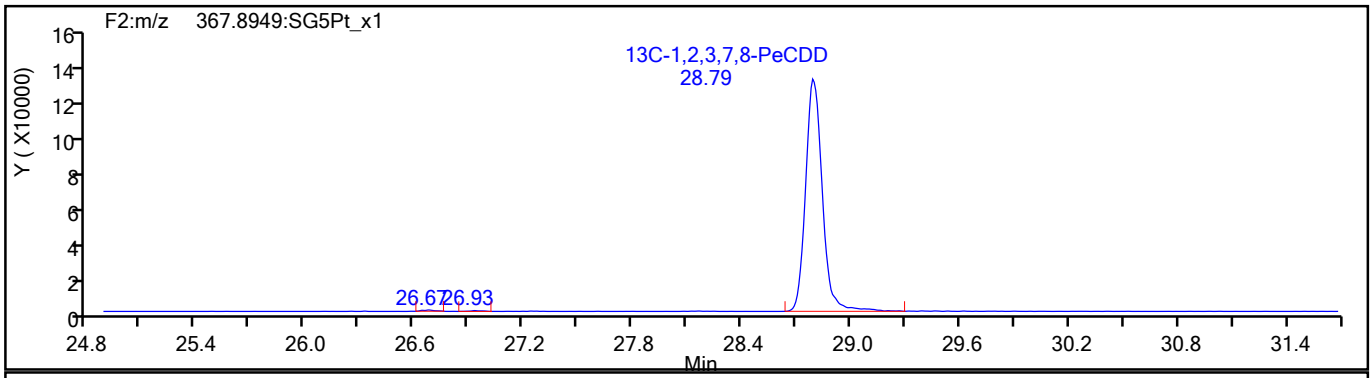

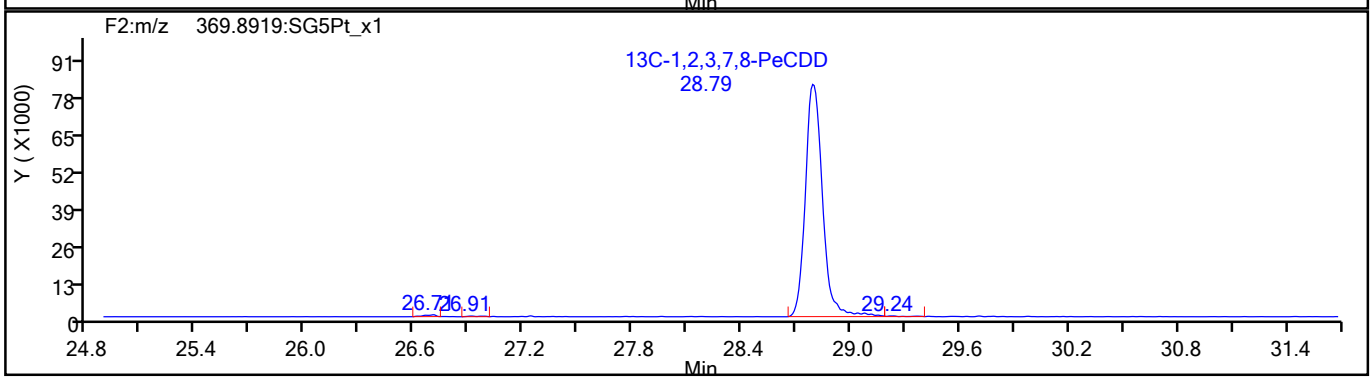

776333

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
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HxCDF

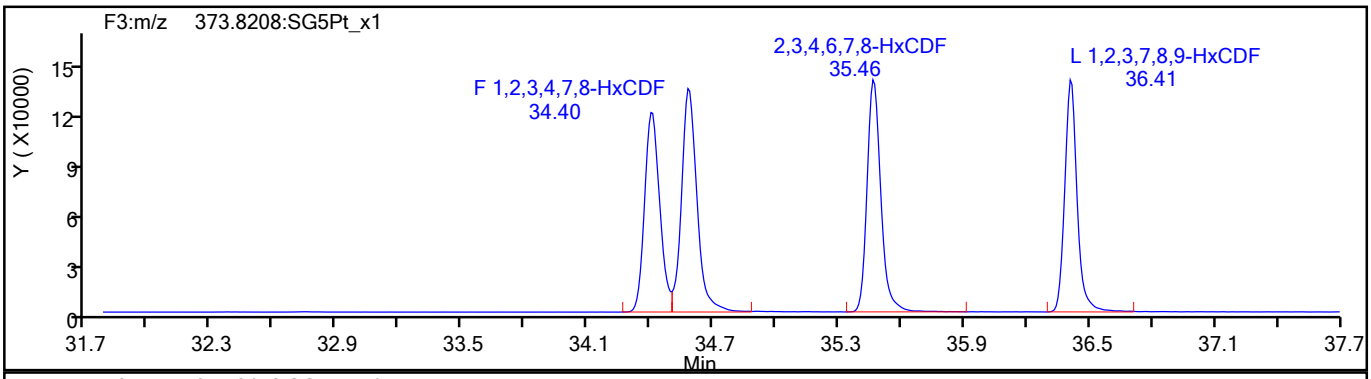

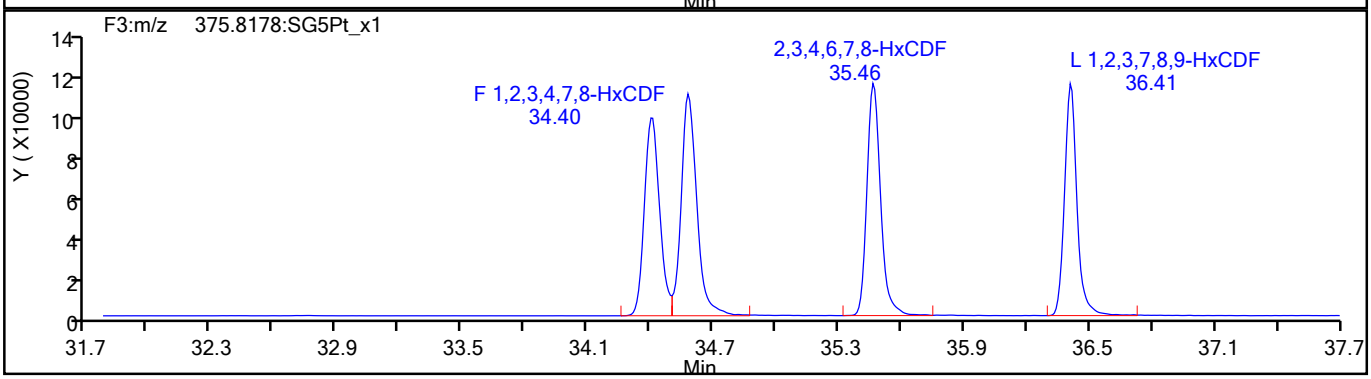

HxCDF Standards

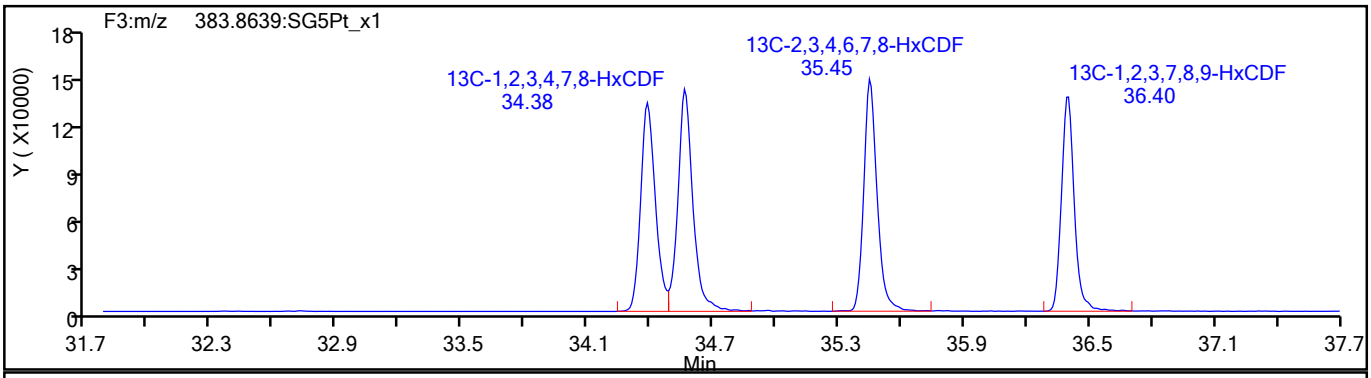

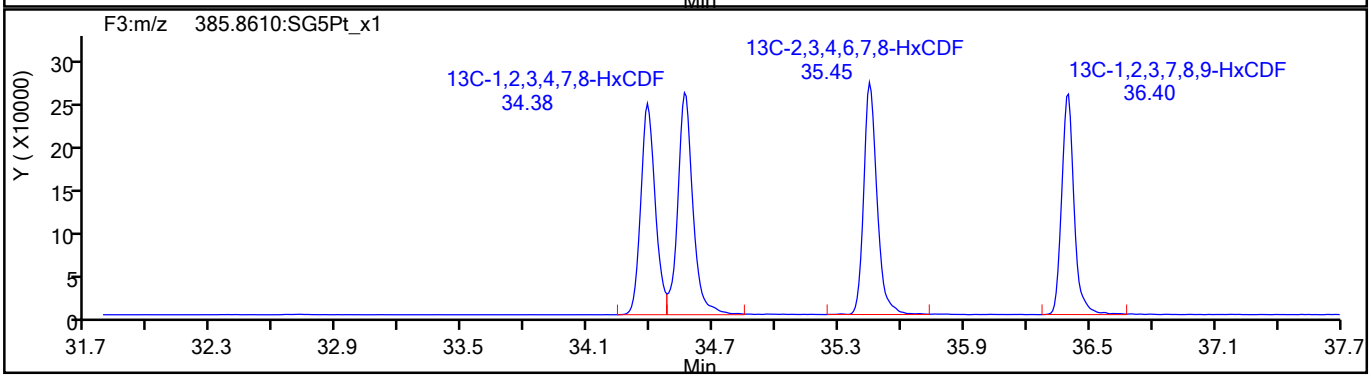

776334

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

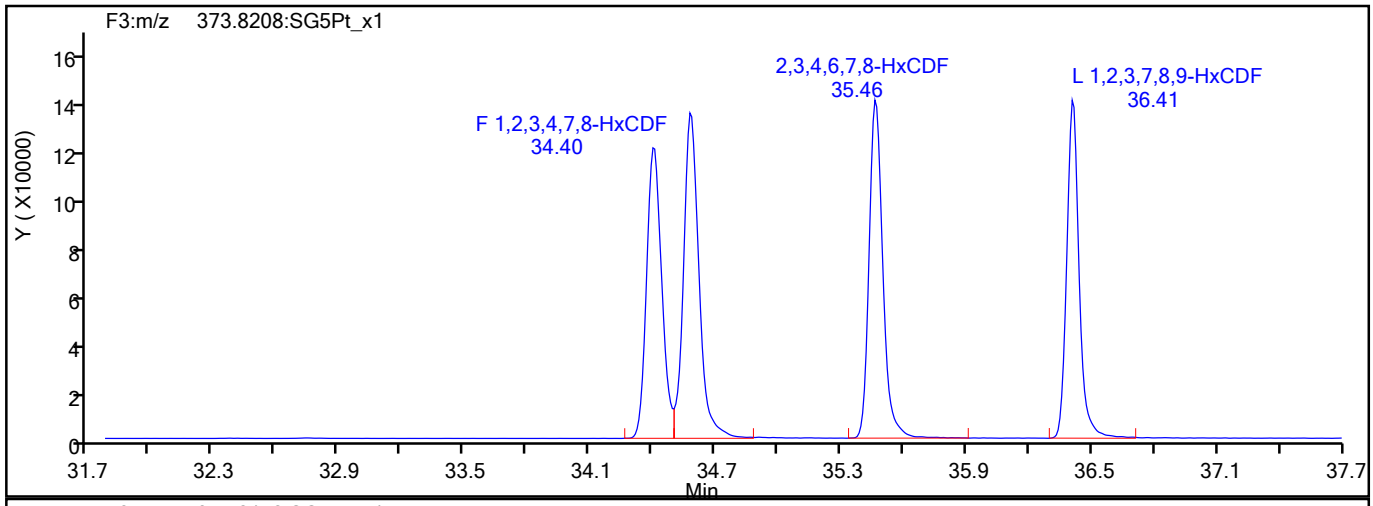

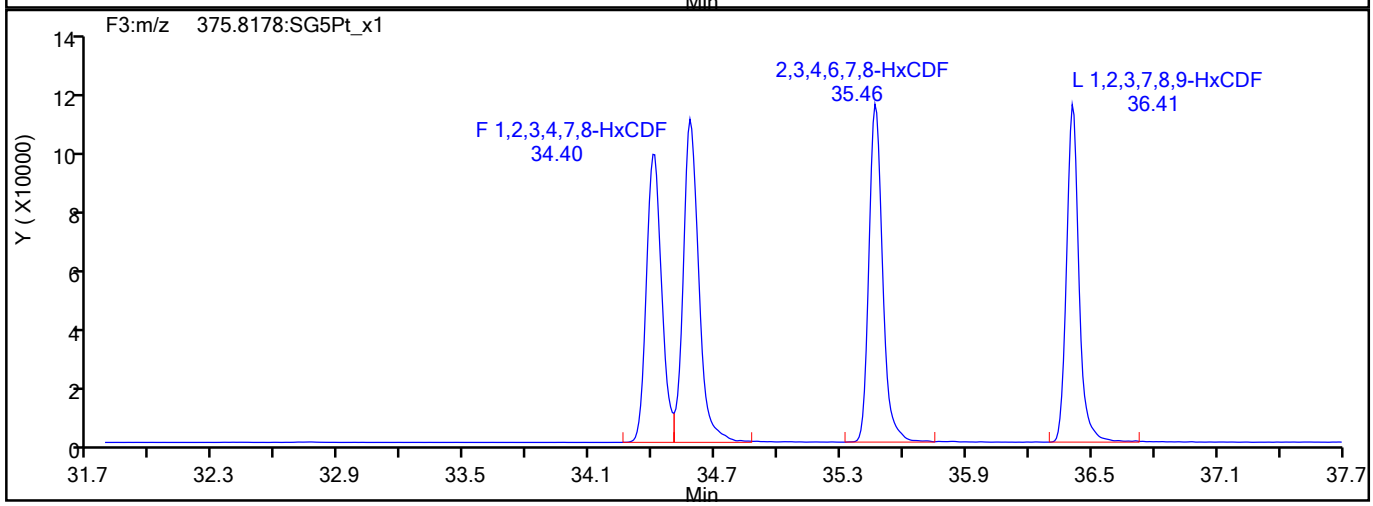

HxCDF Interference Mass

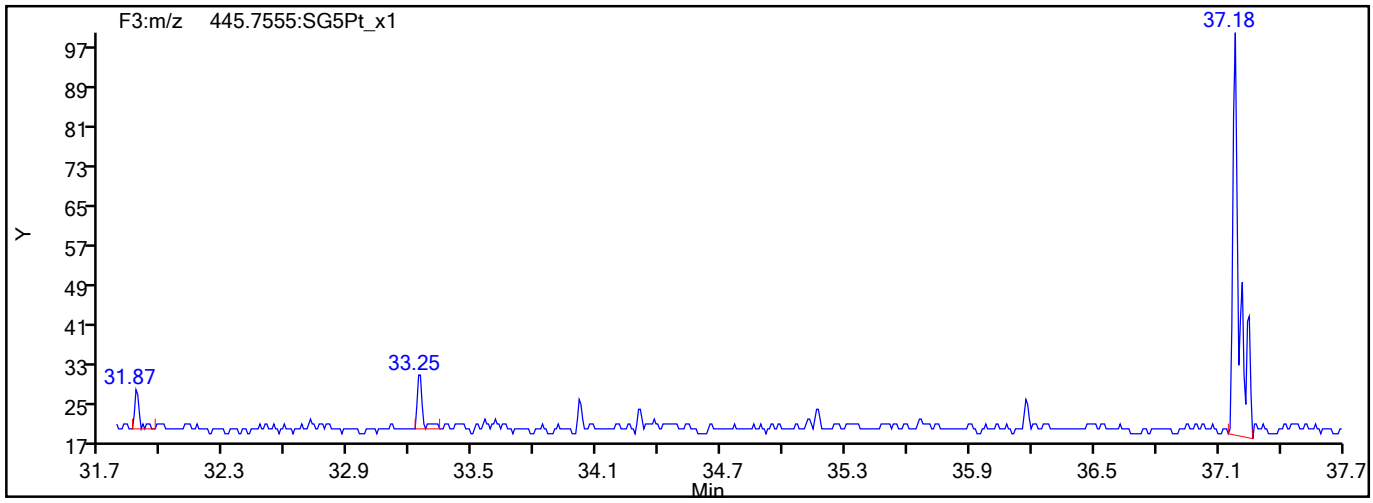

776335

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

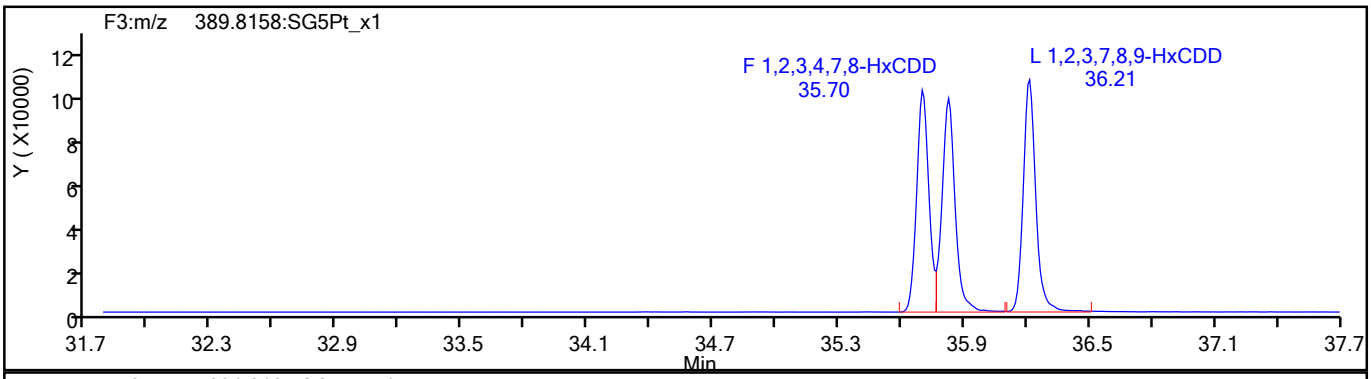

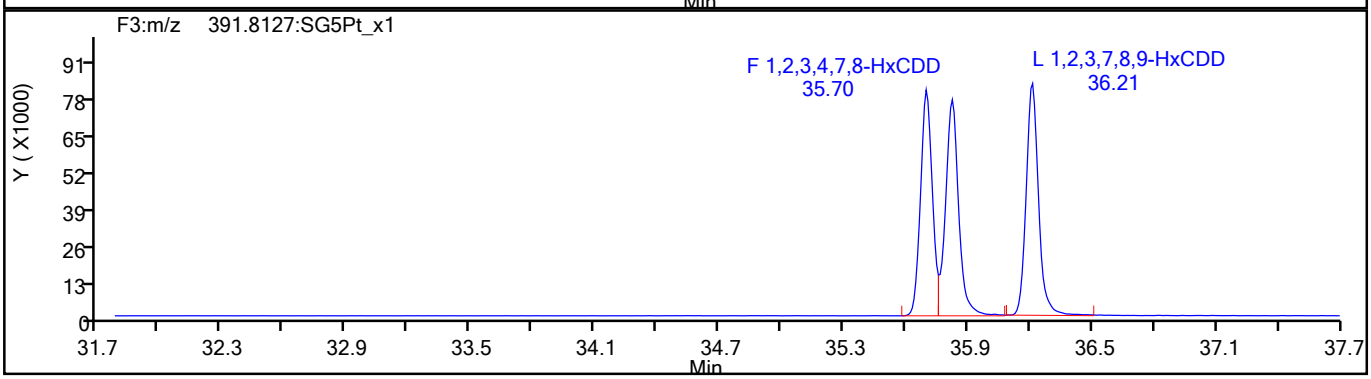

HxCDD Standards

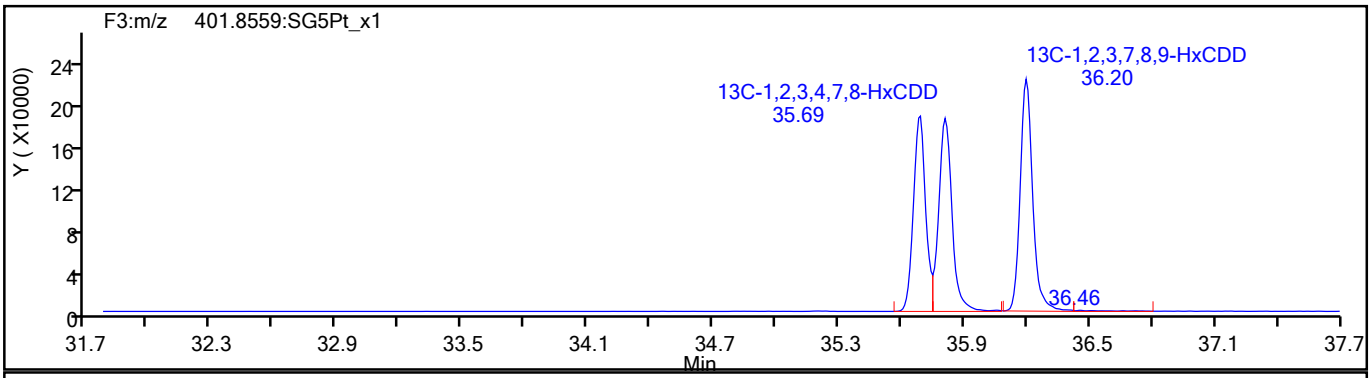

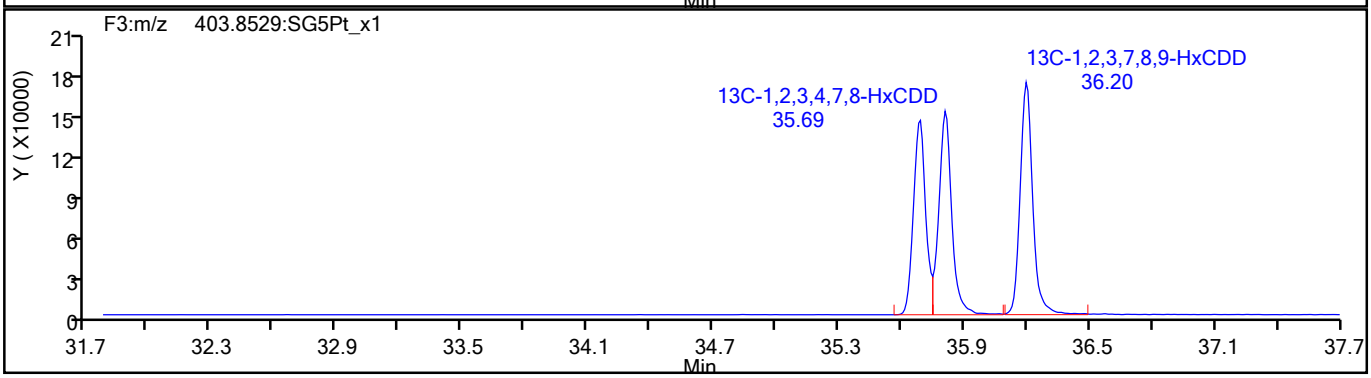

776336

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

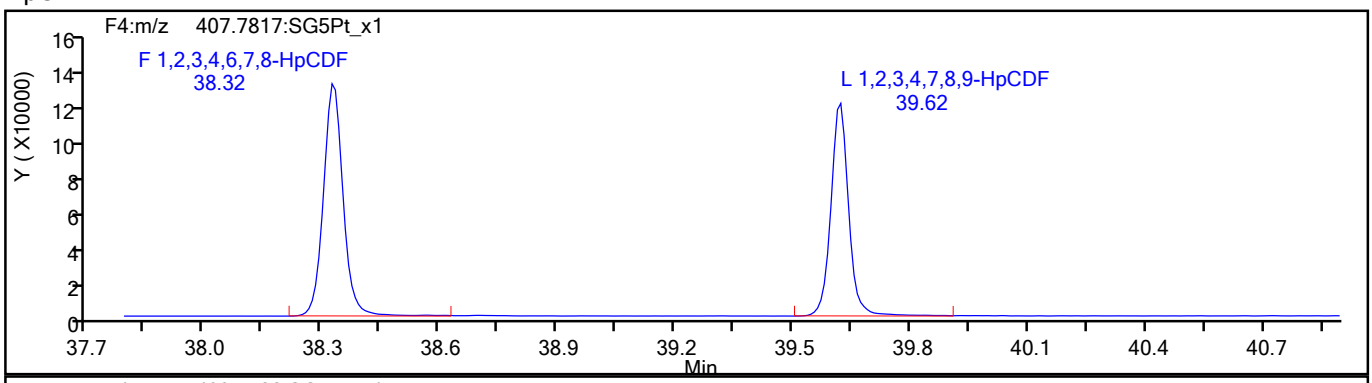

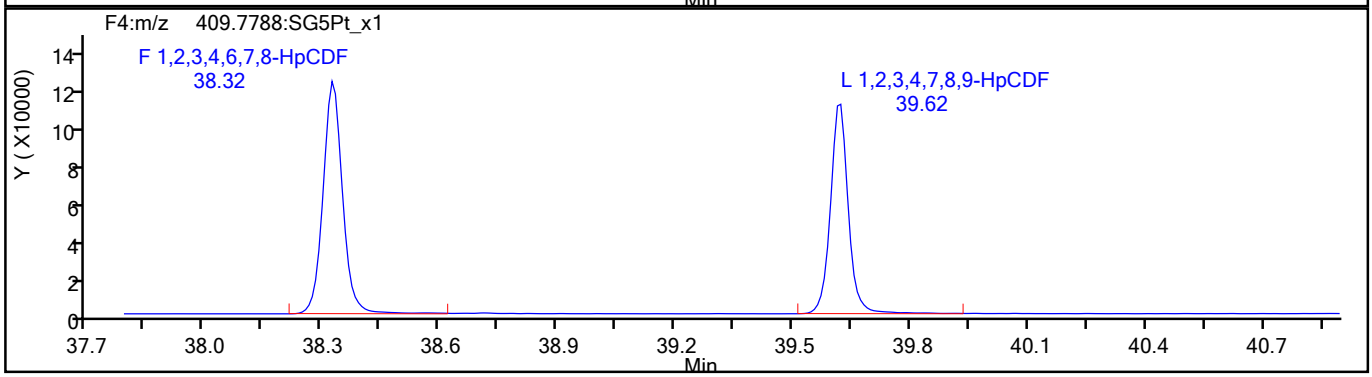

HpCDF Standards

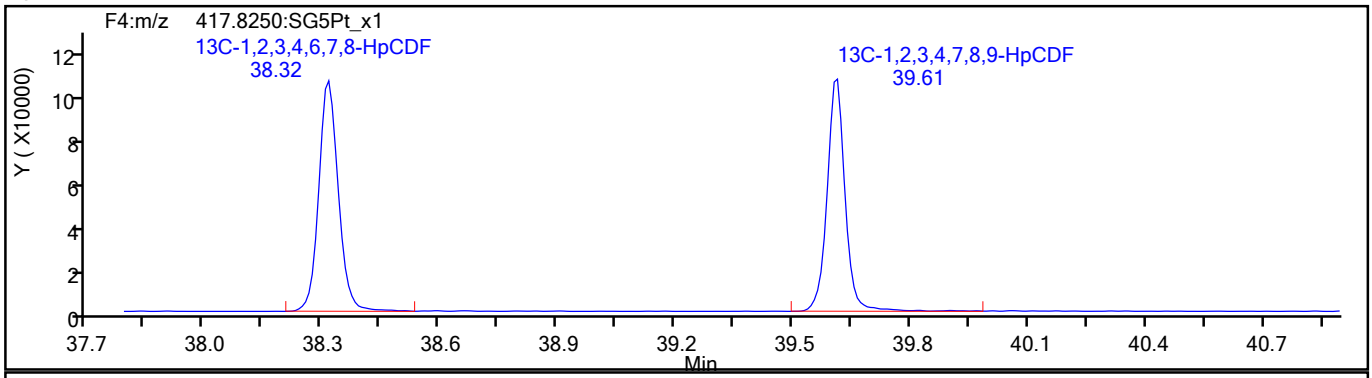

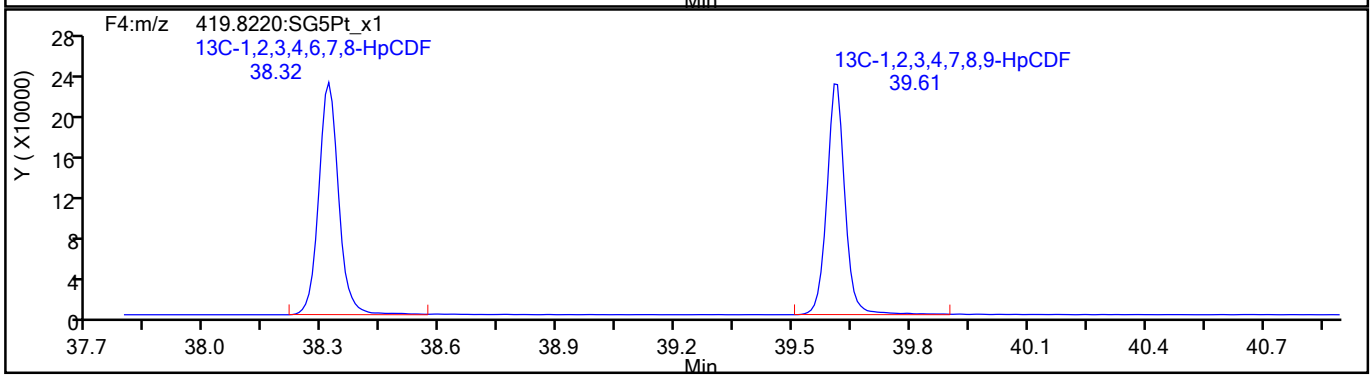

776337

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

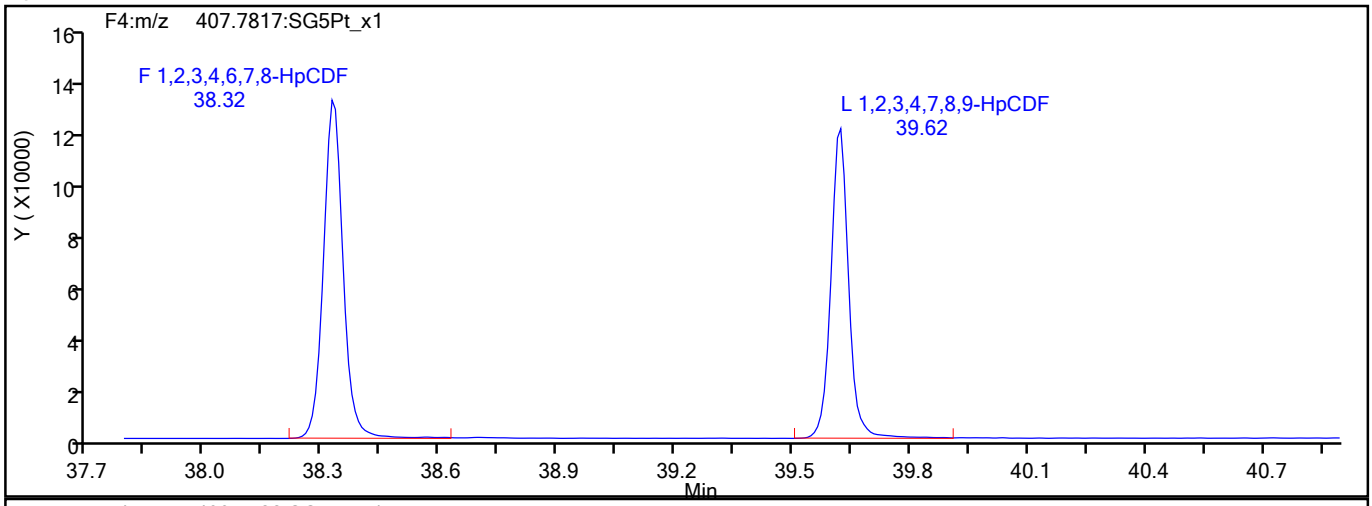

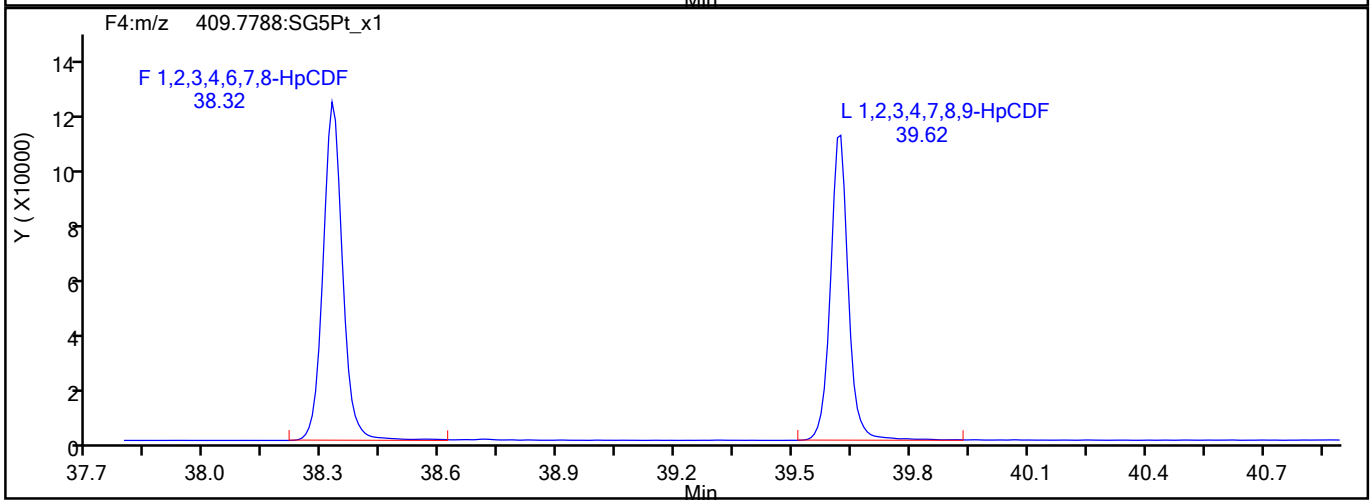

HpCDF Interference Mass

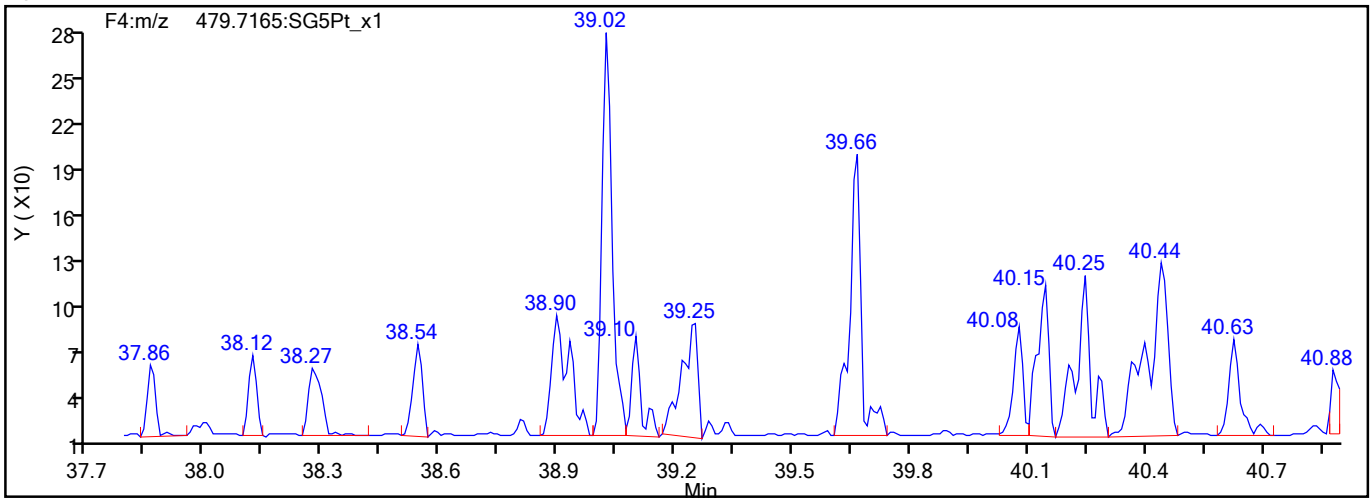

776338

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

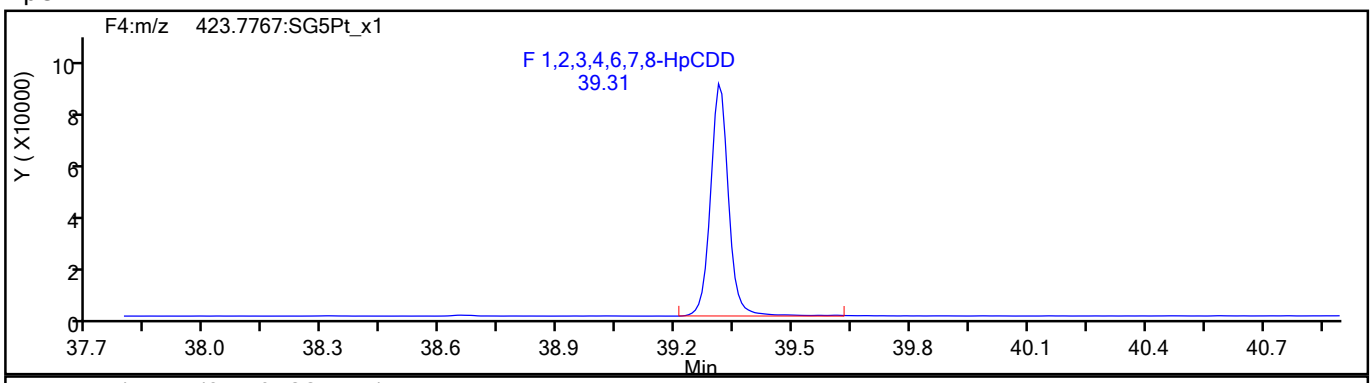

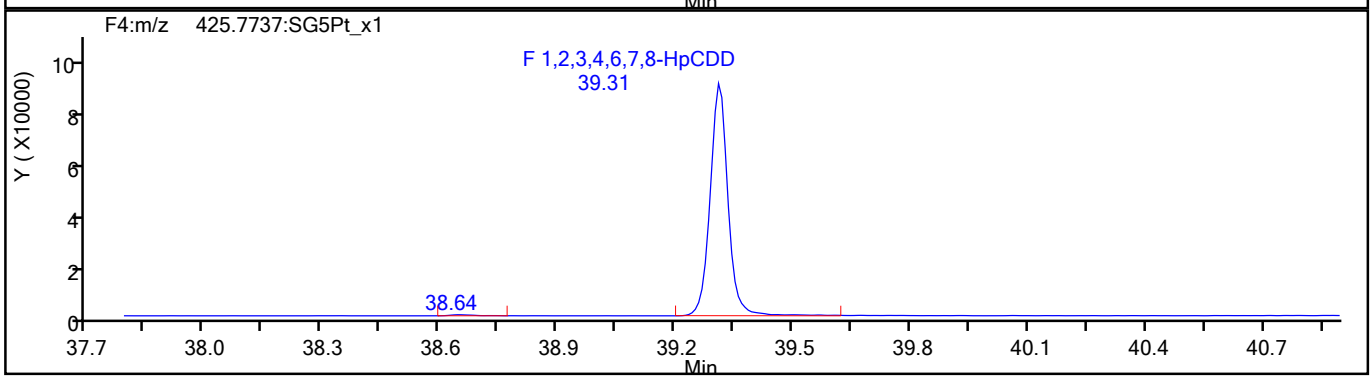

HpCDD Standards

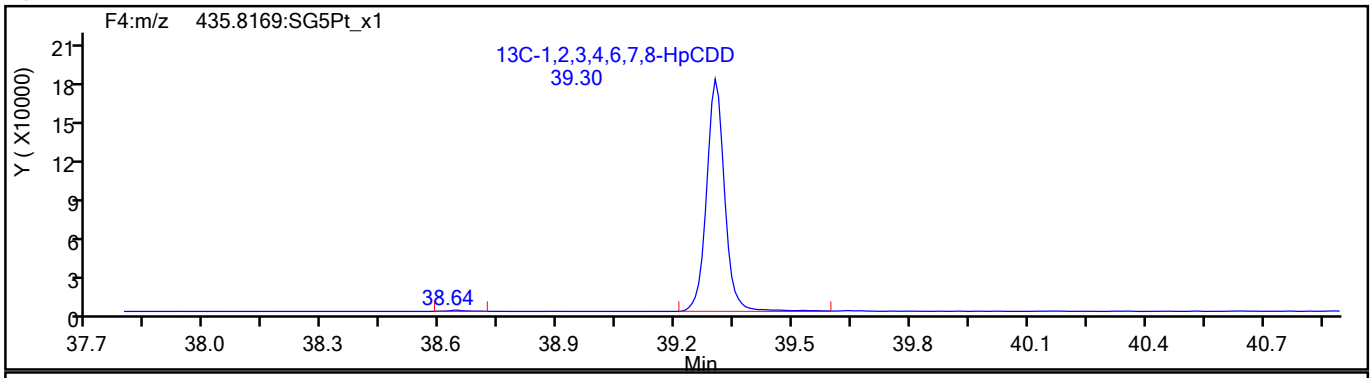

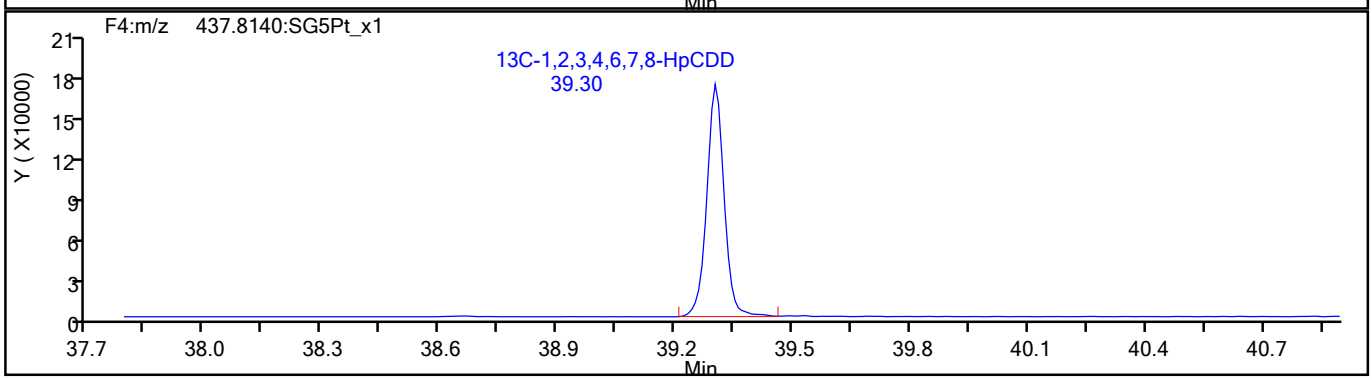

776339

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

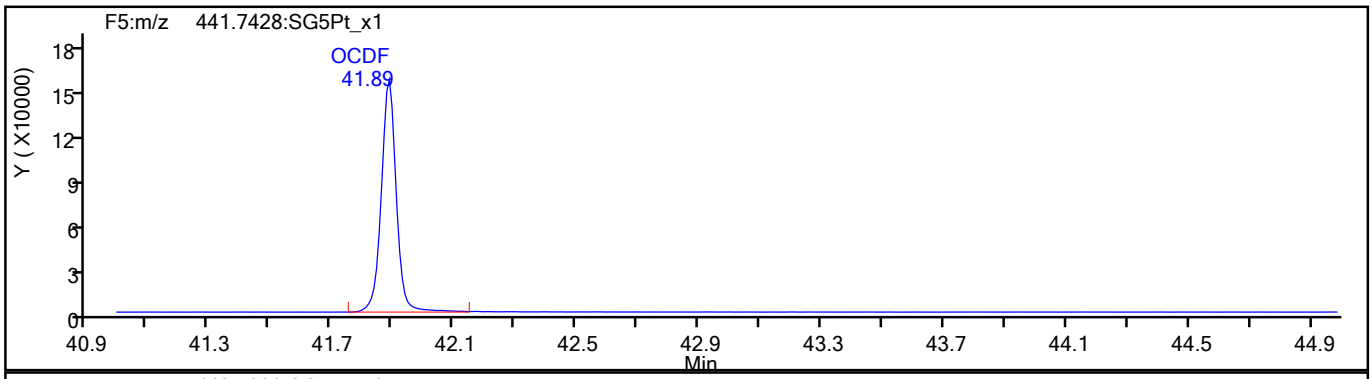

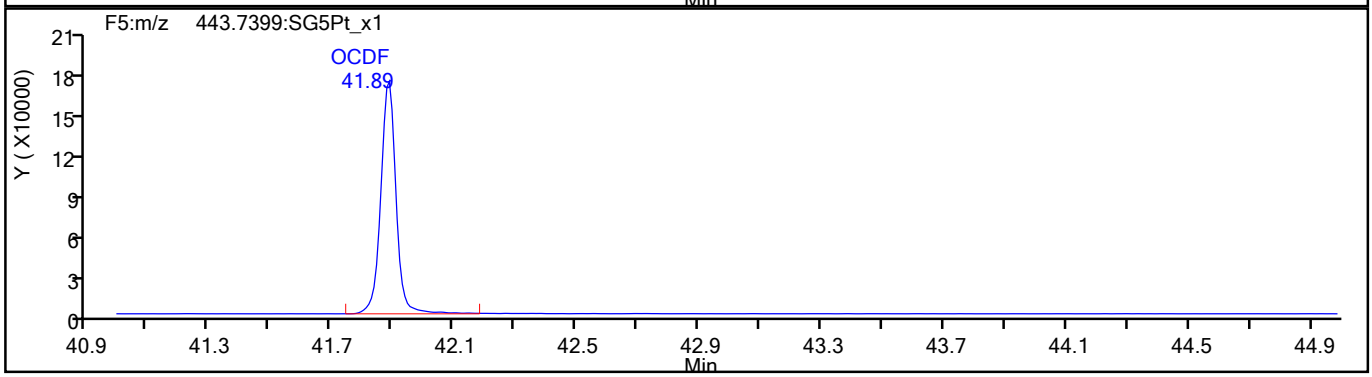

OCDF Standards

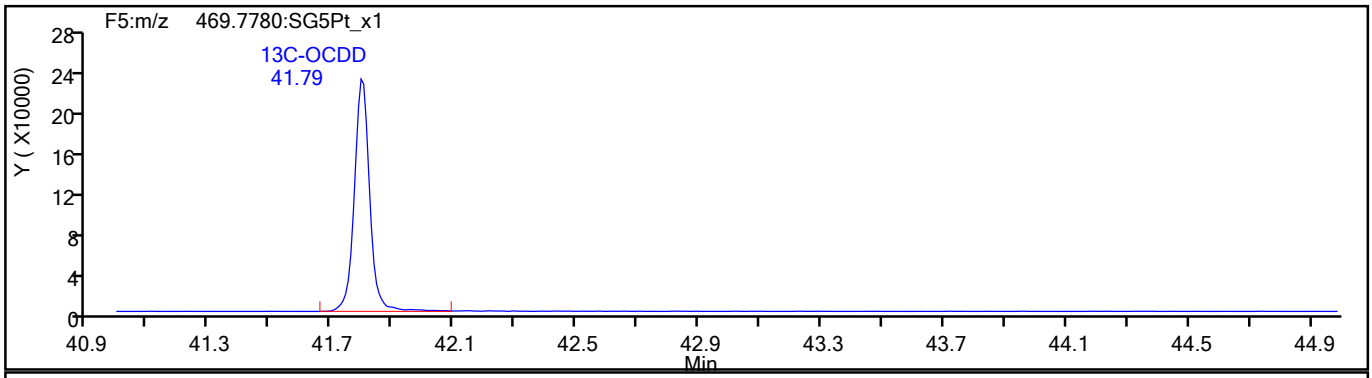

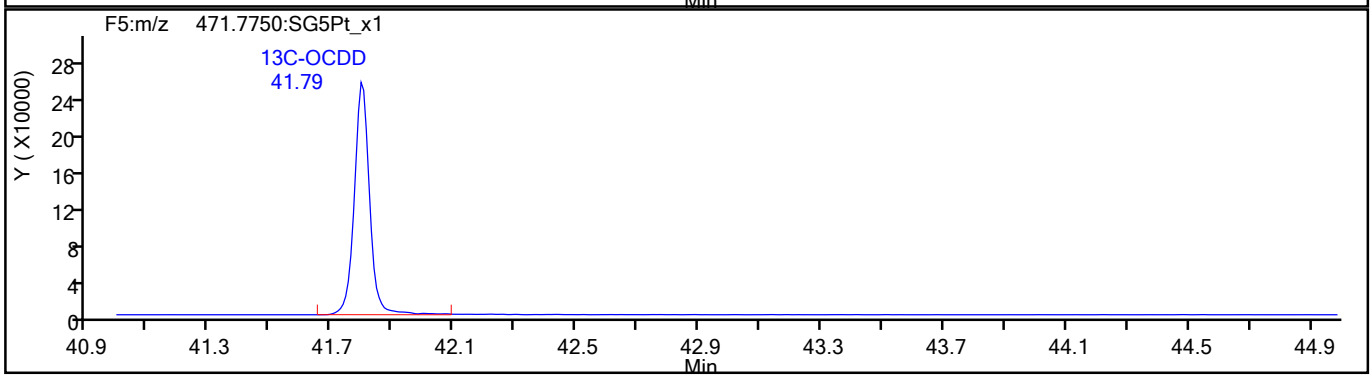

776340

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

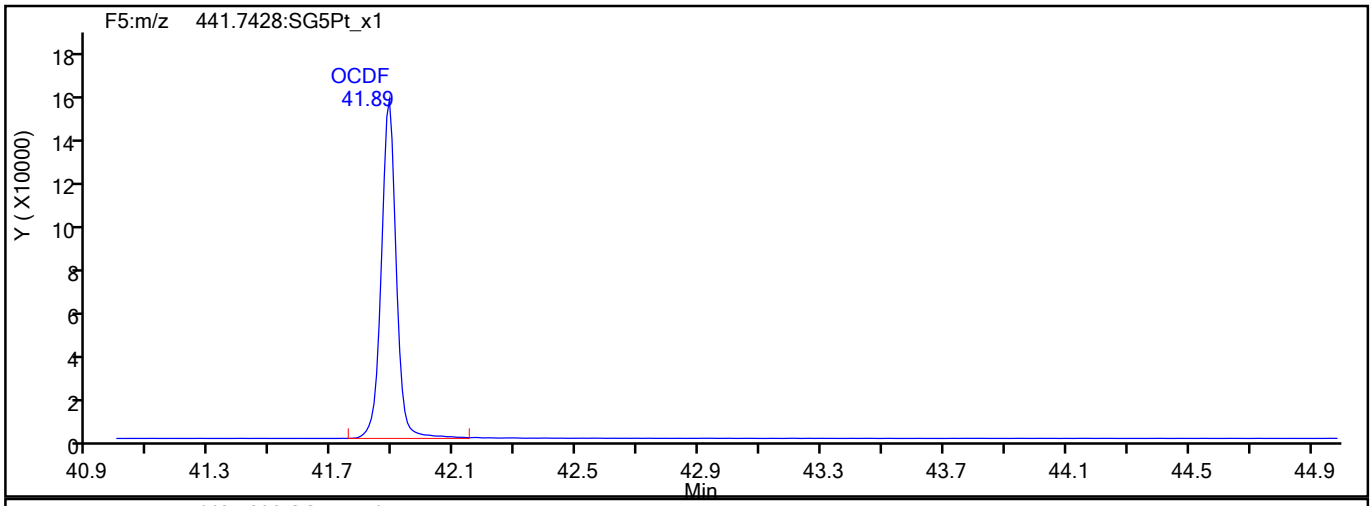

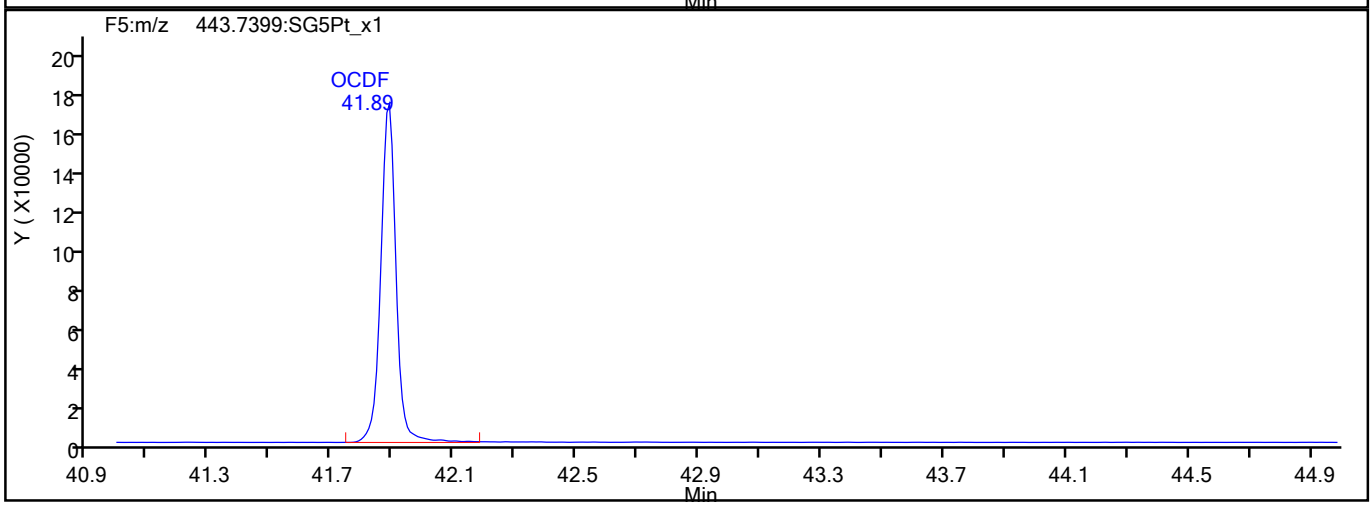

OCDF Interference Mass

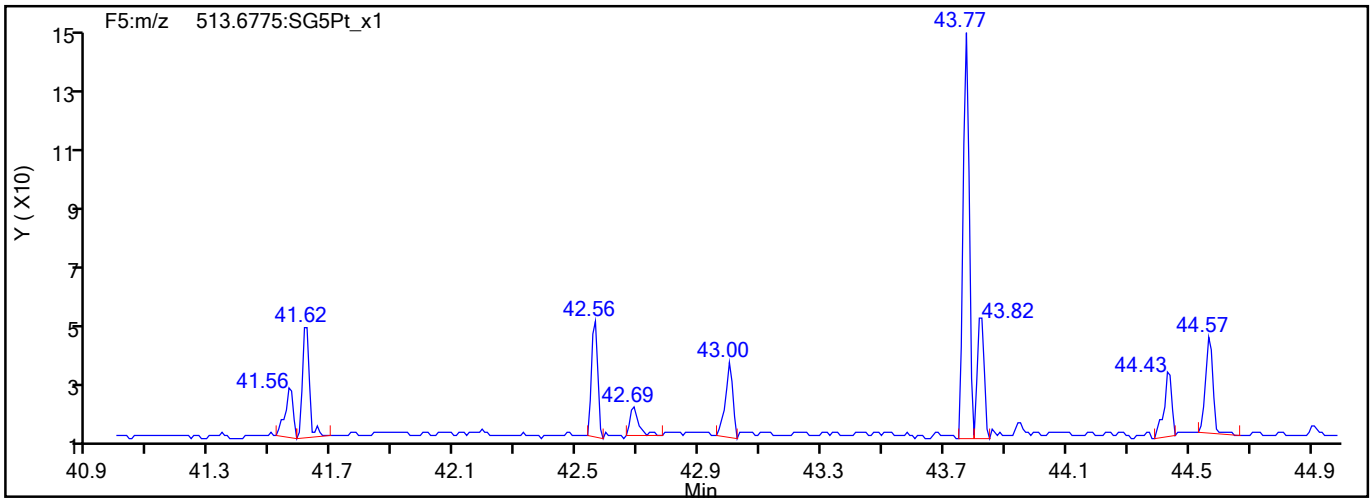

776341

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

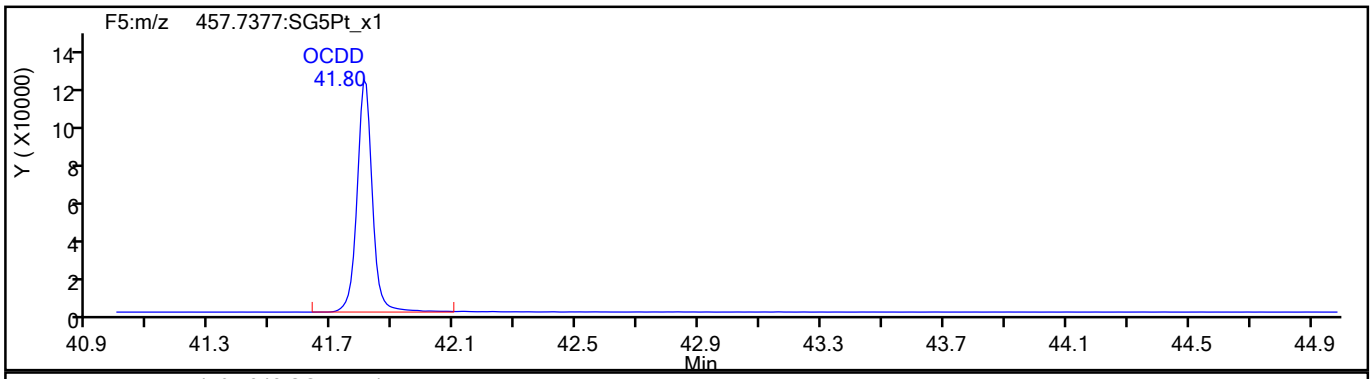

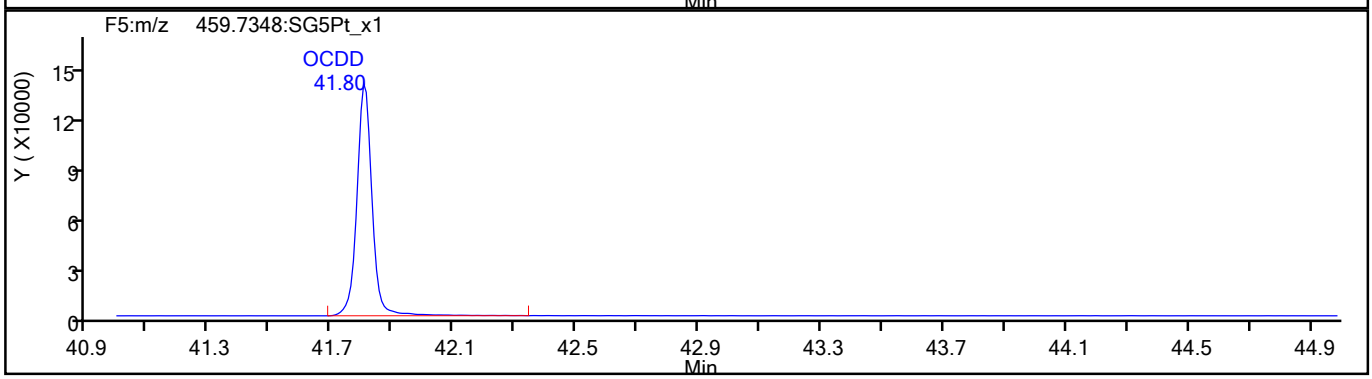

OCDD Standards

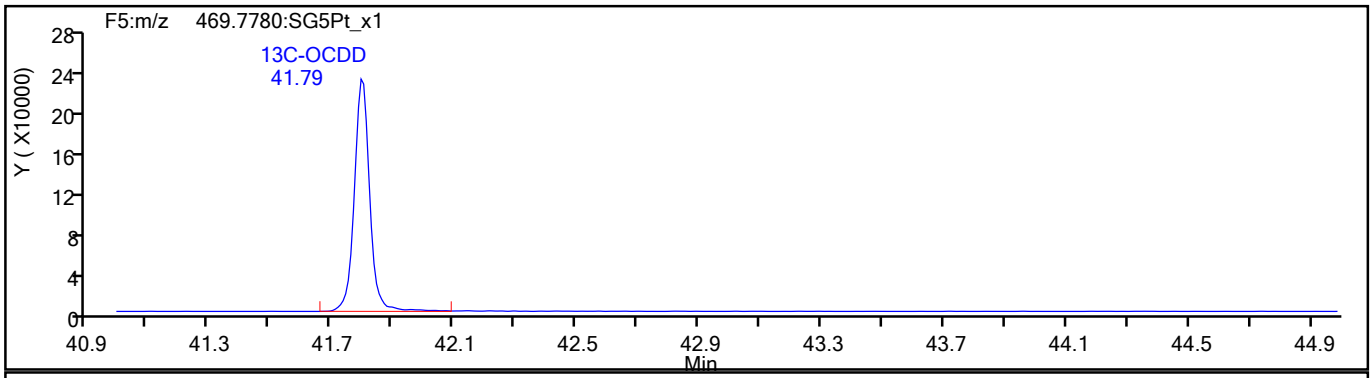

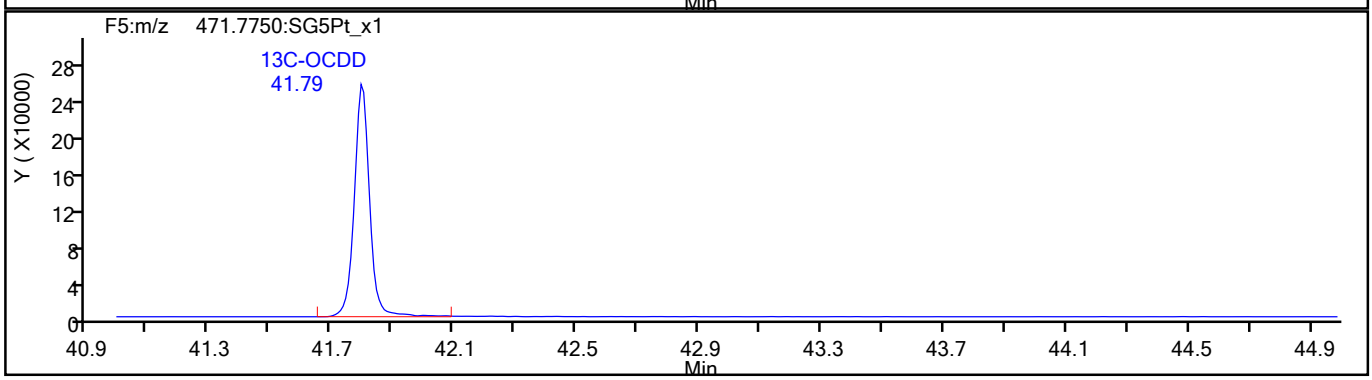

776342

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

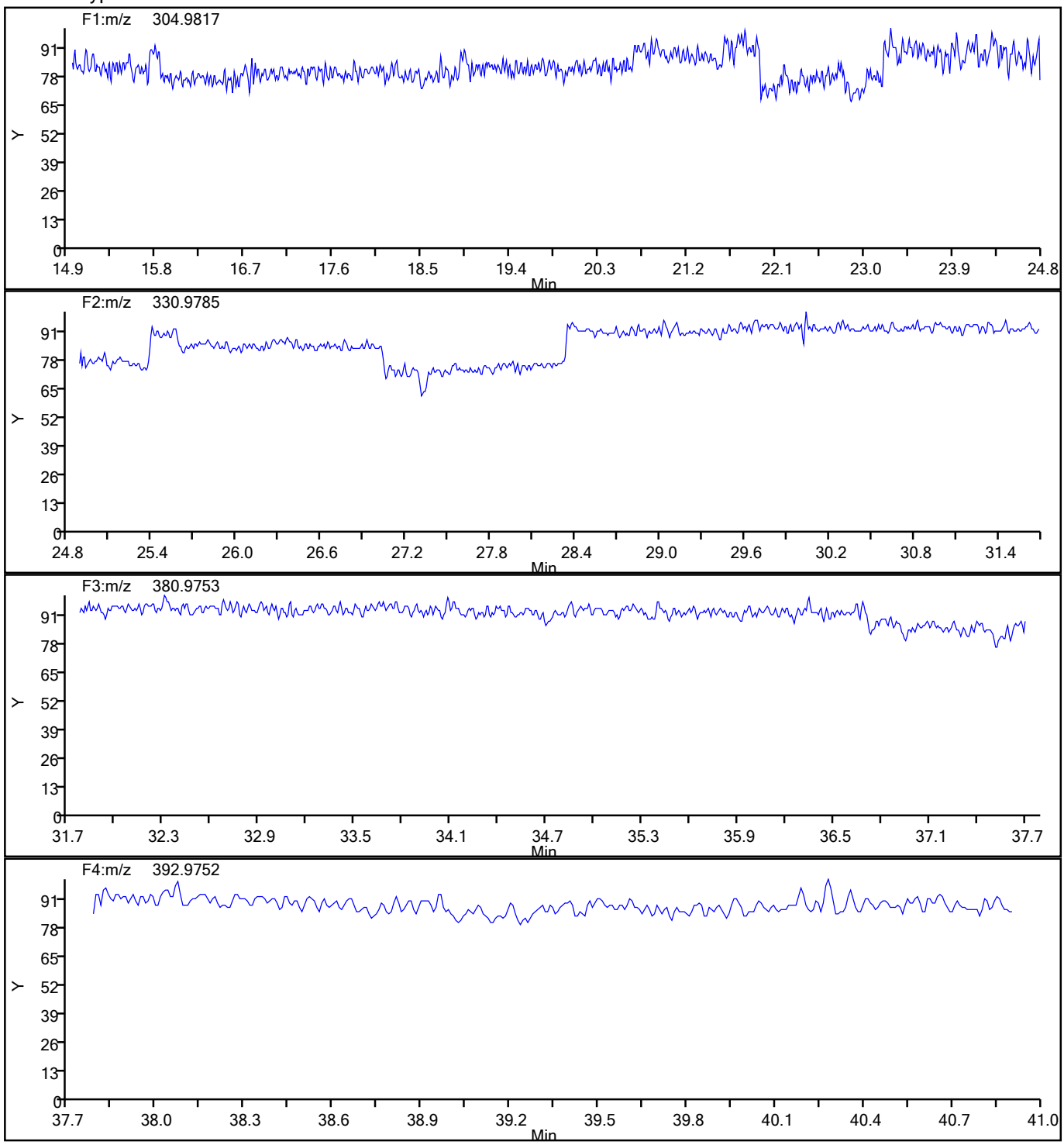

776343

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

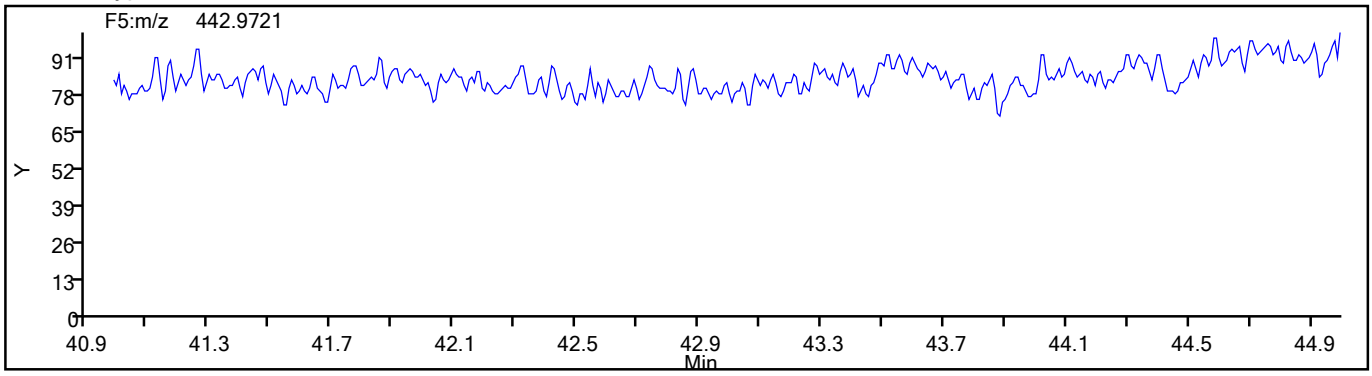

776344

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.548	2105852	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.612	2839435	0.79	1.3459	100.2	100.2	0.1786	0.1786	100	
2,3,7,8-TCDF	19.638	1274052	0.79	1.0802	41.5	41.5	0.0460	0.0460	104	
S Total TCDF					41.5	41.5	0.0460	0.0460		
D 13C-2,3,7,8-TCDD	20.909	1948011	0.81	0.9317	99.3	99.3	0.1662	0.1662	99.29	
$ 37Cl4-2,3,7,8-TCDD	20.935	848616		1.0083	40.0	40.0	0.0168	0.0168	99.92	
2,3,7,8-TCDD	20.935	875630	0.79	1.0753	41.8	41.8	0.0546	0.0546	105	
S Total TCDD					41.8	41.8	0.0546	0.0546		
D 13C-1,2,3,7,8-PeCDF	26.564	2432949	1.58	1.1405	101.3	101.3	0.3082	0.3082	101	
1,2,3,7,8-PeCDF	26.589	5302236	1.57	1.0543	206.7	206.7	0.5886	0.5886	103	
D 13C-2,3,4,7,8-PeCDF	28.023	2374722	1.60	1.1253	100.2	100.2	0.3123	0.3123	100	
2,3,4,7,8-PeCDF	28.048	5051373	1.58	1.0079	211.1	211.1	0.6756	0.6756	106	
S Total PeCDF					417.8	417.8	0.6321	0.6321		
D 13C-1,2,3,7,8-PeCDD	28.806	1521254	1.60	0.7165	100.8	100.8	0.1214	0.1214	101	
1,2,3,7,8-PeCDD	28.832	3351337	1.58	1.0465	210.5	210.5	0.1088	0.1088	105	
S Total PeCDD					210.5	210.5	0.1088	0.1088		
D 13C-1,2,3,4,7,8-HxCDF	34.391	1778238	0.53	0.9648	100.0	100.0	0.3266	0.3266	100	
1,2,3,4,7,8-HxCDF	34.407	4293581	1.24	1.1474	210.4	210.4	0.7958	0.7958	105	
D 13C-1,2,3,6,7,8-HxCDF	34.568	1995567	0.54	1.0708	101.1	101.1	0.2943	0.2943	101	
1,2,3,6,7,8-HxCDF	34.584	4991420	1.25	1.2178	205.4	205.4	0.6778	0.6778	103	
D 13C-2,3,4,6,7,8-HxCDF	35.444	2042874	0.53	1.0413	106.5	106.5	0.3026	0.3026	106	
2,3,4,6,7,8-HxCDF	35.461	5157631	1.25	1.2145	207.9	207.9	0.5811	0.5811	104	
D 13C-1,2,3,7,8,9-HxCDF	36.388	1742331	0.52	0.9731	97.2	97.2	0.3238	0.3238	97.17	
1,2,3,7,8,9-HxCDF	36.397	4445357	1.26	1.2401	205.7	205.7	0.6020	0.6020	103	
S Total HxCDF					829.5	829.5	0.6642	0.6642		
* 13C-1,2,3,7,8,9-HxCDD	36.194	1842630	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.680	1432215	1.28	0.7587	102.4	102.4	0.1598	0.1598	102	
1,2,3,4,7,8-HxCDD	35.697	3222329	1.26	1.0608	212.1	212.1	0.2911	0.2911	106	
D 13C-1,2,3,6,7,8-HxCDD	35.806	1669337	1.24	0.8593	105.4	105.4	0.1411	0.1411	105	
1,2,3,6,7,8-HxCDD	35.815	3426727	1.26	0.9933	206.7	206.7	0.2773	0.2773	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.203	3436144	1.26	1.1094	199.7	199.7	0.2625	0.2625	99.86	
S Total HxCDD					618.5	618.5	0.2770	0.2770		
D 13C-1,2,3,4,6,7,8-HpCDF	38.305	1392194	0.46	0.7359	102.7	102.7	0.3327	0.3327	103	
1,2,3,4,6,7,8-HpCDF	38.314	4243438	1.05	1.4421	211.4	211.4	0.6211	0.6211	106	
D 13C-1,2,3,4,7,8,9-HpCDF	39.595	1337573	0.45	0.6854	105.9	105.9	0.3573	0.3573	106	
1,2,3,4,7,8,9-HpCDF	39.603	3728415	1.05	1.3092	212.9	212.9	0.6974	0.6974	106	
S Total HpCDF					424.3	424.3	0.6592	0.6592		
D 13C-1,2,3,4,6,7,8-HpCDD	39.291	1337869	1.09	0.6745	107.6	107.6	0.2398	0.2398	108	
1,2,3,4,6,7,8-HpCDD	39.300	2935203	1.04	1.0503	208.9	208.9	0.3525	0.3525	104	
S Total HpCDD					208.9	208.9	0.3525	0.3525		
D 13C-OCDD	41.782	2177938	0.90	0.5446	217.0	217.0	0.3019	0.3019	109	
OCDF	41.866	6082696	0.91	1.3168	424.2	424.2	0.3916	0.3916	106	
OCDD	41.790	4803166	0.89	1.0620	415.3	415.3	0.3872	0.3872	104	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.548	20.547	0		944131	150571	127	317	1186		
333.9338	20.548	20.547	0		1161721	185169	81	202	2286	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.612	19.616	0	0.954	1253649	203983	215	537	949		
317.9389	19.621	19.616	0	0.955	1585786	258903	108	270	2397	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.638	19.646	0	1.001	561539	89311	44	110	2030		
305.8987	19.638	19.646	0	1.001	712513	111913	48	120	2332	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.909	20.910	0	1.018	869542	131887	127	317	1038		
333.9338	20.909	20.910	0	1.018	1078469	161266	81	202	1991	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.935	20.935	0	1.019	848616	126683	23	57	5508		
2,3,7,8-TCDD											
319.8965	20.935	20.939	0	1.001	385954	58537	36	90	1626		
321.8936	20.935	20.939	0	1.001	489676	72800	33	82	2206	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.564	26.560	0	1.293	1489826	258263	302	755	855		
353.8970	26.564	26.560	0	1.293	943123	164307	170	425	967	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.589	26.584	0	1.001	3241988	556504	638	1595	872		
341.8567	26.589	26.584	0	1.001	2060248	355863	411	1027	866	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.023	28.014	1	1.364	1460304	235761	302	755	781		
353.8970	28.023	28.014	1	1.364	914418	149333	170	425	878	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.048	28.039	1	1.001	3094556	515182	638	1595	807		
341.8567	28.048	28.039	1	1.001	1956817	323488	411	1027	787	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.806	28.801	0	1.402	936578	147383	82	205	1797		
369.8919	28.806	28.801	0	1.402	584676	95987	35	87	2742	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.832	28.828	0	1.001	2051590	320770	72	180	4455		
357.8516	28.832	28.828	0	1.001	1299747	208335	39	97	5342	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.391	34.384	0	0.950	617675	123602	191	477	647		
385.8610	34.382	34.384	0	0.950	1160563	234726	378	945	621	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.407	34.405	0	1.000	2381065	482843	745	1862	648		
375.8178	34.407	34.405	0	1.000	1912516	389022	564	1410	690	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.568	34.562	0	0.955	696940	140400	191	477	735		
385.8610	34.568	34.562	0	0.955	1298627	255987	378	945	677	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.584	34.582	0	1.000	2775629	556827	745	1862	747		
375.8178	34.584	34.582	0	1.000	2215791	440544	564	1410	781	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.444	35.444	0	0.979	707399	160237	191	477	839		
385.8610	35.444	35.444	0	0.979	1335475	303406	378	945	803	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.461	35.461	0	1.000	2866027	647502	745	1862	869		
375.8178	35.461	35.461	0	1.000	2291604	520419	564	1410	923	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.388	36.388	0	1.005	598306	148820	191	477	779		
385.8610	36.388	36.388	0	1.005	1144025	289476	378	945	766	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.397	36.402	0	1.000	2476452	605954	745	1862	813		
375.8178	36.397	36.402	0	1.000	1968905	483719	564	1410	858	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.194	36.192	0		1026134	250783	116	290	2162		
403.8529	36.186	36.192	0		816496	200495	103	257	1947	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.680	35.680	0	0.986	804332	193336	116	290	1667		
403.8529	35.680	35.680	0	0.986	627883	151493	103	257	1471	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.697	35.695	0	1.000	1795969	436602	241	602	1812		
391.8127	35.697	35.695	0	1.000	1426360	347066	185	462	1876	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.806	35.805	0	0.989	925744	214247	116	290	1847		
403.8529	35.806	35.805	0	0.989	743593	172424	103	257	1674	1.24(1.05-1.43)	

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.815	35.820	0	1.000	1911971	434863	241	602	1804		
391.8127	35.815	35.820	0	1.000	1514756	347831	185	462	1880	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.203	36.208	0	1.015	1913013	474198	241	602	1968		
391.8127	36.203	36.208	0	1.015	1523131	377483	185	462	2040	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.305	38.305	0	1.058	436356	136587	154	385	887		
419.8220	38.305	38.305	0	1.058	955838	295474	288	720	1026	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.314	38.317	0	1.000	2176116	664265	789	1972	842		
409.7788	38.314	38.317	0	1.000	2067322	632606	759	1897	833	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.595	39.600	0	1.094	416057	129213	154	385	839		
419.8220	39.595	39.600	0	1.094	921516	294690	288	720	1023	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.603	39.608	0	1.000	1911190	607125	789	1972	769		
409.7788	39.603	39.608	0	1.000	1817225	579552	759	1897	764	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.291	39.293	0	1.086	696483	219725	150	375	1465		
437.8140	39.291	39.293	0	1.086	641386	202177	142	355	1424	1.09(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.300	39.301	0	1.000	1499524	478443	315	787	1519		
425.7737	39.300	39.301	0	1.000	1435679	451932	310	775	1458	1.04(0.88-1.20)	
13C-OCDD											
469.7780	41.782	41.785	0	1.154	1033665	317462	144	360	2205		
471.7750	41.782	41.785	0	1.154	1144273	352280	153	382	2302	0.90(0.76-1.02)	
OCDF											
441.7428	41.866	41.875	-1	1.002	2905097	900371	326	815	2762		
443.7399	41.866	41.875	-1	1.002	3177599	981356	365	912	2689	0.91(0.76-1.02)	
OCDD											
457.7377	41.790	41.794	0	1.000	2268006	705330	257	642	2744		
459.7348	41.790	41.794	0	1.000	2535160	785518	294	735	2672	0.89(0.76-1.02)	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

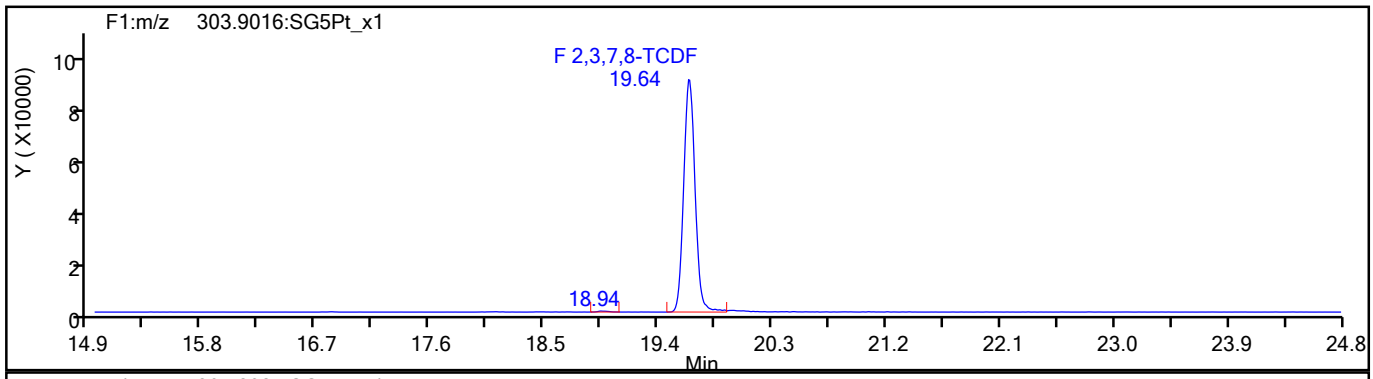

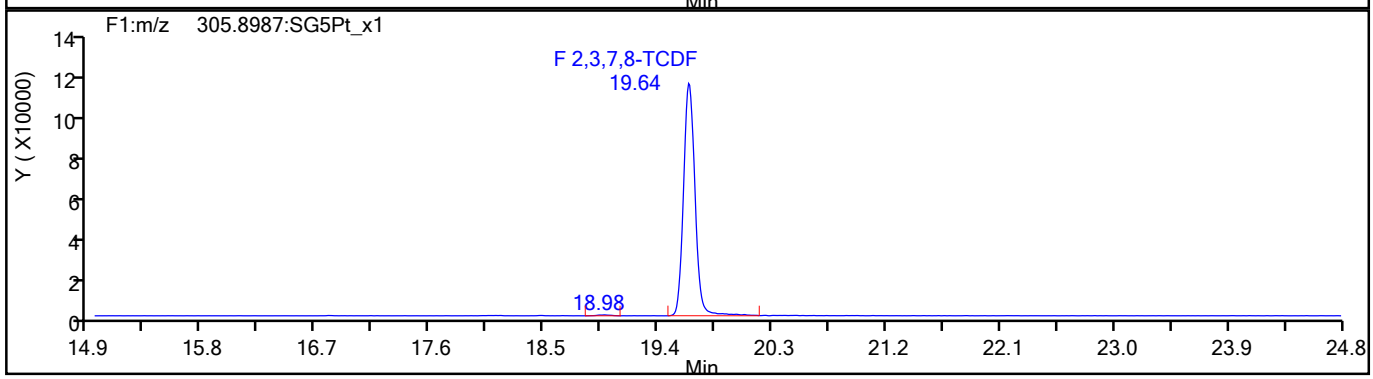

TCDF Standards

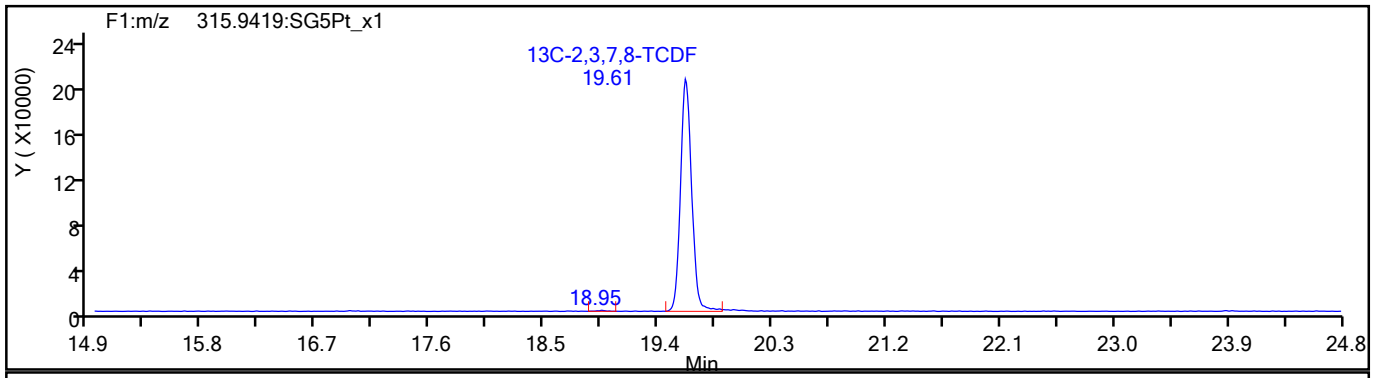

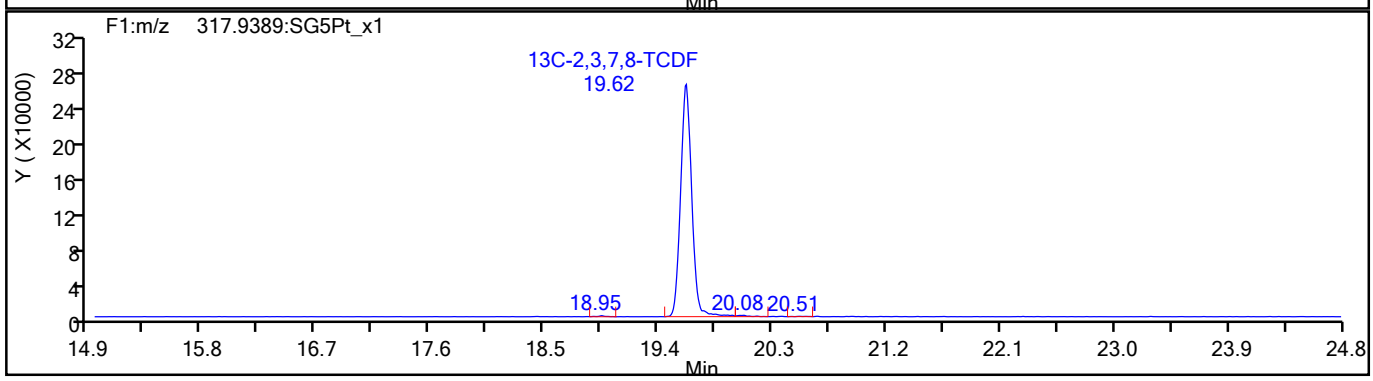

776350

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

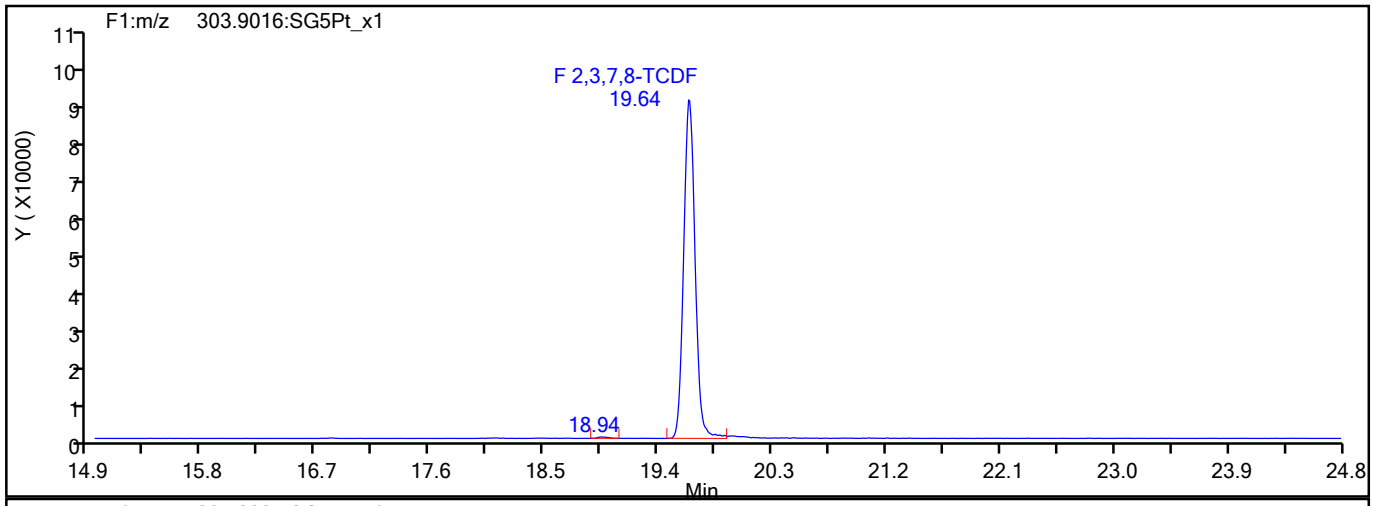

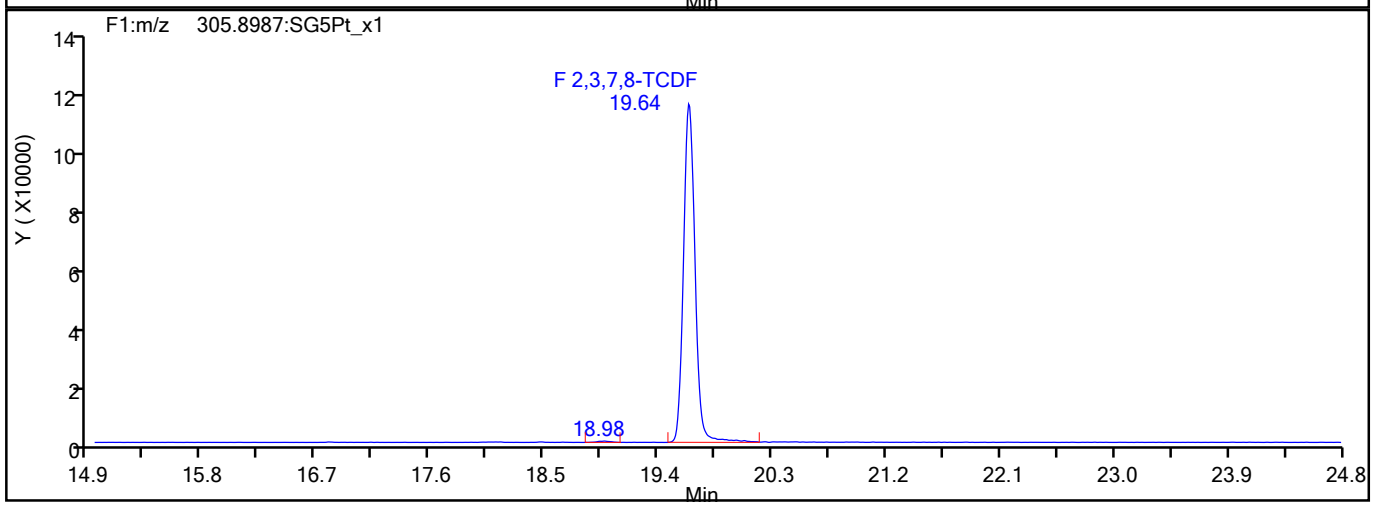

TCDF Interference Mass

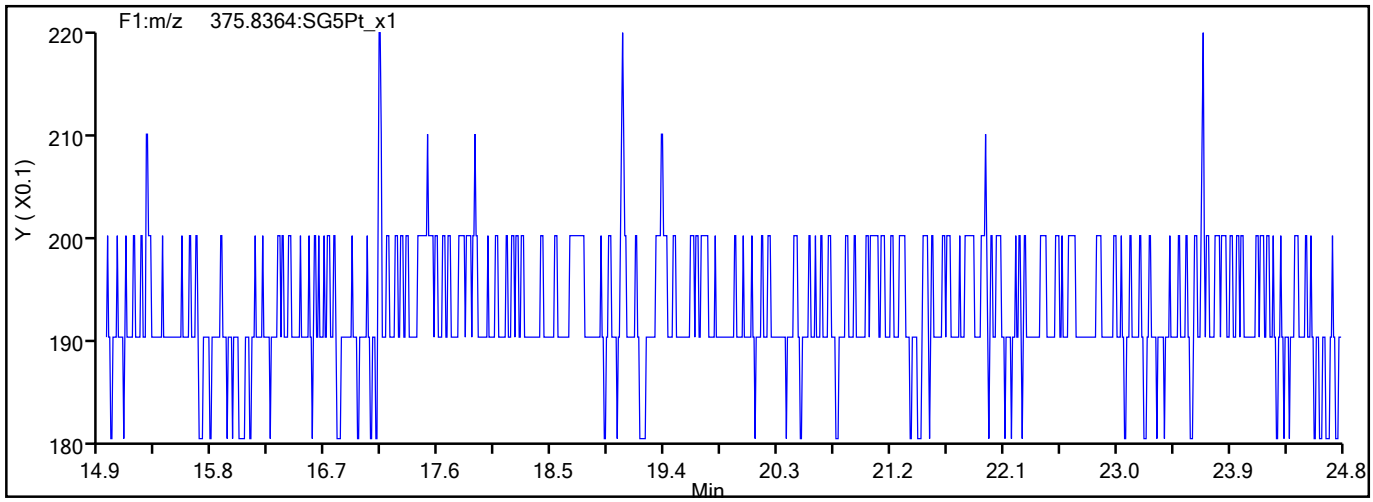

776351

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

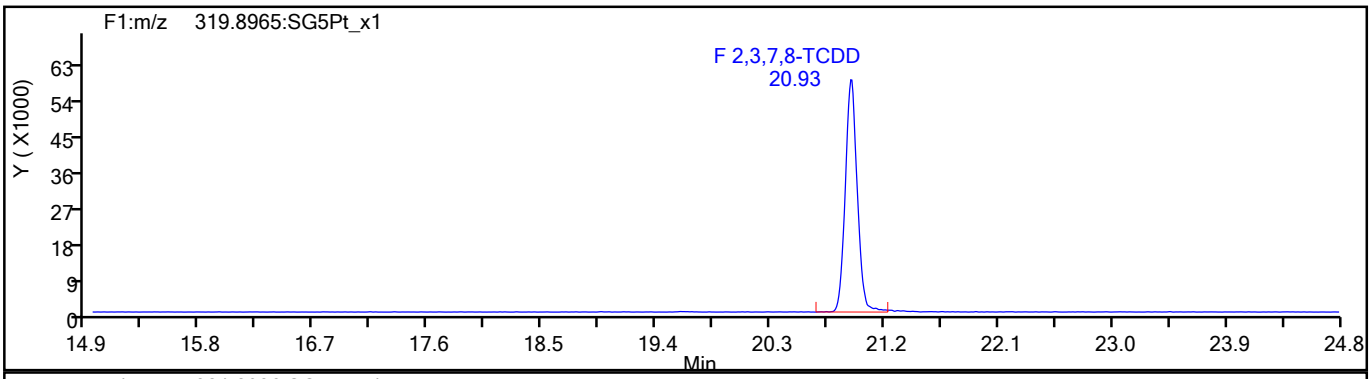

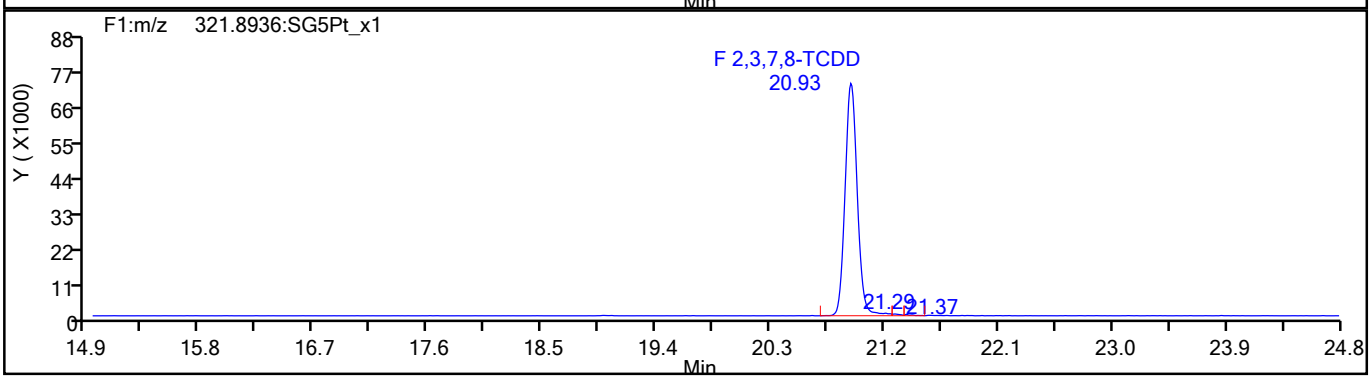

TCDD Standards

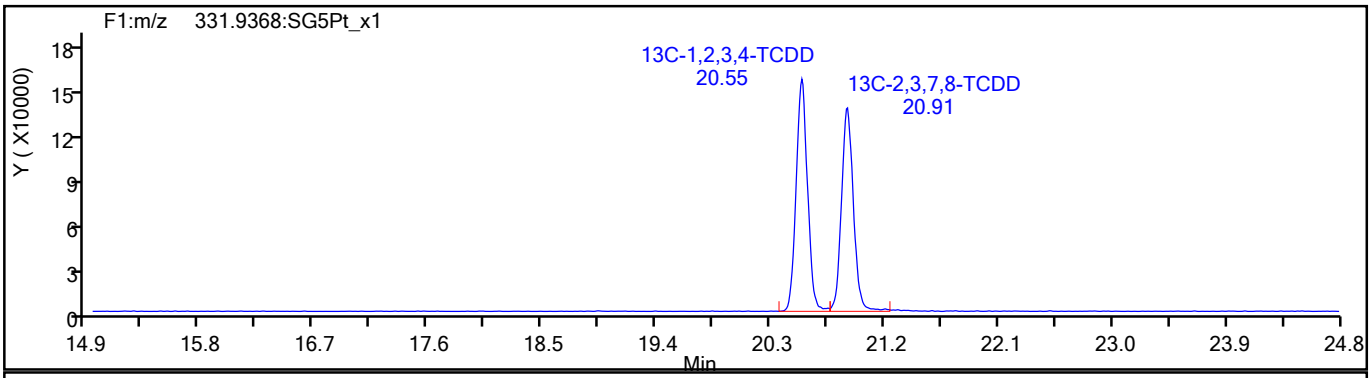

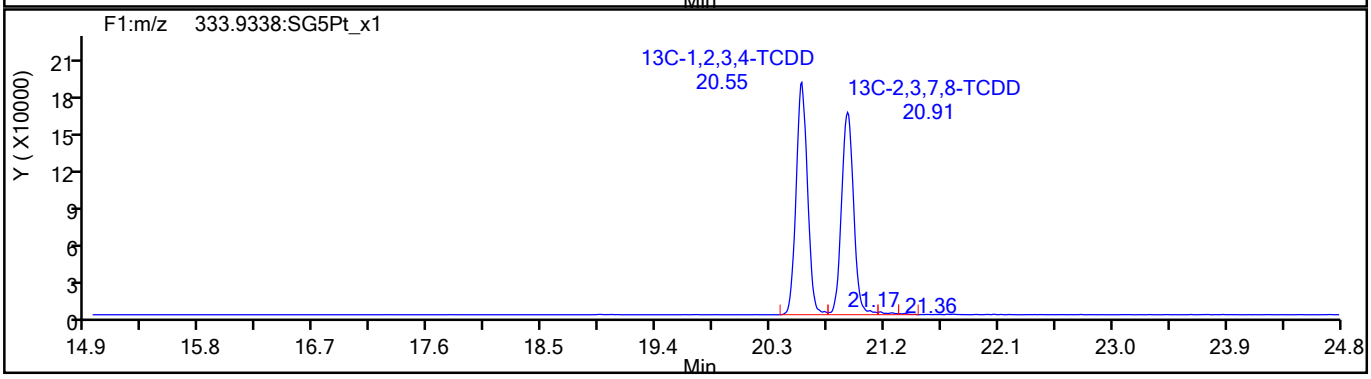

776352

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

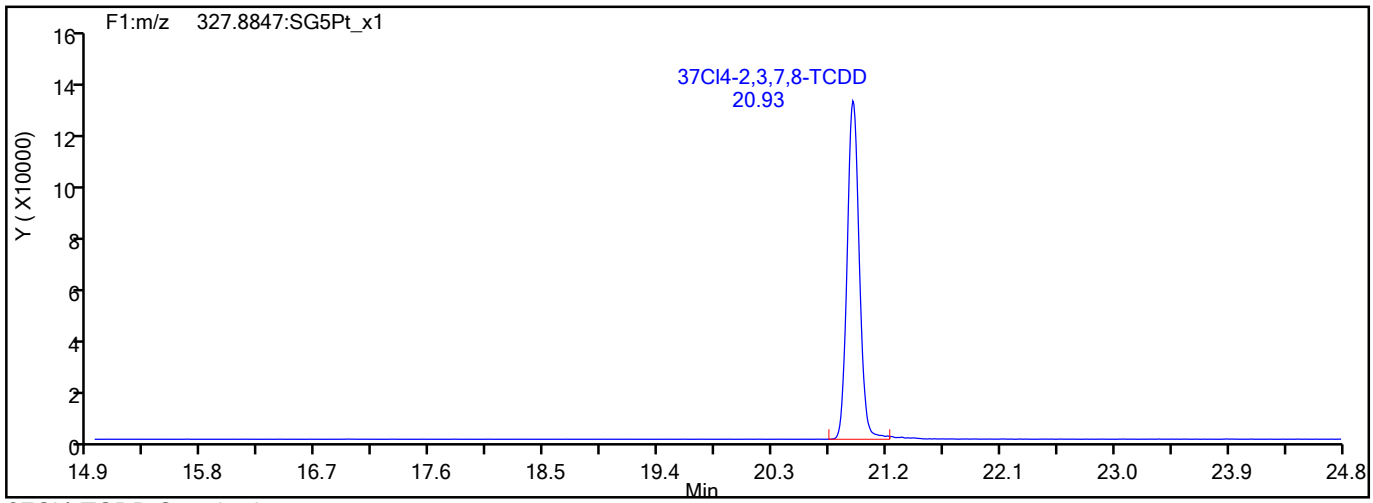

37Cl4-TCDD Standards

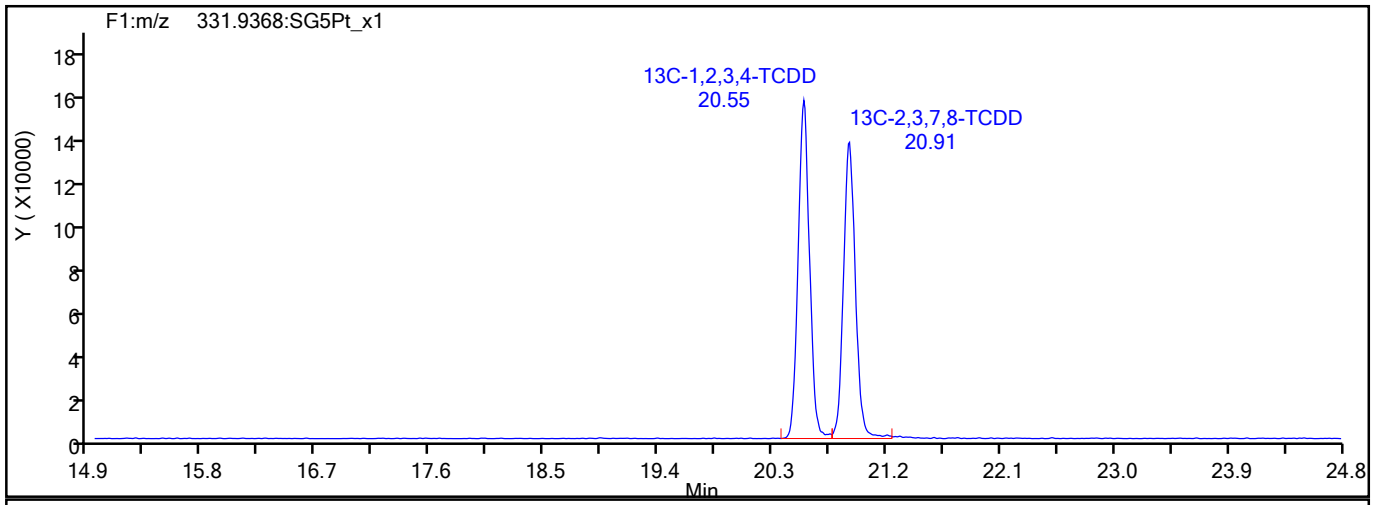

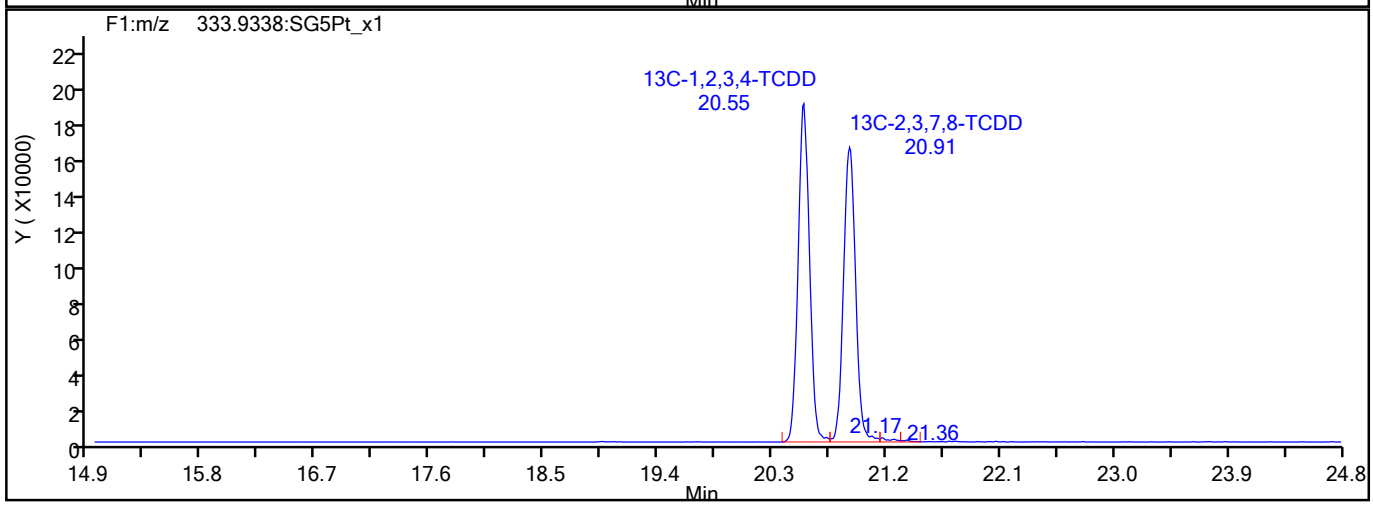

776353

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

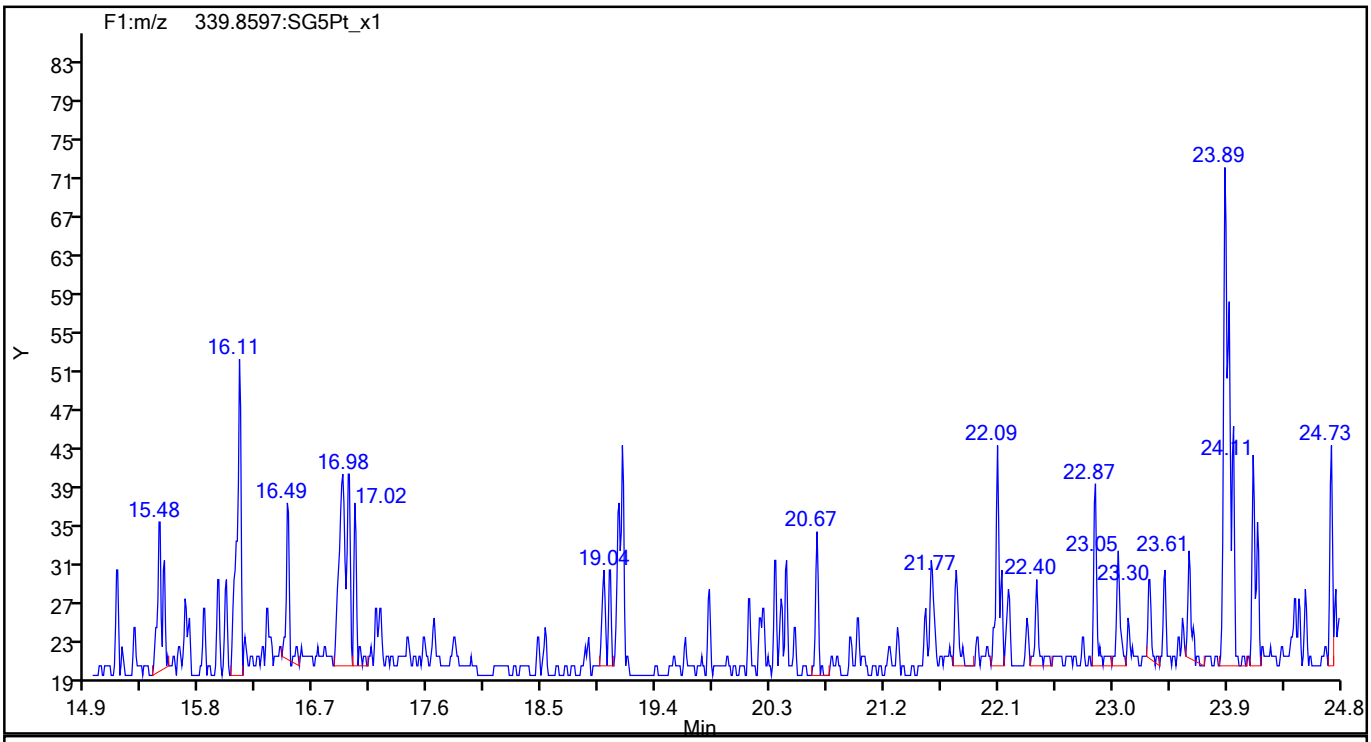

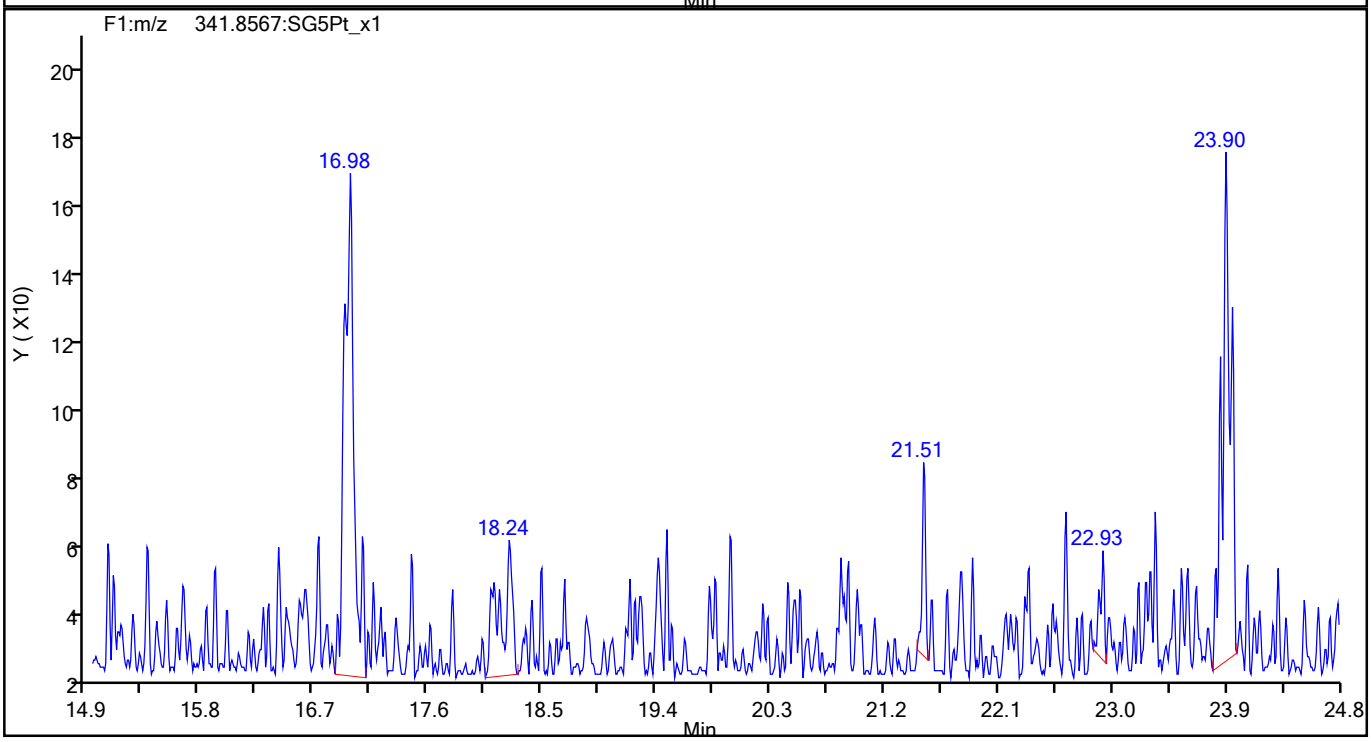

776354

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

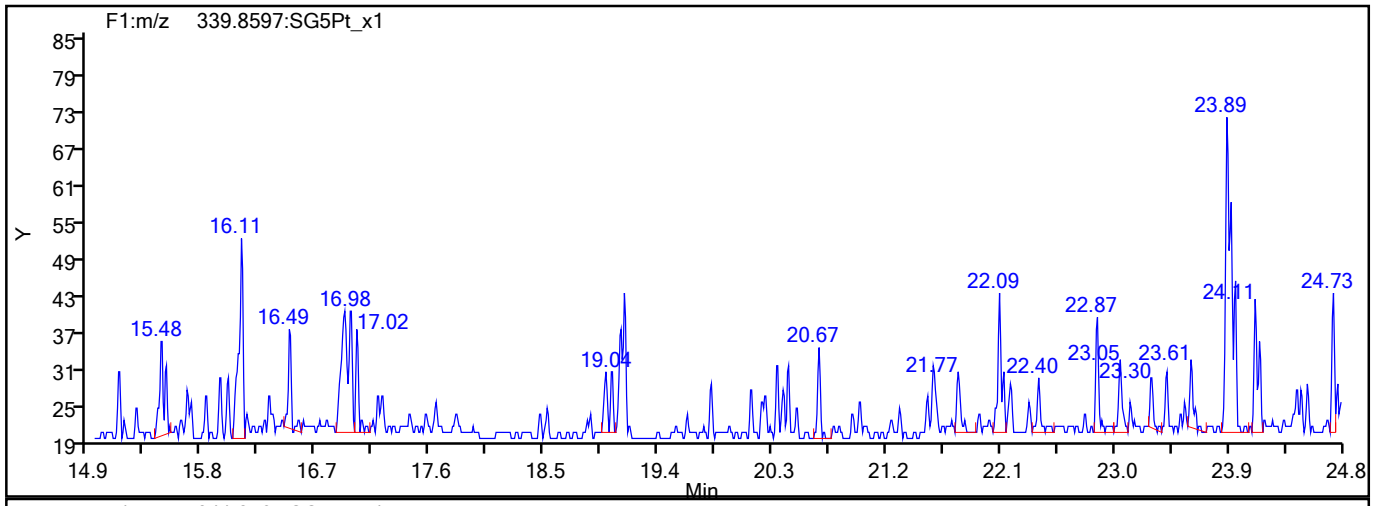

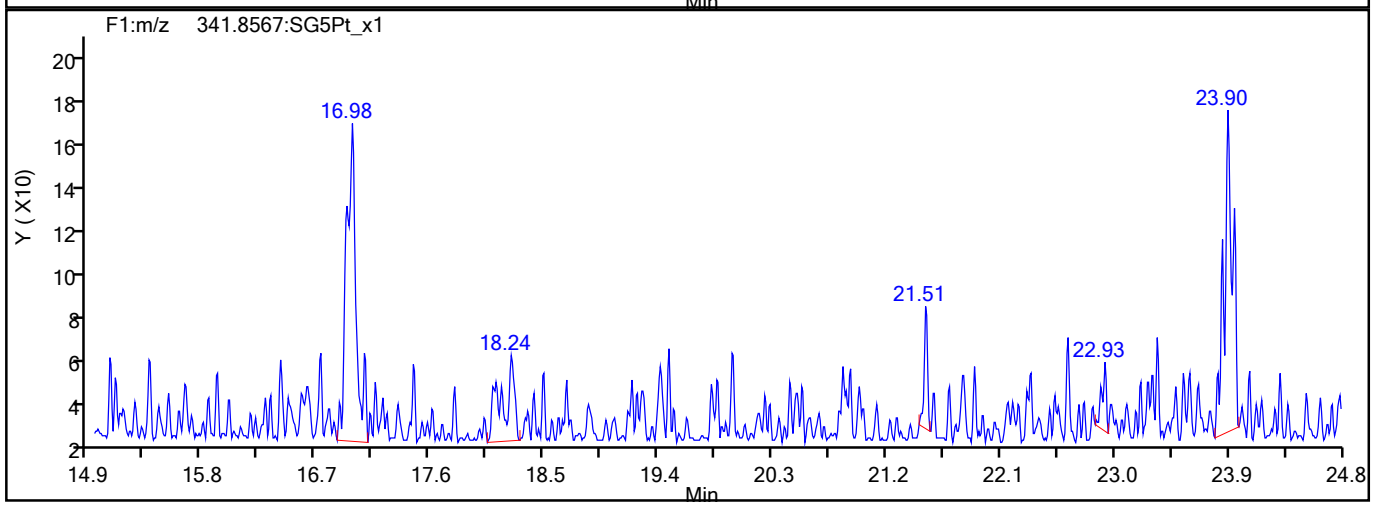

F1 PeCDFs Interference Mass

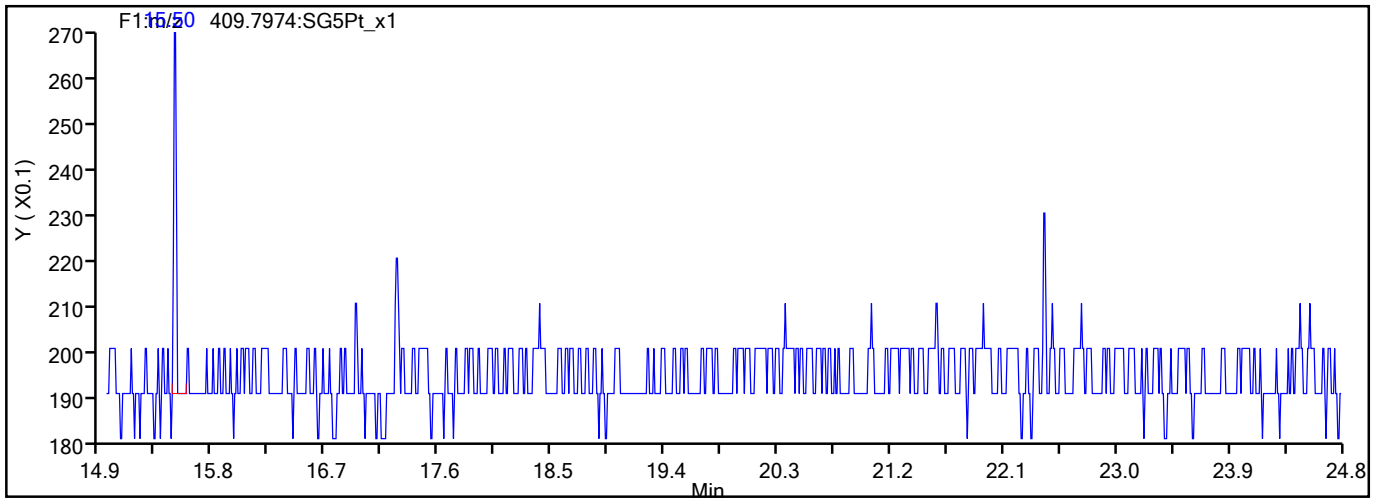

776355

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

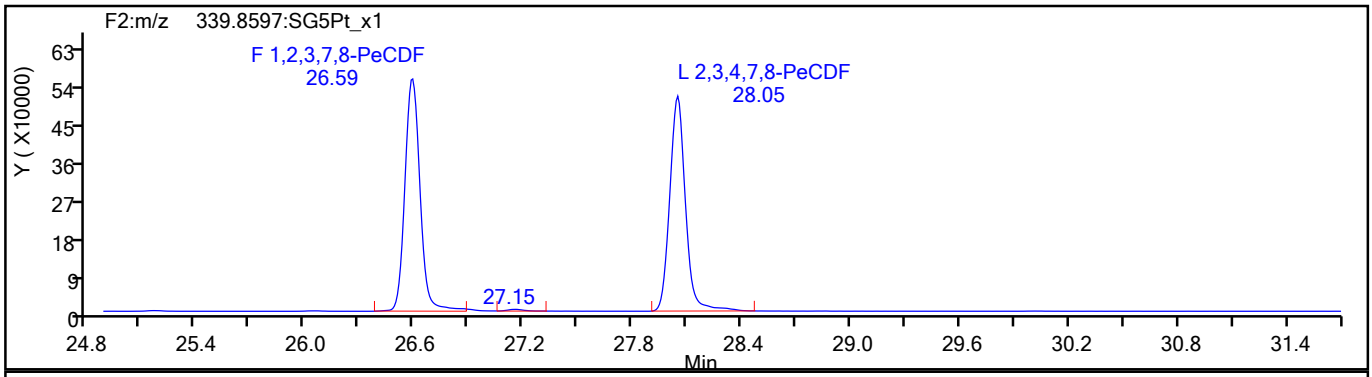

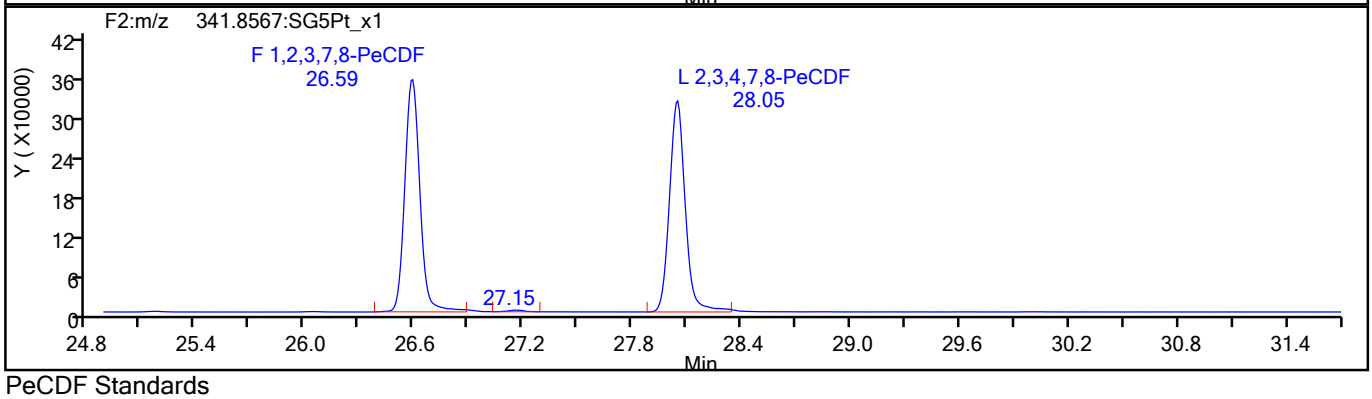

PeCDF Standards

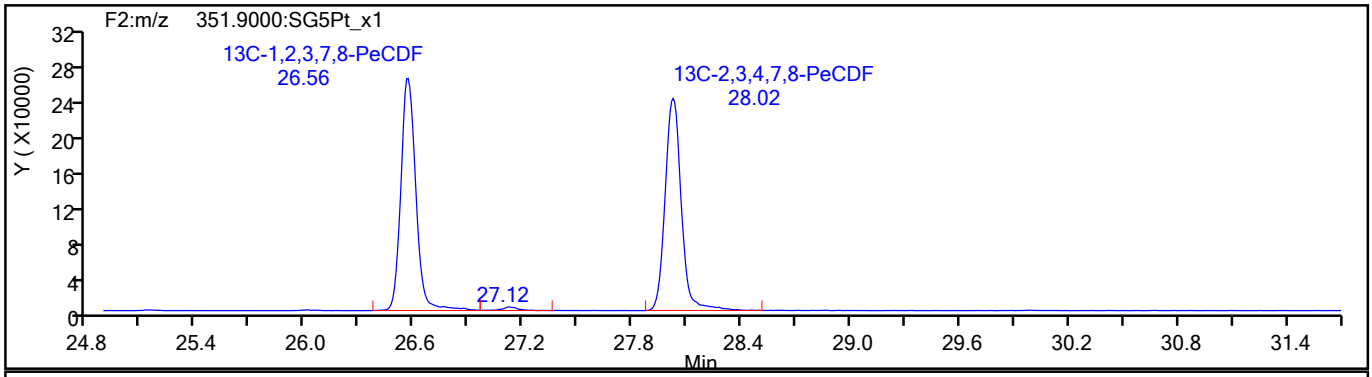

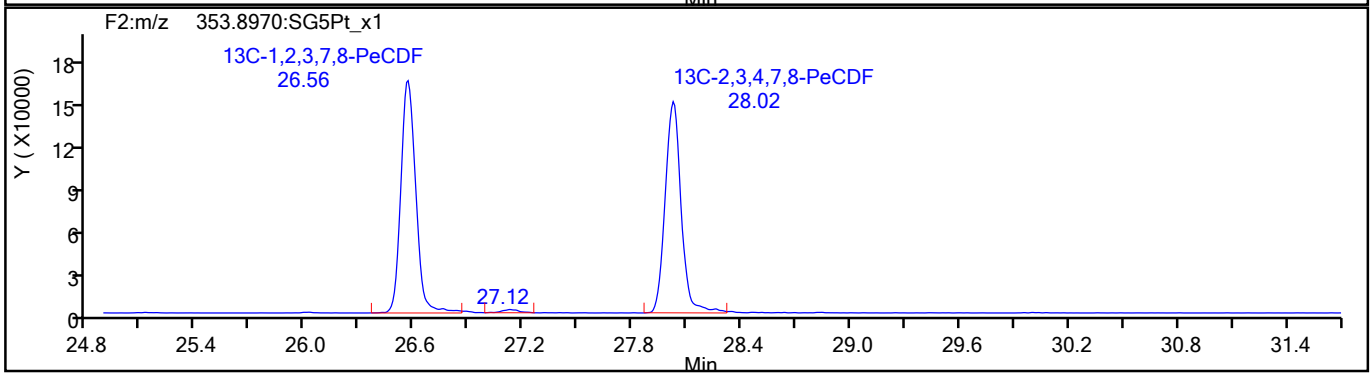

776356

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

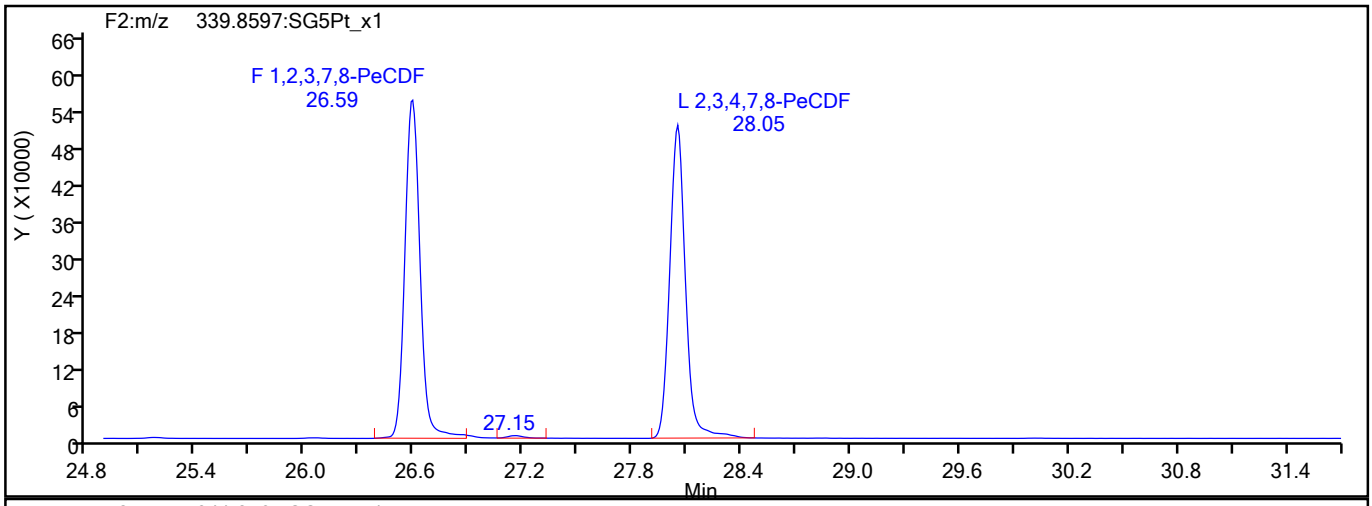

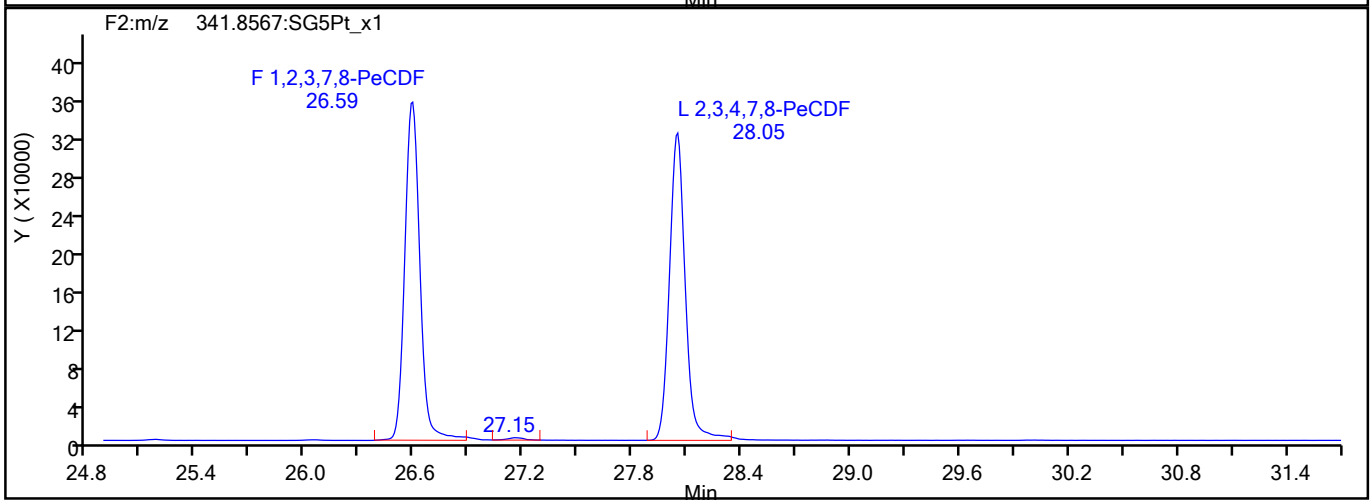

PeCDF Interference Mass

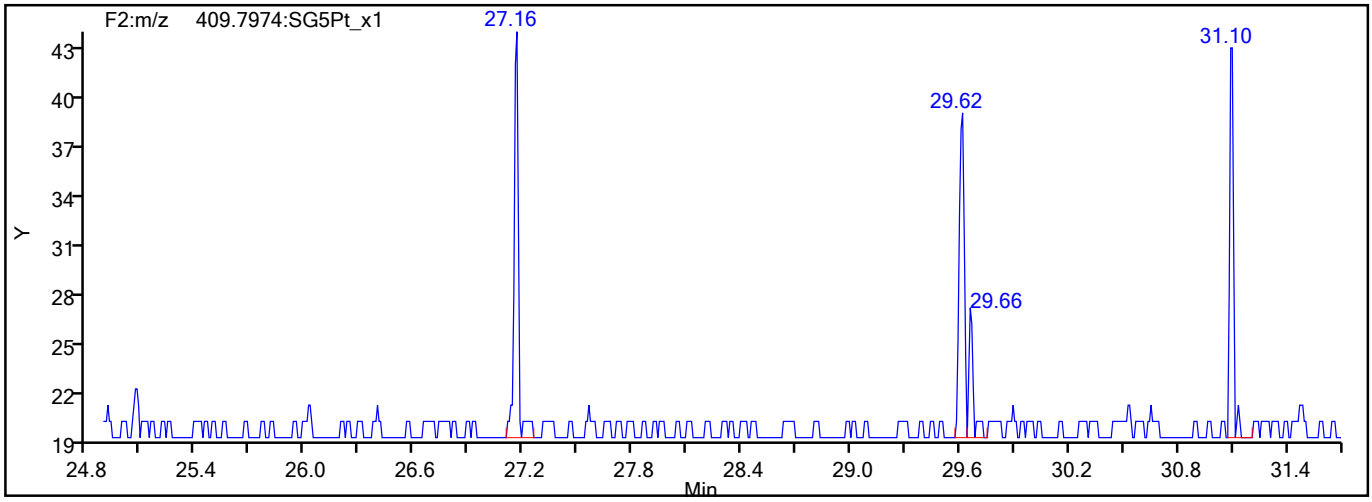

776357

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDD

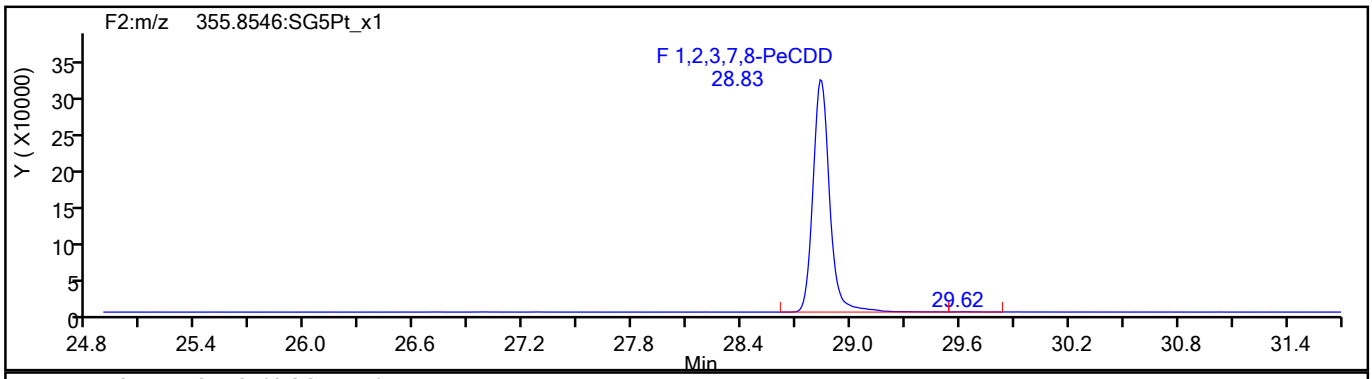

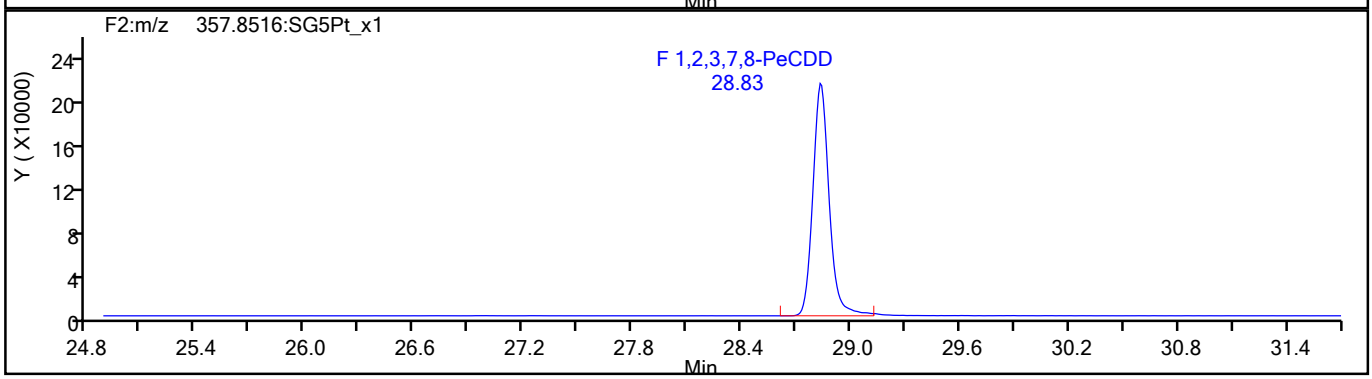

PeCDD Standards

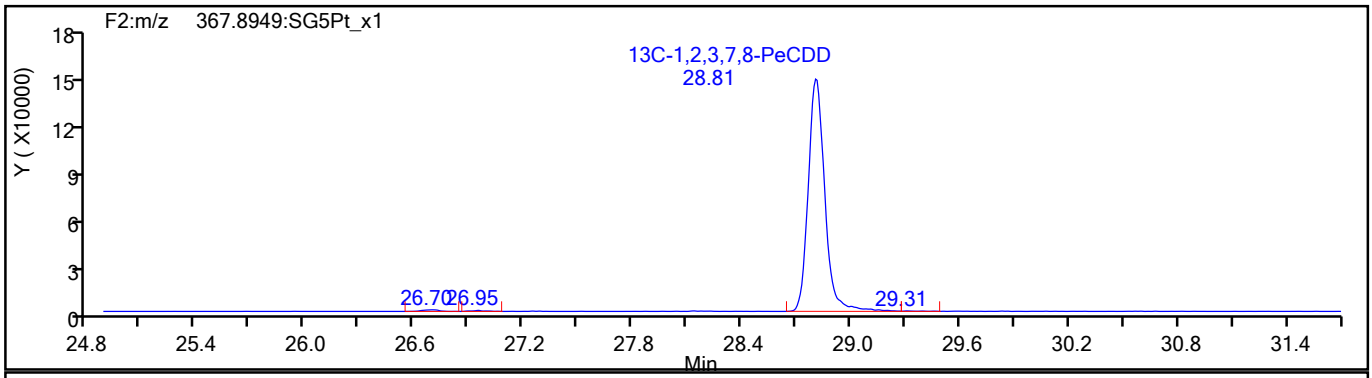

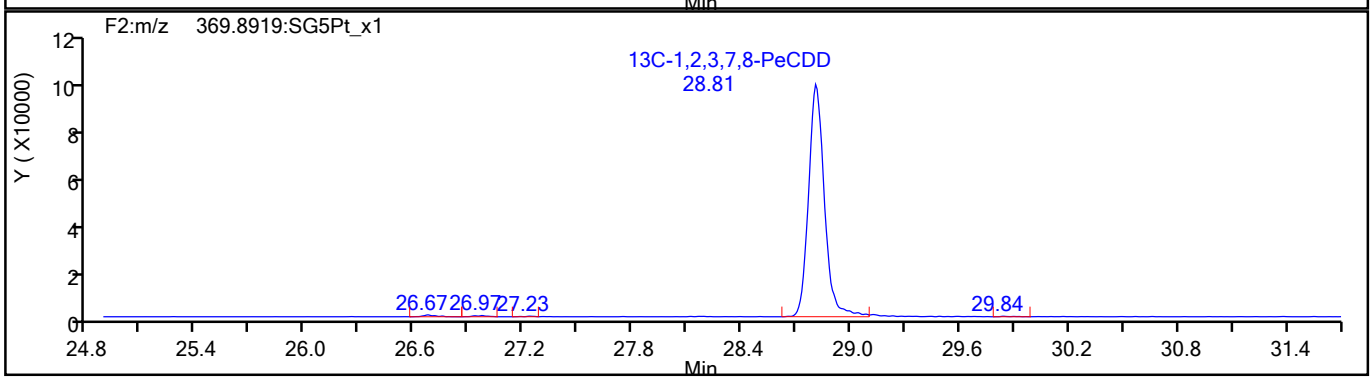

776358

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

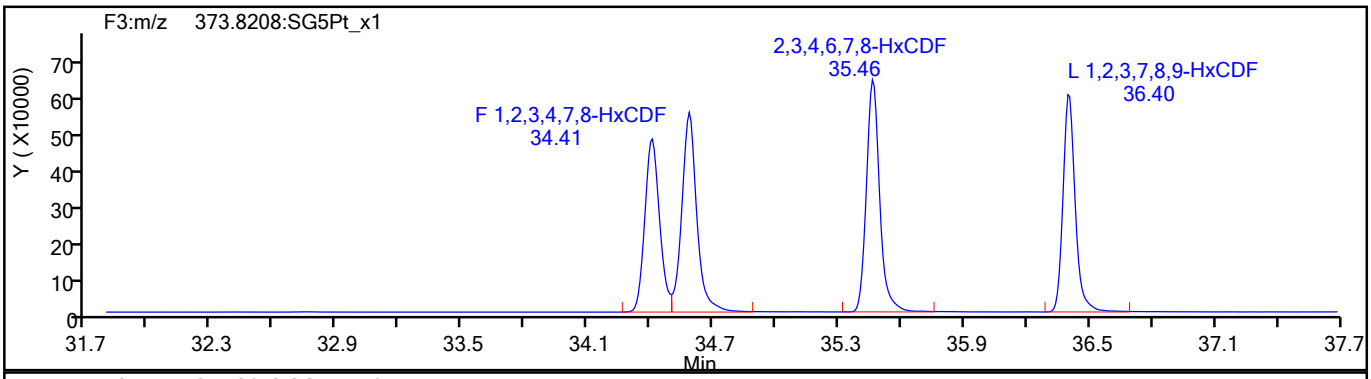

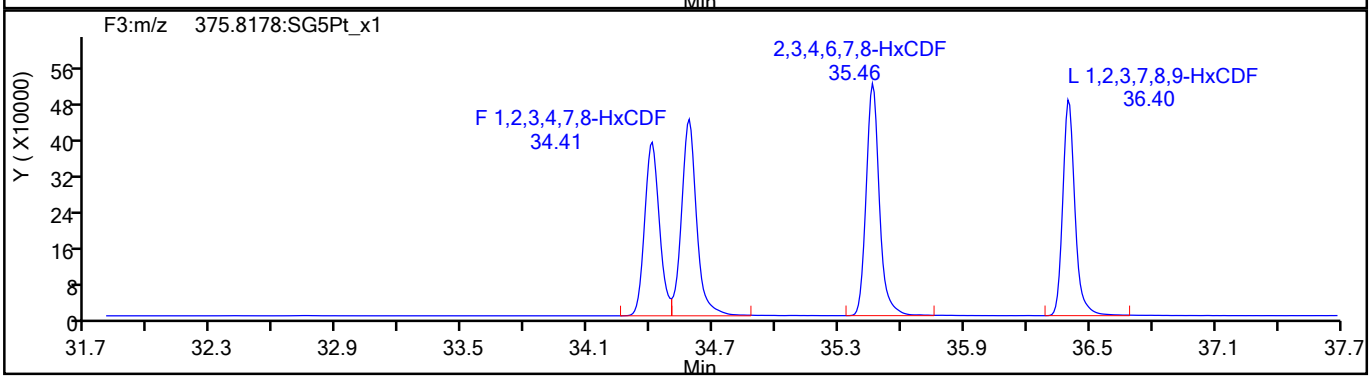

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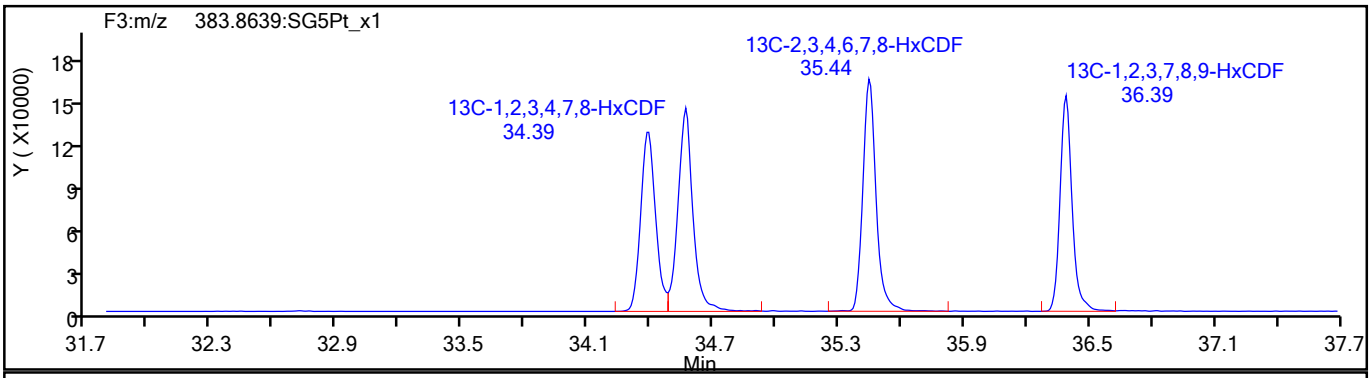

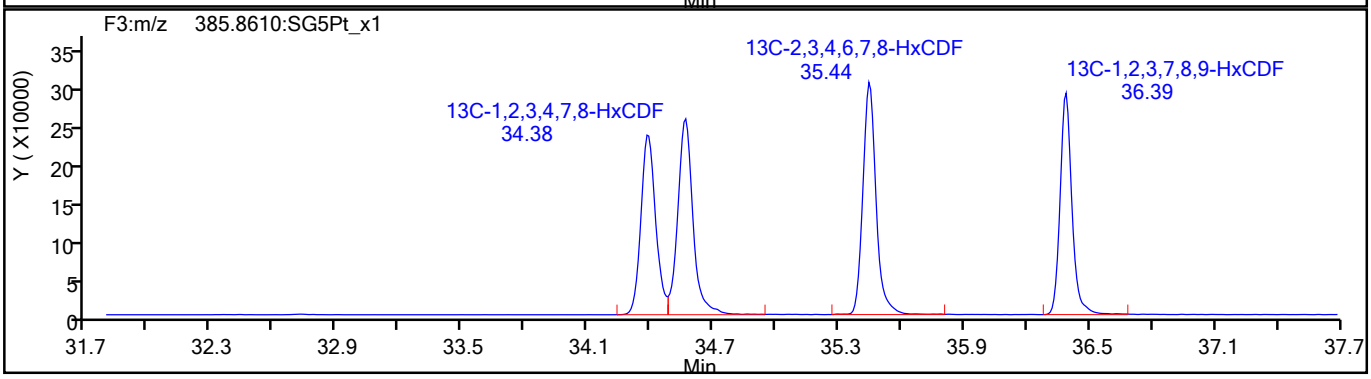

776359

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

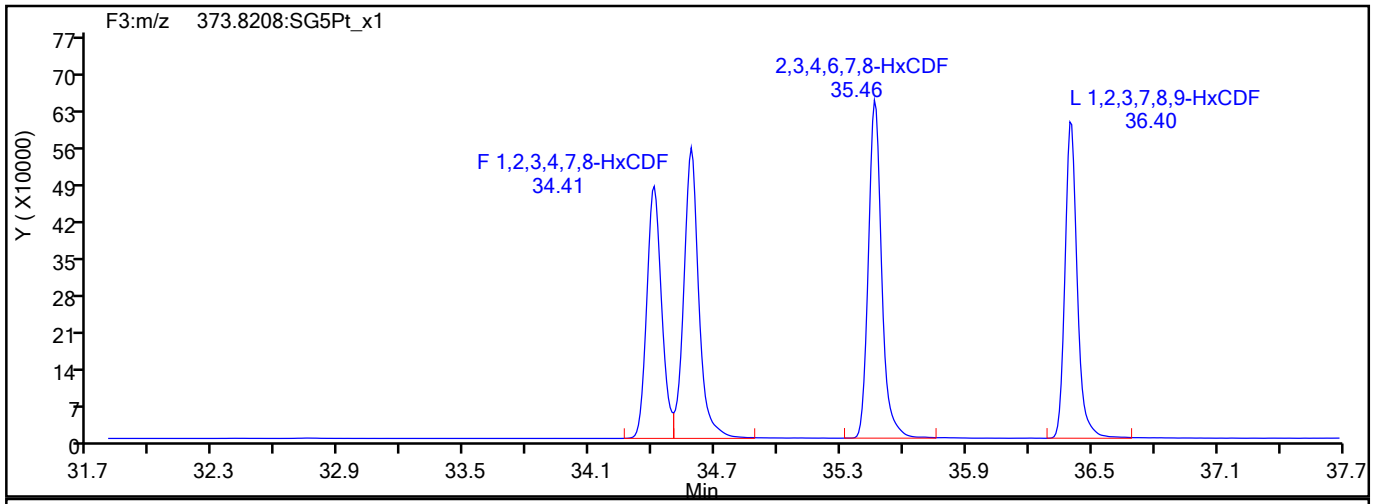

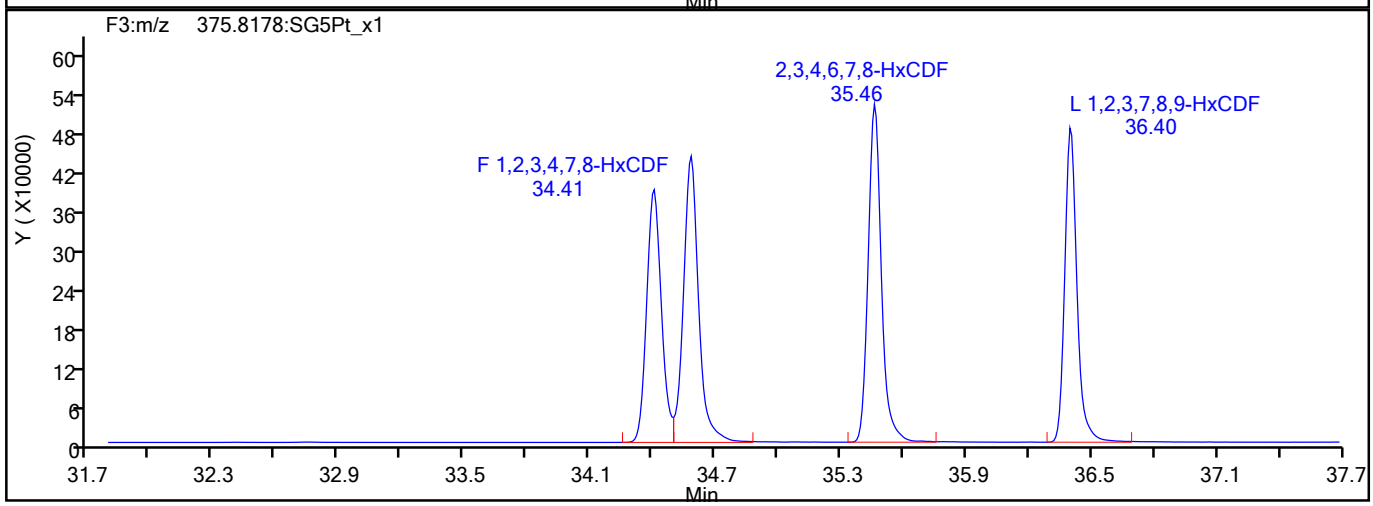

HxCDF Interference Mass

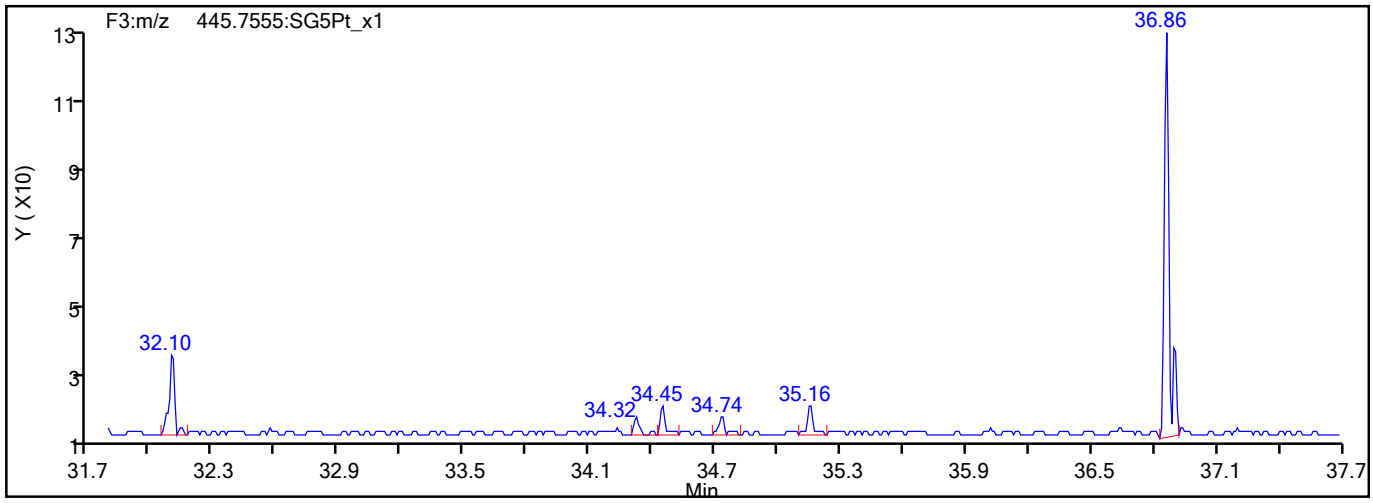

776360

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

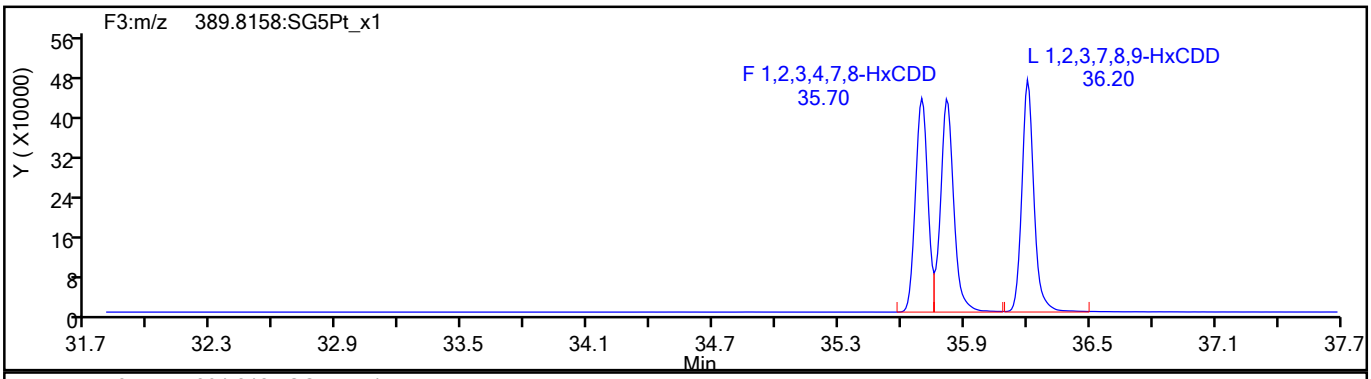

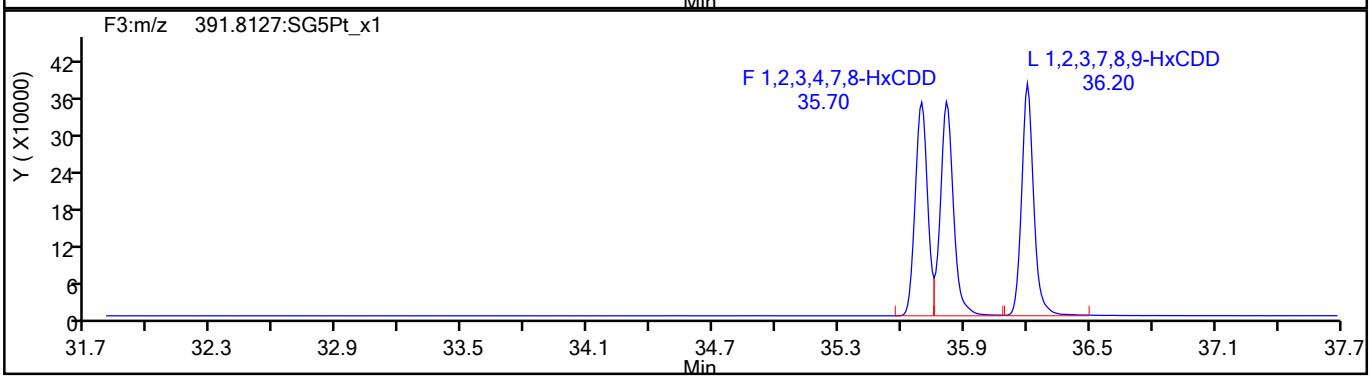

HxCDD Standards

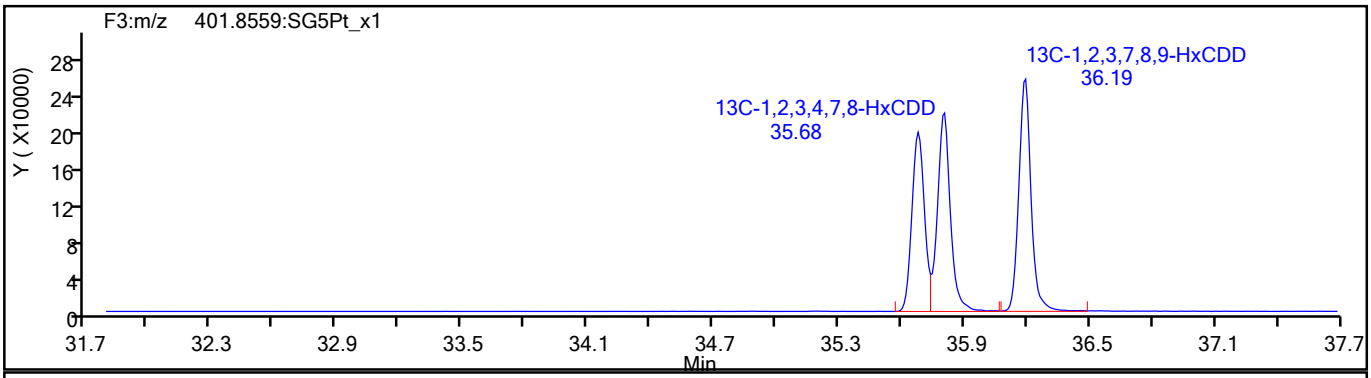

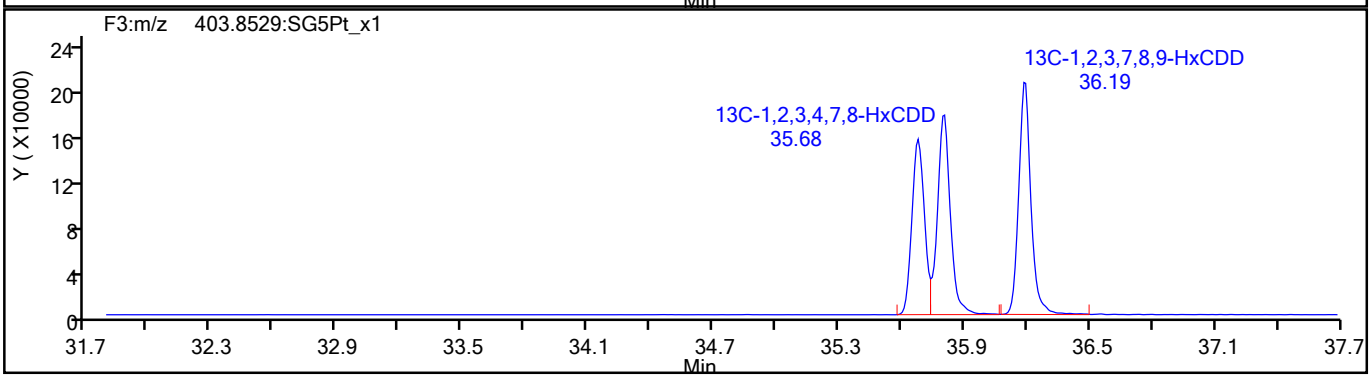

776361

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

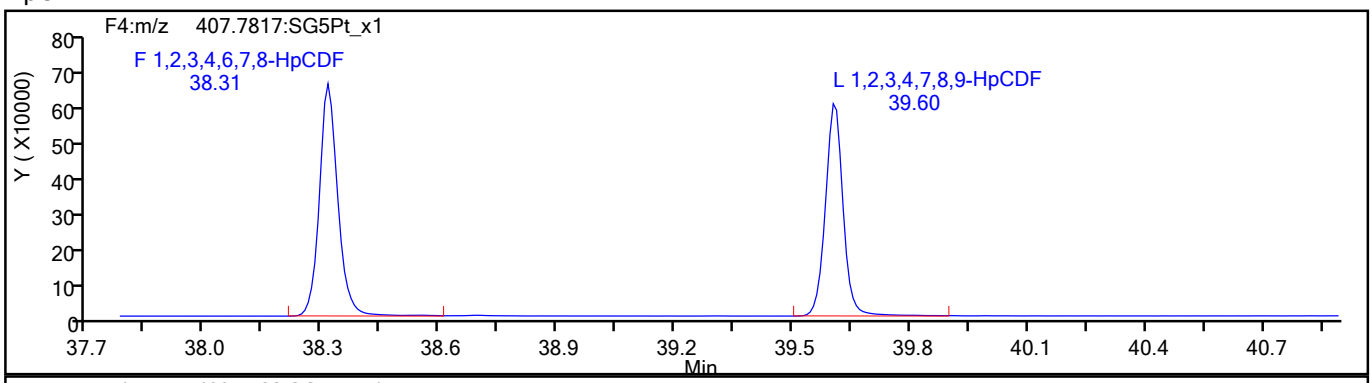

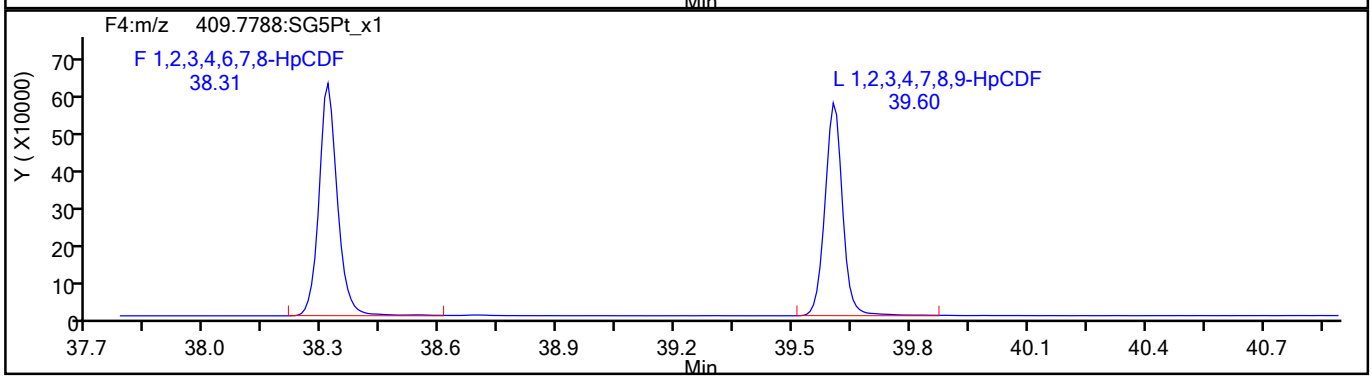

HpCDF Standards

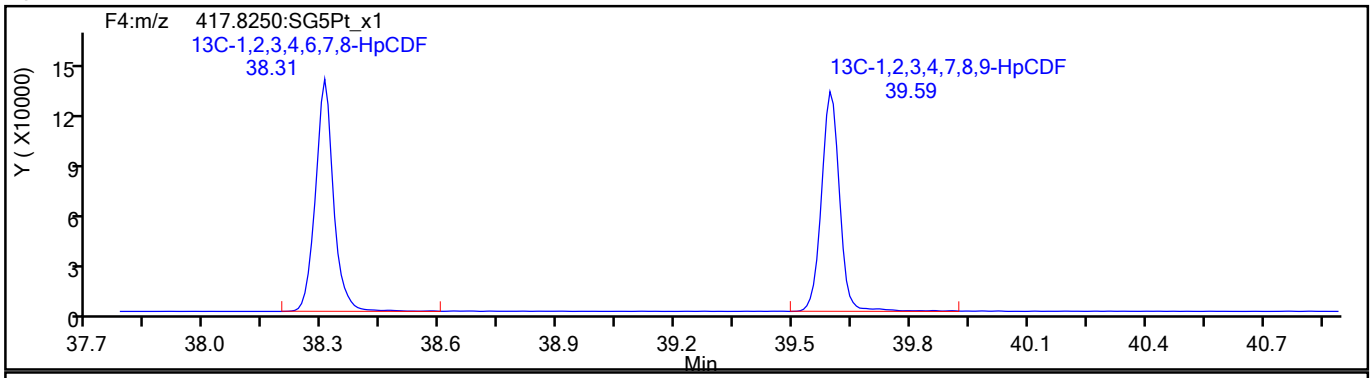

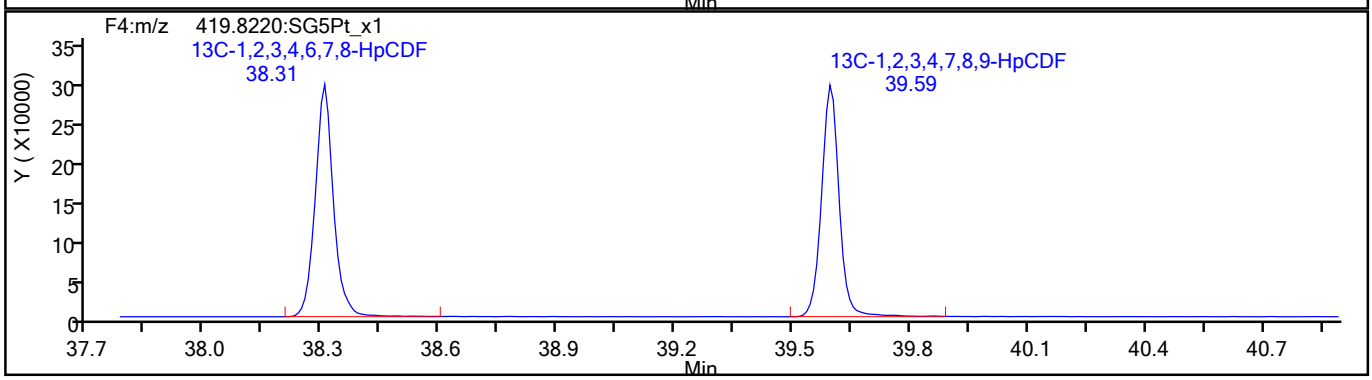

776362

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

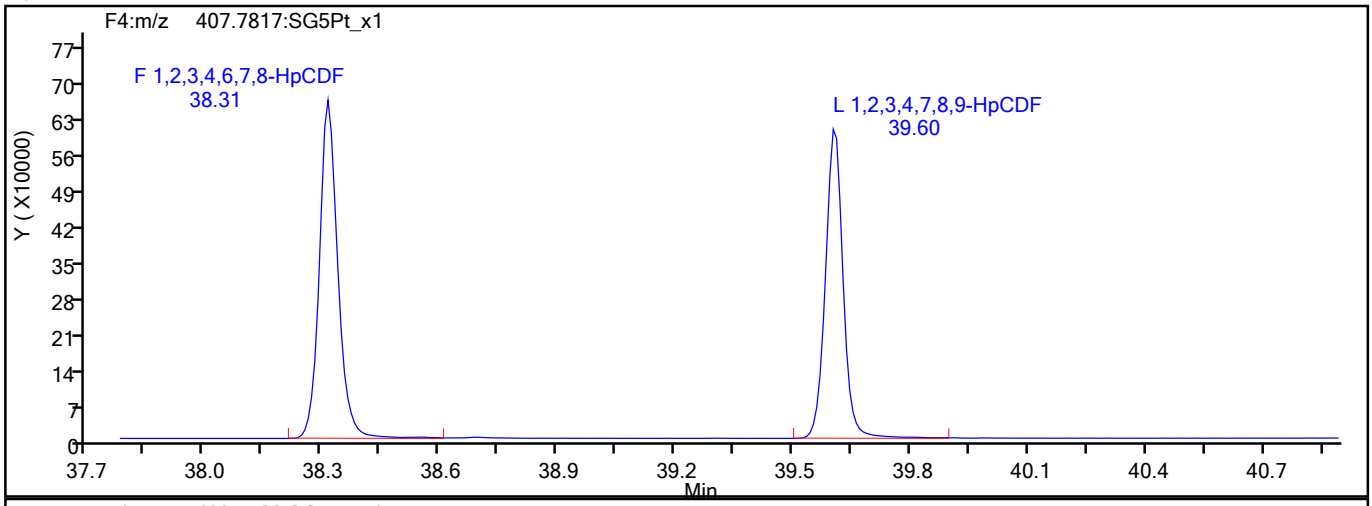

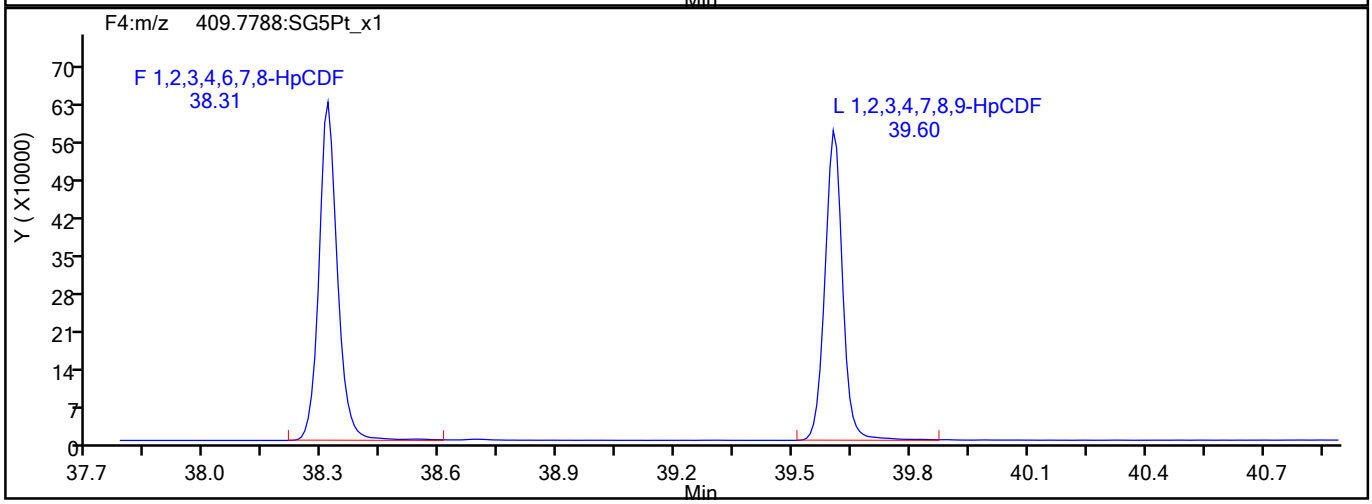

HpCDF Interference Mass

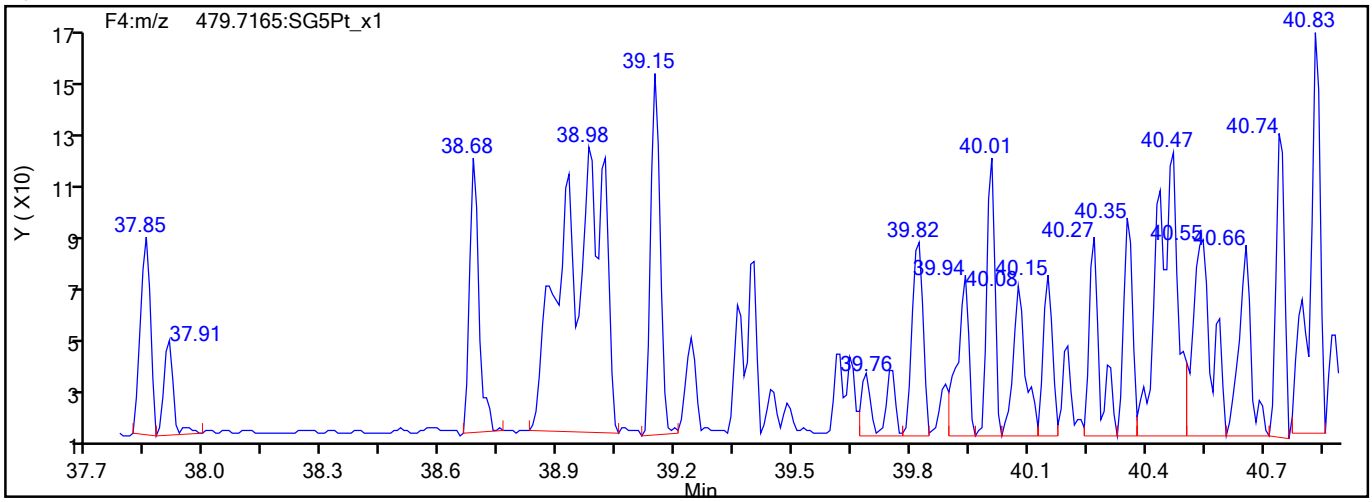

776363

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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HpCDD

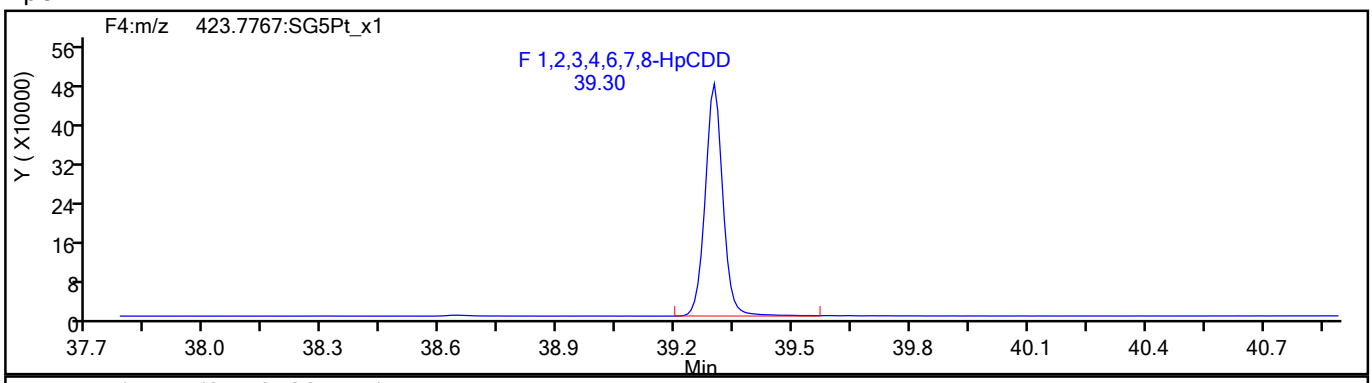

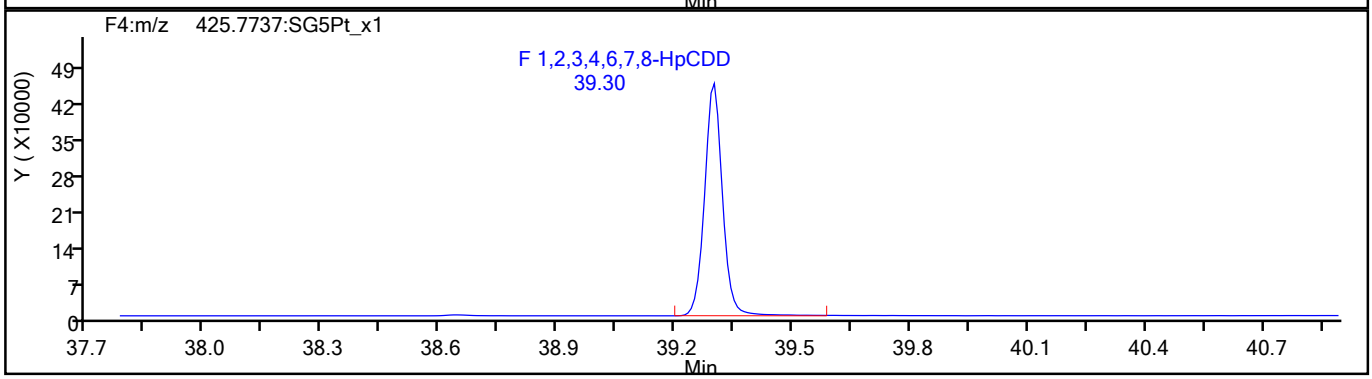

HpCDD Standards

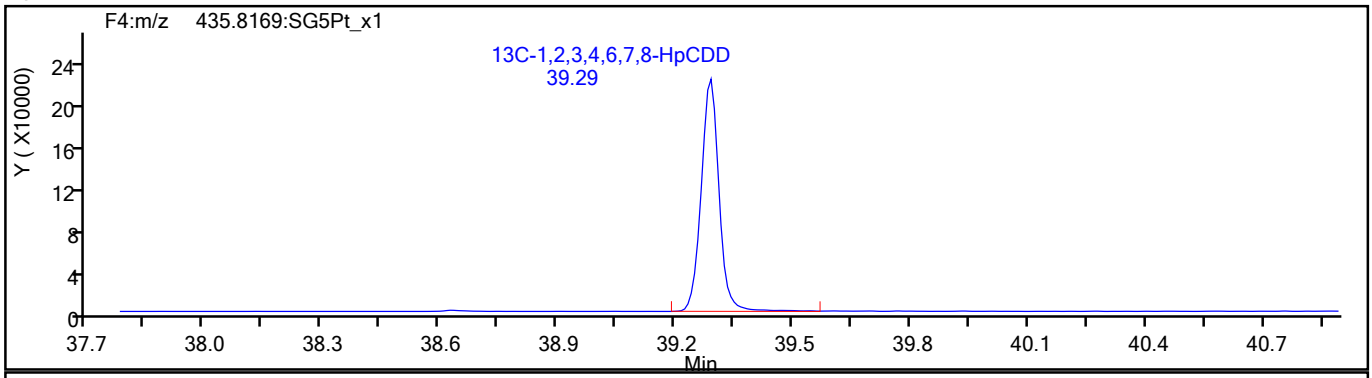

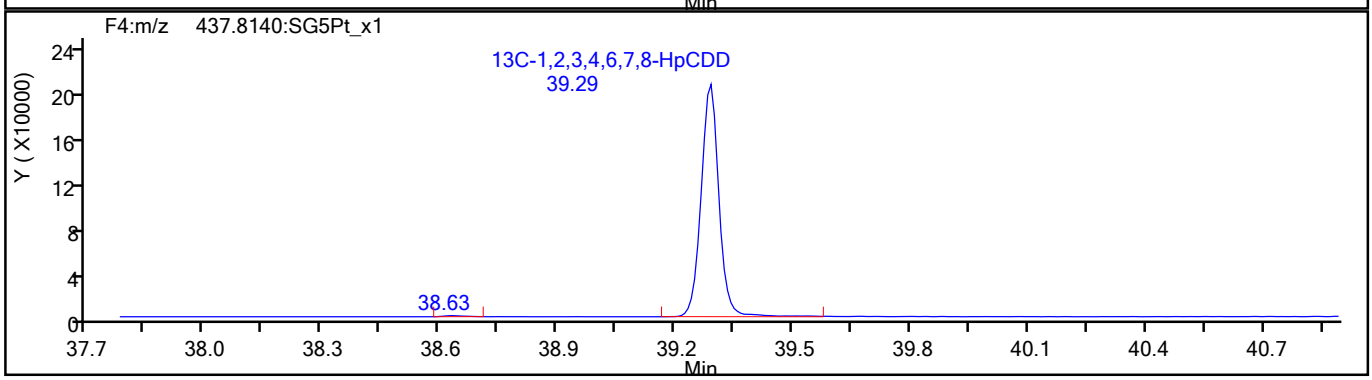

776364

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

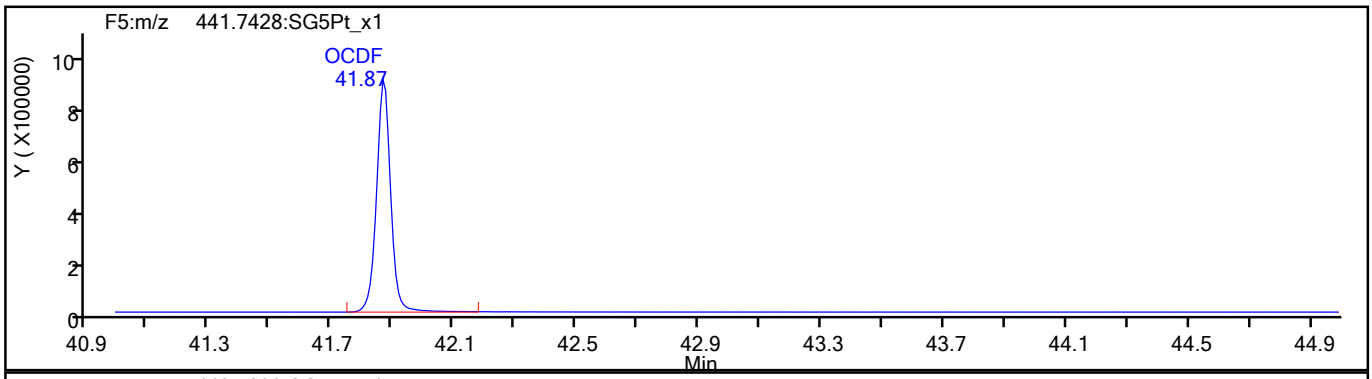

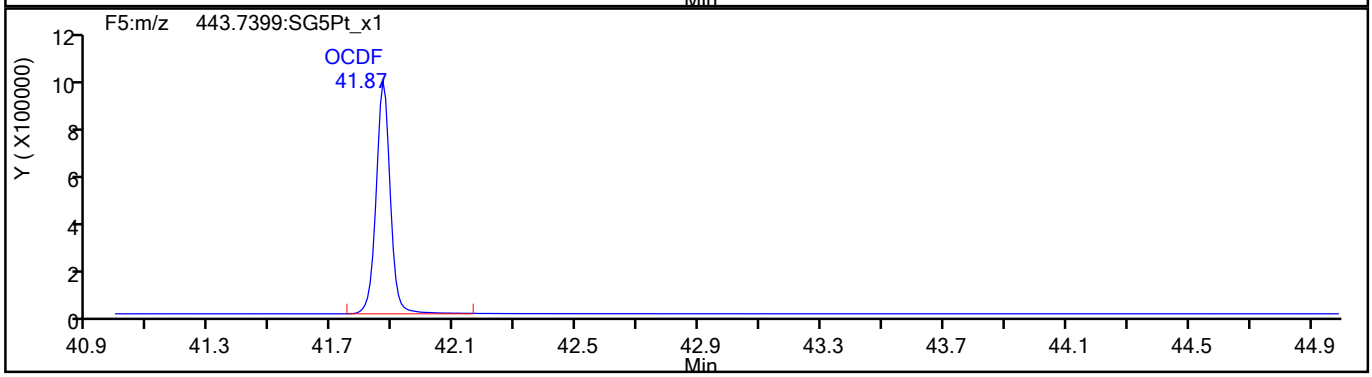

OCDF Standards

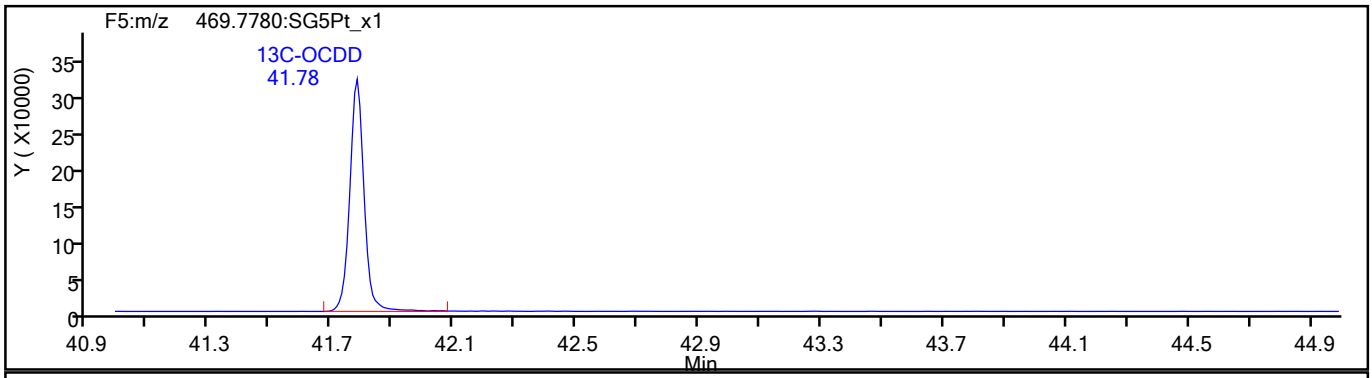

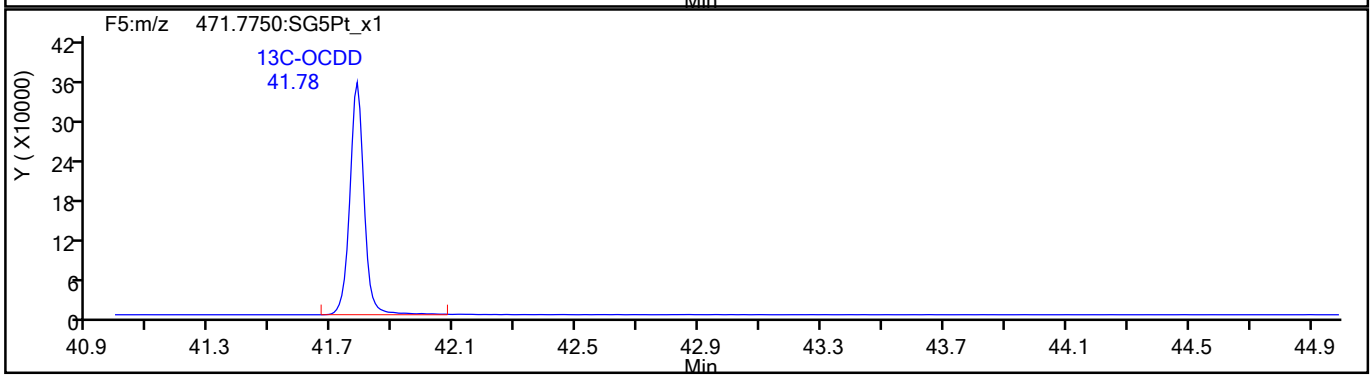

776365

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

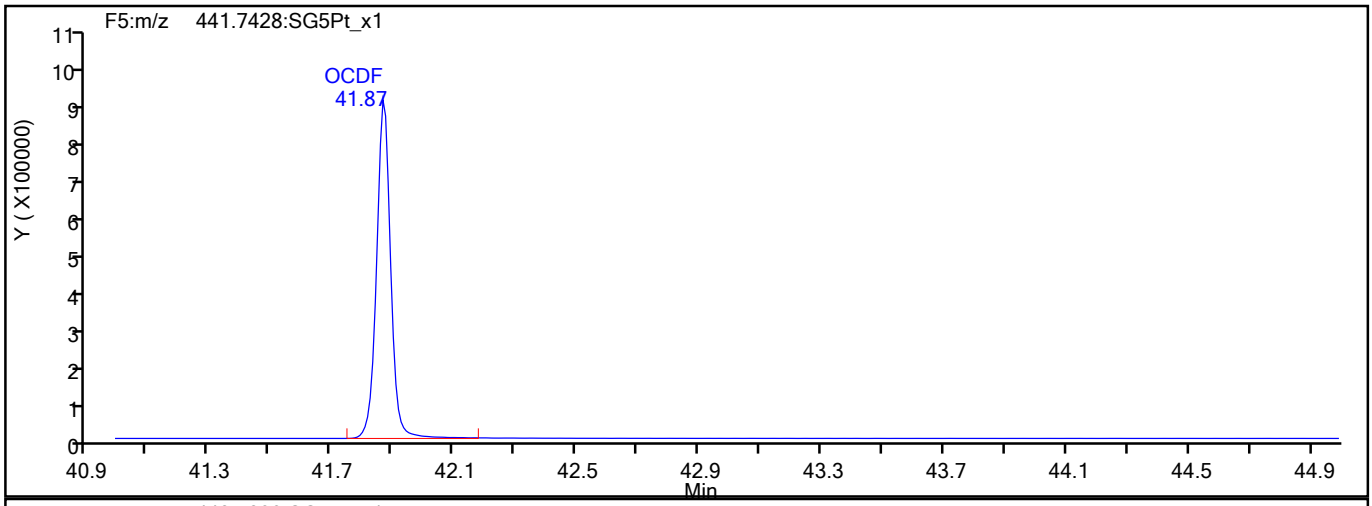

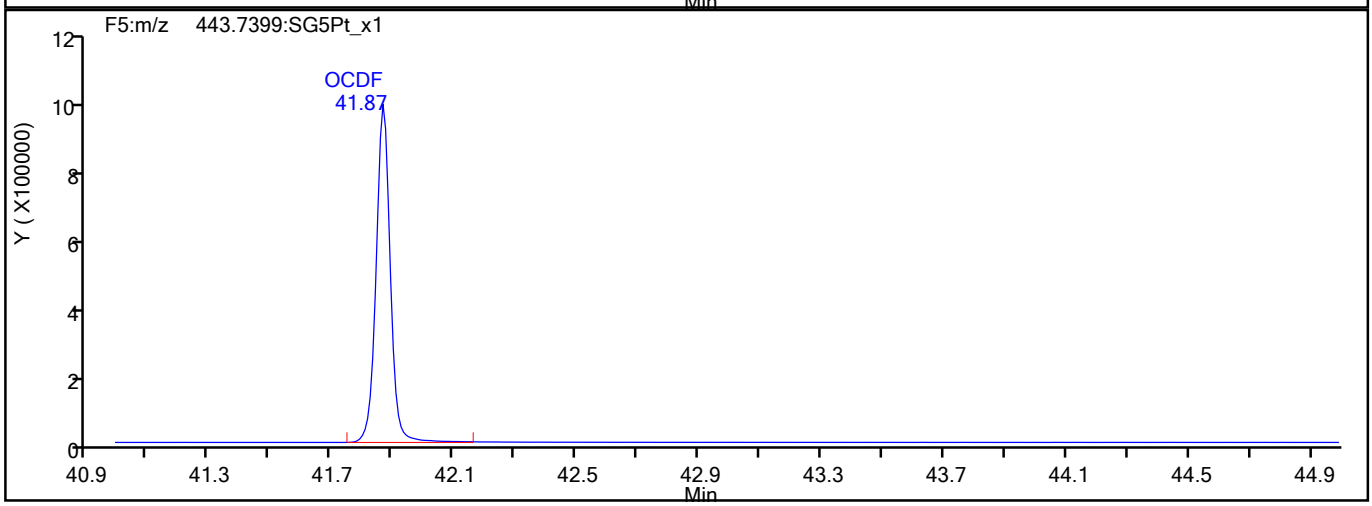

OCDF Interference Mass

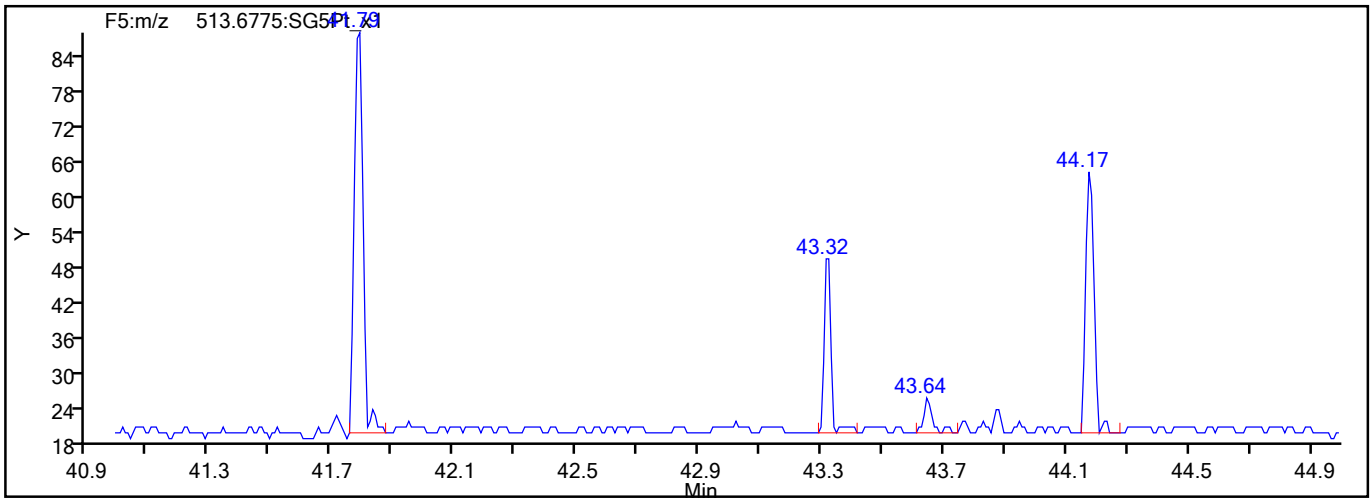

776366

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDD

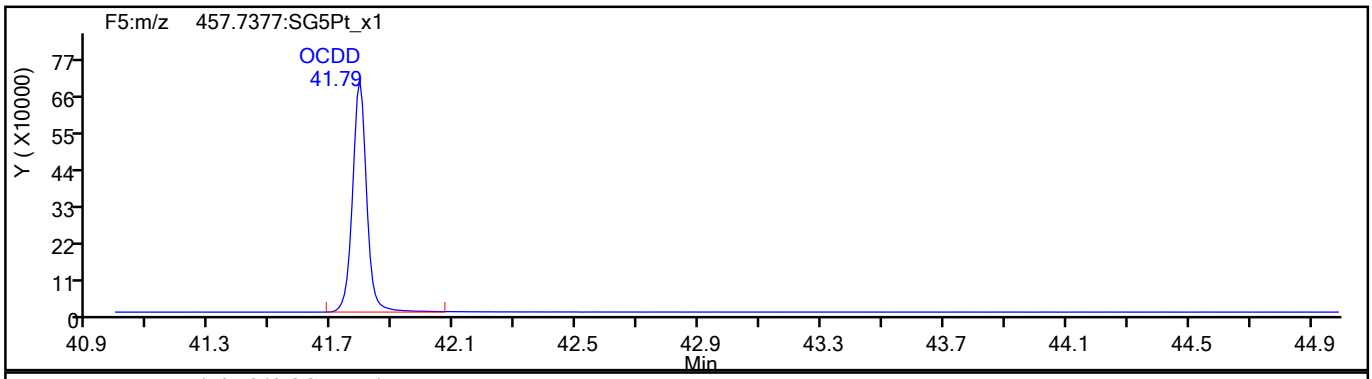

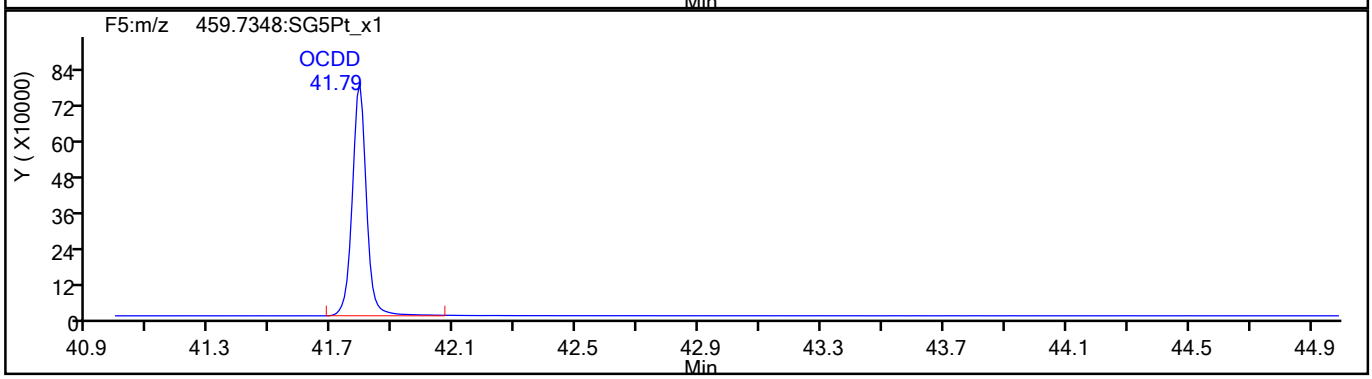

OCDD Standards

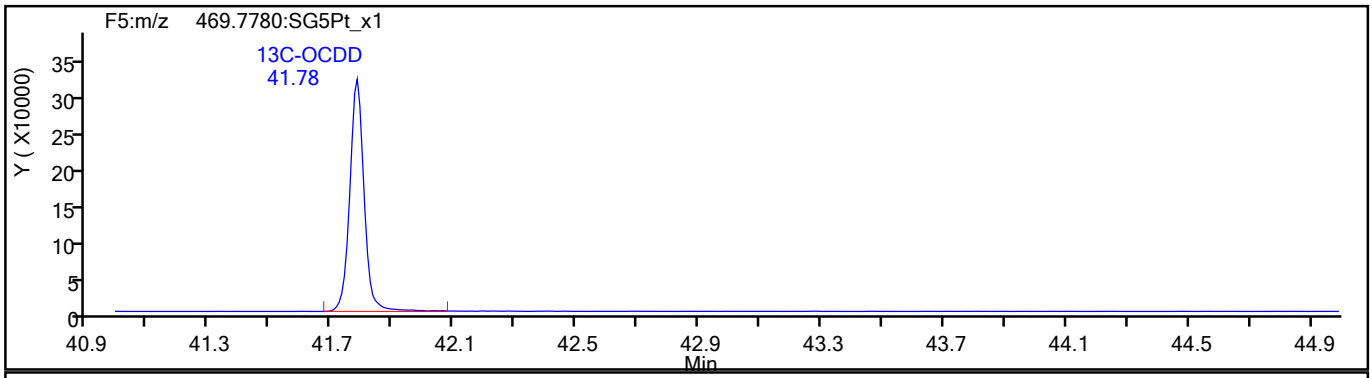

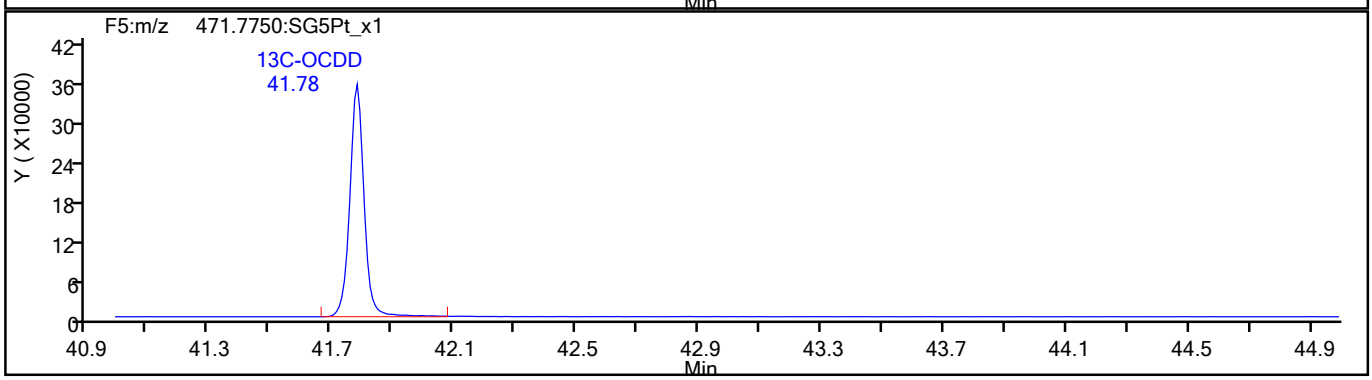

776367

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

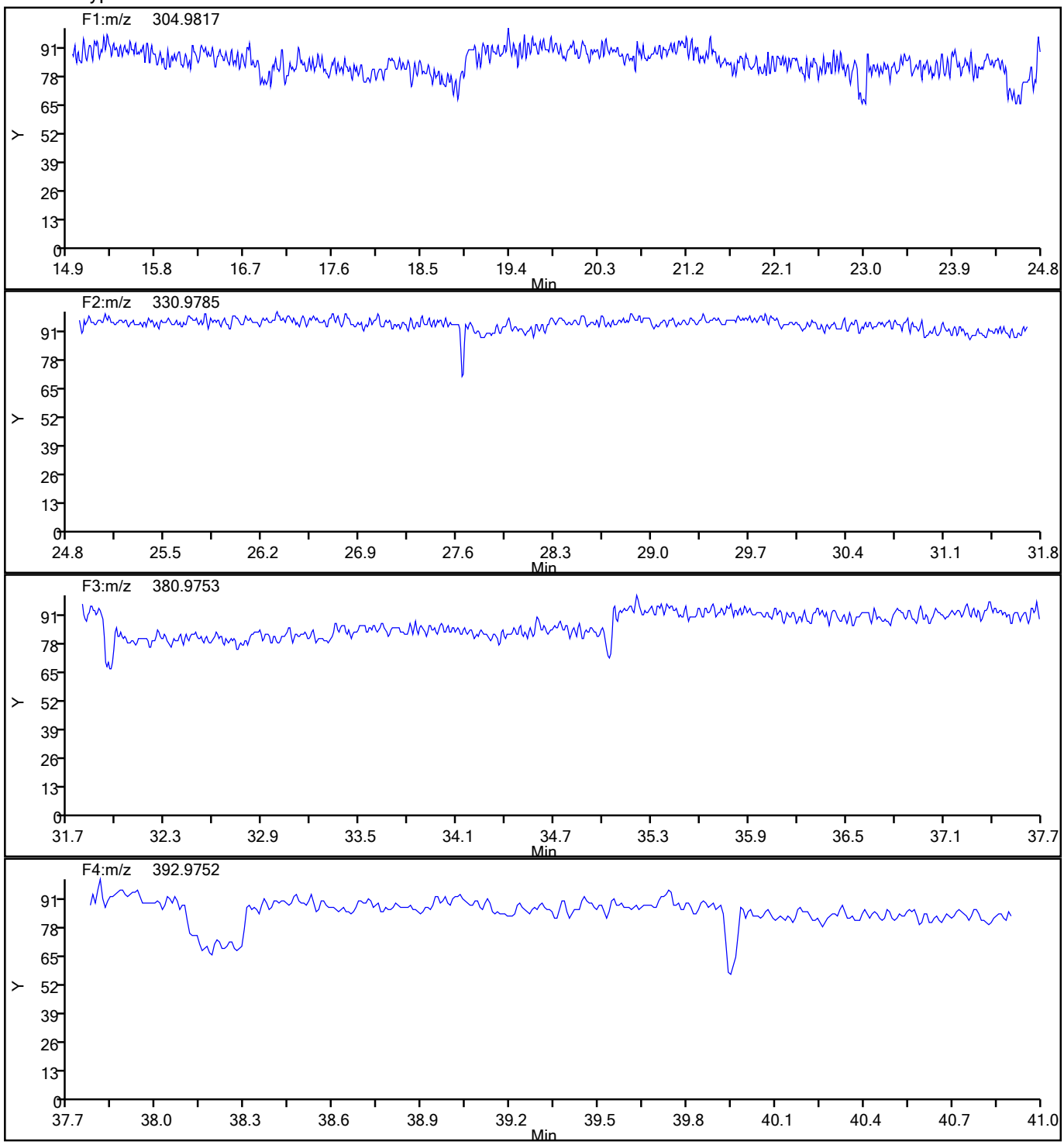

776368

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

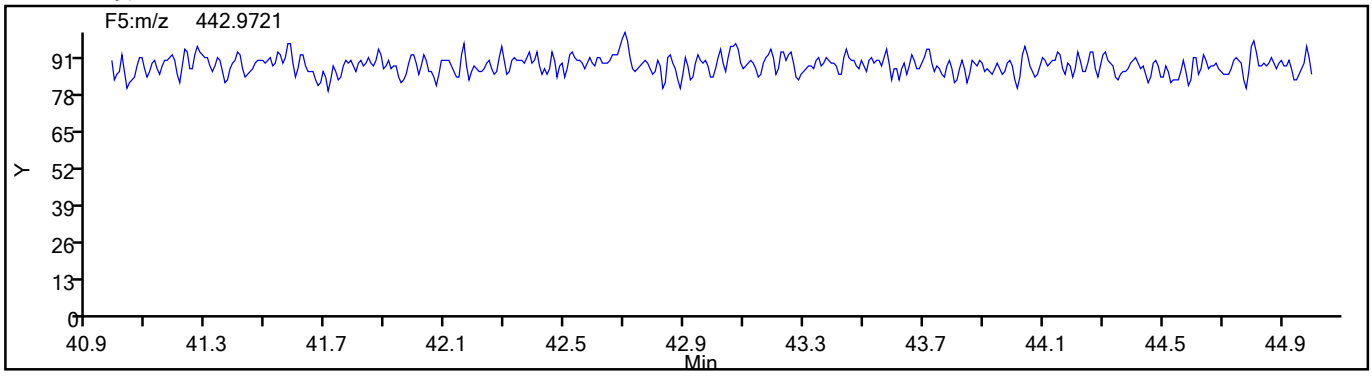

776369

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.544	2066088	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.616	2962515	0.80	1.3459	106.5	106.5	0.1844	0.1844	107	
2,3,7,8-TCDF	19.642	6137031	0.79	1.0802	191.8	191.8	0.1493	0.1493	95.89	
S Total TCDF					191.8	191.8	0.1493	0.1493		
D 13C-2,3,7,8-TCDD	20.913	2014532	0.80	0.9317	104.7	104.7	0.1455	0.1455	105	
$ 37Cl4-2,3,7,8-TCDD	20.939	4287059		1.0083	205.8	205.8	0.0958	0.0958	103	
2,3,7,8-TCDD	20.939	4286034	0.79	1.0753	197.8	197.8	0.1041	0.1041	98.92	
S Total TCDD					197.8	197.8	0.1041	0.1041		
D 13C-1,2,3,7,8-PeCDF	26.552	2574521	1.60	1.1405	109.3	109.3	0.2956	0.2956	109	
1,2,3,7,8-PeCDF	26.578	26032333	1.55	1.0543	959.1	959.1	2.101	2.101	95.91	
D 13C-2,3,4,7,8-PeCDF	28.002	2584740	1.63	1.1253	111.2	111.2	0.2996	0.2996	111	
2,3,4,7,8-PeCDF	28.028	24861382	1.54	1.0079	954.4	954.4	2.393	2.393	95.44	
S Total PeCDF					1913.5	1913.5	2.247	2.247		
D 13C-1,2,3,7,8-PeCDD	28.795	1602880	1.57	0.7165	108.3	108.3	0.1169	0.1169	108	
1,2,3,7,8-PeCDD	28.820	16645947	1.55	1.0465	992.4	992.4	0.3154	0.3154	99.24	
S Total PeCDD					992.4	992.4	0.3154	0.3154		
D 13C-1,2,3,4,7,8-HxCDF	34.370	1968615	0.53	0.9648	104.2	104.2	0.2764	0.2764	104	
1,2,3,4,7,8-HxCDF	34.404	21902419	1.26	1.1474	969.7	969.7	2.964	2.964	96.97	
D 13C-1,2,3,6,7,8-HxCDF	34.555	2283961	0.53	1.0708	109.0	109.0	0.2490	0.2490	109	
1,2,3,6,7,8-HxCDF	34.572	26721257	1.24	1.2178	960.7	960.7	2.280	2.280	96.07	
D 13C-2,3,4,6,7,8-HxCDF	35.432	2190509	0.53	1.0413	107.5	107.5	0.2561	0.2561	107	
2,3,4,6,7,8-HxCDF	35.449	25388405	1.26	1.2145	954.3	954.3	2.195	2.195	95.43	
D 13C-1,2,3,7,8,9-HxCDF	36.376	1895740	0.54	0.9731	99.5	99.5	0.2741	0.2741	99.52	
1,2,3,7,8,9-HxCDF	36.393	22553786	1.25	1.2401	959.4	959.4	2.206	2.206	95.94	
S Total HxCDF					3844.1	3844.1	2.411	2.411		
* 13C-1,2,3,7,8,9-HxCDD	36.182	1957513	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.668	1539784	1.30	0.7587	103.7	103.7	0.1260	0.1260	104	
1,2,3,4,7,8-HxCDD	35.685	15558498	1.24	1.0608	952.5	952.5	0.9710	0.9710	95.25	
D 13C-1,2,3,6,7,8-HxCDD	35.794	1741498	1.29	0.8593	103.5	103.5	0.1112	0.1112	104	
1,2,3,6,7,8-HxCDD	35.811	16661405	1.25	0.9933	963.1	963.1	0.9604	0.9604	96.31	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.198	17279185	1.24	1.1094	949.3	949.3	0.8929	0.8929	94.93	
S Total HxCDD					2865.0	2865.0	0.9414	0.9414		
D 13C-1,2,3,4,6,7,8-HpCDF	38.292	1546113	0.45	0.7359	107.3	107.3	0.2883	0.2883	107	
1,2,3,4,6,7,8-HpCDF	38.309	21181967	1.05	1.4421	950.0	950.0	2.277	2.277	95.00	
D 13C-1,2,3,4,7,8,9-HpCDF	39.591	1455766	0.46	0.6854	108.5	108.5	0.3095	0.3095	109	
1,2,3,4,7,8,9-HpCDF	39.600	17812004	1.04	1.3092	934.6	934.6	2.410	2.410	93.46	
S Total HpCDF					1884.6	1884.6	2.344	2.344		
D 13C-1,2,3,4,6,7,8-HpCDD	39.279	1355803	1.07	0.6745	102.7	102.7	0.1997	0.1997	103	
1,2,3,4,6,7,8-HpCDD	39.287	13800004	1.05	1.0503	969.1	969.1	1.263	1.263	96.91	
S Total HpCDD					969.1	969.1	1.263	1.263		
D 13C-OCDD	41.778	2298668	0.91	0.5446	215.6	215.6	0.2297	0.2297	108	
OCDF	41.862	30505464	0.91	1.3168	2015.6	2015.6	1.318	1.318	101	
OCDD	41.786	22803823	0.89	1.0620	1868.3	1868.3	1.408	1.408	93.41	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.544	20.547	0		920603	150087	115	287	1305		
333.9338	20.544	20.547	0		1145485	178229	63	157	2829	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.616	19.616	0	0.955	1315625	222528	203	507	1096		
317.9389	19.625	19.616	1	0.955	1646890	273662	123	307	2225	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.642	19.646	0	1.001	2713655	446561	138	345	3236		
305.8987	19.642	19.646	0	1.001	3423376	567597	182	455	3119	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.913	20.910	0	1.018	893612	134635	115	287	1171		
333.9338	20.913	20.910	0	1.018	1120920	170916	63	157	2713	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.939	20.935	0	1.019	4287059	670067	127	317	5276		
2,3,7,8-TCDD											
319.8965	20.939	20.939	0	1.001	1891754	292983	63	157	4651		
321.8936	20.939	20.939	0	1.001	2394280	370217	74	185	5003	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.552	26.560	0	1.292	1583459	282119	248	620	1138		
353.8970	26.552	26.560	0	1.292	991062	177690	195	487	911	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.578	26.584	0	1.001	15809872	2840843	2484	6210	1144		
341.8567	26.578	26.584	0	1.001	10222461	1821485	1590	3975	1146	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.002	28.014	-1	1.363	1602860	260320	248	620	1050		
353.8970	28.002	28.014	-1	1.363	981880	162024	195	487	831	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.028	28.039	-1	1.001	15085675	2478093	2484	6210	998		
341.8567	28.028	28.039	-1	1.001	9775707	1618127	1590	3975	1018	1.54(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.795	28.801	0	1.402	978472	153717	62	155	2479		
369.8919	28.795	28.801	0	1.402	624408	97747	48	120	2036	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.820	28.828	0	1.001	10130500	1566899	211	527	7426		
357.8516	28.820	28.828	0	1.001	6515447	1012500	121	302	8368	1.55(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.370	34.384	-1	0.950	681535	131177	206	515	637		
385.8610	34.370	34.384	-1	0.950	1287080	241920	293	732	826	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.404	34.405	0	1.001	12221224	2429393	2850	7125	852		
375.8178	34.404	34.405	0	1.001	9681195	1938109	2226	5565	871	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.555	34.562	0	0.955	787279	159086	206	515	772		
385.8610	34.555	34.562	0	0.955	1496682	297889	293	732	1017	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.572	34.582	-1	1.000	14789206	2955884	2850	7125	1037		
375.8178	34.572	34.582	-1	1.000	11932051	2355841	2226	5565	1058	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.432	35.444	-1	0.979	755749	165004	206	515	801		
385.8610	35.432	35.444	-1	0.979	1434760	311089	293	732	1062	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.449	35.461	-1	1.000	14140079	3143736	2850	7125	1103		
375.8178	35.449	35.461	-1	1.000	11248326	2509936	2226	5565	1128	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.376	36.388	-1	1.005	661276	161798	206	515	785		
385.8610	36.376	36.388	-1	1.005	1234464	302164	293	732	1031	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.393	36.402	-1	1.000	12520528	3053286	2850	7125	1071		
375.8178	36.393	36.402	-1	1.000	10033258	2435227	2226	5565	1094	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.182	36.192	-1		1094886	260943	101	252	2584		
403.8529	36.182	36.192	-1		862627	206665	78	195	2650	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.668	35.680	-1	0.986	871516	210376	101	252	2083		
403.8529	35.668	35.680	-1	0.986	668268	161161	78	195	2066	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.685	35.695	-1	1.000	8624435	2104573	873	2182	2411		
391.8127	35.685	35.695	-1	1.000	6934063	1696812	658	1645	2579	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.794	35.805	-1	0.989	980230	223296	101	252	2211		
403.8529	35.794	35.805	-1	0.989	761268	177860	78	195	2280	1.29(1.05-1.43)	

Report Date: 09-Jun-2021 08:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.811	35.820	-1	1.000	9246987	2090881	873	2182	2395		
391.8127	35.811	35.820	-1	1.000	7414418	1678531	658	1645	2551	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.198	36.208	-1	1.015	9564246	2295203	873	2182	2629		
391.8127	36.198	36.208	-1	1.015	7714939	1845750	658	1645	2805	1.24(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.292	38.305	-1	1.058	482843	137759	141	352	977		
419.8220	38.292	38.305	-1	1.058	1063270	304088	256	640	1188	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	10831802	3065791	3002	7505	1021		
409.7788	38.309	38.317	0	1.000	10350165	2906390	2802	7005	1037	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.591	39.600	-1	1.094	458518	146875	141	352	1042		
419.8220	39.591	39.600	-1	1.094	997248	313009	256	640	1223	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.600	39.608	-1	1.000	9086557	2852631	3002	7505	950		
409.7788	39.600	39.608	-1	1.000	8725447	2728020	2802	7005	974	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.279	39.293	-1	1.086	700550	219811	138	345	1593		
437.8140	39.279	39.293	-1	1.086	655253	202475	114	285	1776	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.287	39.301	-1	1.000	7071387	2141109	1133	2832	1890		
425.7737	39.287	39.301	-1	1.000	6728617	2063900	1107	2767	1864	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.778	41.785	0	1.155	1096060	330168	115	287	2871		
471.7750	41.778	41.785	0	1.155	1202608	365220	119	297	3069	0.91(0.76-1.02)	
OCDF											
441.7428	41.862	41.875	-1	1.002	14551716	4304688	1153	2882	3733		
443.7399	41.862	41.875	-1	1.002	15953748	4798066	1261	3152	3805	0.91(0.76-1.02)	
OCDD											
457.7377	41.786	41.794	0	1.000	10735225	3226535	983	2457	3282		
459.7348	41.786	41.794	0	1.000	12068598	3663774	1097	2742	3340	0.89(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

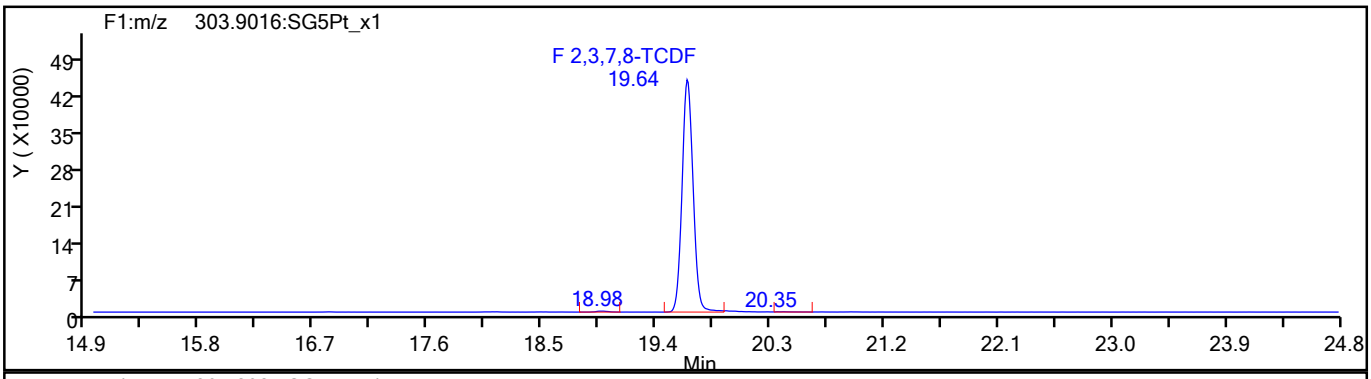

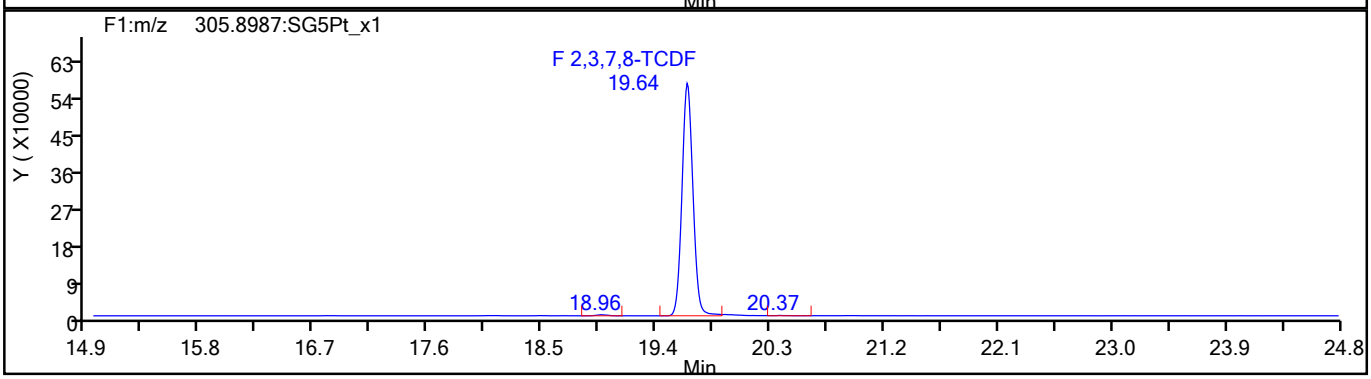

TCDF Standards

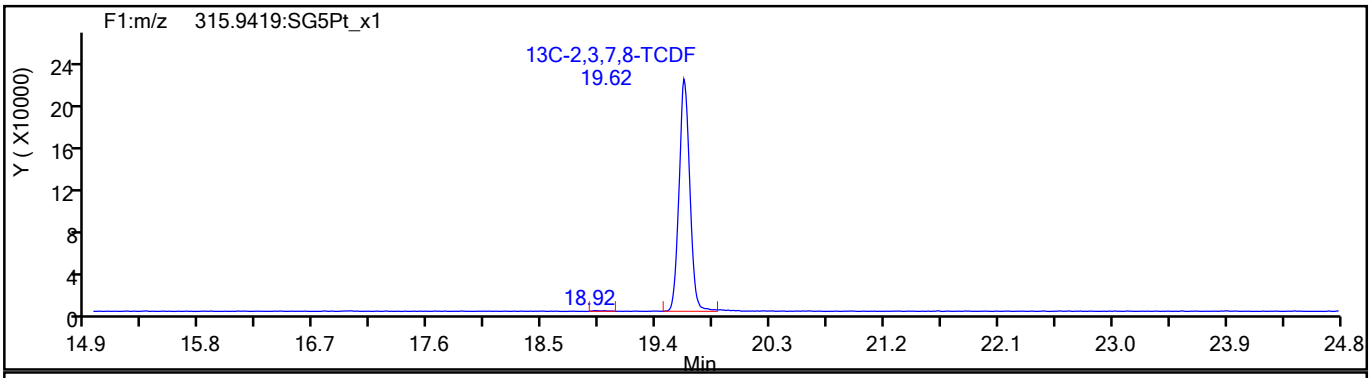

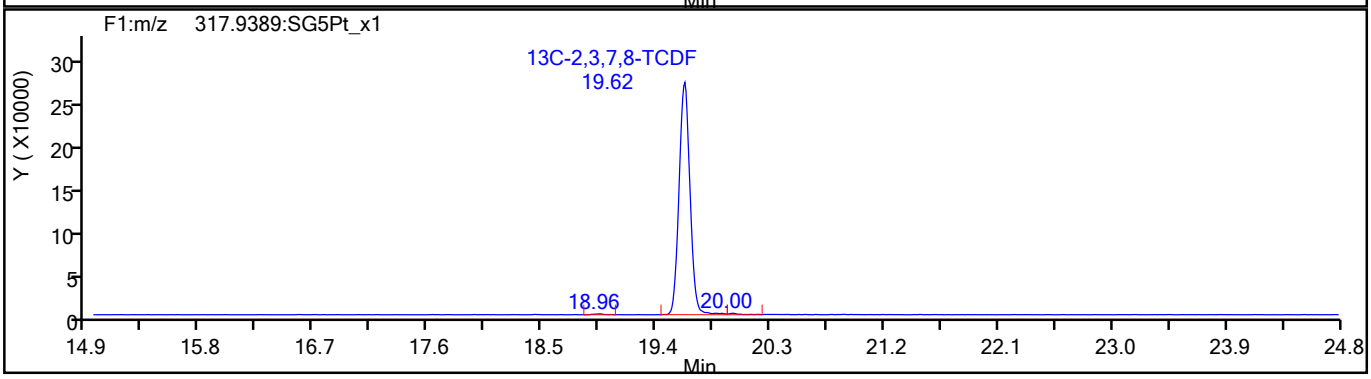

776375

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

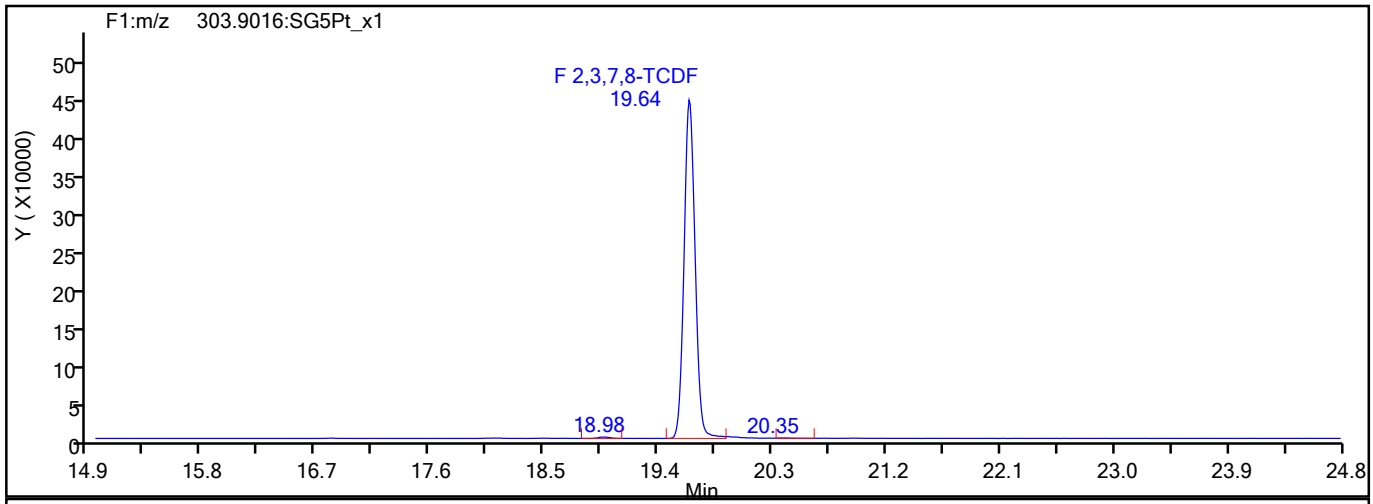

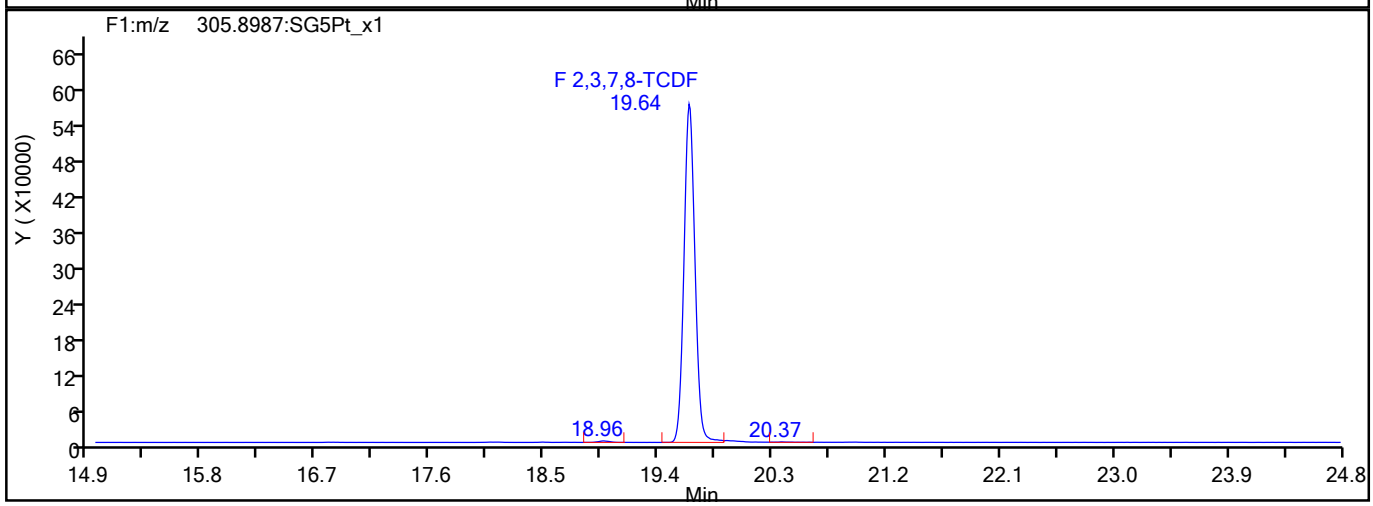

TCDF Interference Mass

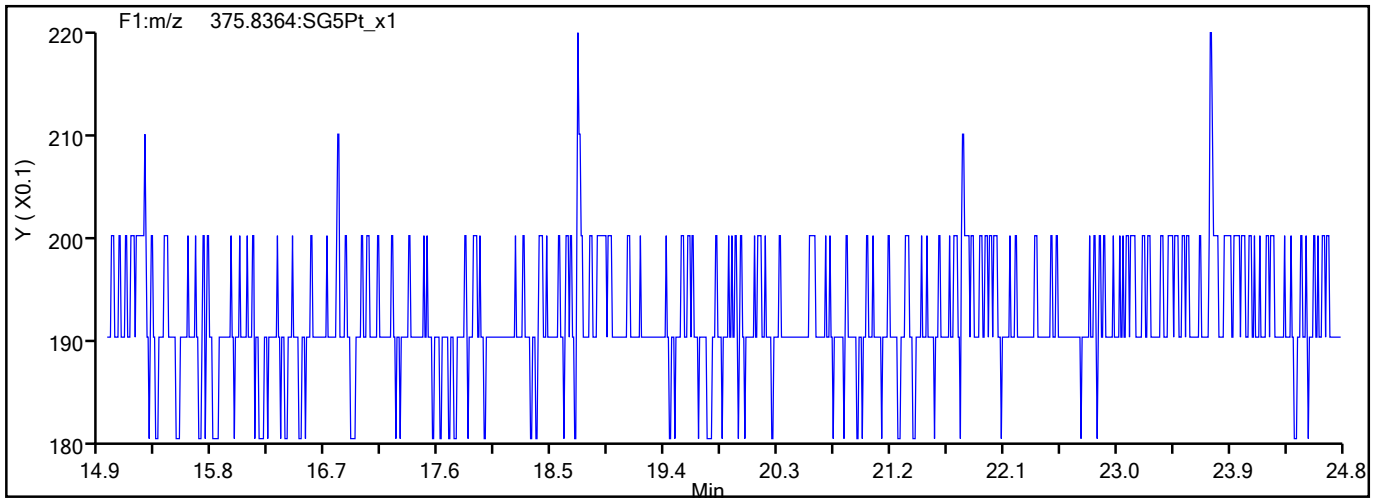

776376

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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TCDD

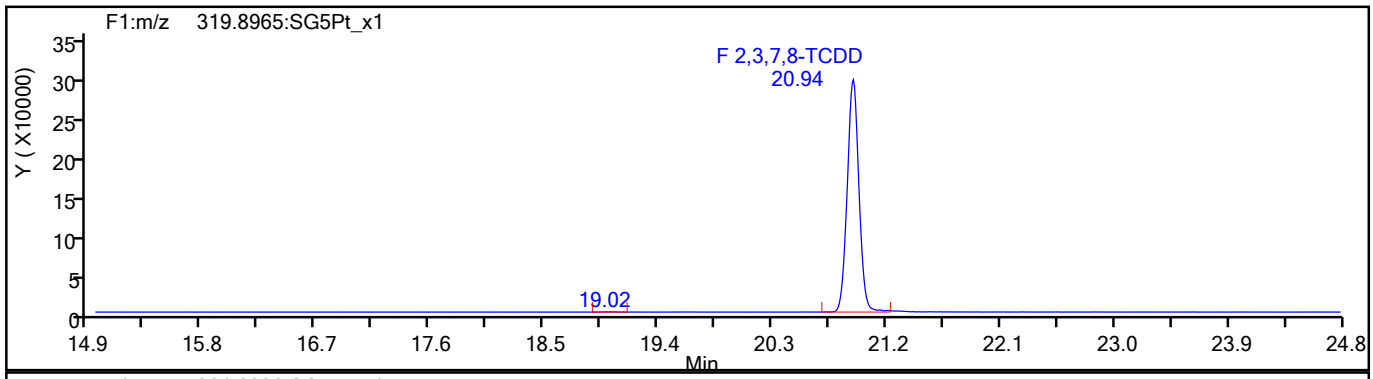

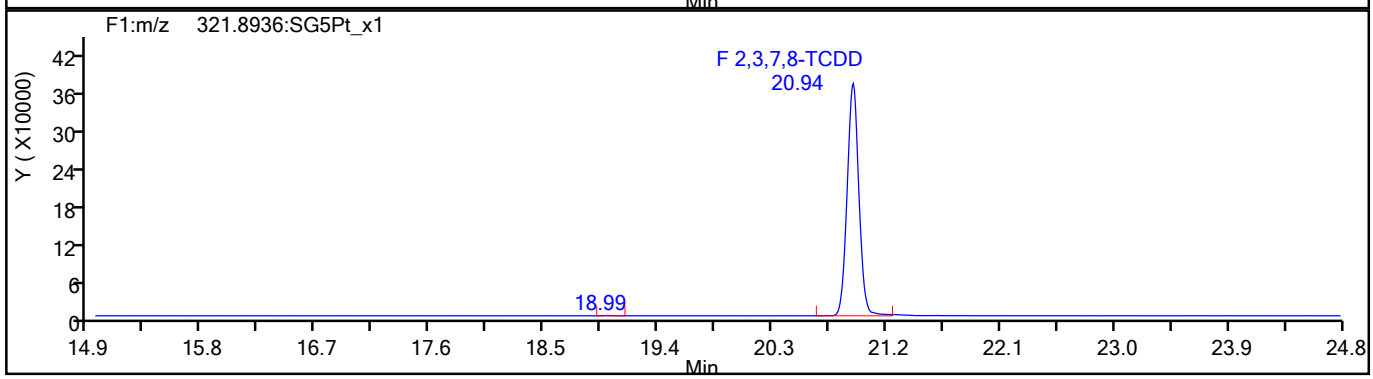

TCDD Standards

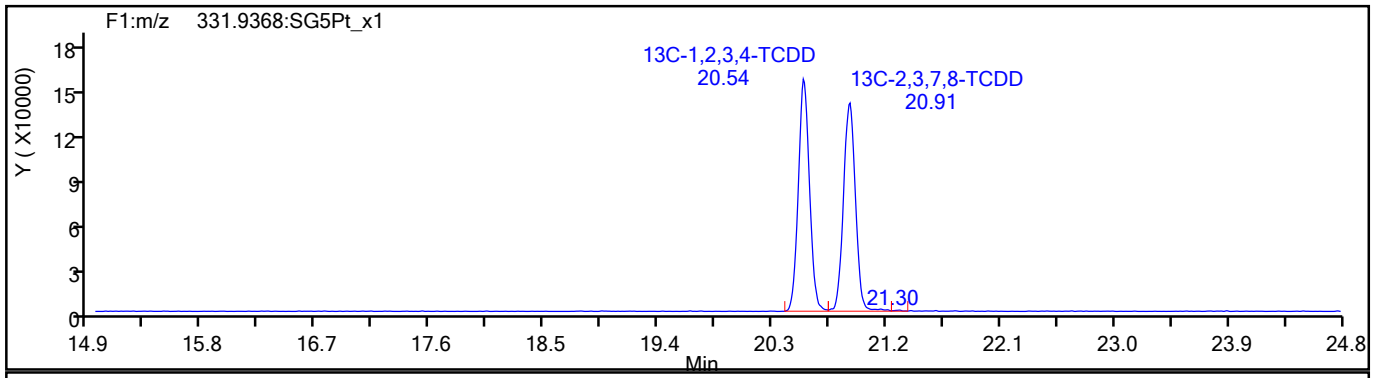

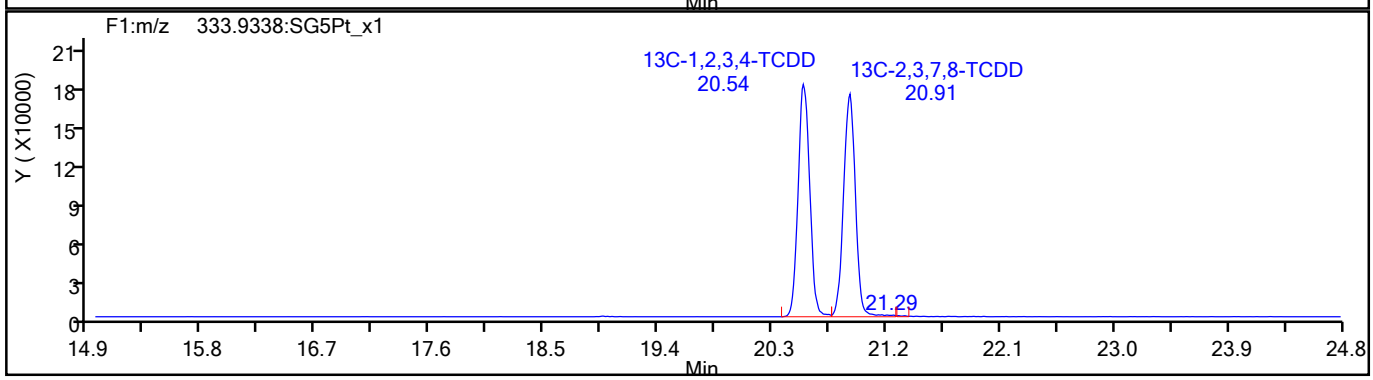

776377

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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37Cl4-TCDD

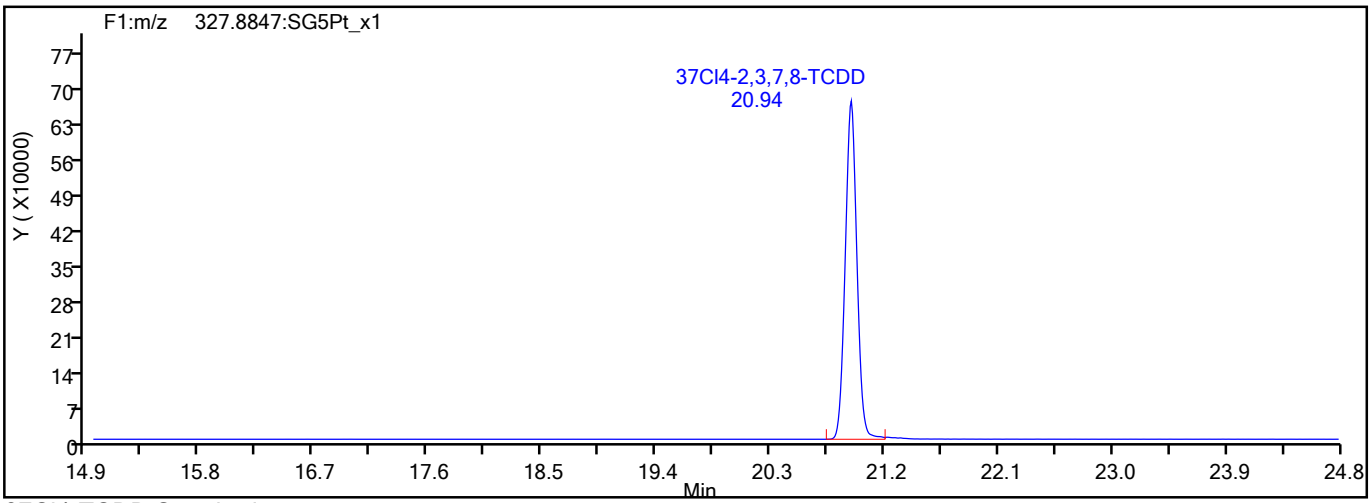

37Cl4-TCDD Standards

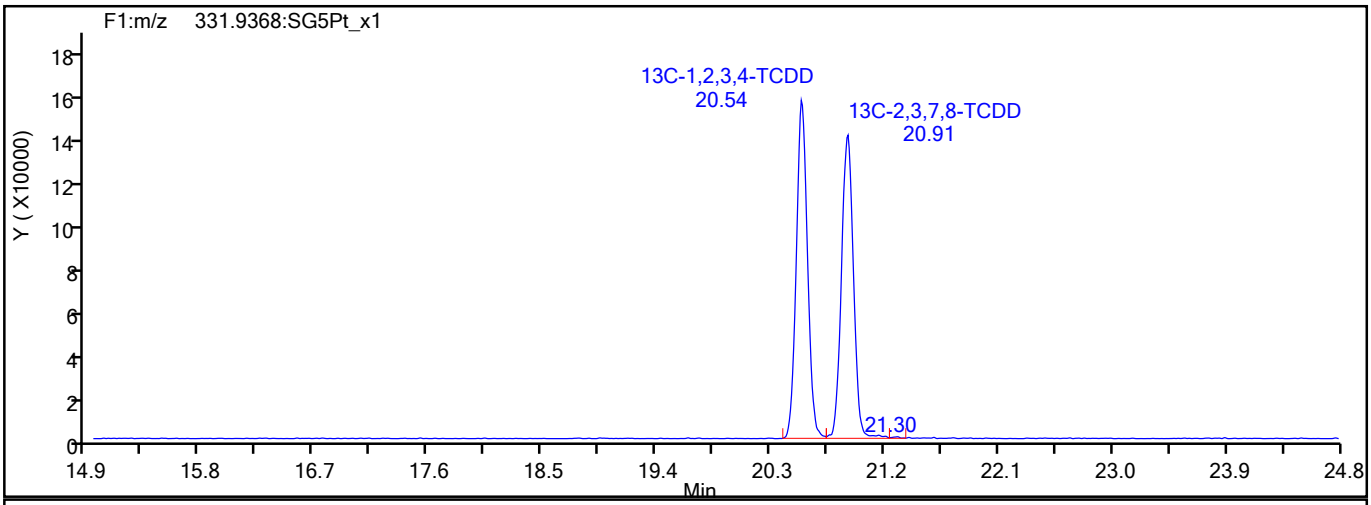

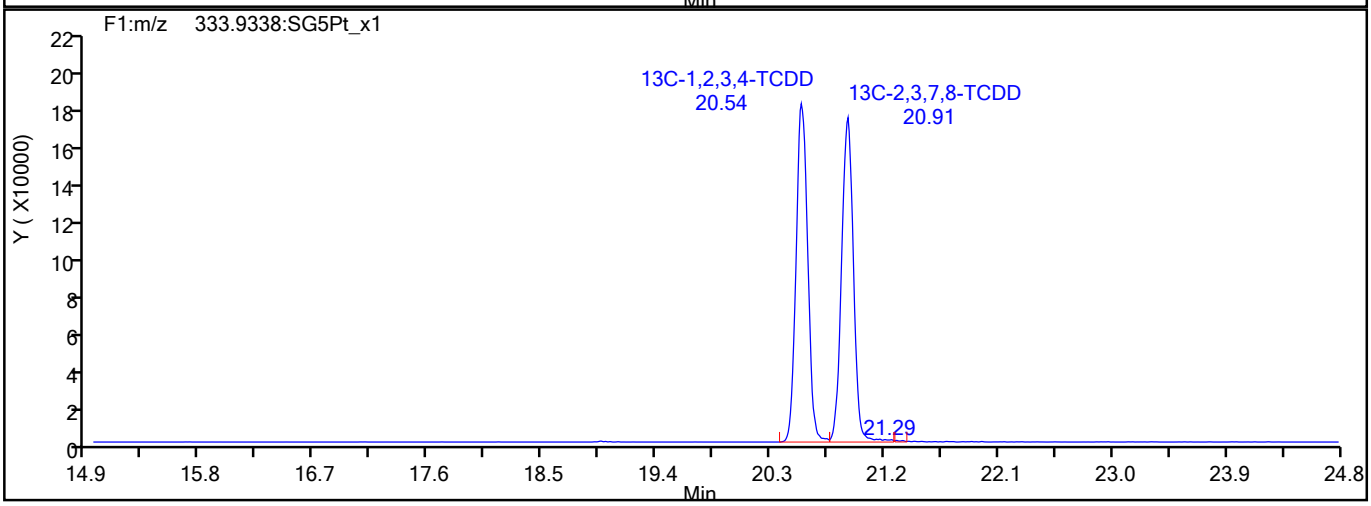

776378

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

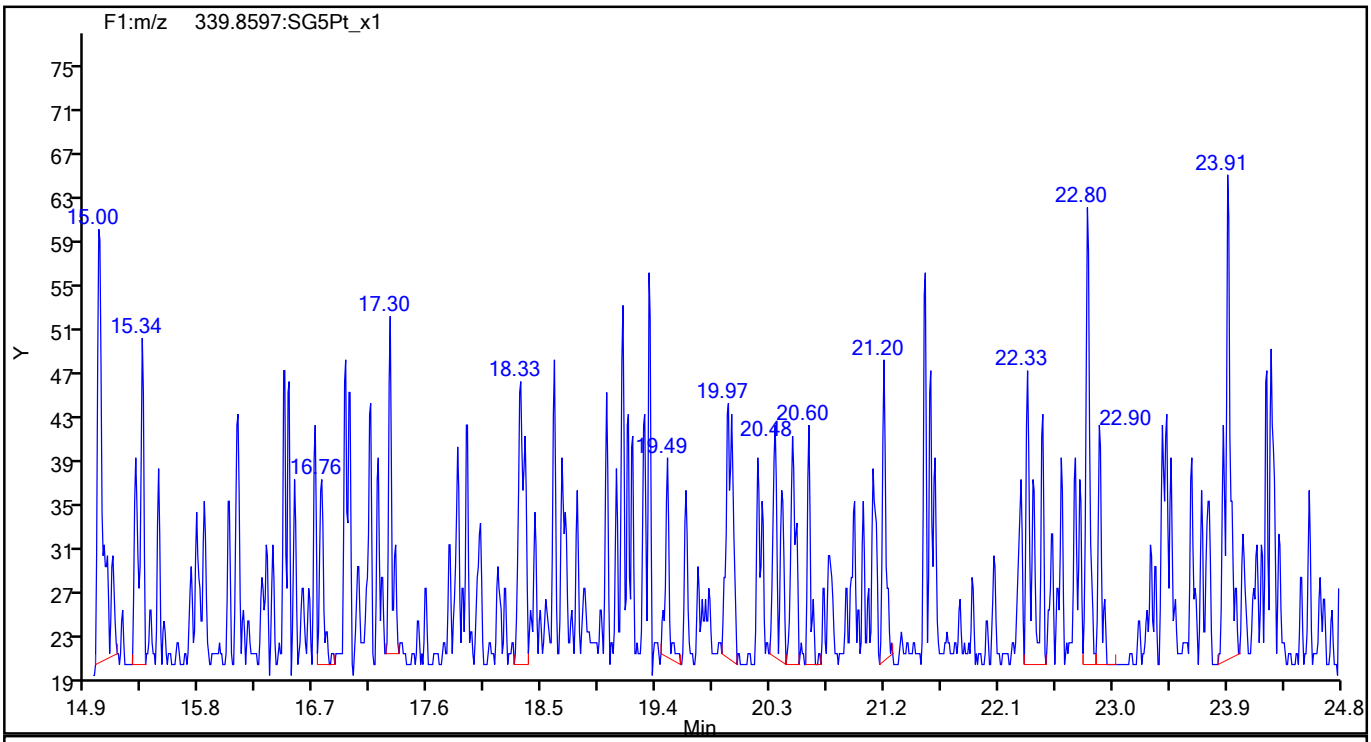

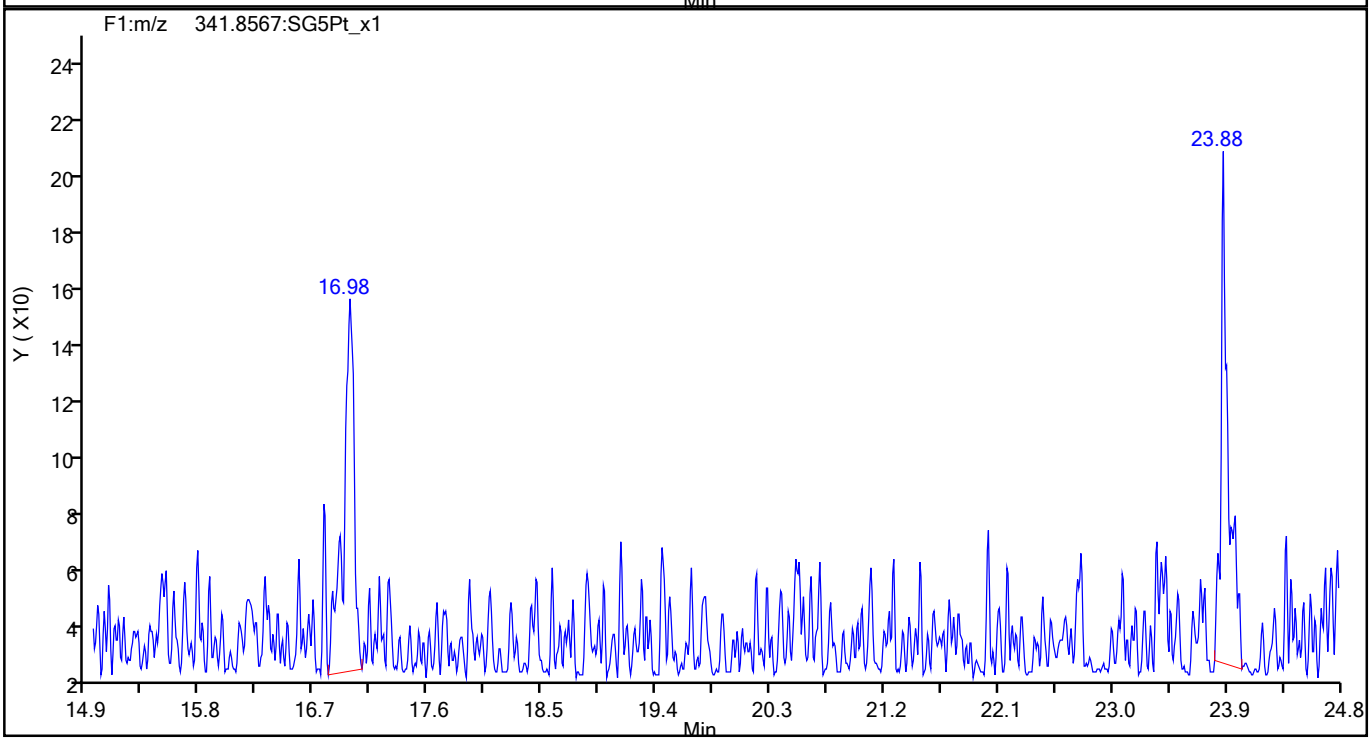

776379

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

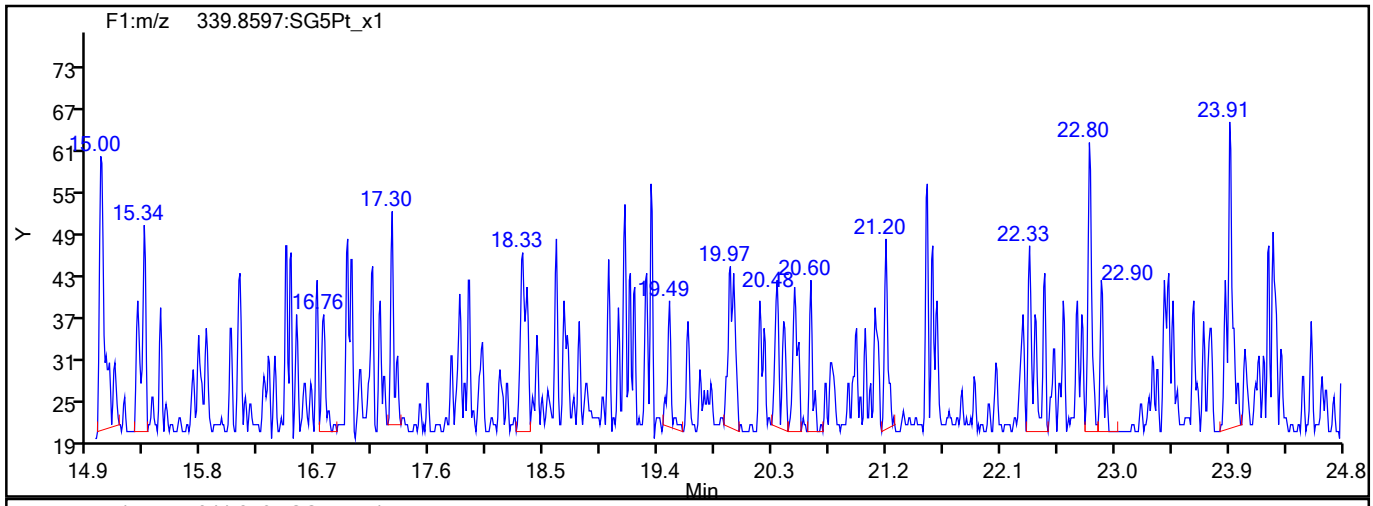

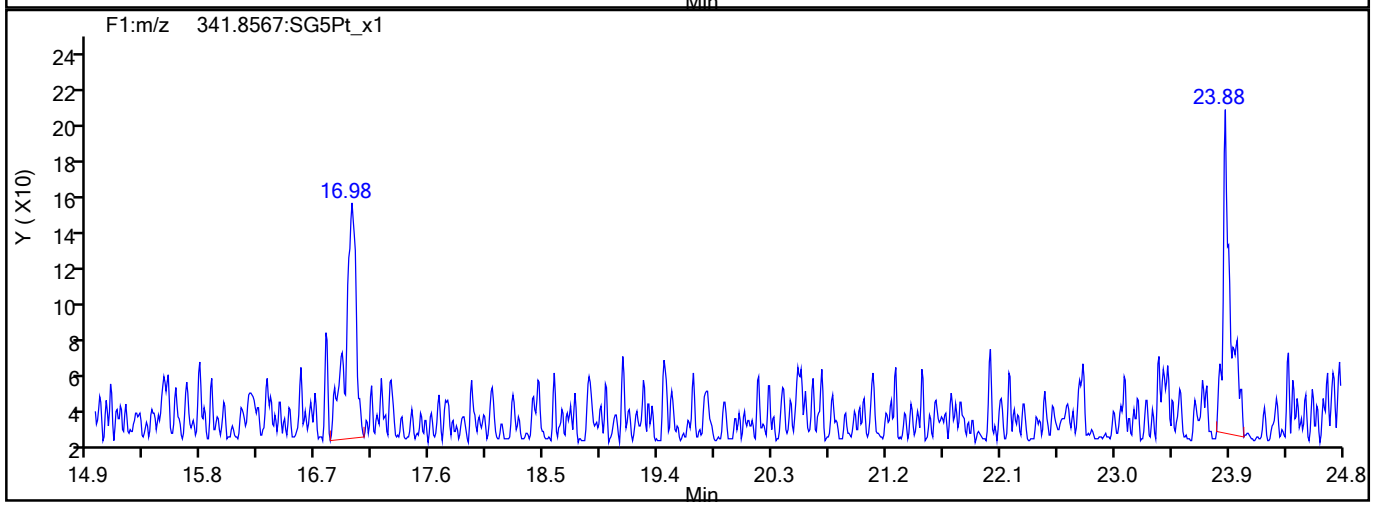

F1 PeCDFs Interference Mass

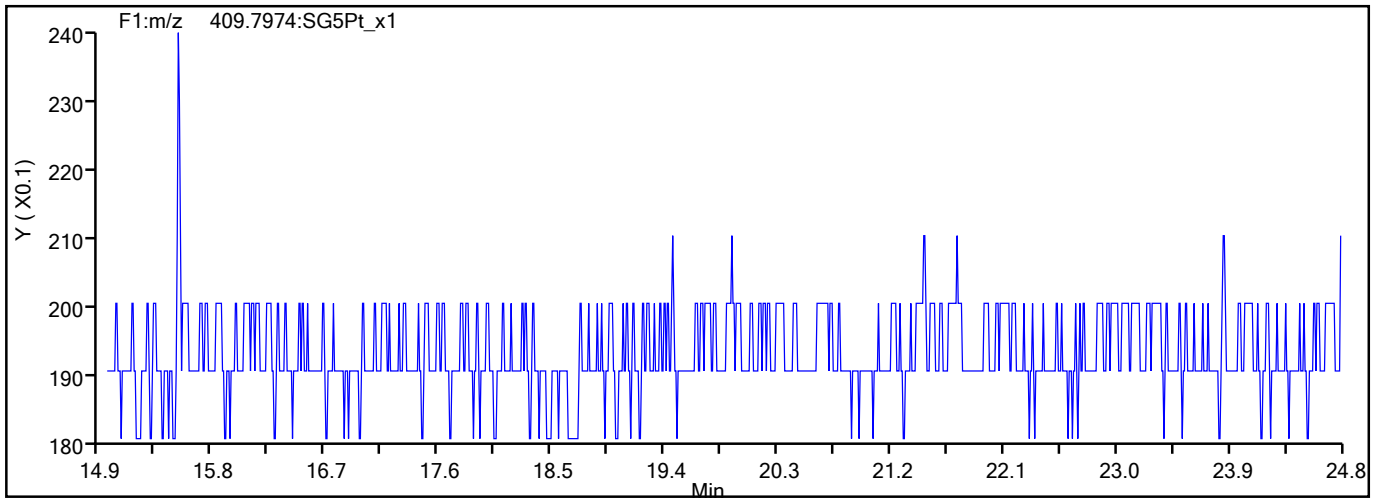

776380

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

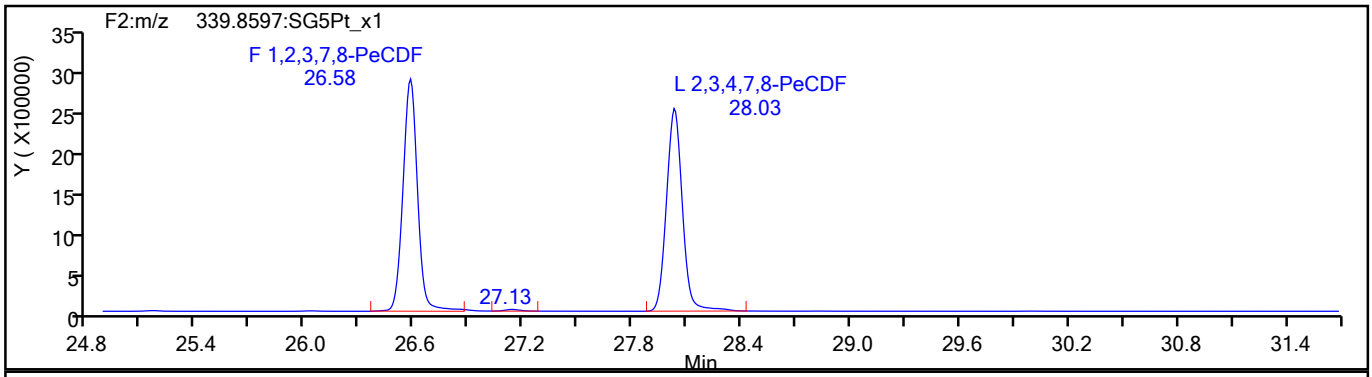

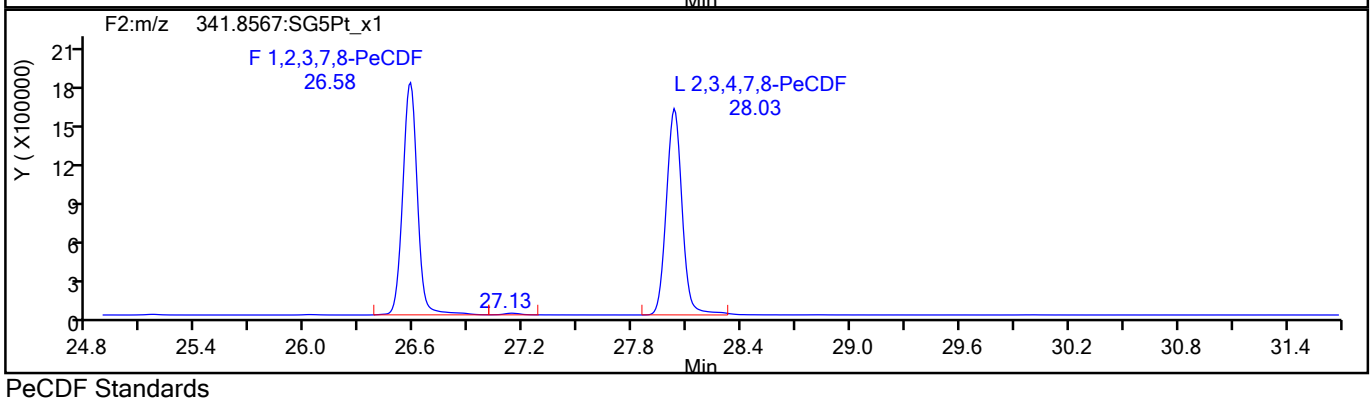

PeCDF Standards

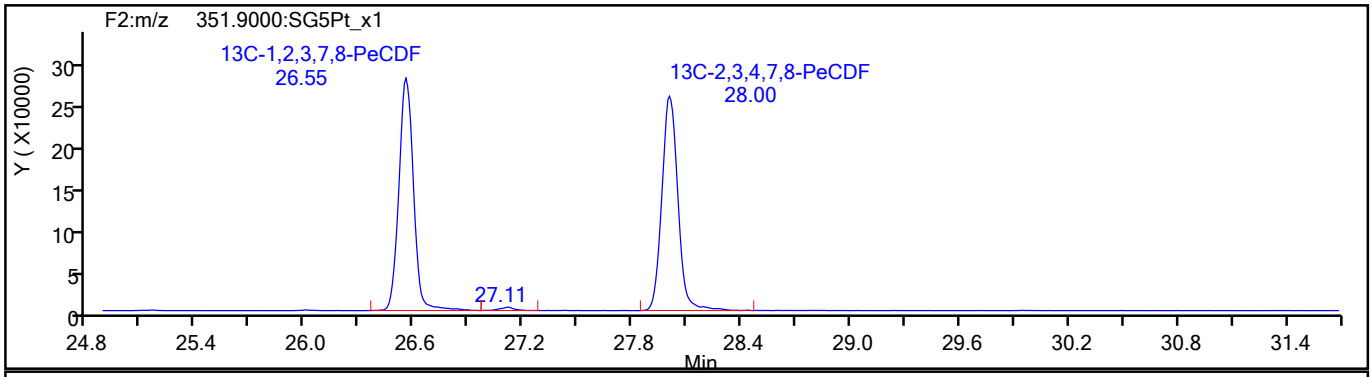

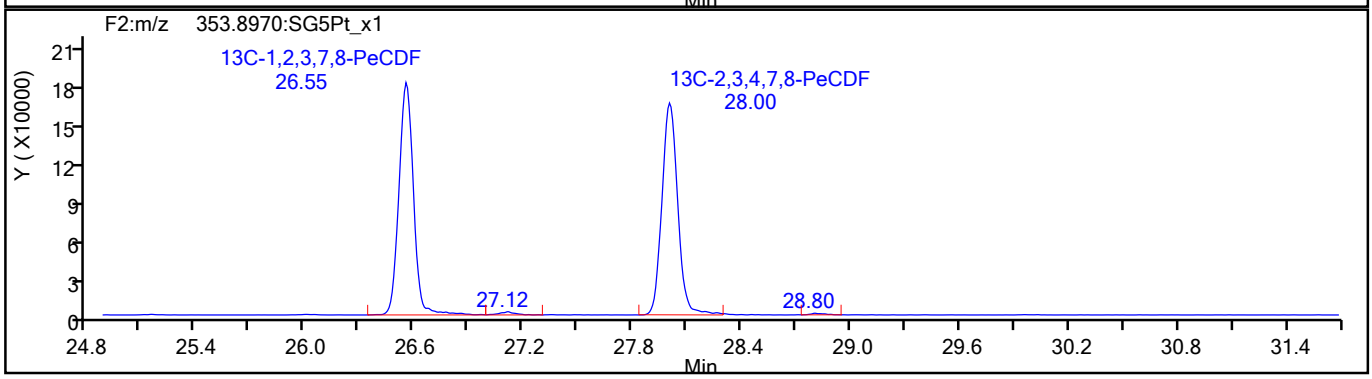

776381

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

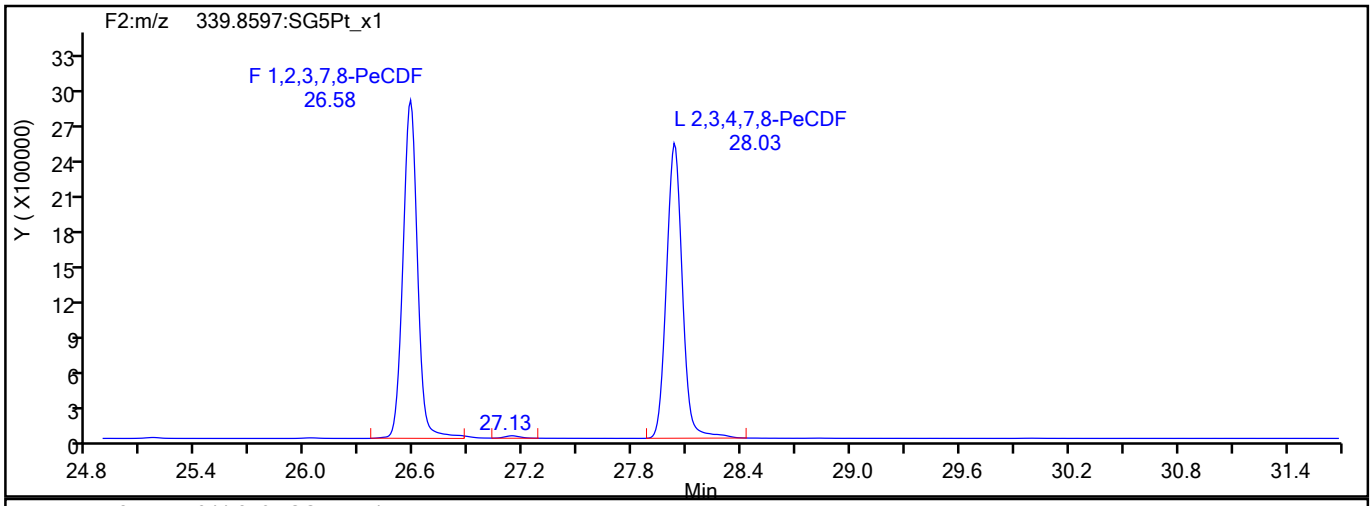

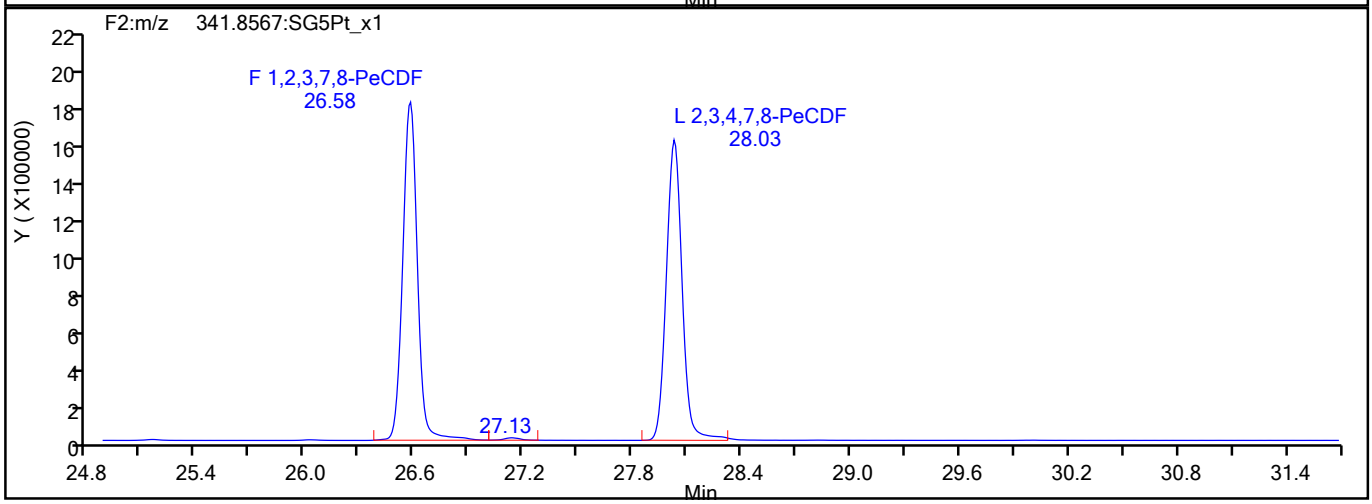

PeCDF Interference Mass

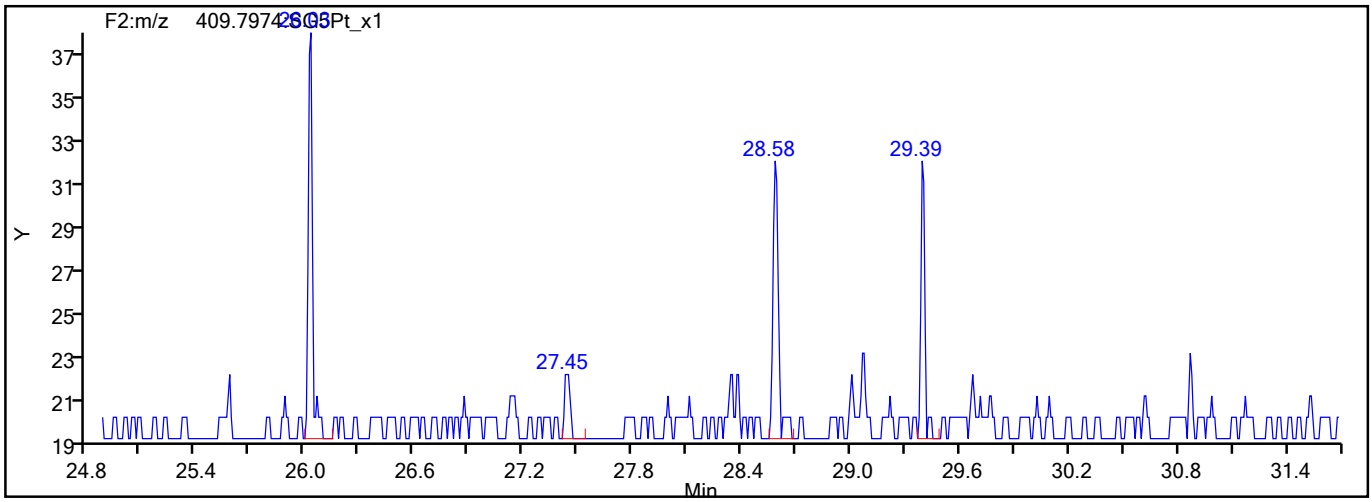

776382

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDD

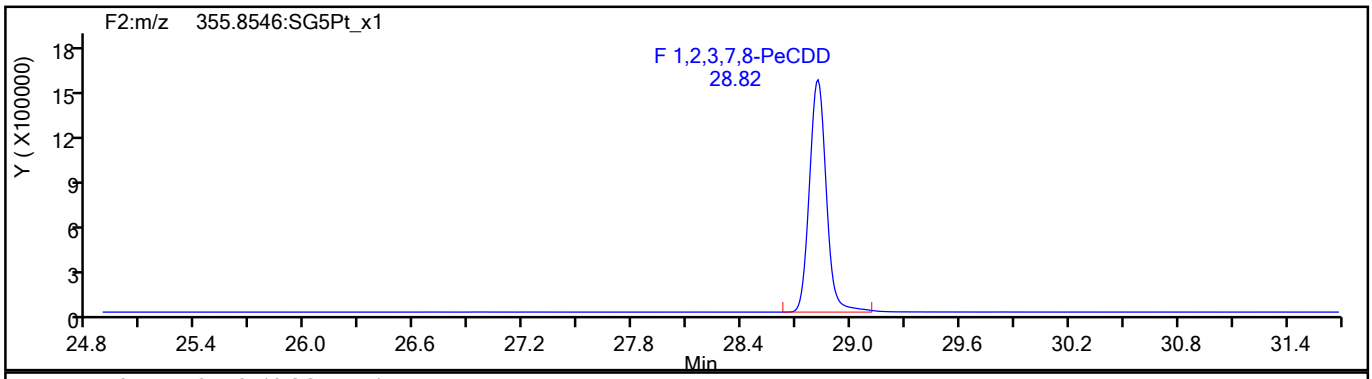

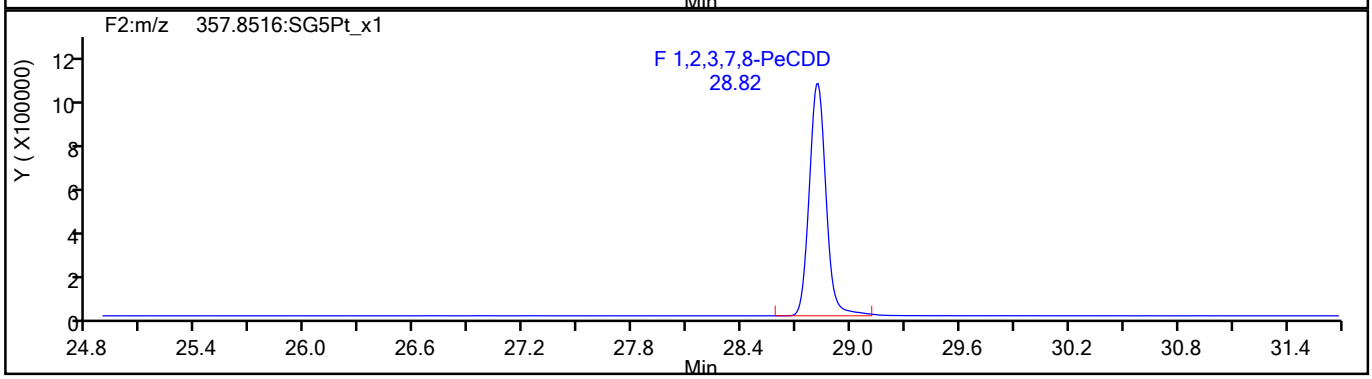

PeCDD Standards

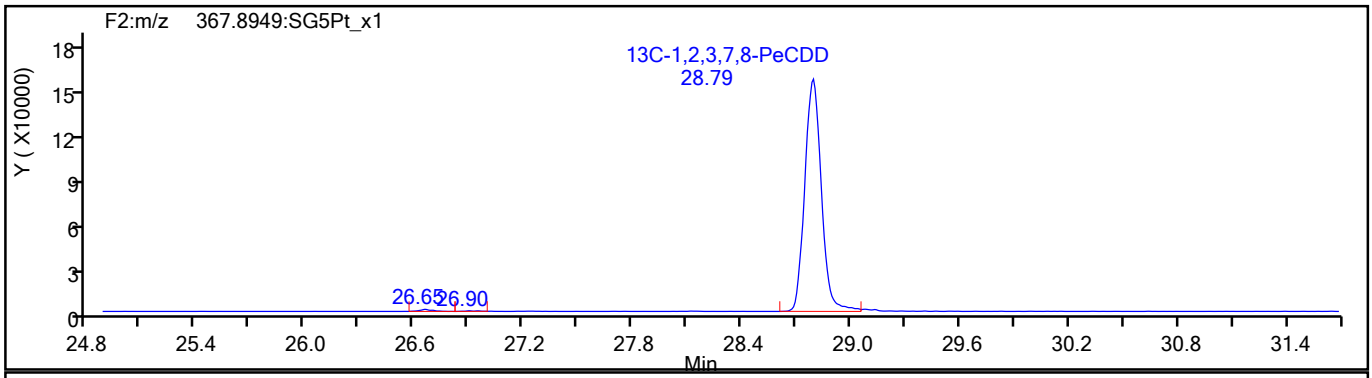

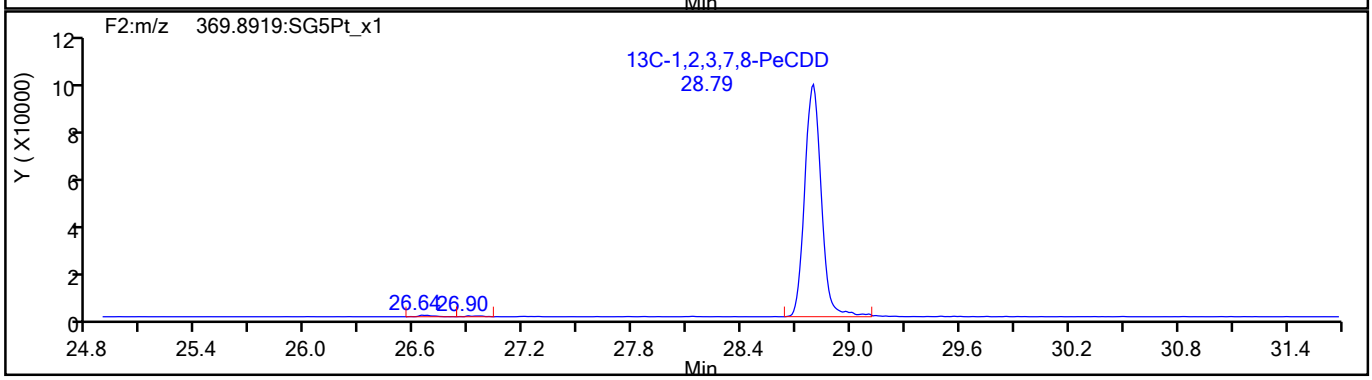

776383

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

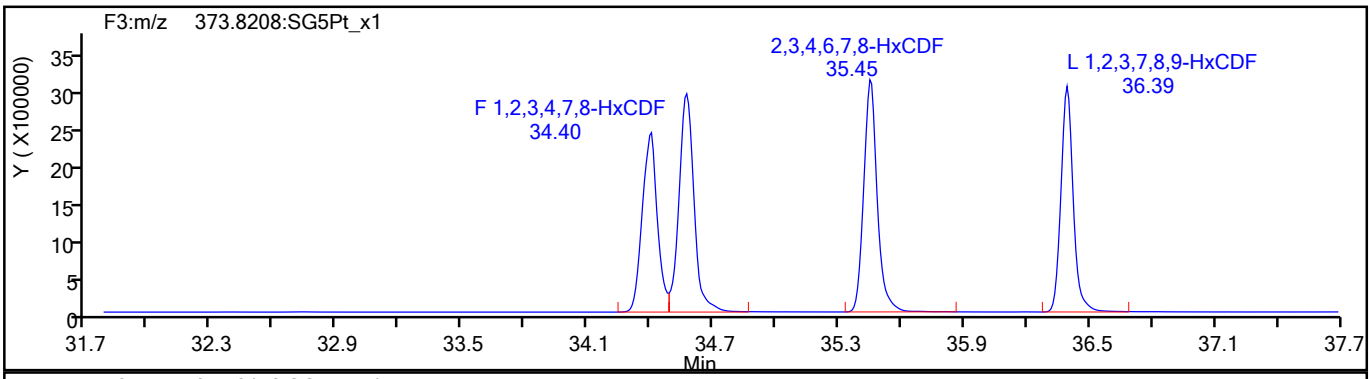

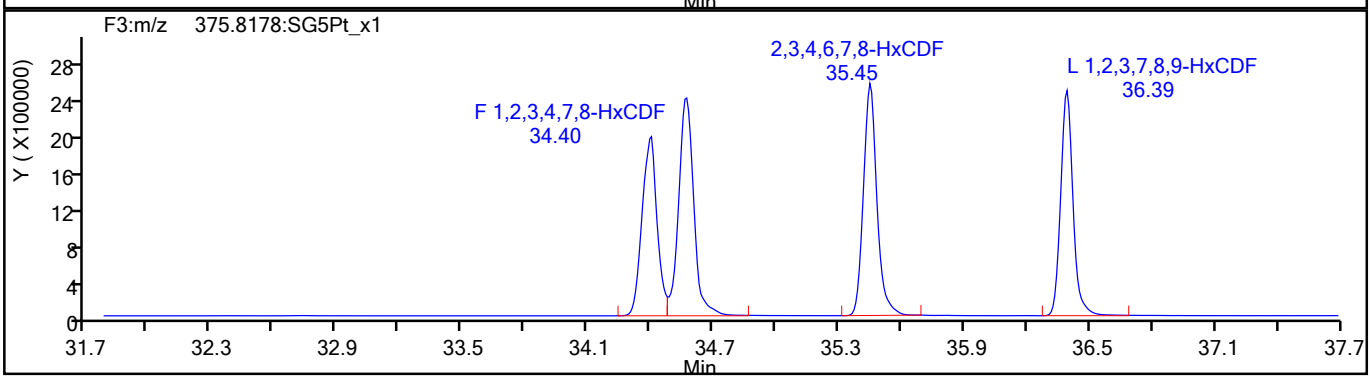

HxCDF Standards

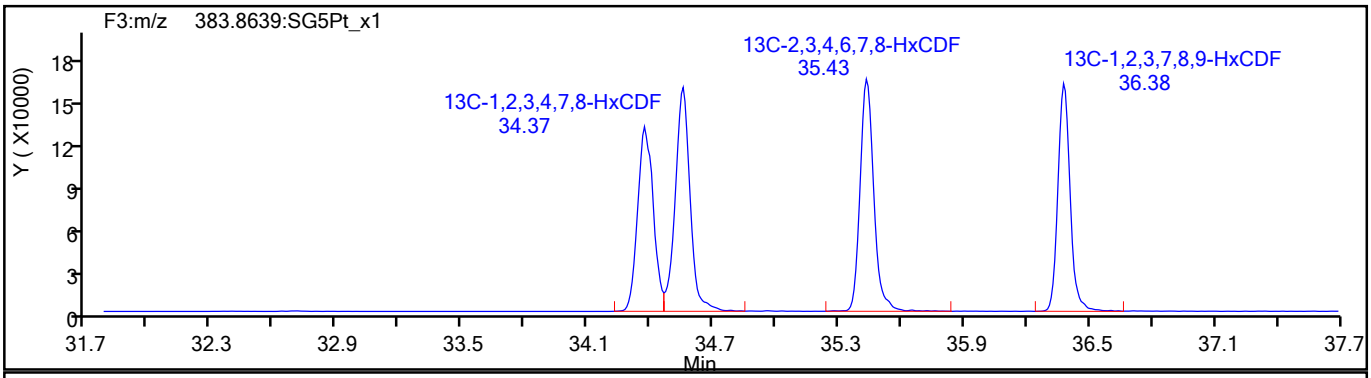

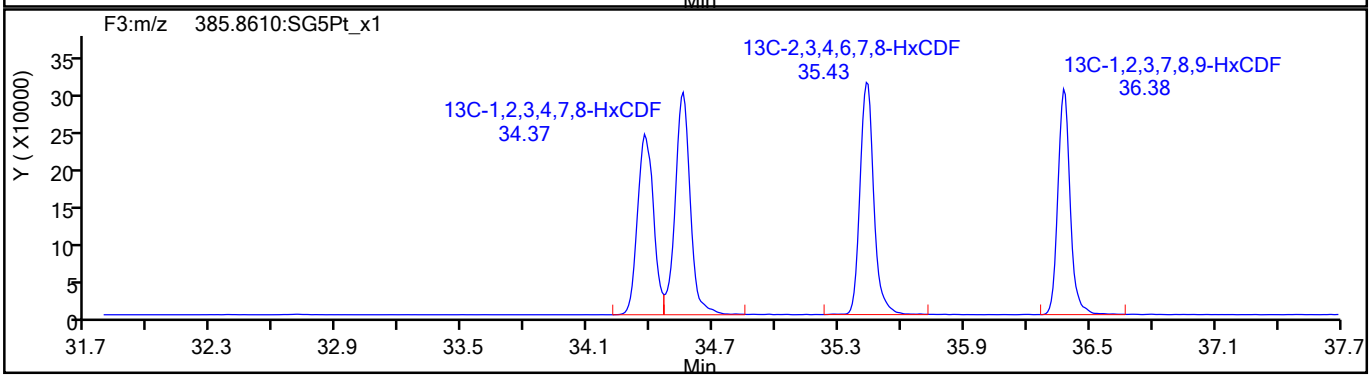

776384

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

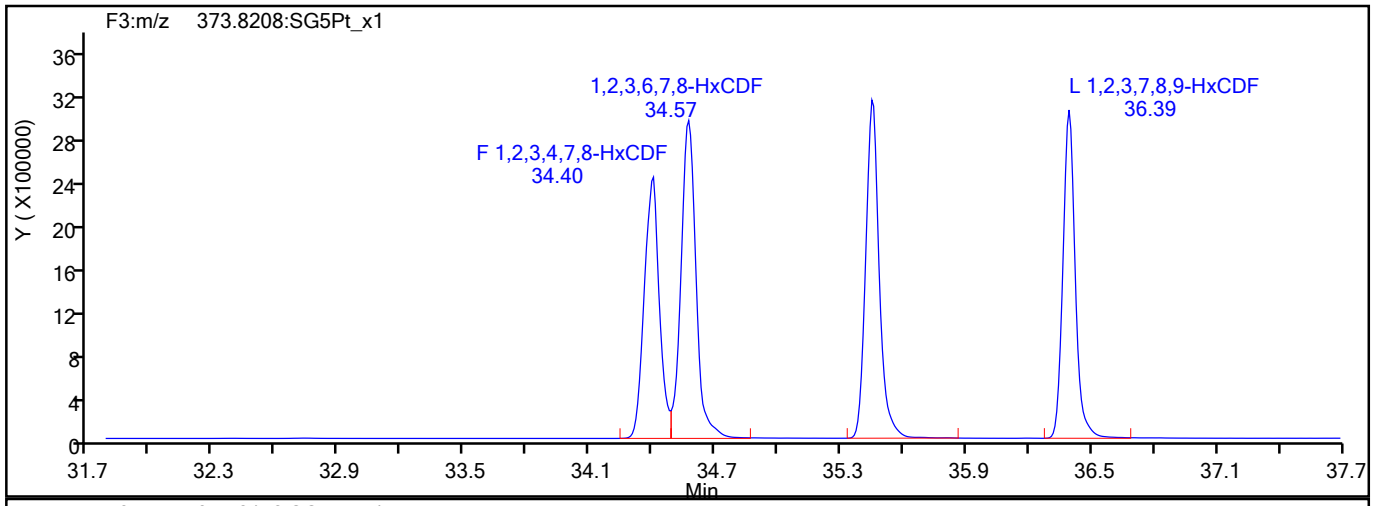

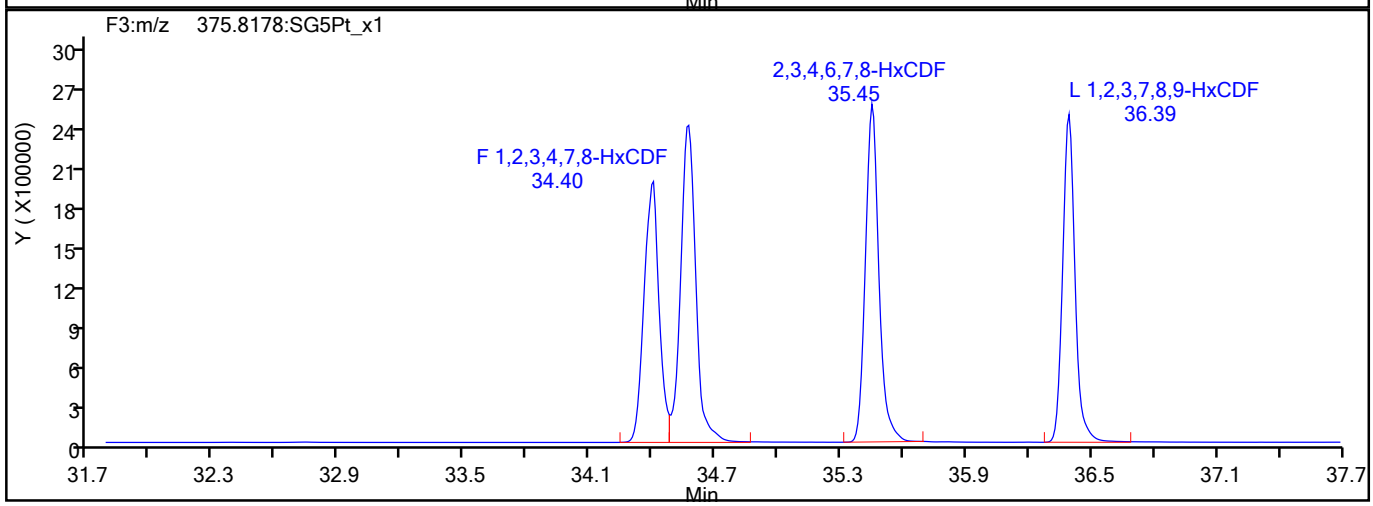

HxCDF Interference Mass

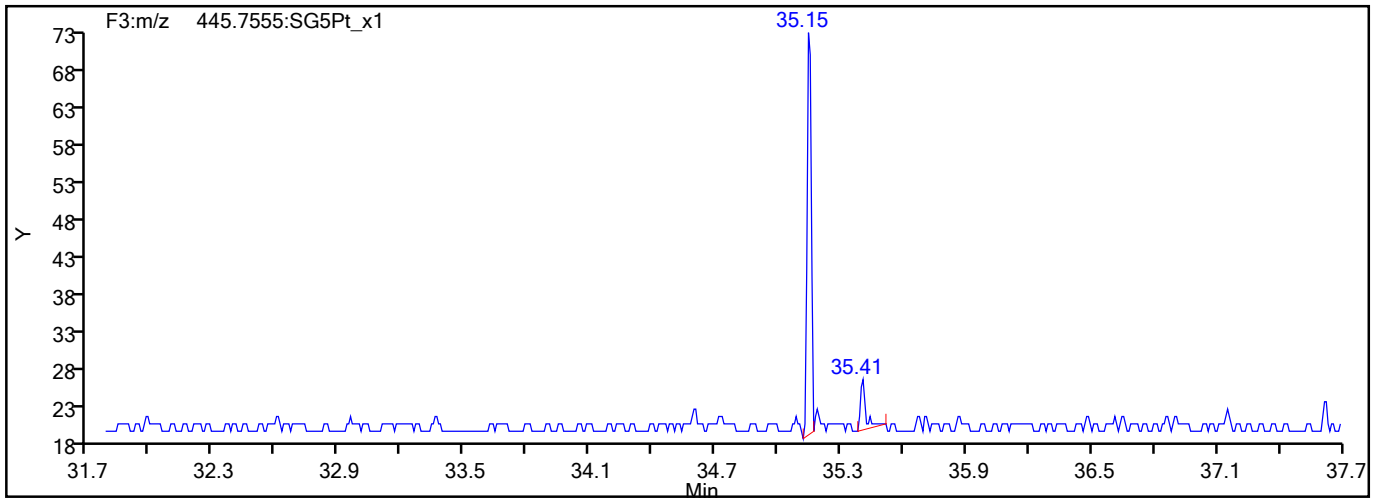

776385

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

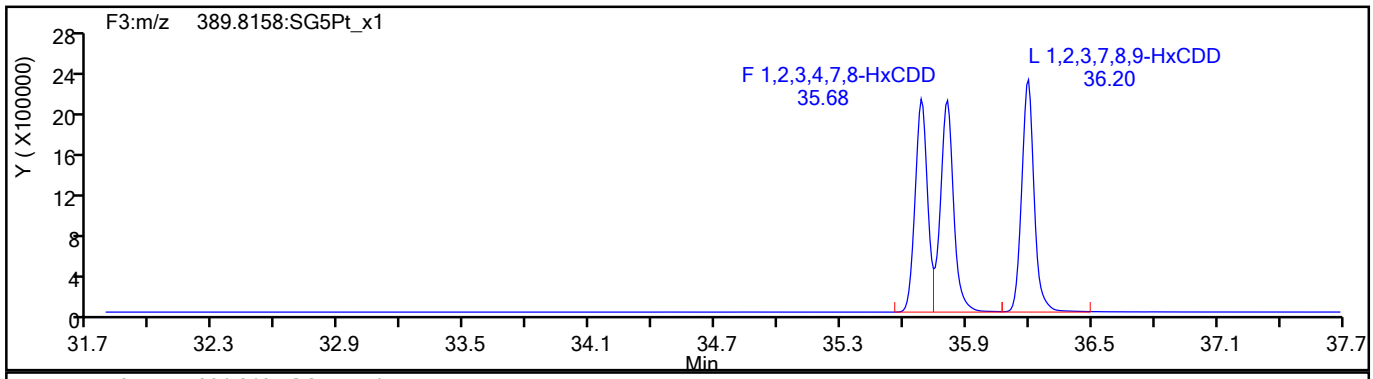

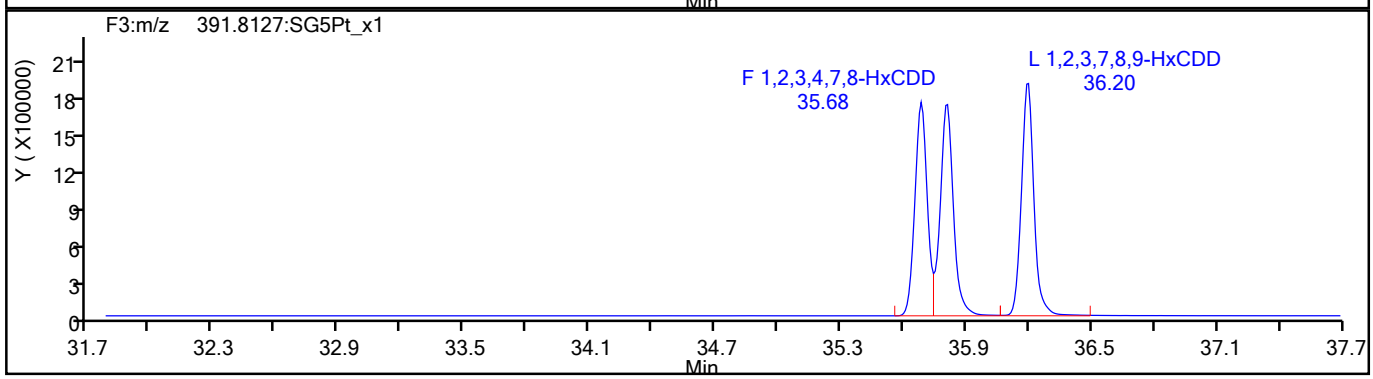

HxCDD Standards

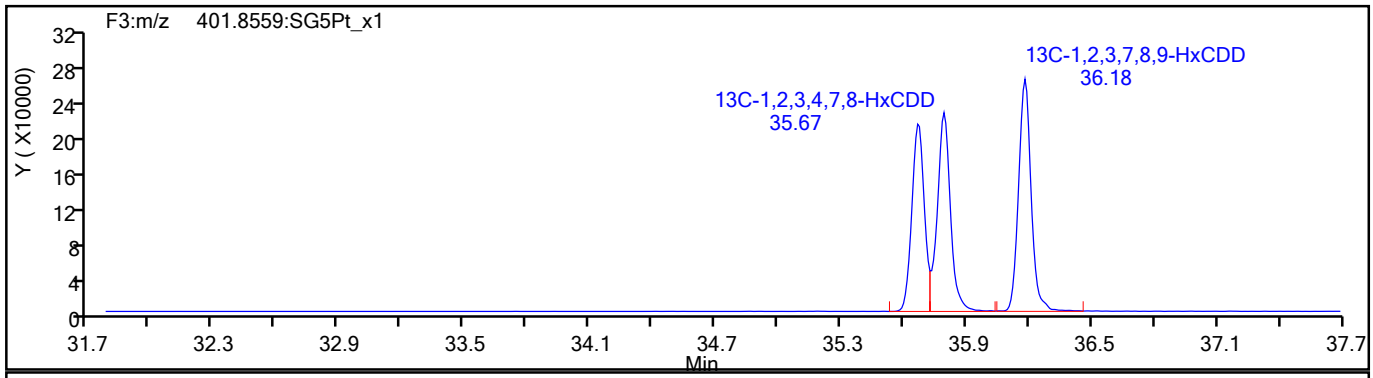

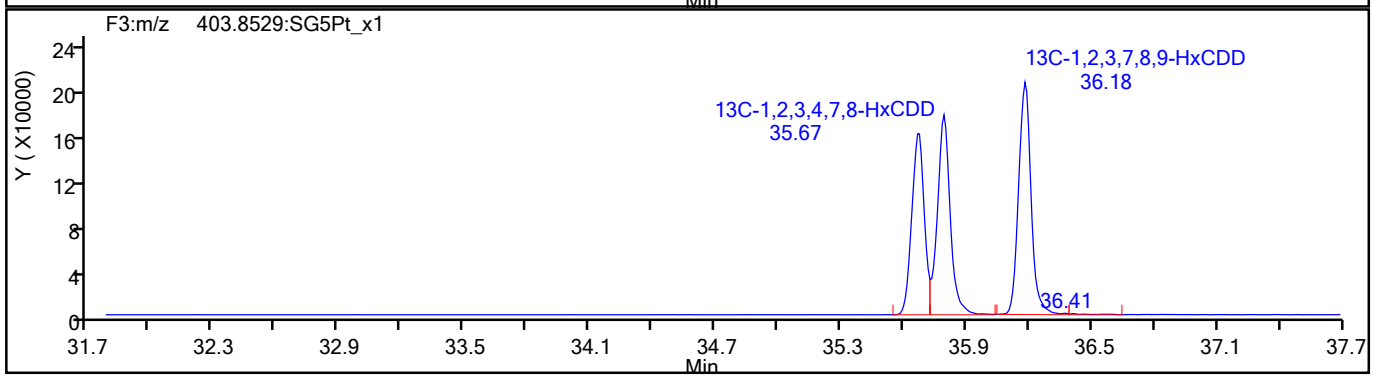

776386

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

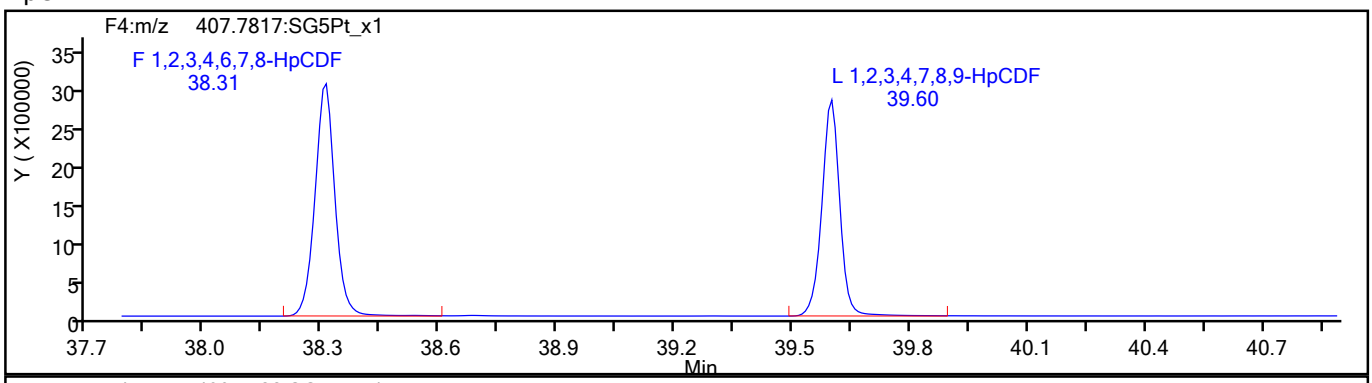

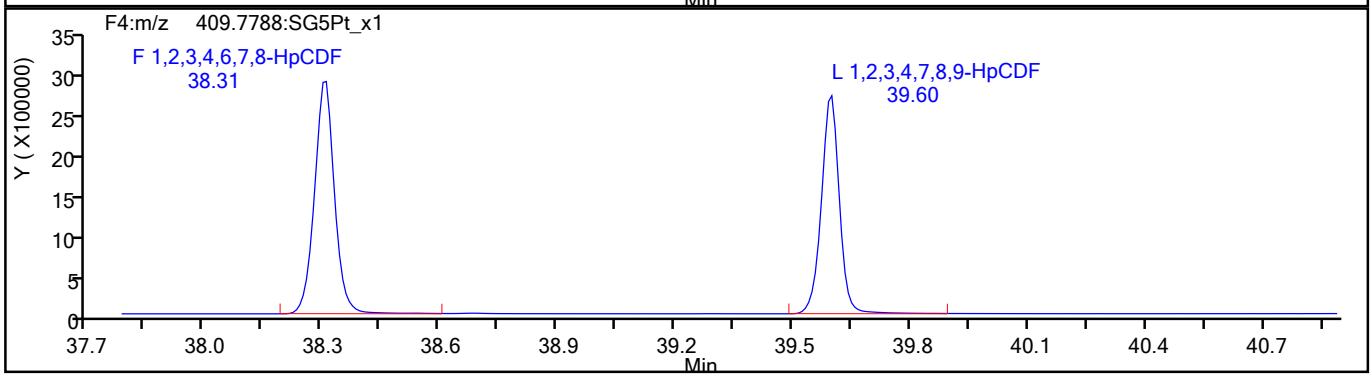

HpCDF Standards

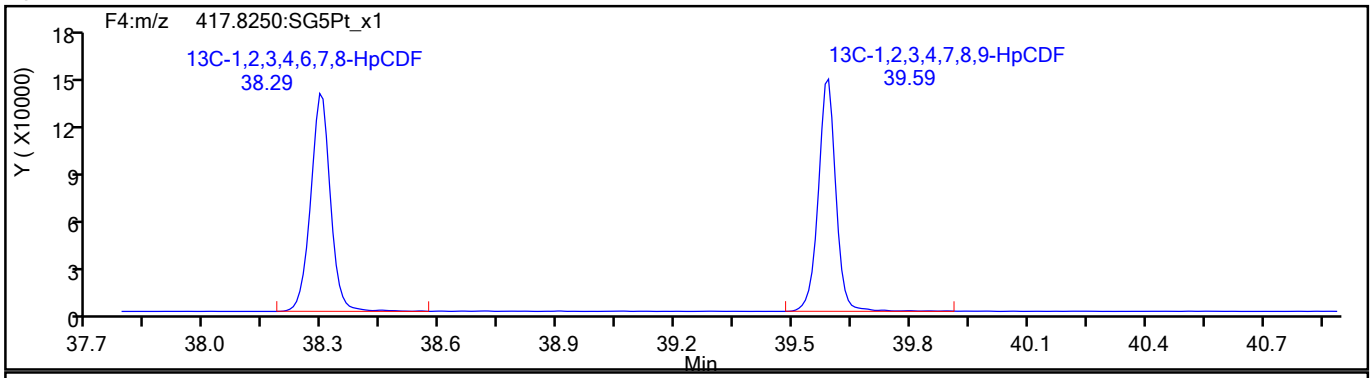

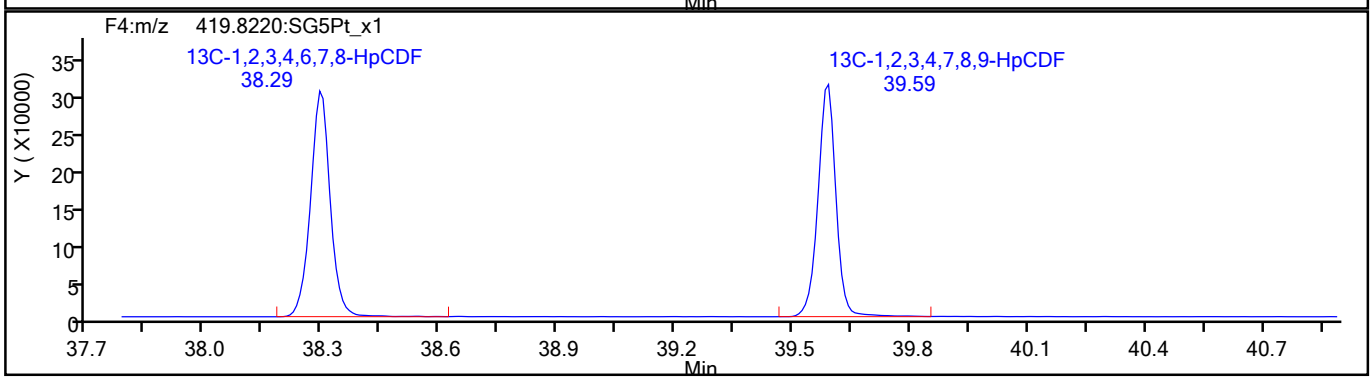

776387

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

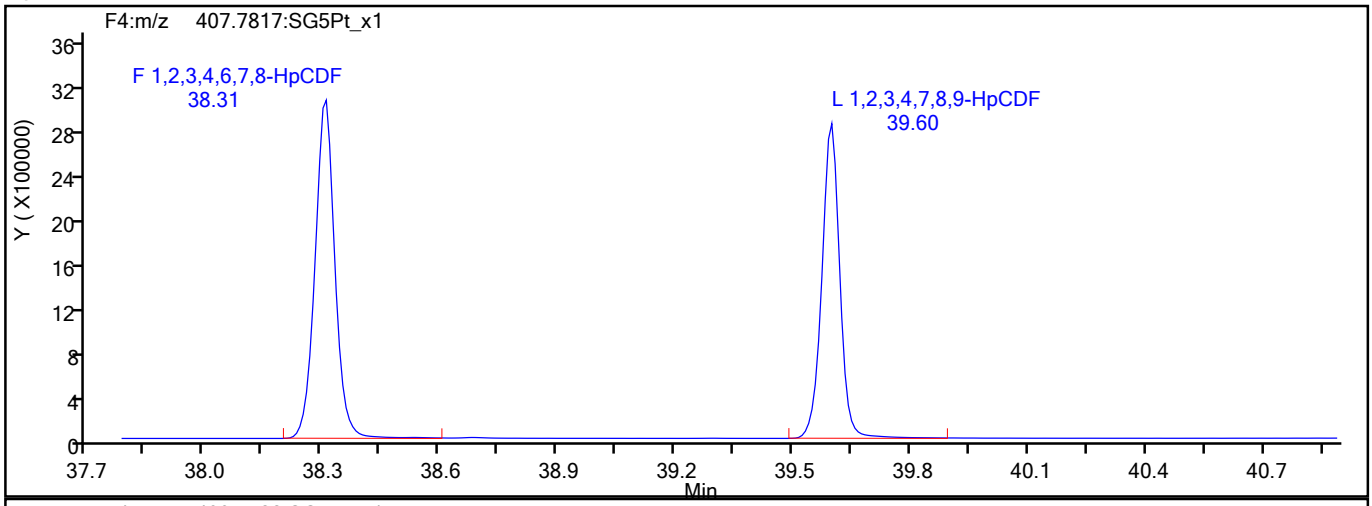

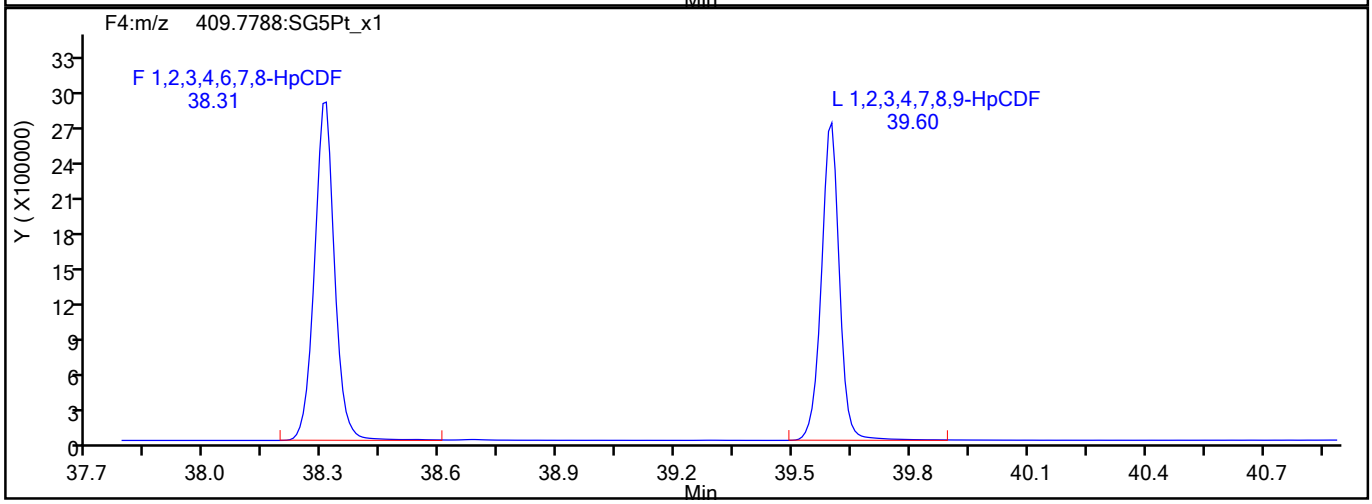

HpCDF Interference Mass

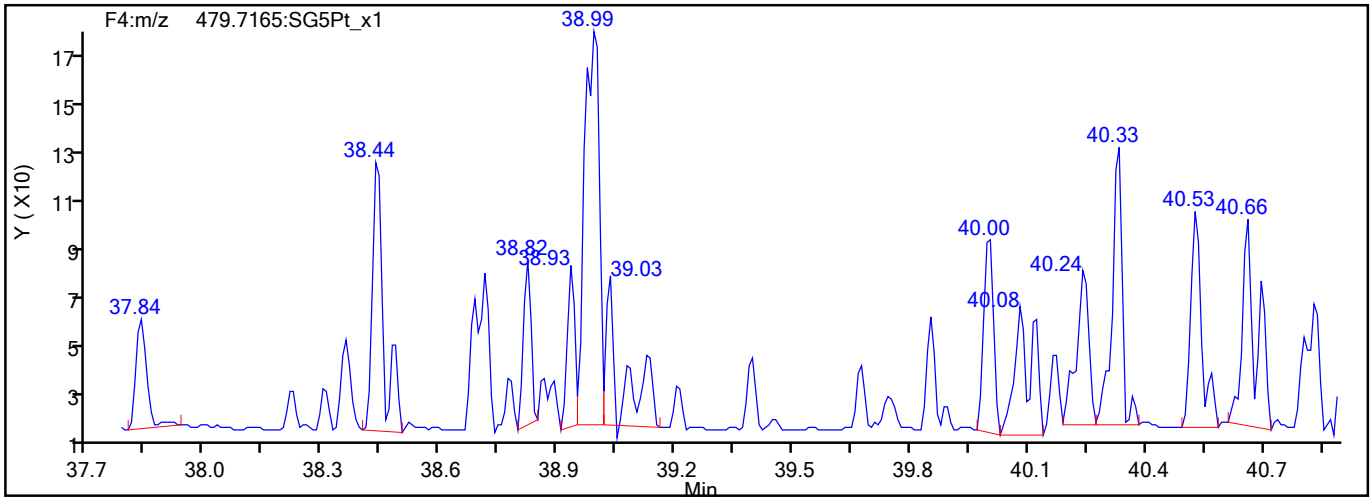

776388

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

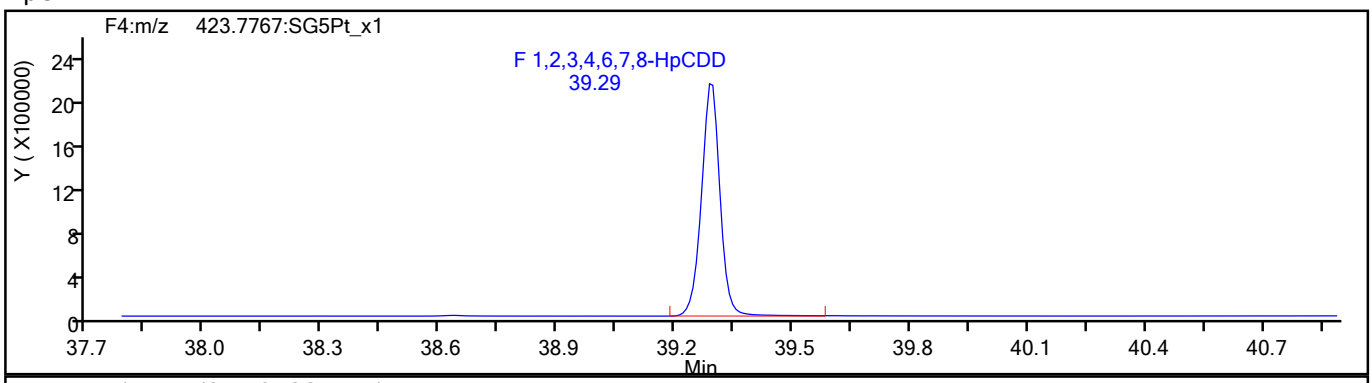

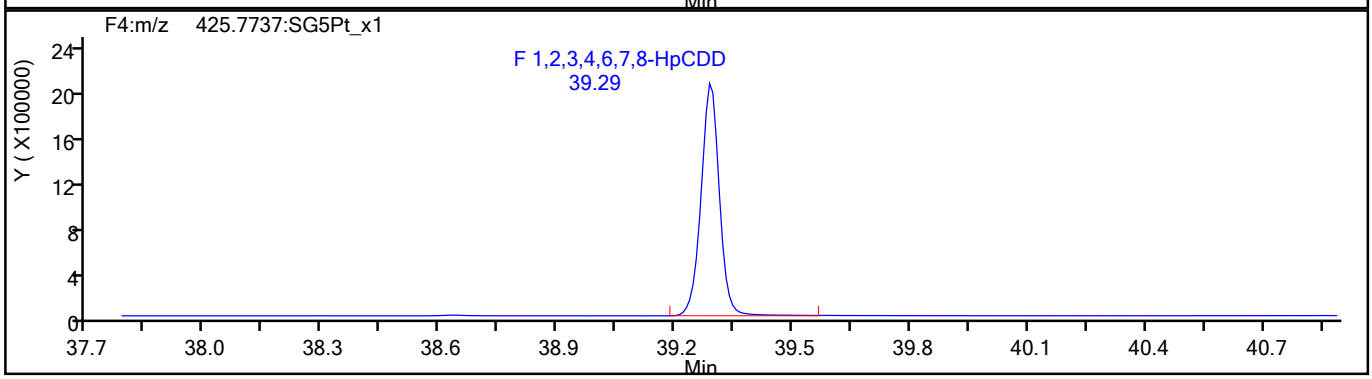

HpCDD Standards

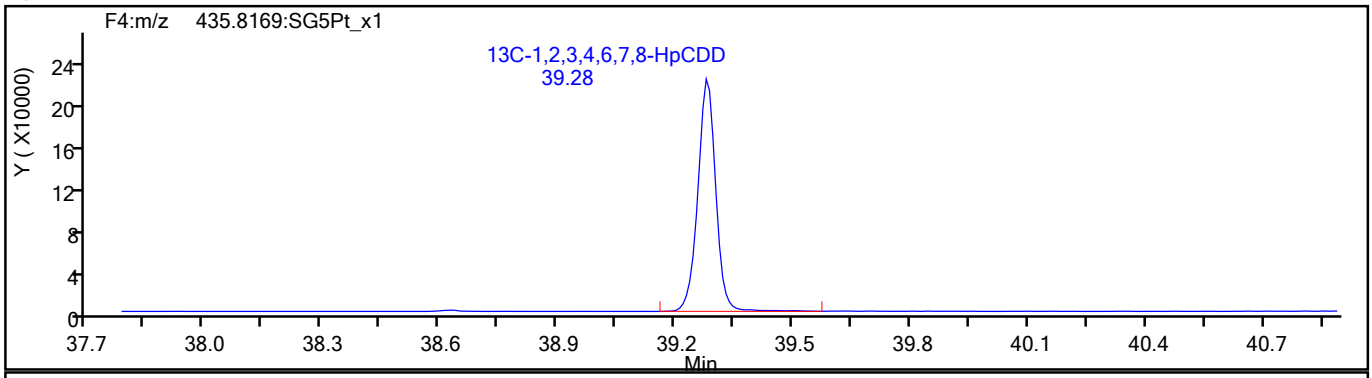

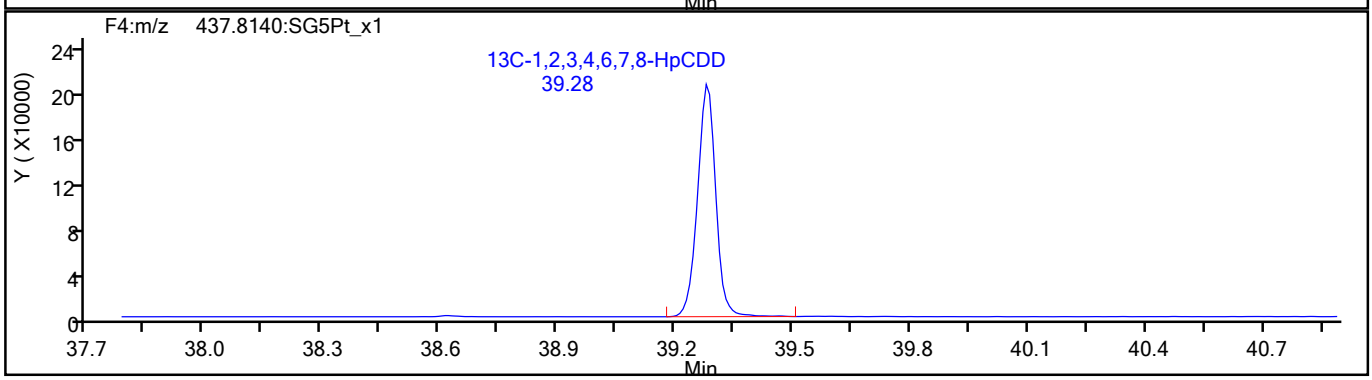

776389

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

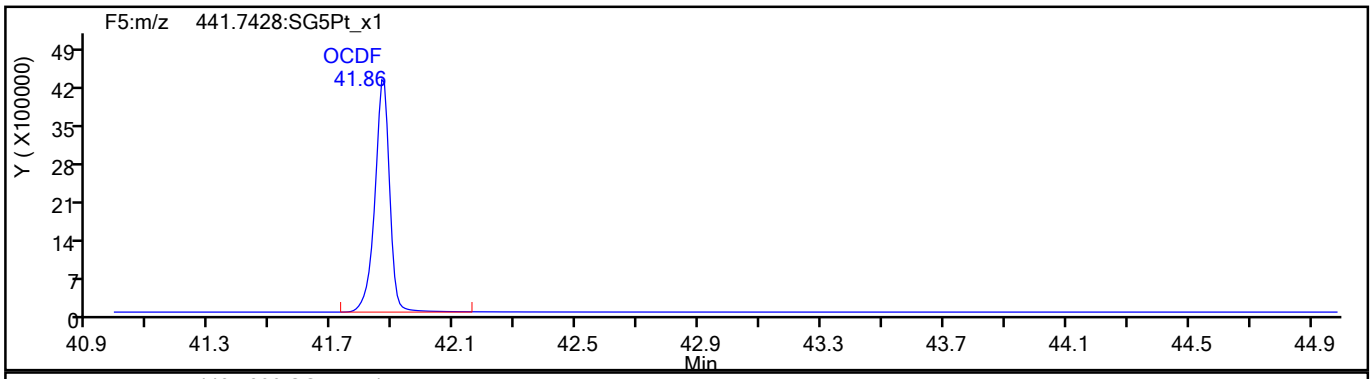

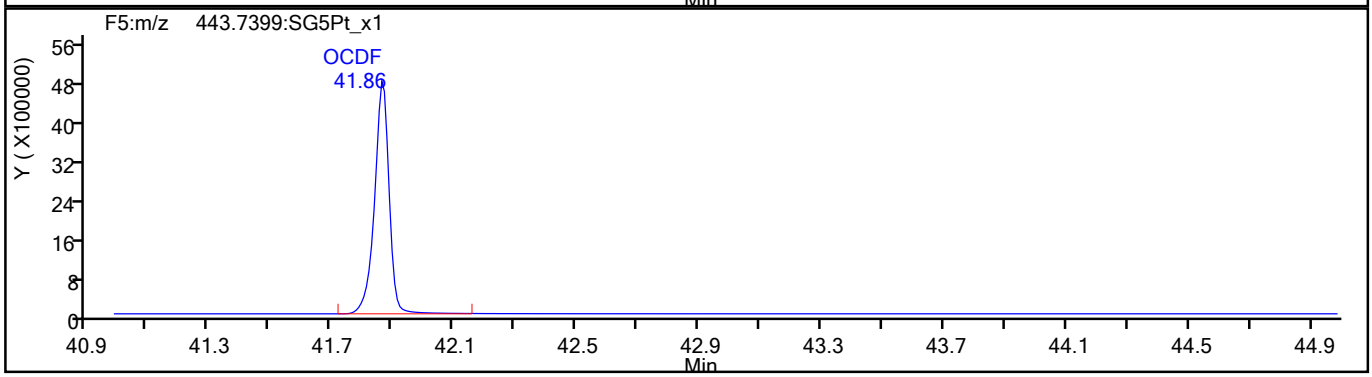

OCDF Standards

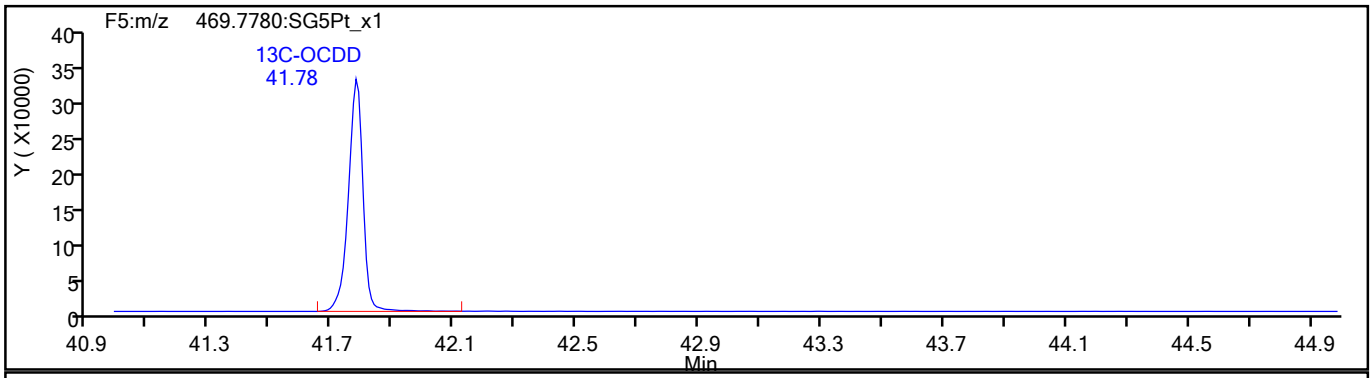

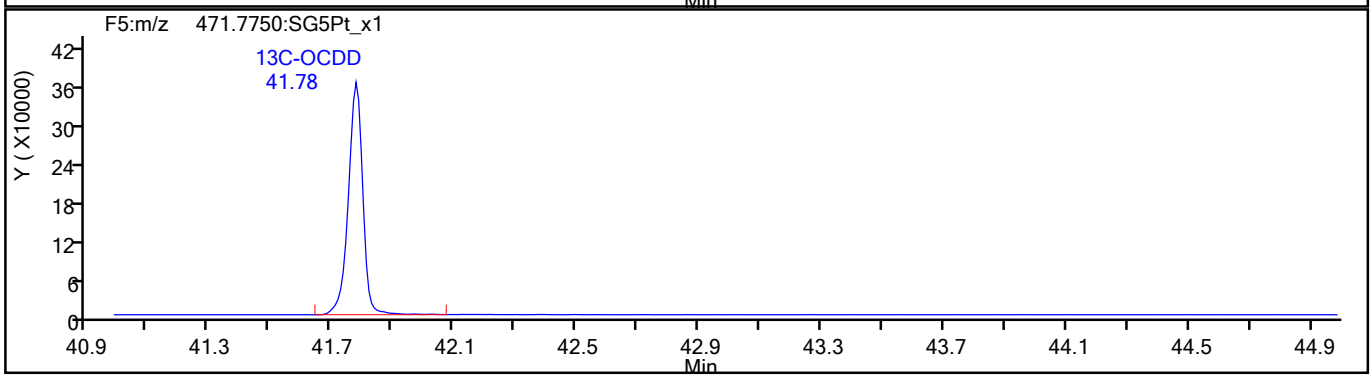

776390

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

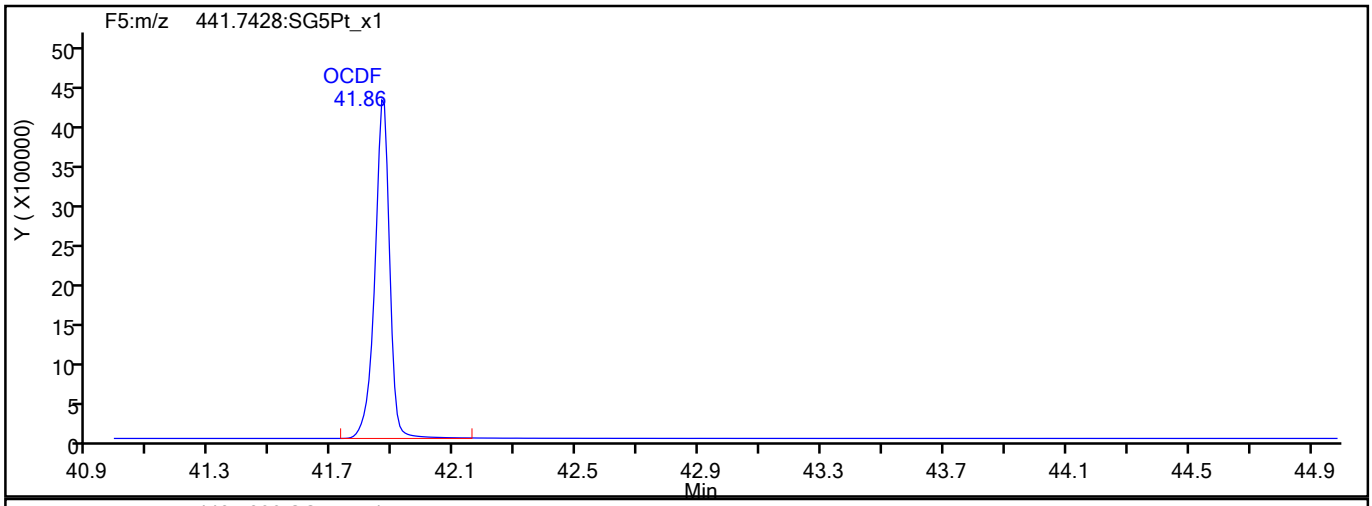

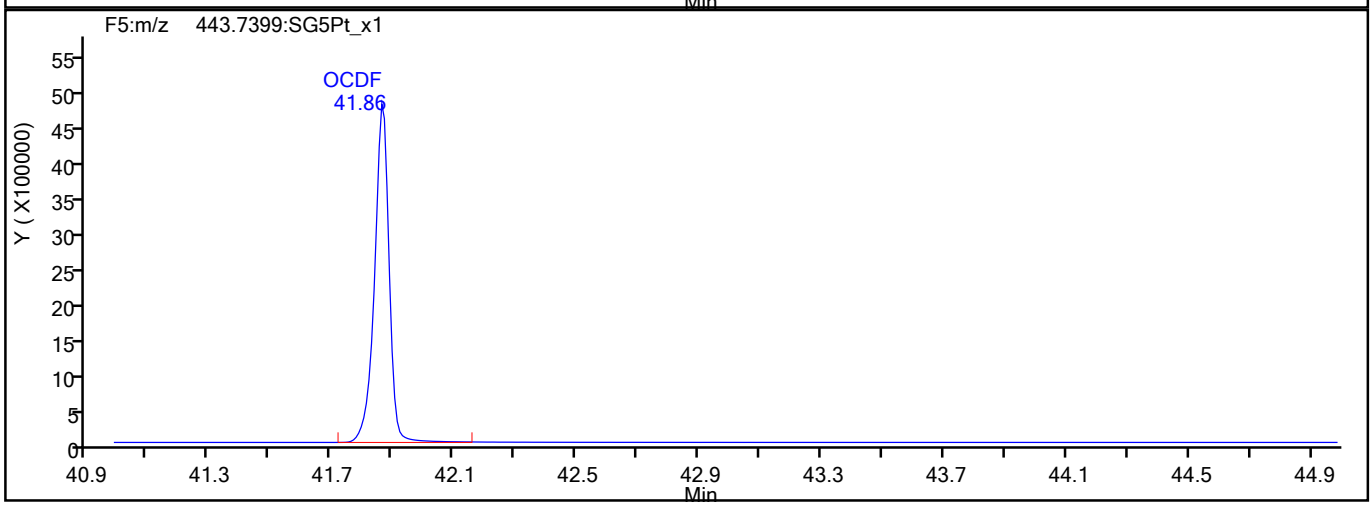

OCDF Interference Mass

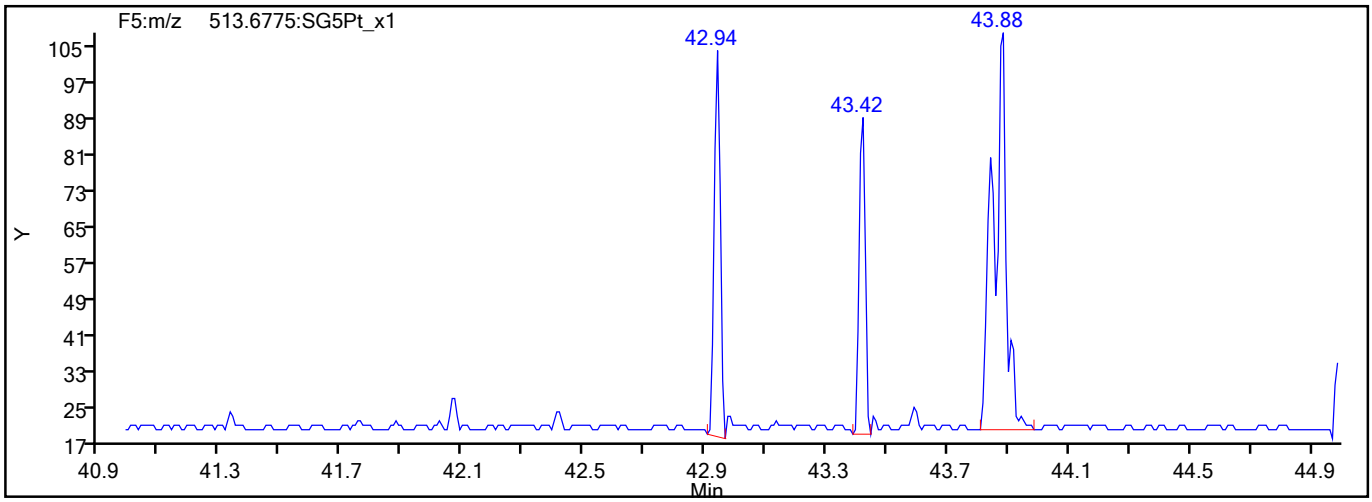

776391

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

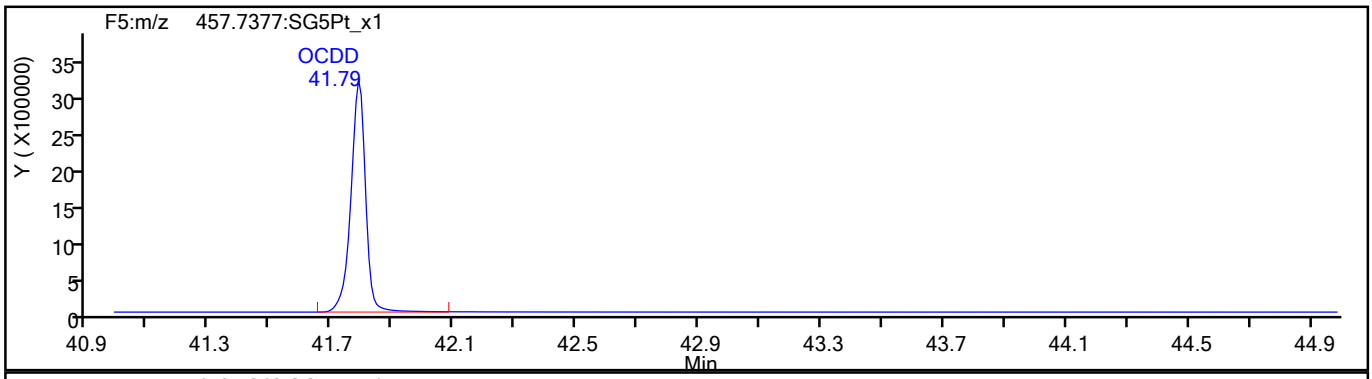

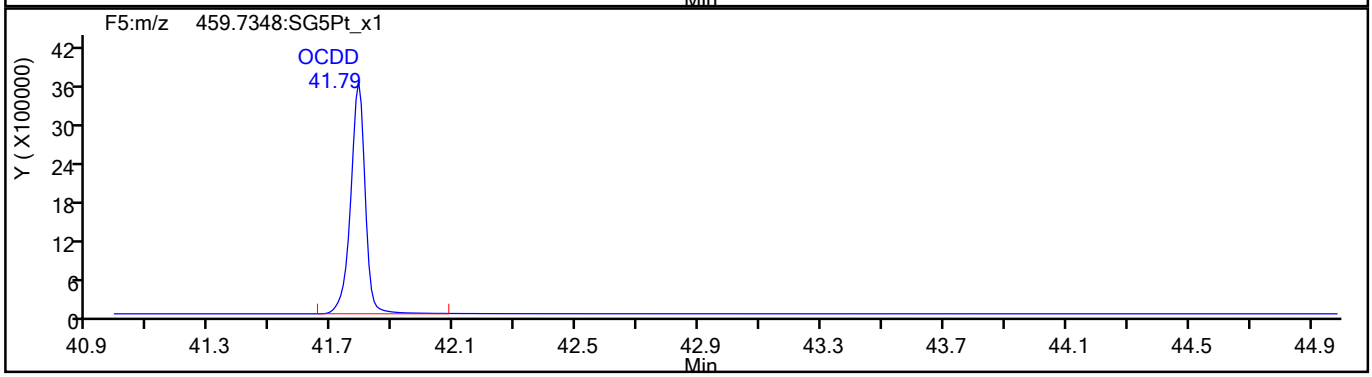

OCDD Standards

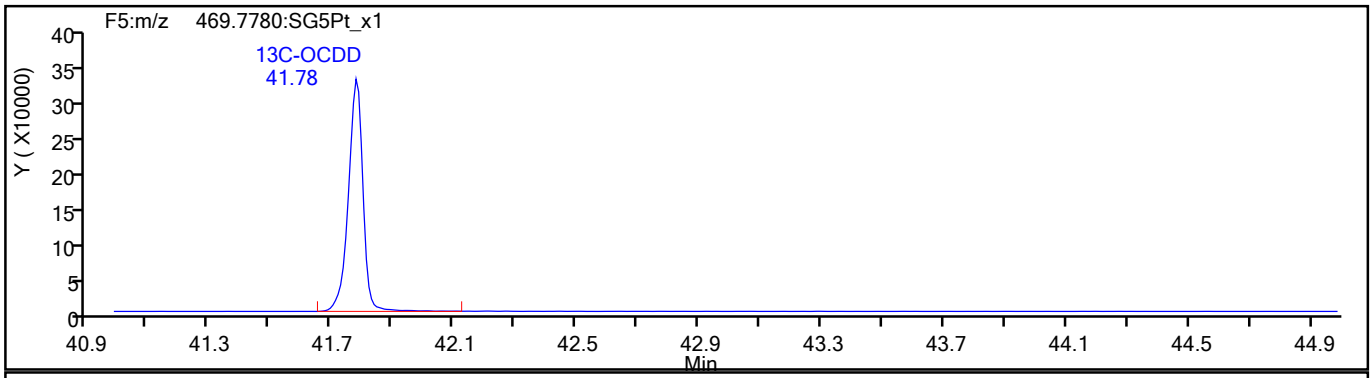

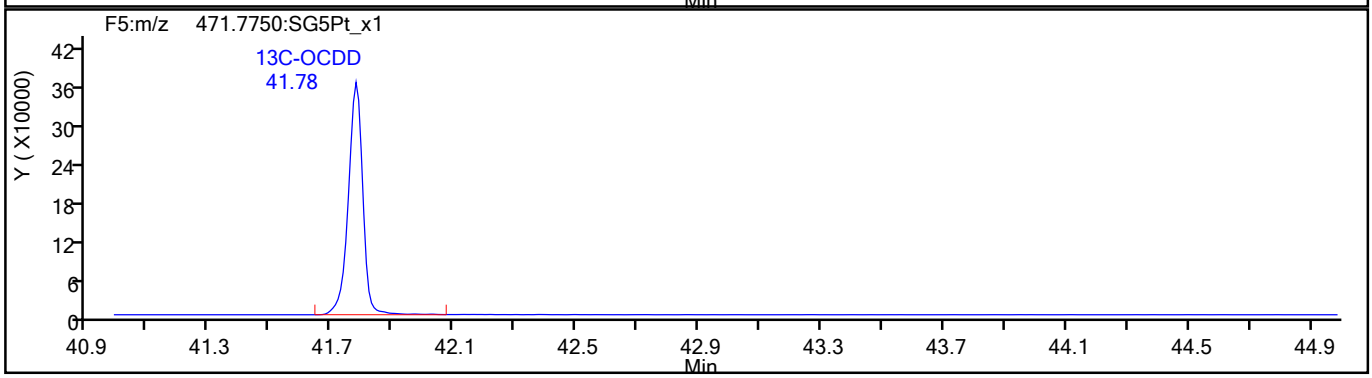

776392

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

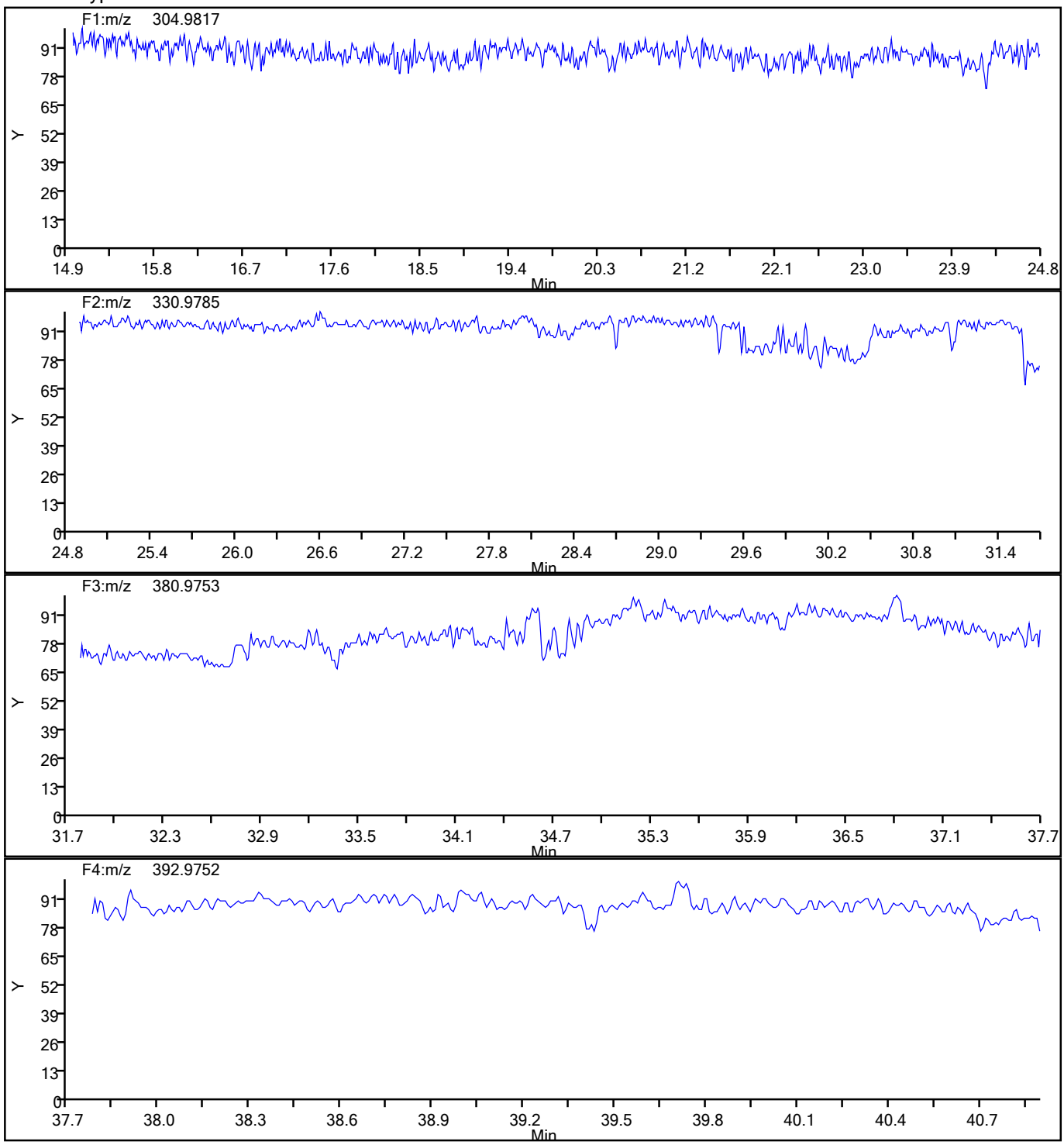

776393

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

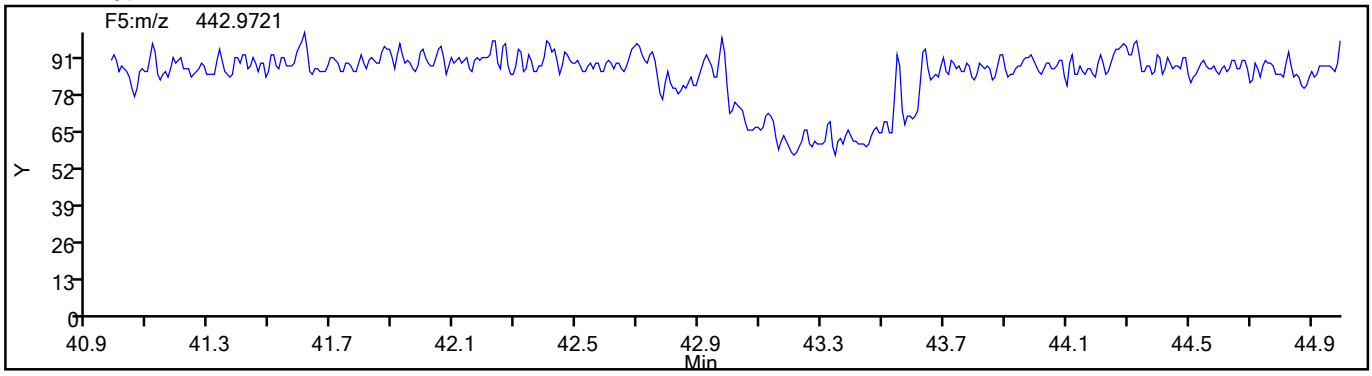

776394

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.05

Error Coefficients

Standard Error:	7060000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.844284	100.0	1113145.0	1.137713	Y
2	IC 320-496688/4	10.0	9.530968	100.0	1162117.0	0.953097	Y
3	IC 320-496688/5	50.0	52.293706	100.0	1094713.0	1.045874	Y
4	IC 320-496688/6	200.0	219.393902	100.0	1337869.0	1.09697	Y
5	IC 320-496688/7	1000.0	1017.847283	100.0	1355803.0	1.017847	Y

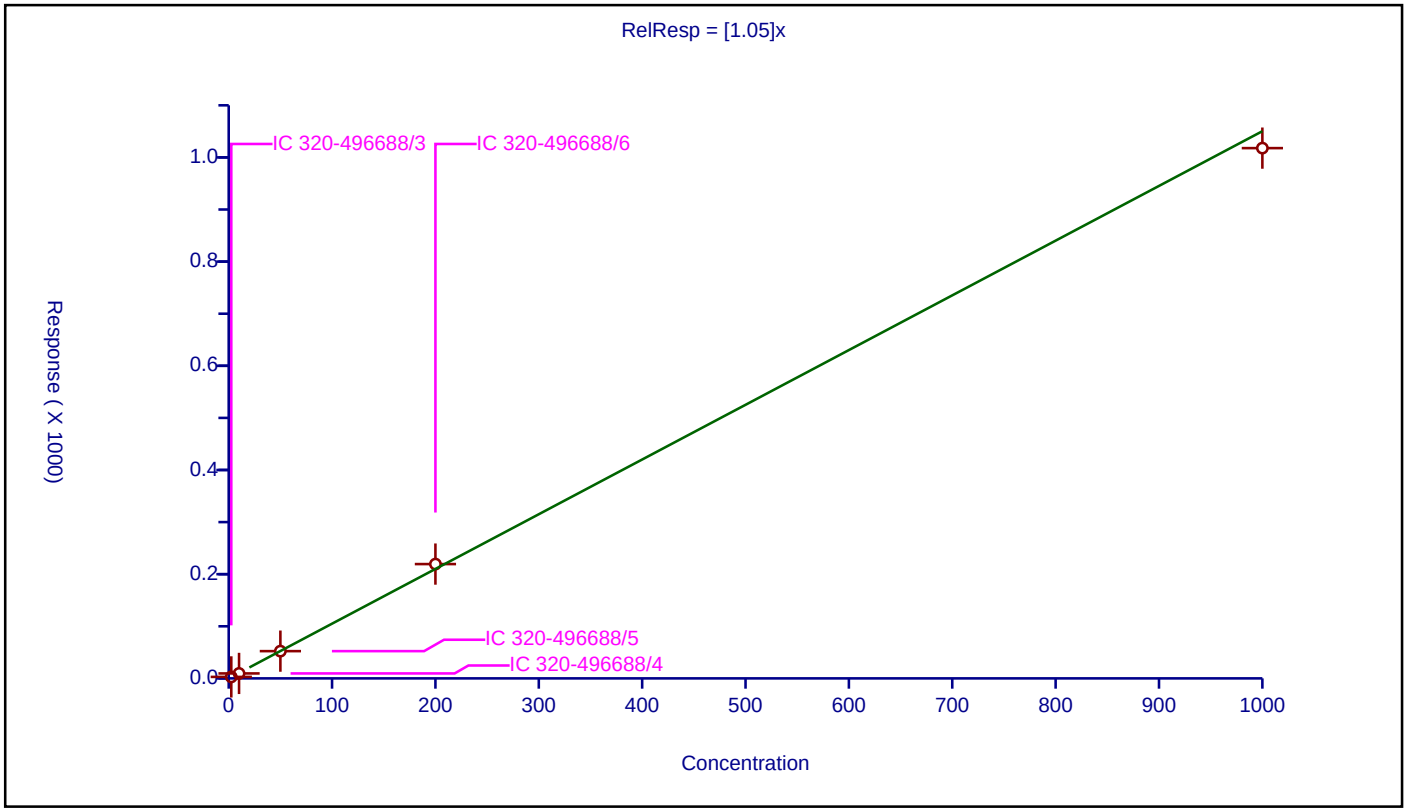

776395

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.442

Error Coefficients

Standard Error:	10800000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.852995	100.0	1227279.0	1.541198	Y
2	IC 320-496688/4	10.0	12.896239	100.0	1272526.0	1.289624	Y
3	IC 320-496688/5	50.0	74.275022	100.0	1182209.0	1.4855	Y
4	IC 320-496688/6	200.0	304.802204	100.0	1392194.0	1.524011	Y
5	IC 320-496688/7	1000.0	1370.014158	100.0	1546113.0	1.370014	Y

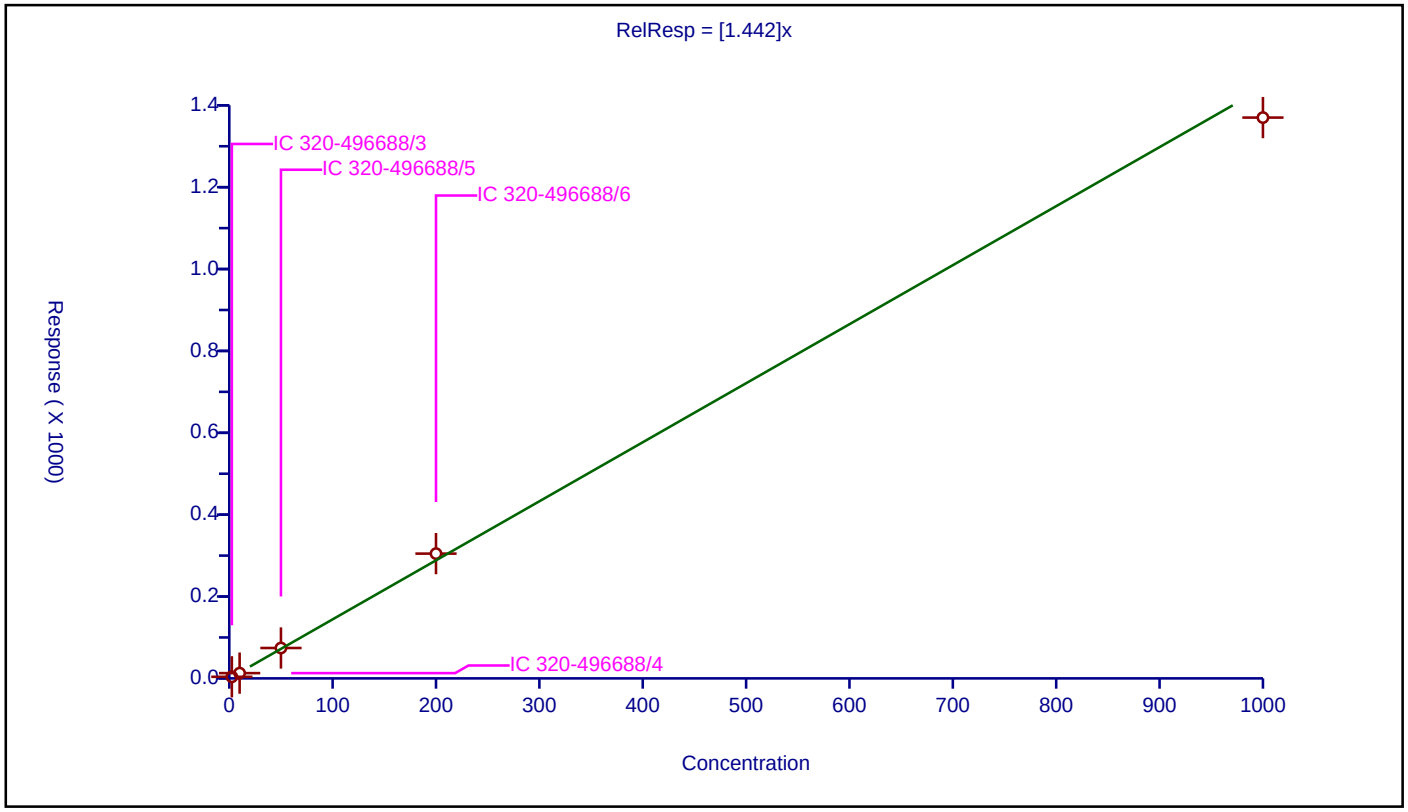

776396

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.309

Error Coefficients

Standard Error:	9110000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.51417	100.0	1120663.0	1.405668	Y
2	IC 320-496688/4	10.0	11.769676	100.0	1175351.0	1.176968	Y
3	IC 320-496688/5	50.0	67.293315	100.0	1080883.0	1.345866	Y
4	IC 320-496688/6	200.0	278.744786	100.0	1337573.0	1.393724	Y
5	IC 320-496688/7	1000.0	1223.548565	100.0	1455766.0	1.223549	Y

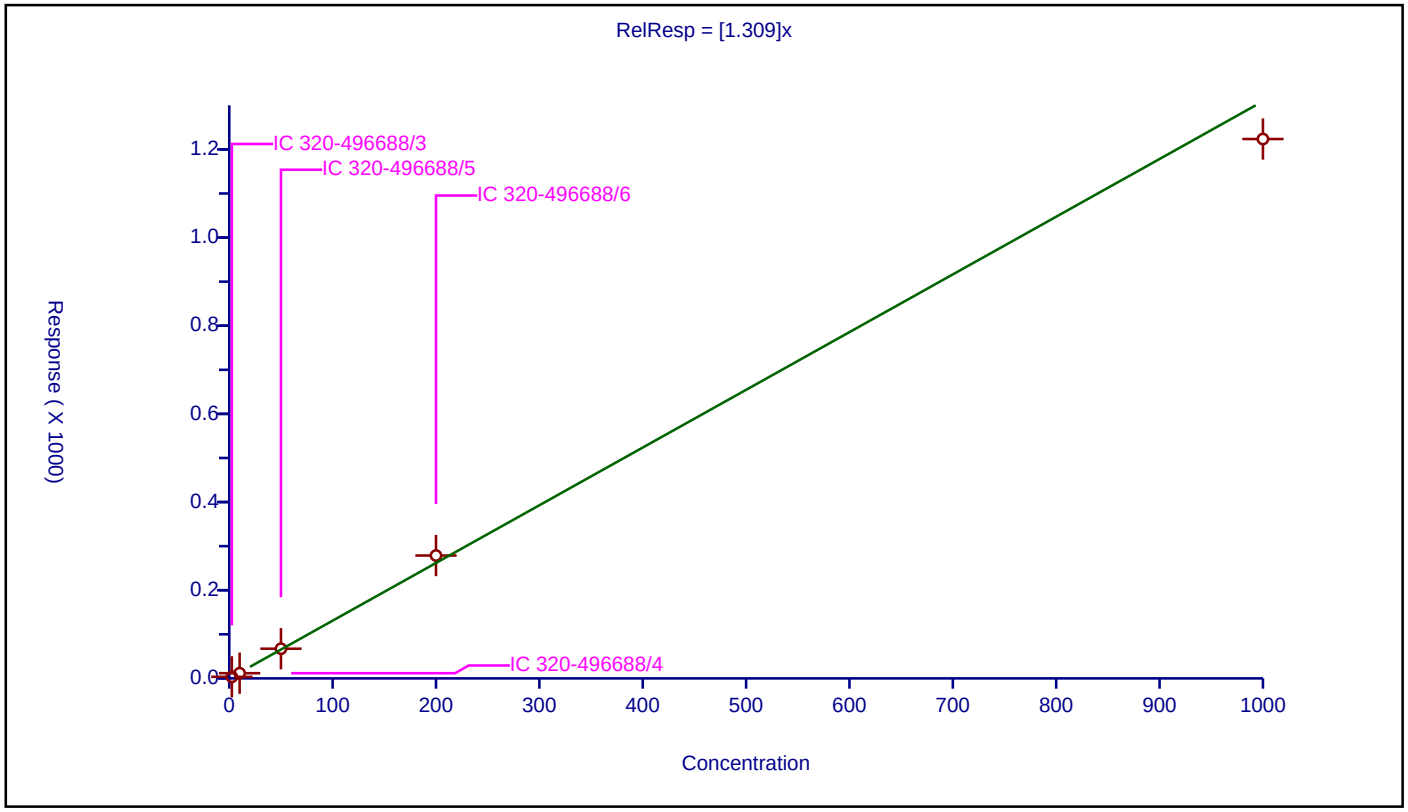

776397

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	7950000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808772	100.0	1127895.0	1.123509	Y
2	IC 320-496688/4	10.0	9.701688	100.0	1363103.0	0.970169	Y
3	IC 320-496688/5	50.0	53.7445	100.0	1348471.0	1.07489	Y
4	IC 320-496688/6	200.0	224.989195	100.0	1432215.0	1.124946	Y
5	IC 320-496688/7	1000.0	1010.433801	100.0	1539784.0	1.010434	Y

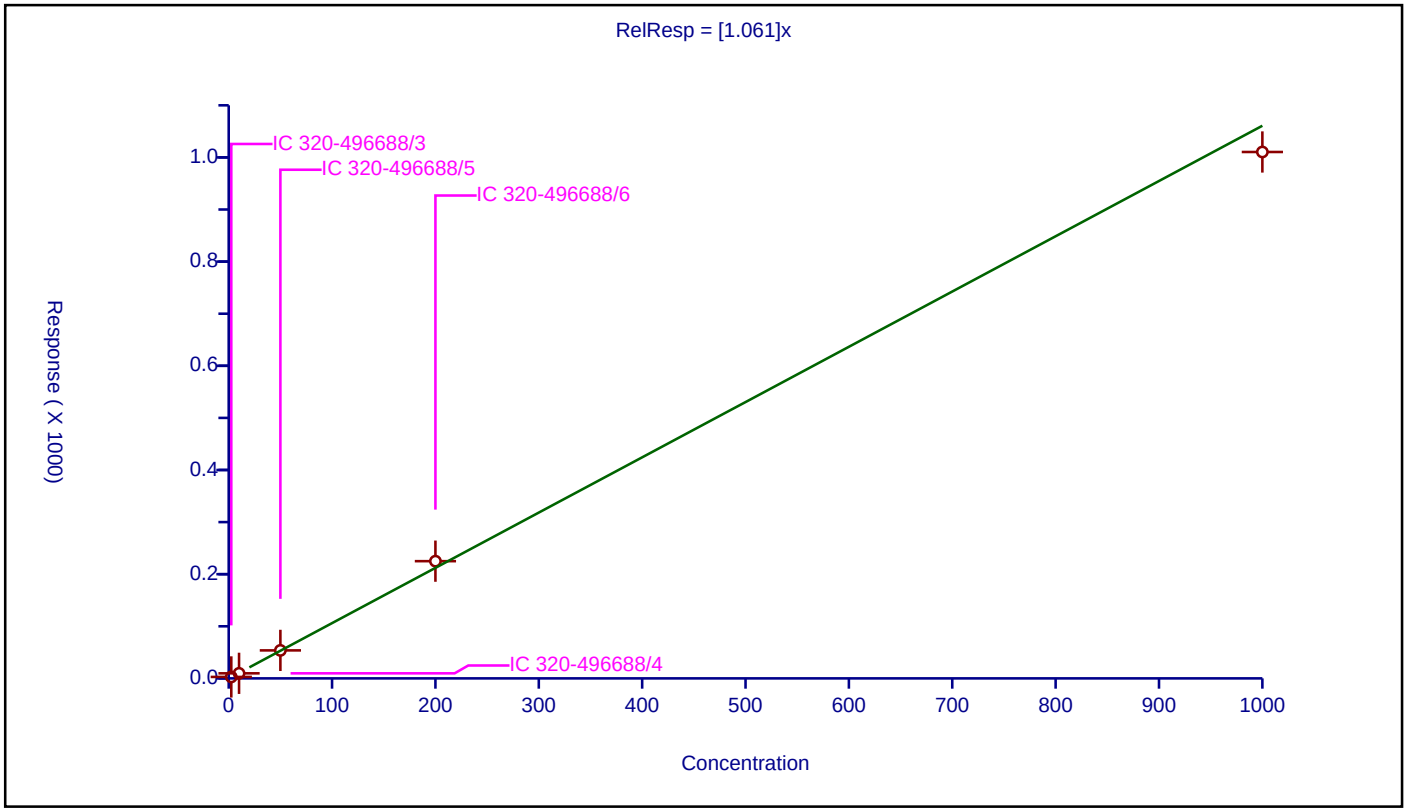

776398

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.147

Error Coefficients

Standard Error:	11200000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.056507	100.0	1517222.0	1.222603	Y
2	IC 320-496688/4	10.0	10.071694	100.0	1545033.0	1.007169	Y
3	IC 320-496688/5	50.0	59.364869	100.0	1841825.0	1.187297	Y
4	IC 320-496688/6	200.0	241.451426	100.0	1778238.0	1.207257	Y
5	IC 320-496688/7	1000.0	1112.580113	100.0	1968615.0	1.11258	Y

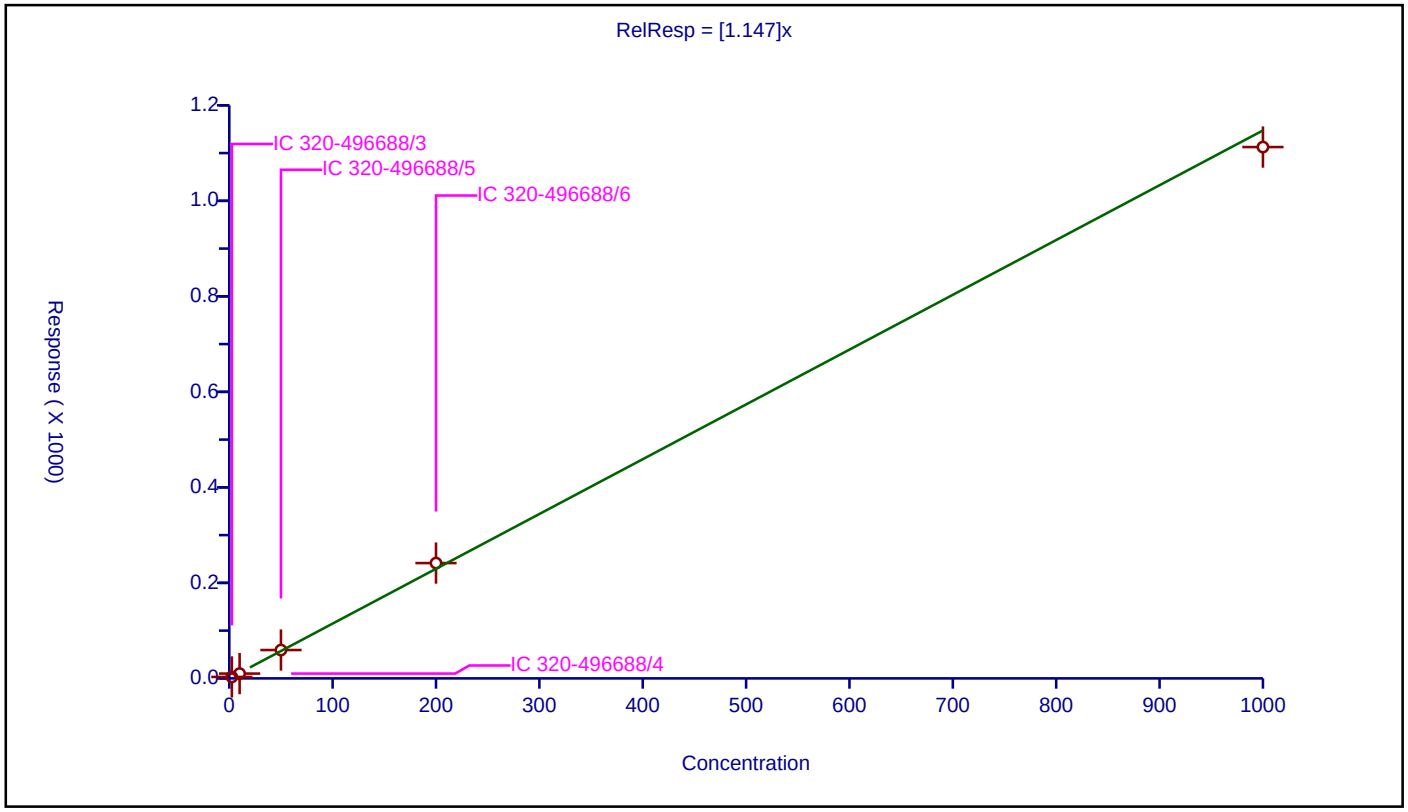

776399

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9933

Error Coefficients

Standard Error:	8510000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.639223	100.0	1291365.0	1.055689	Y
2	IC 320-496688/4	10.0	8.862824	100.0	1558668.0	0.886282	Y
3	IC 320-496688/5	50.0	52.081775	100.0	1460100.0	1.041636	Y
4	IC 320-496688/6	200.0	205.274729	100.0	1669337.0	1.026374	Y
5	IC 320-496688/7	1000.0	956.728345	100.0	1741498.0	0.956728	Y

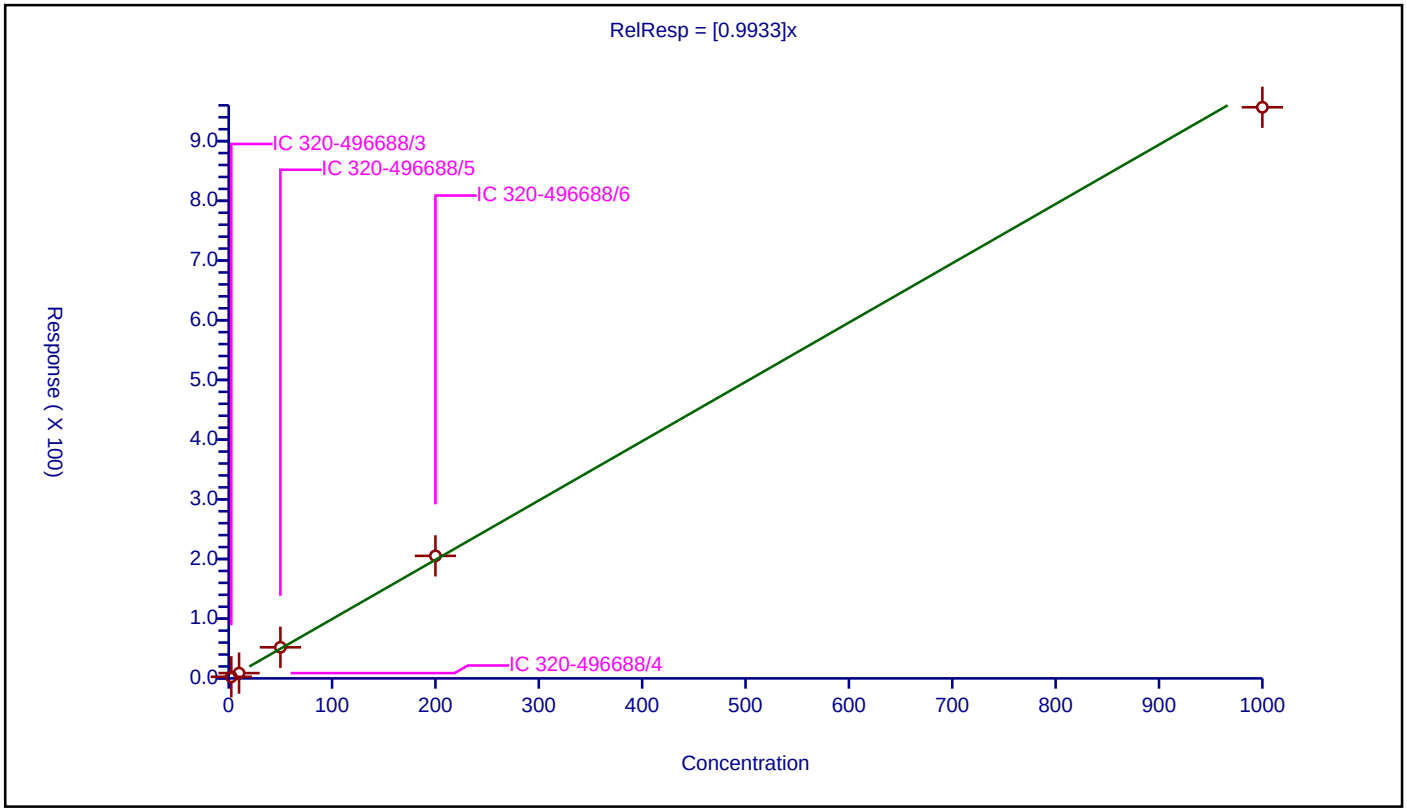

776400

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.218

Error Coefficients

Standard Error:	13600000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.343553	100.0	1626653.0	1.337421	Y
2	IC 320-496688/4	10.0	10.950603	100.0	1692336.0	1.09506	Y
3	IC 320-496688/5	50.0	61.795629	100.0	2015594.0	1.235913	Y
4	IC 320-496688/6	200.0	250.125403	100.0	1995567.0	1.250627	Y
5	IC 320-496688/7	1000.0	1169.95242	100.0	2283961.0	1.169952	Y

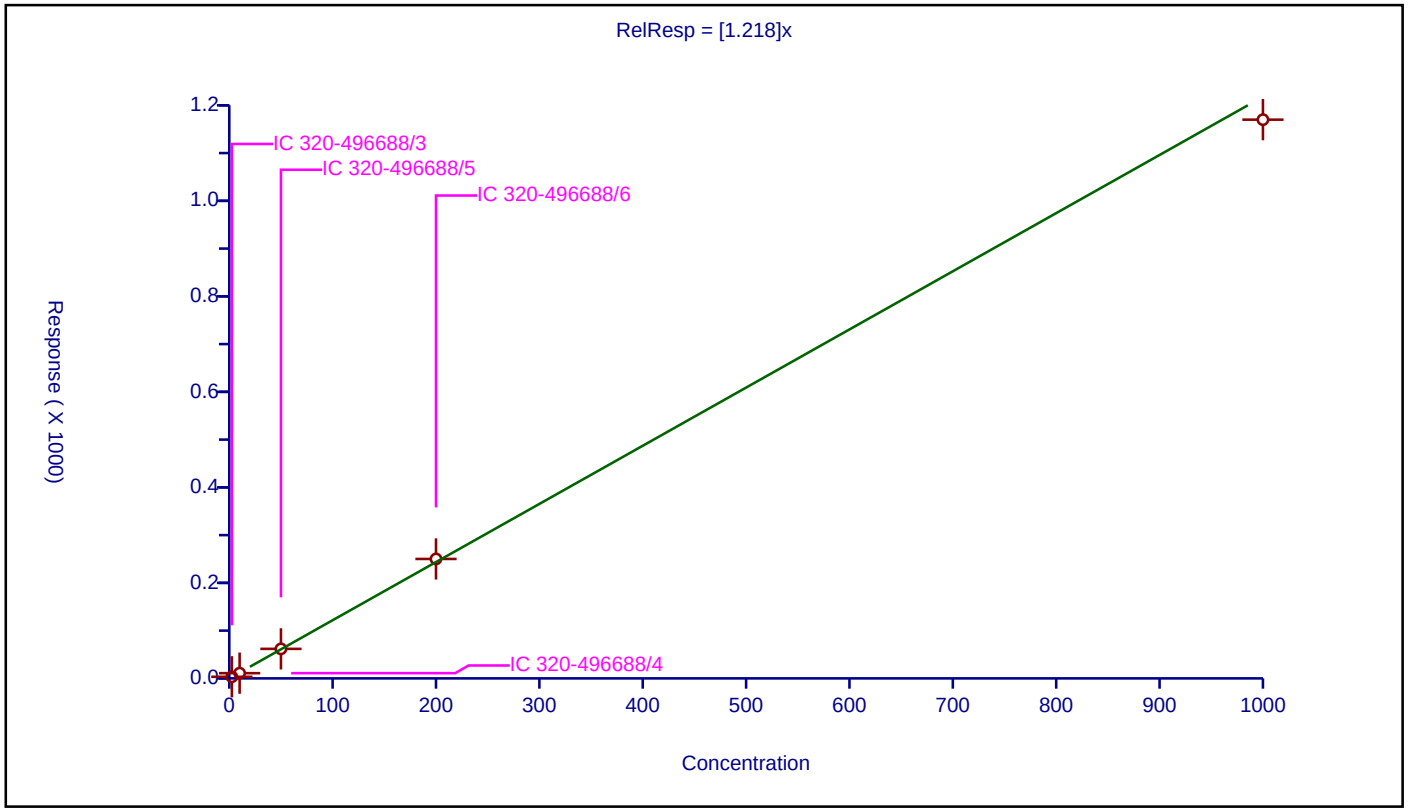

776401

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.184

Error Coefficients

Standard Error:	8820000
Relative Standard Error:	11.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.510522	100.0	1127895.0	1.404209	Y
2	IC 320-496688/4	10.0	10.251683	100.0	1363103.0	1.025168	Y
3	IC 320-496688/5	50.0	58.326134	100.0	1348471.0	1.166523	Y
4	IC 320-496688/6	200.0	239.918169	100.0	1432215.0	1.199591	Y
5	IC 320-496688/7	1000.0	1122.182397	100.0	1539784.0	1.122182	Y

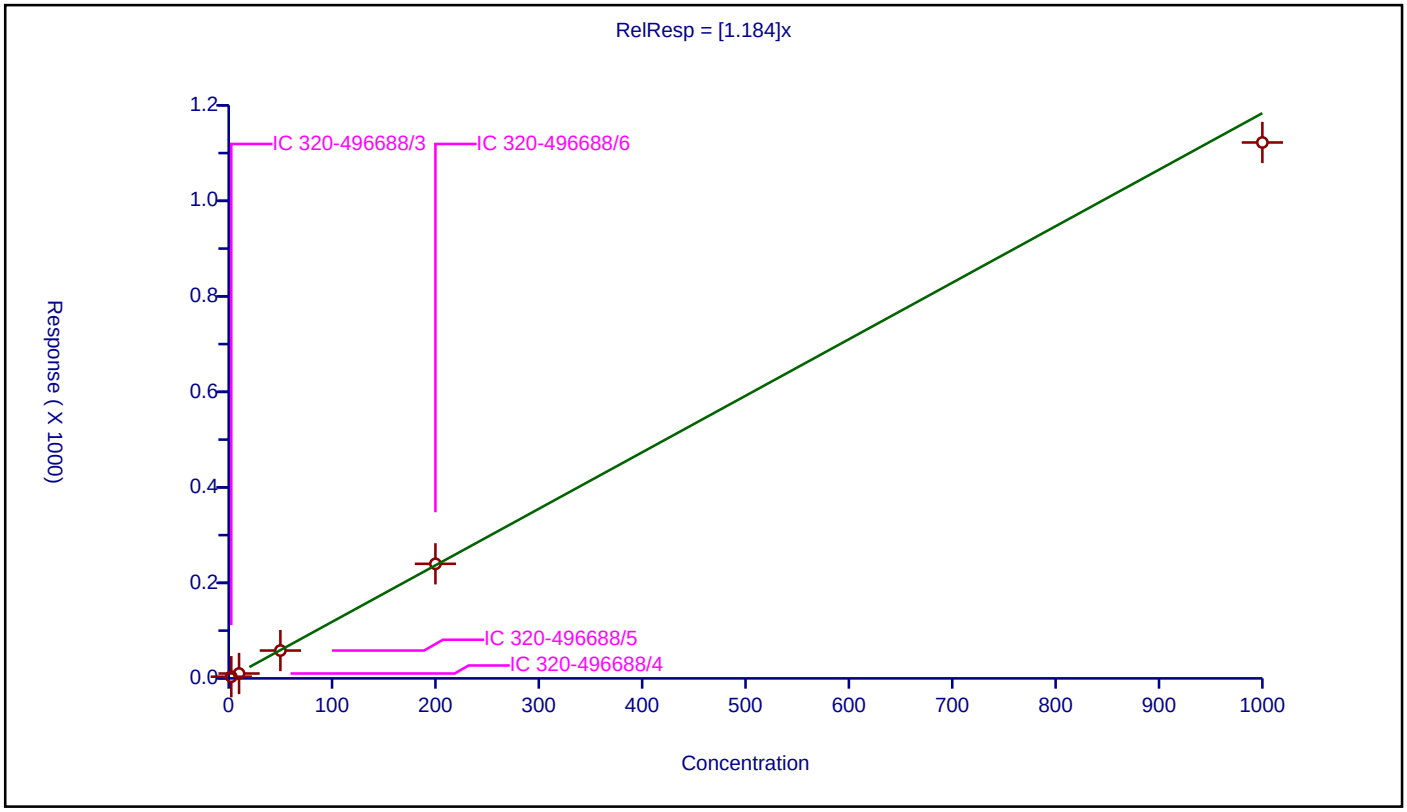

776402

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.24

Error Coefficients

Standard Error:	11500000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.395229	100.0	1696557.0	1.358092	Y
2	IC 320-496688/4	10.0	11.238546	100.0	1735785.0	1.123855	Y
3	IC 320-496688/5	50.0	62.662354	100.0	1657413.0	1.253247	Y
4	IC 320-496688/6	200.0	255.13849	100.0	1742331.0	1.275692	Y
5	IC 320-496688/7	1000.0	1189.708821	100.0	1895740.0	1.189709	Y

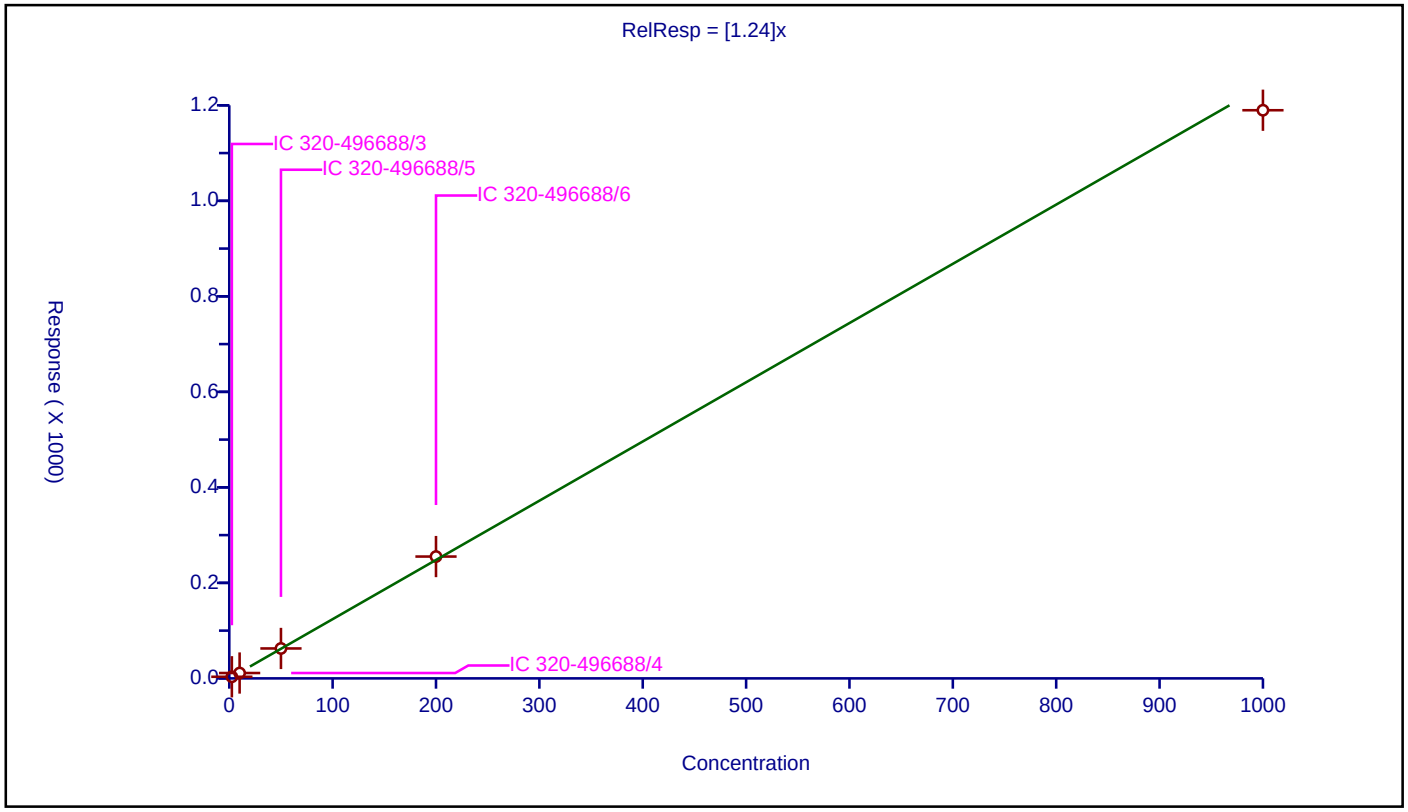

776403

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.046

Error Coefficients

Standard Error:	8500000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.679791	100.0	1602476.0	1.071916	Y
2	IC 320-496688/4	10.0	9.520403	100.0	1364144.0	0.95204	Y
3	IC 320-496688/5	50.0	53.426119	100.0	1388641.0	1.068522	Y
4	IC 320-496688/6	200.0	220.300949	100.0	1521254.0	1.101505	Y
5	IC 320-496688/7	1000.0	1038.502383	100.0	1602880.0	1.038502	Y

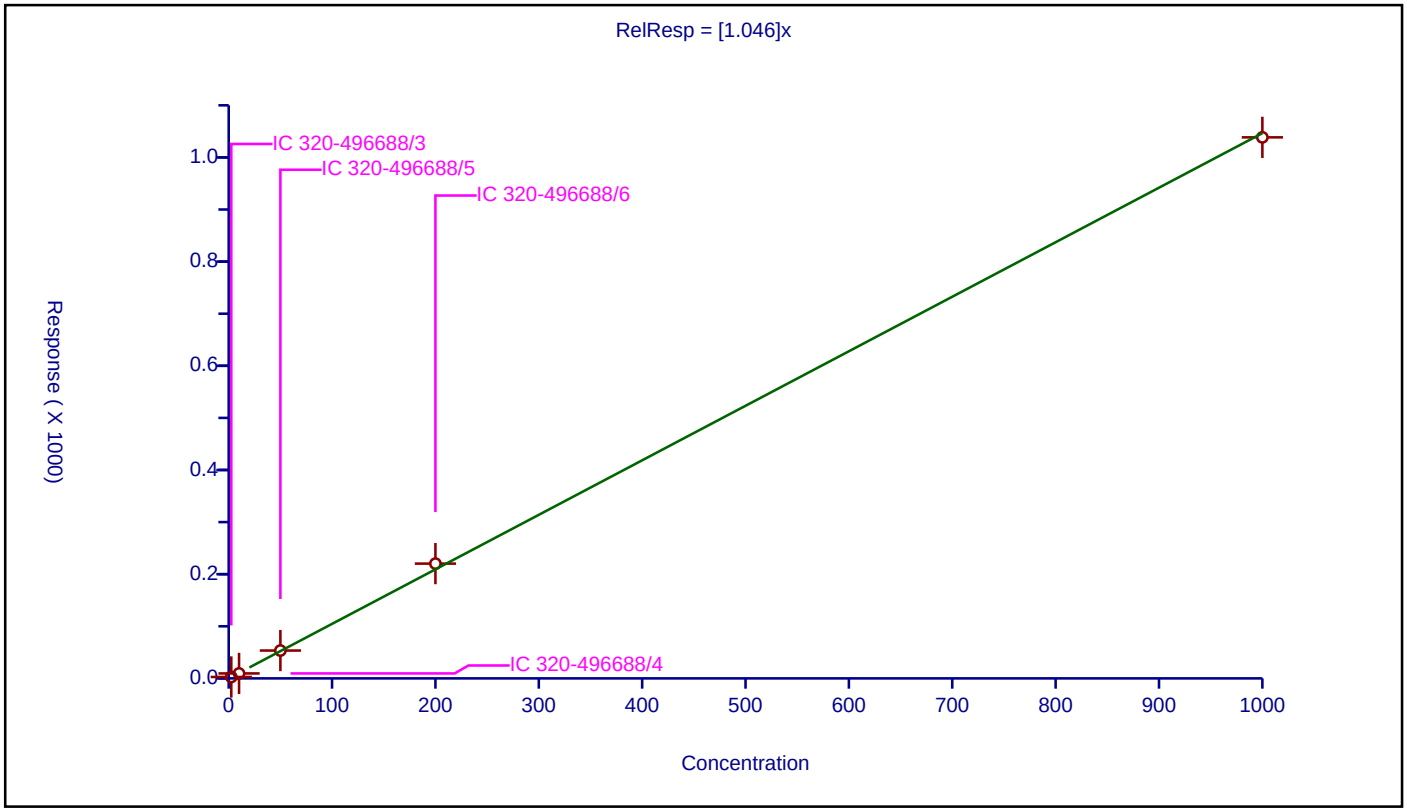

776404

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.054

Error Coefficients

Standard Error:	13300000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.980089	100.0	2514489.0	1.192035	Y
2	IC 320-496688/4	10.0	9.411606	100.0	2234847.0	0.941161	Y
3	IC 320-496688/5	50.0	51.86467	100.0	2149791.0	1.037293	Y
4	IC 320-496688/6	200.0	217.934531	100.0	2432949.0	1.089673	Y
5	IC 320-496688/7	1000.0	1011.152482	100.0	2574521.0	1.011152	Y

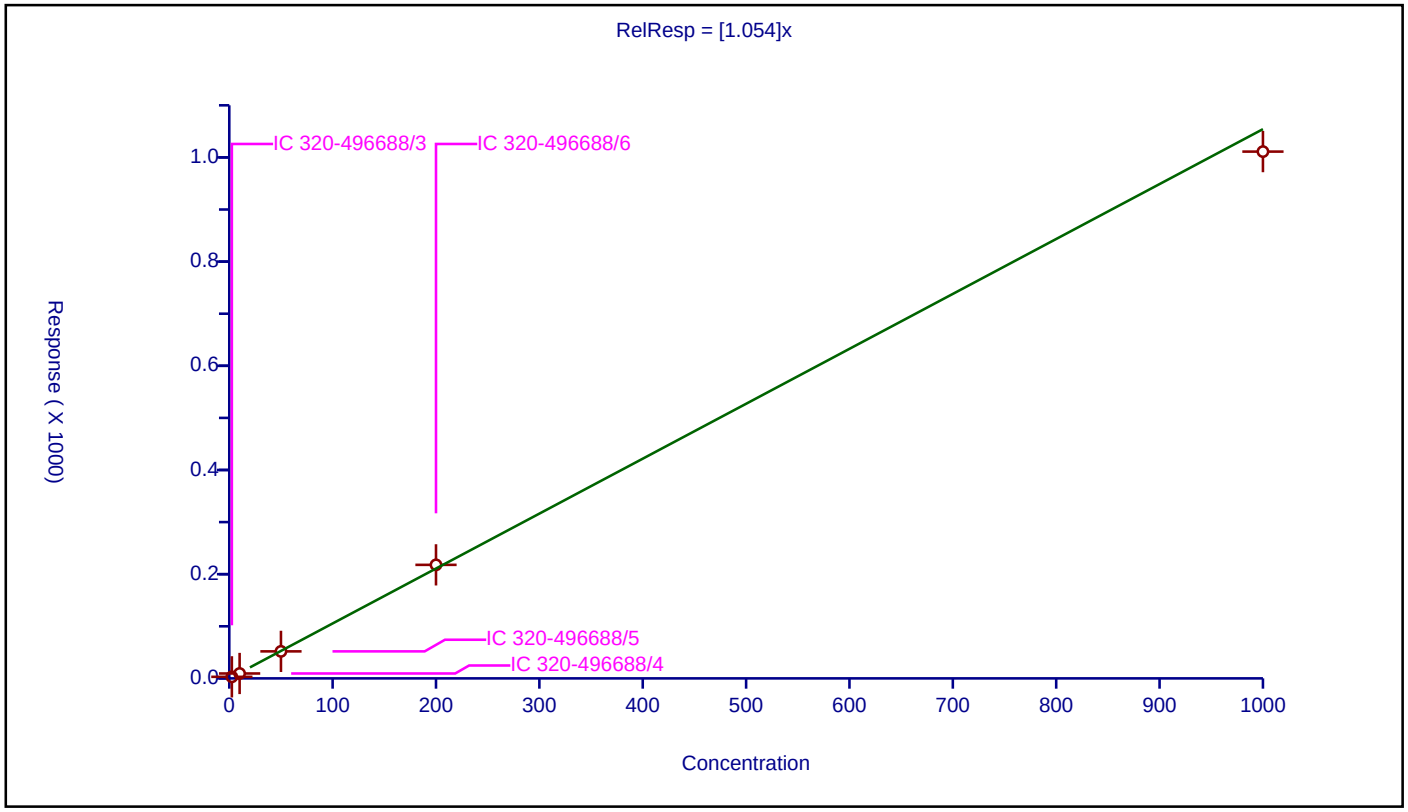

776405

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.214

Error Coefficients

Standard Error:	13000000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.283761	100.0	1523436.0	1.313504	Y
2	IC 320-496688/4	10.0	11.007204	100.0	1740015.0	1.10072	Y
3	IC 320-496688/5	50.0	61.8379	100.0	1861559.0	1.236758	Y
4	IC 320-496688/6	200.0	252.469364	100.0	2042874.0	1.262347	Y
5	IC 320-496688/7	1000.0	1159.01852	100.0	2190509.0	1.159019	Y

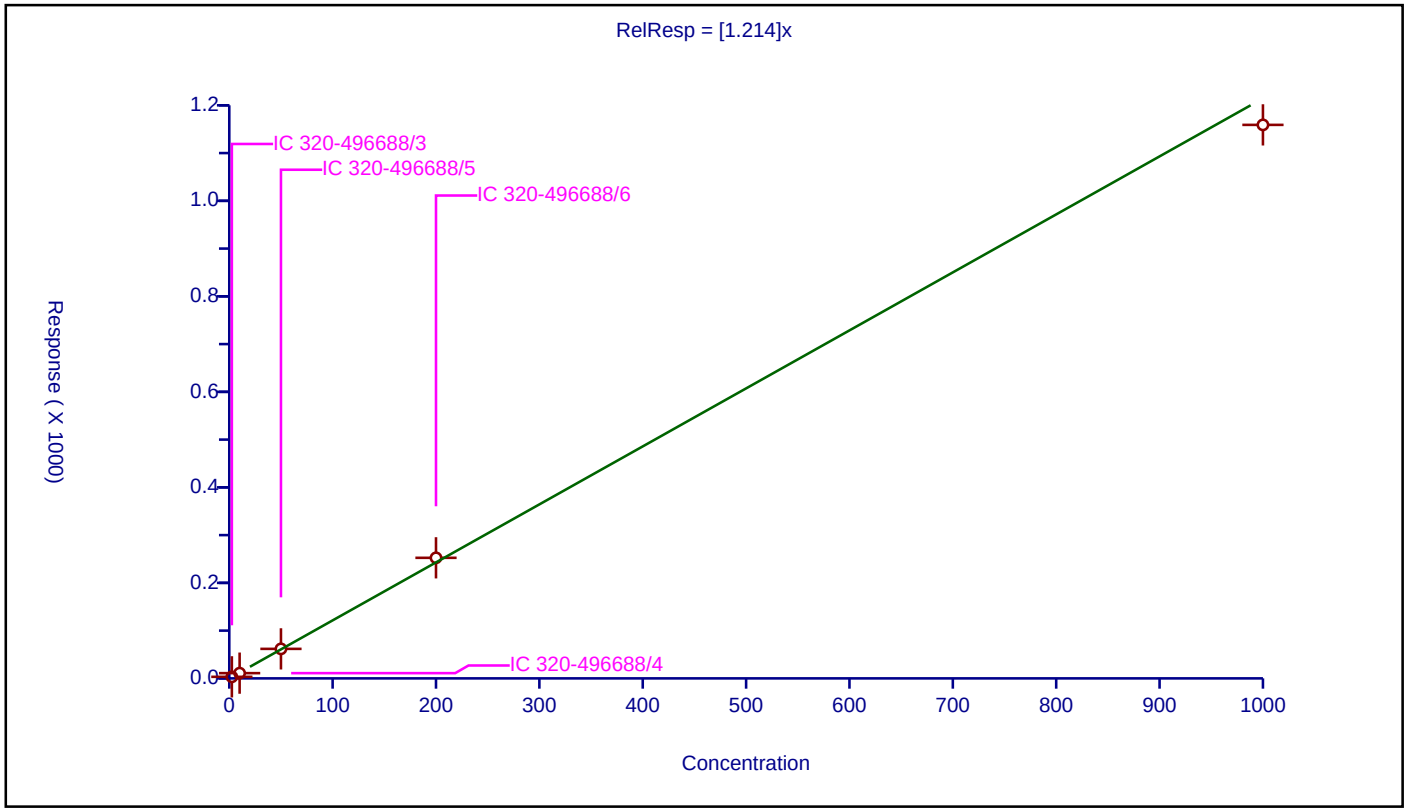

776406

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	12700000
Relative Standard Error:	8.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808272	100.0	2592947.0	1.123309	Y
2	IC 320-496688/4	10.0	8.984414	100.0	2228025.0	0.898441	Y
3	IC 320-496688/5	50.0	49.606313	100.0	1991303.0	0.992126	Y
4	IC 320-496688/6	200.0	212.714288	100.0	2374722.0	1.063571	Y
5	IC 320-496688/7	1000.0	961.852333	100.0	2584740.0	0.961852	Y

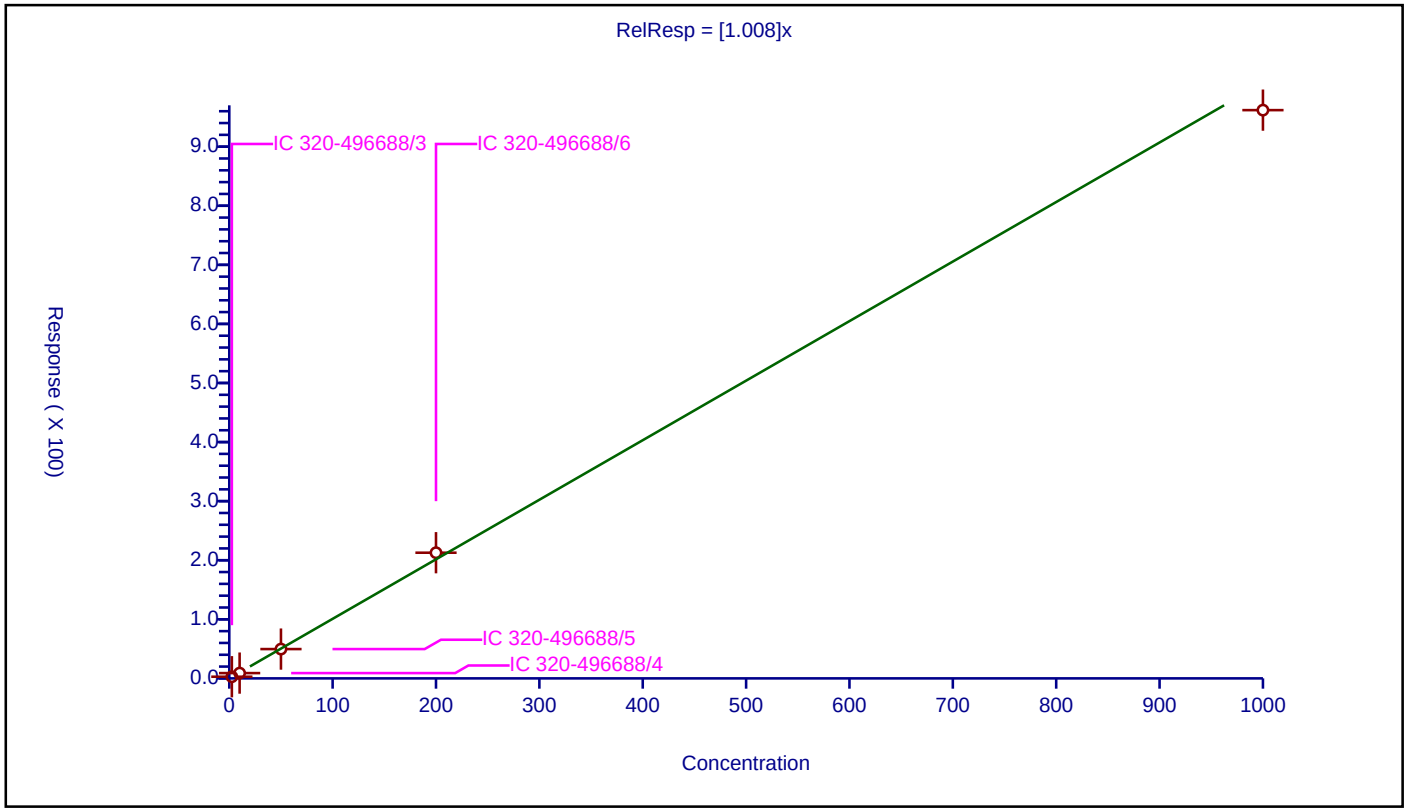

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.075

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.566752	100.0	2138853.0	1.133505	Y
2	IC 320-496688/4	2.0	1.911764	100.0	1829253.0	0.955882	Y
3	IC 320-496688/5	10.0	10.998165	100.0	1800864.0	1.099817	Y
4	IC 320-496688/6	40.0	44.949952	100.0	1948011.0	1.123749	Y
5	IC 320-496688/7	200.0	212.755816	100.0	2014532.0	1.063779	Y

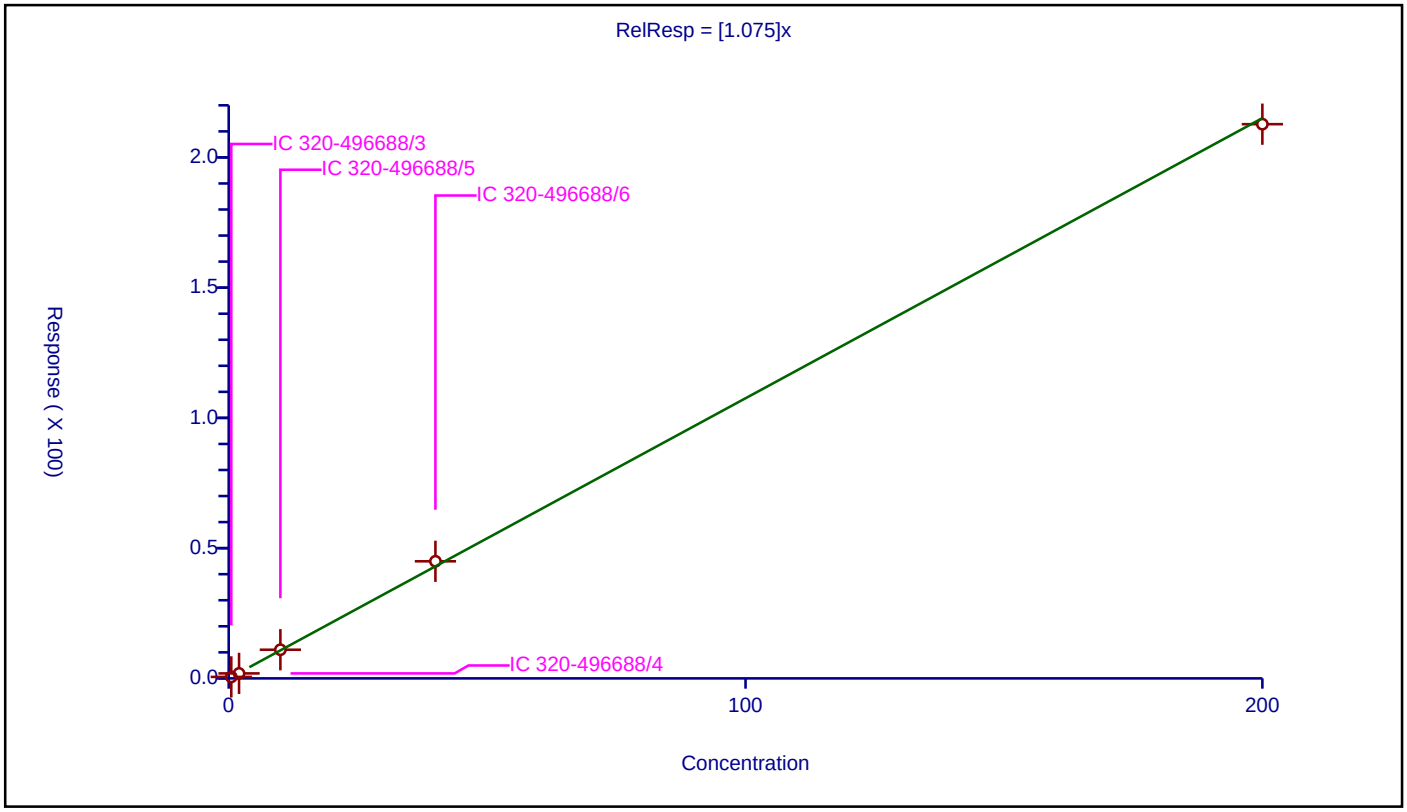

776408

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.08

Error Coefficients

Standard Error:	3140000
Relative Standard Error:	9.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.616764	100.0	3167014.0	1.233528	Y
2	IC 320-496688/4	2.0	1.926948	100.0	2644389.0	0.963474	Y
3	IC 320-496688/5	10.0	10.464342	100.0	2465726.0	1.046434	Y
4	IC 320-496688/6	40.0	44.869913	100.0	2839435.0	1.121748	Y
5	IC 320-496688/7	200.0	207.156116	100.0	2962515.0	1.035781	Y

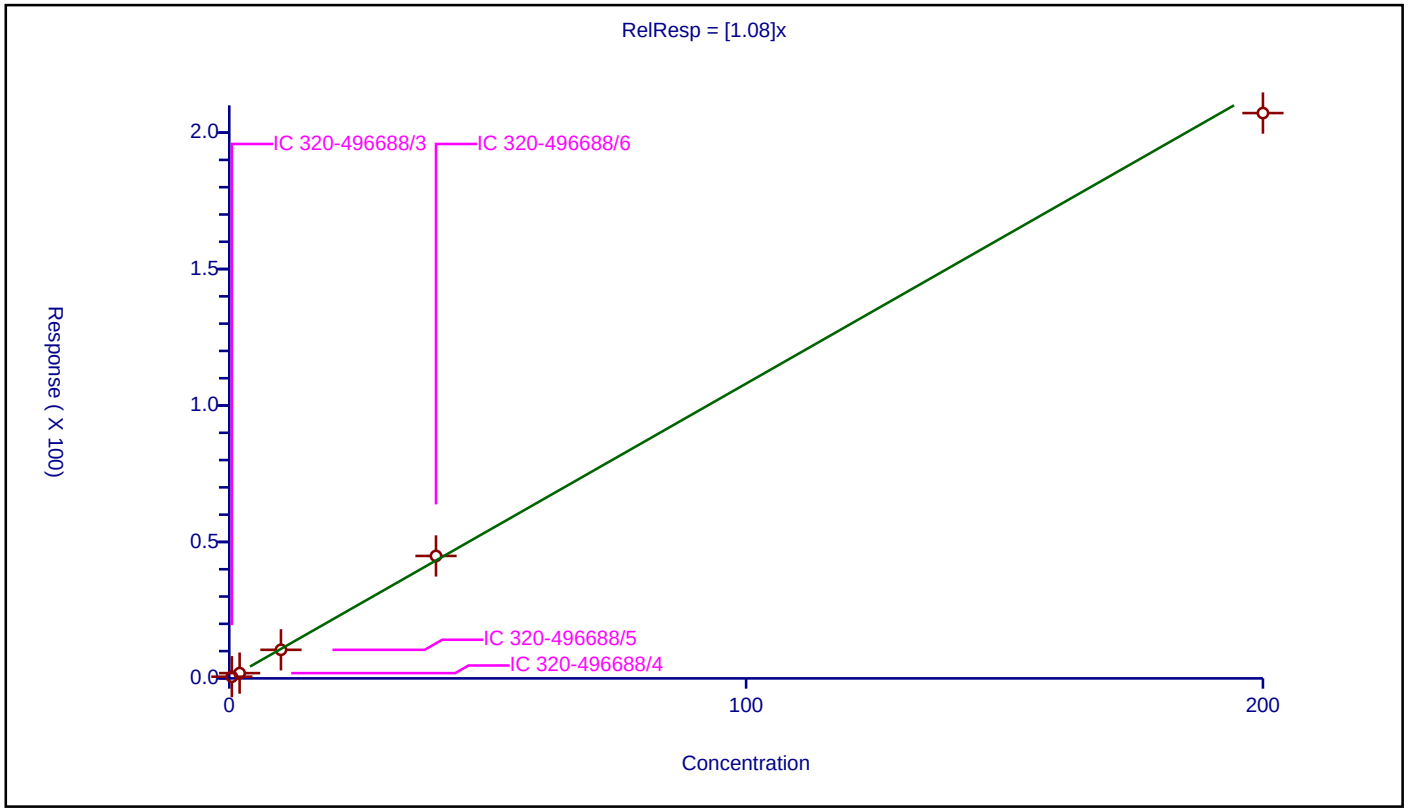

776409

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.482683	100.0	2334037.0	0.965366	Y
2	IC 320-496688/4	2.0	1.917995	100.0	2045939.0	0.958997	Y
3	IC 320-496688/5	10.0	10.721795	100.0	1900111.0	1.072179	Y
4	IC 320-496688/6	40.0	40.297989	100.0	2105852.0	1.00745	Y
5	IC 320-496688/7	200.0	207.496438	100.0	2066088.0	1.037482	Y

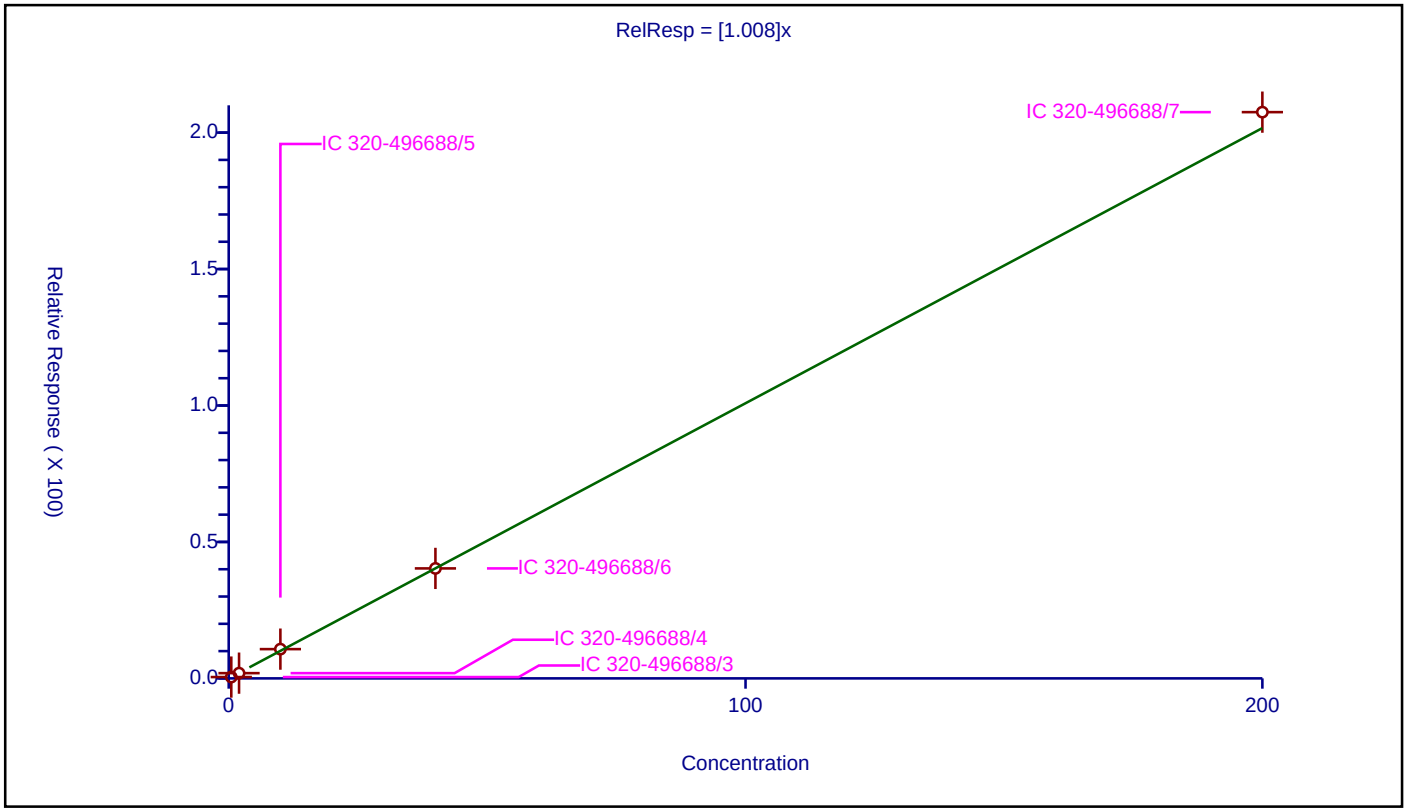

776410

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.062

Error Coefficients

Standard Error:	11700000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	5.664077	200.0	1823492.0	1.132815	Y
2	IC 320-496688/4	20.0	19.907928	200.0	1833139.0	0.995396	Y
3	IC 320-496688/5	100.0	108.699815	200.0	1676139.0	1.086998	Y
4	IC 320-496688/6	400.0	441.074631	200.0	2177938.0	1.102687	Y
5	IC 320-496688/7	2000.0	1984.090177	200.0	2298668.0	0.992045	Y

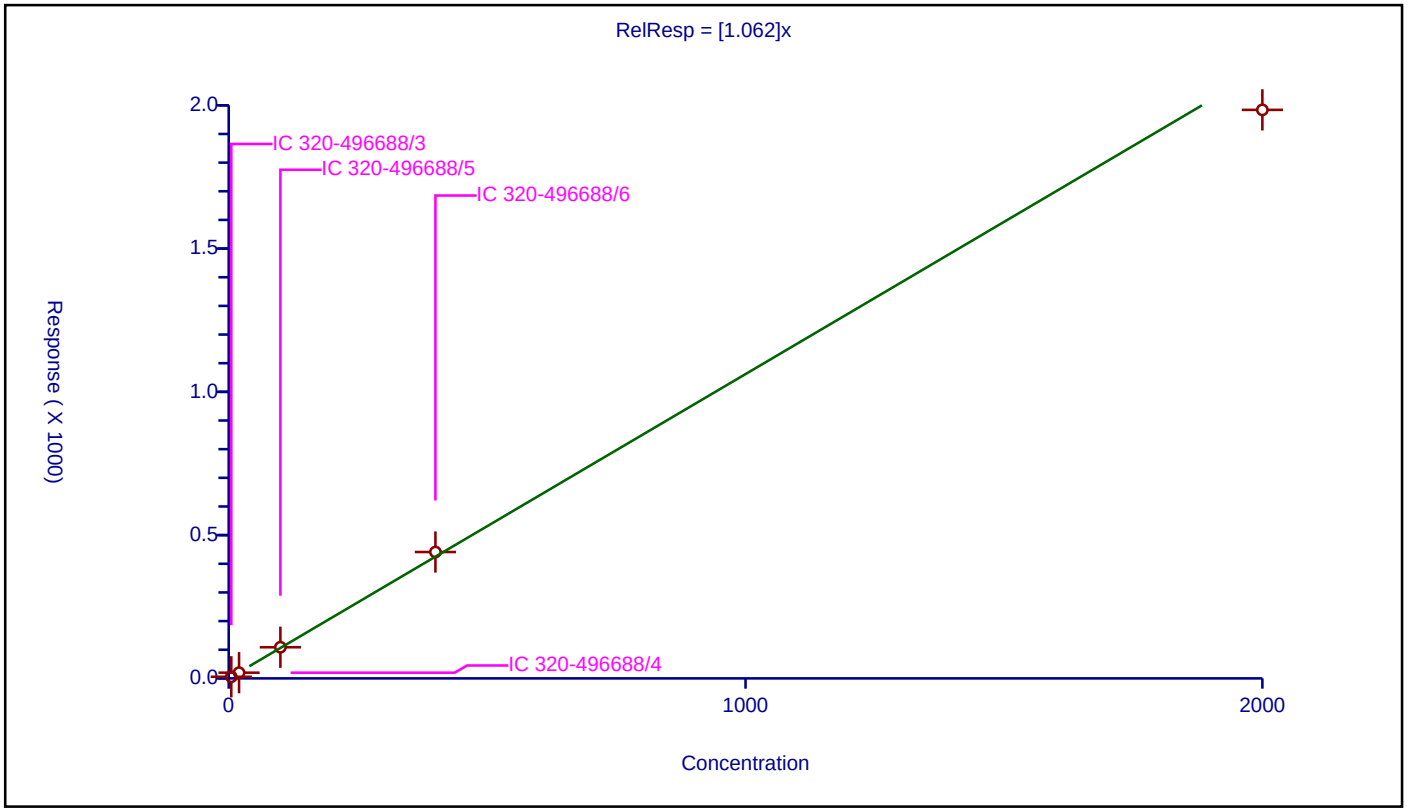

776411

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	15600000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	6.696054	200.0	1823492.0	1.339211	Y
2	IC 320-496688/4	20.0	23.726842	200.0	1833139.0	1.186342	Y
3	IC 320-496688/5	100.0	133.490122	200.0	1676139.0	1.334901	Y
4	IC 320-496688/6	400.0	558.573844	200.0	2177938.0	1.396435	Y
5	IC 320-496688/7	2000.0	2654.186163	200.0	2298668.0	1.327093	Y

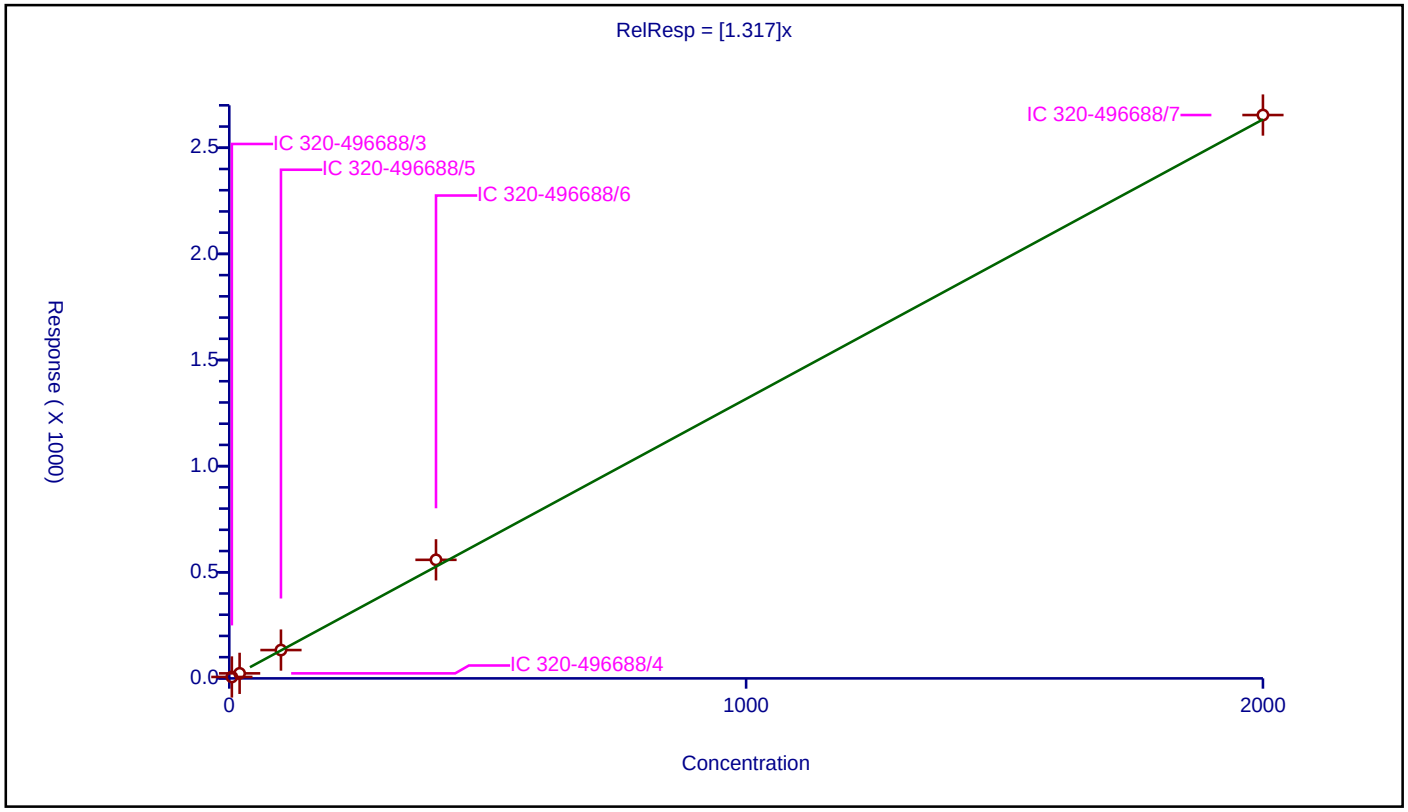

776412

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): WDM 320-496688/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 06/08/2021 12:40

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	20.95	13

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d				
Injection Date:	08-Jun-2021 12:40:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 7095
H (Peak Height) = 55991

%R = 13 <= 25
Passed

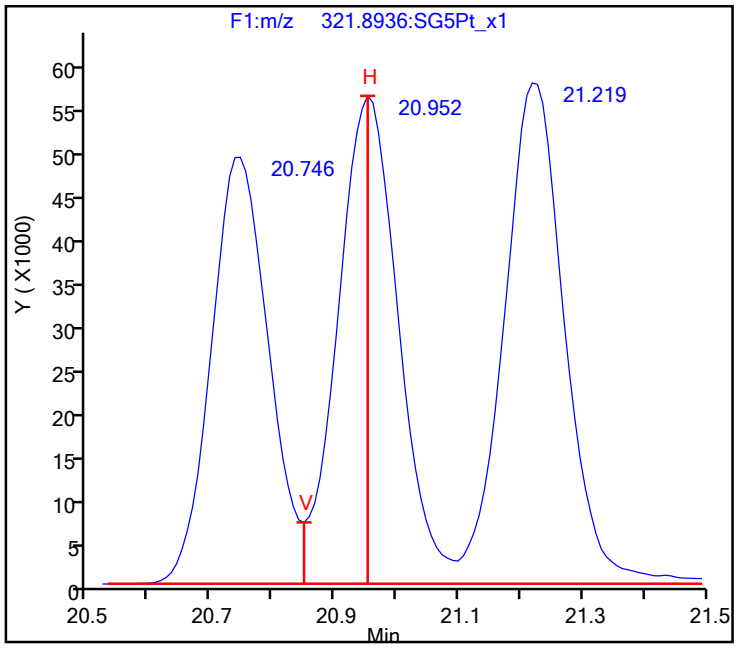

776414

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

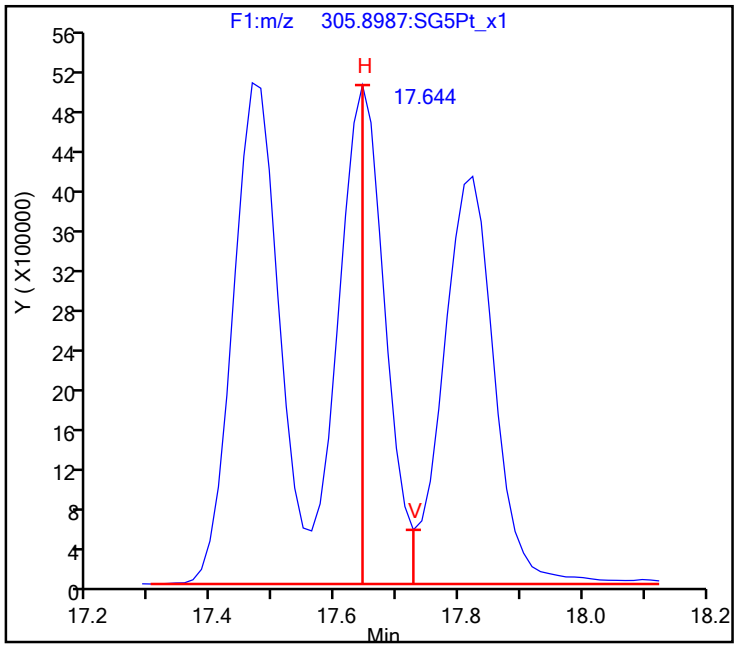

776416

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): WDM 320-510264/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 07/26/2021 09:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.34	18

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d				
Injection Date:	26-Jul-2021 09:21:58	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 725696
H (Peak Height) = 4136533

%R = 18 <= 25
Passed

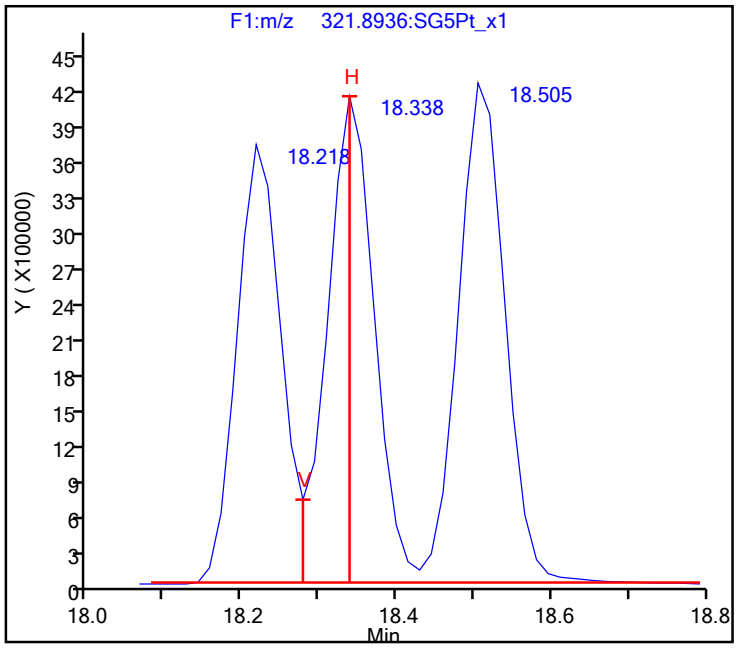

776418

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): WDM 320-516847/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/15/2021 00:36

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.05	22

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d				
Injection Date:	15-Aug-2021 00:36:47	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	DB	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 613464
H (Peak Height) = 2801278

%R = 22 <= 25
Passed

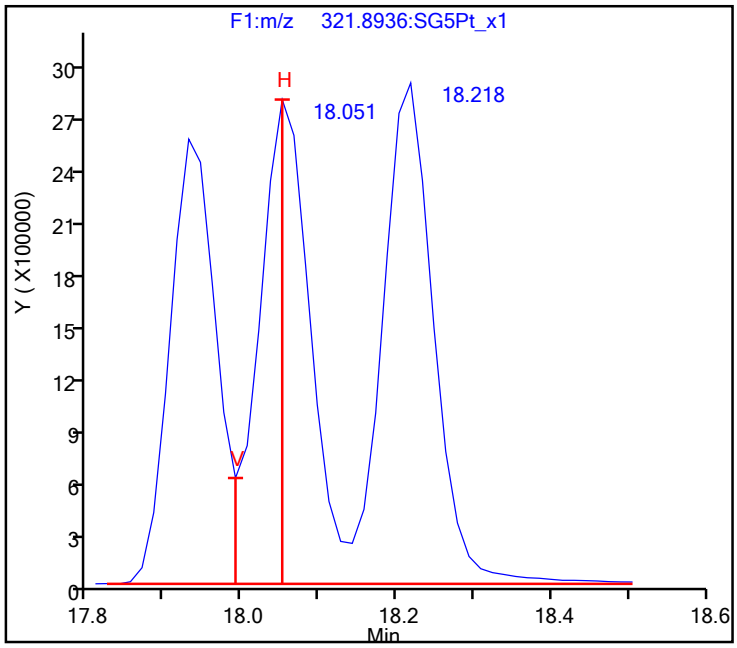

776420

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): WDM 320-516848/16 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/15/2021 12:12

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.07	24

Report Date: 17-Aug-2021 17:09:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d				
Injection Date:	15-Aug-2021 12:12:05	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	DB	ALS Bottle#:	1	Worklist Smp#:	16
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 369691
H (Peak Height) = 1527737

%R = 24 <= 25
Passed

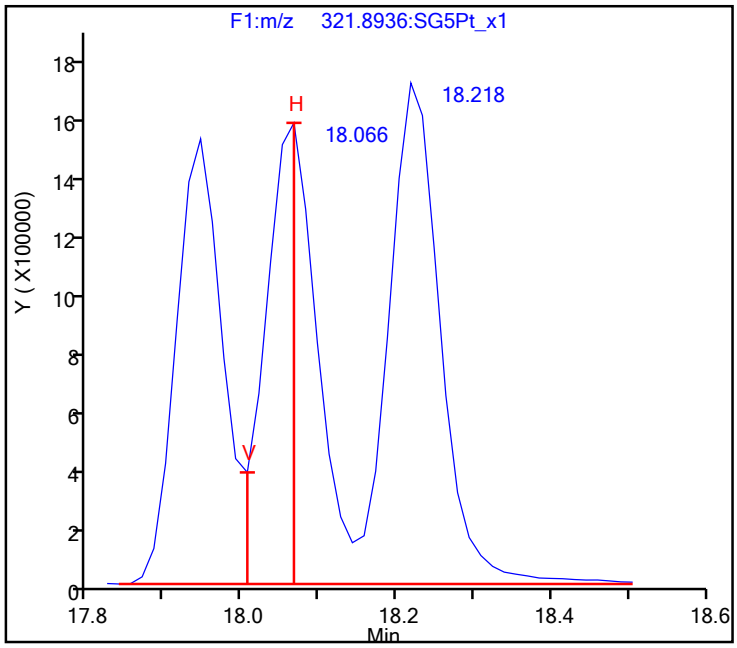

776422

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): WDM 320-517196/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/17/2021 14:27

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.93	19

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d				
Injection Date:	17-Aug-2021 14:27:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 3883
H (Peak Height) = 20212

%R = 19 <= 25
Passed

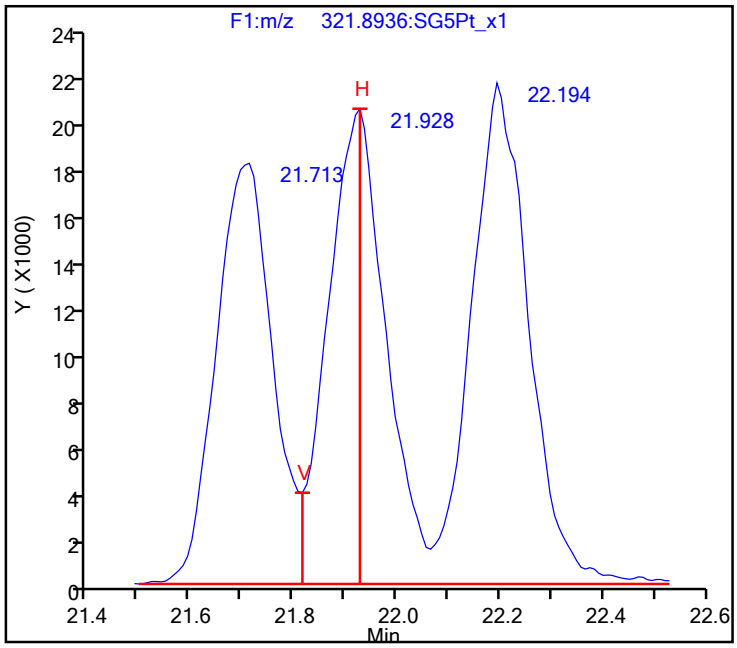

776424

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): WDM 320-517281/16 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/18/2021 02:55

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.83	19

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d				
Injection Date:	18-Aug-2021 02:55:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 2249
H (Peak Height) = 11648

%R = 19 <= 25
Passed

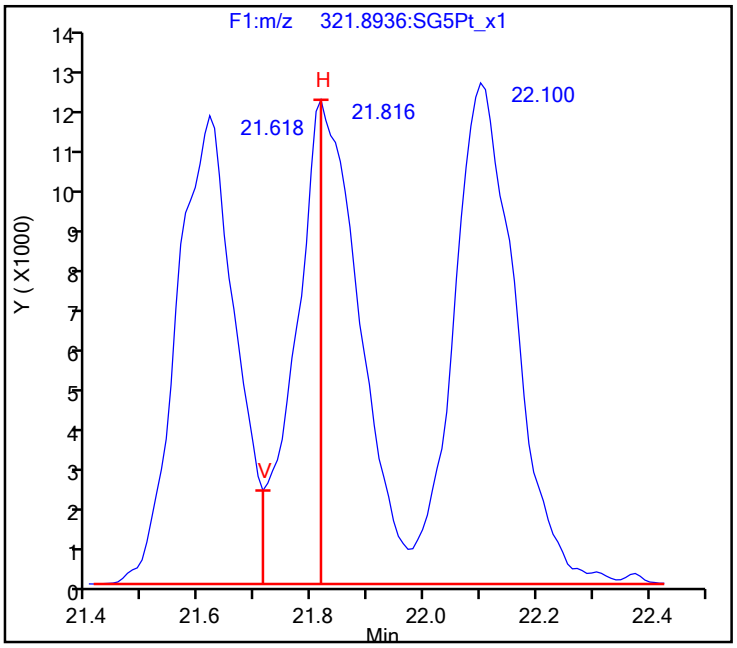

776426

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): WDM 320-517461/30 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/18/2021 14:50

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.89	18

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d				
Injection Date:	18-Aug-2021 14:50:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 791
H (Peak Height) = 4354

%R = 18 <= 25
Passed

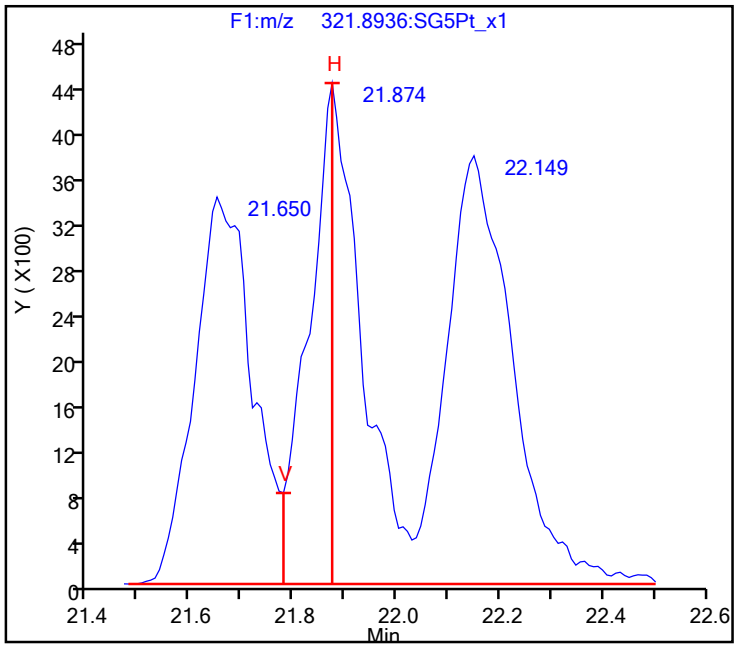

776428

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): WDM 320-517462/44 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/19/2021 02:19

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.78	21

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d				
Injection Date:	19-Aug-2021 02:19:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	44
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 5301
H (Peak Height) = 24781

%R = 21 <= 25
Passed

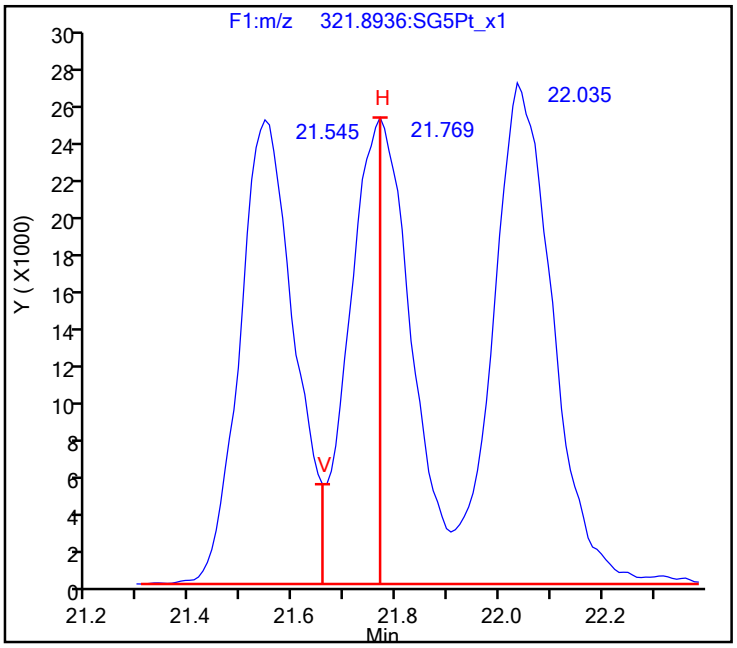

776430

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): WDM 320-517729/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/18/2021 14:15

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.02	23

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d				
Injection Date:	18-Aug-2021 14:15:56	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1518972
H (Peak Height) = 6483954

%R = 23 <= 25
Passed

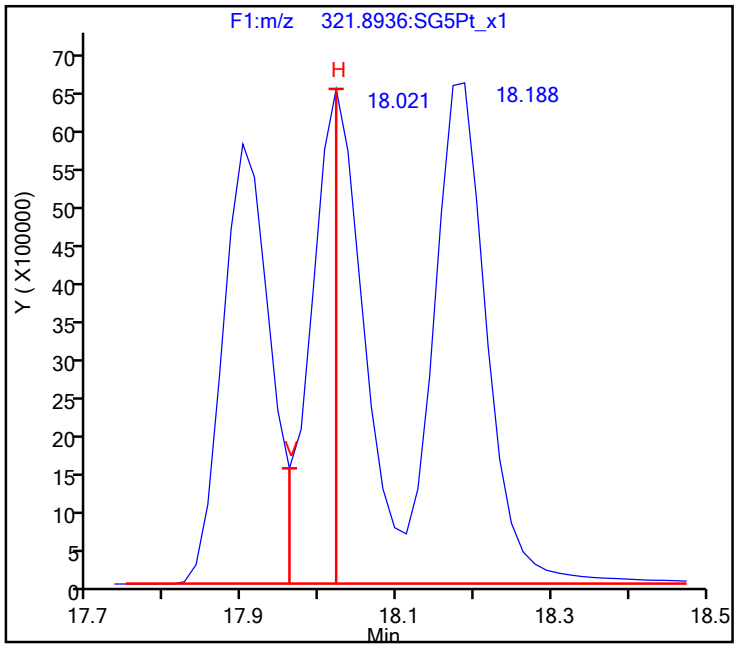

776432

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): WDM 320-517891/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/19/2021 13:59

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.84	22

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d				
Injection Date:	19-Aug-2021 13:59:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 916
H (Peak Height) = 4212

%R = 22 <= 25
Passed

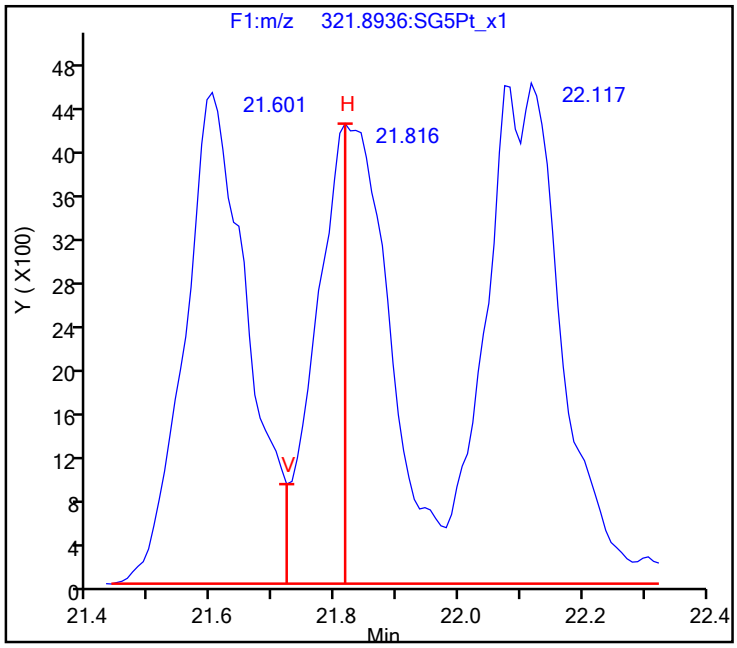

776434

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): WDM 320-518043/16 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/20/2021 02:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.73	20

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d				
Injection Date:	20-Aug-2021 02:21:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 5211
H (Peak Height) = 25746

%R = 20 <= 25
Passed

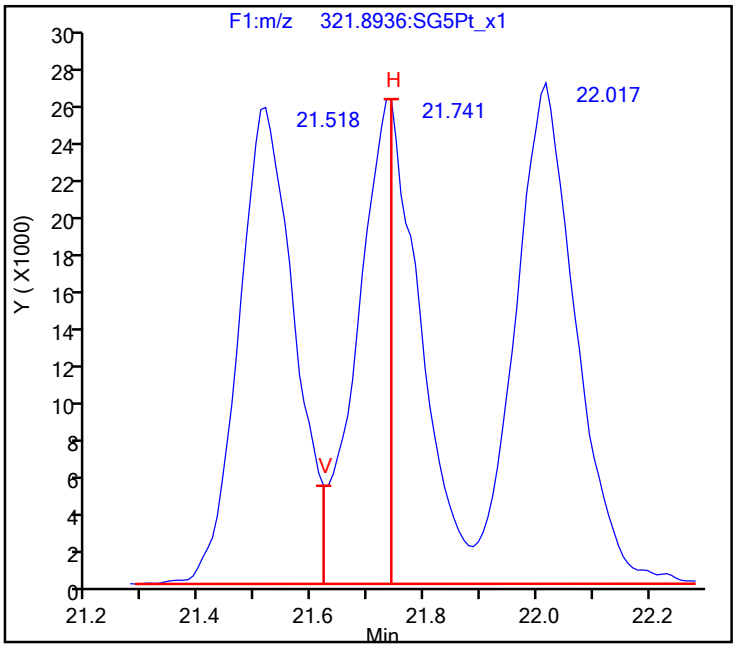

776436

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): CPS 320-518850/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/21/2021 13:54

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	12

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d				
Injection Date:	21-Aug-2021 13:54:29	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 280107
H (Peak Height) = 2376962

%R = 12 <= 25
Passed

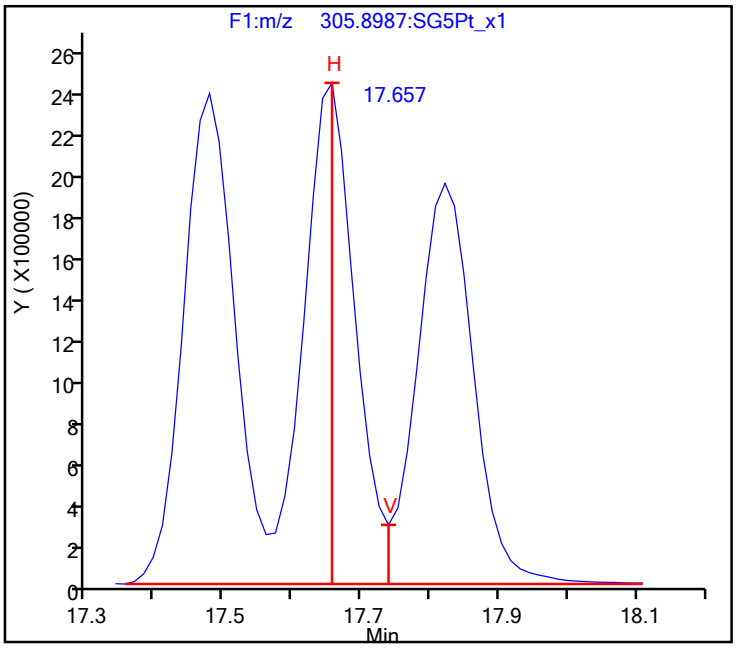

776438

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): CPS 320-518958/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/23/2021 09:32

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.67	13

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d				
Injection Date:	23-Aug-2021 09:32:15	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 147170
H (Peak Height) = 1128470

%R = 13 <= 25
Passed

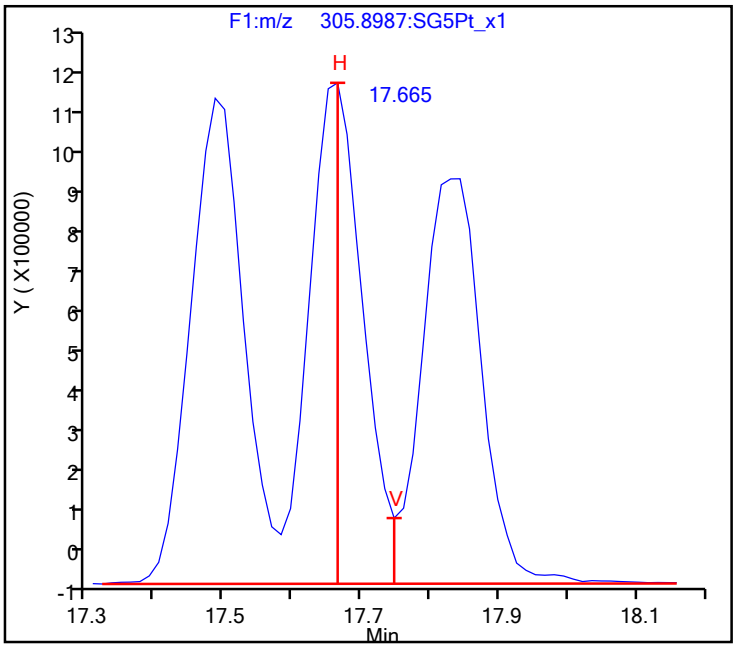

776440

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): CPS 320-518979/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/23/2021 15:34

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	13

Report Date: 24-Aug-2021 09:19:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d				
Injection Date:	23-Aug-2021 15:34:18	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 472819
H (Peak Height) = 3579908

%R = 13 <= 25
Passed

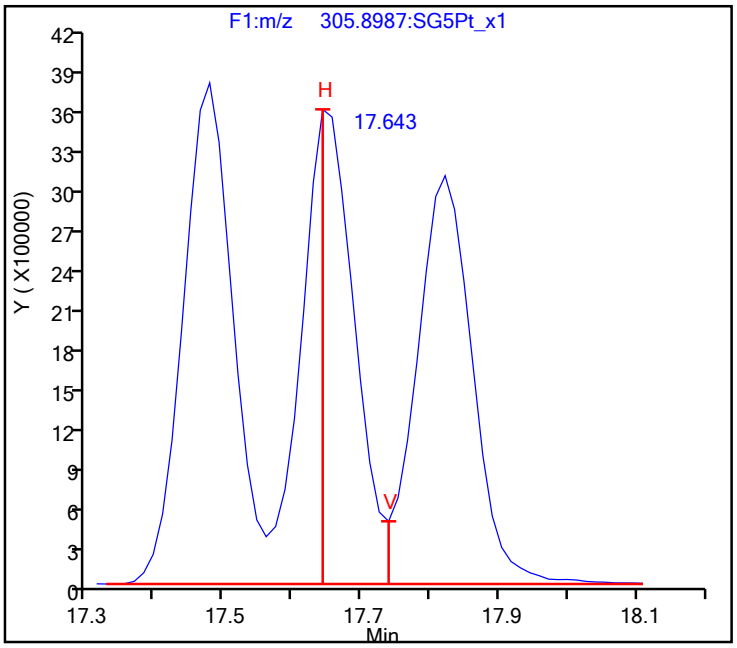

776442

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): CPS 320-519438/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/24/2021 08:28

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	13

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d				
Injection Date:	24-Aug-2021 08:28:58	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 298756
H (Peak Height) = 2238451

%R = 13 <= 25
Passed

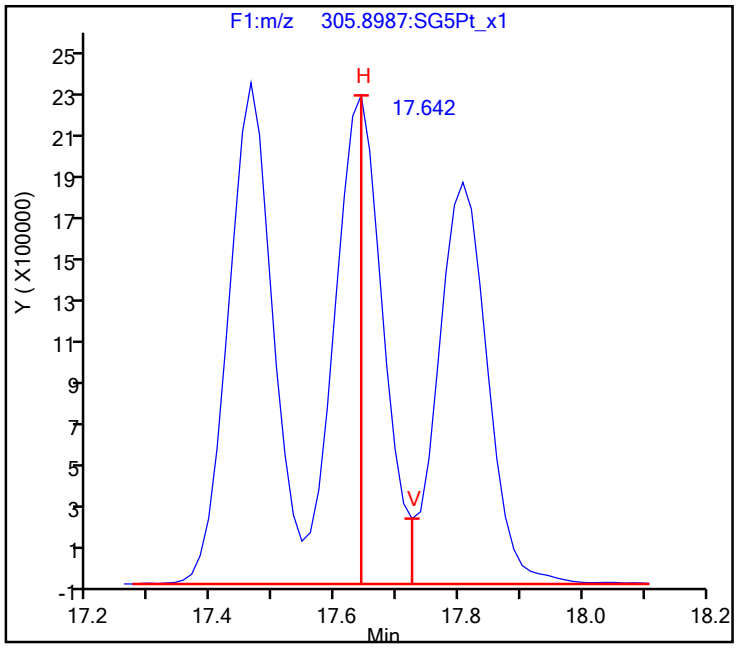

776444

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): CPS 320-519540/2 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/24/2021 17:15

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.63	13

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_002.d				
Injection Date:	24-Aug-2021 17:15:17	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 538934
H (Peak Height) = 4306730

%R = 13 <= 25
Passed

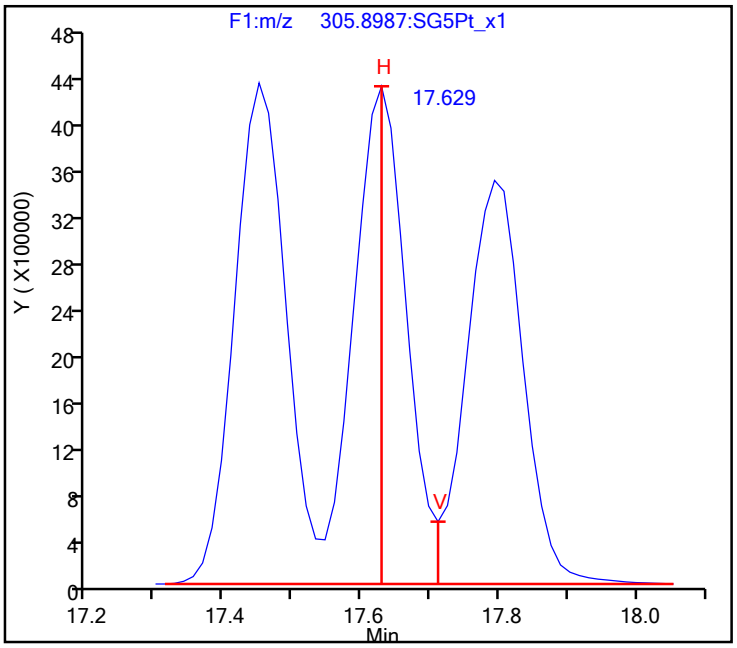

776446

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID (1): CPS 320-519650/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 08:48

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.63	11

Report Date: 25-Aug-2021 13:23:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d				
Injection Date:	25-Aug-2021 08:48:55	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 334173
H (Peak Height) = 2977162

%R = 11 <= 25
Passed

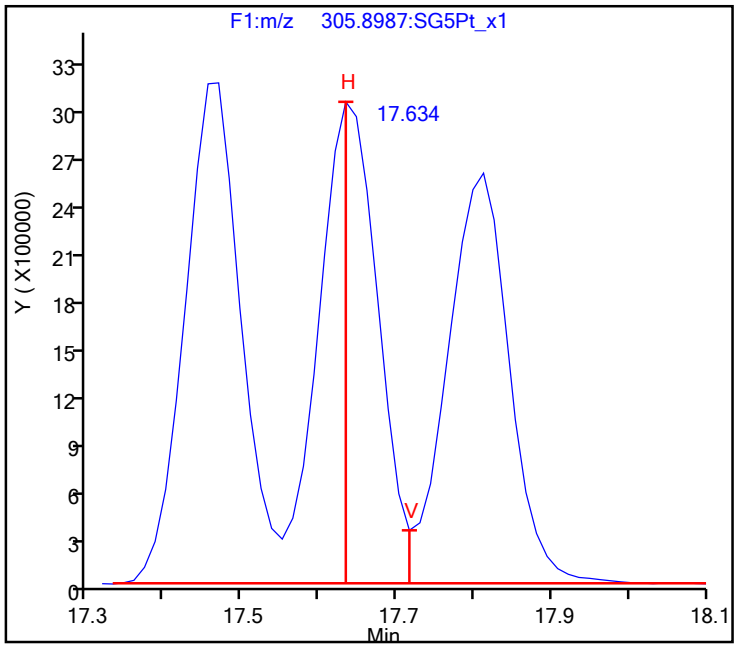

776448

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d				
Injection Date:	25-Aug-2021 08:48:55	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: ICV 320-510264/9 Calibration Date: 07/26/2021 15:31

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 26JL2110D5_9.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.105		43.2	40.0	108	70-130
2,3,7,8-TCDD	AveID	1.254	1.380		44.0	40.0	110	70-130
1,2,3,7,8-PeCDF	AveID	1.061	1.081		204	200	102	70-130
2,3,4,7,8-PeCDF	AveID	1.018	1.151		226	200	113	70-130
1,2,3,7,8-PeCDD	AveID	1.048	1.044		199	200	100	70-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.128		208	200	104	70-130
1,2,3,6,7,8-HxCDF	AveID	1.126	1.227		218	200	109	70-130
2,3,4,6,7,8-HxCDF	AveID	1.168	1.283		220	200	110	70-130
1,2,3,4,7,8-HxCDD	AveID	1.064	1.151		216	200	108	70-130
1,2,3,6,7,8-HxCDD	AveID	1.000	1.082		216	200	108	70-130
1,2,3,7,8,9-HxCDD	AveID	1.133	1.182		209	200	104	70-130
1,2,3,7,8,9-HxCDF	AveID	1.166	1.200		206	200	103	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.576		219	200	109	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.167		213	200	107	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.373		209	200	104	70-130
OCDD	AveID	1.107	1.211		438	400	109	70-130
OCDF	AveID	1.438	1.574		438	400	109	70-130
13C-2,3,7,8-TCDF	Ave	1.625	1.611		99.2	100	99	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9123		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.236		102	100	102	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.300		105	100	105	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7764		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.089		101	100	101	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.093		96.9	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.036		97.4	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7216		98.4	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8697		98.8	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9447		97.6	100	98	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7492		96.9	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6354		98.2	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7065		101	100	101	77-129
13C-OCDD	Ave	0.4472	0.4464		200	200	100	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.177		42.5	40.0	106	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	55225241	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.598	88976883	0.79	1.6249	99.2	99.2	0.1479	0.1479	99.15	
2,3,7,8-TCDF	17.613	39324874	0.78	1.0239	43.2	43.2	0.0666	0.0666	108	
A Non-2,3,7,8-sub-TCDF	17.311	524958	0.77	1.0239	0.6411	0.5762	0.0666	0.3057		RQ
S Total TCDF					43.8	43.7	0.0666	0.0666		RQ
D 13C-2,3,7,8-TCDD	18.323	50383801	0.80	0.8993	101.4	101.4	0.1314	0.1314	101	
2,3,7,8-TCDD	18.338	27801852	0.78	1.2541	44.0	44.0	0.0443	0.0443	110	
$ 37Cl4-2,3,7,8-TCDD	18.338	26006351		1.1071	42.5	42.5	0.0388	0.0388	106	
A Non-2,3,7,8-sub-TCDD	17.772	551726	0.77	1.2541	0.8732	0.8732	0.0443	0.8732		
S Total TCDD					44.9	44.9	0.0443	0.0443		
D 13C-1,2,3,7,8-PeCDF	22.749	68252478	1.57	1.2101	102.1	102.1	0.2097	0.2097	102	
1,2,3,7,8-PeCDF	22.762	147560573	1.57	1.0611	203.7	203.7	0.7454	0.7454	102	
D 13C-2,3,4,7,8-PeCDF	24.126	71797373	1.60	1.2395	104.9	104.9	0.2047	0.2047	105	
2,3,4,7,8-PeCDF	24.153	165293469	1.59	1.0184	226.1	226.1	0.7930	0.7930	113	
A F1 PeCDFs	20.244						0.0162	0.0162		
A Non-2,3,7,8-sub-PeCDF	23.473	3443801	1.55	1.0398	4.730	4.730	0.7686	4.730		
S Total PeCDF					434.5	434.5	0.7692	0.7692		
D 13C-1,2,3,7,8-PeCDD	24.862	42878117	1.62	0.7612	102.0	102.0	0.1090	0.1090	102	
1,2,3,7,8-PeCDD	24.889	89555111	1.58	1.0484	199.2	199.2	0.2271	0.2271	99.61	
A Non-2,3,7,8-sub-PeCDD	23.744						0.2271	0.2271		
S Total PeCDD					199.2	199.2	0.2271	0.2271		
D 13C-1,2,3,4,7,8-HxCDF	30.836	62488487	0.52	1.0837	100.5	100.5	0.4386	0.4386	101	
1,2,3,4,7,8-HxCDF	30.849	141029922	1.22	1.0851	208.0	208.0	1.073	1.073	104	
D 13C-1,2,3,6,7,8-HxCDF	30.995	62719524	0.52	1.1279	96.9	96.9	0.4214	0.4214	96.91	
1,2,3,6,7,8-HxCDF	31.008	153925065	1.22	1.1260	218.0	218.0	1.035	1.035	109	
D 13C-2,3,4,6,7,8-HxCDF	31.754	59440166	0.52	1.0637	97.4	97.4	0.4468	0.4468	97.39	
2,3,4,6,7,8-HxCDF	31.767	152499923	1.22	1.1675	219.7	219.7	0.8510	0.8510	110	
D 13C-1,2,3,7,8,9-HxCDF	32.513	54205090	0.51	0.9676	97.6	97.6	0.4912	0.4912	97.64	
1,2,3,7,8,9-HxCDF	32.526	130040433	1.23	1.1664	205.7	205.7	0.8755	0.8755	103	

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
A Non-2,3,7,8-sub-HxCDF	30.542						0.9509	0.9509		
S Total HxCDF					851.4	851.4	0.9587	0.9587		
* 13C-1,2,3,7,8,9-HxCDD	32.340	57376962	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	41405543	1.26	0.7334	98.4	98.4	0.3599	0.3599	98.39	
1,2,3,4,7,8-HxCDD	31.940	95311816	1.31	1.0640	216.3	216.3	0.7396	0.7396	108	
D 13C-1,2,3,6,7,8-HxCDD	32.020	49899921	1.25	0.8802	98.8	98.8	0.2999	0.2999	98.81	
1,2,3,6,7,8-HxCDD	32.034	107959577	1.21	1.0001	216.3	216.3	0.7456	0.7456	108	
1,2,3,7,8,9-HxCDD	32.340	107964188	1.26	1.1325	208.8	208.8	0.6762	0.6762	104	
A Non-2,3,7,8-sub-HxCDD	31.215						0.7187	0.7187		
S Total HxCDD					641.5	641.5	0.7205	0.7205		
1,2,3,4,6,7,8-HpCDF	33.912	135529943	1.05	1.4413	218.8	218.8	2.088	2.088	109	
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	42985413	0.44	0.7730	96.9	96.9	0.9749	0.9749	96.91	
D 13C-1,2,3,4,7,8,9-HpCDF	35.006	40537577	0.44	0.7008	100.8	100.8	1.075	1.075	101	
1,2,3,4,7,8,9-HpCDF	35.018	111348980	1.06	1.3174	208.5	208.5	2.580	2.580	104	
A Non-2,3,7,8-sub-HpCDF	34.458						2.314	2.314		
S Total HpCDF					427.3	427.3	2.334	2.334		
D 13C-1,2,3,4,6,7,8-HpCDD	34.702	36455330	1.02	0.6472	98.2	98.2	0.5132	0.5132	98.17	
1,2,3,4,6,7,8-HpCDD	34.714	85115851	1.05	1.0943	213.4	213.4	1.044	1.044	107	
A Non-2,3,7,8-sub-HpCDD	33.504						1.044	1.044		
S Total HpCDD					213.4	213.4	1.044	1.044		
D 13C-OCDD	37.082	51228940	0.89	0.4472	199.7	199.7	0.2232	0.2232	99.84	
OCDF	37.189	161294219	0.91	1.4382	437.9	437.9	0.4409	0.4409	109	
OCDD	37.094	124067491	0.90	1.1070	437.5	437.5	0.5859	0.5859	109	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.127	18.142	-1		24811260	6334063	3297	8242	1921		
333.9339	18.127	18.142	-1		30413981	7612051	3296	8240	2309	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	0.971	39276583	9941961	7868	19670	1264		
317.9389	17.598	17.598	0	0.971	49700300	12596795	5536	13840	2275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.613	17.628	-1	1.001	17265923	4373947	2358	5895	1855		
305.8987	17.613	17.628	-1	1.001	22058951	5573170	3788	9470	1471	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.933	17.311	-23	0.962	161517	37808	2358	5895	16		
	Empc Correction				121157	34090	2358	5895	14		
305.8987	16.933	17.311	-23	0.962	157347	44274	3788	9470	12	1.03(0.65-0.89)	
303.9016	17.235	17.311	-5	0.979	125955	28258	2358	5895	12		
	Empc Correction				107214	28155	2358	5895	12		
305.8987	17.220	17.311	-5	0.979	139240	36566	3788	9470	10	0.90(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.011	22418240	5434734	3297	8242	1648		
333.9339	18.323	18.323	0	1.011	27965561	6697610	3296	8240	2032	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.338	0	1.001	12170563	2933733	1303	3257	2252		
321.8936	18.338	18.338	0	1.001	15631289	3775919	1394	3485	2709	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.012	26006351	6295077	2398	5995	2625		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											
319.8965	18.233	17.772	28	0.995	239239	60004	1303	3257	46		
321.8936	18.233	17.772	28	0.995	312487	80578	1394	3485	58	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.749	0	1.255	41668599	7333690	8485	21212	864		
353.8970	22.749	22.749	0	1.255	26583879	4652625	5670	14175	821	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.762	22.776	-1	1.001	90206138	15696498	23147	57867	678		
341.8567	22.762	22.776	-1	1.001	57354435	10012296	14777	36942	678	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.126	0	1.331	44217600	7271382	8485	21212	857		
353.8970	24.126	24.126	0	1.331	27579773	4468756	5670	14175	788	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.153	0	1.001	101392394	16526277	23147	57867	714		
341.8567	24.153	24.153	0	1.001	63901075	10428415	14777	36942	706	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.244						338	845			
341.8567	20.244						462	1155			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.308	23.473	-10	1.025	2092429	352488	23147	57867	15		
341.8567	23.308	23.473	-10	1.025	1351372	223195	14777	36942	15	1.55(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.862	0	1.372	26514155	4045355	2631	6577	1538		
369.8919	24.862	24.862	0	1.372	16363962	2537743	2000	5000	1269	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.889	0	1.001	54803563	8416527	3860	9650	2180		
357.8516	24.889	24.889	0	1.001	34751548	5423049	2410	6025	2250	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.744						3860	9650			
357.8516	23.744						2410	6025			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.836	30.835	0	0.953	21423741	4602993	10138	25345	454		
385.8610	30.836	30.835	0	0.953	41064746	8805011	18904	47260	466	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.862	-1	1.000	77446041	17056861	34028	85070	501		
375.8178	30.849	30.862	-1	1.000	63583881	14029731	28421	71052	494	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.008	-1	0.958	21527343	4645676	10138	25345	458		
385.8610	30.995	31.008	-1	0.958	41192181	8744916	18904	47260	463	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.008	31.021	-1	1.000	84458486	18178004	34028	85070	534		
375.8178	31.008	31.021	-1	1.000	69466579	15063201	28421	71052	530	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.754	0	0.982	20418672	5425134	10138	25345	535		
385.8610	31.754	31.754	0	0.982	39021494	10287607	18904	47260	544	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.767	0	1.000	83657687	22340712	34028	85070	657		
375.8178	31.767	31.767	0	1.000	68842236	18269489	28421	71052	643	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.513	32.526	-1	1.005	18351639	5227320	10138	25345	516		
385.8610	32.513	32.526	-1	1.005	35853451	10061715	18904	47260	532	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.539	-1	1.000	71665418	20282625	34028	85070	596		
375.8178	32.526	32.539	-1	1.000	58375015	16239209	28421	71052	571	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.542						34028	85070			
375.8178	30.542						28421	71052			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.340	32.339	0		32156760	8544429	8352	20880	1023		
403.8529	32.326	32.339	-1		25220202	6731682	7778	19445	865	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.927	0	0.987	23052563	6987052	8352	20880	837		
403.8529	31.927	31.927	0	0.987	18352980	5468630	7778	19445	703	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.940	0	1.000	54057818	15589077	22398	55995	696		
391.8127	31.940	31.940	0	1.000	41253998	12285721	16811	42027	731	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.020	32.033	-1	0.990	27736555	7273068	8352	20880	871		
403.8529	32.020	32.033	-1	0.990	22163366	5871752	7778	19445	755	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.034	32.047	-1	1.000	59116629	16185483	22398	55995	723		
391.8127	32.034	32.047	-1	1.000	48842948	13061351	16811	42027	777	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.340	32.353	-1	1.013	60106510	15800454	22398	55995	705		
391.8127	32.340	32.353	-1	1.013	47857678	12979231	16811	42027	772	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	31.215						22398	55995			
391.8127	31.215						16811	42027			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.912	33.911	0	1.000	69518297	21985720	82461	206152	267		
409.7789	33.912	33.911	0	1.000	66011646	21358881	78734	196835	271	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.912	0	1.049	13138473	4149229	14216	35540	292		
419.8220	33.900	33.912	-1	1.048	29846940	9243997	31835	79587	290	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.006	35.005	0	1.082	12375038	3705586	14216	35540	261		
419.8220	35.006	35.005	0	1.082	28162539	8151296	31835	79587	256	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.018	35.005	1	1.000	57298984	16523888	82461	206152	200		
409.7789	35.006	35.005	0	1.000	54049996	15559126	78734	196835	198	1.06(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						82461	206152			
409.7789	34.458						78734	196835			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.702	34.714	-1	1.073	18400619	5331850	10315	25787	517		
437.8140	34.702	34.714	-1	1.073	18054711	5313047	9982	24955	532	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.714	0	1.000	43603241	12970820	24860	62150	522		
425.7737	34.714	34.714	0	1.000	41512610	12528364	23796	59490	526	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						24860	62150			
425.7737	33.504						23796	59490			
13C-OCDD											
469.7779	37.082	37.093	-1	1.147	24118371	6015882	2552	6380	2357		
471.7750	37.082	37.093	-1	1.147	27110569	6692443	3547	8867	1887	0.89(0.76-1.02)	
OCDF											
441.7428	37.189	37.201	-1	1.003	76746145	20468133	7616	19040	2688		
443.7399	37.189	37.201	-1	1.003	84548074	22394214	8501	21252	2634	0.91(0.76-1.02)	
OCDD											
457.7377	37.094	37.105	-1	1.000	58682484	14688537	7599	18997	1933		
459.7348	37.094	37.105	-1	1.000	65385007	16510536	8885	22212	1858	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	88976883	22538756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	88976883	22538756

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.933	161517	37808	157347	44274	0.3500	1.03	RQ
16.933	121157	34090	157347	44274	0.3057		Empc Correction
17.235	125955	28258	139240	36566	0.2911	0.90	RnQ
17.235	107214	28155	139240	36566	0.2705		Empc Correction
Signal Totals:							
	228371	62245	296587	80840			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	584059	146906				0.97	RQ
	524958	143085					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6411 = (584059 * 100.000) / (88976883 * 1.024)
Empc Amount: 0.5762 = (524958 * 100.000) / (88976883 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50383801	12132344

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50383801	12132344

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.233	239239	60004	312487	80578	0.8732	0.77	
Signal Totals:							
	239239	60004	312487	80578			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	551726	140582				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8732 = (551726 * 100.000) / (50383801 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68252478	11986315
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71797373	11740138

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70024925	11863226

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
23.308	2092429	352488	1351372	223195	4.73	1.55	
Signal Totals:							
	2092429	352488	1351372	223195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3443801	575683				1.55	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.730 = (3443801 * 100.000) / (70024925 * 1.040)

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

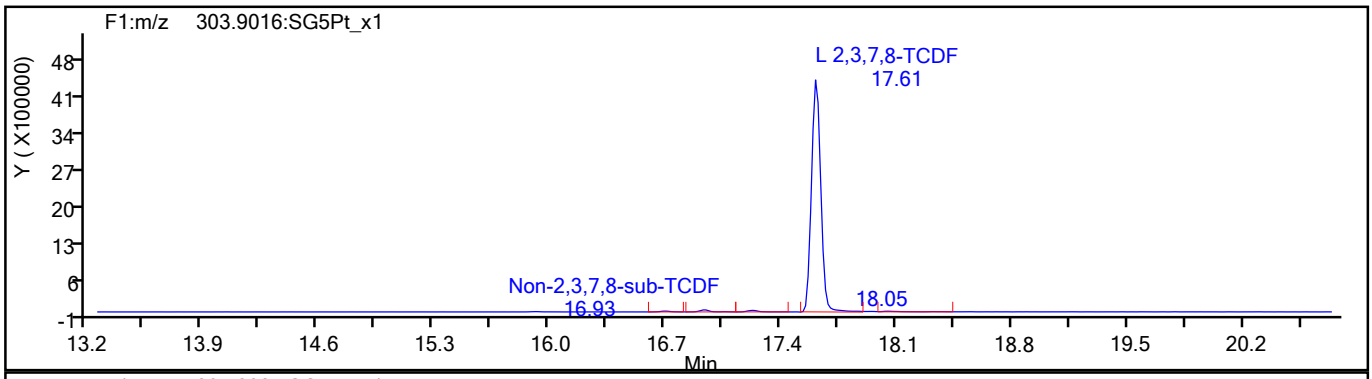

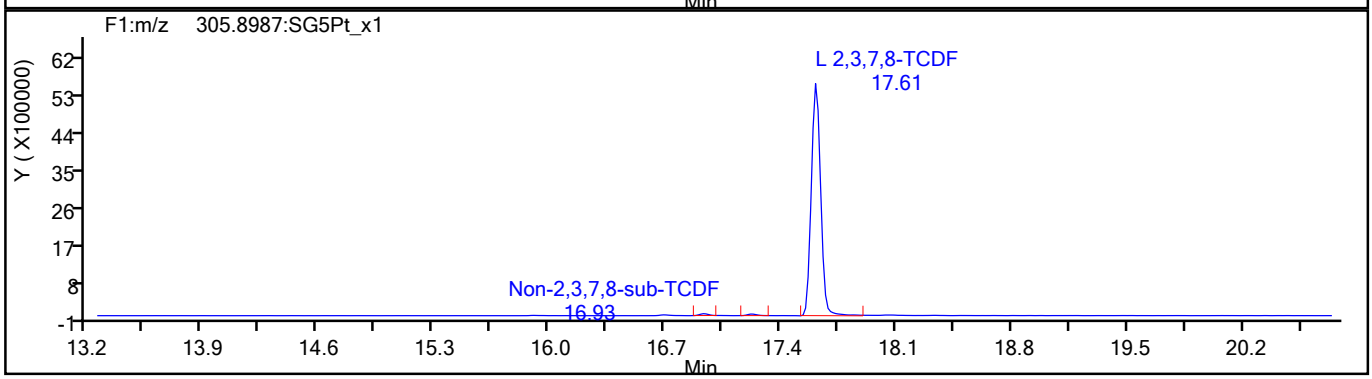

TCDF Standards

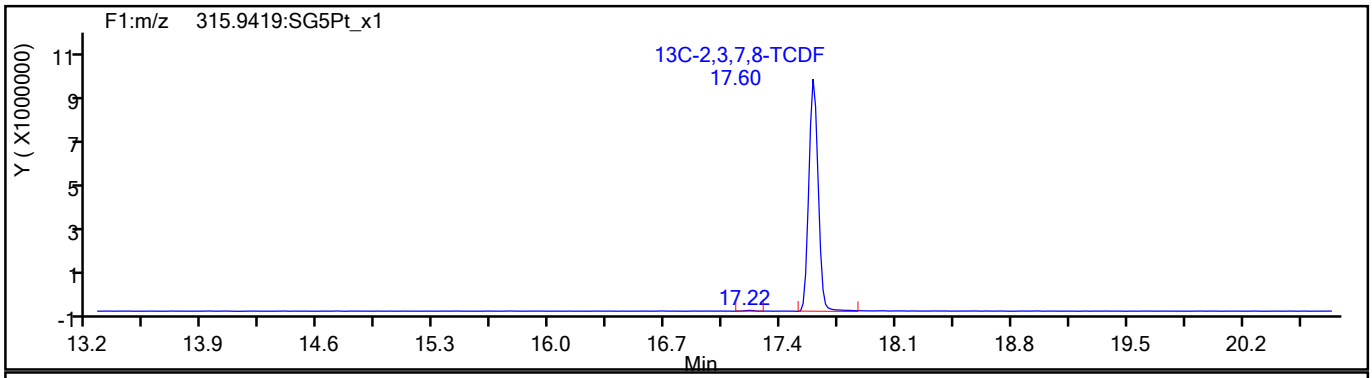

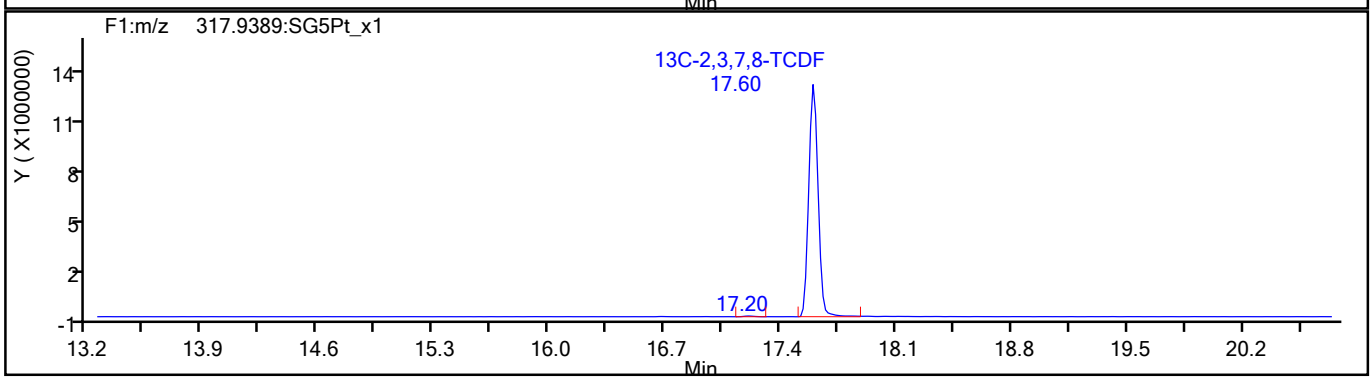

776460

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

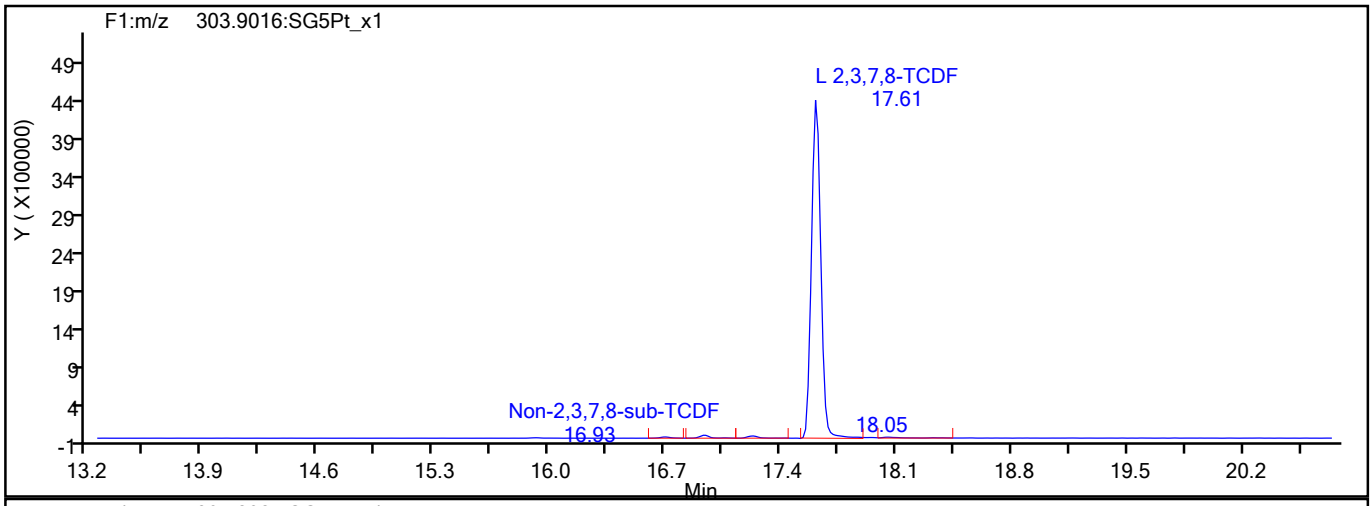

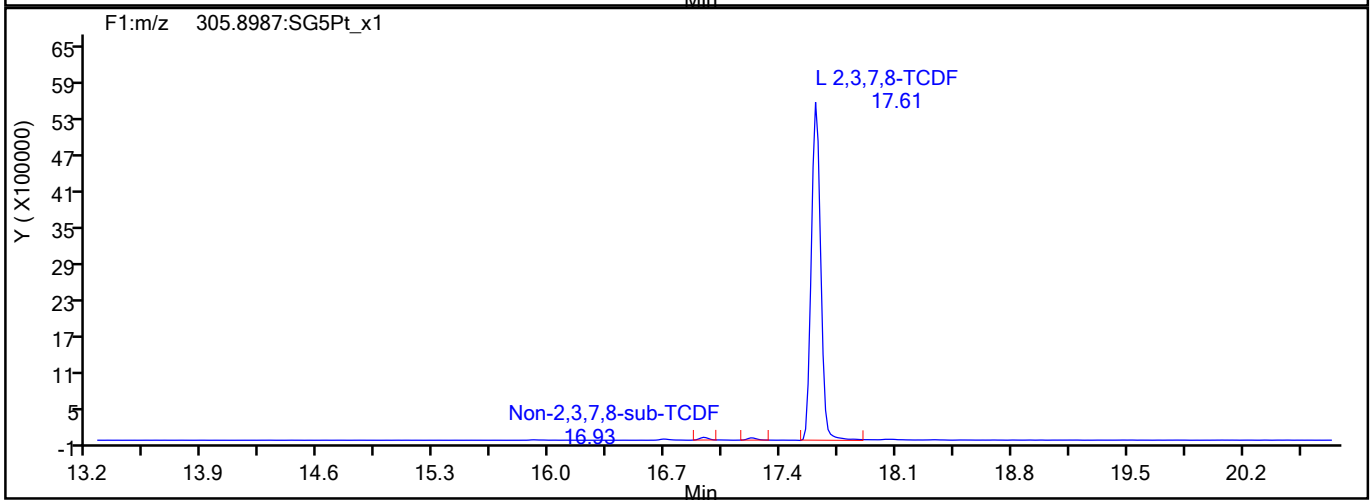

TCDF Interference Mass

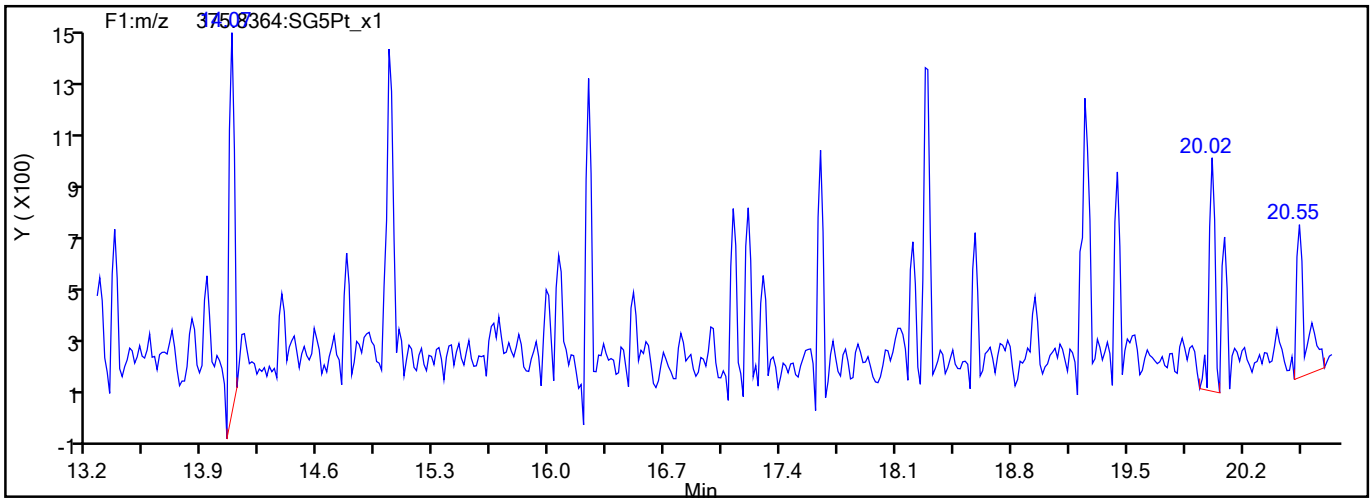

776461

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

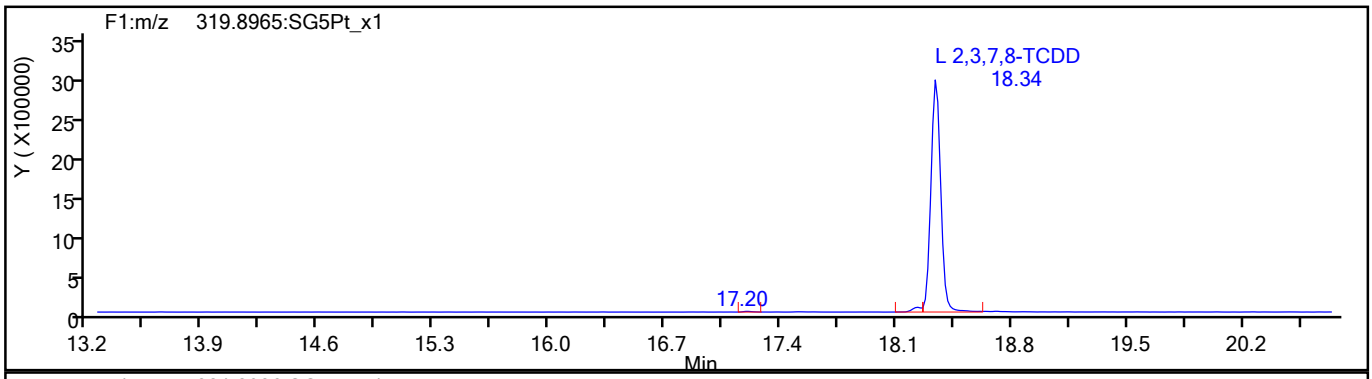

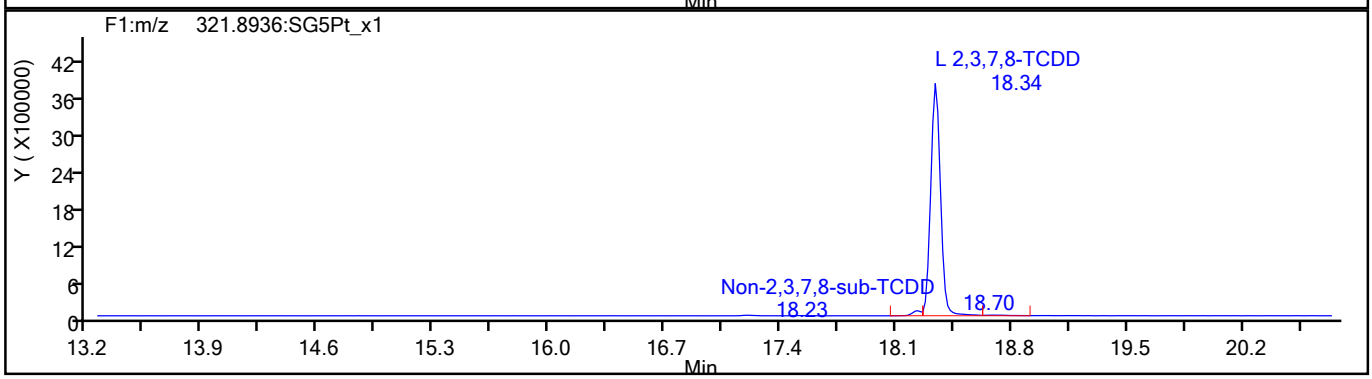

TCDD Standards

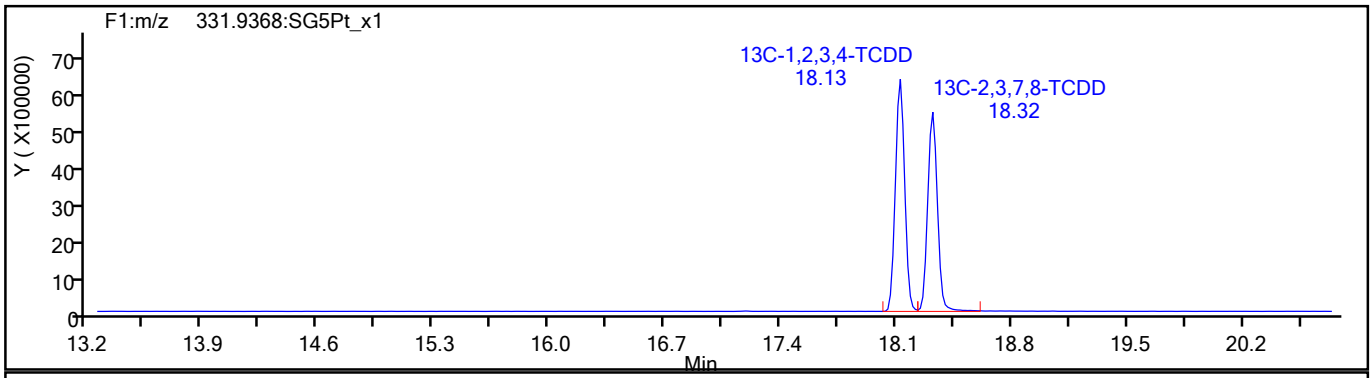

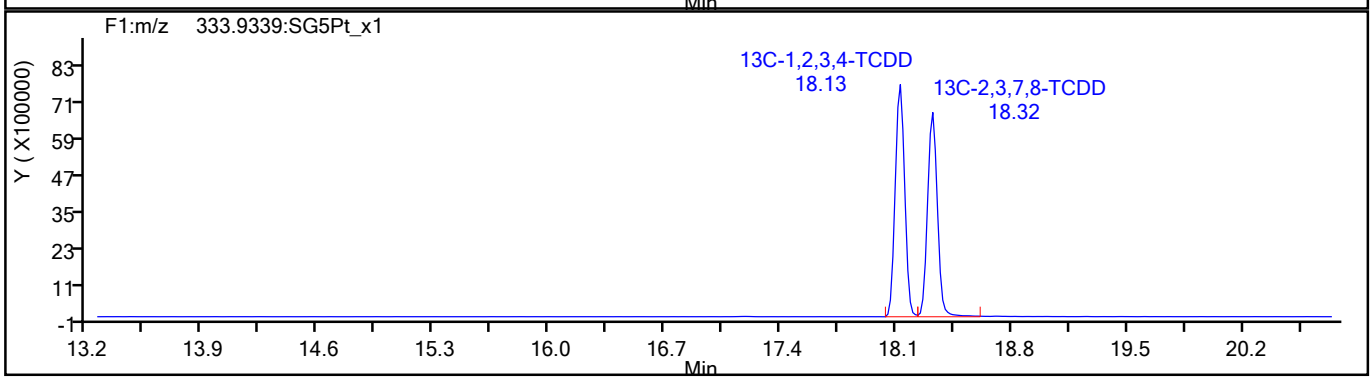

776462

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

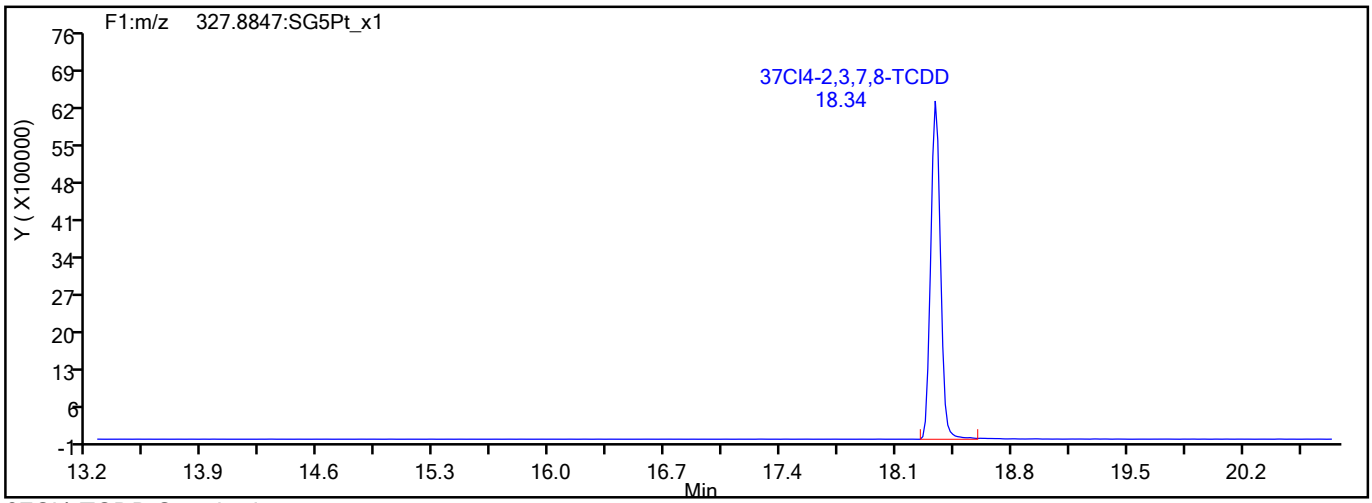

37Cl4-TCDD Standards

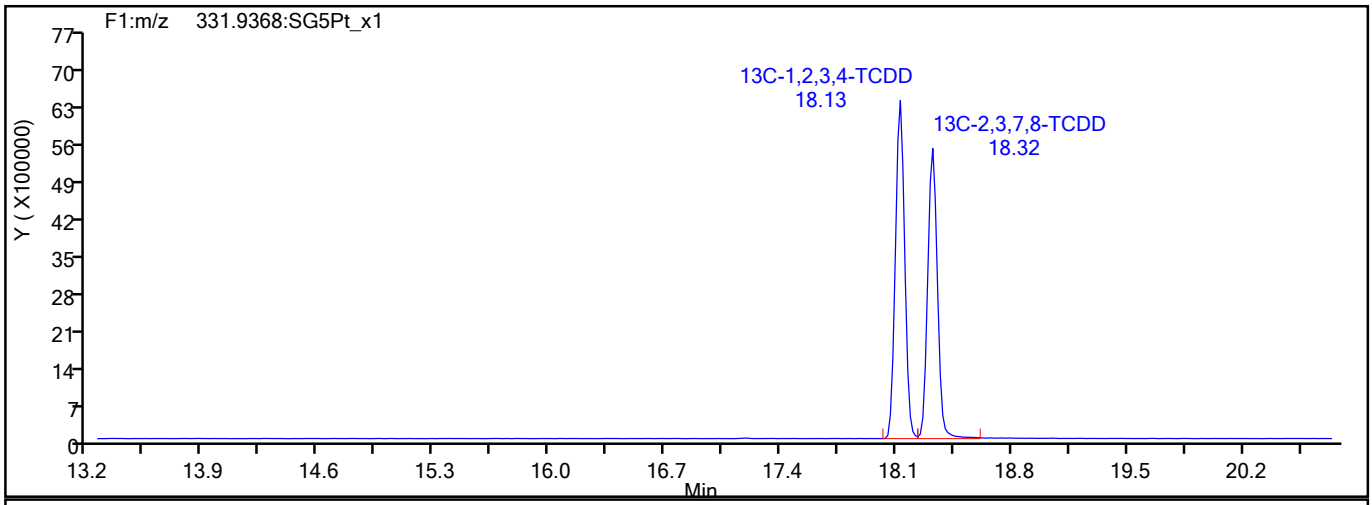

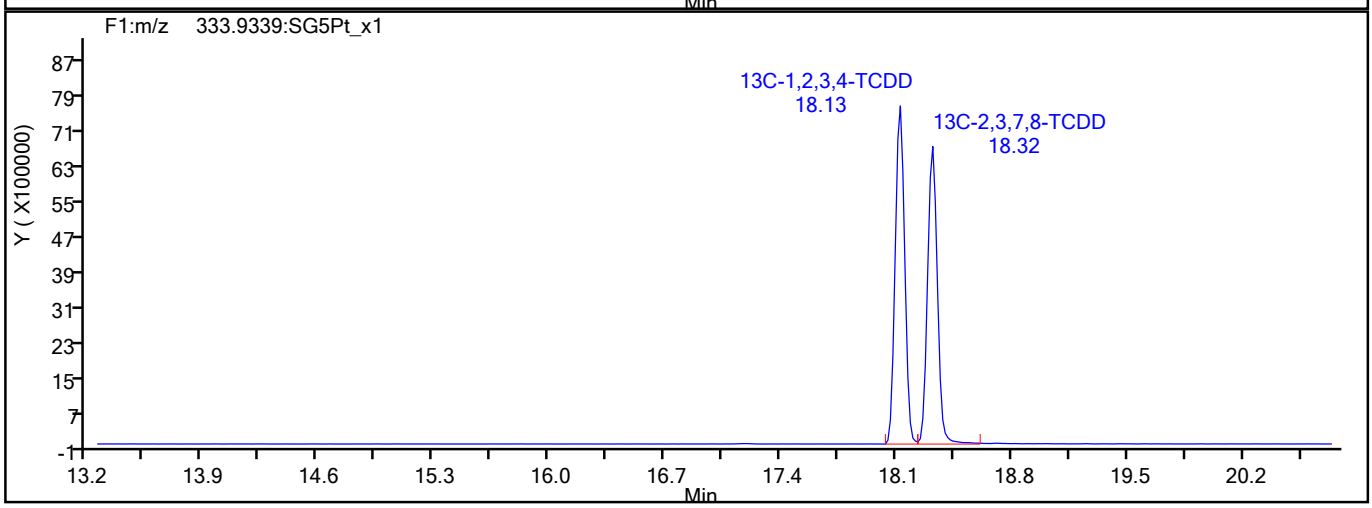

776463

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

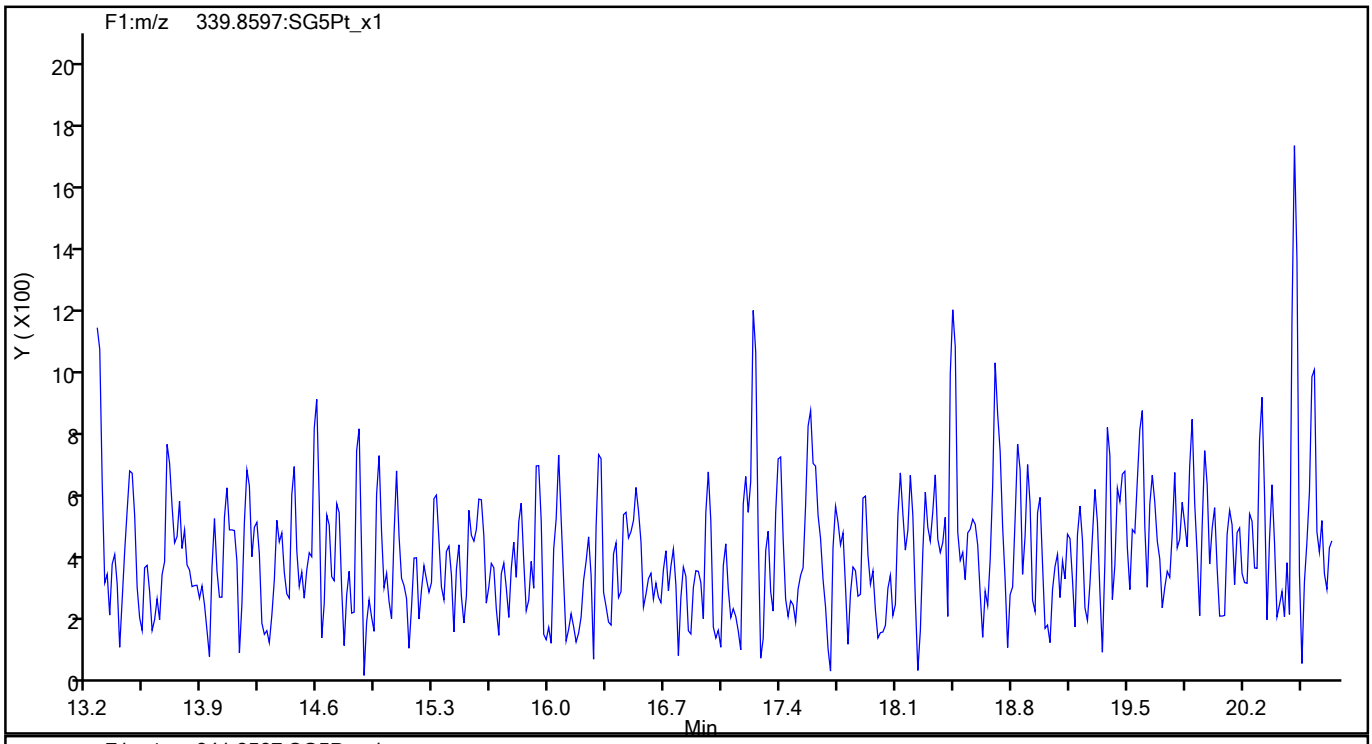

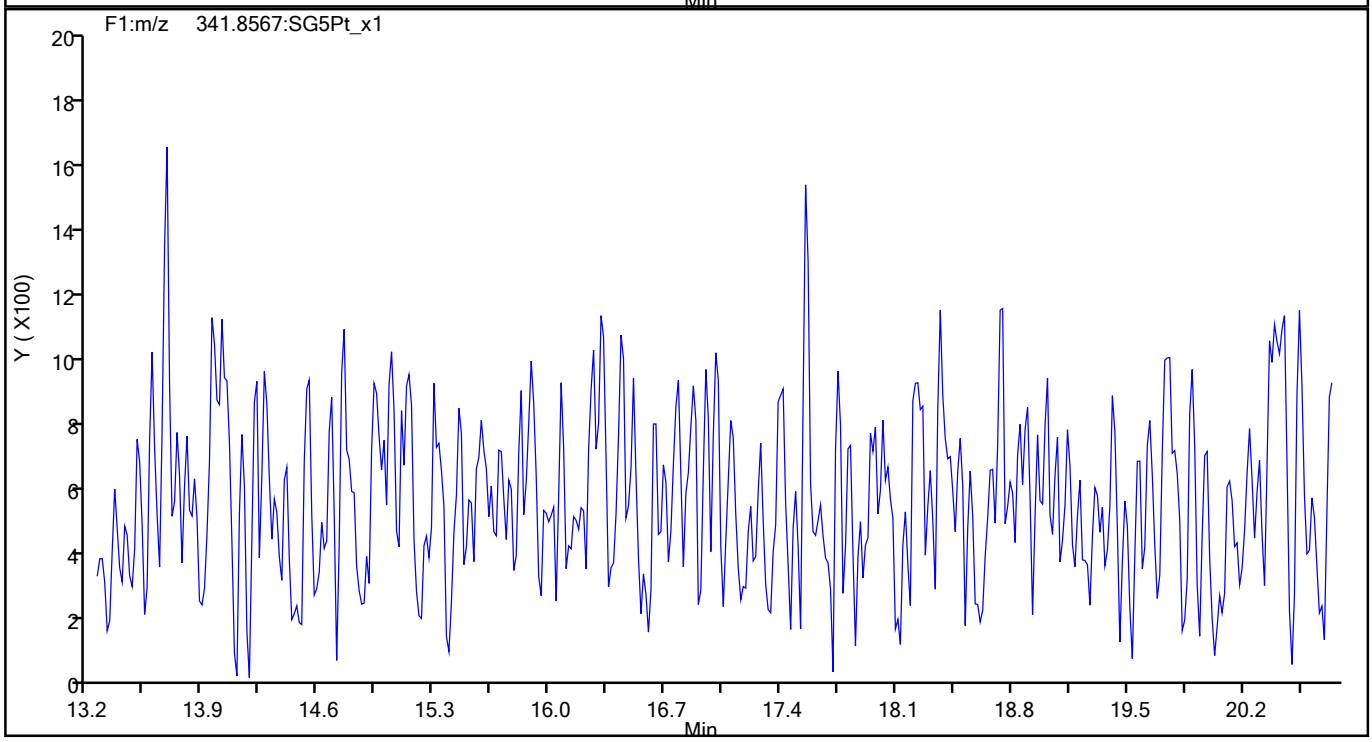

776464

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

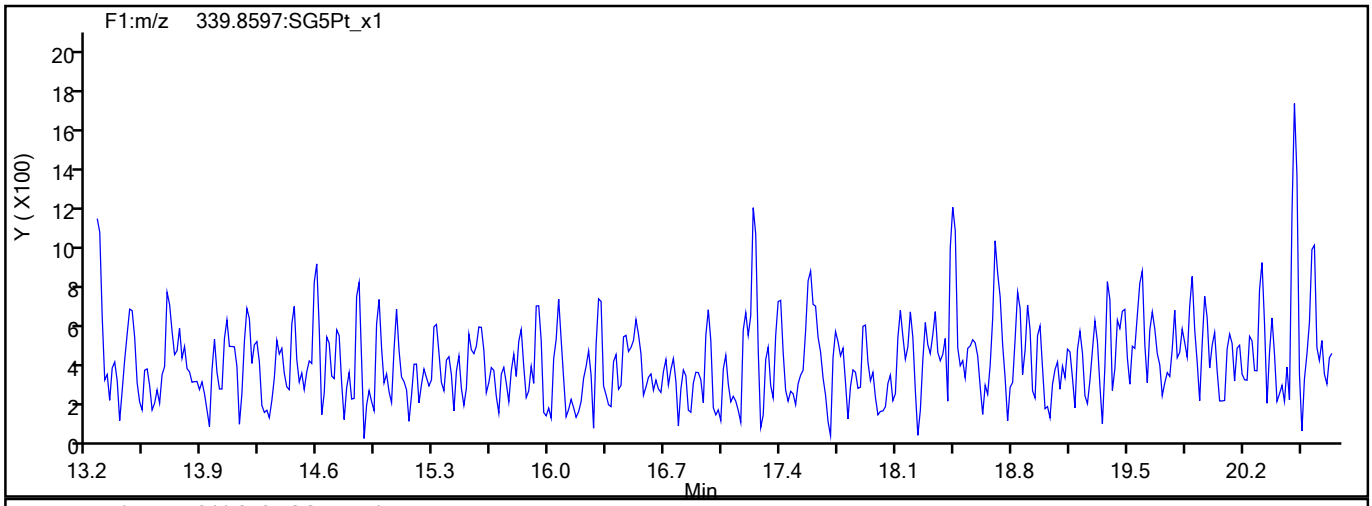

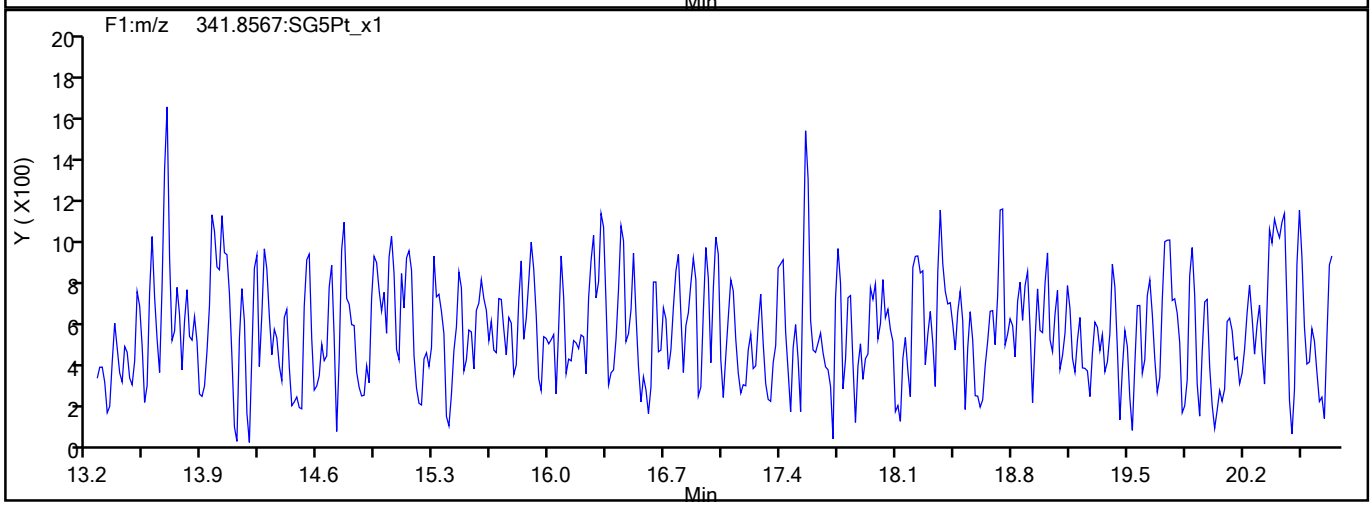

F1 PeCDFs Interference Mass

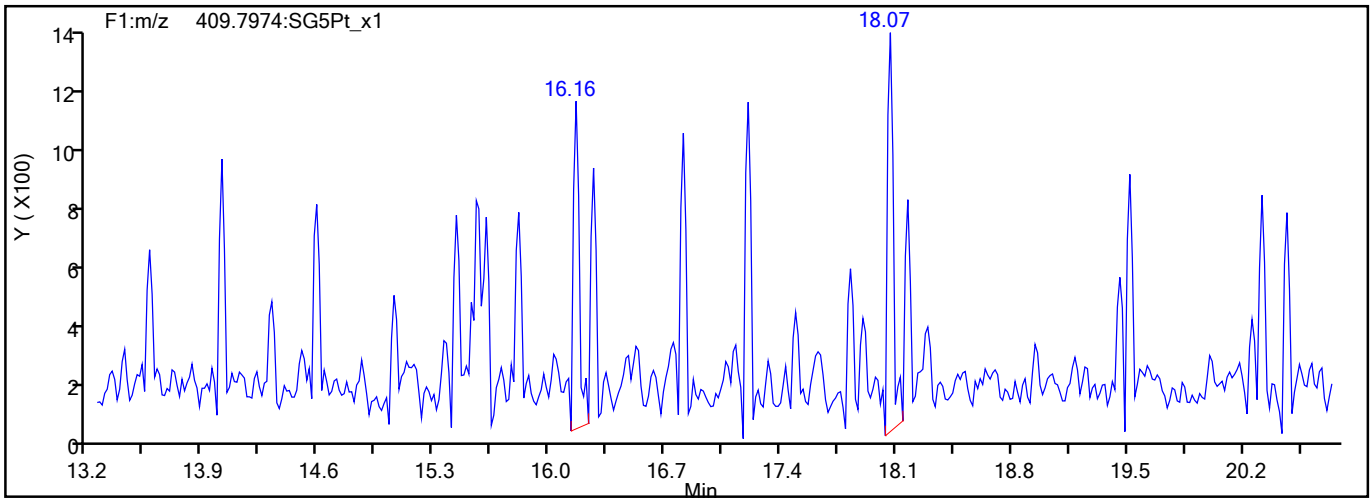

776465

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

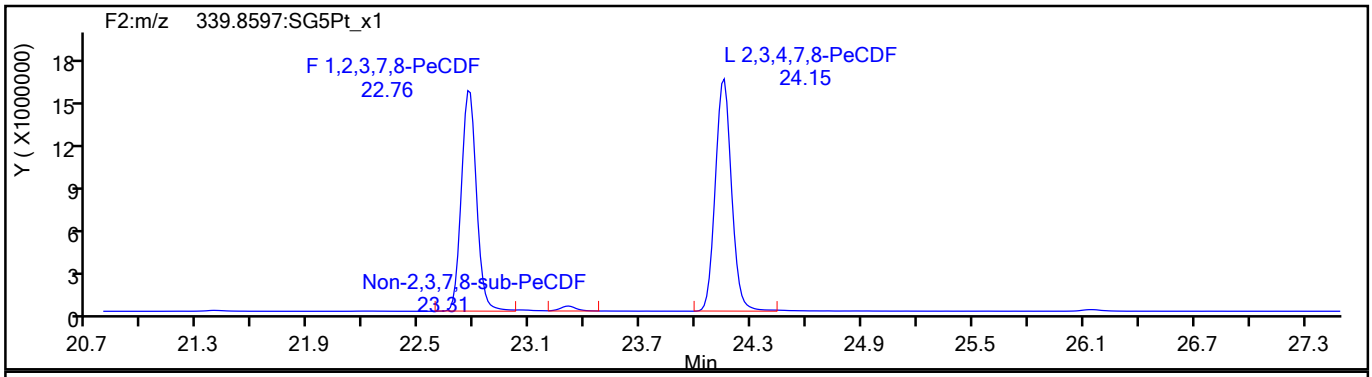

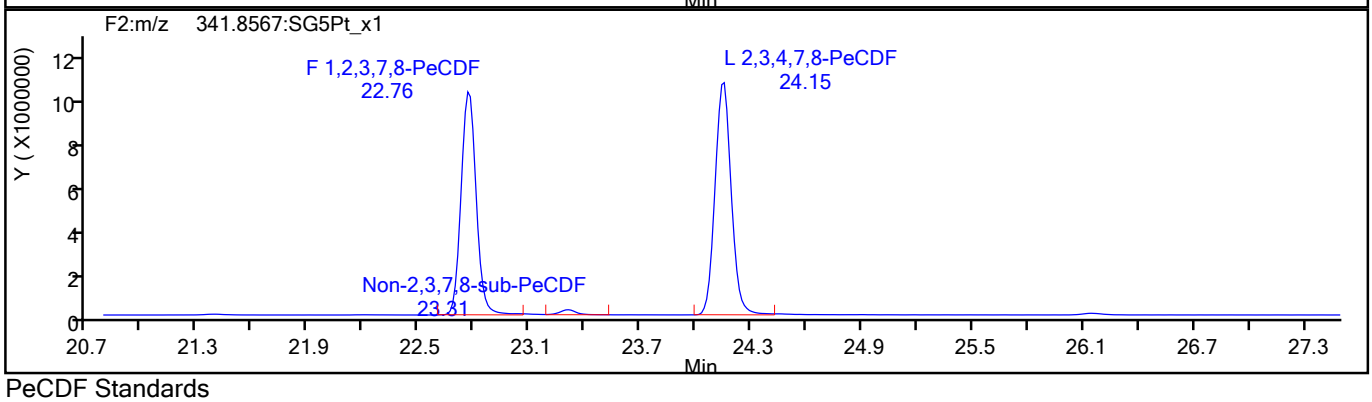

PeCDF Standards

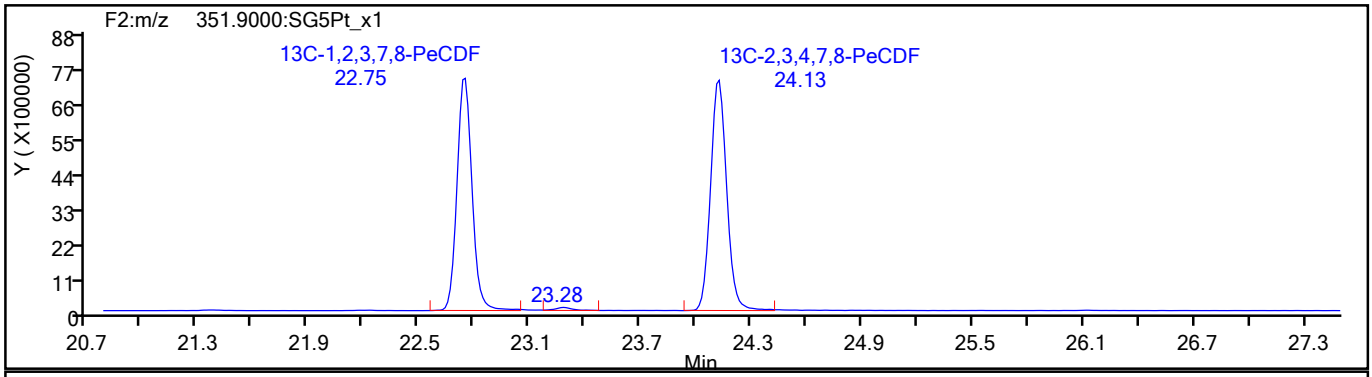

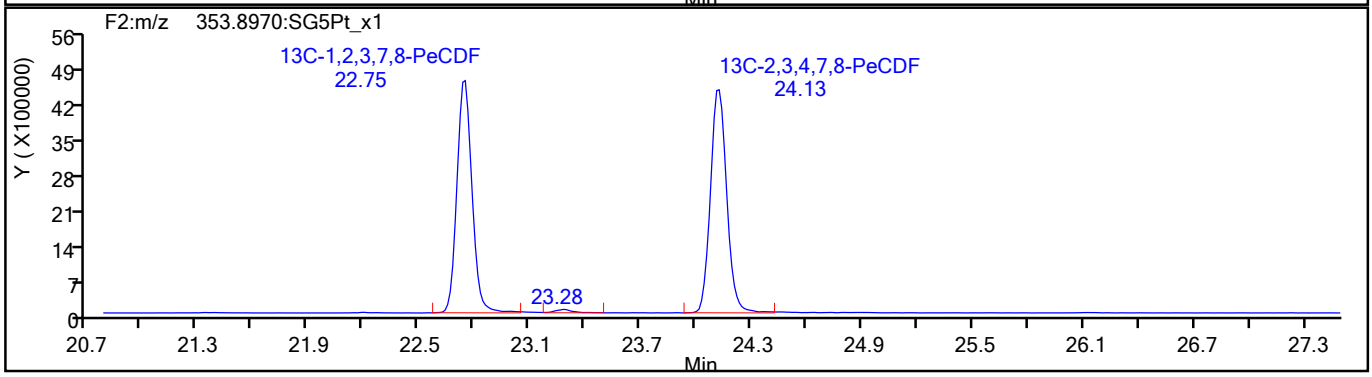

776466

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

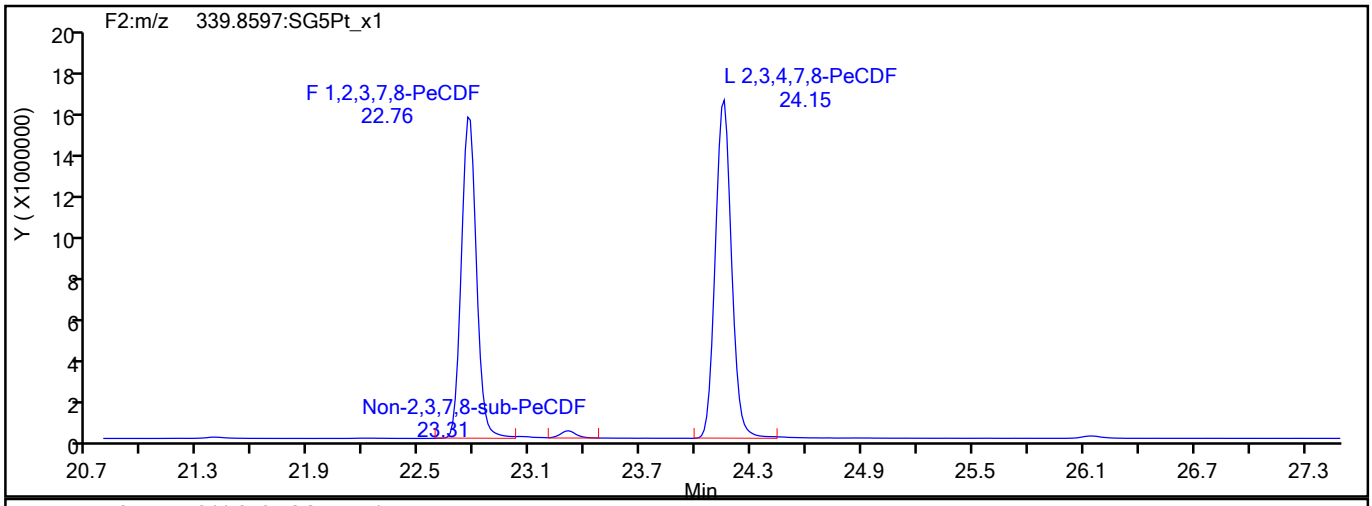

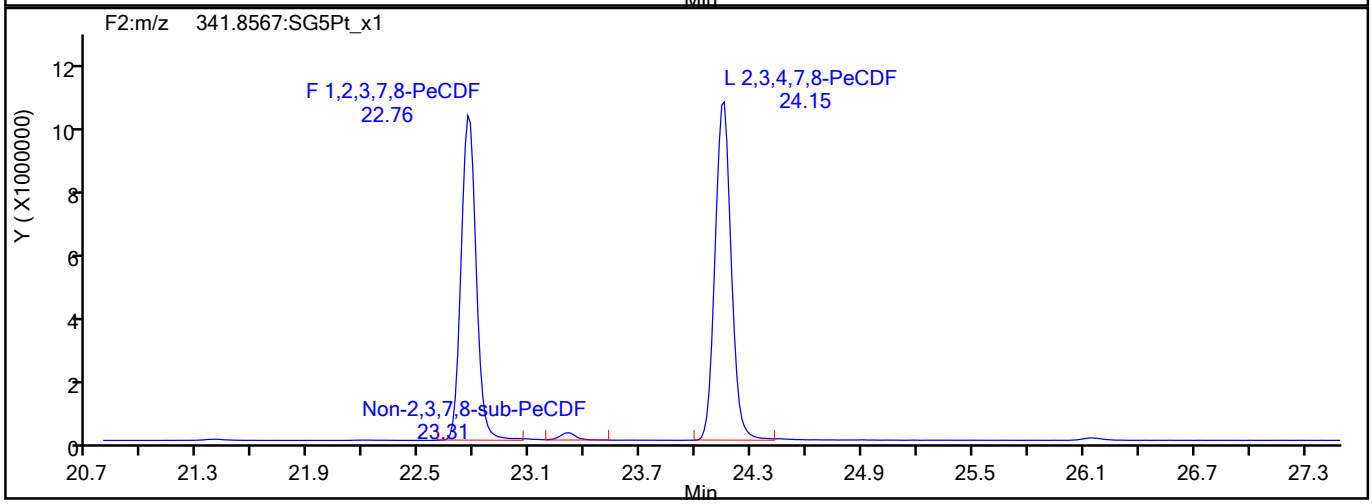

PeCDF Interference Mass

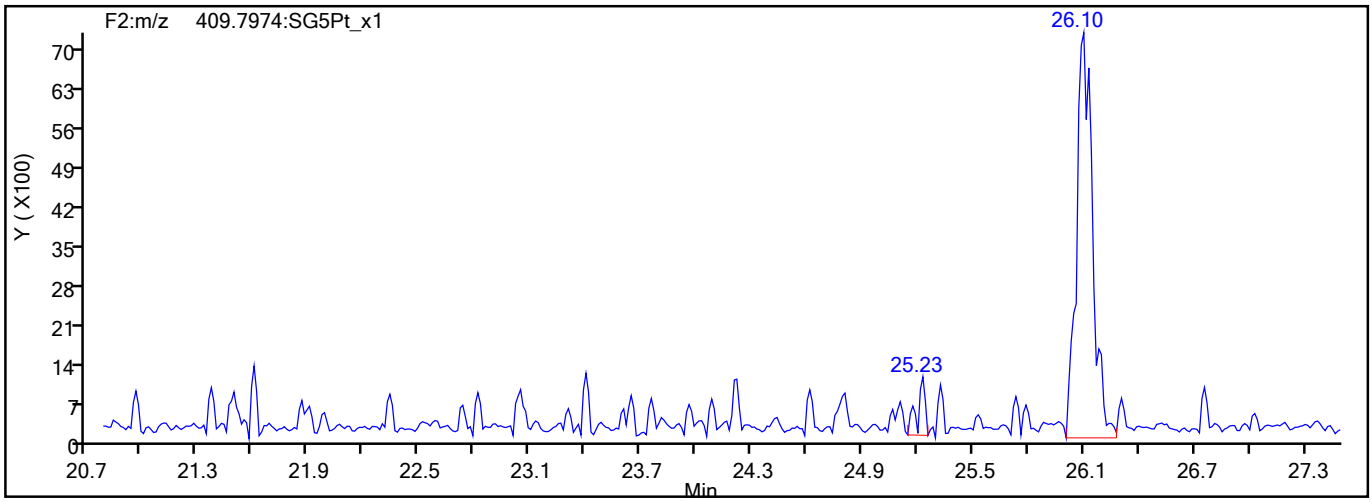

776467

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

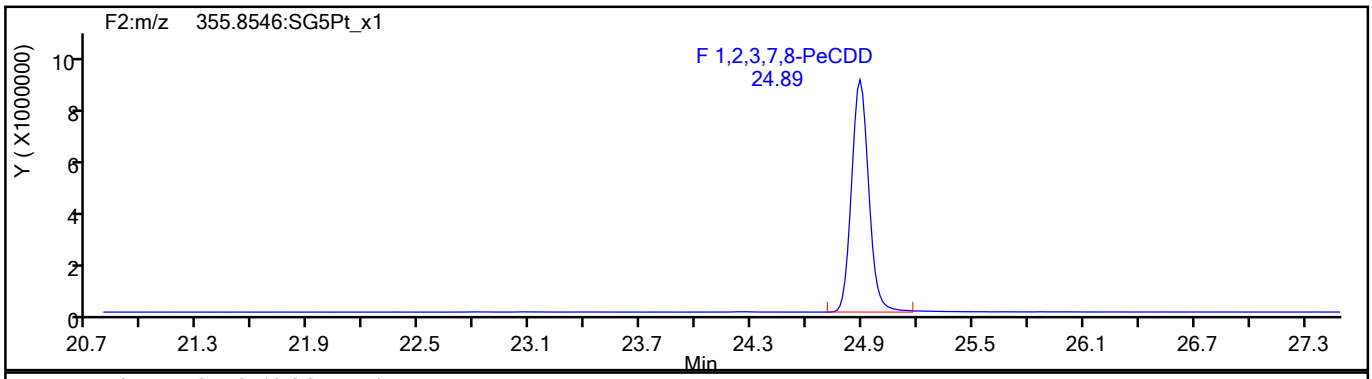

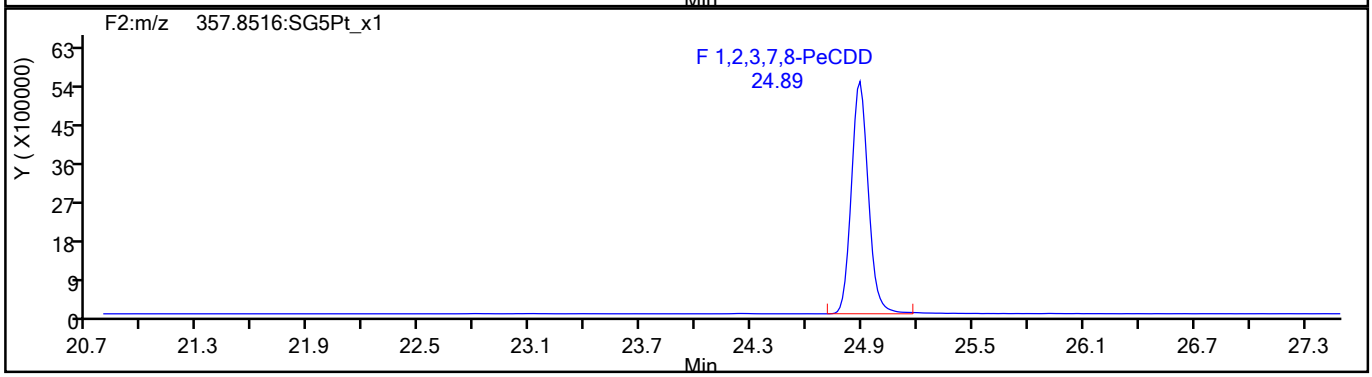

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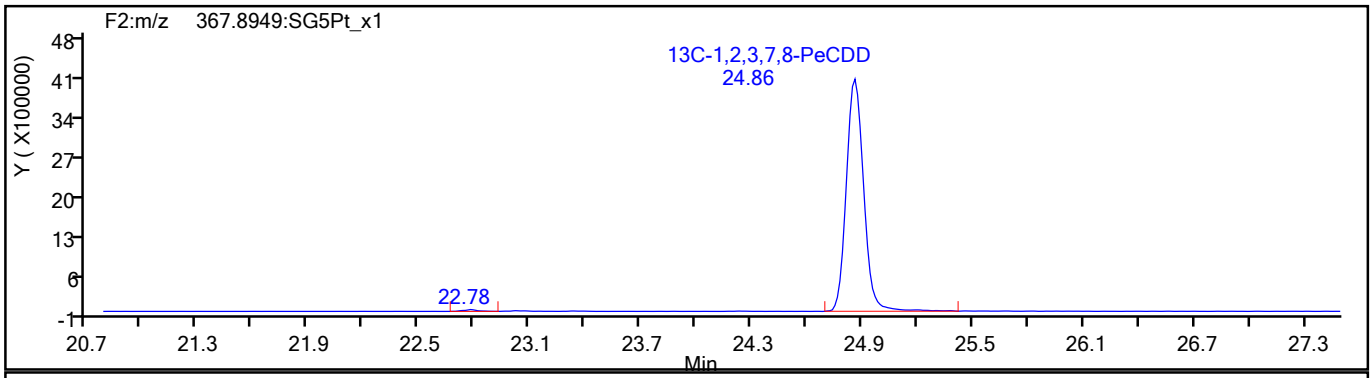

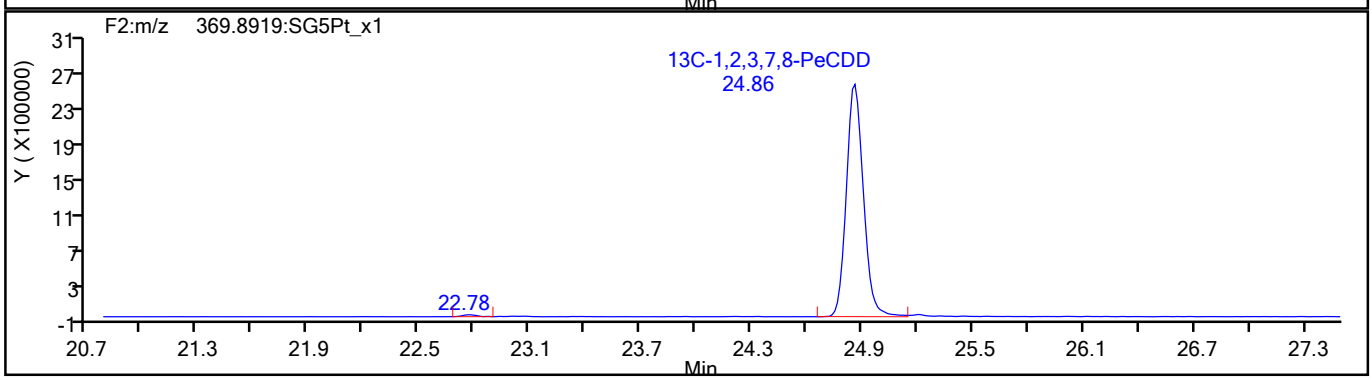

776468

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

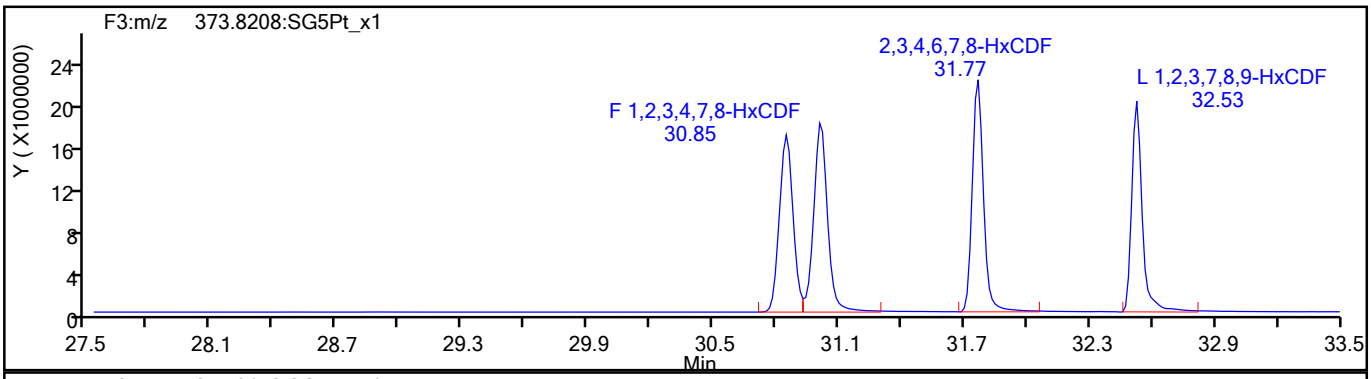

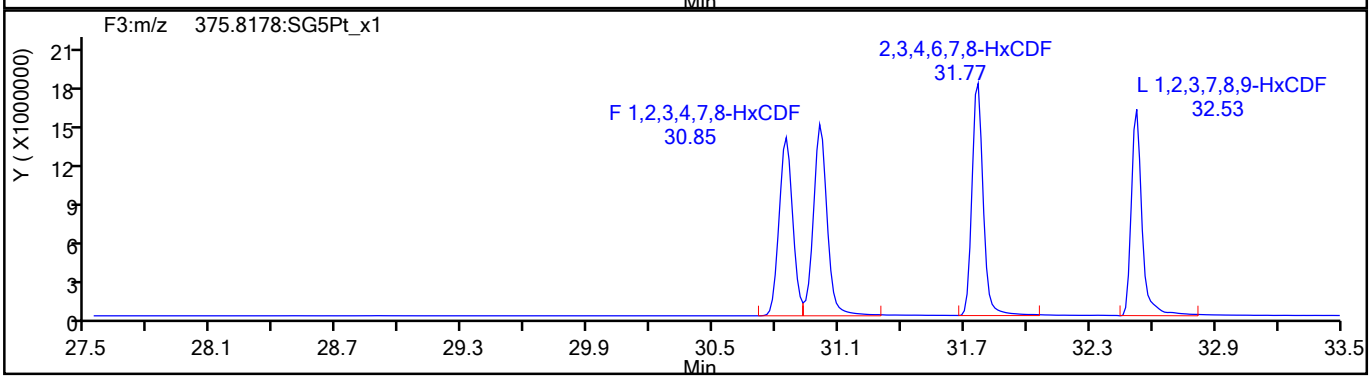

HxCDF Standards

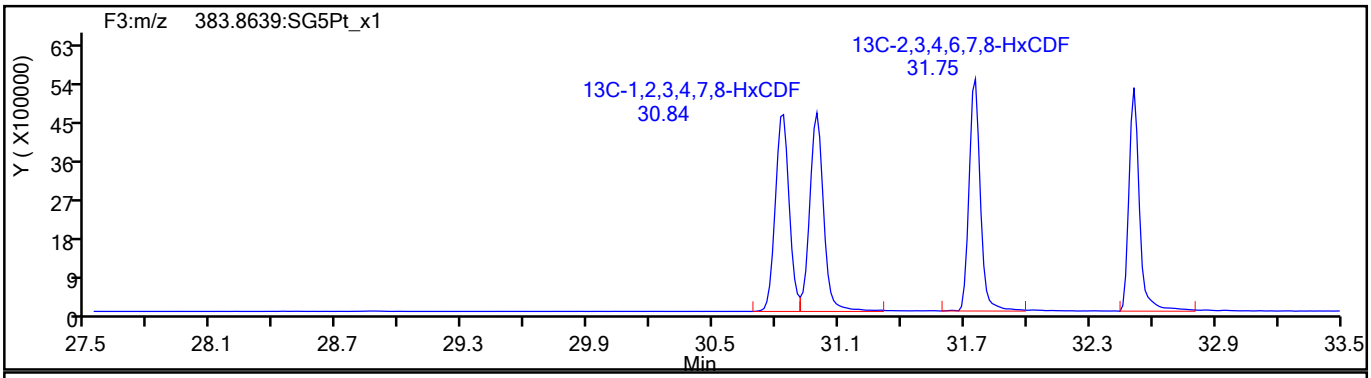

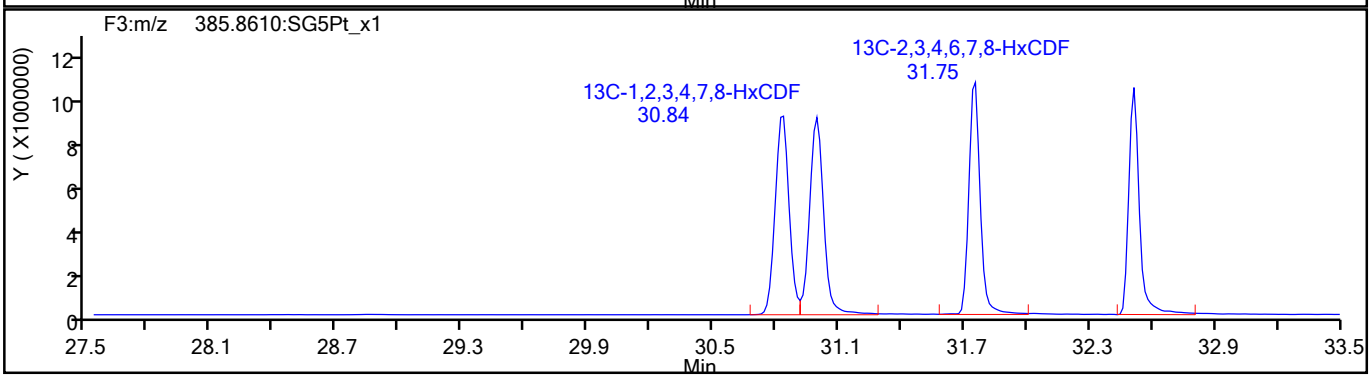

776469

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

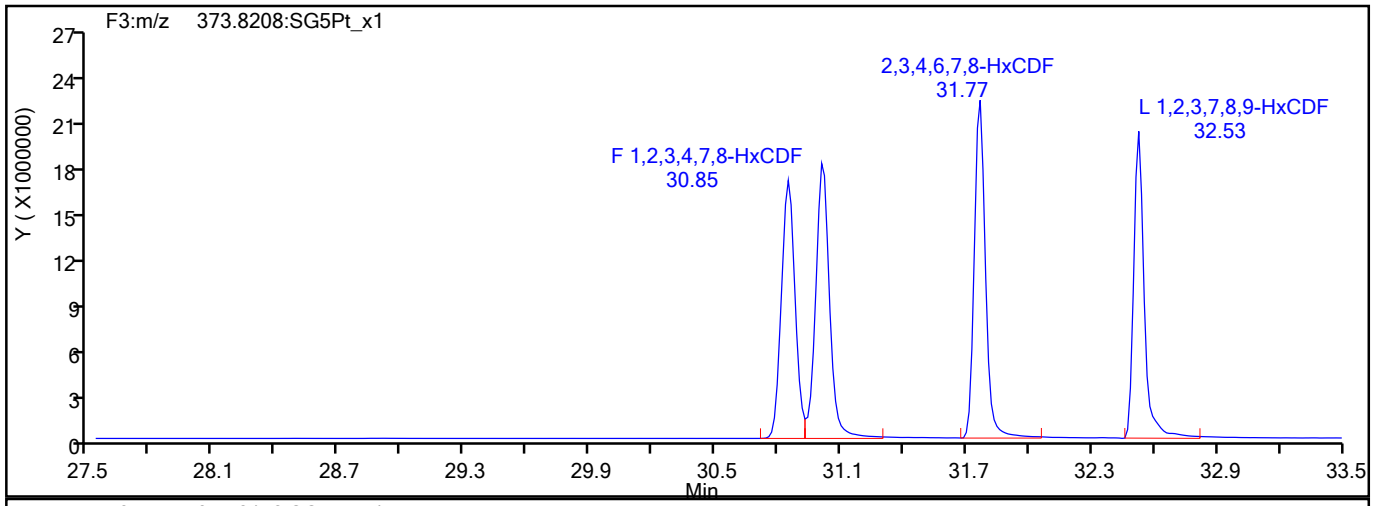

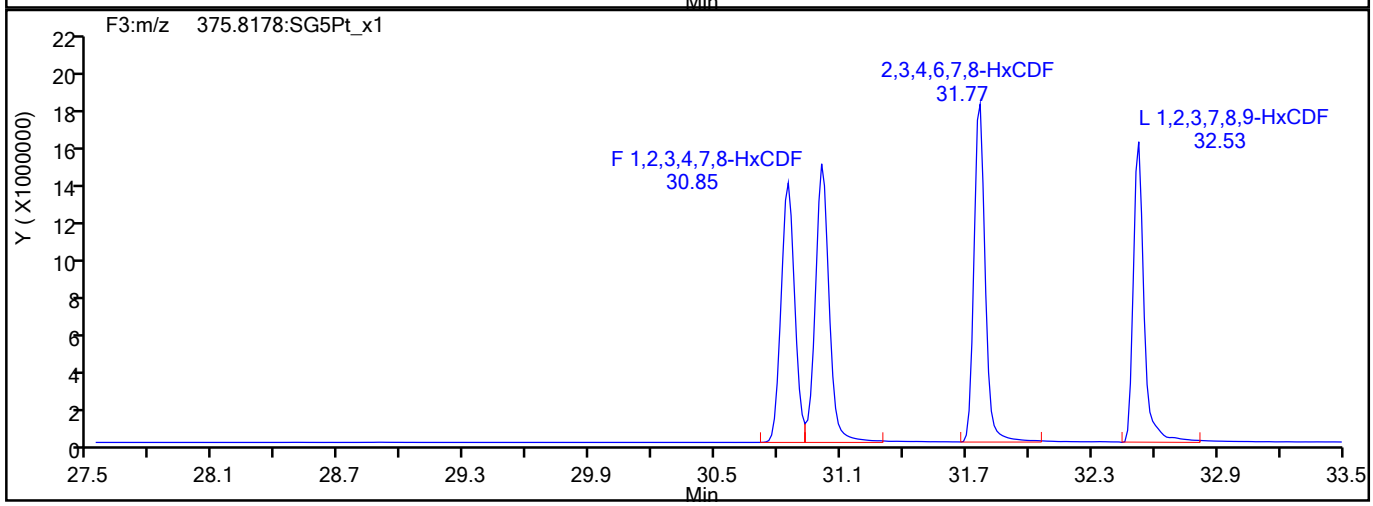

HxCDF Interference Mass

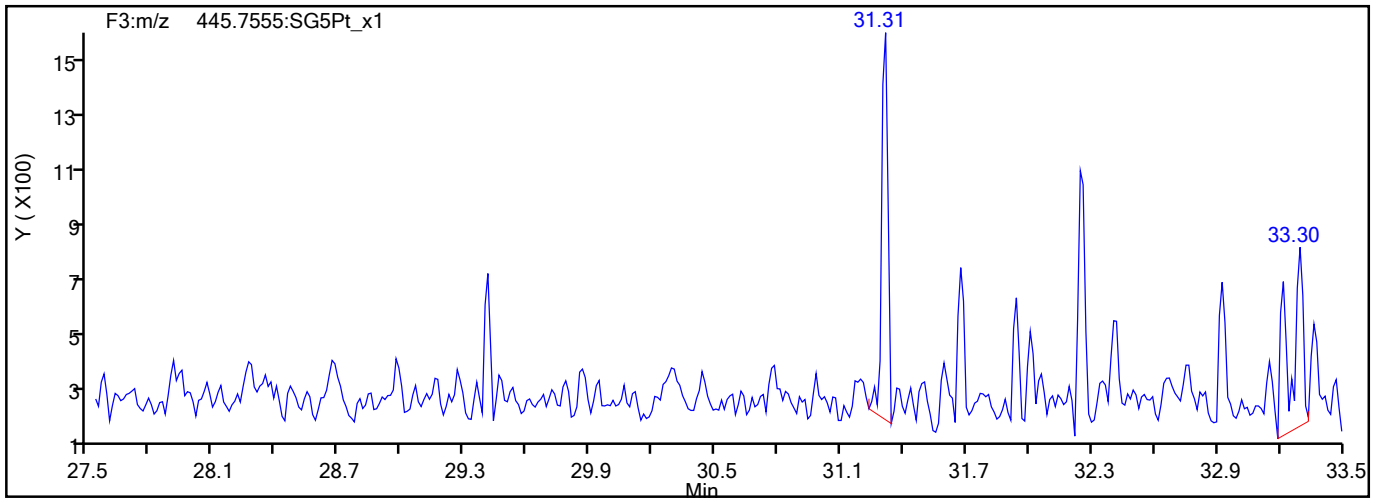

776470

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

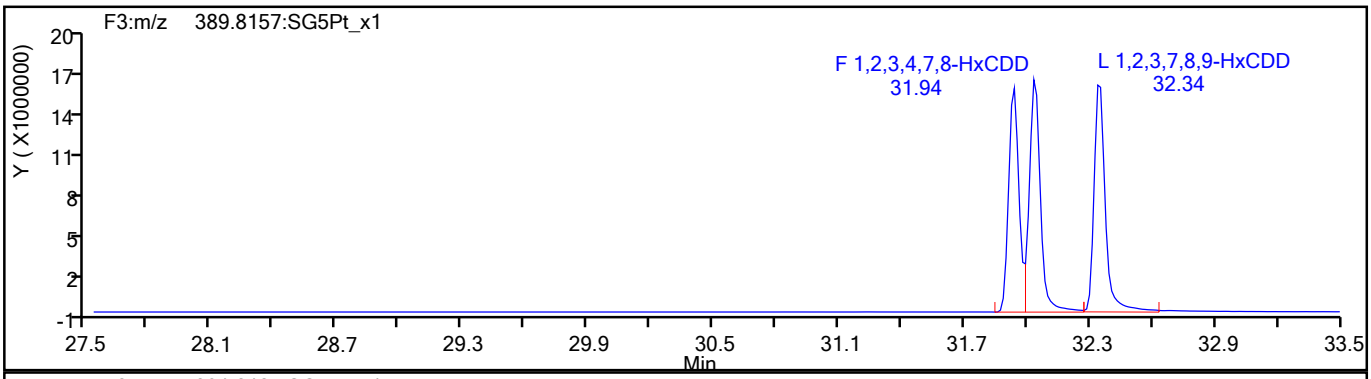

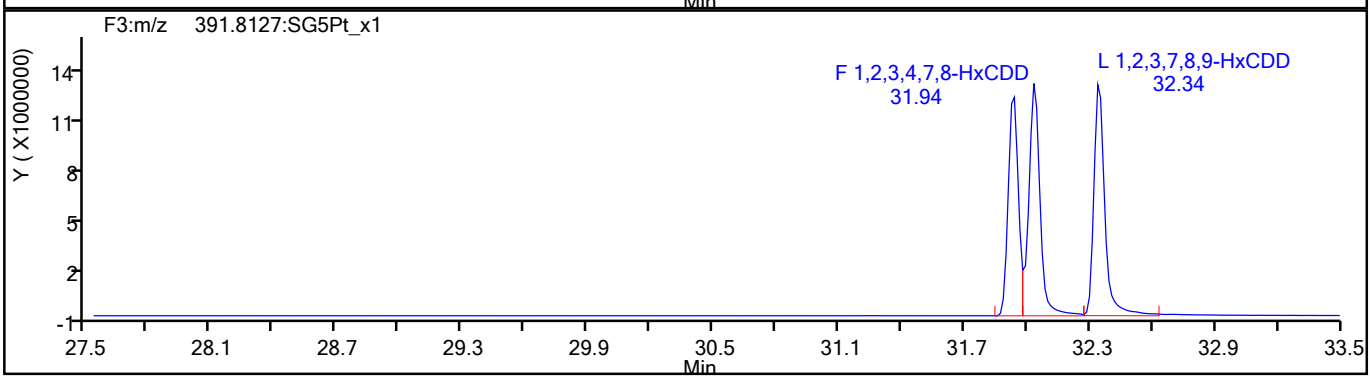

HxCDD Standards

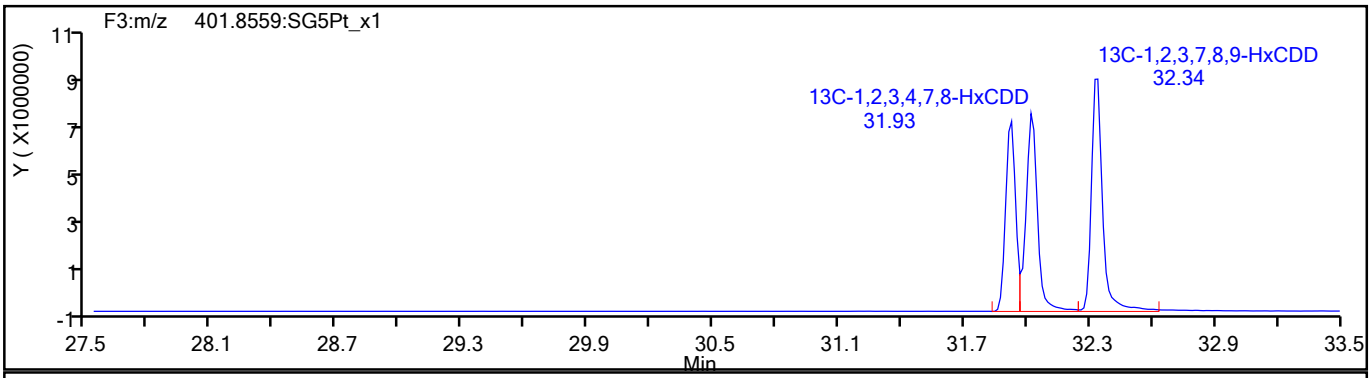

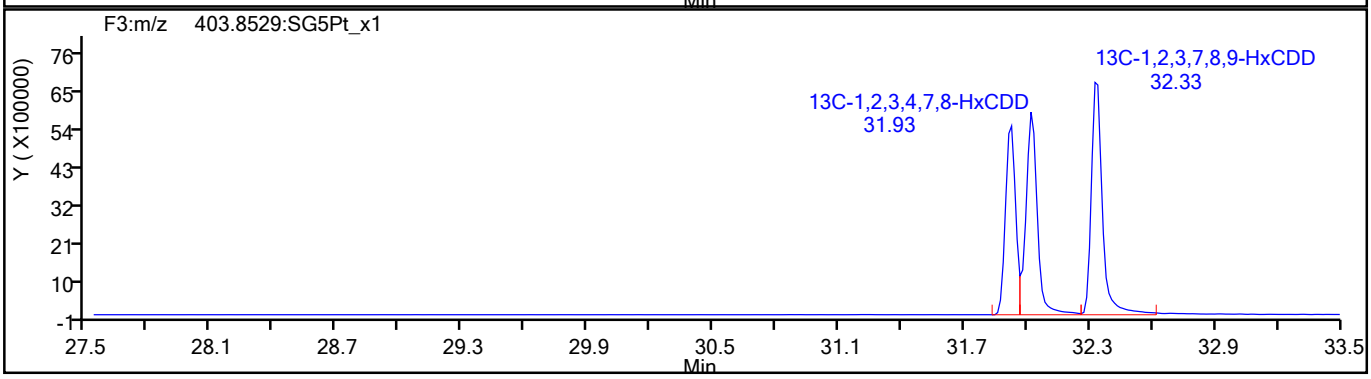

776471

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

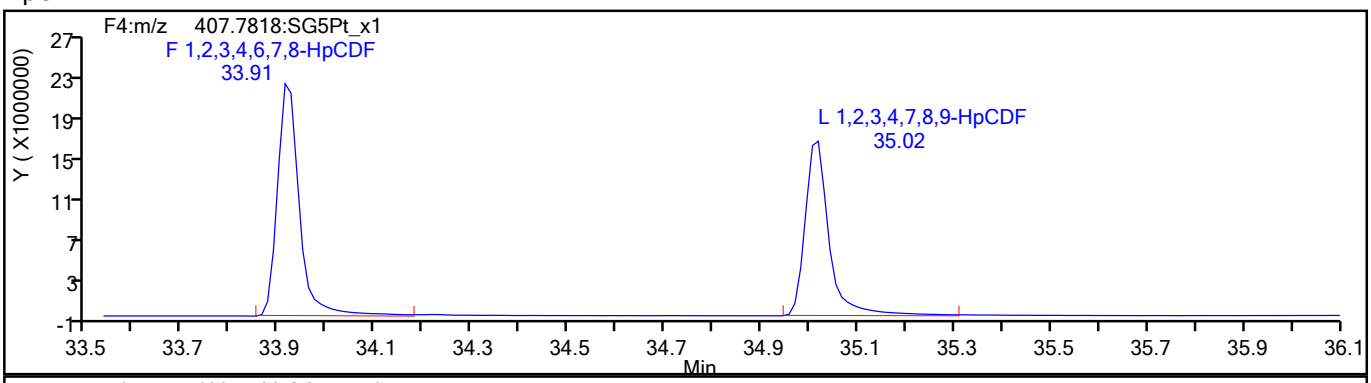

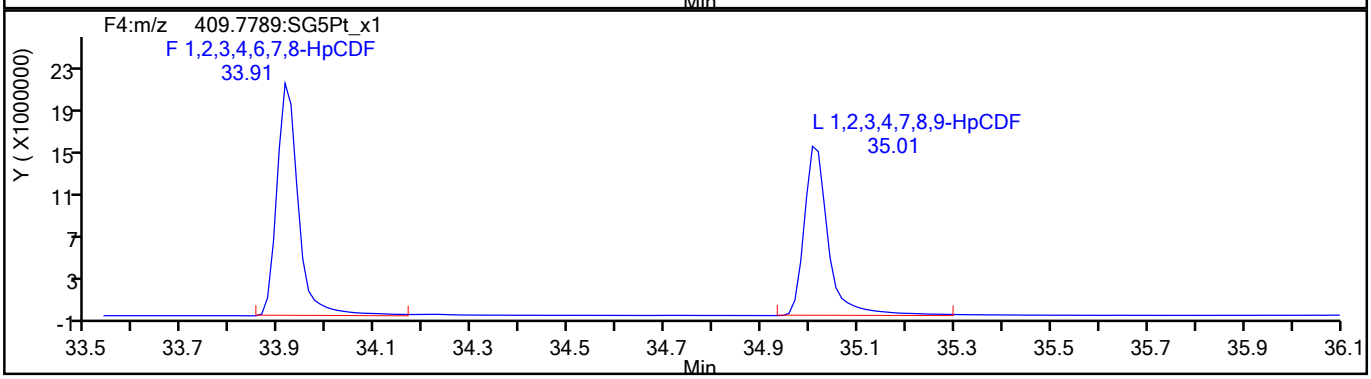

HpCDF Standards

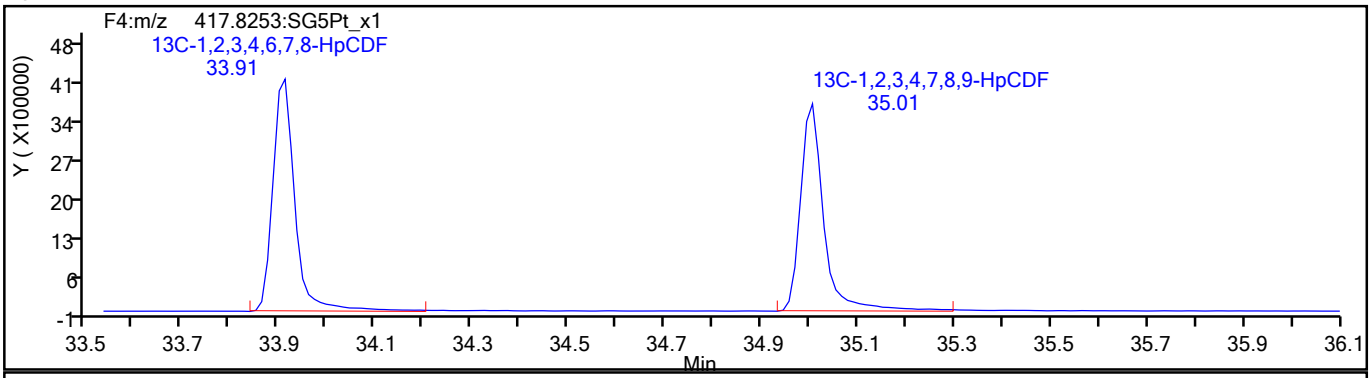

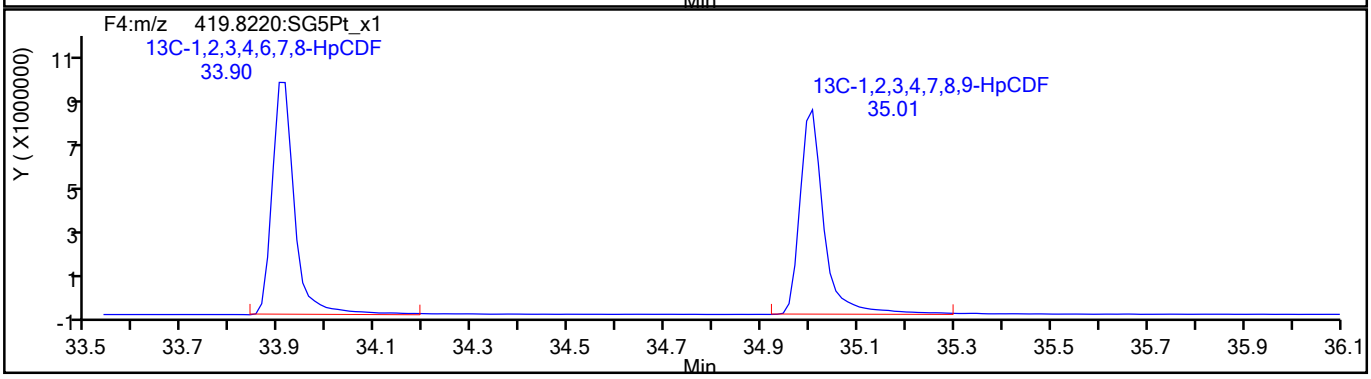

776472

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

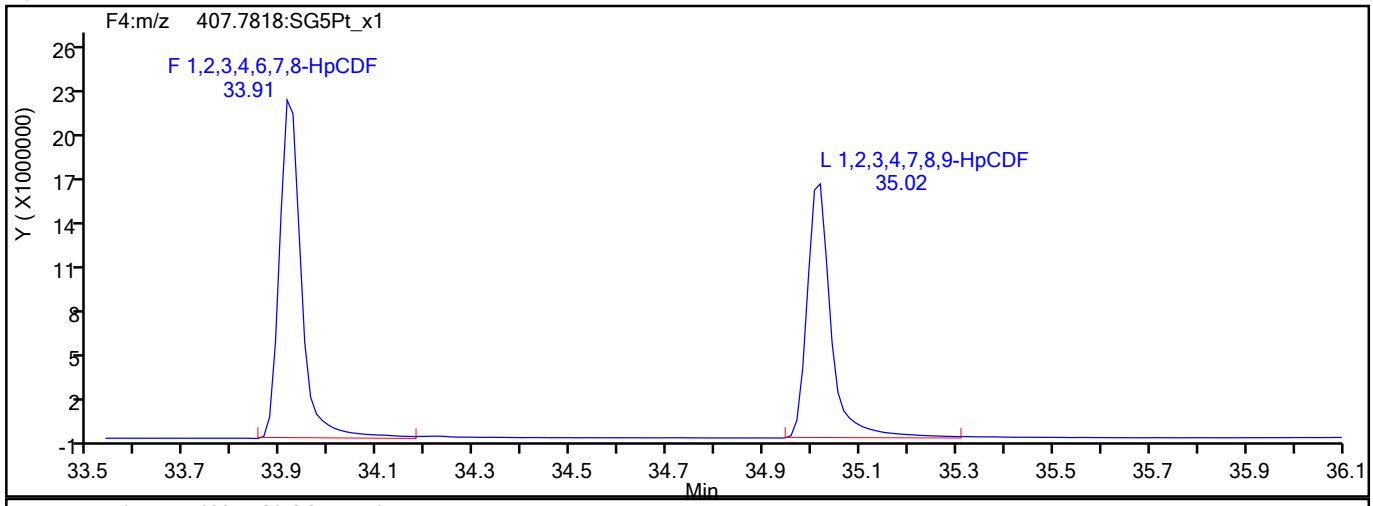

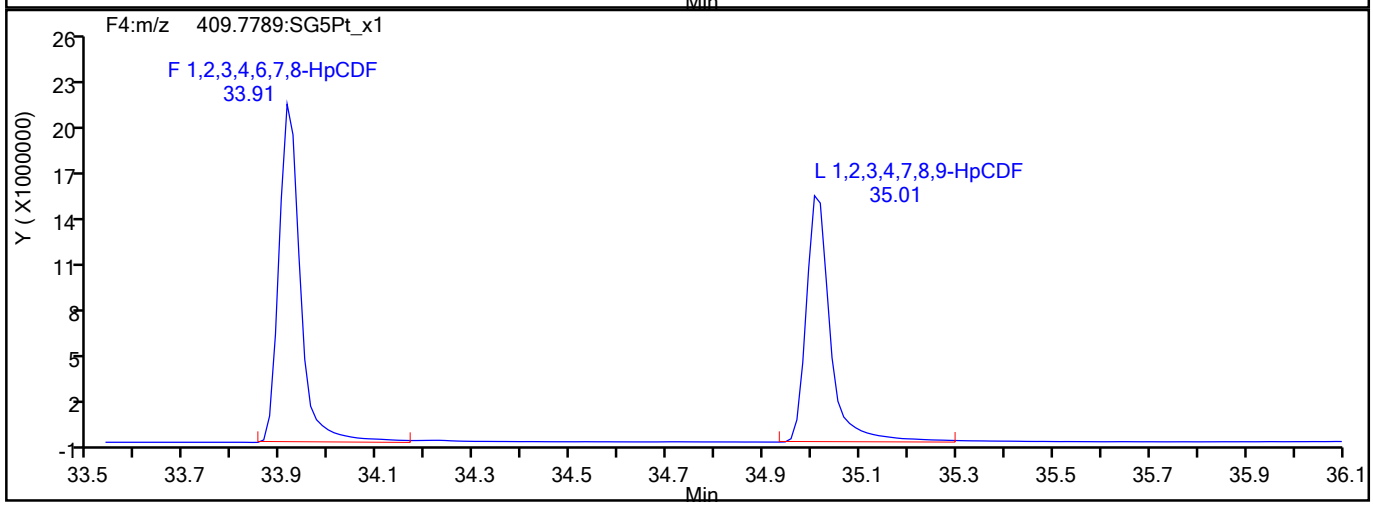

HpCDF Interference Mass

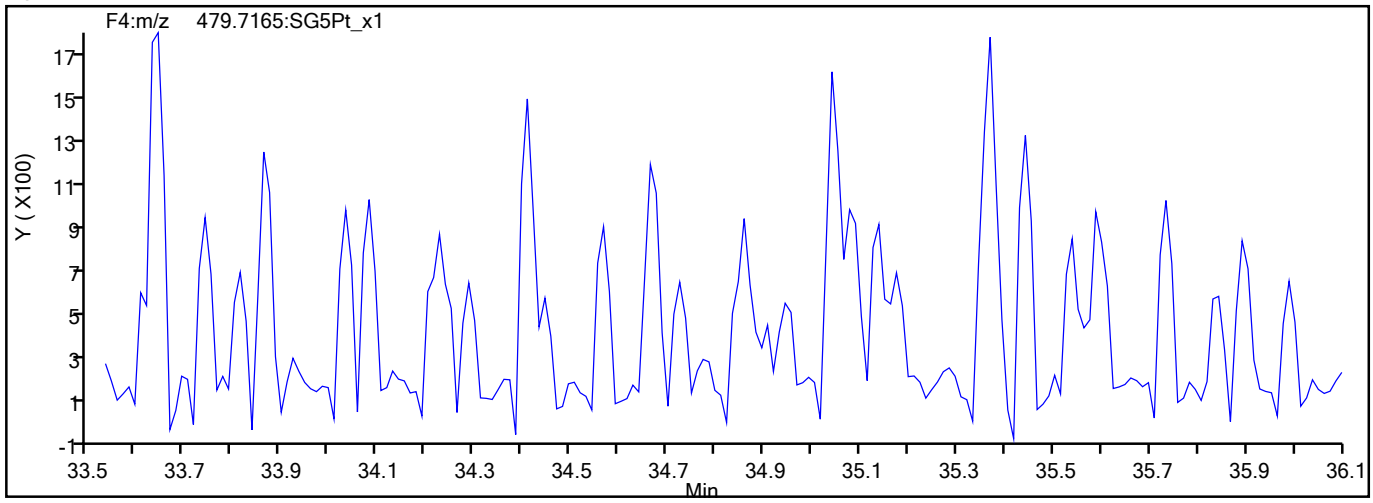

776473

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

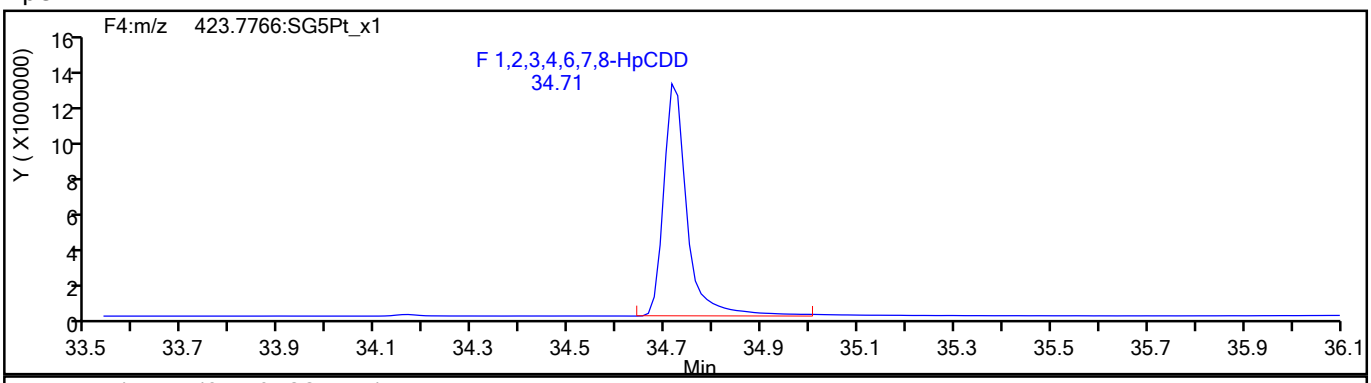

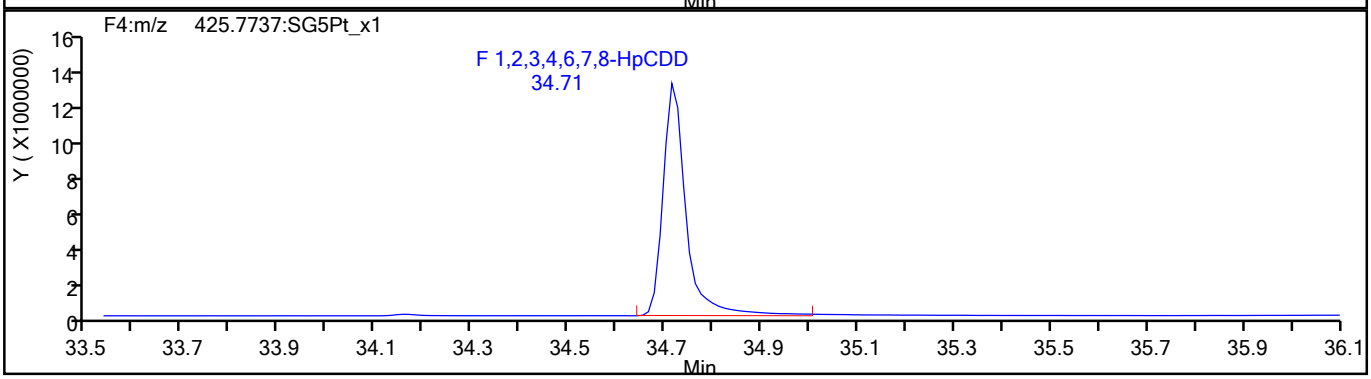

HpCDD Standards

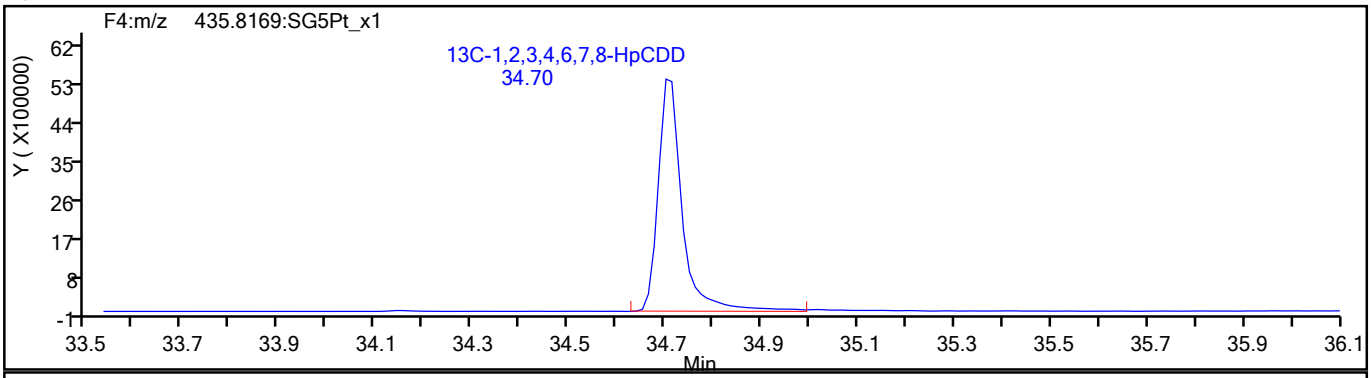

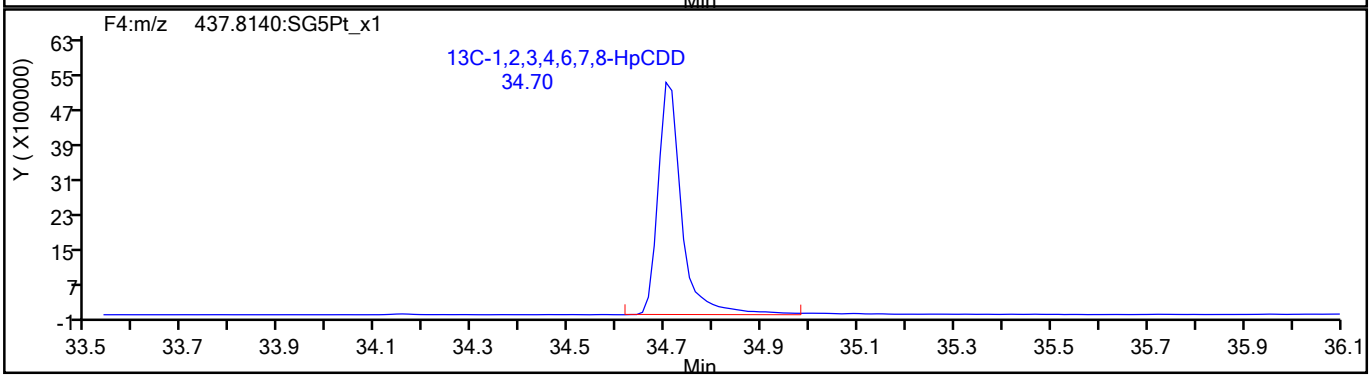

776474

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

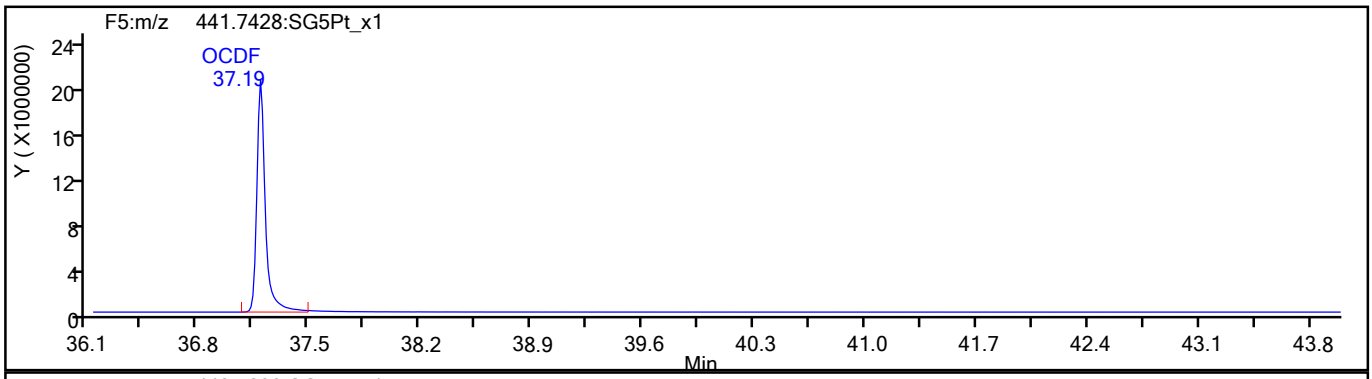

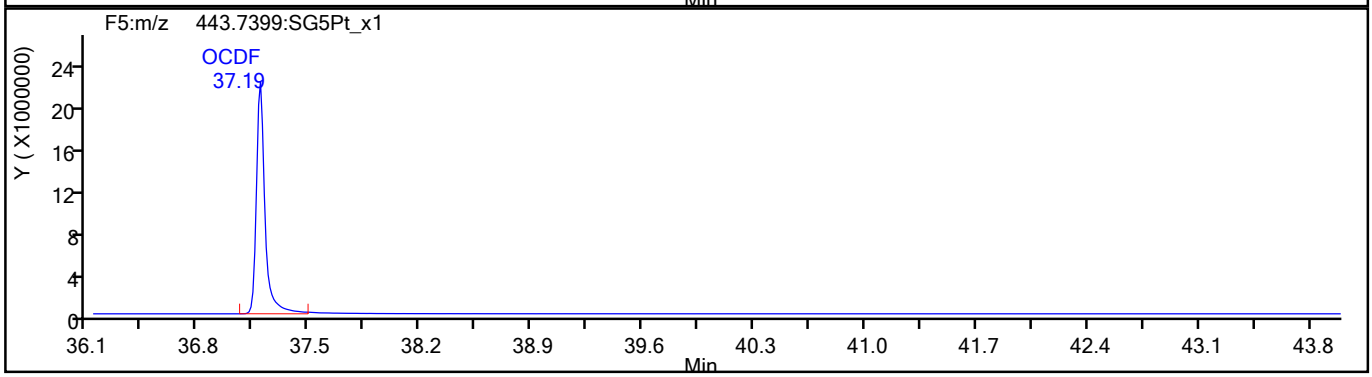

OCDF Standards

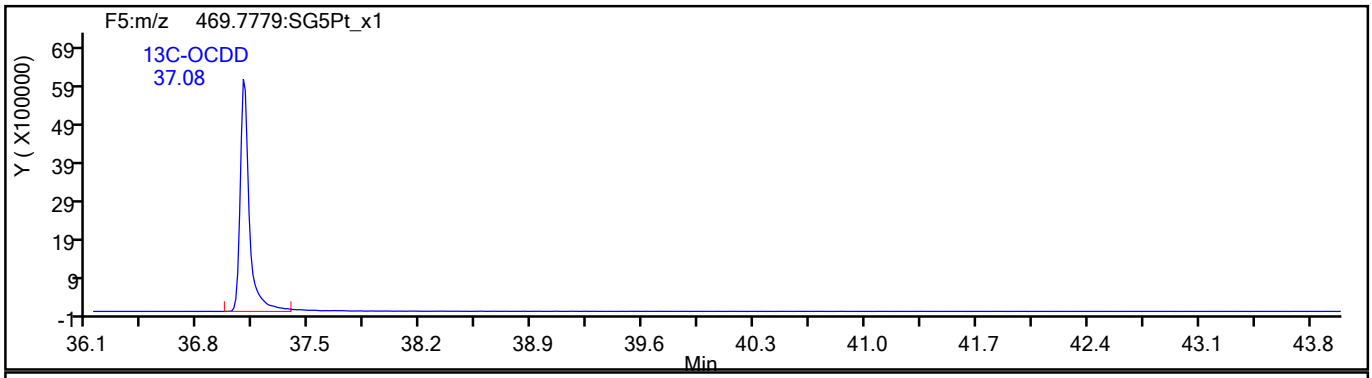

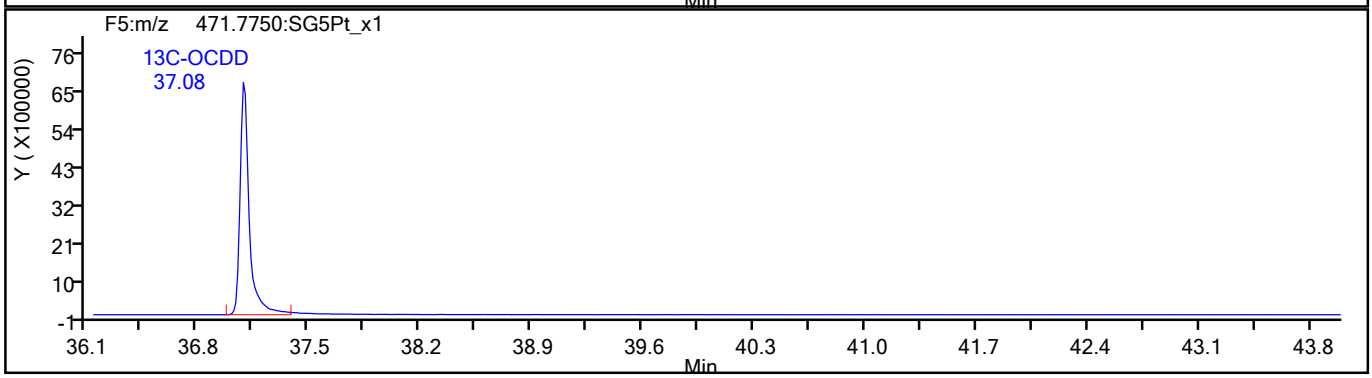

776475

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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OCDF

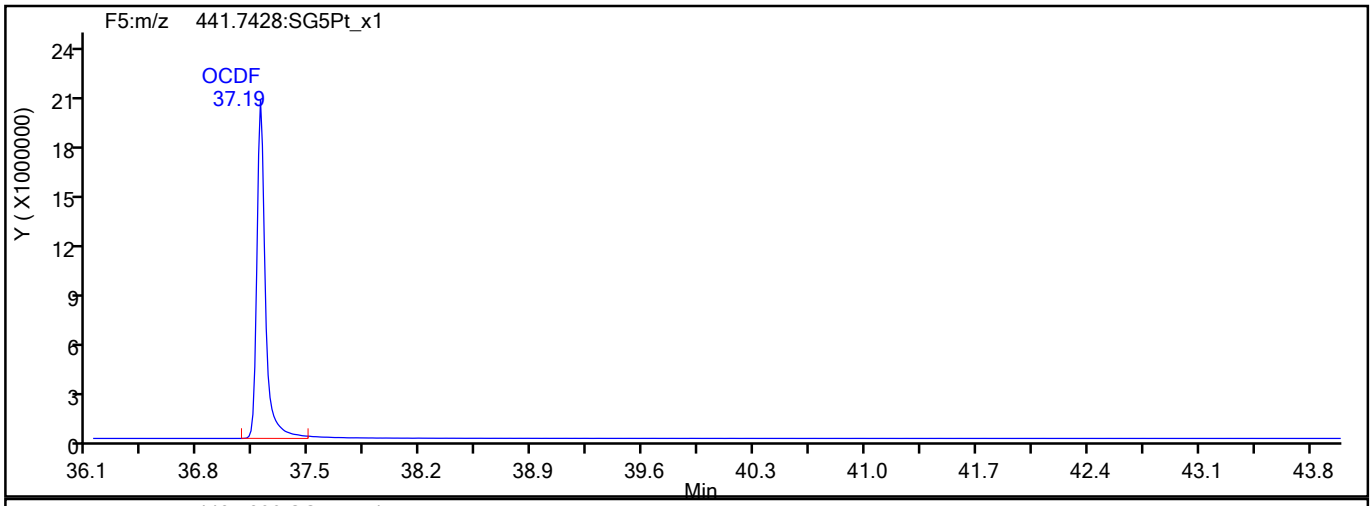

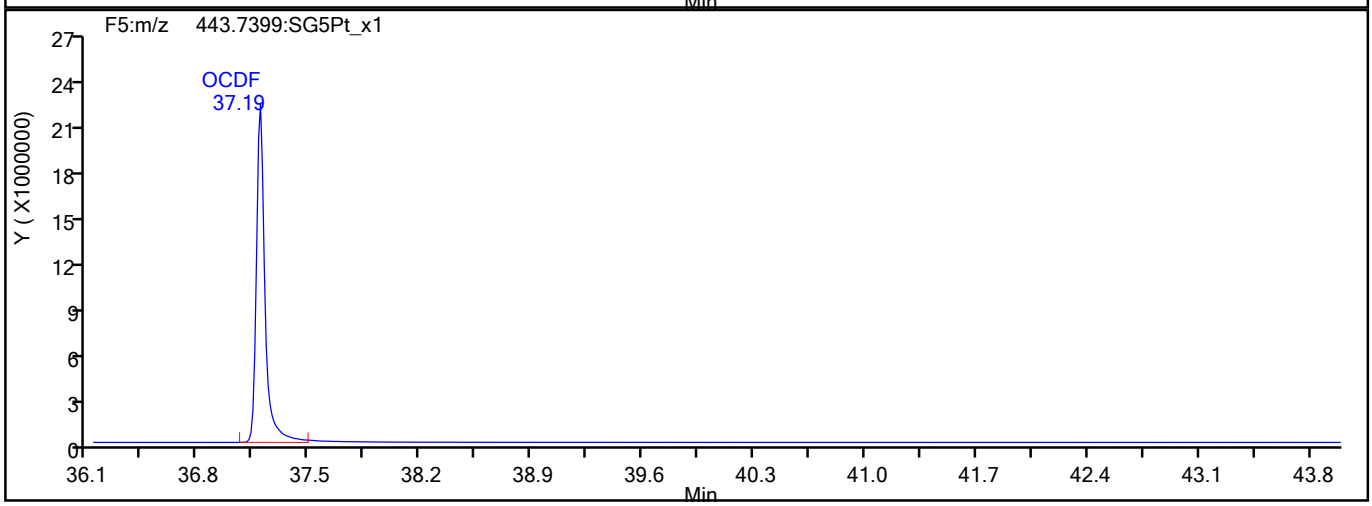

OCDF Interference Mass

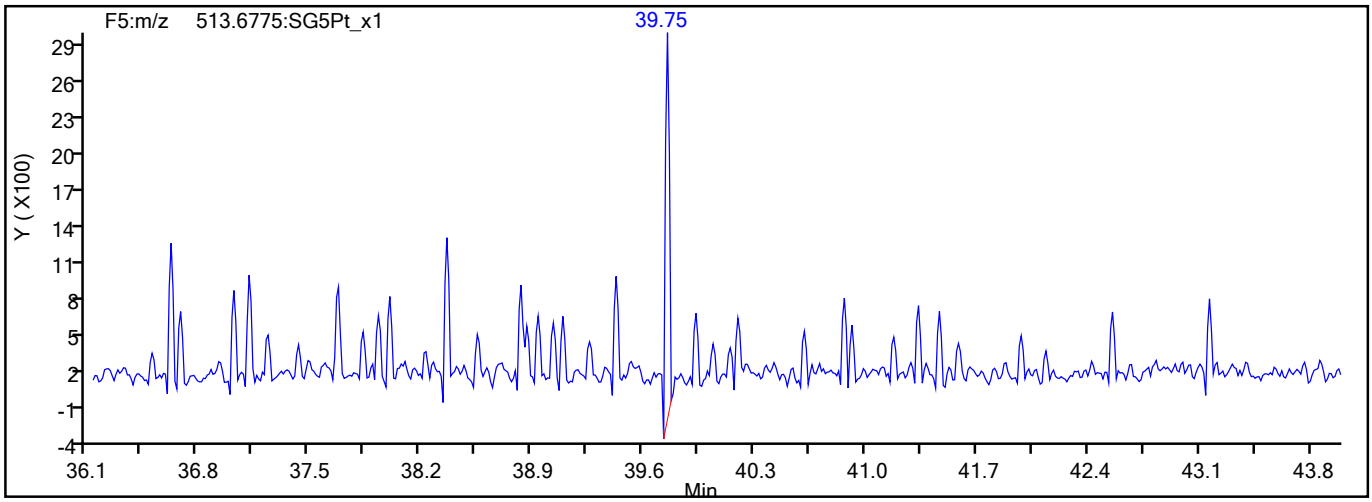

776476

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

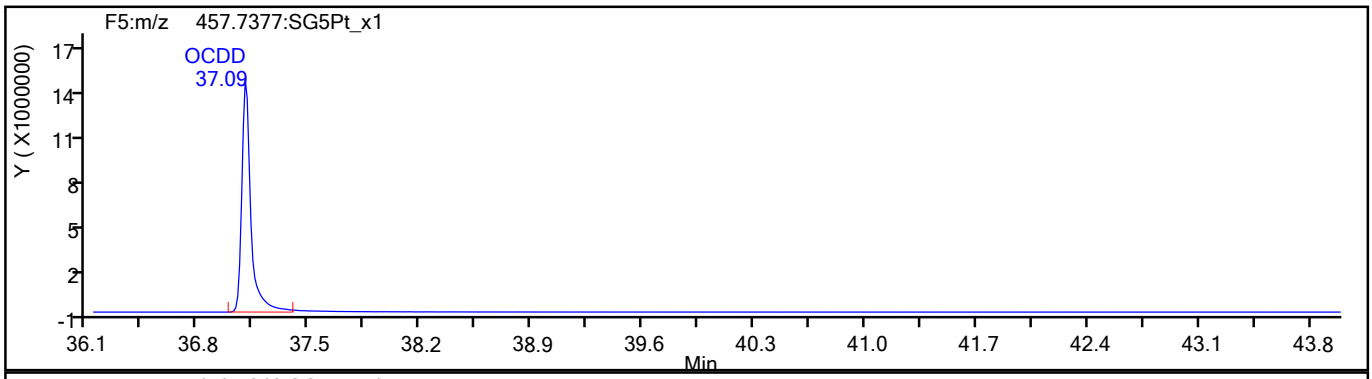

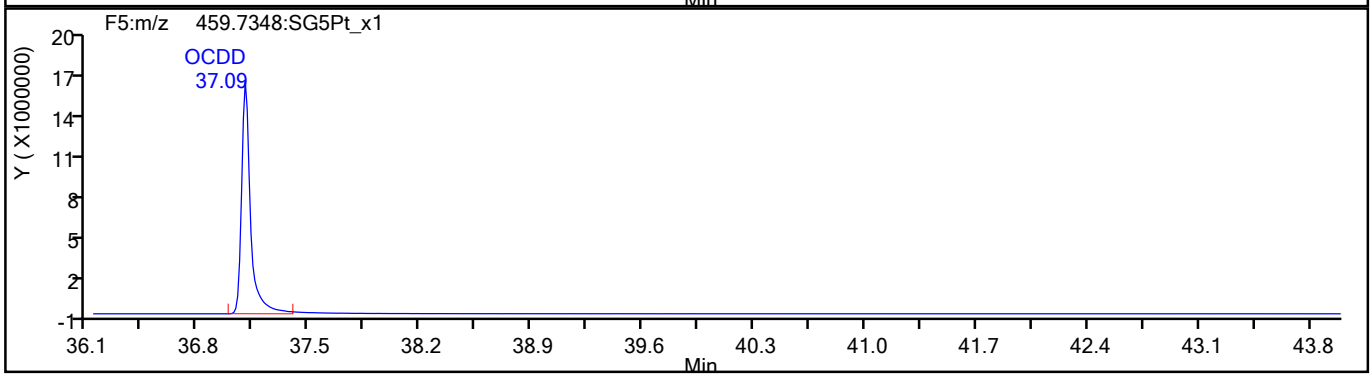

OCDD Standards

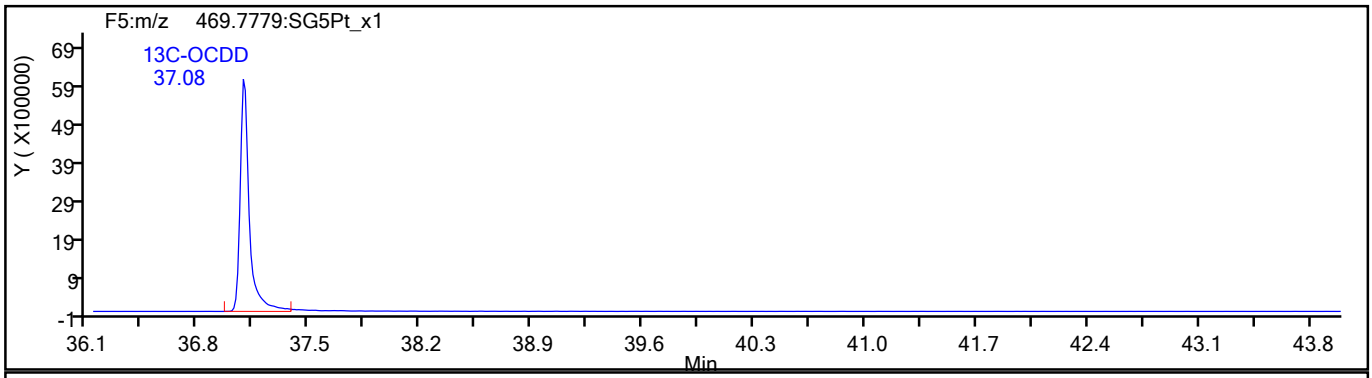

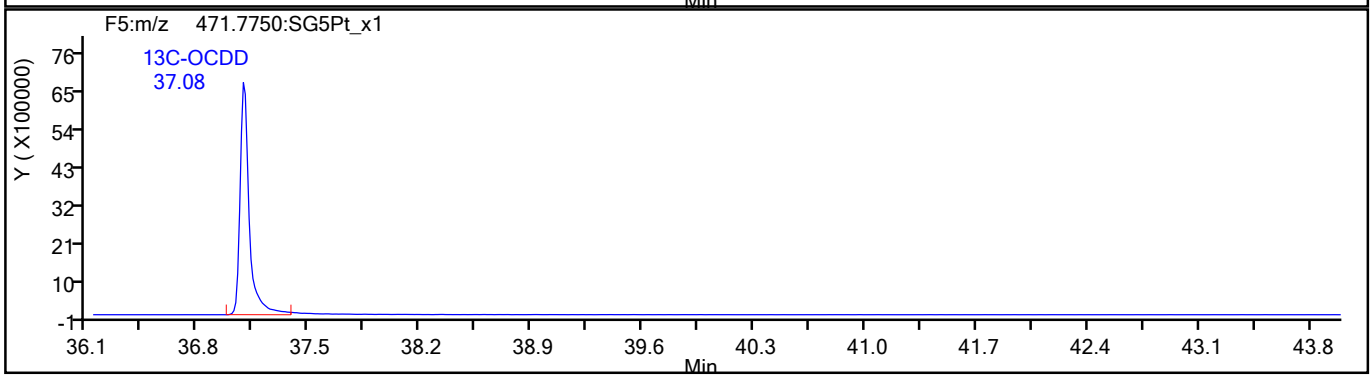

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Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

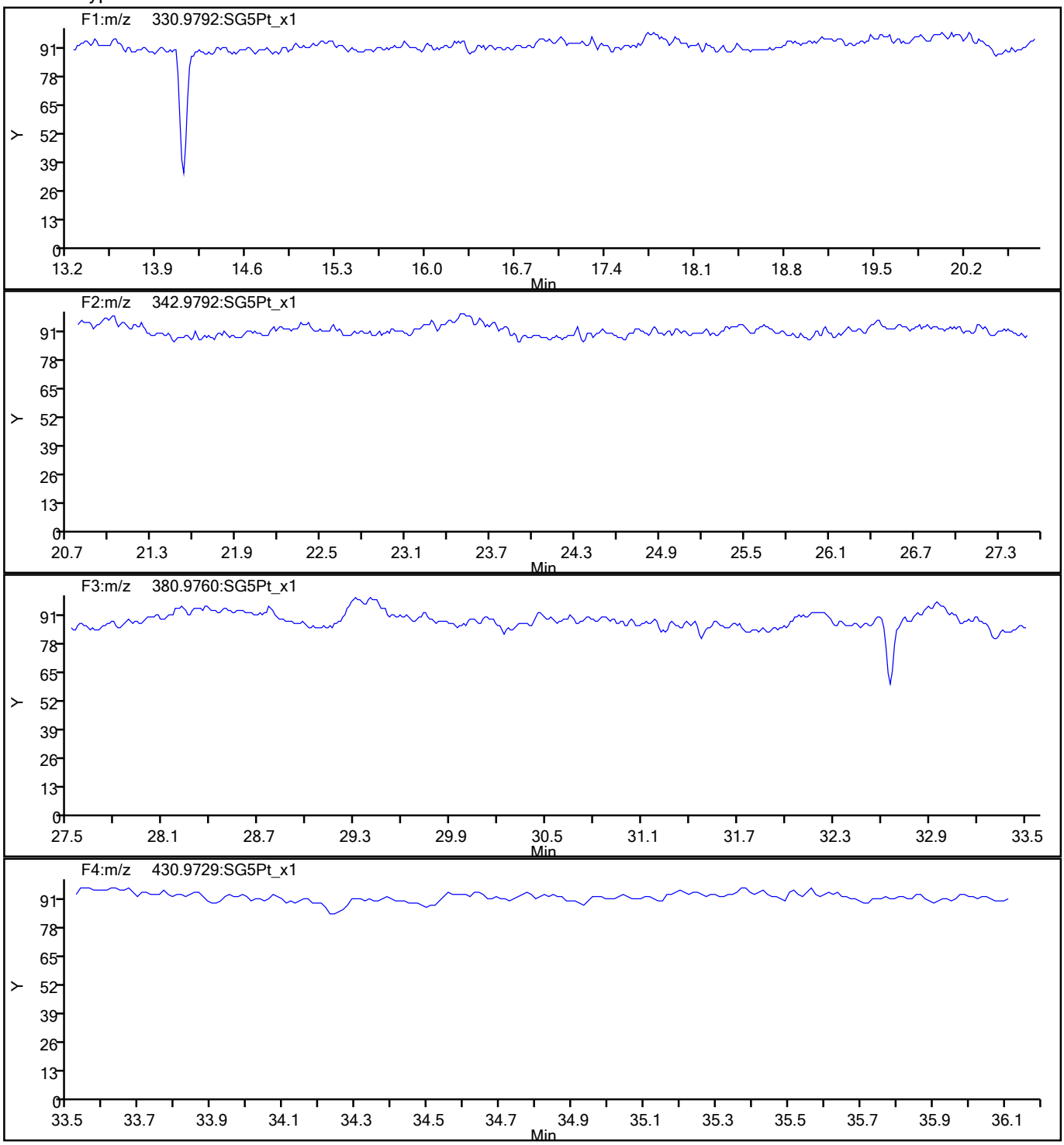

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Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

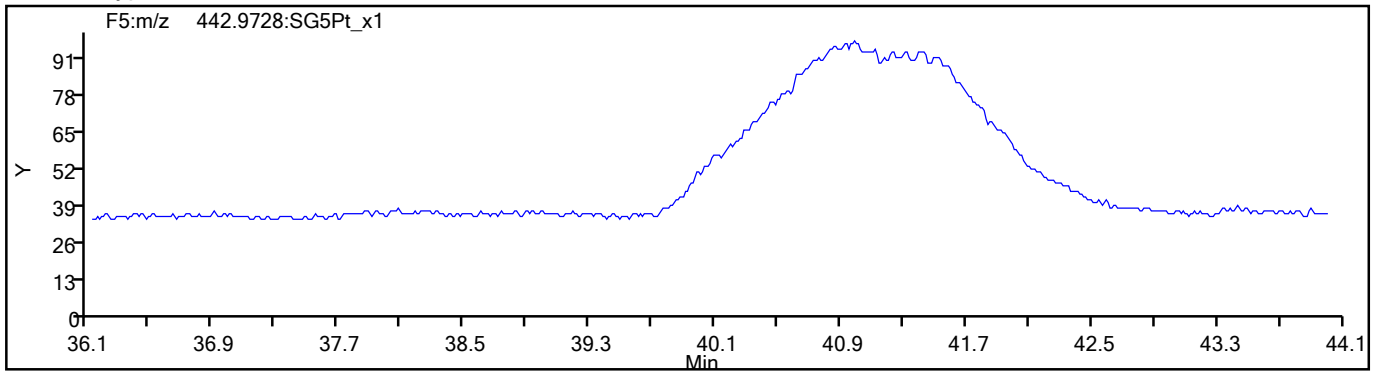

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FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-516847/2 Calibration Date: 08/15/2021 01:21

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 13AU2110D5_43.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.027		10.0	10.0	100	84-120
2,3,7,8-TCDD	AveID	1.254	1.276		10.2	10.0	102	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.058		49.8	50.0	100	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.021		50.1	50.0	100	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.050		50.1	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.099		50.6	50.0	101	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.138		50.5	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.164		49.8	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.066		50.1	50.0	100	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.048		52.4	50.0	105	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.203		53.1	50.0	106	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.169		50.1	50.0	100	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.491		51.7	50.0	103	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.122		51.2	50.0	102	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.341		50.9	50.0	102	86-116
OCDD	AveID	1.107	1.136		103	100	103	79-126
OCDF	AveID	1.438	1.415		98.4	100	98	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.542		94.9	100	95	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9082		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.221		101	100	101	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.287		104	100	104	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8566		113	100	113	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	0.9770		90.2	100	90	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.030		91.3	100	91	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	0.9720		91.4	100	91	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7097		96.8	100	97	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8344		94.8	100	95	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9033		93.4	100	93	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7757		100	100	100	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.7186		111	100	111	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7614		109	100	109	77-129
13C-OCDD	Ave	0.4472	0.5677		254	200	127	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.171		10.6	10.0	106	79-127

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	13AU2110D5_1	CS-4 HRDXNL4_00099	CCV 081321	Tray01:2	Dioxin		DB
2	13AU2110D5_2	WDM HRDXNCP_00044	WDM 081321	Tray01:1	Dioxin		DB
3	13AU2110D5_3	mb 320-514953/1-a	mb 320-514953/1-a	Tray01:4	1613B/8290A/Water	D265	DB
4	13AU2110D5_4	lcs 320-514953/2-a	lcs 320-514953/2-a	Tray01:5	1613B/8290A/Water		DB
5	13AU2110D5_5	lcsd 320-514953/3-a	lcsd 320-514953/3-a	Tray01:6	1613B/8290A/Water		DB
6	13AU2110D5_6	320-76081-a-4-b	320-76081-a-4-b	Tray01:7	1613B/8290A/Water		DB
7	13AU2110D5_7	mb 320-514735/1-a	mb 320-514735/1-a	Tray01:8	1613B/8290A/Solid	D262	DB
8	13AU2110D5_8	lcs 320-514735/2-a	lcs 320-514735/2-a	Tray01:9	1613B/8290A/Solid		DB
9	13AU2110D5_9	lcsd 320-514735/3-a	lcsd 320-514735/3-a	Tray01:10	1613B/8290A/Solid		DB
10	13AU2110D5_10	320-76718-a-1-a	320-76718-a-1-a	Tray01:11	1613B/8290A/Solid		DB
11	13AU2110D5_11	SB Solvent Blank C-14	SB 081321	Tray01:3			DB
12	13AU2110D5_12	CS-4 HRDXNL4_00099	CCV 081321A	Tray01:2	Dioxin		DB
13	13AU2110D5_13	WDM HRDXNCP_00044	WDM 081321A	Tray01:1	Dioxin		DB
14	13AU2110D5_14	mb 320-512871/1-a	mb 320-512871/1-a	Tray01:15	1613B/Solid	D265	DB
15	13AU2110D5_15	lcs 320-512871/2-a	lcs 320-512871/2-a	Tray01:16	1613B/Solid		DB
16	13AU2110D5_16	lcsd 320-512871/3-a	lcsd 320-512871/3-a	Tray01:17	1613B/Solid		DB
17	13AU2110D5_17	320-76788-a-2-a	320-76788-a-2-a	Tray01:18	1613B/Solid		DB
18	13AU2110D5_18	320-76788-a-3-a	320-76788-a-3-a	Tray01:19	1613B/Solid		DB
19	13AU2110D5_19	320-76788-a-4-a	320-76788-a-4-a	Tray01:20	1613B/Solid		DB
20	13AU2110D5_20	320-76788-a-5-a	320-76788-a-5-a	Tray01:21	1613B/Solid		DB
21	13AU2110D5_21	320-76788-a-6-a	320-76788-a-6-a	Tray01:22	1613B/Solid		DB
22	13AU2110D5_22	320-76788-a-7-a	320-76788-a-7-a	Tray01:23	1613B/Solid		DB
23	13AU2110D5_23	320-76720-a-1-a 50X	320-76720-a-1-a 50X	Tray01:24	1613B/Solid		DB
24	13AU2110D5_24	320-76720-a-5-a 25X	320-76720-a-5-a 25X	Tray01:25	1613B/Solid		DB
25	13AU2110D5_25	320-76724-a-3-a 100X	320-76724-a-3-a 100X	Tray01:26	1613B/Solid		DB
26	13AU2110D5_26	SB Solvent Blank C-14	SB 081321A	Tray01:3			DB
27	13AU2110D5_27	WDM HRDXNCP_00044	WDM 081321B	Tray01:1	Dioxin		DB
28	13AU2110D5_28	CS-4 HRDXNL4_00099	CCV 081321B	Tray01:2	Dioxin		DB
29	13AU2110D5_29	320-76788-a-8-a	320-76788-a-8-a	Tray01:29	1613B/Solid	D265	DB
30	13AU2110D5_30	320-76788-a-9-a	320-76788-a-9-a	Tray01:30	1613B/Solid		DB
31	13AU2110D5_31	320-76788-a-13-a	320-76788-a-13-a	Tray01:31	1613B/Solid		DB
32	13AU2110D5_32	320-76788-a-15-a	320-76788-a-15-a	Tray01:32	1613B/Solid		DB
33	13AU2110D5_33	320-76788-a-16-a	320-76788-a-16-a	Tray01:33	1613B/Solid		DB
34	13AU2110D5_34	320-76788-a-17-a	320-76788-a-17-a	Tray01:34	1613B/Solid		DB
35	13AU2110D5_35	320-76788-a-18-a	320-76788-a-18-a	Tray01:35	1613B/Solid		DB
36	13AU2110D5_36	320-76788-a-19-a	320-76788-a-19-a	Tray01:36	1613B/Solid		DB
37	13AU2110D5_37	320-76788-a-20-a	320-76788-a-20-a	Tray01:37	1613B/Solid		DB
38	13AU2110D5_38	320-76788-a-21-a	320-76788-a-21-a	Tray01:38	1613B/Solid		DB
39	13AU2110D5_39	320-76788-a-1-a	320-76788-a-1-a	Tray01:39	1613B/Solid		DB
40	13AU2110D5_40	320-76788-a-14-a	320-76788-a-14-a	Tray01:40	1613B/Solid		DB
41	13AU2110D5_41	SB Solvent Blank C-14	SB 081321B	Tray01:3			DB
42	13AU2110D5_42	WDM HRDXNCP_00044	WDM 081321C	Tray01:1	Dioxin		DB
43	13AU2110D5_43	CS-4 HRDXNL4_00099	CCV 081321C	Tray01:2	Dioxin		DB
44	13AU2110D5_44	mb 320-513585/1-a	mb 320-513585/1-a	Tray01:43	1613B/Solid	D265	DB
45	13AU2110D5_45	lcs 320-513585/2-a	lcs 320-513585/2-a	Tray01:44	1613B/Solid		DB
46	13AU2110D5_46	320-76765-a-18-a	320-76765-a-18-a	Tray01:45	1613B/Solid		DB
47	13AU2110D5_47	320-76769-a-1-a	320-76769-a-1-a	Tray01:46	1613B/Solid		DB
48	13AU2110D5_48	320-76769-a-1-b ms	320-76769-a-1-b ms	Tray01:47	1613B/Solid		DB
49	13AU2110D5_49	320-76769-a-1-c msd	320-76769-a-1-c msd	Tray01:48	1613B/Solid		DB
50	13AU2110D5_50	320-76769-a-2-a	320-76769-a-2-a	Tray01:49	1613B/Solid		DB
51	13AU2110D5_51	320-76769-a-3-a	320-76769-a-3-a	Tray01:50	1613B/Solid		DB
52	13AU2110D5_52	320-76769-a-5-a	320-76769-a-5-a	Tray01:51	1613B/Solid		DB
53	13AU2110D5_53	320-76769-a-6-a	320-76769-a-6-a	Tray01:52	1613B/Solid		DB
54	13AU2110D5_54	320-76769-a-7-a	320-76769-a-7-a	Tray01:53	1613B/Solid		DB
55	13AU2110D5_55	320-76769-a-8-a	320-76769-a-8-a	Tray01:54	1613B/Solid		DB
56	13AU2110D5_56	SB Solvent Blank C-14	SB 081321C	Tray01:3			DB
57	13AU2110D5_57	WDM HRDXNCP_00044	WDM 081321D	Tray01:1	Dioxin		DB
58	13AU2110D5_58	CS-4 HRDXNL4_00099	CCV 081321D	Tray01:2	Dioxin		DB

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
59	13AU2110D5_59	320-76769-a-13-a	320-76769-a-13-a	Tray01:57	1613B/Solid	D265	DB
60	13AU2110D5_60	320-76769-a-15-a	320-76769-a-15-a	Tray01:58	1613B/Solid		DB
61	13AU2110D5_61	320-76769-a-16-a	320-76769-a-16-a	Tray01:59	1613B/Solid		DB
62	13AU2110D5_62	320-76769-a-17-a	320-76769-a-17-a	Tray01:60	1613B/Solid		DB
63	13AU2110D5_63	320-76769-a-18-a	320-76769-a-18-a	Tray01:61	1613B/Solid		DB
64	13AU2110D5_64	320-76769-a-19-a	320-76769-a-19-a	Tray01:62	1613B/Solid		DB
65	13AU2110D5_65	320-76769-a-20-a	320-76769-a-20-a	Tray01:63	1613B/Solid		DB
66	13AU2110D5_66	320-76769-a-25-a	320-76769-a-25-a	Tray01:64	1613B/Solid		DB
67	13AU2110D5_67	320-76769-a-26-a	320-76769-a-26-a	Tray01:65	1613B/Solid		DB
68	13AU2110D5_68	320-76769-a-28-a	320-76769-a-28-a	Tray01:66	1613B/Solid		DB
69	13AU2110D5_69	320-76769-a-14-a	320-76769-a-14-a	Tray01:67	1613B/Solid		DB
70	13AU2110D5_70	SB Solvent Blank C-14	SB 081321D	Tray01:3			DB

Logfile checked
08/16/21 SMA

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover

Process Options	Action On Error	s5
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---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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Sample Size	Units	MS File	Inlet File	Inject Volume	Process
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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M 292.9824 R 11825

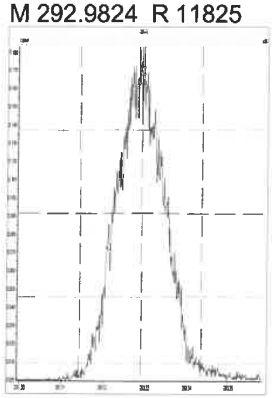

M 304.9824 R 11684

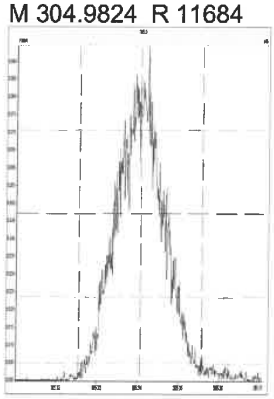

M 318.9792 R 11990

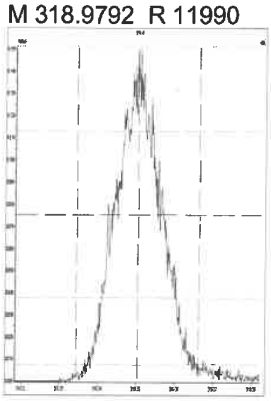

M 330.9792 R 11493

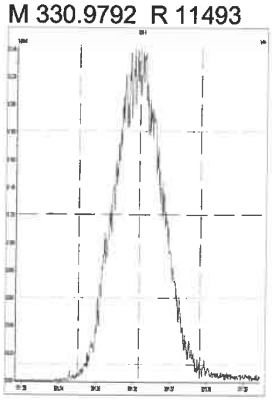

M 342.9792 R 11194

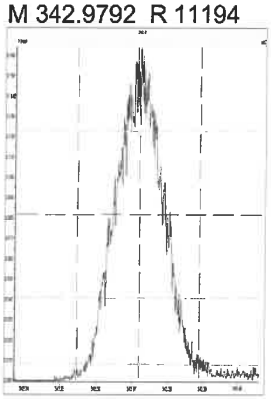

M 354.9792 R 11709

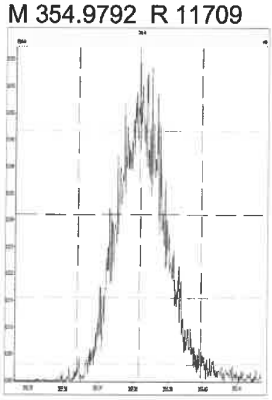

M 366.9792 R 11831

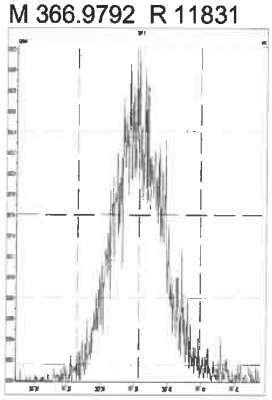

M 380.9760 R 10489

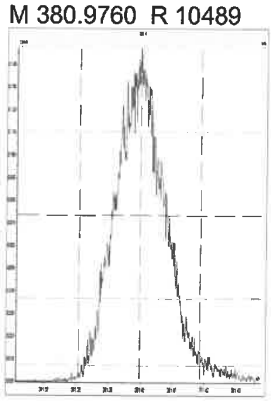

M 392.9760 R 10671

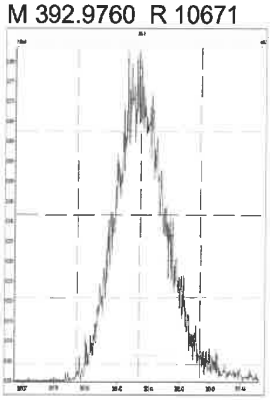

M 404.9760 R 10289

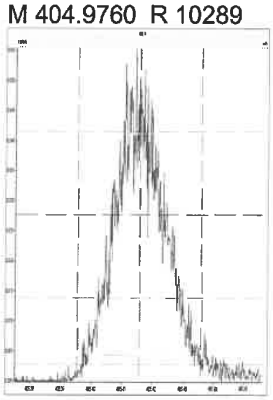

M 416.9760 R 11884

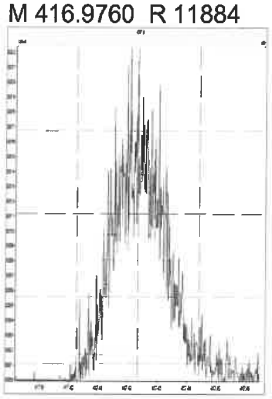

M 318.9792 R 11762

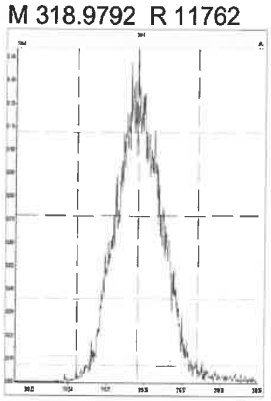

M 330.9792 R 11767

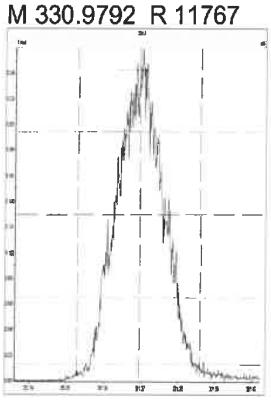

M 342.9792 R 11801

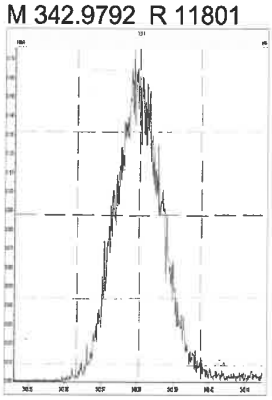

M 354.9792 R 12559

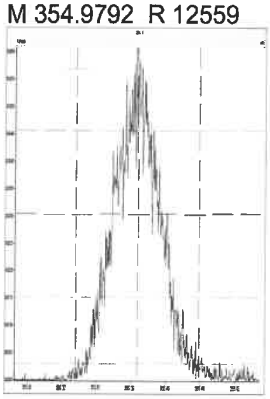

M 366.9792 R 11783

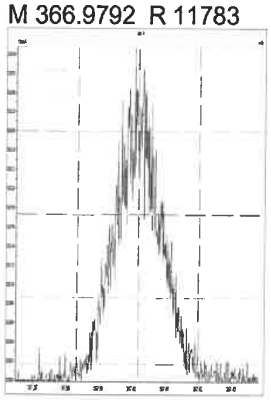

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M 380.9760_R 11265

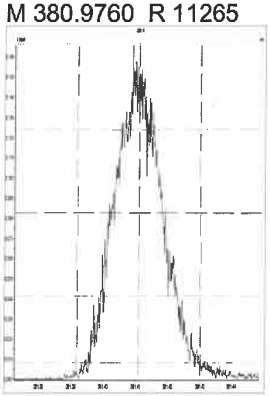

M 392.9760_R 11269

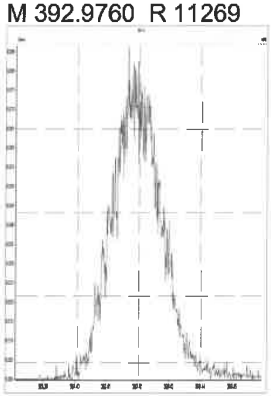

M 404.9760_R 11254

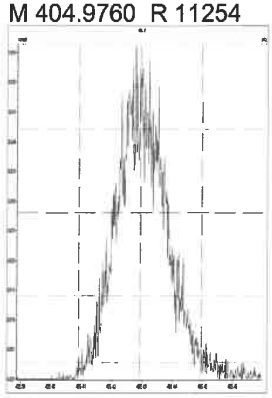

M 416.9760_R 12510

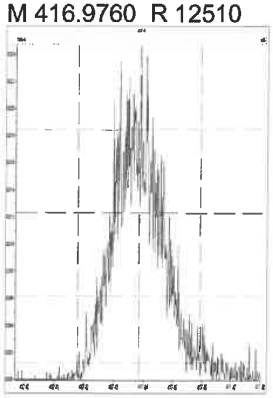

M 366.9792_R 12553

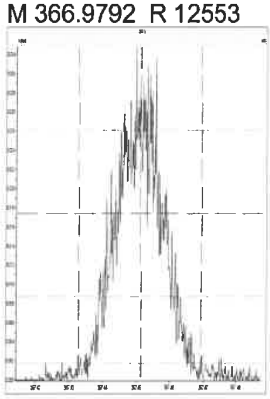

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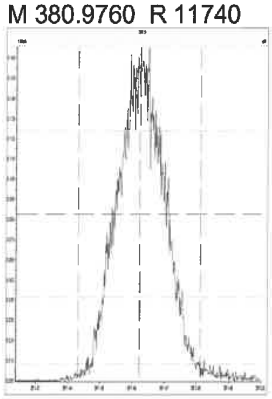

M 392.9760_R 12077

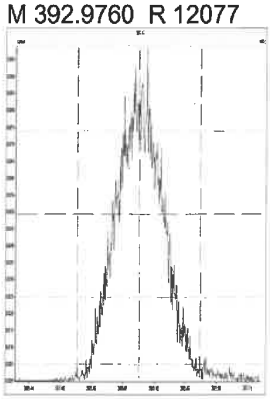

M 404.9760_R 11990

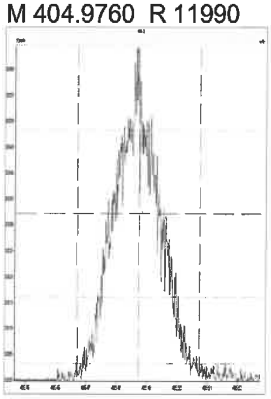

M 416.9760_R 12165

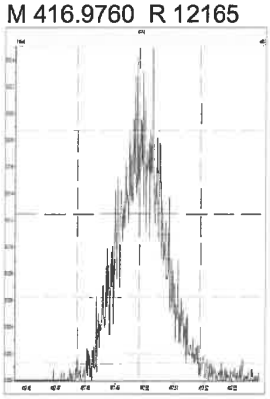

M 430.9728_R 11529

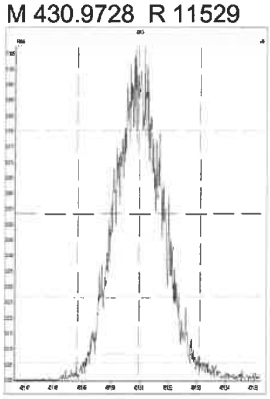

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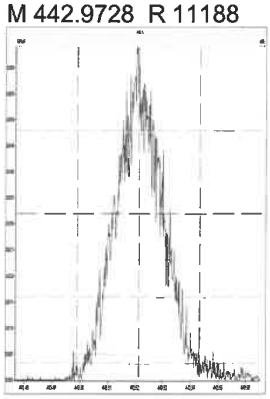

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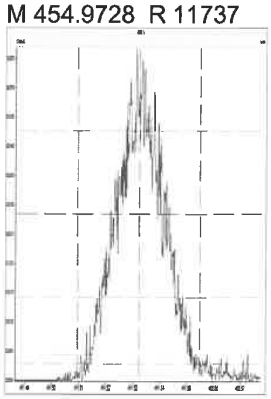

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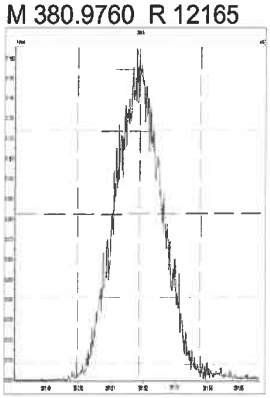

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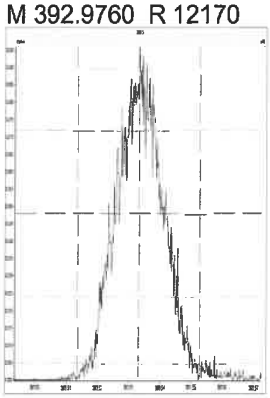

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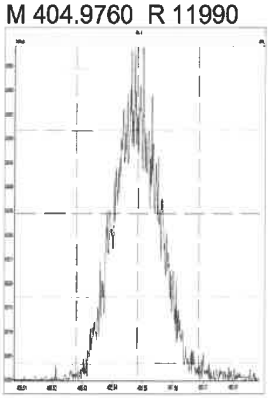

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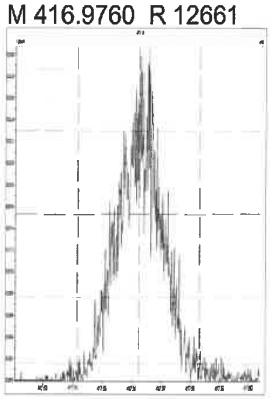

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M 430.9728 R 11601

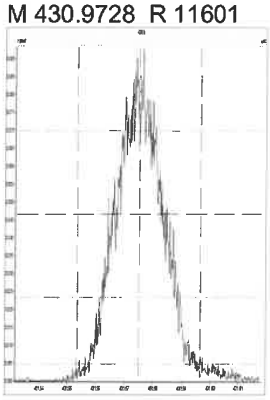

M 442.9728 R 12288

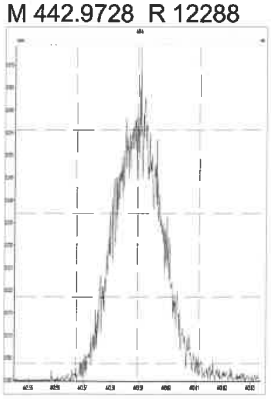

M 454.9728 R 12048

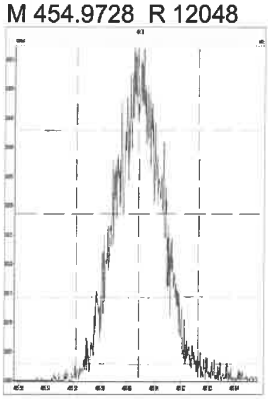

M 466.9728 R 13371

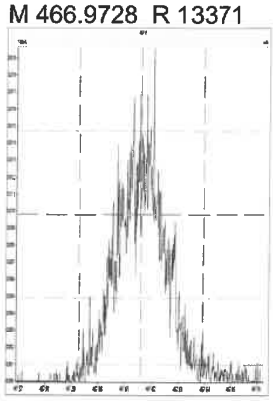

M 480.9696 R 11160

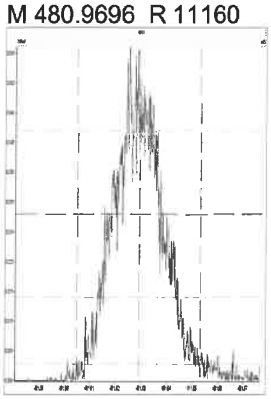

M 380.9760 R 11821

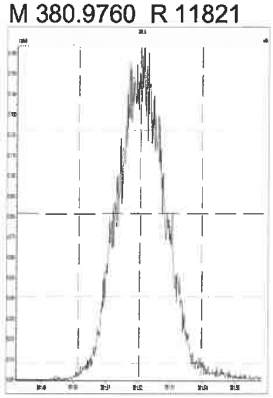

M 392.9760 R 12165

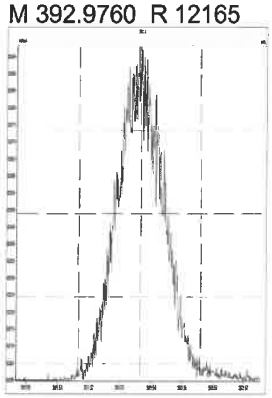

M 404.9760 R 12138

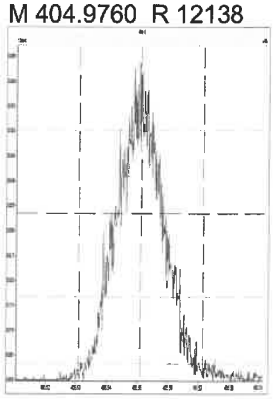

M 416.9760 R 13193

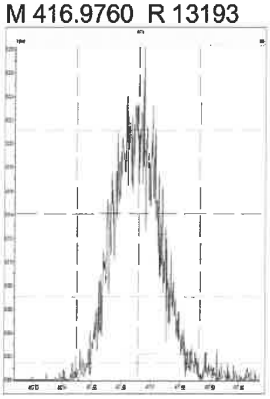

M 430.9728 R 11629

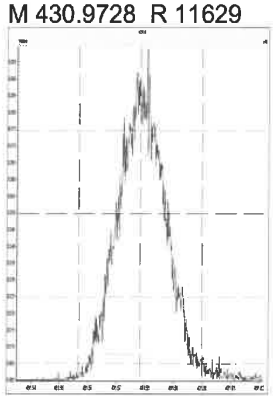

M 442.9728 R 12154

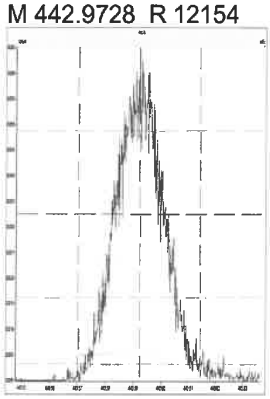

M 454.9728 R 11548

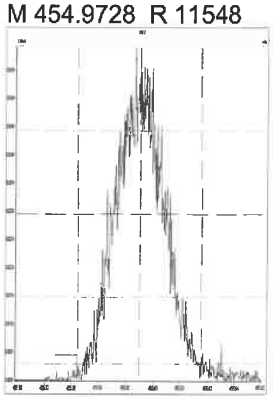

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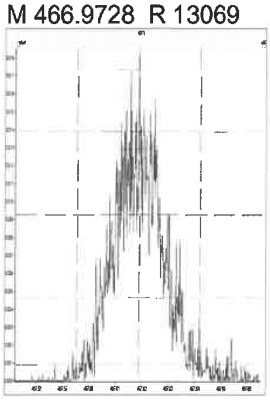

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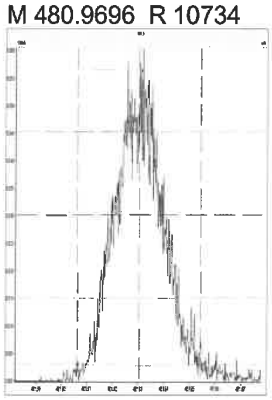

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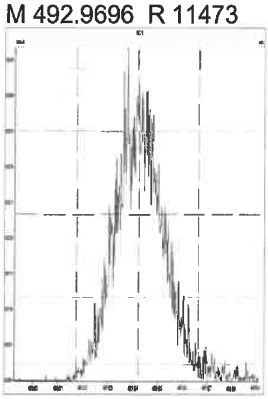

M 504.9696 R 11852

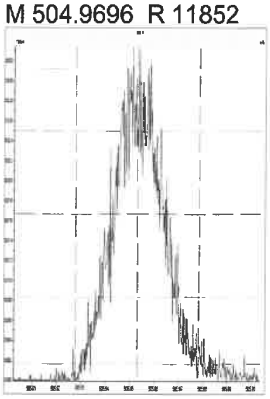

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M 516.9697 R 11643

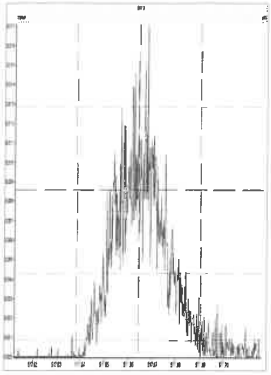

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M 292.9824 R 12540

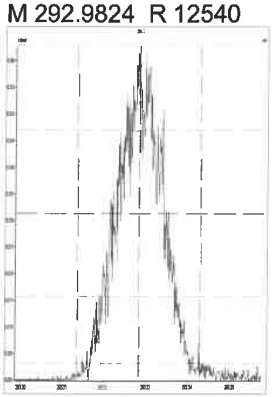

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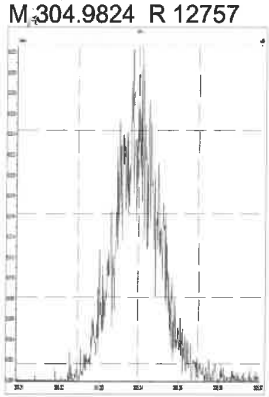

M 318.9792 R 12840

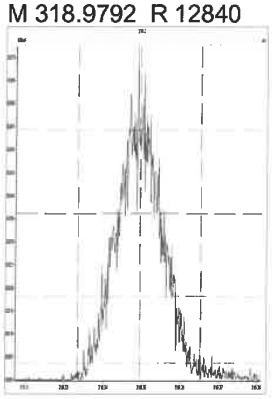

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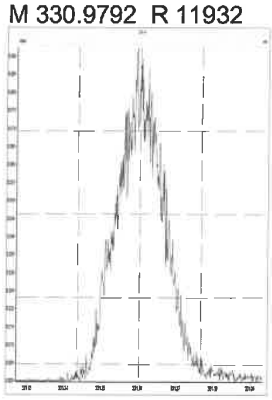

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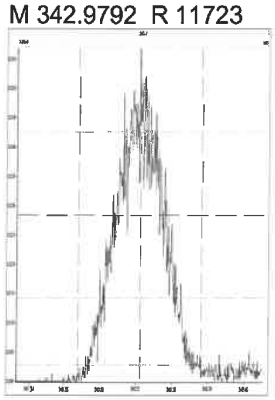

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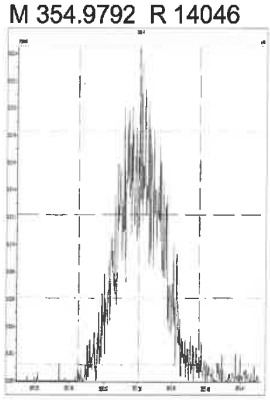

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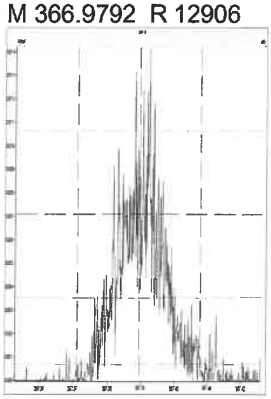

M 380.9760 R 11443

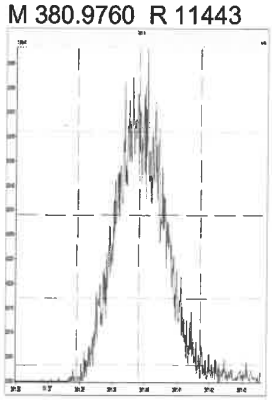

M 392.9760 R 11879

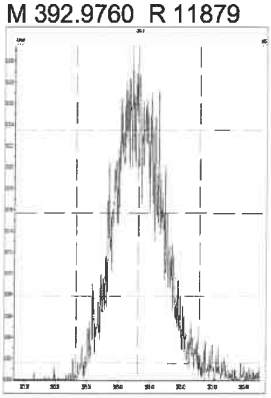

M 404.9760 R 11709

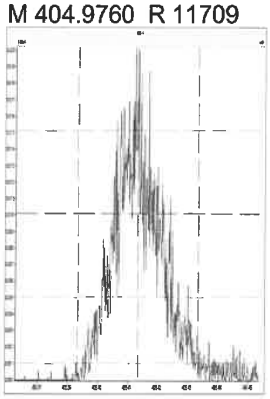

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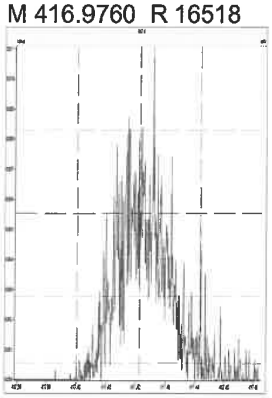

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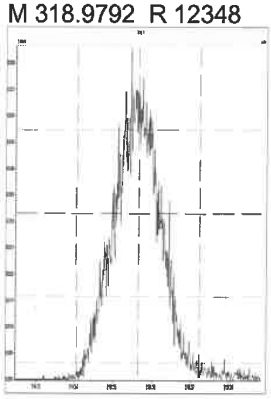

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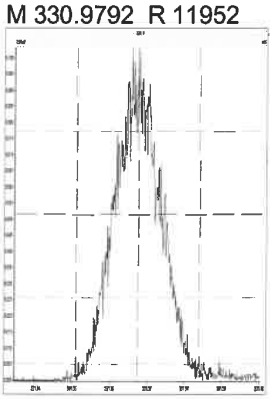

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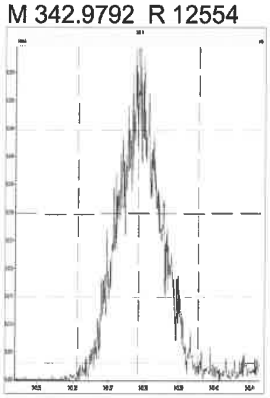

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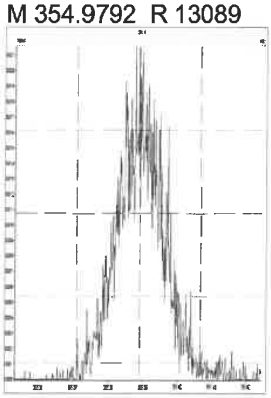

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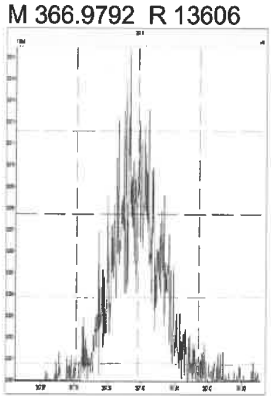

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M 380.9760 R 11363

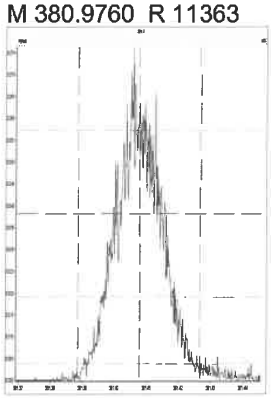

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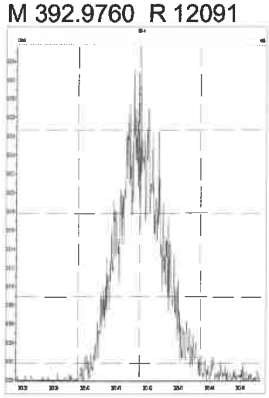

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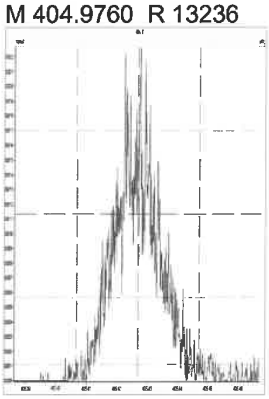

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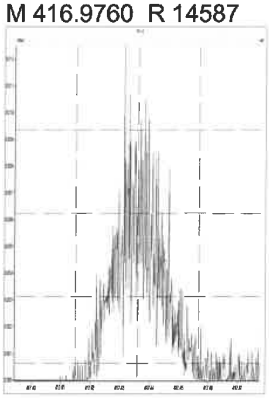

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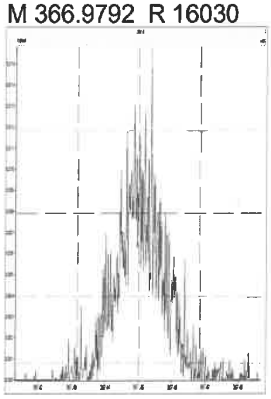

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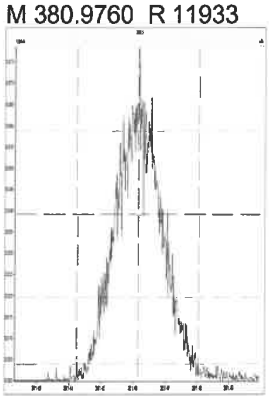

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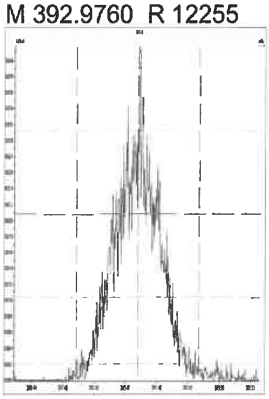

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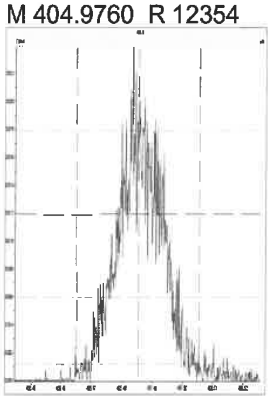

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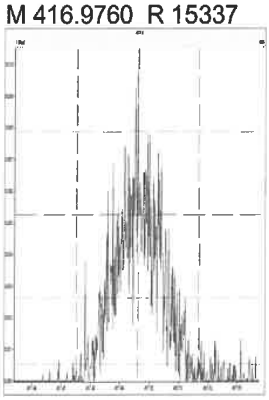

M 430.9728 R 12176

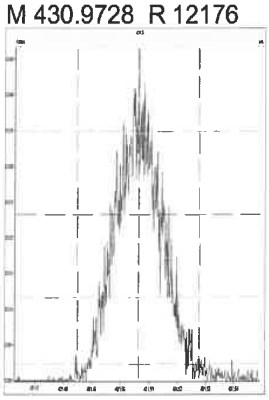

M 442.9728 R 12991

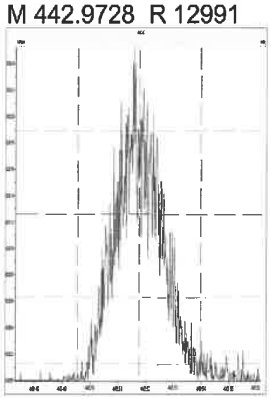

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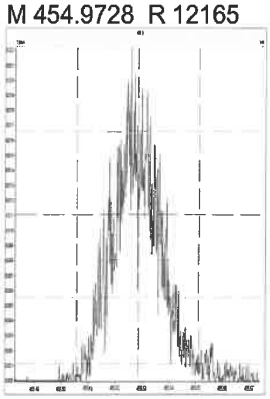

M 380.9760 R 12676

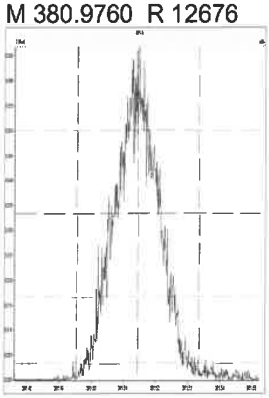

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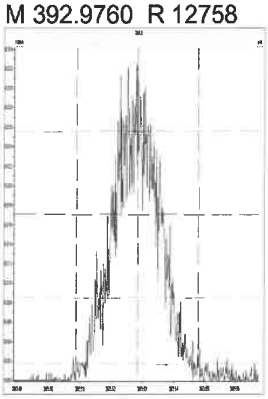

M 404.9760 R 13062

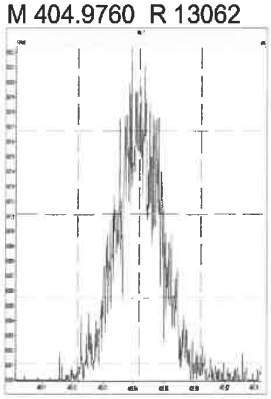

M 416.9760 R 14699

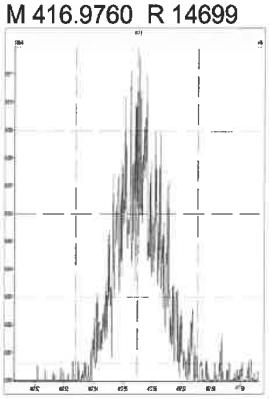

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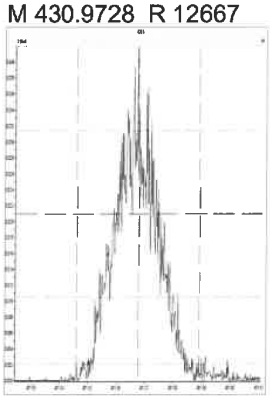

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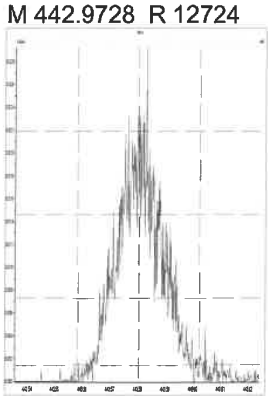

M 454.9728 R 13021

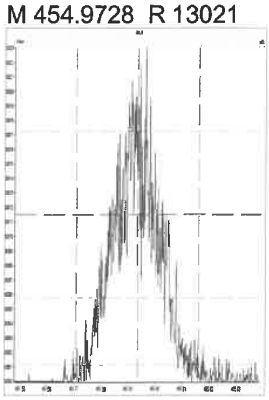

M 466.9728 R 15822

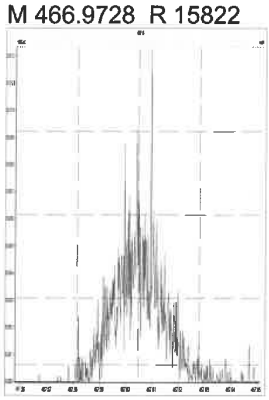

M 480.9696 R 12597

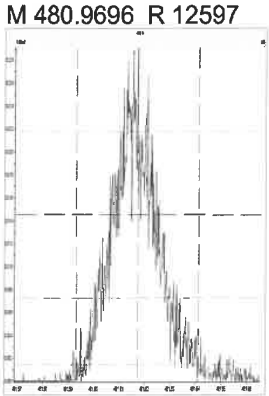

M 380.9760 R 11940

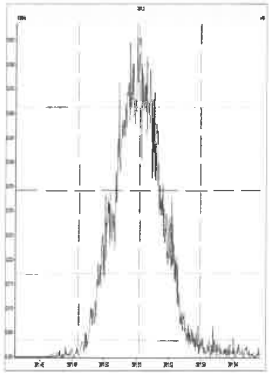

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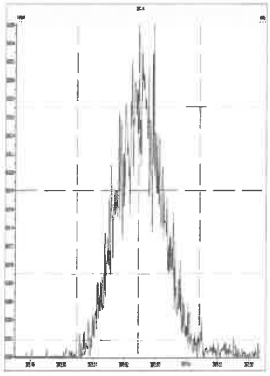

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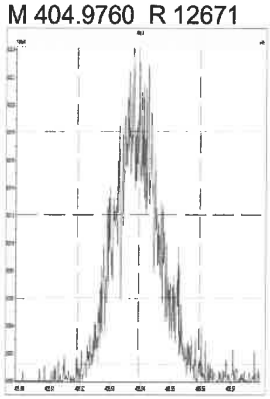

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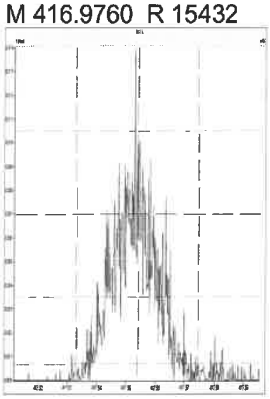

M 430.9728 R 12565

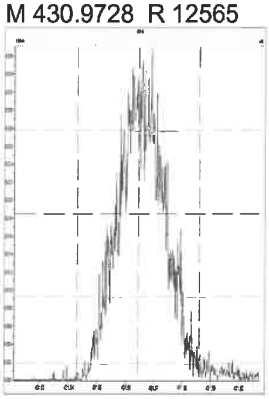

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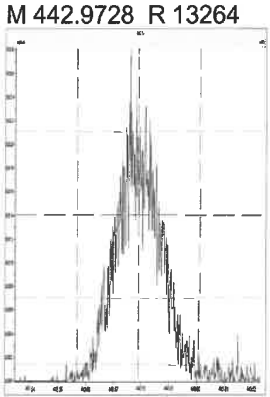

M 454.9728 R 12091

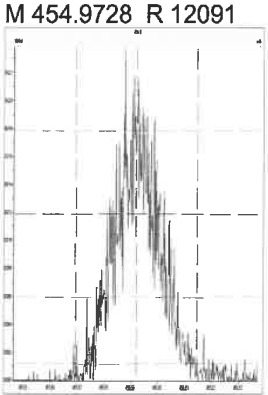

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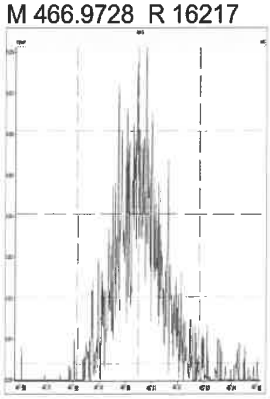

M 480.9696 R 12847

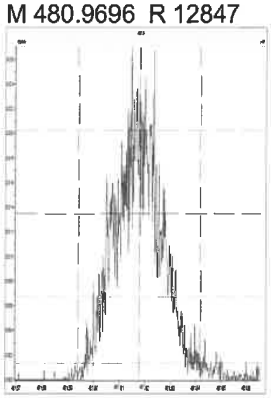

M 492.9696 R 14651

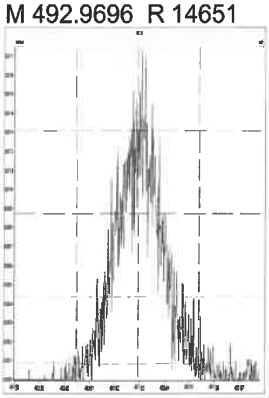

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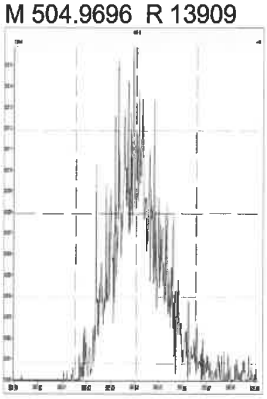

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M 516.9697 R 15549

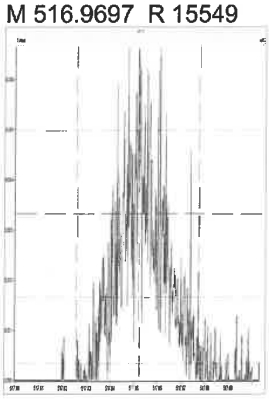

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M 292.9824 R 12922

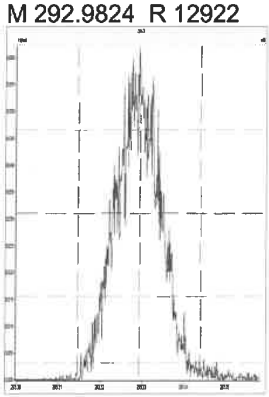

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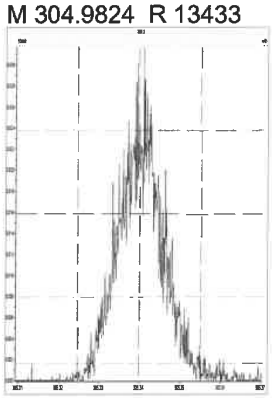

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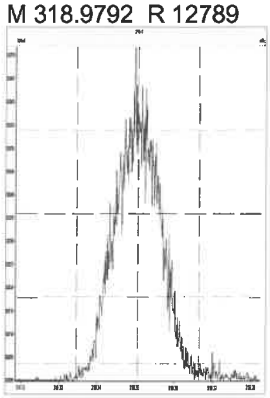

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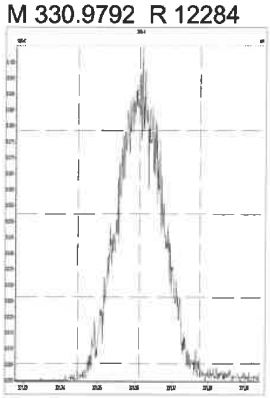

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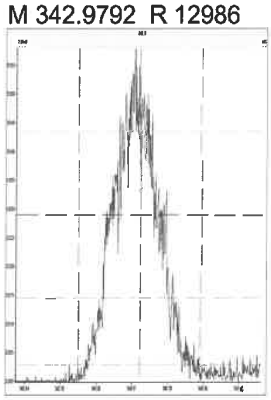

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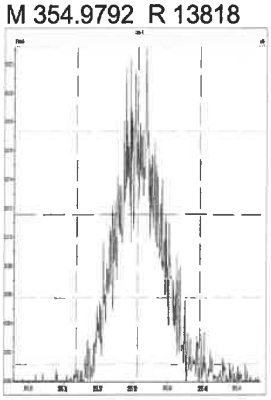

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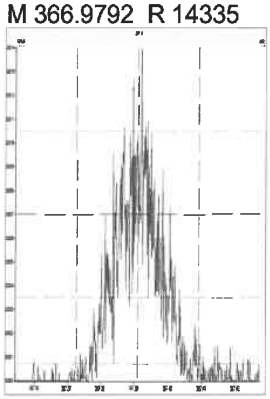

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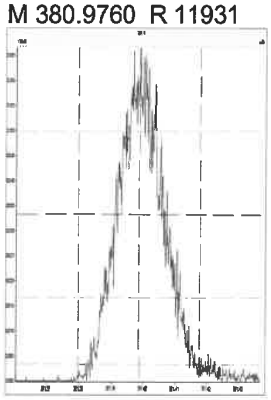

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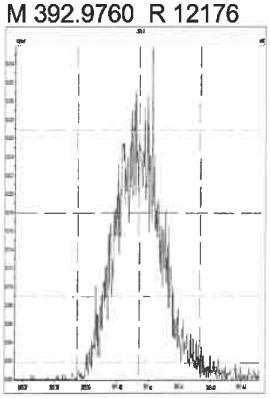

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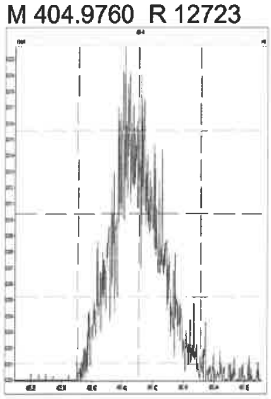

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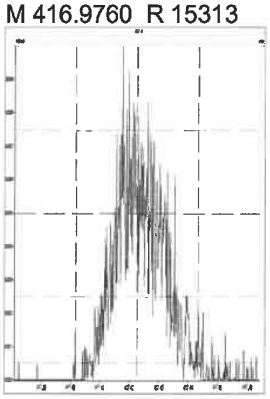

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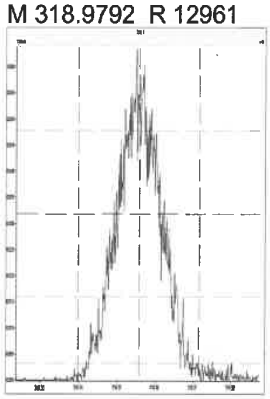

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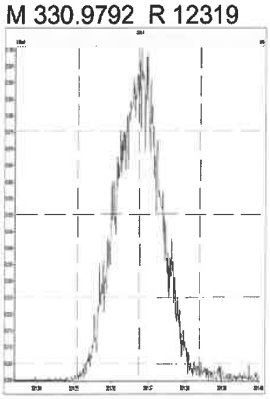

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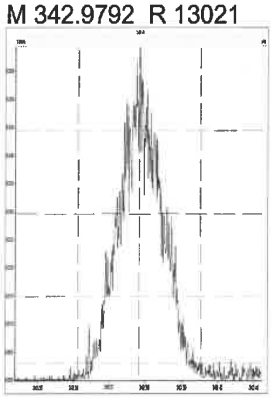

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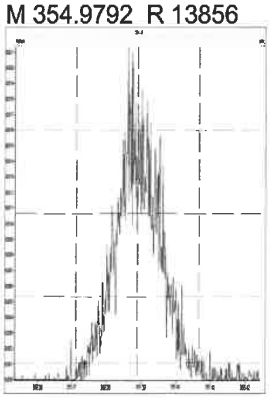

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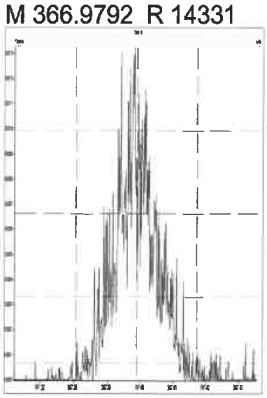

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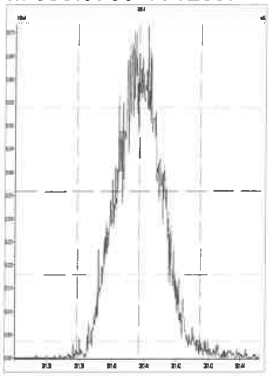

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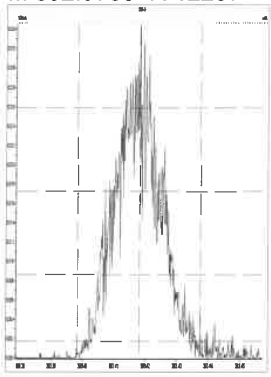

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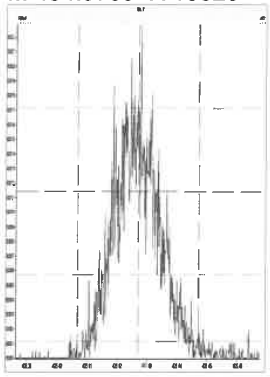

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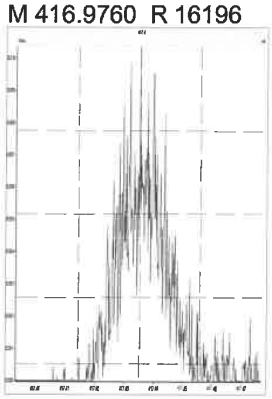

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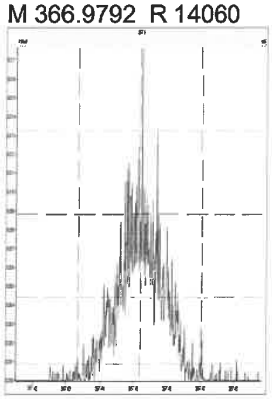

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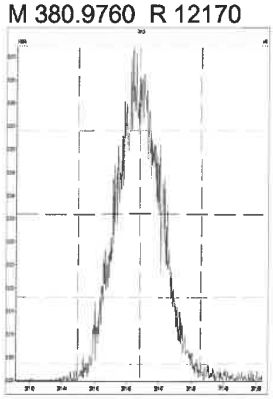

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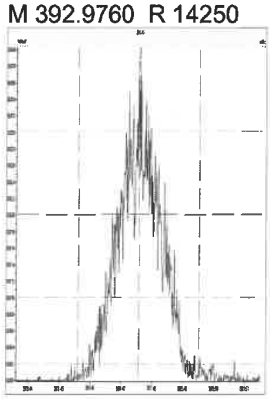

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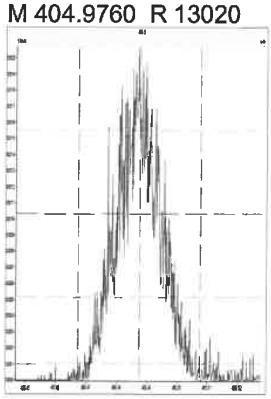

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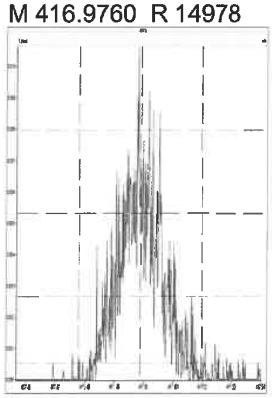

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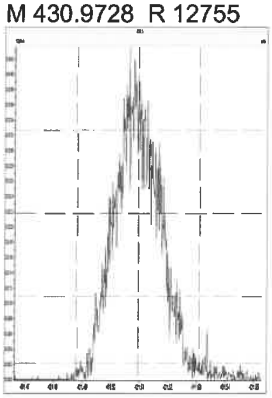

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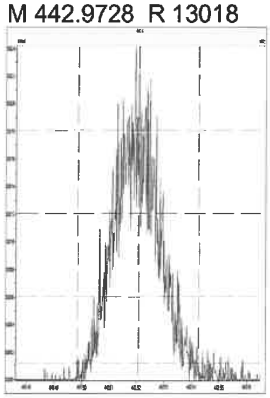

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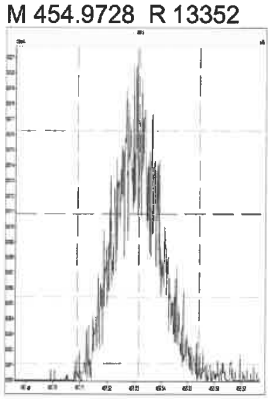

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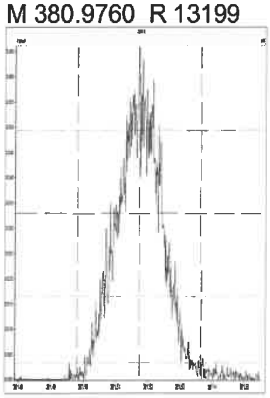

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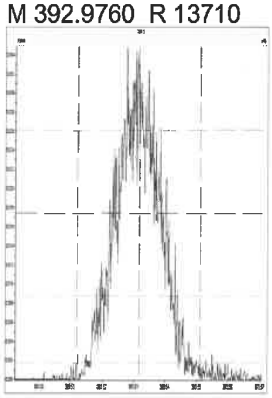

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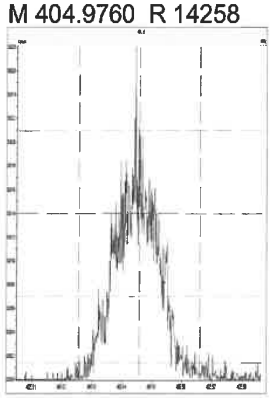

M 416.9760_R 15291

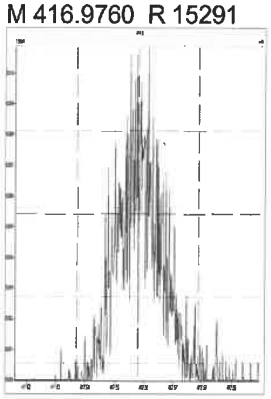

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M 430.9728 R 12607

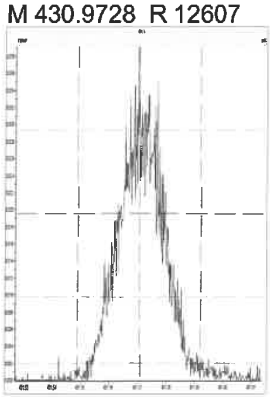

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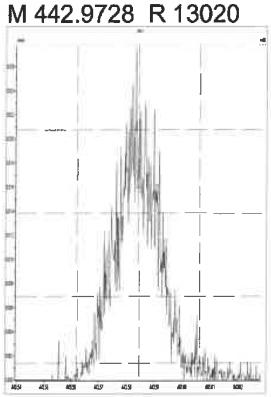

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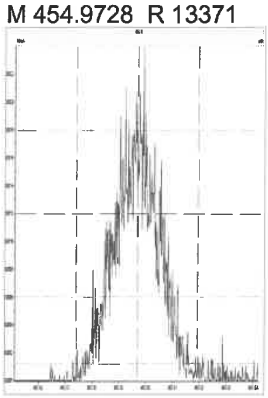

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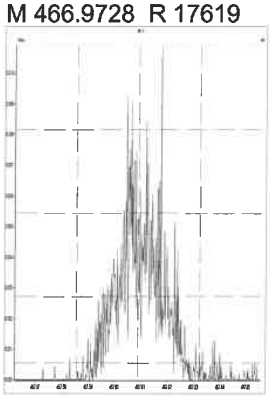

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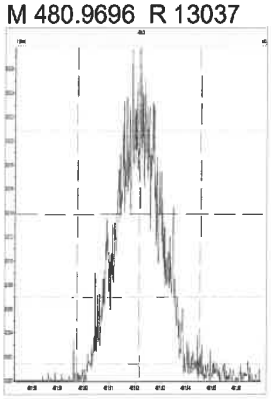

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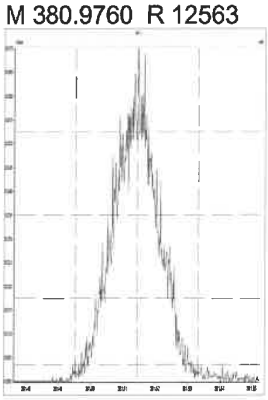

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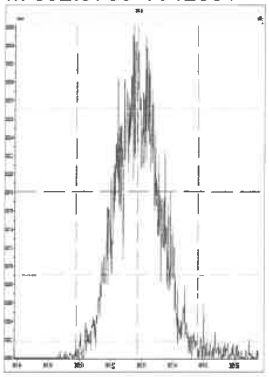

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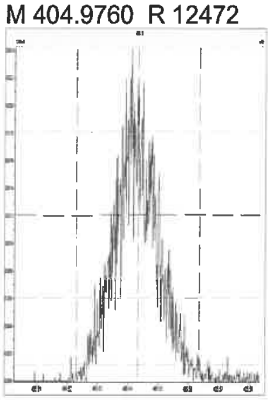

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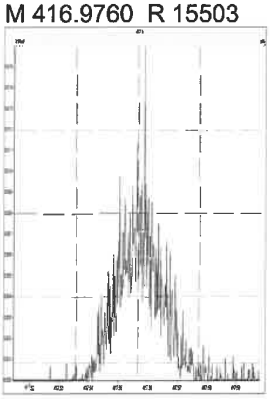

M 430.9728 R 12500

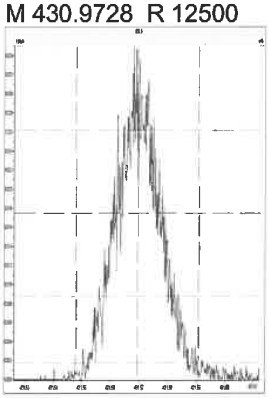

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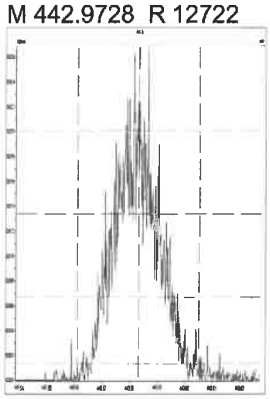

M 454.9728 R 13106

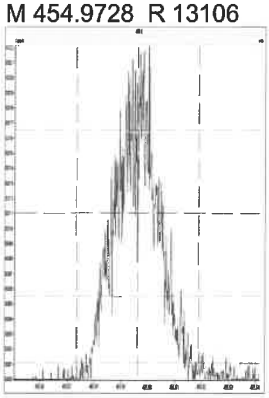

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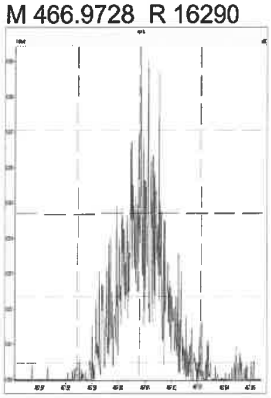

M 480.9696 R 13368

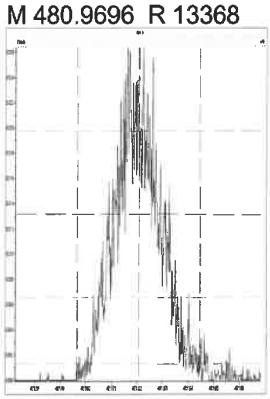

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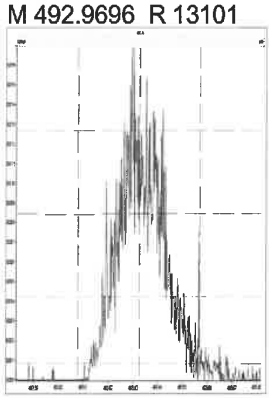

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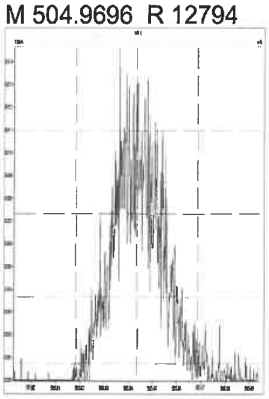

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M 516.9697_R 15138

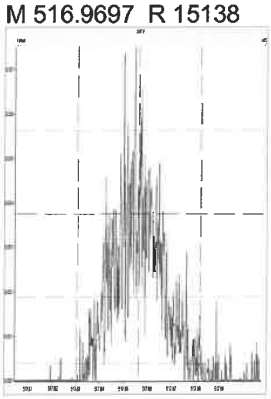

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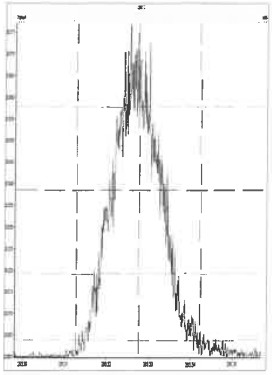

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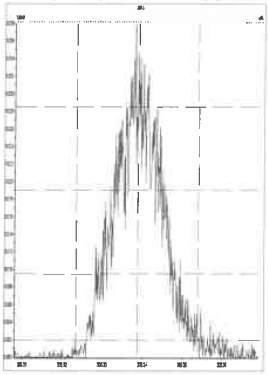

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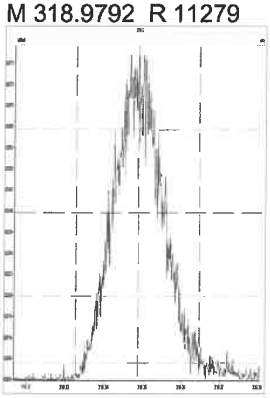

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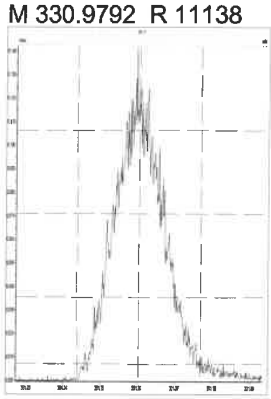

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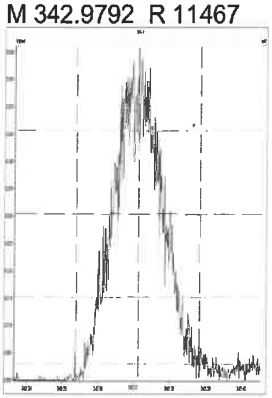

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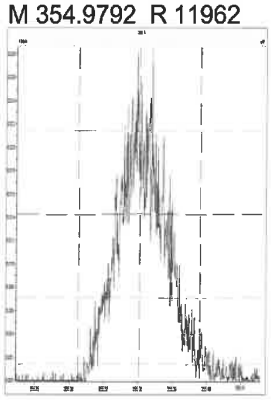

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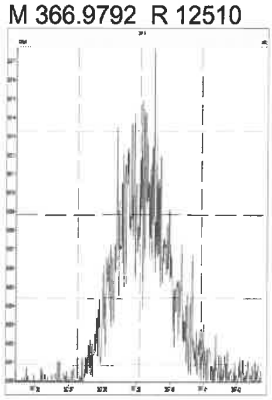

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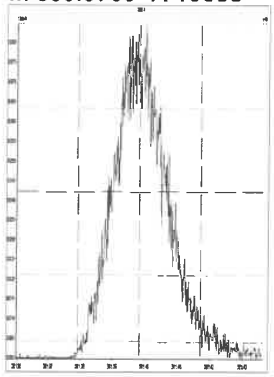

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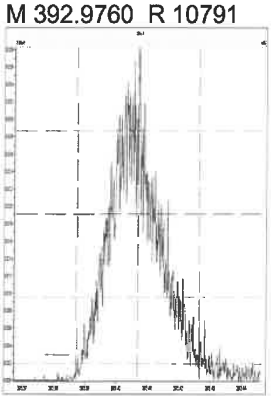

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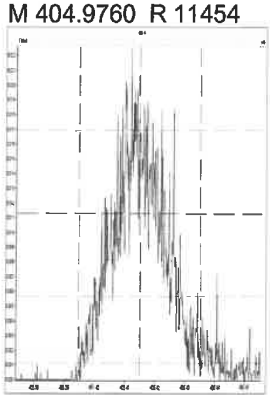

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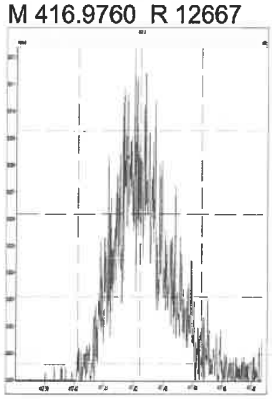

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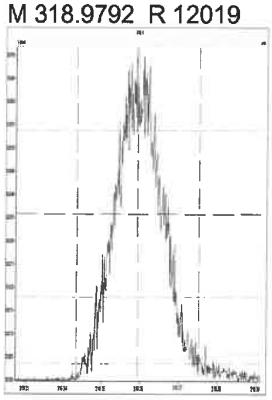

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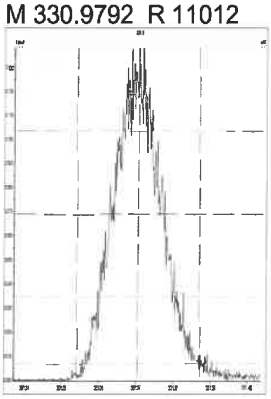

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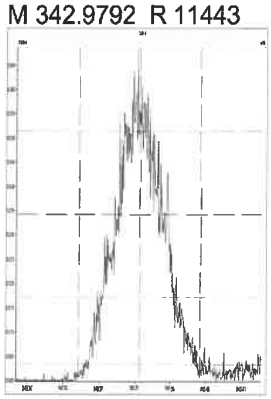

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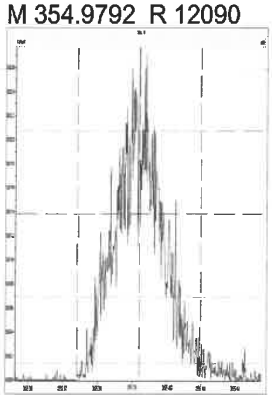

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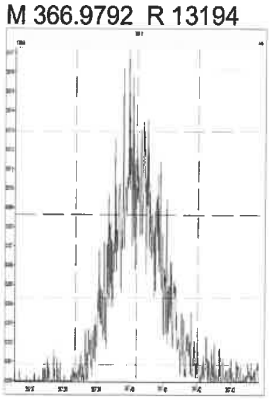

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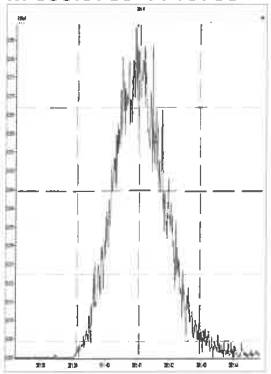

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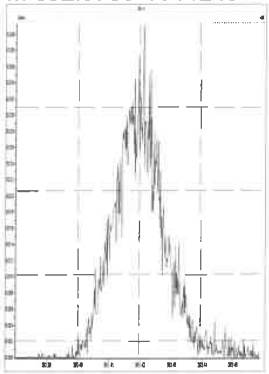

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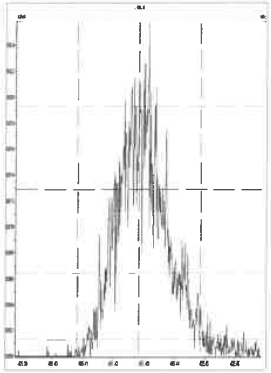

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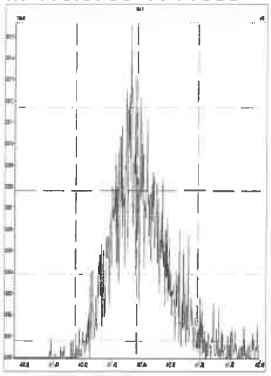

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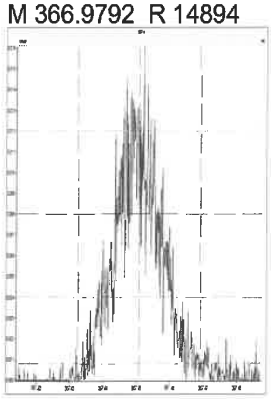

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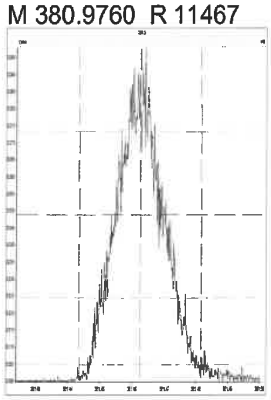

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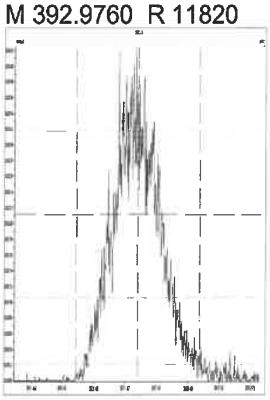

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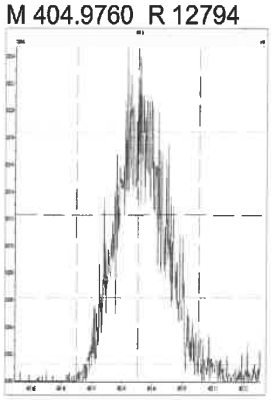

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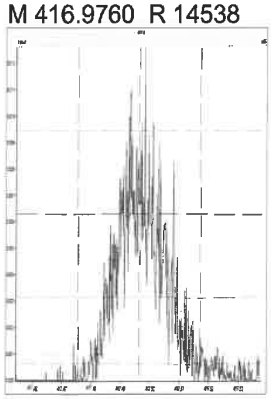

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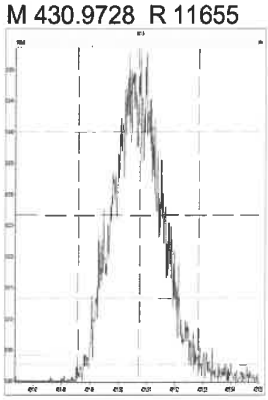

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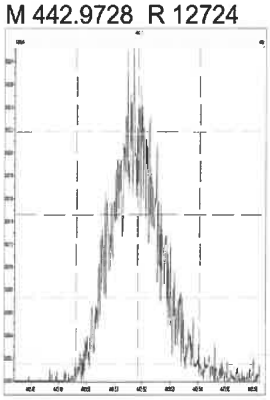

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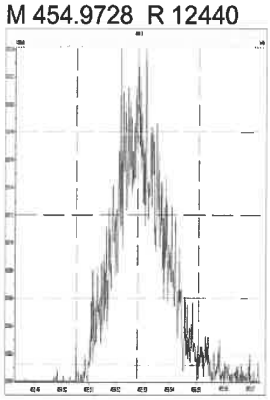

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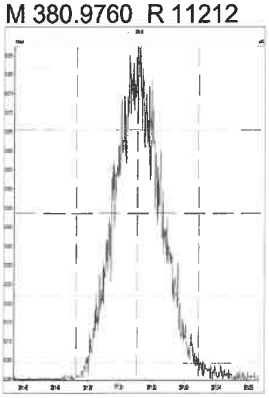

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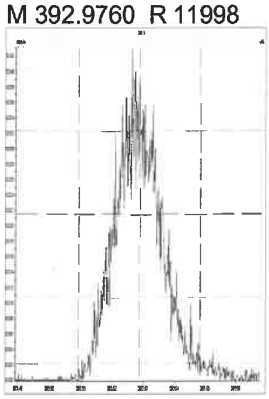

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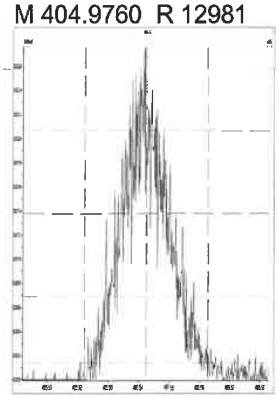

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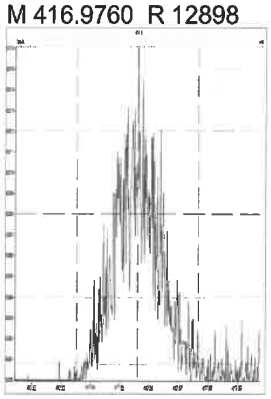

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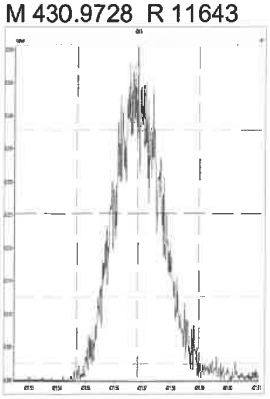

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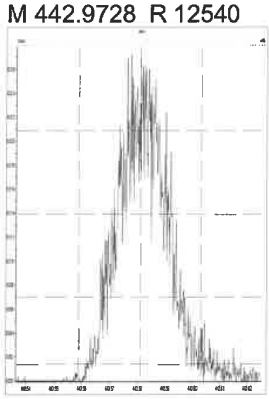

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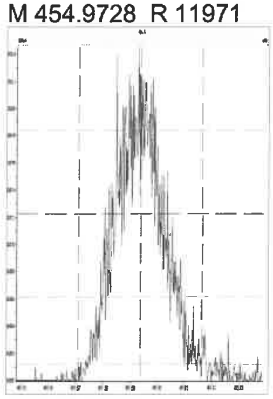

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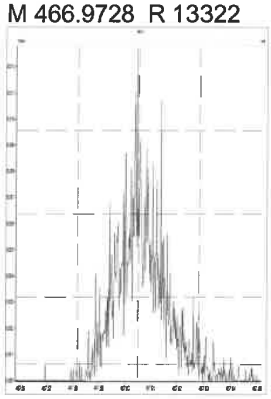

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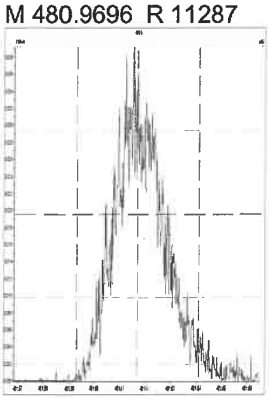

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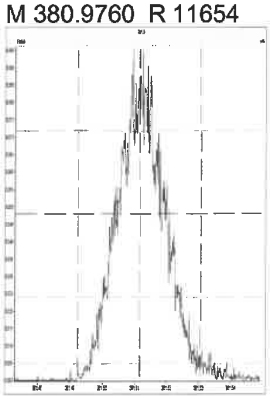

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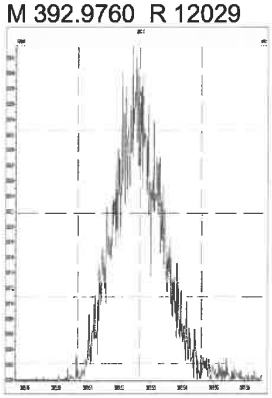

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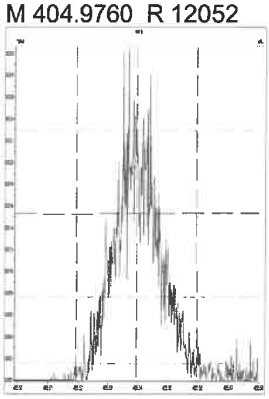

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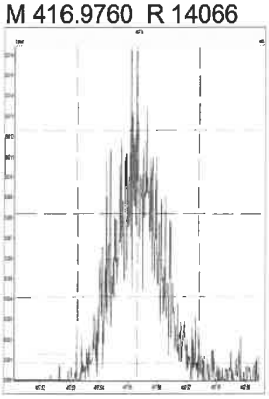

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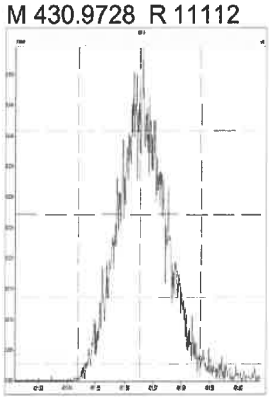

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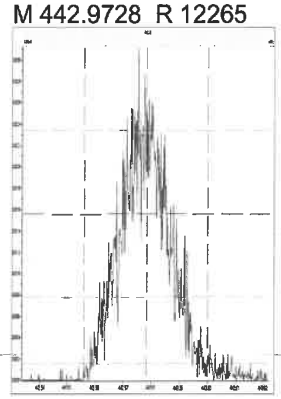

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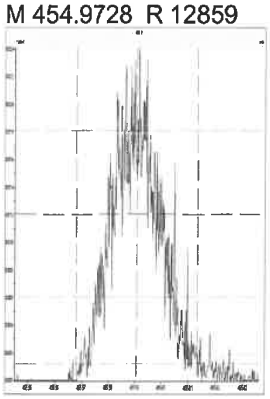

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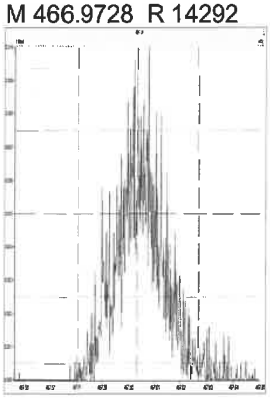

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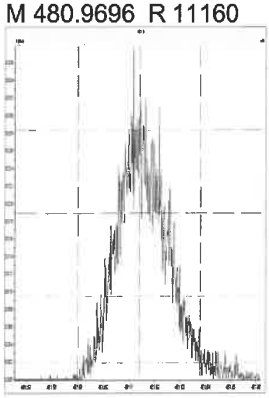

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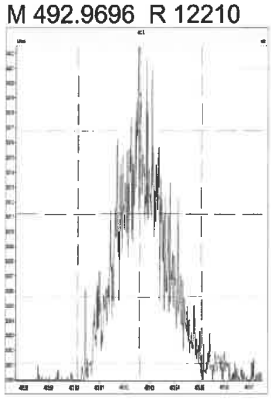

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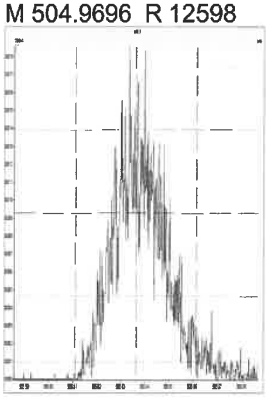

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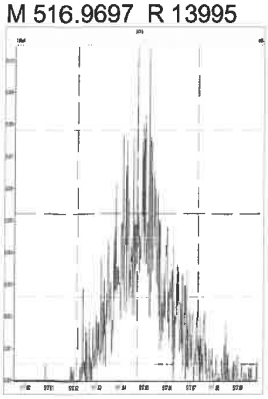

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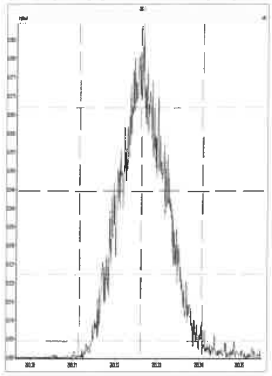

M 304.9824 R 12469

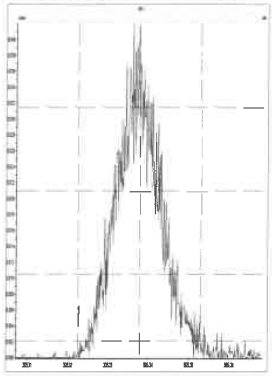

M 318.9792 R 11545

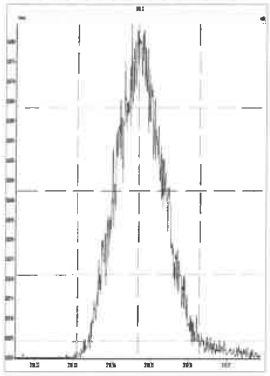

M 330.9792 R 11111

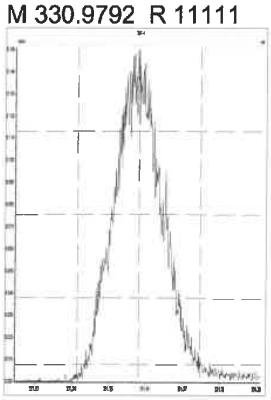

M 342.9792 R 11415

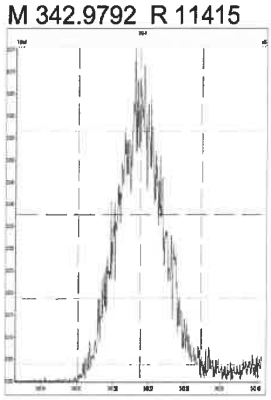

M 354.9792 R 11757

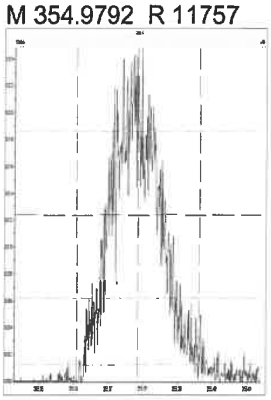

M 366.9792 R 12922

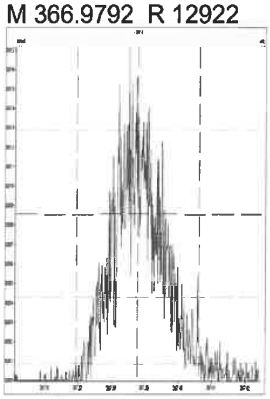

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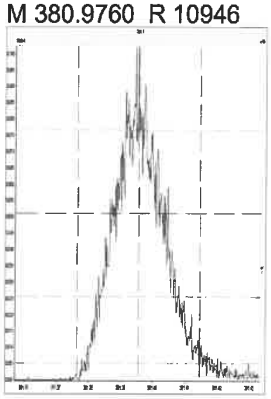

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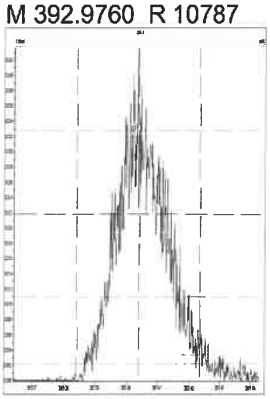

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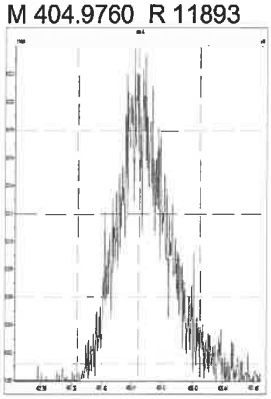

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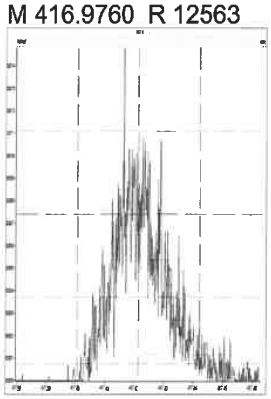

M 318.9792 R 11522

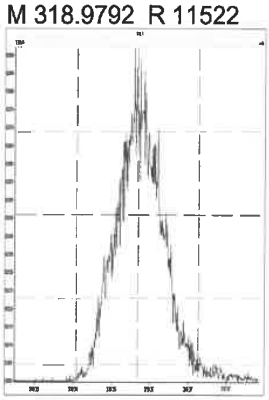

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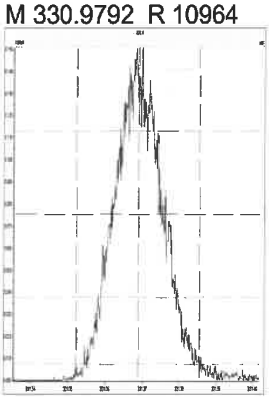

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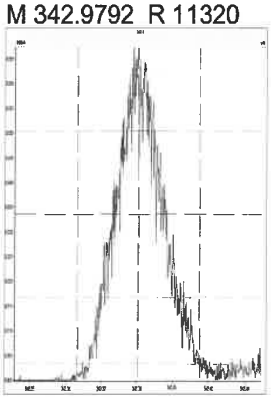

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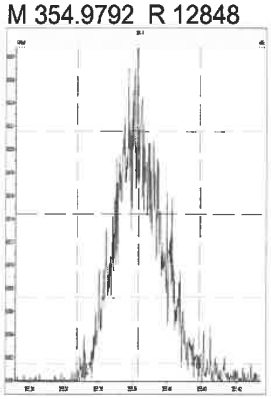

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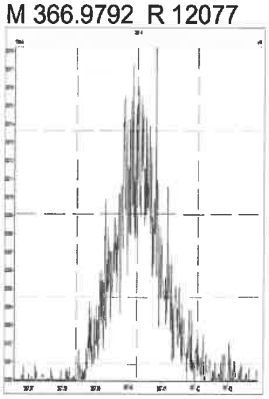

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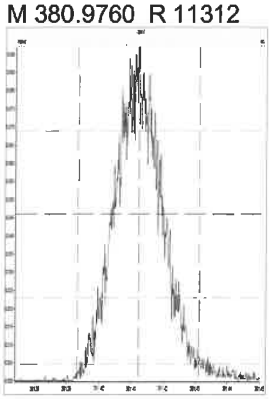

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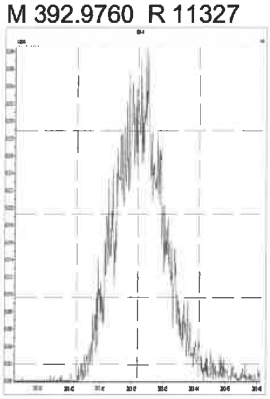

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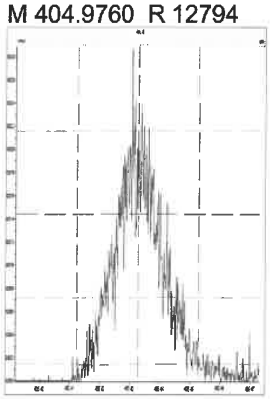

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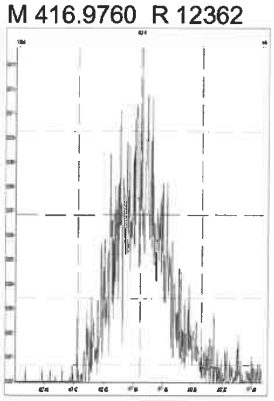

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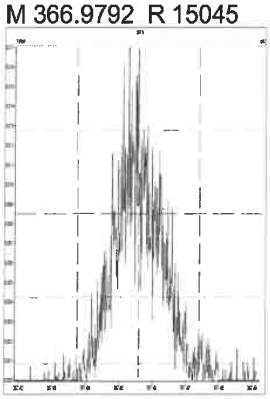

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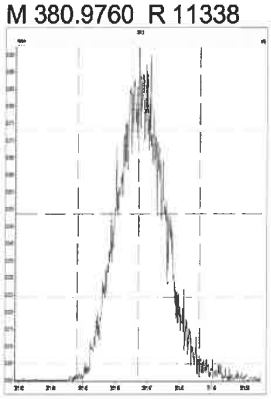

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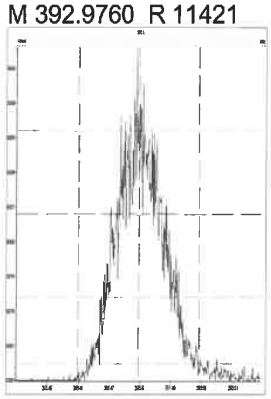

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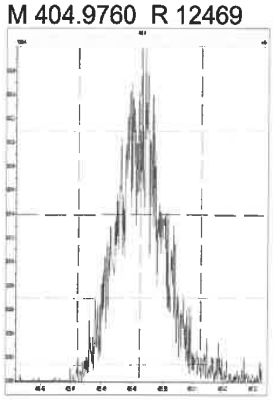

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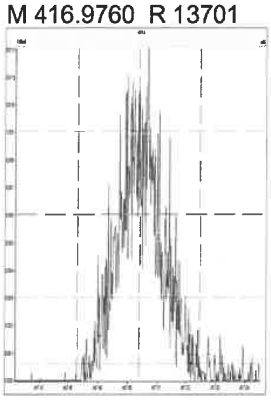

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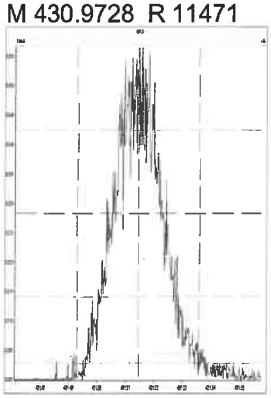

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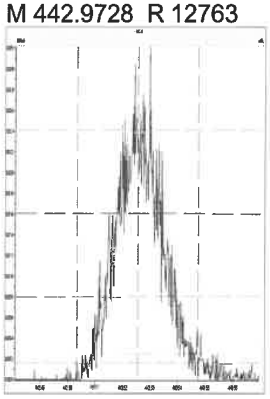

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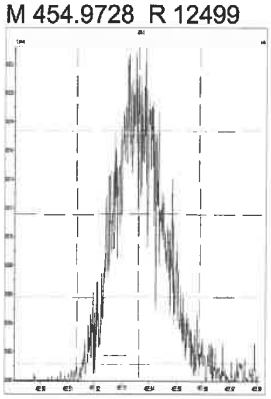

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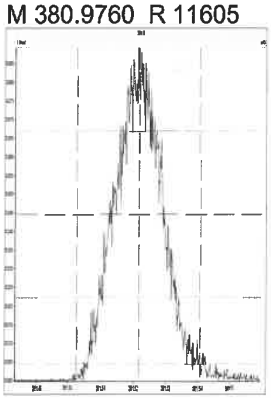

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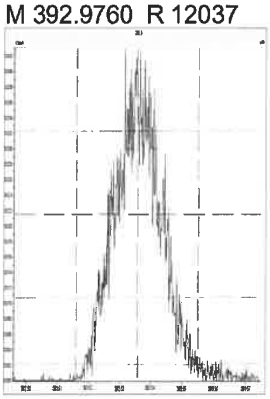

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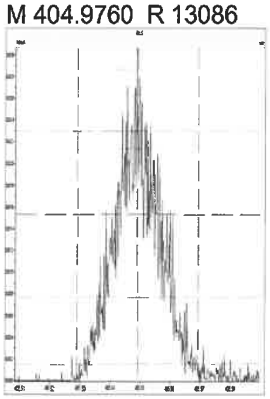

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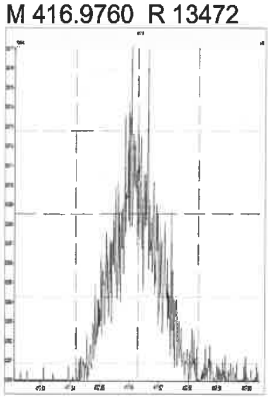

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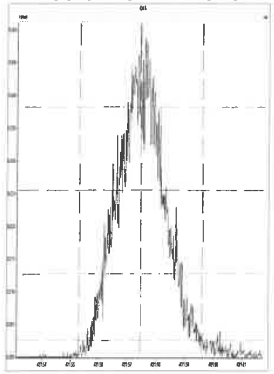

M 442.9728 R 12438

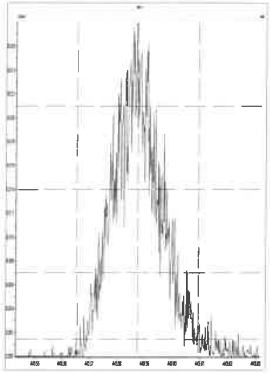

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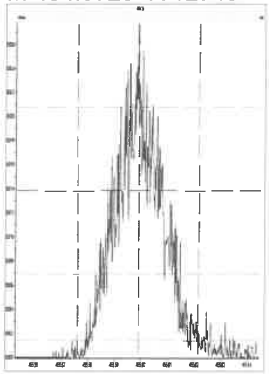

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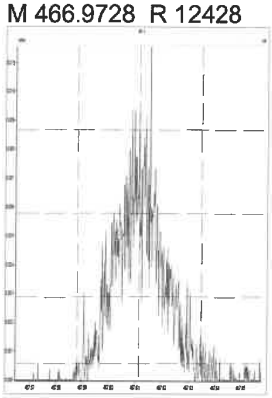

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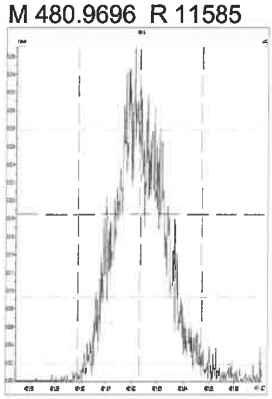

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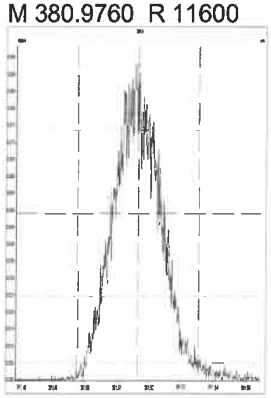

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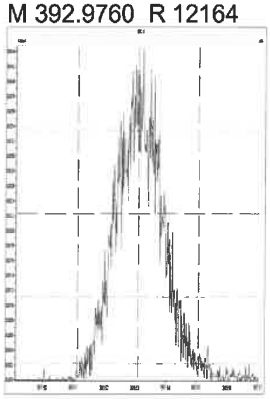

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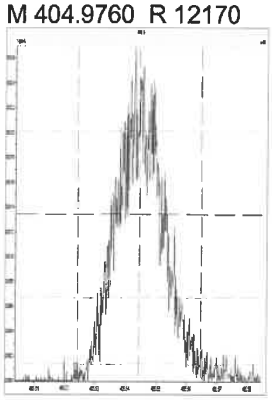

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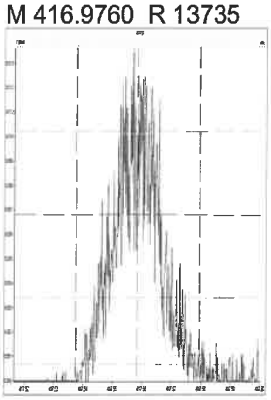

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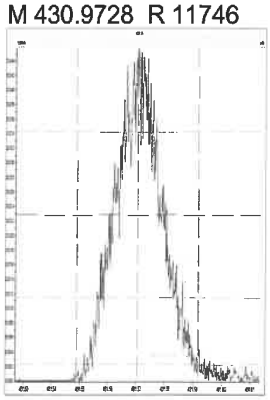

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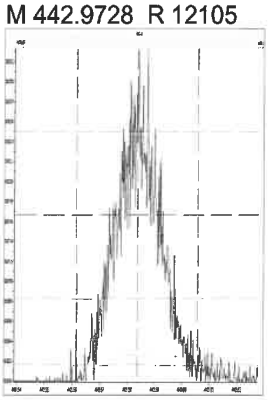

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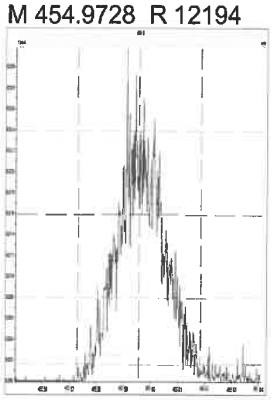

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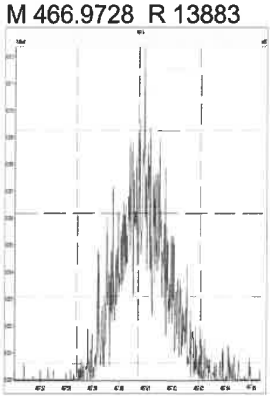

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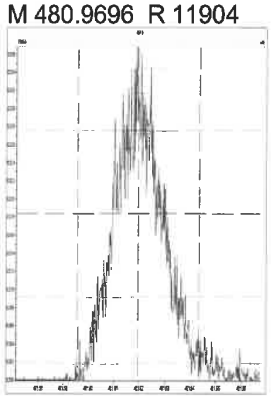

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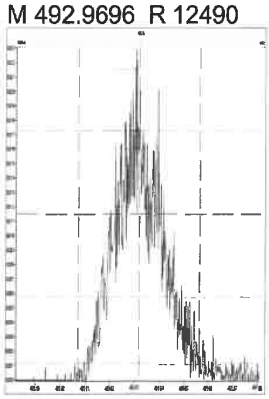

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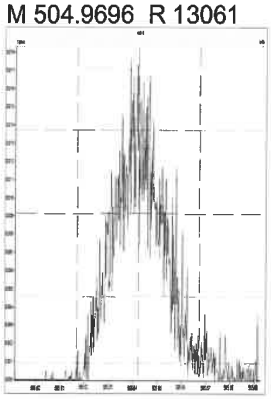

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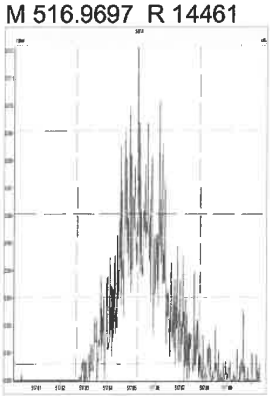

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 15-Aug-2021 01:21:50 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081321C CS-4 HRDXNL4_00099
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 17:08:59 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

First Level Reviewer: bennettd Date: 17-Aug-2021 16:35:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.840	50859151	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	78400712	0.77	1.6249	94.9	94.9	0.1462	0.1462	94.87	
2,3,7,8-TCDF	17.356	8049326	0.77	1.0239	10.0	10.0	0.0298	0.0298	100	
A Non-2,3,7,8-sub-TCDF	17.046						0.0298	0.0298		n
S Total TCDF					10.0	10.0	0.0298	0.0298		
D 13C-2,3,7,8-TCDD	18.036	46190553	0.80	0.8993	101.0	101.0	0.1855	0.1855	101	
2,3,7,8-TCDD	18.066	5895088	0.77	1.2541	10.2	10.2	0.0230	0.0230	102	
$ 37Cl4-2,3,7,8-TCDD	18.066	5953693		1.1071	10.6	10.6	0.0129	0.0129	106	
A Non-2,3,7,8-sub-TCDD	17.492						0.0230	0.0230		
S Total TCDD					10.2	10.2	0.0230	0.0230		
D 13C-1,2,3,7,8-PeCDF	22.353	62103481	1.57	1.2101	100.9	100.9	0.2461	0.2461	101	
1,2,3,7,8-PeCDF	22.381	32847964	1.63	1.0611	49.8	49.8	0.1787	0.1787	99.69	
D 13C-2,3,4,7,8-PeCDF	23.690	65455206	1.56	1.2395	103.8	103.8	0.2403	0.2403	104	
2,3,4,7,8-PeCDF	23.717	33410998	1.62	1.0184	50.1	50.1	0.1914	0.1914	100	
A F1 PeCDFs	20.085						0.008279	0.008279		
A Non-2,3,7,8-sub-PeCDF	23.234						0.1849	0.1849		
S Total PeCDF					100.0	100.0	0.1850	0.1850		
D 13C-1,2,3,7,8-PeCDD	24.412	43564311	1.60	0.7612	112.5	112.5	0.1215	0.1215	113	
1,2,3,7,8-PeCDD	24.440	22861650	1.60	1.0484	50.1	50.1	0.0664	0.0664	100	
A Non-2,3,7,8-sub-PeCDD	23.328						0.0664	0.0664		
S Total PeCDD					50.1	50.1	0.0664	0.0664		
D 13C-1,2,3,4,7,8-HxCDF	30.489	59710259	0.52	1.0837	90.2	90.2	0.4014	0.4014	90.16	
1,2,3,4,7,8-HxCDF	30.516	32798375	1.21	1.0851	50.6	50.6	0.3265	0.3265	101	
D 13C-1,2,3,6,7,8-HxCDF	30.676	62970538	0.52	1.1279	91.3	91.3	0.3856	0.3856	91.35	
1,2,3,6,7,8-HxCDF	30.689	35815811	1.22	1.1260	50.5	50.5	0.2992	0.2992	101	
D 13C-2,3,4,6,7,8-HxCDF	31.501	59405853	0.52	1.0637	91.4	91.4	0.4089	0.4089	91.38	
2,3,4,6,7,8-HxCDF	31.514	34573191	1.20	1.1675	49.8	49.8	0.2366	0.2366	99.69	
D 13C-1,2,3,7,8,9-HxCDF	32.313	55207584	0.52	0.9676	93.4	93.4	0.4495	0.4495	93.36	
1,2,3,7,8,9-HxCDF	32.326	32265097	1.22	1.1664	50.1	50.1	0.2420	0.2420	100	
A Non-2,3,7,8-sub-HxCDF	30.177						0.2718	0.2718		

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					201.1	201.1	0.2761	0.2761		
* 13C-1,2,3,7,8,9-HxCDD	32.126	61116659	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.687	43374648	1.24	0.7334	96.8	96.8	0.3242	0.3242	96.77	
1,2,3,4,7,8-HxCDD	31.701	23129252	1.27	1.0640	50.1	50.1	0.1660	0.1660	100	
D 13C-1,2,3,6,7,8-HxCDD	31.794	50994777	1.25	0.8802	94.8	94.8	0.2701	0.2701	94.80	
1,2,3,6,7,8-HxCDD	31.807	26728367	1.28	1.0001	52.4	52.4	0.1674	0.1674	105	
1,2,3,7,8,9-HxCDD	32.140	28374027	1.29	1.1325	53.1	53.1	0.1518	0.1518	106	
A Non-2,3,7,8-sub-HxCDD	30.882						0.1613	0.1613		
S Total HxCDD					155.6	155.6	0.1617	0.1617		
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	47406728	0.43	0.7730	100.3	100.3	1.177	1.177	100	
1,2,3,4,6,7,8-HpCDF	33.766	35353513	1.05	1.4413	51.7	51.7	0.4282	0.4282	103	
D 13C-1,2,3,4,7,8,9-HpCDF	34.835	46533338	0.44	0.7008	108.6	108.6	1.298	1.298	109	
1,2,3,4,7,8,9-HpCDF	34.847	31192767	1.07	1.3174	50.9	50.9	0.5462	0.5462	102	
A Non-2,3,7,8-sub-HpCDF	34.307						0.4817	0.4817		
S Total HpCDF					102.6	102.6	0.4872	0.4872		
D 13C-1,2,3,4,6,7,8-HpCDD	34.544	43916923	0.98	0.6472	111.0	111.0	0.4424	0.4424	111	
1,2,3,4,6,7,8-HpCDD	34.556	24629161	1.04	1.0943	51.2	51.2	0.2093	0.2093	102	
A Non-2,3,7,8-sub-HpCDD	34.289						0.2093	0.2093		
S Total HpCDD					51.2	51.2	0.2093	0.2093		
D 13C-OCDD	36.914	69387871	0.88	0.4472	253.9	253.9	0.3076	0.3076	127	
OCDF	37.010	49078120	0.90	1.4382	98.4	98.4	0.1054	0.1054	98.36	
OCDD	36.914	39420253	0.88	1.1070	102.6	102.6	0.1519	0.1519	103	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 15-Aug-2021 01:21:50 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081321C CS-4 HRDXNL4_00099
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 17:08:59 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

First Level Reviewer: bennettd Date: 17-Aug-2021 16:35:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.840	17.840	0		22743115	5522115	4764	11910	1159		
333.9339	17.840	17.840	0		28116036	6891844	3520	8800	1958	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.972	34067064	8214308	5335	13337	1540		
317.9389	17.341	17.341	0	0.972	44333648	10467162	6463	16157	1620	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.001	3512551	833797	937	2342	890		
305.8987	17.356	17.356	0	1.001	4536775	1059360	1343	3357	789	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.978	17.046	-4	0.979	25198	5877	937	2342	6		
305.8987	16.978	17.046	-4	0.979	31910	6919	1343	3357	5	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.036	18.036	0	1.011	20528594	4514105	4764	11910	948		
333.9339	18.036	18.036	0	1.011	25661959	5736146	3520	8800	1630	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.002	2572281	583176	627	1567	930		
321.8936	18.066	18.066	0	1.002	3322807	740246	557	1392	1329	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.066	0	1.013	5953693	1343938	709	1772	1896		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.492						627	1567			
321.8936	17.492						557	1392			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.353	22.353	0	1.253	37946552	6316754	8754	21885	722		
353.8970	22.353	22.353	0	1.253	24156929	4164488	6035	15087	690	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.381	22.381	0	1.001	20363855	3358662	4803	12007	699		
341.8567	22.367	22.381	-1	1.001	12484109	2116272	3146	7865	673	1.63(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.690	23.690	0	1.328	39931936	6209260	8754	21885	709		
353.8970	23.690	23.690	0	1.328	25523270	3987469	6035	15087	661	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.717	23.717	0	1.001	20655847	3205424	4803	12007	667		
341.8567	23.717	23.717	0	1.001	12755151	1952936	3146	7865	621	1.62(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.085						147	367			
341.8567	20.085						209	522			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.234						4803	12007			
341.8567	23.234						3146	7865			
13C-1,2,3,7,8-PeCDD											
367.8949	24.412	24.412	0	1.368	26798320	3982751	2755	6887	1446		
369.8919	24.412	24.412	0	1.368	16765991	2466199	1838	4595	1342	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.440	24.440	0	1.001	14056020	2065372	1117	2792	1849		
357.8516	24.440	24.440	0	1.001	8805630	1312498	680	1700	1930	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.328						1117	2792			
357.8516	23.328						680	1700			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.489	30.489	0	0.949	20300382	3786283	9283	23207	408		
385.8610	30.489	30.489	0	0.949	39409877	7376252	17824	44560	414	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.516	30.516	0	1.001	17984259	3313118	8669	21672	382		
375.8178	30.503	30.516	-1	1.000	14814116	2749701	7152	17880	384	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.676	30.676	0	0.955	21558424	4019566	9283	23207	433		
385.8610	30.676	30.676	0	0.955	41412114	7722139	17824	44560	433	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.689	30.689	0	1.000	19706043	3692982	8669	21672	426		
375.8178	30.689	30.689	0	1.000	16109768	3035460	7152	17880	424	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.501	31.501	0	0.981	20409700	5018948	9283	23207	541		
385.8610	31.501	31.501	0	0.981	38996153	9297952	17824	44560	522	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.514	31.514	0	1.000	18883933	4514848	8669	21672	521		
375.8178	31.514	31.514	0	1.000	15689258	3815097	7152	17880	533	1.20(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.313	0	1.006	18926143	4850085	9283	23207	522		
385.8610	32.313	32.313	0	1.006	36281441	9161051	17824	44560	514	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.326	32.326	0	1.000	17732945	4550512	8669	21672	525		
375.8178	32.326	32.326	0	1.000	14532152	3664194	7152	17880	512	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.177						8669	21672			
375.8178	30.177						7152	17880			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.126	32.126	0		33732613	8591161	8168	20420	1052		
403.8529	32.126	32.126	0		27384046	6988644	6648	16620	1051	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.687	31.687	0	0.986	24013314	6627917	8168	20420	811		
403.8529	31.687	31.687	0	0.986	19361334	5353338	6648	16620	805	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.701	31.701	0	1.000	12940734	3587394	4512	11280	795		
391.8127	31.701	31.701	0	1.000	10188518	2819114	3953	9882	713	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.794	31.794	0	0.990	28319375	6987514	8168	20420	855		
403.8529	31.794	31.794	0	0.990	22675402	5651101	6648	16620	850	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.807	31.807	0	1.000	15026721	3689105	4512	11280	818		
391.8127	31.807	31.807	0	1.000	11701646	2912162	3953	9882	737	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.140	0	1.014	15975828	4190450	4512	11280	929		
391.8127	32.140	32.140	0	1.014	12398199	3244183	3953	9882	821	1.29(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						4512	11280			
391.8127	30.882						3953	9882			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.754	0	1.051	14252394	4700312	17078	42695	275		
419.8220	33.754	33.754	0	1.051	33154334	10707684	39604	99010	270	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.766	0	1.000	18078624	5713808	19578	48945	292		
409.7789	33.754	33.766	-1	1.000	17274889	5363836	18455	46137	291	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.835	34.835	0	1.084	14133121	4032024	17078	42695	236		
419.8220	34.835	34.835	0	1.084	32400217	9182483	39604	99010	232	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.847	34.847	0	1.000	16090277	4551571	19578	48945	232		
409.7789	34.847	34.847	0	1.000	15102490	4244504	18455	46137	230	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.307						19578	48945			
409.7789	34.307						18455	46137			

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Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.544	34.544	0	1.075	21729276	6291183	8362	20905	752		
437.8140	34.544	34.544	0	1.075	22187647	6456471	9482	23705	681	0.98(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.556	34.556	0	1.000	12546361	3684464	5870	14675	628		
425.7737	34.556	34.556	0	1.000	12082800	3585591	5810	14525	617	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.289						5870	14675			
425.7737	34.289						5810	14525			
13C-OCDD											
469.7779	36.914	36.914	0	1.149	32383725	7765483	4676	11690	1661		
471.7750	36.914	36.914	0	1.149	37004146	8836953	3897	9742	2268	0.88(0.76-1.02)	
OCDF											
441.7428	37.010	37.010	0	1.003	23198880	5696308	2766	6915	2059		
443.7399	37.010	37.010	0	1.003	25879240	6222631	2266	5665	2746	0.90(0.76-1.02)	
OCDD											
457.7377	36.914	36.914	0	1.000	18450761	4353760	2822	7055	1543		
459.7348	36.914	36.914	0	1.000	20969492	5041686	2760	6900	1827	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d		
Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

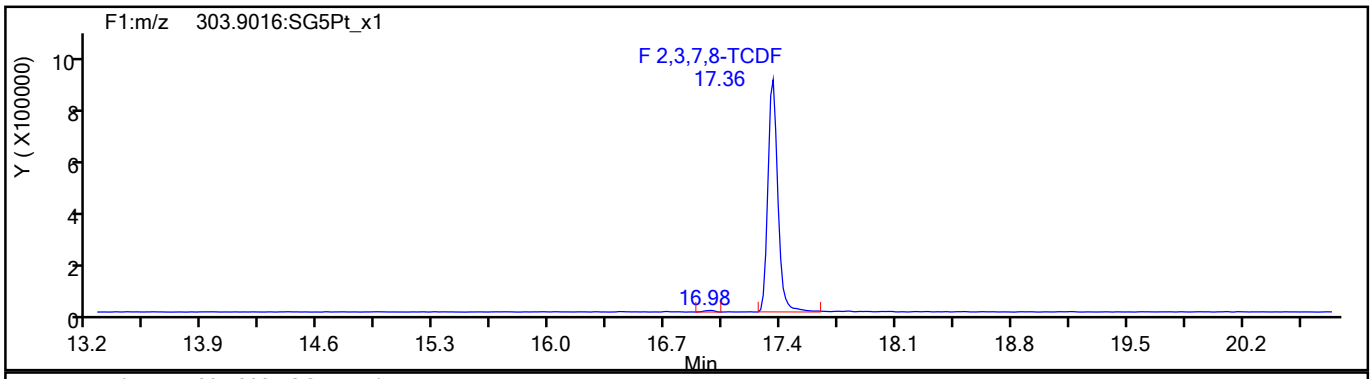

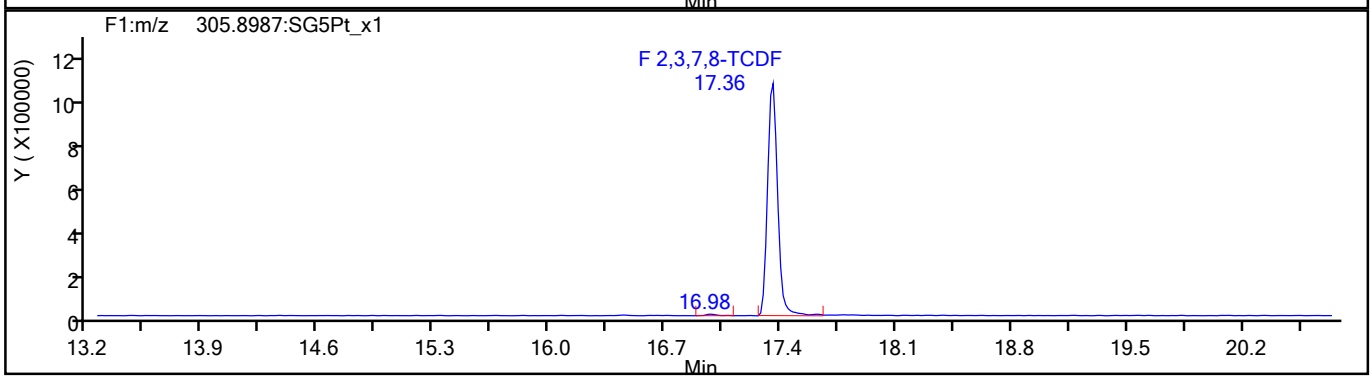

TCDF Standards

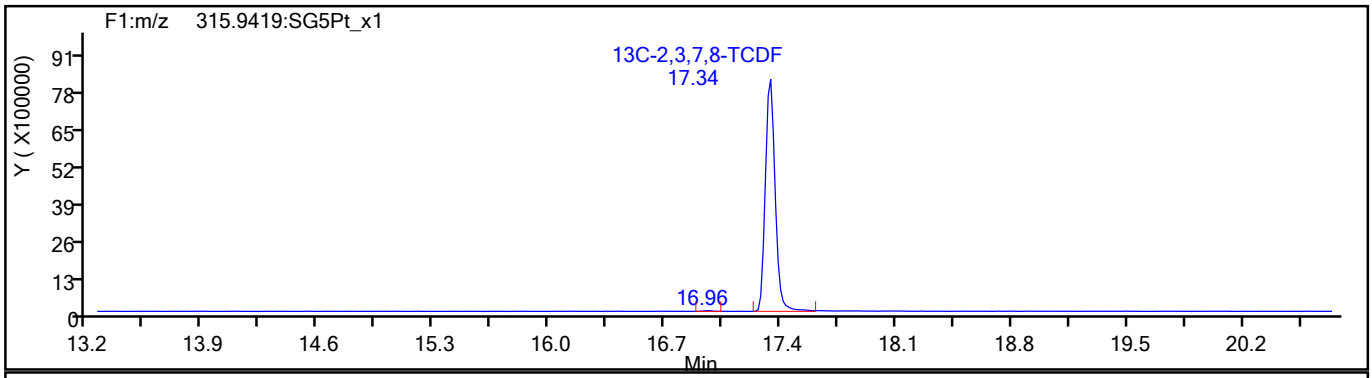

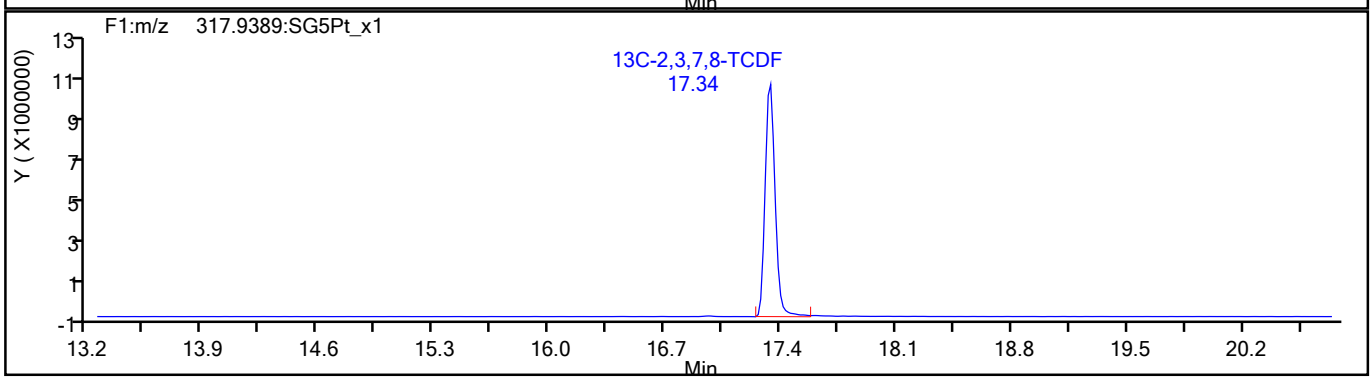

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Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d		
Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

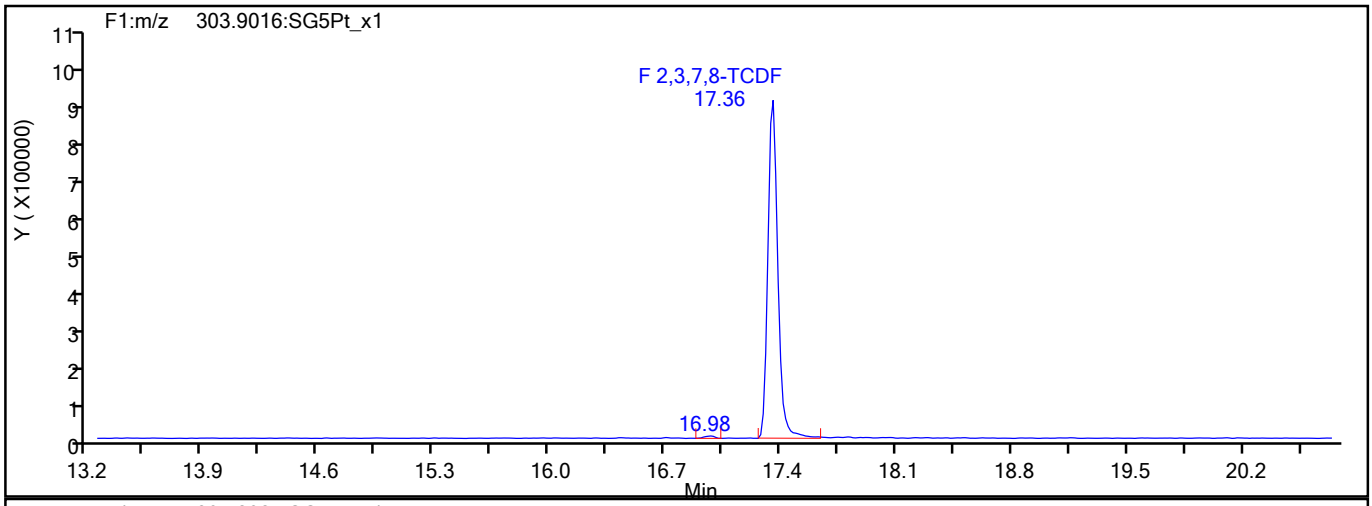

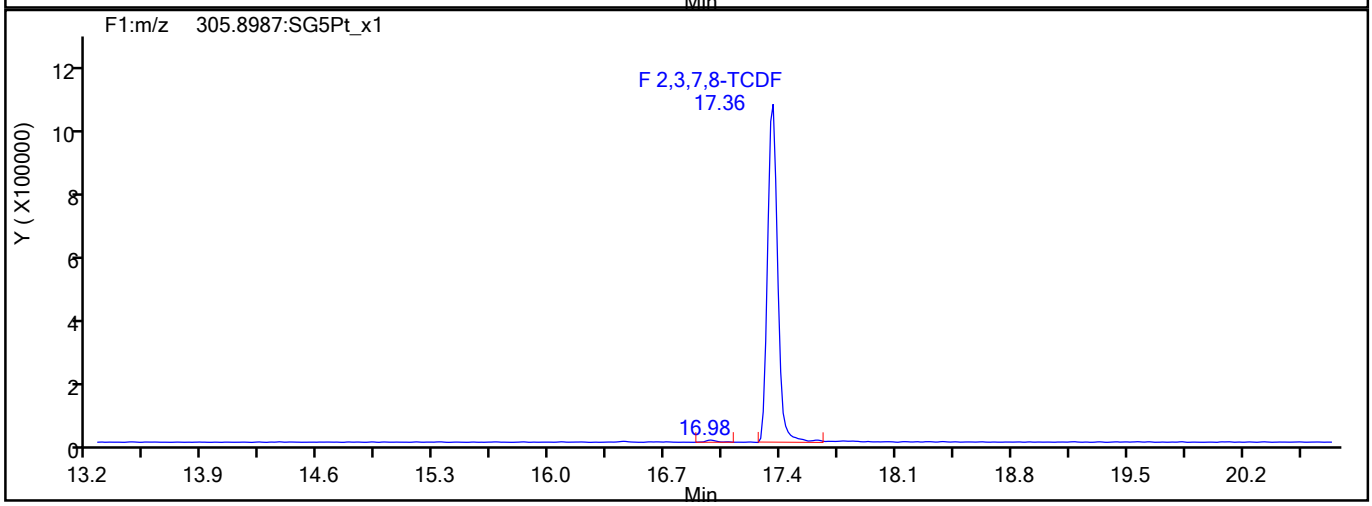

TCDF Interference Mass

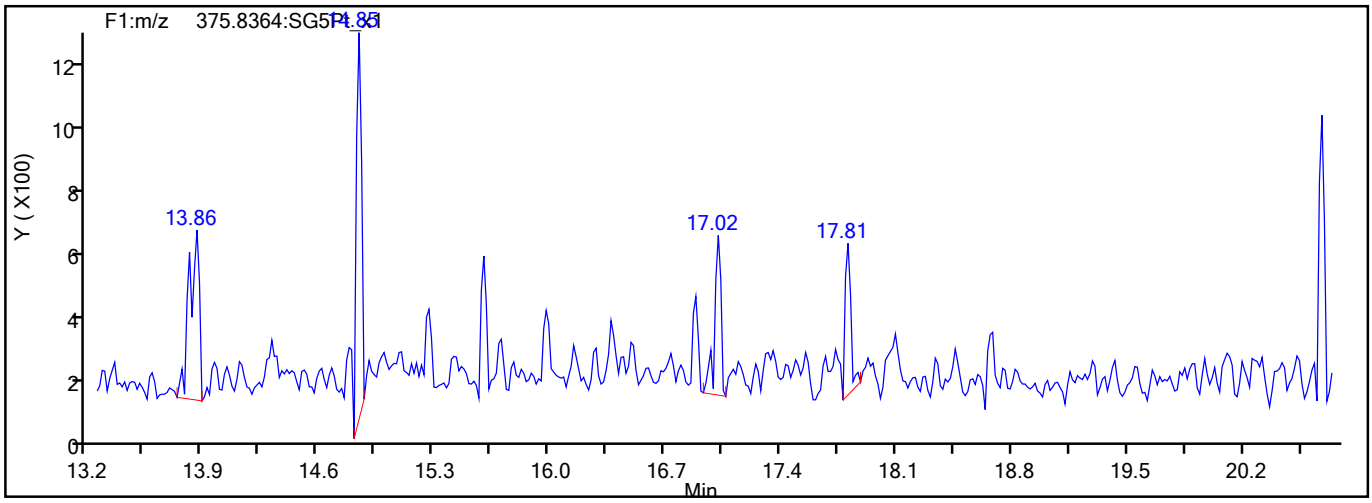

776514

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d		
Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

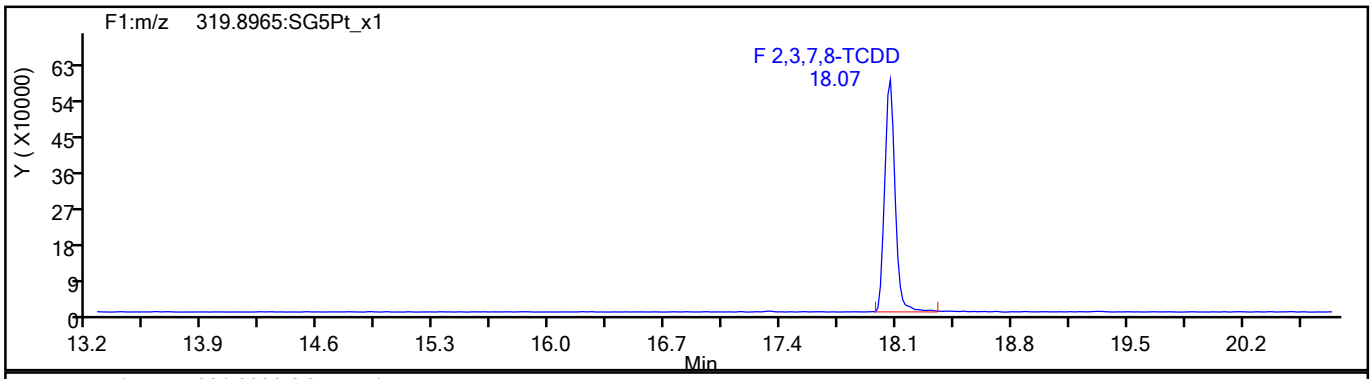

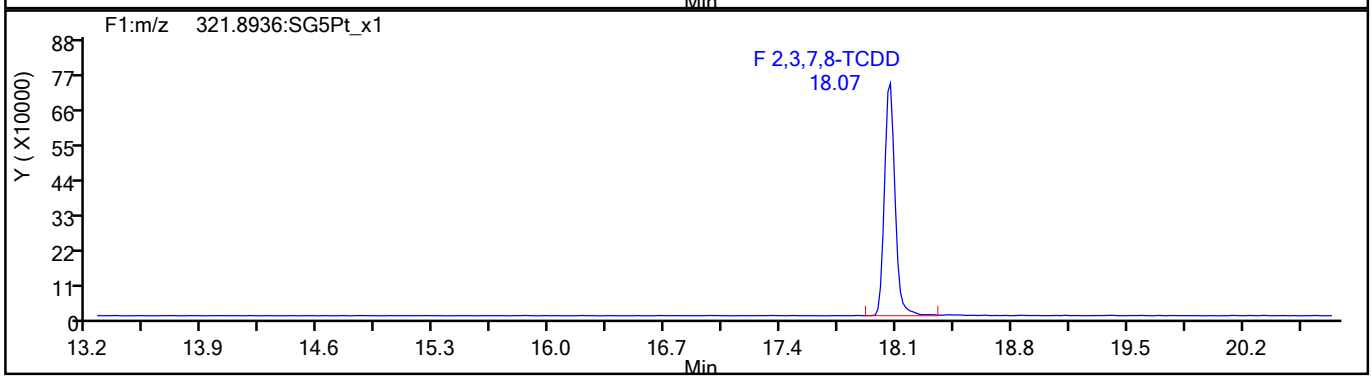

TCDD Standards

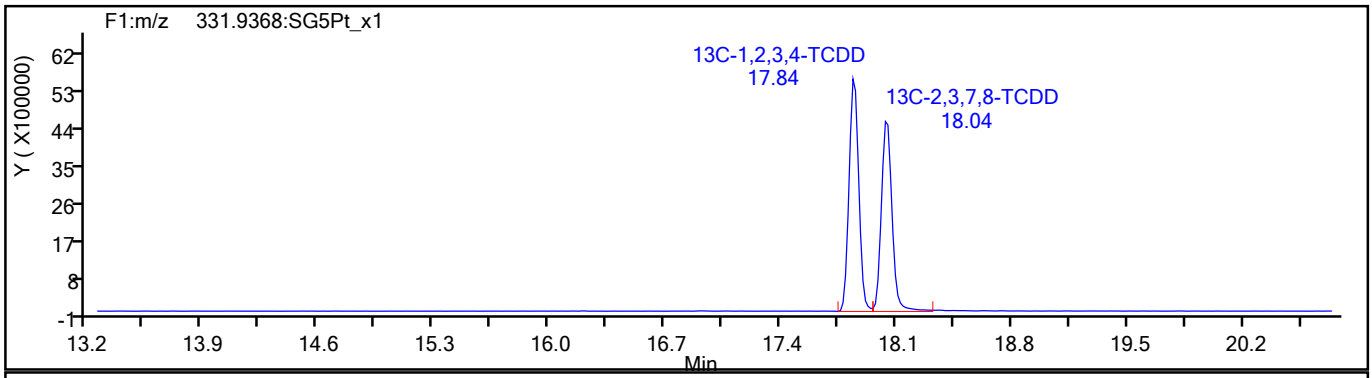

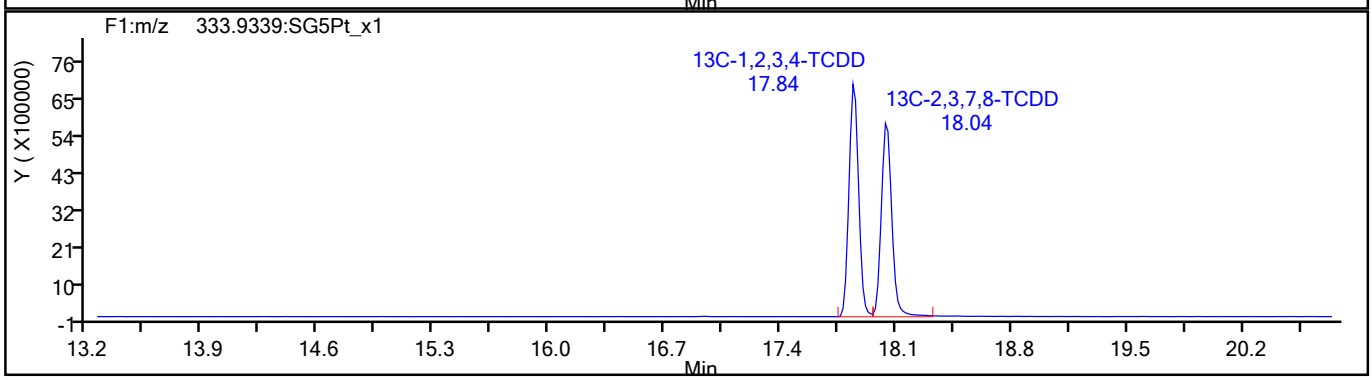

776515

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

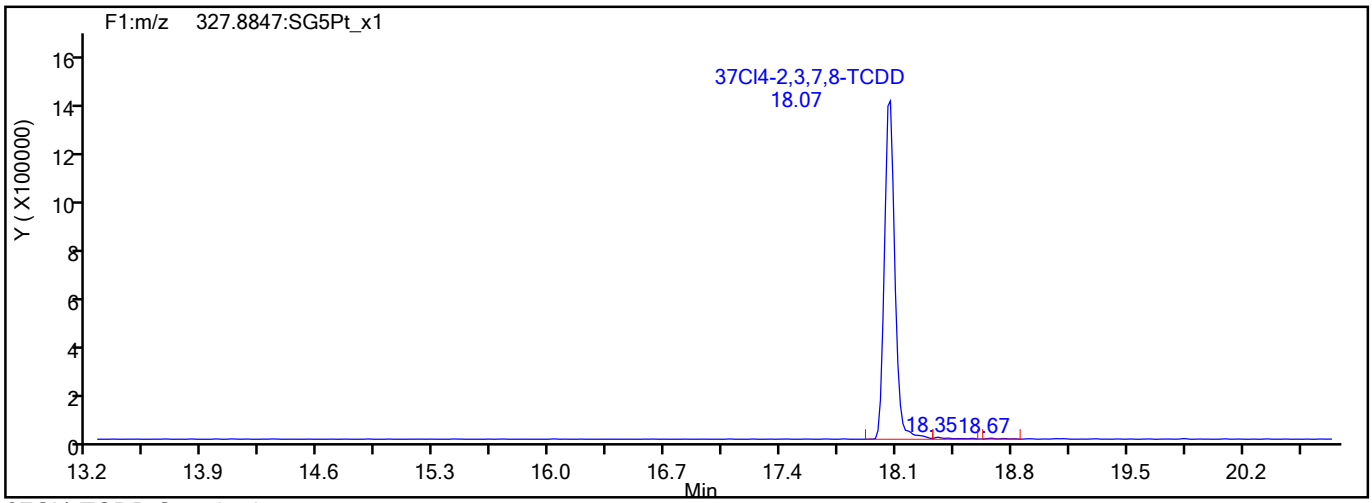

37Cl4-TCDD Standards

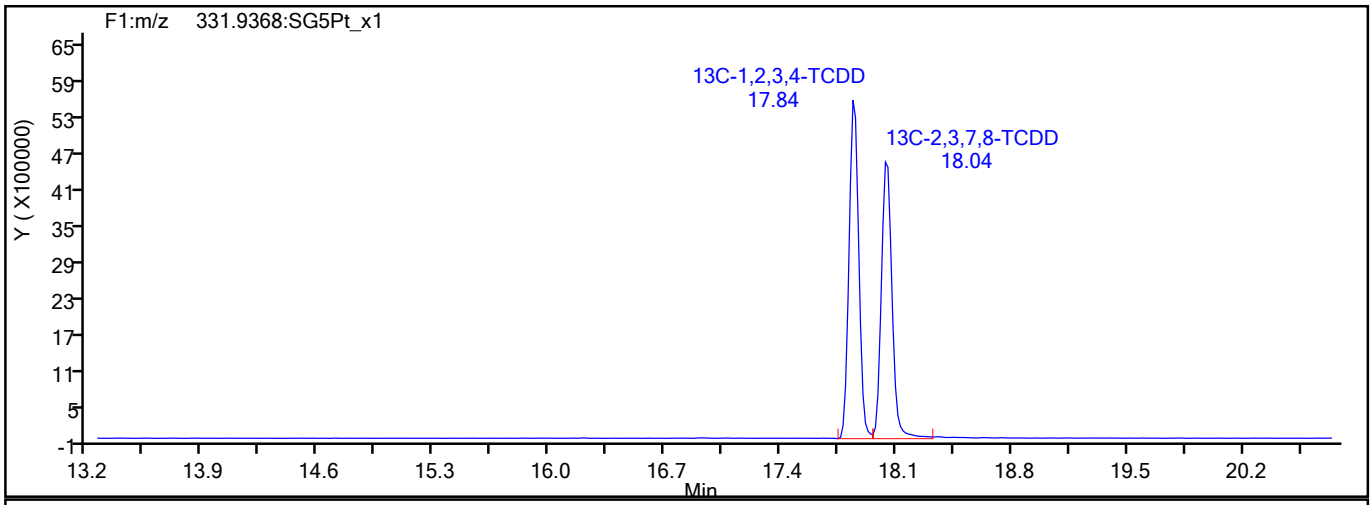

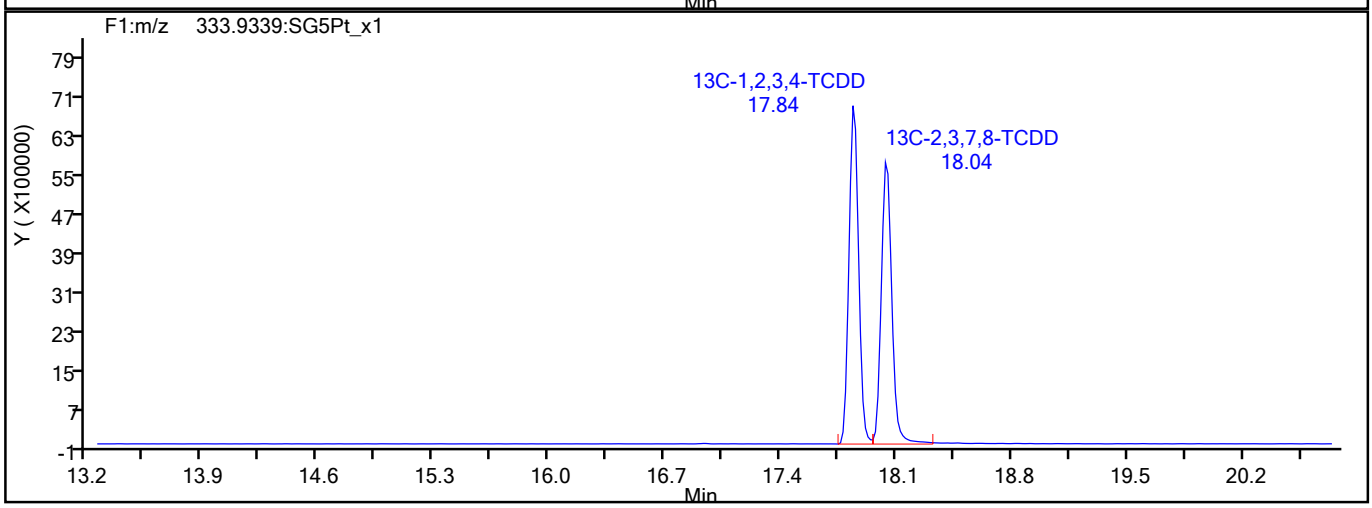

776516

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

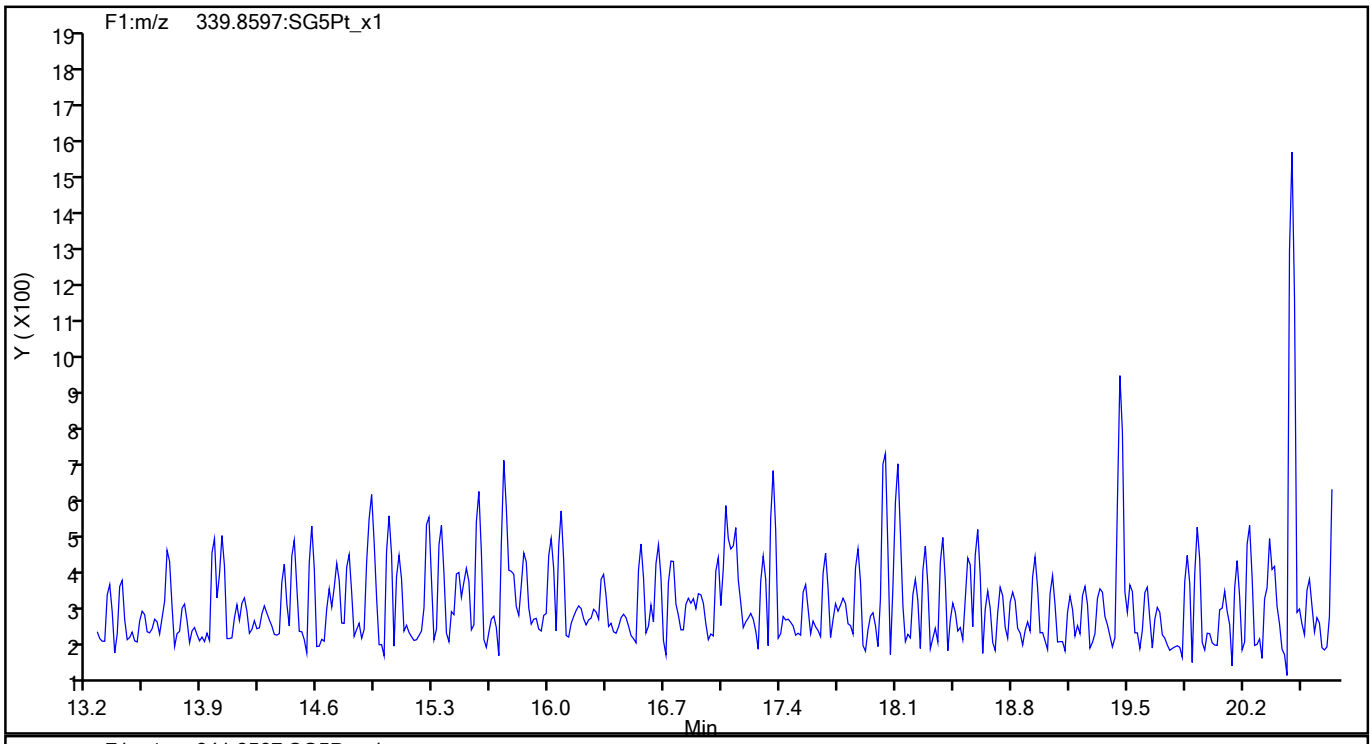

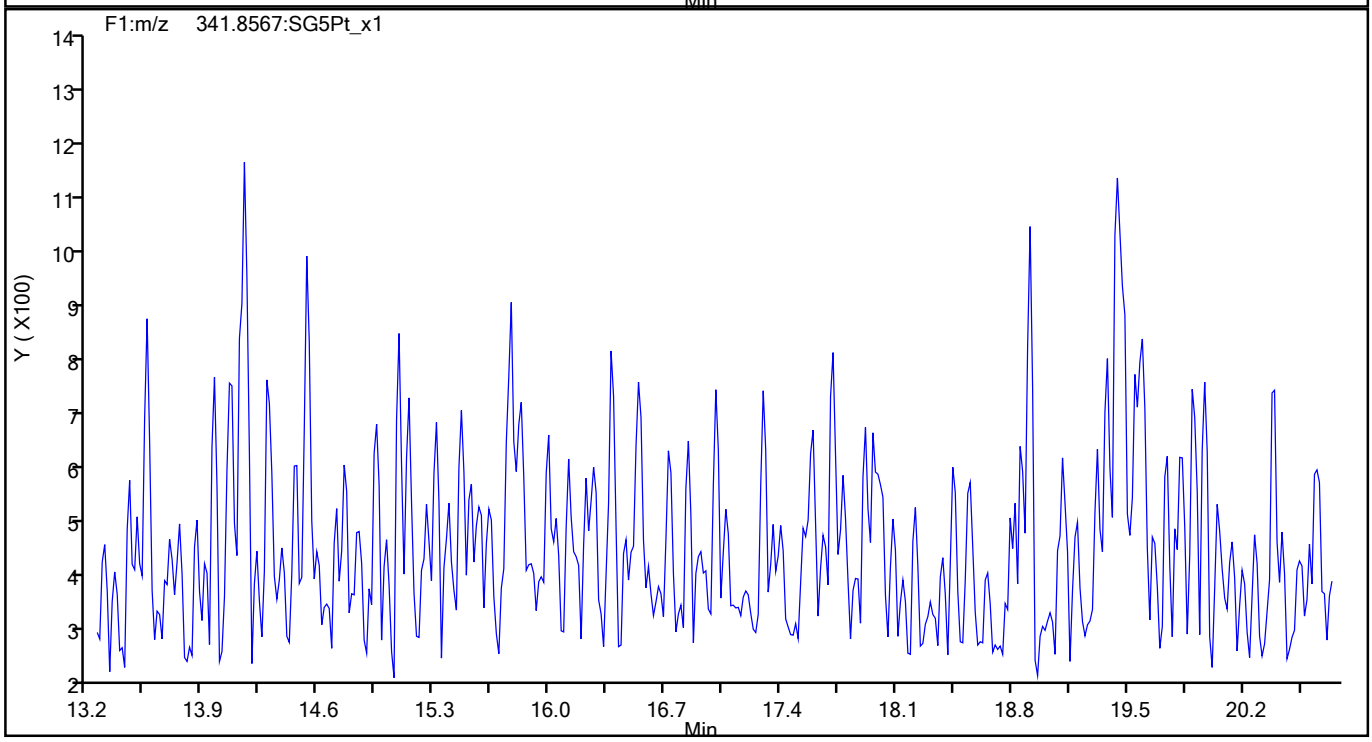

776517

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

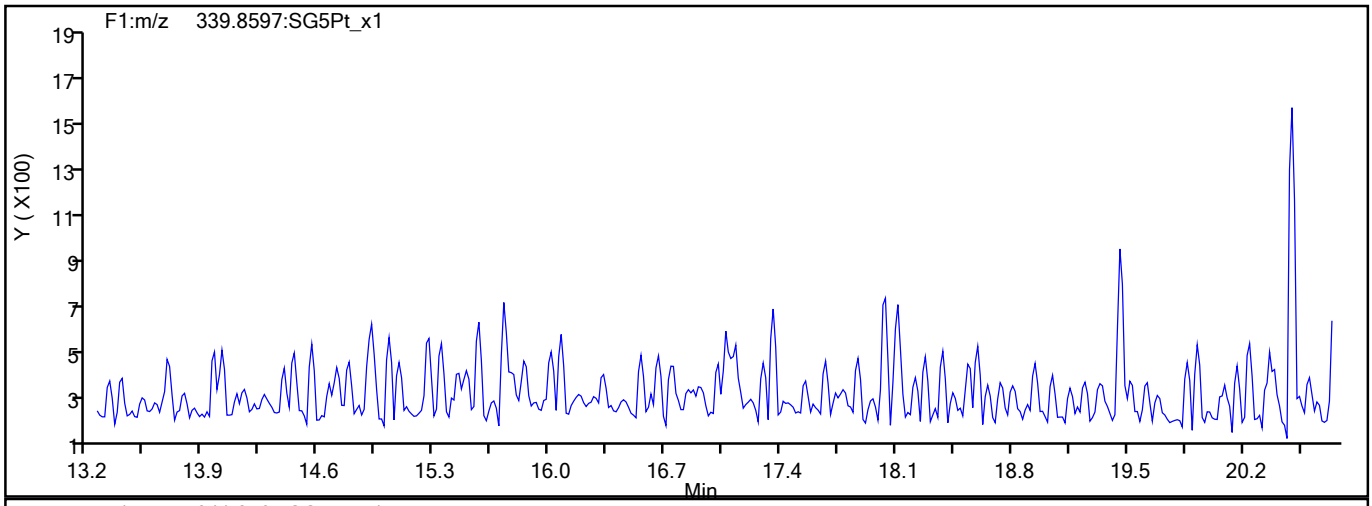

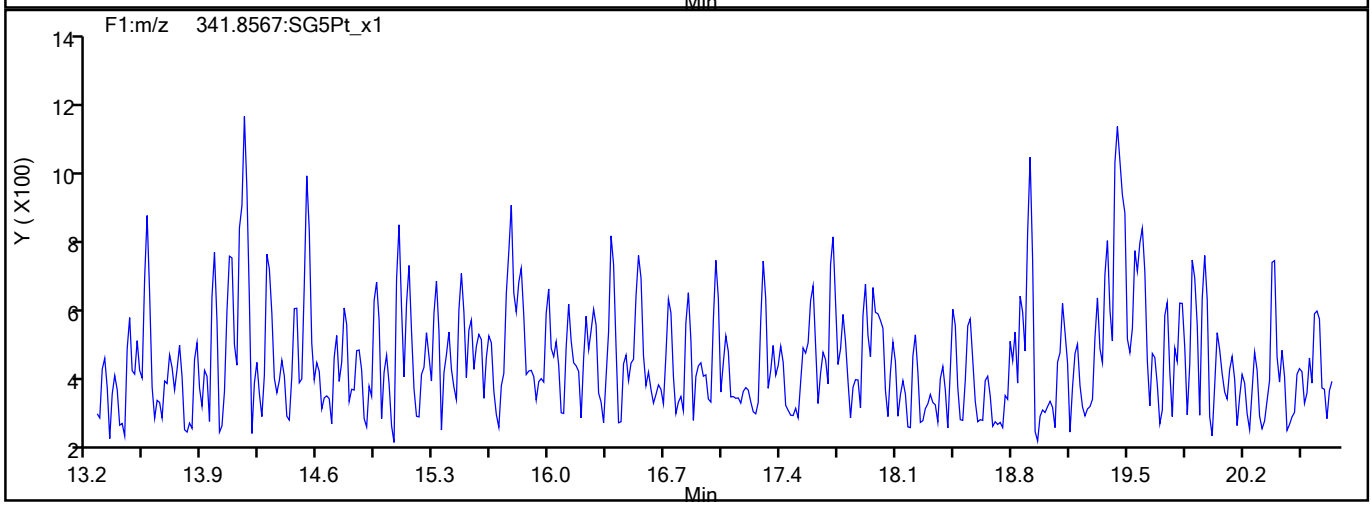

F1 PeCDFs Interference Mass

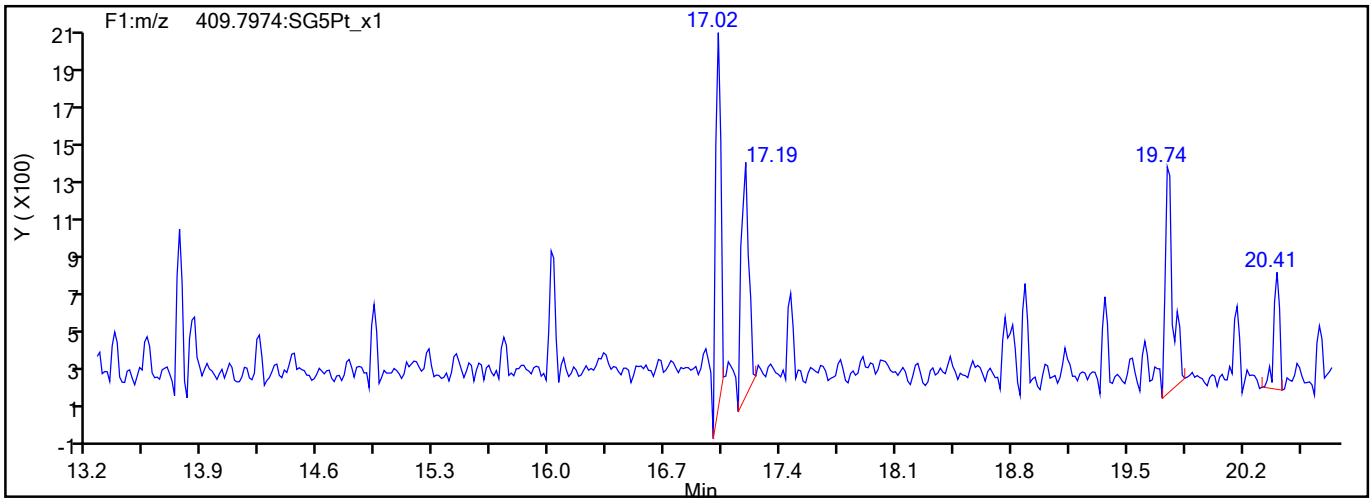

776518

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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Client ID:			
Worklist#:	516847	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

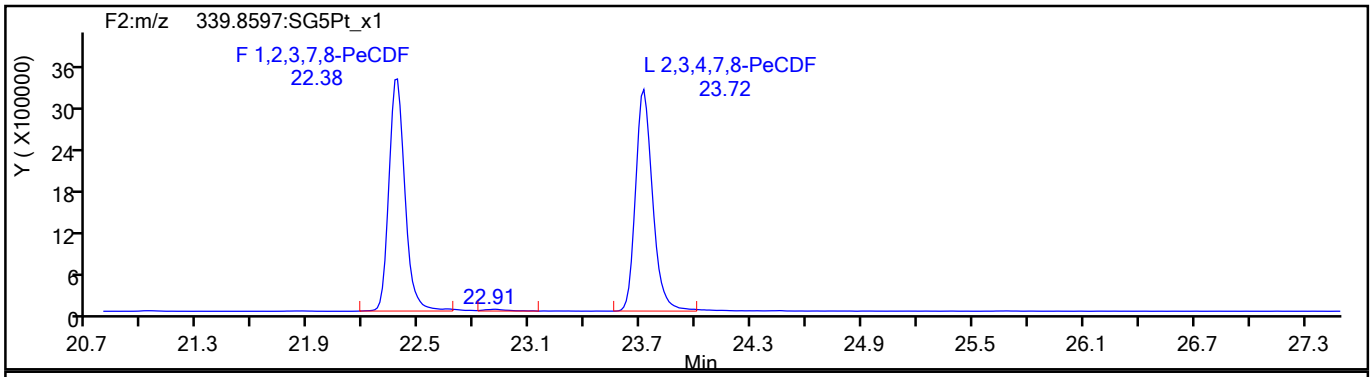

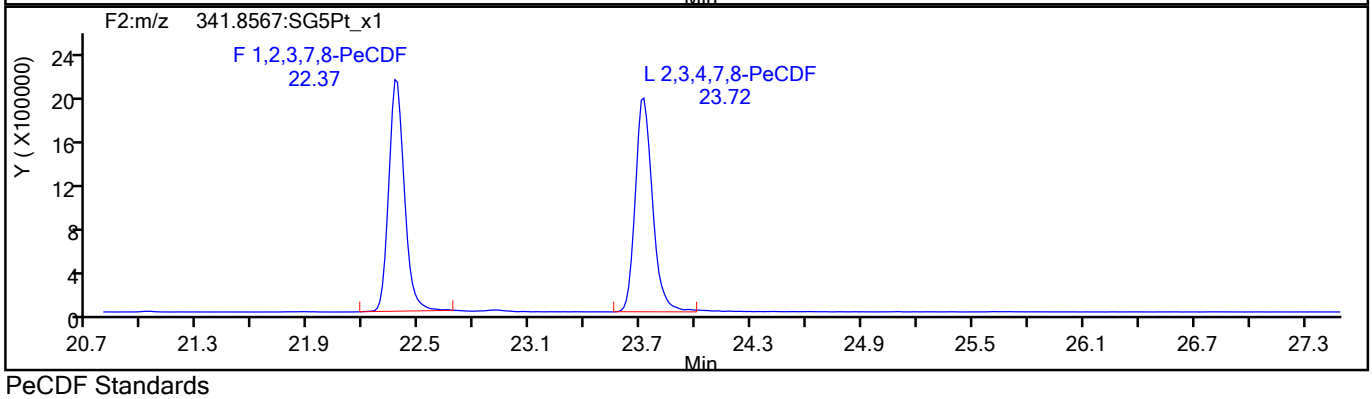

PeCDF Standards

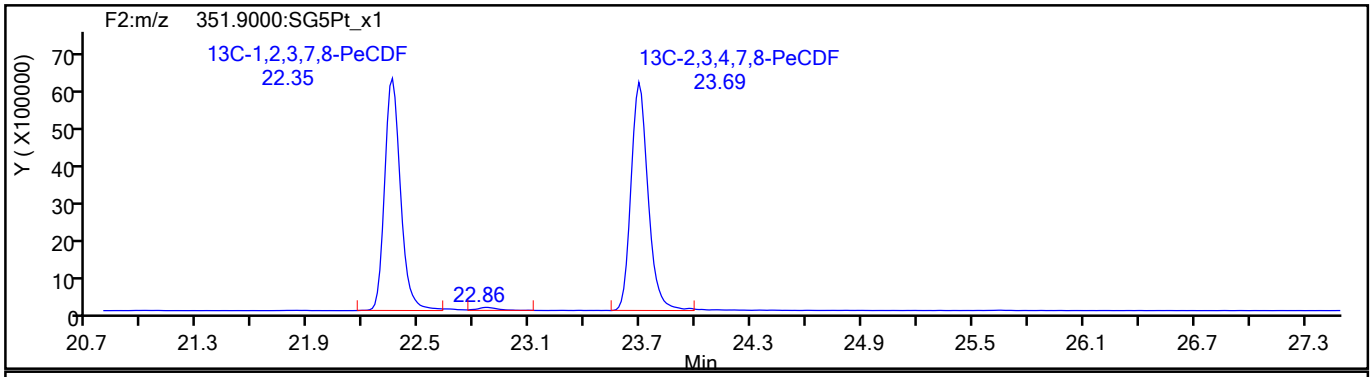

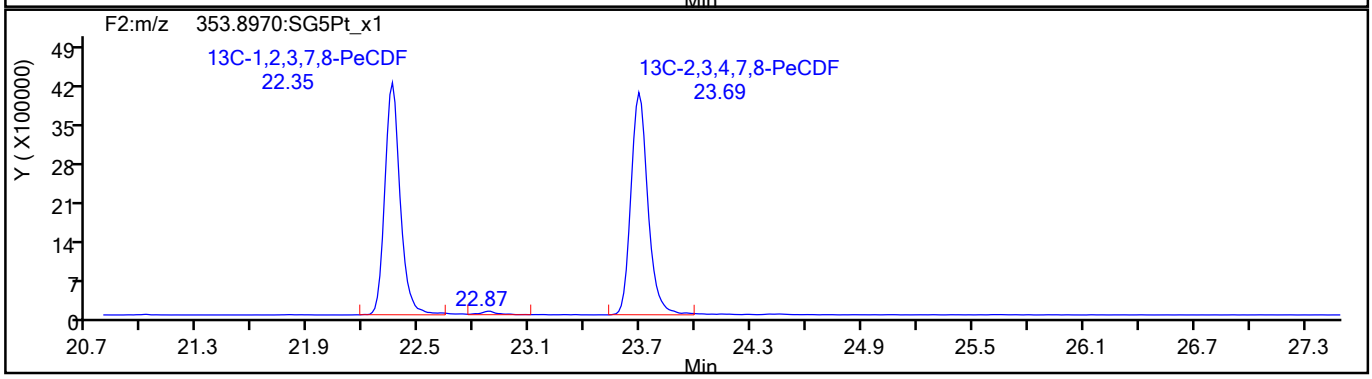

776519

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

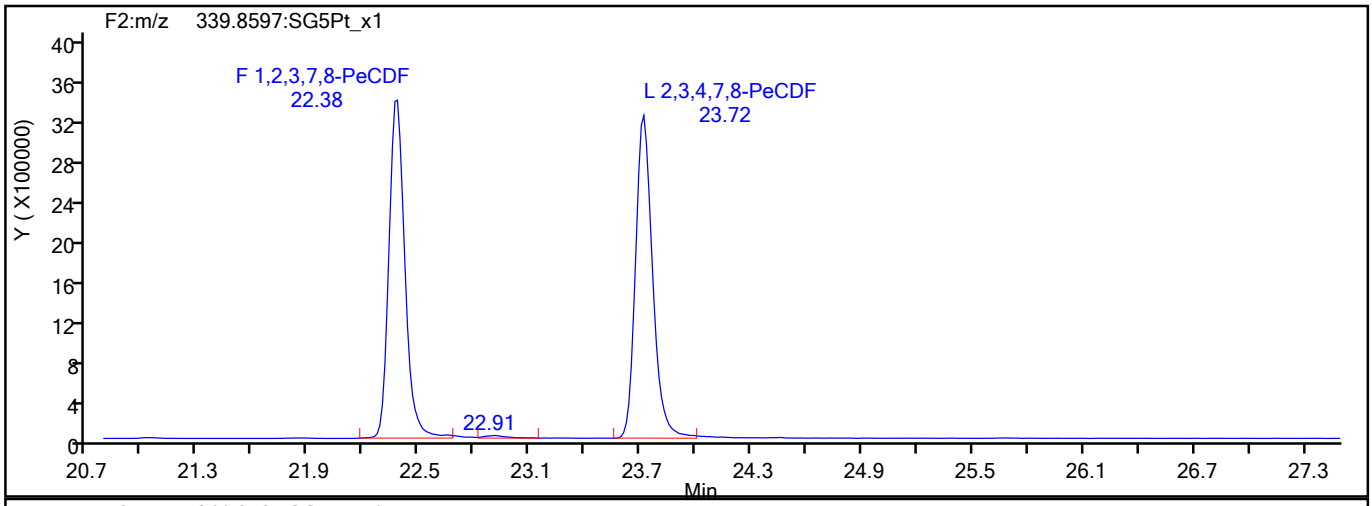

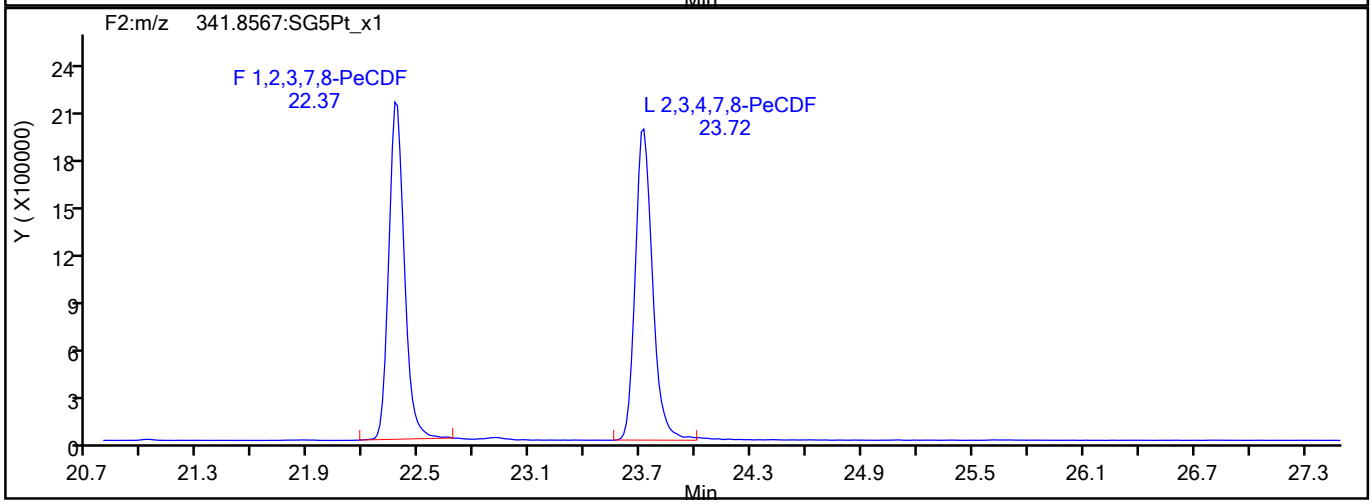

PeCDF Interference Mass

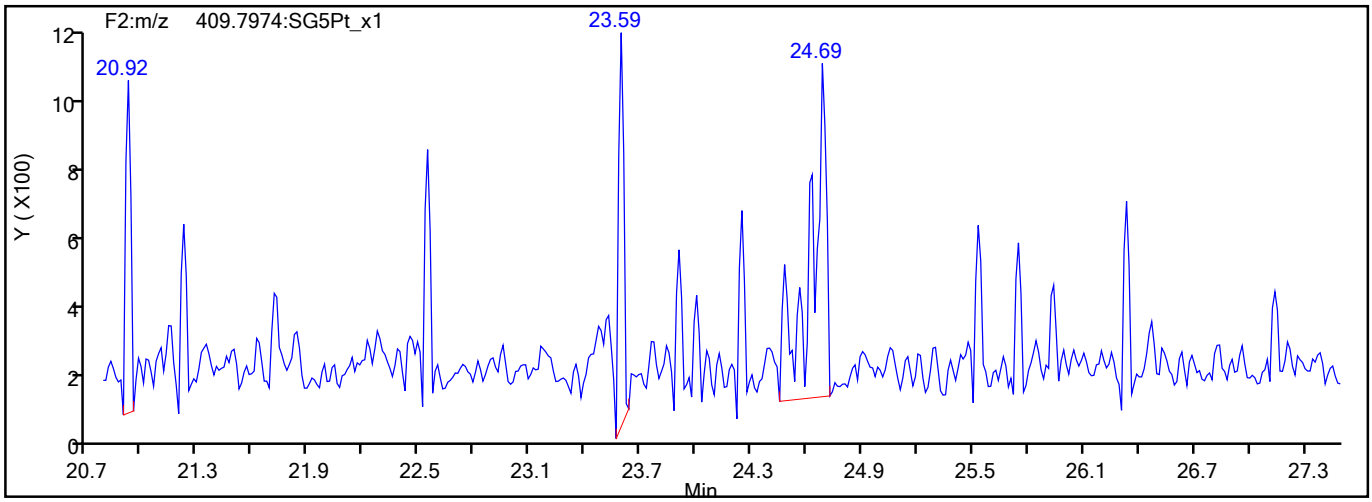

776520

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

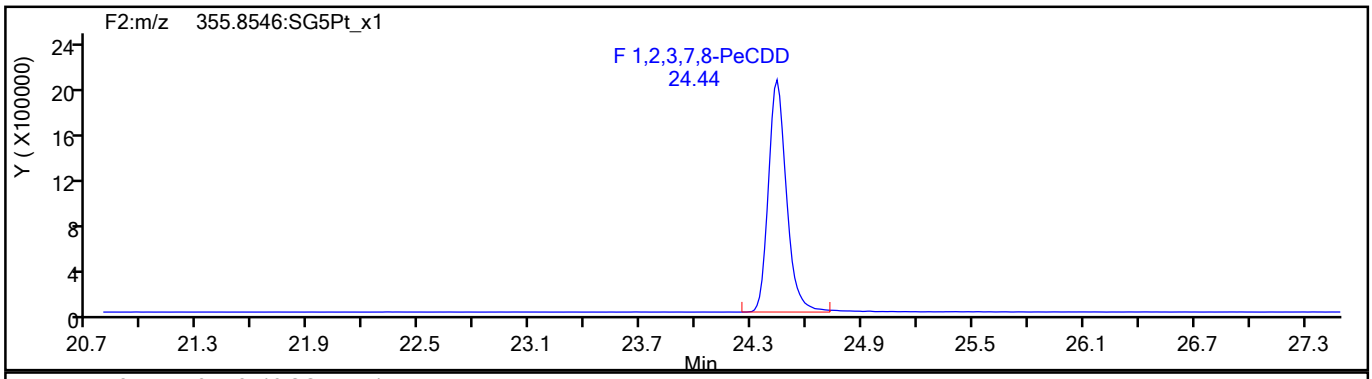

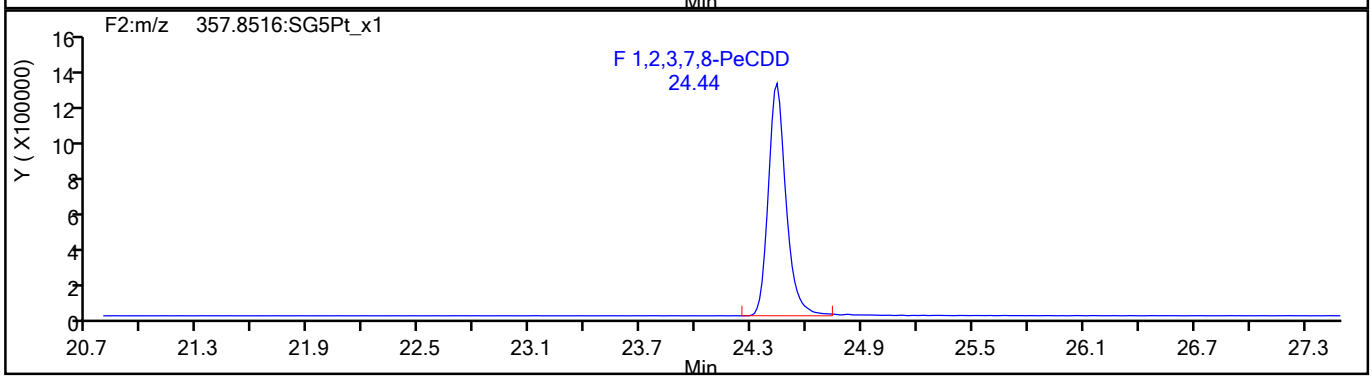

PeCDD Standards

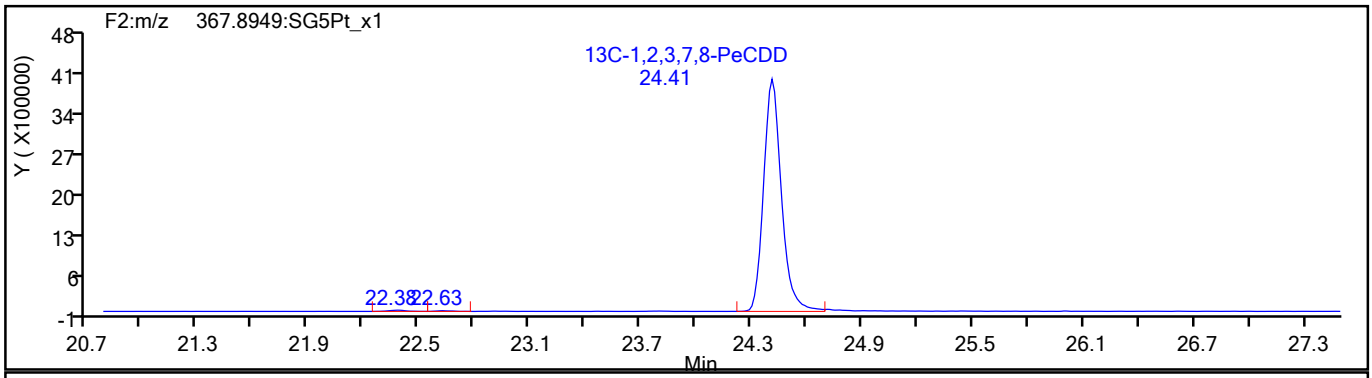

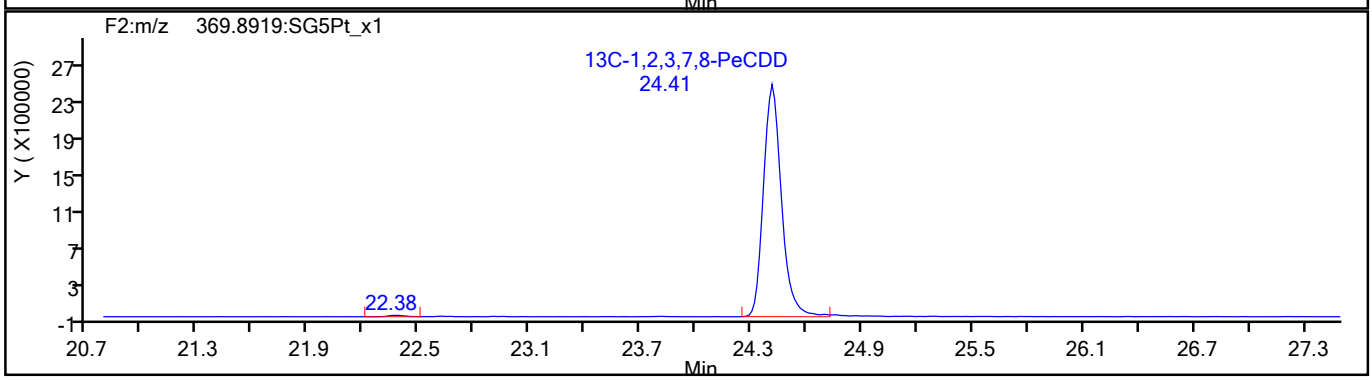

776521

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

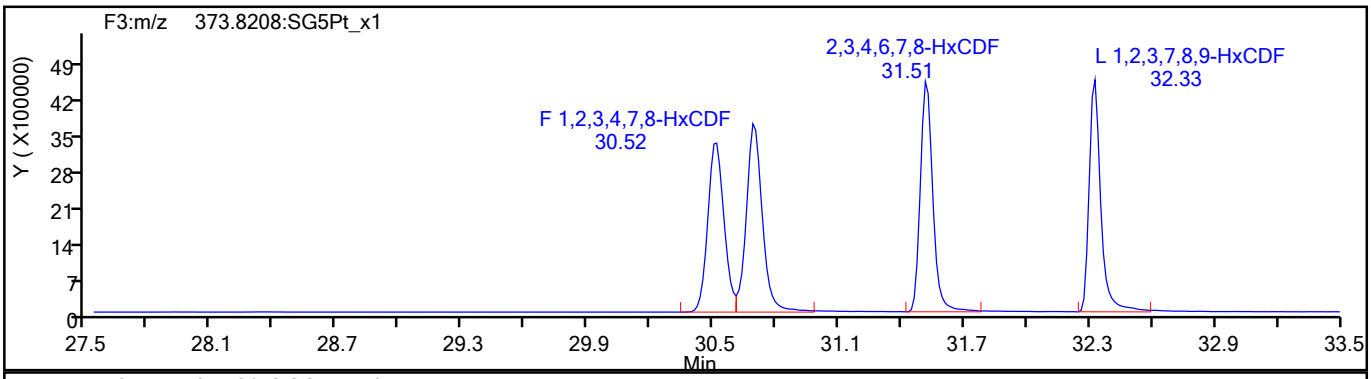

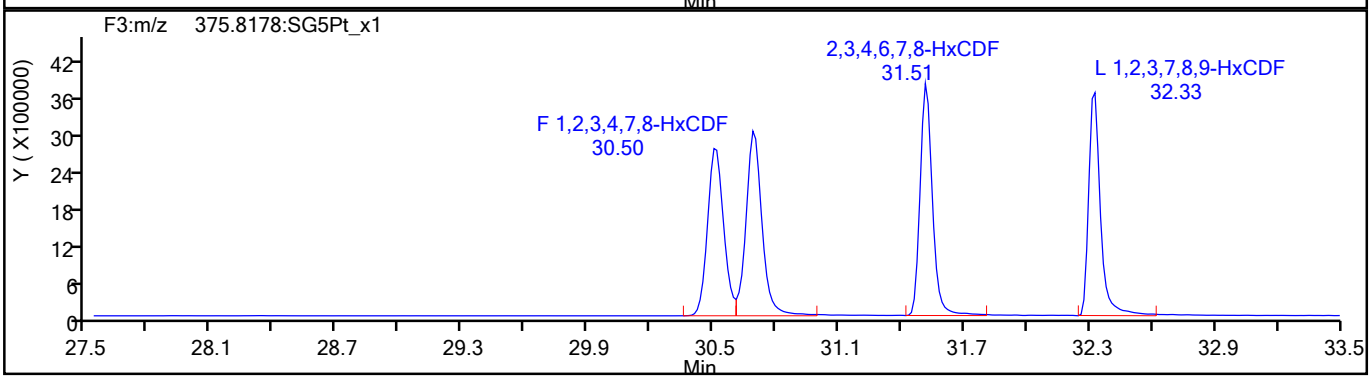

HxCDF Standards

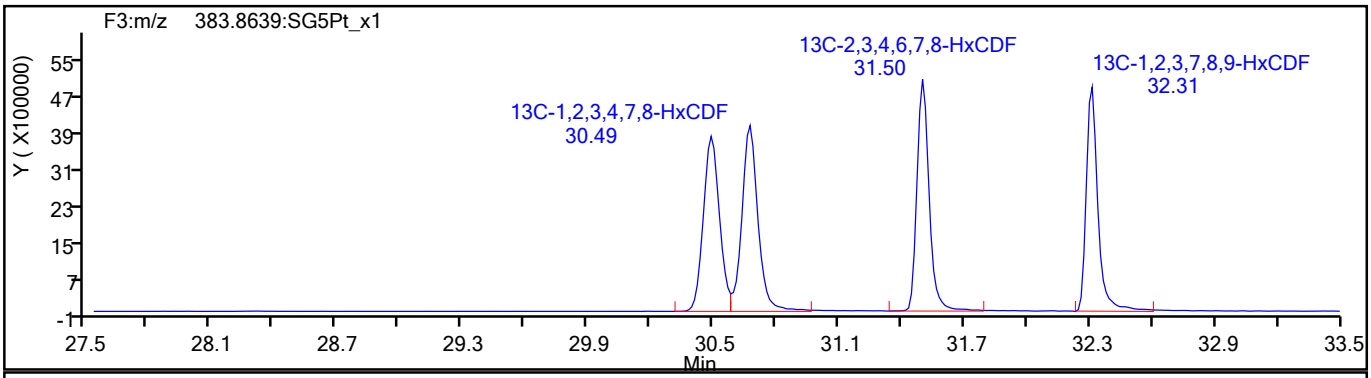

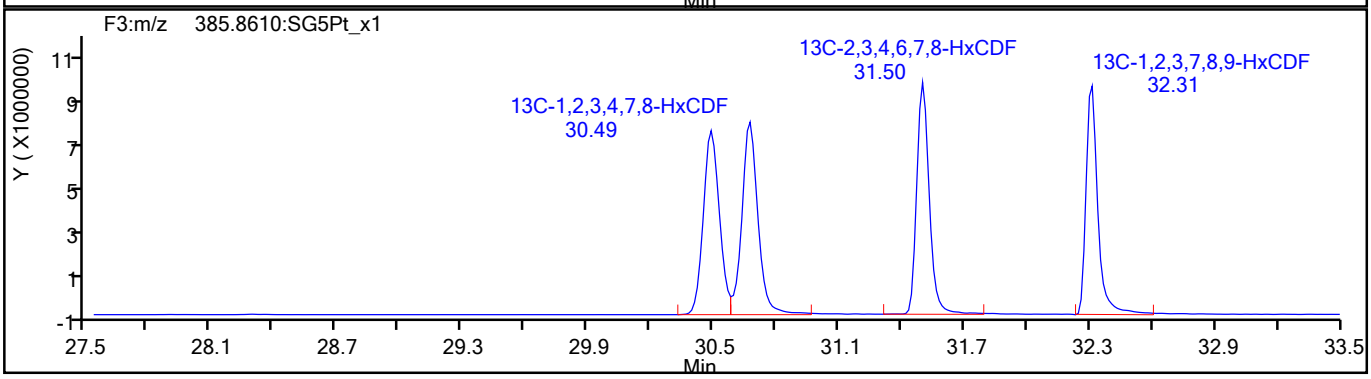

776522

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

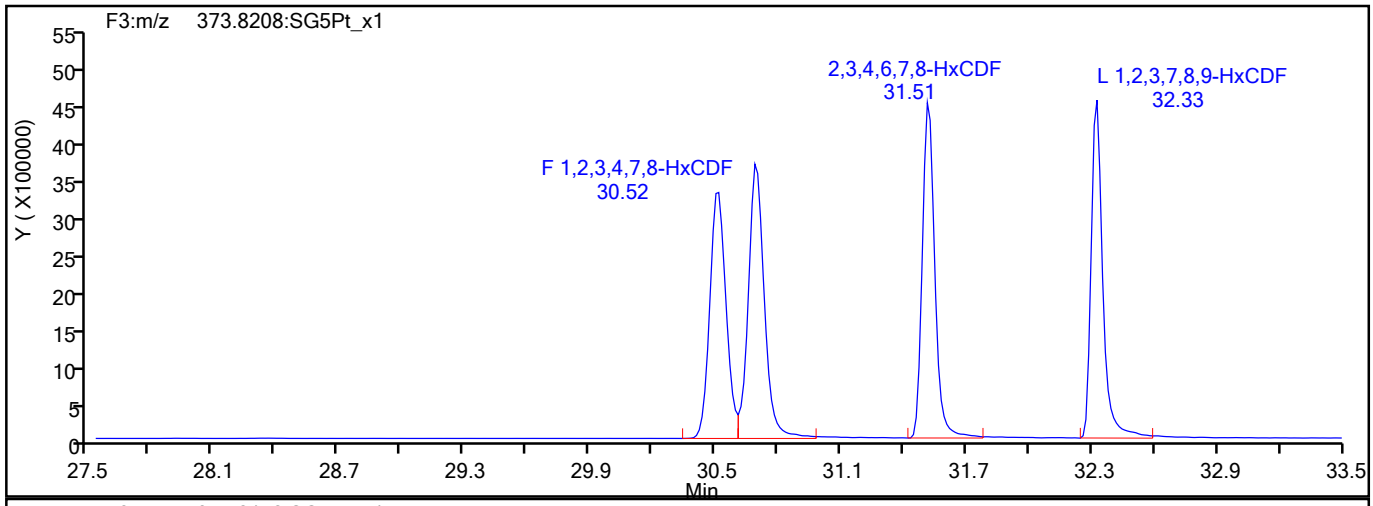

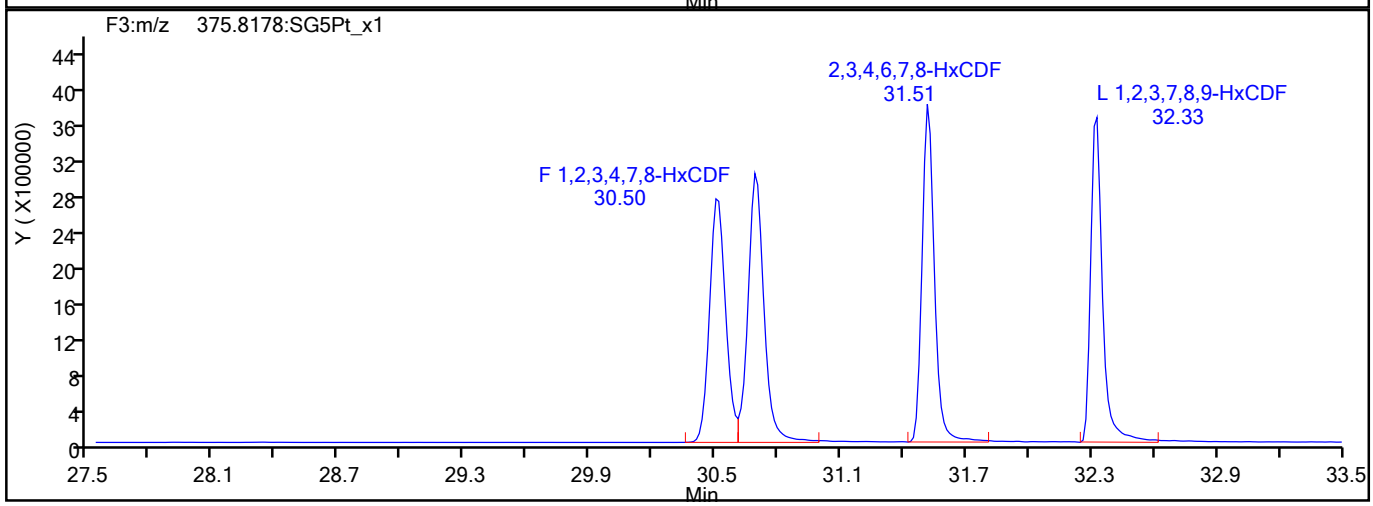

HxCDF Interference Mass

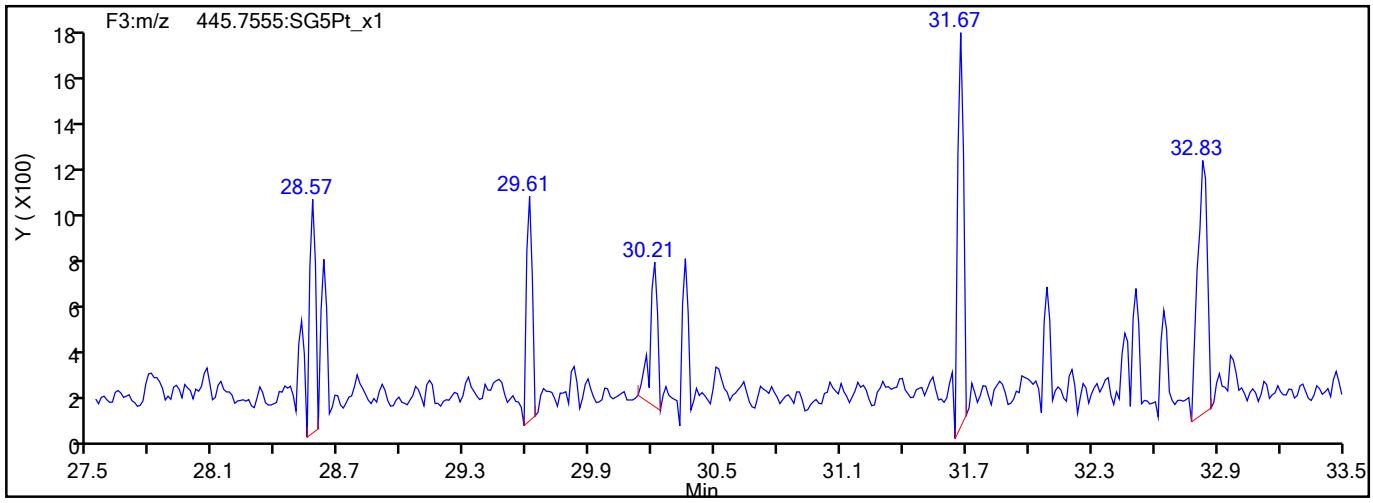

776523

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

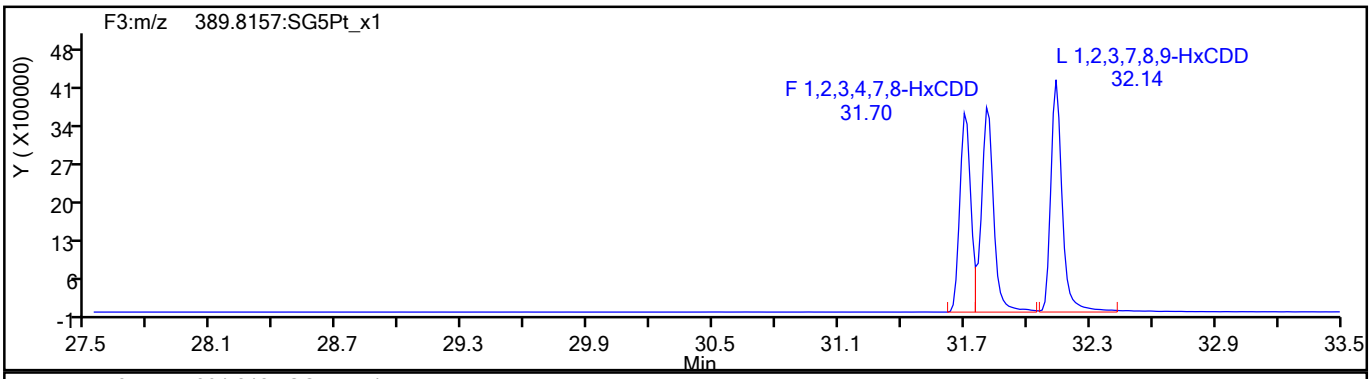

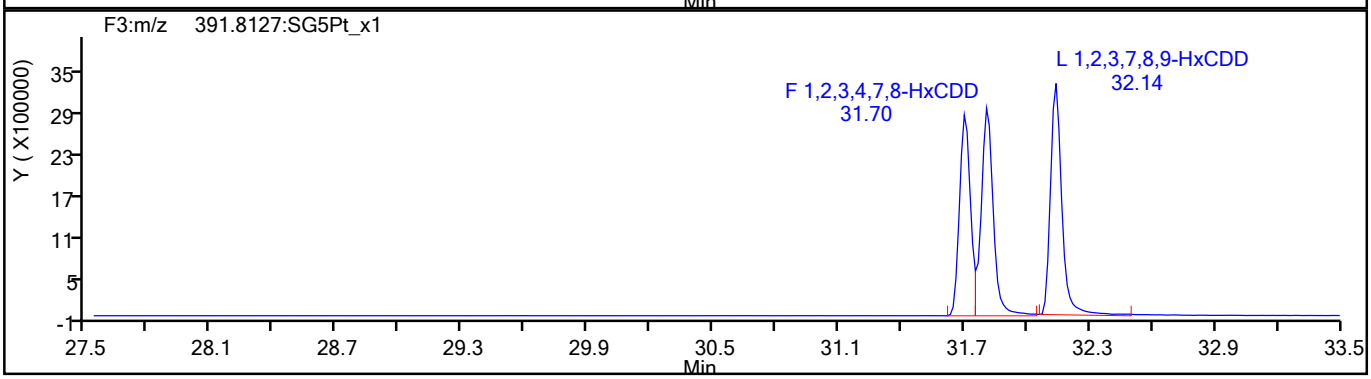

HxCDD Standards

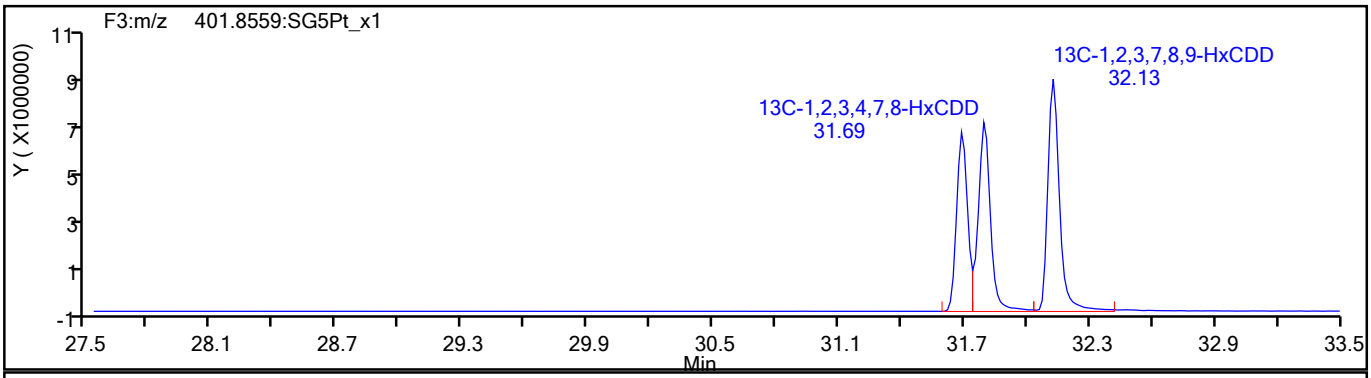

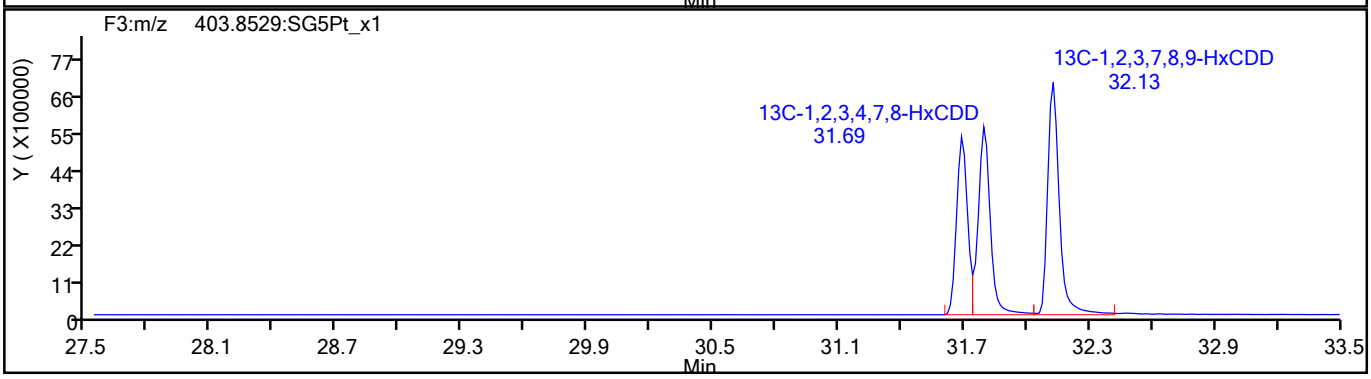

776524

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d		
Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

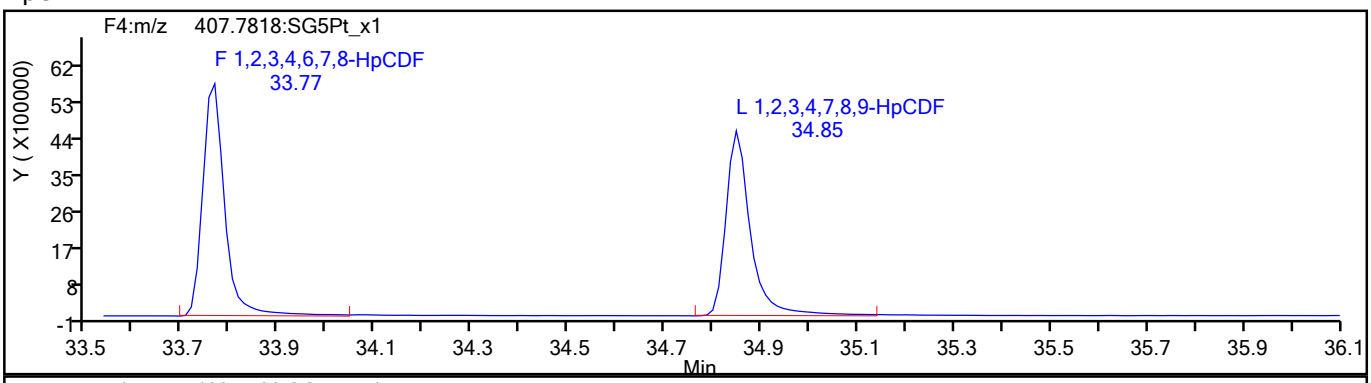

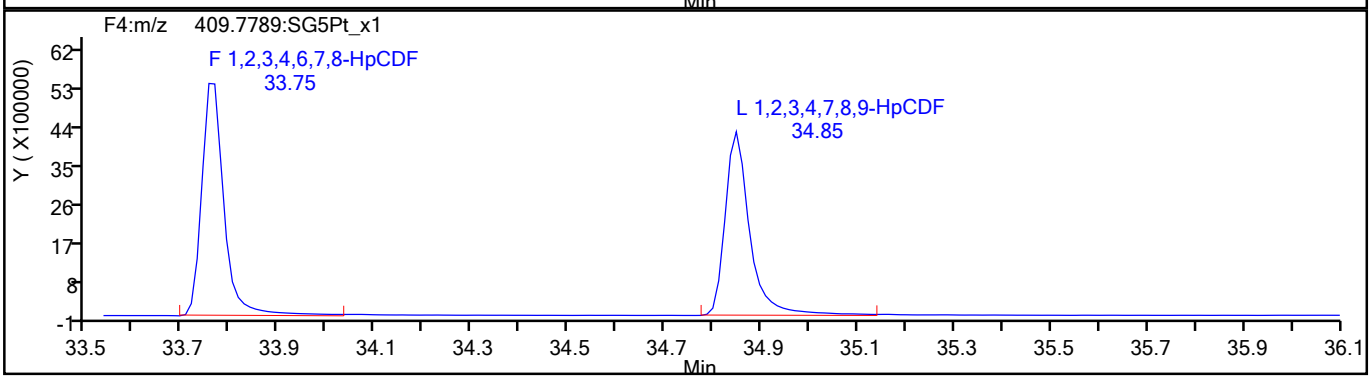

HpCDF Standards

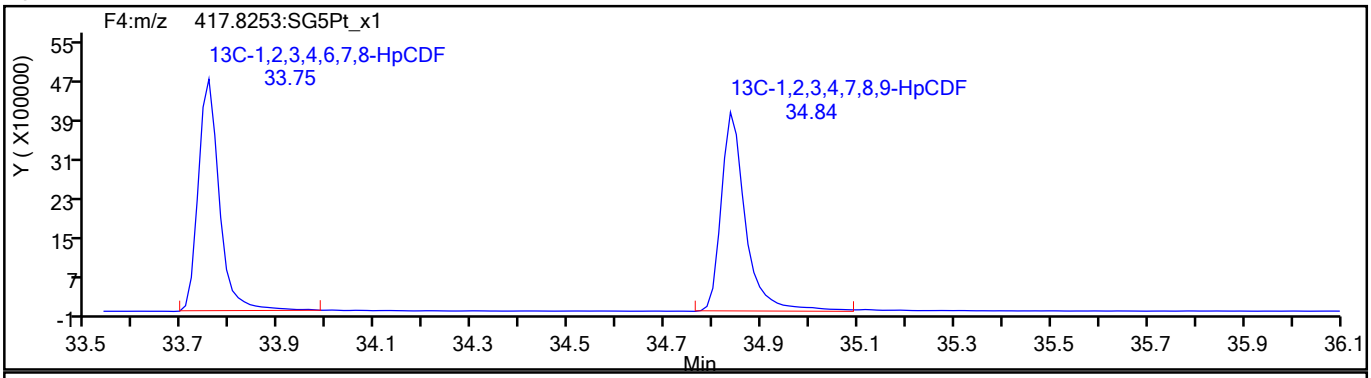

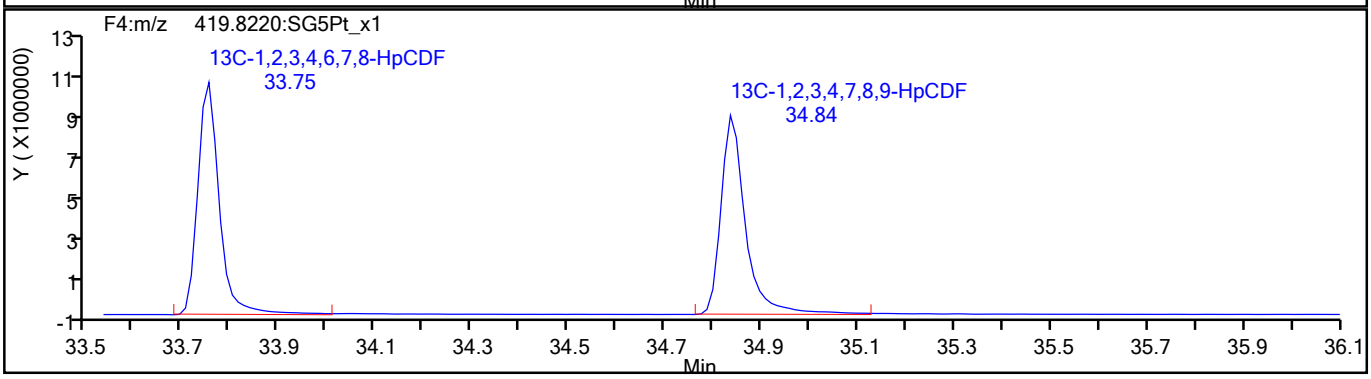

776525

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d		
Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

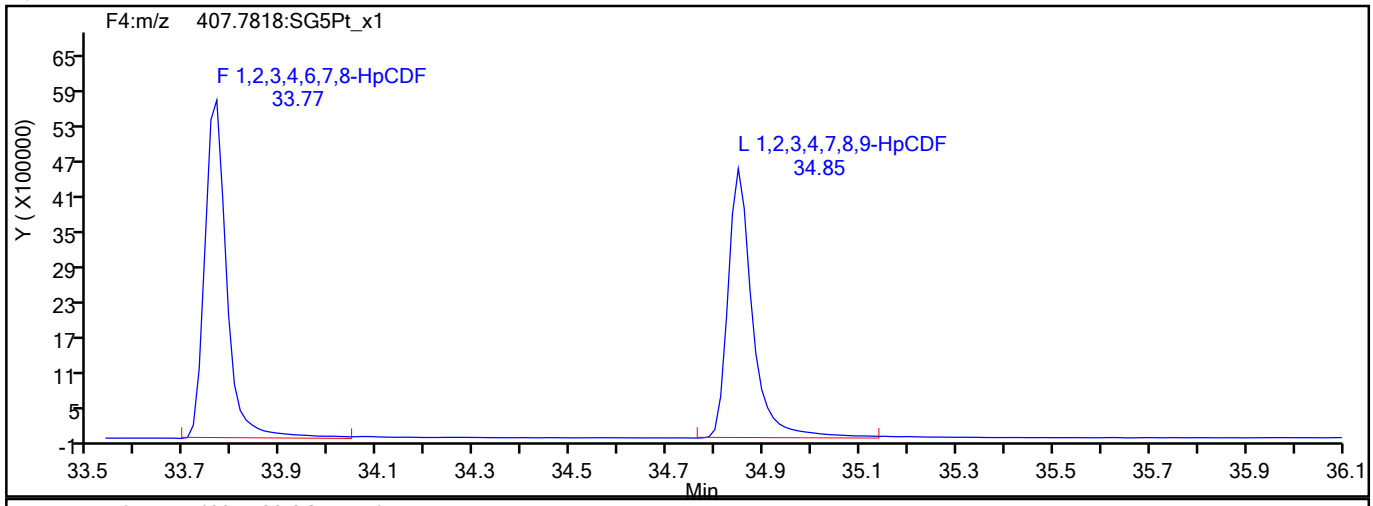

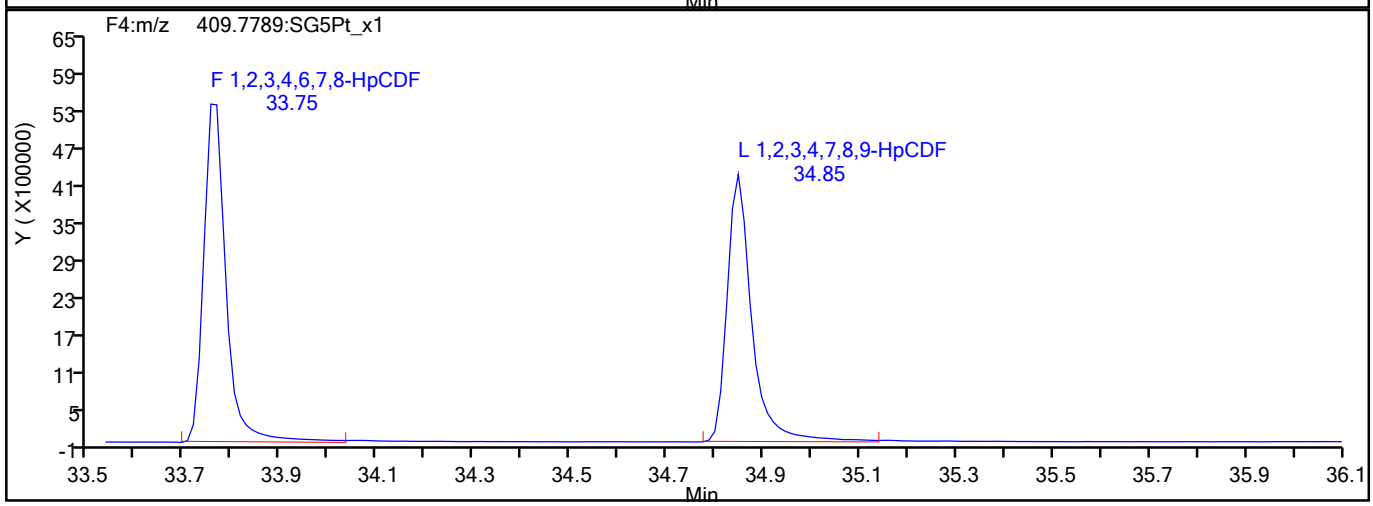

HpCDF Interference Mass

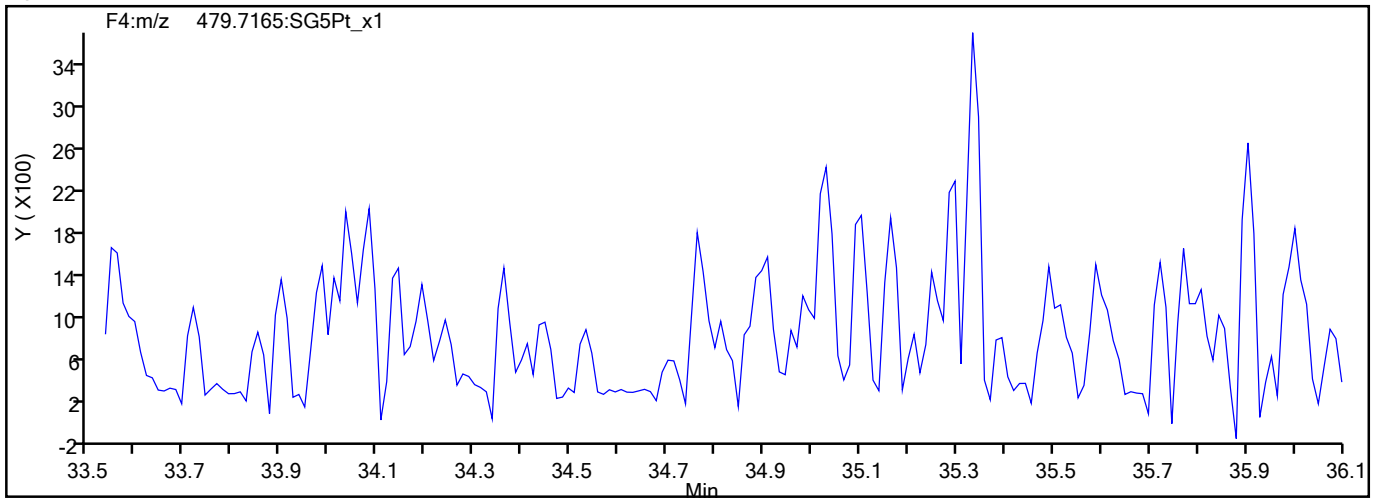

776526

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d		
Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

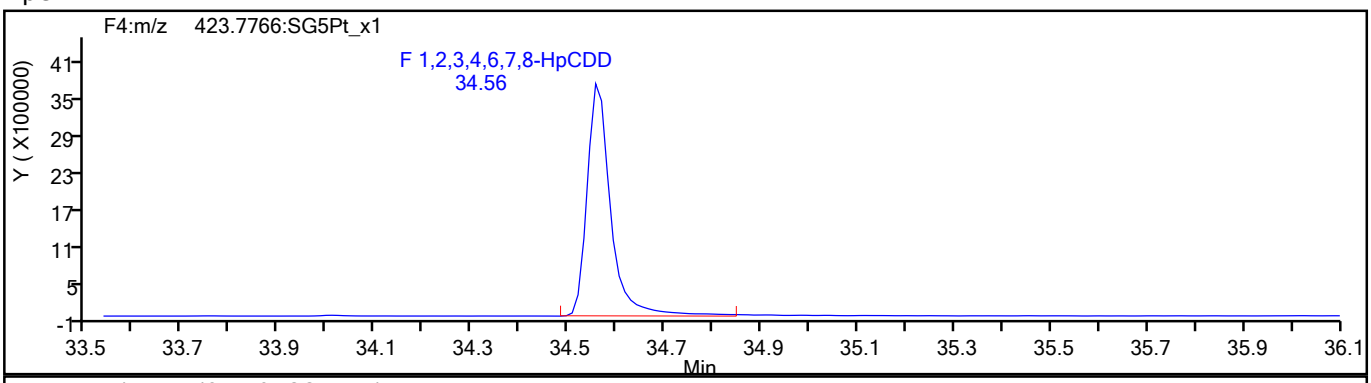

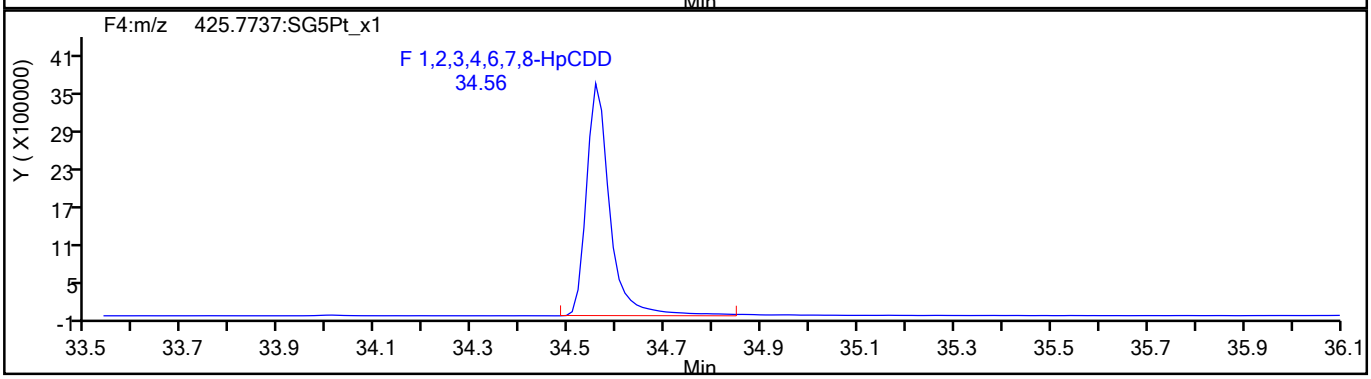

HpCDD Standards

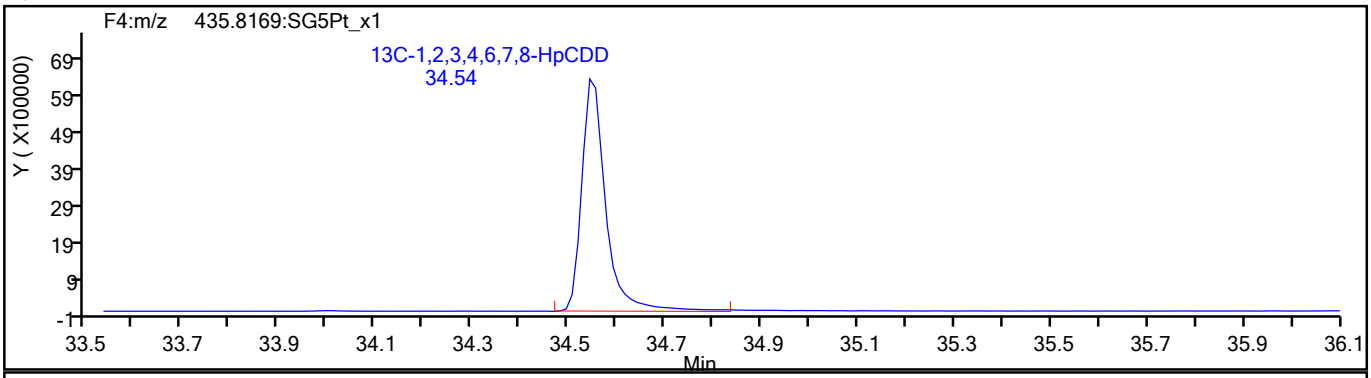

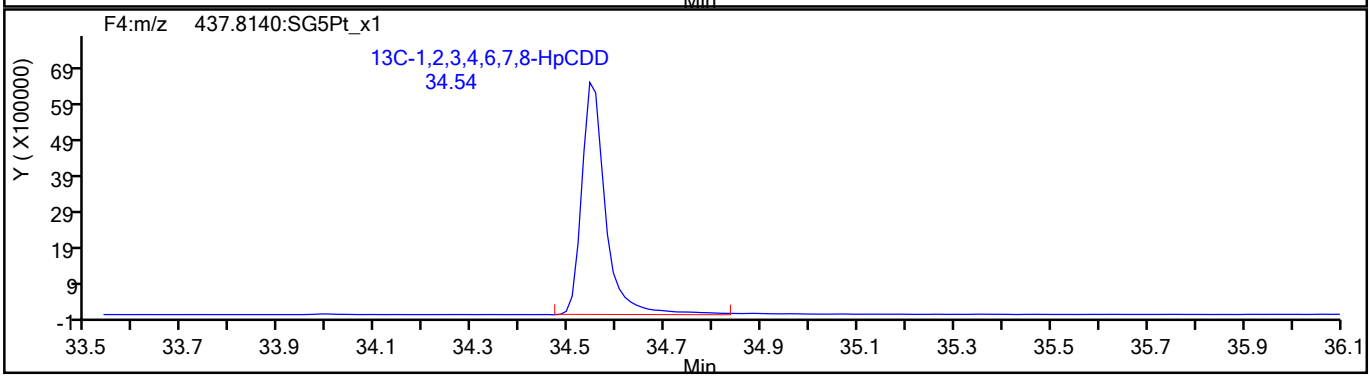

776527

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d		
Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

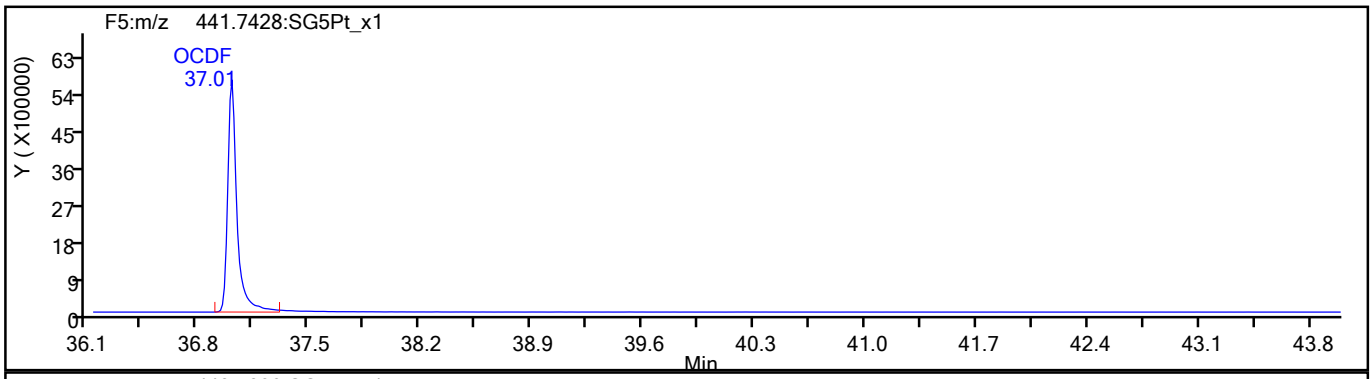

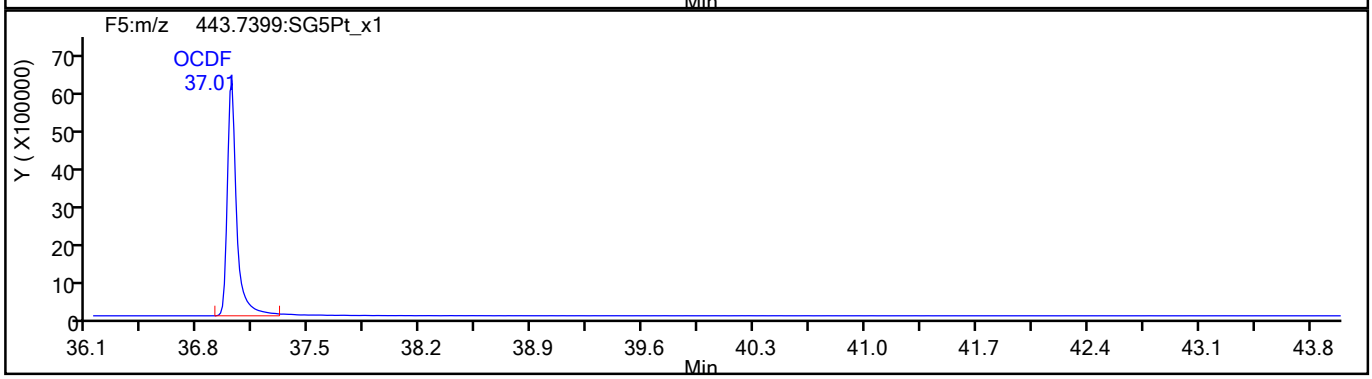

OCDF Standards

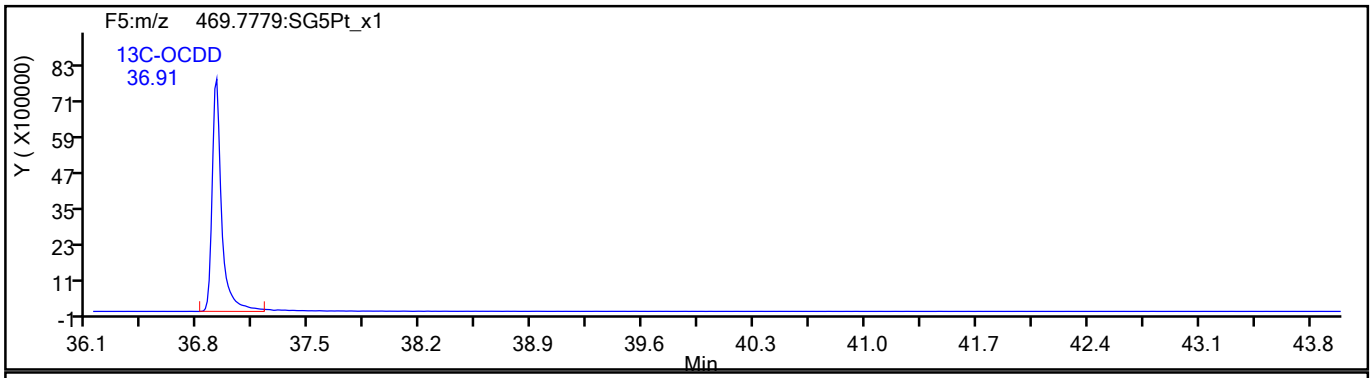

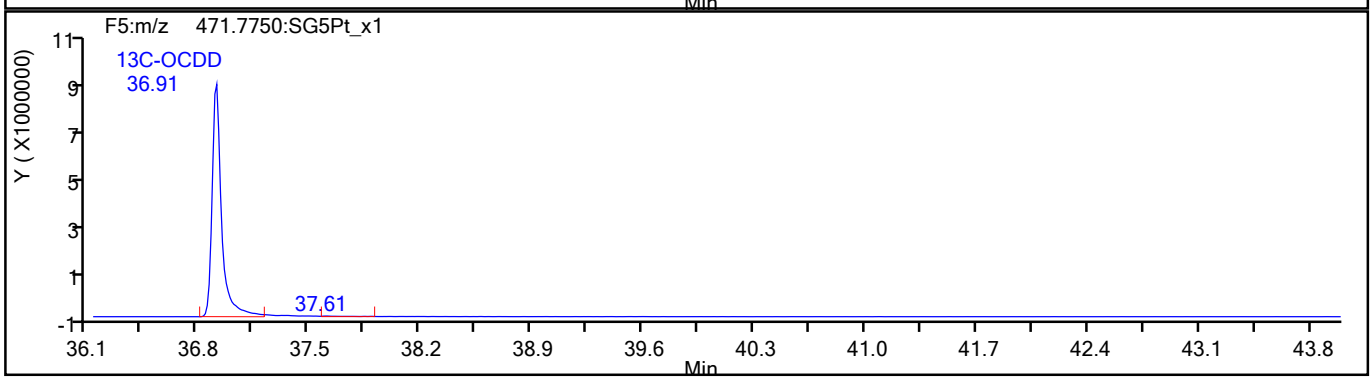

776528

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d		
Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

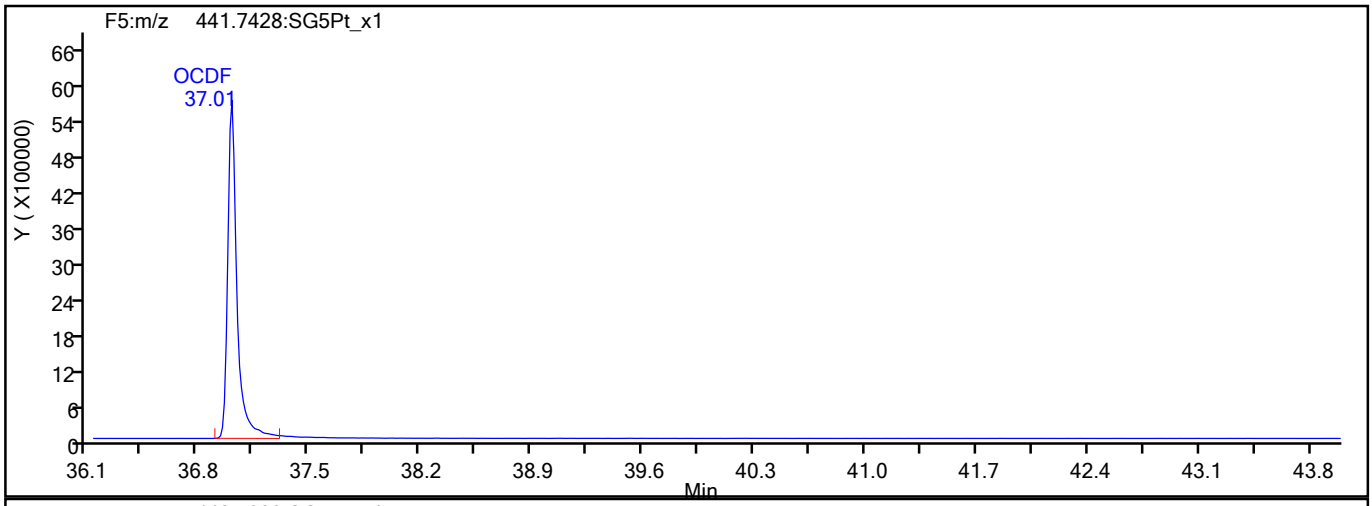

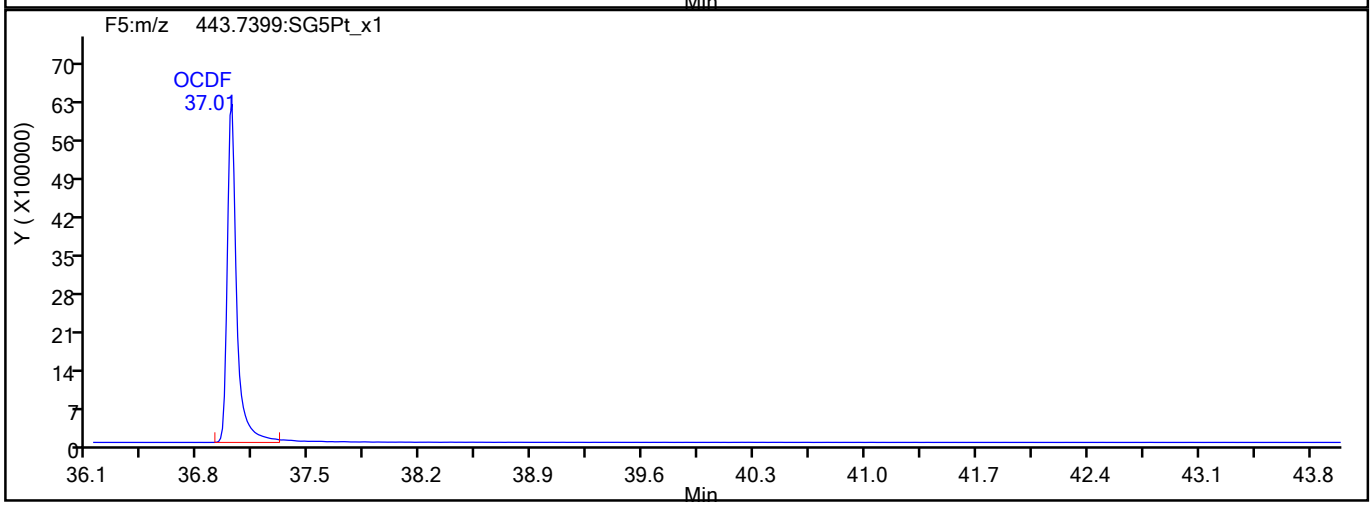

OCDF Interference Mass

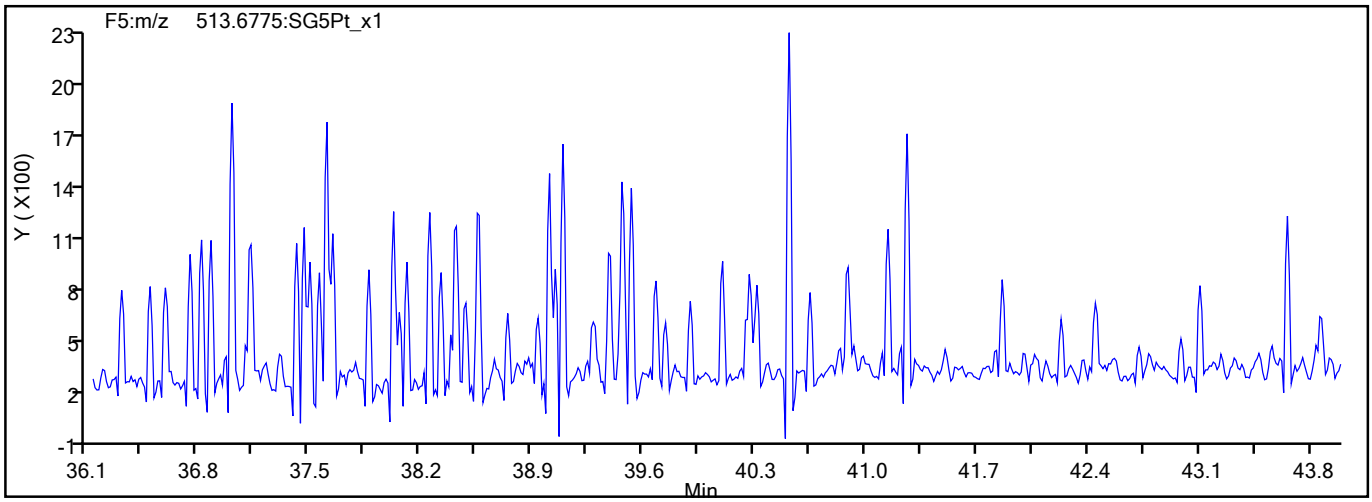

776529

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d		
Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

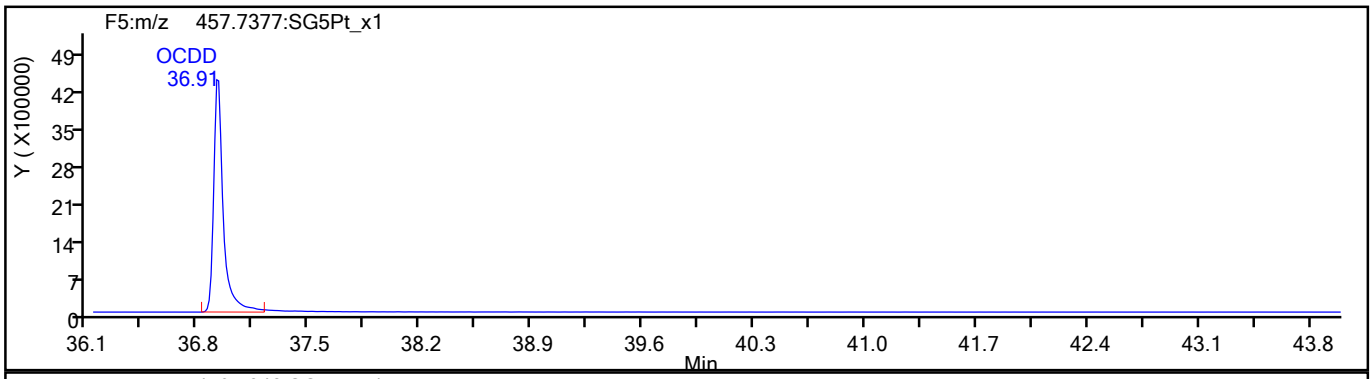

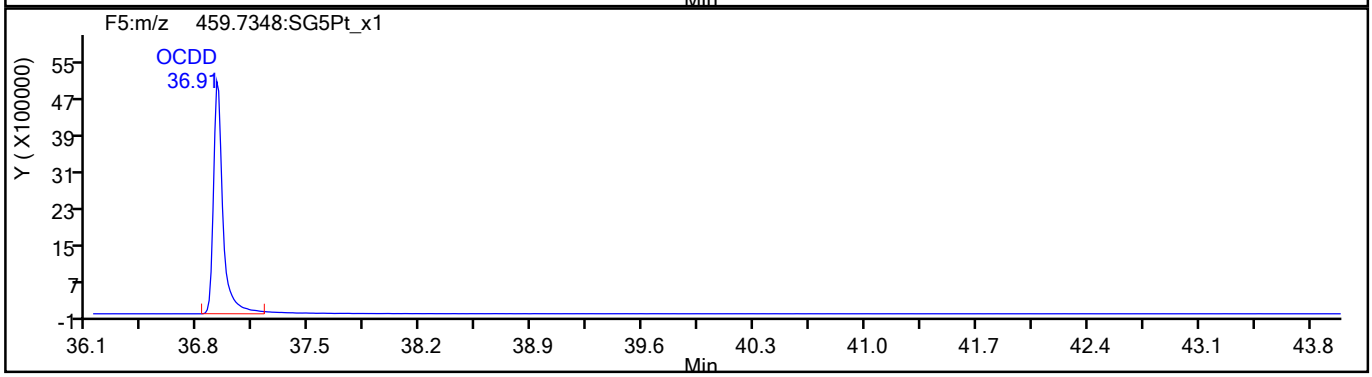

OCDD Standards

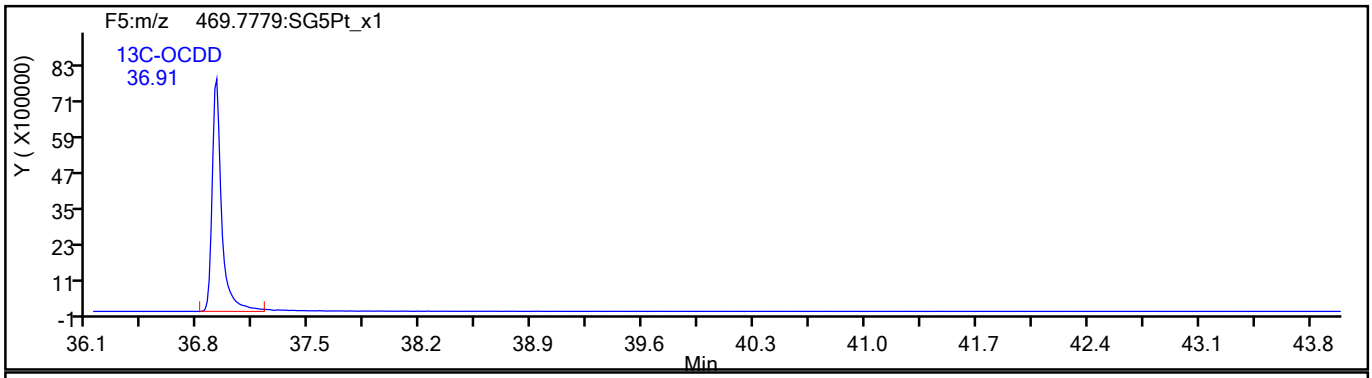

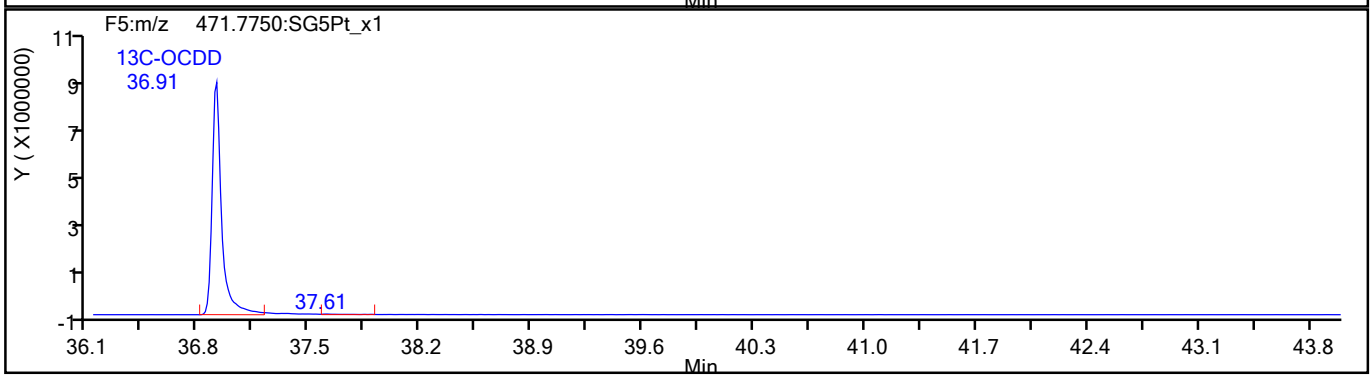

776530

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d		
Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

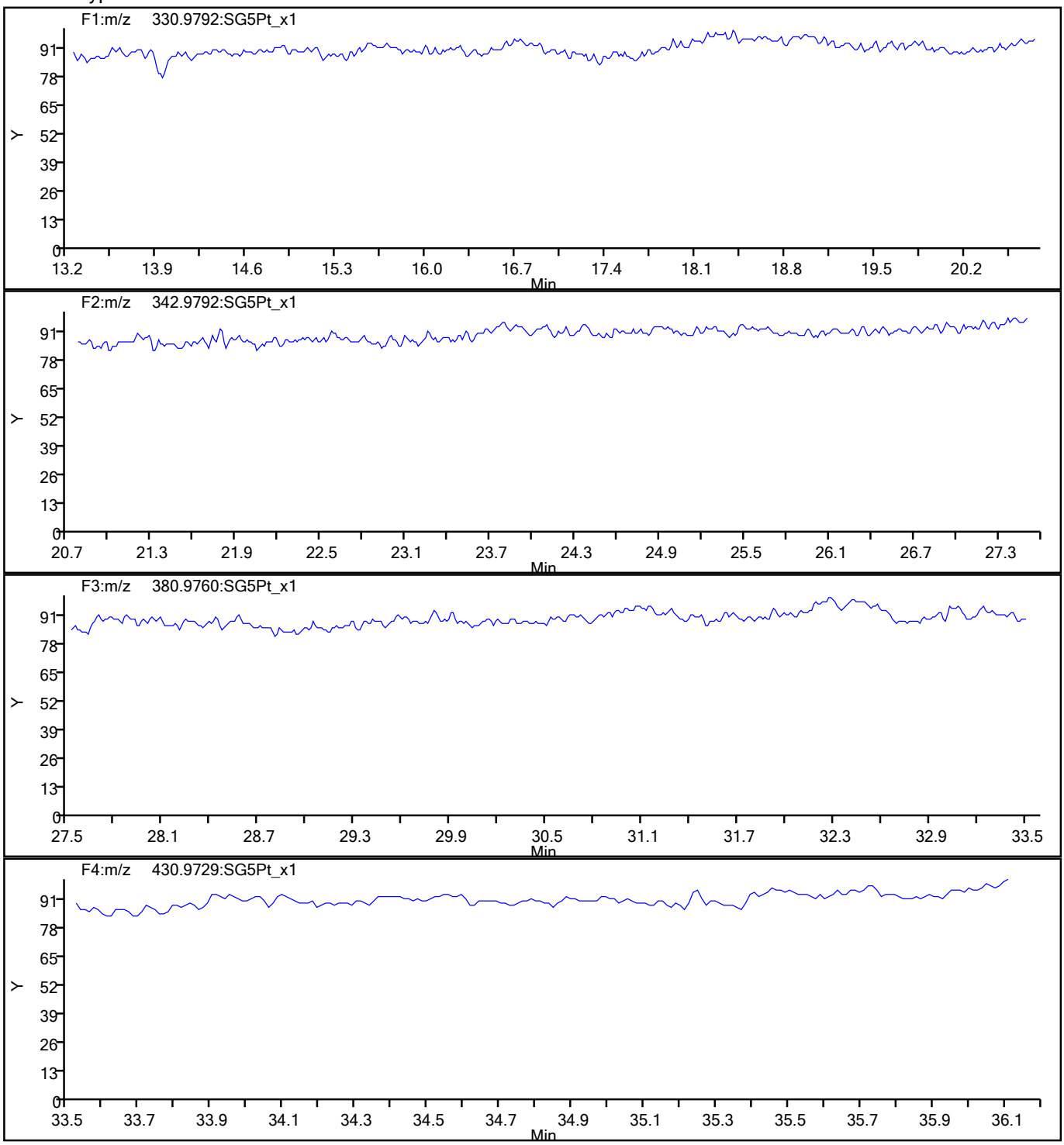

776531

Report Date: 17-Aug-2021 17:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_43.d		
Injection Date:	15-Aug-2021 01:21:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

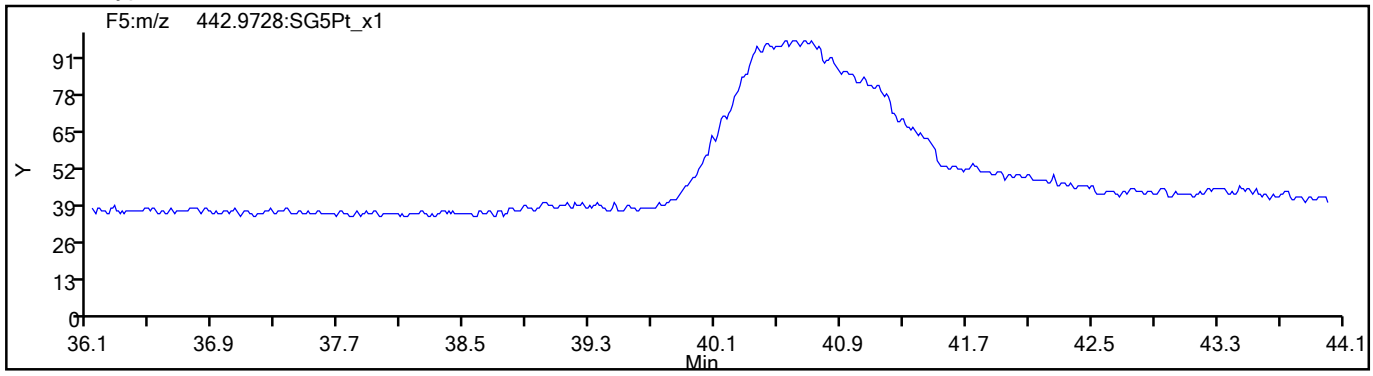

776532

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-516848/17 Calibration Date: 08/15/2021 12:57

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 13AU2110D5_58.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.032		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.210		9.65	10.0	97	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.035		48.8	50.0	98	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.016		49.9	50.0	100	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.049		50.0	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.082		49.9	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.158		51.4	50.0	103	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.169		50.1	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.044		49.0	50.0	98	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.005		50.3	50.0	101	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.178		52.0	50.0	104	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.163		49.9	50.0	100	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.451		50.4	50.0	101	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.095		50.1	50.0	100	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.322		50.2	50.0	100	86-116
OCDD	AveID	1.107	1.123		101	100	101	79-126
OCDF	AveID	1.438	1.384		96.2	100	96	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.420		87.4	100	87	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.8960		99.6	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.079		89.2	100	89	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.091		88.0	100	88	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7406		97.3	100	97	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	0.9425		87.0	100	87	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	0.9695		86.0	100	86	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	0.9229		86.8	100	87	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.6923		94.4	100	94	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8545		97.1	100	97	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.8558		88.4	100	88	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7105		91.9	100	92	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6611		102	100	102	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6728		96.0	100	96	77-129
13C-OCDD	Ave	0.4472	0.4833		216	200	108	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.086		9.80	10.0	98	79-127

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	13AU2110D5_1	CS-4 HRDXNL4_00099	CCV 081321	Tray01:2	Dioxin		DB
2	13AU2110D5_2	WDM HRDXNCP_00044	WDM 081321	Tray01:1	Dioxin		DB
3	13AU2110D5_3	mb 320-514953/1-a	mb 320-514953/1-a	Tray01:4	1613B/8290A/Water	D265	DB
4	13AU2110D5_4	lcs 320-514953/2-a	lcs 320-514953/2-a	Tray01:5	1613B/8290A/Water		DB
5	13AU2110D5_5	lcsd 320-514953/3-a	lcsd 320-514953/3-a	Tray01:6	1613B/8290A/Water		DB
6	13AU2110D5_6	320-76081-a-4-b	320-76081-a-4-b	Tray01:7	1613B/8290A/Water		DB
7	13AU2110D5_7	mb 320-514735/1-a	mb 320-514735/1-a	Tray01:8	1613B/8290A/Solid	D262	DB
8	13AU2110D5_8	lcs 320-514735/2-a	lcs 320-514735/2-a	Tray01:9	1613B/8290A/Solid		DB
9	13AU2110D5_9	lcsd 320-514735/3-a	lcsd 320-514735/3-a	Tray01:10	1613B/8290A/Solid		DB
10	13AU2110D5_10	320-76718-a-1-a	320-76718-a-1-a	Tray01:11	1613B/8290A/Solid		DB
11	13AU2110D5_11	SB Solvent Blank C-14	SB 081321	Tray01:3			DB
12	13AU2110D5_12	CS-4 HRDXNL4_00099	CCV 081321A	Tray01:2	Dioxin		DB
13	13AU2110D5_13	WDM HRDXNCP_00044	WDM 081321A	Tray01:1	Dioxin		DB
14	13AU2110D5_14	mb 320-512871/1-a	mb 320-512871/1-a	Tray01:15	1613B/Solid	D265	DB
15	13AU2110D5_15	lcs 320-512871/2-a	lcs 320-512871/2-a	Tray01:16	1613B/Solid		DB
16	13AU2110D5_16	lcsd 320-512871/3-a	lcsd 320-512871/3-a	Tray01:17	1613B/Solid		DB
17	13AU2110D5_17	320-76788-a-2-a	320-76788-a-2-a	Tray01:18	1613B/Solid		DB
18	13AU2110D5_18	320-76788-a-3-a	320-76788-a-3-a	Tray01:19	1613B/Solid		DB
19	13AU2110D5_19	320-76788-a-4-a	320-76788-a-4-a	Tray01:20	1613B/Solid		DB
20	13AU2110D5_20	320-76788-a-5-a	320-76788-a-5-a	Tray01:21	1613B/Solid		DB
21	13AU2110D5_21	320-76788-a-6-a	320-76788-a-6-a	Tray01:22	1613B/Solid		DB
22	13AU2110D5_22	320-76788-a-7-a	320-76788-a-7-a	Tray01:23	1613B/Solid		DB
23	13AU2110D5_23	320-76720-a-1-a 50X	320-76720-a-1-a 50X	Tray01:24	1613B/Solid		DB
24	13AU2110D5_24	320-76720-a-5-a 25X	320-76720-a-5-a 25X	Tray01:25	1613B/Solid		DB
25	13AU2110D5_25	320-76724-a-3-a 100X	320-76724-a-3-a 100X	Tray01:26	1613B/Solid		DB
26	13AU2110D5_26	SB Solvent Blank C-14	SB 081321A	Tray01:3			DB
27	13AU2110D5_27	WDM HRDXNCP_00044	WDM 081321B	Tray01:1	Dioxin		DB
28	13AU2110D5_28	CS-4 HRDXNL4_00099	CCV 081321B	Tray01:2	Dioxin		DB
29	13AU2110D5_29	320-76788-a-8-a	320-76788-a-8-a	Tray01:29	1613B/Solid	D265	DB
30	13AU2110D5_30	320-76788-a-9-a	320-76788-a-9-a	Tray01:30	1613B/Solid		DB
31	13AU2110D5_31	320-76788-a-13-a	320-76788-a-13-a	Tray01:31	1613B/Solid		DB
32	13AU2110D5_32	320-76788-a-15-a	320-76788-a-15-a	Tray01:32	1613B/Solid		DB
33	13AU2110D5_33	320-76788-a-16-a	320-76788-a-16-a	Tray01:33	1613B/Solid		DB
34	13AU2110D5_34	320-76788-a-17-a	320-76788-a-17-a	Tray01:34	1613B/Solid		DB
35	13AU2110D5_35	320-76788-a-18-a	320-76788-a-18-a	Tray01:35	1613B/Solid		DB
36	13AU2110D5_36	320-76788-a-19-a	320-76788-a-19-a	Tray01:36	1613B/Solid		DB
37	13AU2110D5_37	320-76788-a-20-a	320-76788-a-20-a	Tray01:37	1613B/Solid		DB
38	13AU2110D5_38	320-76788-a-21-a	320-76788-a-21-a	Tray01:38	1613B/Solid		DB
39	13AU2110D5_39	320-76788-a-1-a	320-76788-a-1-a	Tray01:39	1613B/Solid		DB
40	13AU2110D5_40	320-76788-a-14-a	320-76788-a-14-a	Tray01:40	1613B/Solid		DB
41	13AU2110D5_41	SB Solvent Blank C-14	SB 081321B	Tray01:3			DB
42	13AU2110D5_42	WDM HRDXNCP_00044	WDM 081321C	Tray01:1	Dioxin		DB
43	13AU2110D5_43	CS-4 HRDXNL4_00099	CCV 081321C	Tray01:2	Dioxin		DB
44	13AU2110D5_44	mb 320-513585/1-a	mb 320-513585/1-a	Tray01:43	1613B/Solid	D265	DB
45	13AU2110D5_45	lcs 320-513585/2-a	lcs 320-513585/2-a	Tray01:44	1613B/Solid		DB
46	13AU2110D5_46	320-76765-a-18-a	320-76765-a-18-a	Tray01:45	1613B/Solid		DB
47	13AU2110D5_47	320-76769-a-1-a	320-76769-a-1-a	Tray01:46	1613B/Solid		DB
48	13AU2110D5_48	320-76769-a-1-b ms	320-76769-a-1-b ms	Tray01:47	1613B/Solid		DB
49	13AU2110D5_49	320-76769-a-1-c msd	320-76769-a-1-c msd	Tray01:48	1613B/Solid		DB
50	13AU2110D5_50	320-76769-a-2-a	320-76769-a-2-a	Tray01:49	1613B/Solid		DB
51	13AU2110D5_51	320-76769-a-3-a	320-76769-a-3-a	Tray01:50	1613B/Solid		DB
52	13AU2110D5_52	320-76769-a-5-a	320-76769-a-5-a	Tray01:51	1613B/Solid		DB
53	13AU2110D5_53	320-76769-a-6-a	320-76769-a-6-a	Tray01:52	1613B/Solid		DB
54	13AU2110D5_54	320-76769-a-7-a	320-76769-a-7-a	Tray01:53	1613B/Solid		DB
55	13AU2110D5_55	320-76769-a-8-a	320-76769-a-8-a	Tray01:54	1613B/Solid		DB
56	13AU2110D5_56	SB Solvent Blank C-14	SB 081321C	Tray01:3			DB
57	13AU2110D5_57	WDM HRDXNCP_00044	WDM 081321D	Tray01:1	Dioxin		DB
58	13AU2110D5_58	CS-4 HRDXNL4_00099	CCV 081321D	Tray01:2	Dioxin		DB

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
59	13AU2110D5_59	320-76769-a-13-a	320-76769-a-13-a	Tray01:57	1613B/Solid	D265	DB
60	13AU2110D5_60	320-76769-a-15-a	320-76769-a-15-a	Tray01:58	1613B/Solid		DB
61	13AU2110D5_61	320-76769-a-16-a	320-76769-a-16-a	Tray01:59	1613B/Solid		DB
62	13AU2110D5_62	320-76769-a-17-a	320-76769-a-17-a	Tray01:60	1613B/Solid		DB
63	13AU2110D5_63	320-76769-a-18-a	320-76769-a-18-a	Tray01:61	1613B/Solid		DB
64	13AU2110D5_64	320-76769-a-19-a	320-76769-a-19-a	Tray01:62	1613B/Solid		DB
65	13AU2110D5_65	320-76769-a-20-a	320-76769-a-20-a	Tray01:63	1613B/Solid		DB
66	13AU2110D5_66	320-76769-a-25-a	320-76769-a-25-a	Tray01:64	1613B/Solid		DB
67	13AU2110D5_67	320-76769-a-26-a	320-76769-a-26-a	Tray01:65	1613B/Solid		DB
68	13AU2110D5_68	320-76769-a-28-a	320-76769-a-28-a	Tray01:66	1613B/Solid		DB
69	13AU2110D5_69	320-76769-a-14-a	320-76769-a-14-a	Tray01:67	1613B/Solid		DB
70	13AU2110D5_70	SB Solvent Blank C-14	SB 081321D	Tray01:3			DB

Logfile checked
08/16/21 SMA

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
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1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover

Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
---	---	C:\CHROM

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
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---	---	C:\CHROM
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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Printed: Sunday, August 15, 2021 00:36:37 Pacific Daylight Time

M 292.9824 R 11825

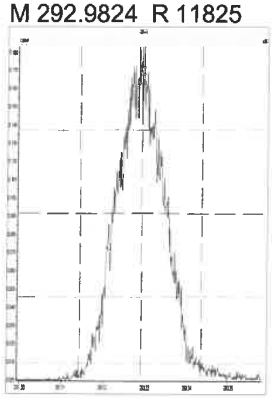

M 304.9824 R 11684

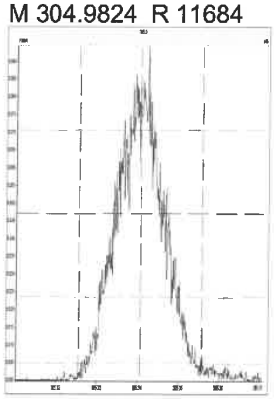

M 318.9792 R 11990

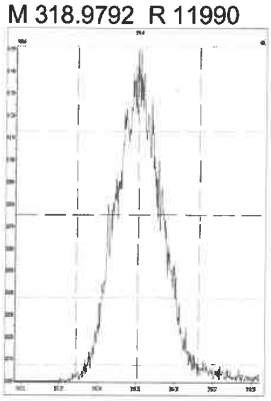

M 330.9792 R 11493

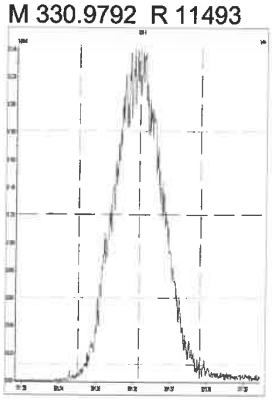

M 342.9792 R 11194

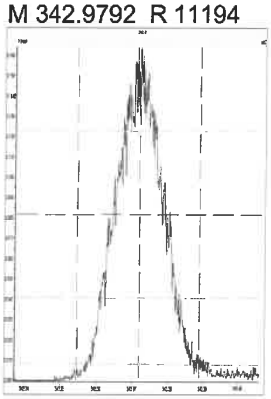

M 354.9792 R 11709

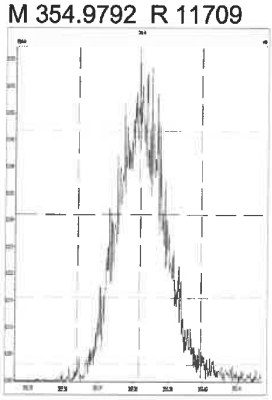

M 366.9792 R 11831

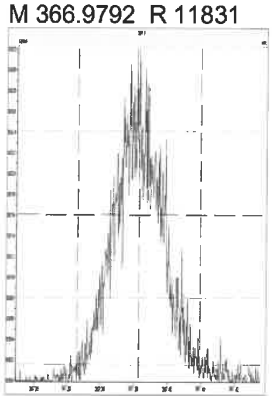

M 380.9760 R 10489

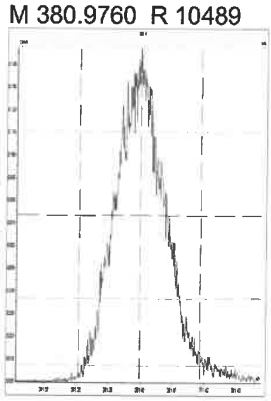

M 392.9760 R 10671

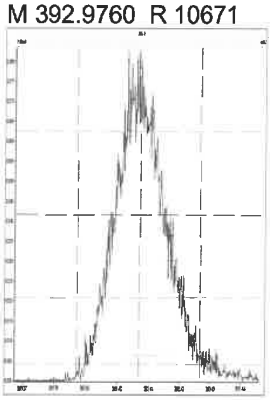

M 404.9760 R 10289

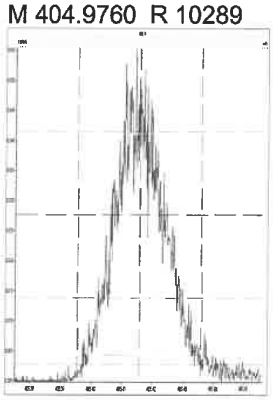

M 416.9760 R 11884

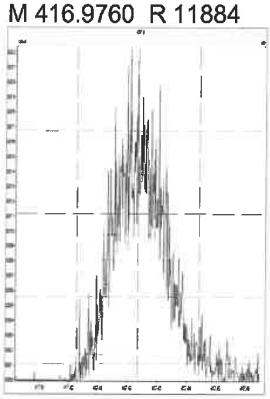

M 318.9792 R 11762

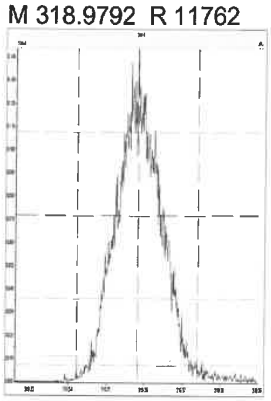

M 330.9792 R 11767

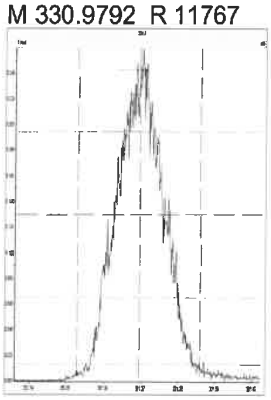

M 342.9792 R 11801

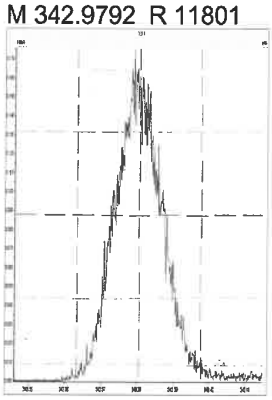

M 354.9792 R 12559

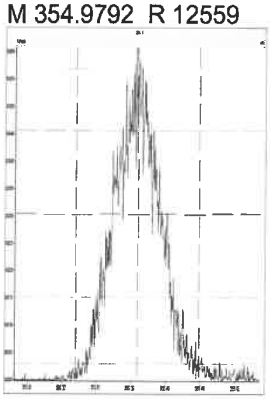

M 366.9792 R 11783

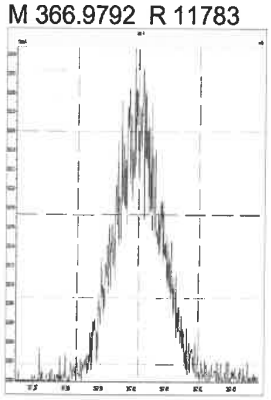

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M 380.9760_R 11265

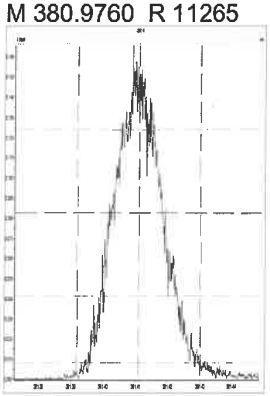

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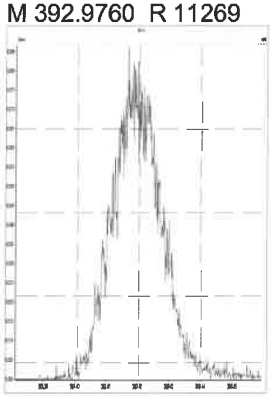

M 404.9760_R 11254

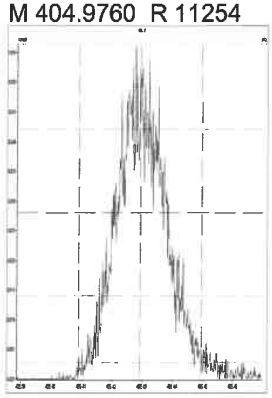

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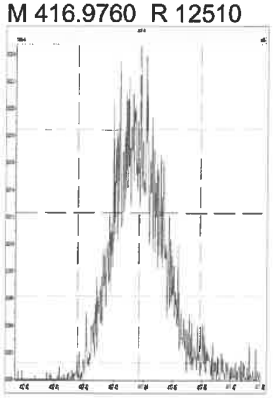

M 366.9792_R 12553

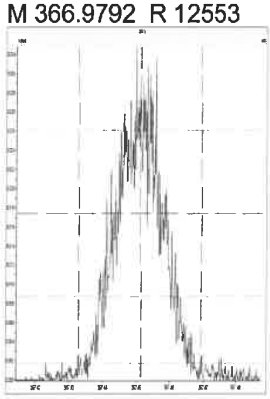

M 380.9760_R 11740

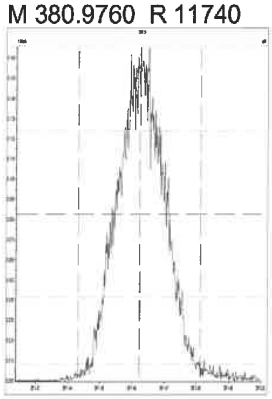

M 392.9760_R 12077

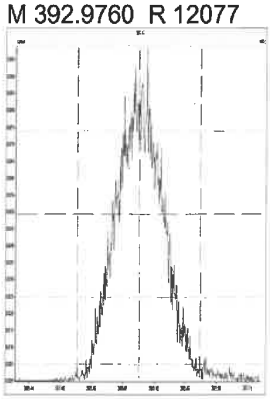

M 404.9760_R 11990

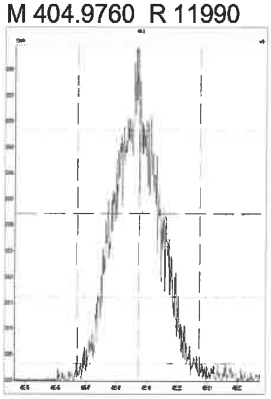

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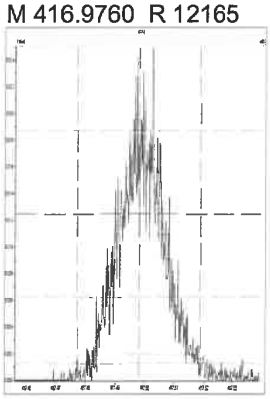

M 430.9728_R 11529

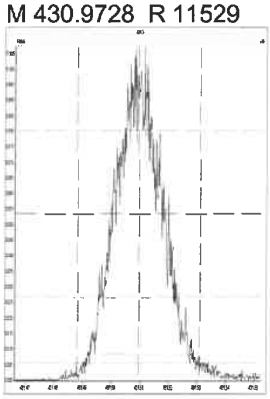

M 442.9728_R 11188

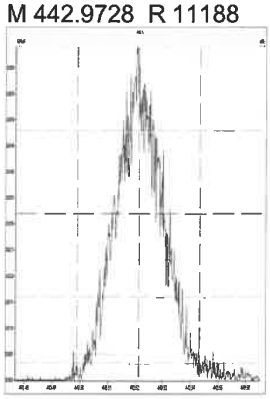

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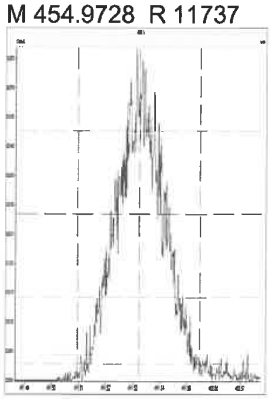

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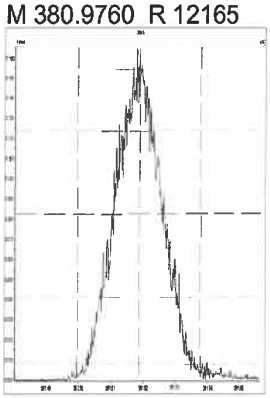

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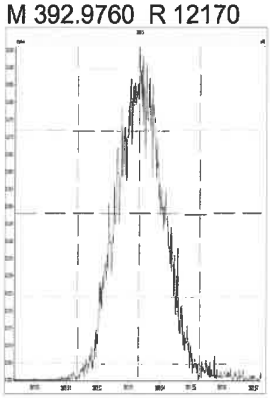

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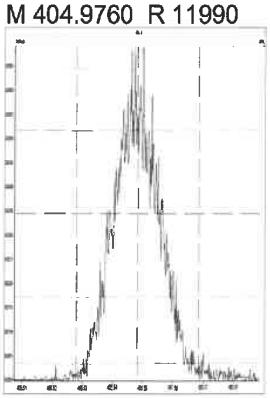

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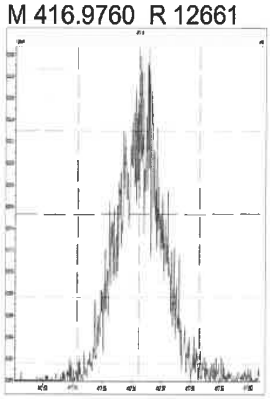

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M 430.9728 R 11601

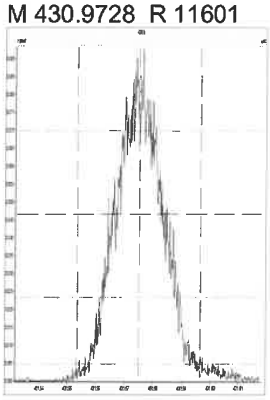

M 442.9728 R 12288

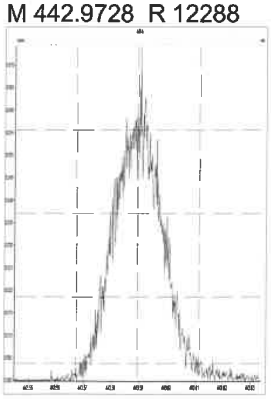

M 454.9728 R 12048

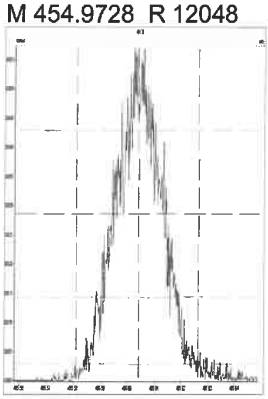

M 466.9728 R 13371

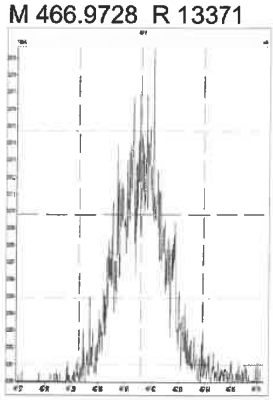

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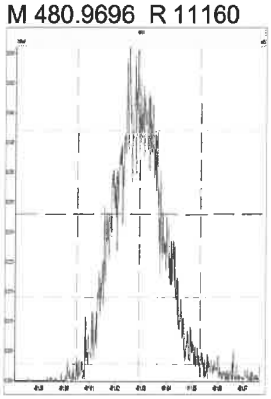

M 380.9760 R 11821

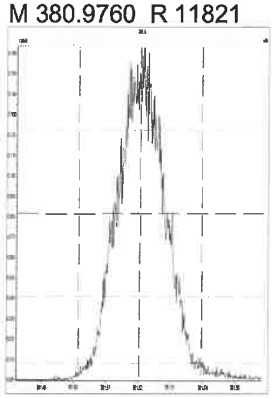

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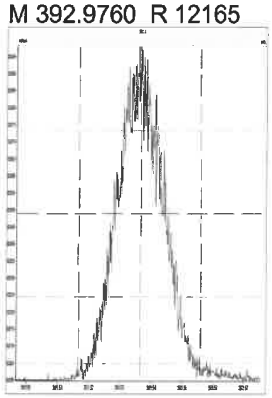

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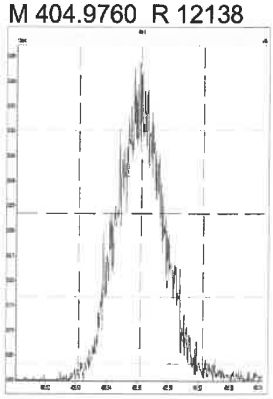

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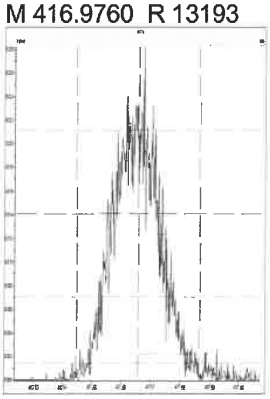

M 430.9728 R 11629

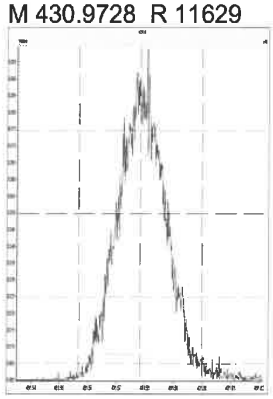

M 442.9728 R 12154

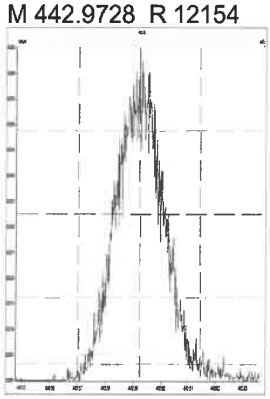

M 454.9728 R 11548

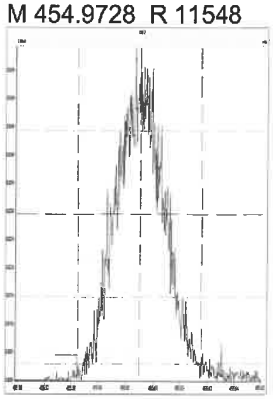

M 466.9728 R 13069

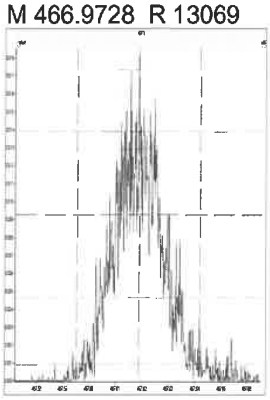

M 480.9696 R 10734

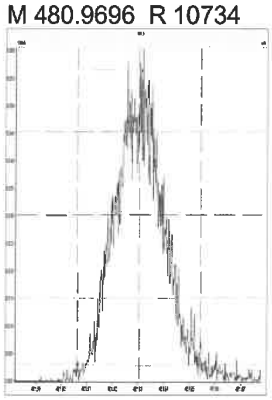

M 492.9696 R 11473

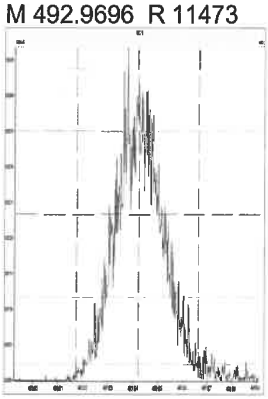

M 504.9696 R 11852

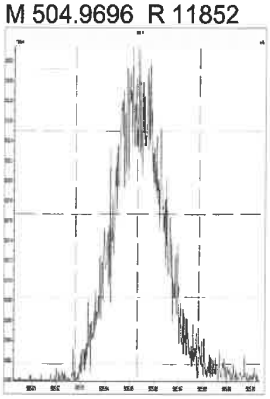

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M 516.9697 R 11643

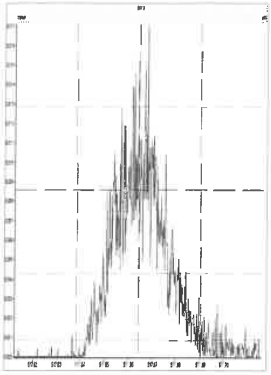

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M 292.9824 R 12540

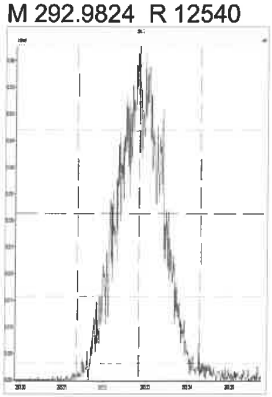

M 304.9824 R 12757

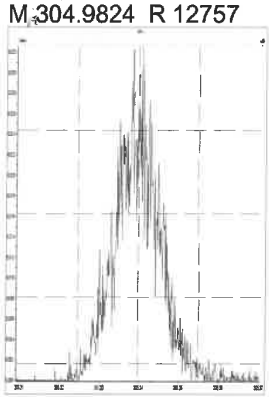

M 318.9792 R 12840

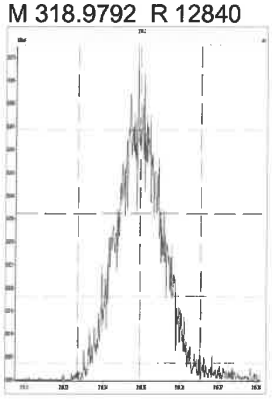

M 330.9792 R 11932

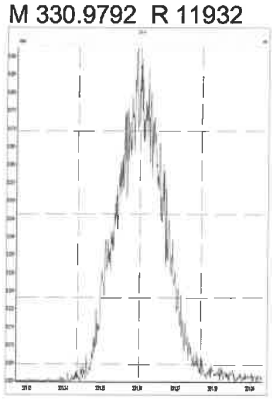

M 342.9792 R 11723

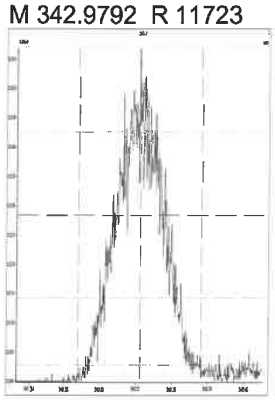

M 354.9792 R 14046

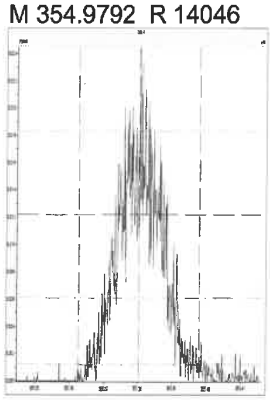

M 366.9792 R 12906

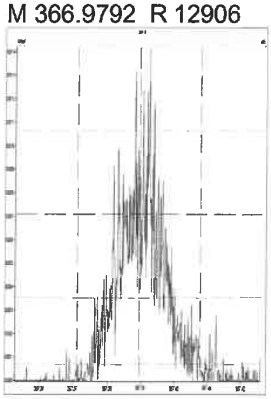

M 380.9760 R 11443

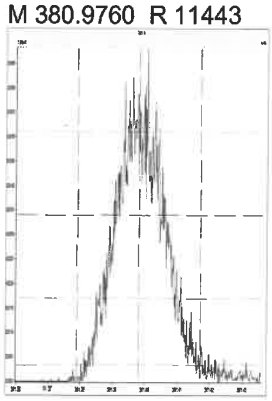

M 392.9760 R 11879

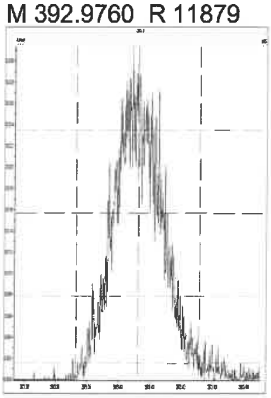

M 404.9760 R 11709

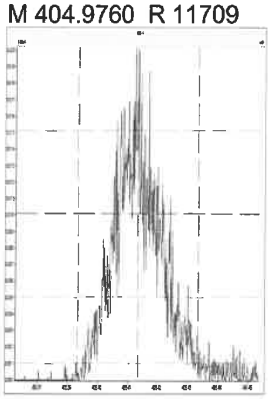

M 416.9760 R 16518

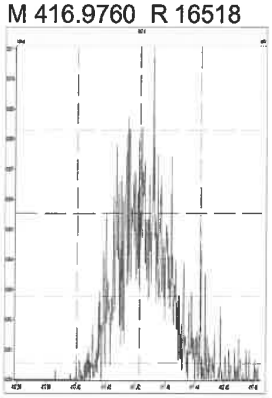

M 318.9792 R 12348

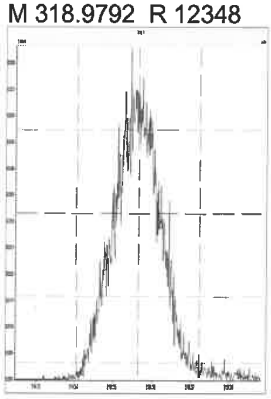

M 330.9792 R 11952

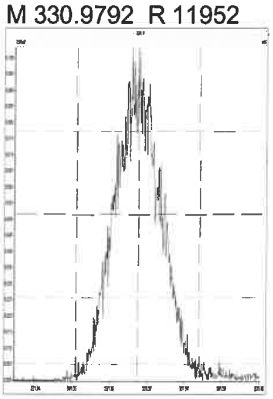

M 342.9792 R 12554

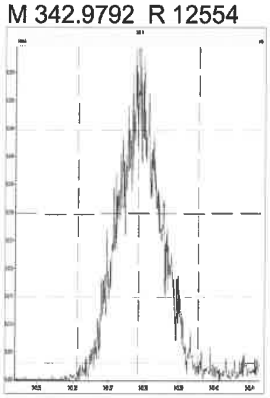

M 354.9792 R 13089

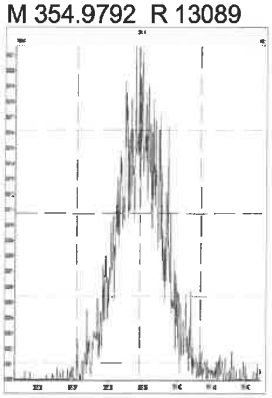

M 366.9792 R 13606

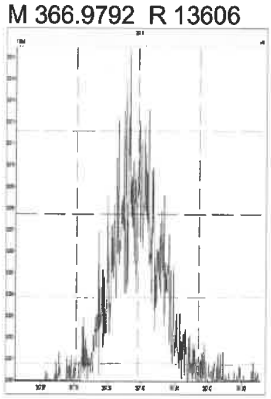

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M 380.9760 R 11363

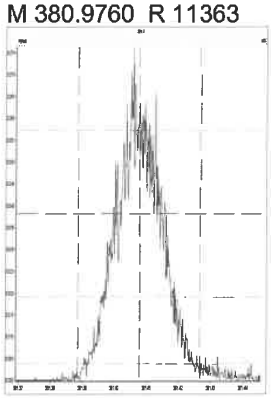

M 392.9760 R 12091

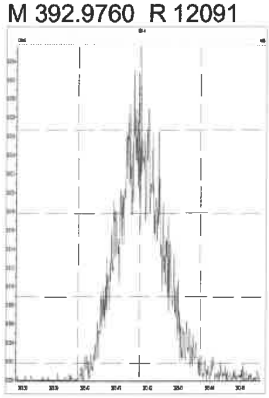

M 404.9760 R 13236

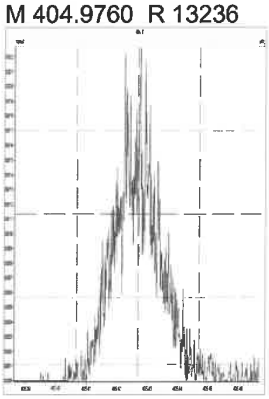

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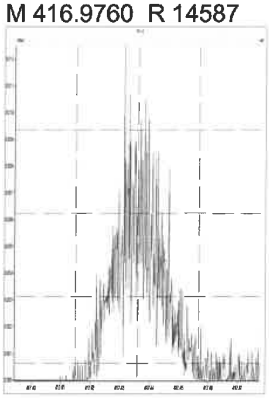

M 366.9792 R 16030

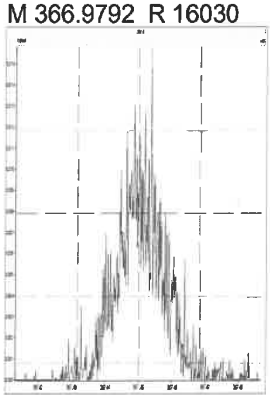

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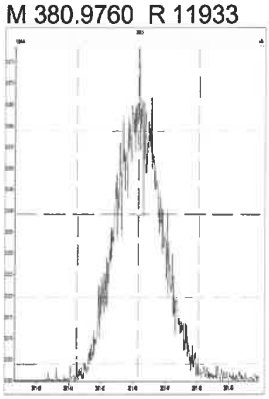

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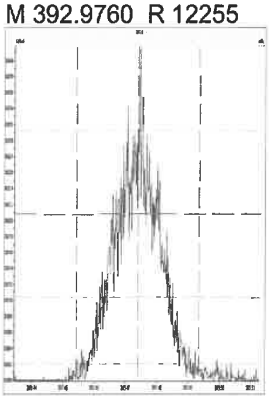

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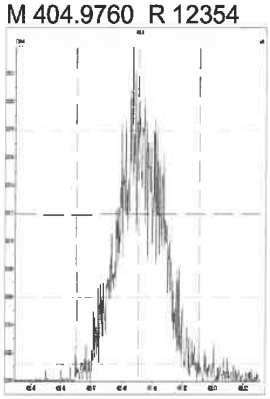

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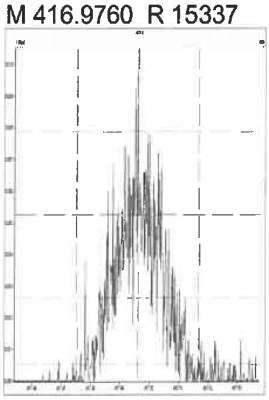

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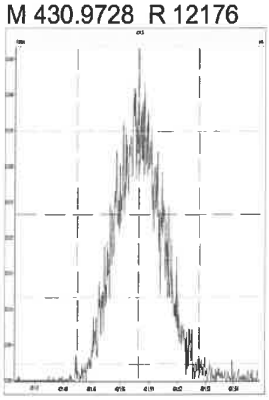

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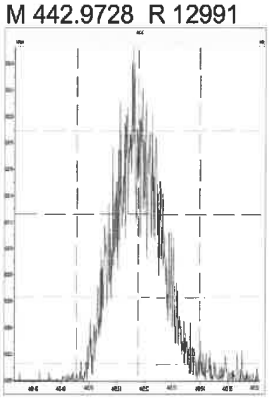

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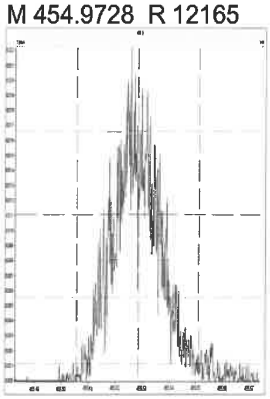

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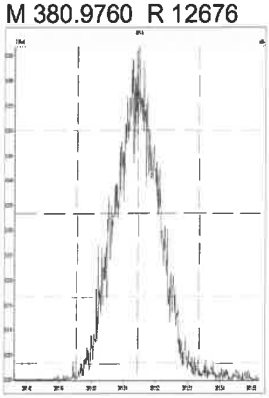

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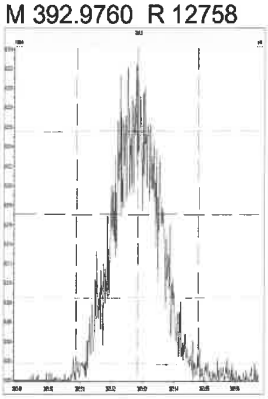

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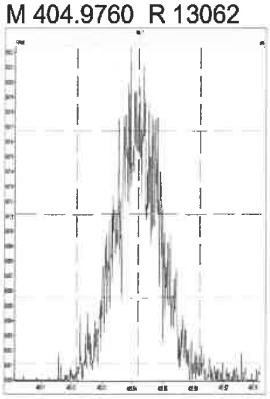

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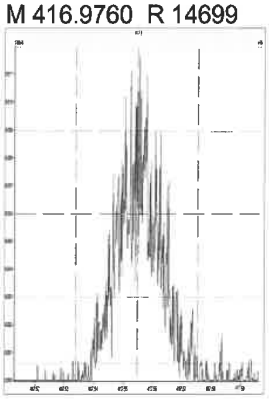

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M 430.9728 R 12667

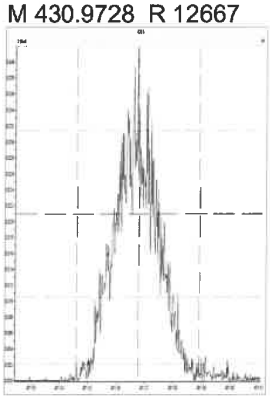

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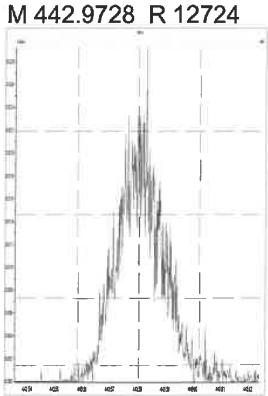

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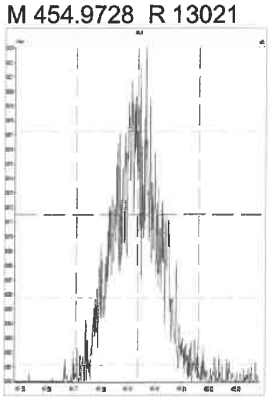

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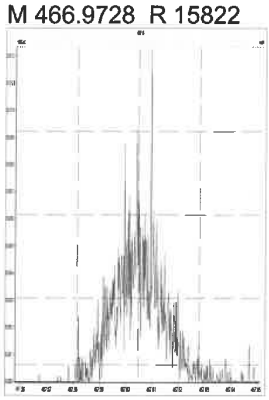

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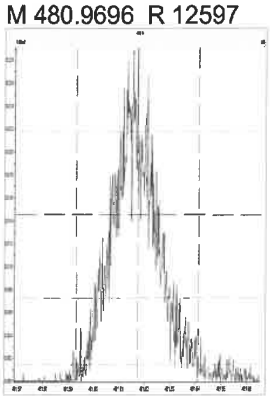

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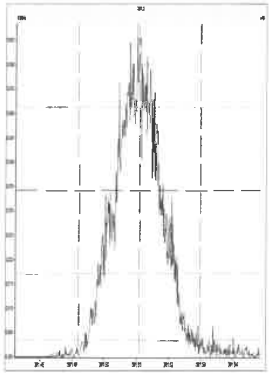

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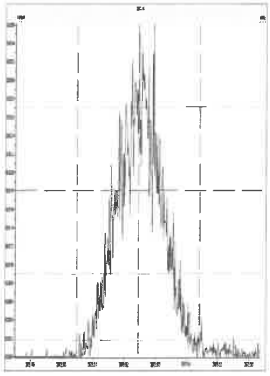

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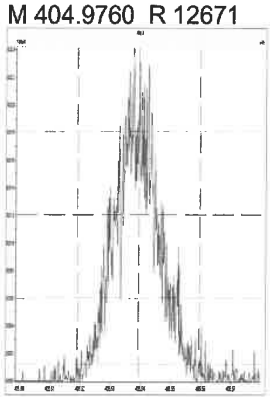

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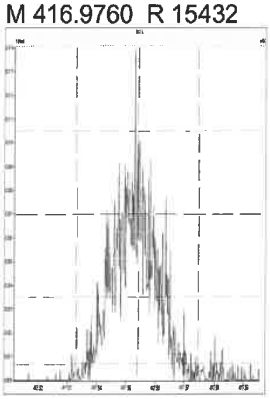

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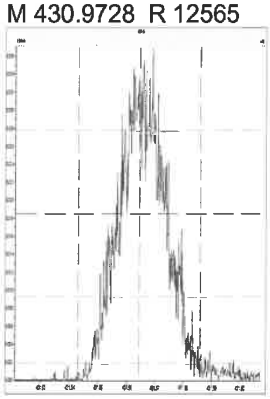

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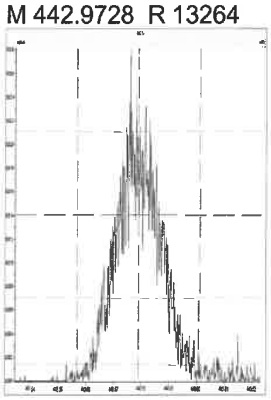

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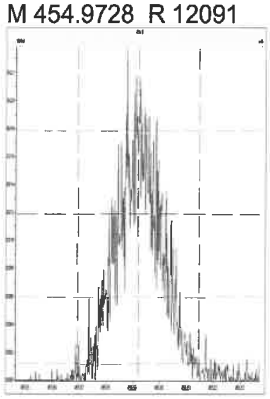

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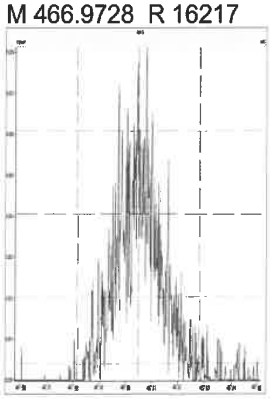

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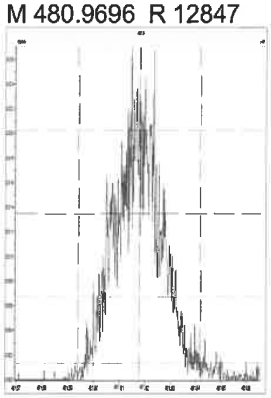

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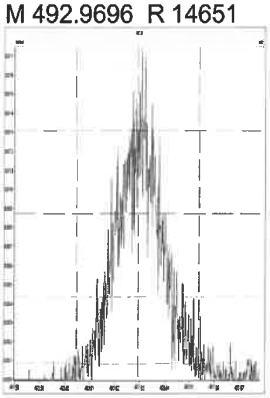

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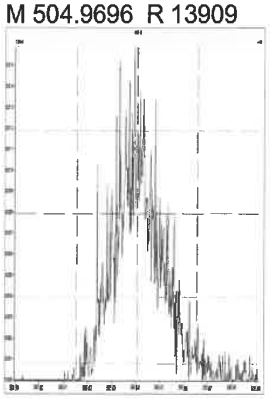

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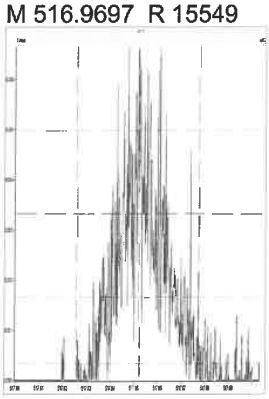

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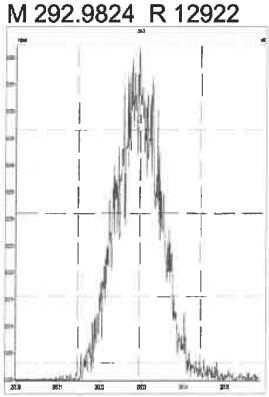

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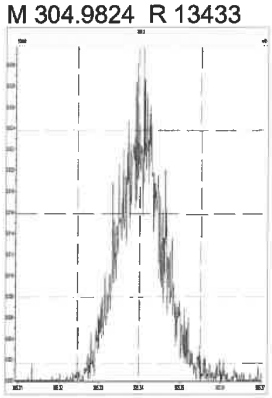

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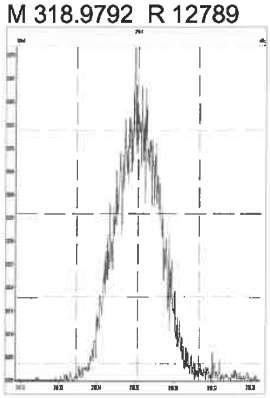

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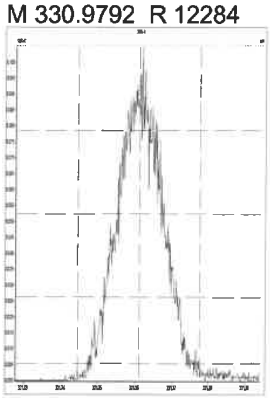

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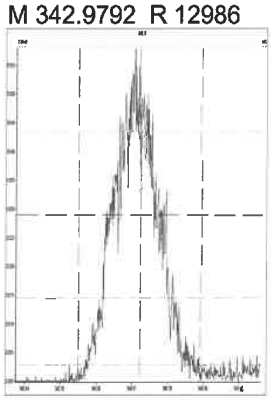

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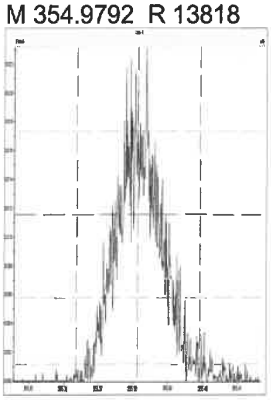

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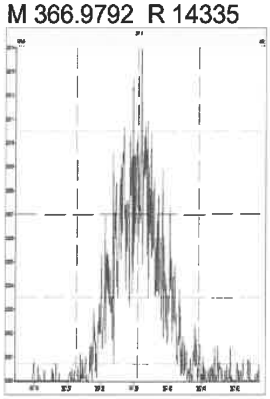

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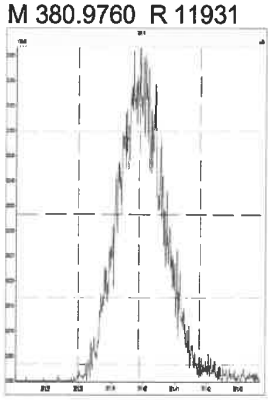

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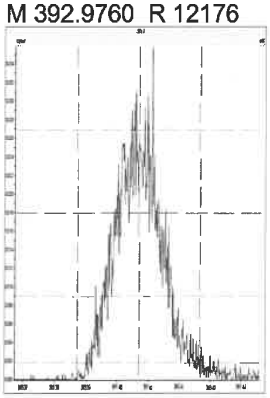

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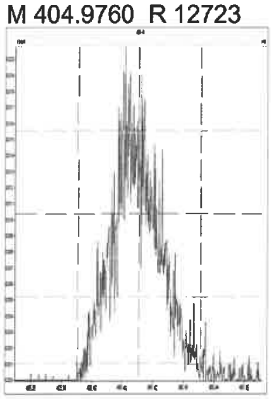

M 416.9760 R 15313

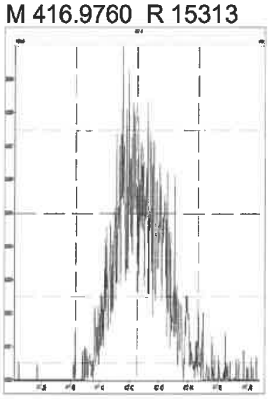

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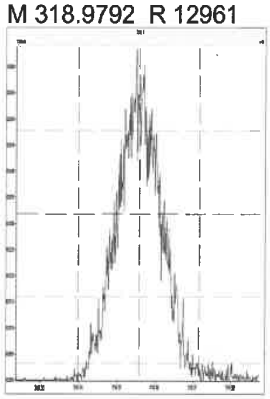

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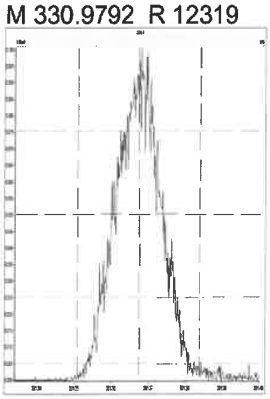

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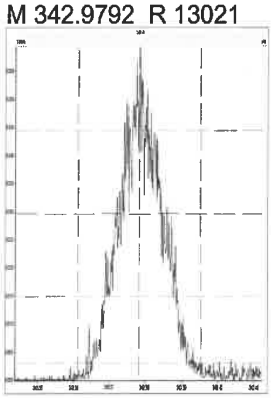

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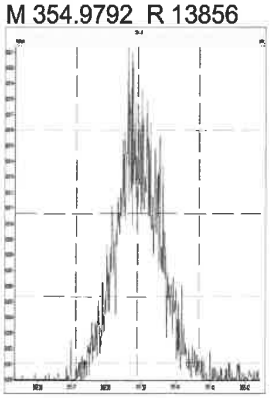

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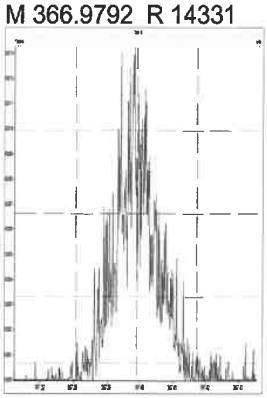

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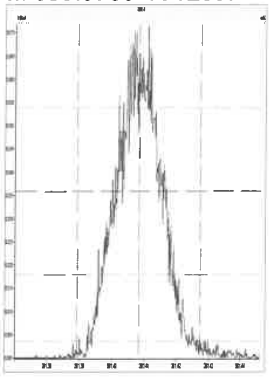

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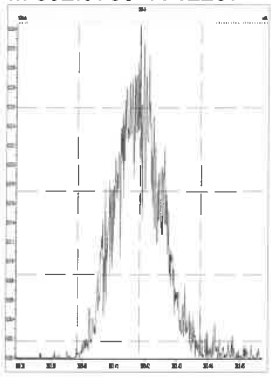

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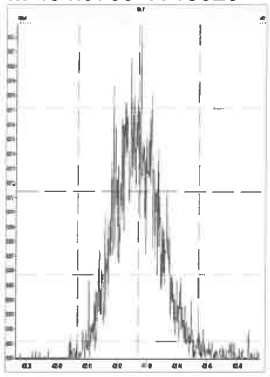

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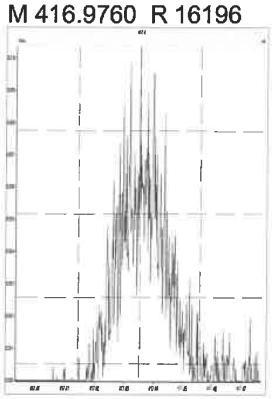

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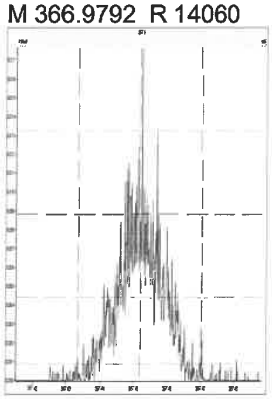

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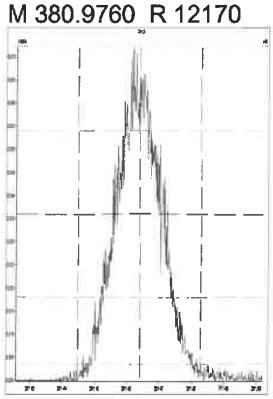

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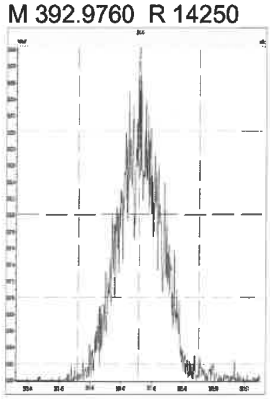

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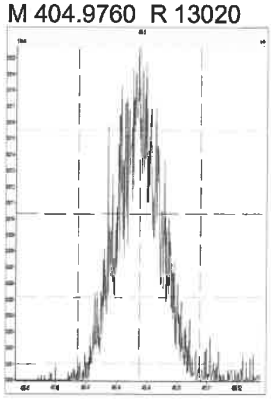

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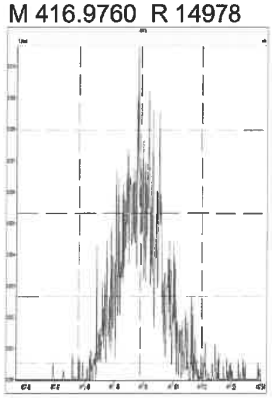

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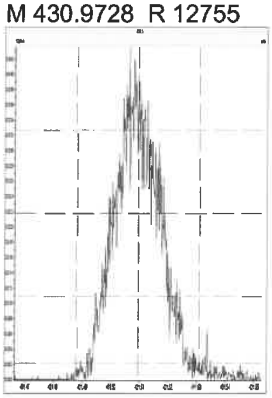

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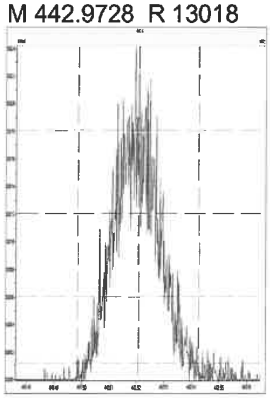

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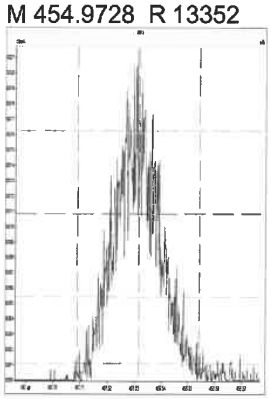

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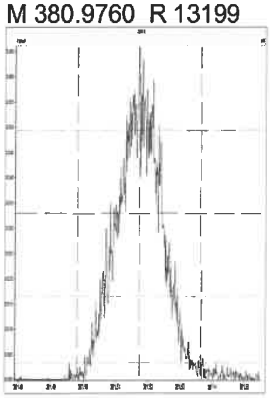

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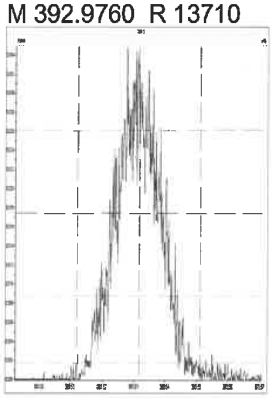

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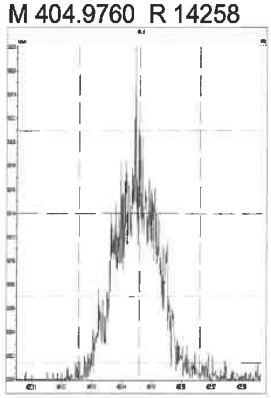

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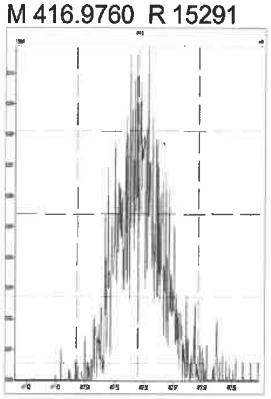

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M 430.9728 R 12607

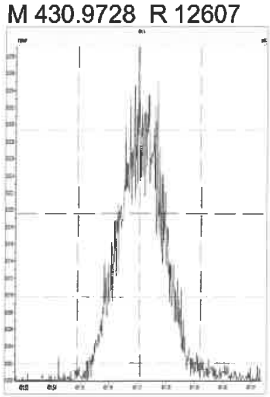

M 442.9728 R 13020

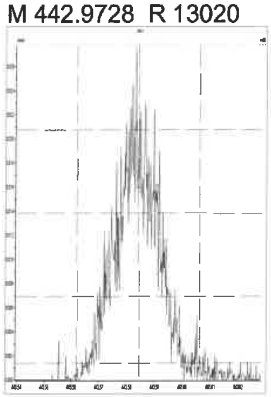

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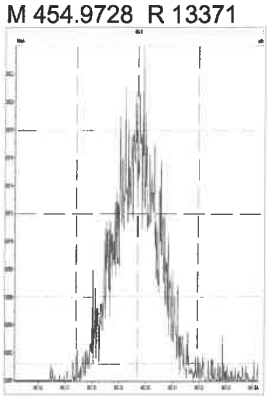

M 466.9728 R 17619

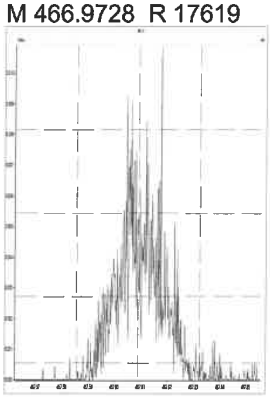

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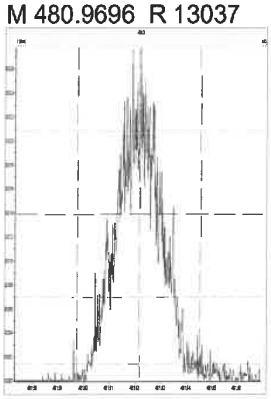

M 380.9760 R 12563

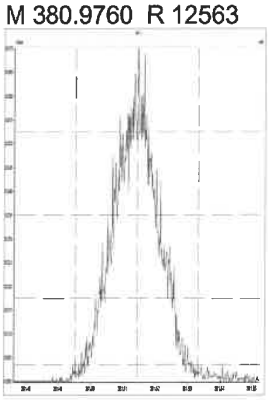

M 392.9760 R 12991

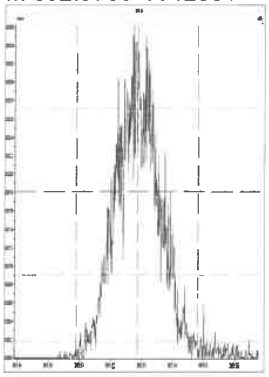

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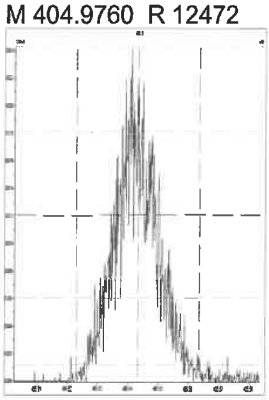

M 416.9760 R 15503

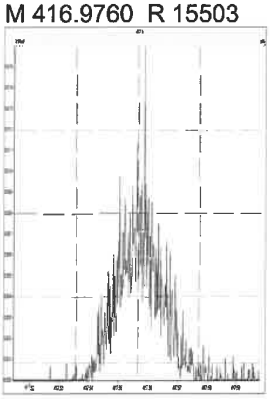

M 430.9728 R 12500

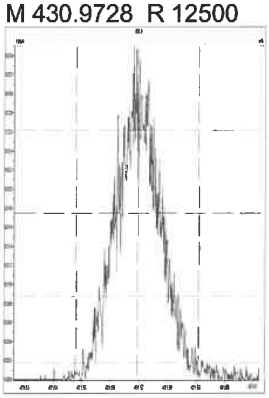

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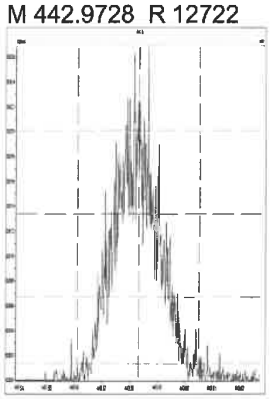

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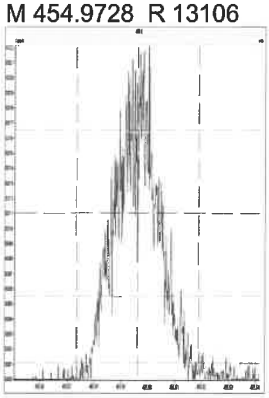

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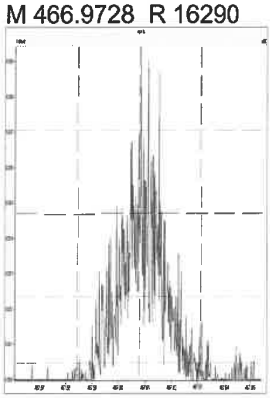

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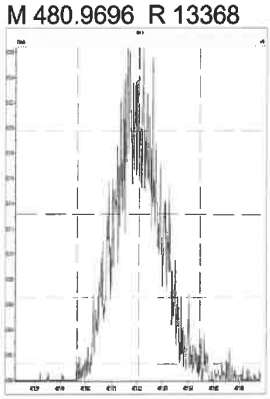

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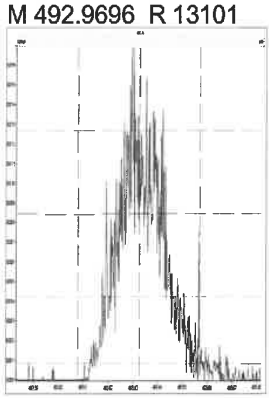

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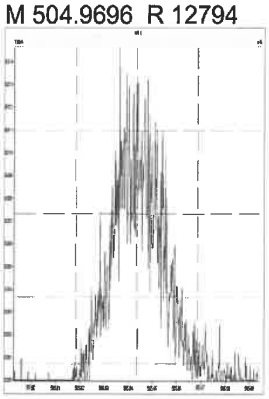

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M 516.9697_R 15138

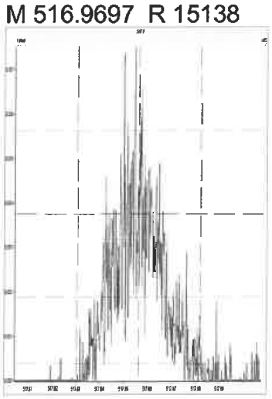

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M 292.9824 R 11238

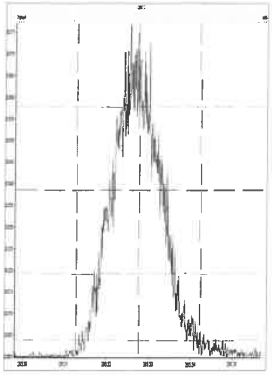

M 304.9824 R 11691

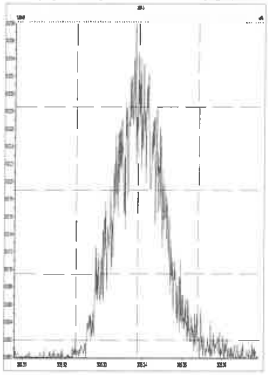

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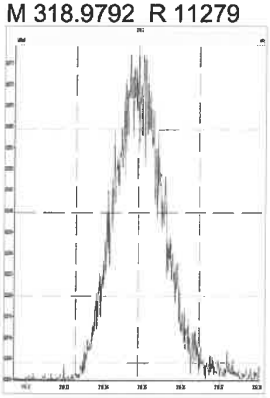

M 330.9792 R 11138

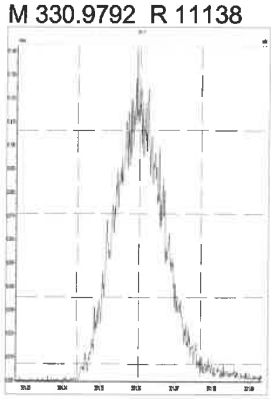

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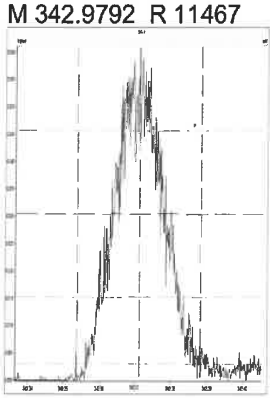

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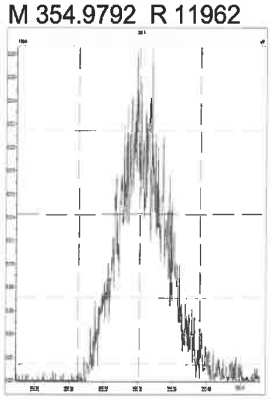

M 366.9792 R 12510

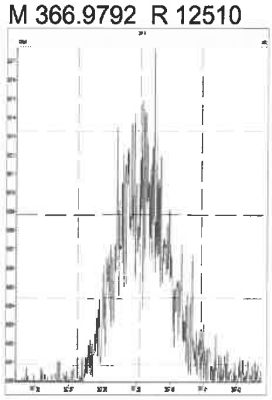

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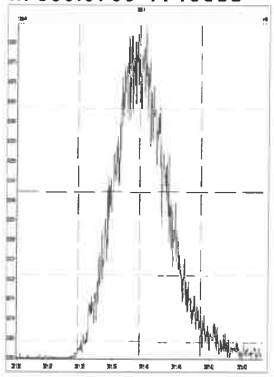

M 392.9760 R 10791

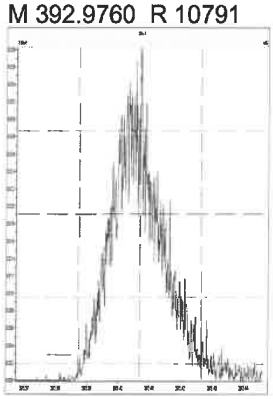

M 404.9760 R 11454

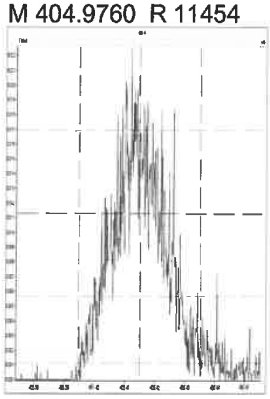

M 416.9760 R 12667

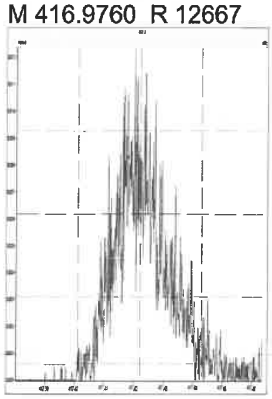

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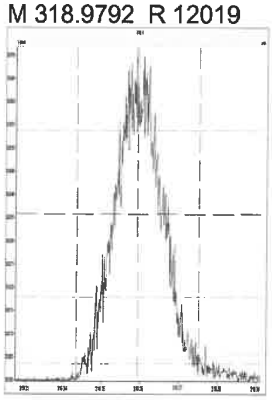

M 330.9792 R 11012

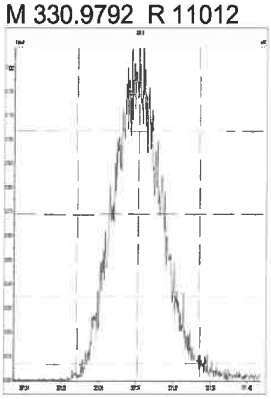

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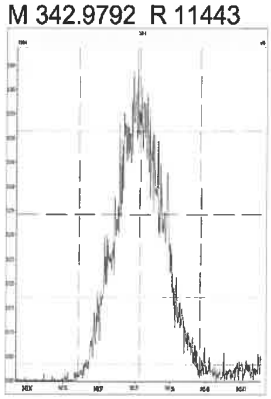

M 354.9792 R 12090

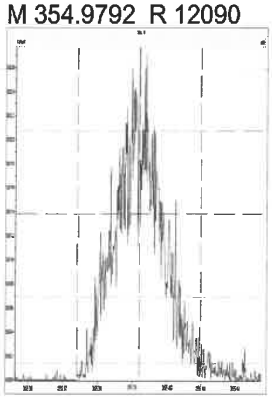

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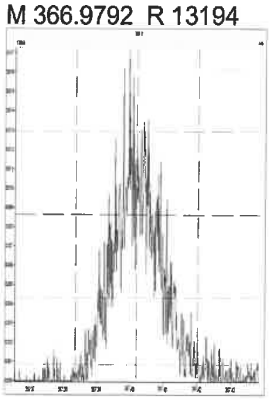

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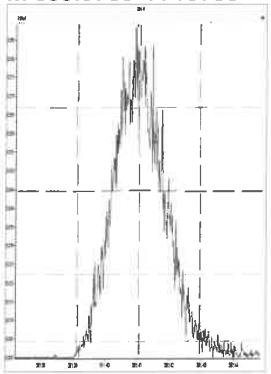

M 392.9760 R 11240

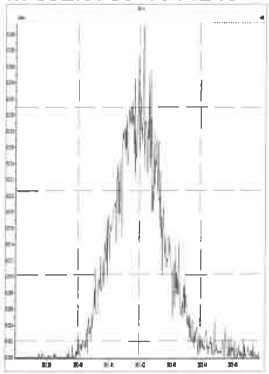

M 404.9760 R 11884

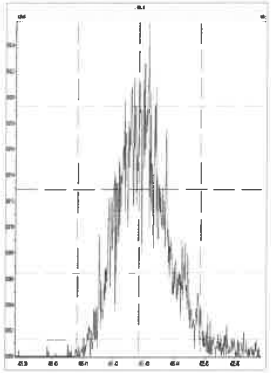

M 416.9760 R 11653

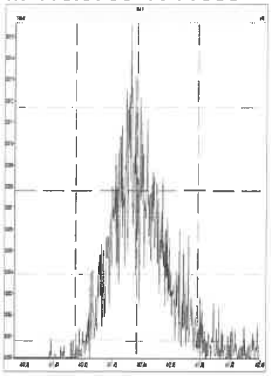

M 366.9792 R 14894

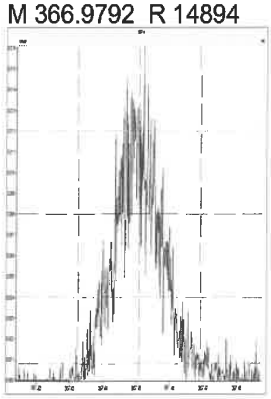

M 380.9760 R 11467

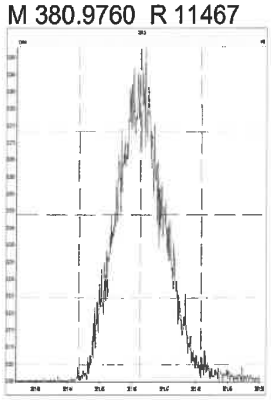

M 392.9760 R 11820

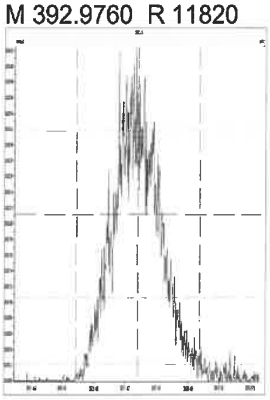

M 404.9760 R 12794

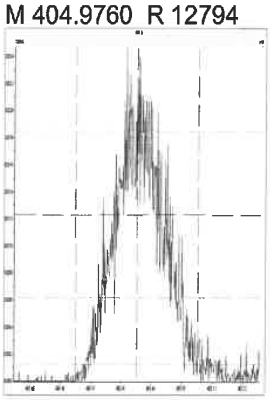

M 416.9760 R 14538

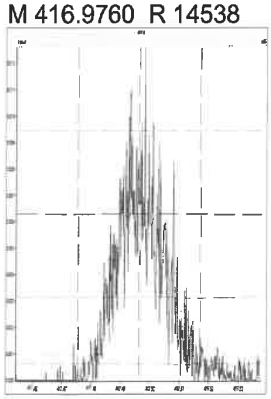

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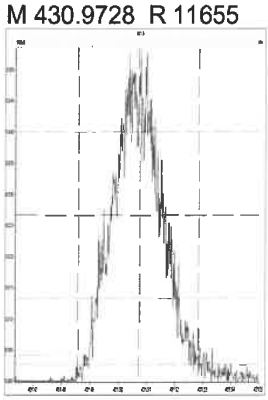

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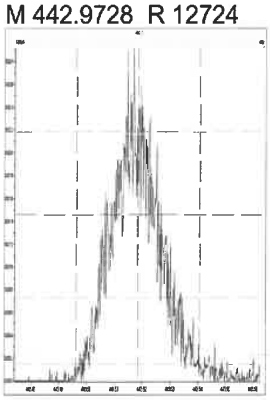

M 454.9728 R 12440

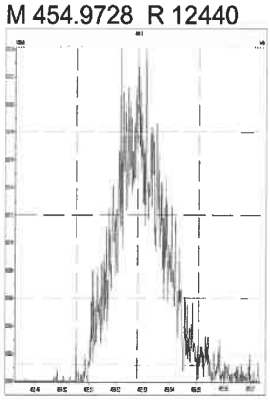

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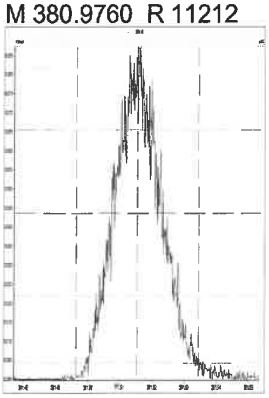

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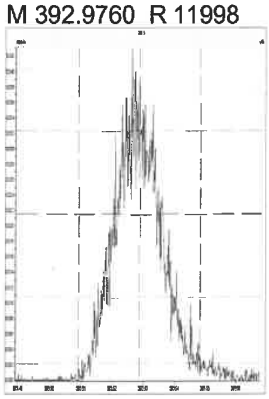

M 404.9760 R 12981

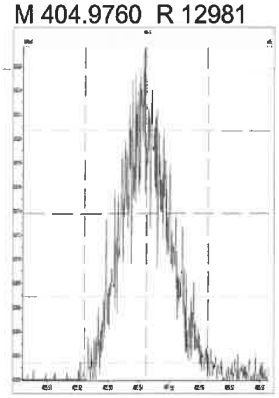

M 416.9760 R 12898

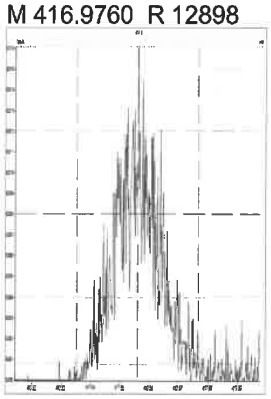

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M 430.9728 R 11643

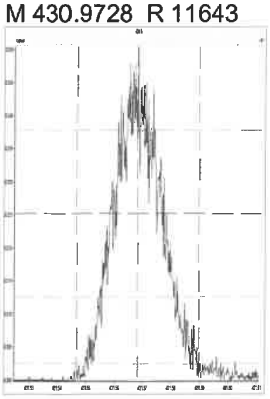

M 442.9728 R 12540

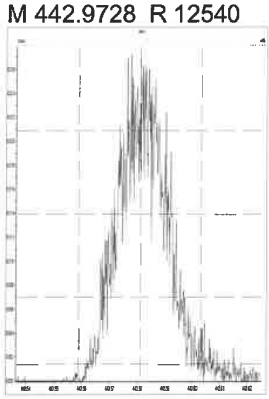

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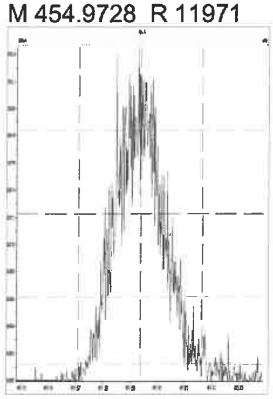

M 466.9728 R 13322

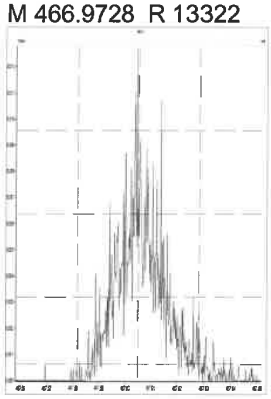

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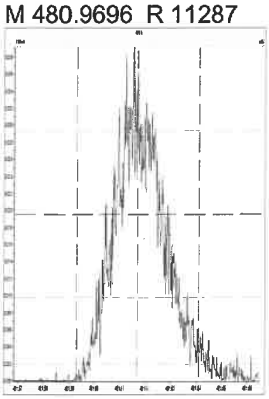

M 380.9760 R 11654

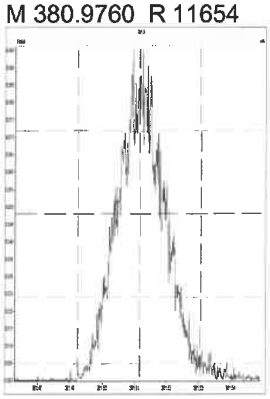

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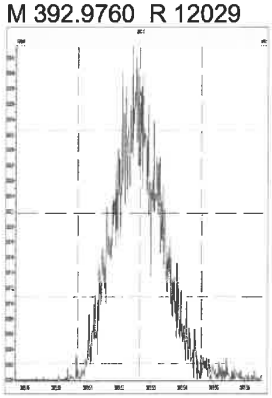

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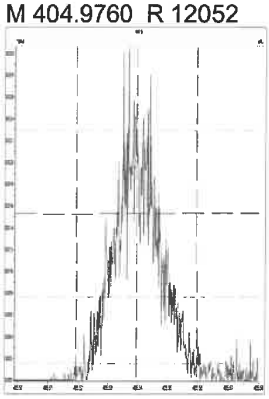

M 416.9760 R 14066

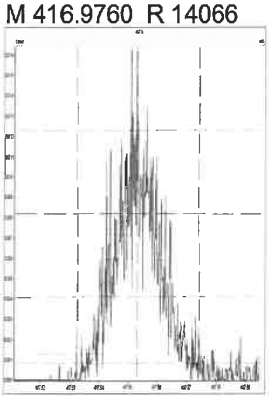

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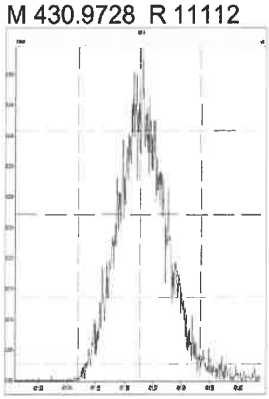

M 442.9728 R 12265

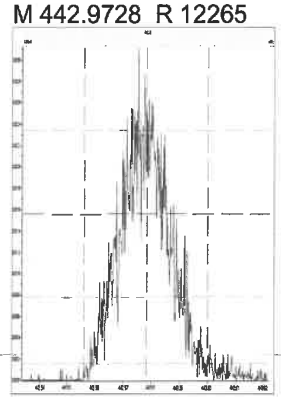

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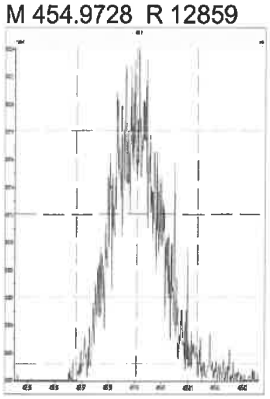

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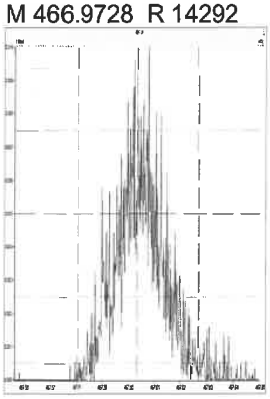

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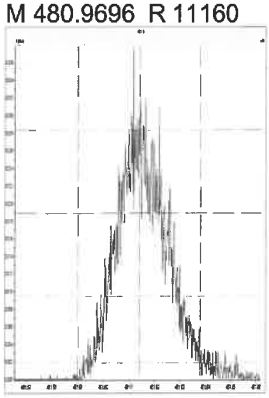

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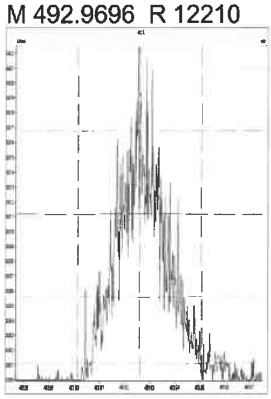

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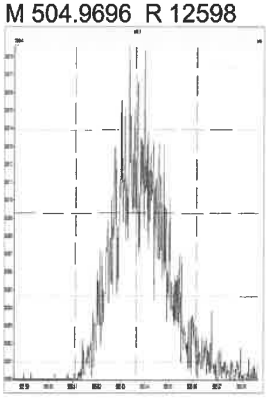

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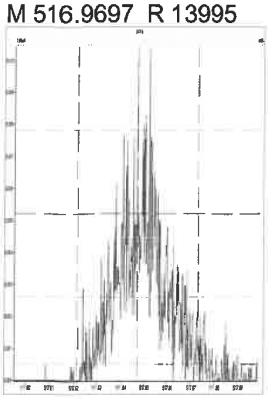

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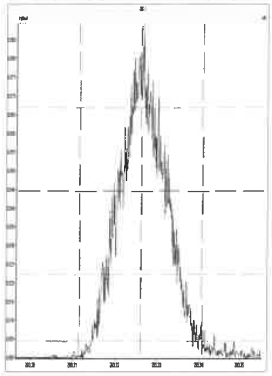

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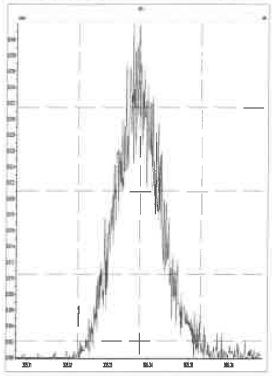

M 318.9792 R 11545

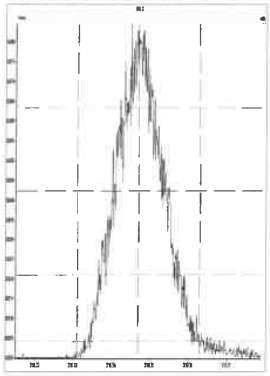

M 330.9792 R 11111

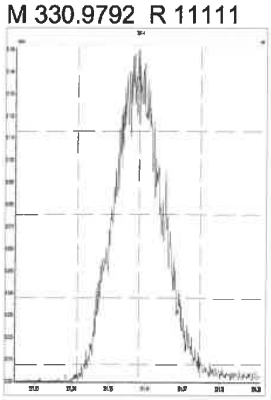

M 342.9792 R 11415

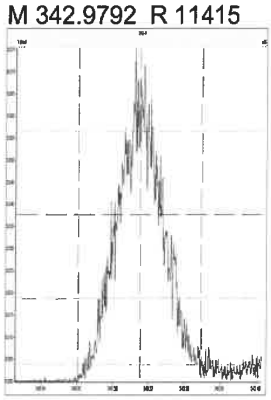

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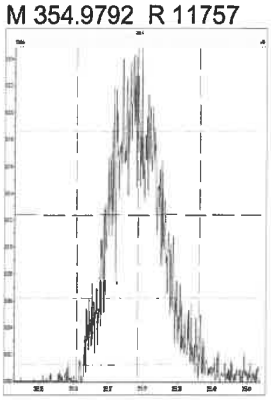

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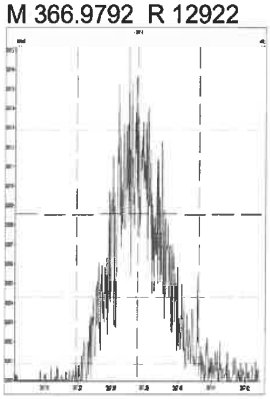

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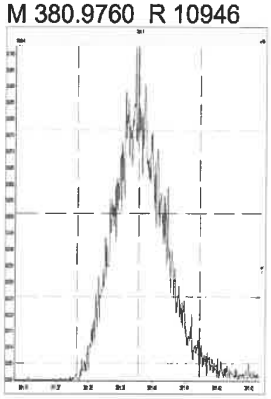

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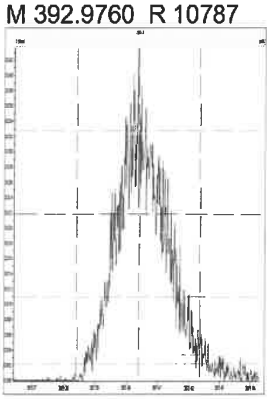

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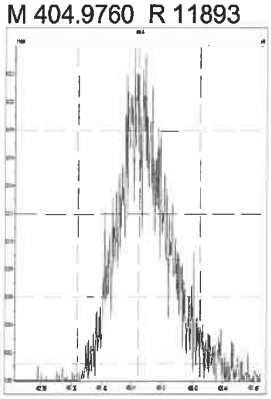

M 416.9760 R 12563

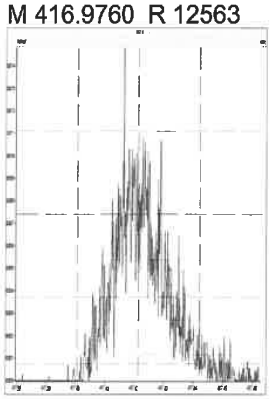

M 318.9792 R 11522

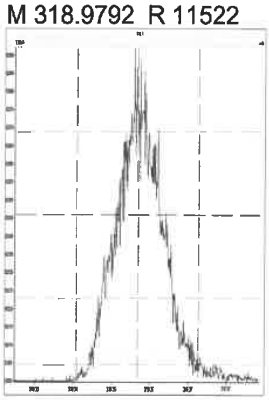

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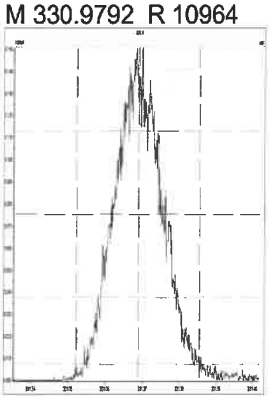

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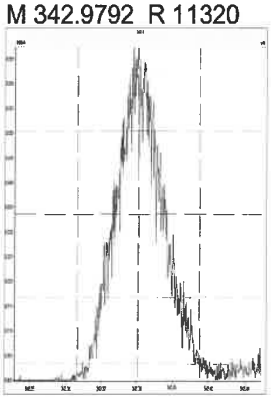

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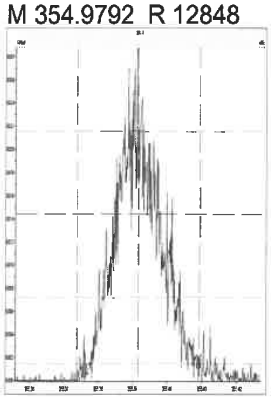

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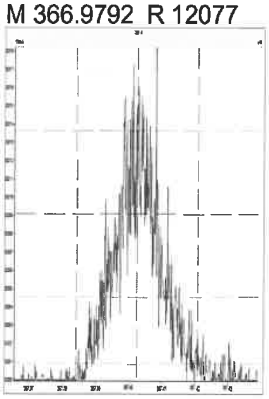

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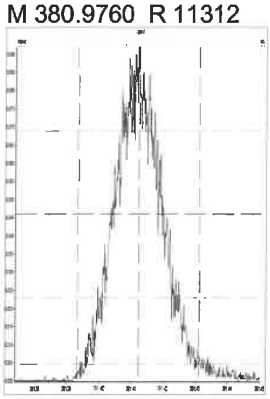

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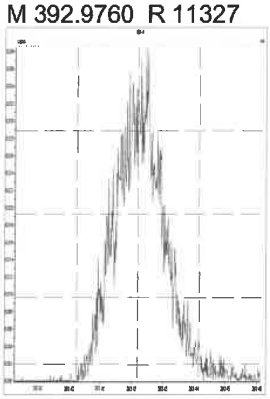

M 404.9760 R 12794

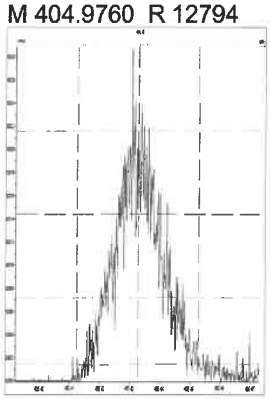

M 416.9760 R 12362

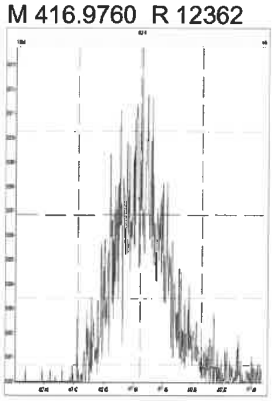

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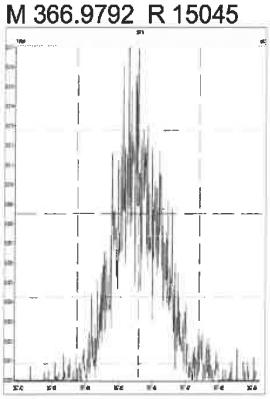

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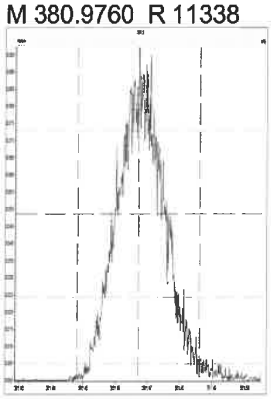

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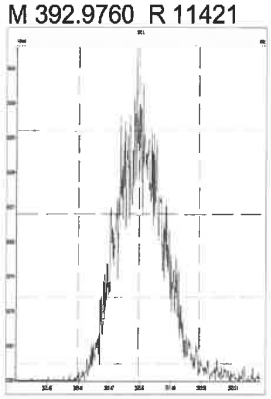

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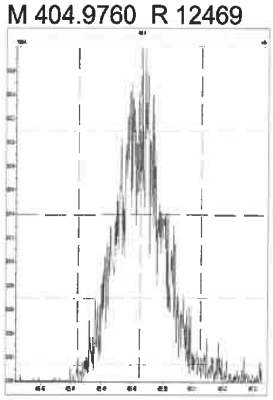

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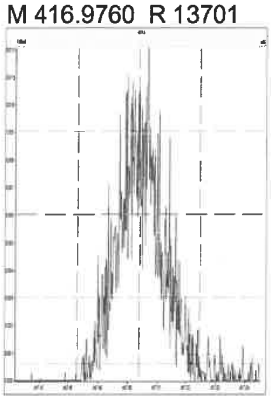

M 430.9728 R 11471

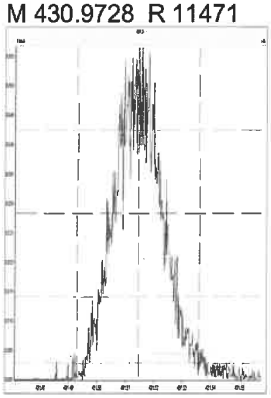

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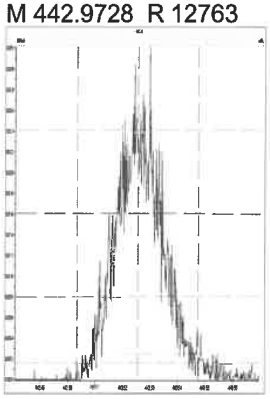

M 454.9728 R 12499

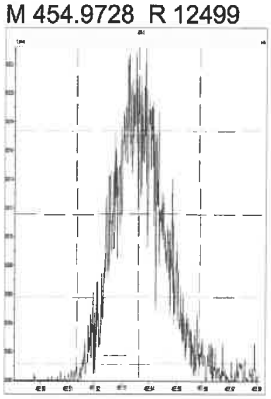

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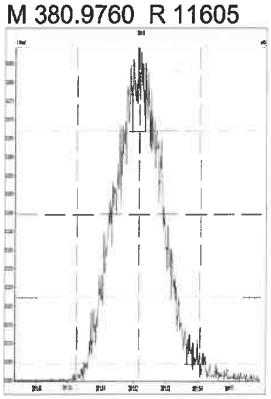

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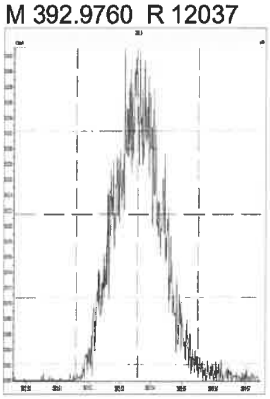

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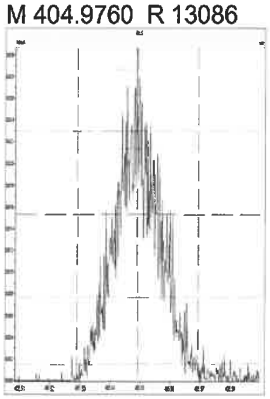

M 416.9760 R 13472

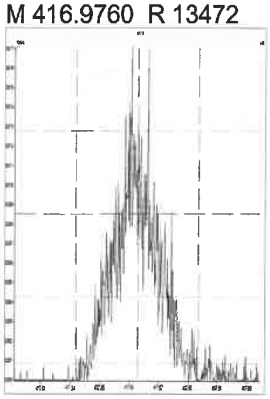

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Printed: Sunday, August 15, 2021 23:02:21 Pacific Daylight Time

M 430.9728 R 11876

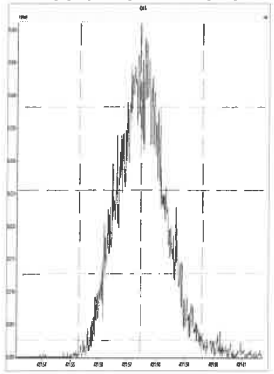

M 442.9728 R 12438

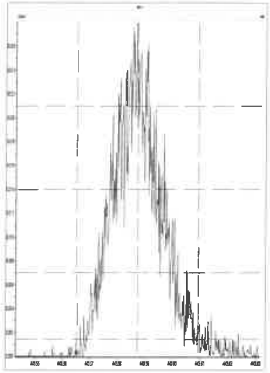

M 454.9728 R 12746

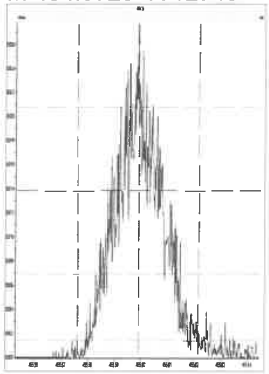

M 466.9728 R 12428

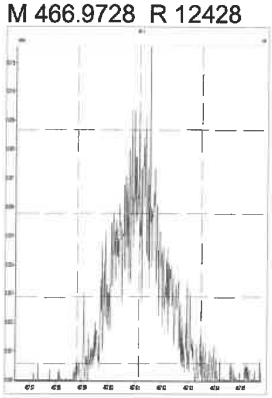

M 480.9696 R 11585

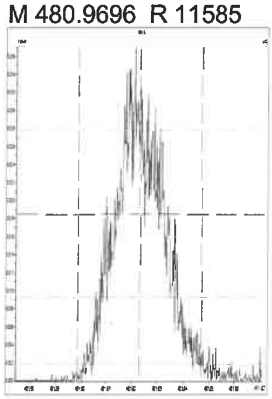

M 380.9760 R 11600

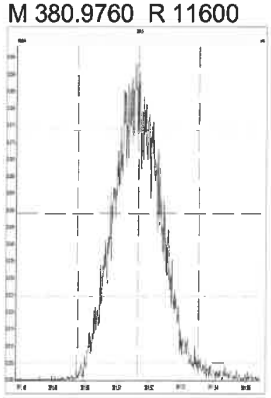

M 392.9760 R 12164

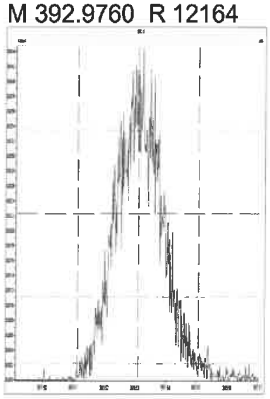

M 404.9760 R 12170

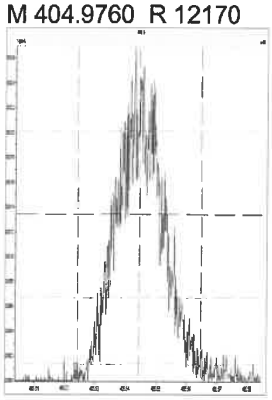

M 416.9760 R 13735

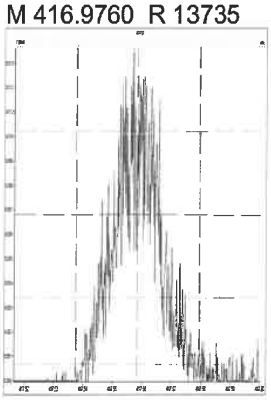

M 430.9728 R 11746

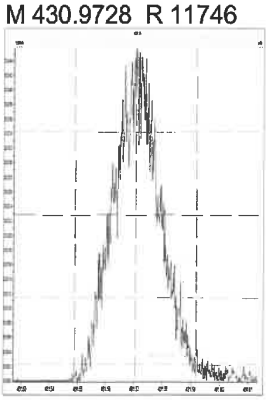

M 442.9728 R 12105

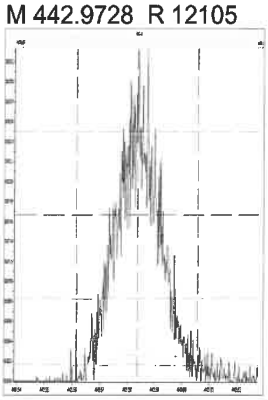

M 454.9728 R 12194

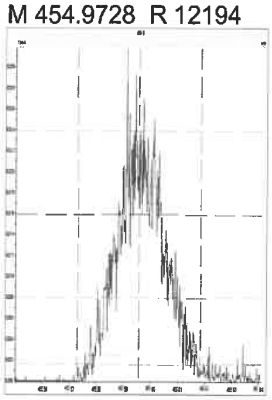

M 466.9728 R 13883

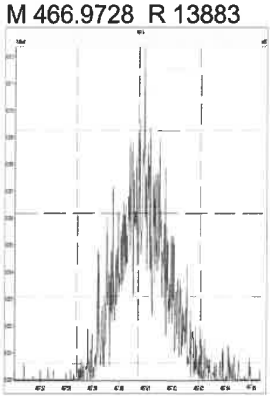

M 480.9696 R 11904

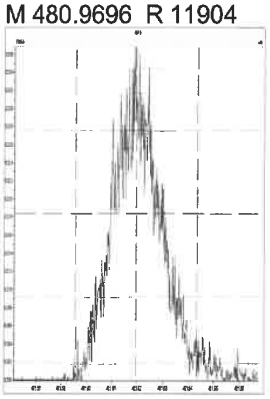

M 492.9696 R 12490

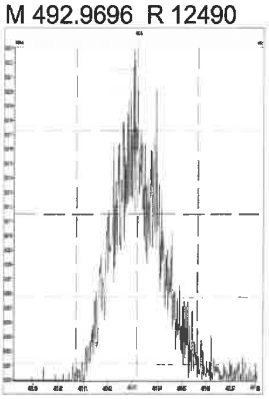

M 504.9696 R 13061

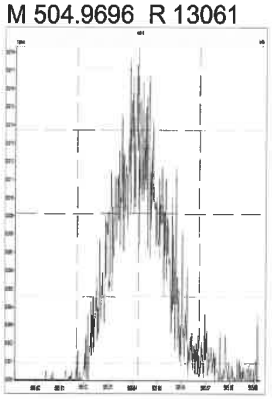

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M 516.9697_R 14461

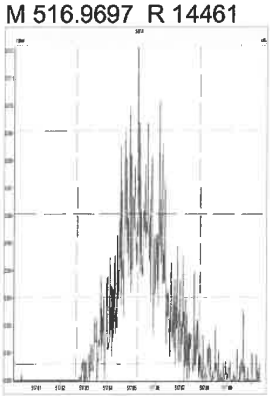

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_58.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 15-Aug-2021 12:57:08 ALS Bottle#: 2 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081321D CS-4 HRDXNL4_00099
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 17:09:33 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	44154290	0.77	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	62702241	0.76	1.6249	87.4	87.4	0.1320	0.1320	87.39	
2,3,7,8-TCDF	17.371	6473515	0.81	1.0239	10.1	10.1	0.0243	0.0243	101	
A Non-2,3,7,8-sub-TCDF	17.046						0.0243	0.0243		Rn
S Total TCDF					10.1	10.1	0.0243	0.0243		
D 13C-2,3,7,8-TCDD	18.051	39560611	0.78	0.8993	99.6	99.6	0.1647	0.1647	99.63	
2,3,7,8-TCDD	18.081	4788011	0.79	1.2541	9.651	9.651	0.0173	0.0173	96.51	
$ 37Cl4-2,3,7,8-TCDD	18.081	4793093		1.1071	9.805	9.805	0.0147	0.0147	98.05	
A Non-2,3,7,8-sub-TCDD	17.500						0.0173	0.0173		
S Total TCDD					9.651	9.651	0.0173	0.0173		
D 13C-1,2,3,7,8-PeCDF	22.367	47659596	1.55	1.2101	89.2	89.2	0.2301	0.2301	89.20	
1,2,3,7,8-PeCDF	22.394	24663836	1.60	1.0611	48.8	48.8	0.1800	0.1800	97.54	
D 13C-2,3,4,7,8-PeCDF	23.703	48173059	1.59	1.2395	88.0	88.0	0.2247	0.2247	88.02	
2,3,4,7,8-PeCDF	23.730	24472206	1.59	1.0184	49.9	49.9	0.2017	0.2017	99.76	
A F1 PeCDFs	20.093						0.006049	0.006049		
A Non-2,3,7,8-sub-PeCDF	23.234						0.1904	0.1904		n
S Total PeCDF					98.7	98.7	0.1908	0.1908		
D 13C-1,2,3,7,8-PeCDD	24.426	32700815	1.60	0.7612	97.3	97.3	0.0989	0.0989	97.29	
1,2,3,7,8-PeCDD	24.453	17150058	1.63	1.0484	50.0	50.0	0.0681	0.0681	100	
A Non-2,3,7,8-sub-PeCDD	23.328						0.0681	0.0681		Rn
S Total PeCDD					50.0	50.0	0.0681	0.0681		
D 13C-1,2,3,4,7,8-HxCDF	30.503	40456203	0.51	1.0837	87.0	87.0	0.4500	0.4500	86.97	
1,2,3,4,7,8-HxCDF	30.529	21895472	1.22	1.0851	49.9	49.9	0.3669	0.3669	99.75	
D 13C-1,2,3,6,7,8-HxCDF	30.689	41615851	0.52	1.1279	86.0	86.0	0.4323	0.4323	85.96	
1,2,3,6,7,8-HxCDF	30.716	24095683	1.22	1.1260	51.4	51.4	0.3495	0.3495	103	
D 13C-2,3,4,6,7,8-HxCDF	31.514	39613824	0.50	1.0637	86.8	86.8	0.4584	0.4584	86.76	
2,3,4,6,7,8-HxCDF	31.528	23153444	1.22	1.1675	50.1	50.1	0.2735	0.2735	100	
D 13C-1,2,3,7,8,9-HxCDF	32.326	36733082	0.51	0.9676	88.4	88.4	0.5039	0.5039	88.44	
1,2,3,7,8,9-HxCDF	32.340	21367812	1.22	1.1664	49.9	49.9	0.2792	0.2792	99.75	
A Non-2,3,7,8-sub-HxCDF	30.197						0.3128	0.3128		
S Total HxCDF					201.2	201.2	0.3173	0.3173		

Report Date: 17-Aug-2021 17:09:33 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_58.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.140	42924278	1.22	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	29714483	1.26	0.7334	94.4	94.4	0.3836	0.3836	94.39	
1,2,3,4,7,8-HxCDD	31.714	15506883	1.28	1.0640	49.0	49.0	0.1847	0.1847	98.09	
D 13C-1,2,3,6,7,8-HxCDD	31.807	36679468	1.24	0.8802	97.1	97.1	0.3196	0.3196	97.08	
1,2,3,6,7,8-HxCDD	31.820	18436565	1.28	1.0001	50.3	50.3	0.1776	0.1776	101	
1,2,3,7,8,9-HxCDD	32.153	19557017	1.25	1.1325	52.0	52.0	0.1648	0.1648	104	
A Non-2,3,7,8-sub-HxCDD	30.882						0.1751	0.1751		
S Total HxCDD					151.3	151.3	0.1757	0.1757		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	30497985	0.43	0.7730	91.9	91.9	1.216	1.216	91.91	
1,2,3,4,6,7,8-HpCDF	33.778	22132618	1.06	1.4413	50.4	50.4	0.5070	0.5070	101	
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	28877551	0.43	0.7008	96.0	96.0	1.342	1.342	96.00	
1,2,3,4,7,8,9-HpCDF	34.860	19089828	1.05	1.3174	50.2	50.2	0.6993	0.6993	100	
A Non-2,3,7,8-sub-HpCDF	34.319						0.5909	0.5909		
S Total HpCDF					100.5	100.5	0.6031	0.6031		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	28375268	1.02	0.6472	102.1	102.1	0.6346	0.6346	102	
1,2,3,4,6,7,8-HpCDD	34.580	15541402	1.04	1.0943	50.1	50.1	0.2818	0.2818	100	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2818	0.2818		
S Total HpCDD					50.1	50.1	0.2818	0.2818		
D 13C-OCDD	36.926	41493319	0.87	0.4472	216.2	216.2	0.2921	0.2921	108	
OCDF	37.022	28705372	0.90	1.4382	96.2	96.2	0.1032	0.1032	96.21	
OCDD	36.938	23294999	0.91	1.1070	101.4	101.4	0.1451	0.1451	101	

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_58.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 15-Aug-2021 12:57:08 ALS Bottle#: 2 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081321D CS-4 HRDXNL4_00099
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 17:09:33 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		19258276	4744705	2581	6452	1838		
333.9339	17.855	17.855	0		24896014	6103590	3845	9612	1587	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.972	27018352	6321207	5322	13305	1188		
317.9389	17.356	17.356	0	0.972	35683889	8317460	3983	9957	2088	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.371	0	1.001	2901392	663581	663	1657	1001		
305.8987	17.371	17.371	0	1.001	3572123	819709	795	1987	1031	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.978	17.046	-4	0.978	19234	4251	663	1657	6		
305.8987	16.978	17.046	-4	0.978	16679	5256	795	1987	7	1.15(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	17308991	3882790	2581	6452	1504		
333.9339	18.051	18.051	0	1.011	22251620	4958178	3845	9612	1290	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.081	18.081	0	1.002	2120340	474703	386	965	1230		
321.8936	18.081	18.081	0	1.002	2667671	579939	382	955	1518	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.081	18.081	0	1.013	4793093	1047546	706	1765	1484		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.500						386	965			
321.8936	17.500						382	955			
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	28966227	4904380	7227	18067	679		
353.8970	22.367	22.367	0	1.253	18693369	3119853	4858	12145	642	1.55(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.394	22.394	0	1.001	15182223	2561895	3747	9367	684		
341.8567	22.394	22.394	0	1.001	9481613	1577135	2384	5960	662	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.328	29541241	4612286	7227	18067	638		
353.8970	23.703	23.703	0	1.328	18631818	2850079	4858	12145	587	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.730	23.730	0	1.001	15011720	2327261	3747	9367	621		
341.8567	23.730	23.730	0	1.001	9460486	1456585	2384	5960	611	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						76	190			
341.8567	20.093						119	297			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.926	23.241	-19	1.025	152021	19792	3747	9367	5		
341.8567	22.926	23.241	-19	1.025	92129	14545	2384	5960	6	1.65(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.368	20104945	2889985	2146	5365	1347		
369.8919	24.426	24.426	0	1.368	12595870	1834519	1120	2800	1638	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453	24.453	0	1.001	10624142	1526874	850	2125	1796		
357.8516	24.453	24.453	0	1.001	6525916	930849	500	1250	1862	1.63(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	25.340	23.349	119	1.037	25556	2409	850	2125	3		
357.8516	25.421	23.349	124	1.041	19528	1951	500	1250	4	1.31(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	13733107	2517846	7422	18555	339		
385.8610	30.503	30.503	0	0.949	26723096	4978674	13859	34647	359	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.001	12038734	2231666	6398	15995	349		
375.8178	30.529	30.529	0	1.001	9856738	1824891	5540	13850	329	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	14193735	2609298	7422	18555	352		
385.8610	30.689	30.689	0	0.955	27422116	4973713	13859	34647	359	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.716	30.716	0	1.001	13252218	2397484	6398	15995	375		
375.8178	30.702	30.716	-1	1.000	10843465	1965337	5540	13850	355	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	13245048	3148285	7422	18555	424		
385.8610	31.514	31.514	0	0.981	26368776	6198760	13859	34647	447	0.50(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528	31.528	0	1.000	12730903	3019291	6398	15995	472		
375.8178	31.528	31.528	0	1.000	10422541	2480179	5540	13850	448	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.326	0	1.006	12429662	3103206	7422	18555	418		
385.8610	32.326	32.326	0	1.006	24303420	6062161	13859	34647	437	0.51(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.340	32.340	0	1.000	11729403	2923029	6398	15995	457		
375.8178	32.340	32.340	0	1.000	9638409	2365416	5540	13850	427	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						6398	15995			
375.8178	30.197						5540	13850			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.140	0		23631653	5988483	6625	16562	904		
403.8529	32.140	32.140	0		19292625	4922455	5653	14132	871	1.22(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	16584899	4468254	6625	16562	674		
403.8529	31.701	31.701	0	0.986	13129584	3547639	5653	14132	628	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.714	0	1.000	8700147	2349323	3785	9462	621		
391.8127	31.714	31.714	0	1.000	6806736	1858231	2518	6295	738	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	20328106	4929564	6625	16562	744		
403.8529	31.807	31.807	0	0.990	16351362	3941164	5653	14132	697	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.820	31.820	0	1.000	10340391	2460065	3785	9462	650		
391.8127	31.820	31.820	0	1.000	8096174	1966859	2518	6295	781	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.153	0	1.014	10881969	2760834	3785	9462	729		
391.8127	32.153	32.153	0	1.014	8675048	2225531	2518	6295	884	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						3785	9462			
391.8127	30.882						2518	6295			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.766	0	1.051	9213492	2934180	12891	32227	228		
419.8220	33.766	33.766	0	1.051	21284493	6725009	28143	70357	239	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	11385299	3603481	15773	39432	228		
409.7789	33.778	33.778	0	1.000	10747319	3358199	12462	31155	269	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.084	8657038	2329753	12891	32227	181		
419.8220	34.847	34.847	0	1.084	20220513	5332812	28143	70357	189	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860	34.860	0	1.000	9767554	2628655	15773	39432	167		
409.7789	34.860	34.860	0	1.000	9322274	2518767	12462	31155	202	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						15773	39432			
409.7789	34.319						12462	31155			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.076	14308566	4030425	9775	24437	412		
437.8140	34.568	34.568	0	1.076	14066702	3947466	8151	20377	484	1.02(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	7905762	2183353	4761	11902	459		
425.7737	34.568	34.580	-1	1.000	7635640	2156618	5081	12702	424	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						4761	11902			
425.7737	34.301						5081	12702			
13C-OCDD											
469.7779	36.926	36.926	0	1.149	19363532	4673482	3150	7875	1484		
471.7750	36.926	36.926	0	1.149	22129787	5304210	2551	6377	2079	0.87(0.76-1.02)	
OCDF											
441.7428	37.022	37.022	0	1.003	13613416	3321409	1557	3892	2133		
443.7399	37.022	37.022	0	1.003	15091956	3635877	1406	3515	2586	0.90(0.76-1.02)	
OCDD											
457.7377	36.938	36.938	0	1.000	11070949	2637763	1244	3110	2120		
459.7348	36.938	36.938	0	1.000	12224050	2894165	1961	4902	1476	0.91(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 17:09:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_58.d		
Injection Date:	15-Aug-2021 12:57:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

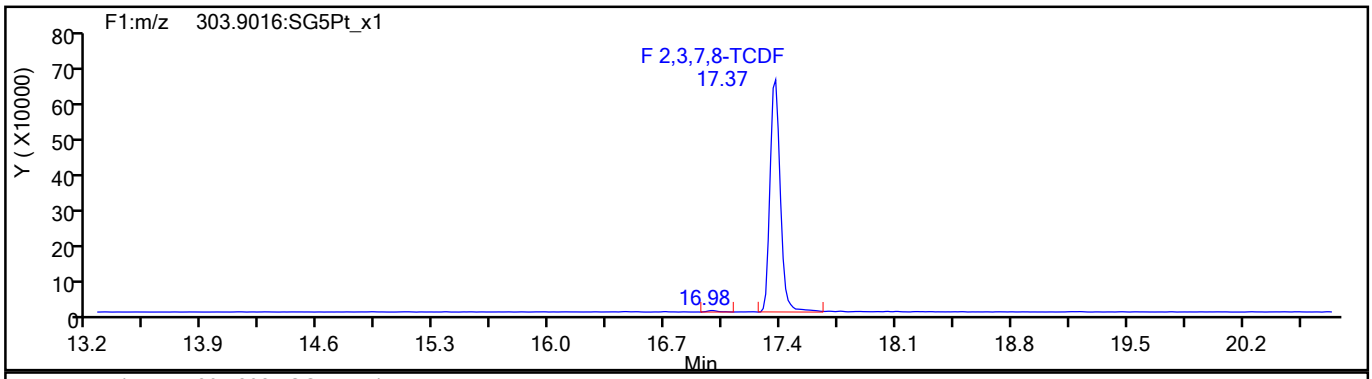

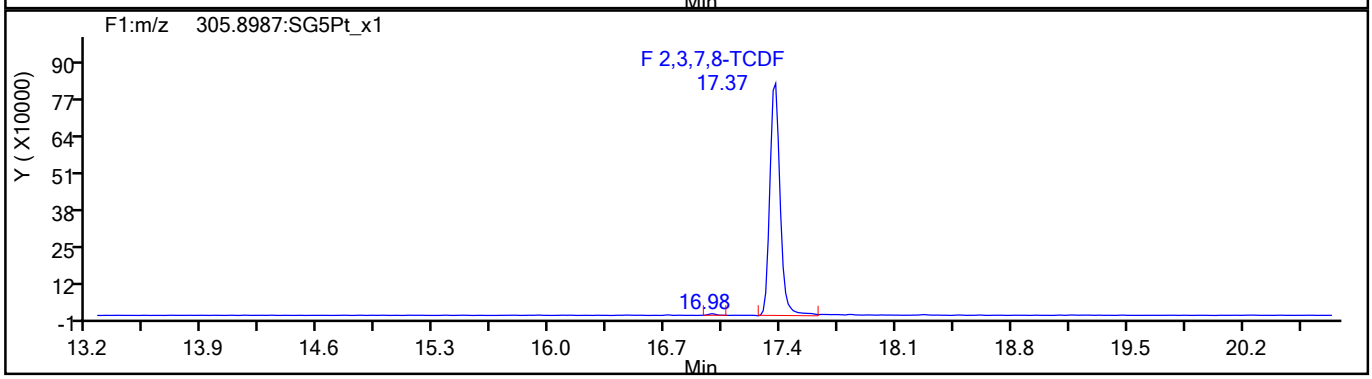

TCDF Standards

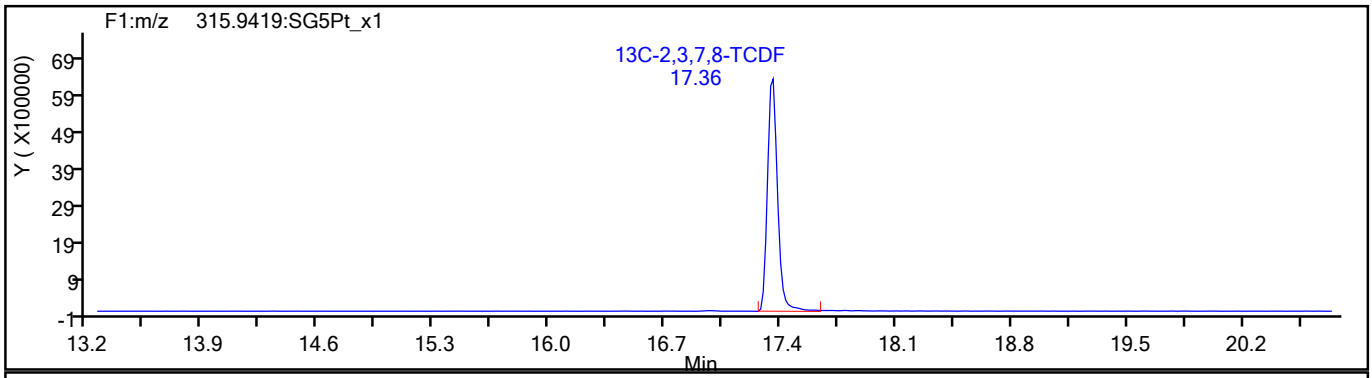

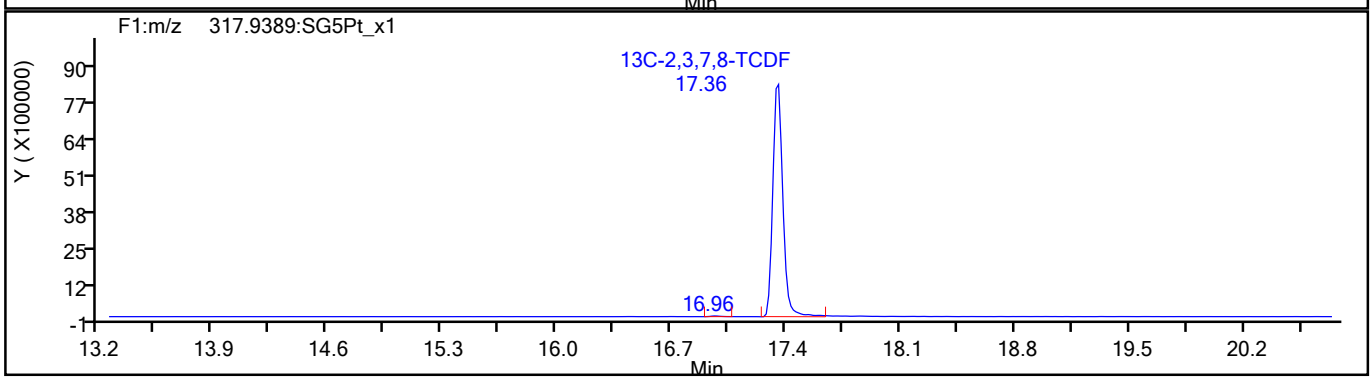

776566

Report Date: 17-Aug-2021 17:09:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_58.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

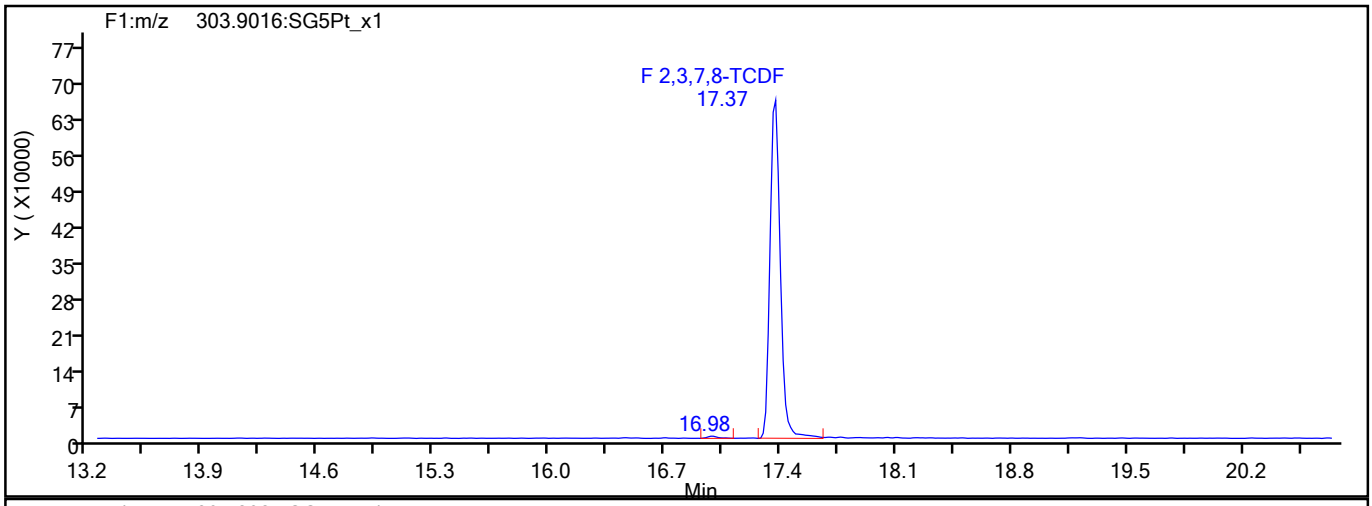

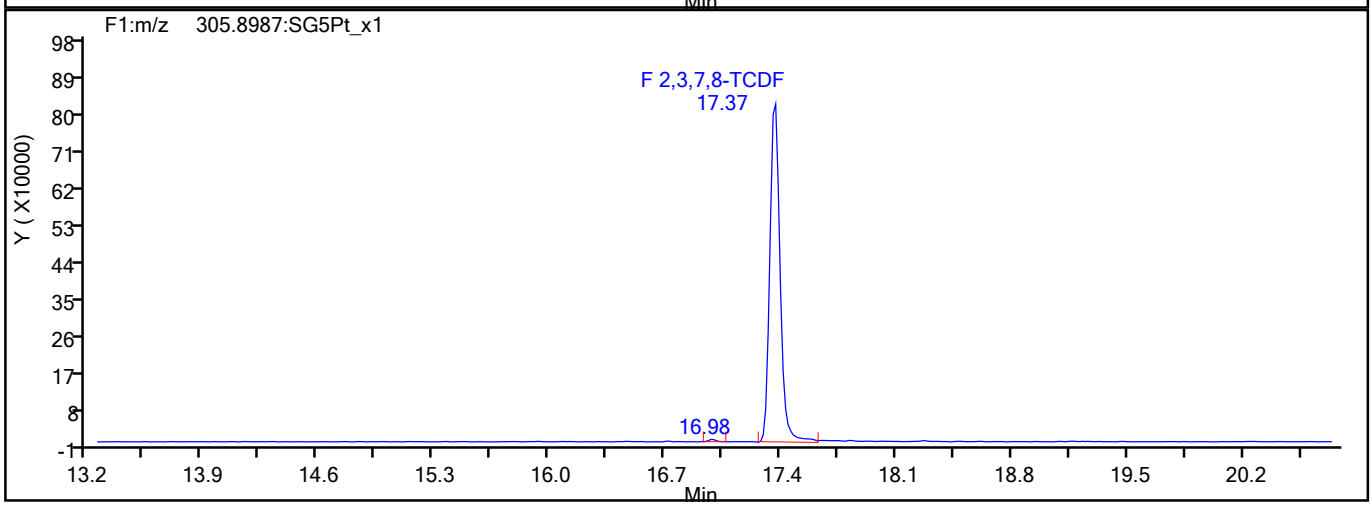

TCDF Interference Mass

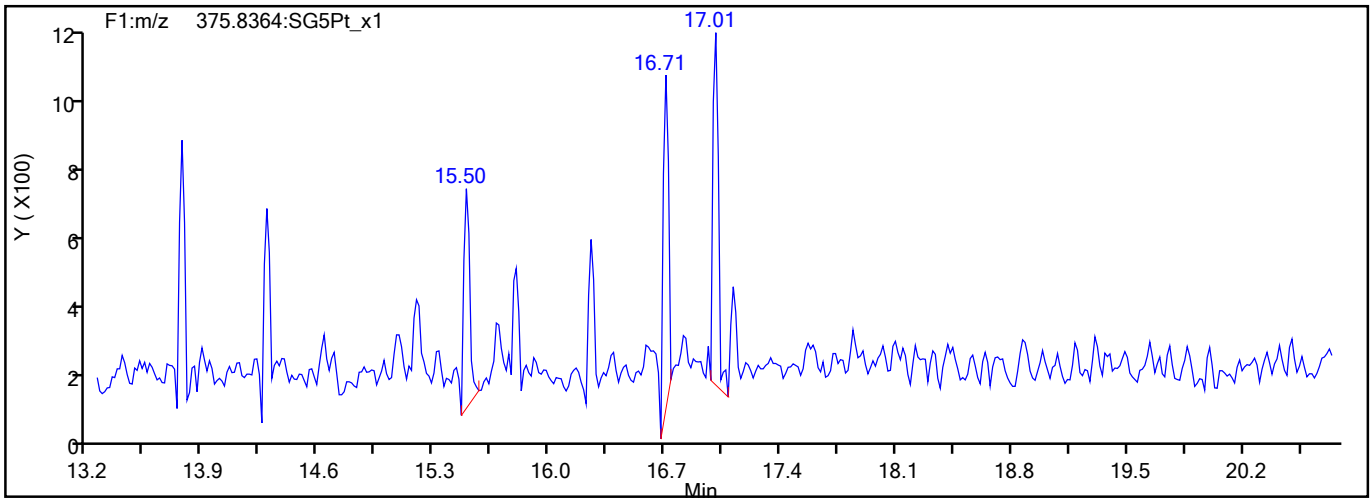

776567

Report Date: 17-Aug-2021 17:09:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_58.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

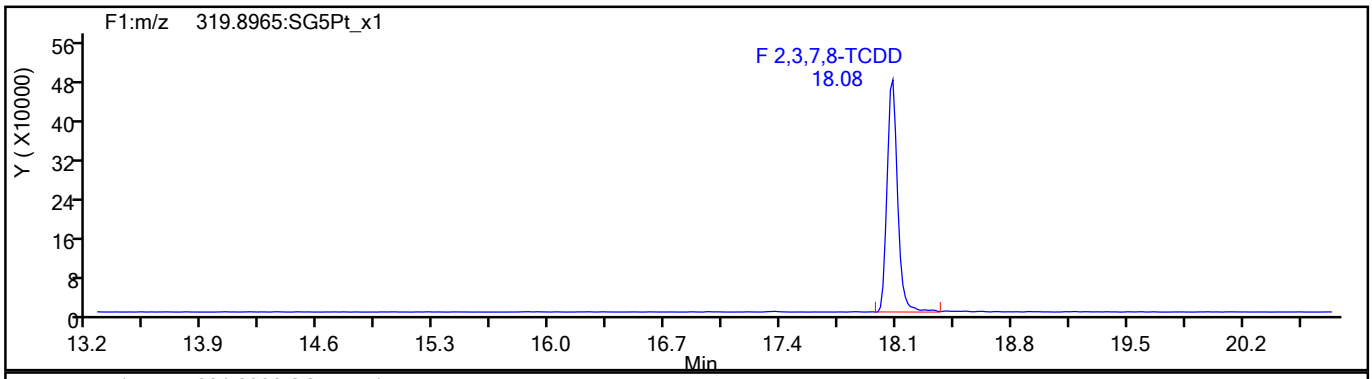

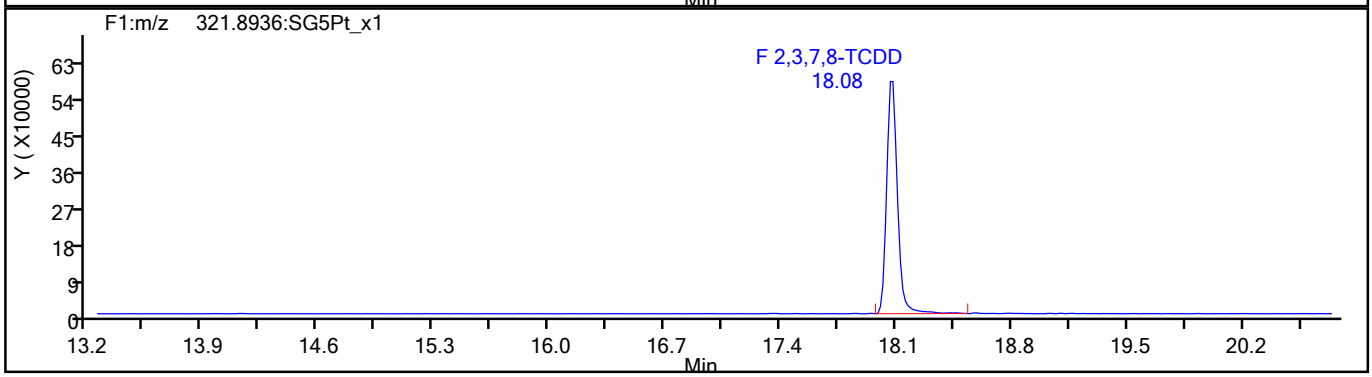

TCDD Standards

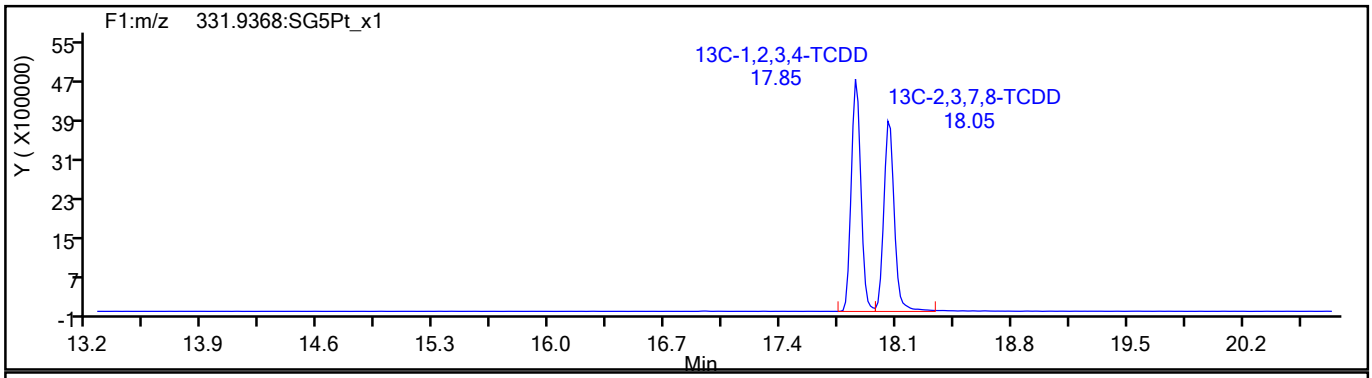

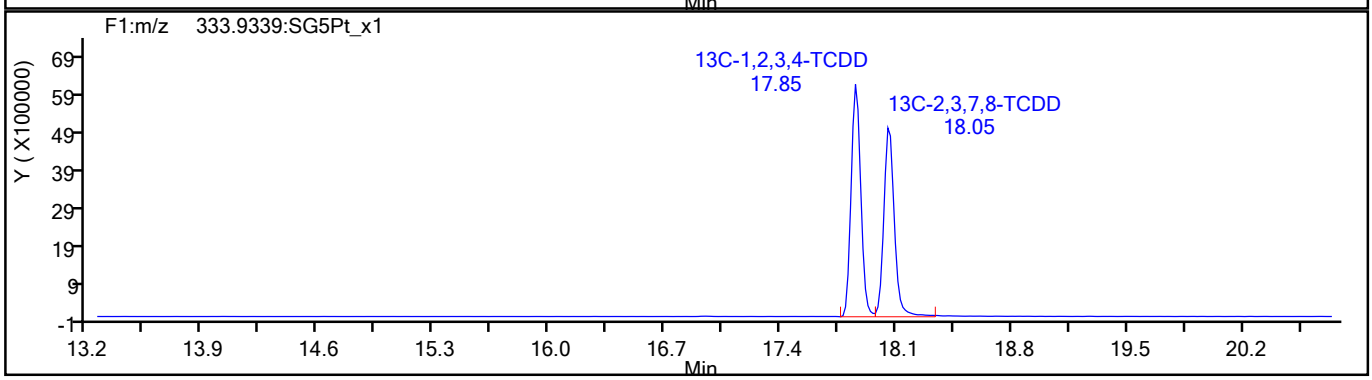

776568

Report Date: 17-Aug-2021 17:09:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_58.d		
Injection Date:	15-Aug-2021 12:57:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

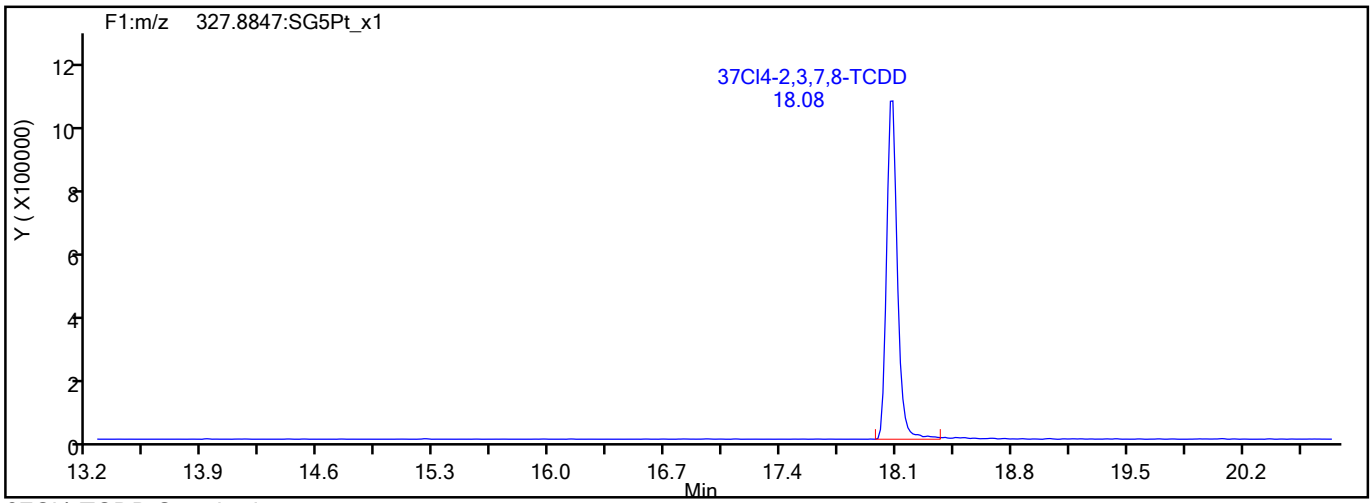

37Cl4-TCDD Standards

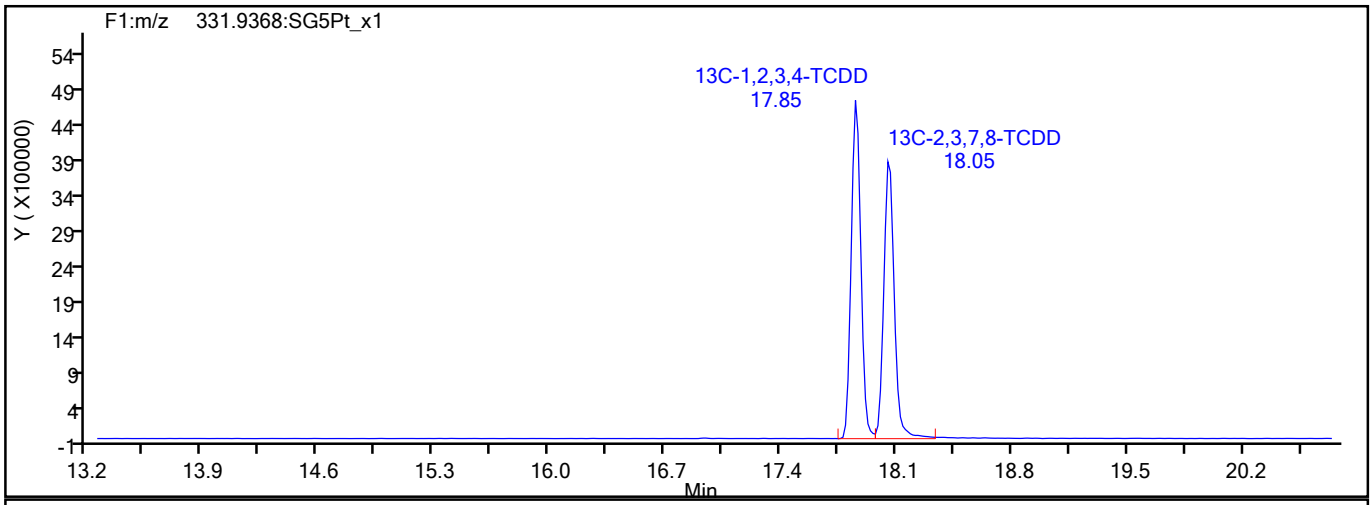

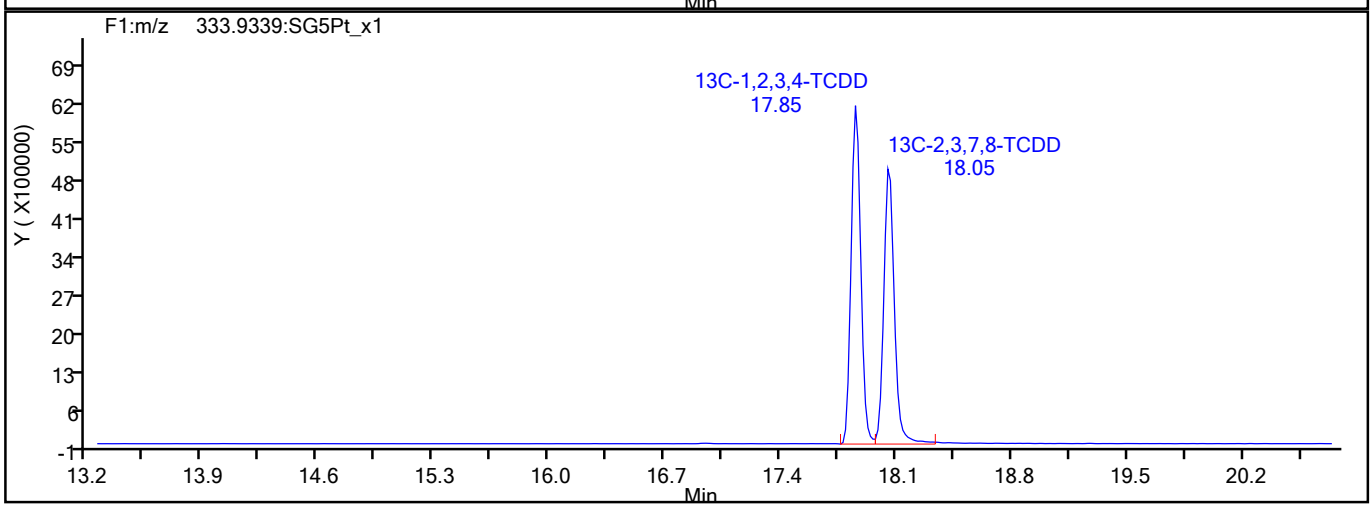

776569

Report Date: 17-Aug-2021 17:09:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_58.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

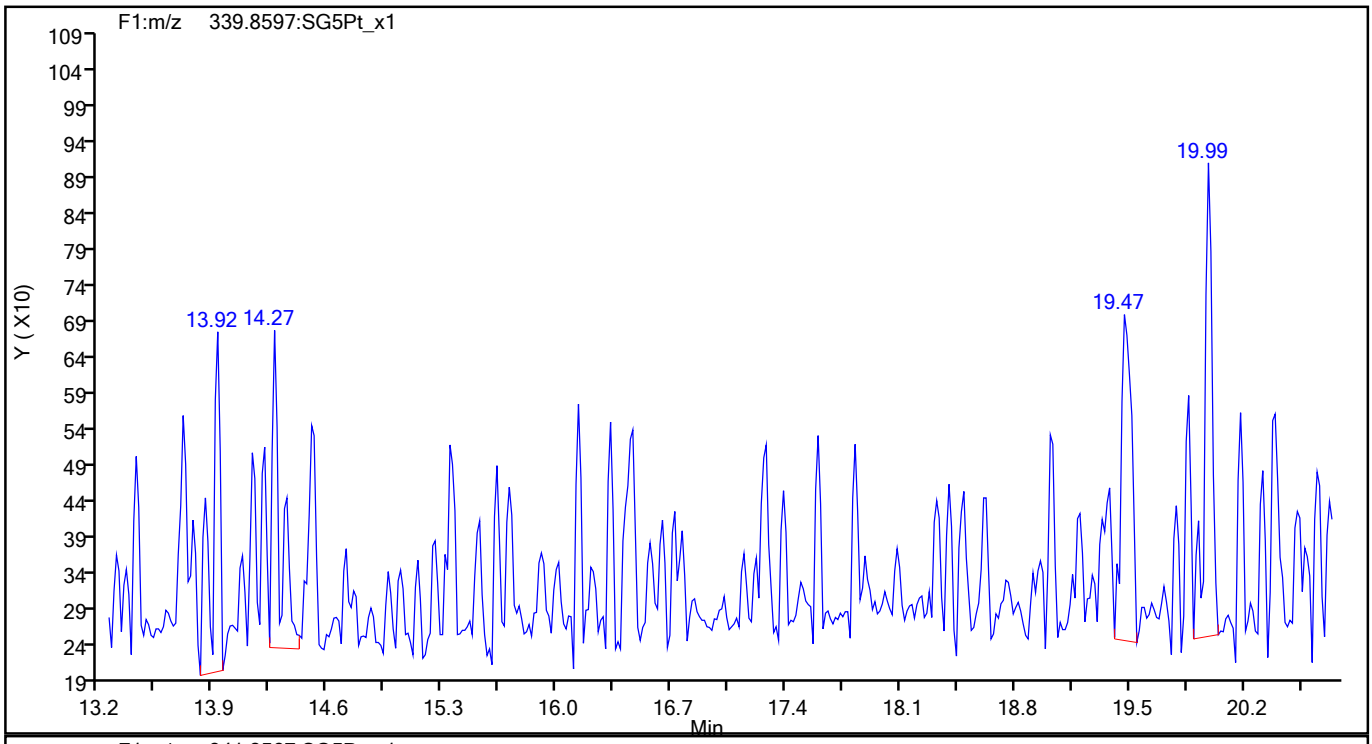

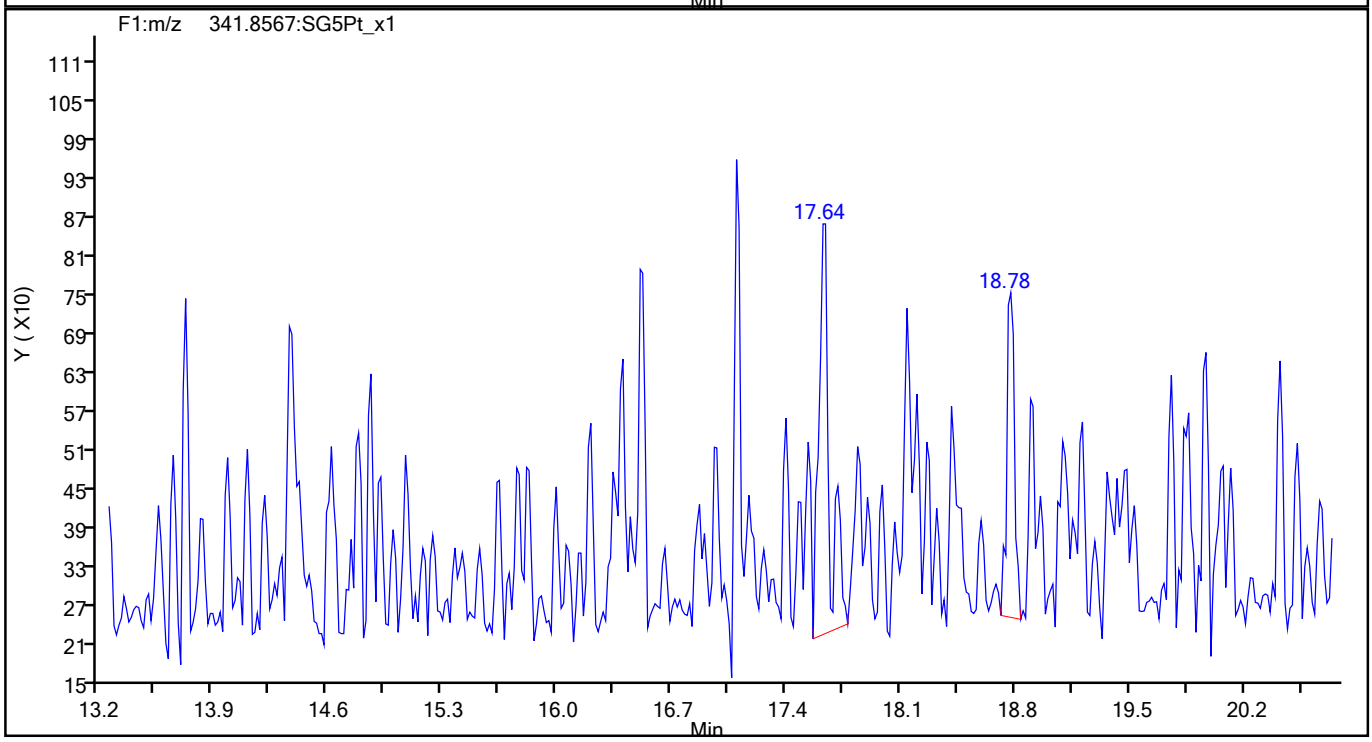

776570

Report Date: 17-Aug-2021 17:09:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_58.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

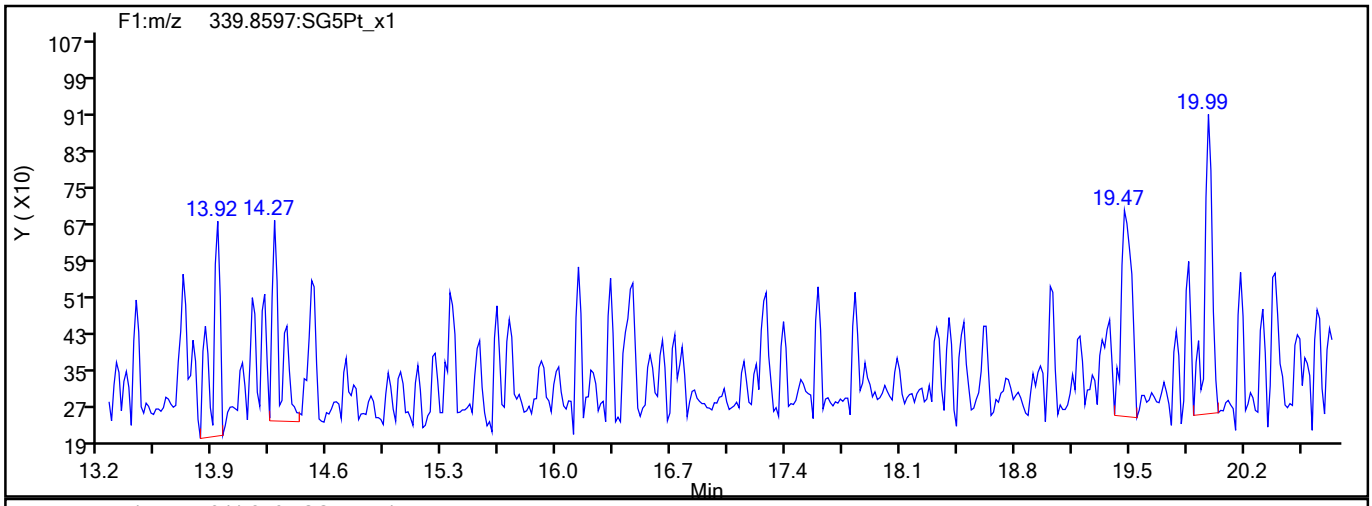

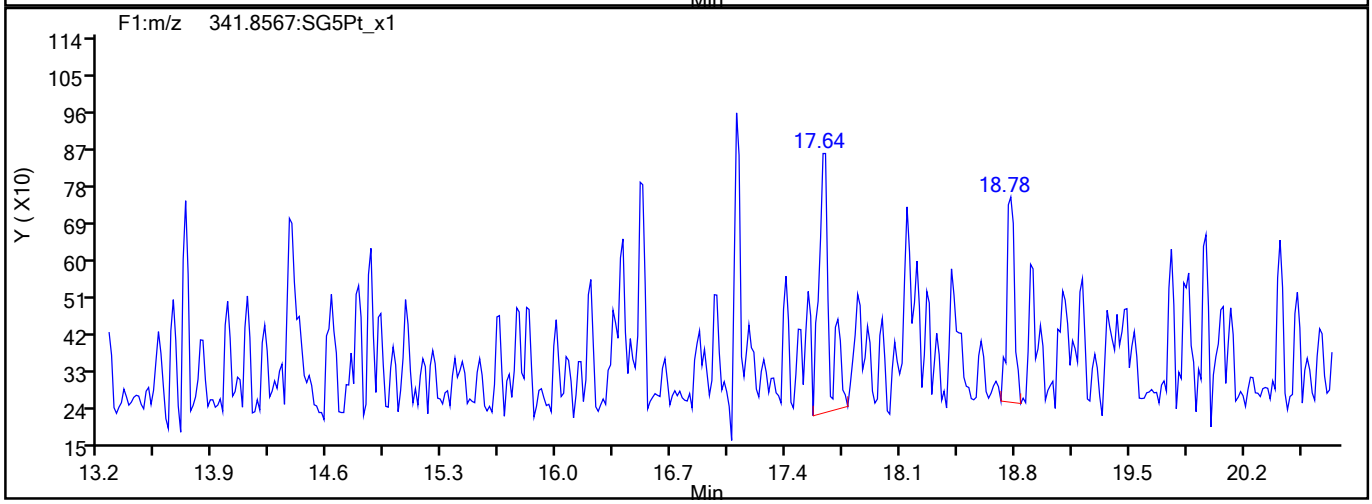

F1 PeCDFs Interference Mass

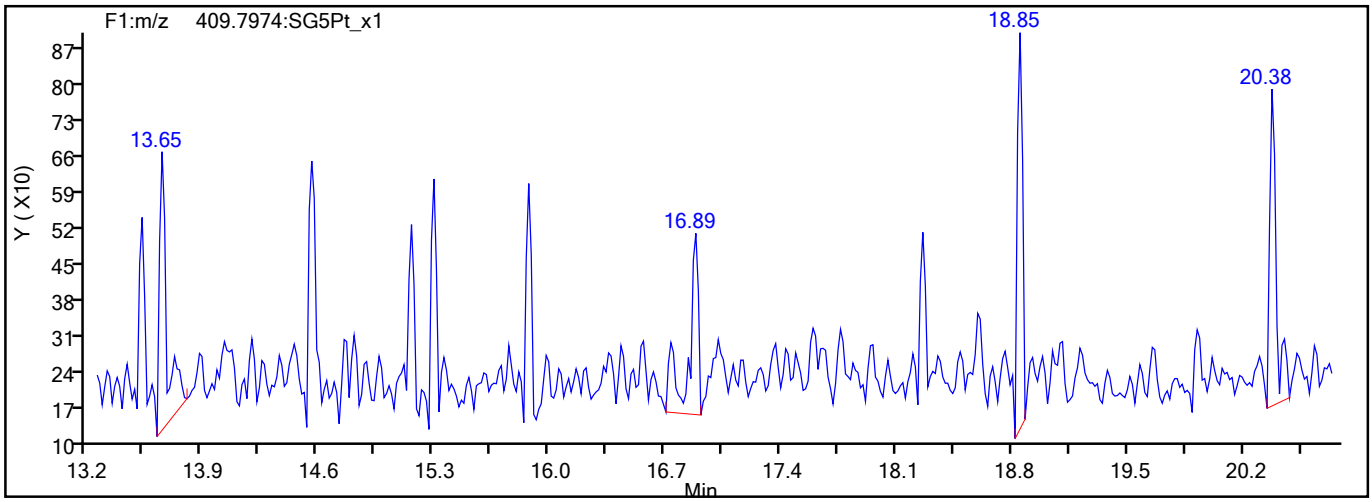

776571

Report Date: 17-Aug-2021 17:09:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_58.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

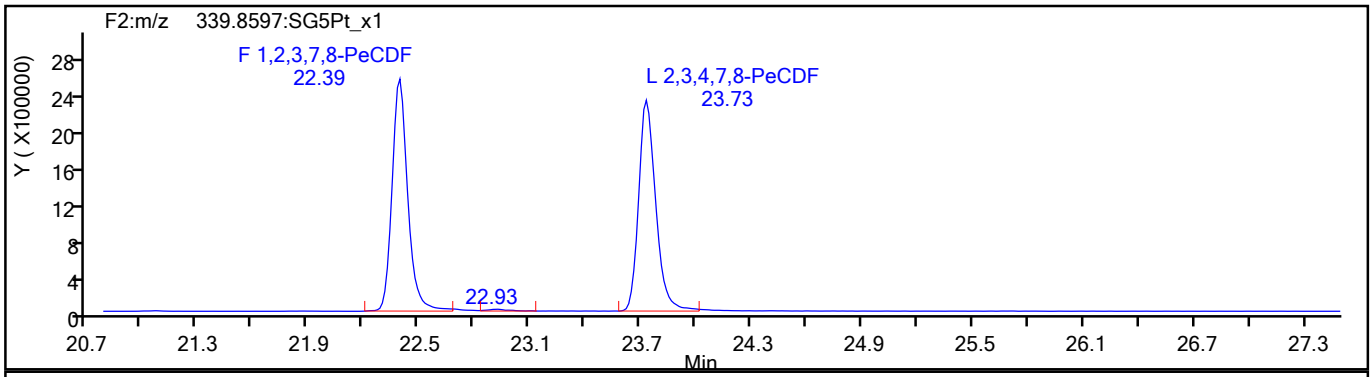

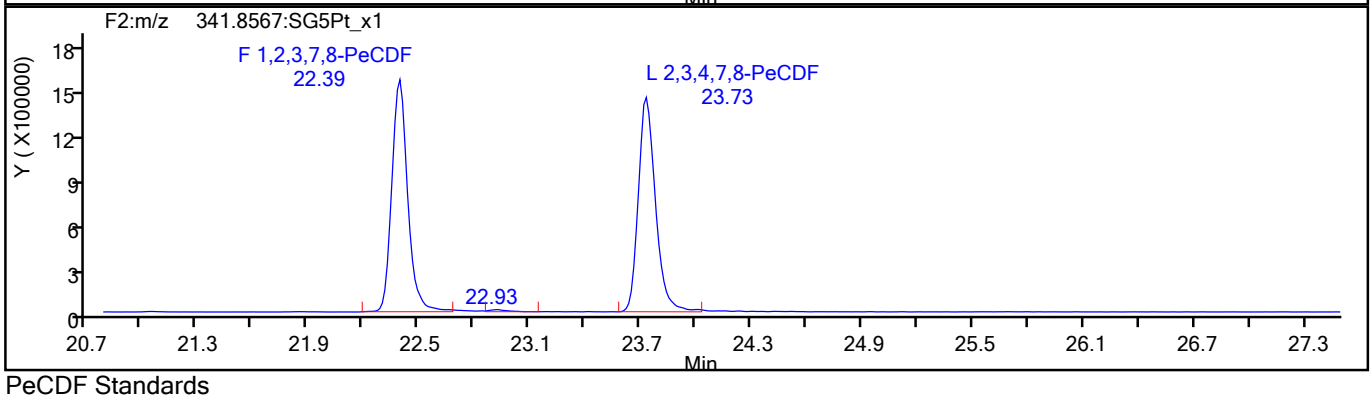

PeCDF Standards

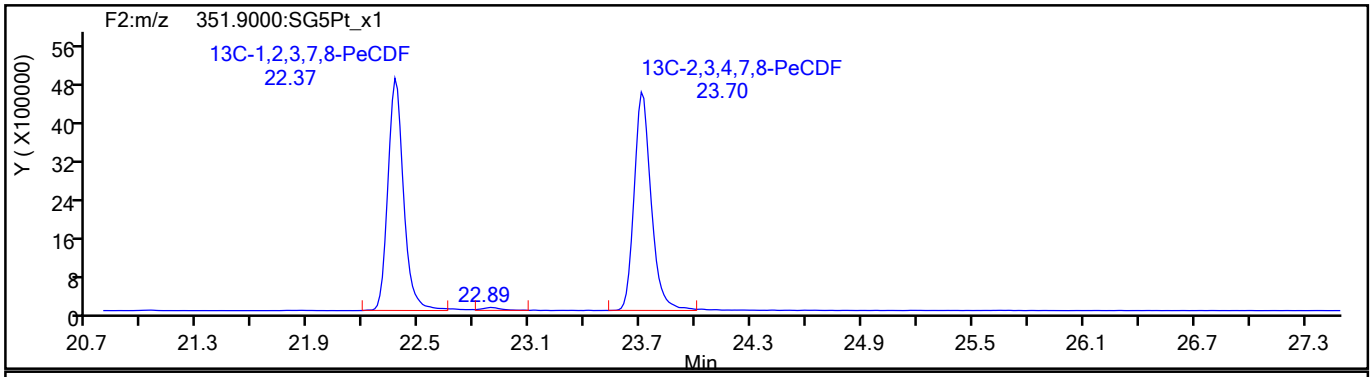

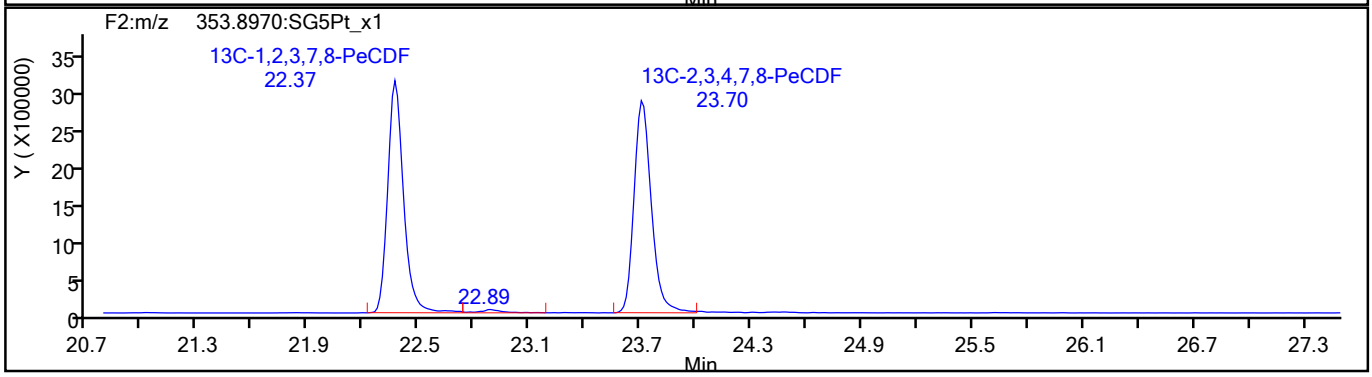

776572

Report Date: 17-Aug-2021 17:09:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

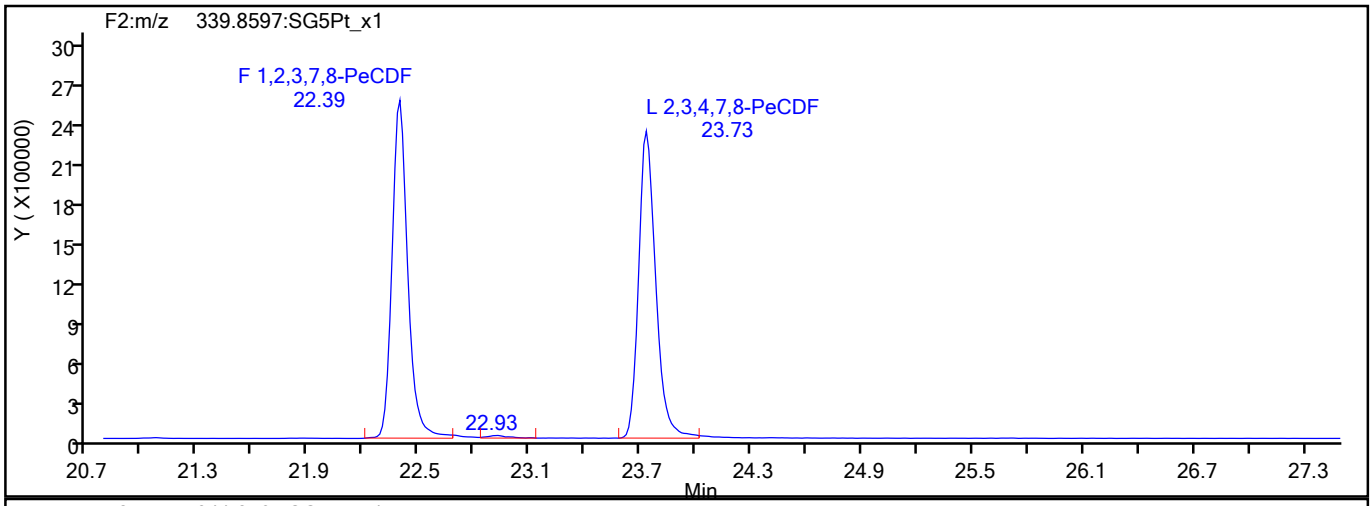

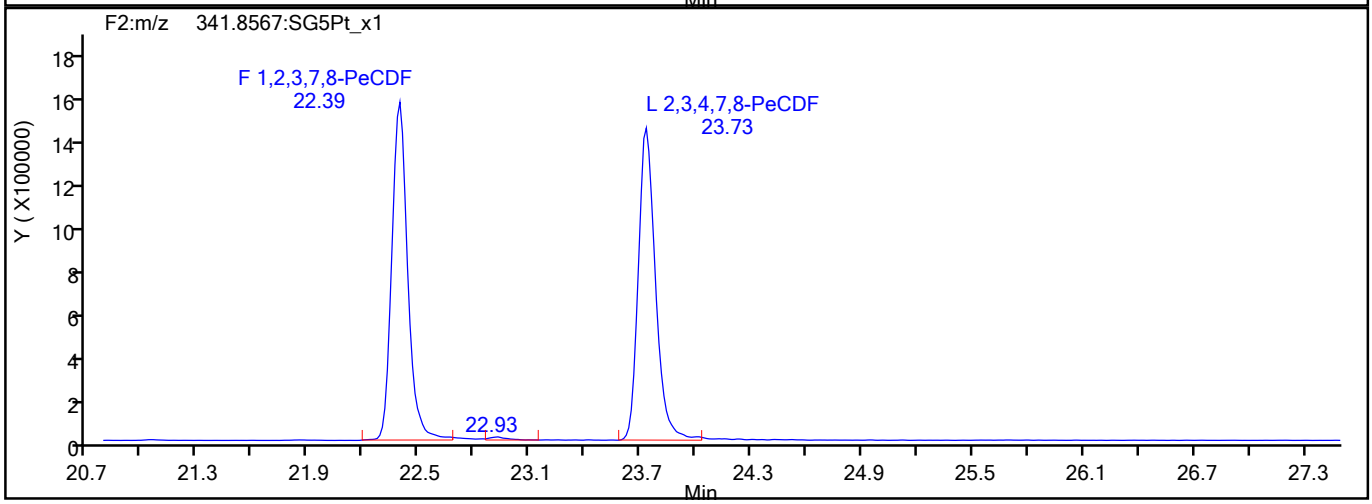

PeCDF Interference Mass

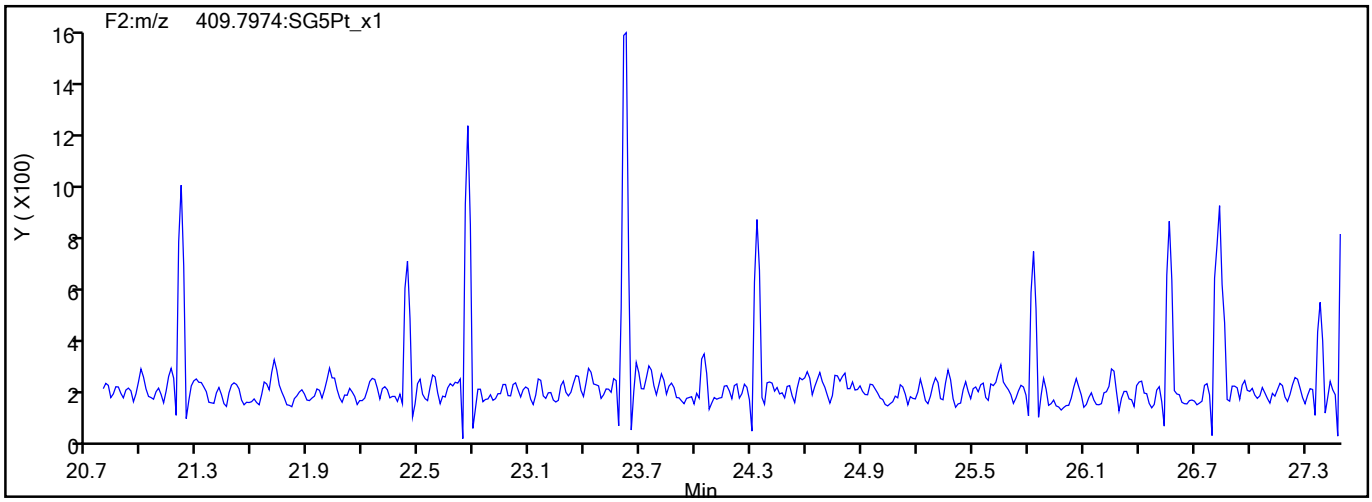

776573

Report Date: 17-Aug-2021 17:09:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_58.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

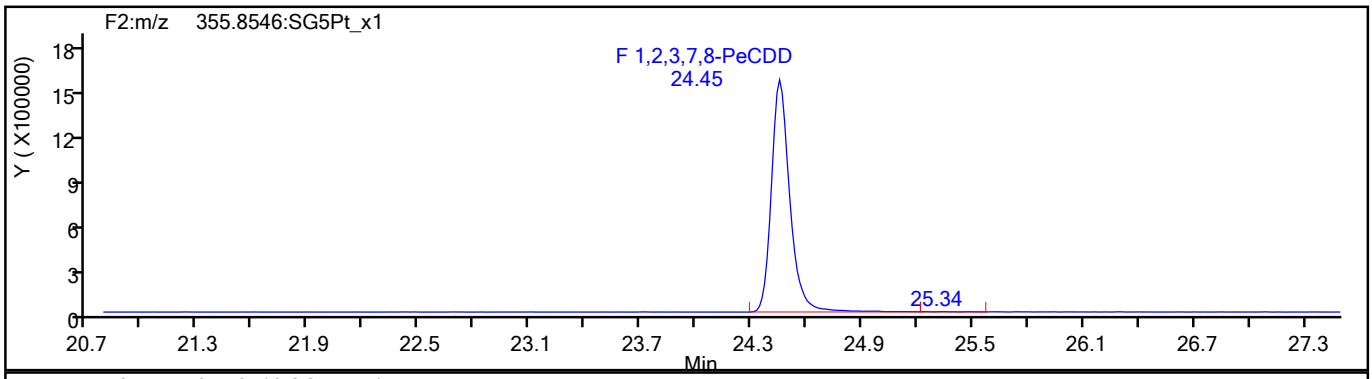

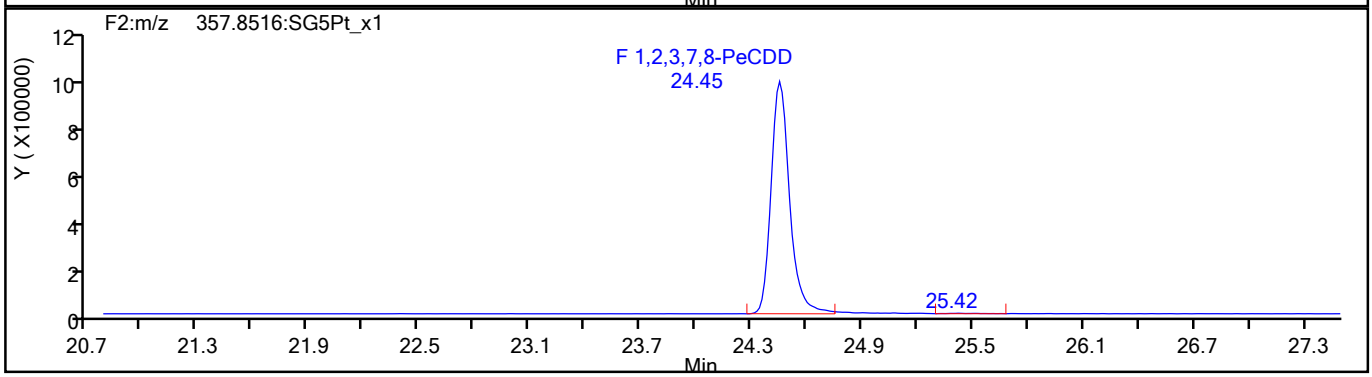

PeCDD Standards

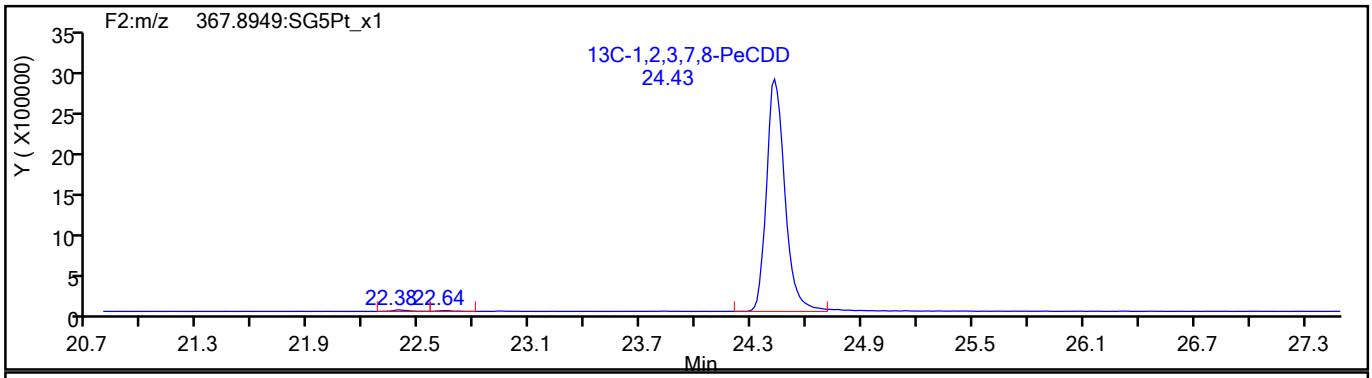

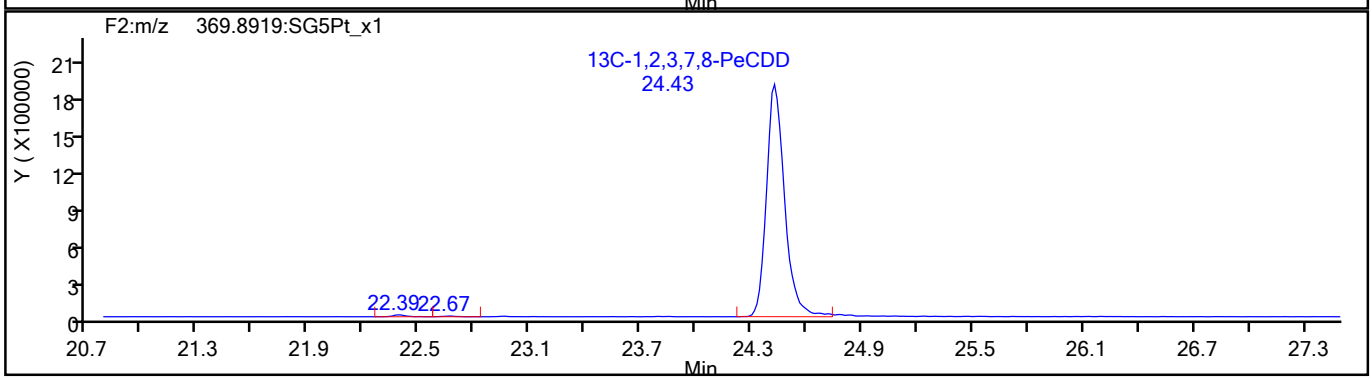

776574

Report Date: 17-Aug-2021 17:09:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

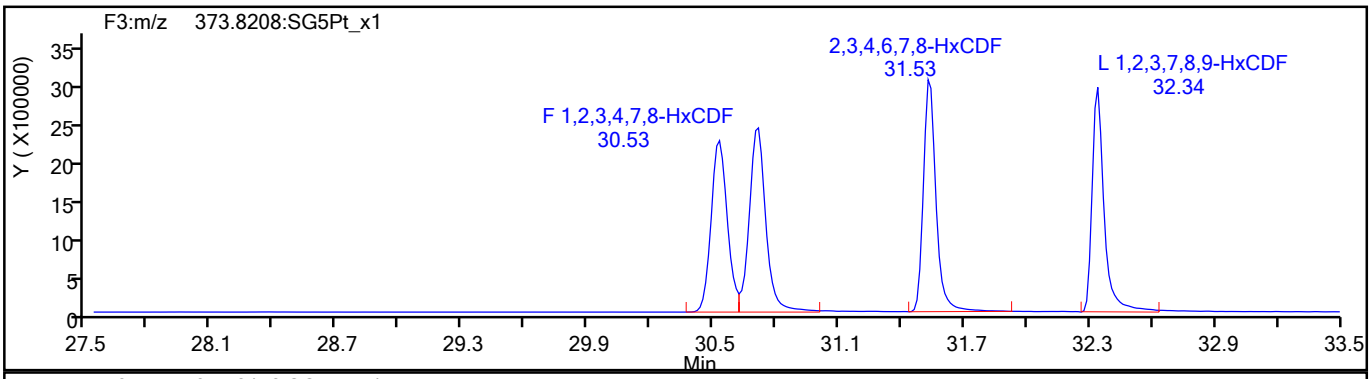

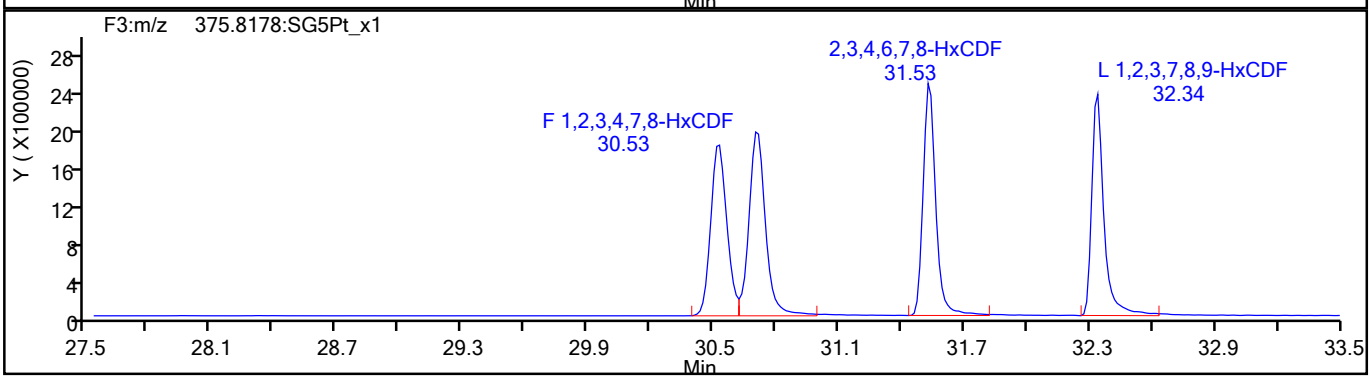

HxCDF Standards

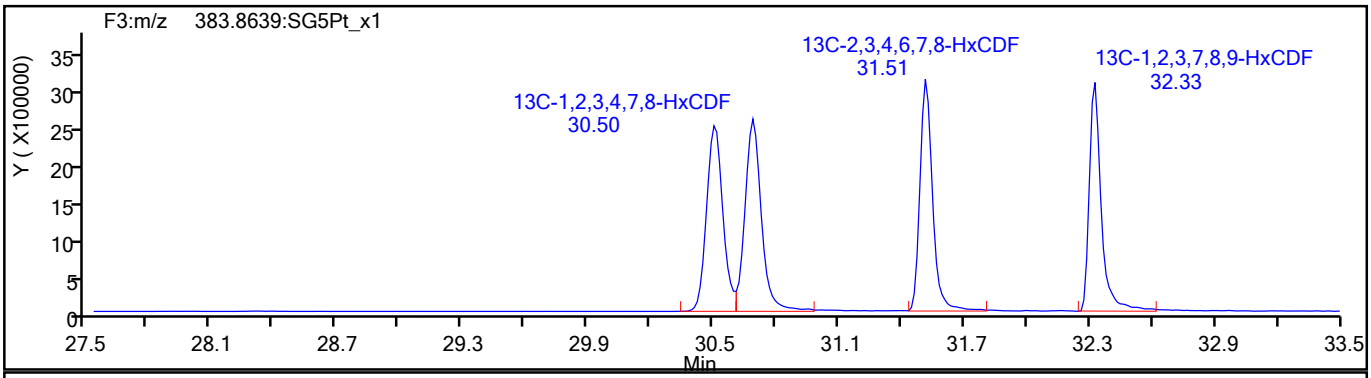

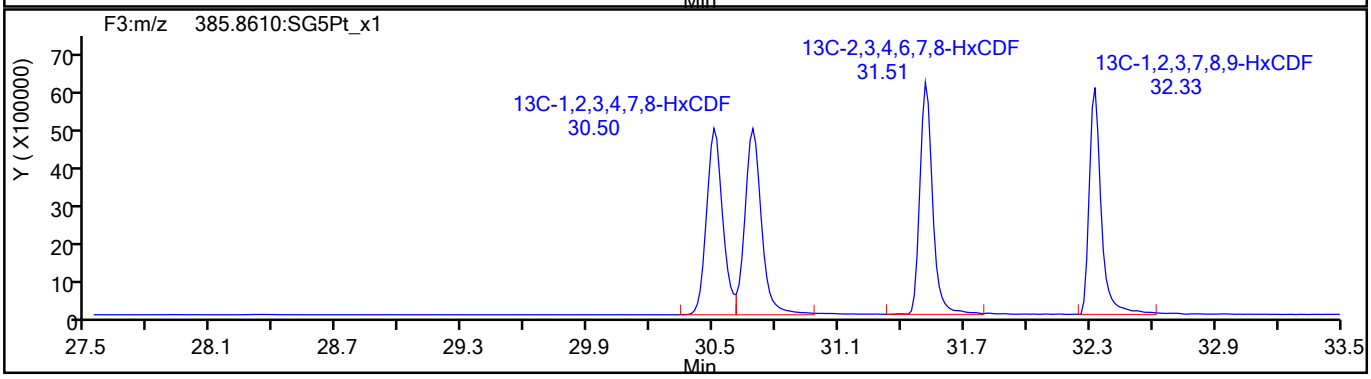

776575

Report Date: 17-Aug-2021 17:09:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

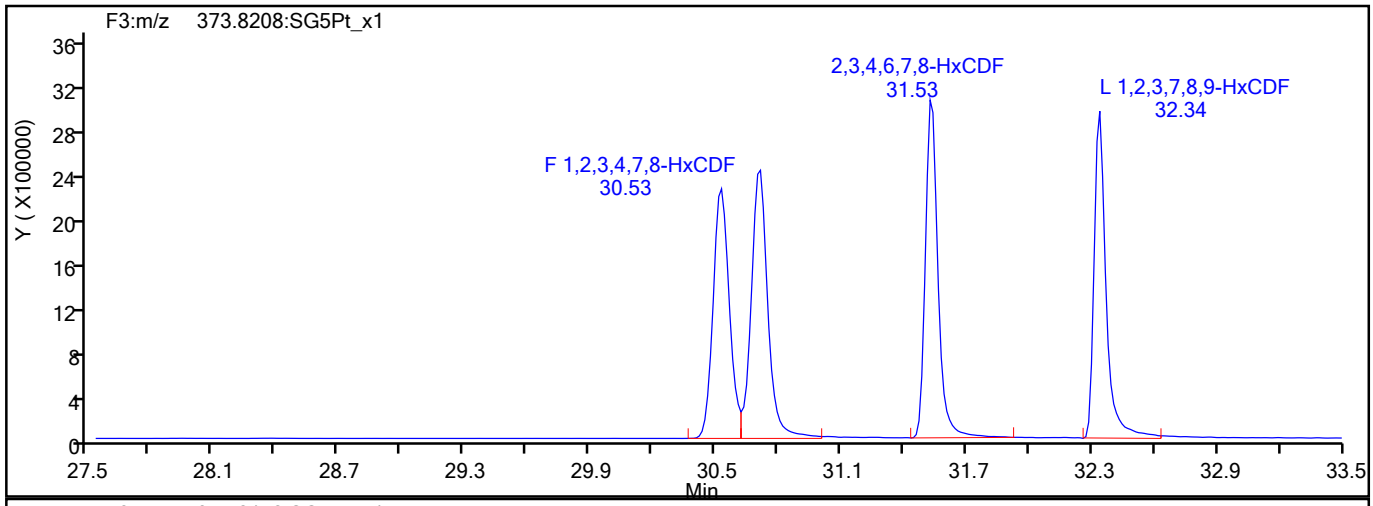

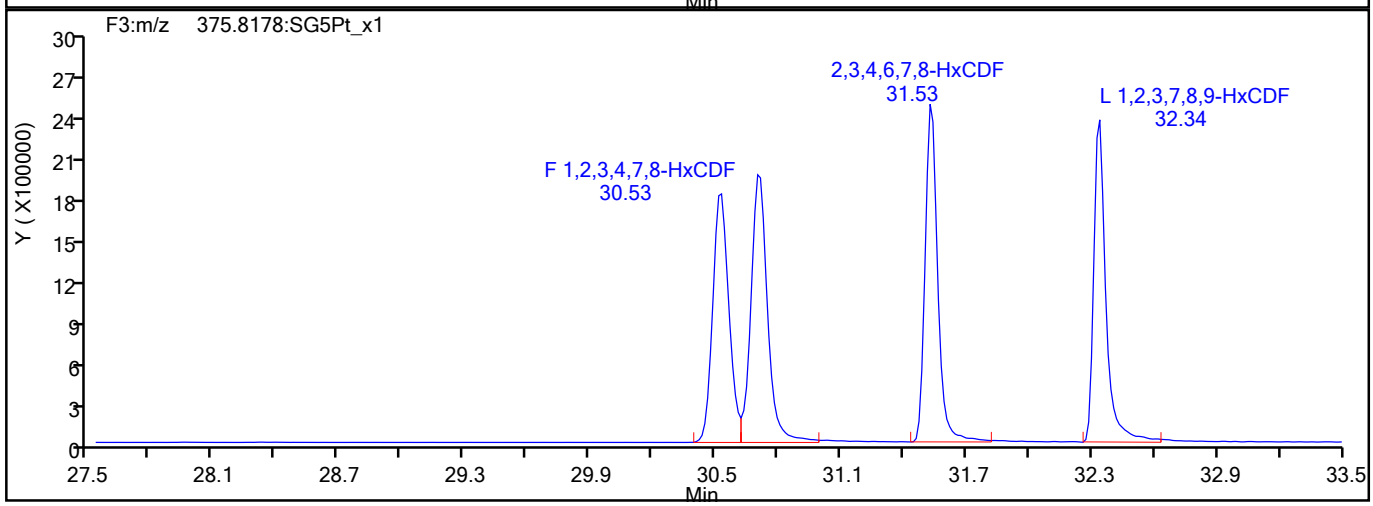

HxCDF Interference Mass

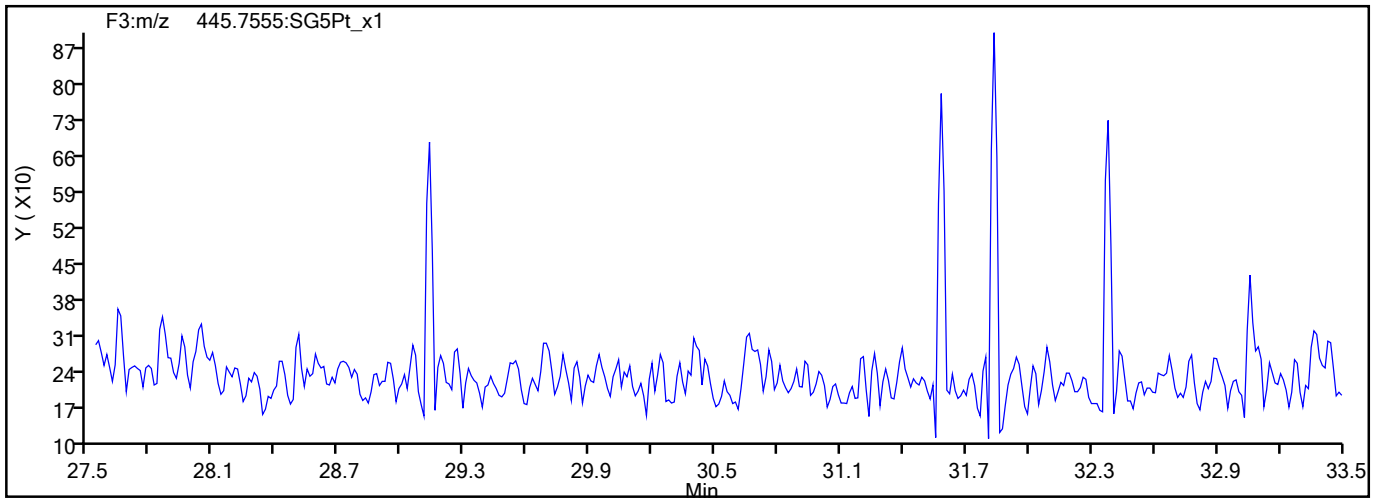

776576

Report Date: 17-Aug-2021 17:09:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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HxCDD

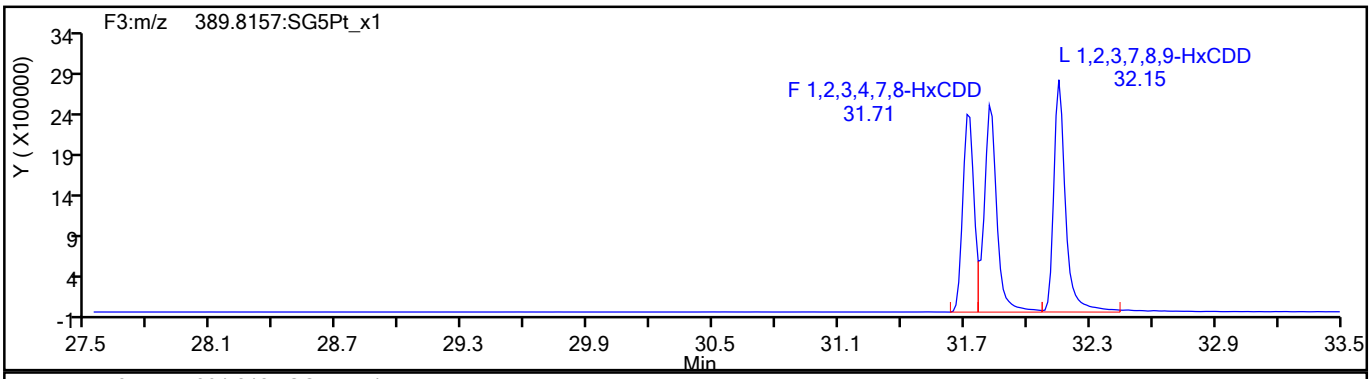

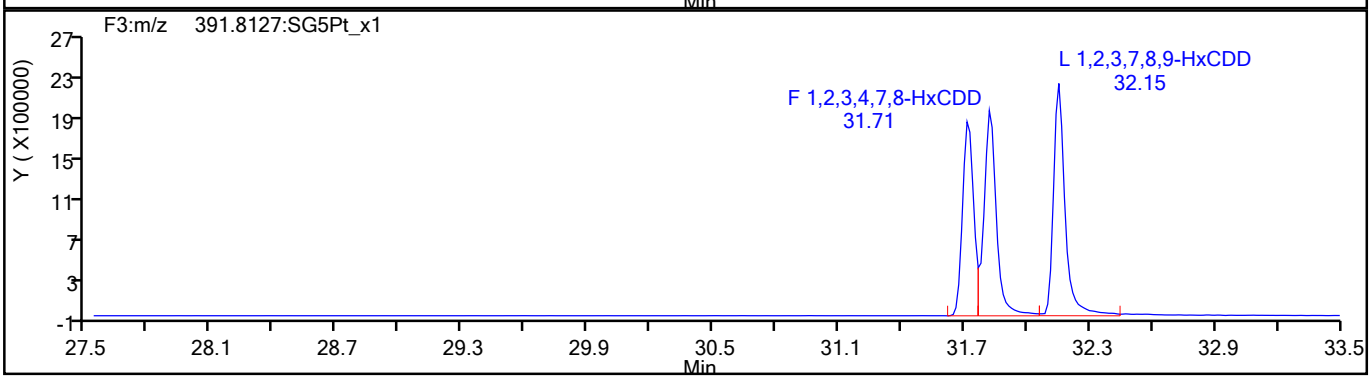

HxCDD Standards

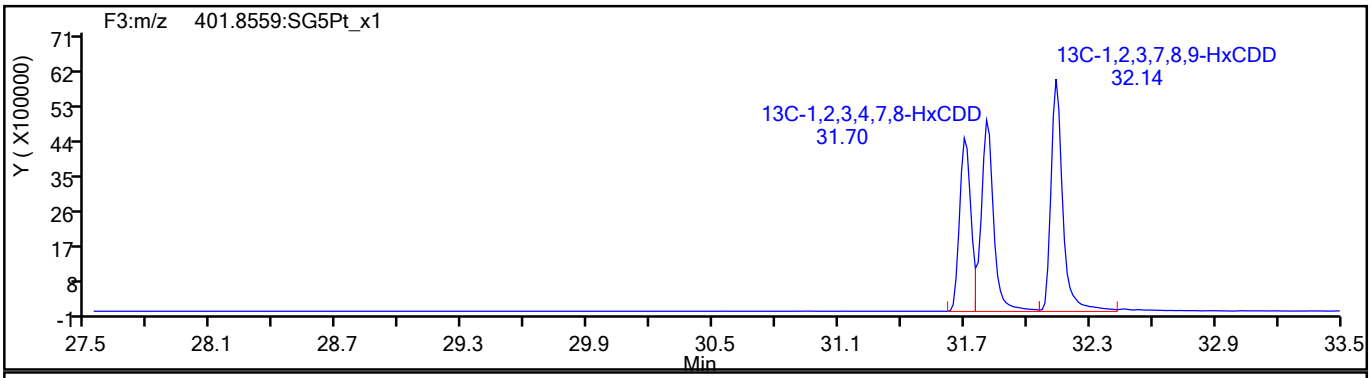

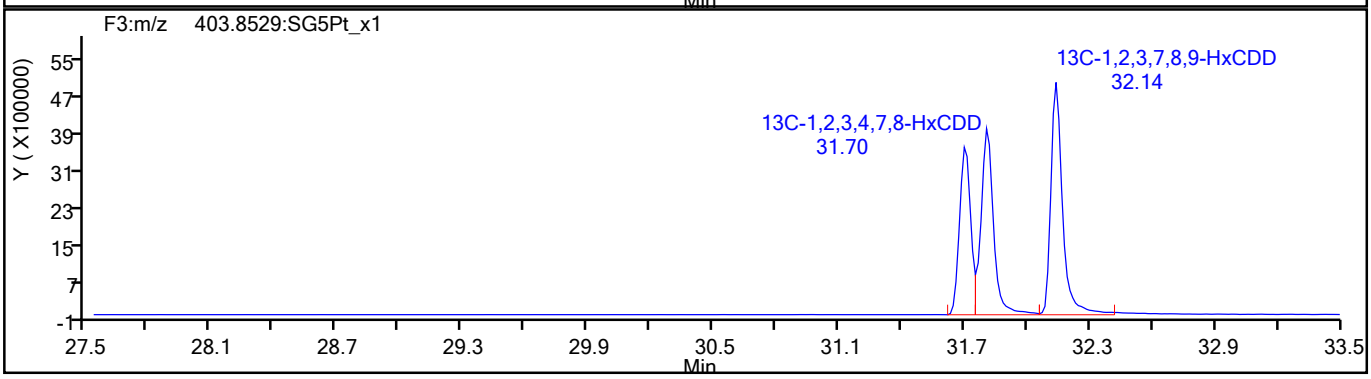

776577

Report Date: 17-Aug-2021 17:09:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

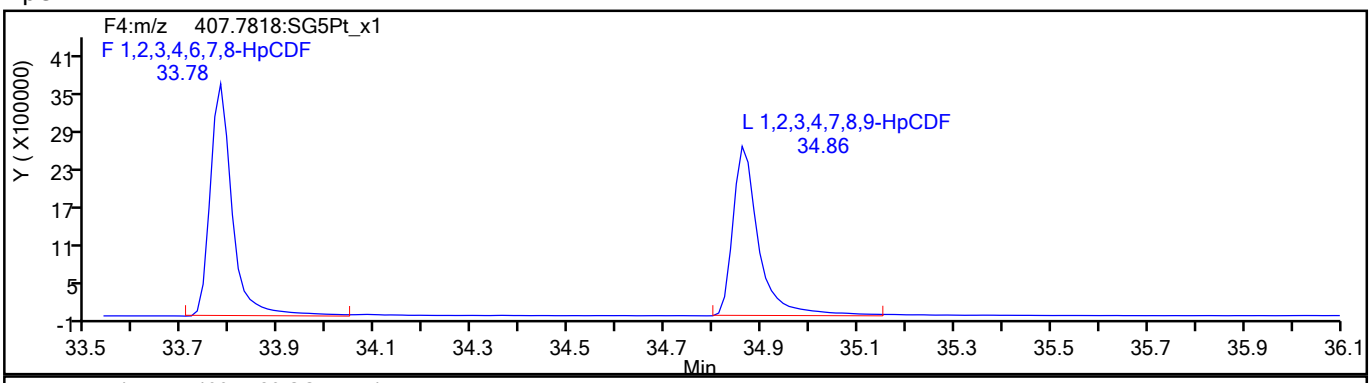

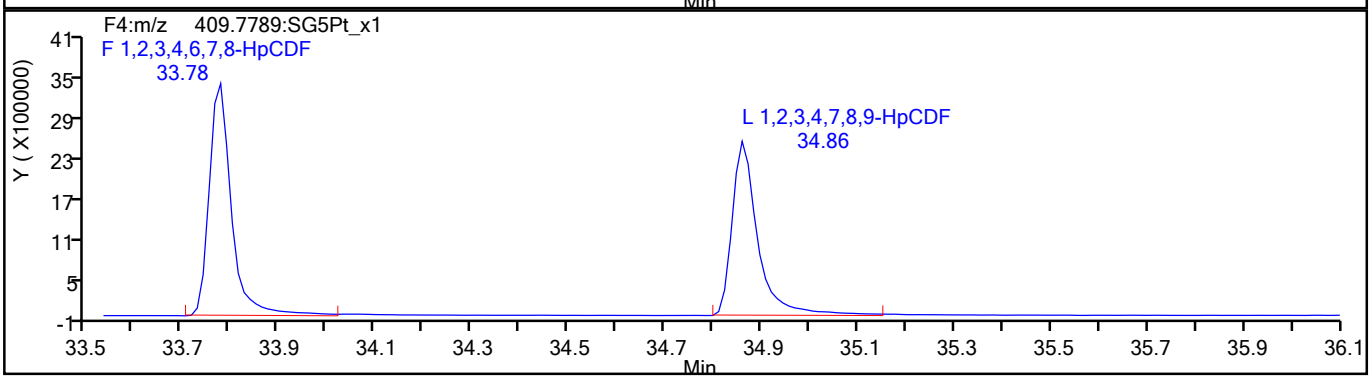

HpCDF Standards

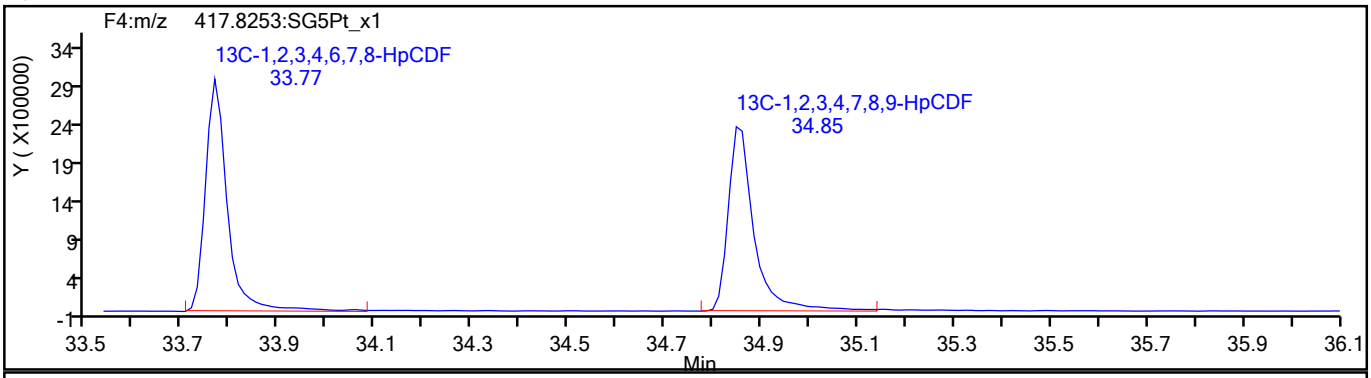

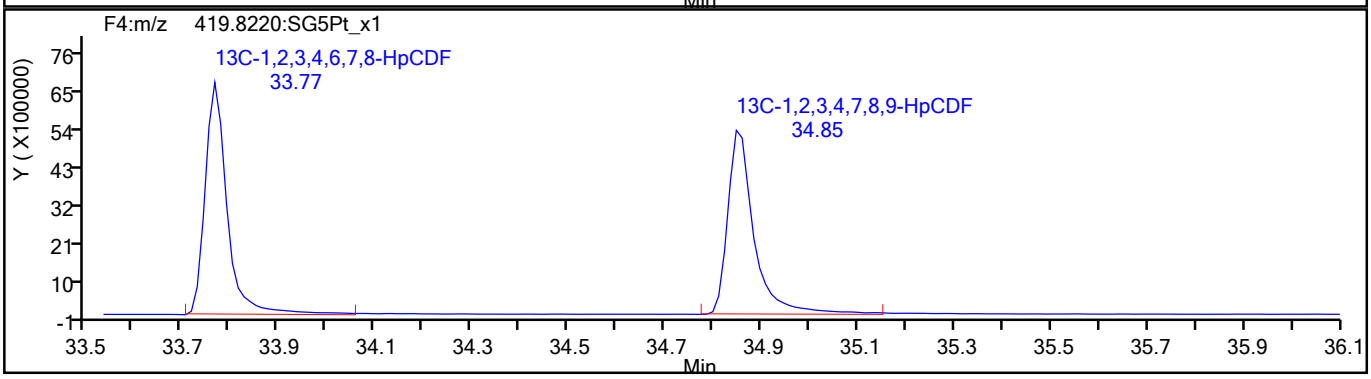

776578

Report Date: 17-Aug-2021 17:09:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

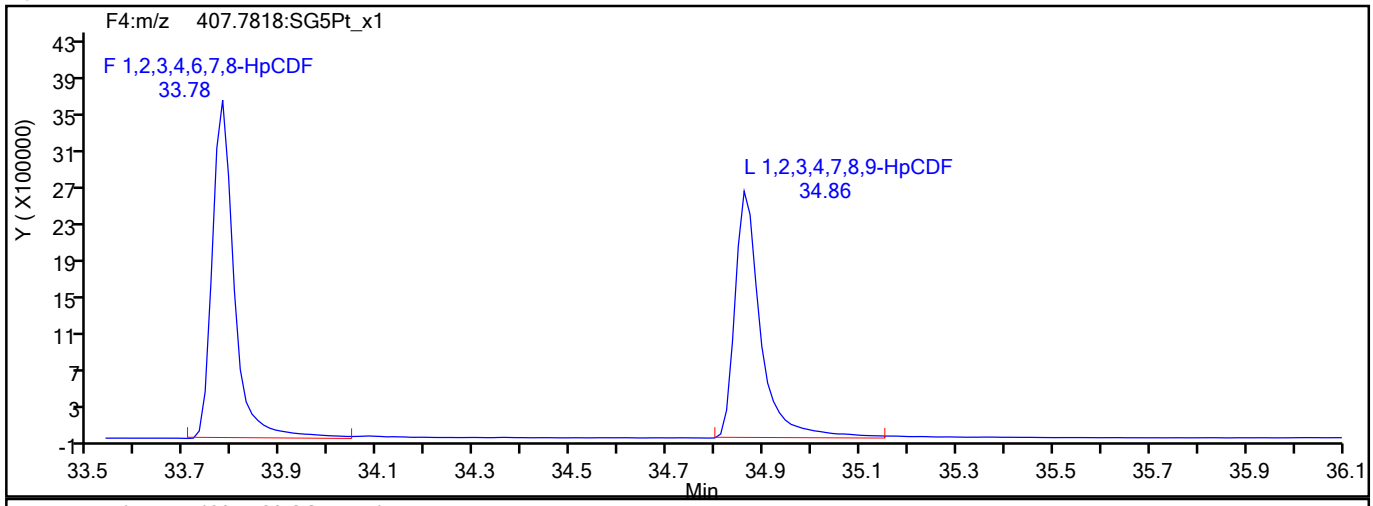

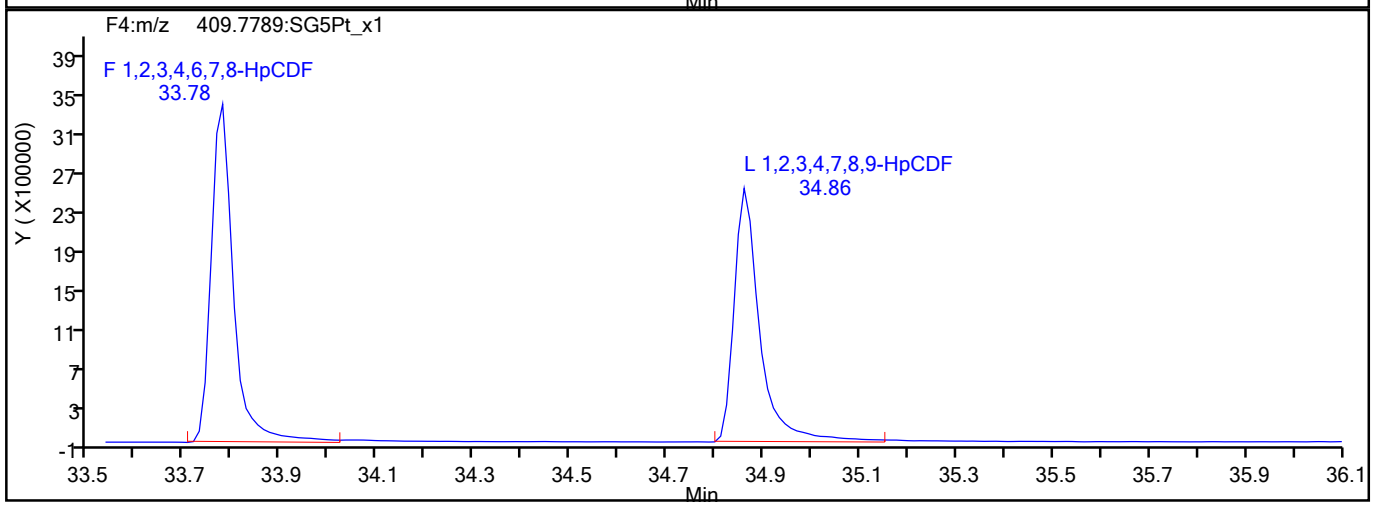

HpCDF Interference Mass

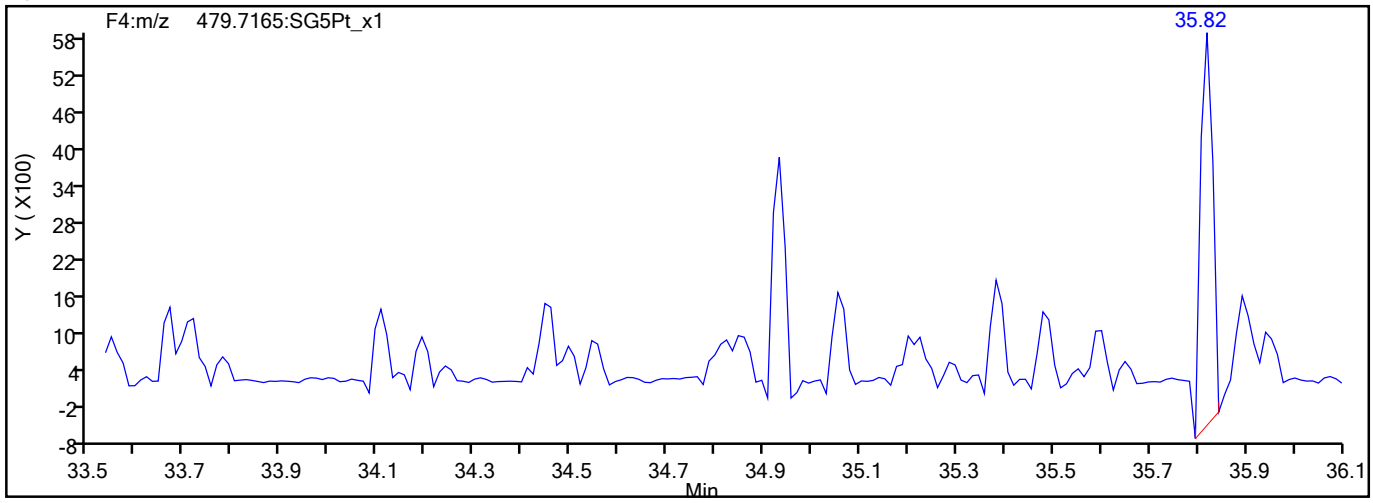

776579

Report Date: 17-Aug-2021 17:09:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

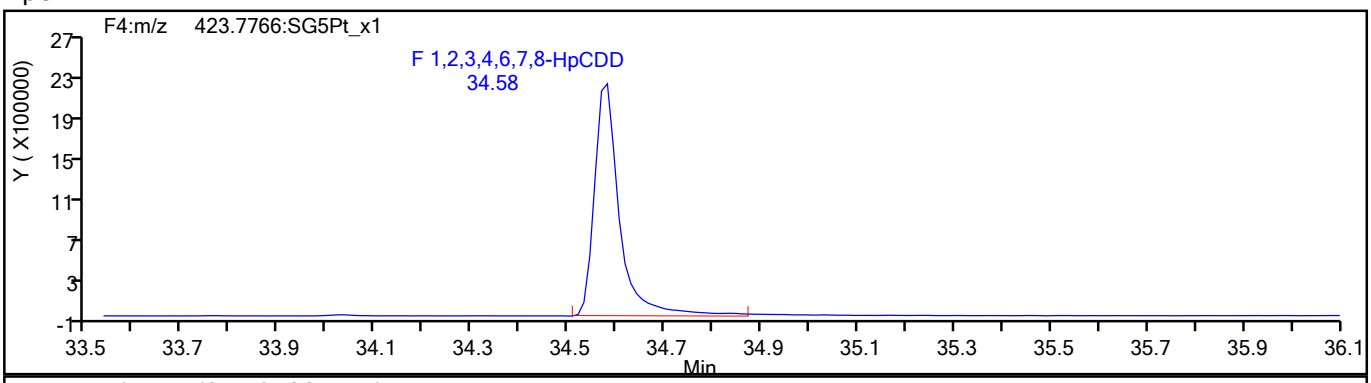

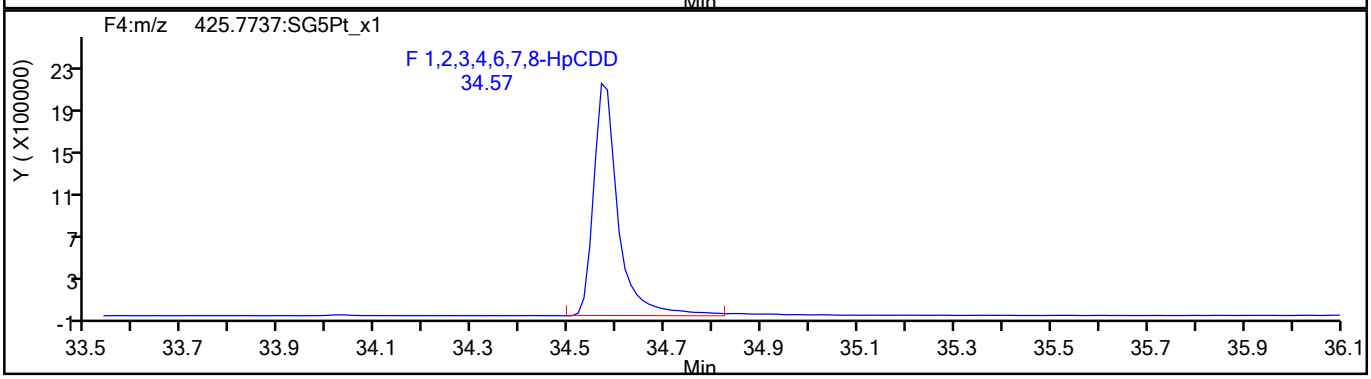

HpCDD Standards

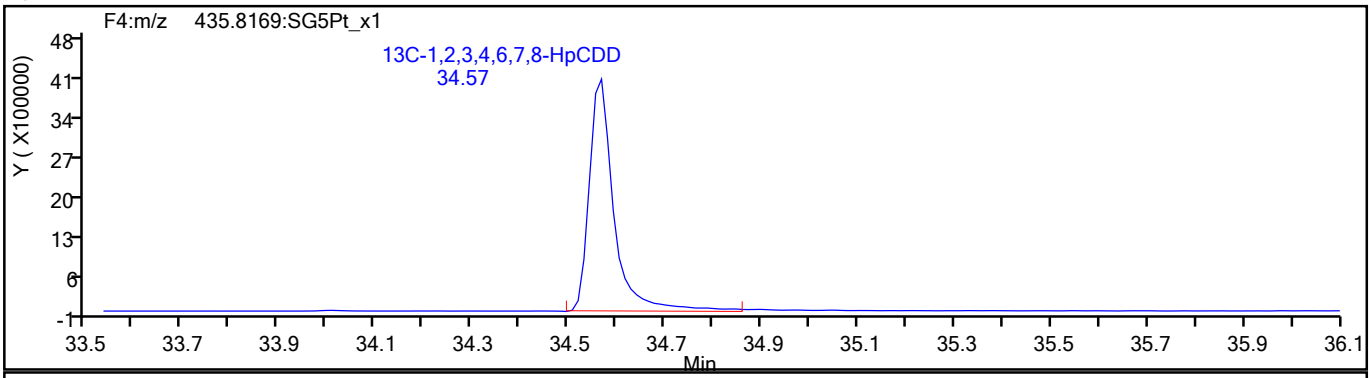

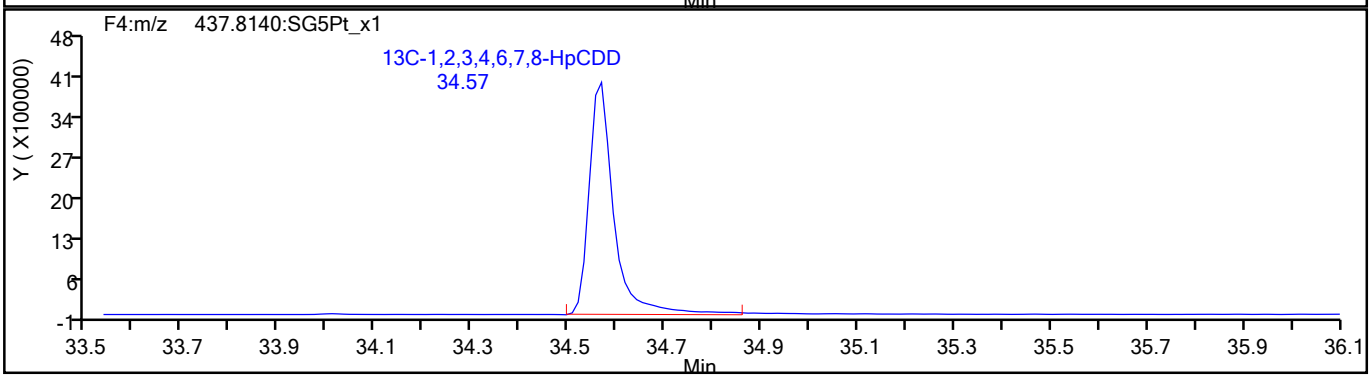

776580

Report Date: 17-Aug-2021 17:09:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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OCDF

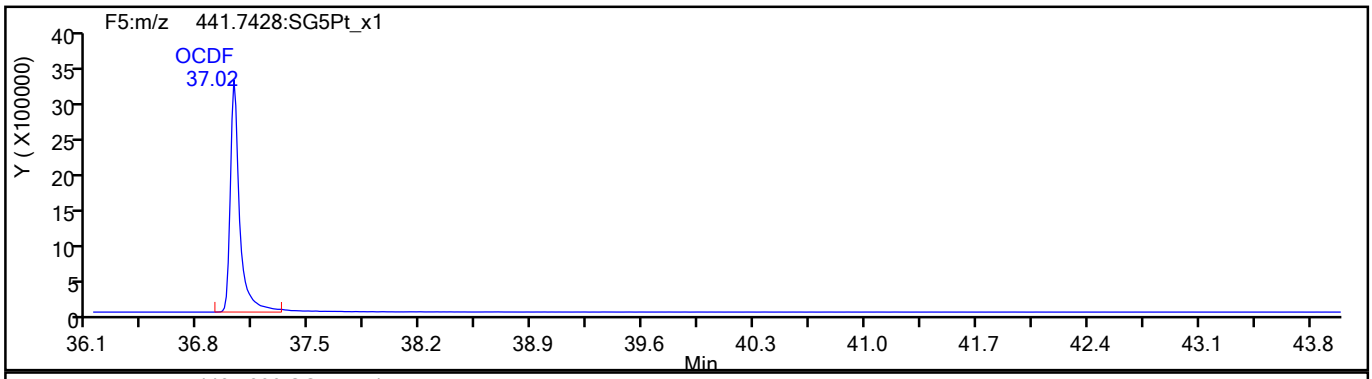

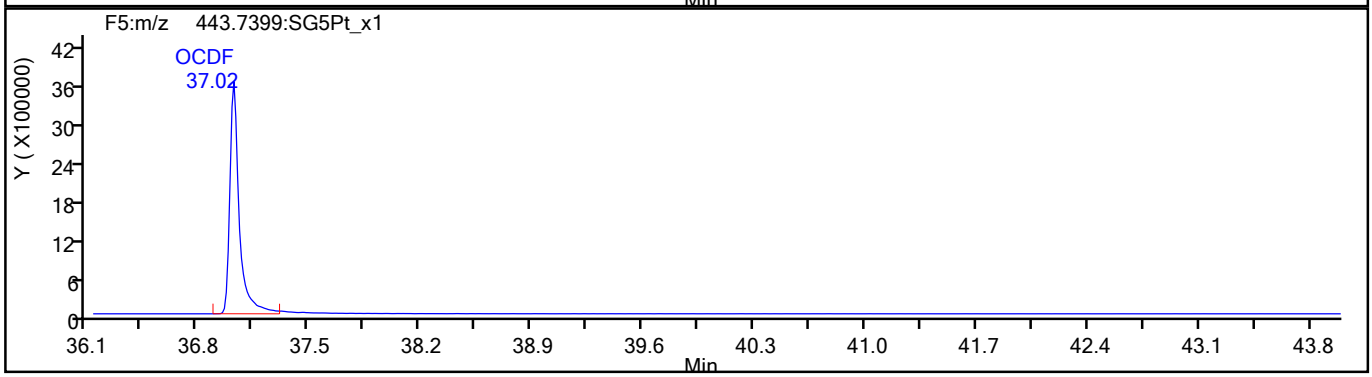

OCDF Standards

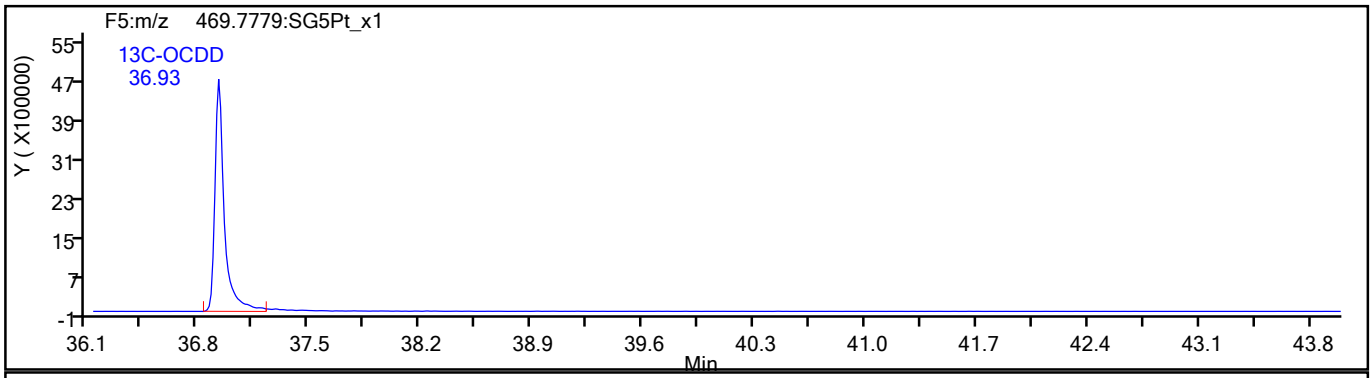

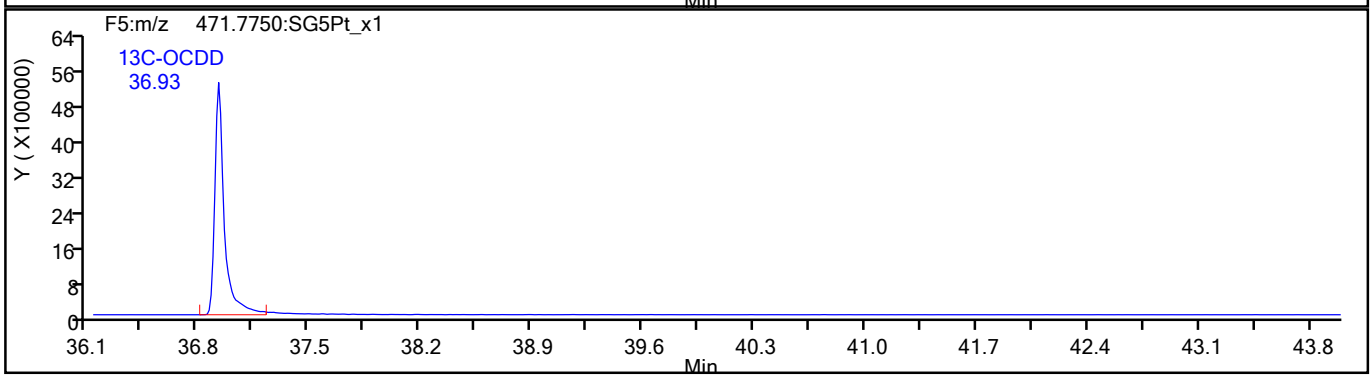

776581

Report Date: 17-Aug-2021 17:09:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

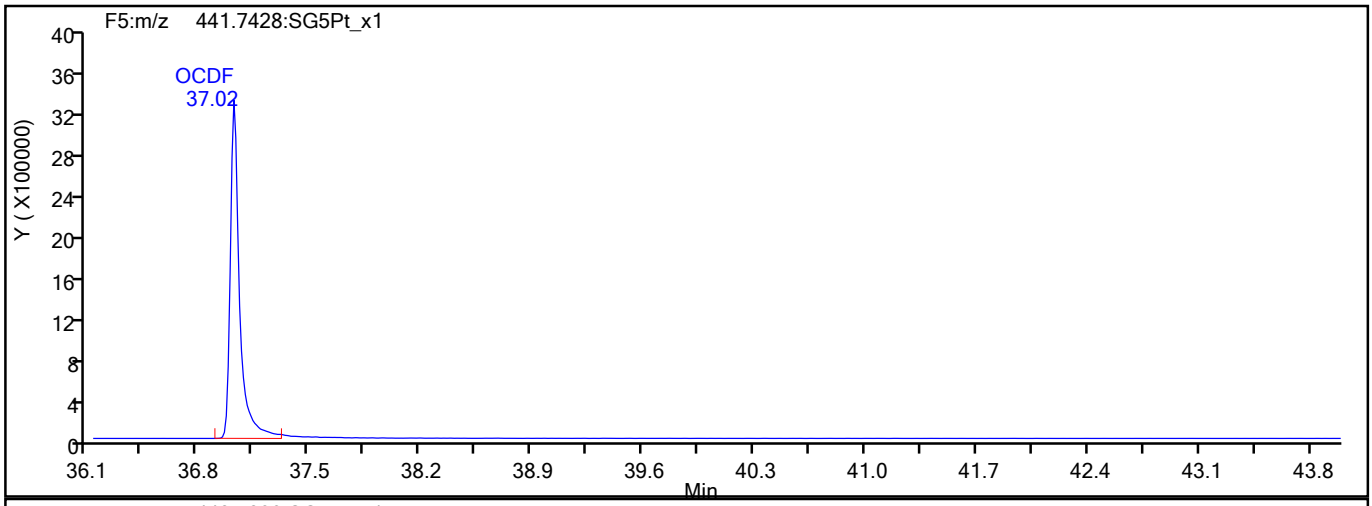

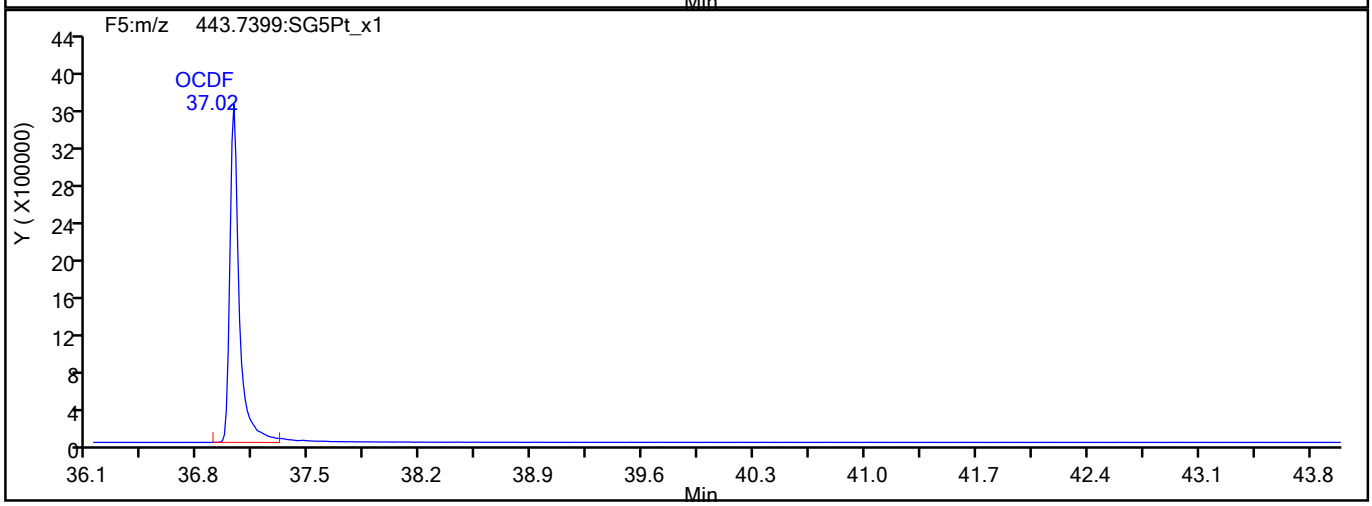

OCDF Interference Mass

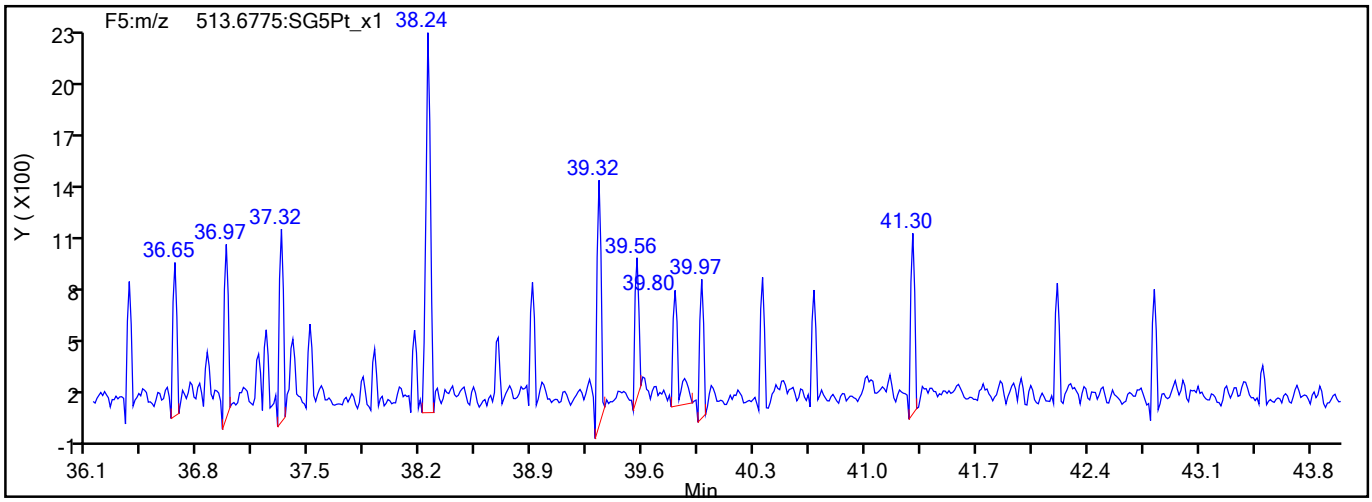

776582

Report Date: 17-Aug-2021 17:09:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_58.d		
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OCDD

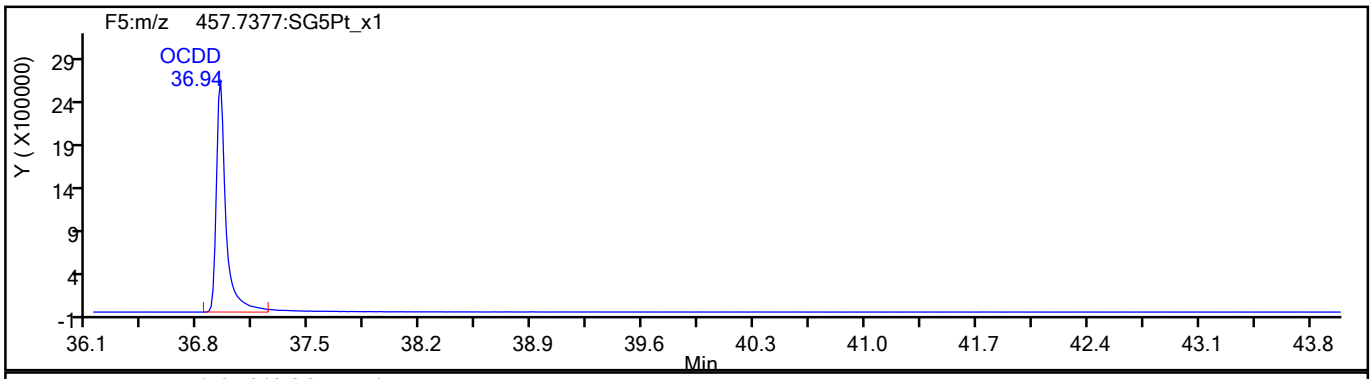

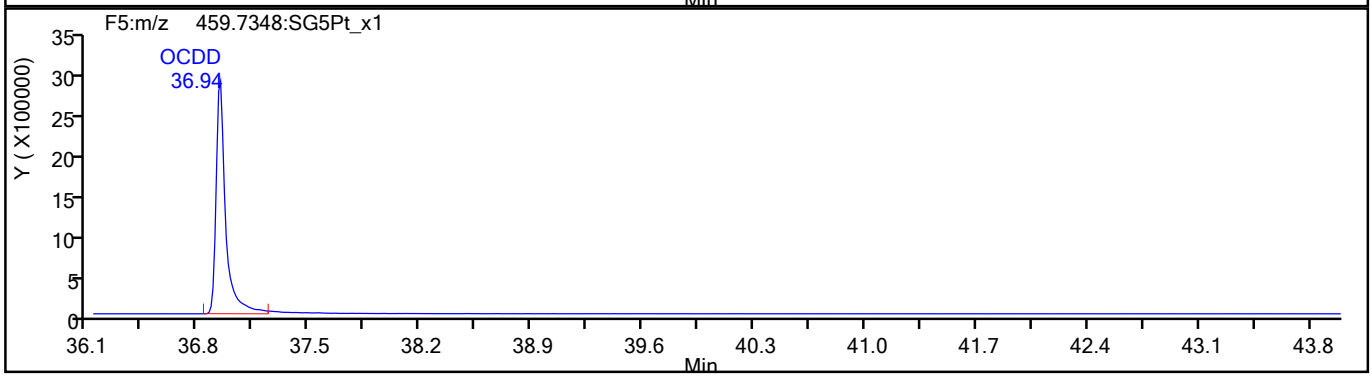

OCDD Standards

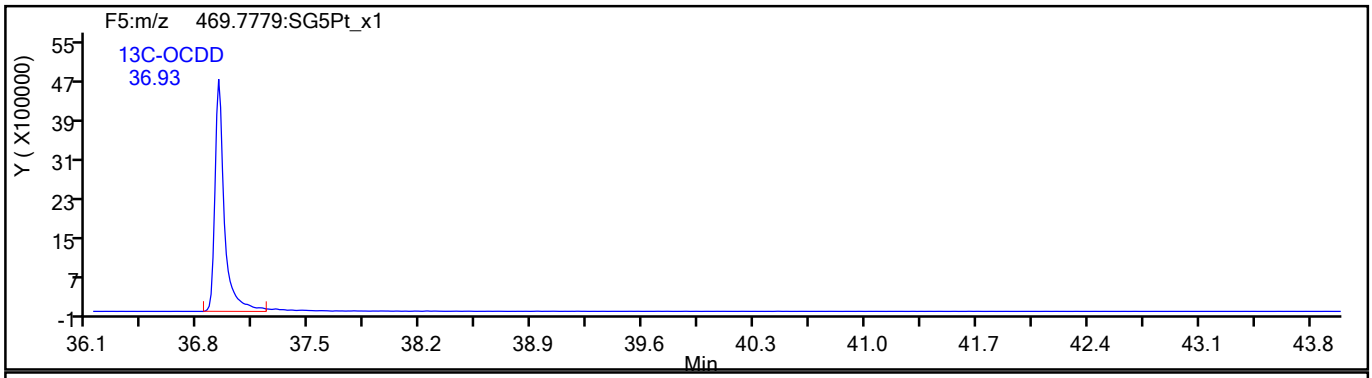

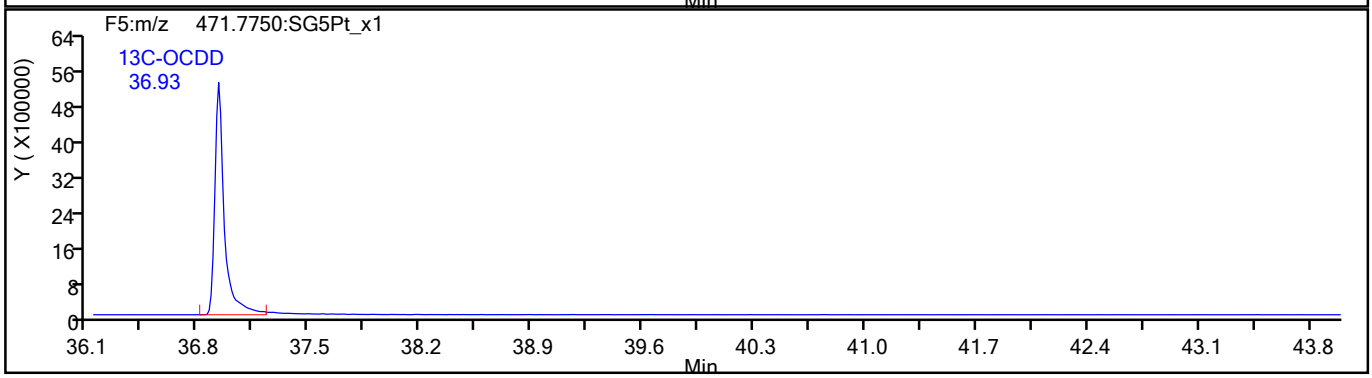

776583

Report Date: 17-Aug-2021 17:09:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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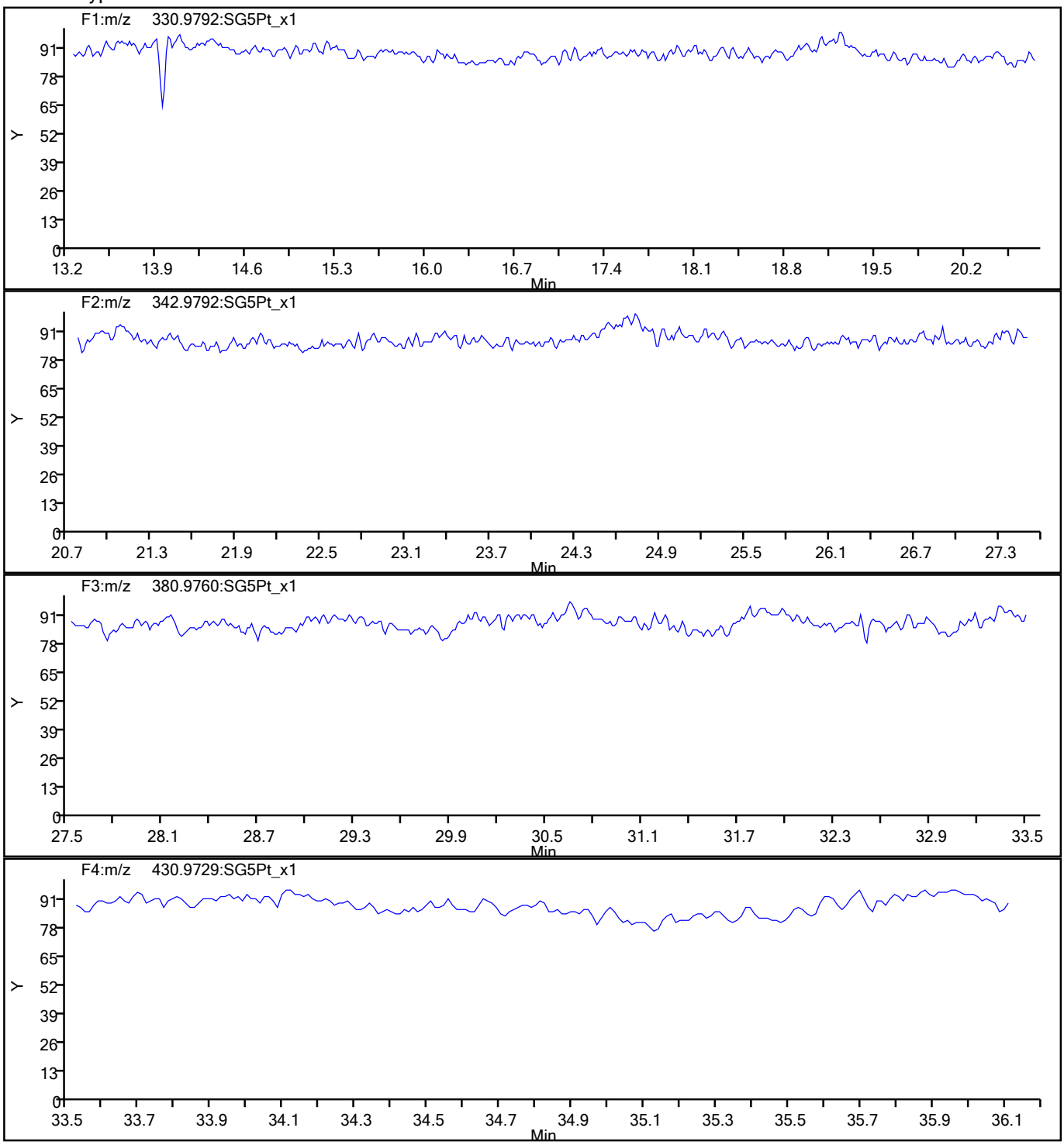

776584

Report Date: 17-Aug-2021 17:09:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 12:57:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

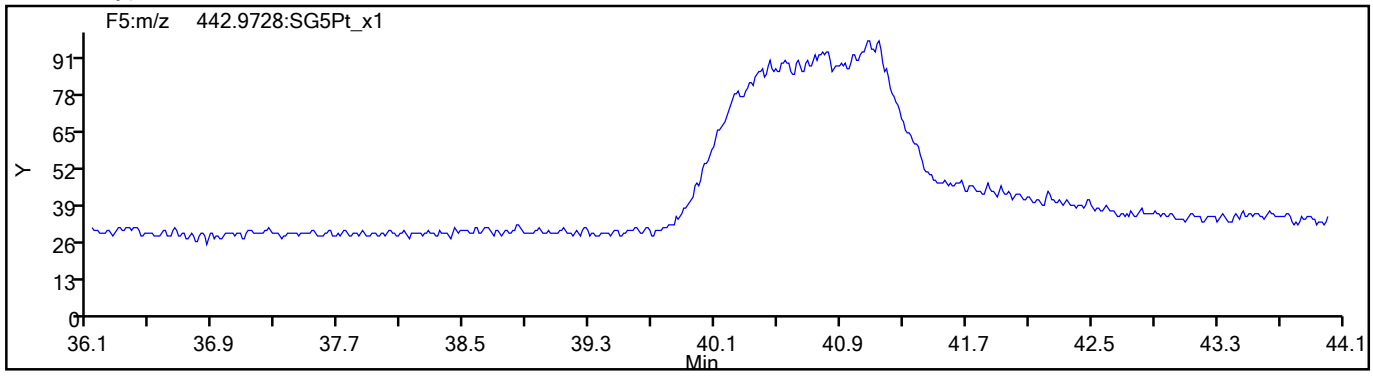

776585

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-517729/2 Calibration Date: 08/18/2021 15:00

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 18AU2110D5_2.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.051		10.3	10.0	103	84-120
2,3,7,8-TCDD	AveID	1.254	1.248		9.95	10.0	100	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.088		51.3	50.0	103	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.052		51.6	50.0	103	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.049		50.0	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.086		50.1	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.161		51.5	50.0	103	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.177		50.4	50.0	101	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.079		50.7	50.0	101	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.058		52.9	50.0	106	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.213		53.6	50.0	107	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.185		50.8	50.0	102	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.494		51.8	50.0	104	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.109		50.7	50.0	101	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.368		51.9	50.0	104	86-116
OCDD	AveID	1.107	1.143		103	100	103	79-126
OCDF	AveID	1.438	1.474		103	100	103	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.547		95.2	100	95	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9226		103	100	103	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.187		98.1	100	98	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.216		98.1	100	98	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8005		105	100	105	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.047		96.6	100	97	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.088		96.5	100	96	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.014		95.3	100	95	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7203		98.2	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8225		93.4	100	93	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9221		95.3	100	95	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7270		94.0	100	94	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6349		98.1	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6573		93.8	100	94	77-129
13C-OCDD	Ave	0.4472	0.4528		203	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.162		10.5	10.0	105	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\18AU2110D5.SPL
Last Modified: Wednesday, August 18, 2021 16:19:48 Pacific Daylight Time
Printed: Wednesday, August 18, 2021 16:25:53 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix
1	18AU2110D5_1	WDM HRDXNCP_00044	WDM 081821	Tray01:1	Dioxin
2	18AU2110D5_2	CS-4 HRDXNL4_00099	CCV 081821	Tray01:2	Dioxin
3	18AU2110D5_3	Hexan QC 081721	Hexan QC 081721	Tray01:4	QC
4	18AU2110D5_4	580-104749-a-21-a RI	580-104749-a-21-a RI	Tray01:5	8290A_D5/Solid
5	18AU2110D5_5	320-76769-A-31-A RI	320-76769-A-31-A	Tray01:6	1613B/Solid
6	18AU2110D5_6	320-76769-A-34-A RI	320-76769-A-34-A RI	Tray01:7	1613B/Solid
7	18AU2110D5_7	320-76887-A-4-A RI	320-76887-A-4-A RI	Tray01:8	1613B/Solid
8	18AU2110D5_8	320-76887-a-2-a 10x	320-76887-a-2-a 10x	Tray01:9	1613B/Solid
9	18AU2110D5_9	320-76887-a-2-b ms 10x	320-76887-a-2-b ms 10x	Tray01:10	1613B/Solid
10	18AU2110D5_10	320-76887-a-2-c msd 10x	320-76887-a-2-c msd 10x	Tray01:11	1613B/Solid
11	18AU2110D5_11	SB Solvent Blank C-14	SB 081821	Tray01:3	
12	18AU2110D5_12	CS-4 HRDXNL4_00099	CCV 081821A	Tray01:2	Dioxin
13	18AU2110D5_13	WDM HRDXNCP_00044	WDM 081821A	Tray01:1	Dioxin
14	18AU2110D5_14	QC DH28_00196 1A 20%	QC DH28_00196 1A 20%	Tray01:15	1613B/8290/QC
15	18AU2110D5_15	QC DH28_00196 2A 65%	QC DH28_00196 2A 65%	Tray01:16	1613B/8290/QC
16	18AU2110D5_16	QC DH6535_00550 65%	QC DH6535_00550 65%	Tray01:17	1613B/8290/QC
17	18AU2110D5_17	QC DH6535_00551 65%	QC DH6535_00551 65%	Tray01:18	1613B/8290/QC
18	18AU2110D5_18	QC DH6535_00552 65%	QC DH6535_00552 65%	Tray01:19	1613B/8290/QC
19	18AU2110D5_19	570-65710-bc-1-a	570-65710-bc-1-a	Tray01:20	8290/Water
20	18AU2110D5_20	570-65471-ap-2-a	570-65471-ap-2-a	Tray01:21	8290/Water
21	18AU2110D5_21	240-153449-p-3-a	240-153449-p-3-a	Tray01:22	8290A/Water
22	18AU2110D5_22	SB Solvent Blank C-14	SB 081821A	Tray01:3	
23	18AU2110D5_23	CS-4 HRDXNL4_00099	CCV 081821B	Tray01:2	Dioxin
24	18AU2110D5_24	081721- DIOXIN IDA QC00481	081721- DIOXIN IDA QC00481	Tray01:23	Dioxin
25	18AU2110D5_25	WDM HRDXNCP_00044	WDM 081821B	Tray01:1	Dioxin
26	18AU2110D5_26	SB Solvent Blank C-14	SB 081821B	Tray01:3	
27	18AU2110D5_27	240-153367-C-5-A	240-153367-C-5-A	Tray01:29	8290A/Solid
28	18AU2110D5_28	240-153367-C-6-A	240-153367-C-6-A	Tray01:30	8290A/Solid
29	18AU2110D5_29	240-153367-C-7-A	240-153367-C-7-A	Tray01:31	8290A/Solid
30	18AU2110D5_30	240-153367-C-8-A	240-153367-C-8-A	Tray01:32	8290A/Solid
31	18AU2110D5_31	240-153367ZC-9-A	240-153367ZC-9-A	Tray01:33	8290A/Solid
32	18AU2110D5_32	240-153367-C-10-A	240-153367-C-10-A	Tray01:34	8290A/Solid
33	18AU2110D5_33	240-153367-C-11-A	240-153367-C-11-A	Tray01:35	8290A/Solid
34	18AU2110D5_34	SB Solvent Blank C-14	SB 081821A	Tray01:3	
35	18AU2110D5_35	CS-4 HRDXNL4_00099	CCV 081821	Tray01:2	Dioxin
36	18AU2110D5_36	WDM HRDXNCP_00044	WDM 081821C	Tray01:1	Dioxin

LOGFILE CHECKED
DB 8/19/21

776587

Box #	User	Sample Size	Units	MS File	Inlet File	Inject Volume	Process
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
---	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D260	SMA	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D266	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
---	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
QC90	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D262	SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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	SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
QC 90	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
---	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D259	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D259	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
---	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Wednesday, August 18, 2021 14:07:25 Pacific Daylight Time

M 292.9824 R 12252

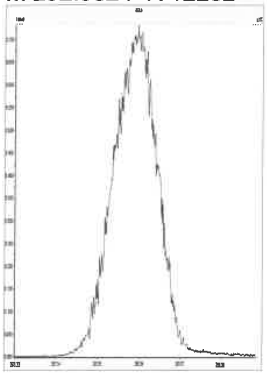

M 304.9824 R 12439

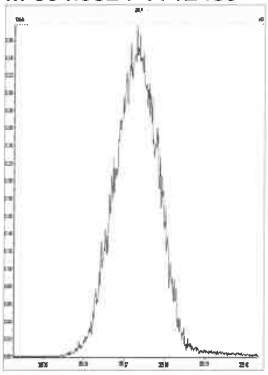

M 318.9792 R 12755

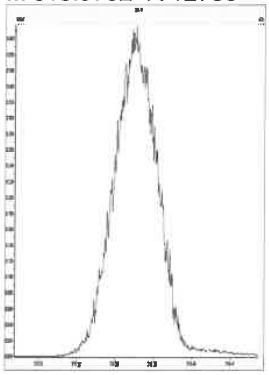

M 330.9792 R 12561

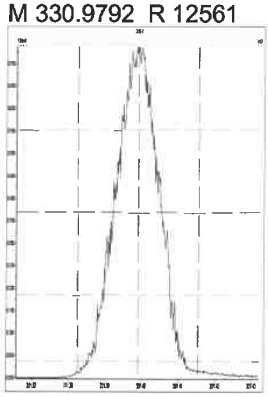

M 342.9792 R 12566

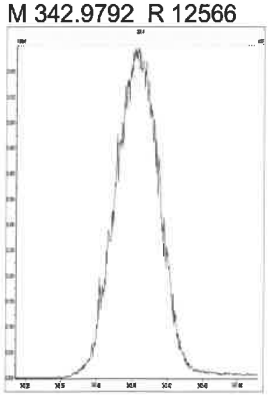

M 354.9792 R 12627

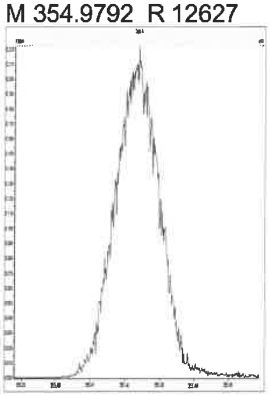

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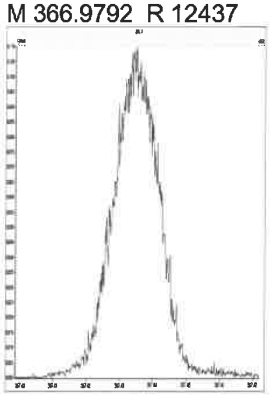

M 380.9760 R 12957

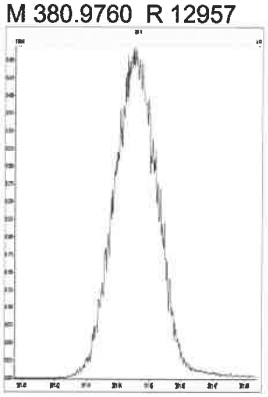

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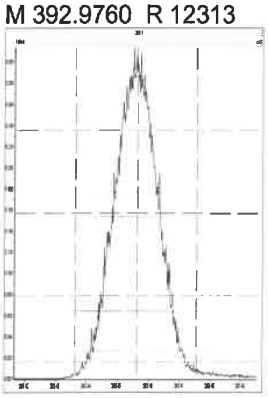

M 404.9760 R 11958

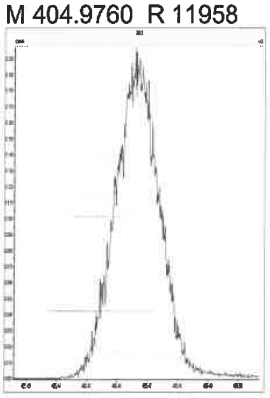

M 416.9760 R 12254

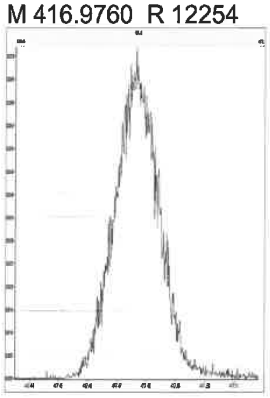

776590

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Wednesday, August 18, 2021 14:08:28 Pacific Daylight Time

M 318.9792 R 12815

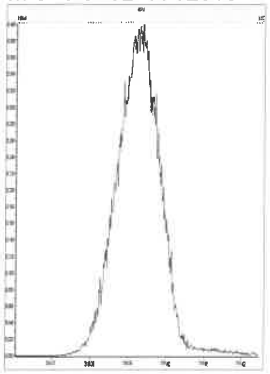

M 330.9792 R 13297

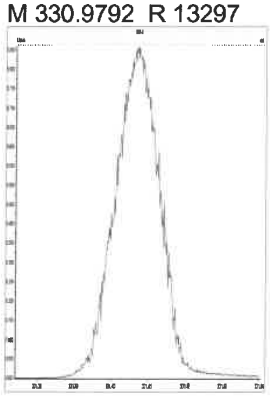

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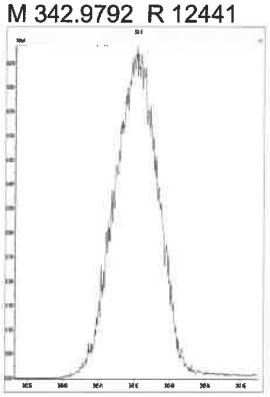

M 354.9792 R 12692

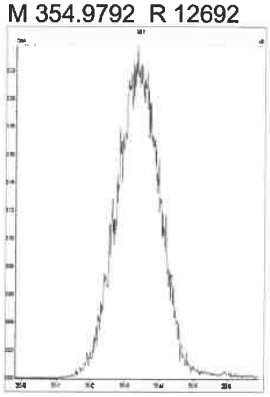

M 366.9792 R 12563

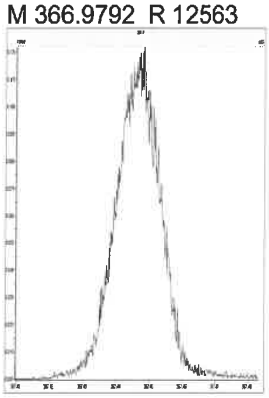

M 380.9760 R 12625

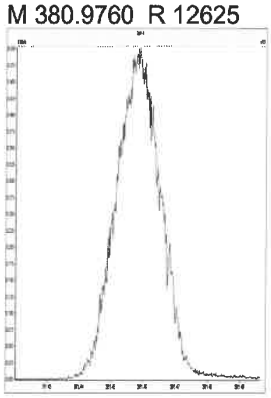

M 392.9760 R 12193

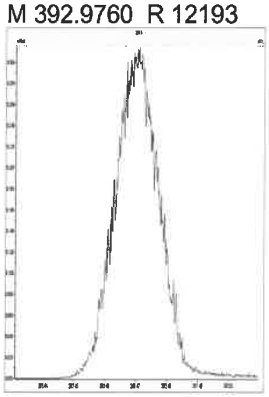

M 404.9760 R 12078

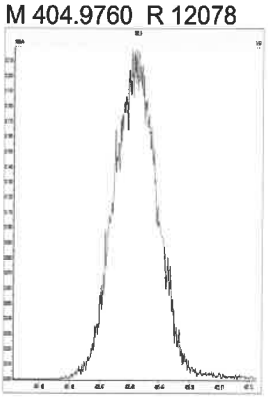

M 416.9760 R 12626

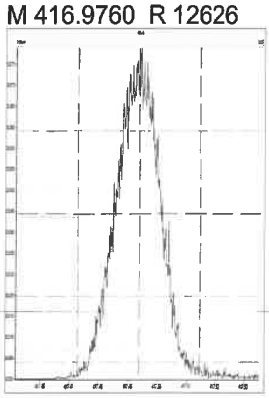

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Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

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M 366.9792 R 12251

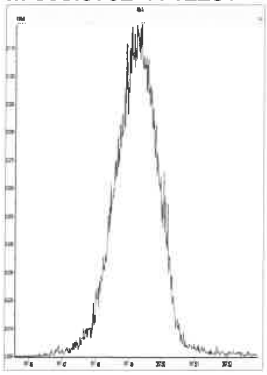

M 380.9760 R 12691

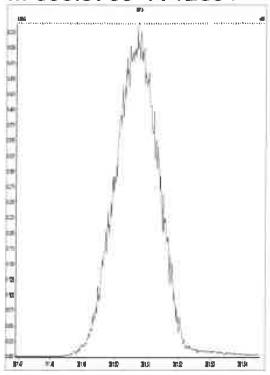

M 392.9760 R 13025

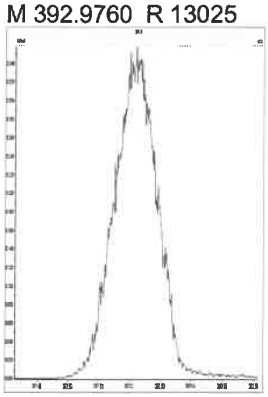

M 404.9760 R 12890

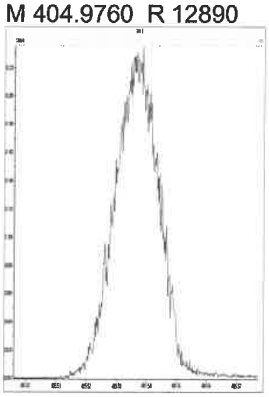

M 416.9760 R 13023

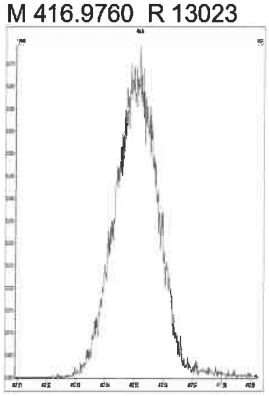

M 430.9728 R 12817

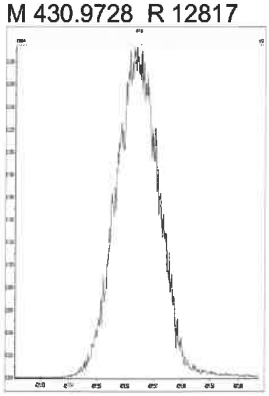

M 442.9728 R 12191

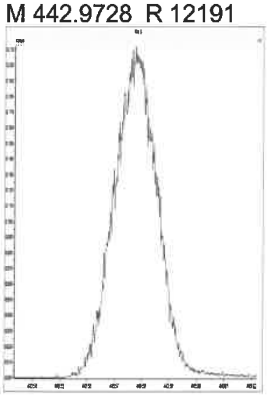

M 454.9728 R 12889

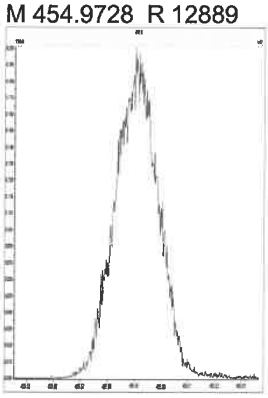

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Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed: Wednesday, August 18, 2021 14:10:19 Pacific Daylight Time

M 380.9760 R 12693

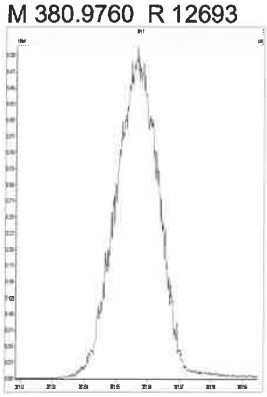

M 392.9760 R 12954

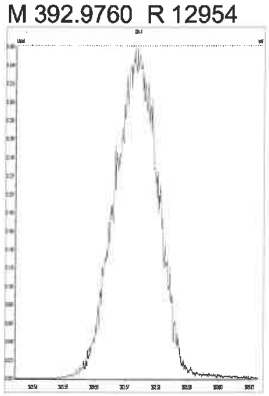

M 404.9760 R 12195

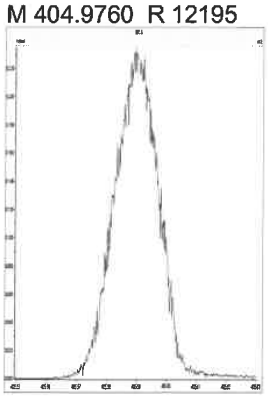

M 416.9760 R 12819

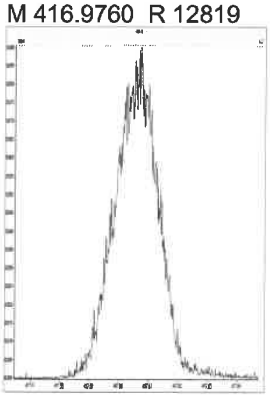

M 430.9728 R 12753

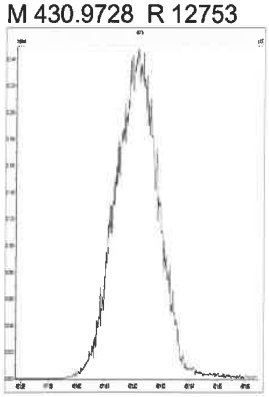

M 442.9728 R 13022

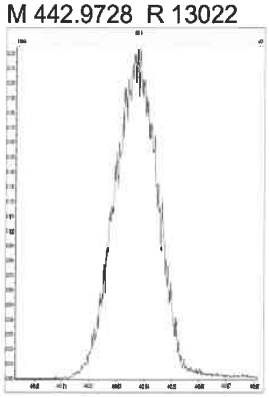

M 454.9728 R 12887

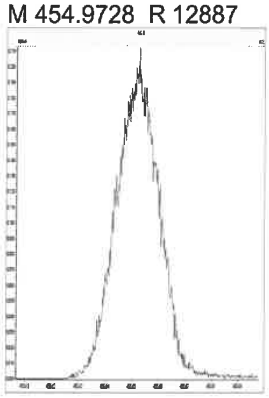

M 466.9728 R 12375

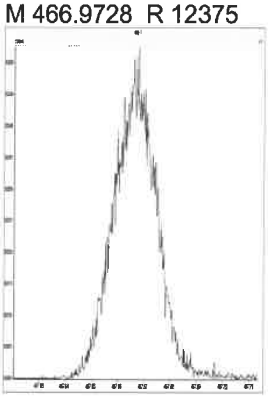

M 480.9696 R 12498

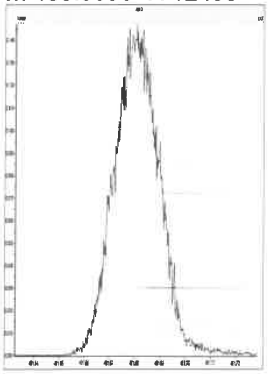

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Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

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M 380.9760 R 12440

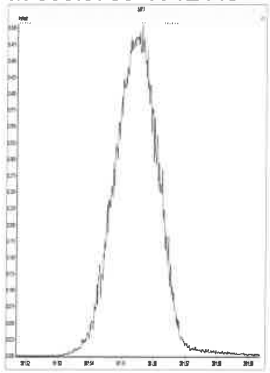

M 392.9760 R 12756

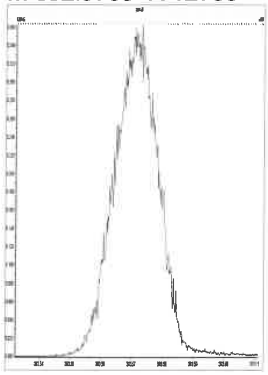

M 404.9760 R 12690

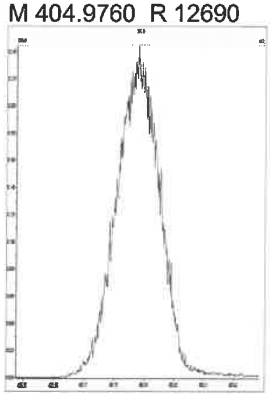

M 416.9760 R 12625

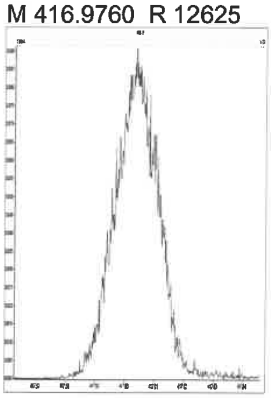

M 430.9728 R 12753

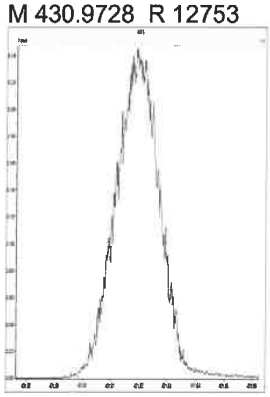

M 442.9728 R 13229

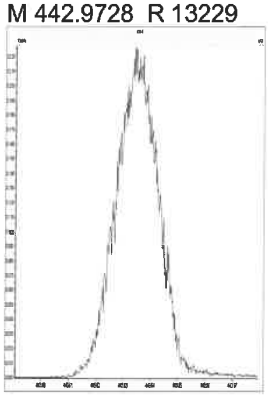

M 454.9728 R 12690

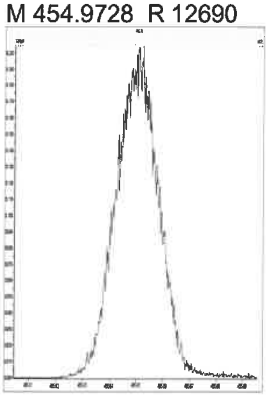

M 466.9728 R 13020

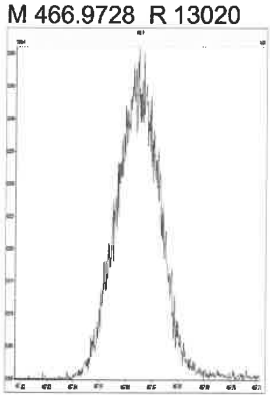

M 480.9696 R 12257

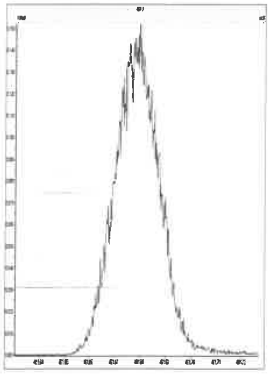

M 492.9696 R 12196

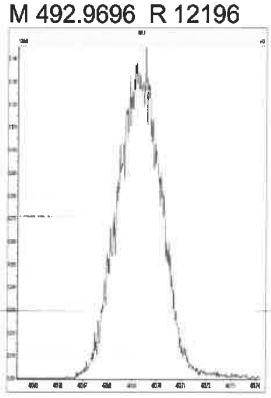

M 504.9696 R 12755

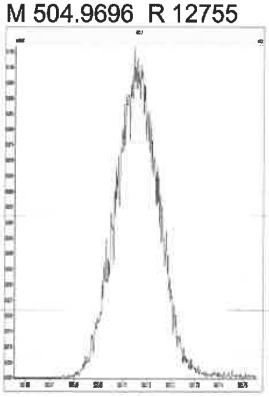

M 516.9697 R 12251

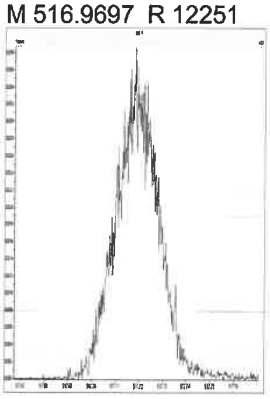

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M 292.9824_R 12026

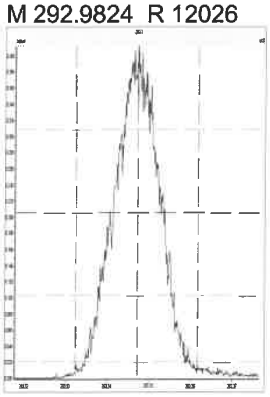

M 304.9824_R 11908

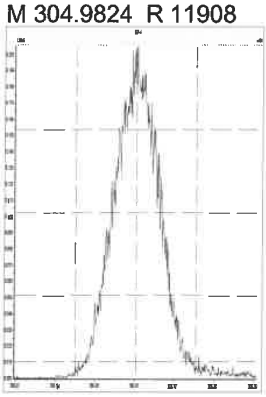

M 318.9792_R 12084

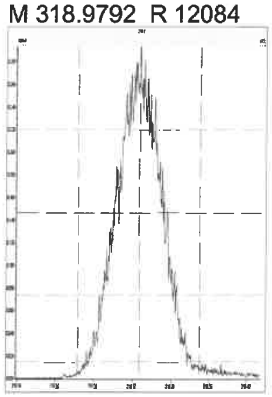

M 330.9792_R 11603

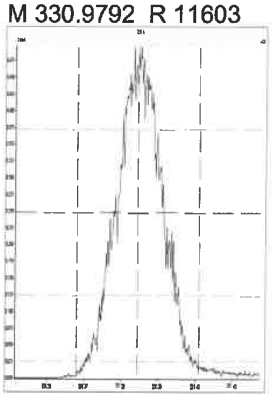

M 342.9792_R 11821

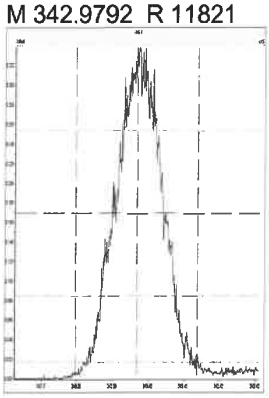

M 354.9792_R 11765

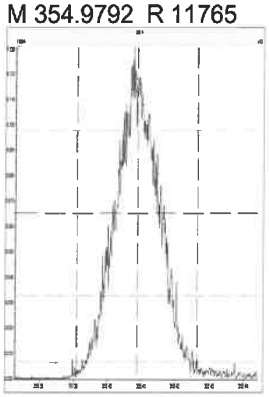

M 366.9792_R 12084

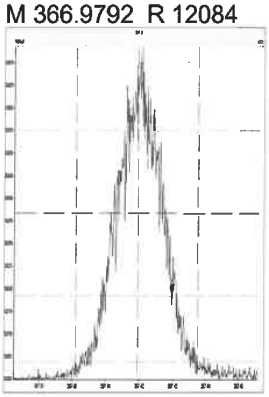

M 380.9760_R 11482

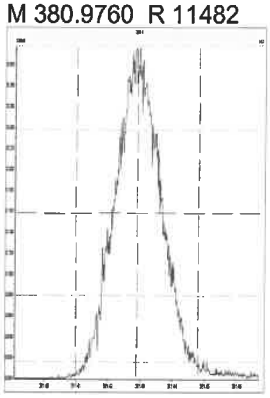

M 392.9760_R 11557

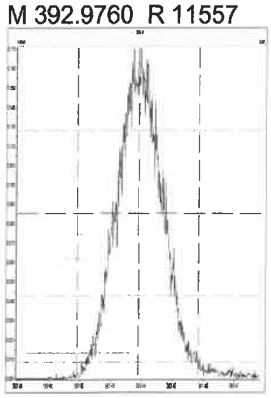

M 404.9760_R 11798

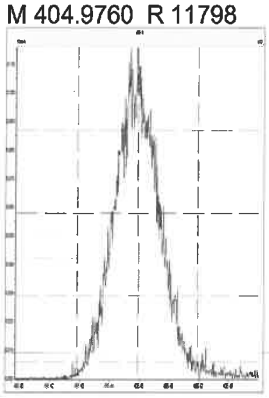

M 416.9760_R 12107

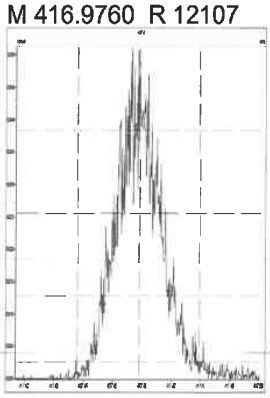

M 318.9792_R 11876

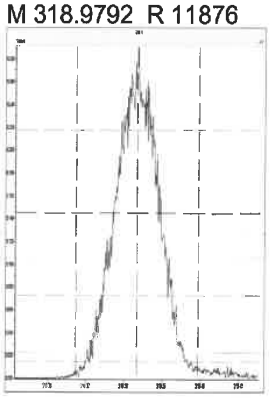

M 330.9792_R 11991

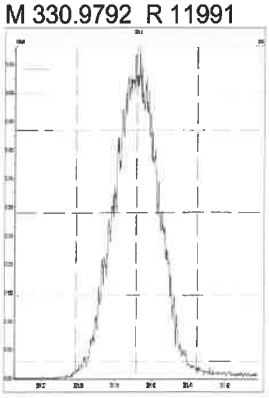

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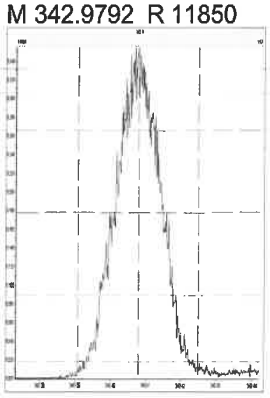

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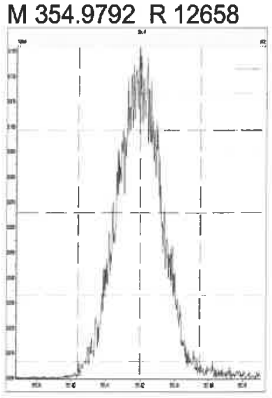

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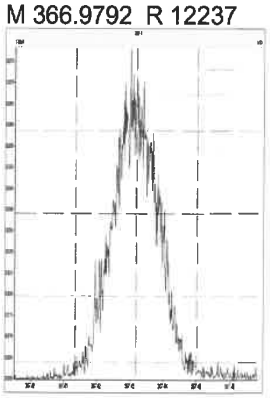

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M 380.9760 R 11684

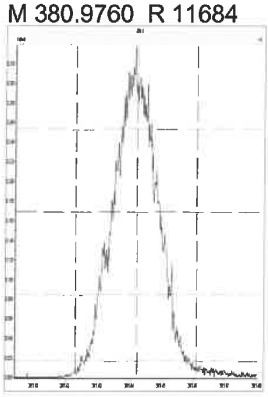

M 392.9760 R 12021

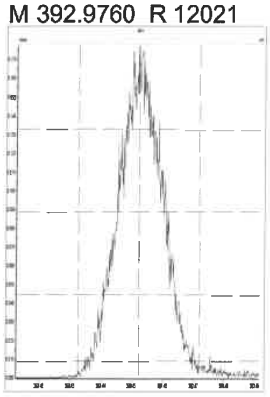

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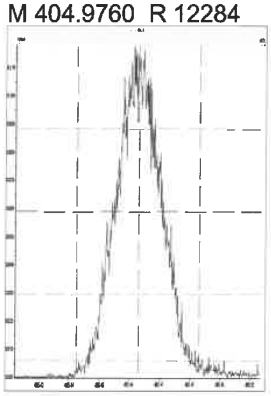

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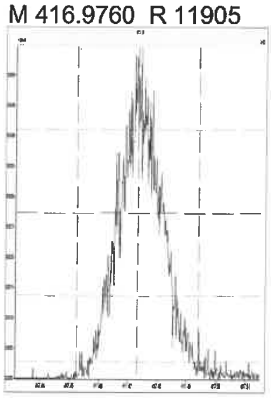

M 366.9792 R 12288

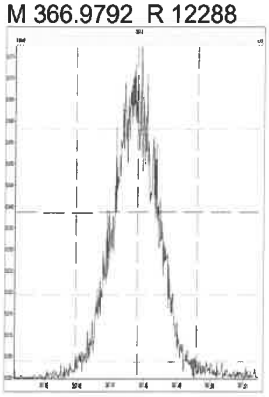

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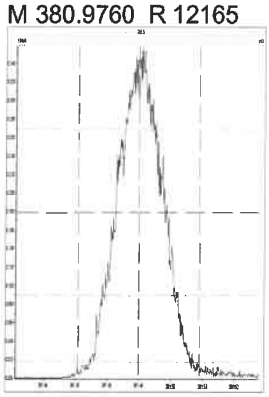

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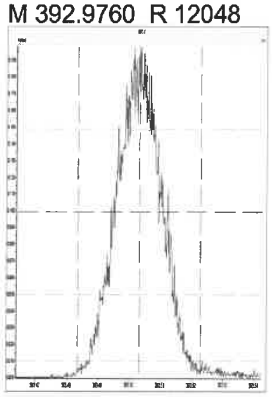

M 404.9760 R 12428

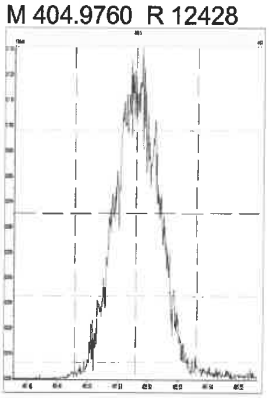

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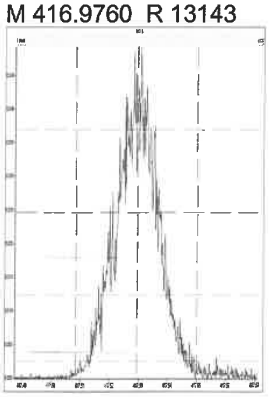

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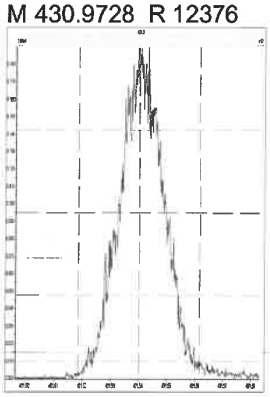

M 442.9728 R 12225

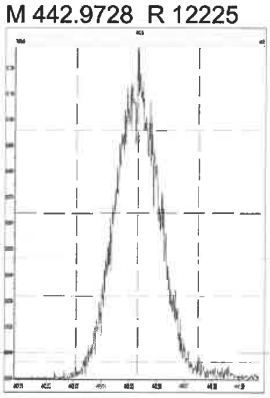

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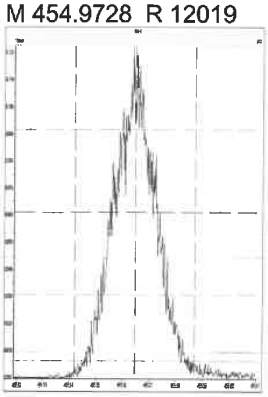

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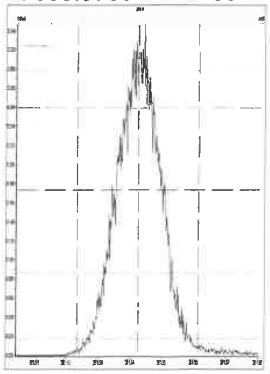

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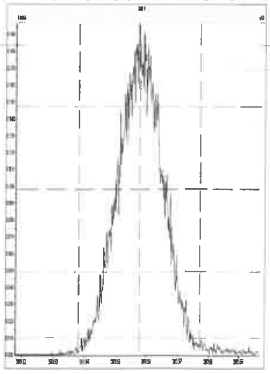

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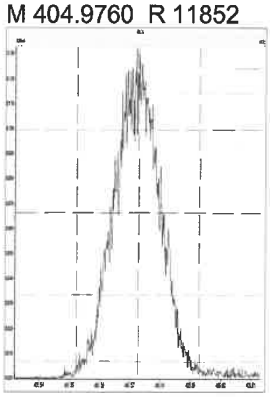

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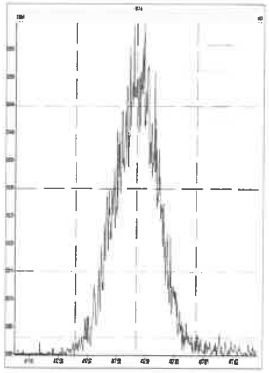

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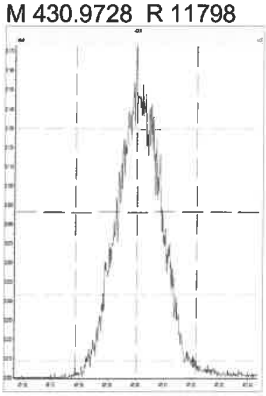

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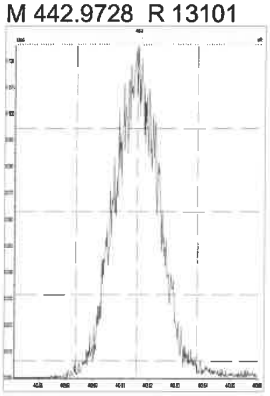

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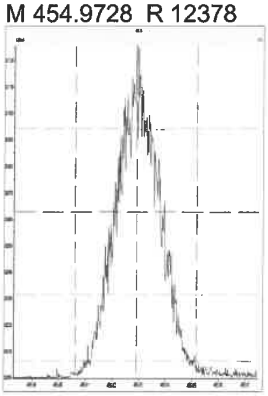

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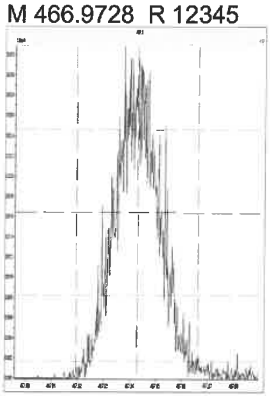

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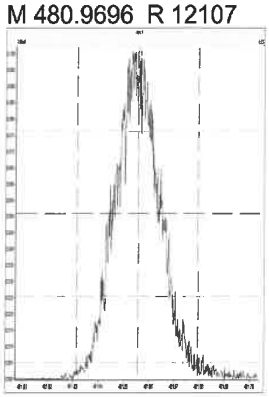

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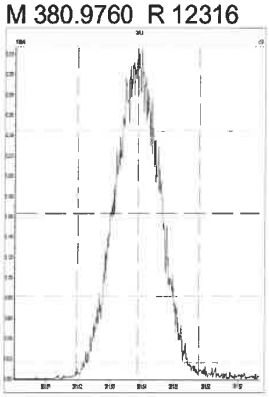

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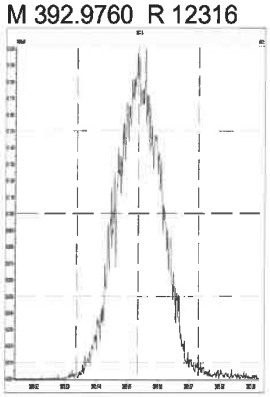

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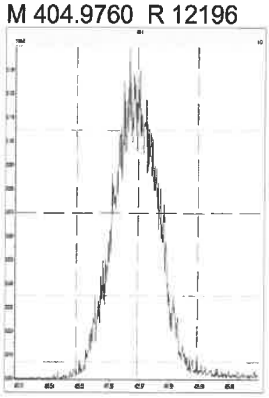

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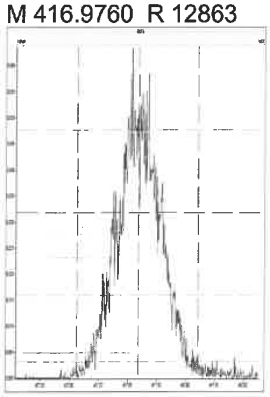

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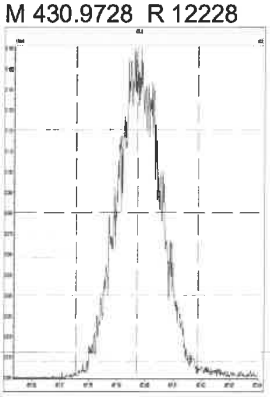

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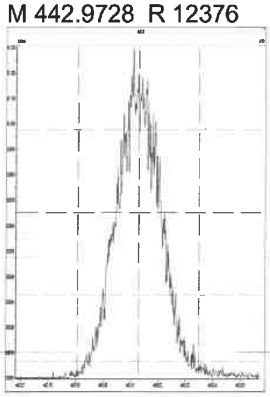

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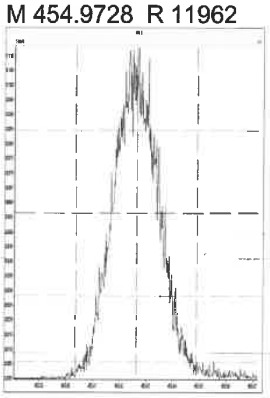

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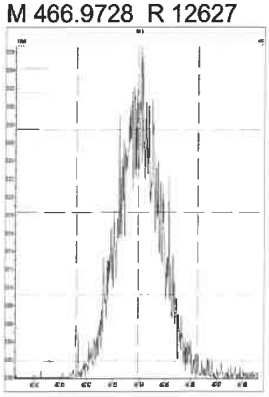

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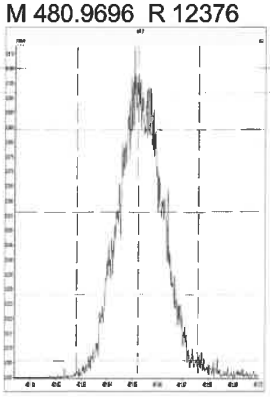

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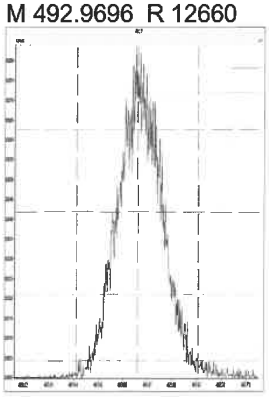

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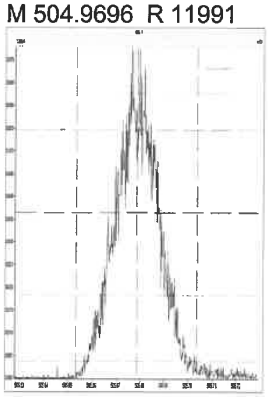

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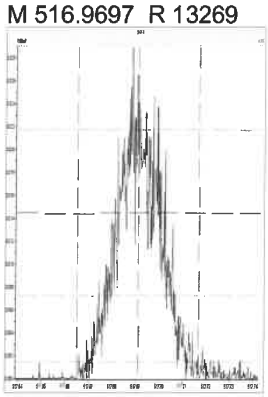

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M 292.9824 R 11600

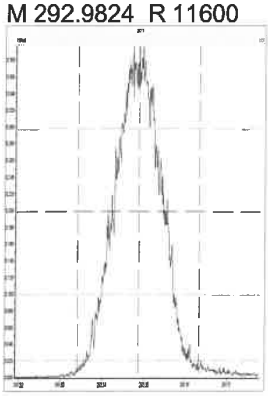

M 304.9824 R 12705

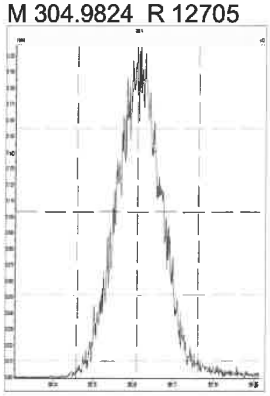

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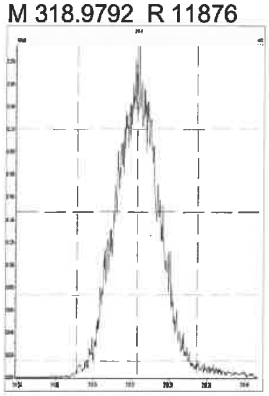

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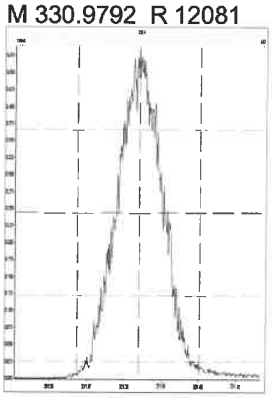

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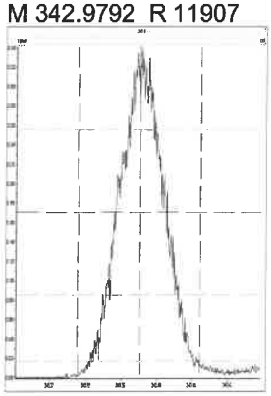

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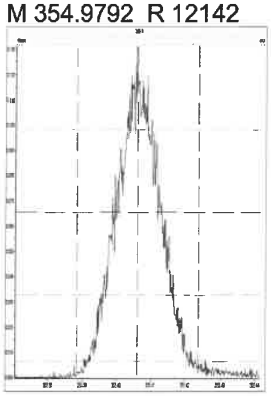

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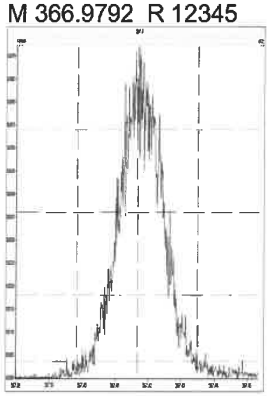

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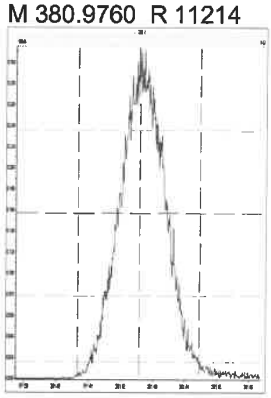

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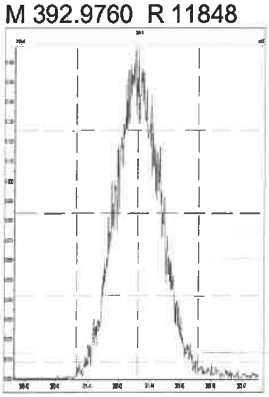

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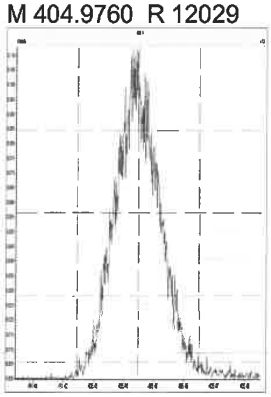

M 416.9760 R 12410

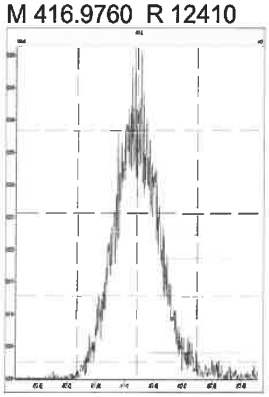

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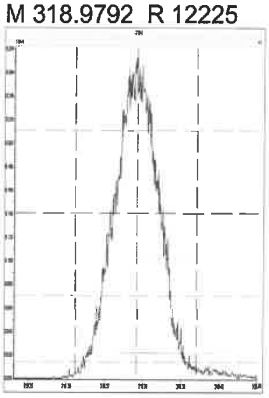

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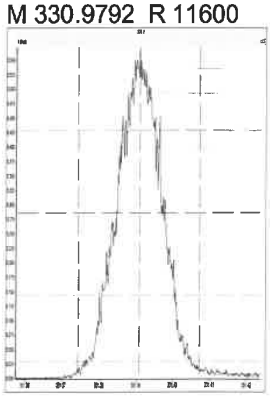

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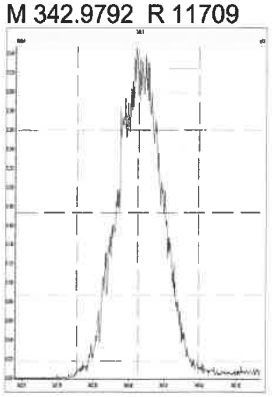

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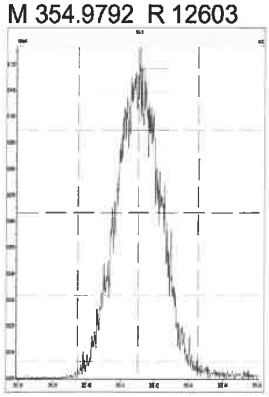

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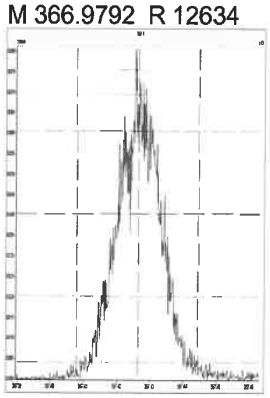

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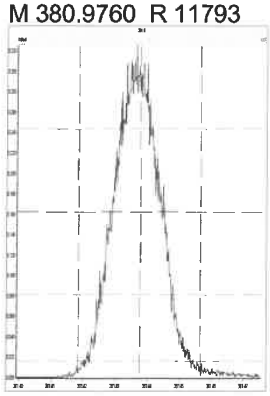

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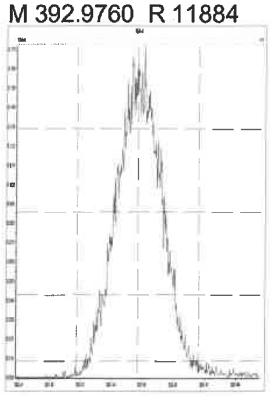

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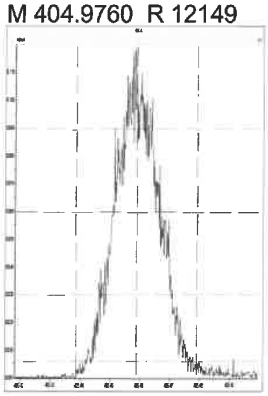

M 416.9760 R 12510

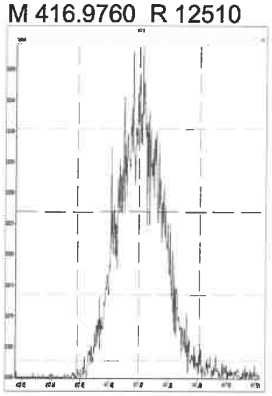

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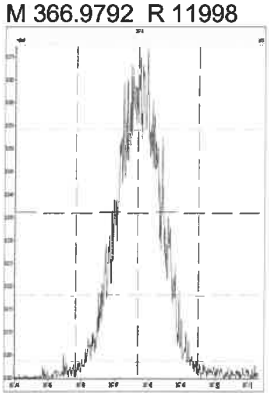

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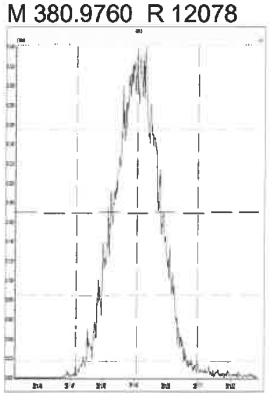

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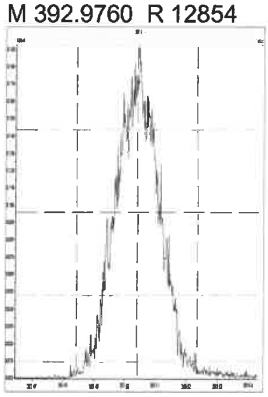

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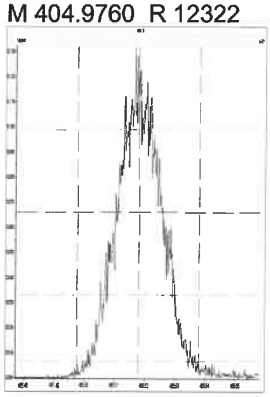

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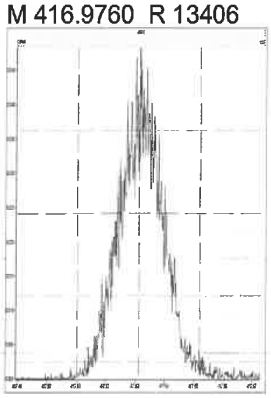

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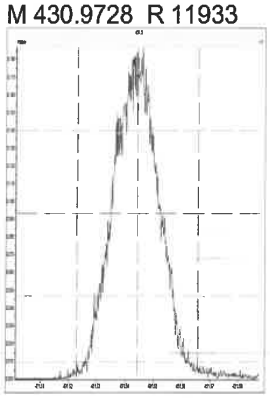

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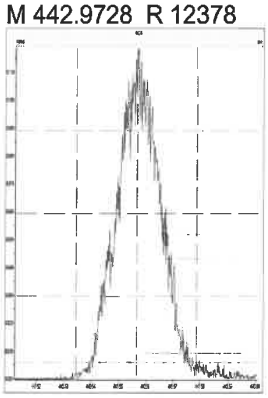

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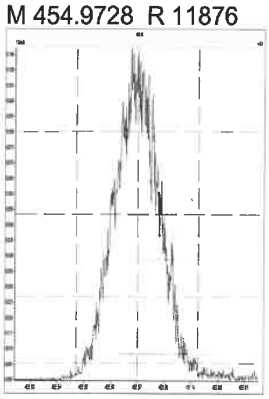

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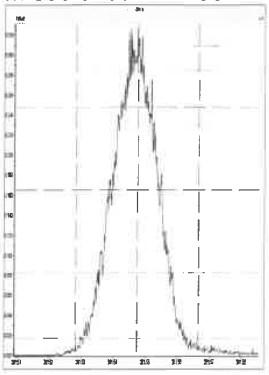

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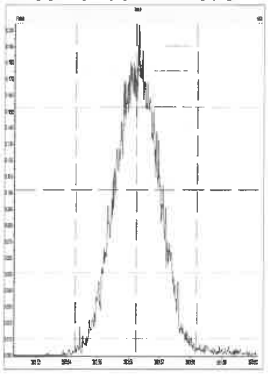

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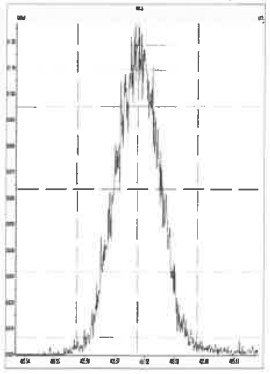

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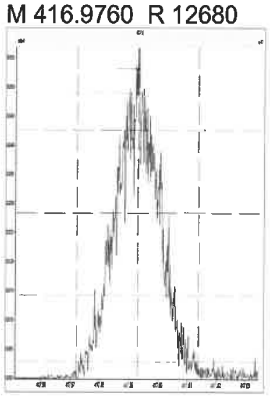

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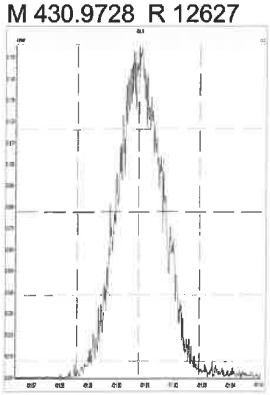

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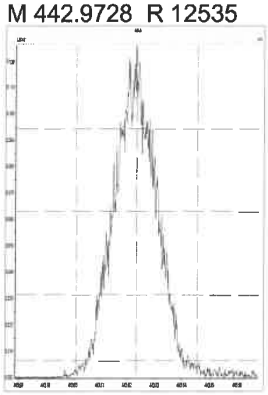

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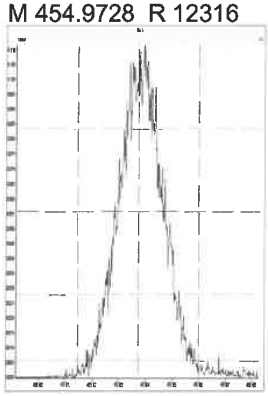

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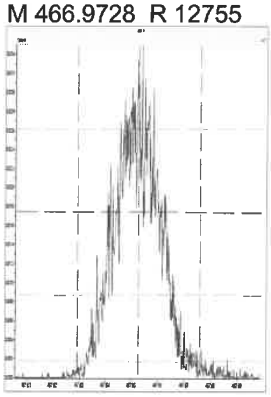

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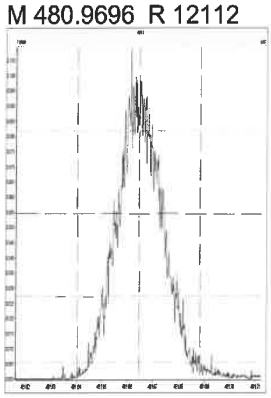

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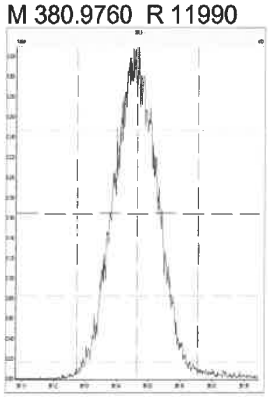

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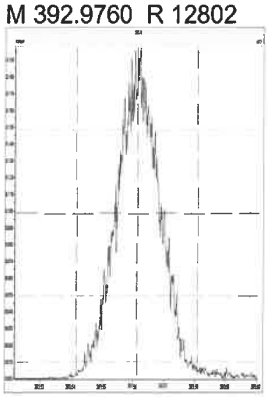

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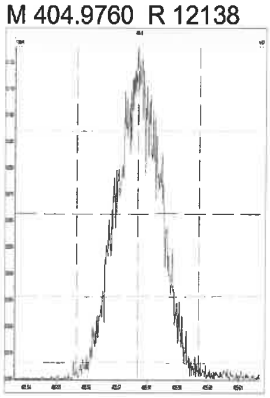

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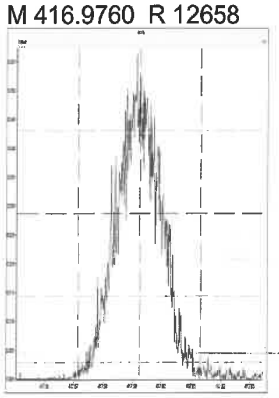

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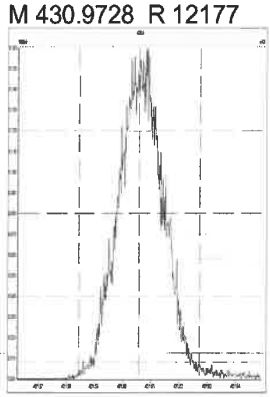

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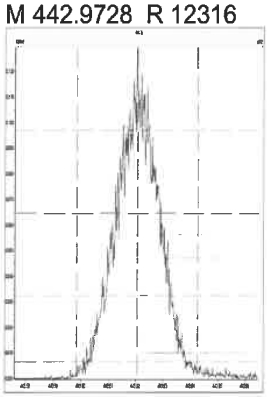

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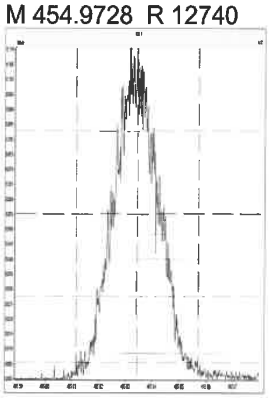

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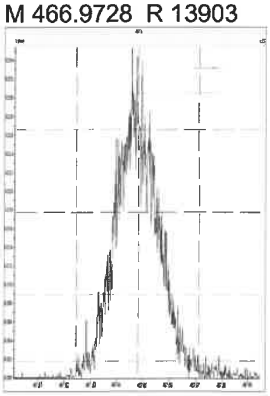

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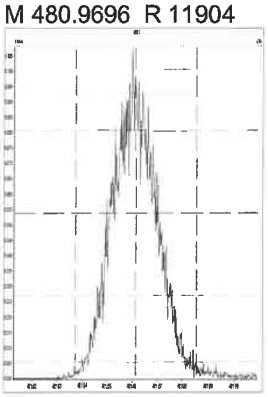

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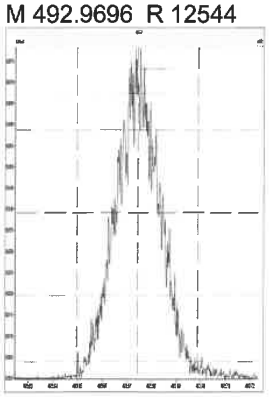

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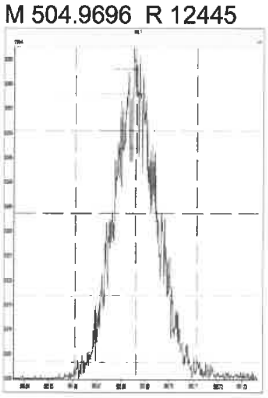

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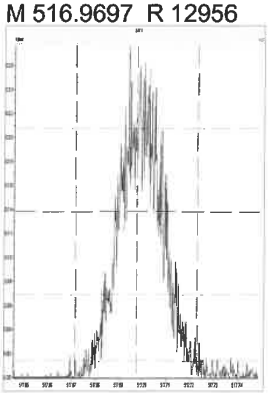

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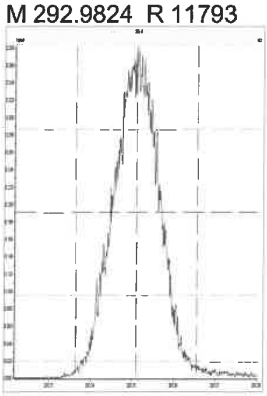

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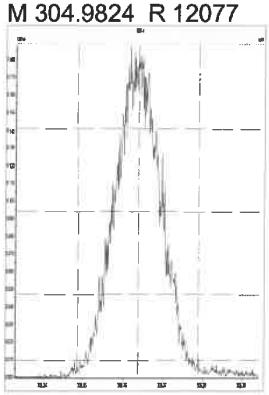

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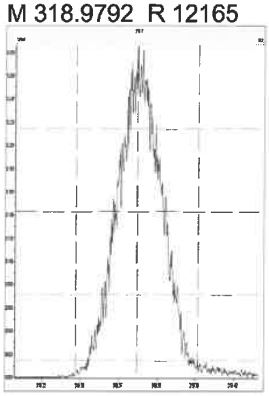

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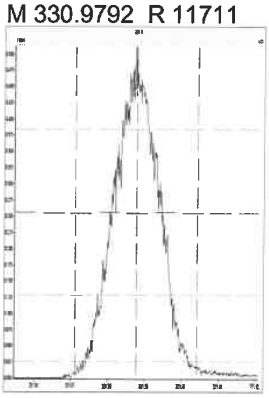

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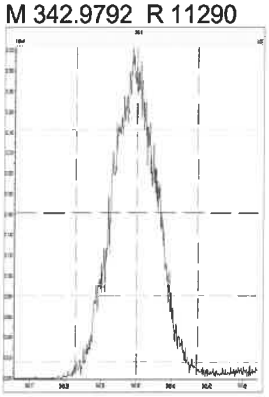

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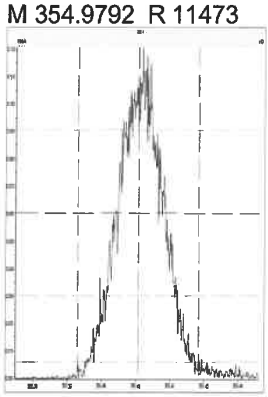

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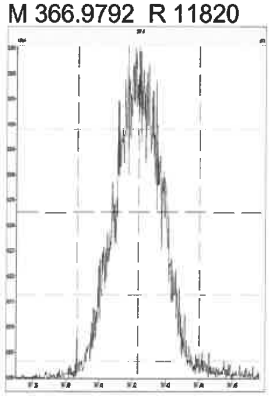

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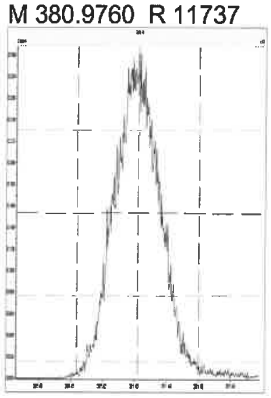

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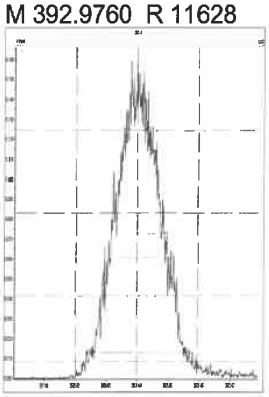

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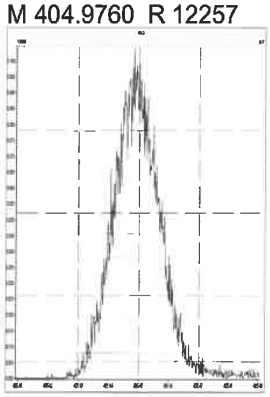

M 416.9760 R 12760

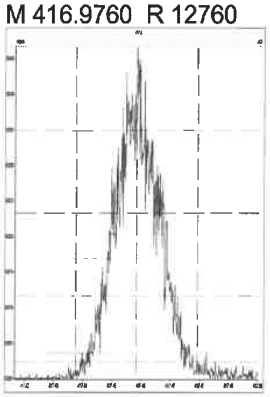

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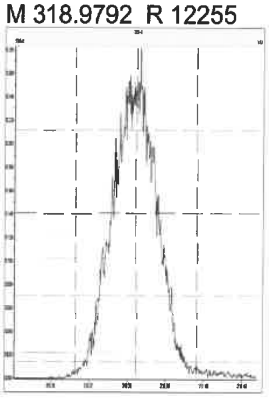

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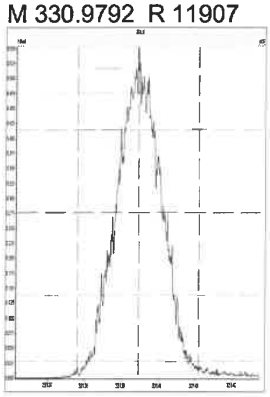

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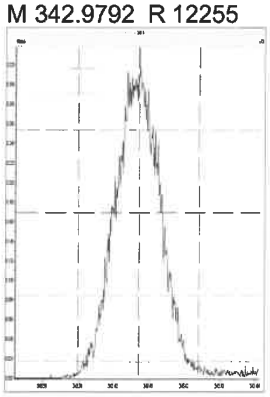

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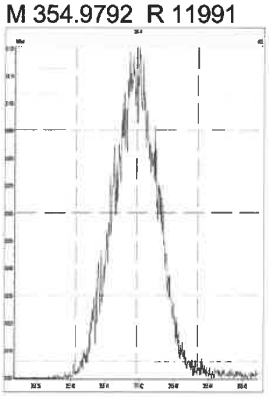

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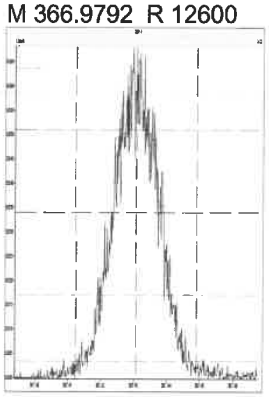

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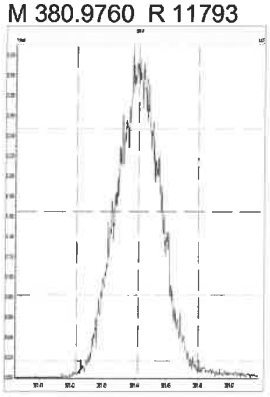

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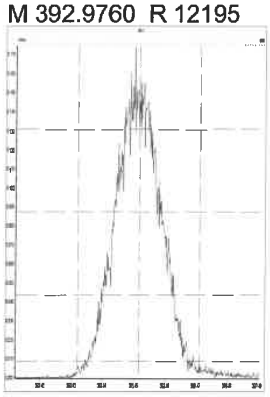

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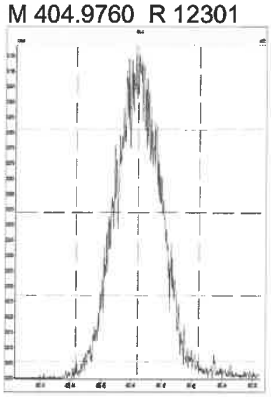

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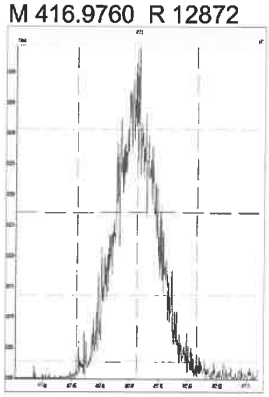

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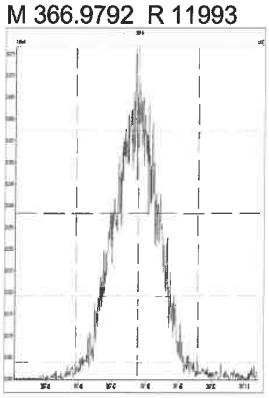

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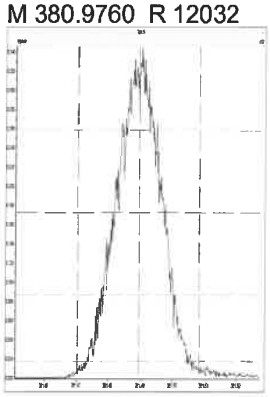

M 392.9760 R 11962

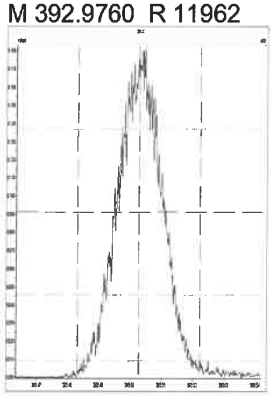

M 404.9760 R 12224

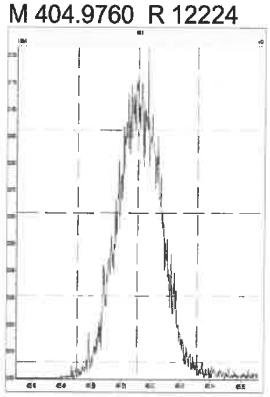

M 416.9760 R 13025

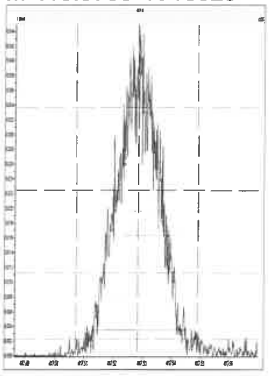

M 430.9728 R 12226

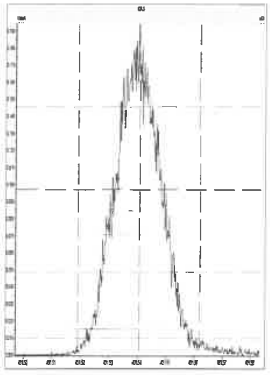

M 442.9728 R 12472

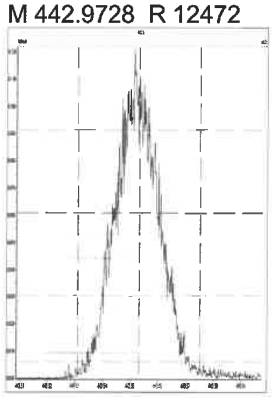

M 454.9728 R 12642

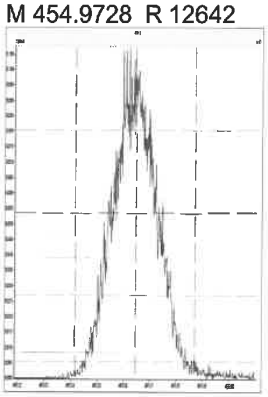

M 380.9760 R 12322

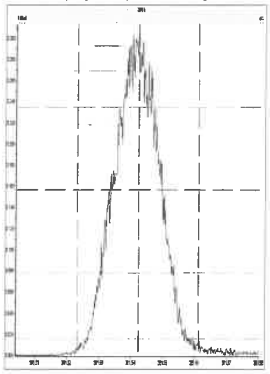

M 392.9760 R 12225

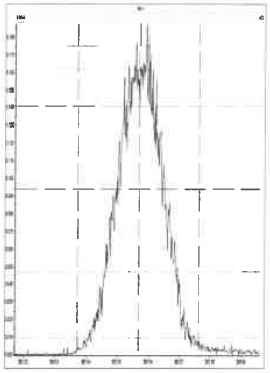

M 404.9760 R 12081

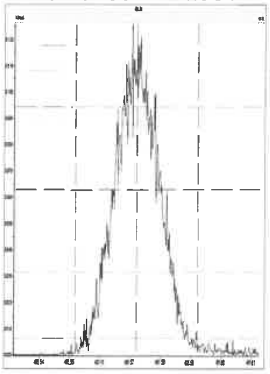

M 416.9760 R 12499

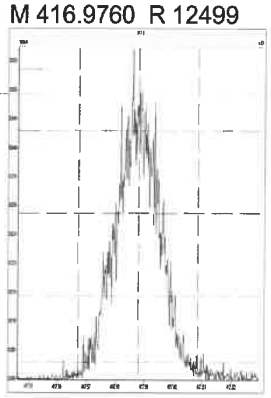

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Printed: Wednesday, August 18, 2021 23:49:29 Pacific Daylight Time

M 430.9728_R 11820

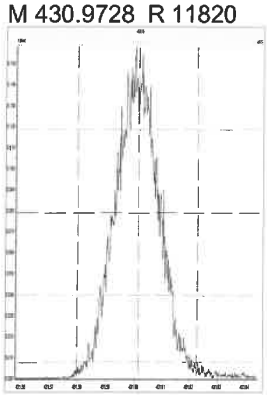

M 442.9728_R 12196

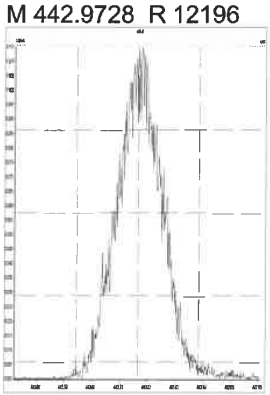

M 454.9728_R 12254

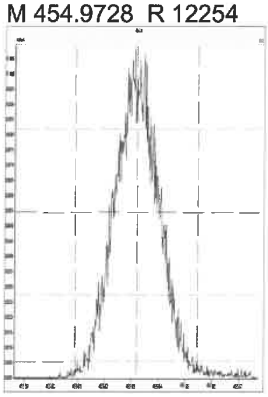

M 466.9728_R 12944

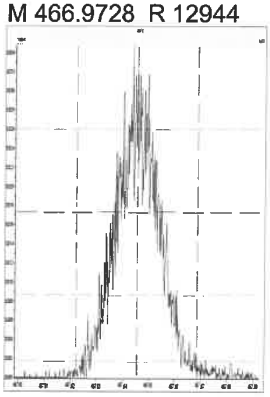

M 480.9696_R 11961

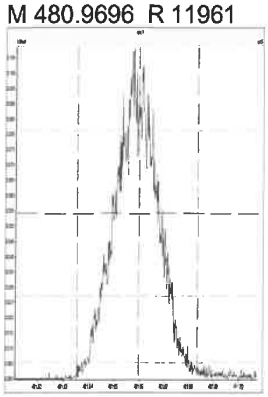

M 380.9760_R 11966

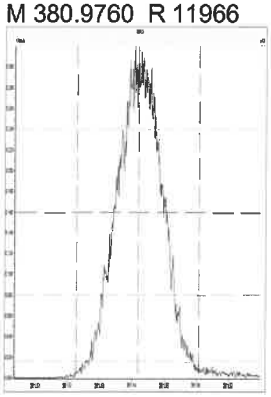

M 392.9760_R 12255

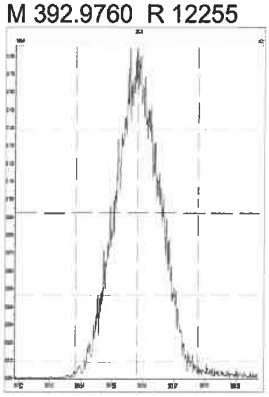

M 404.9760_R 12319

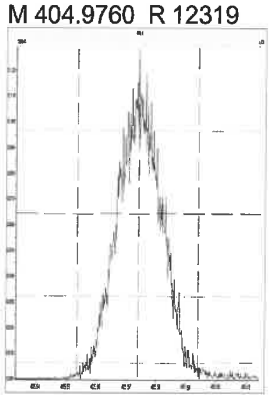

M 416.9760_R 12886

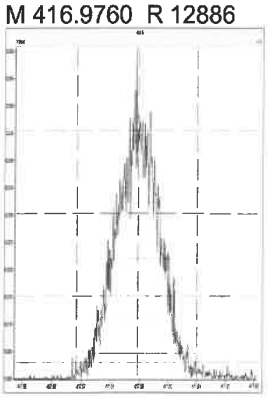

M 430.9728_R 12351

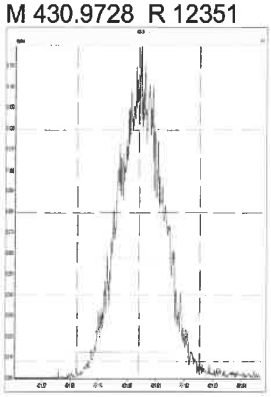

M 442.9728_R 12535

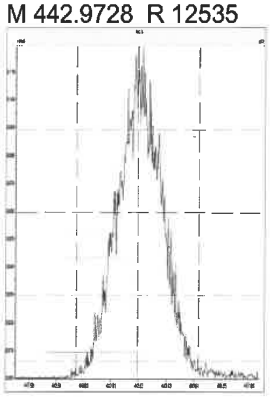

M 454.9728_R 12126

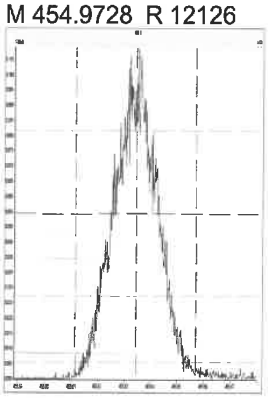

M 466.9728_R 12255

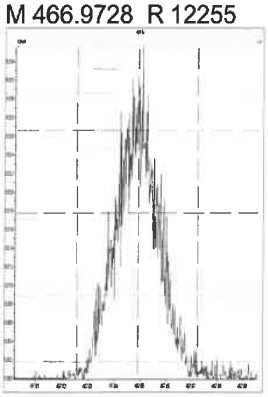

M 480.9696_R 12077

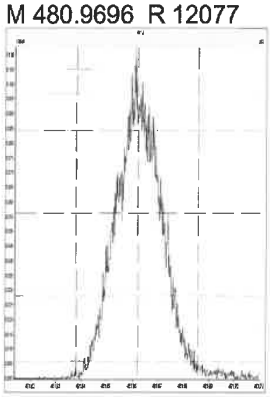

M 492.9696_R 12562

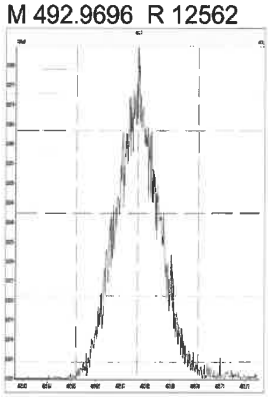

M 504.9696_R 12286

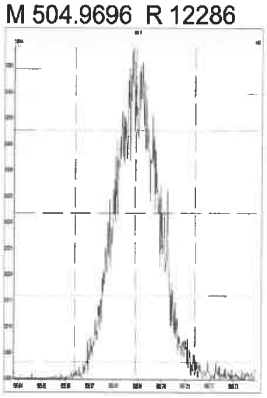

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M 516.9697 R 13640

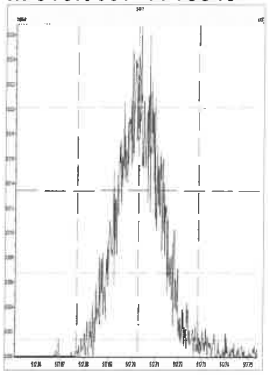

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 15:00:59 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081821 CS-4 HRDXNL4_00099
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:20:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.809	125274630	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.295	193804057	0.76	1.6249	95.2	95.2	0.2628	0.2628	95.21	
2,3,7,8-TCDF	17.310	20374957	0.74	1.0239	10.3	10.3	0.0202	0.0202	103	
A Non-2,3,7,8-sub-TCDF	17.159						0.0202	0.0202		n
S Total TCDF					10.3	10.3	0.0202	0.0202		
D 13C-2,3,7,8-TCDD	18.006	115575767	0.81	0.8993	102.6	102.6	0.2501	0.2501	103	
2,3,7,8-TCDD	18.021	14428107	0.79	1.2541	9.954	9.954	0.0216	0.0216	99.54	
$ 37Cl4-2,3,7,8-TCDD	18.021	14558317		1.1071	10.5	10.5	0.0226	0.0226	105	
A Non-2,3,7,8-sub-TCDD	17.620						0.0216	0.0216		
S Total TCDD					9.954	9.954	0.0216	0.0216		
D 13C-1,2,3,7,8-PeCDF	22.299	148698470	1.55	1.2101	98.1	98.1	0.2691	0.2691	98.09	
1,2,3,7,8-PeCDF	22.326	80901540	1.64	1.0611	51.3	51.3	0.1979	0.1979	103	
D 13C-2,3,4,7,8-PeCDF	23.635	152292643	1.52	1.2395	98.1	98.1	0.2627	0.2627	98.08	
2,3,4,7,8-PeCDF	23.649	80074314	1.58	1.0184	51.6	51.6	0.2180	0.2180	103	
A F1 PeCDFs	20.229						0.007854	0.007854		
A Non-2,3,7,8-sub-PeCDF	23.445						0.2076	0.2076		
S Total PeCDF					102.9	102.9	0.2079	0.2079		
D 13C-1,2,3,7,8-PeCDD	24.358	100276778	1.62	0.7612	105.2	105.2	0.1168	0.1168	105	
1,2,3,7,8-PeCDD	24.372	52599761	1.60	1.0484	50.0	50.0	0.0700	0.0700	100	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0700	0.0700		
S Total PeCDD					50.0	50.0	0.0700	0.0700		
D 13C-1,2,3,4,7,8-HxCDF	30.436	129822416	0.52	1.0837	96.6	96.6	0.4989	0.4989	96.59	
1,2,3,4,7,8-HxCDF	30.463	70522304	1.23	1.0851	50.1	50.1	0.3519	0.3519	100	
D 13C-1,2,3,6,7,8-HxCDF	30.623	134938060	0.53	1.1279	96.5	96.5	0.4793	0.4793	96.46	
1,2,3,6,7,8-HxCDF	30.649	78321574	1.21	1.1260	51.5	51.5	0.3215	0.3215	103	
D 13C-2,3,4,6,7,8-HxCDF	31.461	125717060	0.51	1.0637	95.3	95.3	0.5083	0.5083	95.29	
2,3,4,6,7,8-HxCDF	31.488	73972576	1.22	1.1675	50.4	50.4	0.2542	0.2542	101	
D 13C-1,2,3,7,8,9-HxCDF	32.273	114363903	0.51	0.9676	95.3	95.3	0.5588	0.5588	95.30	
1,2,3,7,8,9-HxCDF	32.286	67787700	1.23	1.1664	50.8	50.8	0.2705	0.2705	102	
A Non-2,3,7,8-sub-HxCDF	30.410						0.2953	0.2953		

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					202.8	202.8	0.2995	0.2995		
* 13C-1,2,3,7,8,9-HxCDD	32.100	124026185	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.661	89334733	1.24	0.7334	98.2	98.2	0.3905	0.3905	98.21	
1,2,3,4,7,8-HxCDD	31.674	48210928	1.25	1.0640	50.7	50.7	0.1818	0.1818	101	
D 13C-1,2,3,6,7,8-HxCDD	31.767	102007309	1.20	0.8802	93.4	93.4	0.3254	0.3254	93.44	
1,2,3,6,7,8-HxCDD	31.781	53948690	1.26	1.0001	52.9	52.9	0.1851	0.1851	106	
1,2,3,7,8,9-HxCDD	32.113	58022287	1.26	1.1325	53.6	53.6	0.1671	0.1671	107	
A Non-2,3,7,8-sub-HxCDD	30.816						0.1776	0.1776		
S Total HxCDD					157.2	157.2	0.1780	0.1780		
D 13C-1,2,3,4,6,7,8-HpCDF	33.718	90162961	0.44	0.7730	94.0	94.0	1.028	1.028	94.04	
1,2,3,4,6,7,8-HpCDF	33.730	67354435	1.05	1.4413	51.8	51.8	0.5166	0.5166	104	
D 13C-1,2,3,4,7,8,9-HpCDF	34.811	81525679	0.44	0.7008	93.8	93.8	1.134	1.134	93.79	
1,2,3,4,7,8,9-HpCDF	34.811	55774124	1.06	1.3174	51.9	51.9	0.7362	0.7362	104	
A Non-2,3,7,8-sub-HpCDF	34.283						0.6108	0.6108		
S Total HpCDF					103.8	103.8	0.6264	0.6264		
D 13C-1,2,3,4,6,7,8-HpCDD	34.520	78738609	1.00	0.6472	98.1	98.1	0.5070	0.5070	98.09	
1,2,3,4,6,7,8-HpCDD	34.532	43664822	1.04	1.0943	50.7	50.7	0.2388	0.2388	101	
A Non-2,3,7,8-sub-HpCDD	33.504						0.2388	0.2388		
S Total HpCDD					50.7	50.7	0.2388	0.2388		
D 13C-OCDD	36.866	112330513	0.88	0.4472	202.5	202.5	0.1921	0.1921	101	
OCDF	36.962	82814446	0.89	1.4382	102.5	102.5	0.0885	0.0885	103	
OCDD	36.878	64177494	0.90	1.1070	103.2	103.2	0.1016	0.1016	103	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 15:00:59 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081821 CS-4 HRDXNL4_00099
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:20:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.809	17.809	0		55736498	13587558	13374	33435	1016		
333.9339	17.809	17.809	0		69538132	16878371	14038	35095	1202	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.295	17.295	0	0.971	83586866	19721140	19889	49722	992		
317.9389	17.295	17.295	0	0.971	110217191	26049370	32151	80377	810	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.310	17.310	0	1.001	8692442	2077936	1567	3917	1326		
305.8987	17.310	17.310	0	1.001	11682515	2758484	2227	5567	1239	0.74(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.948	17.159	-13	0.980	42020	10555	1567	3917	7		
305.8987	16.933	17.159	-14	0.979	55712	14433	2227	5567	6	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.006	18.006	0	1.011	51785893	11505545	13374	33435	860		
333.9339	18.006	18.006	0	1.011	63789874	14200675	14038	35095	1012	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.021	18.021	0	1.001	6369095	1448386	1525	3812	950		
321.8936	18.021	18.021	0	1.001	8059012	1827583	1260	3150	1450	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.021	18.021	0	1.012	14558317	3268578	3049	7622	1072		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.620						1525	3812			
321.8936	17.620						1260	3150			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.299	22.299	0	1.252	90271970	15041763	24310	60775	619		
353.8970	22.299	22.299	0	1.252	58426500	9561596	15368	38420	622	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.326	22.326	0	1.001	50207714	8182842	12381	30952	661		
341.8567	22.312	22.326	-1	1.001	30693826	5086401	8286	20715	614	1.64(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.635	23.635	0	1.327	91910933	14097277	24310	60775	580		
353.8970	23.635	23.635	0	1.327	60381710	9178004	15368	38420	597	1.52(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.649	23.649	0	1.001	49069040	7334316	12381	30952	592		
341.8567	23.649	23.649	0	1.001	31005274	4671897	8286	20715	564	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.229						299	747			
341.8567	20.229						483	1207			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.445						12381	30952			
341.8567	23.445						8286	20715			
13C-1,2,3,7,8-PeCDD											
367.8949	24.358	24.358	0	1.368	61945783	8910689	6562	16405	1358		
369.8919	24.358	24.358	0	1.368	38330995	5550706	4275	10687	1298	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.372	24.372	0	1.001	32358326	4704662	2703	6757	1741		
357.8516	24.372	24.372	0	1.001	20241435	2938127	1542	3855	1905	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						2703	6757			
357.8516	23.696						1542	3855			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.436	30.436	0	0.948	44506160	7943612	22718	56795	350		
385.8610	30.436	30.436	0	0.948	85316256	15360951	43547	108867	353	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.463	30.463	0	1.001	38844012	7190710	19541	48852	368		
375.8178	30.463	30.463	0	1.001	31678292	5902956	16060	40150	368	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.623	30.623	0	0.954	46488347	8438650	22718	56795	371		
385.8610	30.623	30.623	0	0.954	88449713	16149971	43547	108867	371	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.649	30.649	0	1.001	42953118	7782499	19541	48852	398		
375.8178	30.649	30.649	0	1.001	35368456	6456942	16060	40150	402	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.461	31.461	0	0.980	42655418	10160970	22718	56795	447		
385.8610	31.461	31.461	0	0.980	83061642	19823875	43547	108867	455	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.488	31.488	0	1.001	40621532	9421030	19541	48852	482		
375.8178	31.475	31.488	-1	1.000	33351044	7911439	16060	40150	493	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.273	32.273	0	1.005	38827641	9607307	22718	56795	423		
385.8610	32.273	32.273	0	1.005	75536262	18600026	43547	108867	427	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.286	32.286	0	1.000	37444442	9256034	19541	48852	474		
375.8178	32.286	32.286	0	1.000	30343258	7642697	16060	40150	476	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.410						19541	48852			
375.8178	30.410						16060	40150			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.100	32.100	0		68288771	16888912	18190	45475	928		
403.8529	32.100	32.100	0		55737414	13752307	16910	42275	813	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.661	31.661	0	0.986	49496871	13062548	18190	45475	718		
403.8529	31.661	31.661	0	0.986	39837862	10484312	16910	42275	620	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.674	31.674	0	1.000	26830218	7268440	9858	24645	737		
391.8127	31.674	31.674	0	1.000	21380710	5721266	8360	20900	684	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.767	31.767	0	0.990	55587908	13310800	18190	45475	732		
403.8529	31.754	31.767	-1	0.989	46419401	11286560	16910	42275	667	1.20(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.781	31.781	0	1.000	30110702	7380107	9858	24645	749		
391.8127	31.781	31.781	0	1.000	23837988	5817525	8360	20900	696	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.113	32.113	0	1.014	32338097	8008979	9858	24645	812		
391.8127	32.100	32.113	-1	1.014	25684190	6429936	8360	20900	769	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.816						9858	24645			
391.8127	30.816						8360	20900			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.718	33.718	0	1.050	27516469	8483012	30008	75020	283		
419.8220	33.718	33.718	0	1.050	62646492	19337147	67426	168565	287	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.730	33.730	0	1.000	34518971	10819501	40732	101830	266		
409.7789	33.730	33.730	0	1.000	32835464	10367364	42129	105322	246	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.811	34.811	0	1.084	24922068	6496289	30008	75020	216		
419.8220	34.799	34.811	-1	1.084	56603611	14862341	67426	168565	220	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.811	34.811	0	1.000	28680940	7773364	40732	101830	191		
409.7789	34.811	34.811	0	1.000	27093184	7389057	42129	105322	175	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.283						40732	101830			
409.7789	34.283						42129	105322			

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Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.520	34.520	0	1.075	39416837	11323012	21641	54102	523		
437.8140	34.520	34.520	0	1.075	39321772	11021895	18578	46445	593	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.532	34.532	0	1.000	22231118	6282473	11282	28205	557		
425.7737	34.532	34.532	0	1.000	21433704	5941517	12071	30177	492	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						11282	28205			
425.7737	33.504						12071	30177			
13C-OCDD											
469.7779	36.866	36.866	0	1.148	52534568	12396640	4359	10897	2844		
471.7750	36.866	36.866	0	1.148	59795945	14331014	6168	15420	2323	0.88(0.76-1.02)	
OCDF											
441.7428	36.962	36.962	0	1.003	39008933	9420516	3208	8020	2937		
443.7399	36.962	36.962	0	1.003	43805513	10637880	3598	8995	2957	0.89(0.76-1.02)	
OCDD											
457.7377	36.878	36.878	0	1.000	30441767	7255018	3155	7887	2300		
459.7348	36.878	36.878	0	1.000	33735727	8026620	2858	7145	2808	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

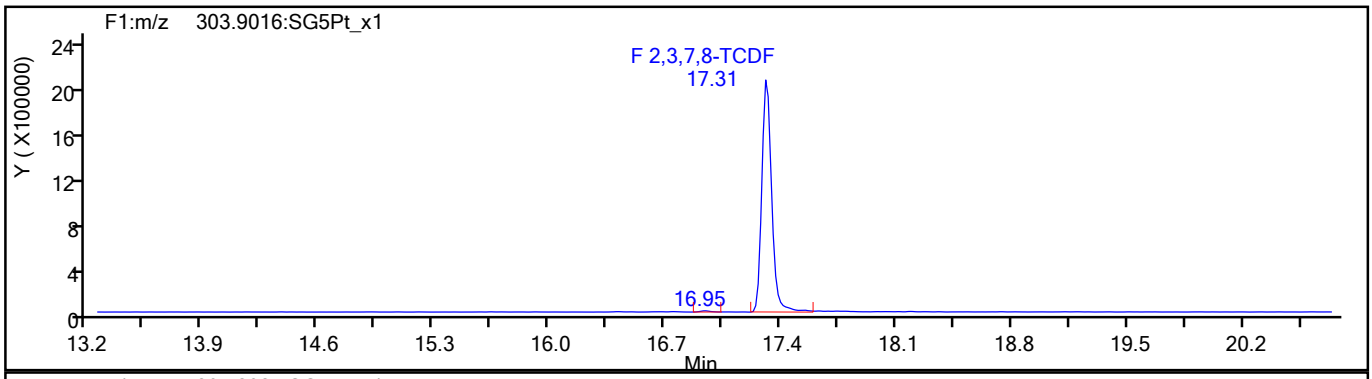

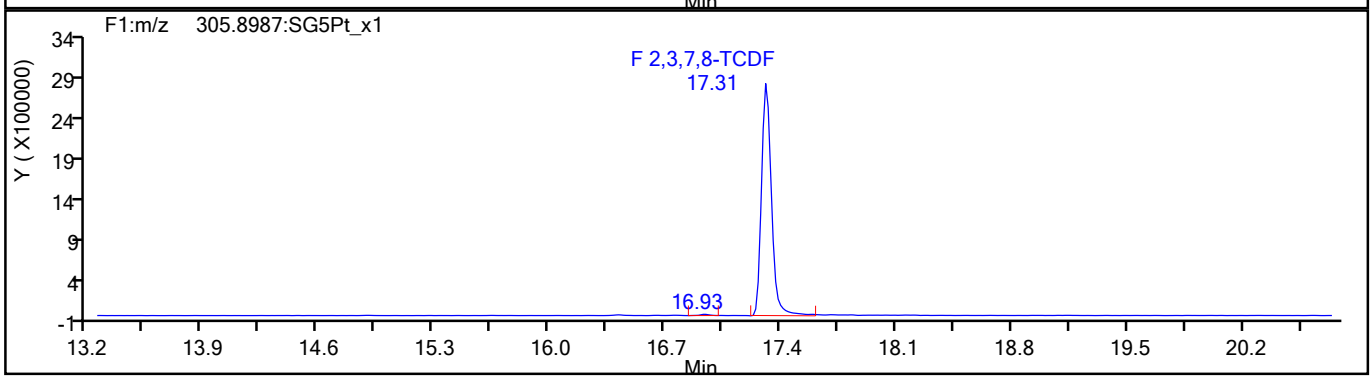

TCDF Standards

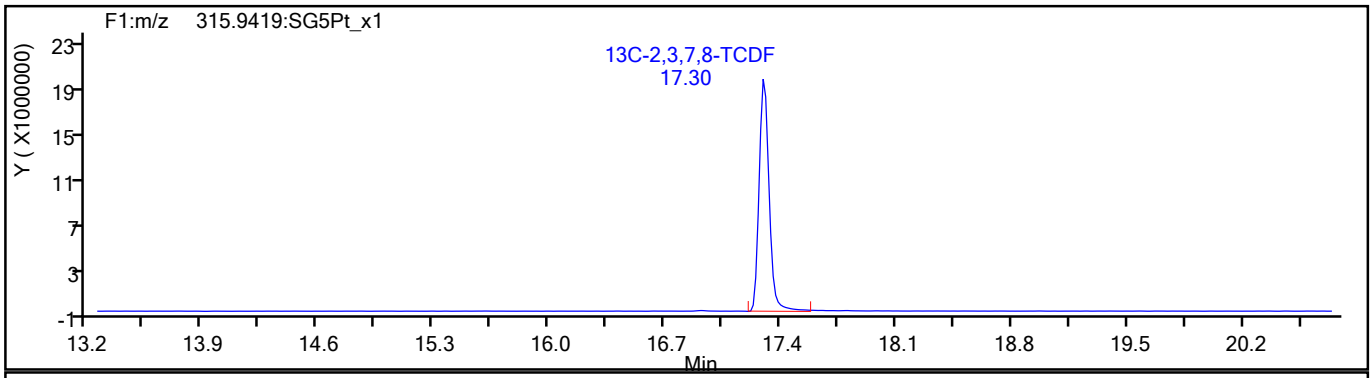

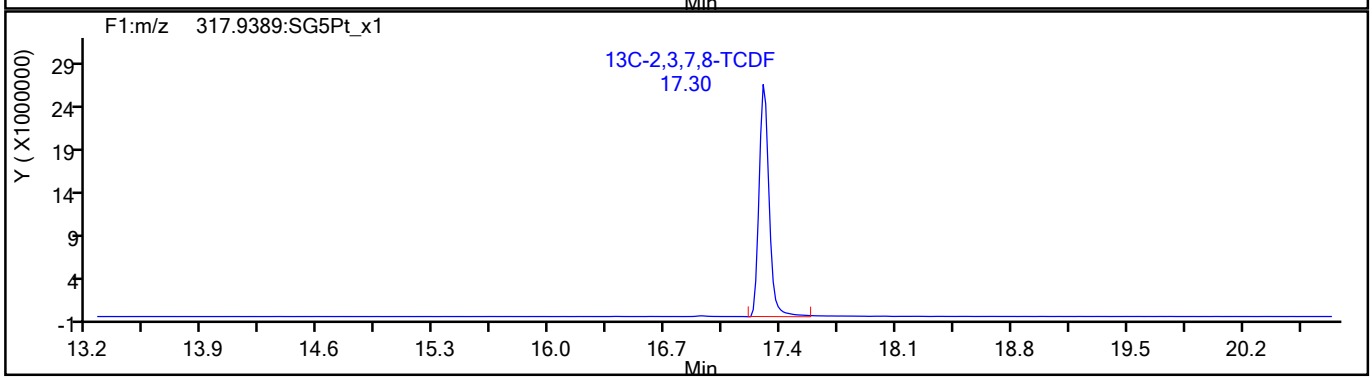

776613

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

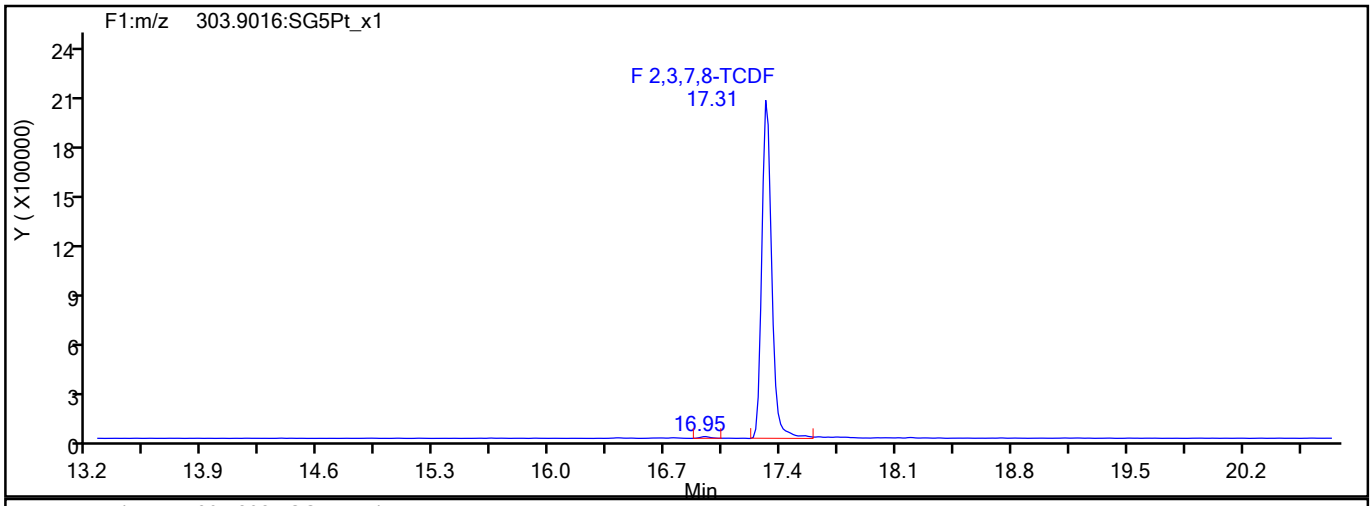

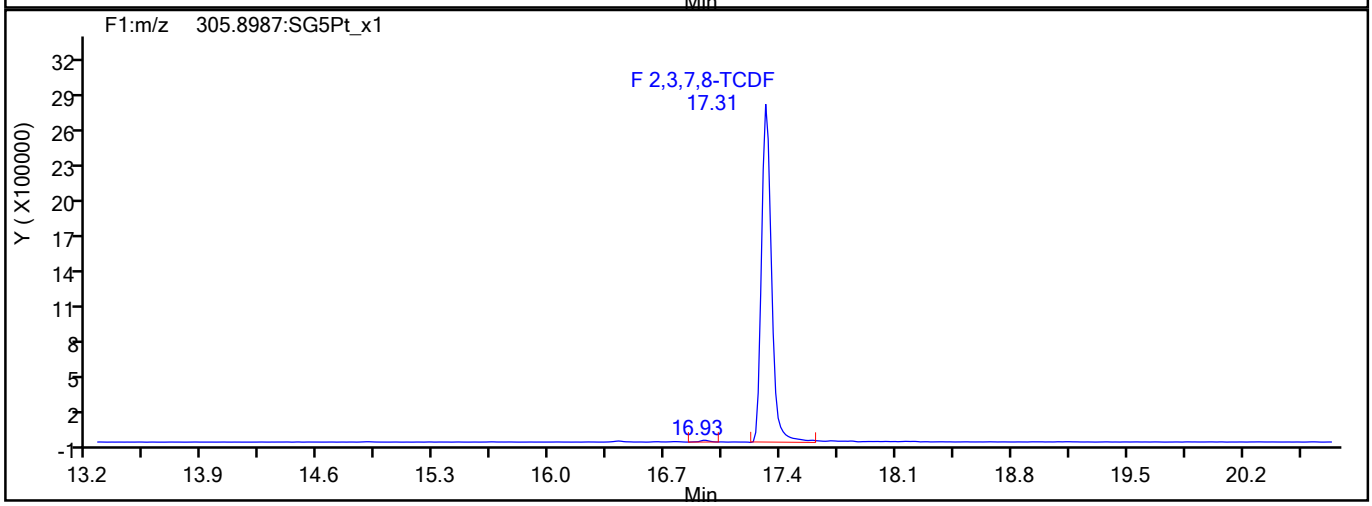

TCDF Interference Mass

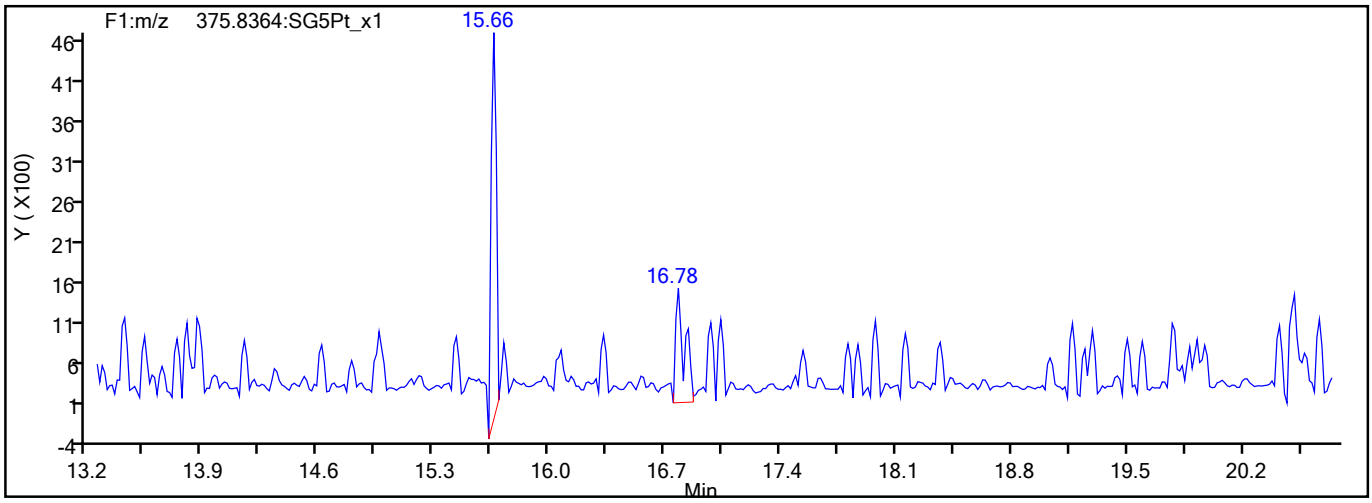

776614

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

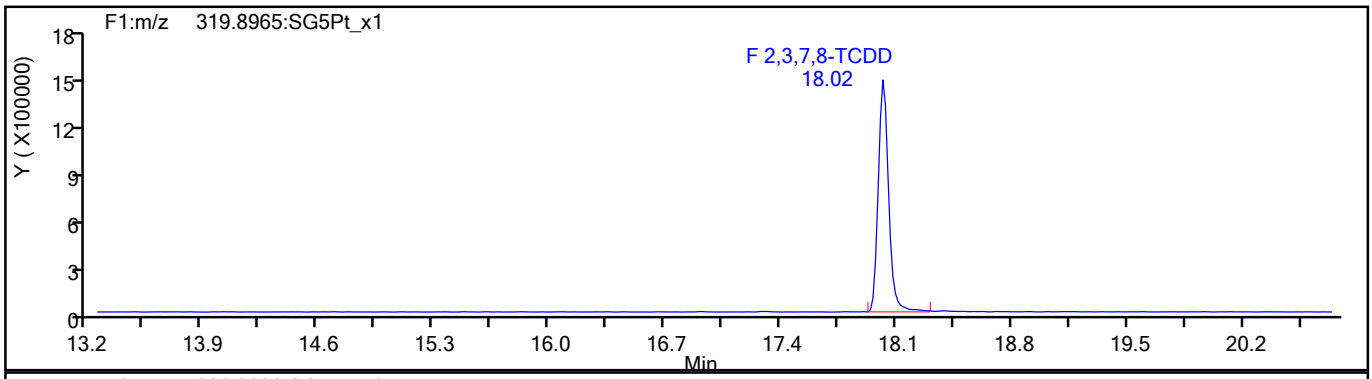

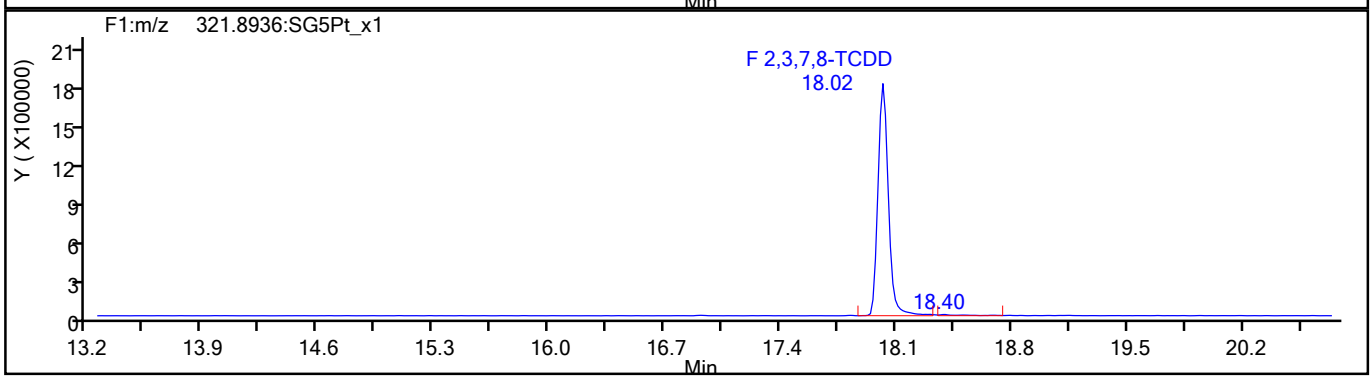

TCDD Standards

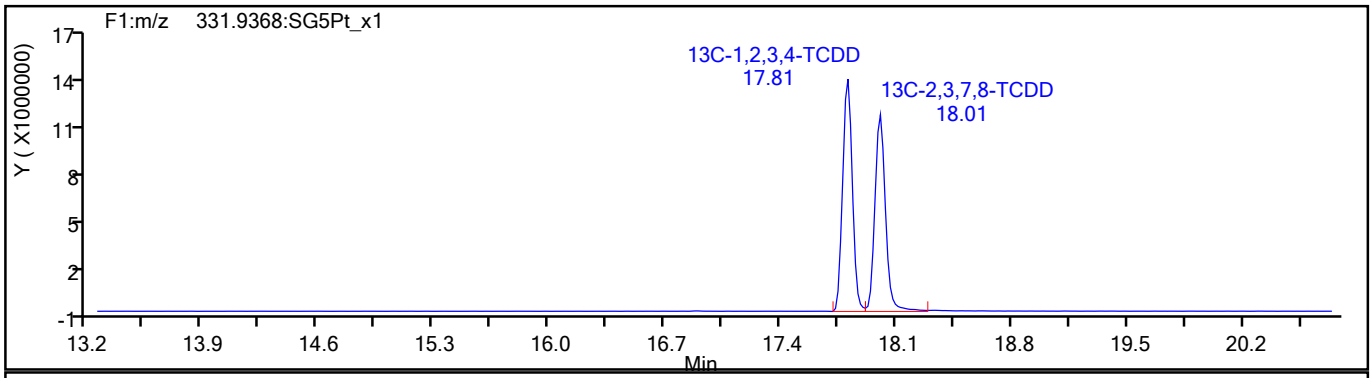

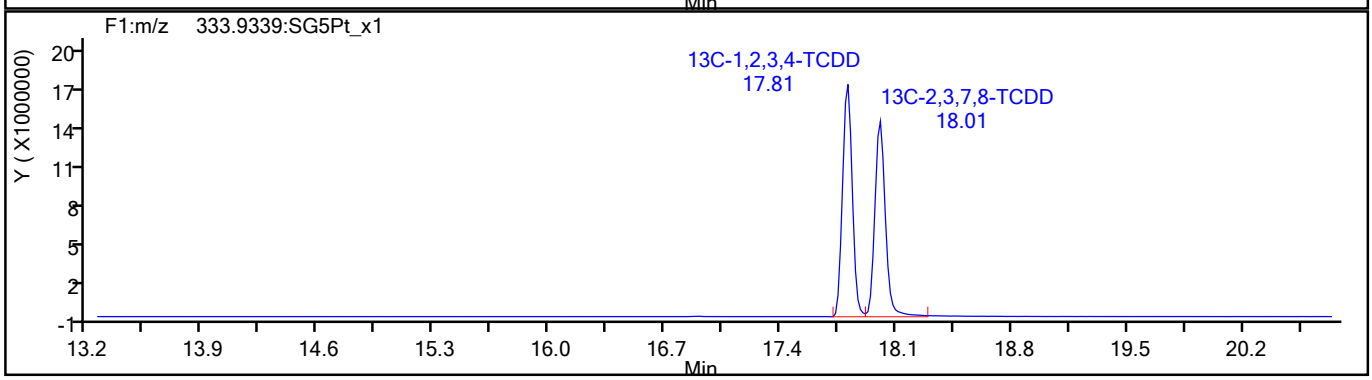

776615

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

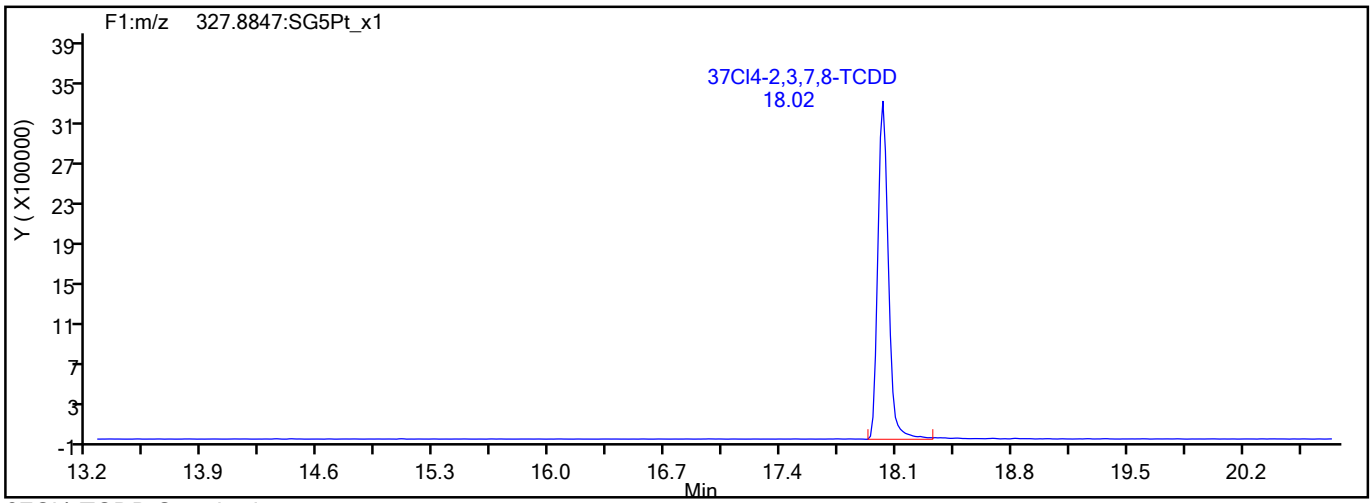

37Cl4-TCDD Standards

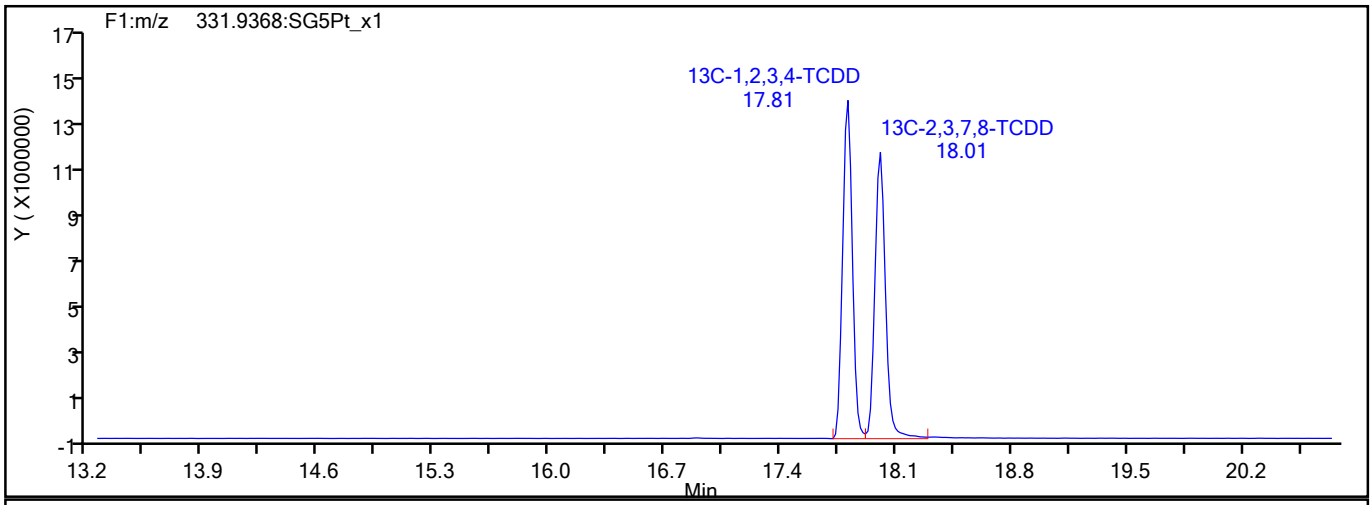

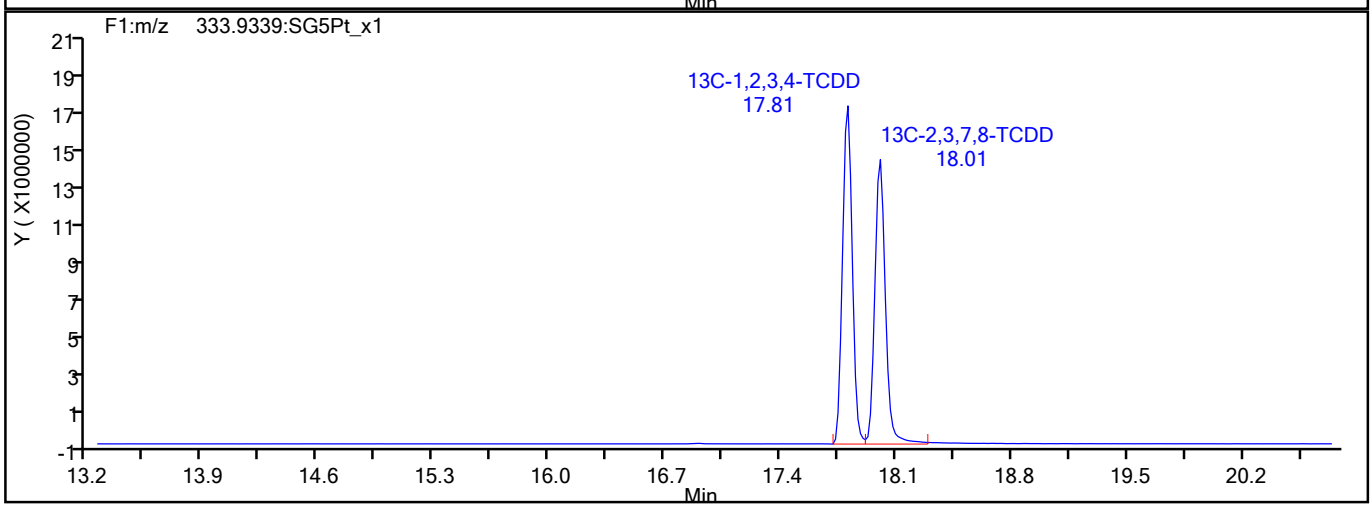

776616

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

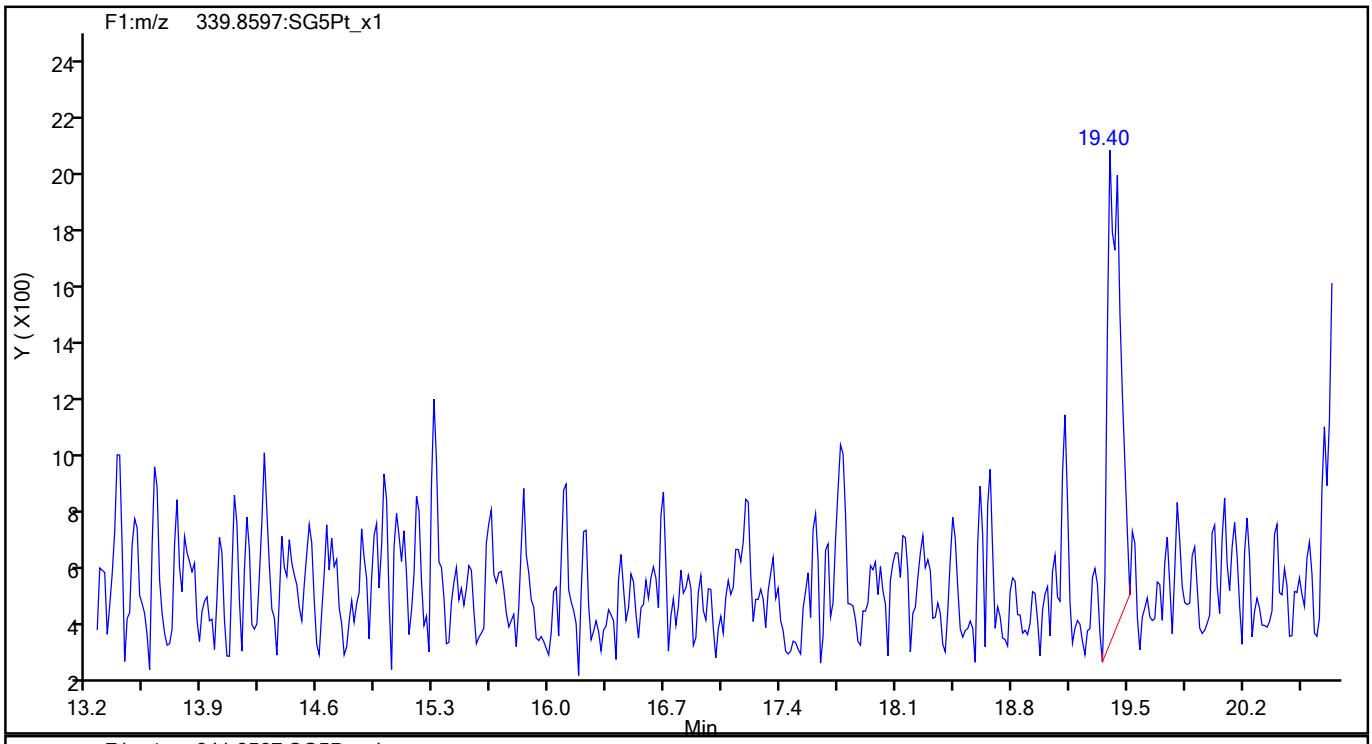

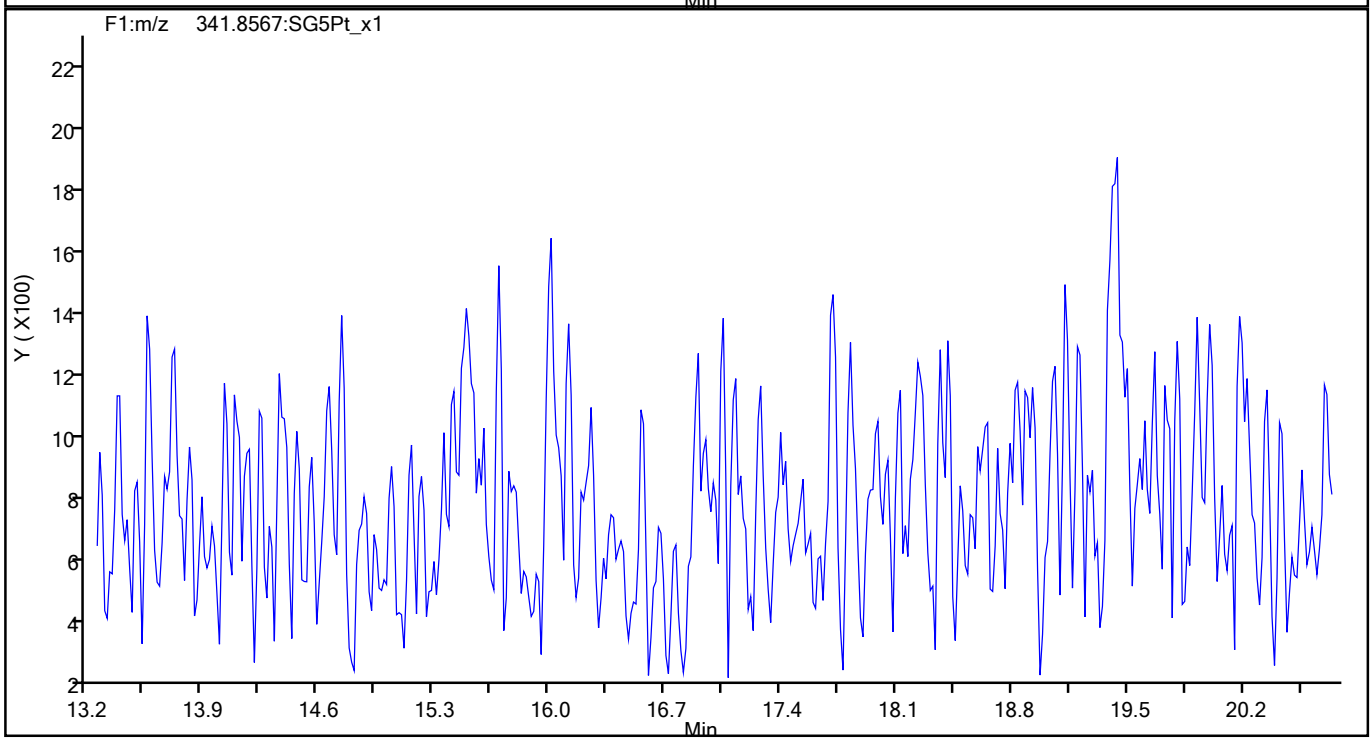

776617

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

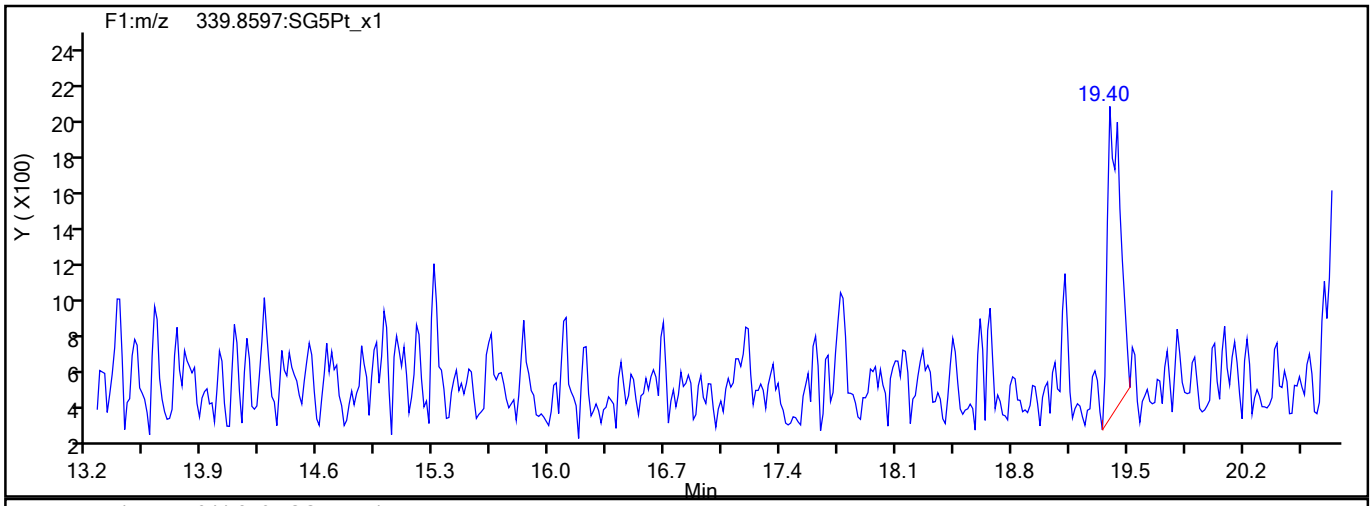

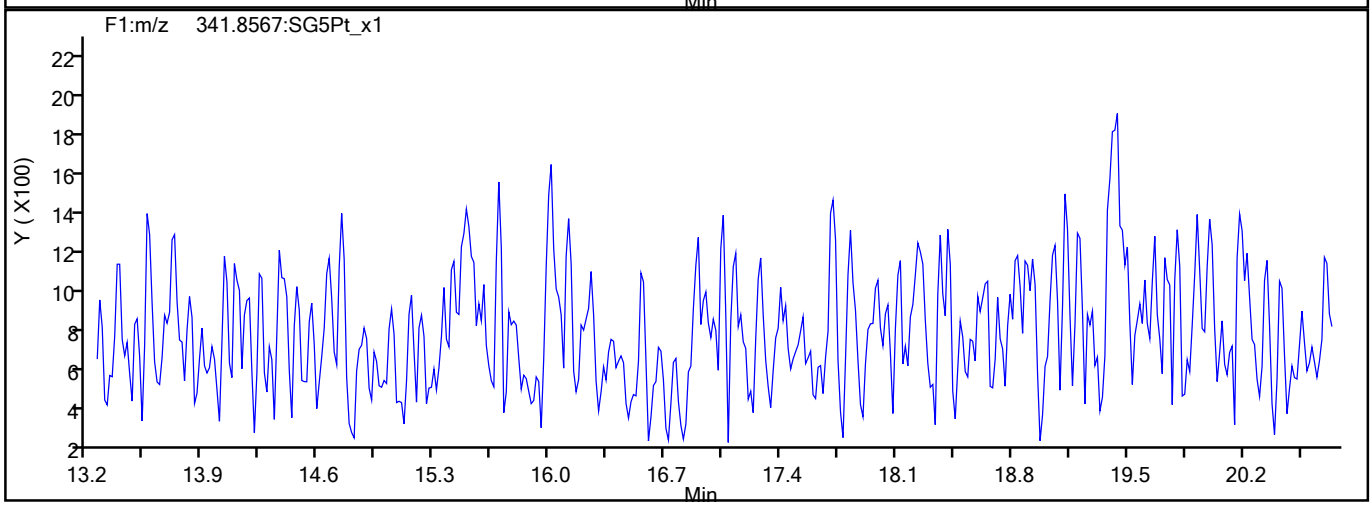

F1 PeCDFs Interference Mass

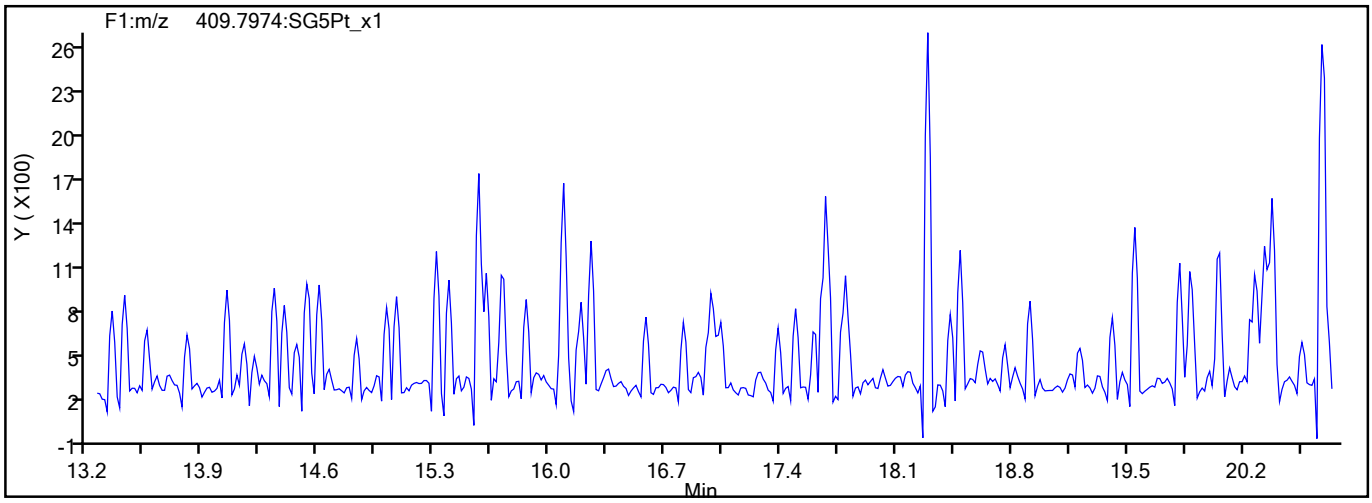

776618

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

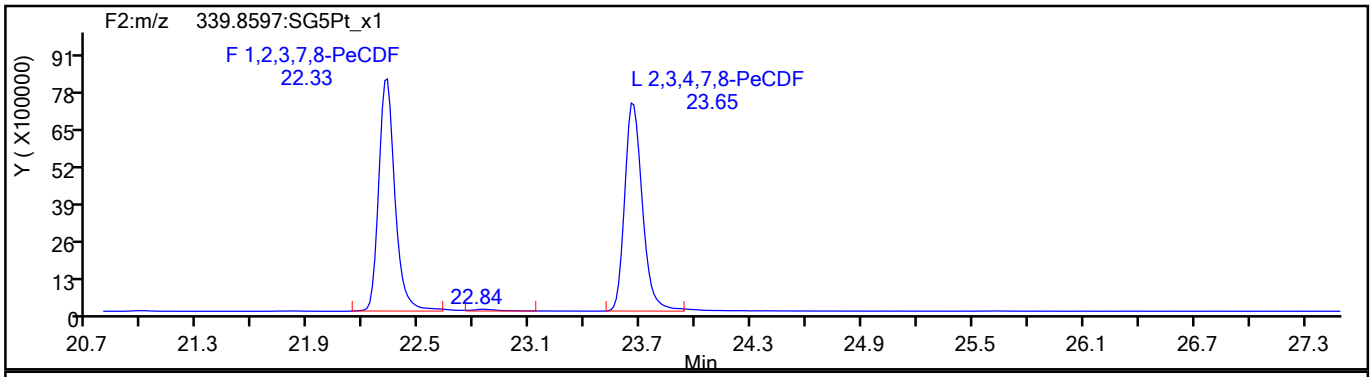

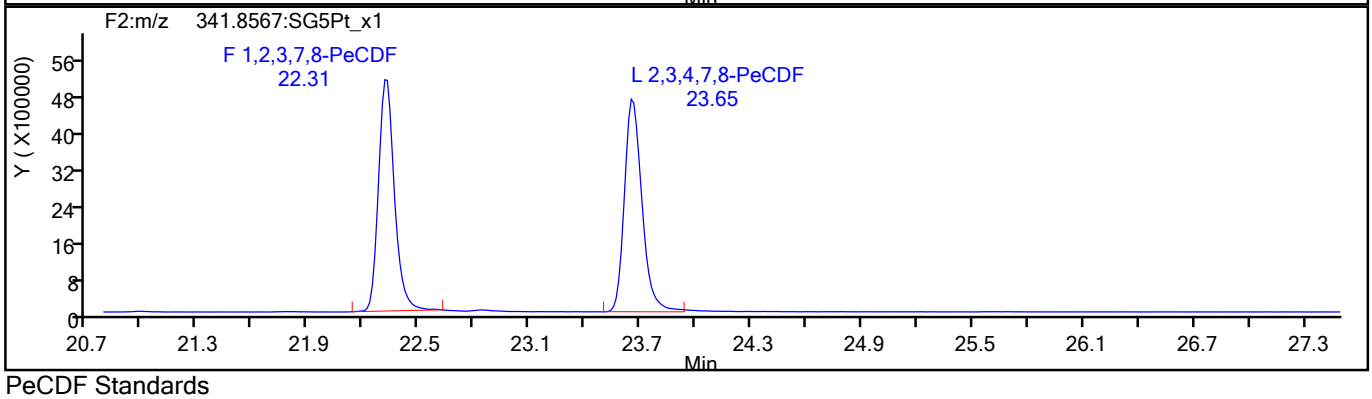

PeCDF Standards

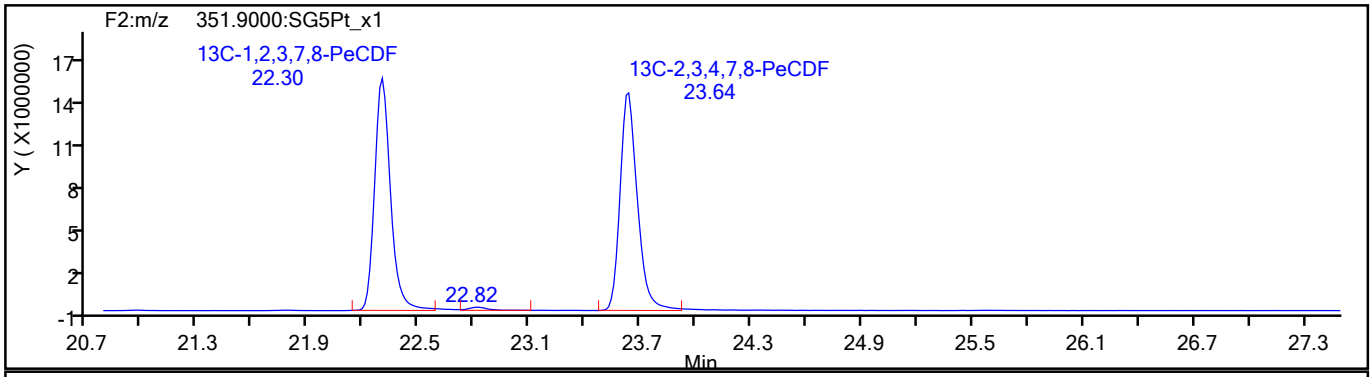

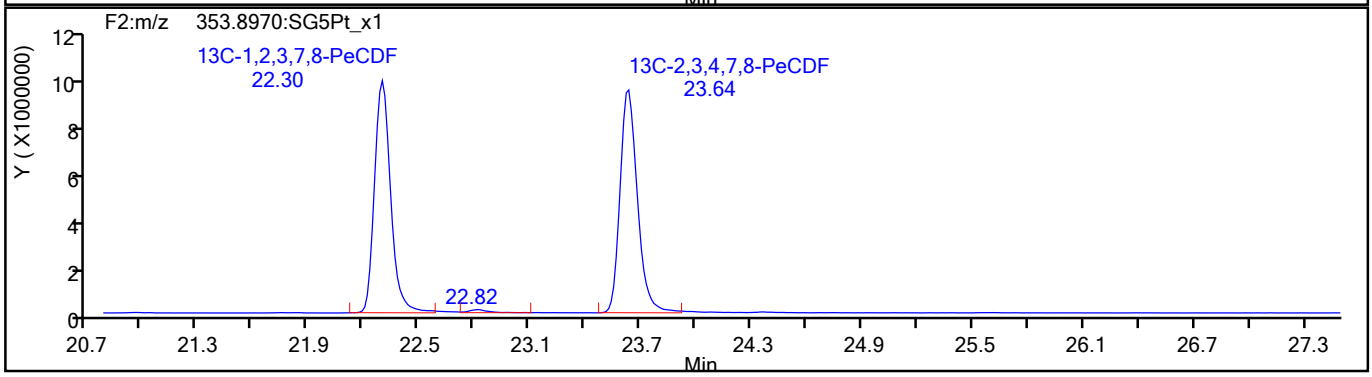

776619

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

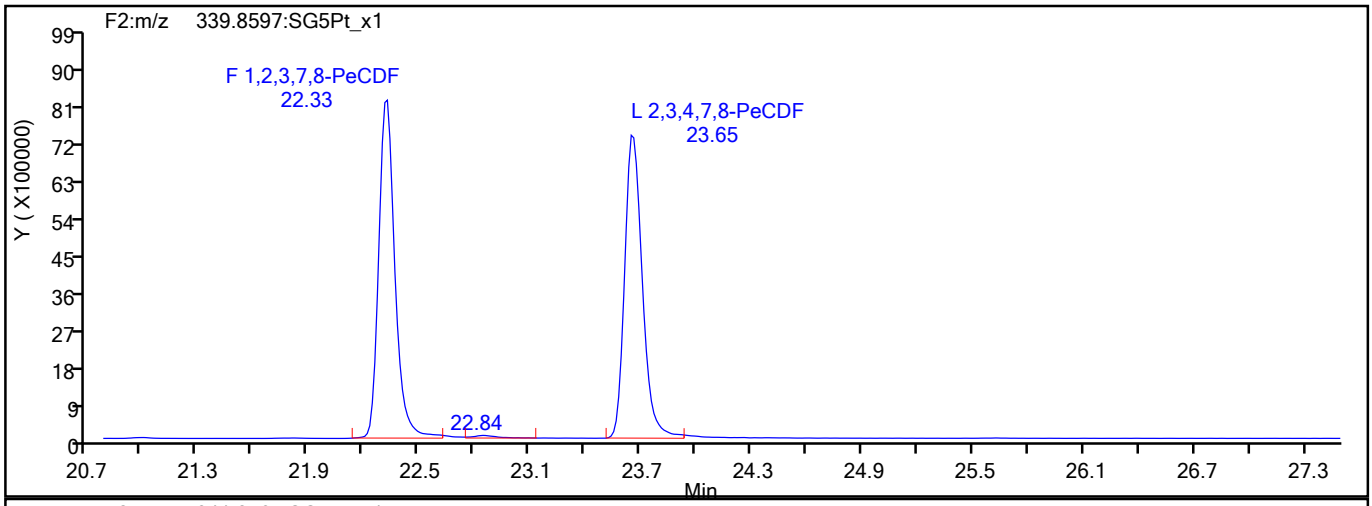

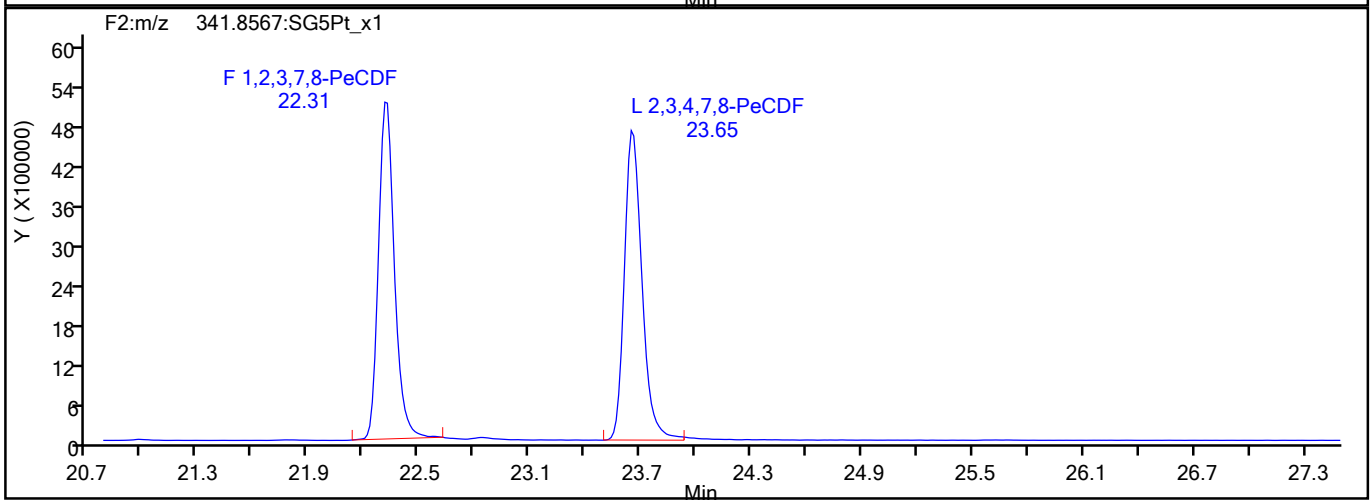

PeCDF Interference Mass

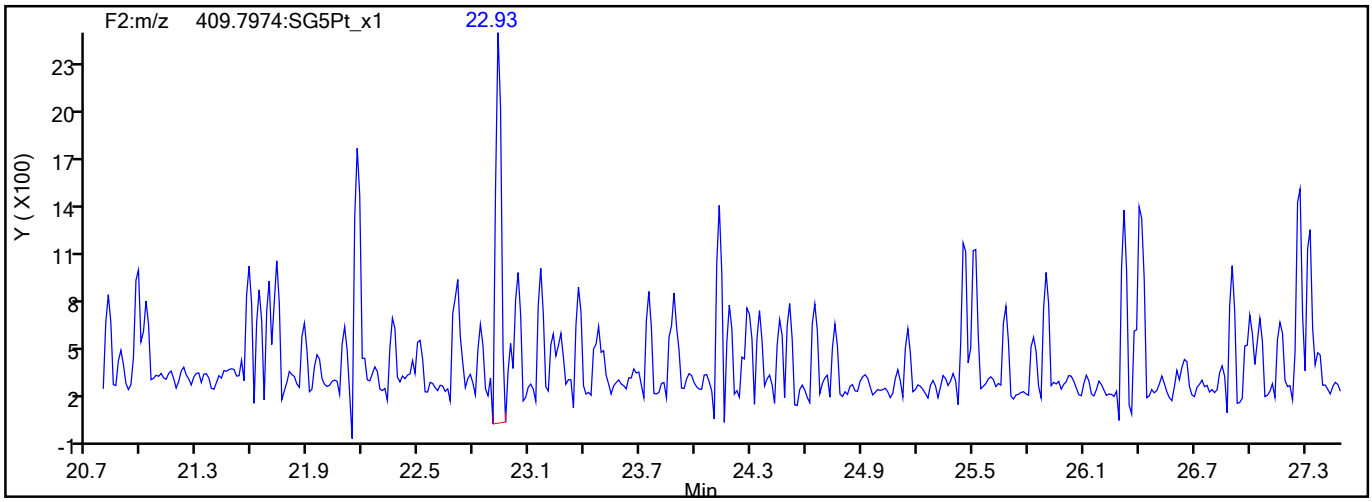

776620

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

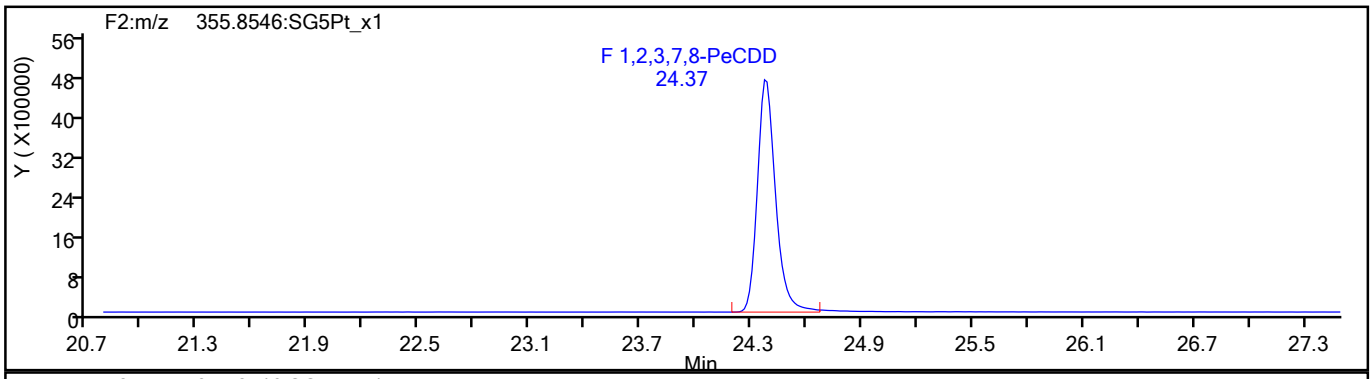

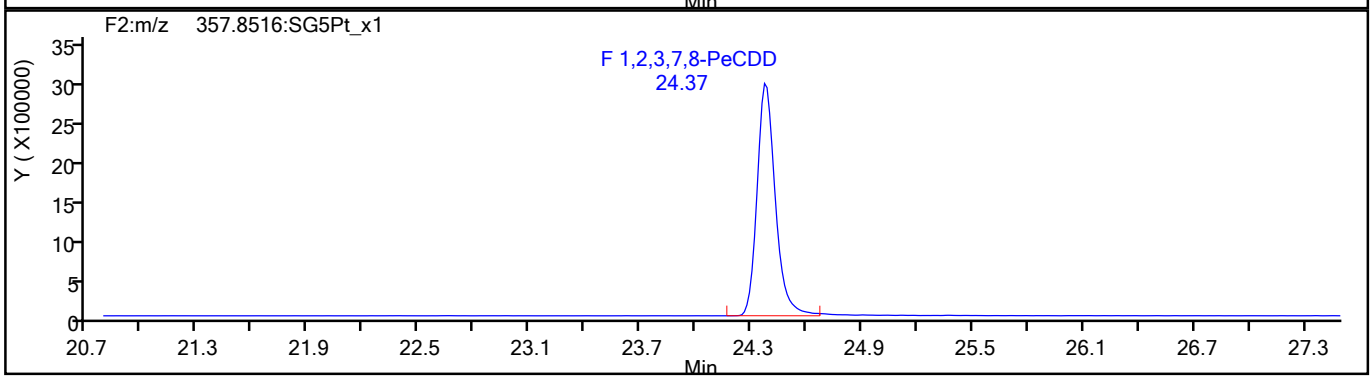

PeCDD Standards

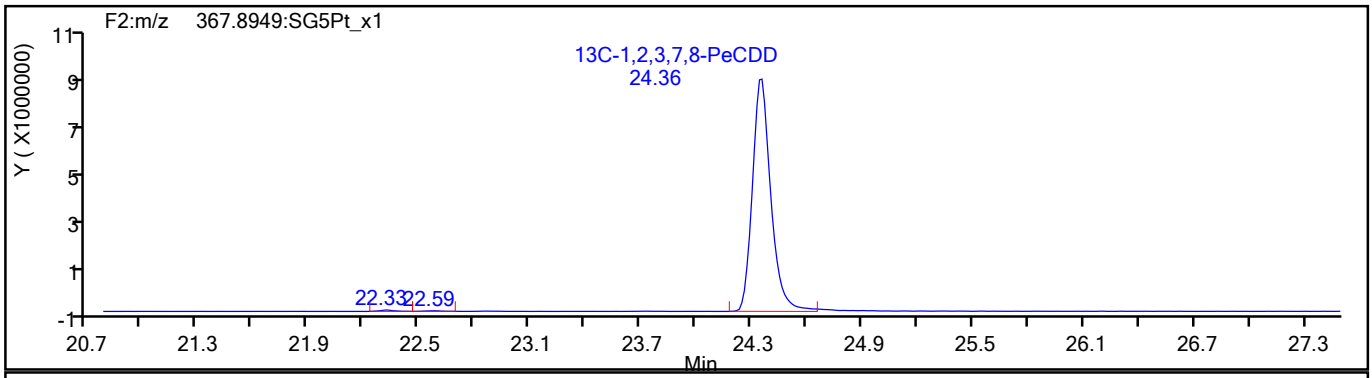

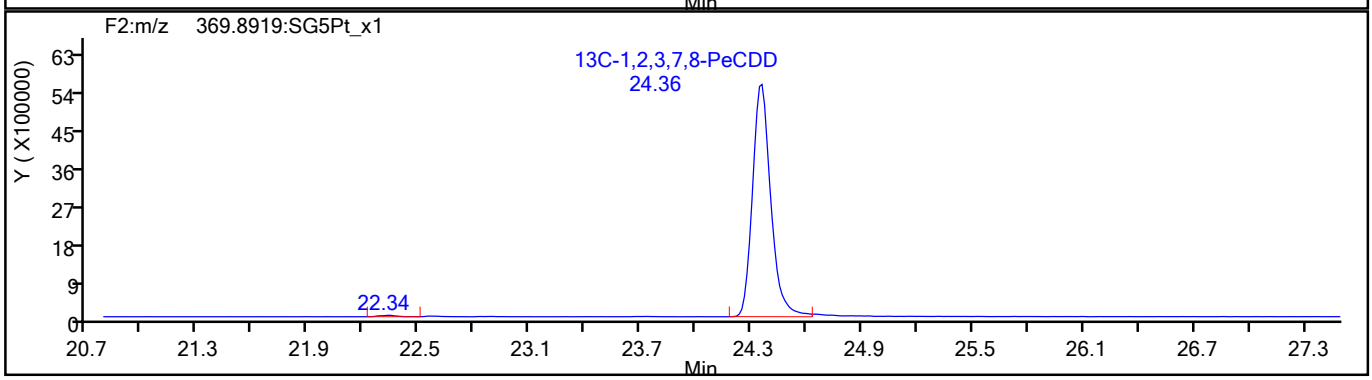

776621

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

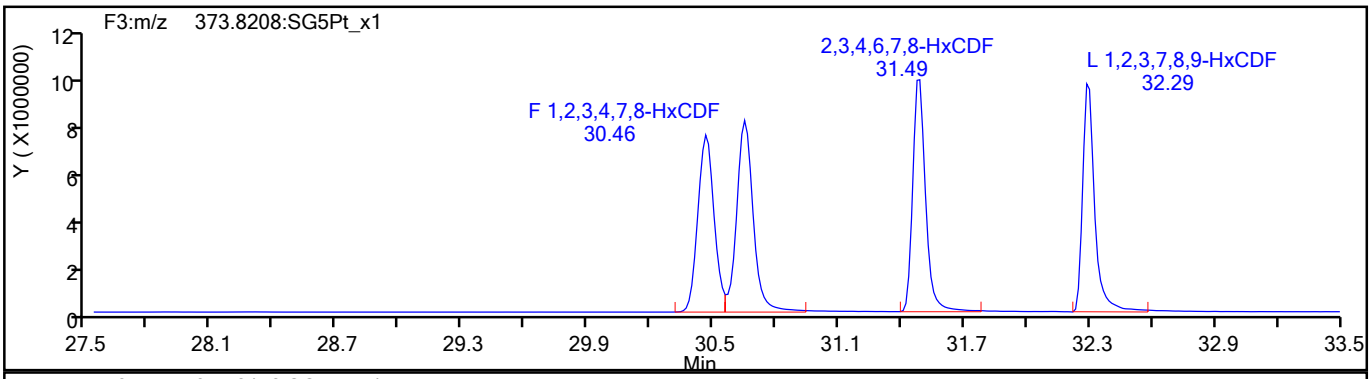

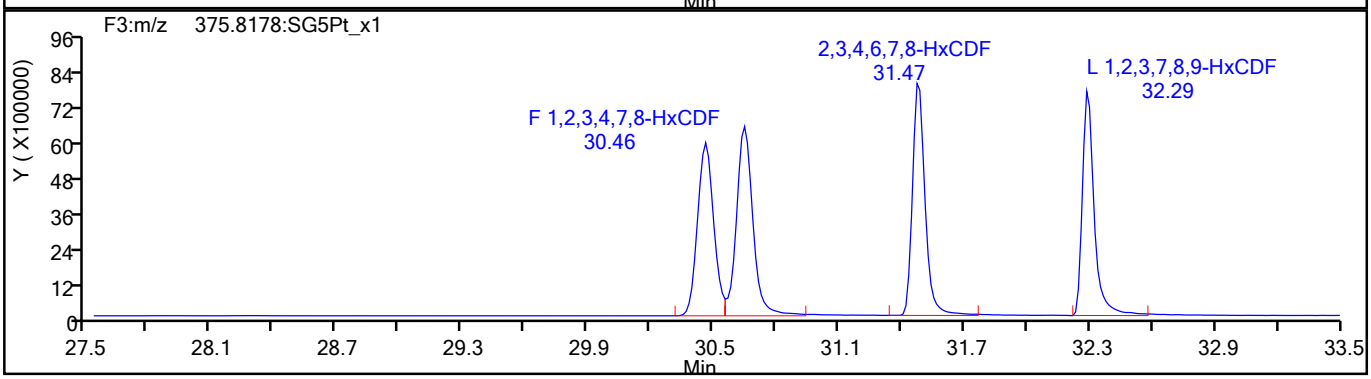

HxCDF Standards

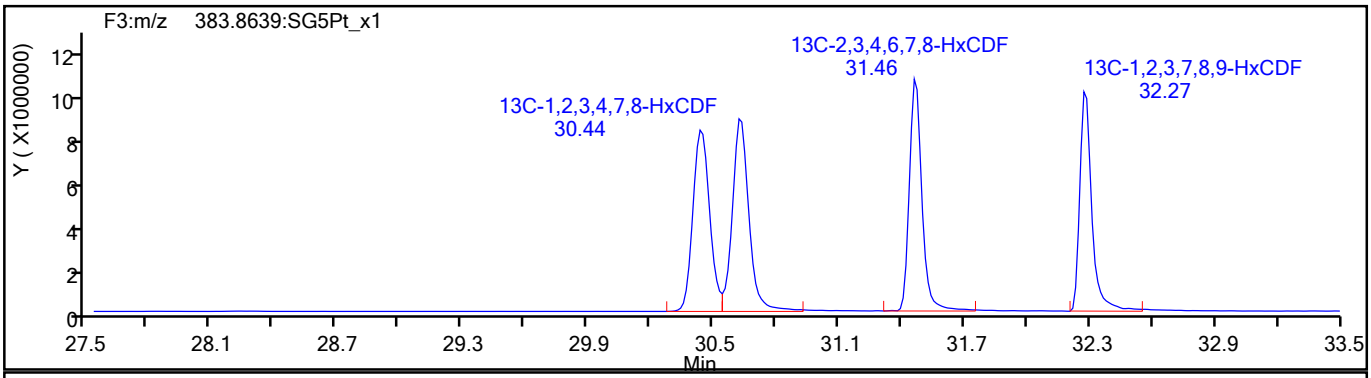

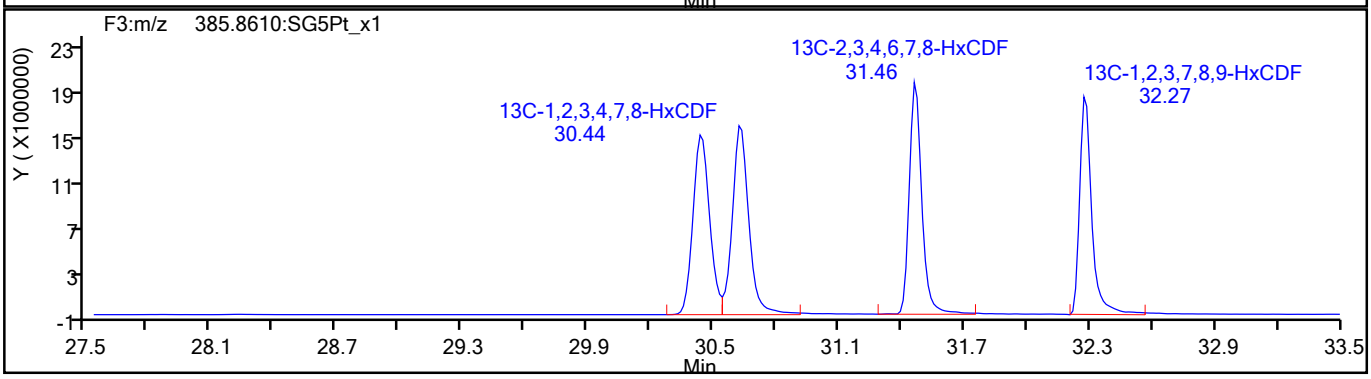

776622

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

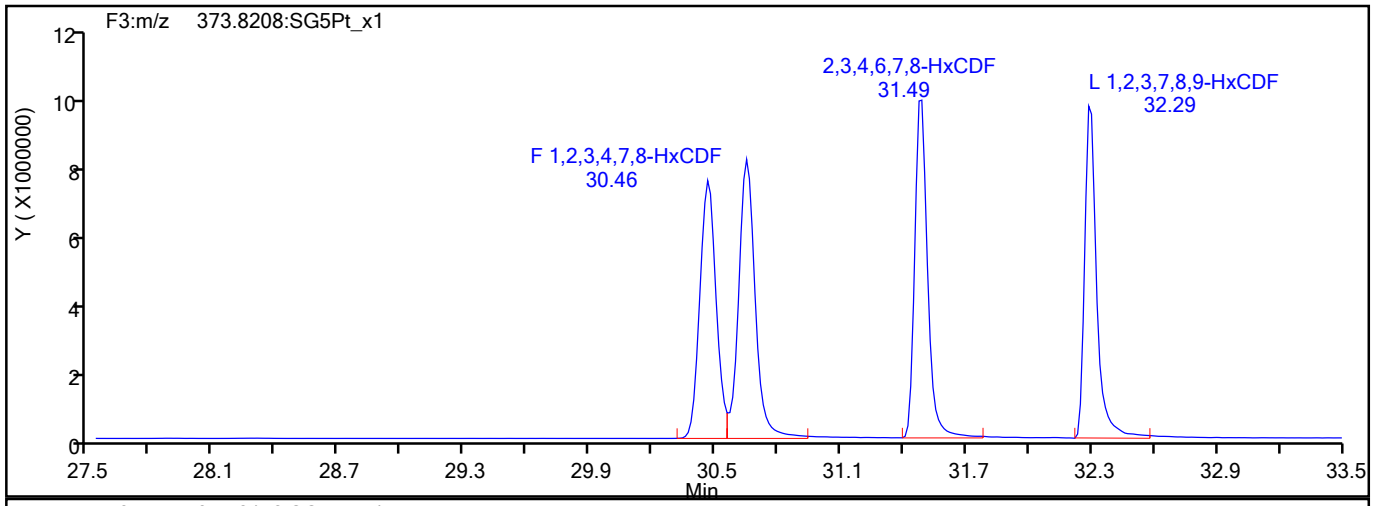

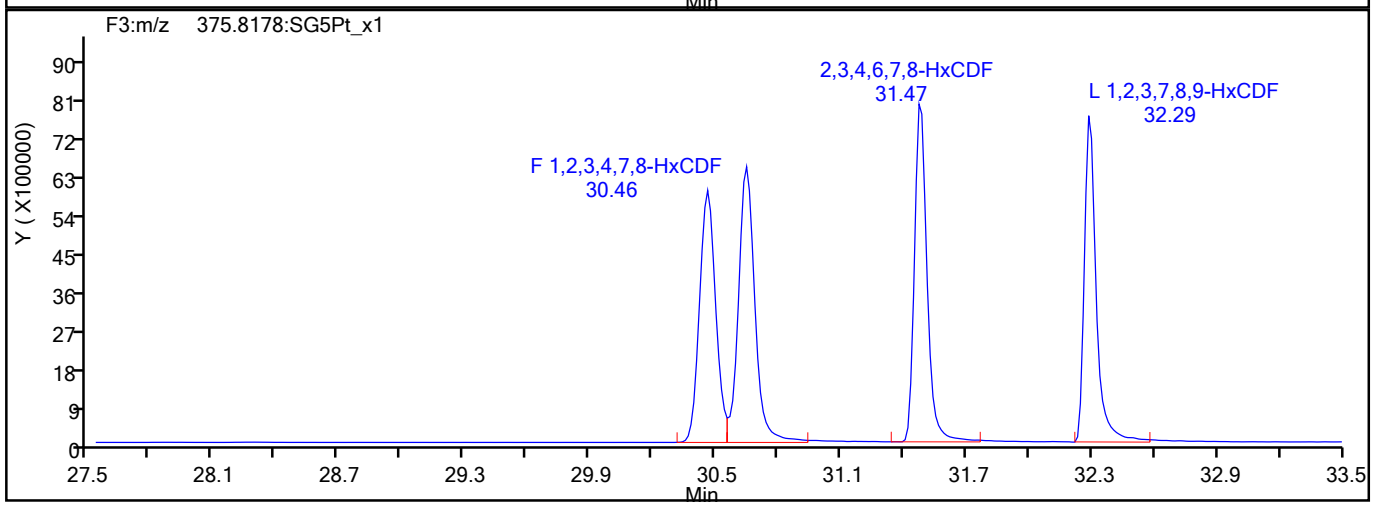

HxCDF Interference Mass

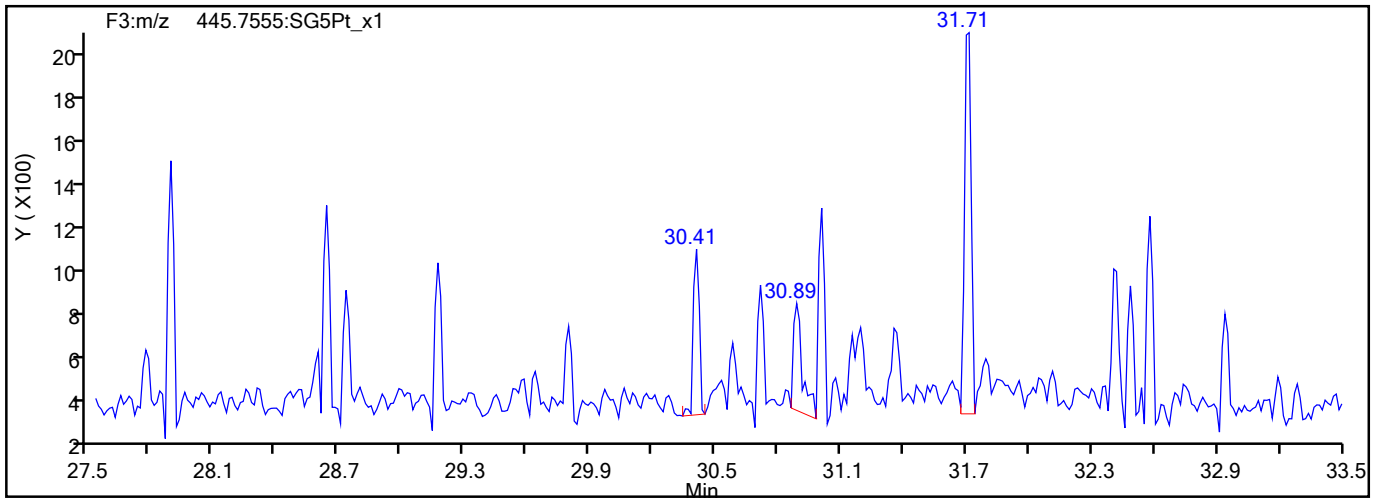

776623

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

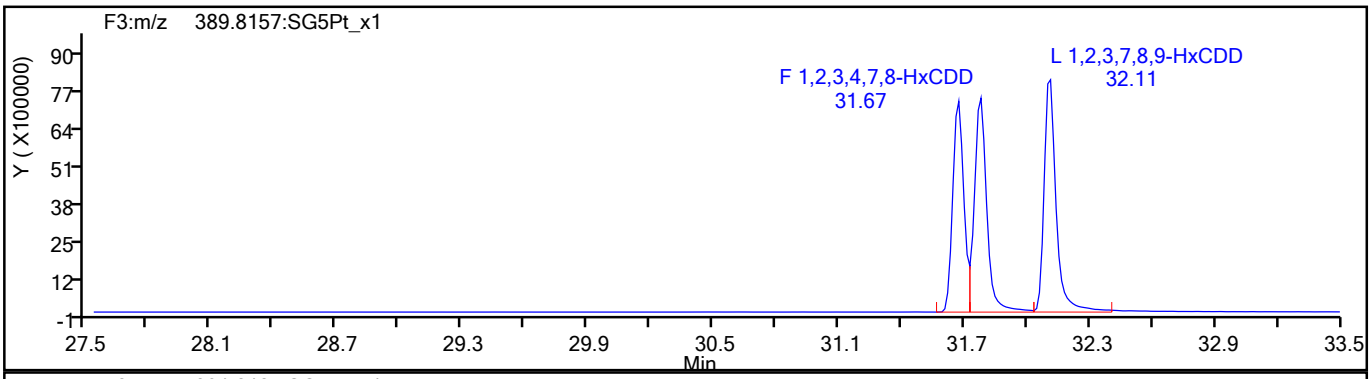

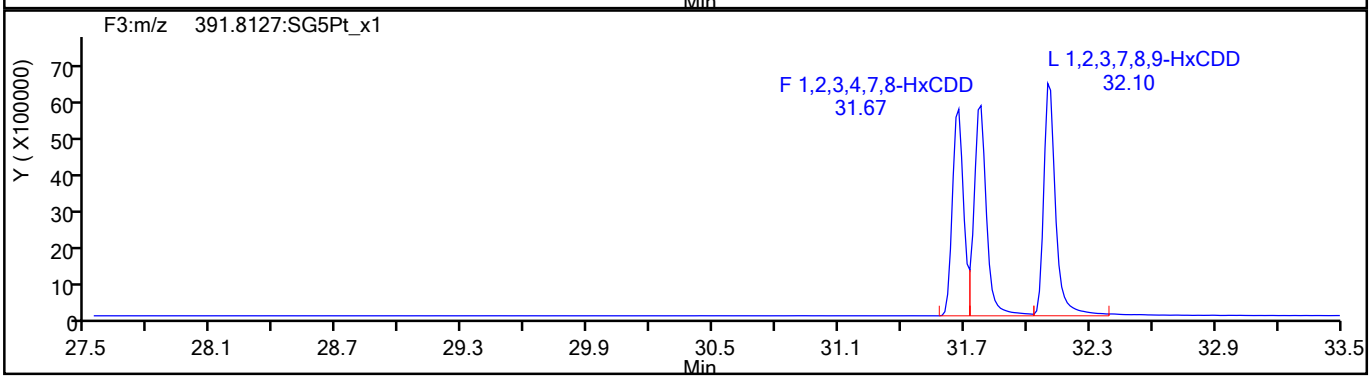

HxCDD Standards

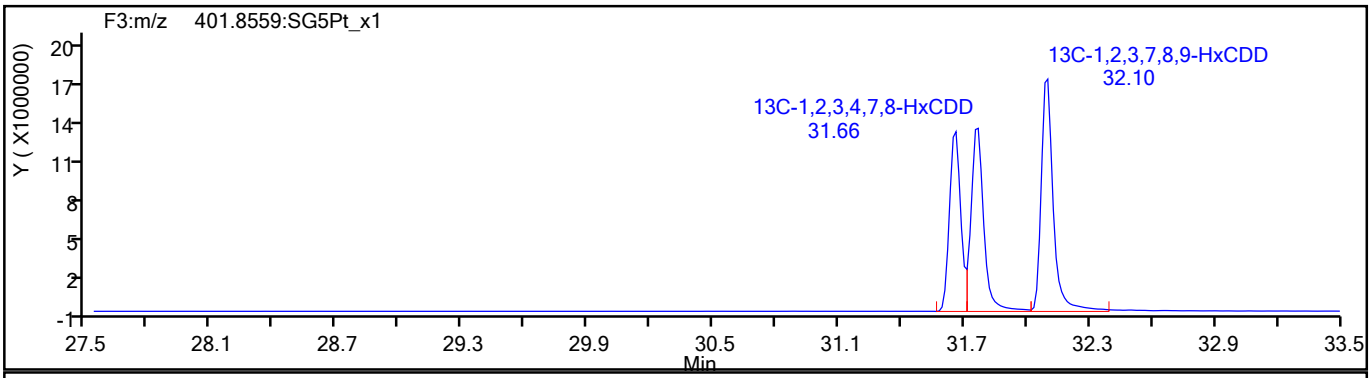

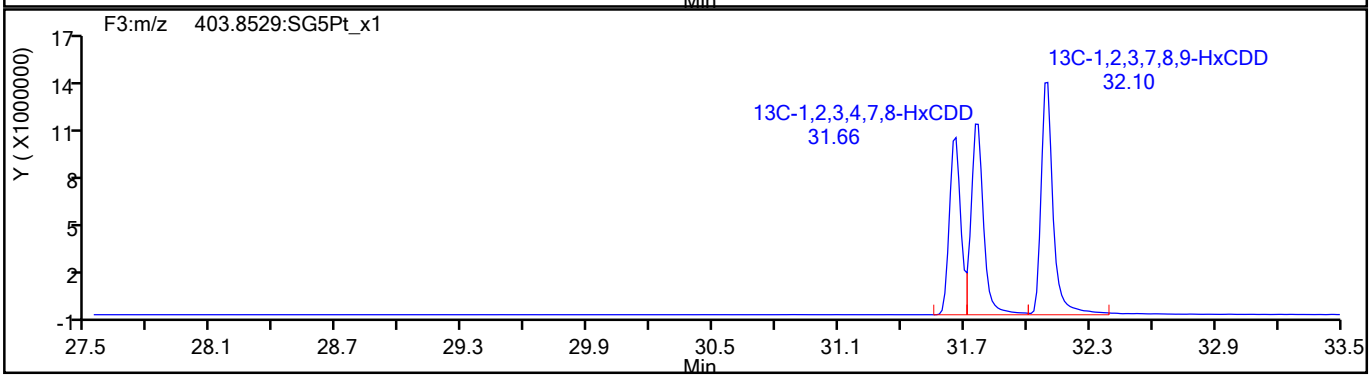

776624

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

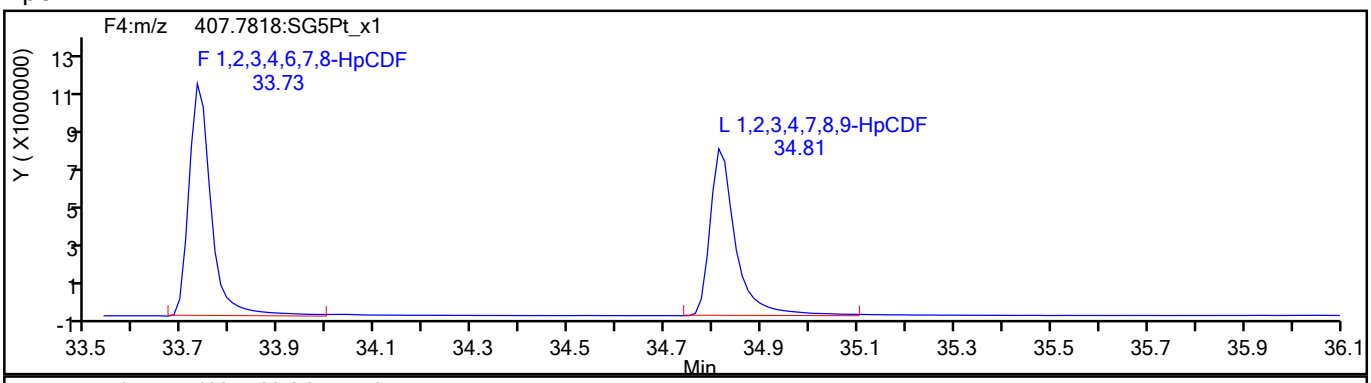

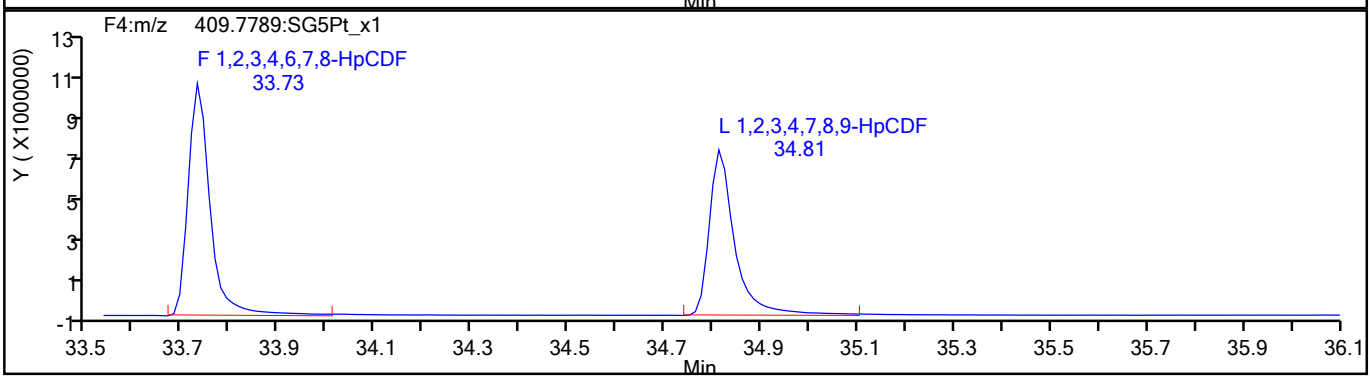

HpCDF Standards

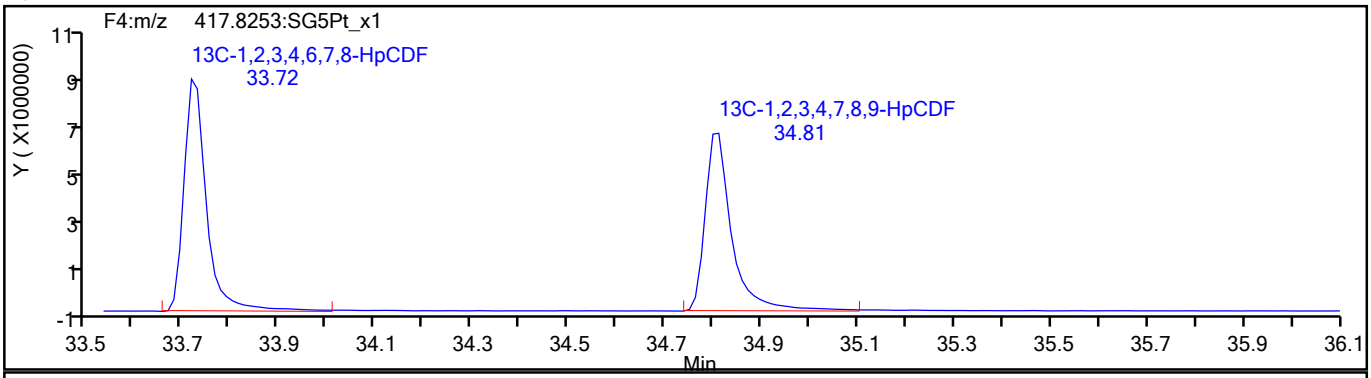

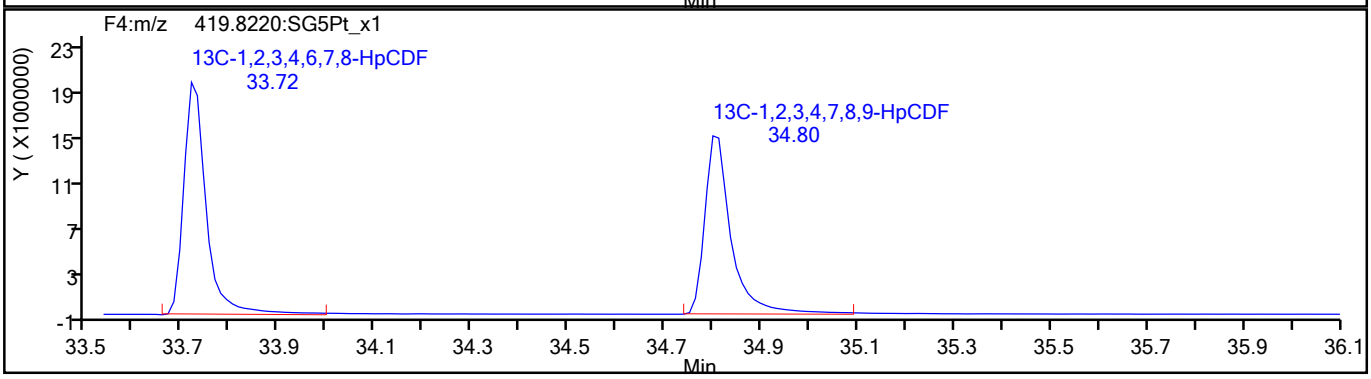

776625

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

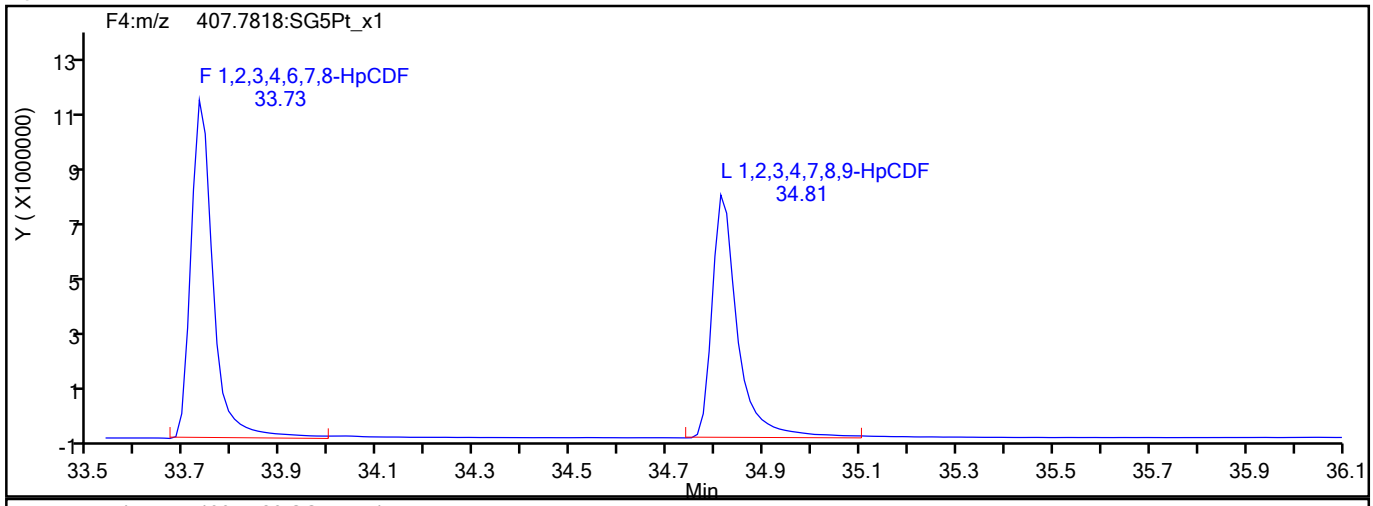

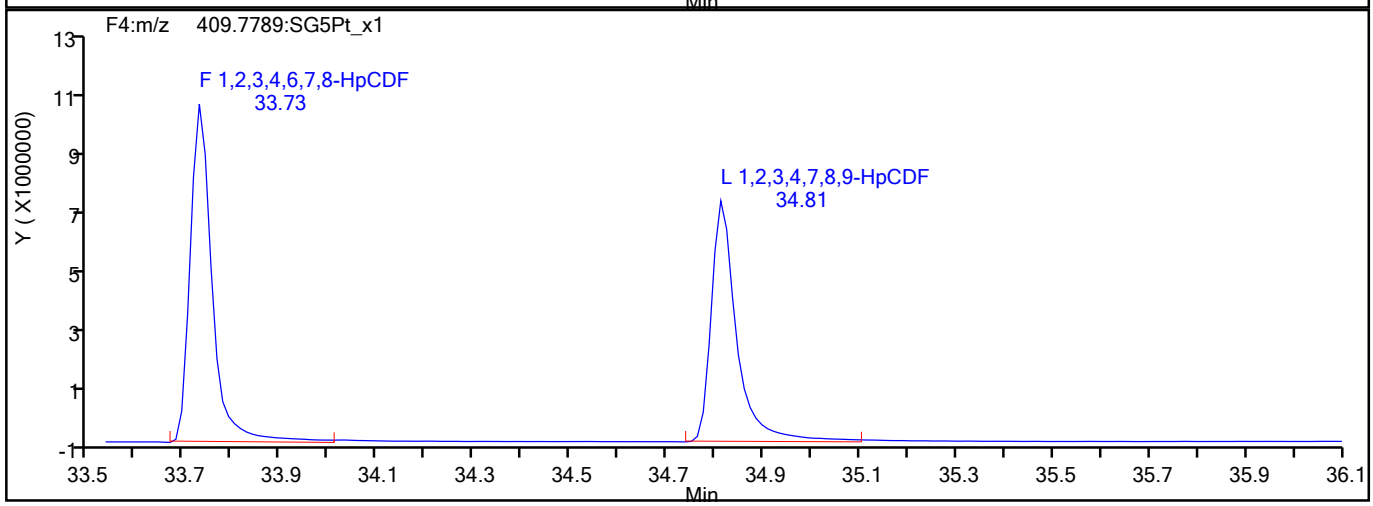

HpCDF Interference Mass

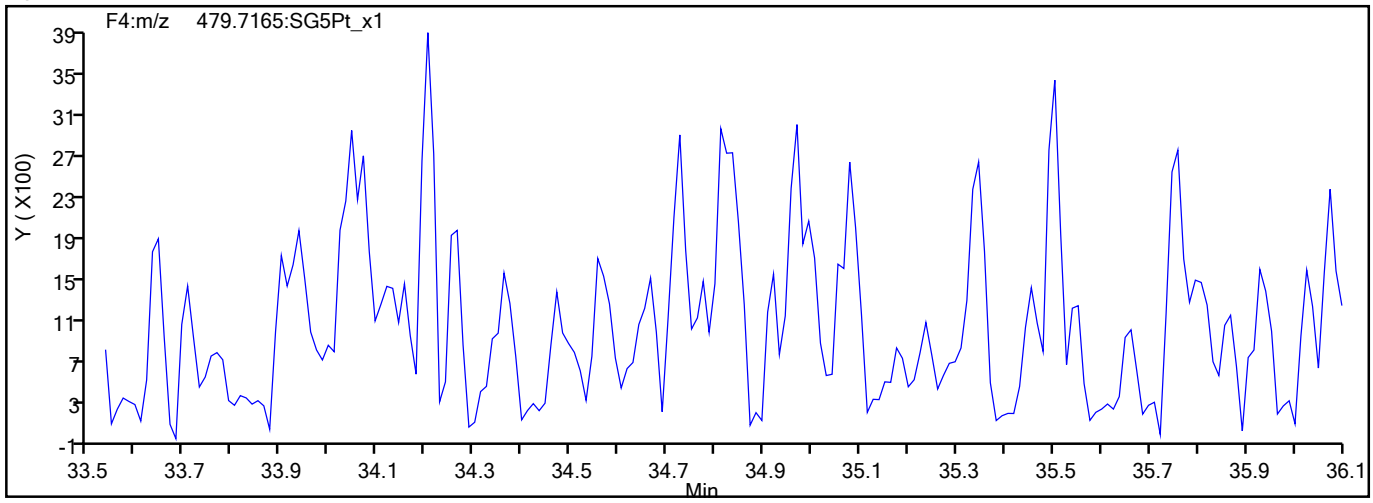

776626

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

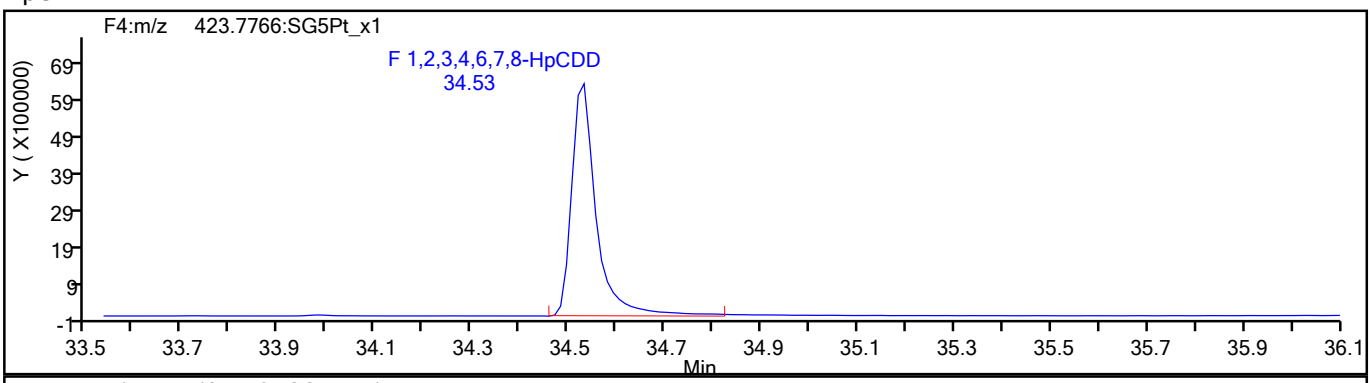

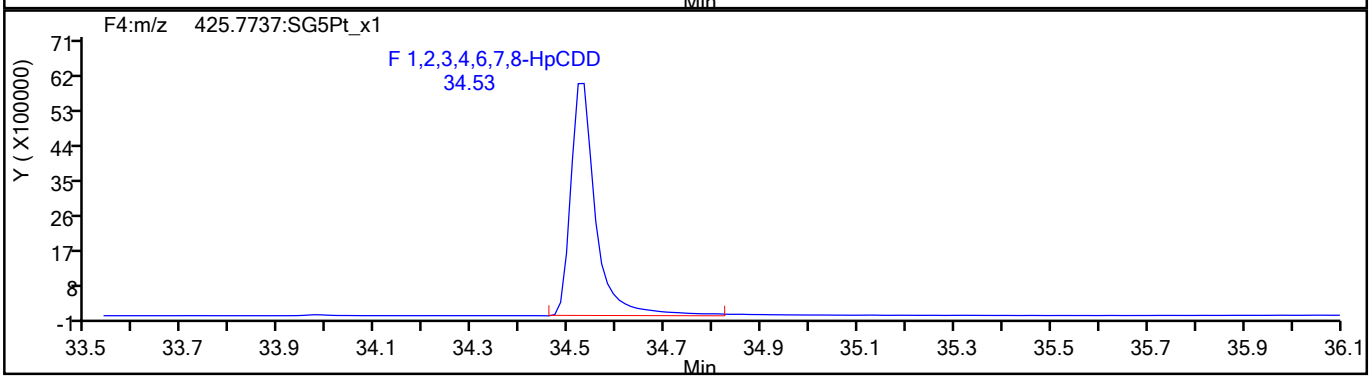

HpCDD Standards

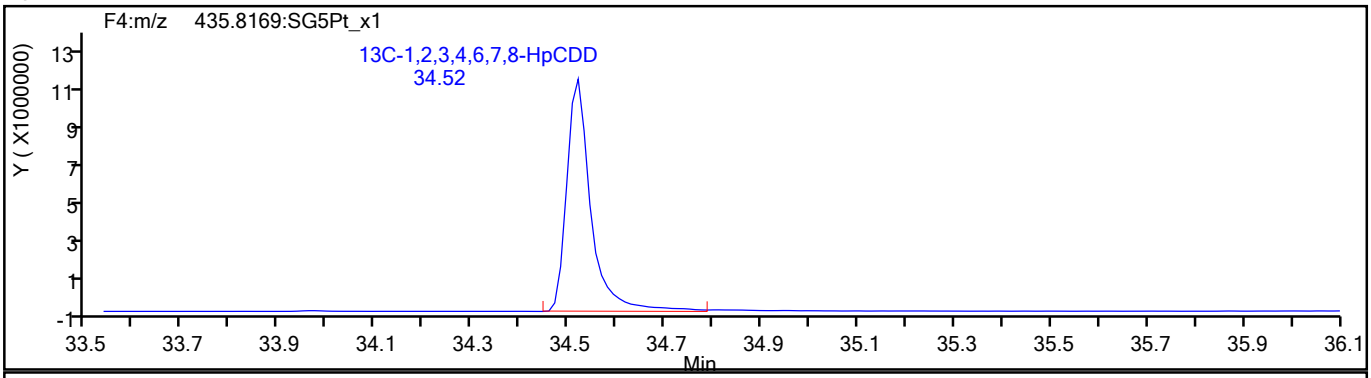

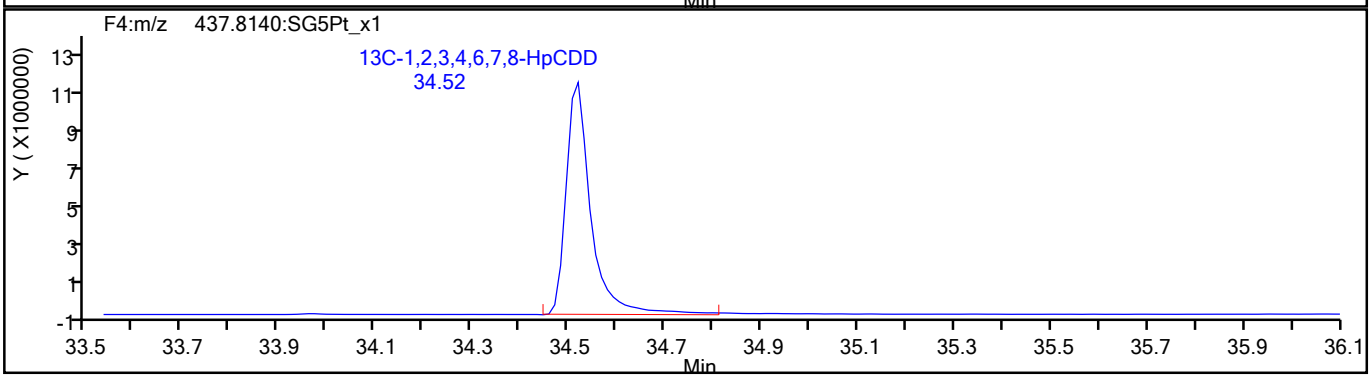

776627

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

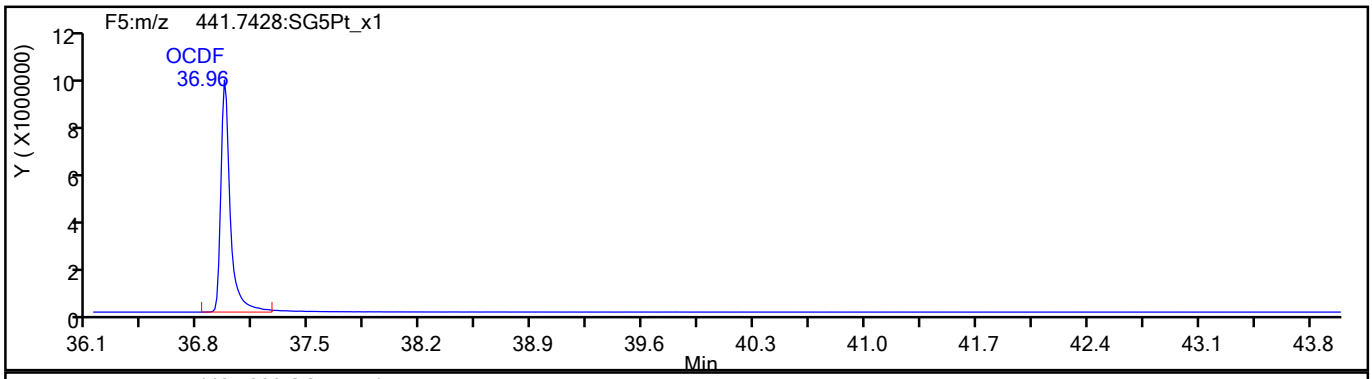

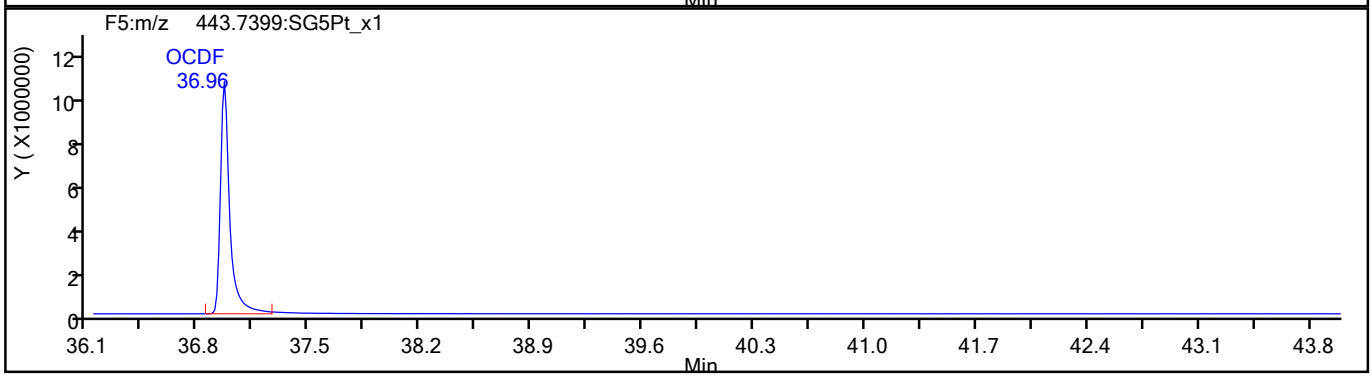

OCDF Standards

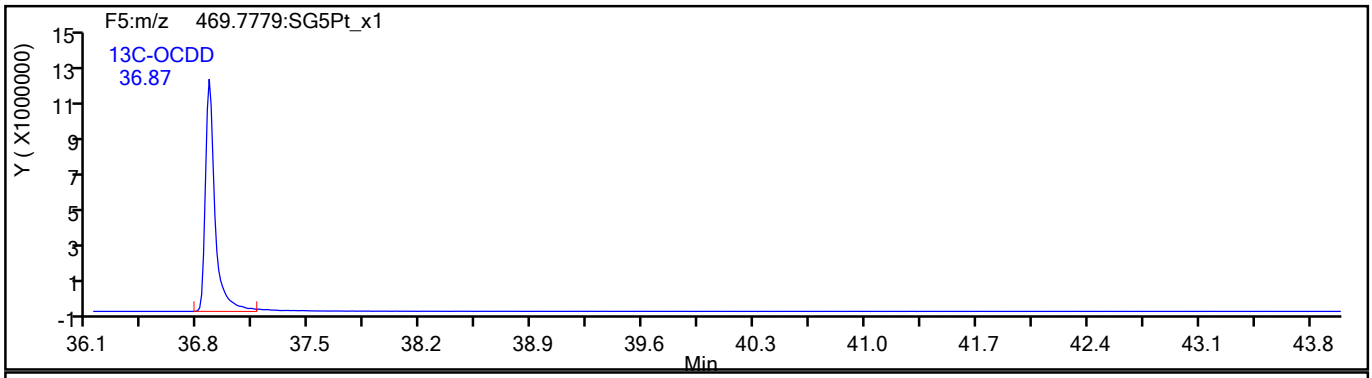

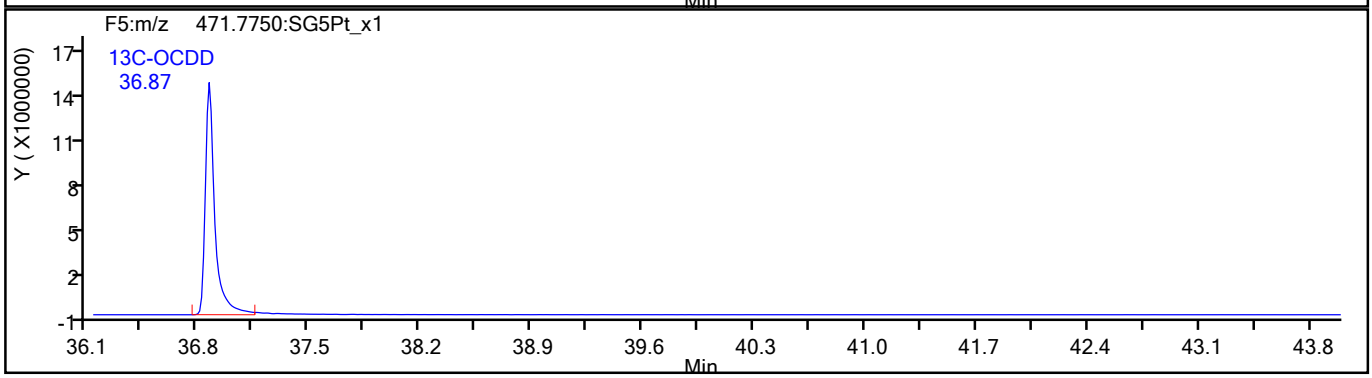

776628

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

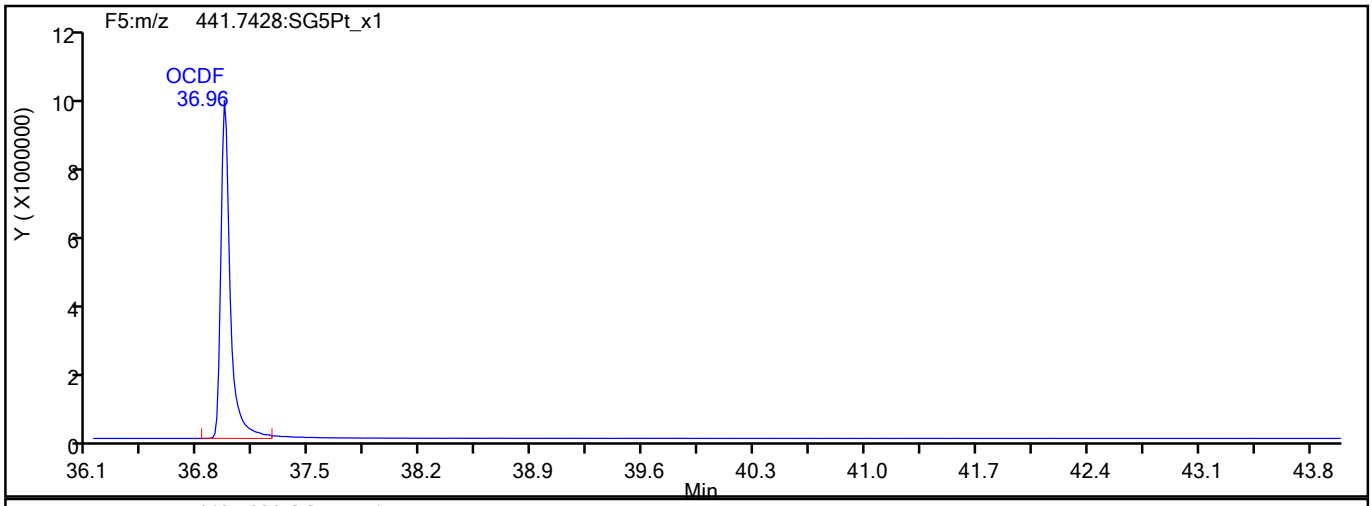

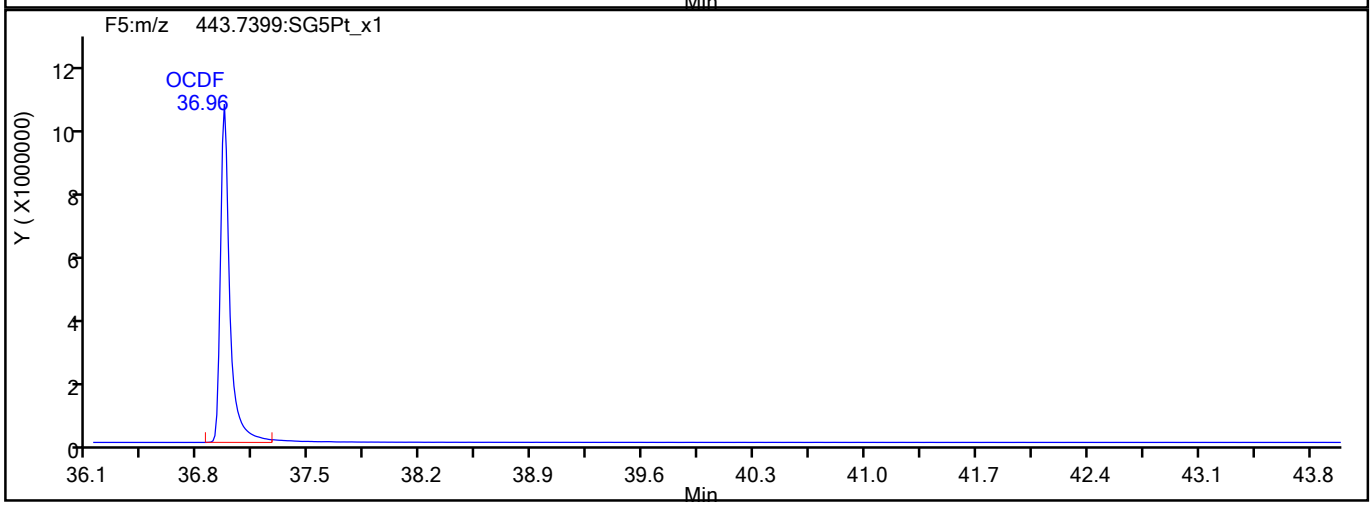

OCDF Interference Mass

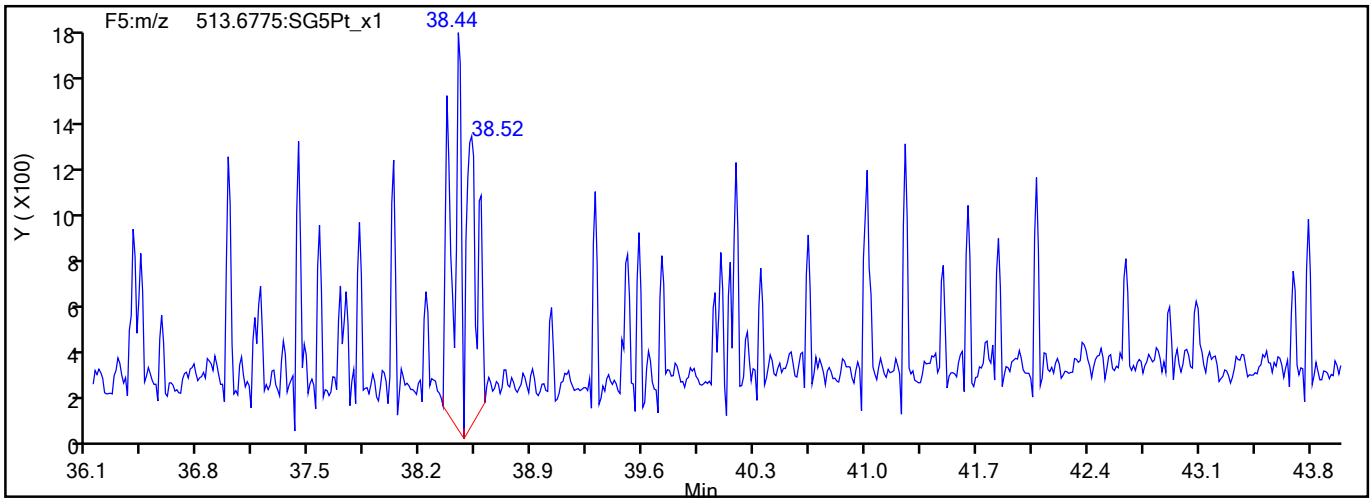

776629

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

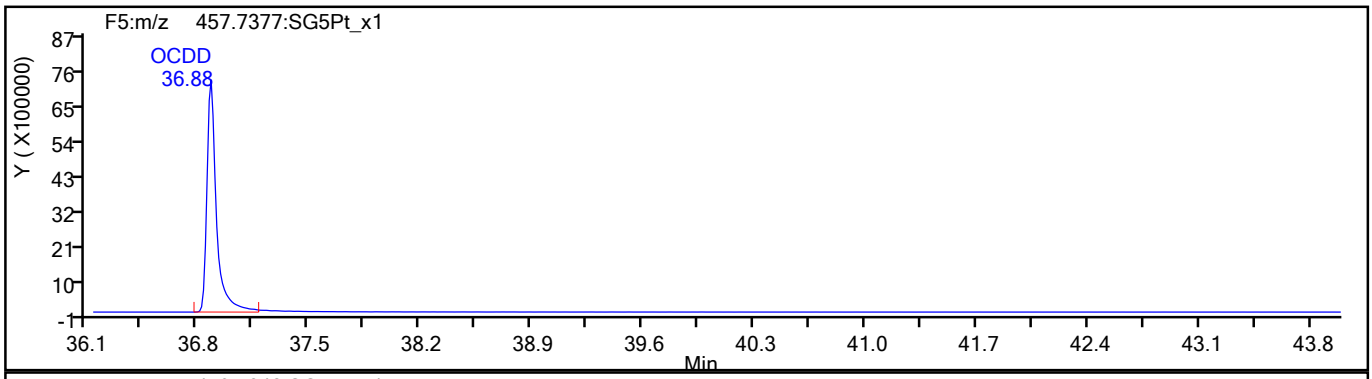

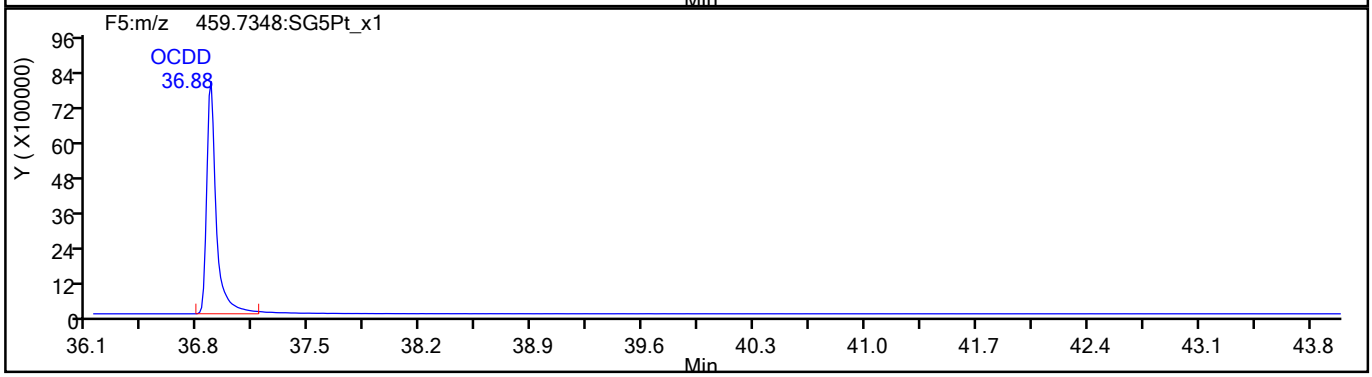

OCDD Standards

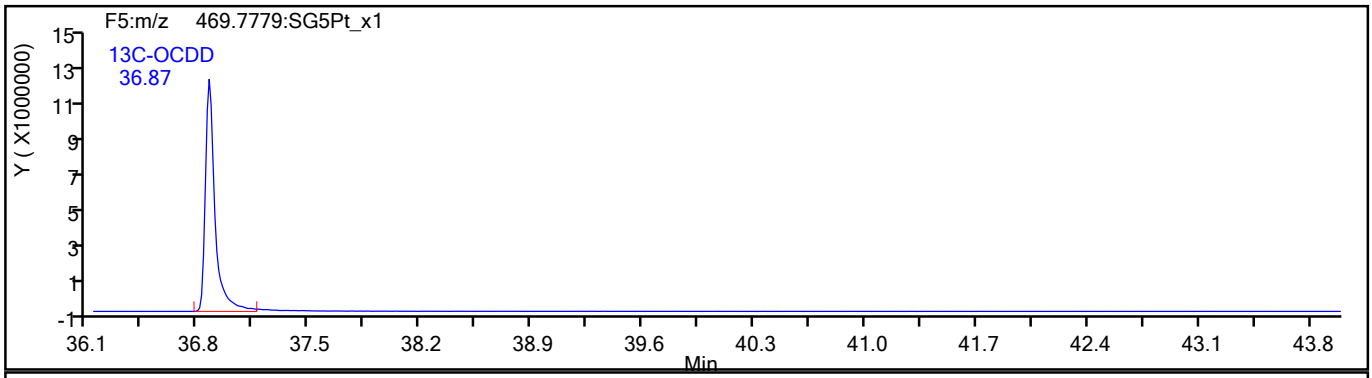

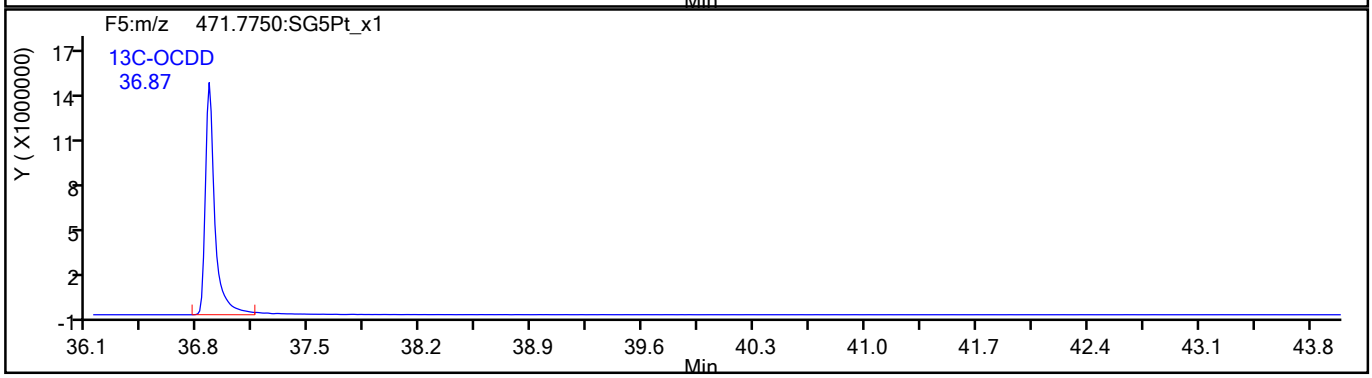

776630

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

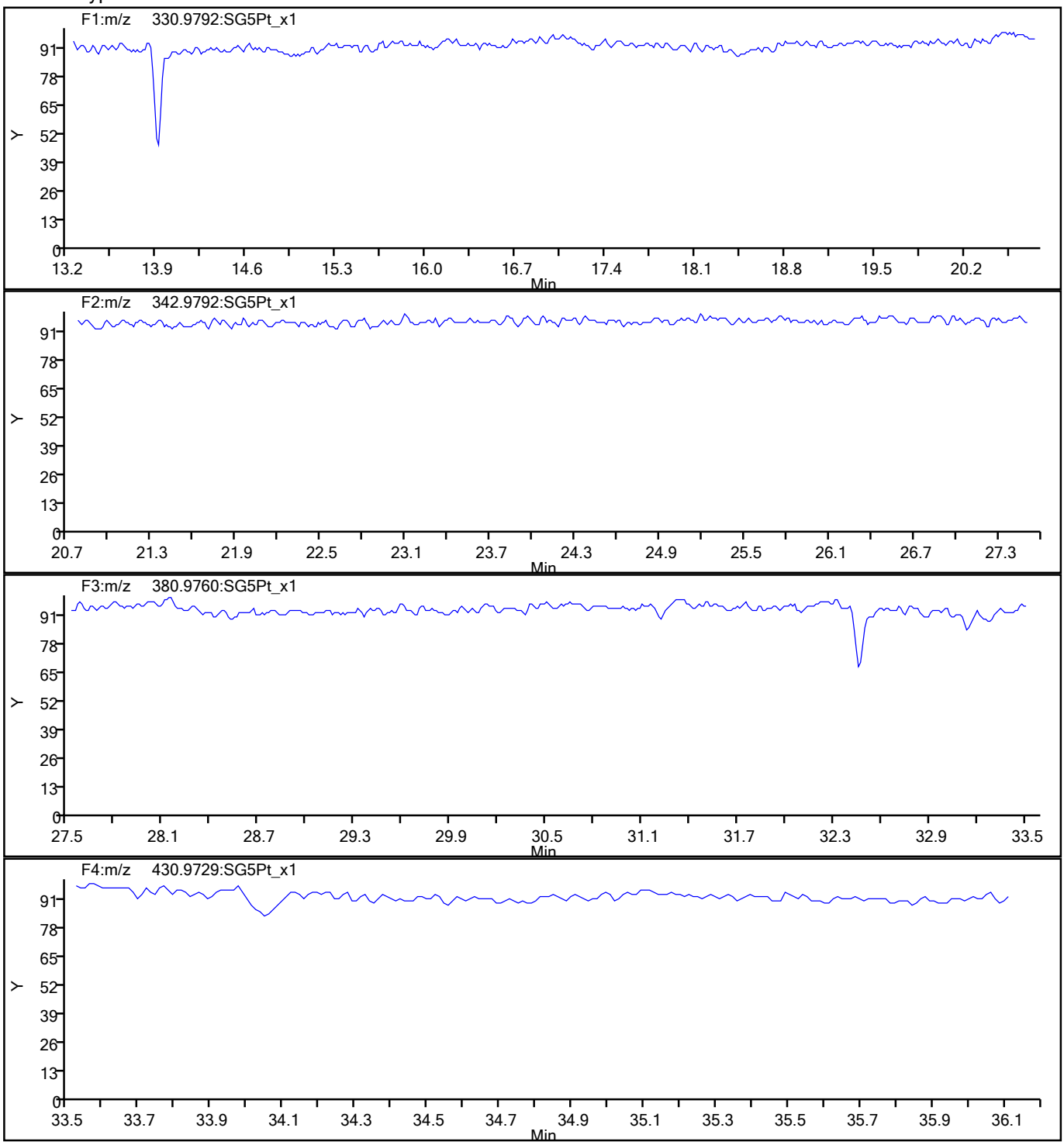

776631

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

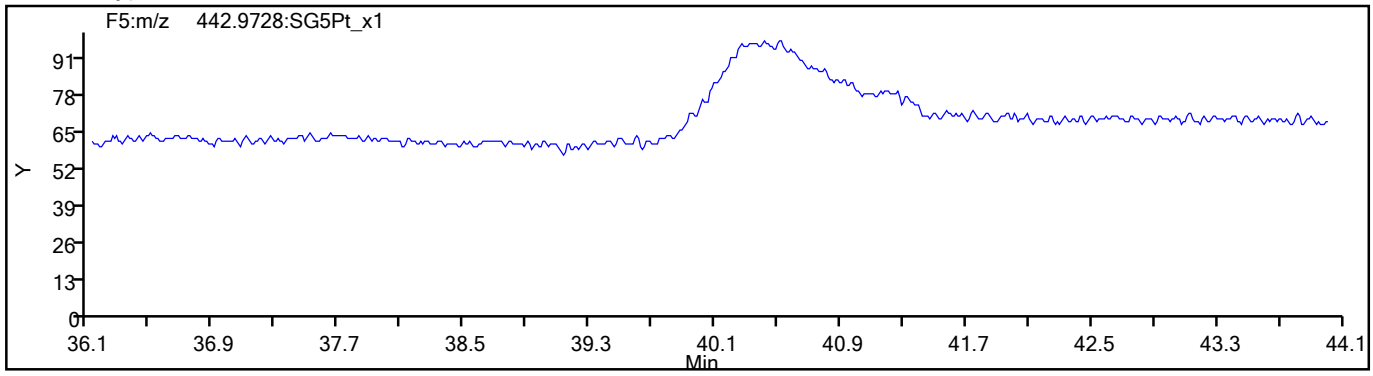

776632

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

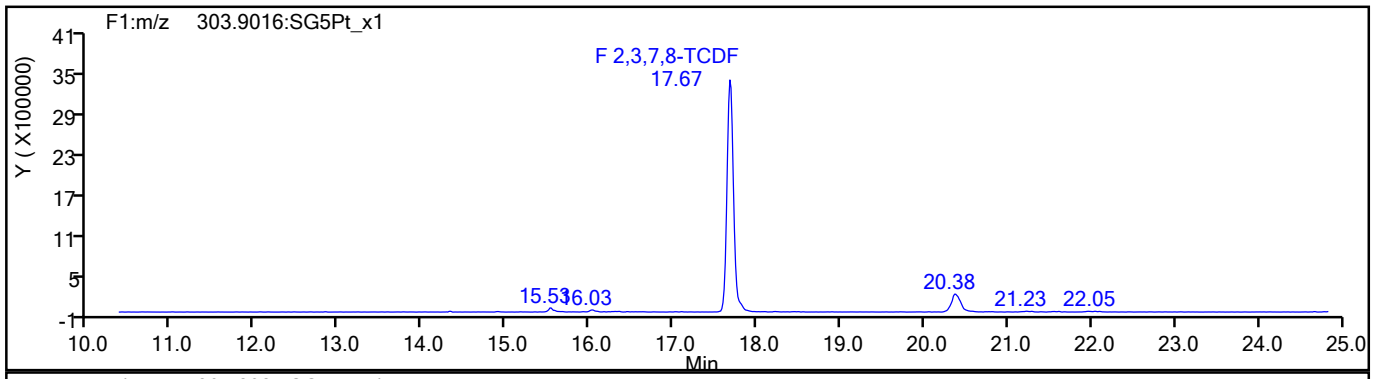

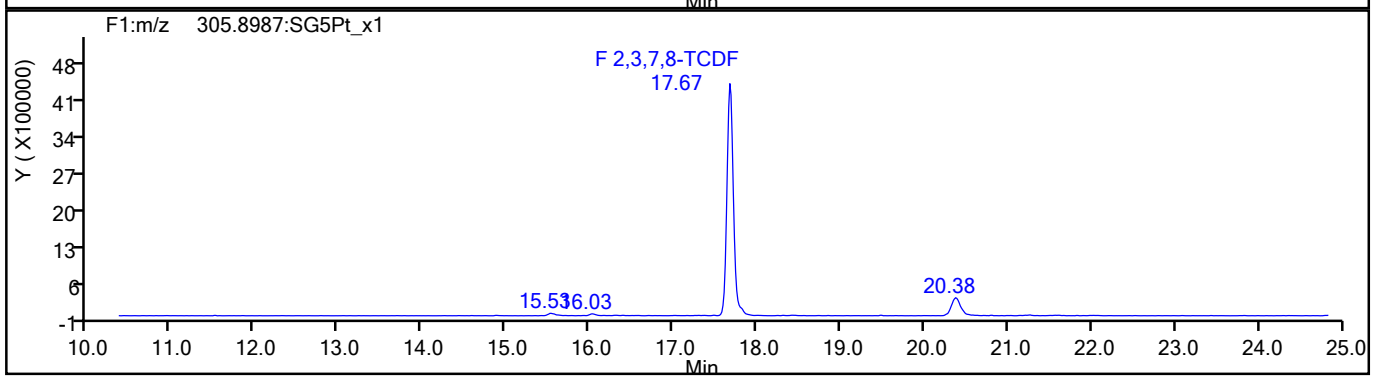

TCDF Standards

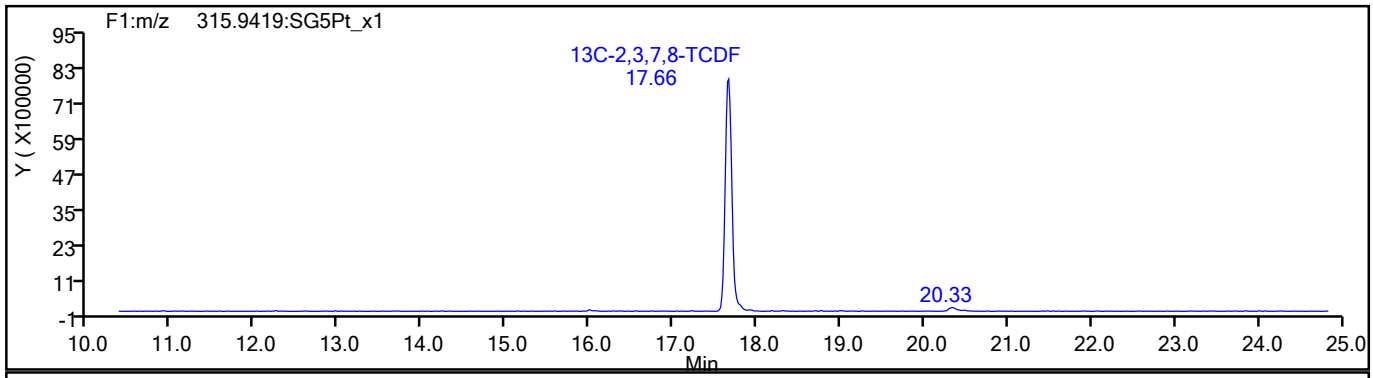

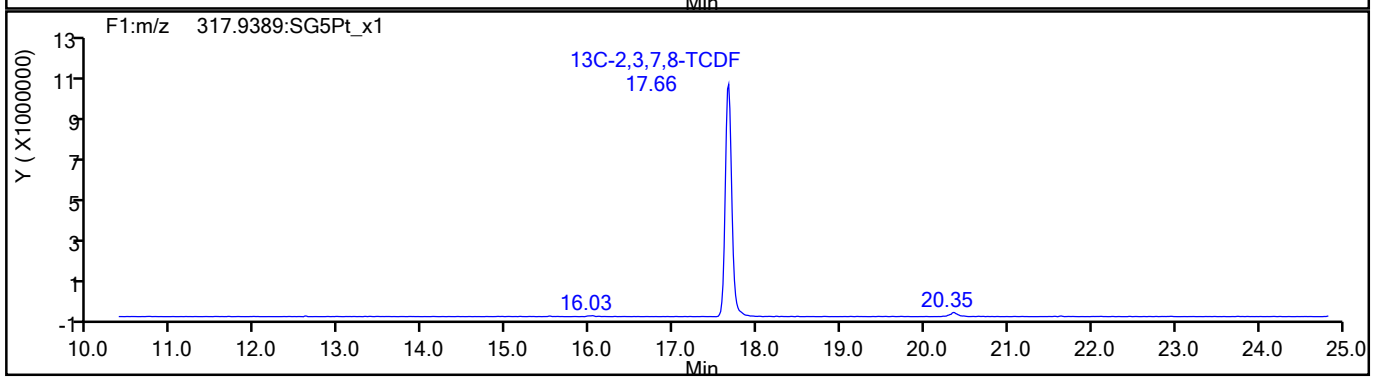

776636

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

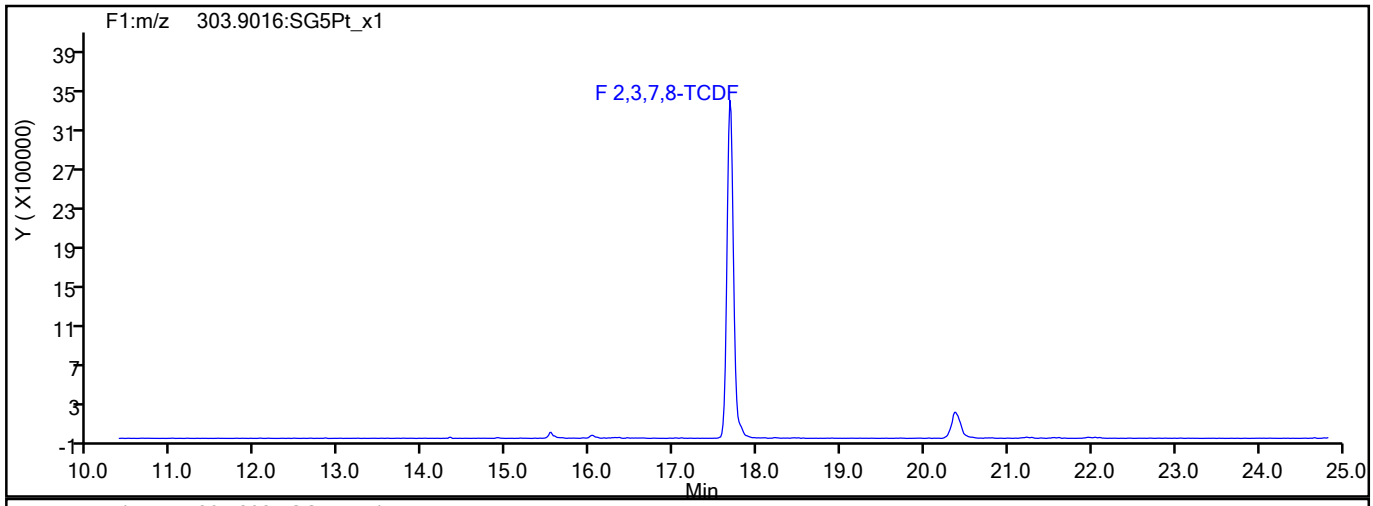

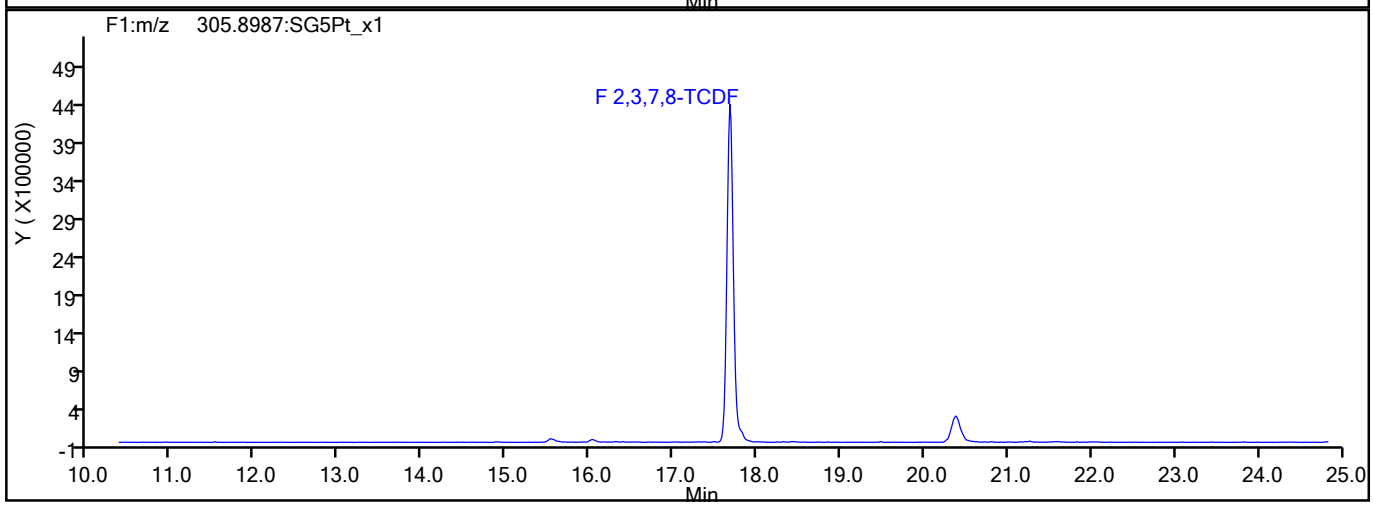

TCDF Interference Mass

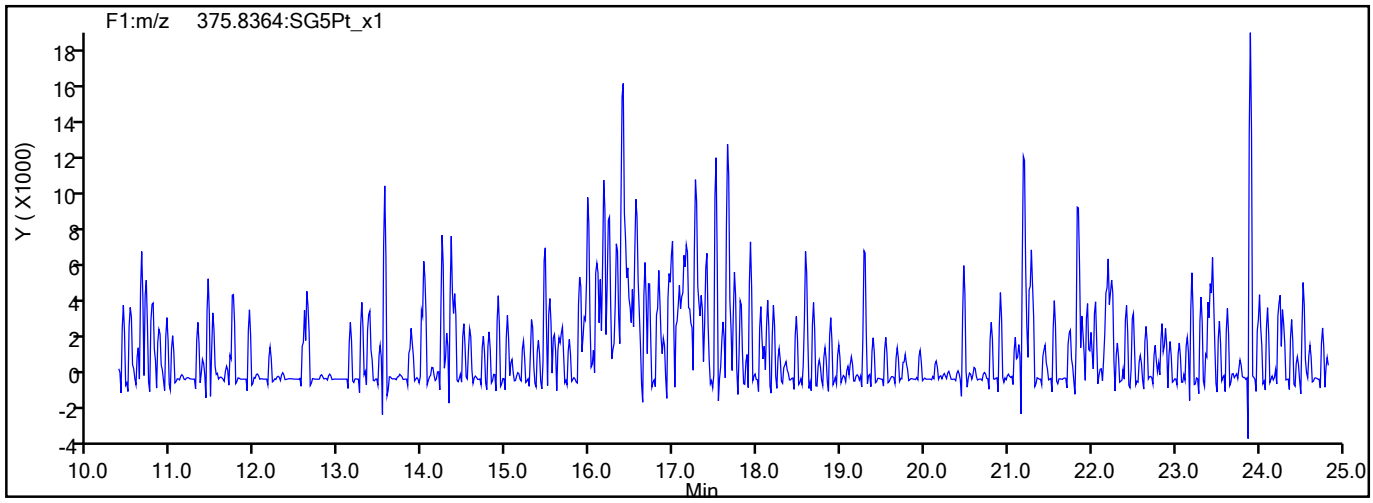

776637

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

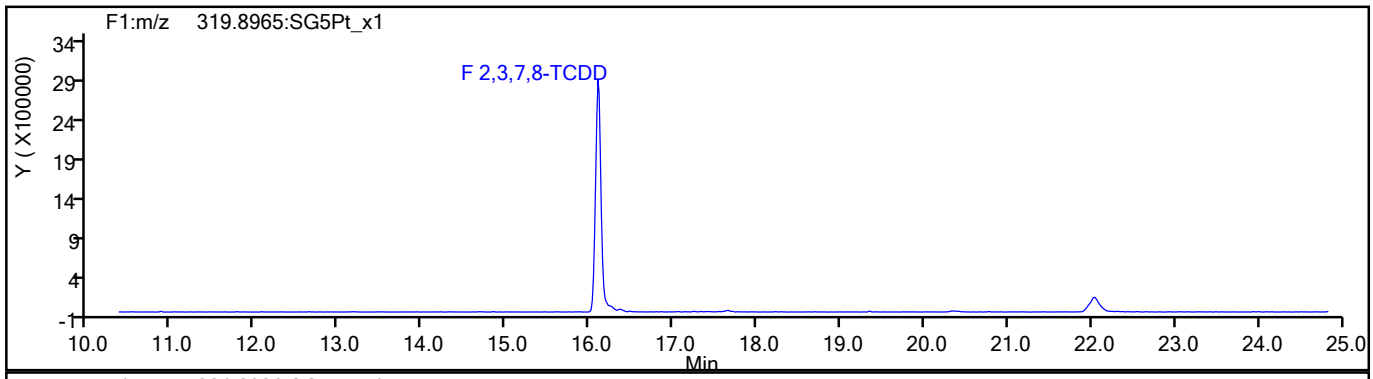

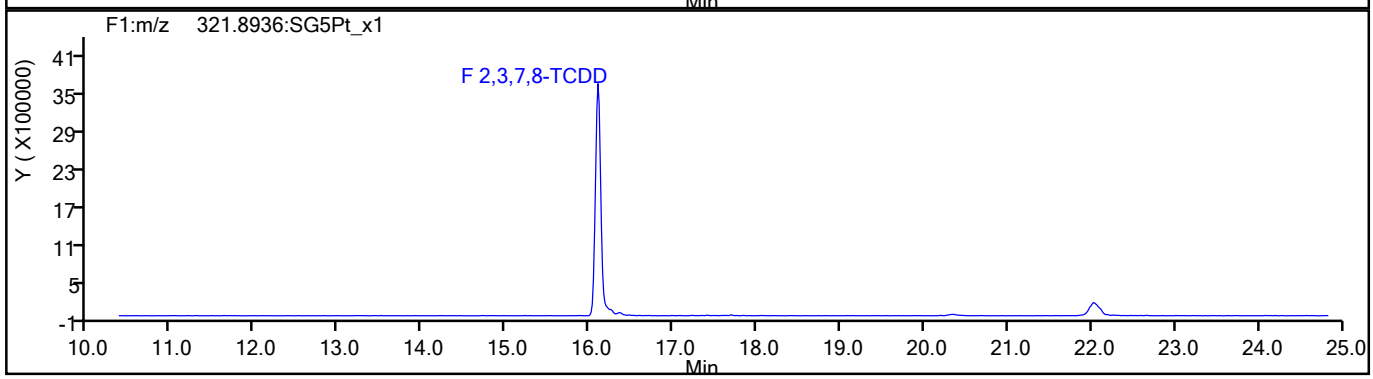

TCDD Standards

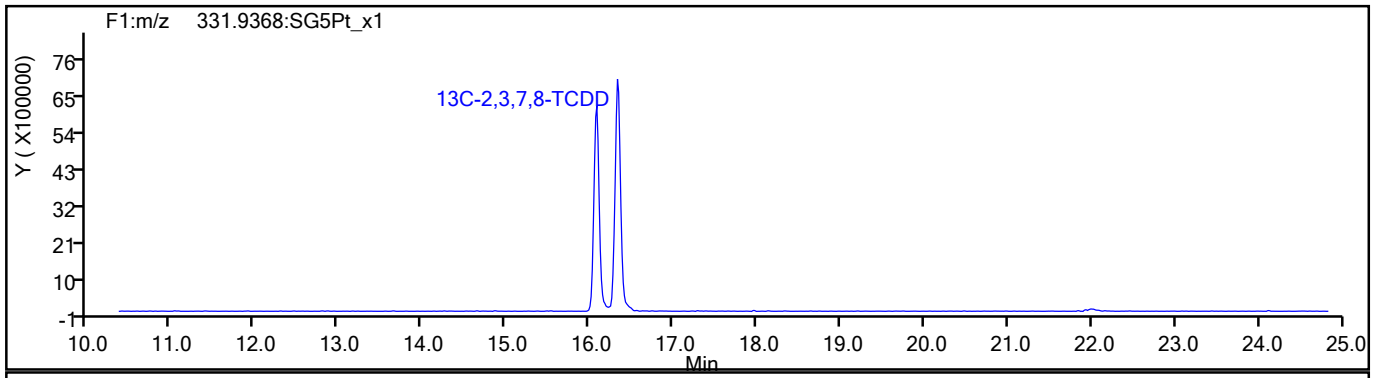

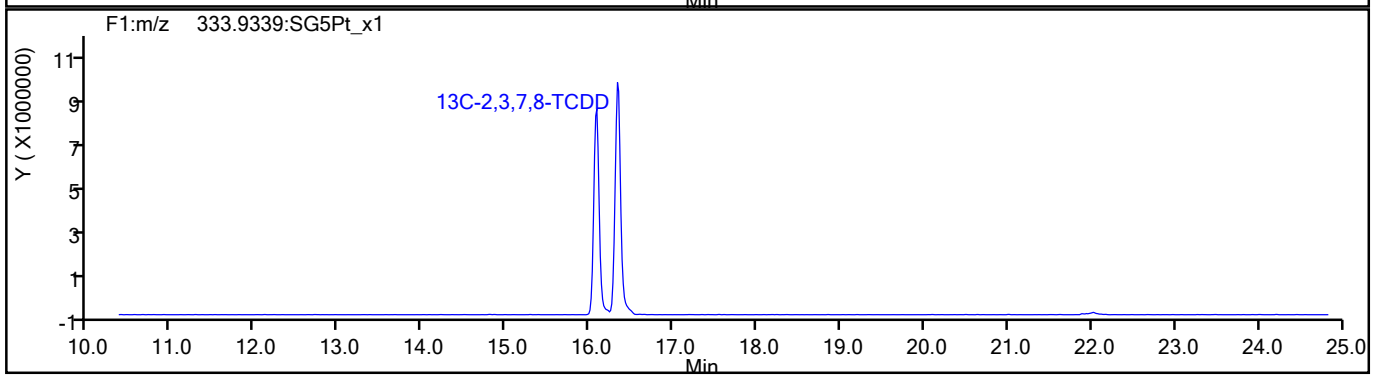

776638

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

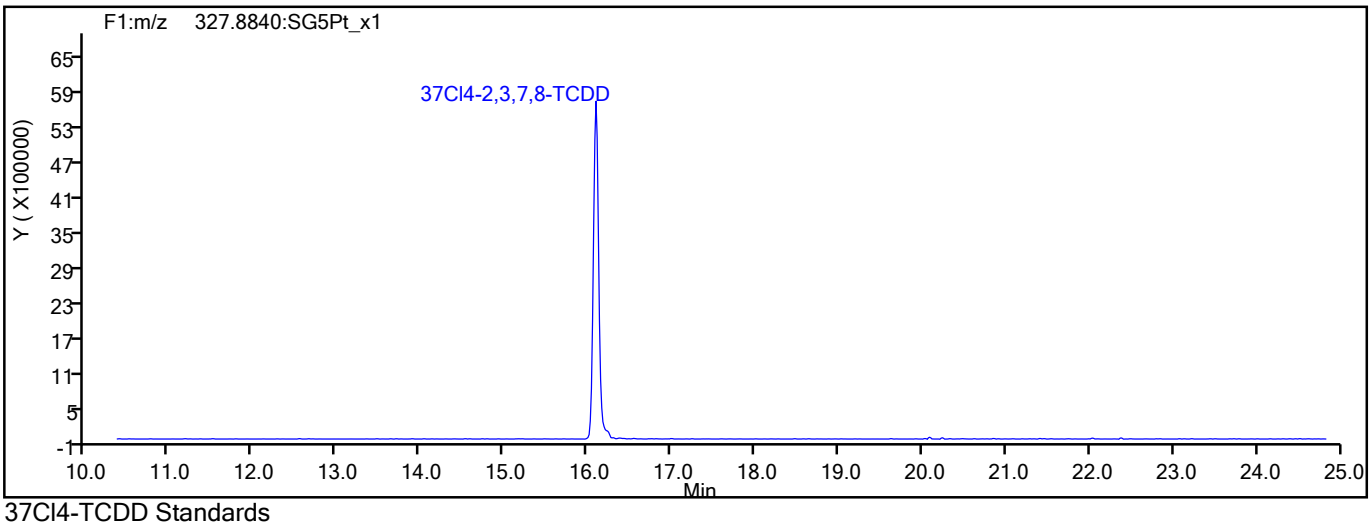

37Cl4-TCDD Standards

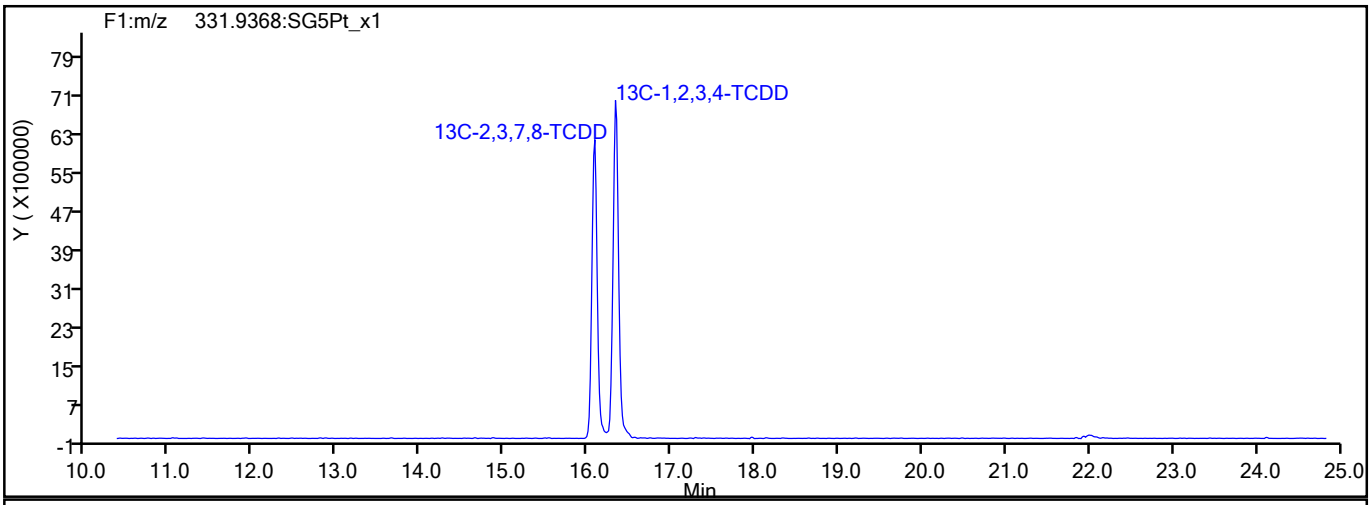

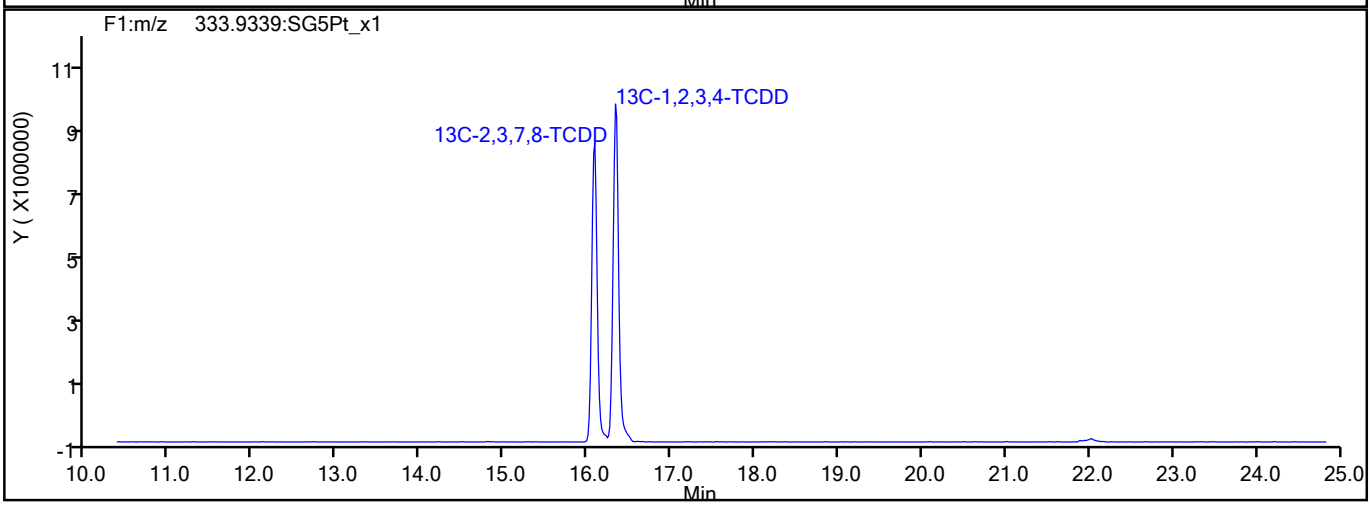

776639

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

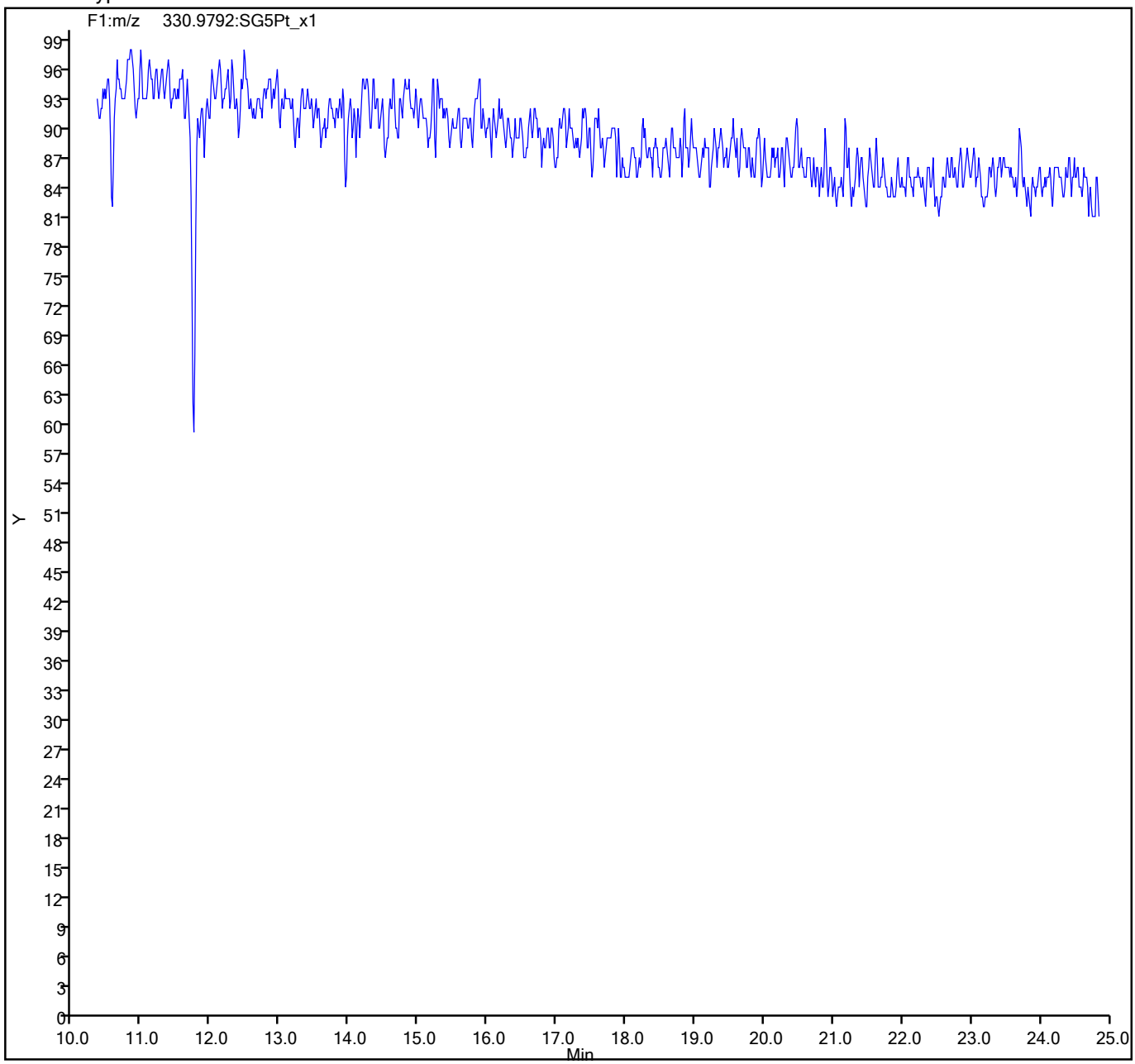

776640

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-518850/2 Calibration Date: 08/21/2021 14:32

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 21AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	0.996		9.42	10.0	94	78-129
2,3,7,8-TCDF	AveID	0.998	0.9211		9.23	10.0	92	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9393		107	100	107	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.446		109	100	109	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8798		10.2	10.0	102	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
21AU2111D2	1	CPS 082121	CPS HRDXNCP_00044				1.00000	
21AU2111D2	2	CCV 082121	CCV CS-4 HRDXNL4_00100				1.00000	
21AU2111D2	3	SB 082121	Solvent Blank C-14				1.00000	
21AU2111D2	4	320-513227	320-76769-A-9-A	20	1613B/Solid	D264	10.00000	g
21AU2111D2	5	320-513227	320-76769-A-35-A	20	1613B/Solid		10.00000	g
21AU2111D2	6	320-513585	320-76765-A-18-A RI	20	1613B/Solid	D265	10.00000	g
21AU2111D2	7	320-513227	320-76765-A-14-A RI	20	1613B/Solid	D264	10.00000	g
21AU2111D2	8	320-513227	320-76765-A-19-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	9	320-513227	320-76765-A-15-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	10	320-513227	320-76765-A-16-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	11	320-513227	320-76765-A-13-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	12	320-513585	320-76769-A-5-A RI	20	1613B/Solid	D265	10.00000	g
21AU2111D2	13	320-513585	320-76769-A-3-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	14	320-513585	320-76769-A-13-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	15	320-513585	320-76769-A-15-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	16	320-513227	320-76765-A-17-A RI	20	1613B/Solid	D264	10.00000	g
21AU2111D2	17	320-513227	320-76765-A-11-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	18	320-513227	320-76765-A-12-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	19						1.00000	
21AU2111D2	20						1.00000	
21AU2111D2	21						1.00000	
21AU2111D2	22						1.00000	
21AU2111D2	23						1.00000	
21AU2111D2	24		KSS 08-21-21				1.00000	
21AU2111D2	25						1.00000	

Logfile checked
08/23/21 SMA

776642

Peak Locate Examination:21-AUG-2021:13:53 File:21AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

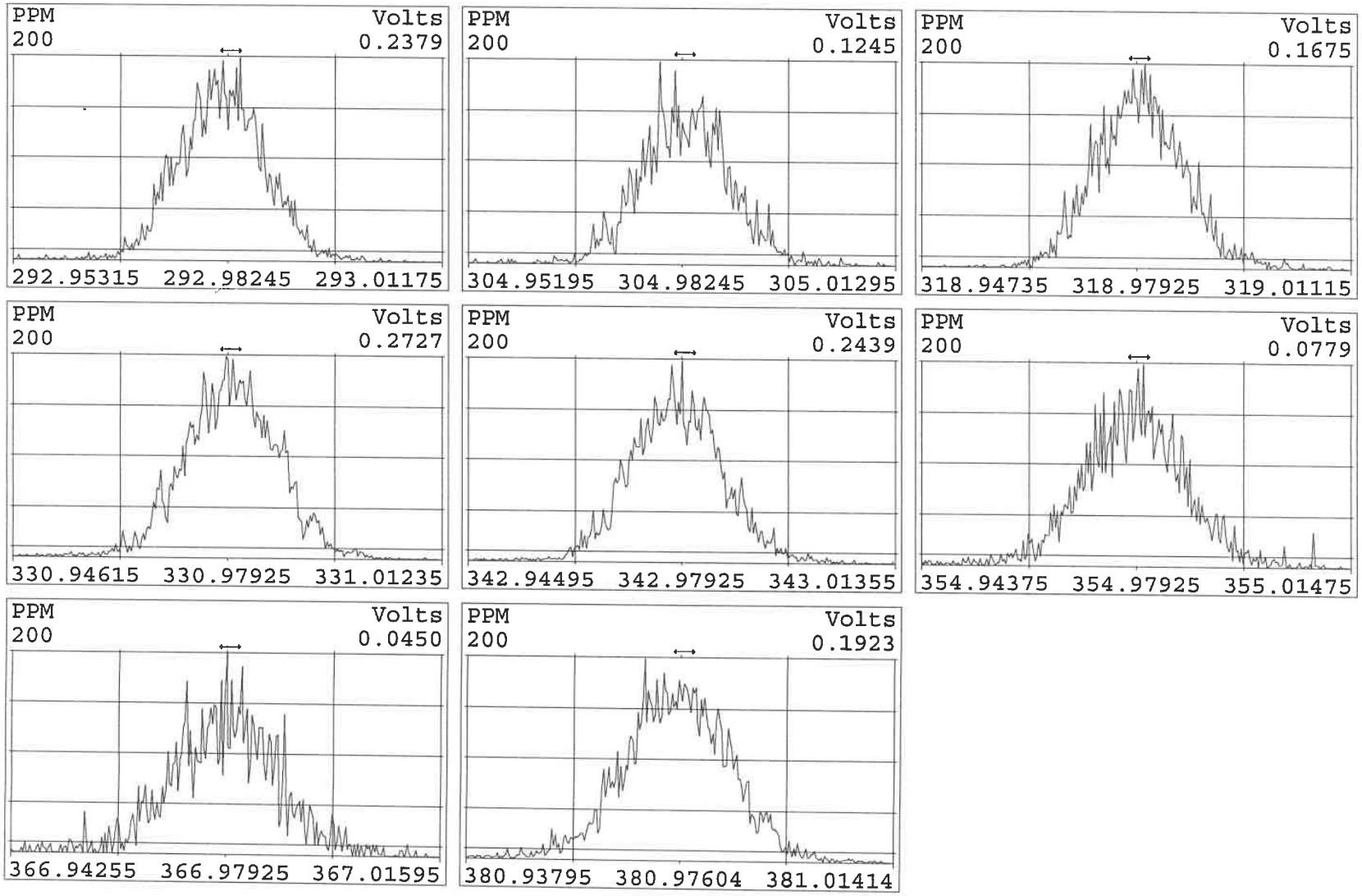

776643

Peak Locate Examination:22-AUG-2021:01:45 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

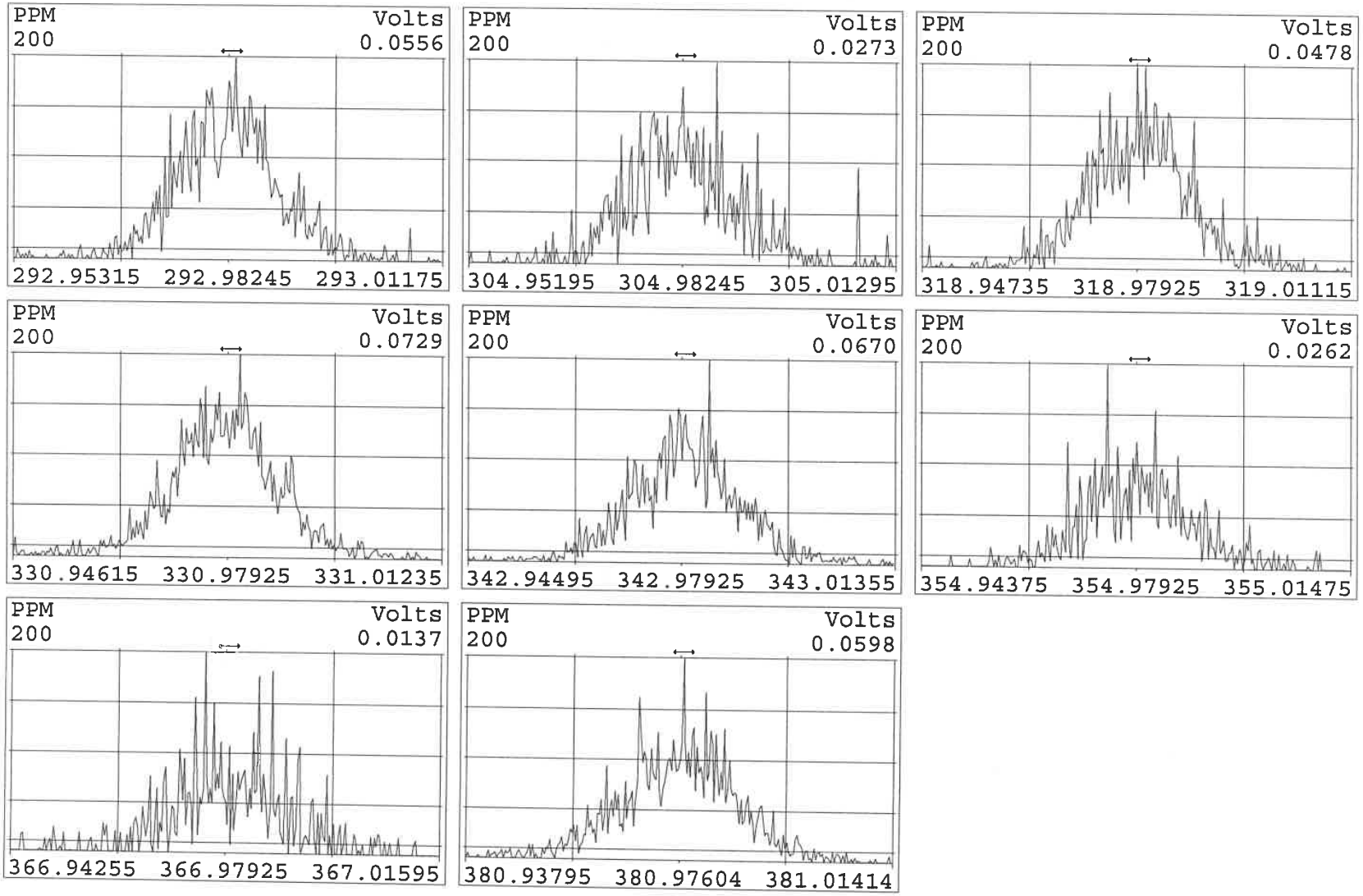

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 21-Aug-2021 14:32:47 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:00:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.309	35877129	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.640	51880975	0.80	1.3327	108.5	108.5	0.3223	0.3223	109	
2,3,7,8-TCDF	17.653	4778531	0.78	0.9978	9.231	9.231	0.0574	0.0574	92.31	
D 13C-2,3,7,8-TCDD	16.076	33700268	0.78	0.8749	107.4	107.4	0.5104	0.5104	107	
2,3,7,8-TCDD	16.103	3356985	0.75	1.0570	9.424	9.424	0.0671	0.0671	94.24	
$ 37Cl4-2,3,7,8-TCDD	16.103	3156320		0.8648	10.2	10.2	0.0484	0.0484	102	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

776645

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 21-Aug-2021 14:32:47 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:00:31

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.309	16.309	0		15319895	3302032	8200	20500	403		
333.9339	16.323	16.309	1		20557234	4490659	5721	14302	785	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.640	17.640	0	1.082	23088836	4268597	6976	17440	612		
317.9389	17.640	17.640	0	1.082	28792139	5365670	6414	16035	837	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.653	17.653	0	1.001	2100550	398770	942	2355	423		
305.8987	17.653	17.653	0	1.001	2677981	509298	1267	3167	402	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.076	16.076	0	0.986	14763429	3298250	8200	20500	402		
333.9339	16.076	16.076	0	0.986	18936839	4307338	5721	14302	753	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.103	16.103	0	1.002	1436306	299691	1100	2750	272		
321.8936	16.103	16.103	0	1.002	1920679	388921	1059	2647	367	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.103	16.103	0	0.987	3156320	679381	1304	3260	521		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

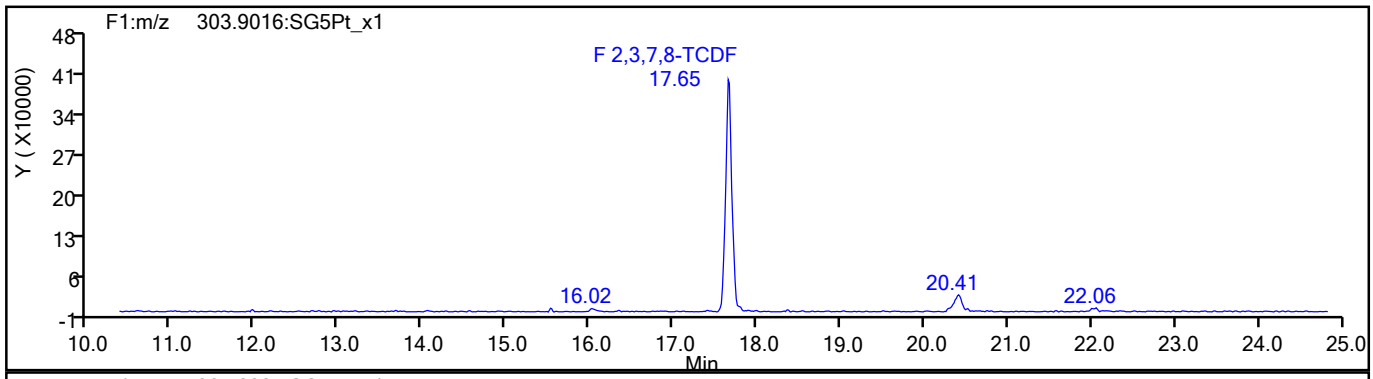

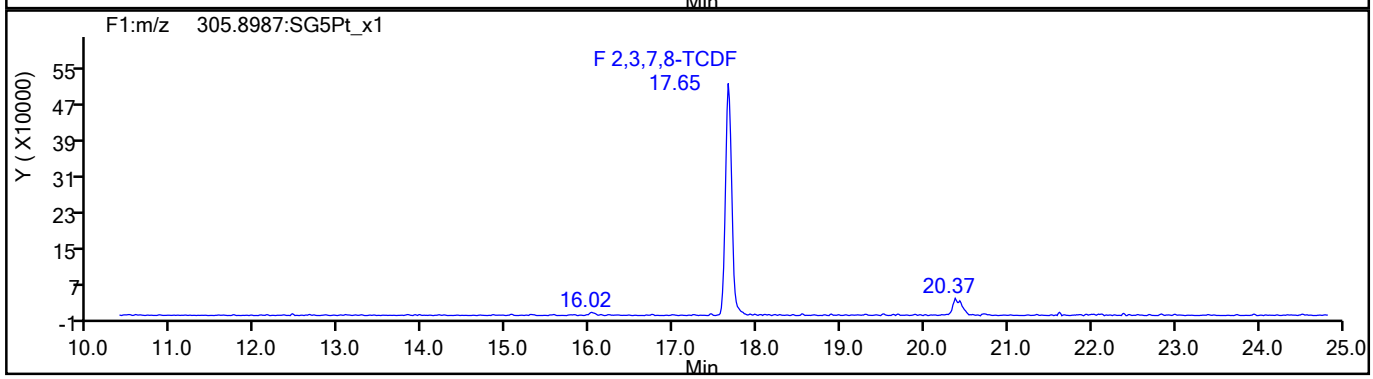

TCDF Standards

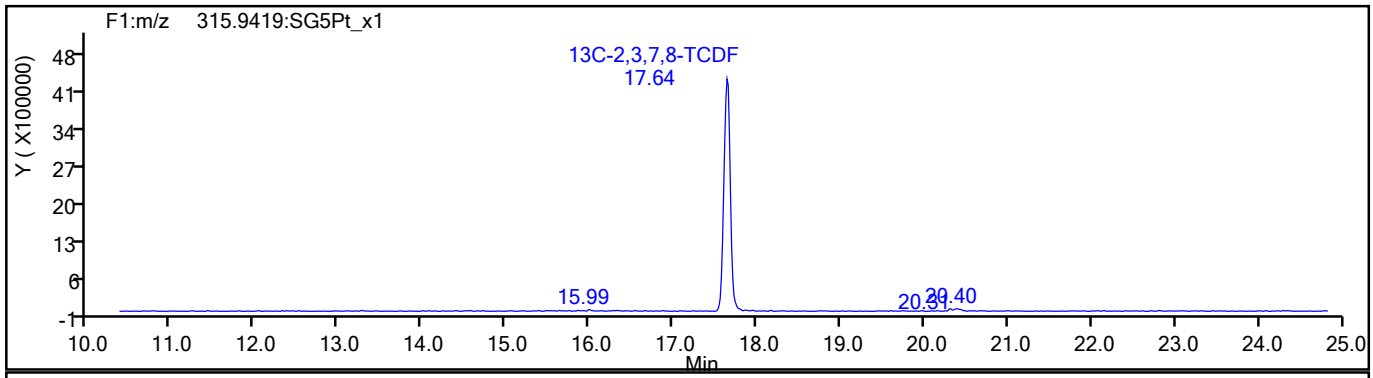

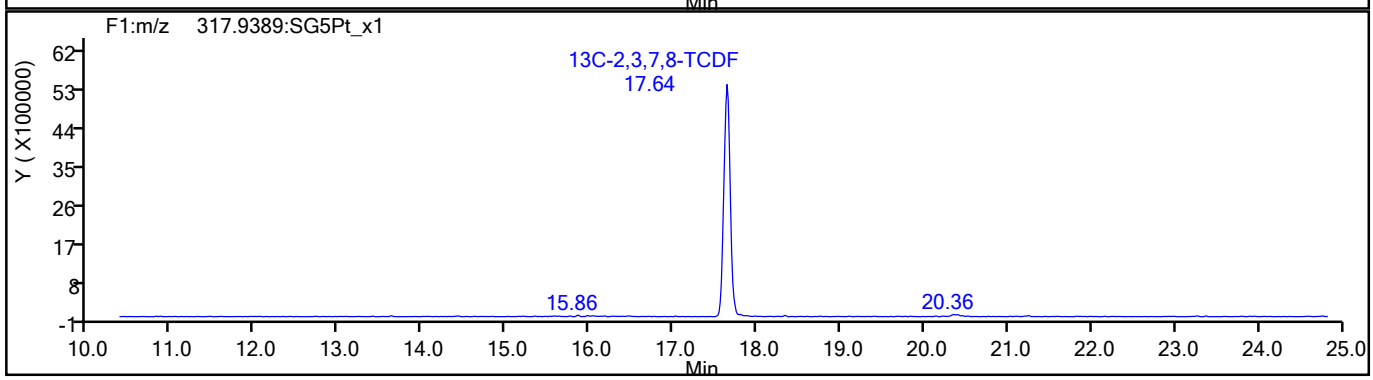

776647

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

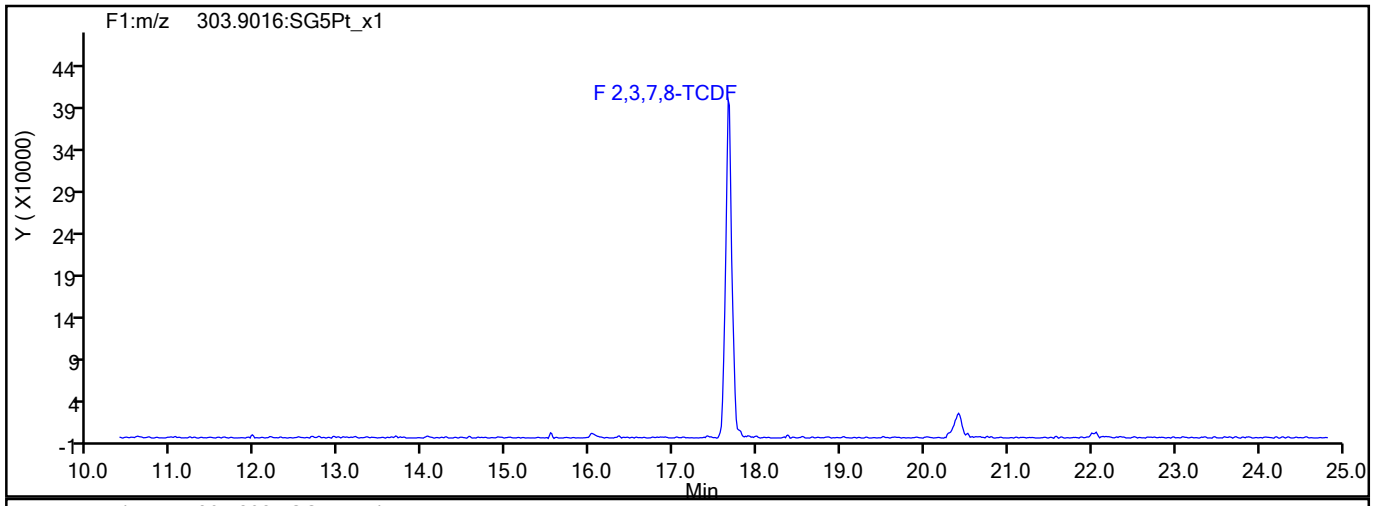

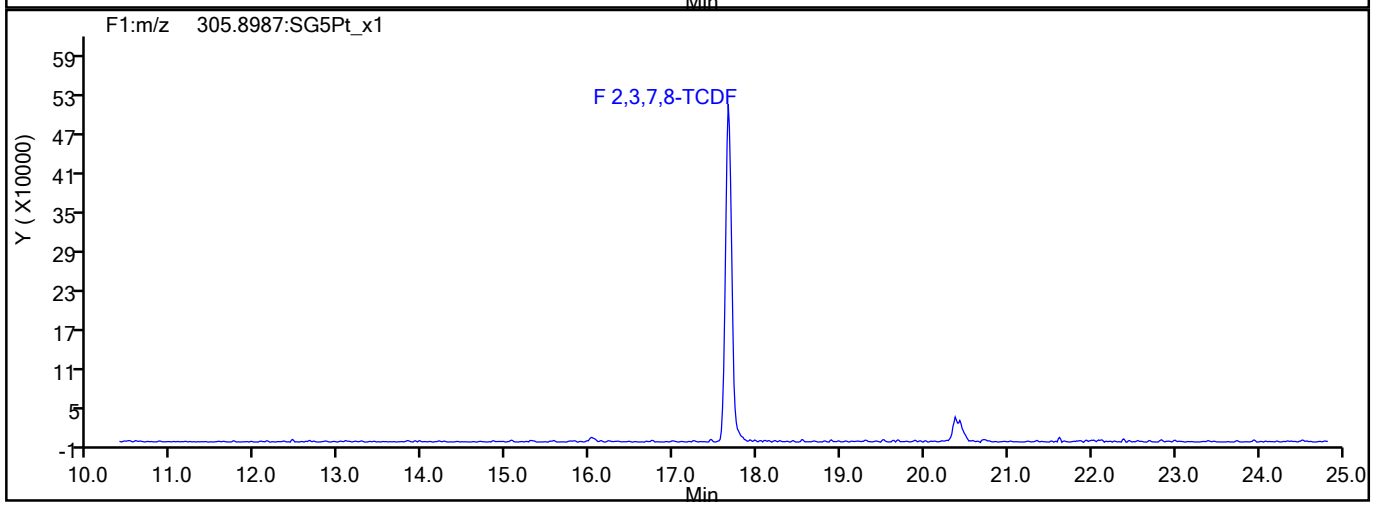

TCDF Interference Mass

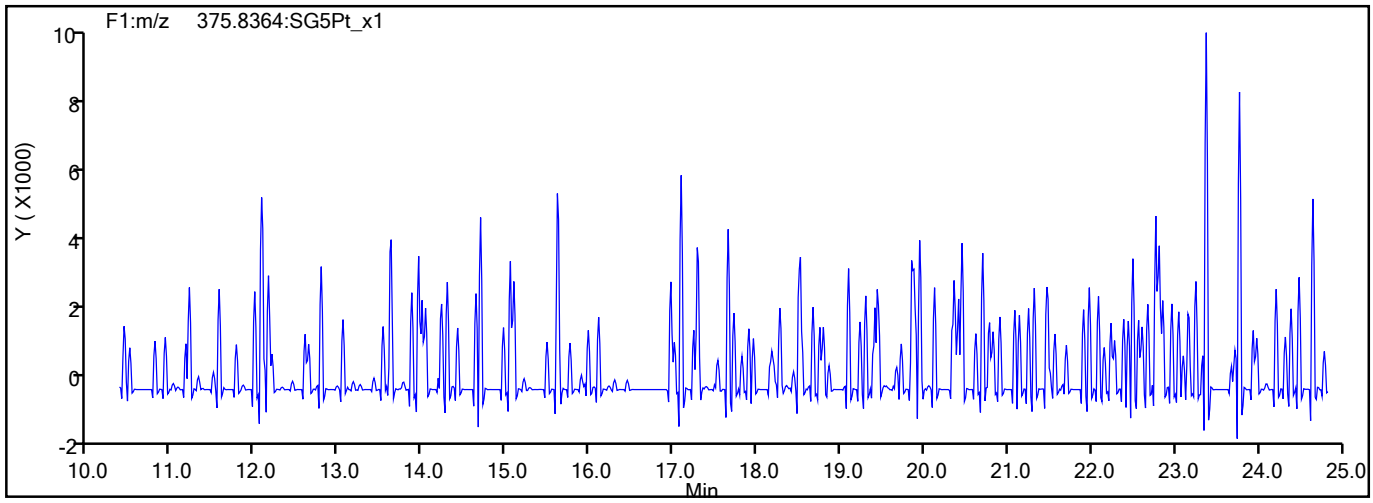

776648

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

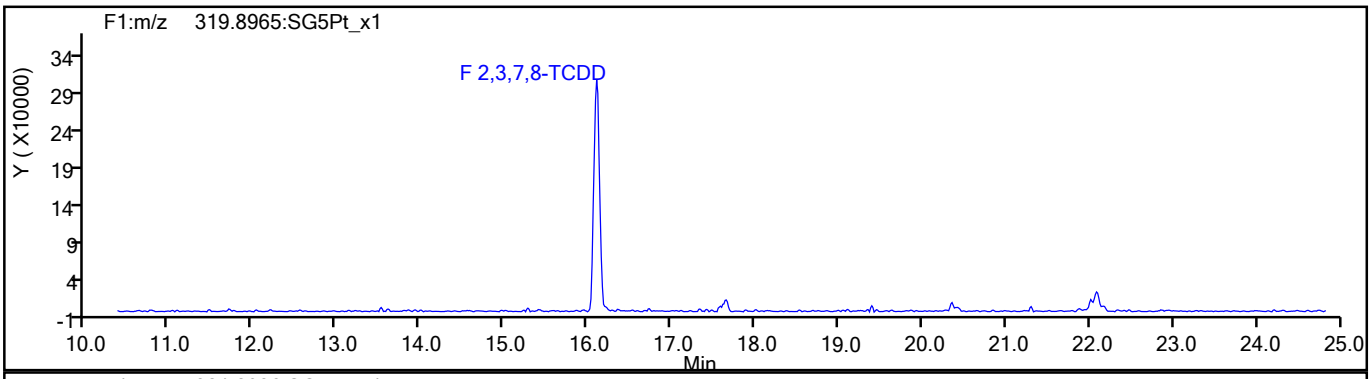

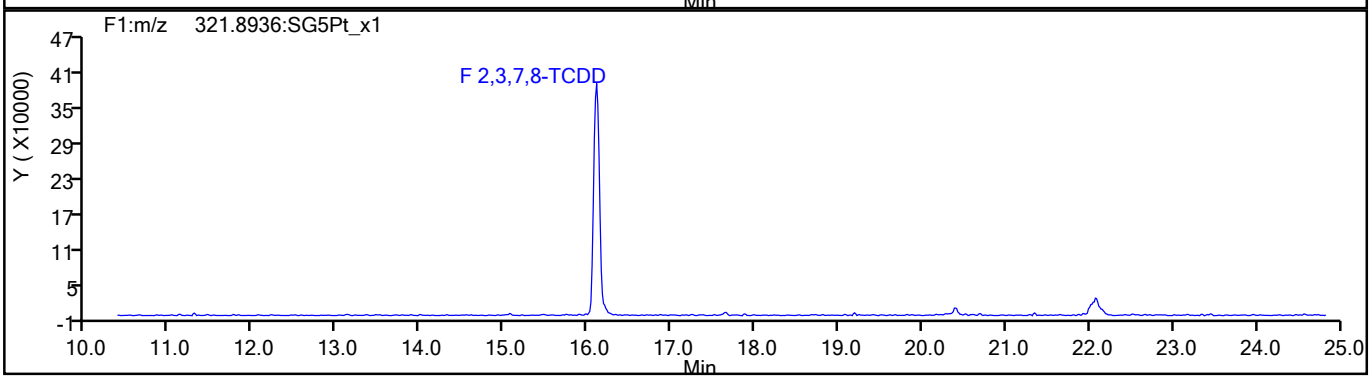

TCDD Standards

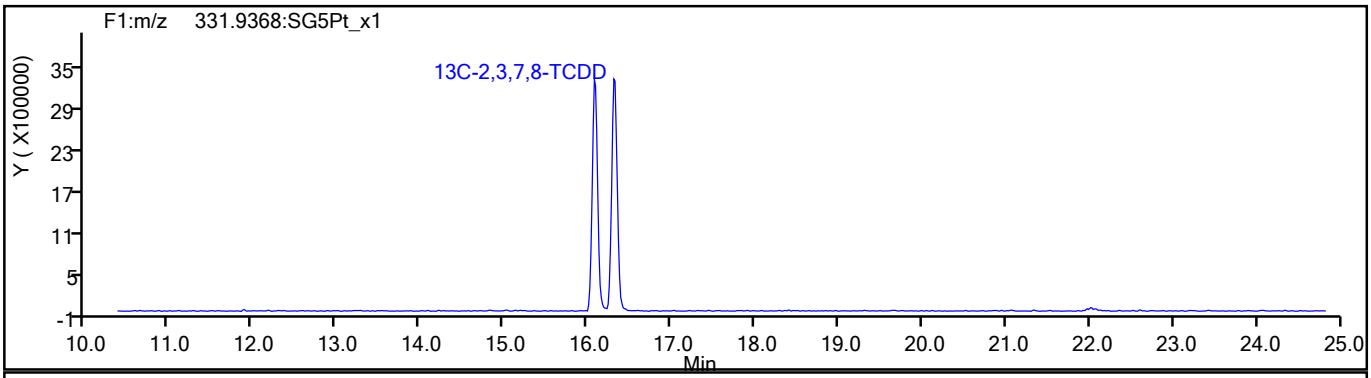

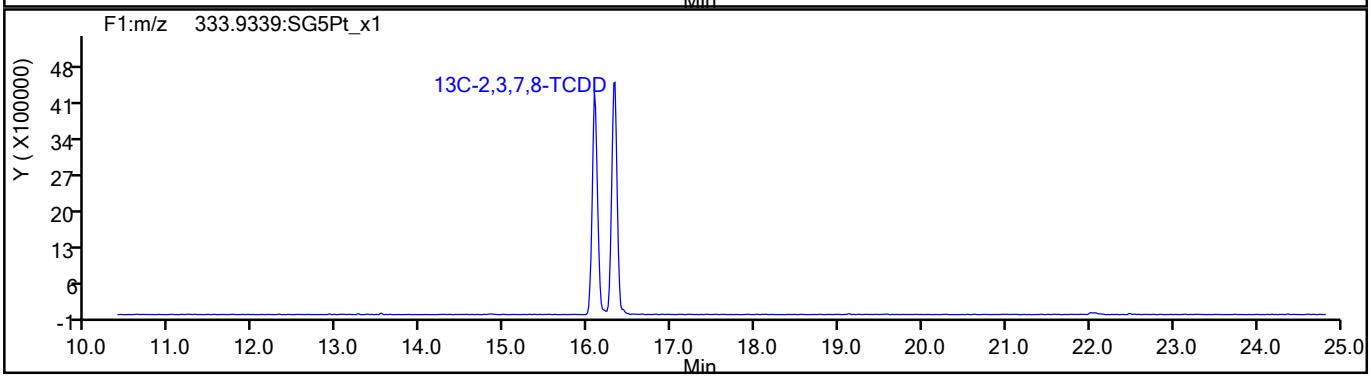

776649

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

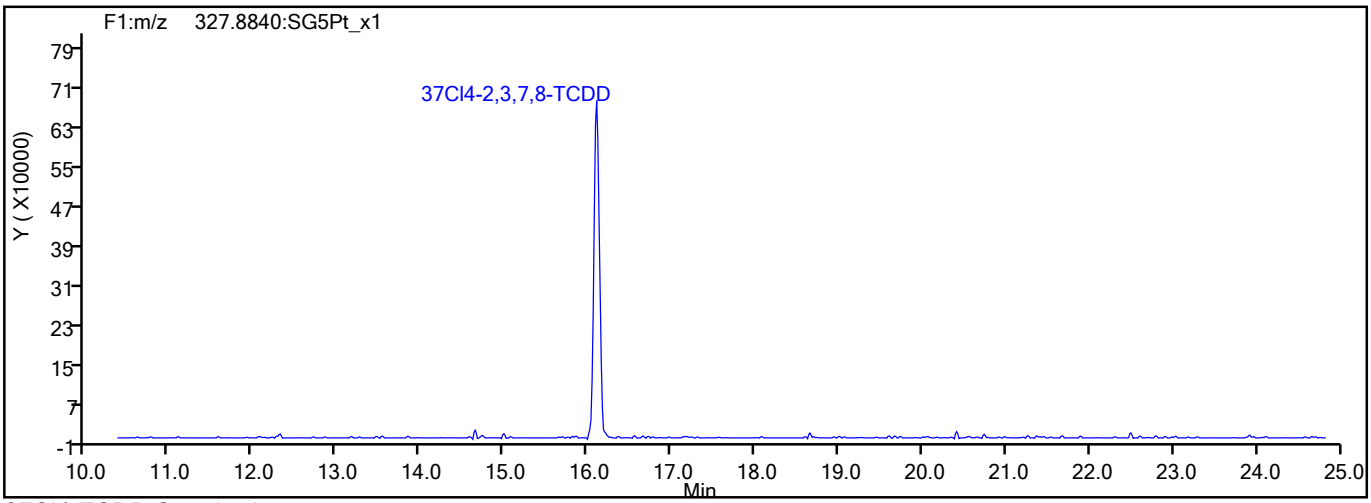

37Cl4-TCDD Standards

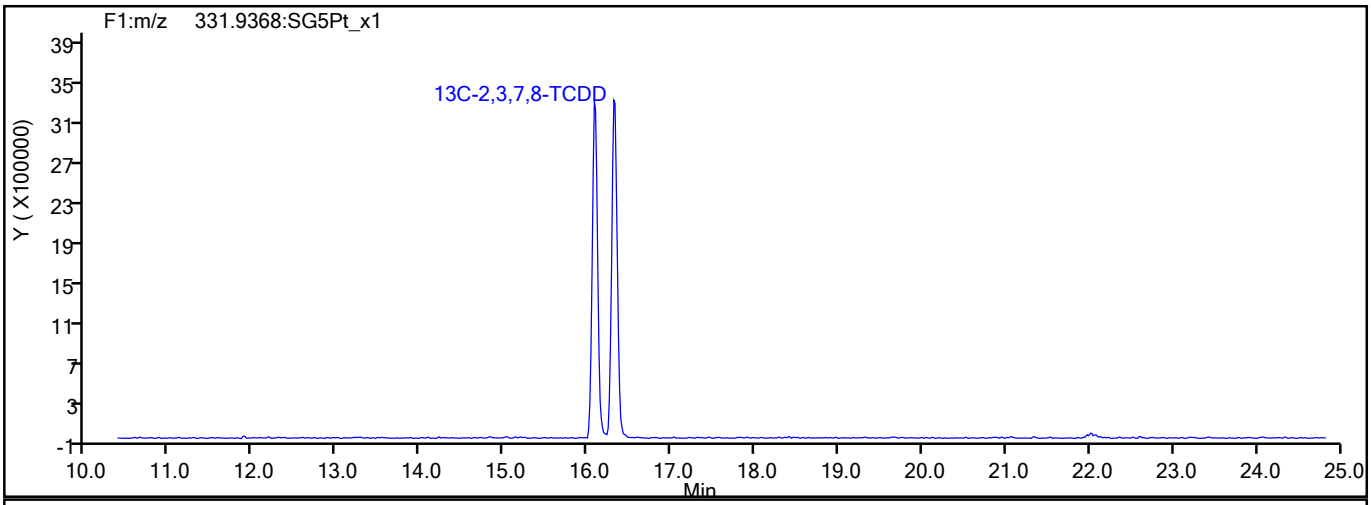

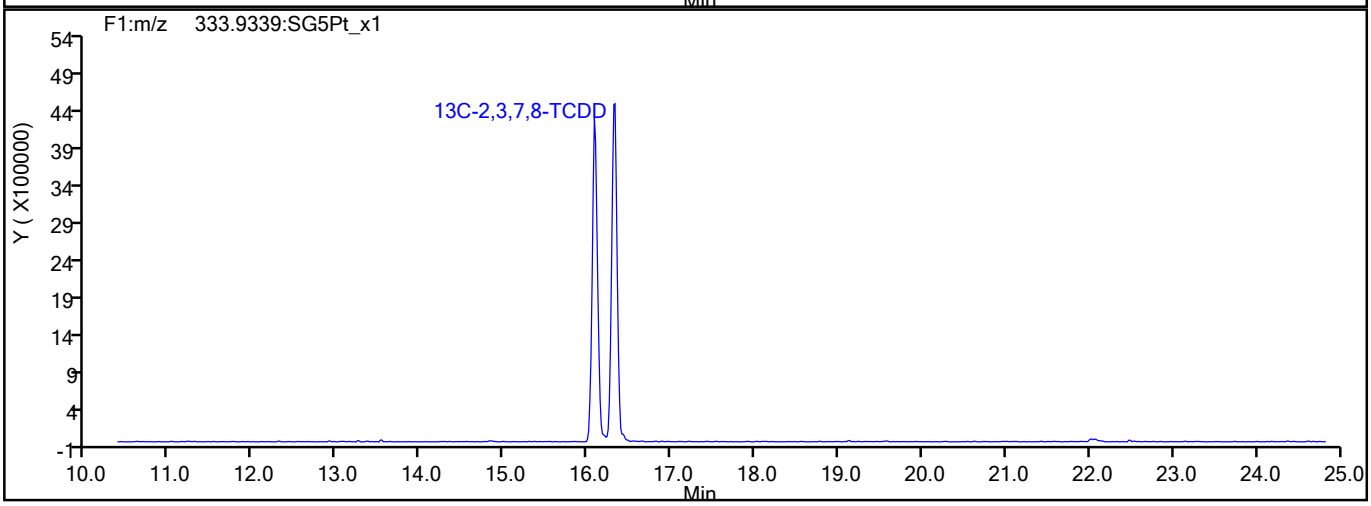

776650

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

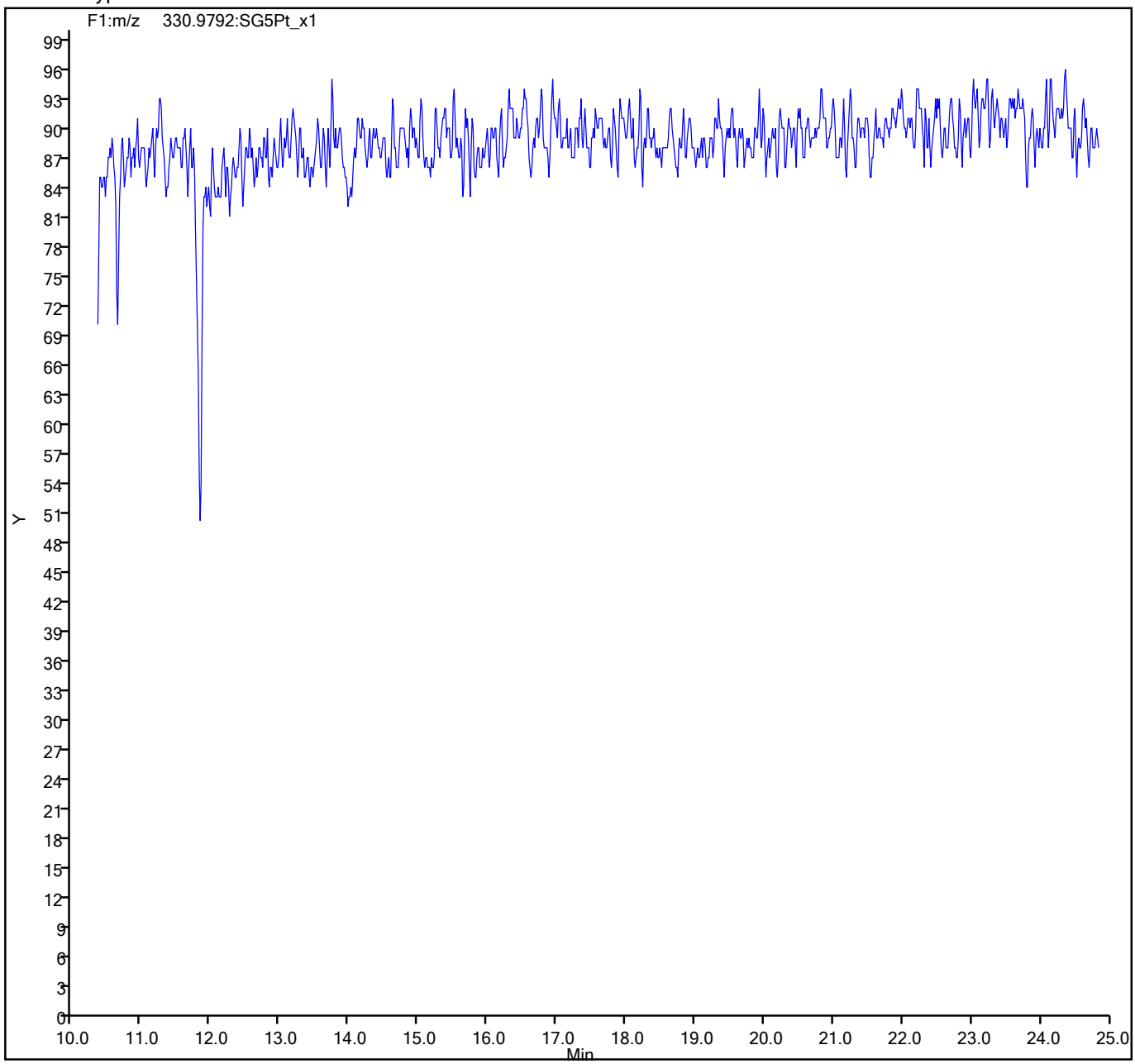

776651

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-518958/2 Calibration Date: 08/23/2021 10:10

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 23AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.038		9.82	10.0	98	78-129
2,3,7,8-TCDF	AveID	0.998	1.004		10.1	10.0	101	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9441		108	100	108	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.458		109	100	109	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8997		10.4	10.0	104	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
23AU2111D2	1	CPS 082321	CPS HRDXNCP_00044				1.00000	
23AU2111D2	2	CCV 082321	CCV CS-4 HRDXNL4_00100				1.00000	
23AU2111D2	3	SB 082321	Solvent Blank C-14				1.00000	
23AU2111D2	4	320-513879	320-76888-A-9-A	20	1613B/Solid	D267	10.00000	g
23AU2111D2	5	320-512871	320-76788-A-21-A	20	1613B/Solid	D265	10.00000	g
23AU2111D2	6	320-513585	320-76769-A-20-A	20	1613B/Solid	D265	10.00000	g
23AU2111D2	7	320-513585	320-76769-A-1-A X5	20	1613B/Solid		10.00000	g
23AU2111D2	8	320-513585	320-76769-A-1-B MS X5	20	1613B/Solid		10.00000	g
23AU2111D2	9	320-513585	320-76769-A-1-C MSD X5	20	1613B/Solid		10.00000	g
23AU2111D2	10						1.00000	
23AU2111D2	11						1.00000	
23AU2111D2	12						1.00000	
23AU2111D2	13						1.00000	
23AU2111D2	14						1.00000	
23AU2111D2	15		KSS 08-23-21				1.00000	
23AU2111D2	16						1.00000	

LOGFILE CHECKED
DB 8/23/21

776653

Peak Locate Examination:23-AUG-2021:09:31 File:23AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

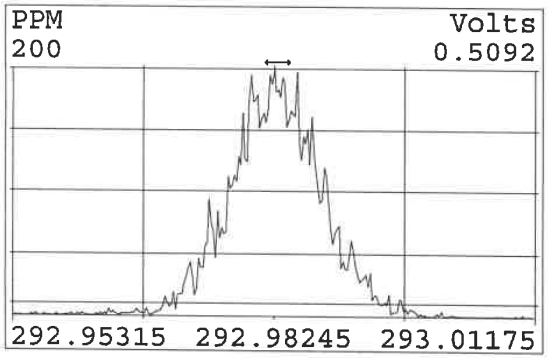

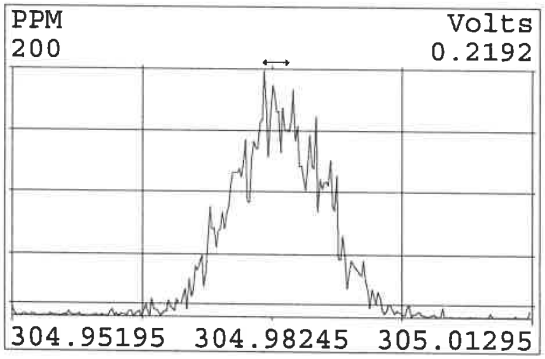

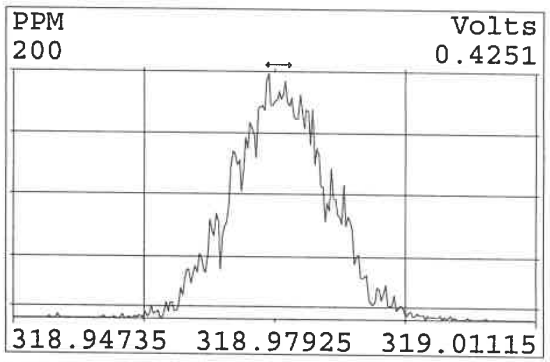

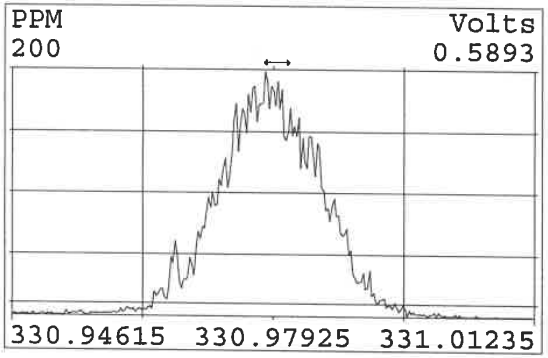

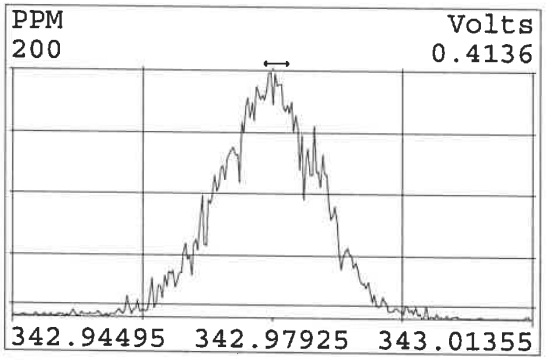

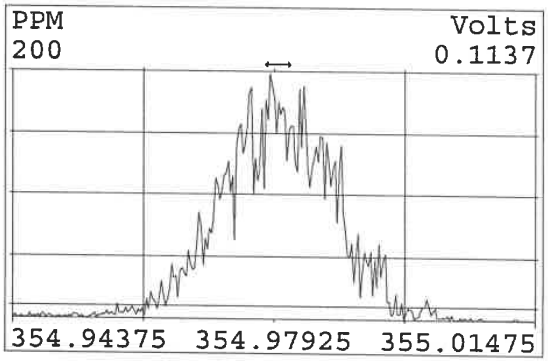

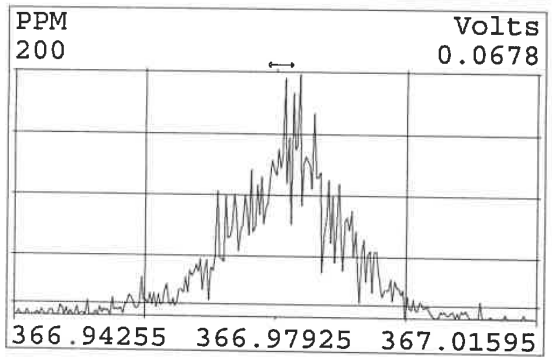

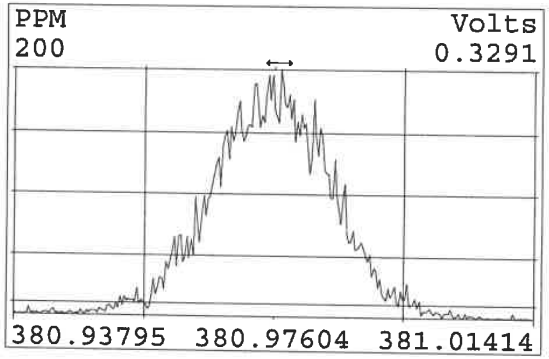

776654

Peak Locate Examination:23-AUG-2021:15:21 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

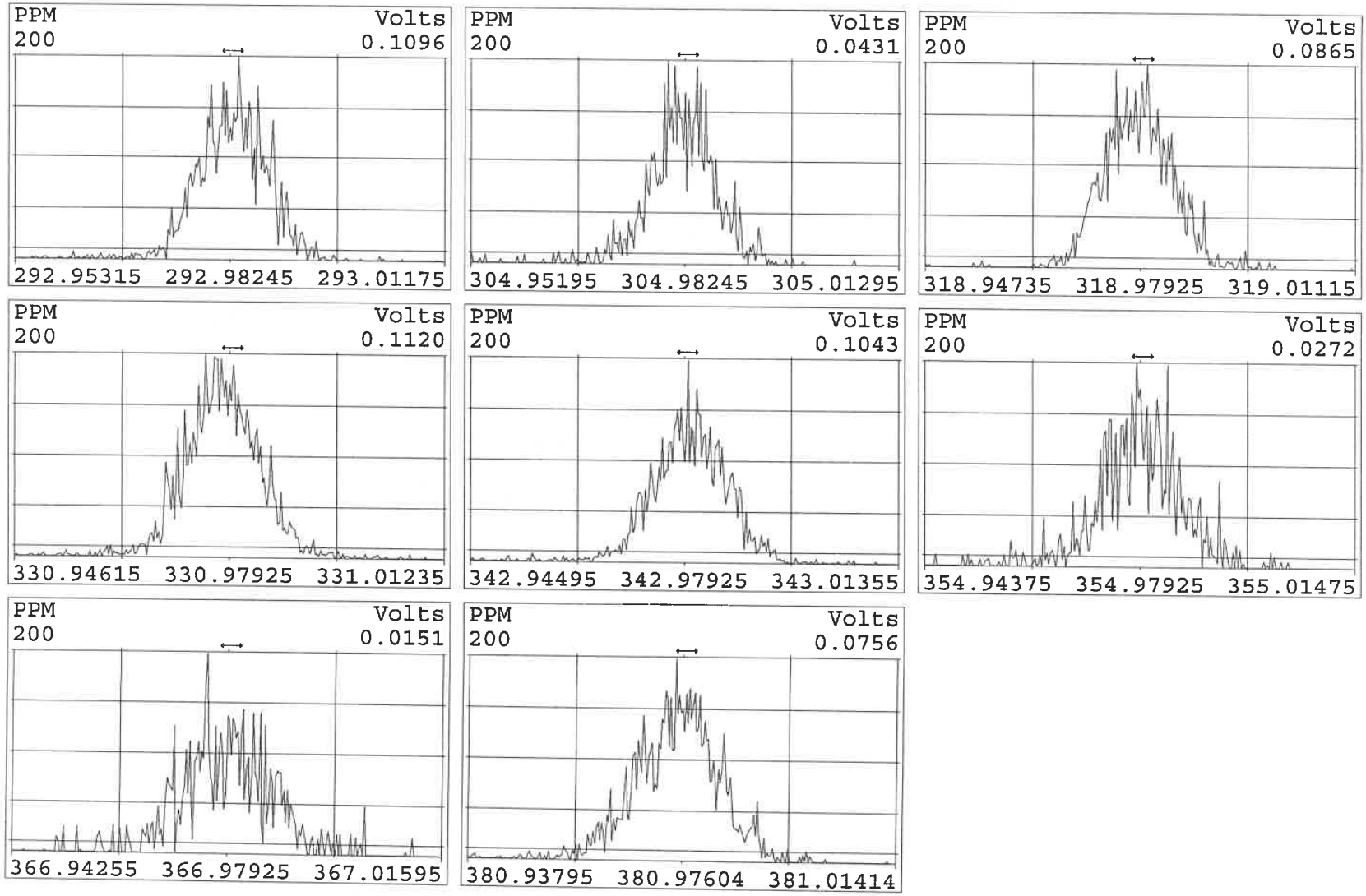

776655

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2021 10:10:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:43:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.312	16971560	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	24750130	0.83	1.3327	109.4	109.4	0.6226	0.6226	109	
2,3,7,8-TCDF	17.643	2483909	0.79	0.9978	10.1	10.1	0.0976	0.0976	101	
D 13C-2,3,7,8-TCDD	16.065	16022399	0.78	0.8749	107.9	107.9	0.9142	0.9142	108	
2,3,7,8-TCDD	16.093	1663816	0.82	1.0570	9.824	9.824	0.1305	0.1305	98.24	
$ 37Cl4-2,3,7,8-TCDD	16.093	1526894		0.8648	10.4	10.4	0.1464	0.1464	104	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

776656

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2021 10:10:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:43:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.312	16.312	0		7313306	1607766	7398	18495	217		
333.9339	16.298	16.312	-1		9658254	2138046	4587	11467	466	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.080	11243672	2122892	6842	17105	310		
317.9389	17.629	17.615	1	1.081	13506458	2501128	5591	13977	447	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.643	0	1.002	1095594	194388	644	1610	302		
305.8987	17.656	17.643	1	1.002	1388315	256841	1157	2892	222	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	0.985	7024679	1536870	7398	18495	208		
333.9339	16.065	16.065	0	0.985	8997720	1912819	4587	11467	417	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.093	0	1.002	751350	174426	1159	2897	150		
321.8936	16.093	16.093	0	1.002	912466	213269	744	1860	287	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.093	16.093	0	0.987	1526894	322057	1897	4742	170		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

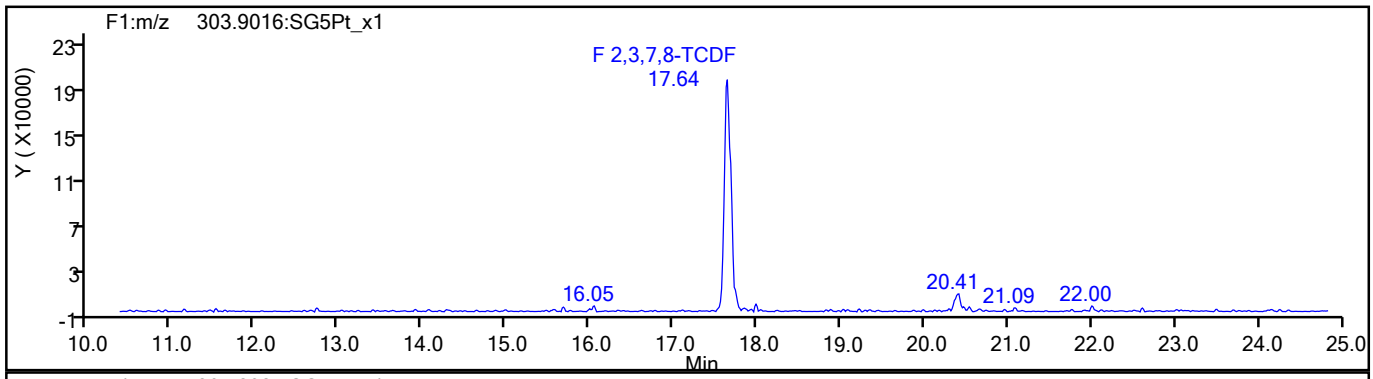

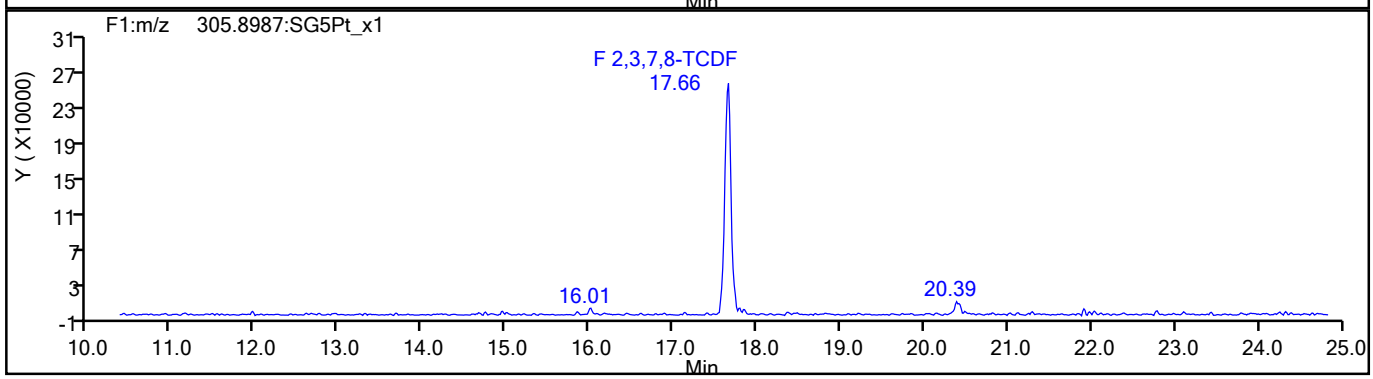

TCDF Standards

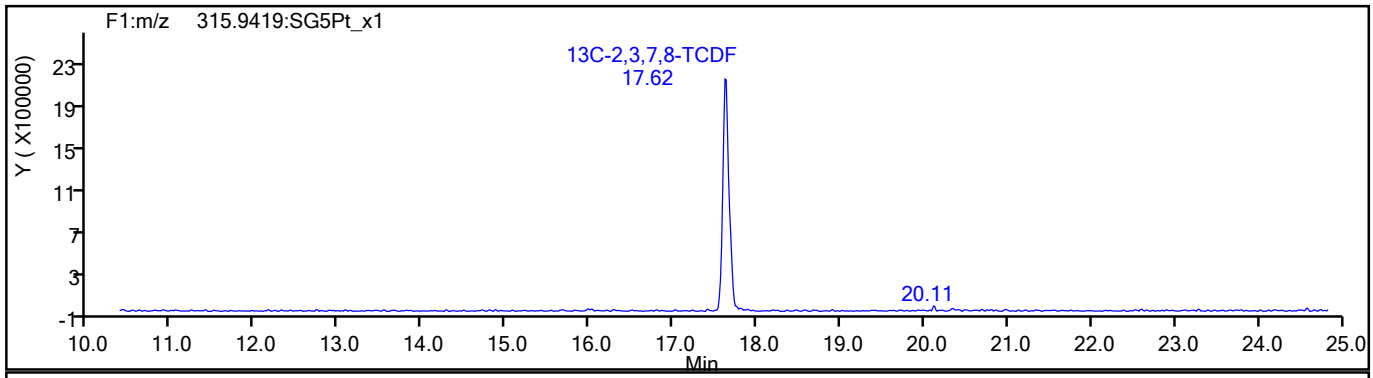

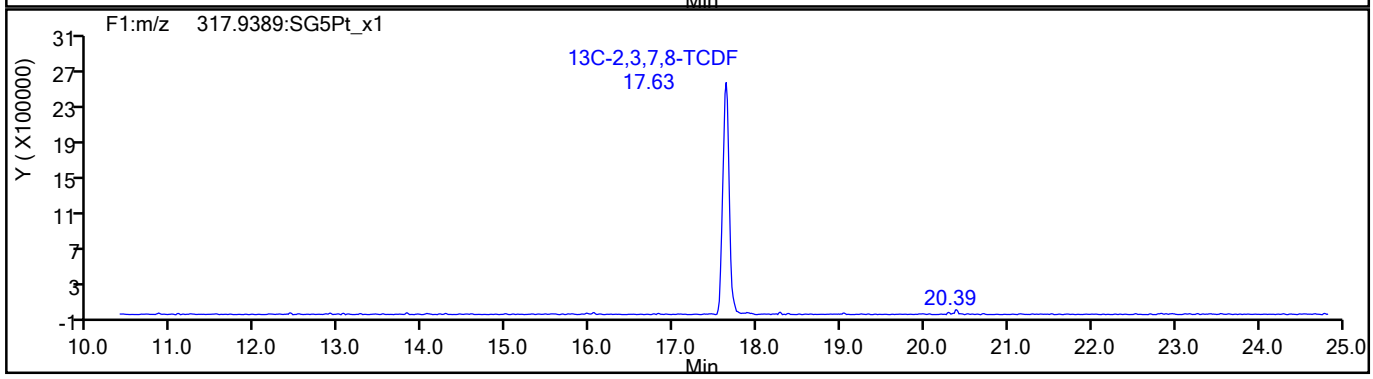

776658

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

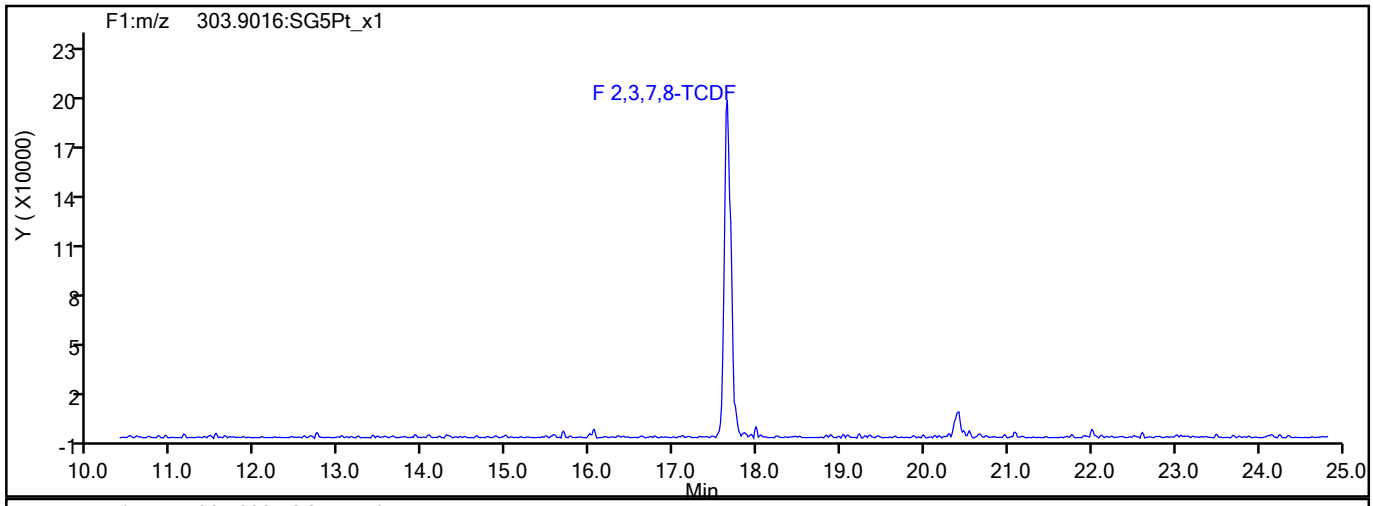

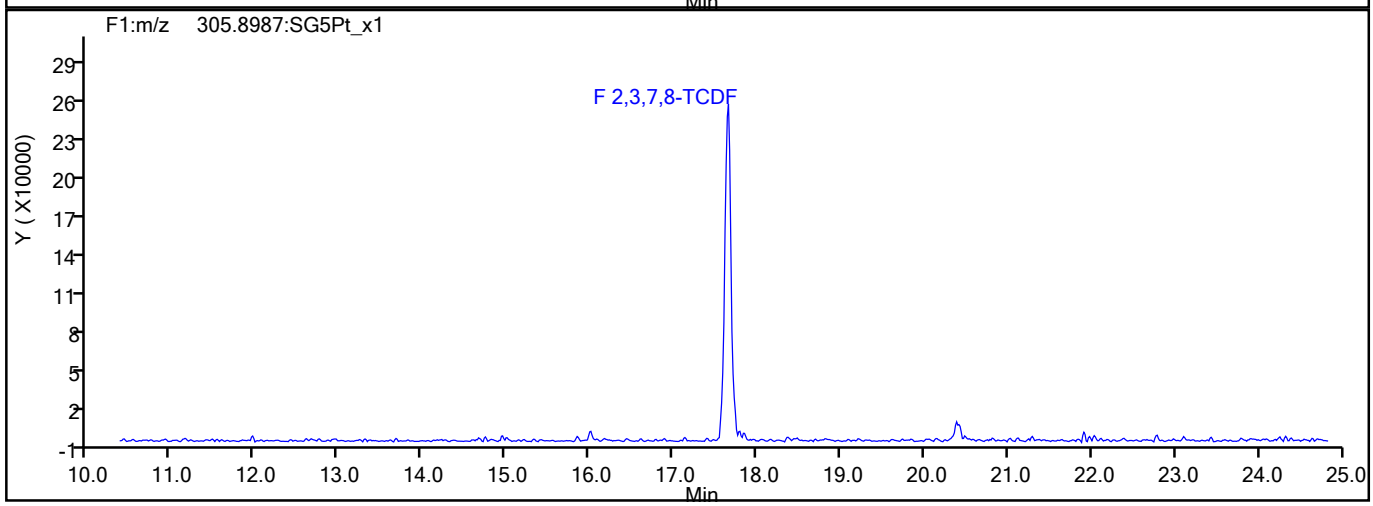

TCDF Interference Mass

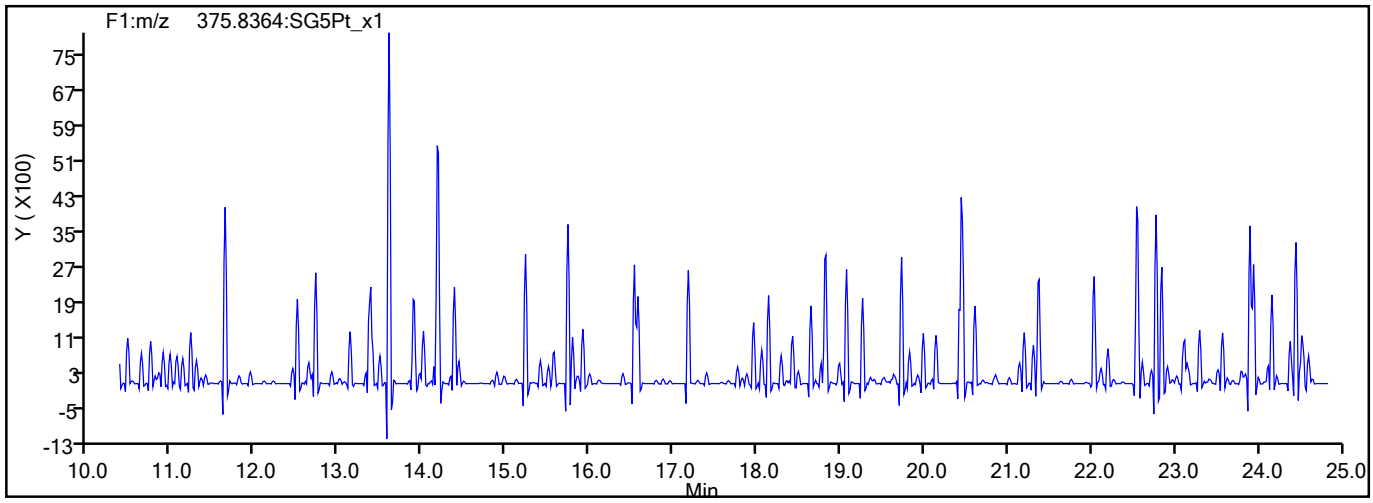

776659

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

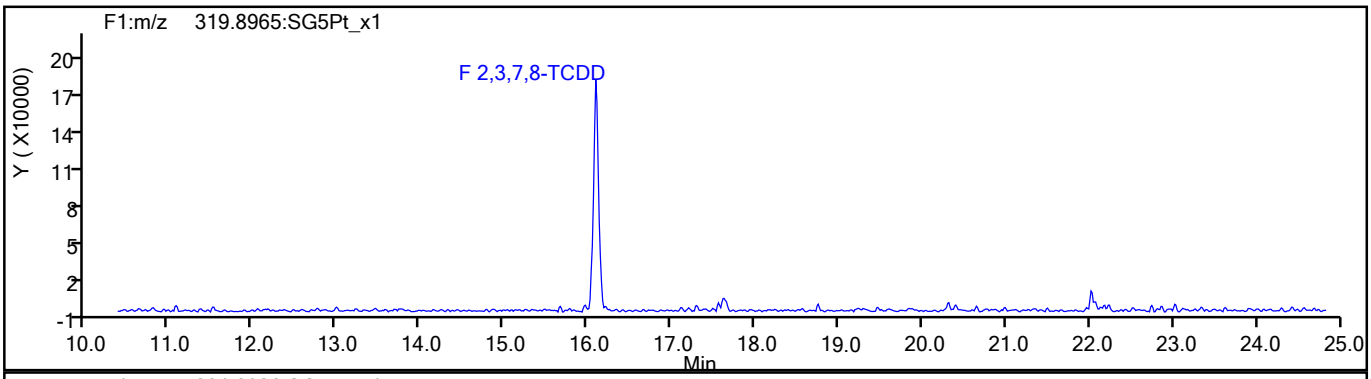

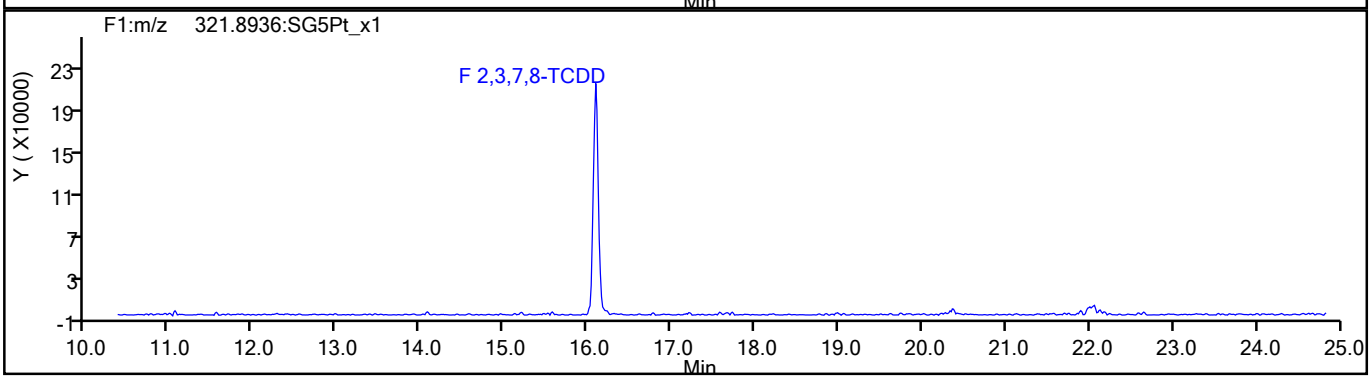

TCDD Standards

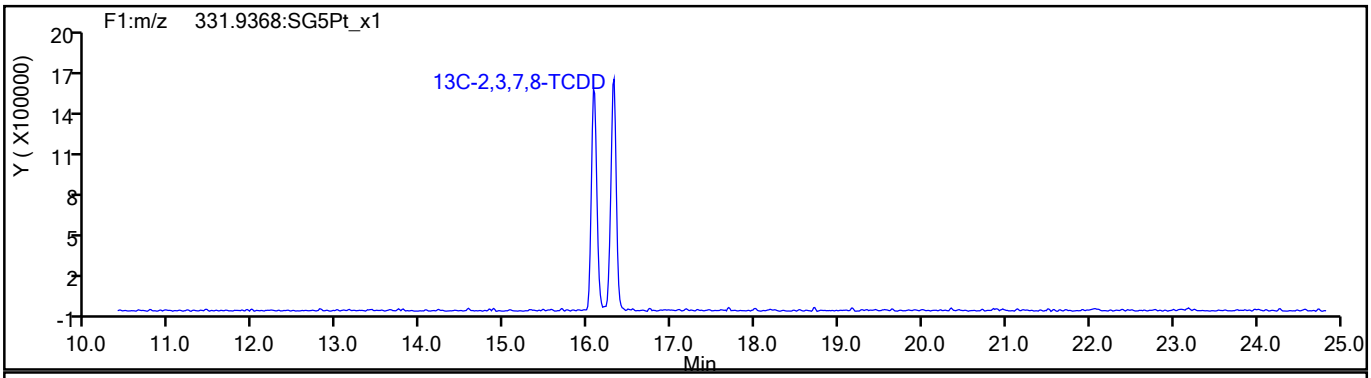

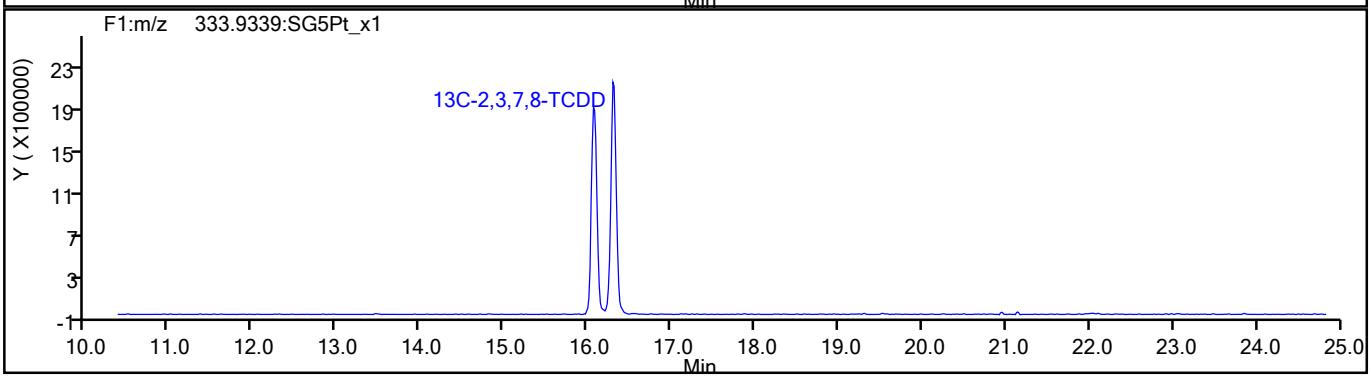

776660

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

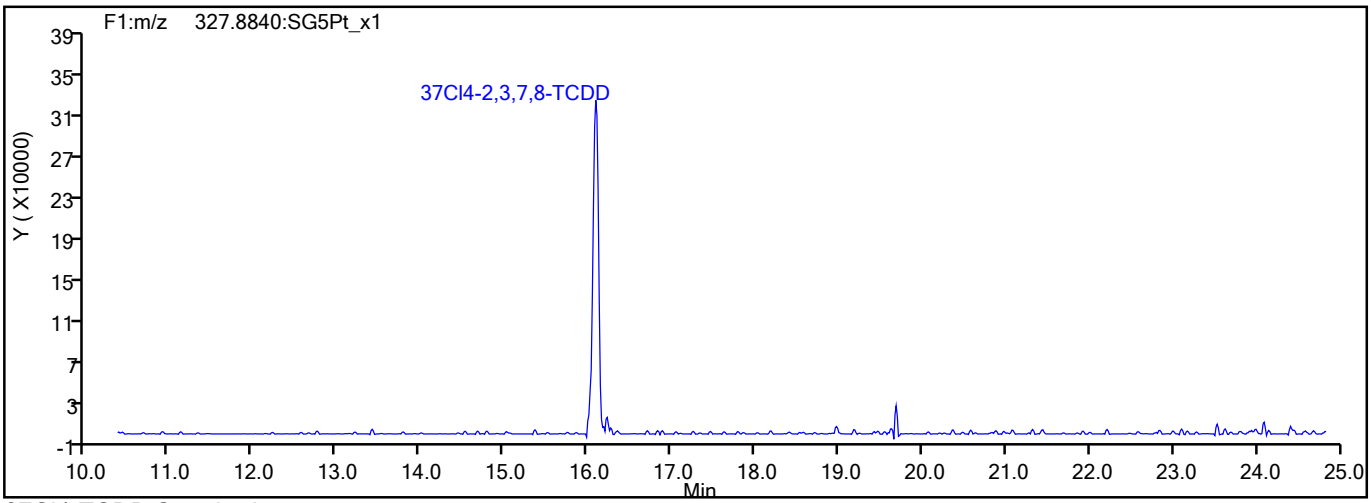

37Cl4-TCDD Standards

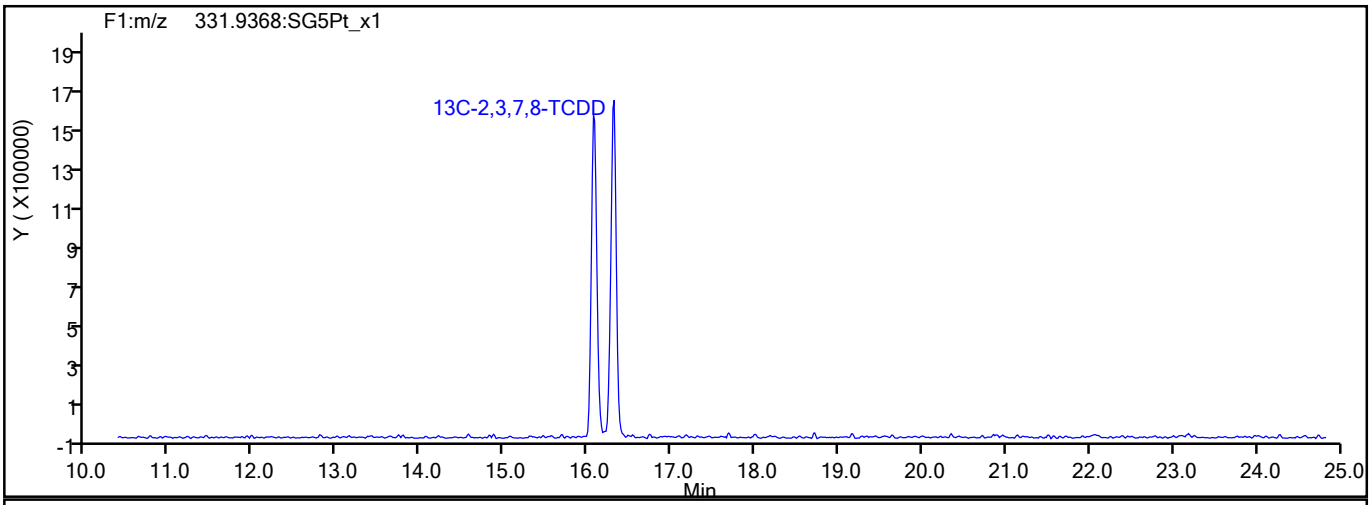

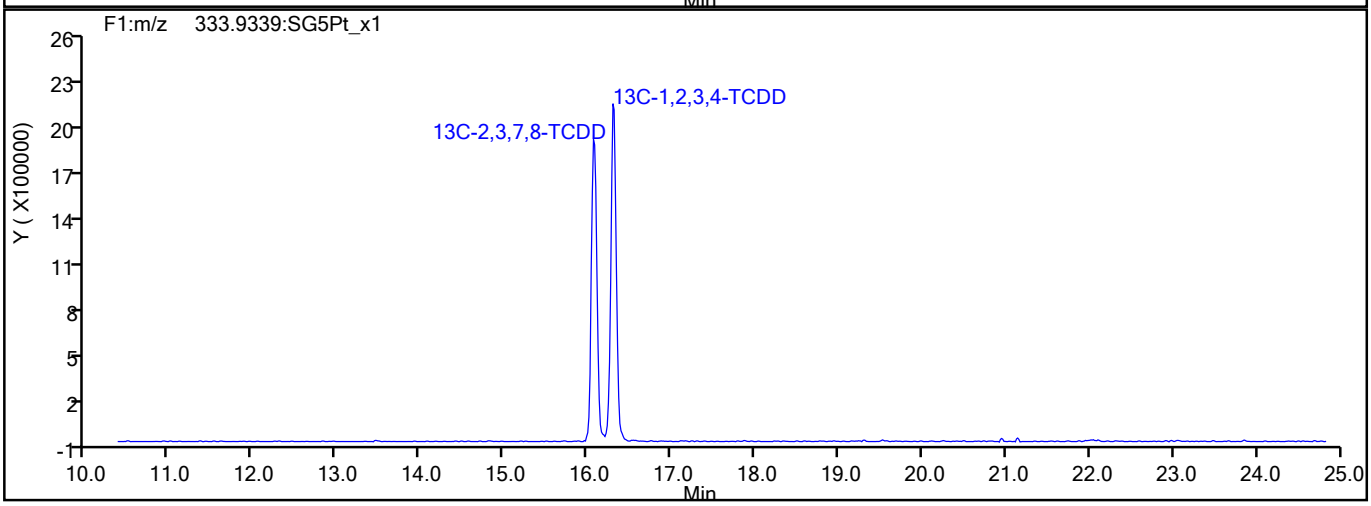

776661

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

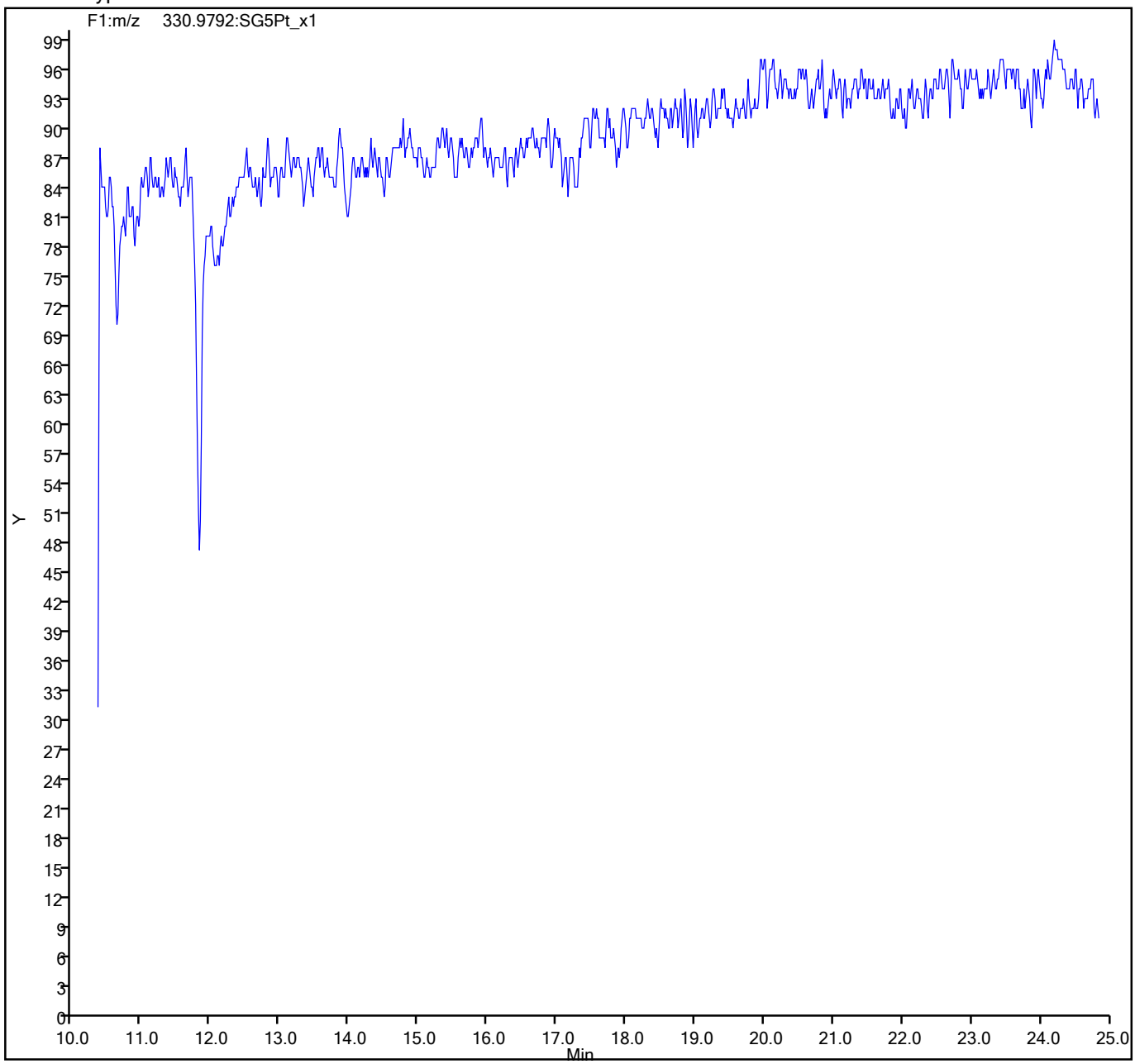

776662

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-518979/2 Calibration Date: 08/23/2021 16:12

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 23AU21A11D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	0.9770		9.24	10.0	92	78-129
2,3,7,8-TCDF	AveID	0.998	0.9288		9.31	10.0	93	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9322		107	100	107	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.415		106	100	106	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8519		9.85	10.0	99	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
23AU21A11D2	1	CPS 082321A	CPS HRDXNCP_00044				1.00000	
23AU21A11D2	2	CCV 082321A	CCV CS-4 HRDXNL4_00100				1.00000	
23AU21A11D2	3	SB 082321A	Solvent Blank C-14				1.00000	
23AU21A11D2	4	320-512871	320-76788-A-9-A	20	1613B/Solid	D265	10.00000	g
23AU21A11D2	5	320-513586	320-76887-A-9-A	20	1613B/Solid	D266	10.00000	g
23AU21A11D2	6	320-513585	320-76769-A-8-A	20	1613B/Solid	D265	10.00000	g
23AU21A11D2	7	320-513585	320-76769-A-6-A	20	1613B/Solid		10.00000	g
23AU21A11D2	8	320-513585	320-76769-A-7-A	20	1613B/Solid		10.00000	g
23AU21A11D2	9	320-513585	320-76769-A-25-A	20	1613B/Solid		10.00000	g
23AU21A11D2	10	320-513585	320-76769-A-18-A	20	1613B/Solid		10.00000	g
23AU21A11D2	11	320-513586	320-76769-A-34-A	20	1613B/Solid	D266	10.00000	g
23AU21A11D2	12	320-513585	320-76769-A-17-A	20	1613B/Solid	D265	10.00000	g
23AU21A11D2	13	320-513586	320-76769-A-31-A	20	1613B/Solid	D266	10.00000	g
23AU21A11D2	14	320-513586	320-76769-A-33-A	20	1613B/Solid		10.00000	g
23AU21A11D2	15	320-513585	320-76769-A-16-A	20	1613B/Solid	D265	10.00000	g
23AU21A11D2	16	320-513586	320-76769-A-32-A	20	1613B/Solid	D266	10.00000	g
23AU21A11D2	17	320-513586	320-76769-A-30-A	20	1613B/Solid		10.00000	g
23AU21A11D2	18	320-513879	320-76769-A-4-B	20	1613B/Solid	D267	10.00000	g
23AU21A11D2	19						1.00000	
23AU21A11D2	20						1.00000	
23AU21A11D2	21						1.00000	
23AU21A11D2	22						1.00000	
23AU21A11D2	23						1.00000	
23AU21A11D2	24		DB 08-23-21				1.00000	
23AU21A11D2	25						1.00000	

Logfile ✓'d
8/24/21 KSS

Peak Locate Examination:23-AUG-2021:15:33 File:23AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

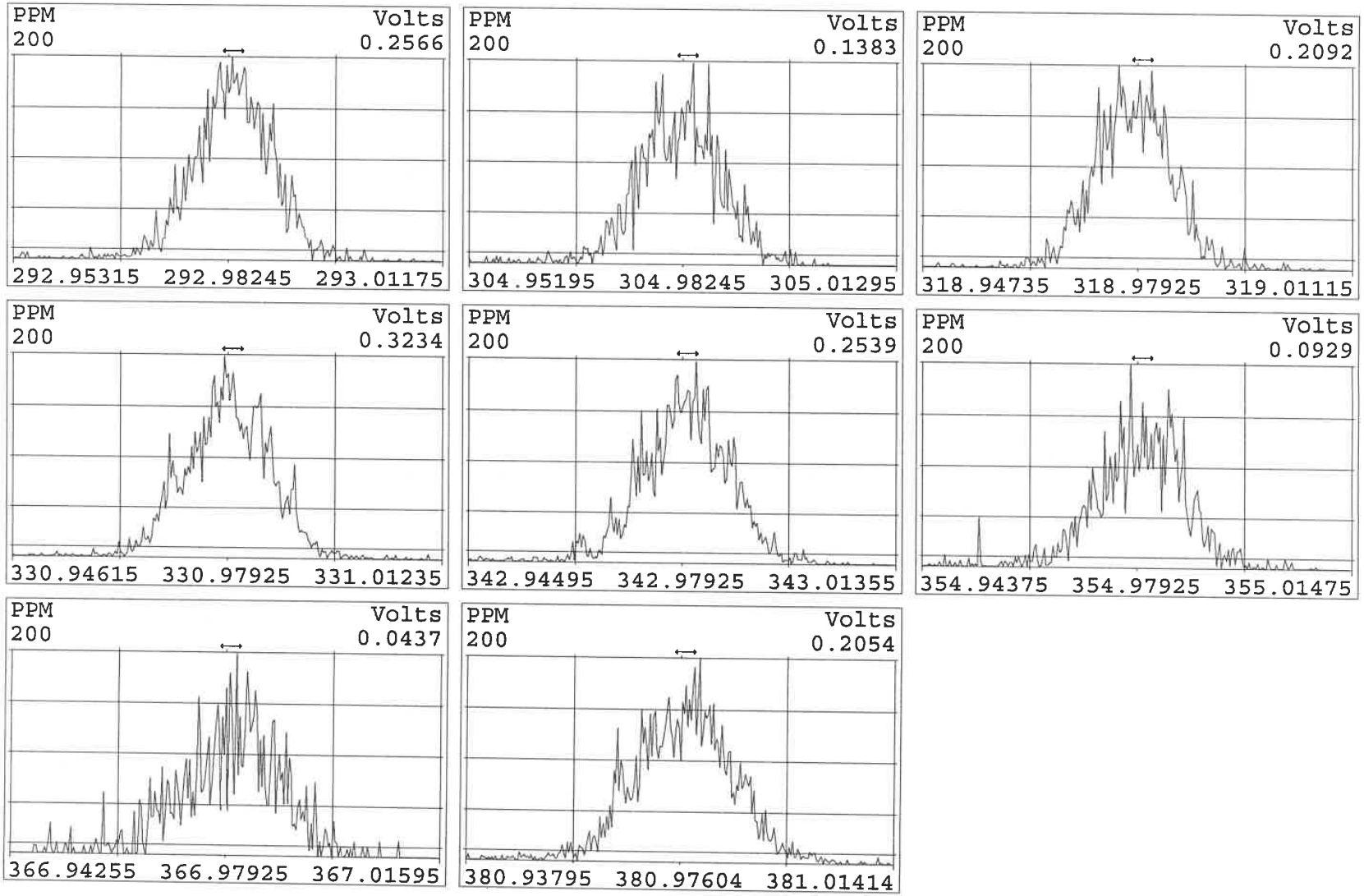

Peak Locate Examination:24-AUG-2021:03:30 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

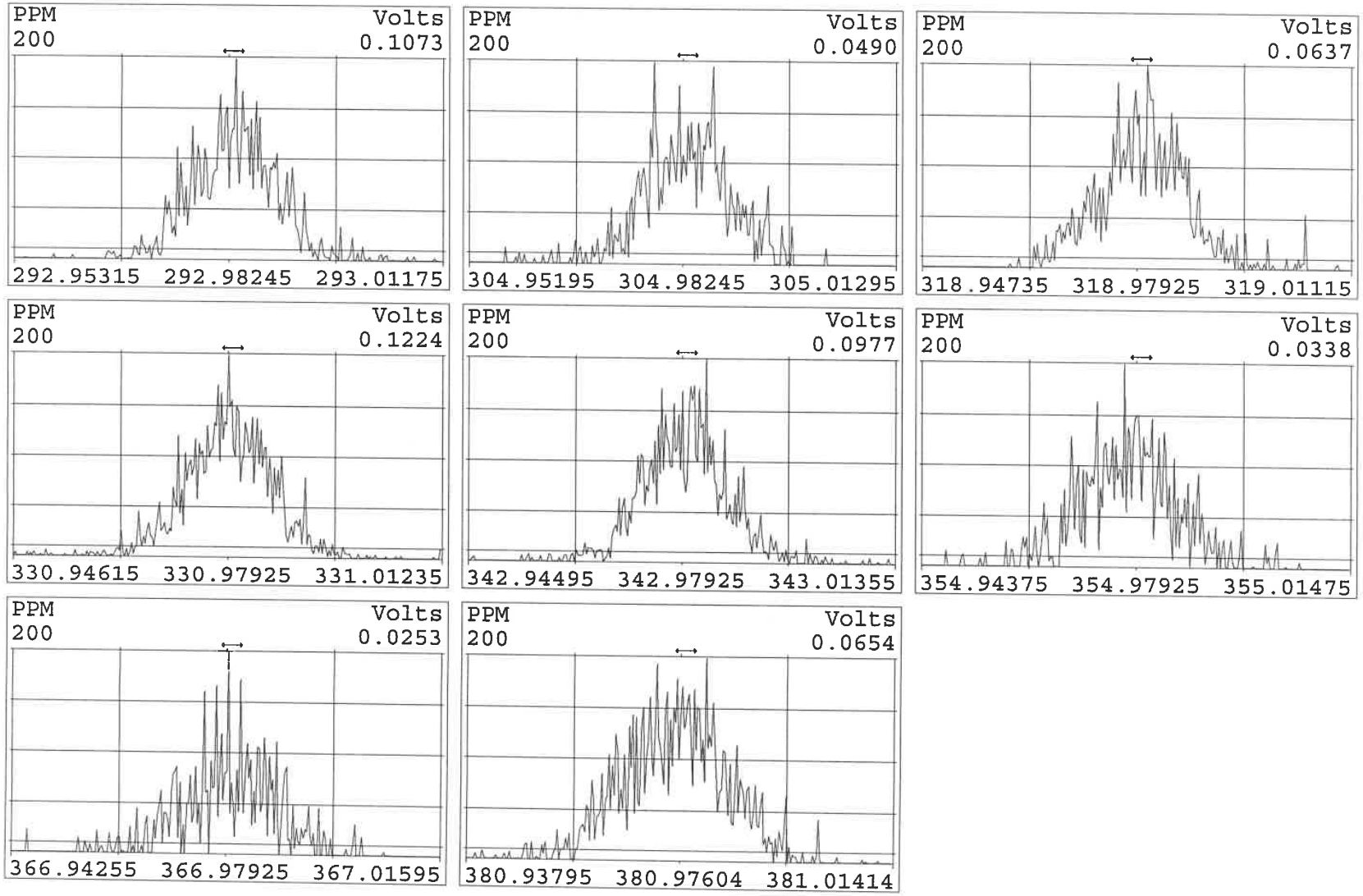

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2021 16:12:40 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:13:16

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	54200262	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	76698090	0.78	1.3327	106.2	106.2	0.2954	0.2954	106	
2,3,7,8-TCDF	17.643	7123807	0.81	0.9978	9.309	9.309	0.0640	0.0640	93.09	
D 13C-2,3,7,8-TCDD	16.065	50526805	0.75	0.8749	106.5	106.5	0.3200	0.3200	107	
2,3,7,8-TCDD	16.079	4936344	0.79	1.0570	9.243	9.243	0.0661	0.0661	92.43	
$ 37Cl4-2,3,7,8-TCDD	16.093	4617218		0.8648	9.850	9.850	0.0451	0.0451	98.50	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

776667

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2021 16:12:40 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:13:16

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.298	16.298	0		23828852	5208477	8177	20442	637		
333.9339	16.298	16.298	0		30371410	6668751	5123	12807	1302	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.081	33708553	6168866	9314	23285	662		
317.9389	17.629	17.615	1	1.082	42989537	8144875	9390	23475	867	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.643	0	1.002	3178735	579321	1438	3595	403		
305.8987	17.643	17.643	0	1.002	3945072	703015	2219	5547	317	0.81(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	0.986	21653368	4888638	8177	20442	598		
333.9339	16.065	16.065	0	0.986	28873437	6356793	5123	12807	1241	0.75(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.079	16.079	0	1.001	2182274	476513	1780	4450	268		
321.8936	16.079	16.079	0	1.001	2754070	588013	1361	3402	432	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.093	16.093	0	0.987	4617218	1056796	1855	4637	570		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

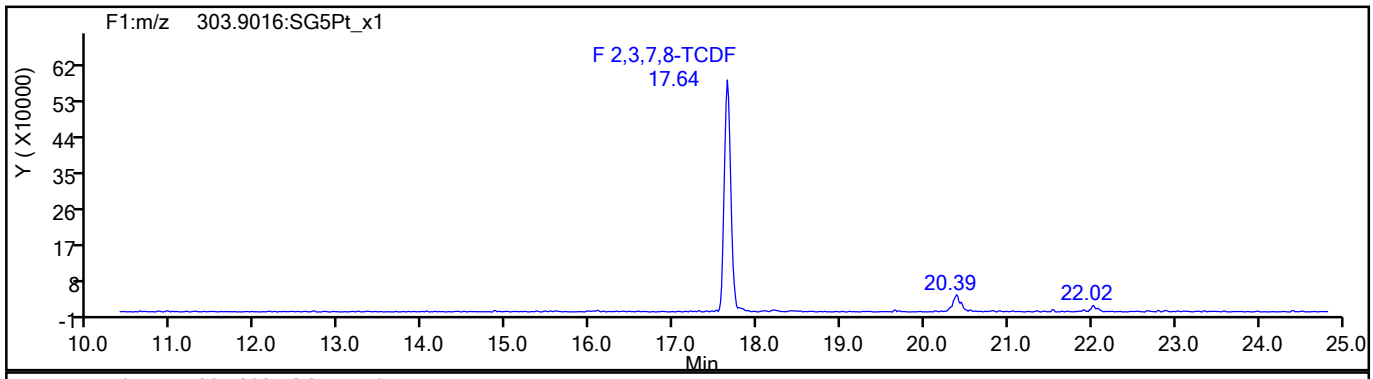

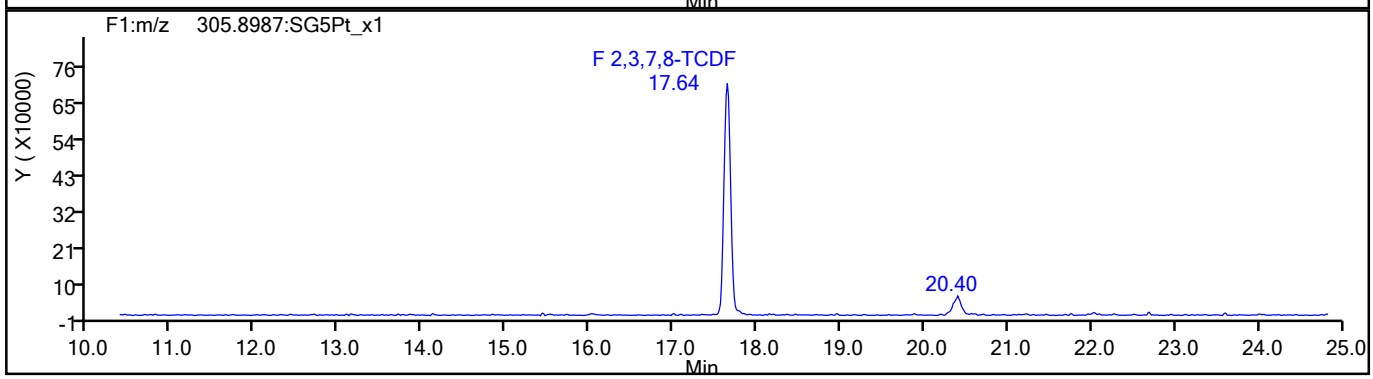

TCDF Standards

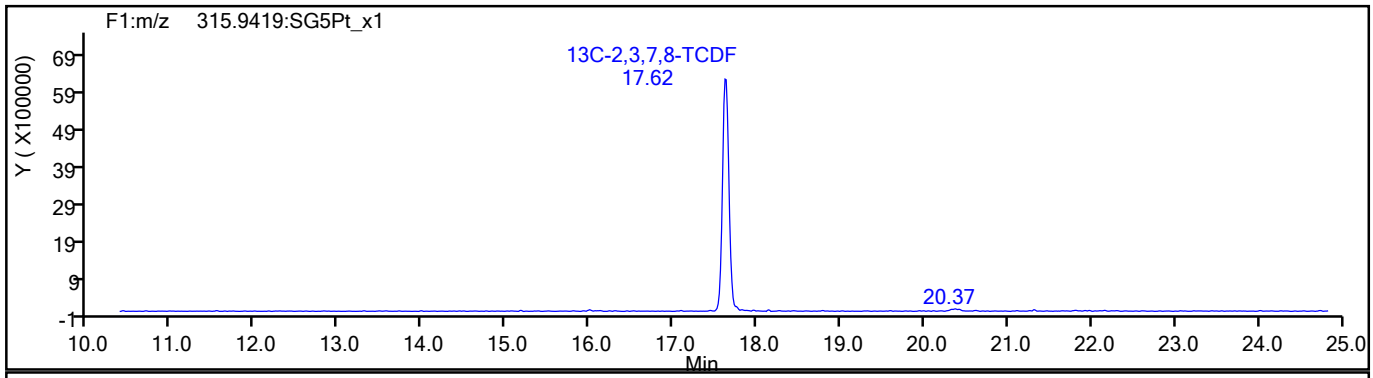

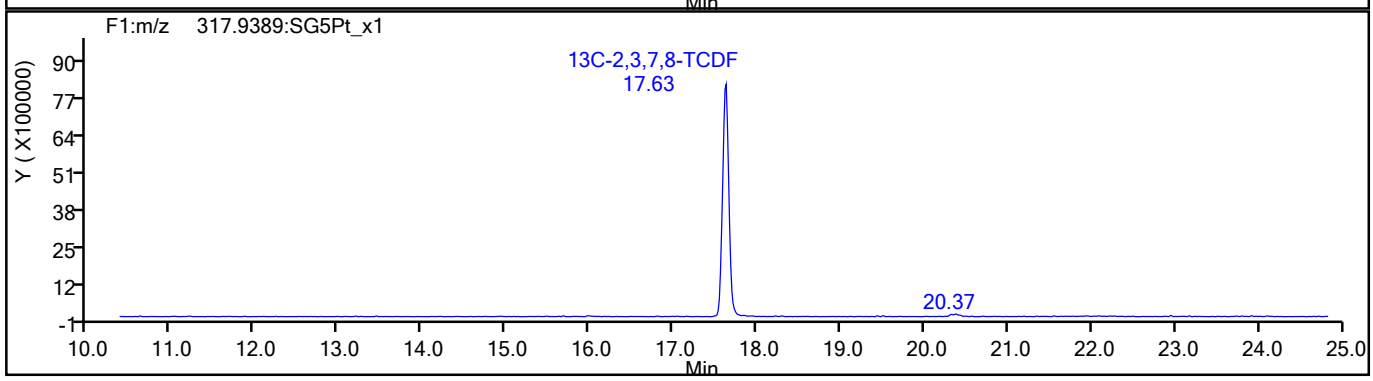

776669

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

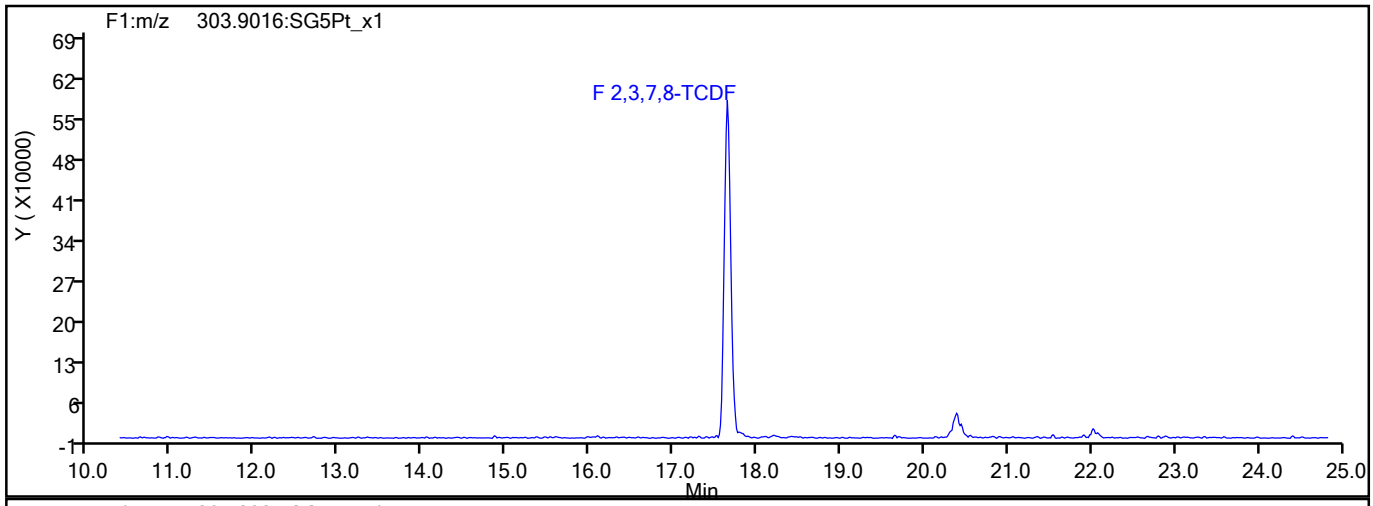

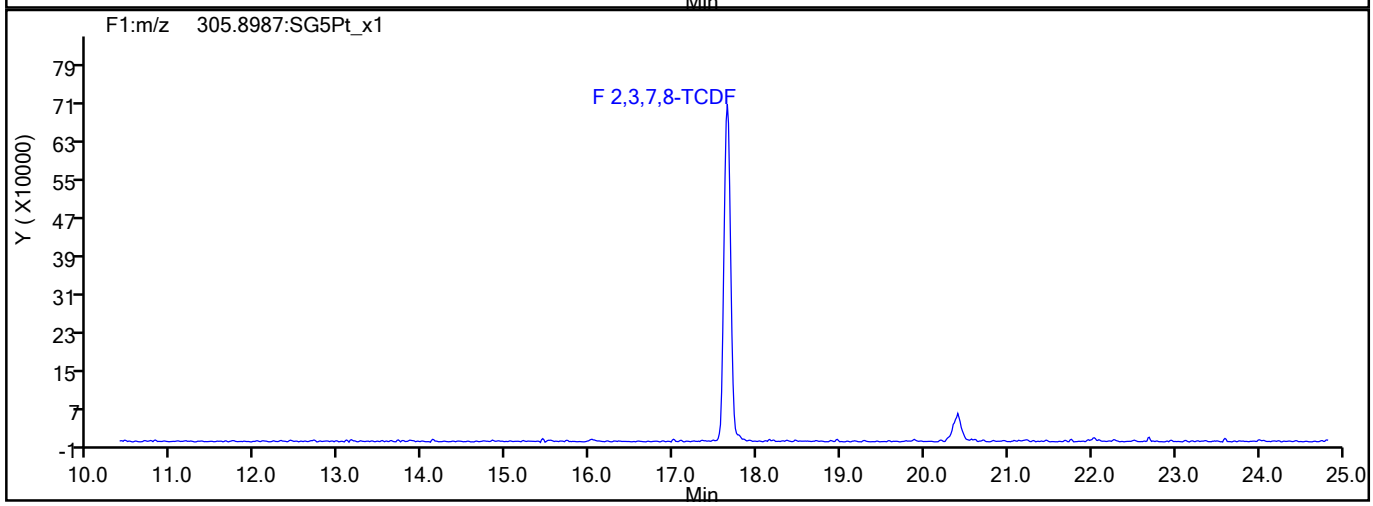

TCDF Interference Mass

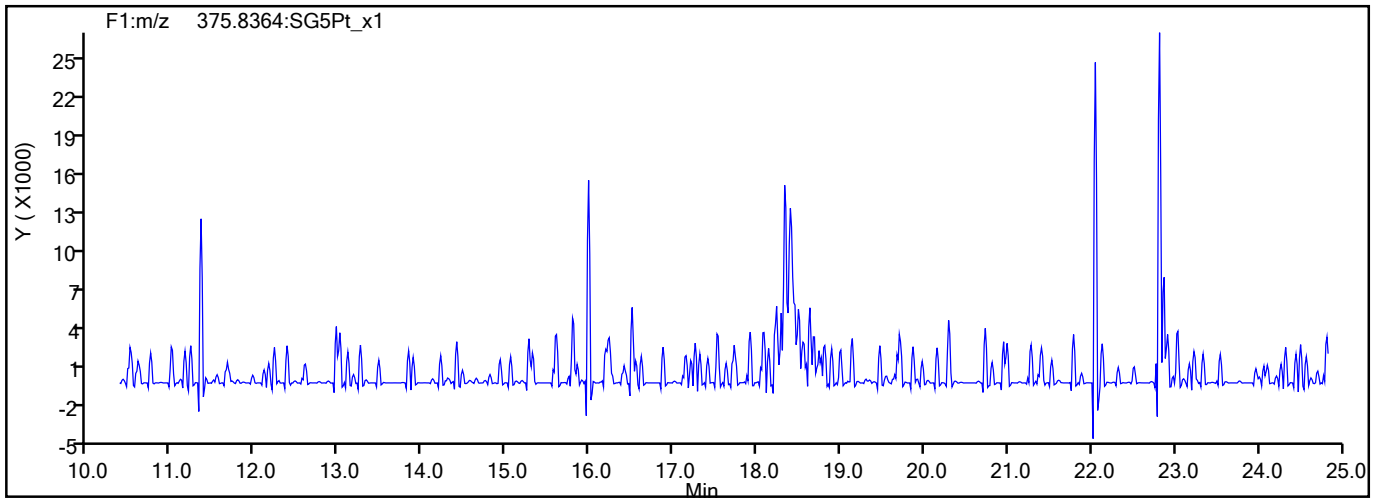

776670

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

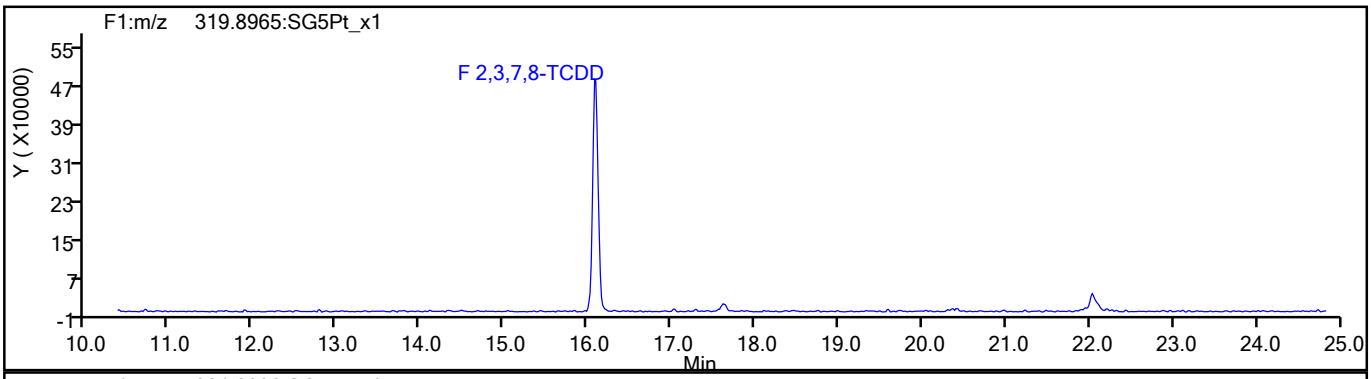

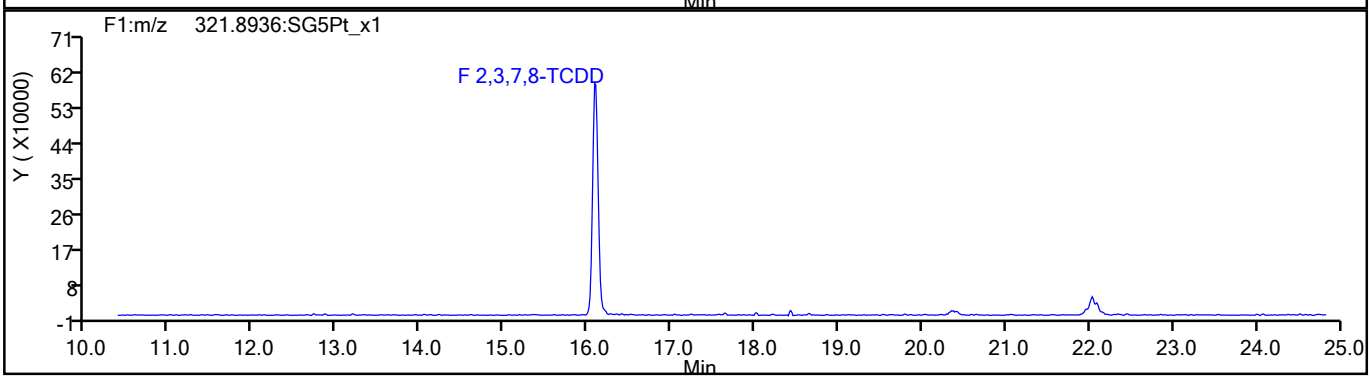

TCDD Standards

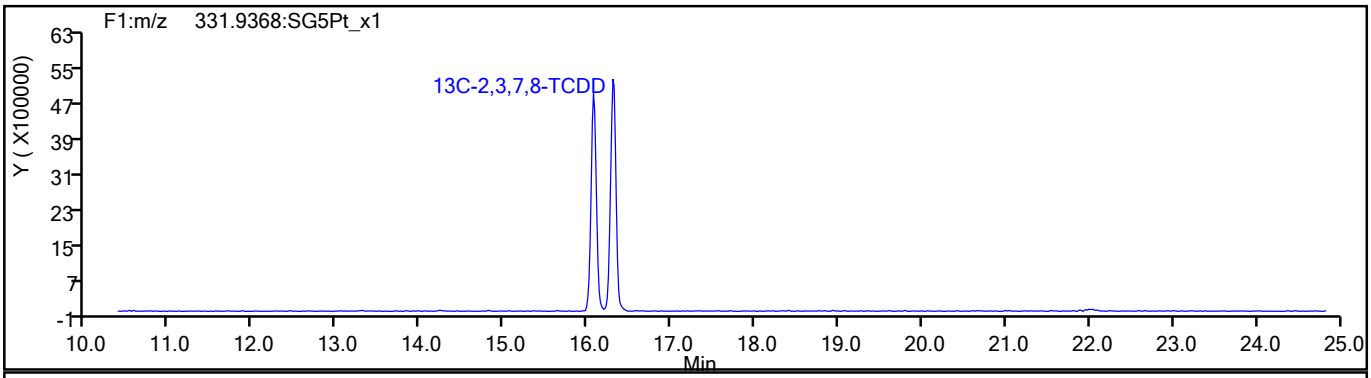

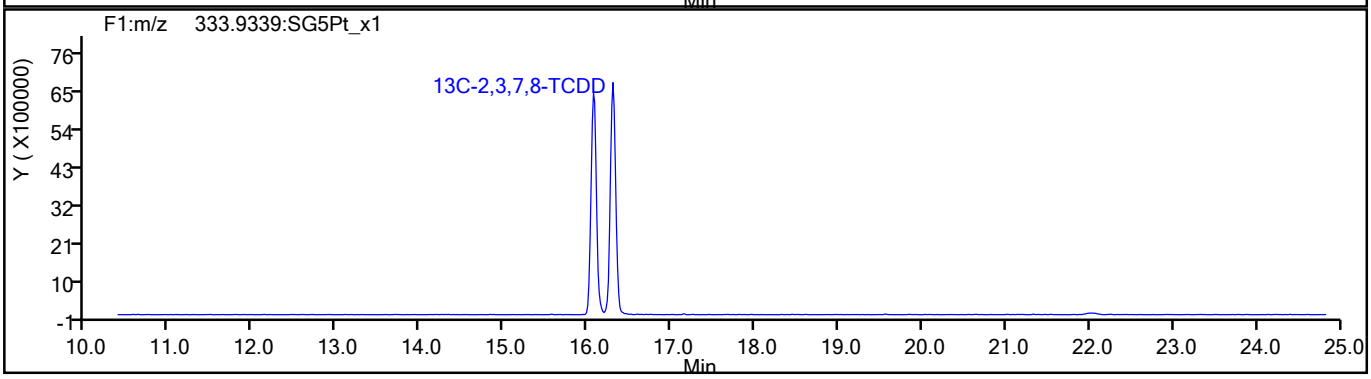

776671

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

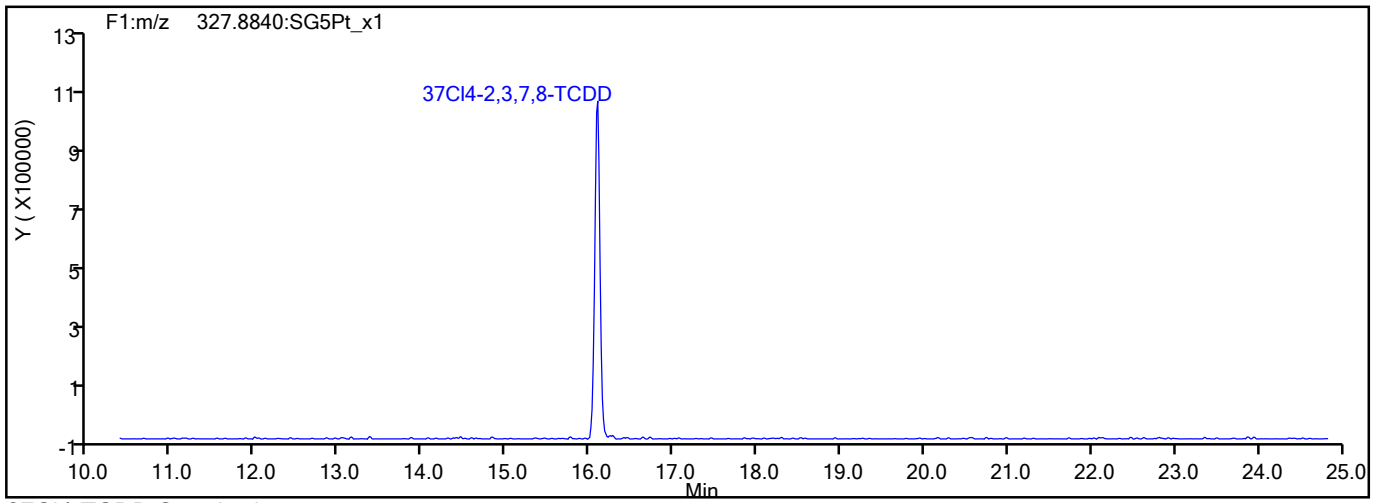

37Cl4-TCDD Standards

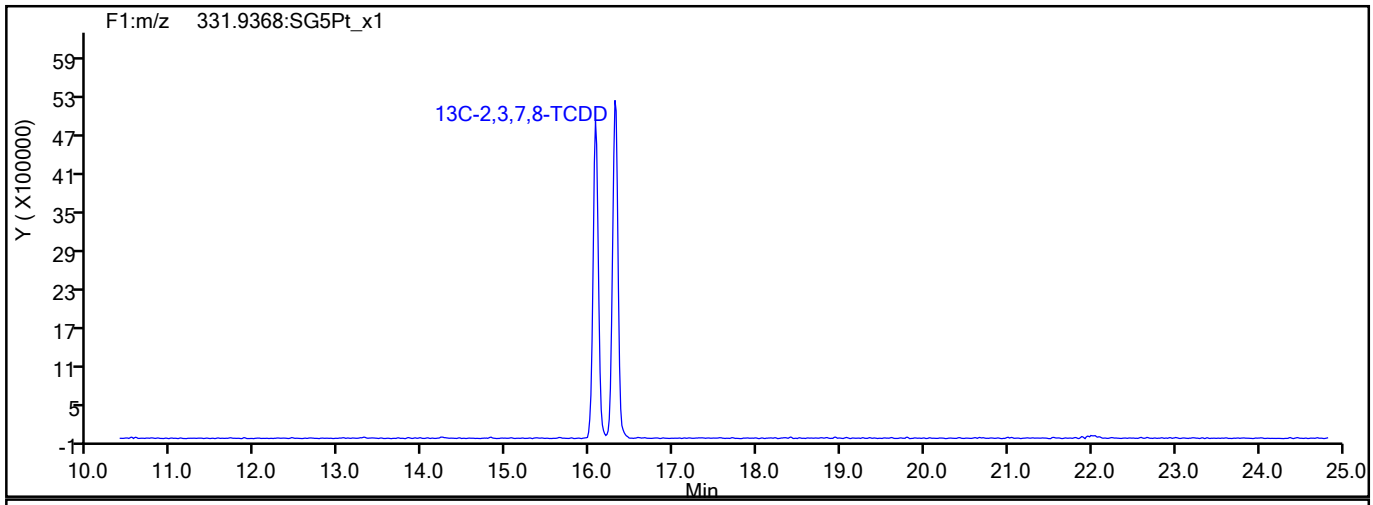

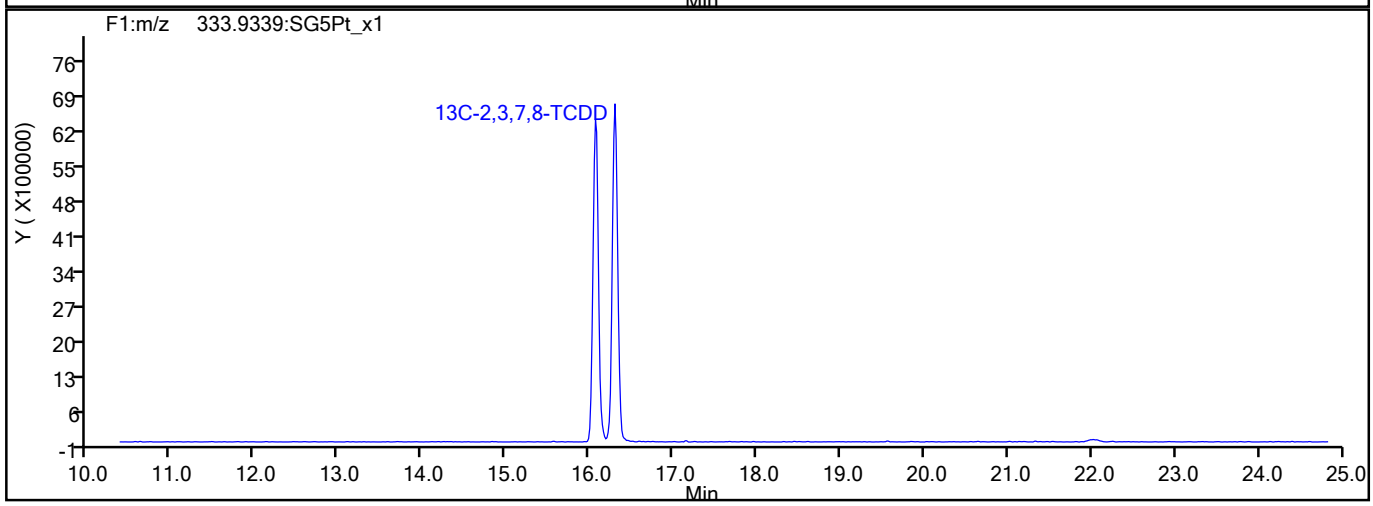

776672

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

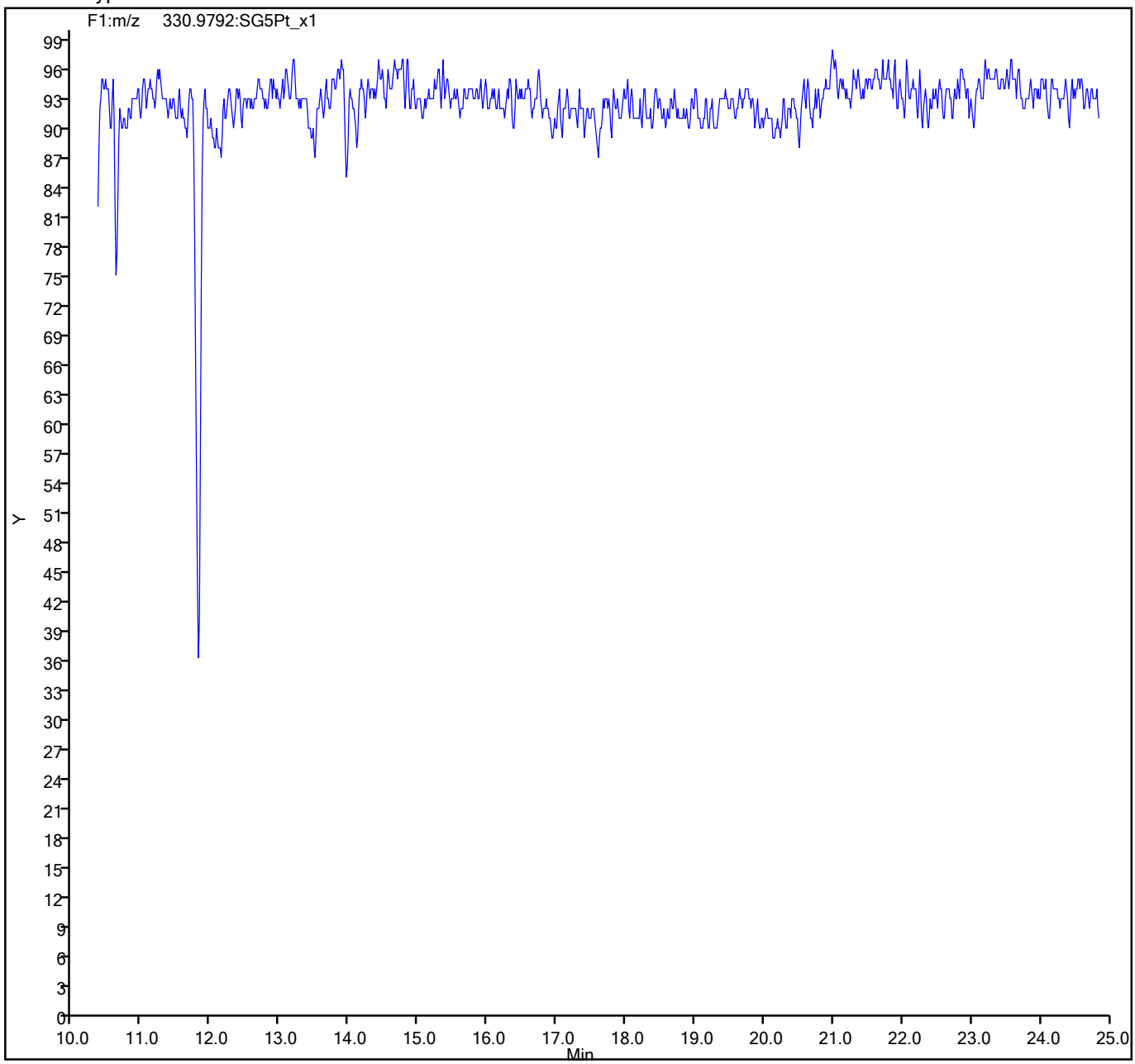

776673

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-519438/2 Calibration Date: 08/24/2021 09:07

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 24AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.028		9.73	10.0	97	78-129
2,3,7,8-TCDF	AveID	0.998	0.9203		9.22	10.0	92	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9731		111	100	111	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.568		118	100	118	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9663		11.2	10.0	112	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
24AU2111D2	1	CPS 082421	CPS HRDXNCP_00044				1.00000	
24AU2111D2	2	CCV 082421	CCV CS-4 HRDXNL4_00100				1.00000	
24AU2111D2	3	SB 082421	Solvent Blank C-14				1.00000	
24AU2111D2	4	320-513879	MB 320-513879/1-A	20	1613B/Solid	D267	10.00000	g
24AU2111D2	5	320-513585	320-76769-A-18-A	20	1613B/Solid	D265	10.00000	g
24AU2111D2	6	320-513585	320-76769-A-2-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	7	320-513585	320-76769-A-14-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	8	320-513585	320-76769-A-26-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	9	320-513585	320-76769-A-28-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	10	320-513586	320-76769-A-27-A	20	1613B/Solid	D266	10.00000	g
24AU2111D2	11	320-513586	320-76769-A-27-B MS	20	1613B/Solid		10.00000	g
24AU2111D2	12	320-513586	320-76769-A-27-C MSD	20	1613B/Solid		10.00000	g
24AU2111D2	13						1.00000	
24AU2111D2	14						1.00000	
24AU2111D2	15						1.00000	
24AU2111D2	16						1.00000	
24AU2111D2	17						1.00000	
24AU2111D2	18		KSS 08-24-21				1.00000	
24AU2111D2	19						1.00000	

LOGFILE CHECKED
DB 8/24/21

Peak Locate Examination:24-AUG-2021:08:27 File:24AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

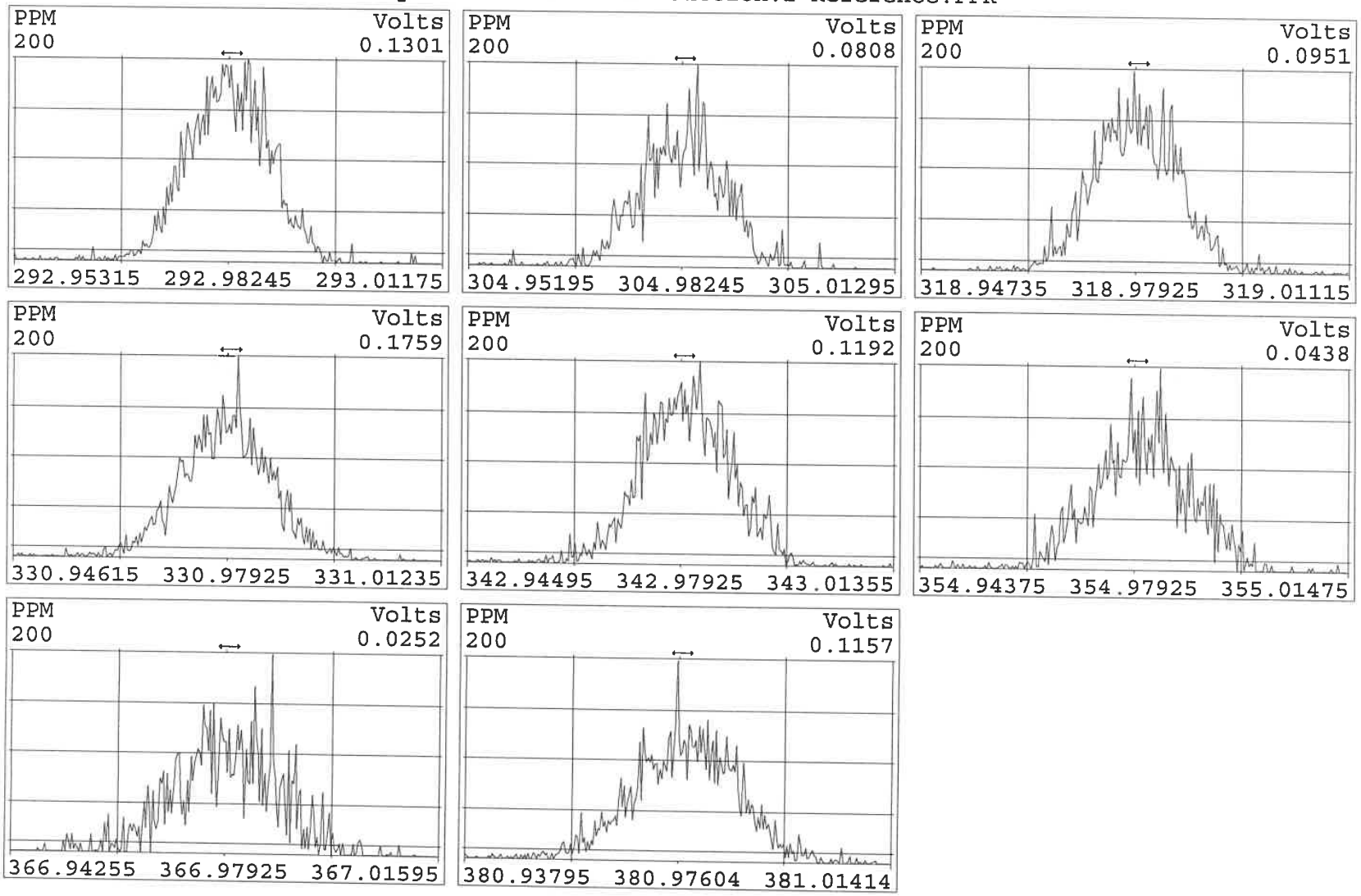

776676

Peak Locate Examination:24-AUG-2021:16:14 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

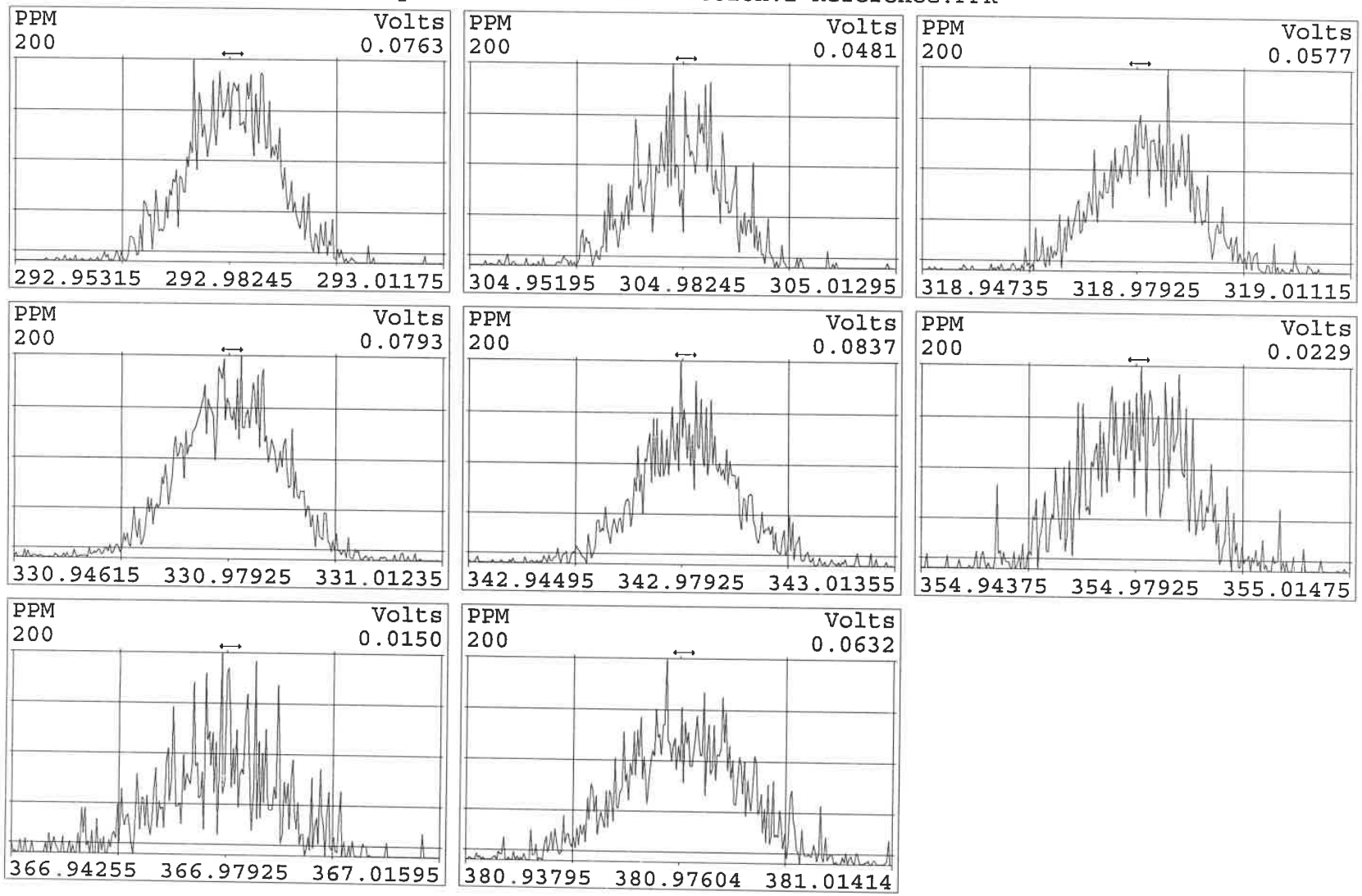

776677

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 09:07:16 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:42

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.283	33559774	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	52629254	0.80	1.3327	117.7	117.7	0.2512	0.2512	118	
2,3,7,8-TCDF	17.641	4843376	0.77	0.9978	9.223	9.223	0.0442	0.0442	92.23	
D 13C-2,3,7,8-TCDD	16.050	32656269	0.76	0.8749	111.2	111.2	0.4262	0.4262	111	
$ 37Cl4-2,3,7,8-TCDD	16.063	3242735		0.8648	11.2	11.2	0.0810	0.0810	112	
2,3,7,8-TCDD	16.077	3357078	0.83	1.0570	9.726	9.726	0.0680	0.0680	97.26	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 09:07:16 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:42

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.283	16.283	0		14514242	3109306	5198	12995	598		
333.9339	16.283	16.283	0		19045532	4067992	5508	13770	739	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.613	0	1.082	23419943	4217062	5707	14267	739		
317.9389	17.599	17.613	-1	1.081	29209311	5613115	3903	9757	1438	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.641	17.641	0	1.002	2101458	376732	657	1642	573		
305.8987	17.627	17.641	-1	1.001	2741918	507422	1079	2697	470	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.050	16.050	0	0.986	14062884	3232967	5198	12995	622		
333.9339	16.050	16.050	0	0.986	18593385	4326423	5508	13770	785	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.063	16.063	0	0.987	3242735	728649	2011	5027	362		
2,3,7,8-TCDD											
319.8965	16.077	16.077	0	1.002	1524098	338203	902	2255	375		
321.8936	16.077	16.077	0	1.002	1832980	395830	1270	3175	312	0.83(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

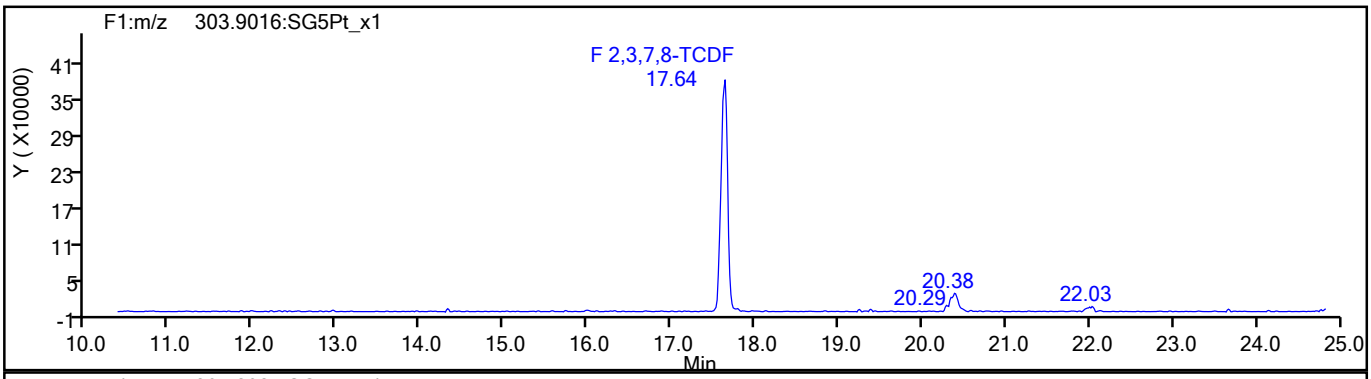

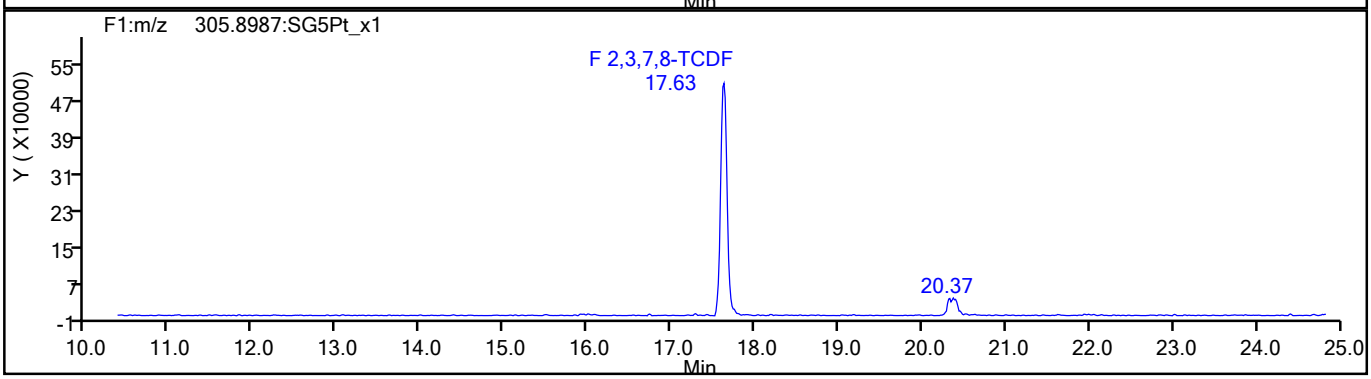

TCDF Standards

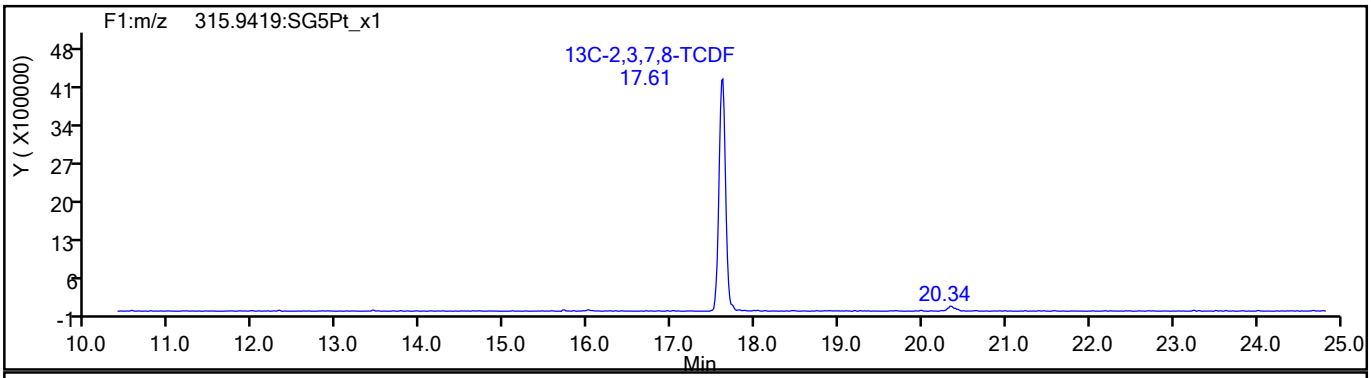

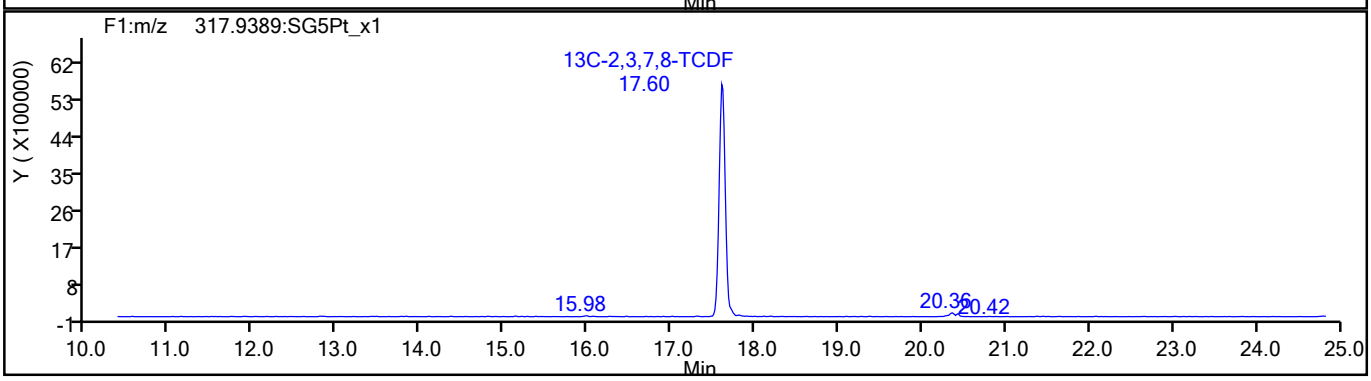

776680

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

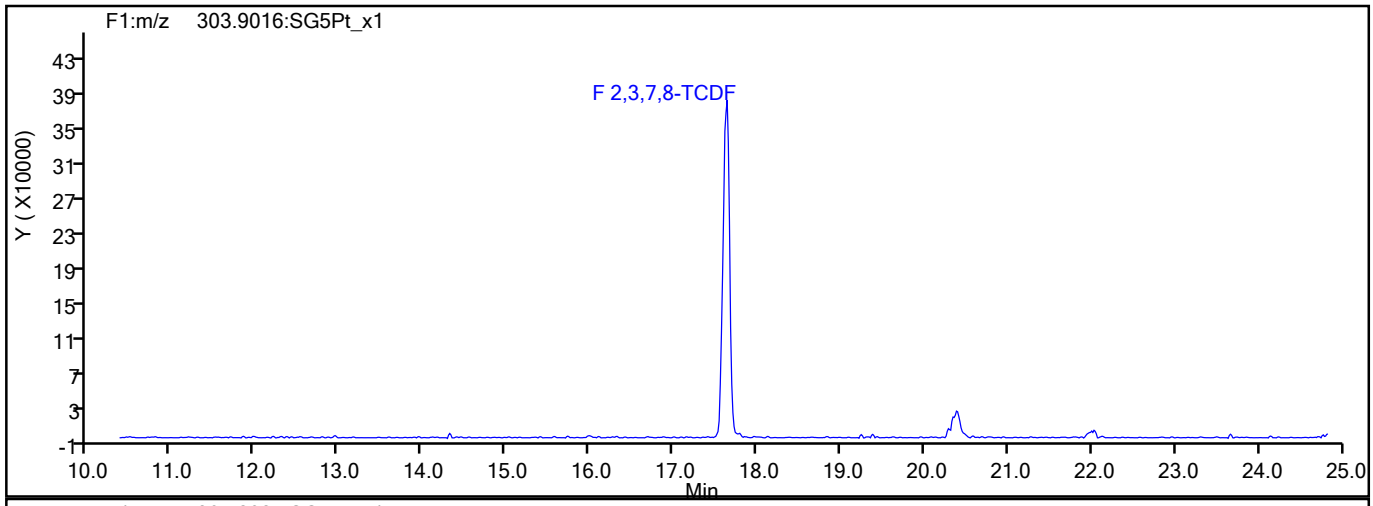

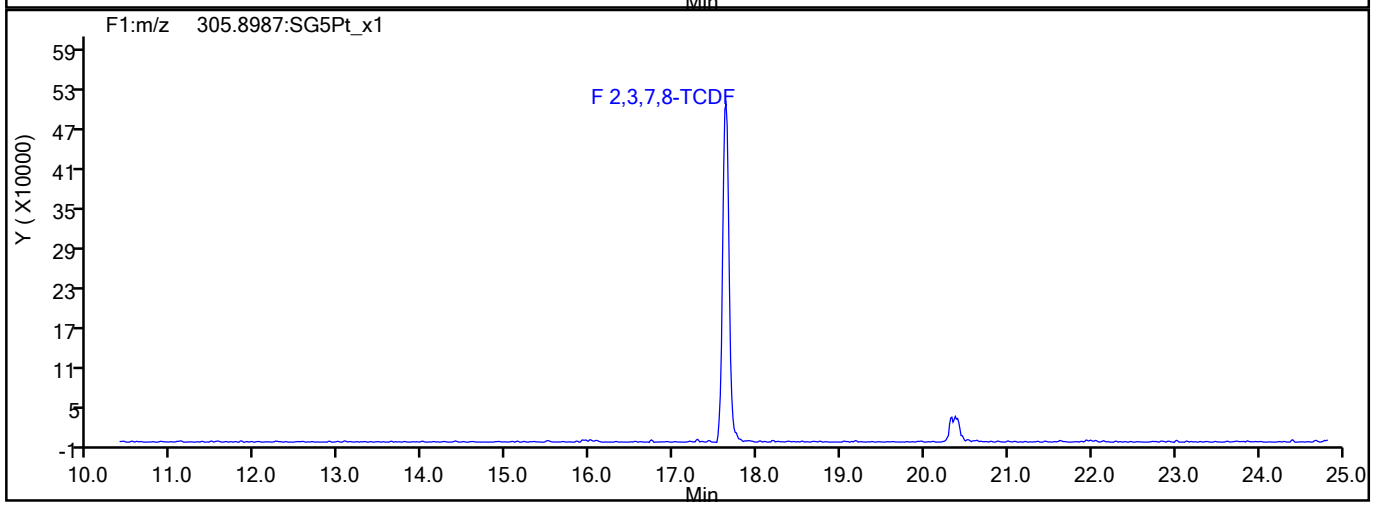

TCDF Interference Mass

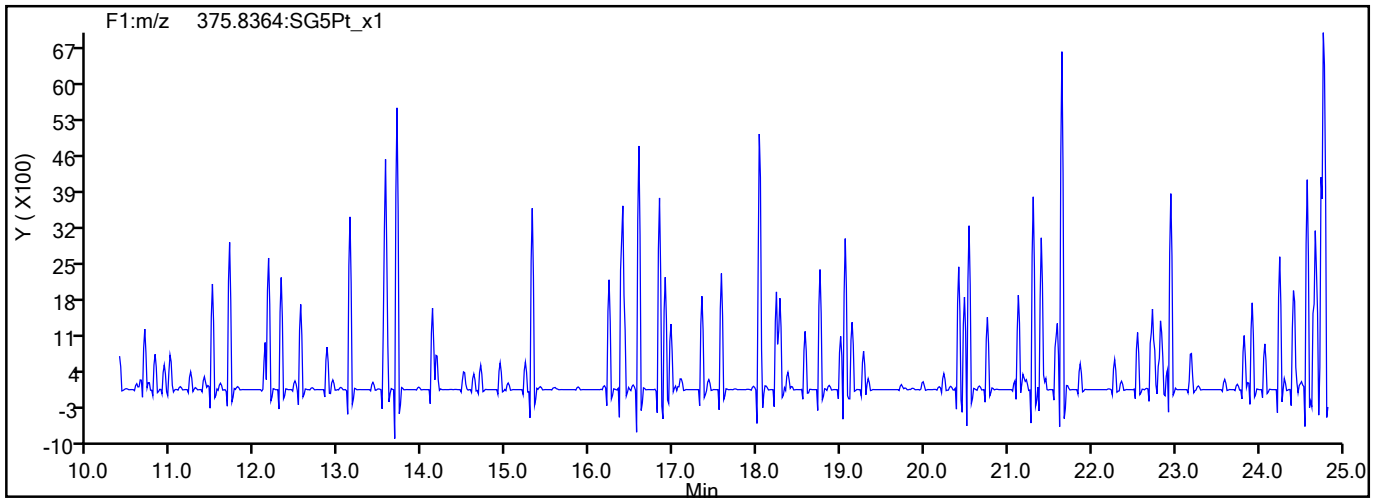

776681

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

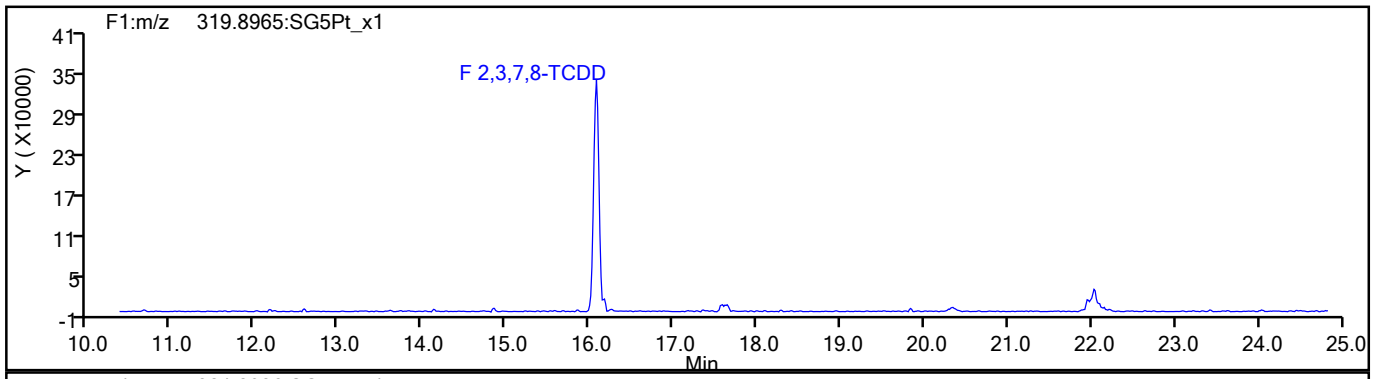

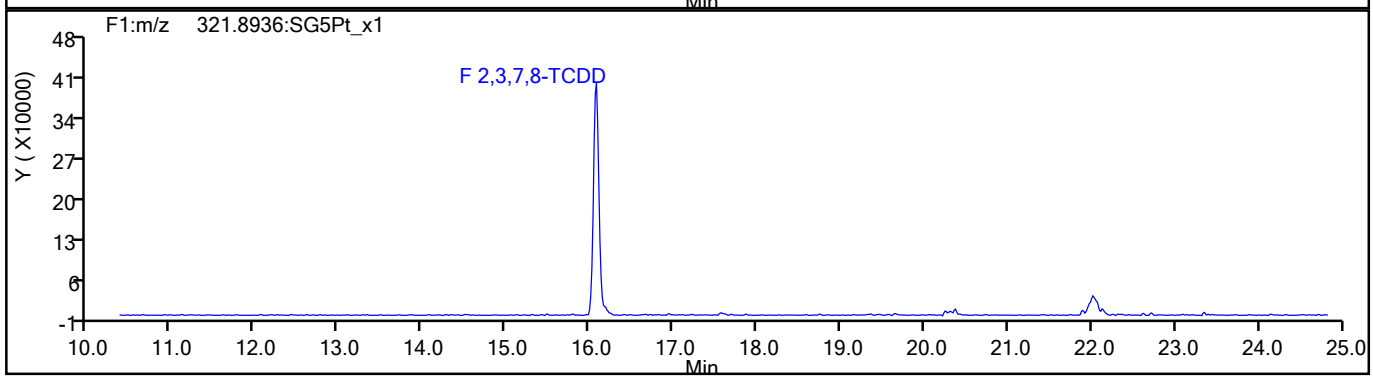

TCDD Standards

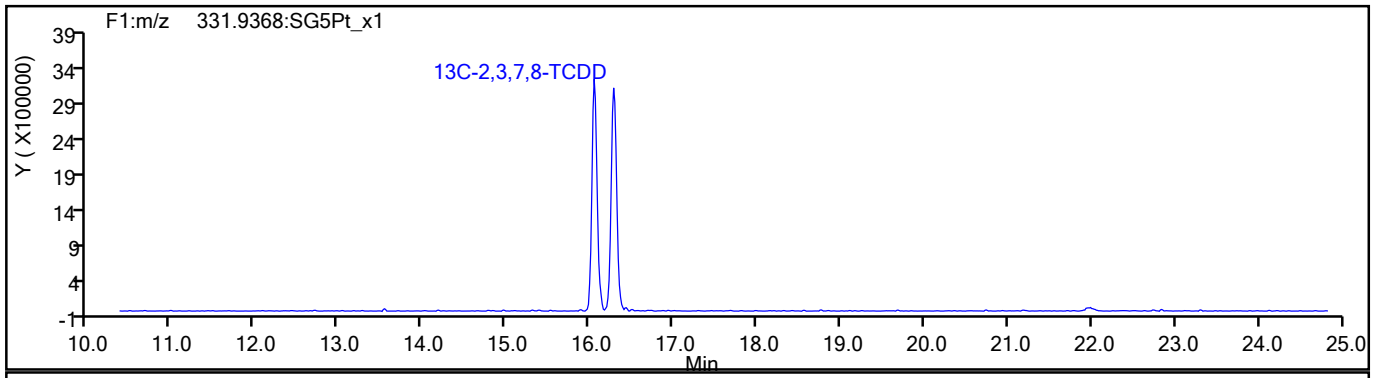

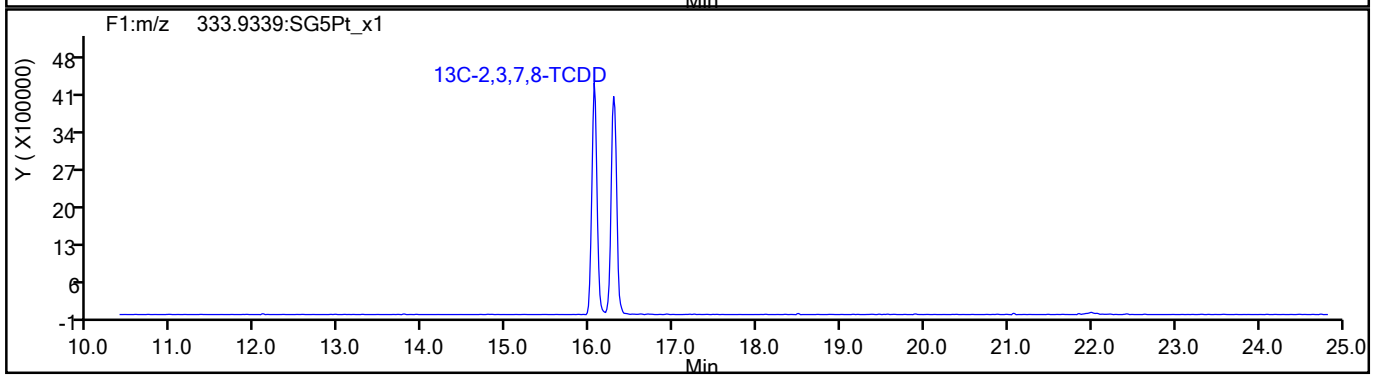

776682

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

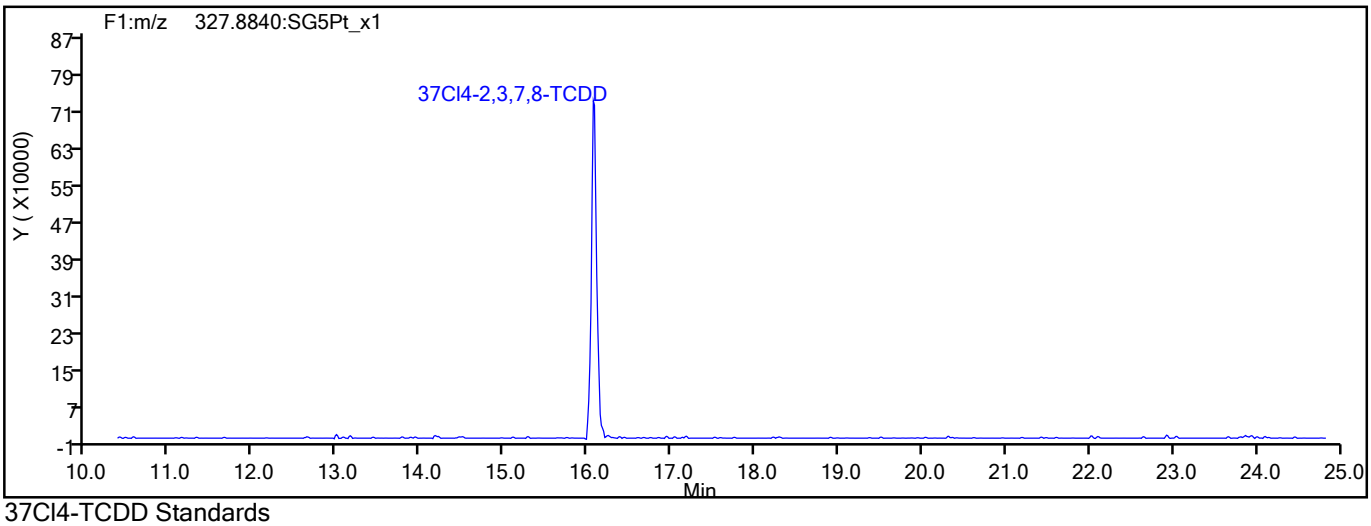

37Cl4-TCDD Standards

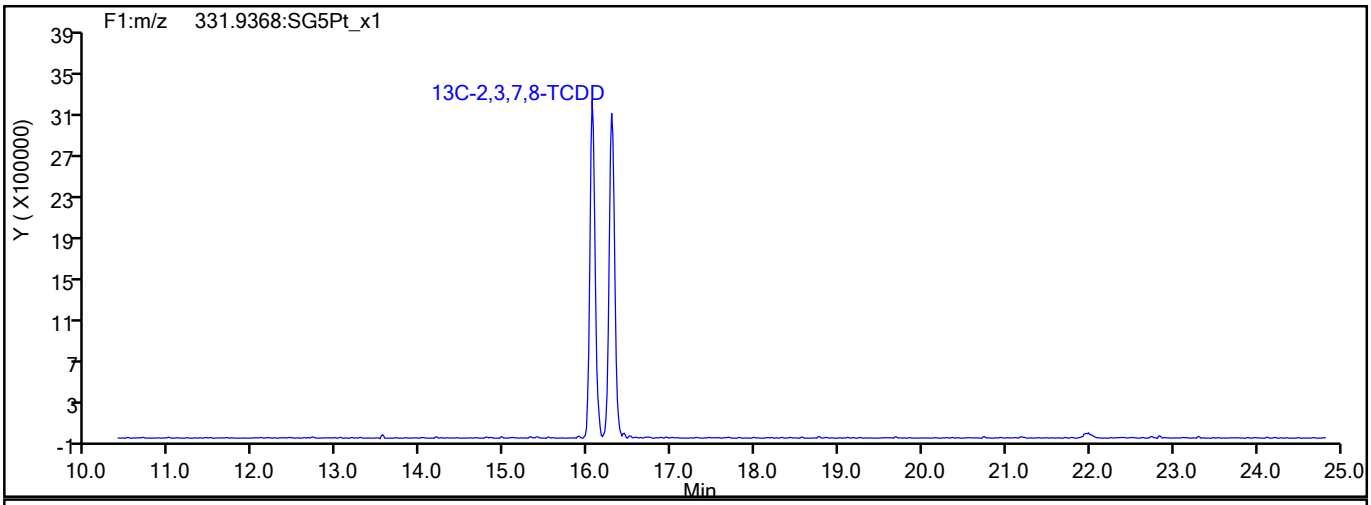

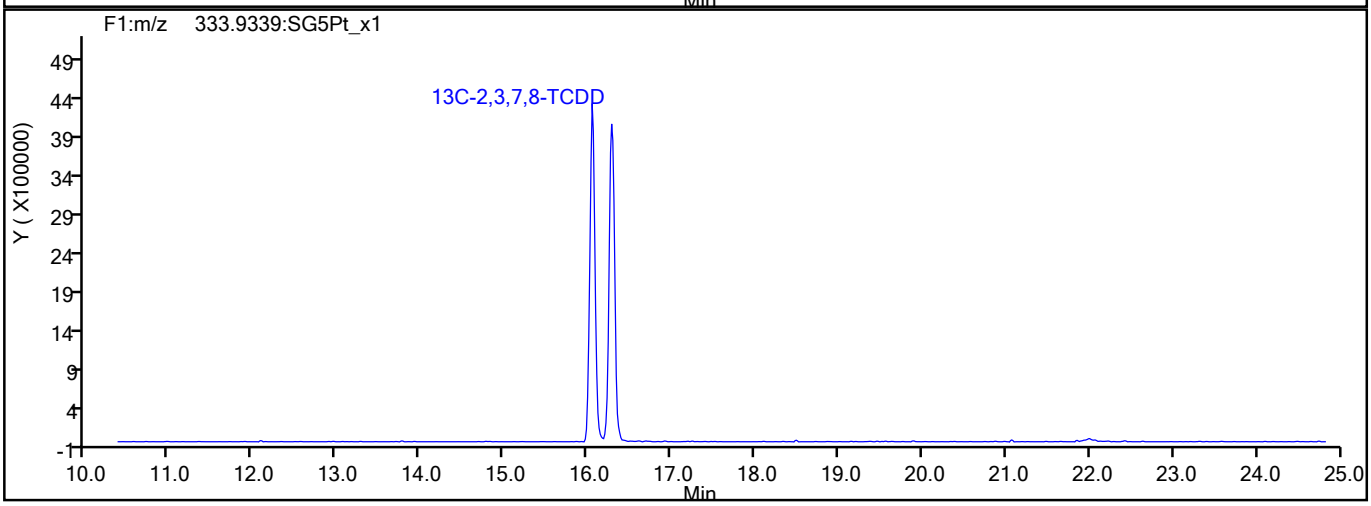

776683

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

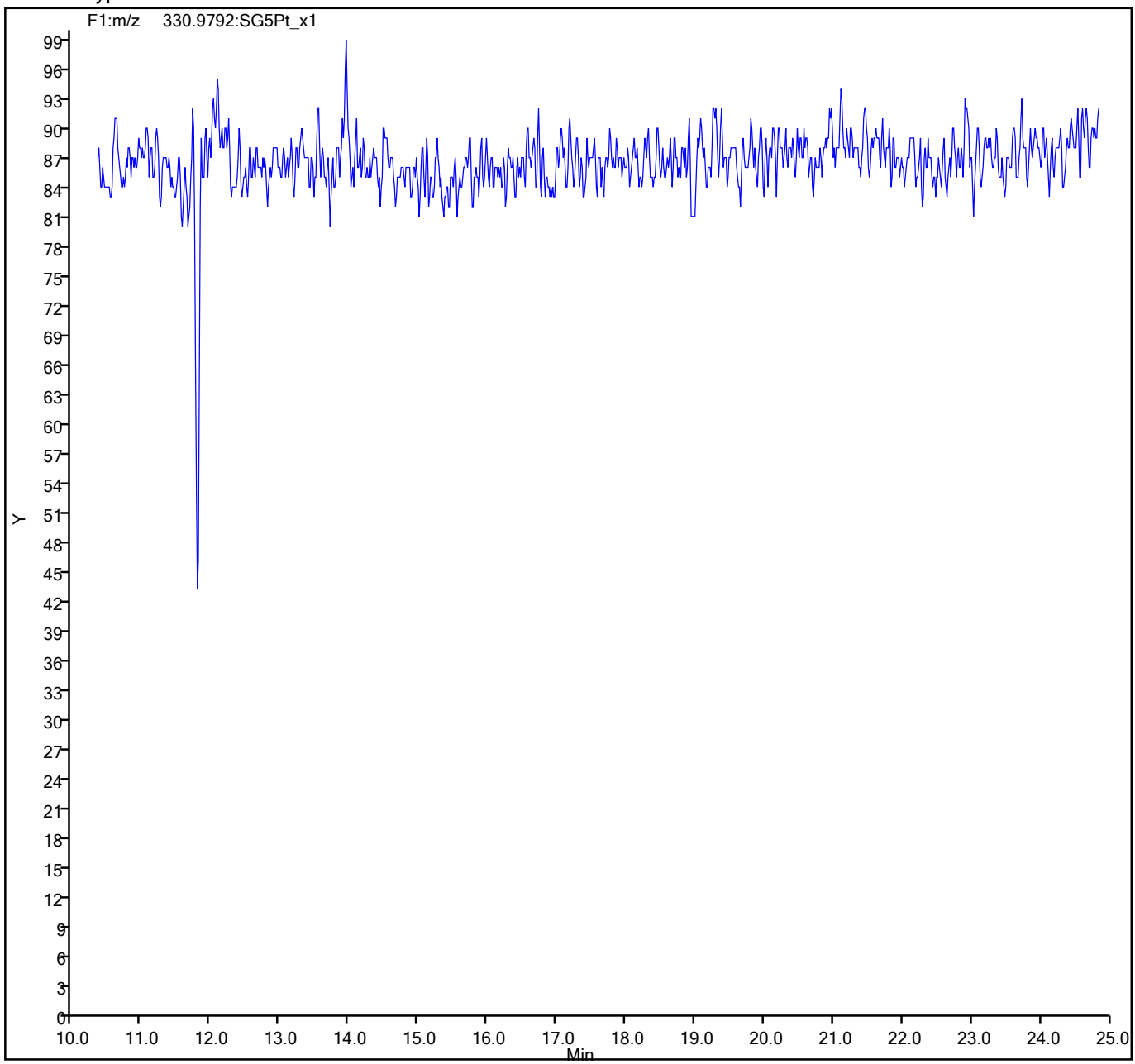

776684

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-519540/1 Calibration Date: 08/24/2021 16:36

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 24AU21A11D2_001.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.019		9.64	10.0	96	78-129
2,3,7,8-TCDF	AveID	0.998	0.9386		9.41	10.0	94	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9428		108	100	108	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.512		113	100	113	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9238		10.7	10.0	107	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
24AU21A11D2	1	CCV 082421A	CCV CS-4 HRDXNL4_00100				1.00000	
24AU21A11D2	2	CPS 082421A	CPS HRDXNCP_00044				1.00000	
24AU21A11D2	3	SB 082421A	Solvent Blank C-14				1.00000	
24AU21A11D2	4	320-512871	320-76788-A-6-A	20	1613B/Solid	D265	10.00000	g
24AU21A11D2	5	320-512871	320-76788-A-7-A	20	1613B/Solid		10.00000	g
24AU21A11D2	6	320-512871	320-76788-A-8-A	20	1613B/Solid		10.00000	g
24AU21A11D2	7	320-512871	320-76788-A-17-A	20	1613B/Solid		10.00000	g
24AU21A11D2	8	320-512871	320-76788-A-18-A	20	1613B/Solid		10.00000	g
24AU21A11D2	9	320-512871	320-76788-A-3-A	20	1613B/Solid		10.00000	g
24AU21A11D2	10	320-512871	320-76788-A-4-A	20	1613B/Solid		10.00000	g
24AU21A11D2	11	320-512871	320-76788-A-5-A	20	1613B/Solid		10.00000	g
24AU21A11D2	12	320-512871	320-76788-A-16-A	20	1613B/Solid		10.00000	g
24AU21A11D2	13	320-512871	320-76788-A-20-A	20	1613B/Solid		10.00000	g
24AU21A11D2	14	320-512871	320-76788-A-15-A	20	1613B/Solid		10.00000	g
24AU21A11D2	15	320-512871	320-76788-A-19-A	20	1613B/Solid		10.00000	g
24AU21A11D2	16	320-512871	320-76788-A-2-A	20	1613B/Solid		10.00000	g
24AU21A11D2	17	320-513586	320-76769-A-29-A X5	20	1613B/Solid	D266	10.00000	g
24AU21A11D2	18						1.00000	
24AU21A11D2	19						1.00000	
24AU21A11D2	20						1.00000	
24AU21A11D2	21						1.00000	
24AU21A11D2	22						1.00000	
24AU21A11D2	23		KSS 08-24-21				1.00000	
24AU21A11D2	24						1.00000	

Logfile ✓'d
8/25/21 KSS

776686

Peak Locate Examination:24-AUG-2021:16:35 File:24AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

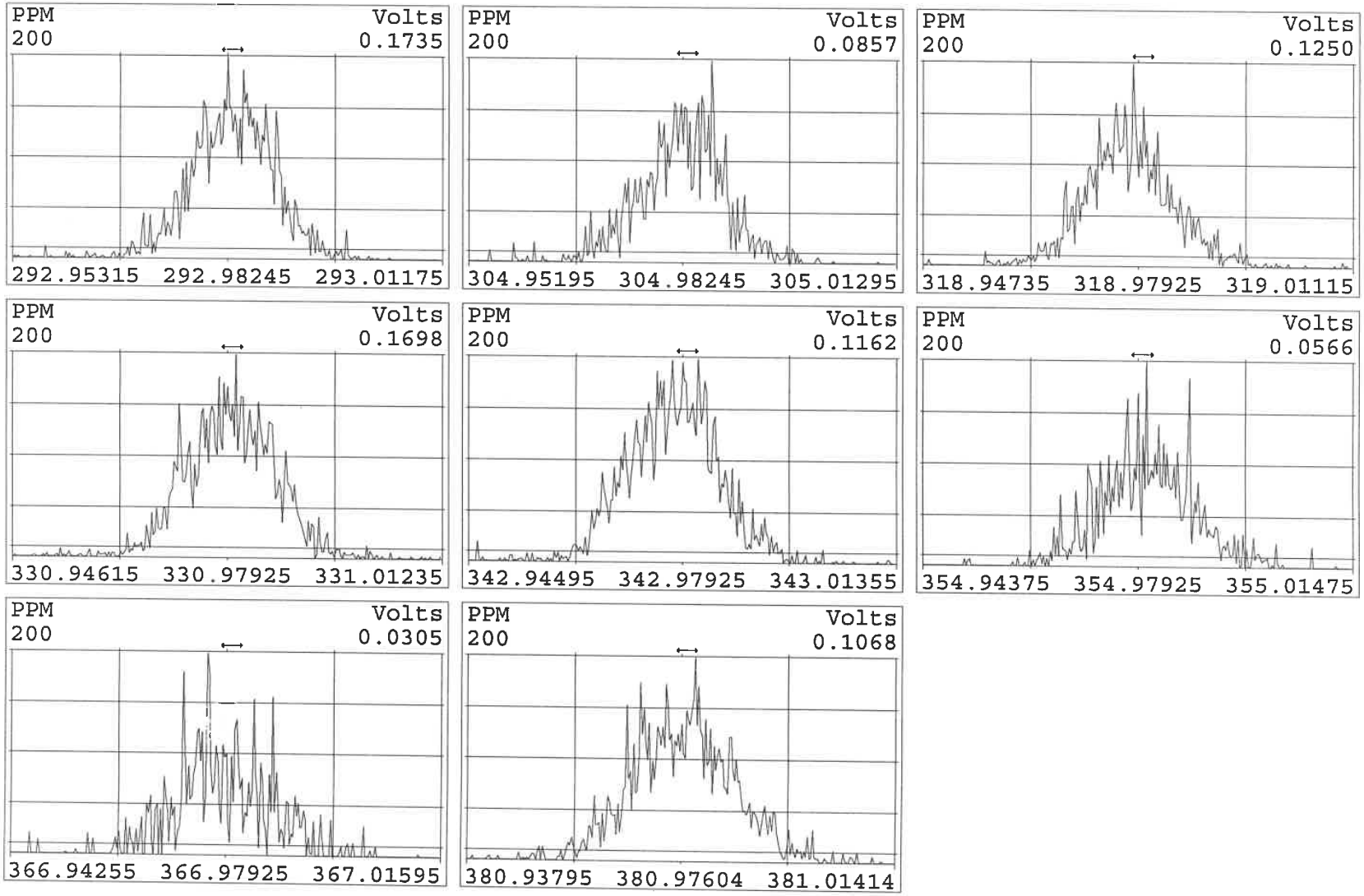

776687

Peak Locate Examination:25-AUG-2021:04:22 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

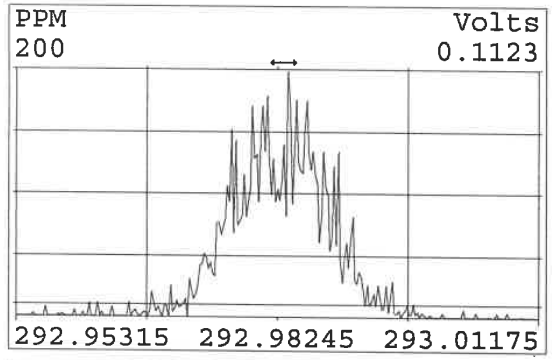

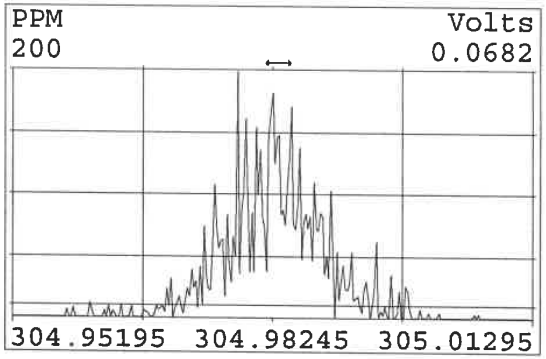

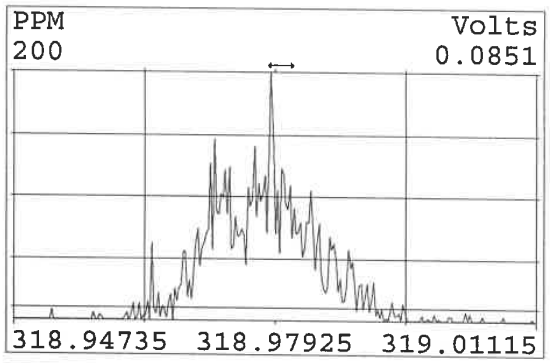

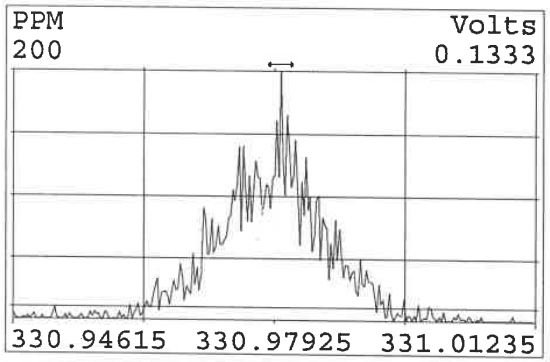

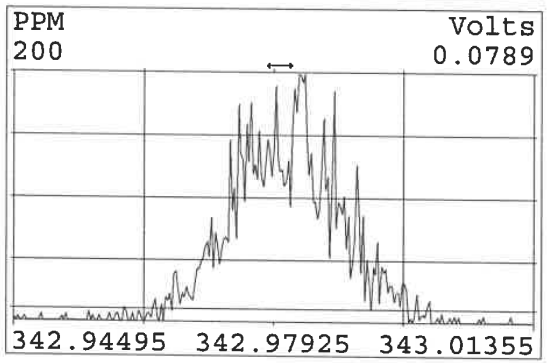

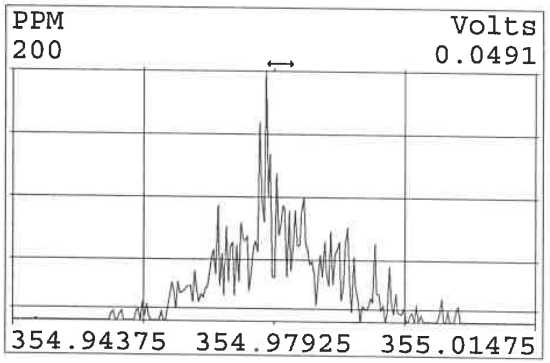

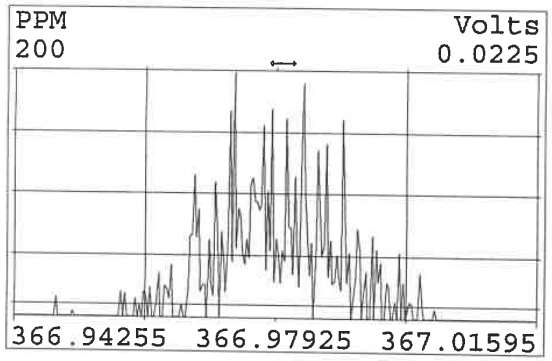

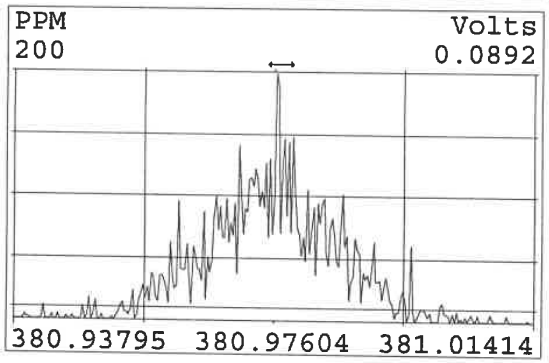

776688

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 16:36:55 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:36 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:28:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.285	62164442	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.602	93993554	0.79	1.3327	113.5	113.5	0.2347	0.2347	113	
2,3,7,8-TCDF	17.615	8822131	0.80	0.9978	9.407	9.407	0.0645	0.0645	94.07	
D 13C-2,3,7,8-TCDD	16.052	58609320	0.76	0.8749	107.8	107.8	0.3549	0.3549	108	
$ 37Cl4-2,3,7,8-TCDD	16.065	5742602		0.8648	10.7	10.7	0.0611	0.0611	107	
2,3,7,8-TCDD	16.079	5974088	0.79	1.0570	9.643	9.643	0.0750	0.0750	96.43	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

776689

Report Date: 25-Aug-2021 09:02:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 16:36:55 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:36 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:28:19

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.285	16.285	0		27386484	5995388	11249	28122	533		
333.9339	16.285	16.285	0		34777958	7818738	5907	14767	1324	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.602	17.602	0	1.081	41369014	7786772	9867	24667	789		
317.9389	17.602	17.602	0	1.081	52624540	9852779	7415	18537	1329	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.615	17.615	0	1.001	3918661	676405	2326	5815	291		
305.8987	17.615	17.615	0	1.001	4903470	919978	2213	5532	416	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.052	16.052	0	0.986	25263151	5697892	11249	28122	507		
333.9339	16.052	16.052	0	0.986	33346169	7561143	5907	14767	1280	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.065	16.065	0	0.987	5742602	1293341	2920	7300	443		
2,3,7,8-TCDD											
319.8965	16.079	16.079	0	1.002	2629449	589599	1960	4900	301		
321.8936	16.065	16.079	-1	1.001	3344639	747193	2247	5617	333	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d		
Injection Date:	24-Aug-2021 16:36:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

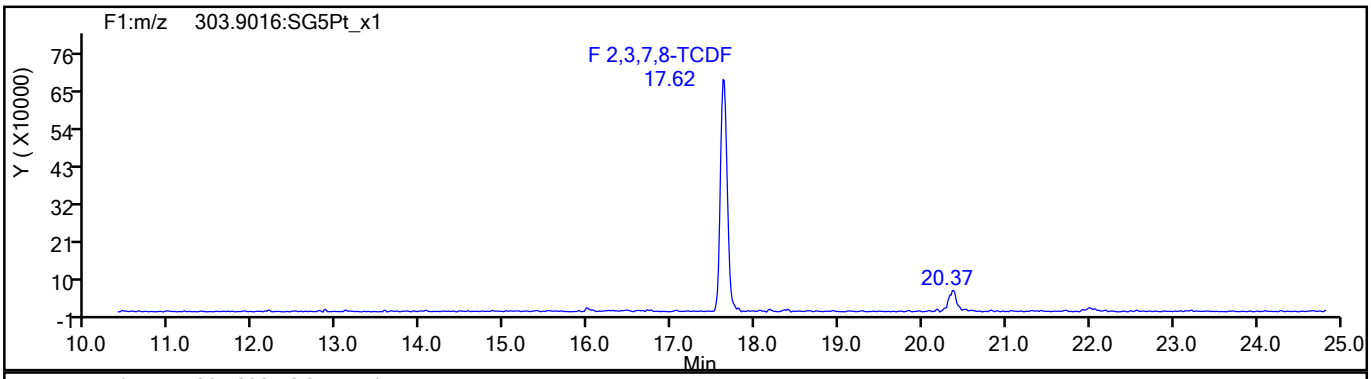

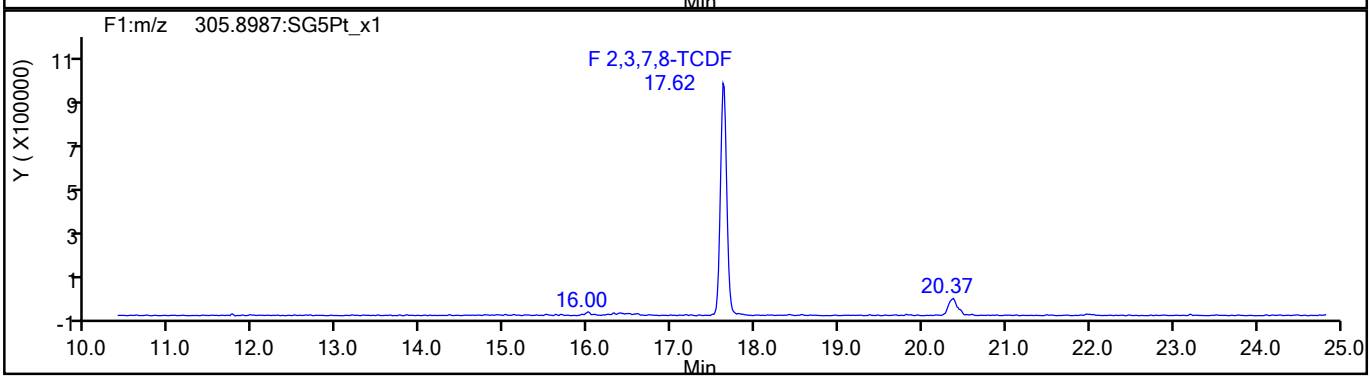

TCDF Standards

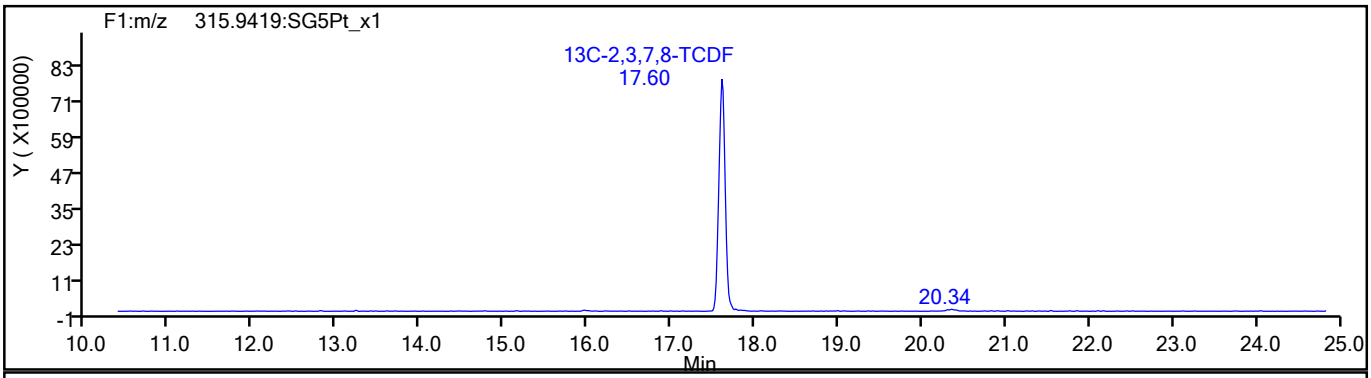

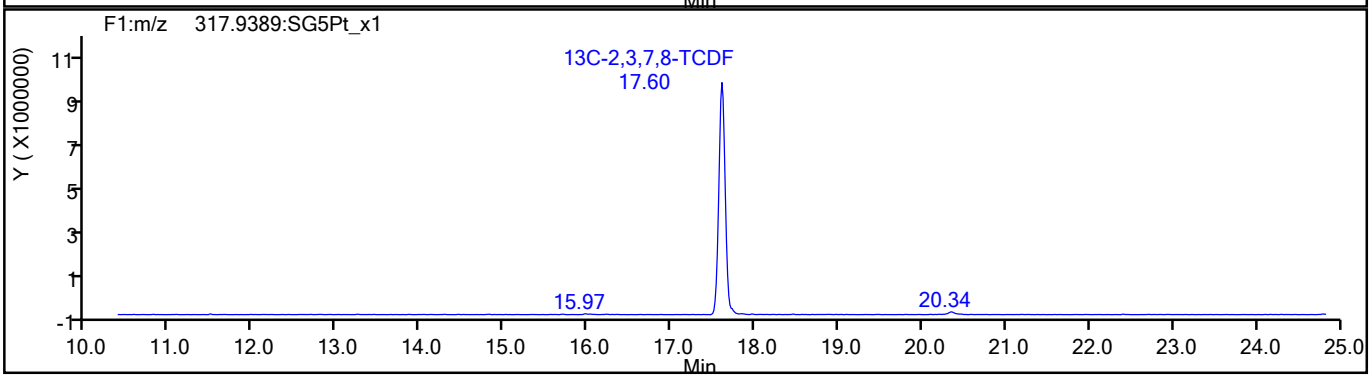

776691

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d		
Injection Date:	24-Aug-2021 16:36:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

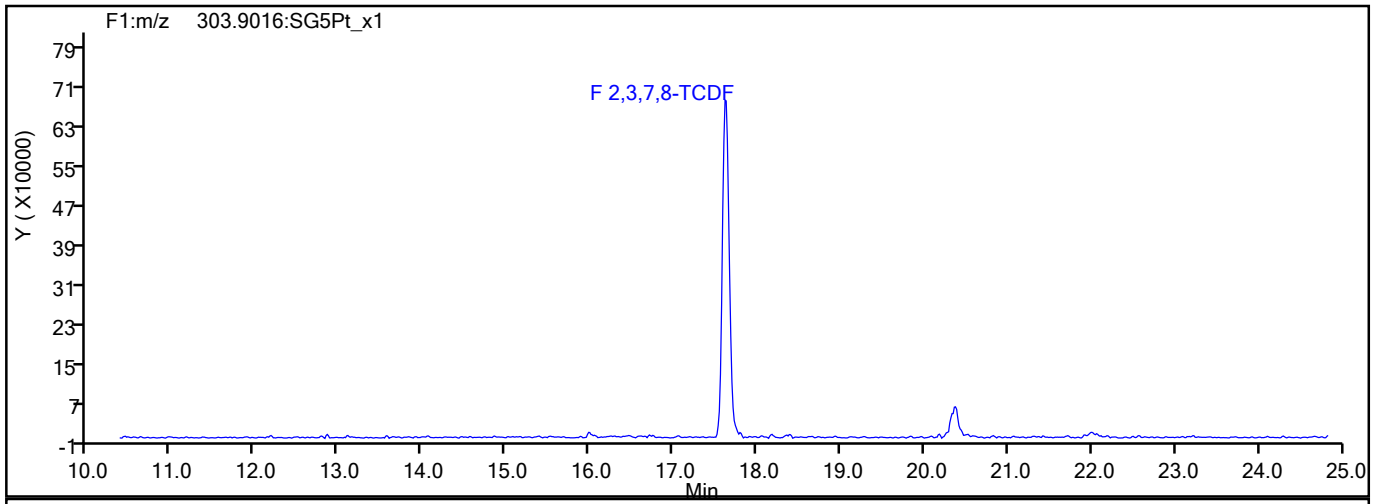

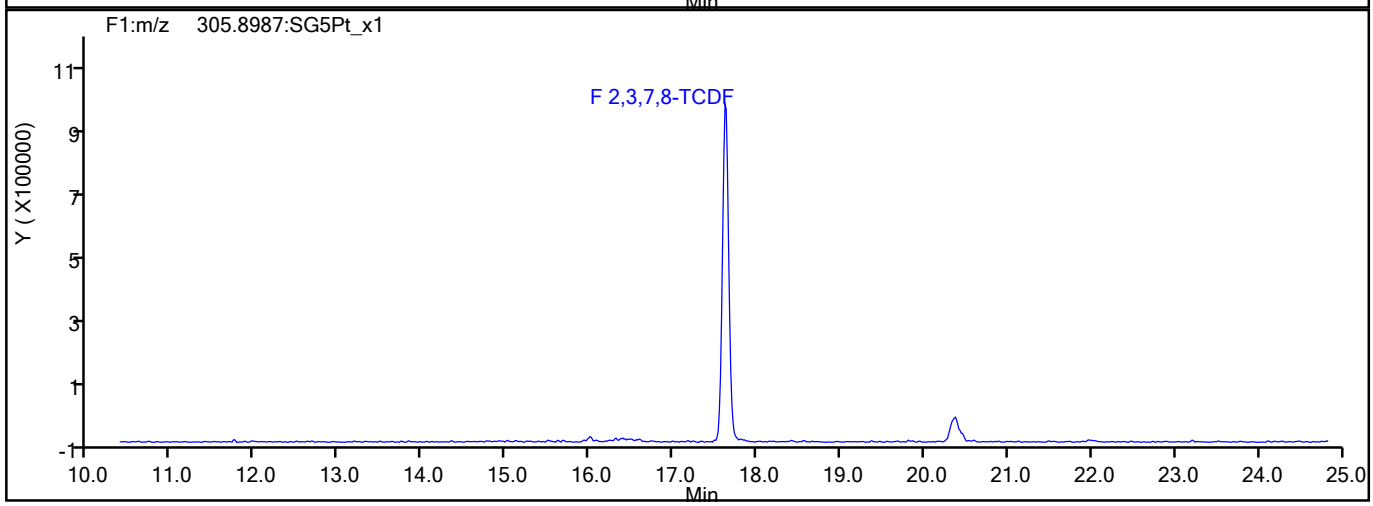

TCDF Interference Mass

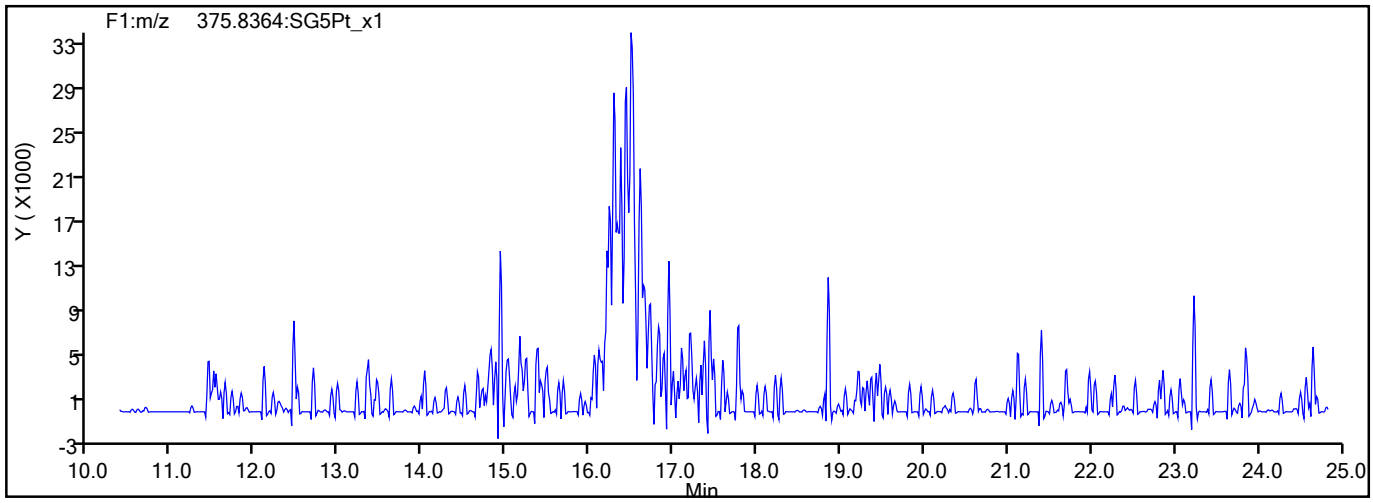

776692

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d		
Injection Date:	24-Aug-2021 16:36:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

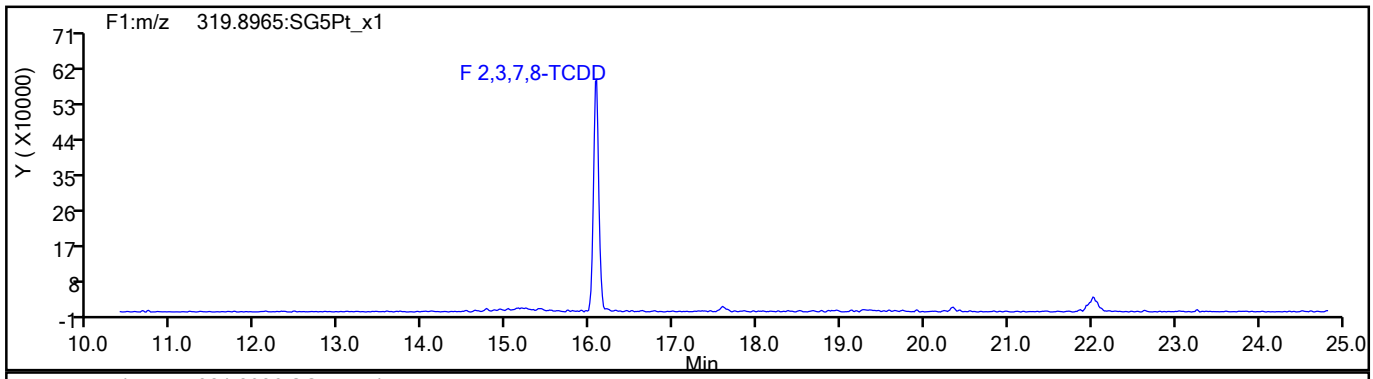

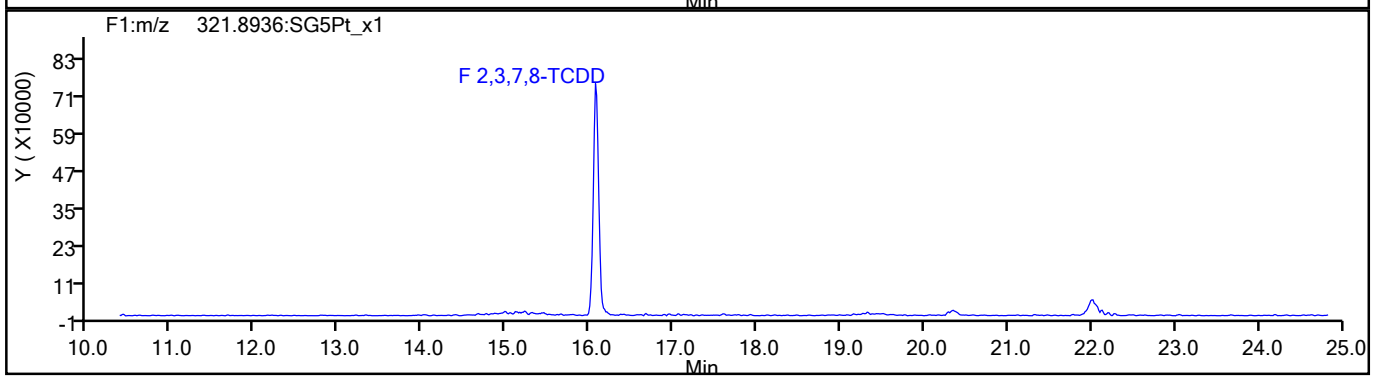

TCDD Standards

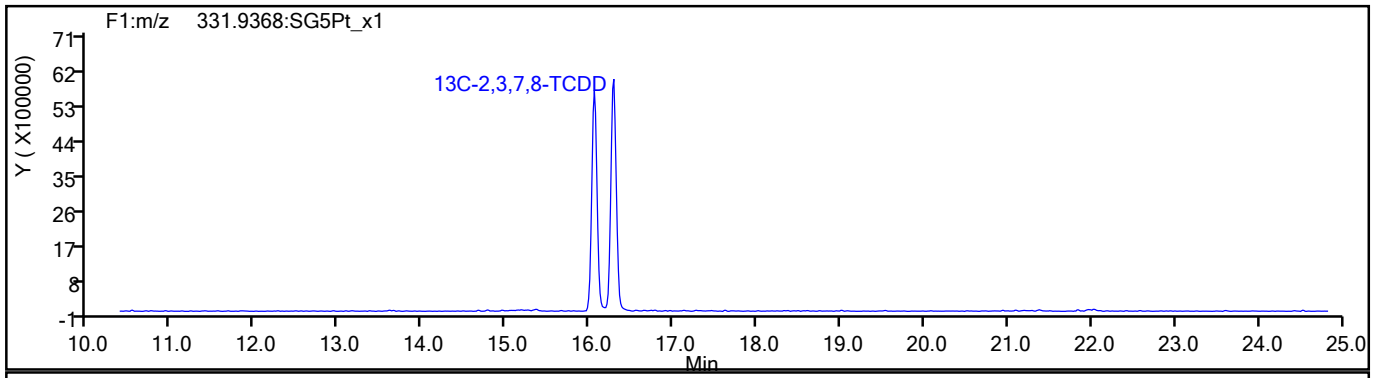

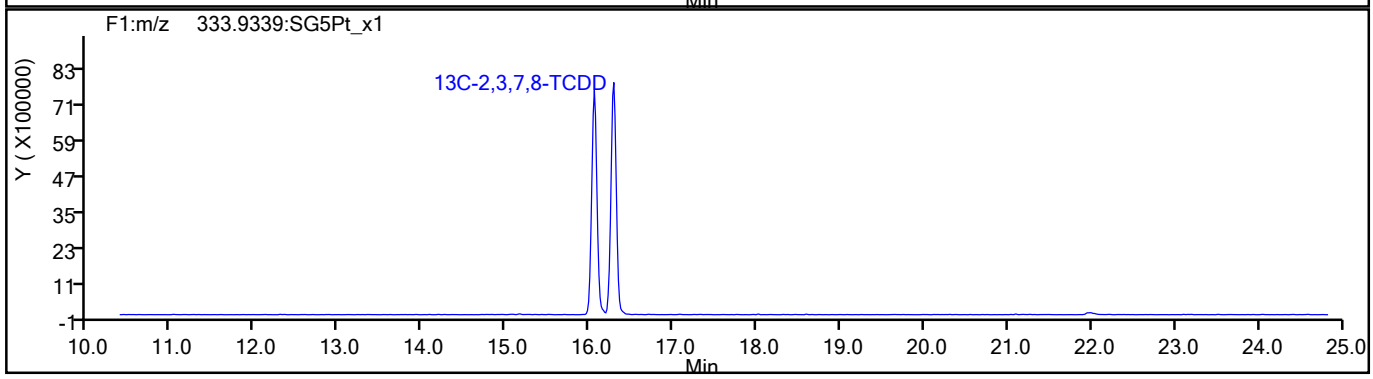

776693

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d		
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Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

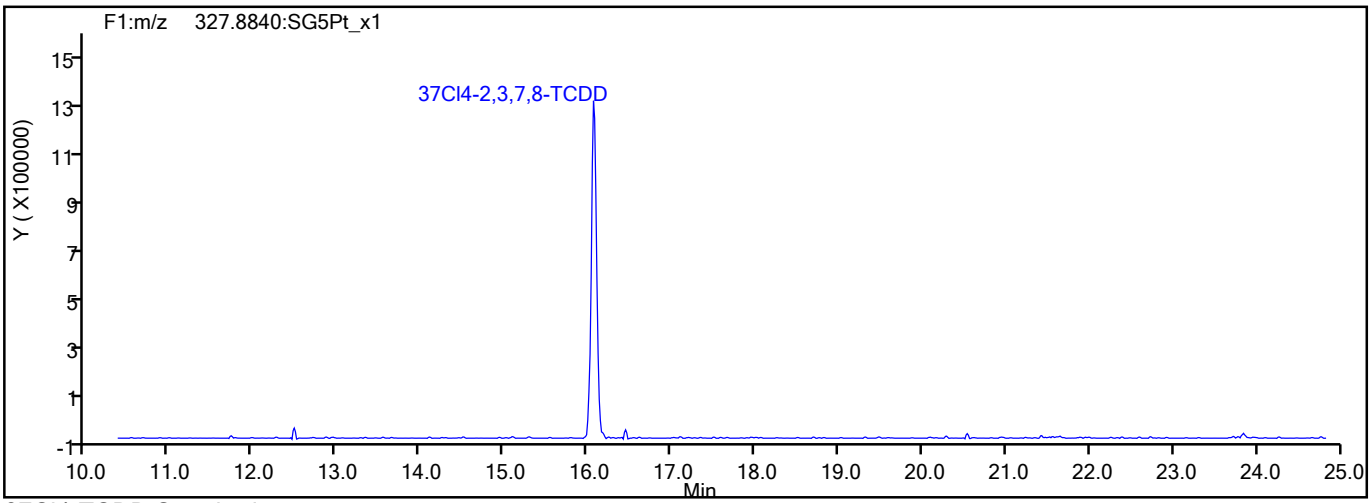

37Cl4-TCDD Standards

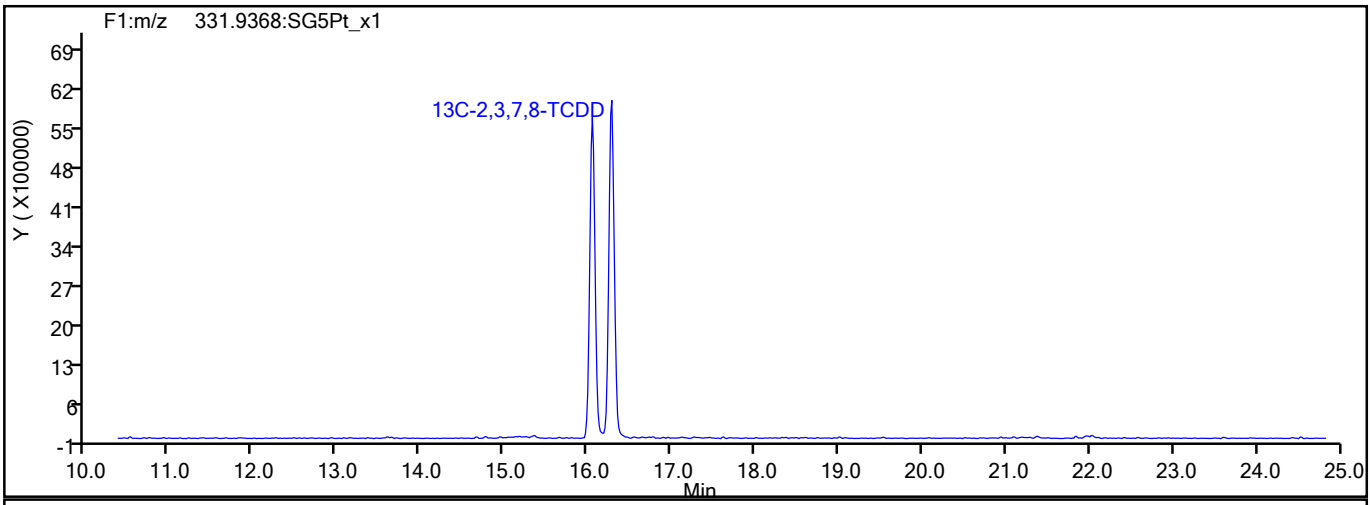

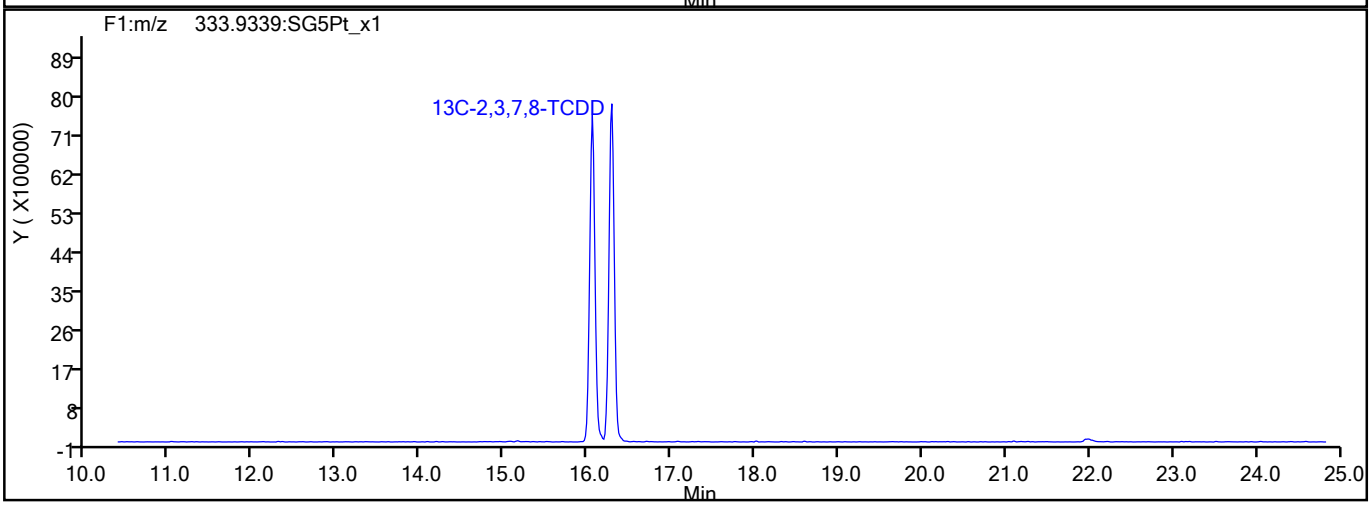

776694

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d		
Injection Date:	24-Aug-2021 16:36:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

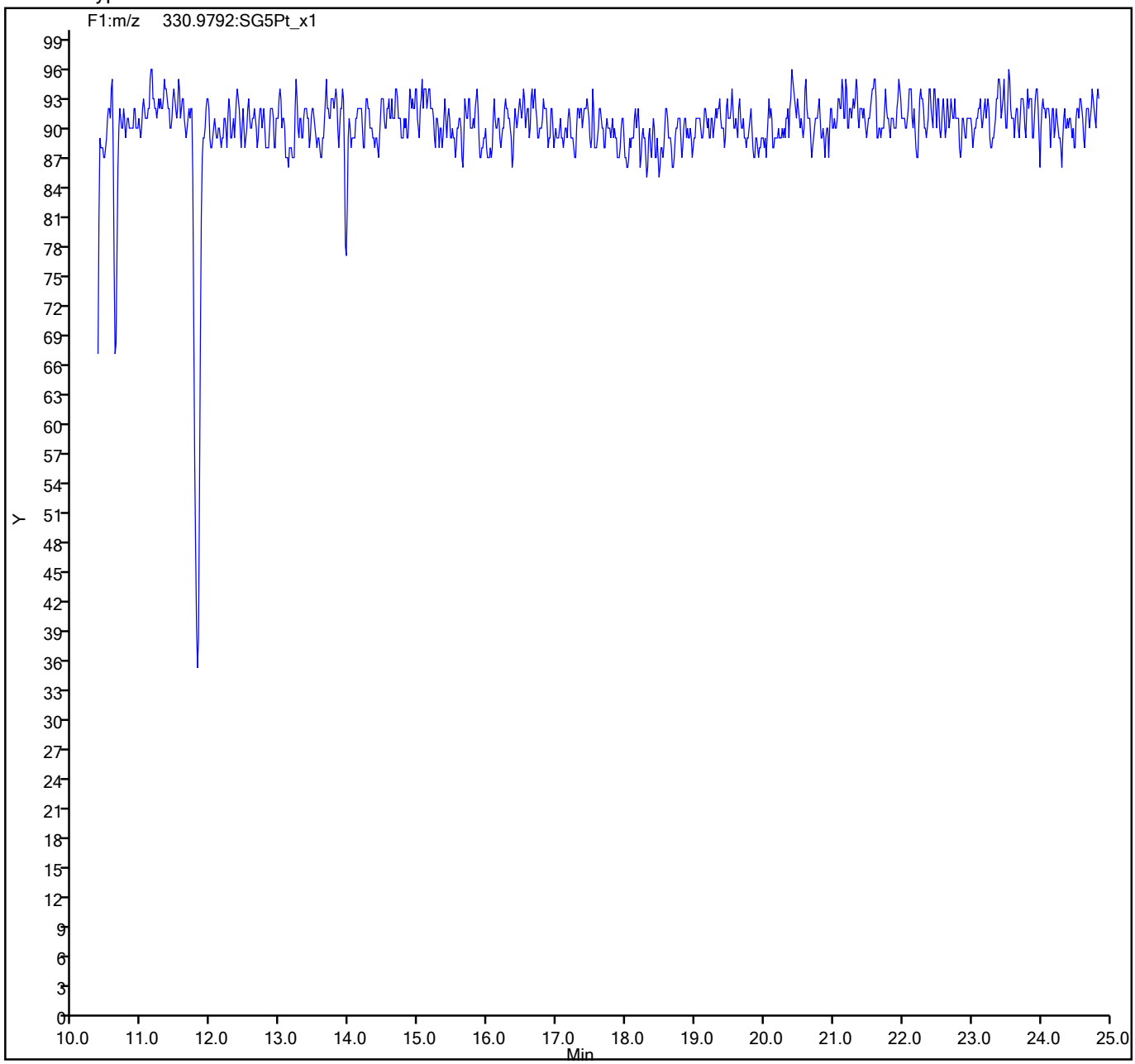

776695

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-519650/2 Calibration Date: 08/25/2021 09:27

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 25AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.067		10.1	10.0	101	78-129
2,3,7,8-TCDF	AveID	0.998	0.9412		9.43	10.0	94	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9516		109	100	109	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.537		115	100	115	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9365		10.8	10.0	108	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
25AU2111D2	1	CPS 082521	CPS HRDXNCP_00044				1.00000	
25AU2111D2	2	CCV 082521	CCV CS-4 HRDXNL4_00100				1.00000	
25AU2111D2	3	SB 082521	Solvent Blank C-14				1.00000	
25AU2111D2	4	320-513879	320-76888-A-1-A X10	20	1613B/Solid	D267	10.00000	g
25AU2111D2	5	320-513879	320-76888-A-1-B MS X10	20	1613B/Solid		10.00000	g
25AU2111D2	6	320-513879	320-76888-A-1-C MSD X10	20	1613B/Solid		10.00000	g
25AU2111D2	7						1.00000	
25AU2111D2	8						1.00000	
25AU2111D2	9						1.00000	
25AU2111D2	10						1.00000	
25AU2111D2	11						1.00000	
25AU2111D2	12		DB 08-25-21				1.00000	
25AU2111D2	13						1.00000	

RUNLOG CHECKED
DB 8/25/21

Peak Locate Examination:25-AUG-2021:08:48 File:25AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

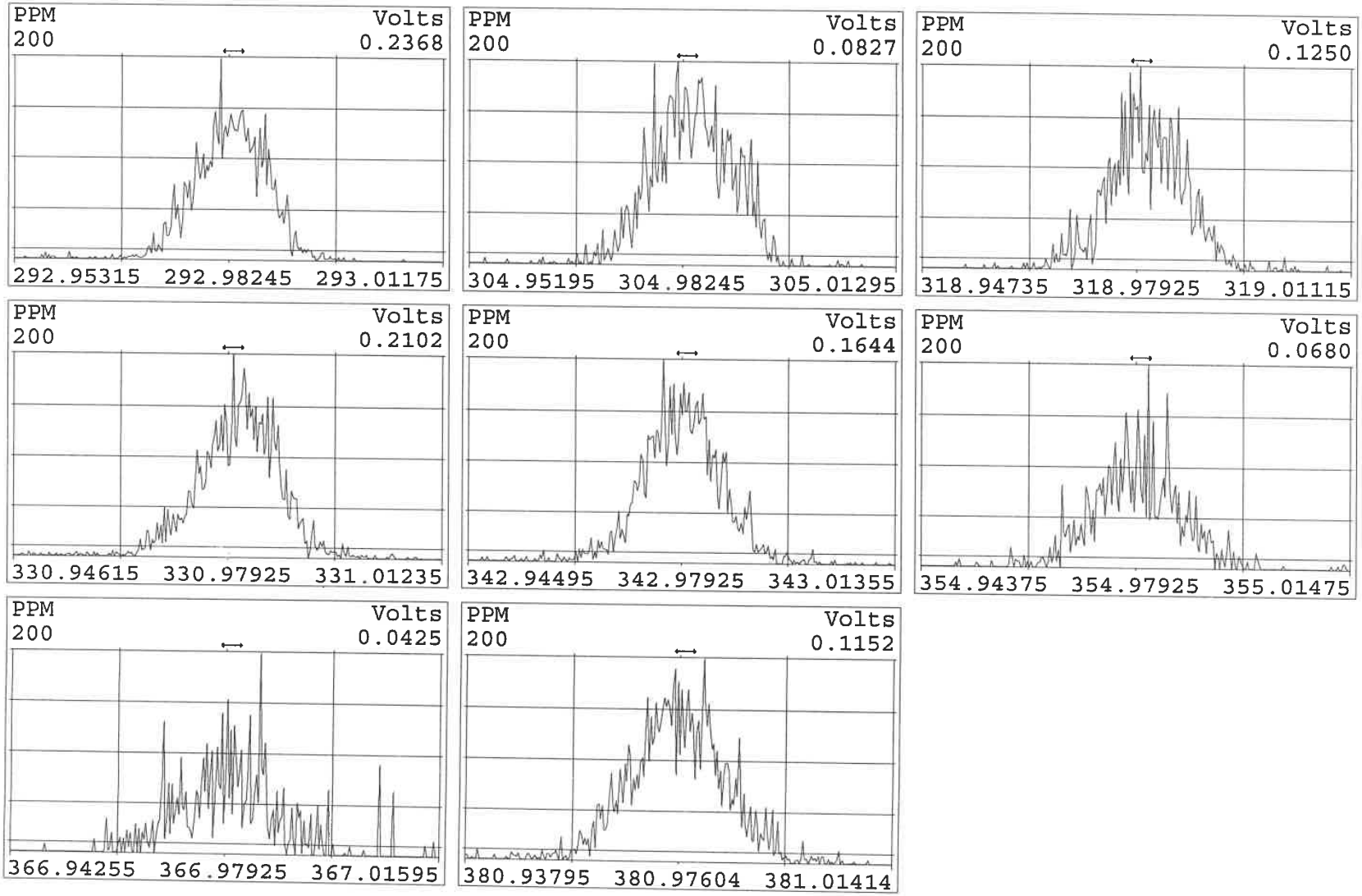

Peak Locate Examination:25-AUG-2021:12:49 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

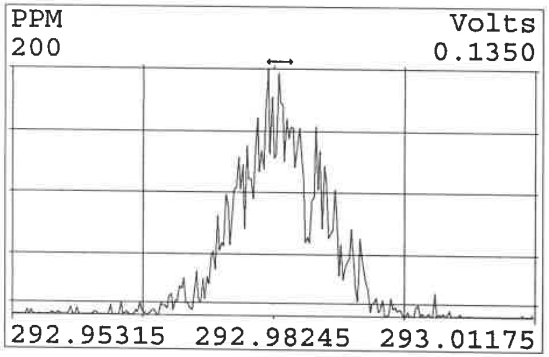

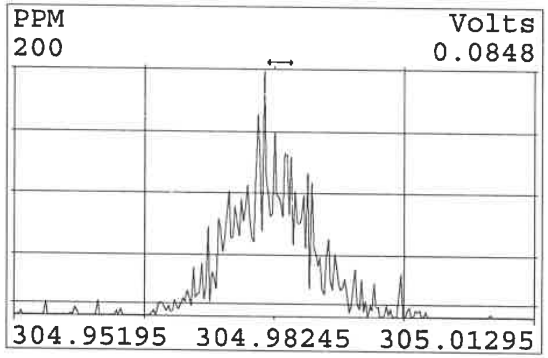

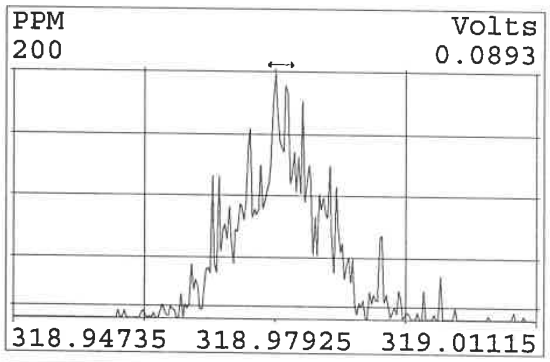

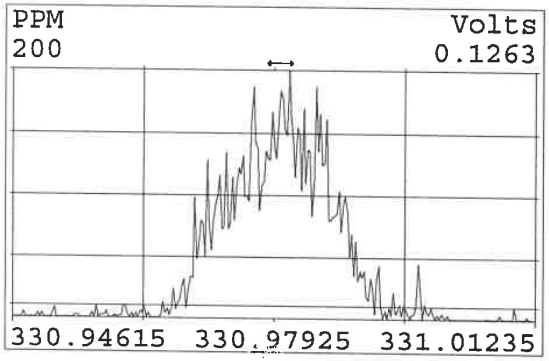

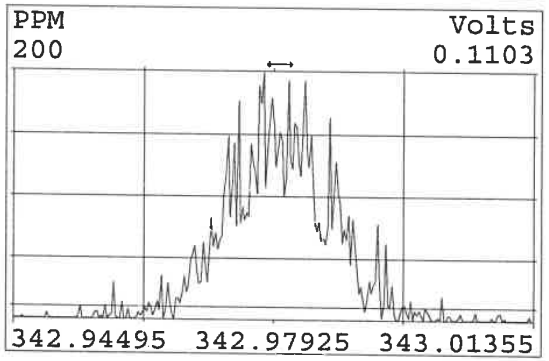

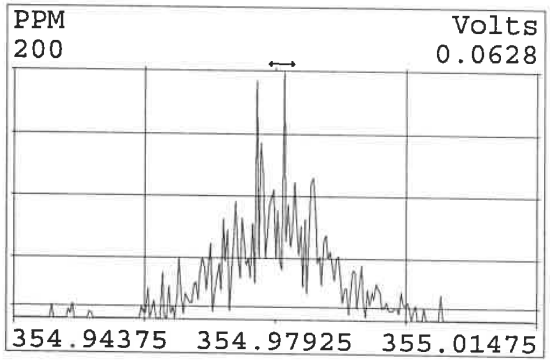

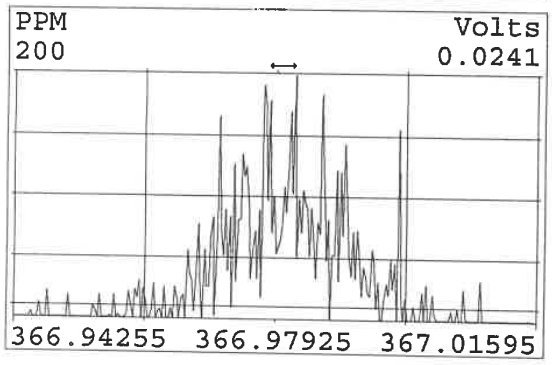

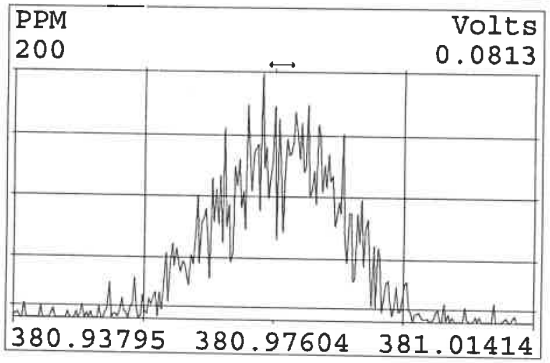

776699

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 09:27:12 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:08:24

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.285	41505218	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.601	63810084	0.80	1.3327	115.4	115.4	0.2725	0.2725	115	
2,3,7,8-TCDF	17.629	6005659	0.76	0.9978	9.432	9.432	0.0437	0.0437	94.32	
D 13C-2,3,7,8-TCDD	16.051	39498195	0.78	0.8749	108.8	108.8	0.4121	0.4121	109	
2,3,7,8-TCDD	16.079	4212727	0.79	1.0570	10.1	10.1	0.0500	0.0500	101	
$ 37Cl4-2,3,7,8-TCDD	16.079	3887170		0.8648	10.8	10.8	0.0505	0.0505	108	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

776700

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 09:27:12 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:08:24

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.285	16.285	0		18219819	4161833	6361	15902	654		
333.9339	16.285	16.285	0		23285399	5071465	6956	17390	729	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.601	17.601	0	1.081	28324668	5203466	6186	15465	841		
317.9389	17.601	17.601	0	1.081	35485416	6670555	7229	18072	923	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.629	0	1.002	2584414	460518	959	2397	480		
305.8987	17.629	17.629	0	1.002	3421245	616042	1110	2775	555	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.051	16.051	0	0.986	17309487	3706712	6361	15902	583		
333.9339	16.065	16.051	1	0.987	22188708	4844866	6956	17390	697	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.079	16.079	0	1.002	1858384	420124	841	2102	500		
321.8936	16.065	16.079	-1	1.001	2354343	486411	965	2412	504	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.079	16.079	0	0.987	3887170	870116	1612	4030	540		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

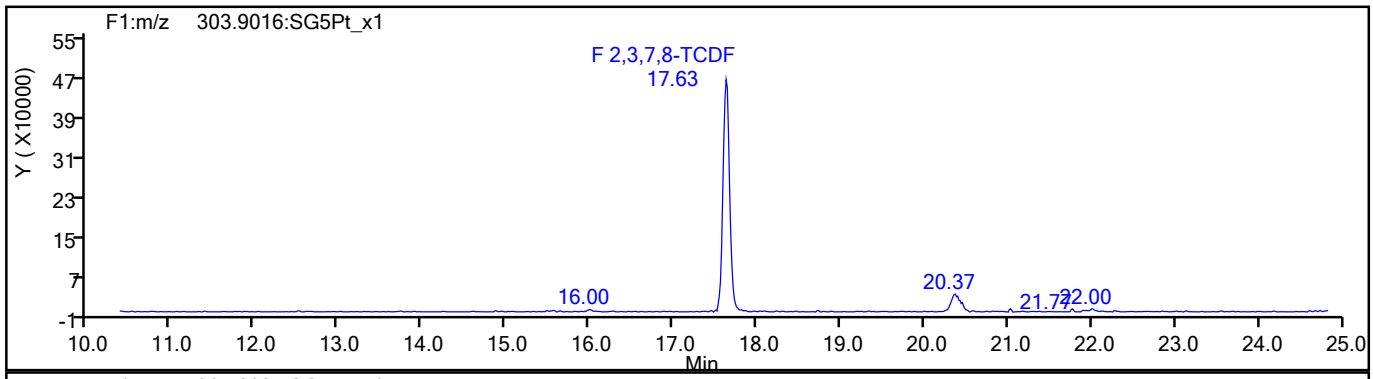

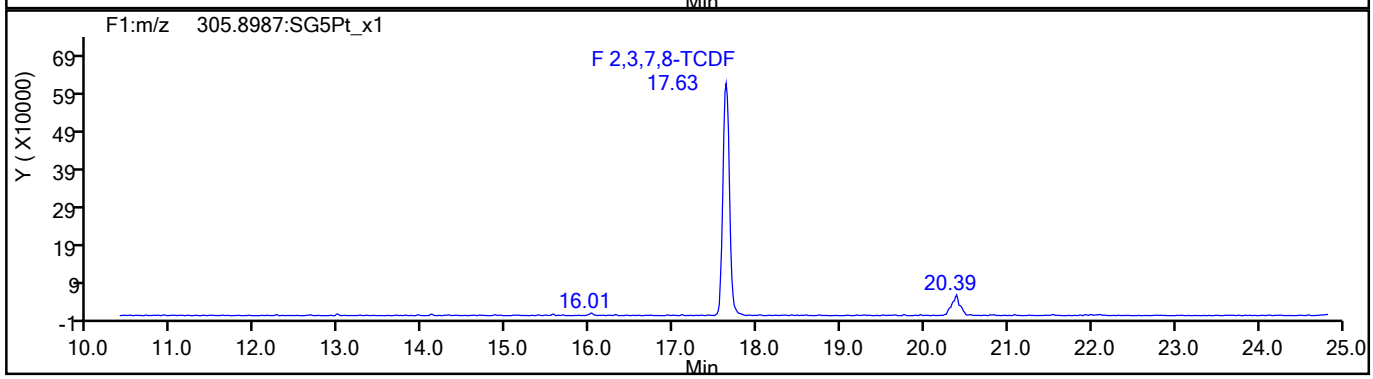

TCDF Standards

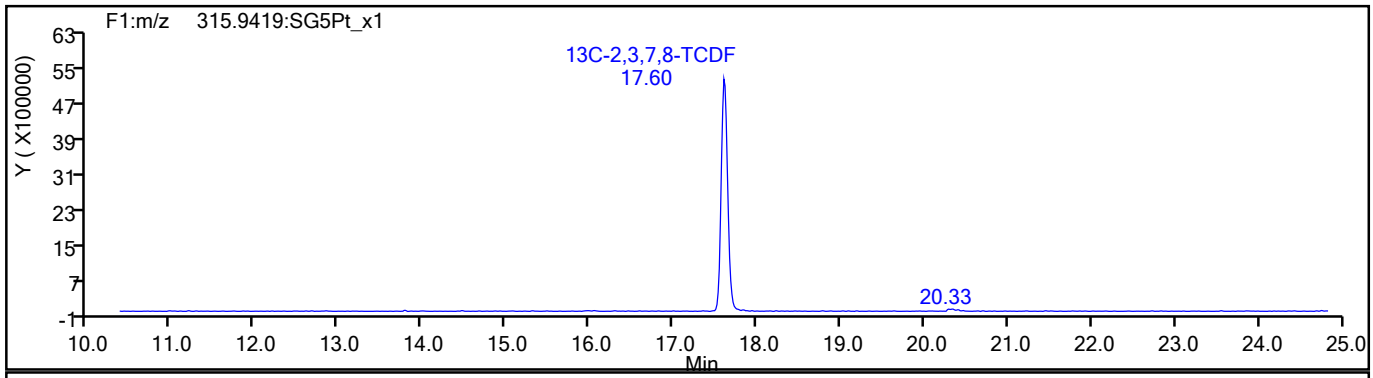

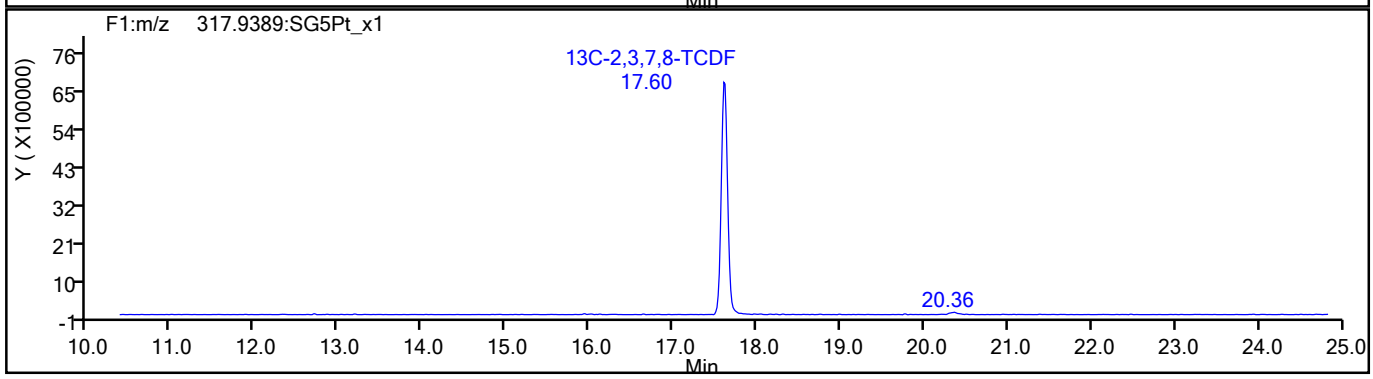

776702

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

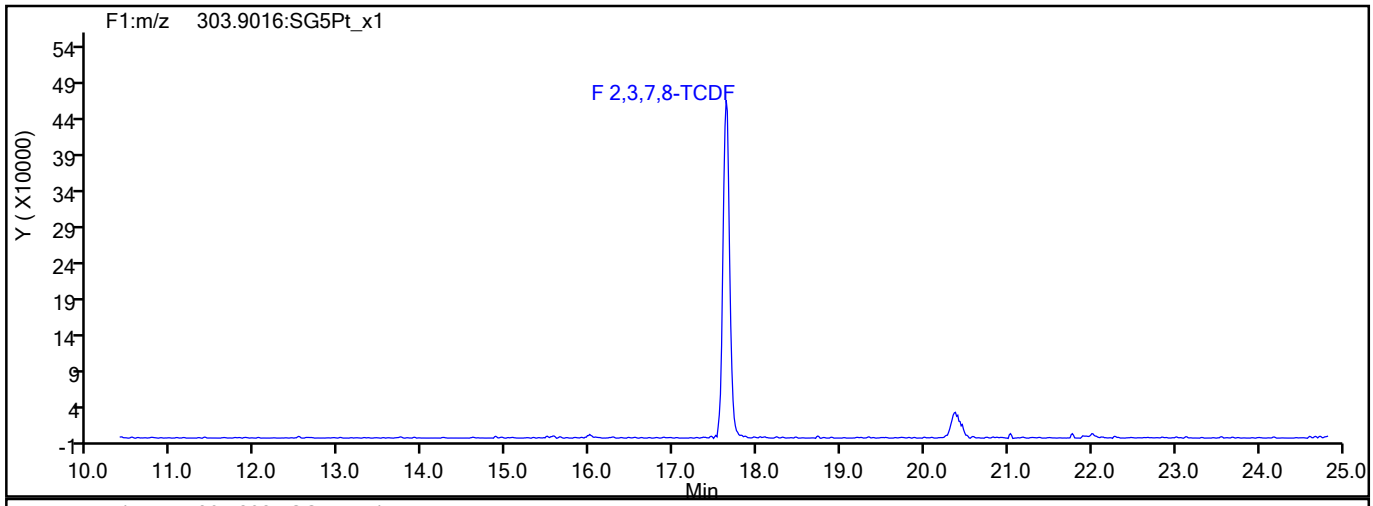

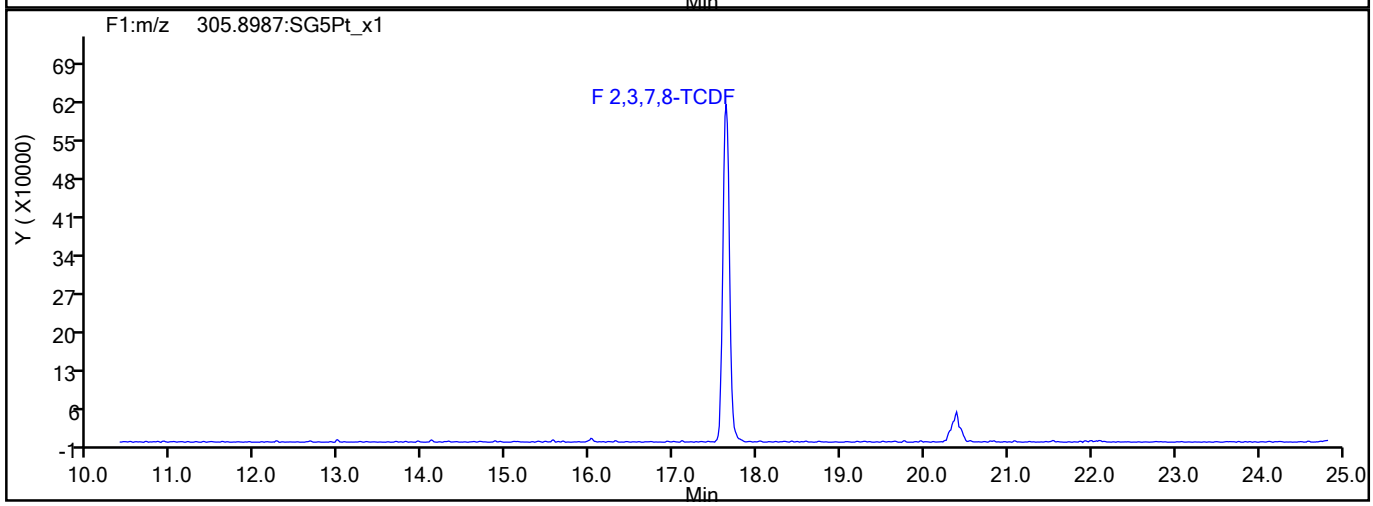

TCDF Interference Mass

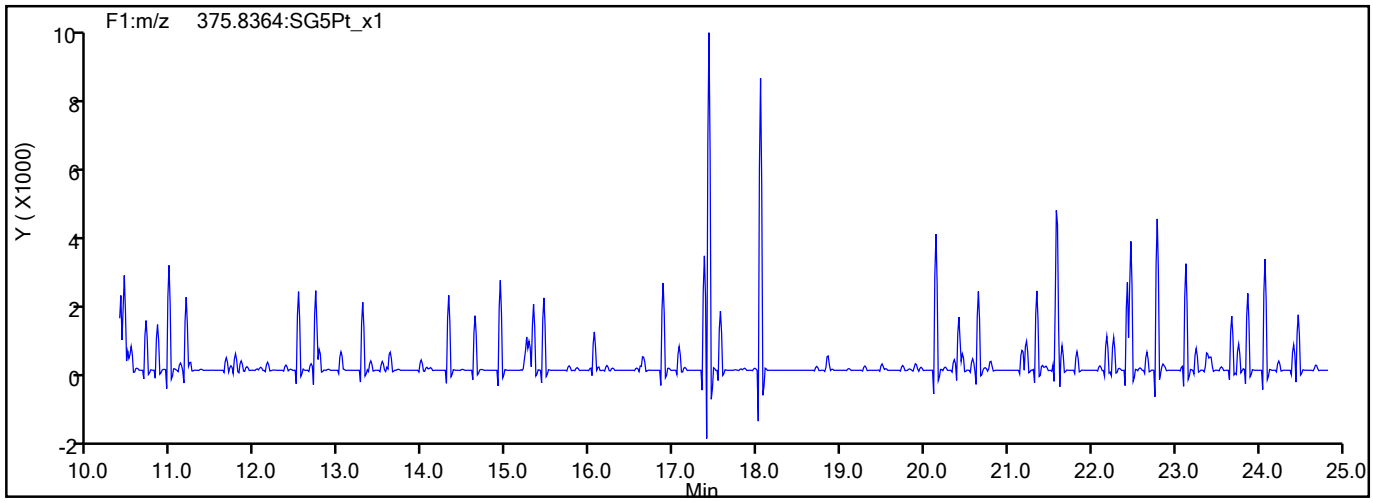

776703

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

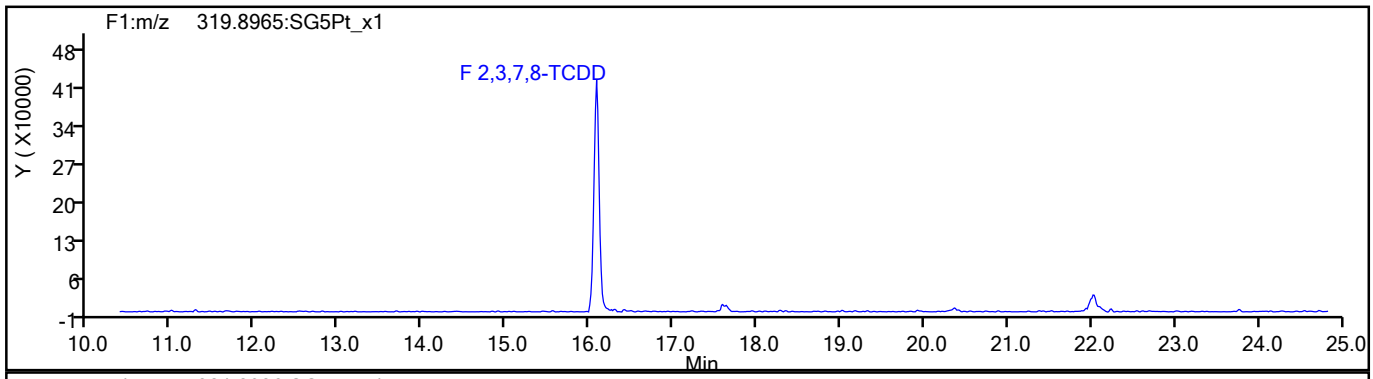

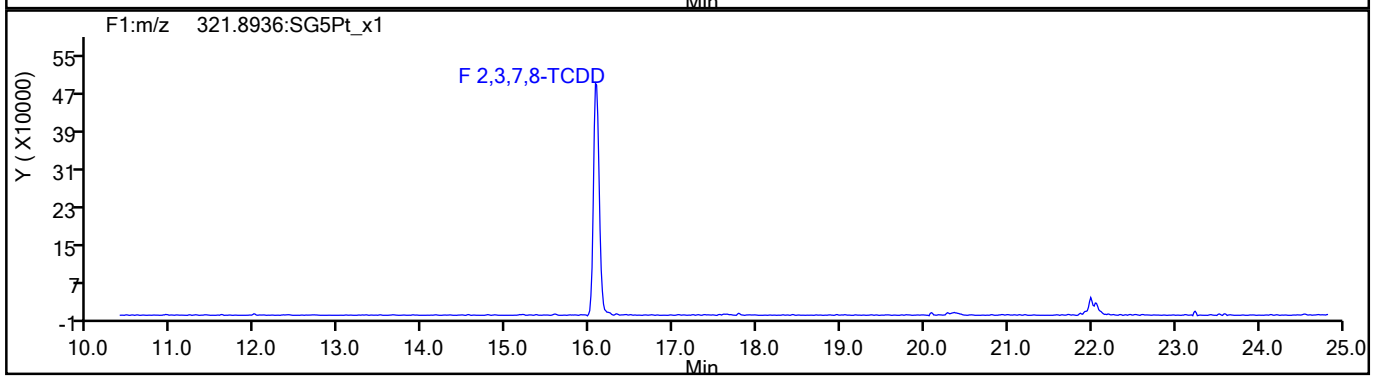

TCDD Standards

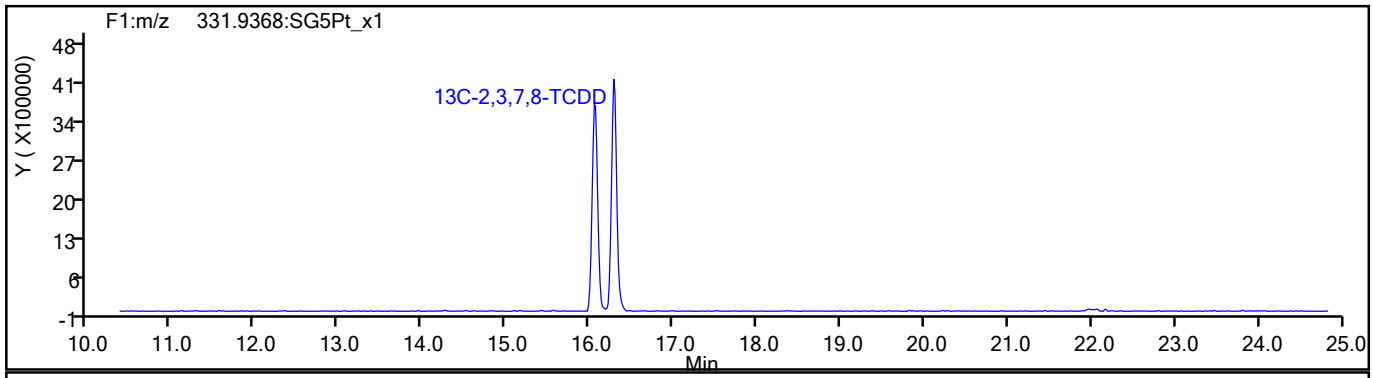

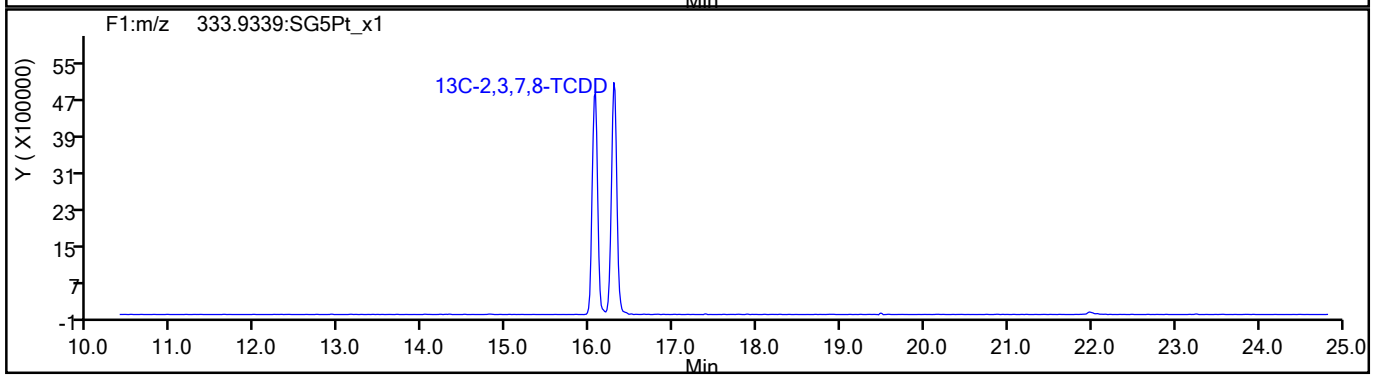

776704

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

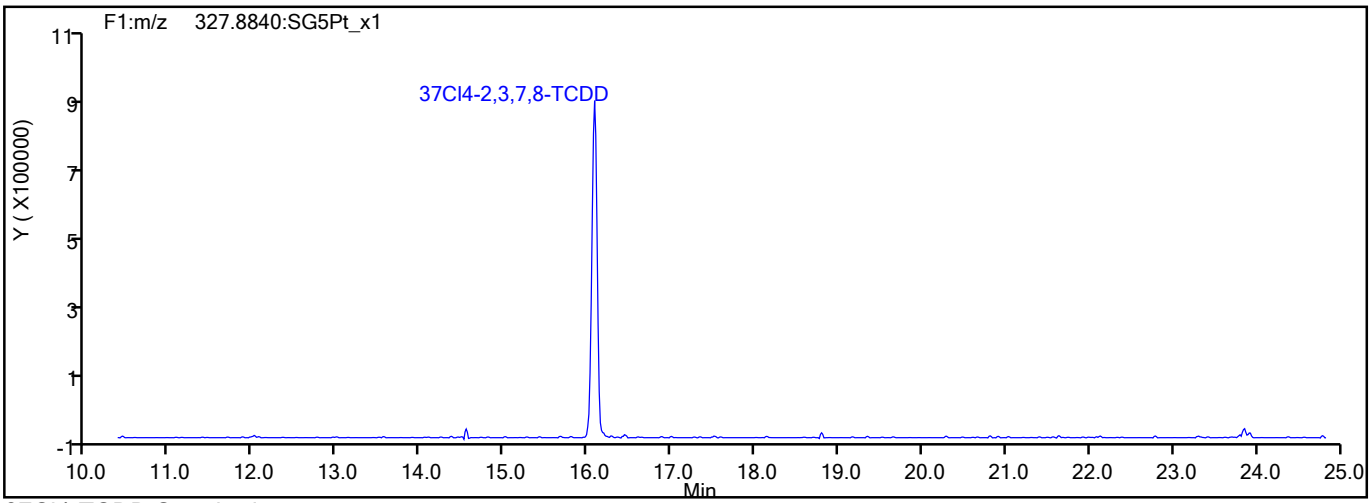

37Cl4-TCDD Standards

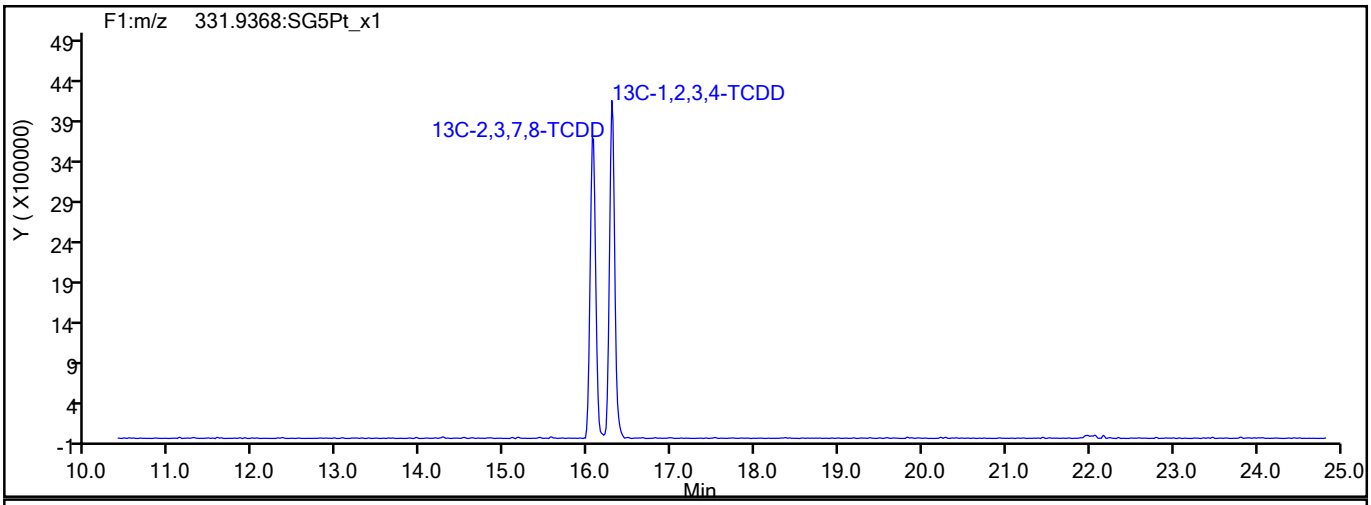

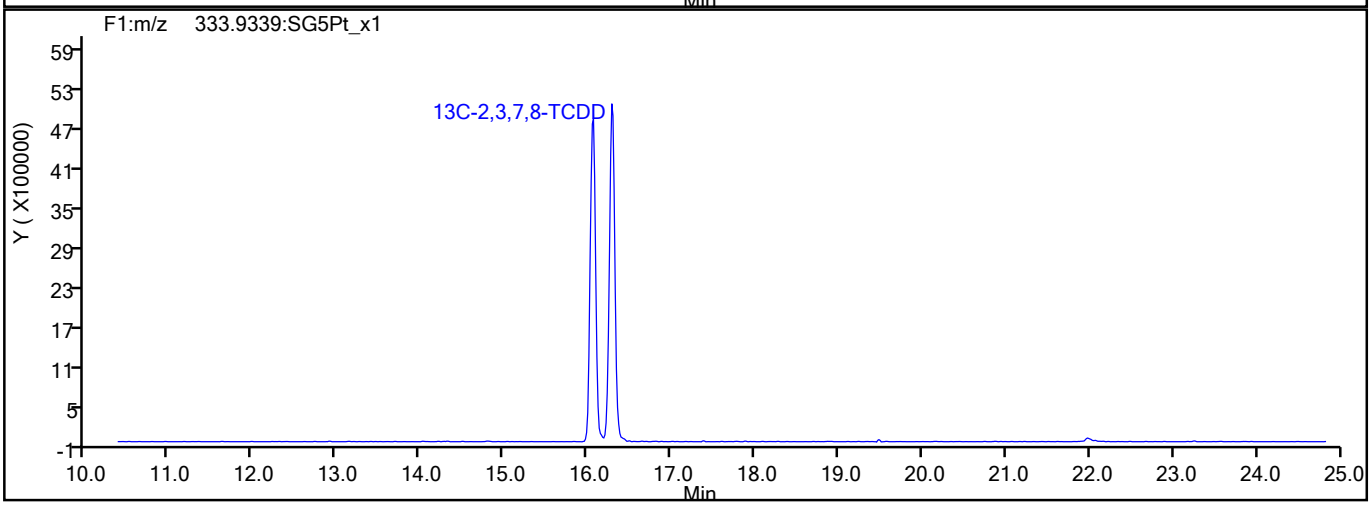

776705

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

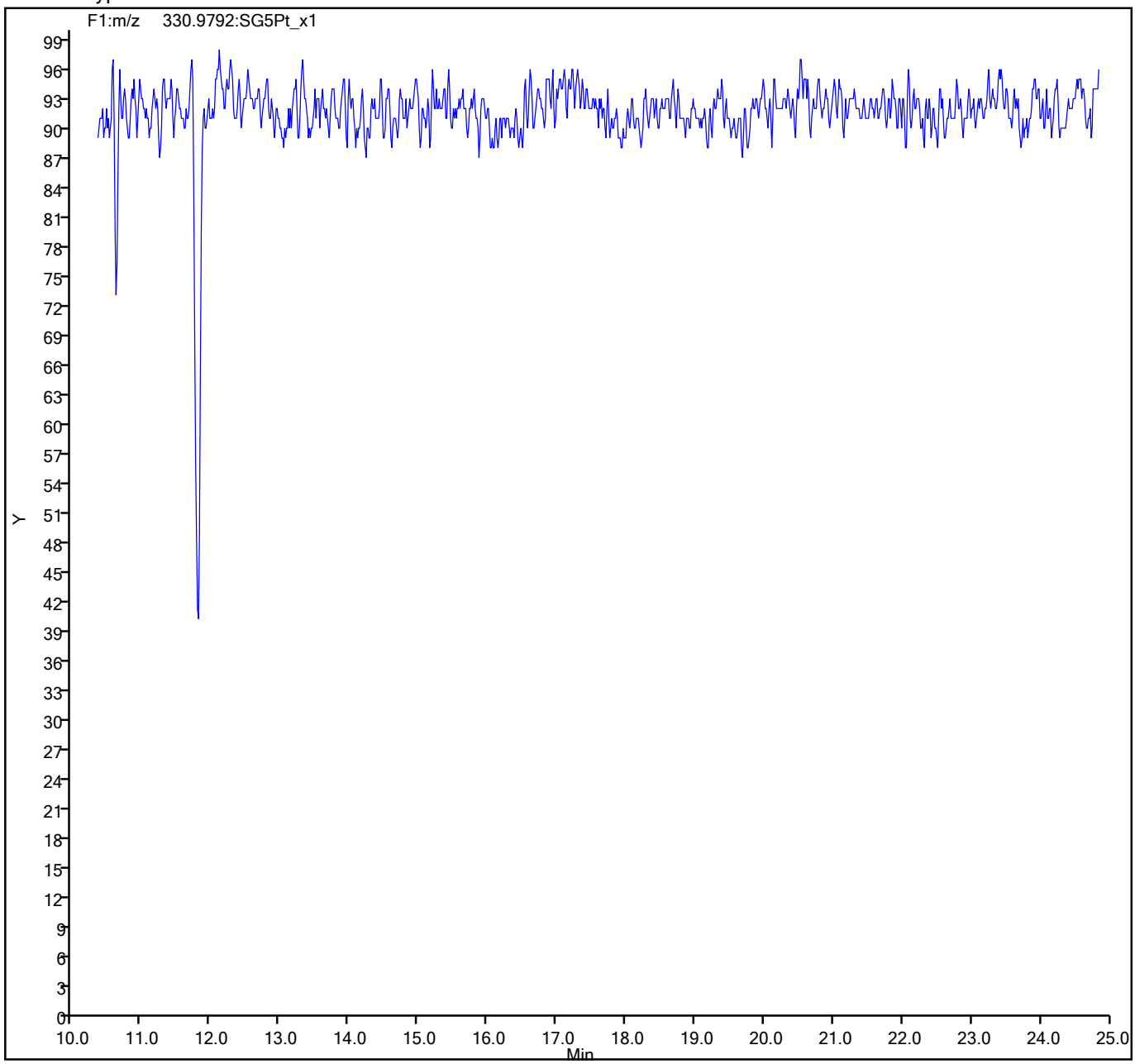

776706

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: ICV 320-496688/9 Calibration Date: 06/08/2021 19:25

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 08jn21adfs1_11.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.086		40.2	40.0	101	70-130
2,3,7,8-TCDD	AveID	1.075	1.121		41.7	40.0	104	70-130
1,2,3,7,8-PeCDF	AveID	1.054	1.024		194	200	97	70-130
2,3,4,7,8-PeCDF	AveID	1.008	1.118		222	200	111	70-130
1,2,3,7,8-PeCDD	AveID	1.046	1.030		197	200	98	70-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.173		204	200	102	70-130
1,2,3,6,7,8-HxCDF	AveID	1.218	1.270		209	200	104	70-130
2,3,4,6,7,8-HxCDF	AveID	1.214	1.289		212	200	106	70-130
1,2,3,4,7,8-HxCDD	AveID	1.061	1.071		202	200	101	70-130
1,2,3,6,7,8-HxCDD	AveID	0.9933	1.055		212	200	106	70-130
1,2,3,7,8,9-HxCDD	AveID	1.109	1.001		180	200	90	70-130
1,2,3,7,8,9-HxCDF	AveID	1.240	1.220		197	200	98	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.505		209	200	104	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.076		205	200	102	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.299		198	200	99	70-130
OCDD	AveID	1.062	1.116		420	400	105	70-130
OCDF	AveID	1.317	1.367		415	400	104	70-130
13C-2,3,7,8-TCDF	Ave	1.346	1.311		97.4	100	97	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9331		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.095		96.0	100	96	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.137		101	100	101	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7038		98.2	100	98	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.080		112	100	112	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.244		116	100	116	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.134		109	100	109	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8428		111	100	111	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9479		110	100	110	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9309		95.7	100	96	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7732		105	100	105	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7344		109	100	109	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7385		108	100	108	77-129
13C-OCDD	Ave	0.5446	0.5501		202	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.000		39.7	40.0	99	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.559	1125768	0.79	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.623	1476391	0.81	1.3459	97.4	97.4	0.3116	0.3116	97.44	
2,3,7,8-TCDF	19.648	641186	0.78	1.0802	40.2	40.2	0.0827	0.0827	101	
A Non-2,3,7,8-sub-TCDF	19.213	10768	0.77	1.0802	0.7248	0.6752	0.0827	0.3523		RQ
S Total TCDF					40.9	40.9	0.0827	0.0827		RQ
D 13C-2,3,7,8-TCDD	20.928	1050504	0.81	0.9317	100.2	100.2	0.3032	0.3032	100	
$ 37Cl4-2,3,7,8-TCDD	20.946	450121		1.0083	39.7	39.7	0.0185	0.0185	99.14	
2,3,7,8-TCDD	20.946	471118	0.76	1.0753	41.7	41.7	0.1073	0.1073	104	
A Non-2,3,7,8-sub-TCDD	20.025	9415	0.75	1.0753	0.8334	0.8334	0.1073	0.8334		
S Total TCDD					42.5	42.5	0.1073	0.1073		
D 13C-1,2,3,7,8-PeCDF	26.596	1232285	1.59	1.1405	96.0	96.0	0.3457	0.3457	95.98	
1,2,3,7,8-PeCDF	26.612	2524406	1.56	1.0543	194.3	194.3	0.8579	0.8579	97.16	
D 13C-2,3,4,7,8-PeCDF	28.053	1280265	1.57	1.1253	101.1	101.1	0.3504	0.3504	101	
2,3,4,7,8-PeCDF	28.079	2861521	1.56	1.0079	221.8	221.8	0.9445	0.9445	111	
A F1 PeCDFs	24.098						0.0158	0.0158		
A Non-2,3,7,8-sub-PeCDF	27.473	63446	1.59	1.0311	4.898	4.898	0.8996	4.898		
S Total PeCDF					421.0	421.0	0.9012	0.9012		
D 13C-1,2,3,7,8-PeCDD	28.846	792316	1.60	0.7165	98.2	98.2	0.1154	0.1154	98.23	
1,2,3,7,8-PeCDD	28.871	1631677	1.56	1.0465	196.8	196.8	0.1550	0.1550	98.39	
A Non-2,3,7,8-sub-PeCDD	27.656						0.1550	0.1550		n
S Total PeCDD					196.8	196.8	0.1550	0.1550		
D 13C-1,2,3,4,7,8-HxCDF	34.420	999392	0.53	0.9648	111.9	111.9	0.3215	0.3215	112	
1,2,3,4,7,8-HxCDF	34.437	2343900	1.24	1.1474	204.4	204.4	0.8372	0.8372	102	
D 13C-1,2,3,6,7,8-HxCDF	34.597	1151145	0.54	1.0708	116.1	116.1	0.2896	0.2896	116	
1,2,3,6,7,8-HxCDF	34.614	2923094	1.25	1.2178	208.5	208.5	0.6918	0.6918	104	
D 13C-2,3,4,6,7,8-HxCDF	35.473	1049318	0.52	1.0413	108.9	108.9	0.2978	0.2978	109	
2,3,4,6,7,8-HxCDF	35.490	2704850	1.25	1.2145	212.3	212.3	0.6697	0.6697	106	
D 13C-1,2,3,7,8,9-HxCDF	36.409	861729	0.52	0.9731	95.7	95.7	0.3187	0.3187	95.67	
1,2,3,7,8,9-HxCDF	36.425	2103282	1.26	1.2401	196.8	196.8	0.7295	0.7295	98.41	
A Non-2,3,7,8-sub-HxCDF	34.470						0.7275	0.7275		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					822.0	822.0	0.7320	0.7320		
* 13C-1,2,3,7,8,9-HxCDD	36.215	925657	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.709	780111	1.25	0.7587	111.1	111.1	0.1965	0.1965	111	
1,2,3,4,7,8-HxCDD	35.726	1671580	1.25	1.0608	202.0	202.0	0.2912	0.2912	101	
D 13C-1,2,3,6,7,8-HxCDD	35.827	877428	1.29	0.8593	110.3	110.3	0.1735	0.1735	110	
1,2,3,6,7,8-HxCDD	35.844	1852033	1.25	0.9933	212.5	212.5	0.2936	0.2936	106	
1,2,3,7,8,9-HxCDD	36.232	1658680	1.25	1.1094	180.4	180.4	0.2704	0.2704	90.20	
A Non-2,3,7,8-sub-HxCDD	34.896						0.2845	0.2845		
S Total HxCDD					594.9	594.9	0.2851	0.2851		
D 13C-1,2,3,4,6,7,8-HpCDF	38.325	715749	0.46	0.7359	105.1	105.1	0.4232	0.4232	105	
1,2,3,4,6,7,8-HpCDF	38.334	2154882	1.05	1.4421	208.8	208.8	0.7056	0.7056	104	
D 13C-1,2,3,4,7,8,9-HpCDF	39.615	683594	0.46	0.6854	107.8	107.8	0.4545	0.4545	108	
1,2,3,4,7,8,9-HpCDF	39.623	1775948	1.06	1.3092	198.4	198.4	0.7773	0.7773	99.22	
A Non-2,3,7,8-sub-HpCDF	38.954						0.7397	0.7397		
S Total HpCDF					407.2	407.2	0.7415	0.7415		
D 13C-1,2,3,4,6,7,8-HpCDD	39.311	679765	1.07	0.6745	108.9	108.9	0.3101	0.3101	109	
1,2,3,4,6,7,8-HpCDD	39.320	1462615	1.05	1.0503	204.9	204.9	0.4465	0.4465	102	
A Non-2,3,7,8-sub-HpCDD	38.962						0.4465	0.4465		n
S Total HpCDD					204.9	204.9	0.4465	0.4465		
D 13C-OCDD	41.801	1018443	0.90	0.5446	202.0	202.0	0.2655	0.2655	101	
OCDF	41.885	2784055	0.91	1.3168	415.2	415.2	0.4728	0.4728	104	
OCDD	41.809	2272994	0.89	1.0620	420.3	420.3	0.4613	0.4613	105	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.559	20.544	1		497786	76231	115	287	663		
333.9338	20.550	20.544	0		627982	95455	79	197	1208	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.623	19.630	0	0.954	658944	105750	176	440	601		
317.9389	19.623	19.630	0	0.954	817447	135001	112	280	1205	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.648	19.673	-1	1.001	281905	45248	31	77	1460		
305.8987	19.648	19.673	-1	1.001	359281	56056	55	137	1019	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.489	19.213	-43	0.942	2444	489	31	77	16		
305.8987	18.489	19.213	-43	0.942	3965	647	55	137	12	0.62(0.65-0.89)	
	Empc Correction				3174	635	55	137	12		
303.9016	18.961	19.213	-15	0.966	2103	355	31	77	11		
305.8987	18.961	19.213	-15	0.966	3047	540	55	137	10	0.69(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.928	20.918	1	1.018	469892	68601	115	287	597		
333.9338	20.920	20.918	0	1.018	580612	84734	79	197	1073	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.946	20.939	0	1.019	450121	64795	13	32	4984		
2,3,7,8-TCDD											
319.8965	20.946	20.952	0	1.001	203710	30841	43	107	717		
321.8936	20.946	20.952	0	1.001	267408	39251	28	70	1402	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	20.748	20.025	43	0.991	4027	748	43	107	17		
321.8936	20.748	20.025	43	0.991	5388	912	28	70	33	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.596	26.552	3	1.294	756622	134257	176	440	763		
353.8970	26.596	26.552	3	1.294	475663	85437	95	237	899	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.612	26.578	2	1.001	1538811	266495	482	1205	553		
341.8567	26.612	26.578	2	1.001	985595	170105	313	782	543	1.56(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.053	28.002	3	1.365	781677	129402	176	440	735		
353.8970	28.062	28.002	4	1.365	498588	79335	95	237	835	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.079	28.028	3	1.001	1744490	280566	482	1205	582		
341.8567	28.079	28.028	3	1.001	1117031	182233	313	782	582	1.56(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.098						3	7			
341.8567	24.098						11	27			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.186	27.473	-17	1.022	38961	6595	482	1205	14		
341.8567	27.177	27.473	-18	1.022	24485	4217	313	782	13	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.846	28.795	3	1.403	487930	72898	31	77	2352		
369.8919	28.846	28.795	3	1.403	304386	45466	26	65	1749	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.871	28.820	3	1.001	995242	153111	50	125	3062		
357.8516	28.871	28.820	3	1.001	636435	96130	27	67	3560	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.214	27.656	33	0.978	1514	293	50	125	6		
357.8516	28.197	27.656	32	0.978	953	151	27	67	6	1.59(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.420	34.370	3	0.950	347982	68430	100	250	684		
385.8610	34.411	34.370	2	0.950	651410	129057	179	447	721	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.437	34.404	2	1.000	1299118	260435	435	1087	599		
375.8178	34.437	34.404	2	1.000	1044782	207176	324	810	639	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.597	34.555	2	0.955	402116	75630	100	250	756		
385.8610	34.597	34.555	2	0.955	749029	149555	179	447	836	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.614	34.572	2	1.000	1625084	318250	435	1087	732		
375.8178	34.614	34.572	2	1.000	1298010	254878	324	810	787	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.473	35.432	2	0.980	359196	80141	100	250	801		
385.8610	35.473	35.432	2	0.980	690122	153108	179	447	855	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.490	35.449	2	1.000	1504442	338765	435	1087	779		
375.8178	35.490	35.449	2	1.000	1200408	271192	324	810	837	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.409	36.376	2	1.005	295983	71192	100	250	712		
385.8610	36.409	36.376	2	1.005	565746	138504	179	447	774	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.425	36.393	2	1.000	1172455	286668	435	1087	659		
375.8178	36.425	36.393	2	1.000	930827	227290	324	810	702	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						435	1087			
375.8178	34.470						324	810			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.215	36.182	2		517474	125327	80	200	1567		
403.8529	36.215	36.182	2		408183	99401	54	135	1841	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.709	35.668	2	0.986	434094	107490	80	200	1344		
403.8529	35.709	35.668	2	0.986	346017	85806	54	135	1589	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.726	35.685	2	1.000	928783	231750	132	330	1756		
391.8127	35.726	35.685	2	1.000	742797	185332	107	267	1732	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.827	35.794	2	0.989	493784	113946	80	200	1424		
403.8529	35.827	35.794	2	0.989	383644	90754	54	135	1681	1.29(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	35.844	35.811	2	1.000	1030480	241468	132	330	1829		
391.8127	35.844	35.811	2	1.000	821553	192627	107	267	1800	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.232	36.198	2	1.015	920944	222717	132	330	1687		
391.8127	36.223	36.198	1	1.014	737736	175856	107	267	1644	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.896						132	330			
391.8127	34.896						107	267			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.325	38.292	2	1.058	225843	65327	102	255	640		
419.8220	38.325	38.292	2	1.058	489906	143703	178	445	807	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.334	38.309	1	1.000	1104308	315033	437	1092	721		
409.7788	38.334	38.309	1	1.000	1050574	298985	414	1035	722	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.615	39.591	1	1.094	215253	65848	102	255	646		
419.8220	39.615	39.591	1	1.094	468341	143162	178	445	804	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.623	39.598	1	1.000	914515	283964	437	1092	650		
409.7788	39.623	39.598	1	1.000	861433	268143	414	1035	648	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						437	1092			
409.7788	38.954						414	1035			

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.311	39.279	2	1.086	351100	106957	105	262	1019		
437.8140	39.311	39.279	2	1.086	328665	103097	83	207	1242	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.320	39.295	1	1.000	749316	235728	209	522	1128		
425.7737	39.320	39.295	1	1.000	713299	221333	185	462	1196	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.662	38.962	-18	0.983	5341	1580	209	522	8		
425.7737	38.662	38.962	-18	0.983	5423	1624	185	462	9	0.98(0.88-1.20)	
13C-OCDD											
469.7780	41.801	41.778	1	1.154	483015	136908	66	165	2074		
471.7750	41.801	41.778	1	1.154	535428	149653	64	160	2338	0.90(0.76-1.02)	
OCDF											
441.7428	41.885	41.862	1	1.002	1324086	386680	165	412	2344		
443.7399	41.885	41.862	1	1.002	1459969	425131	192	480	2214	0.91(0.76-1.02)	
OCDD											
457.7377	41.809	41.786	1	1.000	1072812	307543	147	367	2092		
459.7348	41.809	41.786	1	1.000	1200182	343135	134	335	2561	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1476391	240751

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1476391	240751

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.489	2444	489	3965	647	0.4019	0.62	RQ
18.489	2444	489	3174	635	0.3523		Empc Correction
18.961	2103	355	3047	540	0.3229	0.69	n
Signal Totals:							
	4547	844	6221	1175			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11559	2031				0.65	RQ
	10768	2019					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7248 = (11559 * 100.000) / (1476391 * 1.080)
Empc Amount: 0.6752 = (10768 * 100.000) / (1476391 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDD, RT: 20.025

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	1050504	153335

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	1050504	153335

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
20.748	4027	748	5388	912	0.8334	0.75	
Signal Totals:							
	4027	748	5388	912			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9415	1660				0.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8334 = (9415 * 100.000) / (1050504 * 1.075)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1232285	219694
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1280265	208737

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1256275	214215

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.186	38961	6595	24485	4217	4.90	1.59	
Signal Totals:							
	38961	6595	24485	4217			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63446	10812				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.898 = (63446 * 100.000) / (1256275 * 1.031)

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

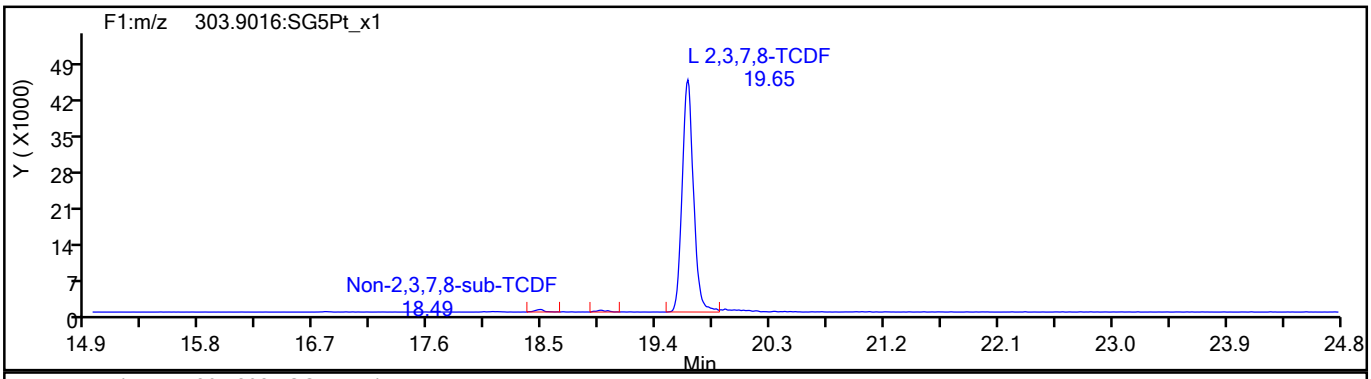

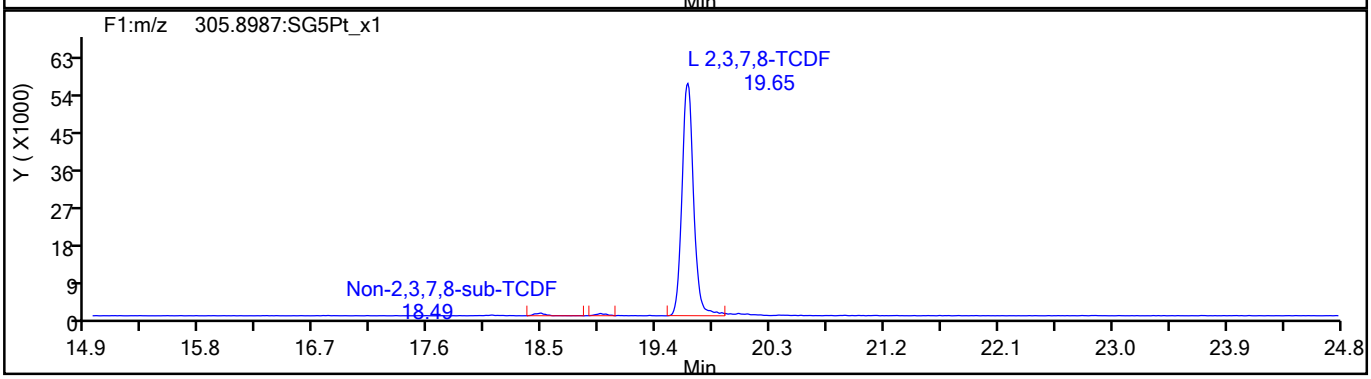

TCDF Standards

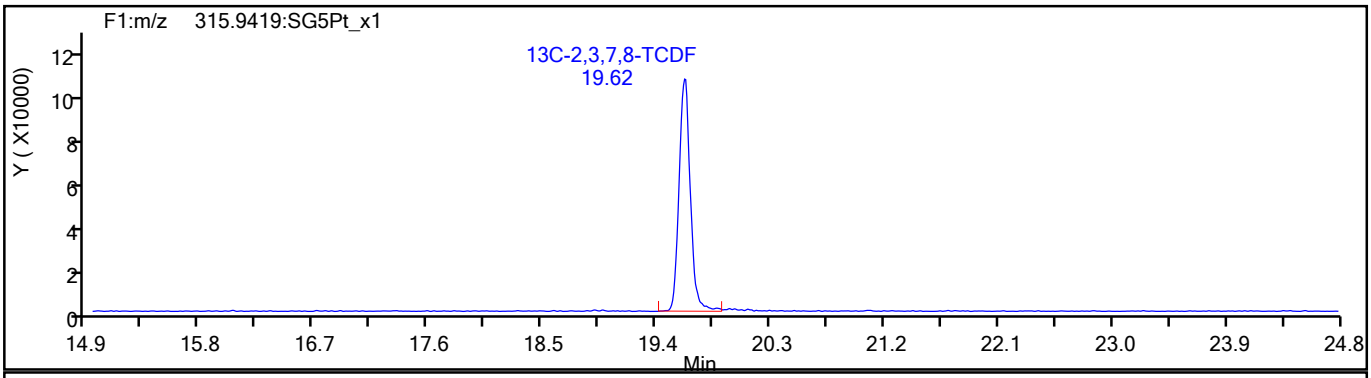

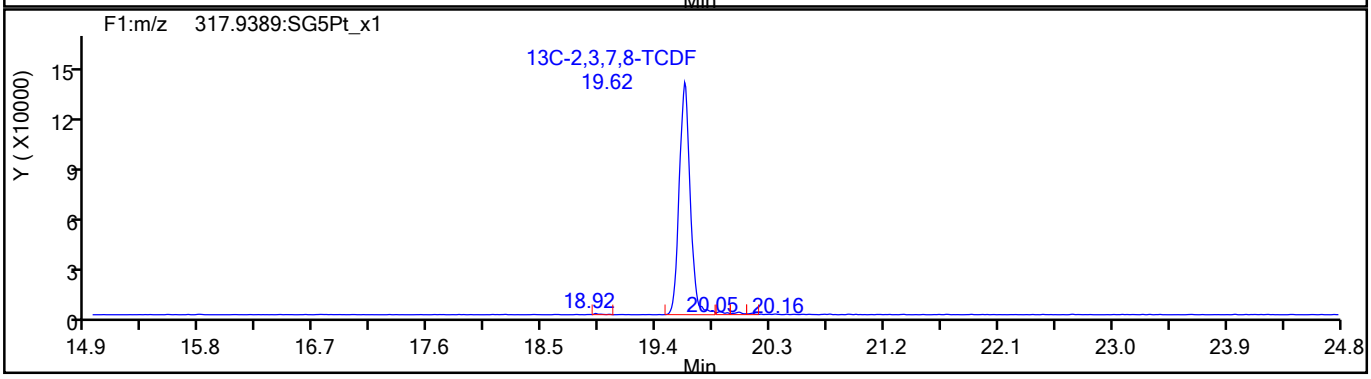

776717

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

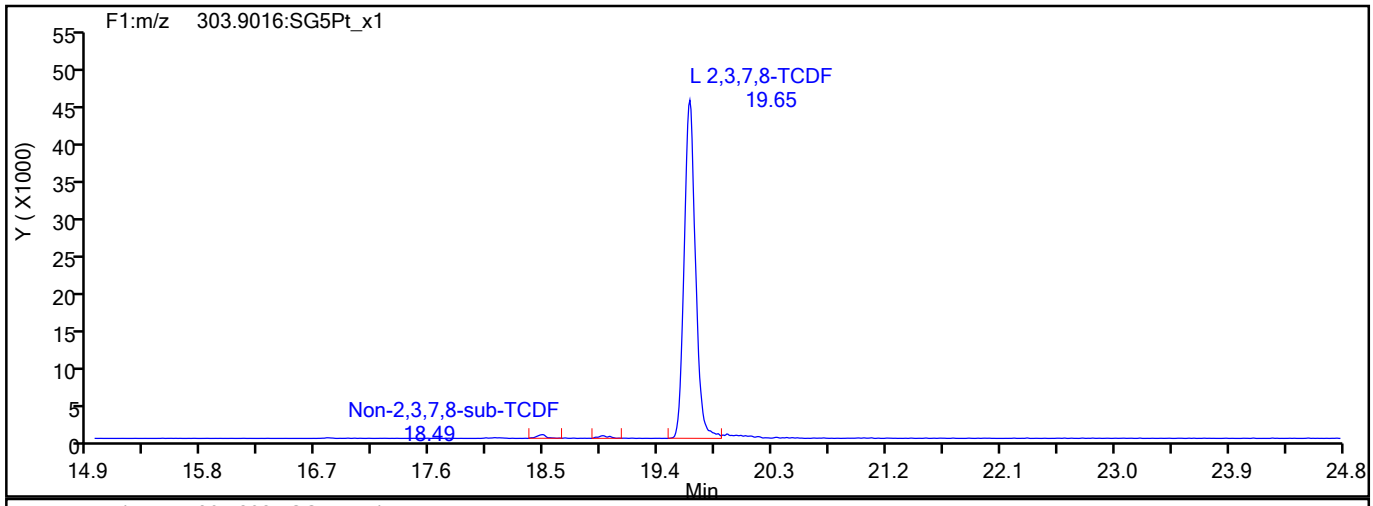

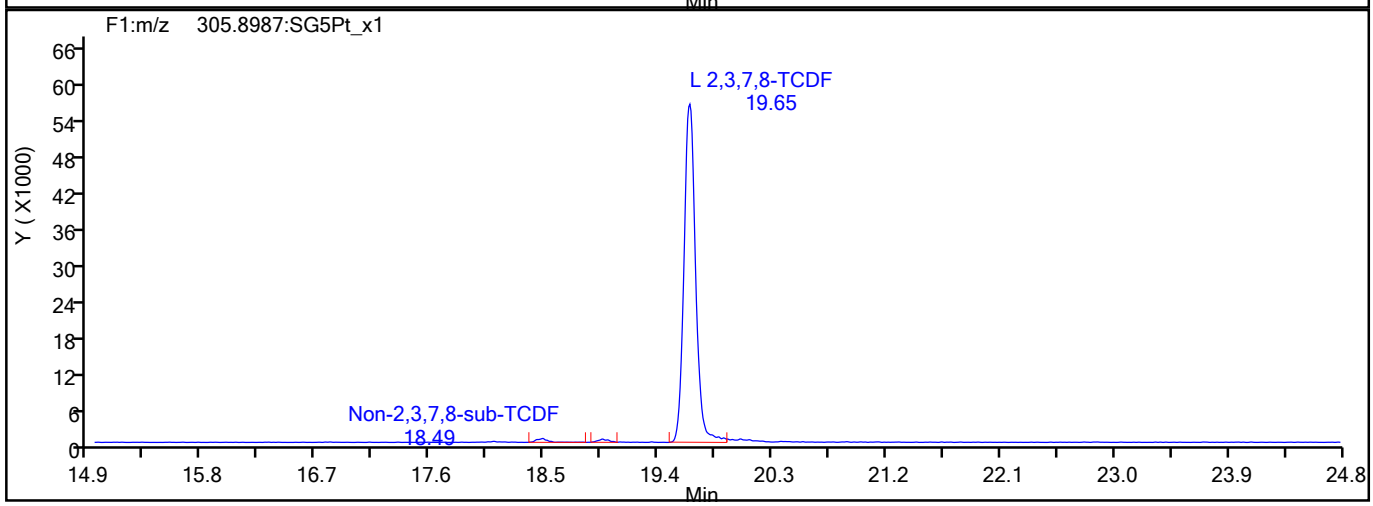

TCDF Interference Mass

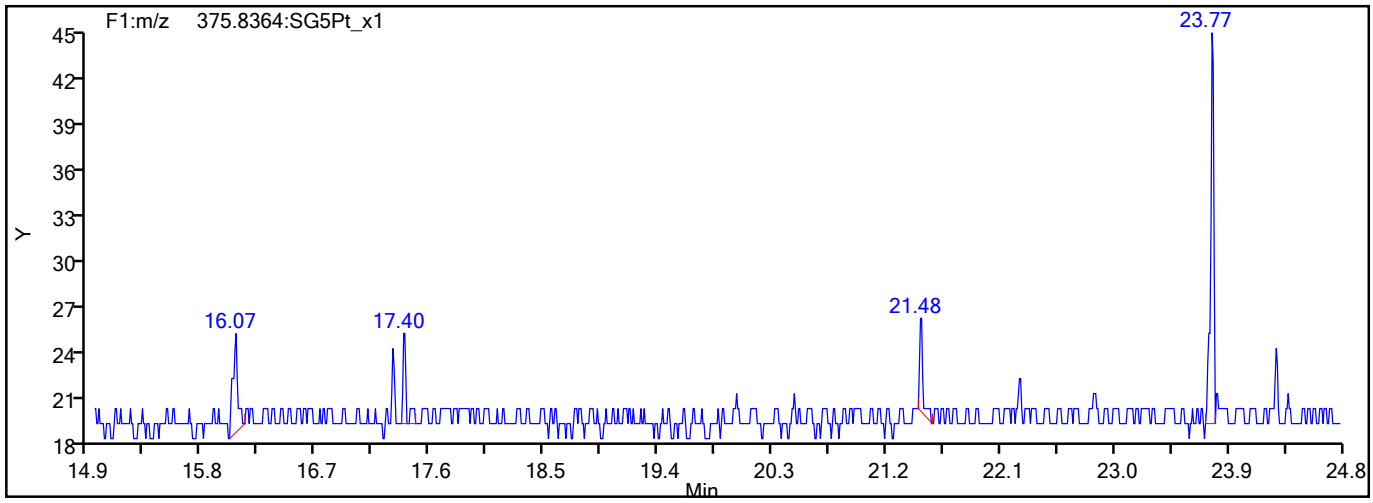

776718

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

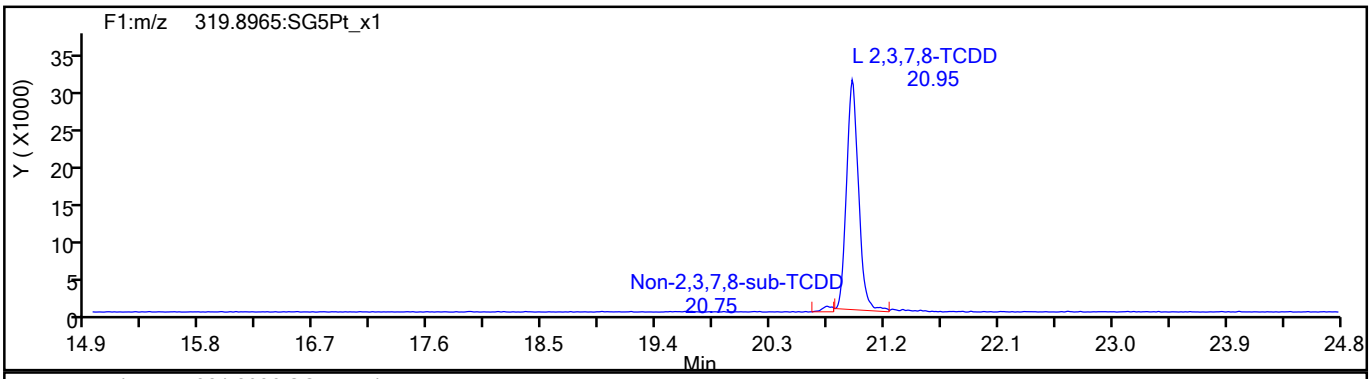

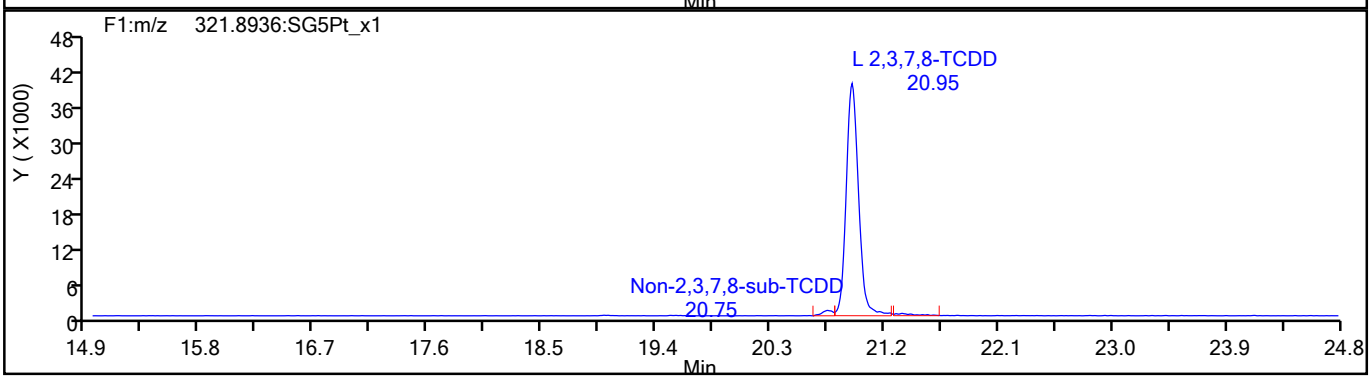

TCDD Standards

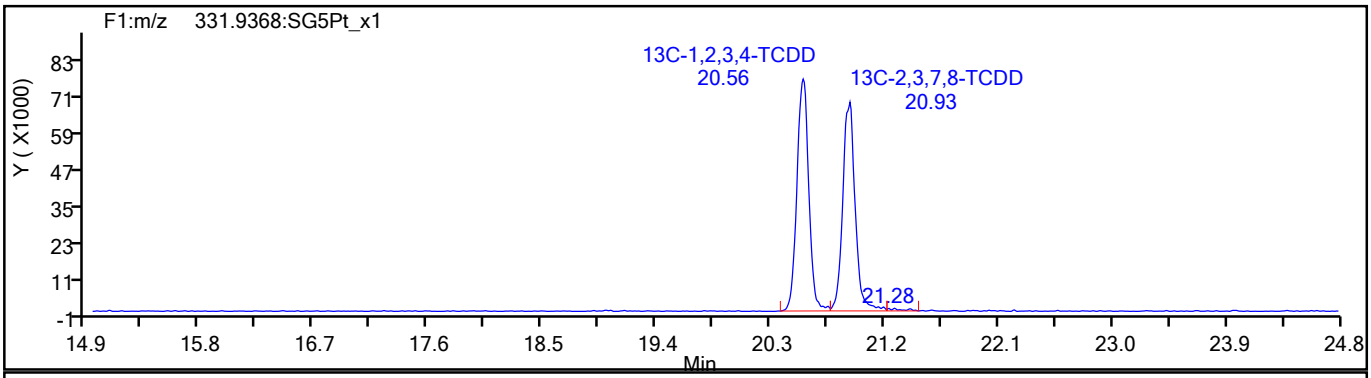

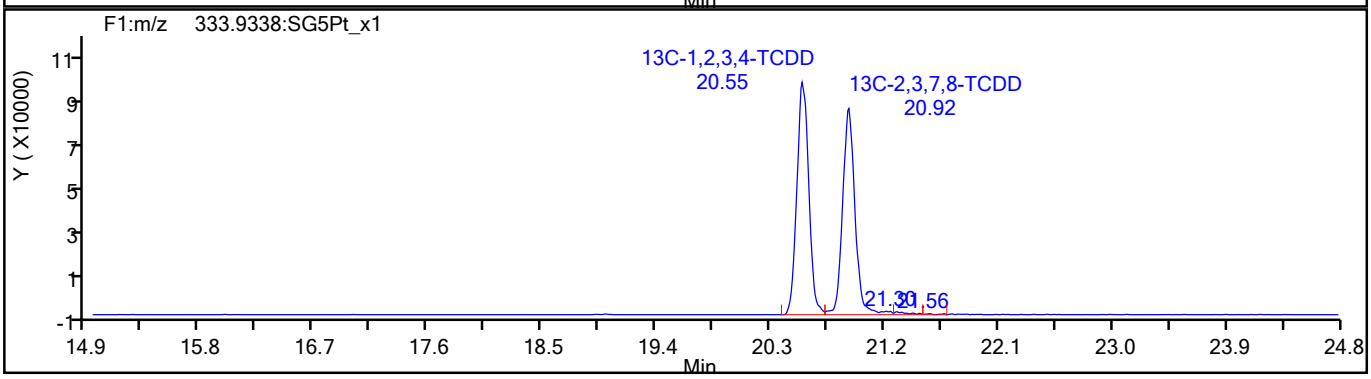

776719

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

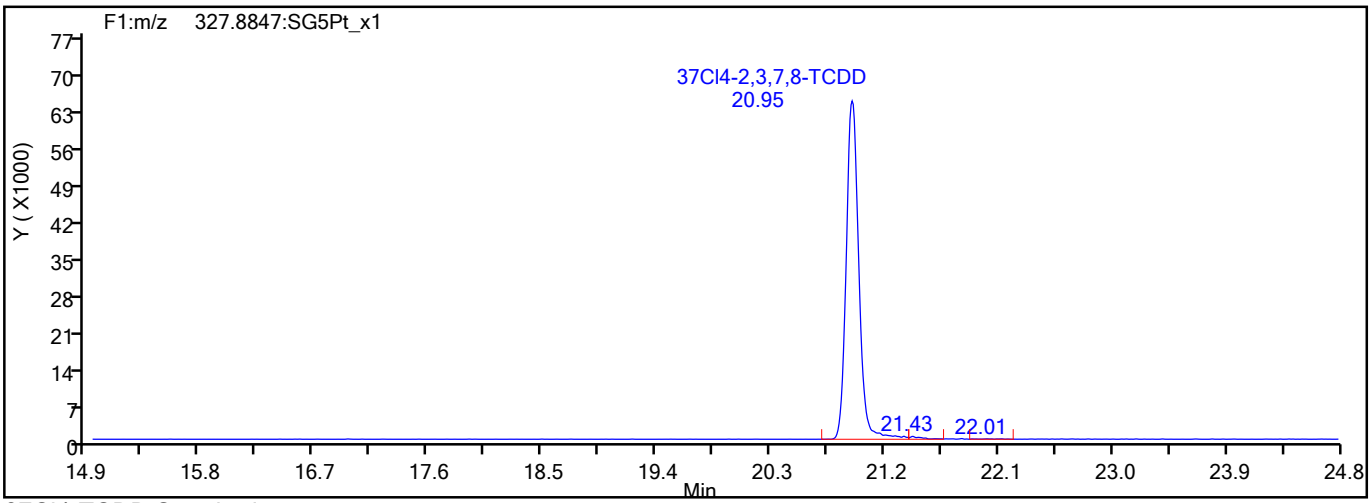

37Cl4-TCDD Standards

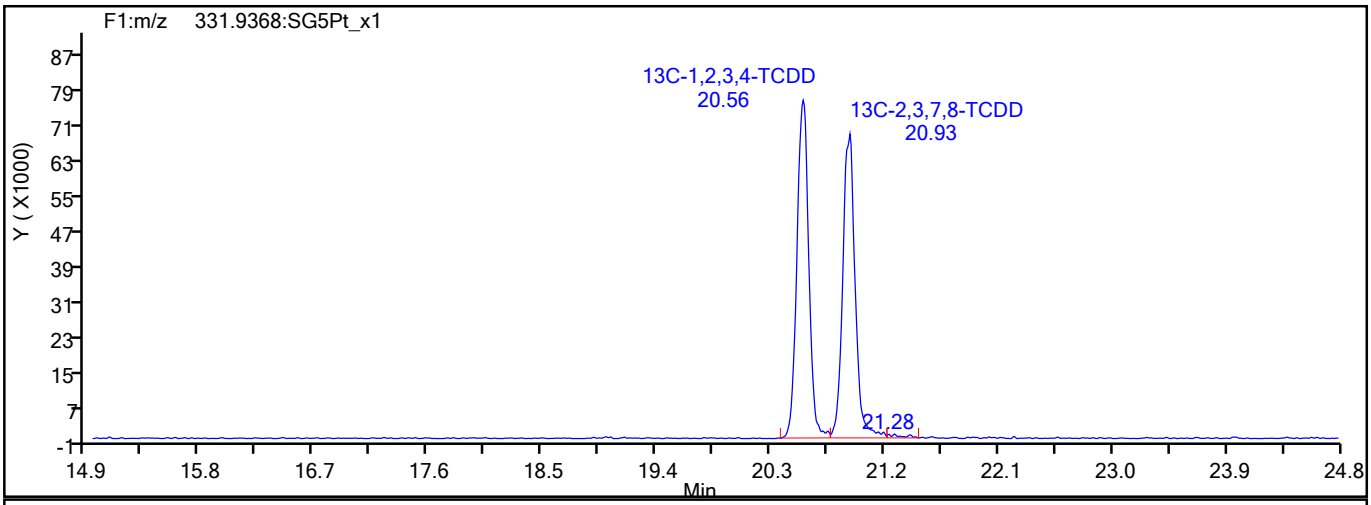

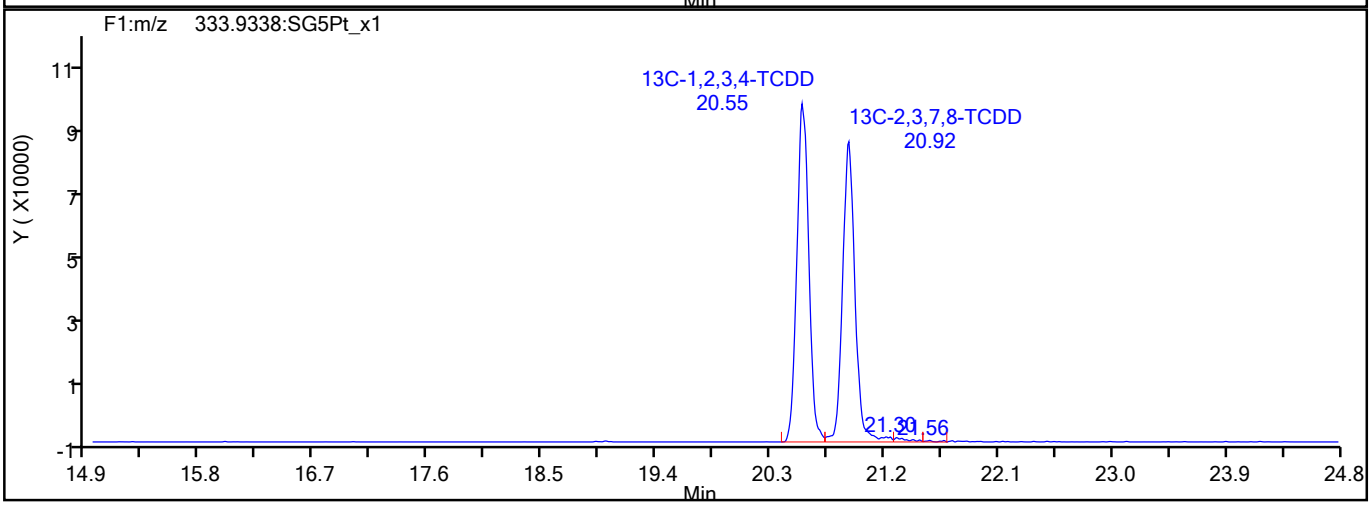

776720

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

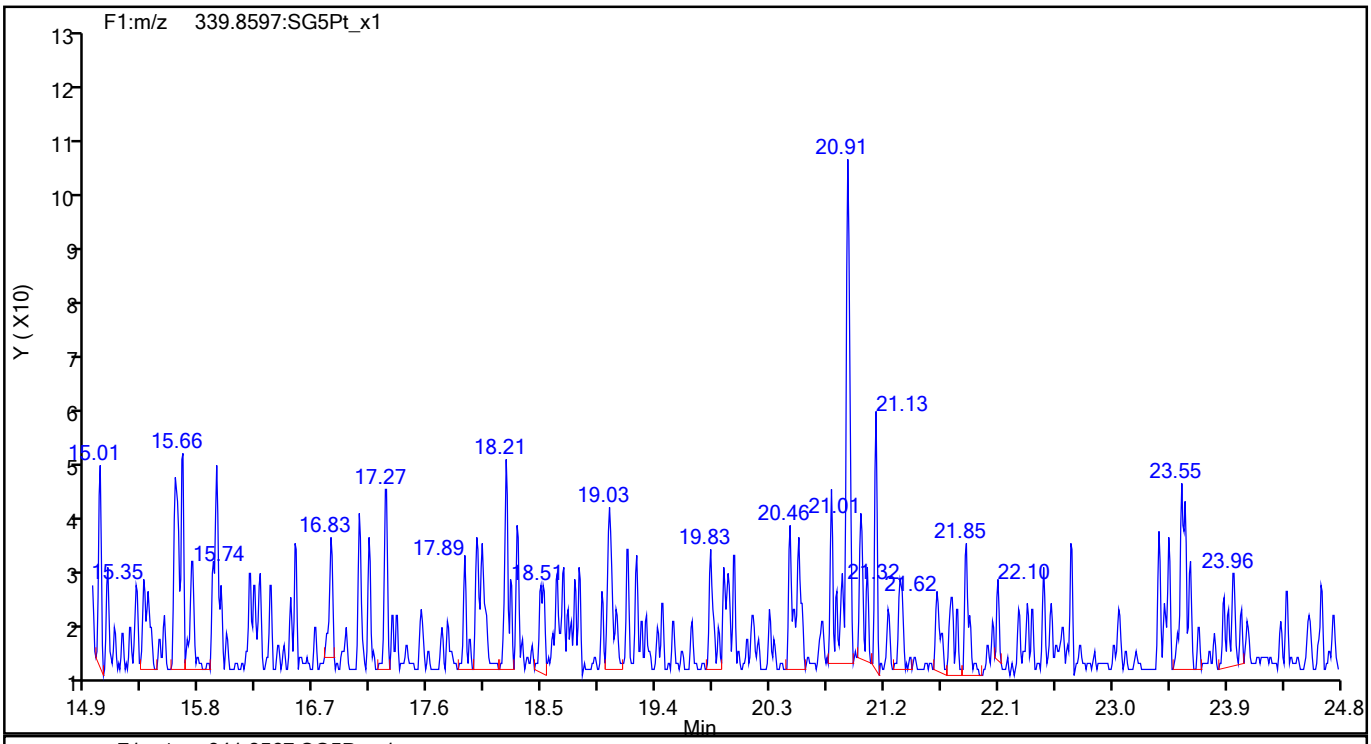

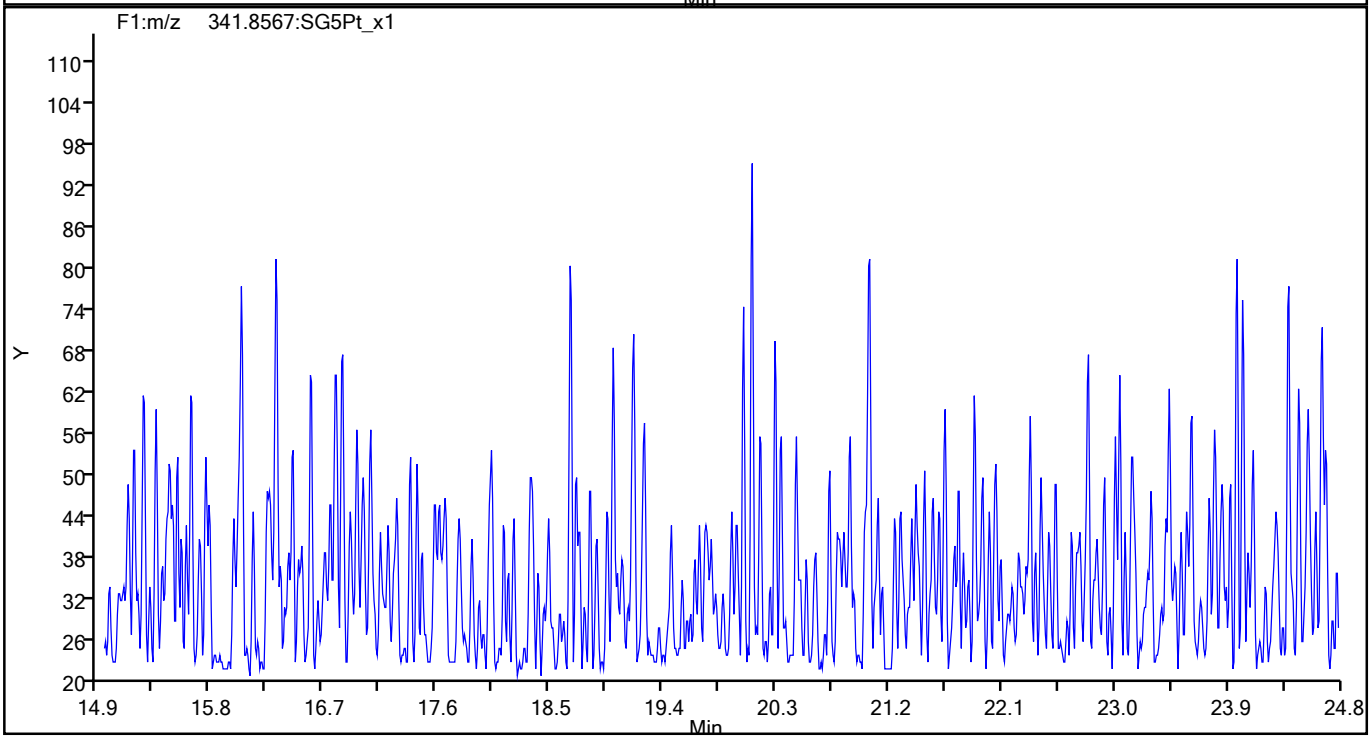

776721

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

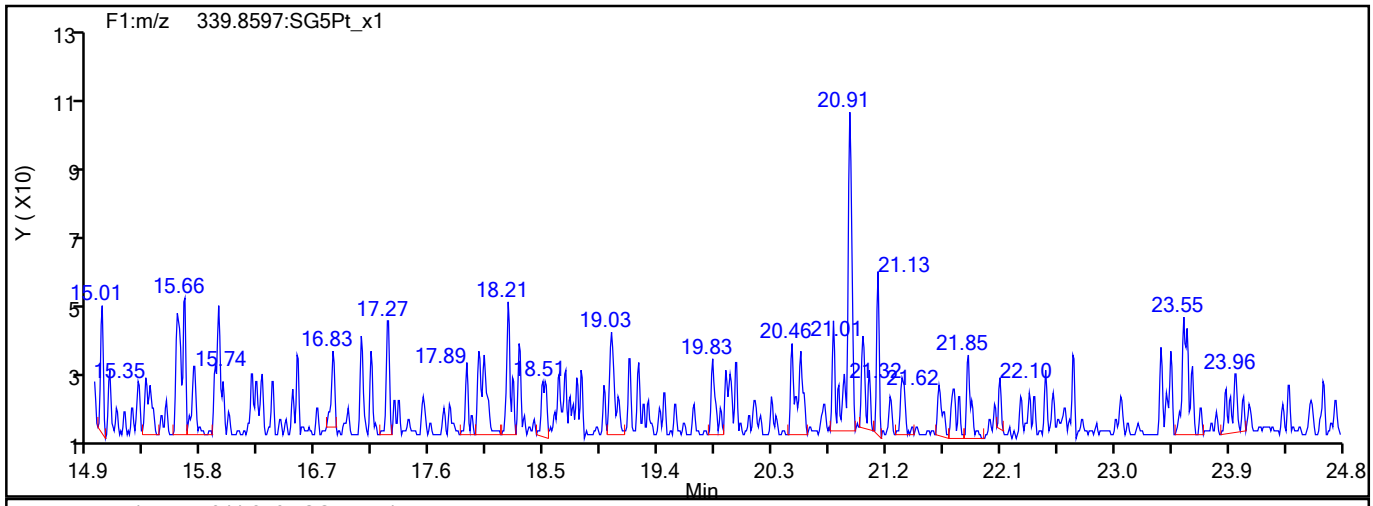

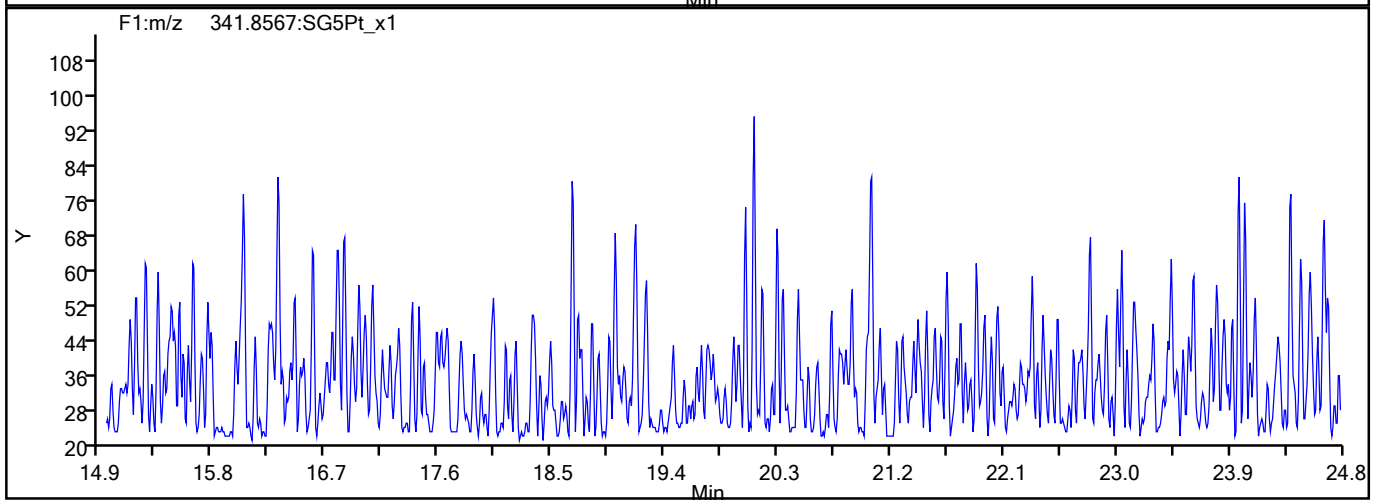

F1 PeCDFs Interference Mass

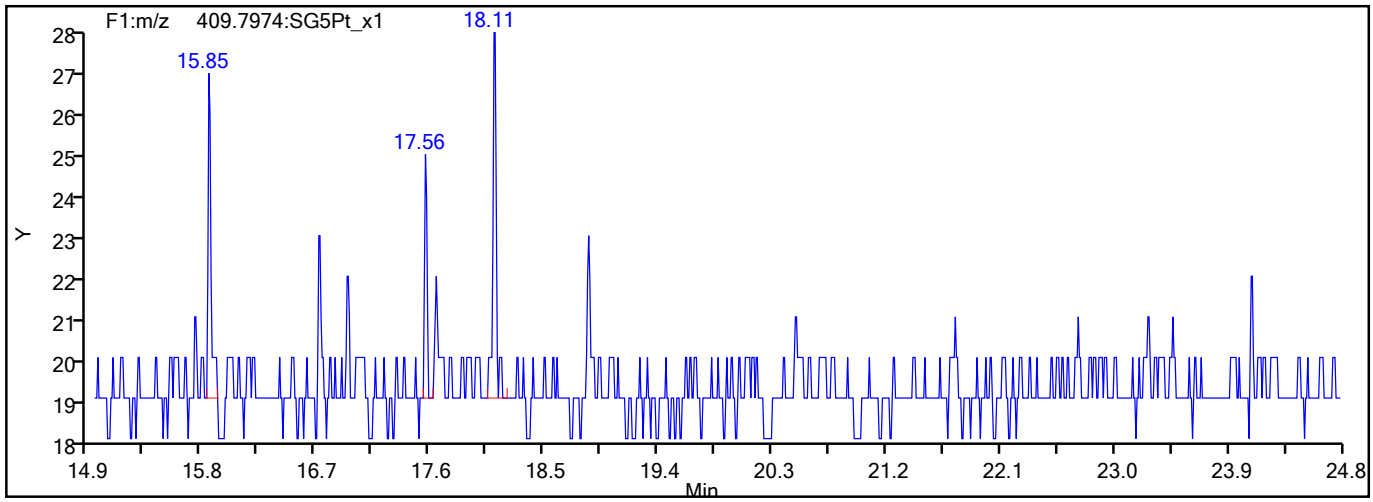

776722

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

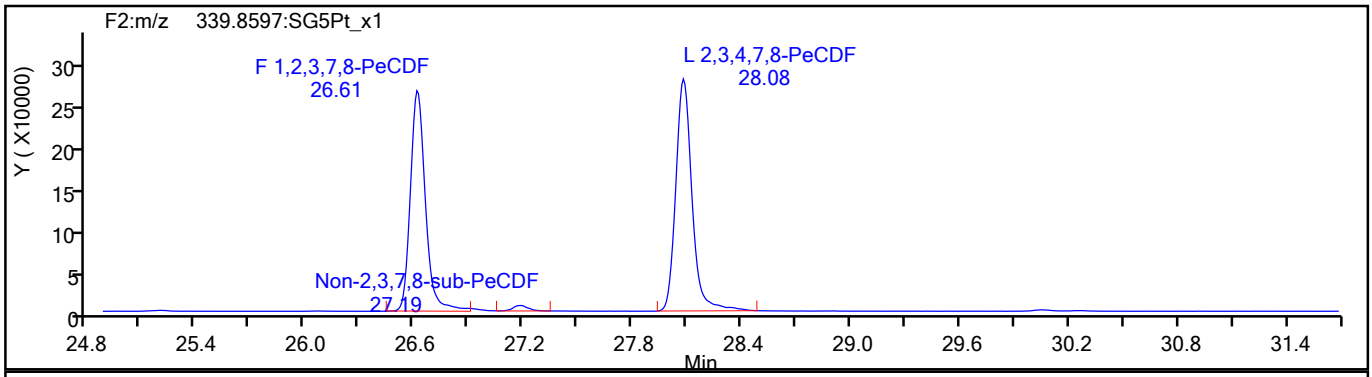

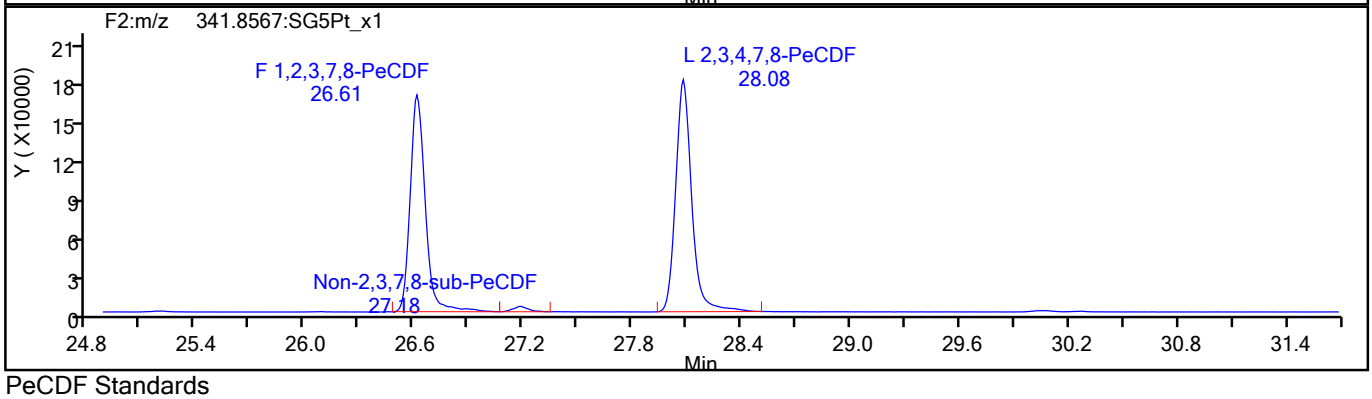

PeCDF Standards

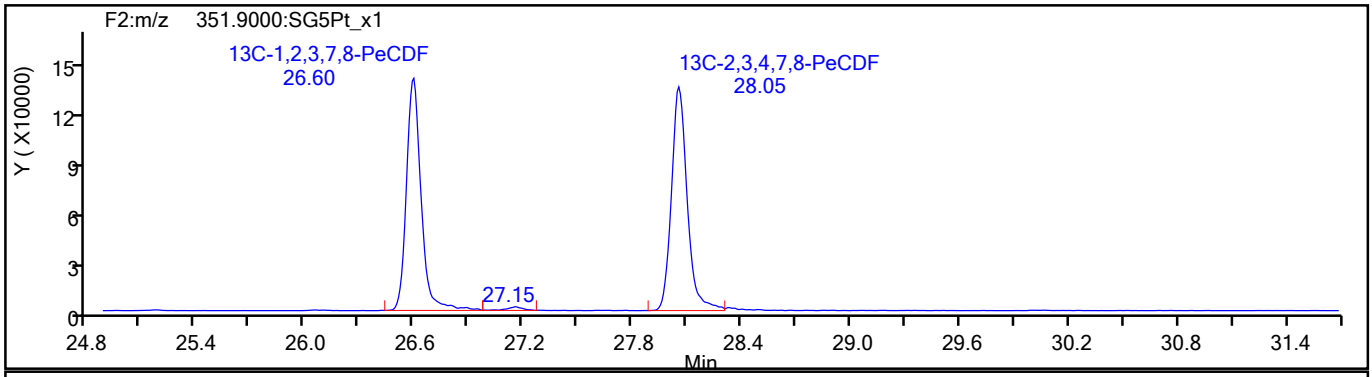

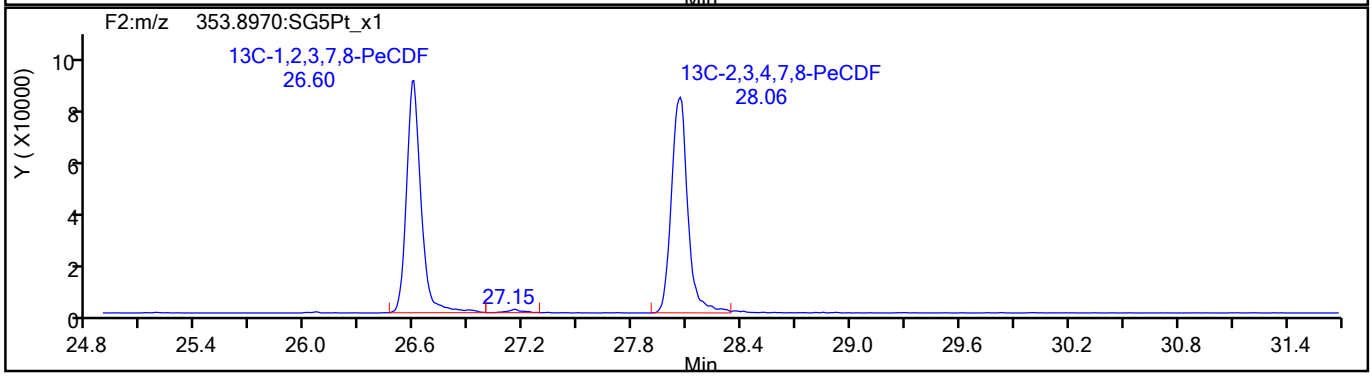

776723

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

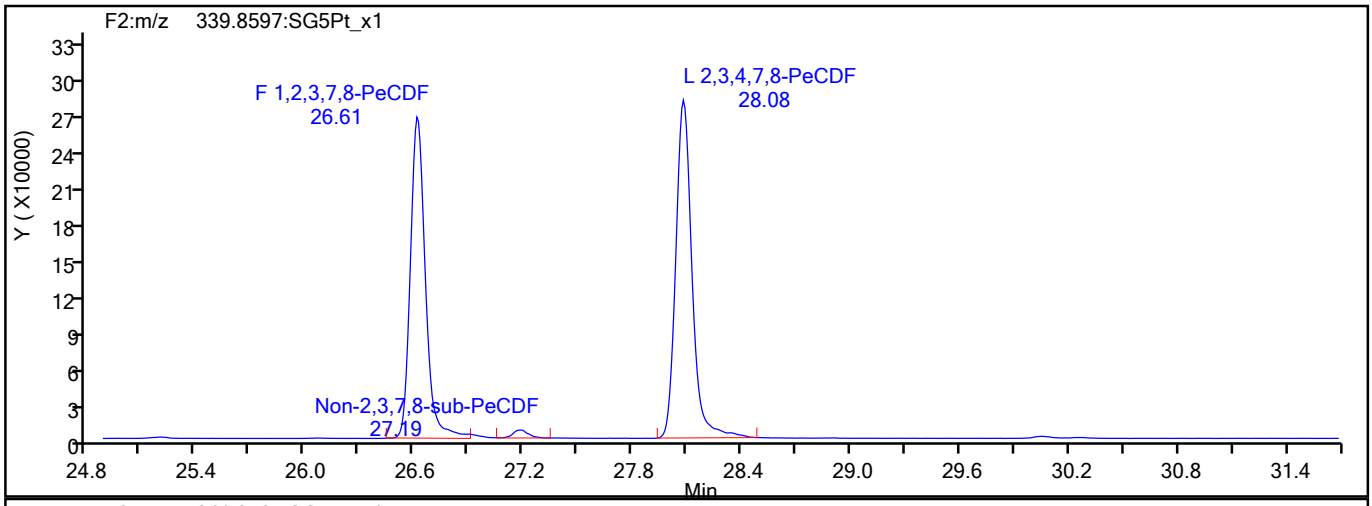

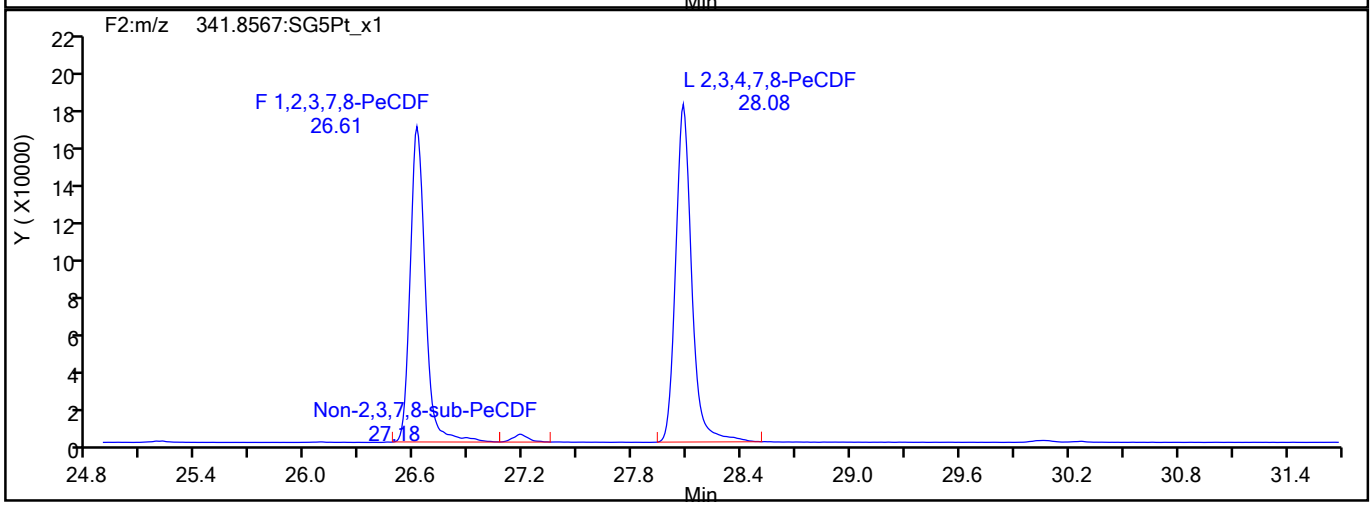

PeCDF Interference Mass

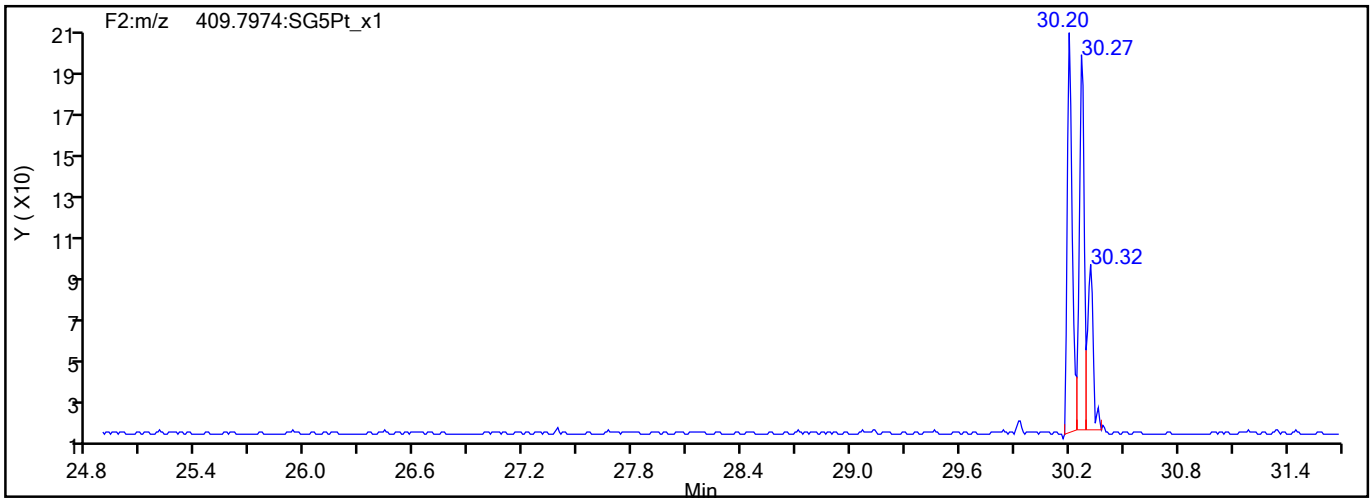

776724

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

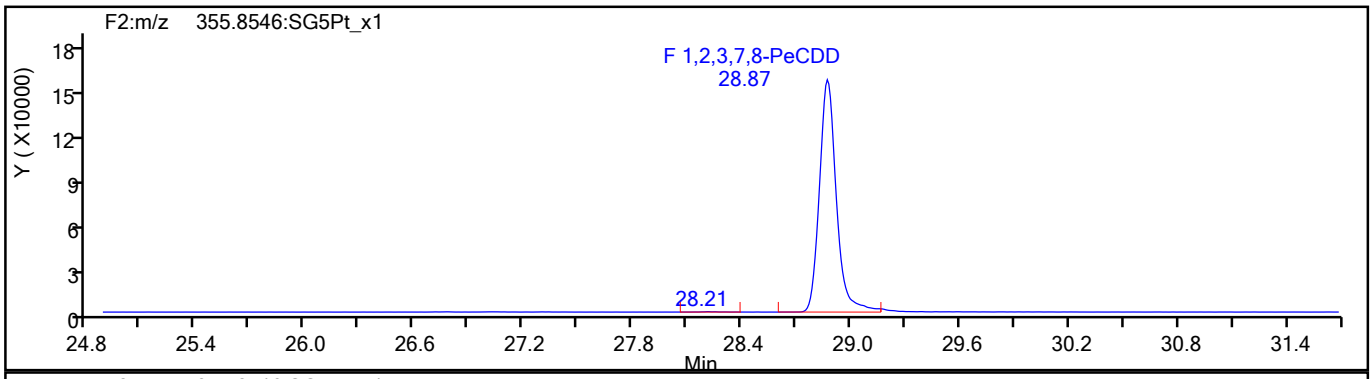

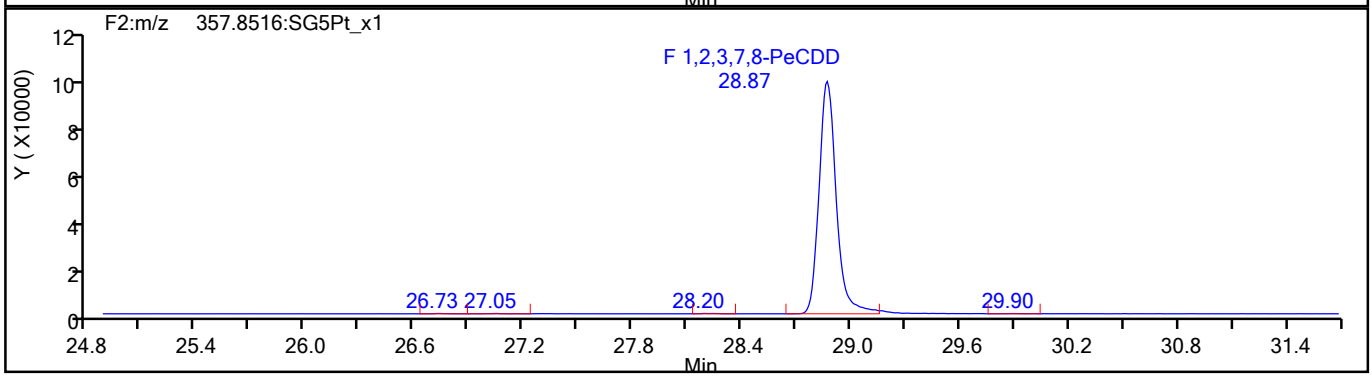

PeCDD Standards

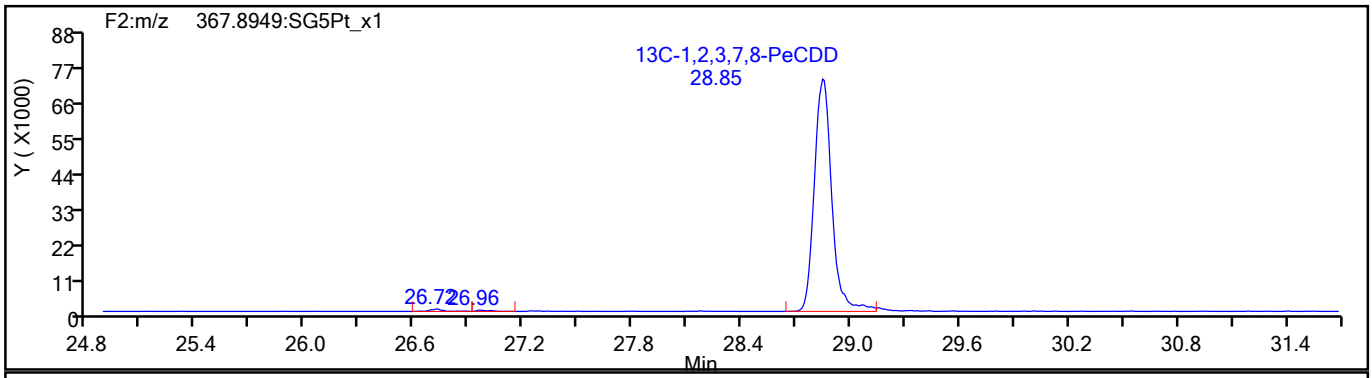

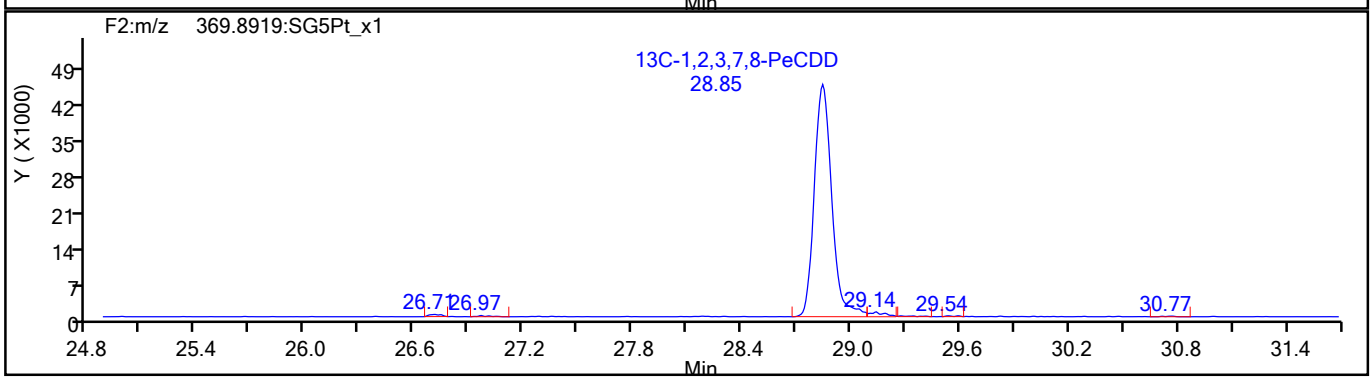

776725

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

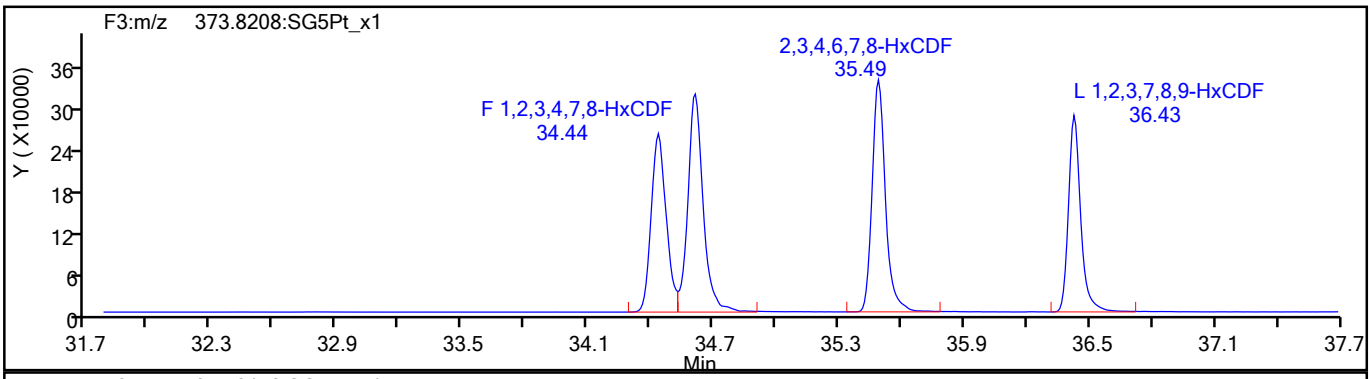

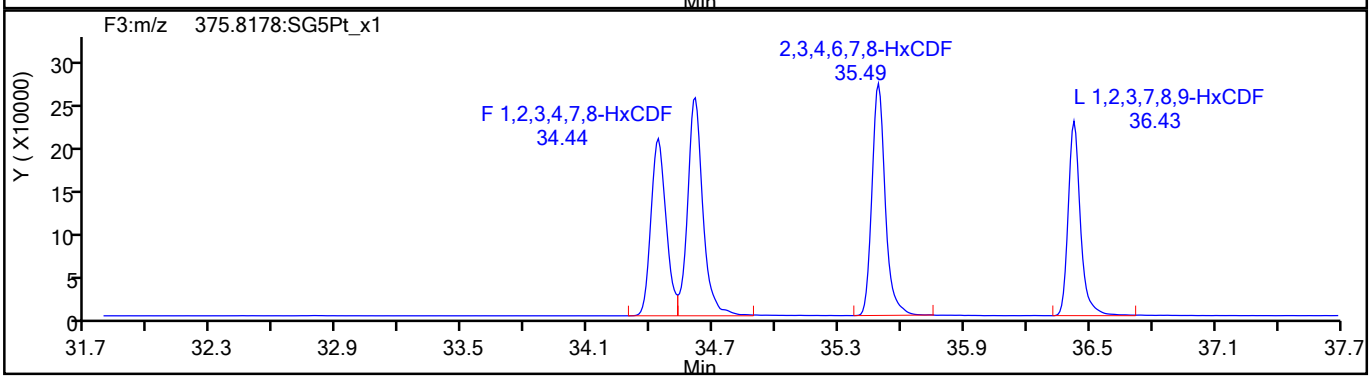

HxCDF Standards

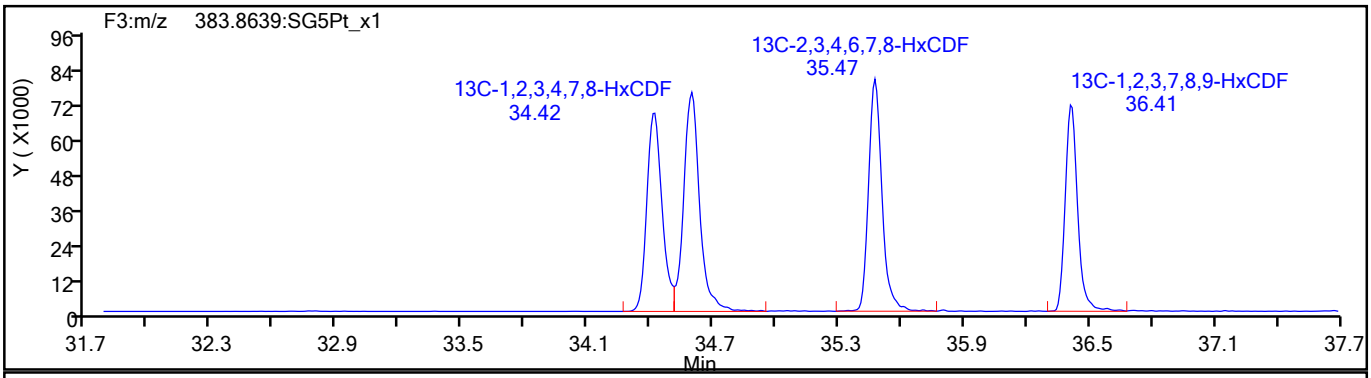

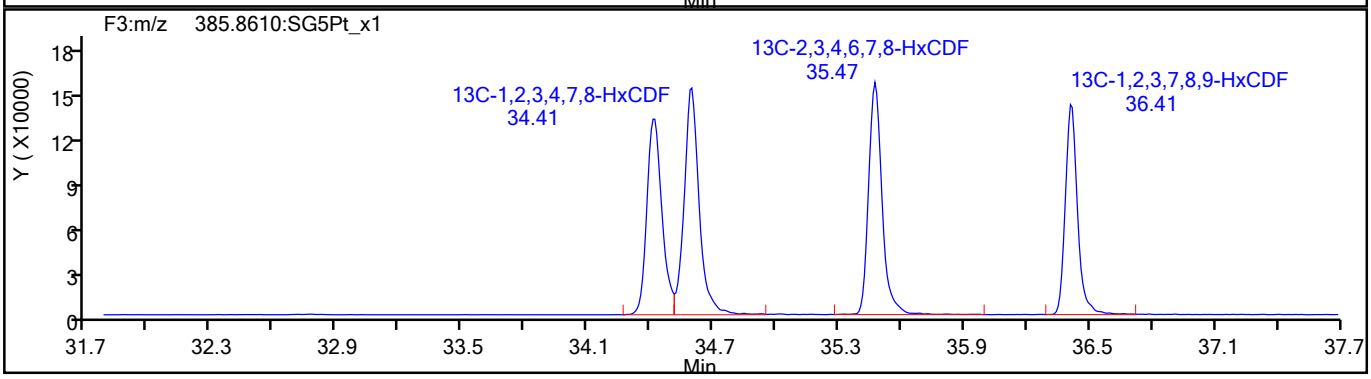

776726

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

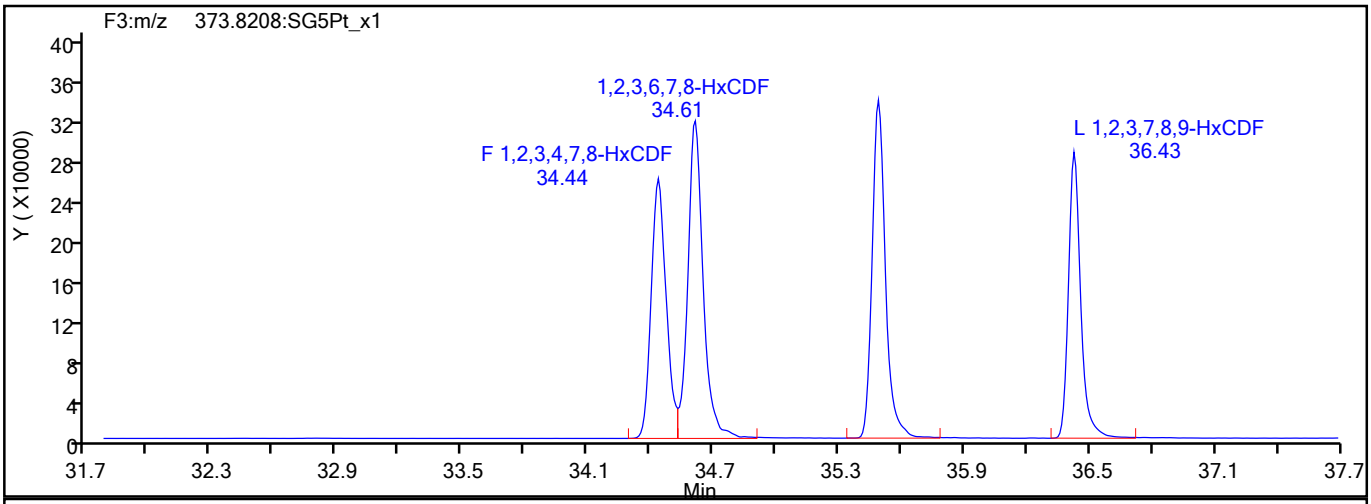

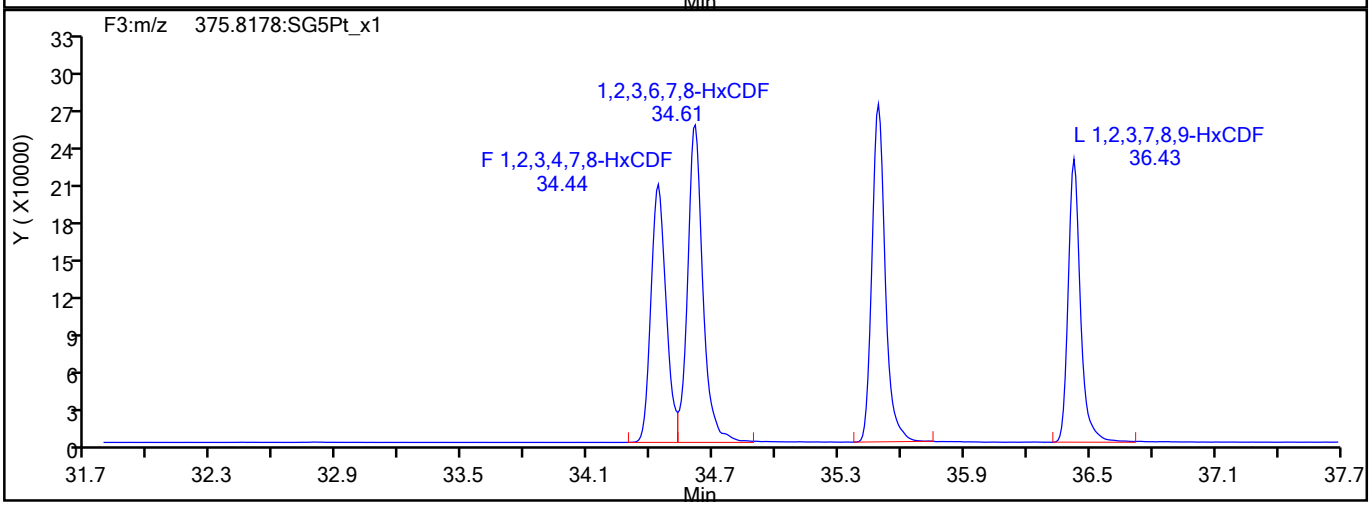

HxCDF Interference Mass

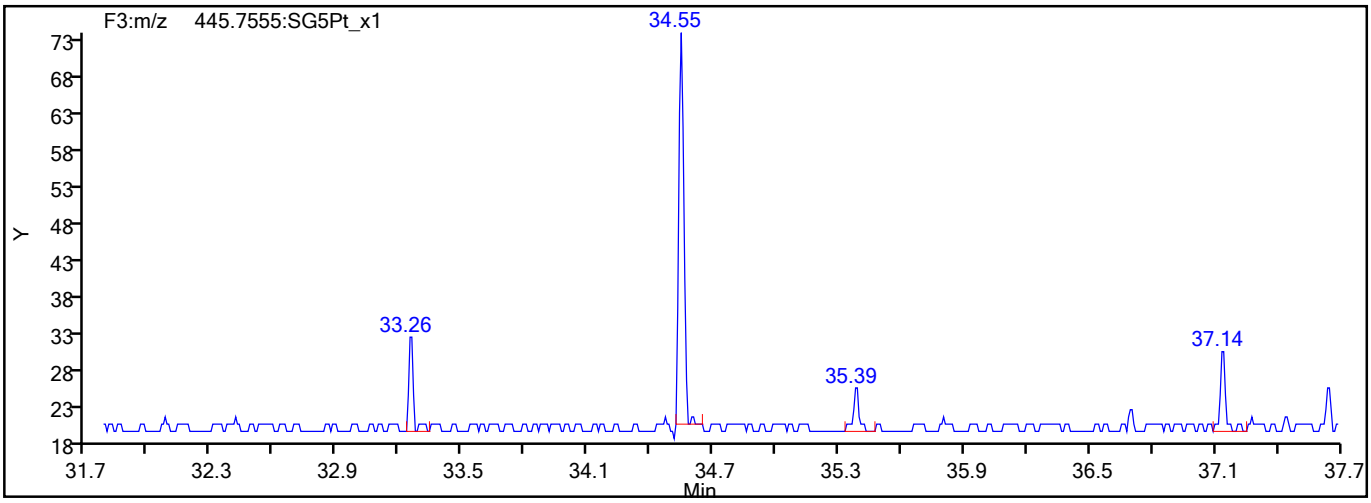

776727

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

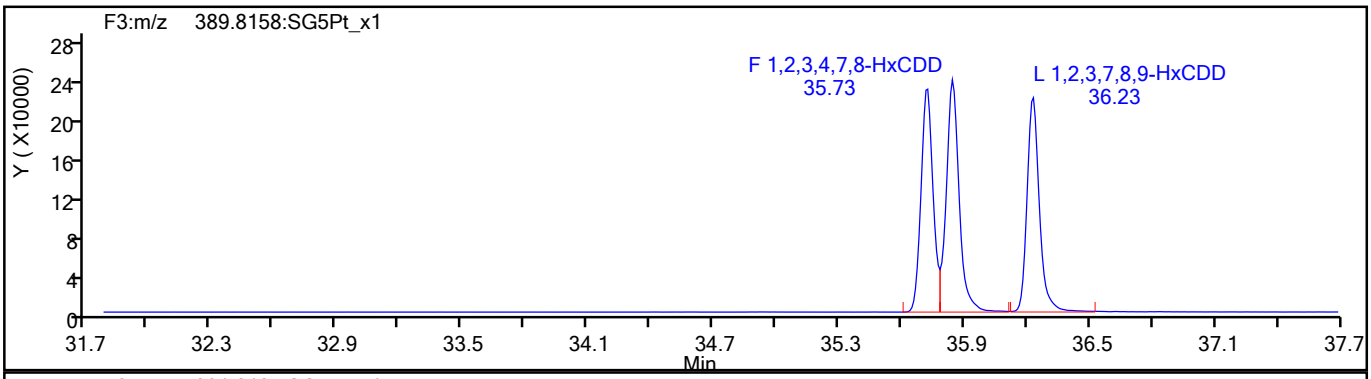

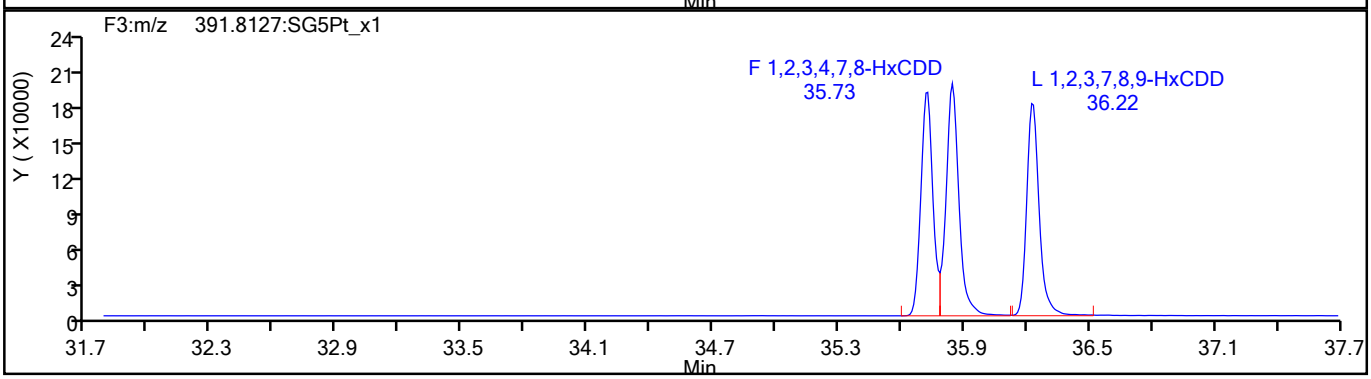

HxCDD Standards

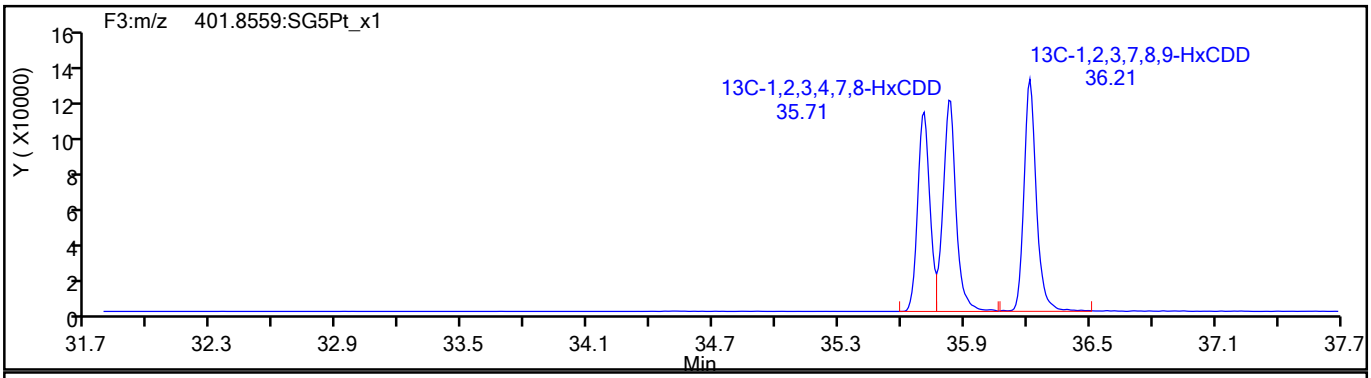

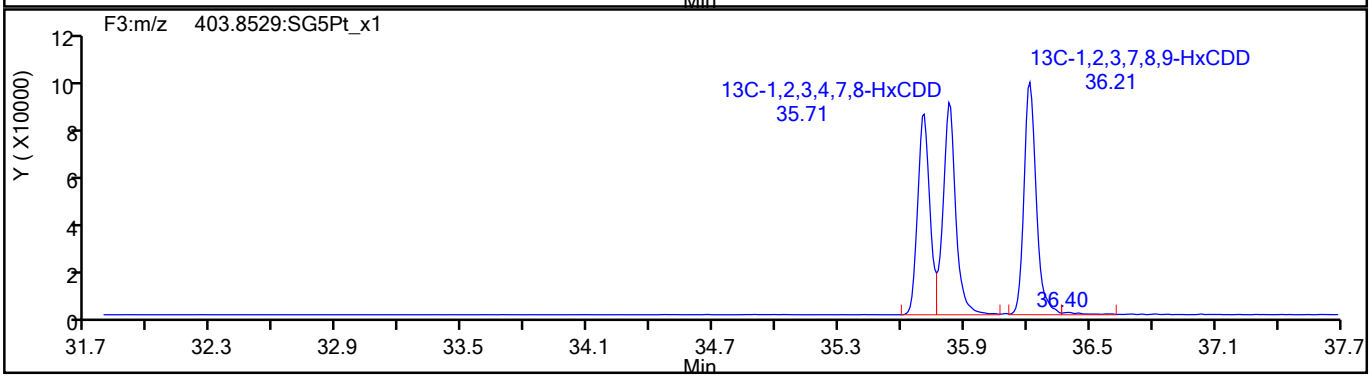

776728

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

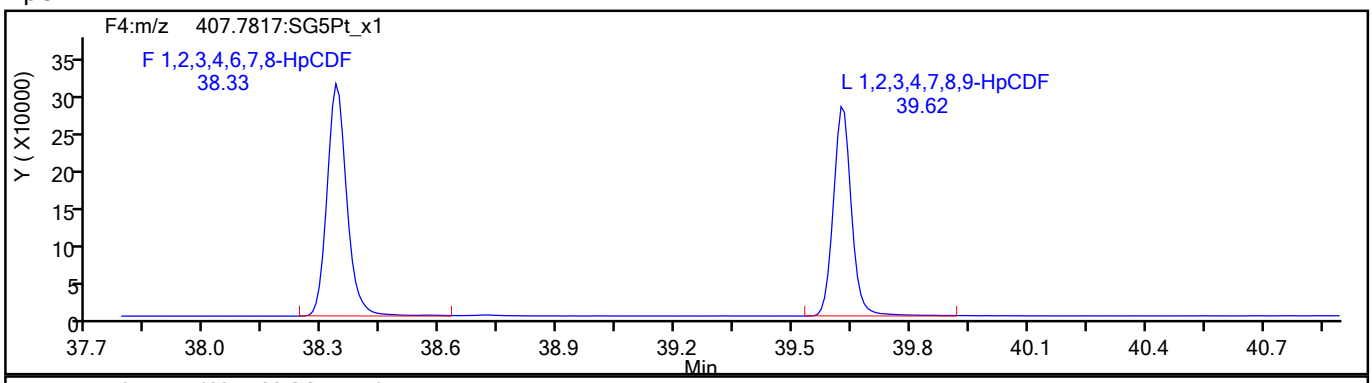

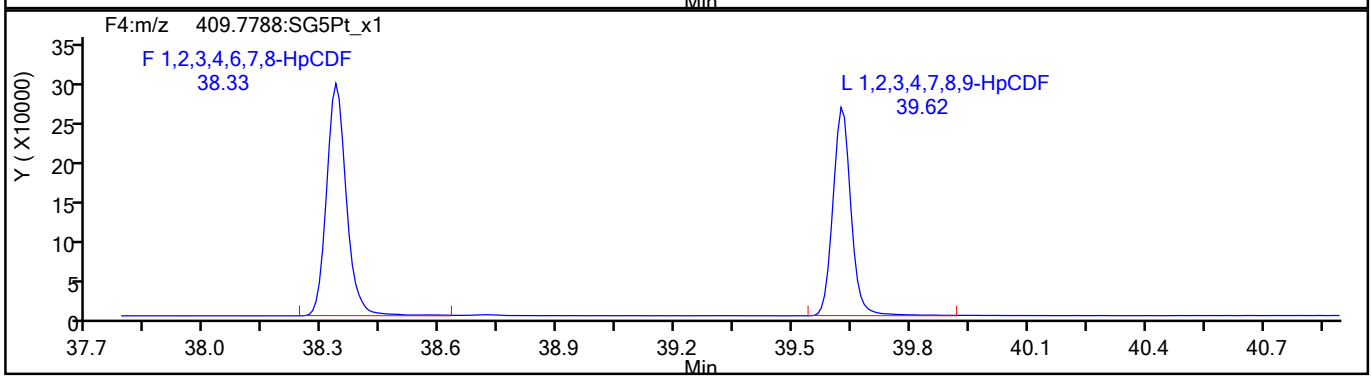

HpCDF Standards

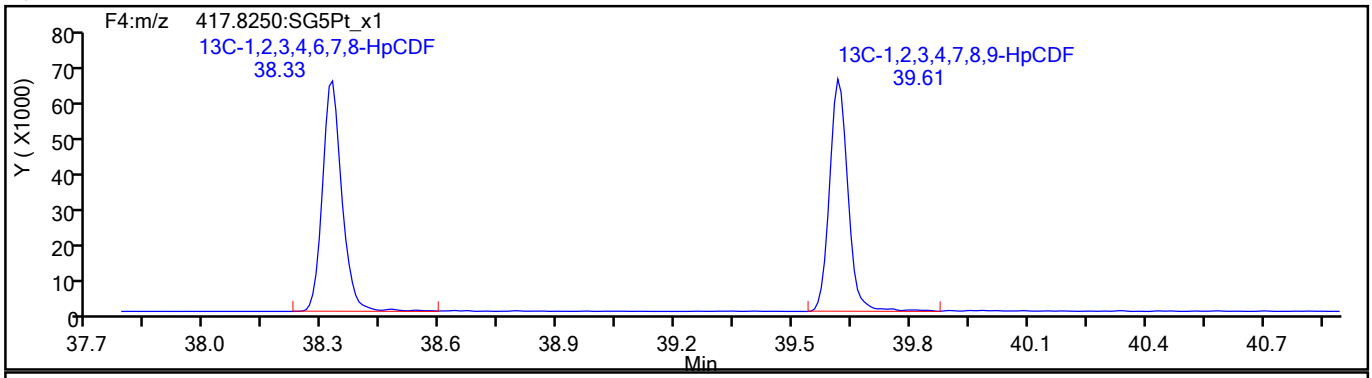

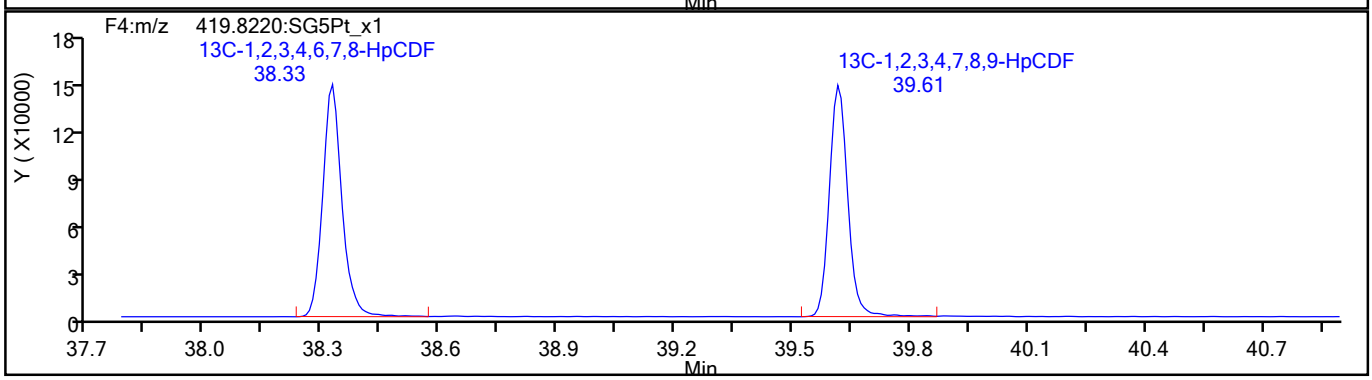

776729

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

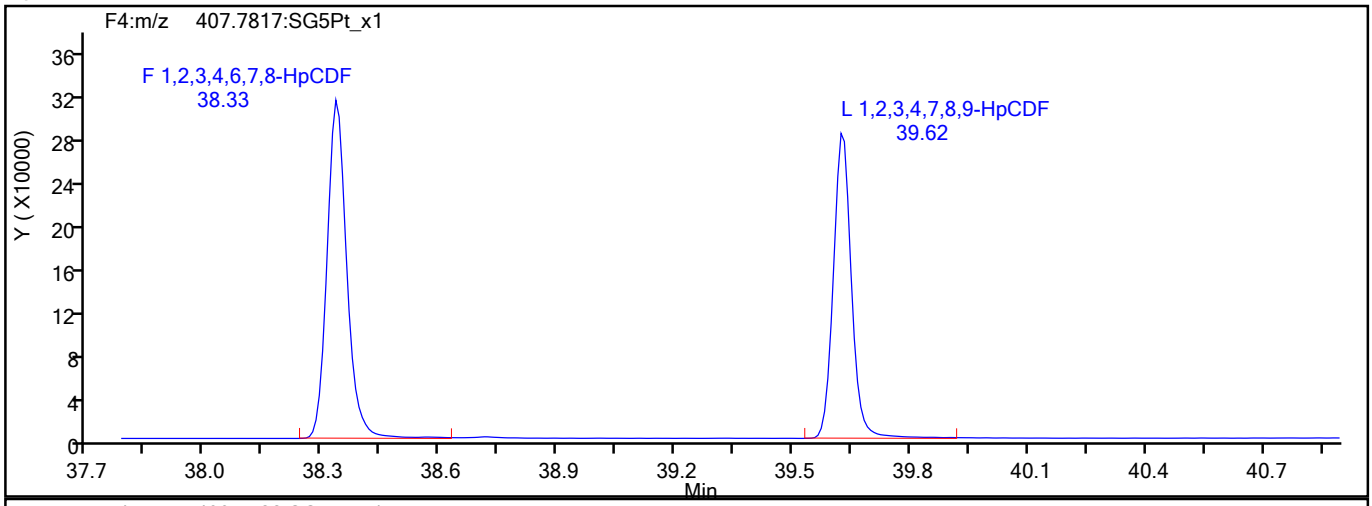

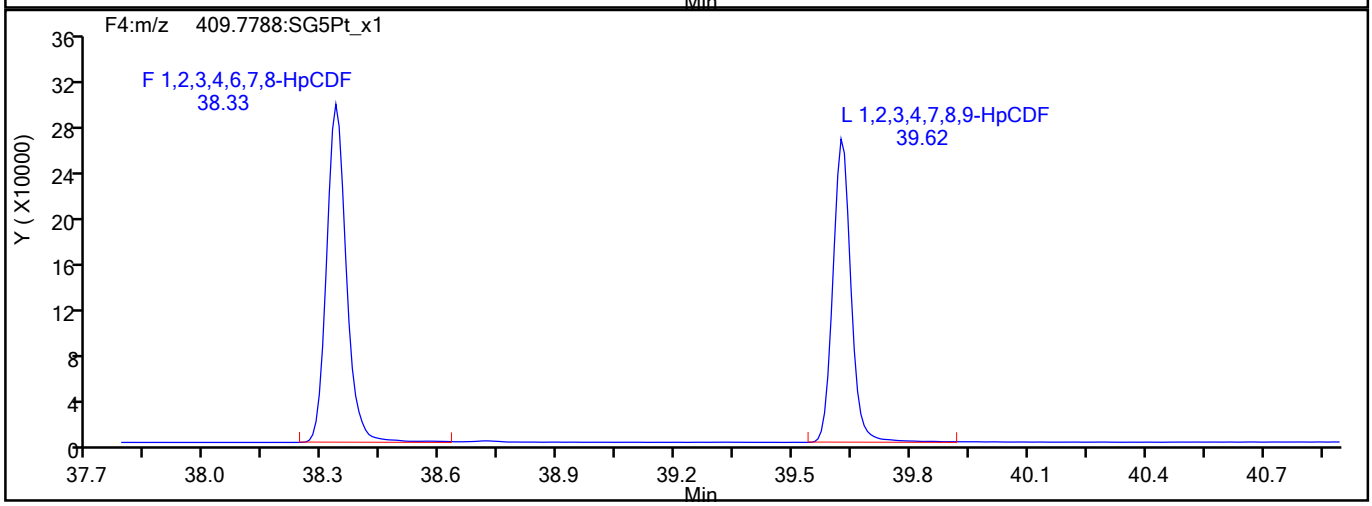

HpCDF Interference Mass

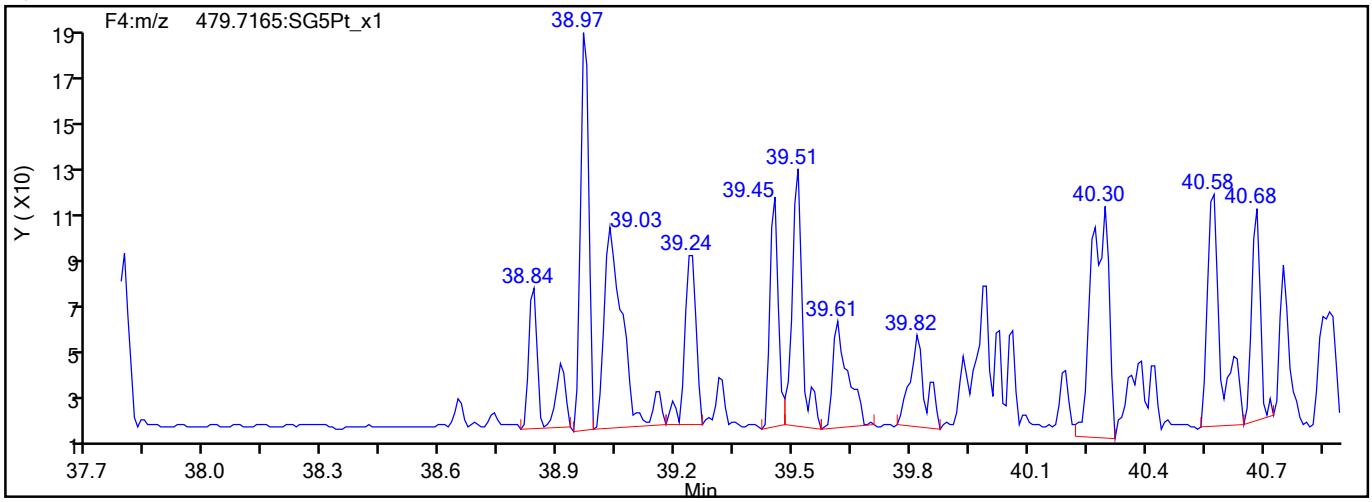

776730

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDD

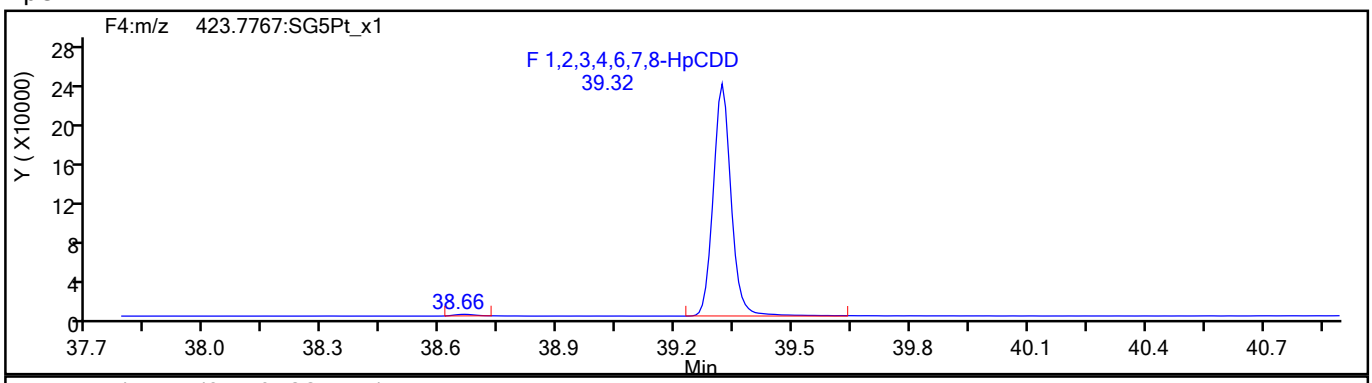

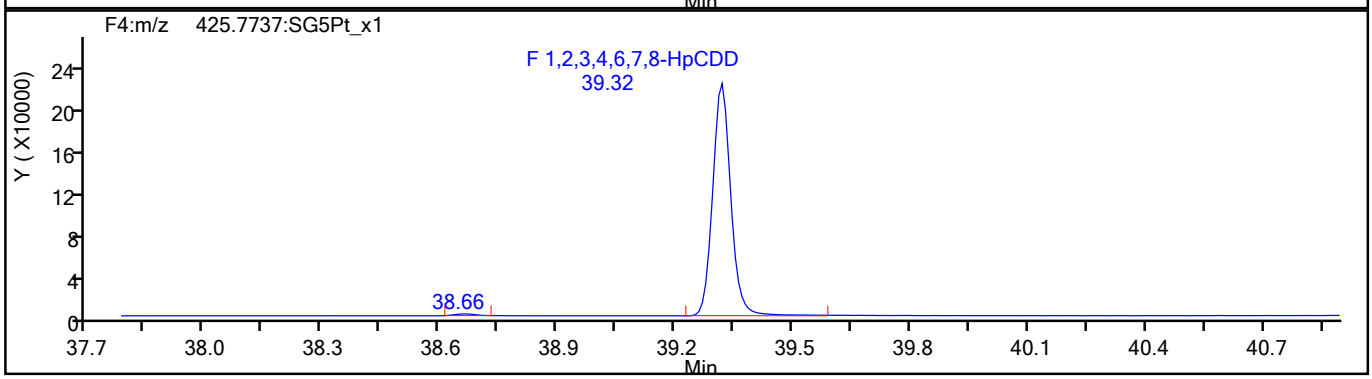

HpCDD Standards

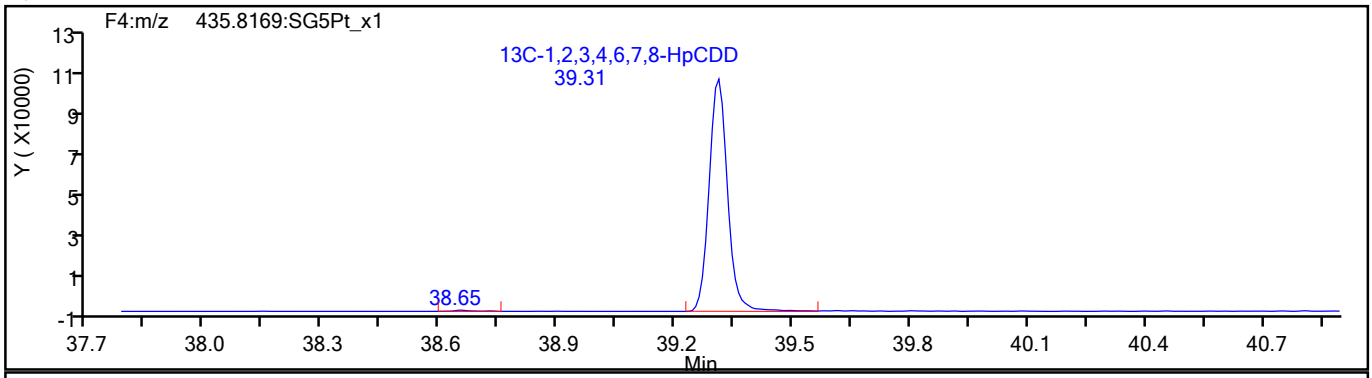

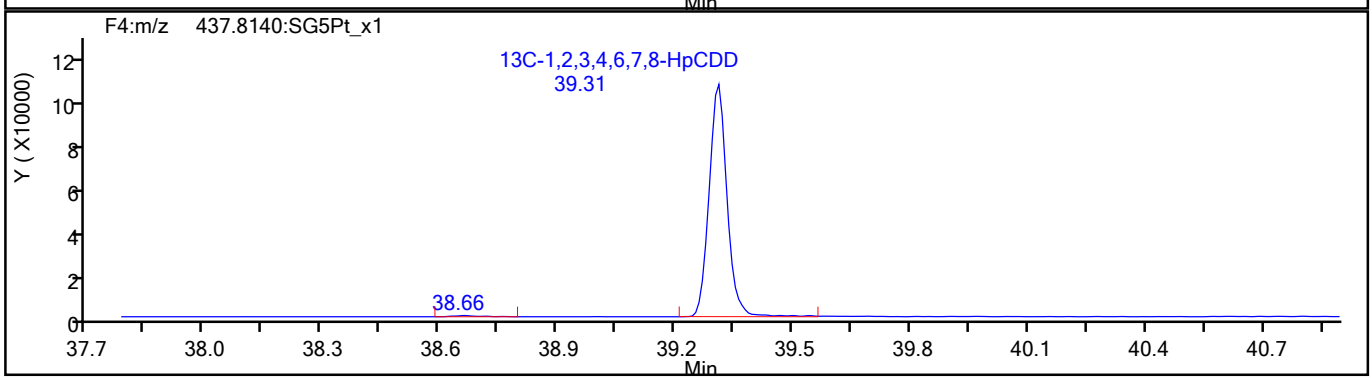

776731

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

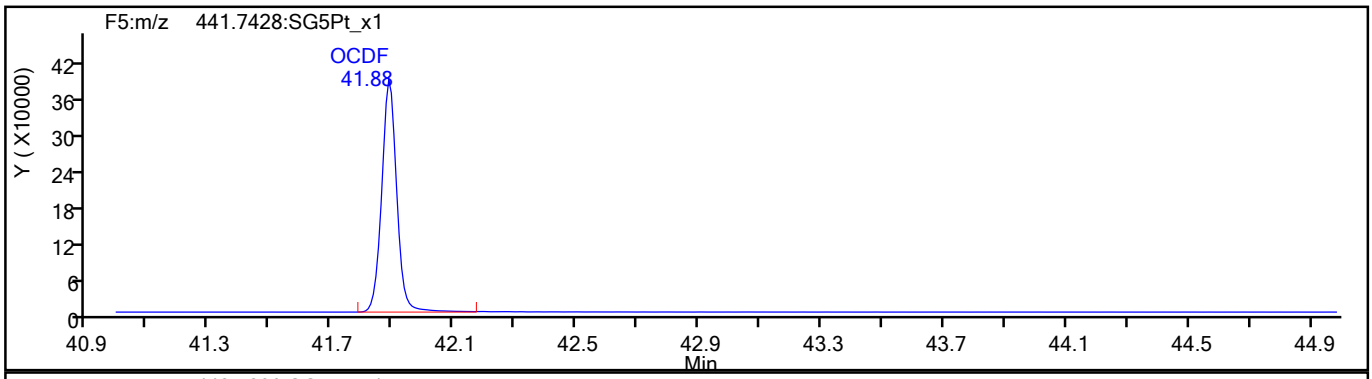

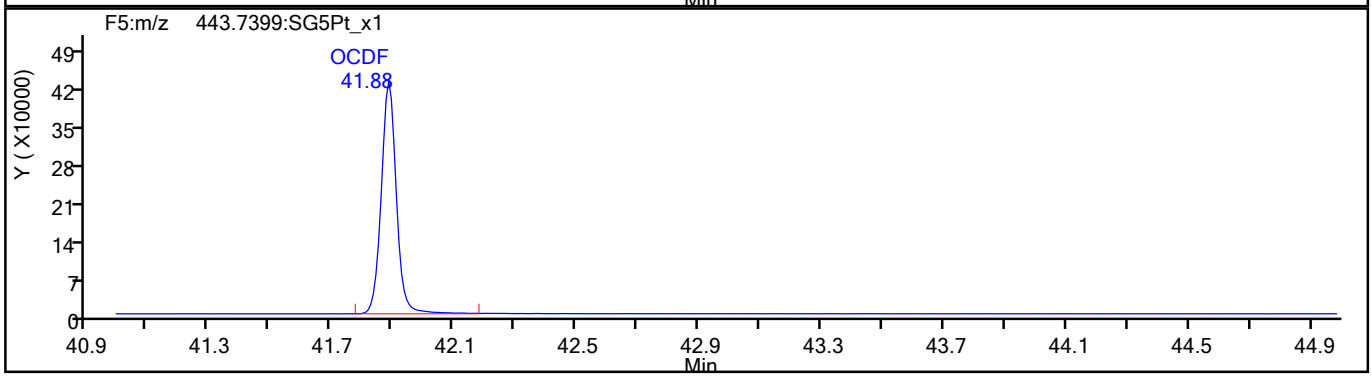

OCDF Standards

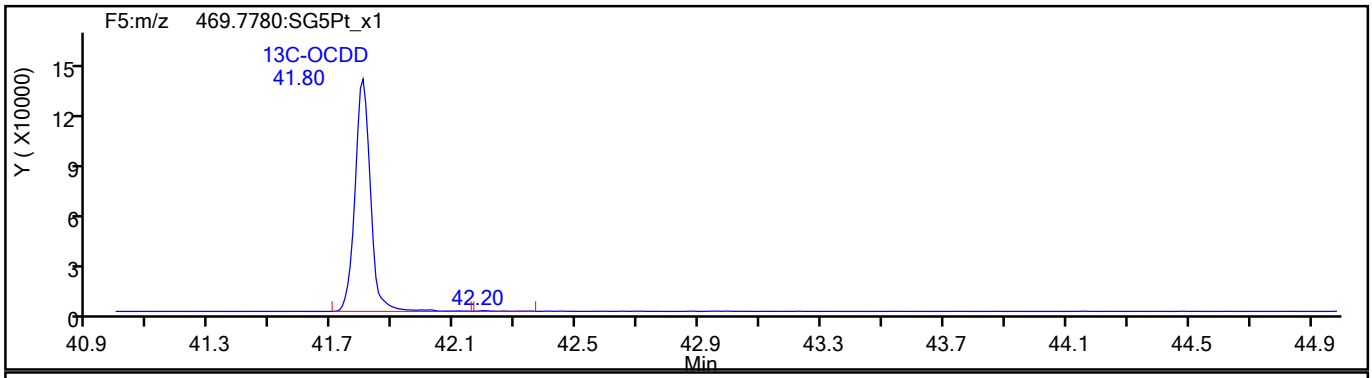

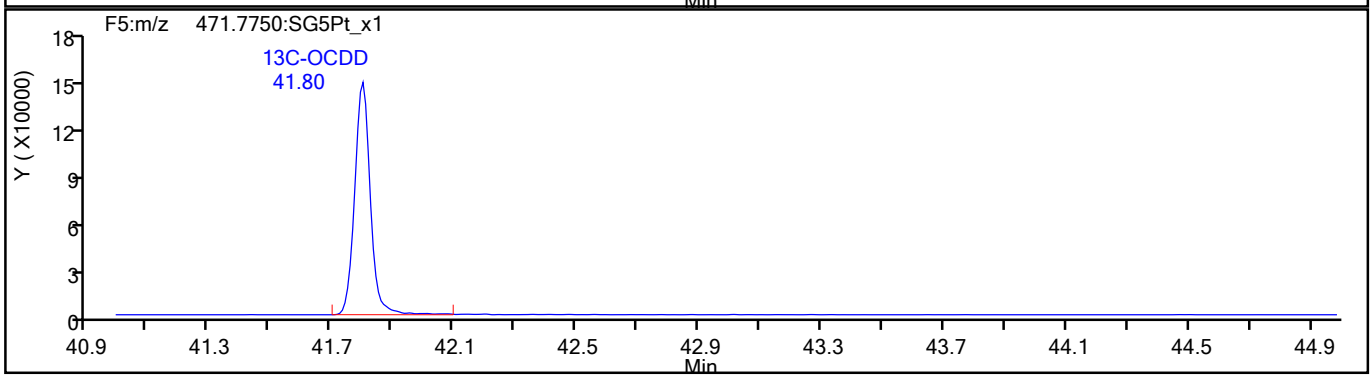

776732

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

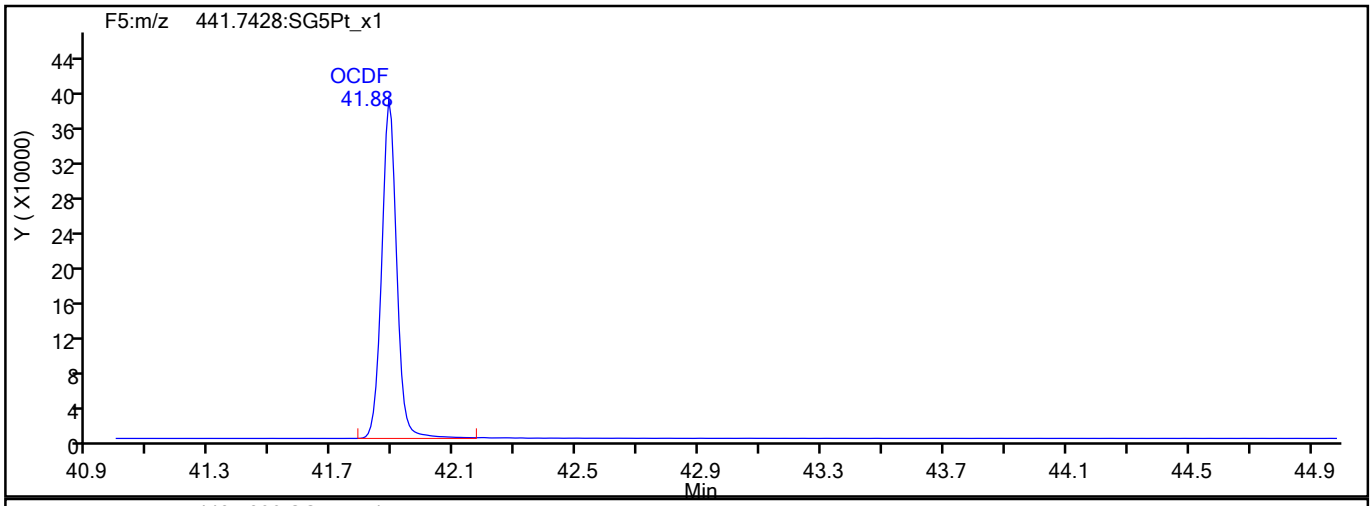

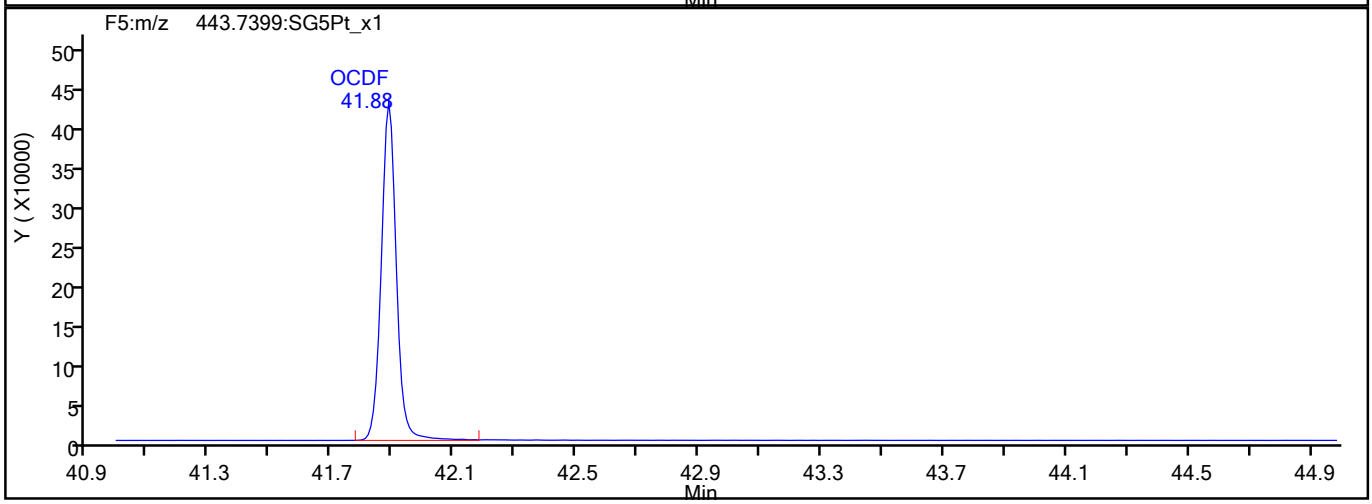

OCDF Interference Mass

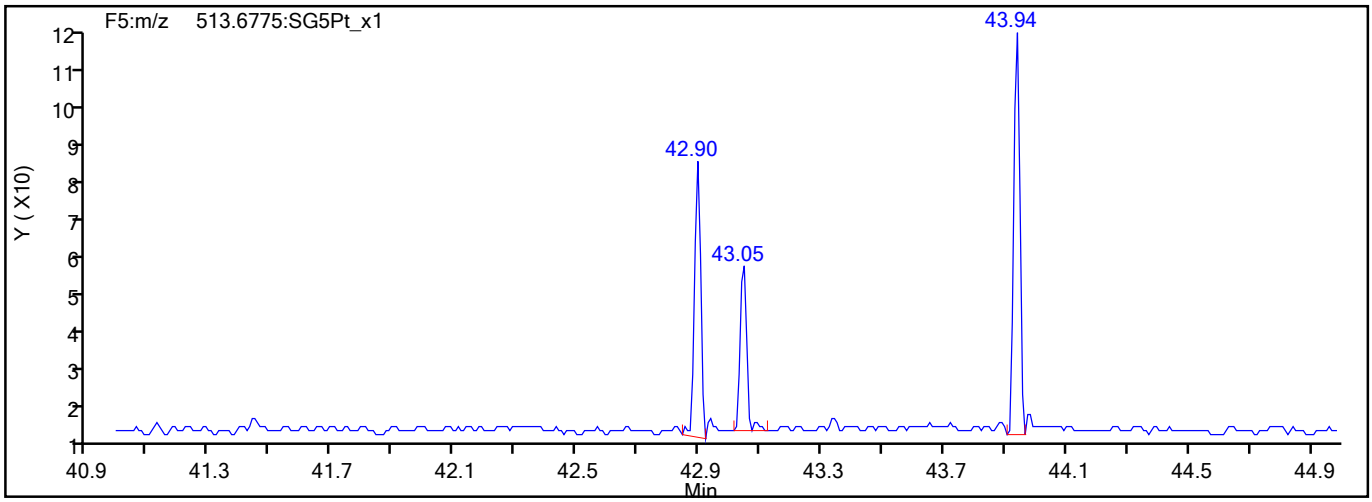

776733

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

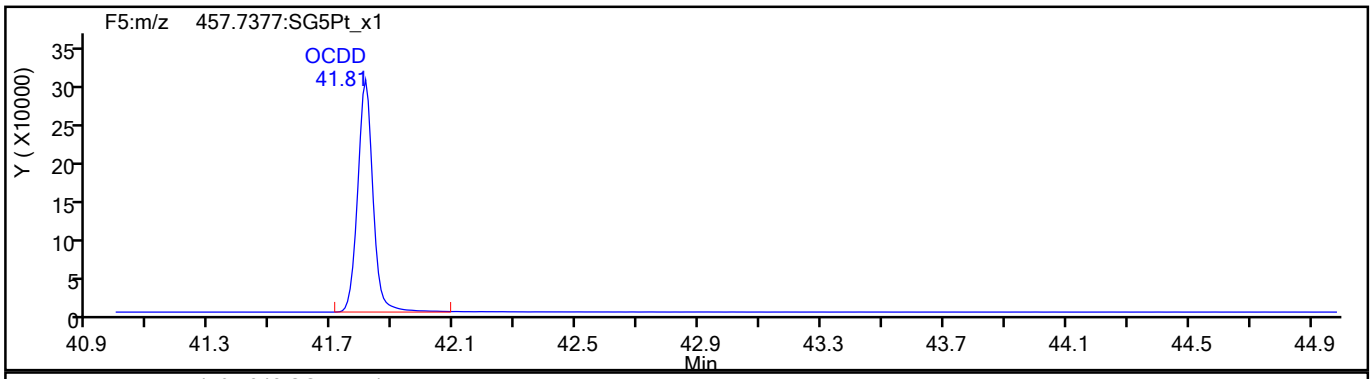

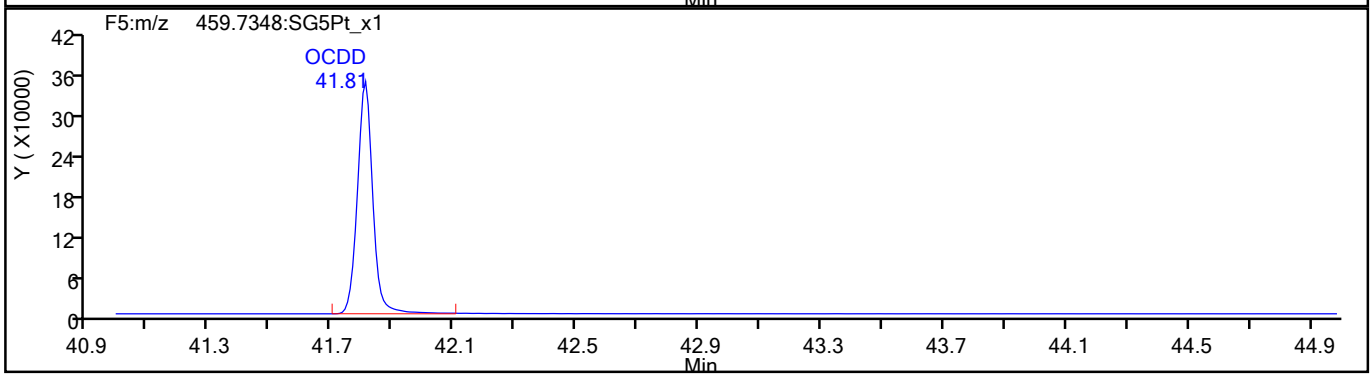

OCDD Standards

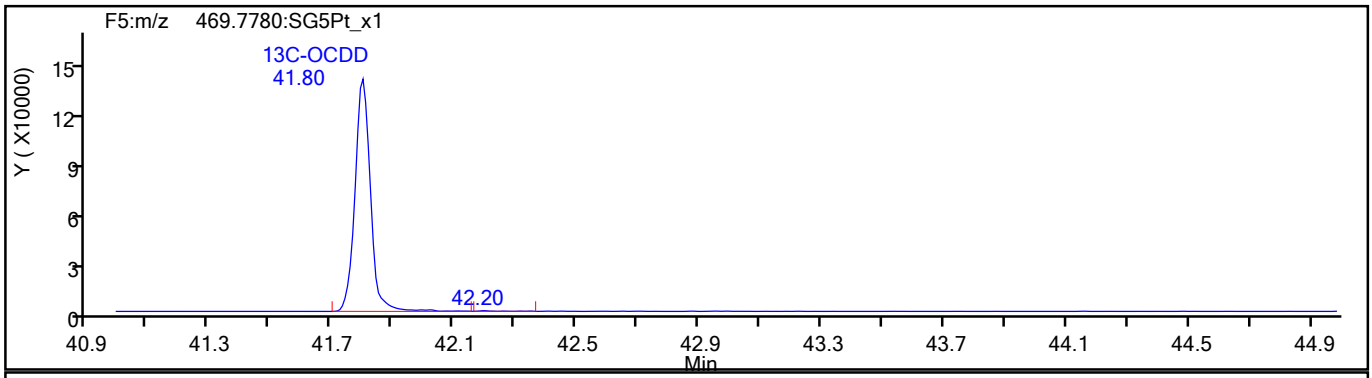

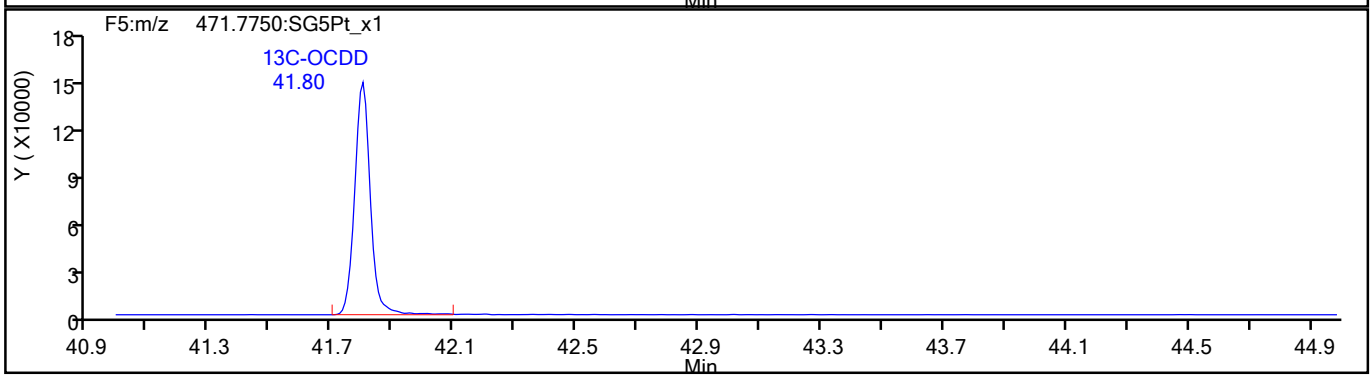

776734

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

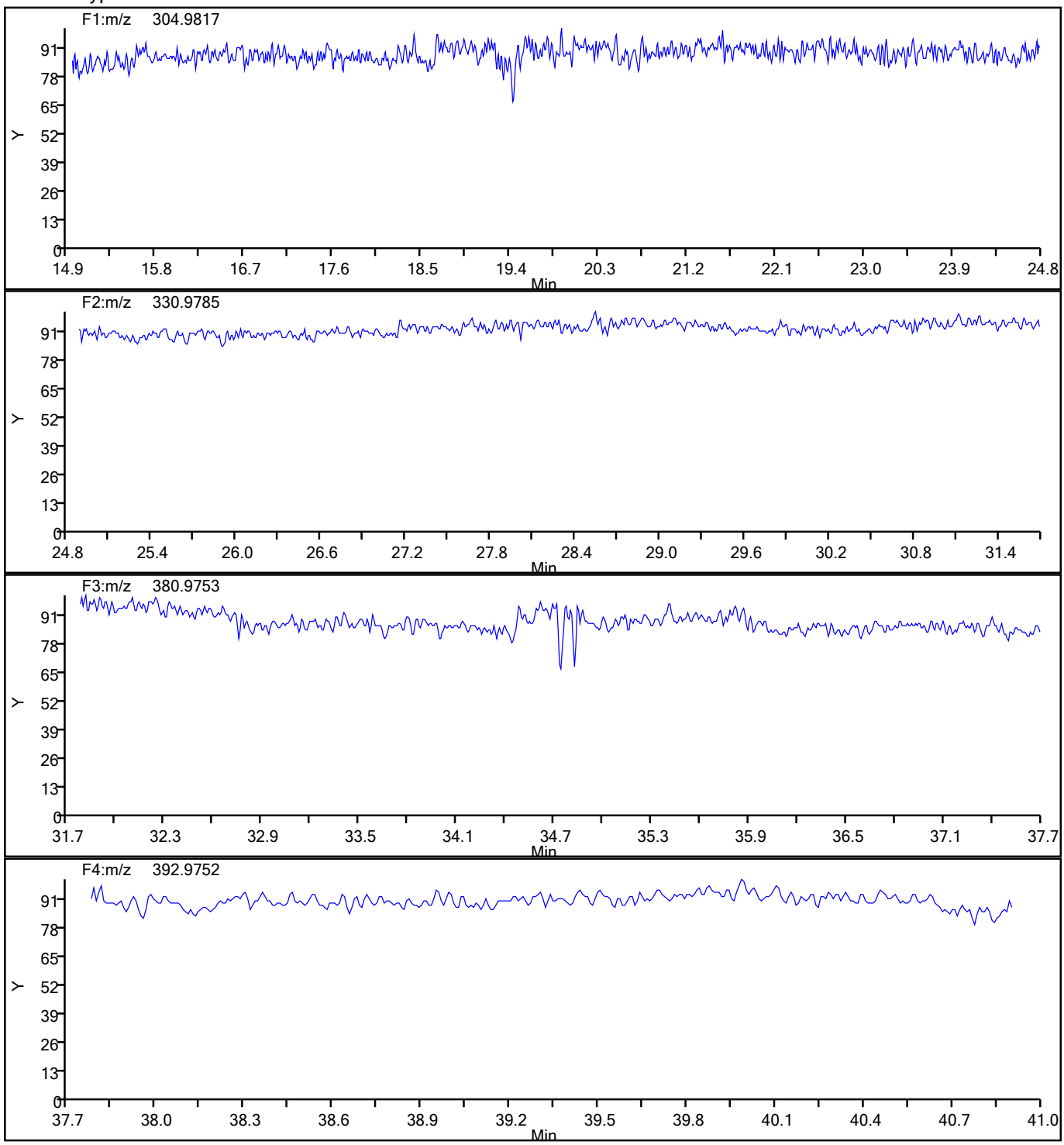

776735

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

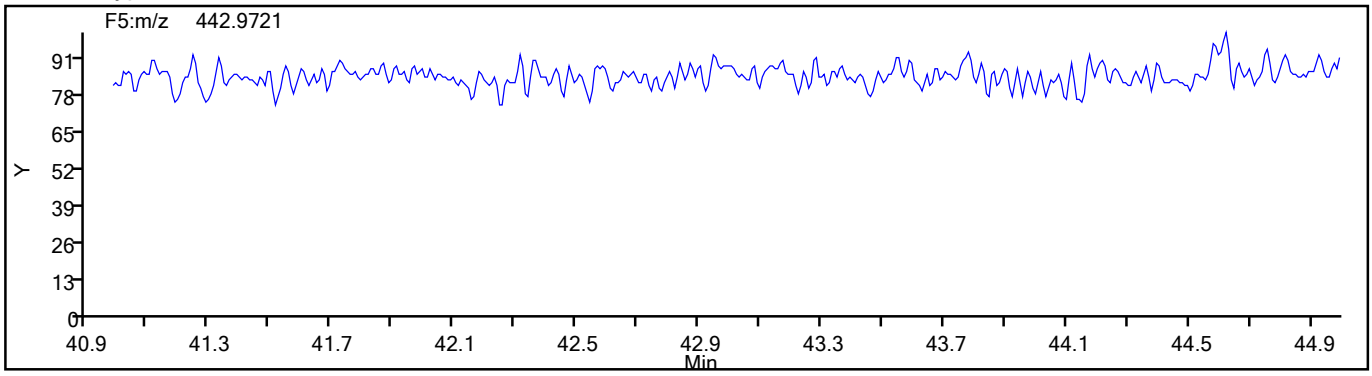

776736

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-517196/2 Calibration Date: 08/17/2021 15:14

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_3.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.077		9.97	10.0	100	84-120
2,3,7,8-TCDD	AveID	1.075	0.9913		9.22	10.0	92	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.070		50.8	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9639		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.056		50.5	50.0	101	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.128		49.1	50.0	98	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.287		52.8	50.0	106	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.292		53.2	50.0	106	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	1.011		47.7	50.0	95	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9724		48.9	50.0	98	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.091		49.2	50.0	98	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.320		53.2	50.0	106	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.363		47.2	50.0	94	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.056		50.3	50.0	101	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.271		48.6	50.0	97	86-116
OCDD	AveID	1.062	1.047		98.6	100	99	79-126
OCDF	AveID	1.317	1.405		107	100	107	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.353		101	100	101	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9742		105	100	105	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.209		106	100	106	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.245		111	100	111	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7328		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.102		114	100	114	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.114		104	100	104	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.089		105	100	105	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7976		105	100	105	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9094		106	100	106	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.082		111	100	111	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.9310		127	100	127	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.8156		121	100	121	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.8837		129	100	129	77-129
13C-OCDD	Ave	0.5446	0.7572		278	200	139	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.015		10.1	10.0	101	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	17AU21DFS1_1	Resolution Check	RC 081721	46			KSS	1.000	
2	17AU21DFS1_2	WDM HRDXNCP_00044	WDM 081721	1	Dioxin		KSS	1.000	
3	17AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081621	2	Dioxin		KSS	1.000	
4	17AU21DFS1_4	SB Solvent Blank C14	SB 081621	3	Dioxin		KSS	1.000	
5	17AU21DFS1_5	mb 320-513586/1-a	mb 320-513586/1-a	4	1613B/Solid	D266	KSS	1.000	g
6	17AU21DFS1_6	lcs 320-513586/2-a	lcs 320-513586/2-a	5	1613B/Solid		KSS	1.000	g
7	17AU21DFS1_7	320-76724-a-16-a 10X	320-76724-a-16-a	6	1613B/Solid	D261	KSS	1.000	g
8	17AU21DFS1_8	320-76764-a-14-a 10X	320-76764-a-14-a	7	1613B/Solid	D263	KSS	1.000	g
9	17AU21DFS1_9	320-76764-a-16-a 10X	320-76764-a-16-a	8	1613B/Solid		KSS	1.000	g
10	17AU21DFS1_10	320-76764-a-38-a 10X	320-76764-a-38-a	9	1613B/Solid		KSS	1.000	g
11	17AU21DFS1_11	320-76765-a-4-a 5X	320-76765-a-4-a	10	1613B/Solid	D264	KSS	1.000	g
12	17AU21DFS1_12	320-76769-A-30-A	320-76769-A-30-A	11	1613B/Solid	D266	KSS	1.000	g
13	17AU21DFS1_13	320-76769-A-31-A	320-76769-A-31-A	12	1613B/Solid		KSS	1.000	g
14	17AU21DFS1_14	320-76769-A-32-A	320-76769-A-32-A	13	1613B/Solid		KSS	1.000	g
15	17AU21DFS1_15	SB Solvent Blank C14	SB 081721A	3	Dioxin		KSS	1.000	
16	17AU21DFS1_16	Resolution Check	RC 081721A	46			KSS	1.000	
17	17AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081621A	2	Dioxin		KSS	1.000	
18	17AU21DFS1_18	WDM HRDXNCP_00044	WDM 081721A	1	Dioxin		KSS	1.000	
19	17AU21DFS1_19	SB Solvent Blank C14	SB 081721B	3	Dioxin		KSS	1.000	
20	17AU21DFS1_20	320-76769-A-33-A	320-76769-A-33-A	14	1613B/Solid	D266	KSS	1.000	g
21	17AU21DFS1_21	320-76769-A-34-A	320-76769-A-34-A	15	1613B/Solid		KSS	1.000	g
22	17AU21DFS1_22	320-76887-A-2-A	320-76887-A-2-A	16	1613B/Solid		KSS	1.000	g
23	17AU21DFS1_23	320-76887-A-2-B MS	320-76887-A-2-B MS	17	1613B/Solid		KSS	1.000	g
24	17AU21DFS1_24	320-76887-A-2-C MSD	320-76887-A-2-C MSD	18	1613B/Solid		KSS	1.000	g
25	17AU21DFS1_25	320-76887-A-3-A	320-76887-A-3-A	19	1613B/Solid		KSS	1.000	g
26	17AU21DFS1_26	320-76887-A-4-A	320-76887-A-4-A	20	1613B/Solid		KSS	1.000	g
27	17AU21DFS1_27	320-76887-A-5-A	320-76887-A-5-A	21	1613B/Solid		KSS	1.000	g
28	17AU21DFS1_28	320-76887-A-6-A	320-76887-A-6-A	22	1613B/Solid		KSS	1.000	g
29	17AU21DFS1_29	320-76887-A-7-A	320-76887-A-7-A	23	1613B/Solid		KSS	1.000	g
30	17AU21DFS1_30	SB Solvent Blank C14	SB 081721C	3	Dioxin		KSS	1.000	
31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A	12	1613B/Solid	D266	KSS	1.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	1.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	1.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	1.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A	27	1613B/Solid		KSS	1.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	1.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	1.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	1.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A	31	1613B/Solid		KSS	1.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32	1613B/Solid		KSS	1.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	

Log file checked
08/18/21 SMA

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	17 Aug 2021 14:07
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11192 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10617 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10669 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10902 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10643 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10651 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 9999 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10320 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10065 [5%height]

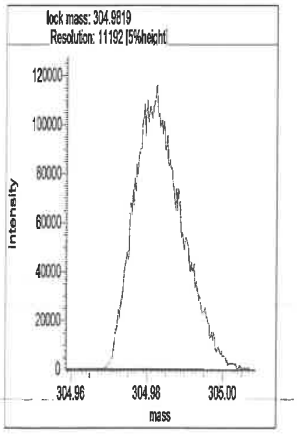

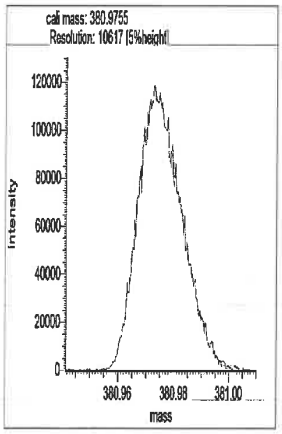

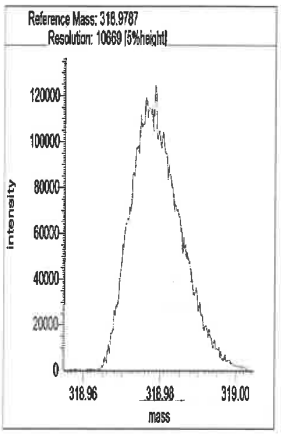

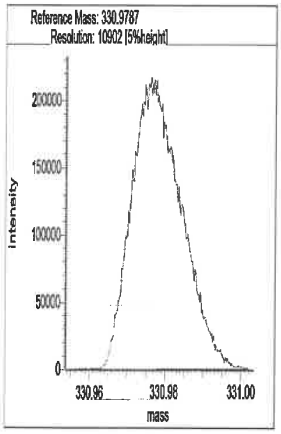

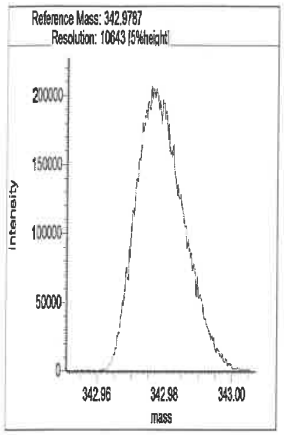

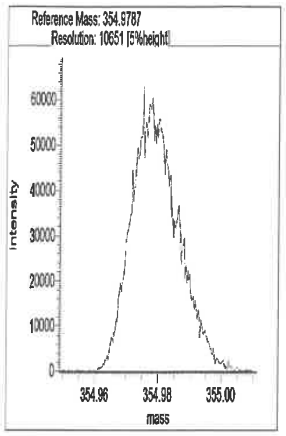

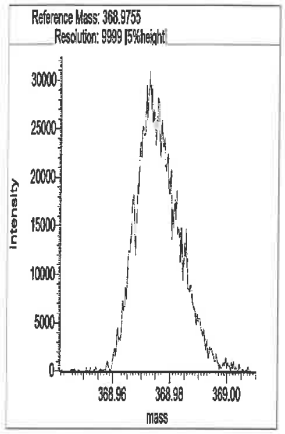

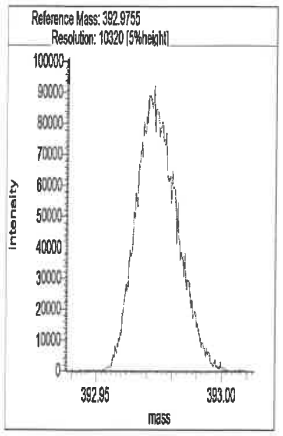

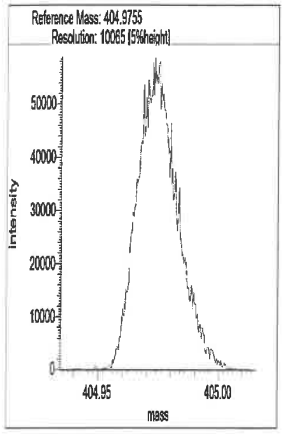

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11006 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10213 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10478 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11117 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10460 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10915 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10374 [5%height]

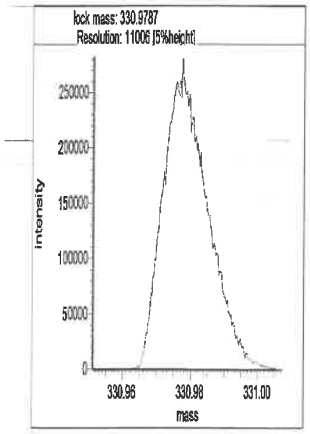

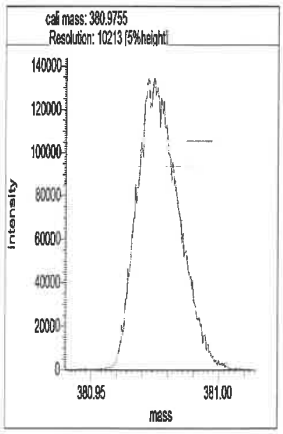

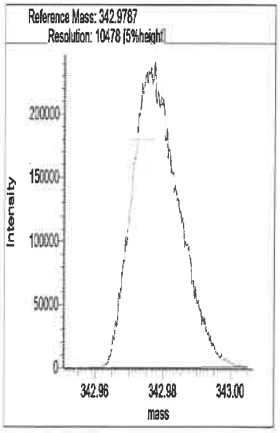

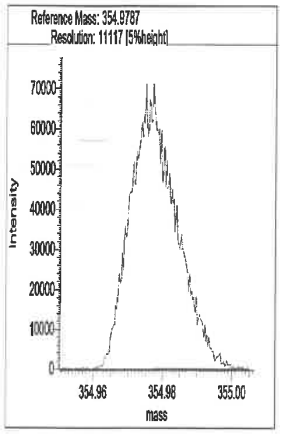

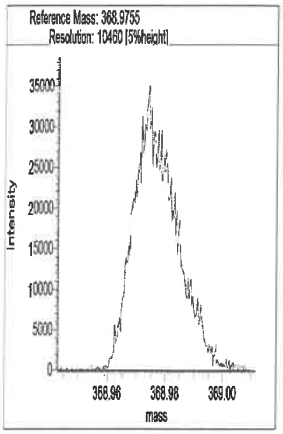

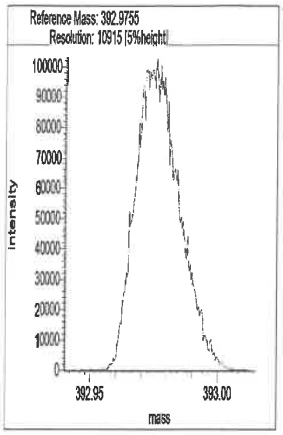

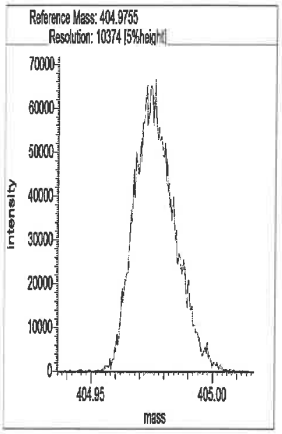

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10663 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10424 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10673 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10509 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11250 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10511 [5%height]

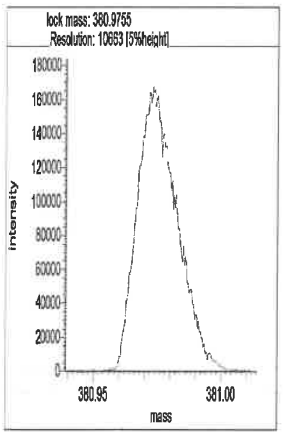

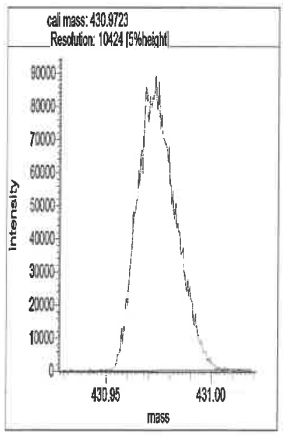

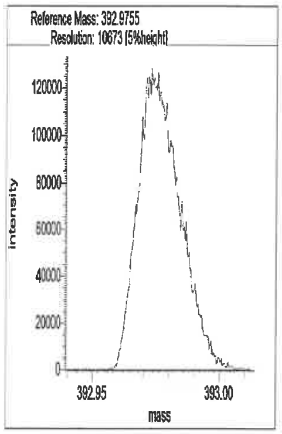

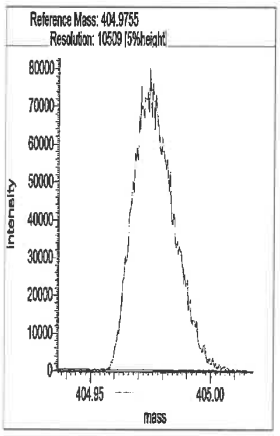

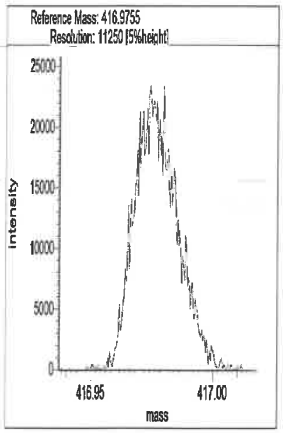

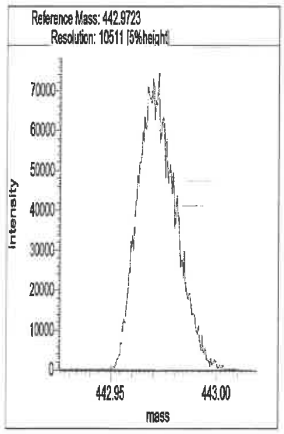

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10570 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11001 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10492 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10831 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10371 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10525 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 9876 [5%height]

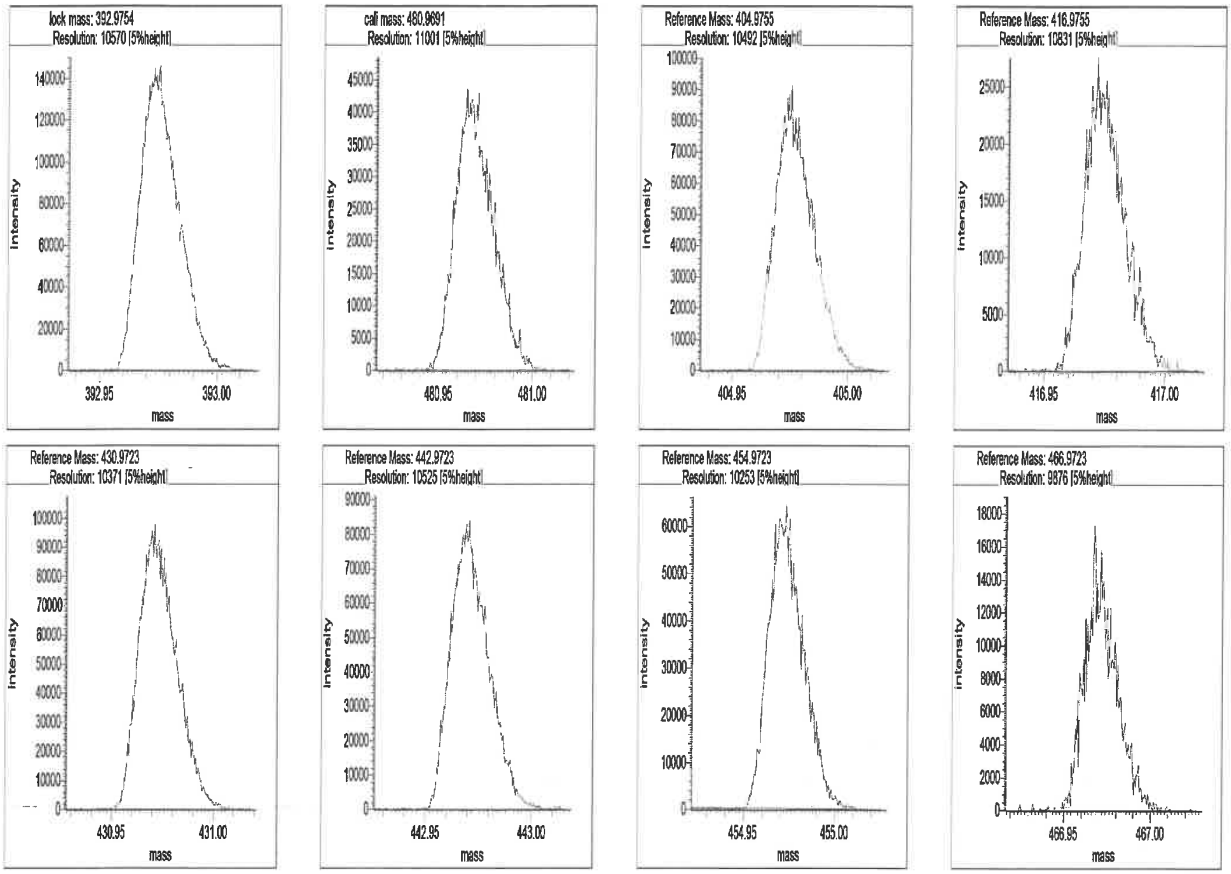

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10598 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10769 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11729 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10589 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10479 [5%height]

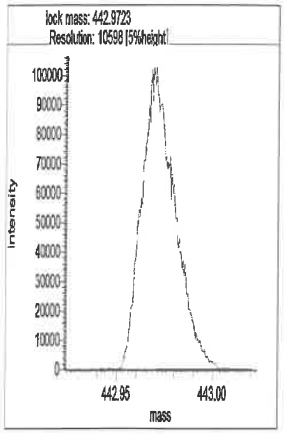
lock mass: 442.9723
Resolution: 10598 [5%height]
Intensity
mass

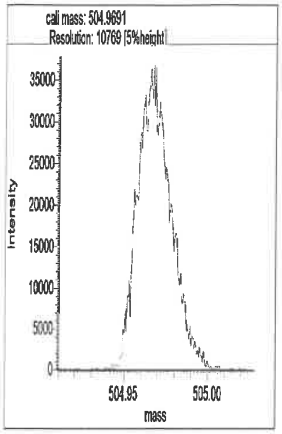
cali mass: 504.9691
Resolution: 10769 [5%height]
Intensity
mass

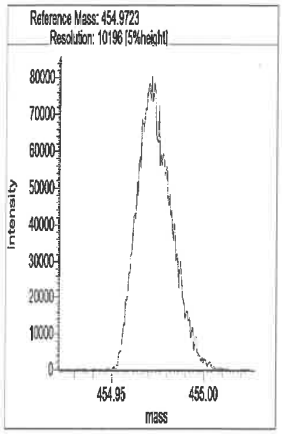
Reference Mass: 454.9723
Resolution: 10196 [5%height]
Intensity
mass

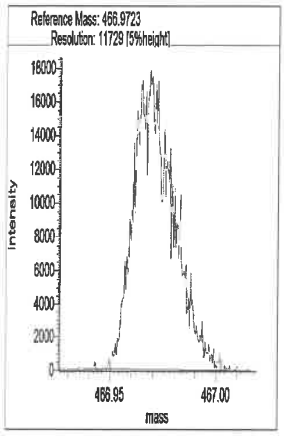
Reference Mass: 466.9723
Resolution: 11729 [5%height]
Intensity
mass

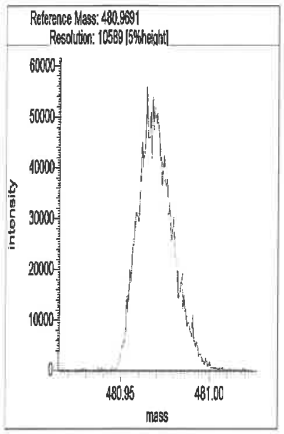
Reference Mass: 480.9691
Resolution: 10589 [5%height]
Intensity
mass

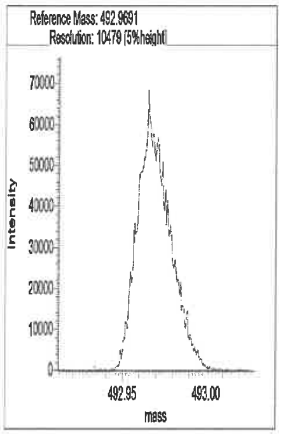
Reference Mass: 492.9691
Resolution: 10479 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 01:48
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10717 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10164 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10292 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10631 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10633 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10192 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10253 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9908 [5%height] 8/18/21 KS
Ref. mass 404.9755 [m/z] Resolution: 10394 [5%height]

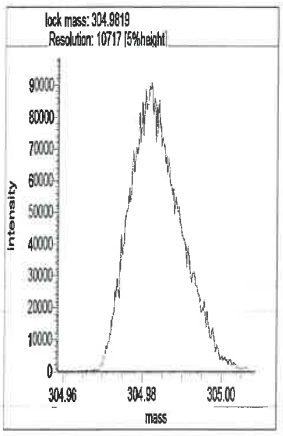

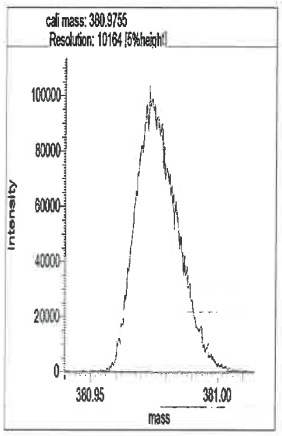

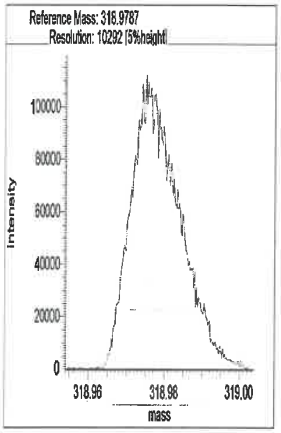

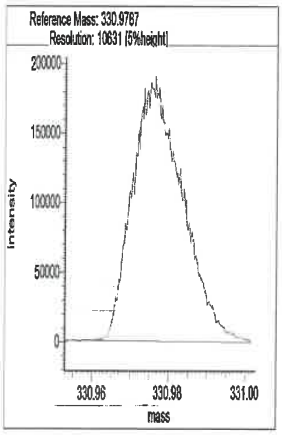

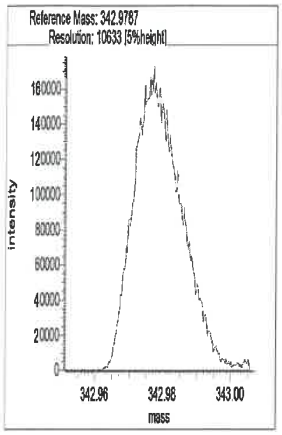

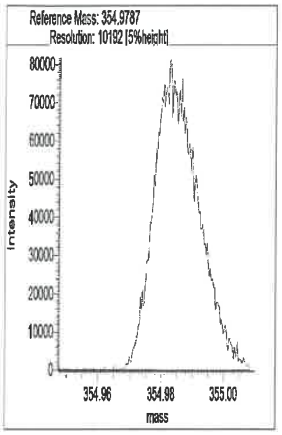

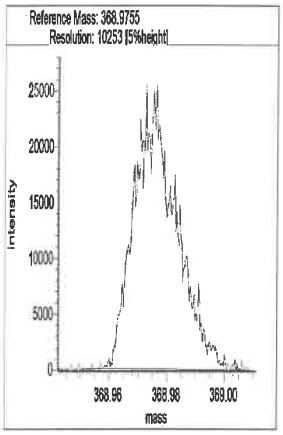

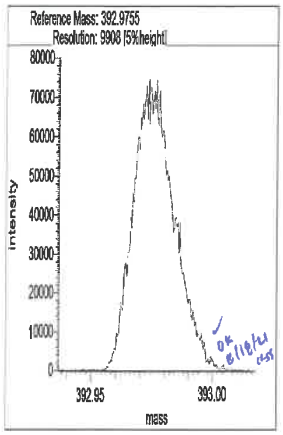

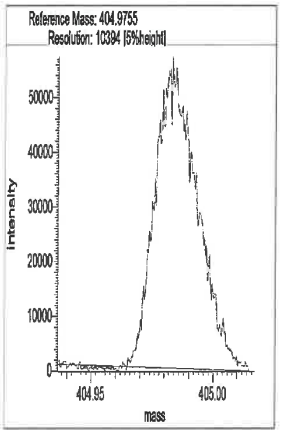

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10724 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10571 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10185 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10507 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 9890 [5%height] ✓

Ref. mass 392.9755 [m/z] Resolution: 10160 [5%height] 8/10/24 KJS

Ref. mass 404.9755 [m/z] Resolution: 9838 [5%height] ✓

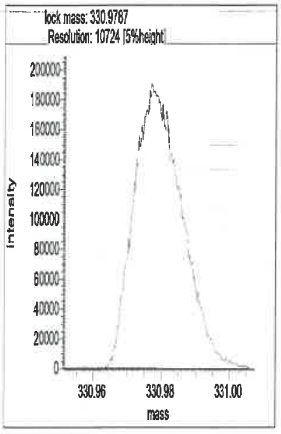

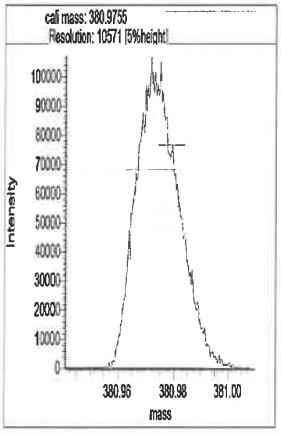

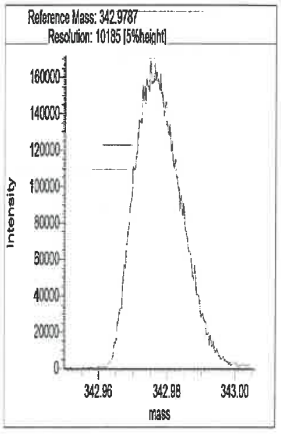

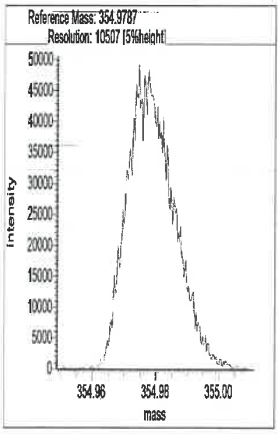

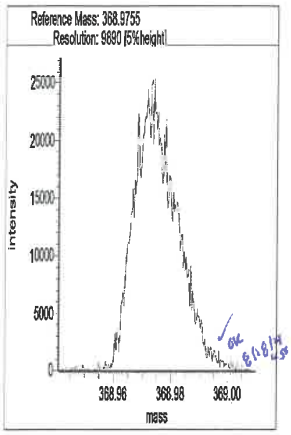

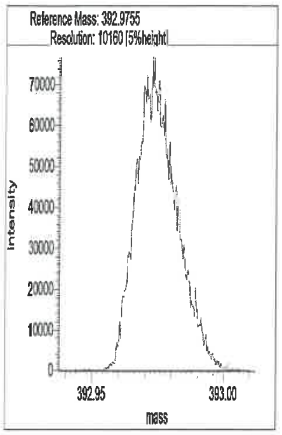

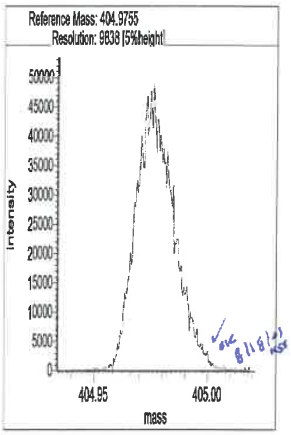

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10569 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10686 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10326 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11023 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11063 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11204 [5%height]

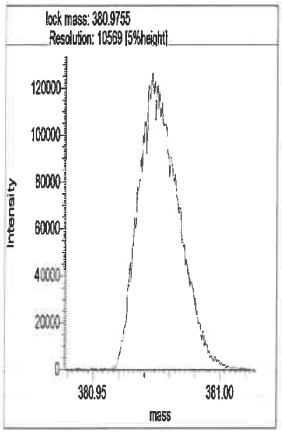

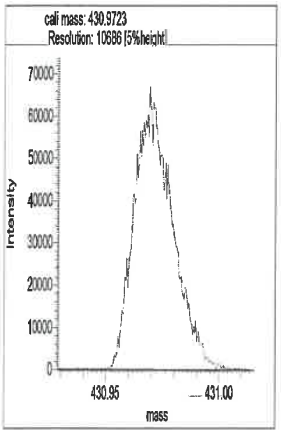

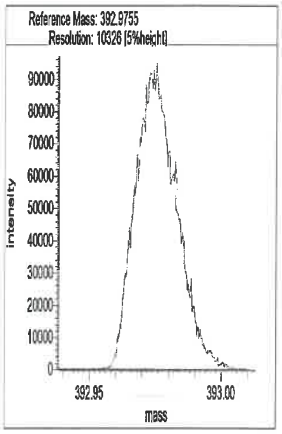

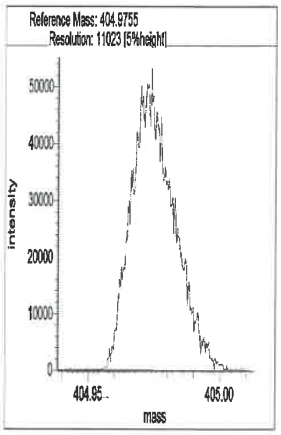

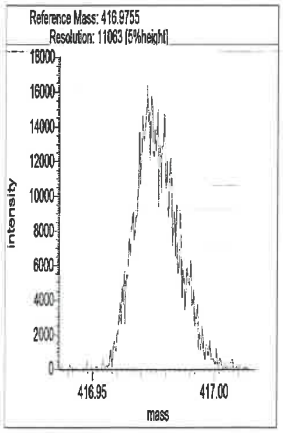

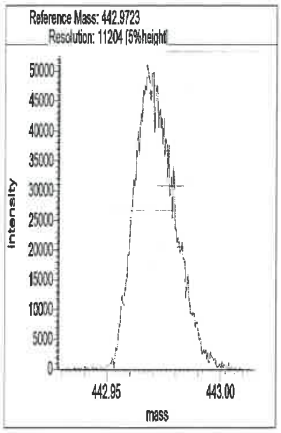

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10576 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10771 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10184 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11006 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10416 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11131 [5%height]

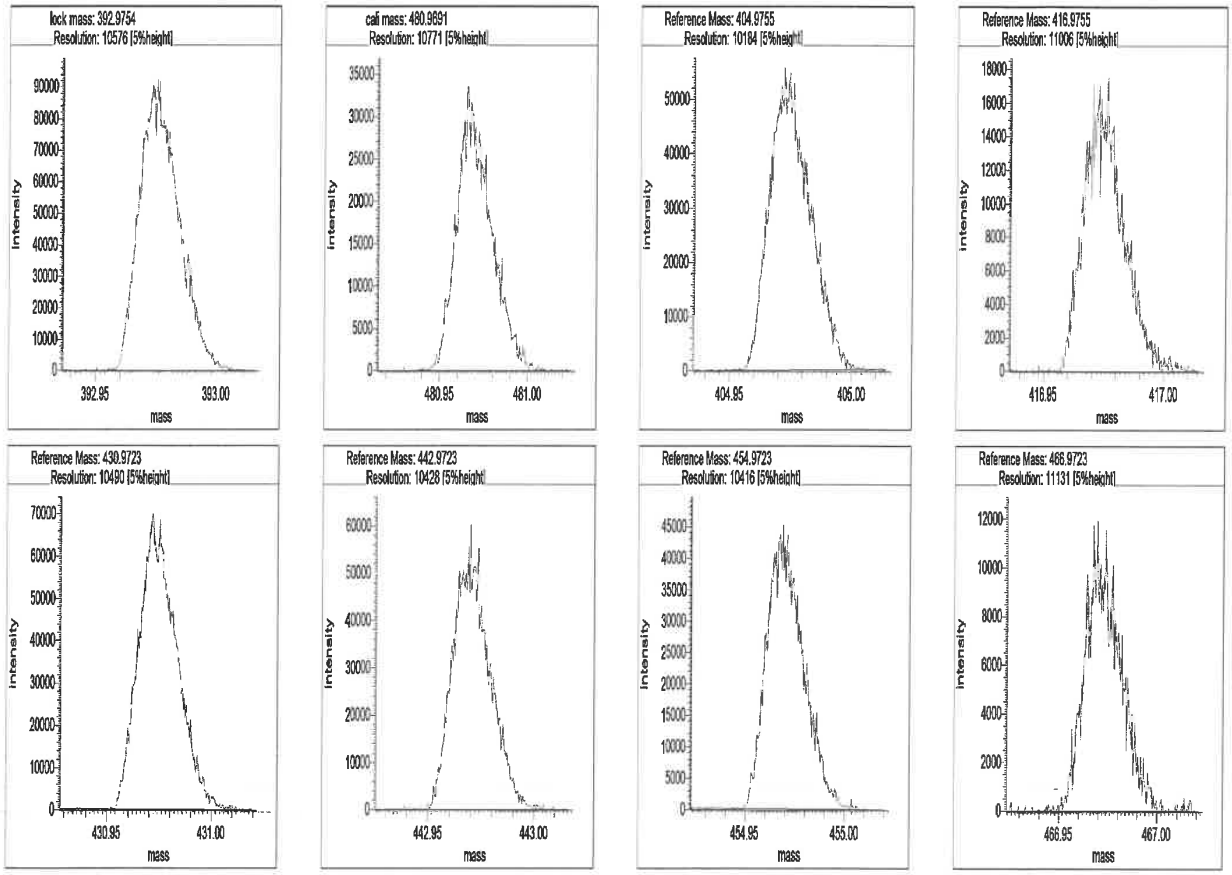

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10847 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11373 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10903 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10602 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10379 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10595 [5%height]

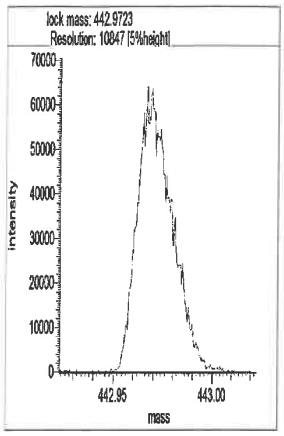
lock mass: 442.9723
Resolution: 10847 [5%height]
Intensity
mass

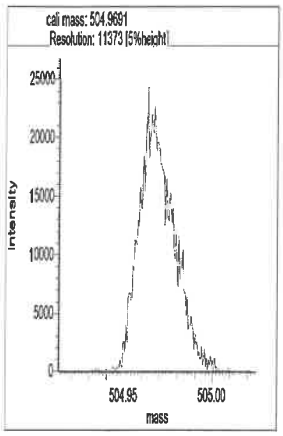
cali mass: 504.9691
Resolution: 11373 [5%height]
Intensity
mass

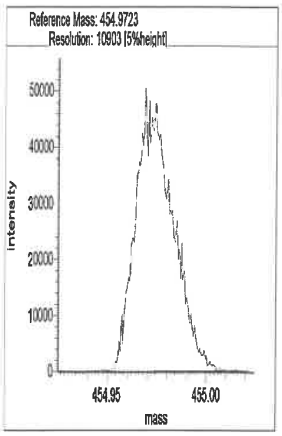
Reference Mass: 454.9723
Resolution: 10903 [5%height]
Intensity
mass

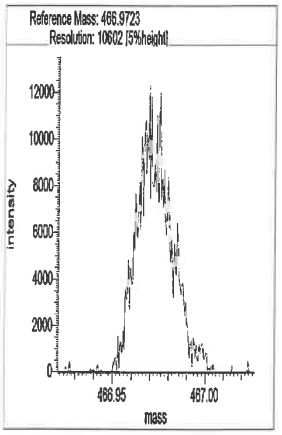
Reference Mass: 466.9723
Resolution: 10602 [5%height]
Intensity
mass

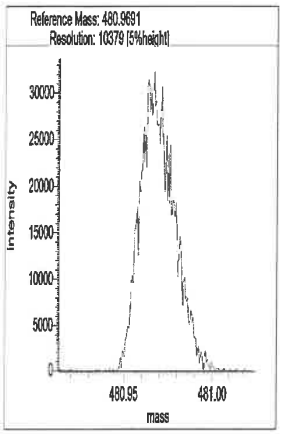
Reference Mass: 480.9691
Resolution: 10379 [5%height]
Intensity
mass

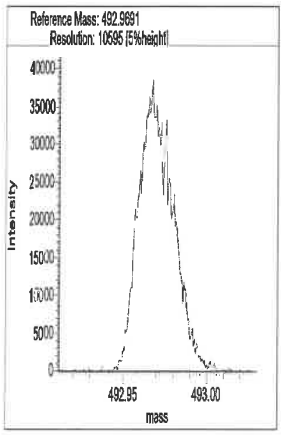
Reference Mass: 492.9691
Resolution: 10595 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

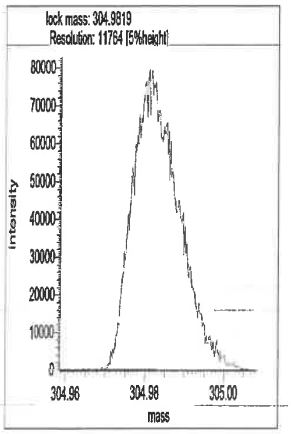

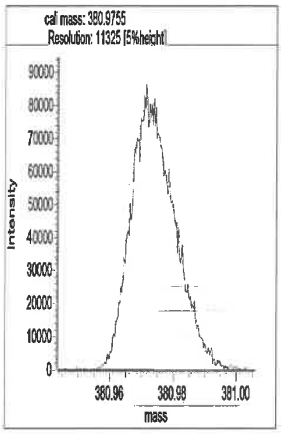

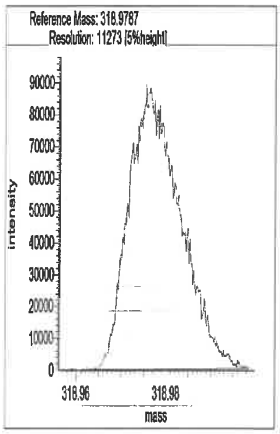

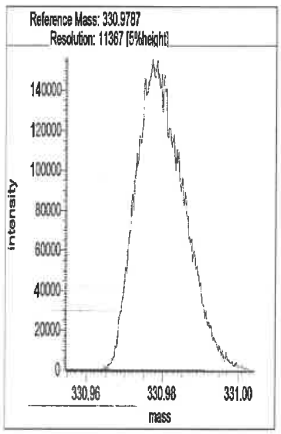

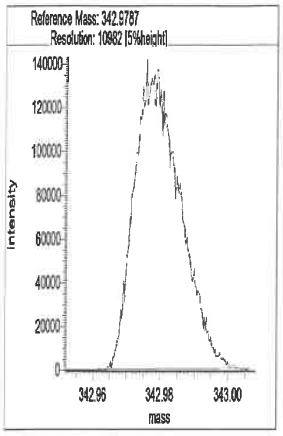

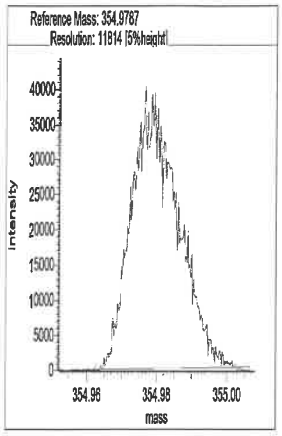

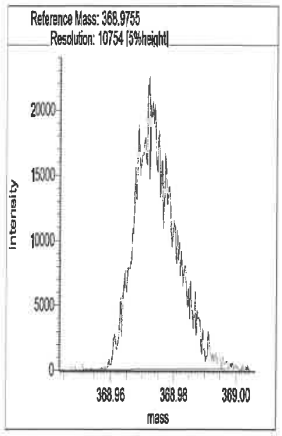

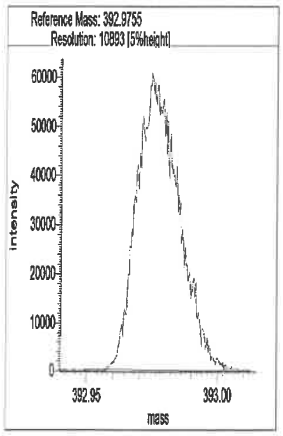

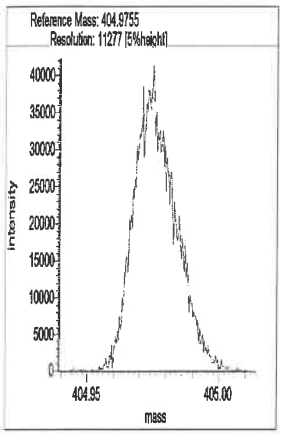

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

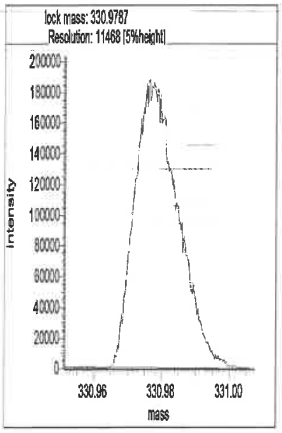

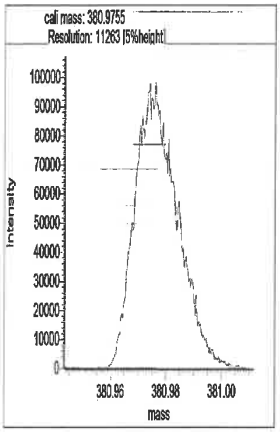

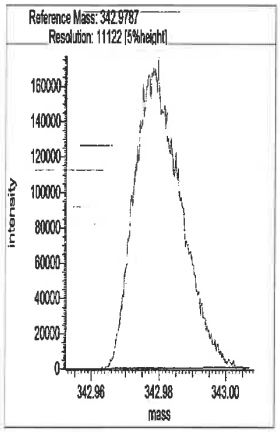

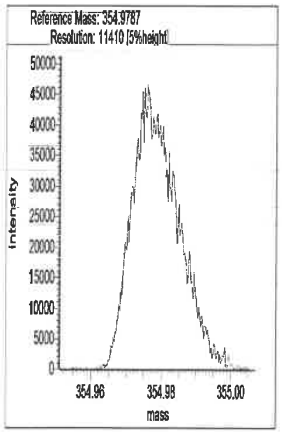

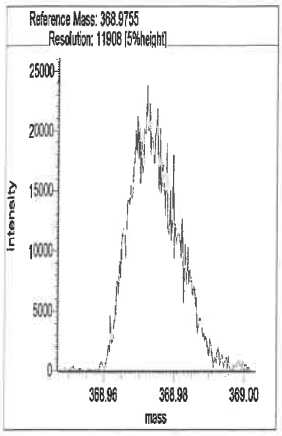

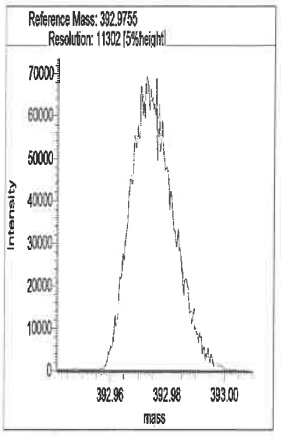

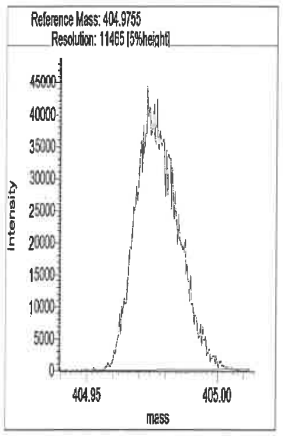

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

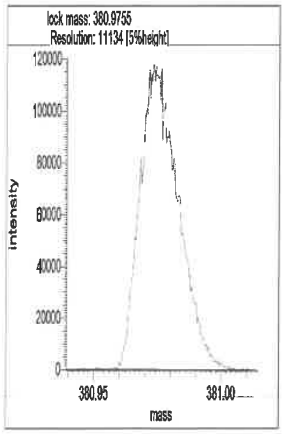

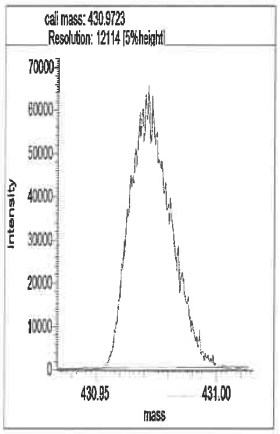

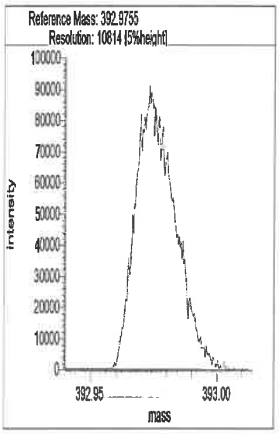

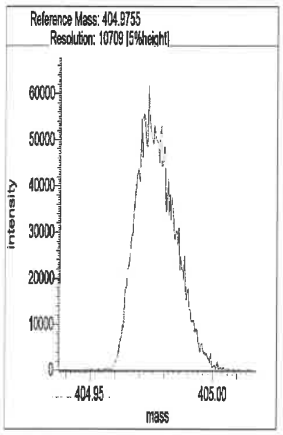

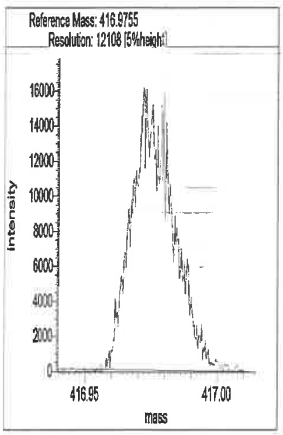

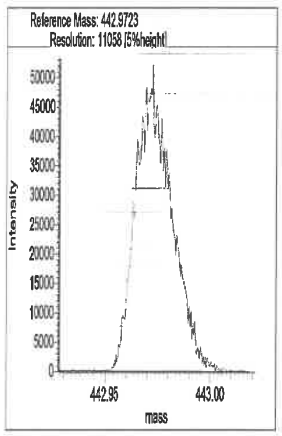

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

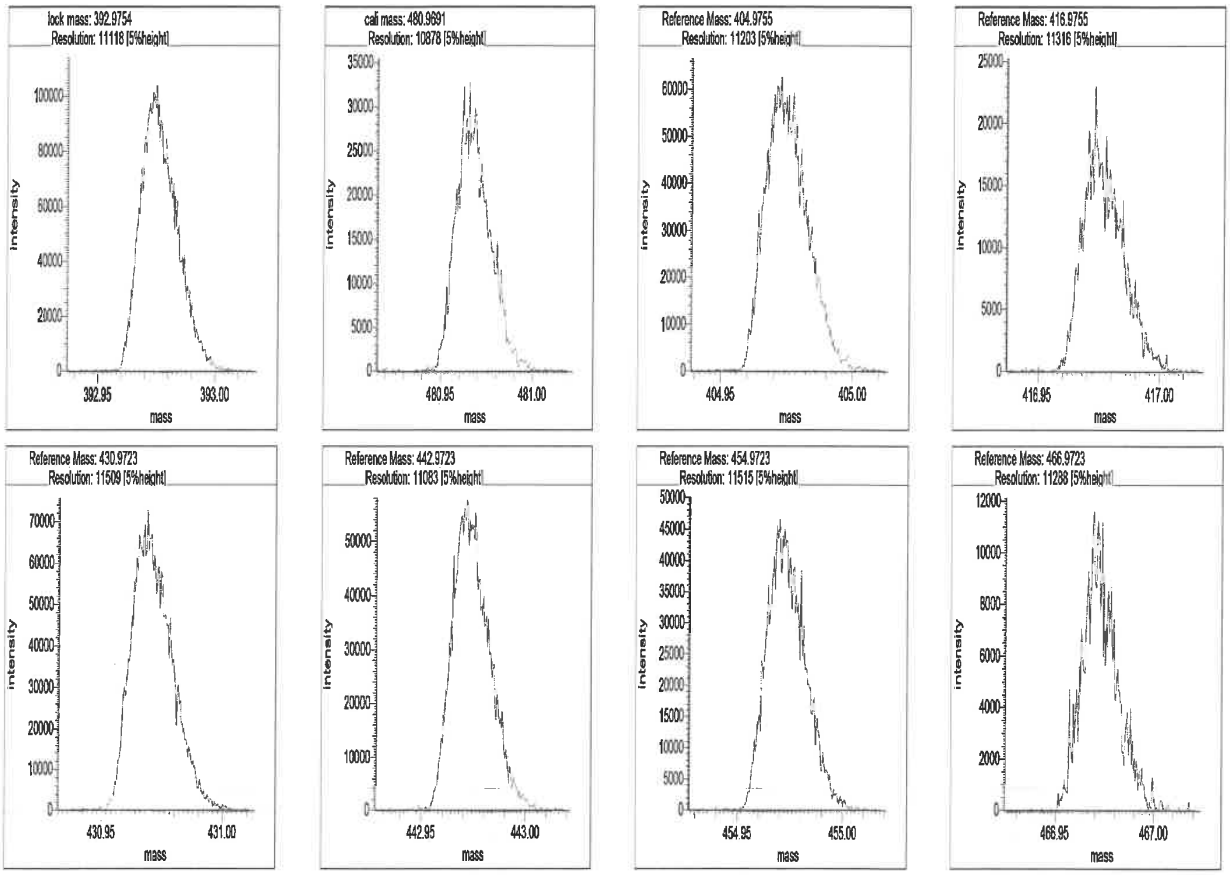

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

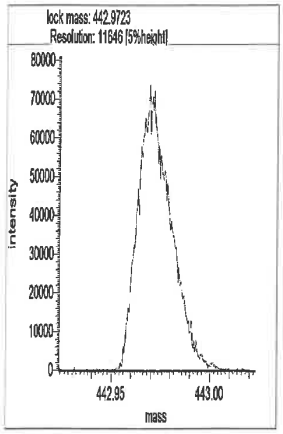
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

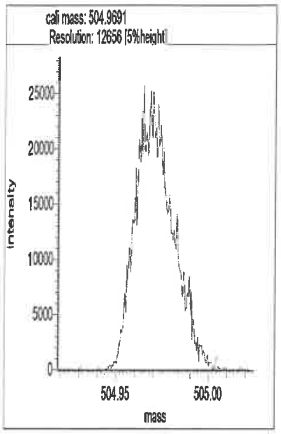
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

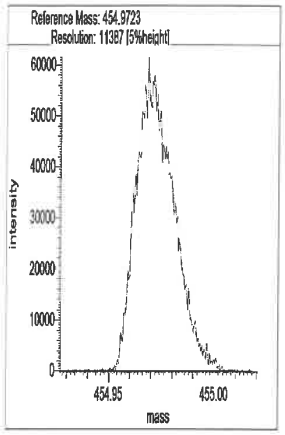
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

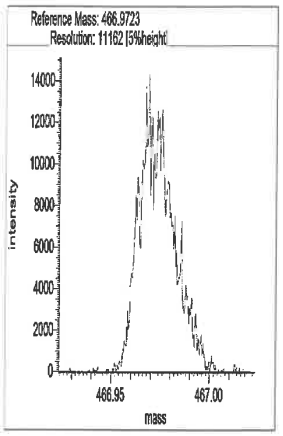
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

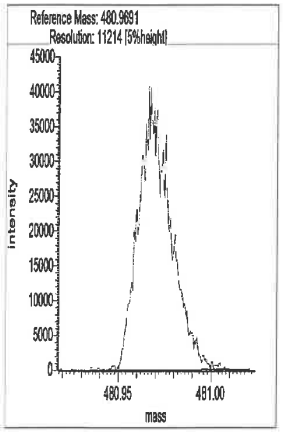
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

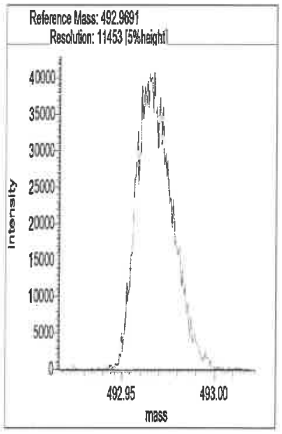
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Aug-2021 15:14:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:12 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 17:09:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.505	872844	0.84	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.517	1180751	0.79	1.3459	100.5	100.5	0.2362	0.2362	101	
2,3,7,8-TCDF	20.535	127151	0.81	1.0802	9.969	9.969	0.0201	0.0201	99.69	M
A Non-2,3,7,8-sub-TCDF	19.983	4146	0.77	1.0802	0.3965	0.3251	0.0201	0.1142	0.00	RQ
S Total TCDF					10.4	10.3	0.0201	0.0201		RQ
D 13C-2,3,7,8-TCDD	21.891	850336	0.79	0.9317	104.6	104.6	0.1468	0.1468	105	
$ 37Cl4-2,3,7,8-TCDD	21.926	88617		1.0083	10.1	10.1	0.006047	0.006047	101	
2,3,7,8-TCDD	21.900	84293	0.79	1.0753	9.218	9.218	0.0312	0.0312	92.18	
A Non-2,3,7,8-sub-TCDD	20.816	223	0.77	1.0753	0.0629	0.0244	0.0312	0.0312	0.00	RQ
S Total TCDD					9.281	9.243	0.0312	0.0312		RQ
D 13C-1,2,3,7,8-PeCDF	27.375	1055618	1.59	1.1405	106.0	106.0	0.3337	0.3337	106	
1,2,3,7,8-PeCDF	27.401	564968	1.61	1.0543	50.8	50.8	0.1524	0.1524	102	
D 13C-2,3,4,7,8-PeCDF	28.900	1086262	1.60	1.1253	110.6	110.6	0.3382	0.3382	111	
2,3,4,7,8-PeCDF	28.934	523506	1.59	1.0079	47.8	47.8	0.1622	0.1622	95.63	
A F1 PeCDFs	24.695	113	1.55	1.0311	0.0243	0.0102	0.003144	0.008151	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.196						0.1572	0.1572		n
S Total PeCDF					98.6	98.6	0.1573	0.1573		RQ
D 13C-1,2,3,7,8-PeCDD	29.734	639607	1.60	0.7165	102.3	102.3	0.1969	0.1969	102	
1,2,3,7,8-PeCDD	29.750	337811	1.56	1.0465	50.5	50.5	0.0678	0.0678	101	
A Non-2,3,7,8-sub-PeCDD	28.556						0.0678	0.0678		
S Total PeCDD					50.5	50.5	0.0678	0.0678		
D 13C-1,2,3,4,7,8-HxCDF	35.008	1081014	0.54	0.9648	114.2	114.2	0.3692	0.3692	114	
1,2,3,4,7,8-HxCDF	35.034	609522	1.29	1.1474	49.1	49.1	0.2200	0.2200	98.28	
D 13C-1,2,3,6,7,8-HxCDF	35.177	1092903	0.52	1.0708	104.0	104.0	0.3326	0.3326	104	
1,2,3,6,7,8-HxCDF	35.185	703282	1.26	1.2178	52.8	52.8	0.2080	0.2080	106	
D 13C-2,3,4,6,7,8-HxCDF	35.977	1067773	0.54	1.0413	104.5	104.5	0.3421	0.3421	105	
2,3,4,6,7,8-HxCDF	35.994	689655	1.27	1.2145	53.2	53.2	0.1898	0.1898	106	
D 13C-1,2,3,7,8,9-HxCDF	36.861	1061355	0.53	0.9731	111.2	111.2	0.3660	0.3660	111	
1,2,3,7,8,9-HxCDF	36.878	700315	1.29	1.2401	53.2	53.2	0.1808	0.1808	106	
A Non-2,3,7,8-sub-HxCDF	35.117						0.1987	0.1987		

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					208.4	208.4	0.1996	0.1996		
* 13C-1,2,3,7,8,9-HxCDD	36.667	980938	1.26	1.8E+04	100.0	100.0				M
D 13C-1,2,3,4,7,8-HxCDD	36.196	782379	1.29	0.7587	105.1	105.1	0.2282	0.2282	105	
1,2,3,4,7,8-HxCDD	36.204	395636	1.27	1.0608	47.7	47.7	0.1125	0.1125	95.34	
D 13C-1,2,3,6,7,8-HxCDD	36.305	892057	1.27	0.8593	105.8	105.8	0.2015	0.2015	106	
1,2,3,6,7,8-HxCDD	36.322	433723	1.26	0.9933	48.9	48.9	0.1139	0.1139	97.89	
1,2,3,7,8,9-HxCDD	36.684	456594	1.27	1.1094	49.2	49.2	0.1047	0.1047	98.32	
A Non-2,3,7,8-sub-HxCDD	35.475						0.1102	0.1102		
S Total HxCDD					145.8	145.8	0.1104	0.1104		
D 13C-1,2,3,4,6,7,8-HpCDF	38.668	913255	0.46	0.7359	126.5	126.5	0.4372	0.4372	127	
1,2,3,4,6,7,8-HpCDF	38.685	622245	1.03	1.4421	47.2	47.2	0.2066	0.2066	94.50	
D 13C-1,2,3,4,7,8,9-HpCDF	39.923	866894	0.46	0.6854	128.9	128.9	0.4695	0.4695	129	M
1,2,3,4,7,8,9-HpCDF	39.932	551031	1.06	1.3092	48.6	48.6	0.2261	0.2261	97.11	
A Non-2,3,7,8-sub-HpCDF	39.301						0.2159	0.2159		n
S Total HpCDF					95.8	95.8	0.2164	0.2164		
D 13C-1,2,3,4,6,7,8-HpCDD	39.612	800046	1.03	0.6745	120.9	120.9	0.3371	0.3371	121	
1,2,3,4,6,7,8-HpCDD	39.620	422590	1.04	1.0503	50.3	50.3	0.1108	0.1108	101	
A Non-2,3,7,8-sub-HpCDD	39.297	9241	1.16	1.0503	1.100	1.100	0.1108	1.100	0.00	
S Total HpCDD					51.4	51.4	0.1108	0.1108		
D 13C-OCDD	42.118	1485464	0.88	0.5446	278.0	278.0	0.3266	0.3266	139	
OCDF	42.211	1043496	0.93	1.3168	106.7	106.7	0.1409	0.1409	107	
OCDD	42.126	777414	0.91	1.0620	98.6	98.6	0.1110	0.1110	98.56	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Aug-2021 15:14:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:12 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 17:09:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.505	21.505	0		399246	51899	51	127	1018		a
333.9338	21.470	21.505	-2		473598	62915	12	30	5243	0.84(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.517	20.517	0	0.954	520031	67444	106	265	636		
317.9389	20.509	20.517	-1	0.954	660720	93847	40	100	2346	0.79(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.535	20.580	-3	1.001	56730	7695	5	12	1539		M
305.8987	20.543	20.580	-2	1.001	70421	9641	9	22	1071	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.938	19.983	-63	0.923	170	62	5	12	12		
305.8987	18.955	19.983	-62	0.924	483	58	9	22	6	0.35(0.65-0.89)	
	Empc Correction				220	80	9	22	9		
303.9016	19.805	19.983	-11	0.965	792	127	5	12	25		
	Empc Correction				587	121	5	12	24		
305.8987	19.840	19.983	-9	0.967	763	158	9	22	18	1.04(0.65-0.89)	
303.9016	20.809	19.983	49	1.014	966	211	5	12	42		
	Empc Correction				633	132	5	12	26		
305.8987	20.809	19.983	49	1.014	823	172	9	22	19	1.17(0.65-0.89)	
303.9016	20.869	19.983	53	1.017	259	106	5	12	21		
305.8987	20.904	19.983	55	1.019	397	182	9	22	20	0.65(0.65-0.89)	
303.9016	22.123	19.983	128	1.078	128	60	5	12	12		
305.8987	22.115	19.983	128	1.078	276	92	9	22	10	0.46(0.65-0.89)	
	Empc Correction				166	77	9	22	9		
13C-2,3,7,8-TCDD											
331.9368	21.891	21.891	0	1.018	376057	46512	51	127	912		
333.9338	21.866	21.891	-2	1.017	474279	57849	12	30	4821	0.79(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											
327.8847	21.926	21.926	0	1.020	88617	11185	3	7	3728		
2,3,7,8-TCDD											
319.8965	21.900	21.928	-2	1.000	37238	5208	11	27	473		
321.8936	21.917	21.928	-1	1.001	47055	5923	3	7	1974	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.347	20.816	92	1.021	449	96	11	27	9		
	Empc Correction				97	52	11	27	5		
321.8936	22.364	20.816	93	1.022	126	68	3	7	23	3.56(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.375	27.375	0	1.273	648386	95776	93	232	1030		
353.8970	27.375	27.375	0	1.273	407232	59794	82	205	729	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.401	27.401	0	1.001	348720	51626	58	145	890		
341.8567	27.401	27.401	0	1.001	216248	31764	42	105	756	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.900	28.900	0	1.344	668645	94221	93	232	1013		
353.8970	28.908	28.900	1	1.344	417617	58719	82	205	716	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.934	28.934	0	1.001	321600	44628	58	145	769		
341.8567	28.934	28.934	0	1.001	201906	27959	42	105	666	1.59(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.107	24.695	-35	0.881	55	39	1	2	39		
341.8567	24.098	24.695	-36	0.880	103	52	1	2	52	0.53(1.32-1.78)	
	Empc Correction				35	25	1	2	25		
339.8597	24.167	24.695	-32	0.883	14	7	1	2	7		
341.8567	24.158	24.695	-32	0.882	96	38	1	2	38	0.15(1.32-1.78)	
	Empc Correction				9	4	1	2	4		
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.990	28.196	-12	1.022	3347	463	58	145	8		
341.8567	28.007	28.196	-11	1.023	1993	308	42	105	7	1.68(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.734	29.734	0	1.383	393342	53131	43	107	1236		
369.8919	29.717	29.734	-1	1.382	246265	31489	22	55	1431	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.750	29.750	0	1.001	206041	26780	17	42	1575		
357.8516	29.742	29.750	-1	1.000	131770	17431	7	17	2490	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						17	42			
357.8516	28.556						7	17			
13C-1,2,3,4,7,8-HxCDF											
383.8639	35.008	35.008	0	0.955	377816	74219	109	272	681		
385.8610	35.017	35.008	1	0.955	703198	136560	193	482	708	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.034	35.034	0	1.001	343279	67338	118	295	571		
375.8178	35.034	35.034	0	1.001	266243	52523	95	237	553	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.177	35.177	0	0.959	376027	74811	109	272	686		
385.8610	35.177	35.177	0	0.959	716876	135202	193	482	701	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.185	35.185	0	1.000	392015	74402	118	295	631		
375.8178	35.185	35.185	0	1.000	311267	58994	95	237	621	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.977	35.977	0	0.981	372963	83270	109	272	764		
385.8610	35.985	35.977	1	0.981	694810	147559	193	482	765	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.994	35.994	0	1.000	386238	84058	118	295	712		
375.8178	35.994	35.994	0	1.000	303417	65154	95	237	686	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.861	36.861	0	1.005	369514	83111	109	272	762		
385.8610	36.870	36.861	1	1.006	691841	154196	193	482	799	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.878	36.878	0	1.000	393832	87889	118	295	745		
375.8178	36.878	36.878	0	1.000	306483	68413	95	237	720	1.29(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.117						118	295			
375.8178	35.117						95	237			
13C-1,2,3,7,8,9-HxCDD											M
401.8559	36.667	36.667	0		547692	117622	80	200	1470		M
403.8529	36.667	36.667	0		433246	94341	67	167	1408	1.26(1.05-1.43)	M
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.196	36.196	0	0.987	440249	100900	80	200	1261		
403.8529	36.187	36.196	-1	0.987	342130	79230	67	167	1183	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.204	36.204	0	1.000	221550	51035	52	130	981		
391.8127	36.204	36.204	0	1.000	174086	38510	34	85	1133	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.305	36.305	0	0.990	498419	104261	80	200	1303		
403.8529	36.305	36.305	0	0.990	393638	85751	67	167	1280	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.322	36.322	0	1.000	242161	51161	52	130	984		
391.8127	36.322	36.322	0	1.000	191562	39885	34	85	1173	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.684	36.684	0	1.013	255516	54919	52	130	1056		
391.8127	36.684	36.684	0	1.013	201078	43958	34	85	1293	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.475						52	130			
391.8127	35.475						34	85			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.668	38.668	0	1.055	285619	74123	93	232	797		
419.8220	38.668	38.668	0	1.055	627636	159832	180	450	888	0.46(0.37-0.51)	

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											
407.7817	38.685	38.685	0	1.000	315818	79975	147	367	544		
409.7788	38.685	38.685	0	1.000	306427	78448	132	330	594	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											M
417.8250	39.923	39.923	0	1.089	274228	74693	93	232	803		M
419.8220	39.923	39.923	0	1.089	592666	160744	180	450	893	0.46(0.37-0.51)	M
1,2,3,4,7,8,9-HpCDF											
407.7817	39.932	39.932	0	1.000	282904	78576	147	367	535		
409.7788	39.932	39.932	0	1.000	268127	73201	132	330	555	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.912	39.301	-23	1.006	4859	976	147	367	7		
409.7788	38.912	39.301	-23	1.006	4264	991	132	330	8	1.14(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.612	39.612	0	1.080	406701	112657	68	170	1657		
437.8140	39.612	39.612	0	1.080	393345	110709	125	312	886	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.620	39.620	0	1.000	215461	58465	40	100	1462		
425.7737	39.620	39.620	0	1.000	207129	56768	64	160	887	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.988	39.297	-19	0.984	4970	1304	40	100	33		
425.7737	38.996	39.297	-18	0.984	4271	1241	64	160	19	1.16(0.88-1.20)	
13C-OCDD											
469.7780	42.118	42.118	0	1.149	697151	158566	72	180	2202		
471.7750	42.109	42.118	-1	1.148	788313	180878	79	197	2290	0.88(0.76-1.02)	
OCDF											
441.7428	42.211	42.211	0	1.002	502591	114869	45	112	2553		
443.7399	42.211	42.211	0	1.002	540905	125676	81	202	1552	0.93(0.76-1.02)	
OCDD											
457.7377	42.126	42.126	0	1.000	369625	84840	36	90	2357		
459.7348	42.126	42.126	0	1.000	407789	93747	44	110	2131	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 17-Aug-2021 15:14:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.983

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1180751	161291

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1180751	161291

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.938	170	62	483	58	0.0512	0.35	RnQ
18.938	170	62	220	80	0.0306		Empc Correction
19.805	792	127	763	158	0.1219	1.04	RQ
19.805	587	121	763	158	0.1058		Empc Correction
20.809	966	211	823	172	0.1403	1.17	RQ
20.809	633	132	823	172	0.1142		Empc Correction
20.869	259	106	397	182	0.0514	0.65	
22.123	128	60	276	92	0.0317	0.46	RQ
22.123	128	60	166	77	0.0231		Empc Correction
Signal Totals:							
	1777	481	2369	669			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5057	1228				0.84	RQ
	4146	1150					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3965 = (5057 * 100.000) / (1180751 * 1.080)
Empc Amount: 0.3251 = (4146 * 100.000) / (1180751 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	17-Aug-2021 15:14:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-TCDD, RT: 20.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	850336	104361

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	850336	104361

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.347	449	96	126	68	0.0629	3.56	RnQ
22.347	97	52	126	68	0.0244		Empc Correction
Signal Totals:							
	97	52	126	68			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	575	164				3.56	RQ
	223	120					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0629 = (575 * 100.000) / (850336 * 1.075)

Empc Amount: 0.0244 = (223 * 100.000) / (850336 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 17-Aug-2021 15:14:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.695

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1055618	155570
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1086262	152940

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1070940	154255

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.107	55	39	103	52	0.0143	0.53	RQ
24.107	55	39	35	25	0.008151		Empc Correction
24.167	14	7	96	38	0.0100	0.15	RnQ
24.167	14	7	9	4	0.002083		Empc Correction
Signal Totals:							
	69	46	44	29			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	268	136				0.35	RQ
	113	75					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0243 = (268 * 100.000) / (1070940 * 1.031)
Empc Amount: 0.0102 = (113 * 100.000) / (1070940 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	17-Aug-2021 15:14:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-HpCDD, RT: 39.297

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	800046	223366

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	800046	223366

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.988	4970	1304	4271	1241	1.10	1.16	
Signal Totals:							
	4970	1304	4271	1241			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9241	2545				1.16	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.100 = (9241 * 100.000) / (800046 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Not Detected
Expected RT: 21.50

Processing Integration Results

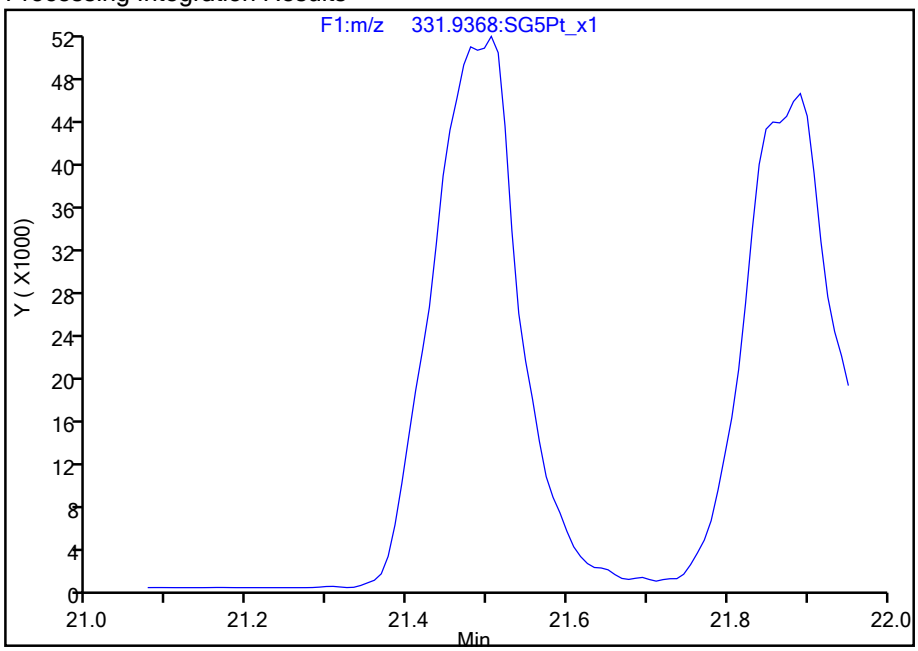

Manual Integration Results

RT: 21.50
Area: 399246
Amount: 100.0000
Amount Units: pg/ul

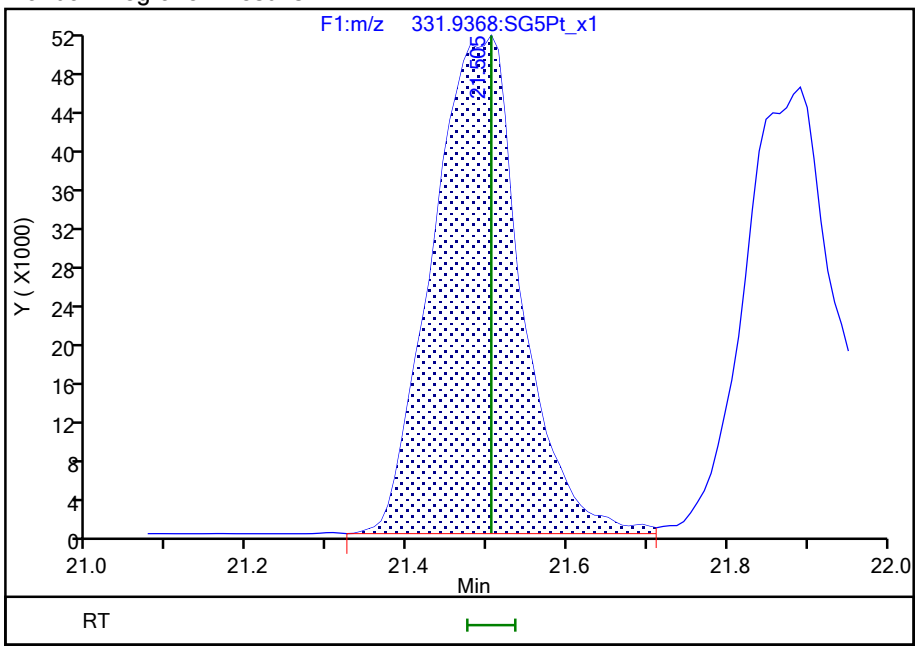

Reviewer: stephensk, 17-Aug-2021 16:07:19
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

776765

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.53
Area: 54682
Amount: 9.808624
Amount Units: pg/ul

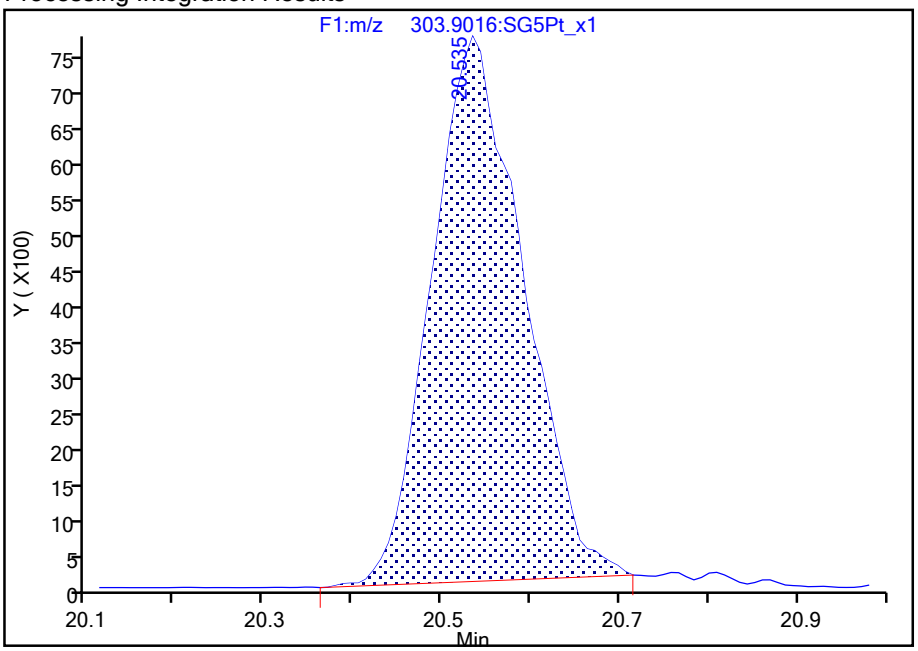

Manual Integration Results

RT: 20.53
Area: 56730
Amount: 9.969196
Amount Units: pg/ul

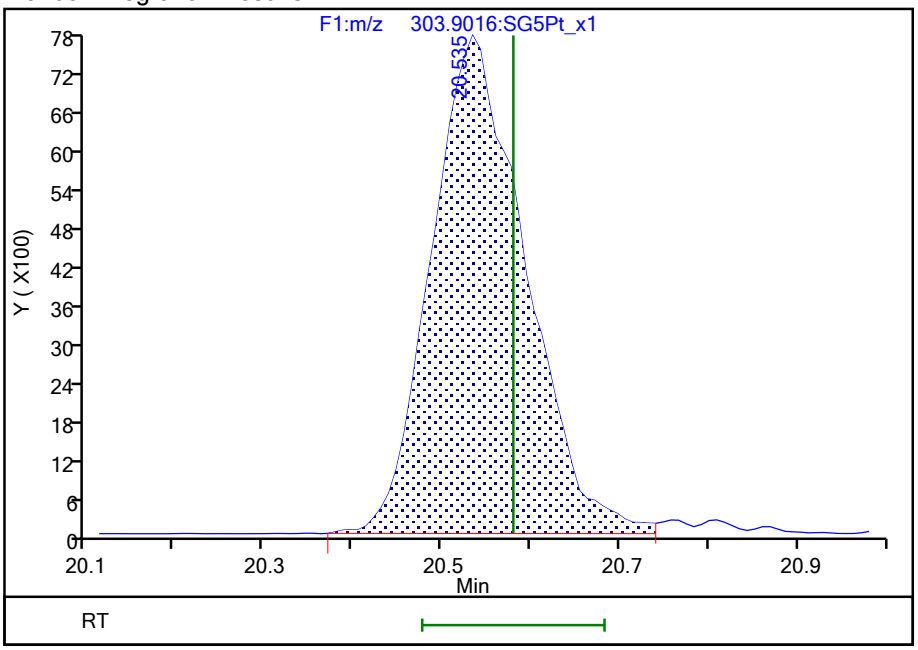

Reviewer: stephensk, 17-Aug-2021 16:07:38

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 1

Processing Integration Results

RT: 36.67
Area: 546030
Amount: 100.0000
Amount Units: pg/ul

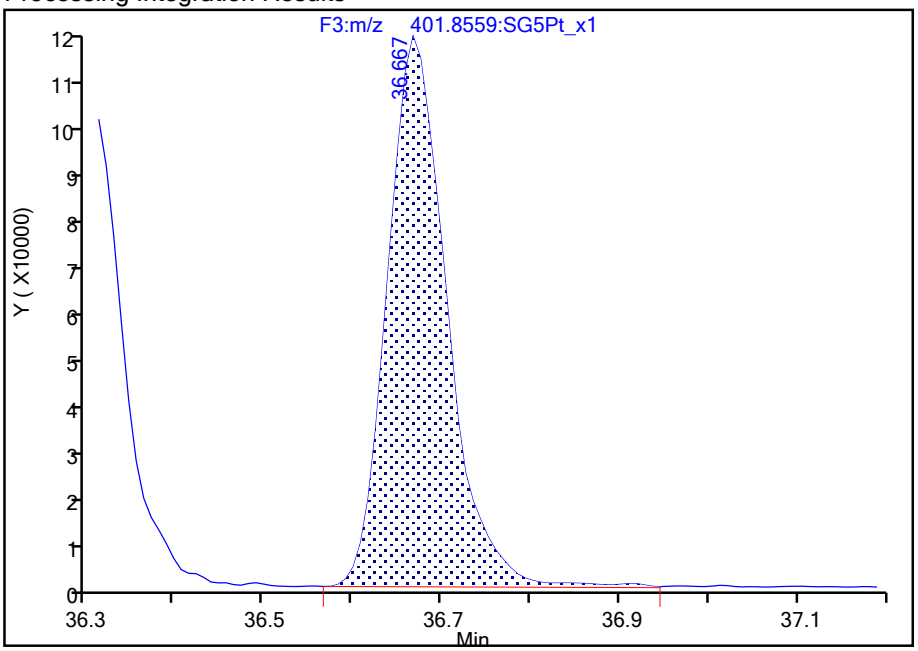

Manual Integration Results

RT: 36.67
Area: 547692
Amount: 100.0000
Amount Units: pg/ul

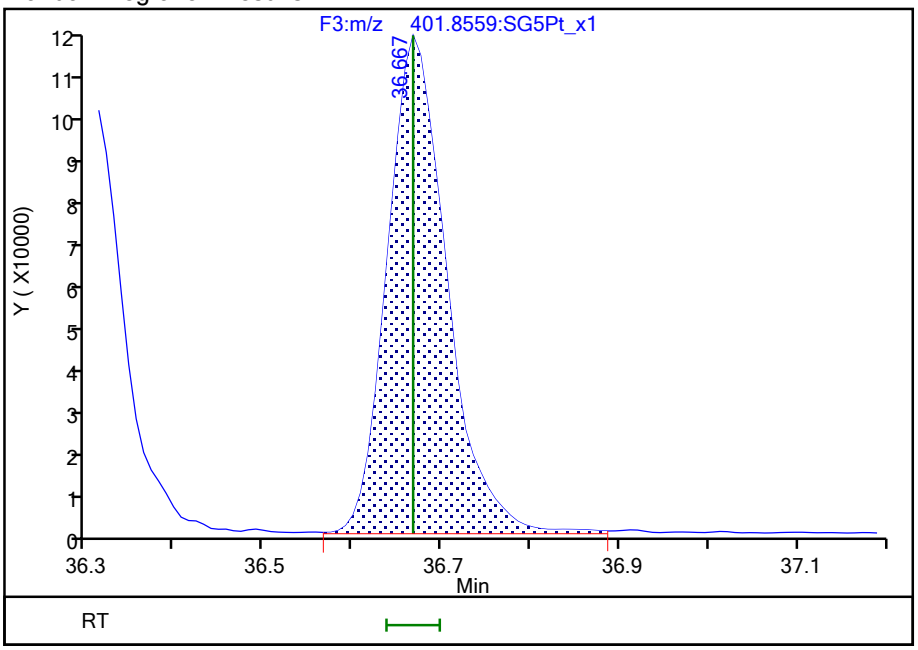

Reviewer: stephensk, 17-Aug-2021 16:09:43

Audit Action: Manually Integrated Audit Reason: Baseline

776767

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 2

Processing Integration Results

RT: 36.67
Area: 430515
Amount: 100.0000
Amount Units: pg/ul

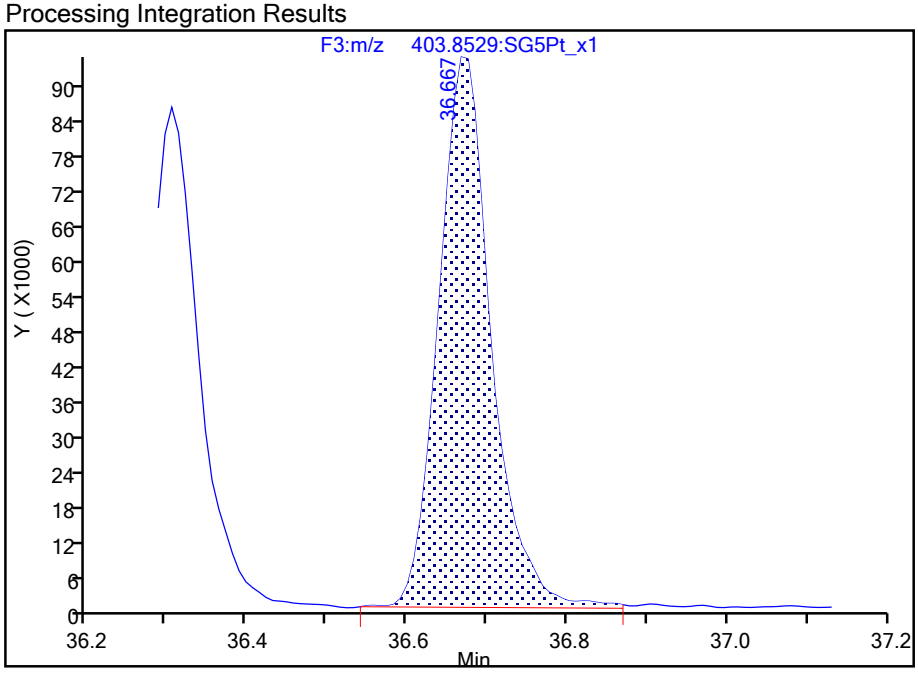

Manual Integration Results

RT: 36.67
Area: 433246
Amount: 100.0000
Amount Units: pg/ul

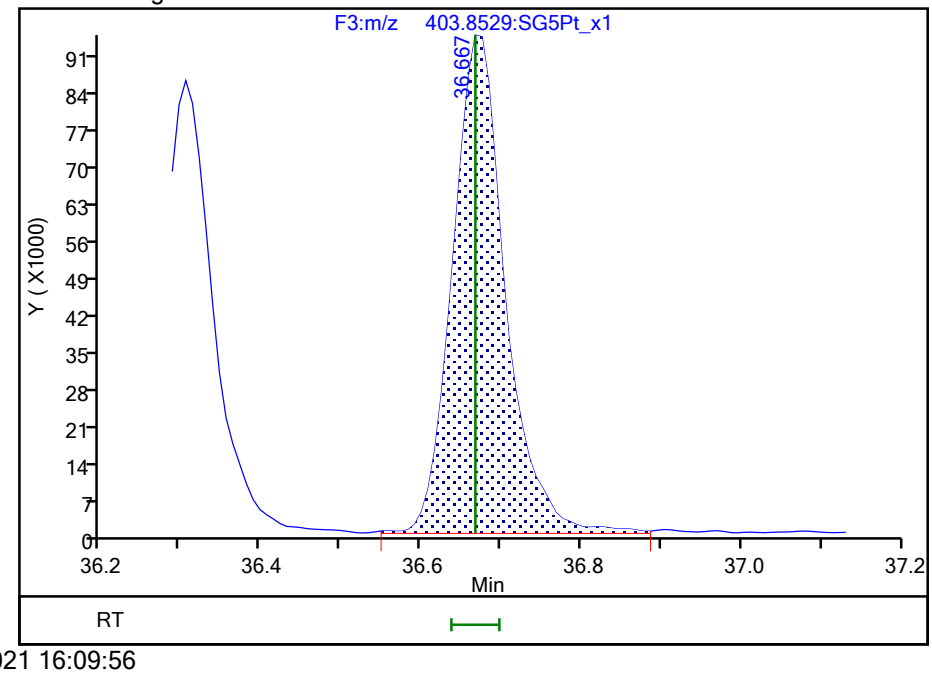

Reviewer: stephensk, 17-Aug-2021 16:09:56

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

RT: 39.92
Area: 275099
Amount: 130.6760
Amount Units: pg/ul

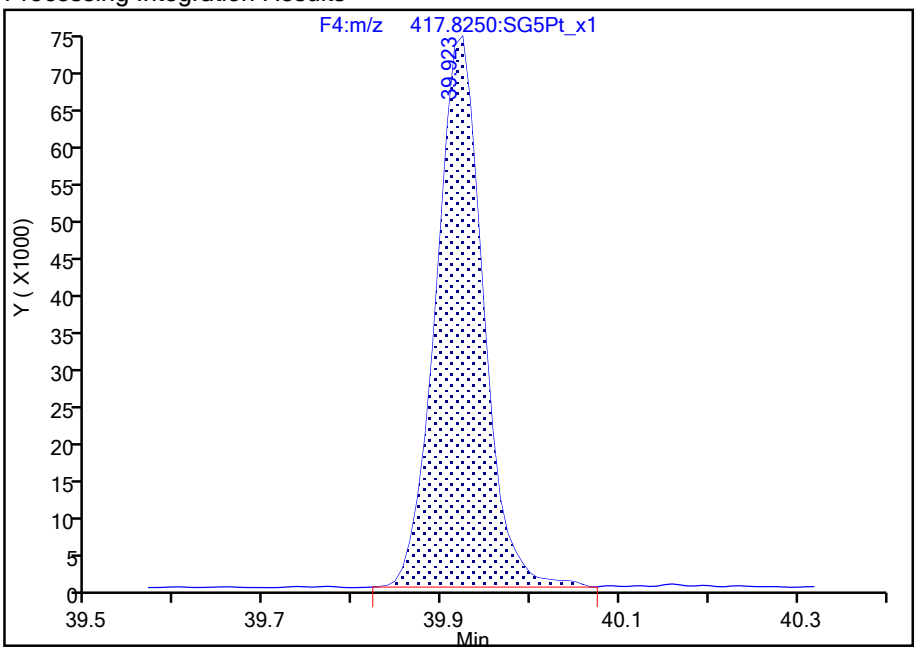

Manual Integration Results

RT: 39.92
Area: 274228
Amount: 128.9419
Amount Units: pg/ul

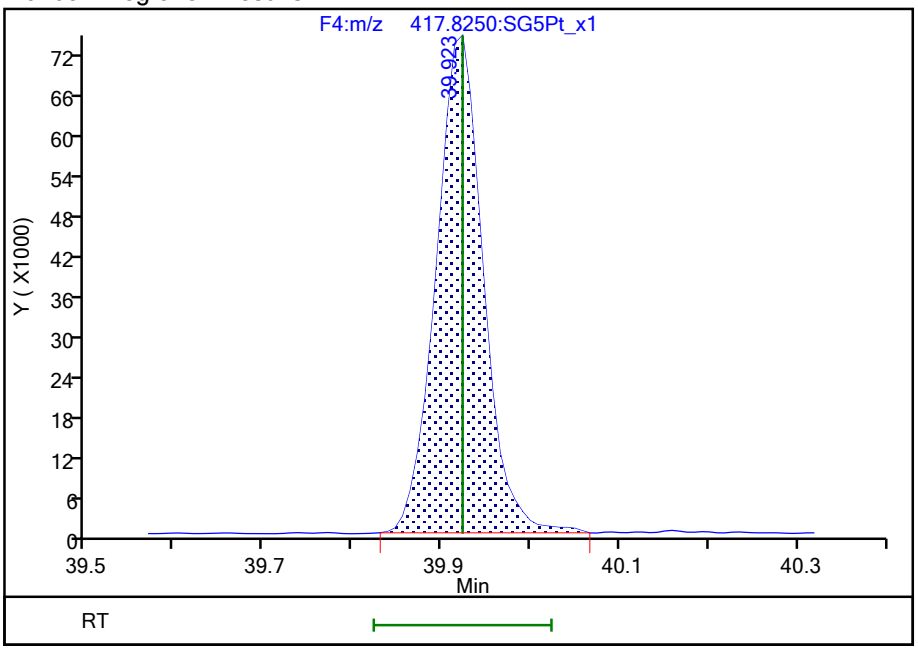

Reviewer: stephensk, 17-Aug-2021 16:09:13

Audit Action: Manually Integrated Audit Reason: Baseline

776769

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 2

Processing Integration Results

RT: 39.92
Area: 599519
Amount: 130.6760
Amount Units: pg/ul

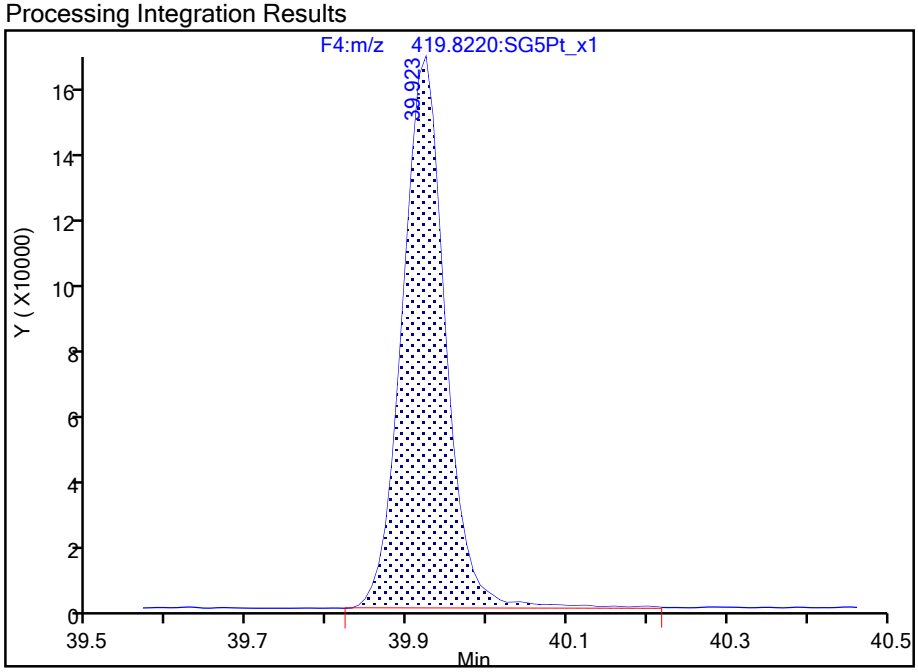

Manual Integration Results

RT: 39.92
Area: 592666
Amount: 128.9419
Amount Units: pg/ul

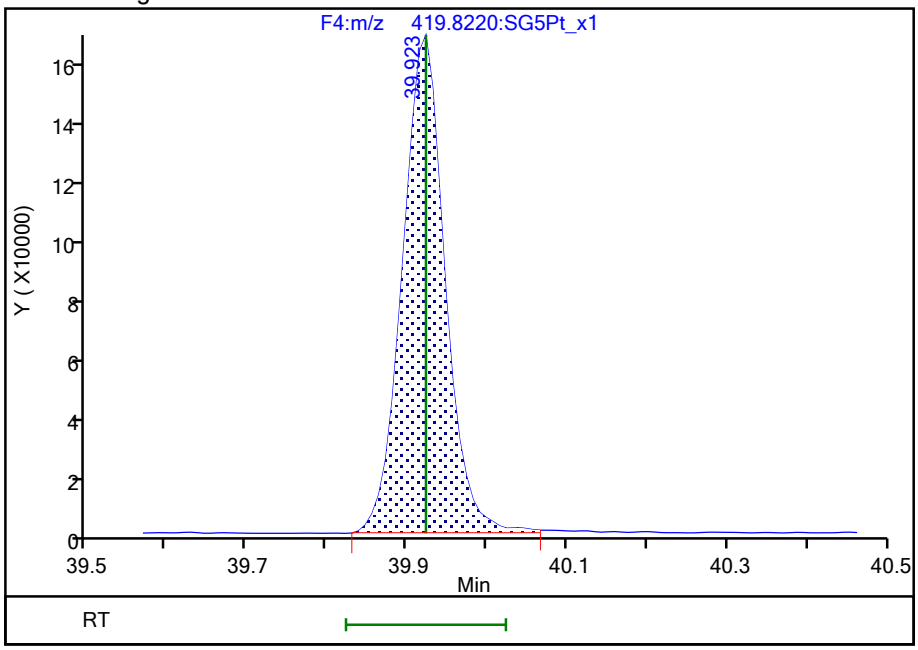

Reviewer: stephensk, 17-Aug-2021 16:09:23

Audit Action: Manually Integrated Audit Reason: Baseline

776770

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

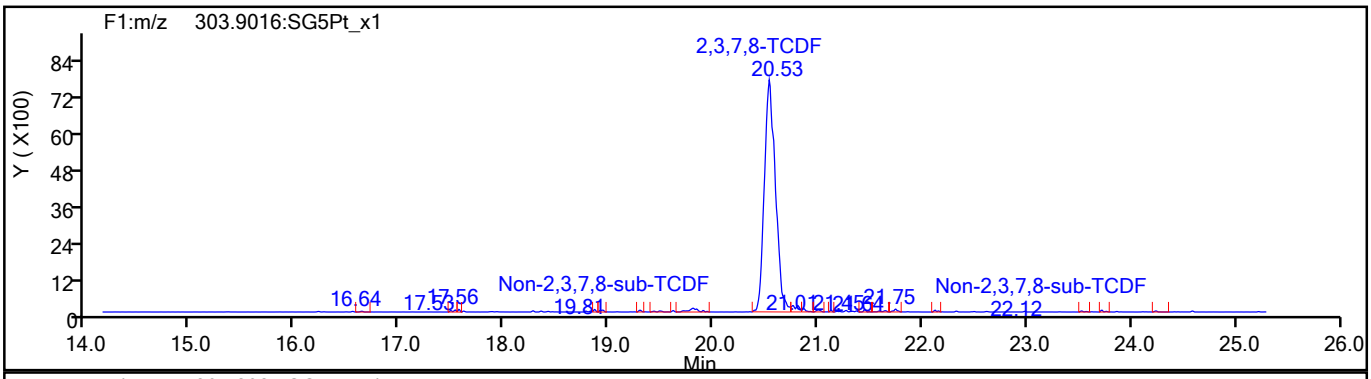

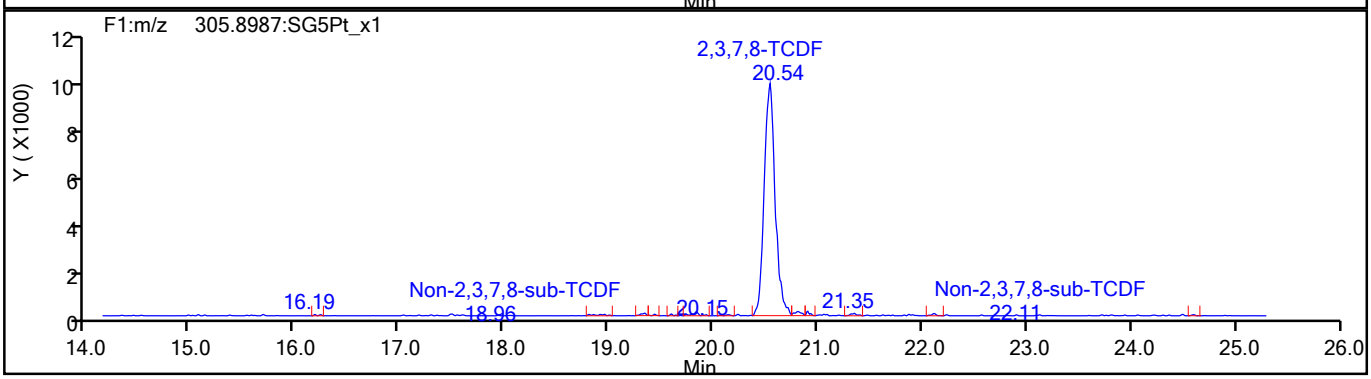

TCDF Standards

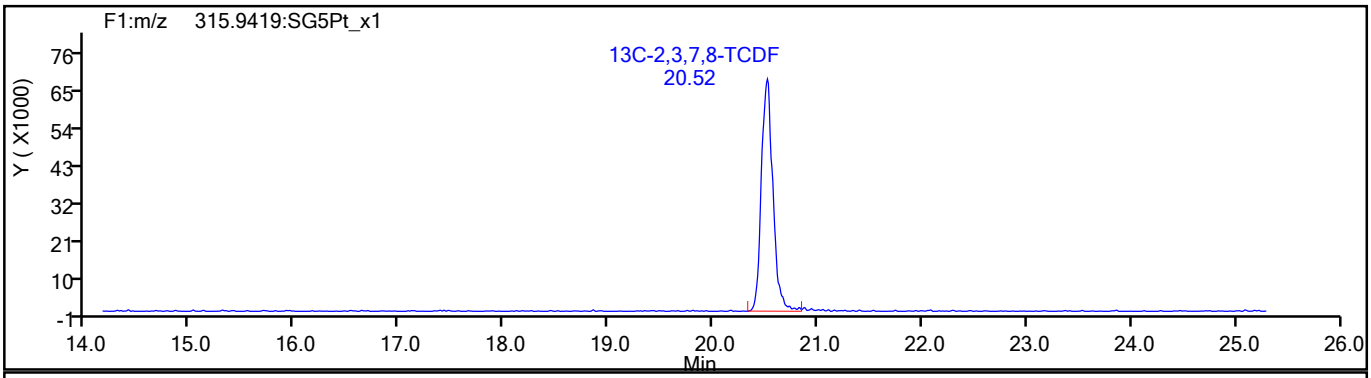

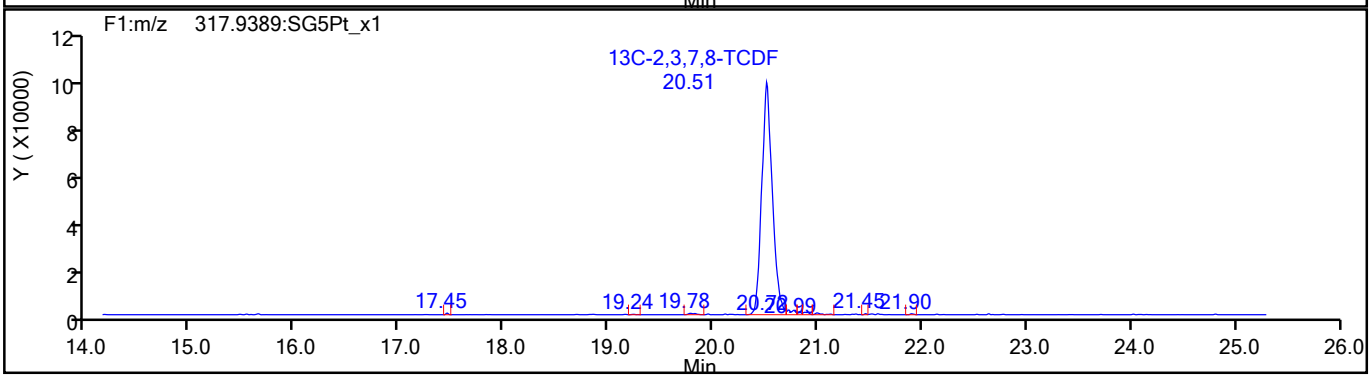

776771

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

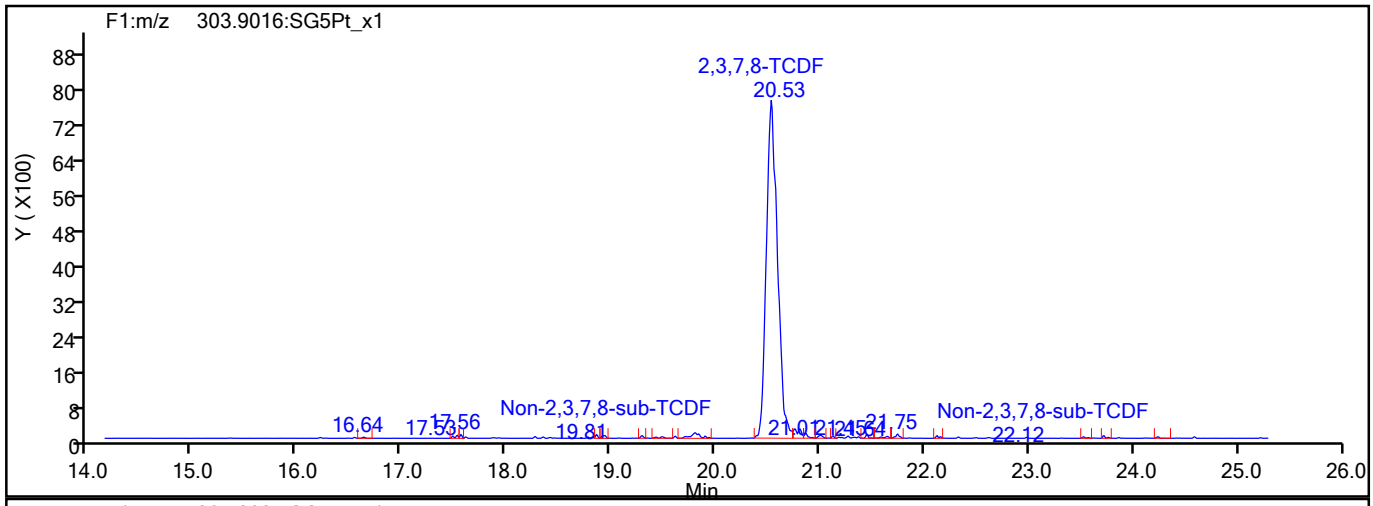

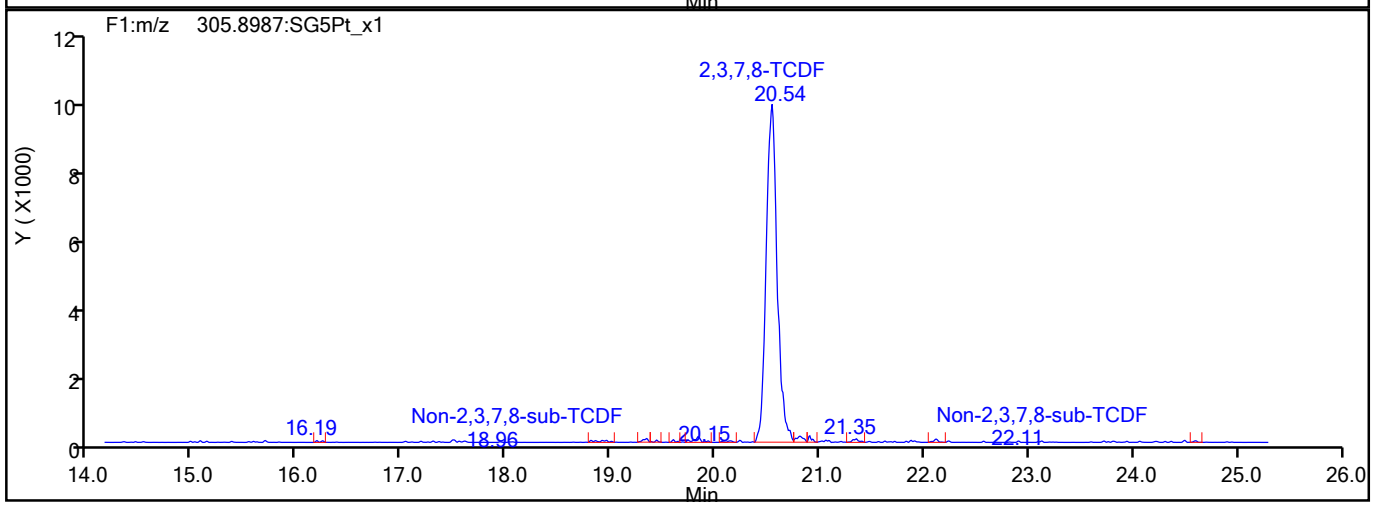

TCDF Interference Mass

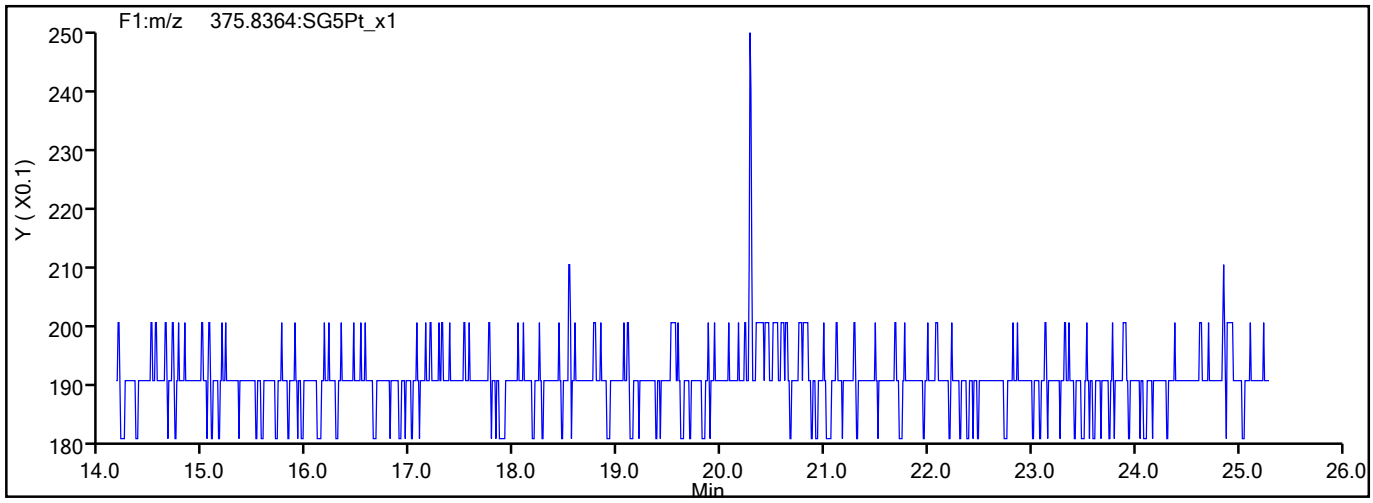

776772

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

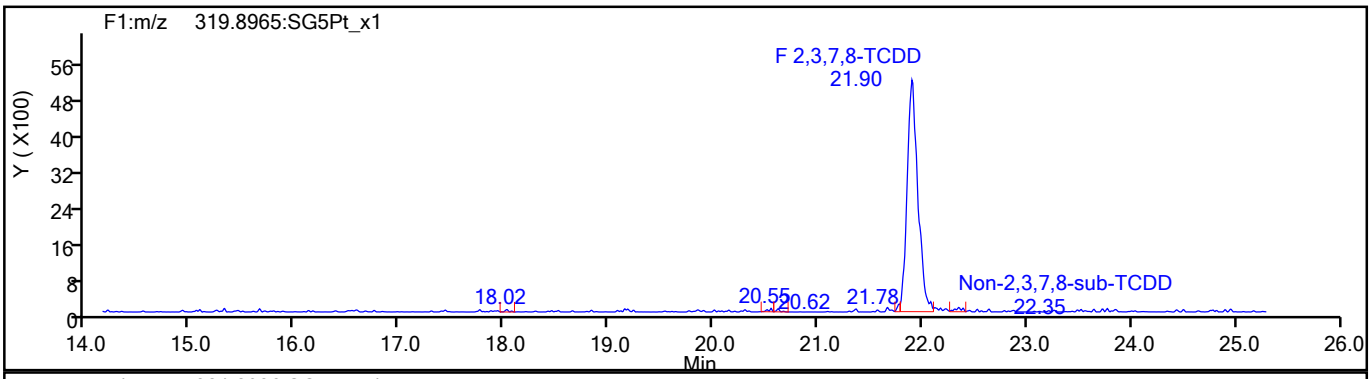

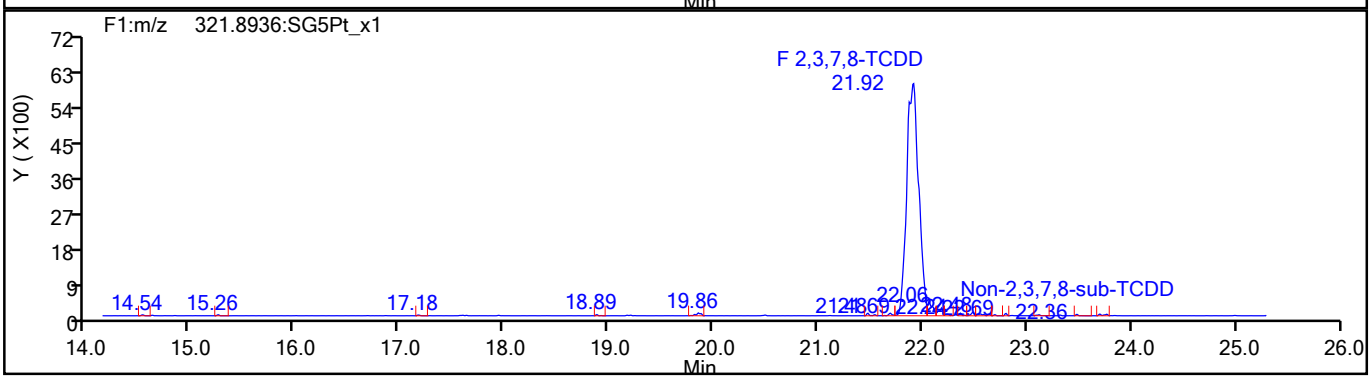

TCDD Standards

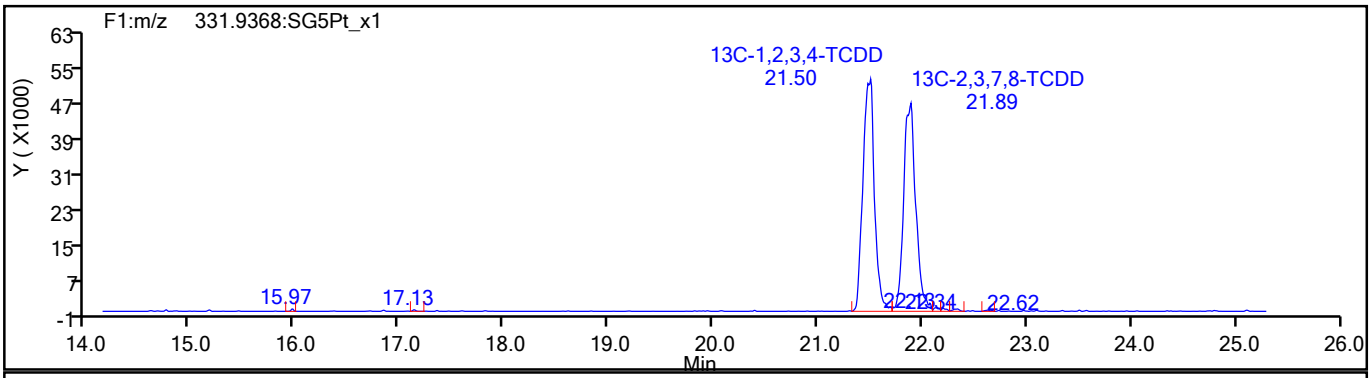

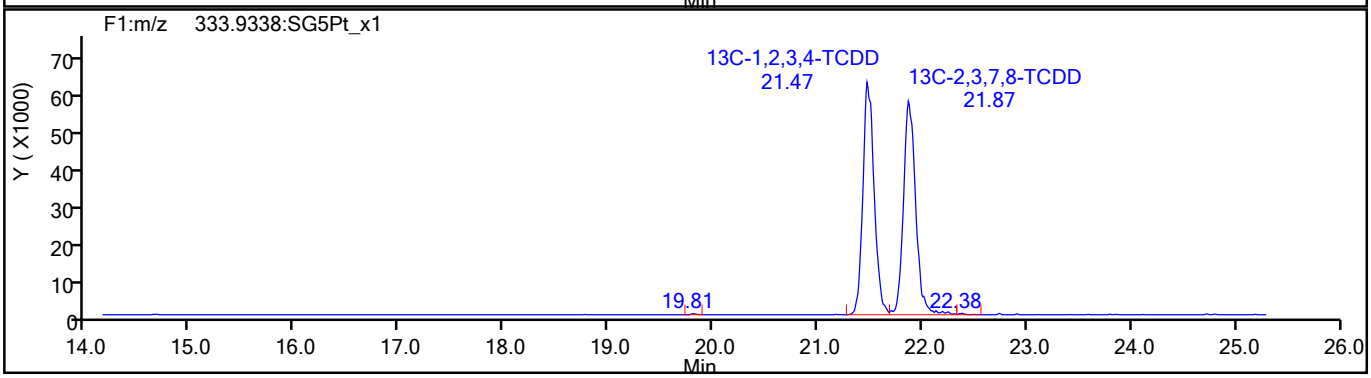

776773

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

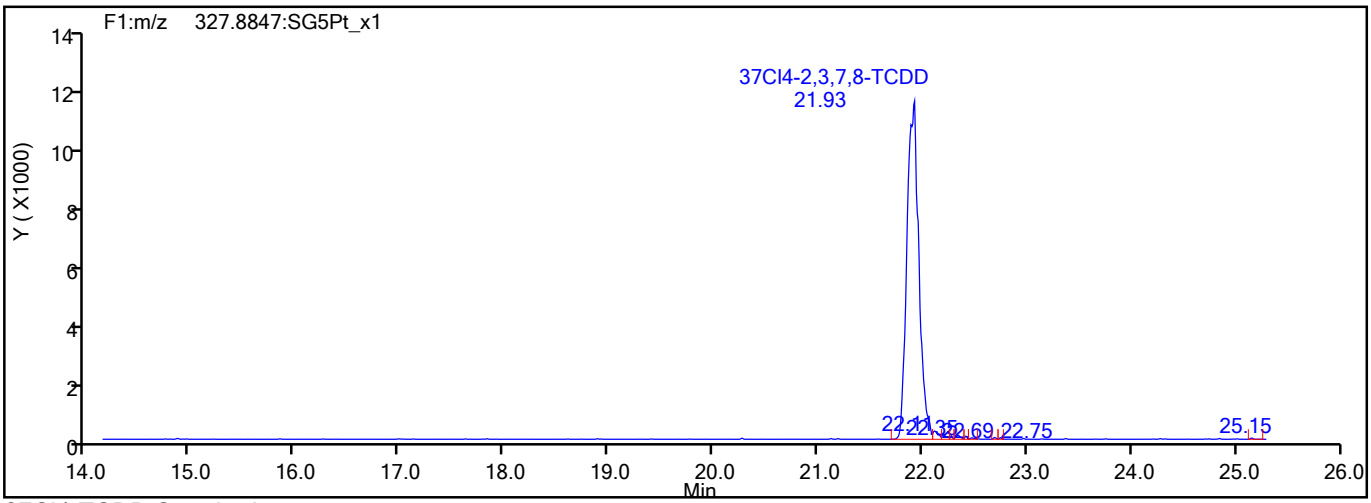

37Cl4-TCDD Standards

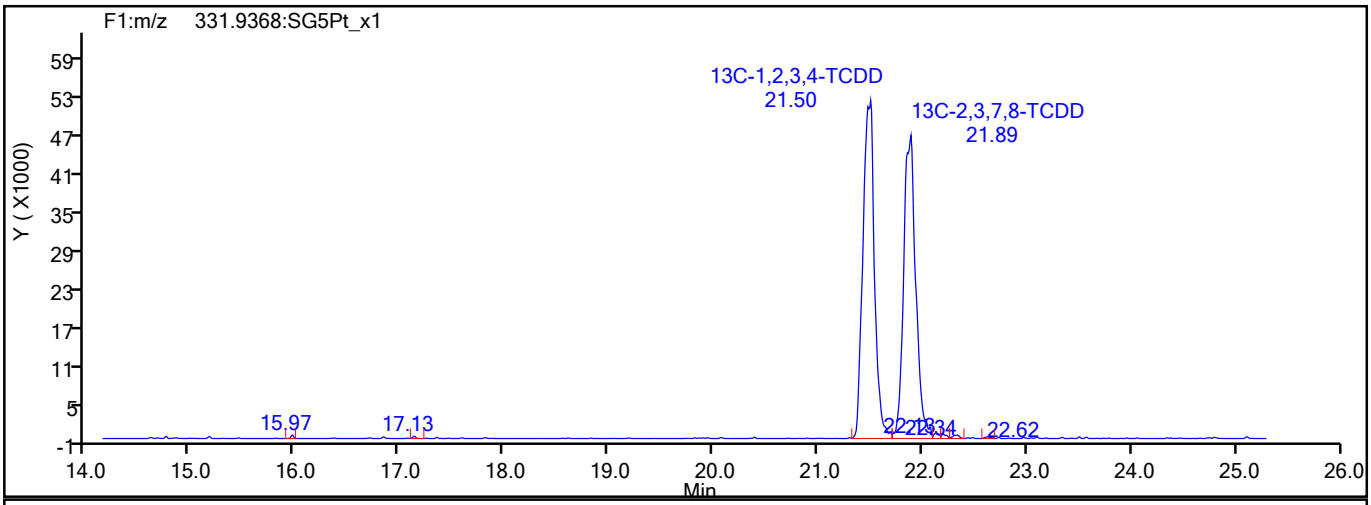

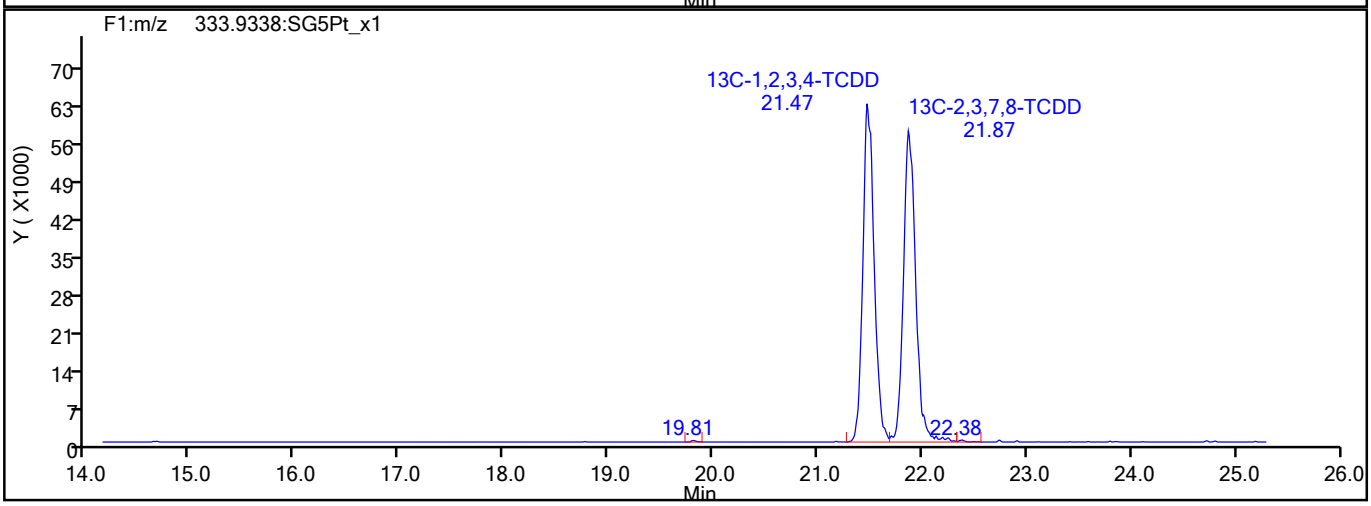

776774

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

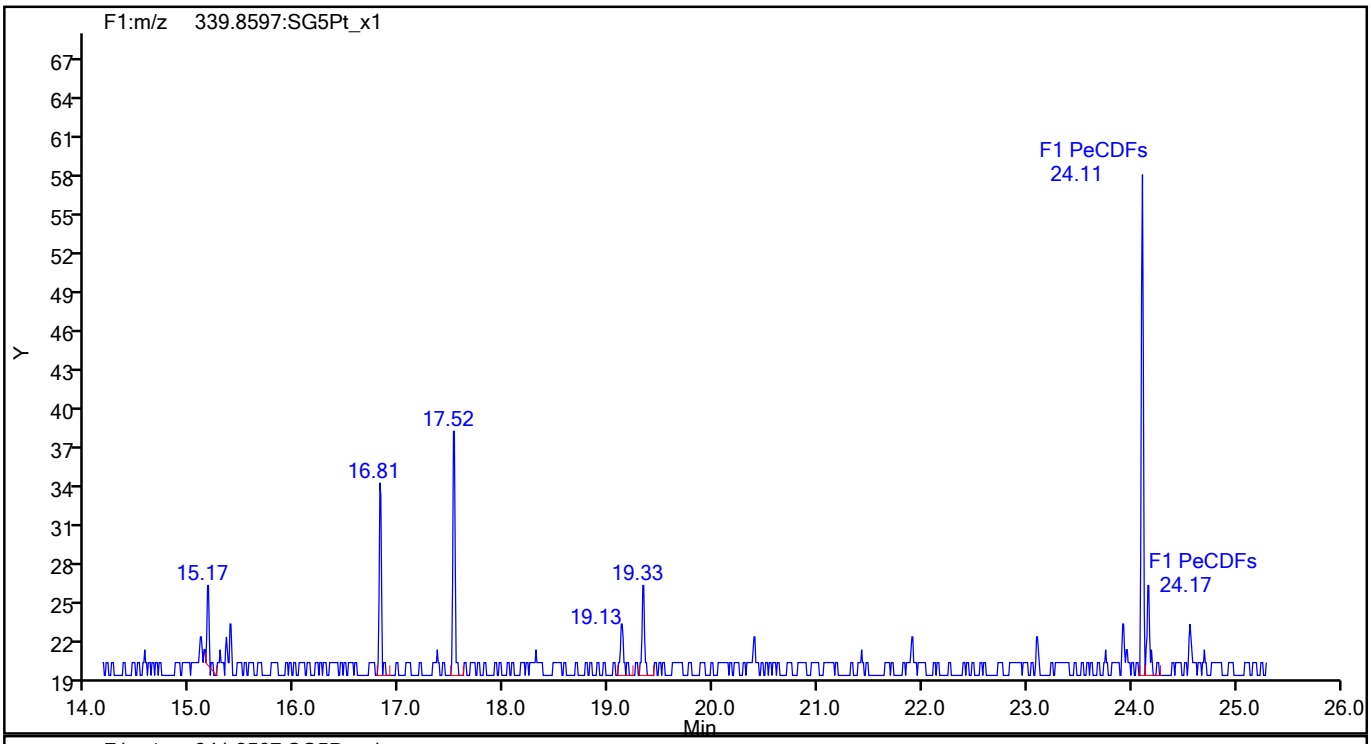

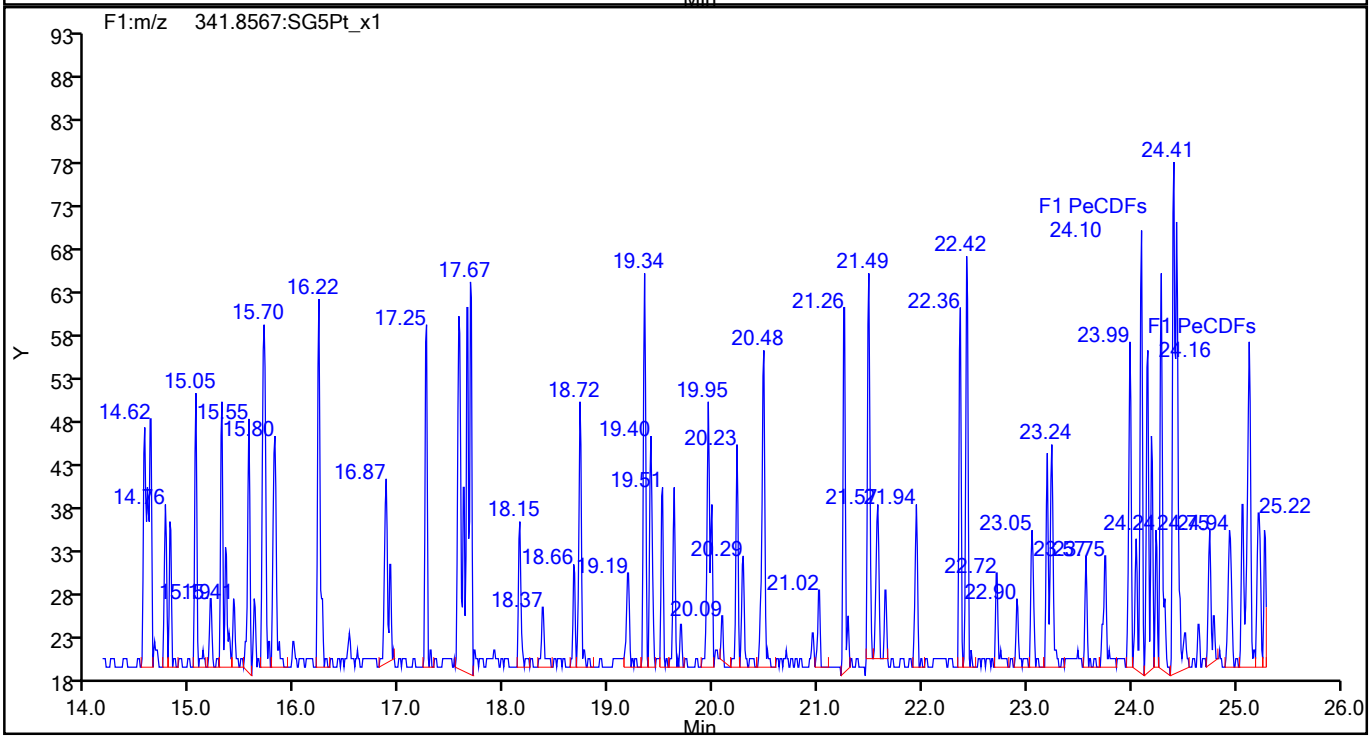

776775

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

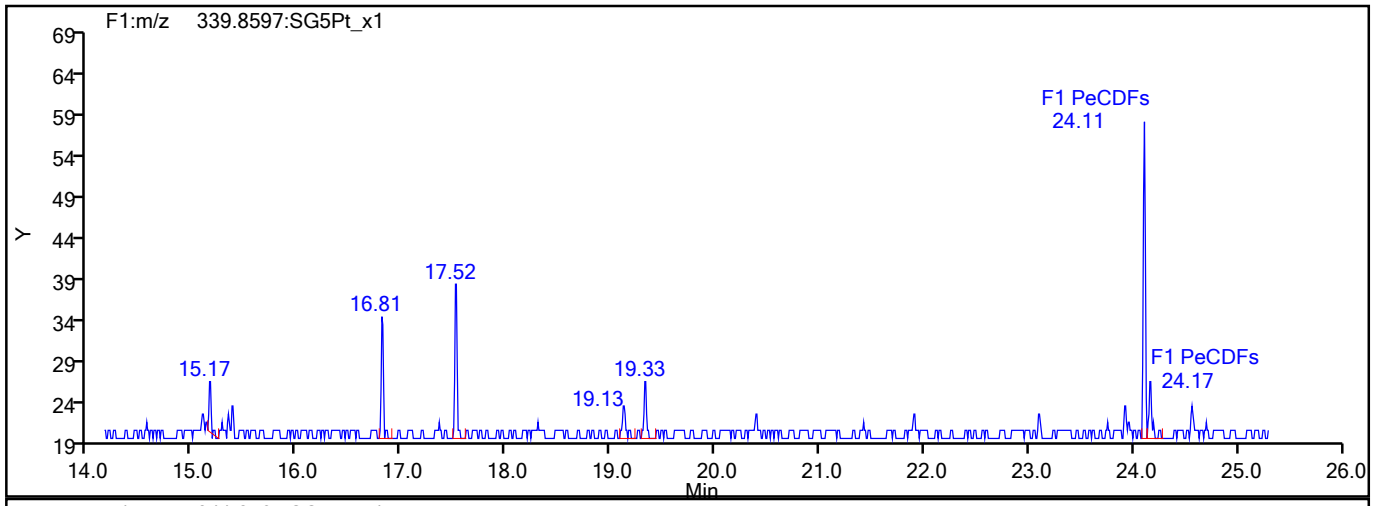

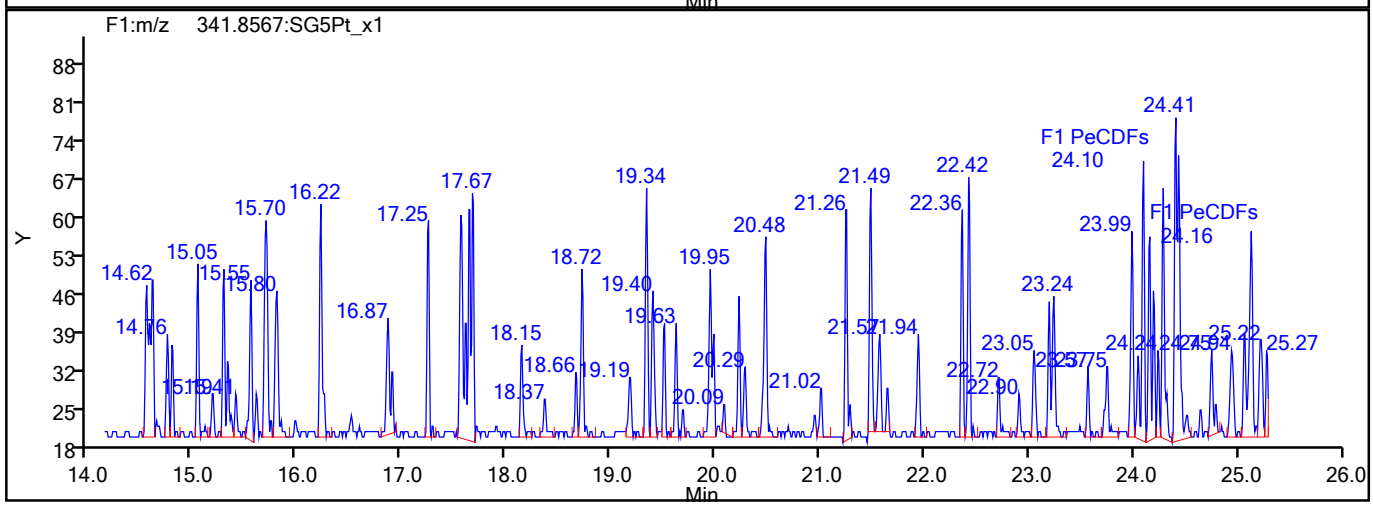

F1 PeCDFs Interference Mass

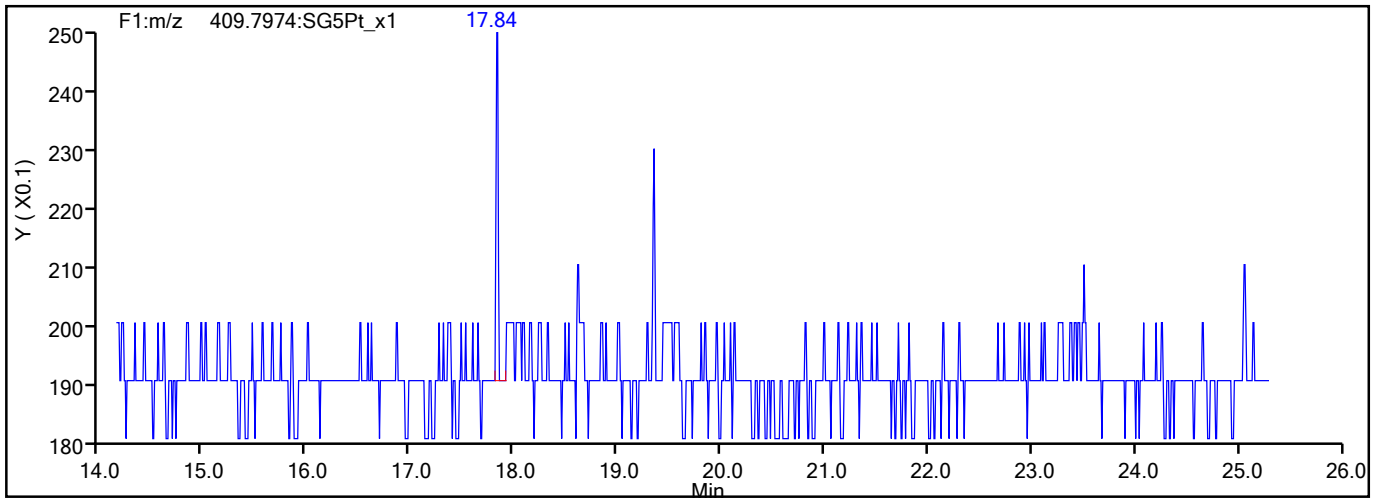

776776

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

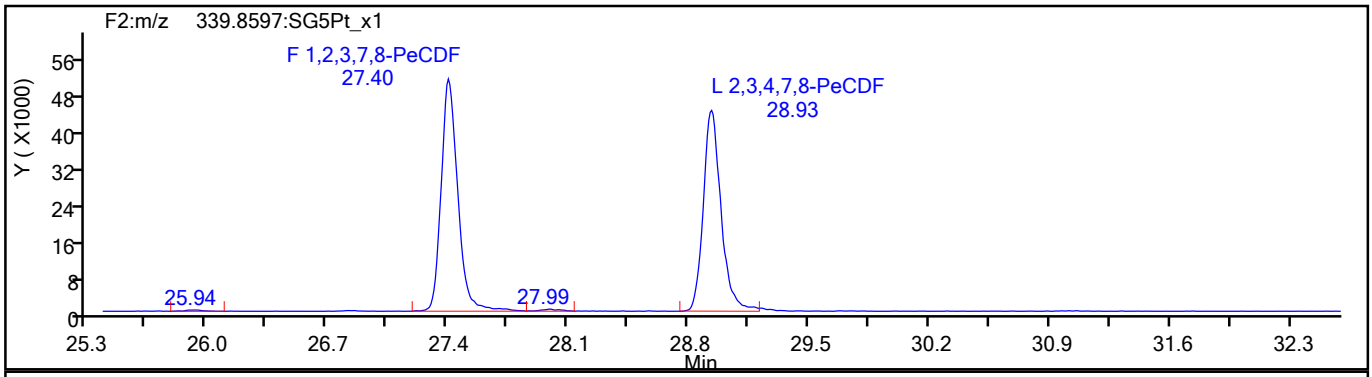

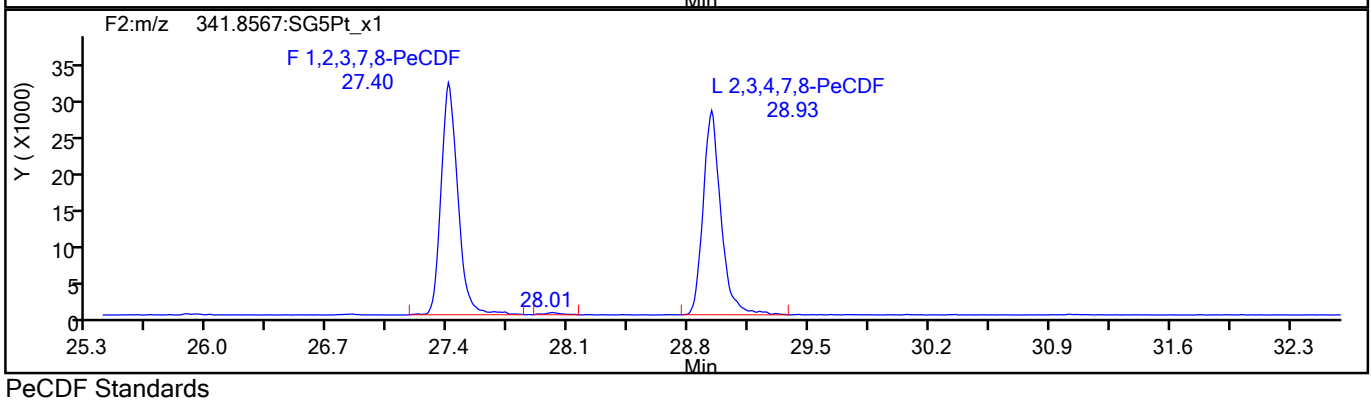

PeCDF Standards

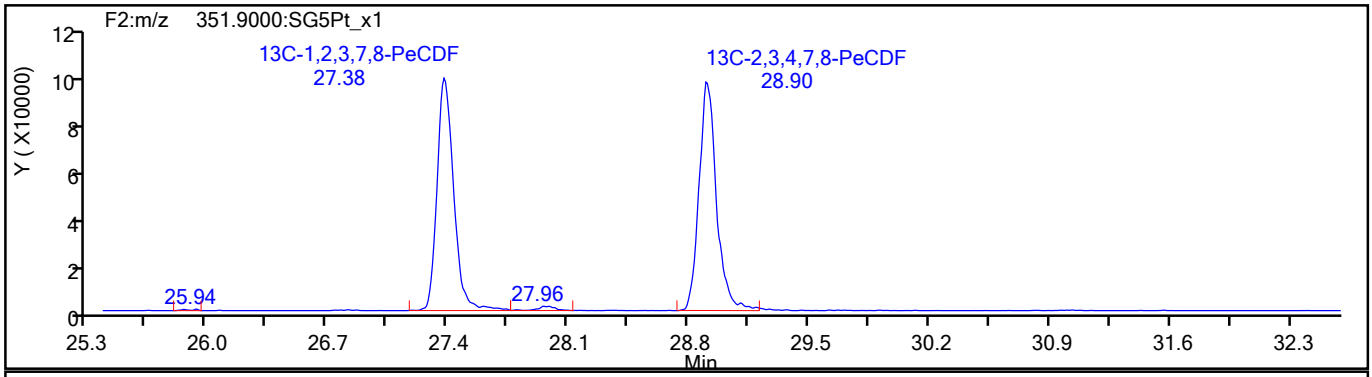

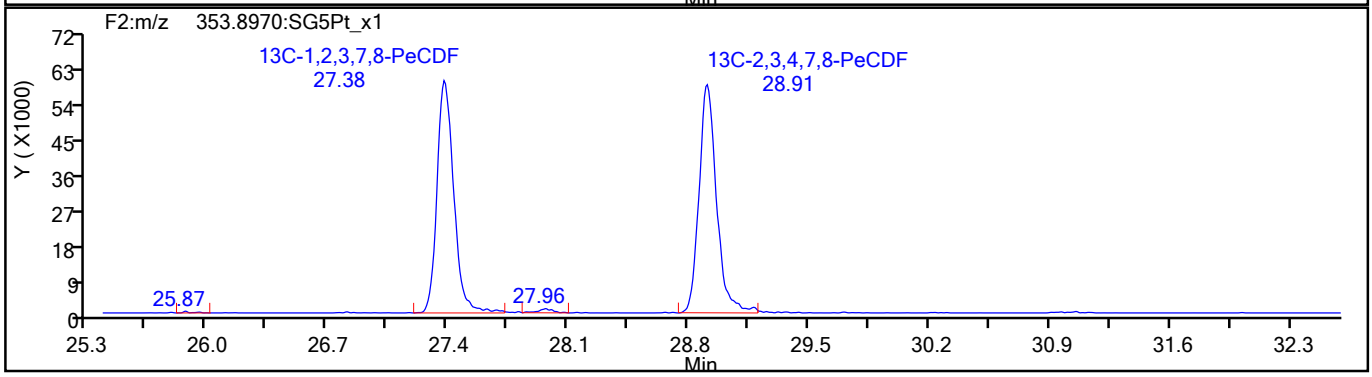

776777

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

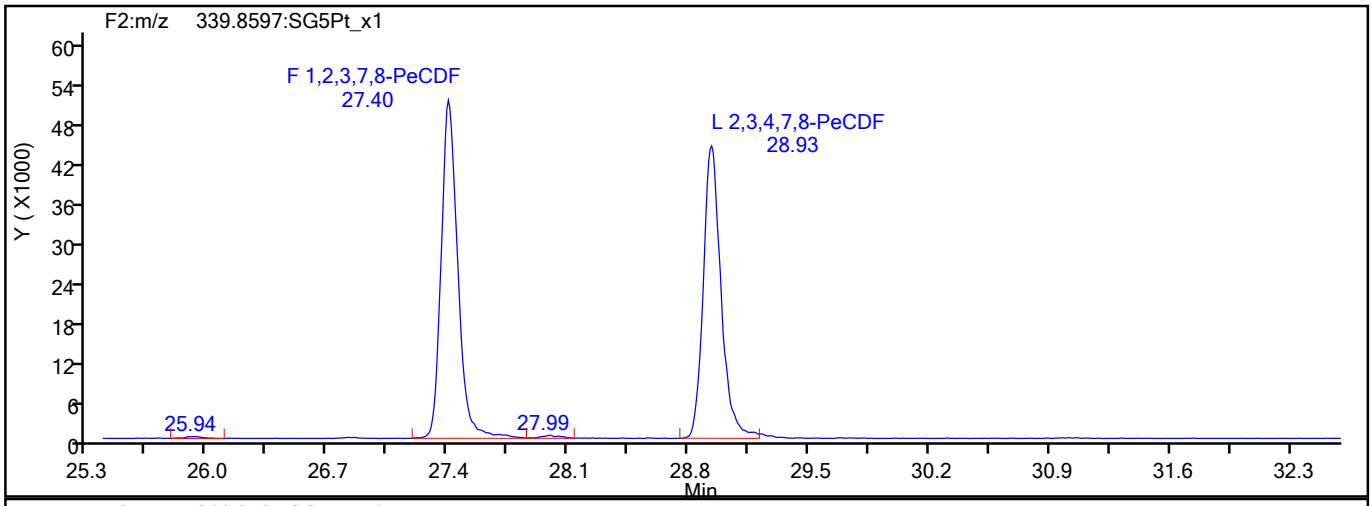

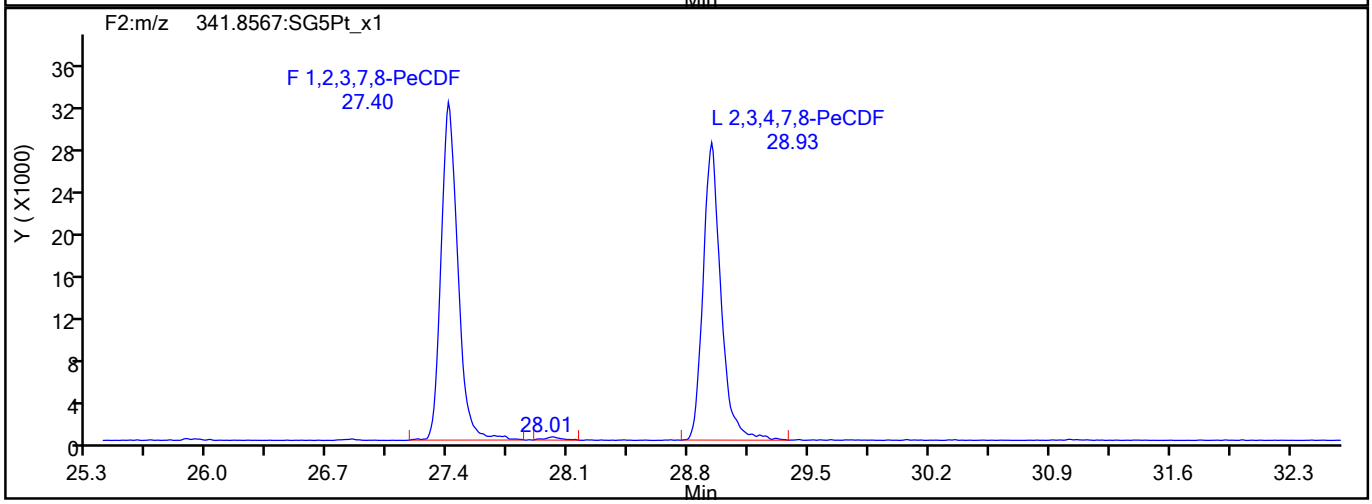

PeCDF Interference Mass

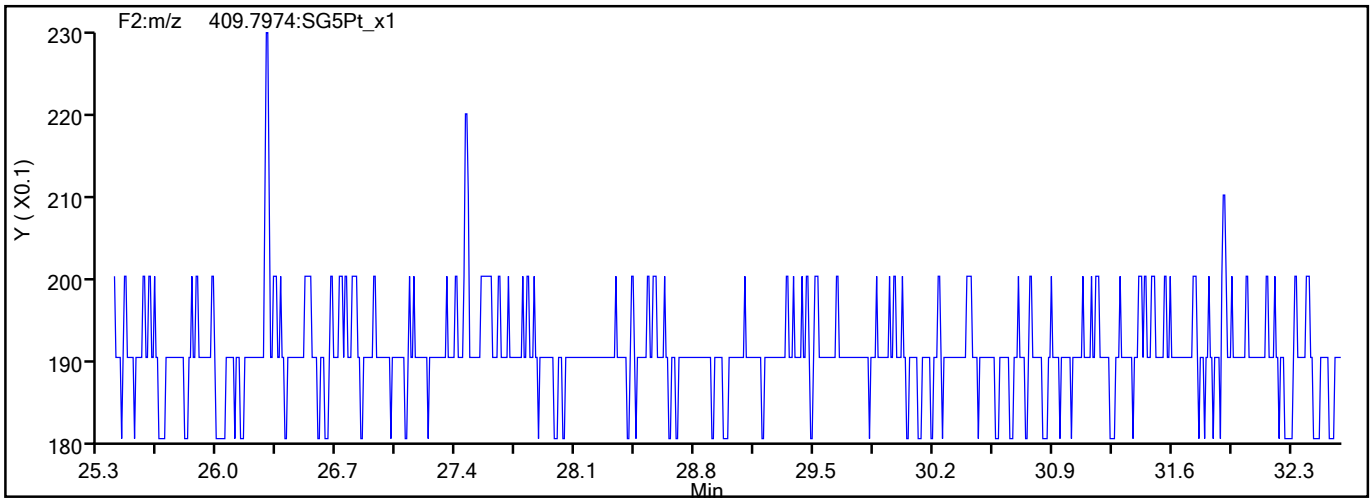

776778

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

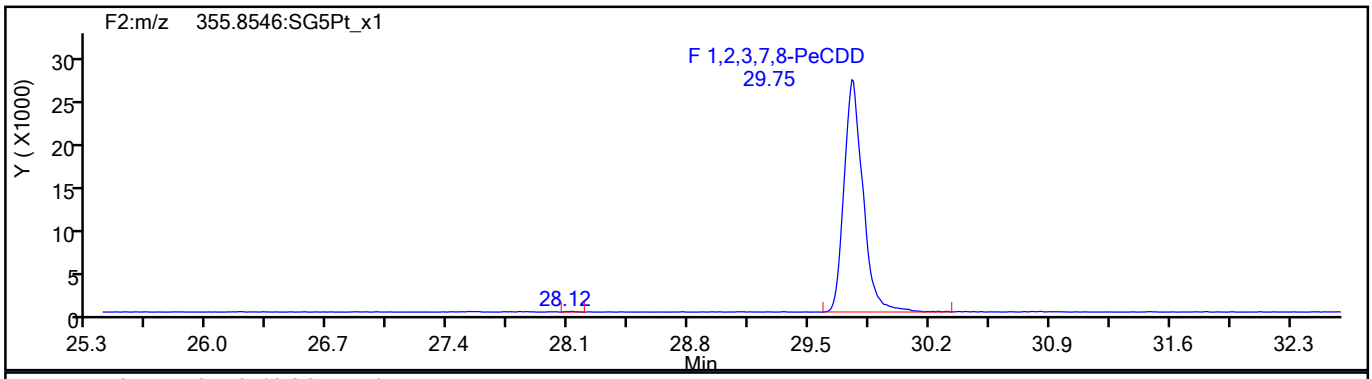

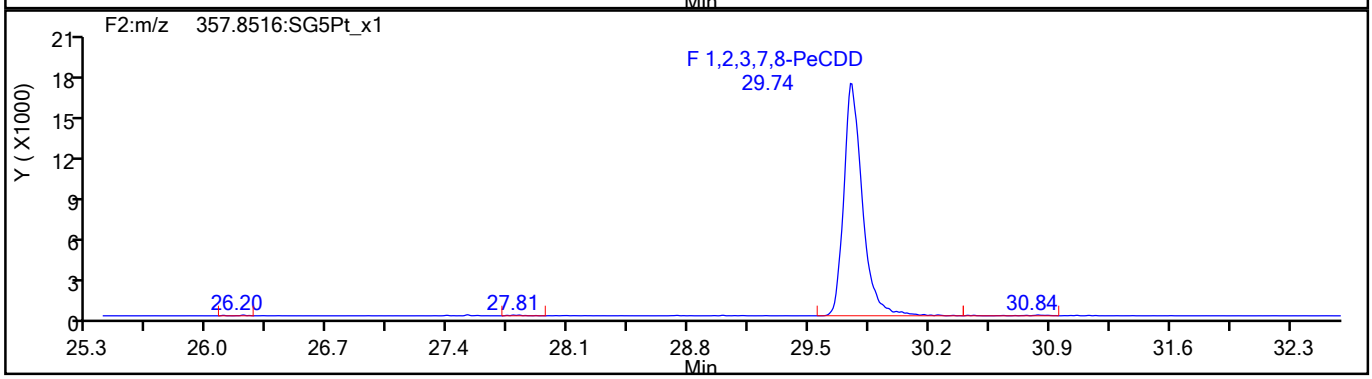

PeCDD Standards

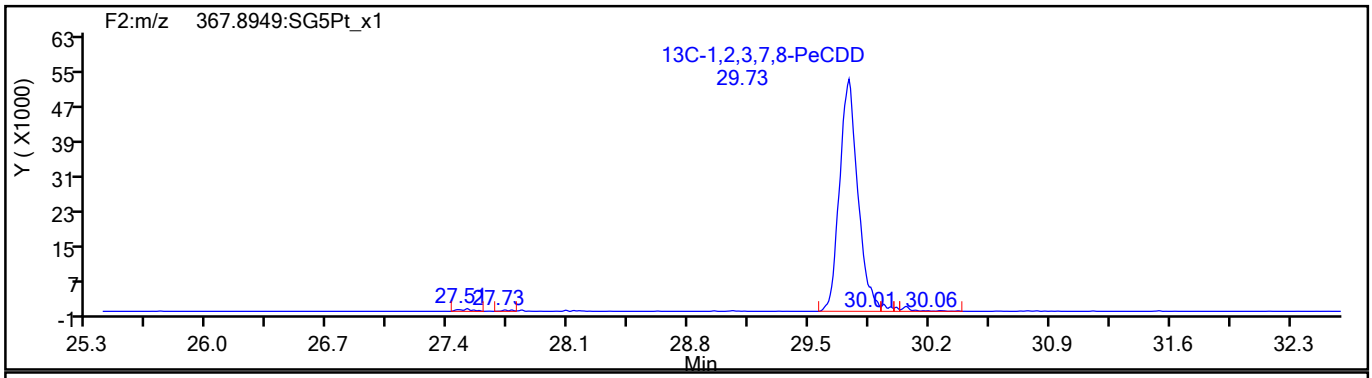

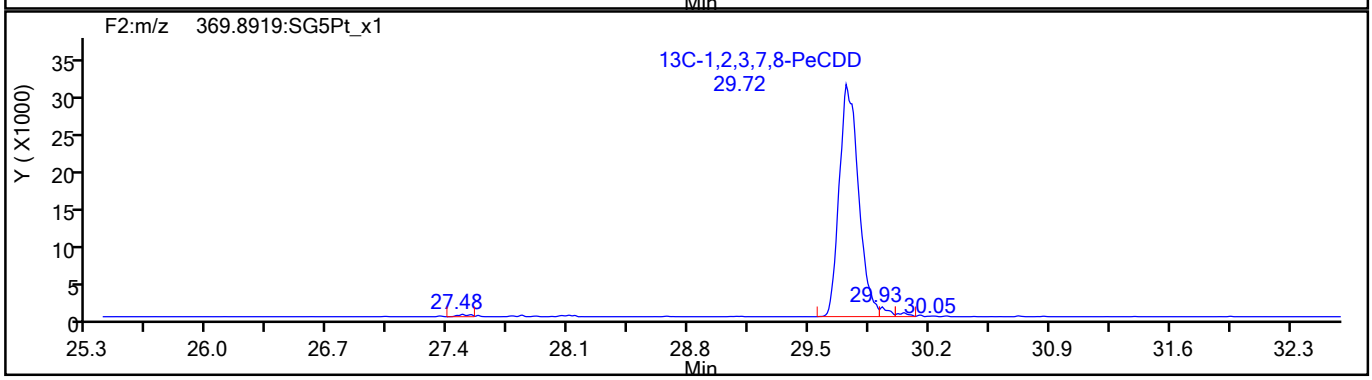

776779

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

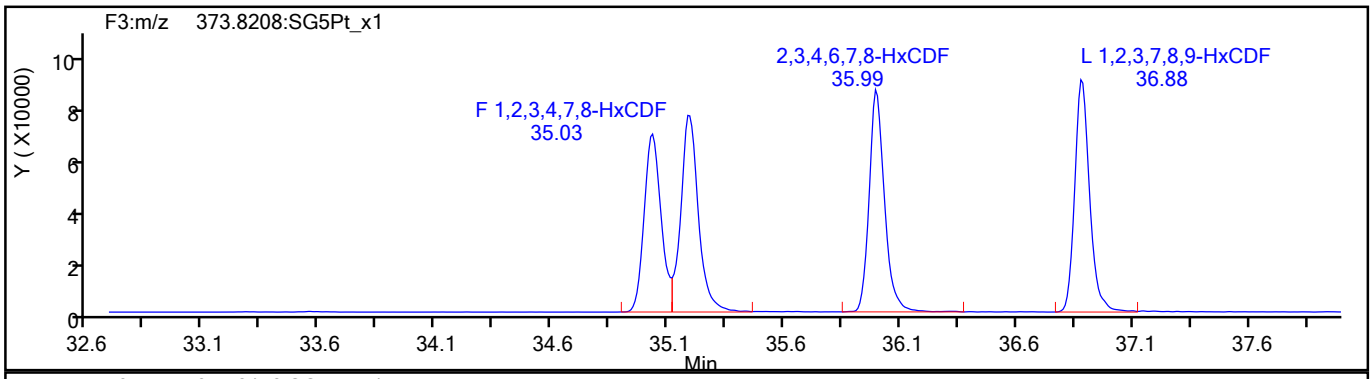

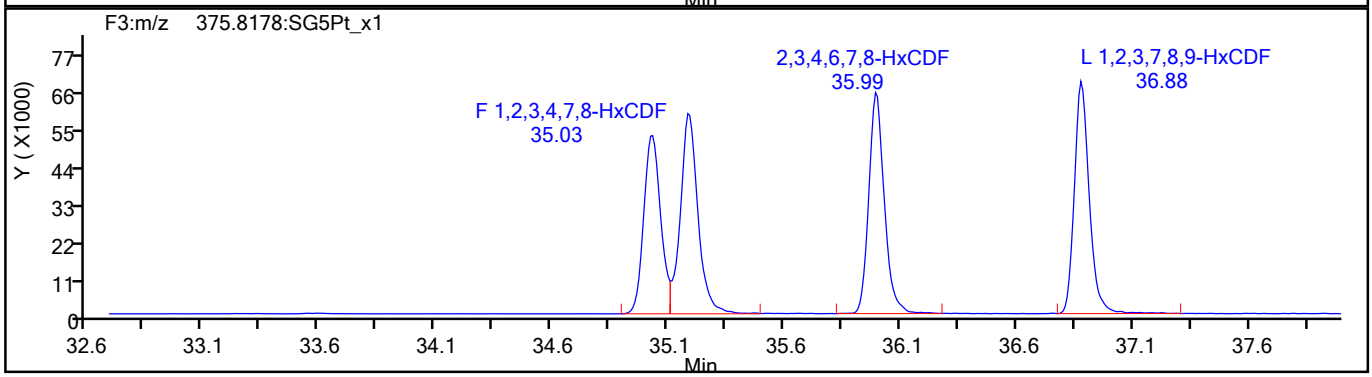

HxCDF Standards

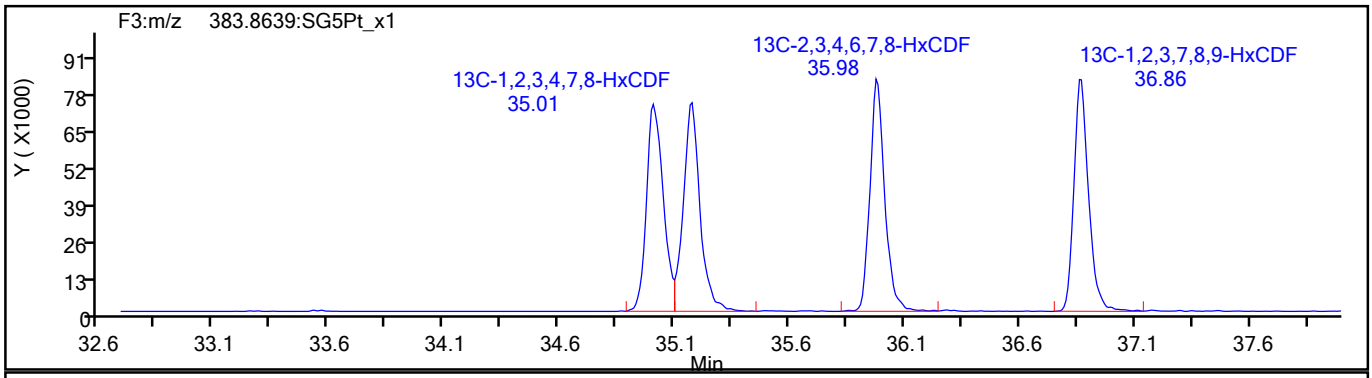

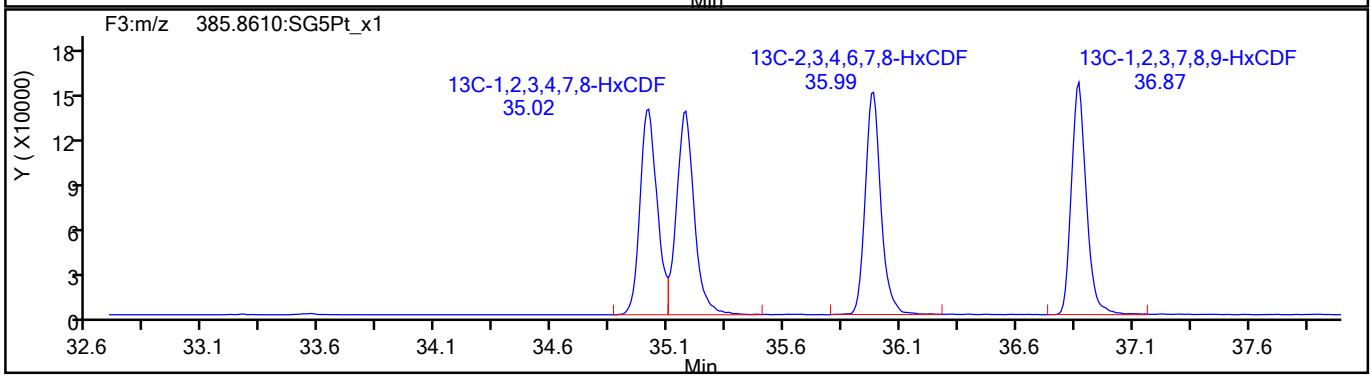

776780

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

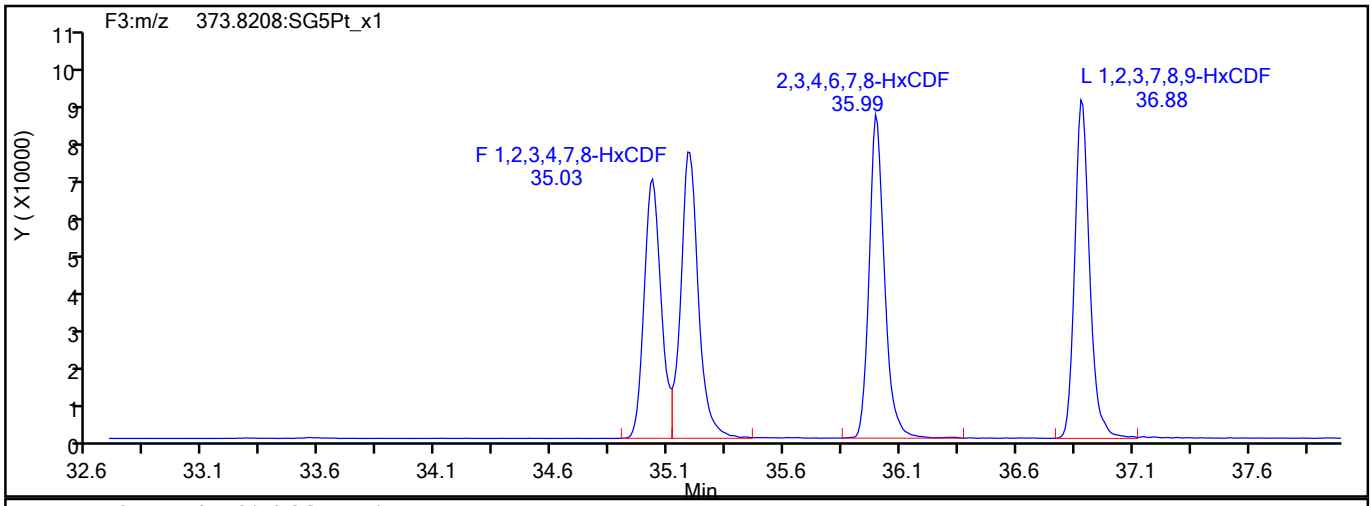

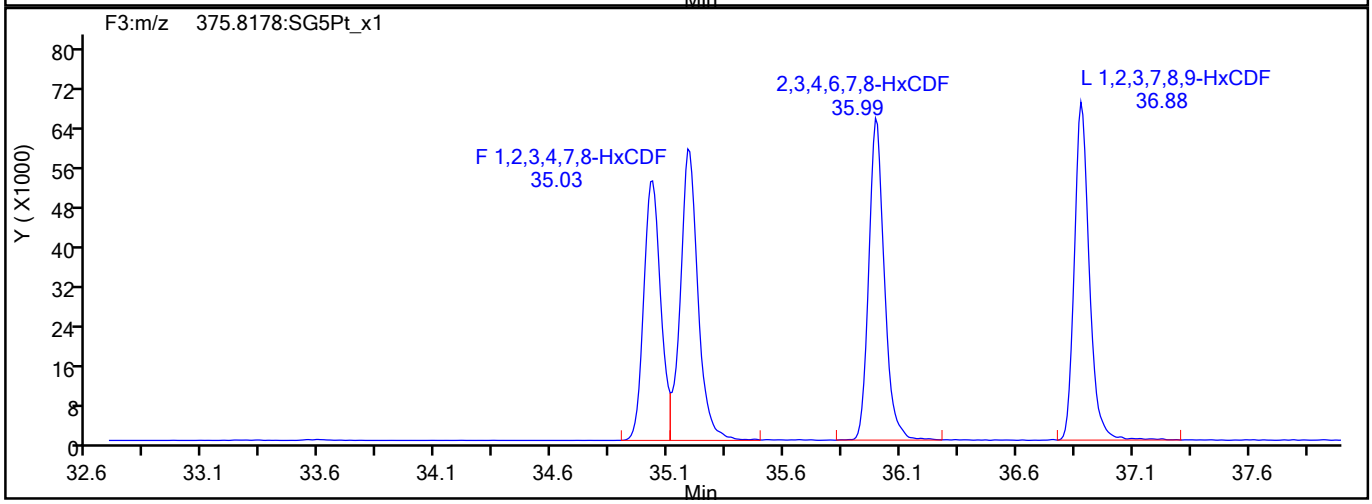

HxCDF Interference Mass

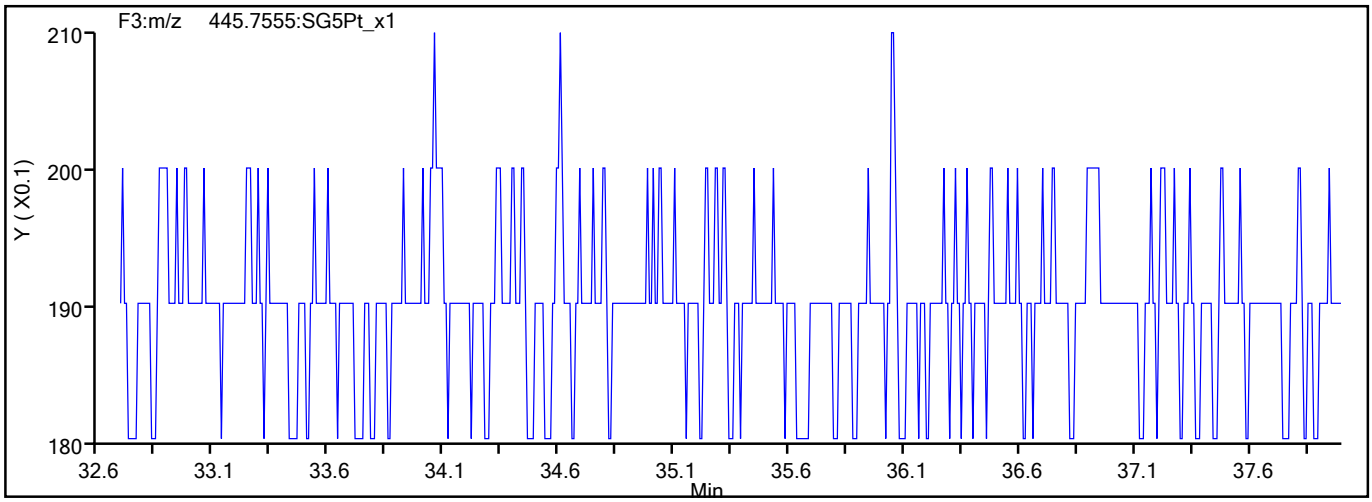

776781

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

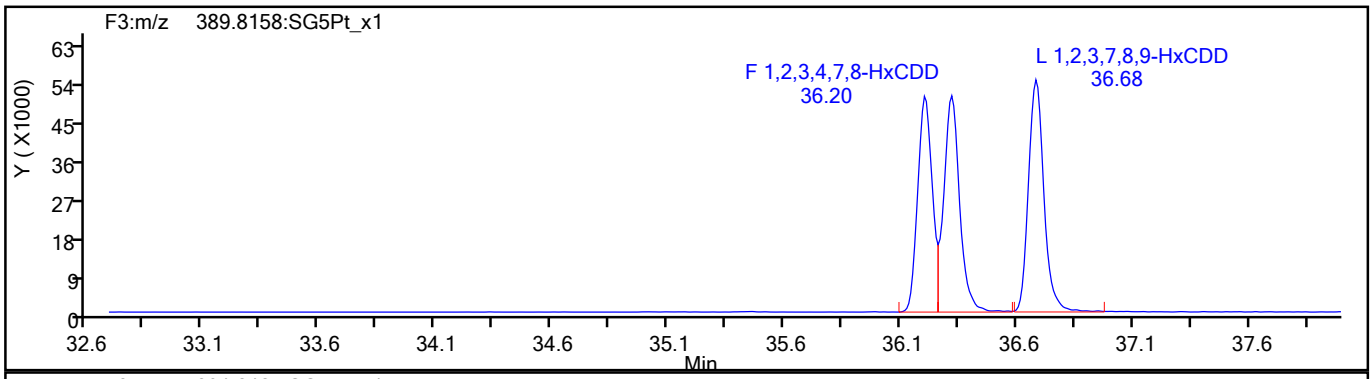

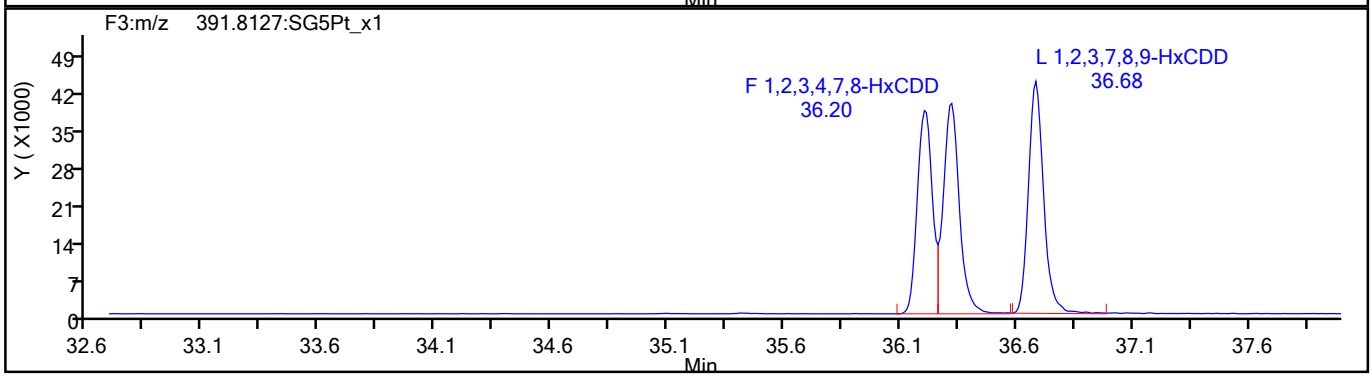

HxCDD Standards

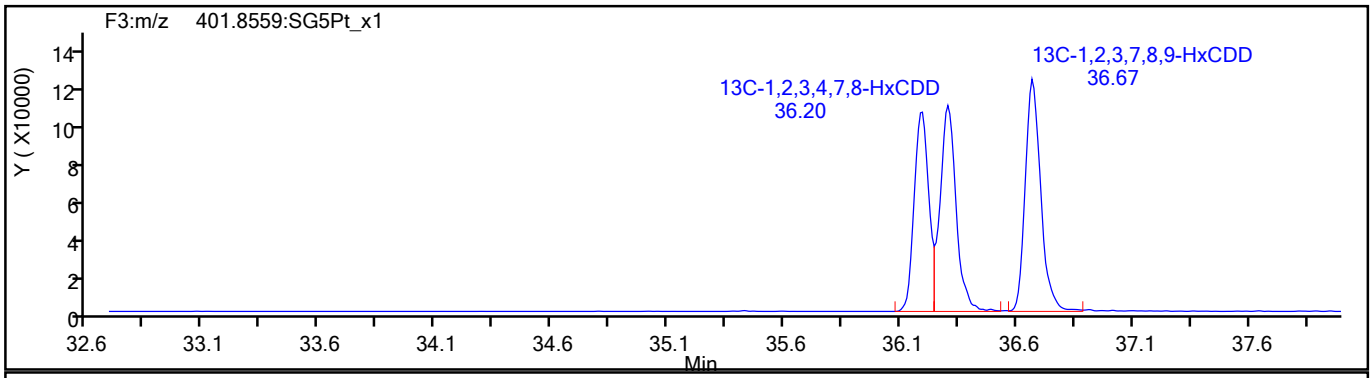

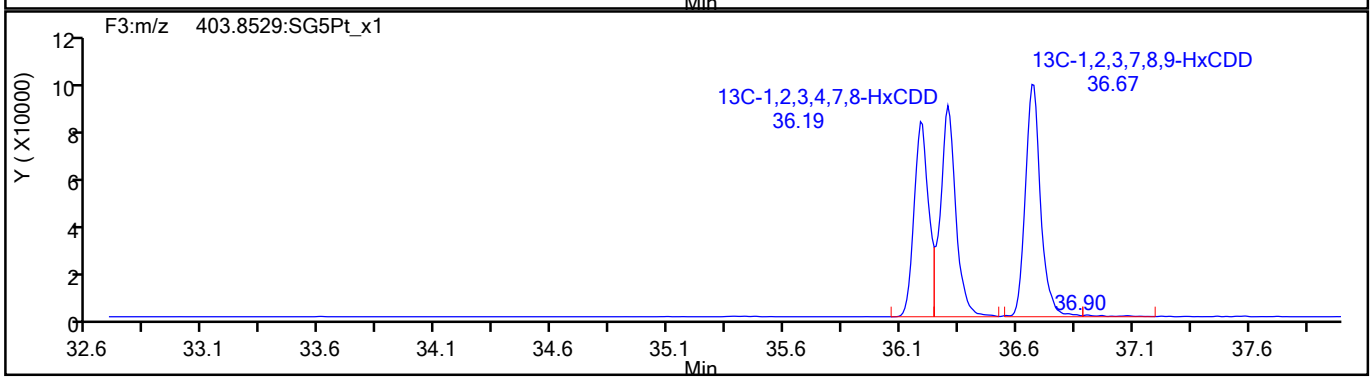

776782

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

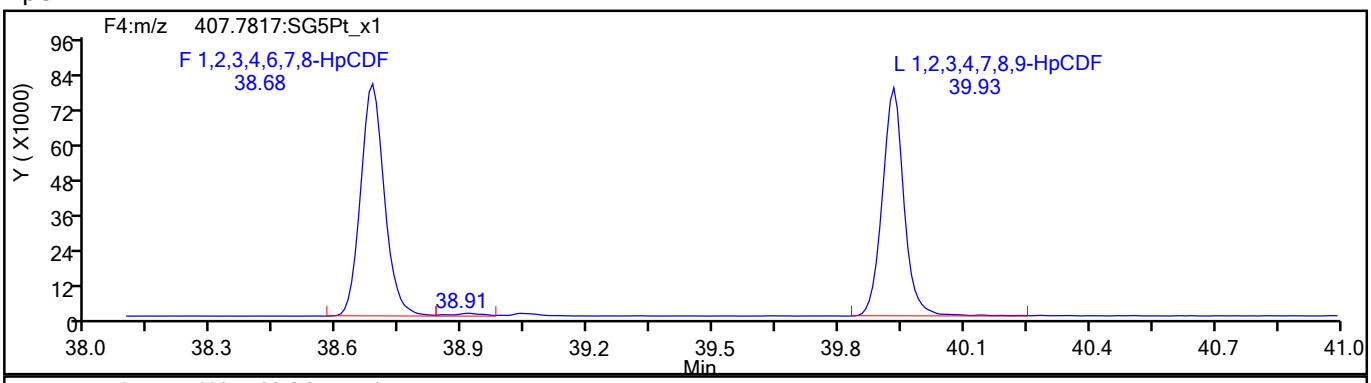

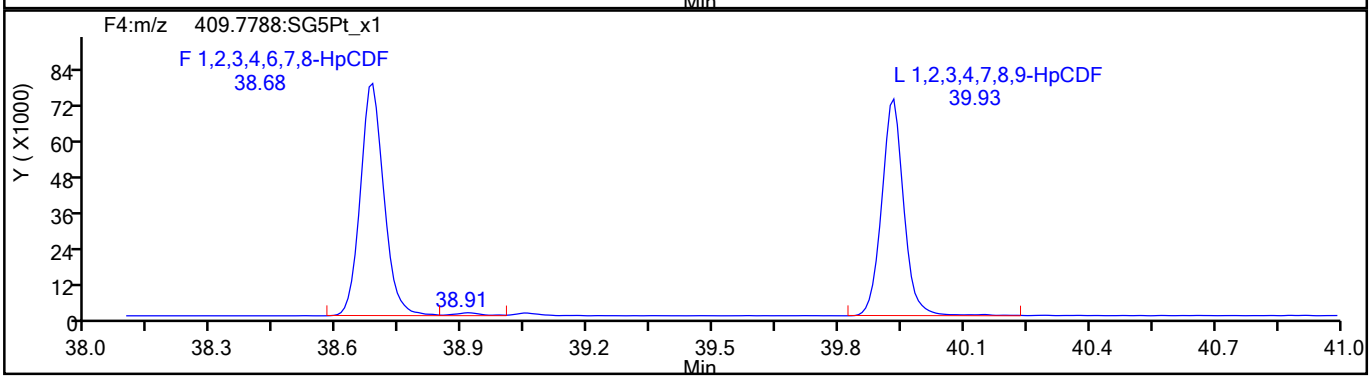

HpCDF Standards

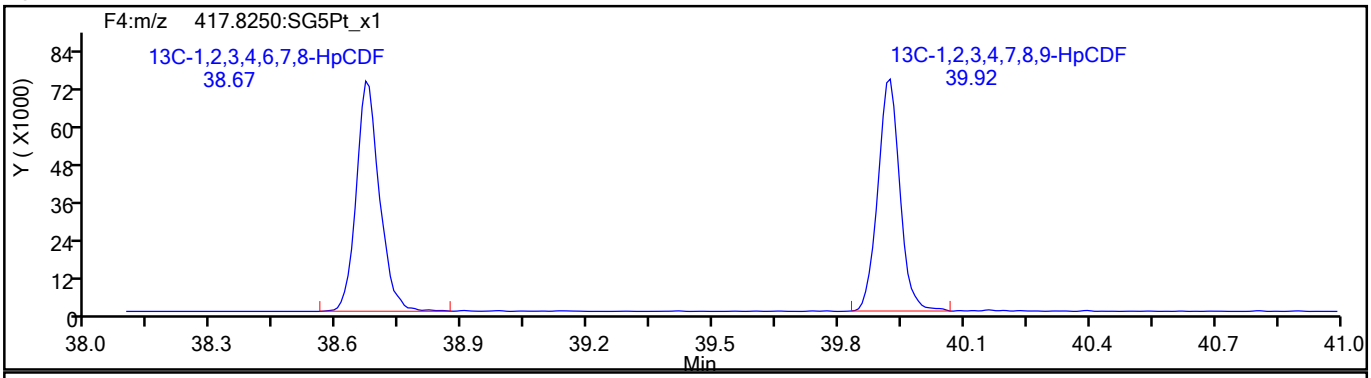

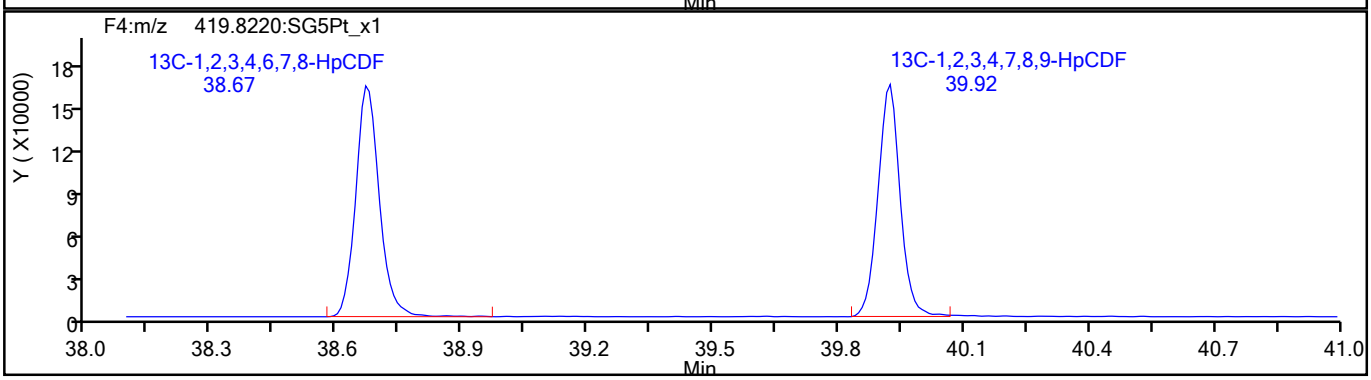

776783

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

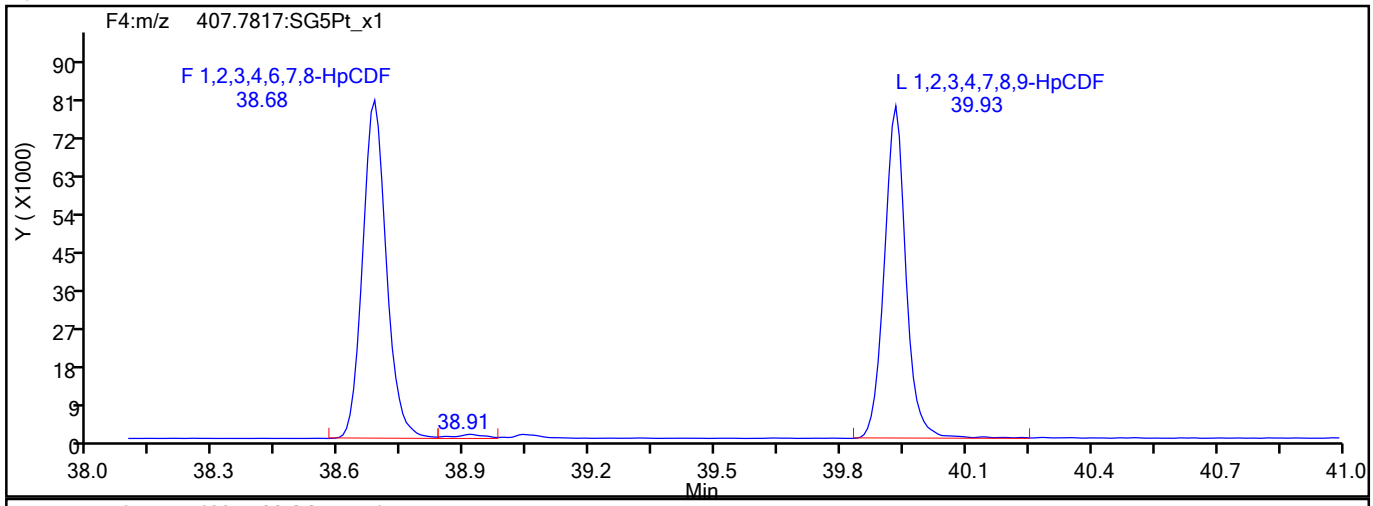

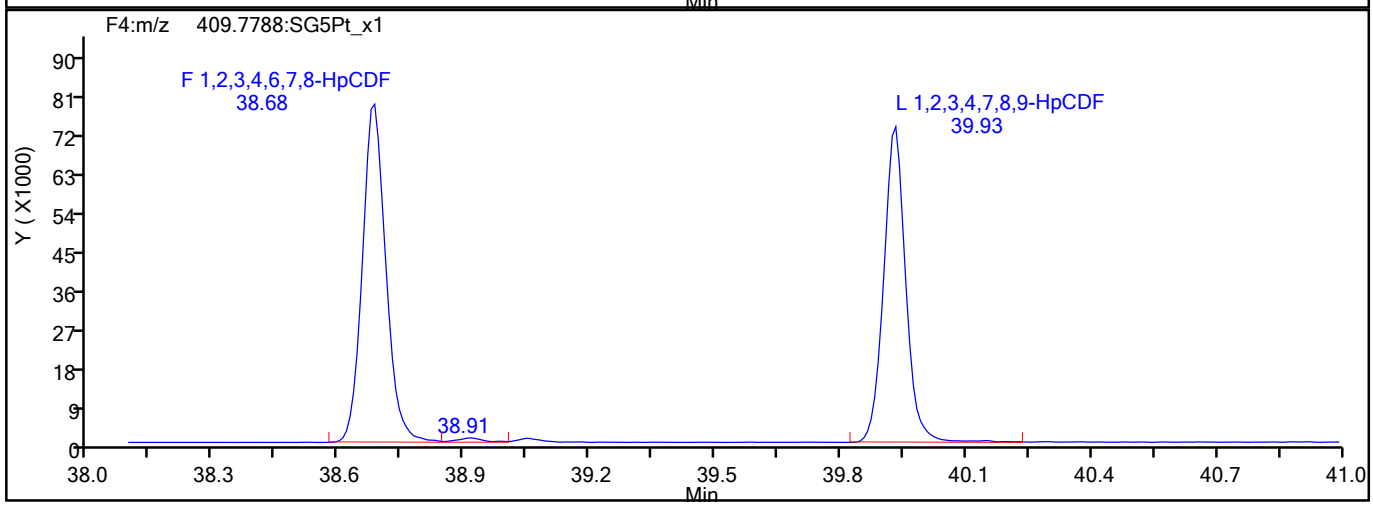

HpCDF Interference Mass

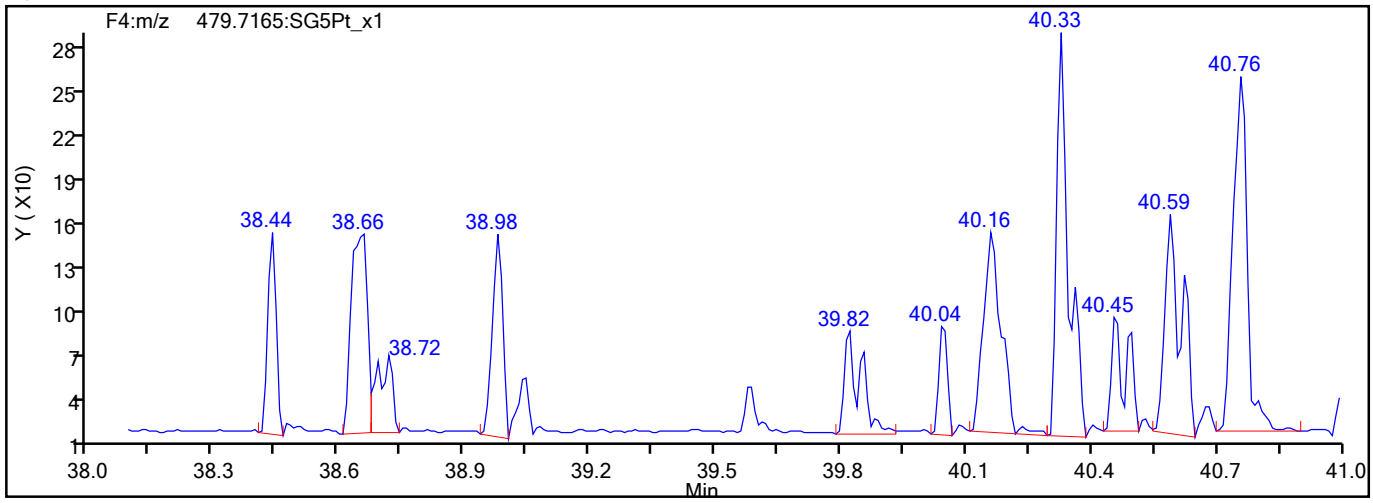

776784

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDD

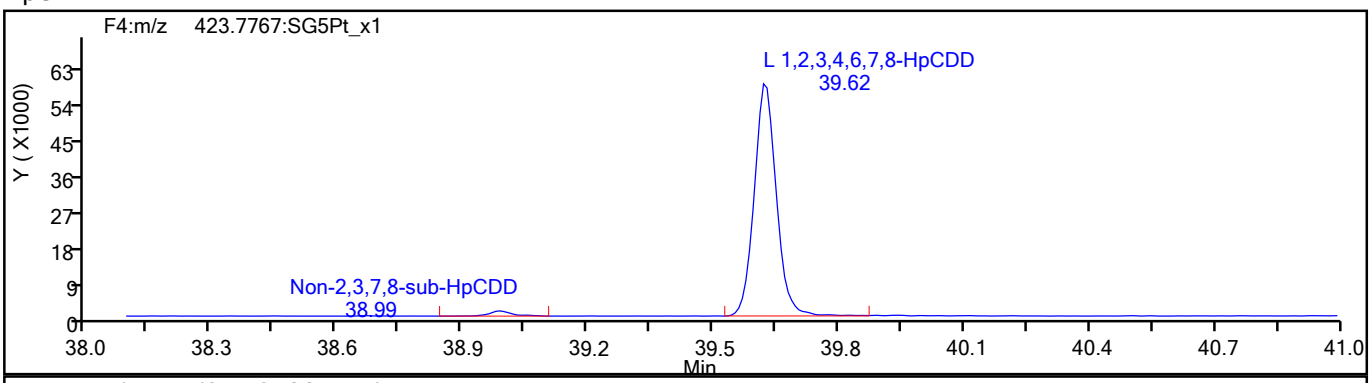

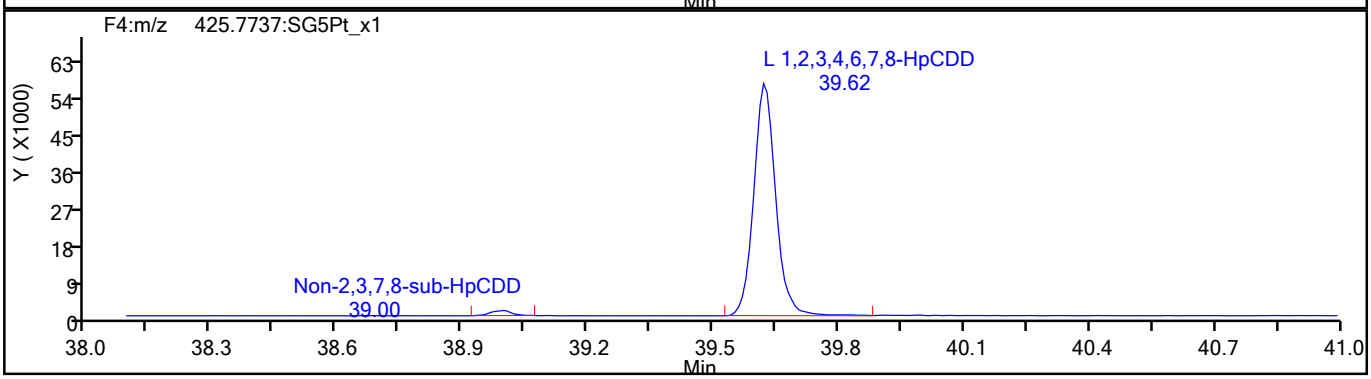

HpCDD Standards

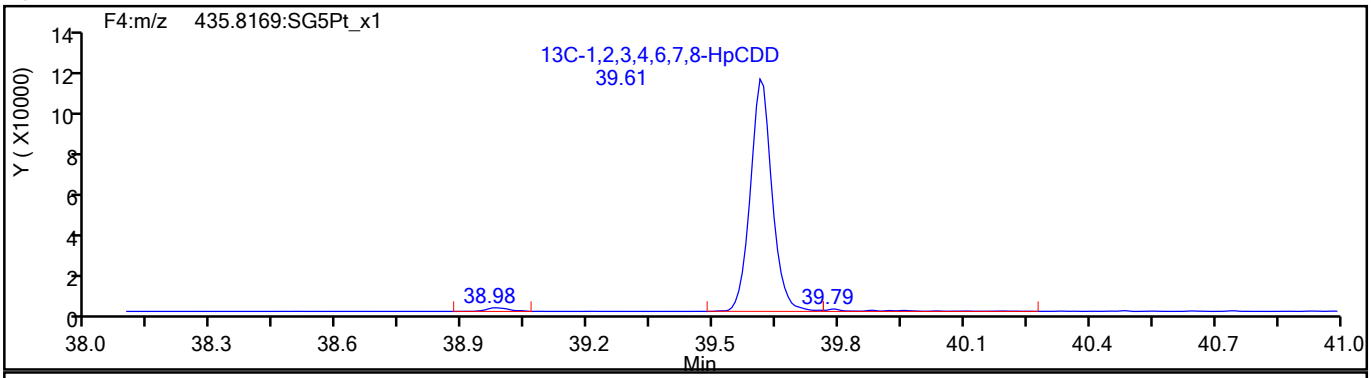

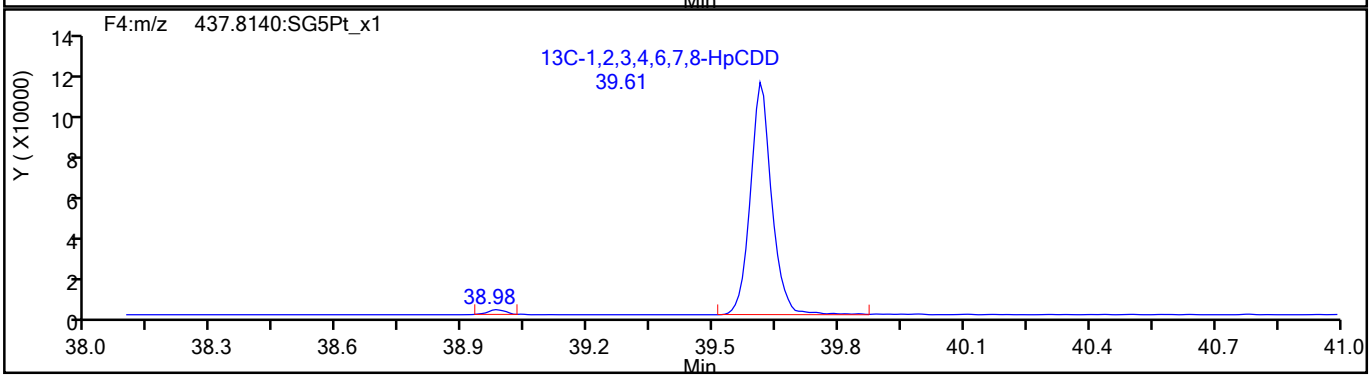

776785

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

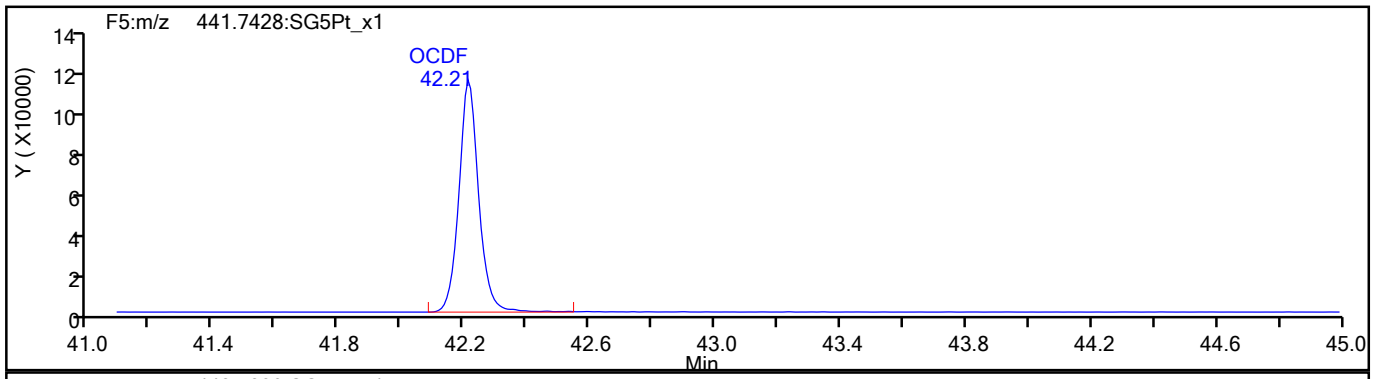

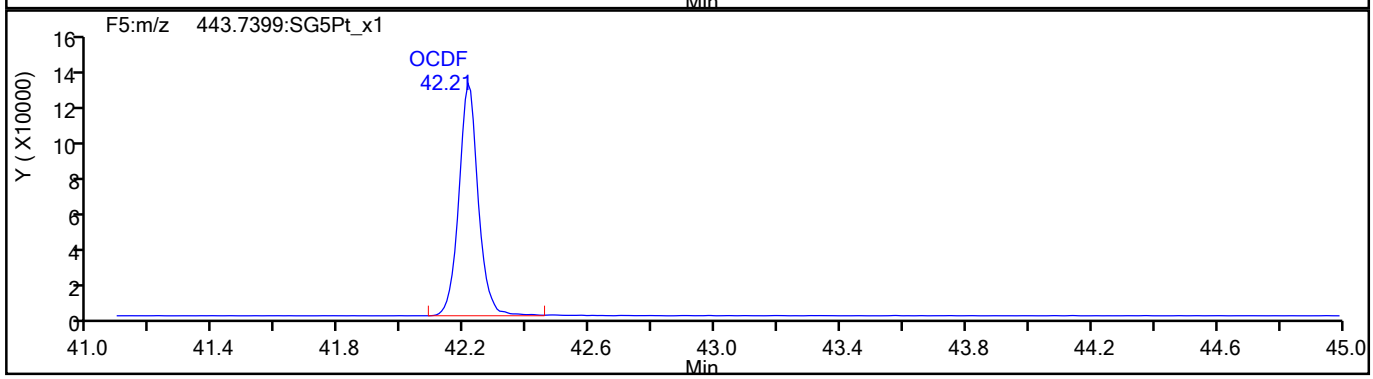

OCDF Standards

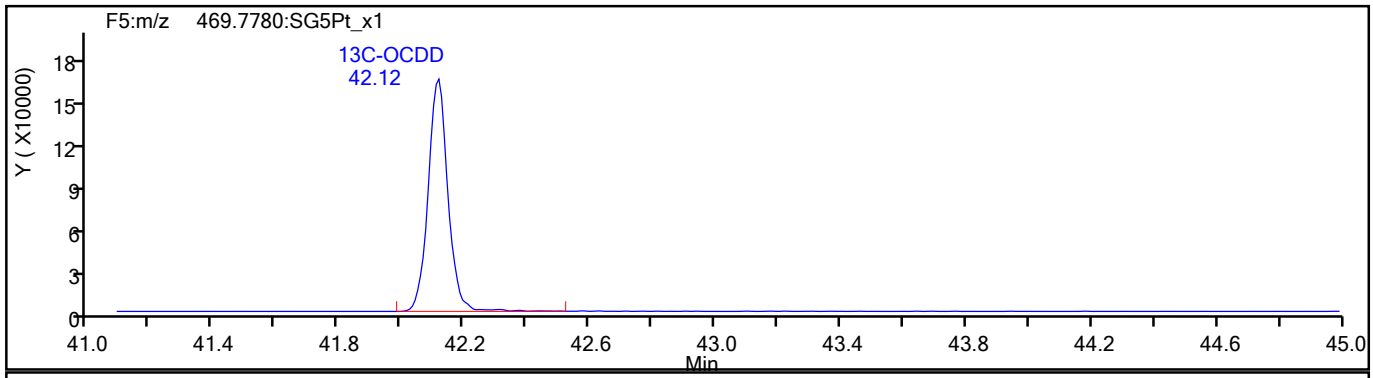

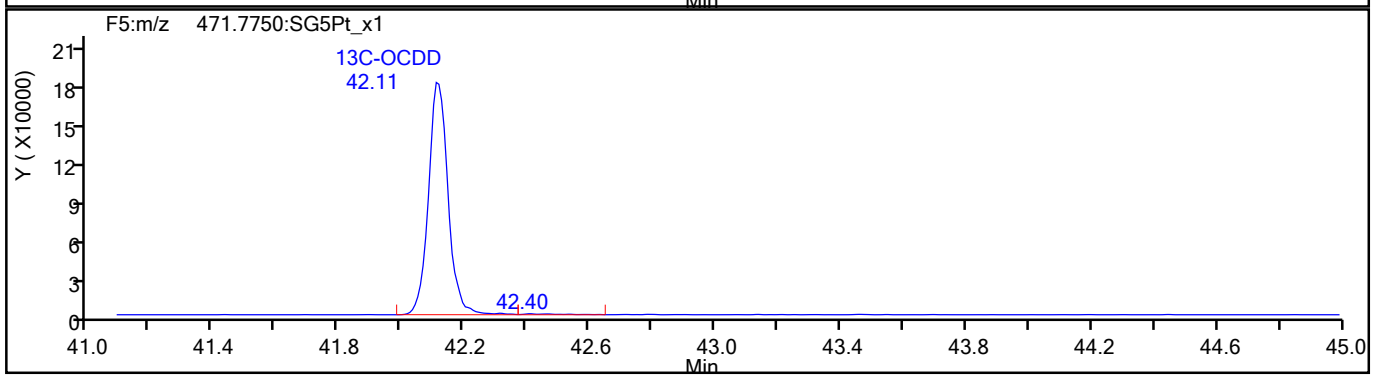

776786

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

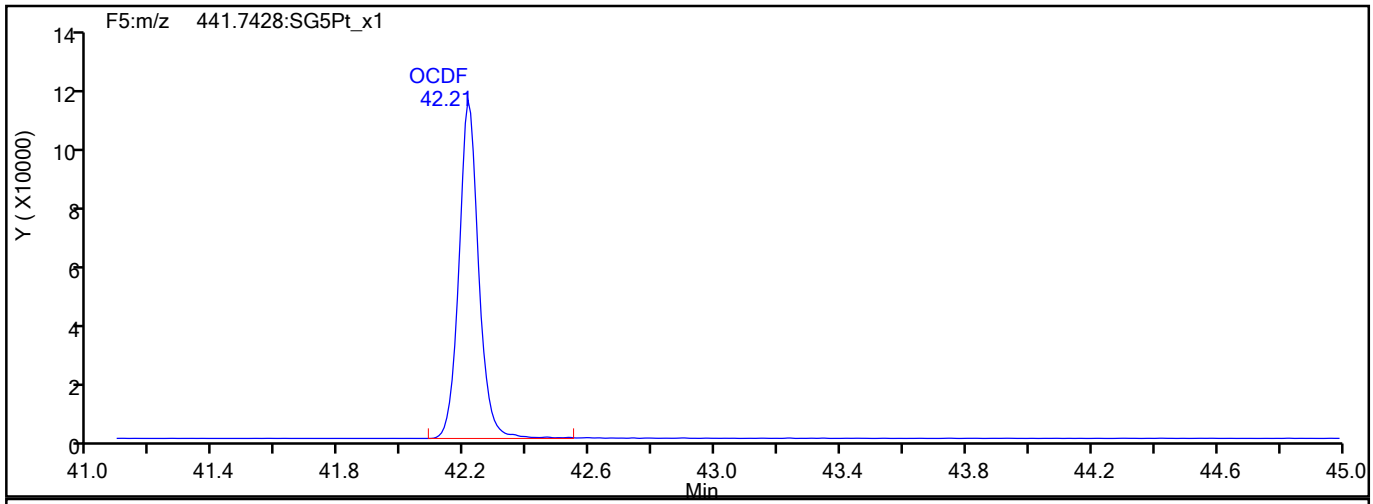

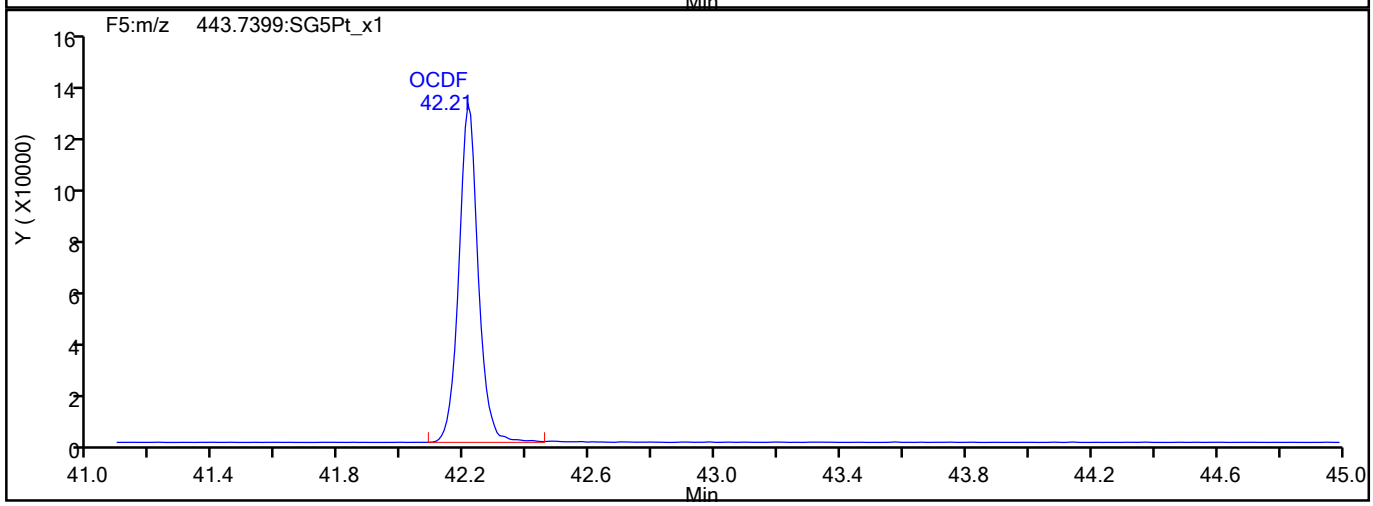

OCDF Interference Mass

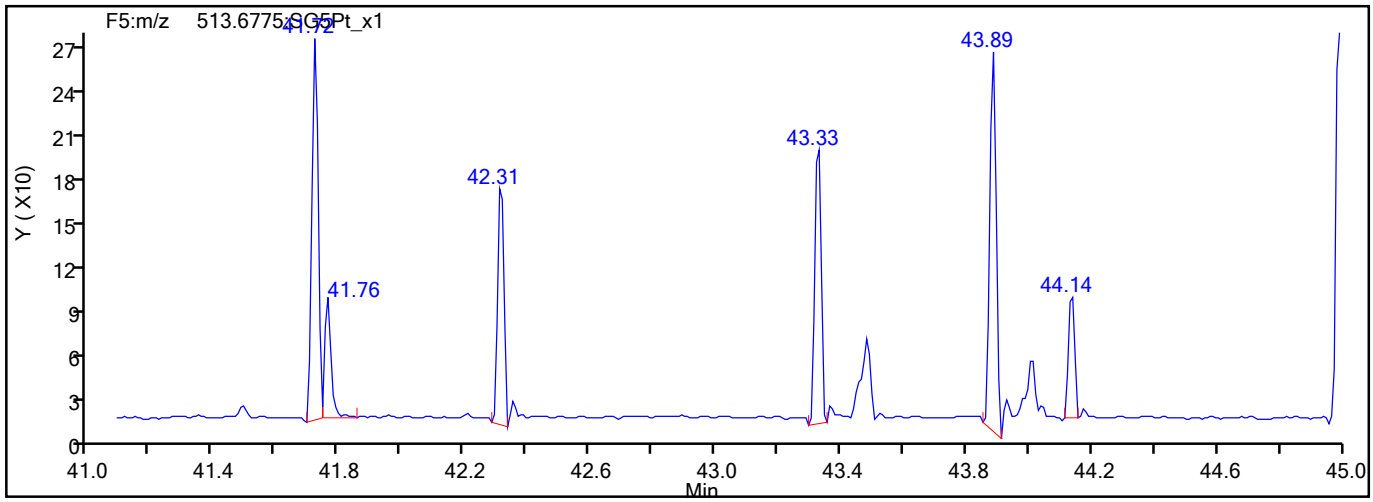

776787

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

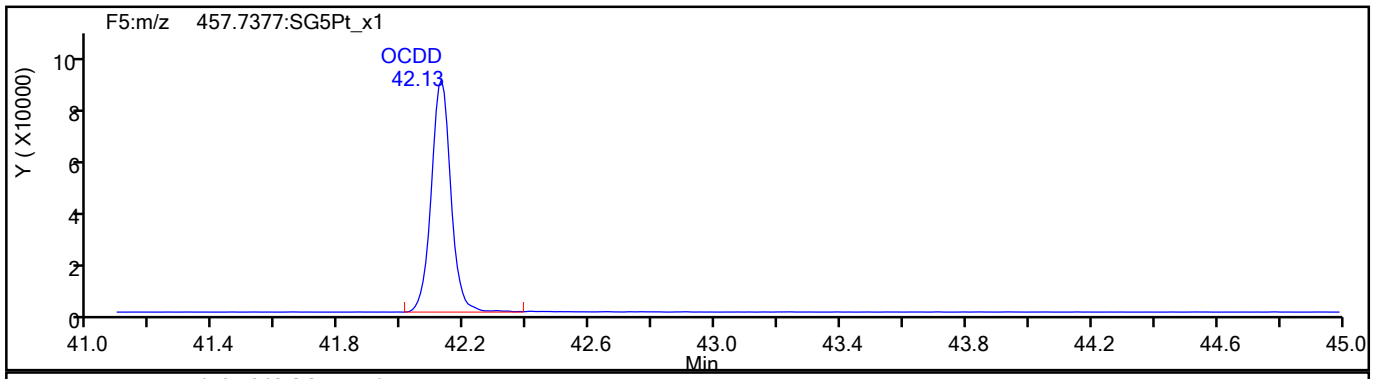

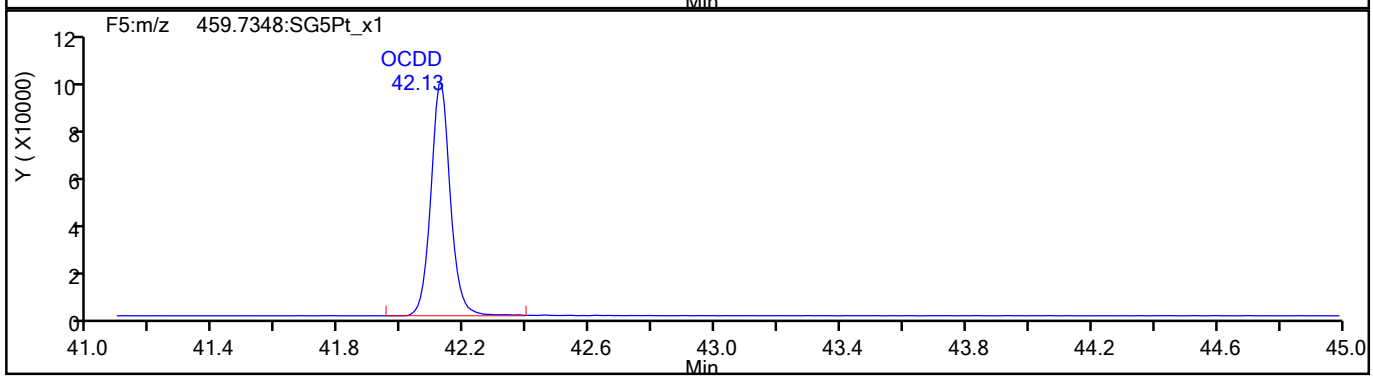

OCDD Standards

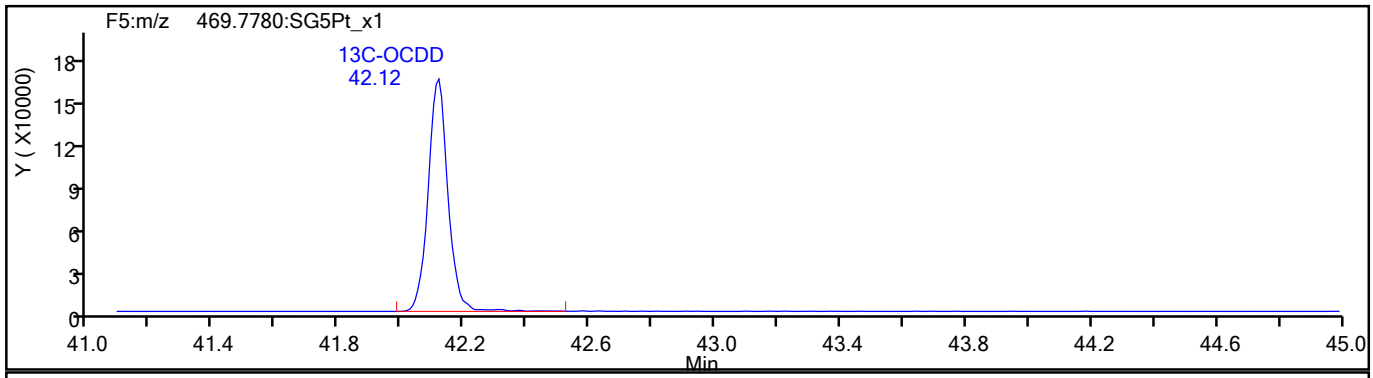

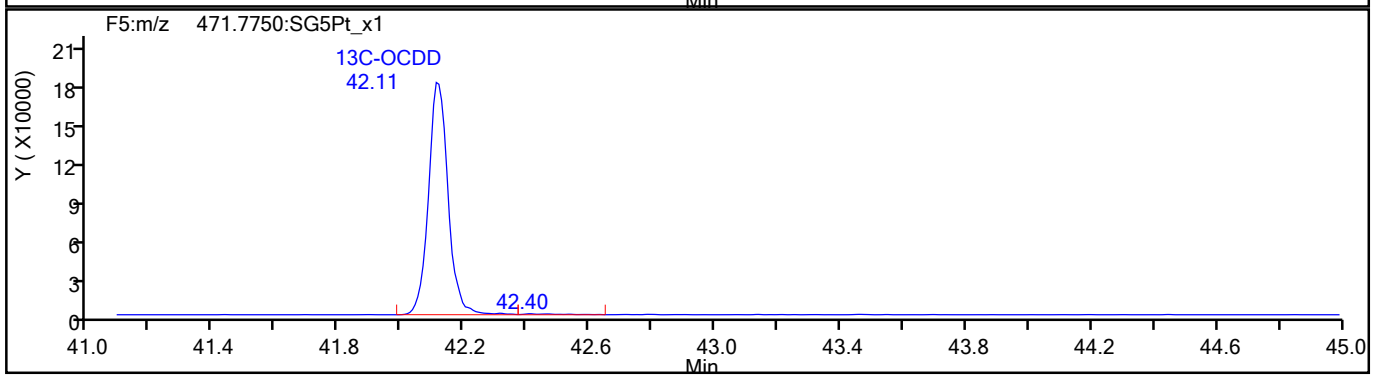

776788

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

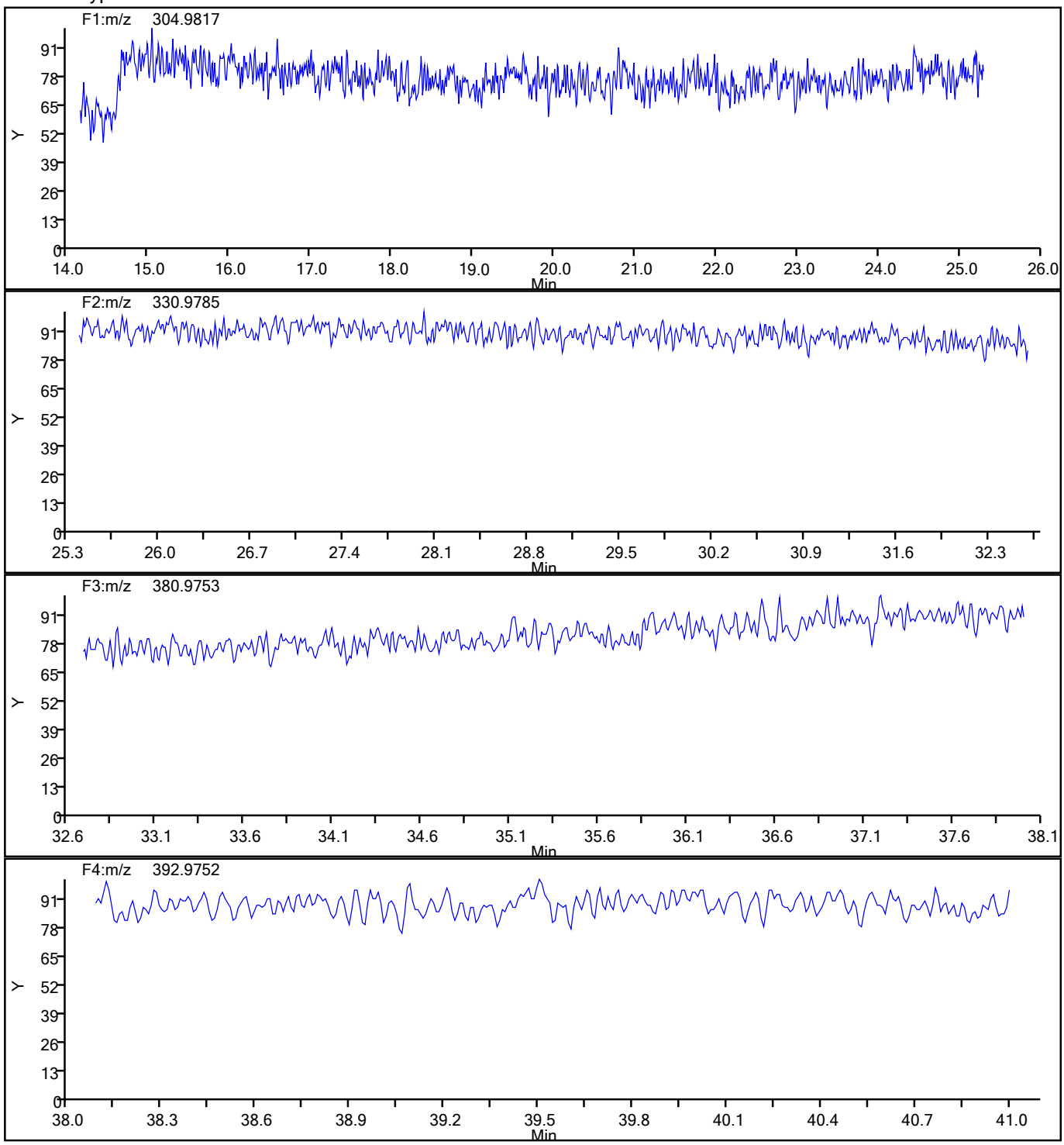

776789

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

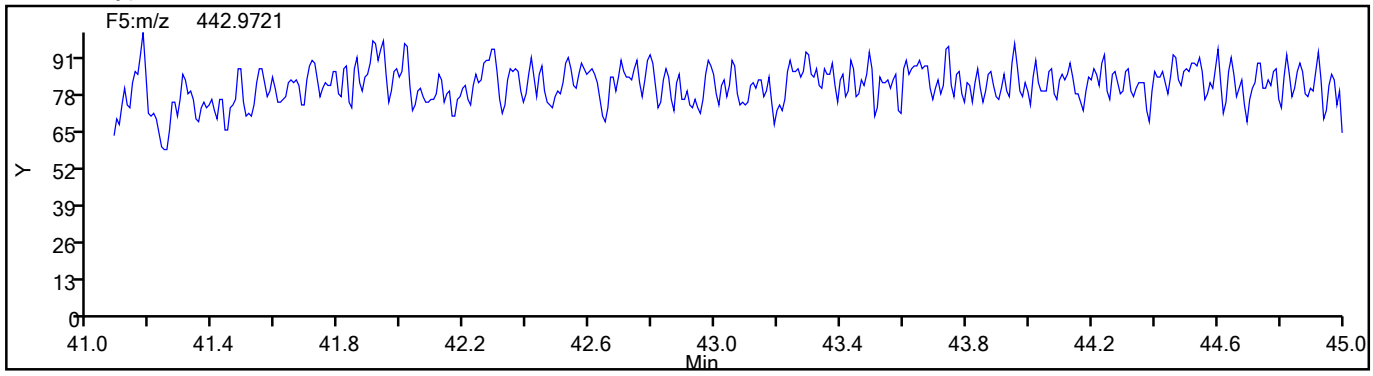

776790

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-517281/15 Calibration Date: 08/18/2021 02:07

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_17.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	0.9735		9.01	10.0	90	84-120
2,3,7,8-TCDD	AveID	1.075	1.030		9.58	10.0	96	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.045		49.5	50.0	99	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9151		45.4	50.0	91	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.051		50.2	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.085		47.3	50.0	95	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.196		49.1	50.0	98	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.256		51.7	50.0	103	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9818		46.3	50.0	93	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9251		46.6	50.0	93	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.136		51.2	50.0	102	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.256		50.6	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.324		45.9	50.0	92	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.047		49.9	50.0	100	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.222		46.7	50.0	93	86-116
OCDD	AveID	1.062	1.015		95.6	100	96	79-126
OCDF	AveID	1.317	1.357		103	100	103	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.378		102	100	102	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9827		105	100	105	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.287		113	100	113	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.398		124	100	124	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7751		108	100	108	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.003		104	100	104	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	0.9639		90.0	100	90	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	0.9586		92.1	100	92	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7714		102	100	102	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.8499		98.9	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9105		93.6	100	94	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.8125		110	100	110	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7666		114	100	114	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.8215		120	100	120	77-129
13C-OCDD	Ave	0.5446	0.7174		263	200	132	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.046		10.4	10.0	104	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	17AU21DFS1_1	Resolution Check	RC 081721	46			KSS	1.000	
2	17AU21DFS1_2	WDM HRDXNCP_00044	WDM 081721	1	Dioxin		KSS	1.000	
3	17AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081621	2	Dioxin		KSS	1.000	
4	17AU21DFS1_4	SB Solvent Blank C14	SB 081621	3	Dioxin		KSS	1.000	
5	17AU21DFS1_5	mb 320-513586/1-a	mb 320-513586/1-a	4	1613B/Solid	D266	KSS	1.000	g
6	17AU21DFS1_6	lcs 320-513586/2-a	lcs 320-513586/2-a	5	1613B/Solid		KSS	1.000	g
7	17AU21DFS1_7	320-76724-a-16-a 10X	320-76724-a-16-a	6	1613B/Solid	D261	KSS	1.000	g
8	17AU21DFS1_8	320-76764-a-14-a 10X	320-76764-a-14-a	7	1613B/Solid	D263	KSS	1.000	g
9	17AU21DFS1_9	320-76764-a-16-a 10X	320-76764-a-16-a	8	1613B/Solid		KSS	1.000	g
10	17AU21DFS1_10	320-76764-a-38-a 10X	320-76764-a-38-a	9	1613B/Solid		KSS	1.000	g
11	17AU21DFS1_11	320-76765-a-4-a 5X	320-76765-a-4-a	10	1613B/Solid	D264	KSS	1.000	g
12	17AU21DFS1_12	320-76769-A-30-A	320-76769-A-30-A	11	1613B/Solid	D266	KSS	1.000	g
13	17AU21DFS1_13	320-76769-A-31-A	320-76769-A-31-A	12	1613B/Solid		KSS	1.000	g
14	17AU21DFS1_14	320-76769-A-32-A	320-76769-A-32-A	13	1613B/Solid		KSS	1.000	g
15	17AU21DFS1_15	SB Solvent Blank C14	SB 081721A	3	Dioxin		KSS	1.000	
16	17AU21DFS1_16	Resolution Check	RC 081721A	46			KSS	1.000	
17	17AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081621A	2	Dioxin		KSS	1.000	
18	17AU21DFS1_18	WDM HRDXNCP_00044	WDM 081721A	1	Dioxin		KSS	1.000	
19	17AU21DFS1_19	SB Solvent Blank C14	SB 081721B	3	Dioxin		KSS	1.000	
20	17AU21DFS1_20	320-76769-A-33-A	320-76769-A-33-A	14	1613B/Solid	D266	KSS	1.000	g
21	17AU21DFS1_21	320-76769-A-34-A	320-76769-A-34-A	15	1613B/Solid		KSS	1.000	g
22	17AU21DFS1_22	320-76887-A-2-A	320-76887-A-2-A	16	1613B/Solid		KSS	1.000	g
23	17AU21DFS1_23	320-76887-A-2-B MS	320-76887-A-2-B MS	17	1613B/Solid		KSS	1.000	g
24	17AU21DFS1_24	320-76887-A-2-C MSD	320-76887-A-2-C MSD	18	1613B/Solid		KSS	1.000	g
25	17AU21DFS1_25	320-76887-A-3-A	320-76887-A-3-A	19	1613B/Solid		KSS	1.000	g
26	17AU21DFS1_26	320-76887-A-4-A	320-76887-A-4-A	20	1613B/Solid		KSS	1.000	g
27	17AU21DFS1_27	320-76887-A-5-A	320-76887-A-5-A	21	1613B/Solid		KSS	1.000	g
28	17AU21DFS1_28	320-76887-A-6-A	320-76887-A-6-A	22	1613B/Solid		KSS	1.000	g
29	17AU21DFS1_29	320-76887-A-7-A	320-76887-A-7-A	23	1613B/Solid		KSS	1.000	g
30	17AU21DFS1_30	SB Solvent Blank C14	SB 081721C	3	Dioxin		KSS	1.000	
31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A	12	1613B/Solid	D266	KSS	1.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	1.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	1.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	1.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A	27	1613B/Solid		KSS	1.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	1.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	1.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	1.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A	31	1613B/Solid		KSS	1.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32	1613B/Solid		KSS	1.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	

Log file checked
08/18/21 SMA

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	17 Aug 2021 14:07
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11192 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10617 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10669 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10902 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10643 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10651 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 9999 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10320 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10065 [5%height]

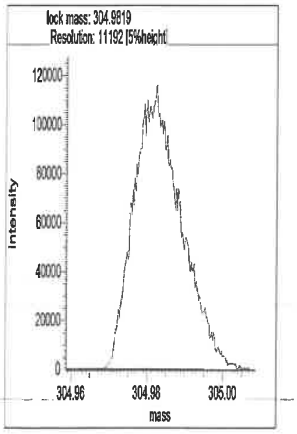

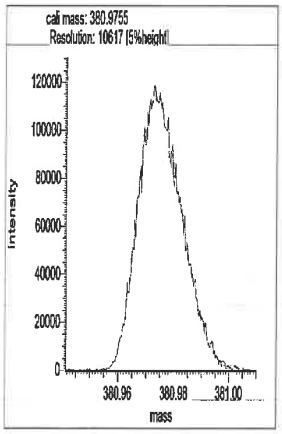

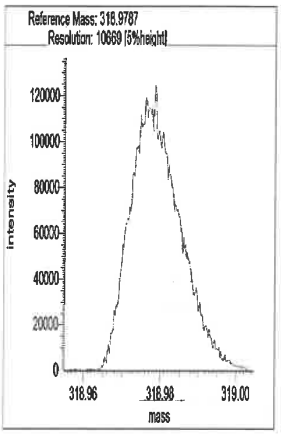

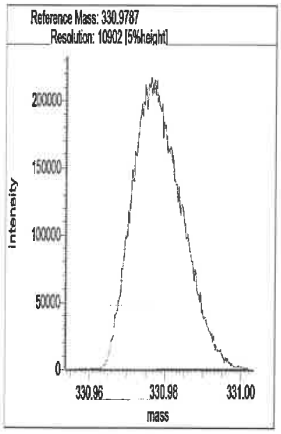

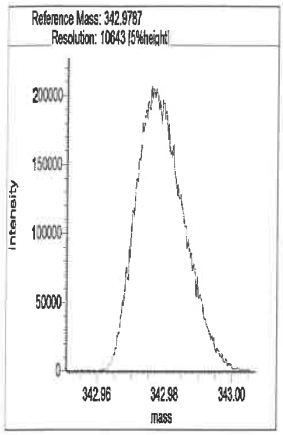

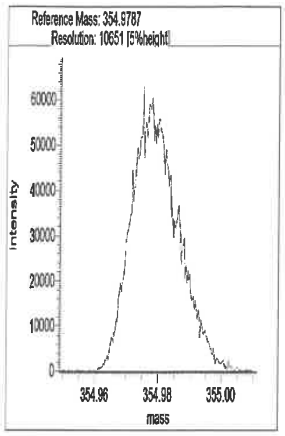

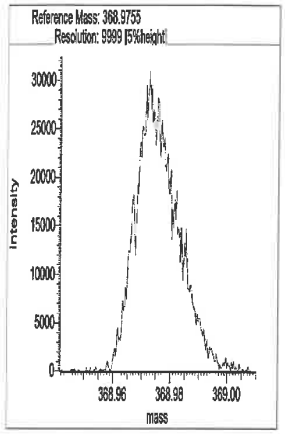

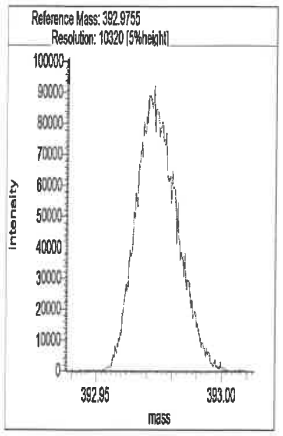

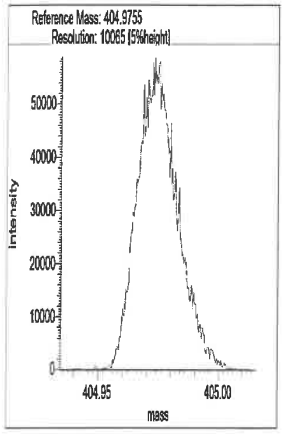

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11006 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10213 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10478 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11117 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10460 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10915 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10374 [5%height]

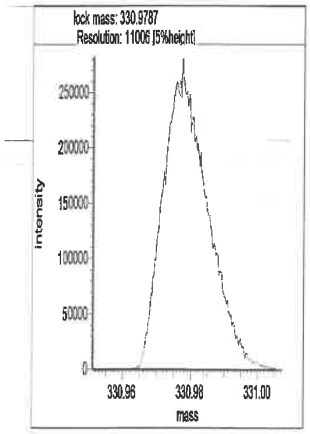

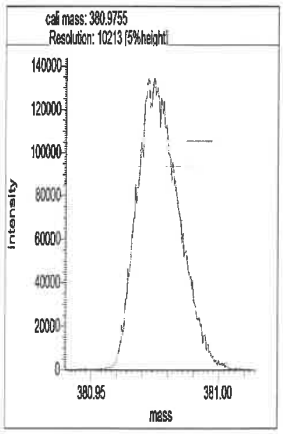

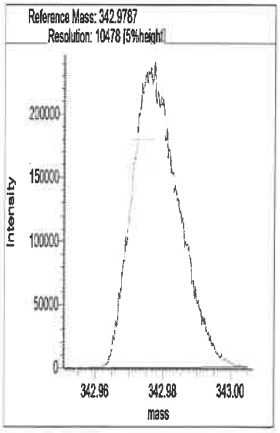

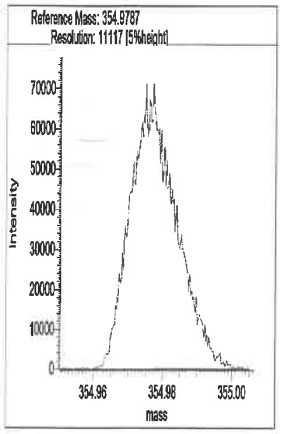

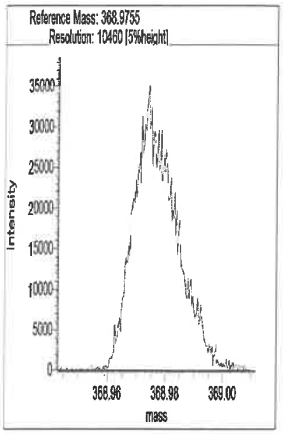

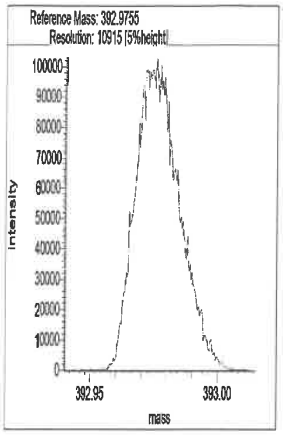

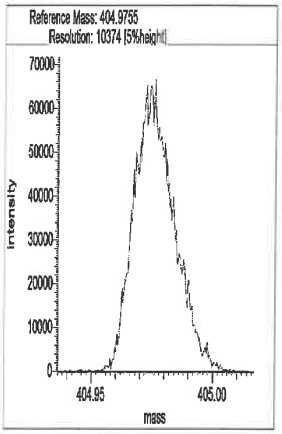

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10663 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10424 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10673 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10509 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11250 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10511 [5%height]

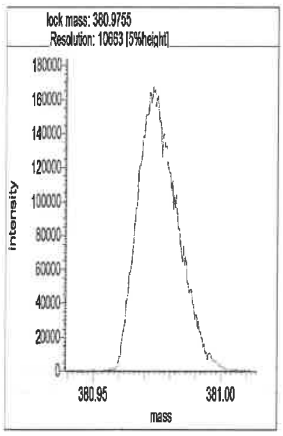

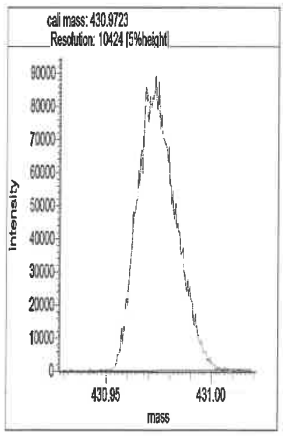

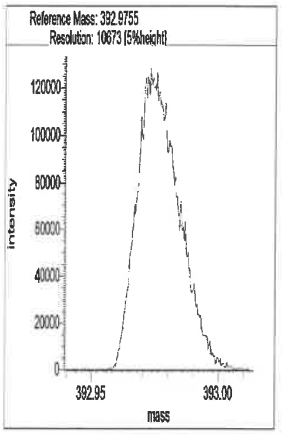

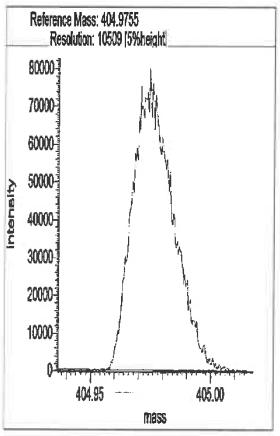

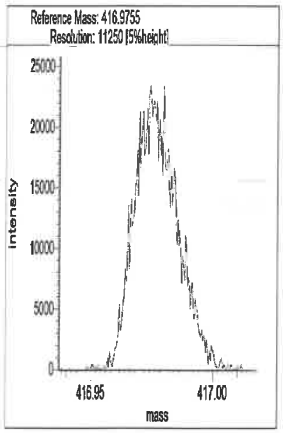

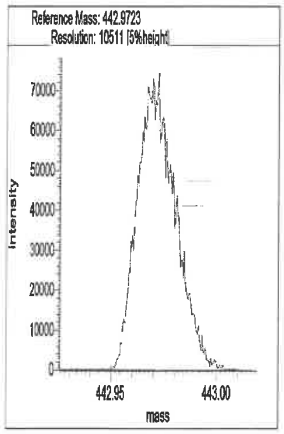

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10570 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11001 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10492 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10831 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10371 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10525 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 9876 [5%height]

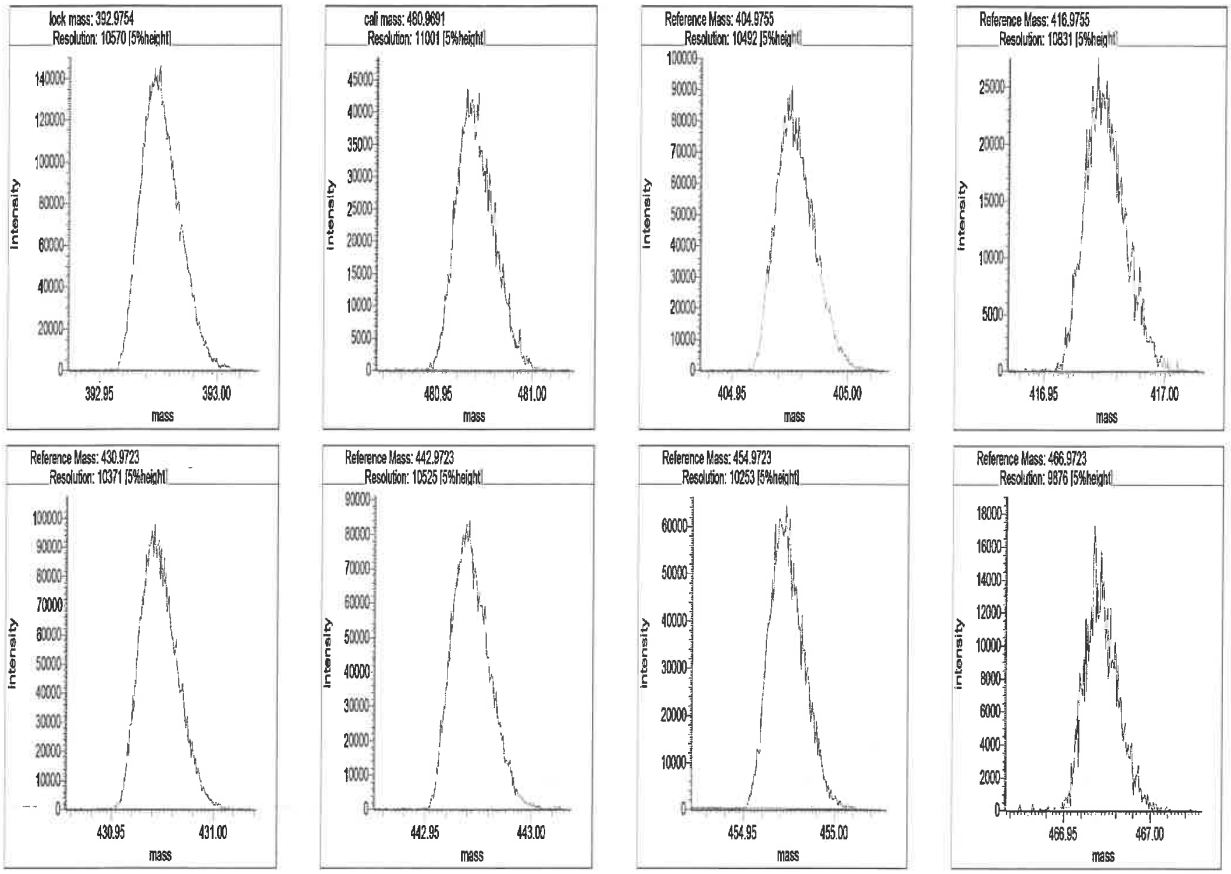

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10598 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10769 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11729 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10589 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10479 [5%height]

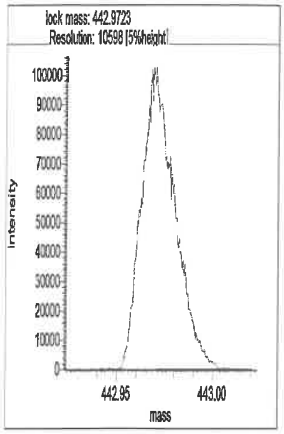
lock mass: 442.9723
Resolution: 10598 [5%height]
Intensity
mass

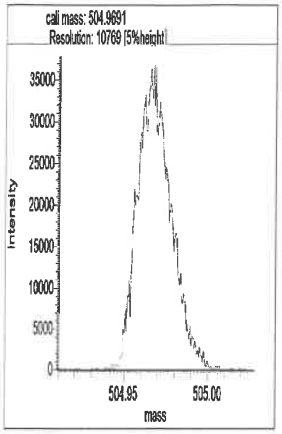
cali mass: 504.9691
Resolution: 10769 [5%height]
Intensity
mass

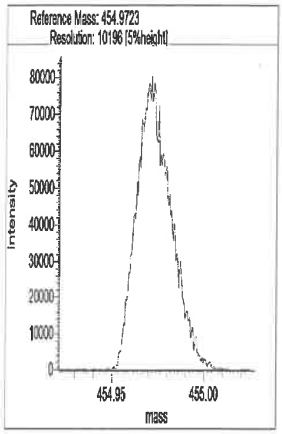
Reference Mass: 454.9723
Resolution: 10196 [5%height]
Intensity
mass

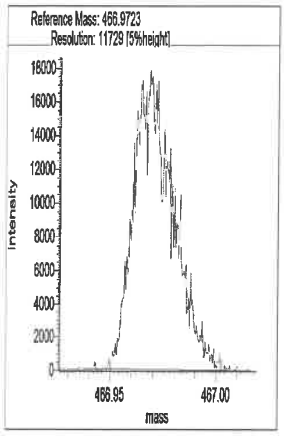
Reference Mass: 466.9723
Resolution: 11729 [5%height]
Intensity
mass

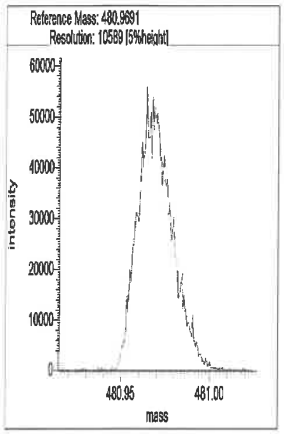
Reference Mass: 480.9691
Resolution: 10589 [5%height]
Intensity
mass

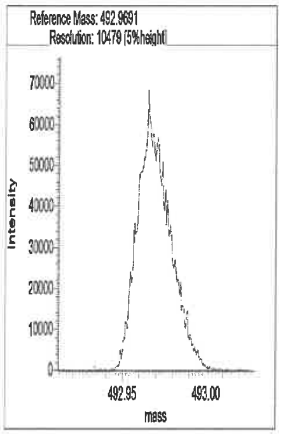
Reference Mass: 492.9691
Resolution: 10479 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 01:48
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10717 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10164 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10292 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10631 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10633 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10192 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10253 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9908 [5%height] 8/18/21 KS
Ref. mass 404.9755 [m/z] Resolution: 10394 [5%height]

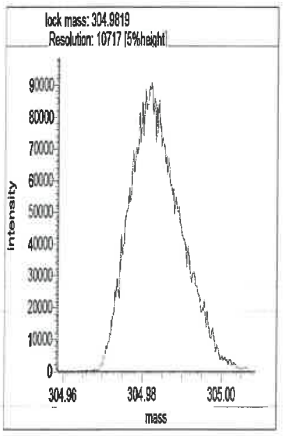

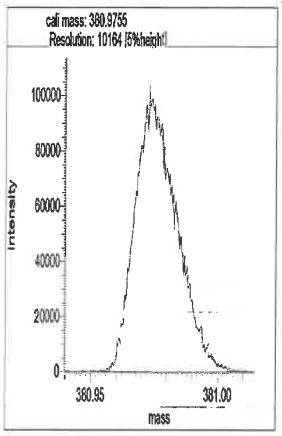

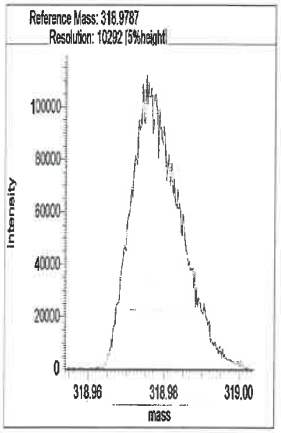

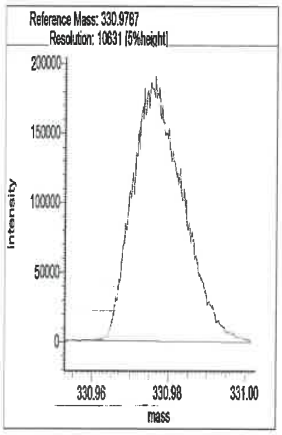

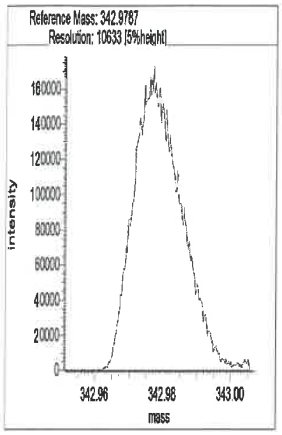

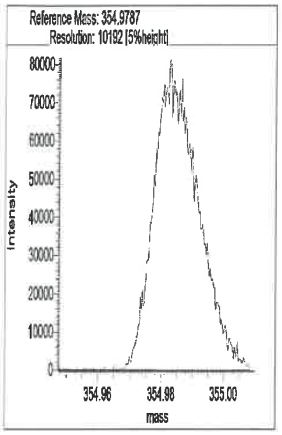

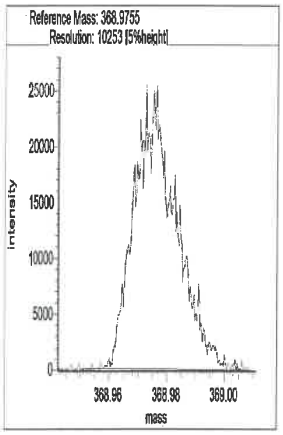

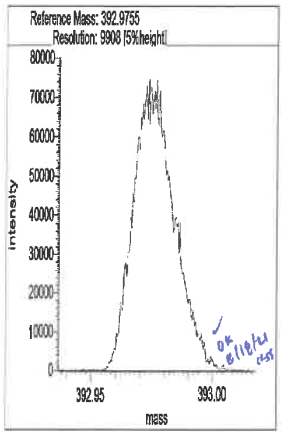

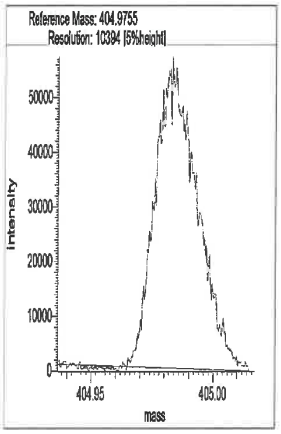

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10724 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10571 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10185 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10507 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 9890 [5%height] ✓

Ref. mass 392.9755 [m/z] Resolution: 10160 [5%height] 8/10/24 KJS

Ref. mass 404.9755 [m/z] Resolution: 9838 [5%height] ✓

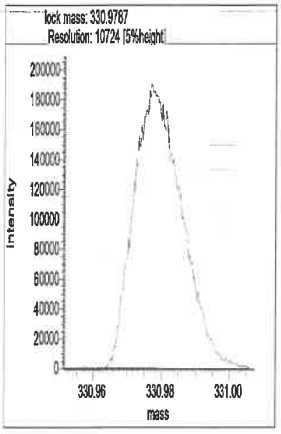

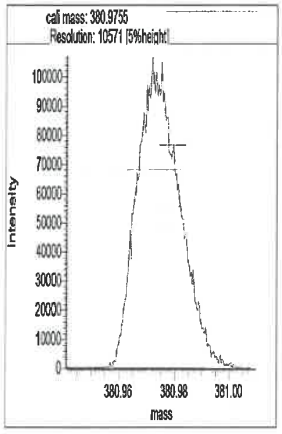

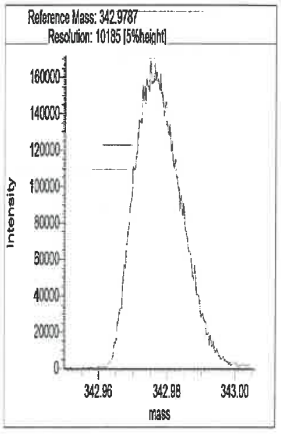

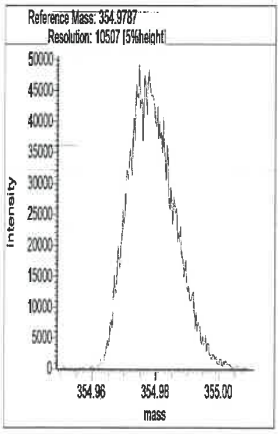

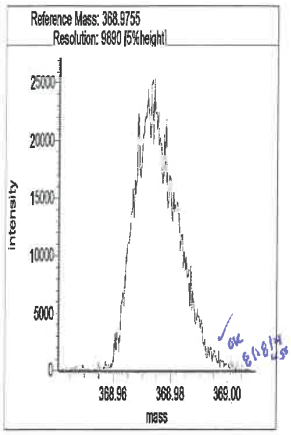

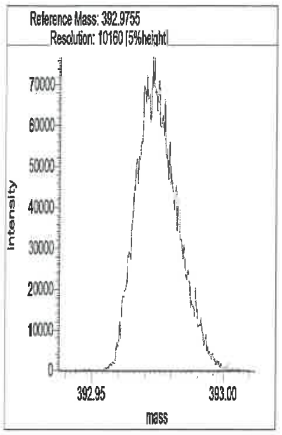

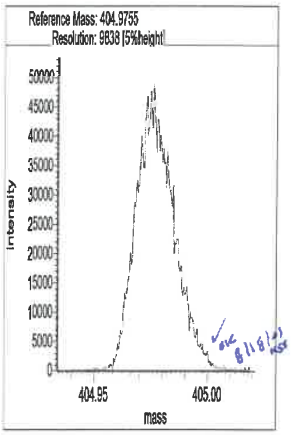

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10569 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10686 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10326 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11023 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11063 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11204 [5%height]

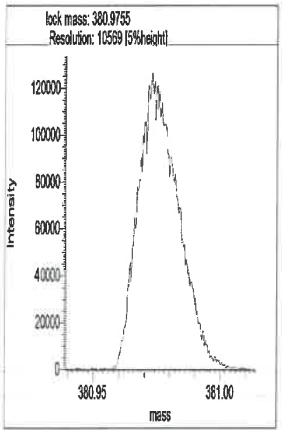

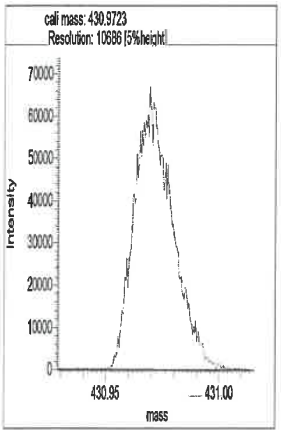

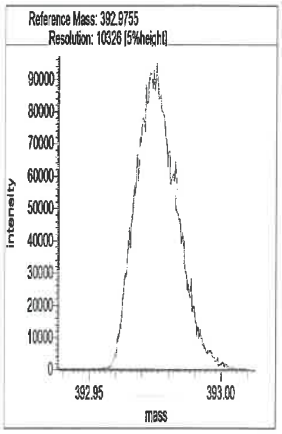

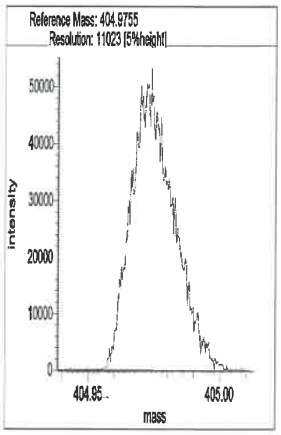

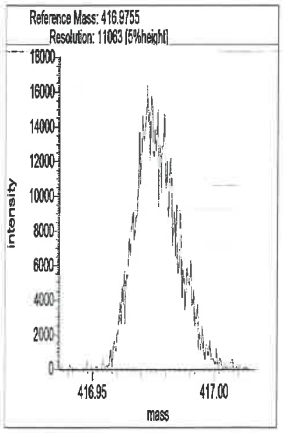

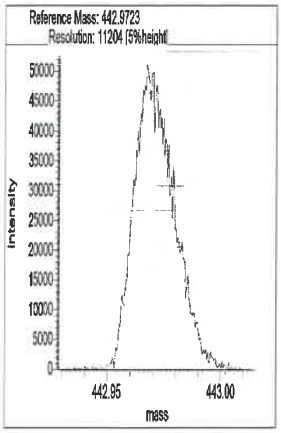

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10576 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10771 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10184 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11006 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10416 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11131 [5%height]

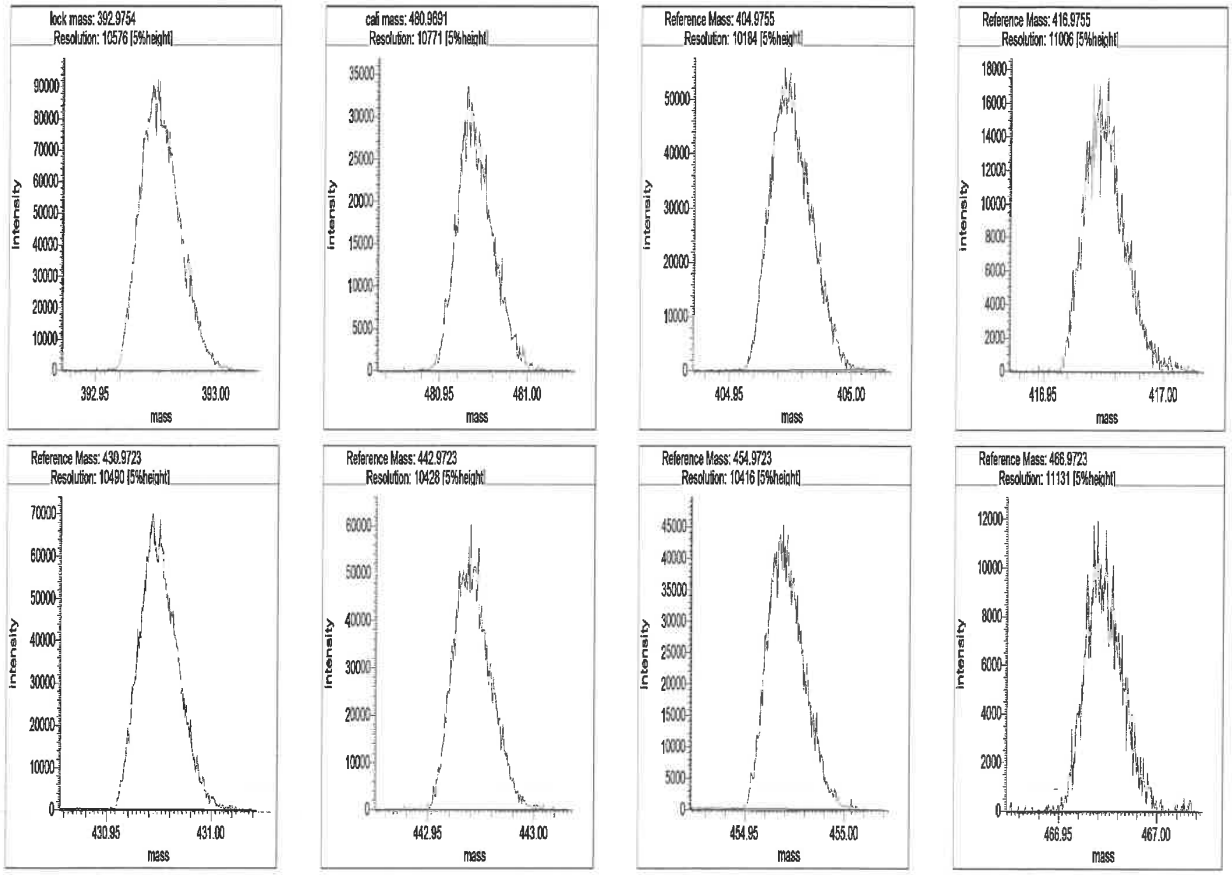

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10847 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11373 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10903 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10602 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10379 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10595 [5%height]

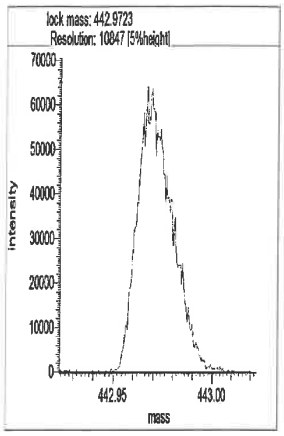
lock mass: 442.9723
Resolution: 10847 [5%height]
Intensity
mass

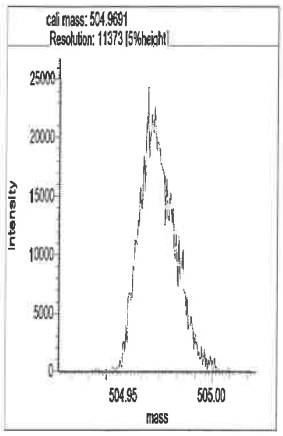
cali mass: 504.9691
Resolution: 11373 [5%height]
Intensity
mass

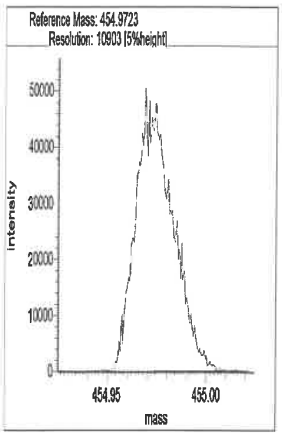
Reference Mass: 454.9723
Resolution: 10903 [5%height]
Intensity
mass

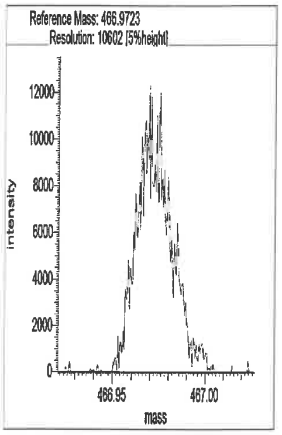
Reference Mass: 466.9723
Resolution: 10602 [5%height]
Intensity
mass

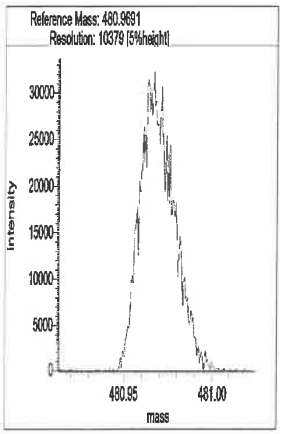
Reference Mass: 480.9691
Resolution: 10379 [5%height]
Intensity
mass

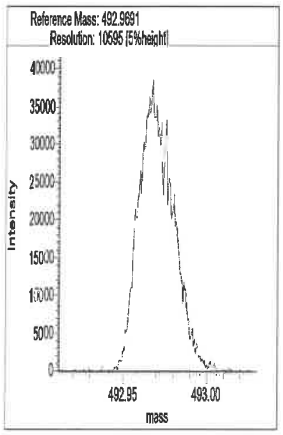
Reference Mass: 492.9691
Resolution: 10595 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

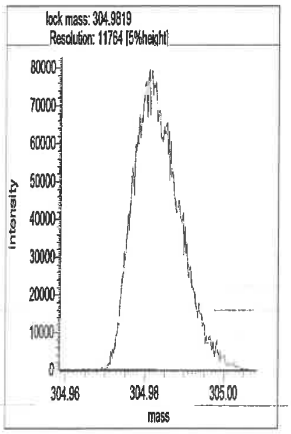

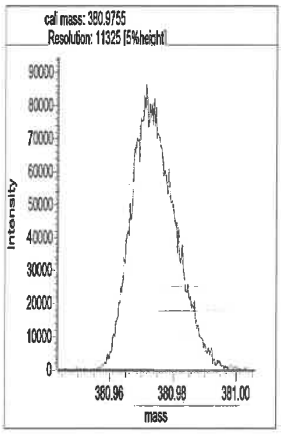

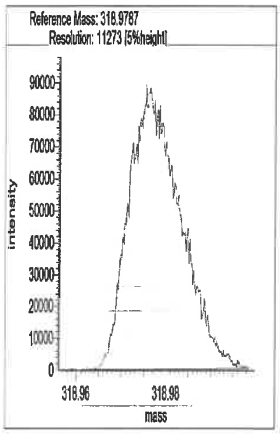

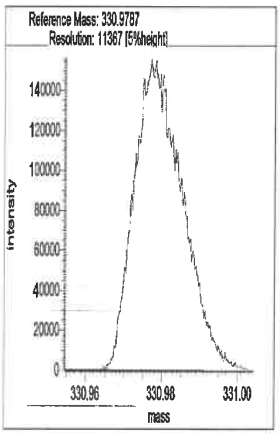

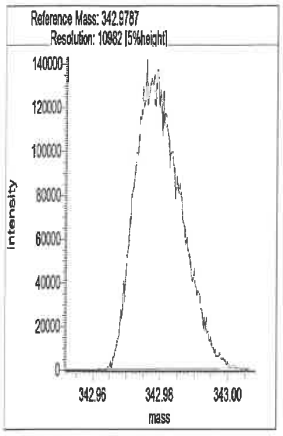

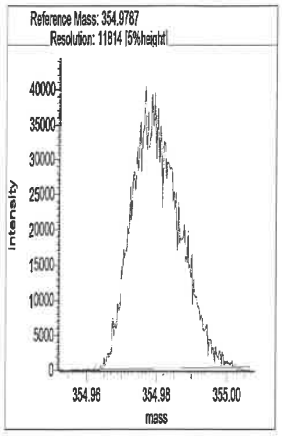

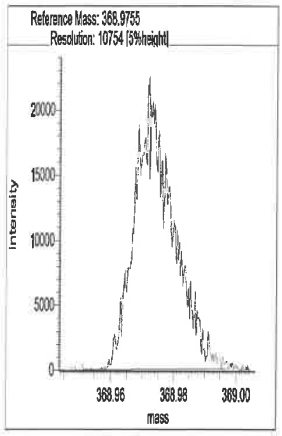

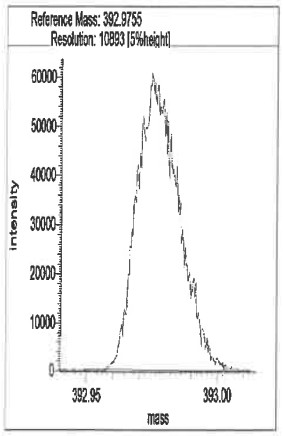

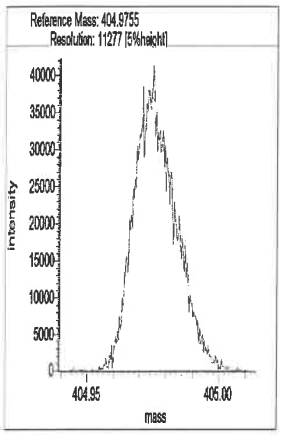

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

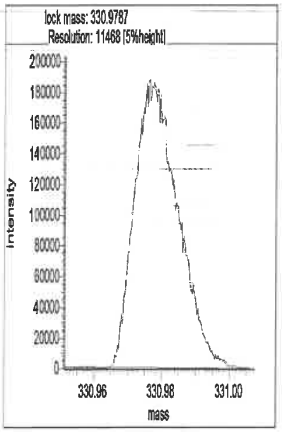

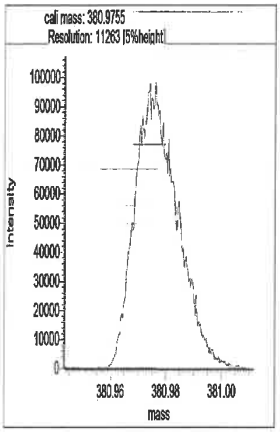

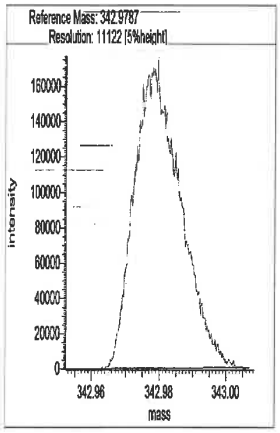

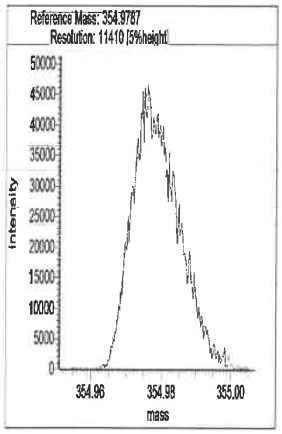

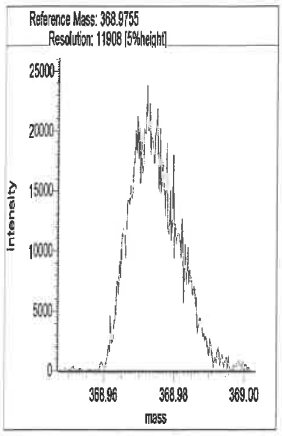

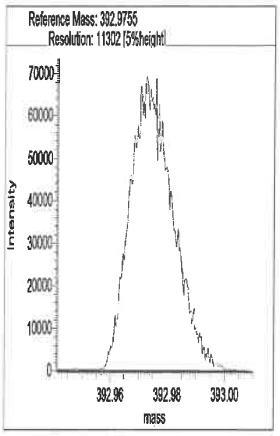

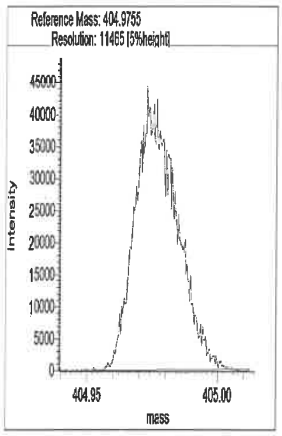

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

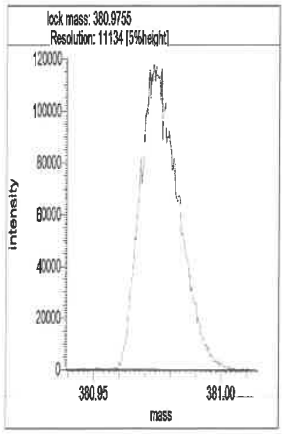

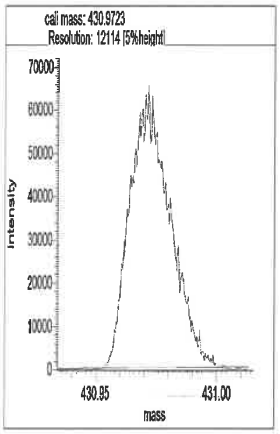

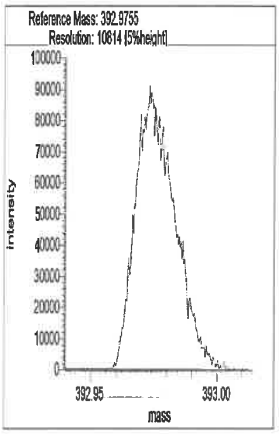

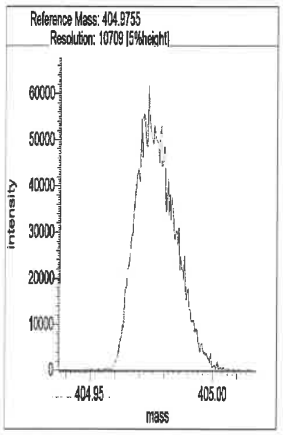

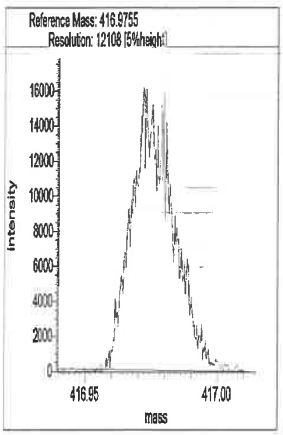

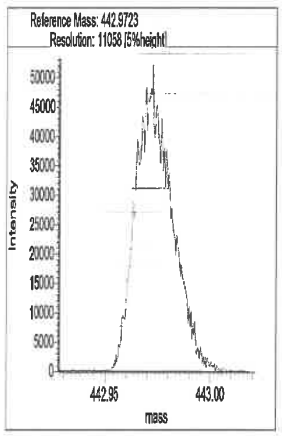

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

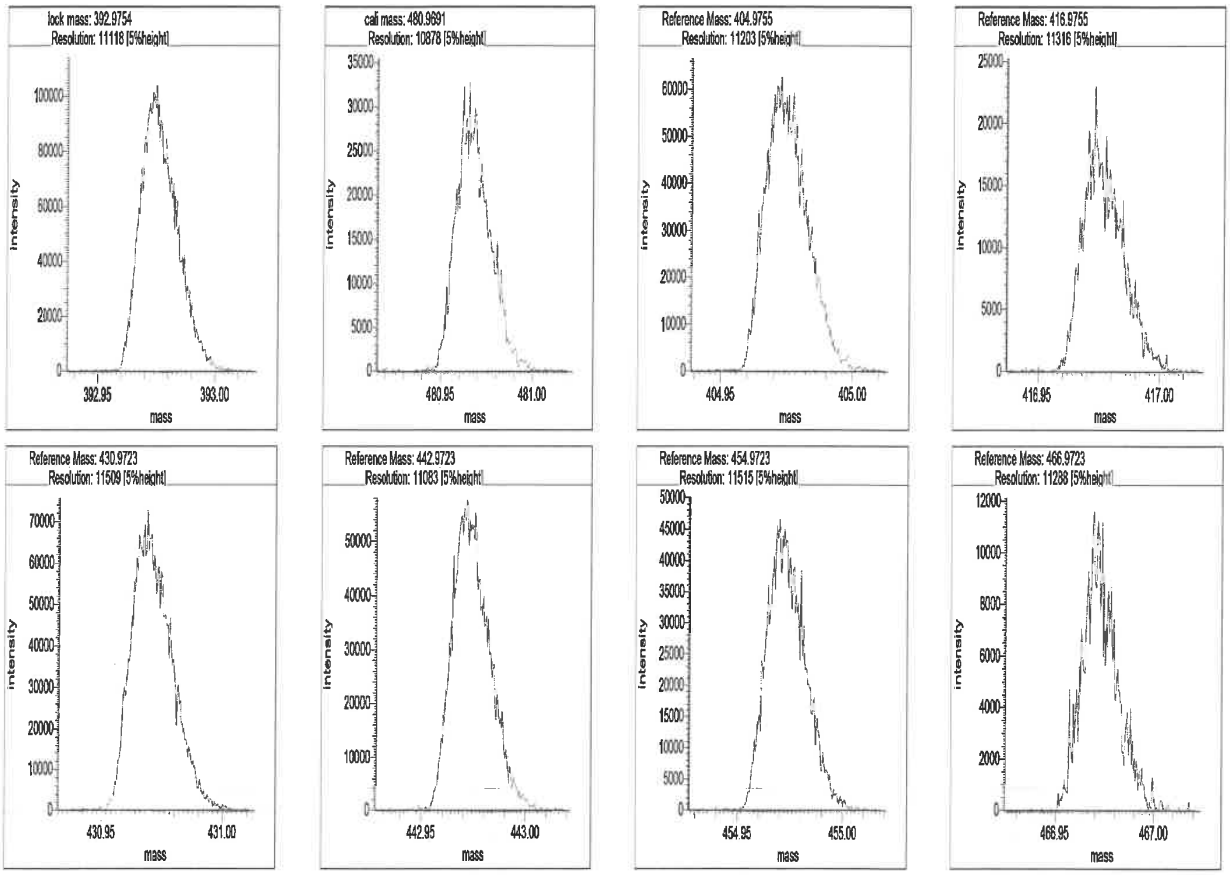

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

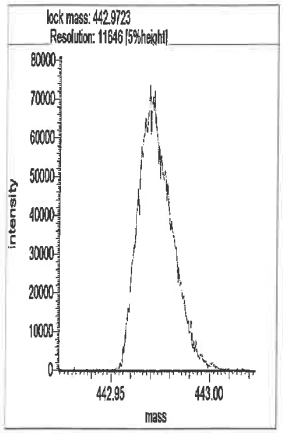
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

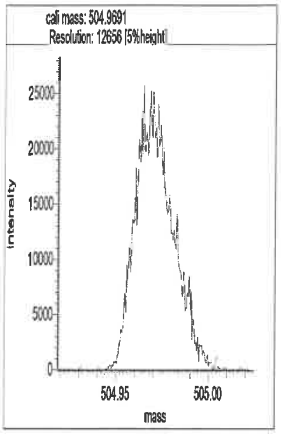
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

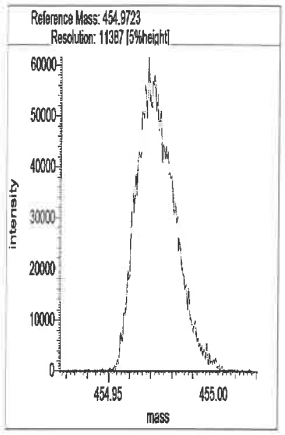
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

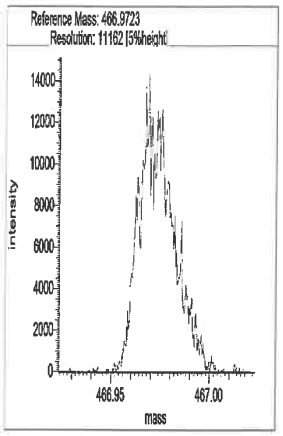
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

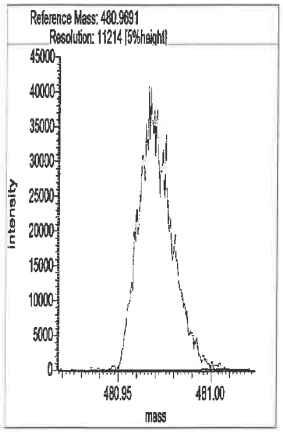
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

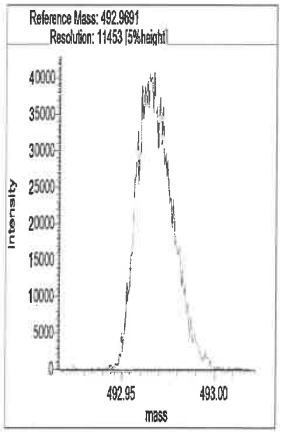
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 02:07:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:51 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 18-Aug-2021 08:26:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.483	653980	0.85	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.529	901083	0.77	1.3459	102.4	102.4	0.1422	0.1422	102	
2,3,7,8-TCDF	20.537	87721	0.70	1.0802	9.012	9.012	0.0156	0.0156	90.12	M
A Non-2,3,7,8-sub-TCDF	19.983	771	0.77	1.0802	0.1729	0.0792	0.0156	0.0373	0.00	RQ
S Total TCDF					9.185	9.092	0.0156	0.0156		RQ
D 13C-2,3,7,8-TCDD	21.879	642649	0.76	0.9317	105.5	105.5	0.1836	0.1836	105	
2,3,7,8-TCDD	21.905	66183	0.83	1.0753	9.577	9.577	0.0193	0.0193	95.77	M
$ 37Cl4-2,3,7,8-TCDD	21.905	68403		1.0083	10.4	10.4	0.0112	0.0112	104	
A Non-2,3,7,8-sub-TCDD	20.816	941	0.77	1.0753	0.2087	0.1362	0.0193	0.0686	0.00	RQ
S Total TCDD					9.786	9.713	0.0193	0.0193		RQ
D 13C-1,2,3,7,8-PeCDF	27.343	841428	1.56	1.1405	112.8	112.8	0.3325	0.3325	113	
1,2,3,7,8-PeCDF	27.368	439454	1.55	1.0543	49.5	49.5	0.1360	0.1360	99.08	
D 13C-2,3,4,7,8-PeCDF	28.867	914292	1.59	1.1253	124.2	124.2	0.3370	0.3370	124	
2,3,4,7,8-PeCDF	28.884	418352	1.57	1.0079	45.4	45.4	0.1398	0.1398	90.80	
A F1 PeCDFs	24.695						0.003787	0.003787		
A Non-2,3,7,8-sub-PeCDF	28.196	4957	1.57	1.0311	0.5477	0.5477	0.1379	0.5477	0.00	
S Total PeCDF					95.5	95.5	0.1379	0.1379		
D 13C-1,2,3,7,8-PeCDD	29.667	506875	1.64	0.7165	108.2	108.2	0.1414	0.1414	108	
1,2,3,7,8-PeCDD	29.692	266290	1.63	1.0465	50.2	50.2	0.0634	0.0634	100	
A Non-2,3,7,8-sub-PeCDD	28.556						0.0634	0.0634		Rn
S Total PeCDD					50.2	50.2	0.0634	0.0634		
D 13C-1,2,3,4,7,8-HxCDF	34.974	824340	0.54	0.9648	104.0	104.0	0.3060	0.3060	104	
1,2,3,4,7,8-HxCDF	35.000	447176	1.19	1.1474	47.3	47.3	0.1959	0.1959	94.56	
D 13C-1,2,3,6,7,8-HxCDF	35.134	791860	0.57	1.0708	90.0	90.0	0.2758	0.2758	90.02	
1,2,3,6,7,8-HxCDF	35.151	473460	1.23	1.2178	49.1	49.1	0.1875	0.1875	98.20	
D 13C-2,3,4,6,7,8-HxCDF	35.951	787519	0.54	1.0413	92.1	92.1	0.2836	0.2836	92.06	
2,3,4,6,7,8-HxCDF	35.968	494510	1.22	1.2145	51.7	51.7	0.1675	0.1675	103	
D 13C-1,2,3,7,8,9-HxCDF	36.843	748006	0.54	0.9731	93.6	93.6	0.3034	0.3034	93.57	
1,2,3,7,8,9-HxCDF	36.852	469818	1.24	1.2401	50.6	50.6	0.1639	0.1639	101	
A Non-2,3,7,8-sub-HxCDF	35.117						0.1779	0.1779		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					198.7	198.7	0.1787	0.1787		
* 13C-1,2,3,7,8,9-HxCDD	36.641	821504	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.161	633725	1.29	0.7587	101.7	101.7	0.1814	0.1814	102	
1,2,3,4,7,8-HxCDD	36.178	311106	1.23	1.0608	46.3	46.3	0.0910	0.0910	92.56	
D 13C-1,2,3,6,7,8-HxCDD	36.279	698214	1.25	0.8593	98.9	98.9	0.1602	0.1602	98.91	
1,2,3,6,7,8-HxCDD	36.296	322951	1.26	0.9933	46.6	46.6	0.0969	0.0969	93.13	
1,2,3,7,8,9-HxCDD	36.658	378296	1.24	1.1094	51.2	51.2	0.0869	0.0869	102	
A Non-2,3,7,8-sub-HxCDD	35.475						0.0914	0.0914		
S Total HxCDD					144.0	144.0	0.0916	0.0916		
D 13C-1,2,3,4,6,7,8-HpCDF	38.647	667505	0.45	0.7359	110.4	110.4	0.2934	0.2934	110	
1,2,3,4,6,7,8-HpCDF	38.664	441945	1.04	1.4421	45.9	45.9	0.1984	0.1984	91.82	
D 13C-1,2,3,4,7,8,9-HpCDF	39.901	674832	0.44	0.6854	119.9	119.9	0.3150	0.3150	120	
1,2,3,4,7,8,9-HpCDF	39.910	412232	1.03	1.3092	46.7	46.7	0.1941	0.1941	93.32	
A Non-2,3,7,8-sub-HpCDF	39.301						0.1957	0.1957		
S Total HpCDF					92.6	92.6	0.1963	0.1963		
D 13C-1,2,3,4,6,7,8-HpCDD	39.590	629793	1.08	0.6745	113.7	113.7	0.3161	0.3161	114	
1,2,3,4,6,7,8-HpCDD	39.598	329811	1.03	1.0503	49.9	49.9	0.1097	0.1097	99.72	
A Non-2,3,7,8-sub-HpCDD	39.297	4895	0.97	1.0503	0.7400	0.7400	0.1097	0.7400	0.00	
S Total HpCDD					50.6	50.6	0.1097	0.1097		
D 13C-OCDD	42.094	1178641	0.91	0.5446	263.4	263.4	0.2379	0.2379	132	
OCDF	42.187	799988	0.91	1.3168	103.1	103.1	0.1030	0.1030	103	
OCDD	42.103	598251	0.90	1.0620	95.6	95.6	0.0965	0.0965	95.59	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 02:07:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:51 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 18-Aug-2021 08:26:59

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.483	21.483	0		300468	40327	36	90	1120		
333.9338	21.501	21.483	1		353512	48528	25	62	1941	0.85(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.529	20.529	0	0.956	391284	55269	50	125	1105		
317.9389	20.520	20.529	-1	0.955	509799	75016	18	45	4168	0.77(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.537	20.537	0	1.000	36140	5174	4	10	1294		M
305.8987	20.555	20.537	1	1.001	51581	6857	5	12	1371	0.70(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.894	19.983	-65	0.920	51	40	4	10	10		
305.8987	18.902	19.983	-65	0.921	424	102	5	12	20	0.12(0.65-0.89)	
	Empc Correction				66	51	5	12	10		
303.9016	19.857	19.983	-8	0.967	158	72	4	10	18		
305.8987	19.849	19.983	-8	0.967	455	176	5	12	35	0.35(0.65-0.89)	
	Empc Correction				205	93	5	12	19		
303.9016	20.830	19.983	51	1.015	127	40	4	10	10		
305.8987	20.795	19.983	49	1.013	468	100	5	12	20	0.27(0.65-0.89)	
	Empc Correction				164	51	5	12	10		
13C-2,3,7,8-TCDD											
331.9368	21.879	21.879	0	1.018	278020	35005	36	90	972		
333.9338	21.879	21.879	0	1.018	364629	47074	25	62	1883	0.76(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.905	21.905	0	1.001	29930	4044	5	12	809		
321.8936	21.913	21.905	1	1.002	36253	4936	2	5	2468	0.83(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	21.905	21.905	0	1.020	68403	9430	4	10	2358		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	19.875	20.816	-56	0.908	98	53	5	12	11		
	Empc Correction				67	29	5	12	6		
321.8936	19.840	20.816	-58	0.907	88	38	2	5	19	1.11(0.65-0.89)	
319.8965	22.085	20.816	76	1.009	571	189	5	12	38		
	Empc Correction				206	54	5	12	11		
321.8936	22.137	20.816	79	1.012	268	71	2	5	36	2.13(0.65-0.89)	
319.8965	22.257	20.816	86	1.017	136	60	5	12	12		
321.8936	22.232	20.816	85	1.016	281	77	2	5	39	0.48(0.65-0.89)	
	Empc Correction				176	77	2	5	39		
13C-1,2,3,7,8-PeCDF											
351.9000	27.343	27.343	0	1.273	513108	78085	77	192	1014		
353.8970	27.335	27.343	-1	1.272	328320	48873	58	145	843	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.368	27.368	0	1.001	266782	39644	45	112	881		
341.8567	27.368	27.368	0	1.001	172672	25441	28	70	909	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.867	28.867	0	1.344	561769	78161	77	192	1015		
353.8970	28.867	28.867	0	1.344	352523	50966	58	145	879	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.884	28.884	0	1.001	255675	37187	45	112	826		
341.8567	28.892	28.884	1	1.001	162677	23614	28	70	843	1.57(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.695						1	2			
341.8567	24.695						1	2			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.966	28.196	-14	1.023	3027	388	45	112	9		
341.8567	27.975	28.196	-13	1.023	1930	313	28	70	11	1.57(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.667	29.667	0	1.381	314537	41843	16	40	2615		
369.8919	29.667	29.667	0	1.381	192338	26022	20	50	1301	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.692	29.692	0	1.001	165129	21108	12	30	1759		
357.8516	29.709	29.692	1	1.001	101161	12956	6	15	2159	1.63(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	27.756	28.556	-48	0.936	422	75	12	30	6		
357.8516	27.806	28.556	-45	0.937	173	40	6	15	7	2.44(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.974	34.974	0	0.955	288260	55851	76	190	735		
385.8610	34.974	34.974	0	0.955	536080	100742	143	357	704	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.000	35.000	0	1.001	242677	48305	76	190	636		
375.8178	35.000	35.000	0	1.001	204499	40075	65	162	617	1.19(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.134	35.134	0	0.959	288034	57691	76	190	759		
385.8610	35.143	35.134	1	0.959	503826	96474	143	357	675	0.57(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDF											
373.8208	35.151	35.151	0	1.000	260709	49152	76	190	647		
375.8178	35.151	35.151	0	1.000	212751	40959	65	162	630	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.951	35.951	0	0.981	274734	60860	76	190	801		
385.8610	35.951	35.951	0	0.981	512785	112169	143	357	784	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.968	35.968	0	1.000	271444	57965	76	190	763		
375.8178	35.968	35.968	0	1.000	223066	47945	65	162	738	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.843	36.843	0	1.006	262042	60518	76	190	796		
385.8610	36.843	36.843	0	1.006	485964	112714	143	357	788	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.852	36.852	0	1.000	260509	58683	76	190	772		
375.8178	36.852	36.852	0	1.000	209309	48521	65	162	746	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.117						76	190			
375.8178	35.117						65	162			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.641	36.641	0		458995	104898	62	155	1692		
403.8529	36.641	36.641	0		362509	80350	40	100	2009	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.161	36.161	0	0.987	357358	80985	62	155	1306		
403.8529	36.161	36.161	0	0.987	276367	66076	40	100	1652	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.178	36.178	0	1.000	171656	38288	35	87	1094		
391.8127	36.170	36.178	-1	1.000	139450	31245	22	55	1420	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.279	36.279	0	0.990	388276	81080	62	155	1308		
403.8529	36.279	36.279	0	0.990	309938	66370	40	100	1659	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.296	36.296	0	1.000	180049	38399	35	87	1097		
391.8127	36.296	36.296	0	1.000	142902	30189	22	55	1372	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.658	36.658	0	1.014	209455	47412	35	87	1355		
391.8127	36.658	36.658	0	1.014	168841	38105	22	55	1732	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.475						35	87			
391.8127	35.475						22	55			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.647	38.647	0	1.055	207852	52510	59	147	890		
419.8220	38.647	38.647	0	1.055	459653	116986	101	252	1158	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.664	38.664	0	1.000	225416	58663	100	250	587		
409.7788	38.664	38.664	0	1.000	216529	55624	94	235	592	1.04(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.901	39.901	0	1.089	207403	60112	59	147	1019		
419.8220	39.901	39.901	0	1.089	467429	130725	101	252	1294	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.910	39.910	0	1.000	209504	59297	100	250	593		
409.7788	39.910	39.910	0	1.000	202728	56331	94	235	599	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.301						100	250			
409.7788	39.301						94	235			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.590	39.590	0	1.080	327053	94033	85	212	1106		
437.8140	39.590	39.590	0	1.080	302740	85600	73	182	1173	1.08(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.598	39.598	0	1.000	167496	46994	44	110	1068		
425.7737	39.598	39.598	0	1.000	162315	44219	39	97	1134	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.958	39.297	-20	0.984	2414	637	44	110	14		
425.7737	38.958	39.297	-20	0.984	2481	763	39	97	20	0.97(0.88-1.20)	
13C-OCDD											
469.7780	42.094	42.094	0	1.149	561827	135839	61	152	2227		
471.7750	42.094	42.094	0	1.149	616814	147272	35	87	4208	0.91(0.76-1.02)	
OCDF											
441.7428	42.187	42.187	0	1.002	380624	88366	35	87	2525		
443.7399	42.187	42.187	0	1.002	419364	101887	42	105	2426	0.91(0.76-1.02)	
OCDD											
457.7377	42.103	42.103	0	1.000	282781	69356	30	75	2312		
459.7348	42.103	42.103	0	1.000	315470	77115	28	70	2754	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 02:07:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517281 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.983

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	901083	130285

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	901083	130285

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.894	51	40	424	102	0.0488	0.12	RQ
18.894	51	40	66	51	0.0120		Empc Correction
19.857	158	72	455	176	0.0630	0.35	RQ
19.857	158	72	205	93	0.0373		Empc Correction
20.830	127	40	468	100	0.0611	0.27	RQ
20.830	127	40	164	51	0.0299		Empc Correction
Signal Totals:							
	336	152	435	195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1683	530				0.25	RQ
	771	347					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1729 = (1683 * 100.000) / (901083 * 1.080)
Empc Amount: 0.0792 = (771 * 100.000) / (901083 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 02:07:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517281 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDD, RT: 20.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	642649	82079

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	642649	82079

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.875	98	53	88	38	0.0269	1.11	RQ
19.875	67	29	88	38	0.0224		Empc Correction
22.085	571	189	268	71	0.1214	2.13	RQ
22.085	206	54	268	71	0.0686		Empc Correction
22.257	136	60	281	77	0.0603	0.48	RQ
22.257	136	60	176	77	0.0451		Empc Correction
Signal Totals:							
	409	143	532	186			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1442	488				1.26	RQ
	941	329					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2087 = (1442 * 100.000) / (642649 * 1.075)
Empc Amount: 0.1362 = (941 * 100.000) / (642649 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 02:07:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517281 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.196

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	841428	126958
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	914292	129127

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	877860	128042

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.966	3027	388	1930	313	0.5477	1.57	n
Signal Totals:							
	3027	388	1930	313			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4957	701				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5477 = (4957 * 100.000) / (877860 * 1.031)

QC Flag Legend

Processing Flags
n - Failed Sig-To-Noise Test

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	18-Aug-2021 02:07:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	15
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-HpCDD, RT: 39.297

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	629793	179633

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	629793	179633

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.958	2414	637	2481	763	0.7400	0.97	
Signal Totals:							
	2414	637	2481	763			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4895	1400				0.97	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.7400 = (4895 * 100.000) / (629793 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d				
Injection Date:	18-Aug-2021 02:07:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.54
Area: 35560
Amount: 8.877750
Amount Units: pg/ul

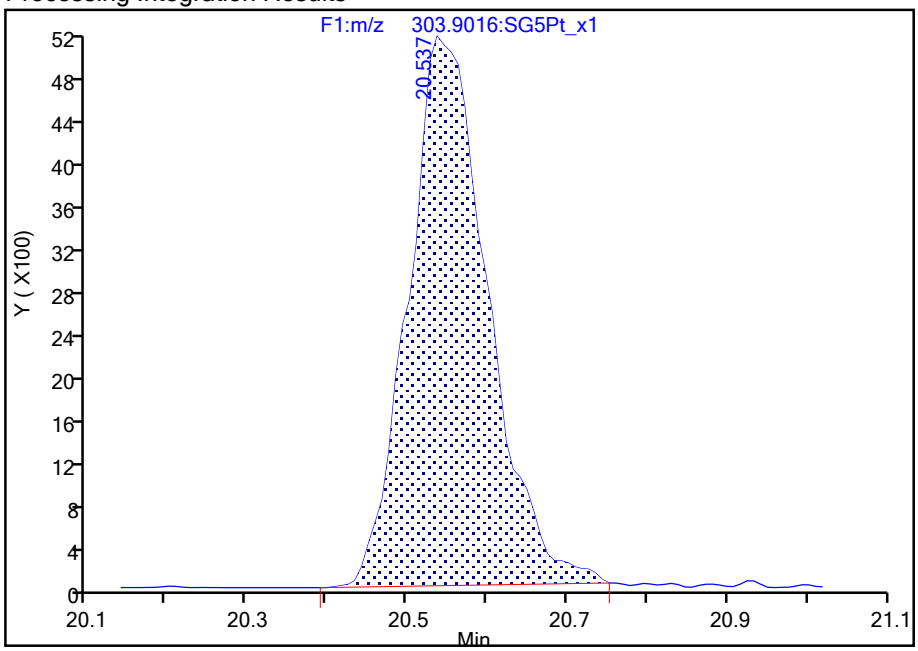

Manual Integration Results

RT: 20.54
Area: 36140
Amount: 9.012338
Amount Units: pg/ul

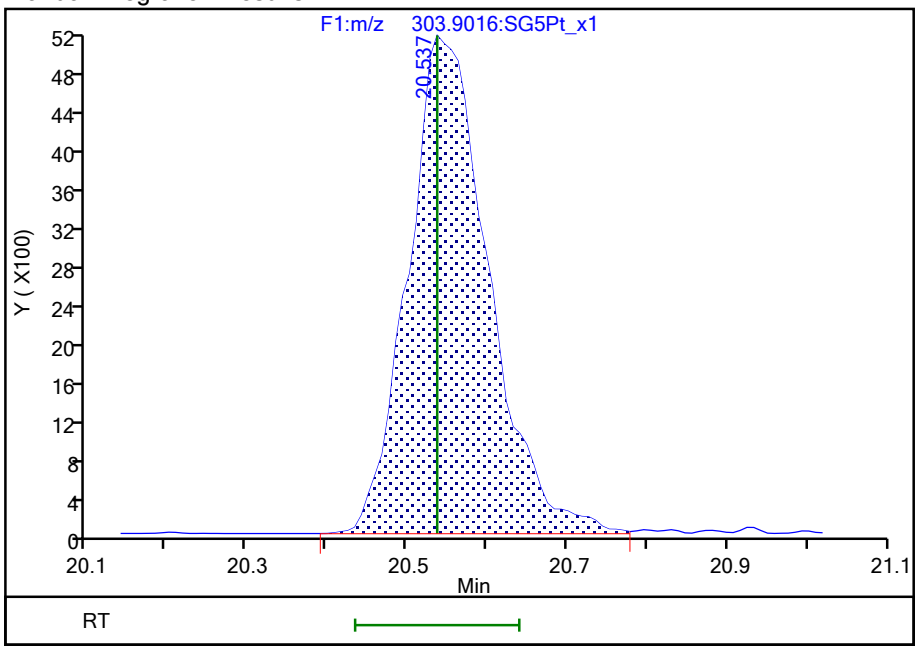

Reviewer: stephensk, 18-Aug-2021 08:26:28

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d				
Injection Date:	18-Aug-2021 02:07:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 20.55
Area: 50851
Amount: 8.877750
Amount Units: pg/ul

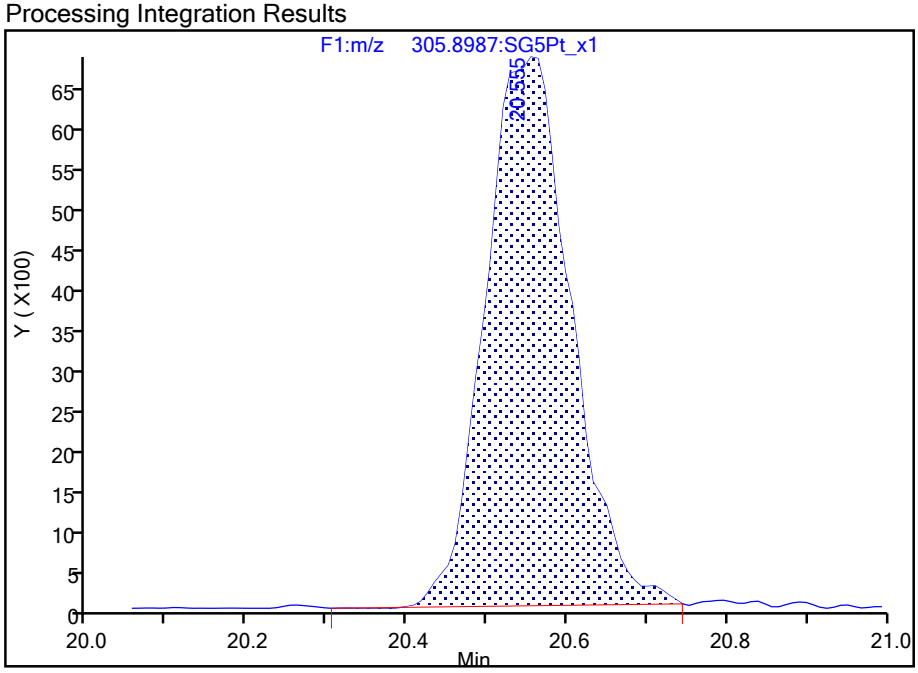

Manual Integration Results

RT: 20.55
Area: 51581
Amount: 9.012338
Amount Units: pg/ul

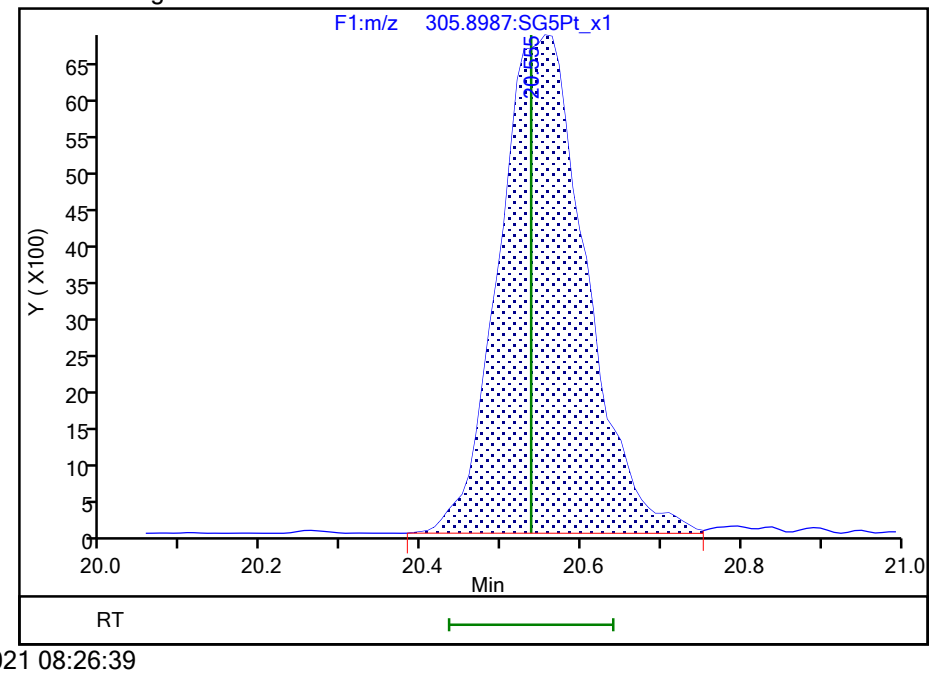

Reviewer: stephensk, 18-Aug-2021 08:26:39

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d				
Injection Date:	18-Aug-2021 02:07:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 21.91
Area: 35232
Amount: 9.429144
Amount Units: pg/ul

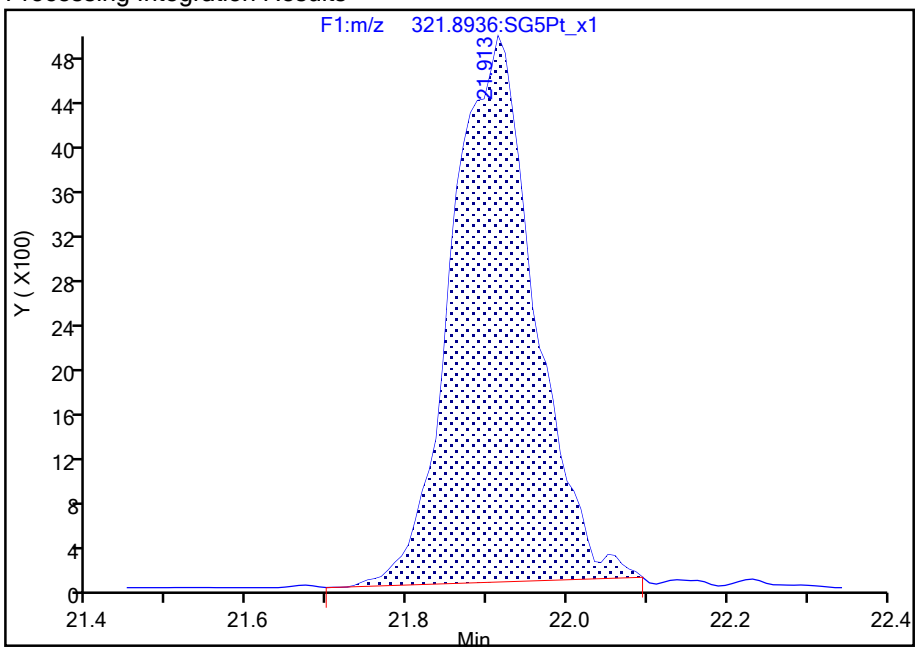

Manual Integration Results

RT: 21.91
Area: 36253
Amount: 9.576886
Amount Units: pg/ul

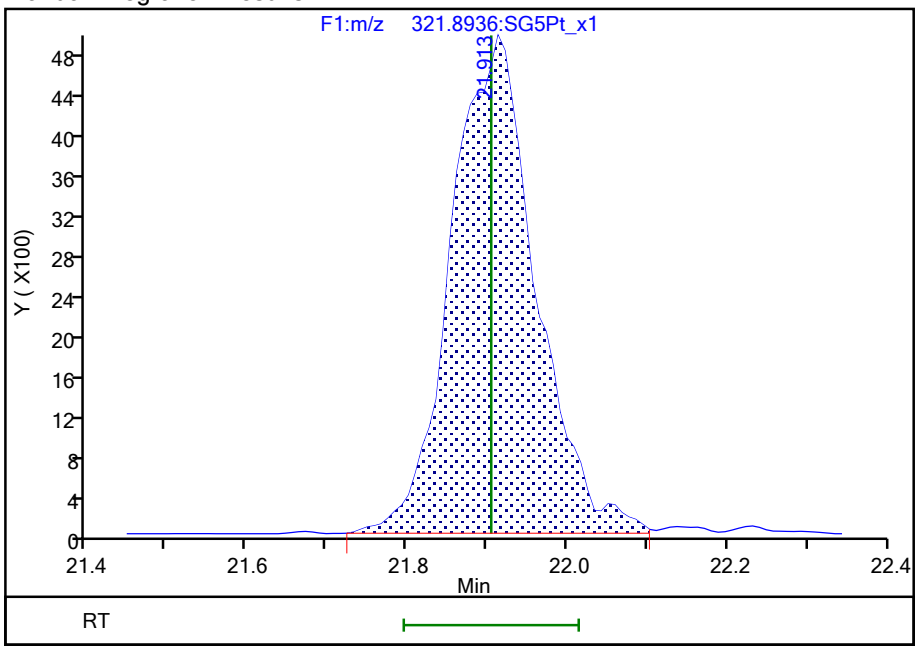

Reviewer: stephensk, 18-Aug-2021 08:26:53

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

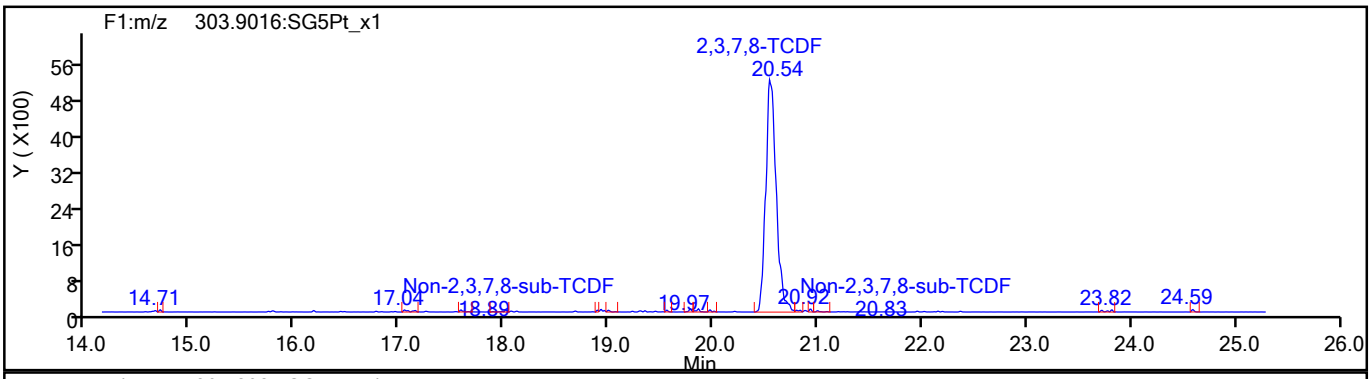

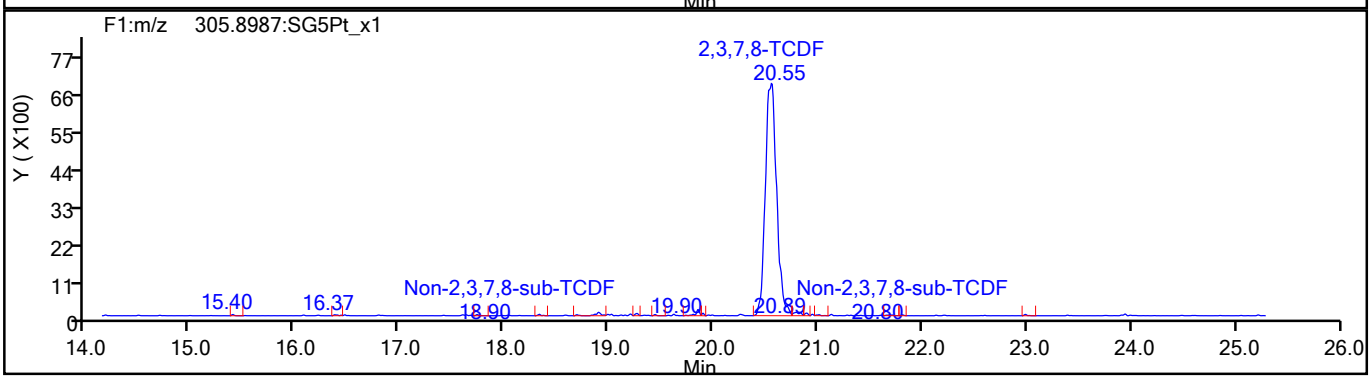

TCDF Standards

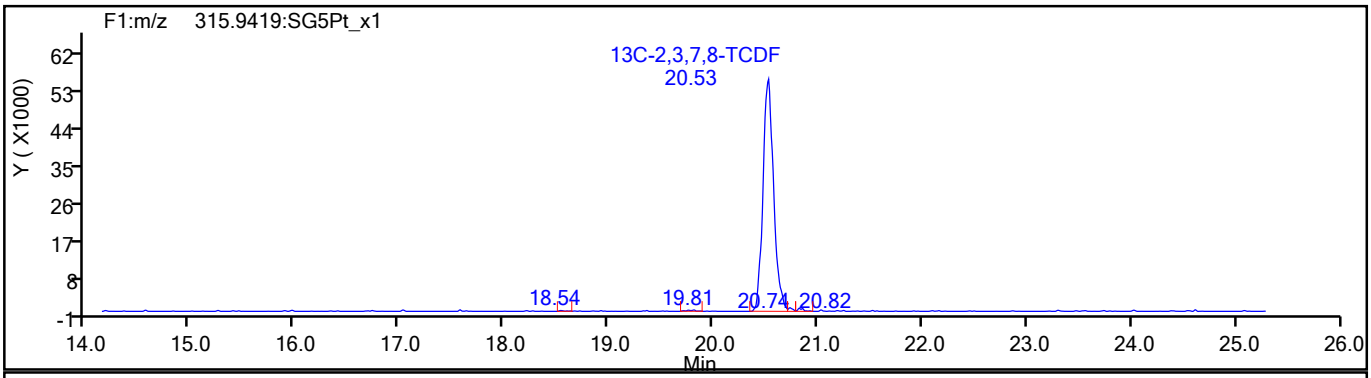

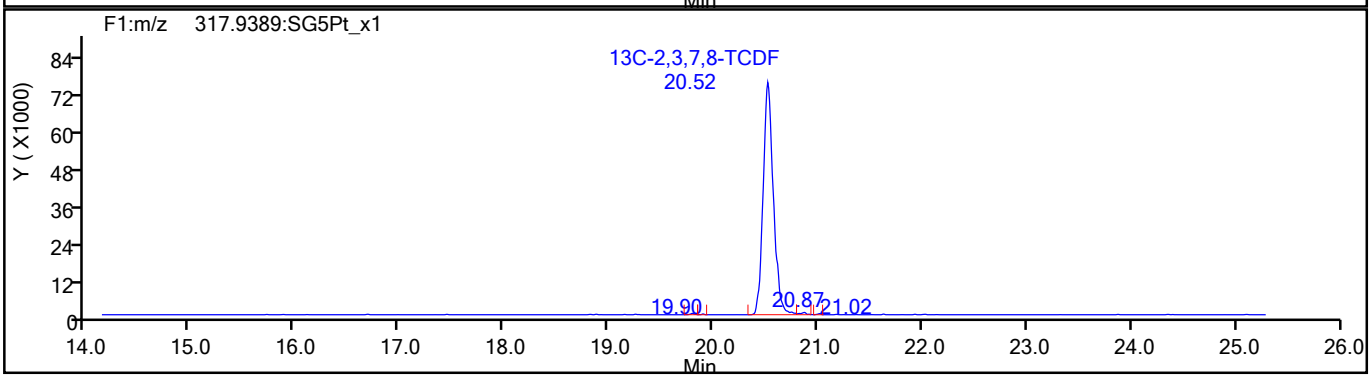

776821

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

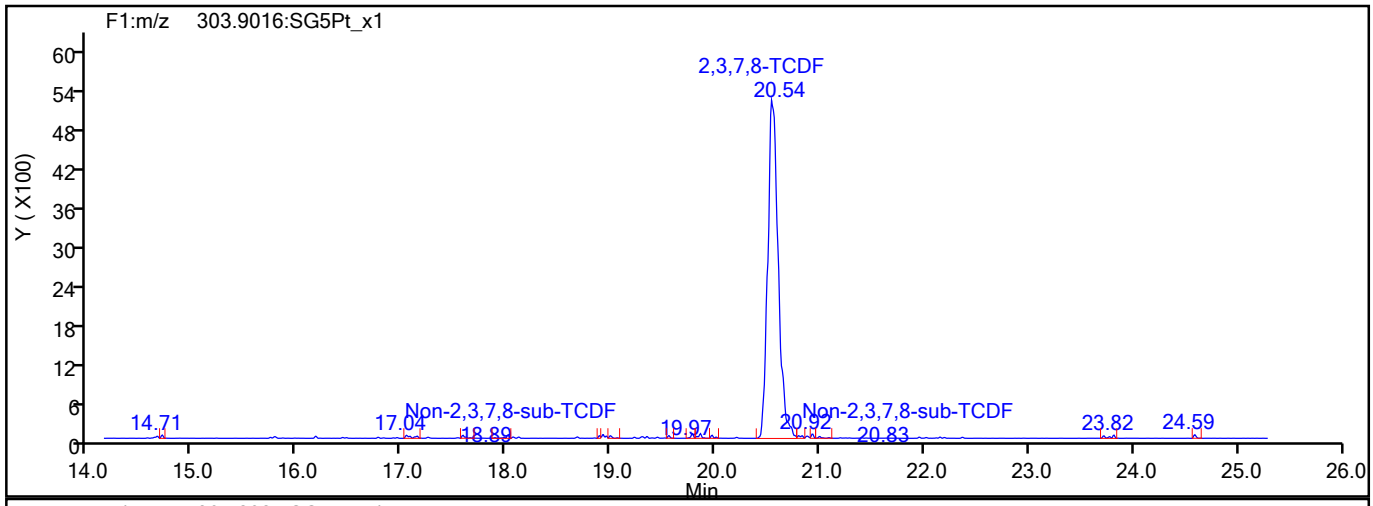

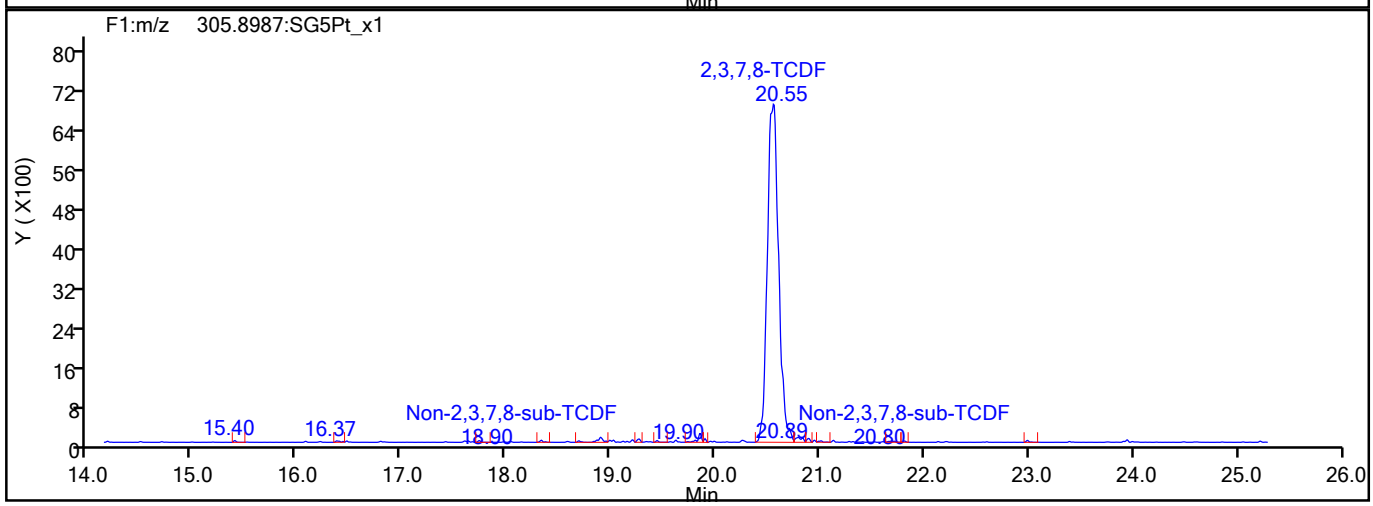

TCDF Interference Mass

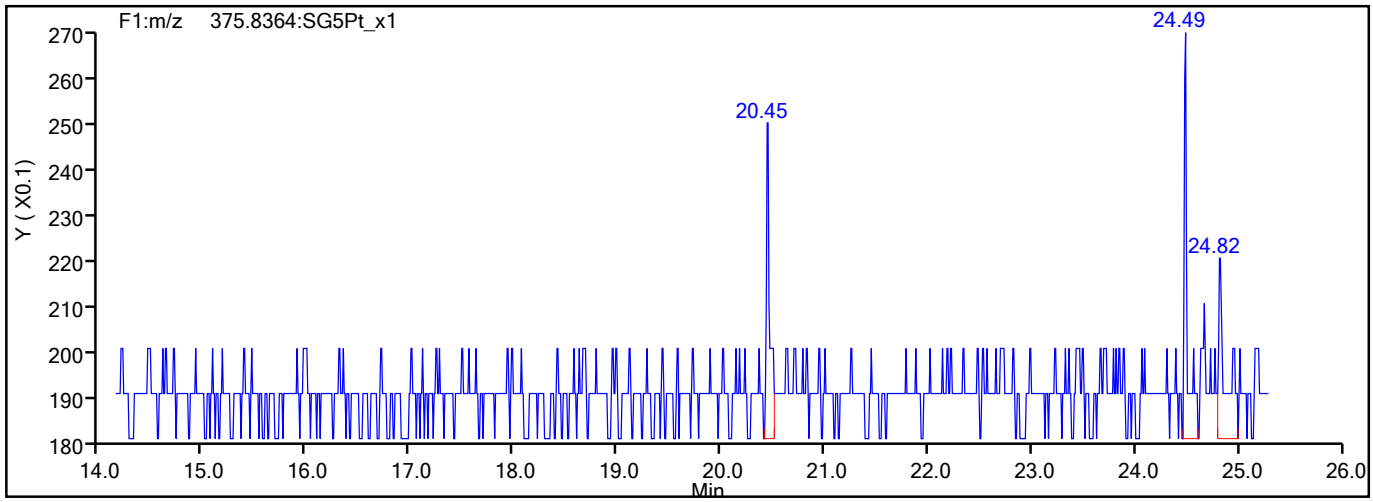

776822

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

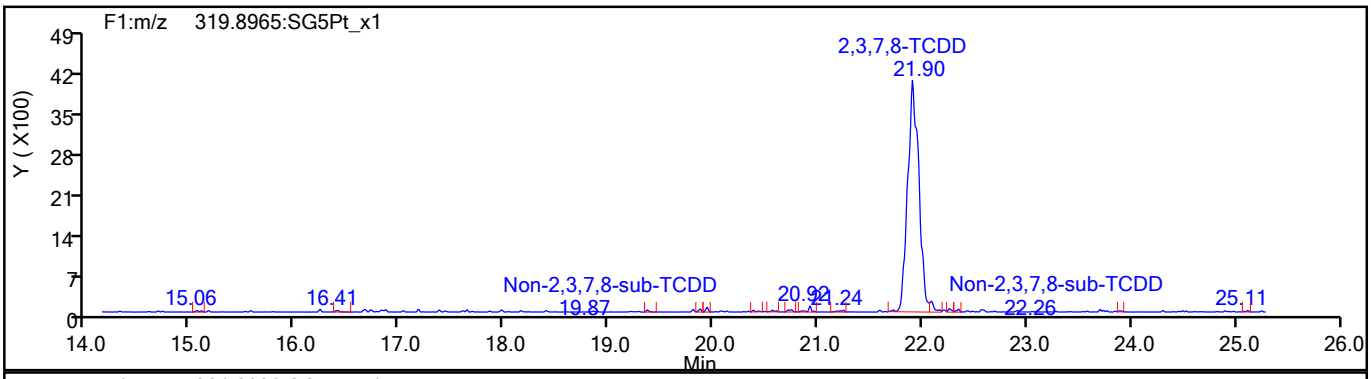

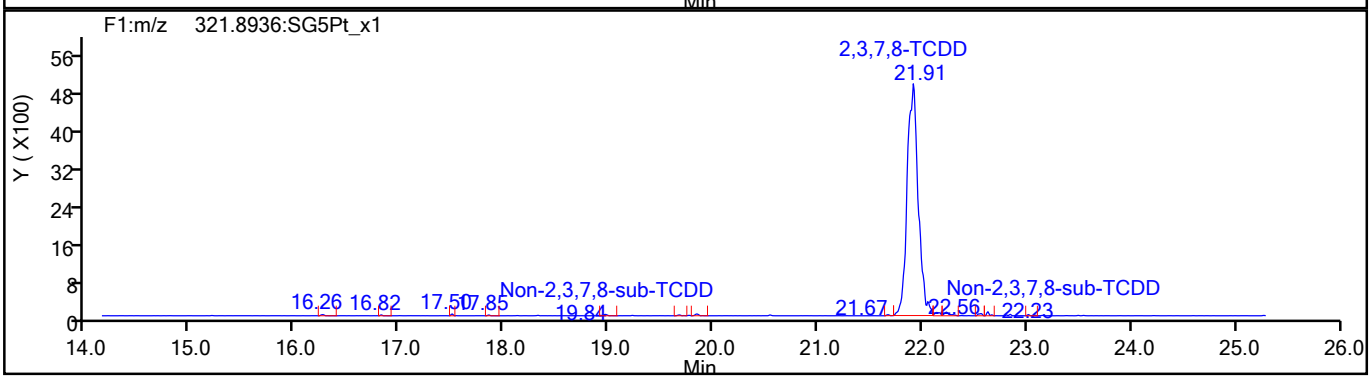

TCDD Standards

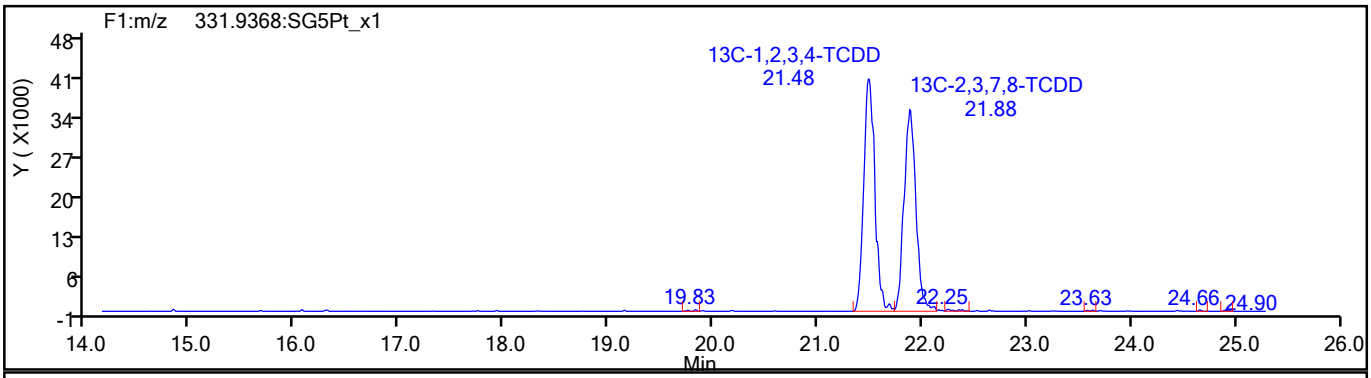

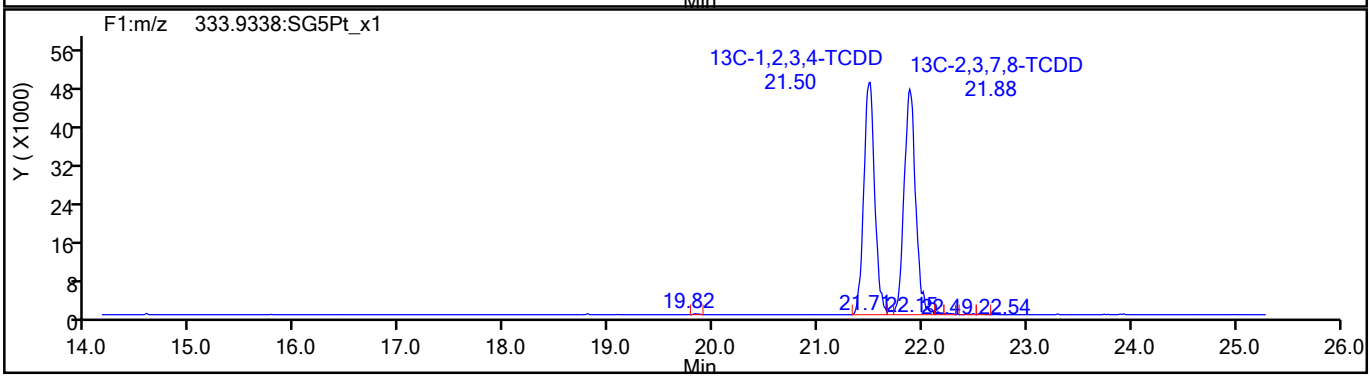

776823

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

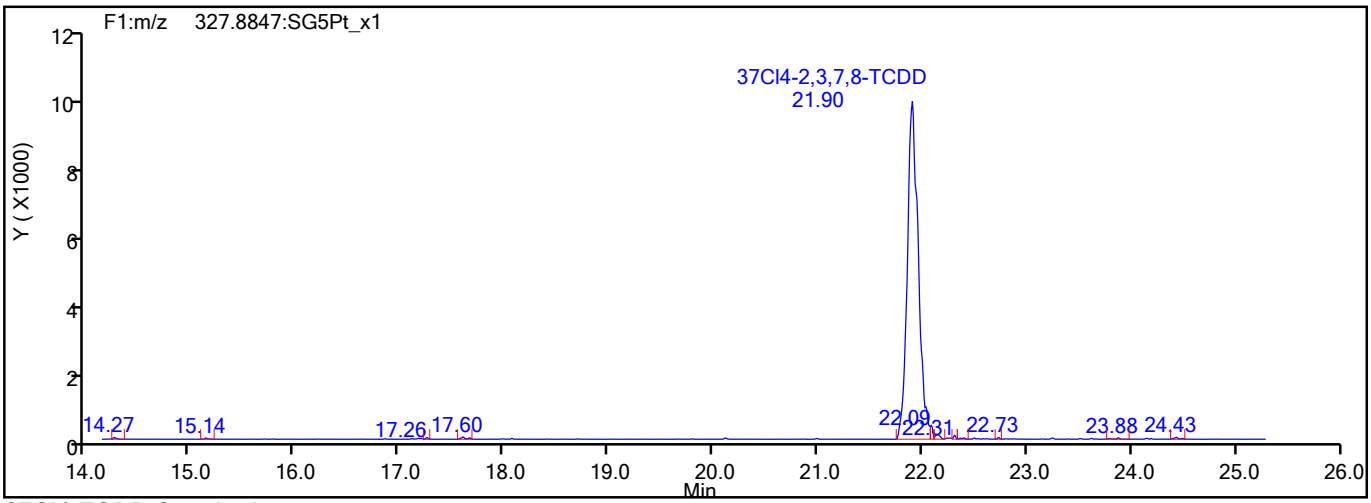

37Cl4-TCDD Standards

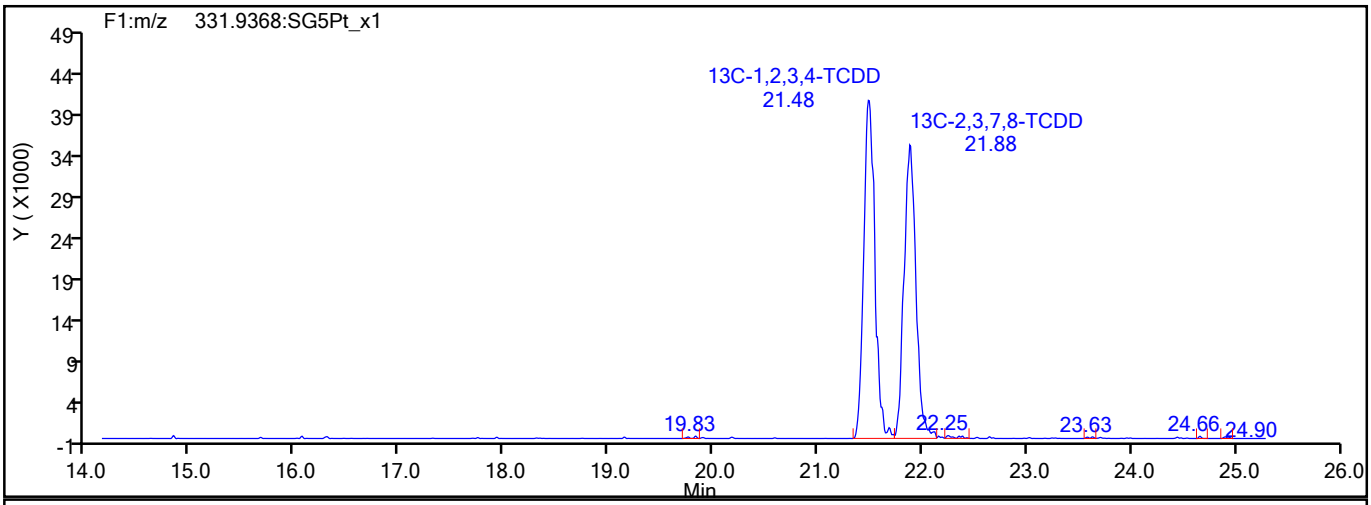

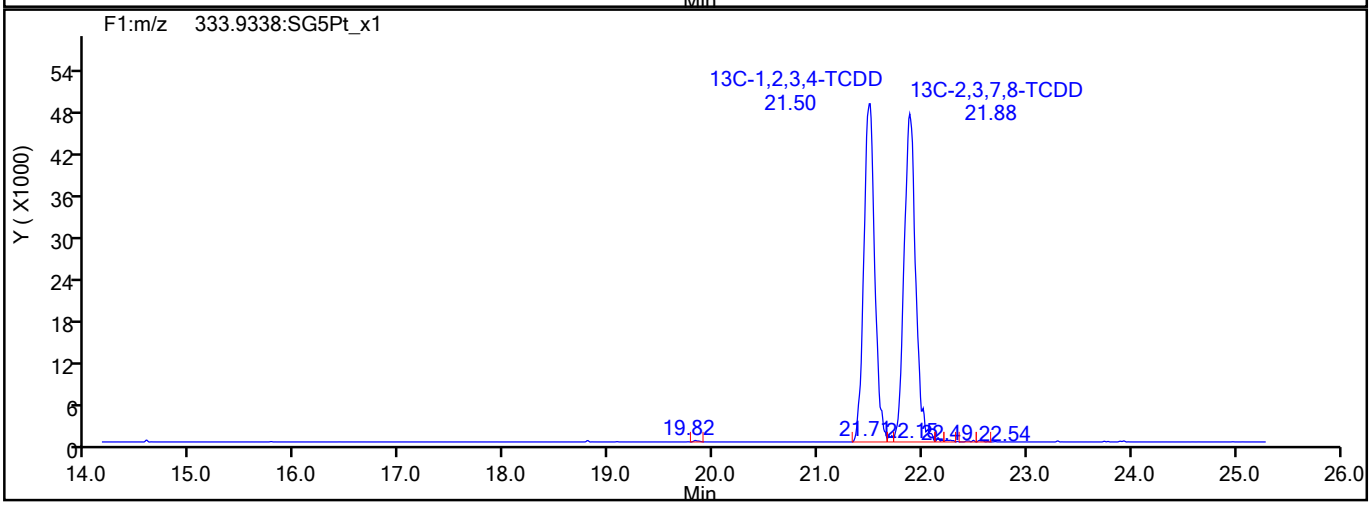

776824

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

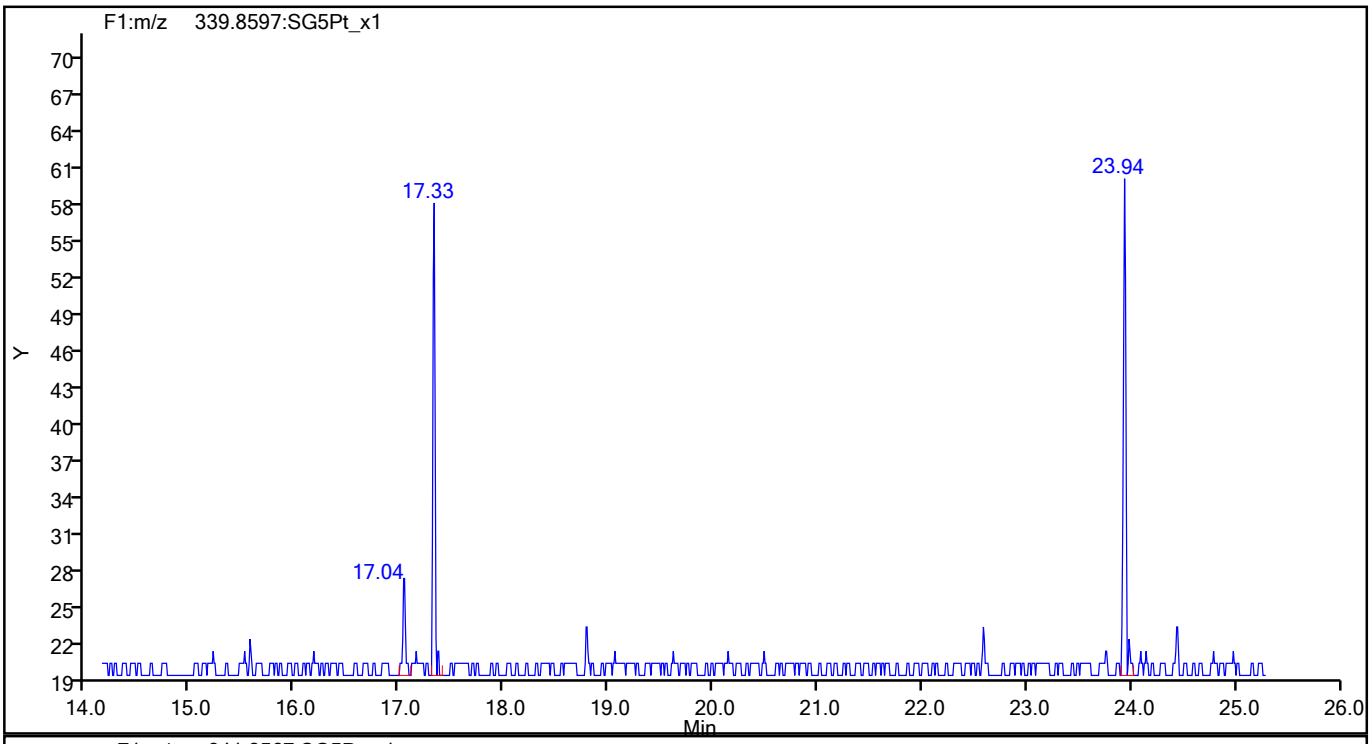

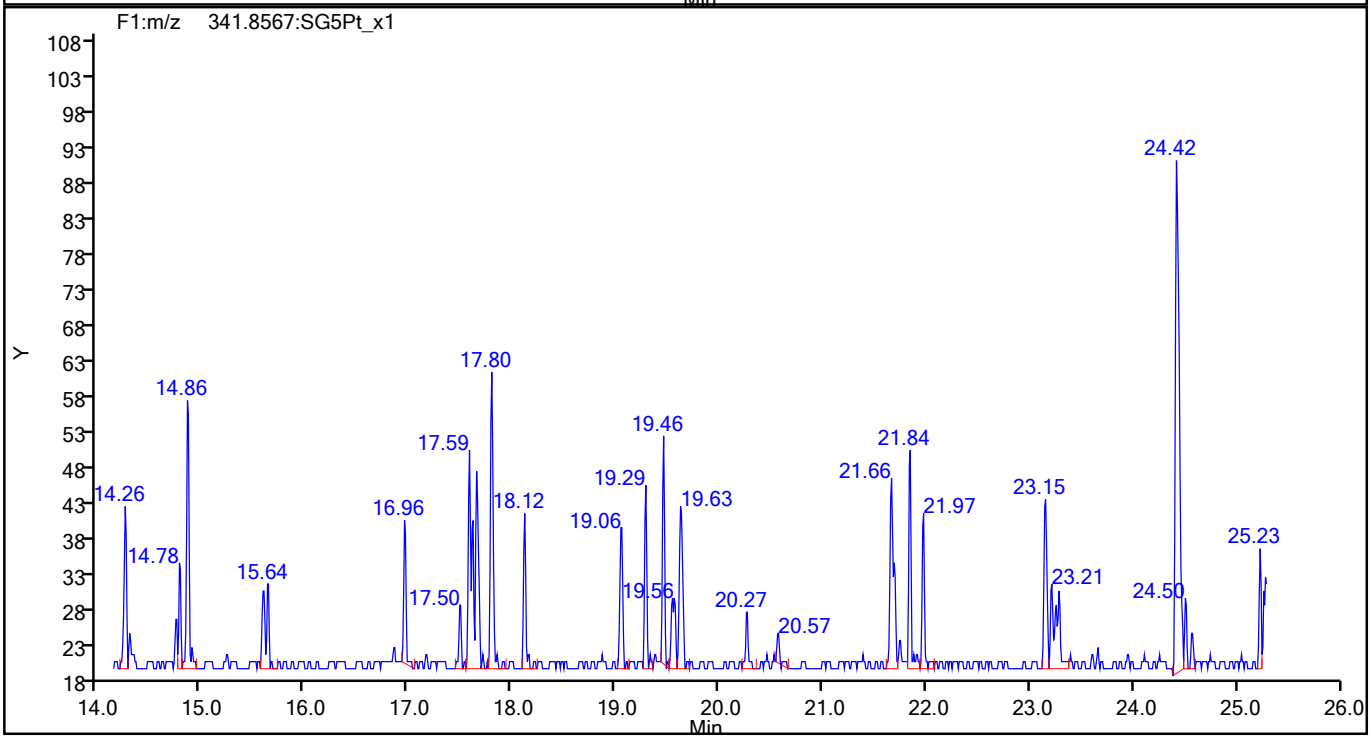

776825

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

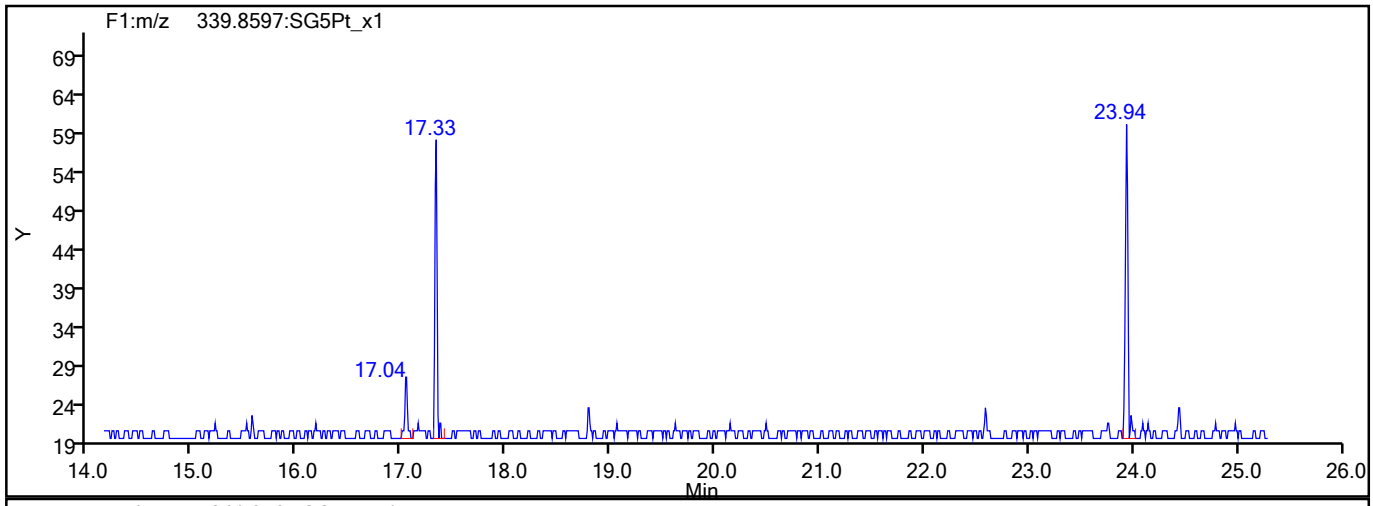

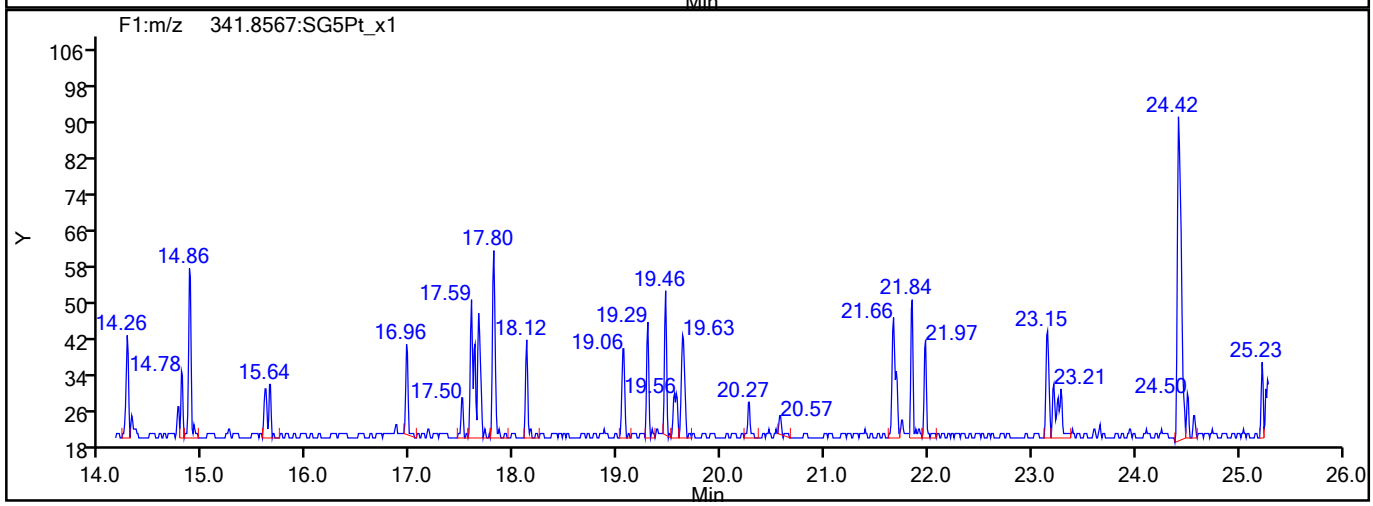

F1 PeCDFs Interference Mass

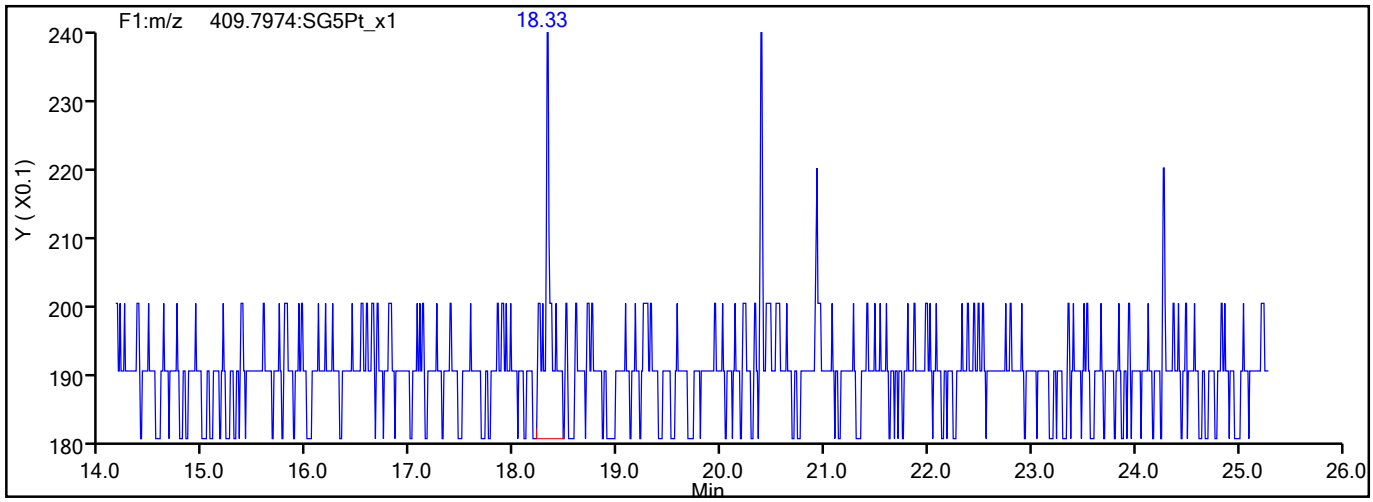

776826

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

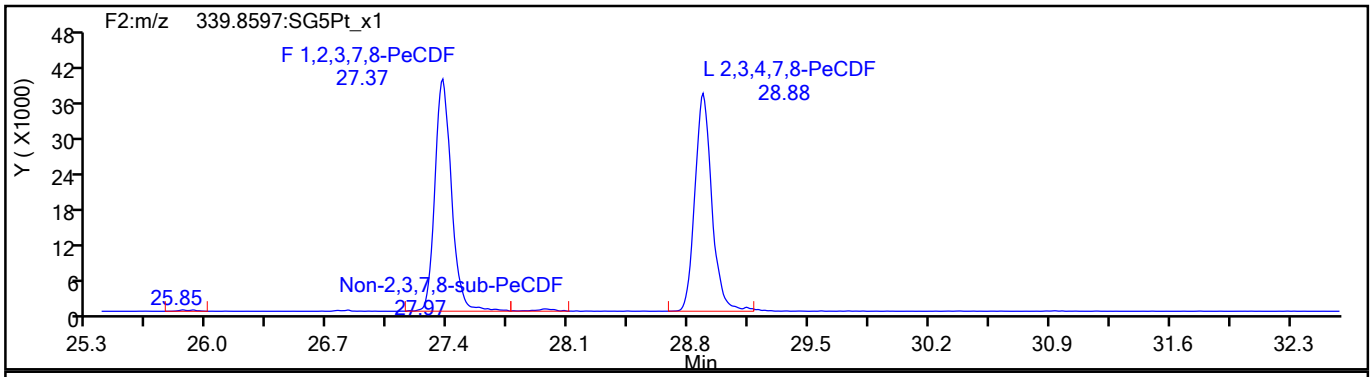

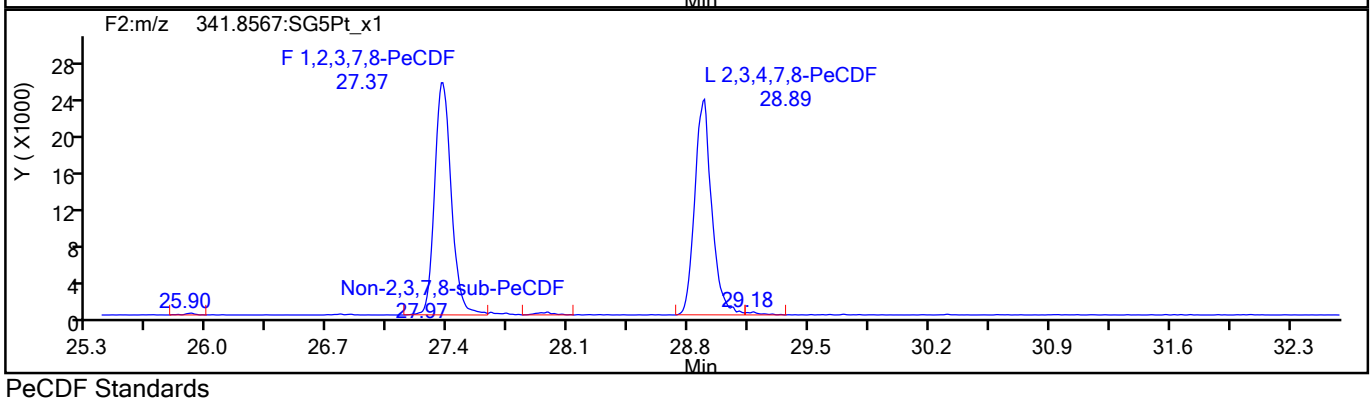

PeCDF Standards

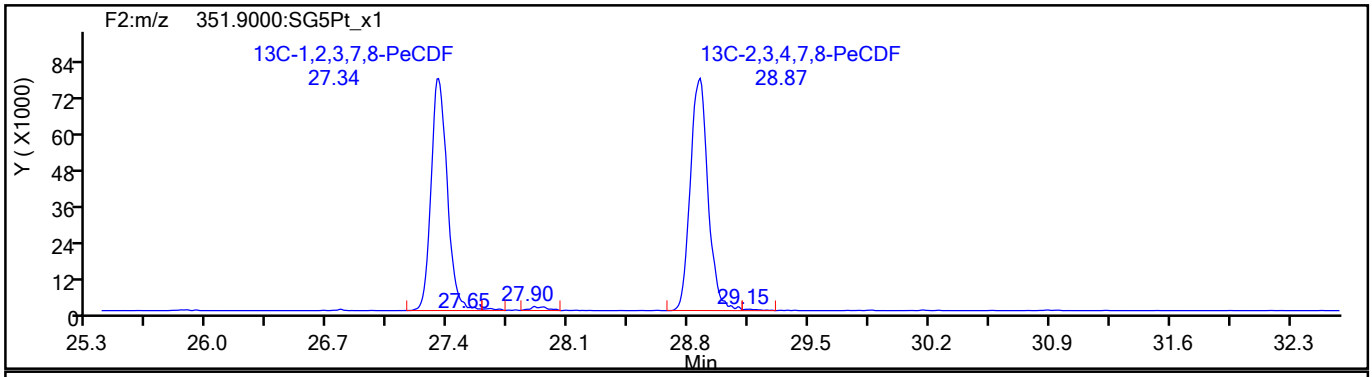

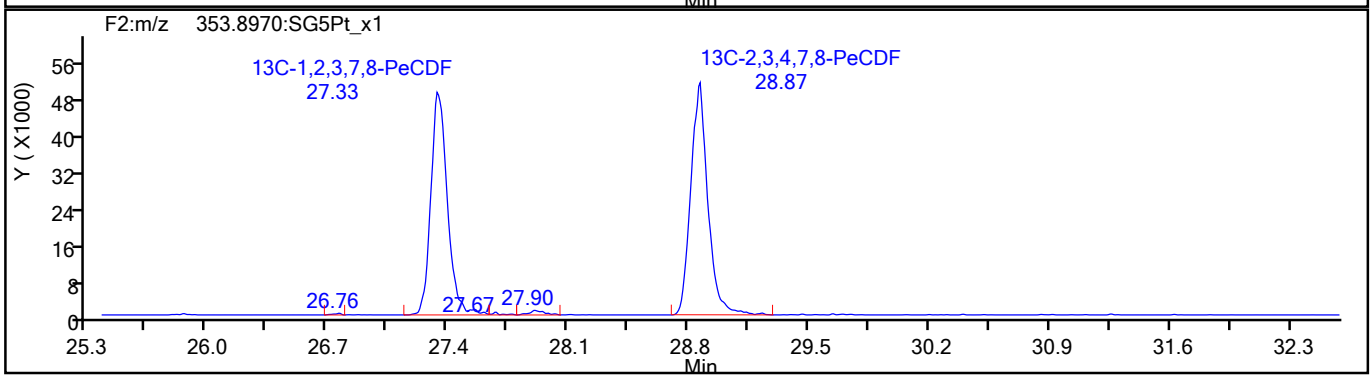

776827

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

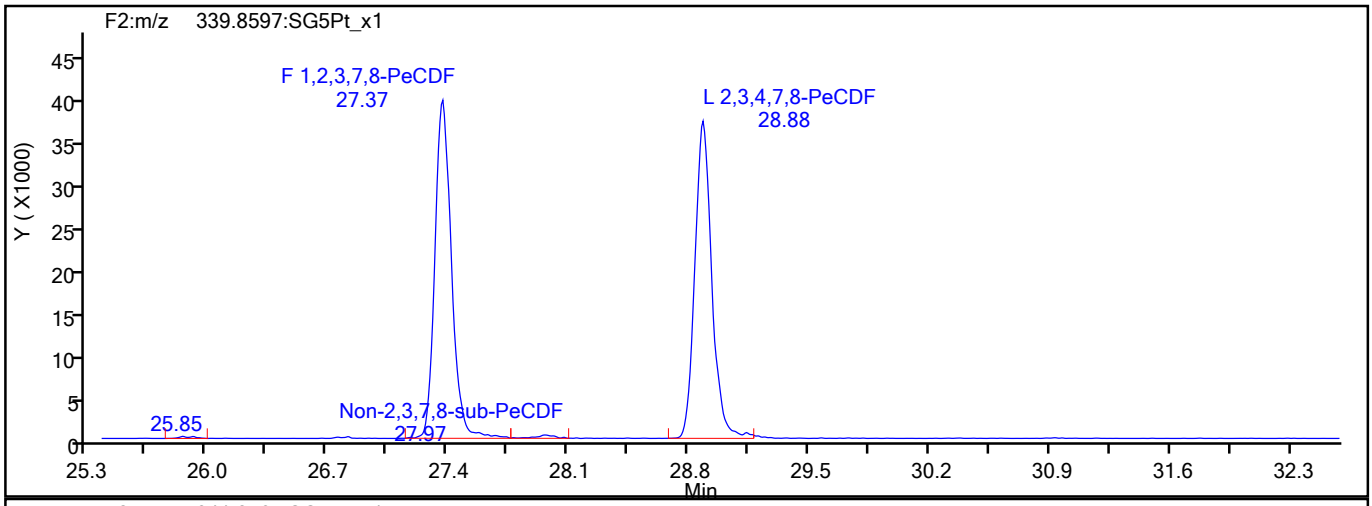

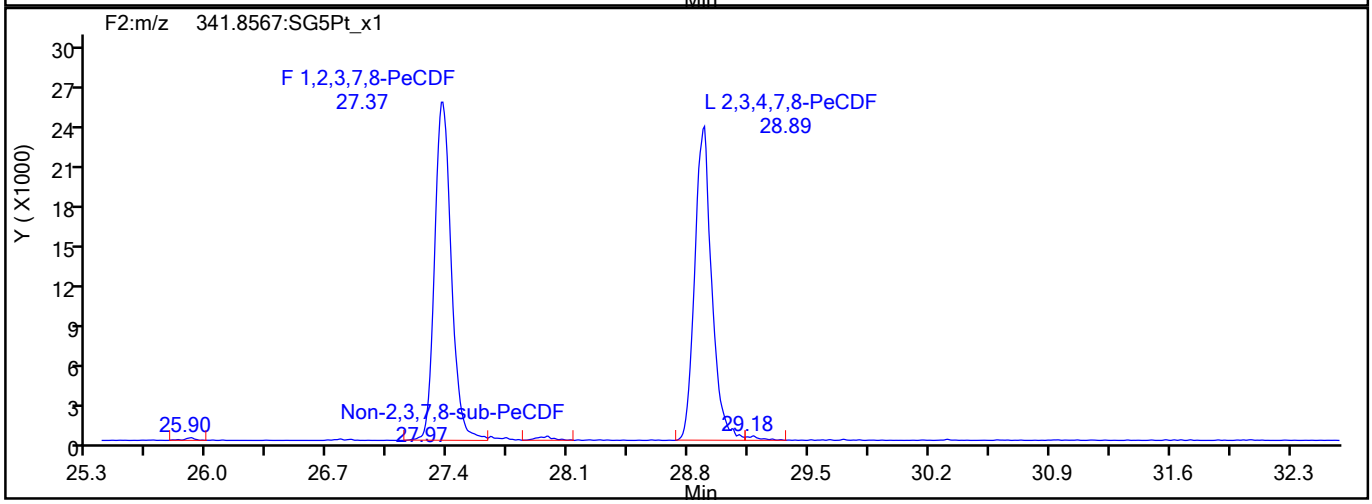

PeCDF Interference Mass

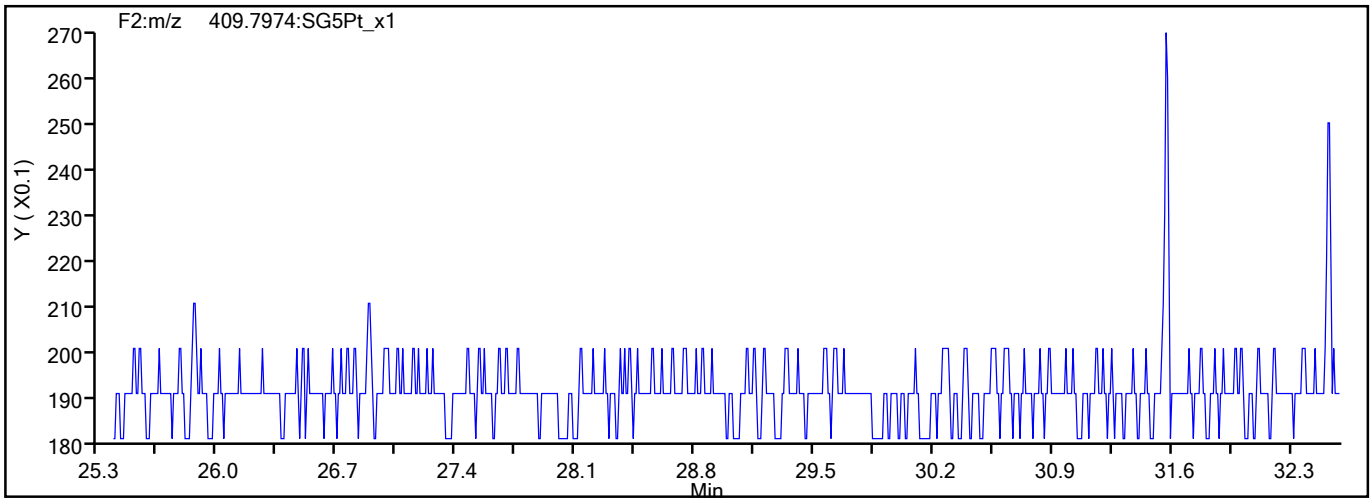

776828

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

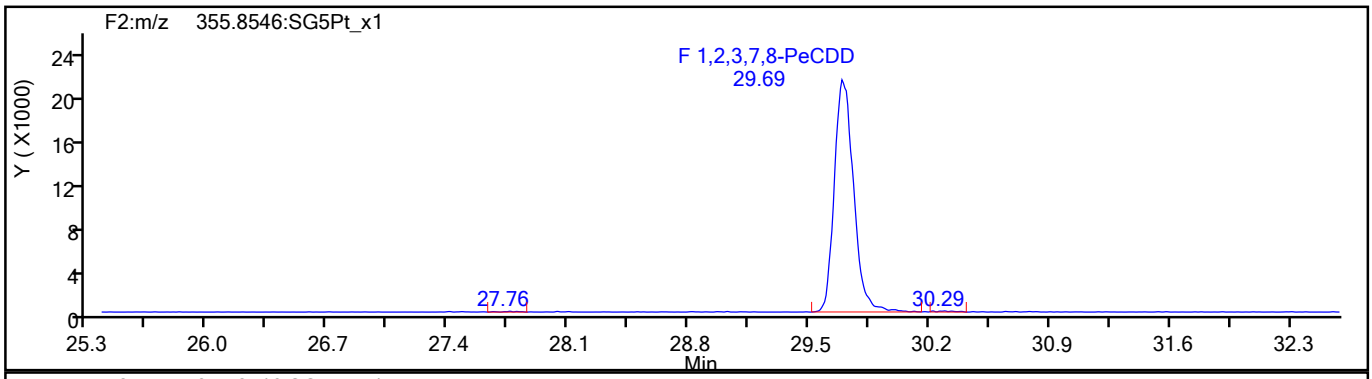

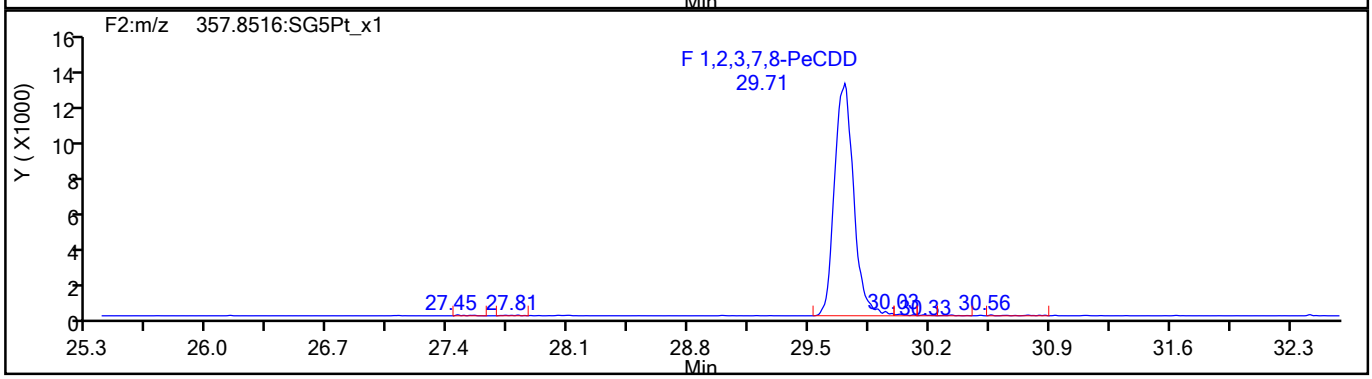

PeCDD Standards

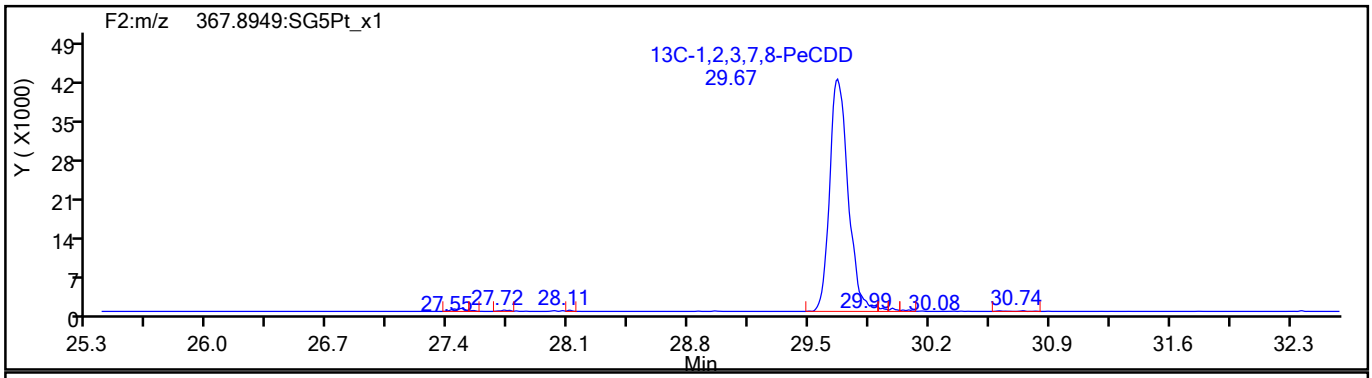

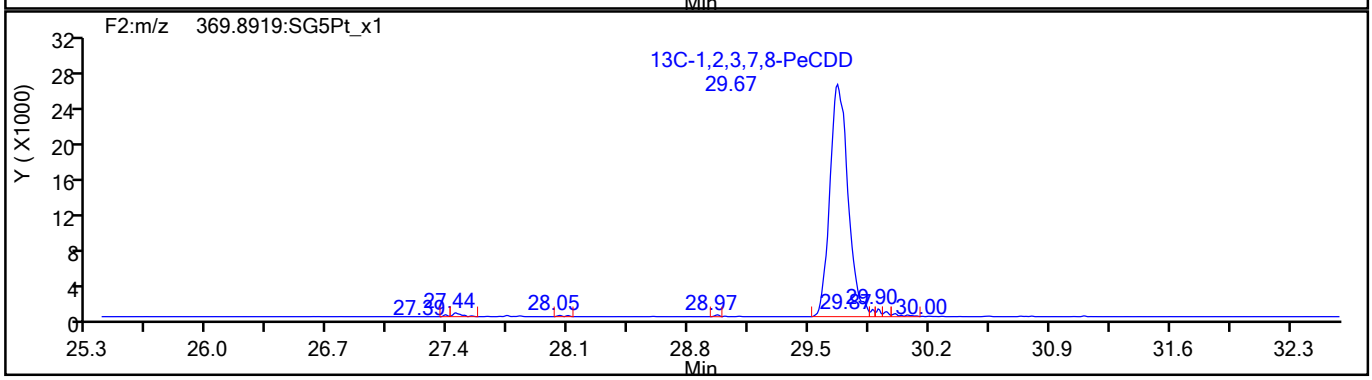

776829

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

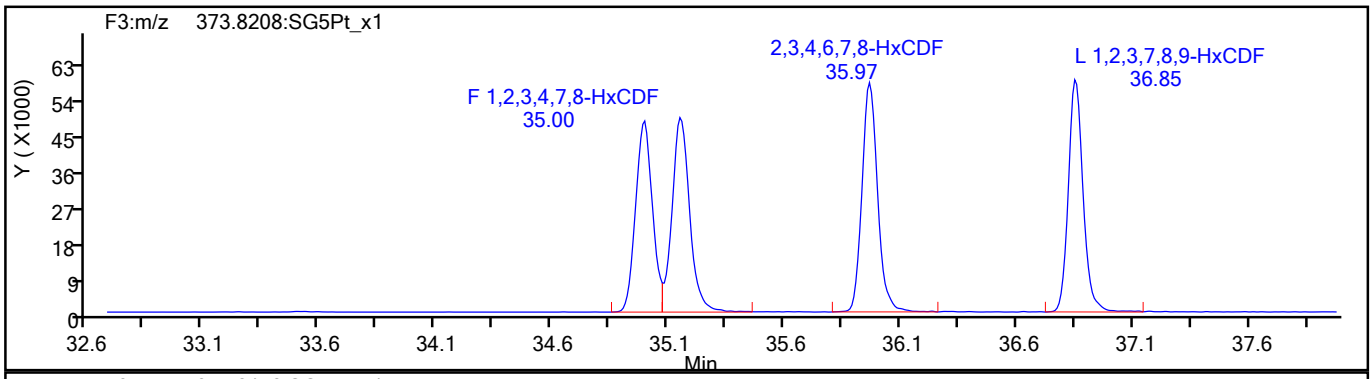

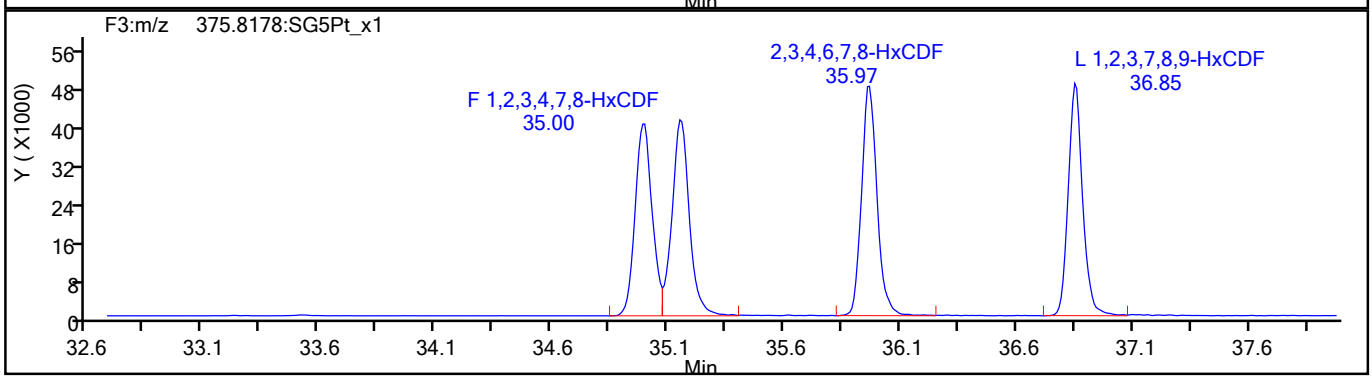

HxCDF Standards

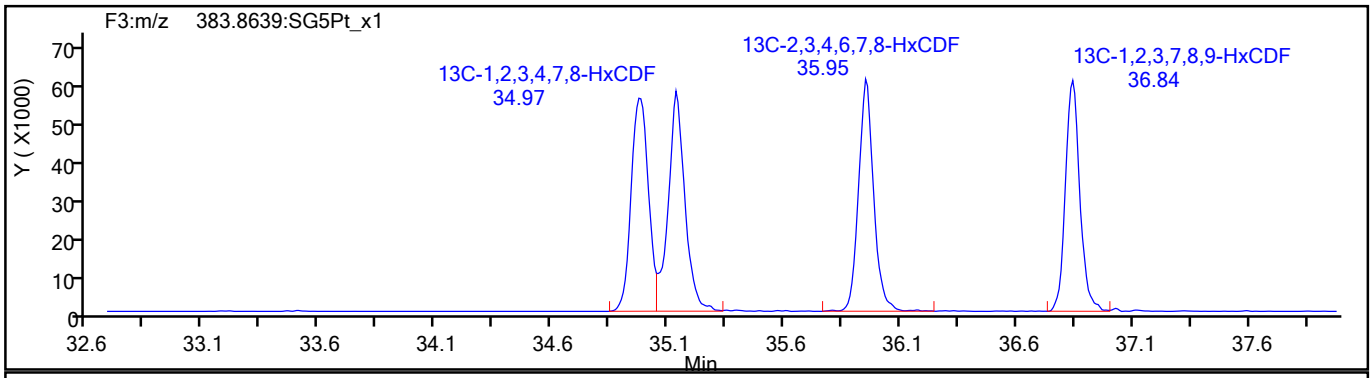

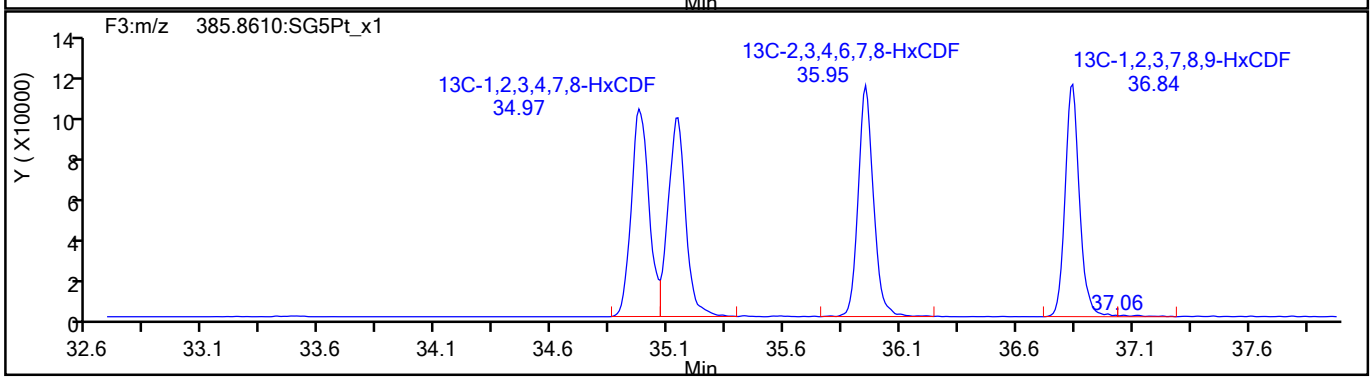

776830

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

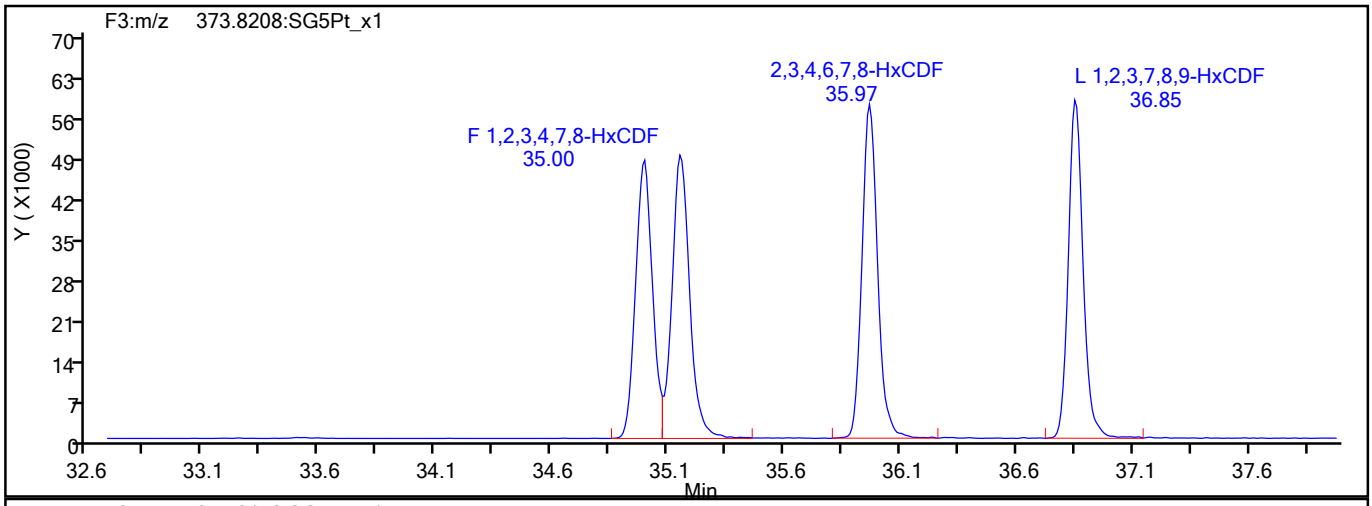

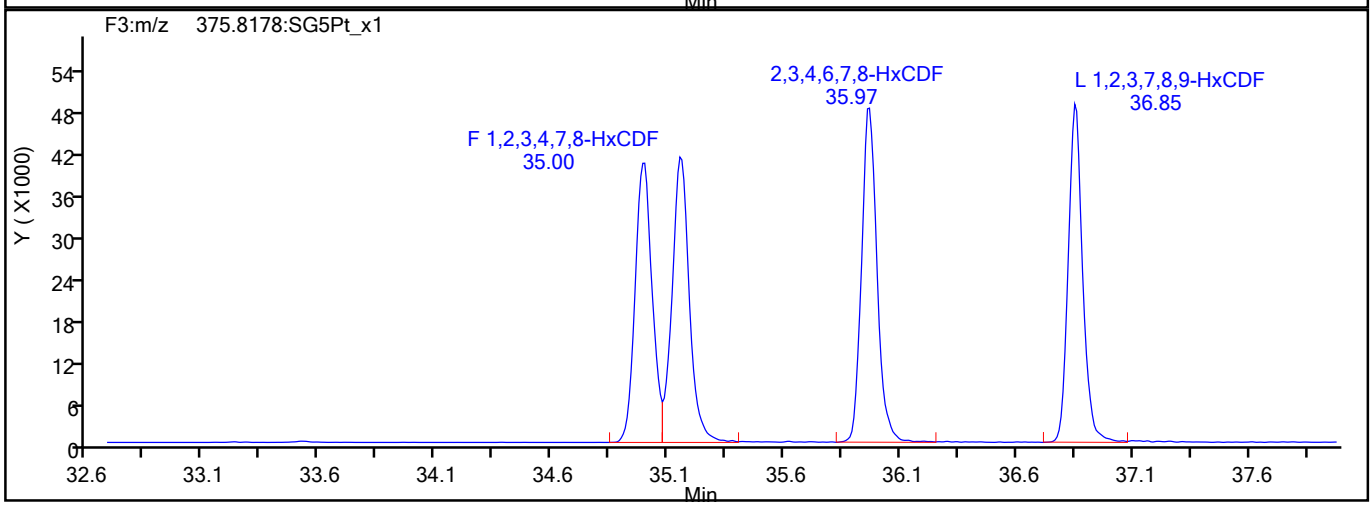

HxCDF Interference Mass

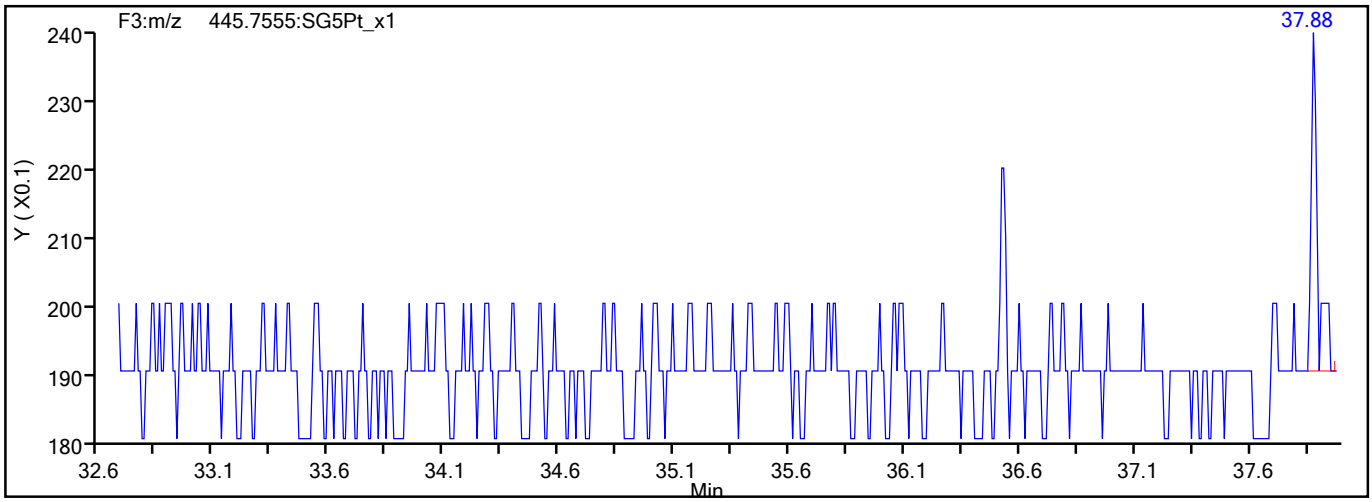

776831

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

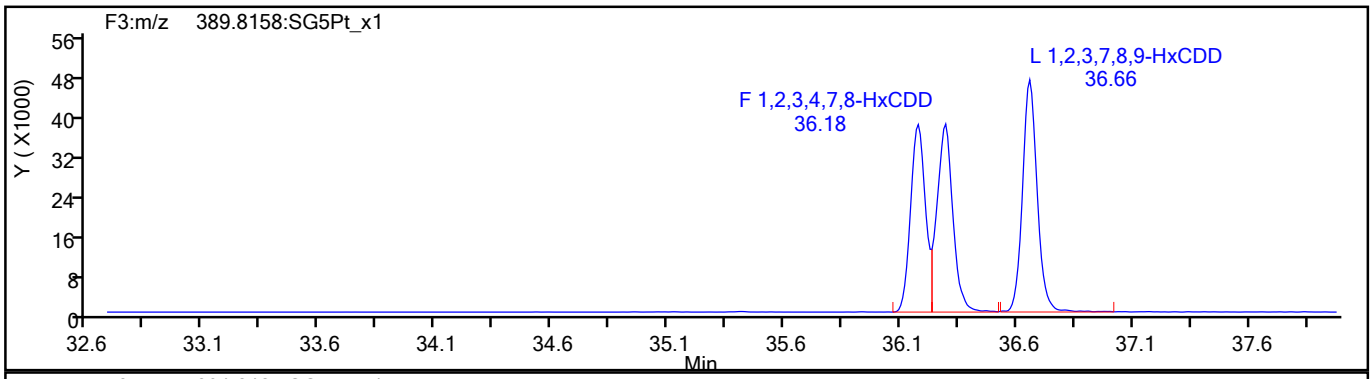

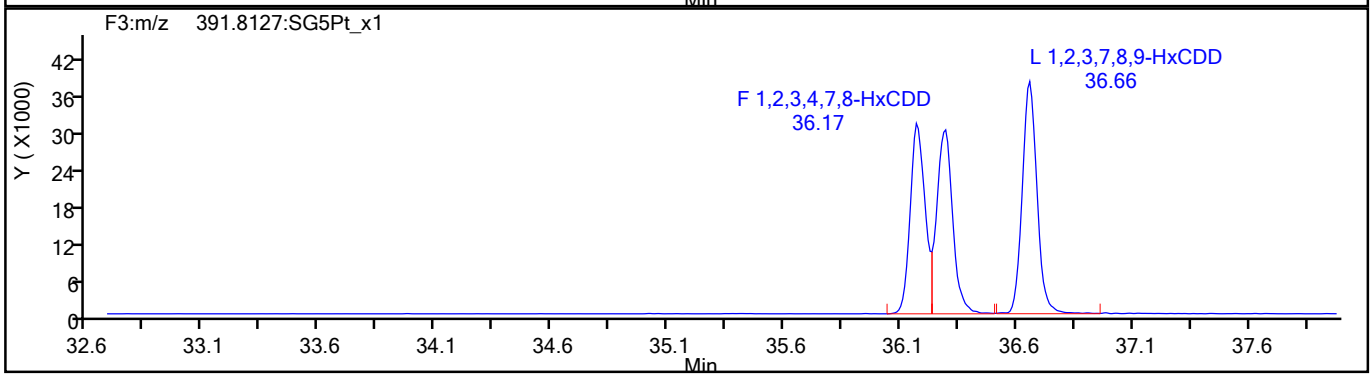

HxCDD Standards

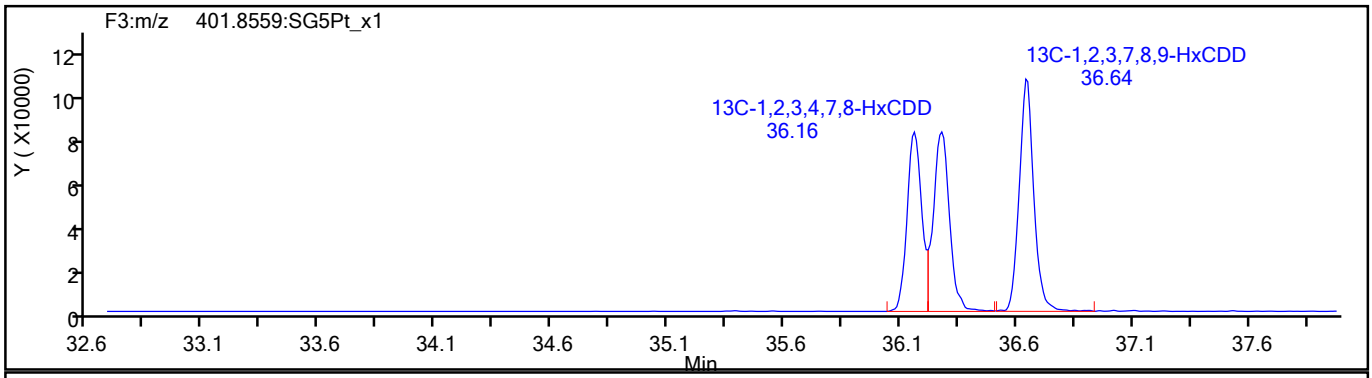

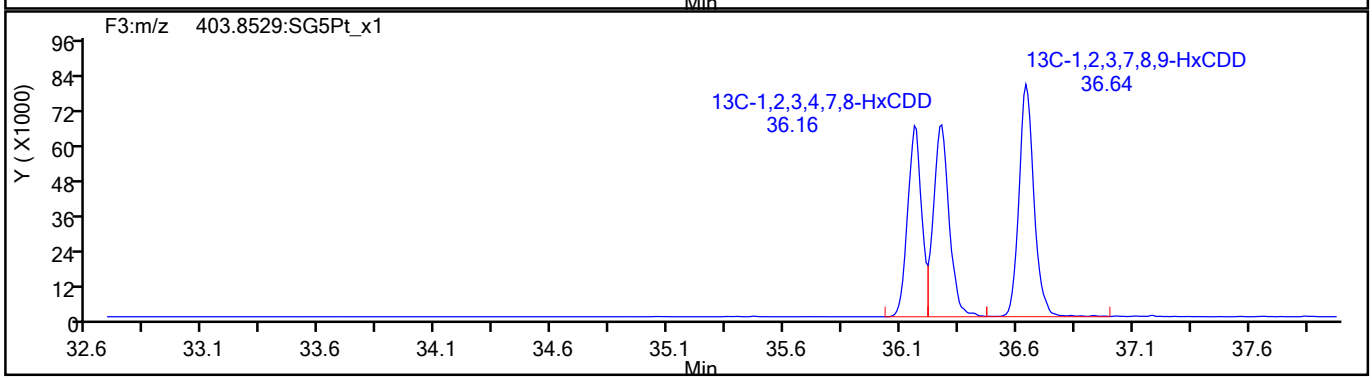

776832

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

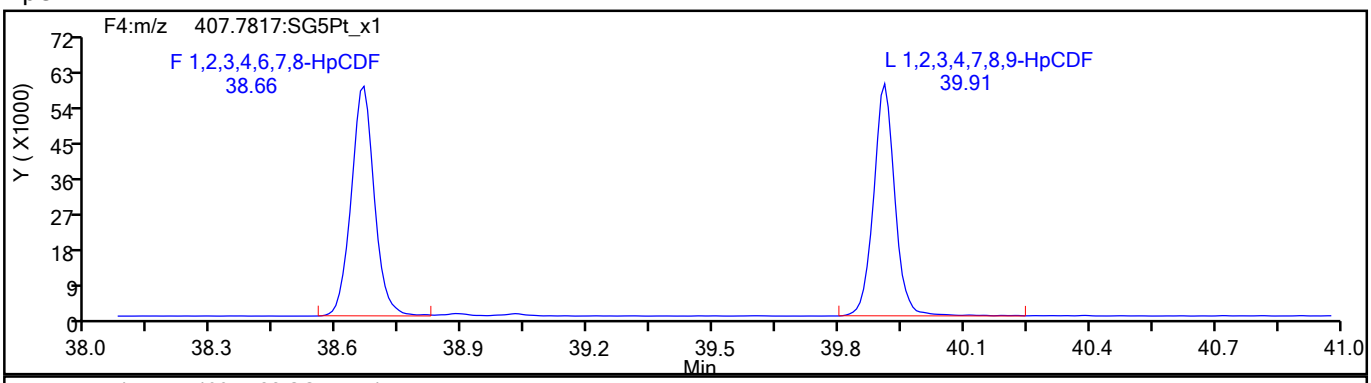

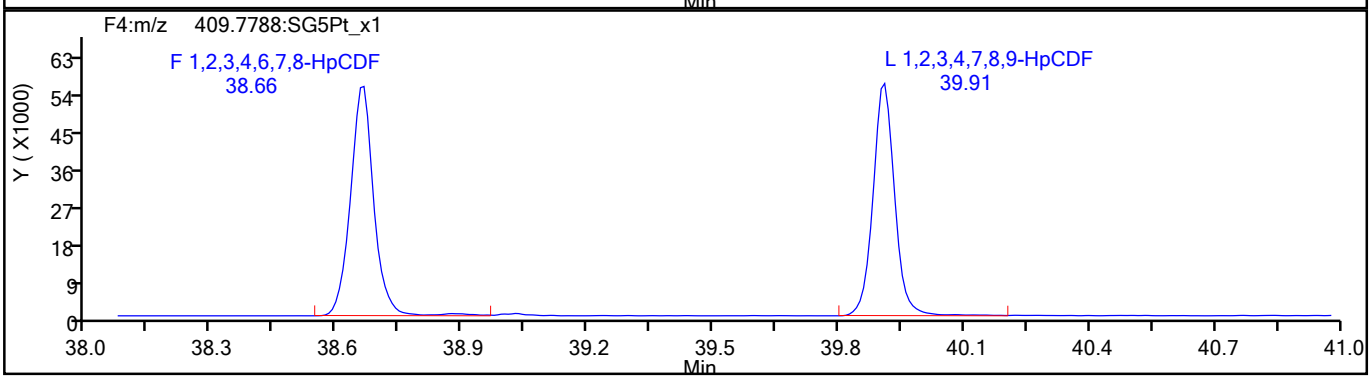

HpCDF Standards

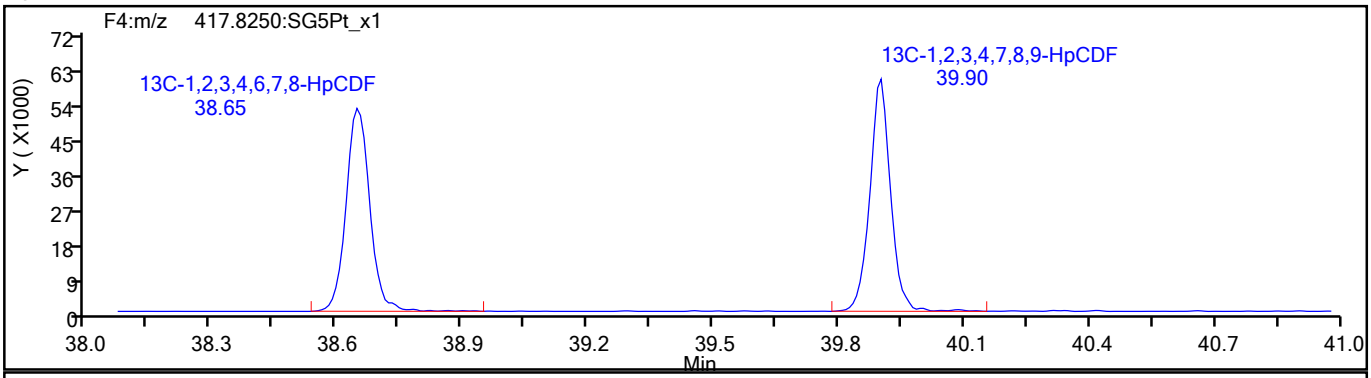

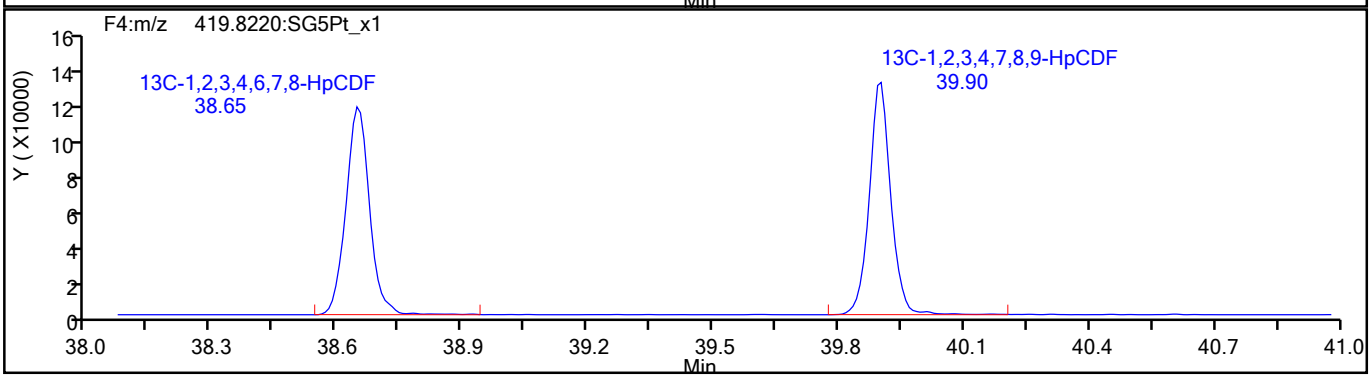

776833

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

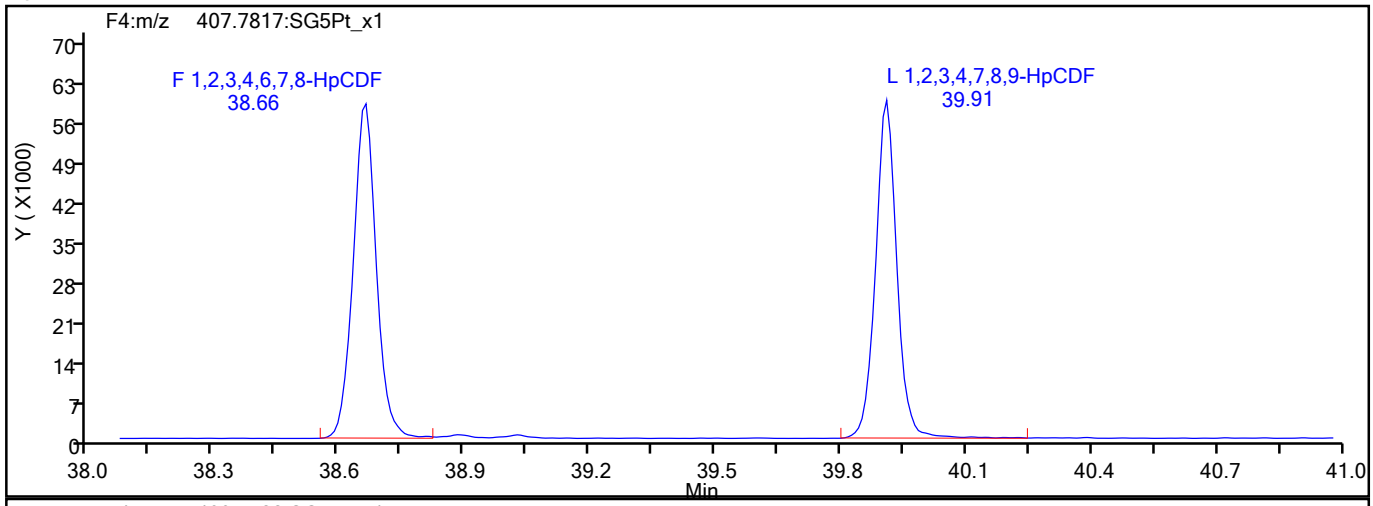

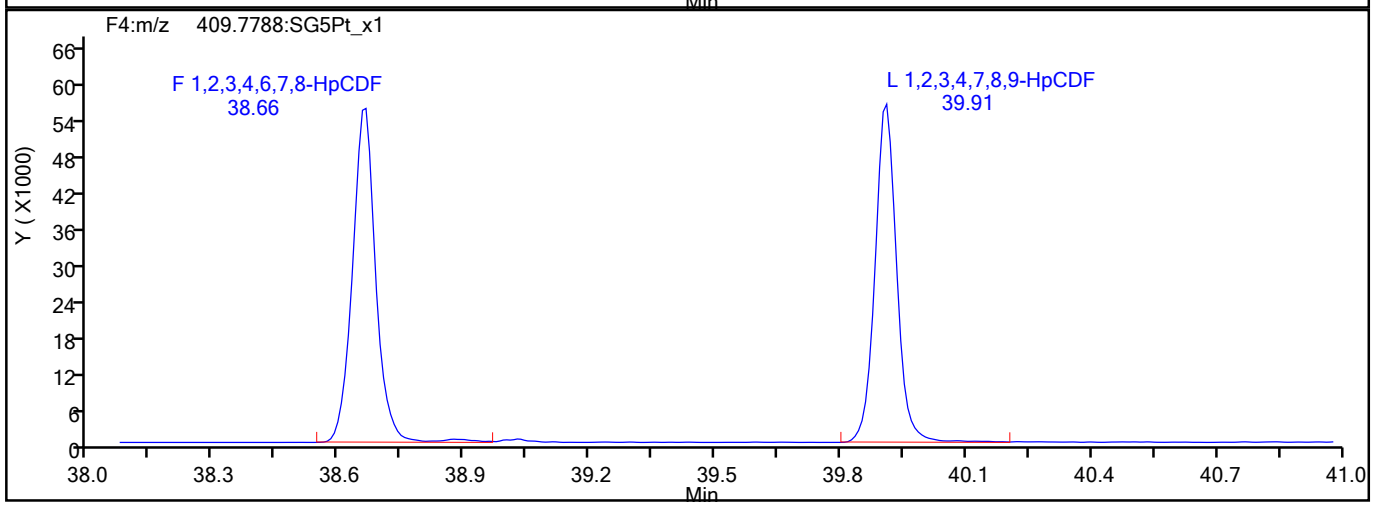

HpCDF Interference Mass

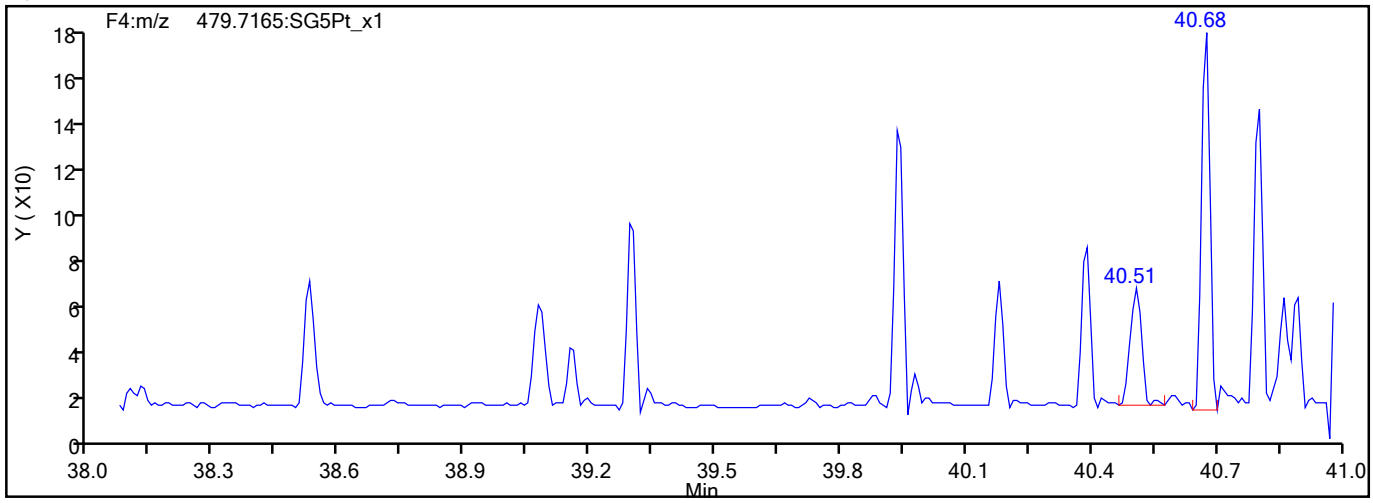

776834

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

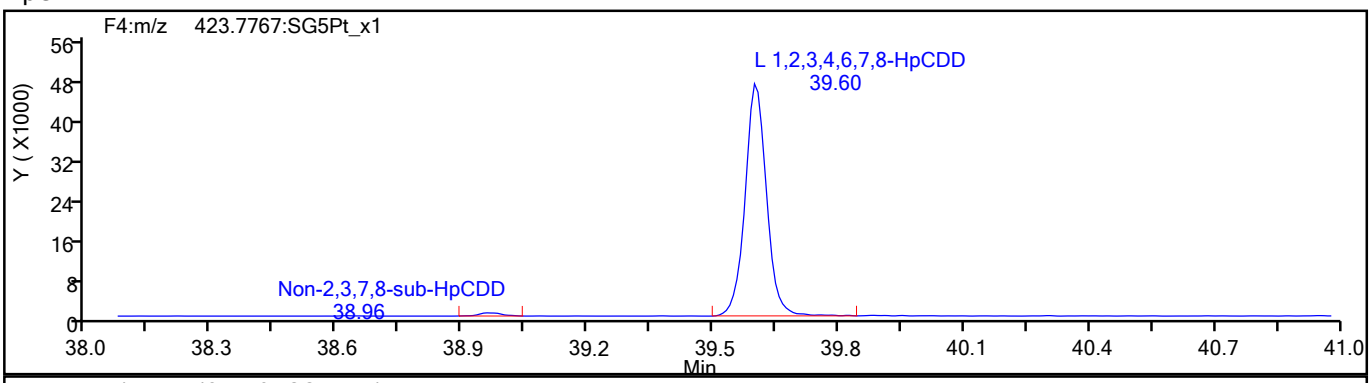

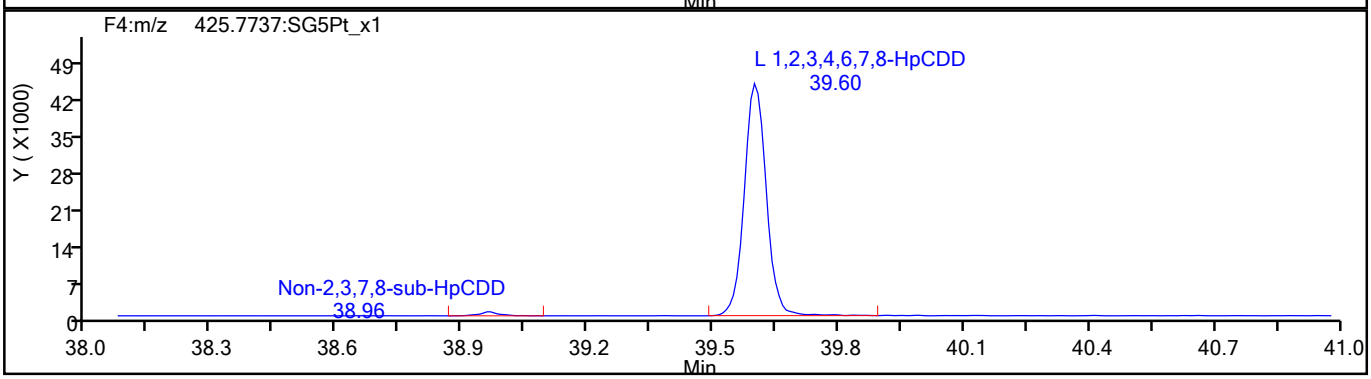

HpCDD Standards

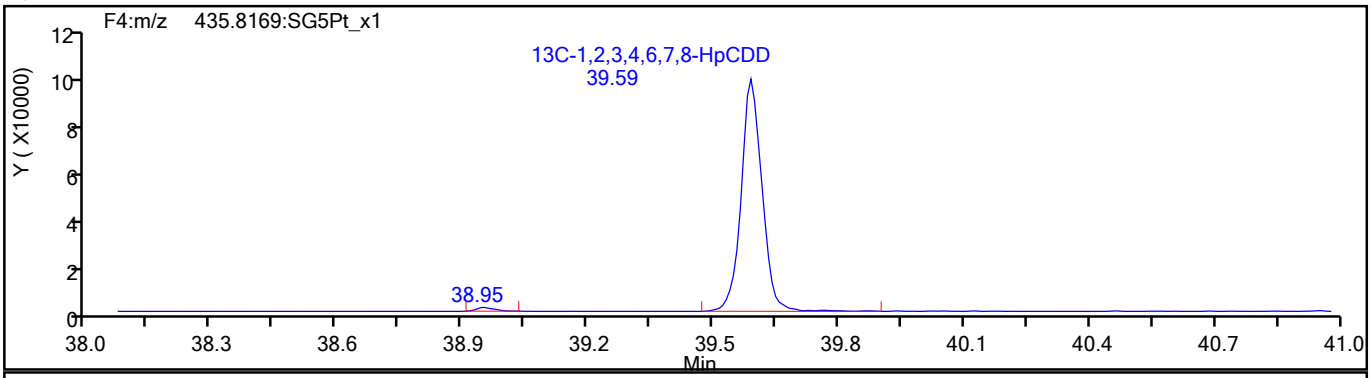

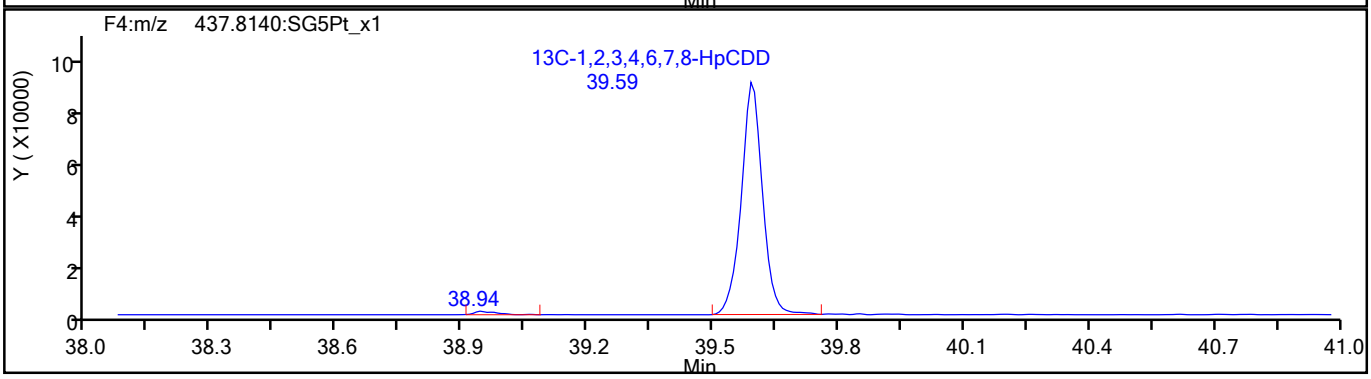

776835

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

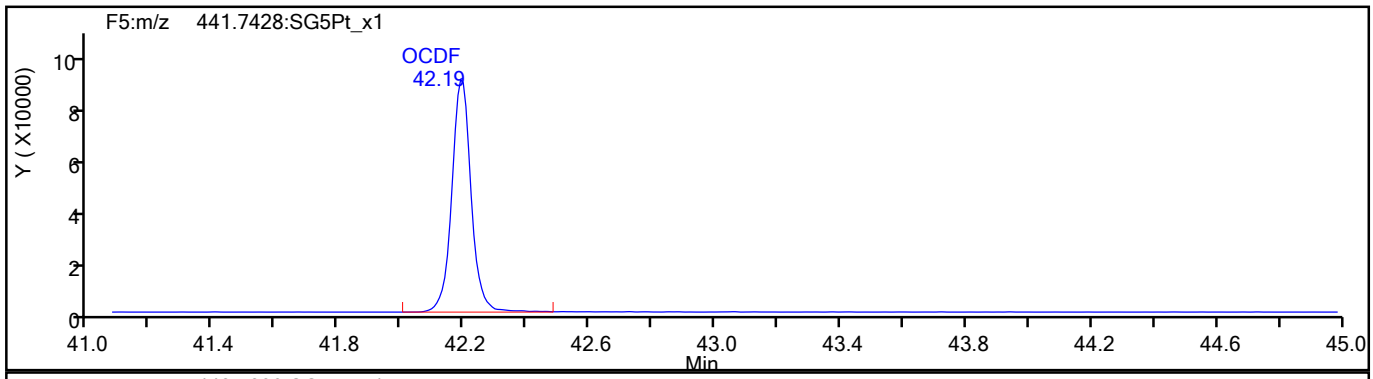

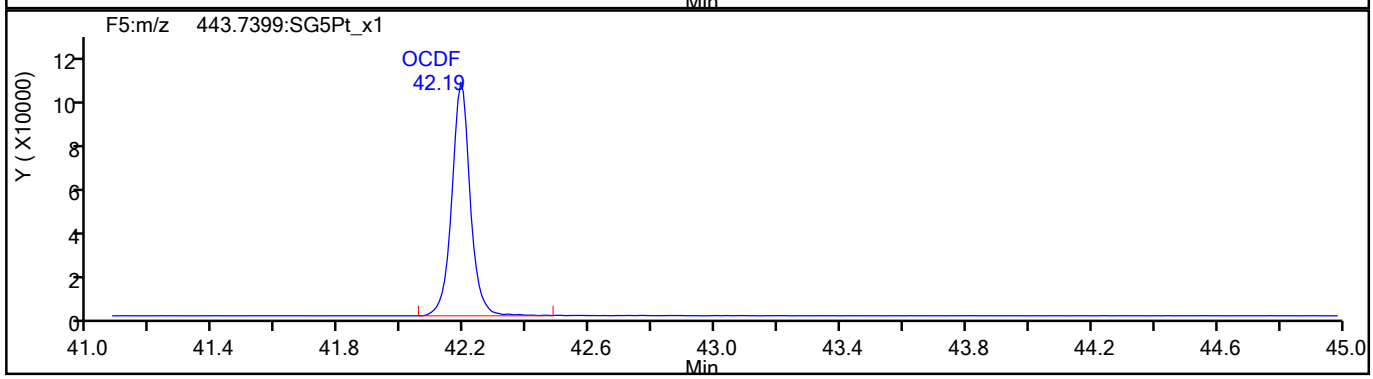

OCDF Standards

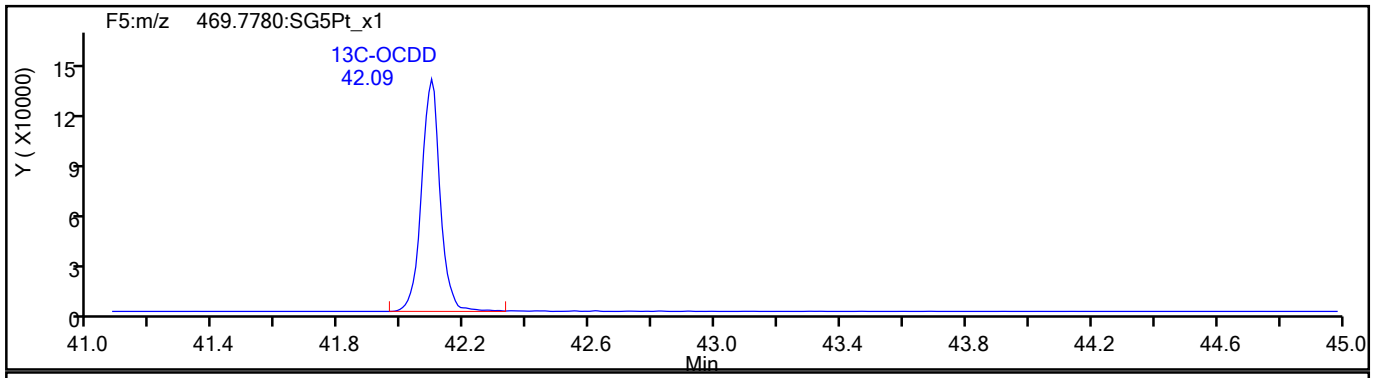

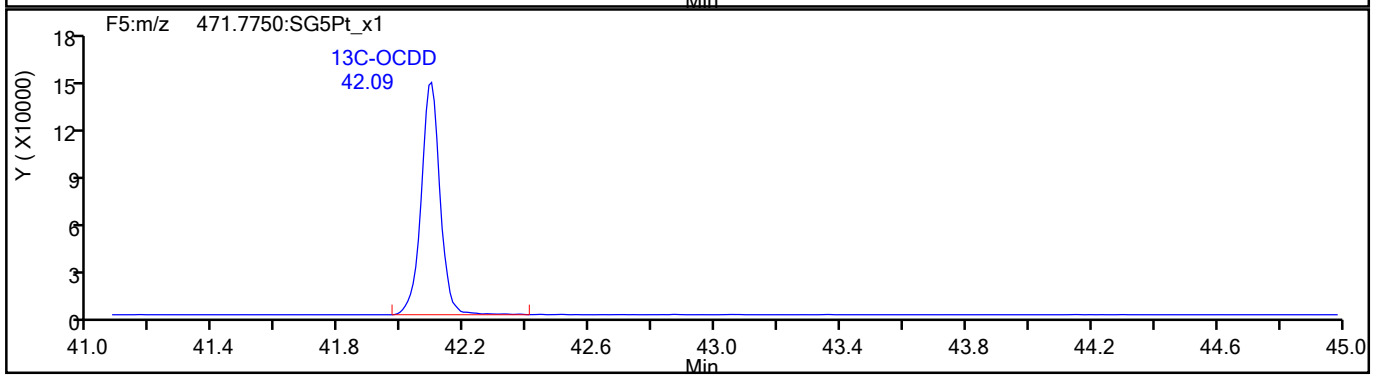

776836

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

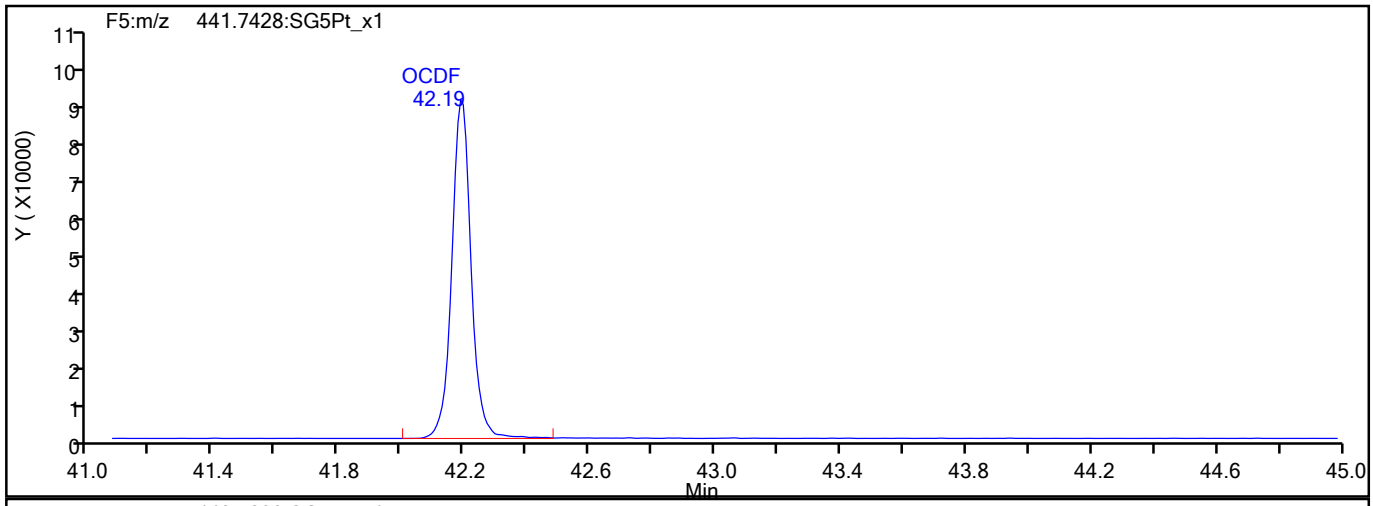

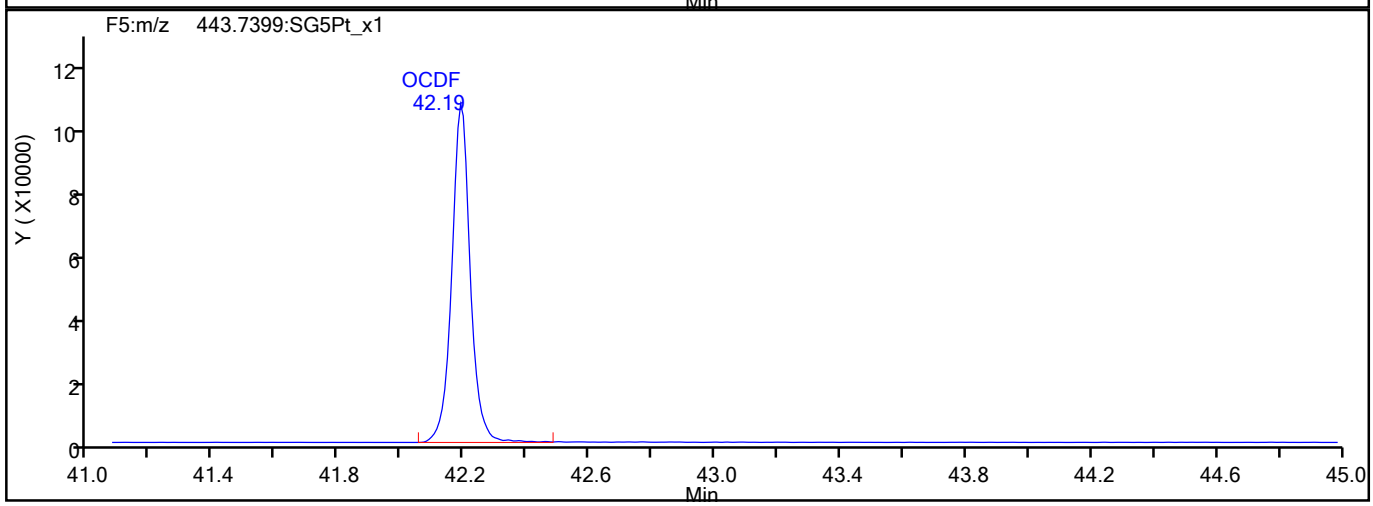

OCDF Interference Mass

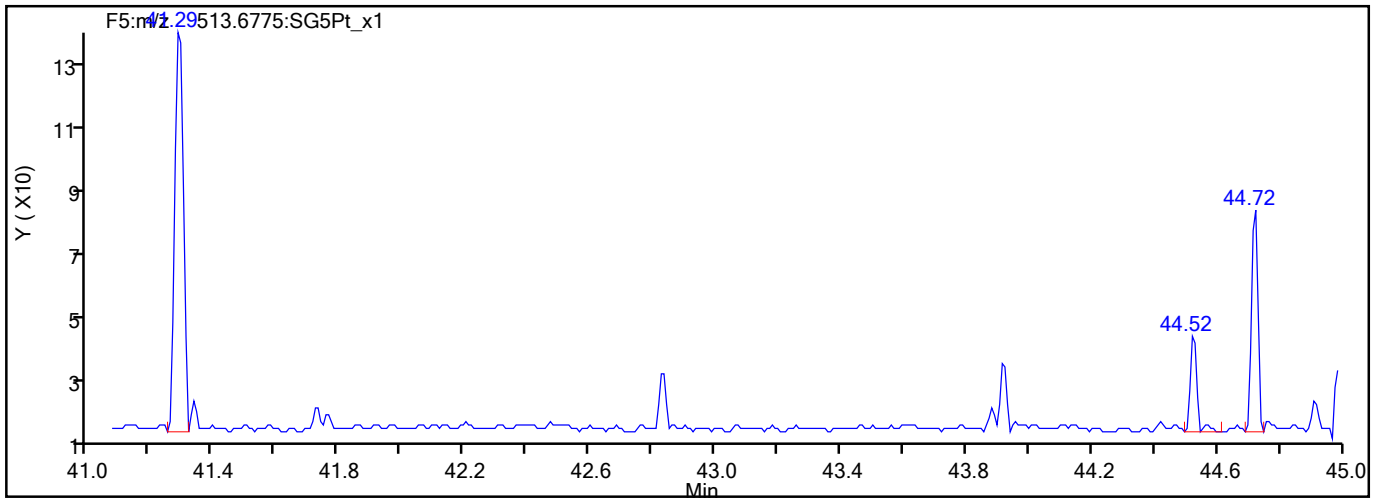

776837

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

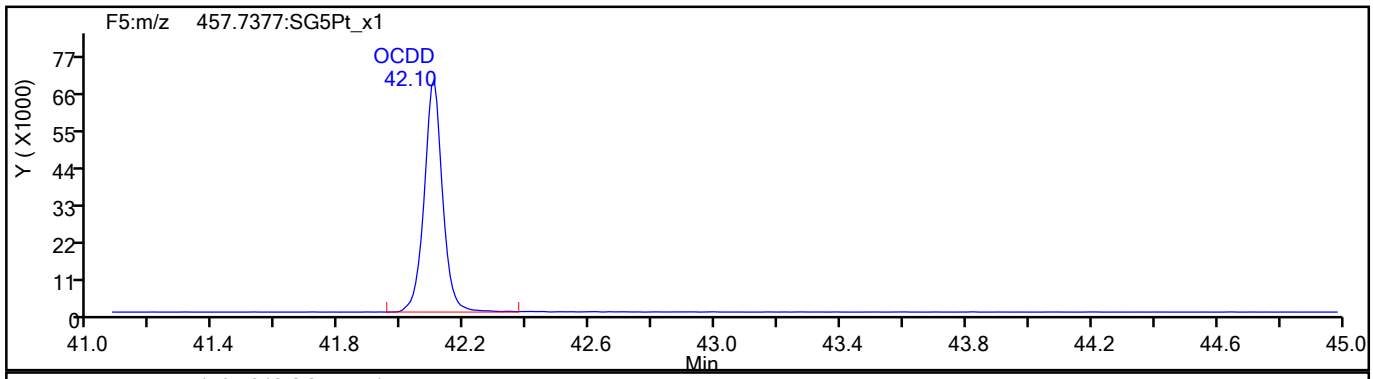

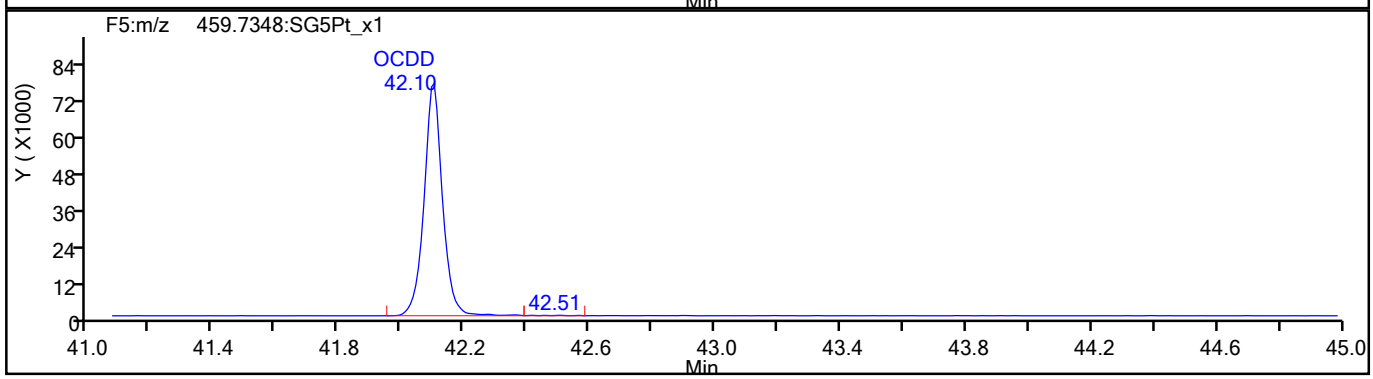

OCDD Standards

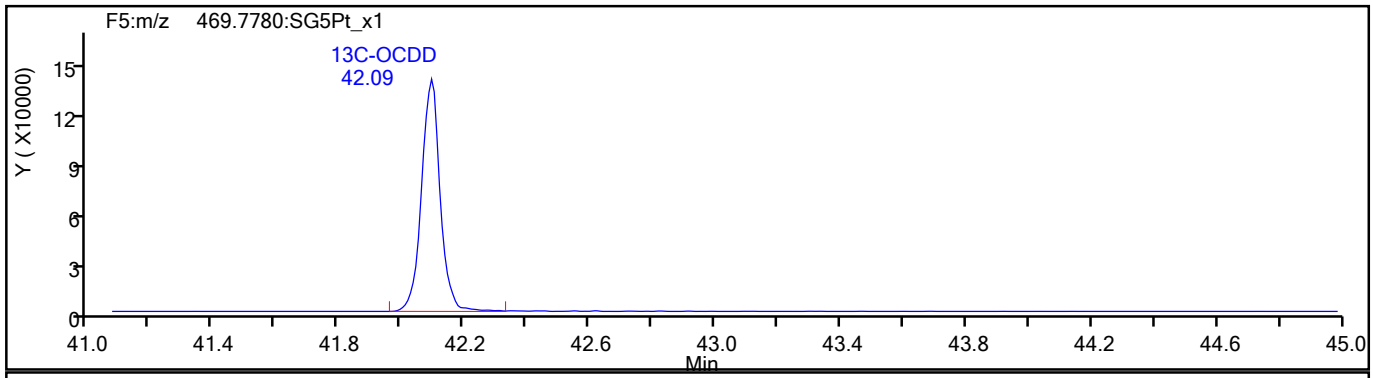

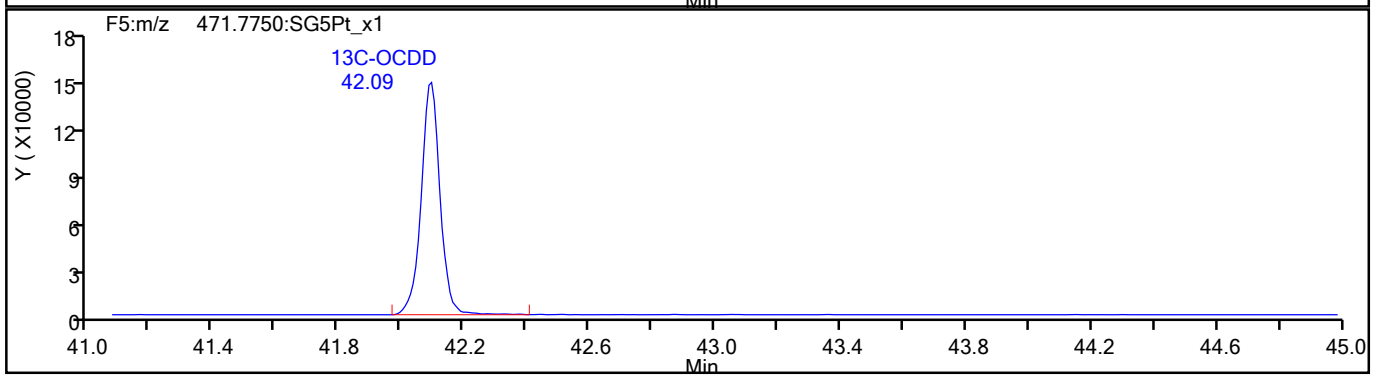

776838

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

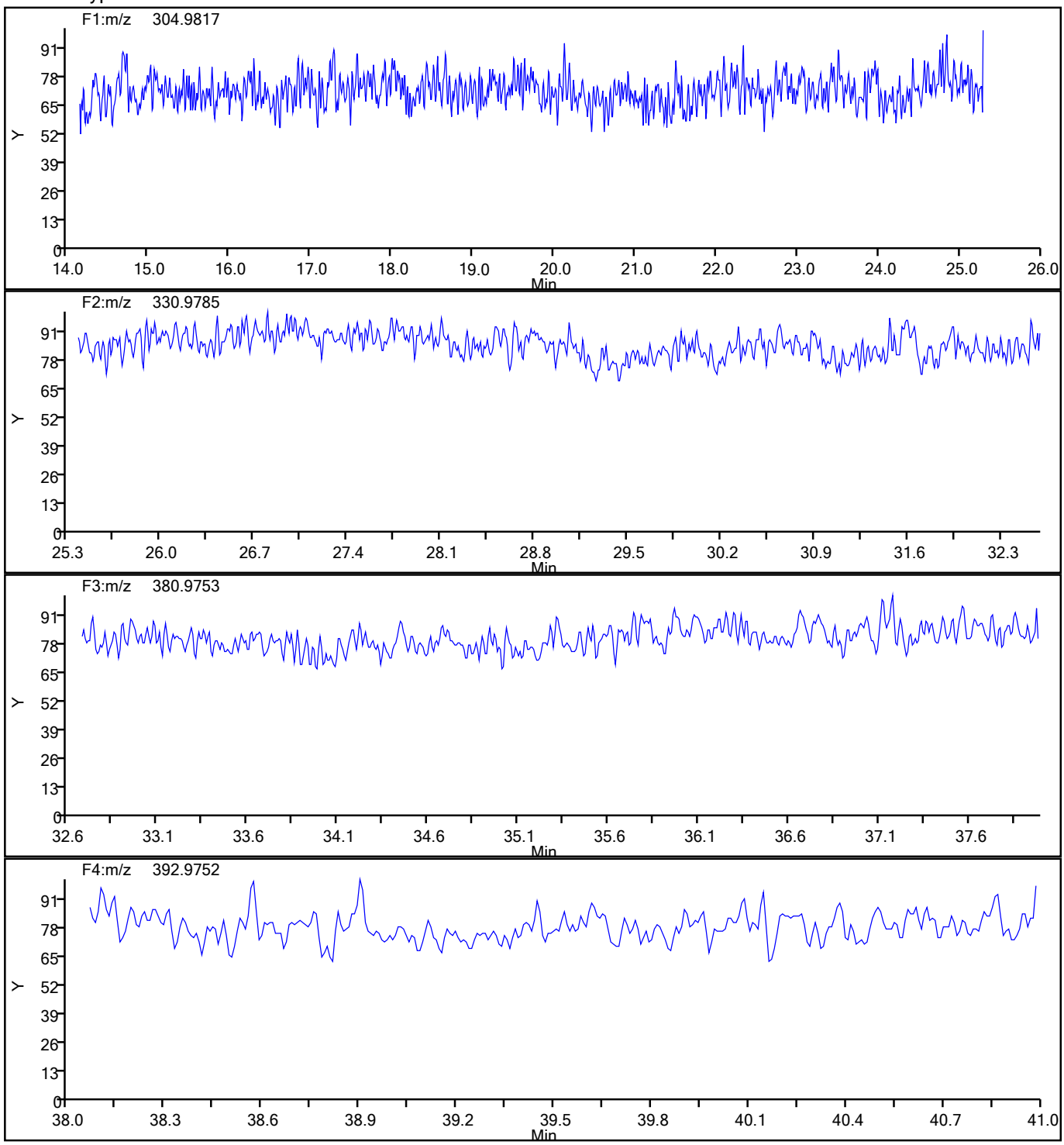

776839

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

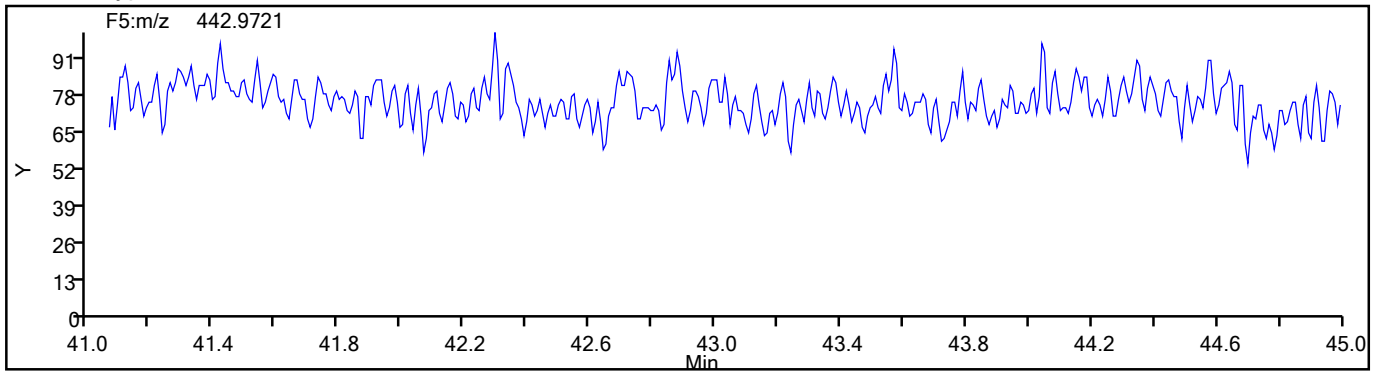

776840

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-517461/29 Calibration Date: 08/18/2021 13:48

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_32.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.039		9.61	10.0	96	84-120
2,3,7,8-TCDD	AveID	1.075	1.014		9.43	10.0	94	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.060		50.3	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9459		46.9	50.0	94	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.062		50.8	50.0	102	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.121		48.9	50.0	98	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.226		50.3	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.252		51.5	50.0	103	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9839		46.4	50.0	93	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9275		46.7	50.0	93	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.136		51.2	50.0	102	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.262		50.9	50.0	102	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.407		48.8	50.0	98	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.031		49.1	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.253		47.9	50.0	96	86-116
OCDD	AveID	1.062	1.015		95.6	100	96	79-126
OCDF	AveID	1.317	1.285		97.6	100	98	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.493		111	100	111	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	1.020		109	100	109	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.199		105	100	105	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.262		112	100	112	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7188		100	100	100	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.068		111	100	111	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.069		99.8	100	100	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.005		96.5	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7788		103	100	103	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.8427		98.1	100	98	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.020		105	100	105	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.8333		113	100	113	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7590		113	100	113	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.8873		129	100	129	77-129
13C-OCDD	Ave	0.5446	0.7162		263	200	132	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.104		11.0	10.0	110	79-127

31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A b.i. NU	12	1613B/Solid	D266	KSS	10.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	10.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	10.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	10.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A bad inj.	27	1613B/Solid		KSS	10.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	10.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	10.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	10.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A needs 20x	31 } reanalyze	1613B/Solid		KSS	10.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32 }	1613B/Solid		KSS	10.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	
47	17AU21DFS1_47	CCV CS-4 HRDXNL4_00100	CCV 081721C	2	Dioxin		KSS	1.000	
48	17AU21DFS1_48	WDM HRDXNCP_00044	WDM 081721C	1	Dioxin		KSS	1.000	
49	17AU21DFS1_49	SB Solvent Blank C14	SB 081721F	3	Dioxin		KSS	1.000	
50	17AU21DFS1_50	mb 320-513879/1-a	mb 320-513879/1-a	33	1613B/Solid	D267	KSS	10.000	g
51	17AU21DFS1_51	lcs 320-513879/2-a	lcs 320-513879/2-a	34	1613B/Solid		KSS	10.000	g
52	17AU21DFS1_52	320-76901-a-2-a	320-76901-a-2-a	35	1613B/Solid		KSS	10.000	g
53	17AU21DFS1_53	320-76901-a-2-b ms	320-76901-a-2-b ms	36	1613B/Solid		KSS	10.000	g
54	17AU21DFS1_54	320-76901-a-2-c msd	320-76901-a-2-c msd	37	1613B/Solid		KSS	10.000	g
55	17AU21DFS1_55	320-76769-a-4-b	320-76769-a-4-b	38	1613B/Solid		KSS	10.000	g
56	17AU21DFS1_56	320-76888-a-6-a	320-76888-a-6-a	39	1613B/Solid		KSS	10.000	g
57	17AU21DFS1_57	320-76888-a-7-a	320-76888-a-7-a	40	1613B/Solid		KSS	10.000	g
58	17AU21DFS1_58	320-76888-a-8-a	320-76888-a-8-a	41	1613B/Solid		KSS	10.000	g
59	17AU21DFS1_59	320-76888-a-9-a	320-76888-a-9-a	42	1613B/Solid		KSS	10.000	g
60	17AU21DFS1_60	SB Solvent Blank C14	SB 081721G	3	Dioxin		KSS	1.000	
61	17AU21DFS1_61	Resolution Check	RC 081721D	46			KSS	1.000	

LOGFILE CHECKED)
DB 8/18/21

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

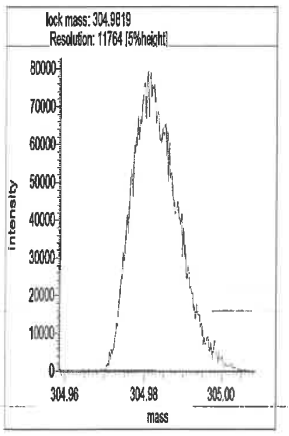

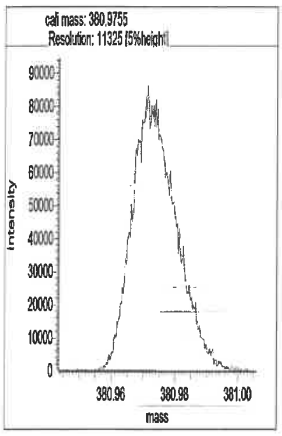

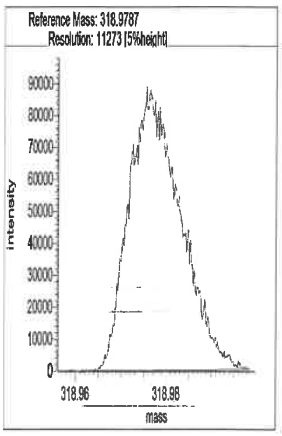

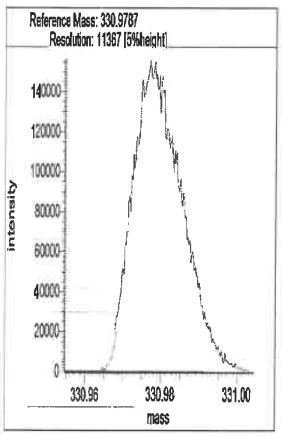

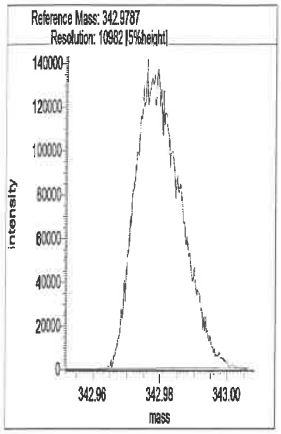

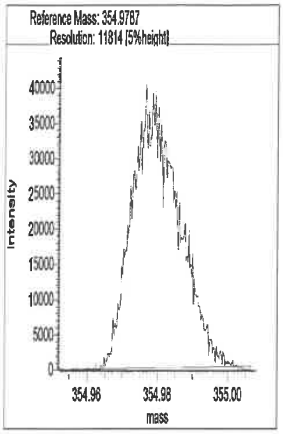

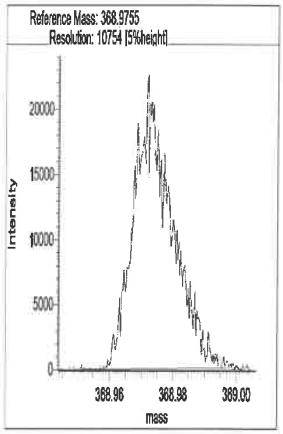

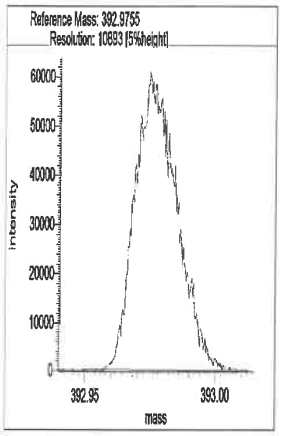

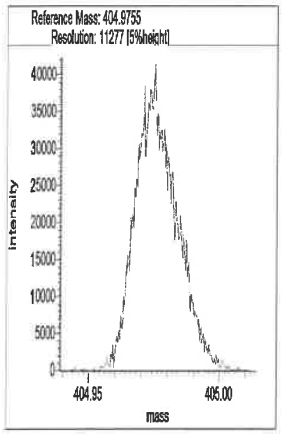

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

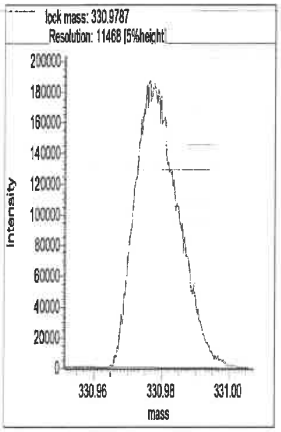

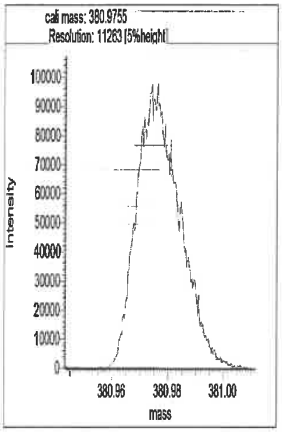

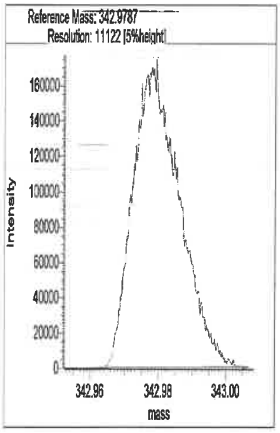

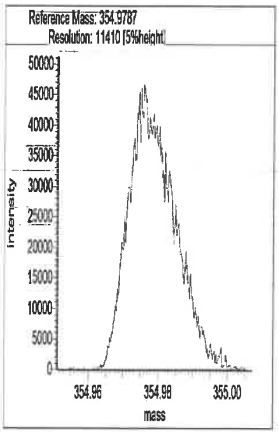

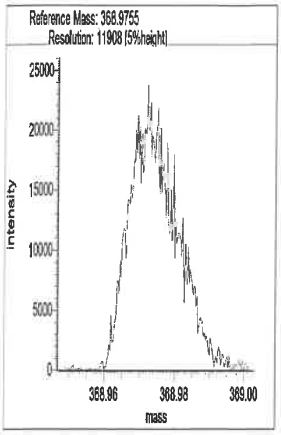

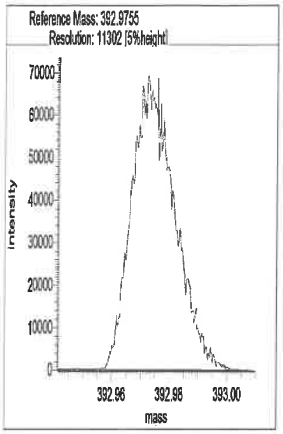

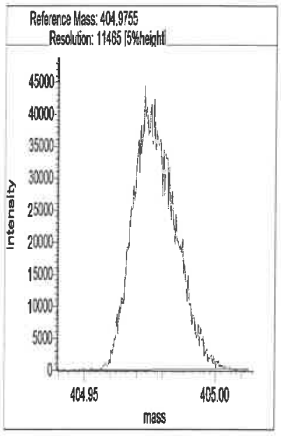

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

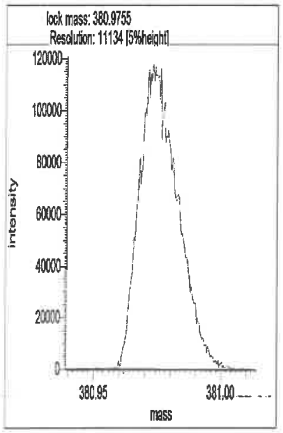

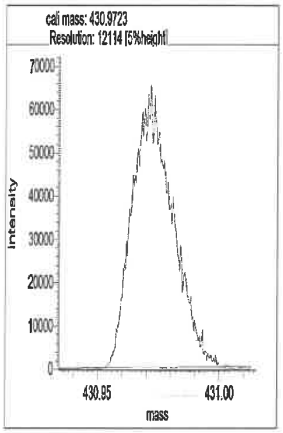

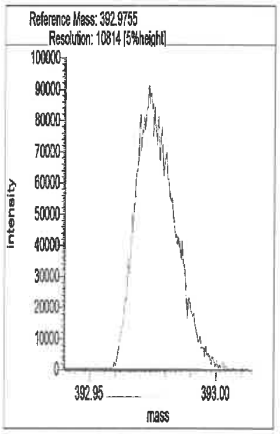

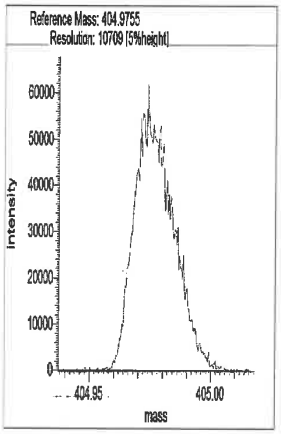

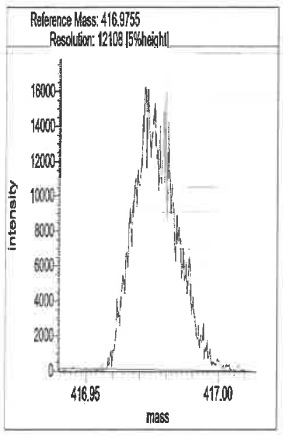

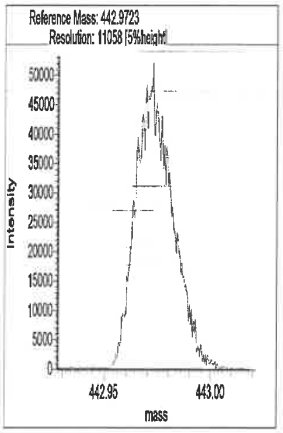

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

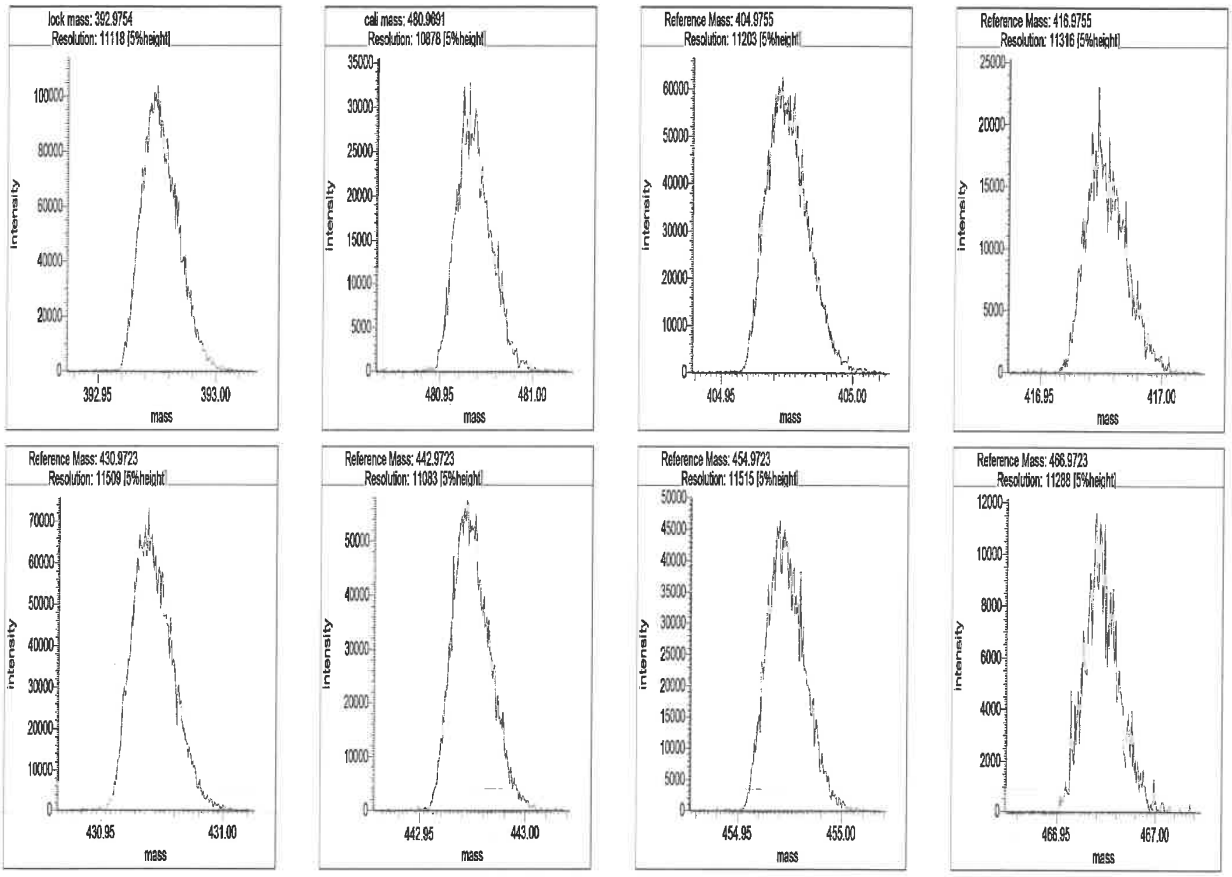

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

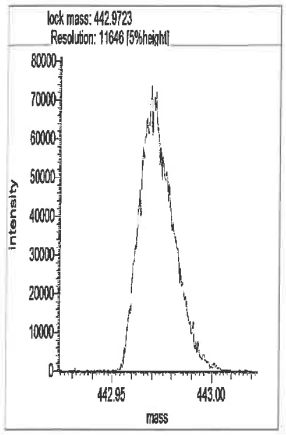
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

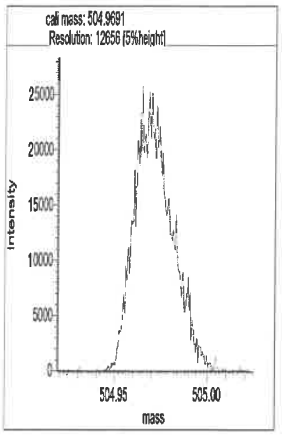
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

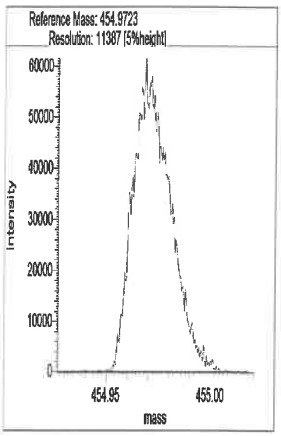
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

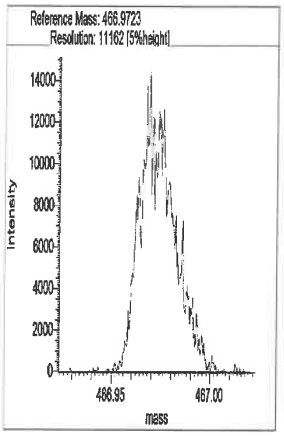
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

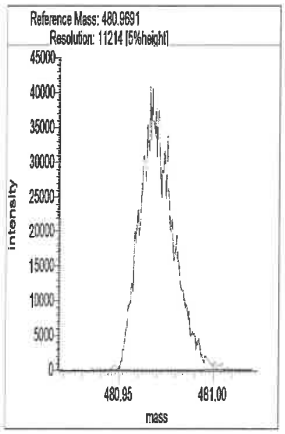
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

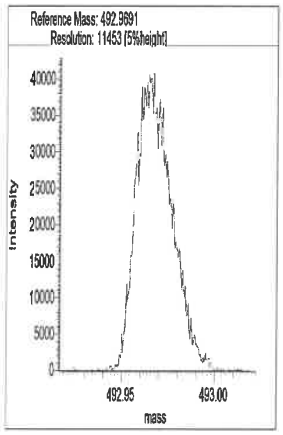
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 01:12
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10755 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10064 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11004 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10862 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10493 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11020 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10113 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10231 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9724 [5%height] ✓ ok 8/19/21

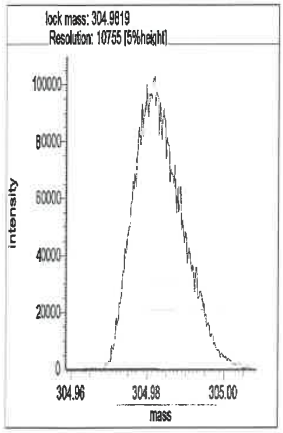

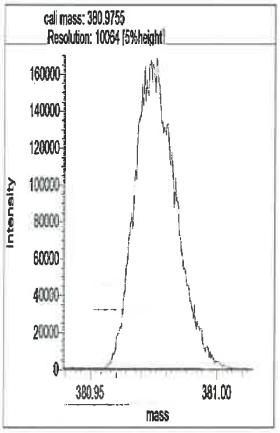

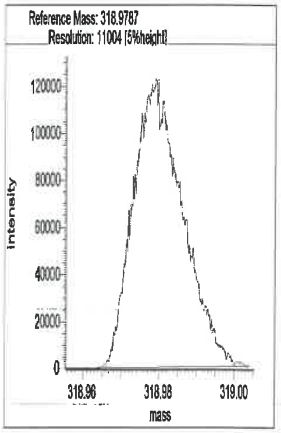

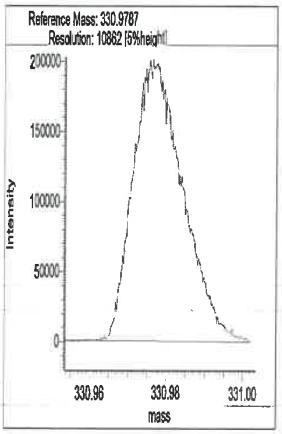

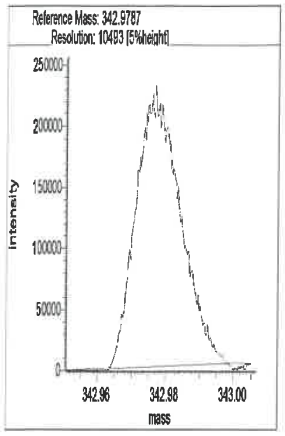

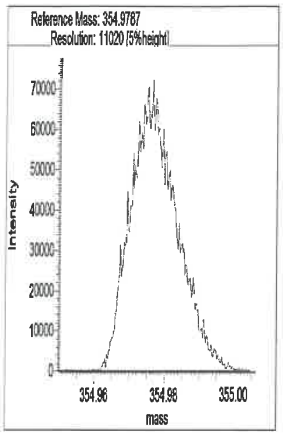

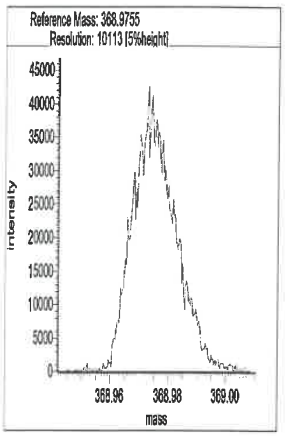

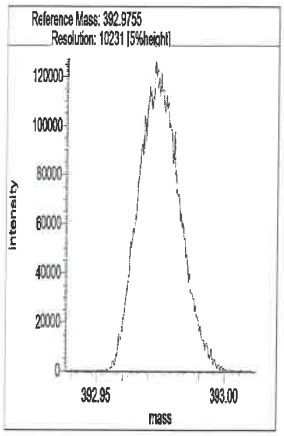

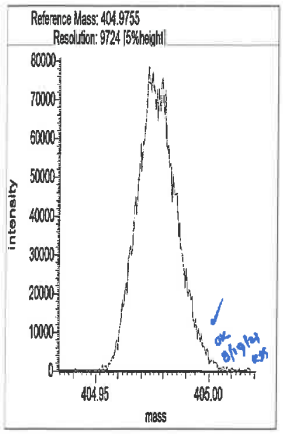

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10868 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10796 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10893 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11154 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10747 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10242 [5%height]

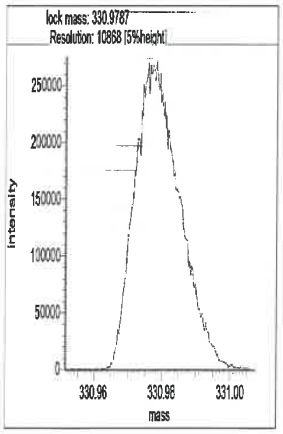

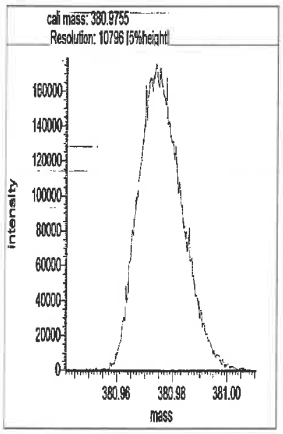

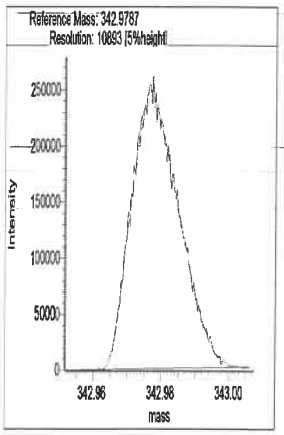

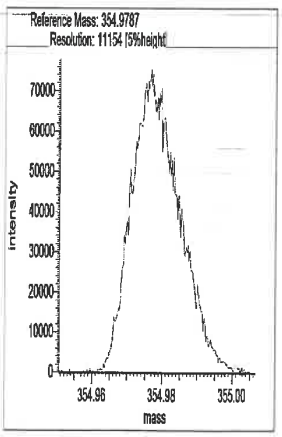

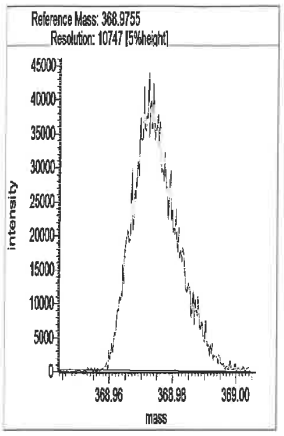

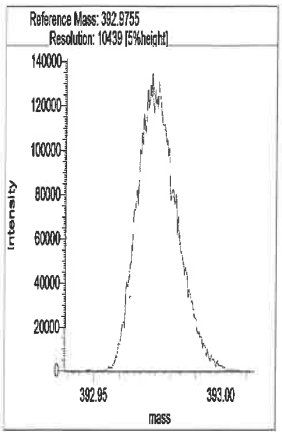

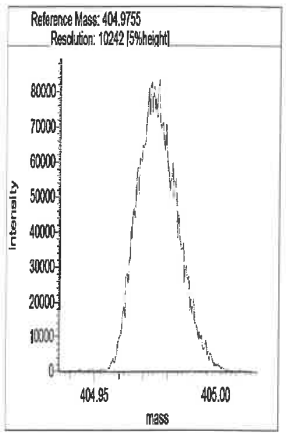

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11012 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10577 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11026 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10658 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11077 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10816 [5%height]

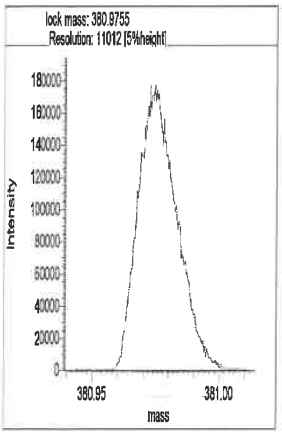

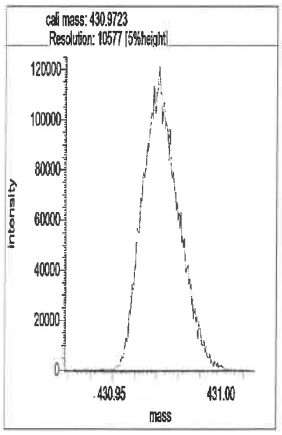

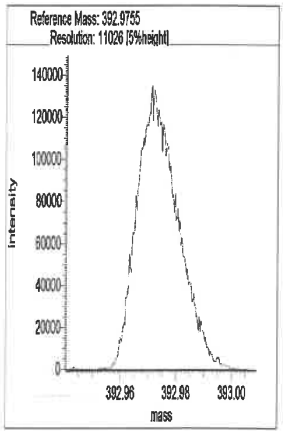

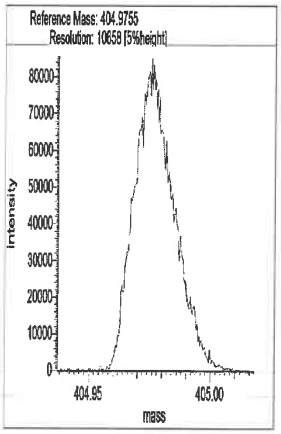

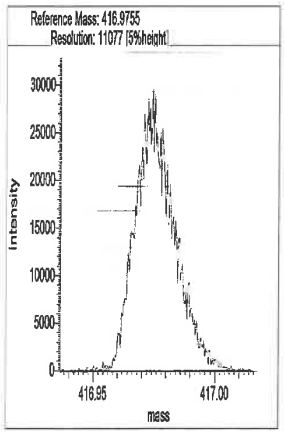

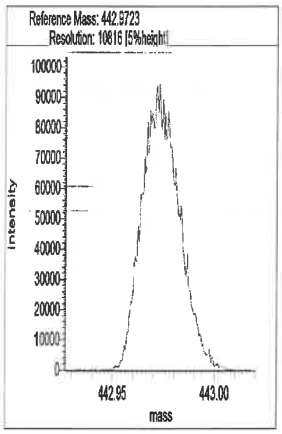

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11599 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10409 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11028 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11067 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10523 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10883 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10838 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11180 [5%height]

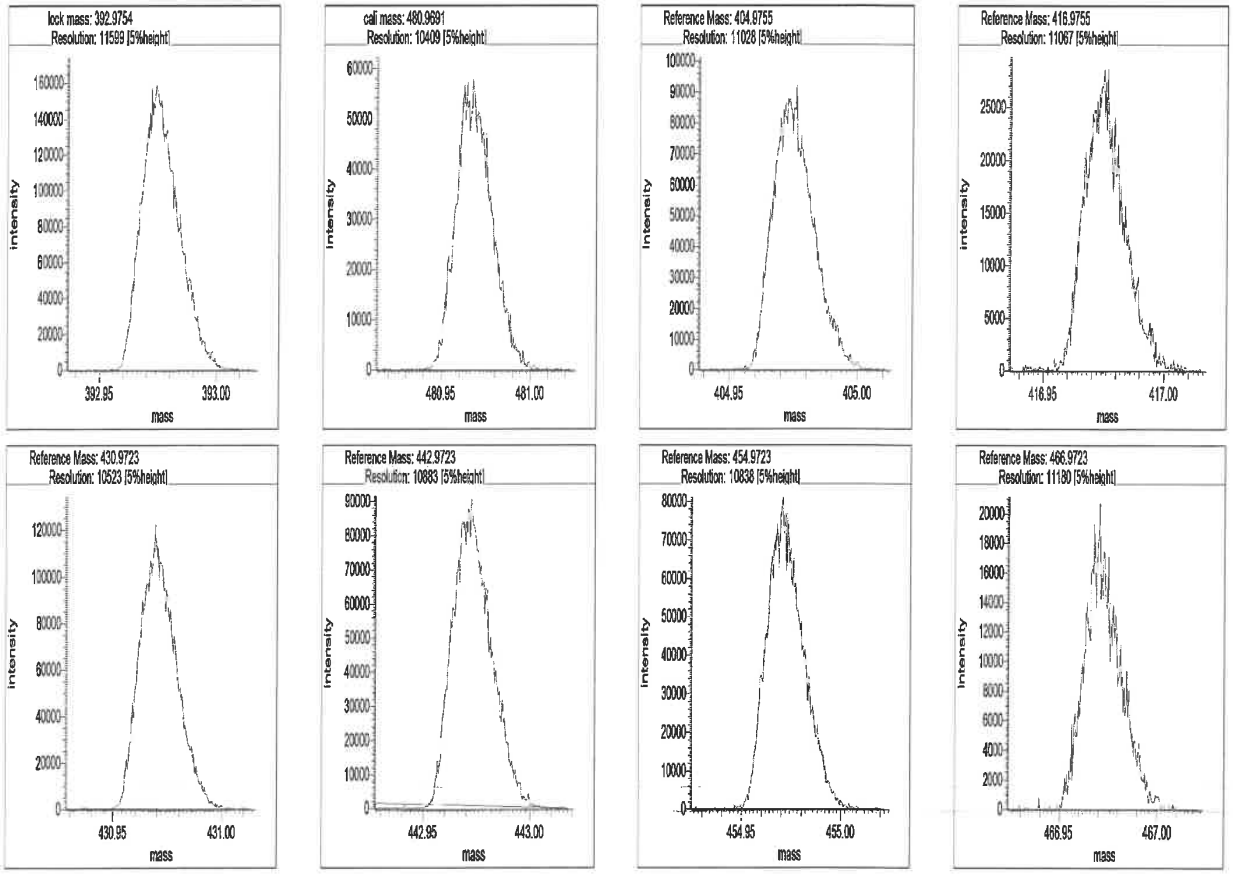

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11216 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10772 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11002 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11259 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10778 [5%height]

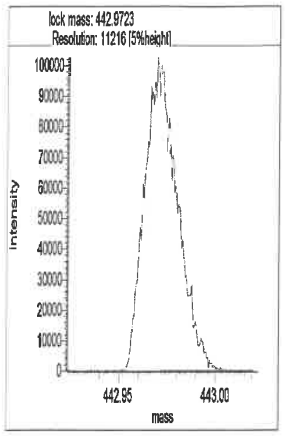
lock mass: 442.9723
Resolution: 11216 [5%height]
Intensity
mass

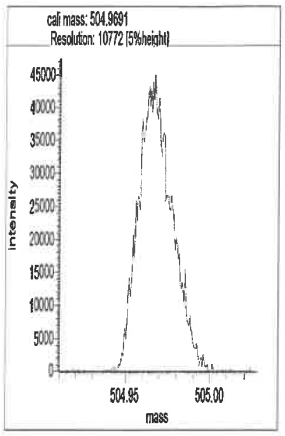
cali mass: 504.9691
Resolution: 10772 [5%height]
Intensity
mass

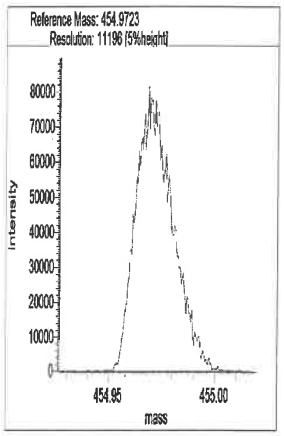
Reference Mass: 454.9723
Resolution: 11196 [5%height]
Intensity
mass

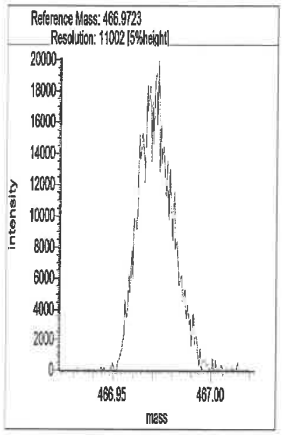
Reference Mass: 466.9723
Resolution: 11002 [5%height]
Intensity
mass

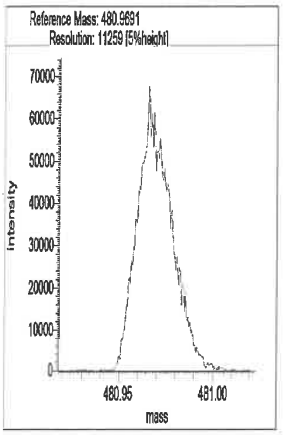
Reference Mass: 480.9691
Resolution: 11259 [5%height]
Intensity
mass

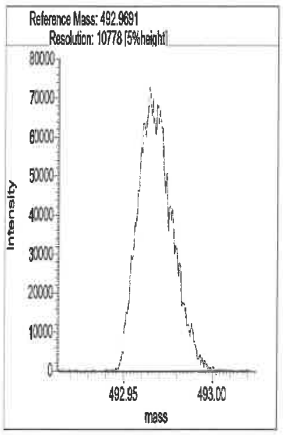
Reference Mass: 492.9691
Resolution: 10778 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 12:47
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11862 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10668 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 11408 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 11603 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11057 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11275 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11232 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10101 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9688 [5%height] ✓ 8/19/21 KCF

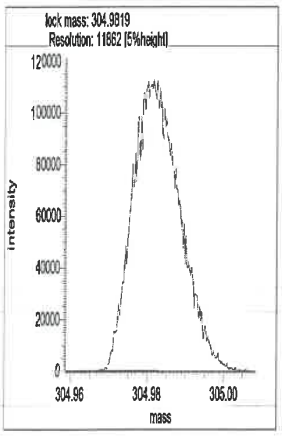

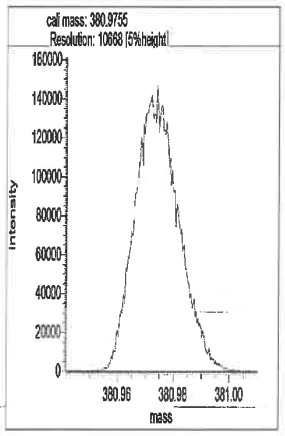

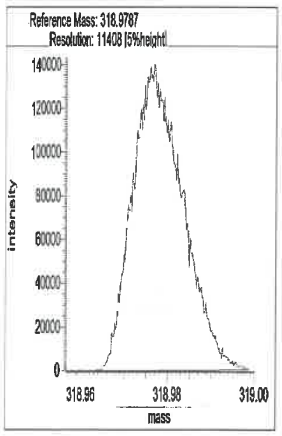

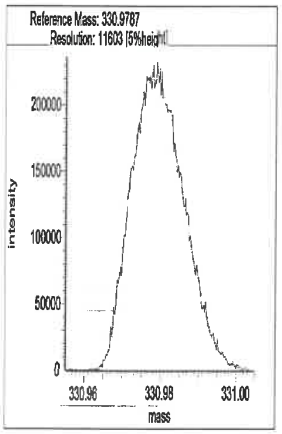

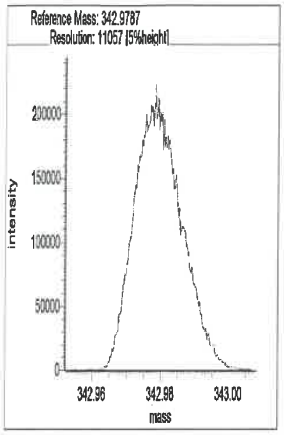

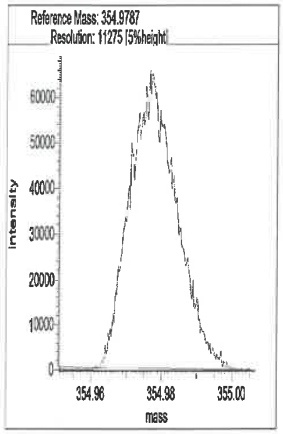

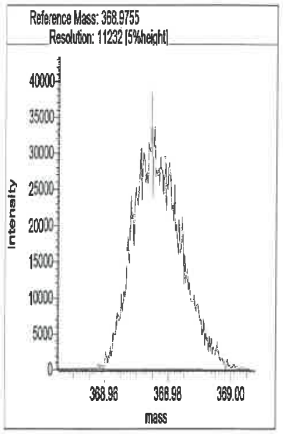

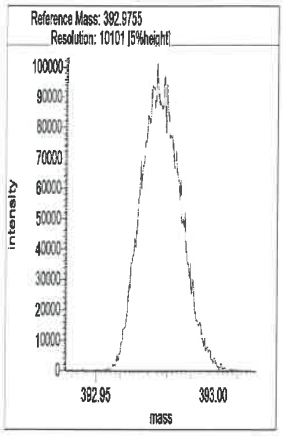

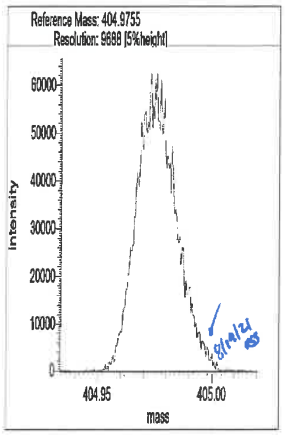

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11409 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11096 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11275 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10877 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10816 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11177 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10770 [5%height]

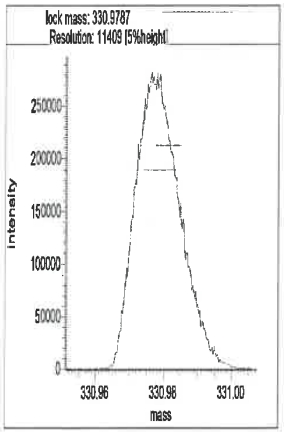

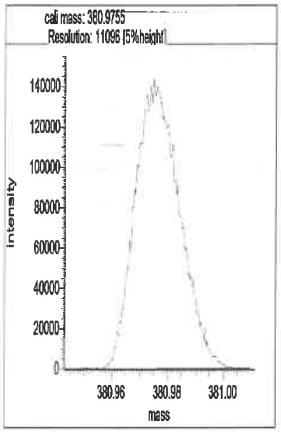

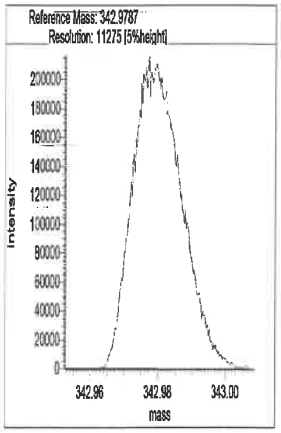

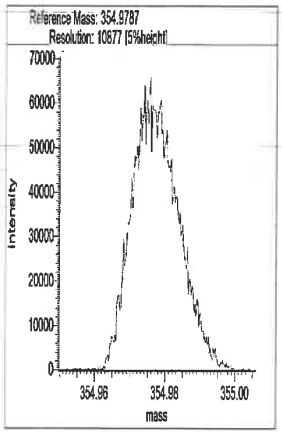

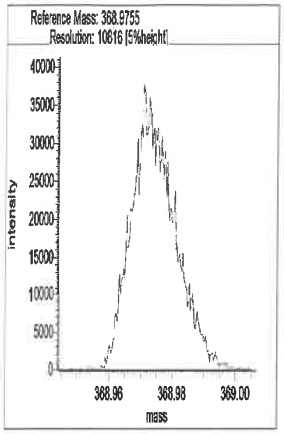

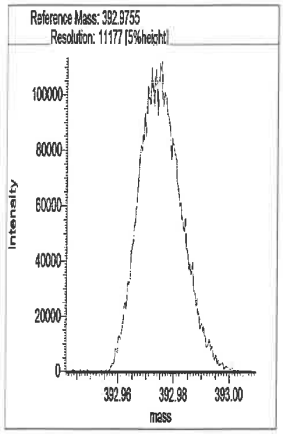

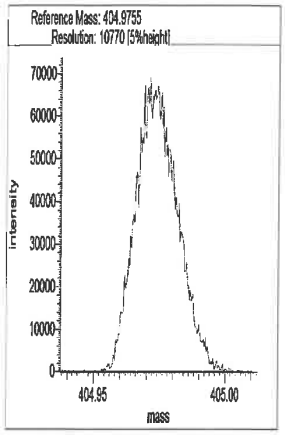

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11068 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11154 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11414 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11295 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10788 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10614 [5%height]

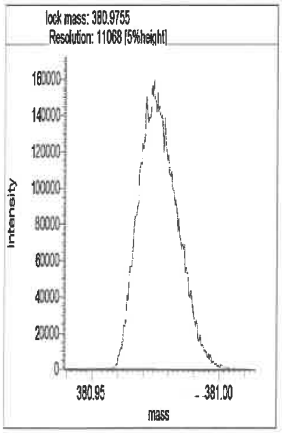

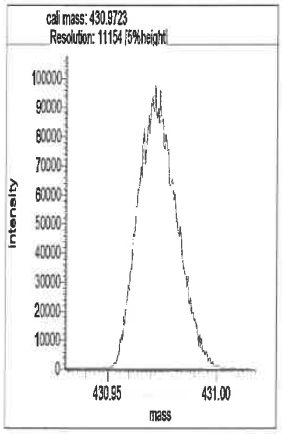

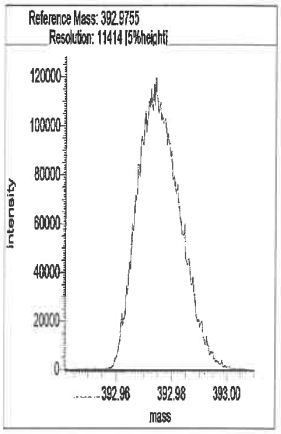

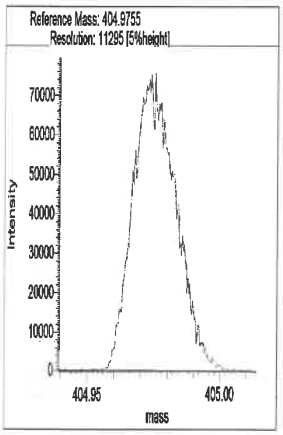

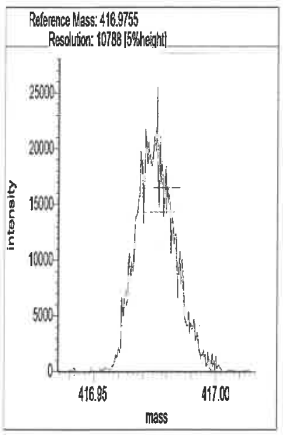

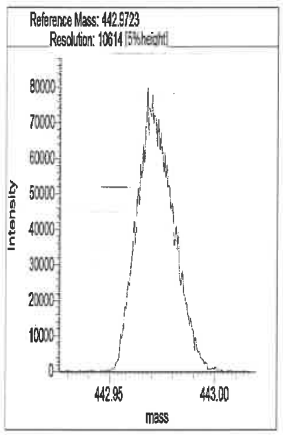

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11418 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11823 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11599 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11335 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10811 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11056 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10732 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10827 [5%height]

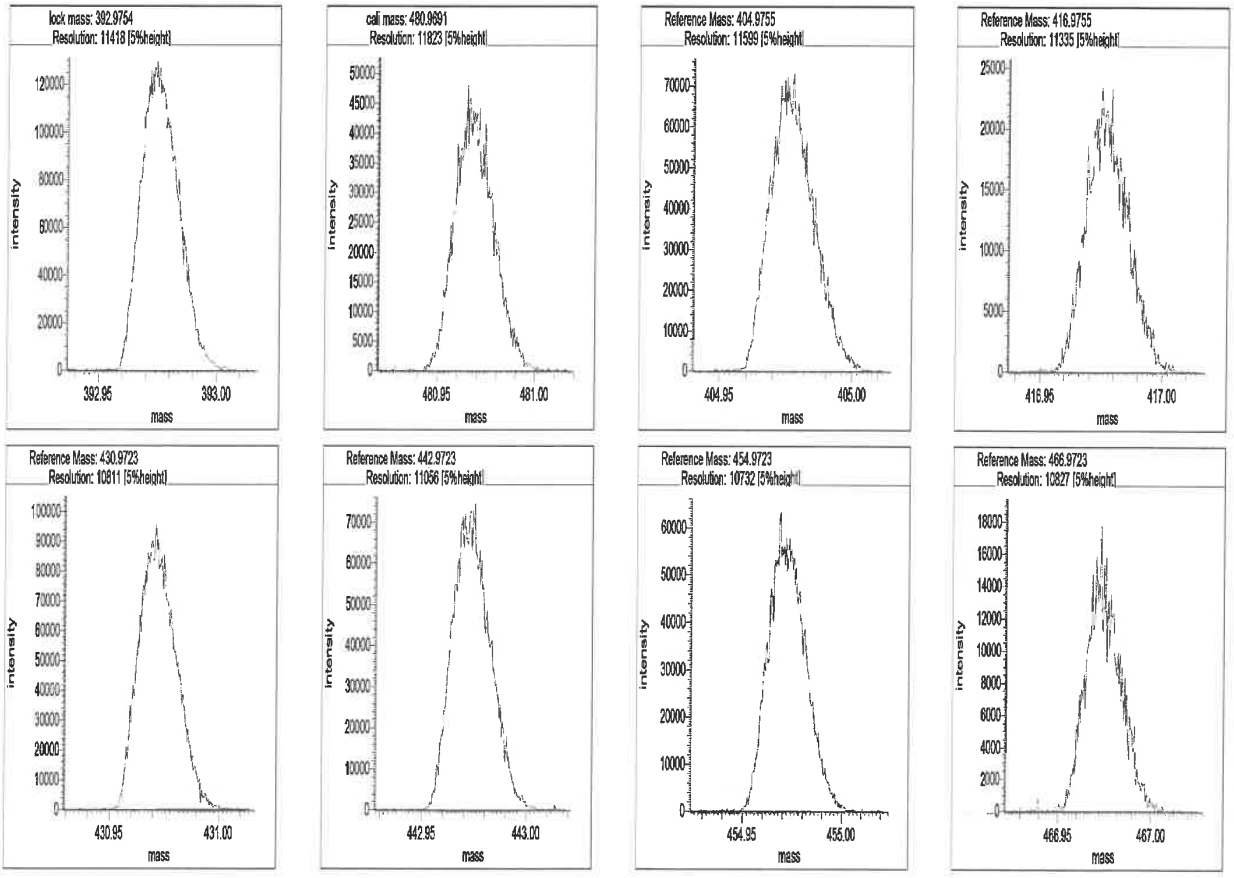

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11579 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11377 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11119 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12204 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10698 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10928 [5%height]

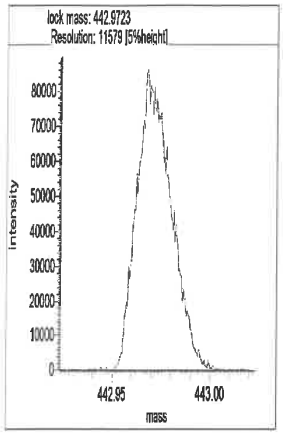
lock mass: 442.9723
Resolution: 11579 [5%height]
Intensity
mass

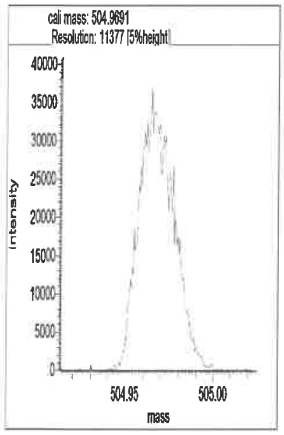
cali mass: 504.9691
Resolution: 11377 [5%height]
Intensity
mass

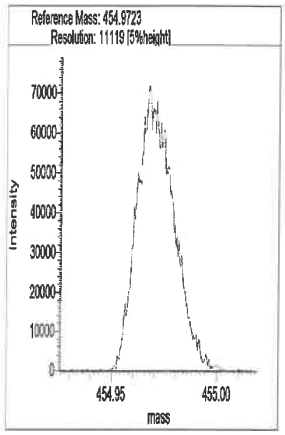
Reference Mass: 454.9723
Resolution: 11119 [5%height]
Intensity
mass

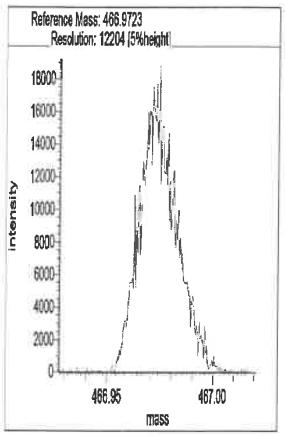
Reference Mass: 466.9723
Resolution: 12204 [5%height]
Intensity
mass

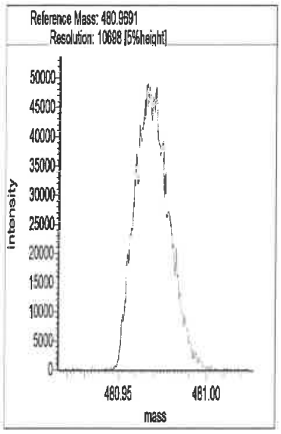
Reference Mass: 480.9691
Resolution: 10628 [5%height]
Intensity
mass

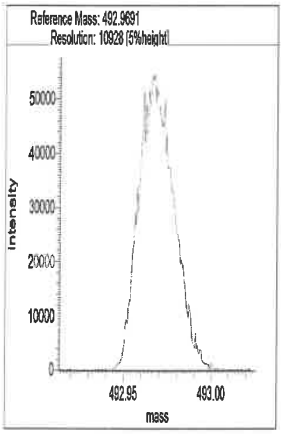
Reference Mass: 492.9691
Resolution: 10928 [5%height]
Intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 13:48:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:36 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 15:08:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.444	583584	0.84	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.480	871422	0.81	1.3459	110.9	110.9	0.2490	0.2490	111	
2,3,7,8-TCDF	20.523	90505	0.83	1.0802	9.615	9.615	0.0222	0.0222	96.15	M
A Non-2,3,7,8-sub-TCDF	19.878	1359	0.77	1.0802	0.2814	0.1444	0.0222	0.0337	0.00	RQM
S Total TCDF					9.896	9.759	0.0222	0.0222		RQ
D 13C-2,3,7,8-TCDD	21.831	595187	0.83	0.9317	109.5	109.5	0.2082	0.2082	109	
$ 37Cl4-2,3,7,8-TCDD	21.857	64449		1.0083	11.0	11.0	0.0117	0.0117	110	
2,3,7,8-TCDD	21.882	60333	0.89	1.0753	9.427	9.427	0.0245	0.0245	94.27	M
A Non-2,3,7,8-sub-TCDD	20.707	208	0.77	1.0753	0.0619	0.0325	0.0245	0.0245	0.00	RQM
S Total TCDD					9.488	9.459	0.0245	0.0245		RQ
D 13C-1,2,3,7,8-PeCDF	27.304	699918	1.55	1.1405	105.2	105.2	0.2134	0.2134	105	
1,2,3,7,8-PeCDF	27.330	370990	1.59	1.0543	50.3	50.3	0.1259	0.1259	101	
D 13C-2,3,4,7,8-PeCDF	28.820	736640	1.63	1.1253	112.2	112.2	0.2163	0.2163	112	
2,3,4,7,8-PeCDF	28.845	348407	1.57	1.0079	46.9	46.9	0.1301	0.1301	93.86	
A F1 PeCDFs	24.648	81	1.55	1.0311	0.0600	0.0109	0.004669	0.008777	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.125	4158	1.55	1.0311	0.6367	0.5614	0.1279	0.5614	0.00	RQ
S Total PeCDF					97.9	97.8	0.1280	0.1280		RQ
D 13C-1,2,3,7,8-PeCDD	29.645	419476	1.56	0.7165	100.3	100.3	0.1428	0.1428	100	
1,2,3,7,8-PeCDD	29.670	222798	1.53	1.0465	50.8	50.8	0.0611	0.0611	102	
A Non-2,3,7,8-sub-PeCDD	28.489						0.0611	0.0611		
S Total PeCDD					50.8	50.8	0.0611	0.0611		
D 13C-1,2,3,4,7,8-HxCDF	34.955	674175	0.54	0.9648	110.7	110.7	0.3609	0.3609	111	
1,2,3,4,7,8-HxCDF	34.972	377904	1.23	1.1474	48.9	48.9	0.1894	0.1894	97.71	
D 13C-1,2,3,6,7,8-HxCDF	35.123	674580	0.52	1.0708	99.8	99.8	0.3252	0.3252	99.80	
1,2,3,6,7,8-HxCDF	35.132	413479	1.26	1.2178	50.3	50.3	0.1934	0.1934	101	
D 13C-2,3,4,6,7,8-HxCDF	35.932	634377	0.53	1.0413	96.5	96.5	0.3344	0.3344	96.51	
2,3,4,6,7,8-HxCDF	35.949	397022	1.26	1.2145	51.5	51.5	0.1754	0.1754	103	
D 13C-1,2,3,7,8,9-HxCDF	36.816	643754	0.55	0.9731	104.8	104.8	0.3579	0.3579	105	
1,2,3,7,8,9-HxCDF	36.833	406240	1.28	1.2401	50.9	50.9	0.1567	0.1567	102	
A Non-2,3,7,8-sub-HxCDF	35.028						0.1777	0.1777		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					201.6	201.6	0.1788	0.1788		
* 13C-1,2,3,7,8,9-HxCDD	36.623	631247	1.29	1.8E+04	100.0	100.0				M
D 13C-1,2,3,4,7,8-HxCDD	36.134	491591	1.35	0.7587	102.6	102.6	0.2264	0.2264	103	
1,2,3,4,7,8-HxCDD	36.159	241838	1.29	1.0608	46.4	46.4	0.0904	0.0904	92.75	
D 13C-1,2,3,6,7,8-HxCDD	36.260	531922	1.23	0.8593	98.1	98.1	0.1999	0.1999	98.07	
1,2,3,6,7,8-HxCDD	36.269	246666	1.18	0.9933	46.7	46.7	0.0900	0.0900	93.37	
1,2,3,7,8,9-HxCDD	36.631	290723	1.25	1.1094	51.2	51.2	0.0834	0.0834	102	
A Non-2,3,7,8-sub-HxCDD	35.394						0.0878	0.0878		
S Total HxCDD					144.3	144.3	0.0880	0.0880		
D 13C-1,2,3,4,6,7,8-HpCDF	38.630	526049	0.45	0.7359	113.2	113.2	0.4054	0.4054	113	
1,2,3,4,6,7,8-HpCDF	38.638	370093	1.06	1.4421	48.8	48.8	0.1783	0.1783	97.57	
D 13C-1,2,3,4,7,8,9-HpCDF	39.876	560124	0.44	0.6854	129.5	129.5	0.4354	0.4354	129	M
1,2,3,4,7,8,9-HpCDF	39.885	351003	1.05	1.3092	47.9	47.9	0.1621	0.1621	95.73	
A Non-2,3,7,8-sub-HpCDF	39.258						0.1690	0.1690		
S Total HpCDF					96.7	96.7	0.1702	0.1702		
D 13C-1,2,3,4,6,7,8-HpCDD	39.573	479110	1.01	0.6745	112.5	112.5	0.3461	0.3461	113	
1,2,3,4,6,7,8-HpCDD	39.582	246982	1.07	1.0503	49.1	49.1	0.1221	0.1221	98.16	
A Non-2,3,7,8-sub-HpCDD	39.258	2973	1.04	1.0503	0.7180	0.5908	0.1221	0.5908	0.00	RQ
S Total HpCDD					49.8	49.7	0.1221	0.1221		RQ
D 13C-OCDD	42.069	904193	0.89	0.5446	263.0	263.0	0.3342	0.3342	132	
OCDF	42.170	580843	0.91	1.3168	97.6	97.6	0.0938	0.0938	97.57	
OCDD	42.078	458801	0.90	1.0620	95.6	95.6	0.0951	0.0951	95.56	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 13:48:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:36 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 15:08:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.444	21.444	0		265855	39874	42	105	949		a
333.9338	21.453	21.444	1		317729	45174	24	60	1882	0.84(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.480	20.480	0	0.955	389124	57100	79	197	723		
317.9389	20.489	20.480	1	0.955	482298	68240	35	87	1950	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.523	20.523	0	1.002	40929	5463	4	10	1366		M
305.8987	20.506	20.523	-1	1.001	49576	7254	8	20	907	0.83(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	17.486	19.878	-143	0.854	72	49	4	10	12		
305.8987	17.503	19.878	-142	0.855	325	77	8	20	10	0.22(0.65-0.89)	
	Empc Correction				93	63	8	20	8		
303.9016	19.749	19.878	-8	0.964	138	54	4	10	14		
305.8987	19.775	19.878	-6	0.966	511	125	8	20	16	0.27(0.65-0.89)	
	Empc Correction				179	70	8	20	9		
303.9016	20.911	19.878	62	1.021	628	84	4	10	21		
	Empc Correction				136	73	4	10	18		
305.8987	20.893	19.878	61	1.020	177	96	8	20	12	3.55(0.65-0.89)	
303.9016	21.005	19.878	67	1.026	138	57	4	10	14		
305.8987	20.988	19.878	66	1.025	265	51	8	20	6	0.52(0.65-0.89)	
	Empc Correction				179	74	8	20	9		
303.9016	21.281	19.878	84	1.039	255	95	4	10	24		
	Empc Correction				107	72	4	10	18		
305.8987	21.315	19.878	86	1.041	140	94	8	20	12	1.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											
331.9368	21.831	21.831	0	1.018	269248	34531	42	105	822		
333.9338	21.822	21.831	-1	1.018	325939	41230	24	60	1718	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.857	21.857	0	1.019	64449	8479	4	10	2120		
2,3,7,8-TCDD											M
319.8965	21.882	21.882	0	1.002	28457	3845	7	17	549		M
321.8936	21.882	21.882	0	1.002	31876	3953	1	2	3953	0.89(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQM
319.8965	21.668	20.707	58	0.993	120	81	7	17	12		
	Empc Correction				33	23	7	17	3		
321.8936	21.693	20.707	59	0.994	43	31	1	2	31	2.79(0.65-0.89)	
319.8965	22.399	20.707	101	1.026	158	67	7	17	10		
	Empc Correction				57	22	7	17	3		
321.8936	22.330	20.707	97	1.023	75	29	1	2	29	2.11(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.304	27.304	0	1.273	425195	63633	45	112	1414		
353.8970	27.313	27.304	1	1.274	274723	39611	38	95	1042	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.330	27.330	0	1.001	227987	33133	32	80	1035		
341.8567	27.338	27.330	1	1.001	143003	20797	23	57	904	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.820	28.820	0	1.344	456611	65087	45	112	1446		
353.8970	28.812	28.820	-1	1.344	280029	39384	38	95	1036	1.63(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.845	28.845	0	1.001	212877	28369	32	80	887		
341.8567	28.837	28.845	-1	1.001	135530	17603	23	57	765	1.57(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.256	24.648	-23	0.888	10	6	1	2	6		
341.8567	24.230	24.648	-25	0.887	25	14	1	2	14	0.40(1.32-1.78)	
	Empc Correction				6	3	1	2	3		
339.8597	24.420	24.648	-14	0.894	40	22	1	2	22		
341.8567	24.394	24.648	-15	0.893	369	90	1	2	90	0.11(1.32-1.78)	
	Empc Correction				25	14	1	2	14		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.919	28.125	-12	1.023	2528	386	32	80	12		
341.8567	27.953	28.125	-10	1.024	2187	262	23	57	11	1.16(1.32-1.78)	
	Empc Correction				1630	249	23	57	11		
13C-1,2,3,7,8-PeCDD											
367.8949	29.645	29.645	0	1.382	255348	35062	26	65	1349		
369.8919	29.636	29.645	-1	1.382	164128	22831	9	22	2537	1.56(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.670	29.670	0	1.001	134733	17174	10	25	1717		
357.8516	29.662	29.670	-1	1.001	88065	11340	5	12	2268	1.53(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						10	25			
357.8516	28.489						5	12			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.955	34.955	0	0.954	237033	46467	65	162	715		
385.8610	34.955	34.955	0	0.954	437142	82345	111	277	742	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.972	34.972	0	1.000	208303	39400	62	155	635		
375.8178	34.972	34.972	0	1.000	169601	31161	50	125	623	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.123	35.123	0	0.959	230353	41039	65	162	631		
385.8610	35.106	35.123	-1	0.959	444227	77817	111	277	701	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.132	35.132	0	1.000	230885	42672	62	155	688		
375.8178	35.132	35.132	0	1.000	182594	33631	50	125	673	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.932	35.932	0	0.981	219287	44412	65	162	683		
385.8610	35.923	35.932	-1	0.981	415090	86999	111	277	784	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.949	35.949	0	1.000	221069	46435	62	155	749		
375.8178	35.940	35.949	-1	1.000	175953	36135	50	125	723	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.816	36.816	0	1.005	227331	51062	65	162	786		
385.8610	36.816	36.816	0	1.005	416423	93051	111	277	838	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.833	36.833	0	1.000	228342	52008	62	155	839		
375.8178	36.833	36.833	0	1.000	177898	40049	50	125	801	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						62	155			
375.8178	35.028						50	125			
13C-1,2,3,7,8,9-HxCDD											M
401.8559	36.623	36.623	0		355684	70512	58	145	1216		M
403.8529	36.623	36.623	0		275563	55836	29	72	1925	1.29(1.05-1.43)	M
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.134	36.134	0	0.987	282661	63231	58	145	1090		
403.8529	36.134	36.134	0	0.987	208930	46276	29	72	1596	1.35(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.159	36.159	0	1.001	136378	30119	23	57	1310		
391.8127	36.151	36.159	-1	1.000	105460	23953	19	47	1261	1.29(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.260	36.260	0	0.990	293421	65852	58	145	1135		
403.8529	36.252	36.260	-1	0.990	238501	51544	29	72	1777	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.269	36.269	0	1.000	133735	29949	23	57	1302		
391.8127	36.269	36.269	0	1.000	112931	23931	19	47	1260	1.18(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDD											
389.8158	36.631	36.631	0	1.014	161603	35208	23	57	1531		
391.8127	36.640	36.631	1	1.014	129120	27227	19	47	1433	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.394						23	57			
391.8127	35.394						19	47			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.630	38.630	0	1.055	163701	41181	54	135	763		
419.8220	38.630	38.630	0	1.055	362348	91864	97	242	947	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.638	38.638	0	1.000	190629	47504	72	180	660		
409.7788	38.638	38.638	0	1.000	179464	44416	65	162	683	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											M
417.8250	39.876	39.876	0	1.089	170131	49846	54	135	923		M
419.8220	39.876	39.876	0	1.089	389993	111269	97	242	1147	0.44(0.37-0.51)	M
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885	39.885	0	1.000	180078	50639	72	180	703		
409.7788	39.885	39.885	0	1.000	170925	47586	65	162	732	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						72	180			
409.7788	39.258						65	162			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.573	39.573	0	1.081	240258	68218	63	157	1083		
437.8140	39.573	39.573	0	1.081	238852	65955	55	137	1199	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.582	39.582	0	1.000	127862	35481	35	87	1014		
425.7737	39.582	39.582	0	1.000	119120	33435	34	85	983	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.950	39.258	-18	0.984	1516	518	35	87	15		
425.7737	38.941	39.258	-19	0.984	2097	634	34	85	19	0.72(0.88-1.20)	
	Empc Correction				1457	498	34	85	15		
13C-OCDD											
469.7780	42.069	42.069	0	1.149	426510	101505	54	135	1880		
471.7750	42.069	42.069	0	1.149	477683	120225	38	95	3164	0.89(0.76-1.02)	
OCDF											
441.7428	42.170	42.170	0	1.002	277003	63466	24	60	2644		
443.7399	42.170	42.170	0	1.002	303840	69097	31	77	2229	0.91(0.76-1.02)	
OCDD											
457.7377	42.078	42.078	0	1.000	217935	51979	16	40	3249		
459.7348	42.078	42.078	0	1.000	240866	57297	29	72	1976	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 13:48:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 29
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	871422	125340

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	871422	125340

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.486	72	49	325	77	0.0422	0.22	RnQ
17.486	72	49	93	63	0.0175		Empc Correction
19.749	138	54	511	125	0.0689	0.27	RQ
19.749	138	54	179	70	0.0337		Empc Correction
20.911	628	84	177	96	0.0855	3.55	RQ
20.911	136	73	177	96	0.0333		Empc Correction
21.005	138	57	265	51	0.0428	0.52	RnQ
21.005	138	57	179	74	0.0337		Empc Correction
21.281	255	95	140	94	0.0420	1.82	RQ
21.281	107	72	140	94	0.0262		Empc Correction
Signal Totals:							
	591	305	768	397			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2649	782				0.87	RQ
	1359	702					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2814 = (2649 * 100.000) / (871422 * 1.080)
Empc Amount: 0.1444 = (1359 * 100.000) / (871422 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	18-Aug-2021 13:48:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	29
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	595187	75761

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	595187	75761

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.668	120	81	43	31	0.0255	2.79	RQ
21.668	33	23	43	31	0.0119		Empc Correction
22.399	158	67	75	29	0.0364	2.11	RnQ
22.399	57	22	75	29	0.0206		Empc Correction
Signal Totals:							
	90	45	118	60			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	396	208				2.36	RQ
	208	105					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0619 = (396 * 100.000) / (595187 * 1.075)

Empc Amount: 0.0325 = (208 * 100.000) / (595187 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 13:48:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 29
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	699918	103244
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	736640	104471

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	718279	103857

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.256	10	6	25	14	0.004726	0.40	RnQ
24.256	10	6	6	3	0.002160		Empc Correction
24.420	40	22	369	90	0.0552	0.11	RQ
24.420	40	22	25	14	0.008777		Empc Correction
Signal Totals:							
	50	28	31	17			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	444	132				0.13	RQ
	81	45					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0600 = (444 * 100.000) / (718279 * 1.031)
Empc Amount: 0.0109 = (81 * 100.000) / (718279 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	18-Aug-2021 13:48:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	29
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	699918	103244
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	736640	104471

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	718279	103857

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.919	2528	386	2187	262	0.6367	1.16	RQ
27.919	2528	386	1630	249	0.5614		Empc Correction
Signal Totals:							
	2528	386	1630	249			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4715	648				1.16	RQ
	4158	635					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.6367 = (4715 * 100.000) / (718279 * 1.031)

Empc Amount: 0.5614 = (4158 * 100.000) / (718279 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 13:48:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 29
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	479110	134173

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	479110	134173

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.950	1516	518	2097	634	0.7180	0.72	RQ
38.950	1516	518	1457	498	0.5908		Empc Correction
Signal Totals:							
	1516	518	1457	498			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3613	1152				0.72	RQ
	2973	1016					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7180 = (3613 * 100.000) / (479110 * 1.050)
Empc Amount: 0.5908 = (2973 * 100.000) / (479110 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.44

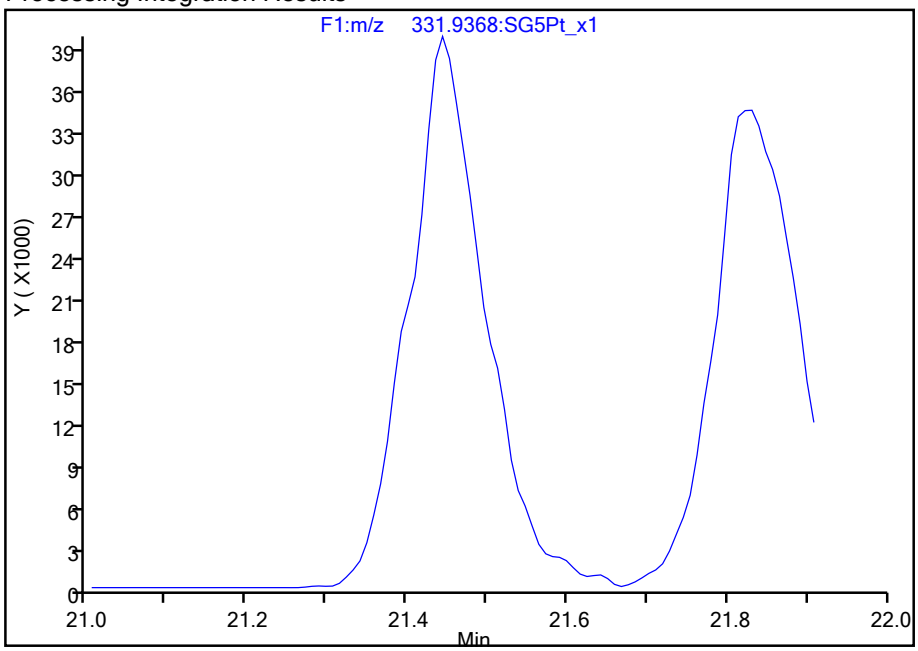

Manual Integration Results

RT: 21.44
Area: 265855
Amount: 100.0000
Amount Units: pg/ul

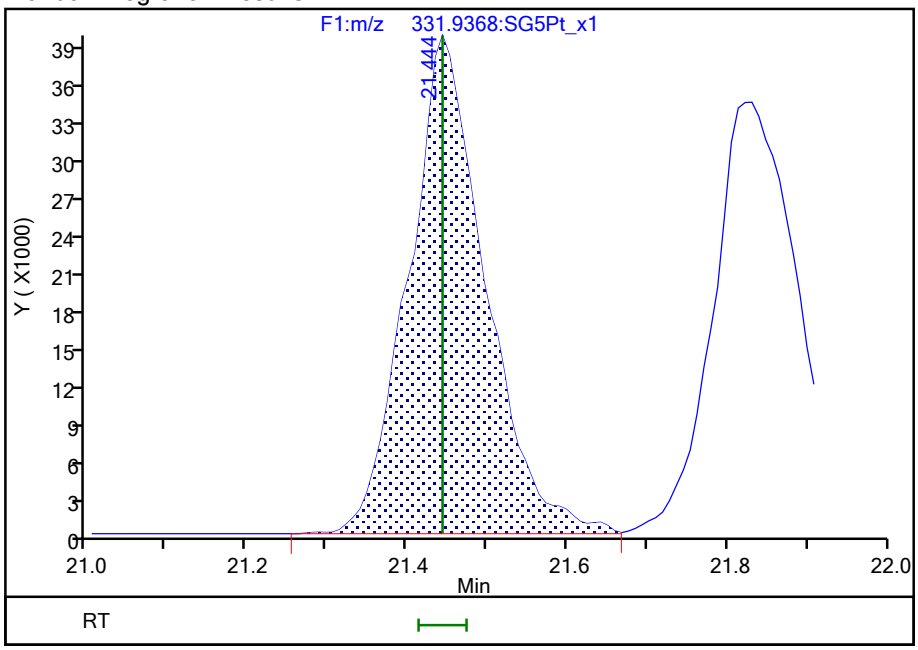

Reviewer: stephensk, 18-Aug-2021 14:37:53

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.52
Area: 39804
Amount: 9.495340
Amount Units: pg/ul

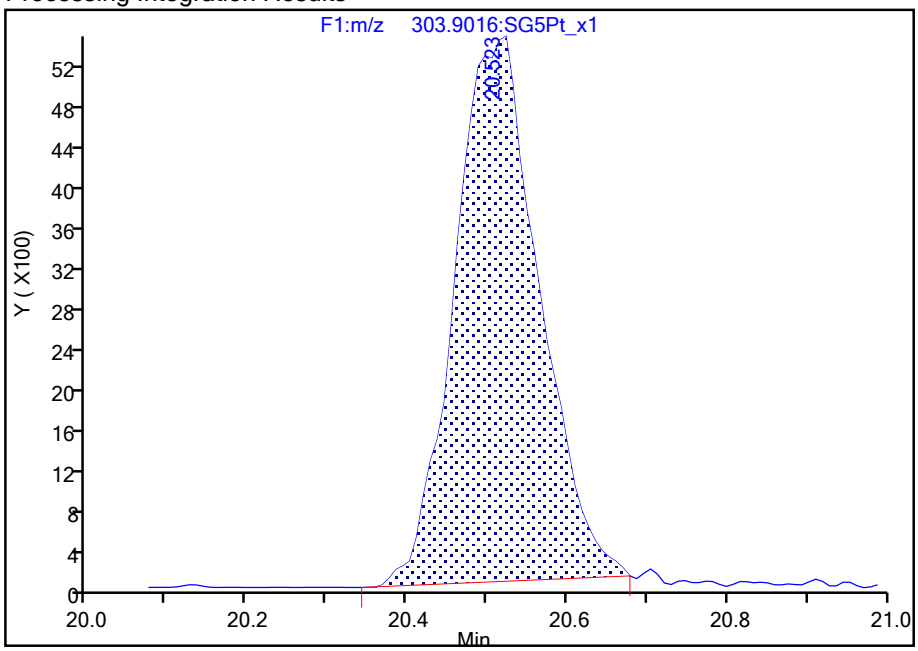

Manual Integration Results

RT: 20.52
Area: 40929
Amount: 9.614855
Amount Units: pg/ul

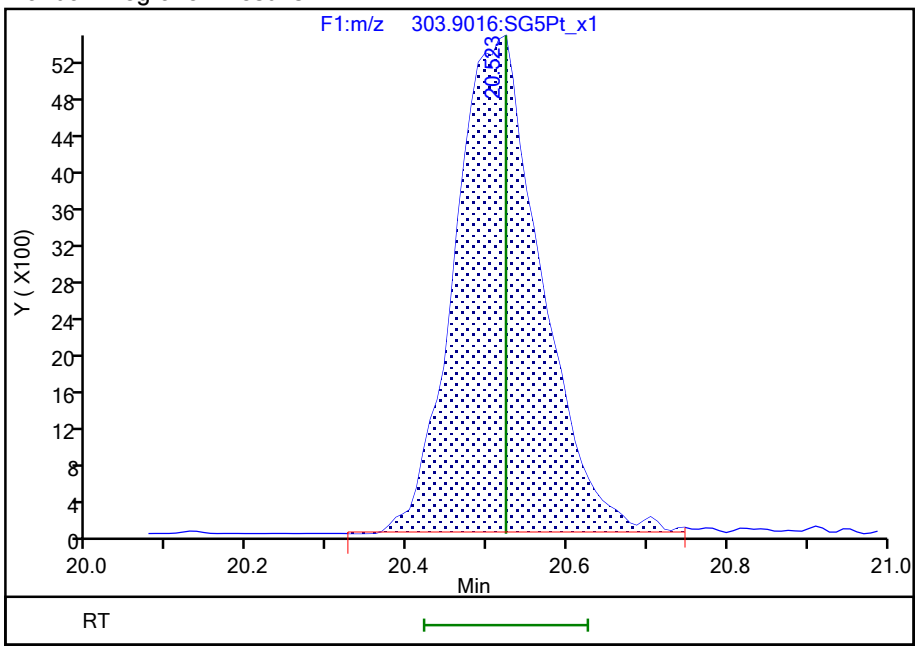

Reviewer: stephensk, 18-Aug-2021 14:38:12

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.88
Area: 26782
Amount: 9.164853
Amount Units: pg/ul

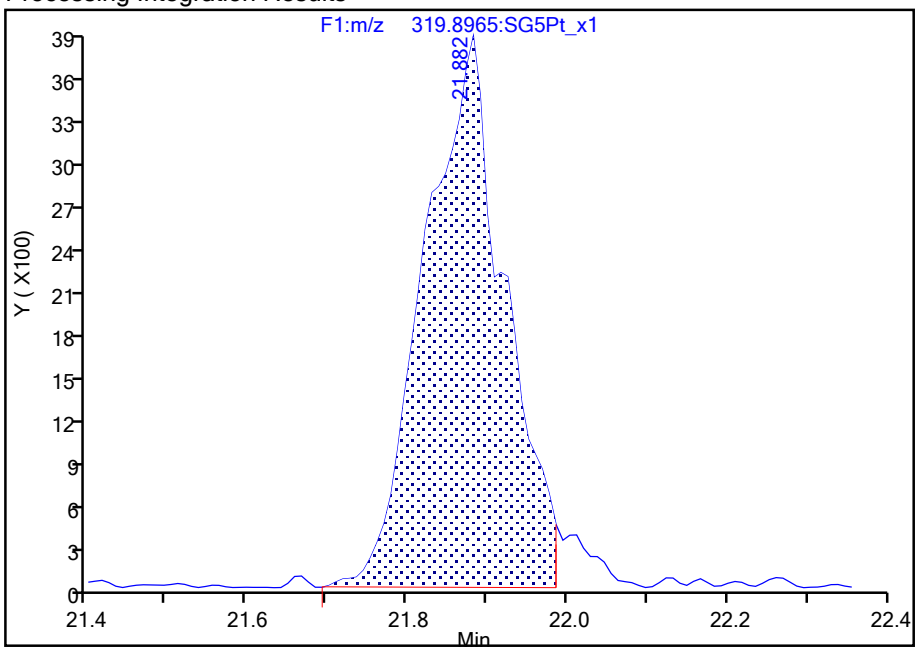

Manual Integration Results

RT: 21.88
Area: 28457
Amount: 9.426559
Amount Units: pg/ul

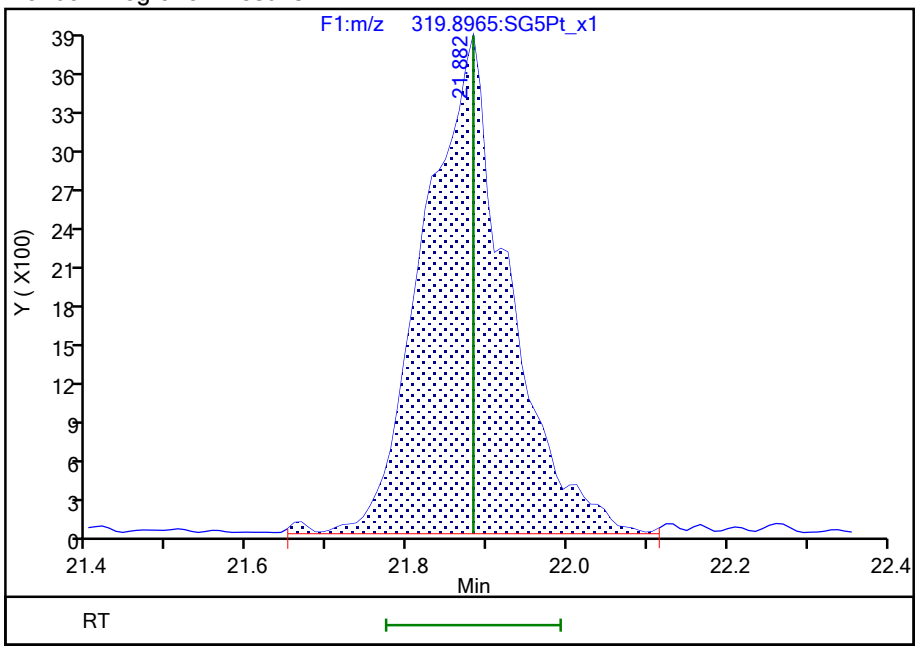

Reviewer: stephensk, 18-Aug-2021 14:38:34

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 1

Processing Integration Results

RT: 36.62
Area: 350740
Amount: 100.0000
Amount Units: pg/ul

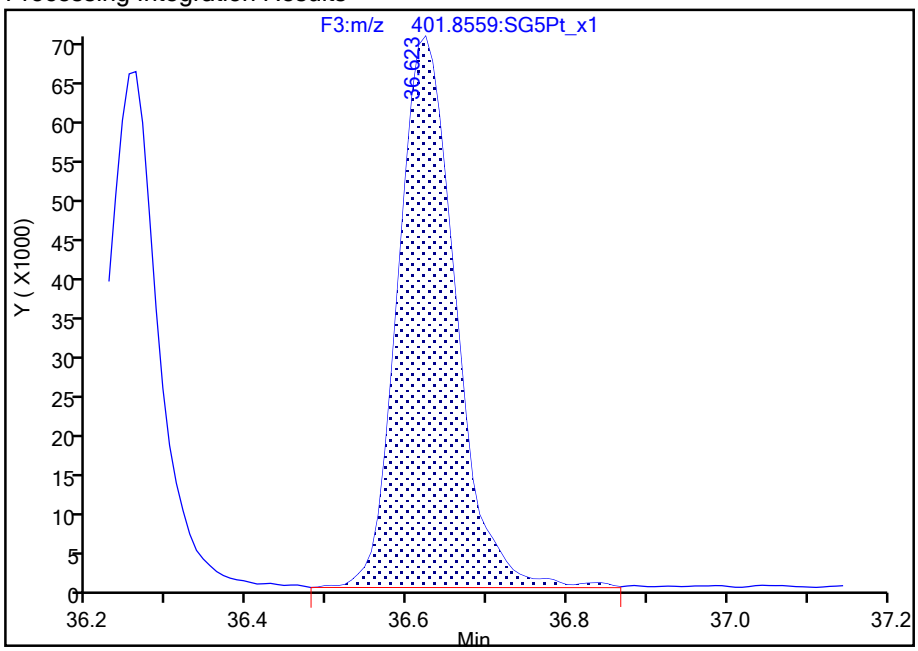

Manual Integration Results

RT: 36.62
Area: 355684
Amount: 100.0000
Amount Units: pg/ul

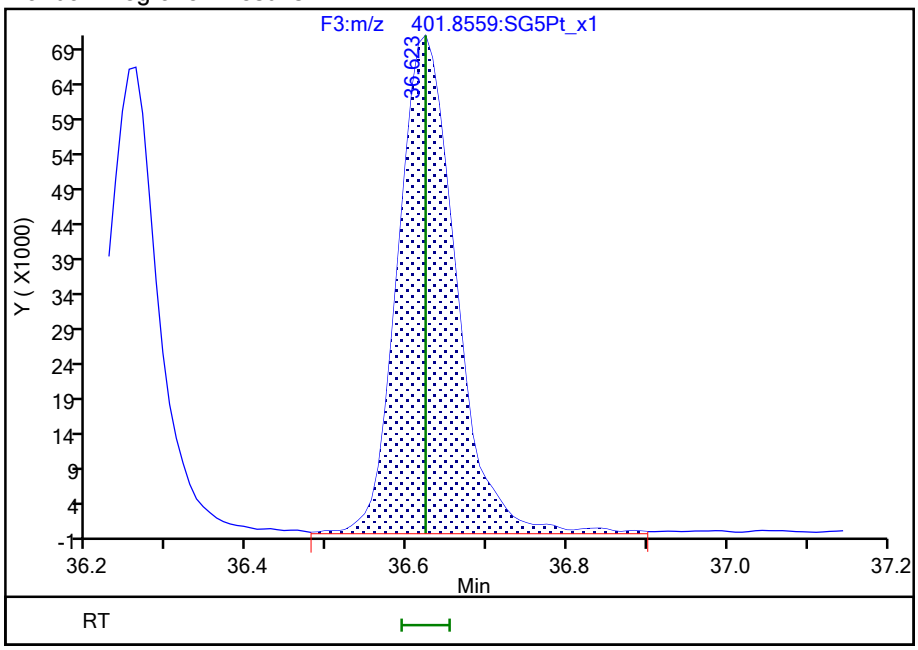

Reviewer: stephensk, 18-Aug-2021 15:08:03

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 2

Processing Integration Results

RT: 36.62
Area: 267152
Amount: 100.0000
Amount Units: pg/ul

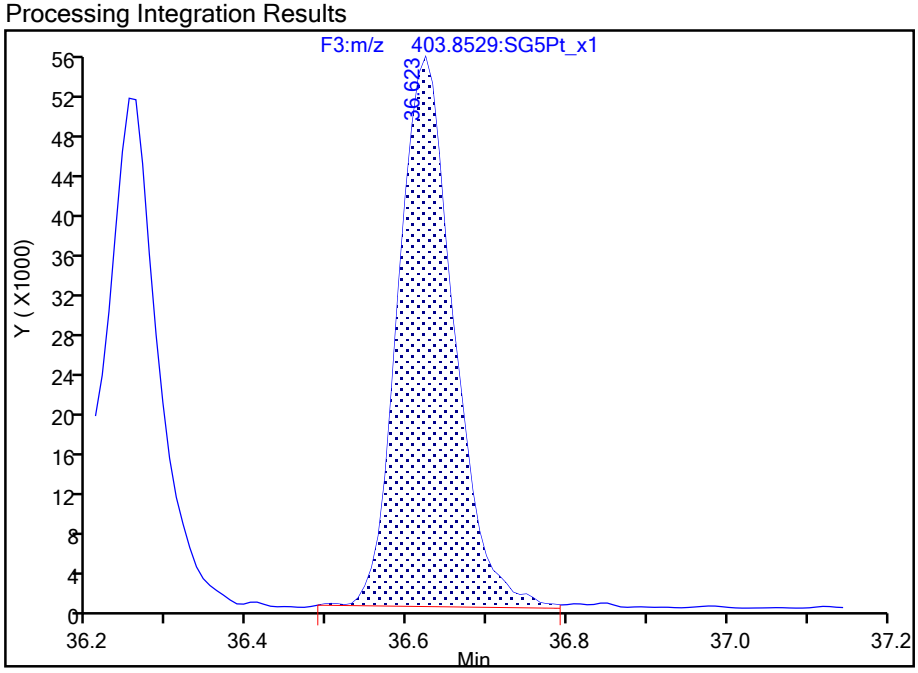

Manual Integration Results

RT: 36.62
Area: 275563
Amount: 100.0000
Amount Units: pg/ul

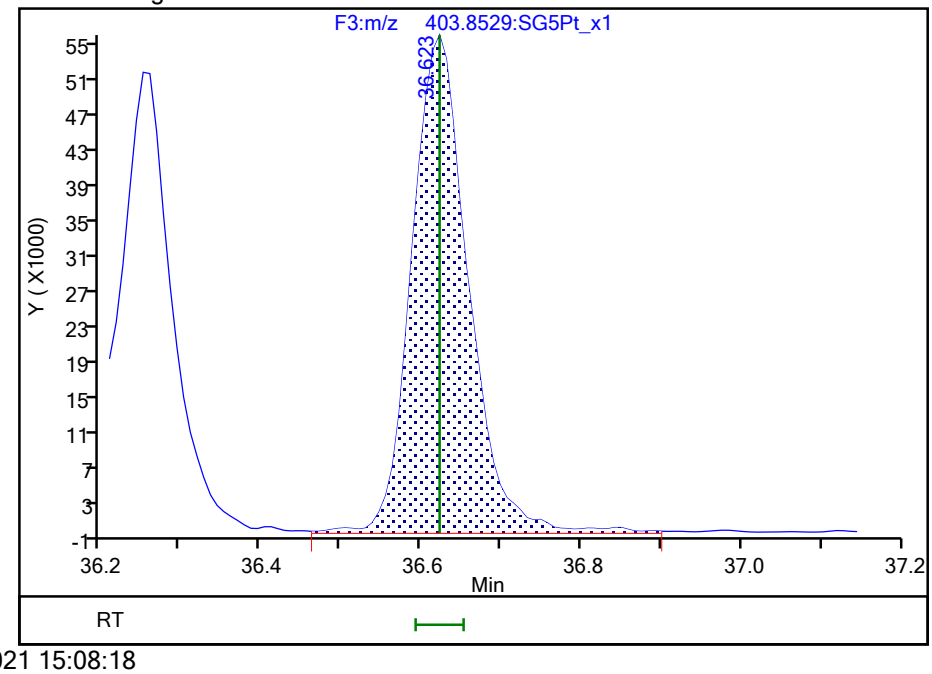

Reviewer: stephensk, 18-Aug-2021 15:08:18

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

RT: 39.88
Area: 171335
Amount: 133.8873
Amount Units: pg/ul

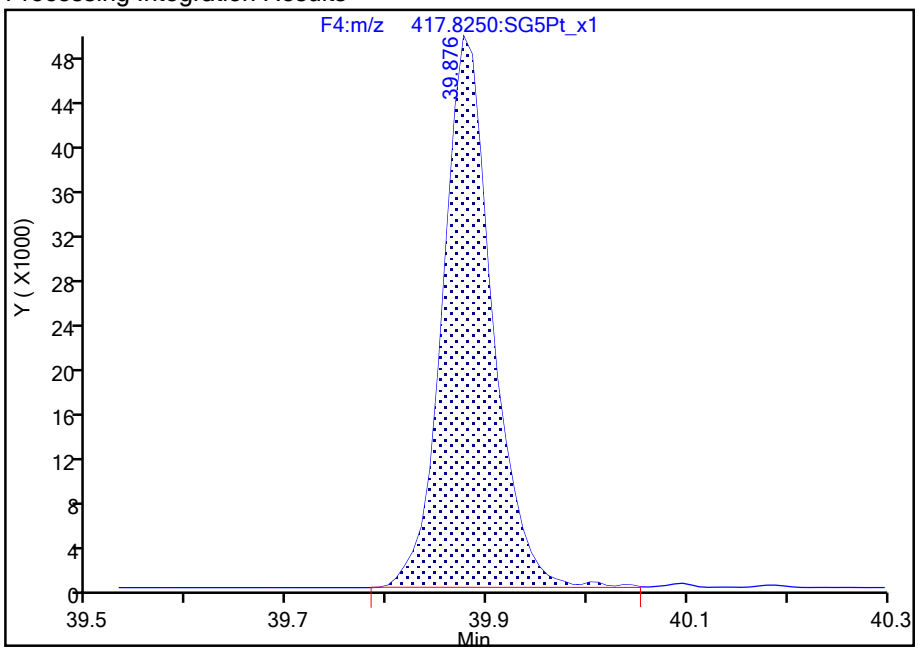

Manual Integration Results

RT: 39.88
Area: 170131
Amount: 129.4656
Amount Units: pg/ul

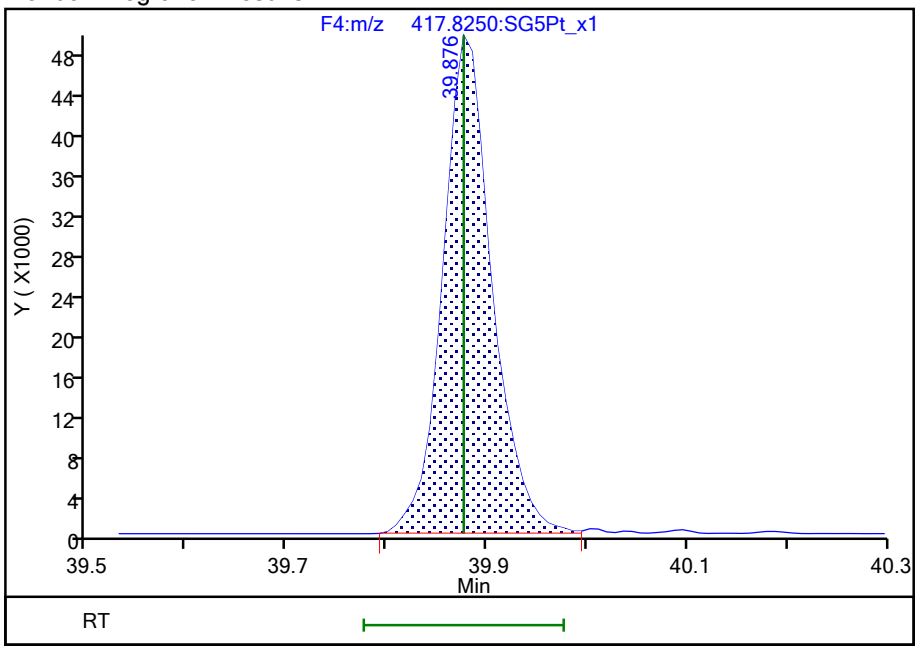

Reviewer: stephensk, 18-Aug-2021 14:43:11

Audit Action: Manually Integrated Audit Reason: Baseline

776876

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 2

Processing Integration Results

RT: 39.88
Area: 395664
Amount: 133.8873
Amount Units: pg/ul

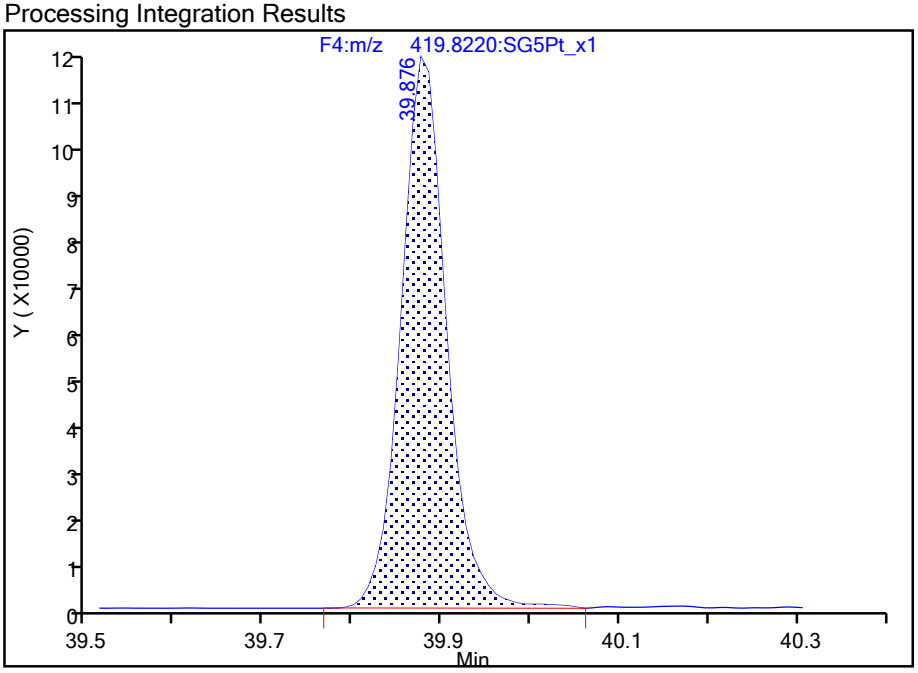

Manual Integration Results

RT: 39.88
Area: 389993
Amount: 129.4656
Amount Units: pg/ul

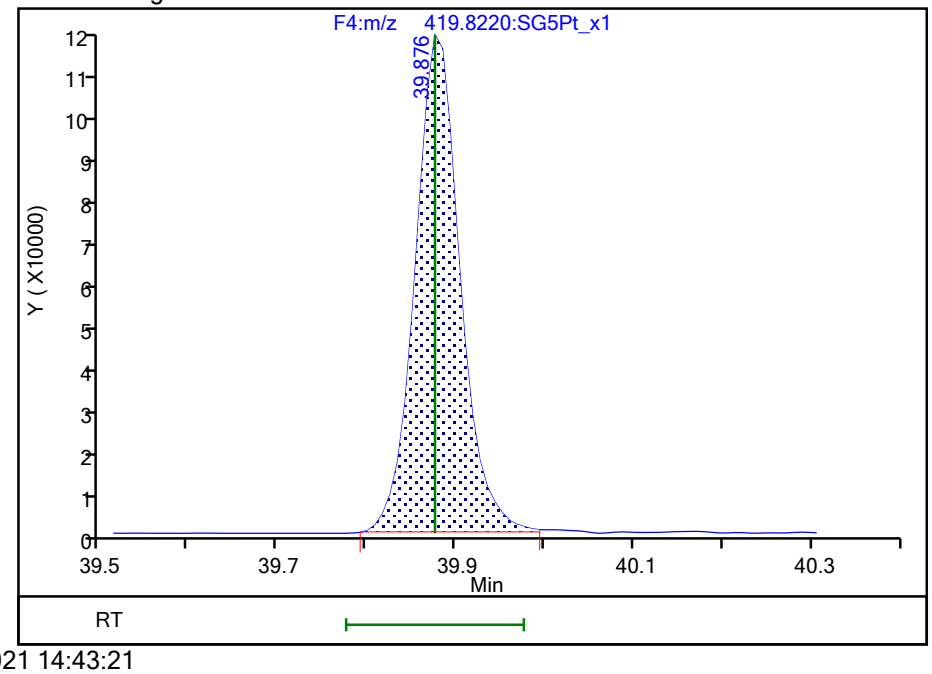

Reviewer: stephensk, 18-Aug-2021 14:43:21

Audit Action: Manually Integrated Audit Reason: Baseline

776877

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

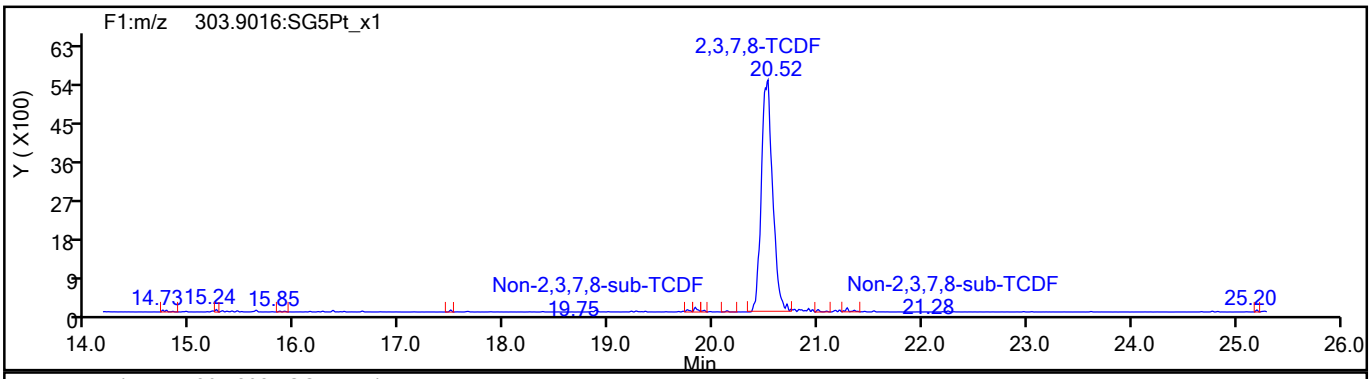

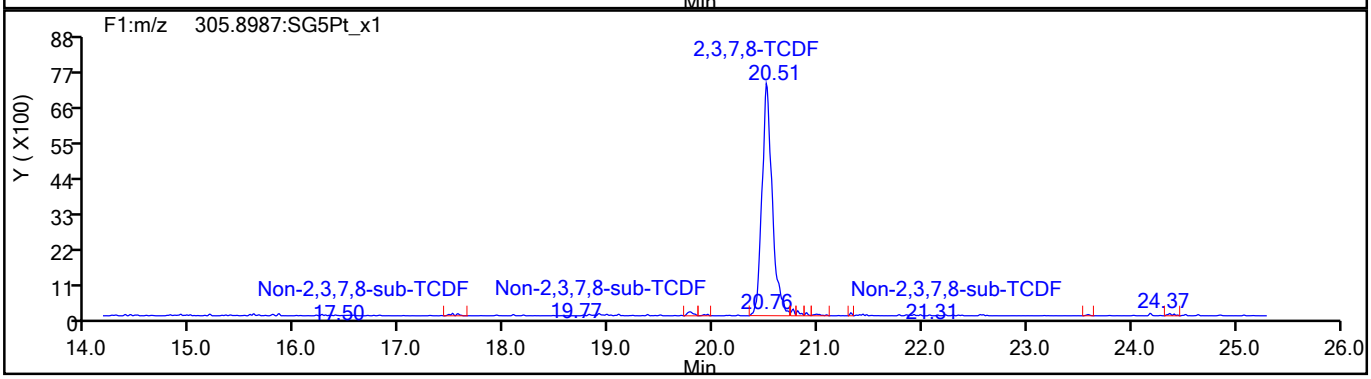

TCDF Standards

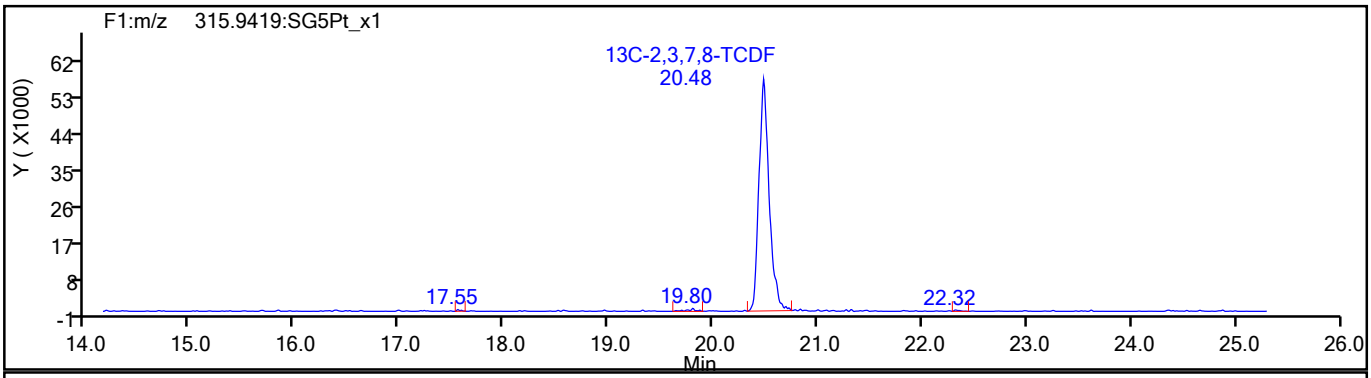

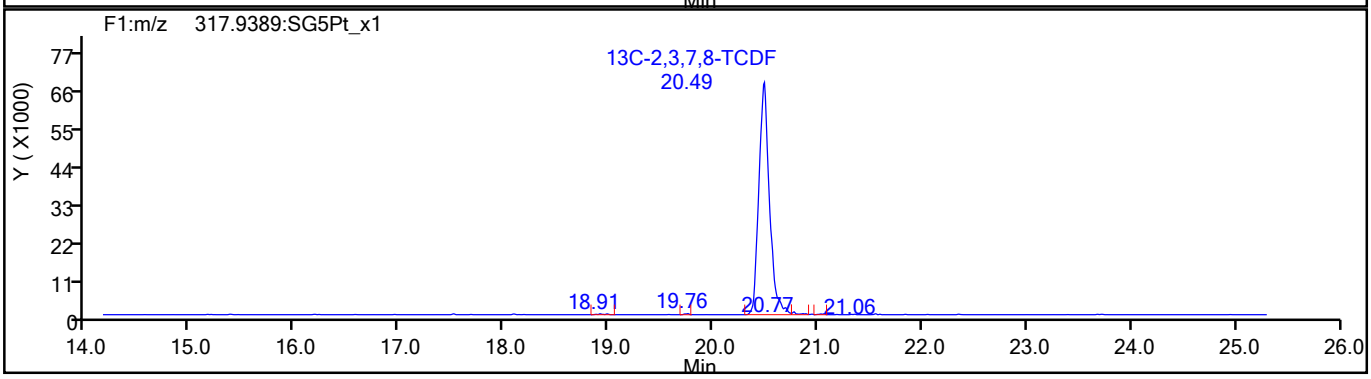

776878

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

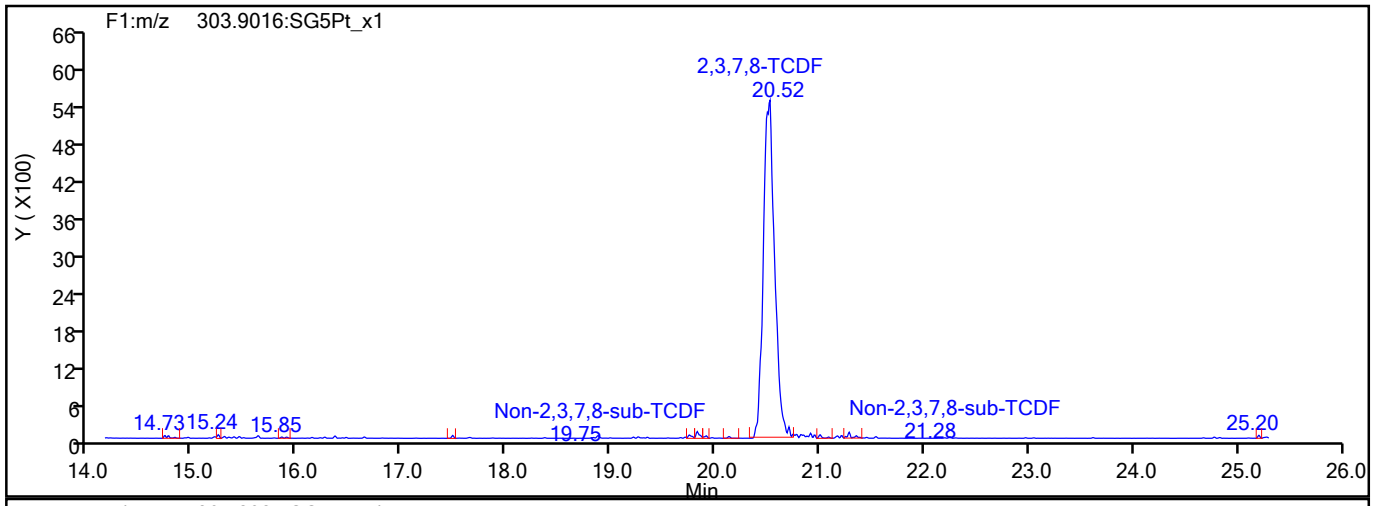

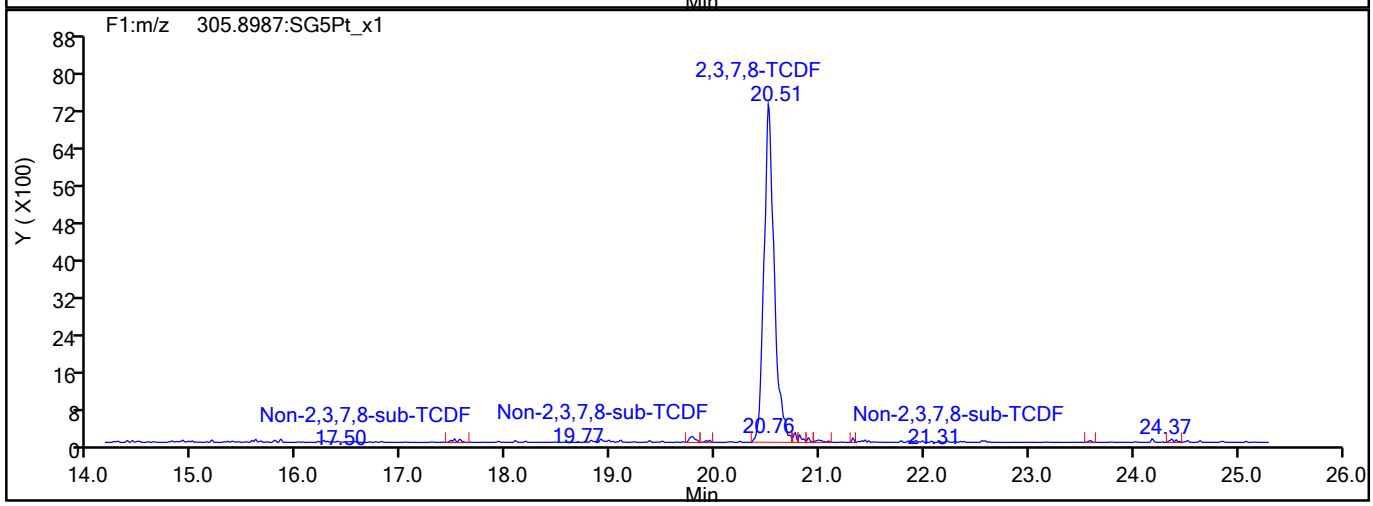

TCDF Interference Mass

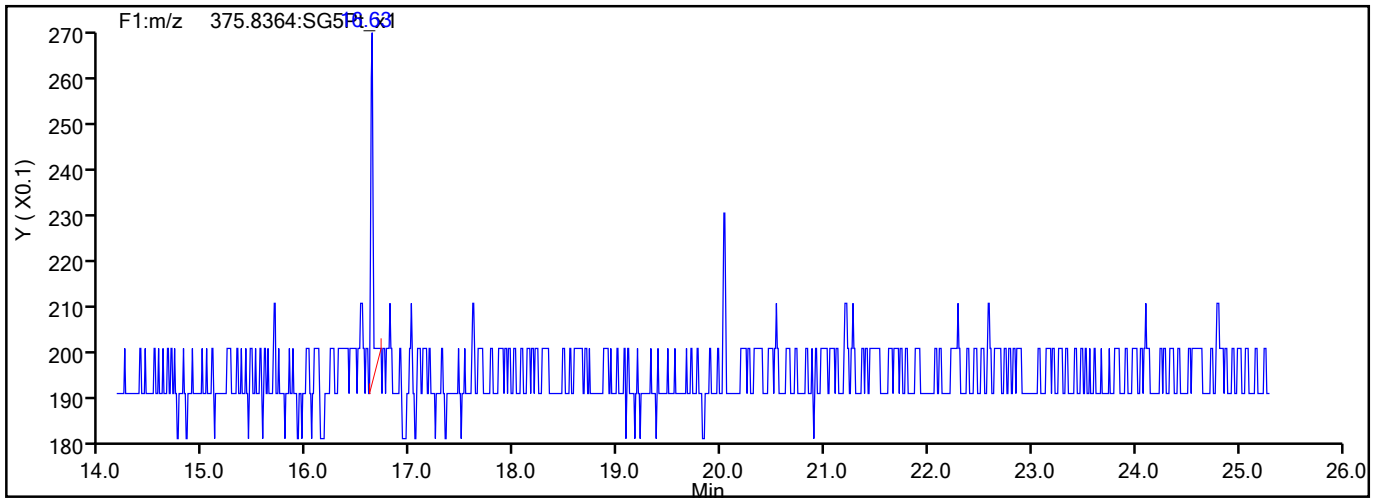

776879

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

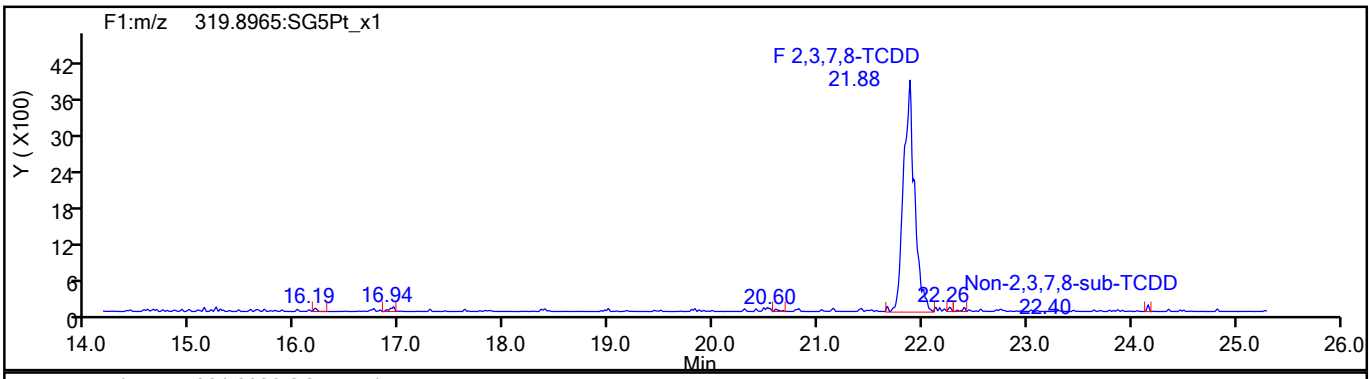

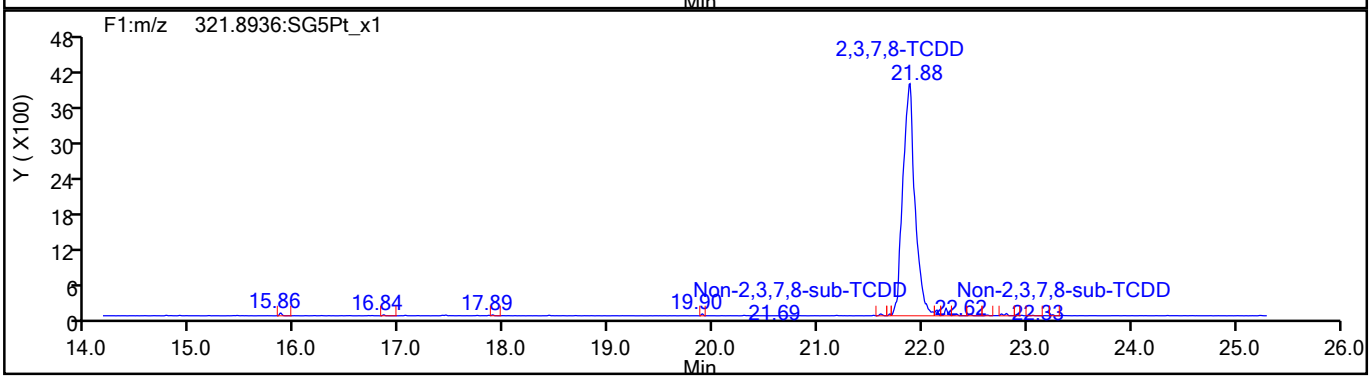

TCDD Standards

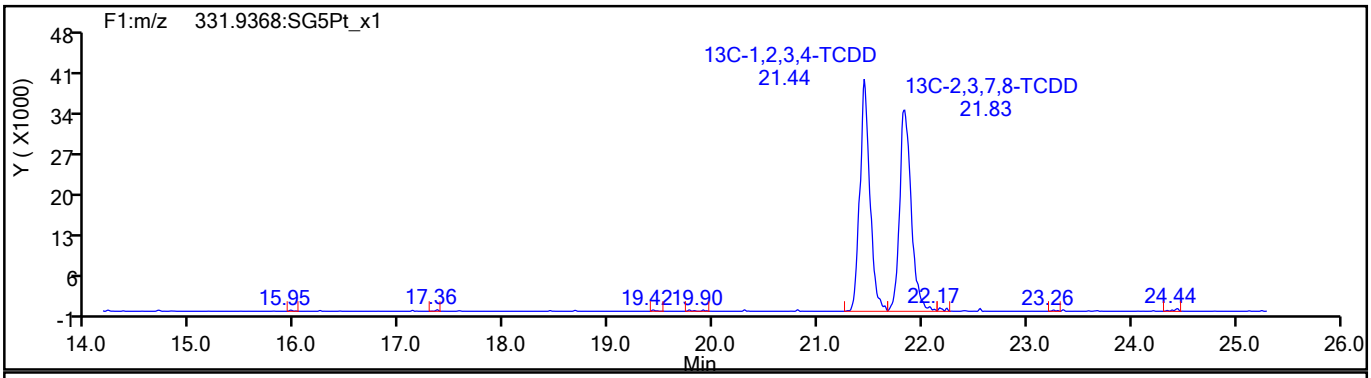

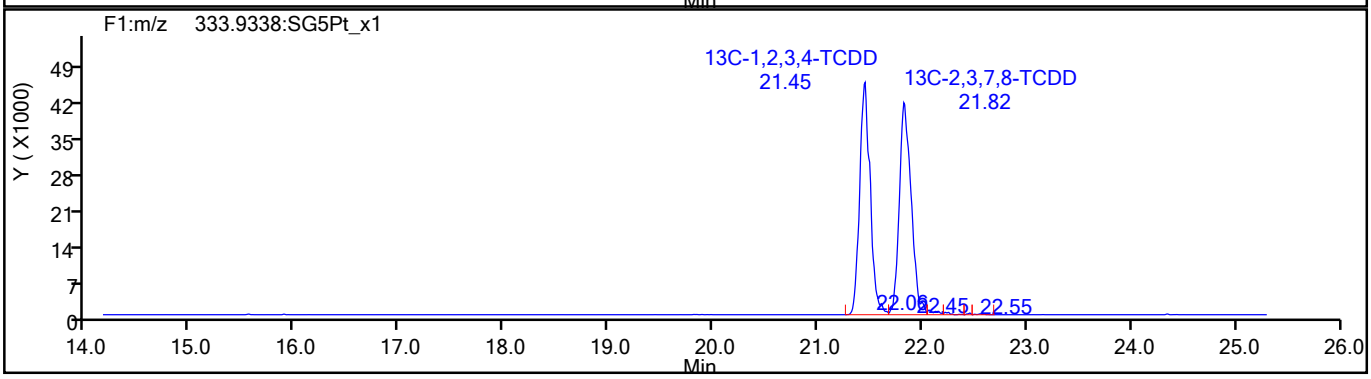

776880

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

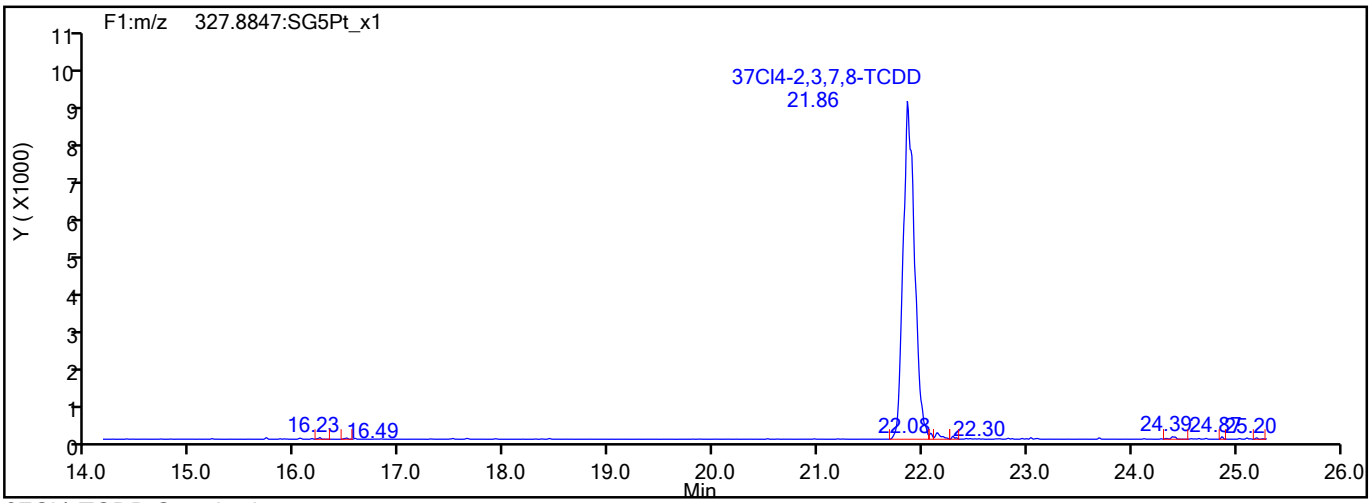

37Cl4-TCDD Standards

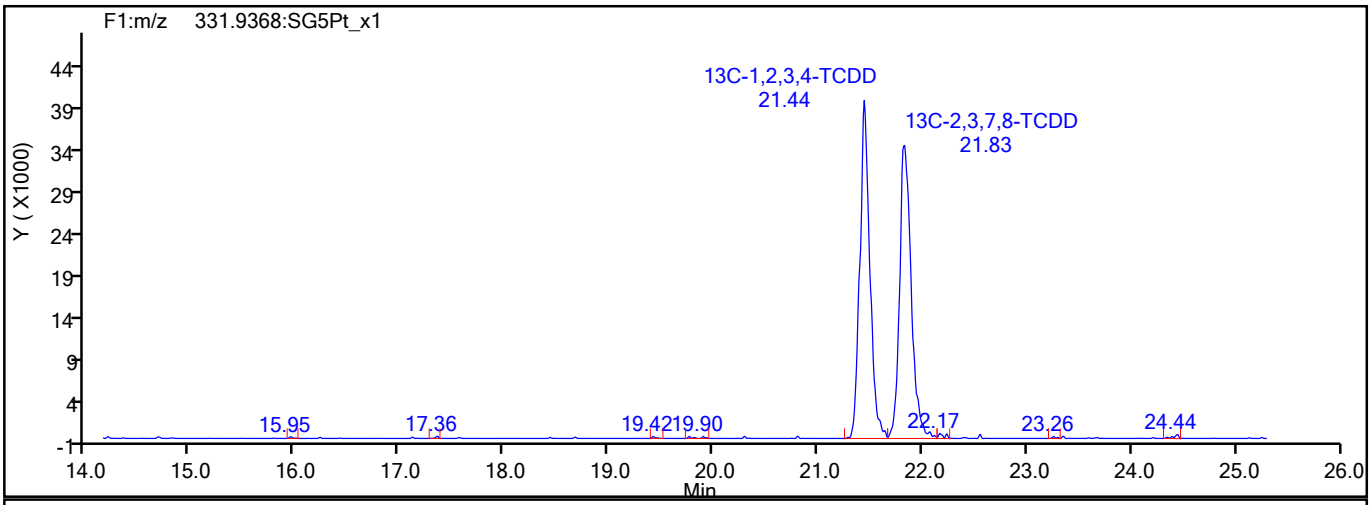

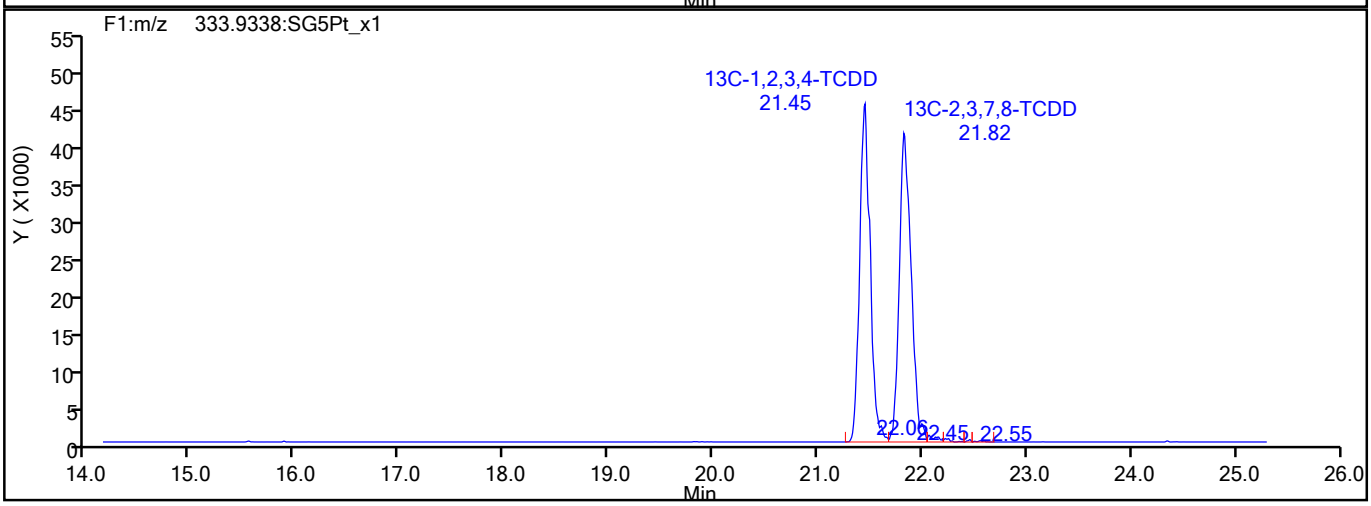

776881

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

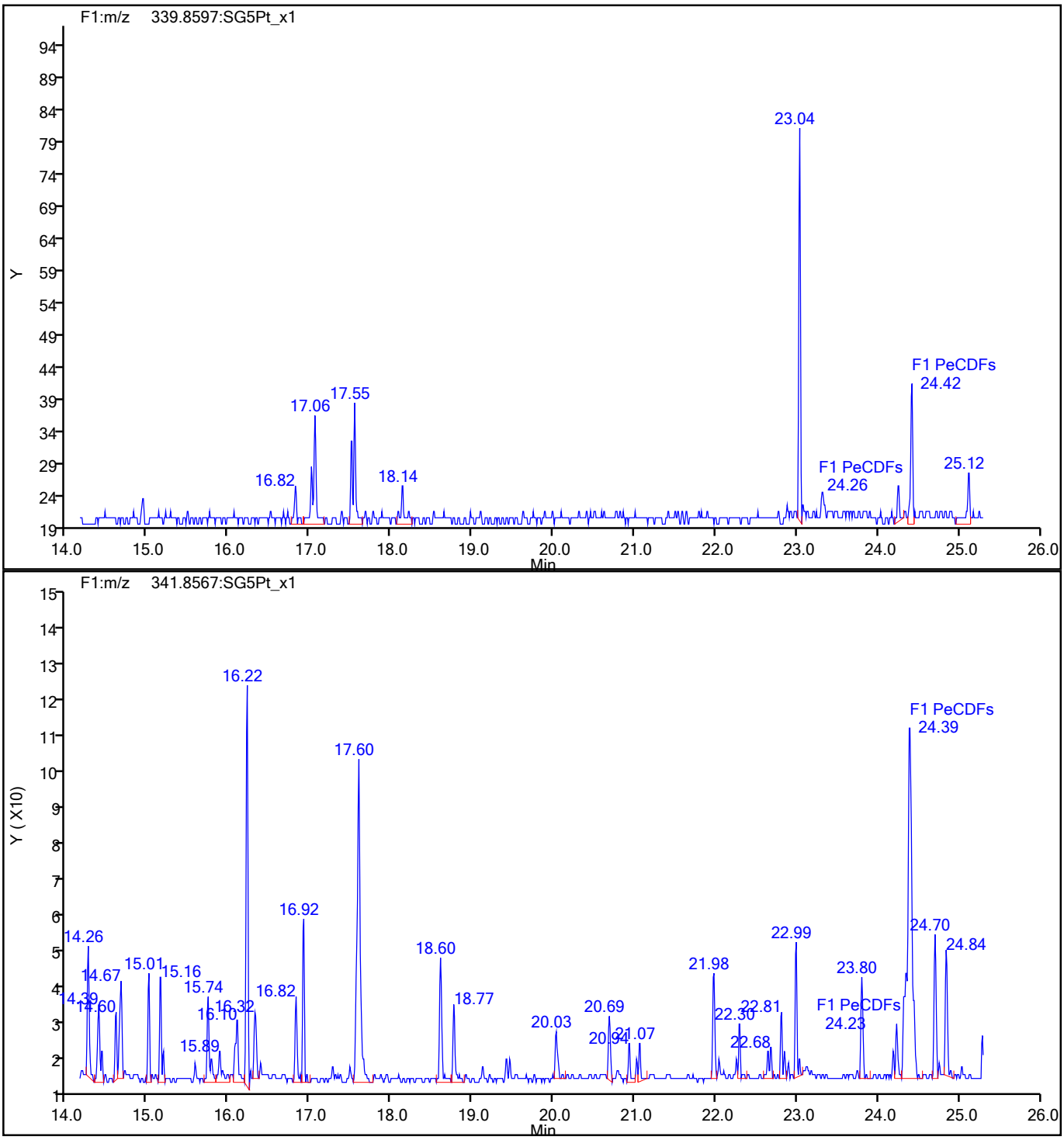

776882

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

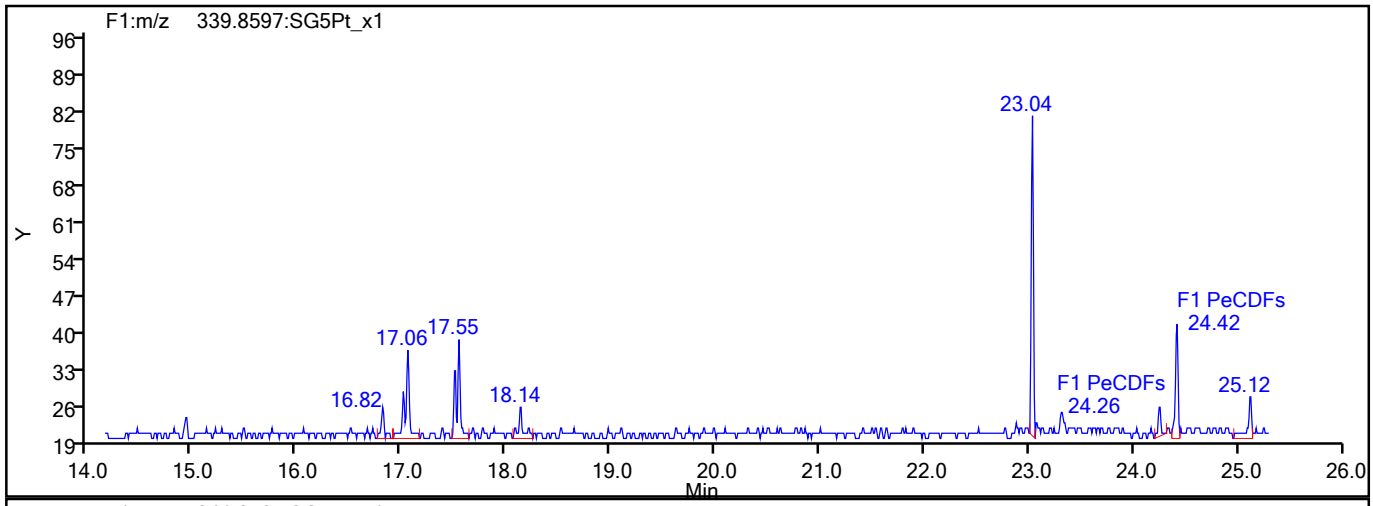

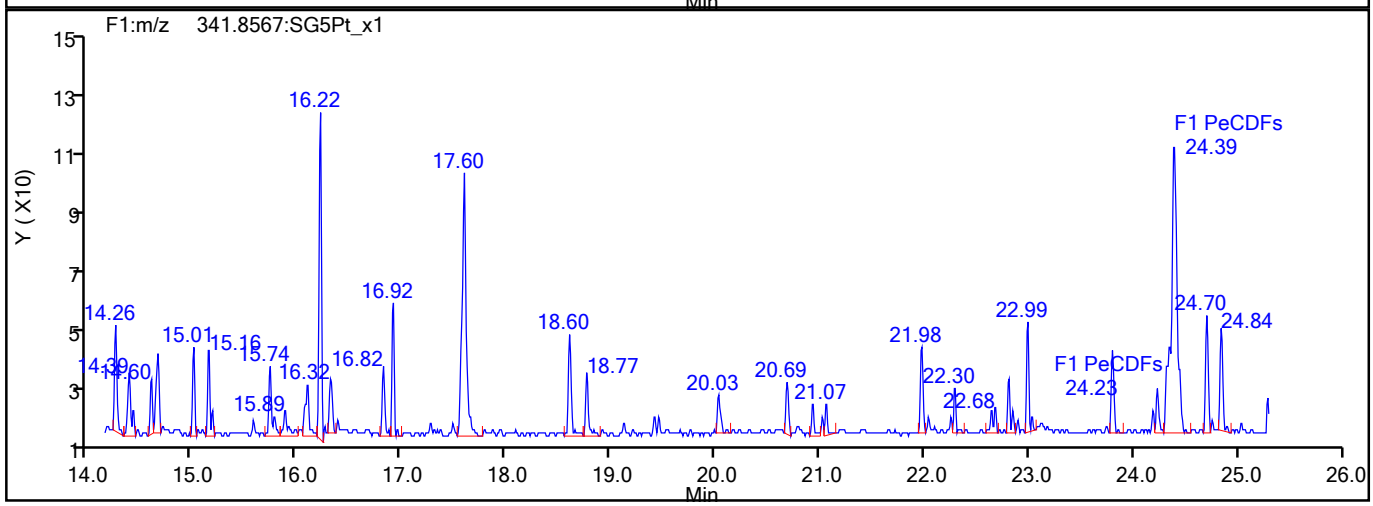

F1 PeCDFs Interference Mass

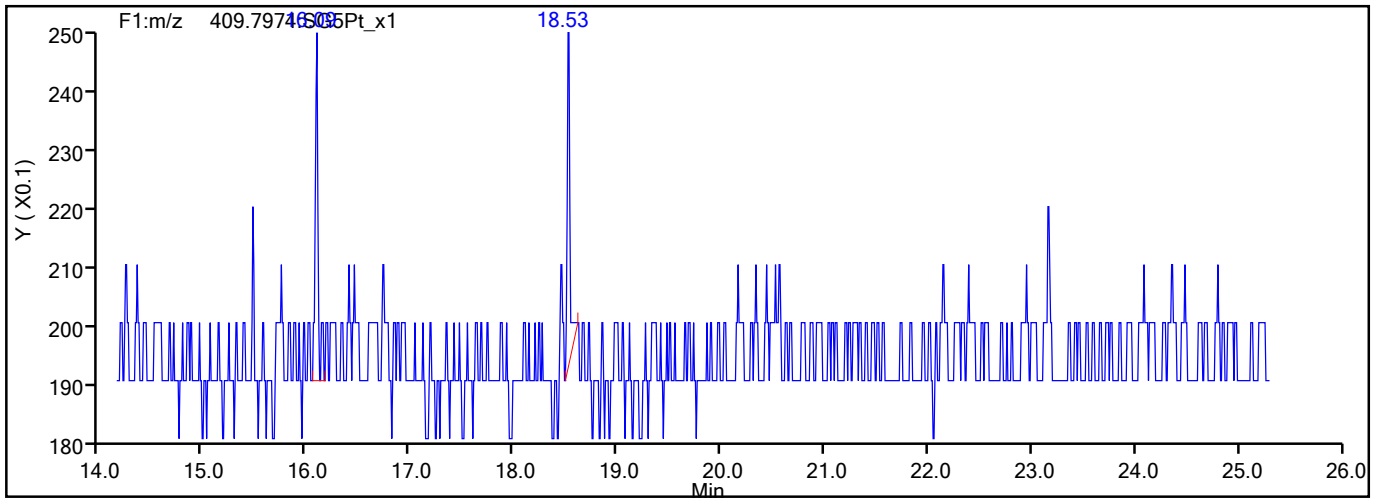

776883

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

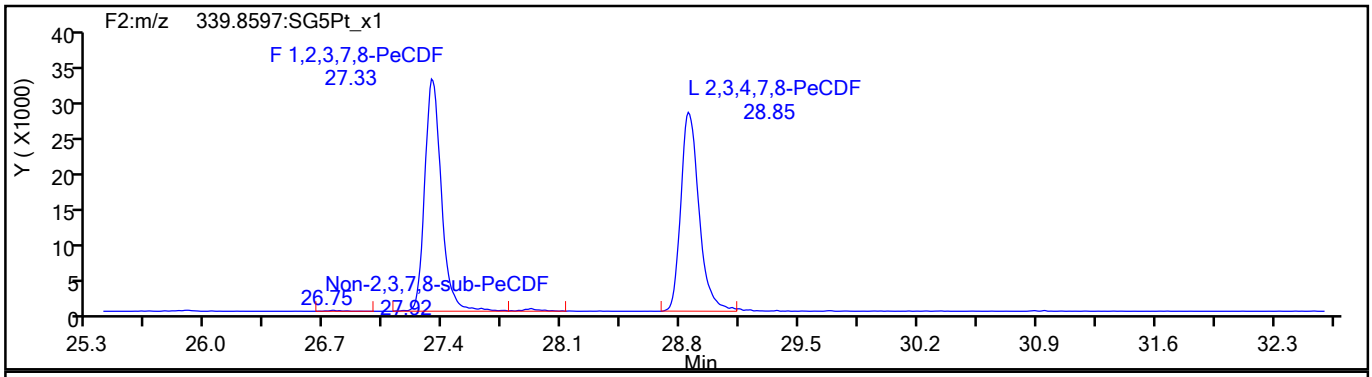

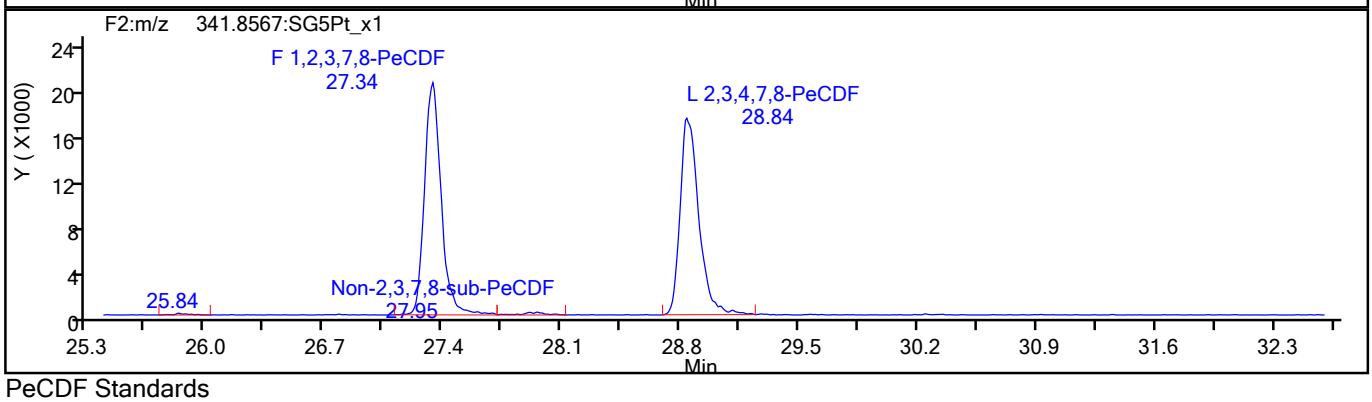

PeCDF Standards

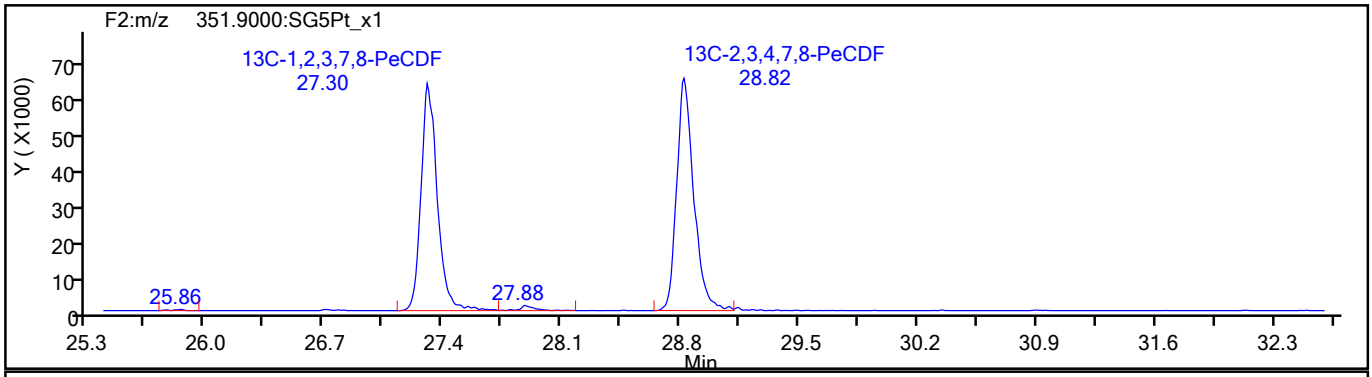

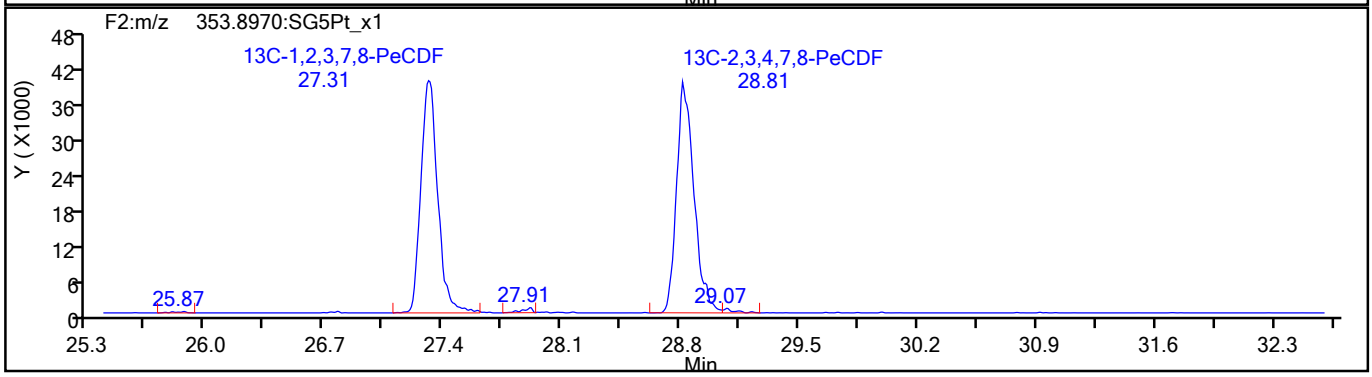

776884

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

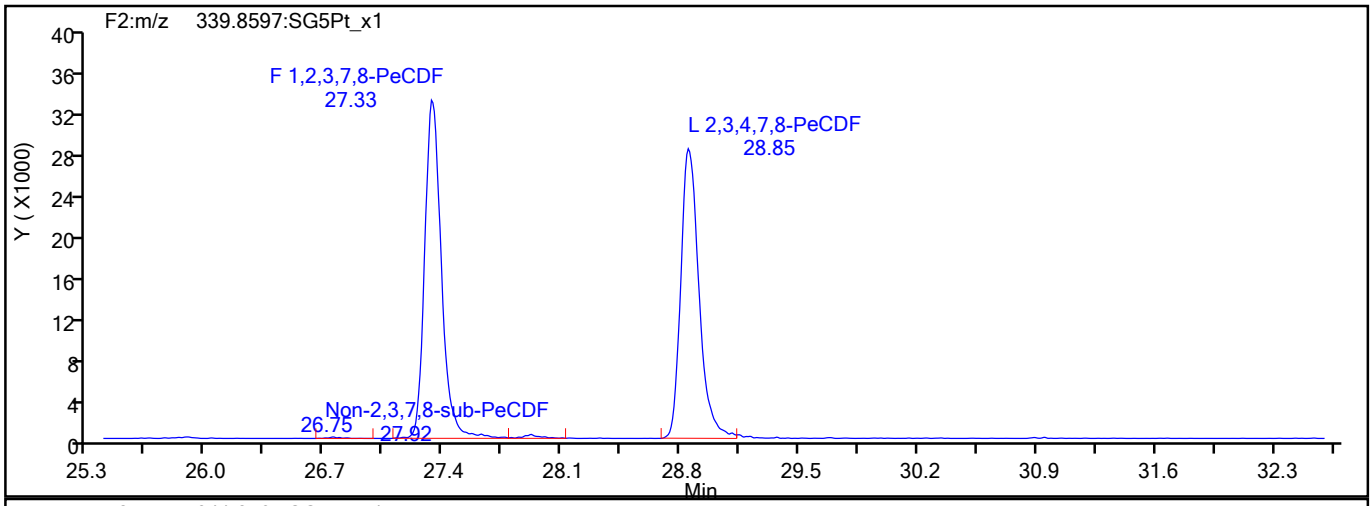

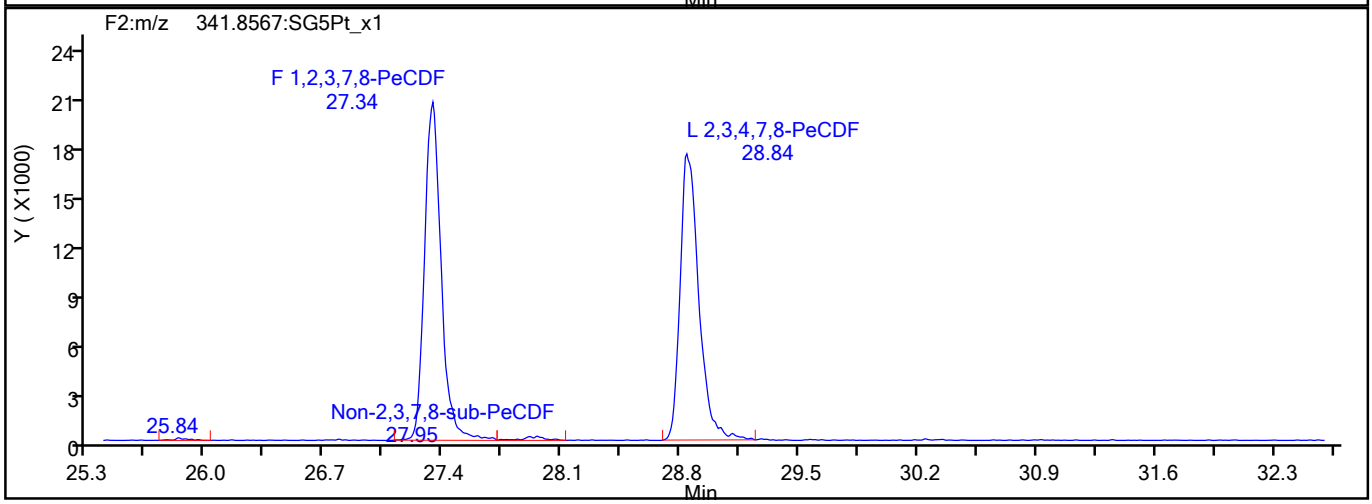

PeCDF Interference Mass

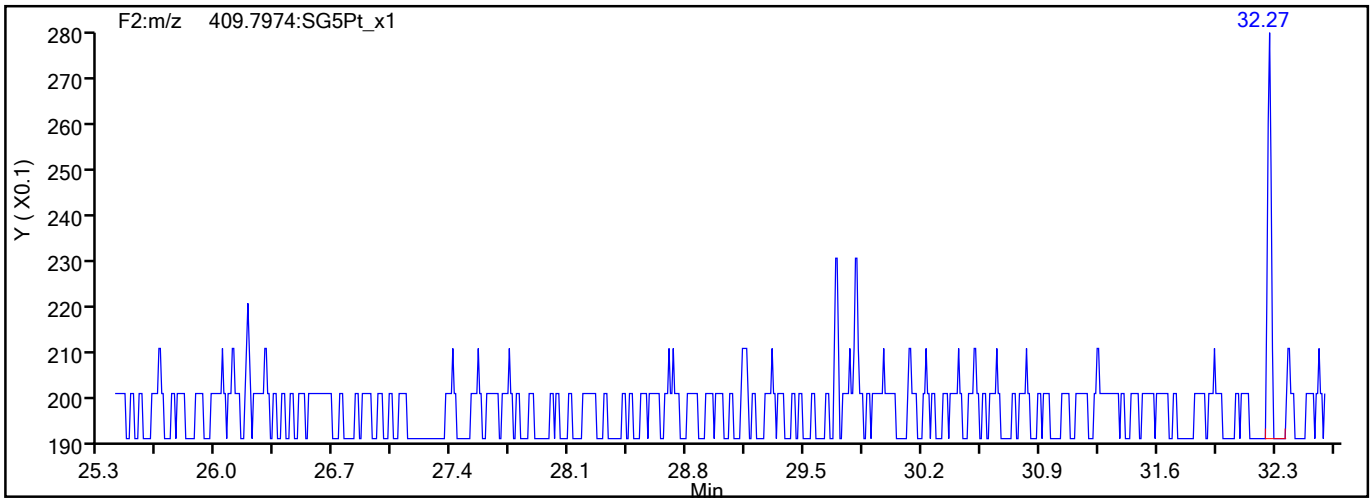

776885

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

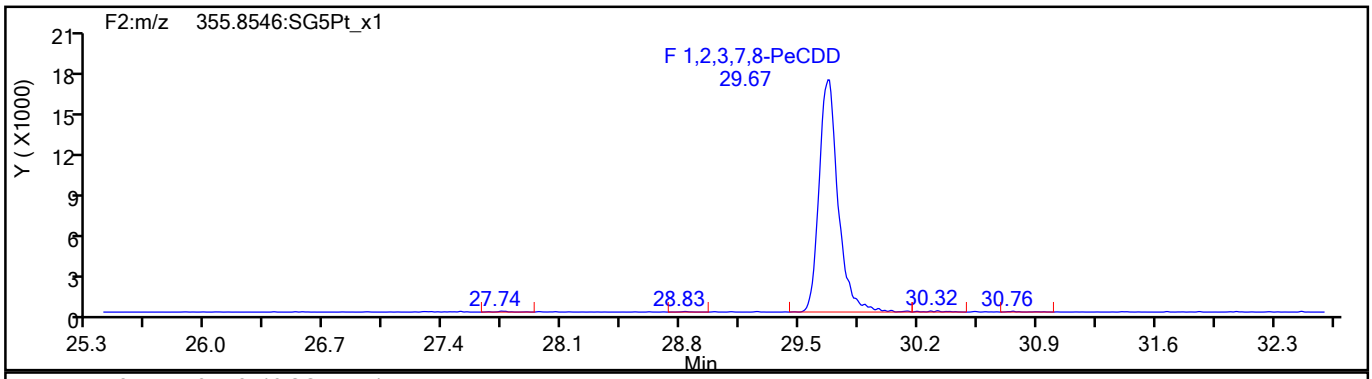

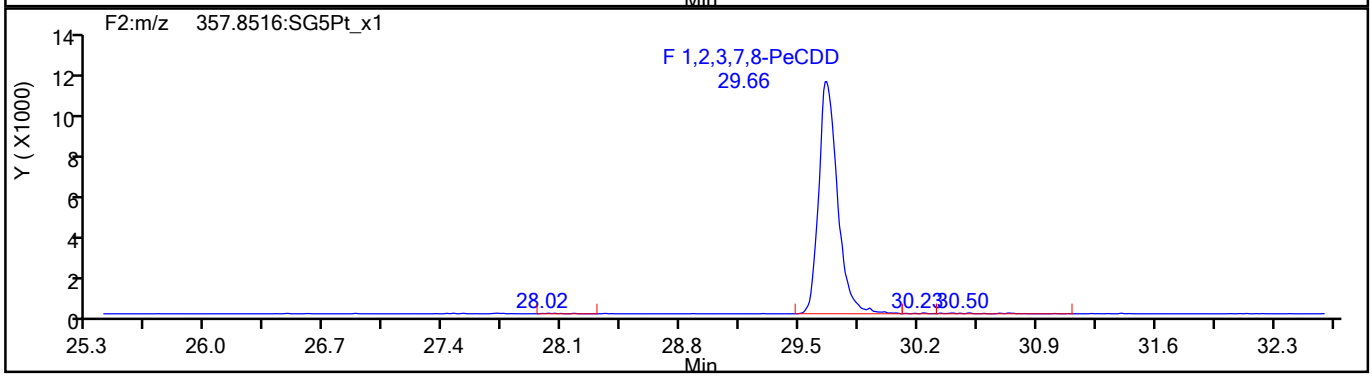

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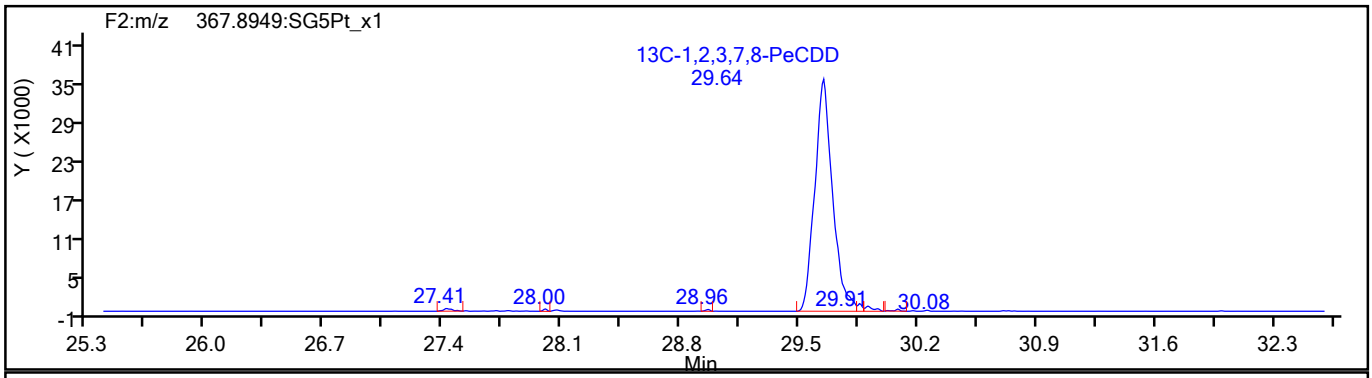

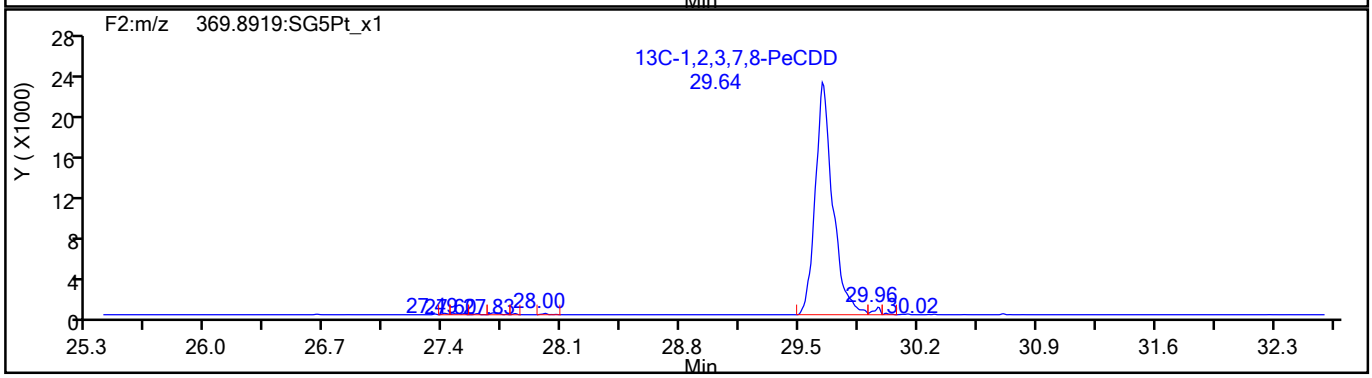

776886

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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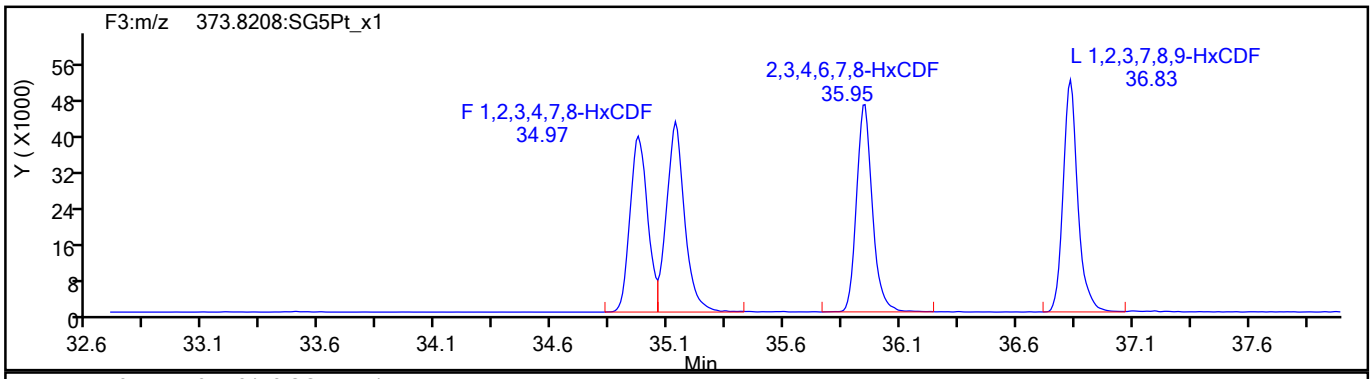

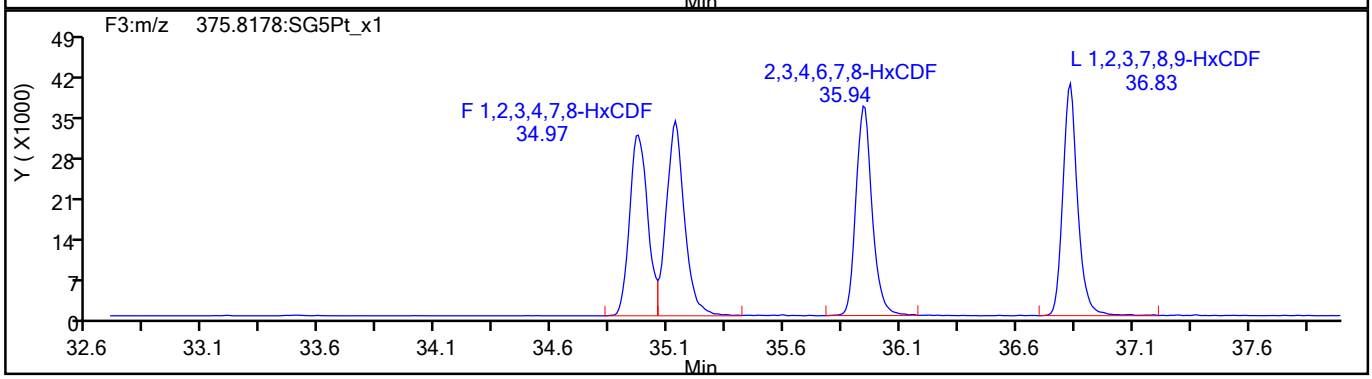

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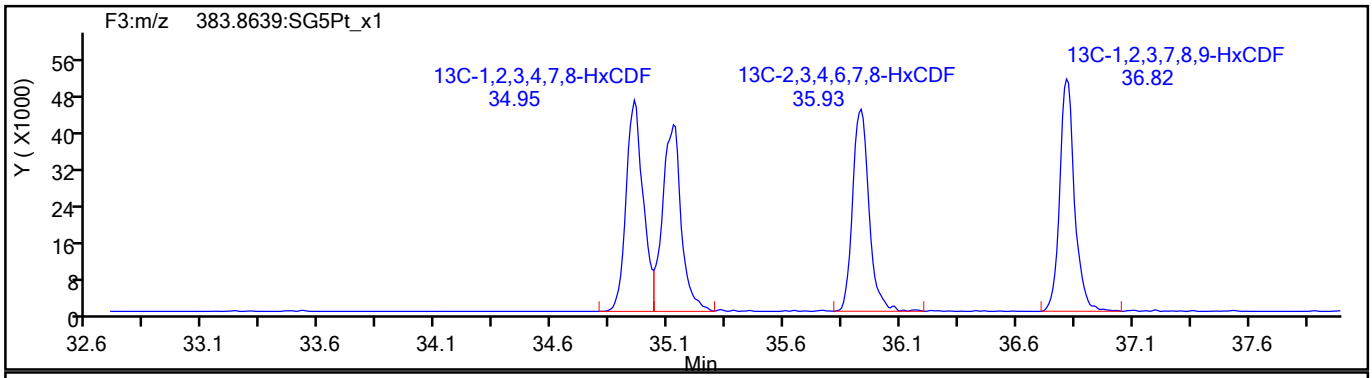

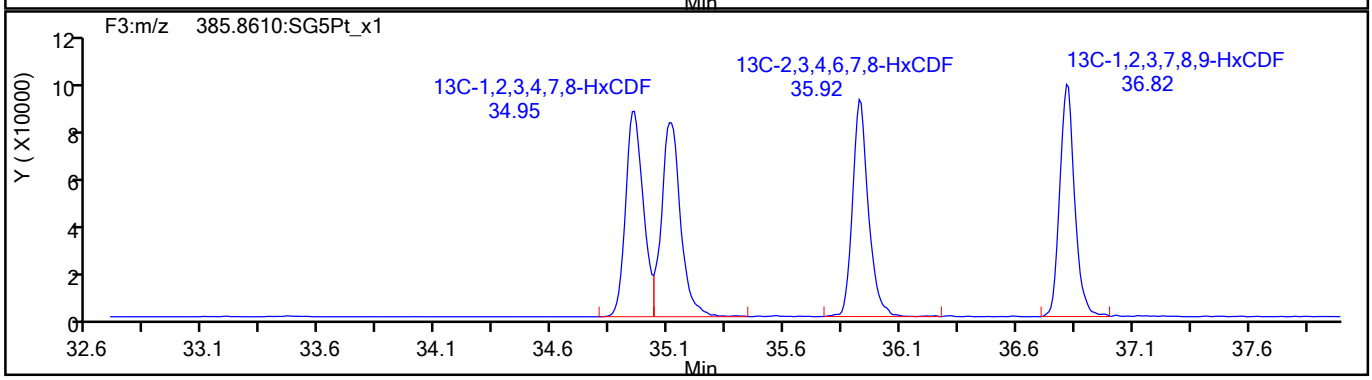

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Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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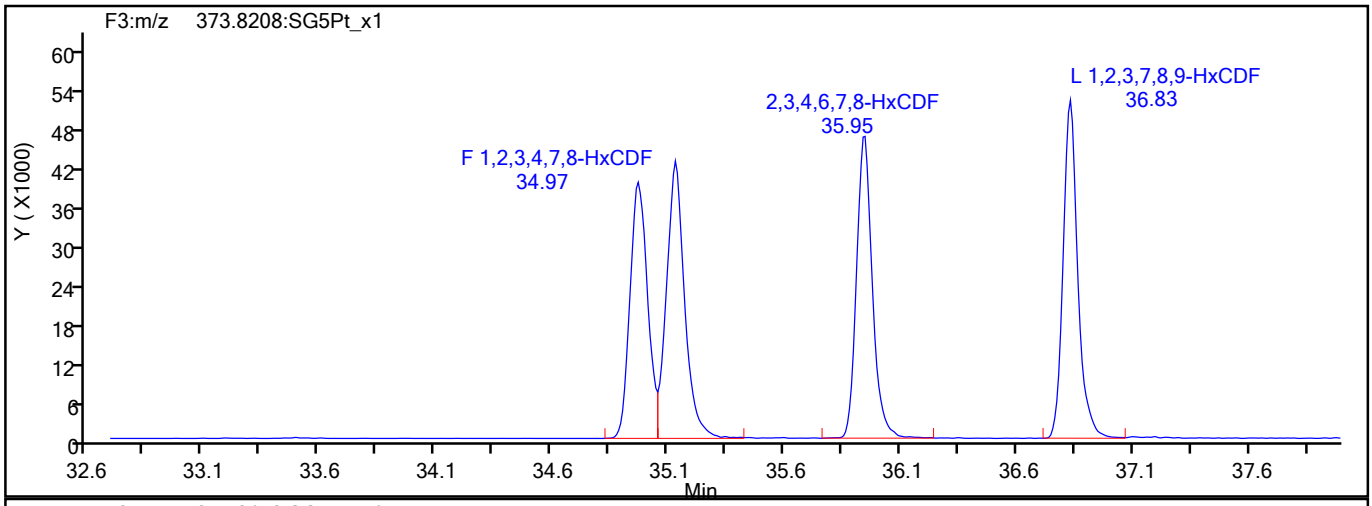

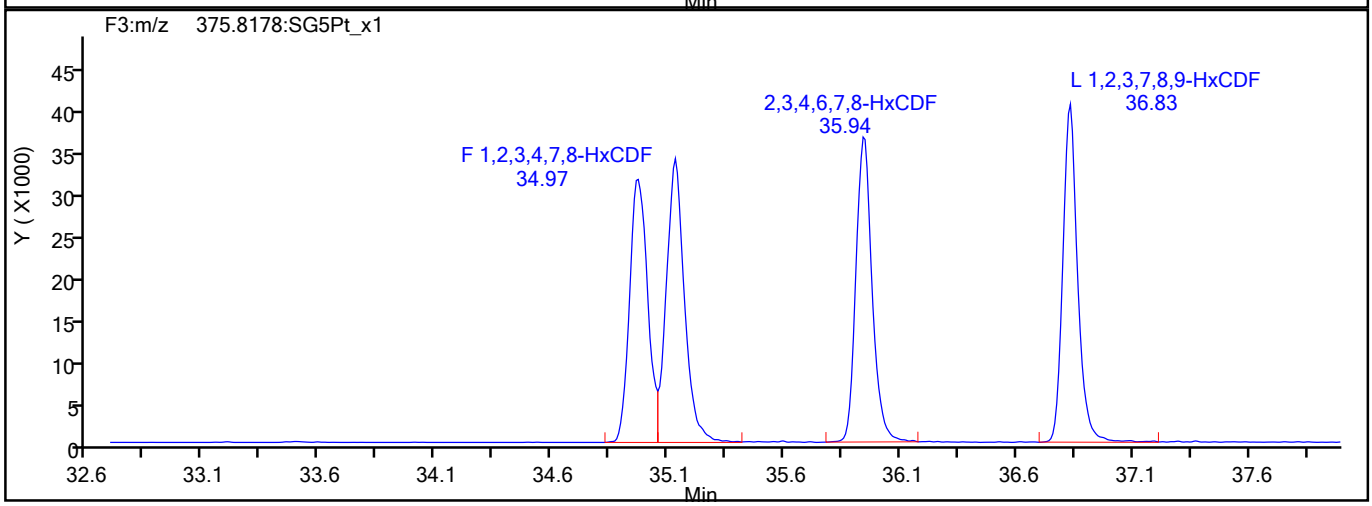

HxCDF Interference Mass

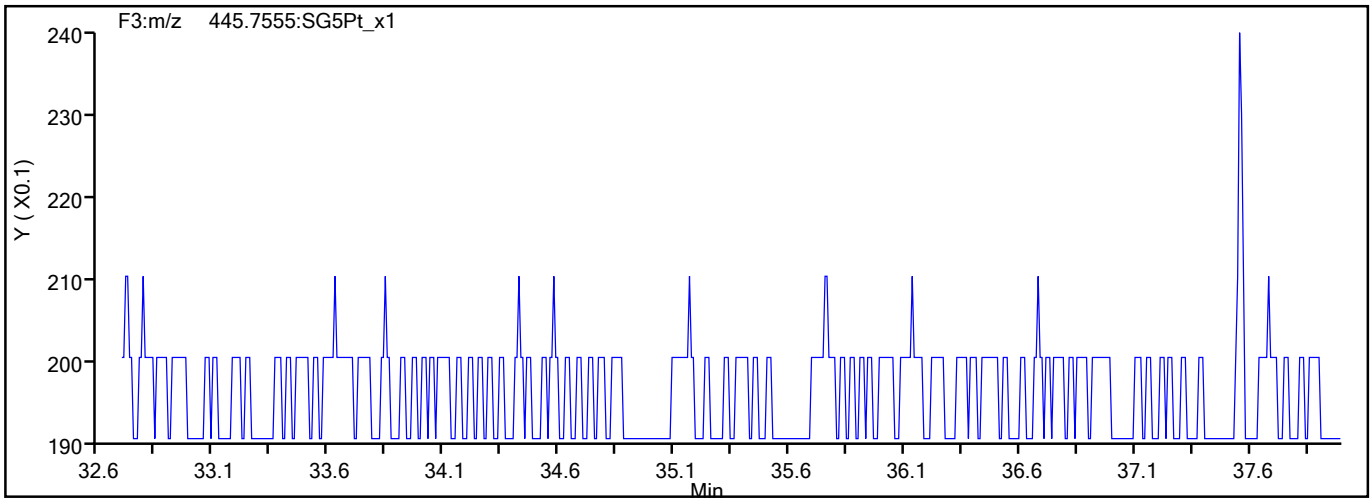

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Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

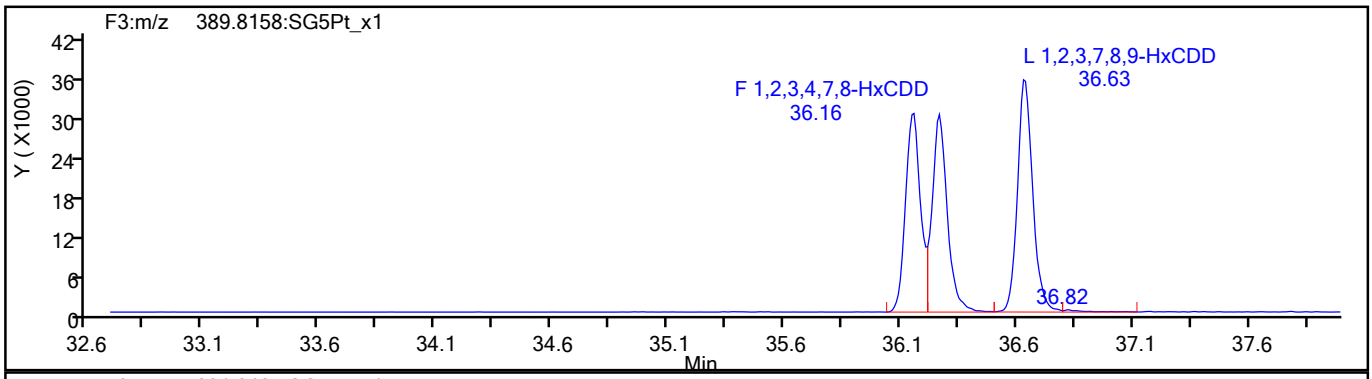

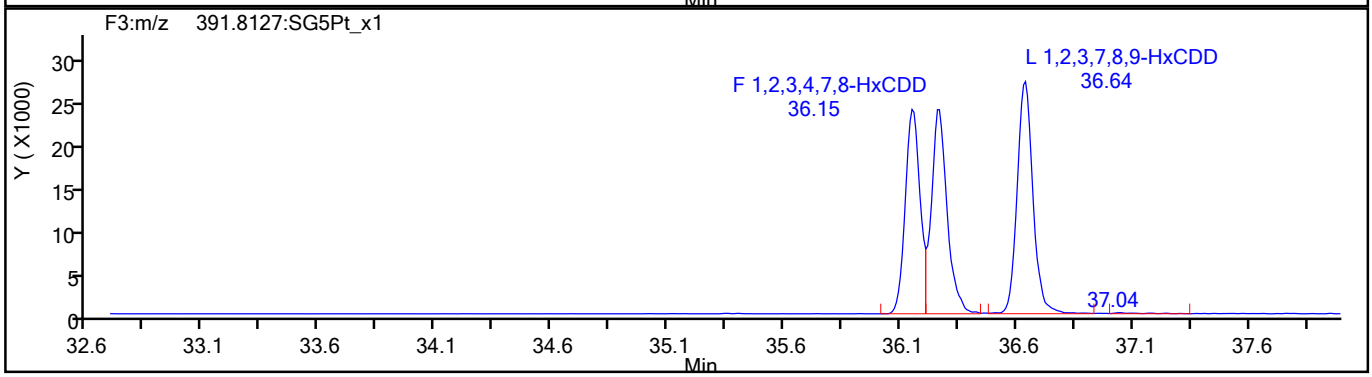

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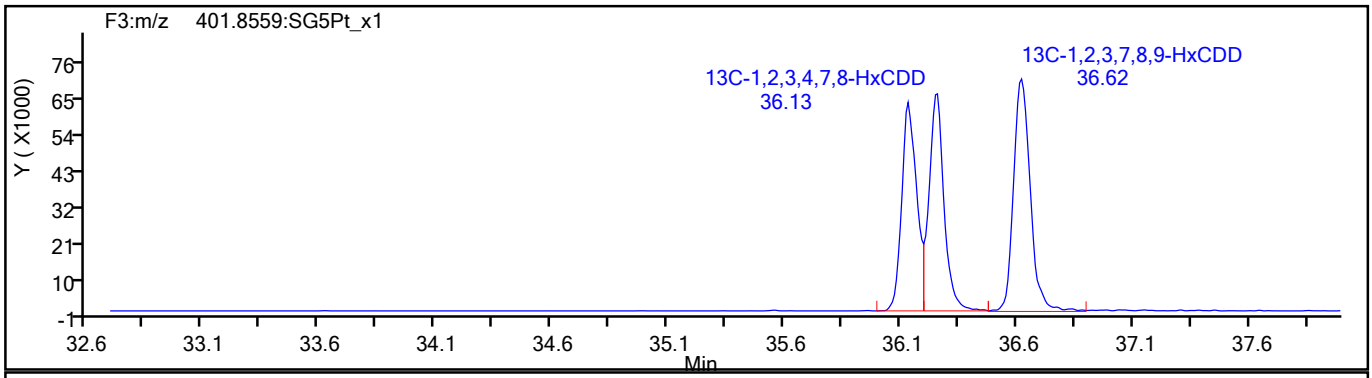

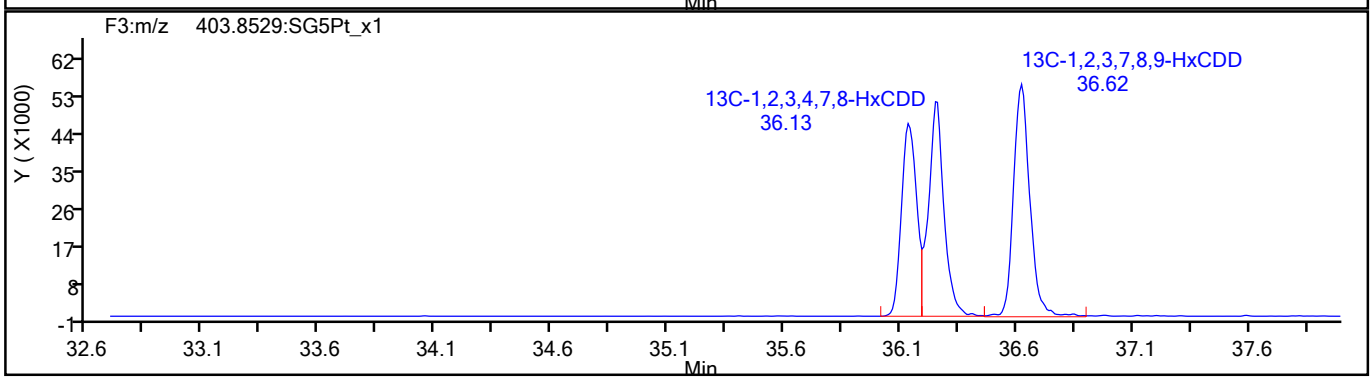

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Eurofins TestAmerica, Sacramento

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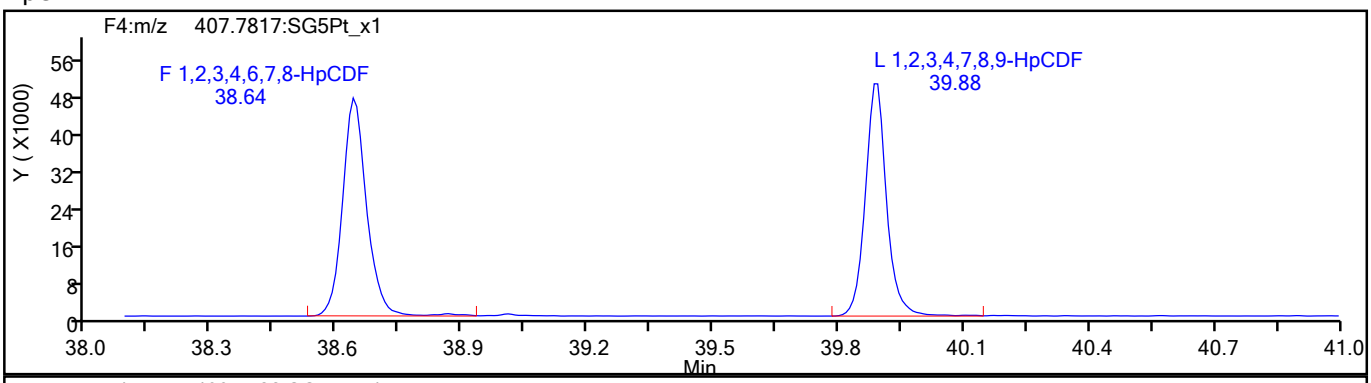

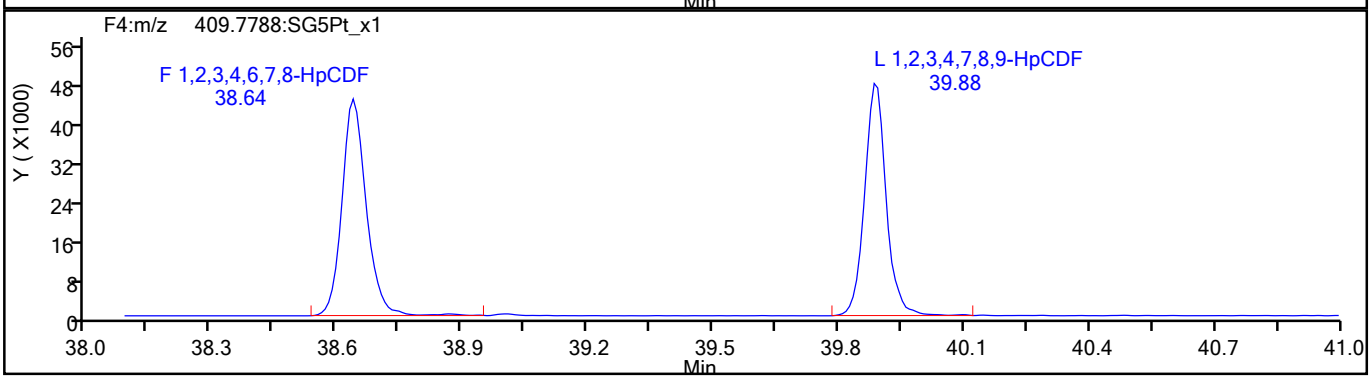

HpCDF Standards

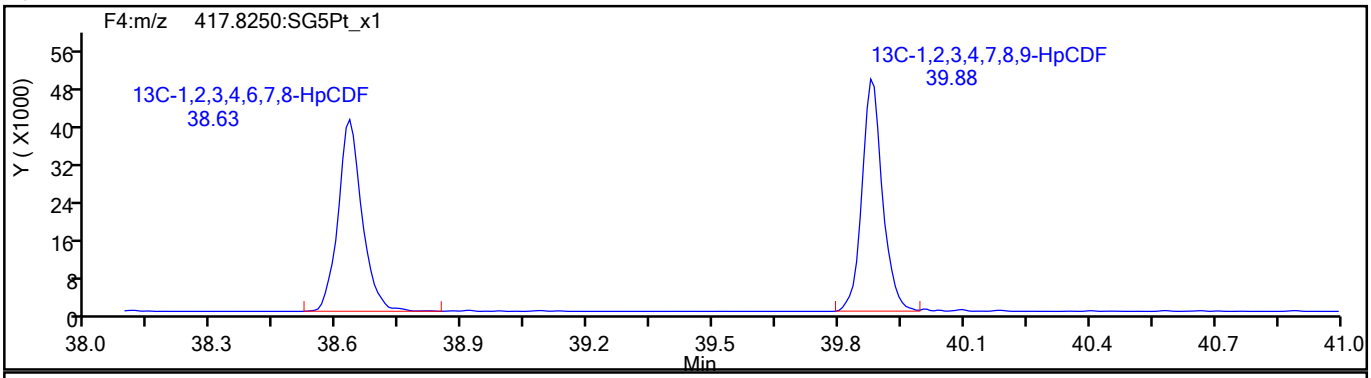

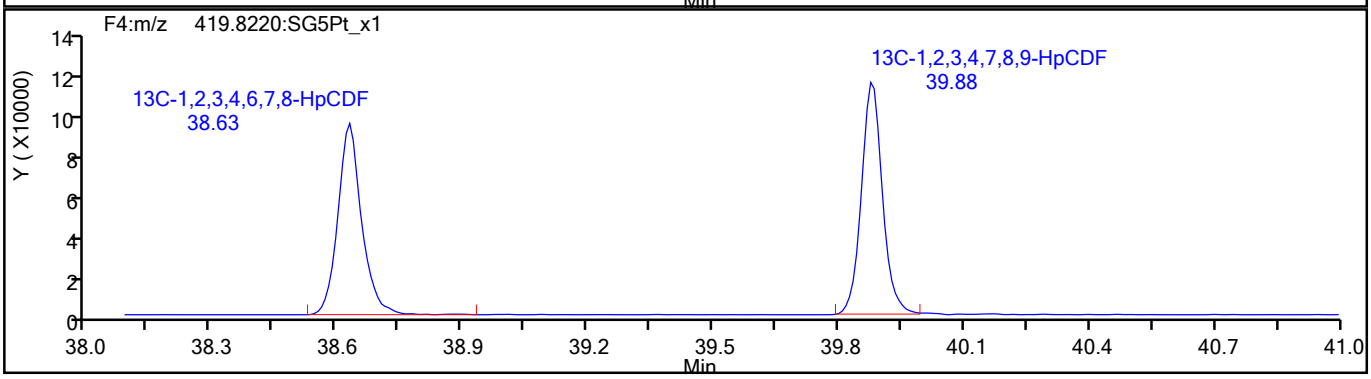

776890

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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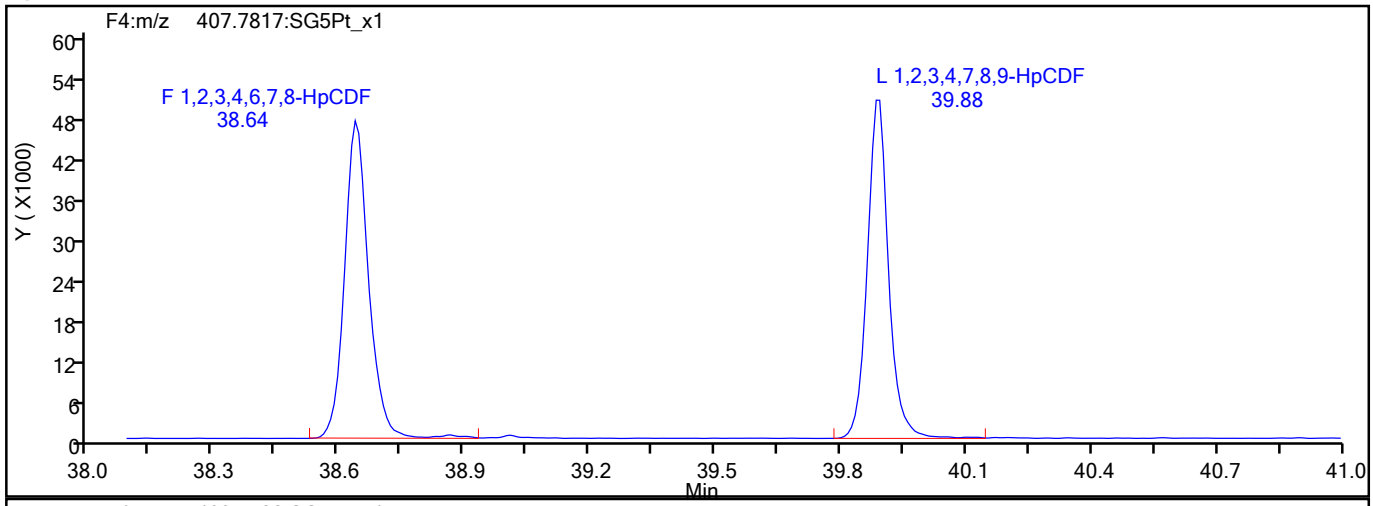

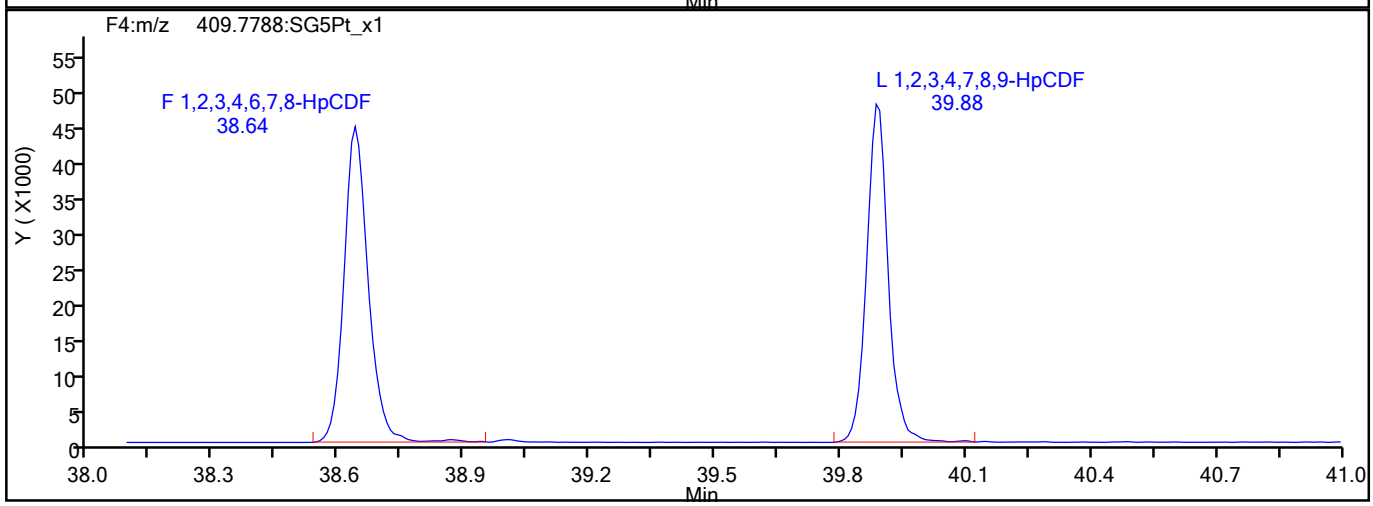

HpCDF Interference Mass

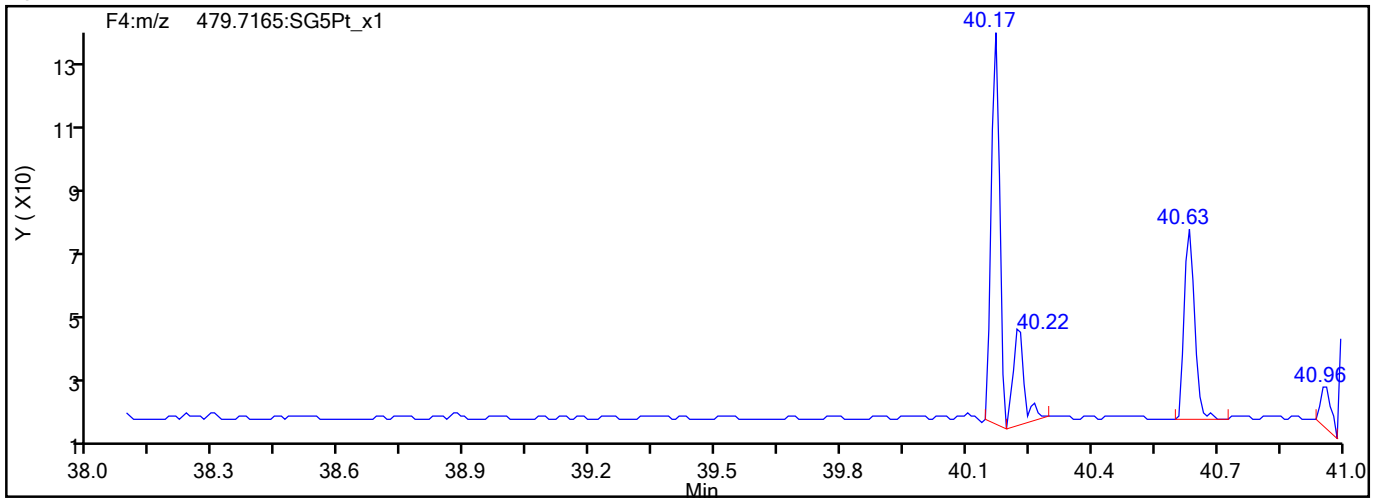

776891

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

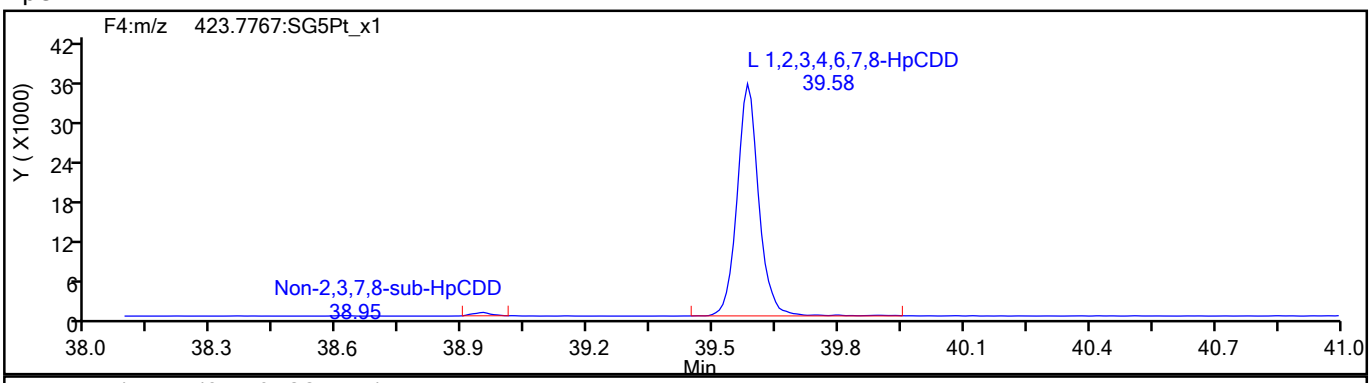

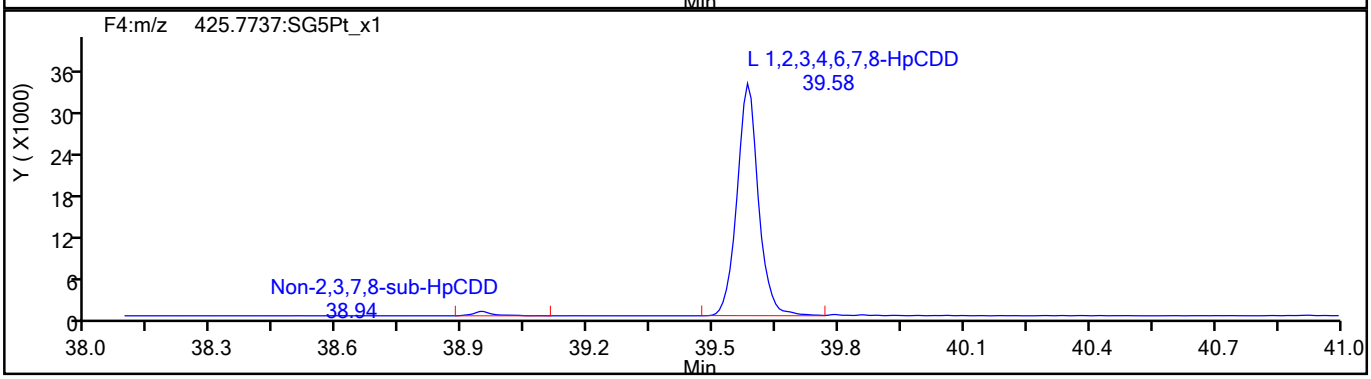

HpCDD Standards

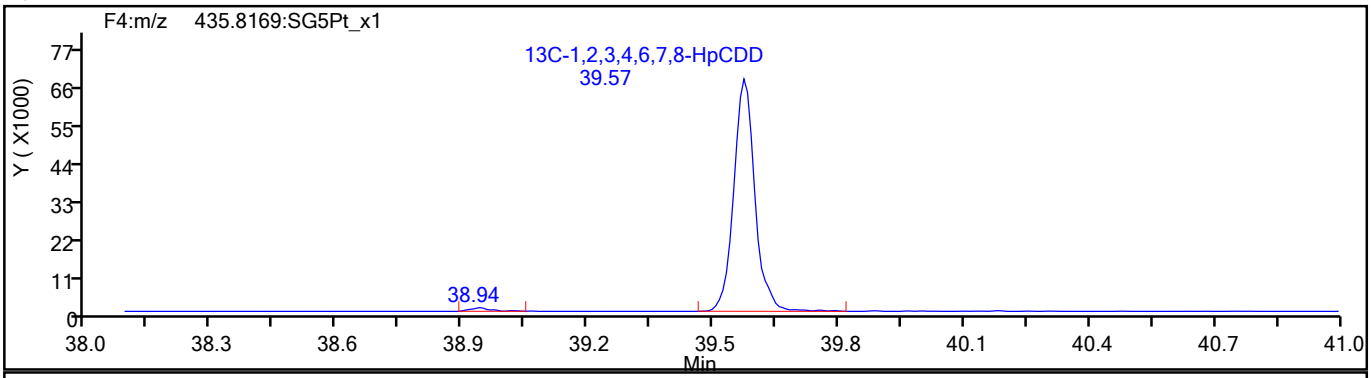

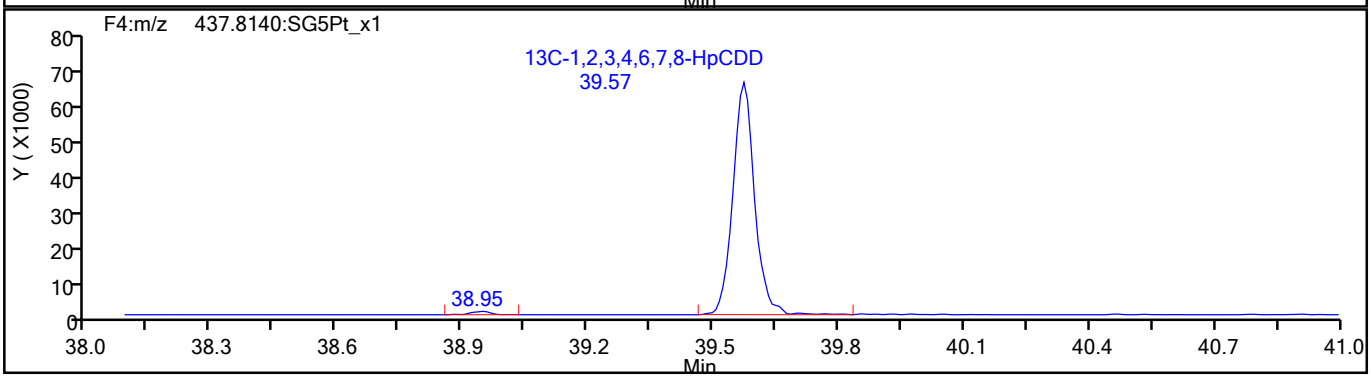

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Eurofins TestAmerica, Sacramento

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OCDF

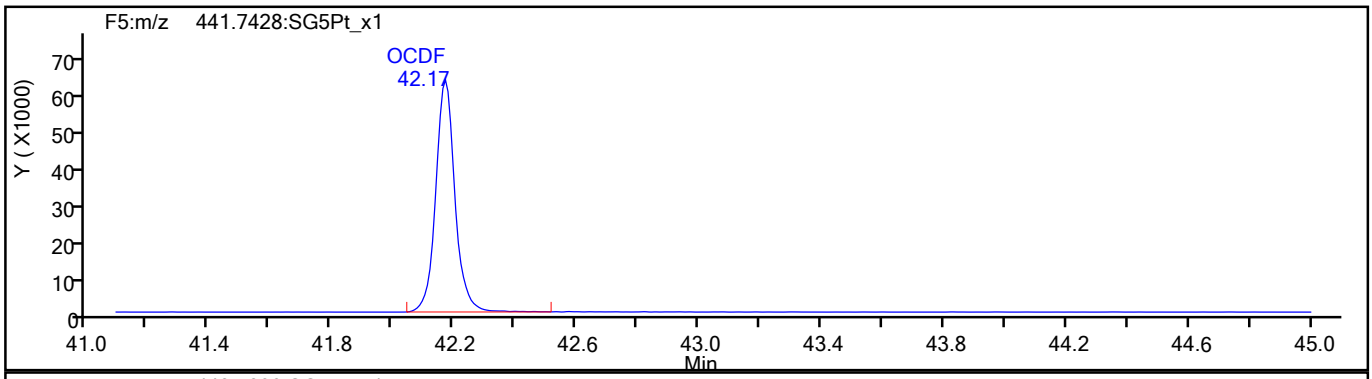

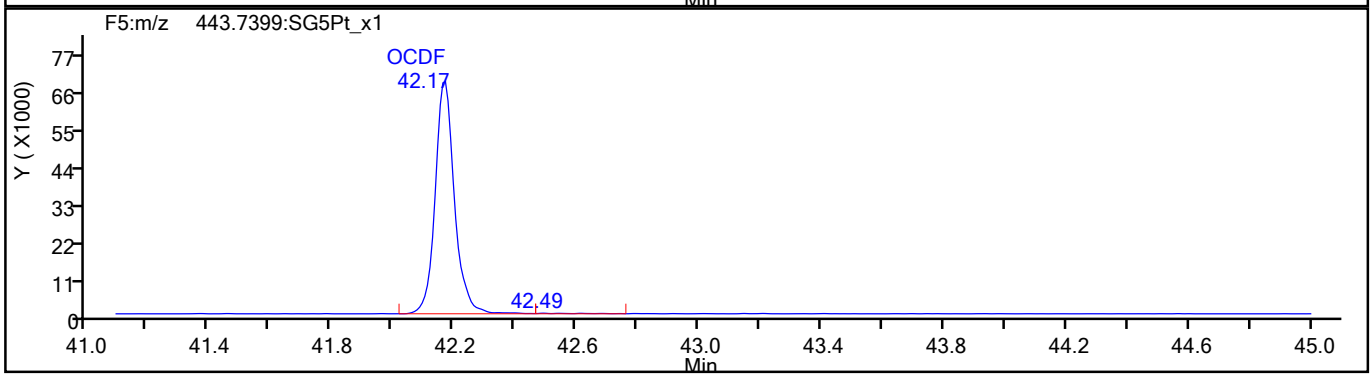

OCDF Standards

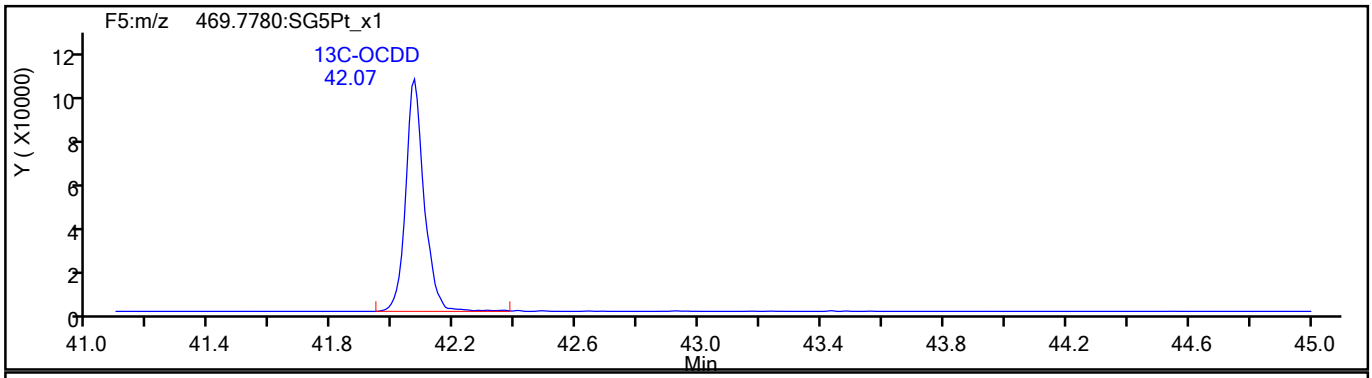

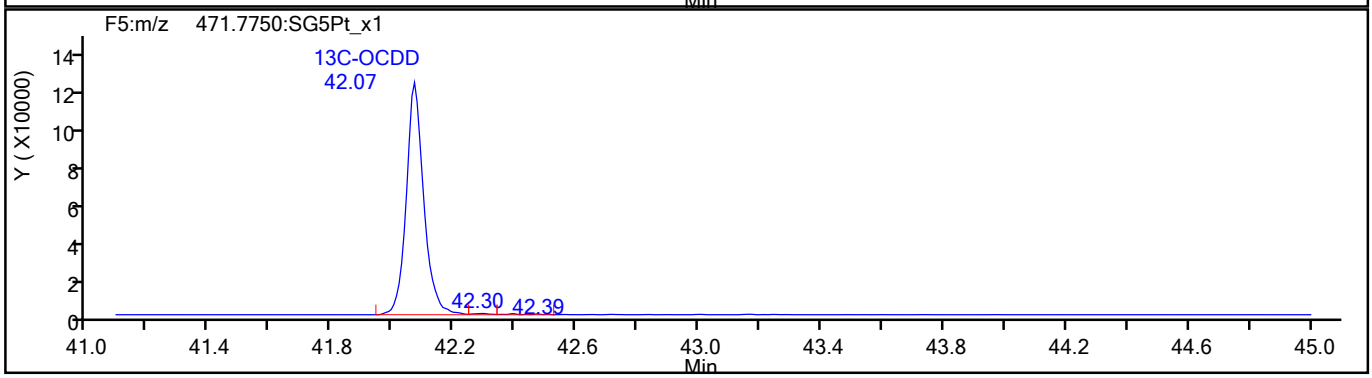

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Eurofins TestAmerica, Sacramento

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OCDF

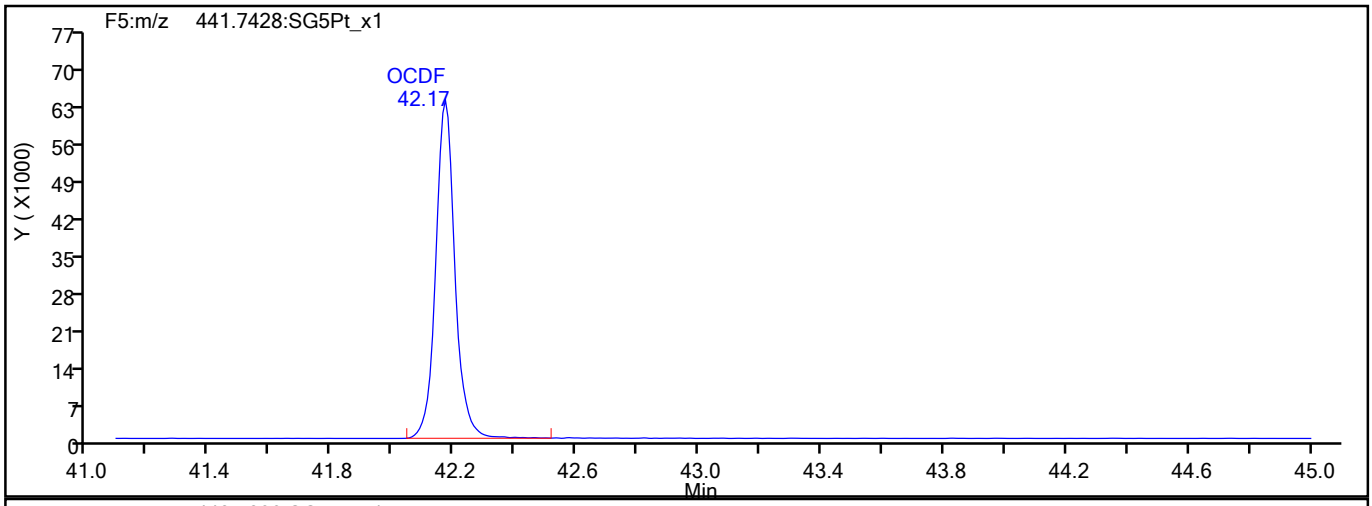

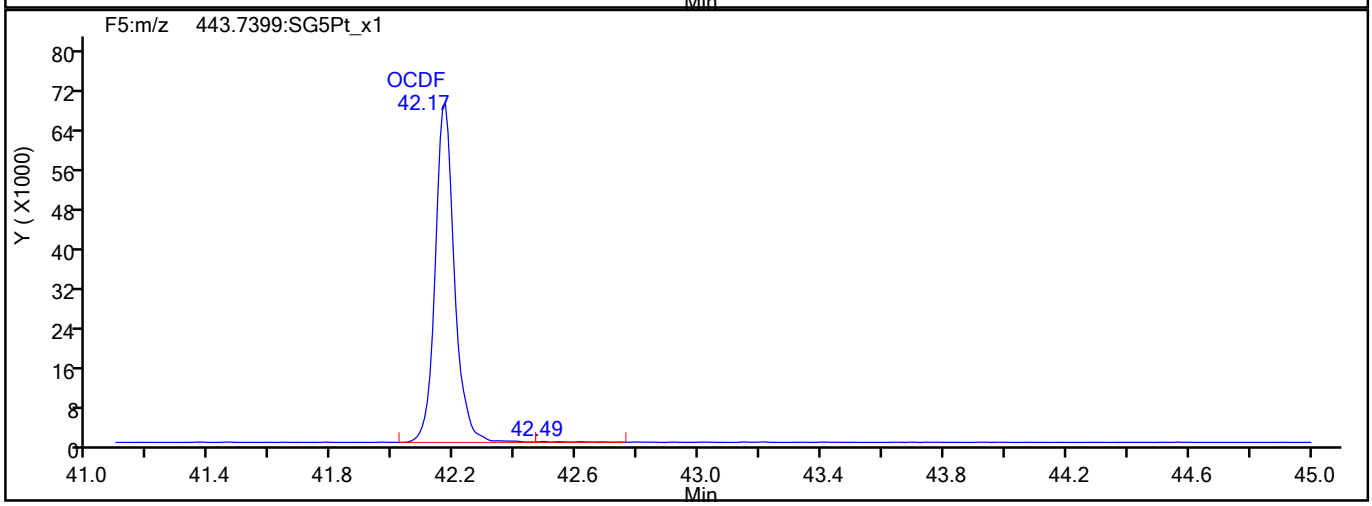

OCDF Interference Mass

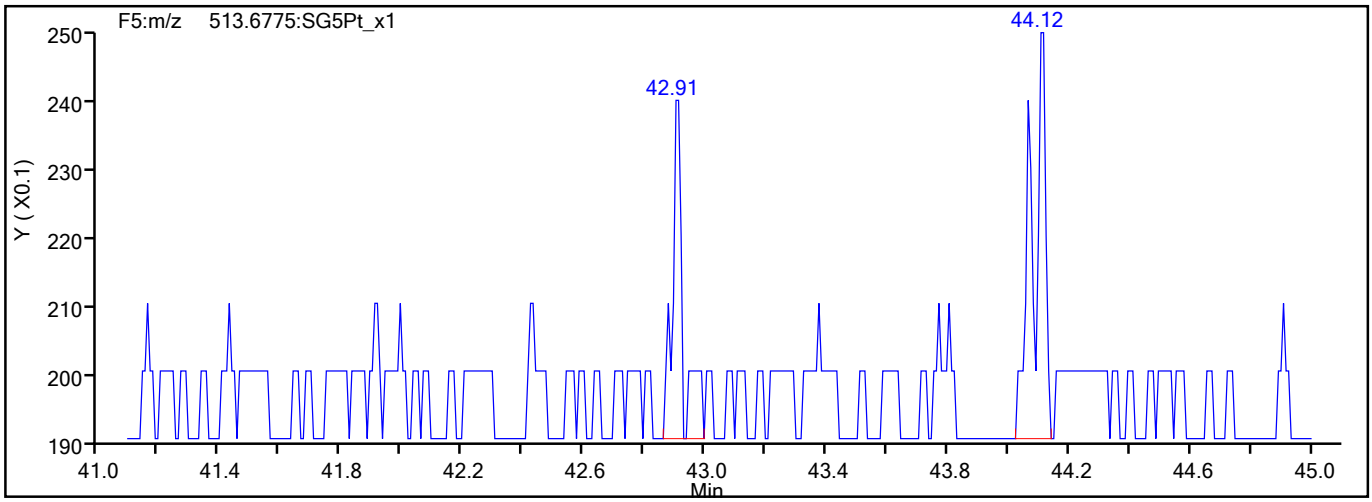

776894

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDD

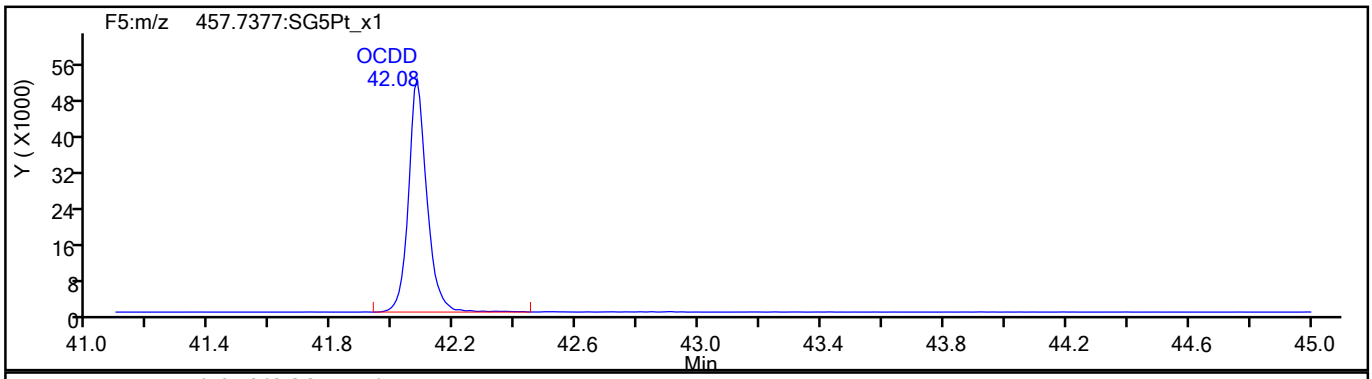

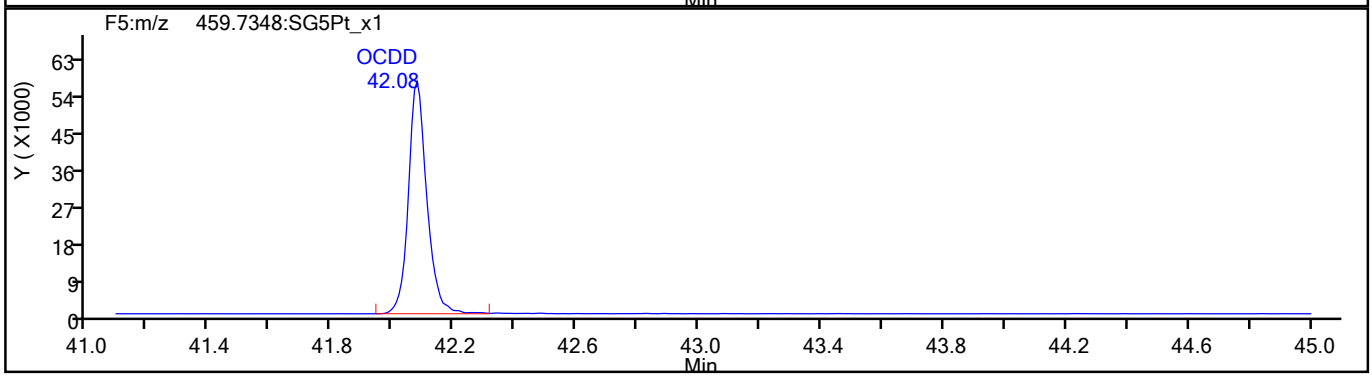

OCDD Standards

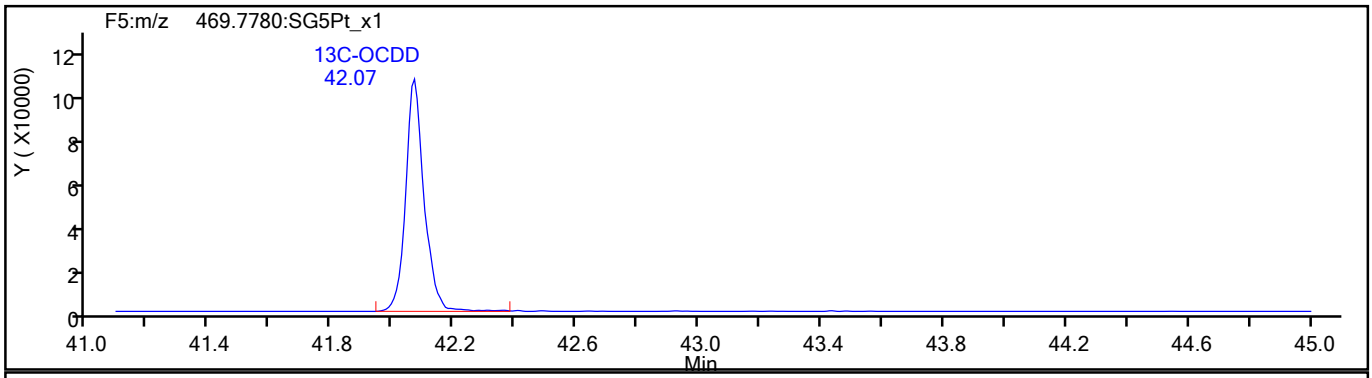

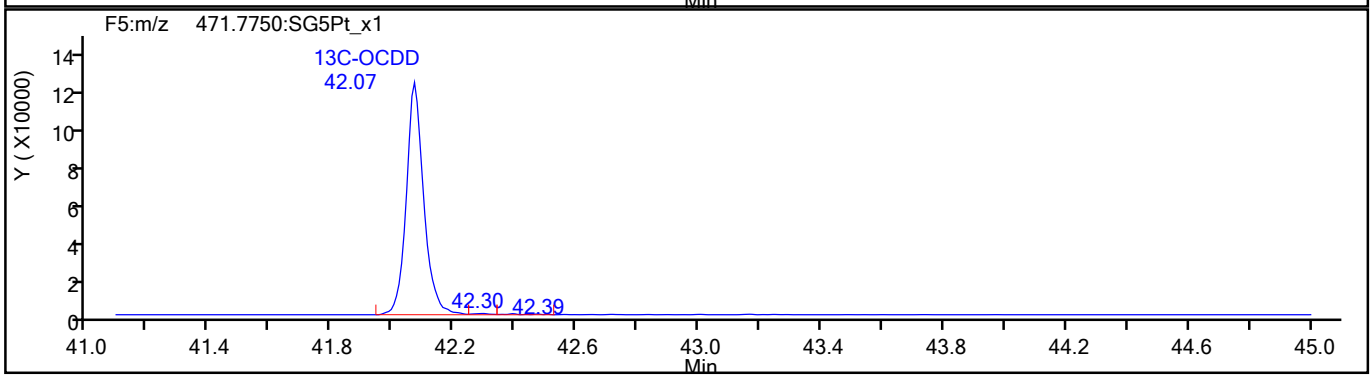

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Eurofins TestAmerica, Sacramento

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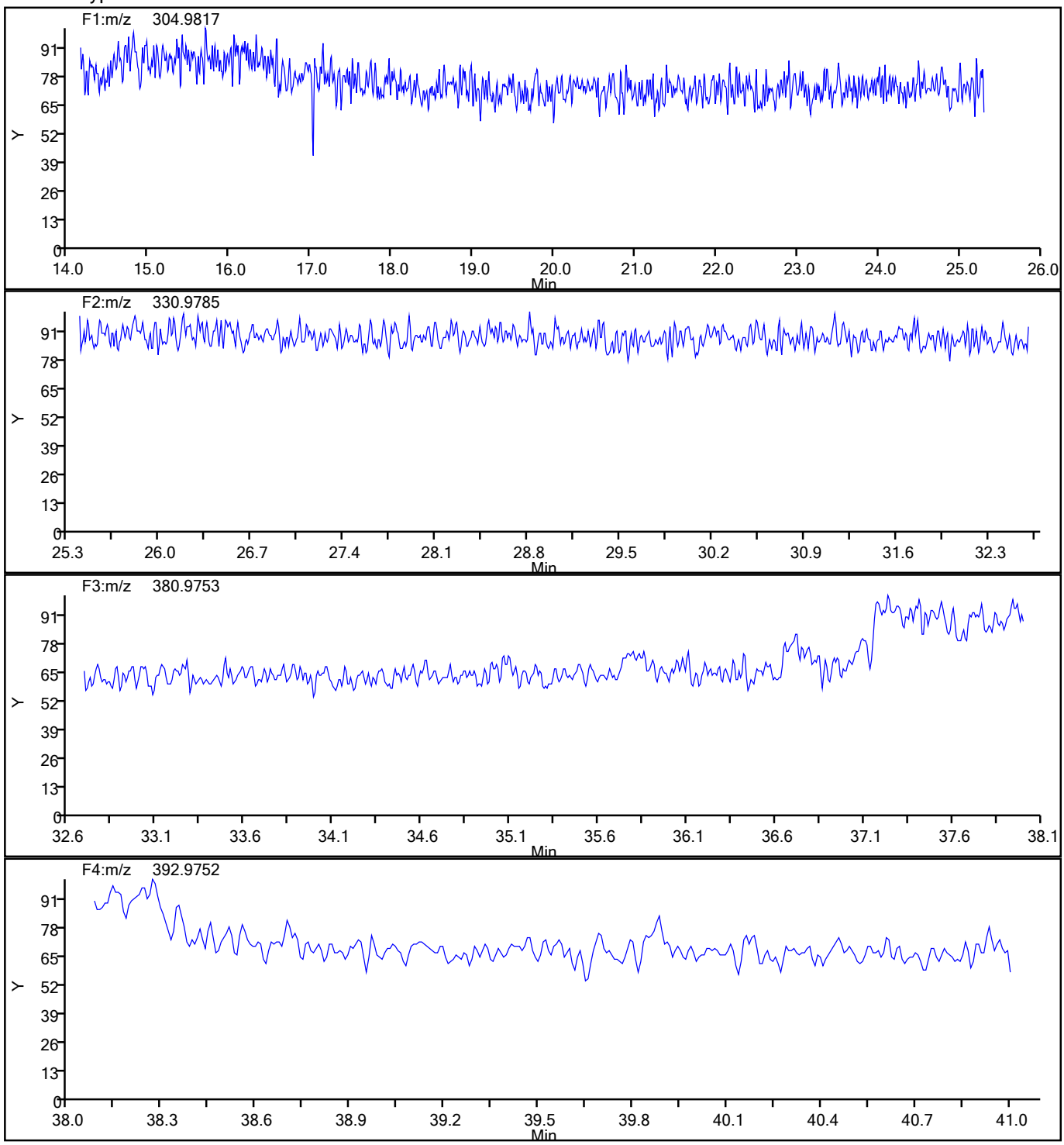

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Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

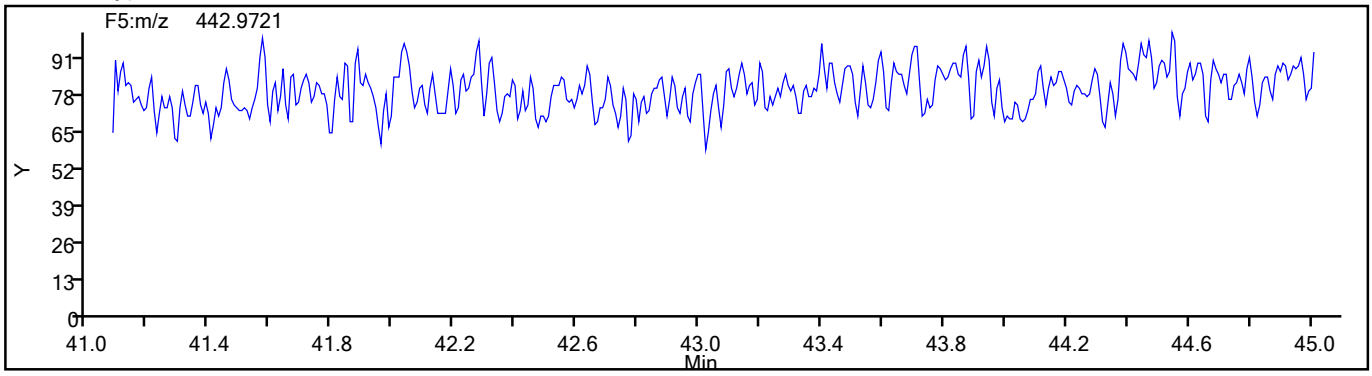

776897

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-517462/43 Calibration Date: 08/19/2021 01:32

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_47.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.245		11.5	10.0	115	84-120
2,3,7,8-TCDD	AveID	1.075	1.091		10.1	10.0	101	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.086		51.5	50.0	103	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9679		48.0	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.034		49.4	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.177		51.3	50.0	103	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.349		55.4	50.0	111	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.333		54.9	50.0	110	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9806		46.2	50.0	92	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9110		45.9	50.0	92	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.012		45.6	50.0	91	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.321		53.3	50.0	107	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.388		48.1	50.0	96	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.035		49.3	50.0	99	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.305		49.8	50.0	100	86-116
OCDD	AveID	1.062	1.020		96.0	100	96	79-126
OCDF	AveID	1.317	1.321		100	100	100	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.297		96.4	100	96	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9349		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.121		98.3	100	98	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.082		96.1	100	96	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6859		95.7	100	96	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.092		113	100	113	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.016		94.9	100	95	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	0.9659		92.8	100	93	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8144		107	100	107	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9636		112	100	112	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9078		93.3	100	93	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7453		101	100	101	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7361		109	100	109	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.6807		99.3	100	99	77-129
13C-OCDD	Ave	0.5446	0.6101		224	200	112	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	0.9902		9.82	10.0	98	79-127

31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A b.i. NU	12	1613B/Solid	D266	KSS	10.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	10.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	10.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	10.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A bad inj.	27	1613B/Solid		KSS	10.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	10.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	10.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	10.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A needs 20x	31 } matrix	1613B/Solid		KSS	10.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32 }	1613B/Solid		KSS	10.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	
47	17AU21DFS1_47	CCV CS-4 HRDXNL4_00100	CCV 081721C	2	Dioxin		KSS	1.000	
48	17AU21DFS1_48	WDM HRDXNCP_00044	WDM 081721C	1	Dioxin		KSS	1.000	
49	17AU21DFS1_49	SB Solvent Blank C14	SB 081721F	3	Dioxin		KSS	1.000	
50	17AU21DFS1_50	mb 320-513879/1-a	mb 320-513879/1-a	33	1613B/Solid	D267	KSS	10.000	g
51	17AU21DFS1_51	lcs 320-513879/2-a	lcs 320-513879/2-a	34	1613B/Solid		KSS	10.000	g
52	17AU21DFS1_52	320-76901-a-2-a	320-76901-a-2-a	35	1613B/Solid		KSS	10.000	g
53	17AU21DFS1_53	320-76901-a-2-b ms	320-76901-a-2-b ms	36	1613B/Solid		KSS	10.000	g
54	17AU21DFS1_54	320-76901-a-2-c msd	320-76901-a-2-c msd	37	1613B/Solid		KSS	10.000	g
55	17AU21DFS1_55	320-76769-a-4-b	320-76769-a-4-b	38	1613B/Solid		KSS	10.000	g
56	17AU21DFS1_56	320-76888-a-6-a	320-76888-a-6-a	39	1613B/Solid		KSS	10.000	g
57	17AU21DFS1_57	320-76888-a-7-a	320-76888-a-7-a	40	1613B/Solid		KSS	10.000	g
58	17AU21DFS1_58	320-76888-a-8-a	320-76888-a-8-a	41	1613B/Solid		KSS	10.000	g
59	17AU21DFS1_59	320-76888-a-9-a	320-76888-a-9-a	42	1613B/Solid		KSS	10.000	g
60	17AU21DFS1_60	SB Solvent Blank C14	SB 081721G	3	Dioxin		KSS	1.000	
61	17AU21DFS1_61	Resolution Check	RC 081721D	46			KSS	1.000	

LOGFILE CHECKED)
DB 8/18/21

2

776899

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

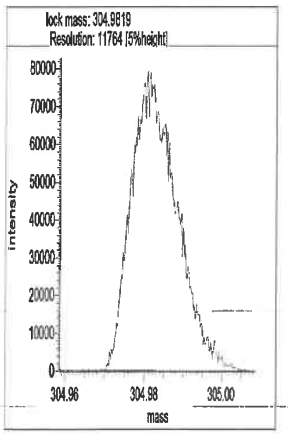

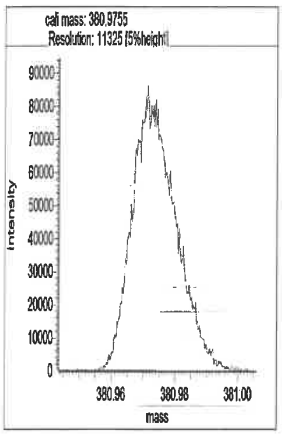

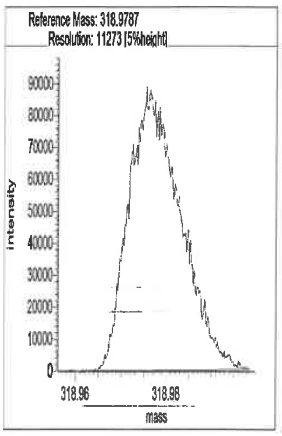

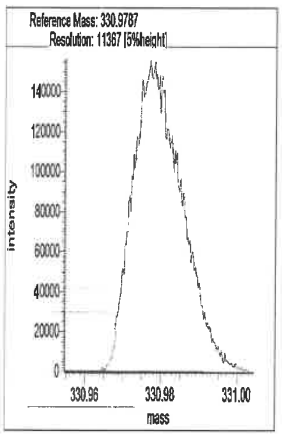

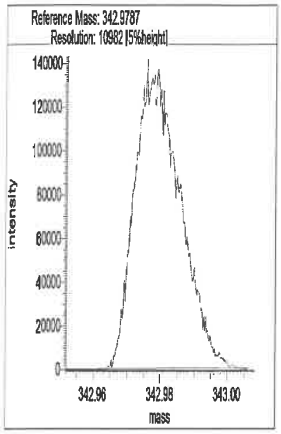

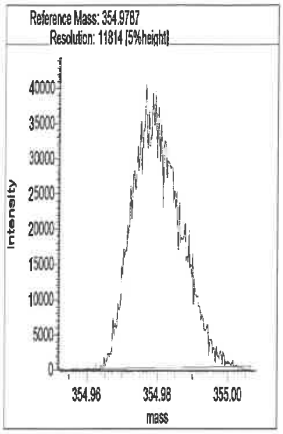

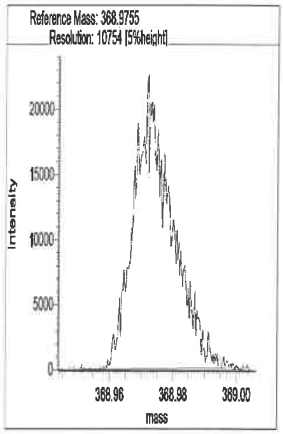

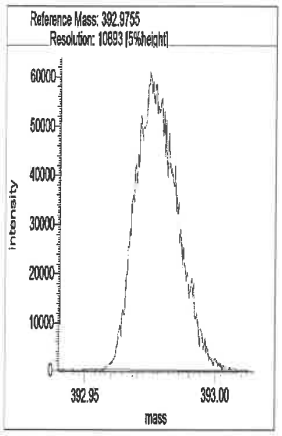

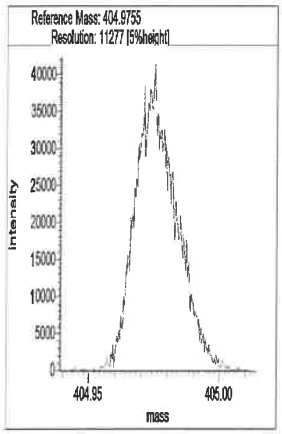

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

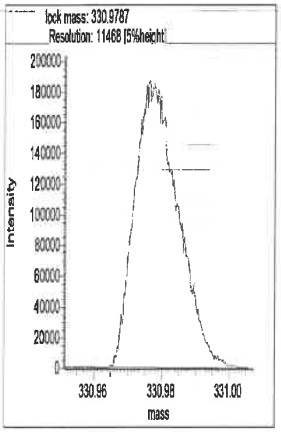

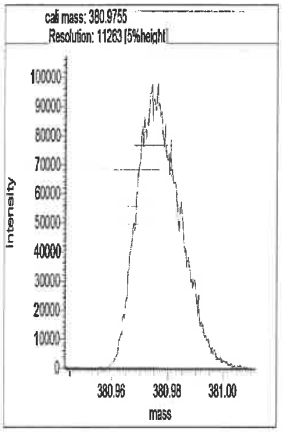

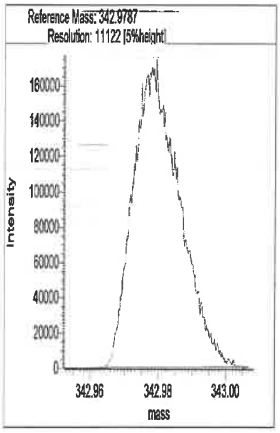

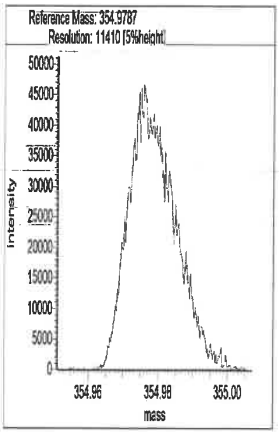

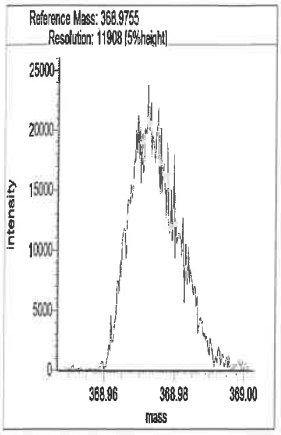

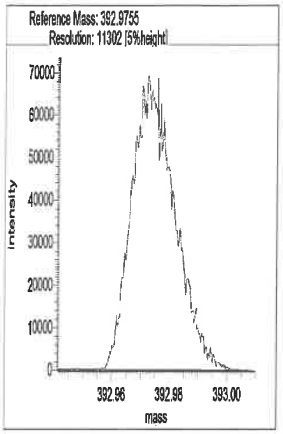

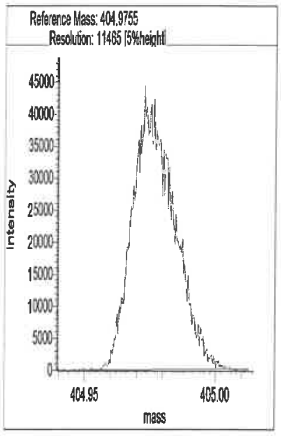

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

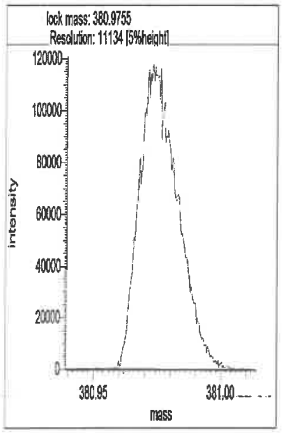

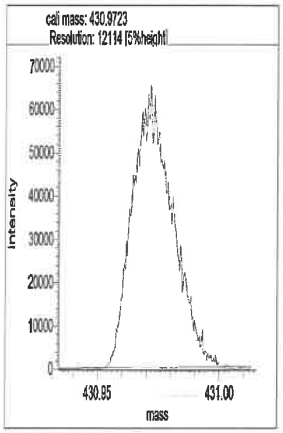

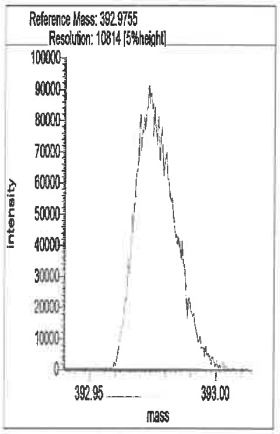

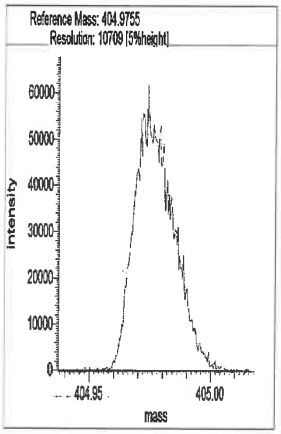

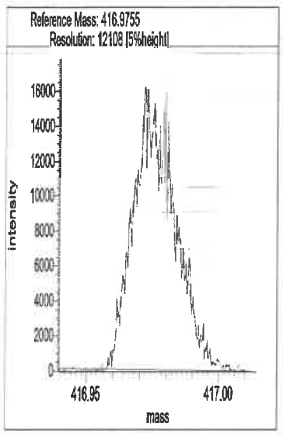

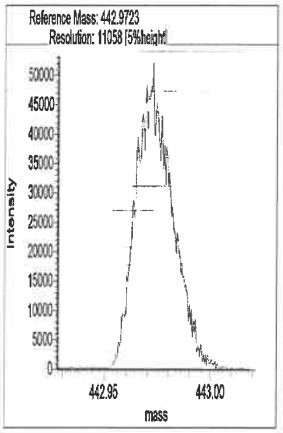

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

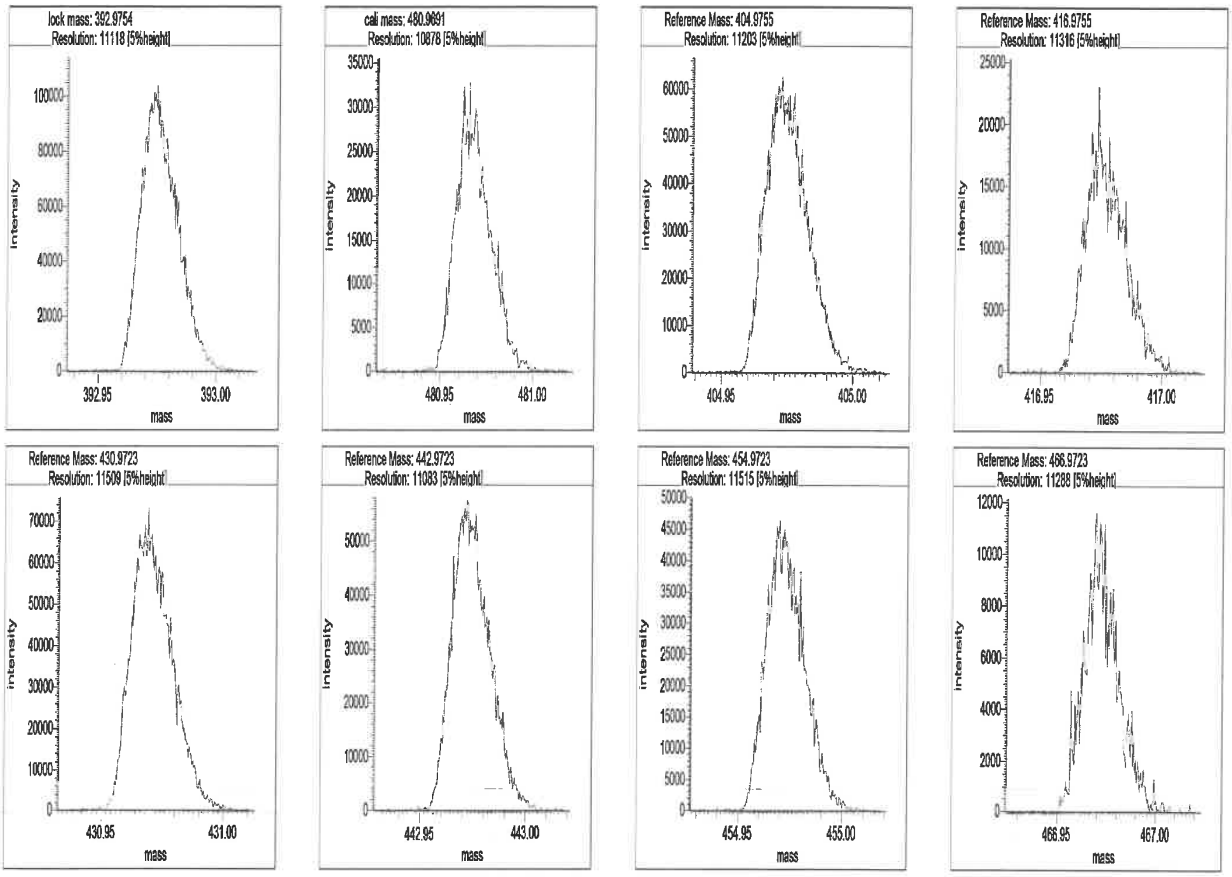

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

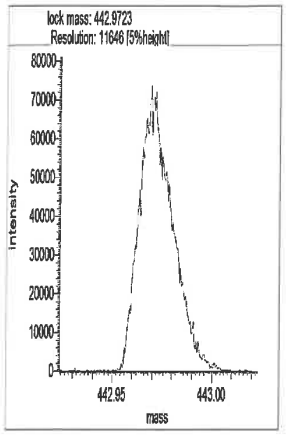
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Resolution: 11646 [5%height]
intensity
mass

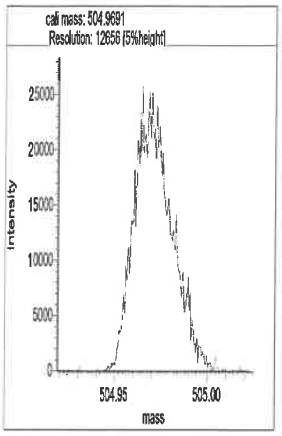
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

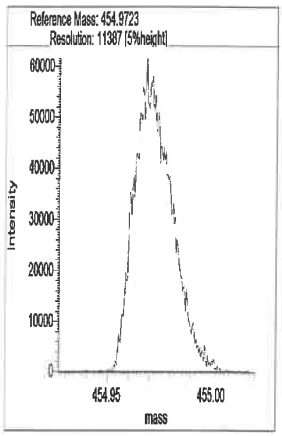
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

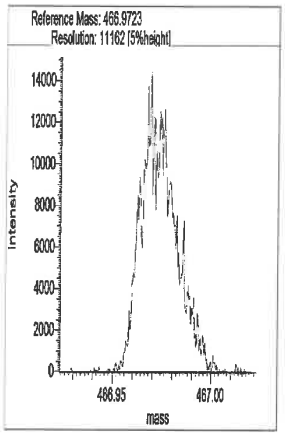
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

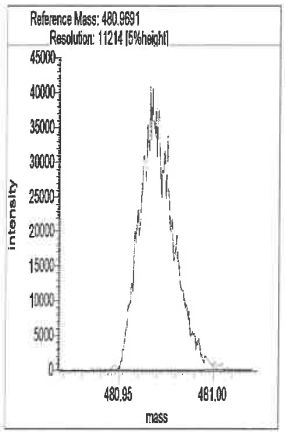
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

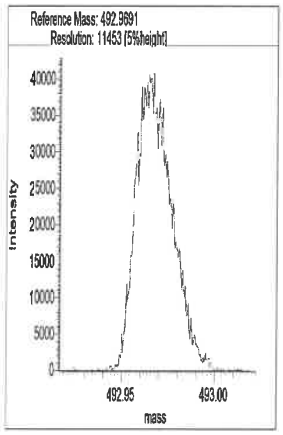
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 01:12
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10755 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10064 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11004 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10862 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10493 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11020 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10113 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10231 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9724 [5%height] ✓ ok 8/19/21

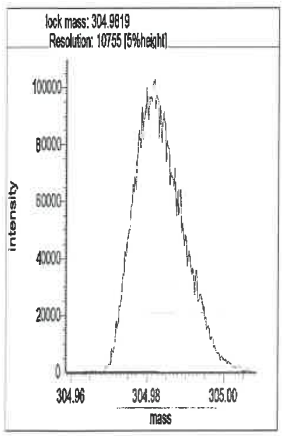

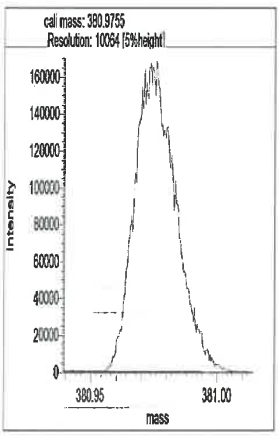

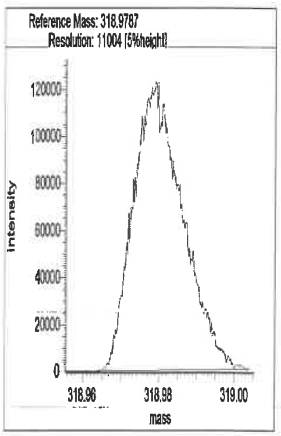

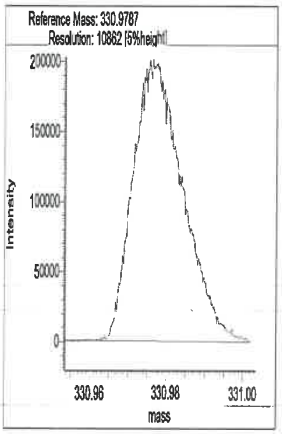

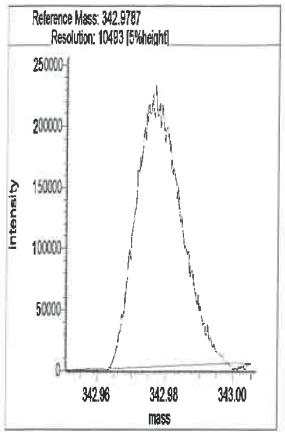

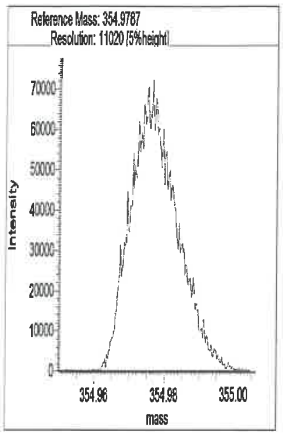

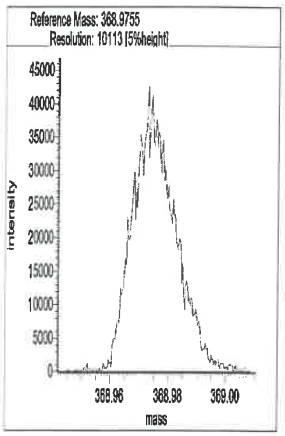

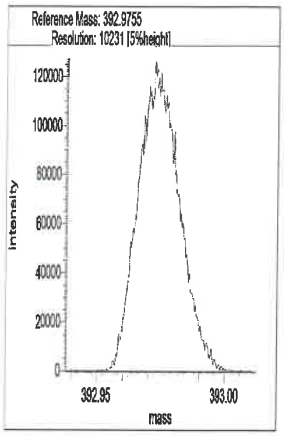

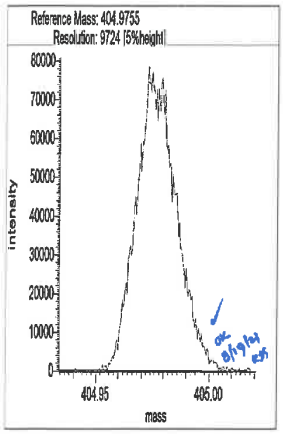

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10868 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10796 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10893 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11154 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10747 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10242 [5%height]

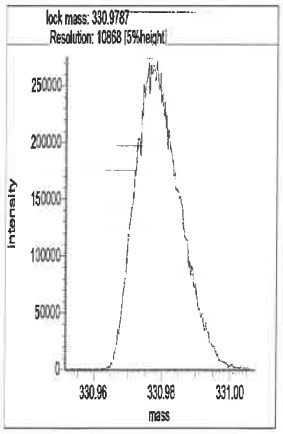

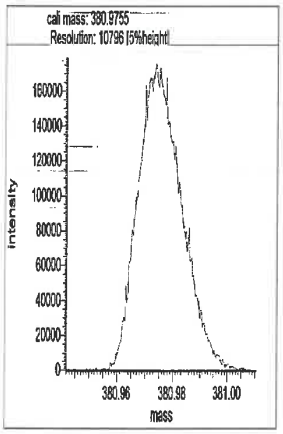

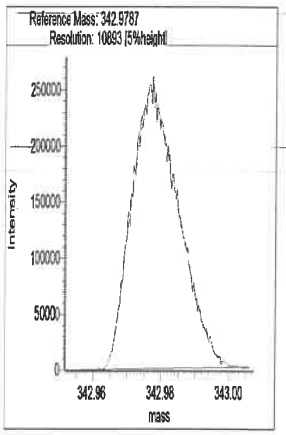

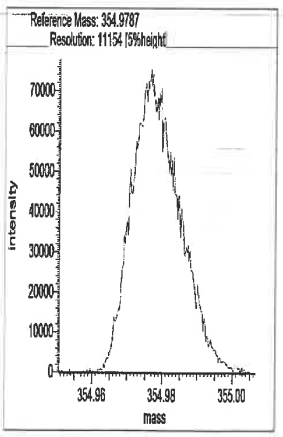

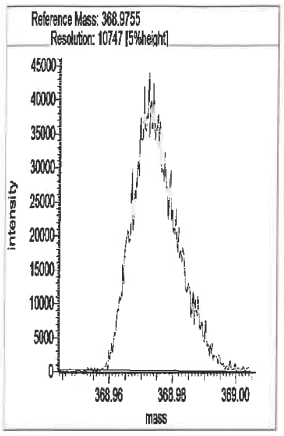

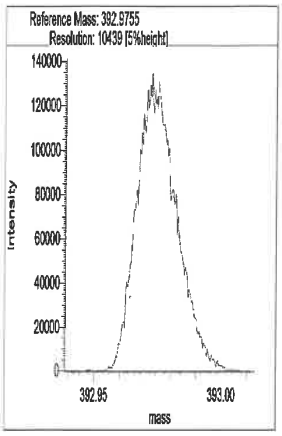

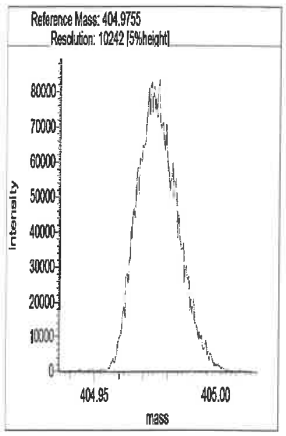

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11012 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10577 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11026 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10658 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11077 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10816 [5%height]

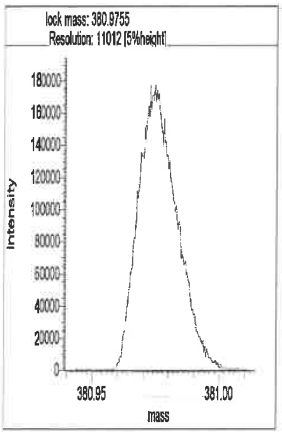

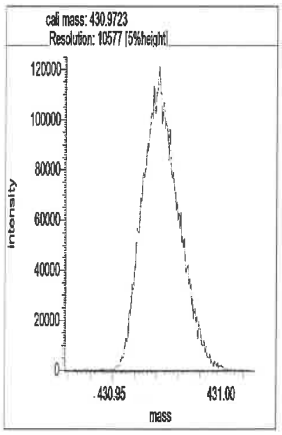

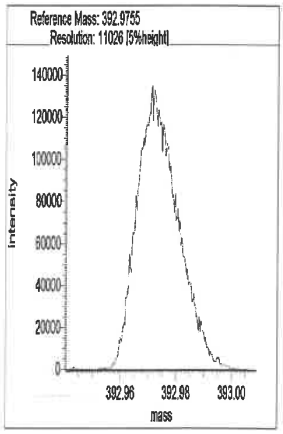

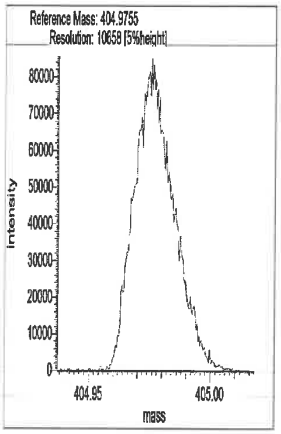

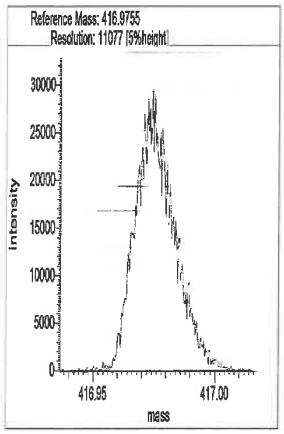

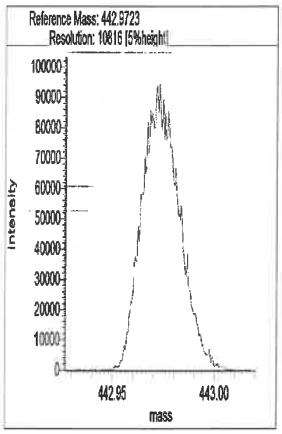

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11599 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10409 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11028 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11067 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10523 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10883 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10838 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11180 [5%height]

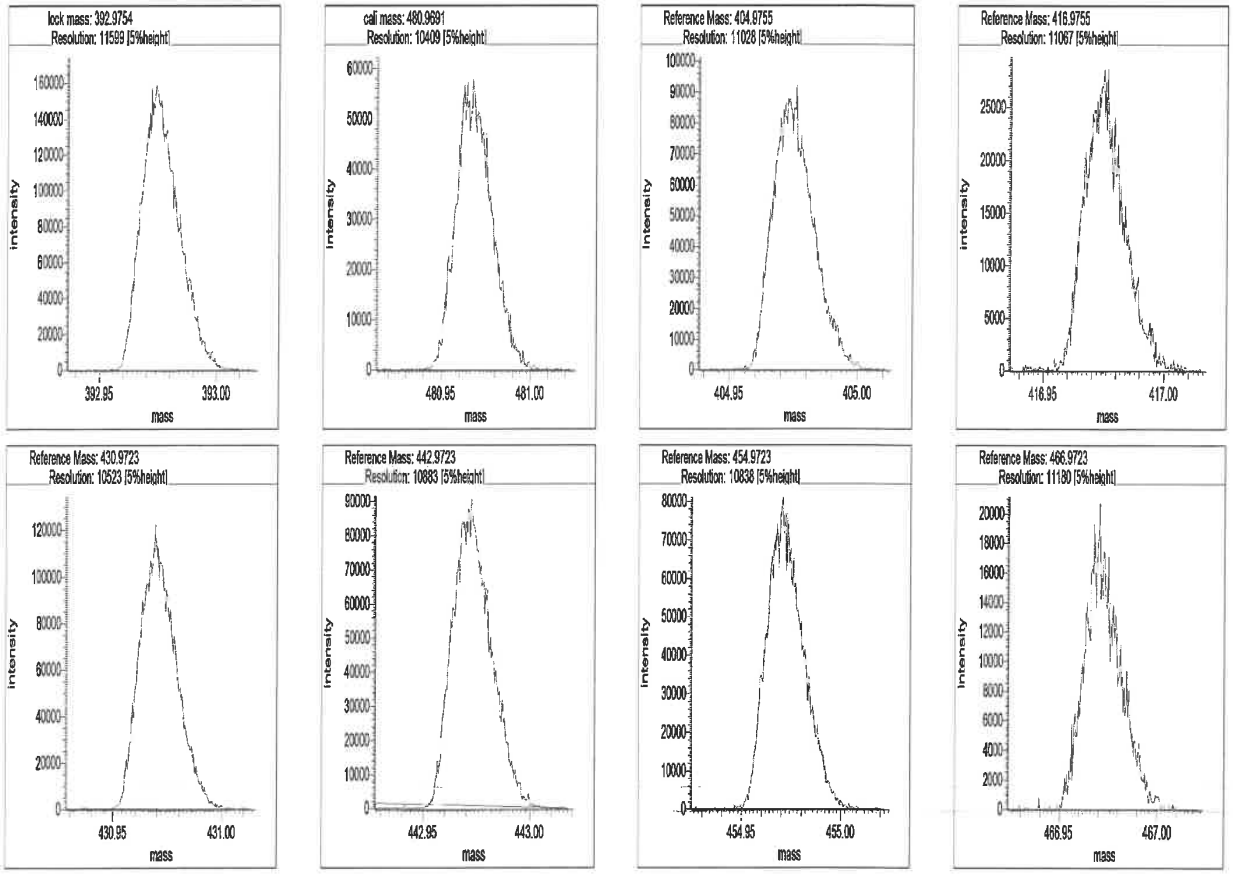

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11216 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10772 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11002 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11259 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10778 [5%height]

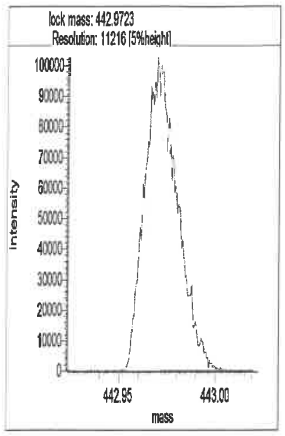
lock mass: 442.9723
Resolution: 11216 [5%height]
Intensity
mass

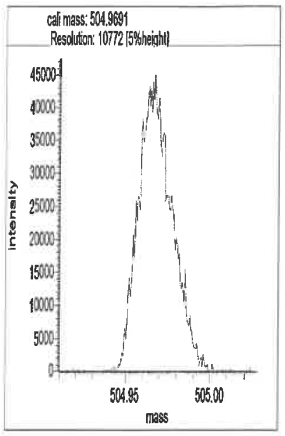
cali mass: 504.9691
Resolution: 10772 [5%height]
Intensity
mass

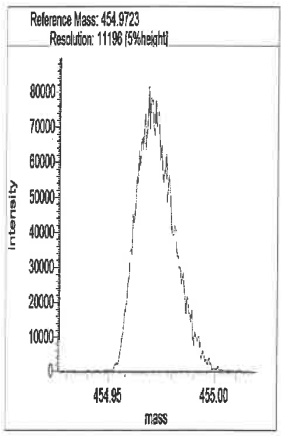
Reference Mass: 454.9723
Resolution: 11196 [5%height]
Intensity
mass

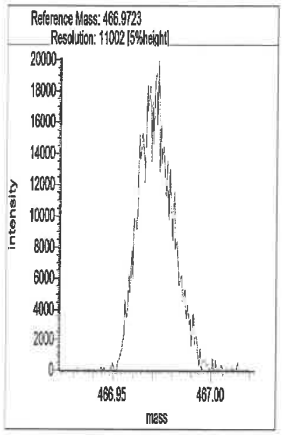
Reference Mass: 466.9723
Resolution: 11002 [5%height]
Intensity
mass

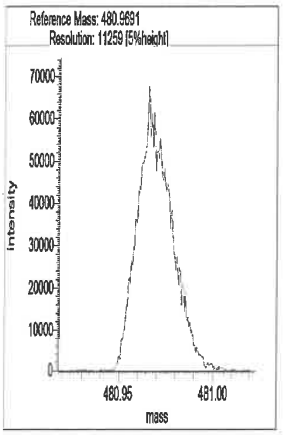
Reference Mass: 480.9691
Resolution: 11259 [5%height]
Intensity
mass

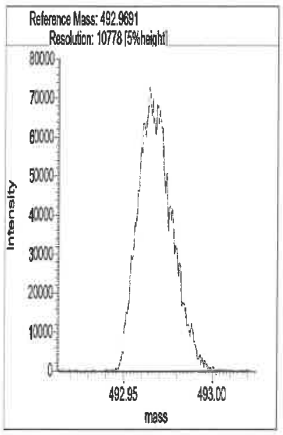
Reference Mass: 492.9691
Resolution: 10778 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 12:47
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11862 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10668 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 11408 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 11603 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11057 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11275 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11232 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10101 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9688 [5%height] ✓ 8/19/21 KCF

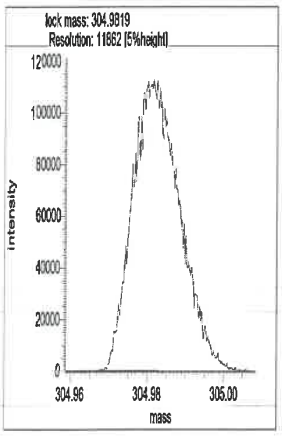

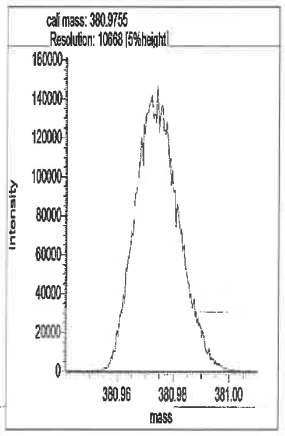

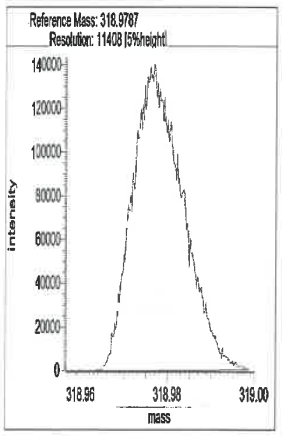

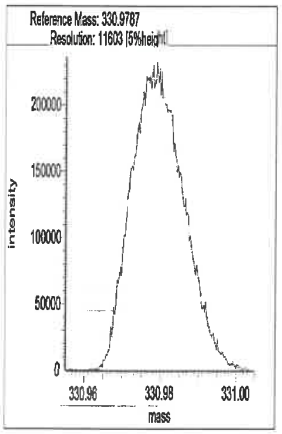

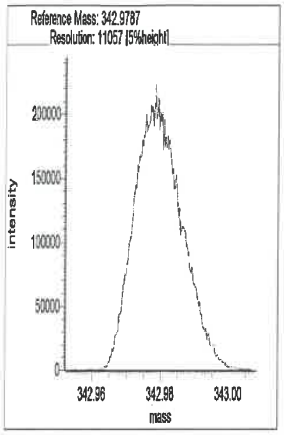

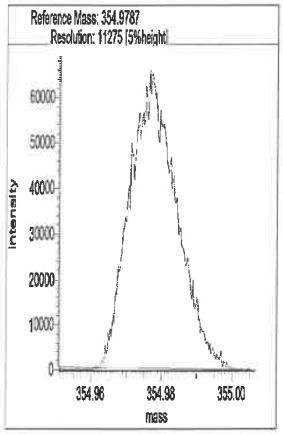

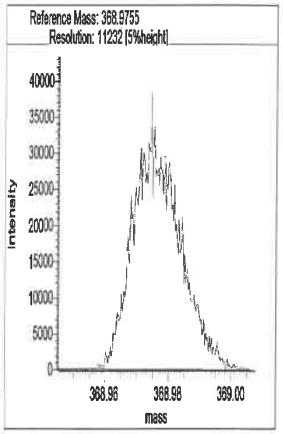

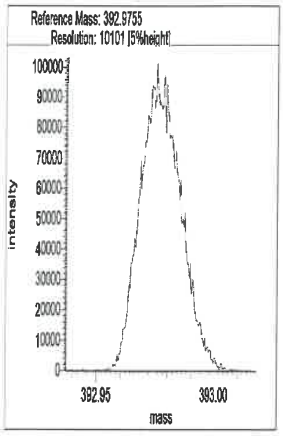

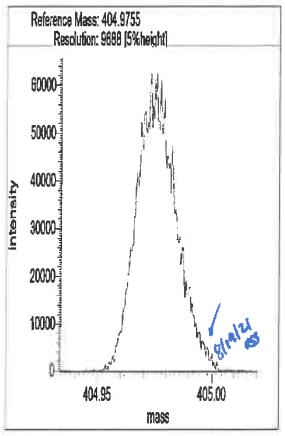

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11409 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11096 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11275 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10877 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10816 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11177 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10770 [5%height]

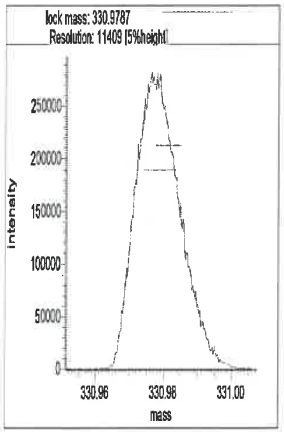

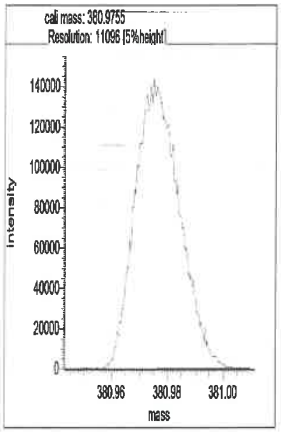

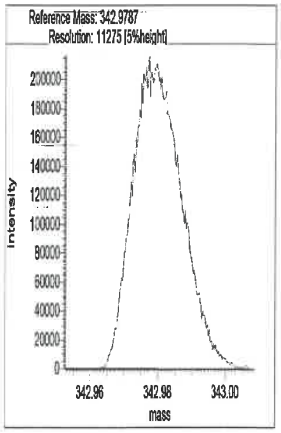

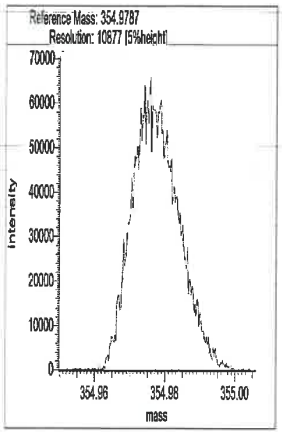

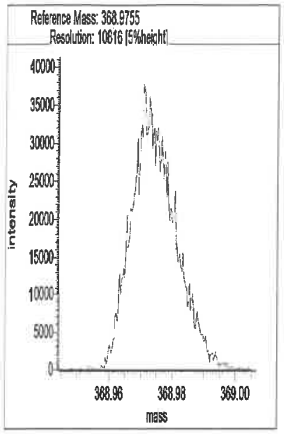

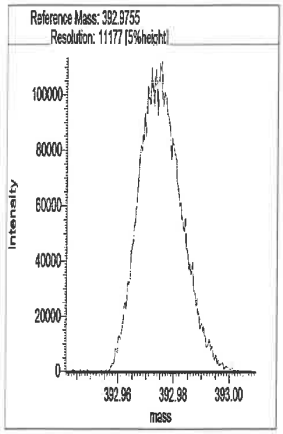

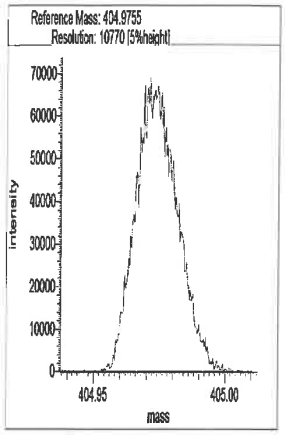

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11068 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11154 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11414 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11295 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10788 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10614 [5%height]

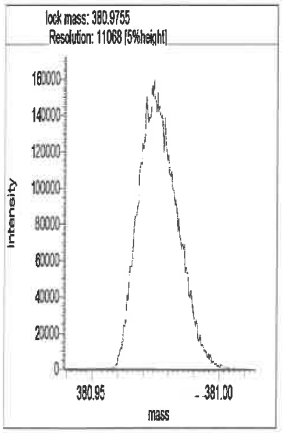

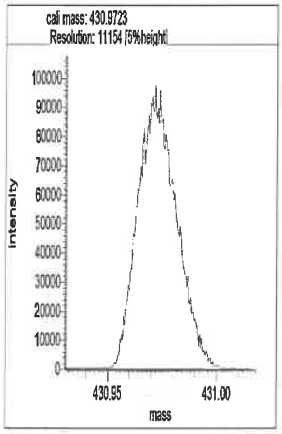

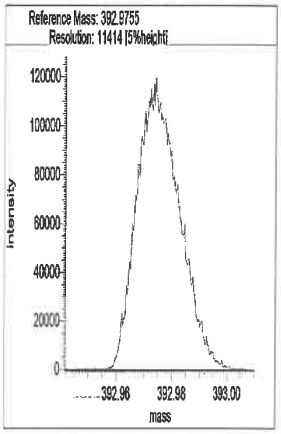

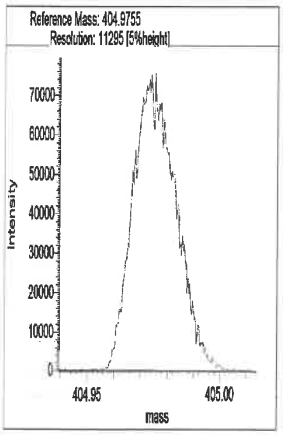

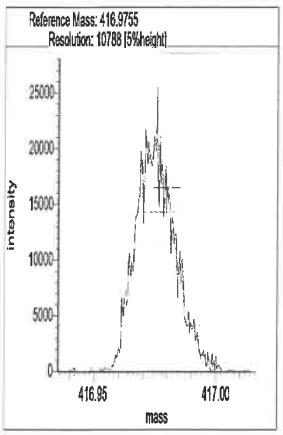

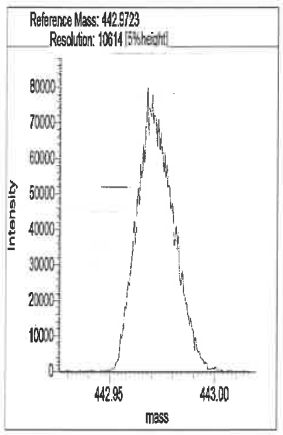

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11418 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11823 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11599 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11335 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10811 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11056 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10732 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10827 [5%height]

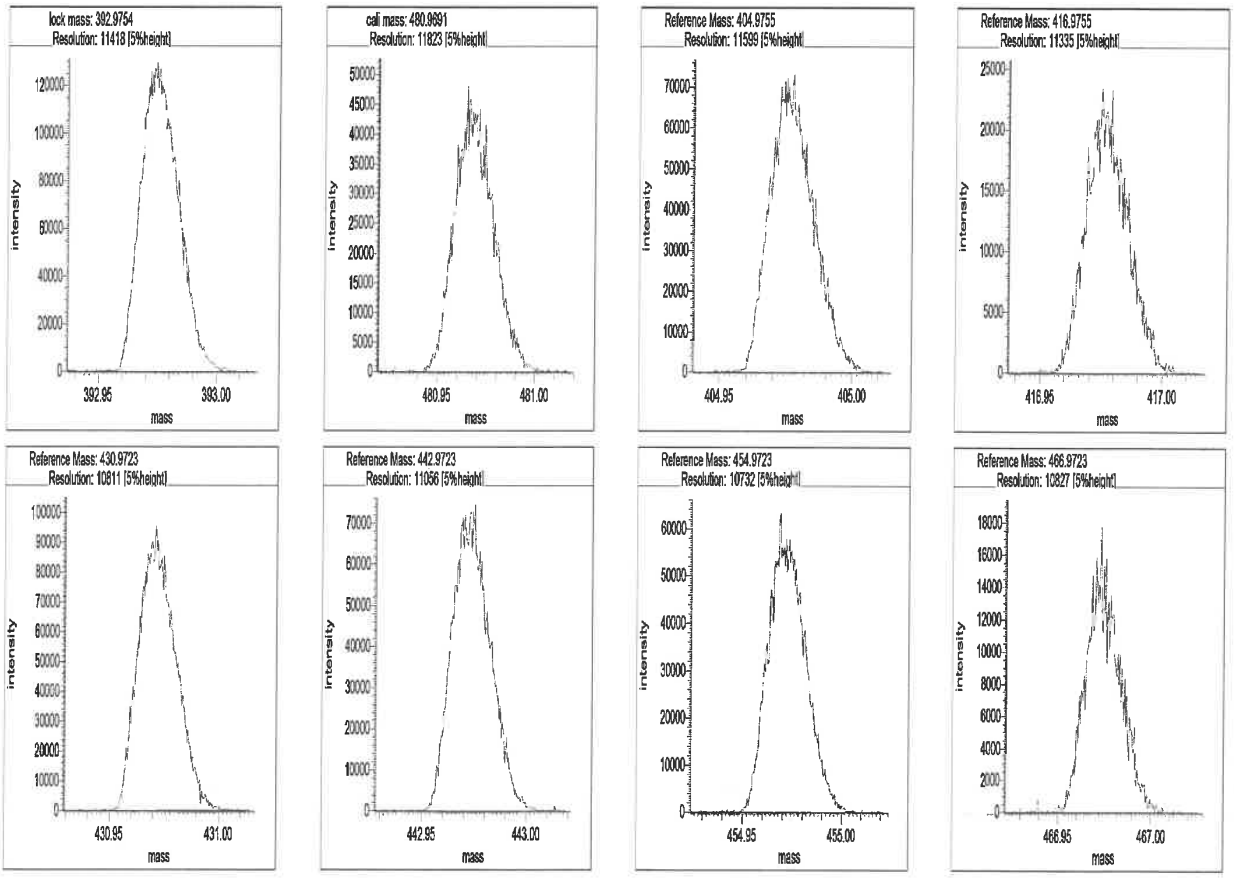

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11579 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11377 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11119 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12204 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10698 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10928 [5%height]

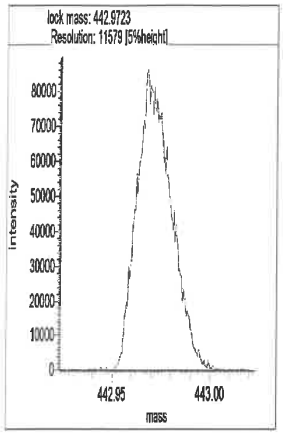
lock mass: 442.9723
Resolution: 11579 [5%height]
Intensity
mass

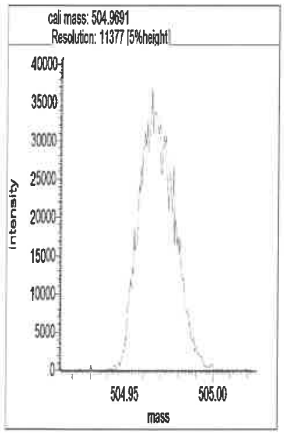
cali mass: 504.9691
Resolution: 11377 [5%height]
Intensity
mass

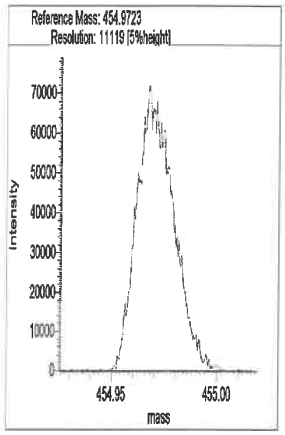
Reference Mass: 454.9723
Resolution: 11119 [5%height]
Intensity
mass

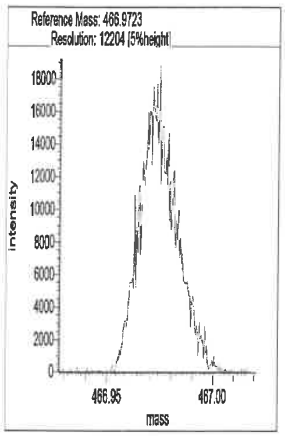
Reference Mass: 466.9723
Resolution: 12204 [5%height]
Intensity
mass

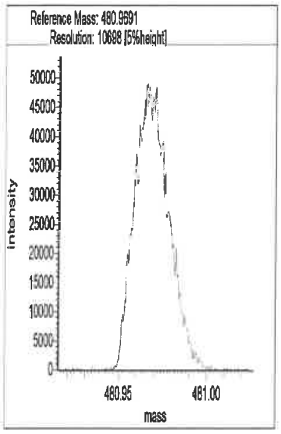
Reference Mass: 480.9691
Resolution: 10628 [5%height]
Intensity
mass

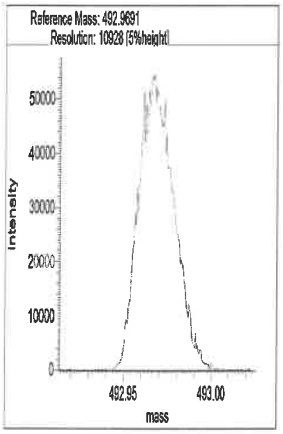
Reference Mass: 492.9691
Resolution: 10928 [5%height]
Intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 01:32:00 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:22:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.427	984489	0.83	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.464	1276686	0.81	1.3459	96.4	96.4	0.2841	0.2841	96.35	
2,3,7,8-TCDF	20.490	158938	0.88	1.0802	11.5	11.5	0.1590	0.1590	115	M
A Non-2,3,7,8-sub-TCDF	19.946						0.1590	0.1590		
S Total TCDF					11.5	11.5	0.1590	0.1590		
D 13C-2,3,7,8-TCDD	21.806	920353	0.75	0.9317	100.3	100.3	0.5973	0.5973	100	
2,3,7,8-TCDD	21.840	100432	0.75	1.0753	10.1	10.1	0.0654	0.0654	101	M
$ 37Cl4-2,3,7,8-TCDD	21.849	97480		1.0083	9.820	9.820	0.0128	0.0128	98.20	
A Non-2,3,7,8-sub-TCDD	20.781						0.0654	0.0654		
S Total TCDD					10.1	10.1	0.0654	0.0654		
D 13C-1,2,3,7,8-PeCDF	27.288	1103721	1.59	1.1405	98.3	98.3	0.2569	0.2569	98.30	
1,2,3,7,8-PeCDF	27.313	599354	1.65	1.0543	51.5	51.5	0.1124	0.1124	103	
D 13C-2,3,4,7,8-PeCDF	28.795	1065050	1.63	1.1253	96.1	96.1	0.2604	0.2604	96.13	
2,3,4,7,8-PeCDF	28.820	515414	1.63	1.0079	48.0	48.0	0.1284	0.1284	96.03	
A F1 PeCDFs	24.697	361	1.55	1.0311	0.0544	0.0323	0.004263	0.0291	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.194	6323	1.61	1.0311	0.5655	0.5655	0.1200	0.5655	0.00	
S Total PeCDF					100.1	100.1	0.1204	0.1204		RQ
D 13C-1,2,3,7,8-PeCDD	29.612	675256	1.54	0.7165	95.7	95.7	0.2875	0.2875	95.73	M
1,2,3,7,8-PeCDD	29.637	349091	1.55	1.0465	49.4	49.4	0.2994	0.2994	98.80	
A Non-2,3,7,8-sub-PeCDD	28.489						0.2994	0.2994		
S Total PeCDD					49.4	49.4	0.2994	0.2994		
D 13C-1,2,3,4,7,8-HxCDF	34.942	961464	0.54	0.9648	113.2	113.2	0.2217	0.2217	113	
1,2,3,4,7,8-HxCDF	34.959	565917	1.34	1.1474	51.3	51.3	0.1626	0.1626	103	
D 13C-1,2,3,6,7,8-HxCDF	35.111	894964	0.54	1.0708	94.9	94.9	0.1997	0.1997	94.92	
1,2,3,6,7,8-HxCDF	35.119	603750	1.33	1.2178	55.4	55.4	0.1845	0.1845	111	
D 13C-2,3,4,6,7,8-HxCDF	35.919	850492	0.53	1.0413	92.8	92.8	0.2054	0.2054	92.76	
2,3,4,6,7,8-HxCDF	35.936	566662	1.32	1.2145	54.9	54.9	0.1693	0.1693	110	
D 13C-1,2,3,7,8,9-HxCDF	36.811	799349	0.53	0.9731	93.3	93.3	0.2198	0.2198	93.29	
1,2,3,7,8,9-HxCDF	36.828	528030	1.35	1.2401	53.3	53.3	0.1512	0.1512	107	
A Non-2,3,7,8-sub-HxCDF	35.107						0.1659	0.1659		
S Total HxCDF					214.8	214.8	0.1669	0.1669		

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.609	880537	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.129	717142	1.25	0.7587	107.3	107.3	0.1846	0.1846	107	
1,2,3,4,7,8-HxCDD	36.146	351624	1.23	1.0608	46.2	46.2	0.0806	0.0806	92.44	
D 13C-1,2,3,6,7,8-HxCDD	36.247	848519	1.22	0.8593	112.1	112.1	0.1630	0.1630	112	
1,2,3,6,7,8-HxCDD	36.264	386501	1.24	0.9933	45.9	45.9	0.0800	0.0800	91.71	
1,2,3,7,8,9-HxCDD	36.626	395938	1.20	1.1094	45.6	45.6	0.0743	0.0743	91.18	
A Non-2,3,7,8-sub-HxCDD	35.460						0.0781	0.0781		
S Total HxCDD					137.7	137.7	0.0783	0.0783		
D 13C-1,2,3,4,6,7,8-HpCDF	38.626	656274	0.44	0.7359	101.3	101.3	0.2851	0.2851	101	
1,2,3,4,6,7,8-HpCDF	38.634	455320	1.06	1.4421	48.1	48.1	0.1685	0.1685	96.22	
D 13C-1,2,3,4,7,8,9-HpCDF	39.880	599385	0.45	0.6854	99.3	99.3	0.3061	0.3061	99.32	
1,2,3,4,7,8,9-HpCDF	39.888	390971	1.08	1.3092	49.8	49.8	0.1885	0.1885	99.65	
A Non-2,3,7,8-sub-HpCDF	39.288						0.1780	0.1780		
S Total HpCDF					97.9	97.9	0.1785	0.1785		
D 13C-1,2,3,4,6,7,8-HpCDD	39.569	648199	1.06	0.6745	109.1	109.1	0.2831	0.2831	109	
1,2,3,4,6,7,8-HpCDD	39.577	335357	1.04	1.0503	49.3	49.3	0.1045	0.1045	98.52	
A Non-2,3,7,8-sub-HpCDD	39.288	3567	1.04	1.0503	0.5786	0.5239	0.1045	0.5239	0.00	RQ
S Total HpCDD					49.8	49.8	0.1045	0.1045		RQ
D 13C-OCDD	42.072	1074471	0.91	0.5446	224.1	224.1	0.2244	0.2244	112	
OCDF	42.165	709884	0.97	1.3168	100.3	100.3	0.1011	0.1011	100	
OCDD	42.081	547805	0.90	1.0620	96.0	96.0	0.1077	0.1077	96.02	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 01:32:00 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:22:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.427	21.427	0		445977	61730	165	412	374		
333.9338	21.444	21.427	1		538512	70339	129	322	545	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.464	20.464	0	0.955	572920	76535	109	272	702		
317.9389	20.464	20.464	0	0.955	703766	101095	93	232	1087	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.490	20.490	0	1.001	74325	10071	54	135	187		M
305.8987	20.490	20.490	0	1.001	84613	12394	68	170	182	0.88(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	19.946						54	135			
305.8987	19.946						68	170			
13C-2,3,7,8-TCDD											
331.9368	21.806	21.806	0	1.018	395703	49232	165	412	298		
333.9338	21.806	21.806	0	1.018	524650	67347	129	322	522	0.75(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.840	21.840	0	1.002	43022	5107	20	50	255		M
321.8936	21.840	21.840	0	1.002	57410	7402	13	32	569	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.849	21.849	0	1.020	97480	12477	7	17	1782		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.781						20	50			
321.8936	20.781						13	32			
13C-1,2,3,7,8-PeCDF											
351.9000	27.288	27.288	0	1.274	677865	102468	92	230	1114		
353.8970	27.279	27.288	-1	1.273	425856	63812	63	157	1013	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.313	27.313	0	1.001	373055	54148	41	102	1321		
341.8567	27.313	27.313	0	1.001	226299	33164	38	95	873	1.65(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.795	28.795	0	1.344	659478	94038	92	230	1022		
353.8970	28.795	28.795	0	1.344	405572	58215	63	157	924	1.63(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.820	28.820	0	1.001	319323	44133	41	102	1076		
341.8567	28.820	28.820	0	1.001	196091	26521	38	95	698	1.63(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.267	24.697	-26	0.889	22	14	1	2	14		
341.8567	24.250	24.697	-27	0.889	64	21	2	5	11	0.34(1.32-1.78)	
	Empc Correction				14	9	2	5	5		
339.8597	24.379	24.697	-19	0.893	198	49	1	2	49		
341.8567	24.379	24.697	-19	0.893	324	81	2	5	41	0.61(1.32-1.78)	
	Empc Correction				127	31	2	5	16		
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.894	28.194	-18	1.022	3897	465	41	102	11		
341.8567	27.877	28.194	-19	1.022	2426	361	38	95	10	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											M
367.8949	29.612	29.612	0	1.382	408922	48749	62	155	786		
369.8919	29.628	29.612	1	1.383	266334	33288	47	117	708	1.54(1.32-1.78)	M
1,2,3,7,8-PeCDD											
355.8546	29.637	29.637	0	1.001	212257	27310	81	202	337		
357.8516	29.637	29.637	0	1.001	136834	17949	22	55	816	1.55(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						81	202			
357.8516	28.489						22	55			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.942	34.942	0	0.954	336469	68825	57	142	1207		
385.8610	34.942	34.942	0	0.954	624995	114454	111	277	1031	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.959	34.959	0	1.000	323795	64220	78	195	823		
375.8178	34.959	34.959	0	1.000	242122	47319	59	147	802	1.34(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.111	35.111	0	0.959	313436	52098	57	142	914		
385.8610	35.111	35.111	0	0.959	581528	100114	111	277	902	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.119	35.119	0	1.000	344594	62612	78	195	803		
375.8178	35.119	35.119	0	1.000	259156	47352	59	147	803	1.33(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.919	35.919	0	0.981	293056	57881	57	142	1015		
385.8610	35.919	35.919	0	0.981	557436	108473	111	277	977	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.936	35.936	0	1.000	321979	63834	78	195	818		
375.8178	35.936	35.936	0	1.000	244683	48323	59	147	819	1.32(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.811	36.811	0	1.006	276711	60371	57	142	1059		
385.8610	36.811	36.811	0	1.006	522638	121974	111	277	1099	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.828	36.828	0	1.000	302880	64959	78	195	833		
375.8178	36.828	36.828	0	1.000	225150	48893	59	147	829	1.35(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.107						78	195			
375.8178	35.107						59	147			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.609	36.609	0		486696	109333	53	132	2063		
403.8529	36.617	36.609	1		393841	87046	57	142	1527	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.129	36.129	0	0.987	398284	87752	53	132	1656		
403.8529	36.129	36.129	0	0.987	318858	70052	57	142	1229	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.146	36.146	0	1.000	194100	42368	32	80	1324		
391.8127	36.146	36.146	0	1.000	157524	35287	22	55	1604	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.247	36.247	0	0.990	466694	92606	53	132	1747		
403.8529	36.247	36.247	0	0.990	381825	77360	57	142	1357	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.264	36.264	0	1.000	214301	44193	32	80	1381		
391.8127	36.255	36.264	-1	1.000	172200	36180	22	55	1645	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.626	36.626	0	1.014	215900	47500	32	80	1484		
391.8127	36.626	36.626	0	1.014	180038	40127	22	55	1824	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.460						32	80			
391.8127	35.460						22	55			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.626	38.626	0	1.055	200757	51554	47	117	1097		
419.8220	38.626	38.626	0	1.055	455517	113911	118	295	965	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.634	38.634	0	1.000	234238	59520	82	205	726		
409.7788	38.634	38.634	0	1.000	221082	55709	79	197	705	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.880	39.880	0	1.089	186100	51202	47	117	1089		
419.8220	39.880	39.880	0	1.089	413285	111683	118	295	946	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.888	39.888	0	1.000	203424	55186	82	205	673		
409.7788	39.888	39.888	0	1.000	187547	51038	79	197	646	1.08(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.288						82	205			
409.7788	39.288						79	197			

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.569	39.569	0	1.081	333648	91786	80	200	1147		
437.8140	39.569	39.569	0	1.081	314551	90360	70	175	1291	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.577	39.577	0	1.000	170747	48038	40	100	1201		
425.7737	39.577	39.577	0	1.000	164610	46442	40	100	1161	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.946	39.288	-21	0.984	2190	476	40	100	12		
	Empc Correction				1818	545	40	100	14		
425.7737	38.946	39.288	-21	0.984	1749	525	40	100	13	1.25(0.88-1.20)	
13C-OCDD											
469.7780	42.072	42.072	0	1.149	513322	127575	59	147	2162		
471.7750	42.064	42.072	-1	1.149	561149	138295	37	92	3738	0.91(0.76-1.02)	
OCDF											
441.7428	42.165	42.165	0	1.002	349557	84896	33	82	2573		
443.7399	42.165	42.165	0	1.002	360327	89931	38	95	2367	0.97(0.76-1.02)	
OCDD											
457.7377	42.081	42.081	0	1.000	259339	62403	31	77	2013		
459.7348	42.072	42.081	-1	1.000	288466	70332	30	75	2344	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.697

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1103721	166280
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1065050	152253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1084385	159266

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.267	22	14	64	21	0.007692	0.34	RQ
24.267	22	14	14	9	0.003220		Empc Correction
24.379	198	49	324	81	0.0467	0.61	RQ
24.379	198	49	127	31	0.0291		Empc Correction
Signal Totals:							
	220	63	141	40			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	608	165				0.57	RQ
	361	103					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0544 = (608 * 100.000) / (1084385 * 1.031)
Empc Amount: 0.0323 = (361 * 100.000) / (1084385 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.194

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1103721	166280
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1065050	152253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1084385	159266

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.894	3897	465	2426	361	0.5655	1.61	n
Signal Totals:							
	3897	465	2426	361			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6323	826				1.61	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5655 = (6323 * 100.000) / (1084385 * 1.031)

QC Flag Legend

Processing Flags
n - Failed Sig-To-Noise Test

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.288

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	648199	182146

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	648199	182146

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.946	2190	476	1749	525	0.5786	1.25	RQ
38.946	1818	545	1749	525	0.5239		Empc Correction
Signal Totals:							
	1818	545	1749	525			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3939	1001				1.25	RQ
	3567	1070					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5786 = (3939 * 100.000) / (648199 * 1.050)
Empc Amount: 0.5239 = (3567 * 100.000) / (648199 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.49
Area: 70726
Amount: 11.264064
Amount Units: pg/ul

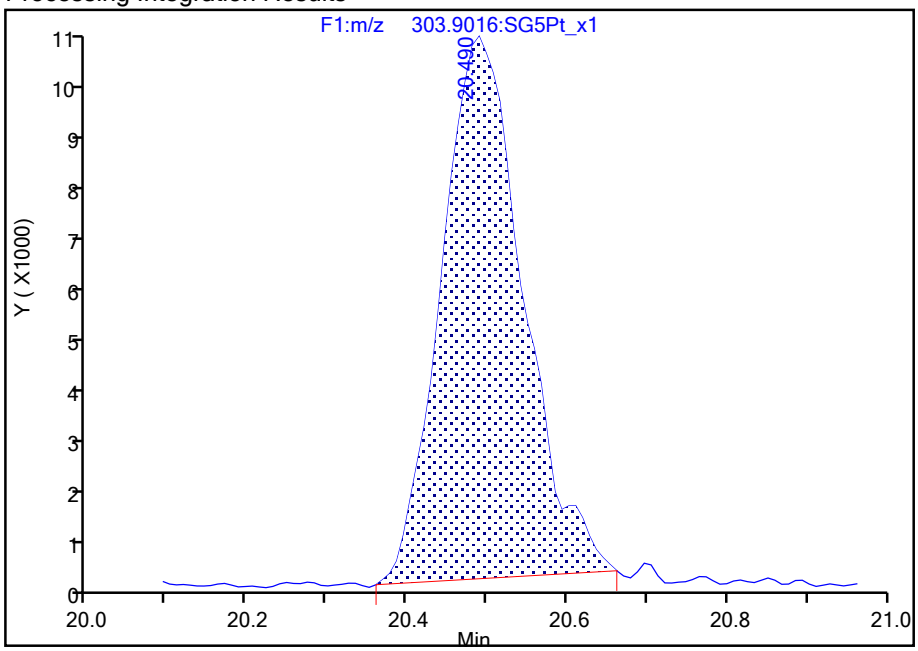

Manual Integration Results

RT: 20.49
Area: 74325
Amount: 11.525037
Amount Units: pg/ul

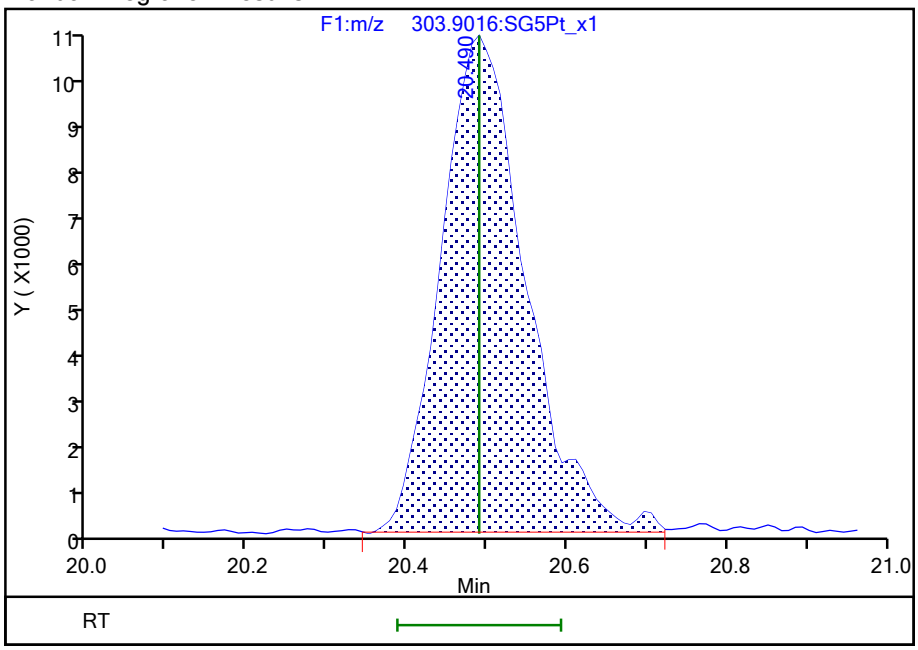

Reviewer: stephensk, 19-Aug-2021 09:20:42

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.84
Area: 41863
Amount: 10.030634
Amount Units: pg/ul

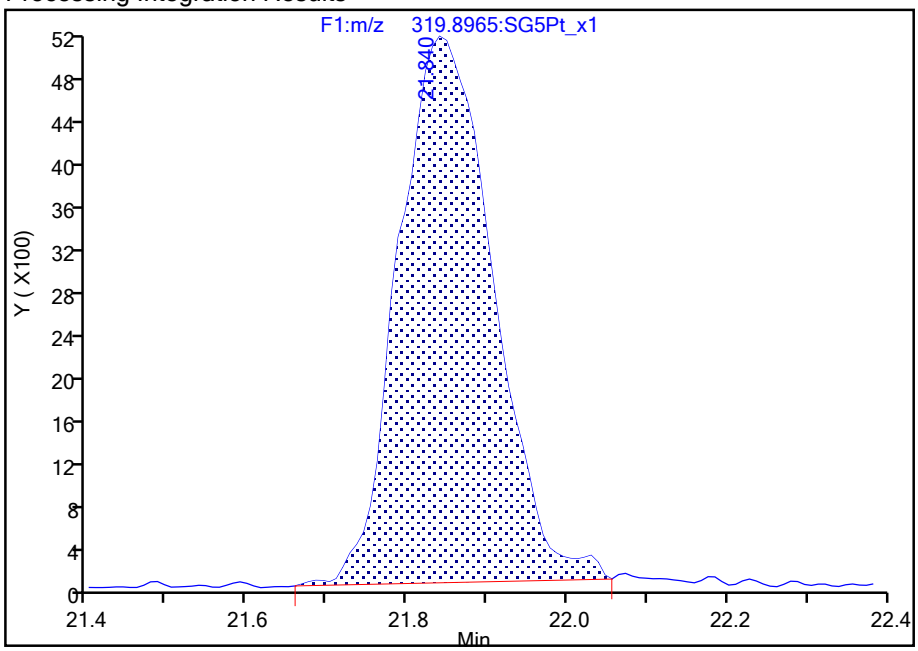

Manual Integration Results

RT: 21.84
Area: 43022
Amount: 10.147741
Amount Units: pg/ul

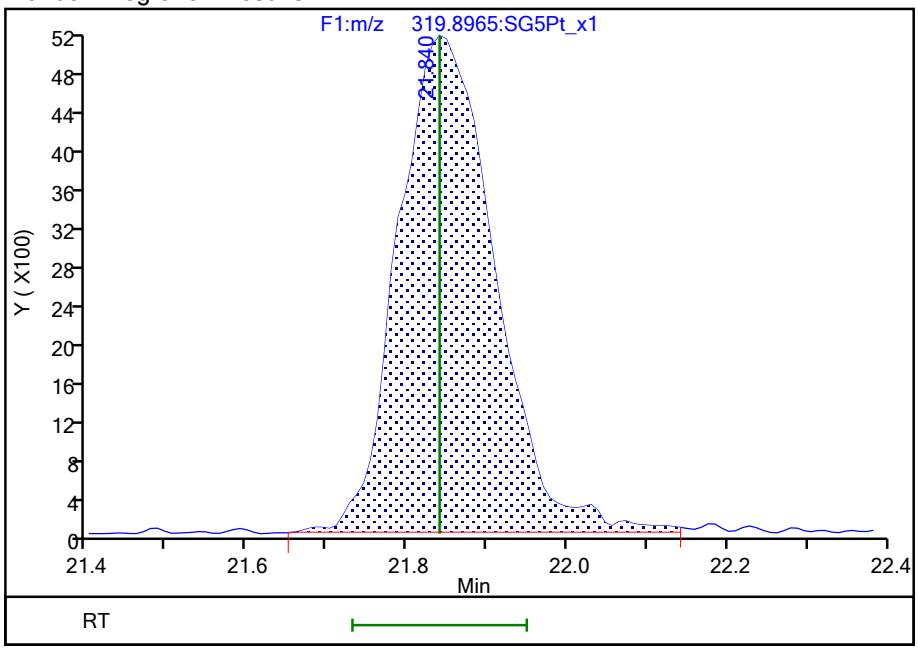

Reviewer: stephensk, 19-Aug-2021 09:21:00

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 2

Processing Integration Results

RT: 29.63
Area: 252502
Amount: 93.771696
Amount Units: pg/ul

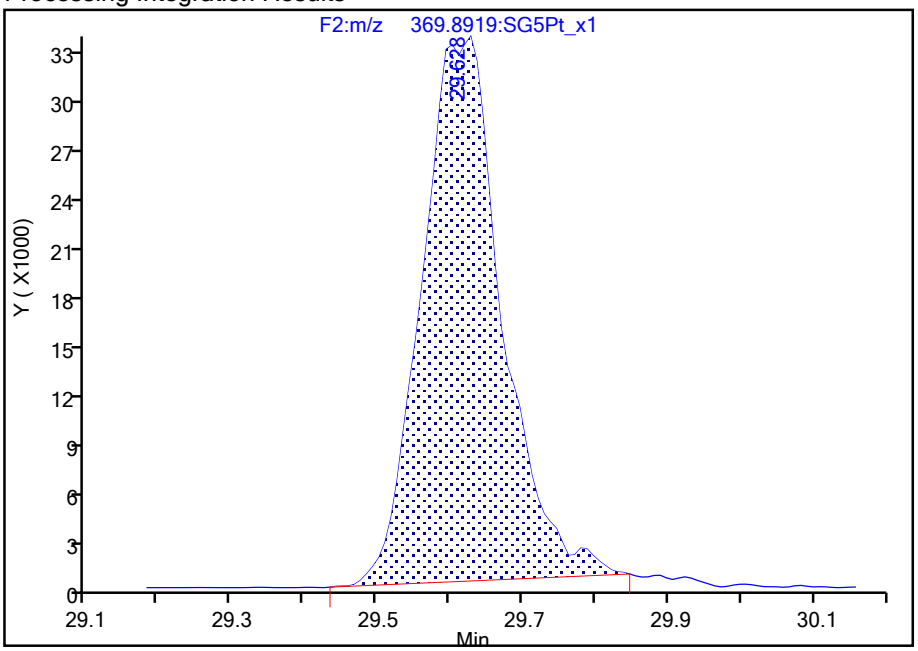

Manual Integration Results

RT: 29.63
Area: 266334
Amount: 95.732693
Amount Units: pg/ul

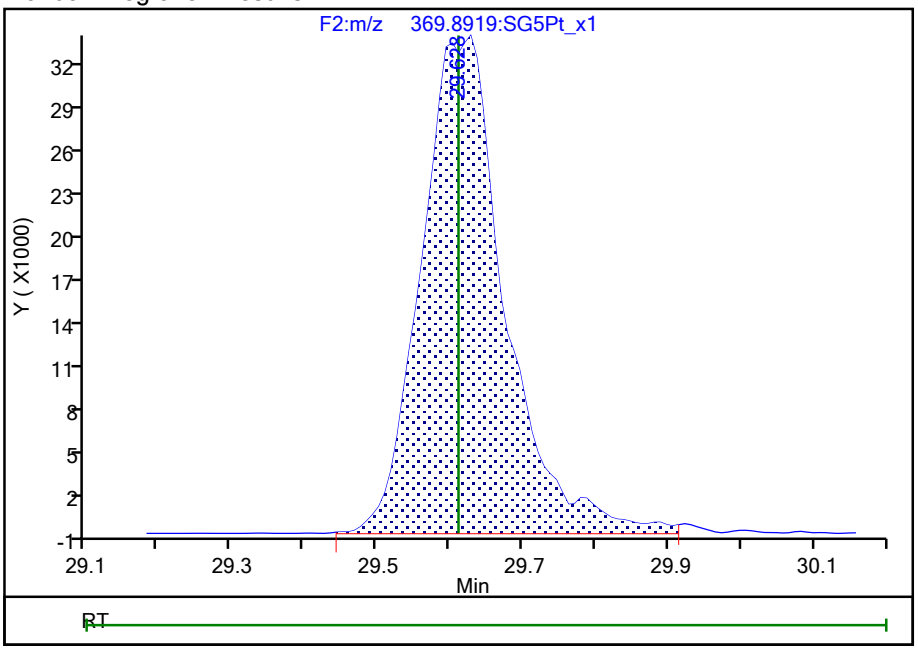

Reviewer: stephensk, 19-Aug-2021 09:21:19

Audit Action: Manually Integrated Audit Reason: Baseline

776926

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

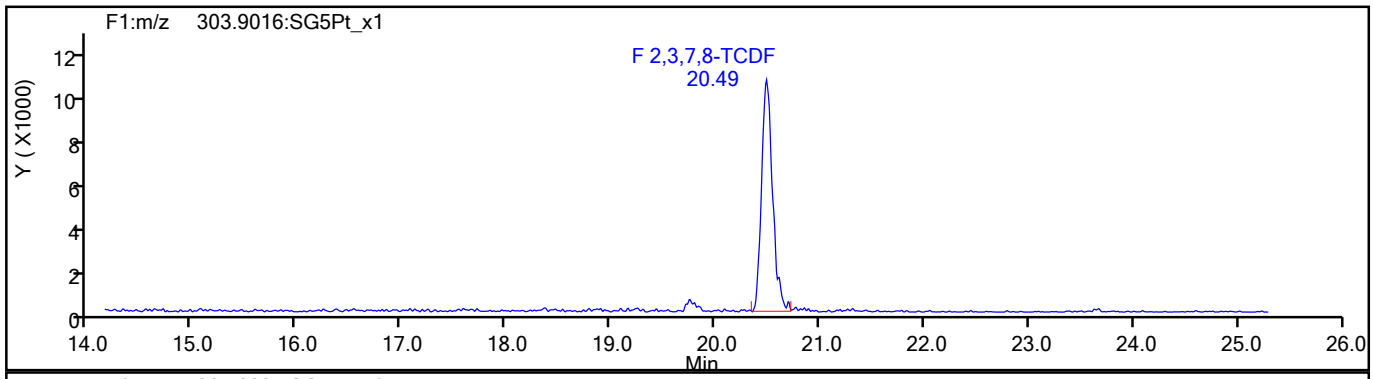

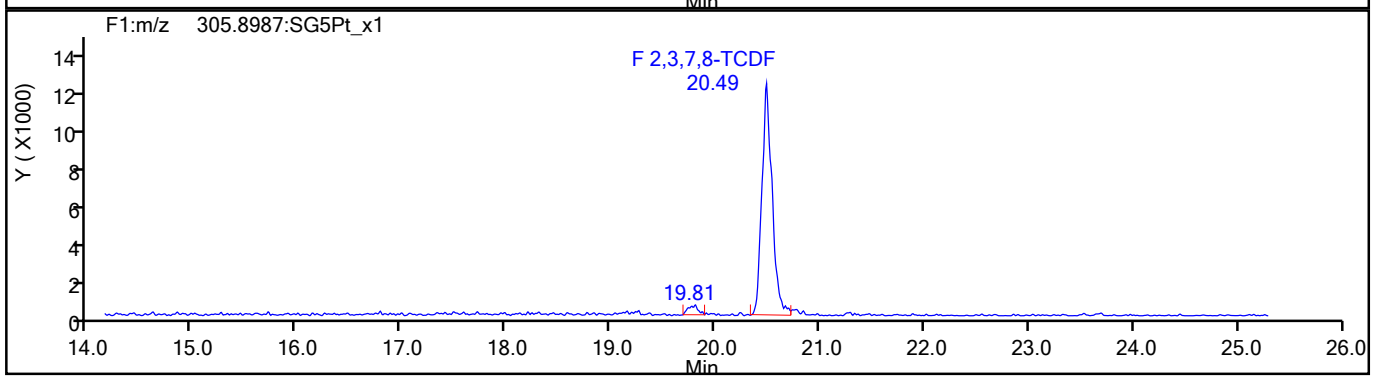

TCDF Standards

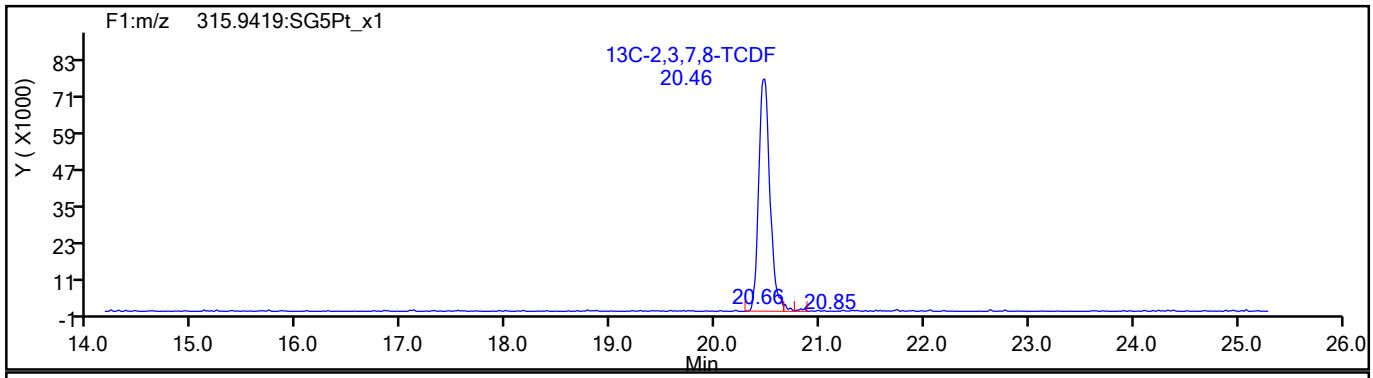

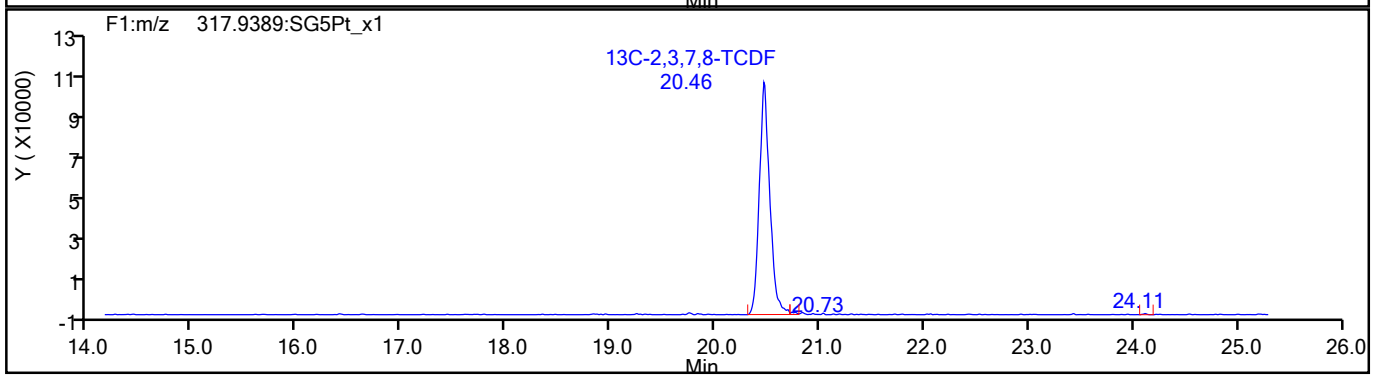

776927

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

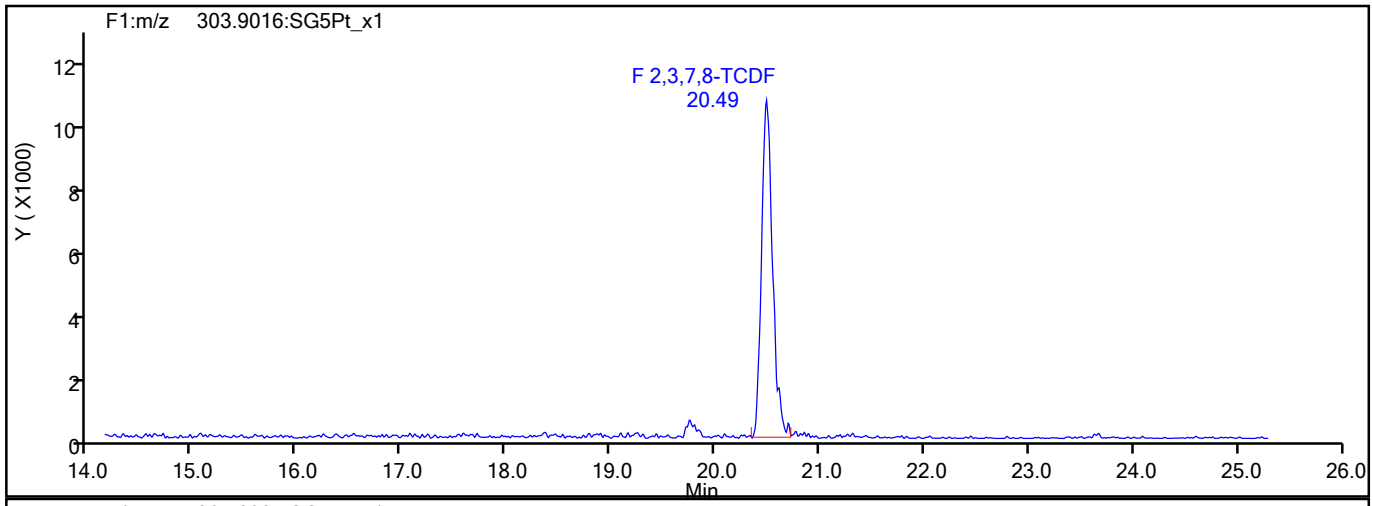

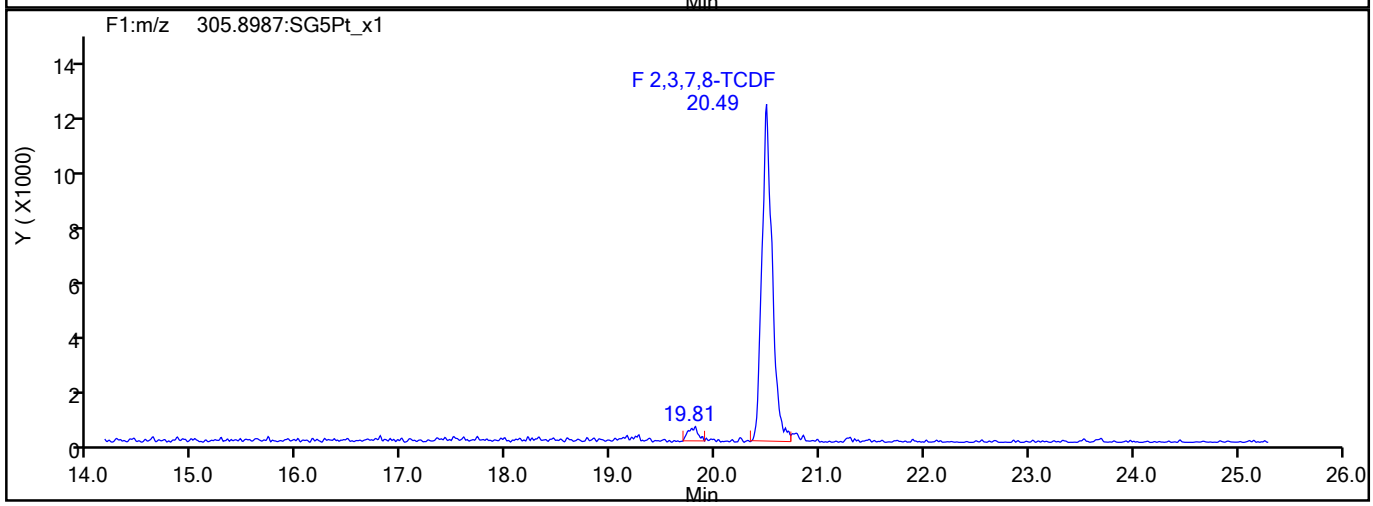

TCDF Interference Mass

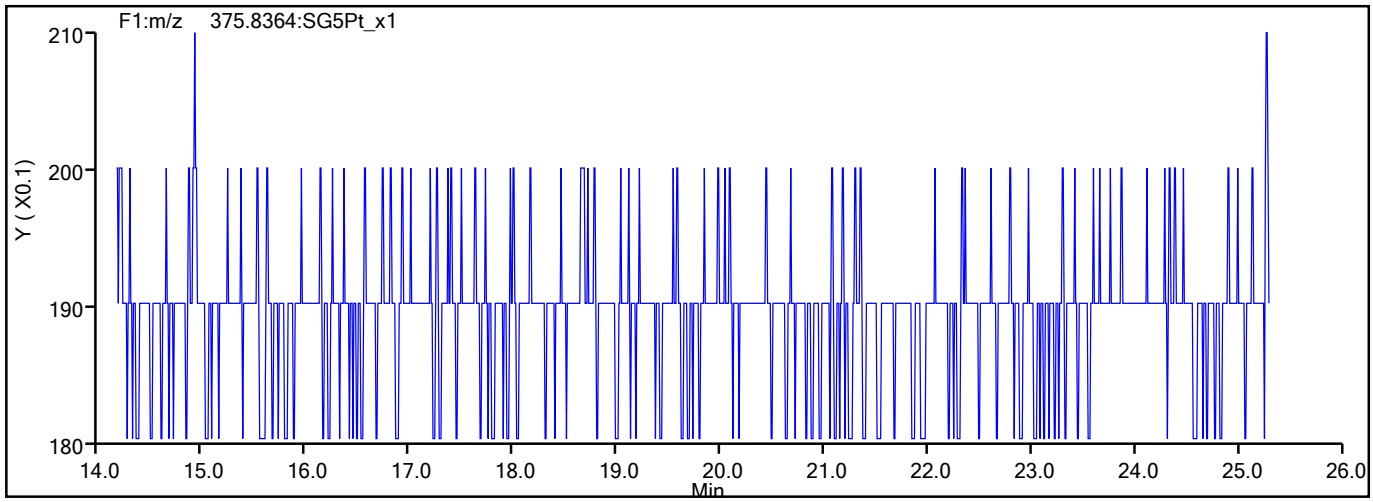

776928

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

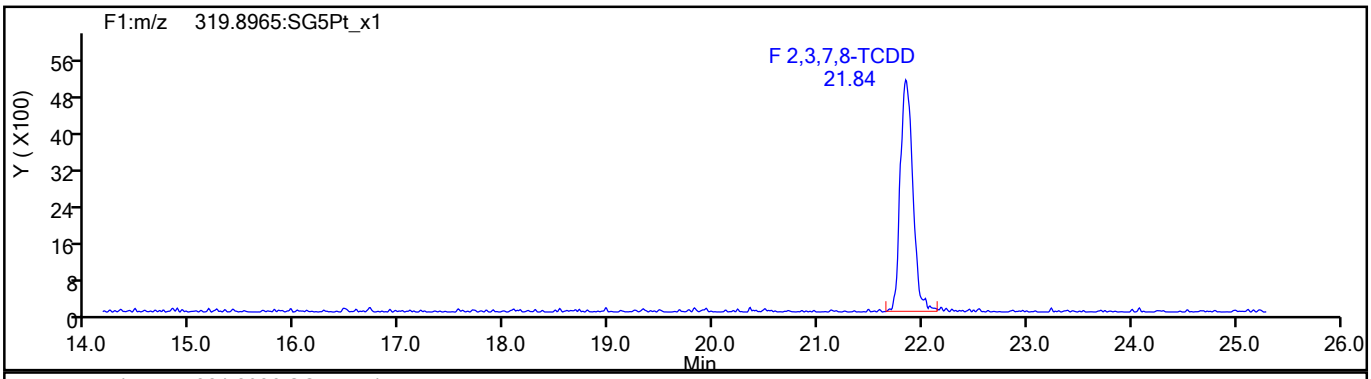

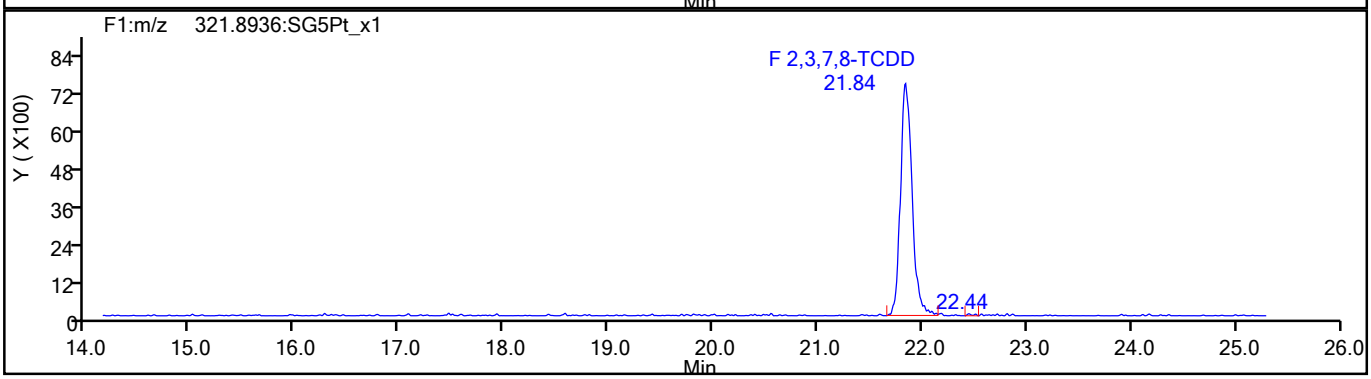

TCDD Standards

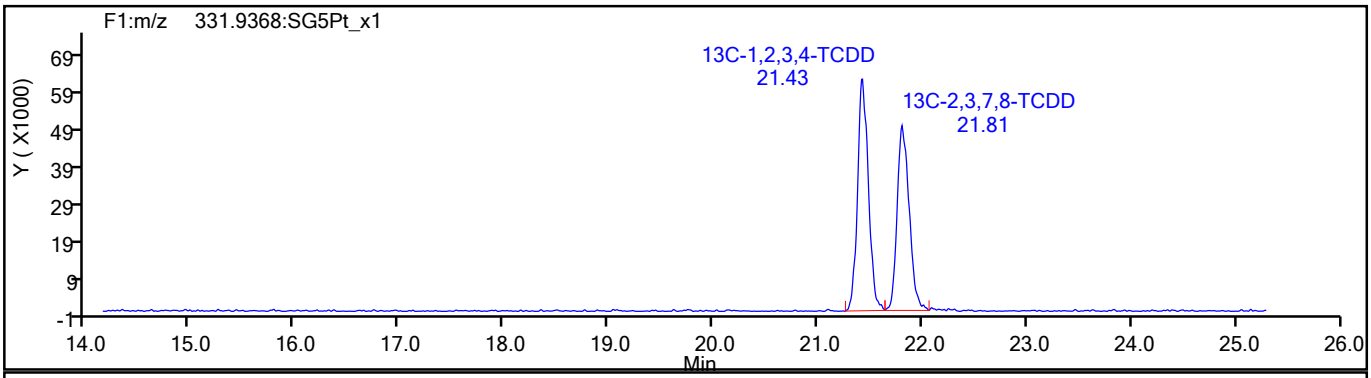

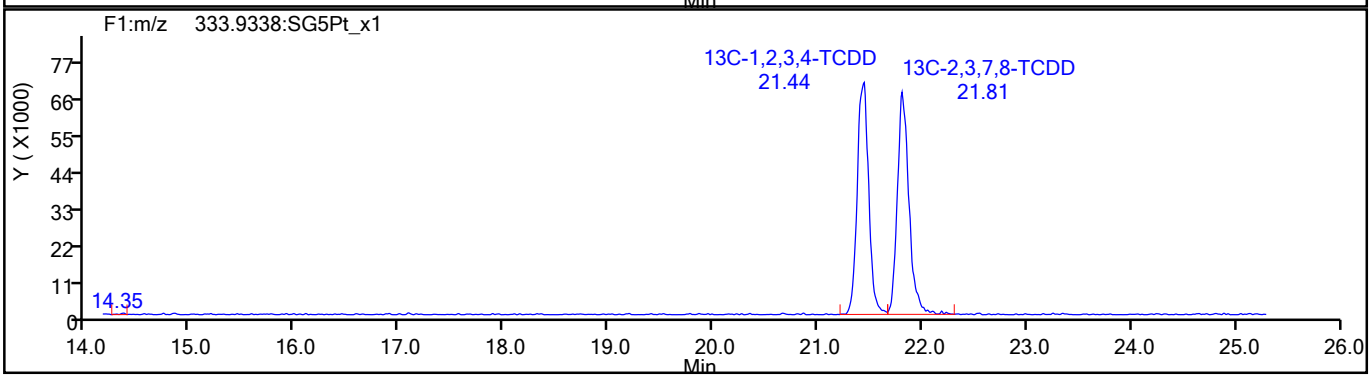

776929

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

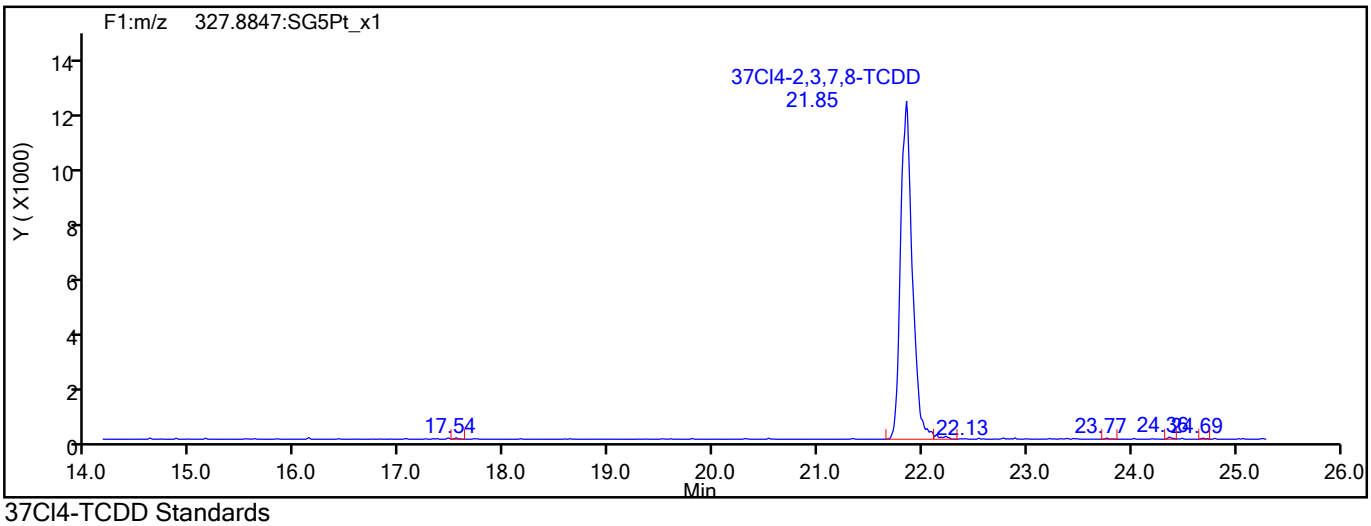

37Cl4-TCDD Standards

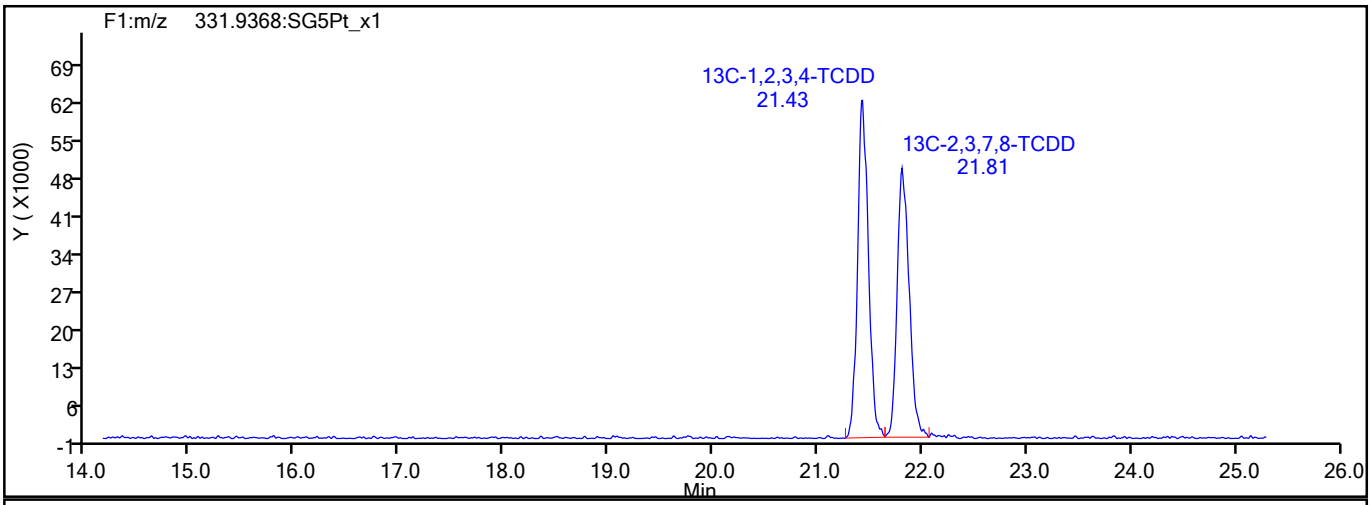

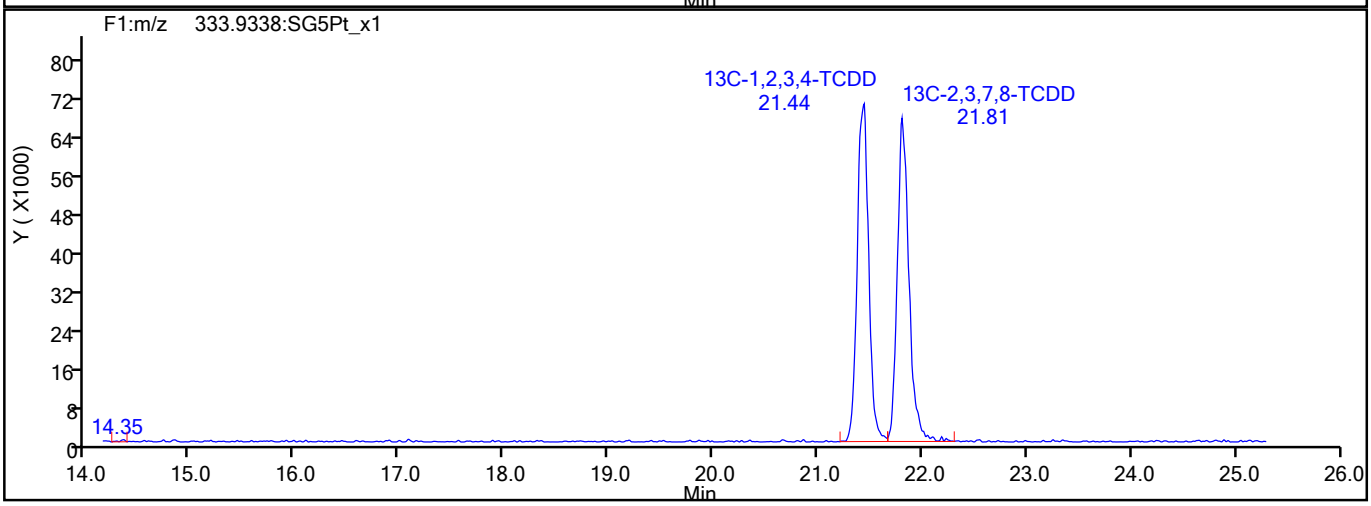

776930

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

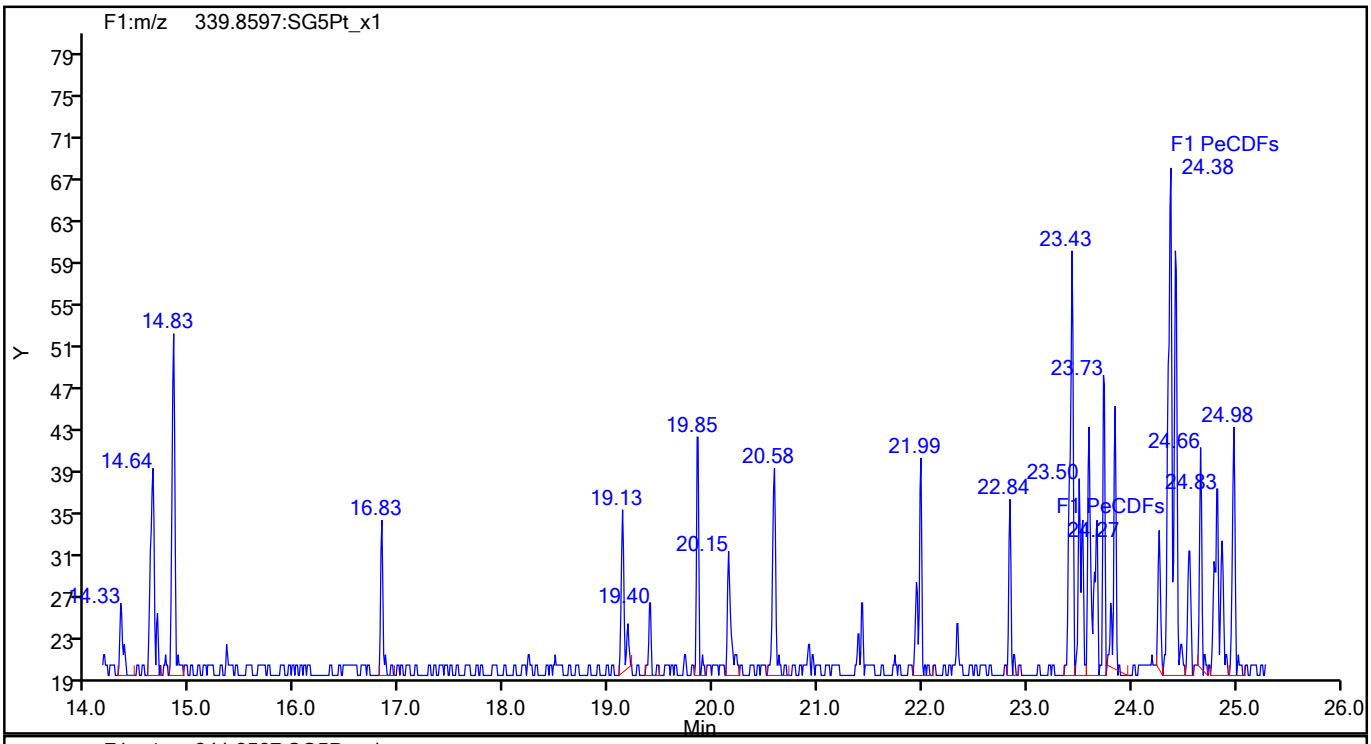

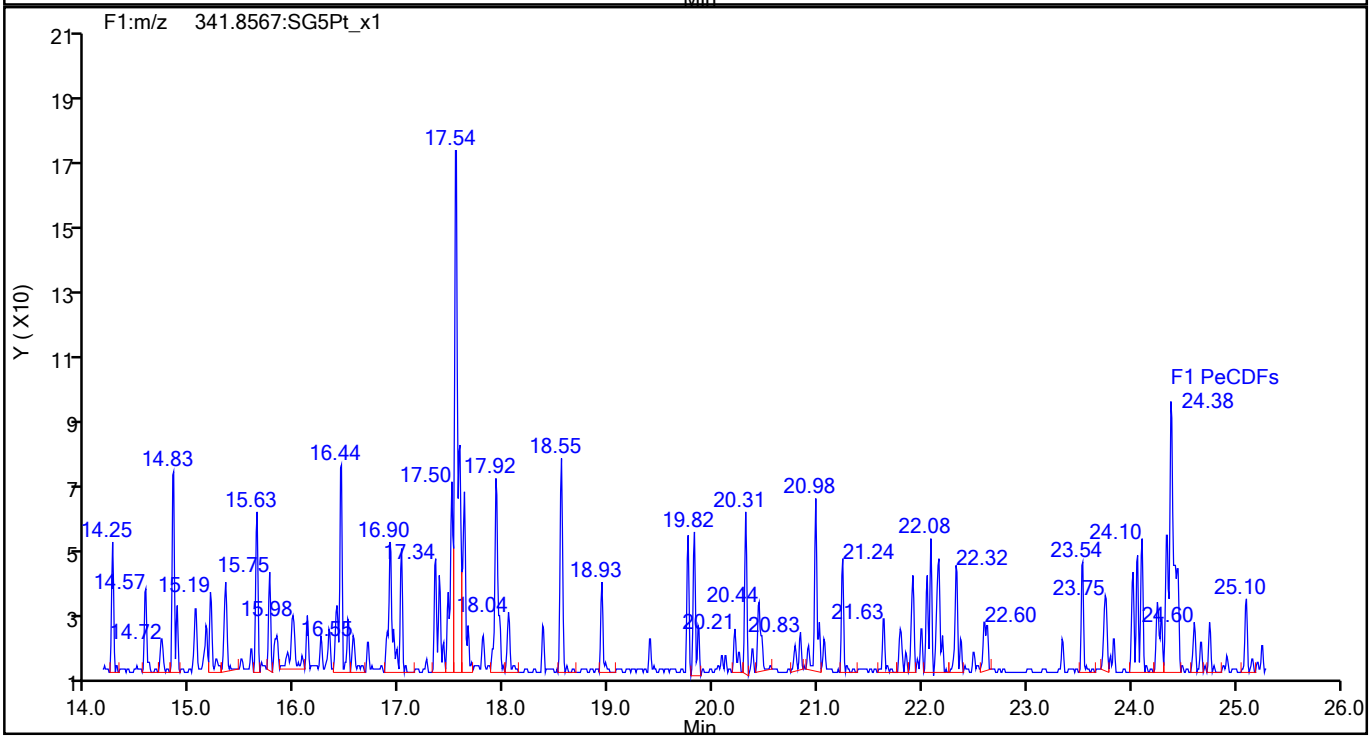

776931

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

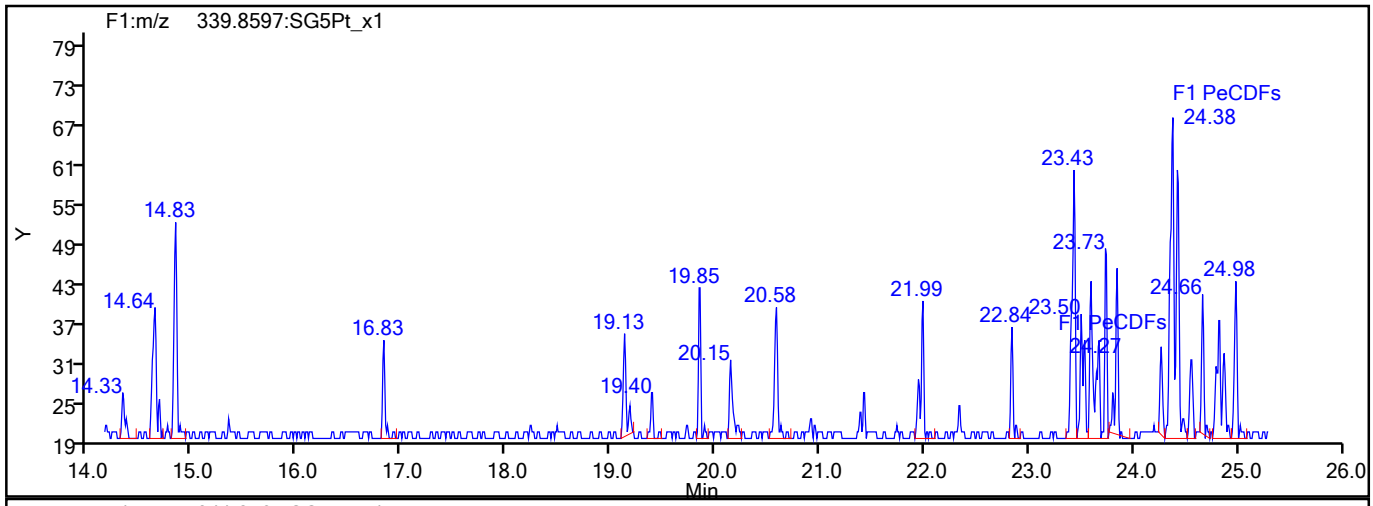

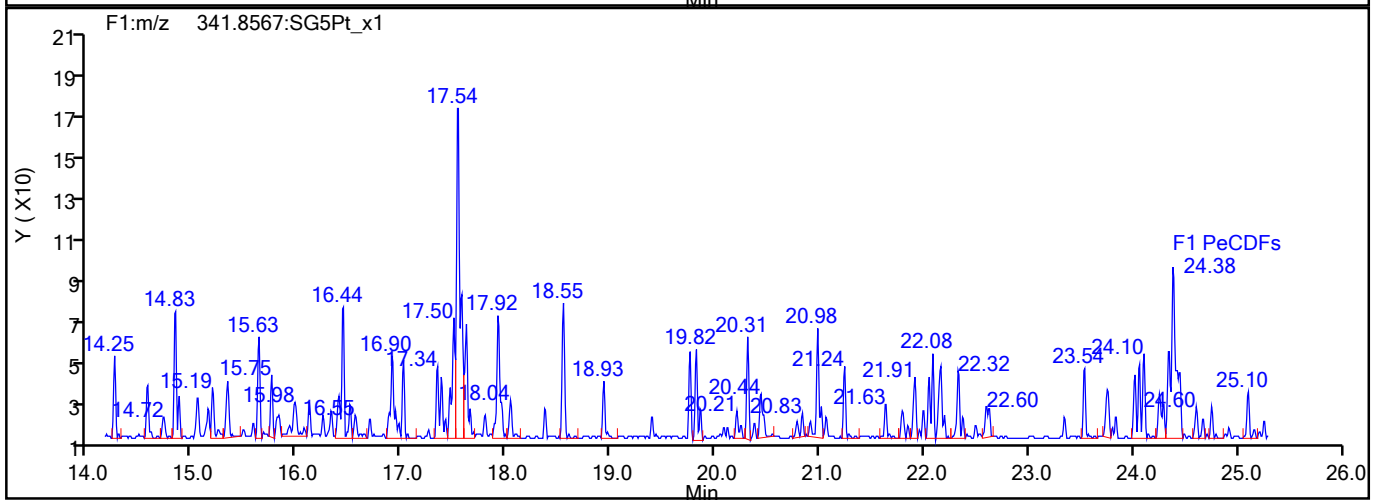

F1 PeCDFs Interference Mass

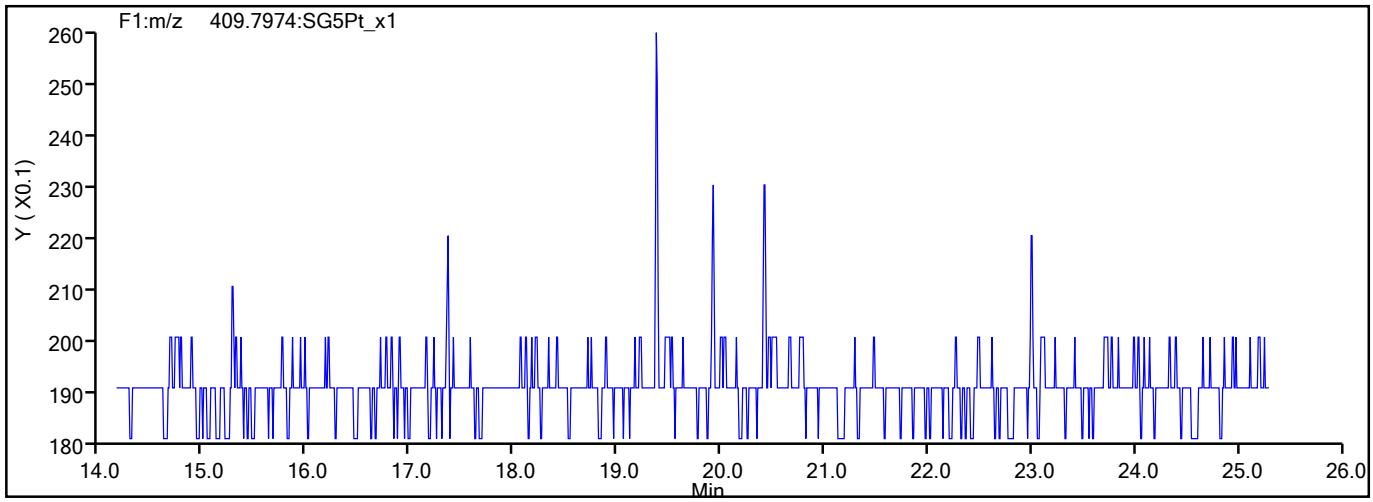

776932

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

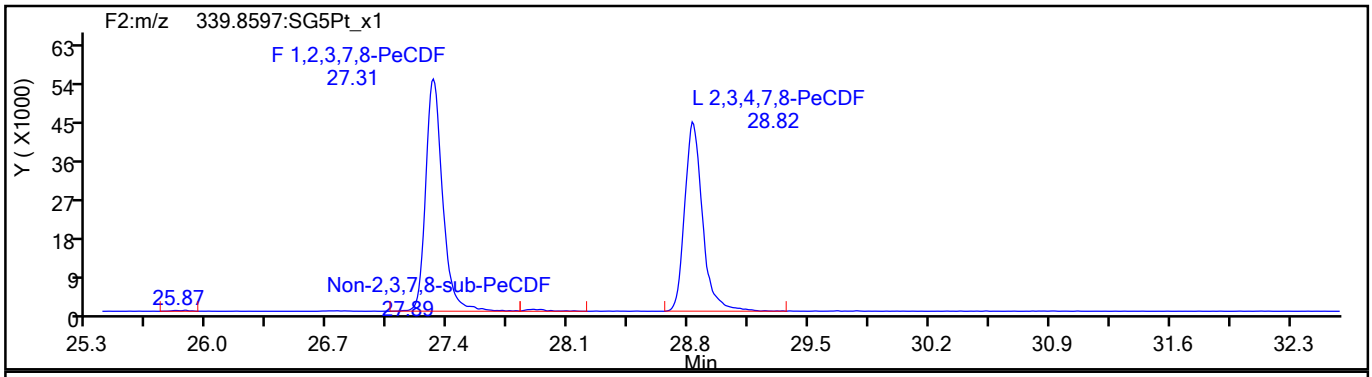

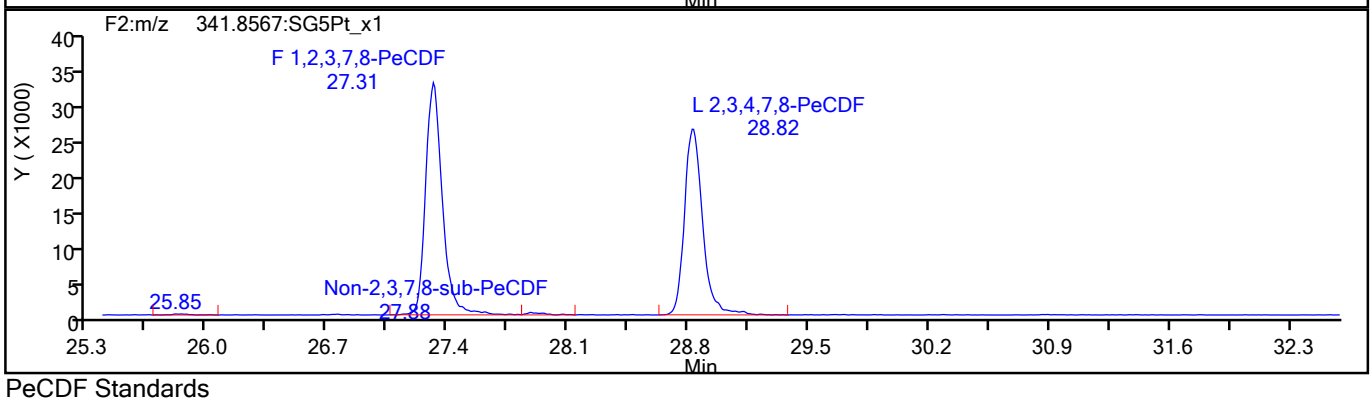

PeCDF Standards

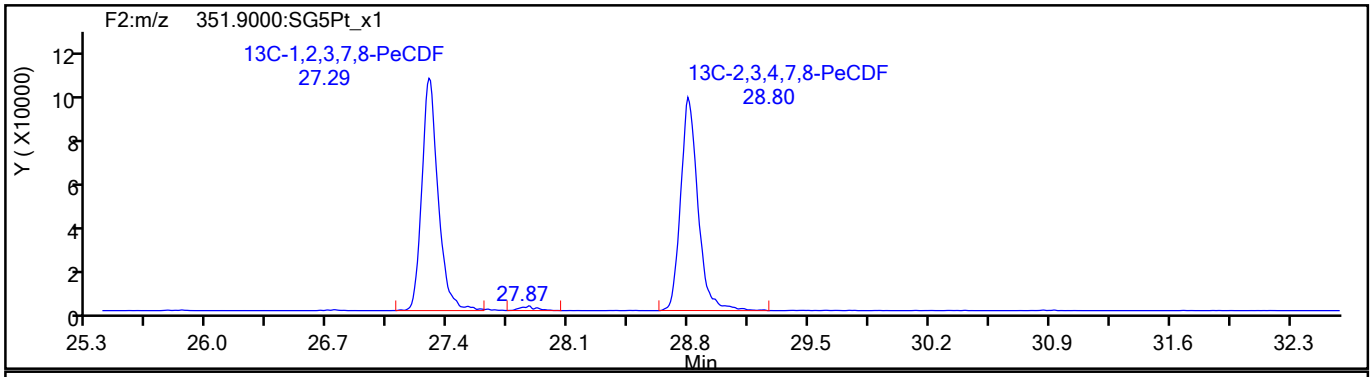

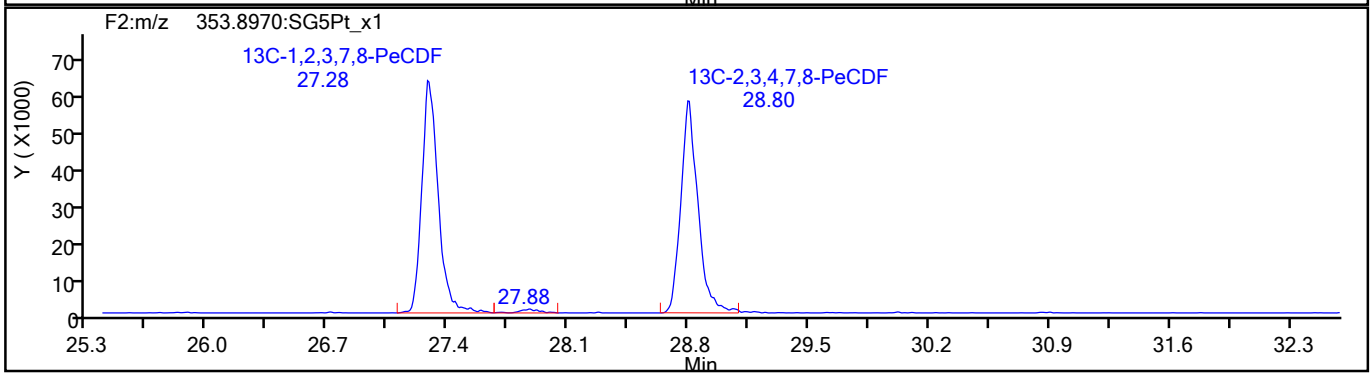

776933

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

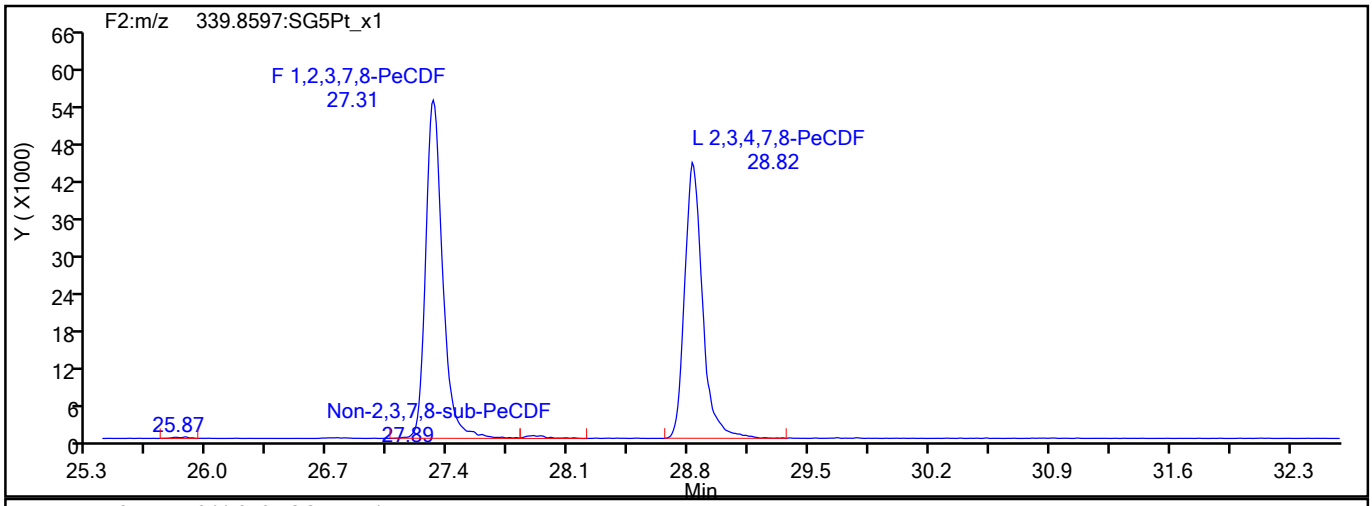

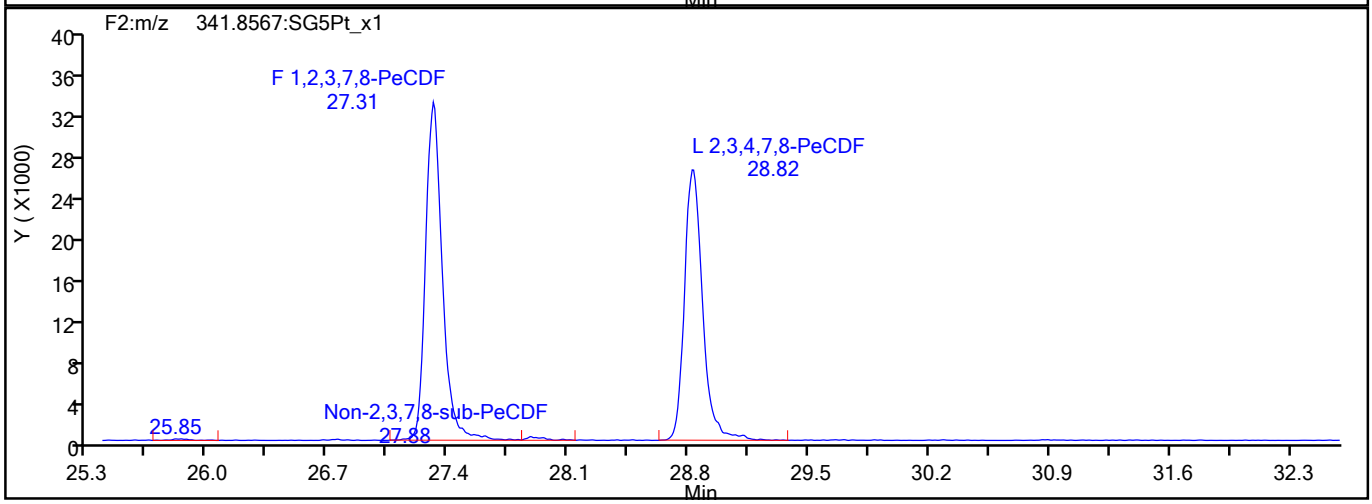

PeCDF Interference Mass

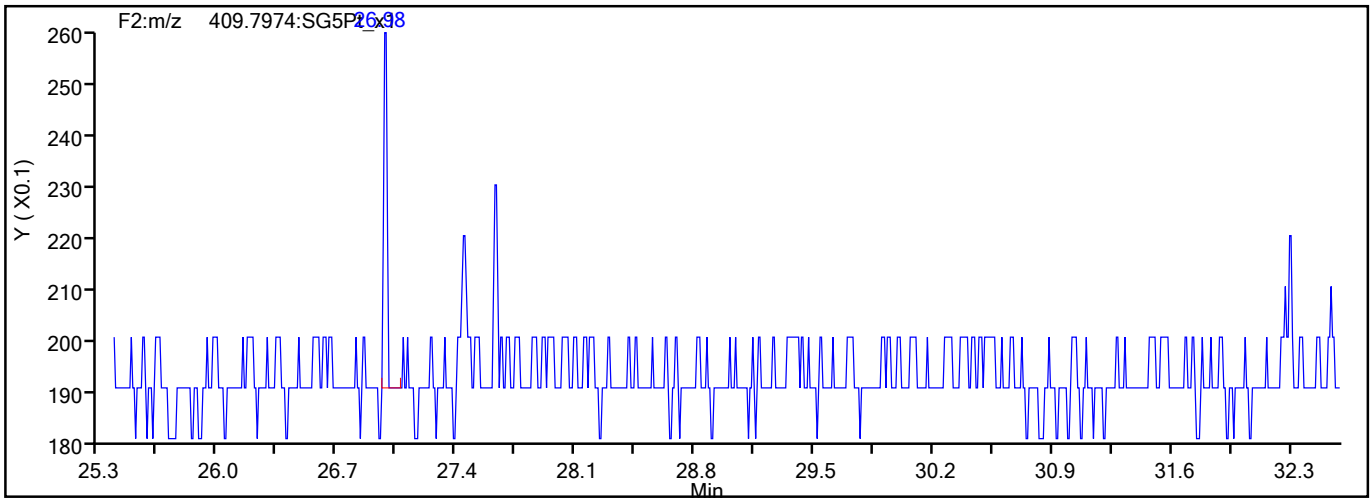

776934

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

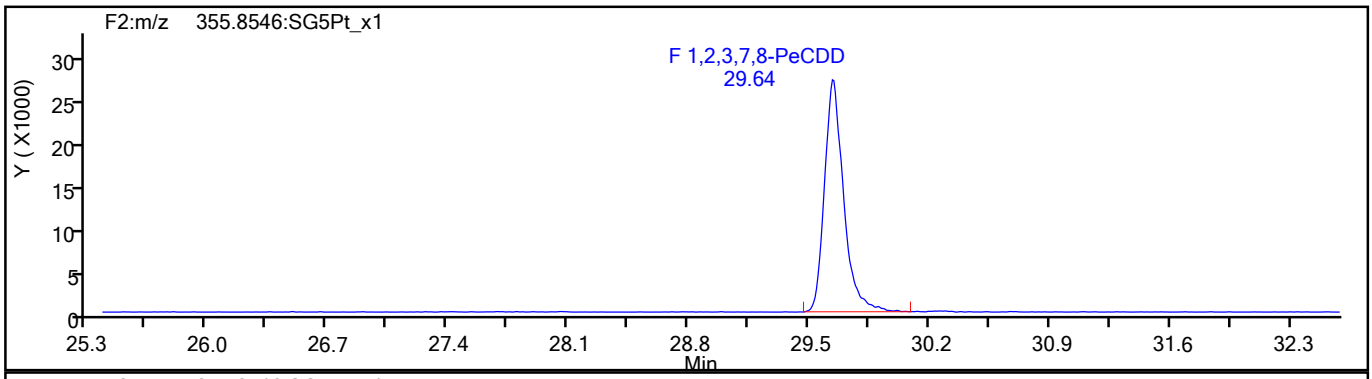

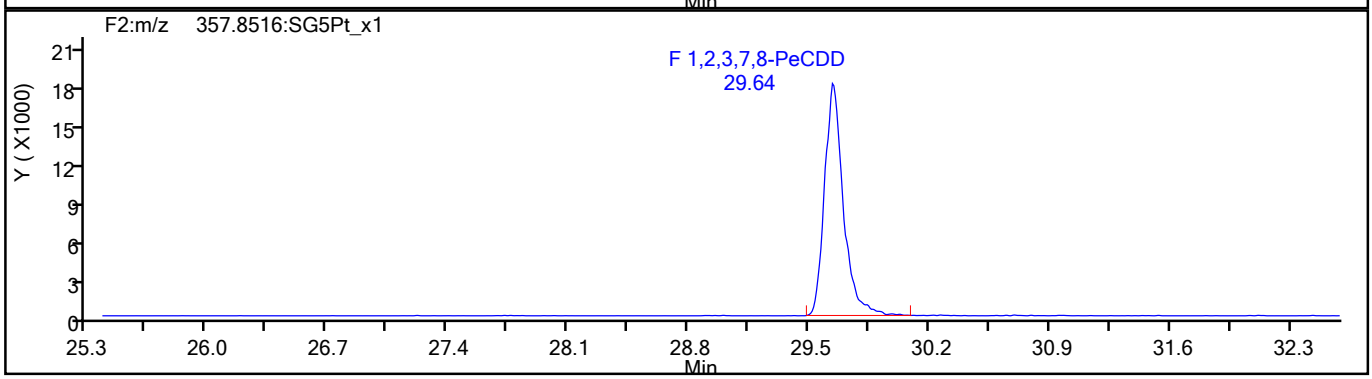

PeCDD Standards

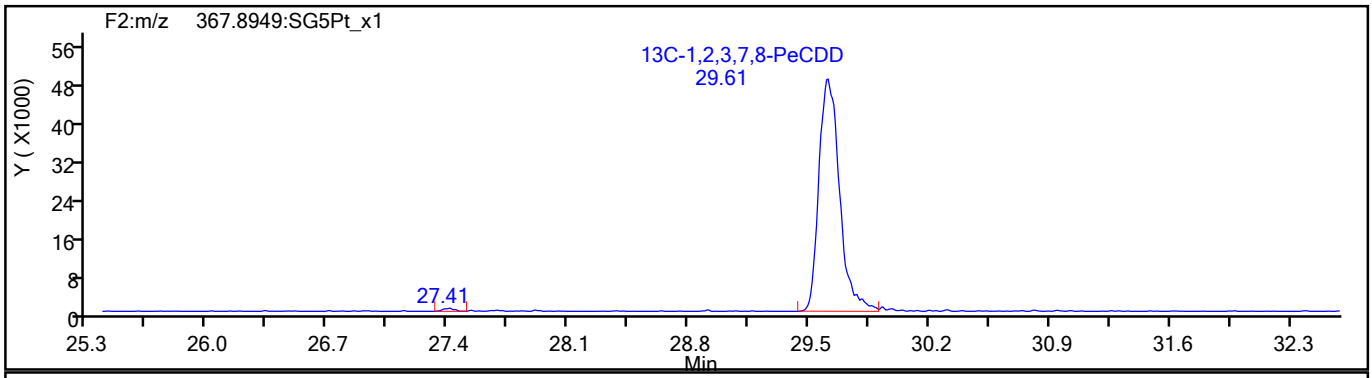

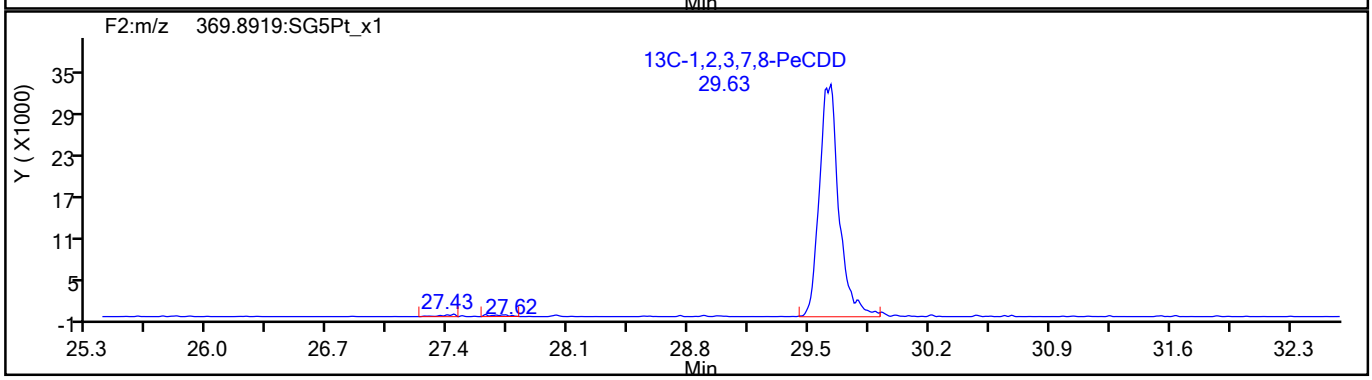

776935

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

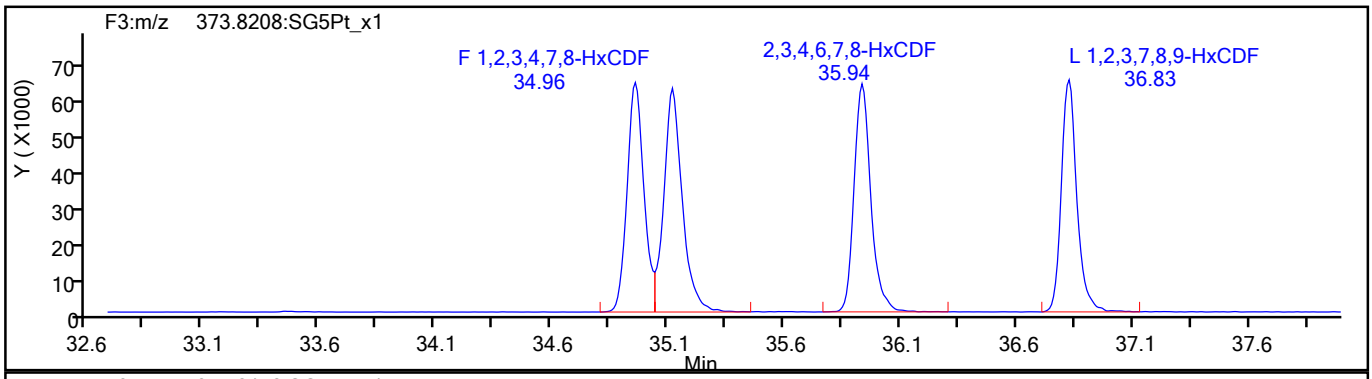

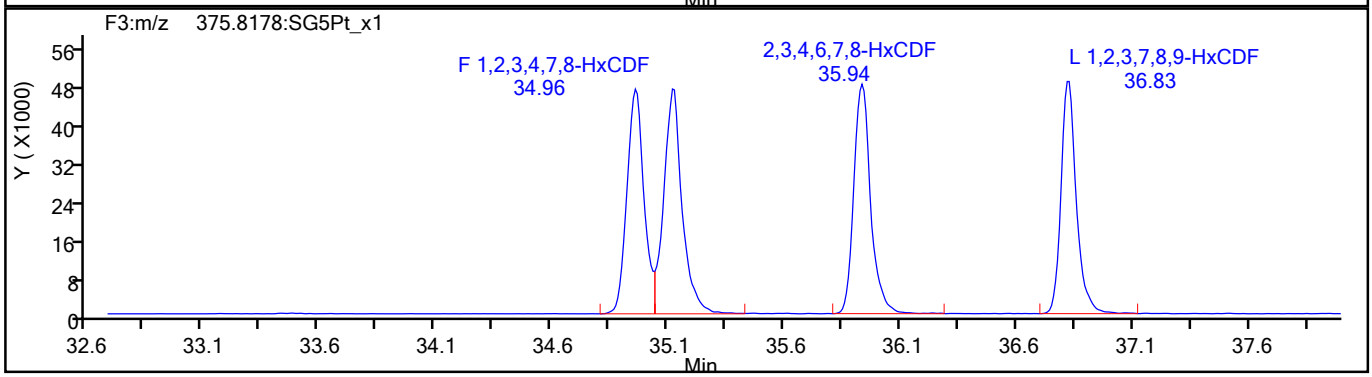

HxCDF Standards

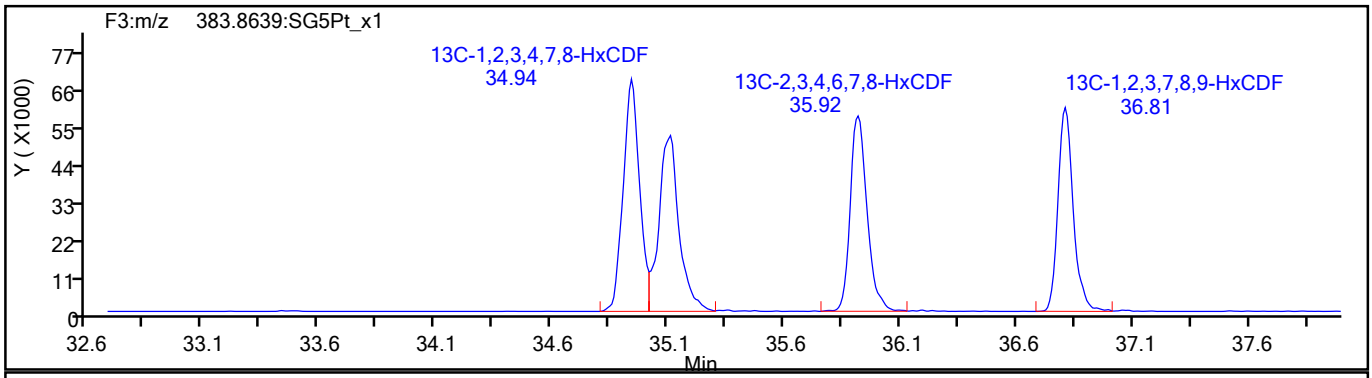

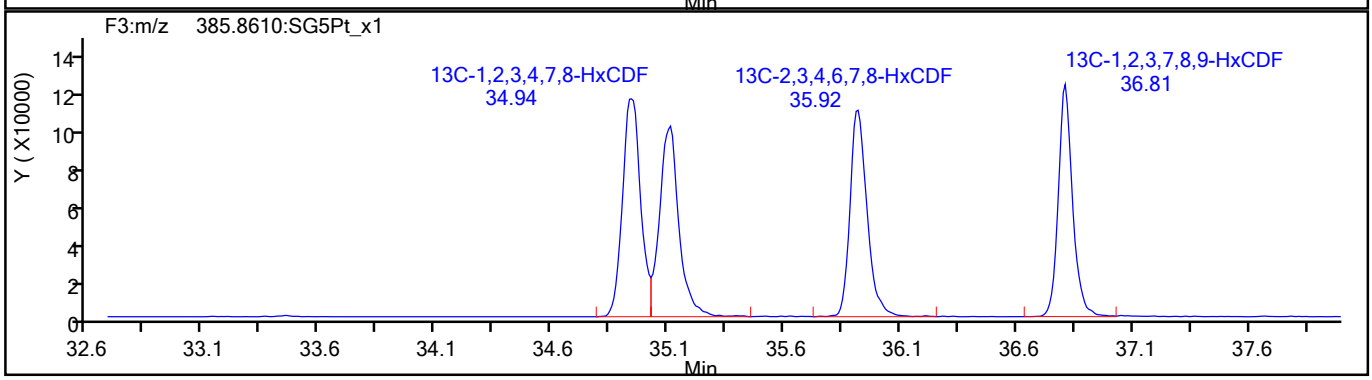

776936

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

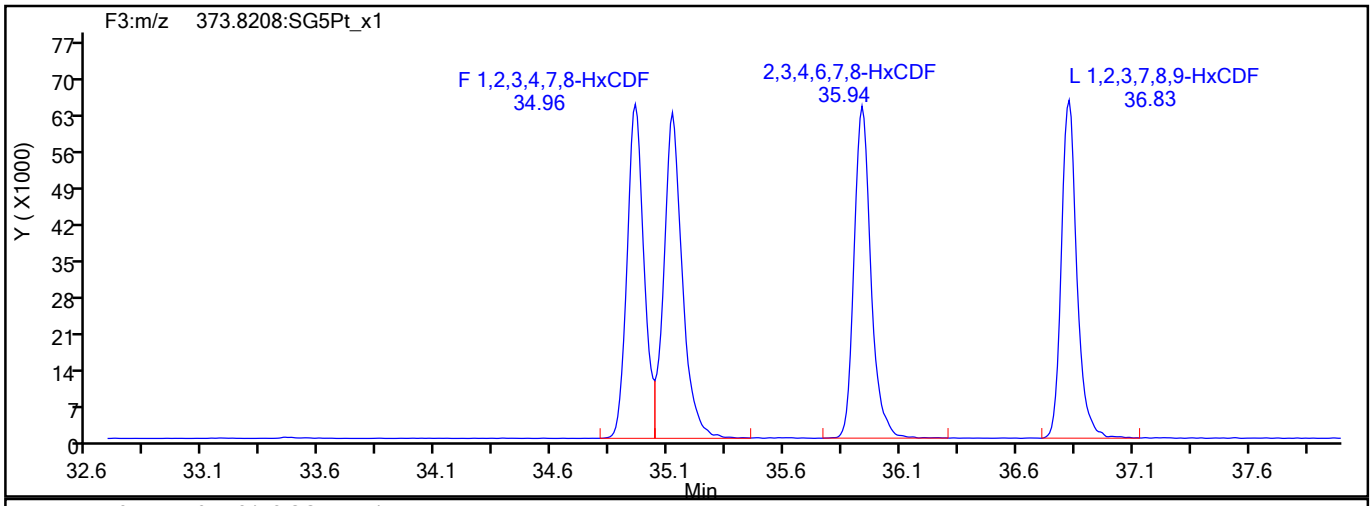

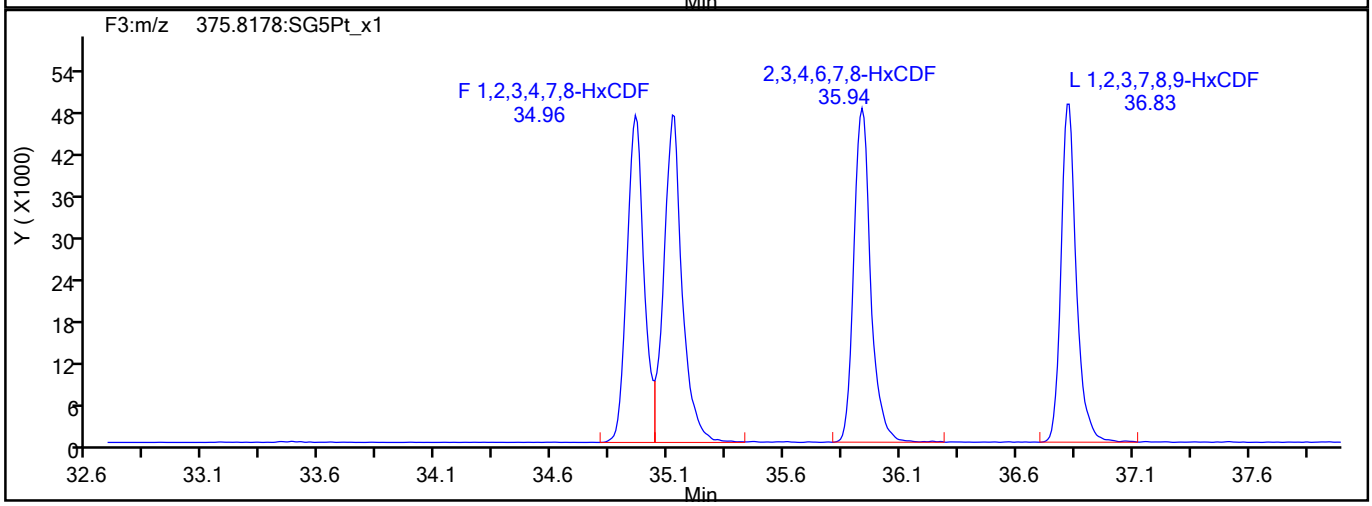

HxCDF Interference Mass

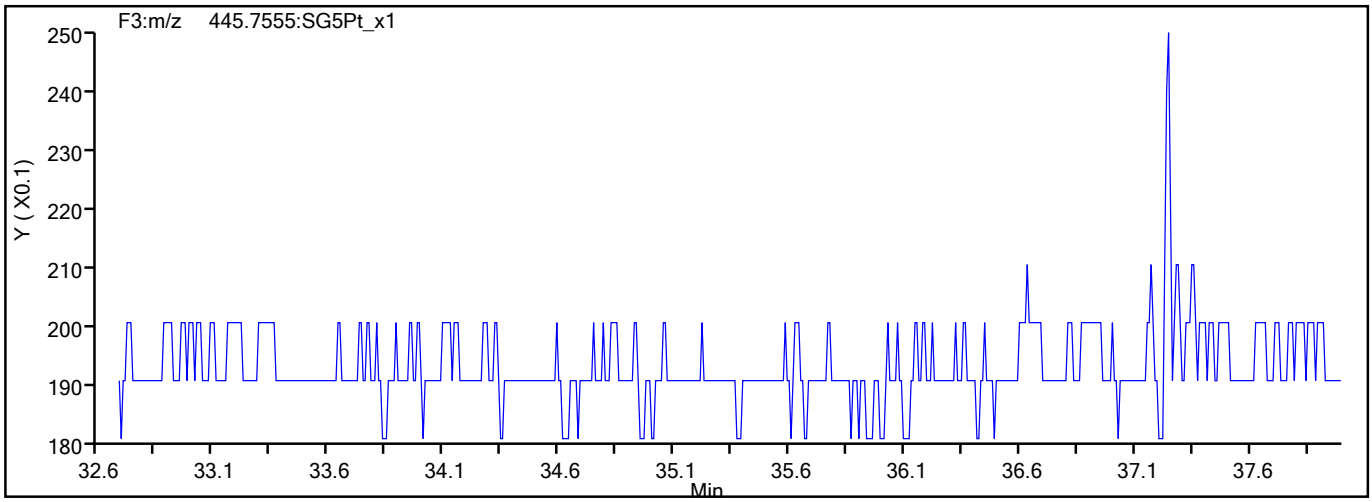

776937

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

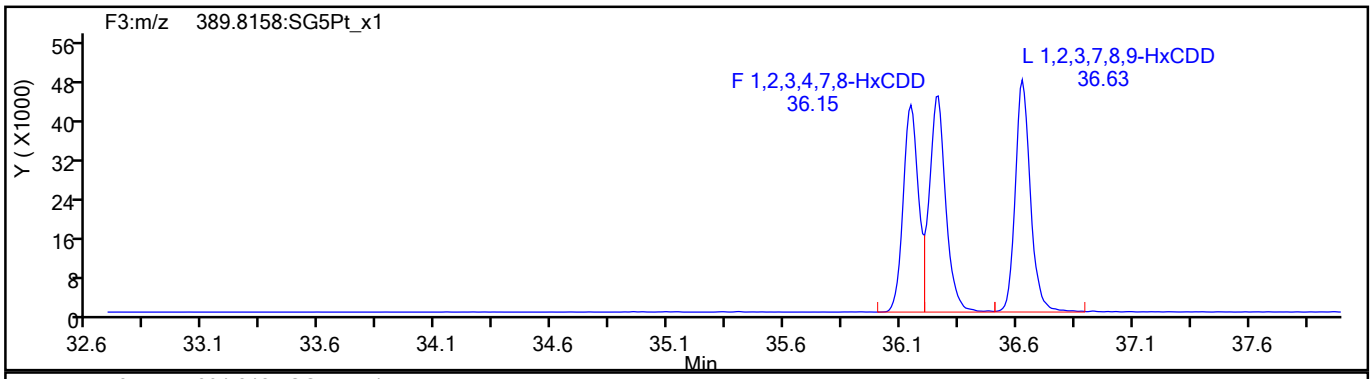

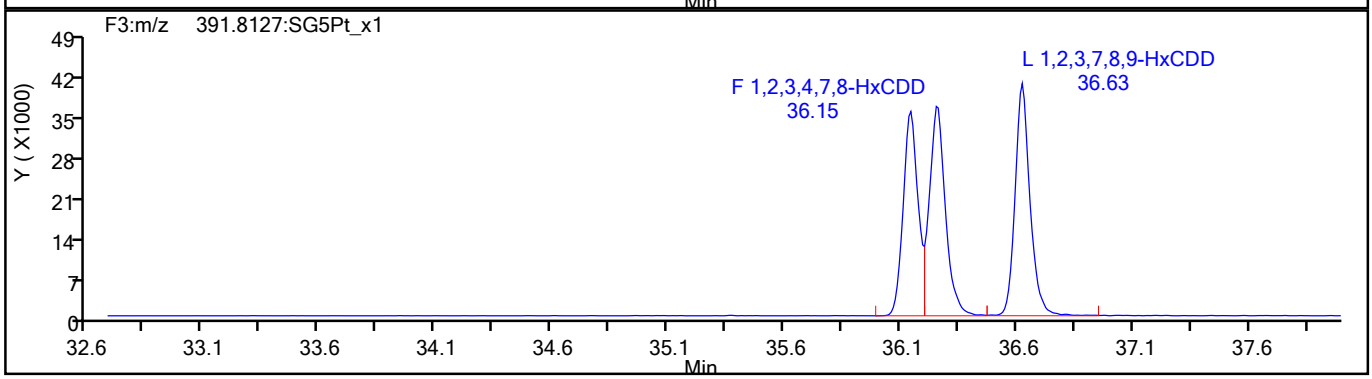

HxCDD Standards

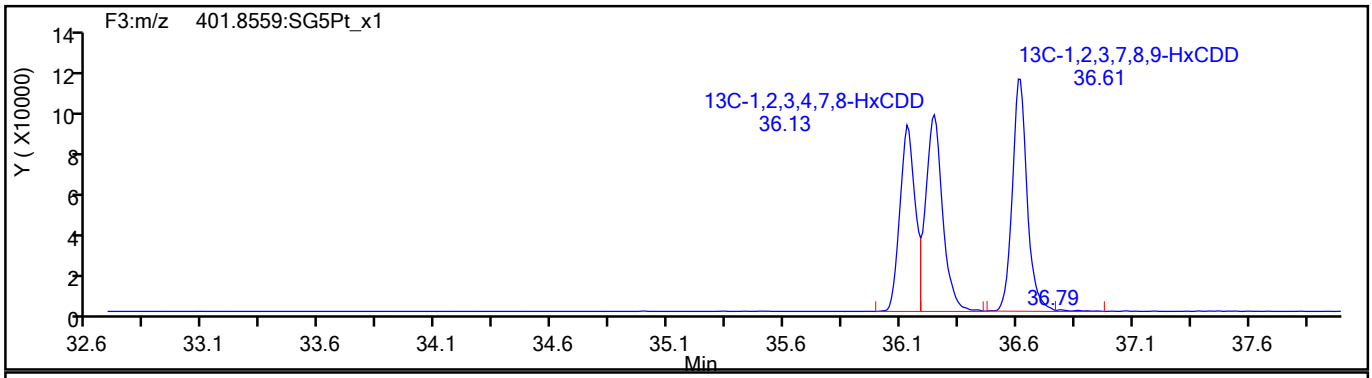

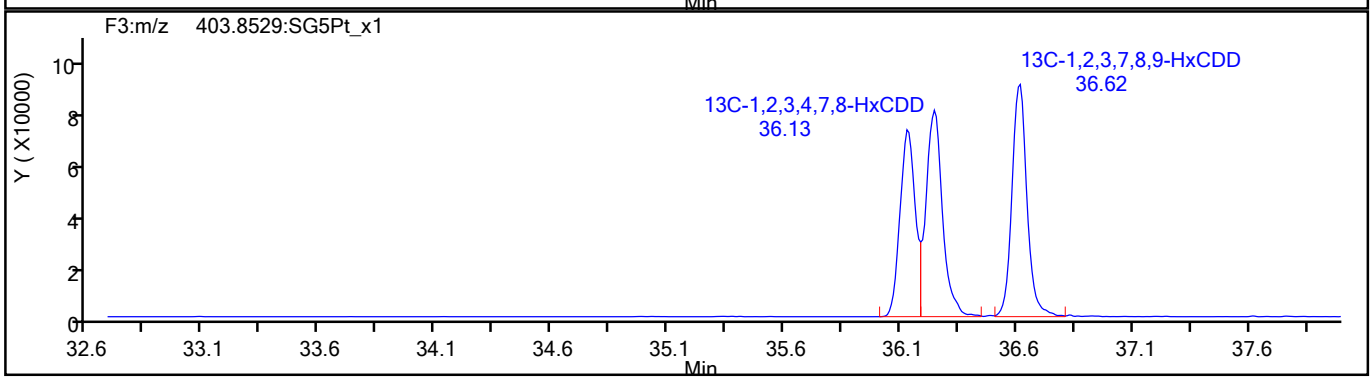

776938

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

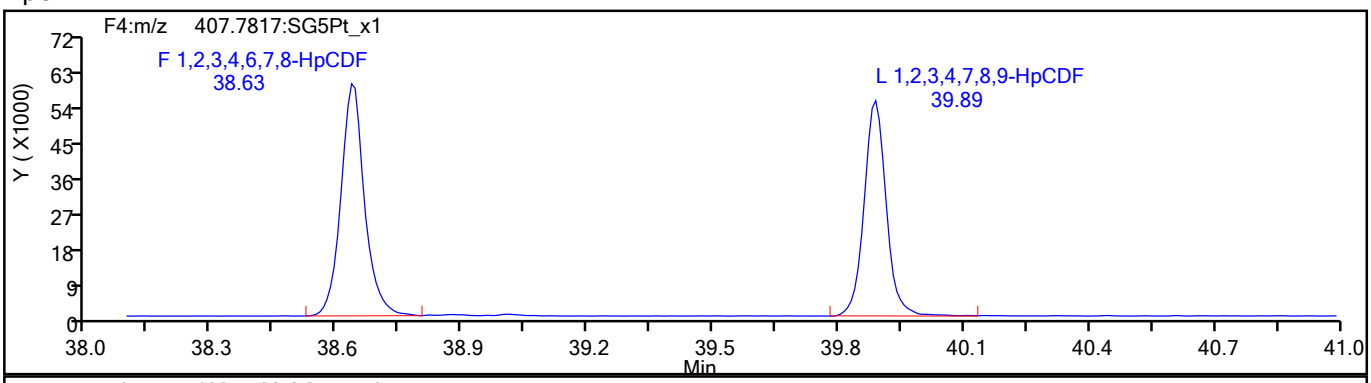

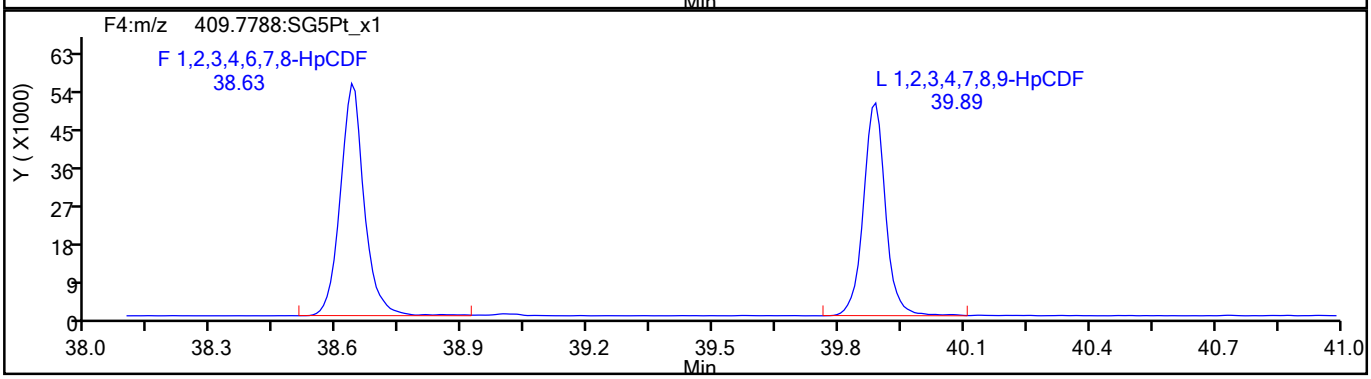

HpCDF Standards

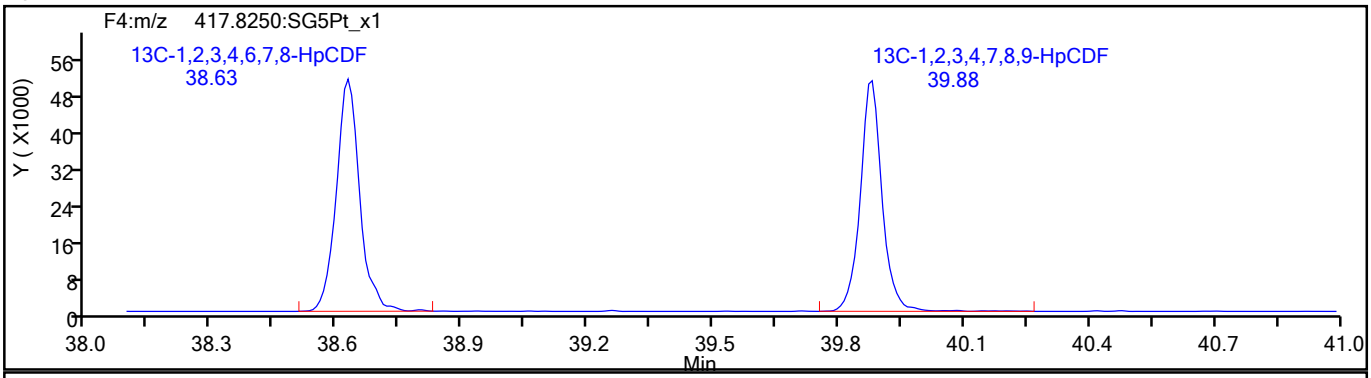

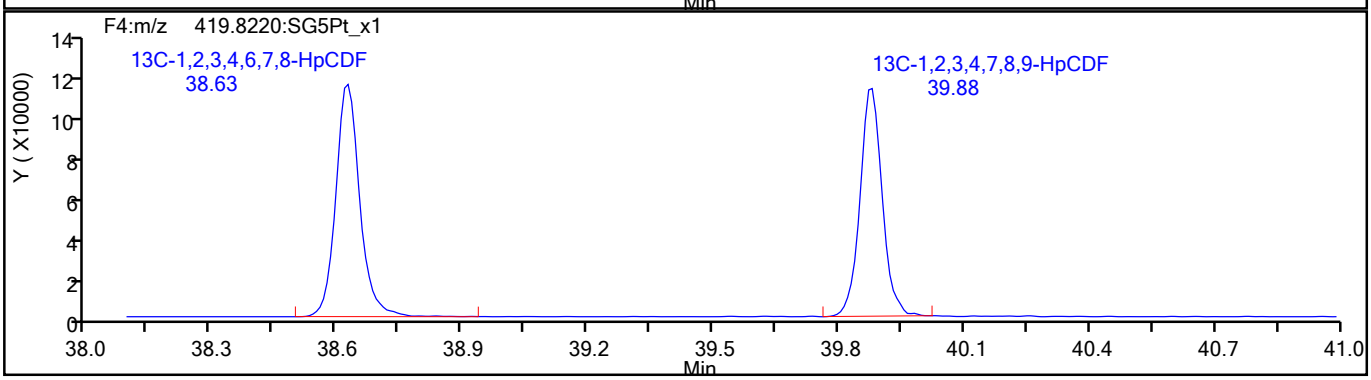

776939

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

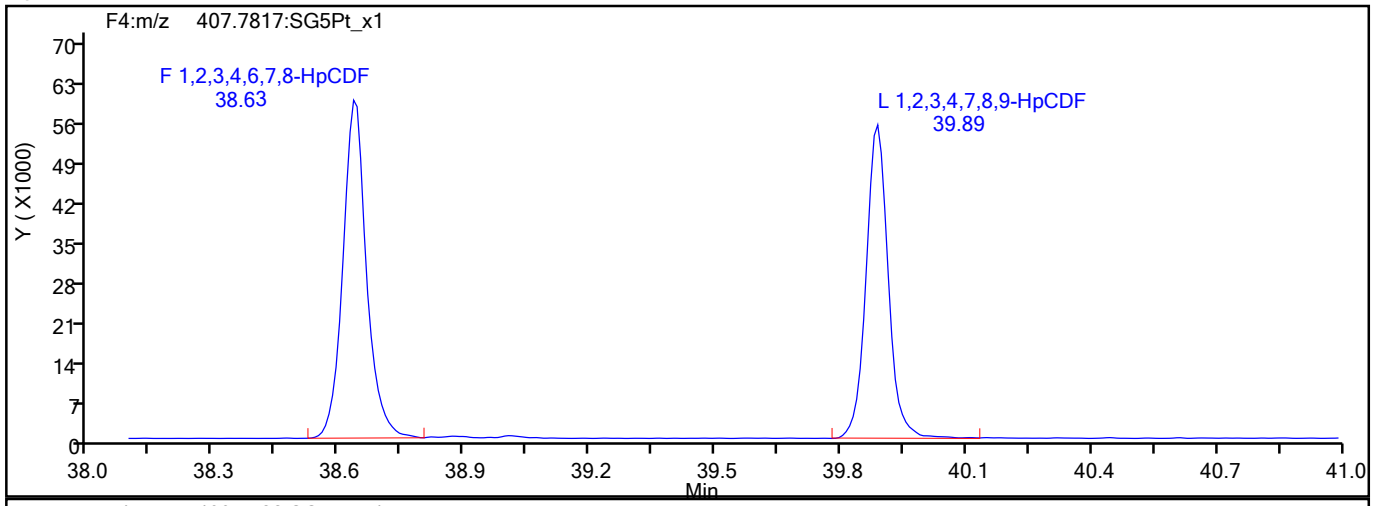

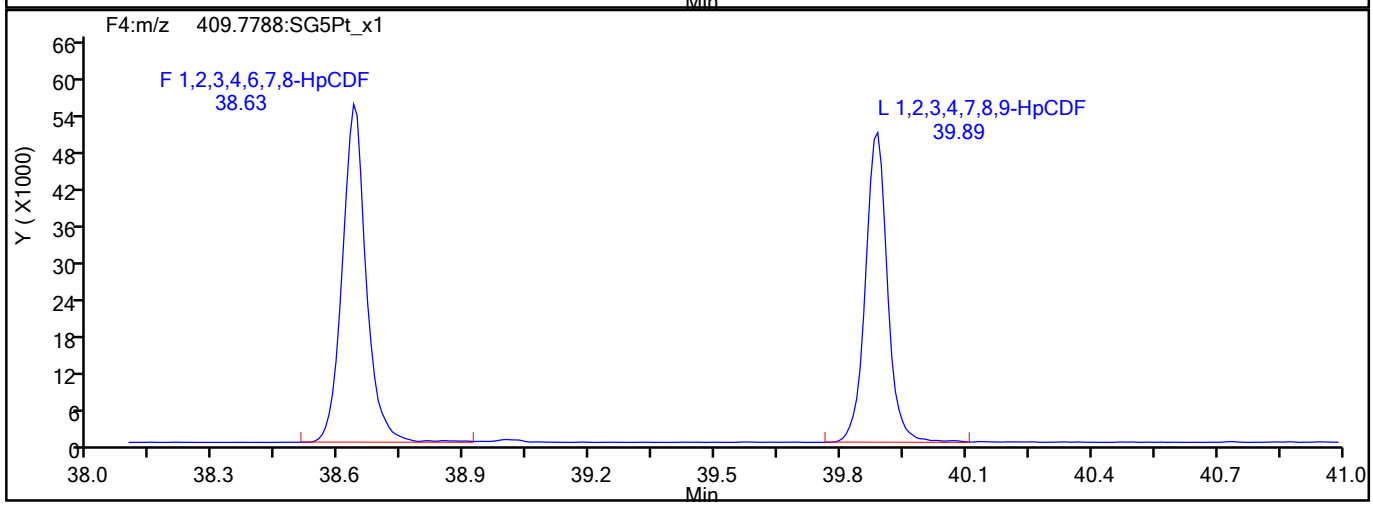

HpCDF Interference Mass

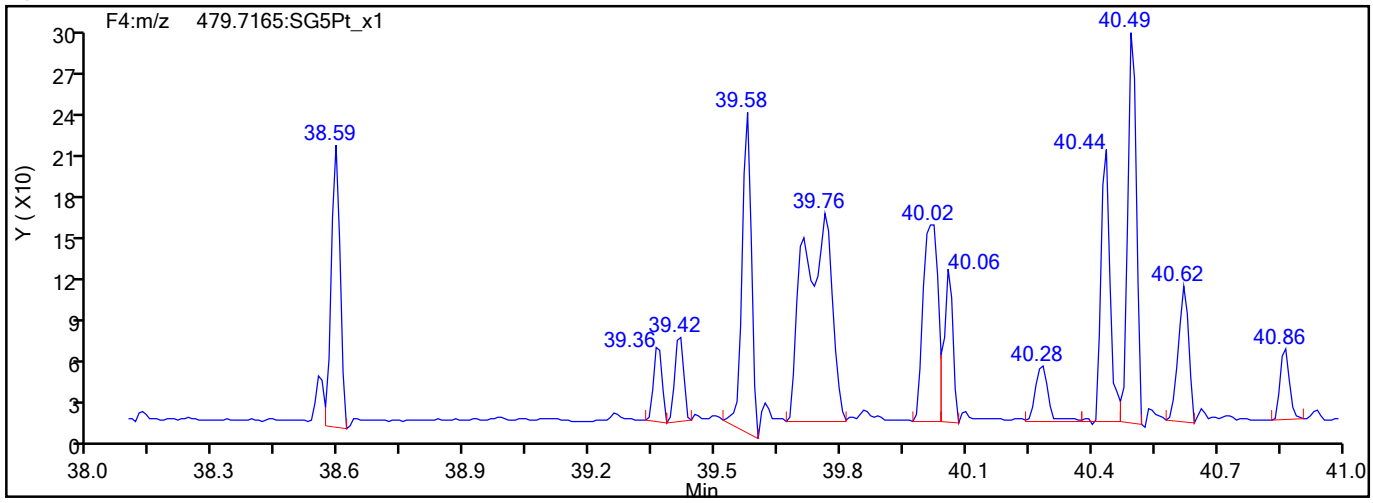

776940

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

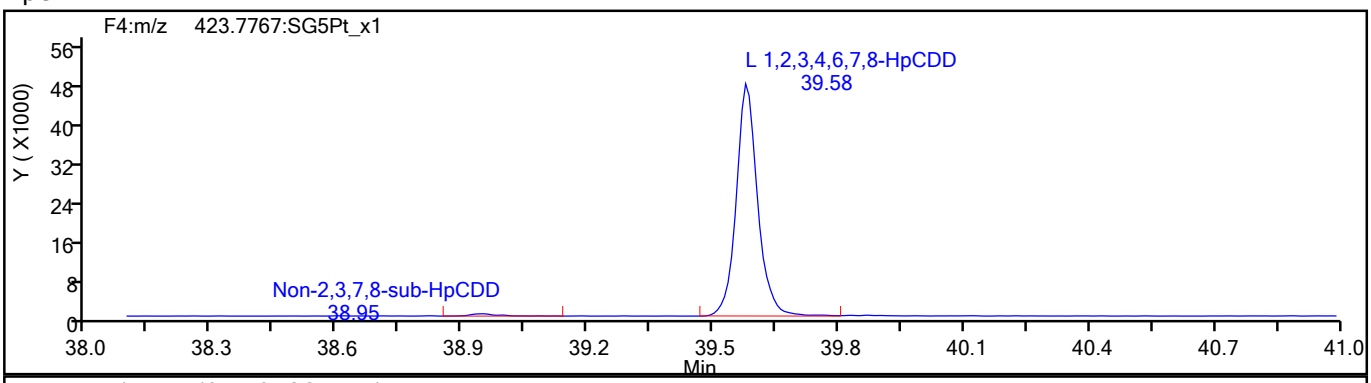

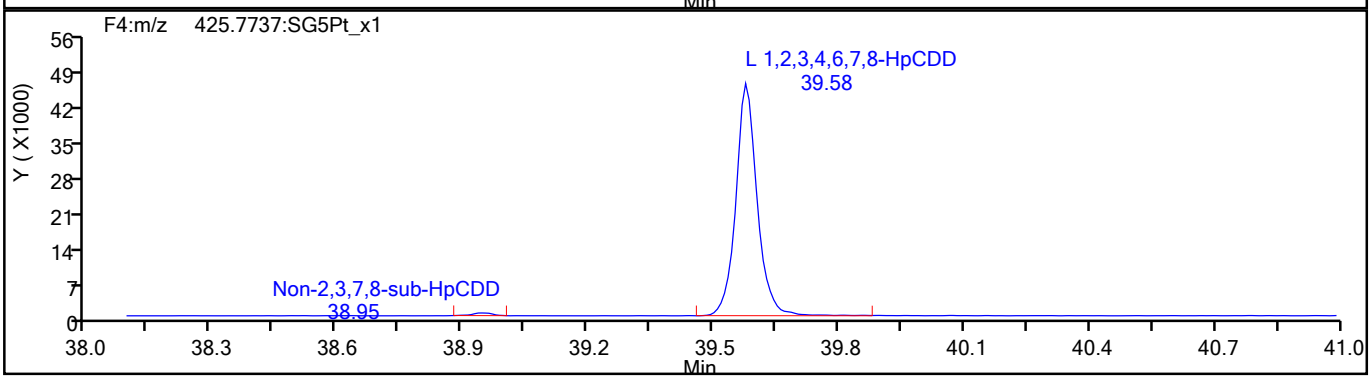

HpCDD Standards

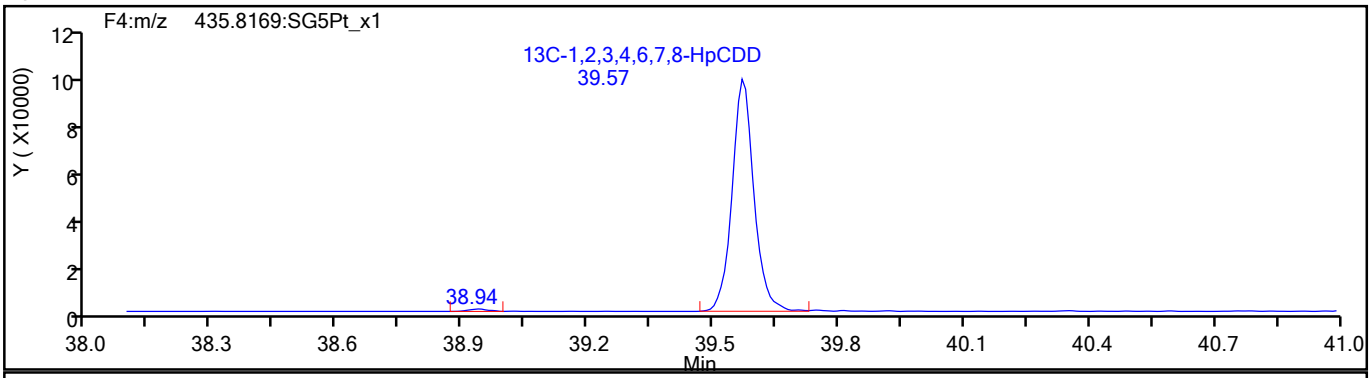

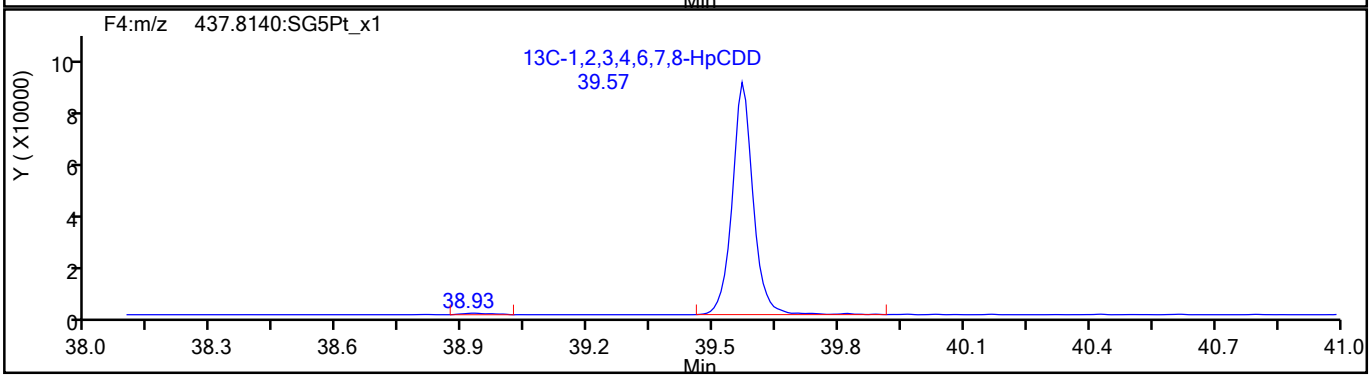

776941

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

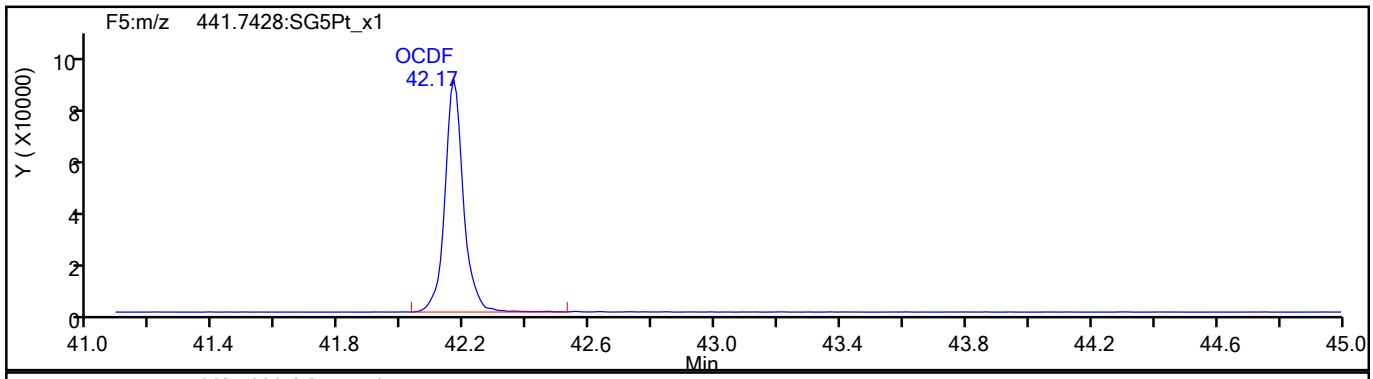

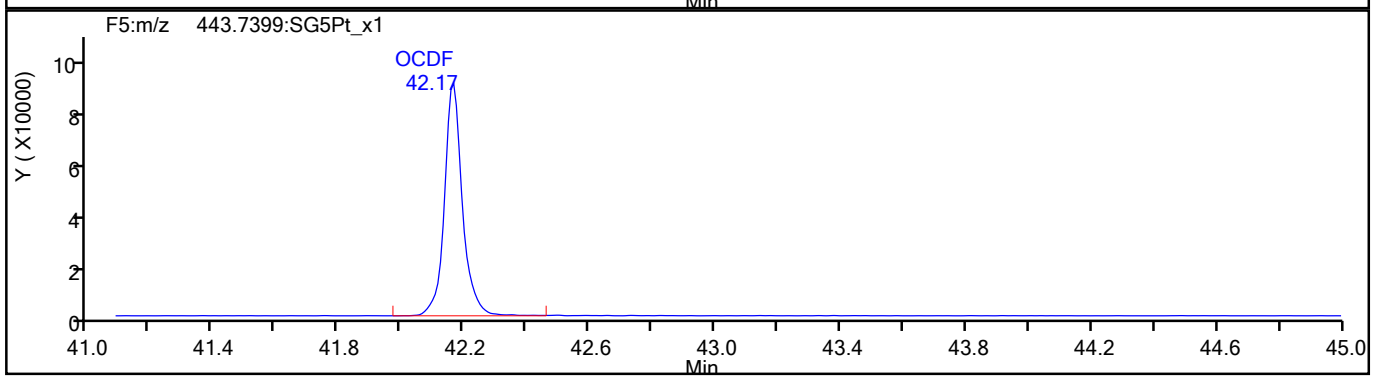

OCDF Standards

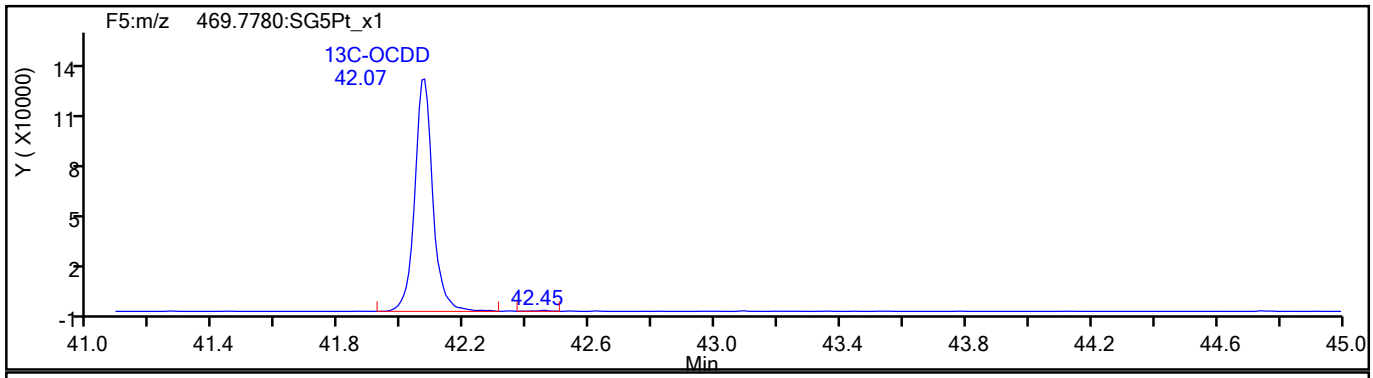

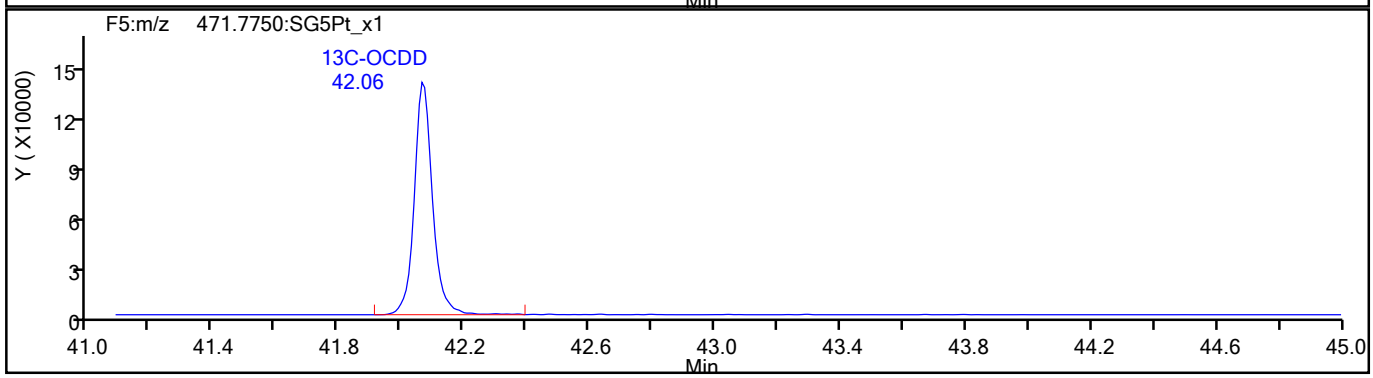

776942

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

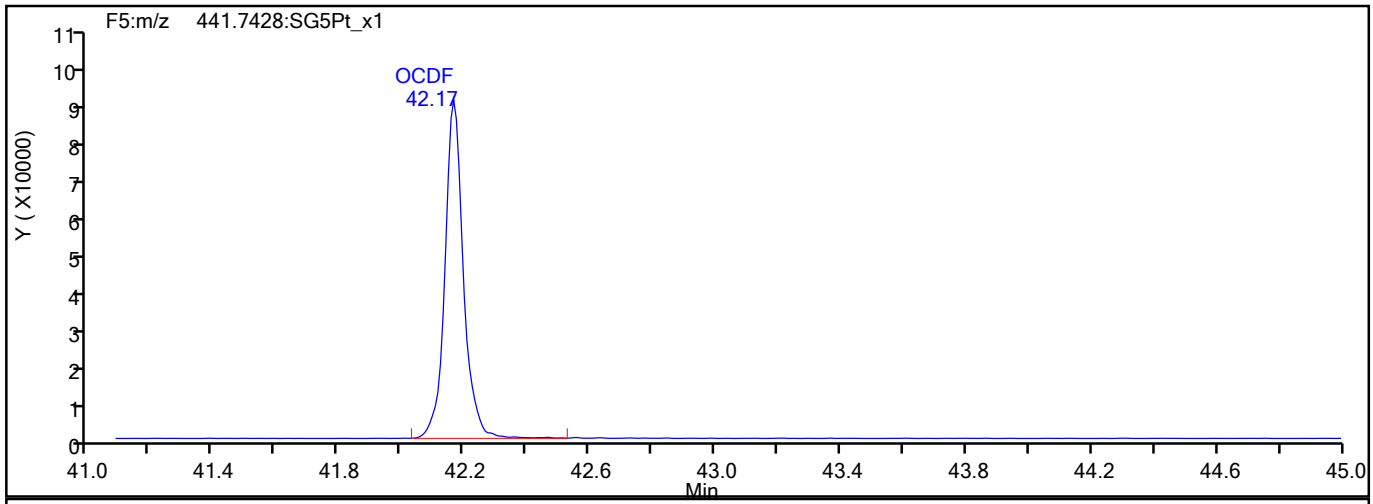

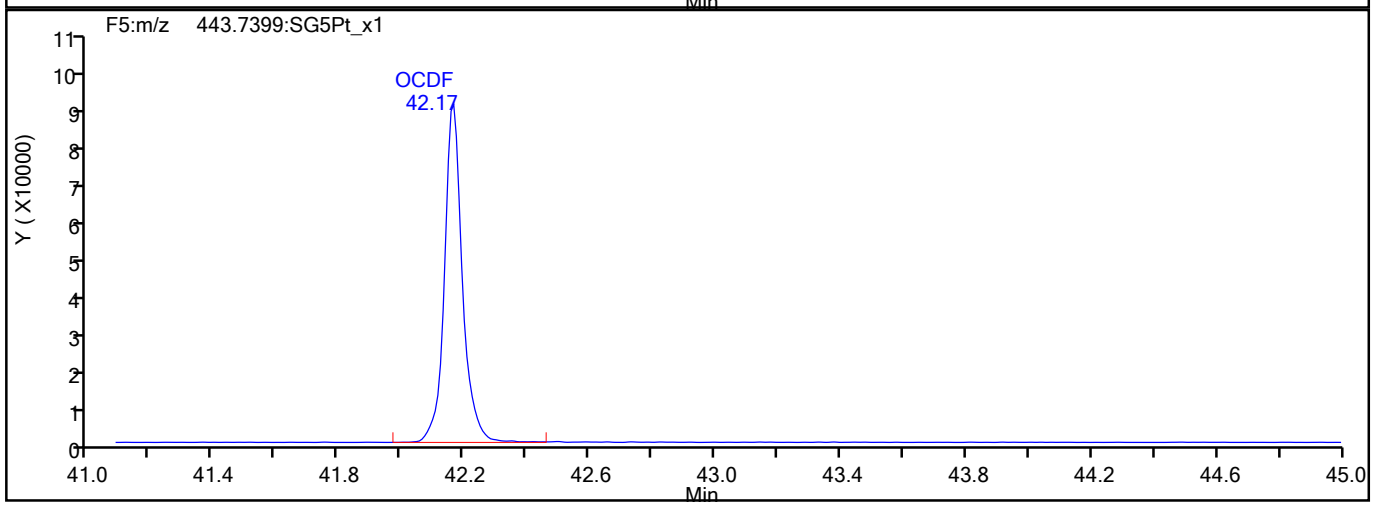

OCDF Interference Mass

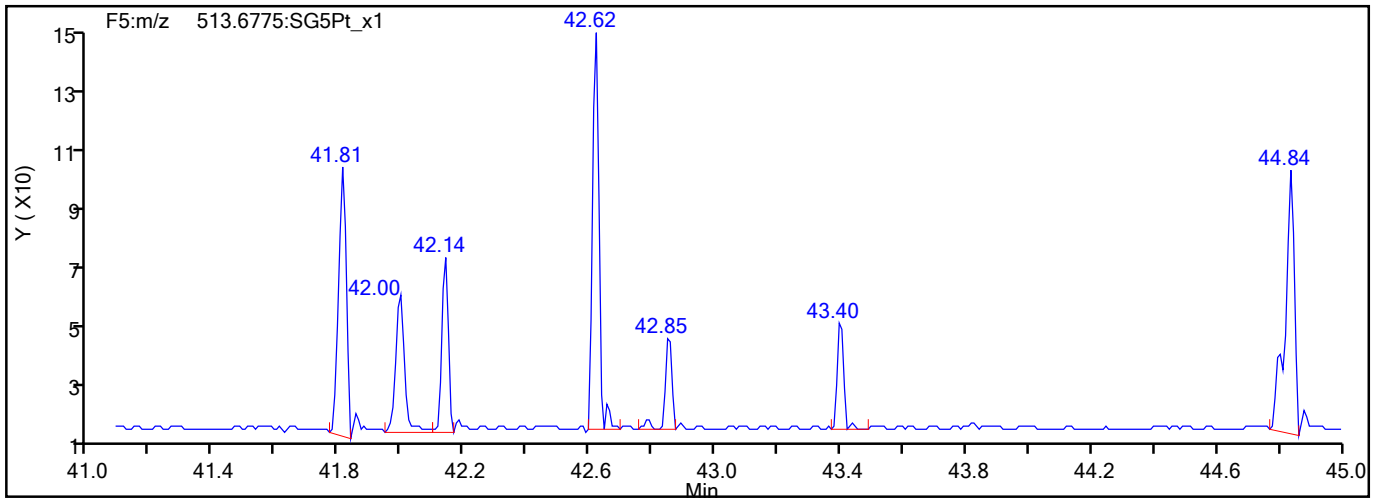

776943

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

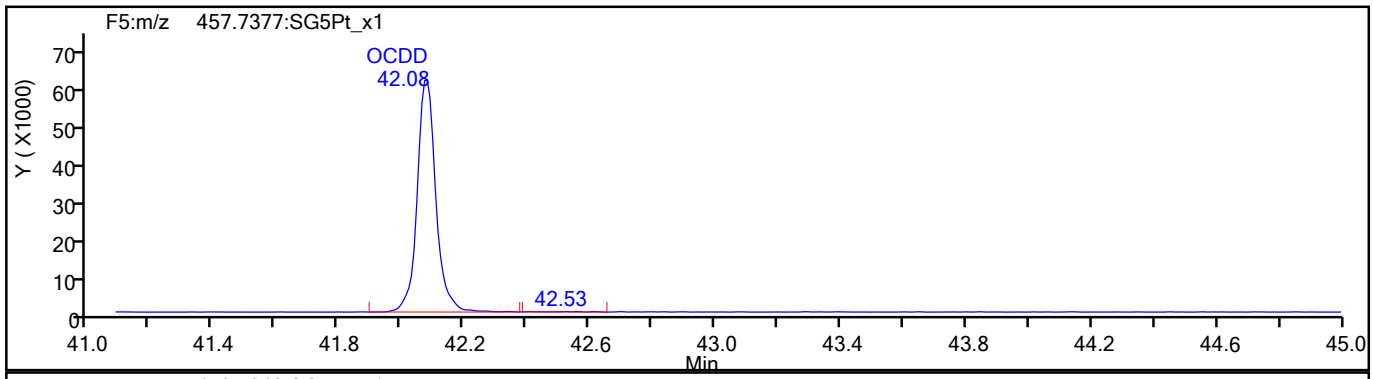

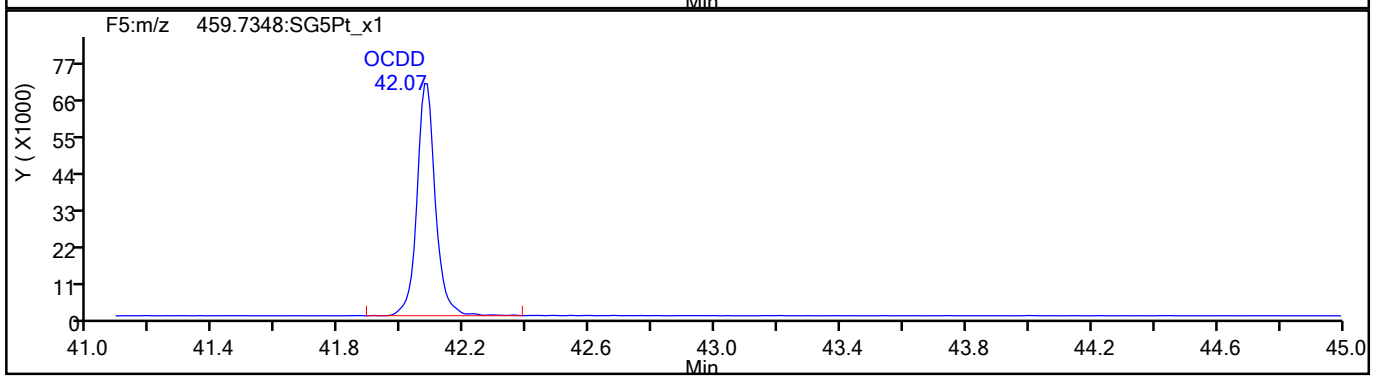

OCDD Standards

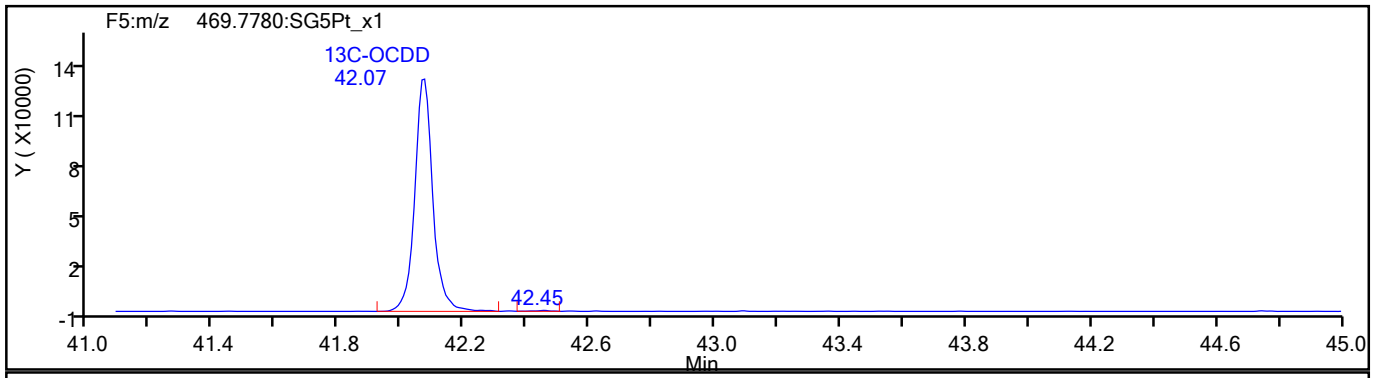

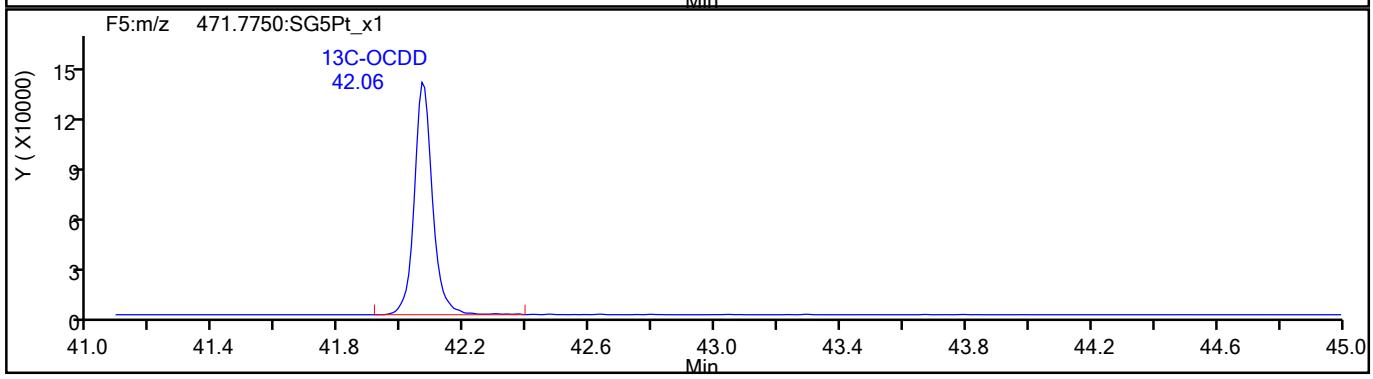

776944

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

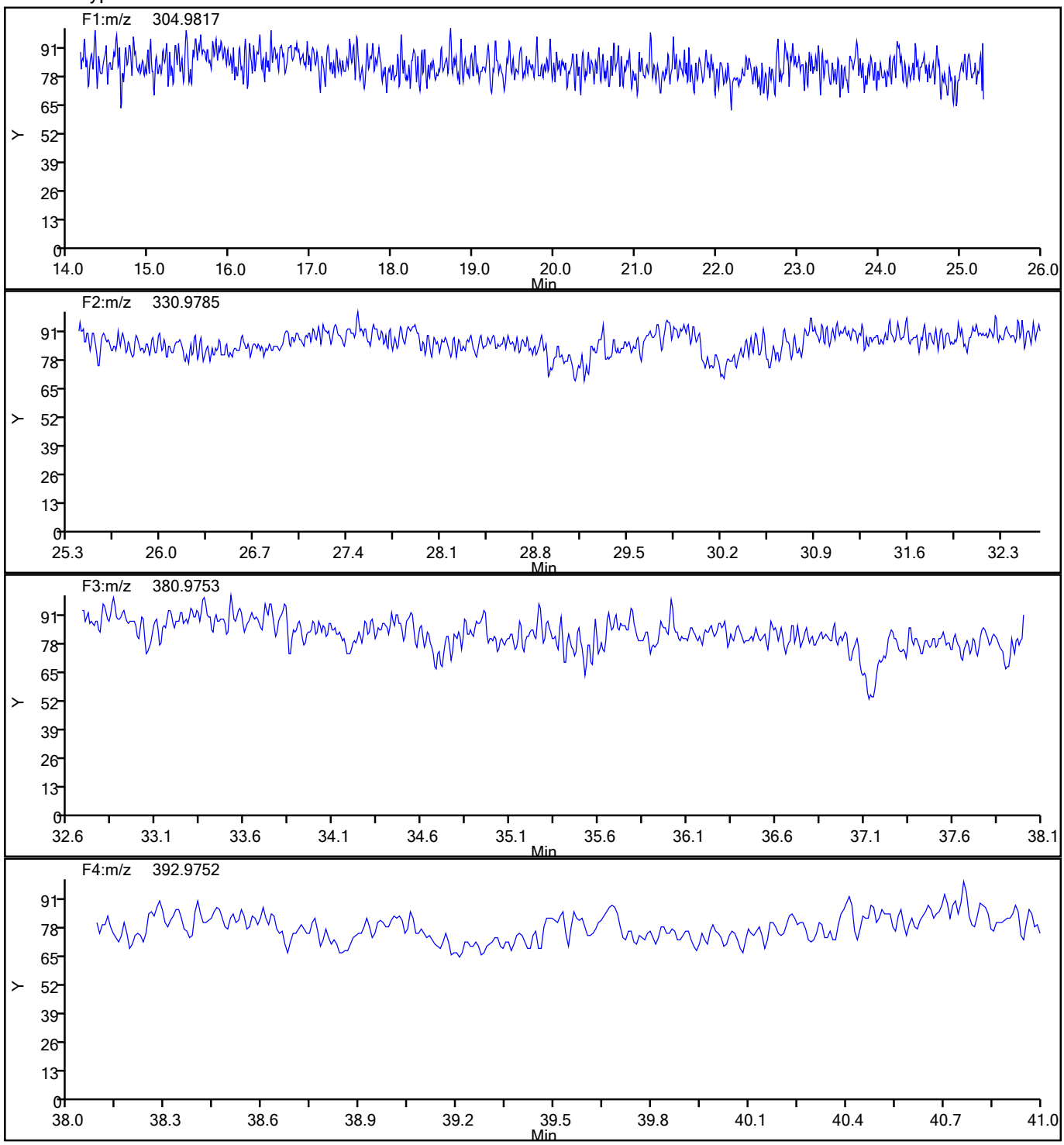

776945

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

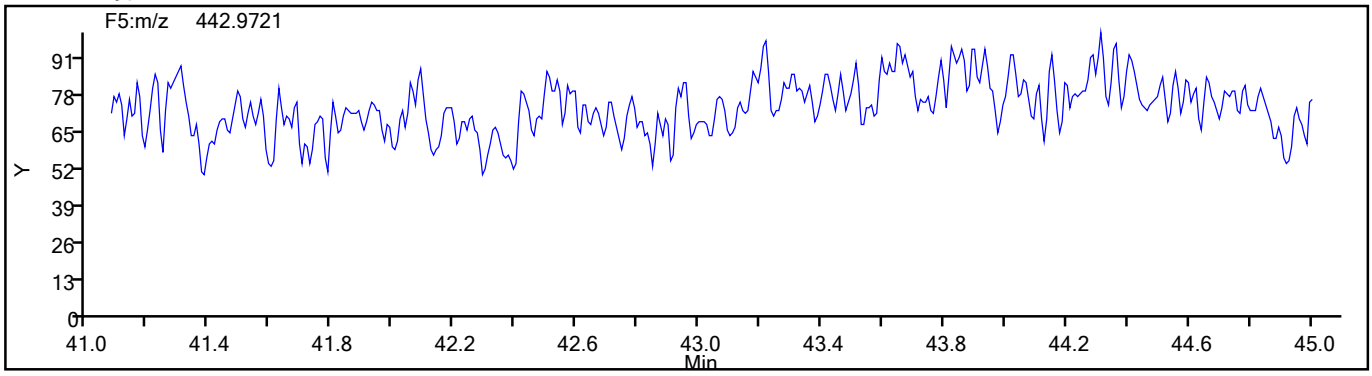

776946

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-517891/2 Calibration Date: 08/19/2021 14:46

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 19au21dfs1_3.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.050		9.72	10.0	97	84-120
2,3,7,8-TCDD	AveID	1.075	1.033		9.60	10.0	96	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.077		51.1	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9629		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.051		50.2	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.164		50.7	50.0	101	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.285		52.8	50.0	106	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.306		53.7	50.0	107	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9728		45.9	50.0	92	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9017		45.4	50.0	91	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.036		46.7	50.0	93	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.311		52.8	50.0	106	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.348		46.7	50.0	93	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.013		48.2	50.0	96	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.260		48.1	50.0	96	86-116
OCDD	AveID	1.062	1.013		95.4	100	95	79-126
OCDF	AveID	1.317	1.434		109	100	109	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.419		105	100	105	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9767		105	100	105	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	0.996		87.4	100	87	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.099		97.7	100	98	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6618		92.4	100	92	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.074		111	100	111	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.086		101	100	101	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.008		96.8	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7840		103	100	103	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9106		106	100	106	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9343		96.0	100	96	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7901		107	100	107	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7627		113	100	113	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7751		113	100	113	77-129
13C-OCDD	Ave	0.5446	0.6405		235	200	118	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.001		9.93	10.0	99	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	19AU21DFS1_1	Resolution Check	RC 081921	46			KSS	1.000	
2	19AU21DFS1_2	WDM HRDXNCP_00044	WDM 081921	1	Dioxin		KSS	1.000	
3	19AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081921	2	Dioxin		KSS	1.000	
4	19AU21DFS1_4	SB Solvent Blank C14	SB 081921	3	Dioxin		KSS	1.000	
5	19AU21DFS1_5	mb 320-513879/1-a RI	mb 320-513879/1-a	4	1613B/Solid	D267	KSS	10.000	g
6	19AU21DFS1_6	320-76888-a-13-a RI	320-76888-a-13-a	5	1613B/Solid	D266	KSS	10.000	g
7	19AU21DFS1_7	320-76901-a-3-a	320-76901-a-3-a	6	1613B/Solid	D267	KSS	10.000	g
8	19AU21DFS1_8	320-76901-a-4-a	320-76901-a-4-a	7	1613B/Solid		KSS	10.000	g
9	19AU21DFS1_9	320-76901-a-5-a	320-76901-a-5-a	8	1613B/Solid		KSS	10.000	g
10	19AU21DFS1_10	320-76901-a-6-a	320-76901-a-6-a	9	1613B/Solid		KSS	10.000	g
11	19AU21DFS1_11	320-76901-a-7-a	320-76901-a-7-a	10	1613B/Solid		KSS	10.000	g
12	19AU21DFS1_12	320-76901-a-8-a	320-76901-a-8-a	11	1613B/Solid		KSS	10.000	g
13	19AU21DFS1_13	320-76901-a-9-a	320-76901-a-9-a	12	1613B/Solid		KSS	10.000	g
14	19AU21DFS1_14	320-76901-a-13-a	320-76901-a-13-a	13	1613B/Solid		KSS	10.000	g
15	19AU21DFS1_15	SB Solvent Blank C14	SB 081921A	3	Dioxin		KSS	1.000	
16	19AU21DFS1_16	Resolution Check	RC 081921A	46			KSS	1.000	
17	19AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081921A	2	Dioxin		KSS	1.000	
18	19AU21DFS1_18	WDM HRDXNCP_00044	WDM 081921A	1	Dioxin		KSS	1.000	
19	19AU21DFS1_19	SB Solvent Blank C14	SB 081921B	3	Dioxin		KSS	1.000	
20	19AU21DFS1_20	320-76888-a-5-a 5X	320-76888-a-5-a	14	1613B/Solid	D267	KSS	10.000	g
21	19AU21DFS1_21	320-76888-a-1-a 10X	320-76888-a-1-a	15	1613B/Solid		KSS	10.000	g
22	19AU21DFS1_22	320-76888-a-1-b ms 10X	320-76888-a-1-b ms	16	1613B/Solid		KSS	10.000	g
23	19AU21DFS1_23	320-76888-a-1-c msd 10X	320-76888-a-1-c msd	17	1613B/Solid		KSS	10.000	g
24	19AU21DFS1_24	320-76888-a-4-a 10X	320-76888-a-4-a	18	1613B/Solid		KSS	10.000	g
25	19AU21DFS1_25	320-76888-a-2-a 10X	320-76888-a-2-a	19	1613B/Solid		KSS	10.000	g
26	19AU21DFS1_26	320-76901-a-1-a 10X	320-76901-a-1-a	20	1613B/Solid		KSS	10.000	g
27	19AU21DFS1_27	320-76888-a-3-a 10X	320-76888-a-3-a	21	1613B/Solid		KSS	10.000	g
28	19AU21DFS1_28	SB Solvent Blank C14	SB 081921C	3	Dioxin		KSS	1.000	
29	19AU21DFS1_29	SB Solvent Blank C14	SB 081921D	3	Dioxin		KSS	1.000	
30	19AU21DFS1_30	Resolution Check	RC 081921B	46			KSS	1.000	

Logfile ✓'d
8/21/21
KSS

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 13:39
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11552 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10549 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11385 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11272 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11335 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11001 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11059 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10420 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10449 [5%height]

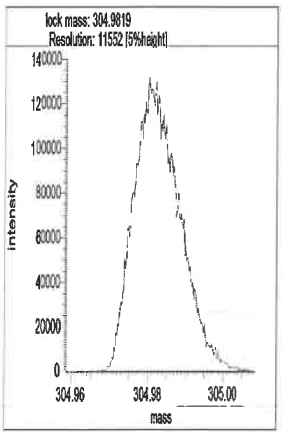

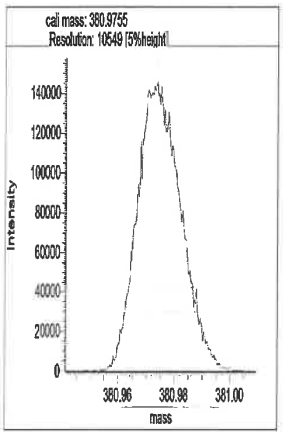

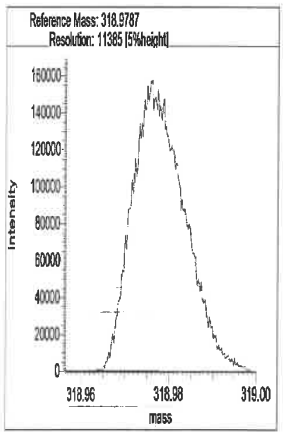

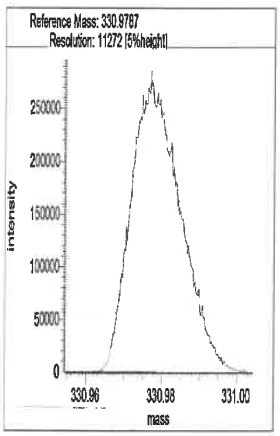

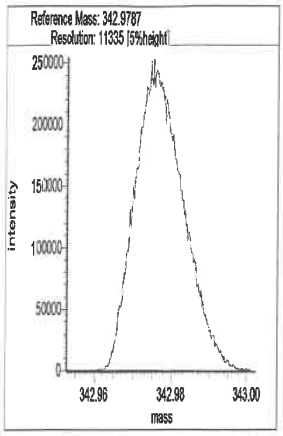

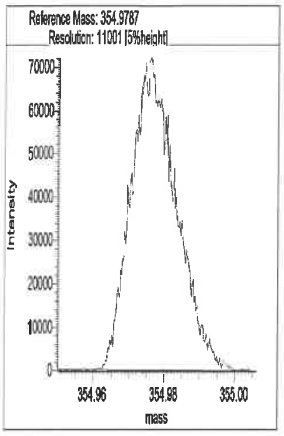

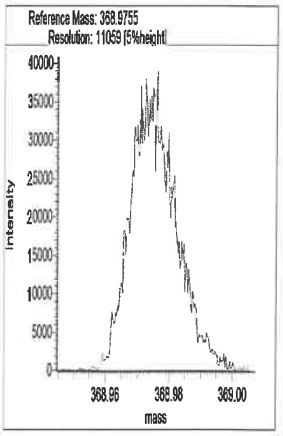

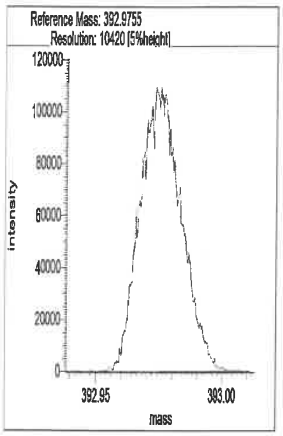

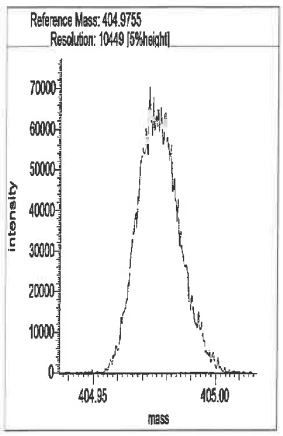

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11485 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10793 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11226 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11398 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10683 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10785 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10698 [5%height]

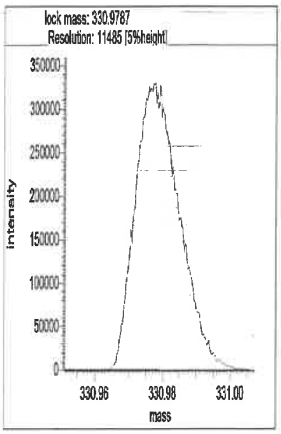

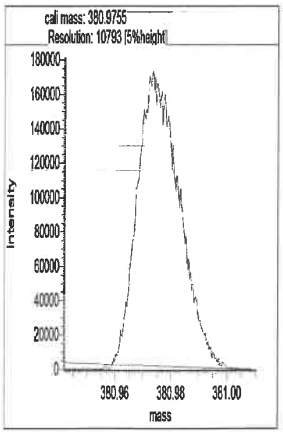

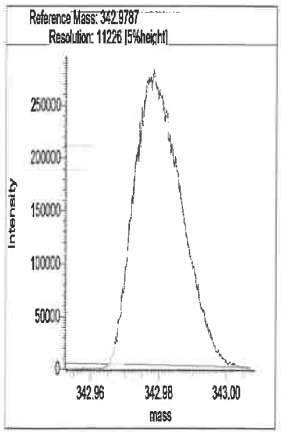

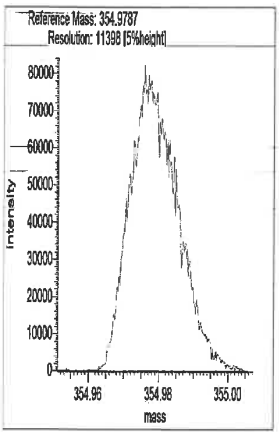

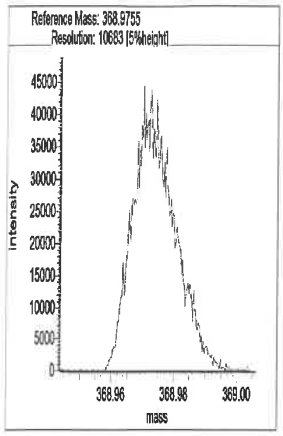

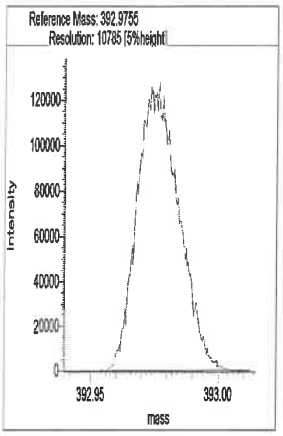

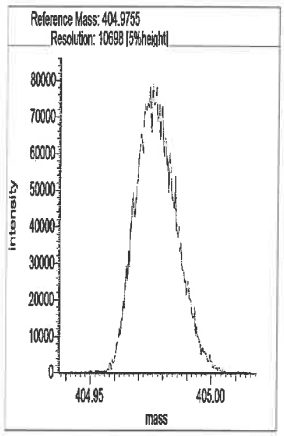

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11415 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10771 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11020 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11042 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12007 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10745 [5%height]

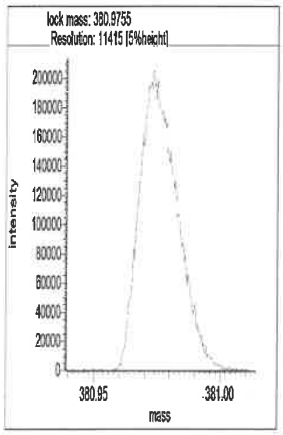

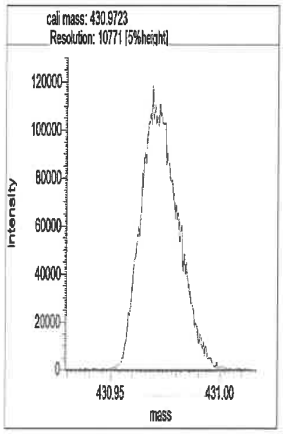

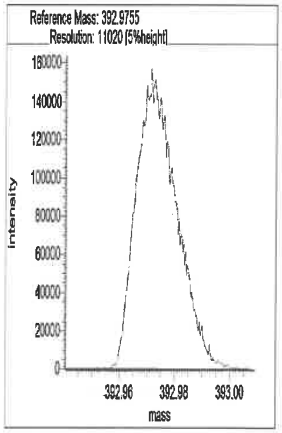

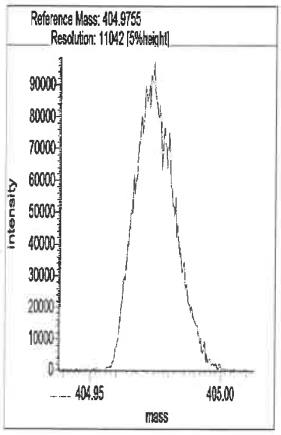

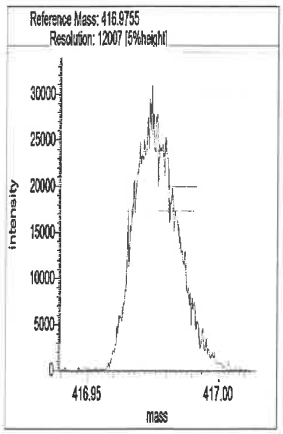

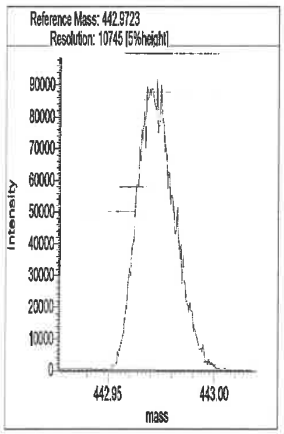

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11386 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10623 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11300 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10989 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11023 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10728 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10731 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10778 [5%height]

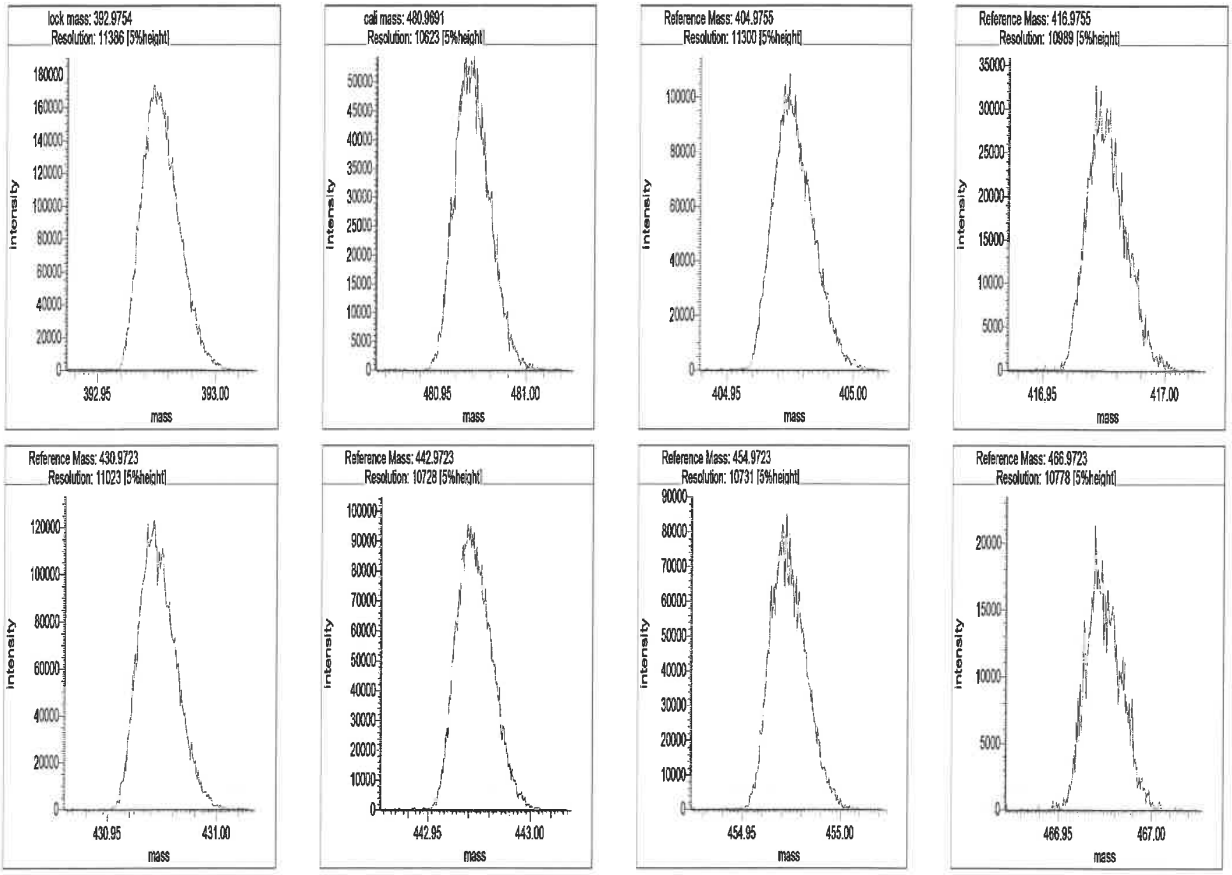

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11445 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11134 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11159 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10809 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11068 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10706 [5%height]

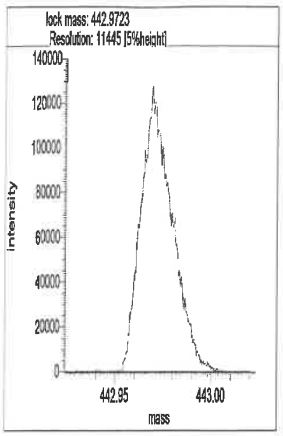
lock mass: 442.9723
Resolution: 11445 [5%height]
Intensity
mass

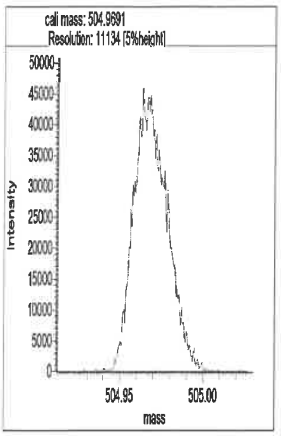
cali mass: 504.9691
Resolution: 11134 [5%height]
Intensity
mass

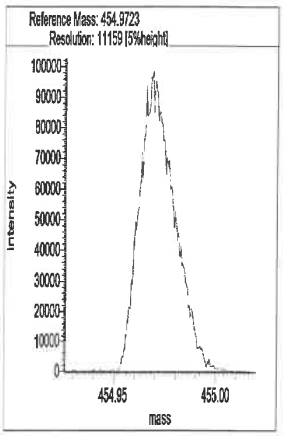
Reference Mass: 454.9723
Resolution: 11159 [5%height]
Intensity
mass

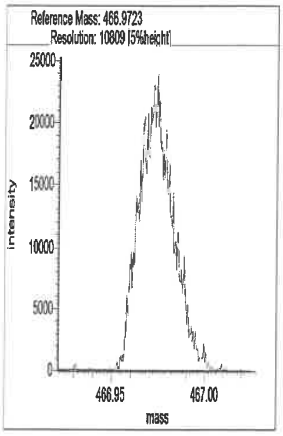
Reference Mass: 466.9723
Resolution: 10809 [5%height]
Intensity
mass

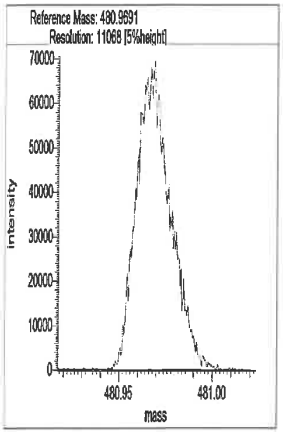
Reference Mass: 480.9691
Resolution: 11068 [5%height]
Intensity
mass

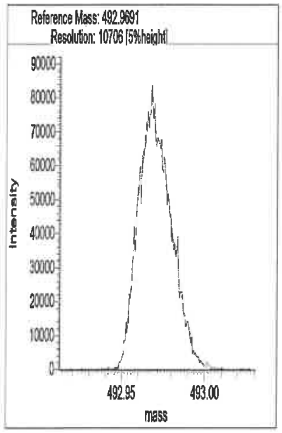
Reference Mass: 492.9691
Resolution: 10706 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 01:14
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10904 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10388 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10733 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10622 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10608 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10712 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10070 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9982 [5%height] ✓ OK 8/21/21 KH
Ref. mass 404.9755 [m/z] Resolution: 10023 [5%height]

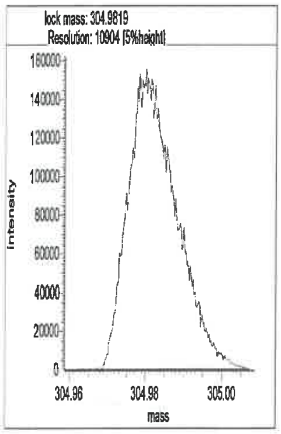

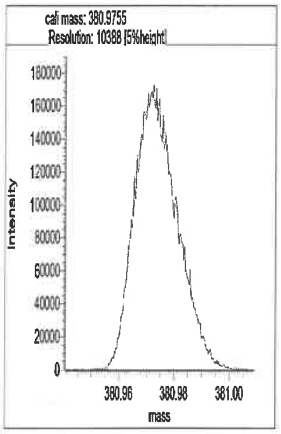

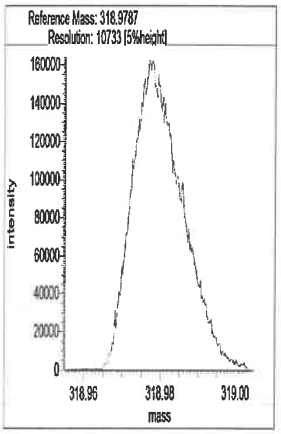

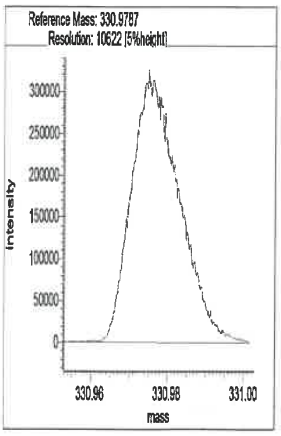

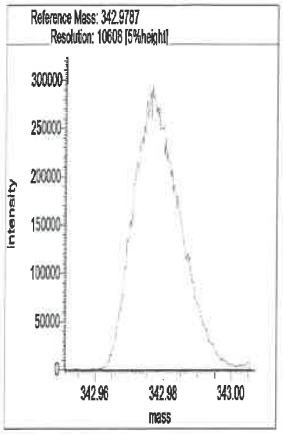

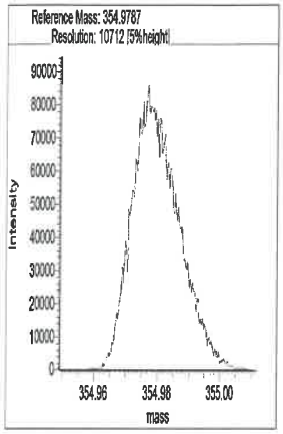

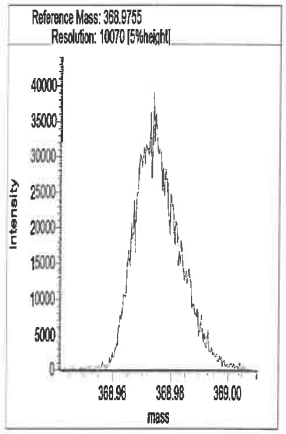

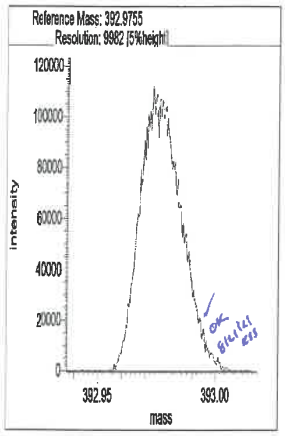

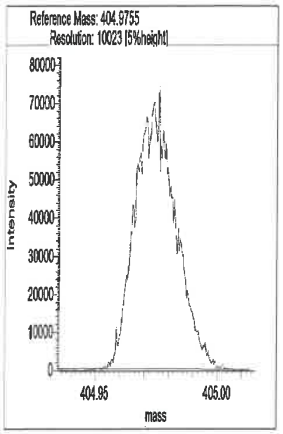

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10787 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10782 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11025 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11013 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10635 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10603 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10396 [5%height]

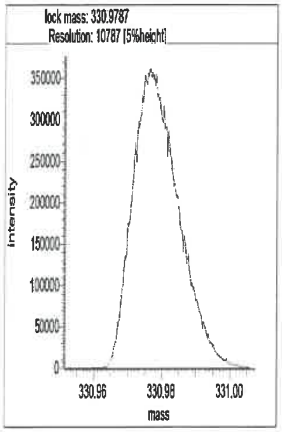

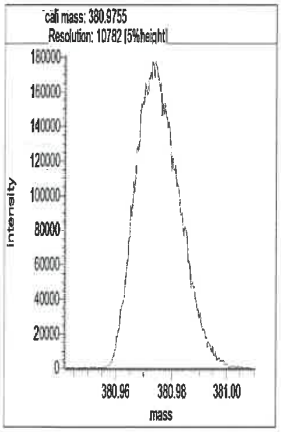

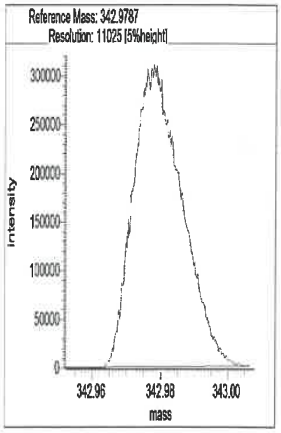

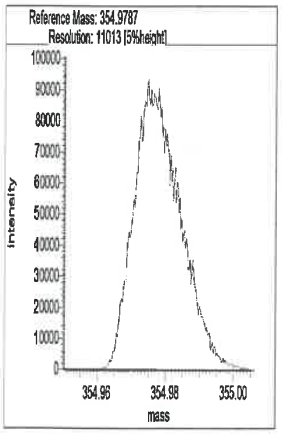

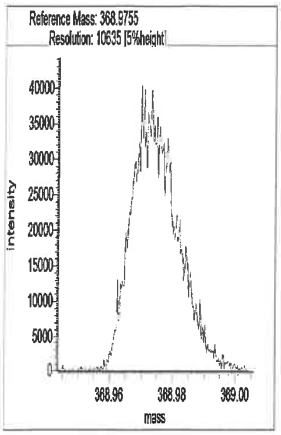

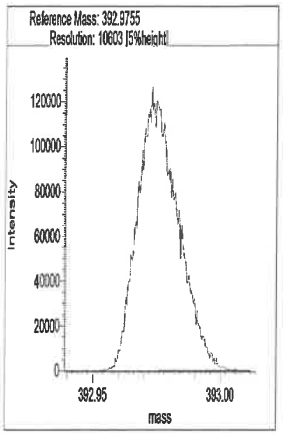

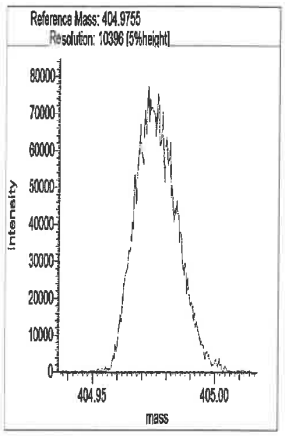

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11029 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10564 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10871 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10418 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11260 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10446 [5%height]

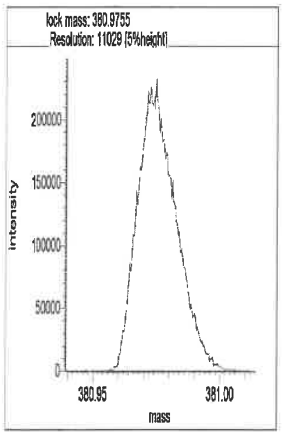

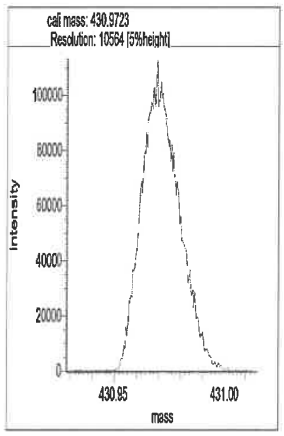

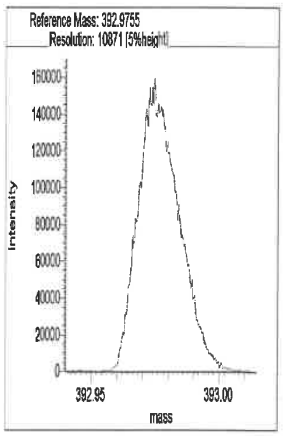

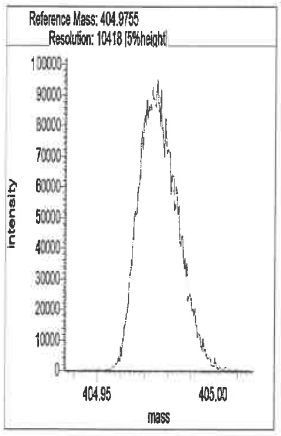

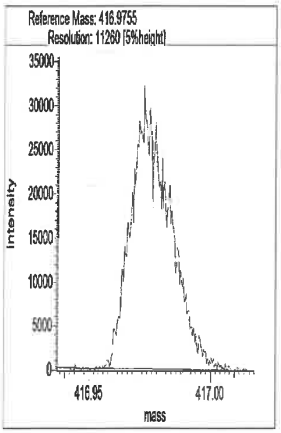

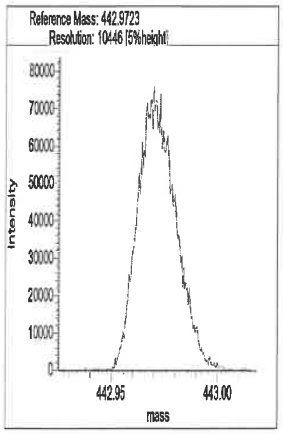

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10922 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10352 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10773 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12243 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10710 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11096 [5%height]

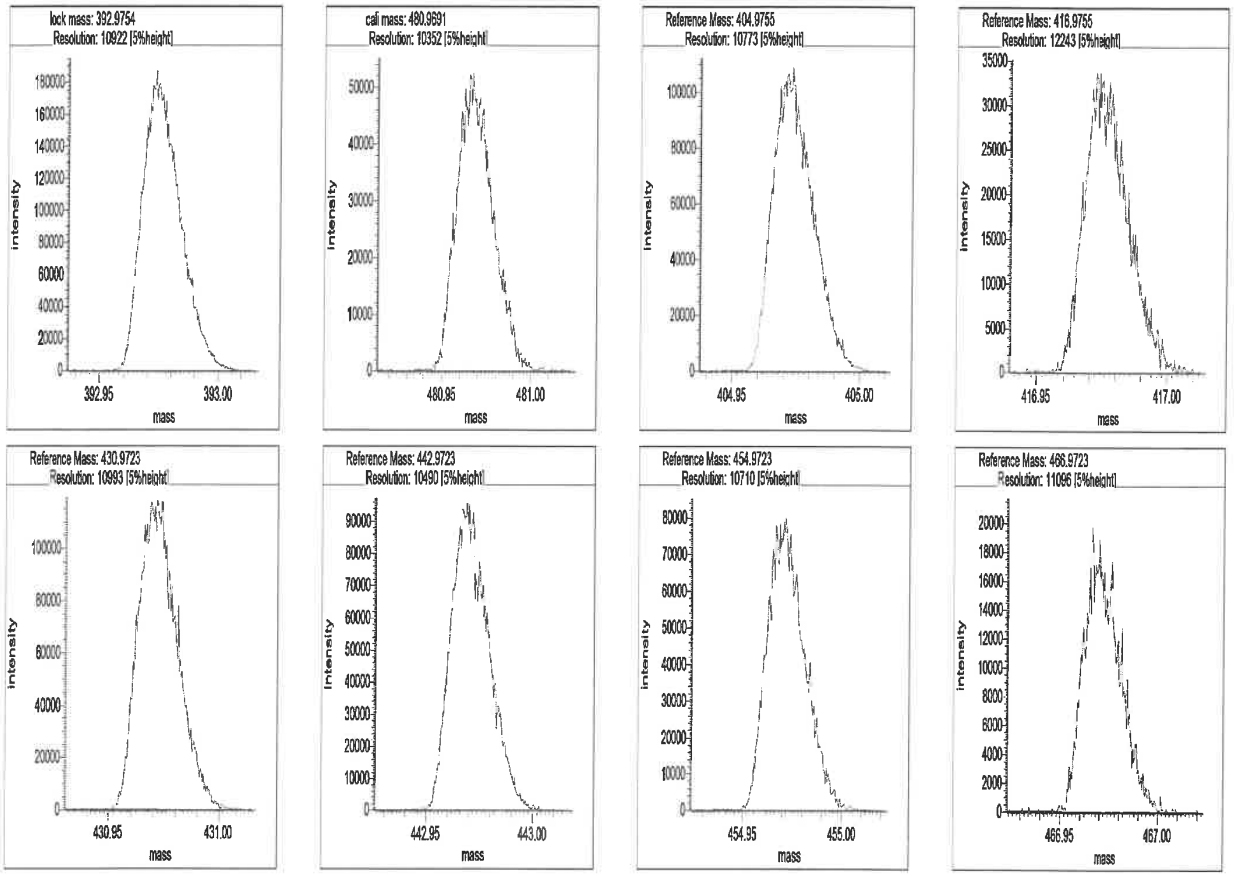

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11165 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10856 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11100 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10488 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11155 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10611 [5%height]

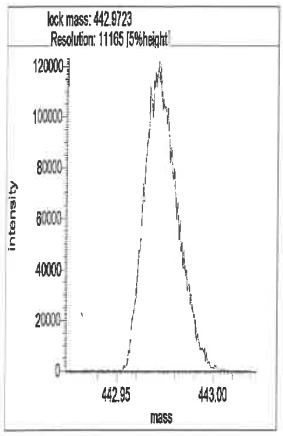
lock mass: 442.9723
Resolution: 11165 [5%height]
intensity
mass

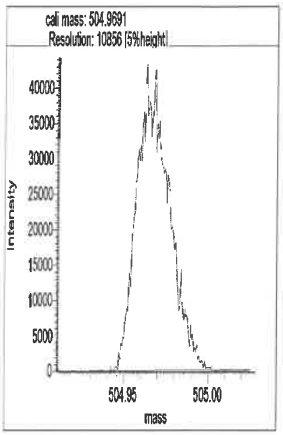
cali mass: 504.9691
Resolution: 10856 [5%height]
intensity
mass

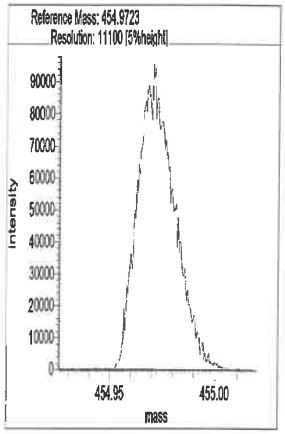
Reference Mass: 454.9723
Resolution: 11100 [5%height]
intensity
mass

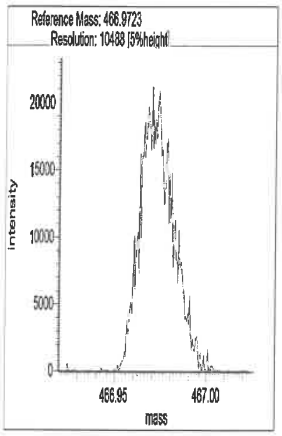
Reference Mass: 466.9723
Resolution: 10488 [5%height]
intensity
mass

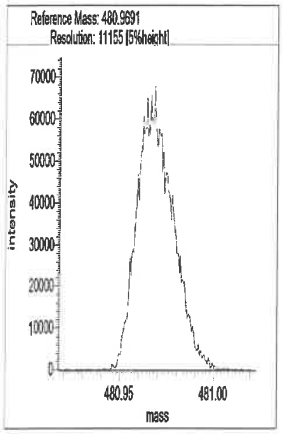
Reference Mass: 480.9691
Resolution: 11155 [5%height]
intensity
mass

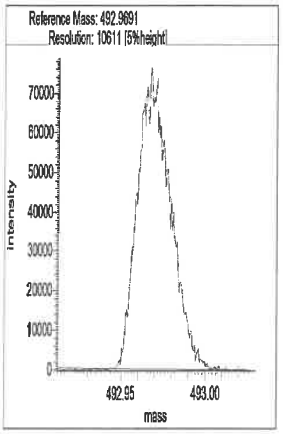
Reference Mass: 492.9691
Resolution: 10611 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 11:56
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10511 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10099 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 10342 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 10503 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10344 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 27776 [5%height] ? software glitch. [illegible]

Ref. mass 368.9755 [m/z] Resolution: 10394 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 9749 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9682 [5%height]

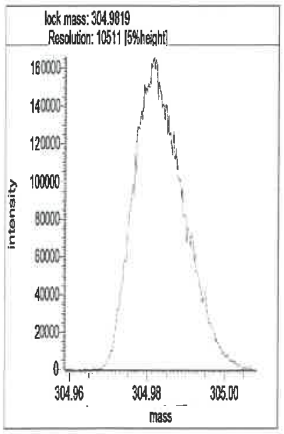

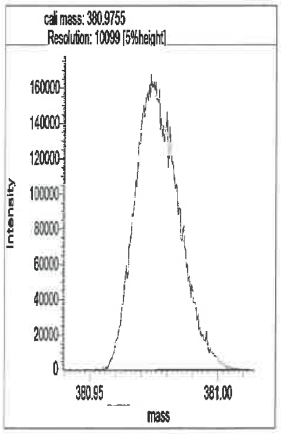

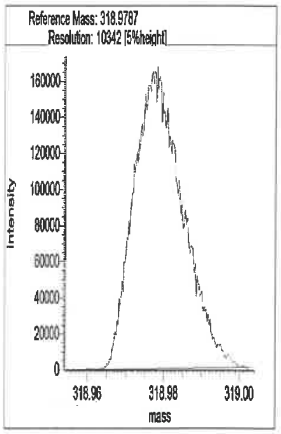

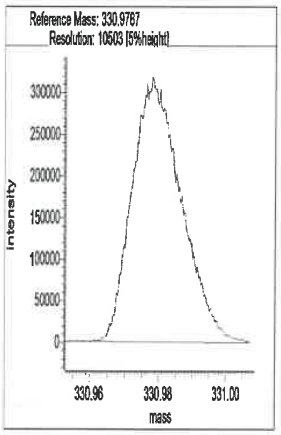

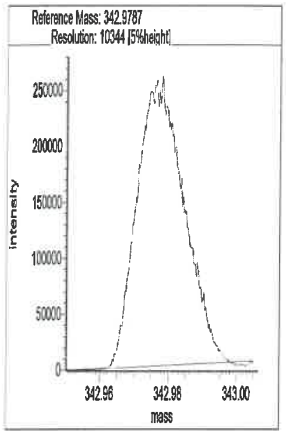

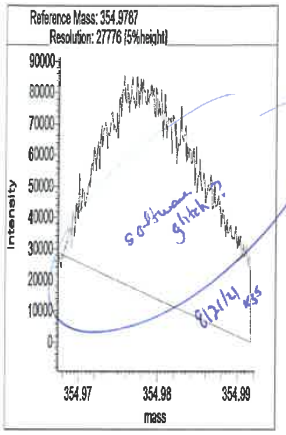

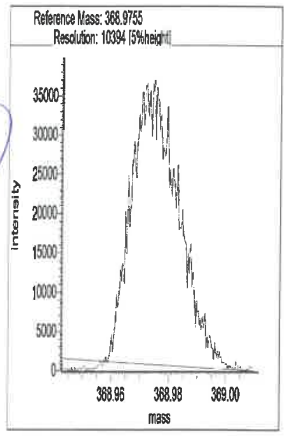

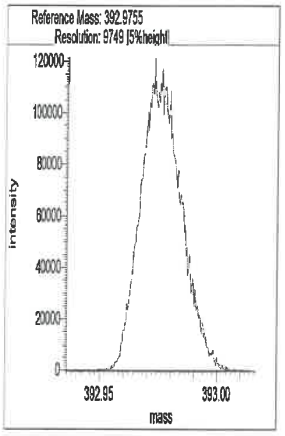

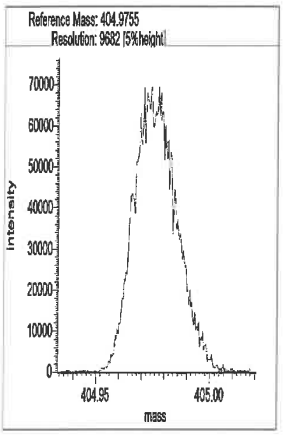

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10733 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10393 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10683 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10545 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10150 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10185 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10040 [5%height]

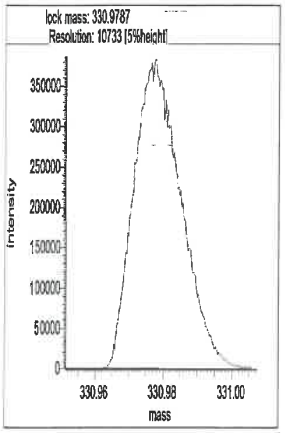

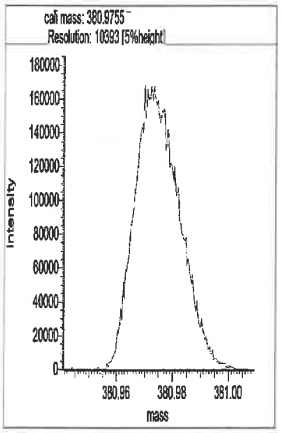

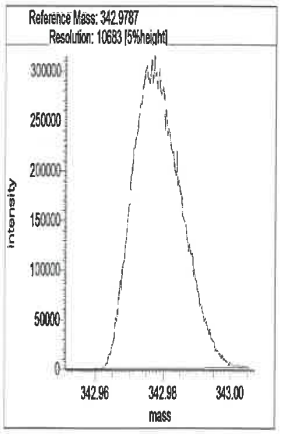

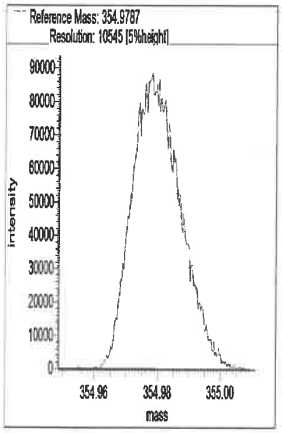

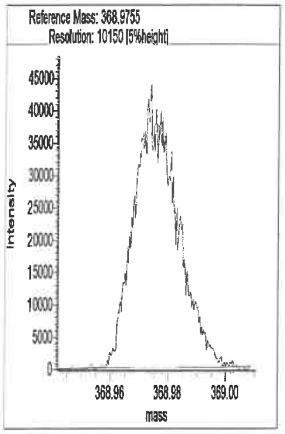

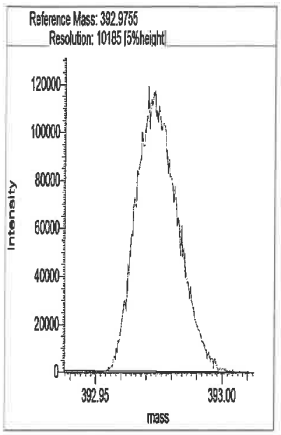

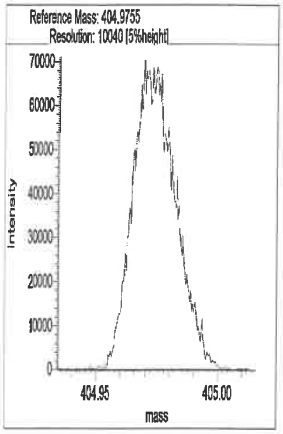

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10536 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10403 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10410 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10419 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10244 [5%height]

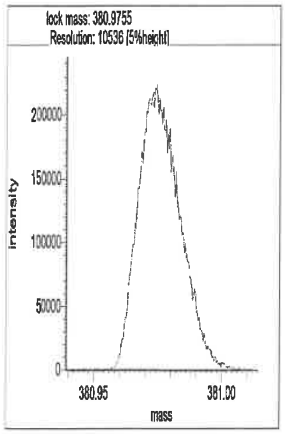

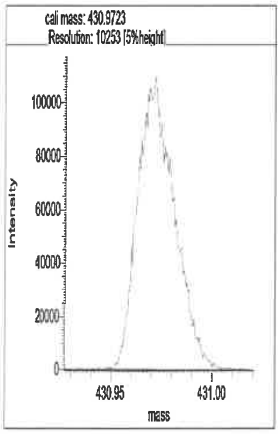

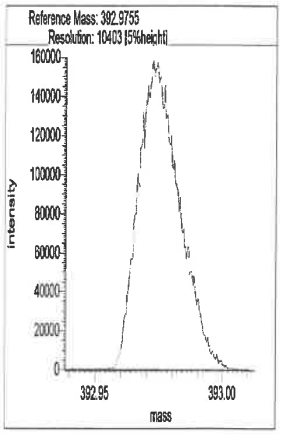

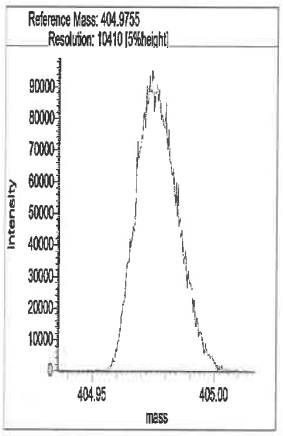

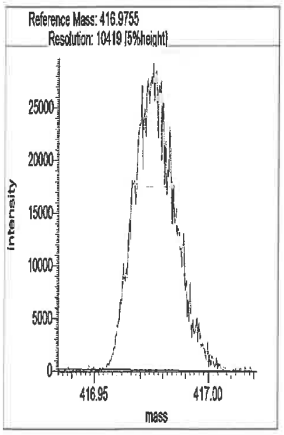

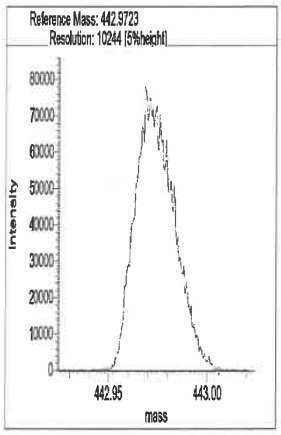

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10914 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 9523 [5%height] ✓ OK 8/21/21 KD

Ref. mass 404.9755 [m/z] Resolution: 10727 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10613 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10522 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10235 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10314 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10509 [5%height]

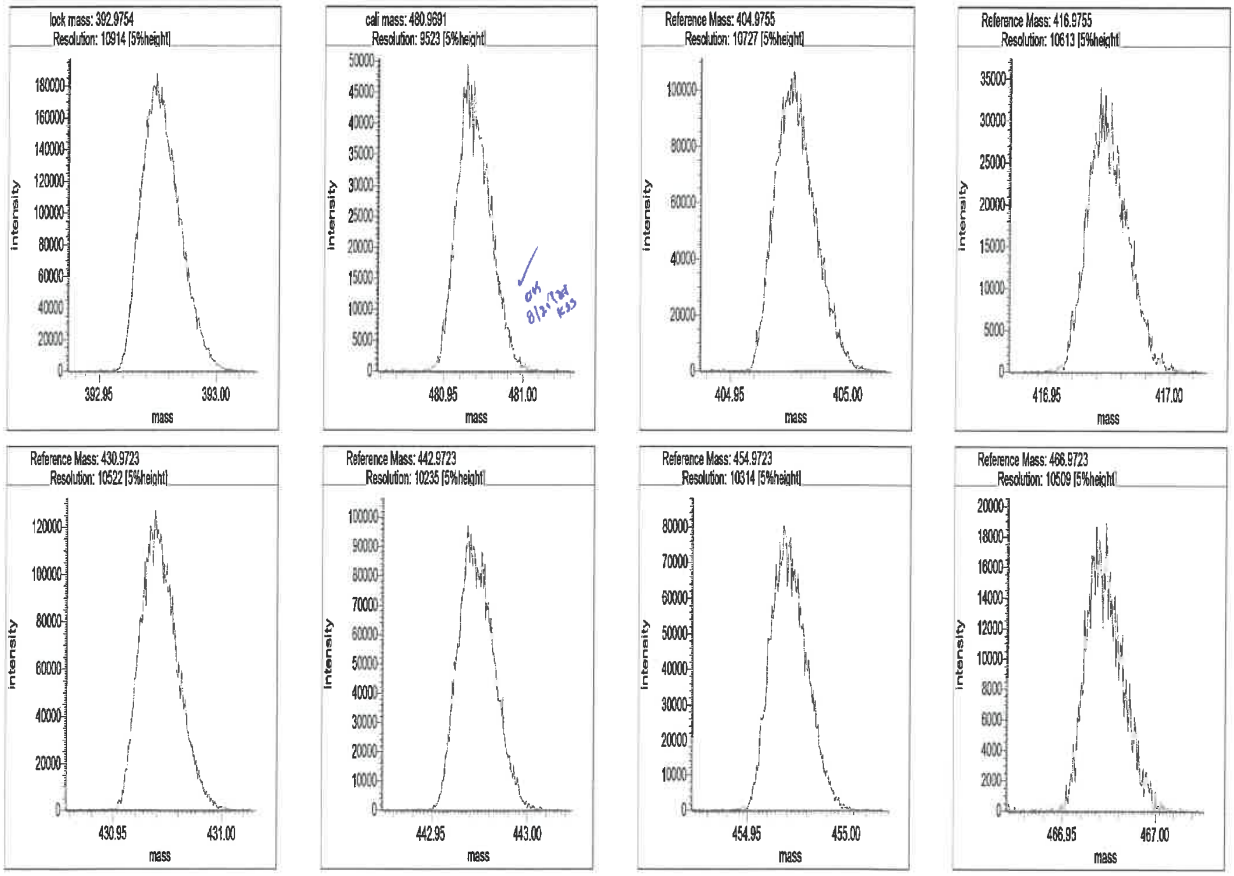

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10927 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10443 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10654 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11221 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10354 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10748 [5%height]

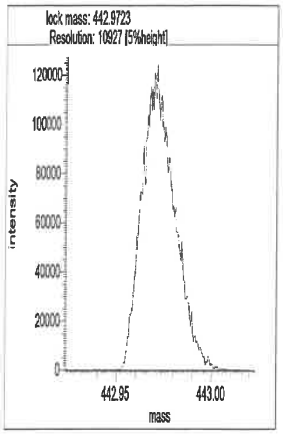
lock mass: 442.9723
Resolution: 10927 [5%height]
intensity
mass

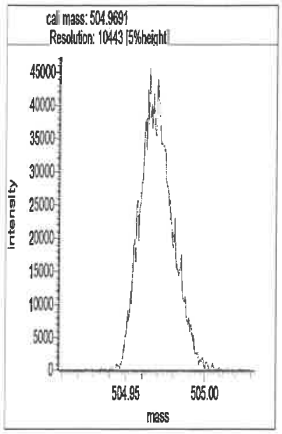
cali mass: 504.9691
Resolution: 10443 [5%height]
intensity
mass

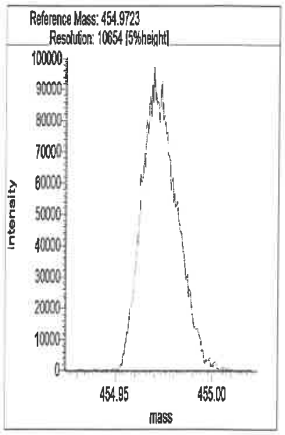
Reference Mass: 454.9723
Resolution: 10654 [5%height]
intensity
mass

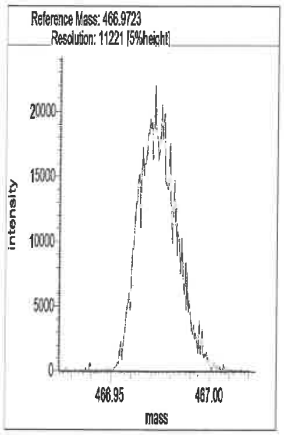
Reference Mass: 466.9723
Resolution: 11221 [5%height]
intensity
mass

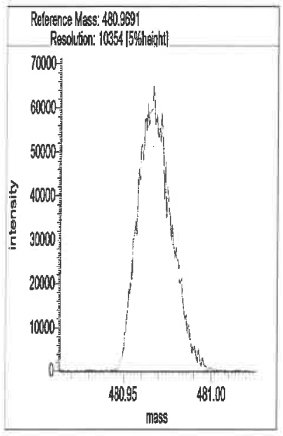
Reference Mass: 480.9691
Resolution: 10354 [5%height]
intensity
mass

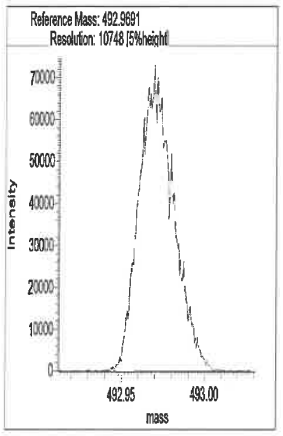
Reference Mass: 492.9691
Resolution: 10748 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 14:46:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:38:43

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.350	880144	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.395	1248688	0.81	1.3459	105.4	105.4	0.3439	0.3439	105	
2,3,7,8-TCDF	20.421	131092	0.83	1.0802	9.719	9.719	0.0187	0.0187	97.19	
A Non-2,3,7,8-sub-TCDF	19.885	2548	0.77	1.0802	0.2183	0.1889	0.0187	0.0708	0.00	RQ
S Total TCDF					9.937	9.908	0.0187	0.0187		RQ
D 13C-2,3,7,8-TCDD	21.746	859664	0.80	0.9317	104.8	104.8	0.2310	0.2310	105	
2,3,7,8-TCDD	21.754	88765	0.76	1.0753	9.602	9.602	0.0289	0.0289	96.02	M
$ 37Cl4-2,3,7,8-TCDD	21.772	88098		1.0083	9.927	9.927	0.0148	0.0148	99.27	
A Non-2,3,7,8-sub-TCDD	20.727						0.0289	0.0289		
S Total TCDD					9.602	9.602	0.0289	0.0289		
D 13C-1,2,3,7,8-PeCDF	27.246	876942	1.58	1.1405	87.4	87.4	0.2980	0.2980	87.36	
1,2,3,7,8-PeCDF	27.263	472088	1.57	1.0543	51.1	51.1	0.1254	0.1254	102	
D 13C-2,3,4,7,8-PeCDF	28.762	967288	1.58	1.1253	97.7	97.7	0.3020	0.3020	97.66	
2,3,4,7,8-PeCDF	28.787	465705	1.60	1.0079	47.8	47.8	0.1325	0.1325	95.54	
A F1 PeCDFs	24.666	72	1.55	1.0311	0.0354	0.007573	0.007281	0.007281	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.176	3649	1.55	1.0311	0.4206	0.3838	0.1289	0.3838	0.00	RQ
S Total PeCDF					99.3	99.2	0.1289	0.1289		RQ
D 13C-1,2,3,7,8-PeCDD	29.570	582520	1.58	0.7165	92.4	92.4	0.1287	0.1287	92.38	
1,2,3,7,8-PeCDD	29.595	305999	1.58	1.0465	50.2	50.2	0.2556	0.2556	100	
A Non-2,3,7,8-sub-PeCDD	28.536						0.2556	0.2556		
S Total PeCDD					50.2	50.2	0.2556	0.2556		
D 13C-1,2,3,4,7,8-HxCDF	34.922	857555	0.54	0.9648	111.3	111.3	0.3425	0.3425	111	
1,2,3,4,7,8-HxCDF	34.938	499173	1.30	1.1474	50.7	50.7	0.1885	0.1885	101	
D 13C-1,2,3,6,7,8-HxCDF	35.073	867107	0.50	1.0708	101.4	101.4	0.3086	0.3086	101	
1,2,3,6,7,8-HxCDF	35.099	557239	1.26	1.2178	52.8	52.8	0.1873	0.1873	106	
D 13C-2,3,4,6,7,8-HxCDF	35.899	805042	0.53	1.0413	96.8	96.8	0.3173	0.3173	96.79	
2,3,4,6,7,8-HxCDF	35.916	525498	1.33	1.2145	53.7	53.7	0.1797	0.1797	107	
D 13C-1,2,3,7,8,9-HxCDF	36.800	746273	0.55	0.9731	96.0	96.0	0.3396	0.3396	96.01	
1,2,3,7,8,9-HxCDF	36.808	489075	1.31	1.2401	52.8	52.8	0.1691	0.1691	106	
A Non-2,3,7,8-sub-HxCDF	35.073						0.1808	0.1808		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					210.1	210.1	0.1812	0.1812		
* 13C-1,2,3,7,8,9-HxCDD	36.598	798781	1.28	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.109	626230	1.27	0.7587	103.3	103.3	0.1789	0.1789	103	
1,2,3,4,7,8-HxCDD	36.126	304605	1.24	1.0608	45.9	45.9	0.0786	0.0786	91.71	
D 13C-1,2,3,6,7,8-HxCDD	36.227	727407	1.24	0.8593	106.0	106.0	0.1580	0.1580	106	
1,2,3,6,7,8-HxCDD	36.244	327966	1.26	0.9933	45.4	45.4	0.0820	0.0820	90.78	
1,2,3,7,8,9-HxCDD	36.606	350583	1.24	1.1094	46.7	46.7	0.0743	0.0743	93.38	
A Non-2,3,7,8-sub-HxCDD	35.427						0.0781	0.0781		
S Total HxCDD					137.9	137.9	0.0783	0.0783		
D 13C-1,2,3,4,6,7,8-HpCDF	38.614	631083	0.46	0.7359	107.4	107.4	0.3595	0.3595	107	
1,2,3,4,6,7,8-HpCDF	38.622	425207	1.05	1.4421	46.7	46.7	0.1807	0.1807	93.45	
D 13C-1,2,3,4,7,8,9-HpCDF	39.869	619112	0.44	0.6854	113.1	113.1	0.3861	0.3861	113	
1,2,3,4,7,8,9-HpCDF	39.877	390127	1.03	1.3092	48.1	48.1	0.1991	0.1991	96.27	
A Non-2,3,7,8-sub-HpCDF	39.253						0.1894	0.1894		
S Total HpCDF					94.9	94.9	0.1899	0.1899		
D 13C-1,2,3,4,6,7,8-HpCDD	39.557	609233	1.02	0.6745	113.1	113.1	0.2887	0.2887	113	
1,2,3,4,6,7,8-HpCDD	39.574	308551	1.04	1.0503	48.2	48.2	0.1086	0.1086	96.44	
A Non-2,3,7,8-sub-HpCDD	39.253	2712	1.04	1.0503	0.4815	0.4238	0.1086	0.4238	0.00	RQ
S Total HpCDD					48.7	48.6	0.1086	0.1086		RQ
D 13C-OCDD	42.064	1023273	0.90	0.5446	235.2	235.2	0.2892	0.2892	118	
OCDF	42.157	733525	0.95	1.3168	108.9	108.9	0.1126	0.1126	109	
OCDD	42.073	518459	0.87	1.0620	95.4	95.4	0.1218	0.1218	95.42	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 14:46:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:38:43

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.350	21.350	0		392365	50129	68	170	737		a
333.9338	21.359	21.350	1		487779	63734	30	75	2124	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.395	20.395	0	0.955	557813	78278	117	292	669		
317.9389	20.387	20.395	-1	0.955	690875	94571	94	235	1006	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.421	20.421	0	1.001	59271	8014	5	12	1603		
305.8987	20.421	20.421	0	1.001	71821	9716	9	22	1080	0.83(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.717	19.885	-70	0.918	165	55	5	12	11		
305.8987	18.760	19.885	-67	0.920	328	106	9	22	12	0.50(0.65-0.89)	
	Empc Correction				214	71	9	22	8		
303.9016	19.724	19.885	-10	0.967	539	104	5	12	21		
	Empc Correction				415	97	5	12	19		
305.8987	19.689	19.885	-12	0.965	540	127	9	22	14	1.00(0.65-0.89)	
303.9016	20.696	19.885	49	1.015	334	82	5	12	16		
305.8987	20.696	19.885	49	1.015	398	183	9	22	20	0.84(0.65-0.89)	
303.9016	20.808	19.885	55	1.020	210	86	5	12	17		
305.8987	20.757	19.885	52	1.018	431	109	9	22	12	0.49(0.65-0.89)	
	Empc Correction				272	111	9	22	12		
13C-2,3,7,8-TCDD											
331.9368	21.746	21.746	0	1.019	380761	50135	68	170	737		
333.9338	21.737	21.746	-1	1.018	478903	62607	30	75	2087	0.80(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.754	21.754	0	1.000	38393	4783	10	25	478		M
321.8936	21.772	21.754	1	1.001	50372	6262	4	10	1566	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											
327.8847	21.772	21.772	0	1.020	88098	11715	7	17	1674		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.727						10	25			
321.8936	20.727						4	10			
13C-1,2,3,7,8-PeCDF											
351.9000	27.246	27.246	0	1.276	537093	80730	85	212	950		
353.8970	27.246	27.246	0	1.276	339849	53122	70	175	759	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.263	27.263	0	1.001	288515	42689	34	85	1256		
341.8567	27.263	27.263	0	1.001	183573	26170	37	92	707	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.762	28.762	0	1.347	592788	80849	85	212	951		
353.8970	28.753	28.762	-1	1.347	374500	51726	70	175	739	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.787	28.787	0	1.001	286668	39229	34	85	1154		
341.8567	28.787	28.787	0	1.001	179037	24246	37	92	655	1.60(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.352	24.666	-19	0.894	30	12	1	2	12		
341.8567	24.343	24.666	-19	0.893	194	92	3	7	31	0.15(1.32-1.78)	
	Empc Correction				19	7	3	7	2		
339.8597	25.005	24.666	20	0.918	14	8	1	2	8		
341.8567	25.023	24.666	21	0.918	99	47	3	7	16	0.14(1.32-1.78)	
	Empc Correction				9	5	3	7	2		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.869	28.176	-18	1.023	2568	448	34	85	13		
	Empc Correction				2218	396	34	85	12		
341.8567	27.877	28.176	-18	1.023	1431	256	37	92	7	1.79(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.570	29.570	0	1.385	356741	48302	23	57	2100		
369.8919	29.562	29.570	-1	1.385	225779	30199	19	47	1589	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.595	29.595	0	1.001	187317	23303	59	147	395		
357.8516	29.604	29.595	1	1.001	118682	15295	25	62	612	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.536						59	147			
357.8516	28.536						25	62			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.922	34.922	0	0.954	301743	58450	70	175	835		
385.8610	34.922	34.922	0	0.954	555812	106606	161	402	662	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.938	34.938	0	1.000	282106	53539	84	210	637		
375.8178	34.930	34.938	-1	1.000	217067	41553	59	147	704	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.073	35.073	0	0.958	289842	54372	70	175	777		
385.8610	35.082	35.073	1	0.959	577265	102104	161	402	634	0.50(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDF											
373.8208	35.099	35.099	0	1.001	311153	56921	84	210	678		
375.8178	35.099	35.099	0	1.001	246086	45717	59	147	775	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.899	35.899	0	0.981	279239	55912	70	175	799		
385.8610	35.899	35.899	0	0.981	525803	107690	161	402	669	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.916	35.916	0	1.000	300256	62548	84	210	745		
375.8178	35.916	35.916	0	1.000	225242	47171	59	147	800	1.33(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.800	36.800	0	1.006	263890	60577	70	175	865		
385.8610	36.791	36.800	-1	1.005	482383	109655	161	402	681	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.808	36.808	0	1.000	276925	62991	84	210	750		
375.8178	36.808	36.808	0	1.000	212150	48219	59	147	817	1.31(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						84	210			
375.8178	35.073						59	147			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.598	36.598	0		447919	95381	56	140	1703		
403.8529	36.598	36.598	0		350862	79228	39	97	2031	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.109	36.109	0	0.987	350834	84152	56	140	1503		
403.8529	36.109	36.109	0	0.987	275396	65709	39	97	1685	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.126	36.126	0	1.000	168355	39063	26	65	1502		
391.8127	36.126	36.126	0	1.000	136250	30911	24	60	1288	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.227	36.227	0	0.990	402538	84276	56	140	1505		
403.8529	36.227	36.227	0	0.990	324869	69268	39	97	1776	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.244	36.244	0	1.000	182565	37967	26	65	1460		
391.8127	36.236	36.244	-1	1.000	145401	30482	24	60	1270	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.606	36.606	0	1.014	194341	42531	26	65	1636		
391.8127	36.606	36.606	0	1.014	156242	33894	24	60	1412	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.427						26	65			
391.8127	35.427						24	60			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.614	38.614	0	1.055	199982	53427	62	155	862		
419.8220	38.614	38.614	0	1.055	431101	110427	123	307	898	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.622	38.622	0	1.000	218080	55878	91	227	614		
409.7788	38.622	38.622	0	1.000	207127	52397	80	200	655	1.05(0.88-1.20)	

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.869	39.869	0	1.089	188242	48045	62	155	775		
419.8220	39.869	39.869	0	1.089	430870	115800	123	307	941	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.877	39.877	0	1.000	198124	52467	91	227	577		
409.7788	39.877	39.877	0	1.000	192003	50350	80	200	629	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						91	227			
409.7788	39.253						80	200			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.557	39.557	0	1.081	307328	83776	71	177	1180		
437.8140	39.557	39.557	0	1.081	301905	84577	65	162	1301	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.574	39.574	0	1.000	157219	41341	38	95	1088		
425.7737	39.574	39.574	0	1.000	151332	41049	39	97	1053	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.950	39.253	-18	0.985	1383	343	38	95	9		
425.7737	38.925	39.253	-20	0.984	1698	522	39	97	13	0.81(0.88-1.20)	
	Empc Correction				1329	329	39	97	8		
13C-OCDD											
469.7780	42.064	42.064	0	1.149	483730	114644	56	140	2047		
471.7750	42.064	42.064	0	1.149	539543	128072	54	135	2372	0.90(0.76-1.02)	
OCDF											
441.7428	42.157	42.157	0	1.002	357311	85331	29	72	2942		
443.7399	42.157	42.157	0	1.002	376214	89559	43	107	2083	0.95(0.76-1.02)	
OCDD											
457.7377	42.073	42.073	0	1.000	241071	58376	32	80	1824		
459.7348	42.073	42.073	0	1.000	277388	67400	31	77	2174	0.87(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	19-Aug-2021 14:46:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1248688	172849

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1248688	172849

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.717	165	55	328	106	0.0366	0.50	RQ
18.717	165	55	214	71	0.0281		Empc Correction
19.724	539	104	540	127	0.0800	1.00	RQ
19.724	415	97	540	127	0.0708		Empc Correction
20.696	334	82	398	183	0.0543	0.84	
20.808	210	86	431	109	0.0475	0.49	RQ
20.808	210	86	272	111	0.0357		Empc Correction
Signal Totals:							
	1124	320	1424	492			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2945	852				0.74	RQ
	2548	812					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.2183 = (2945 * 100.000) / (1248688 * 1.080)

Empc Amount: 0.1889 = (2548 * 100.000) / (1248688 * 1.080)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 14:46:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.666

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	876942	133852
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	967288	132575

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	922115	133213

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.352	30	12	194	92	0.0236	0.15	RQ
24.352	30	12	19	7	0.005154		Empc Correction
25.005	14	8	99	47	0.0119	0.14	RnQ
25.005	14	8	9	5	0.002419		Empc Correction
Signal Totals:							
	44	20	28	12			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	337	159				0.15	RQ
	72	32					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0354 = (337 * 100.000) / (922115 * 1.031)
Empc Amount: 0.007573 = (72 * 100.000) / (922115 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	19-Aug-2021 14:46:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	876942	133852
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	967288	132575

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	922115	133213

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.869	2568	448	1431	256	0.4206	1.79	RnQ
27.869	2218	396	1431	256	0.3838		Empc Correction
Signal Totals:							
	2218	396	1431	256			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3999	704				1.79	RQ
	3649	652					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.4206 = (3999 * 100.000) / (922115 * 1.031)

Empc Amount: 0.3838 = (3649 * 100.000) / (922115 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	19-Aug-2021 14:46:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-HpCDD, RT: 39.253

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	609233	168353

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	609233	168353

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.950	1383	343	1698	522	0.4815	0.81	RnQ
38.950	1383	343	1329	329	0.4238		Empc Correction
Signal Totals:							
	1383	343	1329	329			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3081	865				0.81	RQ
	2712	672					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4815 = (3081 * 100.000) / (609233 * 1.050)
Empc Amount: 0.4238 = (2712 * 100.000) / (609233 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d				
Injection Date:	19-Aug-2021 14:46:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Not Detected
Expected RT: 21.35

Processing Integration Results

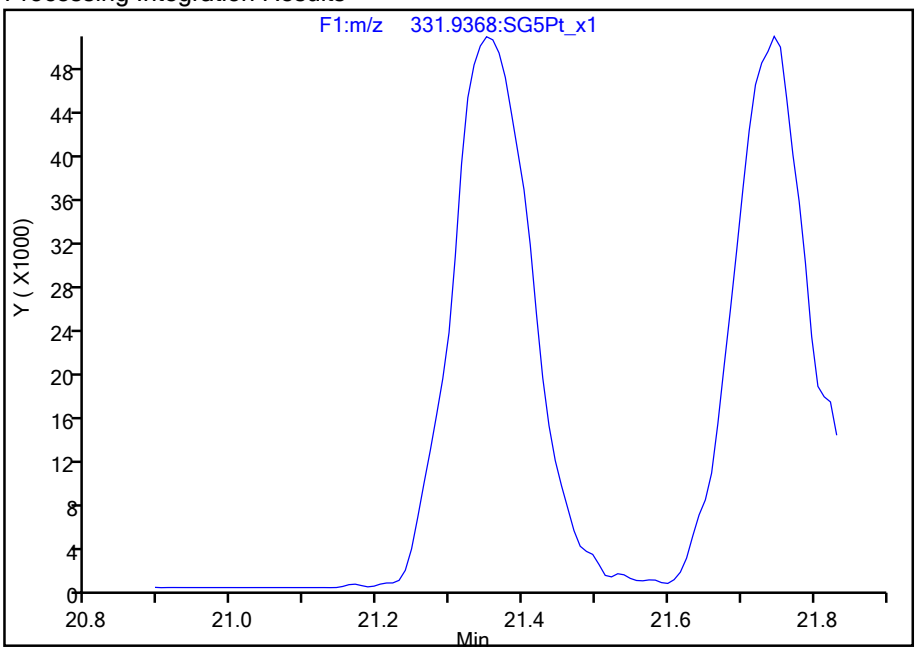

Manual Integration Results

RT: 21.35
Area: 392365
Amount: 100.0000
Amount Units: pg/ul

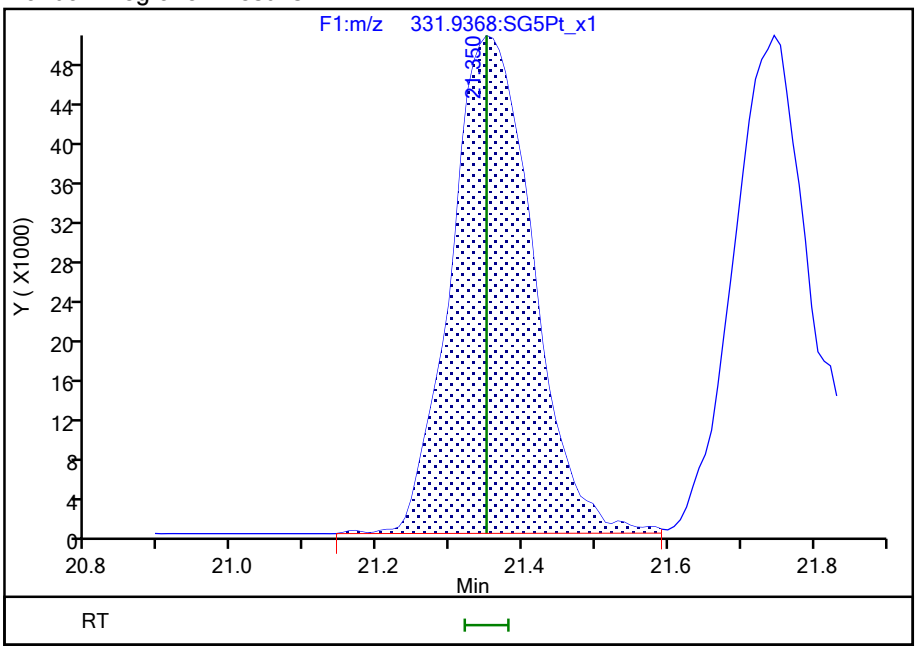

Reviewer: stephensk, 19-Aug-2021 15:37:52
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

776974

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d				
Injection Date:	19-Aug-2021 14:46:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.75
Area: 36392
Amount: 9.385610
Amount Units: pg/ul

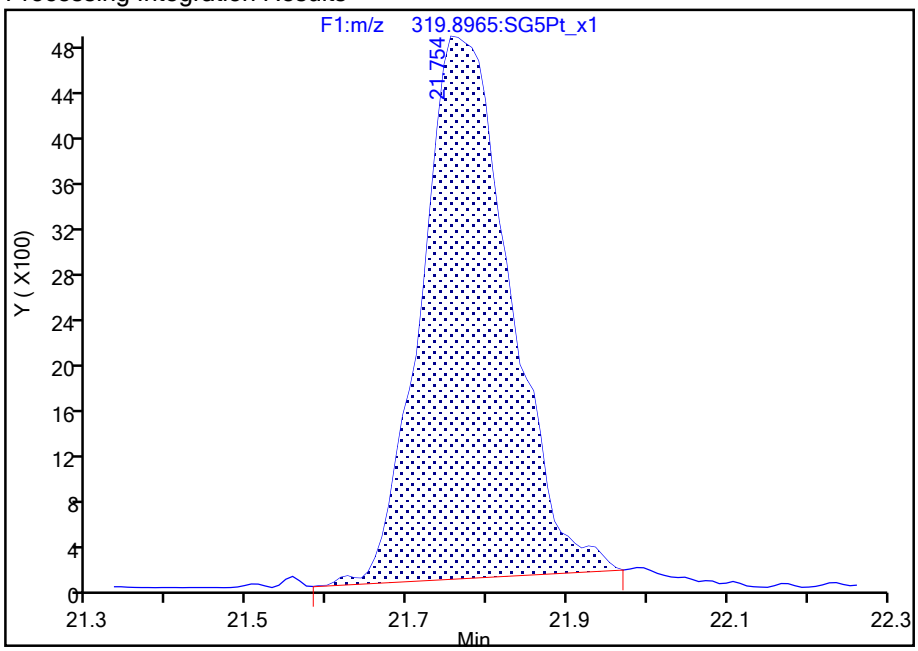

Manual Integration Results

RT: 21.75
Area: 38393
Amount: 9.602066
Amount Units: pg/ul

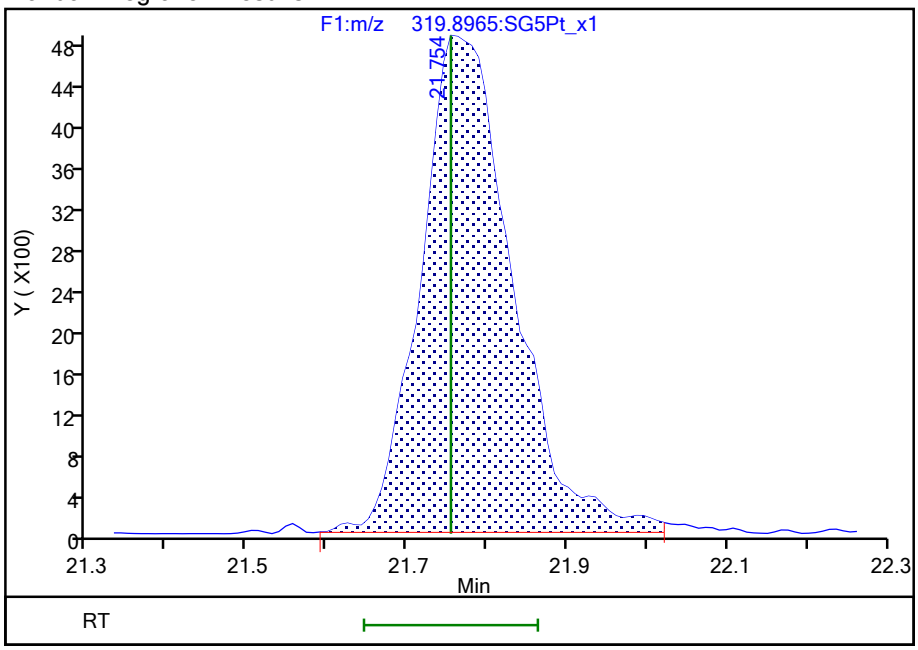

Reviewer: stephensk, 19-Aug-2021 15:38:12

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

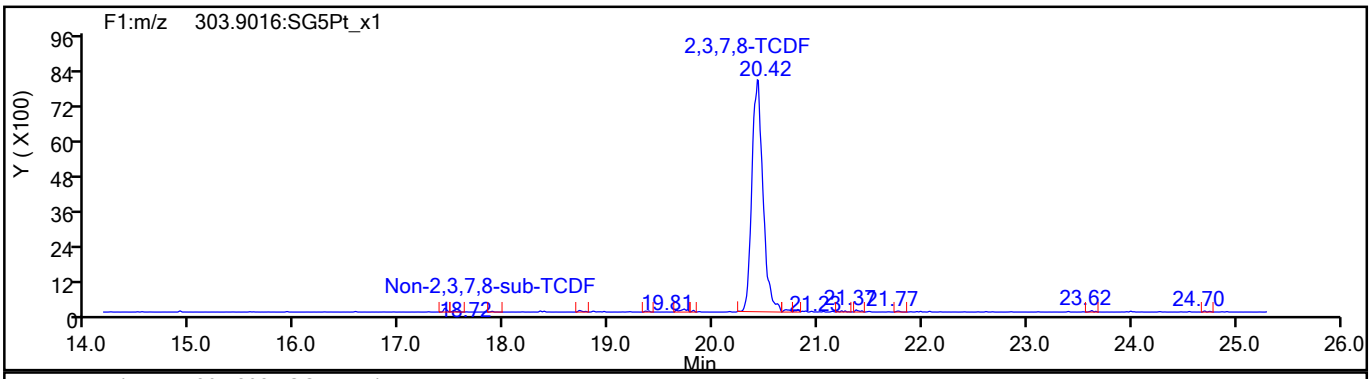

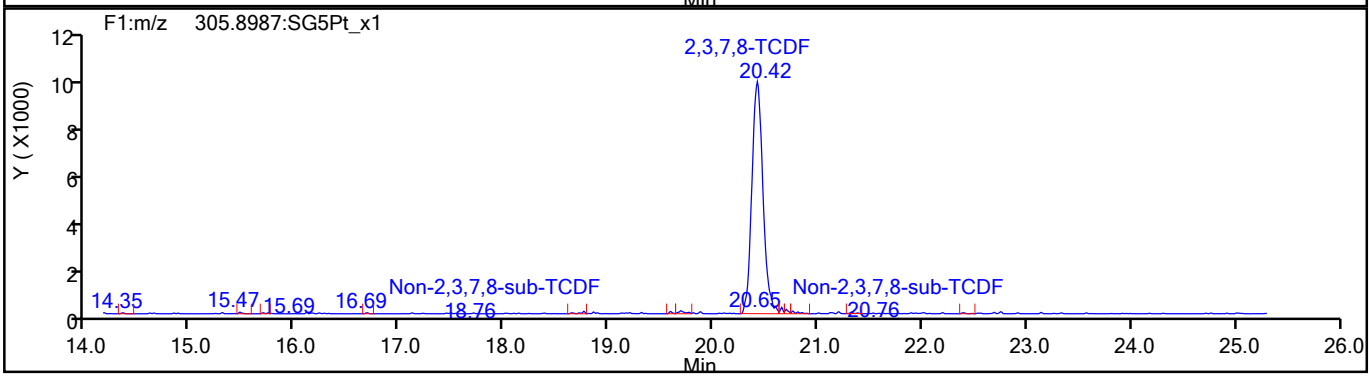

TCDF Standards

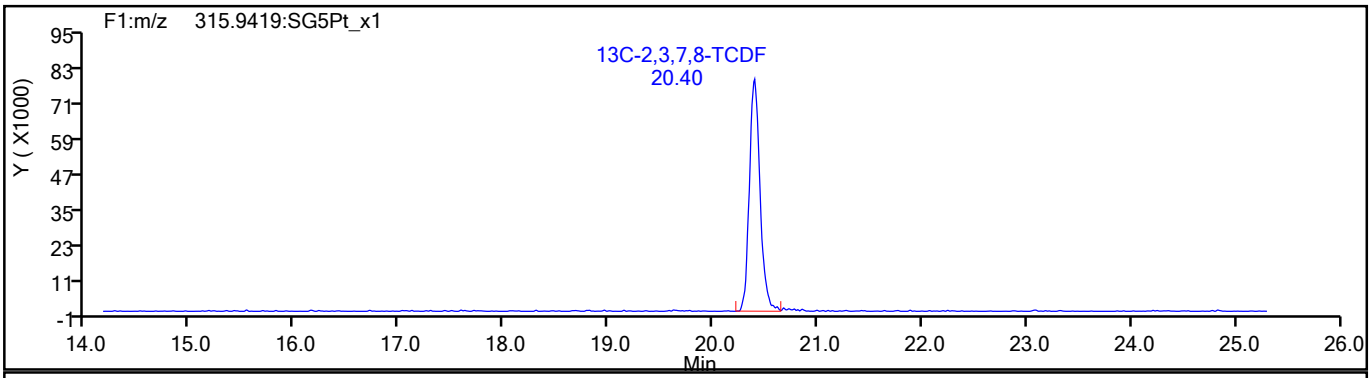

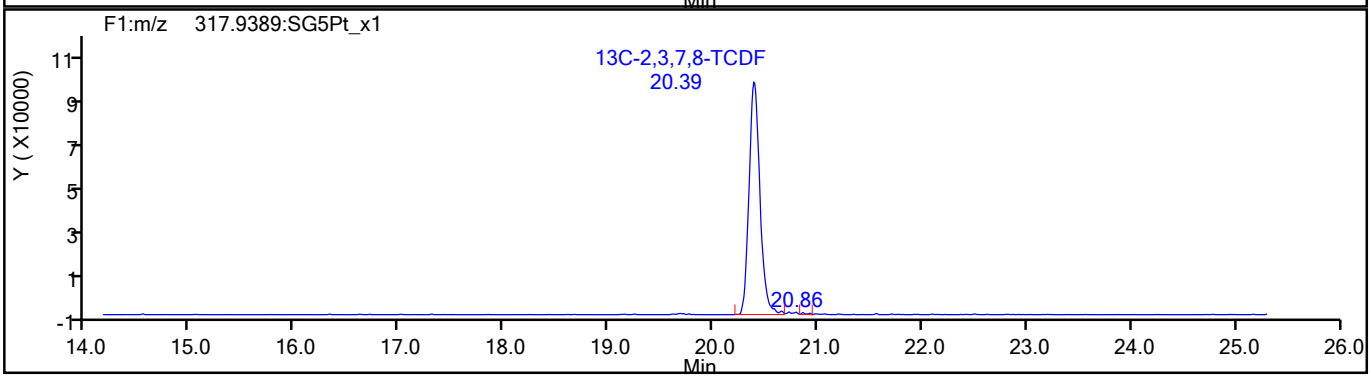

776976

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

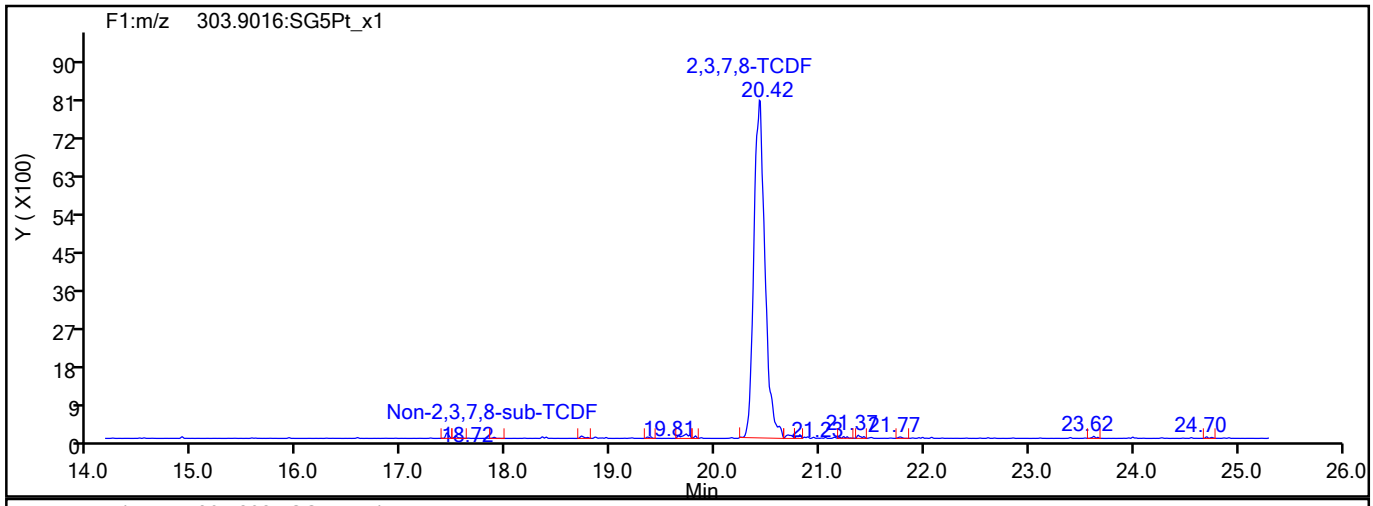

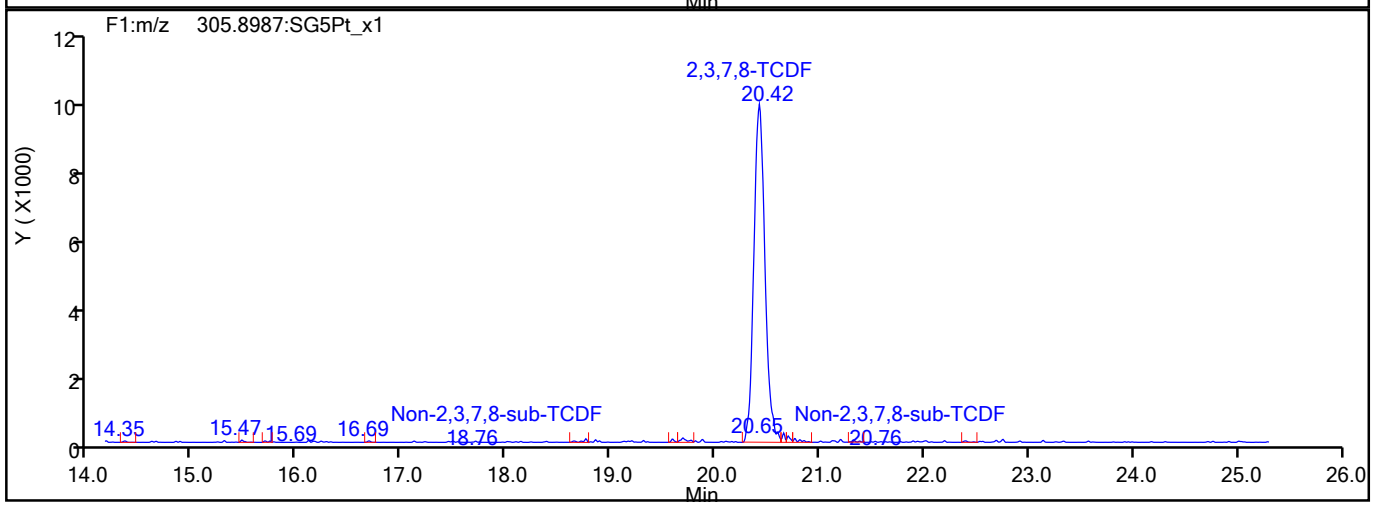

TCDF Interference Mass

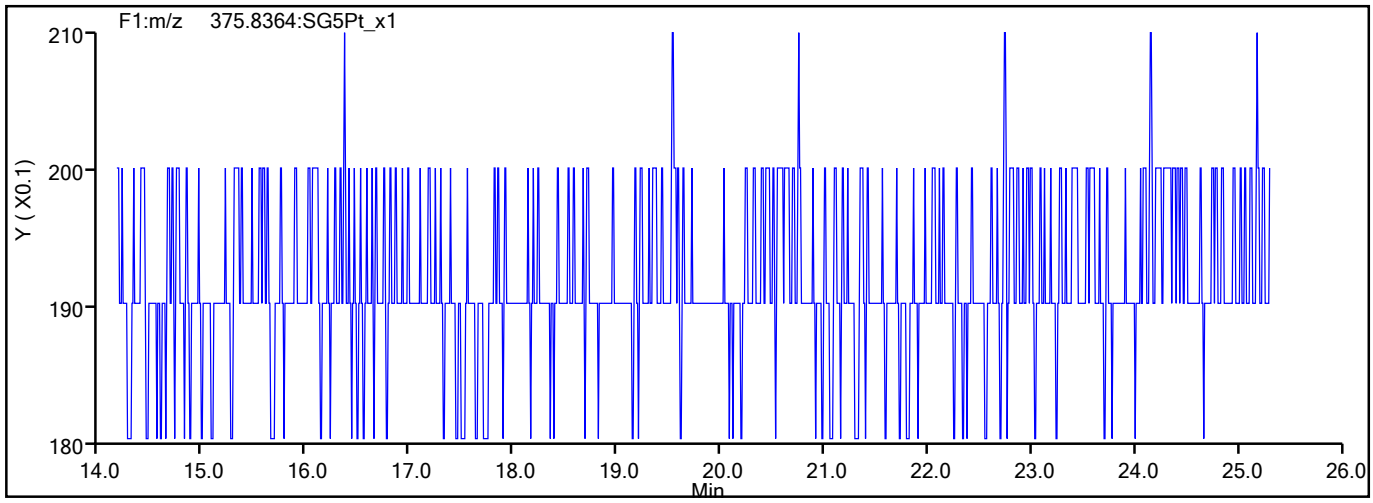

776977

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

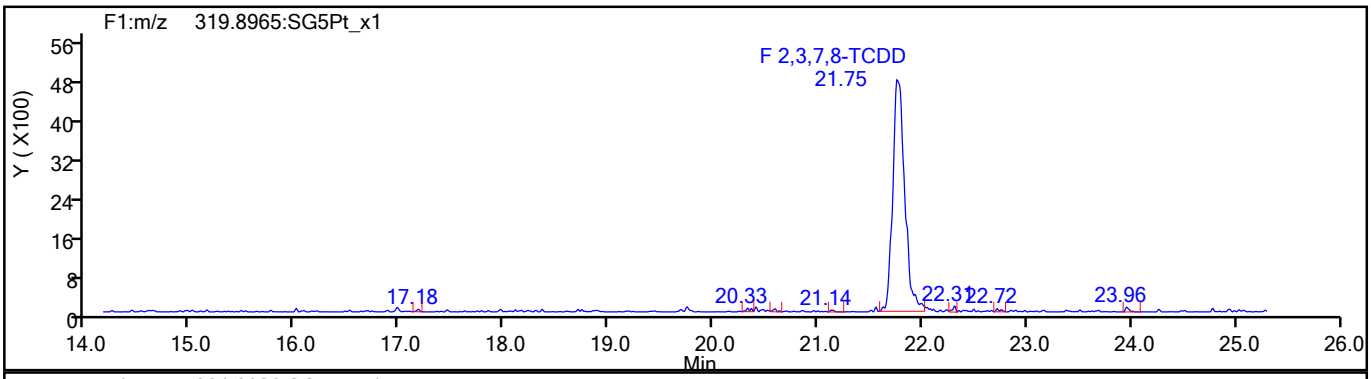

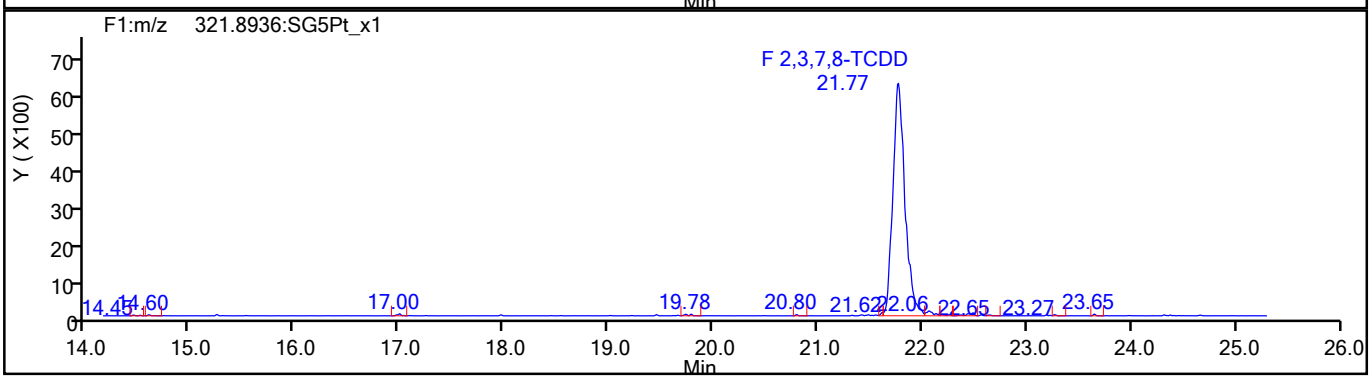

TCDD Standards

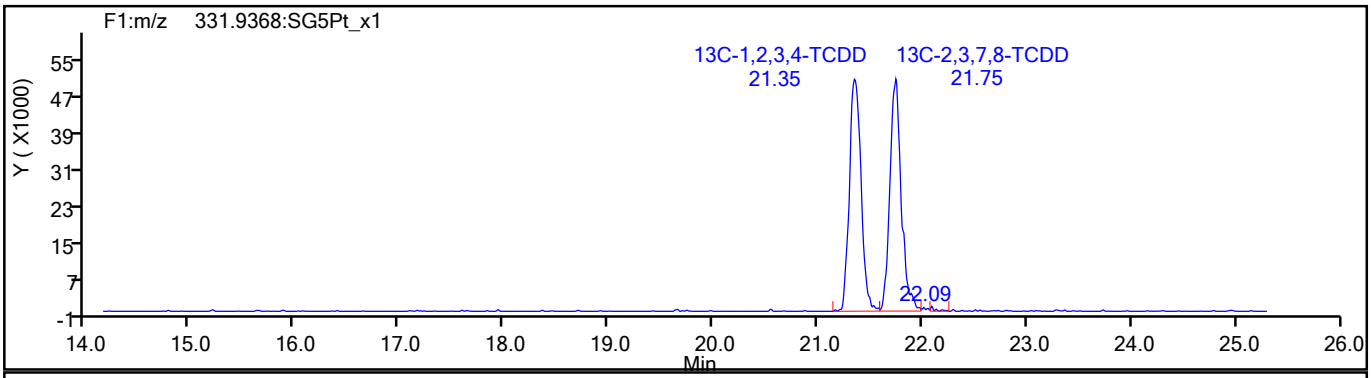

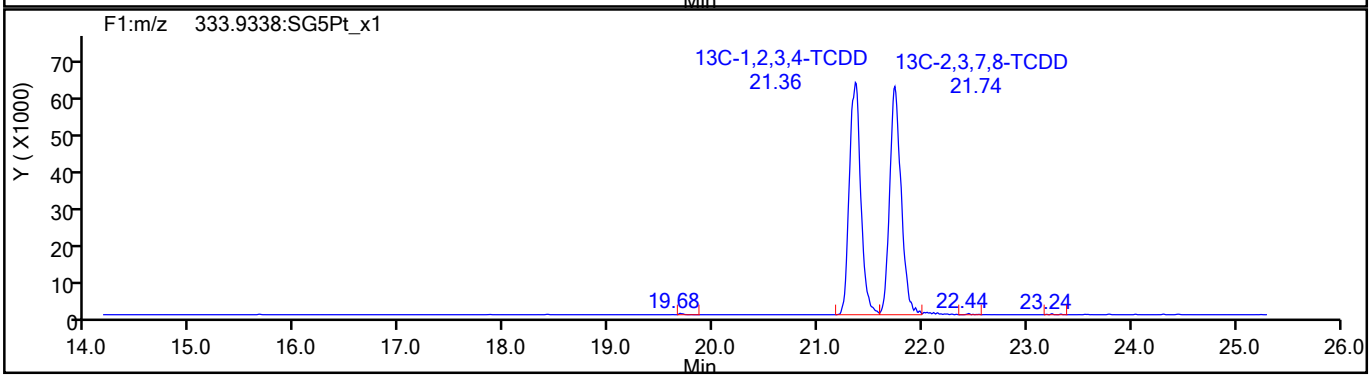

776978

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

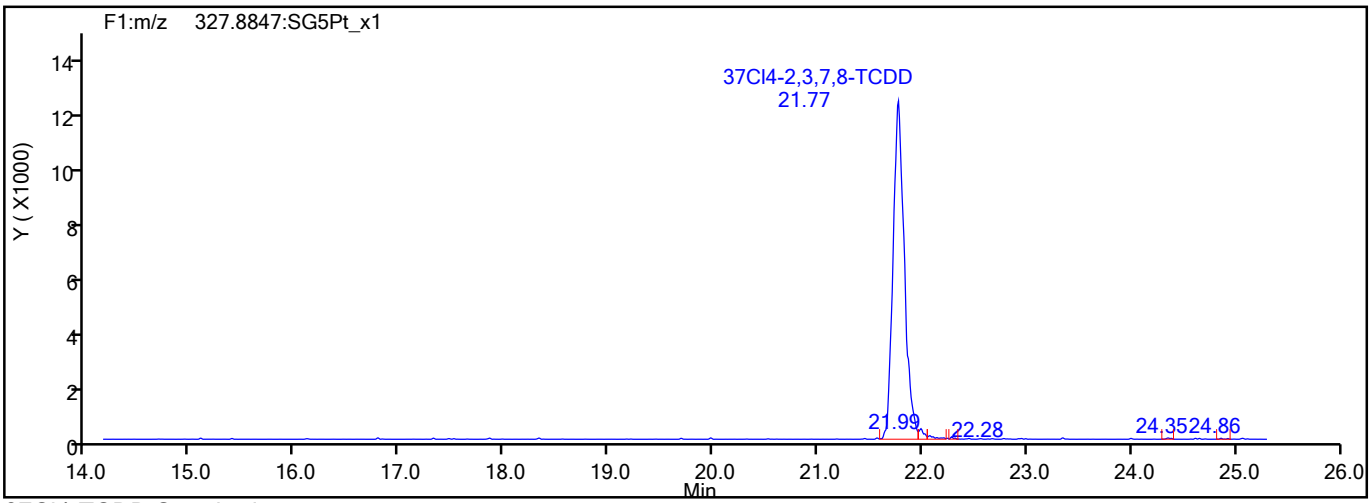

37Cl4-TCDD Standards

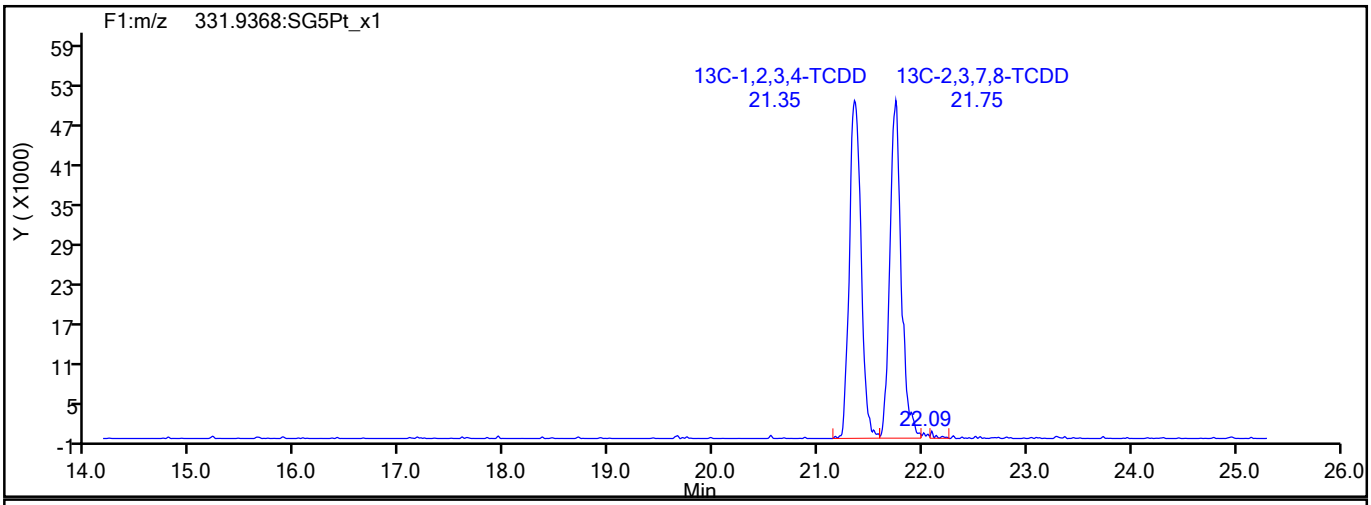

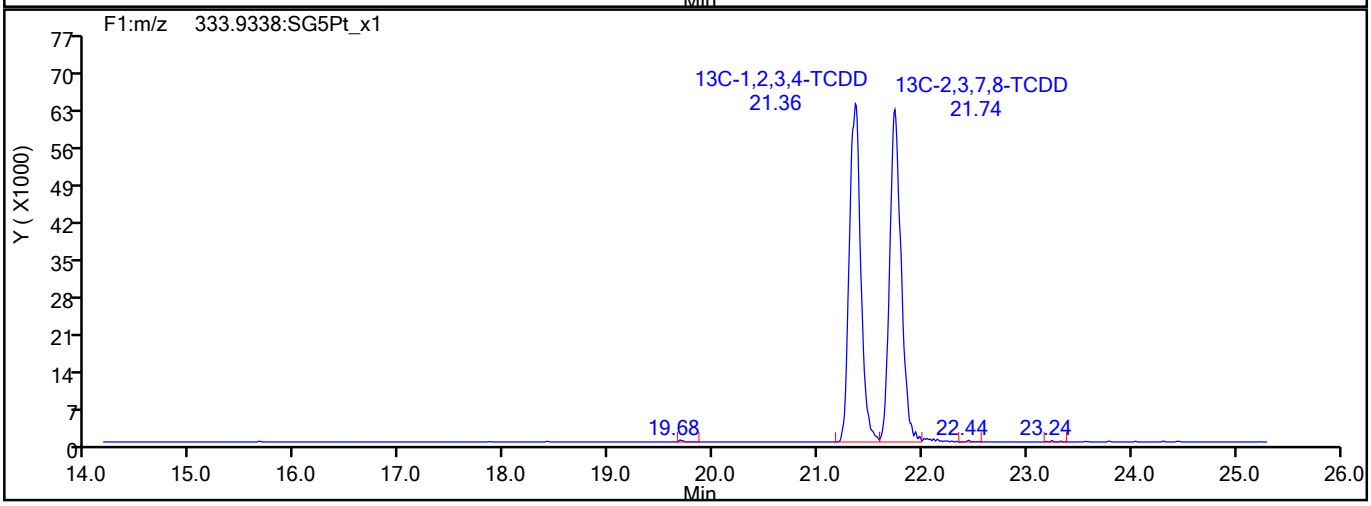

776979

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

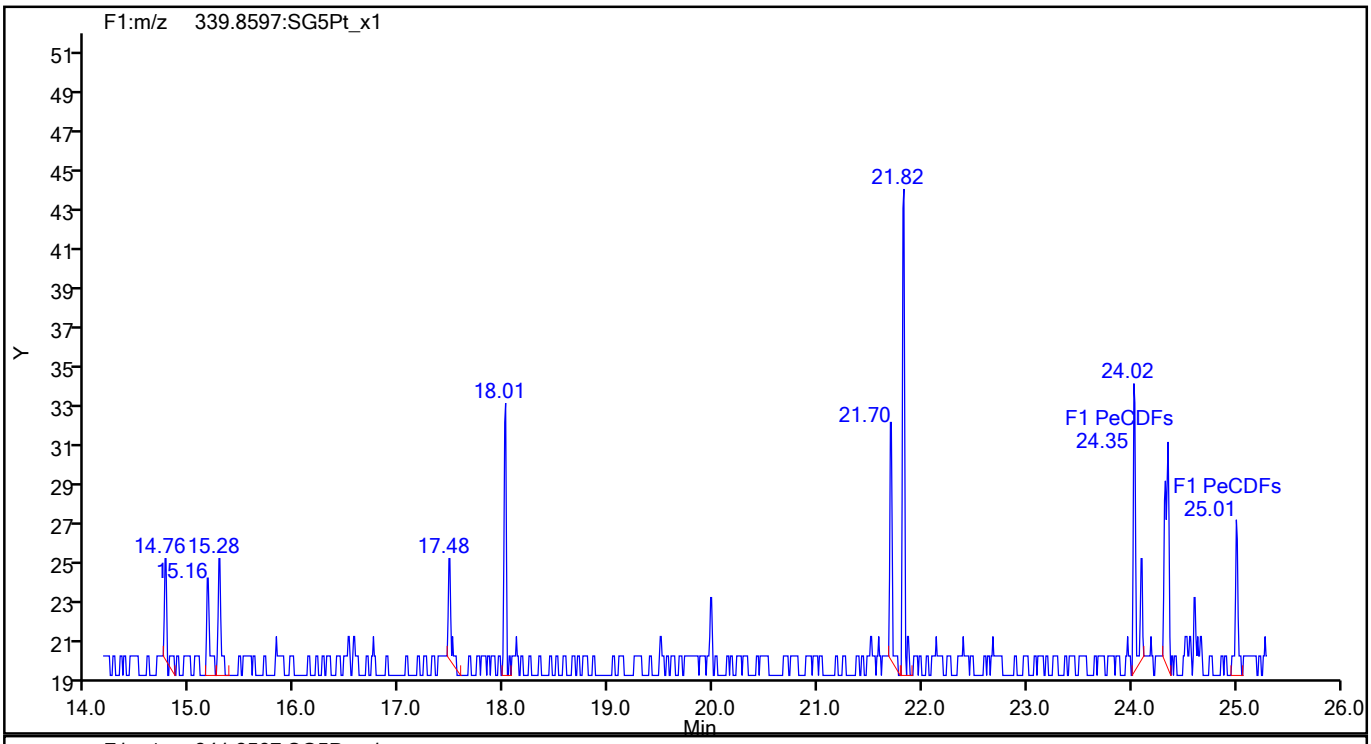

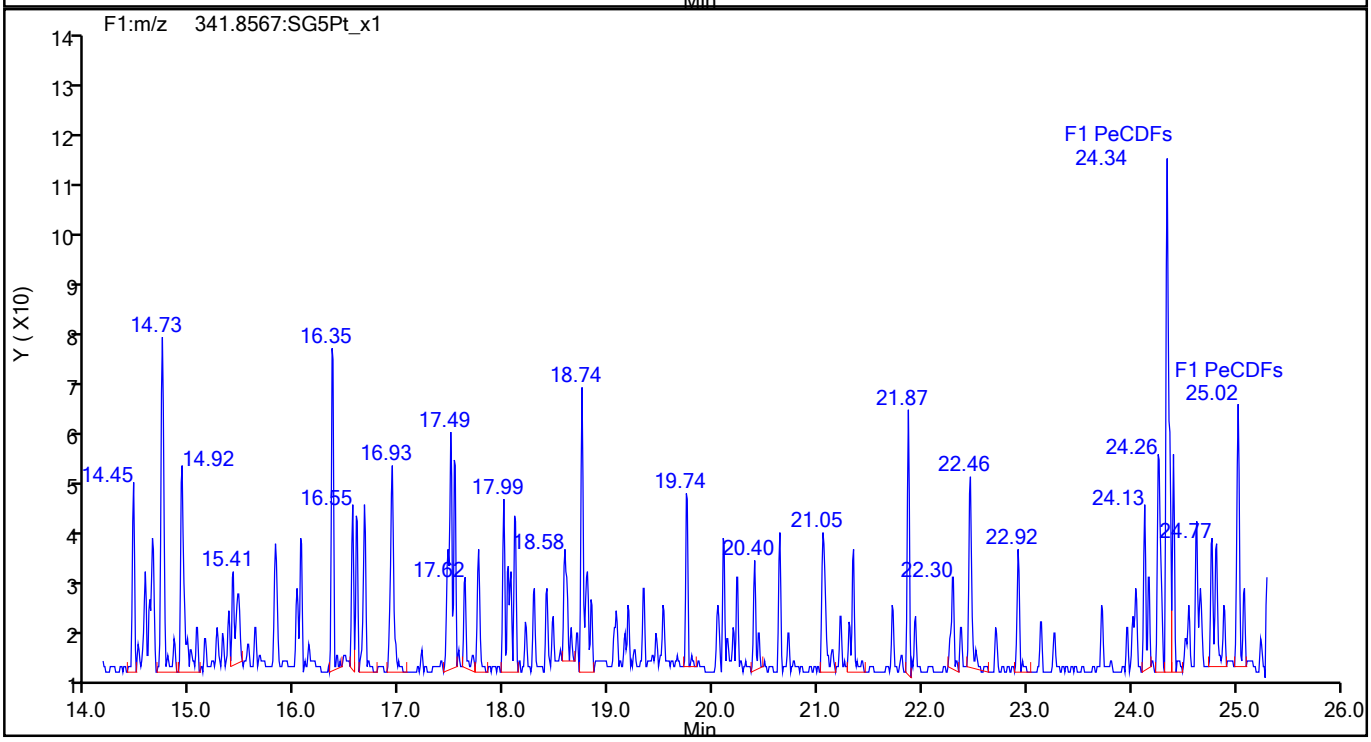

776980

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

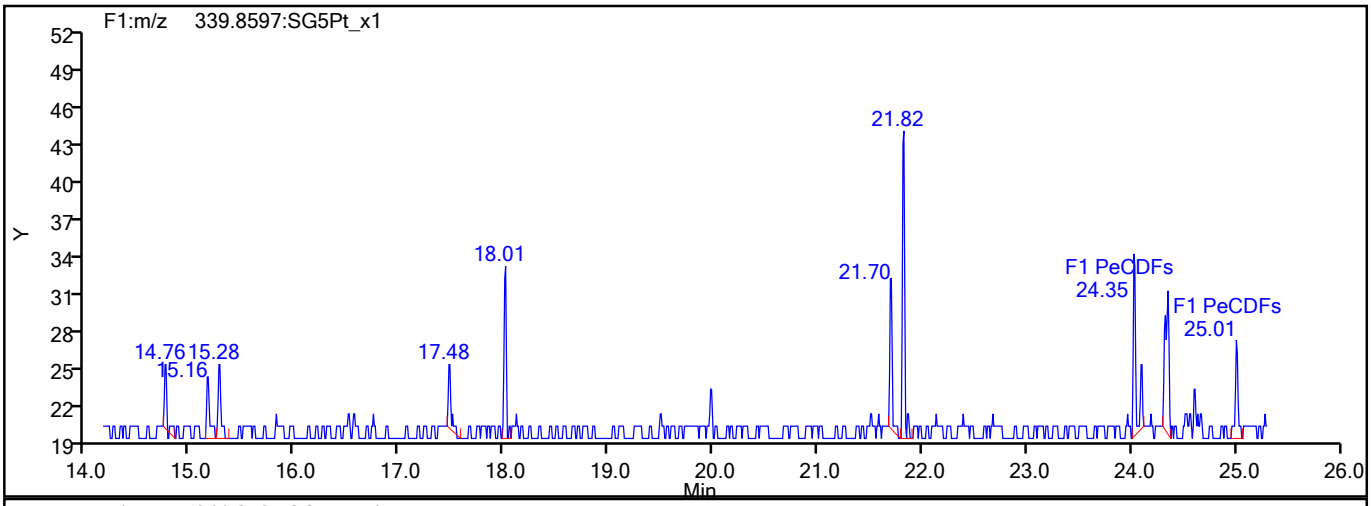

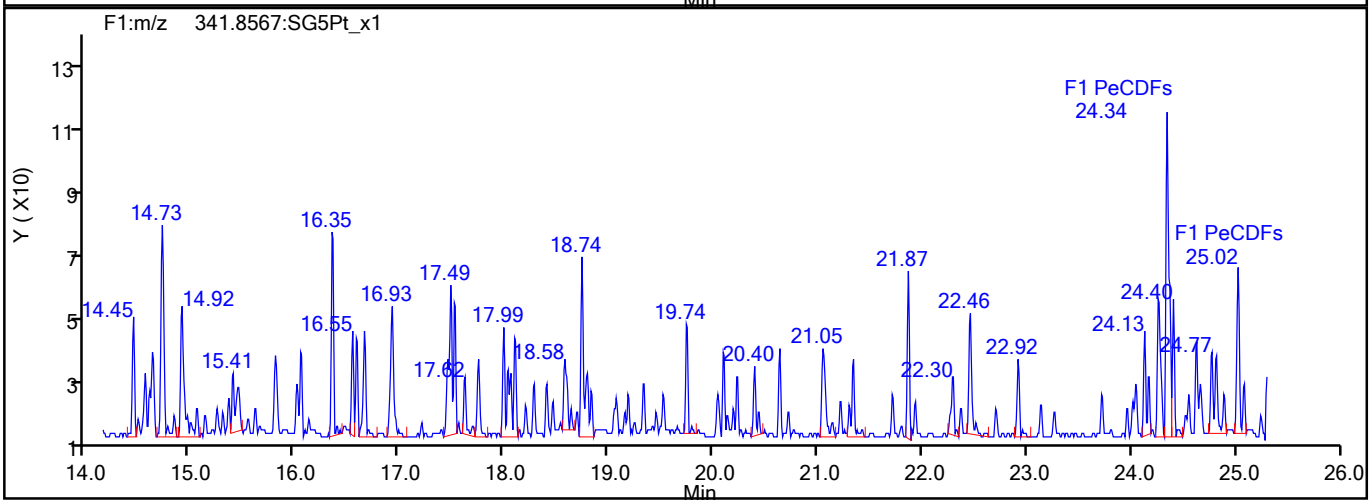

F1 PeCDFs Interference Mass

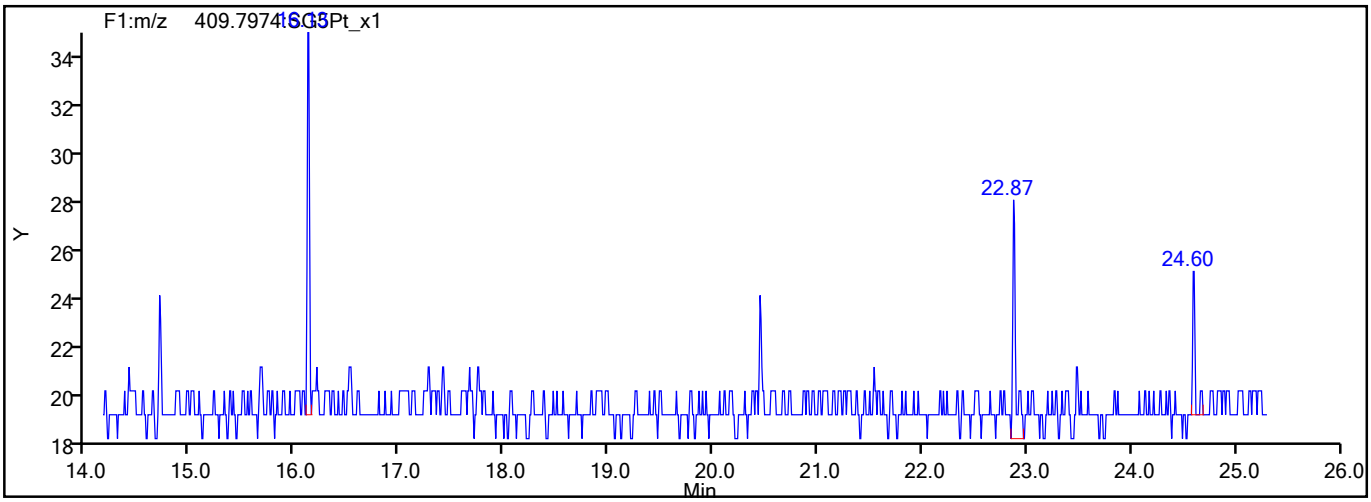

776981

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

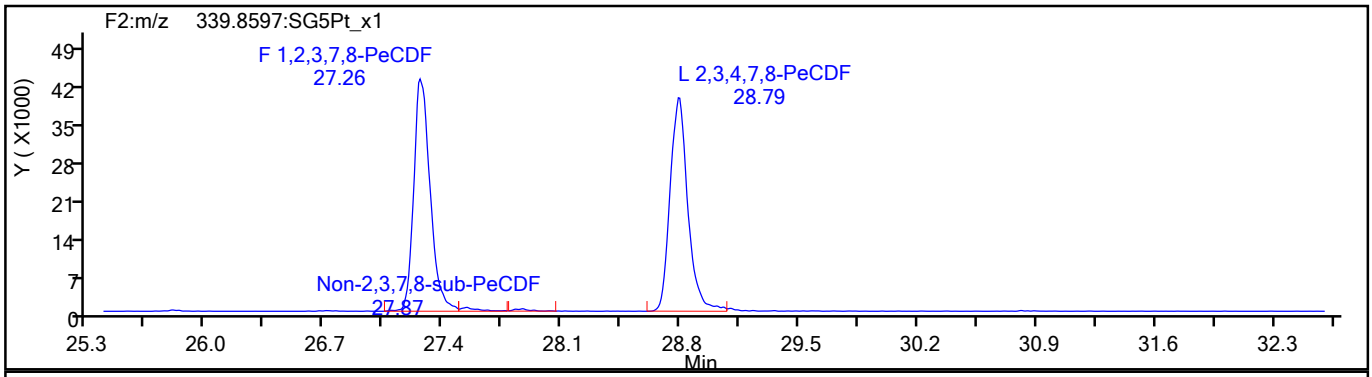

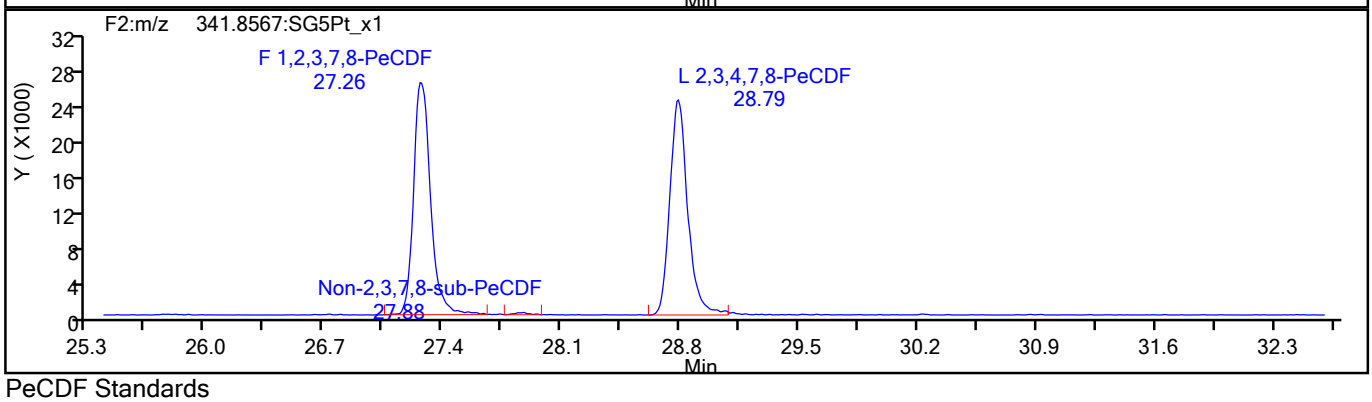

PeCDF Standards

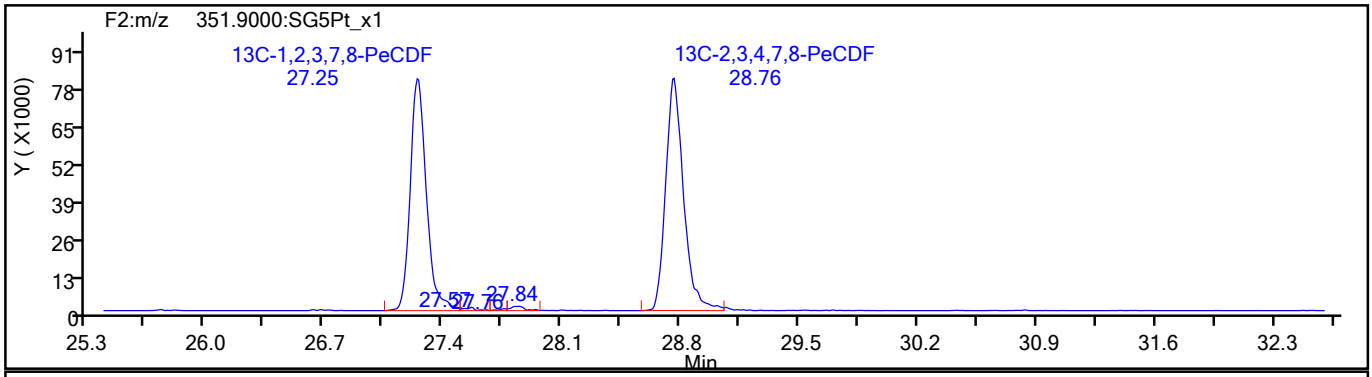

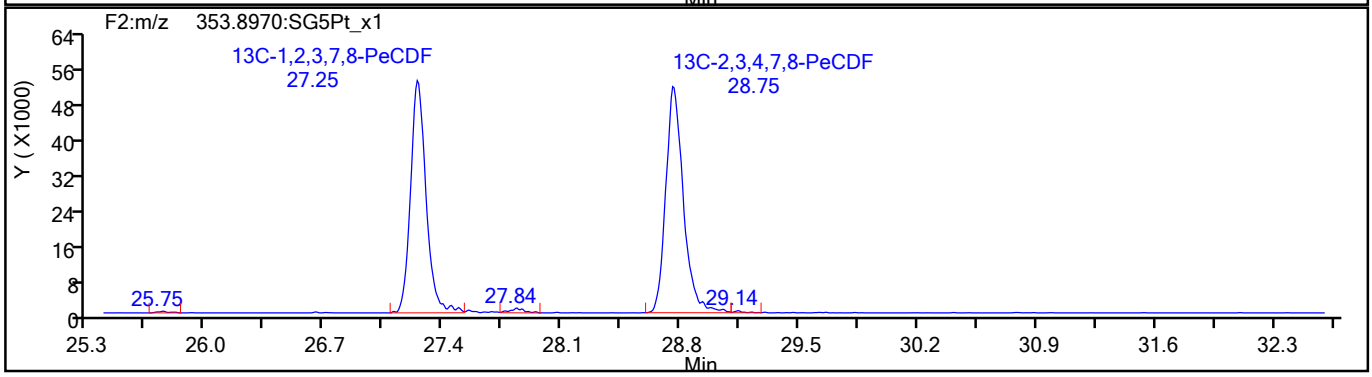

776982

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

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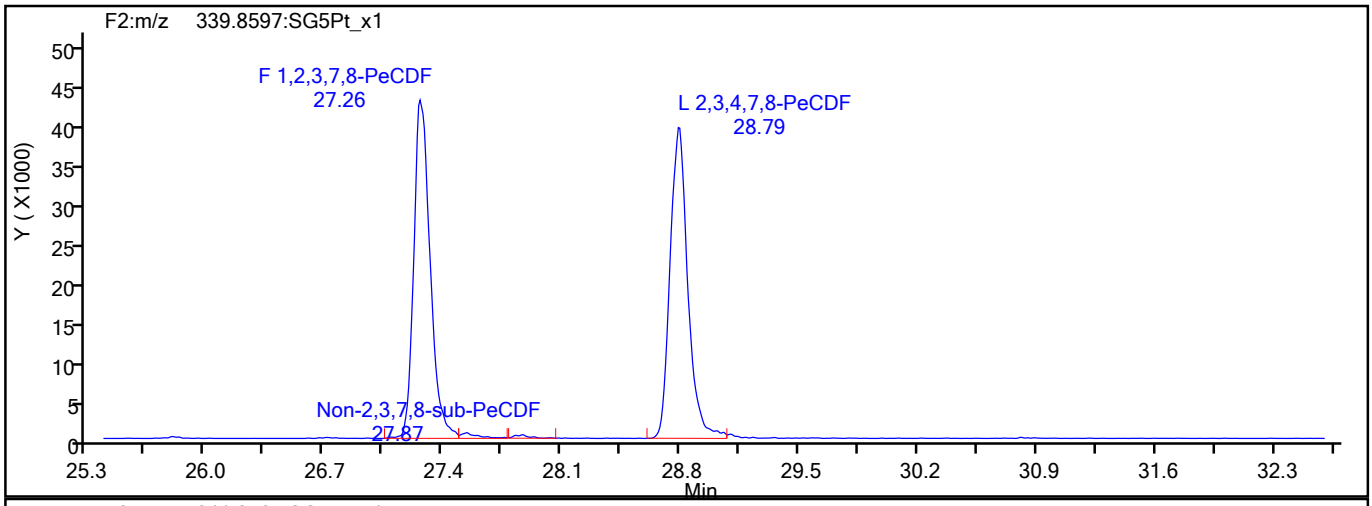

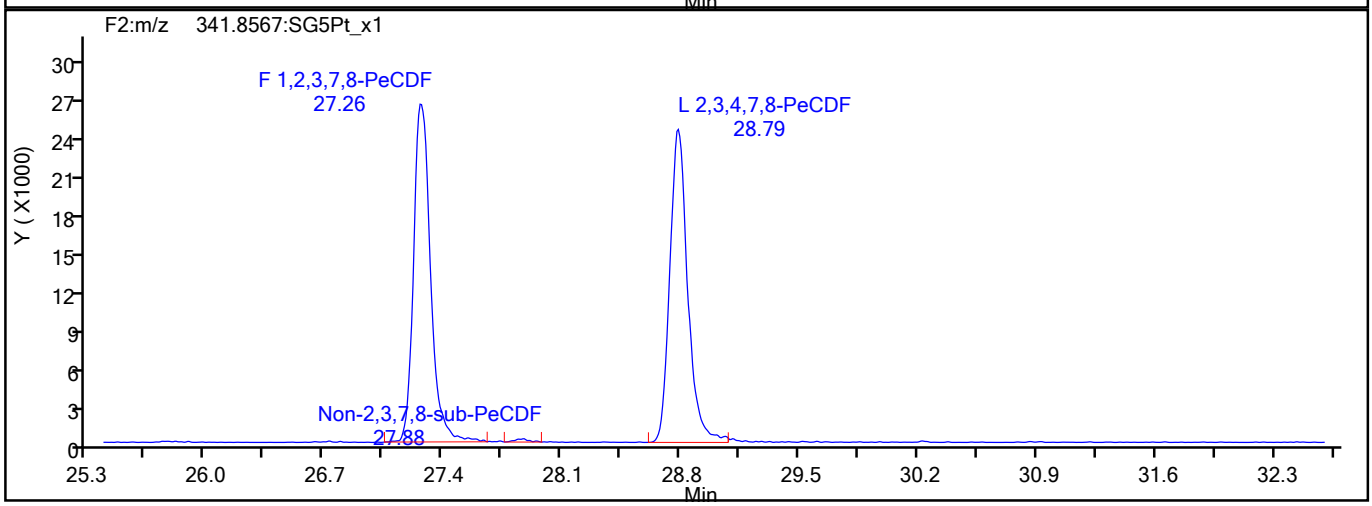

PeCDF Interference Mass

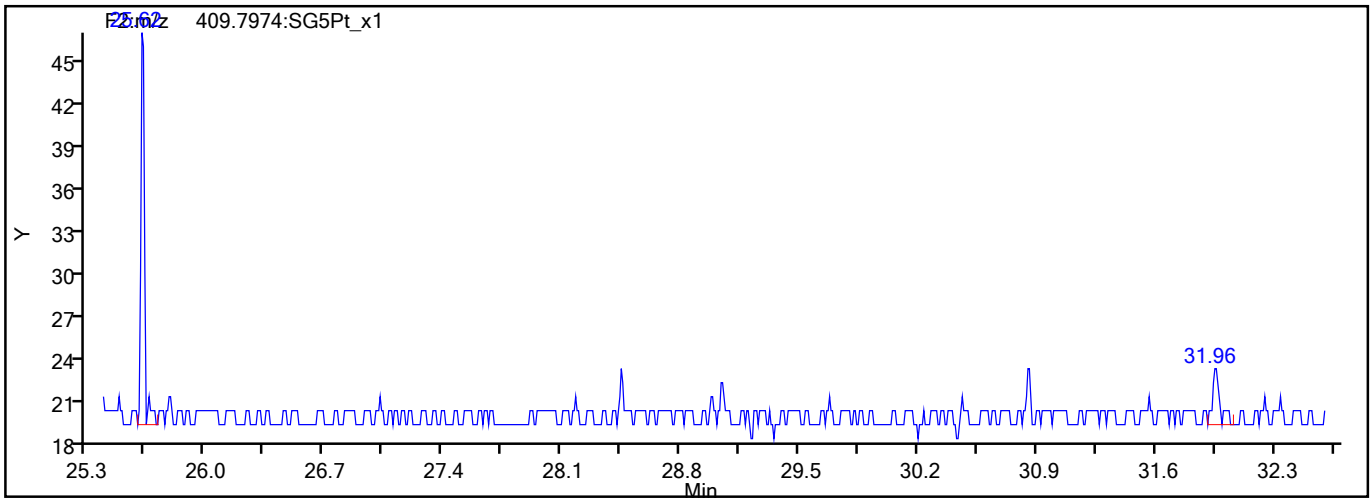

776983

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

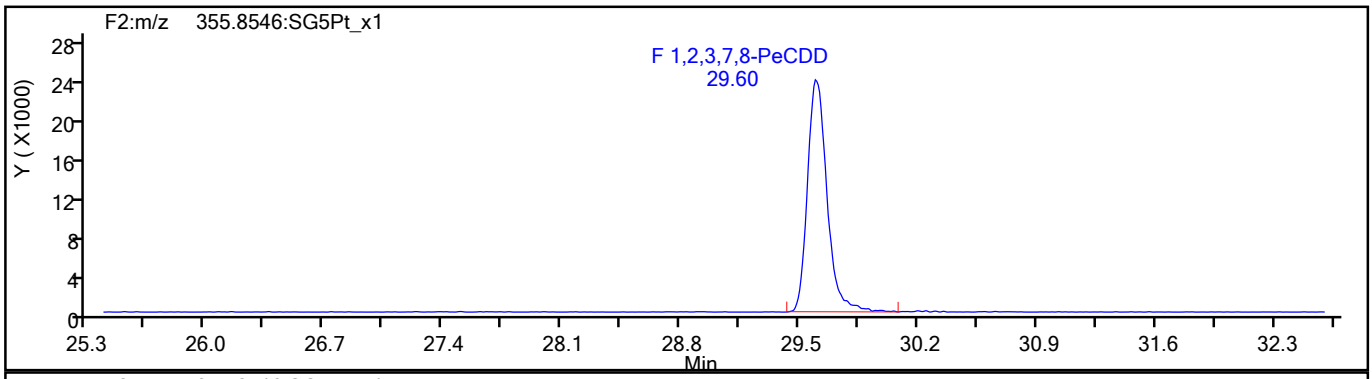

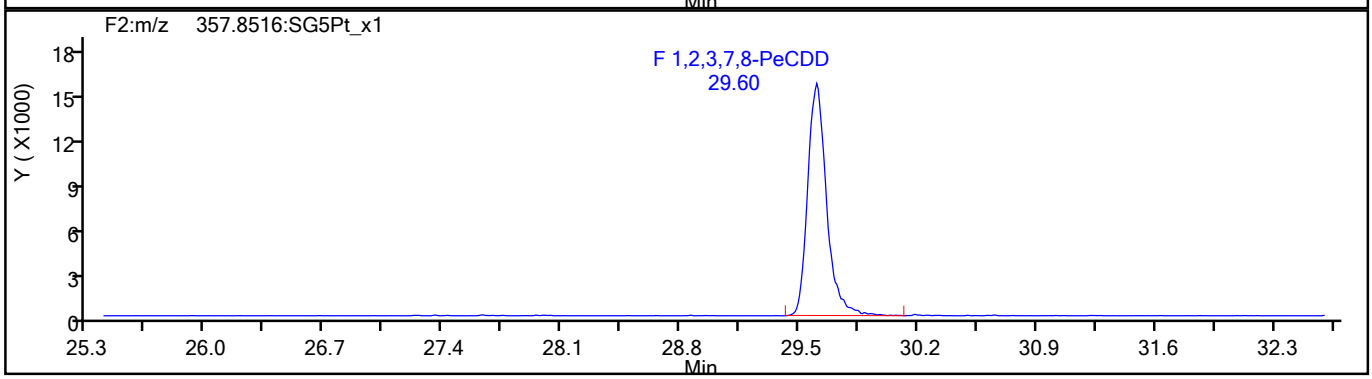

PeCDD Standards

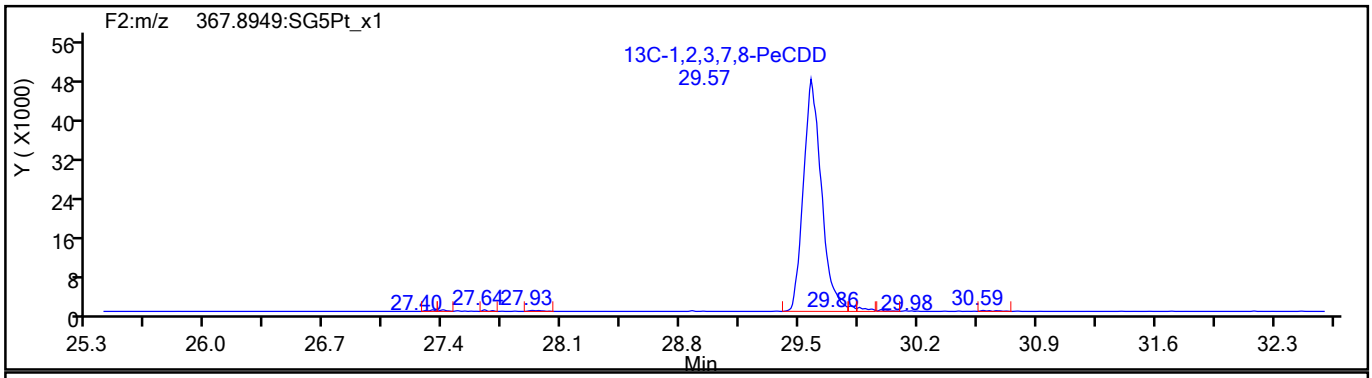

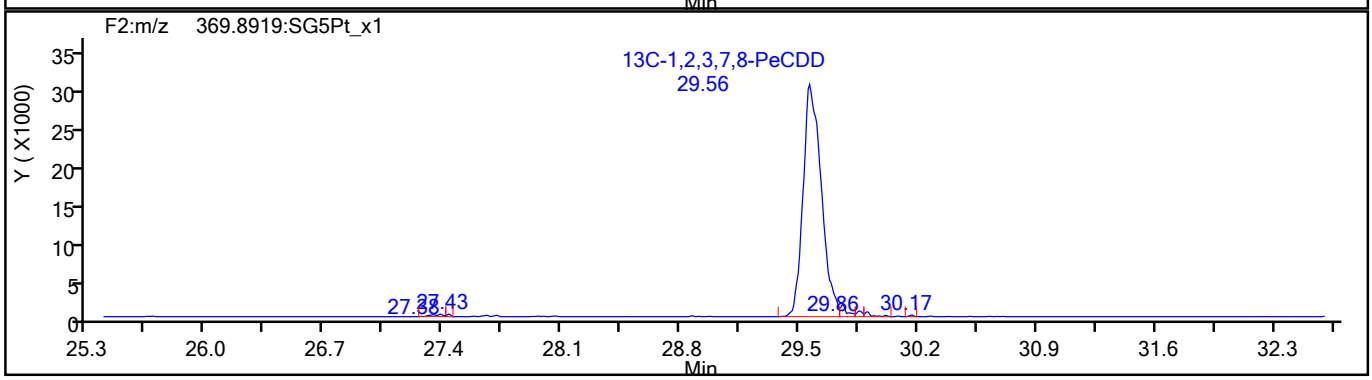

776984

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

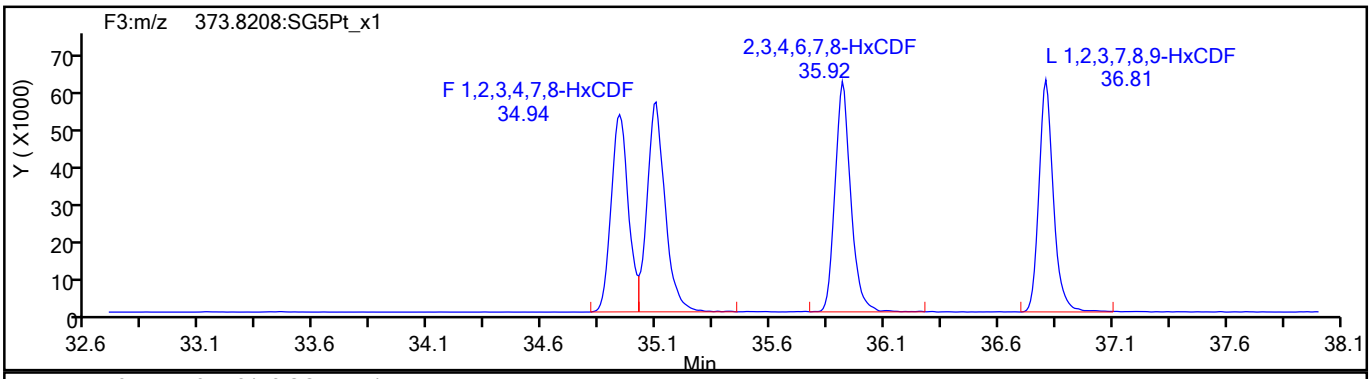

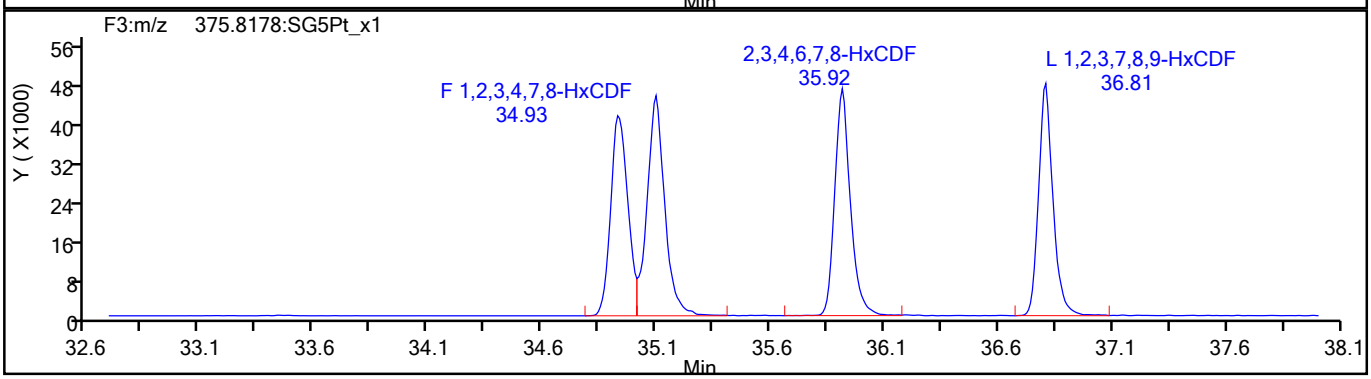

HxCDF Standards

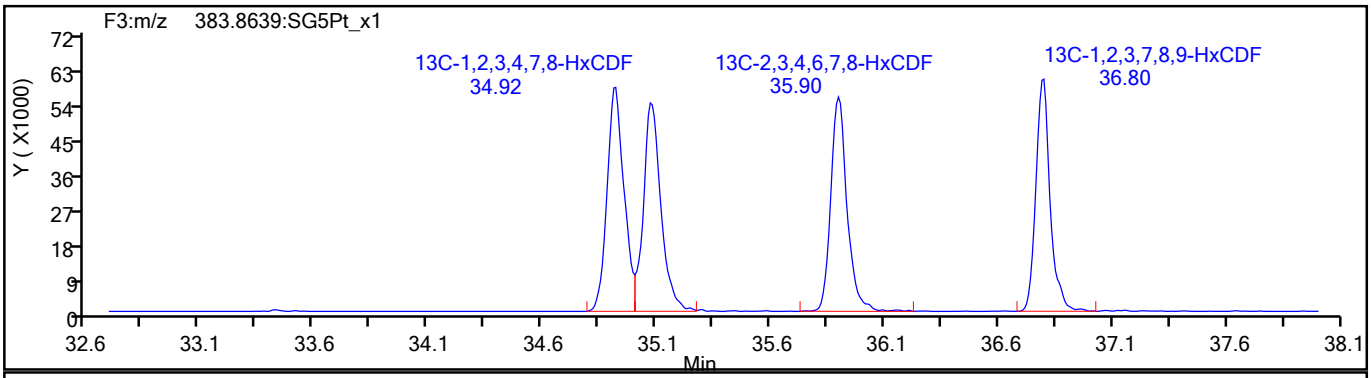

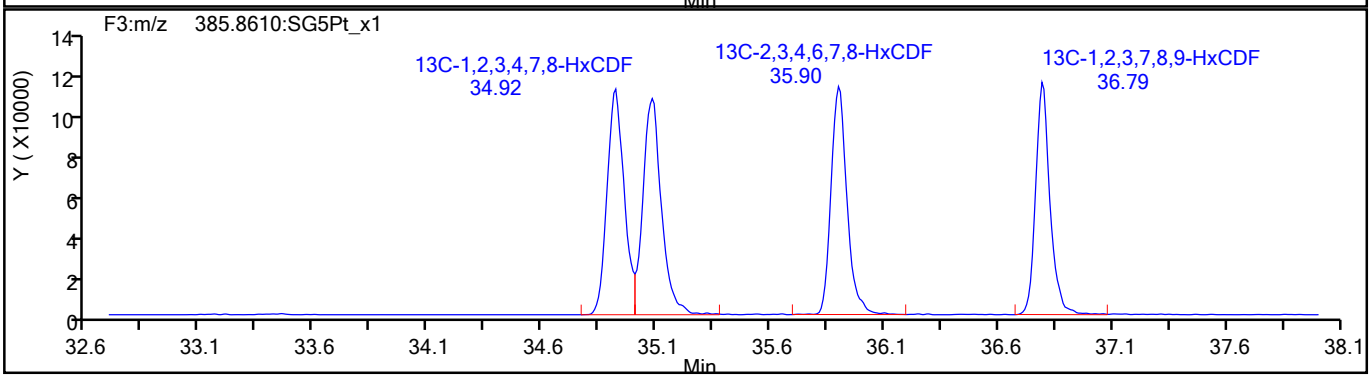

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Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

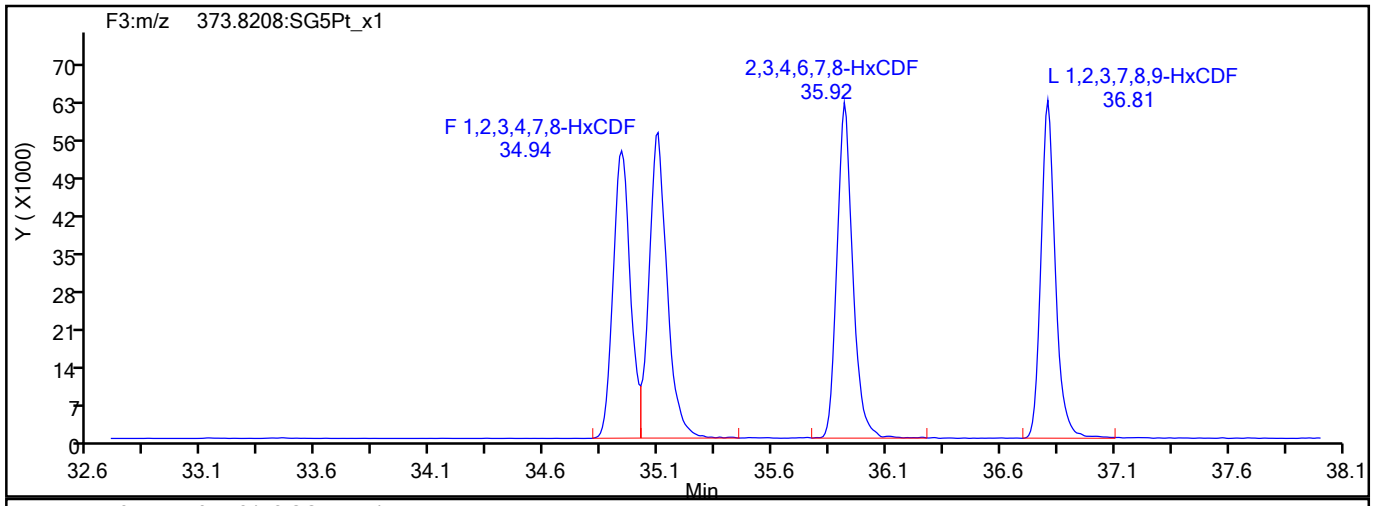

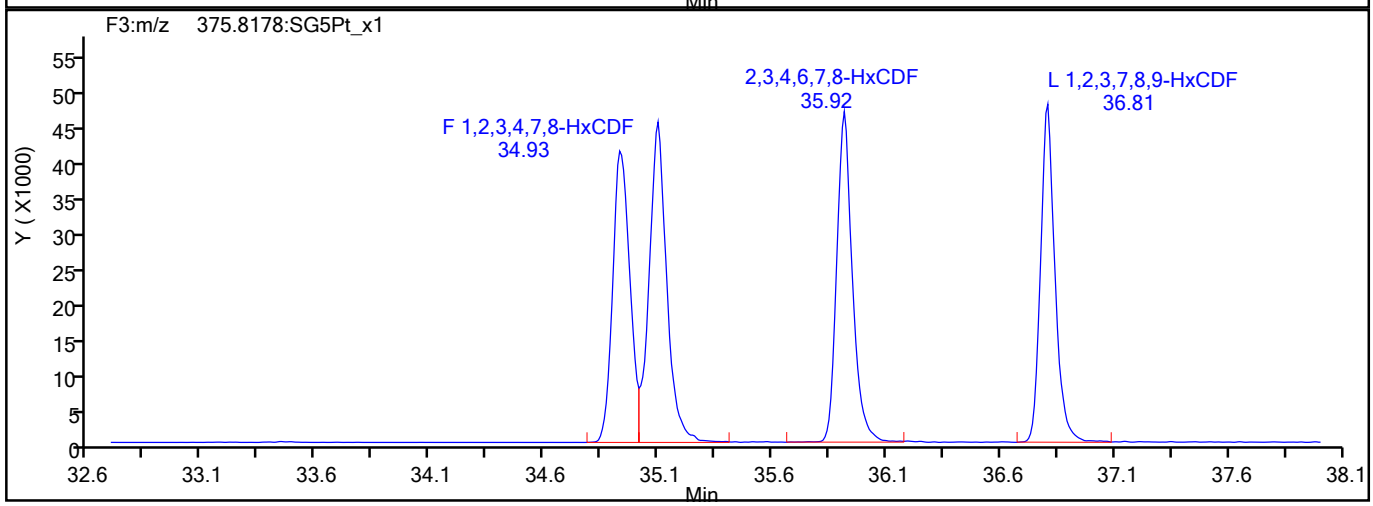

HxCDF Interference Mass

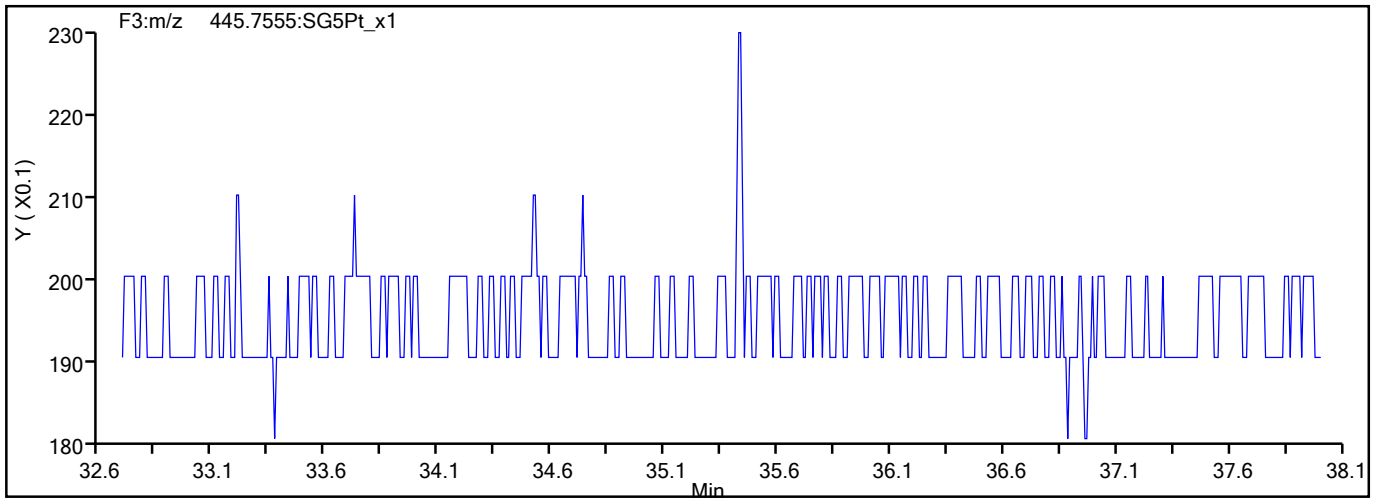

776986

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDD

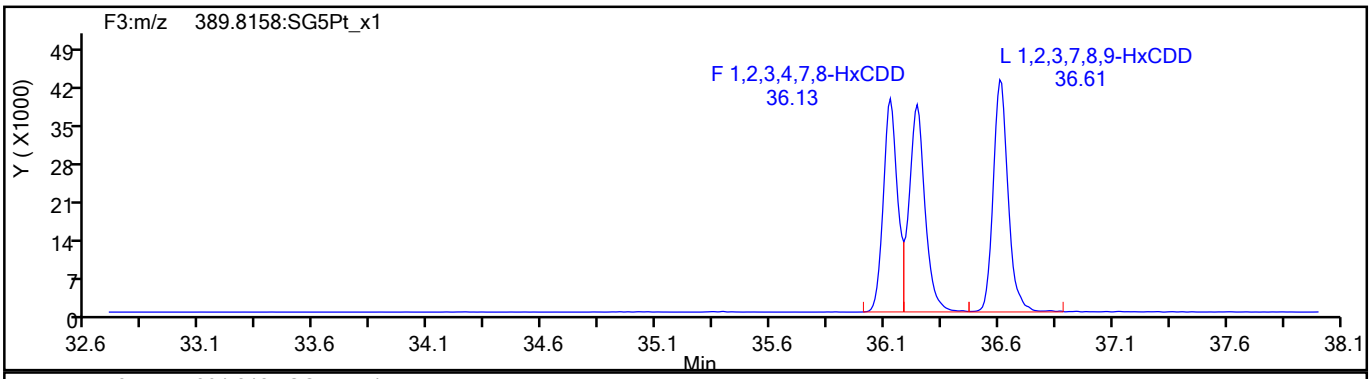

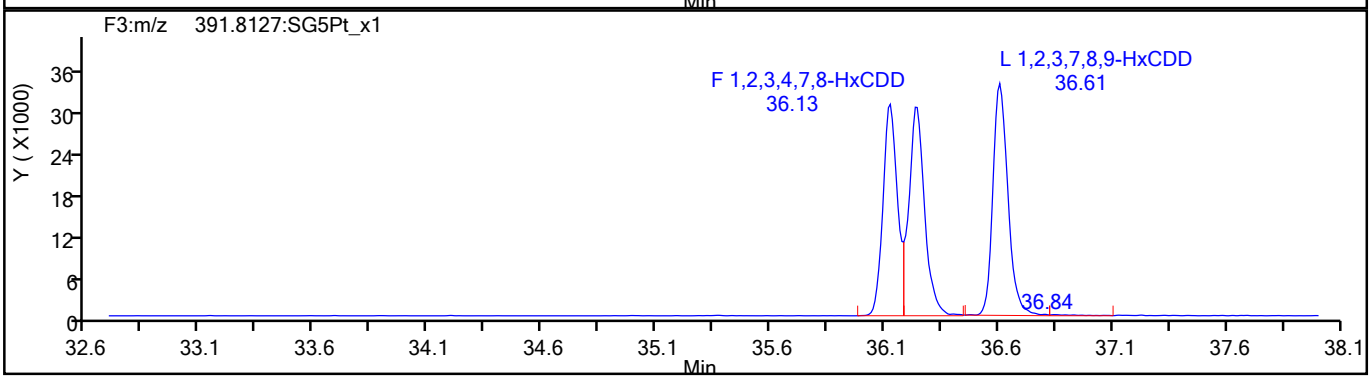

HxCDD Standards

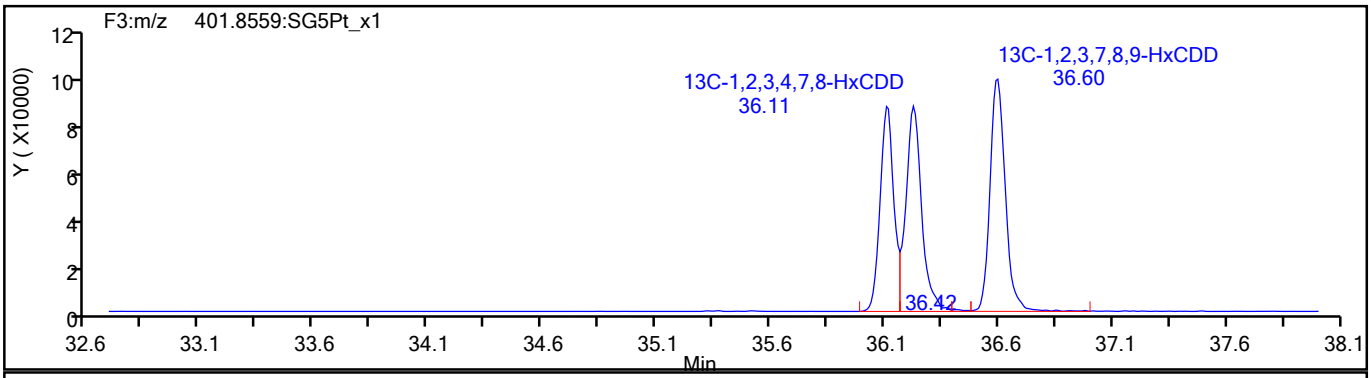

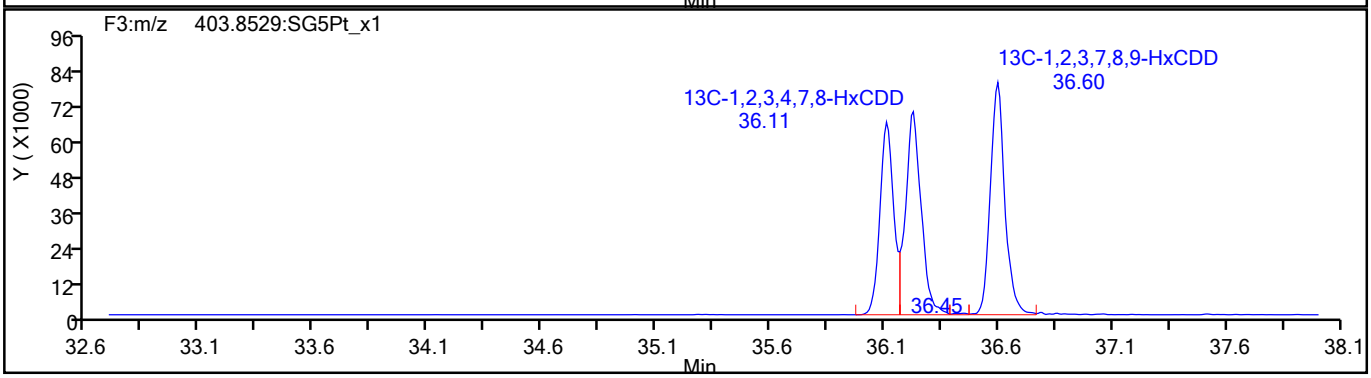

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Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

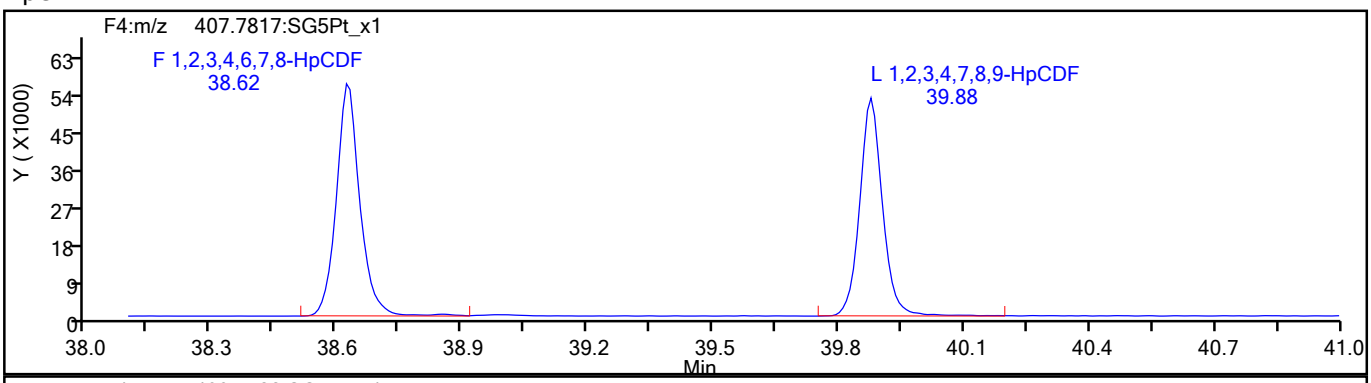

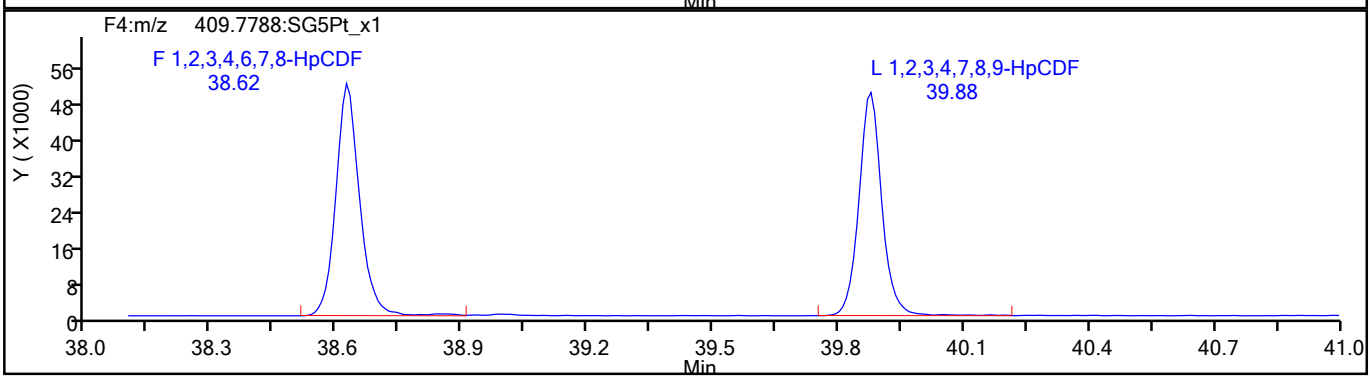

HpCDF Standards

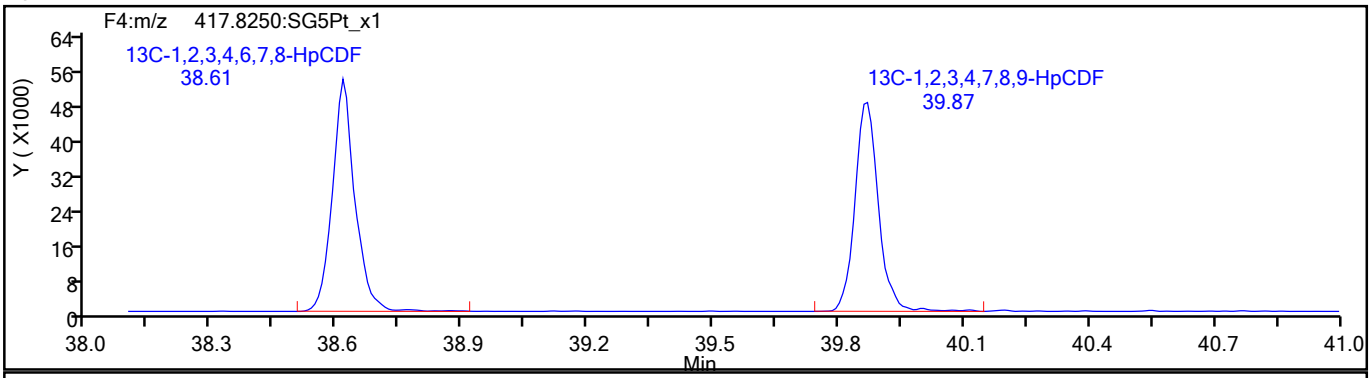

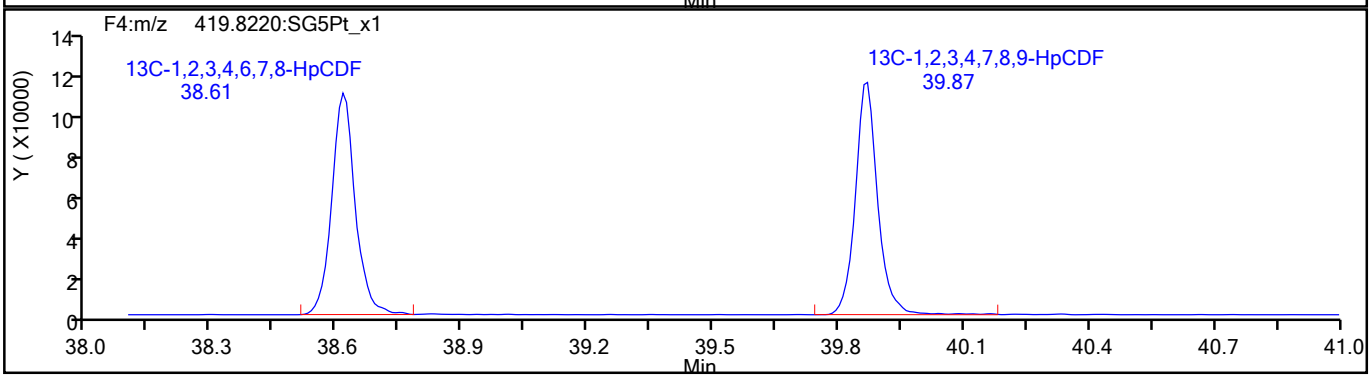

776988

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

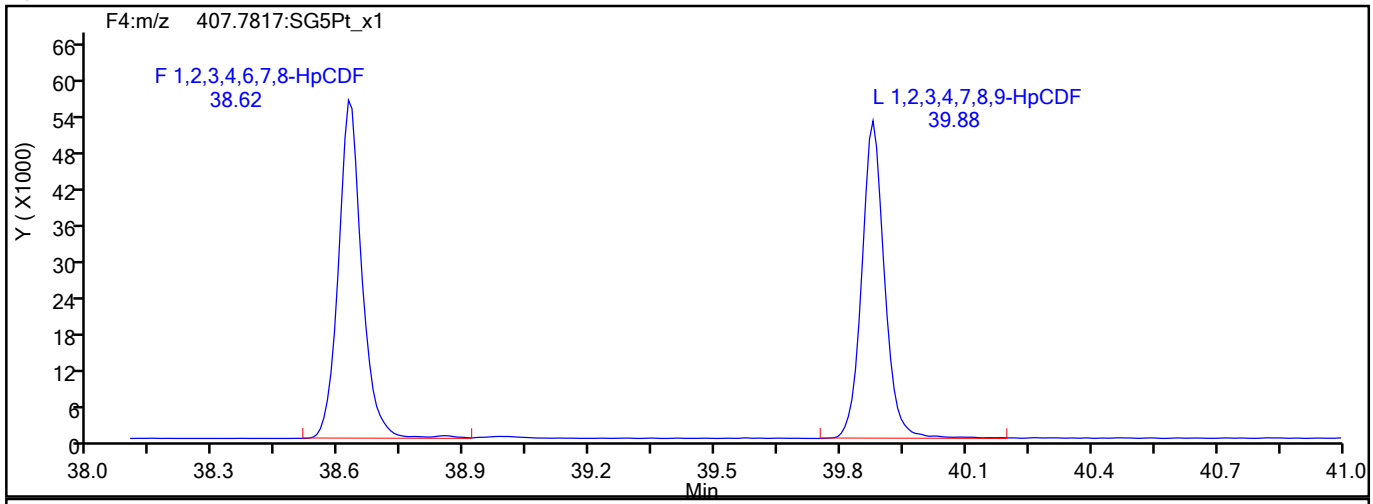

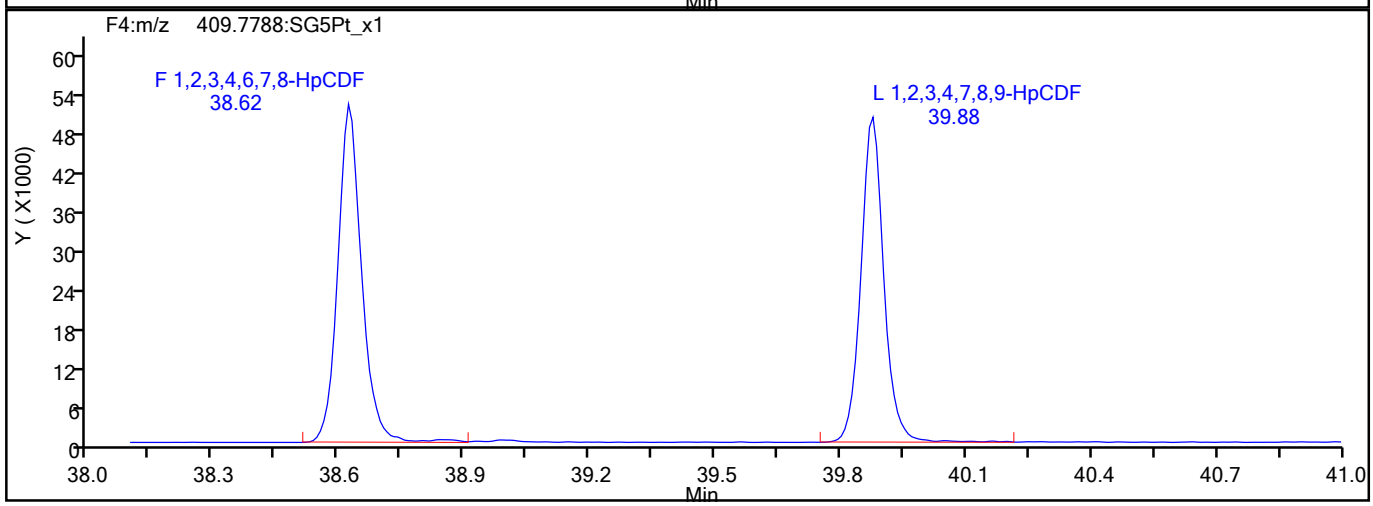

HpCDF Interference Mass

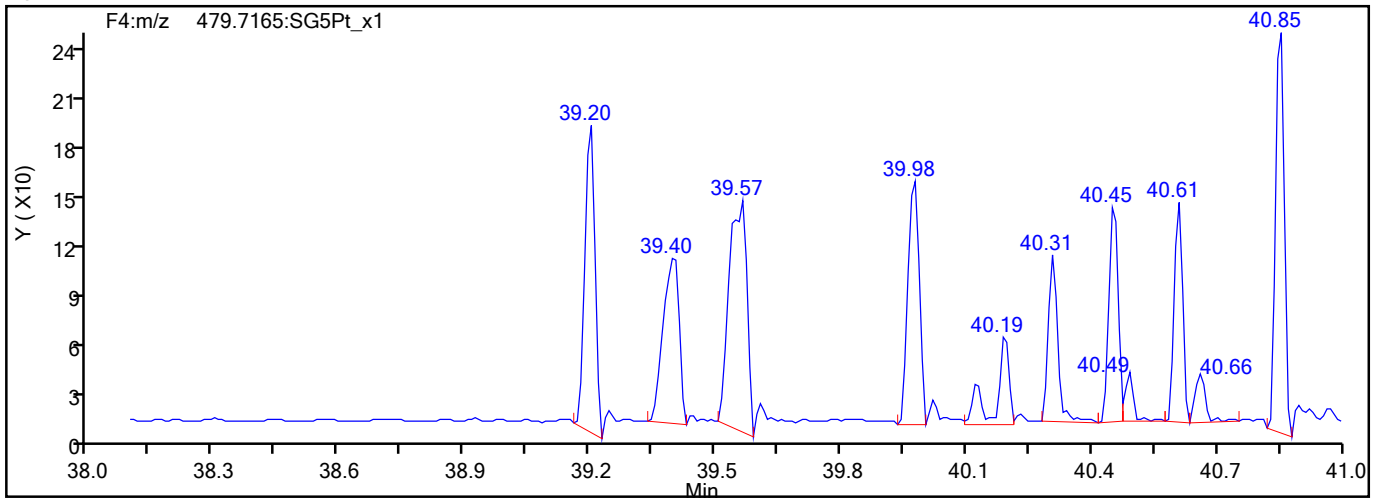

776989

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDD

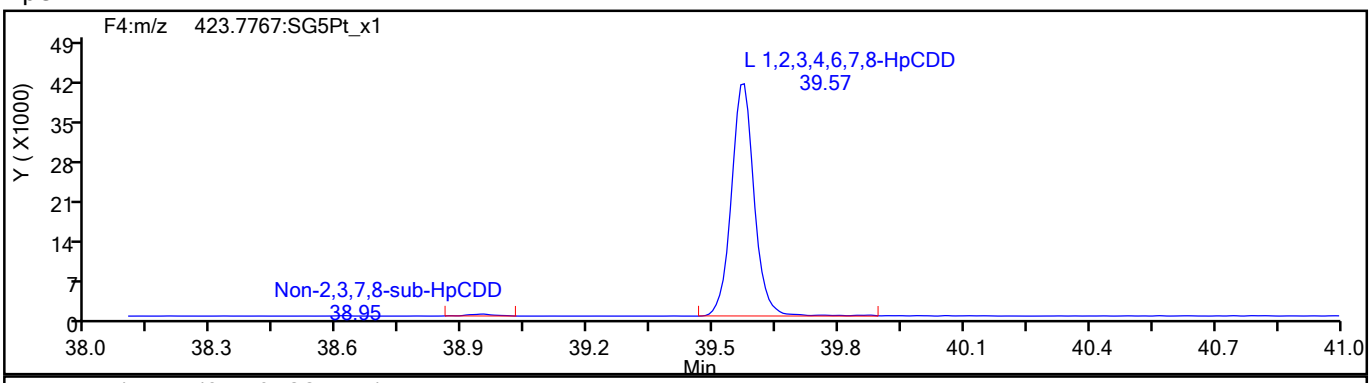

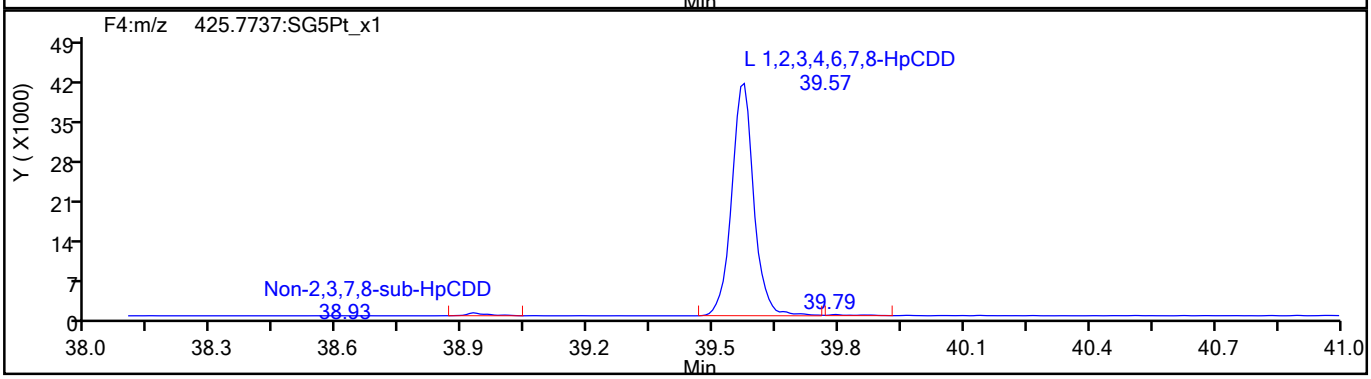

HpCDD Standards

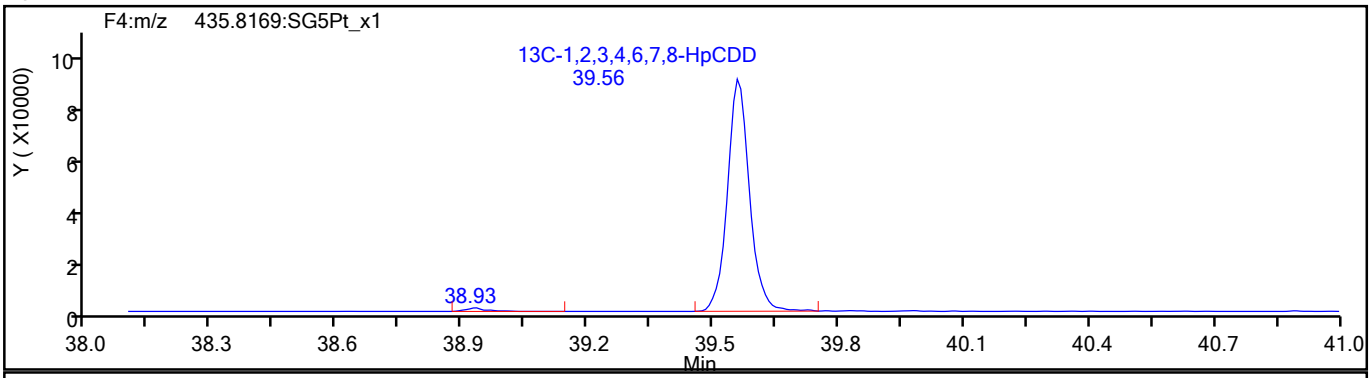

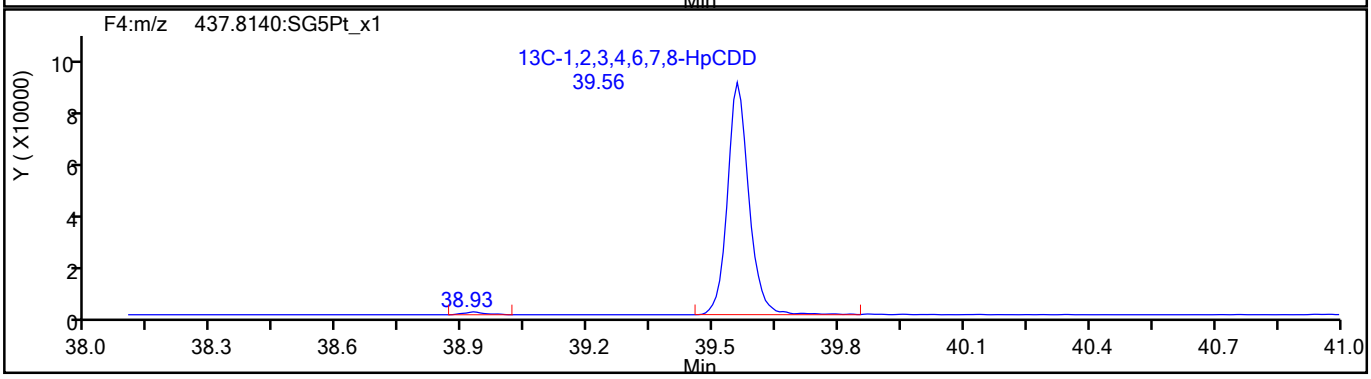

776990

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

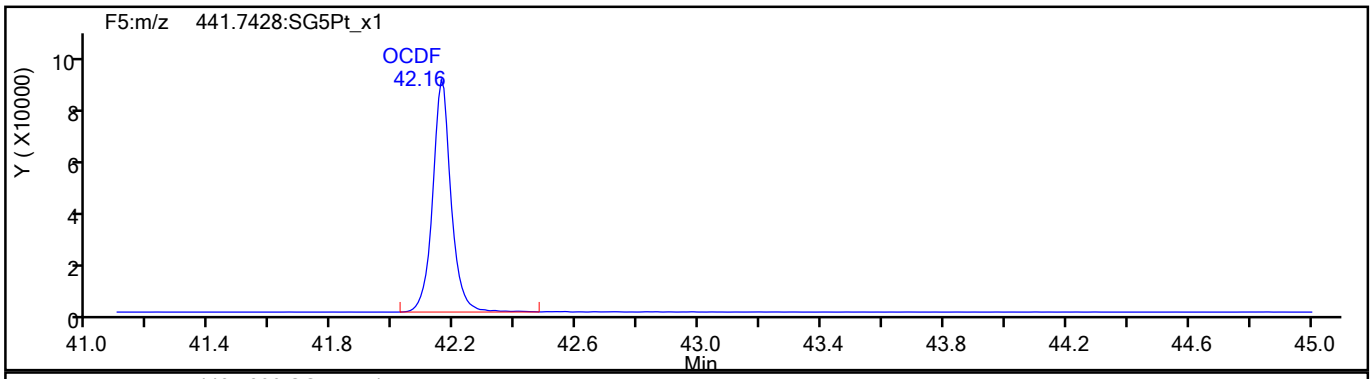

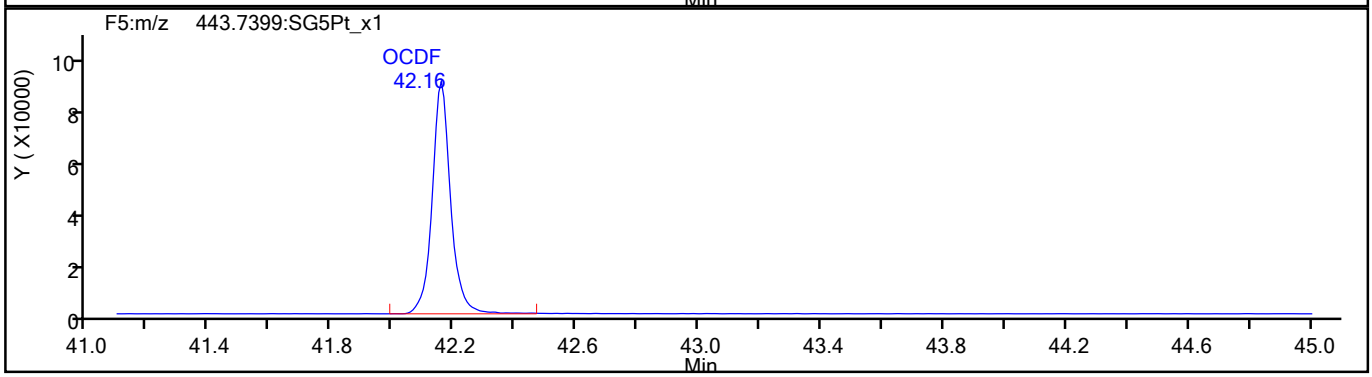

OCDF Standards

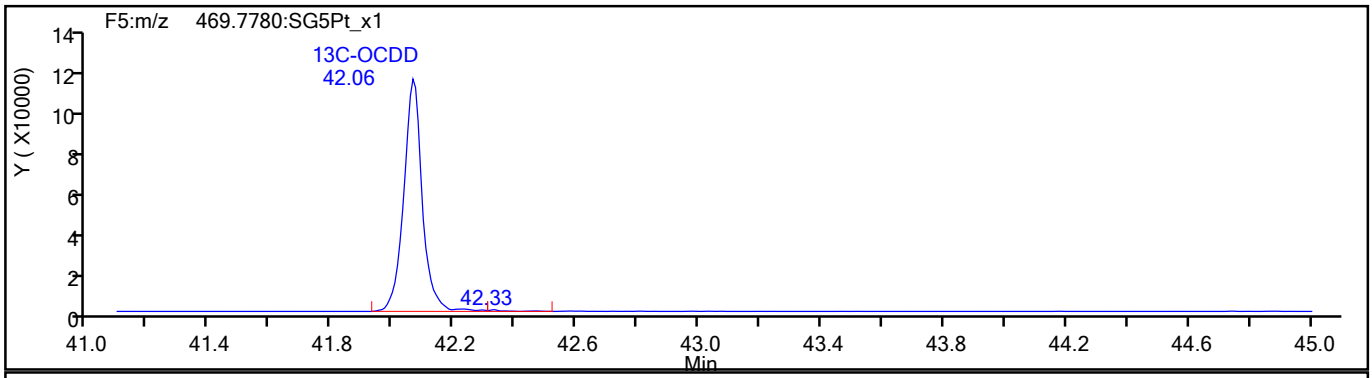

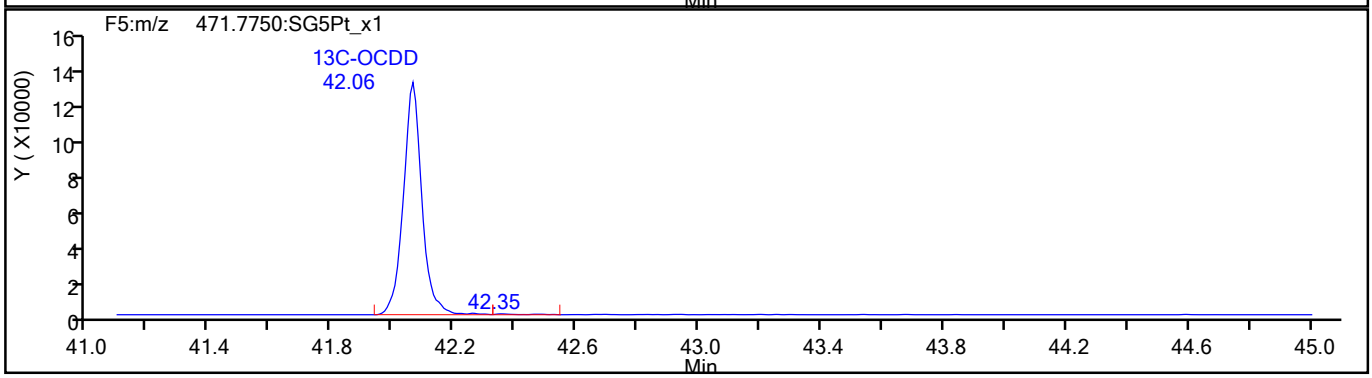

776991

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDF

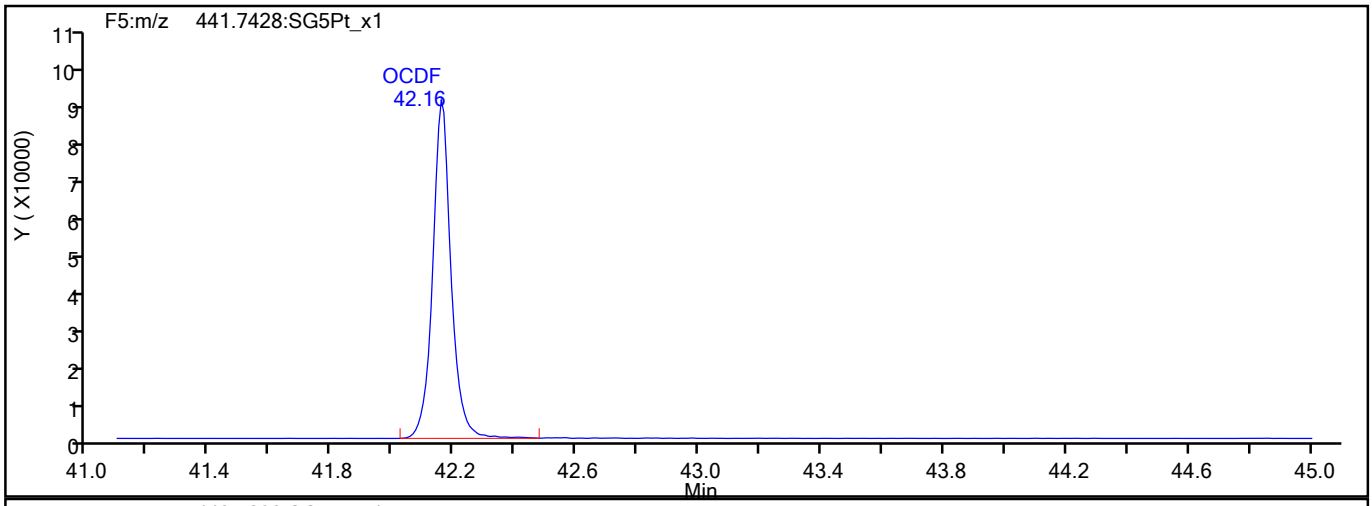

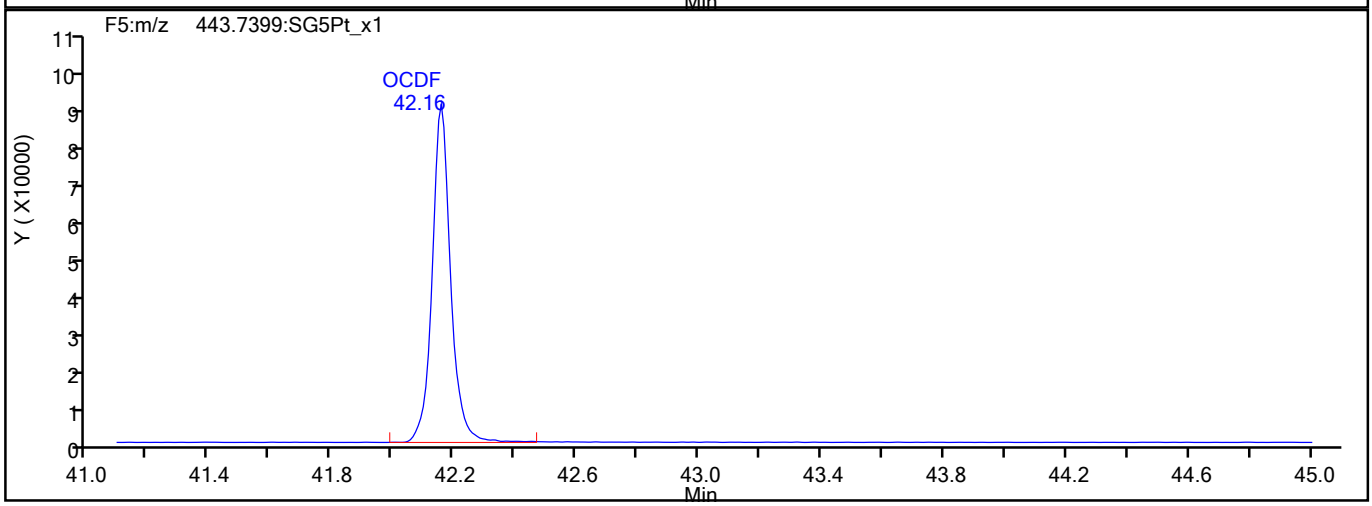

OCDF Interference Mass

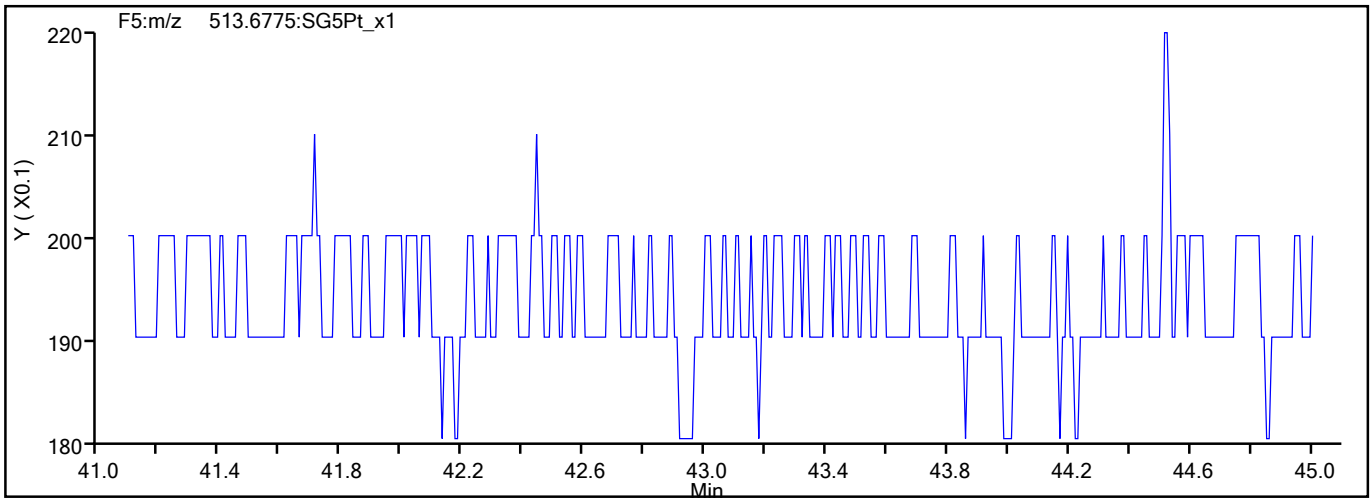

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Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

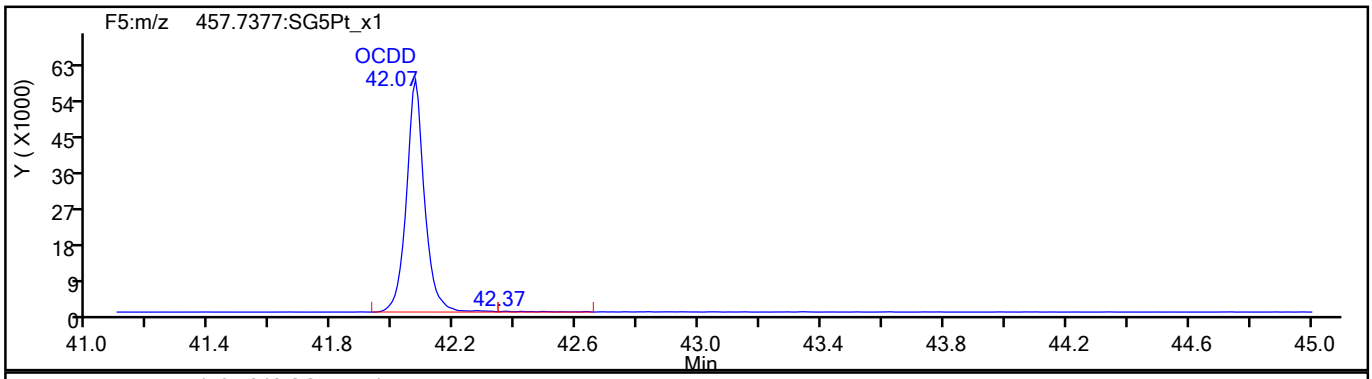

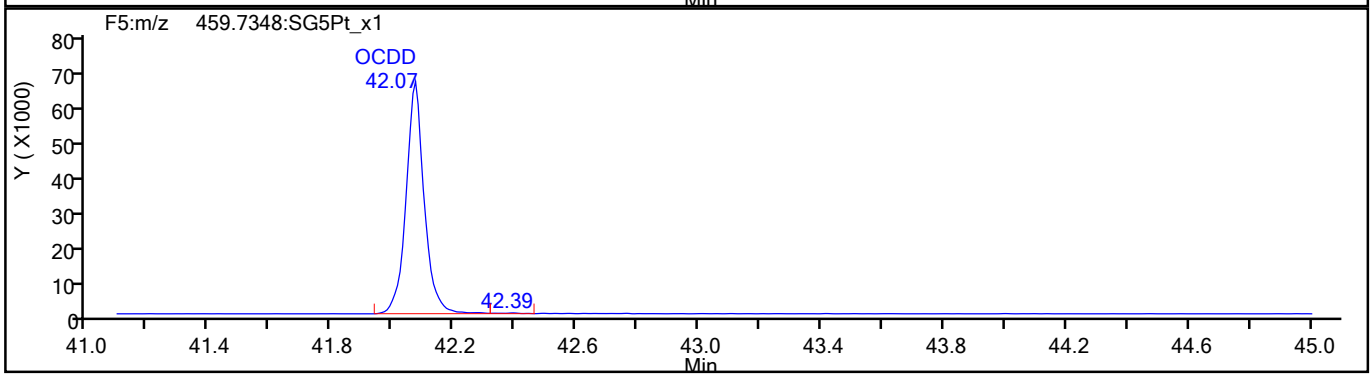

OCDD Standards

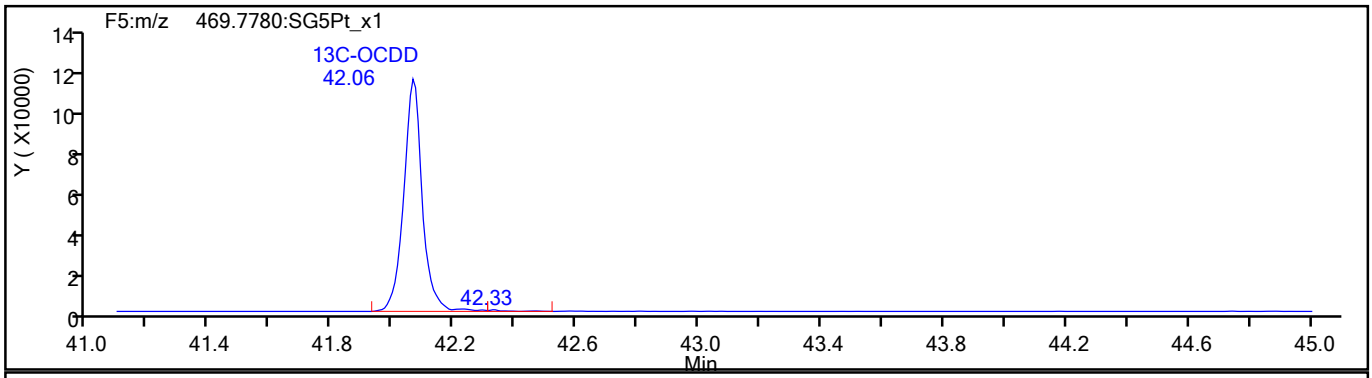

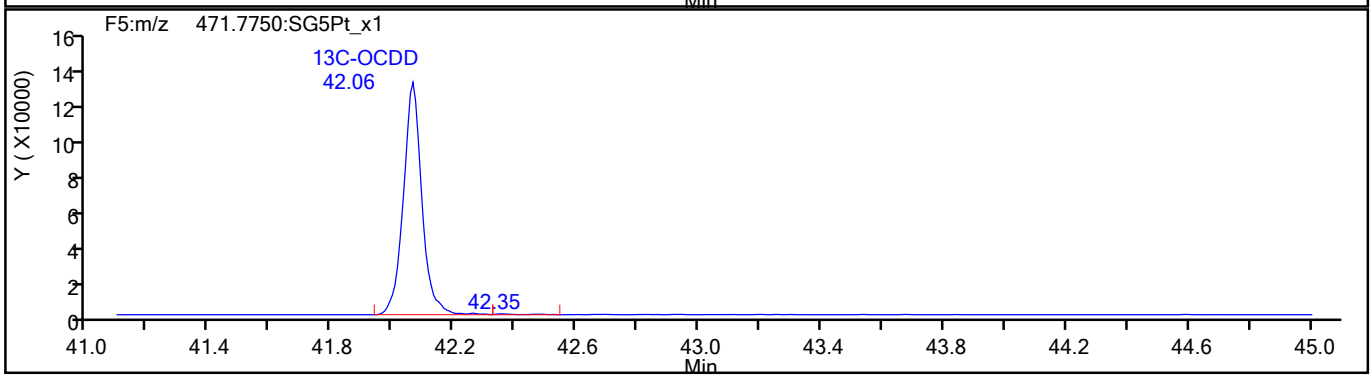

776993

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

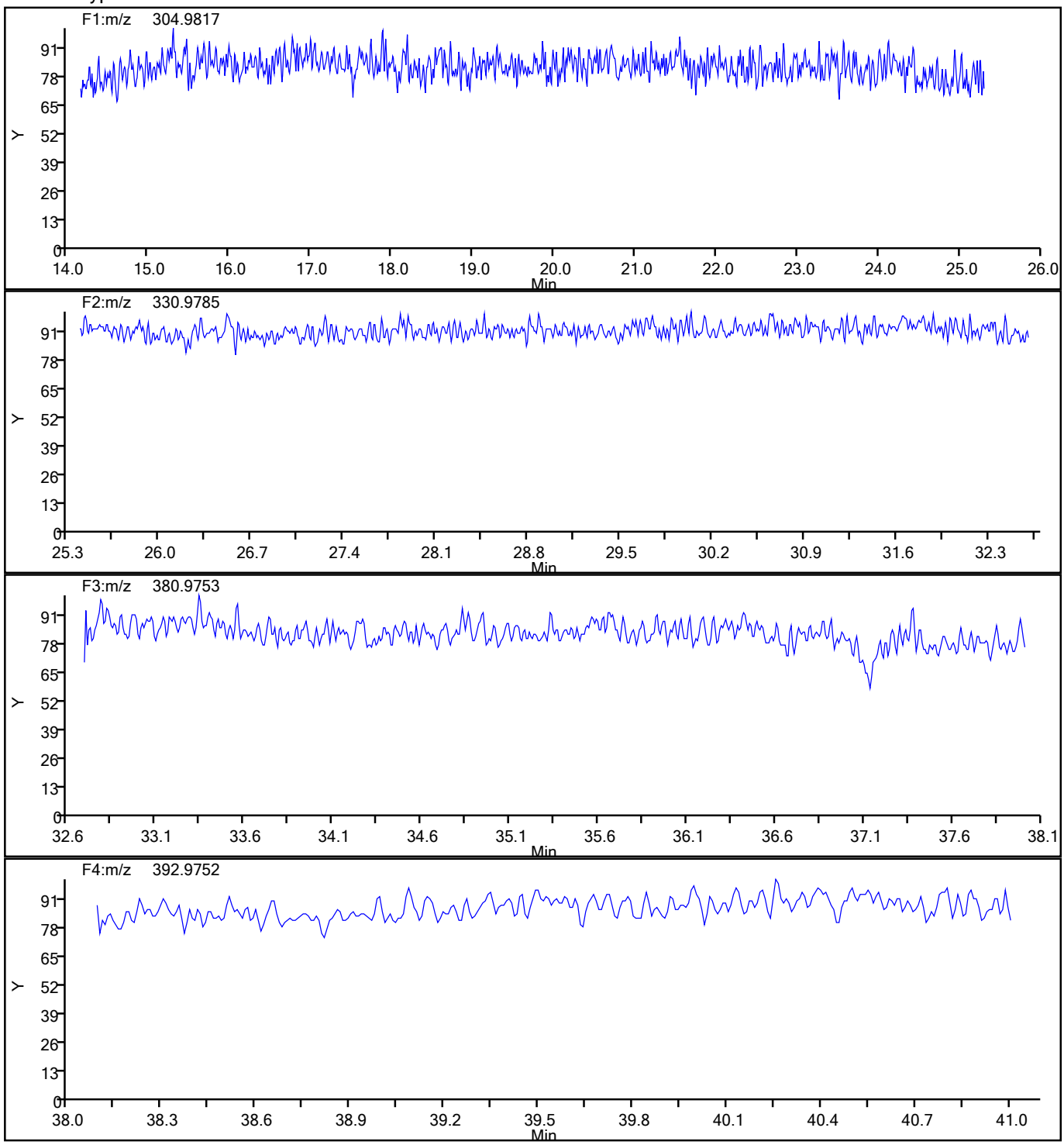

776994

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

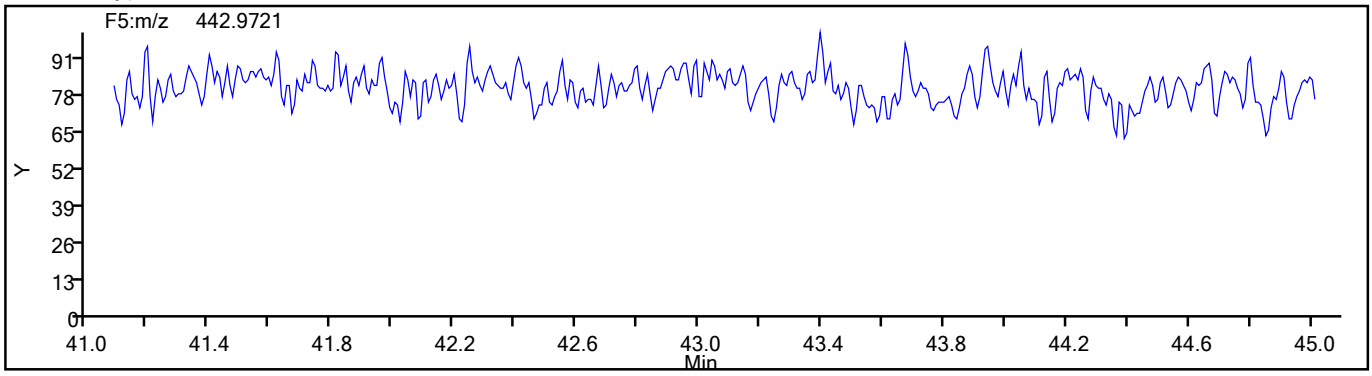

776995

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Lab Sample ID: CCV 320-518043/15 Calibration Date: 08/20/2021 01:34

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 19au21dfs1_17.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.048		9.71	10.0	97	84-120
2,3,7,8-TCDD	AveID	1.075	1.025		9.54	10.0	95	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.061		50.3	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9636		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.060		50.7	50.0	101	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.159		50.5	50.0	101	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.243		51.0	50.0	102	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.301		53.5	50.0	107	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9540		45.0	50.0	90	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9885		49.8	50.0	100	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.141		51.4	50.0	103	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.300		52.4	50.0	105	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.388		48.1	50.0	96	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.034		49.2	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.281		48.9	50.0	98	86-116
OCDD	AveID	1.062	1.054		99.3	100	99	79-126
OCDF	AveID	1.317	1.471		112	100	112	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.409		105	100	105	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9327		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.157		101	100	101	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.165		103	100	103	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6996		97.6	100	98	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.060		110	100	110	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.105		103	100	103	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.008		96.8	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8016		106	100	106	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.8667		101	100	101	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.116		115	100	115	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.9098		124	100	124	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.6899		102	100	102	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7820		114	100	114	77-129
13C-OCDD	Ave	0.5446	0.6551		241	200	120	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	0.9918		9.84	10.0	98	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	19AU21DFS1_1	Resolution Check	RC 081921	46			KSS	1.000	
2	19AU21DFS1_2	WDM HRDXNCP_00044	WDM 081921	1	Dioxin		KSS	1.000	
3	19AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081921	2	Dioxin		KSS	1.000	
4	19AU21DFS1_4	SB Solvent Blank C14	SB 081921	3	Dioxin		KSS	1.000	
5	19AU21DFS1_5	mb 320-513879/1-a RI	mb 320-513879/1-a	4	1613B/Solid	D267	KSS	10.000	g
6	19AU21DFS1_6	320-76888-a-13-a RI	320-76888-a-13-a	5	1613B/Solid	D266	KSS	10.000	g
7	19AU21DFS1_7	320-76901-a-3-a	320-76901-a-3-a	6	1613B/Solid	D267	KSS	10.000	g
8	19AU21DFS1_8	320-76901-a-4-a	320-76901-a-4-a	7	1613B/Solid		KSS	10.000	g
9	19AU21DFS1_9	320-76901-a-5-a	320-76901-a-5-a	8	1613B/Solid		KSS	10.000	g
10	19AU21DFS1_10	320-76901-a-6-a	320-76901-a-6-a	9	1613B/Solid		KSS	10.000	g
11	19AU21DFS1_11	320-76901-a-7-a	320-76901-a-7-a	10	1613B/Solid		KSS	10.000	g
12	19AU21DFS1_12	320-76901-a-8-a	320-76901-a-8-a	11	1613B/Solid		KSS	10.000	g
13	19AU21DFS1_13	320-76901-a-9-a	320-76901-a-9-a	12	1613B/Solid		KSS	10.000	g
14	19AU21DFS1_14	320-76901-a-13-a	320-76901-a-13-a	13	1613B/Solid		KSS	10.000	g
15	19AU21DFS1_15	SB Solvent Blank C14	SB 081921A	3	Dioxin		KSS	1.000	
16	19AU21DFS1_16	Resolution Check	RC 081921A	46			KSS	1.000	
17	19AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081921A	2	Dioxin		KSS	1.000	
18	19AU21DFS1_18	WDM HRDXNCP_00044	WDM 081921A	1	Dioxin		KSS	1.000	
19	19AU21DFS1_19	SB Solvent Blank C14	SB 081921B	3	Dioxin		KSS	1.000	
20	19AU21DFS1_20	320-76888-a-5-a 5X	320-76888-a-5-a	14	1613B/Solid	D267	KSS	10.000	g
21	19AU21DFS1_21	320-76888-a-1-a 10X	320-76888-a-1-a	15	1613B/Solid		KSS	10.000	g
22	19AU21DFS1_22	320-76888-a-1-b ms 10X	320-76888-a-1-b ms	16	1613B/Solid		KSS	10.000	g
23	19AU21DFS1_23	320-76888-a-1-c msd 10X	320-76888-a-1-c msd	17	1613B/Solid		KSS	10.000	g
24	19AU21DFS1_24	320-76888-a-4-a 10X	320-76888-a-4-a	18	1613B/Solid		KSS	10.000	g
25	19AU21DFS1_25	320-76888-a-2-a 10X	320-76888-a-2-a	19	1613B/Solid		KSS	10.000	g
26	19AU21DFS1_26	320-76901-a-1-a 10X	320-76901-a-1-a	20	1613B/Solid		KSS	10.000	g
27	19AU21DFS1_27	320-76888-a-3-a 10X	320-76888-a-3-a	21	1613B/Solid		KSS	10.000	g
28	19AU21DFS1_28	SB Solvent Blank C14	SB 081921C	3	Dioxin		KSS	1.000	
29	19AU21DFS1_29	SB Solvent Blank C14	SB 081921D	3	Dioxin		KSS	1.000	
30	19AU21DFS1_30	Resolution Check	RC 081921B	46			KSS	1.000	

Logfile ✓'d
8/21/21
KSS

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 13:39
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11552 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10549 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11385 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11272 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11335 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11001 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11059 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10420 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10449 [5%height]

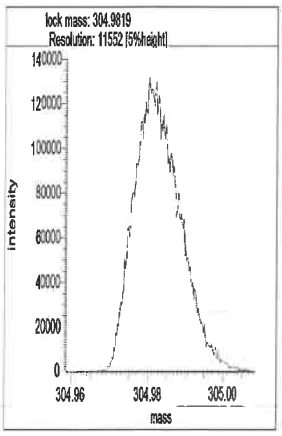

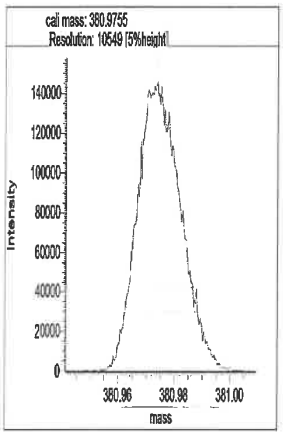

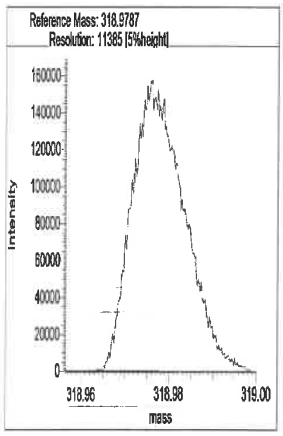

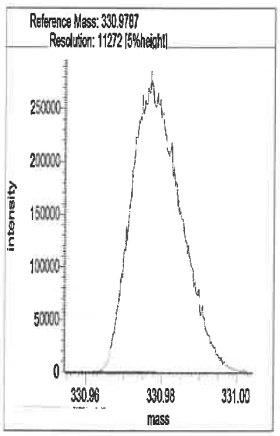

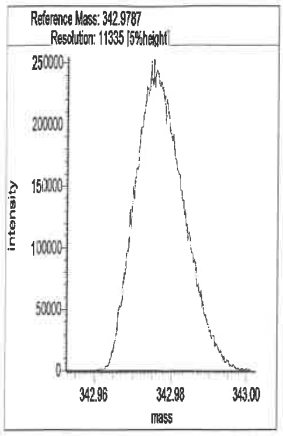

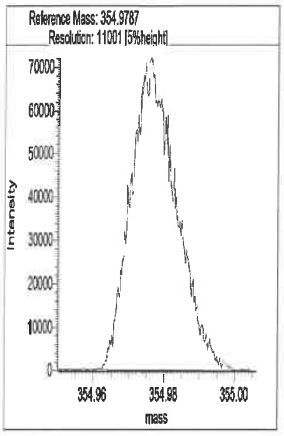

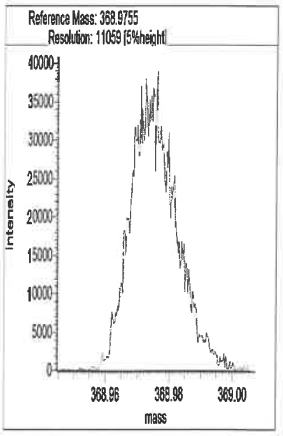

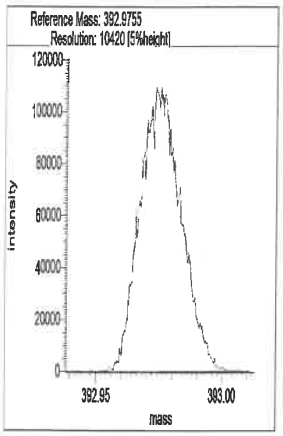

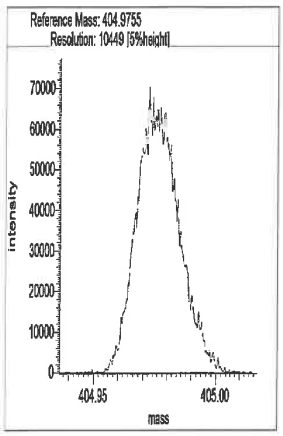

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11485 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10793 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11226 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11398 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10683 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10785 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10698 [5%height]

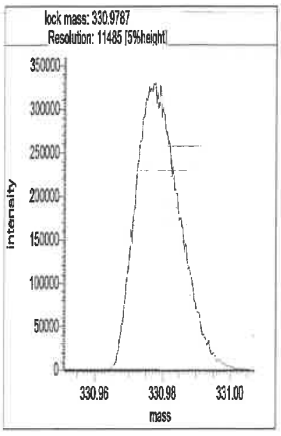

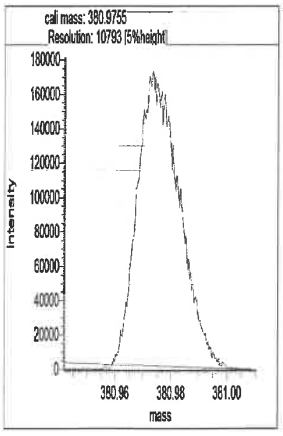

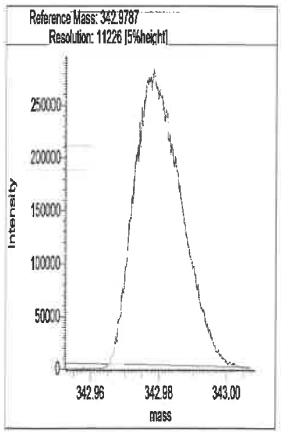

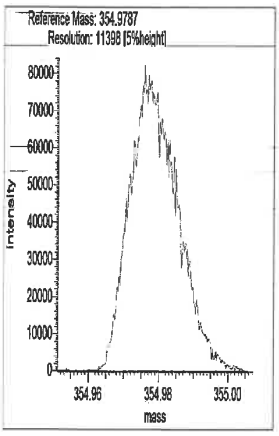

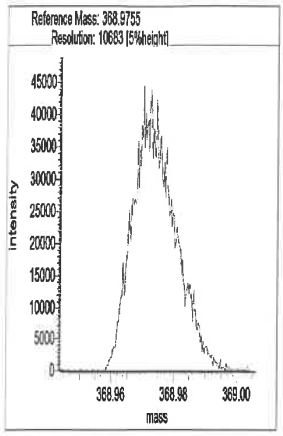

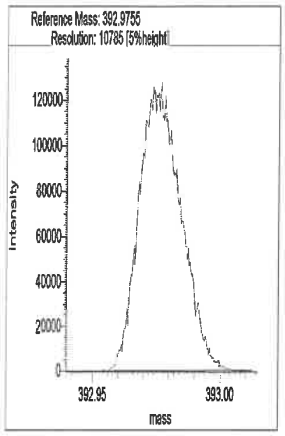

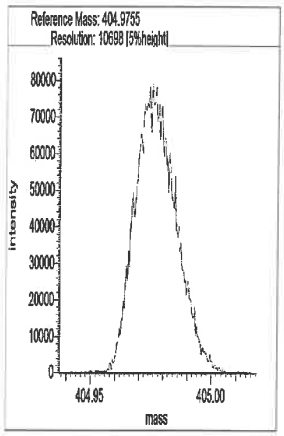

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11415 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10771 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11020 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11042 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12007 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10745 [5%height]

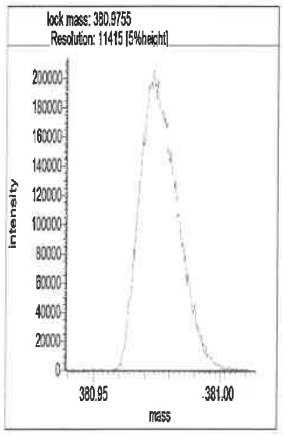

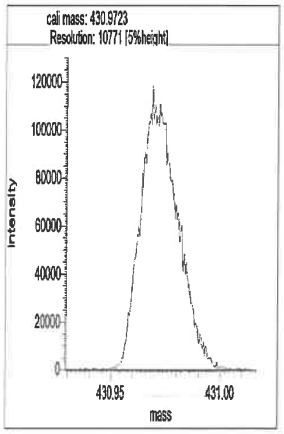

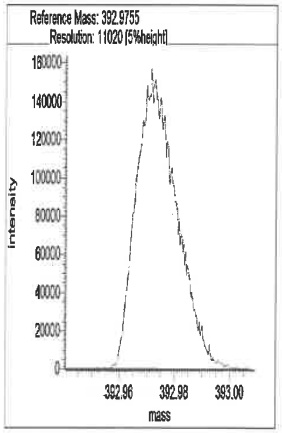

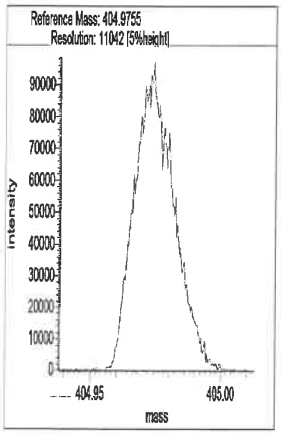

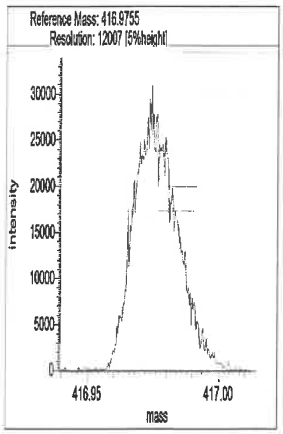

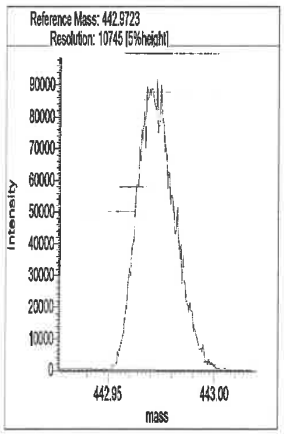

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11386 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10623 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11300 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10989 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11023 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10728 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10731 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10778 [5%height]

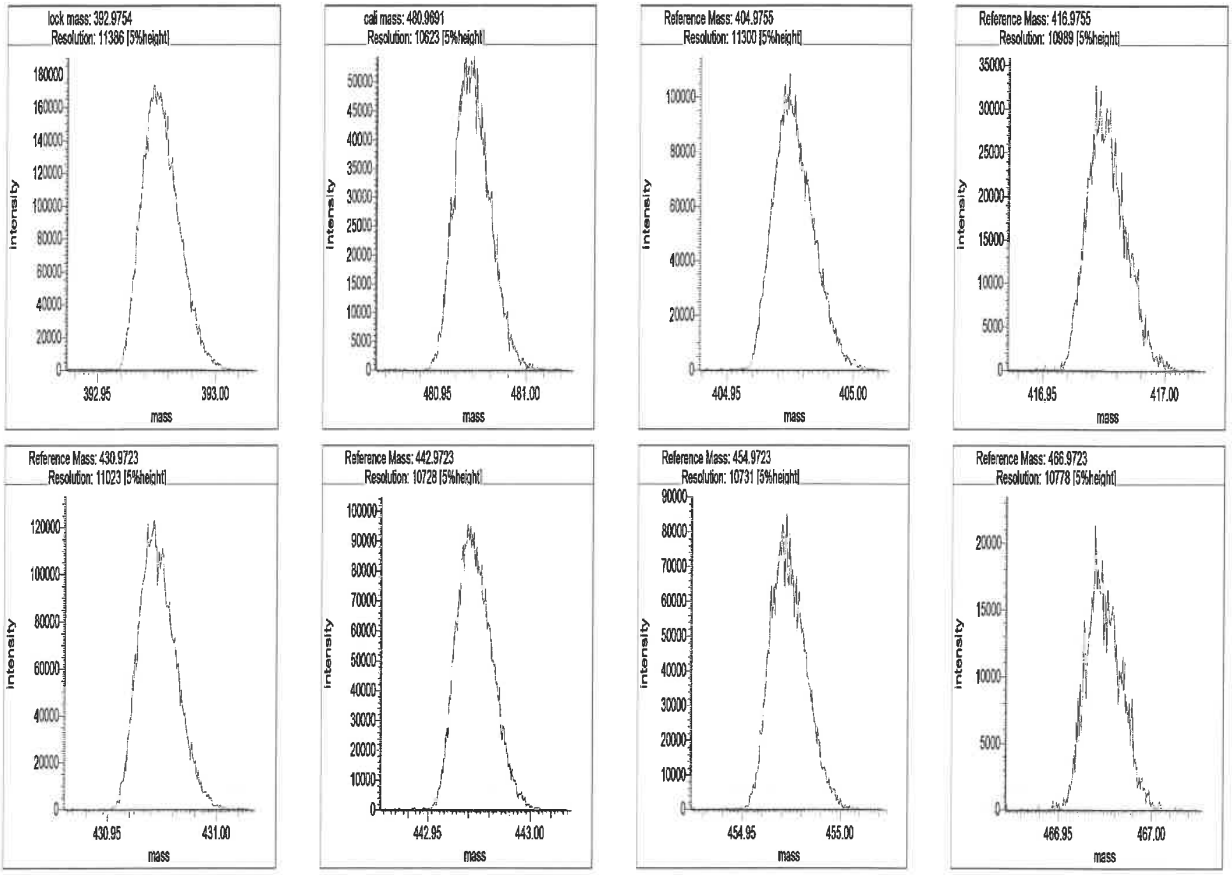

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11445 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11134 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11159 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10809 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11068 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10706 [5%height]

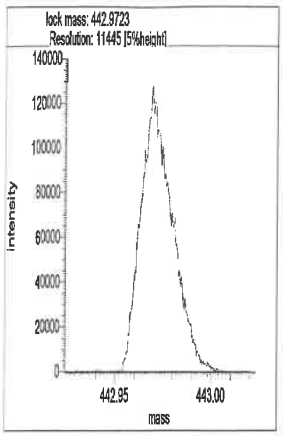
lock mass: 442.9723
Resolution: 11445 [5%height]
Intensity
mass

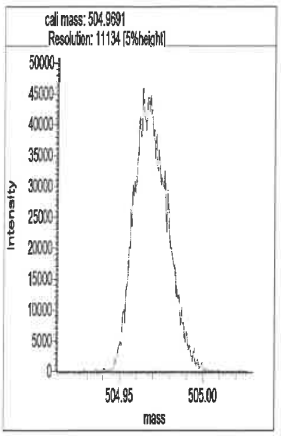
cali mass: 504.9691
Resolution: 11134 [5%height]
Intensity
mass

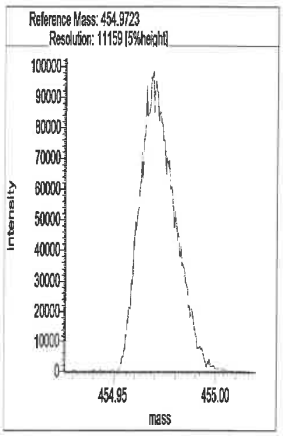
Reference Mass: 454.9723
Resolution: 11159 [5%height]
Intensity
mass

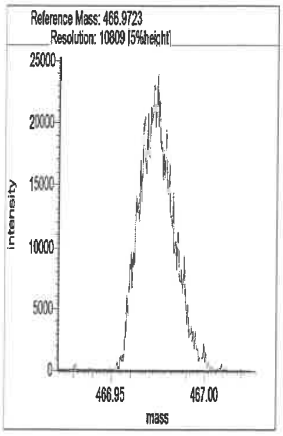
Reference Mass: 466.9723
Resolution: 10809 [5%height]
Intensity
mass

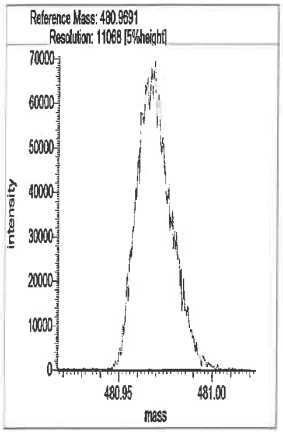
Reference Mass: 480.9691
Resolution: 11068 [5%height]
Intensity
mass

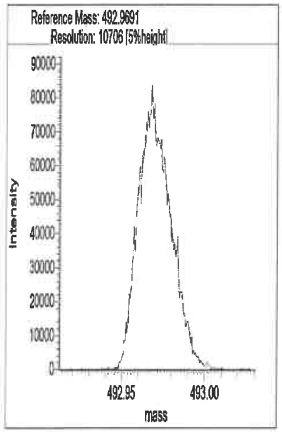
Reference Mass: 492.9691
Resolution: 10706 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 01:14
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10904 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10388 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10733 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10622 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10608 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10712 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10070 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9982 [5%height] ✓ DK 8/21/21
Ref. mass 404.9755 [m/z] Resolution: 10023 [5%height]

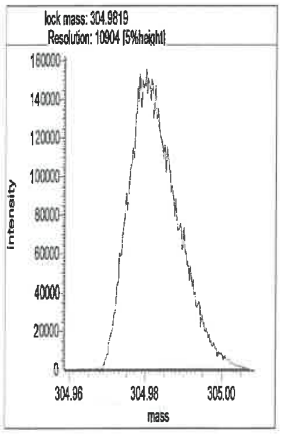

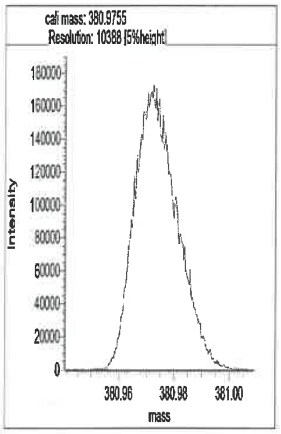

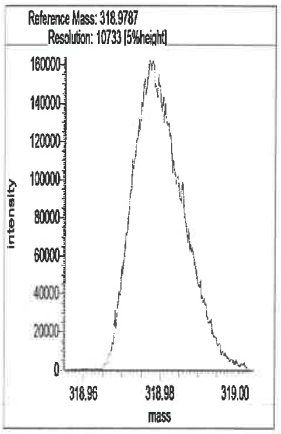

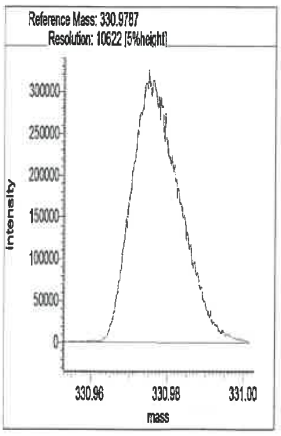

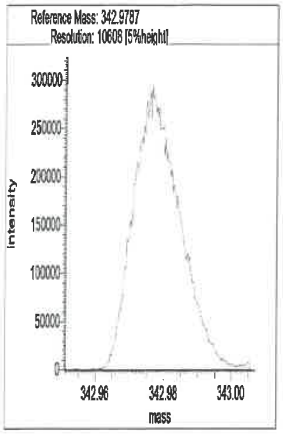

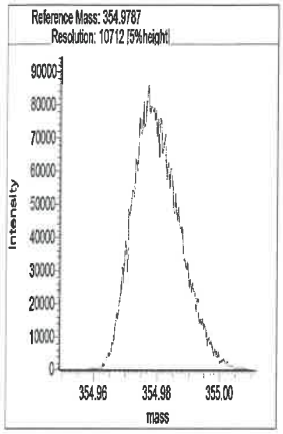

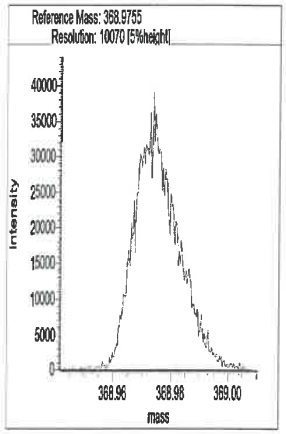

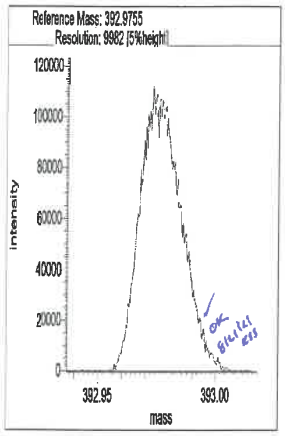

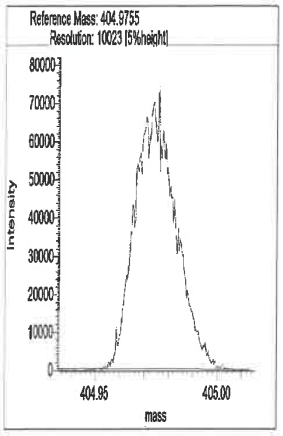

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10787 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10782 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11025 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11013 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10635 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10603 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10396 [5%height]

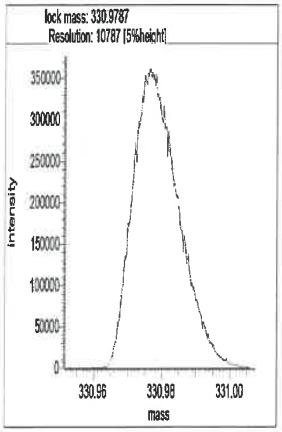

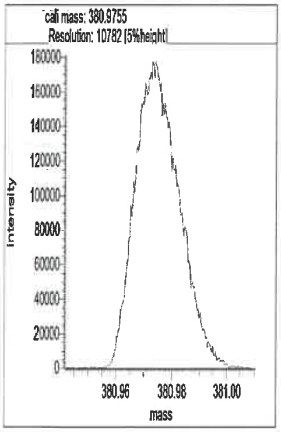

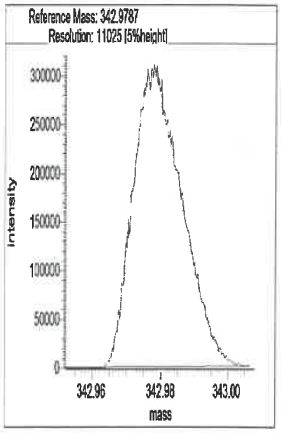

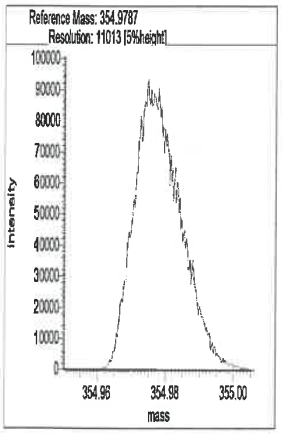

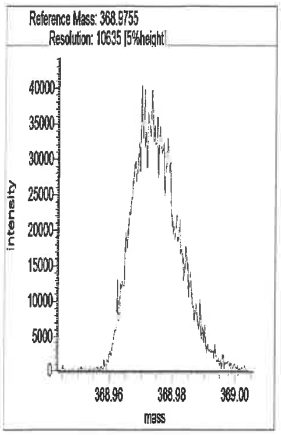

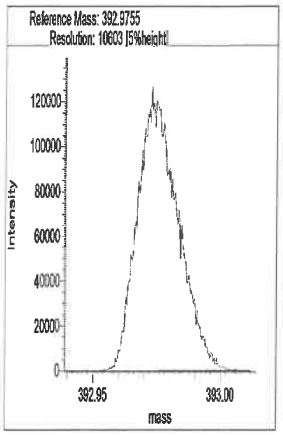

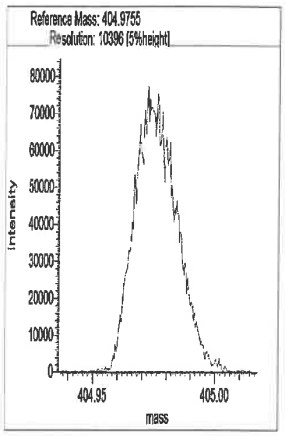

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11029 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10564 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10871 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10418 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11260 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10446 [5%height]

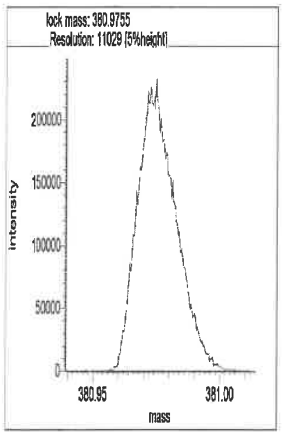

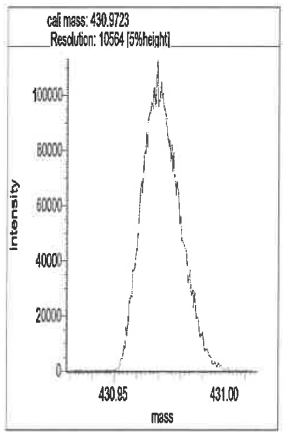

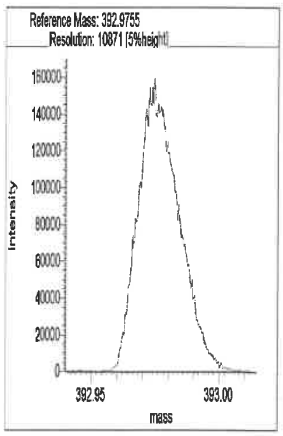

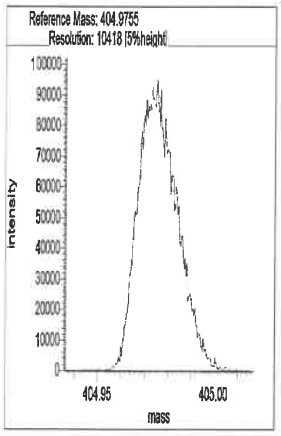

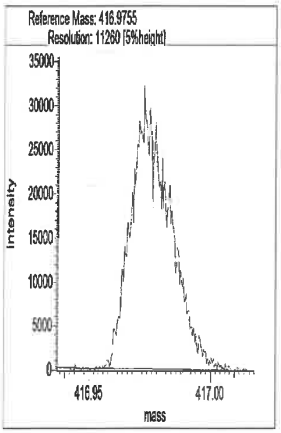

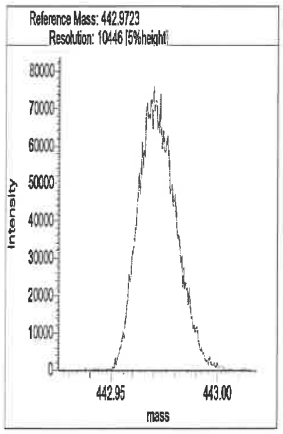

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10922 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10352 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10773 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12243 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10710 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11096 [5%height]

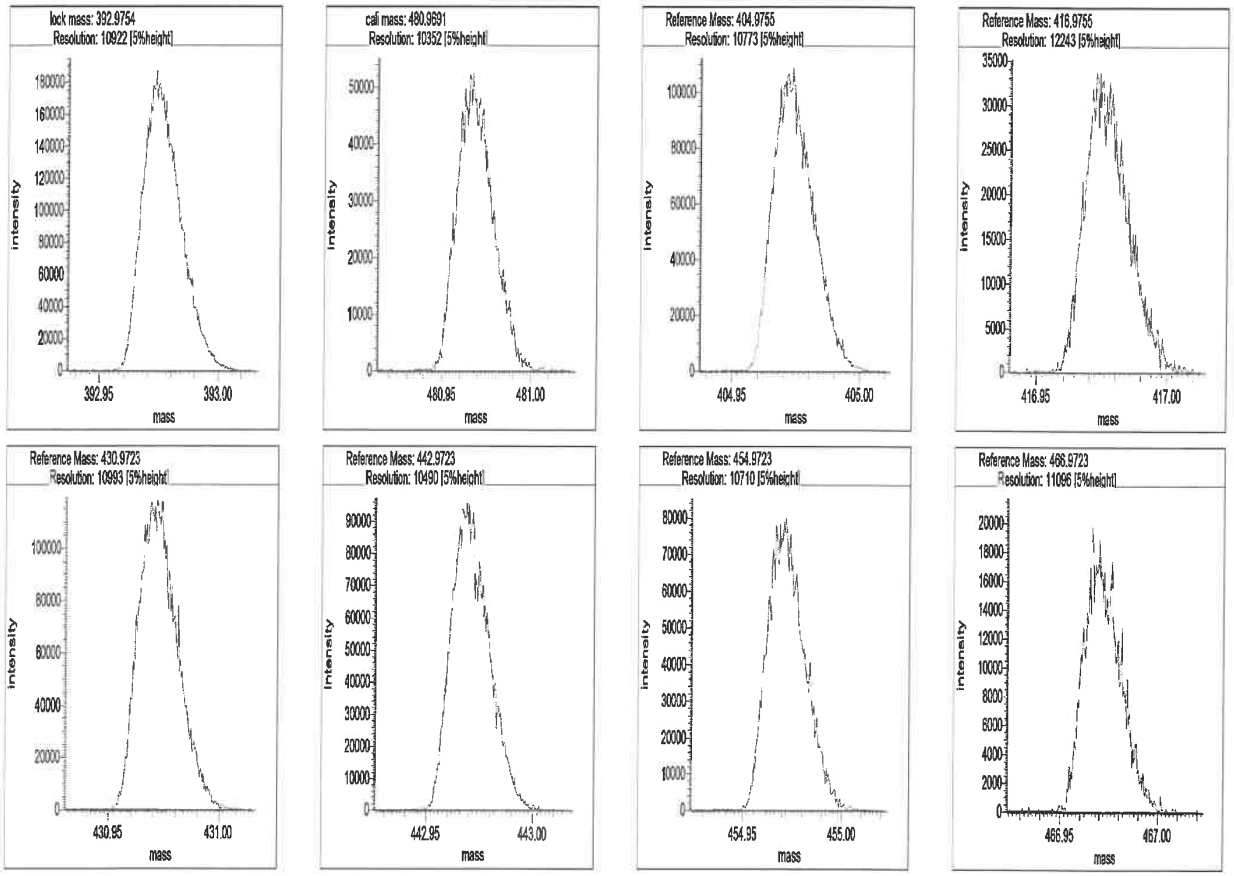

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11165 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10856 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11100 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10488 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11155 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10611 [5%height]

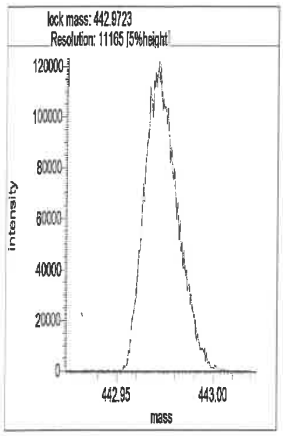
lock mass: 442.9723
Resolution: 11165 [5%height]
intensity
mass

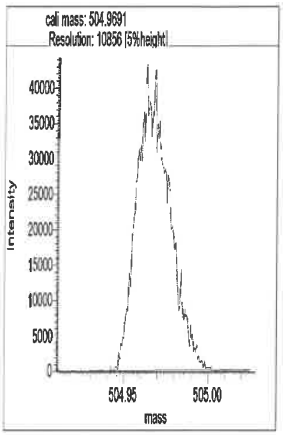
cali mass: 504.9691
Resolution: 10856 [5%height]
intensity
mass

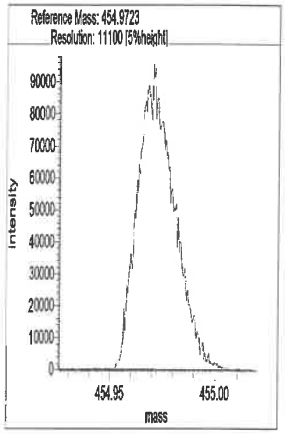
Reference Mass: 454.9723
Resolution: 11100 [5%height]
intensity
mass

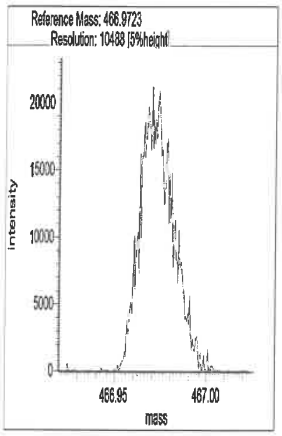
Reference Mass: 466.9723
Resolution: 10488 [5%height]
intensity
mass

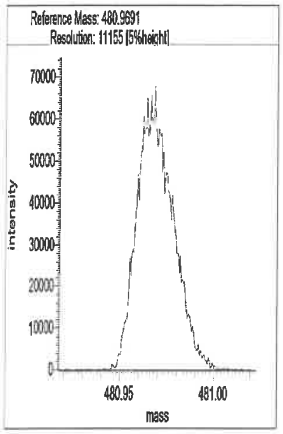
Reference Mass: 480.9691
Resolution: 11155 [5%height]
intensity
mass

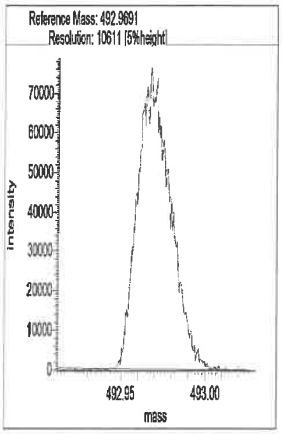
Reference Mass: 492.9691
Resolution: 10611 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 11:56
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10511 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10099 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 10342 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 10503 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10344 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 27776 [5%height] ? software glitch. [illegible]

Ref. mass 368.9755 [m/z] Resolution: 10394 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 9749 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9682 [5%height]

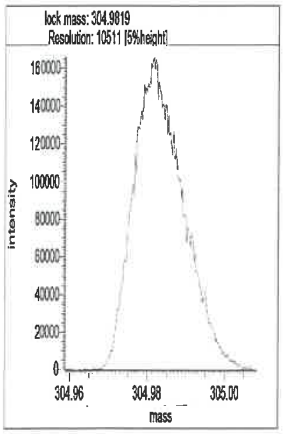

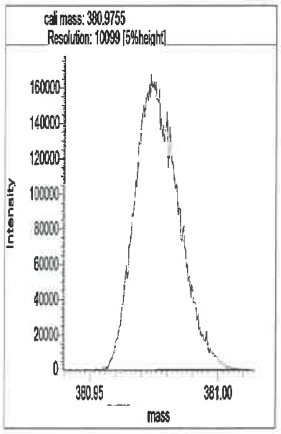

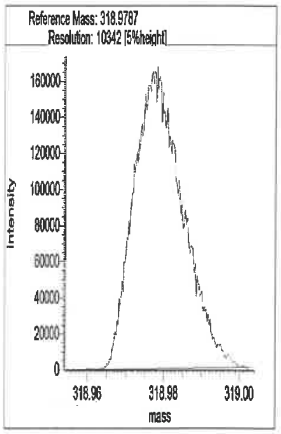

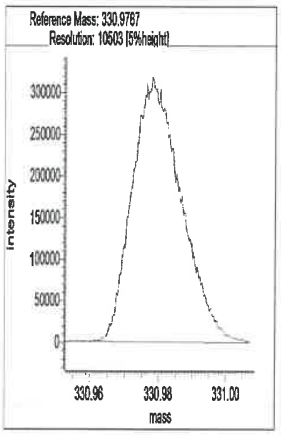

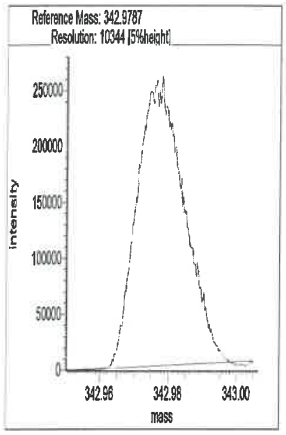

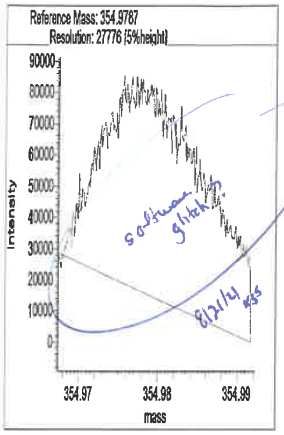

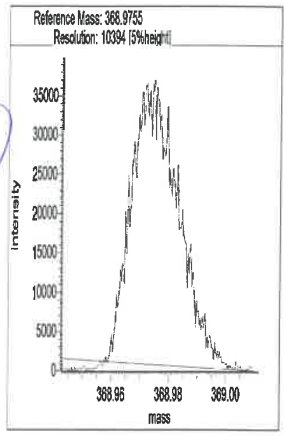

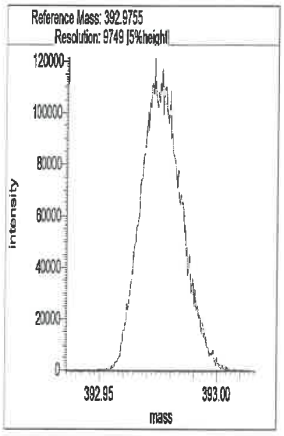

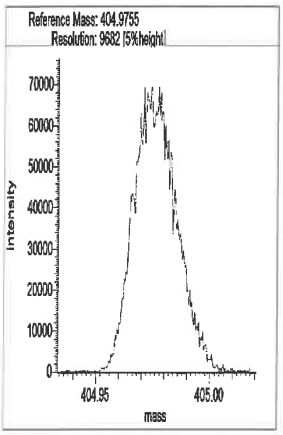

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10733 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10393 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10683 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10545 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10150 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10185 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10040 [5%height]

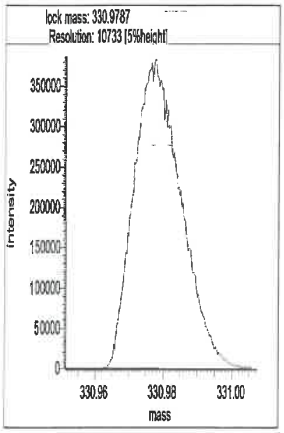

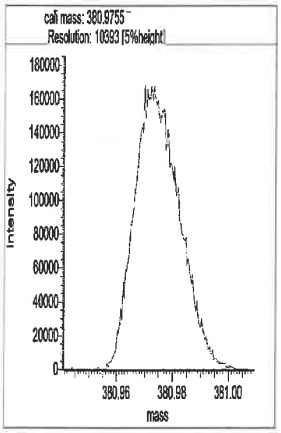

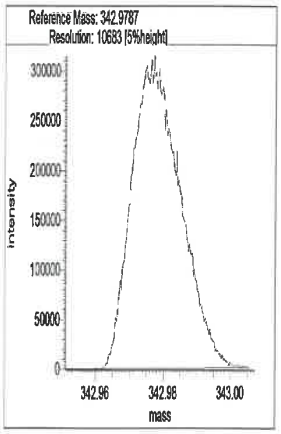

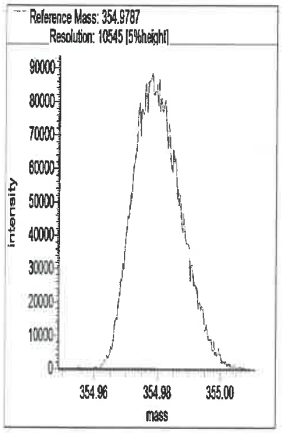

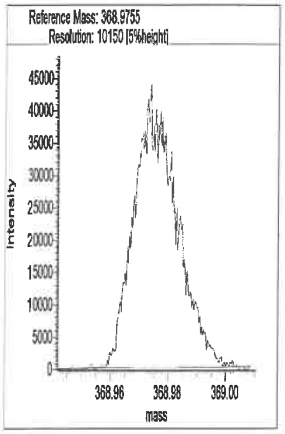

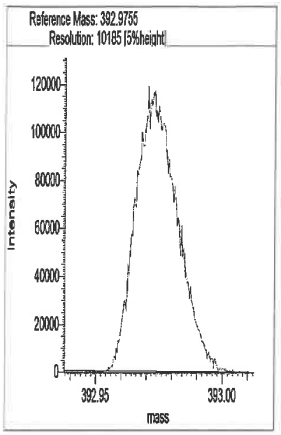

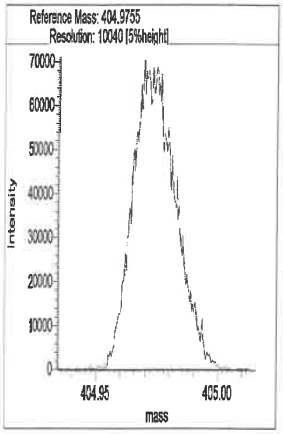

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10536 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10403 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10410 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10419 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10244 [5%height]

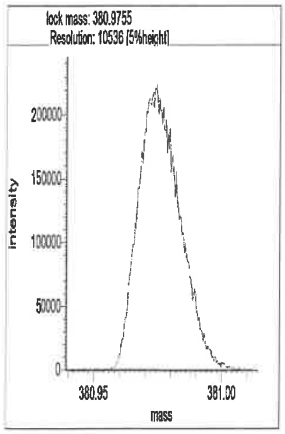

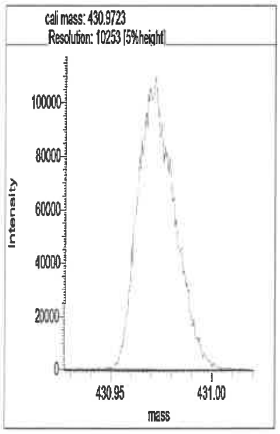

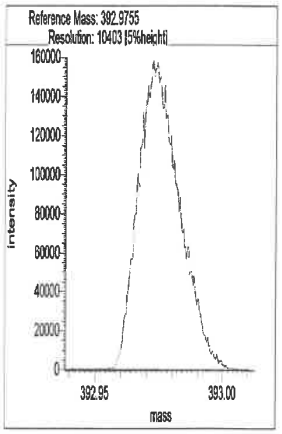

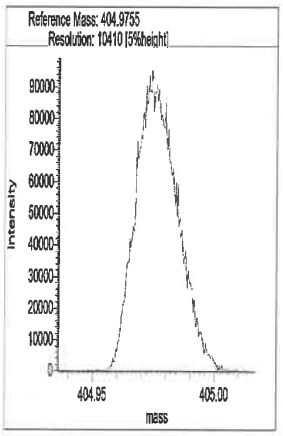

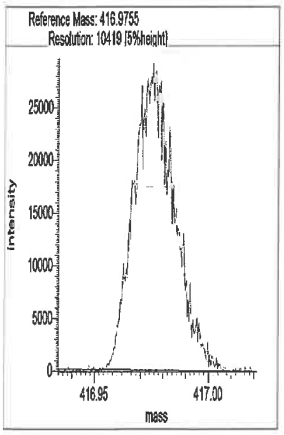

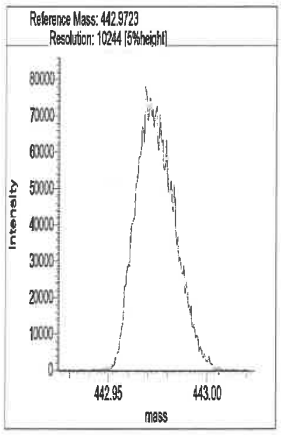

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10914 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 9523 [5%height] ✓ OK 8/21/21 KD

Ref. mass 404.9755 [m/z] Resolution: 10727 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10613 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10522 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10235 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10314 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10509 [5%height]

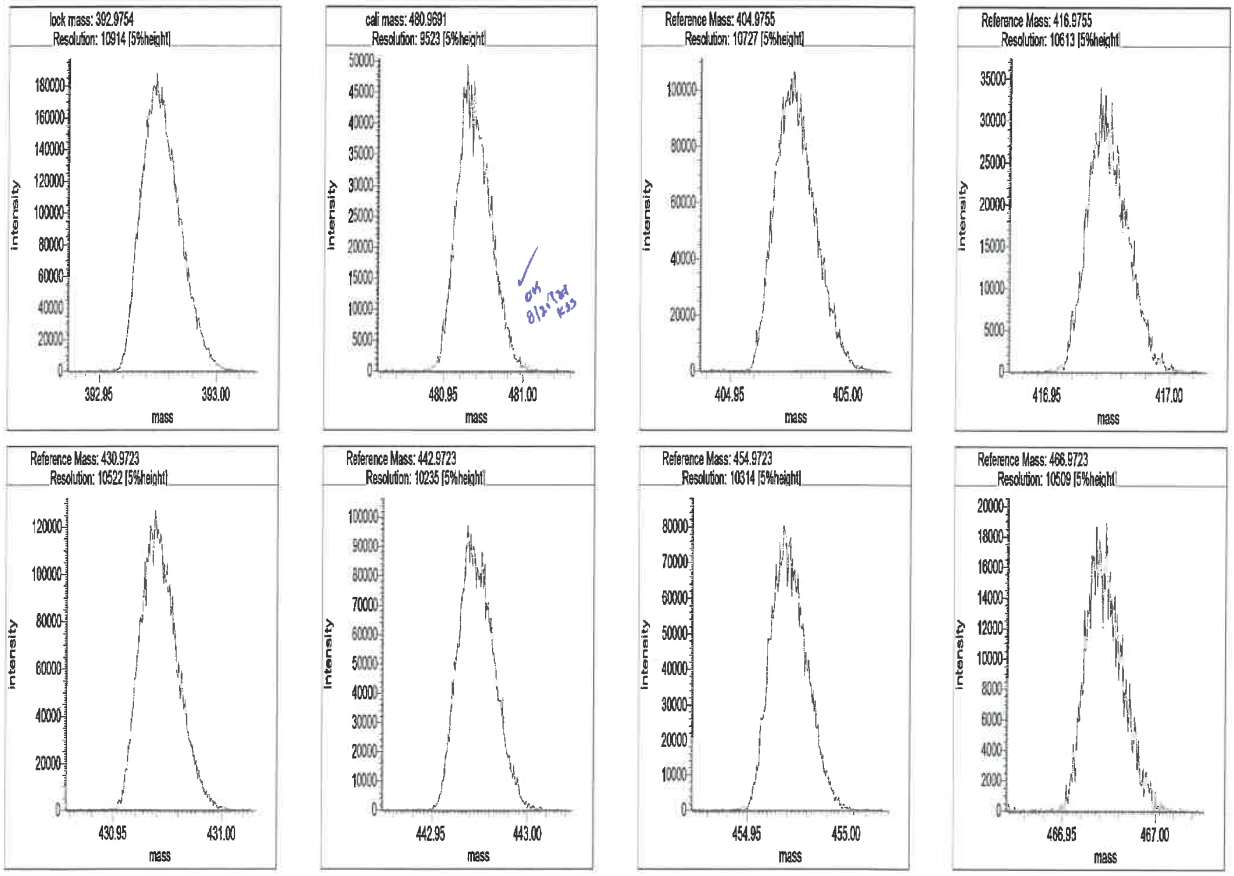

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10927 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10443 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10654 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11221 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10354 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10748 [5%height]

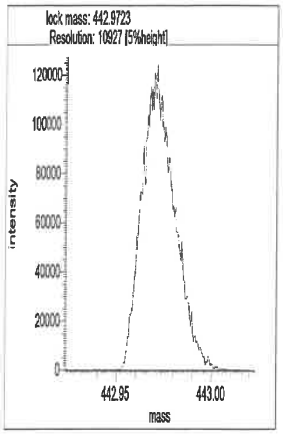
lock mass: 442.9723
Resolution: 10927 [5%height]
intensity
mass

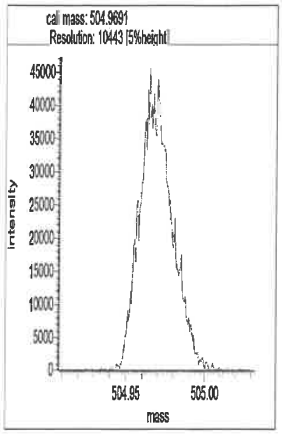
cali mass: 504.9691
Resolution: 10443 [5%height]
intensity
mass

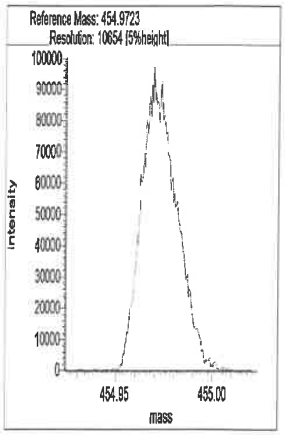
Reference Mass: 454.9723
Resolution: 10654 [5%height]
intensity
mass

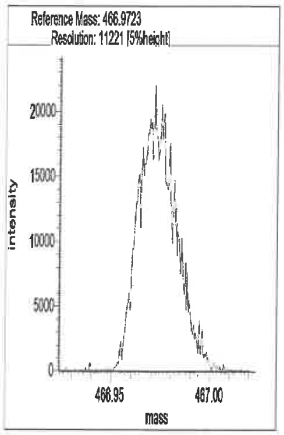
Reference Mass: 466.9723
Resolution: 11221 [5%height]
intensity
mass

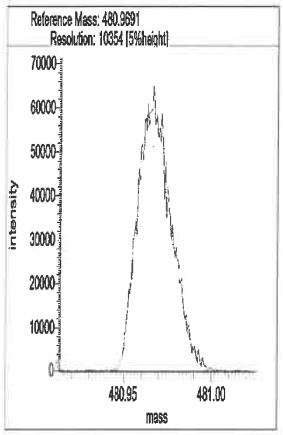
Reference Mass: 480.9691
Resolution: 10354 [5%height]
intensity
mass

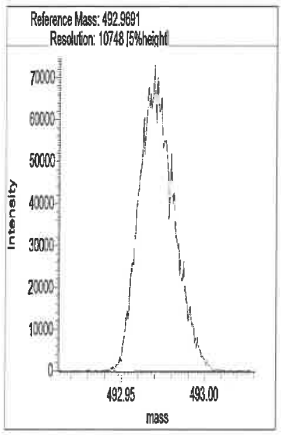
Reference Mass: 492.9691
Resolution: 10748 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 20-Aug-2021 01:34:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:09:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.395	870777	0.77	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.432	1227122	0.85	1.3459	104.7	104.7	0.2055	0.2055	105	
2,3,7,8-TCDF	20.458	128655	0.70	1.0802	9.706	9.706	0.0217	0.0217	97.06	
A Non-2,3,7,8-sub-TCDF	19.885	2870	0.77	1.0802	0.2742	0.2165	0.0217	0.0967	0.00	RQ
S Total TCDF					9.980	9.922	0.0217	0.0217		RQ
D 13C-2,3,7,8-TCDD	21.782	812184	0.79	0.9317	100.1	100.1	0.1327	0.1327	100	
2,3,7,8-TCDD	21.799	83283	0.83	1.0753	9.536	9.536	0.0291	0.0291	95.36	
$ 37Cl4-2,3,7,8-TCDD	21.799	86367		1.0083	9.837	9.837	0.008068	0.008068	98.37	
A Non-2,3,7,8-sub-TCDD	20.727	1705	0.77	1.0753	0.2671	0.1952	0.0291	0.0876	0.00	RQ
S Total TCDD					9.803	9.731	0.0291	0.0291		RQ
D 13C-1,2,3,7,8-PeCDF	27.251	1007111	1.60	1.1405	101.4	101.4	0.2068	0.2068	101	
1,2,3,7,8-PeCDF	27.276	534435	1.55	1.0543	50.3	50.3	0.1177	0.1177	101	
D 13C-2,3,4,7,8-PeCDF	28.757	1014118	1.65	1.1253	103.5	103.5	0.2096	0.2096	103	
2,3,4,7,8-PeCDF	28.791	488593	1.55	1.0079	47.8	47.8	0.1348	0.1348	95.61	
A F1 PeCDFs	24.666						0.003311	0.003311		
A Non-2,3,7,8-sub-PeCDF	28.176	4461	1.55	1.0311	0.4954	0.4281	0.1258	0.4281	0.00	RQ
S Total PeCDF					98.6	98.6	0.1263	0.1263		RQ
D 13C-1,2,3,7,8-PeCDD	29.574	609217	1.61	0.7165	97.6	97.6	0.0965	0.0965	97.65	
1,2,3,7,8-PeCDD	29.616	322963	1.59	1.0465	50.7	50.7	0.3115	0.3115	101	
A Non-2,3,7,8-sub-PeCDD	28.536						0.3115	0.3115		
S Total PeCDD					50.7	50.7	0.3115	0.3115		
D 13C-1,2,3,4,7,8-HxCDF	34.906	957306	0.54	0.9648	109.9	109.9	0.3367	0.3367	110	
1,2,3,4,7,8-HxCDF	34.922	554867	1.23	1.1474	50.5	50.5	0.2017	0.2017	101	
D 13C-1,2,3,6,7,8-HxCDF	35.066	997413	0.54	1.0708	103.2	103.2	0.3034	0.3034	103	
1,2,3,6,7,8-HxCDF	35.082	619855	1.26	1.2178	51.0	51.0	0.1914	0.1914	102	
D 13C-2,3,4,6,7,8-HxCDF	35.890	910006	0.53	1.0413	96.8	96.8	0.3120	0.3120	96.79	
2,3,4,6,7,8-HxCDF	35.907	591761	1.24	1.2145	53.5	53.5	0.1763	0.1763	107	
D 13C-1,2,3,7,8,9-HxCDF	36.782	1007667	0.55	0.9731	114.7	114.7	0.3339	0.3339	115	
1,2,3,7,8,9-HxCDF	36.791	654973	1.28	1.2401	52.4	52.4	0.1413	0.1413	105	
A Non-2,3,7,8-sub-HxCDF	35.073						0.1748	0.1748		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					207.5	207.5	0.1777	0.1777		
* 13C-1,2,3,7,8,9-HxCDD	36.581	902938	1.25	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.092	723760	1.28	0.7587	105.7	105.7	0.2345	0.2345	106	
1,2,3,4,7,8-HxCDD	36.109	345231	1.23	1.0608	45.0	45.0	0.0877	0.0877	89.93	
D 13C-1,2,3,6,7,8-HxCDD	36.210	782596	1.27	0.8593	100.9	100.9	0.2070	0.2070	101	
1,2,3,6,7,8-HxCDD	36.227	386782	1.25	0.9933	49.8	49.8	0.0944	0.0944	99.51	
1,2,3,7,8,9-HxCDD	36.597	429511	1.25	1.1094	51.4	51.4	0.0842	0.0842	103	
A Non-2,3,7,8-sub-HxCDD	35.427						0.0886	0.0886		
S Total HxCDD					146.1	146.1	0.0888	0.0888		
D 13C-1,2,3,4,6,7,8-HpCDF	38.596	821510	0.47	0.7359	123.6	123.6	0.3385	0.3385	124	
1,2,3,4,6,7,8-HpCDF	38.613	569968	1.06	1.4421	48.1	48.1	0.1682	0.1682	96.22	
D 13C-1,2,3,4,7,8,9-HpCDF	39.850	706137	0.47	0.6854	114.1	114.1	0.3635	0.3635	114	
1,2,3,4,7,8,9-HpCDF	39.859	452390	1.04	1.3092	48.9	48.9	0.1894	0.1894	97.87	
A Non-2,3,7,8-sub-HpCDF	39.253						0.1782	0.1782		
S Total HpCDF					97.0	97.0	0.1788	0.1788		
D 13C-1,2,3,4,6,7,8-HpCDD	39.547	622968	1.07	0.6745	102.3	102.3	0.3007	0.3007	102	
1,2,3,4,6,7,8-HpCDD	39.556	322055	1.03	1.0503	49.2	49.2	0.1146	0.1146	98.44	
A Non-2,3,7,8-sub-HpCDD	39.253	3653	0.97	1.0503	0.5583	0.5583	0.1146	0.5583	0.00	
S Total HpCDD					49.8	49.8	0.1146	0.1146		
D 13C-OCDD	42.036	1182987	0.89	0.5446	240.6	240.6	0.2013	0.2013	120	
OCDF	42.137	870176	0.93	1.3168	111.7	111.7	0.1096	0.1096	112	
OCDD	42.053	623449	0.91	1.0620	99.3	99.3	0.0862	0.0862	99.25	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 20-Aug-2021 01:34:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:09:19

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.395	21.395	0		378196	54432	46	115	1183		a
333.9338	21.395	21.395	0		492581	68496	15	37	4566	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.432	20.432	0	0.955	563293	79642	82	205	971		
317.9389	20.432	20.432	0	0.955	663829	90836	54	135	1682	0.85(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.458	20.458	0	1.001	52907	7930	3	7	2643		
305.8987	20.449	20.458	-1	1.001	75748	10580	13	32	814	0.70(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.254	19.885	-38	0.942	158	58	3	7	19		
305.8987	19.202	19.885	-41	0.940	283	105	13	32	8	0.56(0.65-0.89)	
	Empc Correction				205	75	13	32	6		
303.9016	19.727	19.885	-9	0.965	558	160	3	7	53		
305.8987	19.727	19.885	-9	0.965	1084	193	13	32	15	0.51(0.65-0.89)	
	Empc Correction				724	207	13	32	16		
303.9016	20.733	19.885	51	1.015	533	92	3	7	31		
305.8987	20.741	19.885	51	1.015	1018	140	13	32	11	0.52(0.65-0.89)	
	Empc Correction				692	119	13	32	9		
13C-2,3,7,8-TCDD											
331.9368	21.782	21.782	0	1.018	359415	45756	46	115	995		
333.9338	21.774	21.782	-1	1.018	452769	56603	15	37	3774	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.799	21.799	0	1.001	37679	5159	11	27	469		
321.8936	21.817	21.799	1	1.002	45604	5681	2	5	2841	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.799	21.799	0	1.019	86367	10928	4	10	2732		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	19.727	20.727	-60	0.906	309	131	11	27	12		
	Empc Correction				36	20	11	27	2		
321.8936	19.753	20.727	-58	0.907	48	26	2	5	13	6.44(0.65-0.89)	
319.8965	20.380	20.727	-21	0.936	408	89	11	27	8		
	Empc Correction				53	28	11	27	3		
321.8936	20.363	20.727	-22	0.935	70	37	2	5	19	5.83(0.65-0.89)	
319.8965	22.014	20.727	77	1.011	354	122	11	27	11		
321.8936	22.092	20.727	82	1.014	411	123	2	5	62	0.86(0.65-0.89)	
319.8965	22.118	20.727	83	1.015	322	96	11	27	9		
321.8936	22.092	20.727	82	1.014	411	123	2	5	62	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.251	27.251	0	1.274	619620	94605	72	180	1314		
353.8970	27.259	27.251	1	1.274	387491	58543	44	110	1331	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.276	27.276	0	1.001	325227	47467	43	107	1104		
341.8567	27.276	27.276	0	1.001	209208	30740	33	82	932	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.757	28.757	0	1.344	630965	86581	72	180	1203		
353.8970	28.766	28.757	1	1.344	383153	53222	44	110	1210	1.65(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.791	28.791	0	1.001	296979	39367	43	107	916		
341.8567	28.791	28.791	0	1.001	191614	26294	33	82	797	1.55(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.666						1	2			
341.8567	24.666						1	2			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.882	28.176	-18	1.023	2712	384	43	107	9		
341.8567	27.857	28.176	-19	1.022	2450	331	33	82	10	1.11(1.32-1.78)	
	Empc Correction				1749	247	33	82	7		
13C-1,2,3,7,8-PeCDD											
367.8949	29.574	29.574	0	1.382	375736	50925	22	55	2315		
369.8919	29.574	29.574	0	1.382	233481	32502	12	30	2709	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616	29.616	0	1.001	198400	24604	104	260	237		
357.8516	29.616	29.616	0	1.001	124563	16634	5	12	3327	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.536						104	260			
357.8516	28.536						5	12			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.906	34.906	0	0.954	335150	62206	104	260	598		
385.8610	34.906	34.906	0	0.954	622156	117085	157	392	746	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.922	34.922	0	1.000	306264	56530	98	245	577		
375.8178	34.931	34.922	1	1.001	248603	46439	68	170	683	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.066	35.066	0	0.959	349001	62636	104	260	602		
385.8610	35.066	35.066	0	0.959	648412	115434	157	392	735	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.082	35.082	0	1.000	345877	63685	98	245	650		
375.8178	35.082	35.082	0	1.000	273978	49689	68	170	731	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.890	35.890	0	0.981	315886	69314	104	260	666		
385.8610	35.890	35.890	0	0.981	594120	124533	157	392	793	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.907	35.907	0	1.000	327418	70468	98	245	719		
375.8178	35.907	35.907	0	1.000	264343	55699	68	170	819	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.782	36.782	0	1.006	355986	85136	104	260	819		
385.8610	36.782	36.782	0	1.006	651681	151674	157	392	966	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791	36.791	0	1.000	367965	84048	98	245	858		
375.8178	36.791	36.791	0	1.000	287008	65537	68	170	964	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						98	245			
375.8178	35.073						68	170			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.581	36.581	0		500778	110918	96	240	1155		
403.8529	36.589	36.581	1		402160	89771	47	117	1910	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.092	36.092	0	0.987	406606	94681	96	240	986		
403.8529	36.092	36.092	0	0.987	317154	74046	47	117	1575	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.109	36.109	0	1.000	190473	44726	32	80	1398		
391.8127	36.117	36.109	1	1.001	154758	35613	31	77	1149	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.210	36.210	0	0.990	437873	93109	96	240	970		
403.8529	36.210	36.210	0	0.990	344723	74267	47	117	1580	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.227	36.227	0	1.000	214850	43622	32	80	1363		
391.8127	36.227	36.227	0	1.000	171932	35324	31	77	1139	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.597	36.597	0	1.014	238372	51108	32	80	1597		
391.8127	36.597	36.597	0	1.014	191139	41299	31	77	1332	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.427						32	80			
391.8127	35.427						31	77			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.596	38.596	0	1.055	262759	61898	82	205	755		
419.8220	38.596	38.596	0	1.055	558751	138925	118	295	1177	0.47(0.37-0.51)	

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											
407.7817	38.613	38.613	0	1.000	292766	74037	102	255	726		
409.7788	38.605	38.613	-1	1.000	277202	69784	93	232	750	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.850	39.850	0	1.089	225724	63173	82	205	770		
419.8220	39.850	39.850	0	1.089	480413	133267	118	295	1129	0.47(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.859	39.859	0	1.000	230887	65916	102	255	646		
409.7788	39.859	39.859	0	1.000	221503	62046	93	232	667	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						102	255			
409.7788	39.253						93	232			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.547	39.547	0	1.081	322605	89433	92	230	972		
437.8140	39.547	39.547	0	1.081	300363	82619	71	177	1164	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.556	39.556	0	1.000	163232	44143	41	102	1077		
425.7737	39.547	39.556	-1	1.000	158823	43134	42	105	1027	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.916	39.253	-20	0.984	1800	475	41	102	12		
425.7737	38.916	39.253	-20	0.984	1853	453	42	105	11	0.97(0.88-1.20)	
13C-OCDD											
469.7780	42.036	42.036	0	1.149	557785	137107	35	87	3917		
471.7750	42.036	42.036	0	1.149	625202	146861	53	132	2771	0.89(0.76-1.02)	
OCDF											
441.7428	42.137	42.137	0	1.002	419758	104739	35	87	2993		
443.7399	42.137	42.137	0	1.002	450418	110462	47	117	2350	0.93(0.76-1.02)	
OCDD											
457.7377	42.053	42.053	0	1.000	297170	72135	25	62	2885		
459.7348	42.053	42.053	0	1.000	326279	80759	27	67	2991	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1227122	170478

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1227122	170478

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.254	158	58	283	105	0.0333	0.56	RnQ
19.254	158	58	205	75	0.0274		Empc Correction
19.727	558	160	1084	193	0.1239	0.51	RQ
19.727	558	160	724	207	0.0967		Empc Correction
20.733	533	92	1018	140	0.1170	0.52	RQ
20.733	533	92	692	119	0.0924		Empc Correction
Signal Totals:							
	1249	310	1621	401			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3634	748				0.52	RQ
	2870	711					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2742 = (3634 * 100.000) / (1227122 * 1.080)
Empc Amount: 0.2165 = (2870 * 100.000) / (1227122 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDD, RT: 20.727

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	812184	102359

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	812184	102359

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.727	309	131	48	26	0.0409	6.44	RQ
19.727	36	20	48	26	0.009618		Empc Correction
20.380	408	89	70	37	0.0547	5.83	RnQ
20.380	53	28	70	37	0.0141		Empc Correction
22.014	354	122	411	123	0.0876	0.86	
22.118	322	96	411	123	0.0839	0.78	n
Signal Totals:							
	765	266	940	309			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2333	747				1.48	RQ
	1705	575					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2671 = (2333 * 100.000) / (812184 * 1.075)
Empc Amount: 0.1952 = (1705 * 100.000) / (812184 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1007111	153148
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1014118	139803

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1010614	146475

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.882	2712	384	2450	331	0.4954	1.11	RnQ
27.882	2712	384	1749	247	0.4281		Empc Correction
Signal Totals:							
	2712	384	1749	247			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5162	715				1.11	RQ
	4461	631					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4954 = (5162 * 100.000) / (1010614 * 1.031)
Empc Amount: 0.4281 = (4461 * 100.000) / (1010614 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.253

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	622968	172052

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	622968	172052

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.916	1800	475	1853	453	0.5583	0.97	
Signal Totals:	1800	475	1853	453			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3653	928				0.97	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5583 = (3653 * 100.000) / (622968 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d				
Injection Date:	20-Aug-2021 01:34:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.40

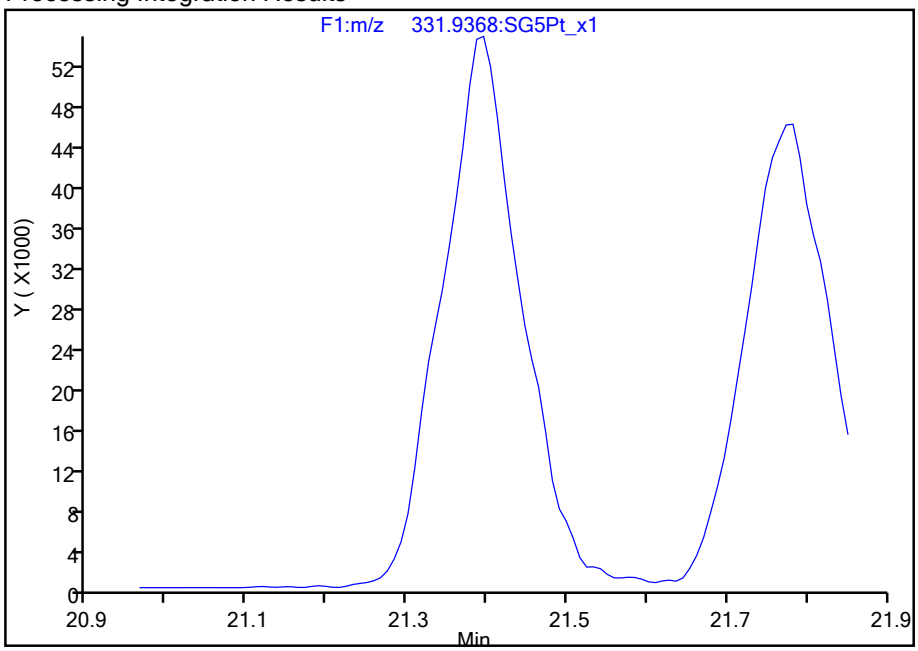

Manual Integration Results

RT: 21.40
Area: 378196
Amount: 100.0000
Amount Units: pg/ul

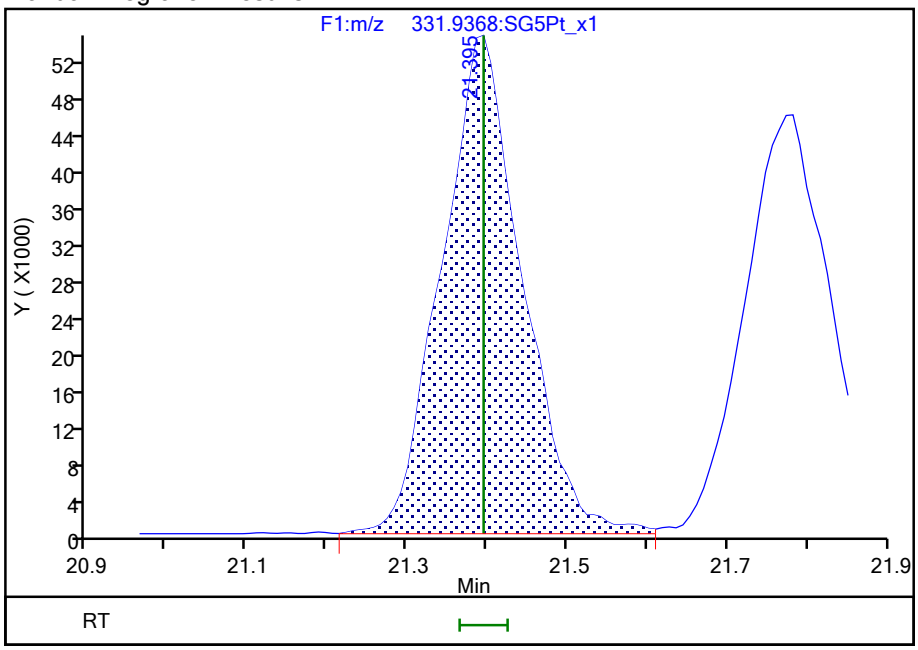

Reviewer: arghestanis, 20-Aug-2021 09:08:31
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

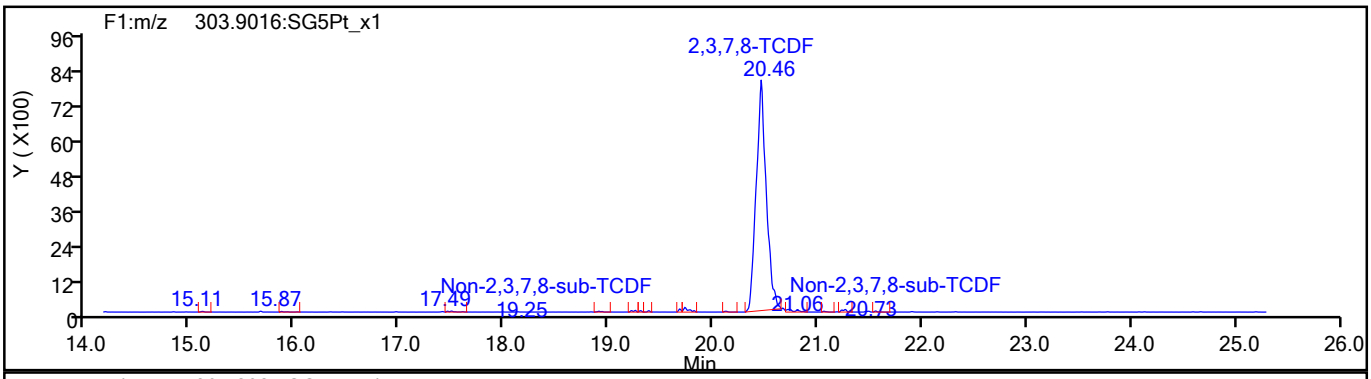

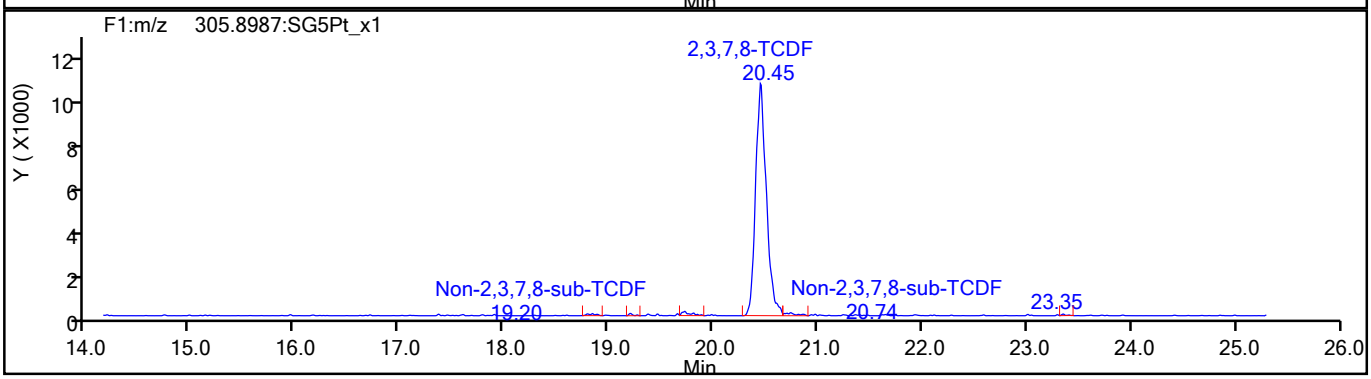

TCDF Standards

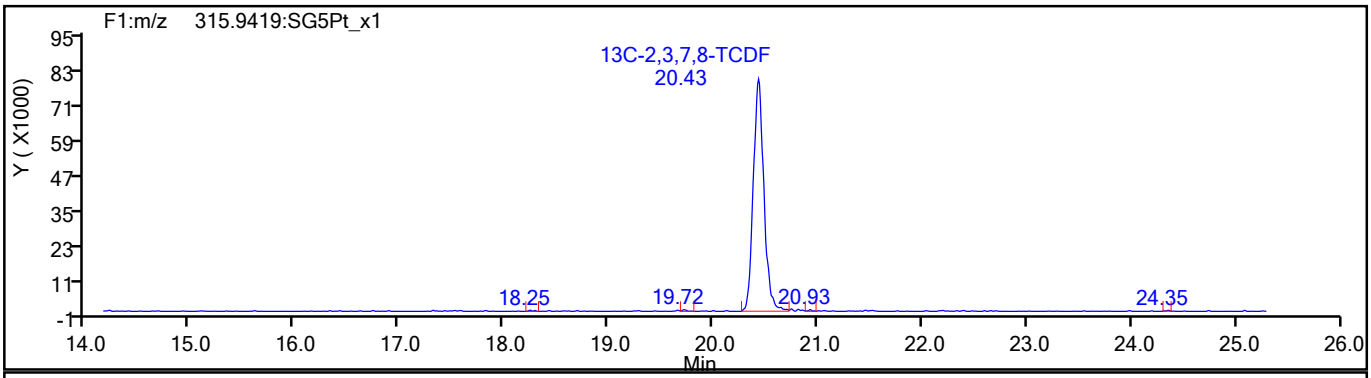

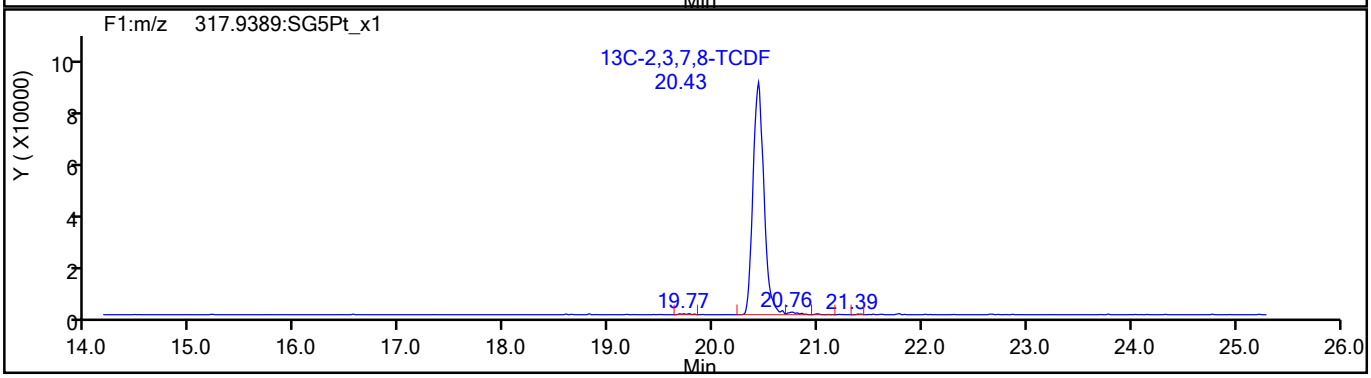

777024

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

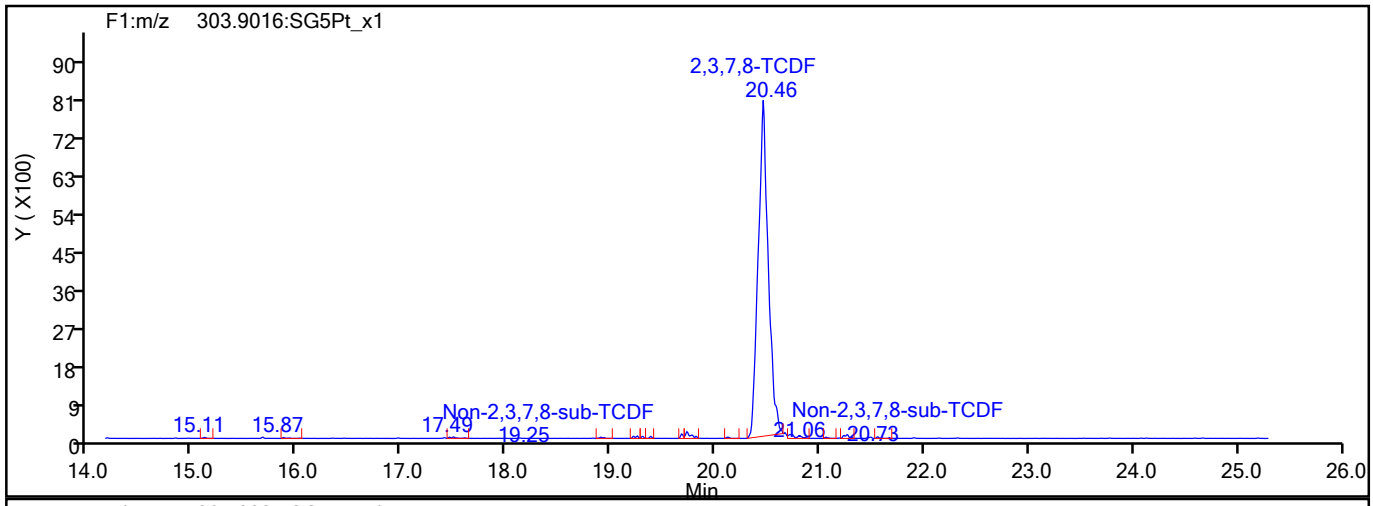

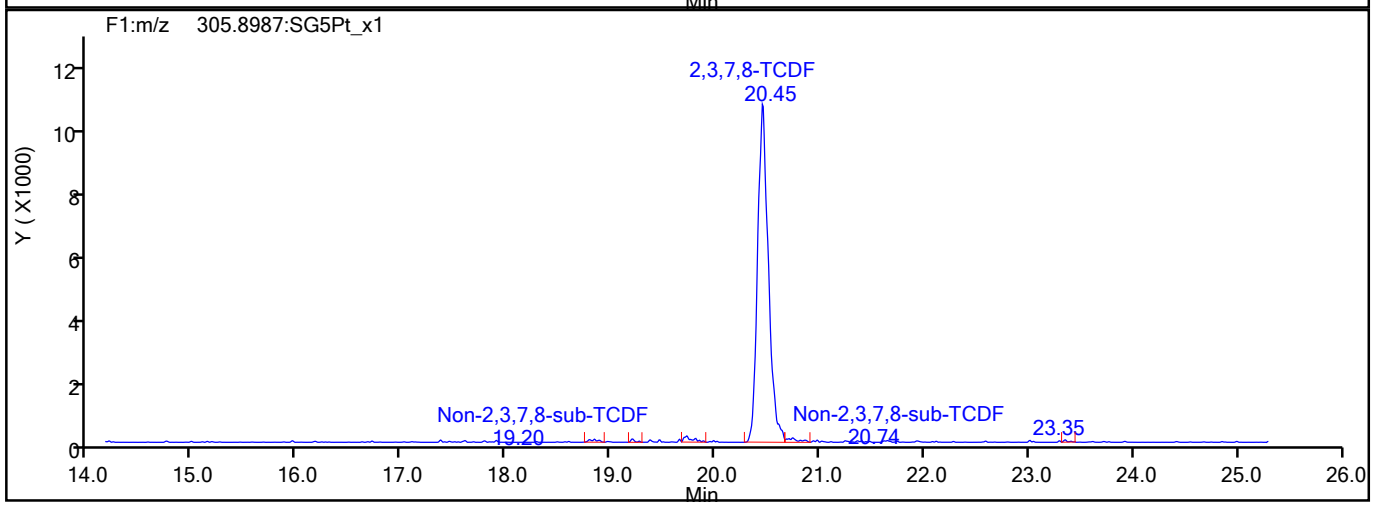

TCDF Interference Mass

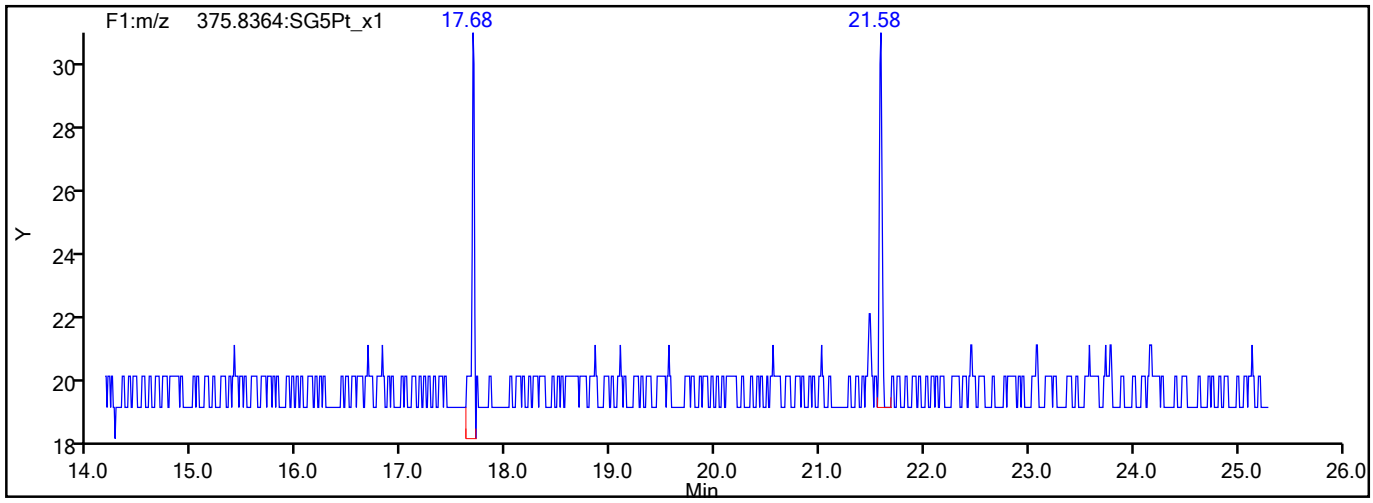

777025

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

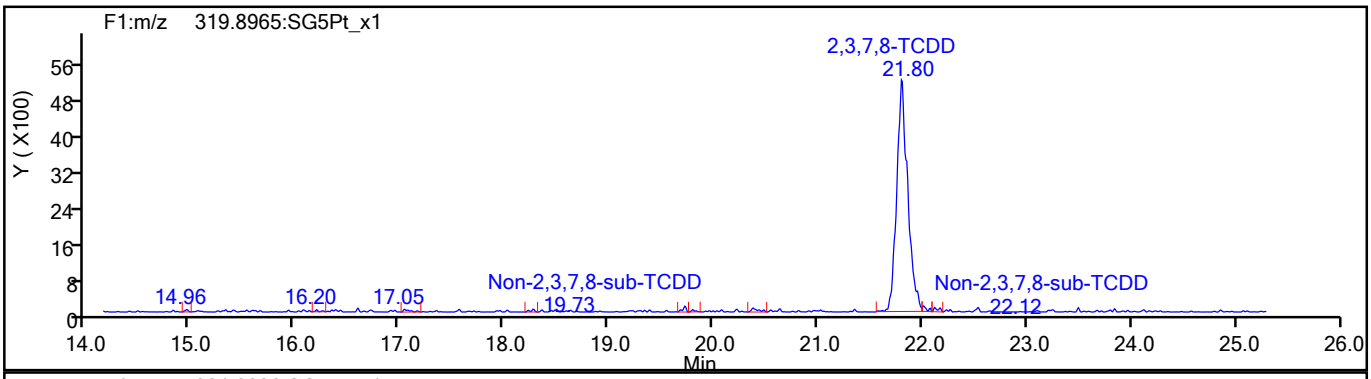

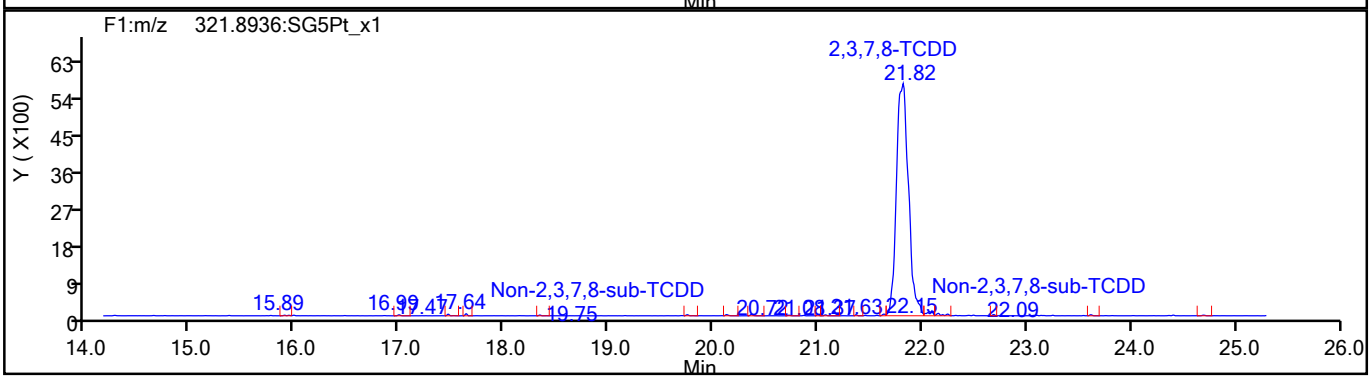

TCDD Standards

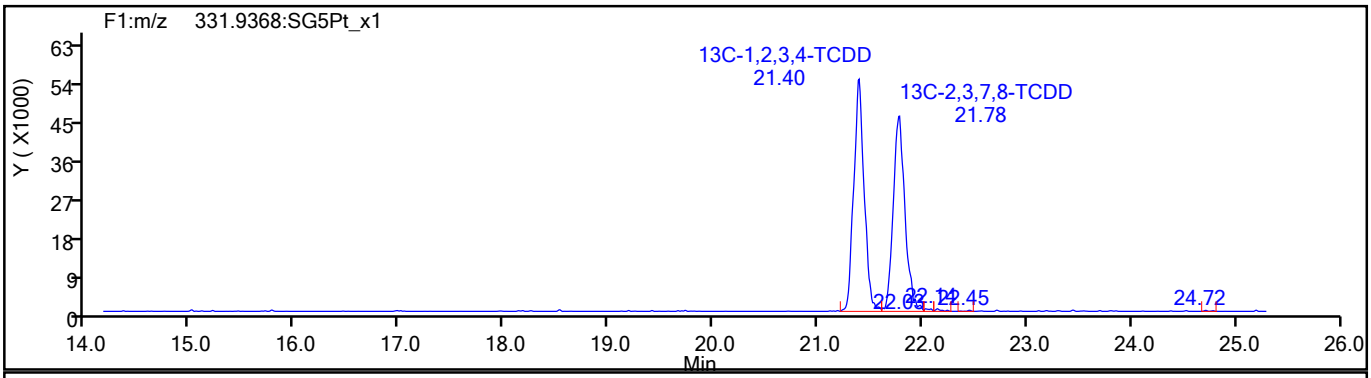

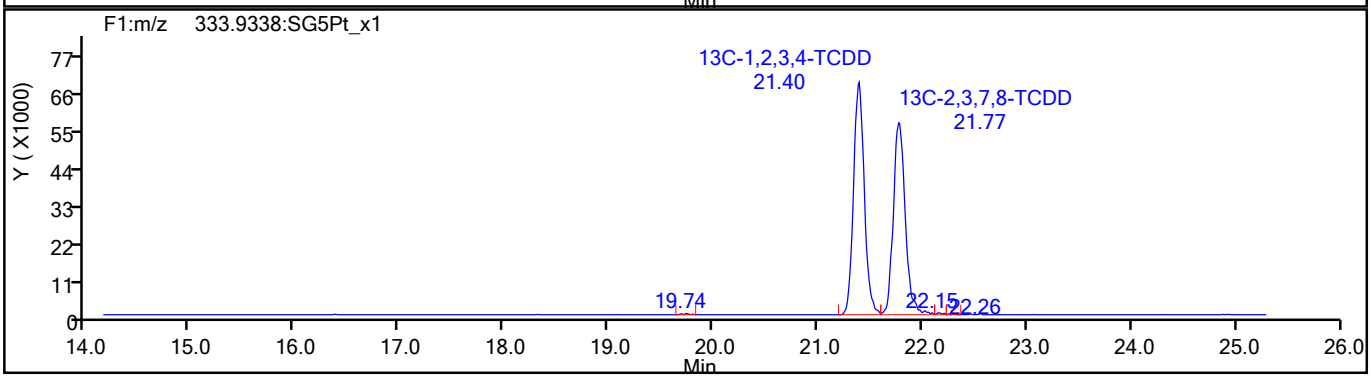

777026

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

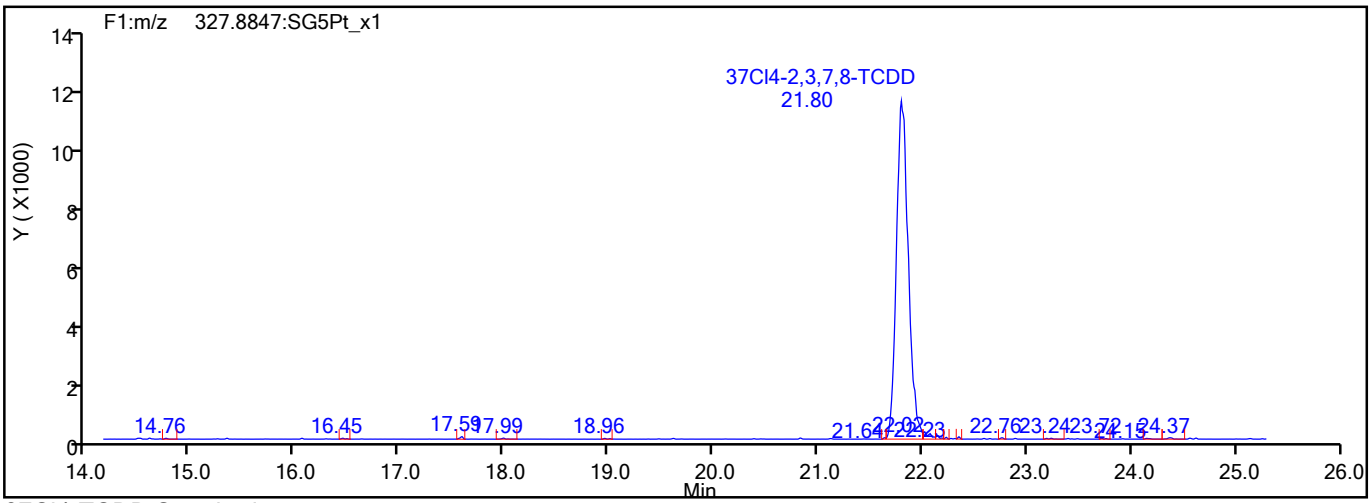

37Cl4-TCDD Standards

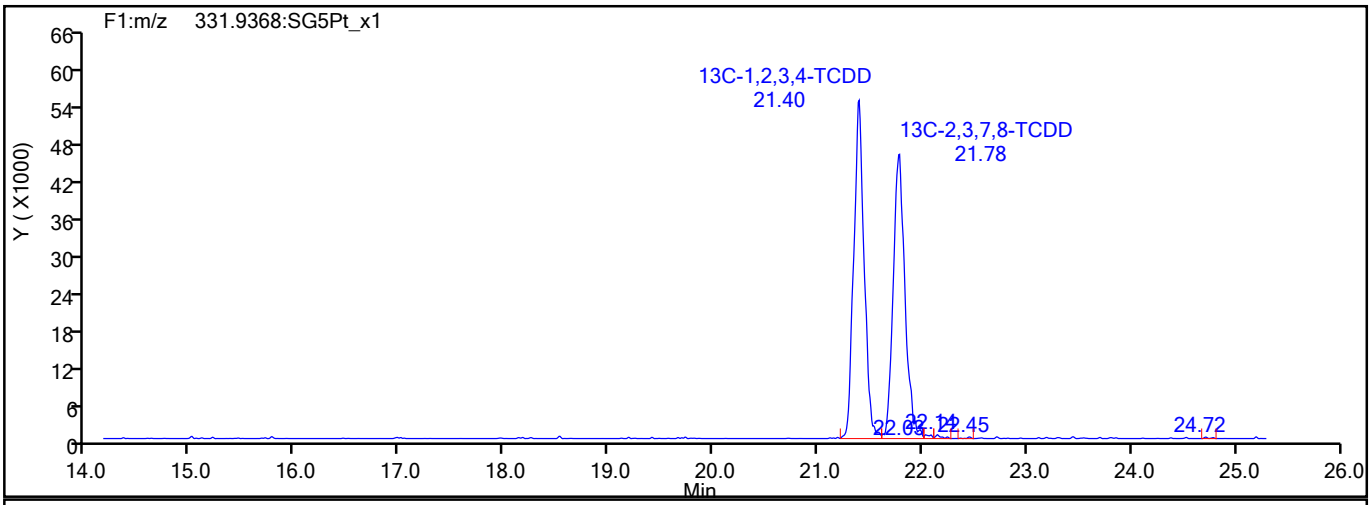

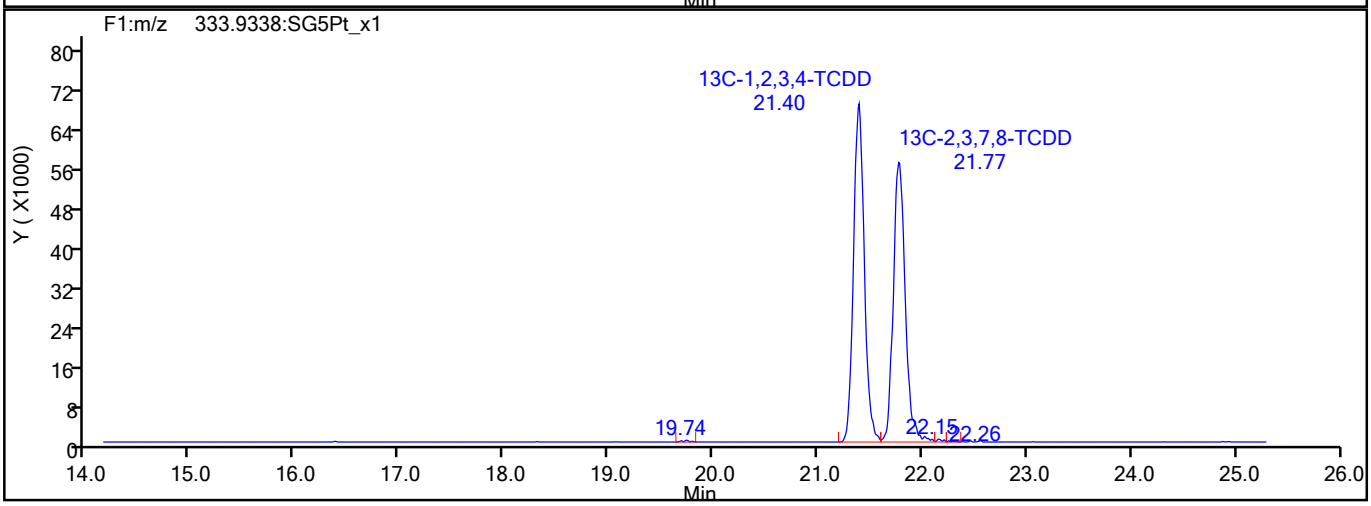

777027

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

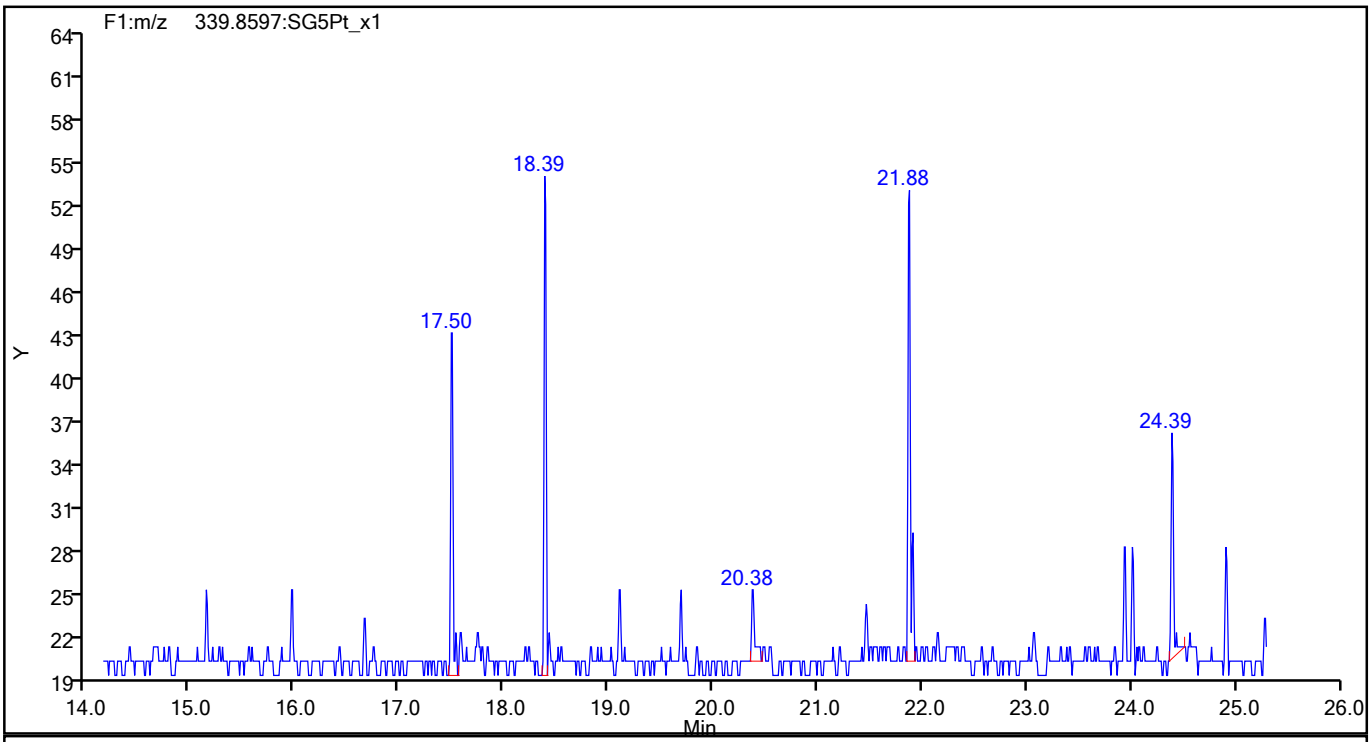

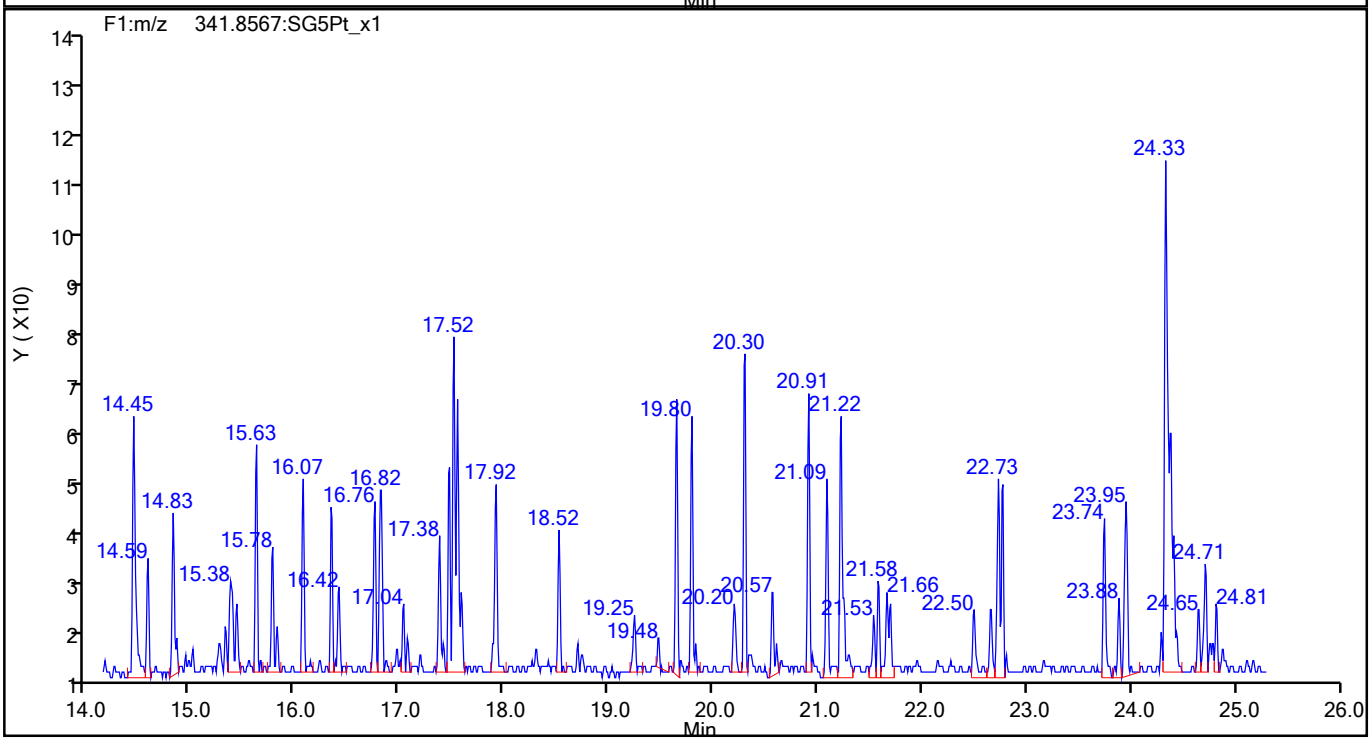

777028

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

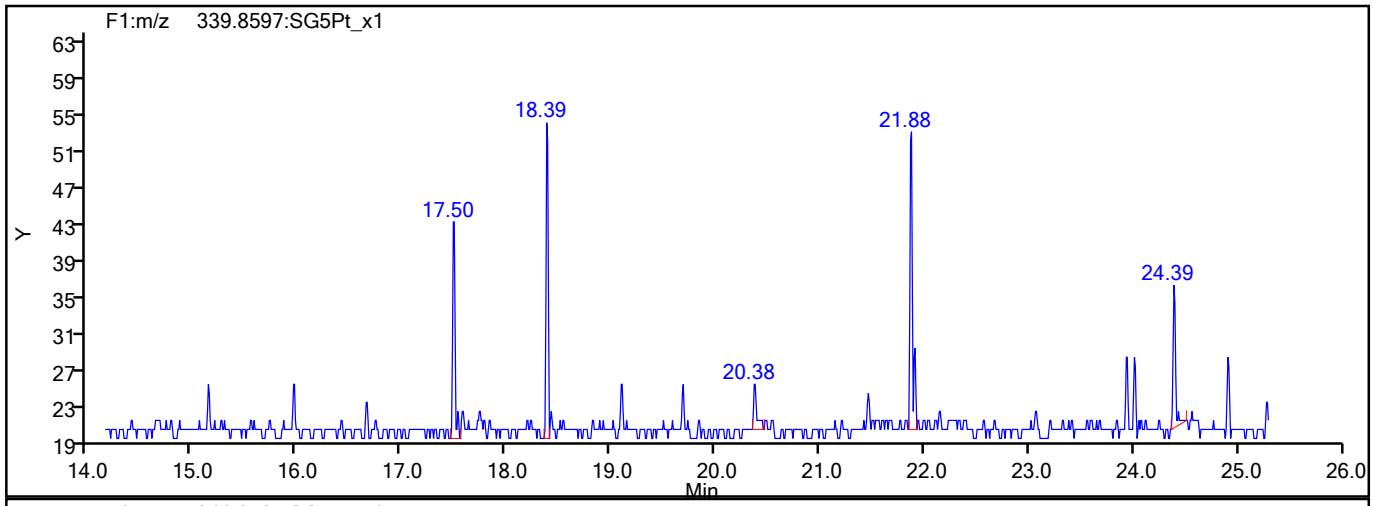

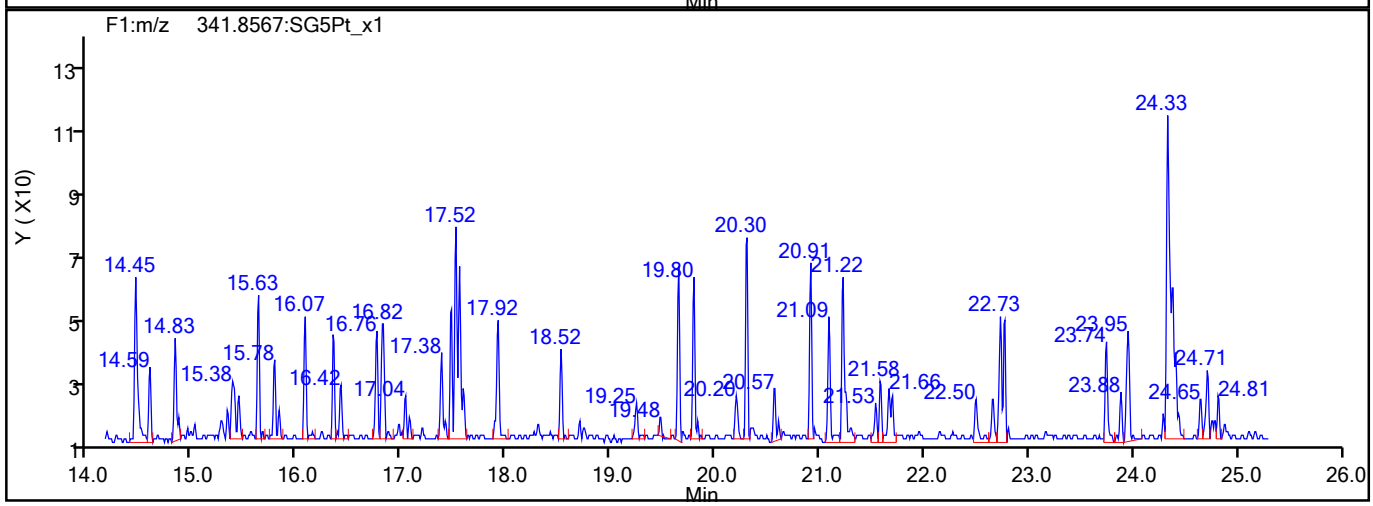

F1 PeCDFs Interference Mass

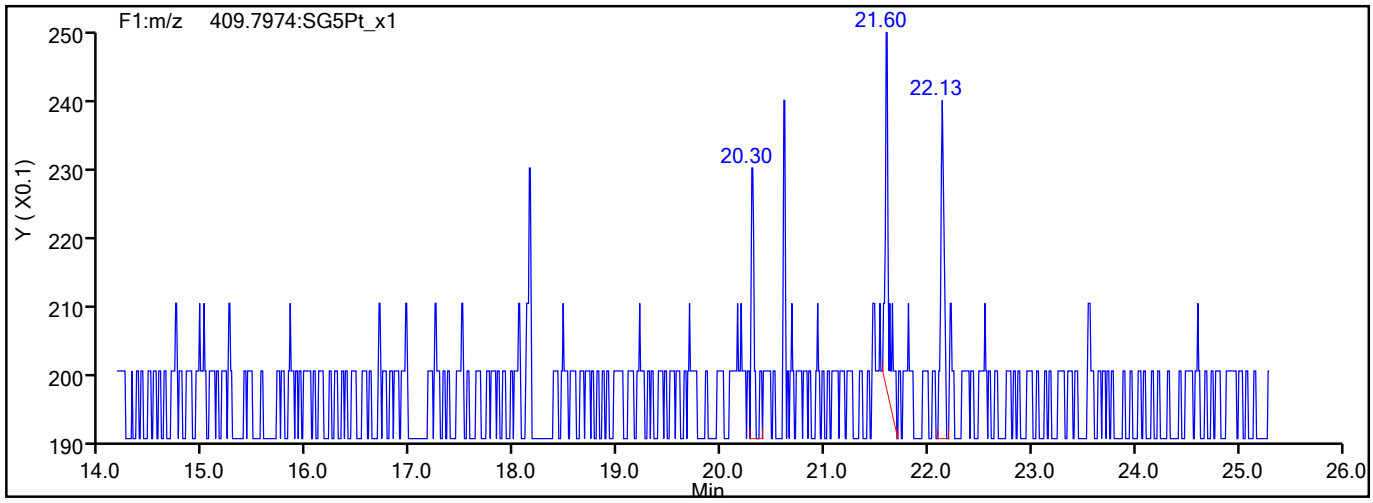

777029

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

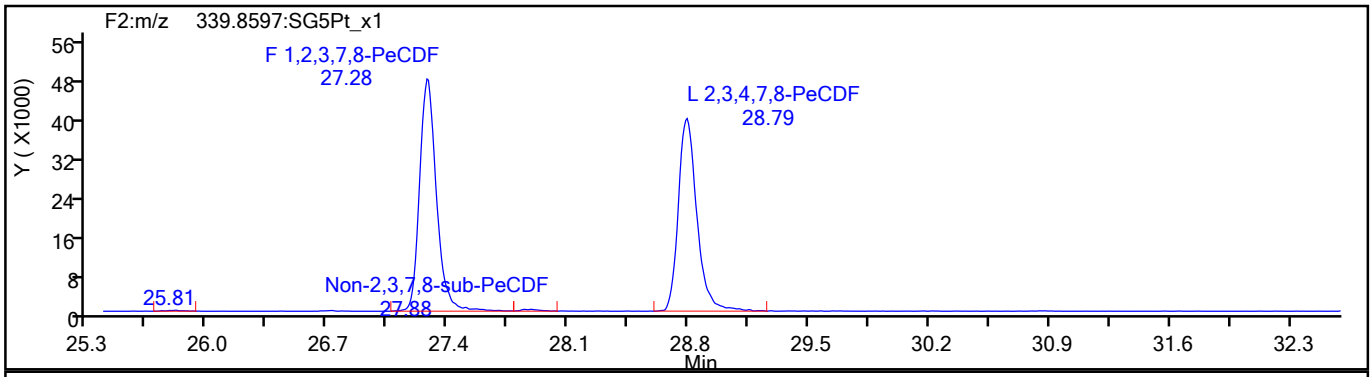

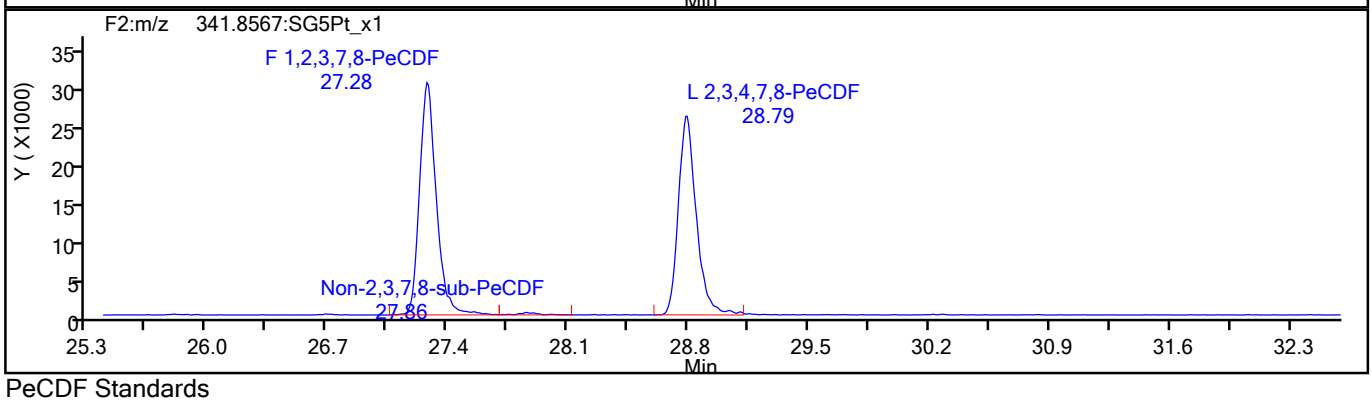

PeCDF Standards

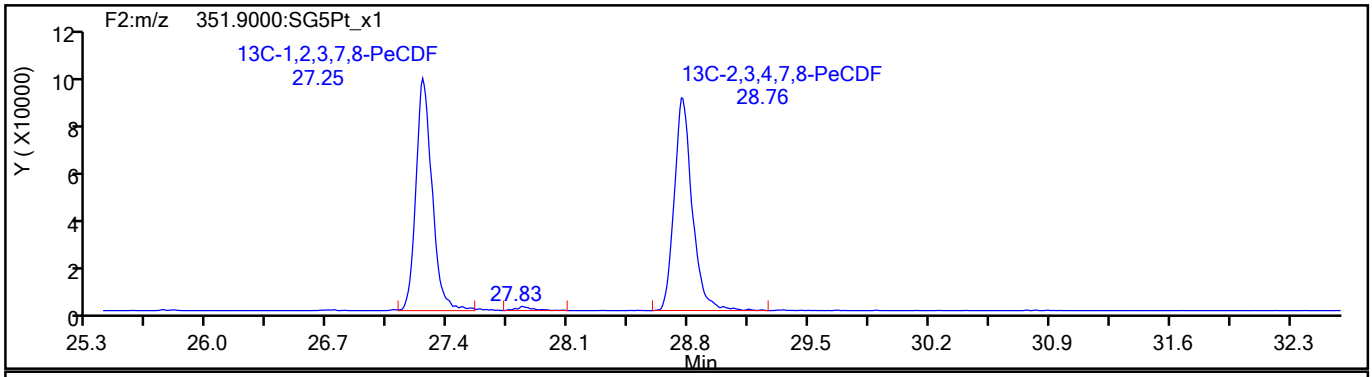

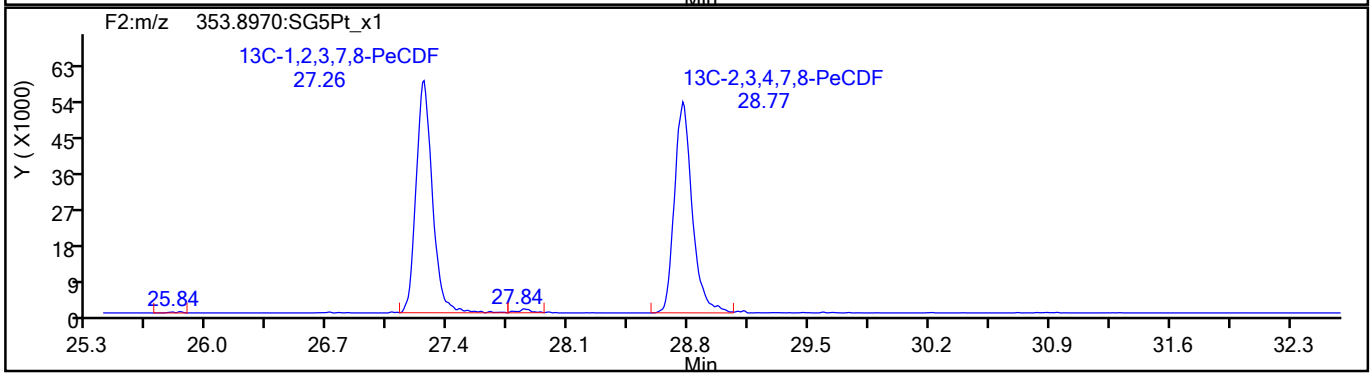

777030

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

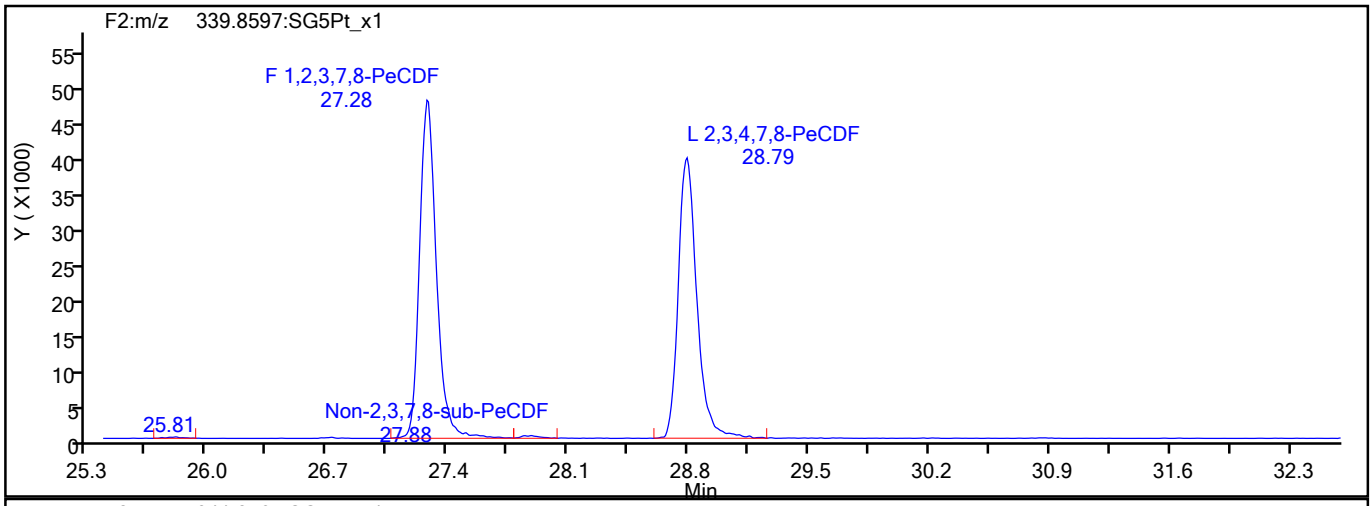

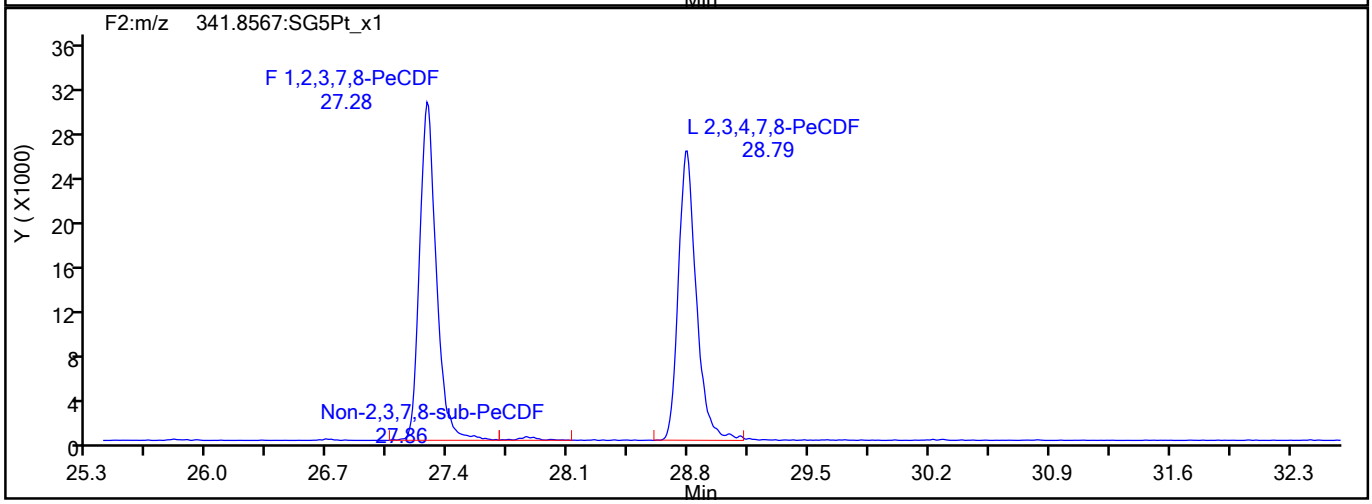

PeCDF Interference Mass

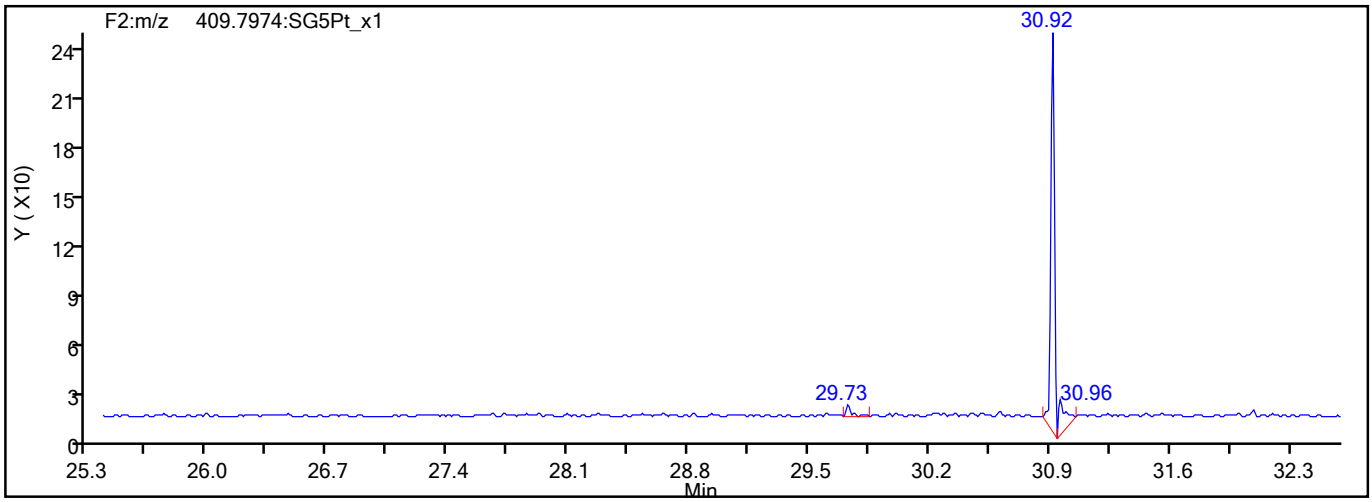

777031

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

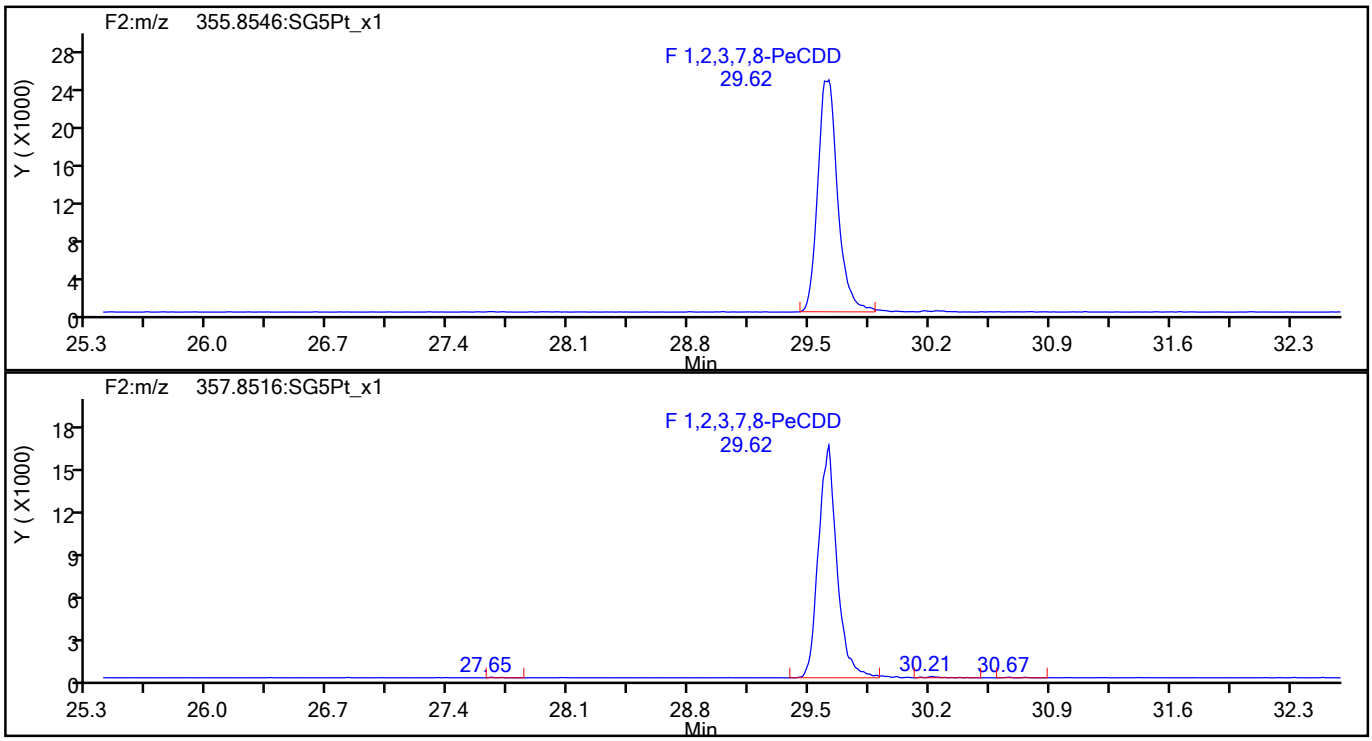

PeCDD Standards

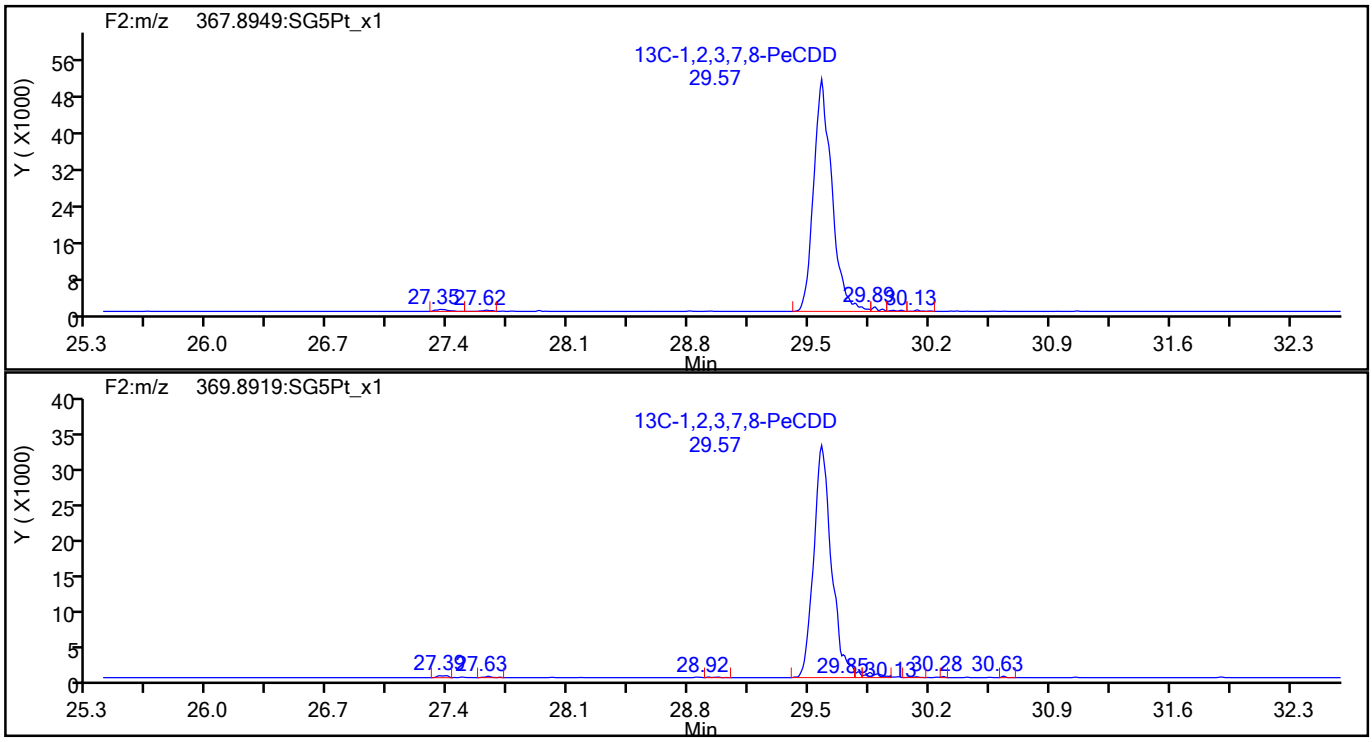

777032

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

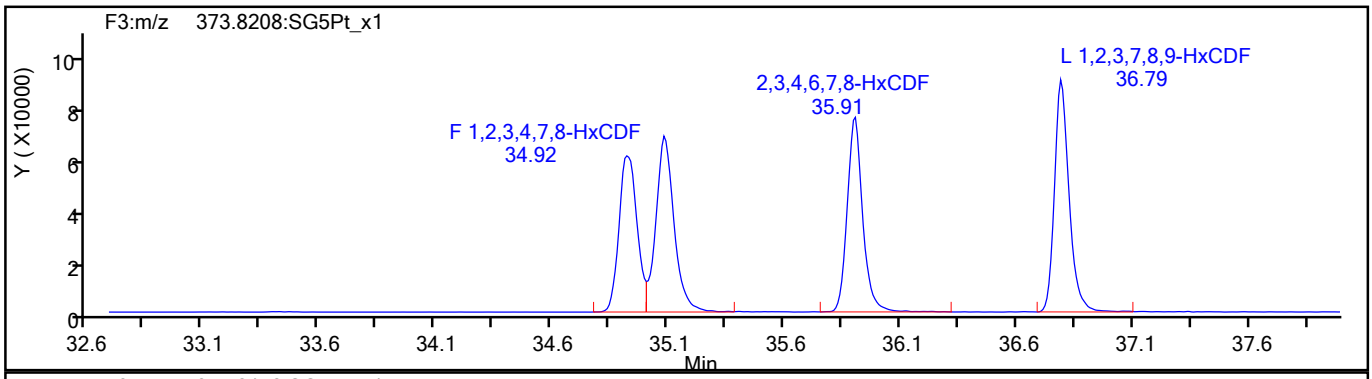

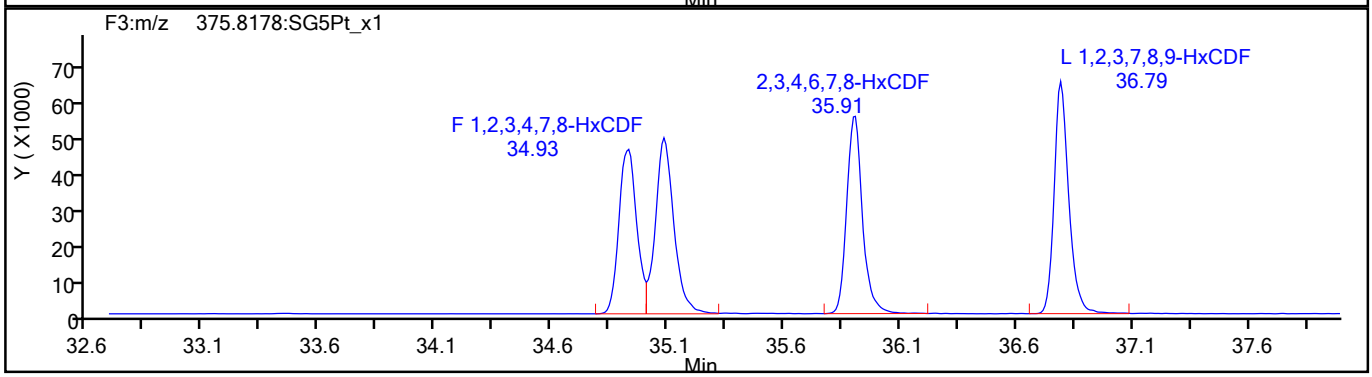

HxCDF Standards

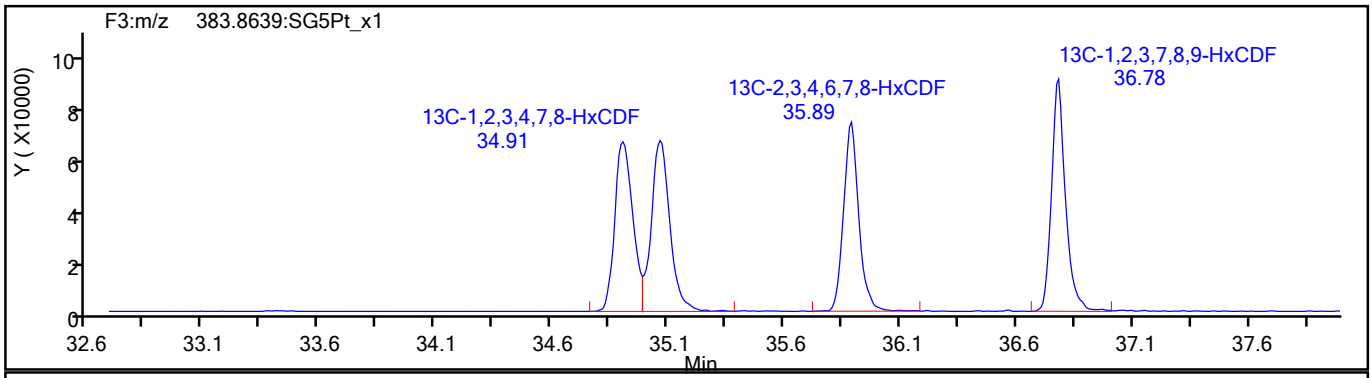

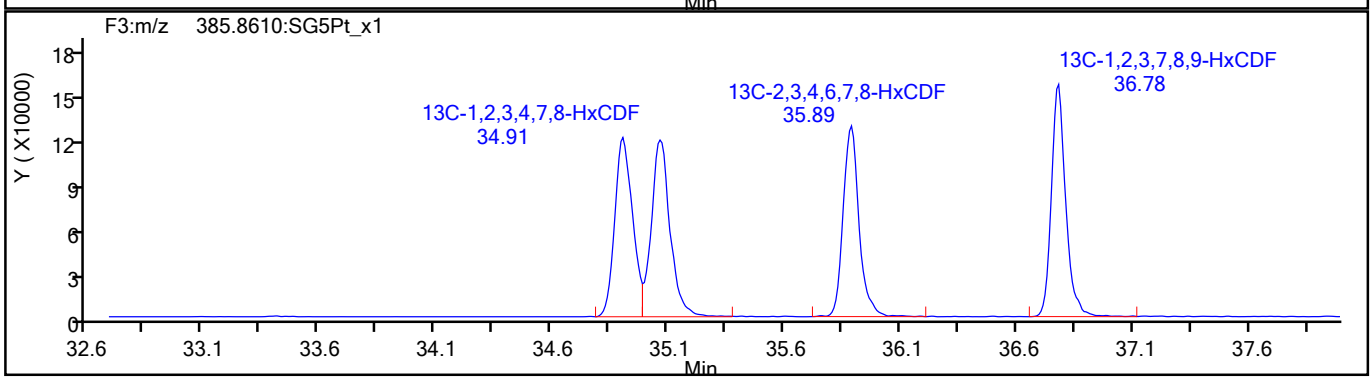

777033

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

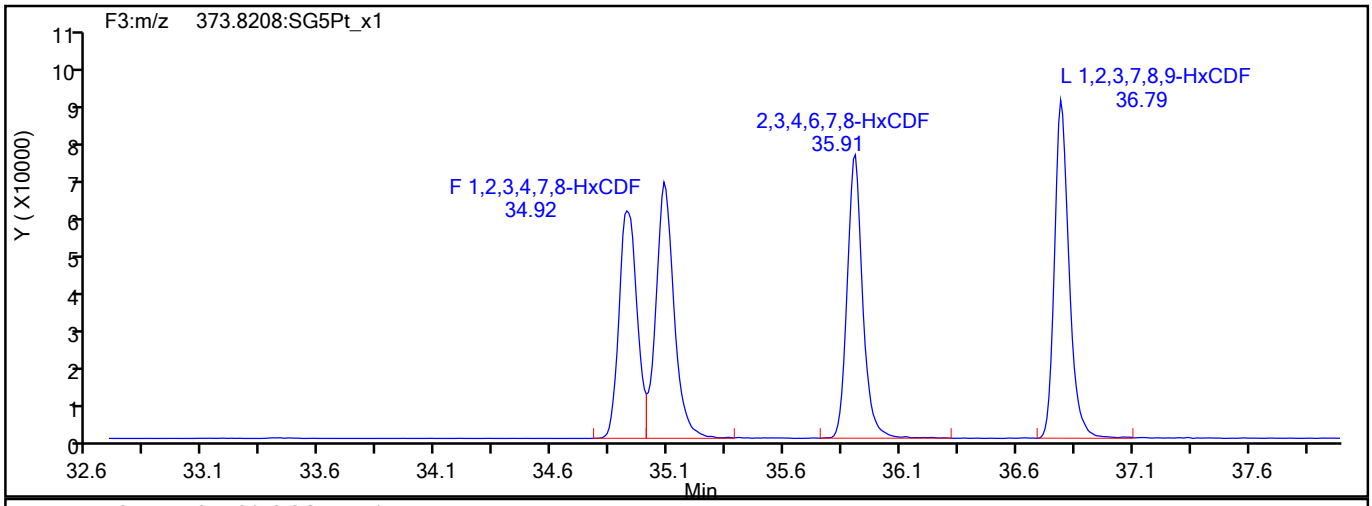

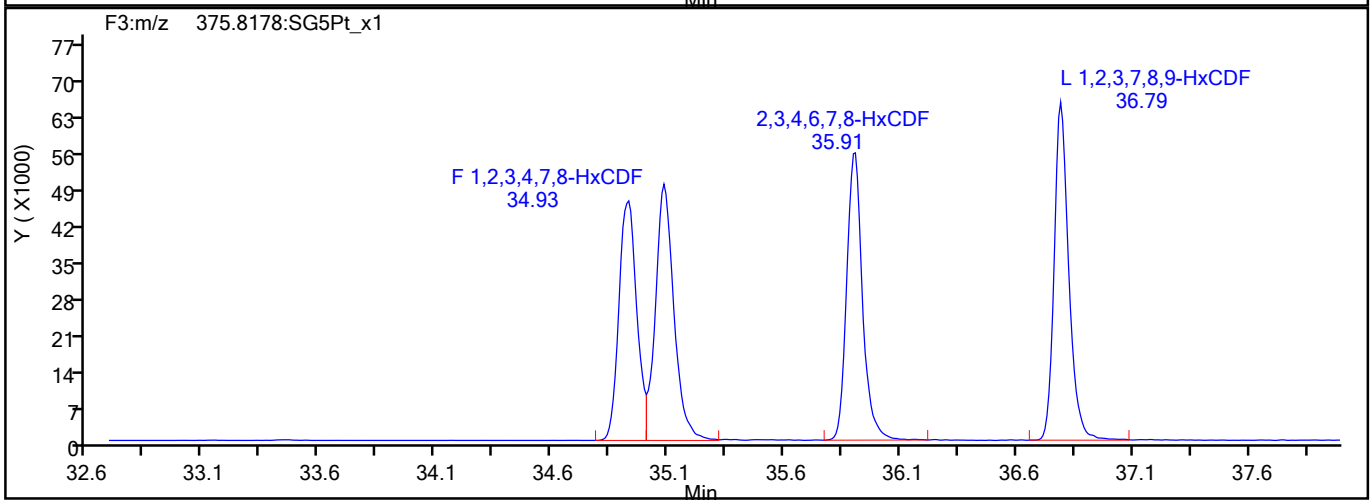

HxCDF Interference Mass

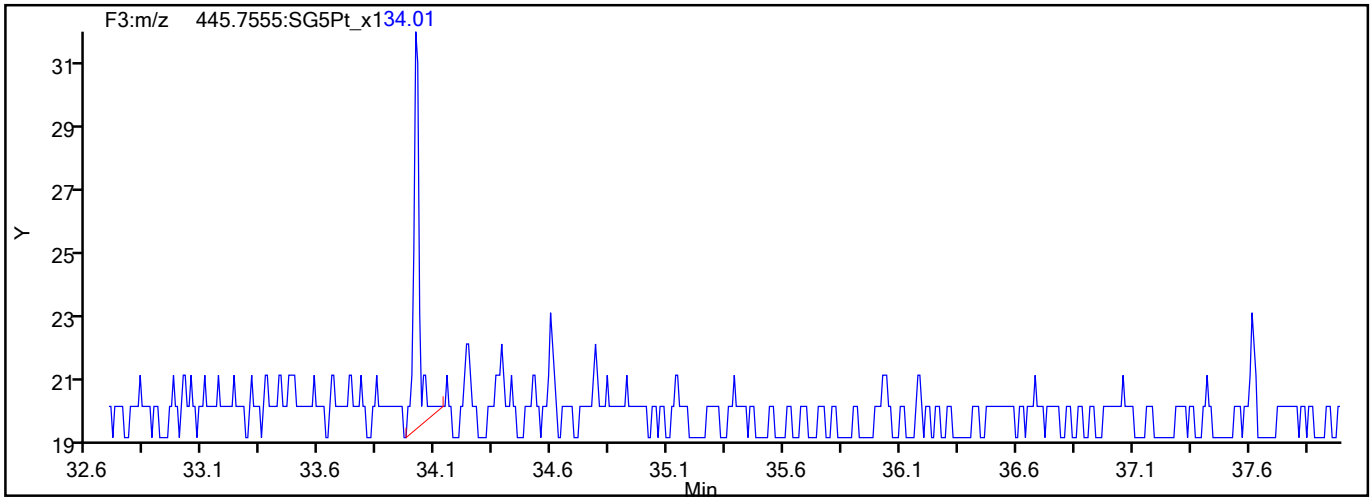

777034

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

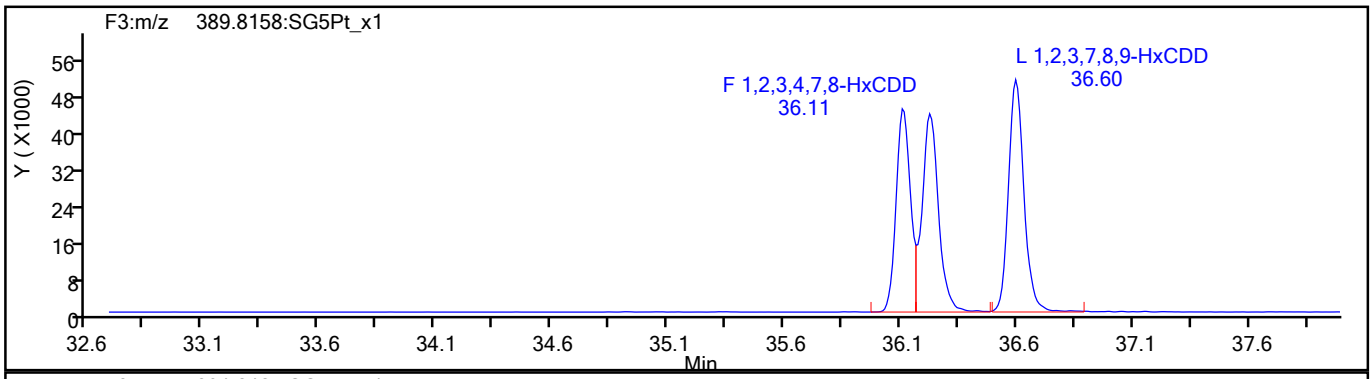

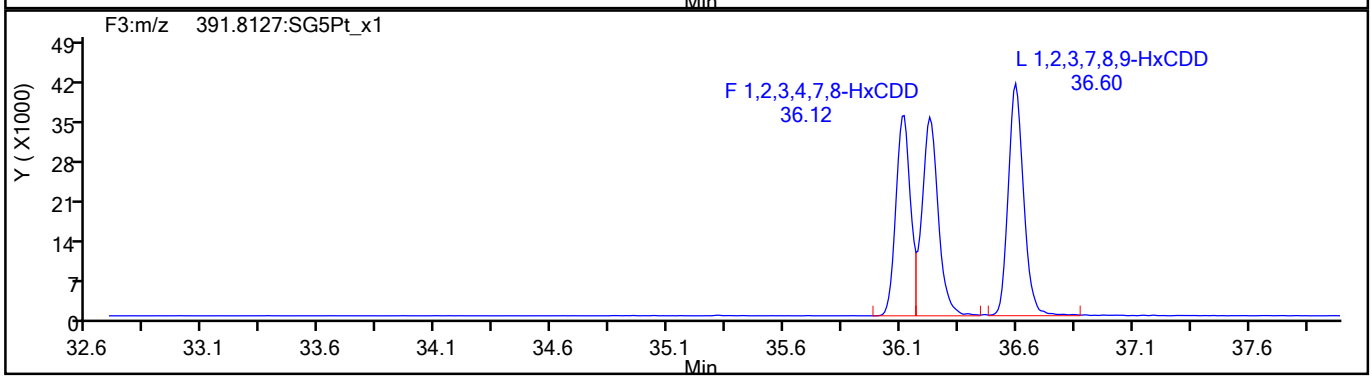

HxCDD Standards

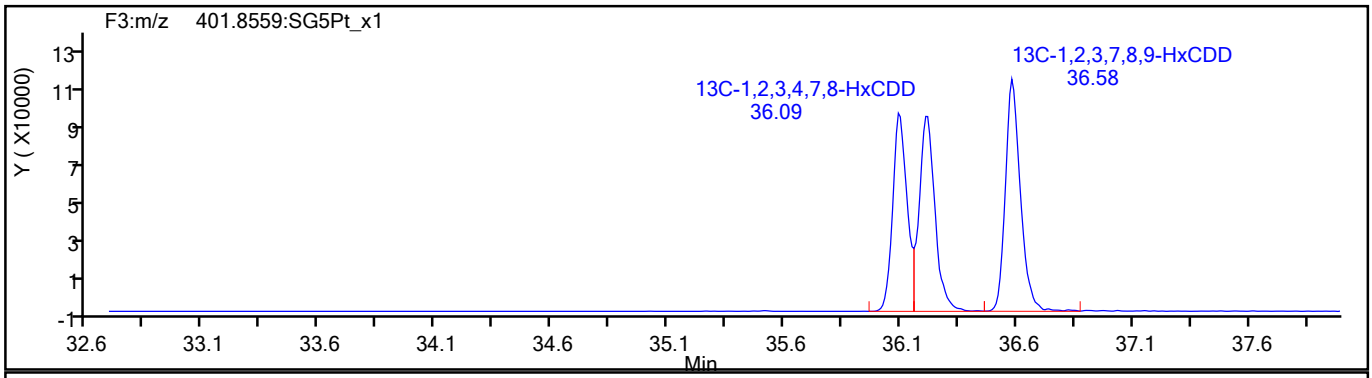

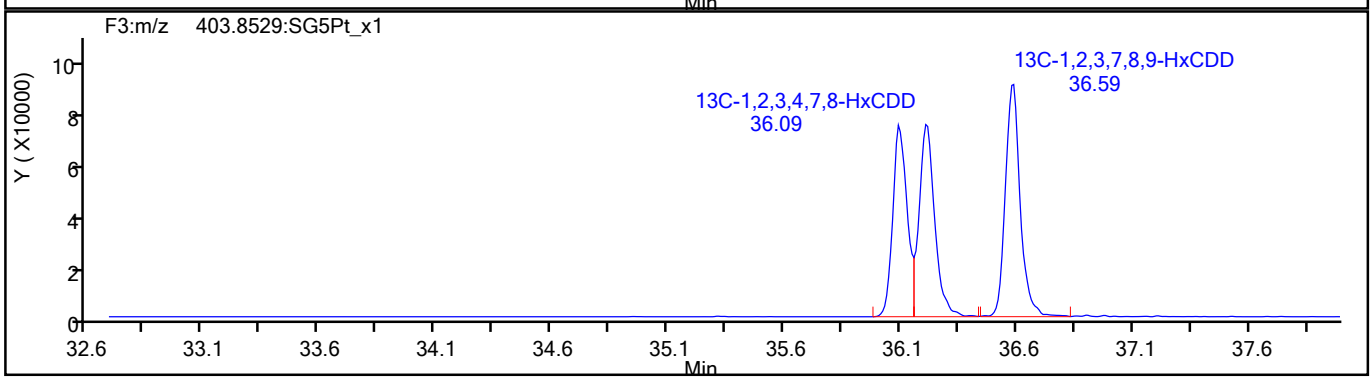

777035

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

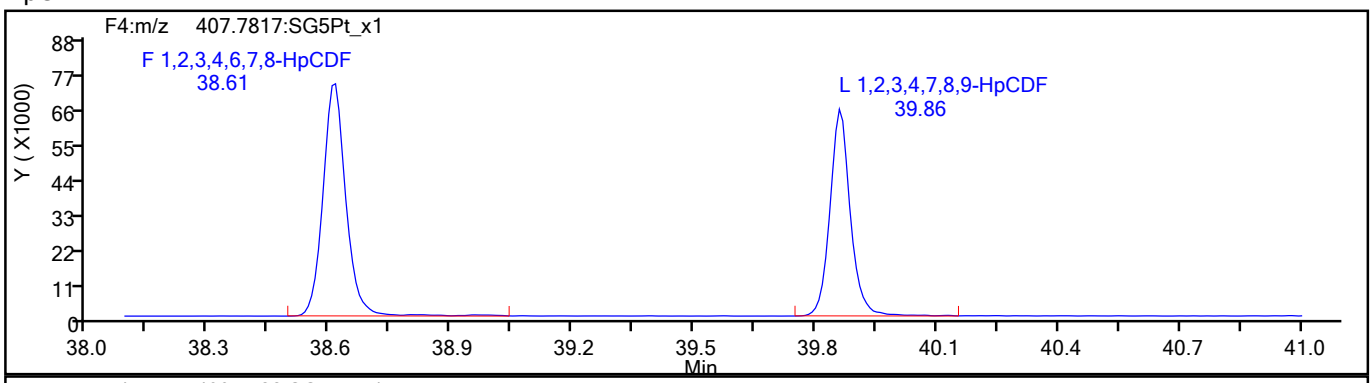

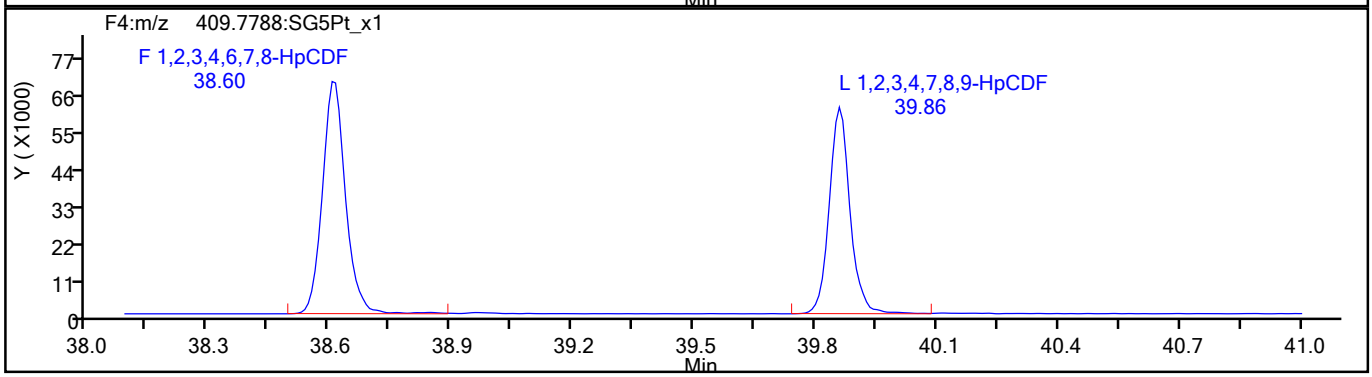

HpCDF Standards

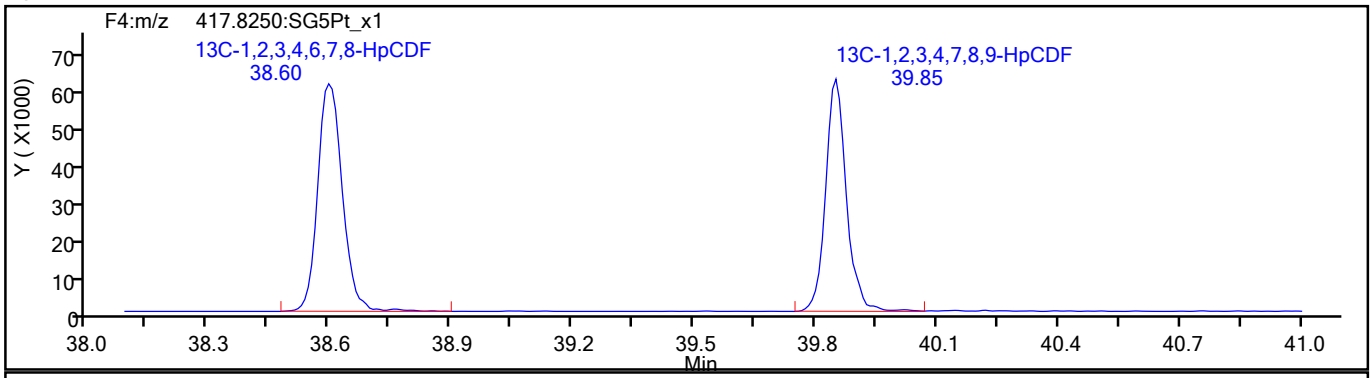

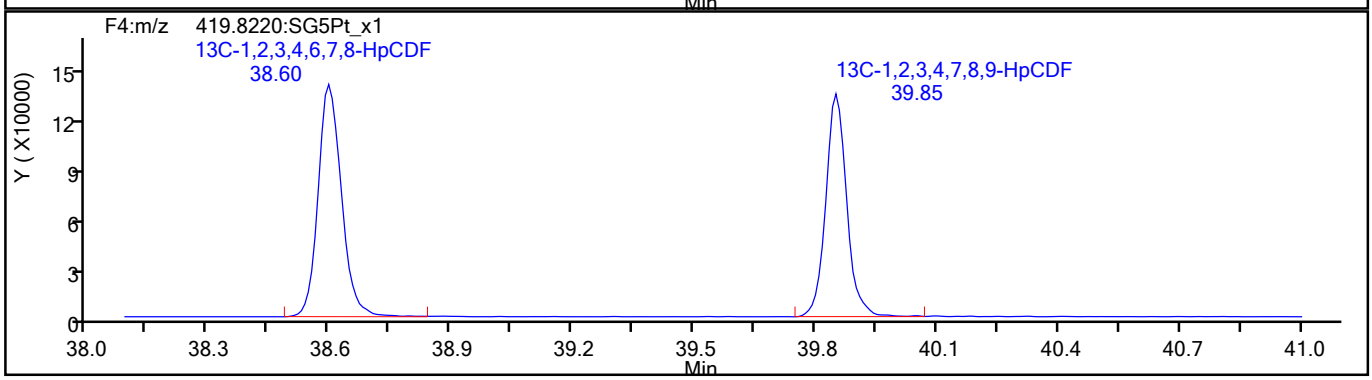

777036

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

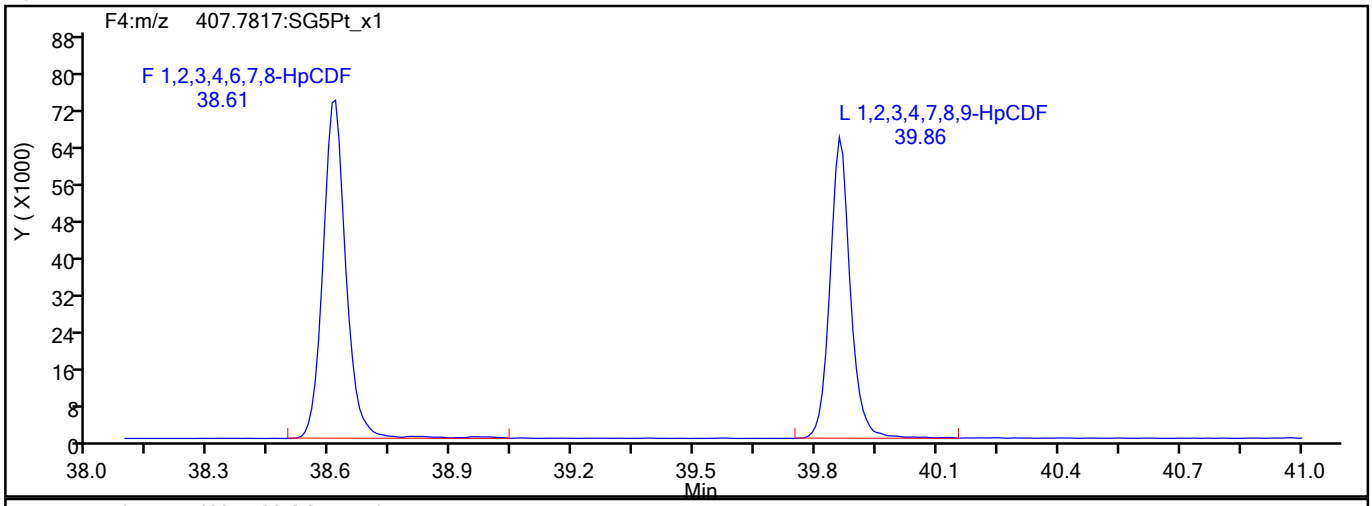

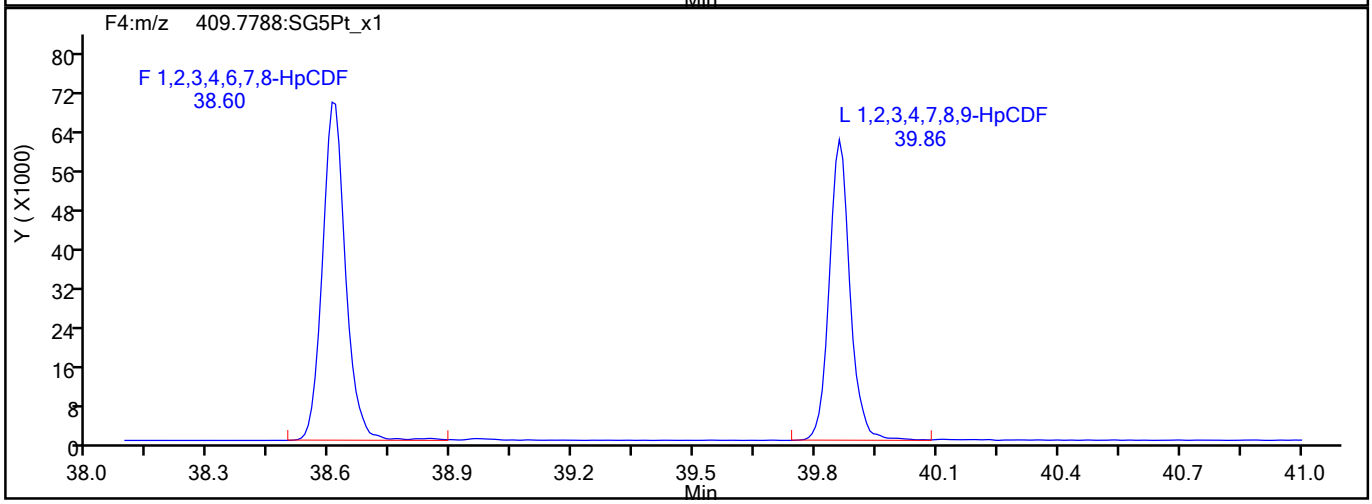

HpCDF Interference Mass

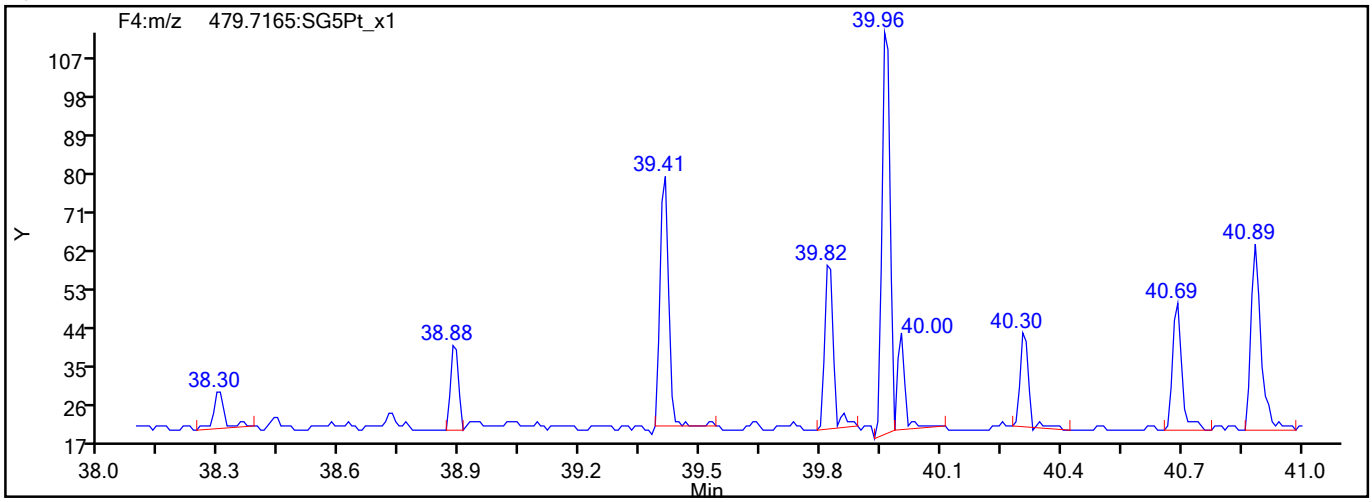

777037

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

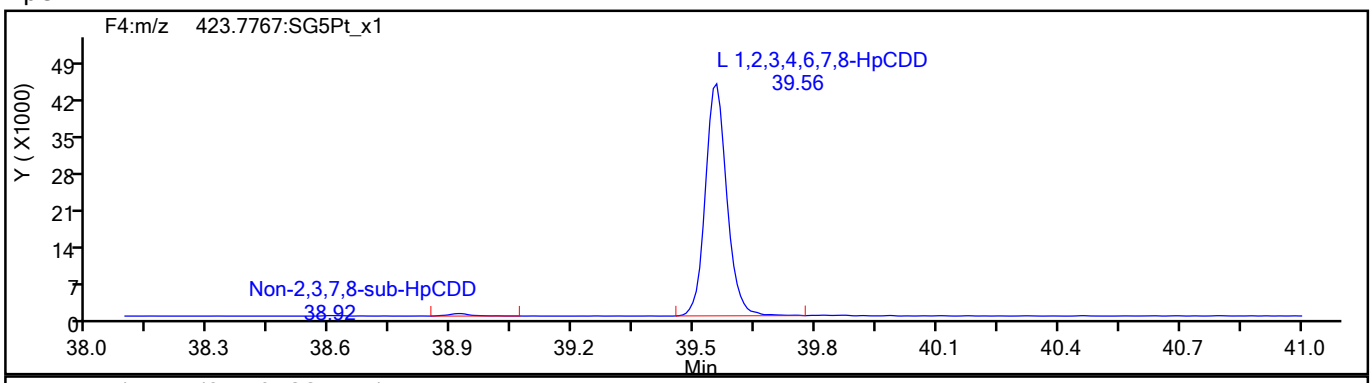

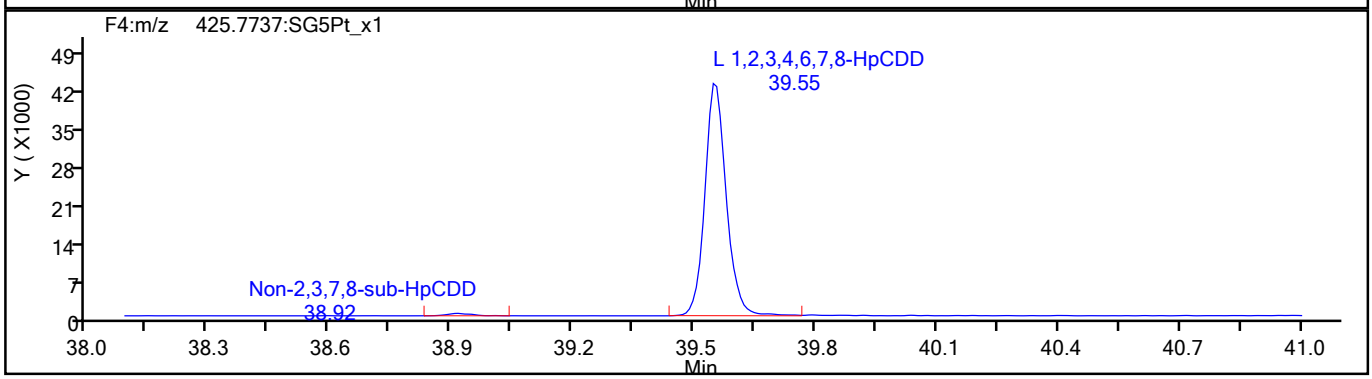

HpCDD Standards

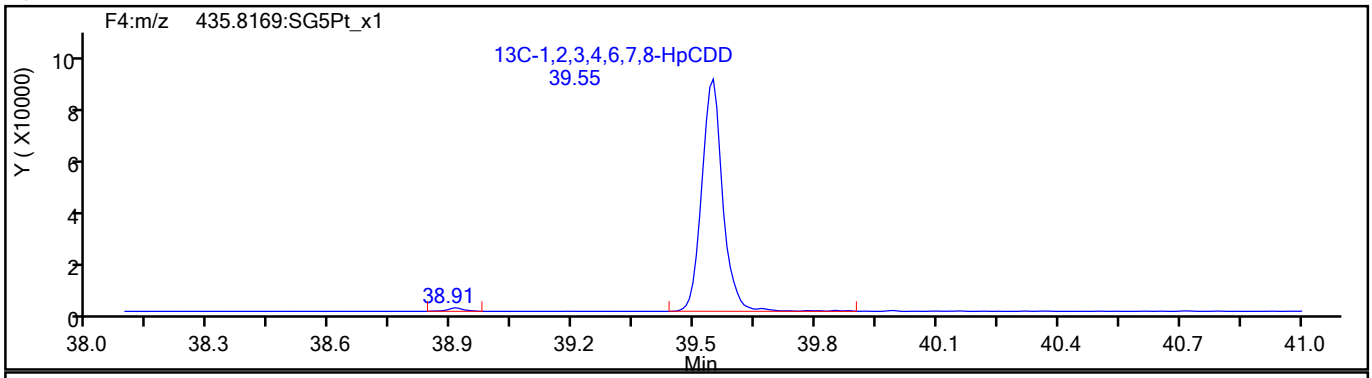

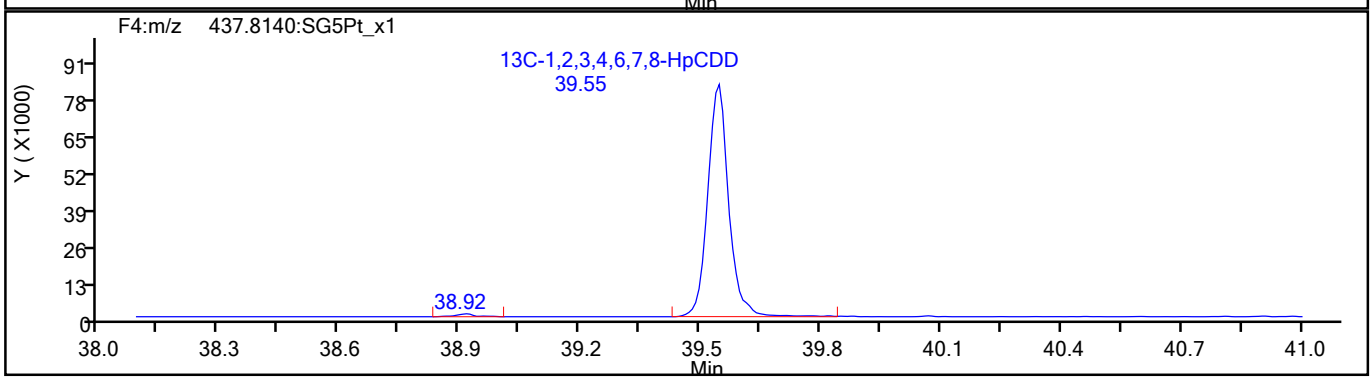

777038

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

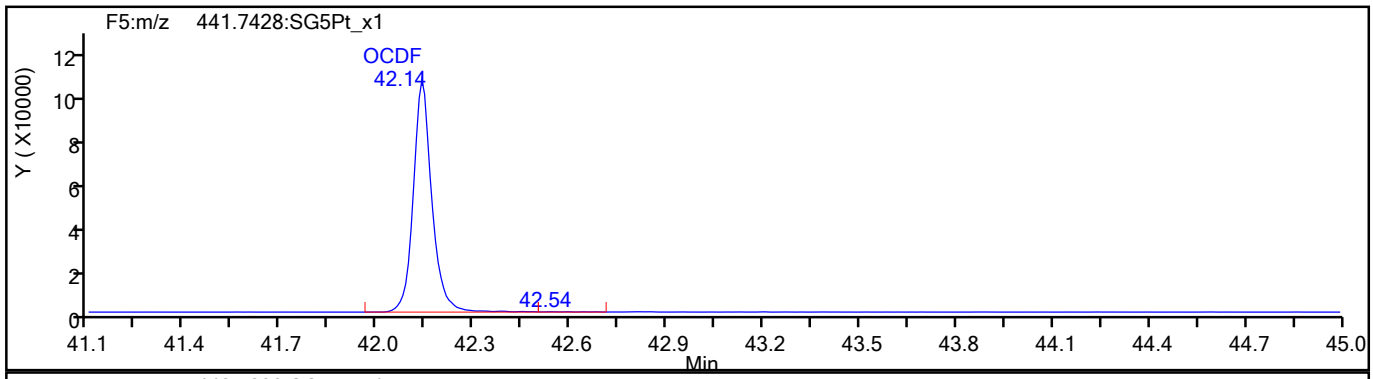

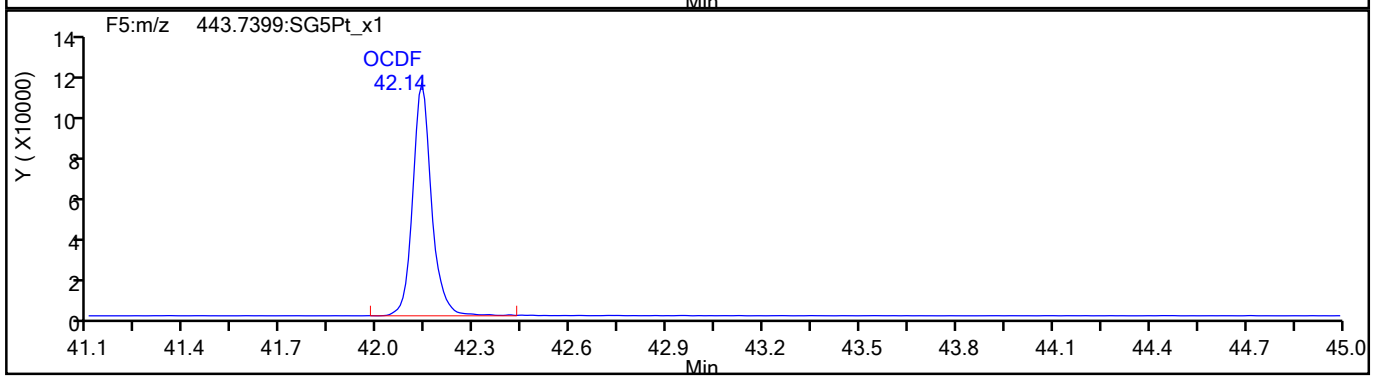

OCDF Standards

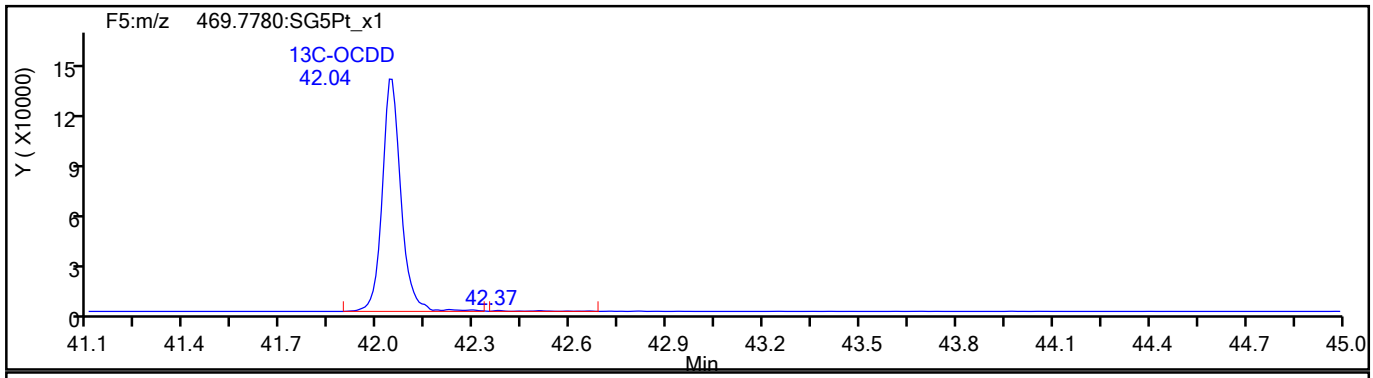

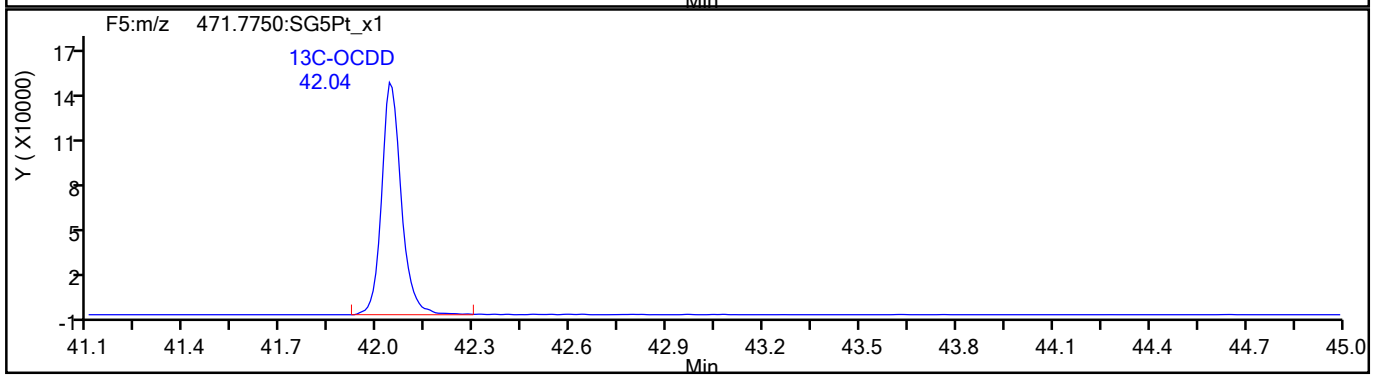

777039

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

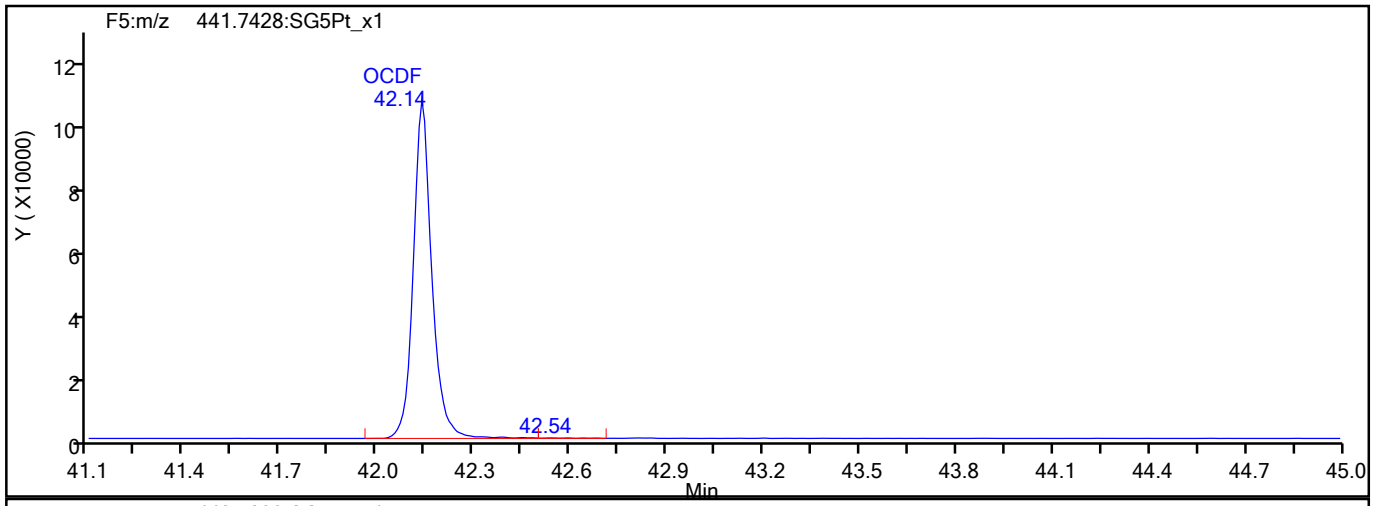

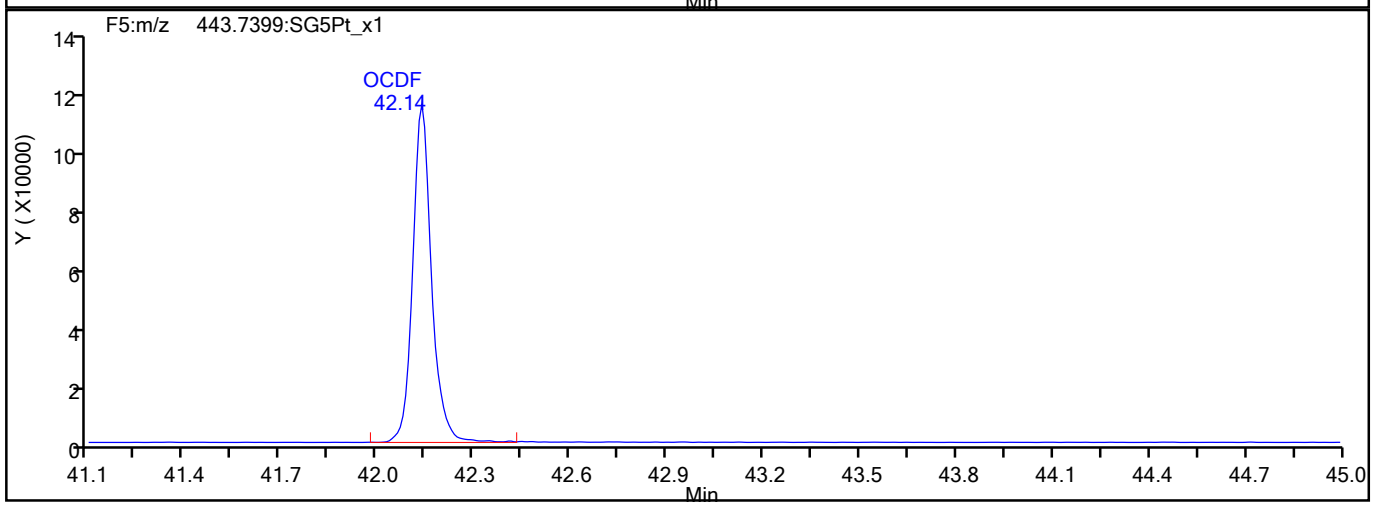

OCDF Interference Mass

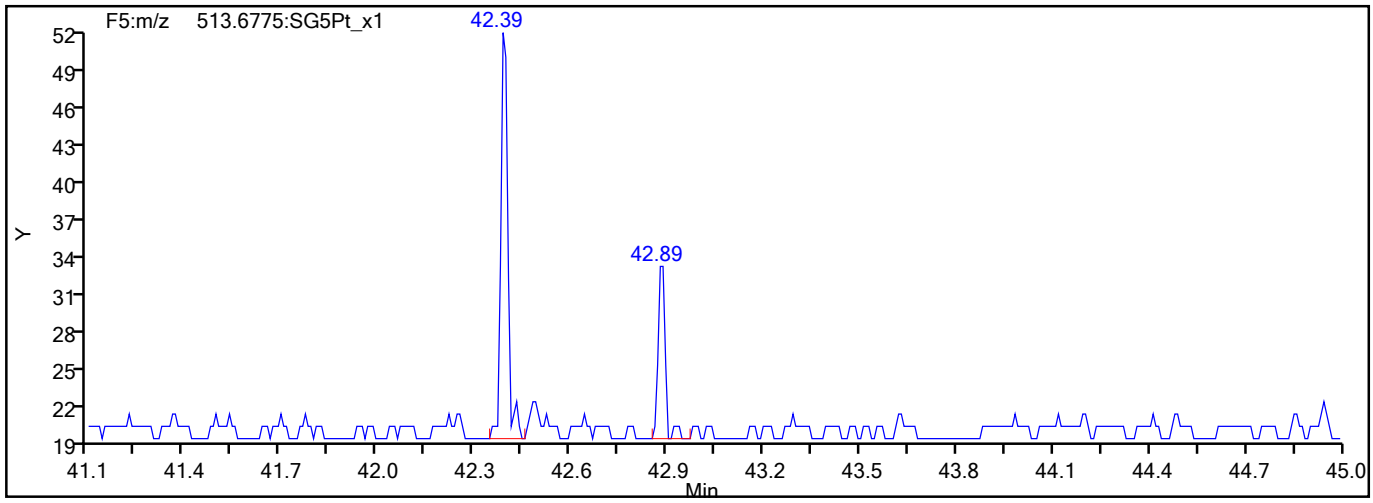

777040

Report Date: 21-Aug-2021 17:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

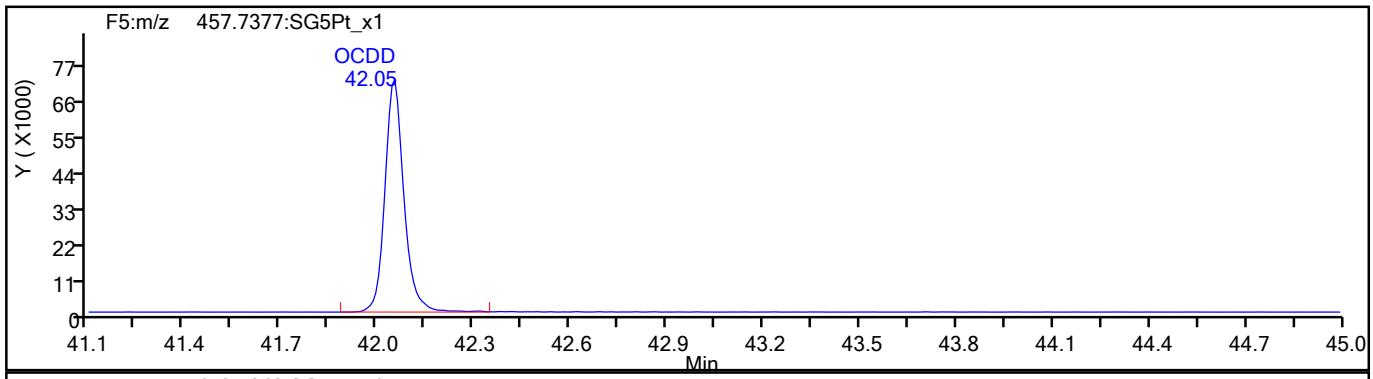

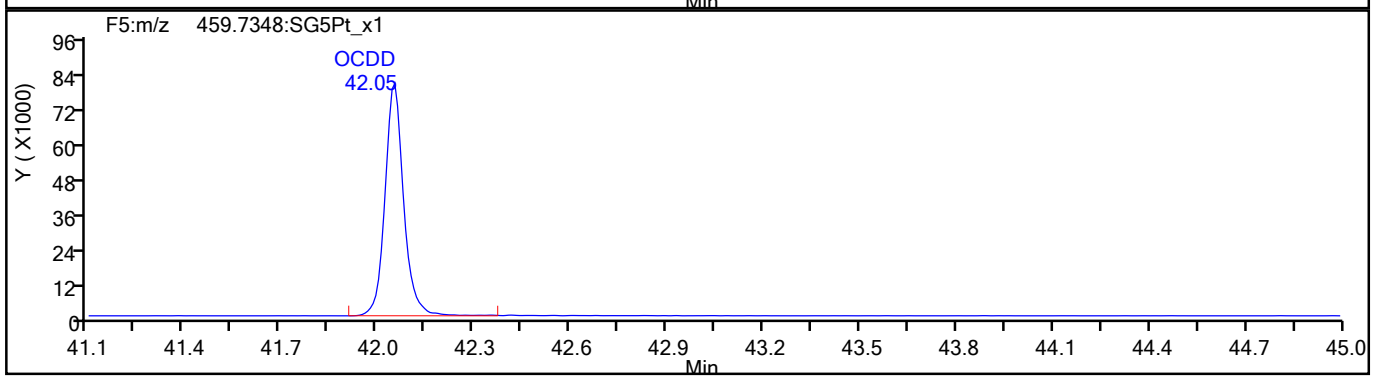

OCDD Standards

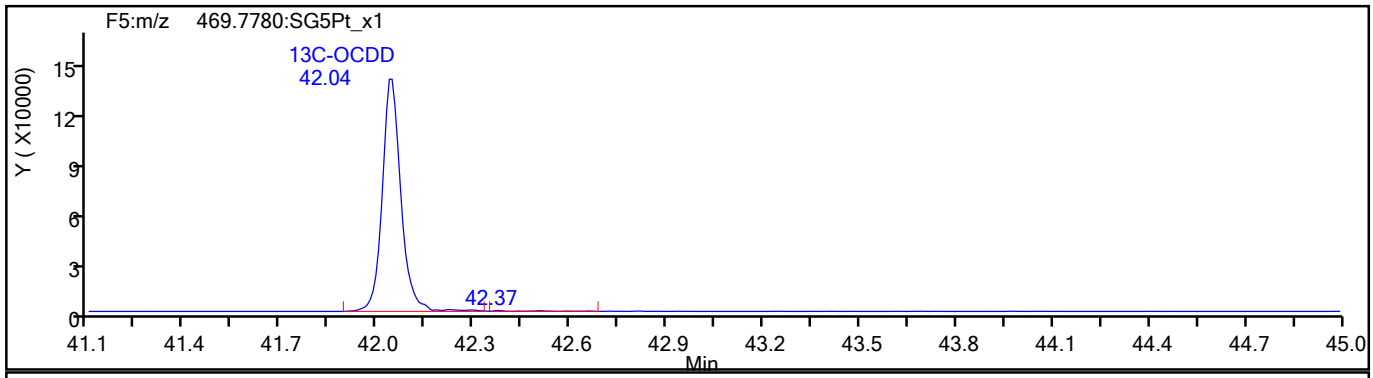

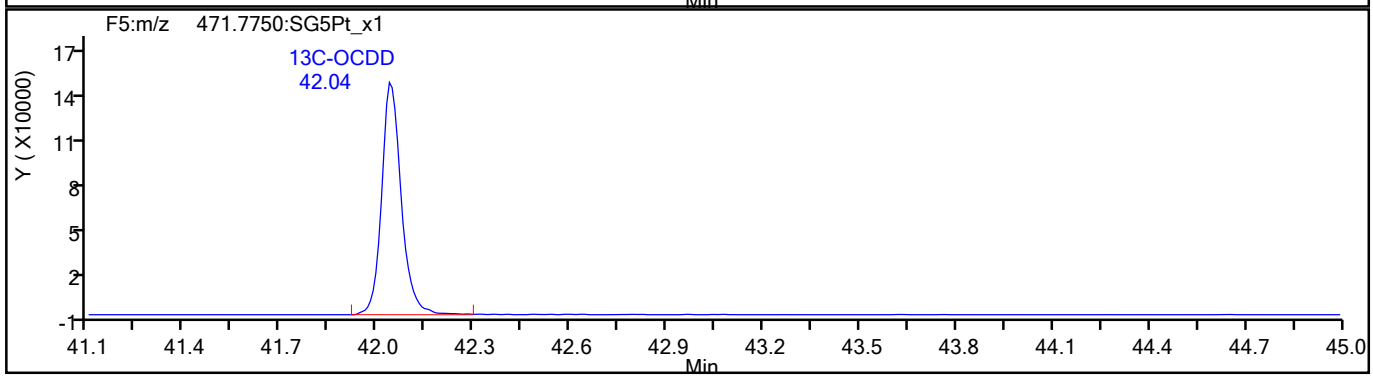

777041

Report Date: 21-Aug-2021 17:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

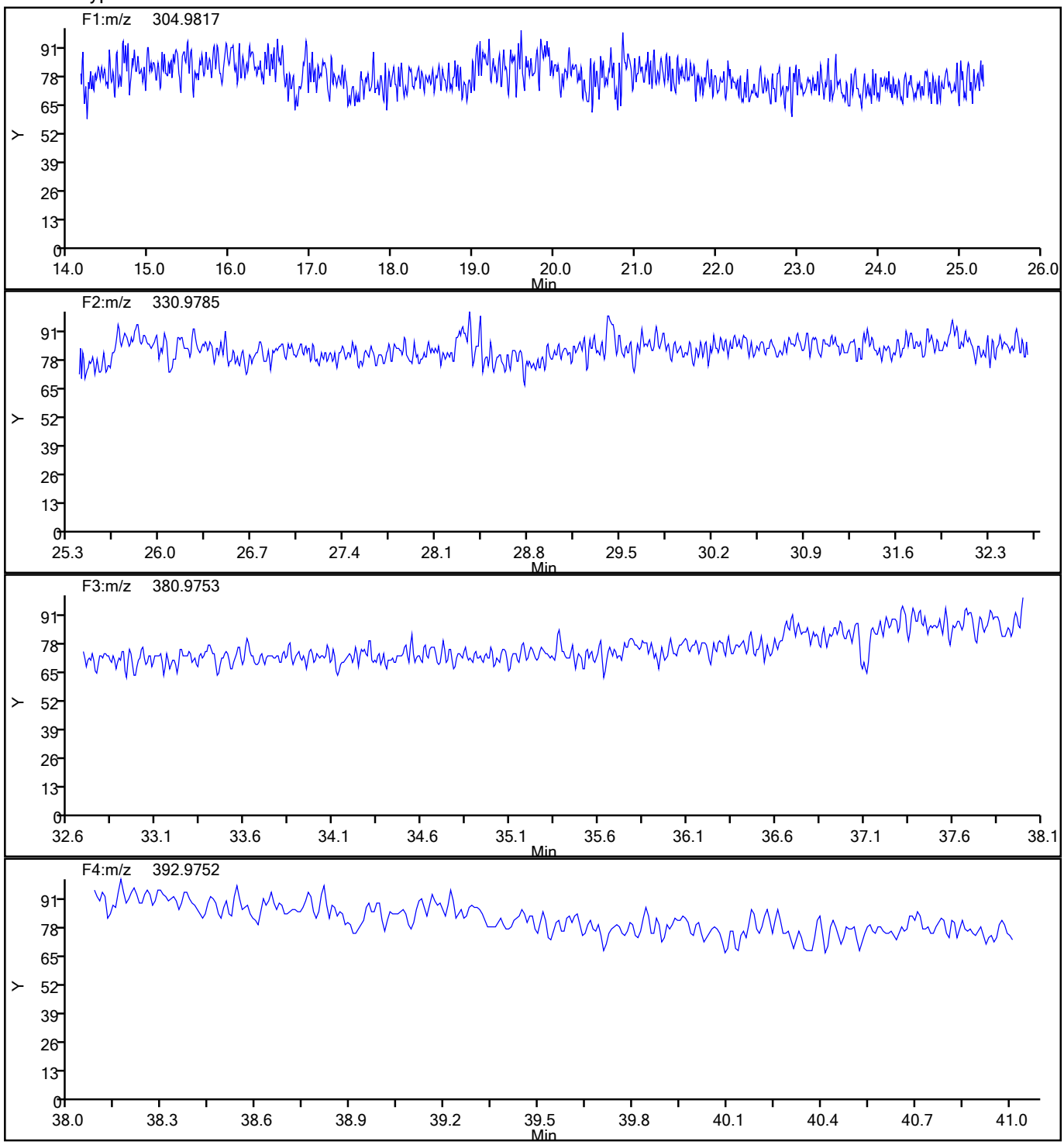

777042

Report Date: 21-Aug-2021 17:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

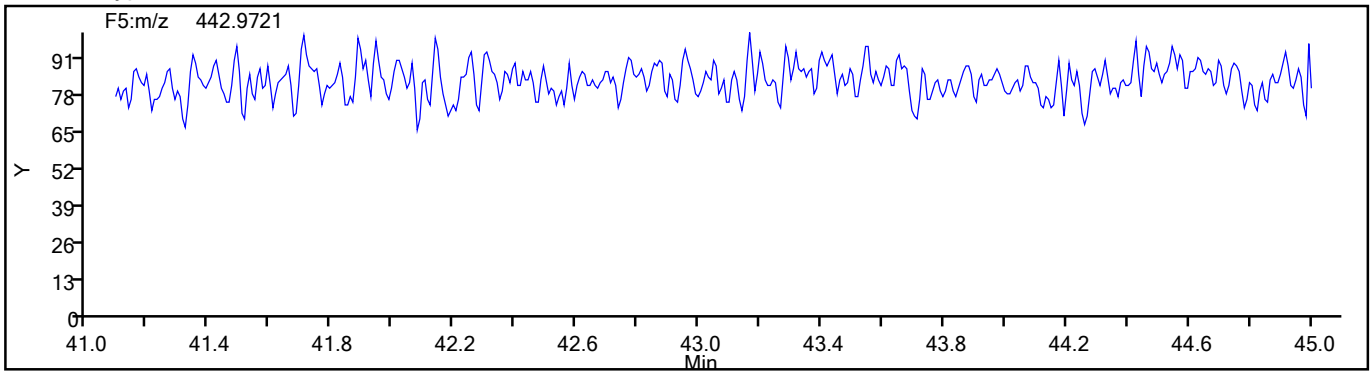

777043

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.598	43192451	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.628	95812265	0.77	1.0239	86.7	86.7	0.4368	0.4368		
A Non-2,3,7,8-sub-TCDF	17.311	141340622	0.77	1.0239	127.8	127.8	0.4368	50.4		
S Total TCDF					214.5	214.5	0.4368	0.4368		
D 13C-2,3,7,8-TCDD	18.323	22643725	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.338	31002300	0.78	1.2541	43.7	43.7	0.2199	0.2199		
A Non-2,3,7,8-sub-TCDD	17.772	120319254	0.78	1.2541	169.5	169.5	0.2199	46.0		
S Total TCDD					213.1	213.1	0.2199	0.2199		
A F1 PeCDFs	20.244	36548211	1.59	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.473	28699153	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.744	44367204	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.542	988216341	1.23	0.0000						
A Non-2,3,7,8-sub-HxCDF	30.542	1016402527	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	31.215	43254937	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.911	28490431	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	35.005	21744380	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.458						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.714	17168827	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.133	55744963	0.78							a
1,3,6,8-TCDD	16.071	32157911	0.78							a
2,3,4,7-TCDF	17.628	95812265	0.77							a
1,2,3,7-TCDD	18.218	26254918	0.77							a
1,2,3,9-TCDF	18.505	41465019	0.77							a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,9-TCDD	18.505	32677146	0.79							a
1,2,8,9-TCDD	19.472	12707183								a
1,2,8,9-TCDF	19.488	41982512	0.76							a
1,3,4,6,8-PeCDF	19.760	36548211	1.59							a
1,2,4,7,9-PeCDD	21.576	23369968	1.58							a
1,2,3,8,9-PeCDD	25.912	20997236	1.59							a
1,2,3,8,9-PeCDF	26.144	28026312	1.61							a
1,2,3,4,6,8-HxCDF	28.479	29886017	1.22							a
1,2,4,6,7,9-HxCDD	30.023	21768457	1.27							a
1,2,3,4,6,7-HxCDD	32.299	21486480	1.24							a
1,2,3,4,8,9-HxCDF	32.605	28186186	1.23							a
1,2,3,4,6,7,9-HpCDD	34.154						0.0	0.0		U

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:09:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	1.000	18796968	4666881	8168	20420	571		
317.9389	17.598	17.598	0	1.000	24395483	6066397	3473	8682	1747	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.002	41629702	9682578	19585	48962	494		
305.8987	17.628	17.631	0	1.002	54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.133	17.311	-130	0.860	24509538	7569037	19585	48962	386		
305.8987	15.133	17.311	-130	0.860	31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
303.9016	18.505	17.311	72	1.052	18061189	4195885	19585	48962	214		
305.8987	18.505	17.311	72	1.052	23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
303.9016	19.488	17.311	130	1.107	18098944	4035450	19585	48962	206		
305.8987	19.488	17.311	130	1.107	23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
303.9016	19.775	17.311	148	1.124	944774	152570	19585	48962	8		
305.8987	19.775	17.311	148	1.124	1203354	204203	28414	71035	7	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.000	10063481	2396990	3086	7715	777		
333.9339	18.323	18.323	0	1.000	12580244	3018588	1527	3817	1977	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.357	-1	1.001	13597515	3193209	6116	15290	522		
321.8936	18.338	18.357	-1	1.001	17404785	4135946	8817	22042	469	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	16.071	17.772	-102	0.877	14103074	4061475	6116	15290	664		
321.8936	16.071	17.772	-102	0.877	18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
319.8965	18.218	17.772	27	0.994	11446127	2829889	6116	15290	463		
321.8936	18.218	17.772	27	0.994	14808791	3726958	8817	22042	423	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	18.505	17.772	44	1.010	14439496	3301963	6116	15290	540		
321.8936	18.505	17.772	44	1.010	18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
319.8965	19.472	17.772	102	1.063	12707183	2751784	6116	15290	450		
321.8936	19.472	17.772	102	1.063	16522096	3661962	8817	22042	415	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.760	20.244	-29	1.000	22414023	4920048	649	1622	7581		
341.8567	19.760	20.244	-29	1.000	14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.344	23.473	-127	1.000	84191	14080	2633	6582	5		
341.8567	21.344	23.473	-127	1.000	53909	7615	1950	4875	4	1.56(1.32-1.78)	
339.8597	22.176	23.473	-78	1.000	88076	13805	2633	6582	5		
341.8567	22.190	23.473	-77	1.000	48170	9635	1950	4875	5	1.83(1.32-1.78)	
339.8597	22.749	23.473	-43	1.000	168309	20506	2633	6582	8		
341.8567	22.762	23.473	-43	1.000	82177	12827	1950	4875	7	2.05(1.32-1.78)	
339.8597	23.321	23.473	-9	1.000	142716	22963	2633	6582	9		
341.8567	23.321	23.473	-9	1.000	79356	11480	1950	4875	6	1.80(1.32-1.78)	
339.8597	26.144	23.473	160	1.000	17301746	2425915	2633	6582	921		
341.8567	26.144	23.473	160	1.000	10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.576	23.744	-130	1.000	14314296	2552271	2414	6035	1057		
357.8516	21.576	23.744	-130	1.000	9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
355.8546	25.912	23.744	130	1.000	12881489	1801570	2414	6035	746		
357.8516	25.912	23.744	130	1.000	8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	32.605	30.542	124	1.000	15534015	4607321	4603	11507	1001		
375.8178	32.605	30.542	124	1.000	12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.023	31.215	-71	1.000	12175655	1922535	6506	16265	296		
391.8127	30.023	31.215	-71	1.000	9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
389.8157	32.299	31.215	65	1.000	11903453	3254284	6506	16265	500		
391.8127	32.299	31.215	65	1.000	9583027	2649988	5715	14287	464	1.24(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.911	33.926	-1	1.000	14581587	4505694	20273	50682	222		
409.7789	33.911	33.926	-1	1.000	13908844	4348275	17441	43602	249	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.005	35.020	-1	1.000	11106344	3153936	20273	50682	156		
409.7789	35.005	35.020	-1	1.000	10638036	3040493	17441	43602	174	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						20273	50682			
409.7789	34.458						17441	43602			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.726	-1	1.000	8809155	2526480	13831	34577	183		
425.7737	34.714	34.726	-1	1.000	8359672	2427581	13744	34360	177	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						13831	34577			
425.7737	33.504						13744	34360			
1,3,6,8-TCDF											a
303.9016	15.133	15.133	0		24509538	7569037	19585	48962	386		a
305.8987	15.133	15.133	0		31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
1,3,6,8-TCDD											a
319.8965	16.071	16.071	0		14103074	4061475	6116	15290	664		a
321.8936	16.071	16.071	0		18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
2,3,4,7-TCDF											a
303.9016	17.628	17.628	0		41629702	9682578	19585	48962	494		a
305.8987	17.628	17.628	0		54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
1,2,3,7-TCDD											a
319.8965	18.218	18.218	0		11446127	2829889	6116	15290	463		a
321.8936	18.218	18.218	0		14808791	3726958	8817	22042	423	0.77(0.65-0.89)	
1,2,3,9-TCDF											a
303.9016	18.505	18.505	0		18061189	4195885	19585	48962	214		a
305.8987	18.505	18.505	0		23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
1,2,3,9-TCDD											a
319.8965	18.505	18.505	0		14439496	3301963	6116	15290	540		a
321.8936	18.505	18.505	0		18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
1,2,8,9-TCDD											a
319.8965	19.472	19.472	0		12707183	2751784	6116	15290	450		a
1,2,8,9-TCDF											a
303.9016	19.488	19.488	0		18098944	4035450	19585	48962	206		a
305.8987	19.488	19.488	0		23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
1,3,4,6,8-PeCDF											a
339.8597	19.760	19.760	0		22414023	4920048	649	1622	7581		a
341.8567	19.760	19.760	0		14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	21.576	21.576	0		14314296	2552271	2414	6035	1057		a
357.8516	21.576	21.576	0		9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											a
355.8546	25.912	25.912	0		12881489	1801570	2414	6035	746		a
357.8516	25.912	25.912	0		8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	26.144	26.144	0		17301746	2425915	2633	6582	921		a
341.8567	26.144	26.144	0		10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											a
373.8208	28.479	28.479	0		16406487	2121744	4603	11507	461		a
375.8178	28.479	28.479	0		13479530	1752621	3729	9322	470	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											a
389.8157	30.023	30.023	0		12175655	1922535	6506	16265	296		a
391.8127	30.023	30.023	0		9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											a
389.8157	32.299	32.299	0		11903453	3254284	6506	16265	500		a
391.8127	32.299	32.299	0		9583027	2649988	5715	14287	464	1.24(1.05-1.43)	

Report Date: 27-Jul-2021 15:09:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,8,9-HxCDF											a
373.8208	32.605	32.605	0		15534015	4607321	4603	11507	1001		a
375.8178	32.605	32.605	0		12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.154						13831	34577			
425.7737	34.154						13744	34360			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	43192451	10733278

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	43192451	10733278

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.133	24509538	7569037	31235425	9722736	50.4	0.78	
18.505	18061189	4195885	23403830	5509968	37.5	0.77	
19.488	18098944	4035450	23883568	5304928	38.0	0.76	
19.775	944774	152570	1203354	204203	1.94	0.79	
Signal Totals:	61614445	15952942	79726177	20741835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141340622	36694777				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 127.837 = (141340622 * 40.000) / (43192451 * 1.024)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	22643725	5415578

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	22643725	5415578

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.071	14103074	4061475	18054837	5166402	45.3	0.78	
18.218	11446127	2829889	14808791	3726958	37.0	0.77	
18.505	14439496	3301963	18237650	4248308	46.0	0.79	
19.472	12707183	2751784	16522096	3661962	41.2	0.77	
Signal Totals:							
	52695880	12945111	67623374	16803630			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	120319254	29748741				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 169.476 = (120319254 * 40.000) / (22643725 * 1.254)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

F1 PeCDFs, RT: 20.244

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.760	22414023	4920048	14134188	3116108		1.59	
Signal Totals:							
	22414023	4920048	14134188	3116108			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	36548211	8036156				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (36548211 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.344	84191	14080	53909	7615		1.56	
22.176	88076	13805	48170	9635		1.83	R
22.749	168309	20506	82177	12827		2.05	R
23.321	142716	22963	79356	11480		1.80	R
26.144	17301746	2425915	10724566	1530575		1.61	
Signal Totals:							
	17785038	2497269	10988178	1572132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28773216	4069401				1.62	RQ
	28699153	4064735					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (28773216 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (28699153 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.744

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.576	14314296	2552271	9055672	1599456		1.58	
25.912	12881489	1801570	8115747	1169053		1.59	
Signal Totals:							
	27195785	4353841	17171419	2768509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	44367204	7122350				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (44367204 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.542

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
32.605	15534015	4607321	12652171	3734547		1.23	
Signal Totals:							
	15534015	4607321	12652171	3734547			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	988216341	287497877				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (988216341 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 31.215

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.023	12175655	1922535	9592802	1497827		1.27	
32.299	11903453	3254284	9583027	2649988		1.24	
Signal Totals:							
	24079108	5176819	19175829	4147815			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43254937	9324634				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43254937 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

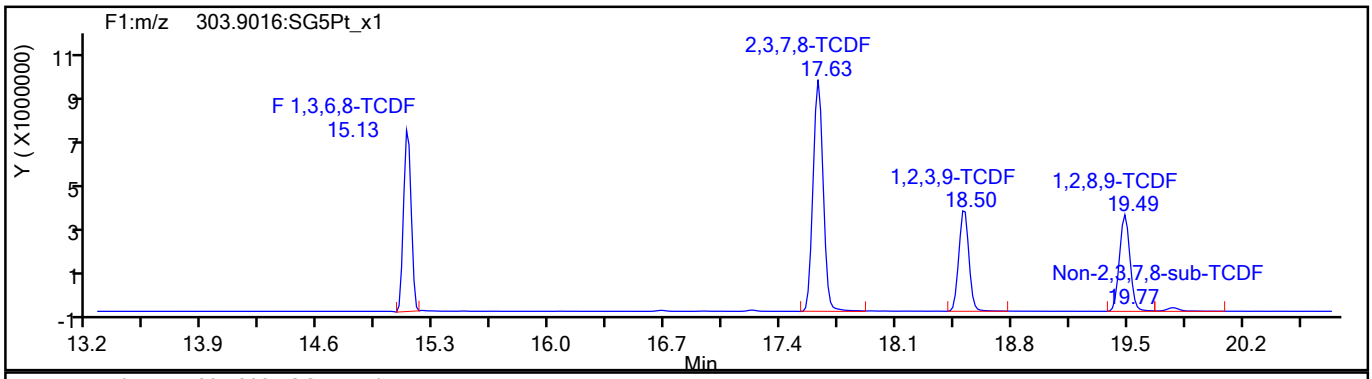

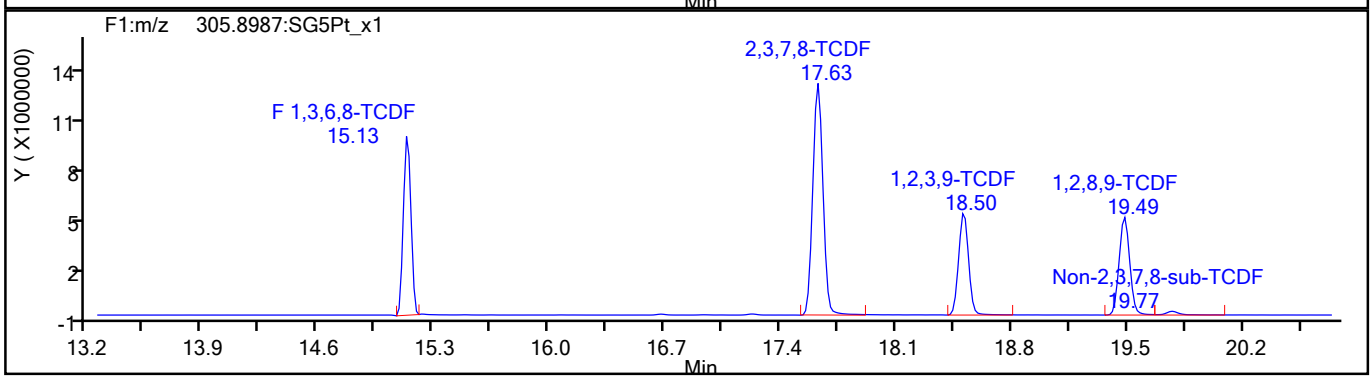

TCDF Standards

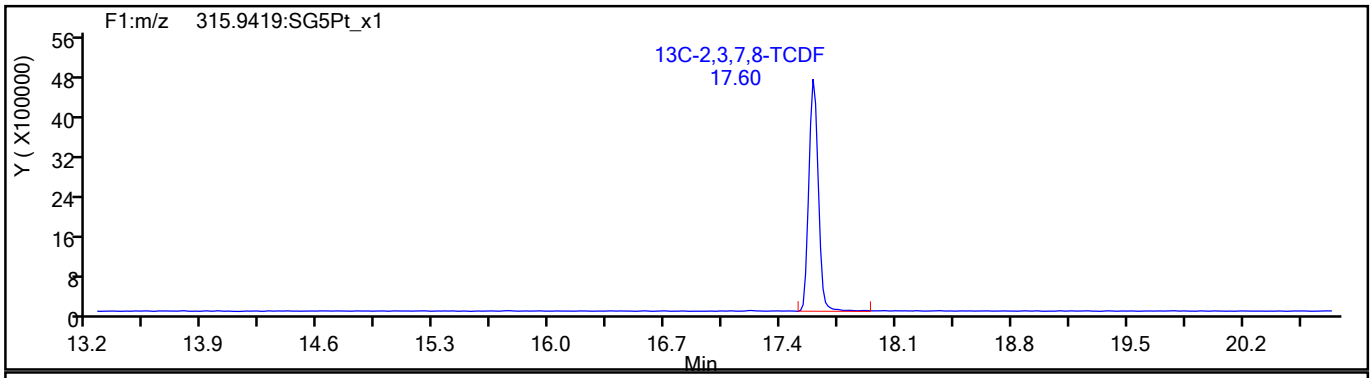

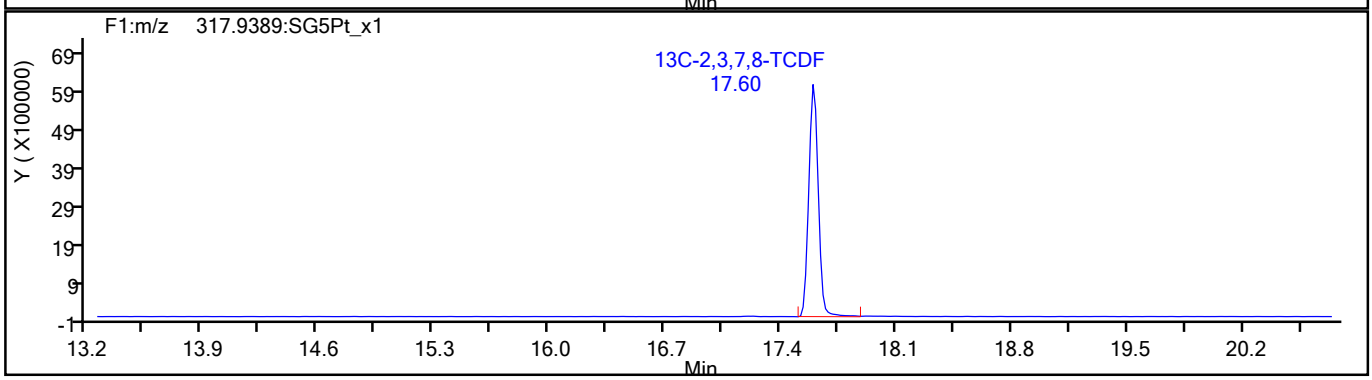

777058

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

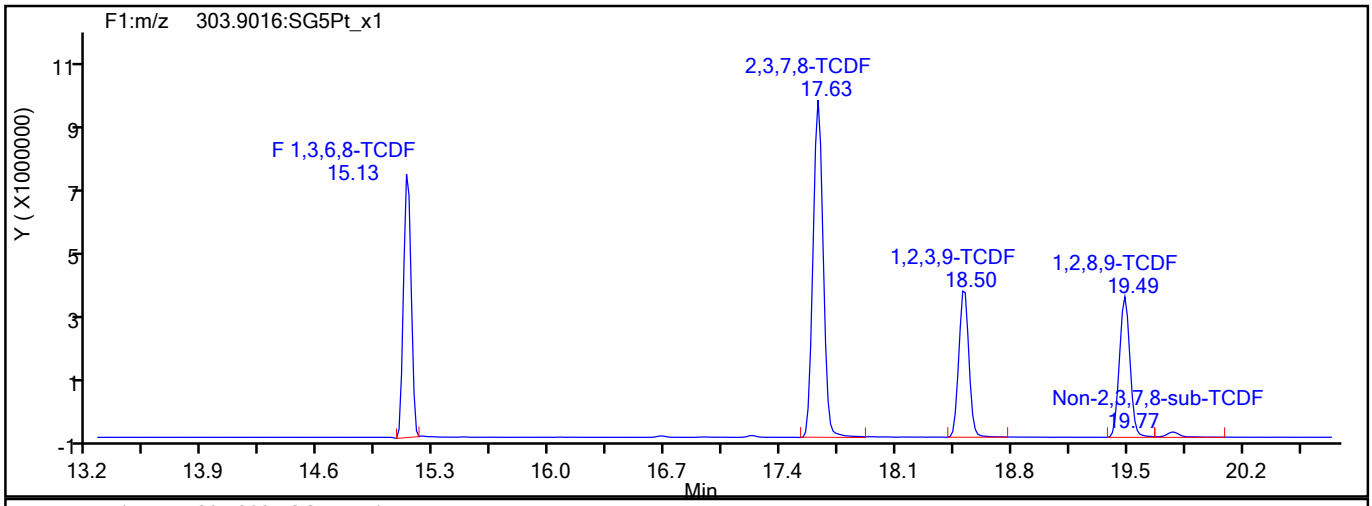

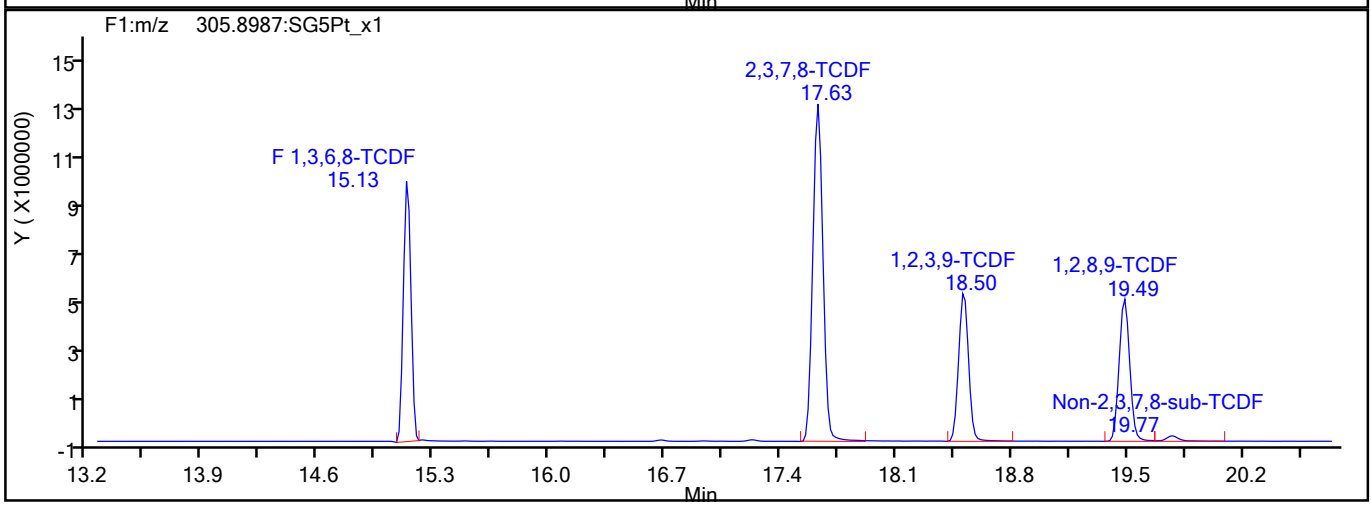

TCDF Interference Mass

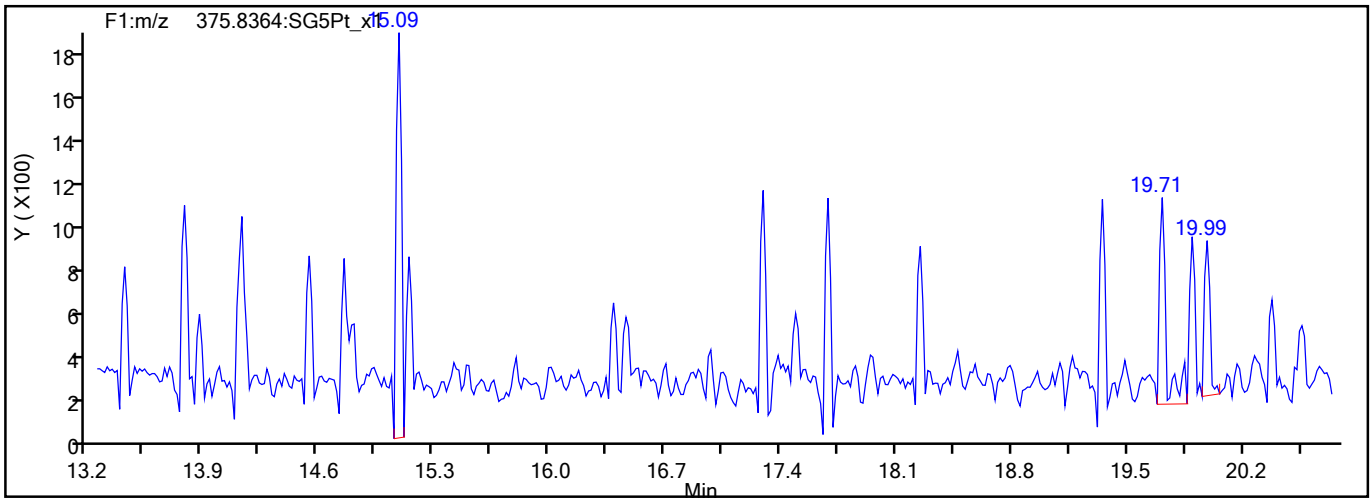

777059

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

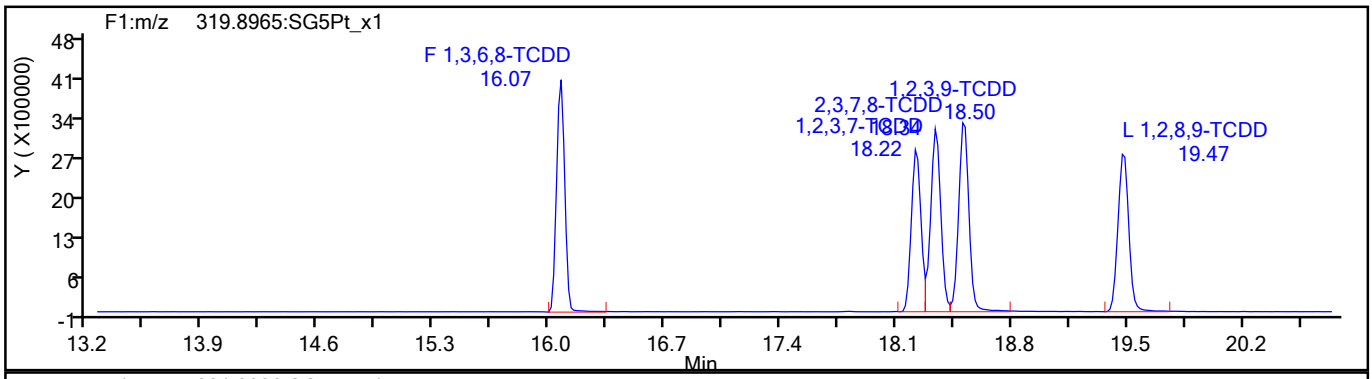

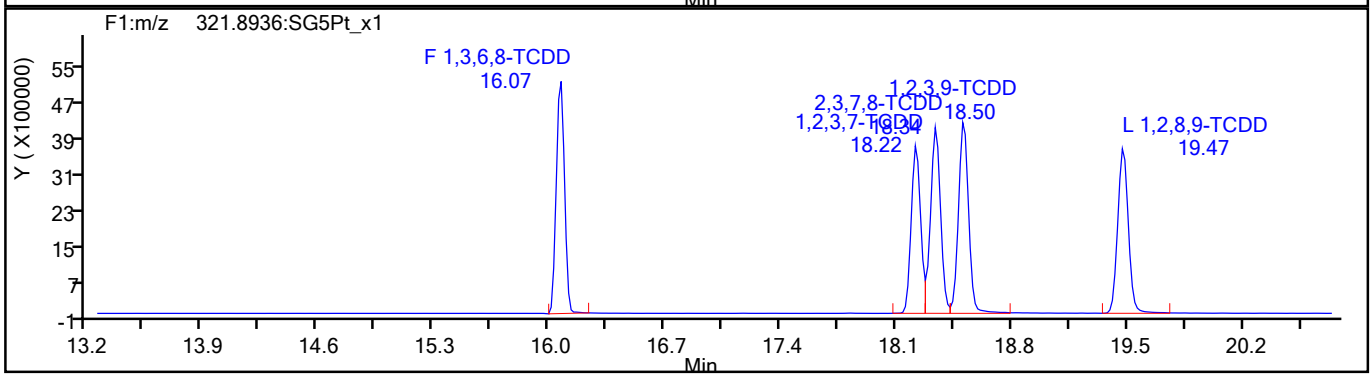

TCDD Standards

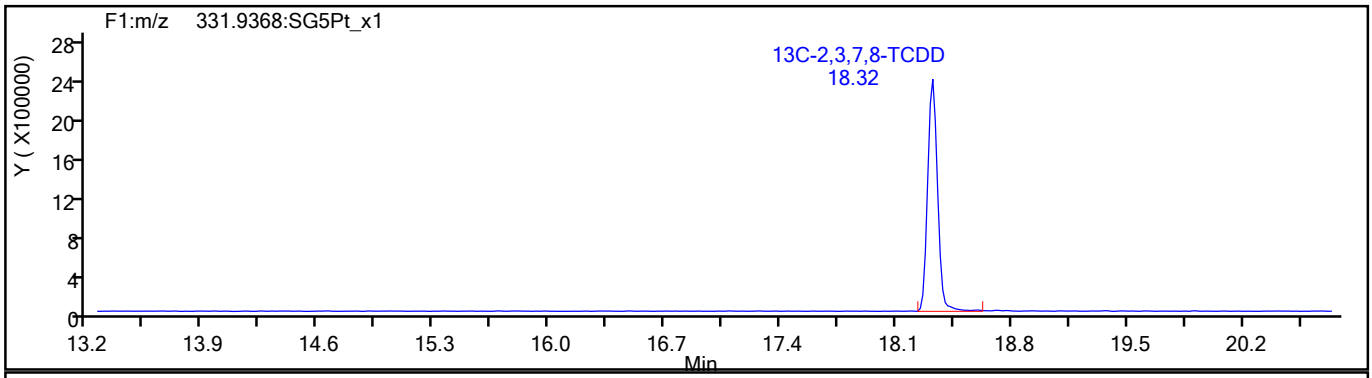

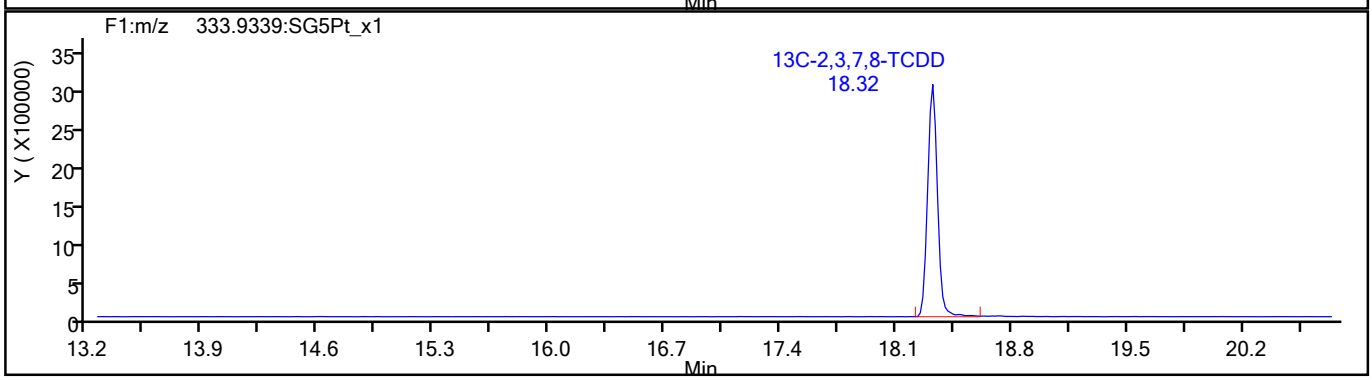

777060

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

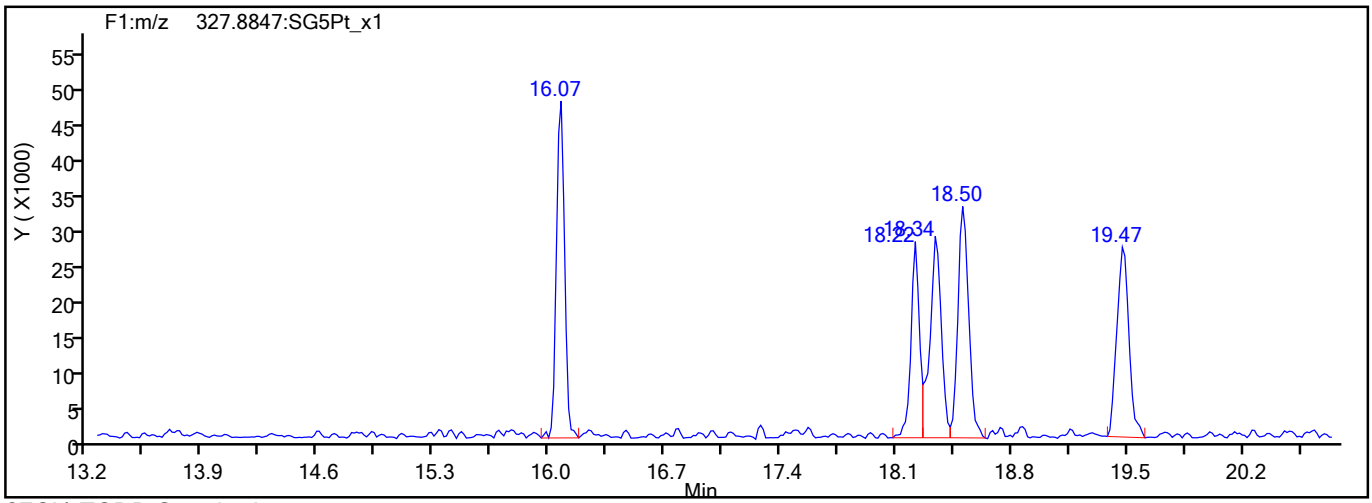

37Cl4-TCDD Standards

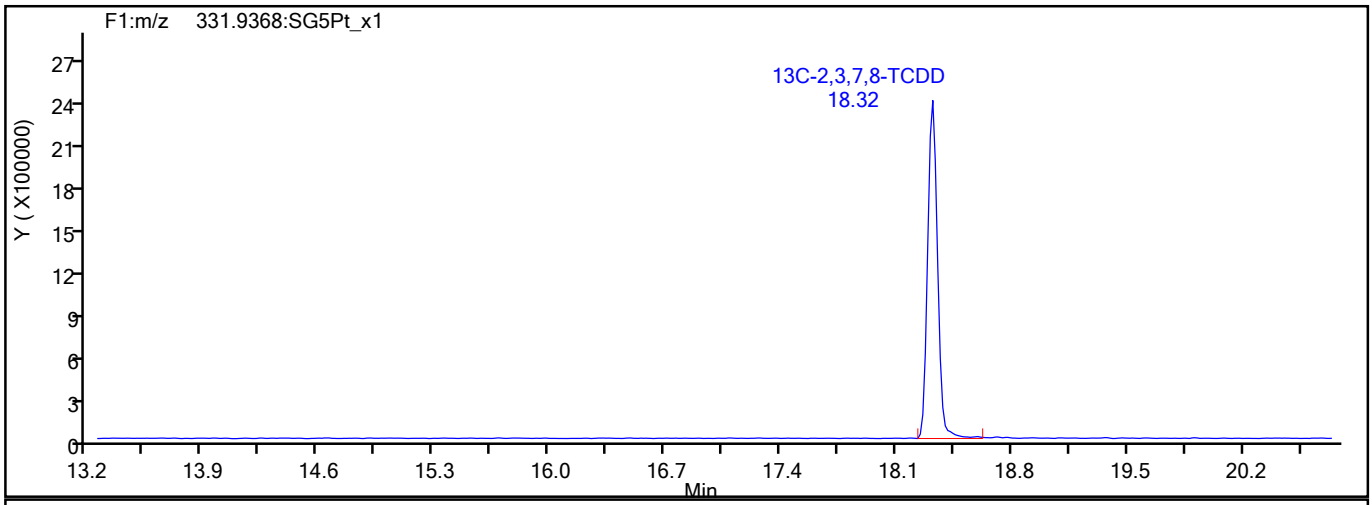

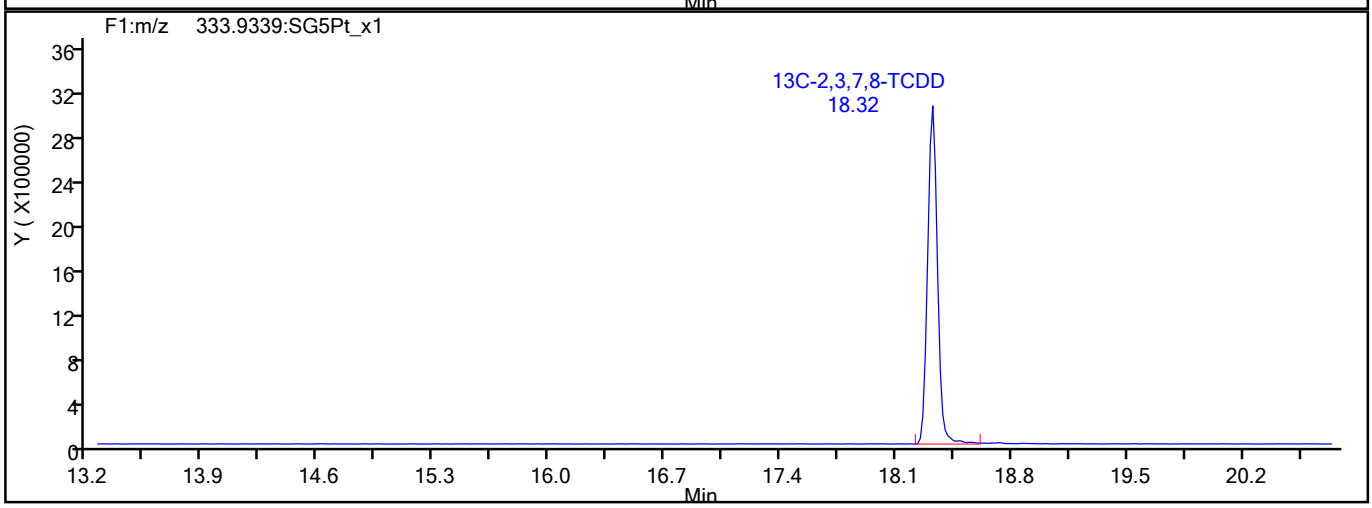

777061

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

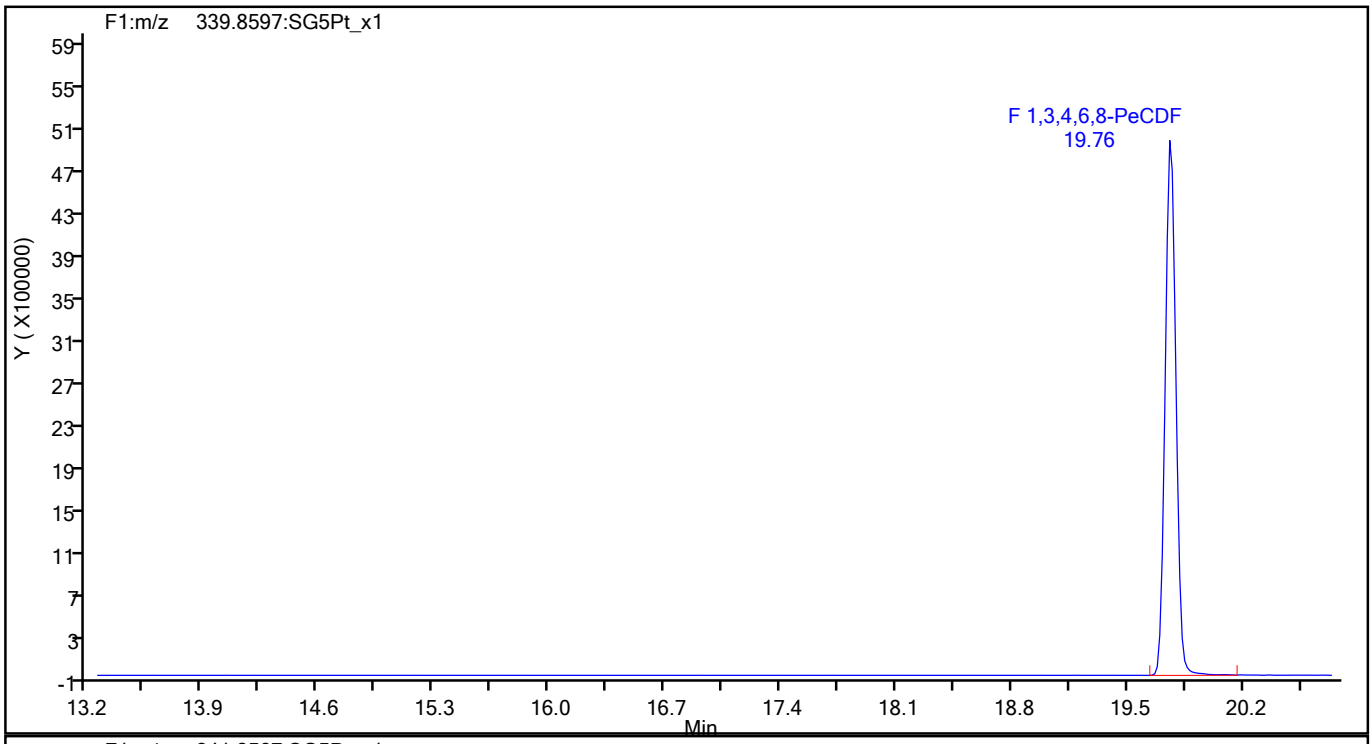

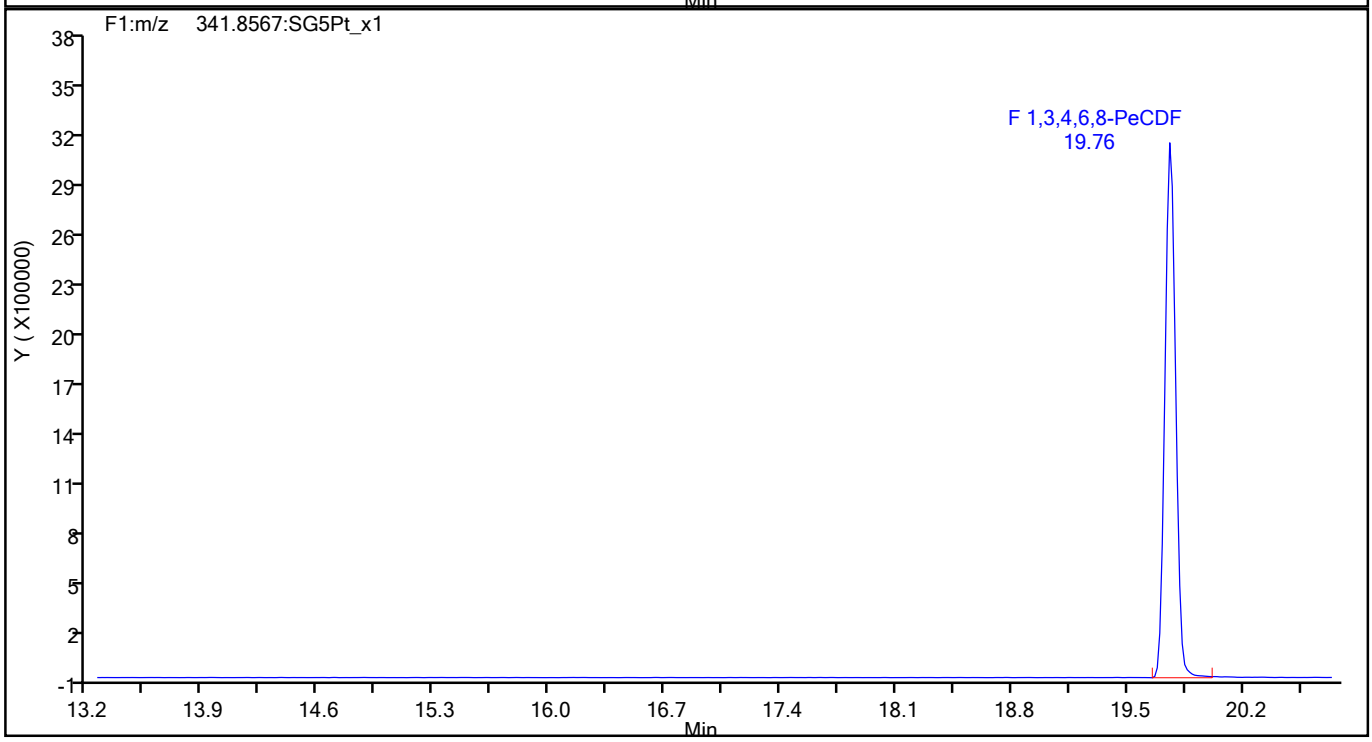

777062

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

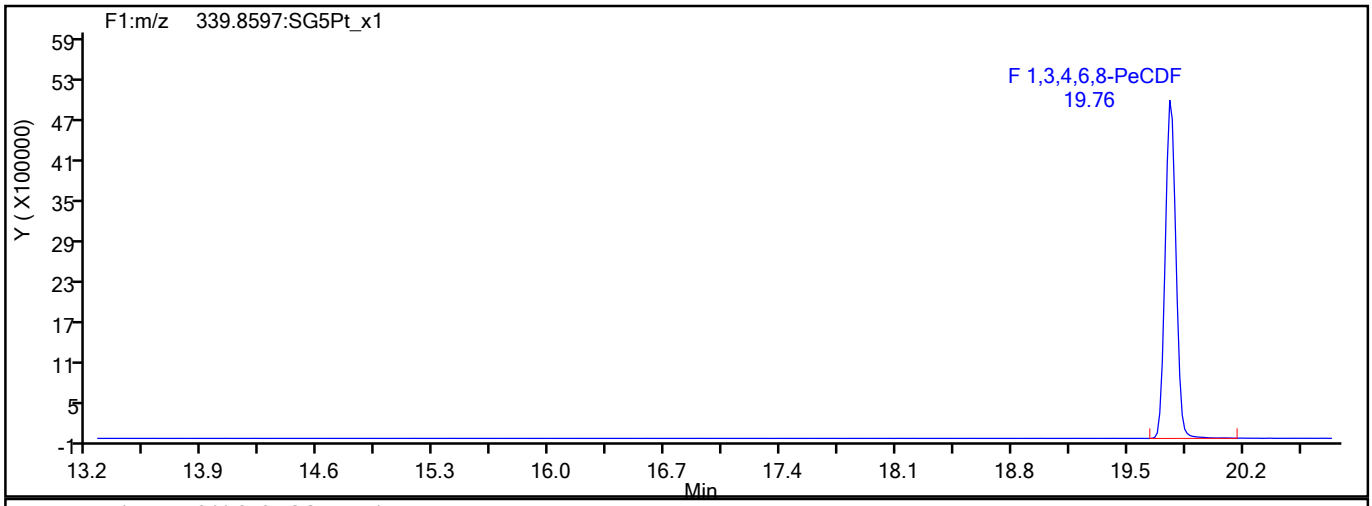

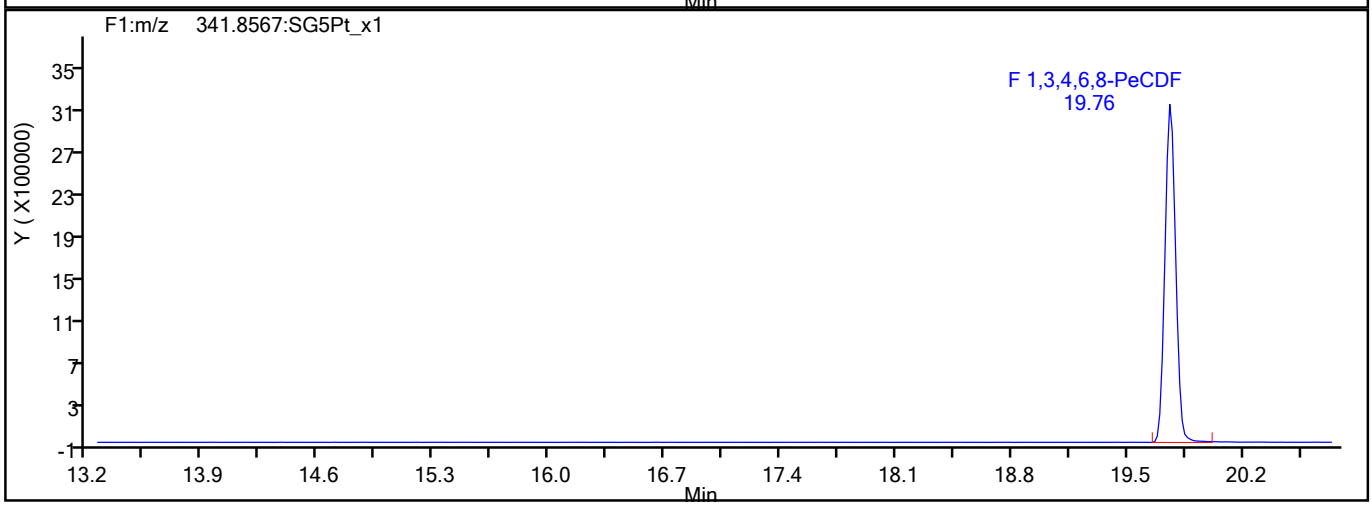

F1 PeCDFs Interference Mass

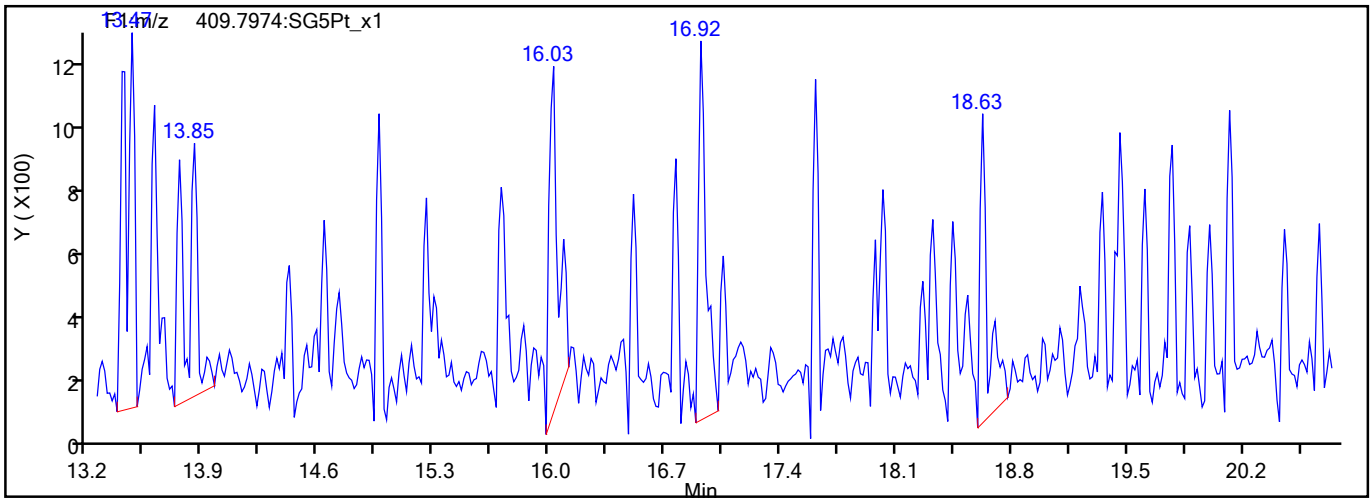

777063

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

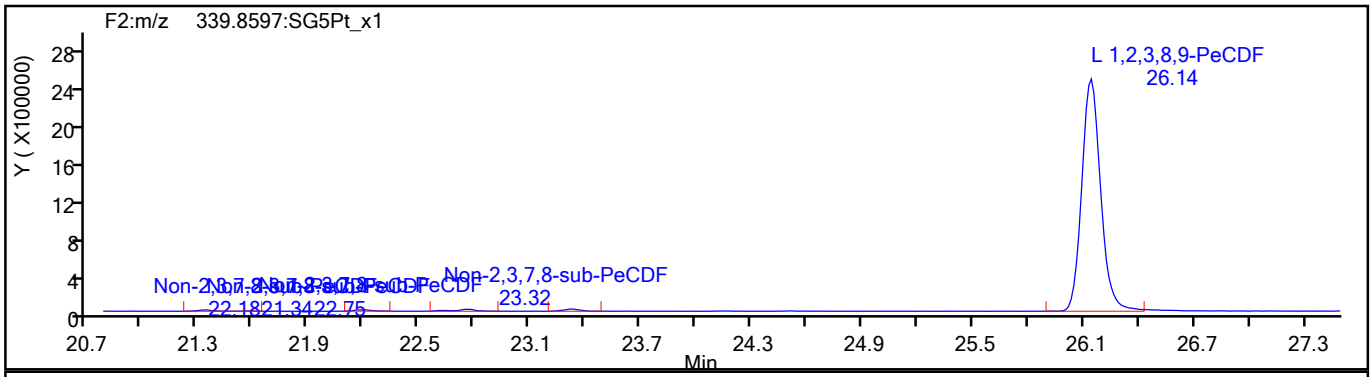

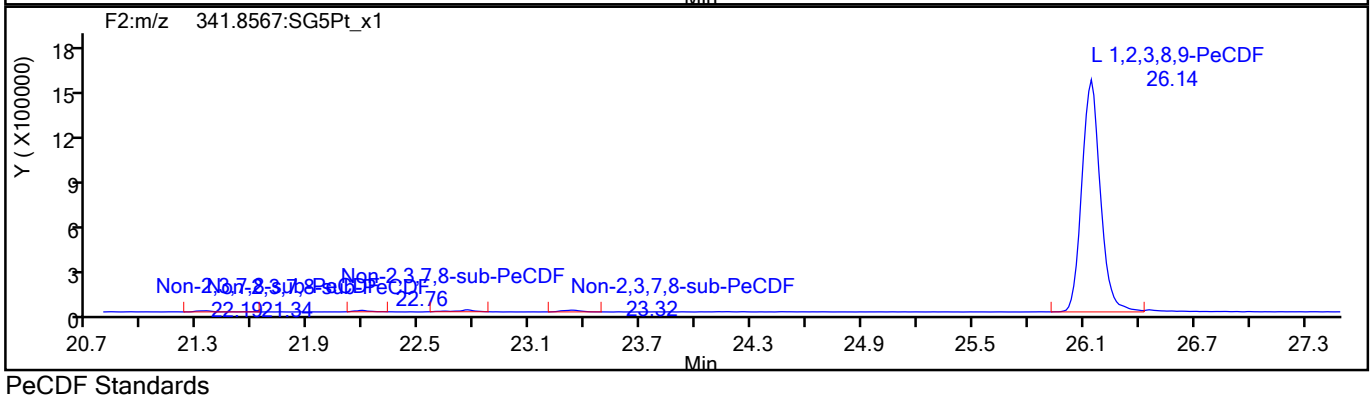

PeCDF Standards

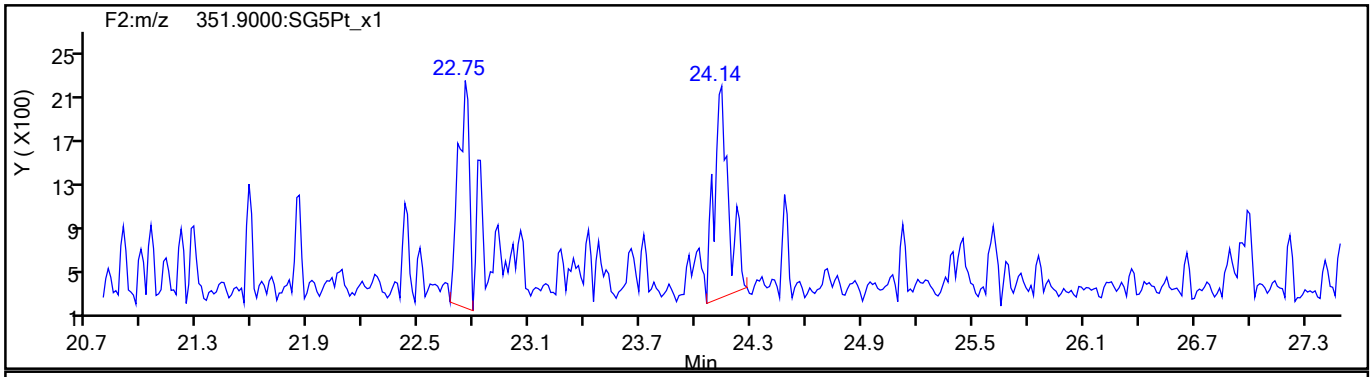

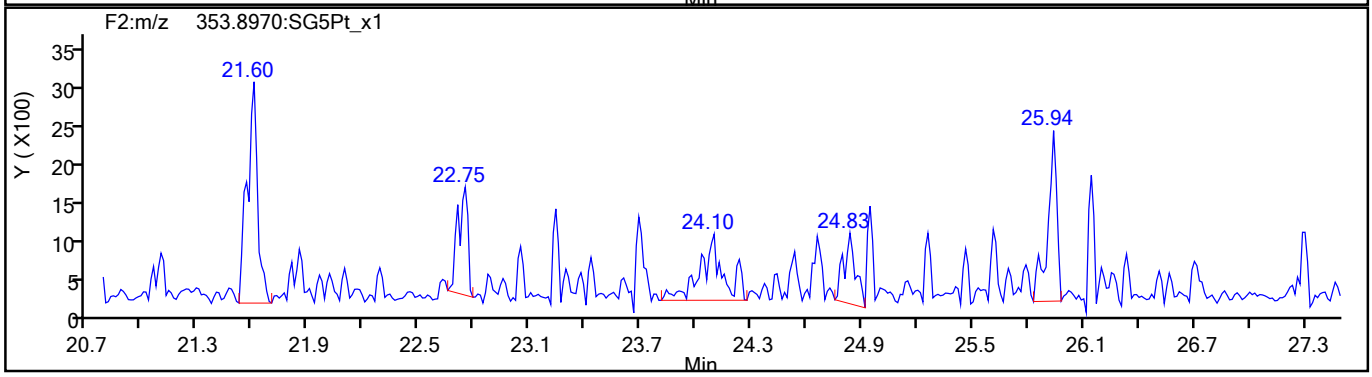

777064

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Eurofins TestAmerica, Sacramento

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PeCDF

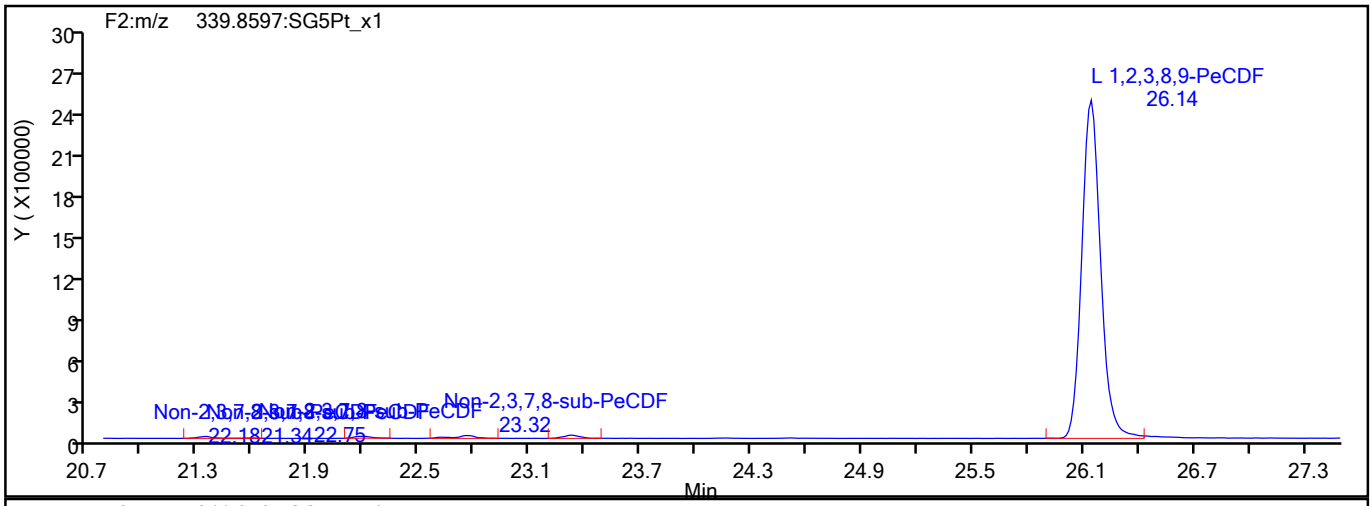

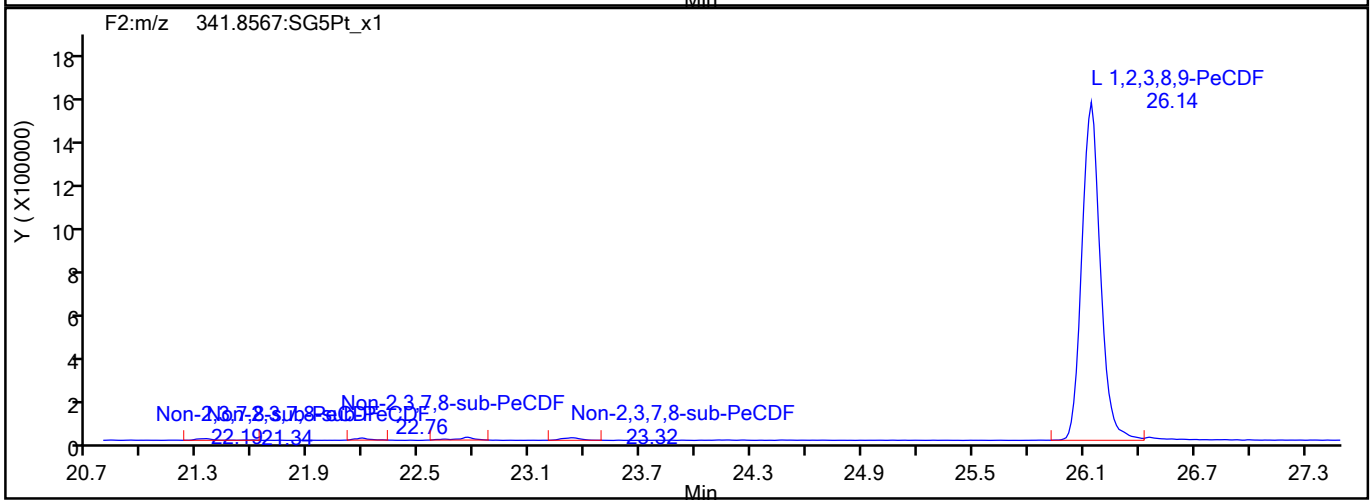

PeCDF Interference Mass

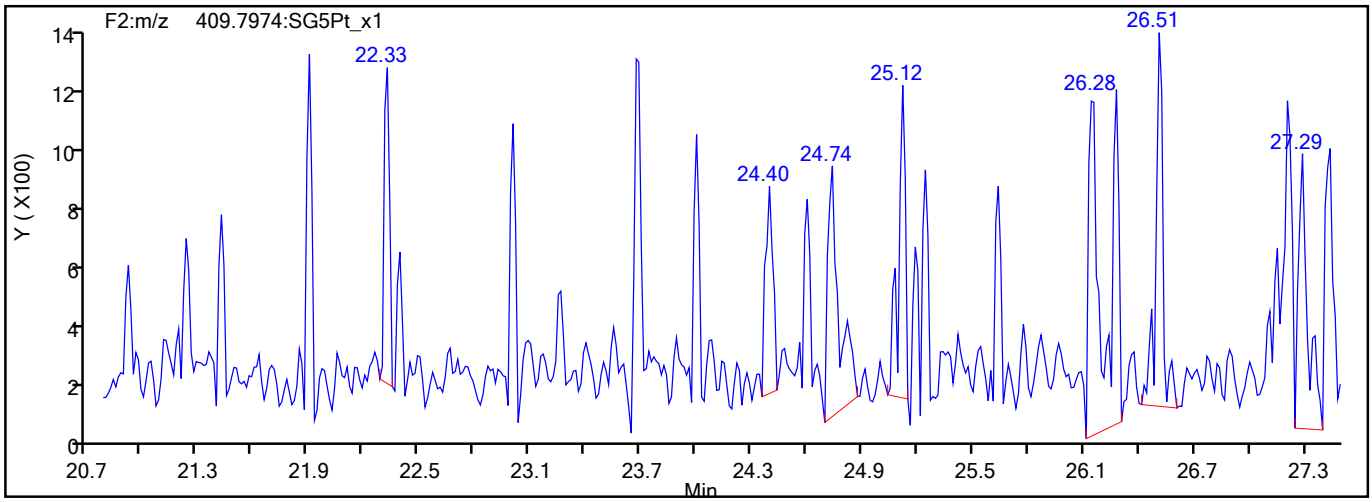

777065

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

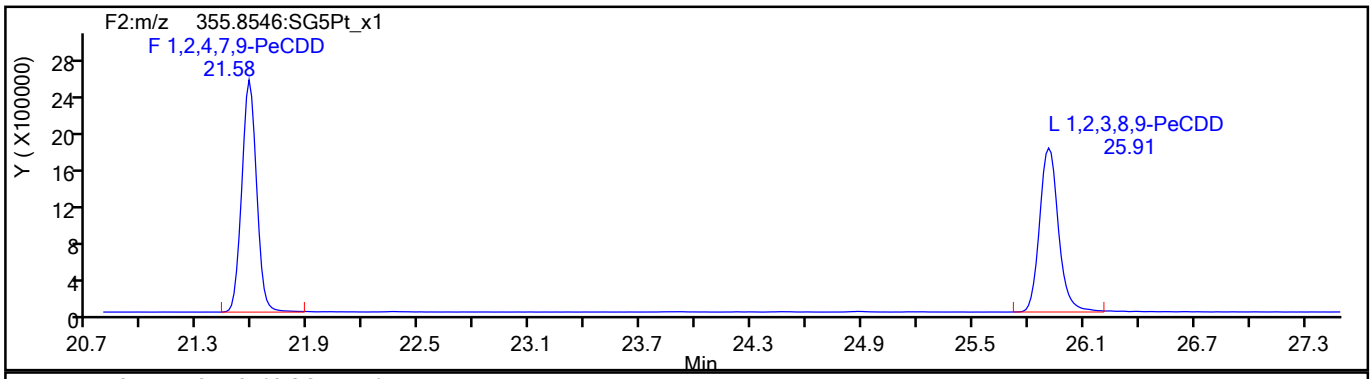

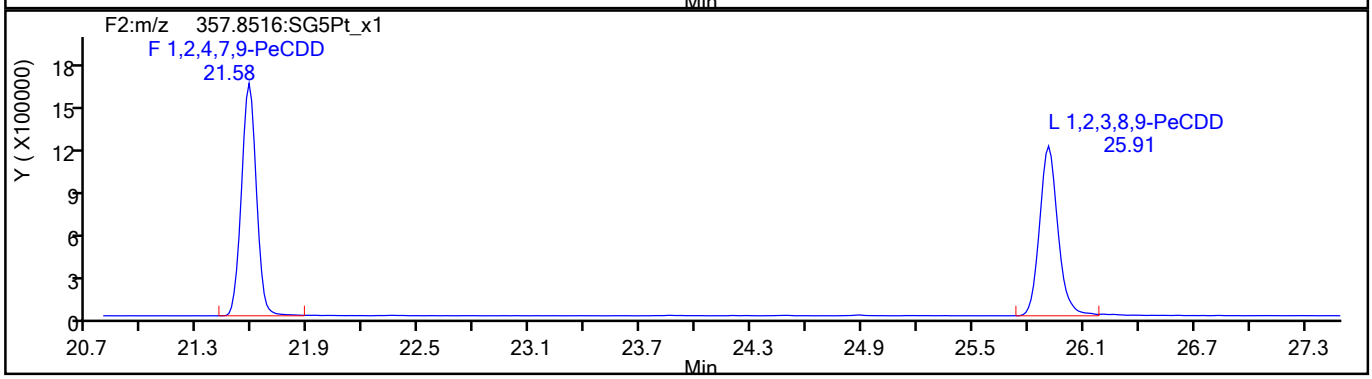

PeCDD Standards

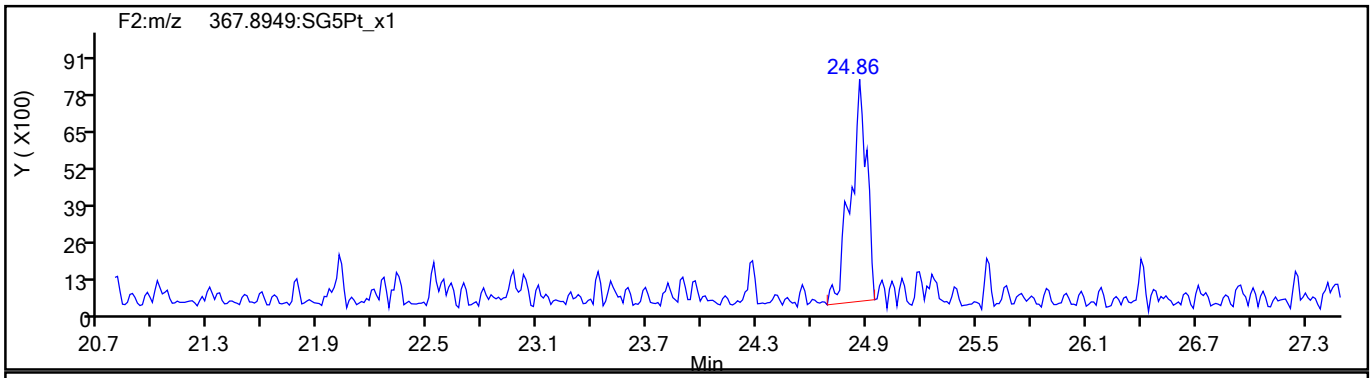

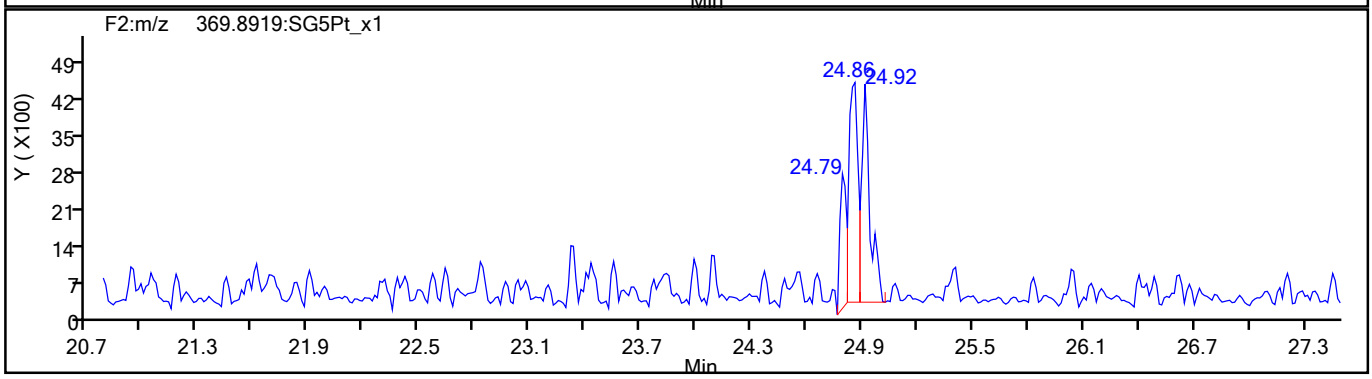

777066

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

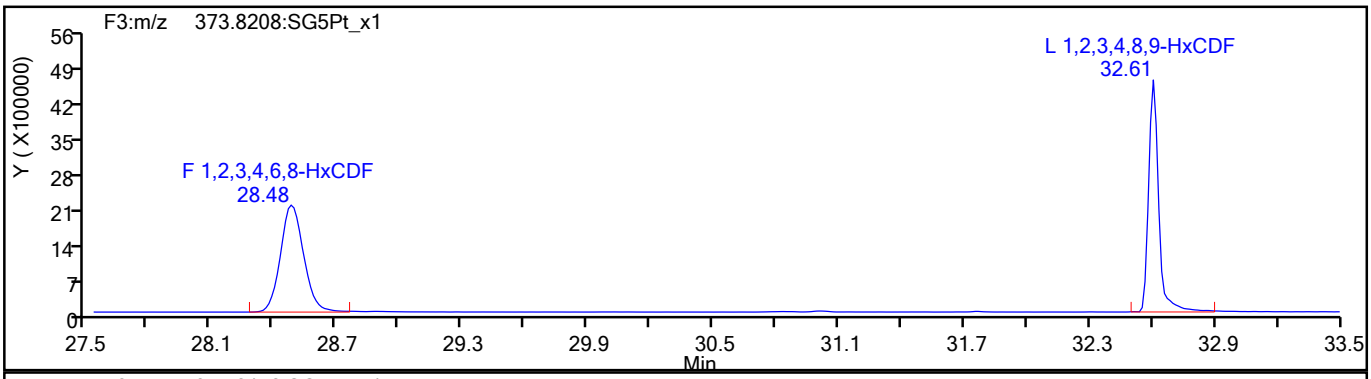

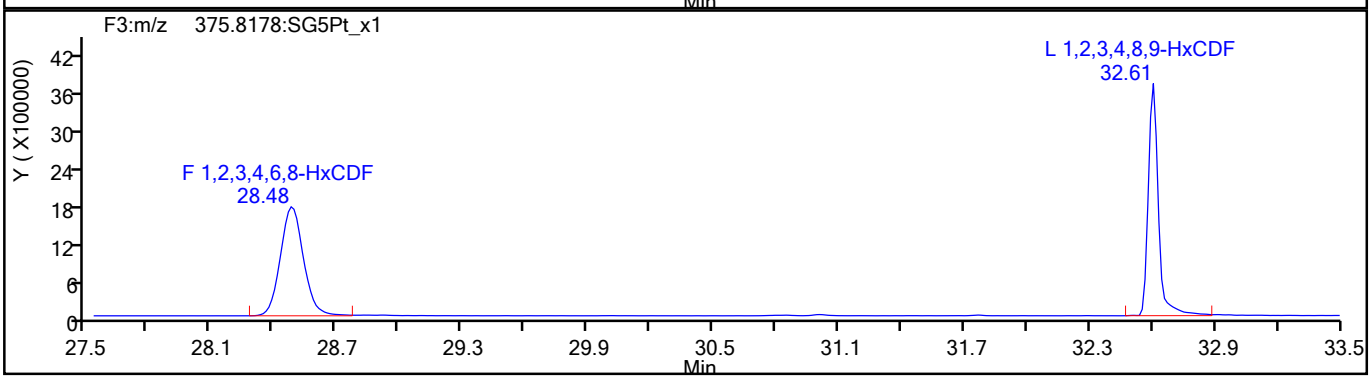

HxCDF Standards

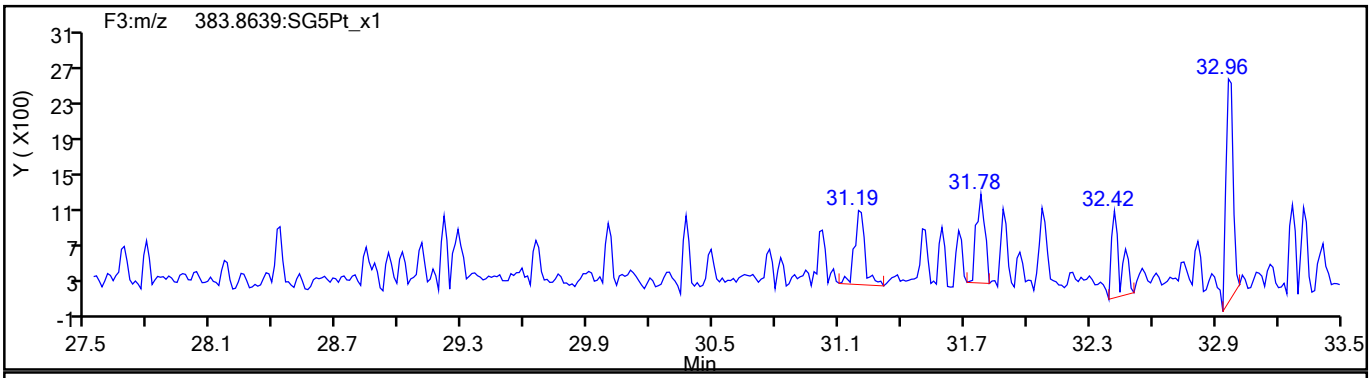

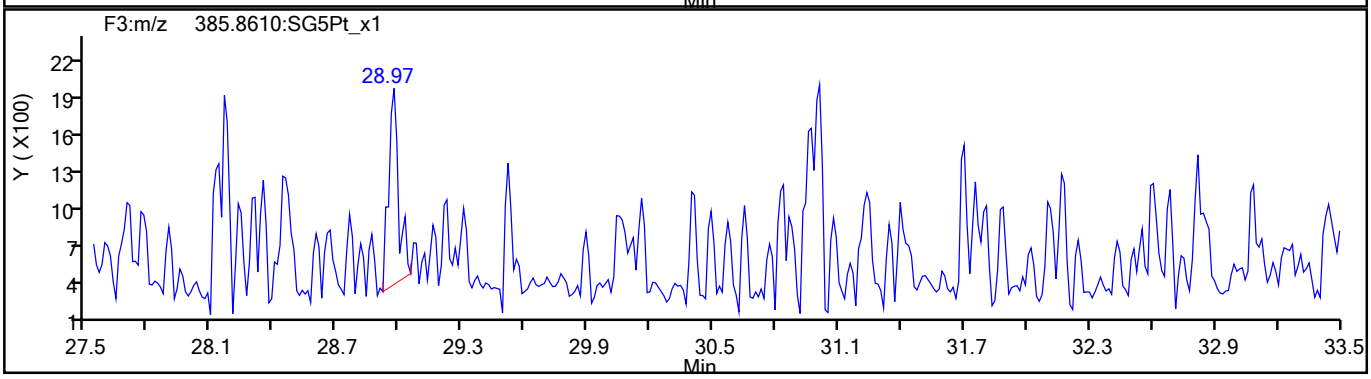

777067

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

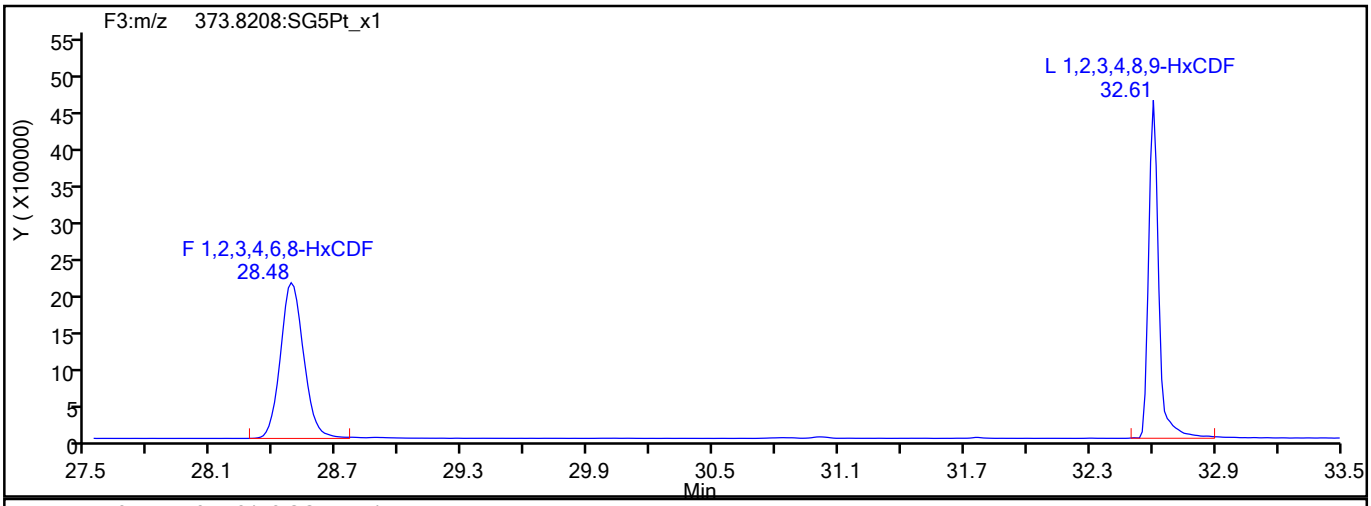

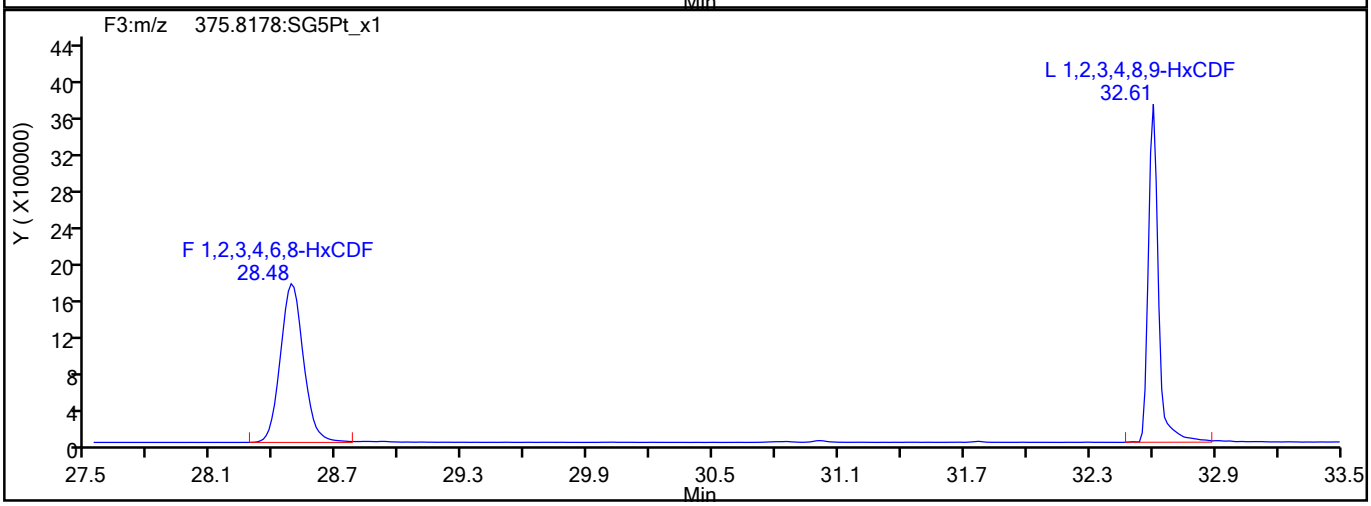

HxCDF Interference Mass

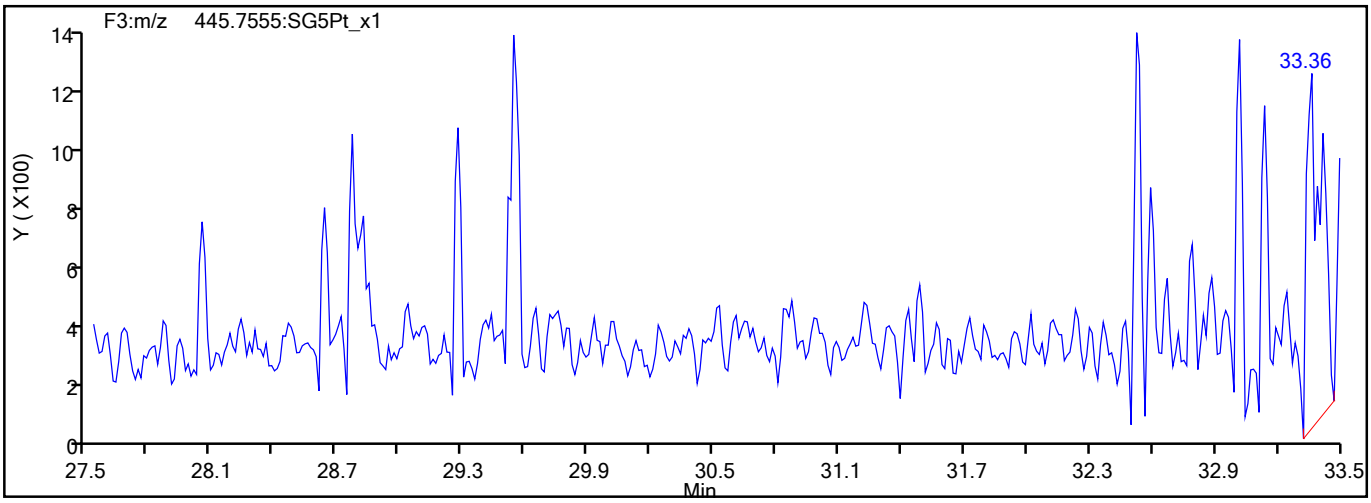

777068

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

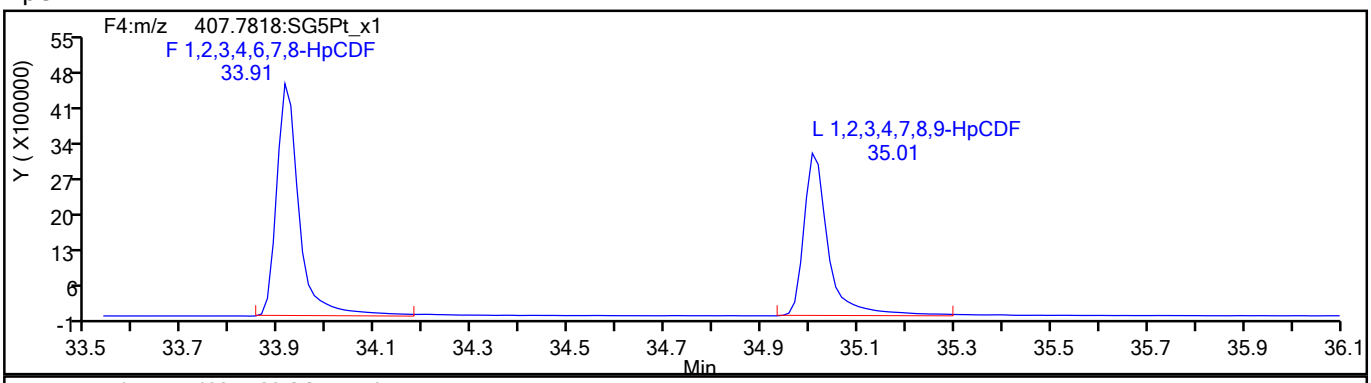

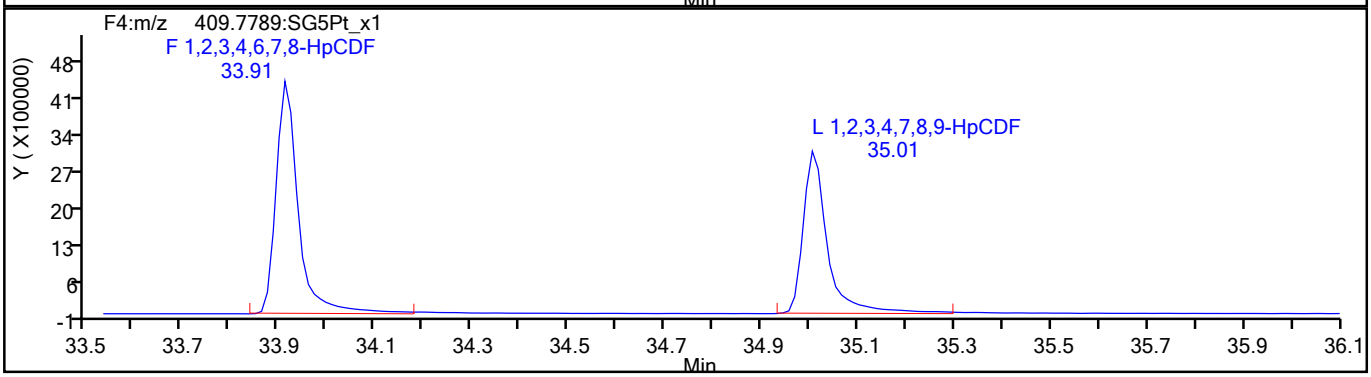

HpCDF Standards

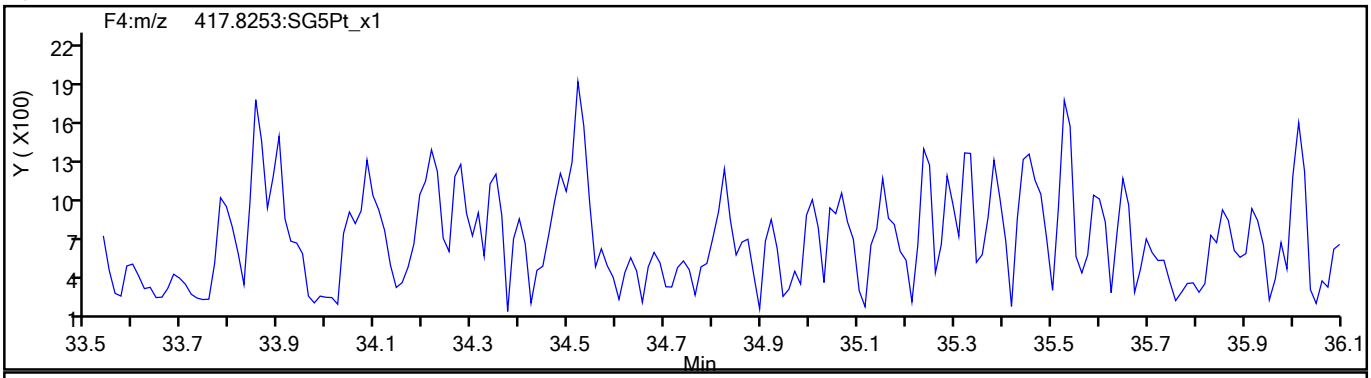

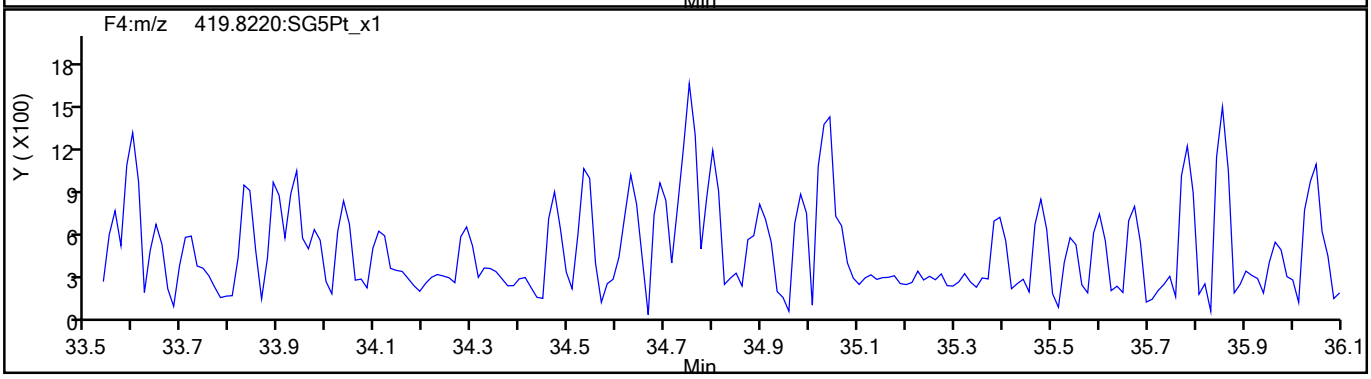

777069

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

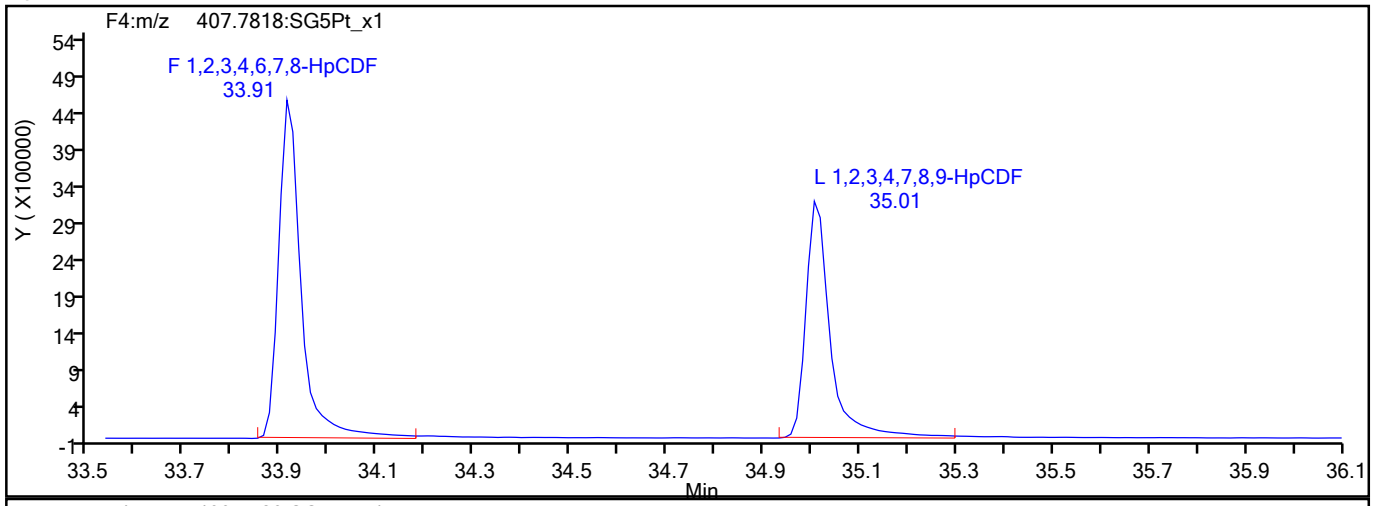

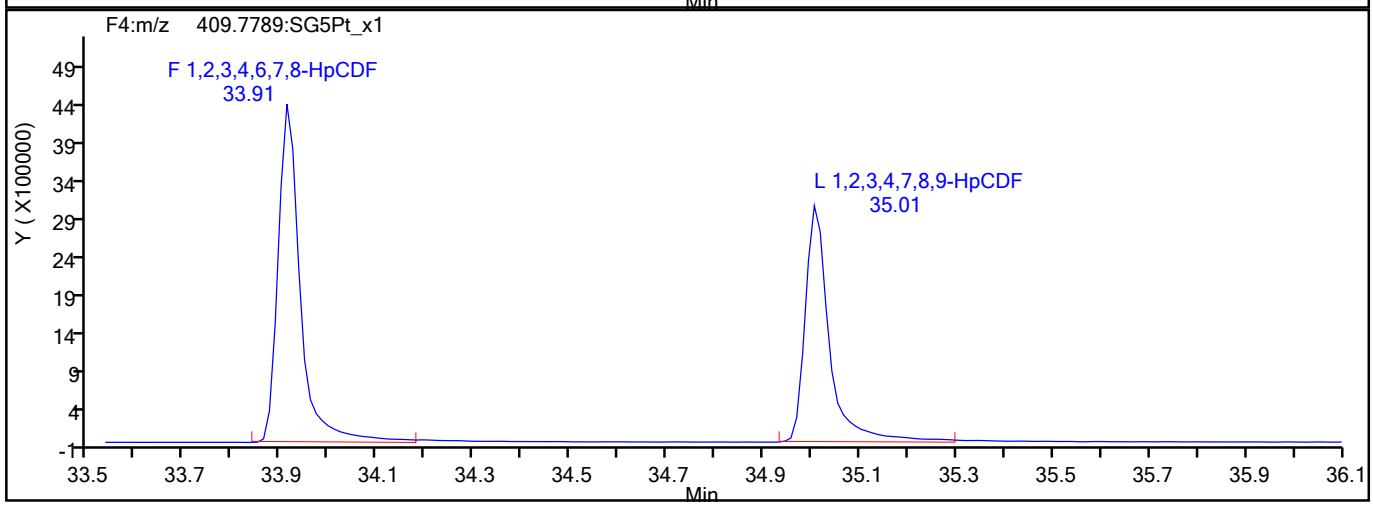

HpCDF Interference Mass

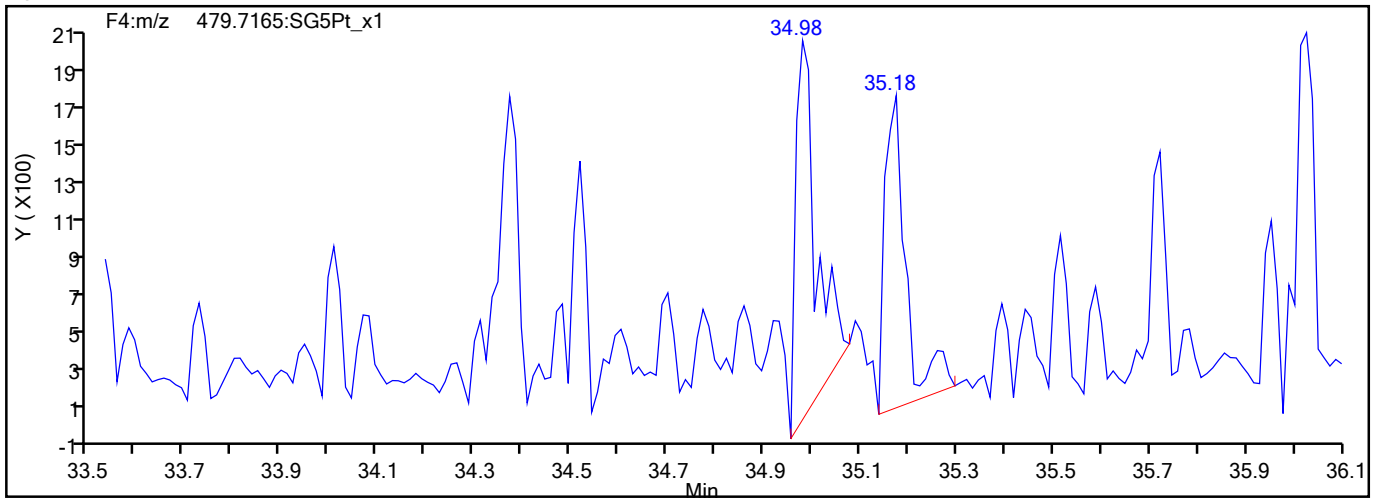

777070

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

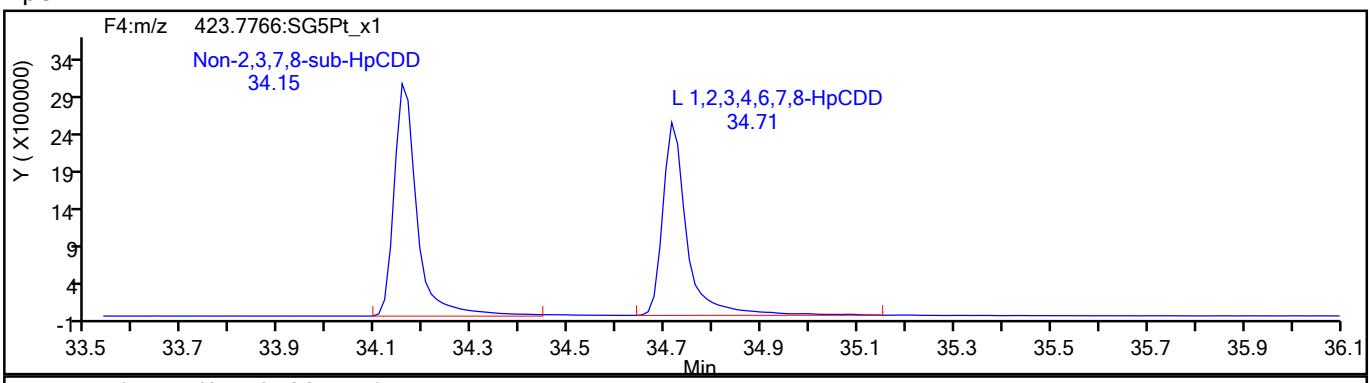

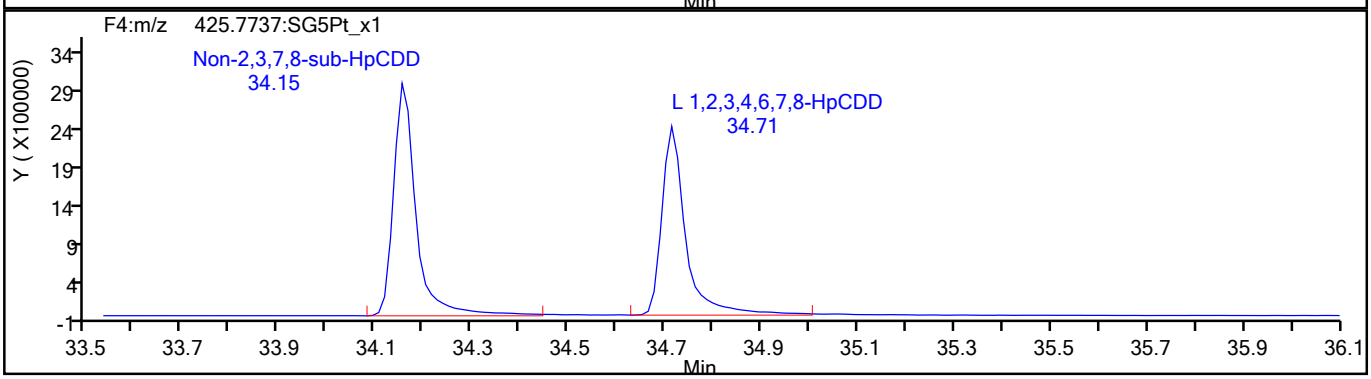

HpCDD Standards

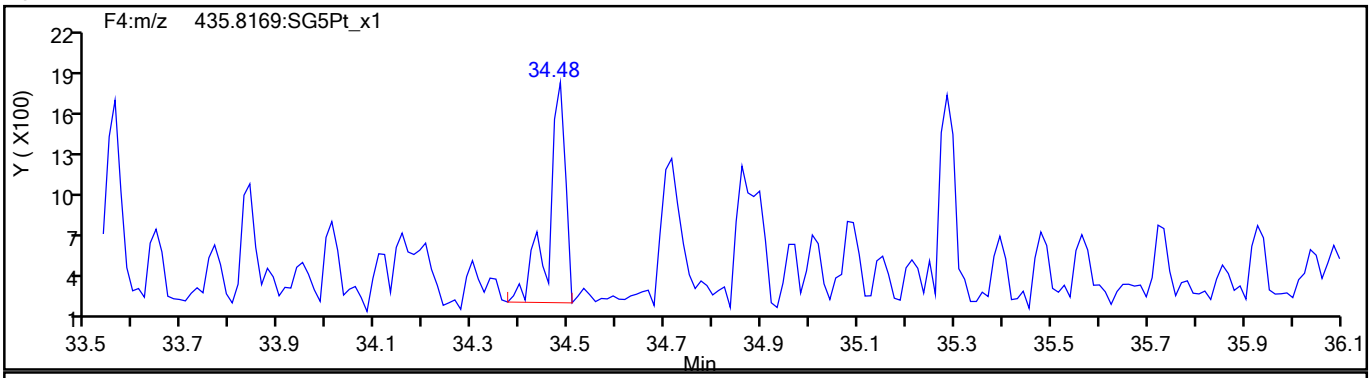

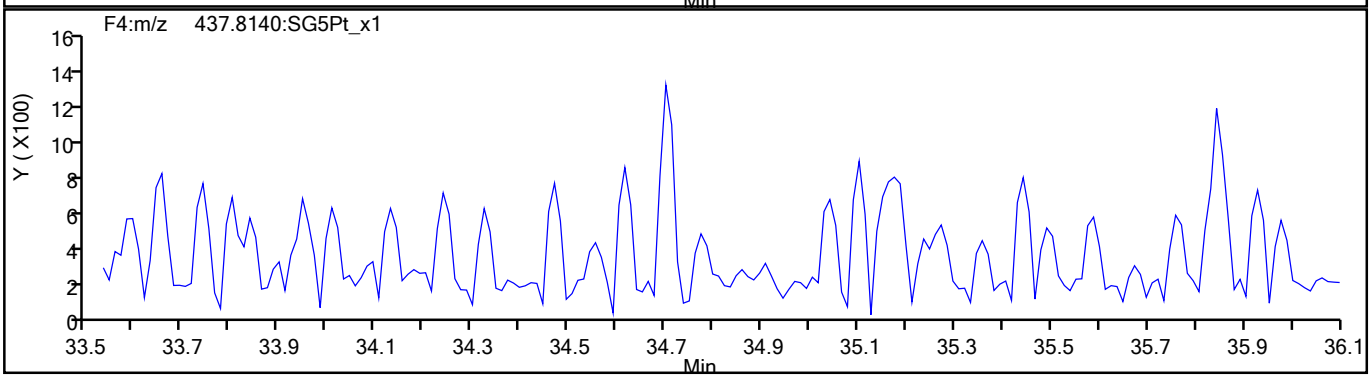

777071

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

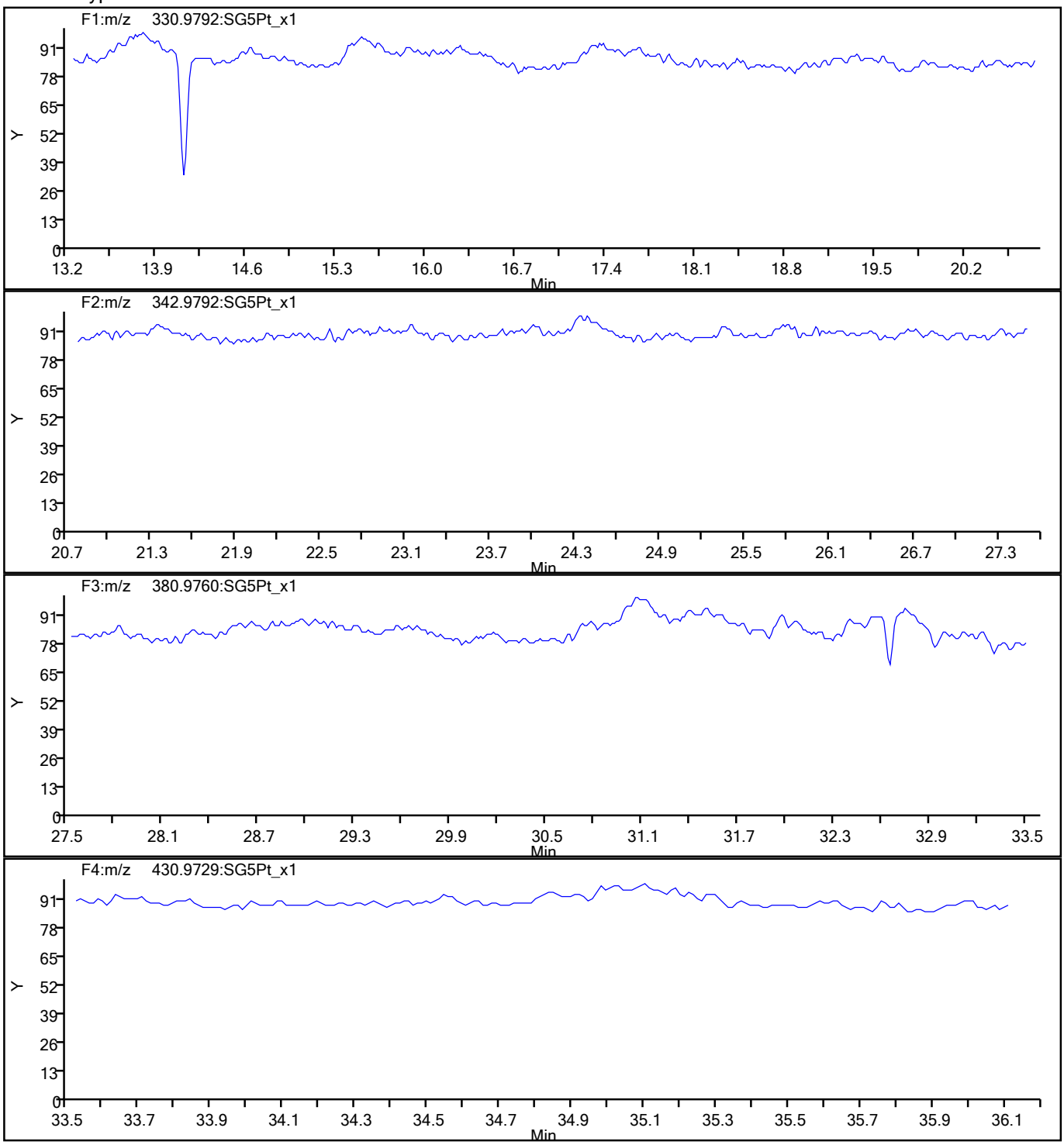

777072

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

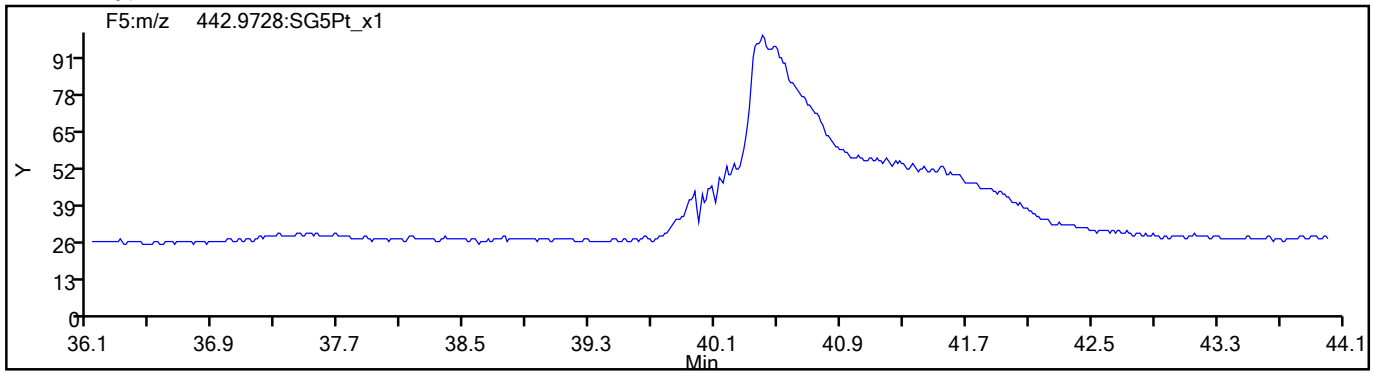

777073

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 15-Aug-2021 00:36:47 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081321C WDM HRDXNCP_00044
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 17:08:57 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

First Level Reviewer: bennettd Date: 17-Aug-2021 16:34:47

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.326	29225358	0.78	1.6249					0.00	
2,3,7,8-TCDF	17.356	63596599	0.77	1.0239	85.0	85.0	0.4372	0.4372		
A Non-2,3,7,8-sub-TCDF	17.046						0.4372	0.4372		
S Total TCDF					85.0	85.0	0.4372	0.4372		
D 13C-2,3,7,8-TCDD	18.036	15711713	0.81	0.8993					0.00	
2,3,7,8-TCDD	18.051	22754970	0.79	1.2541	46.2	46.2	0.2391	0.2391		
A Non-2,3,7,8-sub-TCDD	17.492	18783694	0.77	1.2541	38.1	38.1	0.2391	38.1		
S Total TCDD					84.3	84.3	0.2391	0.2391		
A F1 PeCDFs	20.085						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	23.234	246565	1.61	0.0000						
S Total PeCDF										
A Non-2,3,7,8-sub-PeCDD	23.328						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.177						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.882						0.0	0.0		
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.766	23087349	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	34.847	19521336	1.03	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.307						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.568	15618150	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.289						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.922	35938849	0.77							
1,3,6,8-TCDD	15.829	23226412	0.77							
2,3,4,7-TCDF	17.356	63596599	0.77							
1,2,3,7-TCDD	18.051	22766453	0.79							
1,2,3,9-TCDF	18.218	27373566	0.77							
1,2,3,9-TCDD	18.218	23628048	0.78							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.155	9344494								
1,2,8,9-TCDF	19.170	28812271	0.78							
1,3,4,6,8-PeCDF	19.442	25360715	1.55							
1,2,4,7,9-PeCDD	21.221	17402722	1.61							
1,2,3,8,9-PeCDD	25.435	16062693	1.58							
1,2,3,8,9-PeCDF	25.667	20475608	1.63							
1,2,3,4,6,8-HxCDF	27.947	21896837	1.23							
1,2,4,6,7,9-HxCDD	29.531	17100817	1.27							
1,2,3,4,6,7-HxCDD	32.100	18146372	1.29							
1,2,3,4,8,9-HxCDF	32.406	22168172	1.23							
1,2,3,4,6,7,9-HpCDD	34.009	17424717	1.05							

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 15-Aug-2021 00:36:47 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081321C WDM HRDXNCP_00044
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 17:08:57 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

First Level Reviewer: bennettd Date: 17-Aug-2021 16:34:47

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.326	17.326	0	1.000	12775049	3055763	4157	10392	735		
317.9389	17.326	17.326	0	1.000	16450309	3946376	2830	7075	1394	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.002	27592522	6169947	11816	29540	522		
305.8987	17.356	17.356	0	1.002	36004077	8040111	19532	48830	412	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.046						11816	29540			
305.8987	17.046						19532	48830			
13C-2,3,7,8-TCDD											
331.9368	18.036	18.036	0	1.000	7031598	1588520	2242	5605	709		
333.9339	18.036	18.036	0	1.000	8680115	1946062	1990	4975	978	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.051	18.051	0	1.001	10027413	2205182	4362	10905	506		
321.8936	18.051	18.051	0	1.001	12727557	2800549	6239	15597	449	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.930	17.492	26	0.994	8194935	1974067	4362	10905	453		
321.8936	17.930	17.492	26	0.994	10588759	2572229	6239	15597	412	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	20.085						627	1567			
341.8567	20.085						716	1790			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.381	23.234	-51	1.000	90868	11511	1919	4797	6		
341.8567	22.367	23.234	-52	1.000	53143	7410	1344	3360	6	1.71(1.32-1.78)	
339.8597	22.926	23.234	-18	1.000	61371	8517	1919	4797	4		
341.8567	22.940	23.234	-18	1.000	41183	5692	1344	3360	4	1.49(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.328						1828	4570			
357.8516	23.328						1213	3032			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.177						3925	9812			
375.8178	30.177						3152	7880			
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						4986	12465			
391.8127	30.882						3987	9967			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.766	0	1.000	11816099	3712354	16246	40615	229		
409.7789	33.766	33.766	0	1.000	11271250	3459731	16336	40840	212	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.847	34.847	0	1.000	9921266	2592117	16246	40615	160		
409.7789	34.847	34.847	0	1.000	9600070	2537068	16336	40840	155	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.307						16246	40615			
409.7789	34.307						16336	40840			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	7987342	2165707	10442	26105	207		
425.7737	34.556	34.568	-1	1.000	7630808	2091596	11252	28130	186	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.289						10442	26105			
425.7737	34.289						11252	28130			
1,3,6,8-TCDF											
303.9016	14.922	14.922	0		15687487	4507686	11816	29540	381		
305.8987	14.906	14.922	-1		20251362	5874926	19532	48830	301	0.77(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.829	15.829	0		10117305	2811762	4362	10905	645		
321.8936	15.829	15.829	0		13109107	3653866	6239	15597	586	0.77(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.356	17.356	0		27592522	6169947	11816	29540	522		
305.8987	17.356	17.356	0		36004077	8040111	19532	48830	412	0.77(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.051	18.051	0		10033386	2205972	4362	10905	506		
321.8936	18.051	18.051	0		12733067	2801278	6239	15597	449	0.79(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	18.218	18.218	0		11927806	2676020	11816	29540	226		
305.8987	18.202	18.218	-1		15445760	3393307	19532	48830	174	0.77(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.218	18.218	0		10351817	2299438	4362	10905	527		
321.8936	18.218	18.218	0		13276231	2897762	6239	15597	464	0.78(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.155	19.155	0		9344494	1945985	4362	10905	446		
1,2,8,9-TCDF											
303.9016	19.170	19.170	0		12638854	2589689	11816	29540	219		
305.8987	19.155	19.170	-1		16173417	3279989	19532	48830	168	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,3,4,6,8-PeCDF											
339.8597	19.442	19.442	0		15414534	3225954	627	1567	5145		
341.8567	19.442	19.442	0		9946181	2110208	716	1790	2947	1.55(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	21.221	21.221	0		10741573	1762578	1828	4570	964		
357.8516	21.221	21.221	0		6661149	1093836	1213	3032	902	1.61(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	25.435	25.435	0		9829778	1293796	1828	4570	708		
357.8516	25.435	25.435	0		6232915	822447	1213	3032	678	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	25.667	25.667	0		12697568	1574959	1919	4797	821		
341.8567	25.667	25.667	0		7778040	952658	1344	3360	709	1.63(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	27.947	27.947	0		12084739	1438345	3925	9812	366		
375.8178	27.947	27.947	0		9812098	1168529	3152	7880	371	1.23(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.531	29.531	0		9574918	1047515	4986	12465	210		
391.8127	29.531	29.531	0		7525899	825920	3987	9967	207	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8157	32.100	32.100	0		10207524	2580616	4986	12465	518		
391.8127	32.100	32.100	0		7938848	1985227	3987	9967	498	1.29(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.406	32.406	0		12206943	3214933	3925	9812	819		
375.8178	32.406	32.406	0		9961229	2668435	3152	7880	847	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	34.009	34.009	0		8931674	2730039	10442	26105	261		
425.7737	34.009	34.009	0		8493043	2572770	11252	28130	229	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d
Lims ID: WDM
Client ID:
Inject. Date: 15-Aug-2021 00:36:47 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.492

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	15711713	3534582

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	15711713	3534582

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.930	8194935	1974067	10588759	2572229	38.1	0.77	
Signal Totals:							
	8194935	1974067	10588759	2572229			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	18783694	4546296				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 38.131 = (18783694 * 40.000) / (15711713 * 1.254)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d
Lims ID: WDM
Client ID:
Inject. Date: 15-Aug-2021 00:36:47 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.234

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.381	90868	11511	53143	7410		1.71	
22.926	61371	8517	41183	5692		1.49	
Signal Totals:							
	152239	20028	94326	13102			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	246565	33130				1.61	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (246565 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d		
Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

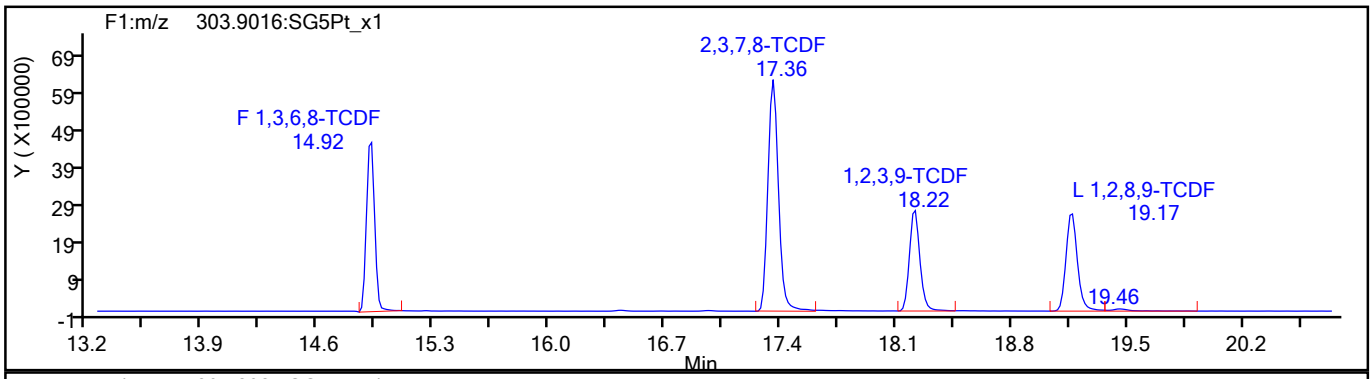

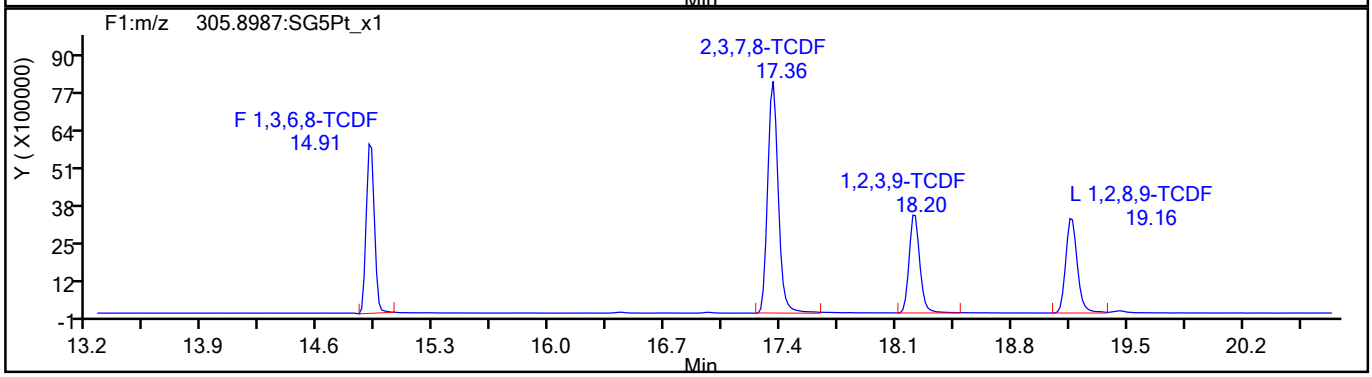

TCDF Standards

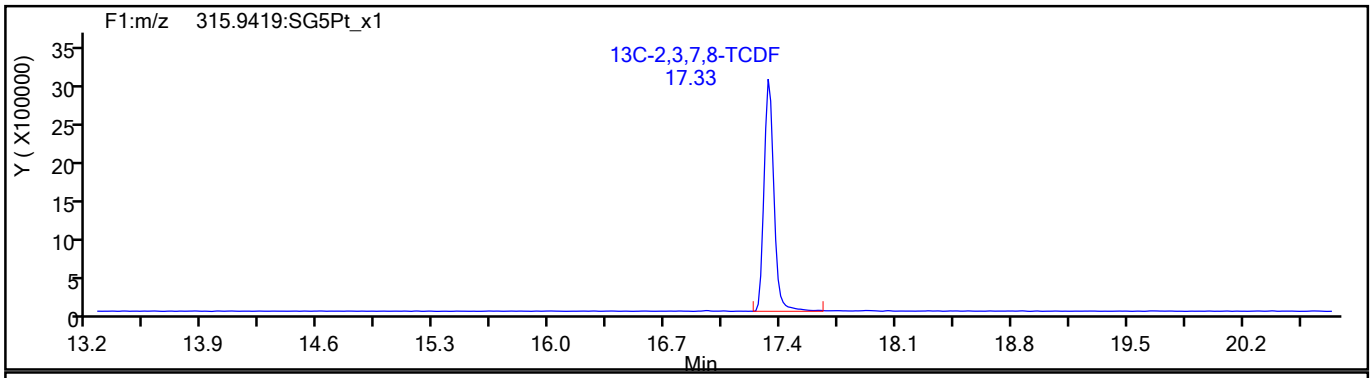

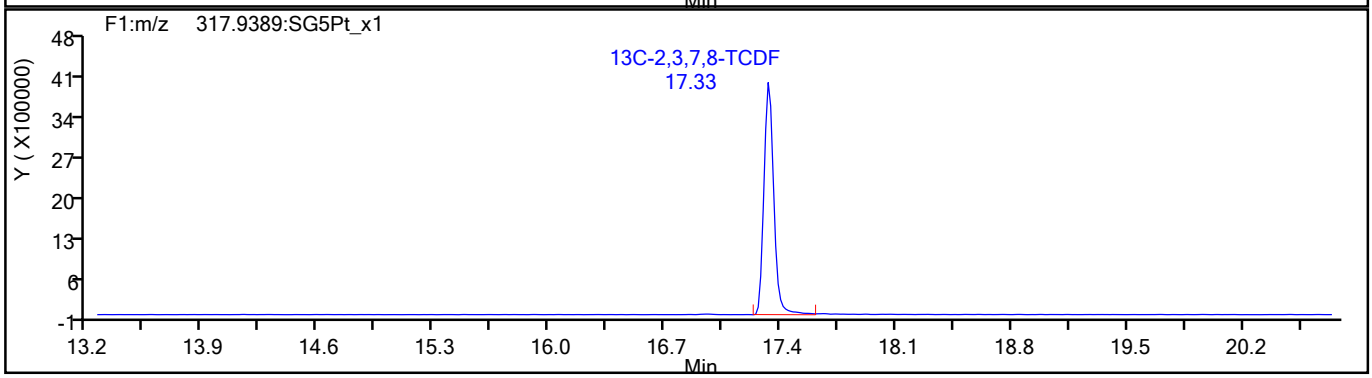

777081

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d		
Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

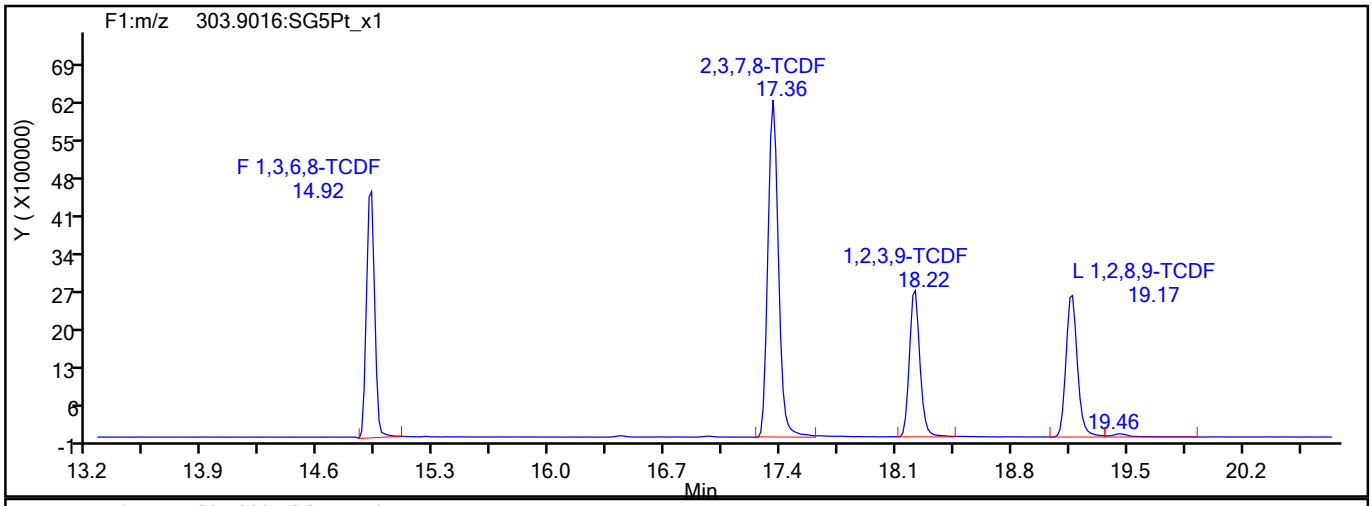

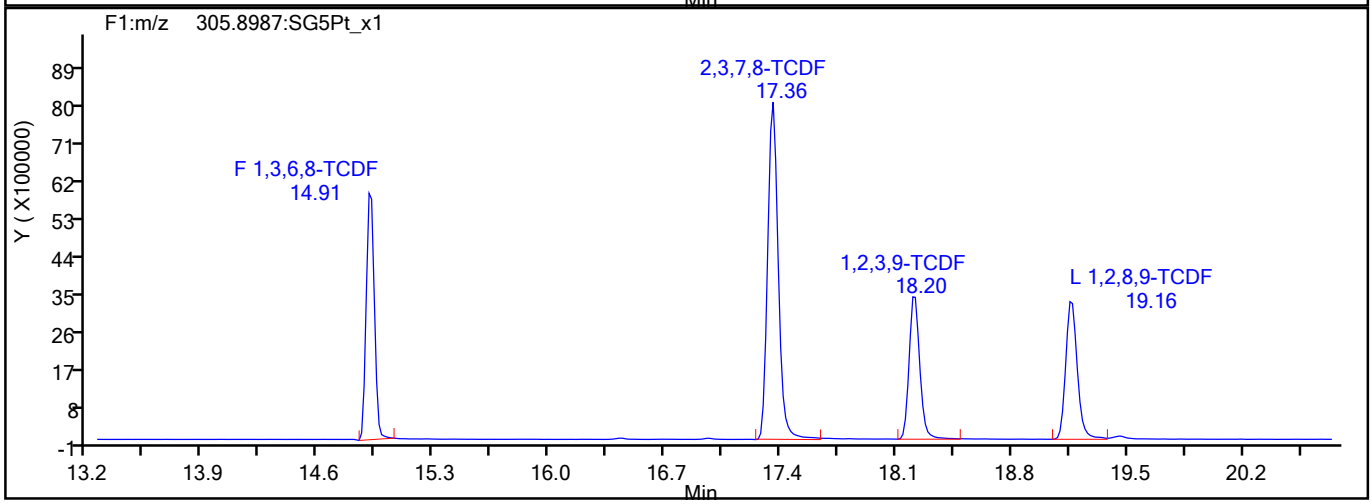

TCDF Interference Mass

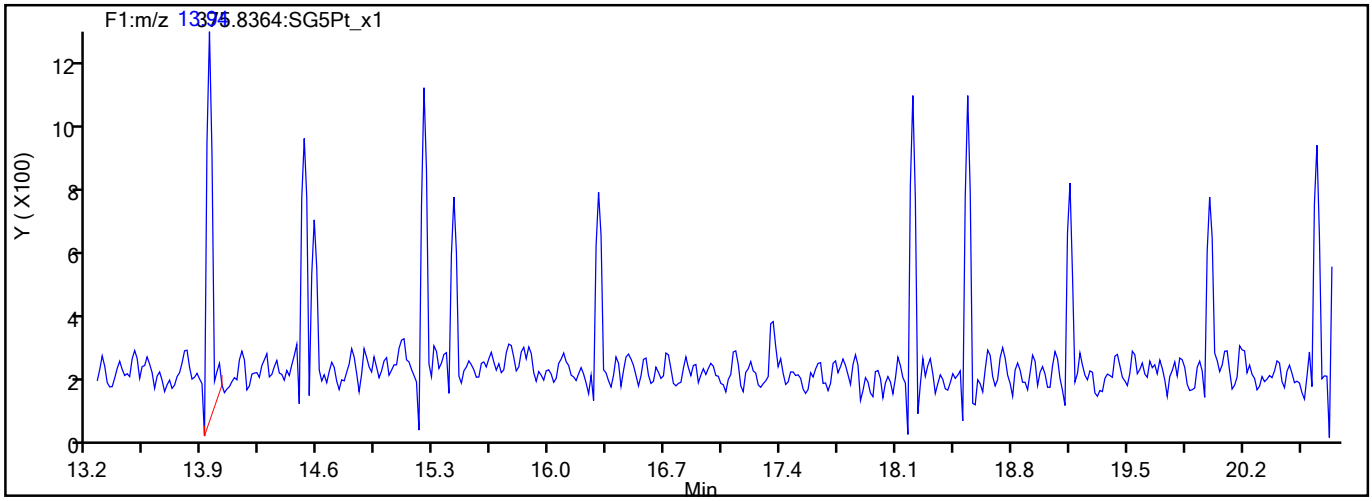

777082

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d		
Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

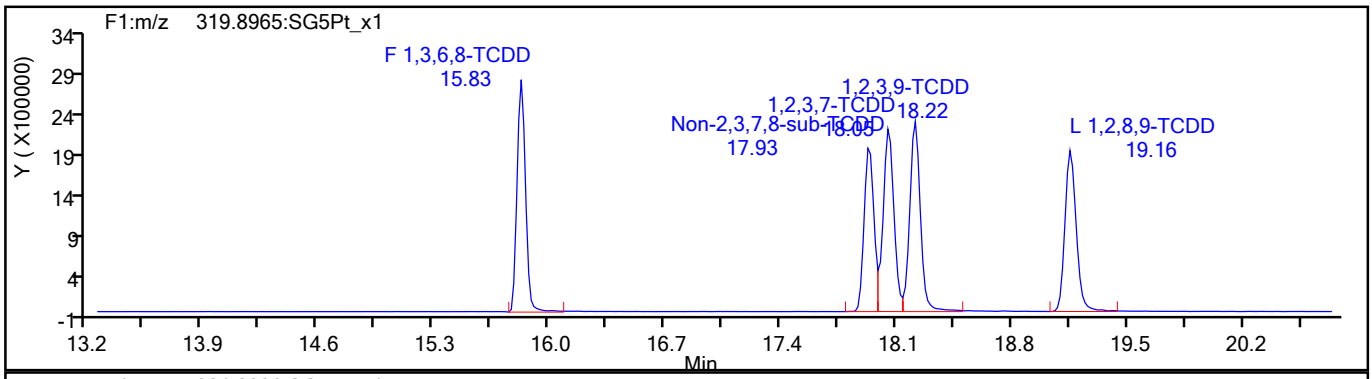

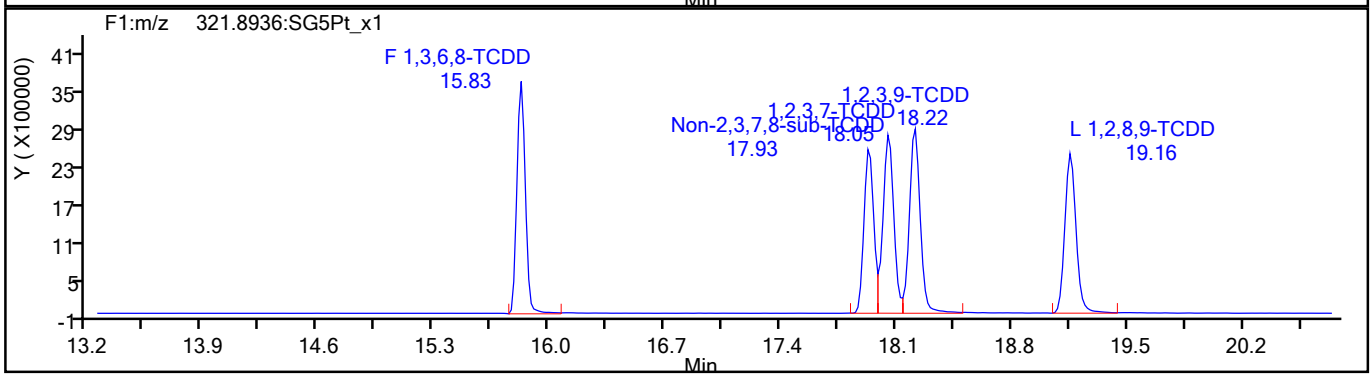

TCDD Standards

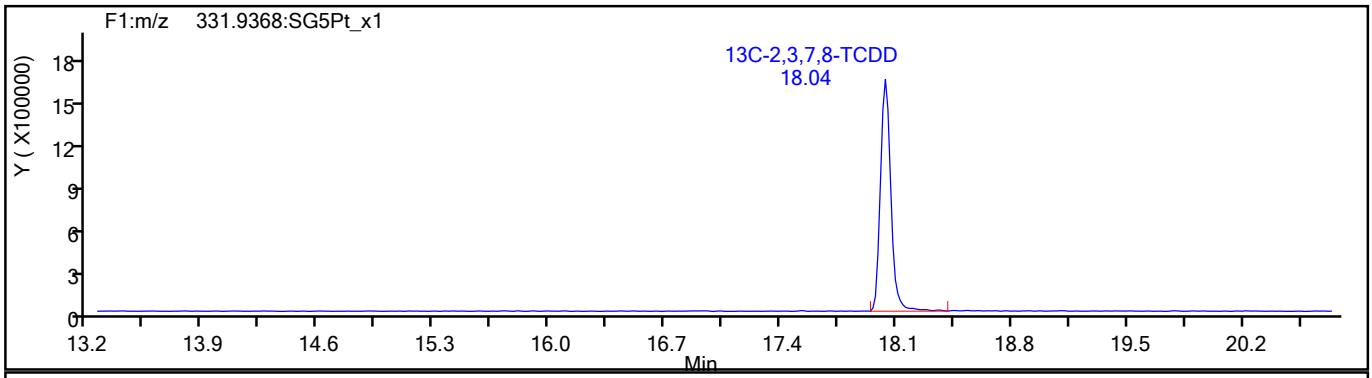

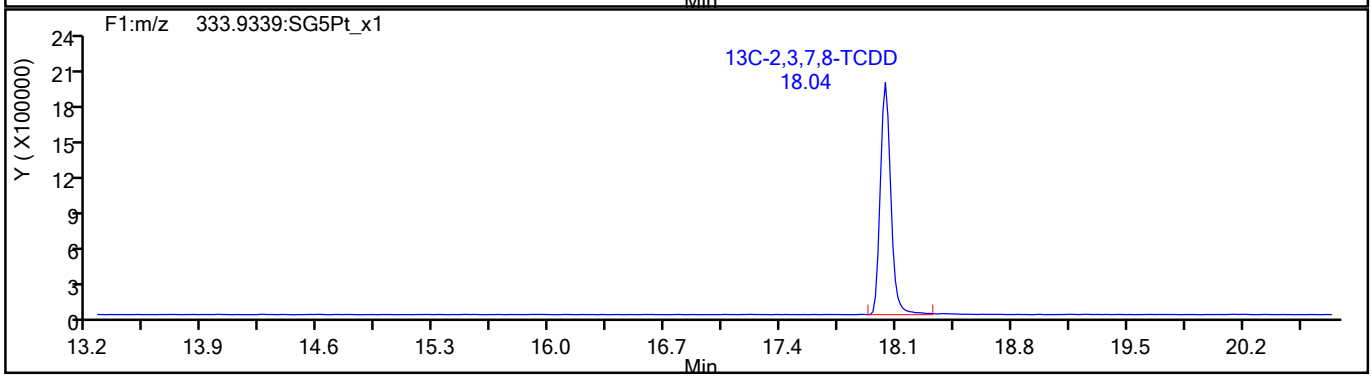

777083

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Worklist#:	516847	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

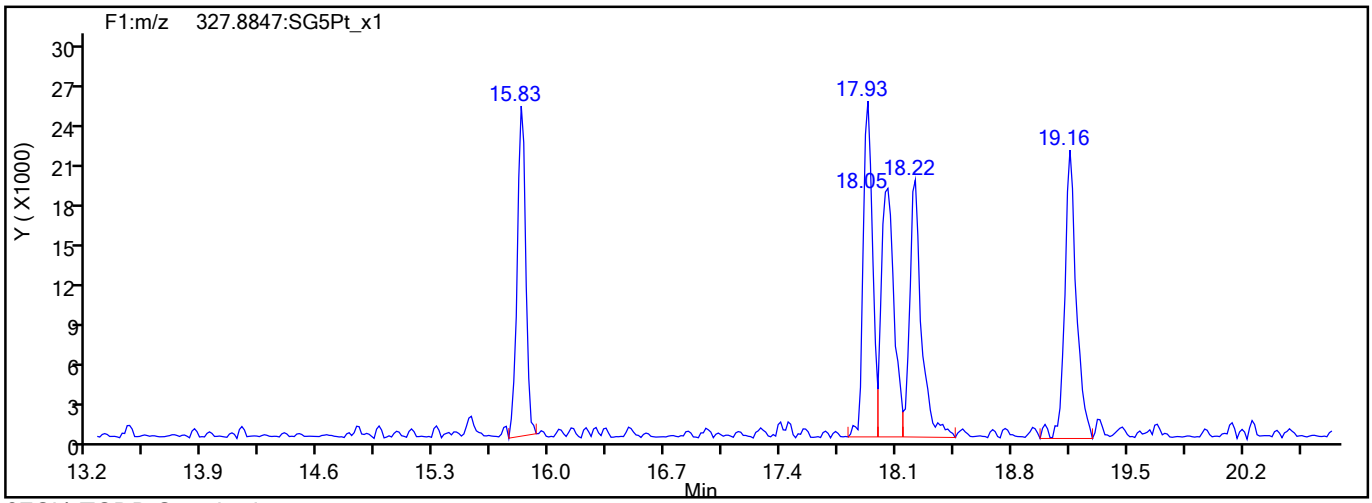

37Cl4-TCDD Standards

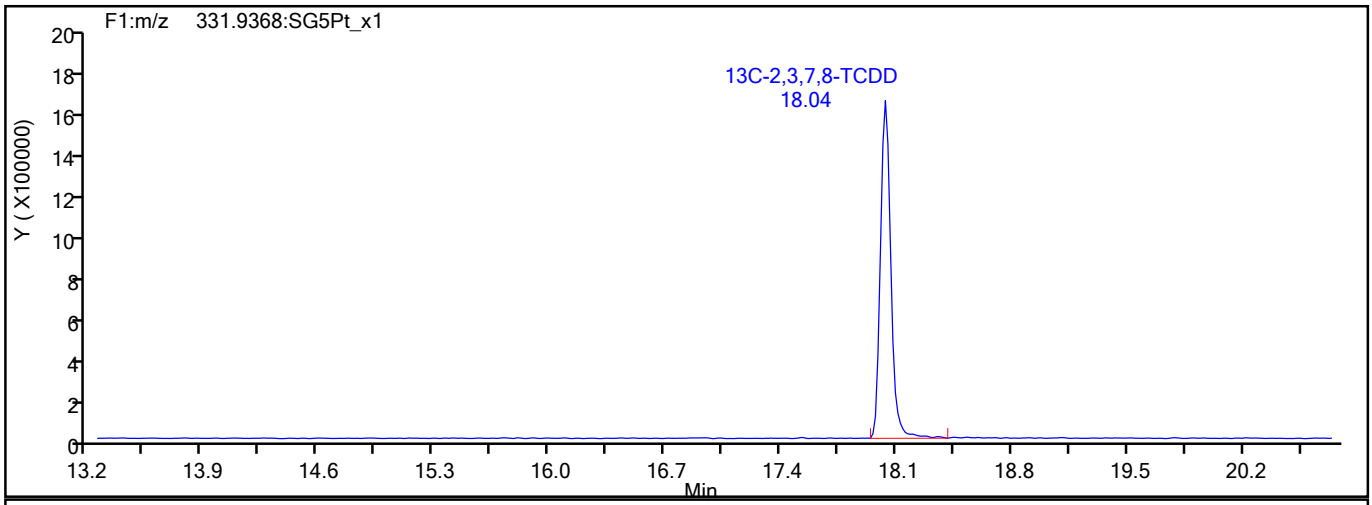

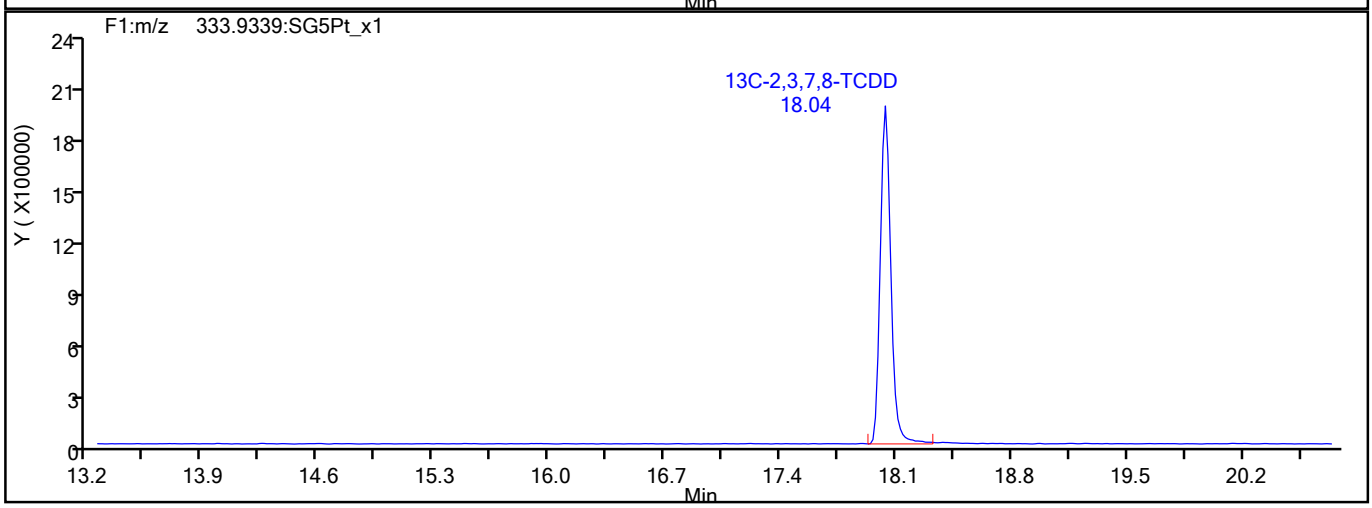

777084

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

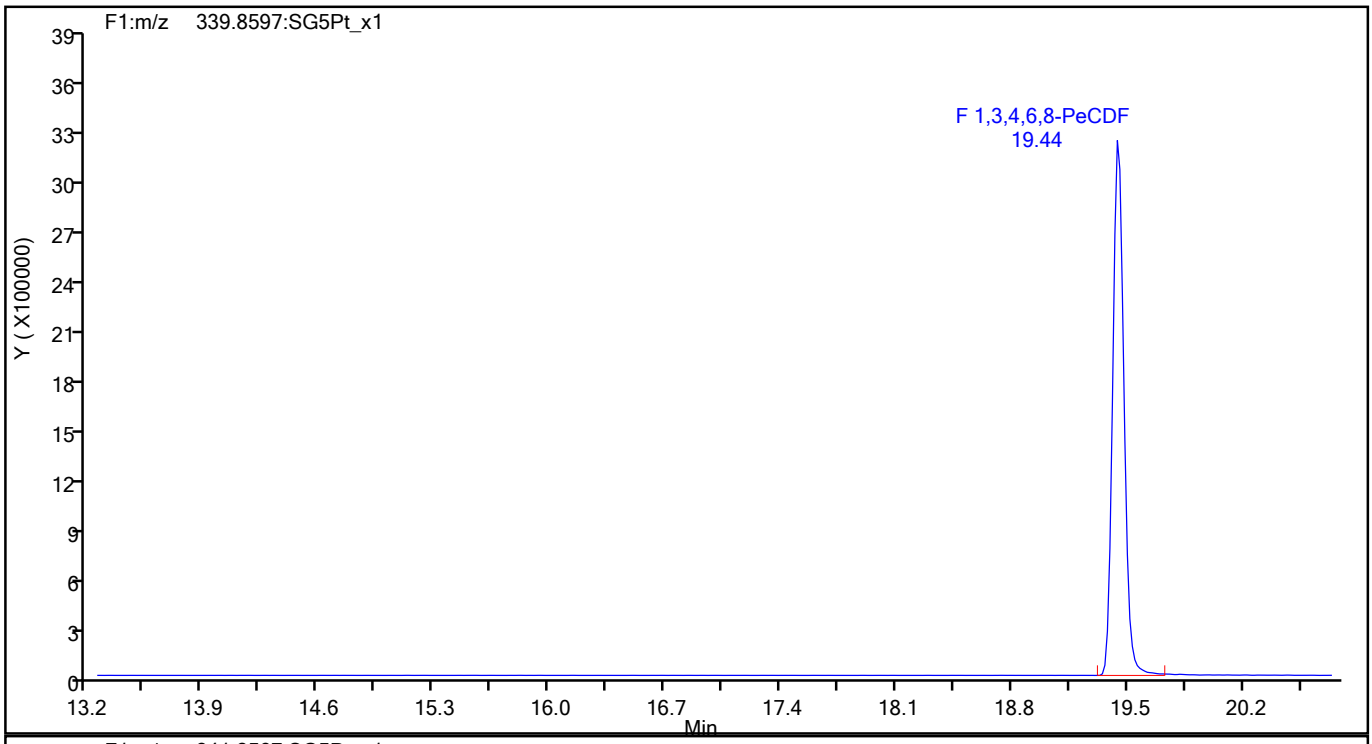

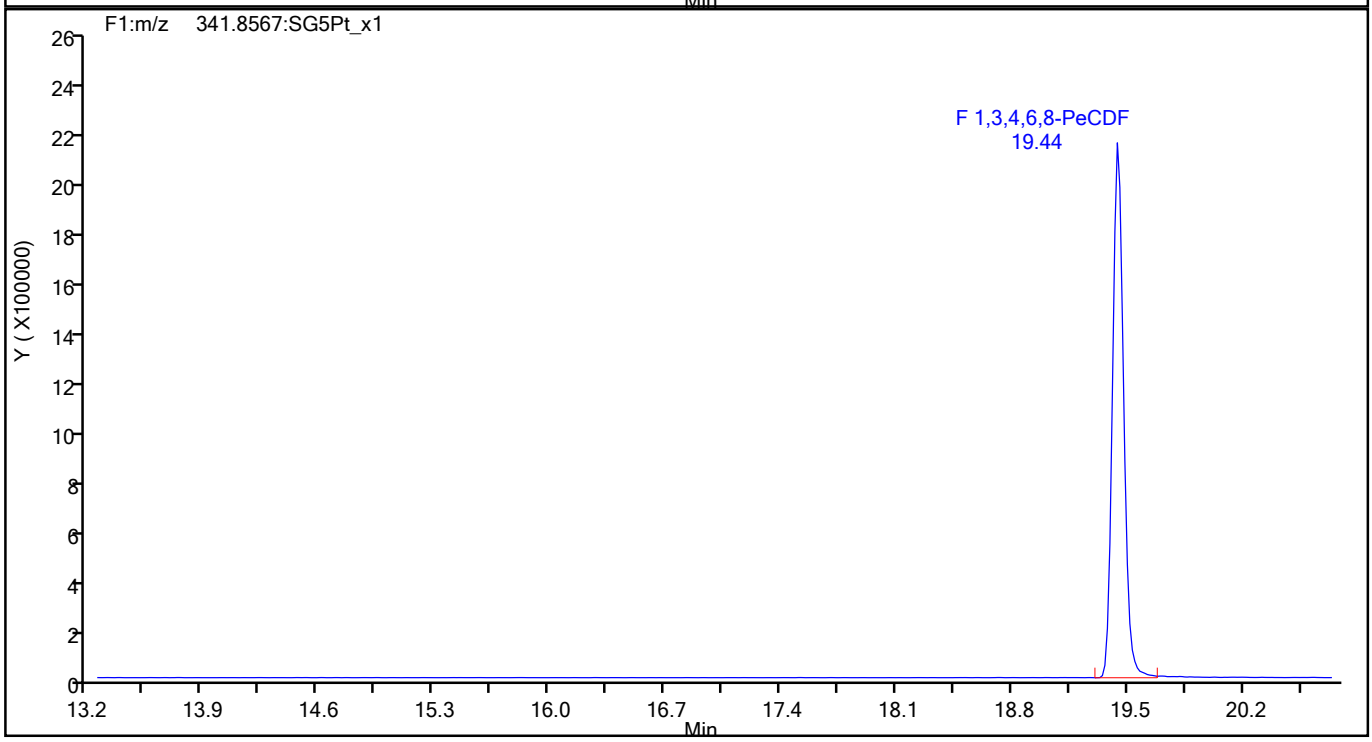

777085

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d		
Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
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F1 PeCDFs

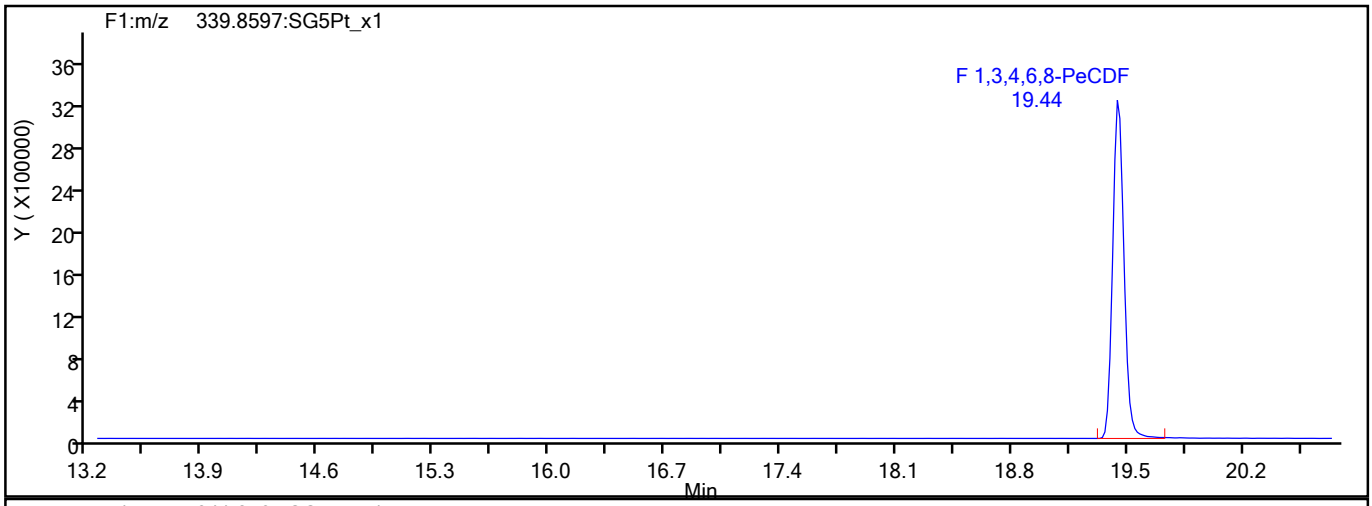

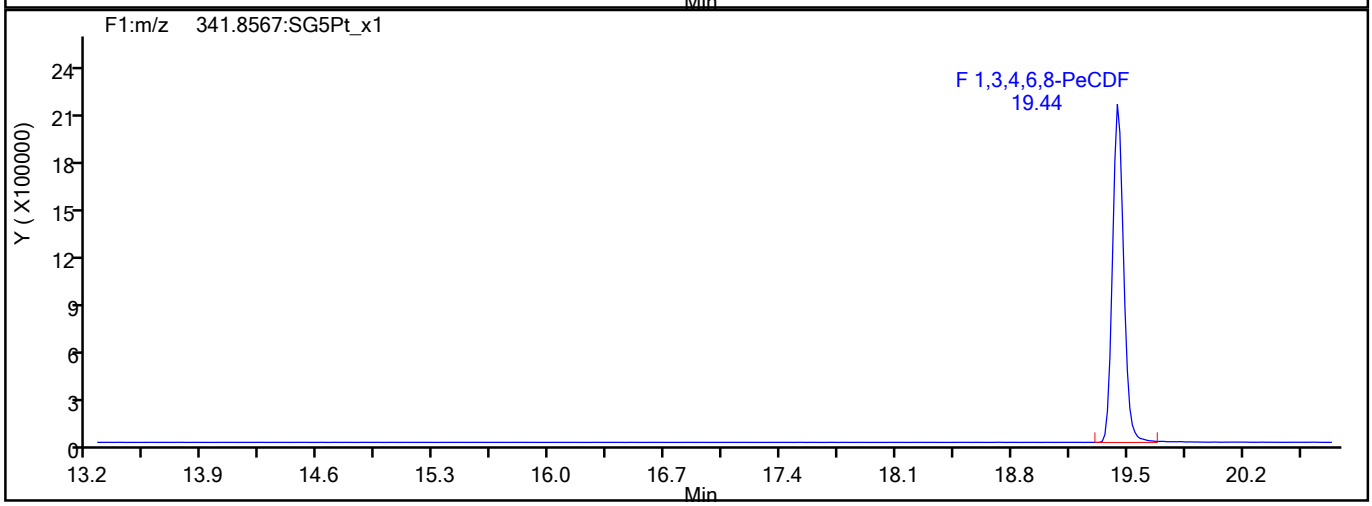

F1 PeCDFs Interference Mass

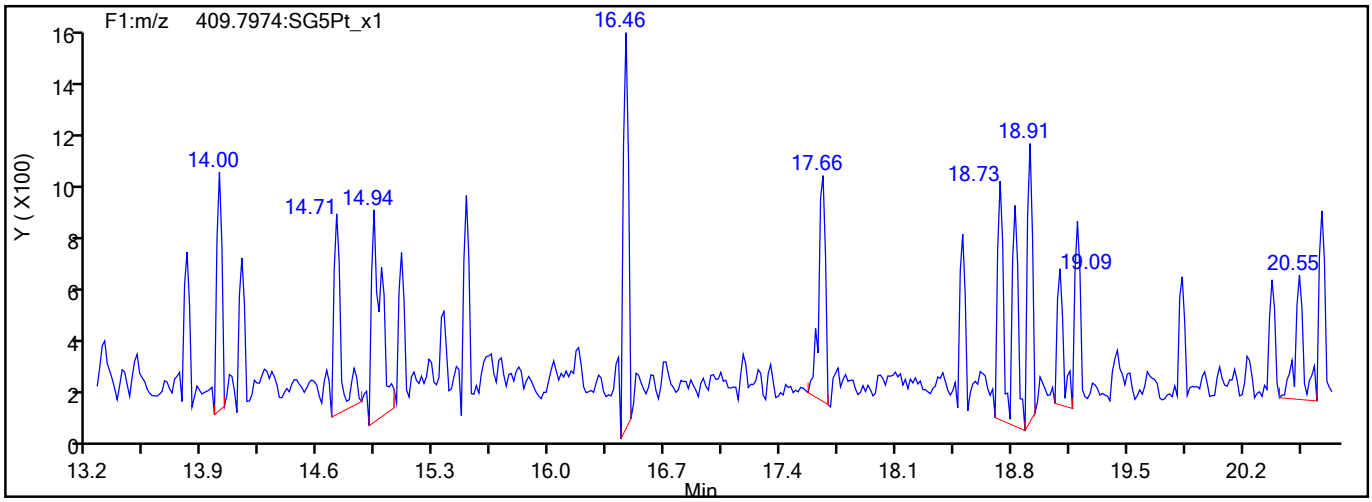

777086

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

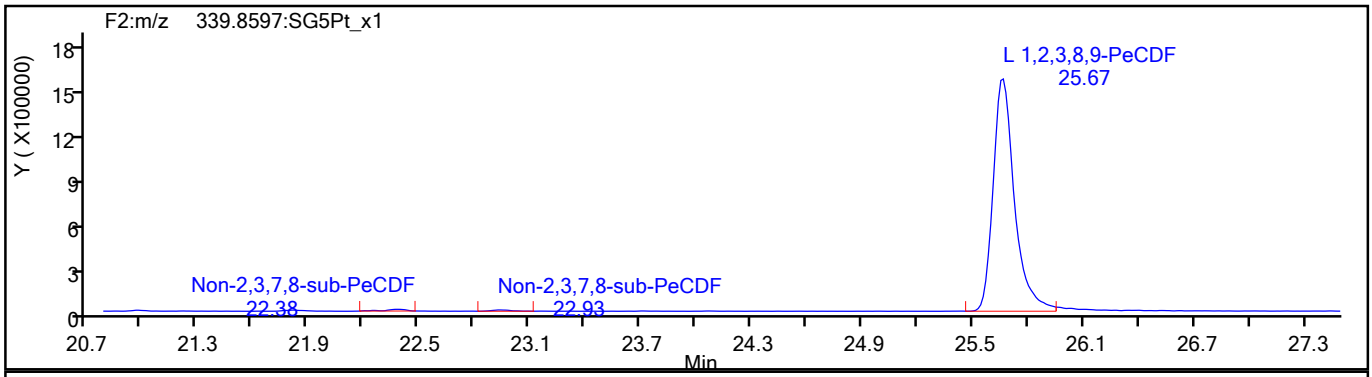

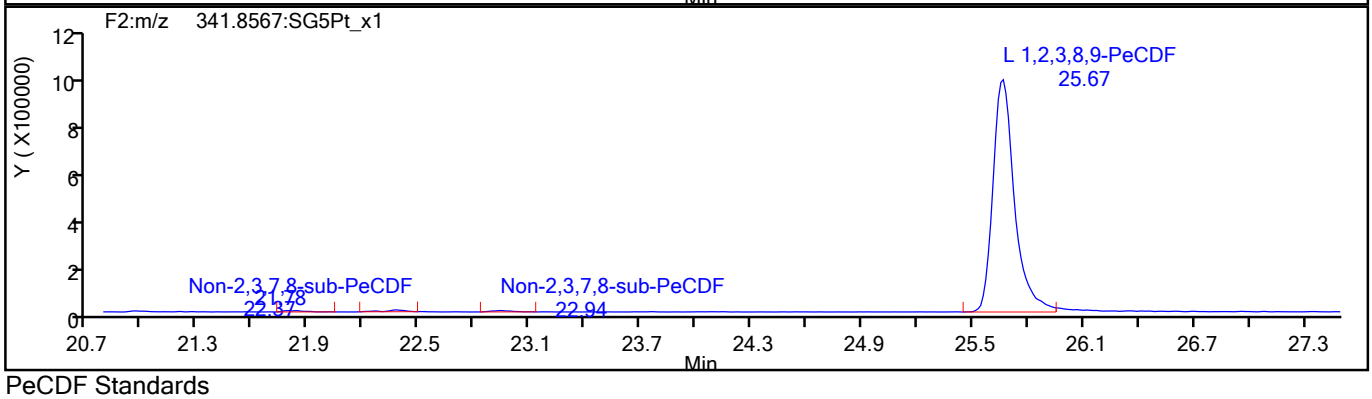

PeCDF Standards

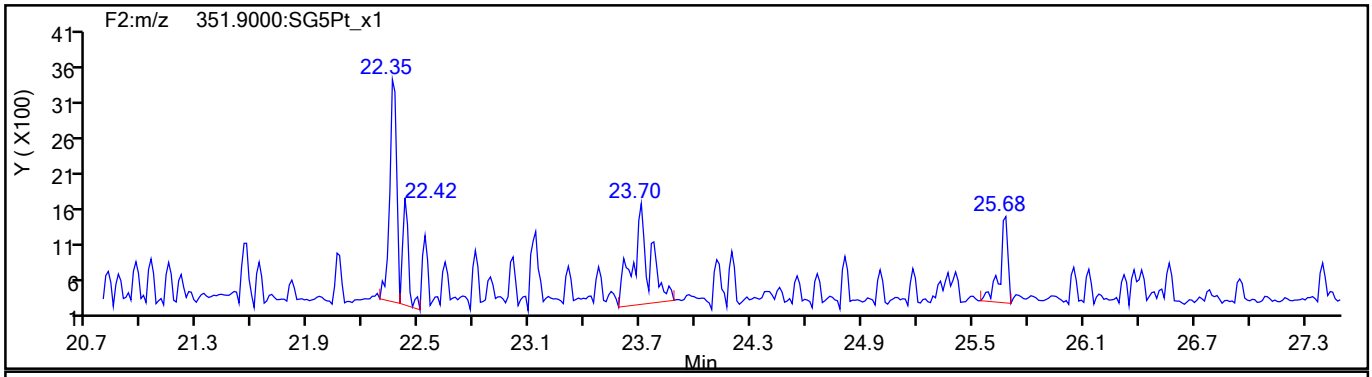

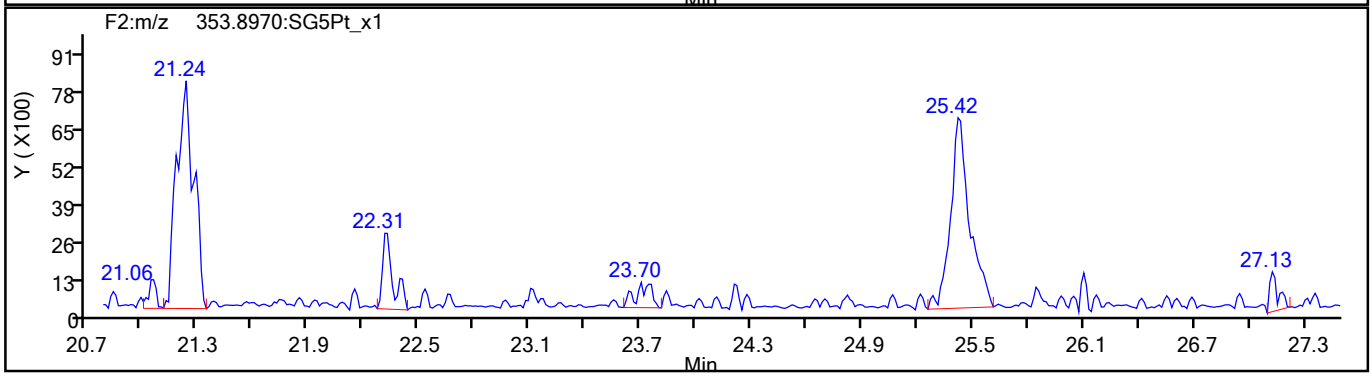

777087

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d		
Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

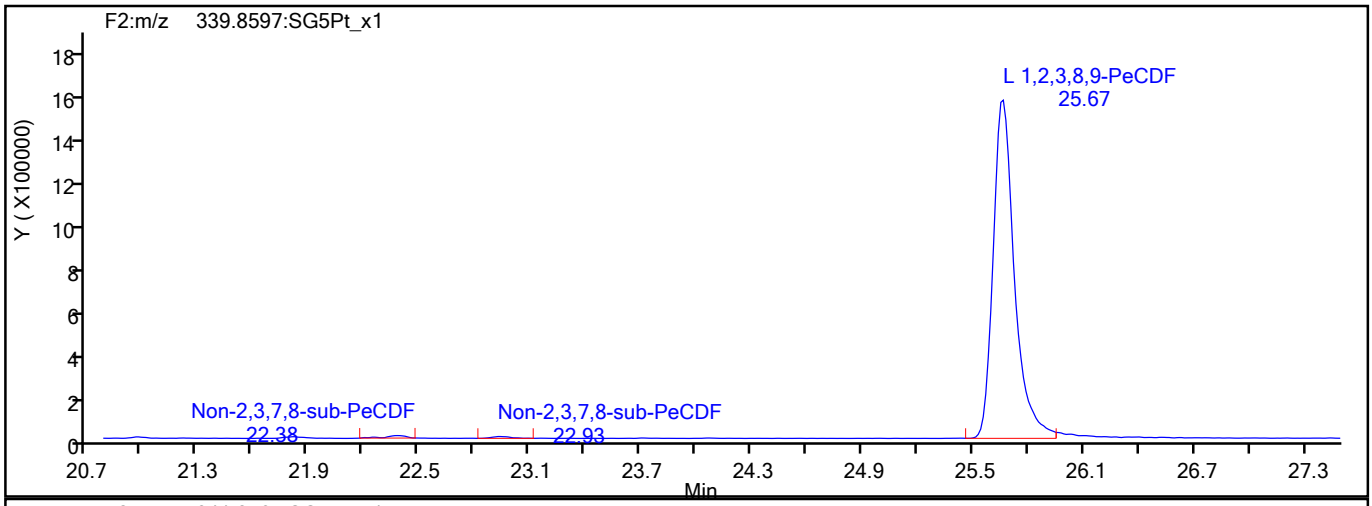

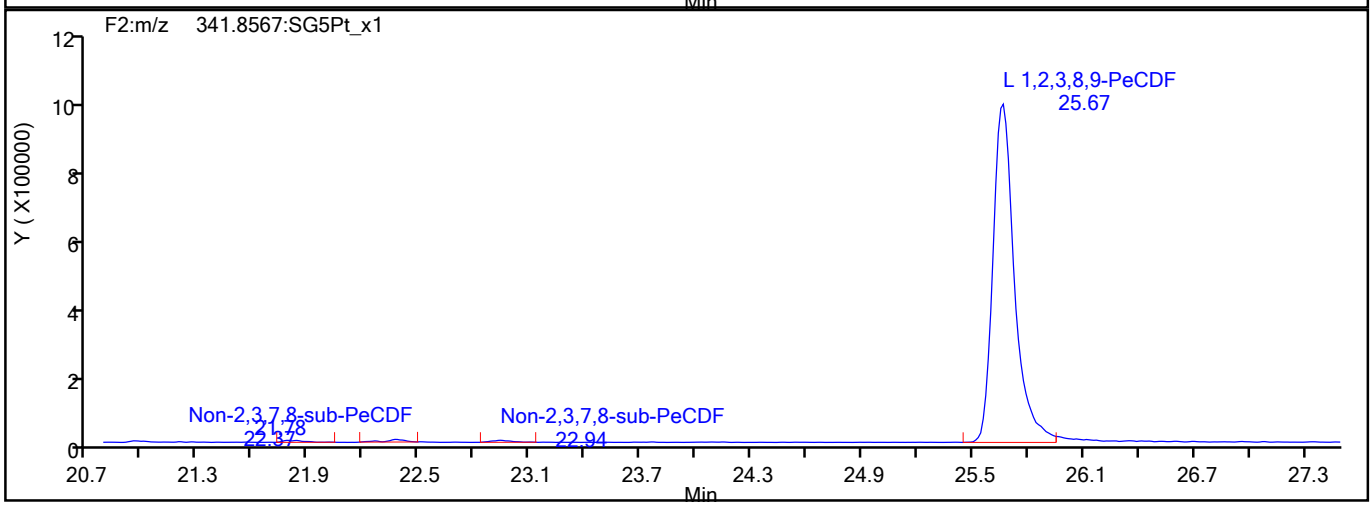

PeCDF Interference Mass

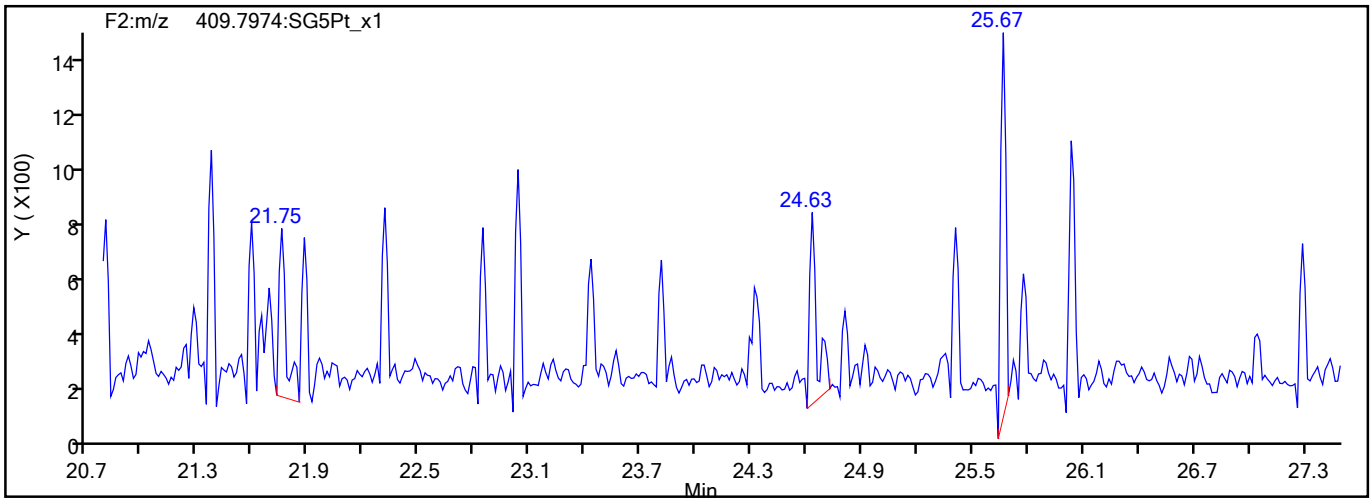

777088

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d		
Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

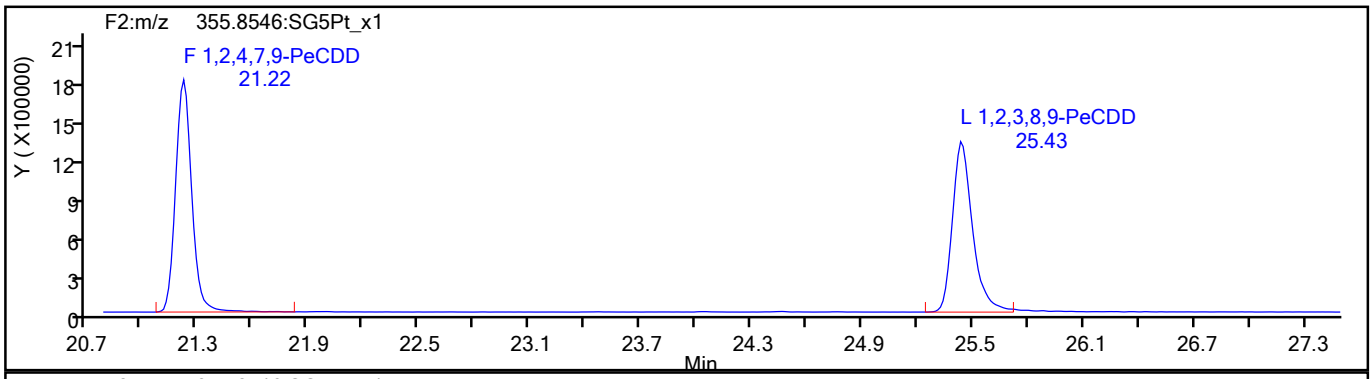

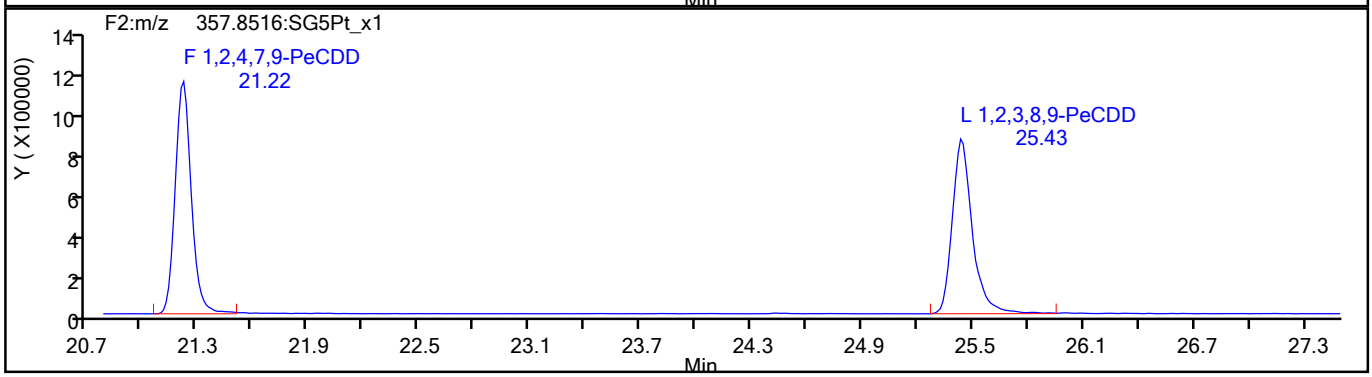

PeCDD Standards

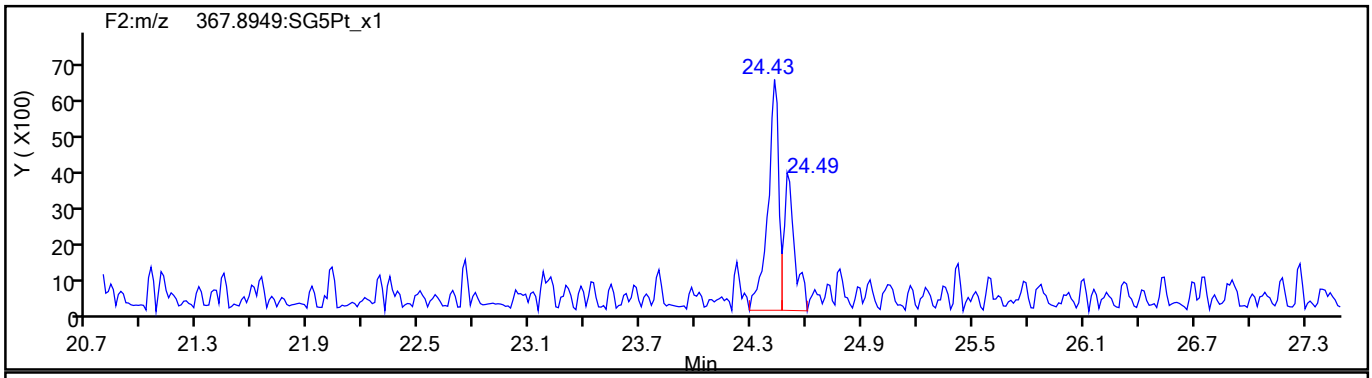

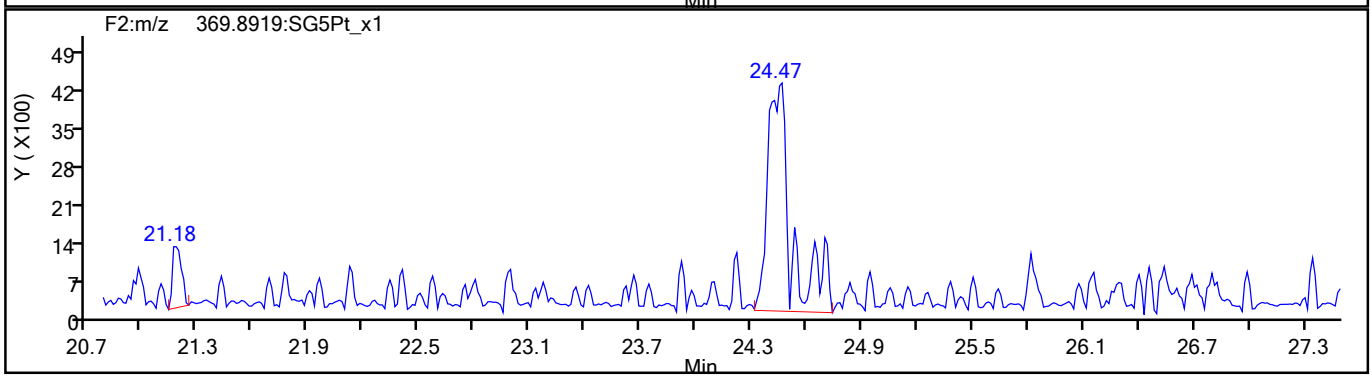

777089

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

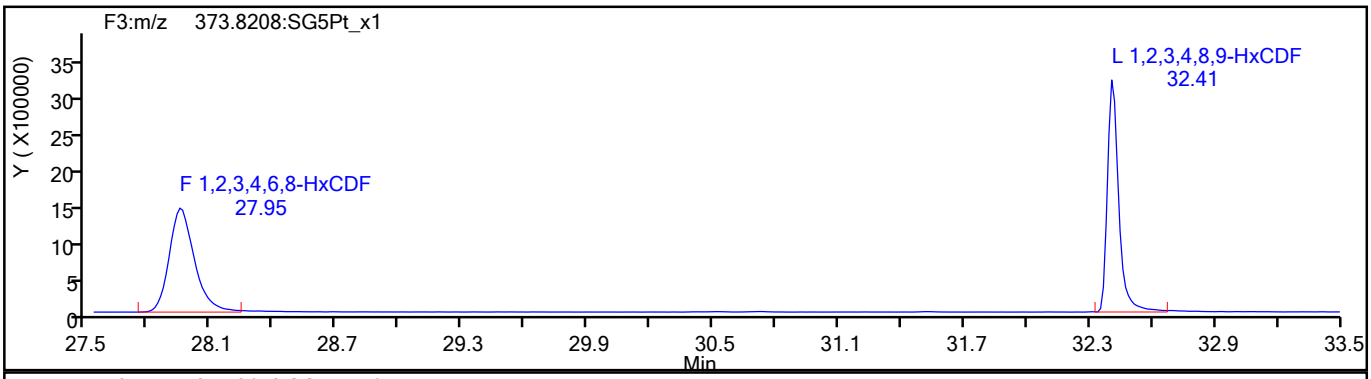

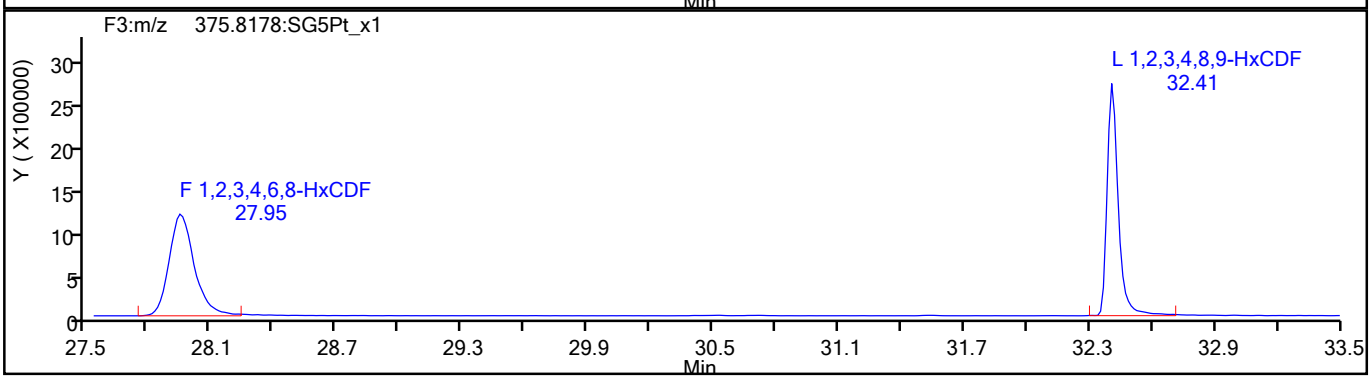

HxCDF Standards

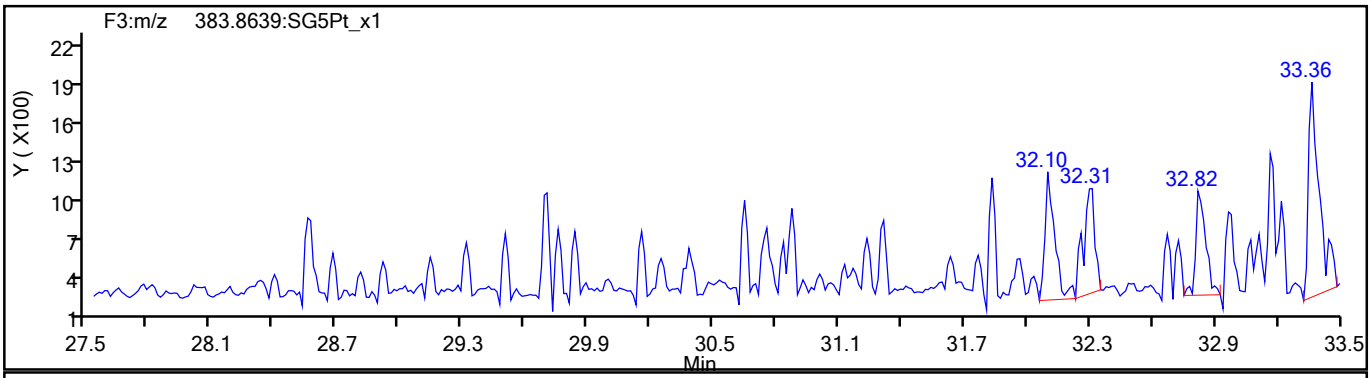

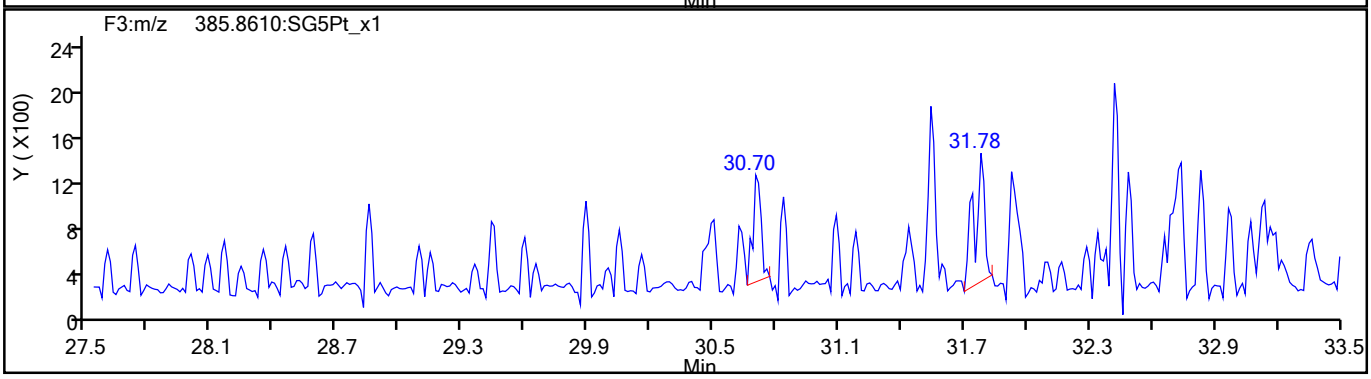

777090

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d		
Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

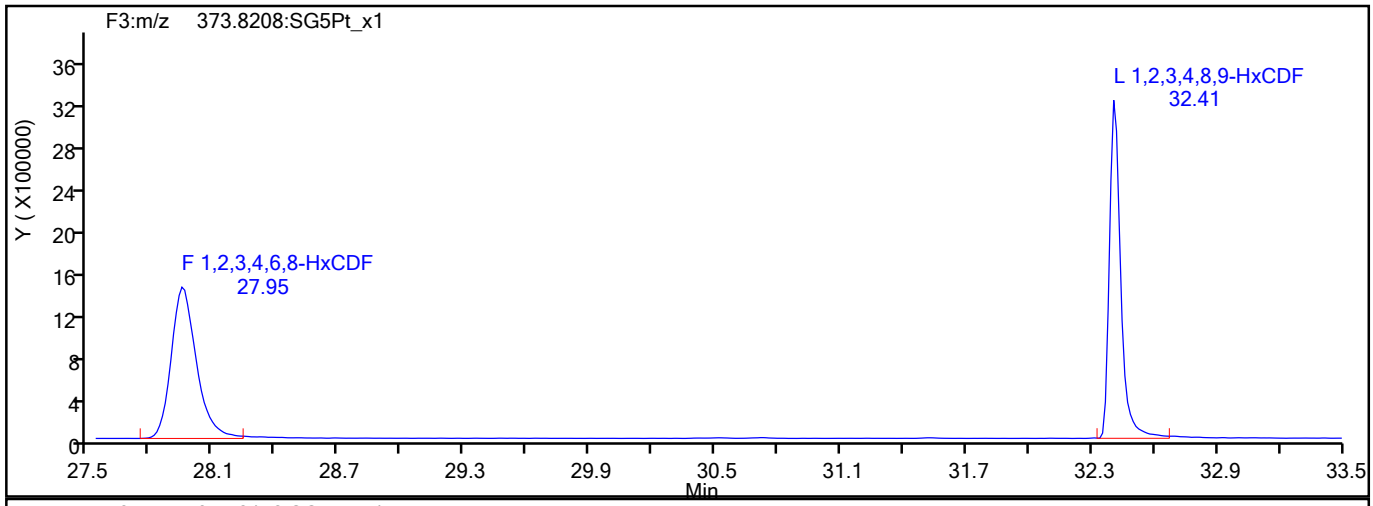

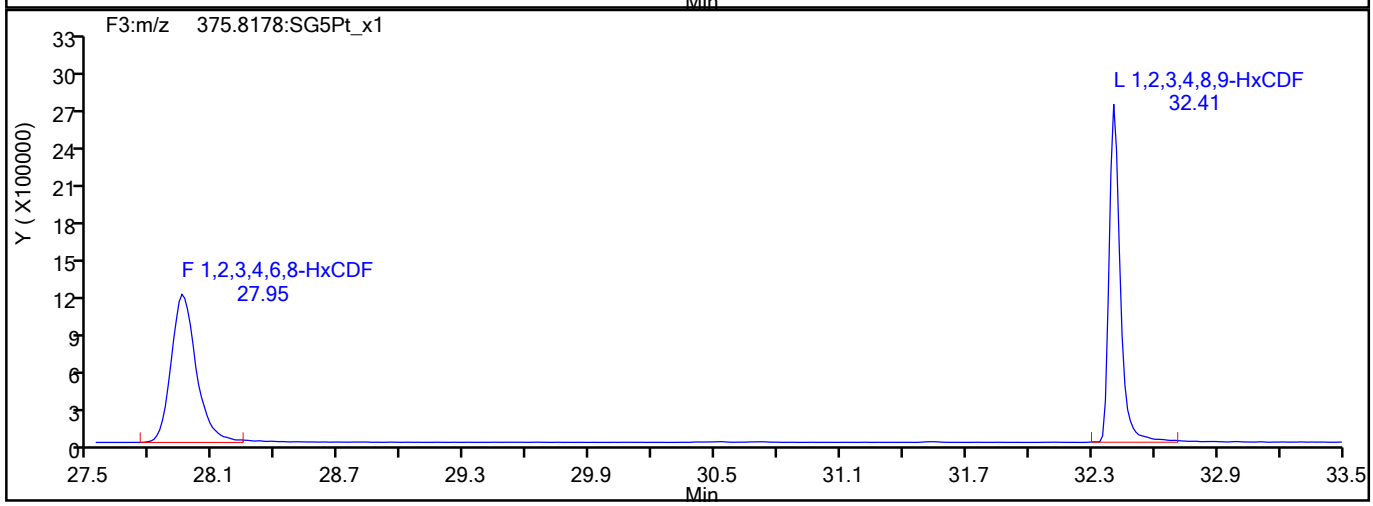

HxCDF Interference Mass

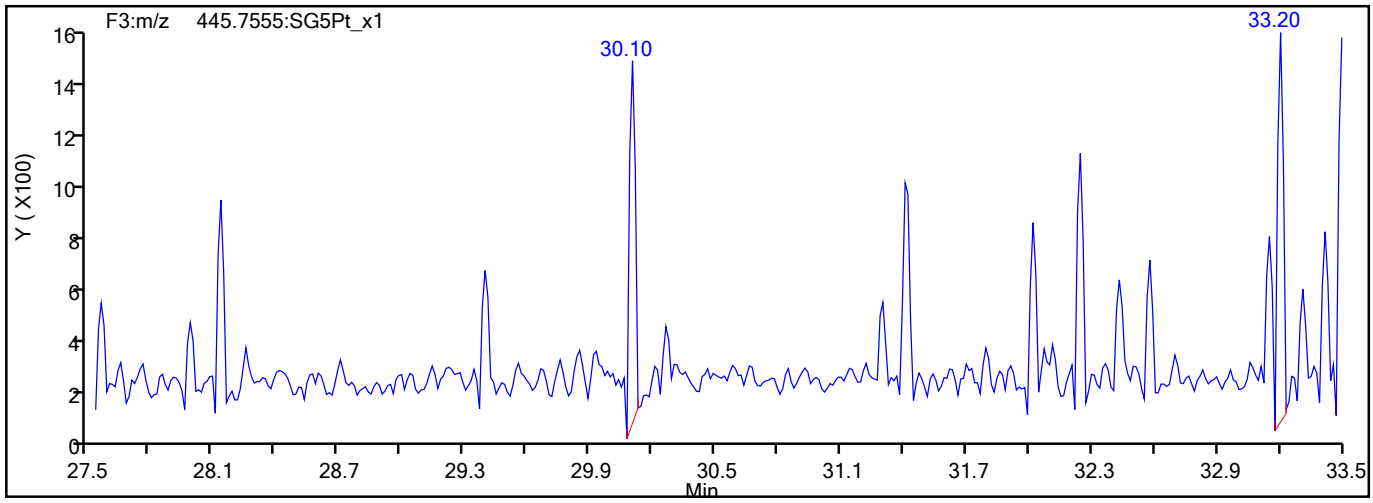

777091

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d		
Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

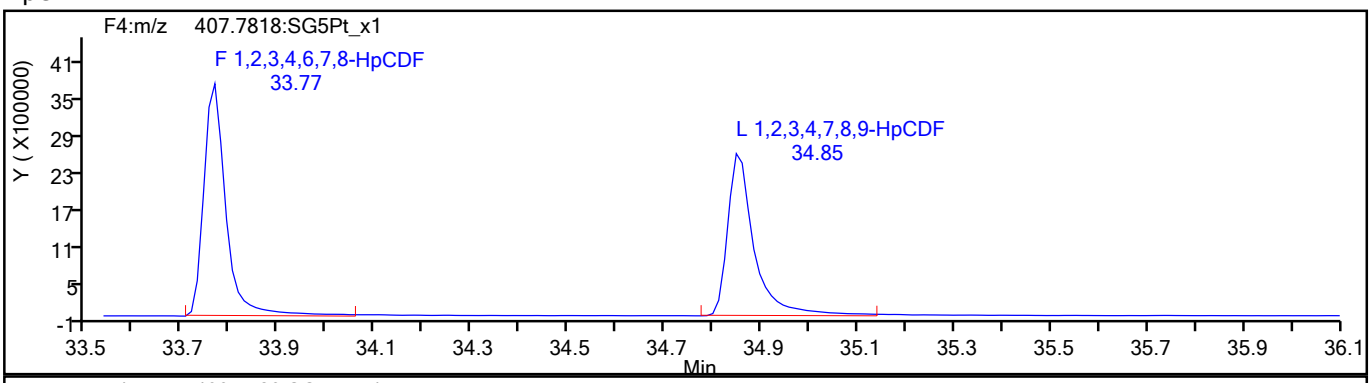

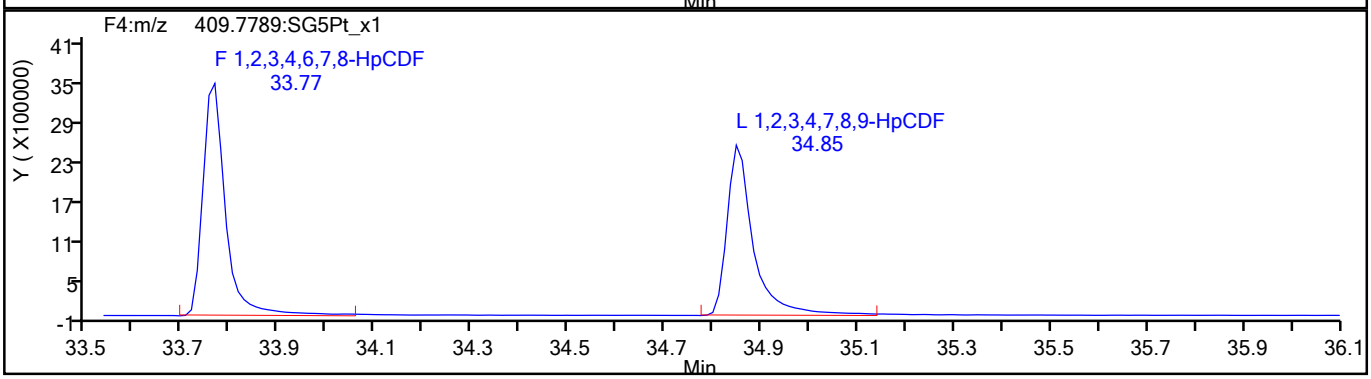

HpCDF Standards

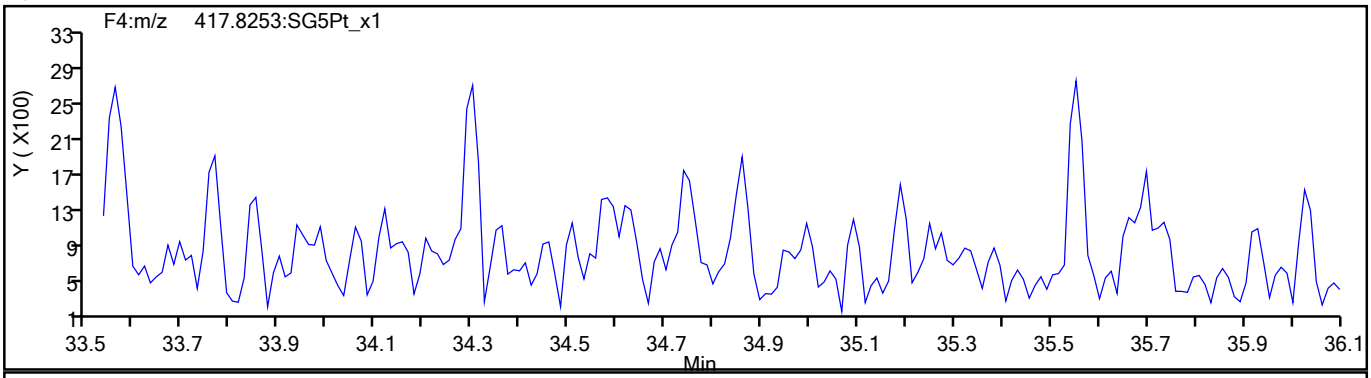

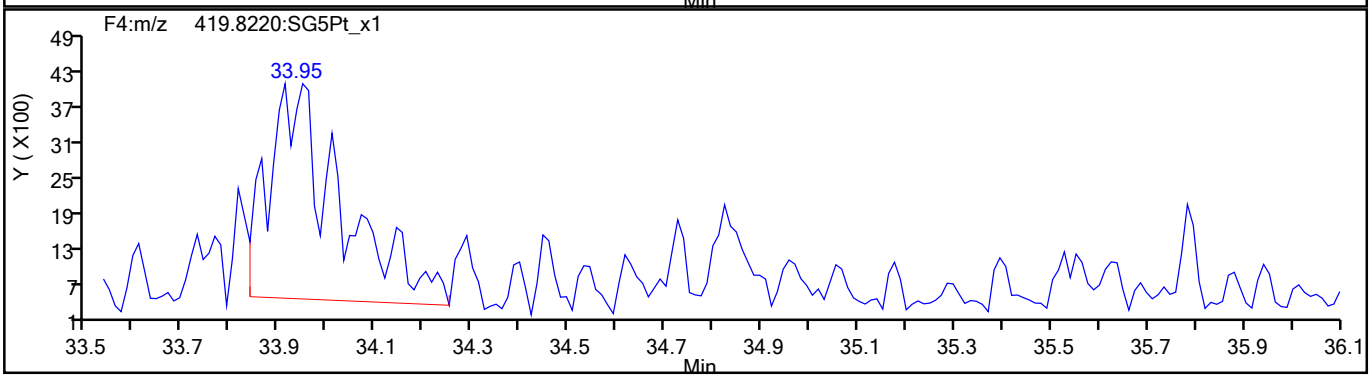

777092

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d		
Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

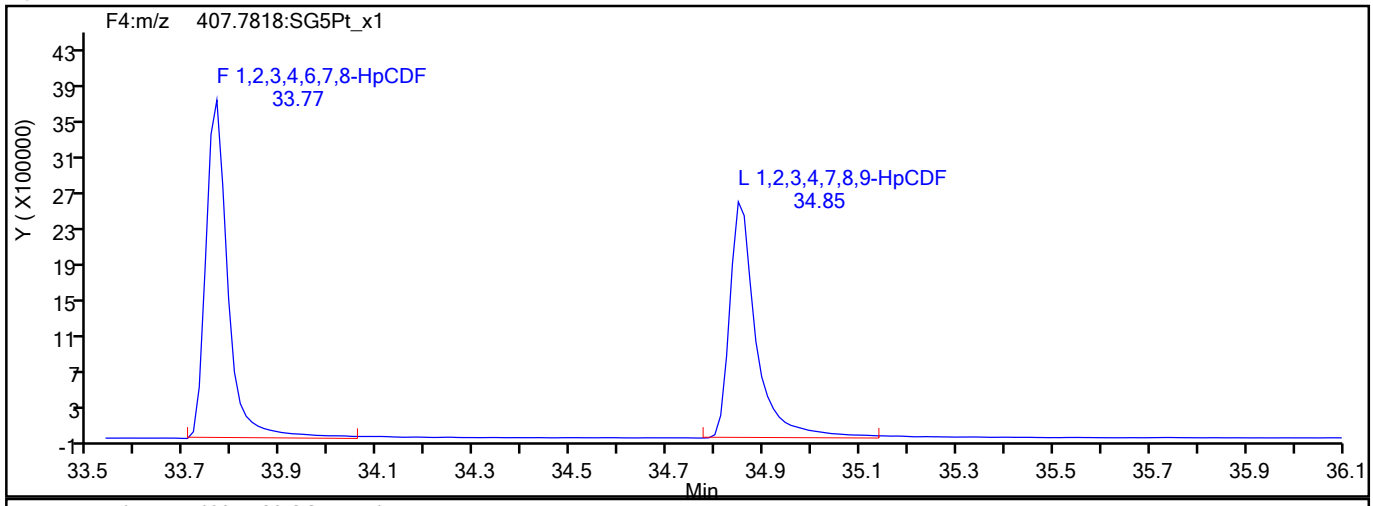

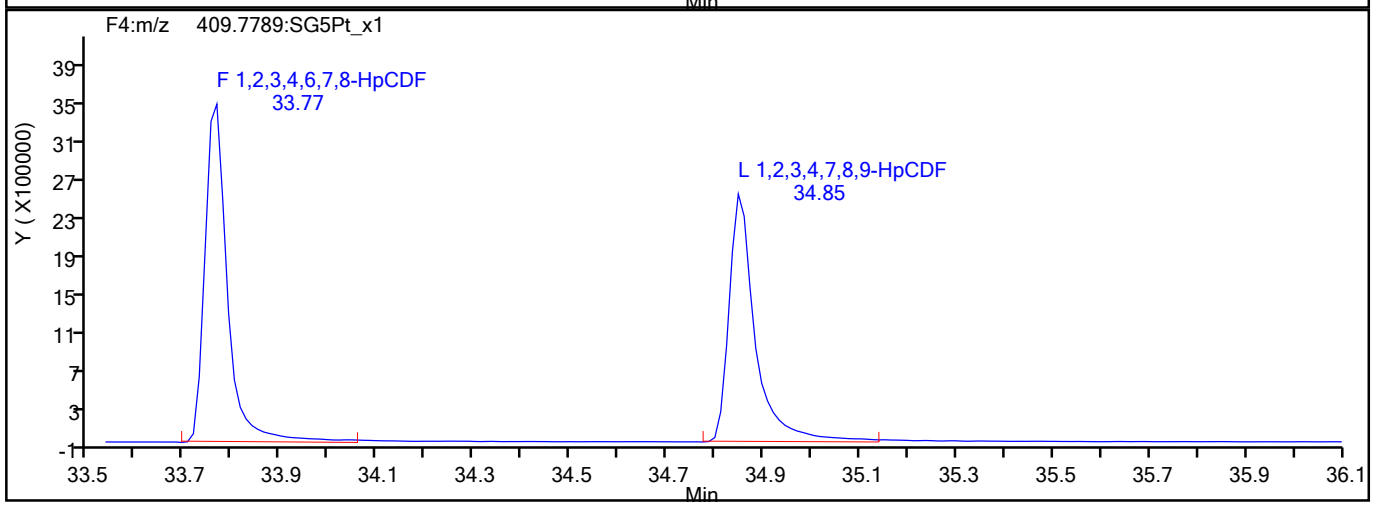

HpCDF Interference Mass

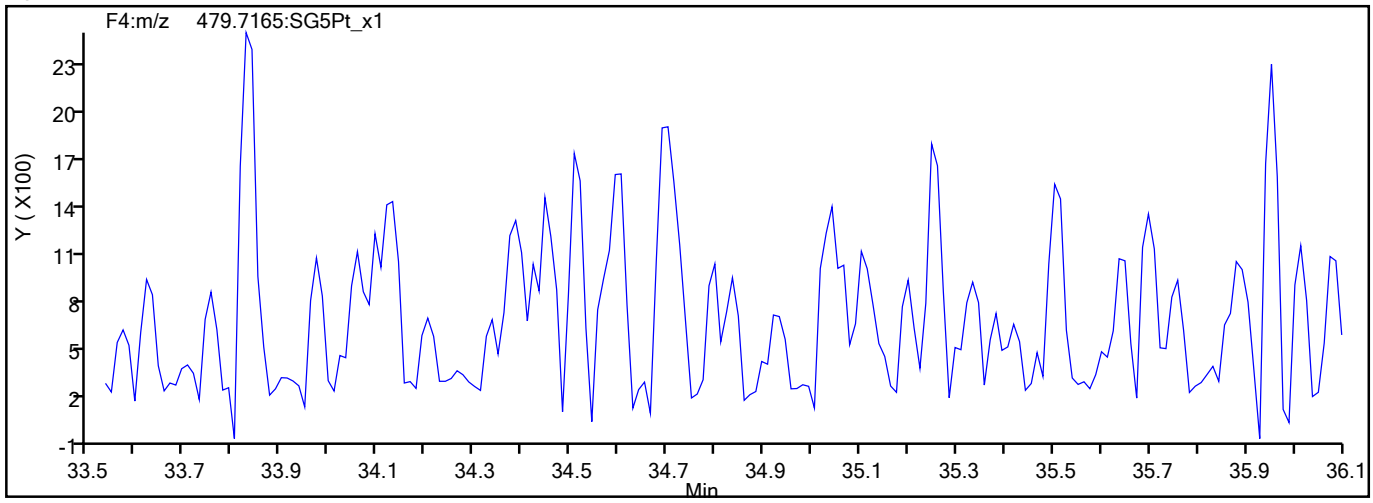

777093

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d		
Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

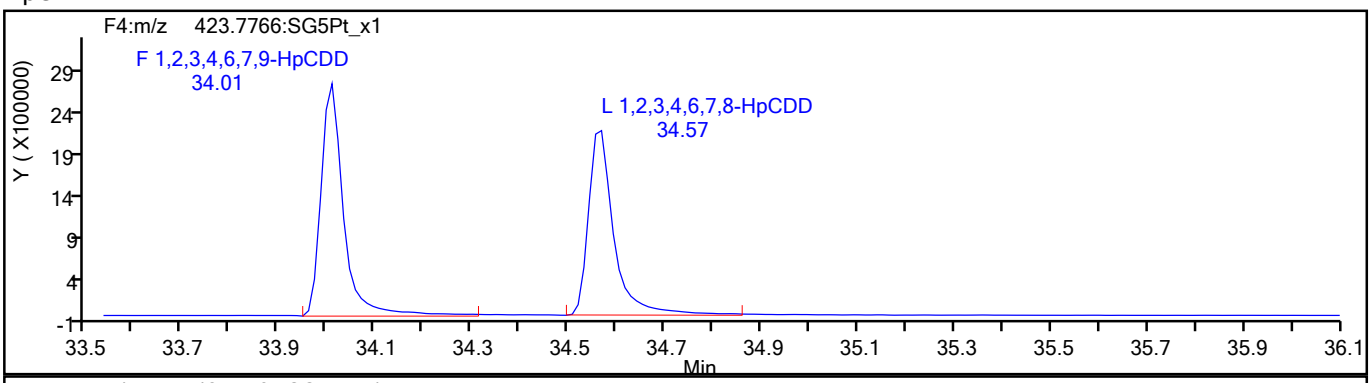

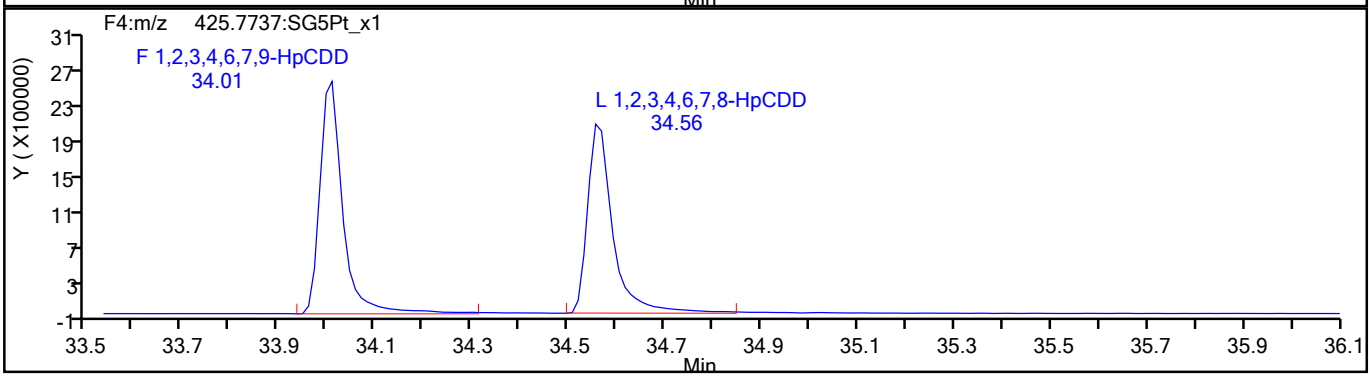

HpCDD Standards

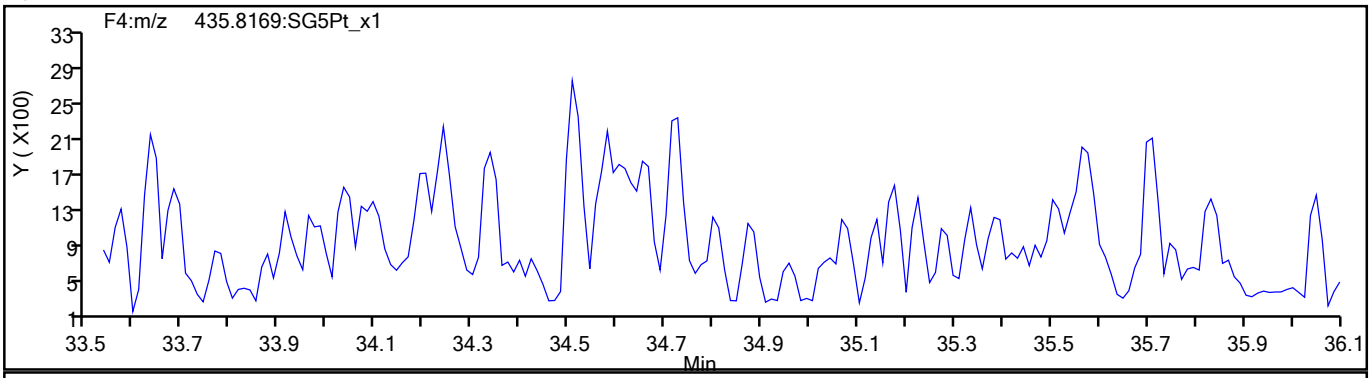

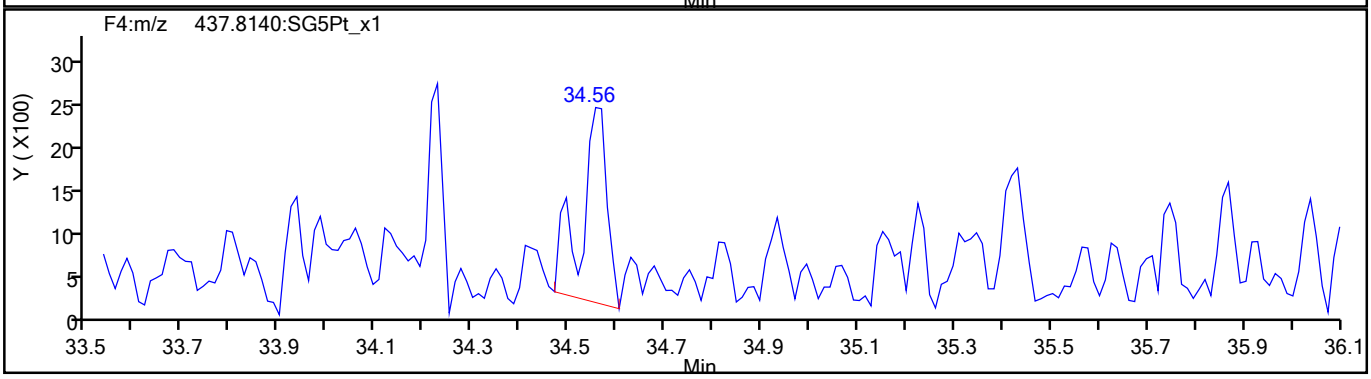

777094

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d		
Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

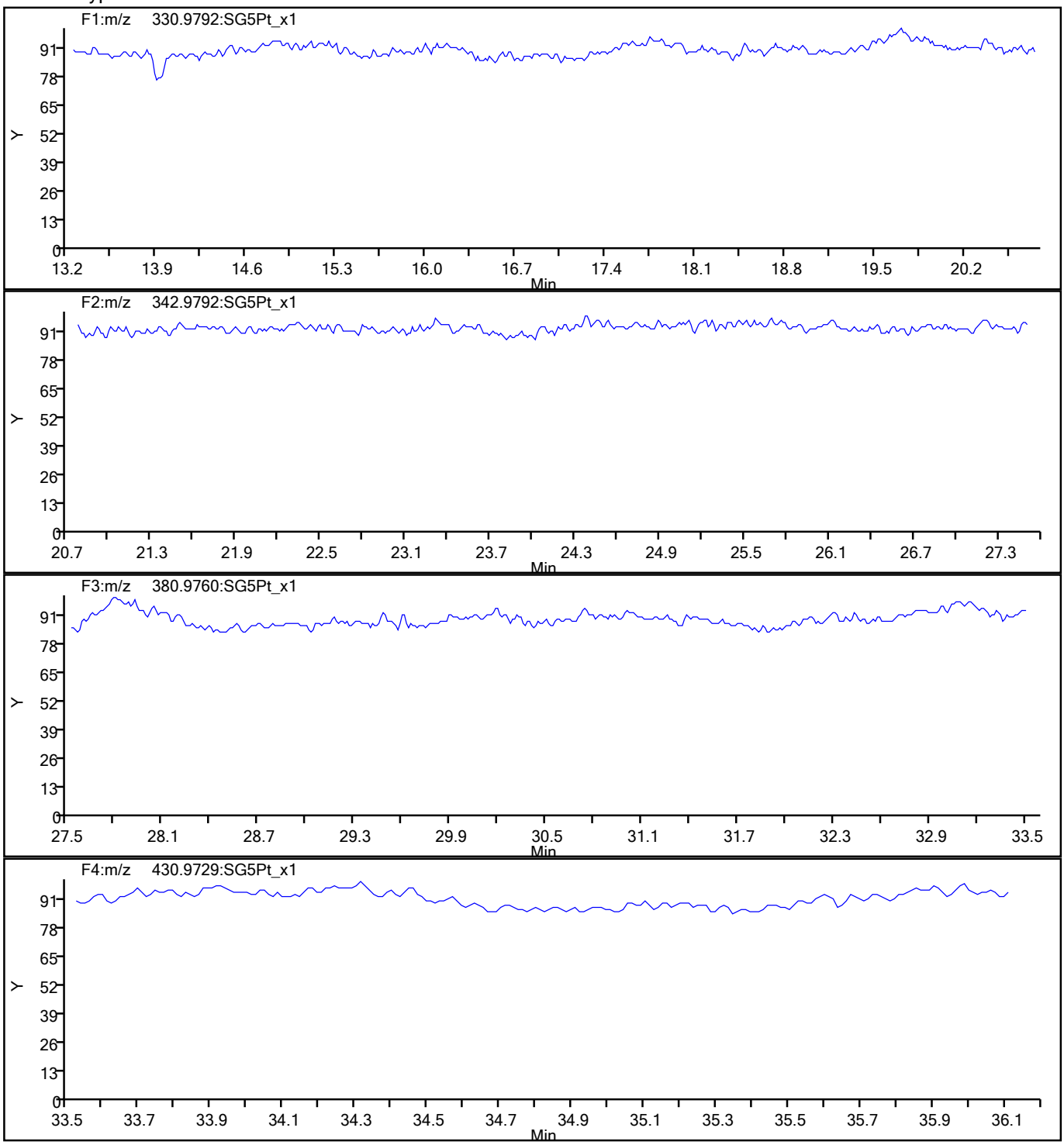

777095

Report Date: 17-Aug-2021 17:08:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_42.d		
Injection Date:	15-Aug-2021 00:36:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

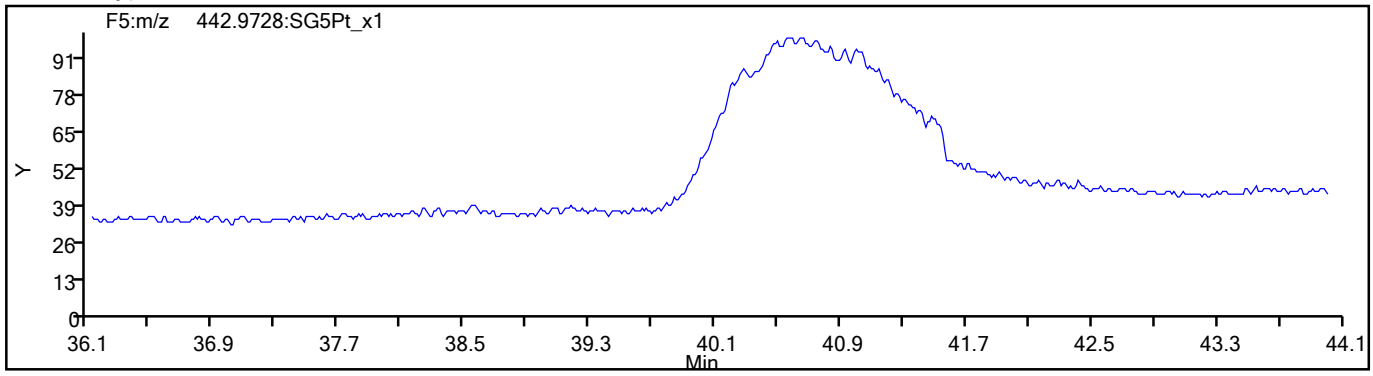

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Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 15-Aug-2021 12:12:05 ALS Bottle#: 1 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081321D WDM HRDXNCP_00044
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 17:09:31 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

First Level Reviewer: bennettd Date: 17-Aug-2021 16:35:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.341	16009290	0.79	1.6249					0.00	
2,3,7,8-TCDF	17.356	35165671	0.76	1.0239	85.8	85.8	0.4142	0.4142		
A Non-2,3,7,8-sub-TCDF	17.046	640622	0.77	1.0239	1.753	1.563	0.4142	1.563		RQ
S Total TCDF					87.6	87.4	0.4142	0.4142		RQ
D 13C-2,3,7,8-TCDD	18.036	9120153	0.82	0.8993					0.00	
2,3,7,8-TCDD	18.066	12360058	0.79	1.2541	43.2	43.2	0.2120	0.2120		
A Non-2,3,7,8-sub-TCDD	17.500	10908725	0.77	1.2541	38.1	38.1	0.2120	38.1		
S Total TCDD					81.4	81.4	0.2120	0.2120		
A F1 PeCDFs	20.093						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	23.241	159733	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.349						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.197						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.882						0.0	0.0		
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.778	13172996	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	34.859	11024286	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.319						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.580	9094532	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.301						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.922	21069995	0.77							
1,3,6,8-TCDD	15.829	13676718	0.77							
2,3,4,7-TCDF	17.356	35165671	0.76							
1,2,3,7-TCDD	18.066	12361589	0.79							
1,2,3,9-TCDF	18.218	15436835	0.78							
1,2,3,9-TCDD	18.218	13775872	0.78							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.170	5519868								
1,2,8,9-TCDF	19.170	16547615	0.75							
1,3,4,6,8-PeCDF	19.458	15474705	1.56							
1,2,4,7,9-PeCDD	21.235	11240401	1.56							
1,2,3,8,9-PeCDD	25.462	10213094	1.59							
1,2,3,8,9-PeCDF	25.681	12796235	1.62							
1,2,3,4,6,8-HxCDF	27.974	12965832	1.21							
1,2,4,6,7,9-HxCDD	29.544	10011755	1.25							
1,2,3,4,6,7-HxCDD	32.113	10653583	1.26							
1,2,3,4,8,9-HxCDF	32.419	12836521	1.21							
1,2,3,4,6,7,9-HpCDD	34.021	10224106	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 17:09:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 15-Aug-2021 12:12:05 ALS Bottle#: 1 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081321D WDM HRDXNCP_00044
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 17:09:31 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

First Level Reviewer: bennettd Date: 17-Aug-2021 16:35:11

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	1.000	7058095	1640907	1974	4935	831		
317.9389	17.341	17.341	0	1.000	8951195	2038646	1810	4525	1126	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.001	15185855	3277974	5595	13987	586		
305.8987	17.356	17.356	0	1.001	19979816	4332197	10012	25030	433	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.473	17.046	145	1.123	278689	48407	5595	13987	9		
305.8987	19.473	17.046	145	1.123	439614	65031	10012	25030	6	0.63(0.65-0.89)	
	Empc Correction				361933	62866	10012	25030	6		
13C-2,3,7,8-TCDD											
331.9368	18.036	18.036	0	1.000	4101099	881905	1163	2907	758		
333.9339	18.052	18.036	1	1.000	5019054	1067628	930	2325	1148	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.002	5438908	1200951	2279	5697	527		
321.8936	18.066	18.066	0	1.002	6921150	1527651	2904	7260	526	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.946	17.500	27	0.995	4762277	1131383	2279	5697	496		
321.8936	17.946	17.500	27	0.995	6146448	1474890	2904	7260	508	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	20.093						457	1142			
341.8567	20.093						422	1055			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	22.381	23.241	-52	1.000	62749	8315	1444	3610	6		
341.8567	22.408	23.241	-50	1.000	39811	5077	897	2242	6	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	22.967	23.241	-16	1.000	41513	6237	1444	3610	4		
341.8567	22.967	23.241	-16	1.000	22421	3953	897	2242	4	1.85(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.349						1310	3275			
357.8516	23.349						876	2190			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						2212	5530			
375.8178	30.197						2098	5245			
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						2908	7270			
391.8127	30.882						2401	6002			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	6735820	2011792	11602	29005	173		
409.7789	33.778	33.778	0	1.000	6437176	1906589	11320	28300	168	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.859	34.859	0	1.000	5621971	1327704	11602	29005	114		
409.7789	34.859	34.859	0	1.000	5402315	1322743	11320	28300	117	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						11602	29005			
409.7789	34.319						11320	28300			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	4642900	1203399	8450	21125	142		
425.7737	34.580	34.580	0	1.000	4451632	1125342	8606	21515	131	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						8450	21125			
425.7737	34.301						8606	21515			
1,3,6,8-TCDF											
303.9016	14.922	14.922	0		9177156	2642354	5595	13987	472		
305.8987	14.922	14.922	0		11892839	3394554	10012	25030	339	0.77(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.829	15.829	0		5945889	1589236	2279	5697	697		
321.8936	15.829	15.829	0		7730829	2071707	2904	7260	713	0.77(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.356	17.356	0		15185855	3277974	5595	13987	586		
305.8987	17.356	17.356	0		19979816	4332197	10012	25030	433	0.76(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.066	18.066	0		5439806	1201073	2279	5697	527		
321.8936	18.066	18.066	0		6921783	1527737	2904	7260	526	0.79(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	18.218	18.218	0		6751268	1497254	5595	13987	268		
305.8987	18.218	18.218	0		8685567	1920410	10012	25030	192	0.78(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.218	18.218	0		6028798	1296462	2279	5697	569		
321.8936	18.218	18.218	0		7747074	1660241	2904	7260	572	0.78(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.170	19.170	0		5519868	1117717	2279	5697	490		

Report Date: 17-Aug-2021 17:09:31 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	19.170	19.170	0		7071493	1446022	5595	13987	258		
305.8987	19.170	19.170	0		9476122	1902588	10012	25030	190	0.75(0.65-0.89)	
1,3,4,6,8-PeCDF											
339.8597	19.458	19.458	0		9439473	1946375	457	1142	4259		
341.8567	19.458	19.458	0		6035232	1262222	422	1055	2991	1.56(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	21.235	21.235	0		6856107	1102210	1310	3275	841		
357.8516	21.235	21.235	0		4384294	711345	876	2190	812	1.56(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	25.462	25.462	0		6264106	778160	1310	3275	594		
357.8516	25.449	25.462	-1		3948988	495464	876	2190	566	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	25.681	25.681	0		7903762	947823	1444	3610	656		
341.8567	25.681	25.681	0		4892473	599483	897	2242	668	1.62(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	27.974	27.974	0		7105034	838721	2212	5530	379		
375.8178	27.974	27.974	0		5860798	692244	2098	5245	330	1.21(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.544	29.544	0		5567338	612280	2908	7270	211		
391.8127	29.544	29.544	0		4444417	494166	2401	6002	206	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8157	32.113	32.113	0		5940110	1469655	2908	7270	505		
391.8127	32.113	32.113	0		4713473	1139315	2401	6002	475	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.419	32.419	0		7033414	1740562	2212	5530	787		
375.8178	32.419	32.419	0		5803107	1452126	2098	5245	692	1.21(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	34.021	34.021	0		5209417	1526082	8450	21125	181		
425.7737	34.021	34.021	0		5014689	1435633	8606	21515	167	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 17:09:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d
Lims ID: WDM
Client ID:
Inject. Date: 15-Aug-2021 12:12:05 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 16

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	16009290	3679553

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	16009290	3679553

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.473	278689	48407	439614	65031	1.75	0.63	RQ
19.473	278689	48407	361933	62866	1.56		Empc Correction
Signal Totals:							
	278689	48407	361933	62866			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	718303	113438				0.63	RQ
	640622	111273					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.753 = (718303 * 40.000) / (16009290 * 1.024)
Empc Amount: 1.563 = (640622 * 40.000) / (16009290 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 17-Aug-2021 17:09:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d
Lims ID: WDM
Client ID:
Inject. Date: 15-Aug-2021 12:12:05 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 16

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	9120153	1949533

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	9120153	1949533

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.946	4762277	1131383	6146448	1474890	38.1	0.77	
Signal Totals:							
	4762277	1131383	6146448	1474890			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10908725	2606273				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 38.150 = (10908725 * 40.000) / (9120153 * 1.254)

Report Date: 17-Aug-2021 17:09:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d
Lims ID: WDM
Client ID:
Inject. Date: 15-Aug-2021 12:12:05 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516848 Lims Sample ID: 16

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.381	62749	8315	39811	5077		1.58	
22.967	41513	6237	22421	3953		1.85	R
Signal Totals:							
	104262	14552	62232	9030			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	166494	23582				1.68	RQ
	159733	23472					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (166494 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (159733 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 17-Aug-2021 17:09:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

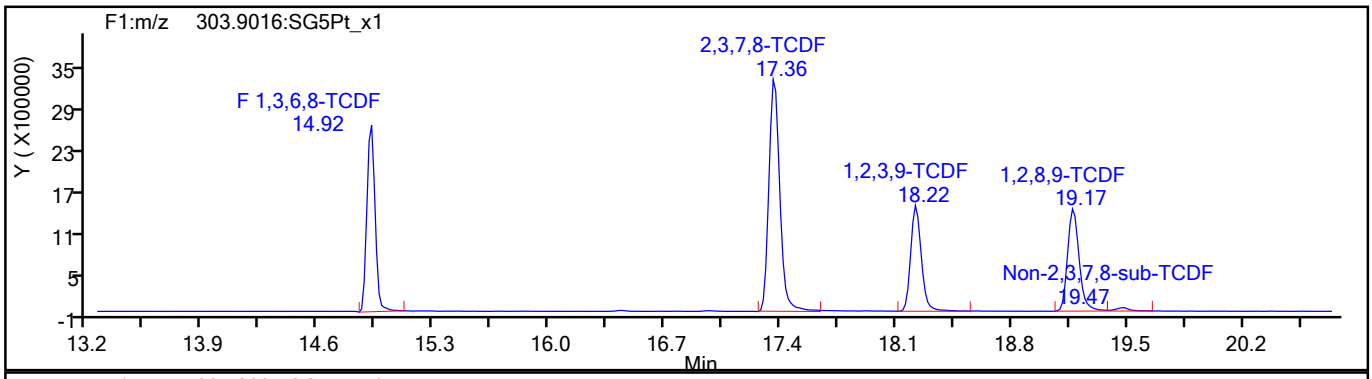

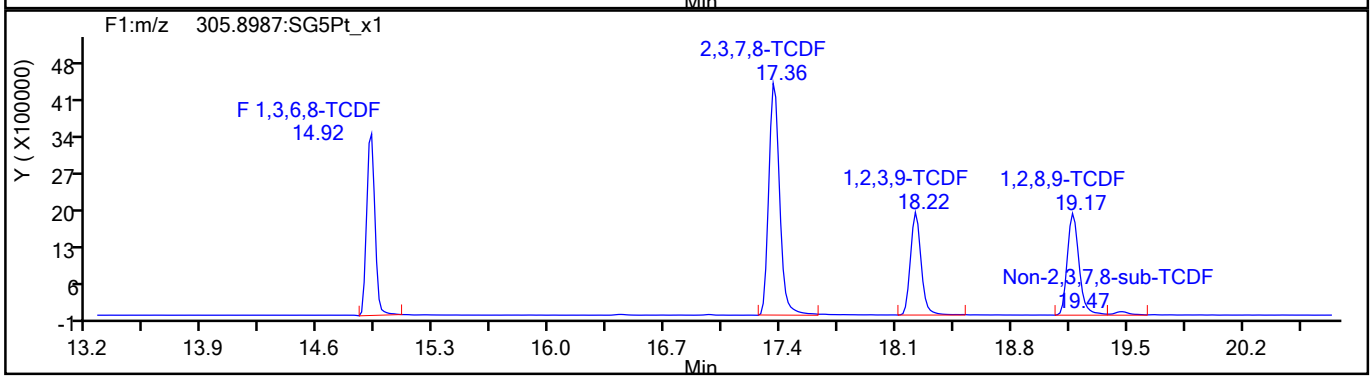

TCDF Standards

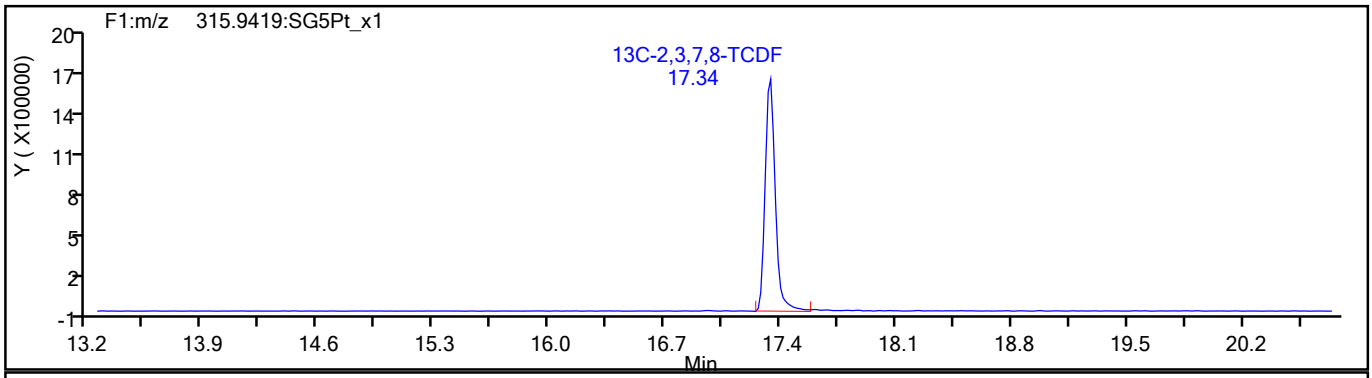

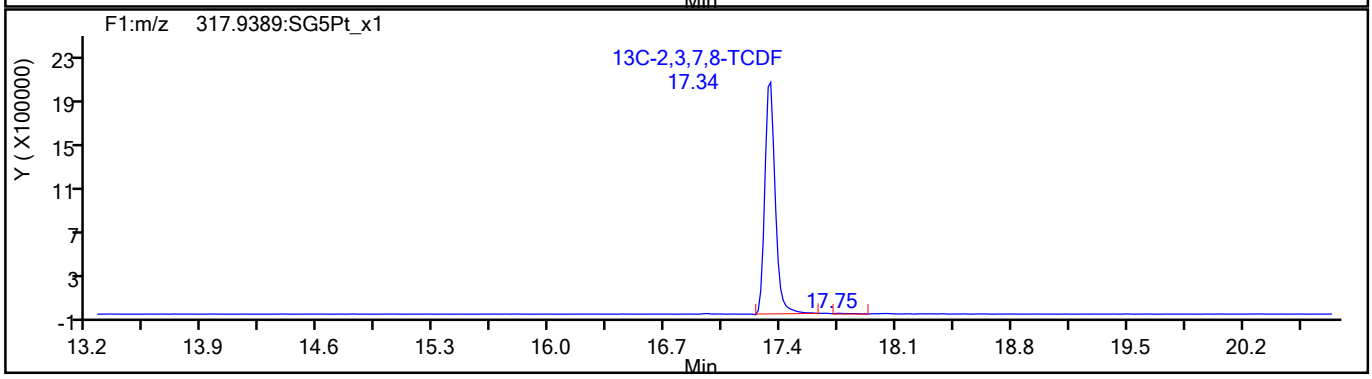

777105

Report Date: 17-Aug-2021 17:09:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

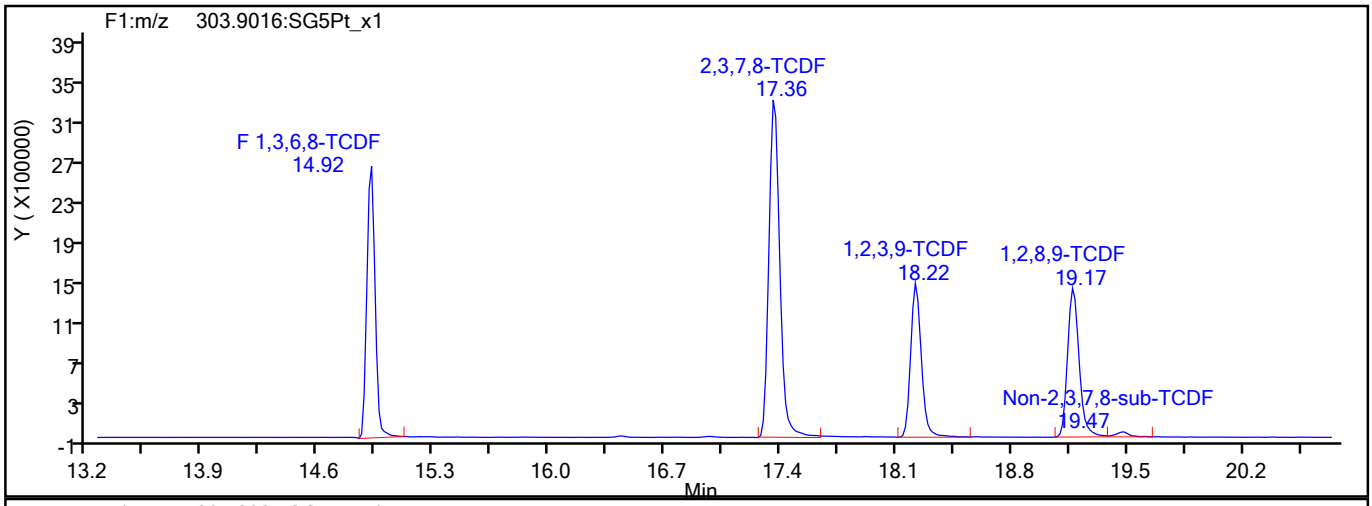

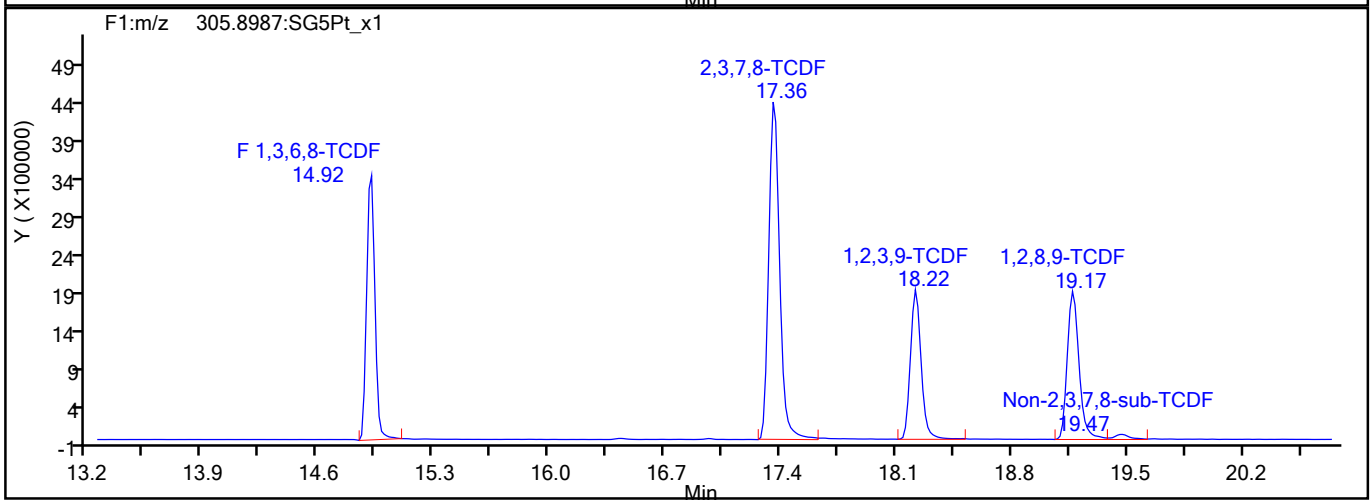

TCDF Interference Mass

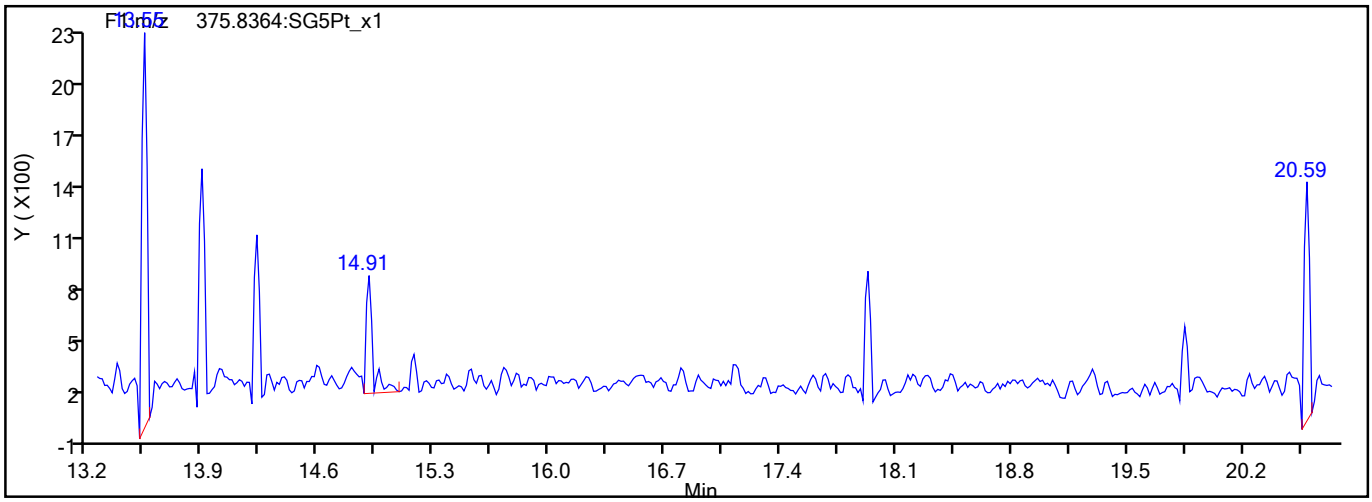

777106

Report Date: 17-Aug-2021 17:09:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

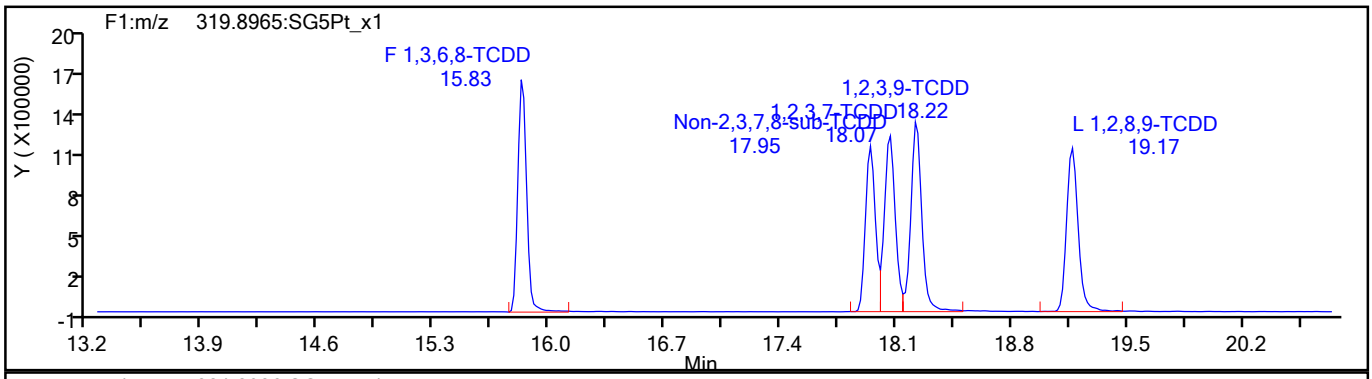

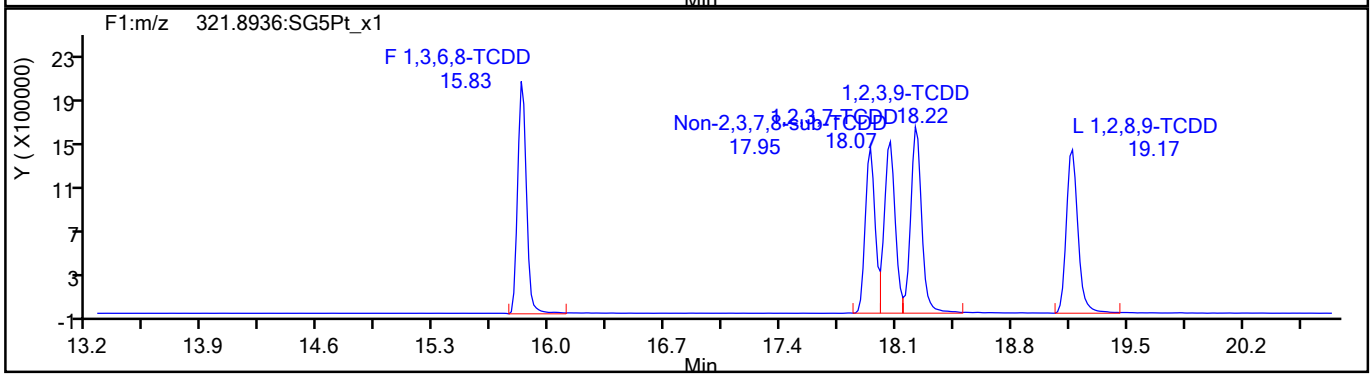

TCDD Standards

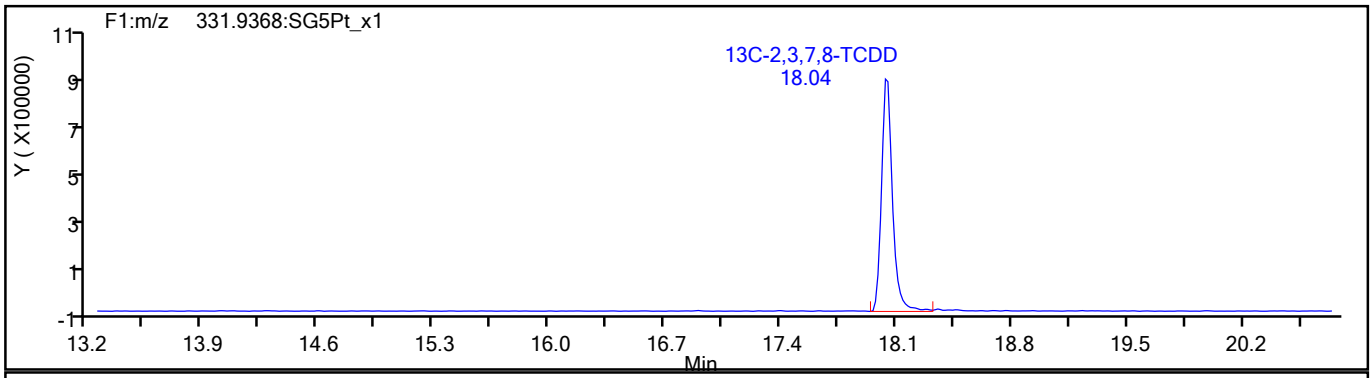

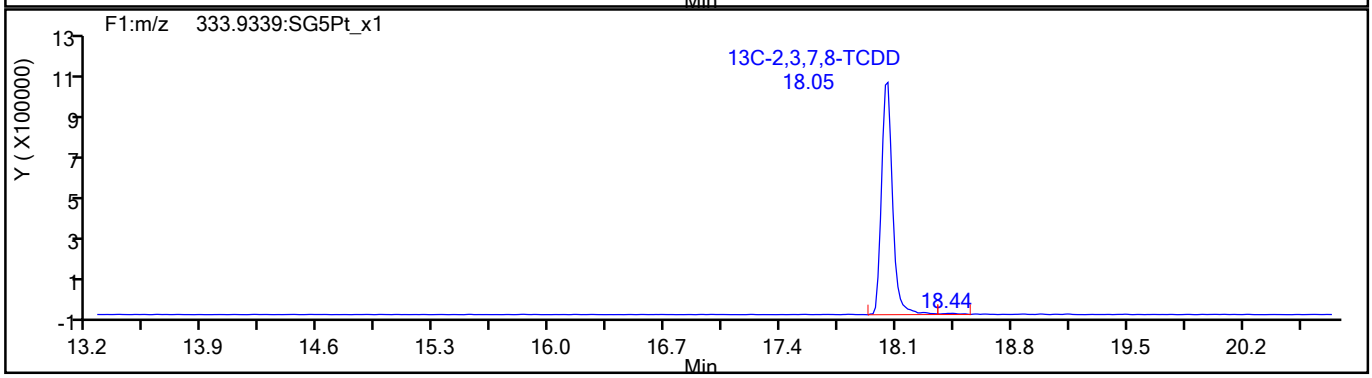

777107

Report Date: 17-Aug-2021 17:09:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

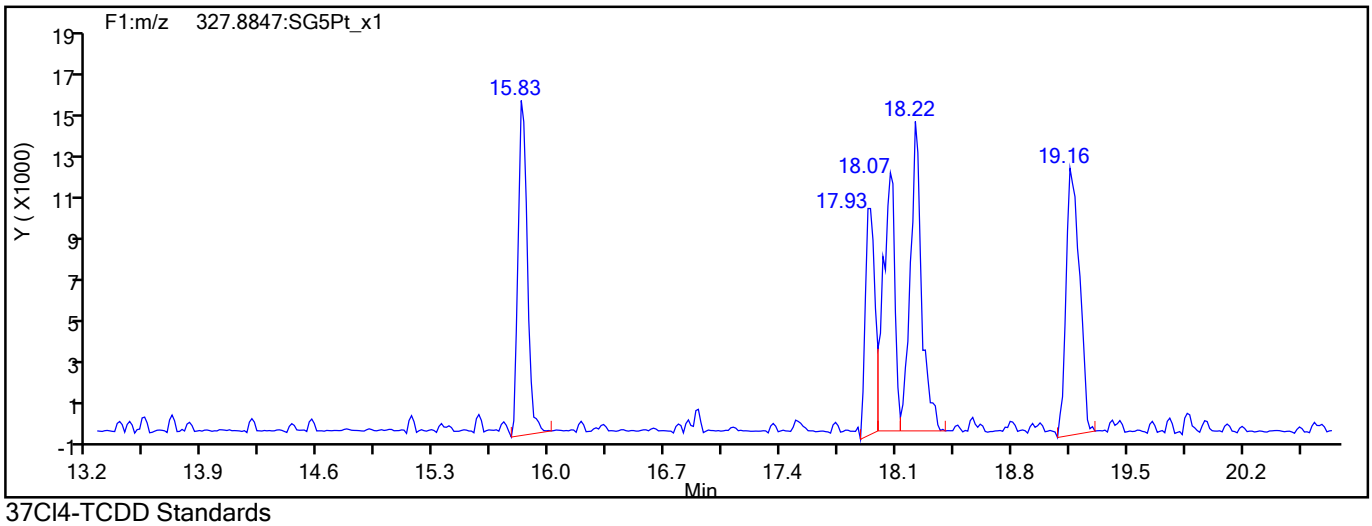

37Cl4-TCDD Standards

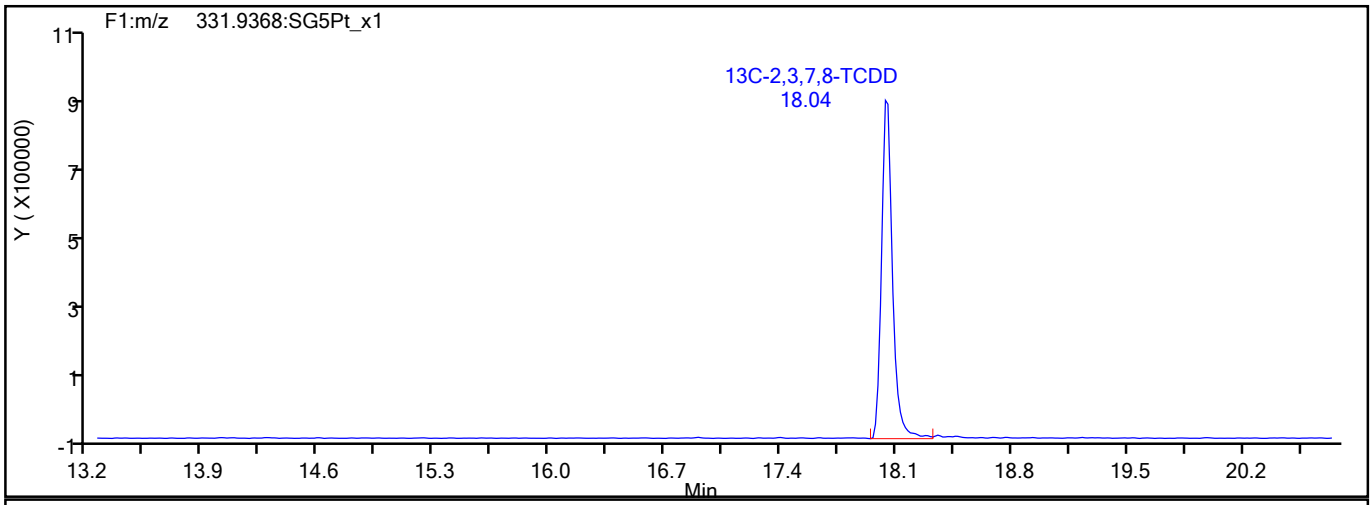

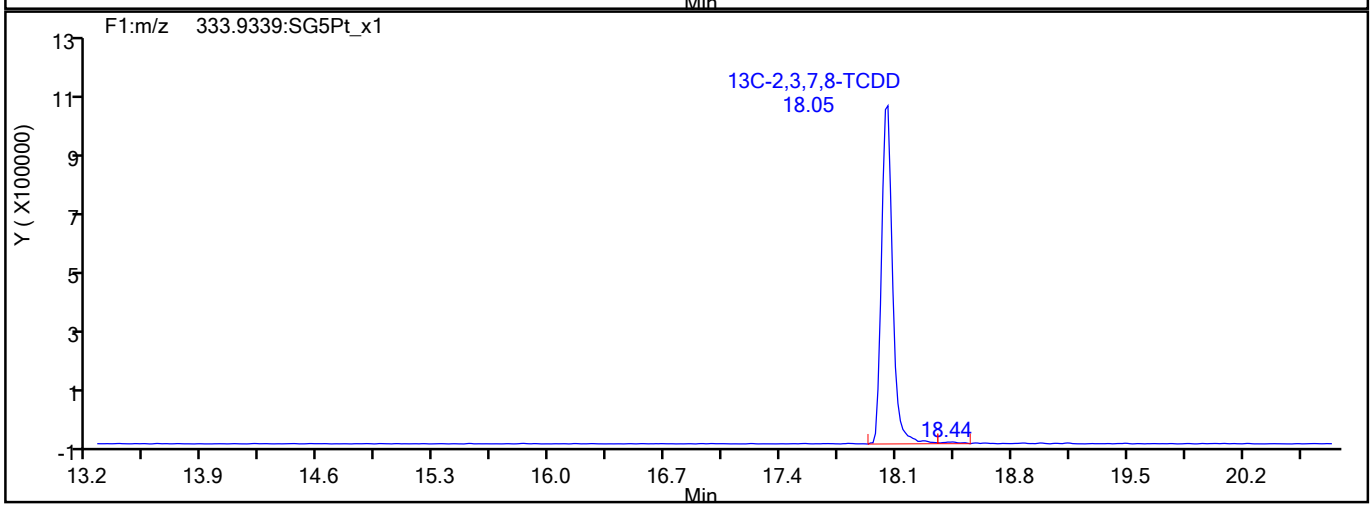

777108

Report Date: 17-Aug-2021 17:09:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

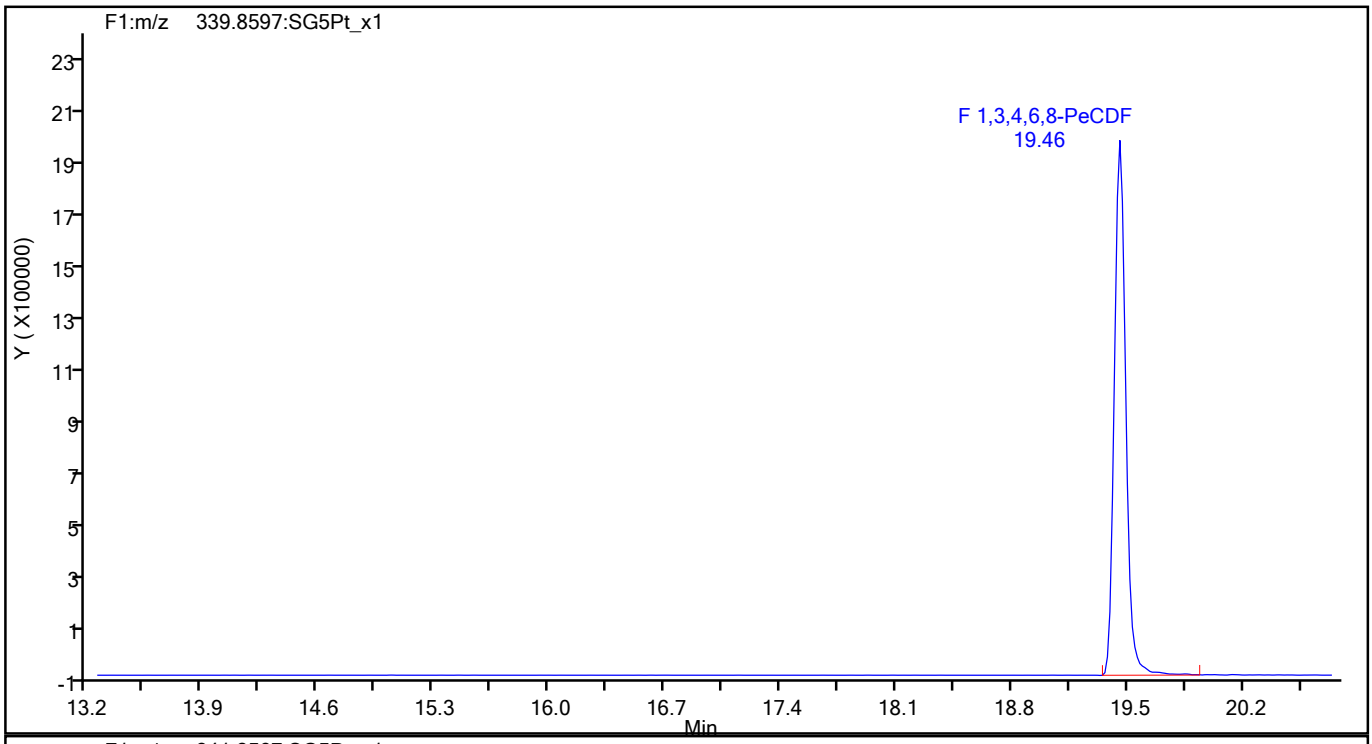

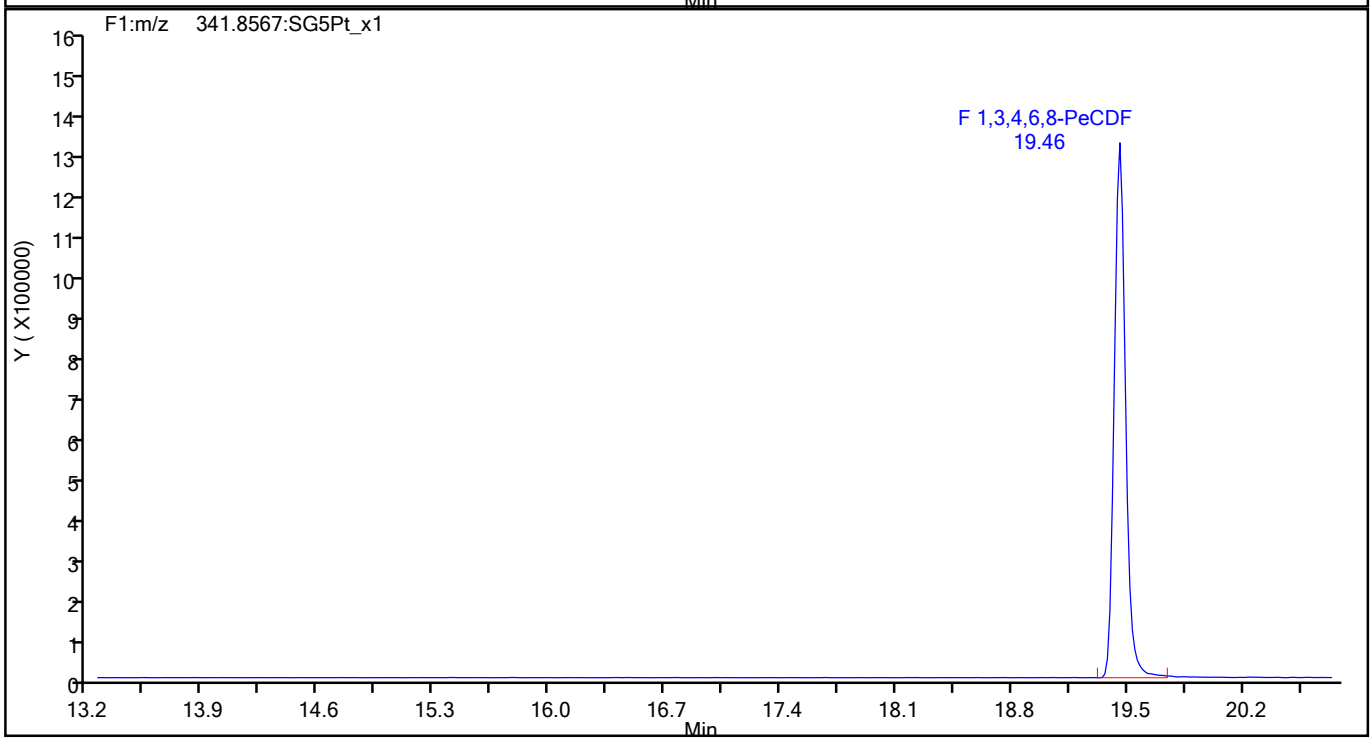

777109

Report Date: 17-Aug-2021 17:09:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

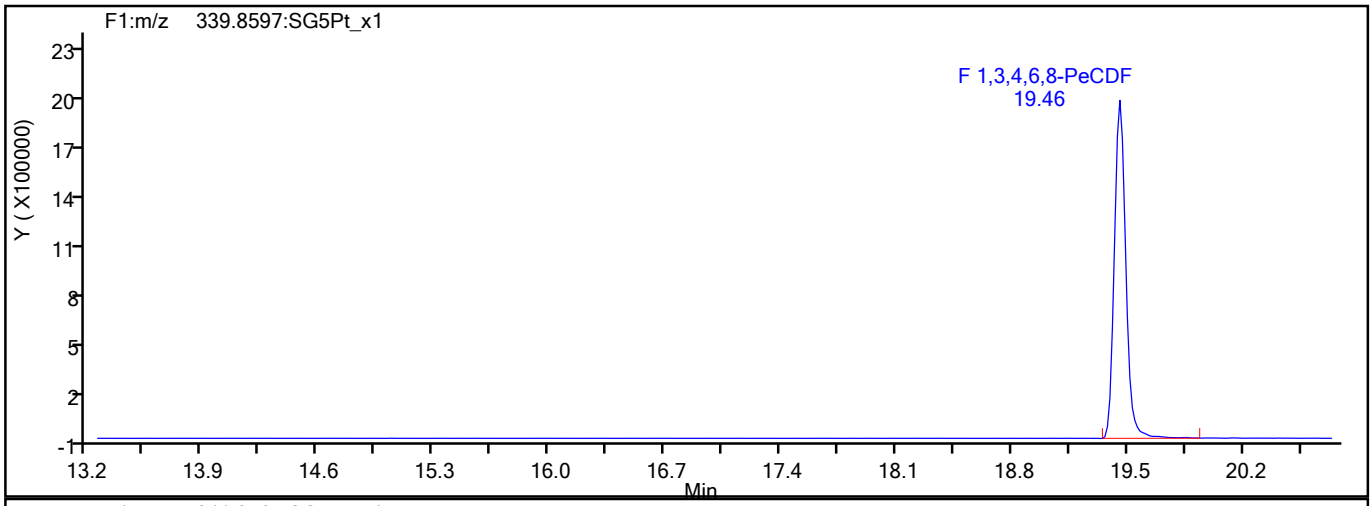

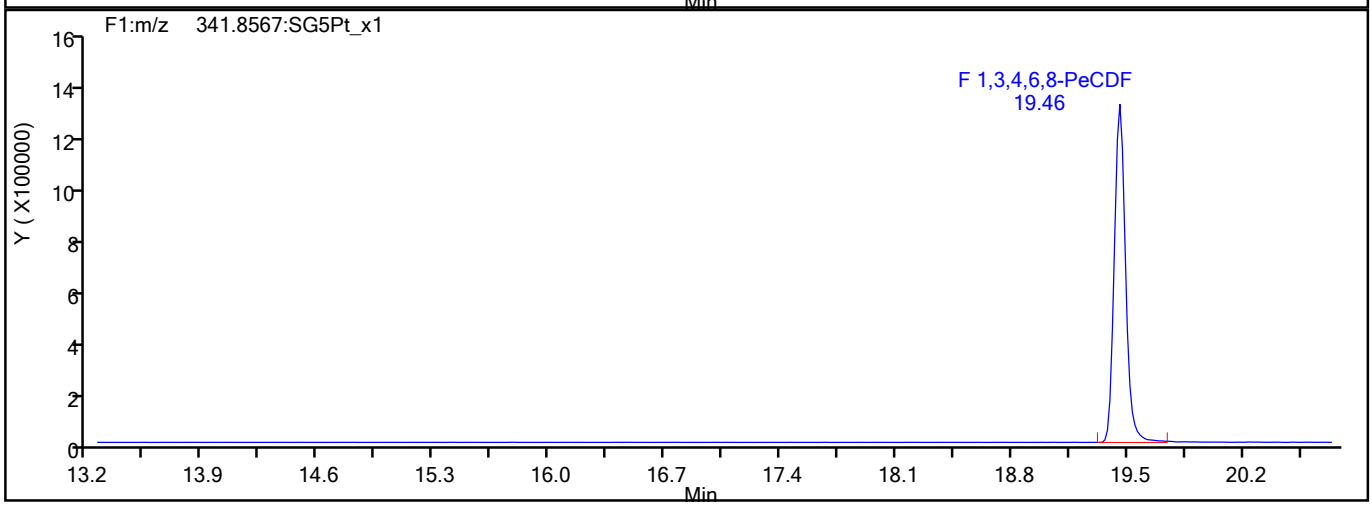

F1 PeCDFs Interference Mass

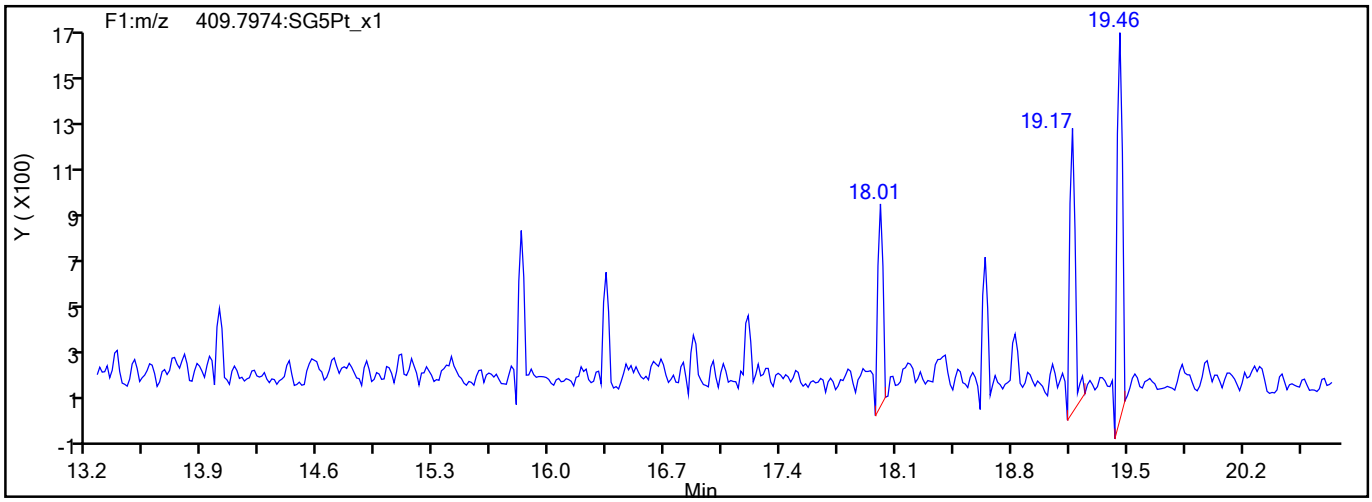

777110

Report Date: 17-Aug-2021 17:09:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

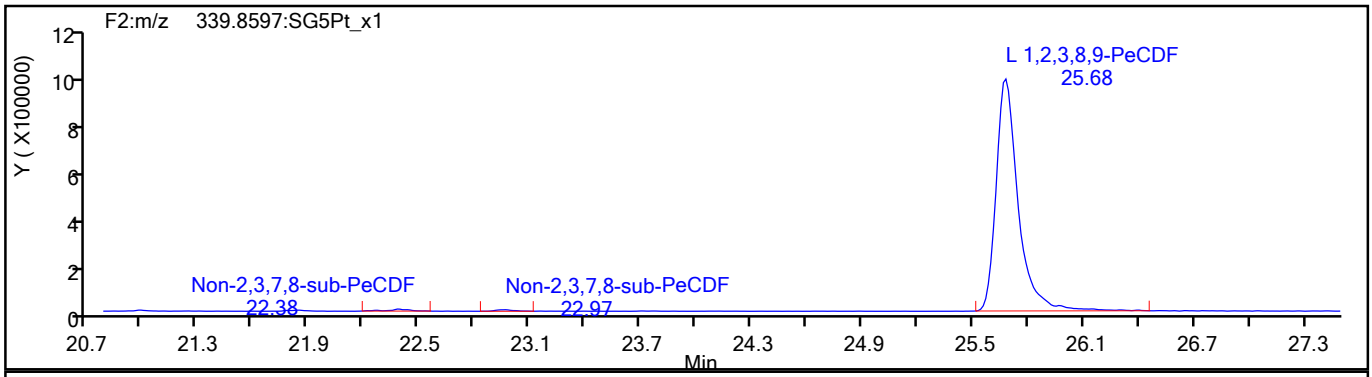

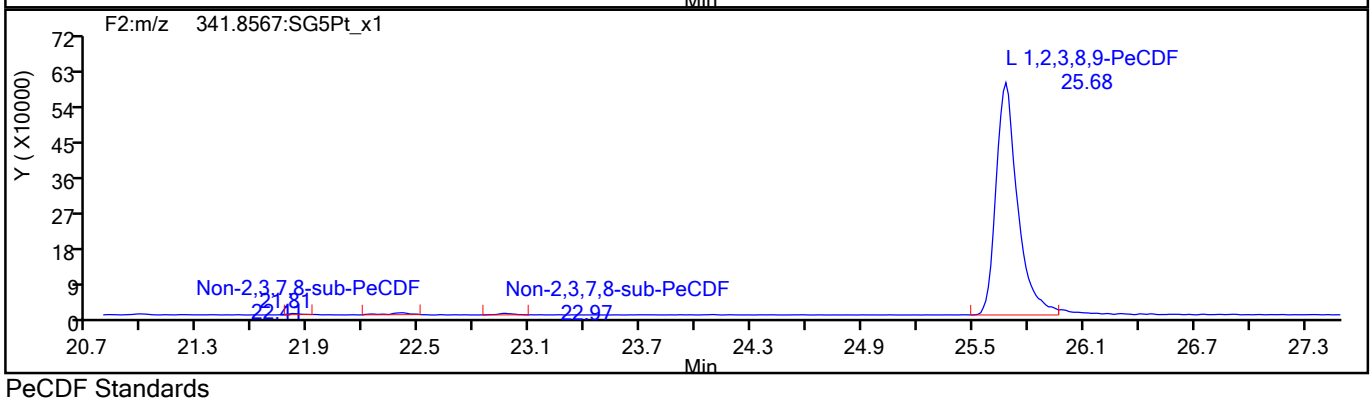

PeCDF Standards

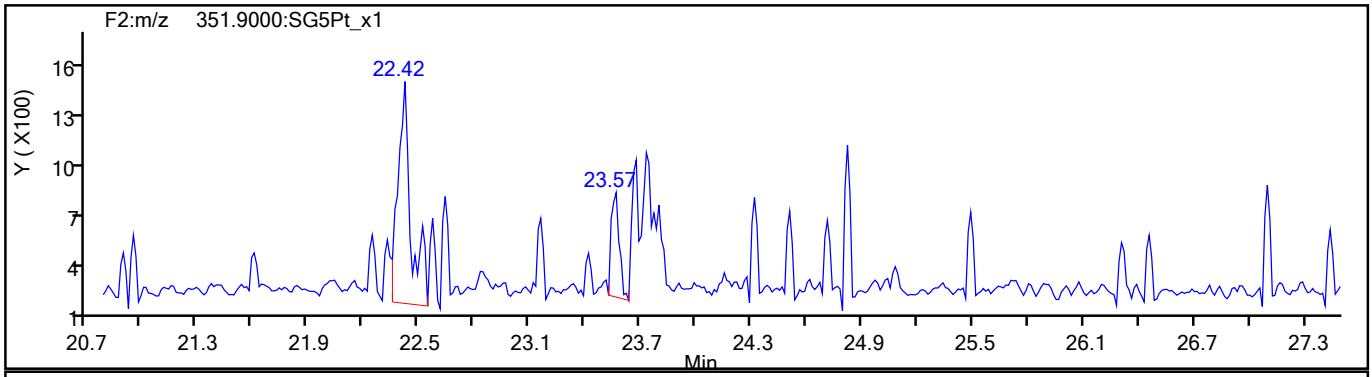

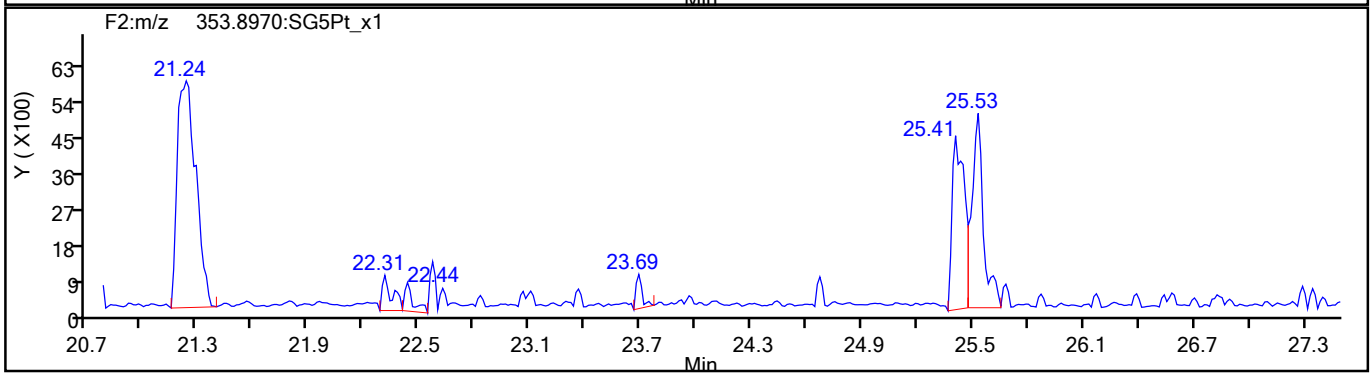

777111

Report Date: 17-Aug-2021 17:09:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

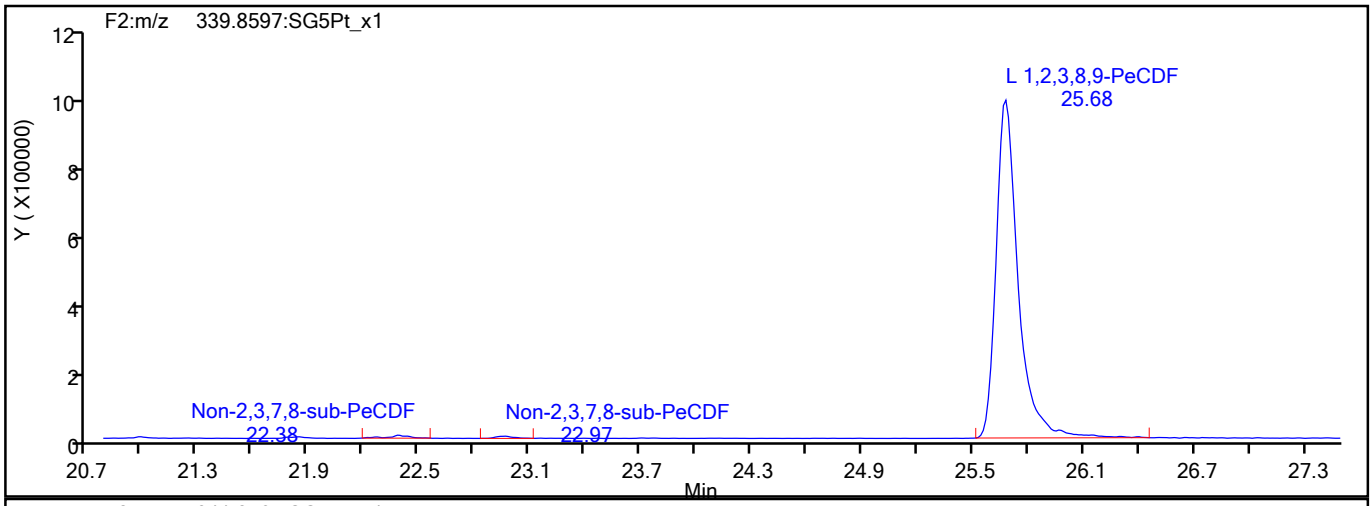

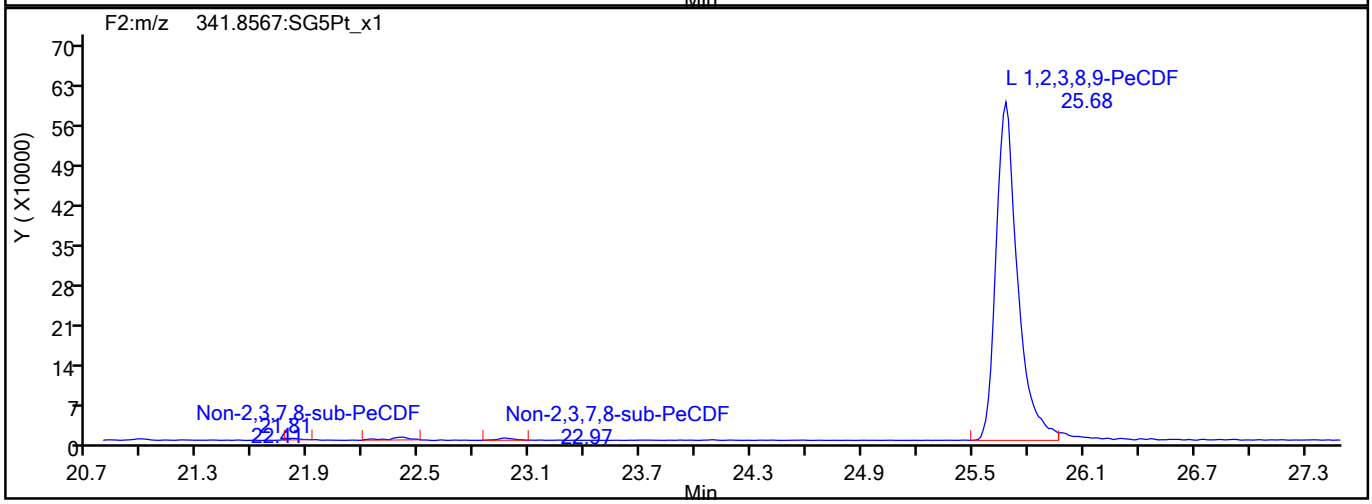

PeCDF Interference Mass

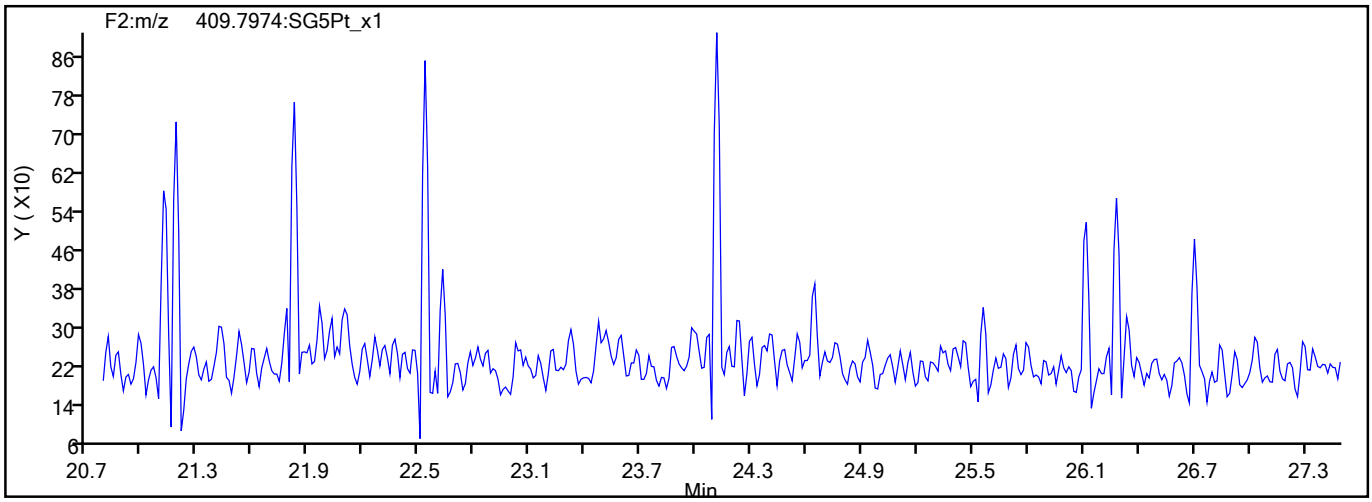

777112

Report Date: 17-Aug-2021 17:09:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

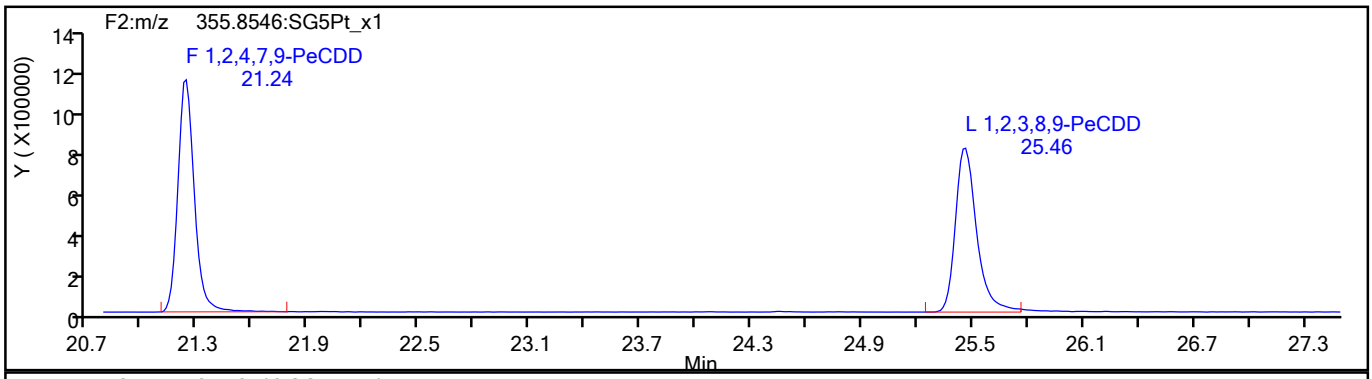

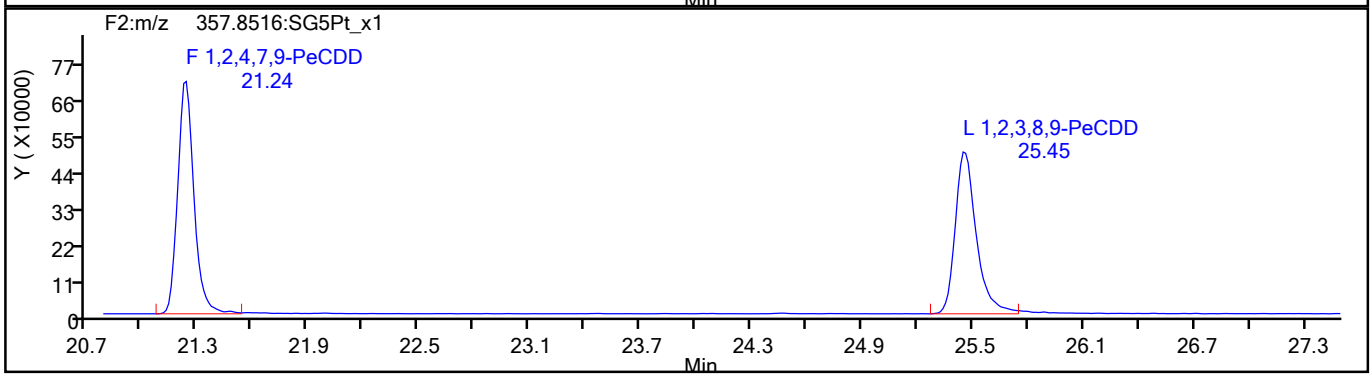

PeCDD Standards

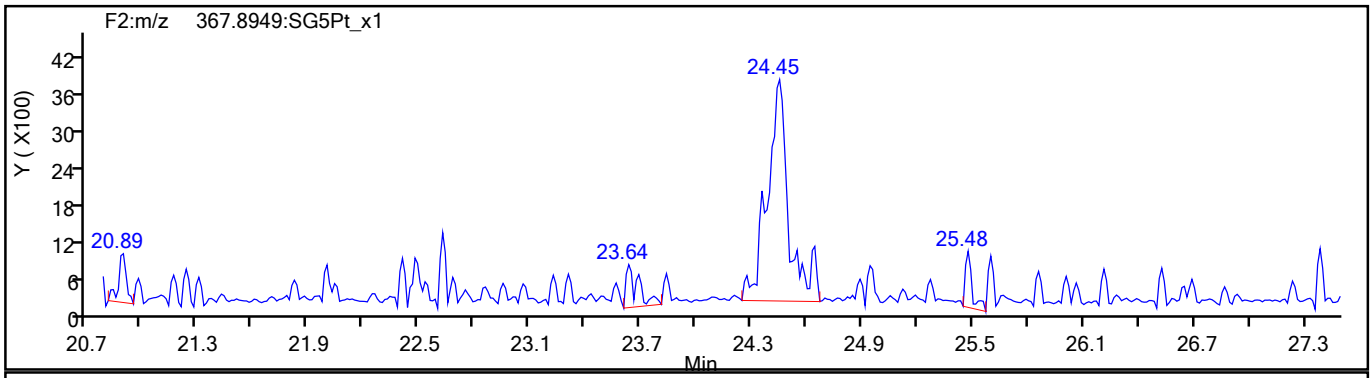

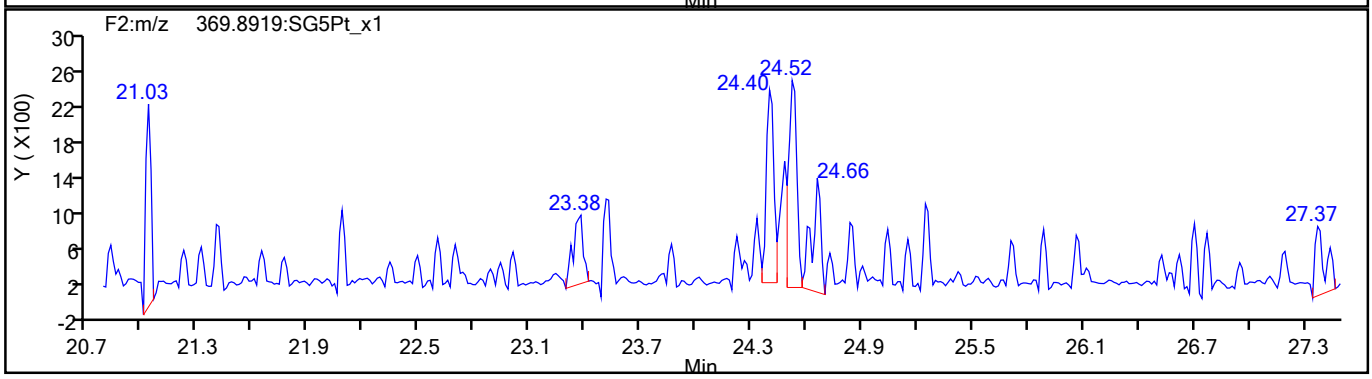

777113

Report Date: 17-Aug-2021 17:09:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

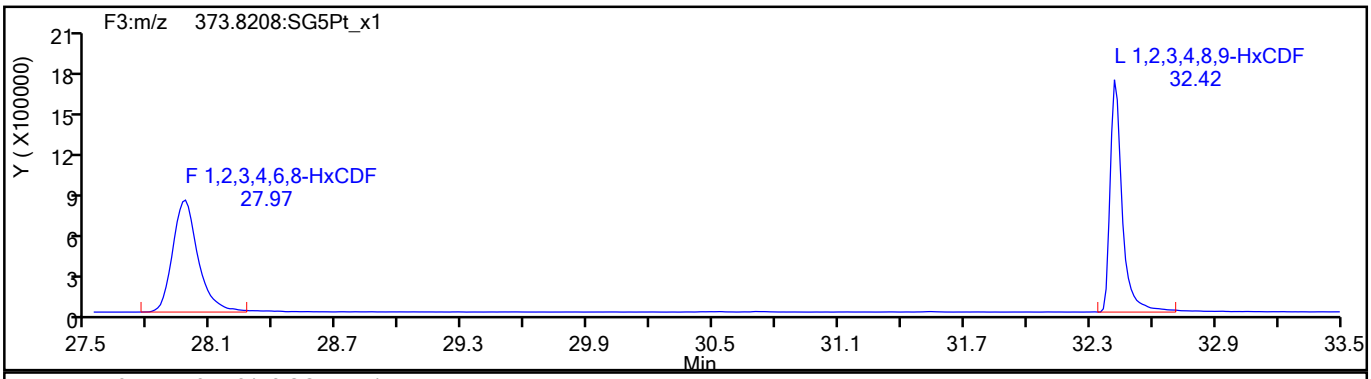

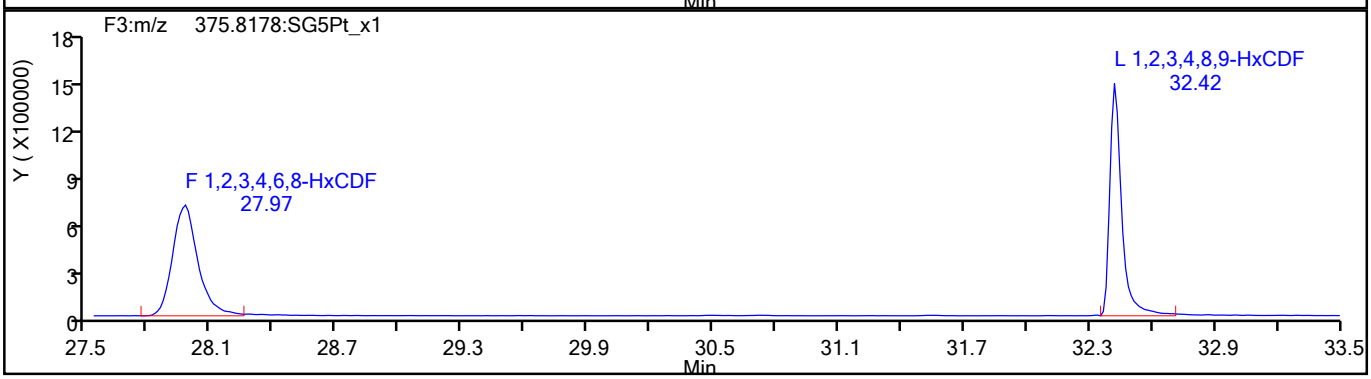

HxCDF Standards

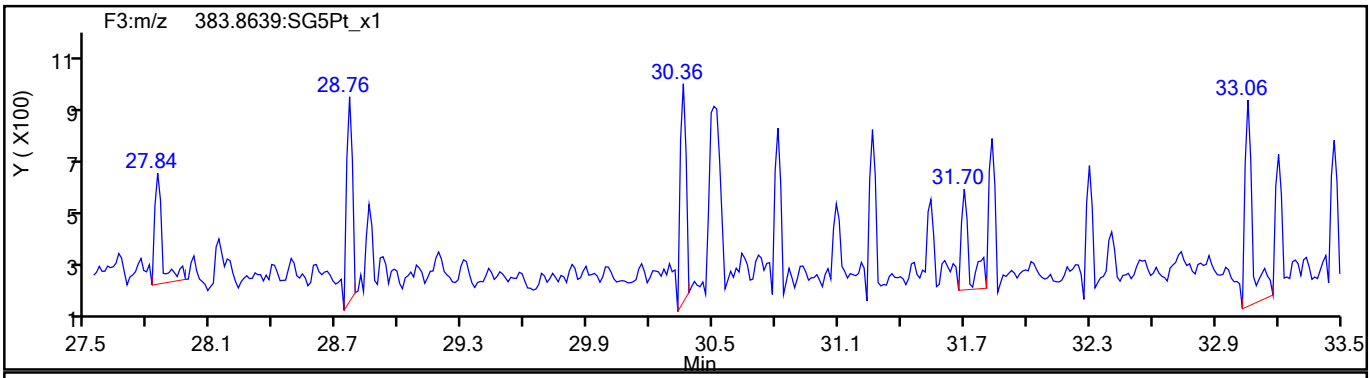

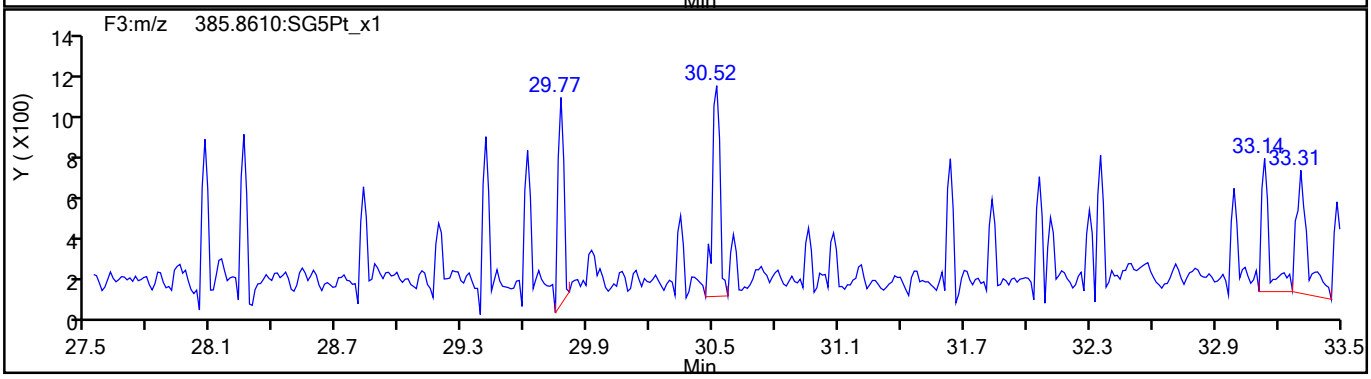

777114

Report Date: 17-Aug-2021 17:09:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

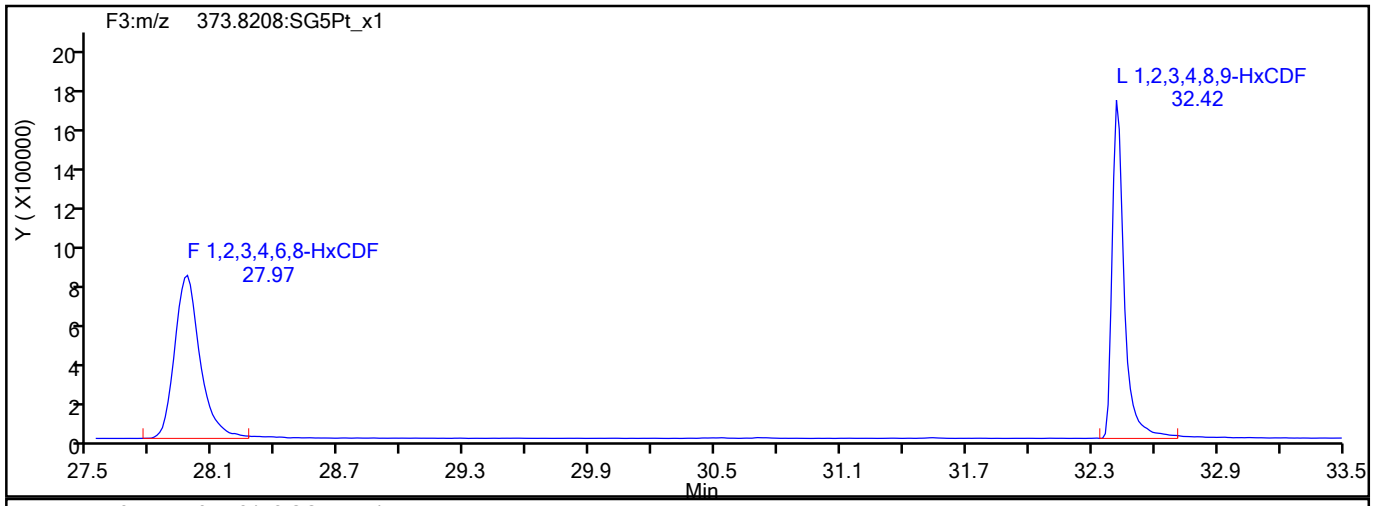

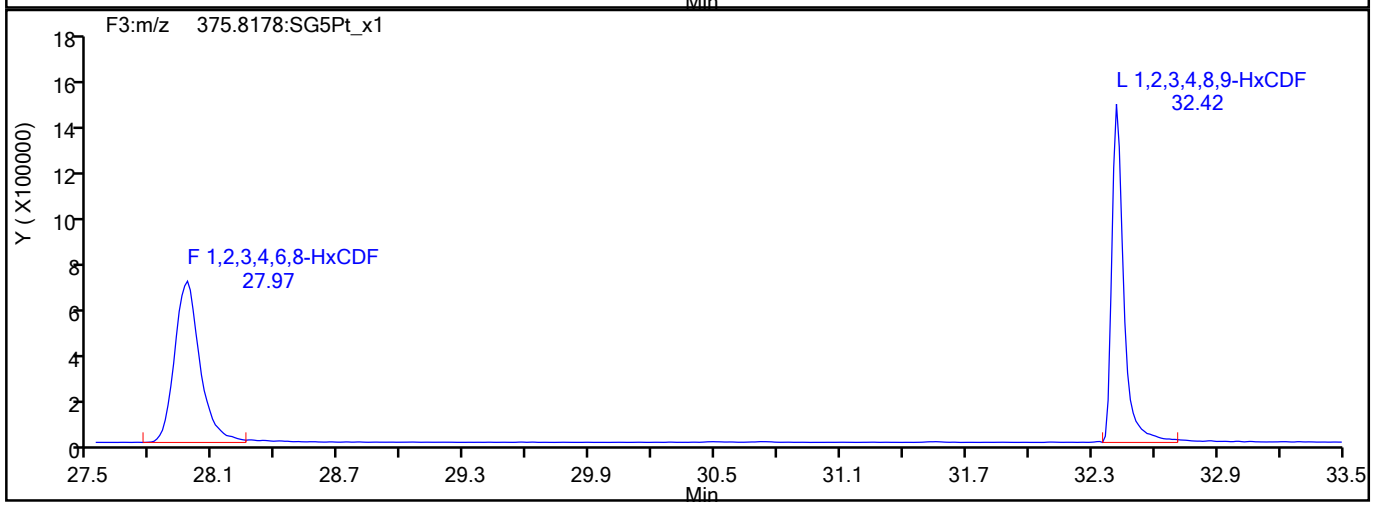

HxCDF Interference Mass

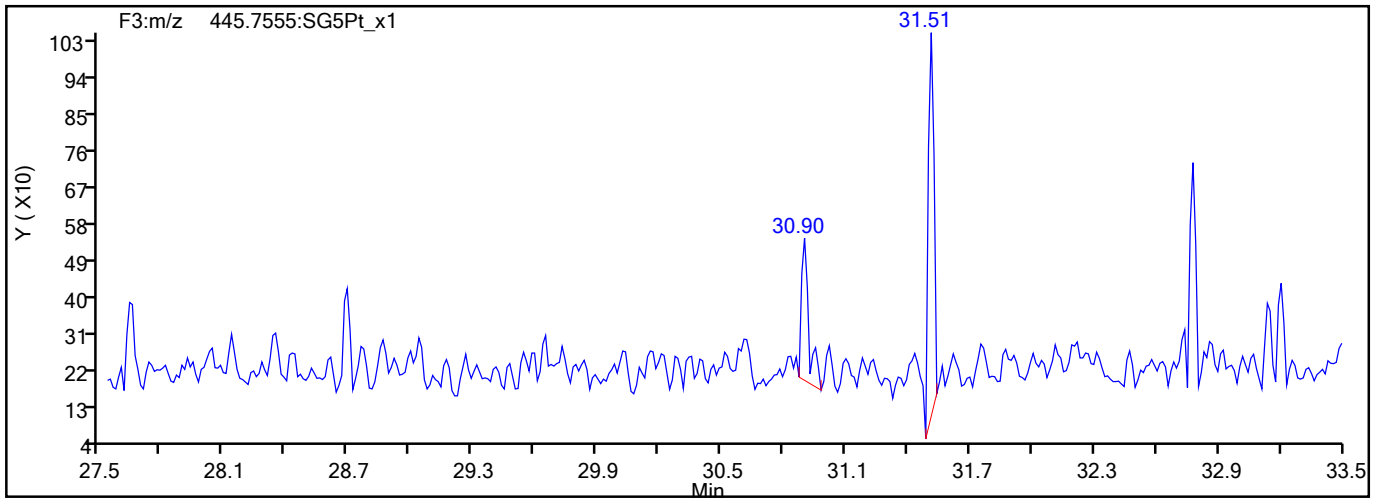

777115

Report Date: 17-Aug-2021 17:09:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

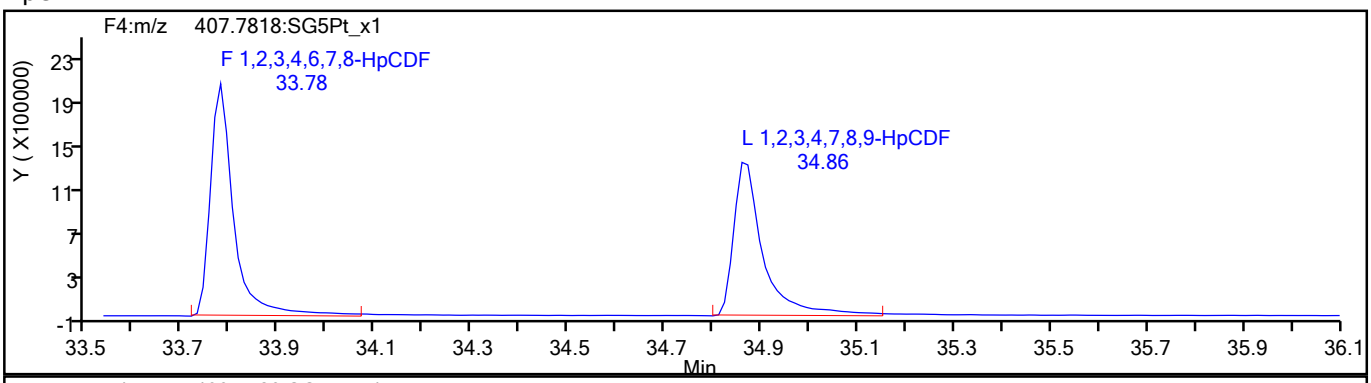

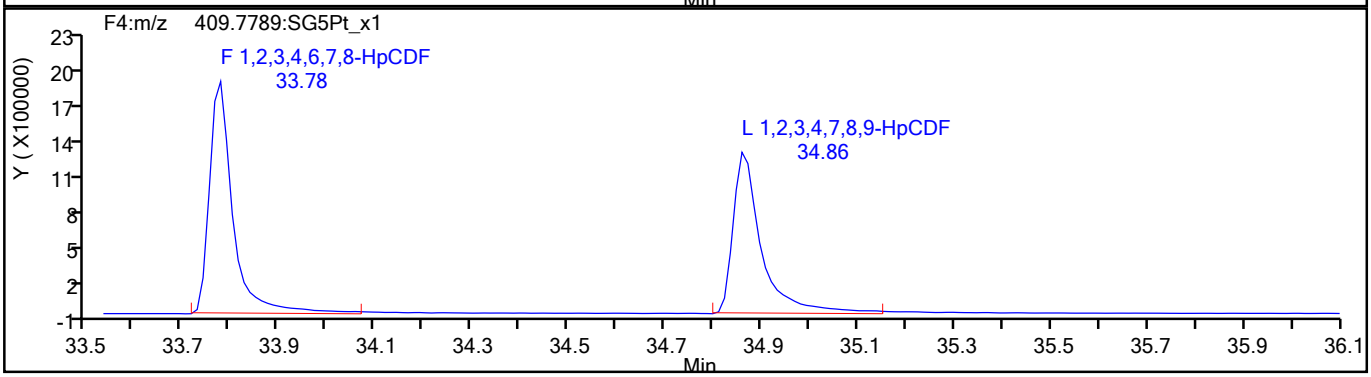

HpCDF Standards

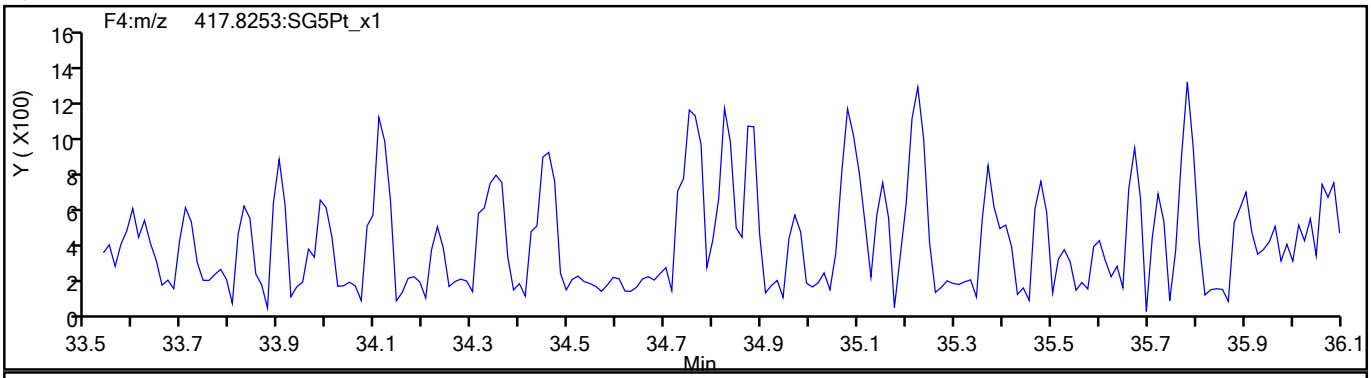

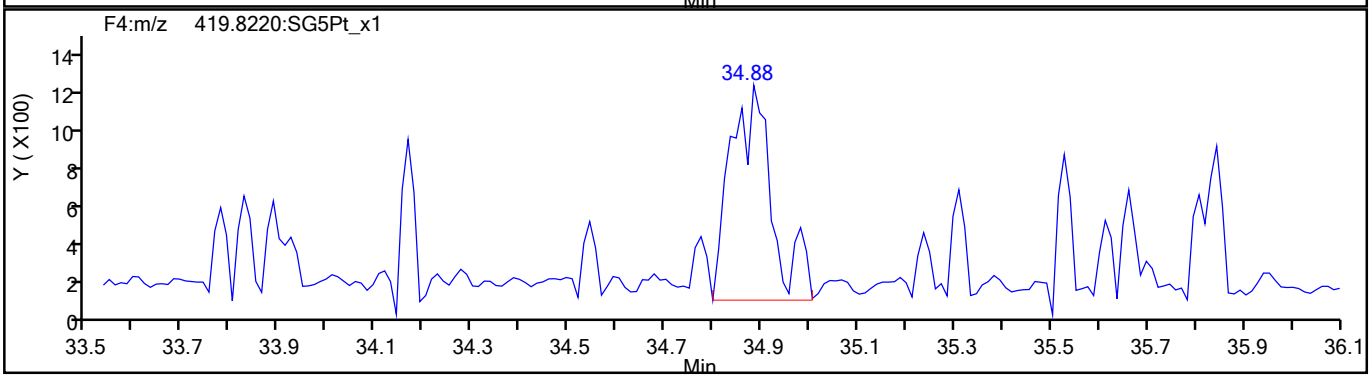

777116

Report Date: 17-Aug-2021 17:09:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

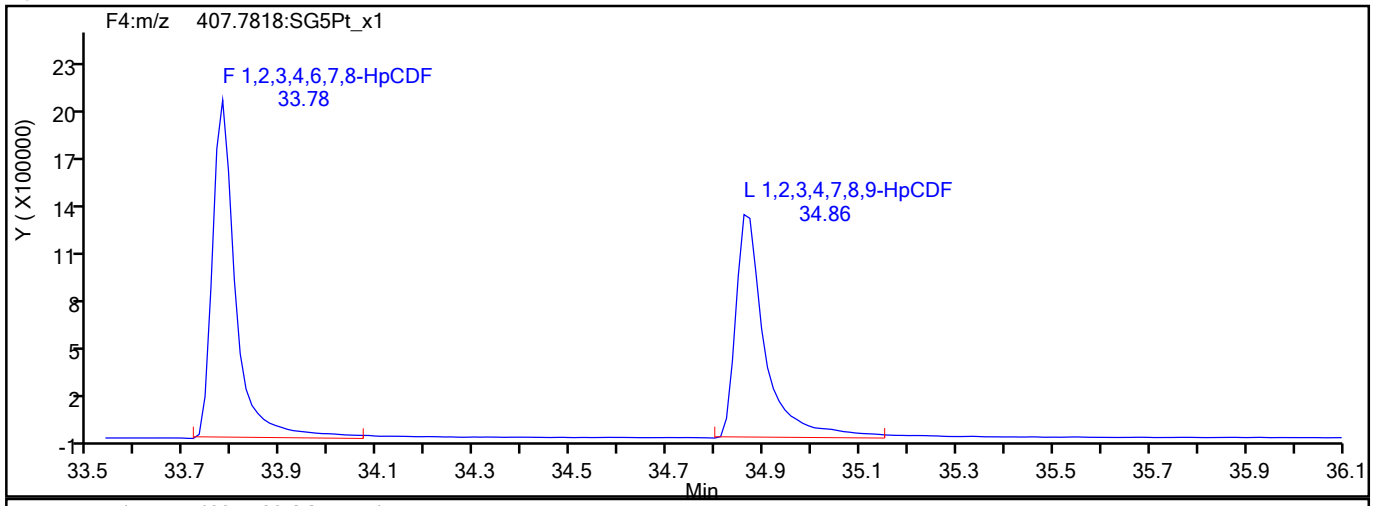

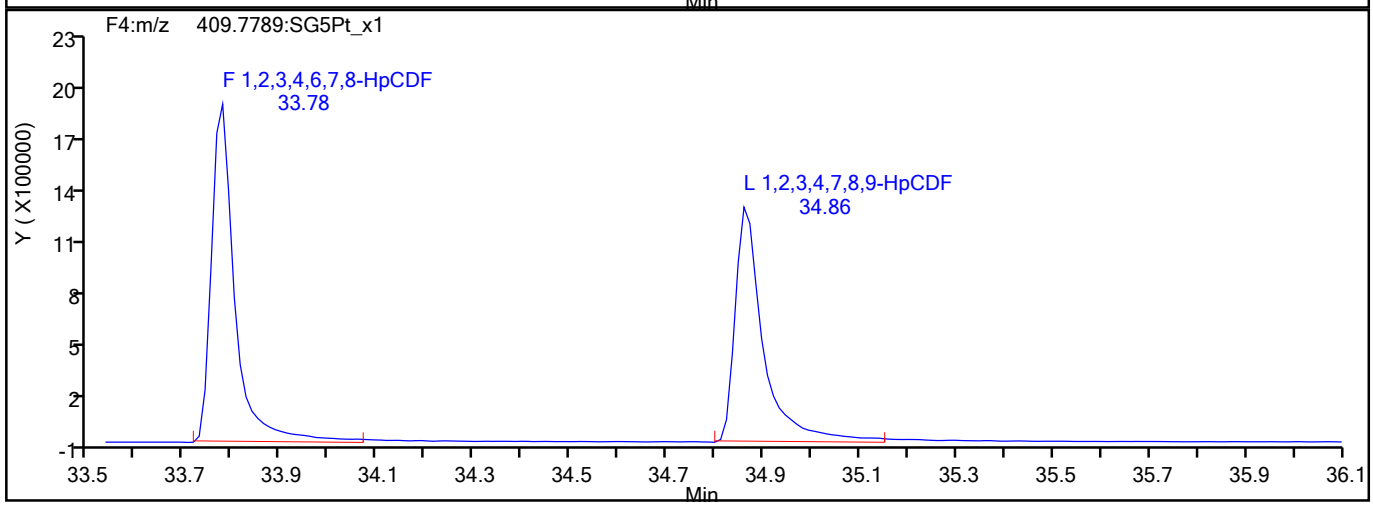

HpCDF Interference Mass

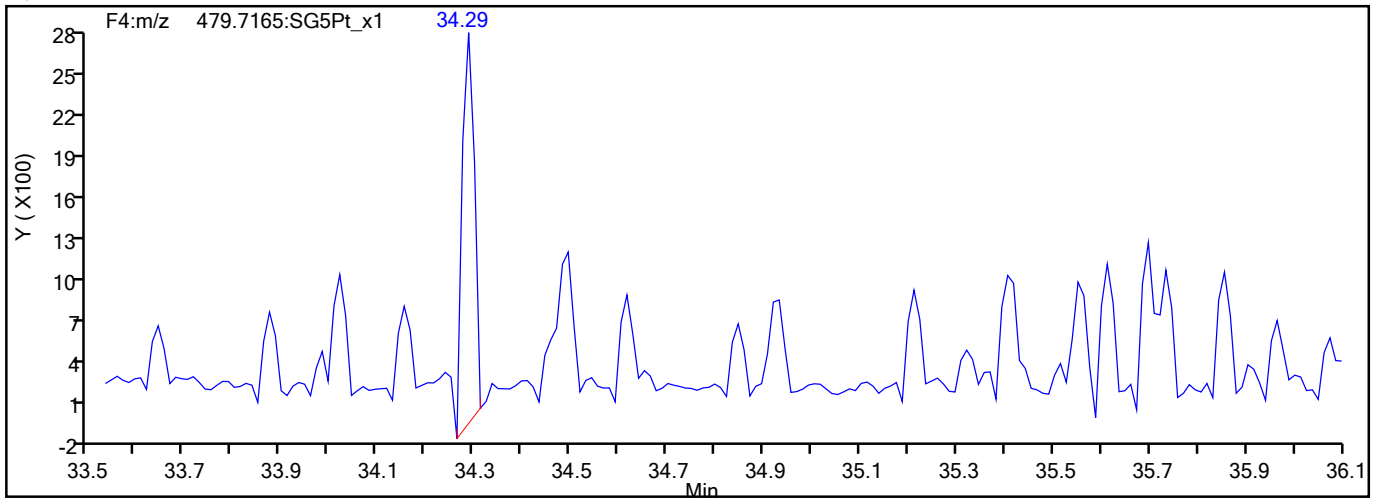

777117

Report Date: 17-Aug-2021 17:09:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

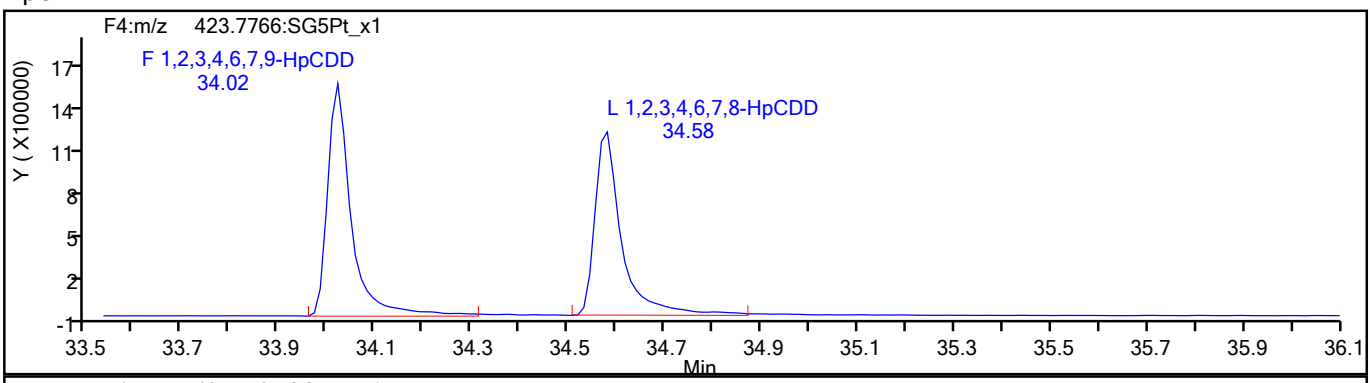

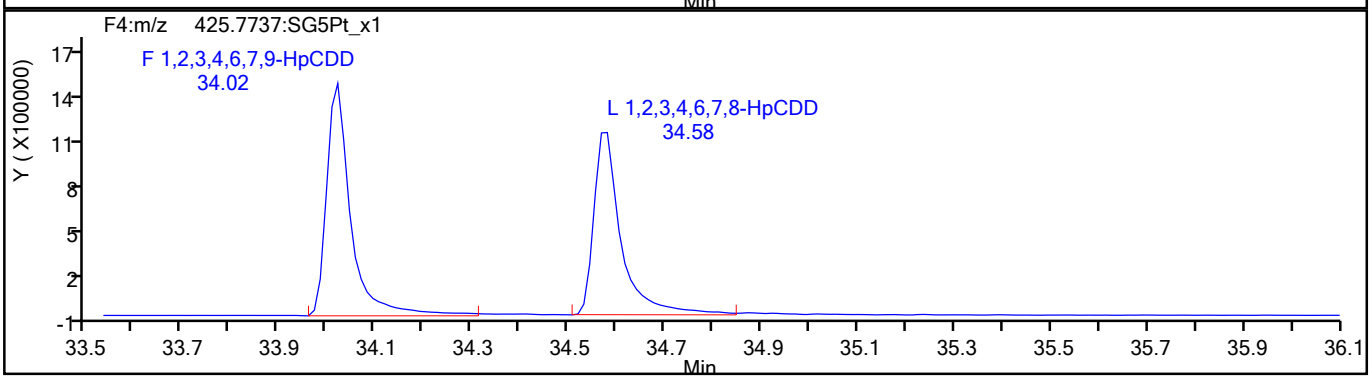

HpCDD Standards

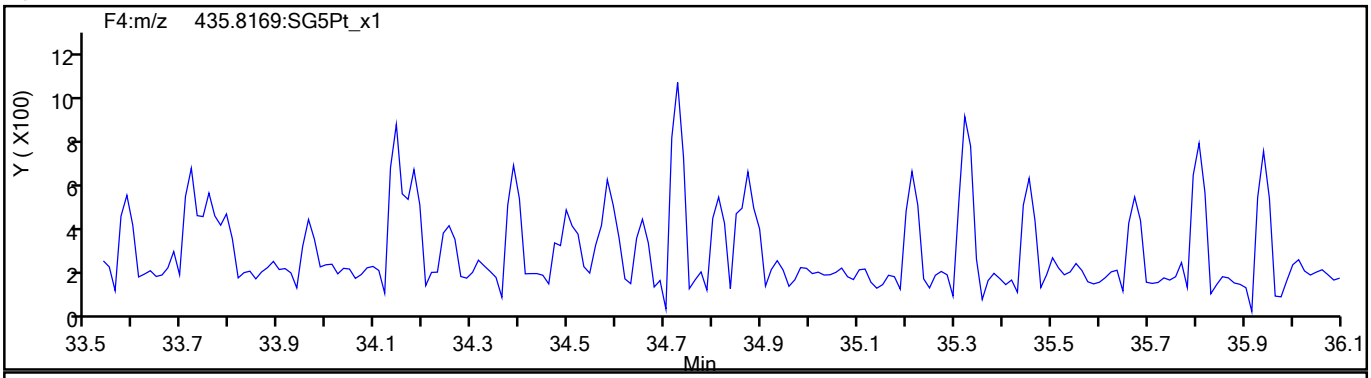

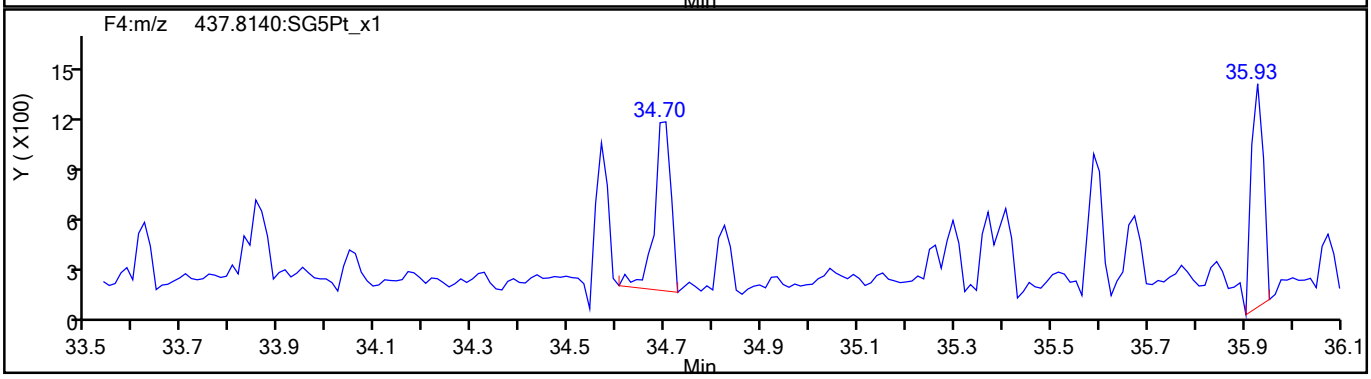

777118

Report Date: 17-Aug-2021 17:09:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

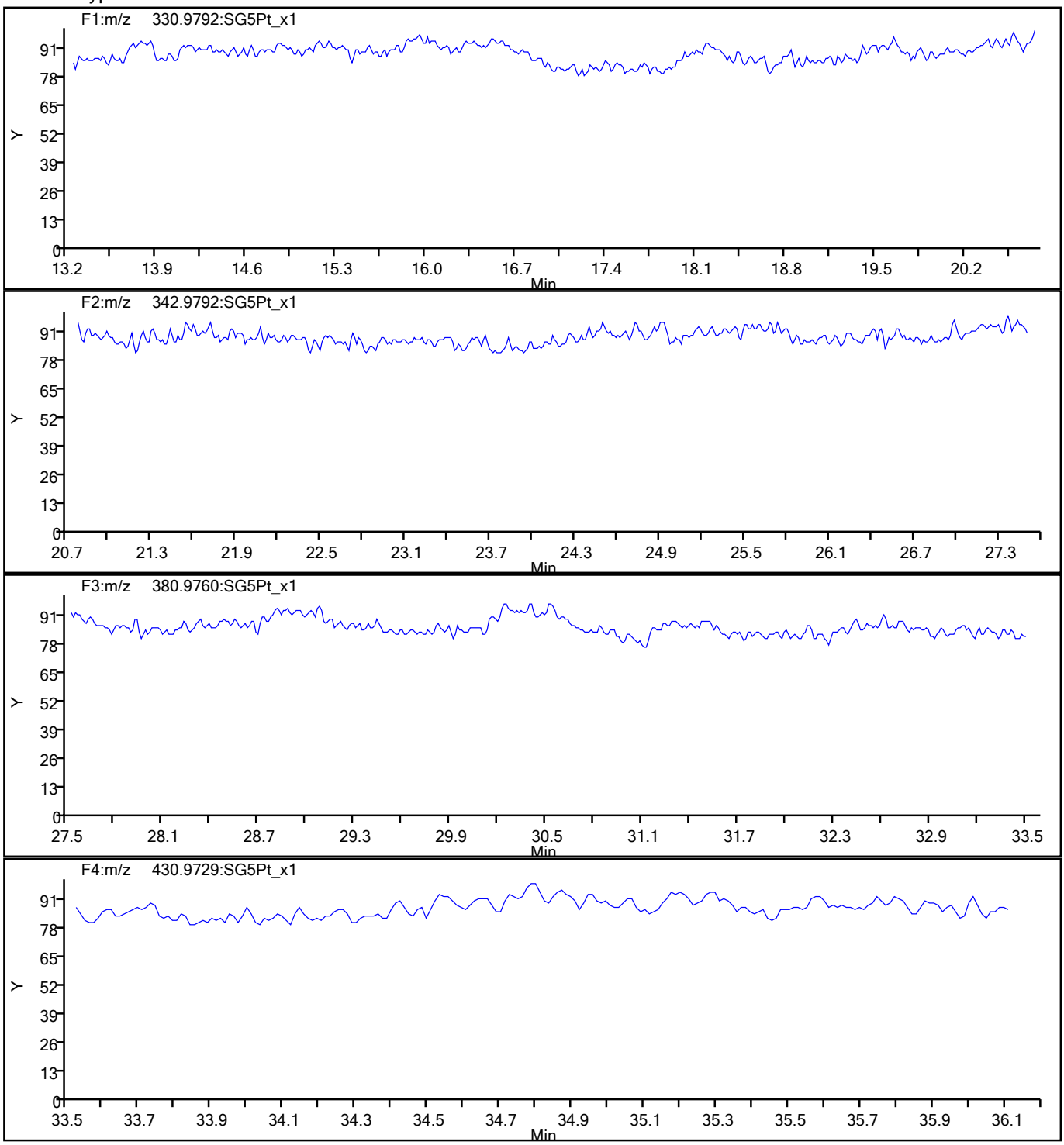

777119

Report Date: 17-Aug-2021 17:09:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_57.d		
Injection Date:	15-Aug-2021 12:12:05	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516848	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

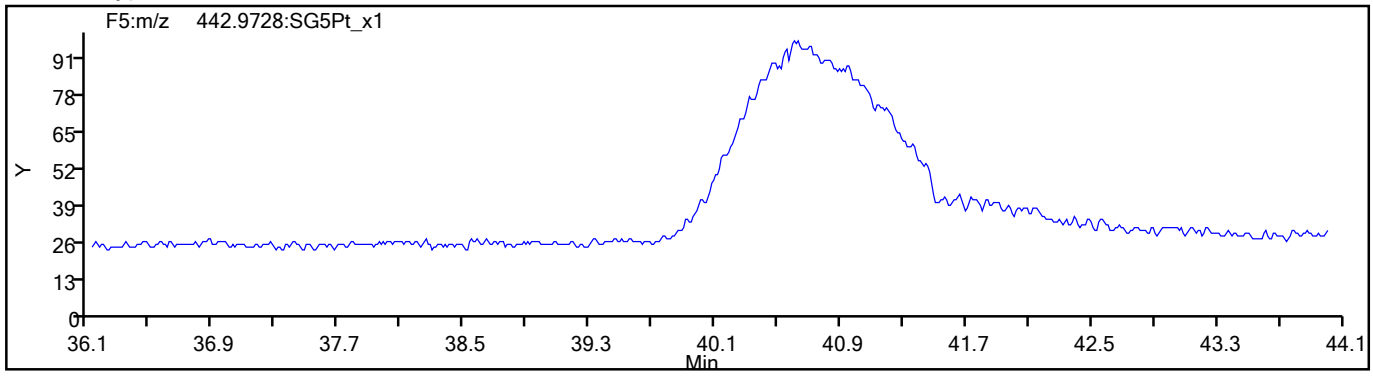

777120

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:15:56 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081821 WDM HRDXNCP_00044
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:08 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:20:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.295	69420187	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.326	151843787	0.77	1.0239	85.4	85.4	0.4310	0.4310		
A Non-2,3,7,8-sub-TCDF	17.159	133612459	0.77	1.0239	75.2	75.2	0.4310	38.3		
S Total TCDF					160.6	160.6	0.4310	0.4310		
D 13C-2,3,7,8-TCDD	18.006	37918605	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.021	53423673	0.78	1.2541	44.9	44.9	0.2530	0.2530		
A Non-2,3,7,8-sub-TCDD	17.620	92642138	0.77	1.2541	77.9	77.9	0.2530	42.0		
S Total TCDD					122.9	122.9	0.2530	0.2530		
A F1 PeCDFs	20.229	63182212	1.57	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.445	50866521	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.696	79837324	1.59	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.410	52807043	1.22	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.816	39471925	1.25	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.742	46907850	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	34.823	37538389	1.06	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.283						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.544	29701953	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.892	84061745	0.77							
1,3,6,8-TCDD	15.799	52404413	0.79							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.188	55973679	0.78							
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427	2869844	0.78							
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	32.074	38128527	1.28							
1,2,3,4,8,9-HxCDF	32.393	46915349	1.22							
1,2,3,4,6,7,9-HpCDD	33.985	33701057	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:15:56 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081821 WDM HRDXNCP_00044
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:08 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:20:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.295	17.295	0	1.000	30119156	7040410	10258	25645	686		
317.9389	17.295	17.295	0	1.000	39301031	9052899	8361	20902	1083	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.326	17.326	0	1.002	65844552	14068992	28643	71607	491		
305.8987	17.326	17.326	0	1.002	85999235	18144170	42380	105950	428	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	18.188	17.159	62	1.052	28576959	6224057	28643	71607	217		
305.8987	18.173	17.159	61	1.051	36892458	8010443	42380	105950	189	0.77(0.65-0.89)	
303.9016	19.125	17.159	118	1.106	29540653	6011607	28643	71607	210		
305.8987	19.125	17.159	118	1.106	38602389	7894370	42380	105950	186	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.006	18.006	0	1.000	16843563	3663772	4259	10647	860		
333.9339	18.006	18.006	0	1.000	21075042	4575106	3564	8910	1284	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.021	18.021	0	1.001	23429132	5046080	11037	27592	457		
321.8936	18.021	18.021	0	1.001	29994541	6481319	15105	37762	429	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.900	17.620	17	0.994	18501501	4422101	11037	27592	401		
321.8936	17.900	17.620	17	0.994	24188347	5763757	15105	37762	382	0.76(0.65-0.89)	
319.8965	19.125	17.620	90	1.062	21846080	4468756	11037	27592	405		
321.8936	19.125	17.620	90	1.062	28106210	5724522	15105	37762	379	0.78(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.412	20.229	-49	1.000	38615522	8205117	1956	4890	4195		
341.8567	19.412	20.229	-49	1.000	24566690	5135283	1400	3500	3668	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	22.340	23.445	-66	1.000	228968	28585	4870	12175	6		
341.8567	22.353	23.445	-65	1.000	192408	20551	3418	8545	6	1.19(1.32-1.78)	
339.8597	22.913	23.445	-32	1.000	154598	20633	4870	12175	4		
341.8567	22.913	23.445	-32	1.000	84101	12272	3418	8545	4	1.84(1.32-1.78)	
339.8597	25.612	23.445	130	1.000	30966531	3822830	4870	12175	785		
341.8567	25.612	23.445	130	1.000	19308844	2404223	3418	8545	703	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.181	23.696	-151	1.000	25265729	4092592	5766	14415	710		
357.8516	21.181	23.696	-151	1.000	15918876	2558015	3809	9522	672	1.59(1.32-1.78)	
355.8546	25.394	23.696	102	1.000	23797384	3085081	5766	14415	535		
357.8516	25.394	23.696	102	1.000	14855335	1944381	3809	9522	510	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.894	30.410	-151	1.000	28980246	3431886	9045	22612	379		
375.8178	27.894	30.410	-151	1.000	23826797	2865744	7126	17815	402	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.465	30.816	-81	1.000	21961037	2463781	13897	34742	177		
391.8127	29.465	30.816	-81	1.000	17510888	1966381	7540	18850	261	1.25(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.742	33.742	0	1.000	23982917	7200292	41768	104420	172		
409.7789	33.742	33.742	0	1.000	22924933	7020417	31948	79870	220	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.823	34.823	0	1.000	19292477	4755591	41768	104420	114		
409.7789	34.823	34.823	0	1.000	18245912	4549449	31948	79870	142	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.283						41768	104420			
409.7789	34.283						31948	79870			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.544	34.544	0	1.000	15149420	4052775	21767	54417	186		
425.7737	34.544	34.544	0	1.000	14552533	3832849	21109	52772	182	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						21767	54417			
425.7737	33.504						21109	52772			
1,3,6,8-TCDF											
303.9016	14.892	14.892	0		36536834	10411762	28643	71607	364		
305.8987	14.876	14.892	-1		47524911	13356055	42380	105950	315	0.77(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.799	15.799	0		23209186	6396511	11037	27592	580		
321.8936	15.799	15.799	0		29195227	8036642	15105	37762	532	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.537						28643	71607			
305.8987	17.537						42380	105950			
1,2,3,7-TCDD											
319.8965	18.188	18.188	0		24514458	5166590	11037	27592	468		
321.8936	18.188	18.188	0		31459221	6563099	15105	37762	434	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,9-TCDF											
303.9016	18.414						28643	71607			
305.8987	18.414						42380	105950			
1,2,3,9-TCDD											
319.8965	18.414						11037	27592			
321.8936	18.414						15105	37762			
1,2,8,9-TCDD											
319.8965	19.382						11037	27592			
1,2,8,9-TCDF											
303.9016	19.427	19.427	0		1254031	169921	28643	71607	6		
305.8987	19.427	19.427	0		1615813	214042	42380	105950	5	0.78(0.65-0.89)	
1,3,4,6,8-PeCDF											
339.8597	19.669						1956	4890			
341.8567	19.669						1400	3500			
1,2,4,7,9-PeCDD											
355.8546	21.480						5766	14415			
357.8516	21.480						3809	9522			
1,2,3,8,9-PeCDD											
355.8546	25.790						5766	14415			
357.8516	25.790						3809	9522			
1,2,3,8,9-PeCDF											
339.8597	26.021						4870	12175			
341.8567	26.021						3418	8545			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						9045	22612			
375.8178	28.333						7126	17815			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						13897	34742			
391.8127	29.890						7540	18850			
1,2,3,4,6,7-HxCDD											
389.8157	32.074	32.074	0		21375834	5308020	13897	34742	382		
391.8127	32.074	32.074	0		16752693	4221204	7540	18850	560	1.28(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.393	32.393	0		25737556	6730514	9045	22612	744		
375.8178	32.393	32.393	0		21177793	5495534	7126	17815	771	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.985	33.985	0		17203699	5138812	21767	54417	236		
425.7737	33.985	33.985	0		16497358	4928736	21109	52772	233	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.159

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	69420187	16093309

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	69420187	16093309

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.188	28576959	6224057	36892458	8010443	36.8	0.77	
19.125	29540653	6011607	38602389	7894370	38.3	0.77	
Signal Totals:							
	58117612	12235664	75494847	15904813			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	133612459	28140477				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 75.190 = (133612459 * 40.000) / (69420187 * 1.024)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.620

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	37918605	8238878

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	37918605	8238878

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.900	18501501	4422101	24188347	5763757	35.9	0.76	
19.125	21846080	4468756	28106210	5724522	42.0	0.78	
Signal Totals:							
	40347581	8890857	52294557	11488279			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	92642138	20379136				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 77.925 = (92642138 * 40.000) / (37918605 * 1.254)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

F1 PeCDFs, RT: 20.229

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.412	38615522	8205117	24566690	5135283		1.57	
Signal Totals:							
	38615522	8205117	24566690	5135283			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63182212	13340400				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (63182212 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.445

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.340	228968	28585	192408	20551		1.19	R
22.913	154598	20633	84101	12272		1.84	R
25.612	30966531	3822830	19308844	2404223		1.60	
Signal Totals:							
	31350097	3872048	19585353	2437046			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	50935450	6309094				1.60	RQ
	50866521	6305372					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (50935450 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (50866521 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.181	25265729	4092592	15918876	2558015		1.59	
25.394	23797384	3085081	14855335	1944381		1.60	
Signal Totals:							
	49063113	7177673	30774211	4502396			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	79837324	11680069				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (79837324 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.410

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.894	28980246	3431886	23826797	2865744		1.22	
Signal Totals:							
	28980246	3431886	23826797	2865744			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	52807043	6297630				1.22	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (52807043 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 30.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.465	21961037	2463781	17510888	1966381		1.25	
Signal Totals:							
	21961037	2463781	17510888	1966381			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	39471925	4430162				1.25	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (39471925 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

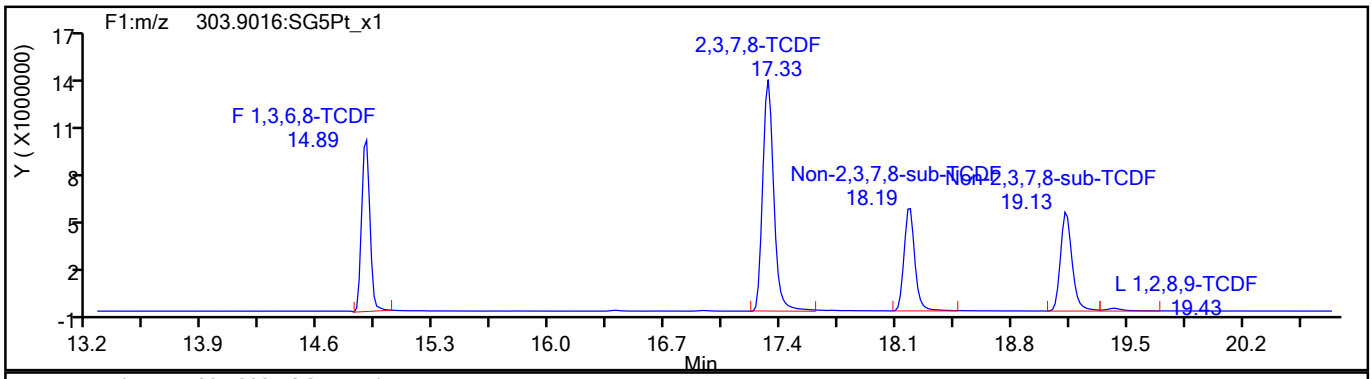

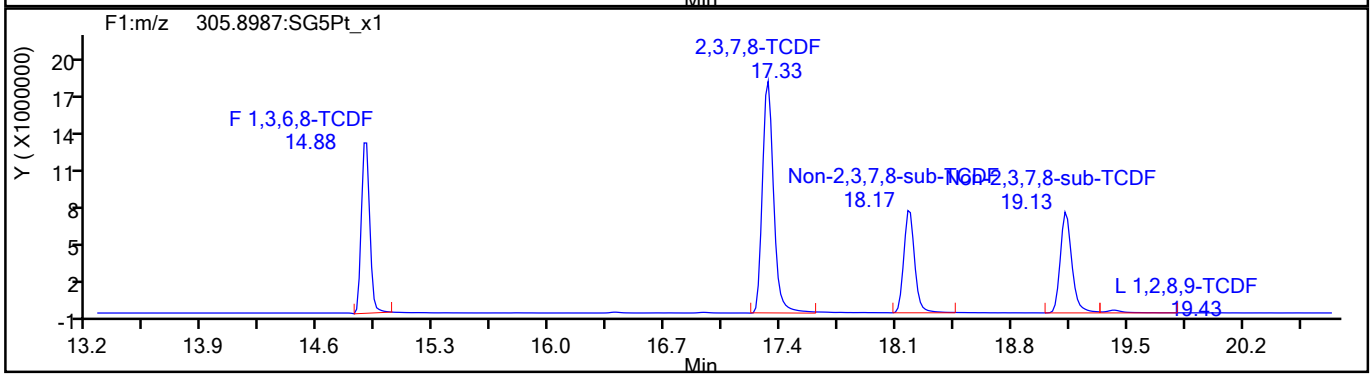

TCDF Standards

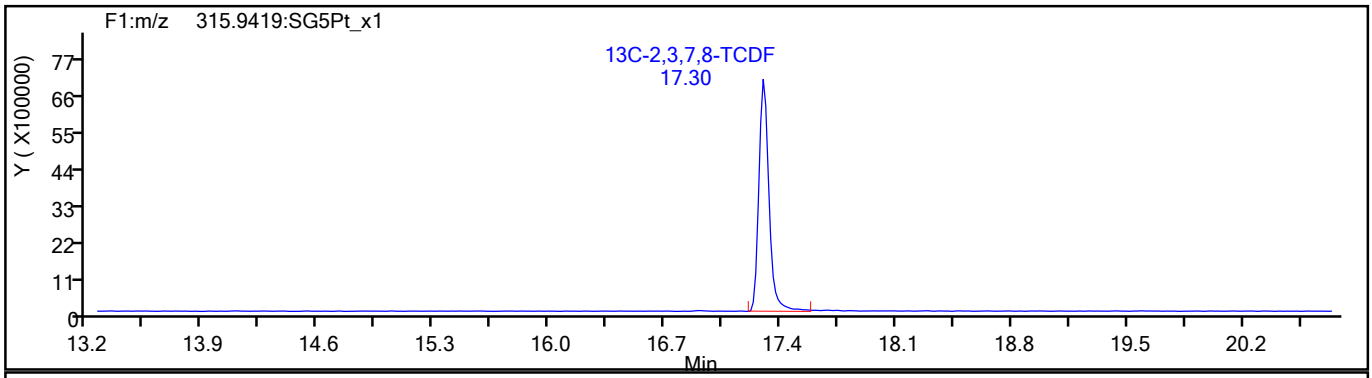

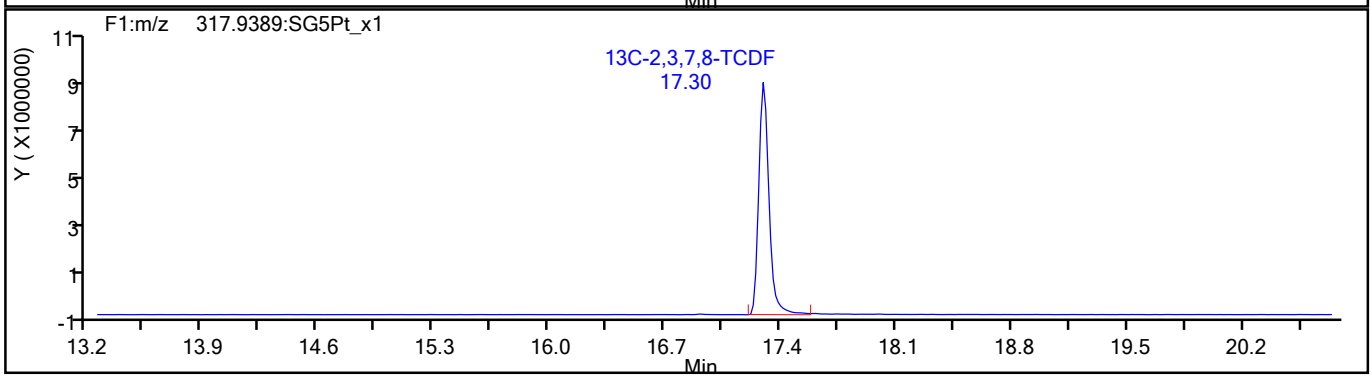

777133

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

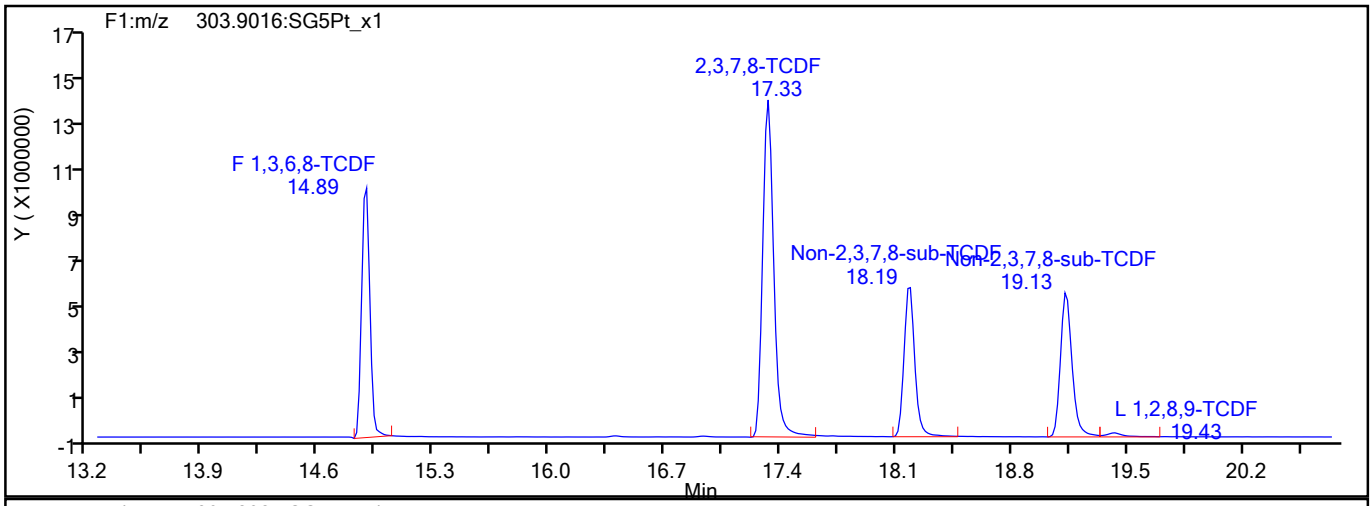

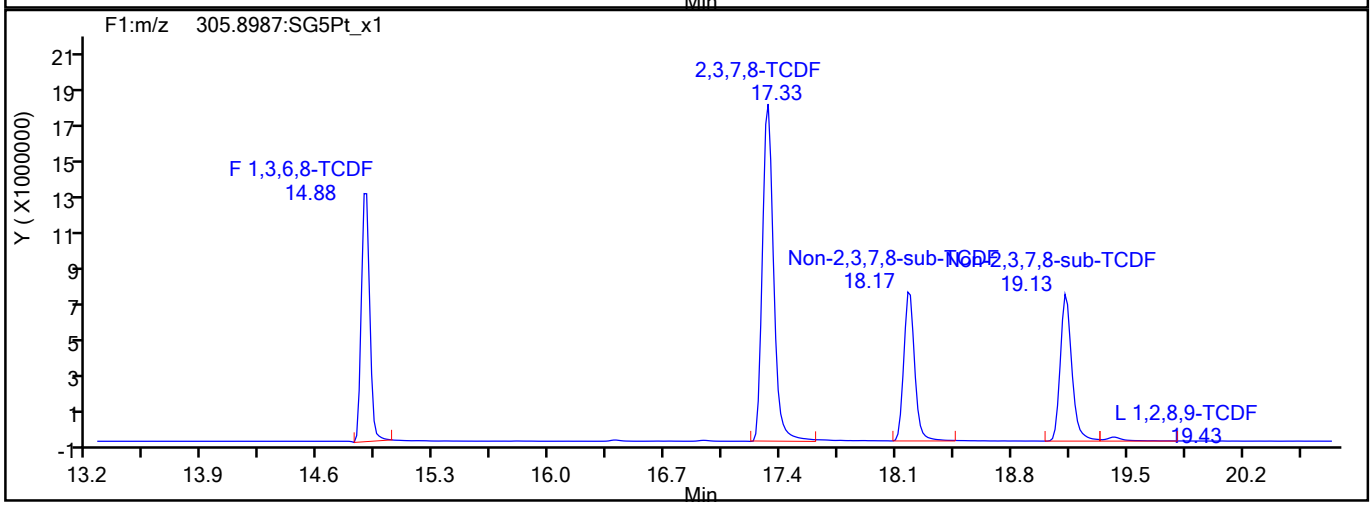

TCDF Interference Mass

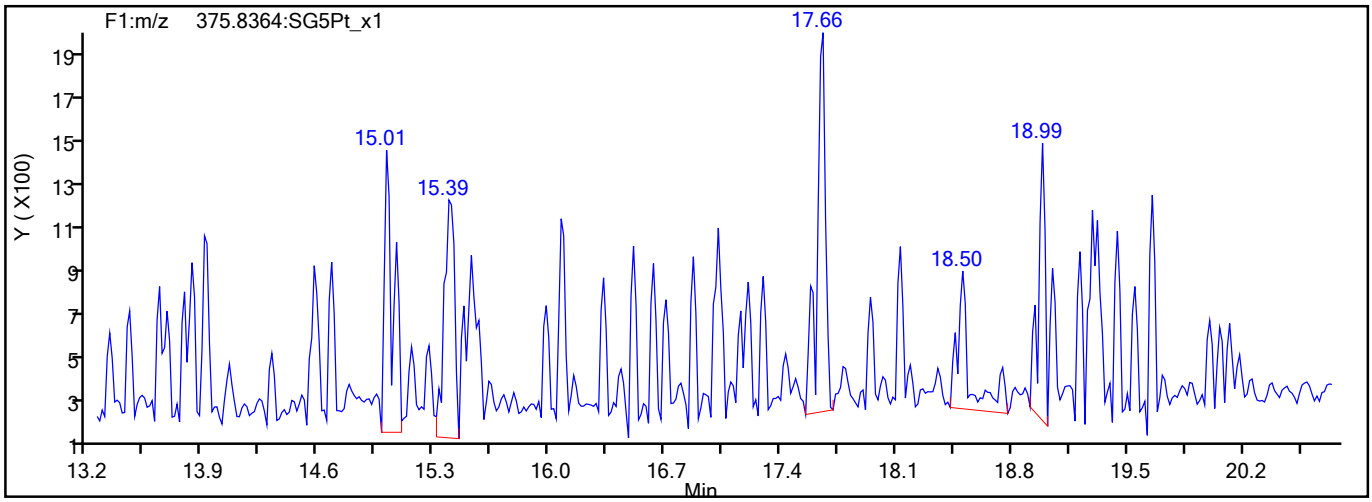

777134

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

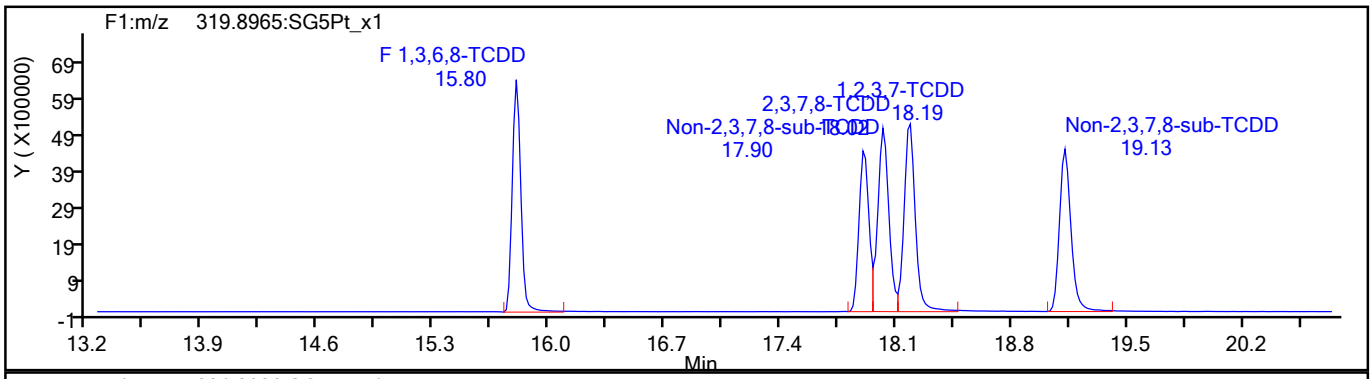

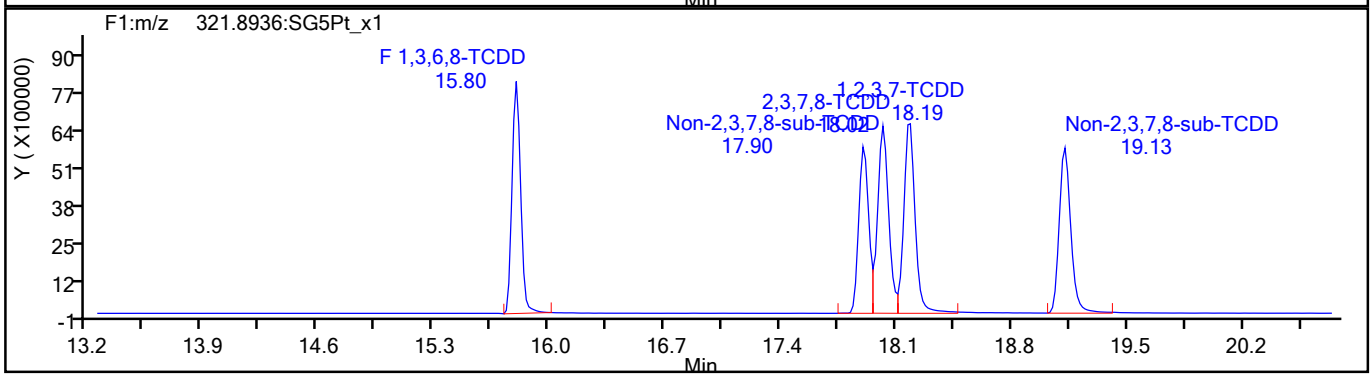

TCDD Standards

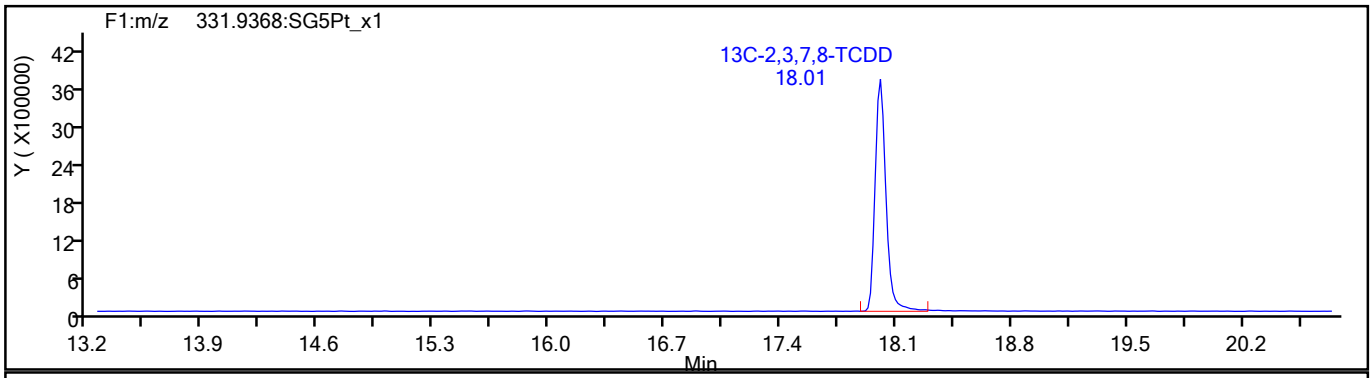

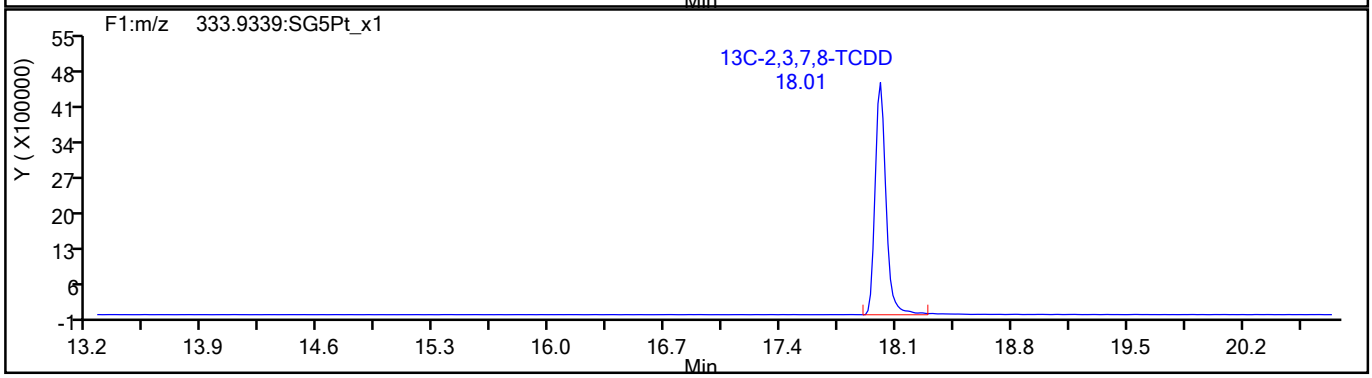

777135

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

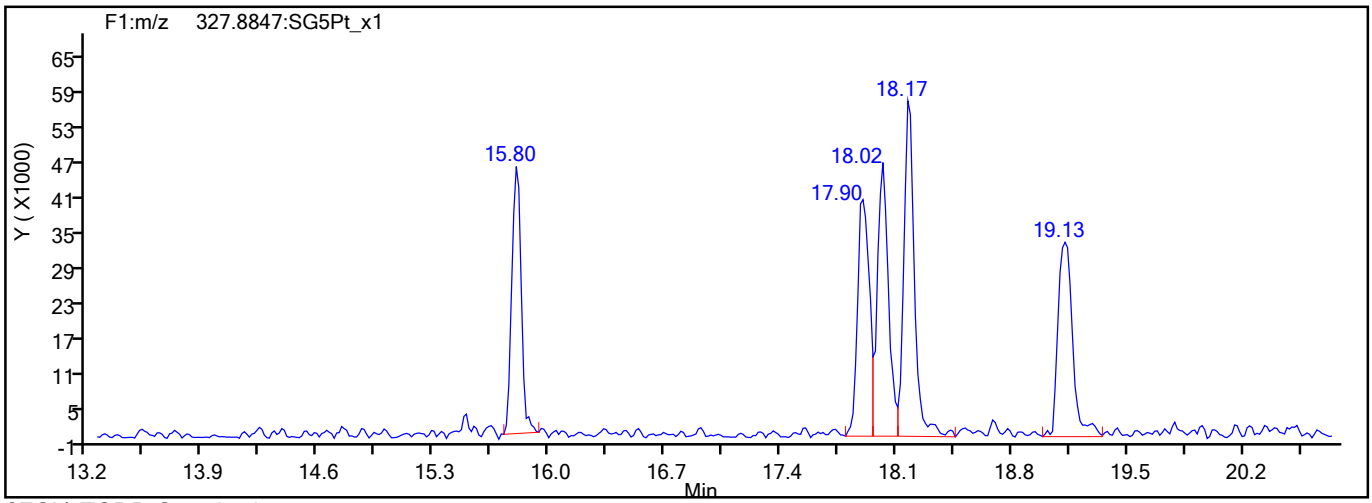

37Cl4-TCDD Standards

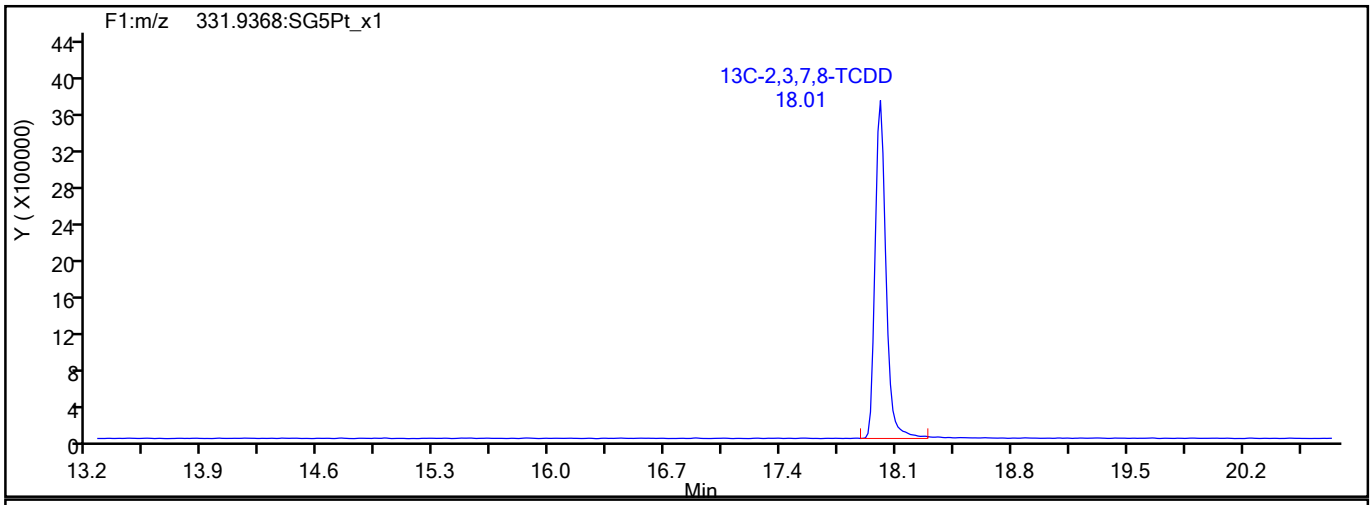

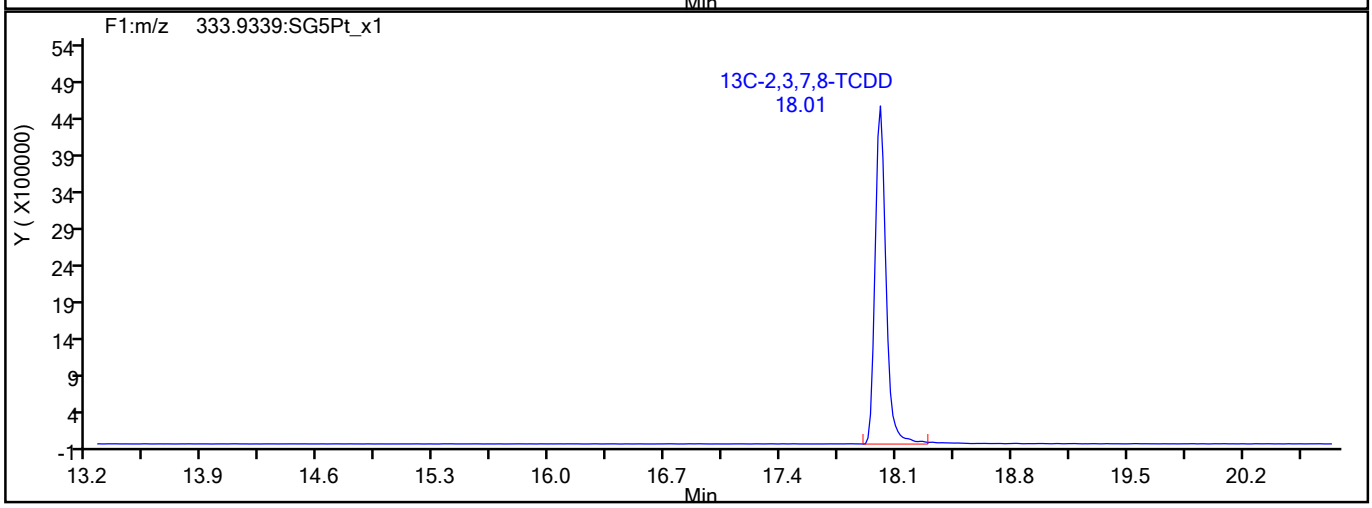

777136

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

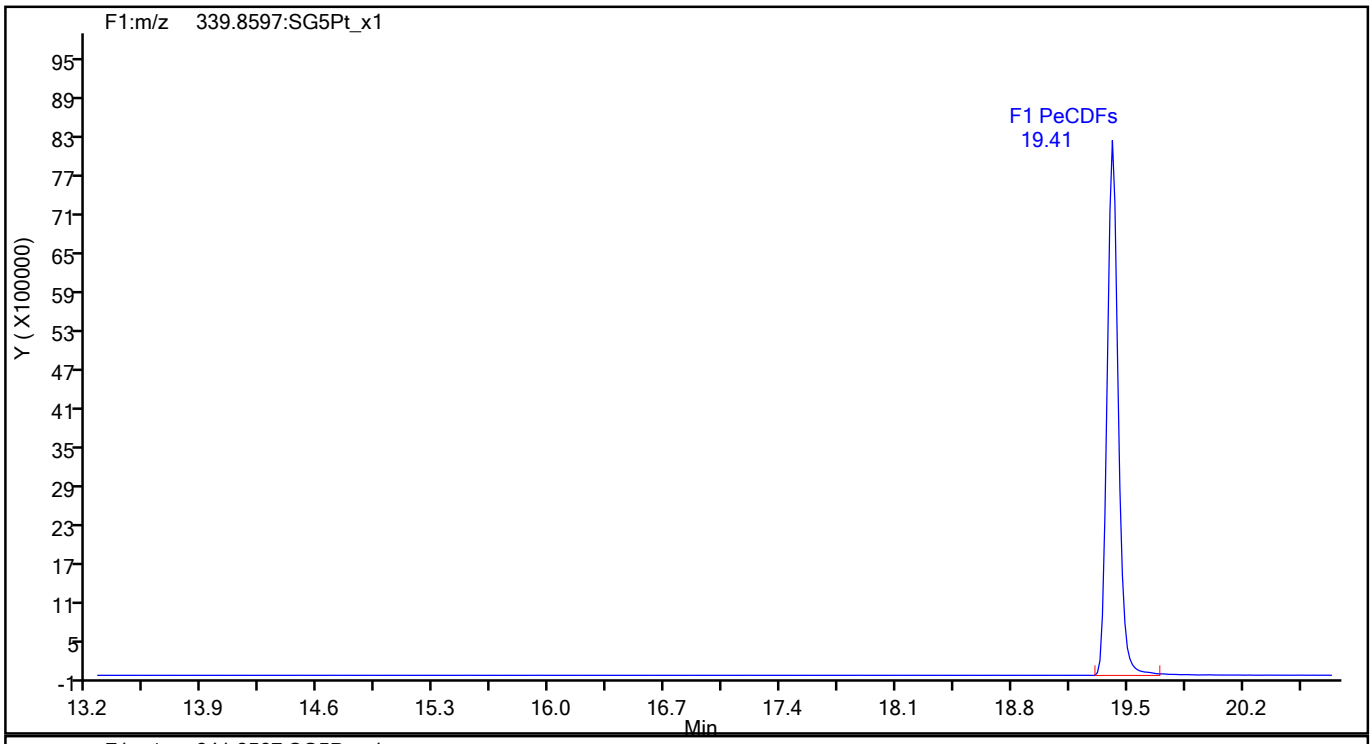

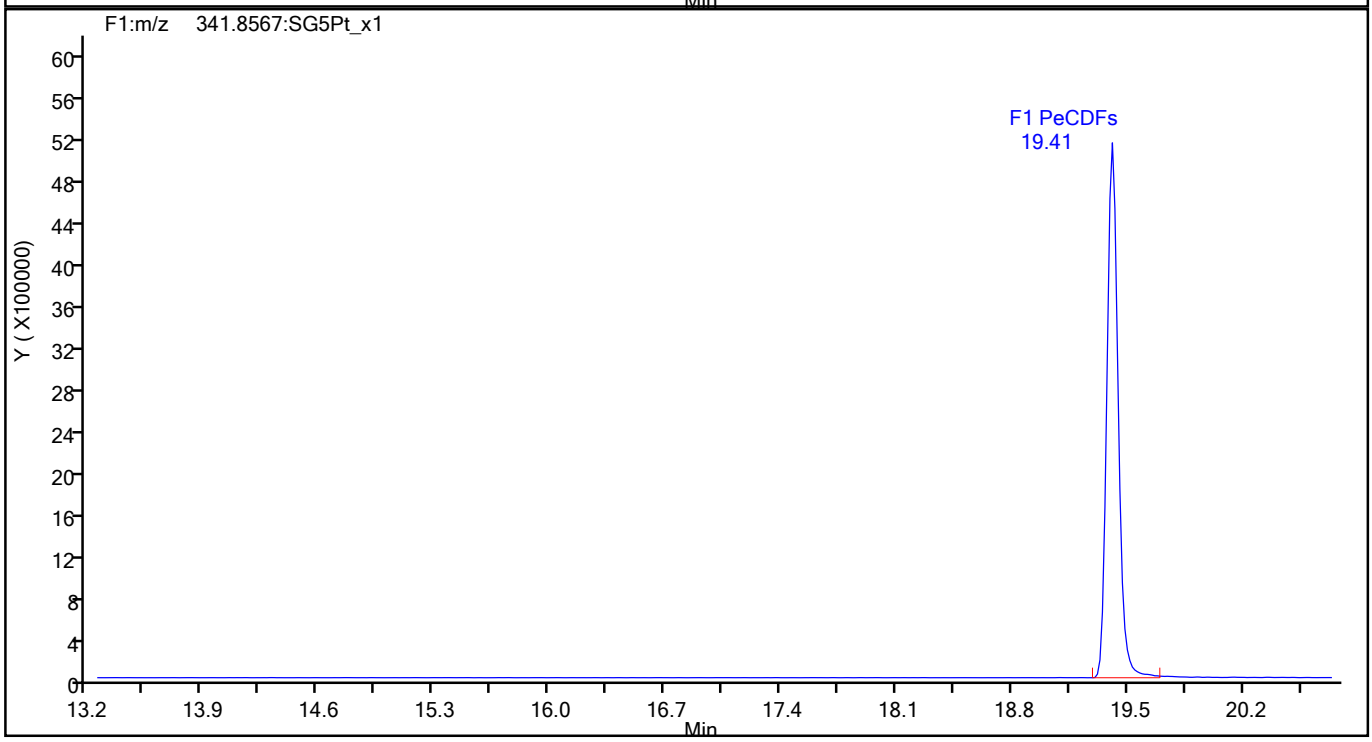

777137

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Eurofins TestAmerica, Sacramento

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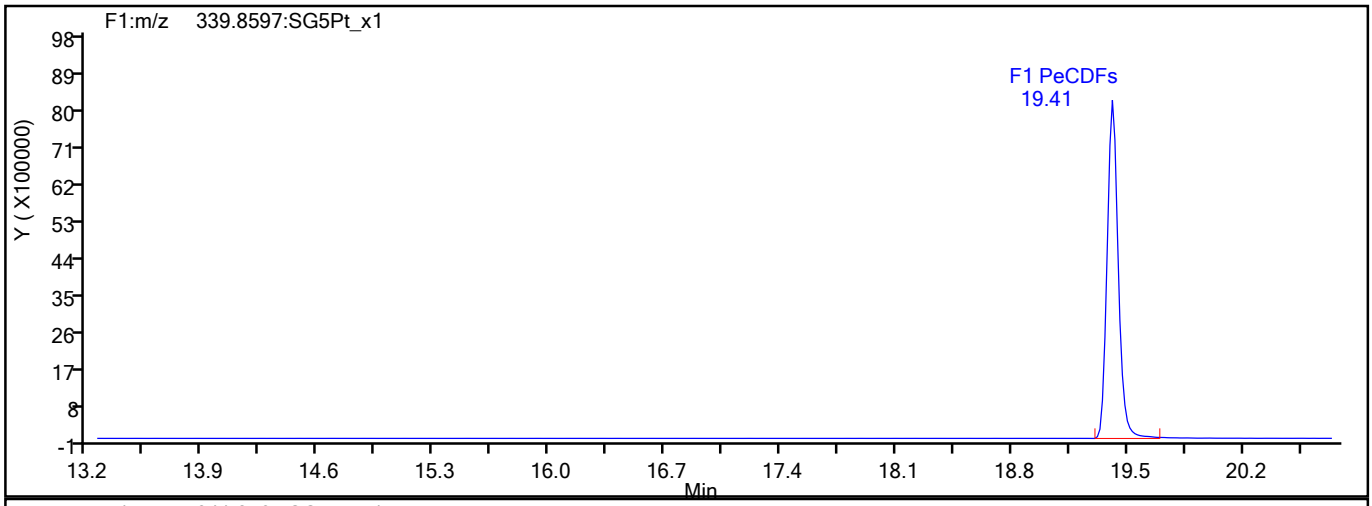

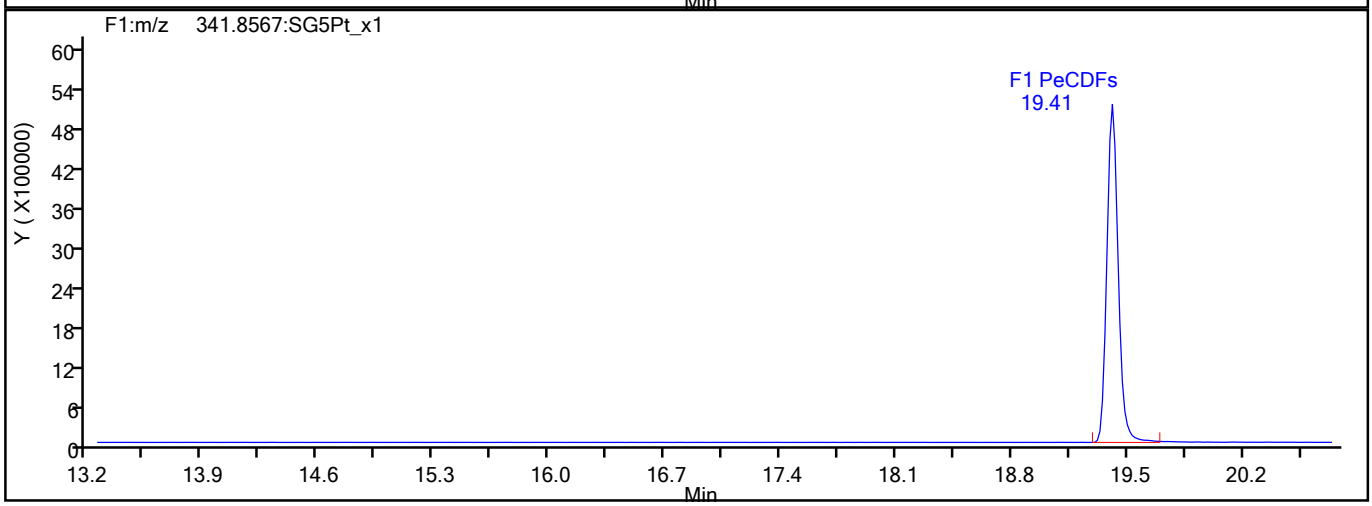

F1 PeCDFs Interference Mass

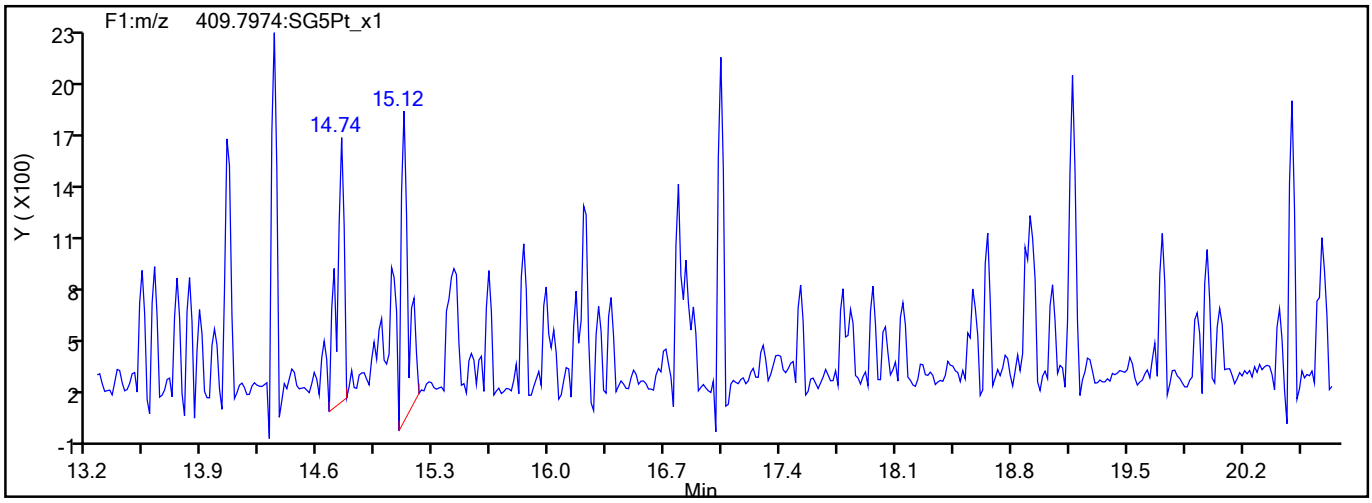

777138

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

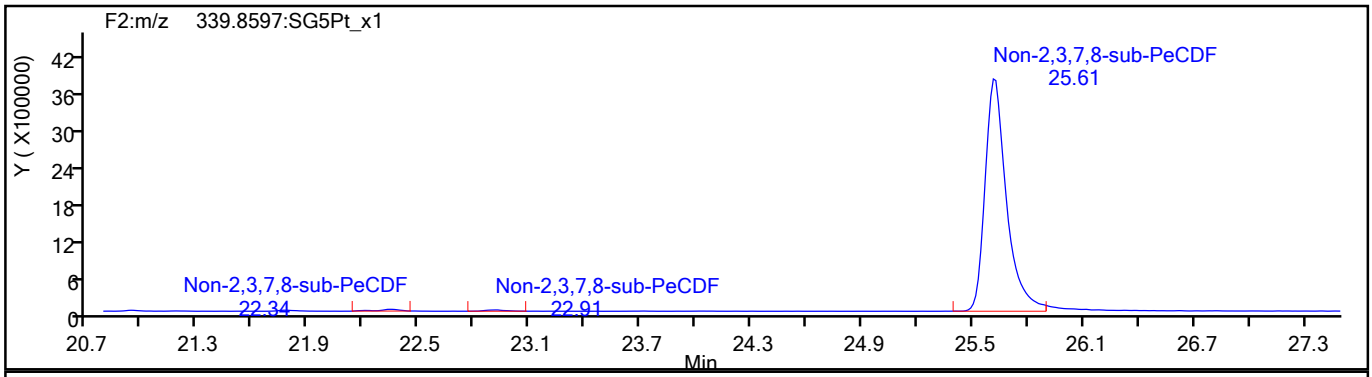

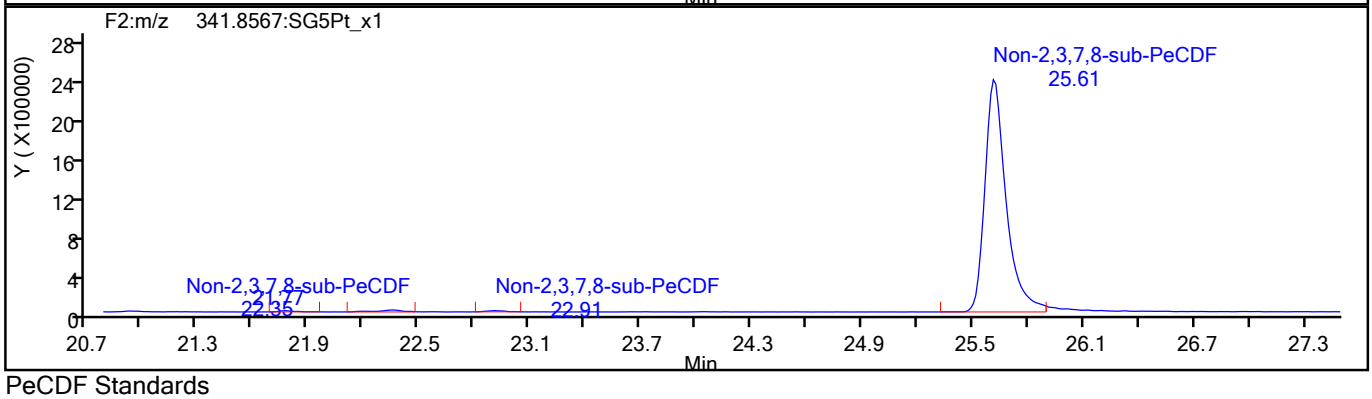

PeCDF Standards

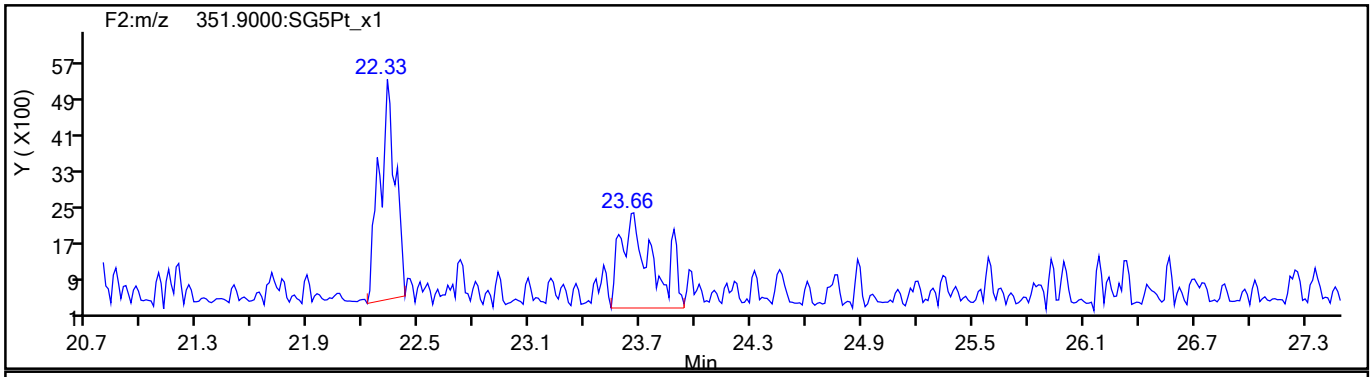

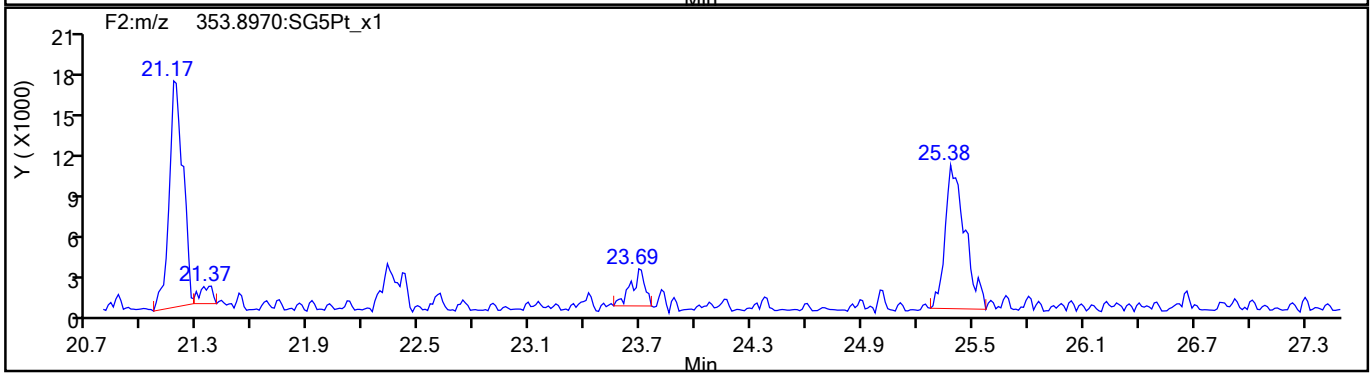

777139

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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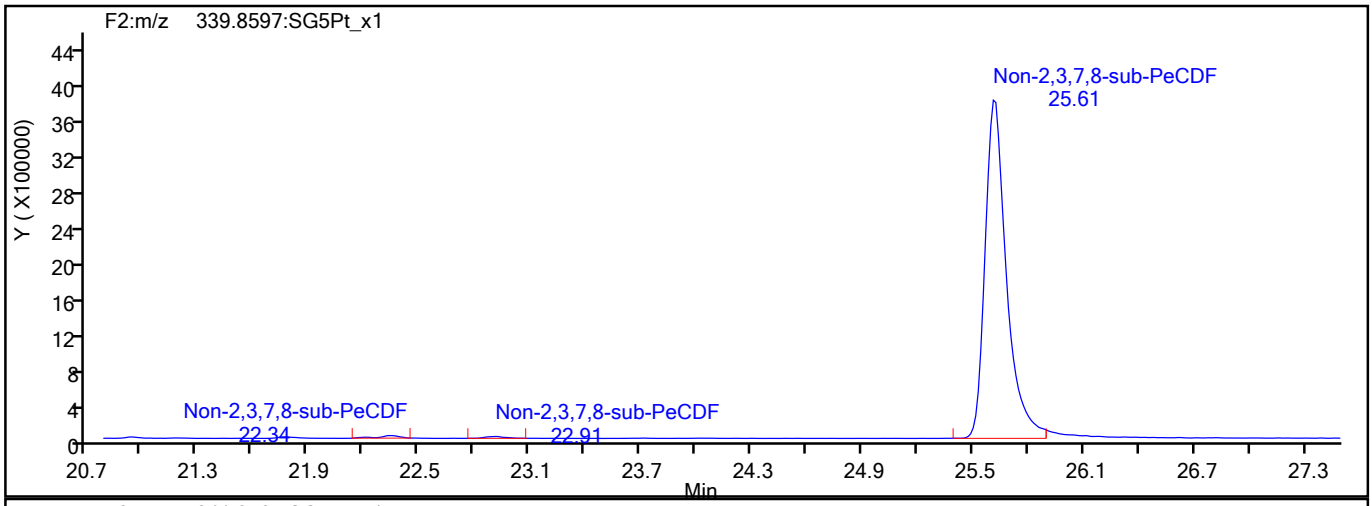

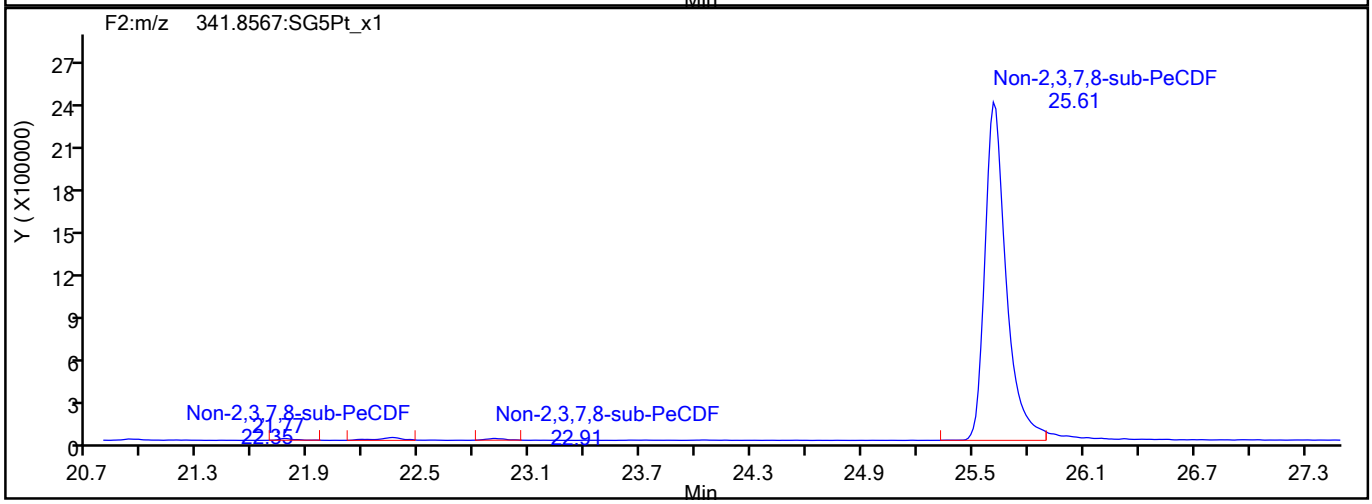

PeCDF Interference Mass

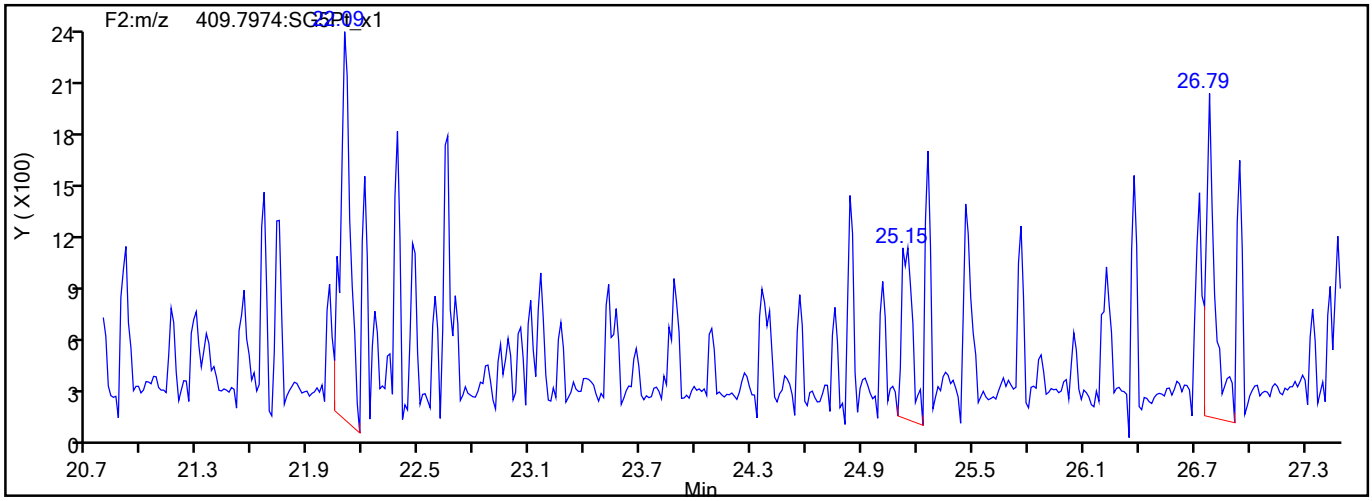

777140

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

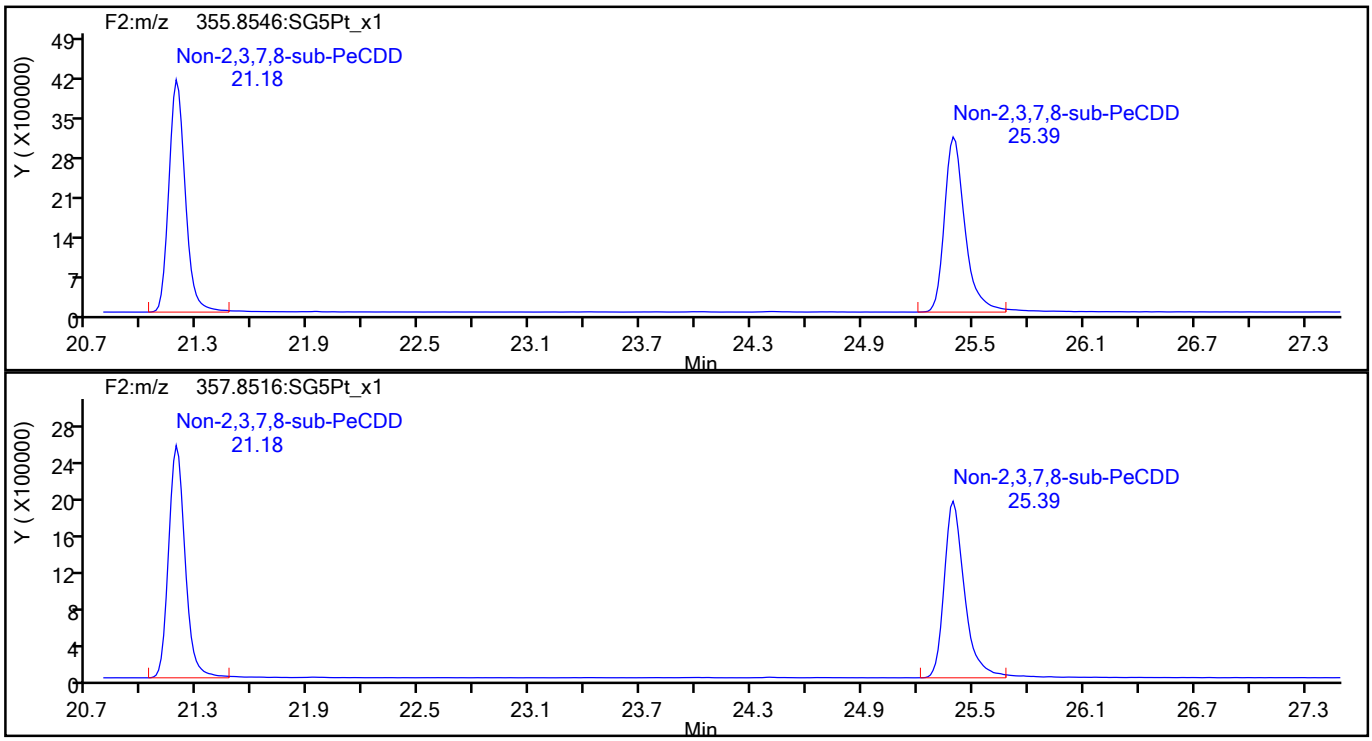

PeCDD Standards

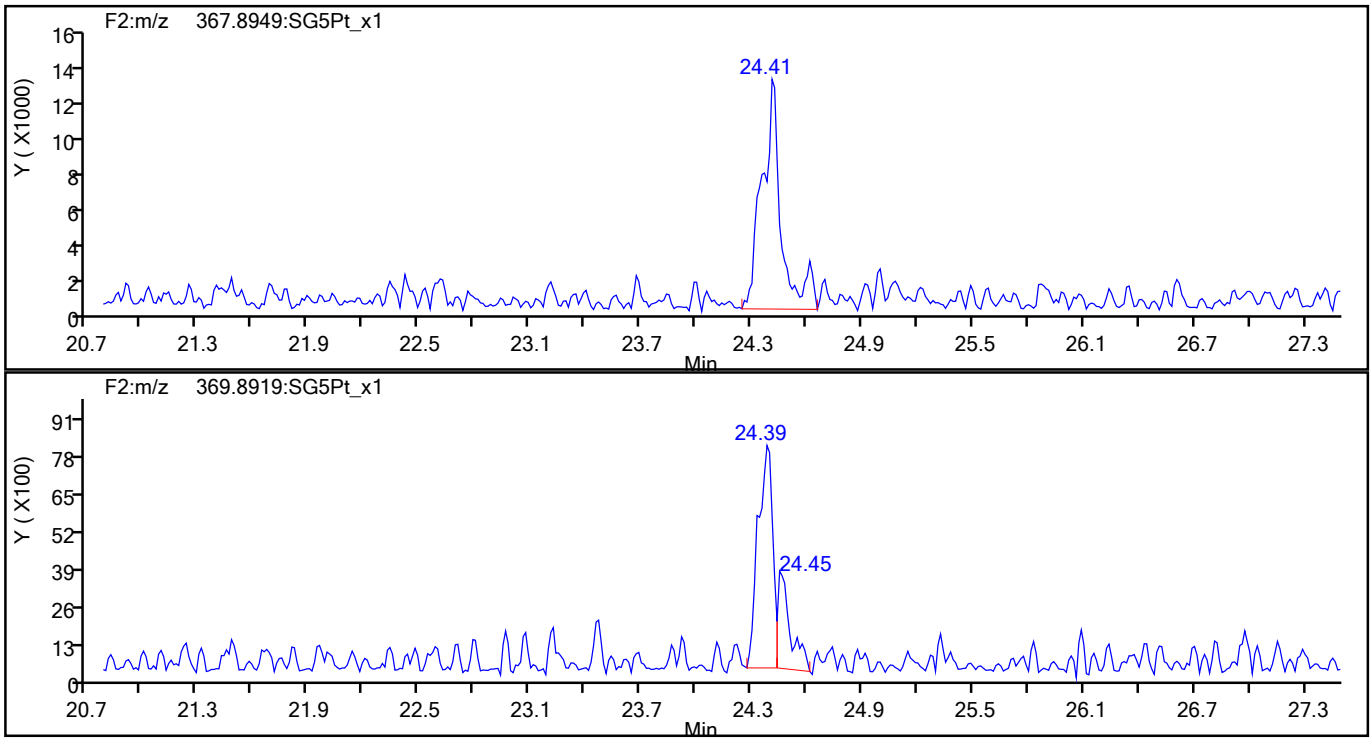

777141

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

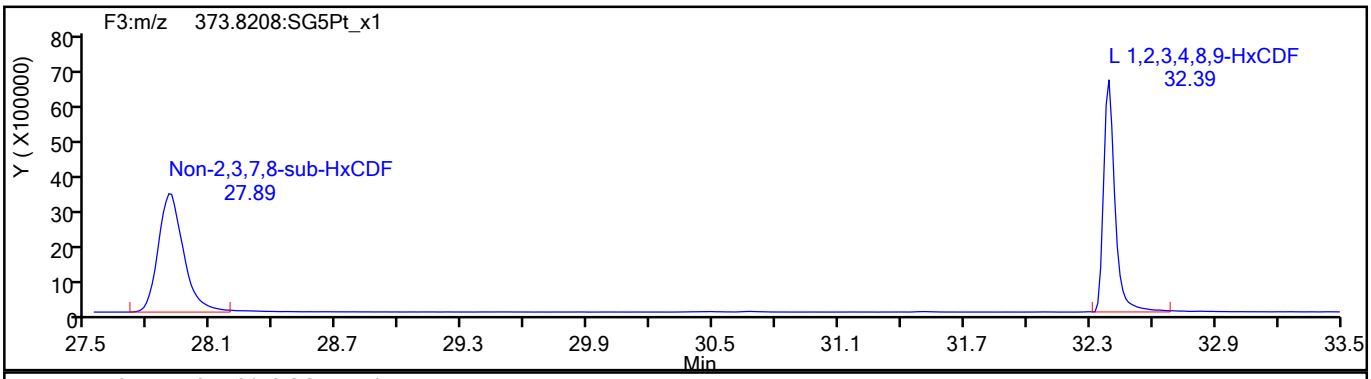

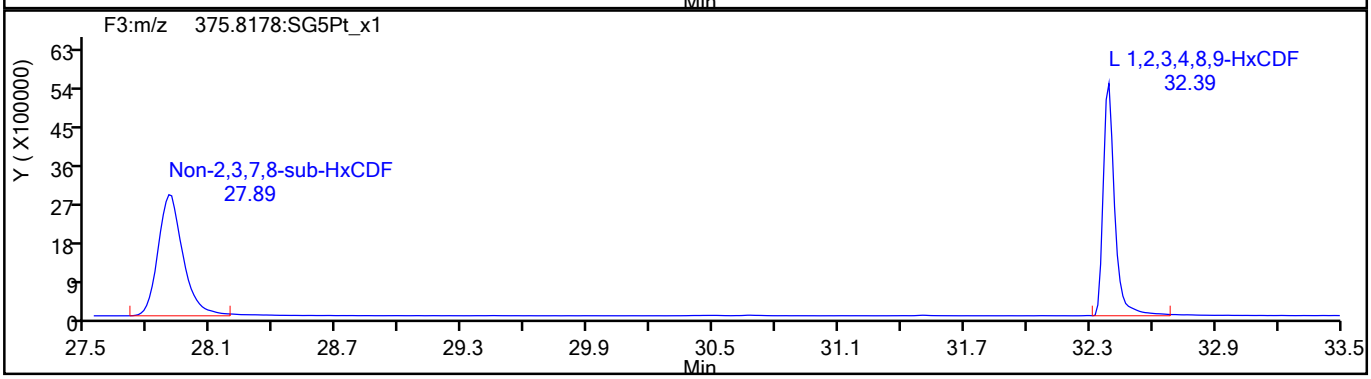

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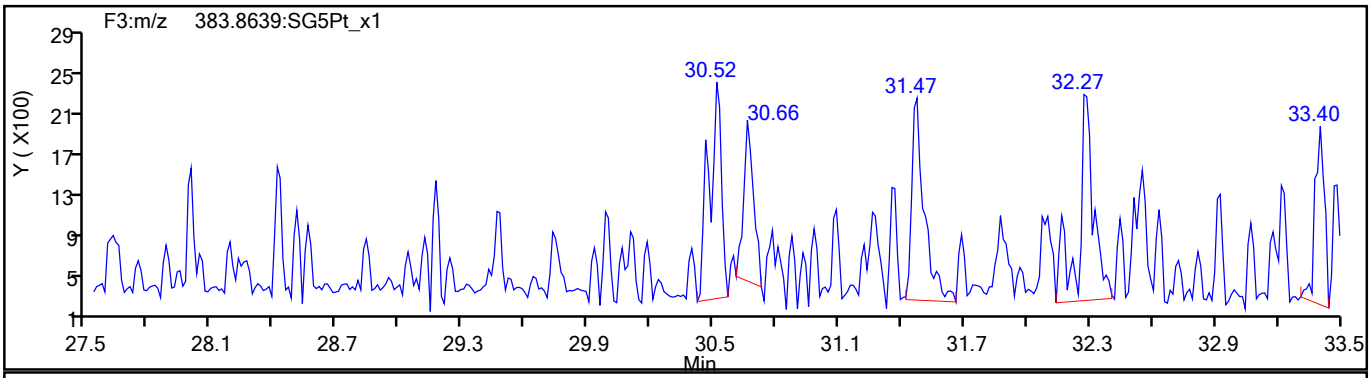

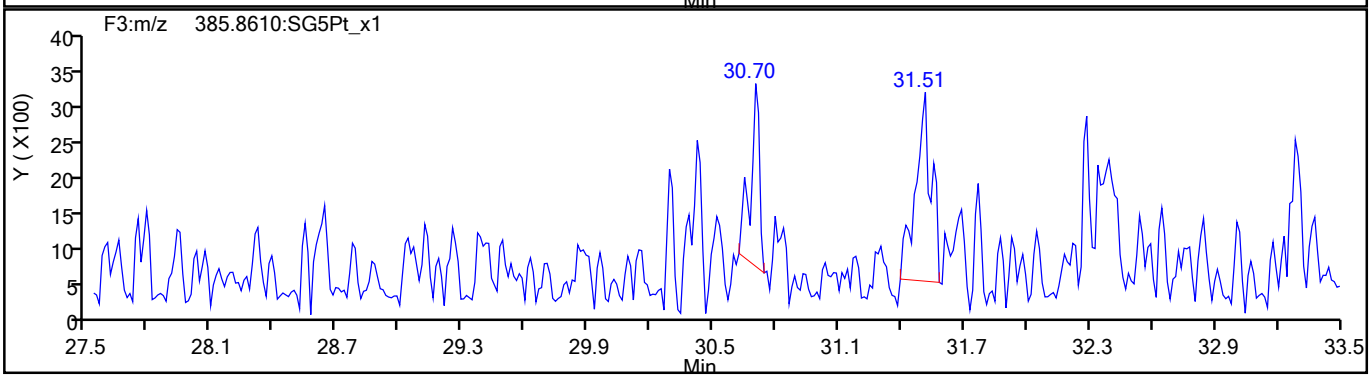

777142

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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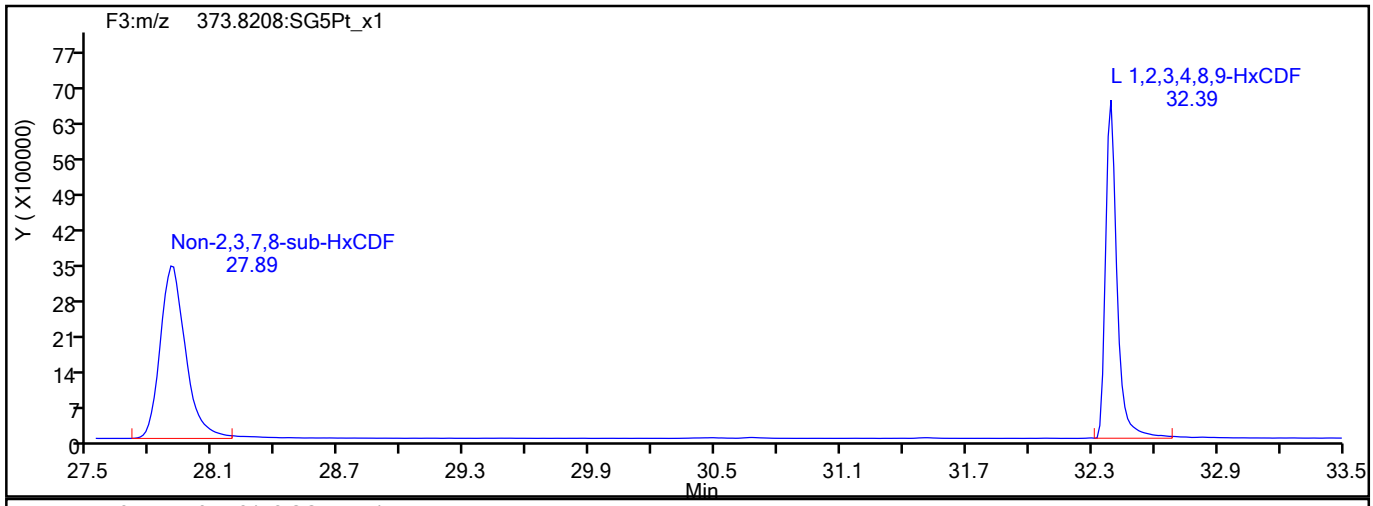

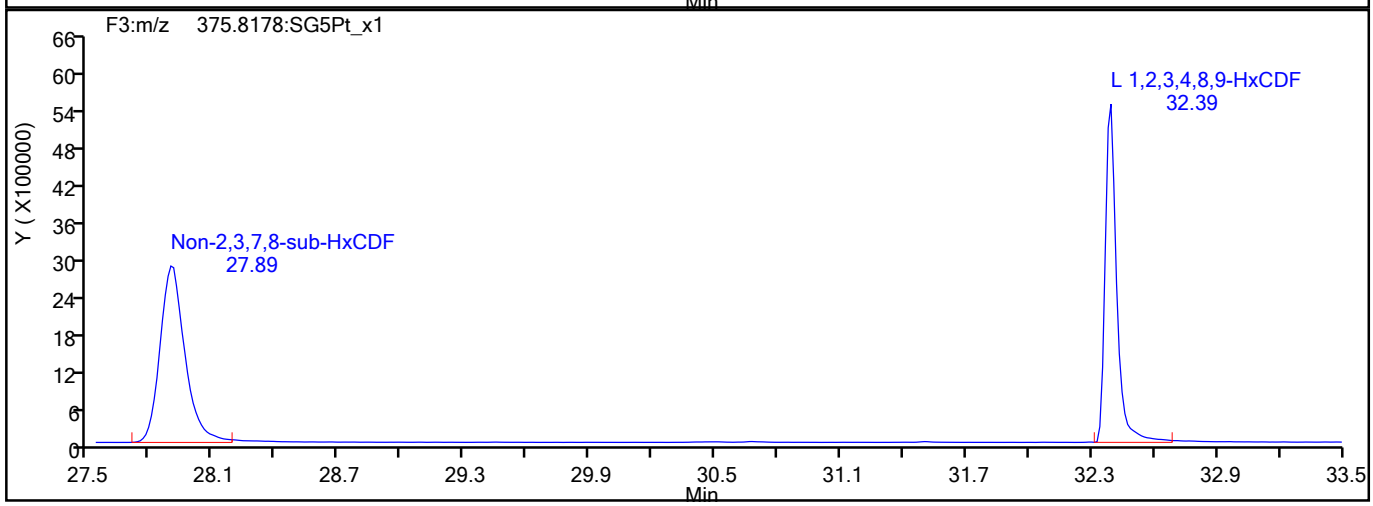

HxCDF Interference Mass

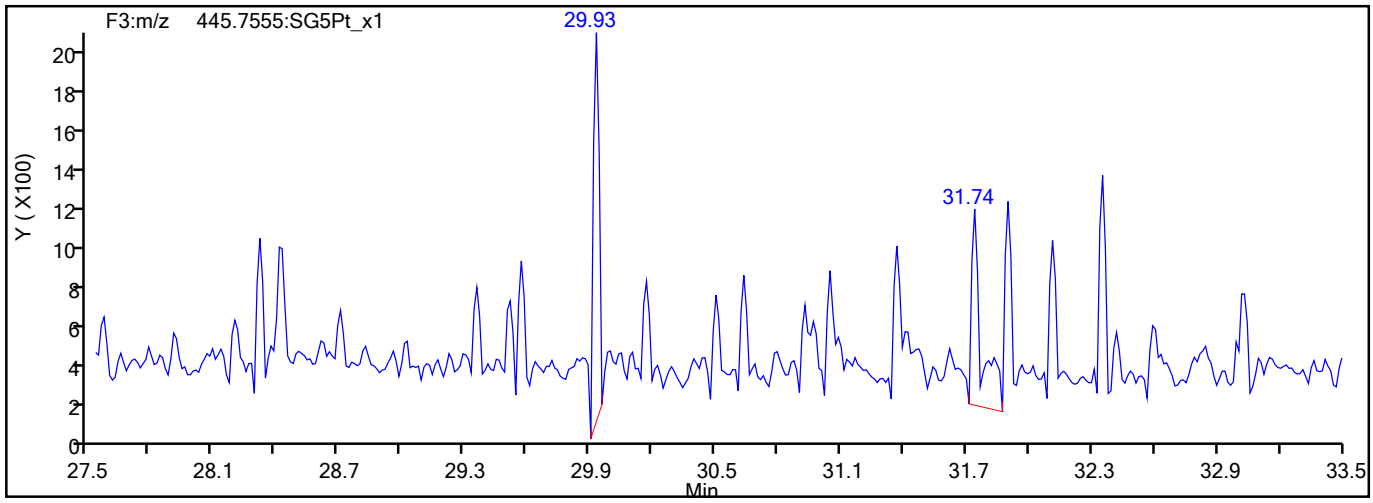

777143

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

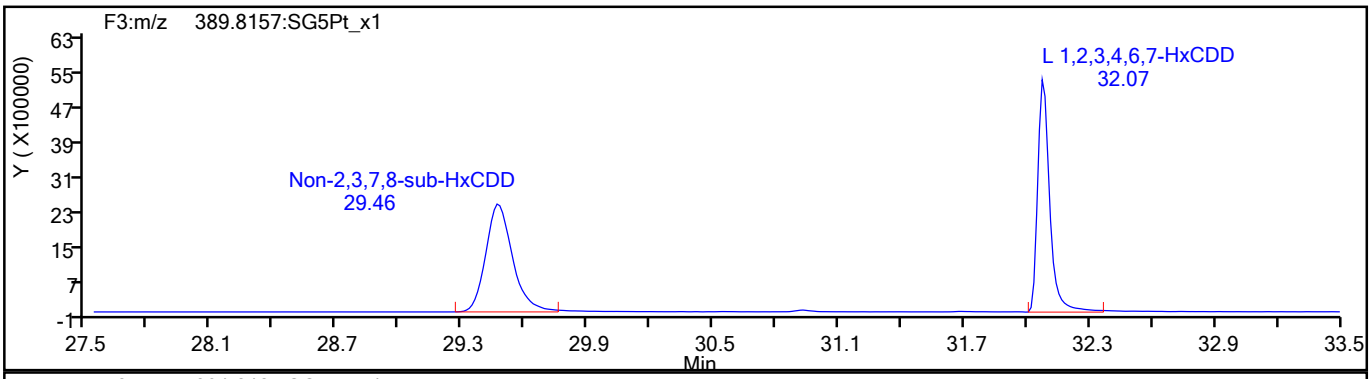

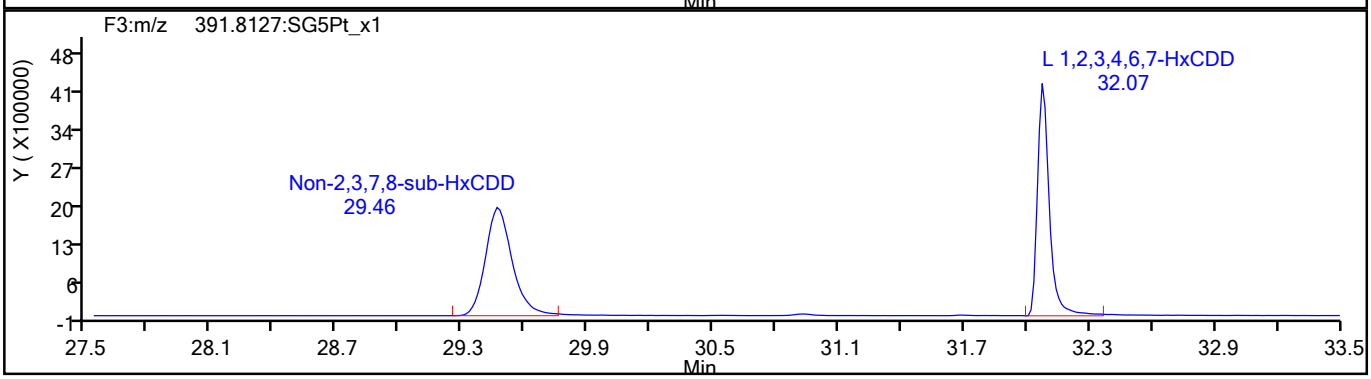

HxCDD Standards

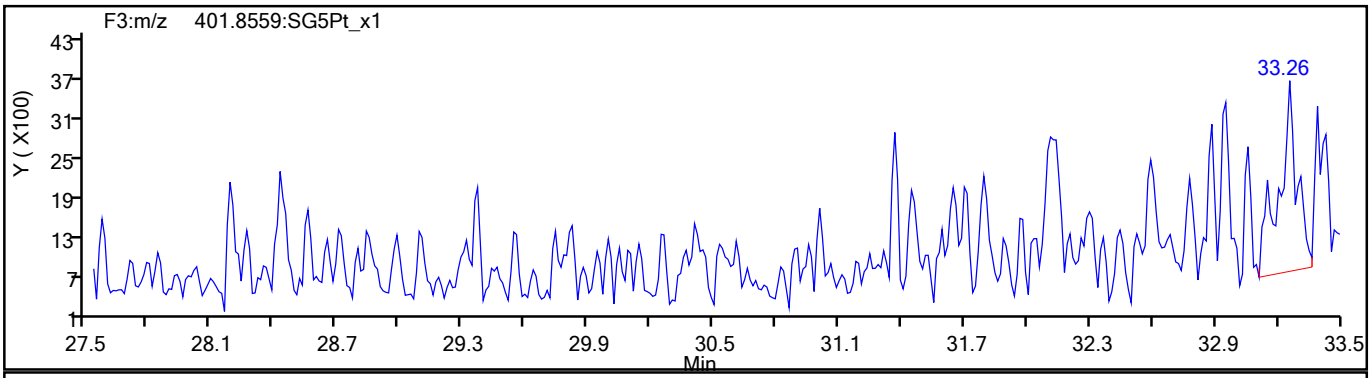

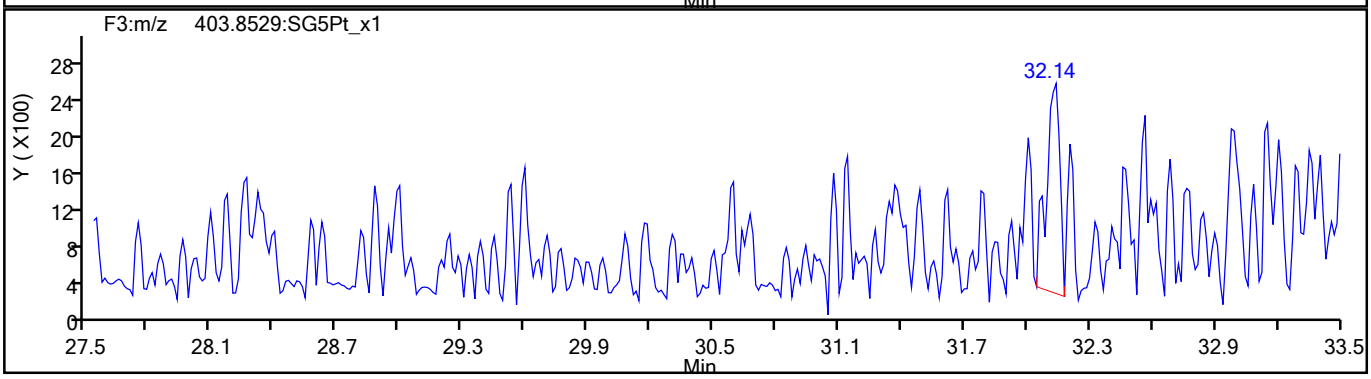

777144

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Eurofins TestAmerica, Sacramento

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HpCDF

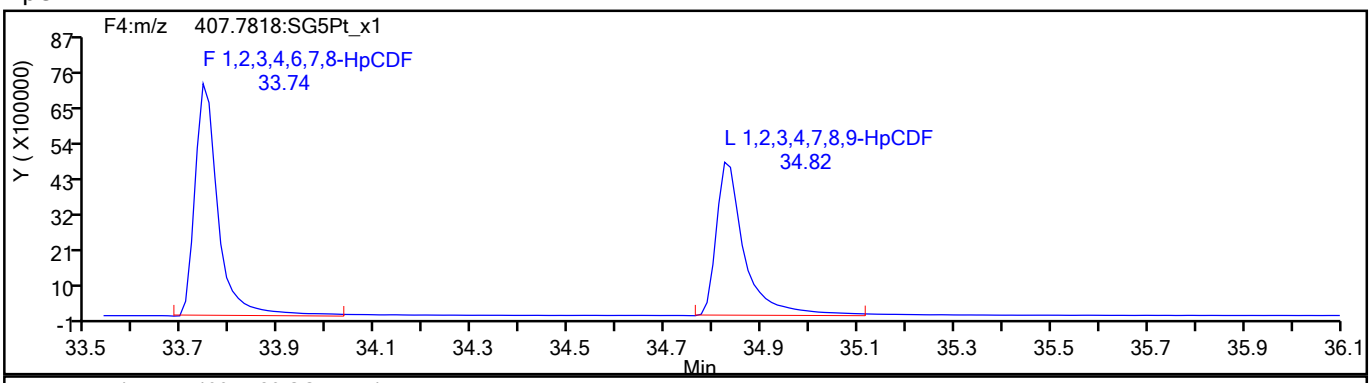

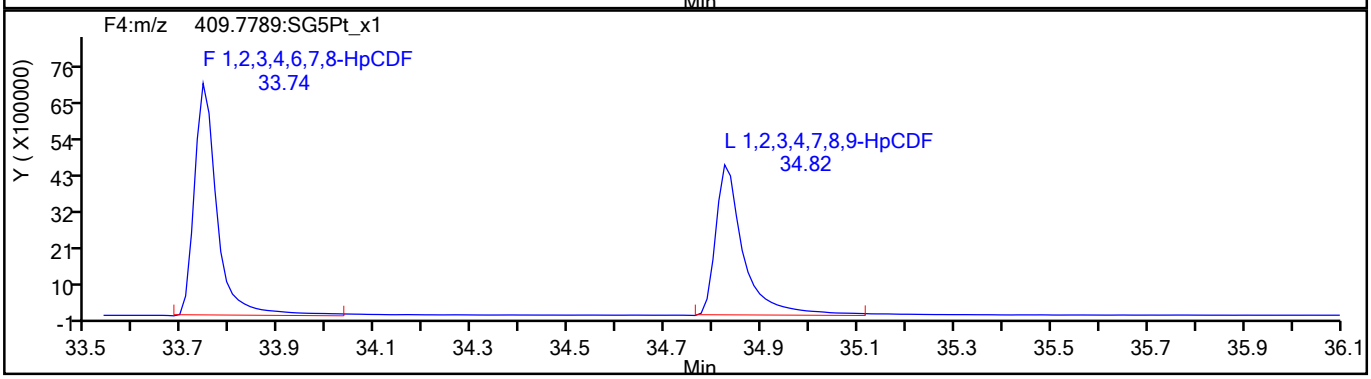

HpCDF Standards

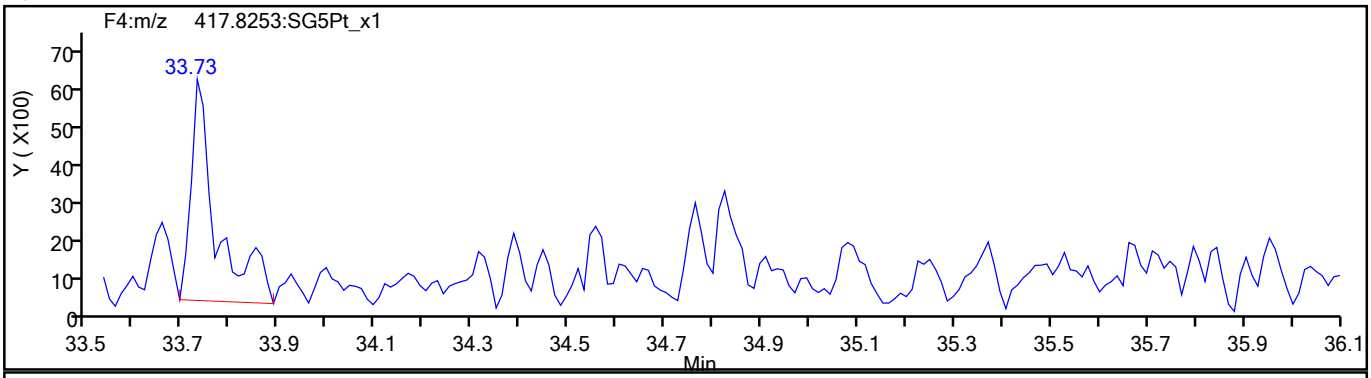

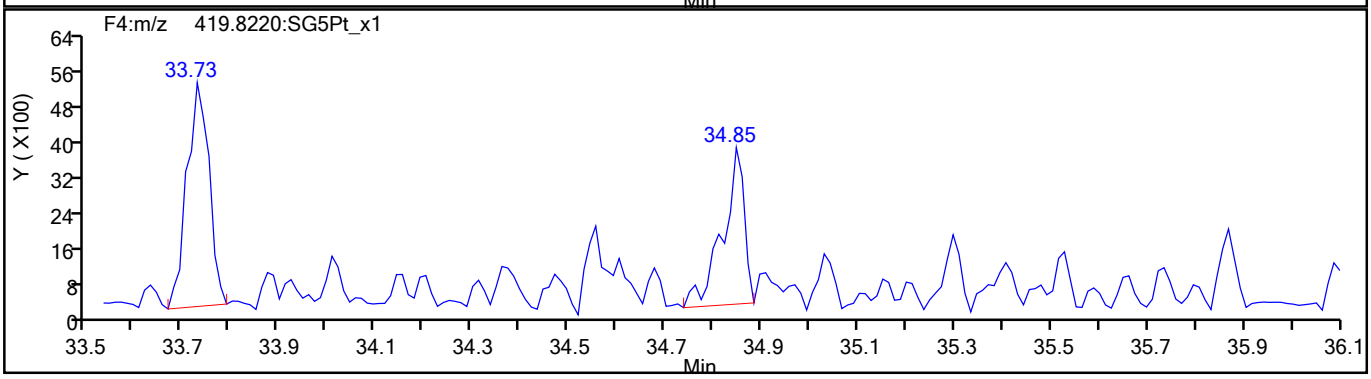

777145

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

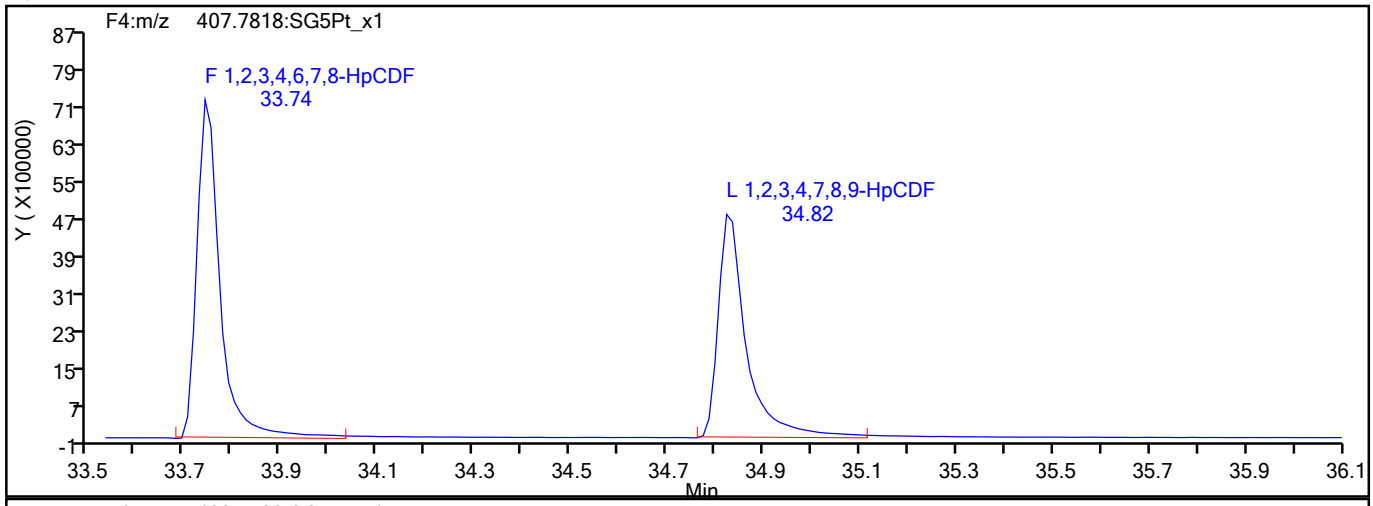

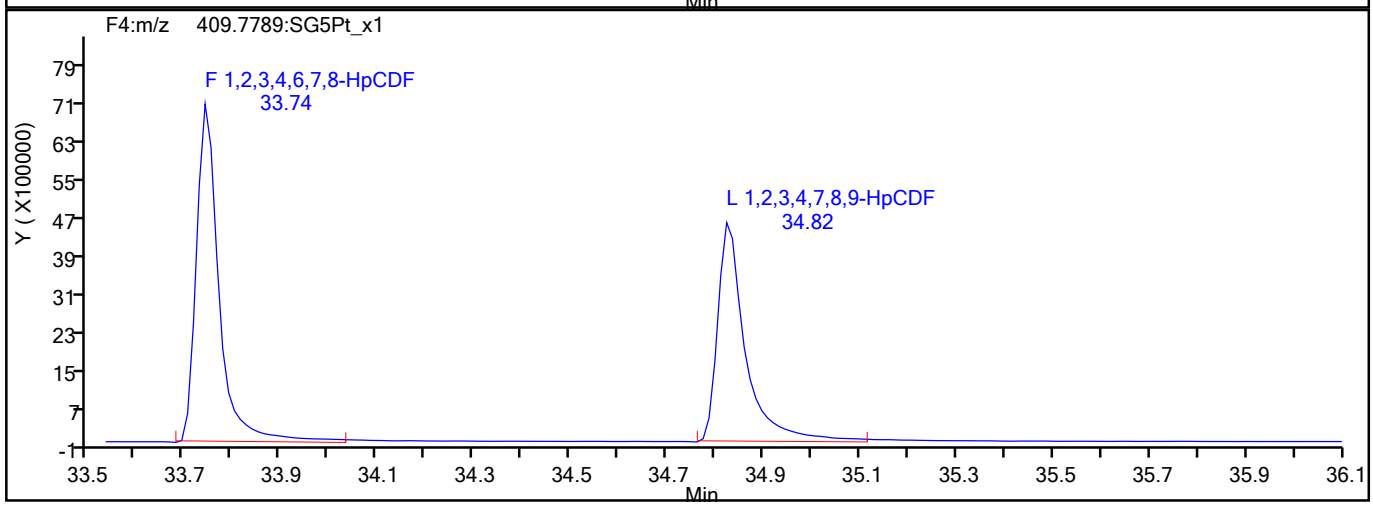

HpCDF Interference Mass

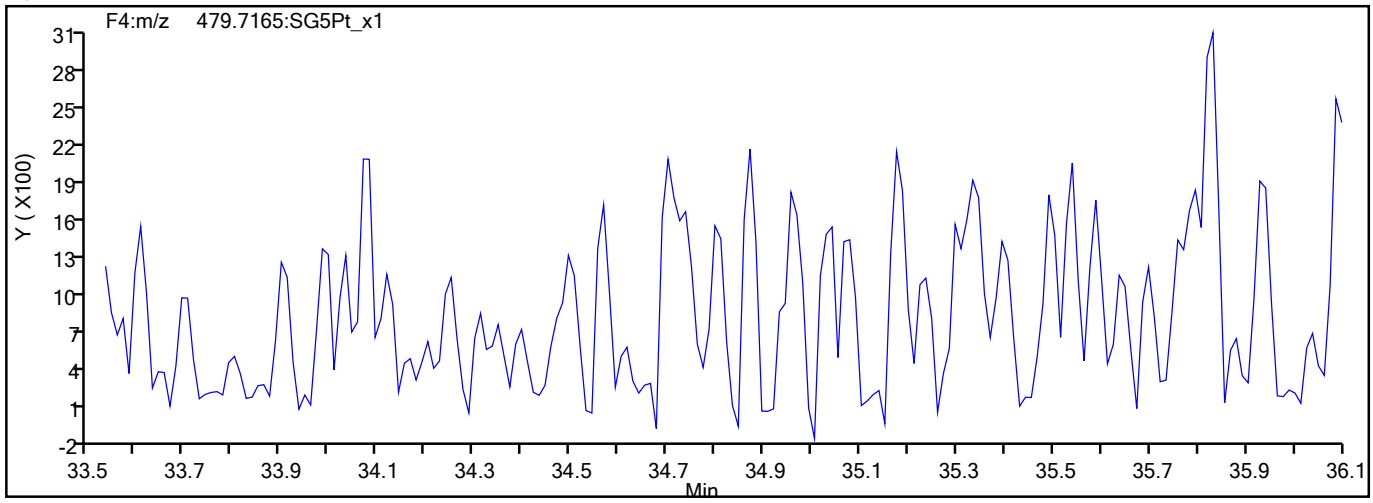

777146

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Eurofins TestAmerica, Sacramento

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HpCDD

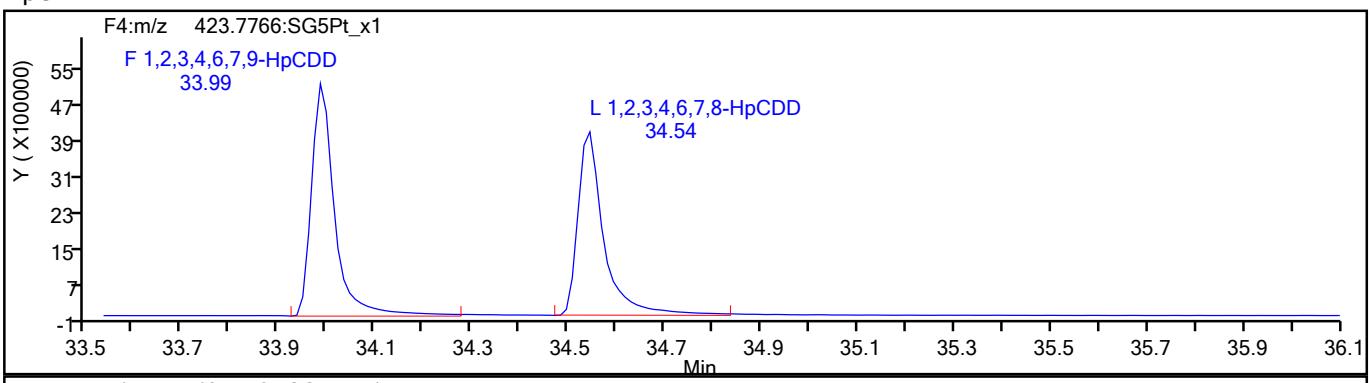

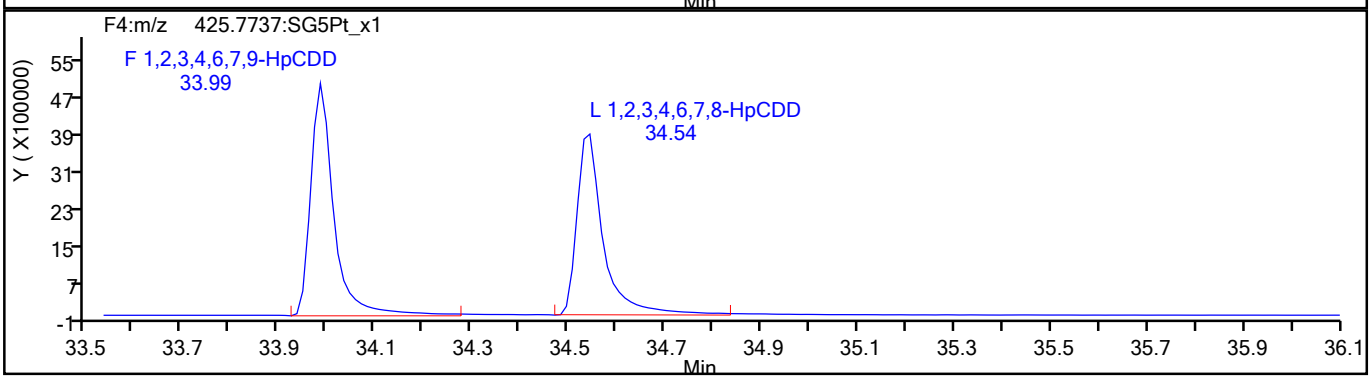

HpCDD Standards

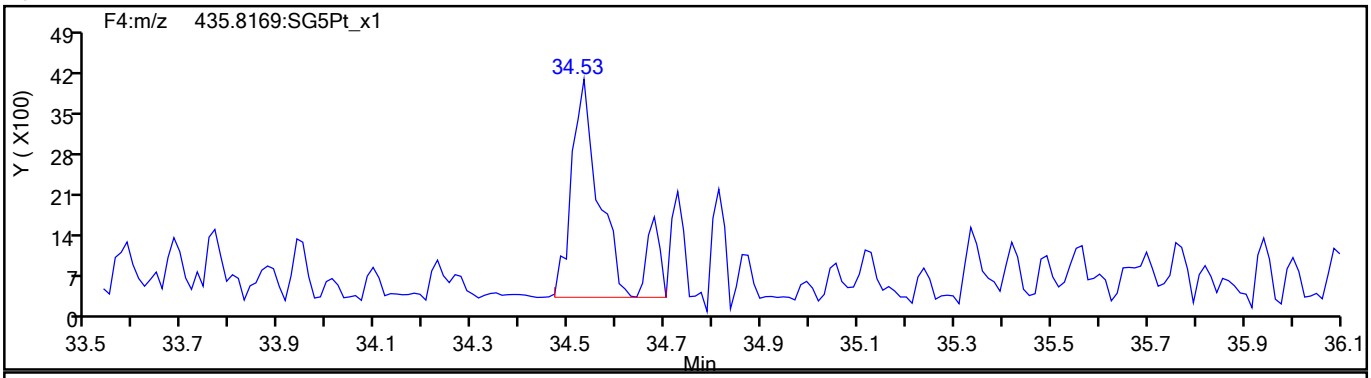

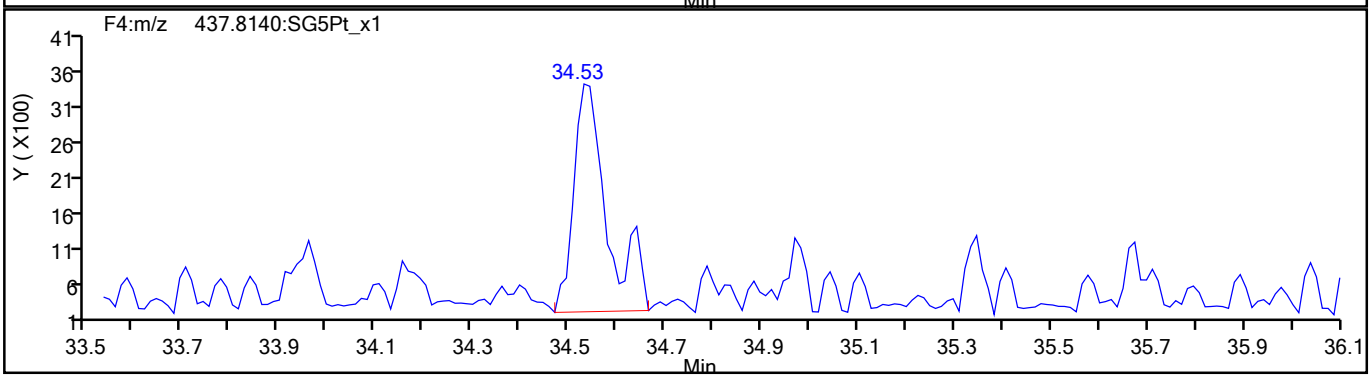

777147

Report Date: 19-Aug-2021 13:08:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

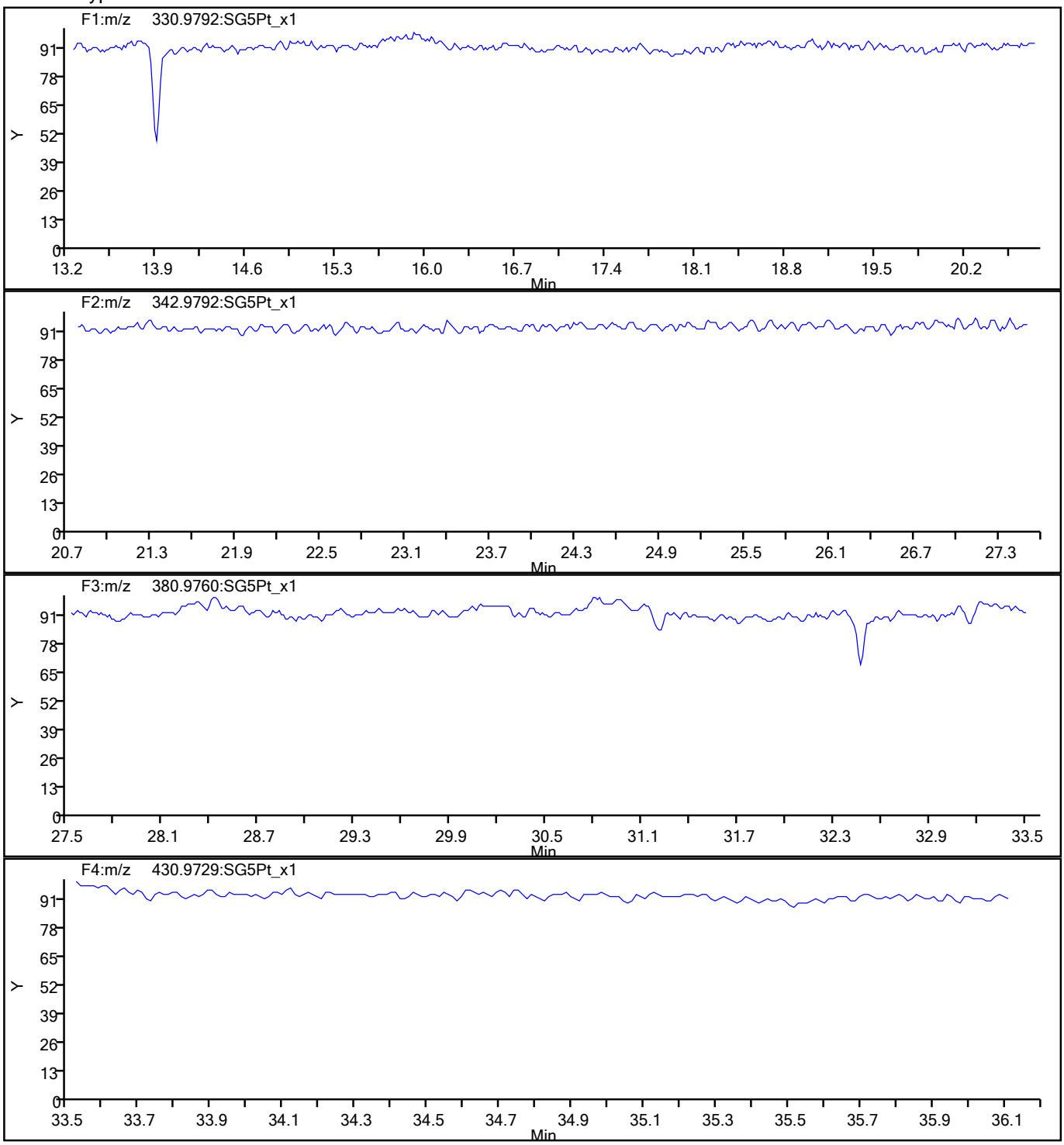

777148

Report Date: 19-Aug-2021 13:08:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

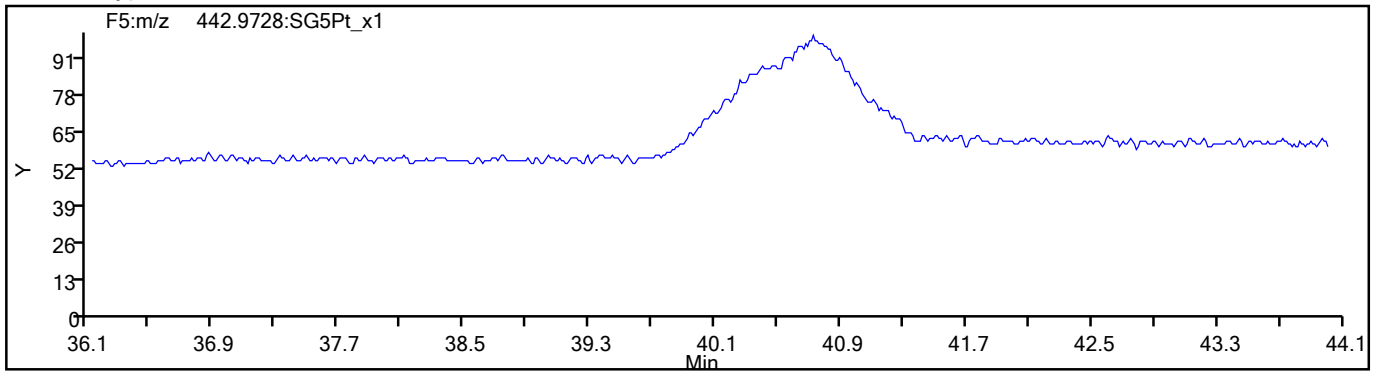

777149

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

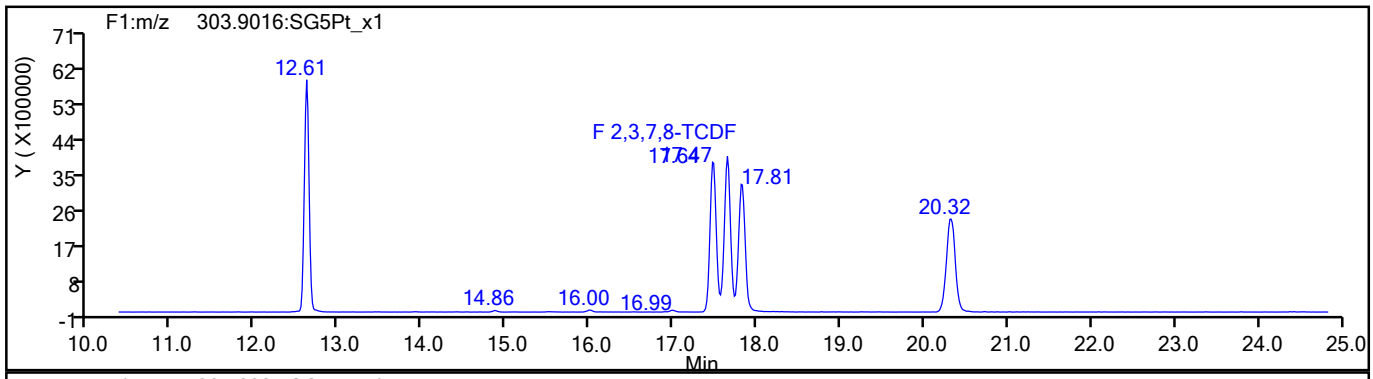

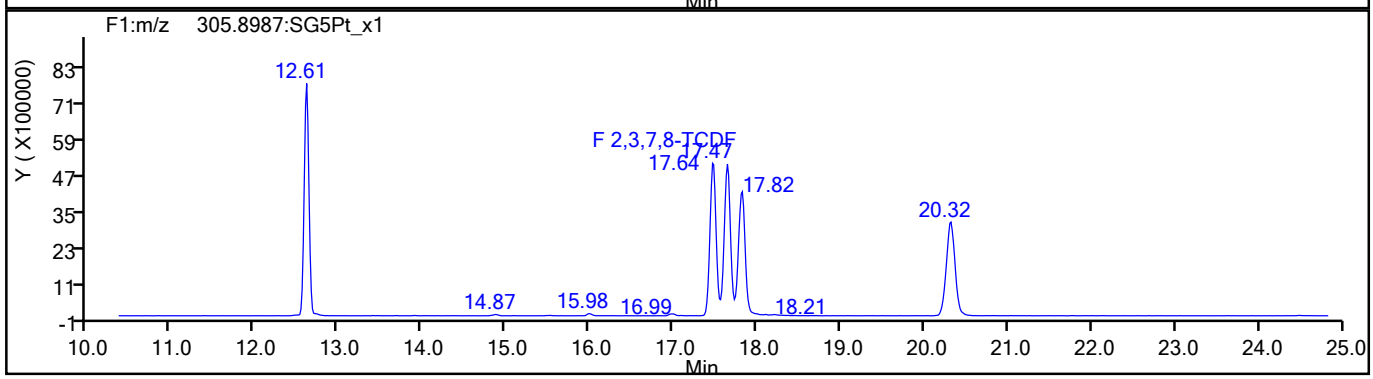

TCDF Standards

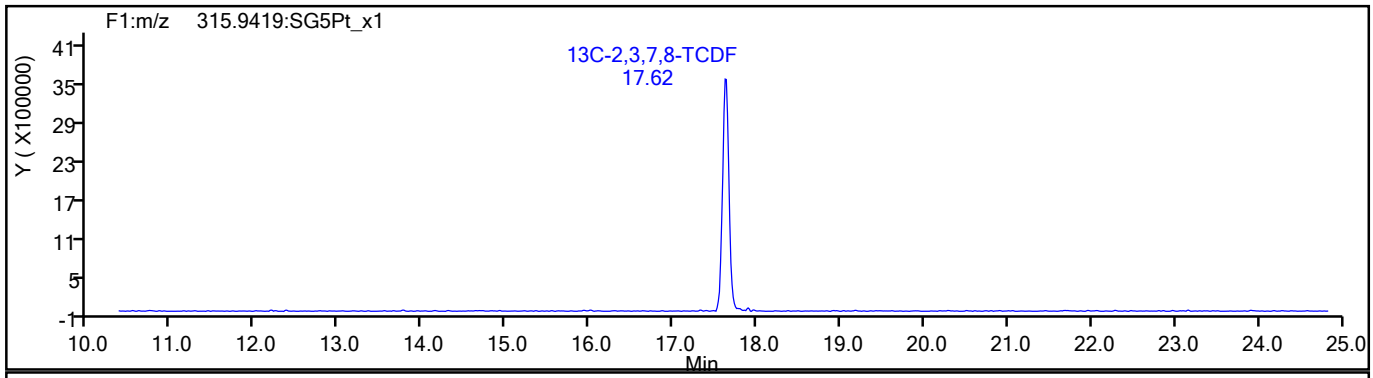

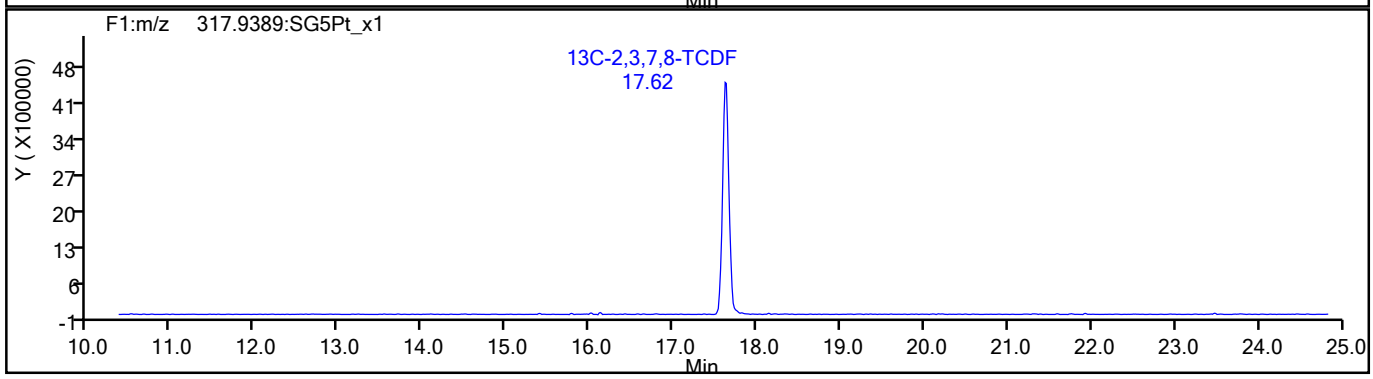

777152

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

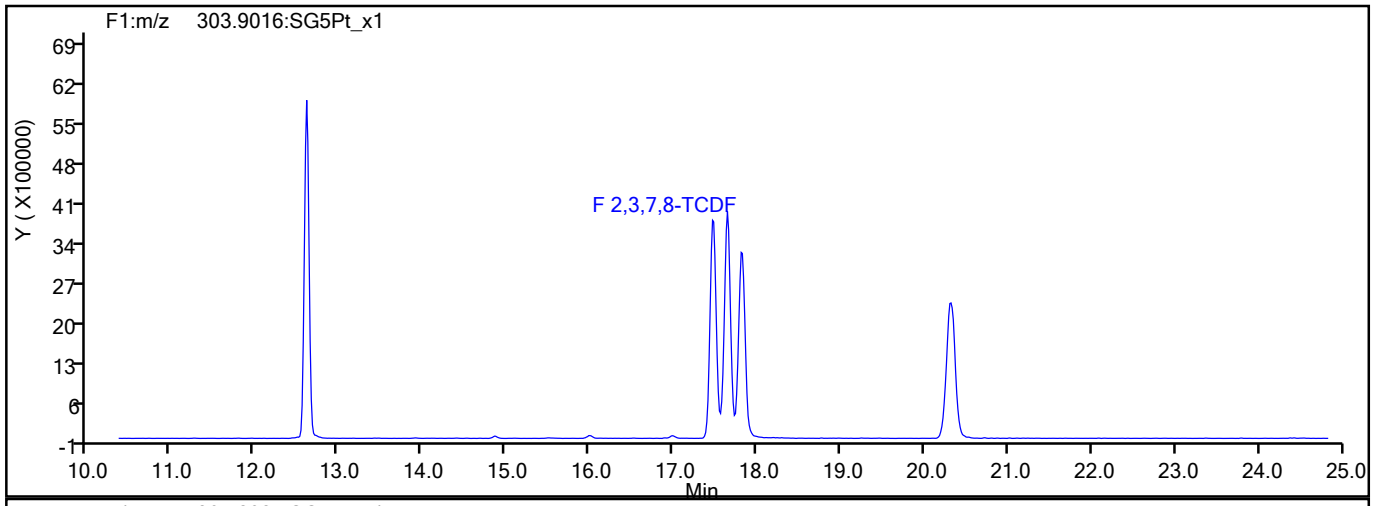

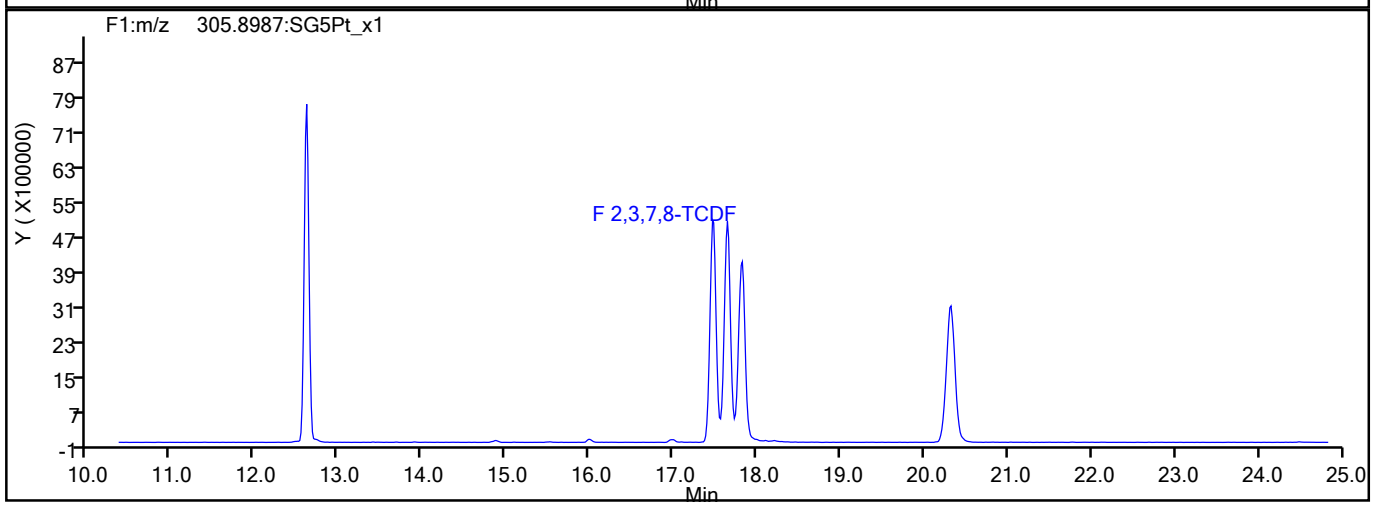

TCDF Interference Mass

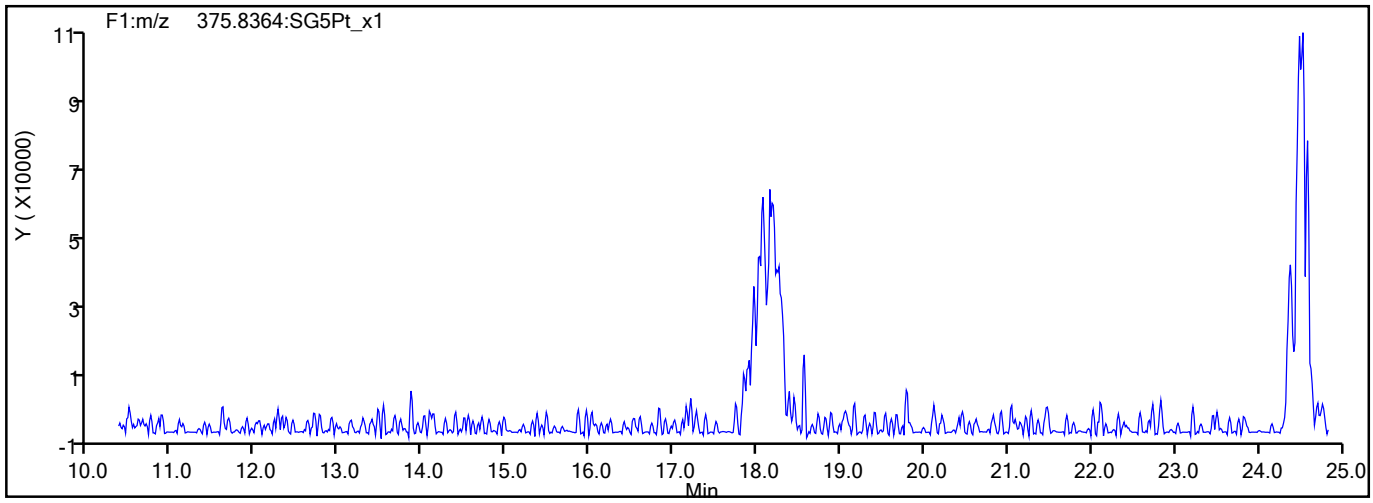

777153

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

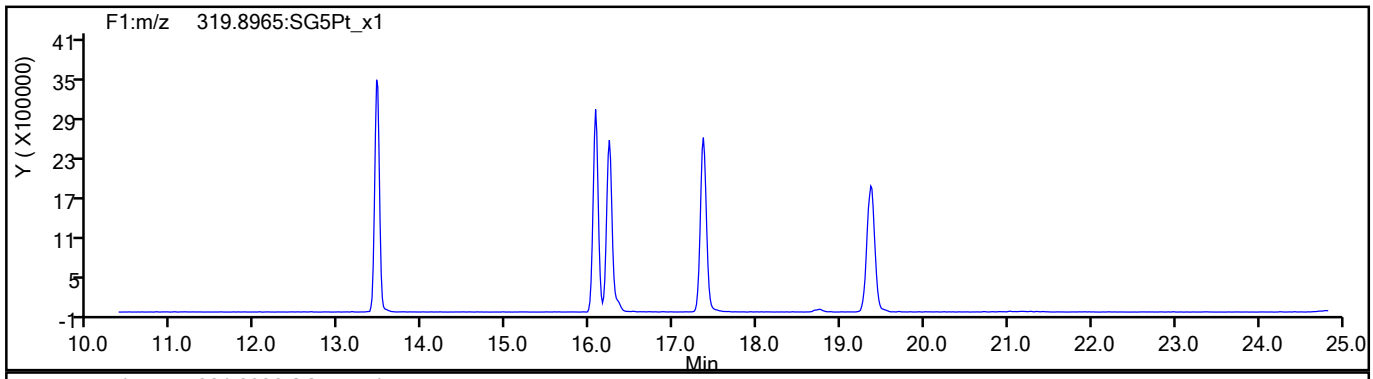

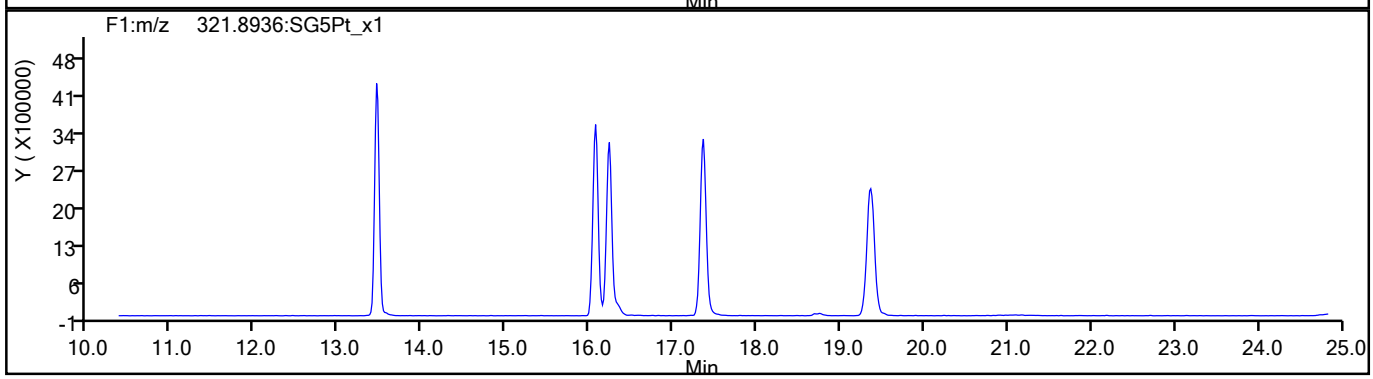

TCDD Standards

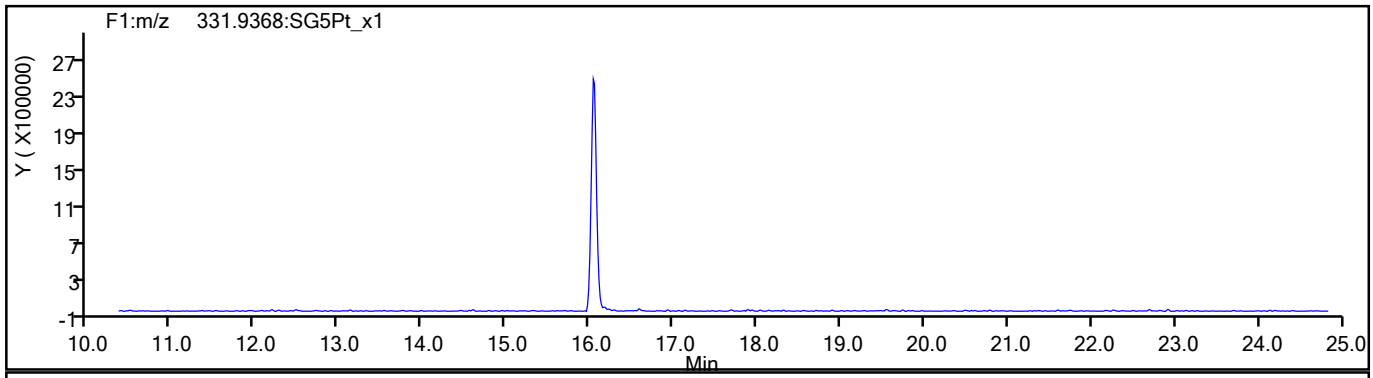

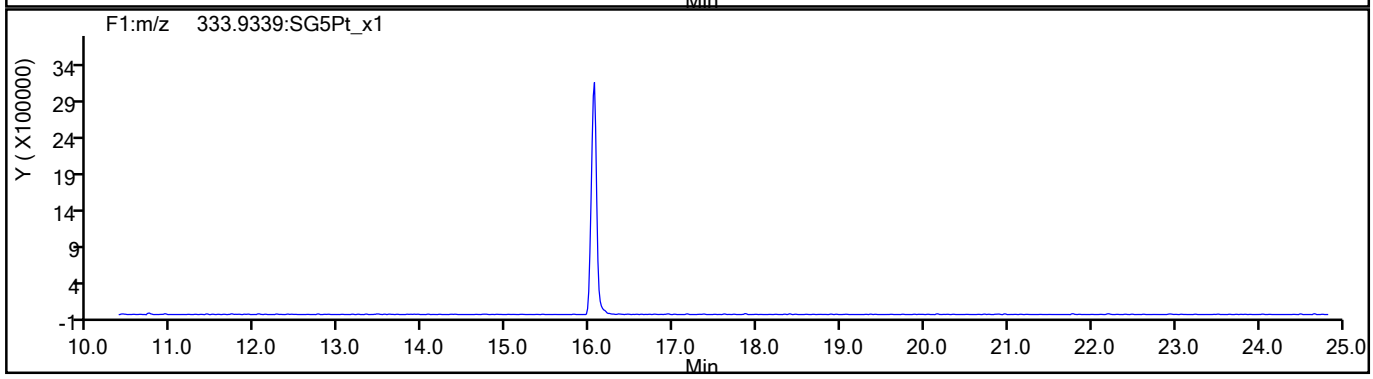

777154

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

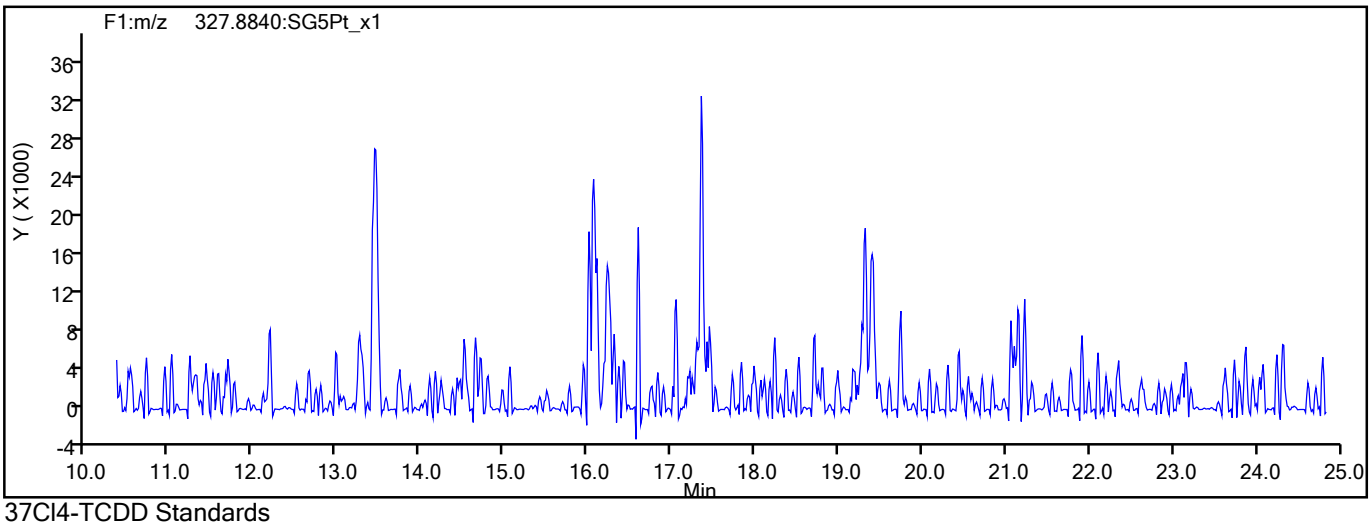

37Cl4-TCDD Standards

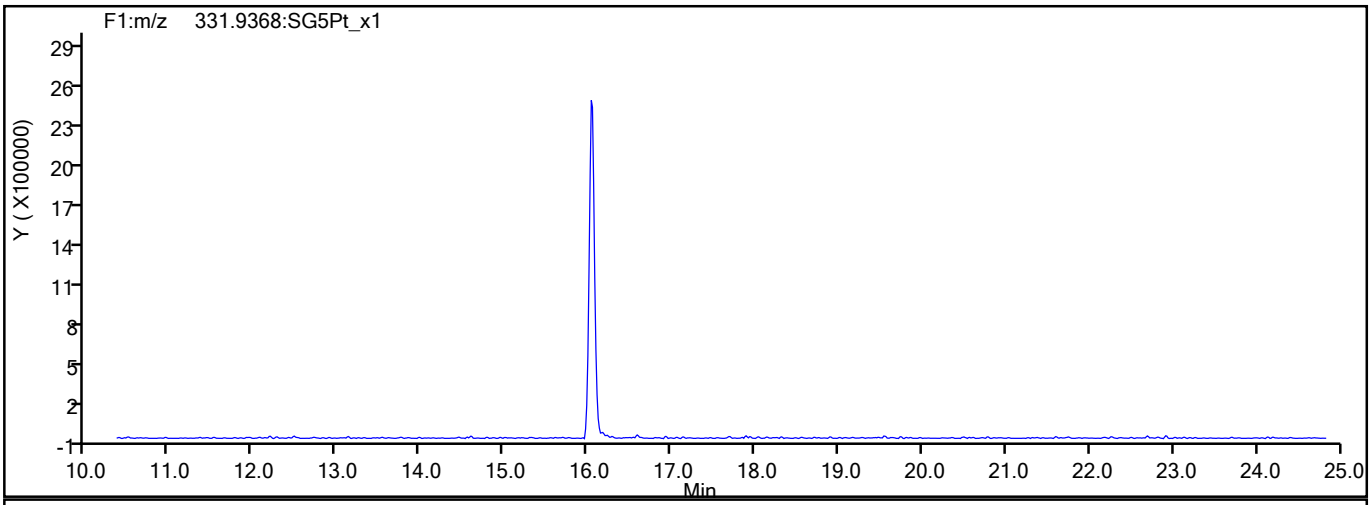

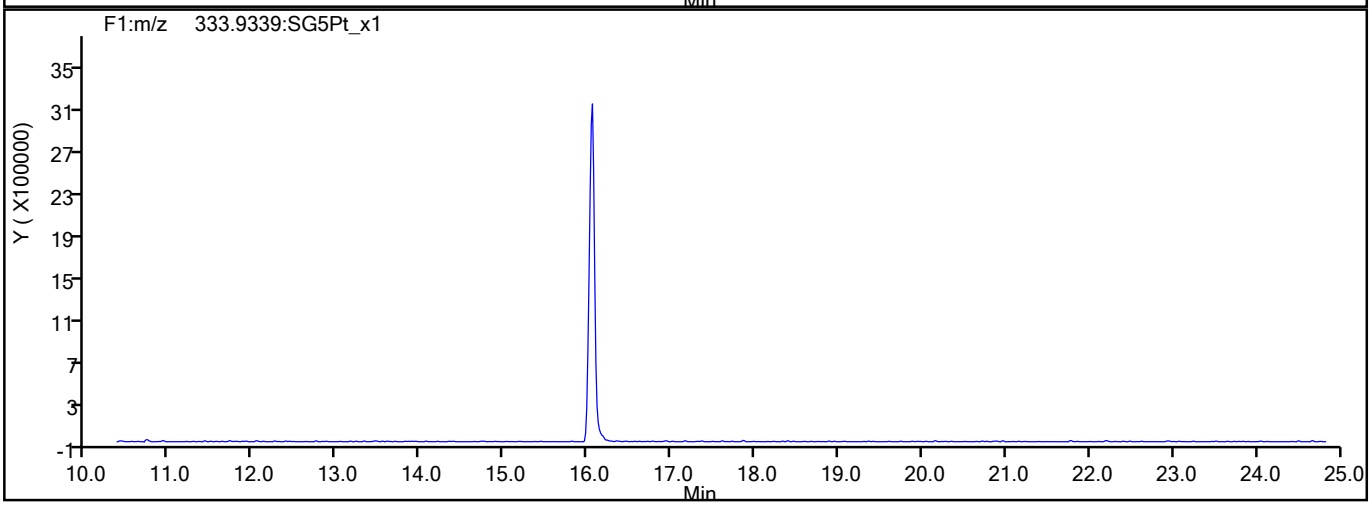

777155

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

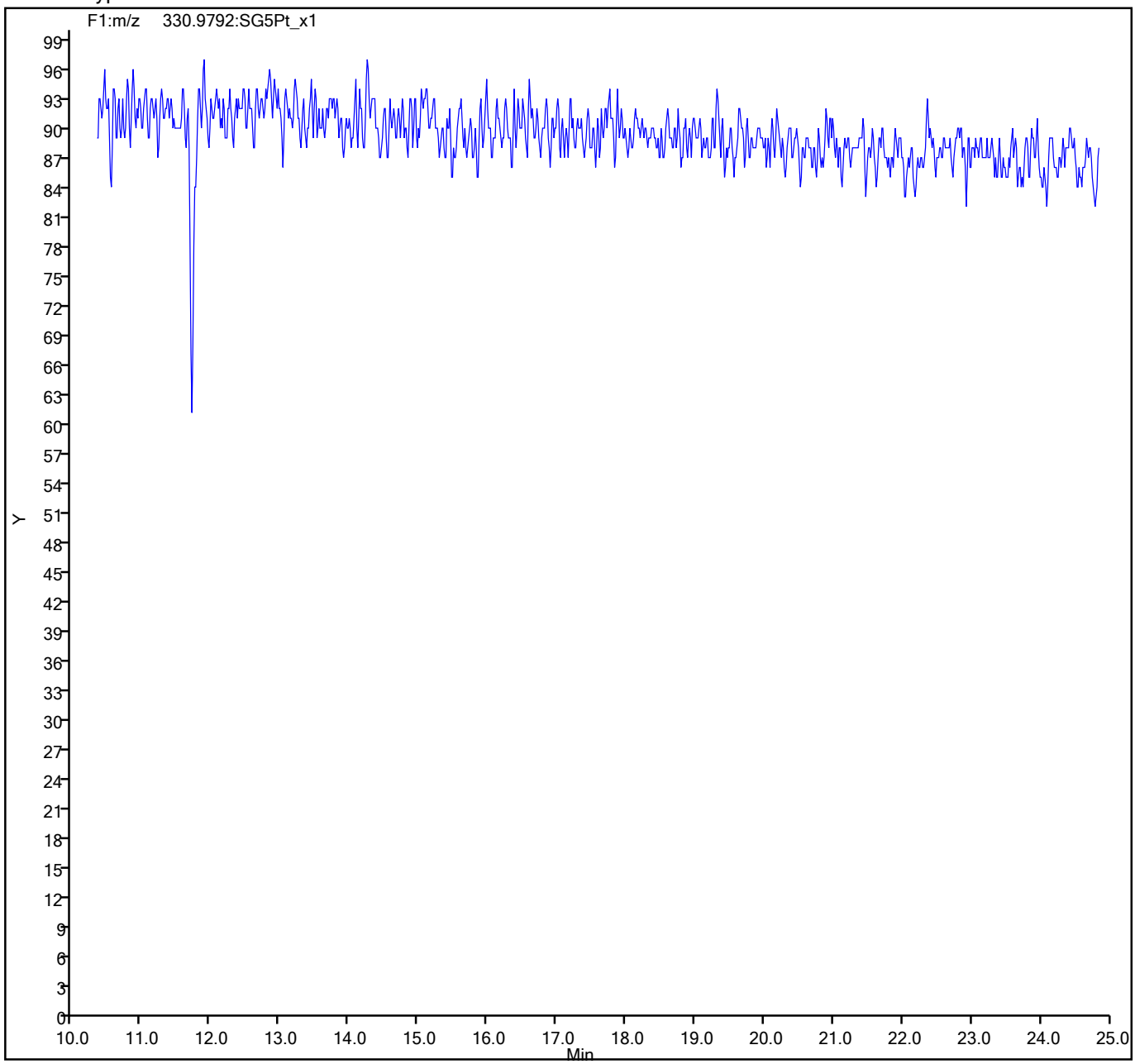

777156

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 21-Aug-2021 13:54:29 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:20 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:00:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.643	21183677	0.78	1.3327					0.00	
2,3,7,8-TCDF	17.657	21670362	0.76	0.9978	41.0	41.0	0.1237	0.1237		
D 13C-2,3,7,8-TCDD	16.079	12627140	0.77	0.8749					0.00	
2,3,7,8-TCDD	16.093	12110737	0.77	1.0570	40.5	36.3	0.1198	0.1198		RQ
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 23-Aug-2021 10:28:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 21-Aug-2021 13:54:29 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:20 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:00:10

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.643	17.643	0	1.000	9282695	1757658	6824	17060	258		
317.9389	17.629	17.643	-1	1.000	11900982	2236315	6448	16120	347	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.657	17.657	0	1.001	9366824	1823436	1677	4192	1087		
305.8987	17.657	17.657	0	1.001	12303538	2377115	3254	8135	731	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.079	16.079	0	1.000	5487617	1115956	6201	15502	180		
333.9339	16.079	16.079	0	1.000	7139523	1649666	3914	9785	421	0.77(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.093	16.093	0	1.001	5268513	1295383	1820	4550	712		
321.8936	16.093	16.093	0	1.001	8236540	1869801	1682	4205	1112	0.64(0.65-0.89)	
	Empc Correction				6842224	1682315	1682	4205	1000		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d		
Injection Date:	21-Aug-2021 13:54:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

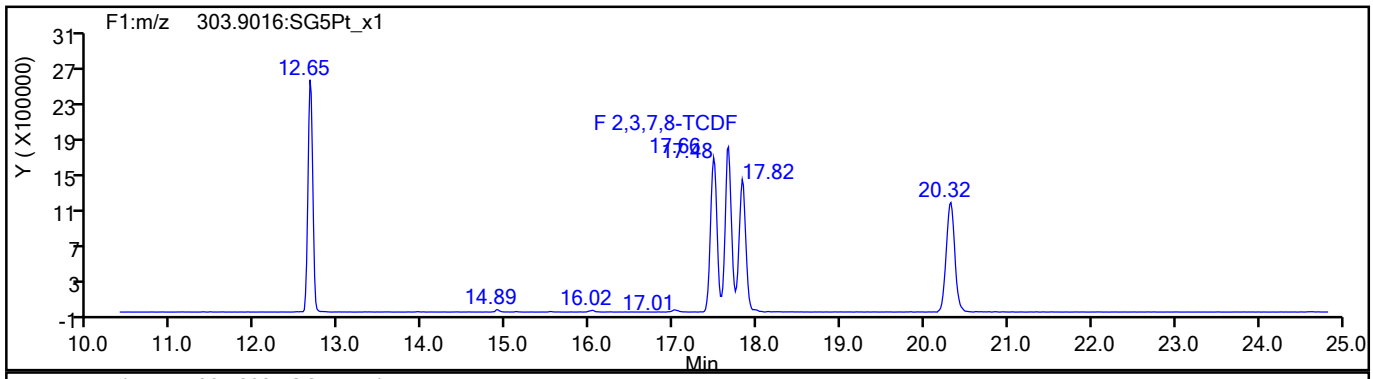

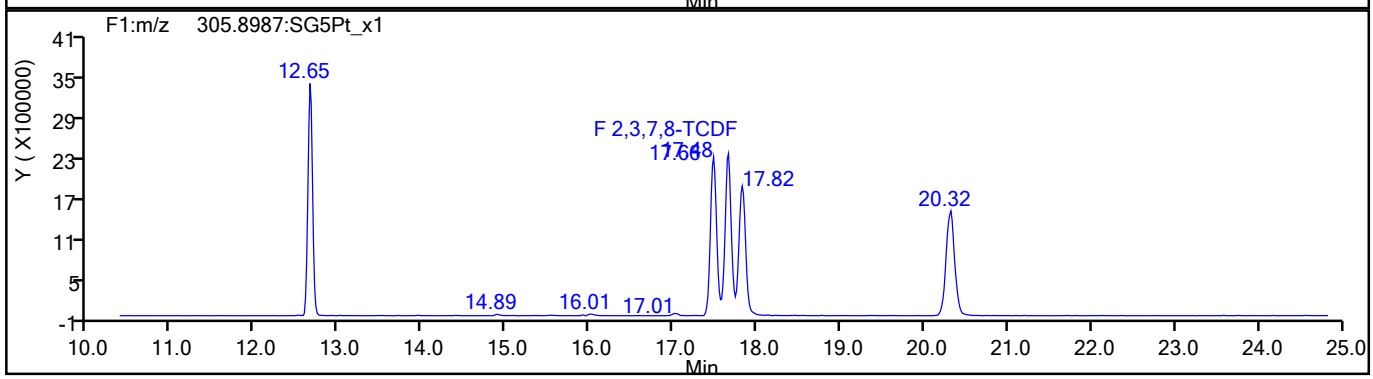

TCDF Standards

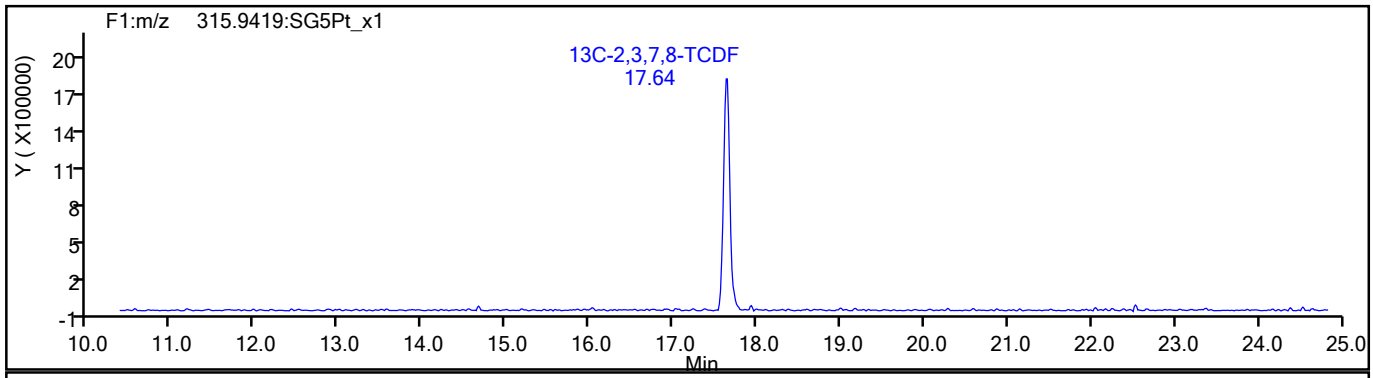

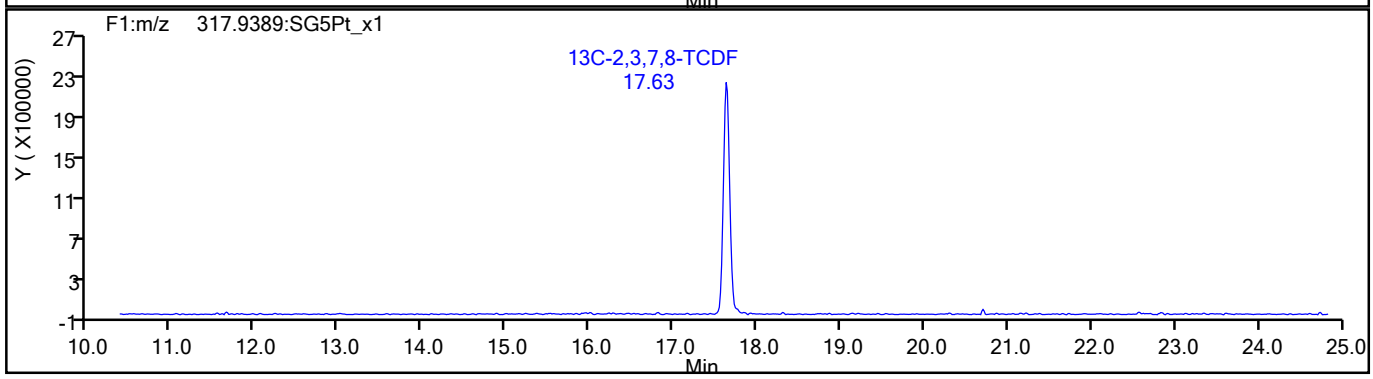

777159

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d		
Injection Date:	21-Aug-2021 13:54:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

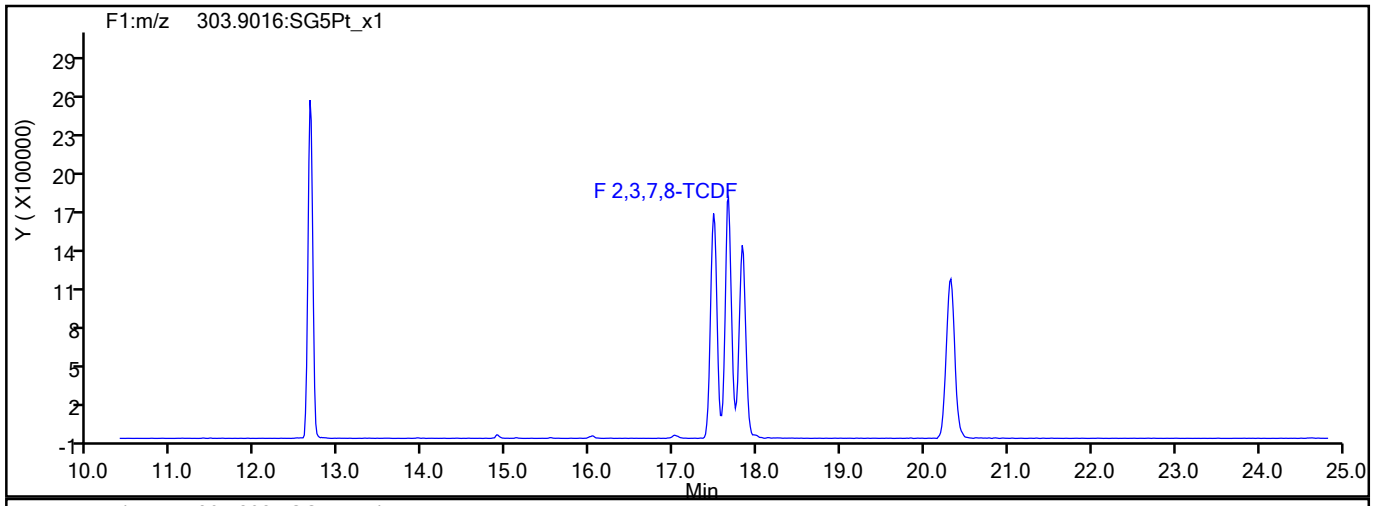

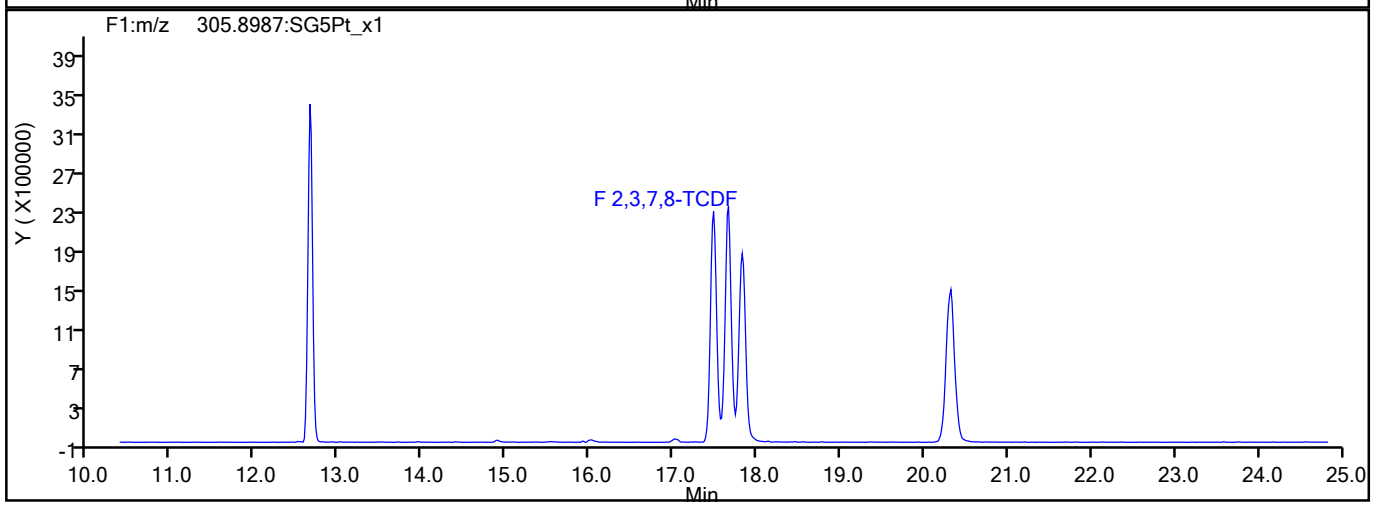

TCDF Interference Mass

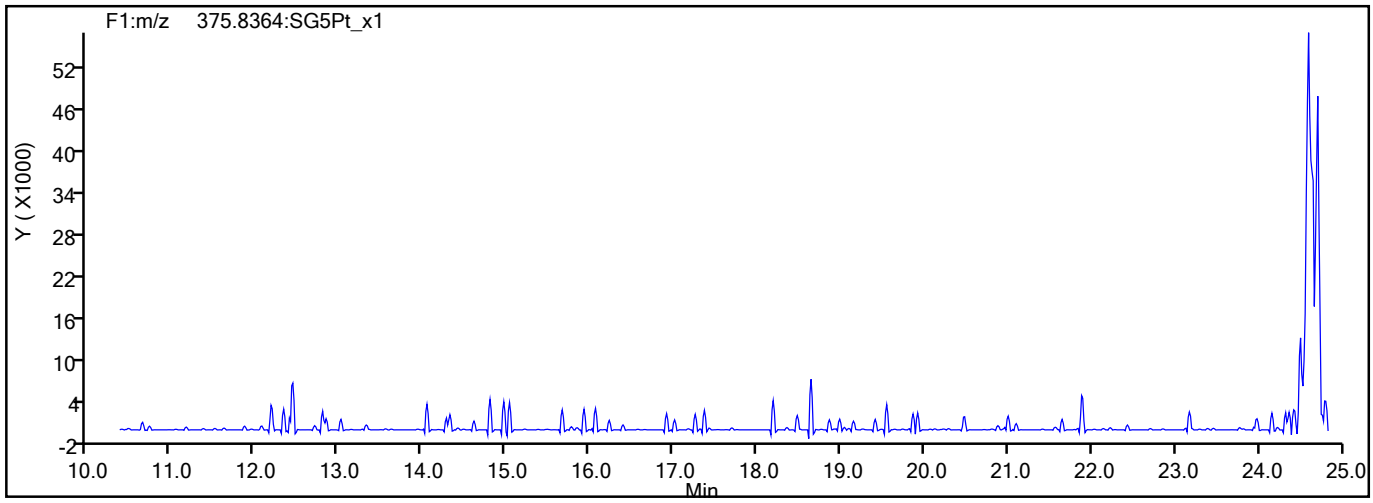

777160

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d		
Injection Date:	21-Aug-2021 13:54:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

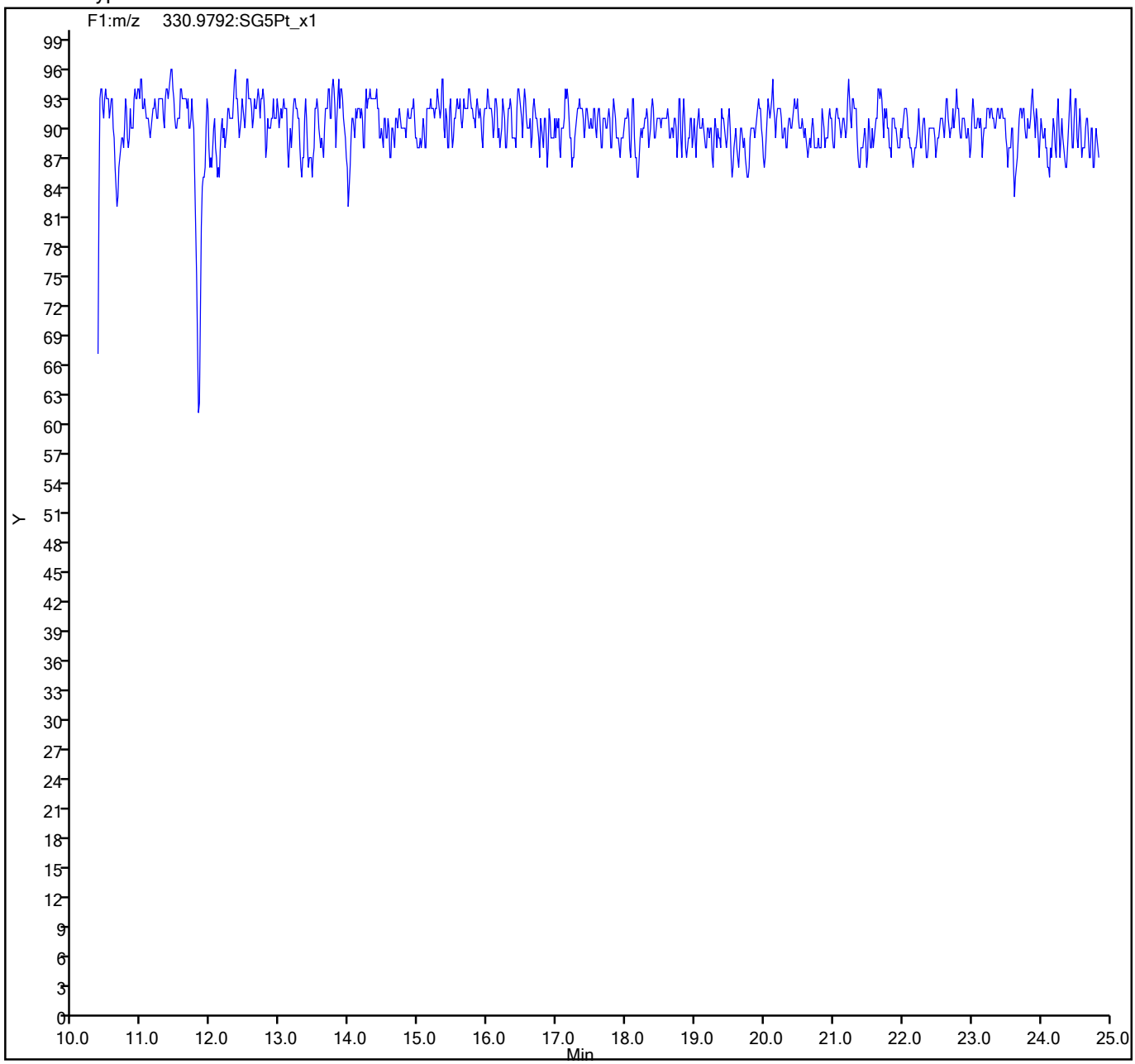

777161

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 23-Aug-2021 09:32:15 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:43:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.637	9601063	0.85	1.3327					0.00	
2,3,7,8-TCDF	17.665	11045352	0.82	0.9978	46.1	46.1	0.1927	0.1927		
D 13C-2,3,7,8-TCDD	16.087	6481328	0.76	0.8749					0.00	
2,3,7,8-TCDD	16.101	6949267	0.78	1.0570	40.6	40.6	0.2121	0.2121		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 23-Aug-2021 09:32:15 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:43:19

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.637	17.637	0	1.000	4407572	855495	7388	18470	116		
317.9389	17.637	17.637	0	1.000	5193491	1011684	5445	13612	186	0.85(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.665	17.665	0	1.002	4971101	886156	1668	4170	531		
305.8987	17.665	17.665	0	1.002	6074251	1128635	1922	4805	587	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.087	16.087	0	1.000	2800293	587194	6878	17195	85		
333.9339	16.087	16.087	0	1.000	3681035	811326	2649	6622	306	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.101	16.101	0	1.001	3034454	677456	1907	4767	355		
321.8936	16.101	16.101	0	1.001	3914813	870353	1228	3070	709	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d		
Injection Date:	23-Aug-2021 09:32:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

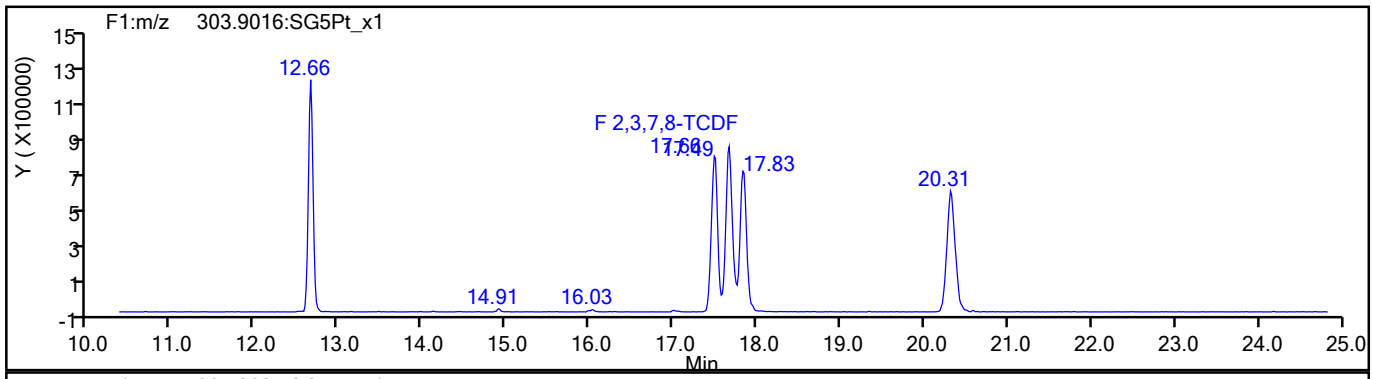

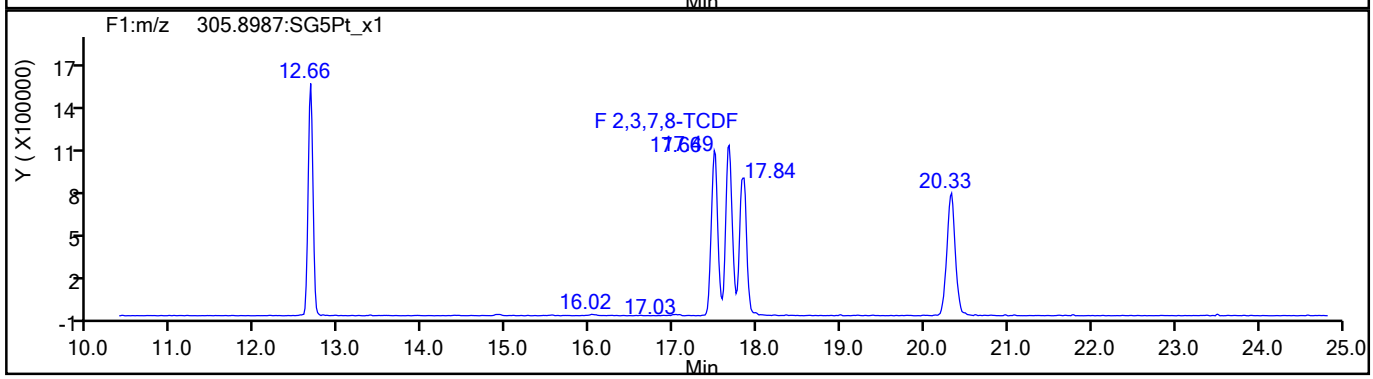

TCDF Standards

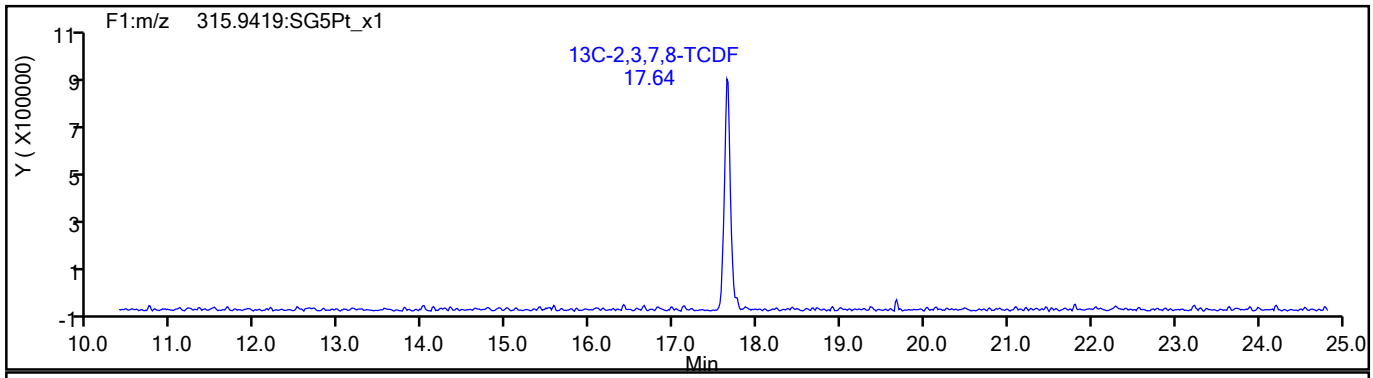

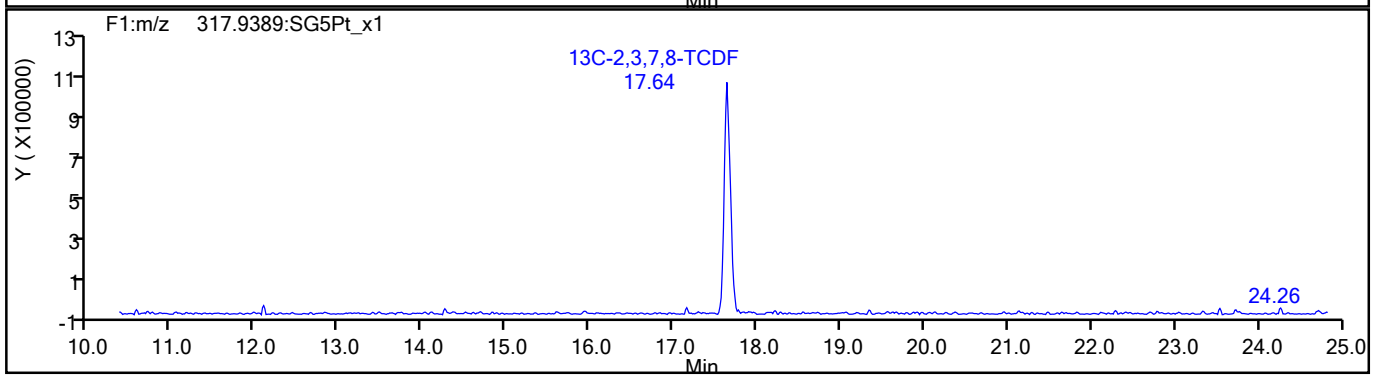

777164

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d		
Injection Date:	23-Aug-2021 09:32:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

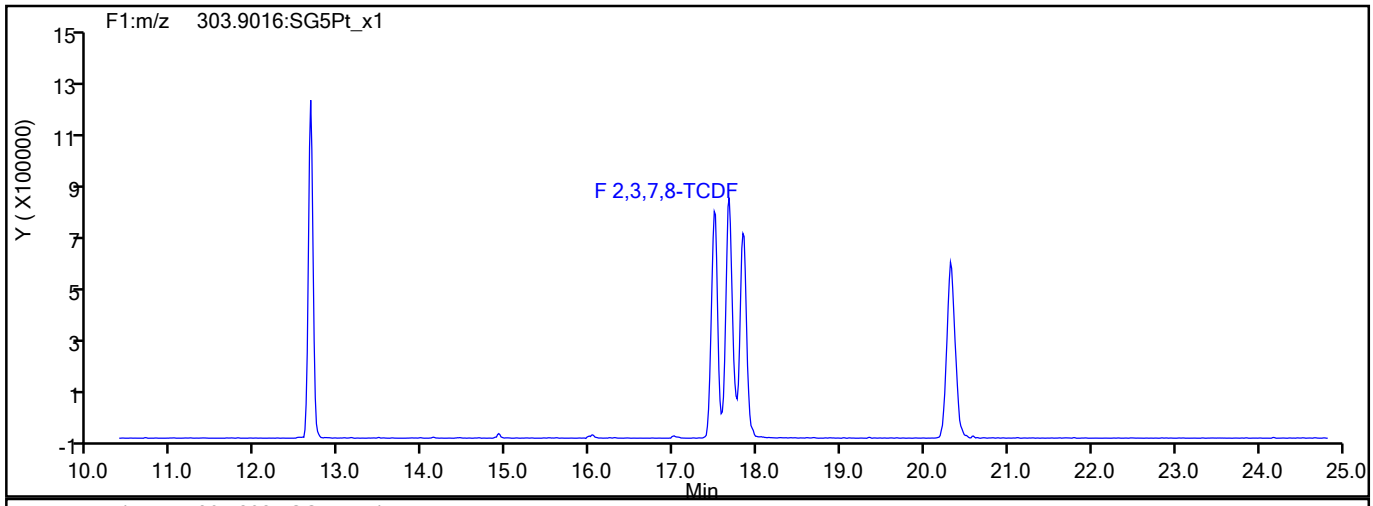

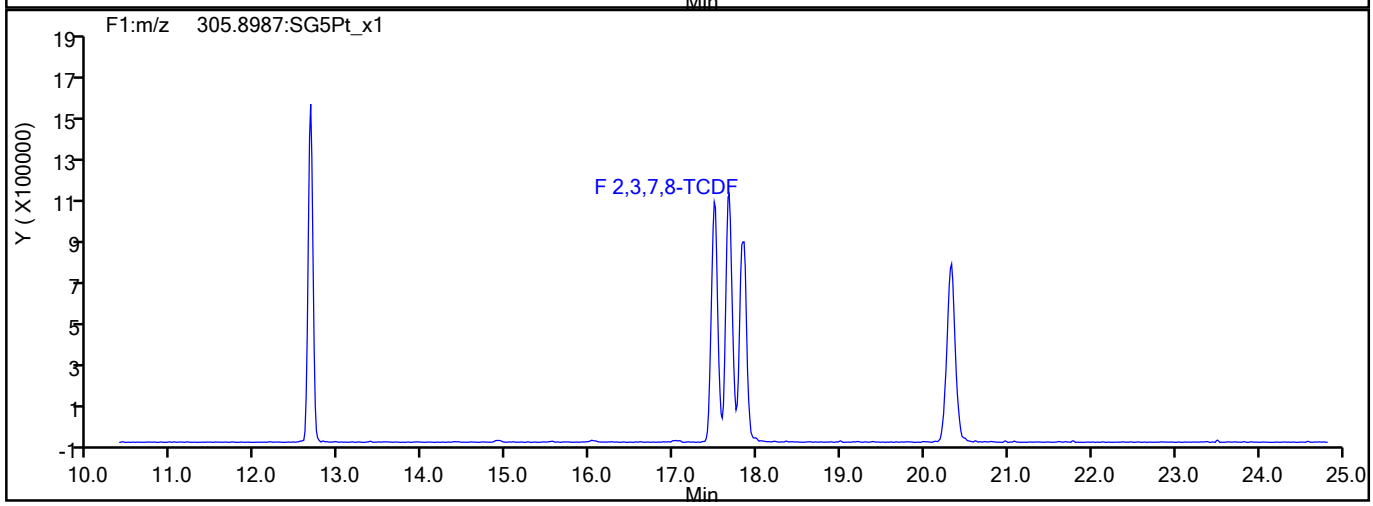

TCDF Interference Mass

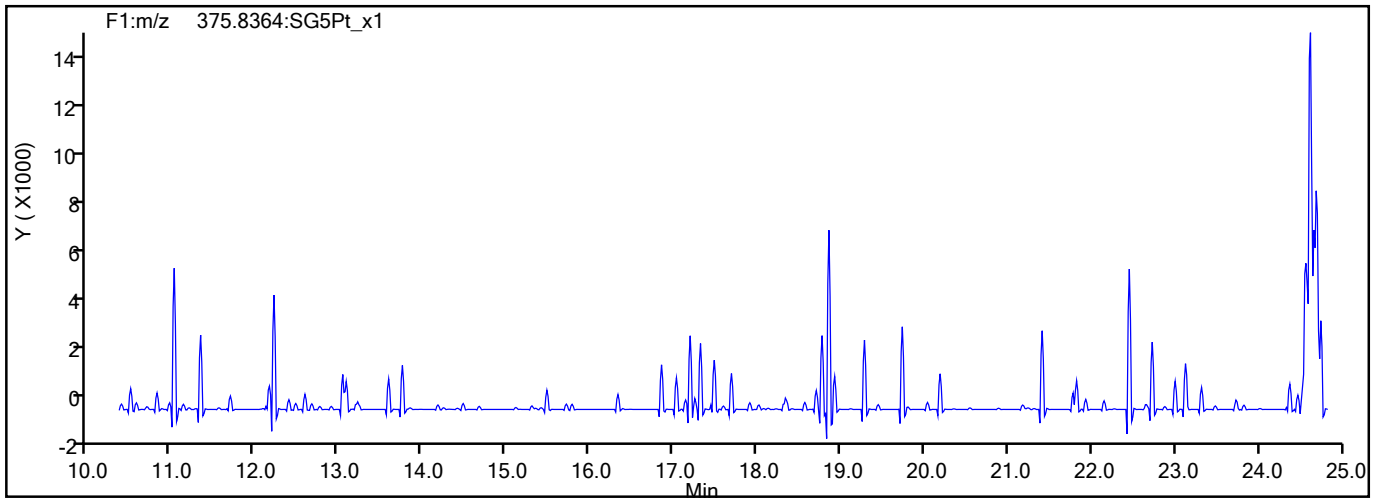

777165

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d		
Injection Date:	23-Aug-2021 09:32:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

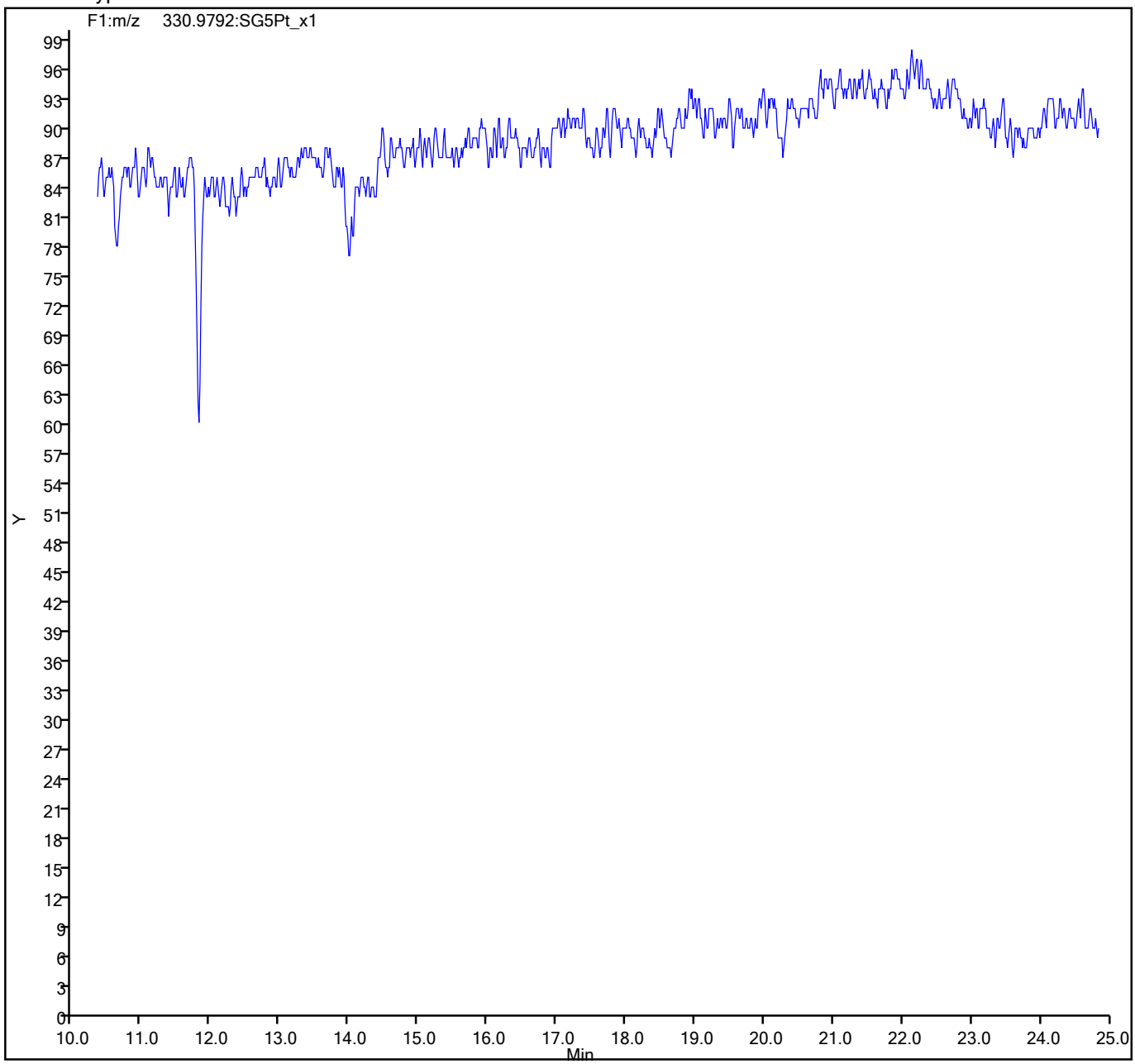

777166

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 23-Aug-2021 15:34:18 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:39 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:13:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.629	32758937	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.657	34131251	0.78	0.9978	41.8	41.8	0.1128	0.1128		
D 13C-2,3,7,8-TCDD	16.079	19405997	0.76	0.8749					0.00	
2,3,7,8-TCDD	16.093	21994765	0.79	1.0570	42.9	42.9	0.1176	0.1176		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 23-Aug-2021 15:34:18 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:39 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:13:04

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.629	17.629	0	1.000	14792047	2886457	8002	20005	361		
317.9389	17.629	17.629	0	1.000	17966890	3466817	8253	20632	420	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.657	17.657	0	1.002	14965952	2812417	3180	7950	884		
305.8987	17.643	17.657	-1	1.001	19165299	3579927	3970	9925	902	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.079	16.079	0	1.000	8398782	1875390	22329	55822	84		
333.9339	16.079	16.079	0	1.000	11007215	2396714	10997	27492	218	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.093	0	1.001	9703507	2157313	2641	6602	817		
321.8936	16.093	16.093	0	1.001	12291258	2740074	2671	6677	1026	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 24-Aug-2021 09:19:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d		
Injection Date:	23-Aug-2021 15:34:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

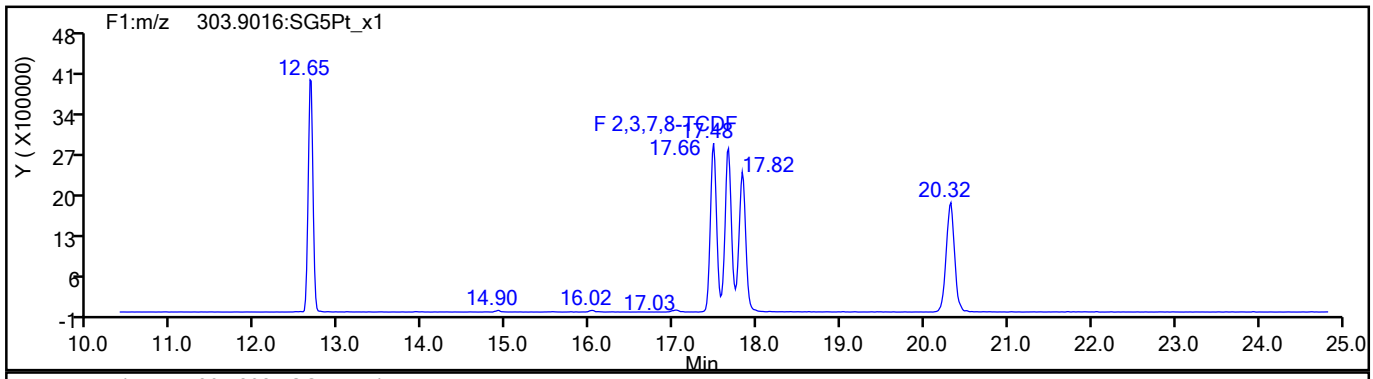

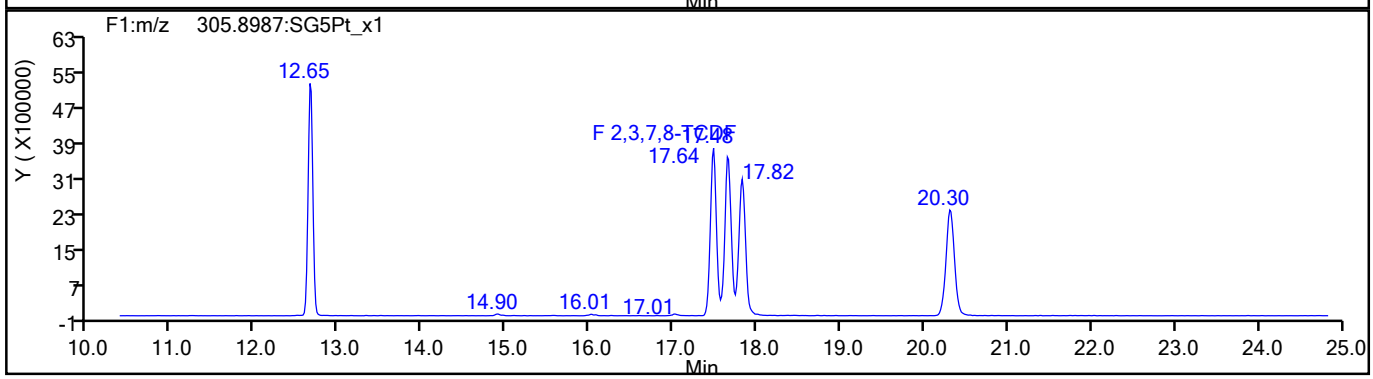

TCDF Standards

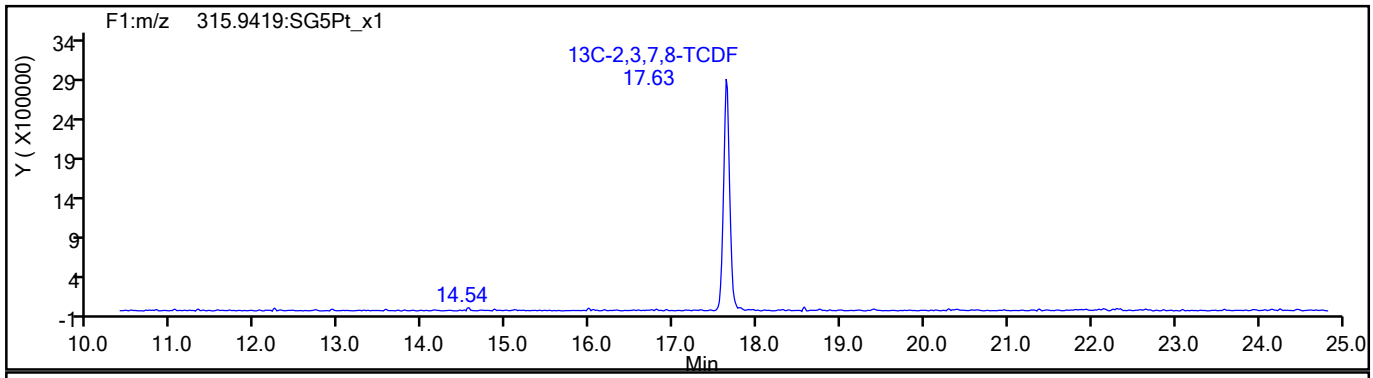

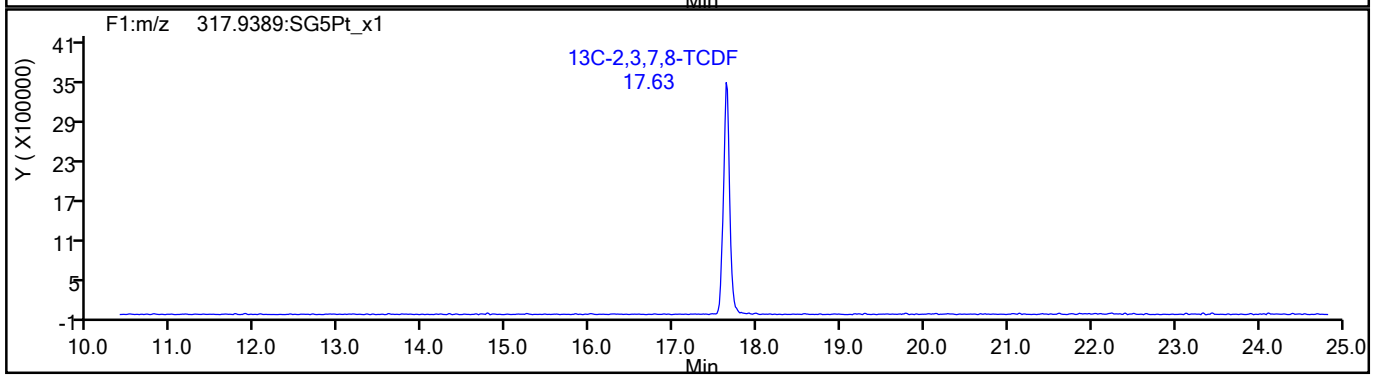

777169

Report Date: 24-Aug-2021 09:19:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d		
Injection Date:	23-Aug-2021 15:34:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

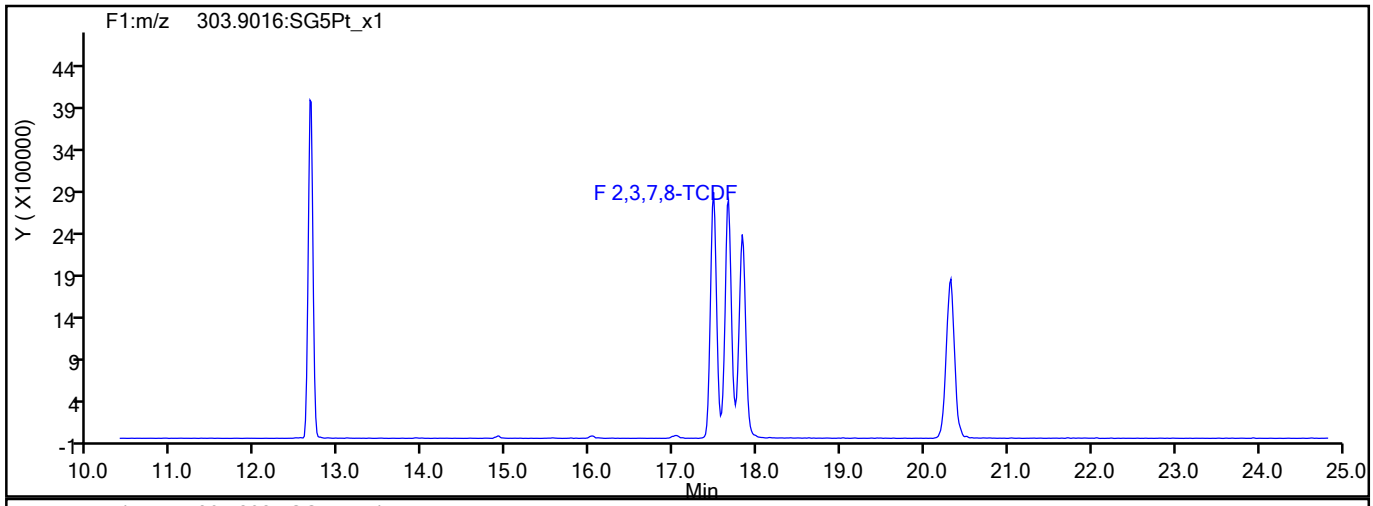

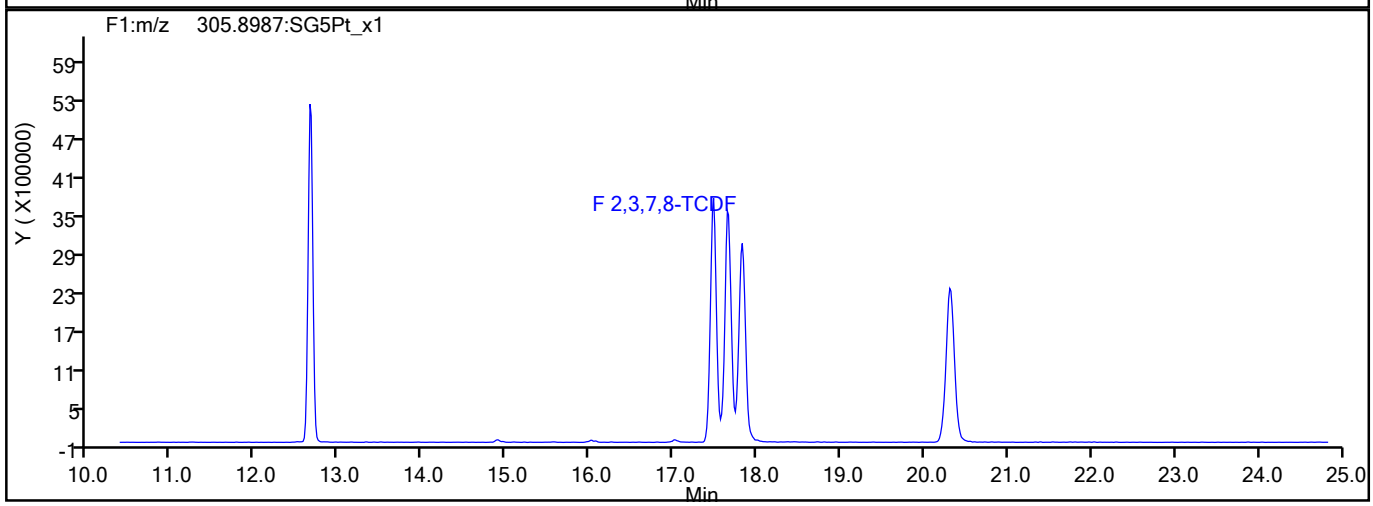

TCDF Interference Mass

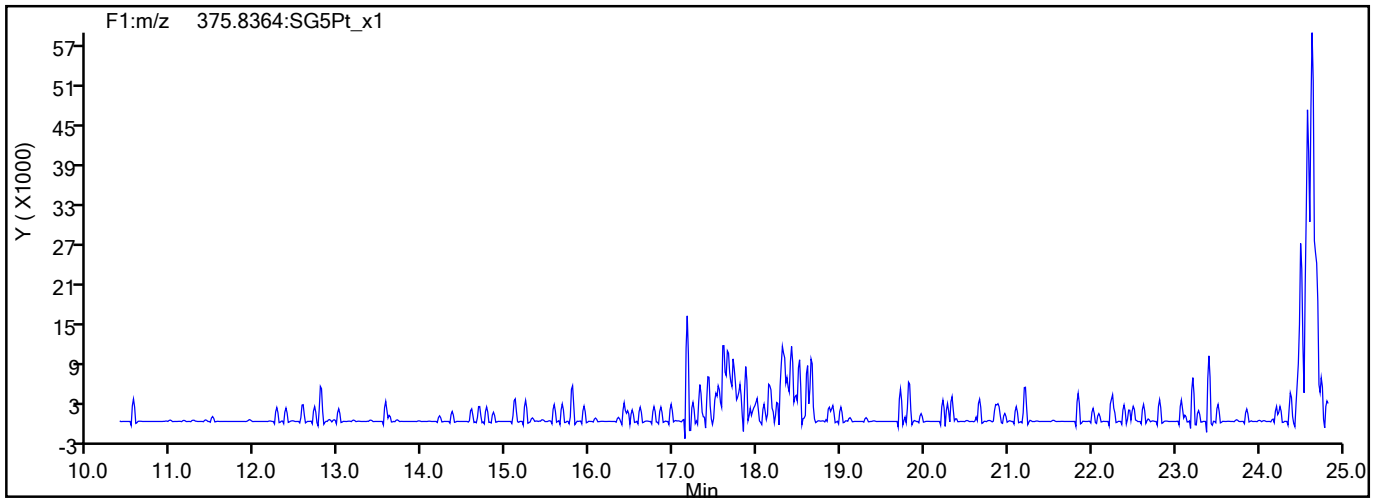

777170

Report Date: 24-Aug-2021 09:19:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d		
Injection Date:	23-Aug-2021 15:34:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

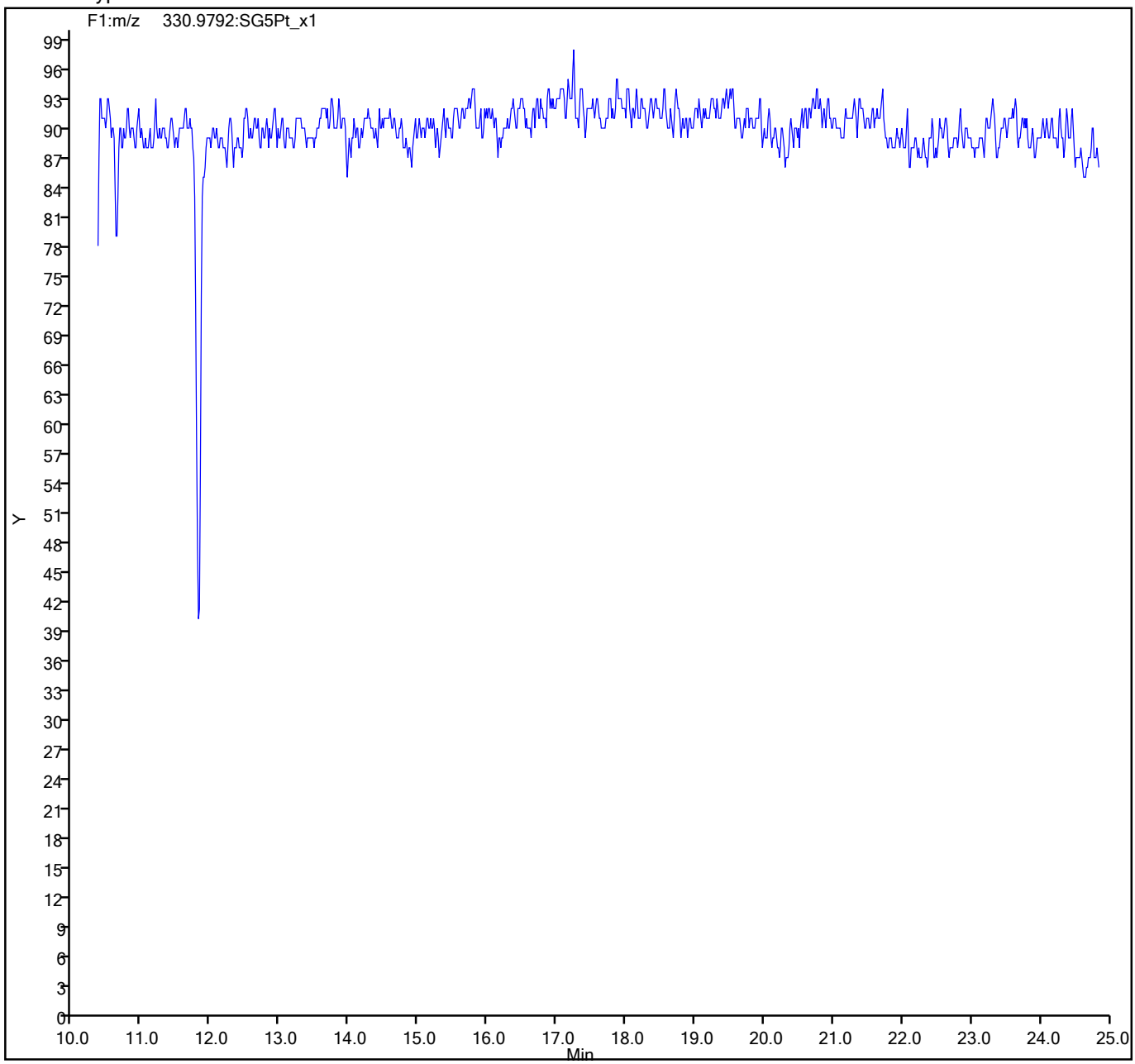

777171

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 08:28:58 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:02

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.615	20166287	0.80	1.3327					0.00	
2,3,7,8-TCDF	17.642	21336126	0.77	0.9978	42.4	42.4	0.0930	0.0930		
D 13C-2,3,7,8-TCDD	16.065	11857898	0.79	0.8749					0.00	
2,3,7,8-TCDD	16.092	14178098	0.79	1.0570	45.2	45.2	0.1126	0.1126		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 08:28:58 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:02

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.000	8953190	1656694	4027	10067	411		
317.9389	17.615	17.615	0	1.000	11213097	2115870	3038	7595	696	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.642	17.642	0	1.002	9272598	1746650	1553	3882	1125		
305.8987	17.642	17.642	0	1.002	12063528	2238983	1948	4870	1149	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	1.000	5225809	1131264	4006	10015	282		
333.9339	16.065	16.065	0	1.000	6632089	1437296	1641	4102	876	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.092	16.092	0	1.002	6258759	1439127	1606	4015	896		
321.8936	16.078	16.092	-1	1.001	7919339	1769891	1451	3627	1220	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

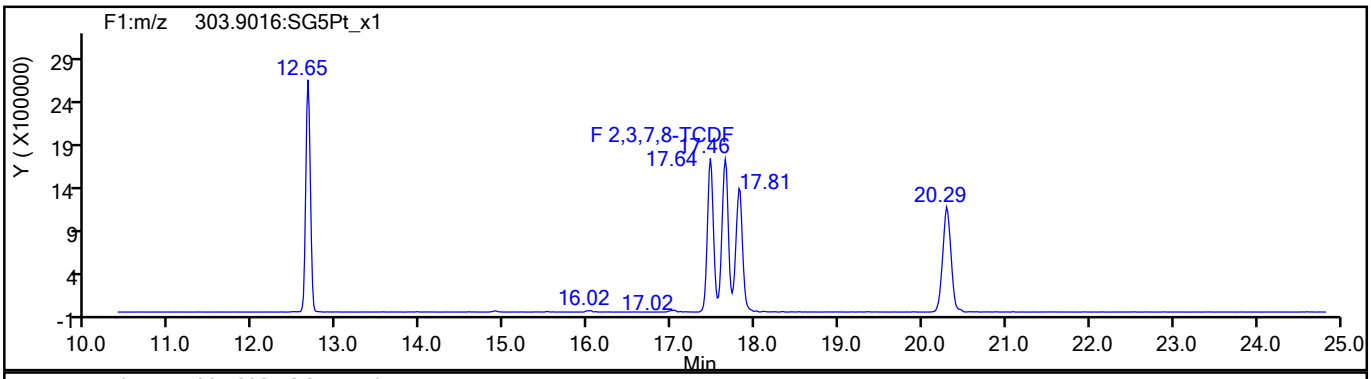

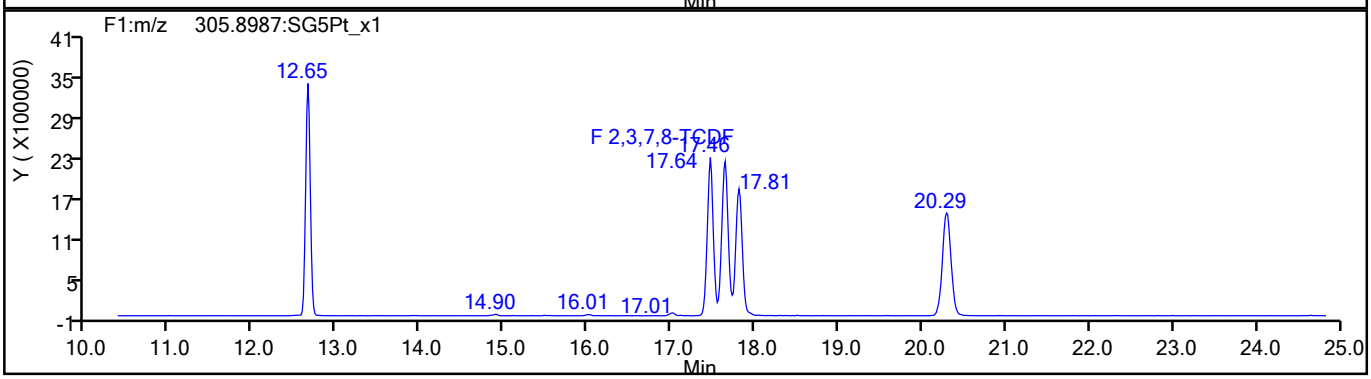

TCDF Standards

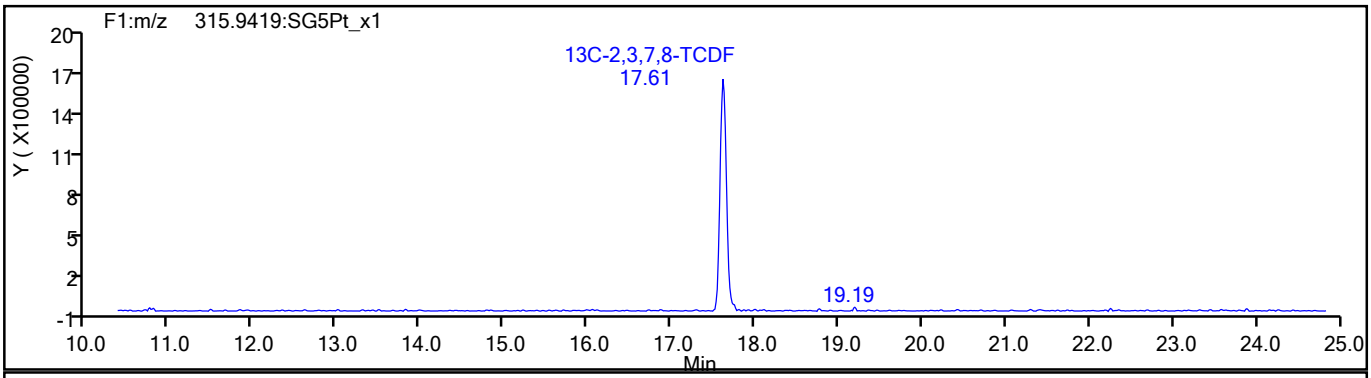

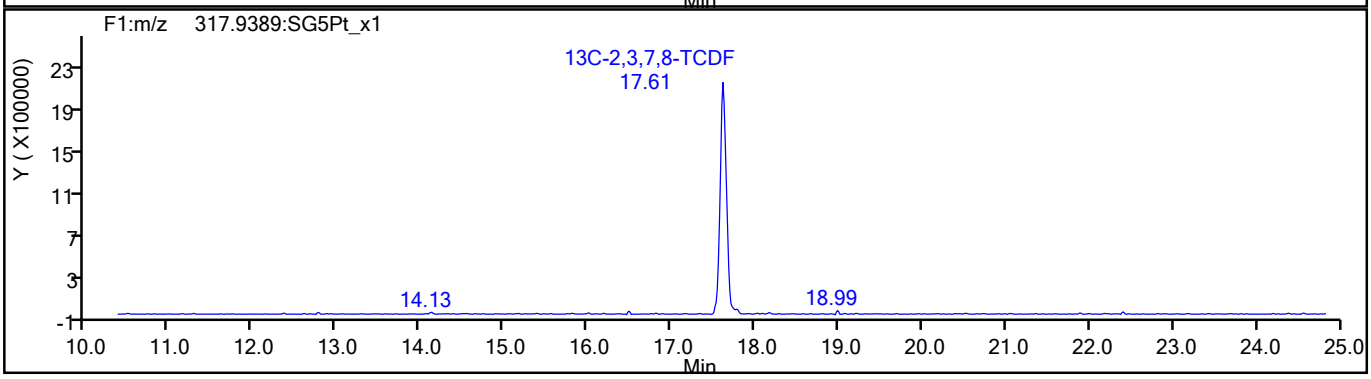

777174

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

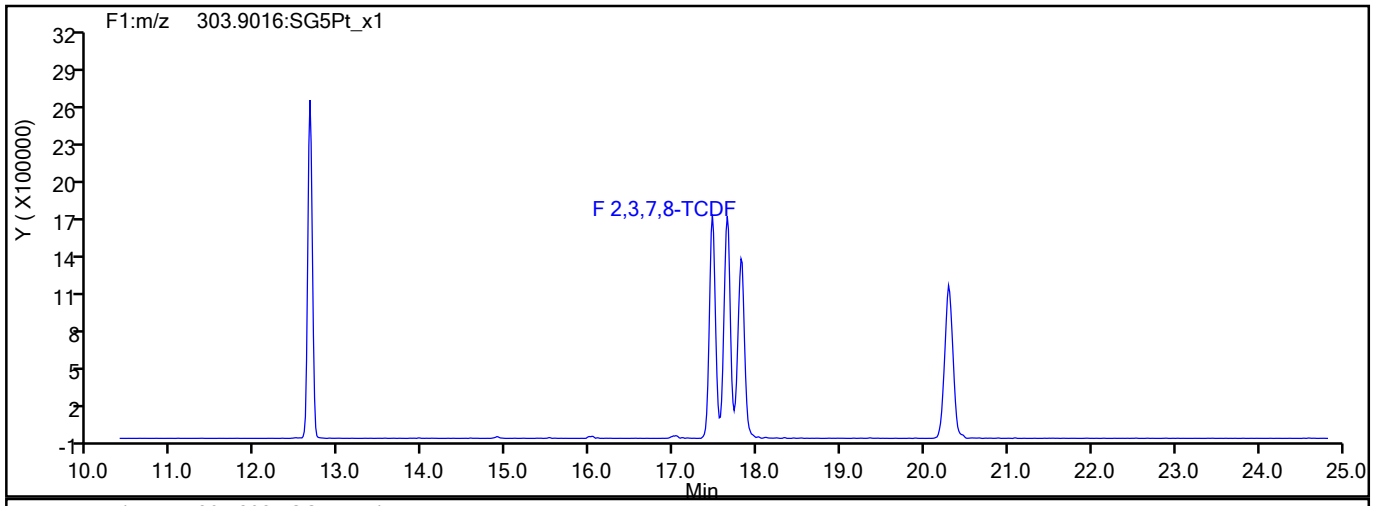

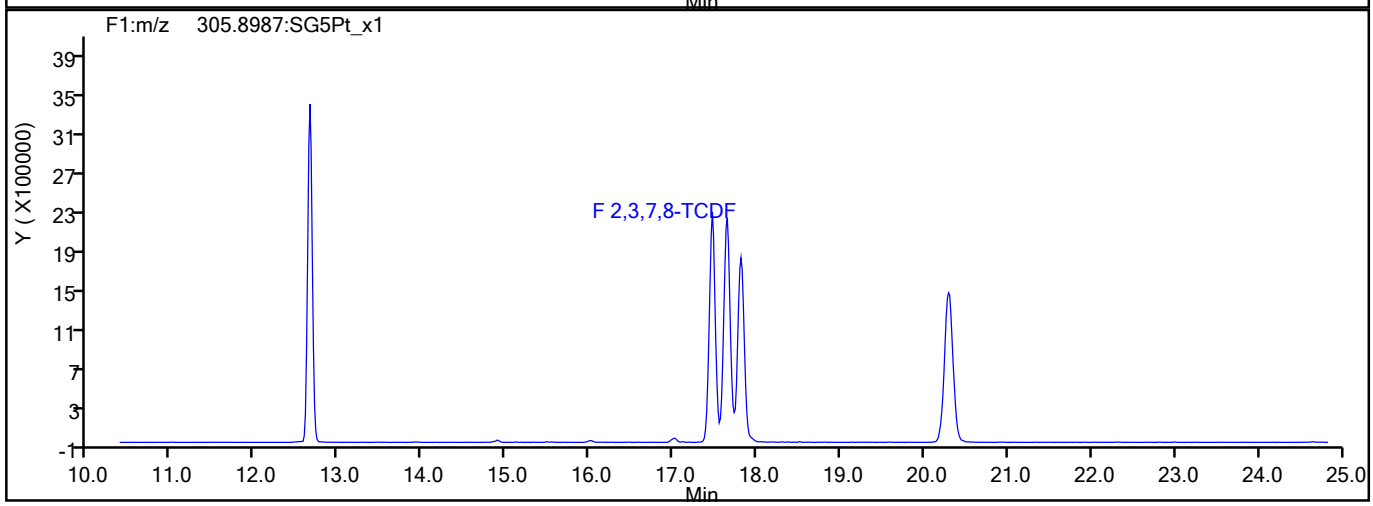

TCDF Interference Mass

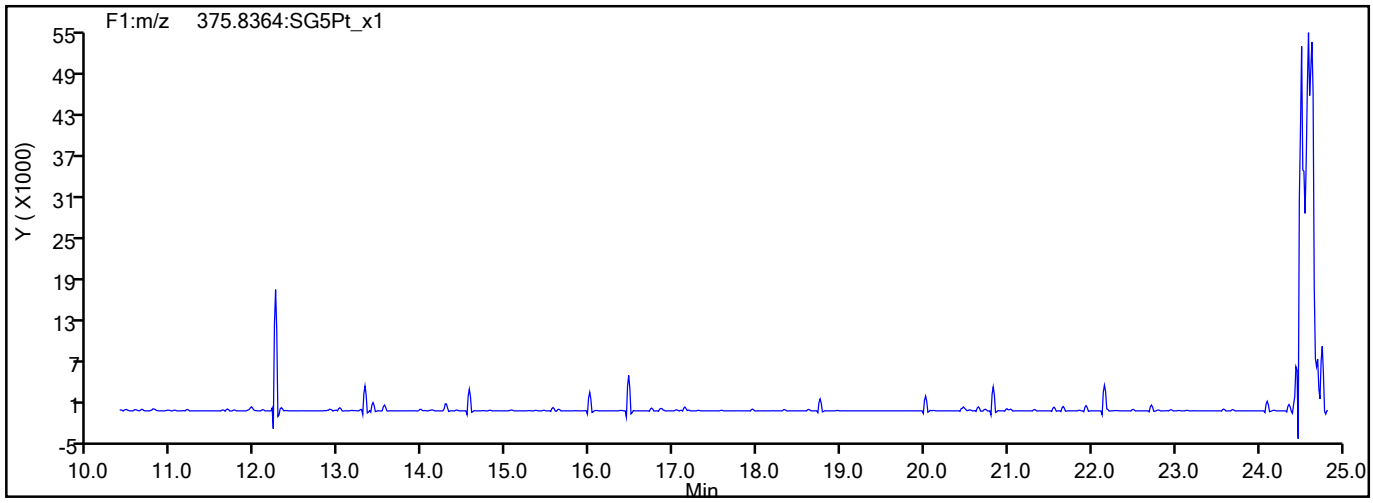

777175

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

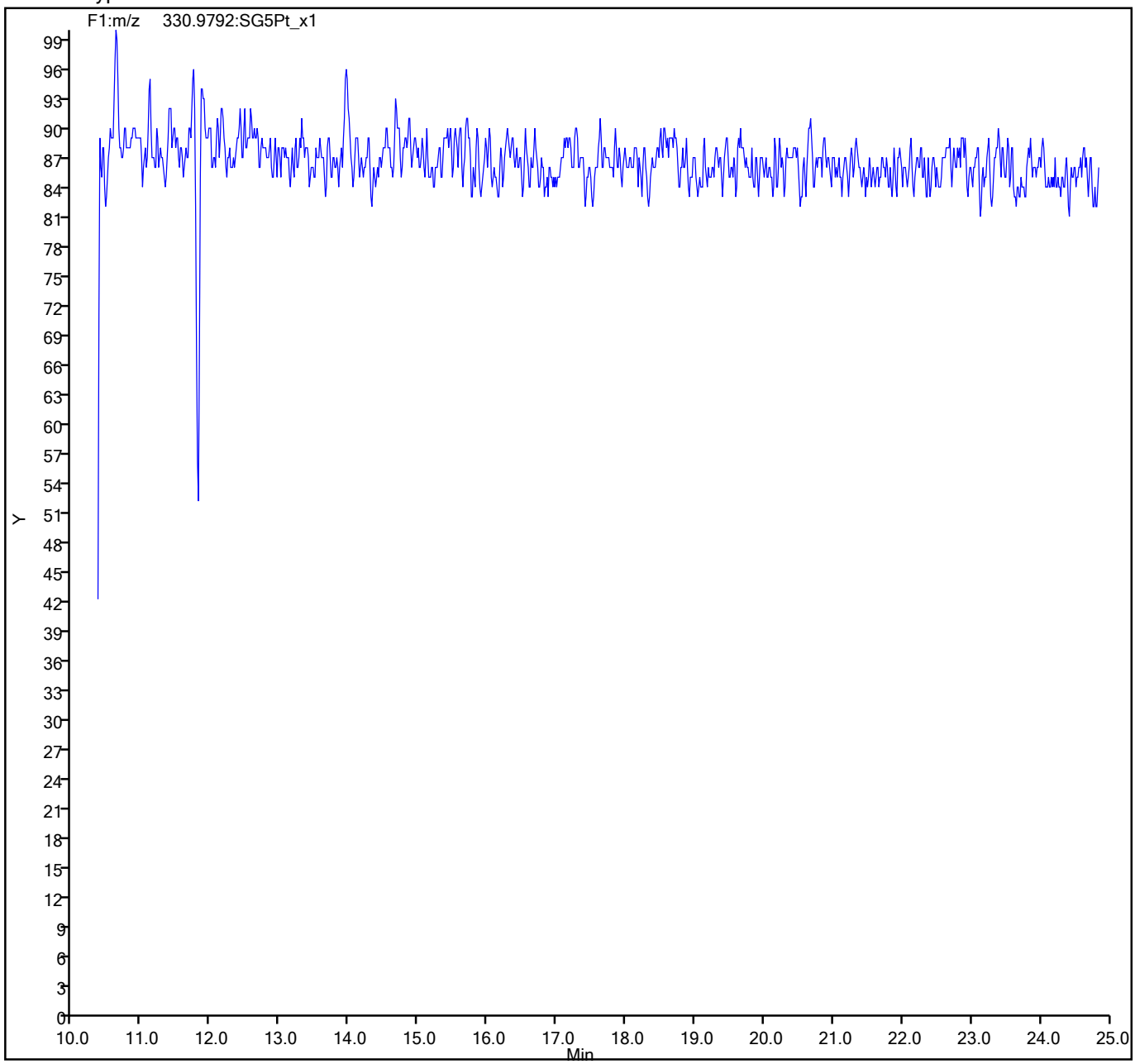

777176

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_002.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 17:15:17 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CPS HRDXNCP_00044
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:28:36

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.601	37621968	0.80	1.3327					0.00	
2,3,7,8-TCDF	17.629	40139106	0.78	0.9978	42.8	42.8	0.0953	0.0953		
D 13C-2,3,7,8-TCDD	16.051	21661624	0.77	0.8749					0.00	
2,3,7,8-TCDD	16.079	25852001	0.79	1.0570	45.2	45.2	0.1141	0.1141		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_002.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 17:15:17 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CPS HRDXNCP_00044
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:28:36

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.601	17.601	0	1.000	16695042	3096709	5941	14852	521		
317.9389	17.601	17.601	0	1.000	20926926	4019040	7015	17537	573	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.629	0	1.002	17601032	3370821	2976	7440	1133		
305.8987	17.629	17.629	0	1.002	22538074	4306913	3791	9477	1136	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.051	16.051	0	1.000	9450810	2154322	5959	14897	362		
333.9339	16.051	16.051	0	1.000	12210814	2712539	3431	8577	791	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.079	16.079	0	1.002	11435260	2568651	2865	7162	897		
321.8936	16.079	16.079	0	1.002	14416741	3306055	3006	7515	1100	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_002.d		
Injection Date:	24-Aug-2021 17:15:17	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

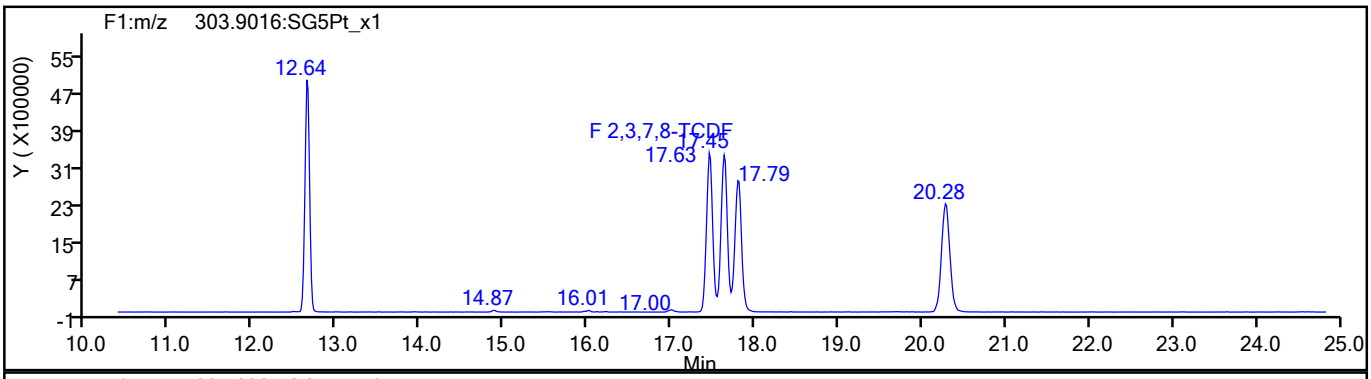

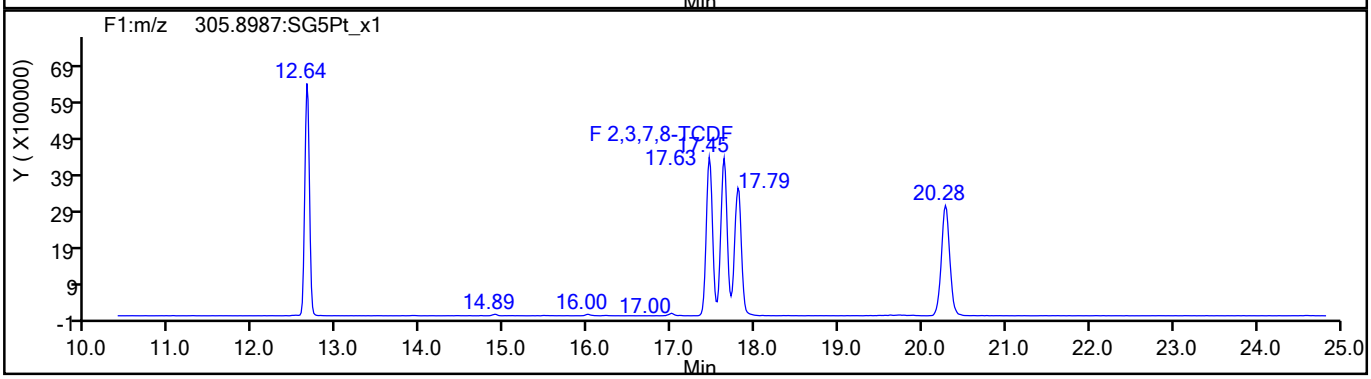

TCDF Standards

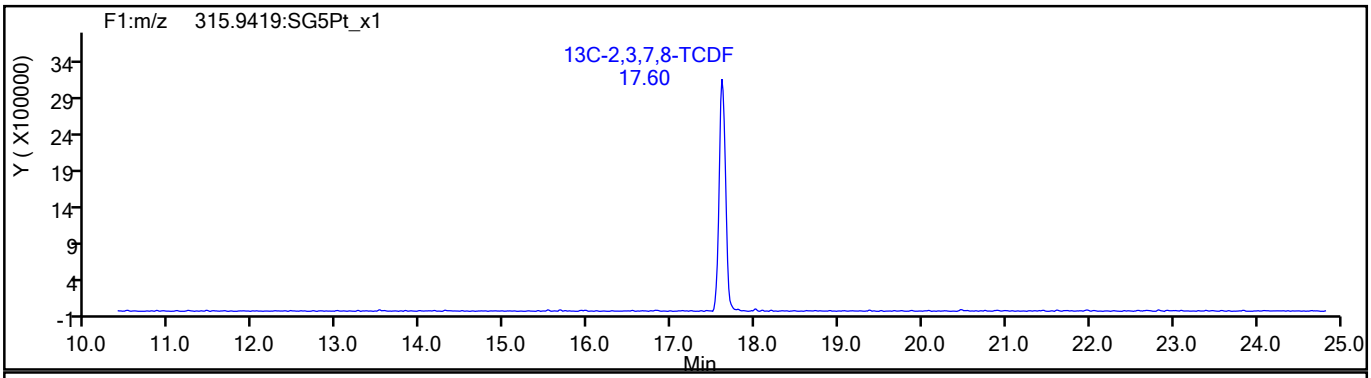

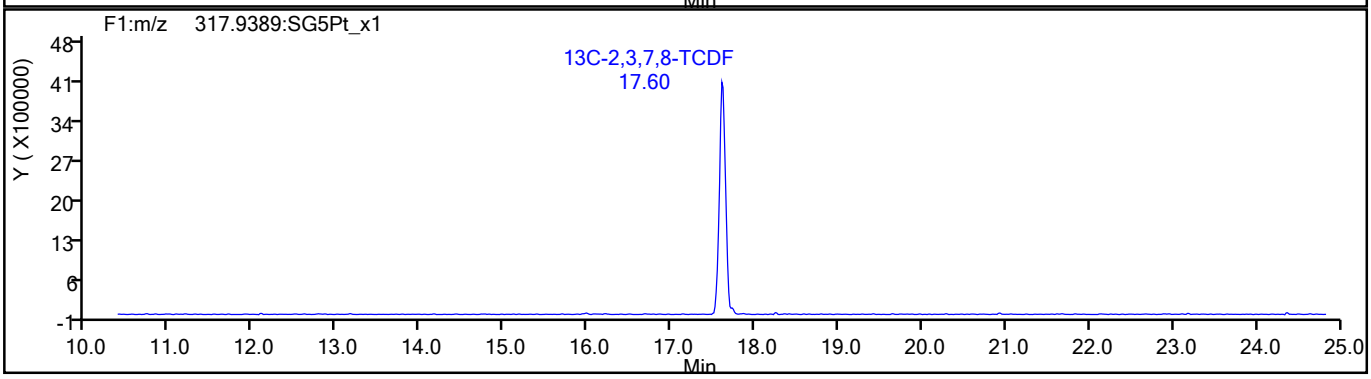

777179

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_002.d		
Injection Date:	24-Aug-2021 17:15:17	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

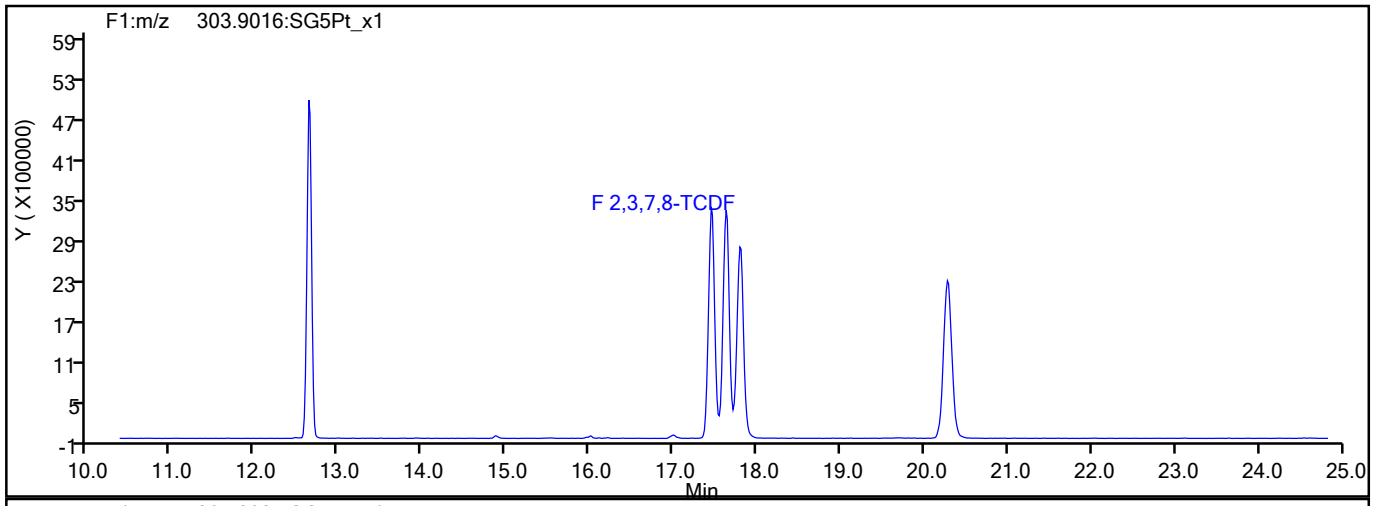

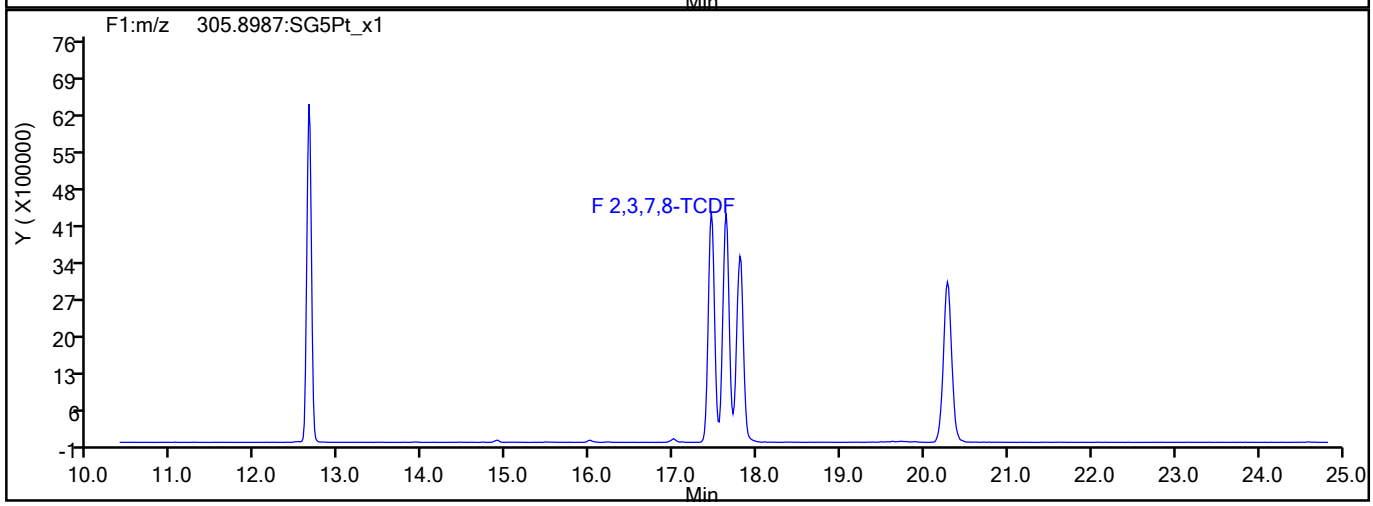

TCDF Interference Mass

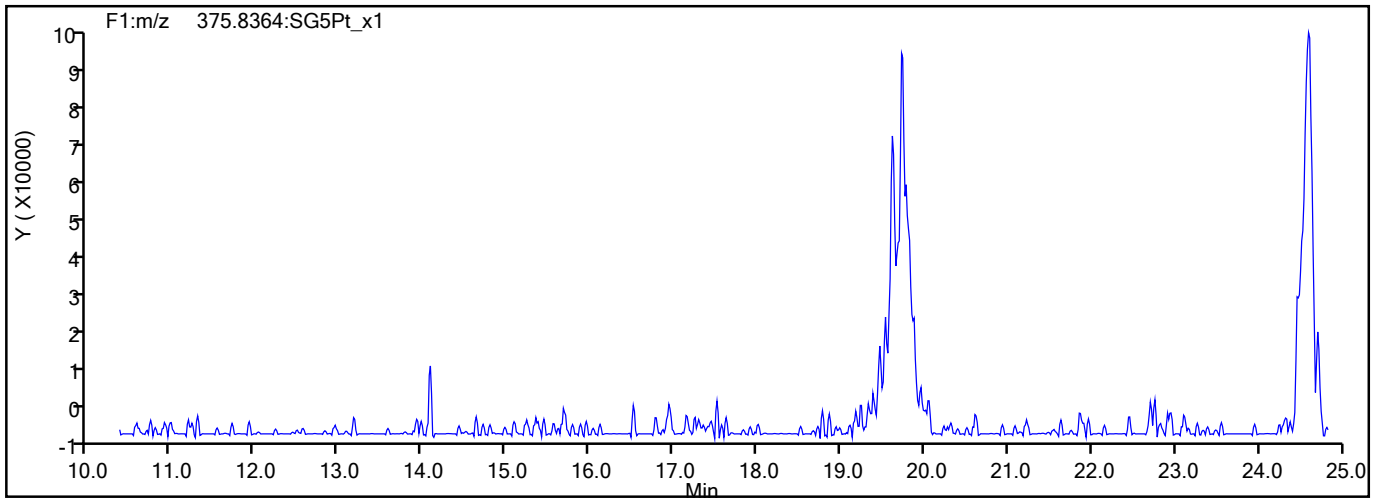

777180

Report Date: 25-Aug-2021 09:02:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_002.d		
Injection Date:	24-Aug-2021 17:15:17	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

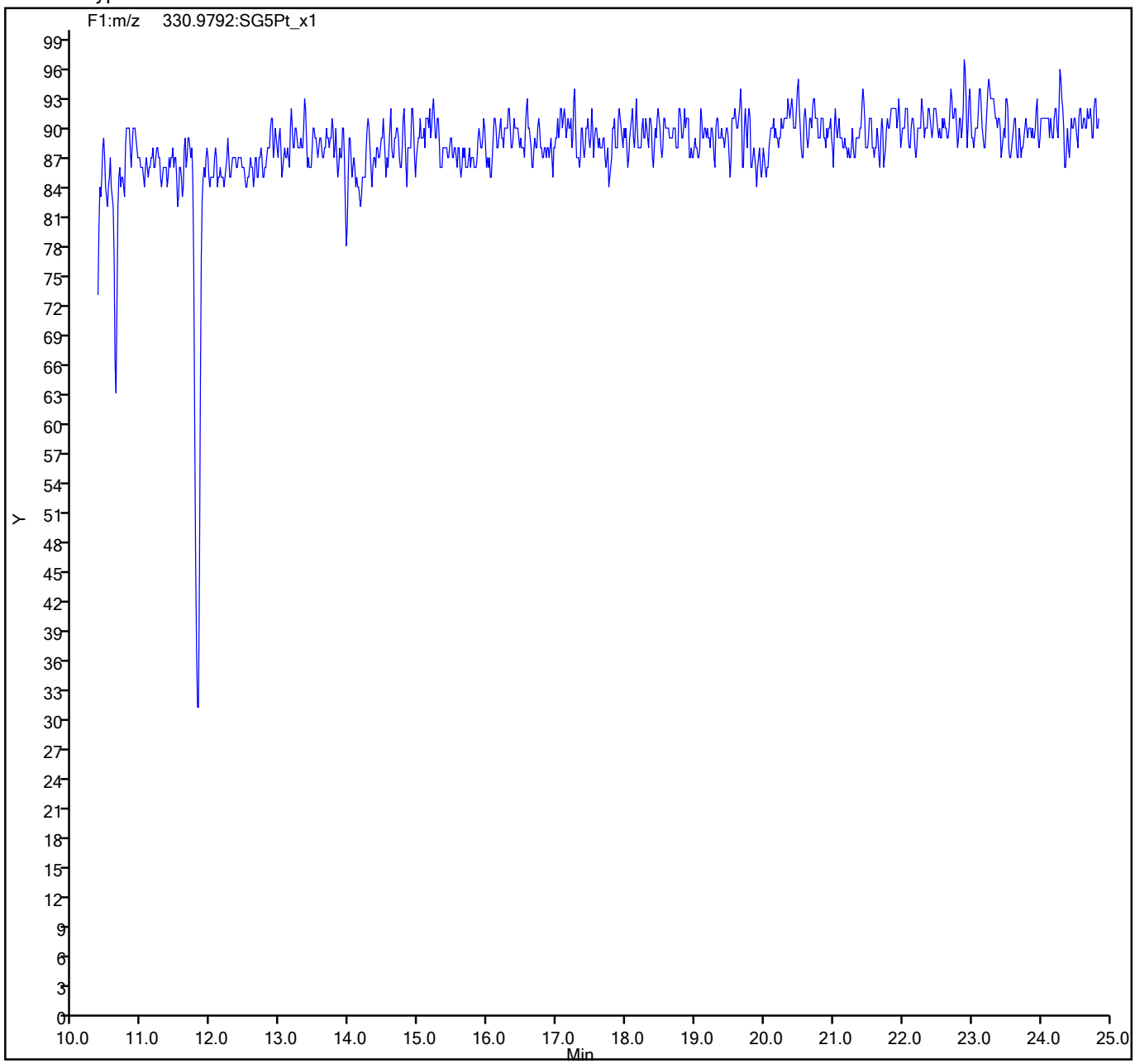

777181

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 08:48:55 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:07:58

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.620	27354850	0.80	1.3327					0.00	
2,3,7,8-TCDF	17.634	28239846	0.79	0.9978	41.4	41.4	0.0895	0.0895		
D 13C-2,3,7,8-TCDD	16.070	15199563	0.71	0.8749					0.00	
2,3,7,8-TCDD	16.084	18529027	0.79	1.0570	46.1	46.1	0.0939	0.0939		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 25-Aug-2021 13:23:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 08:48:55 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:07:58

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.620	17.620	0	1.000	12156891	2249102	3968	9920	567		
317.9389	17.620	17.620	0	1.000	15197959	2989621	4477	11192	668	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.634	17.634	0	1.001	12470724	2311945	2087	5217	1108		
305.8987	17.634	17.634	0	1.001	15769122	2977863	2593	6482	1148	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.070	16.070	0	1.000	6313938	1304830	4828	12070	270		
333.9339	16.056	16.070	-1	1.000	8885625	2042860	2726	6815	749	0.71(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.084	16.084	0	1.001	8201624	1837071	1687	4217	1089		
321.8936	16.084	16.084	0	1.001	10327403	2337477	1635	4087	1430	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 25-Aug-2021 13:23:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

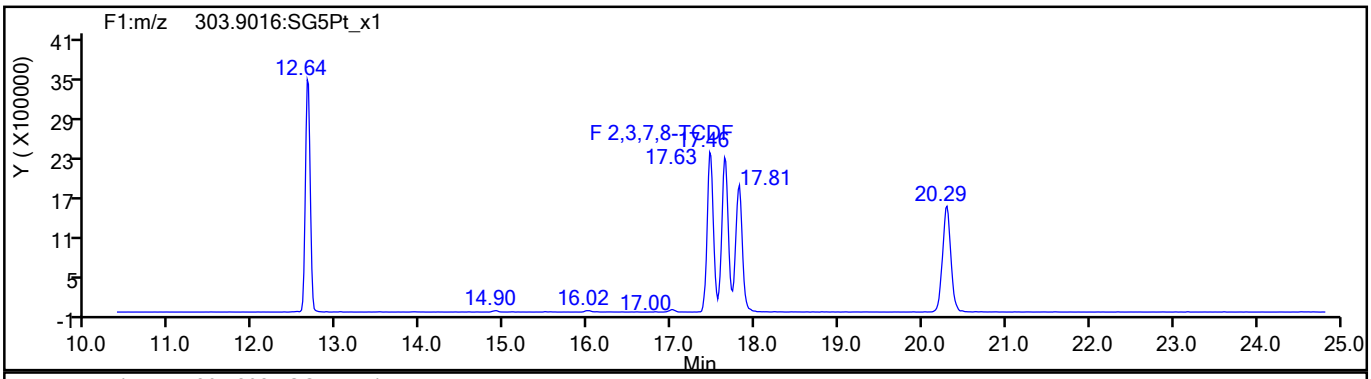

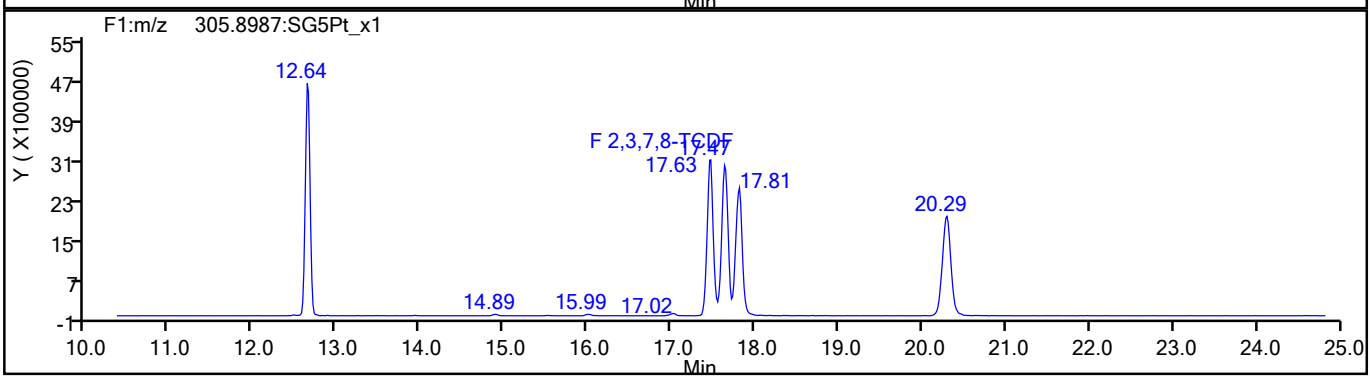

TCDF Standards

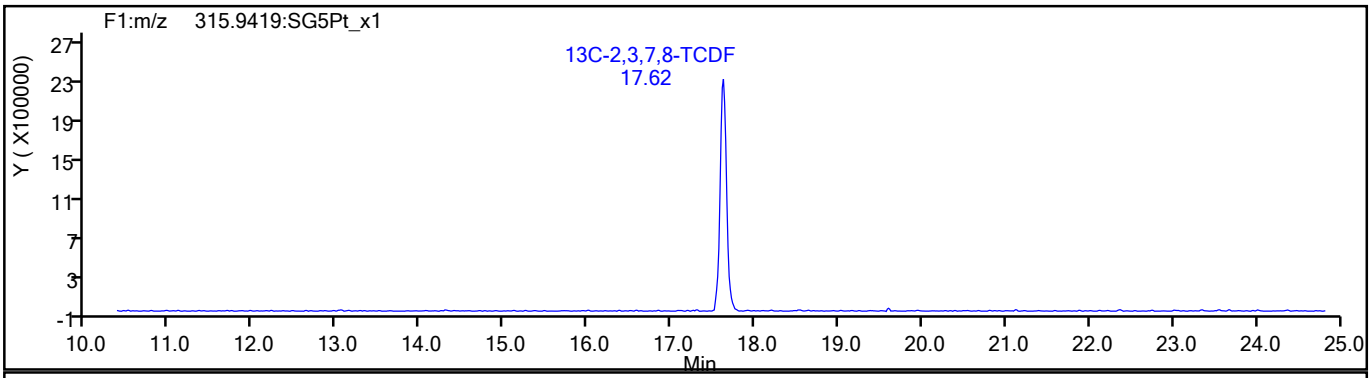

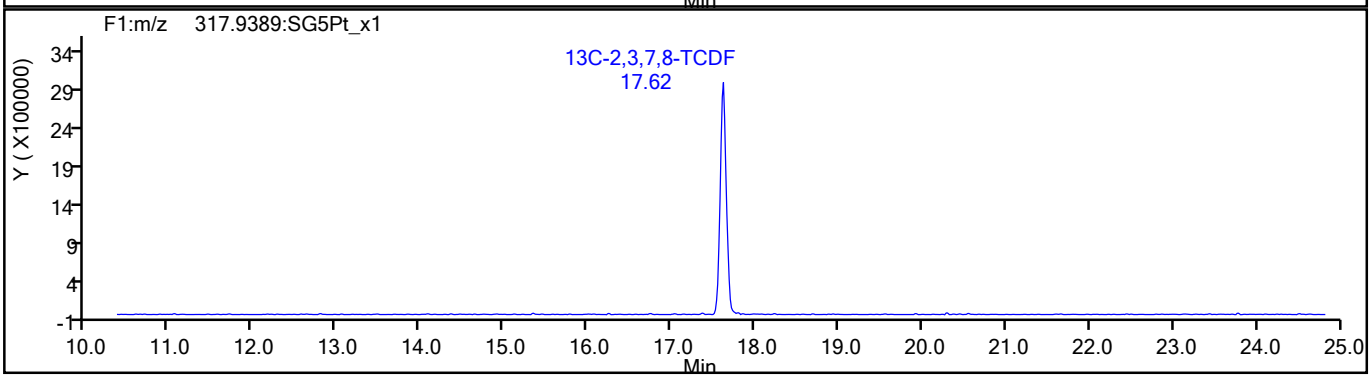

777184

Report Date: 25-Aug-2021 13:23:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

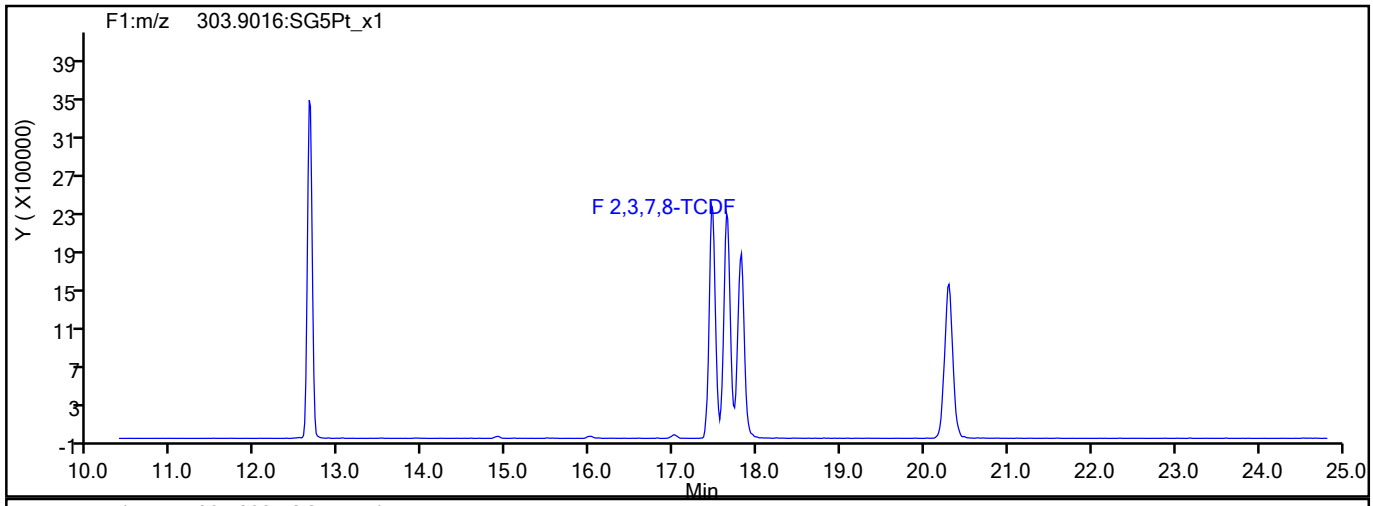

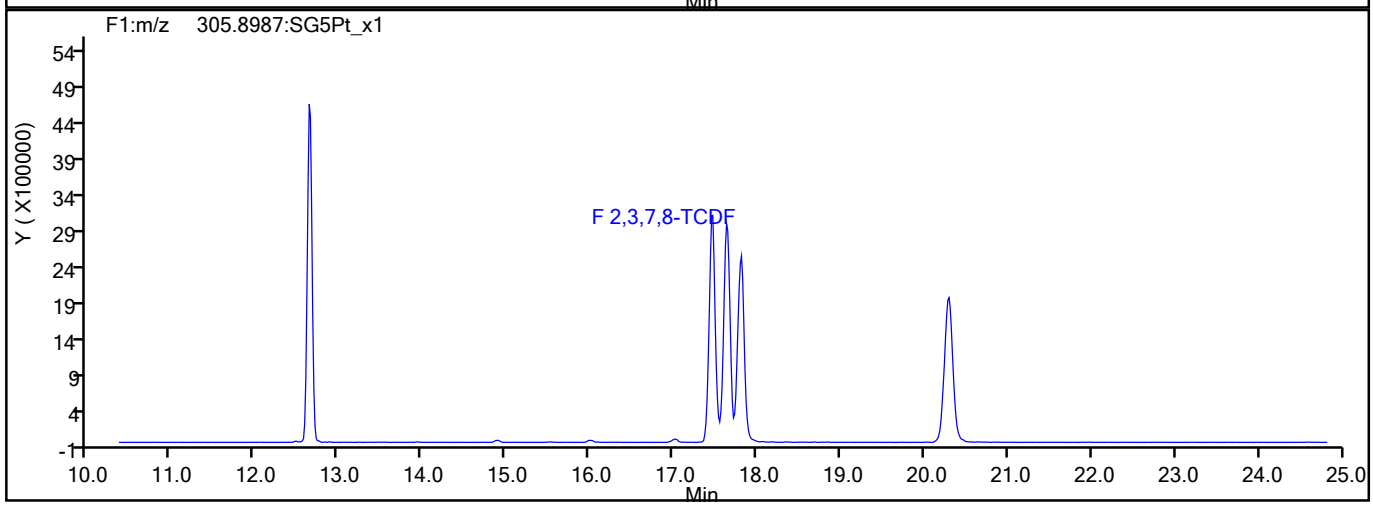

TCDF Interference Mass

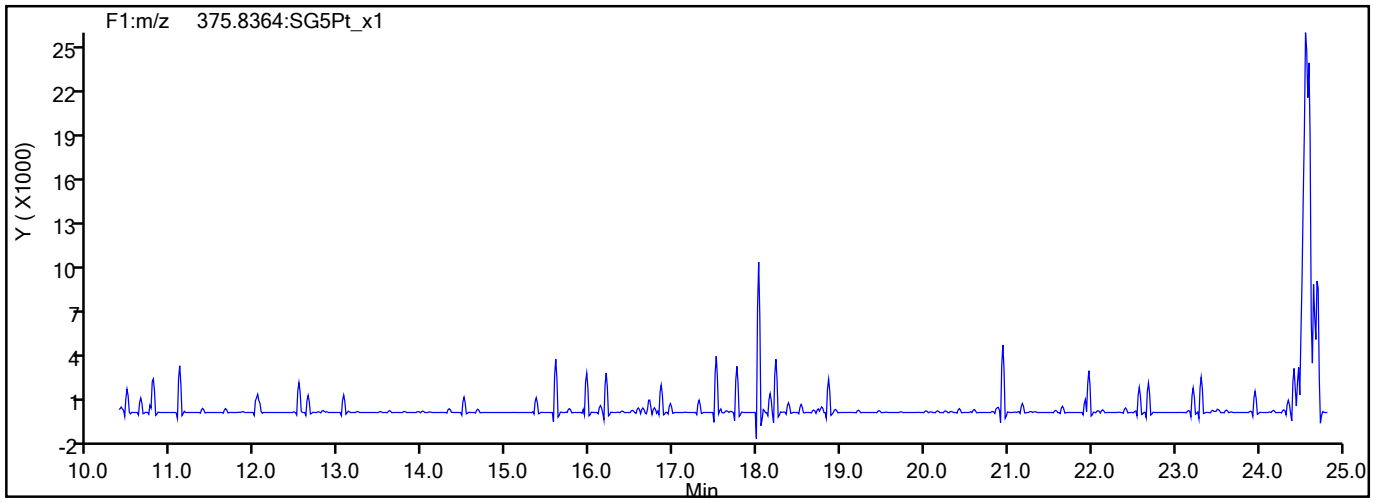

777185

Report Date: 25-Aug-2021 13:23:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

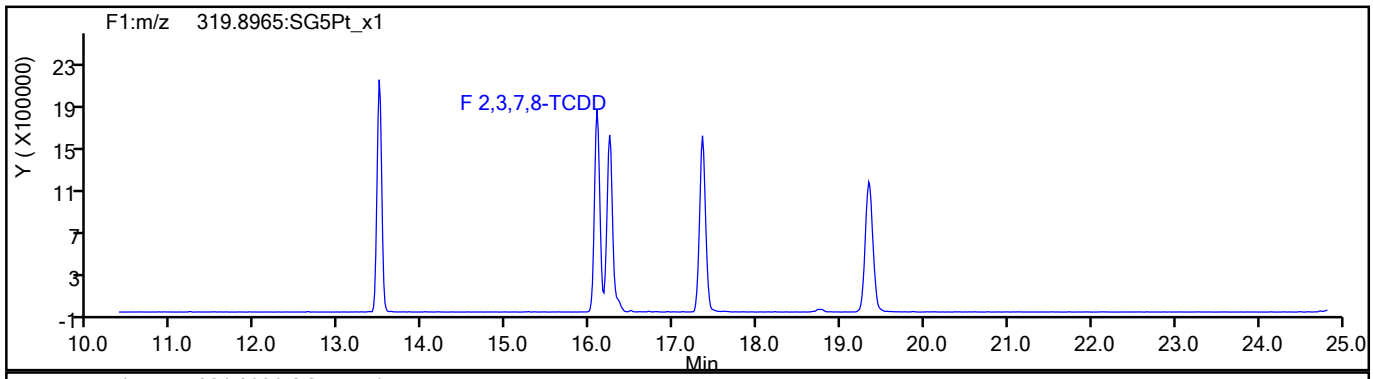

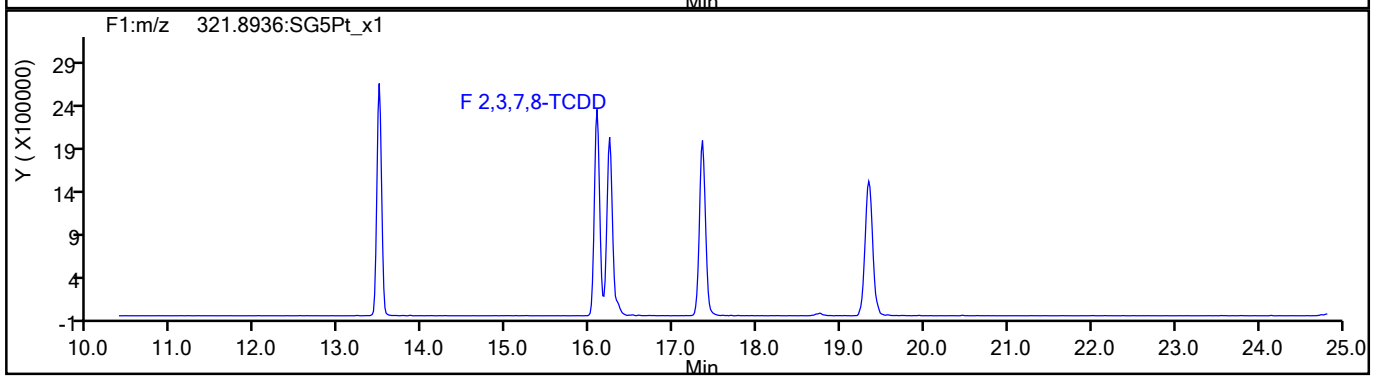

TCDD Standards

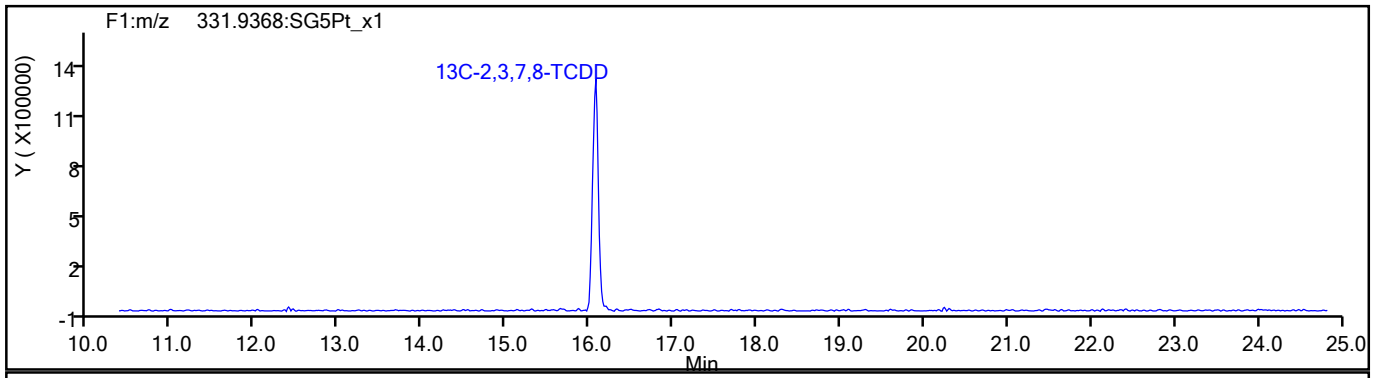

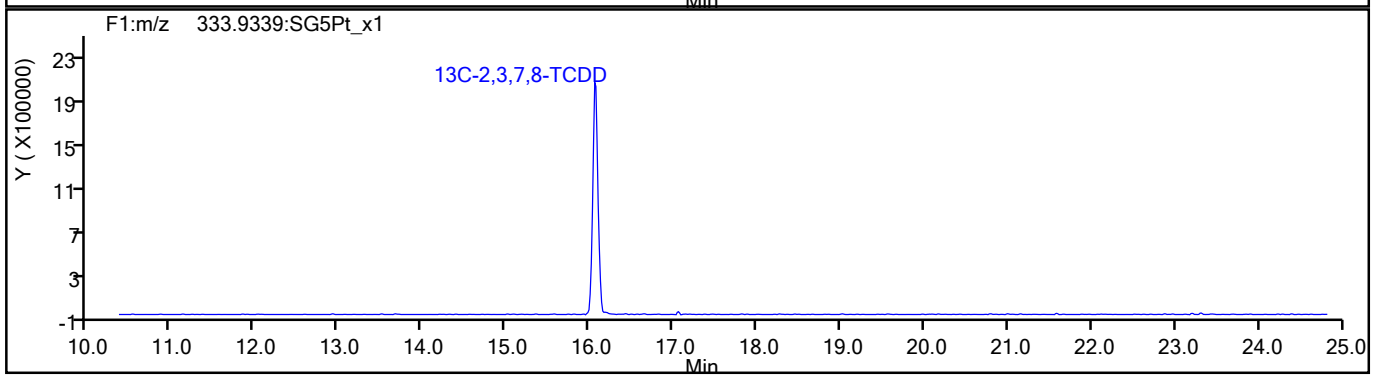

777186

Report Date: 25-Aug-2021 13:23:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

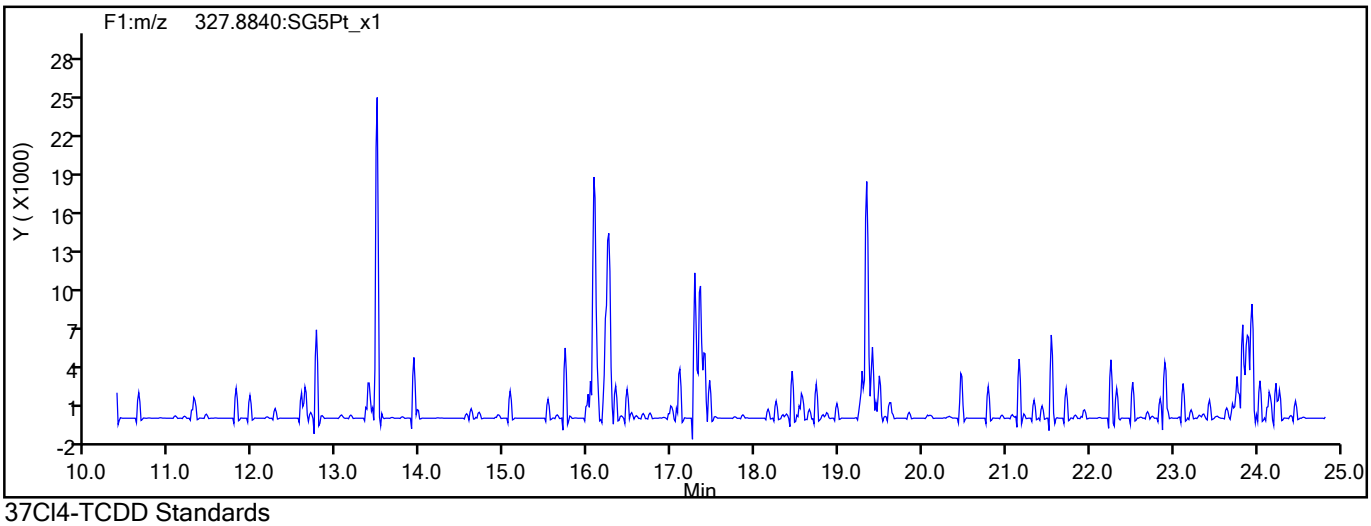

37Cl4-TCDD Standards

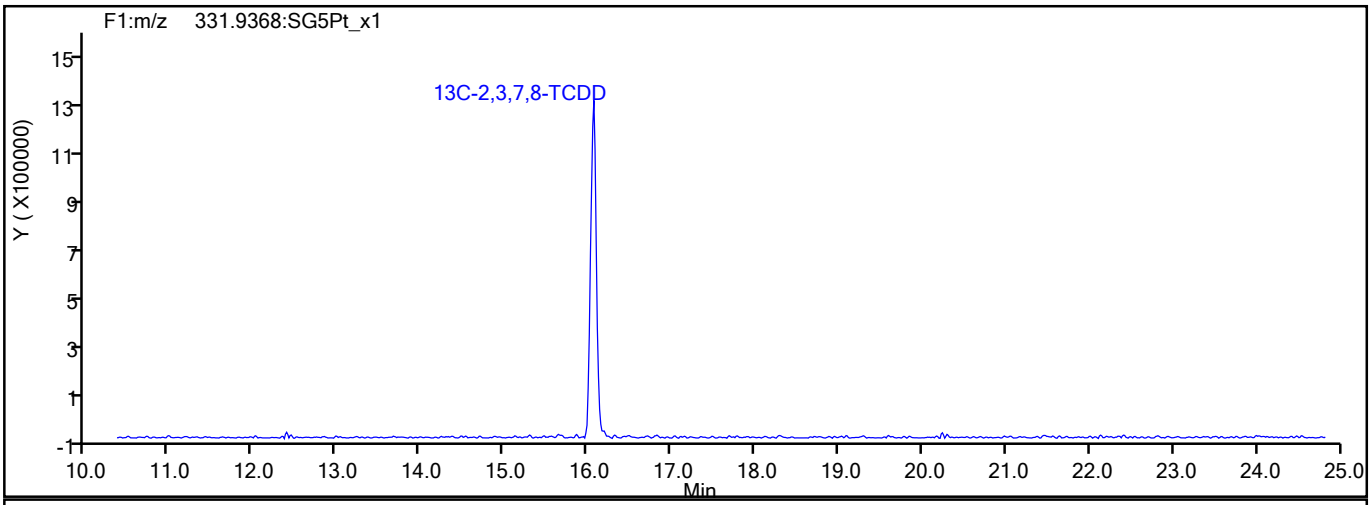

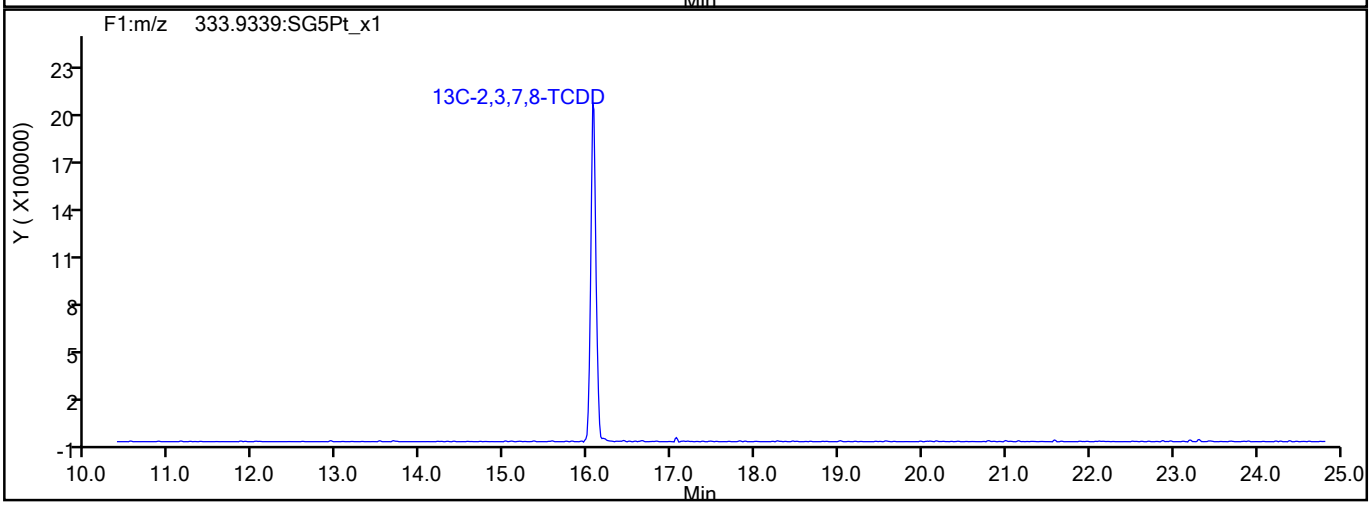

777187

Report Date: 25-Aug-2021 13:23:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

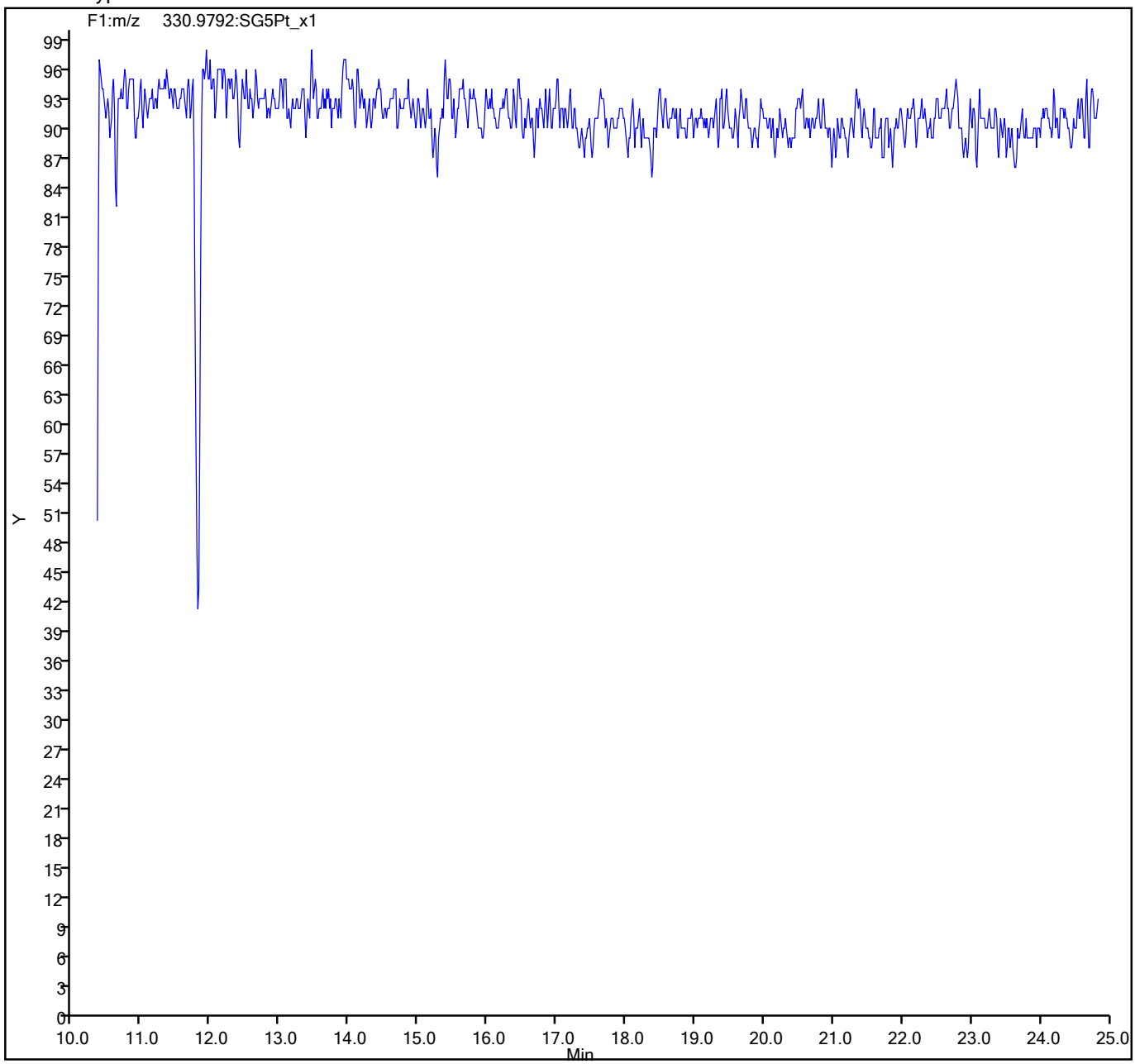

777188

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	19.630	956054	0.80	1.3459					0.00	
2,3,7,8-TCDF	19.673	1998250	0.78	1.0802	77.4	77.4	0.2129	0.2129		
A Non-2,3,7,8-sub-TCDF	19.213	12503	0.80	1.0802	0.4843	0.4843	0.2129	0.4843		
S Total TCDF					77.9	77.9	0.2129	0.2129		
D 13C-2,3,7,8-TCDD	20.918	596833	0.84	0.9317					0.00	
2,3,7,8-TCDD	20.952	682873	0.80	1.0753	42.6	42.6	0.1742	0.1742		
A Non-2,3,7,8-sub-TCDD	20.025						0.1742	0.1742		
S Total TCDD					42.6	42.6	0.1742	0.1742		
A F1 PeCDFs	24.098						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	27.473	14452	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	27.656						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	34.470						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	34.896	7360	1.11	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.309	643675	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.598	537364	1.05	1.3092						
A Non-2,3,7,8-sub-HpCDF	38.954						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.295	435480	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	38.962						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.592	1199920	0.78							
1,3,6,8-TCDD	17.122	706482	0.80							
2,3,4,7-TCDF	19.673	1998250	0.78							
1,2,3,7-TCDD	20.746	567957	0.79							
1,2,3,9-TCDF	21.124	860286	0.78							
1,2,3,9-TCDD	21.227	705730	0.80							
1,2,8,9-TCDF	22.833	906629	0.79							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	22.927	290535								
1,3,4,6,8-PeCDF	23.417	833719	1.57							
1,2,4,7,9-PeCDD	25.443	580592	1.56							
1,2,3,8,9-PeCDD	29.870	532099	1.58							
1,2,3,8,9-PeCDF	30.030	680377	1.58							
1,2,3,4,6,8-HxCDF	32.430	811785	1.23							
1,2,4,6,7,9-HxCDD	33.644	577087	1.25							
1,2,3,4,6,7-HxCDD	36.148	580699	1.24							
1,2,3,4,8,9-HxCDF	36.510	710754	1.25							
1,2,3,4,6,7,9-HpCDD	38.629	486479	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	19.630	19.630	0	1.000	423520	68874	224	560	307		
317.9389	19.639	19.630	1	1.000	532534	85912	93	232	924	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.673	19.646	2	1.002	874984	129163	148	370	873		
305.8987	19.673	19.646	2	1.002	1123266	166698	208	520	801	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	23.417	19.213	252	1.193	5547	1019	148	370	7		
305.8987	23.417	19.213	252	1.193	6956	1132	208	520	5	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.918	20.918	0	1.000	272607	40247	106	265	380		
333.9338	20.927	20.918	1	1.000	324226	50518	46	115	1098	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	20.952	20.939	1	1.002	302613	44836	90	225	498		
321.8936	20.952	20.939	1	1.002	380260	55991	80	200	700	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.025						90	225			
321.8936	20.025						80	200			
A F1 PeCDFs											
339.8597	24.098						6	15			
341.8567	24.098						22	55			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.114	27.473	-141	1.000	1272	231	55	137	4		
341.8567	25.123	27.473	-141	1.000	842	169	40	100	4	1.51(1.32-1.78)	
339.8597	26.033	27.473	-86	1.000	1834	347	55	137	6		
341.8567	26.067	27.473	-84	1.000	1408	247	40	100	6	1.30(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	26.623	27.473	-51	1.000	3412	452	55	137	8		
341.8567	26.606	27.473	-52	1.000	2424	350	40	100	9	1.41(1.32-1.78)	
339.8597	27.205	27.473	-16	1.000	2495	380	55	137	7		
341.8567	27.188	27.473	-17	1.000	1367	235	40	100	6	1.83(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	27.656						71	177			
357.8516	27.656						35	87			
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						89	222			
375.8178	34.470						66	165			
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.875	34.896	-1	1.000	3879	711	57	142	12		
391.8127	34.866	34.896	-2	1.000	3481	707	48	120	15	1.11(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	330574	91984	132	330	697		
409.7788	38.309	38.317	0	1.000	313101	85674	117	292	732	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	275340	83564	132	330	633		
409.7788	39.598	39.608	-1	1.000	262024	79894	117	292	683	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						132	330			
409.7788	38.954						117	292			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.295	39.301	0	1.000	225083	68745	95	237	724		
425.7737	39.295	39.301	0	1.000	210397	63713	87	217	732	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.962						95	237			
425.7737	38.962						87	217			
1,3,6,8-TCDF											
303.9016	15.592	15.592	0		526894	111834	148	370	756		
305.8987	15.583	15.592	-1		673026	142703	208	520	686	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.122	17.122	0		313043	59426	90	225	660		
321.8936	17.122	17.122	0		393439	76022	80	200	950	0.80(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	19.673	19.673	0		874984	129163	148	370	873		
305.8987	19.673	19.673	0		1123266	166698	208	520	801	0.78(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	20.746	20.746	0		250988	38559	90	225	428		
321.8936	20.746	20.746	0		316969	48950	80	200	612	0.79(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.124	21.124	0		377767	55151	148	370	373		
305.8987	21.124	21.124	0		482519	70000	208	520	337	0.78(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	21.227	21.227	0		313060	44546	90	225	495		
321.8936	21.219	21.227	-1		392670	57474	80	200	718	0.80(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	22.833	22.833	0		399193	52133	148	370	352		
305.8987	22.833	22.833	0		507436	68524	208	520	329	0.79(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	22.927	22.927	0		290535	38894	90	225	432		
1,3,4,6,8-PeCDF											
339.8597	23.417	23.417	0		509034	87286	6	15	14548		
341.8567	23.417	23.417	0		324685	55380	22	55	2517	1.57(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	25.443	25.443	0		354036	58724	71	177	827		
357.8516	25.443	25.443	0		226556	37367	35	87	1068	1.56(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	29.870	29.870	0		325767	47119	71	177	664		
357.8516	29.870	29.870	0		206332	29856	35	87	853	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.030	30.030	0		416382	57063	55	137	1038		
341.8567	30.030	30.030	0		263995	36391	40	100	910	1.58(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	32.430	32.430	0		447956	61361	89	222	689		
375.8178	32.421	32.430	-1		363829	50870	66	165	771	1.23(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	33.644	33.644	0		320872	55052	57	142	966		
391.8127	33.644	33.644	0		256215	45045	48	120	938	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.148	36.148	0		321739	75271	57	142	1321		
391.8127	36.148	36.148	0		258960	61340	48	120	1278	1.24(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.510	36.510	0		394836	96545	89	222	1085		
375.8178	36.510	36.510	0		315918	78144	66	165	1184	1.25(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.629	38.629	0		248662	72309	95	237	761		
425.7737	38.629	38.629	0		237817	69783	87	217	802	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	956054	154786

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	956054	154786

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
23.417	5547	1019	6956	1132	0.4843	0.80	
Signal Totals:							
	5547	1019	6956	1132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12503	2151				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4843 = (12503 * 40.000) / (956054 * 1.080)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.114	1272	231	842	169		1.51	
26.033	1834	347	1408	247		1.30	R
26.623	3412	452	2424	350		1.41	
27.205	2495	380	1367	235		1.83	R
Signal Totals:							
	9013	1410	6041	1001			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15054	2411				1.49	RQ
	14452	2371					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (15054 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (14452 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 34.896

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.875	3879	711	3481	707		1.11	
Signal Totals:							
	3879	711	3481	707			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7360	1418				1.11	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (7360 * 0.0) / (0 * 0.000)

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

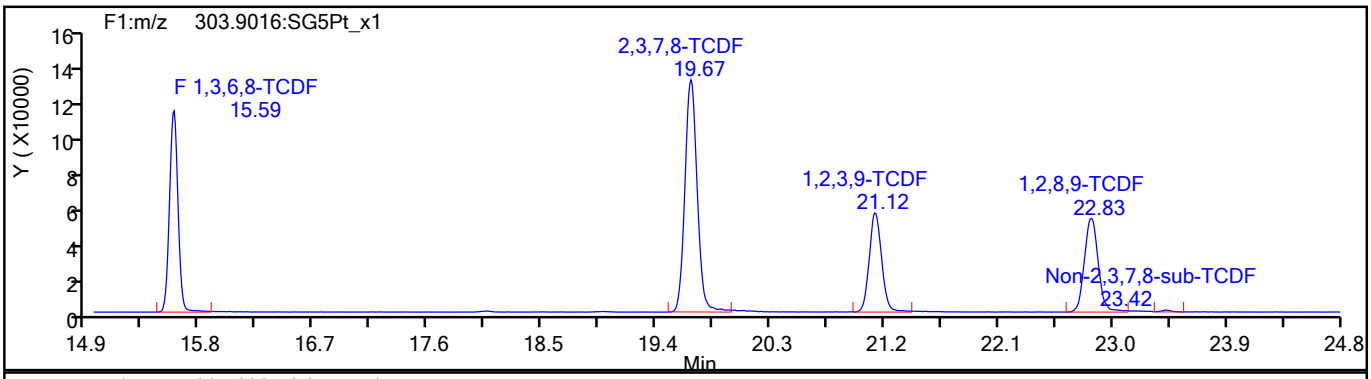

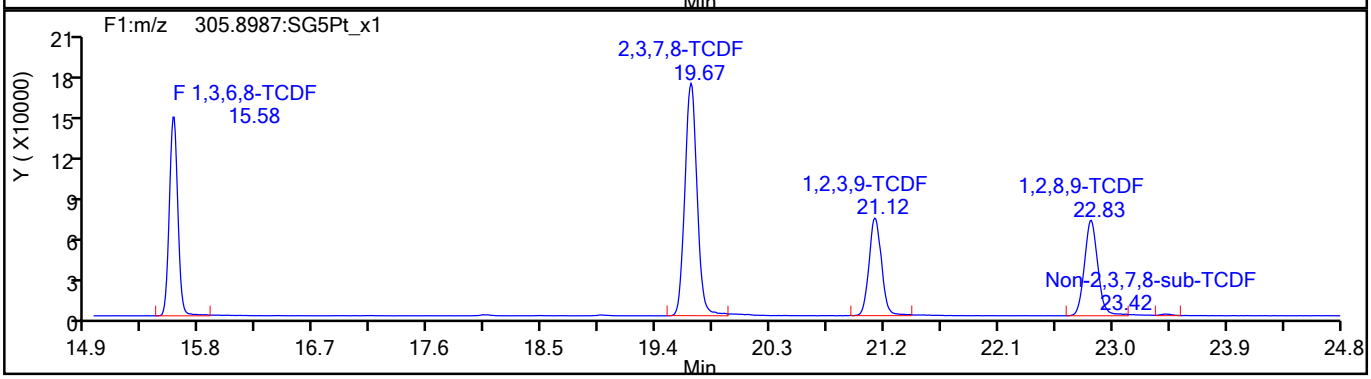

TCDF Standards

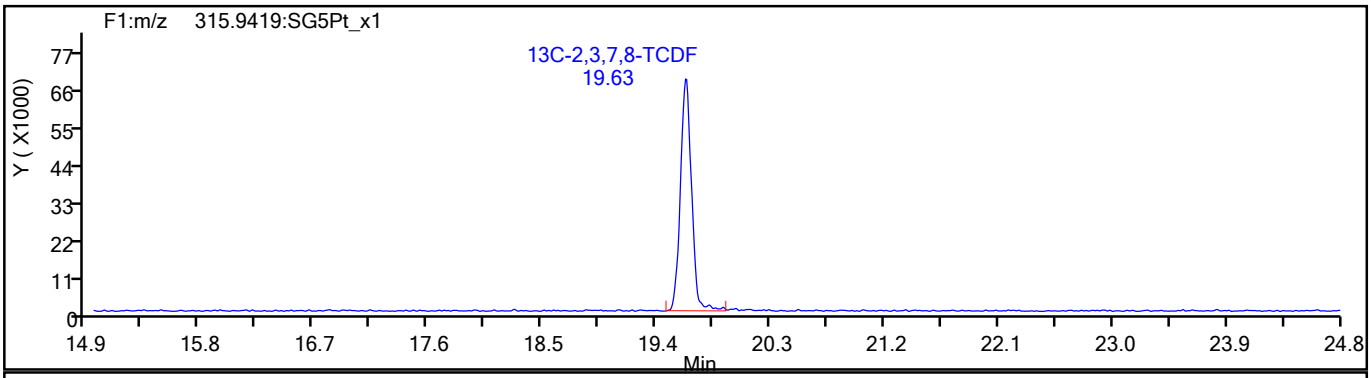

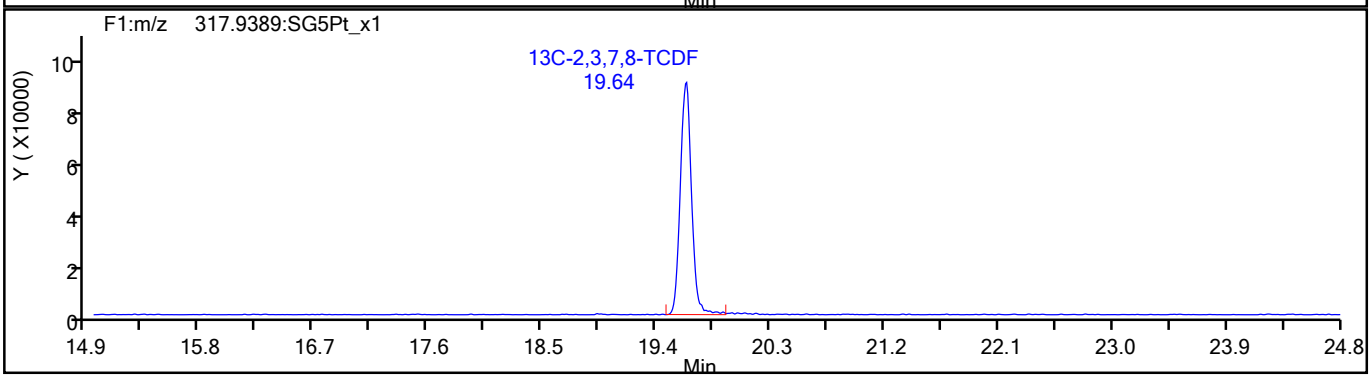

777197

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

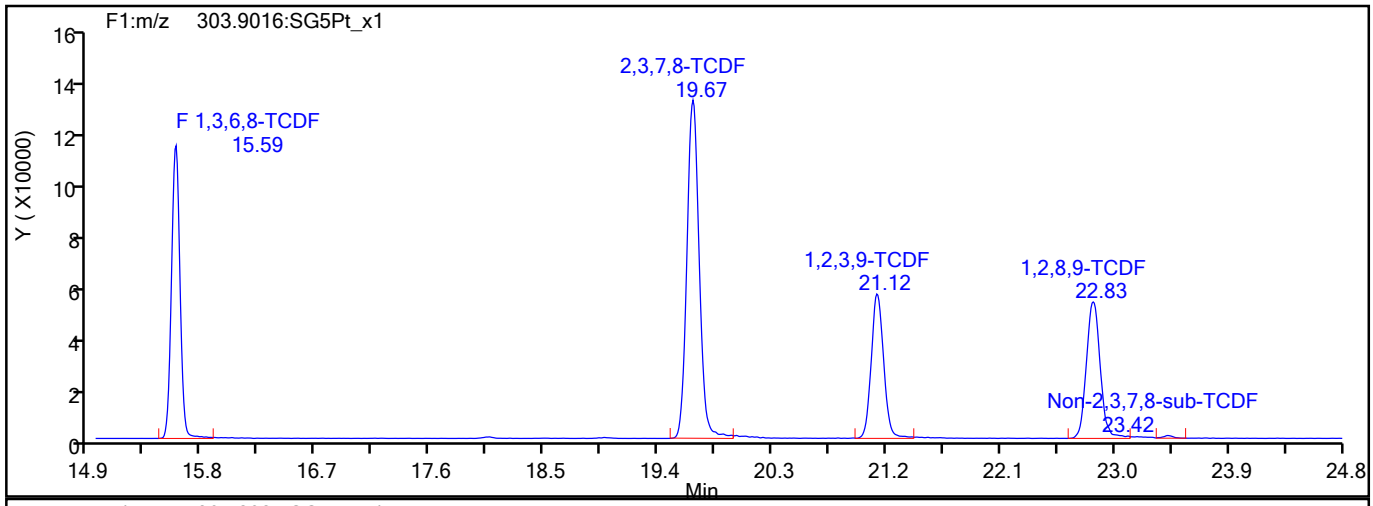

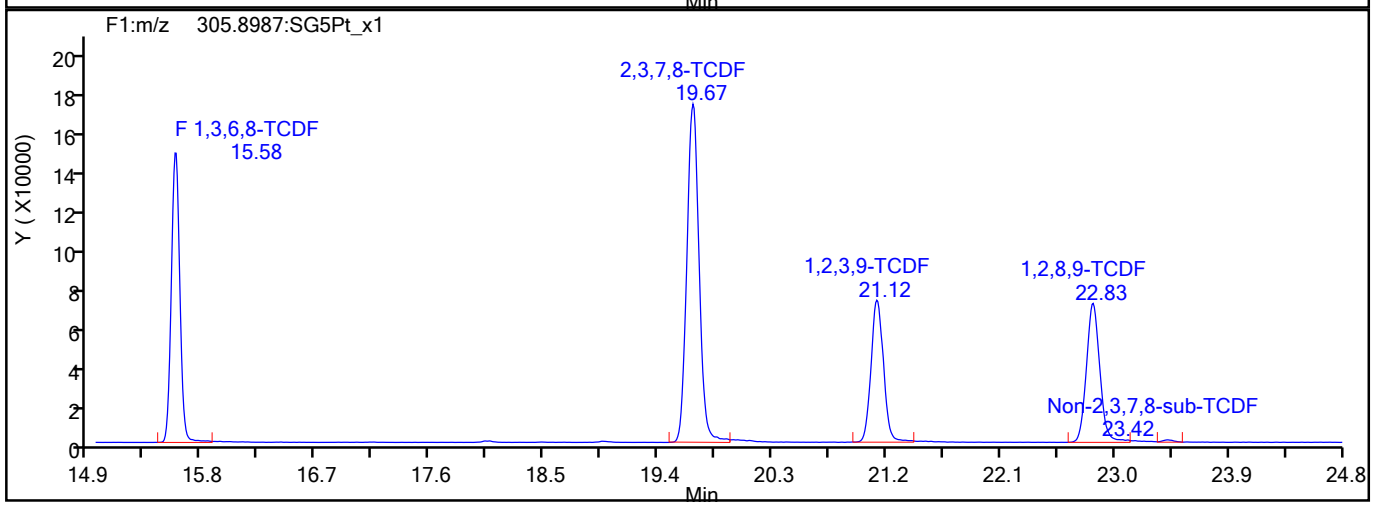

TCDF Interference Mass

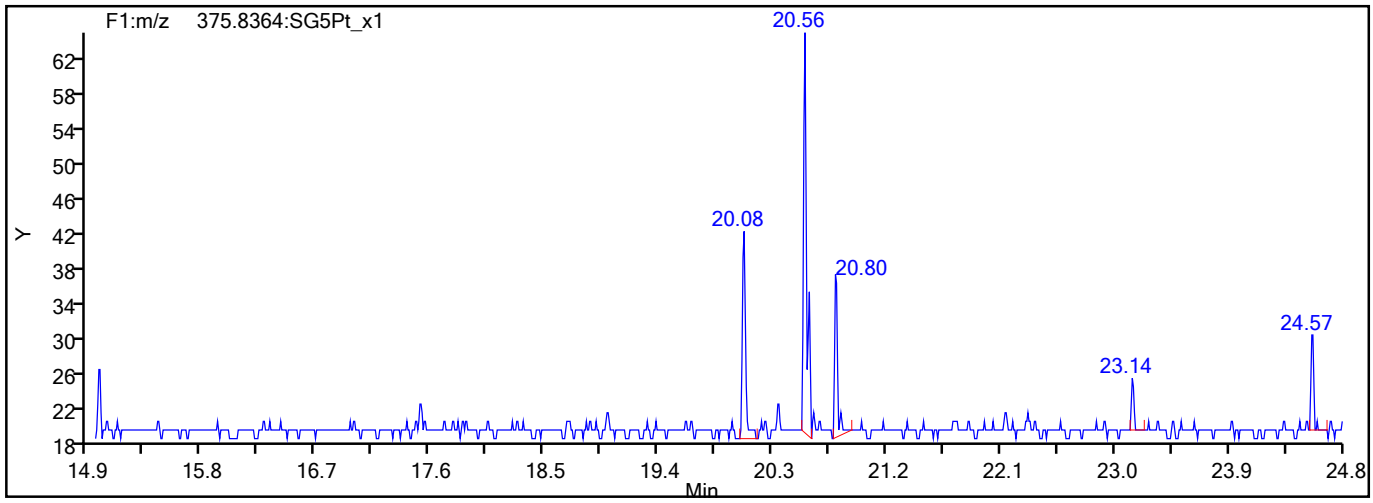

777198

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

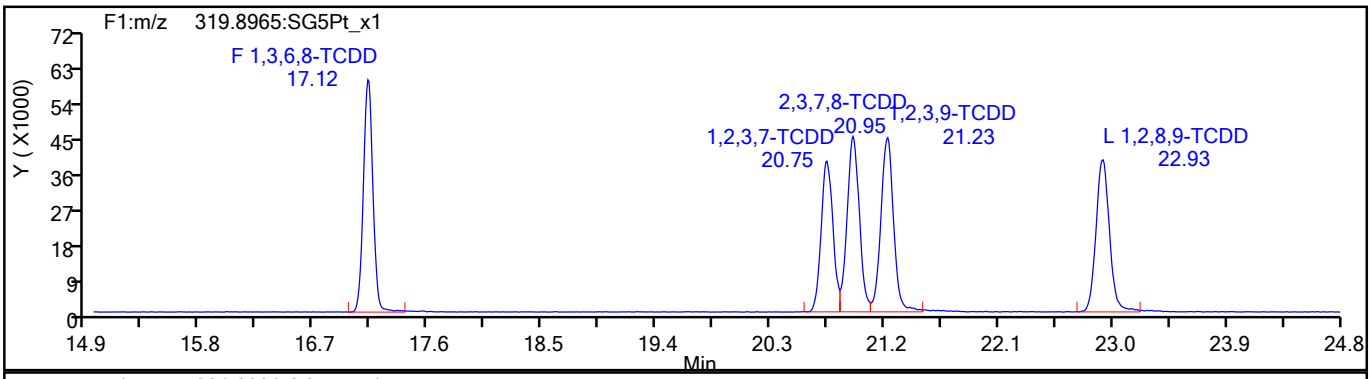

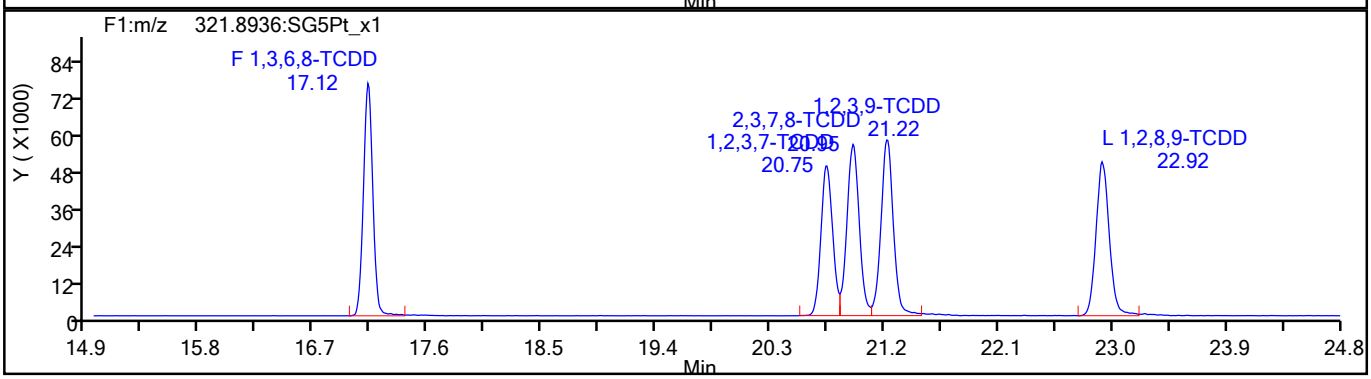

TCDD Standards

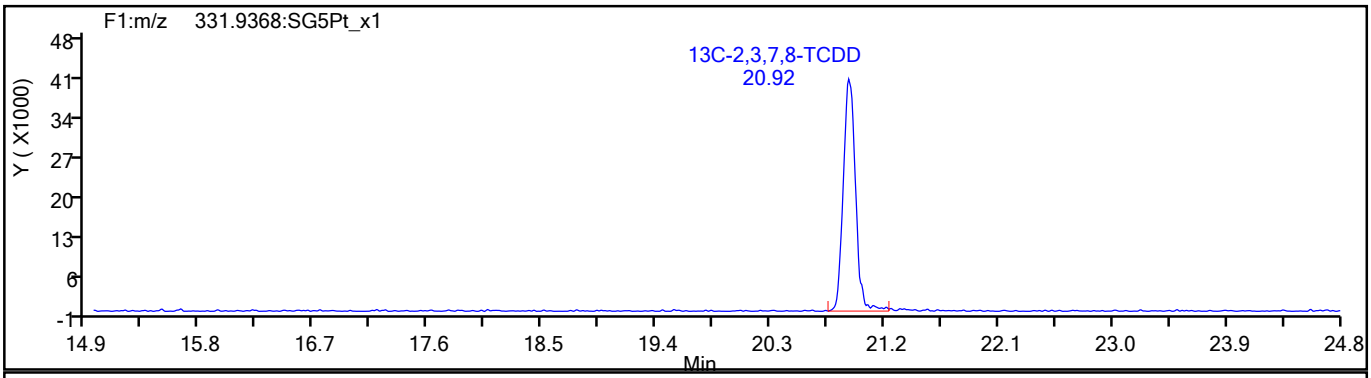

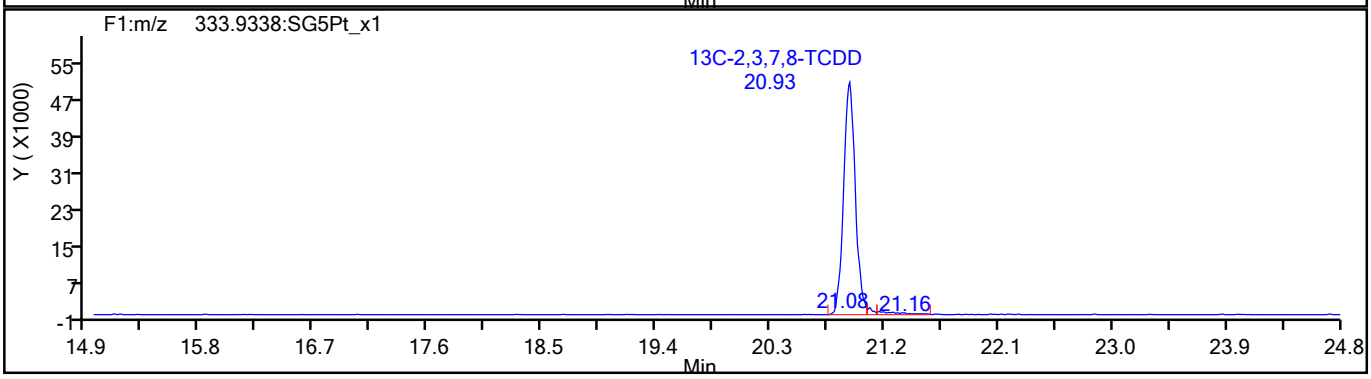

777199

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

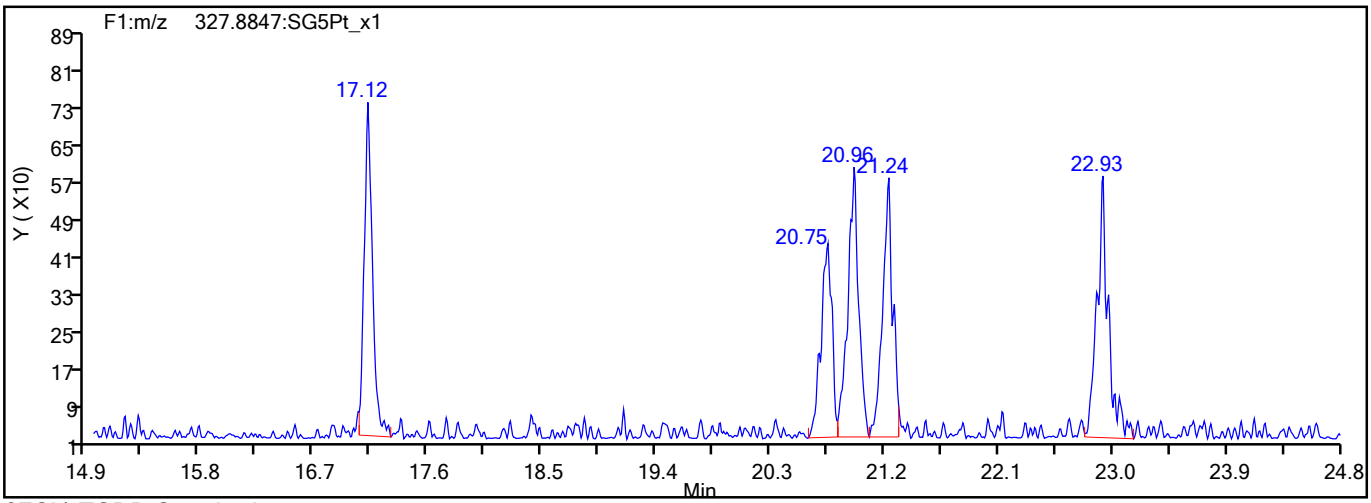

37Cl4-TCDD Standards

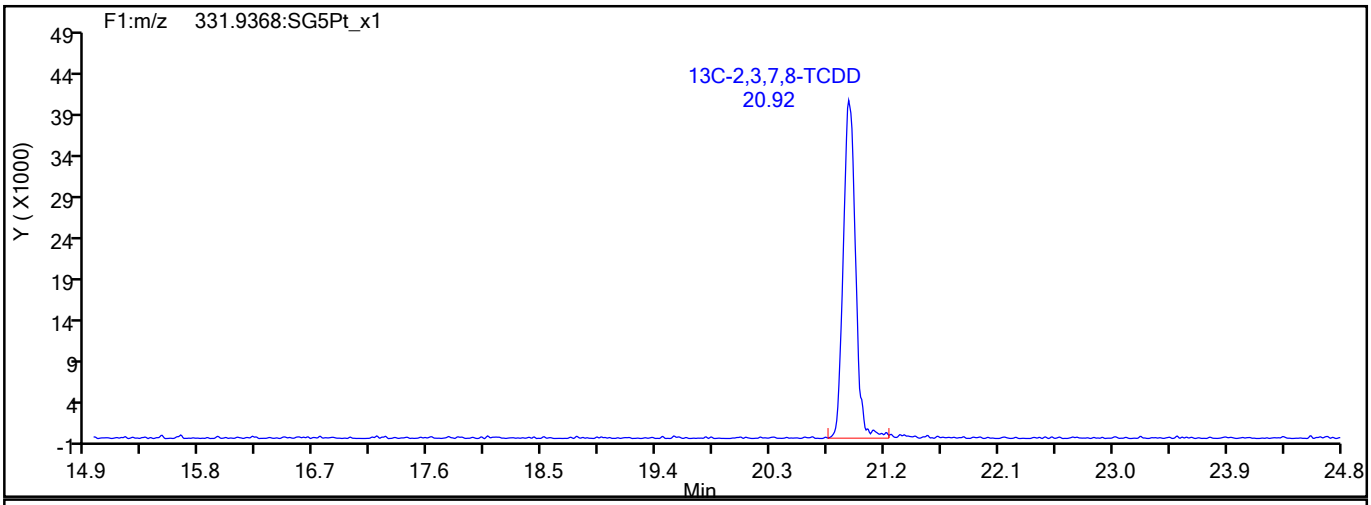

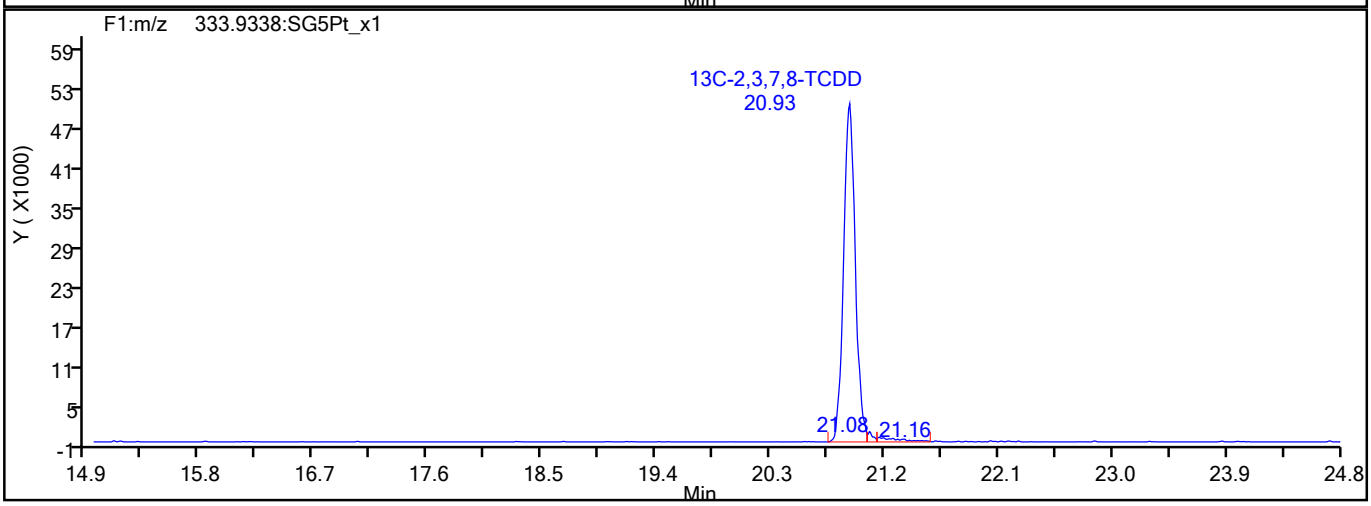

777200

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

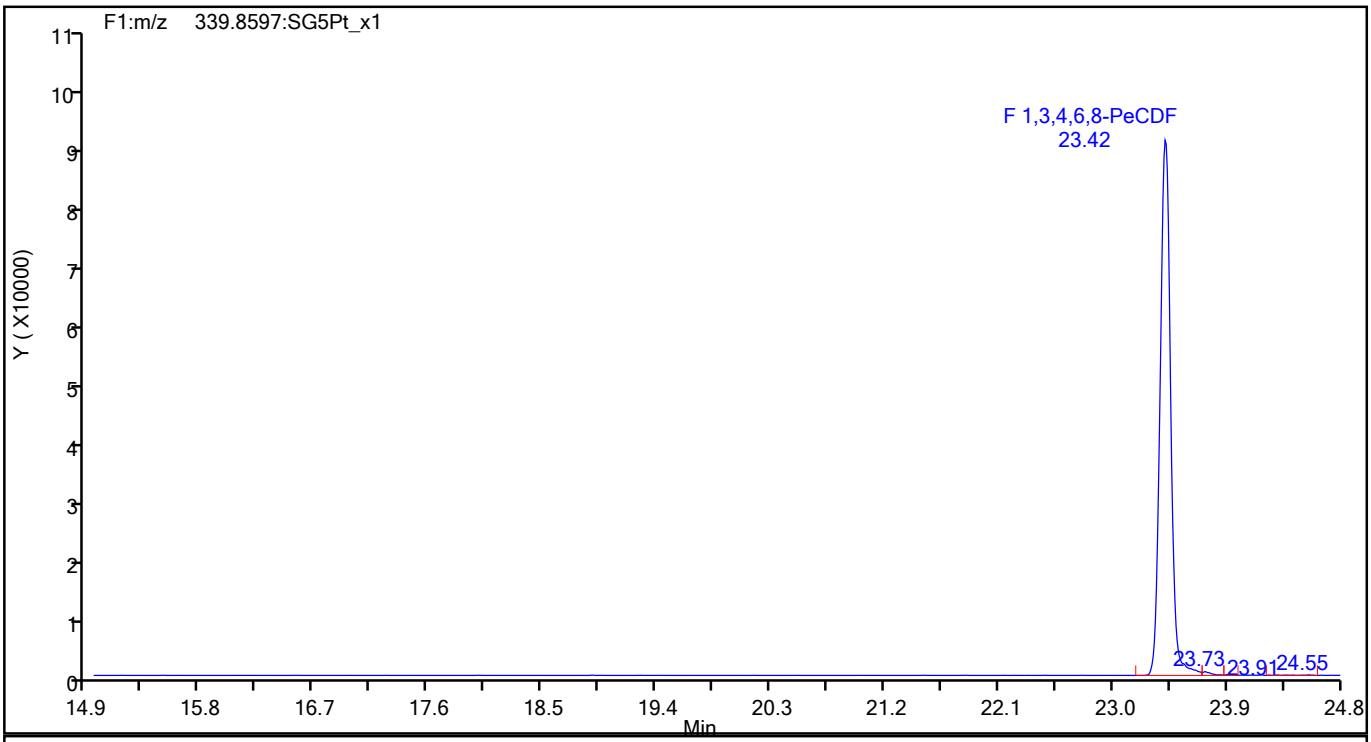

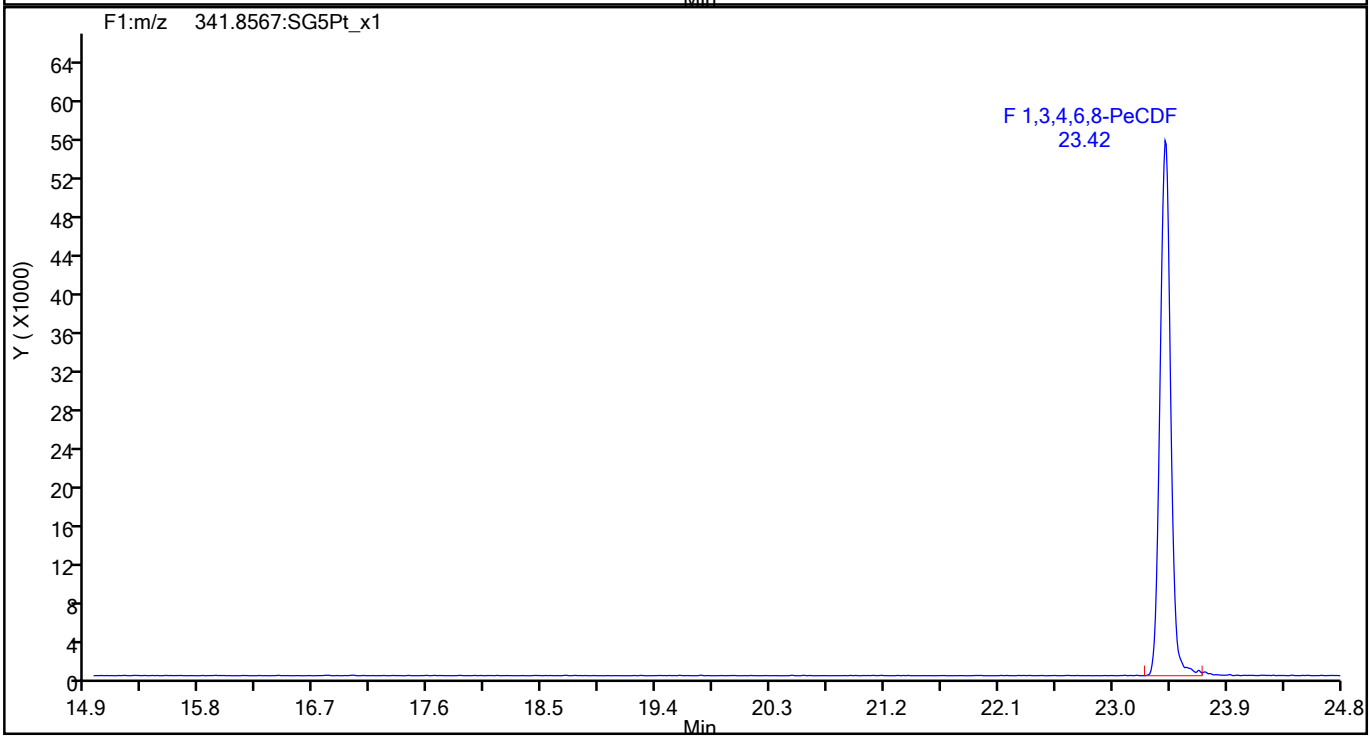

777201

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

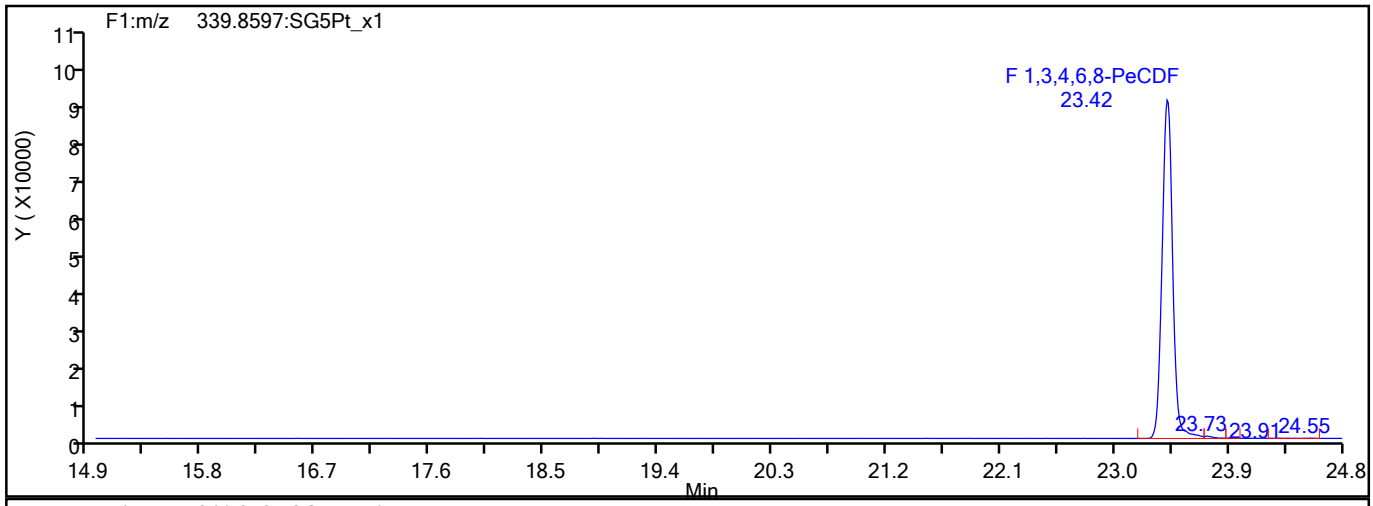

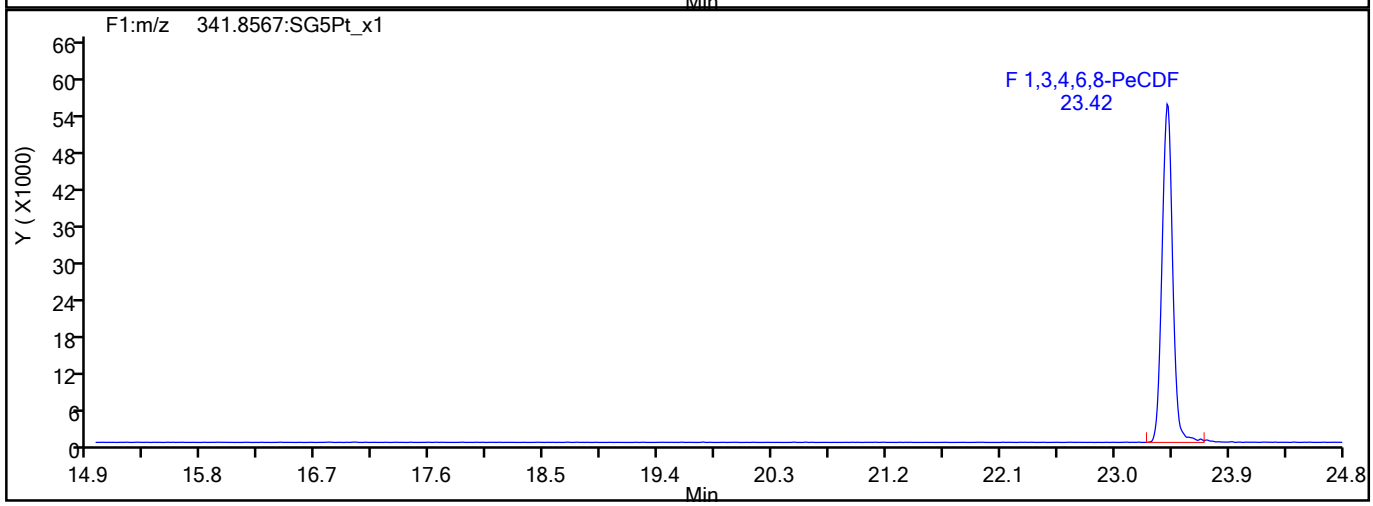

F1 PeCDFs Interference Mass

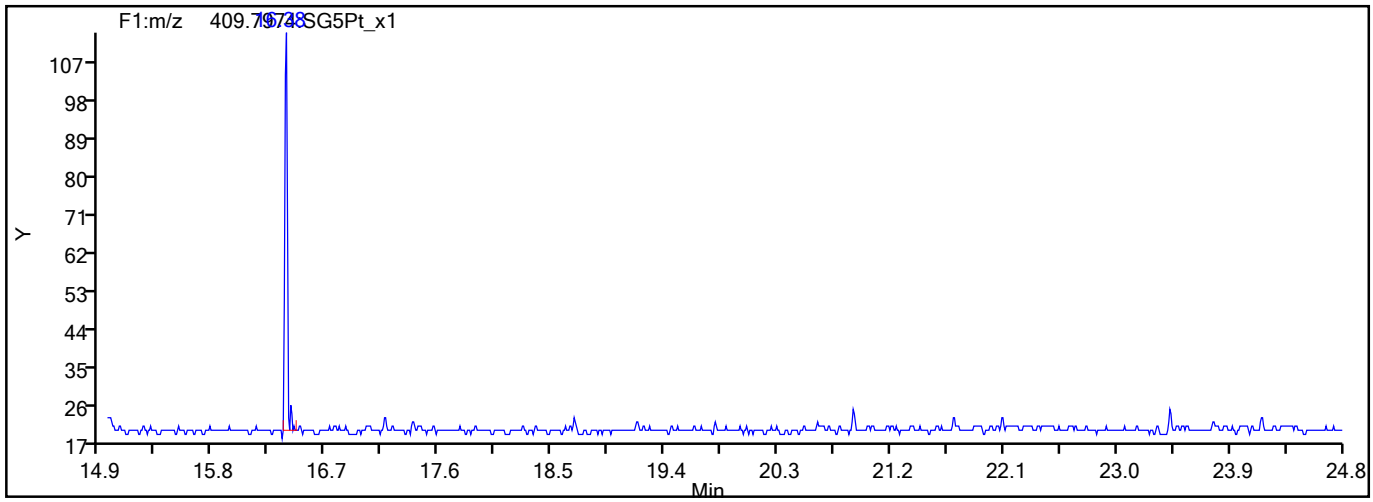

777202

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

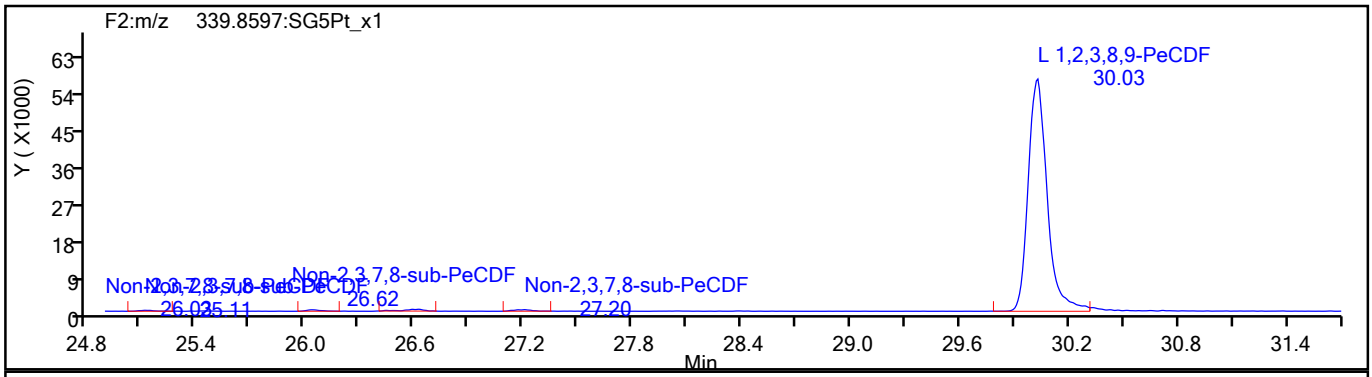

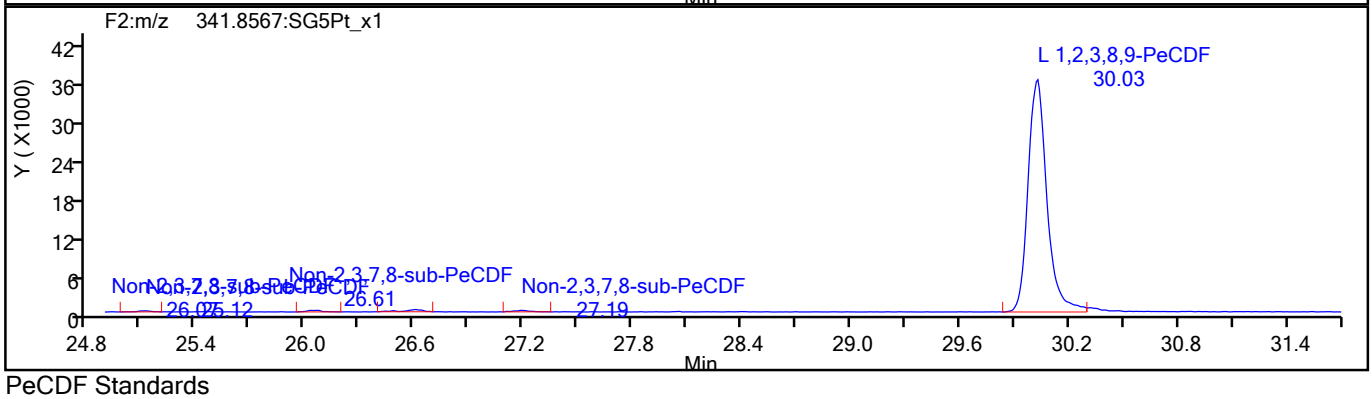

PeCDF Standards

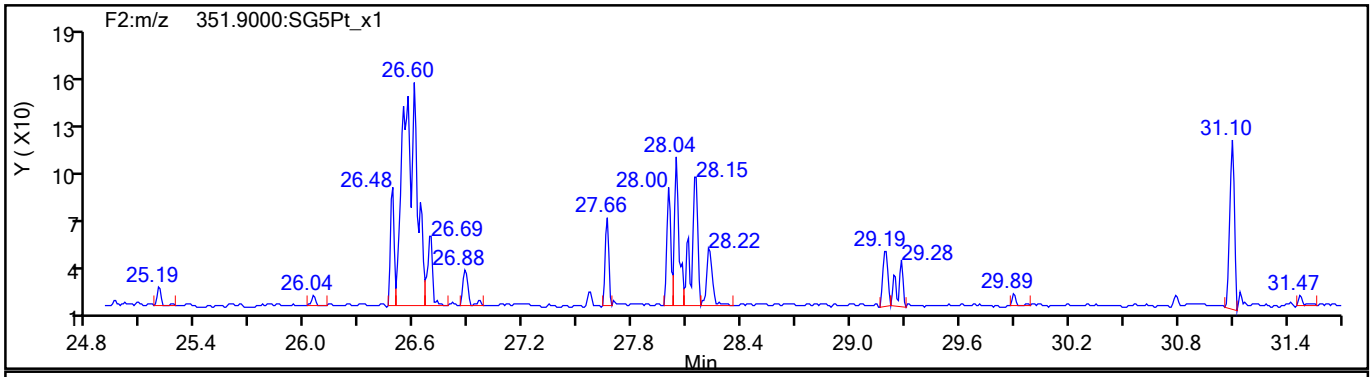

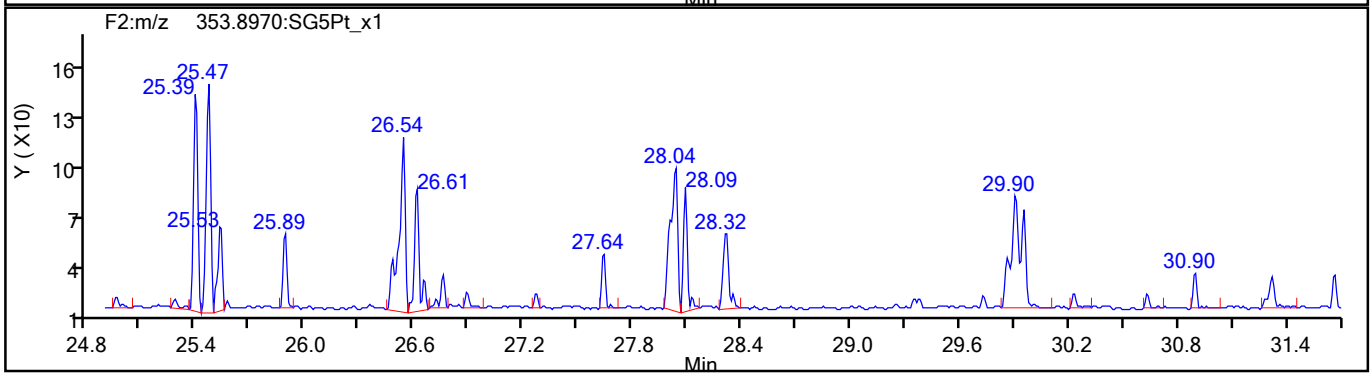

777203

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

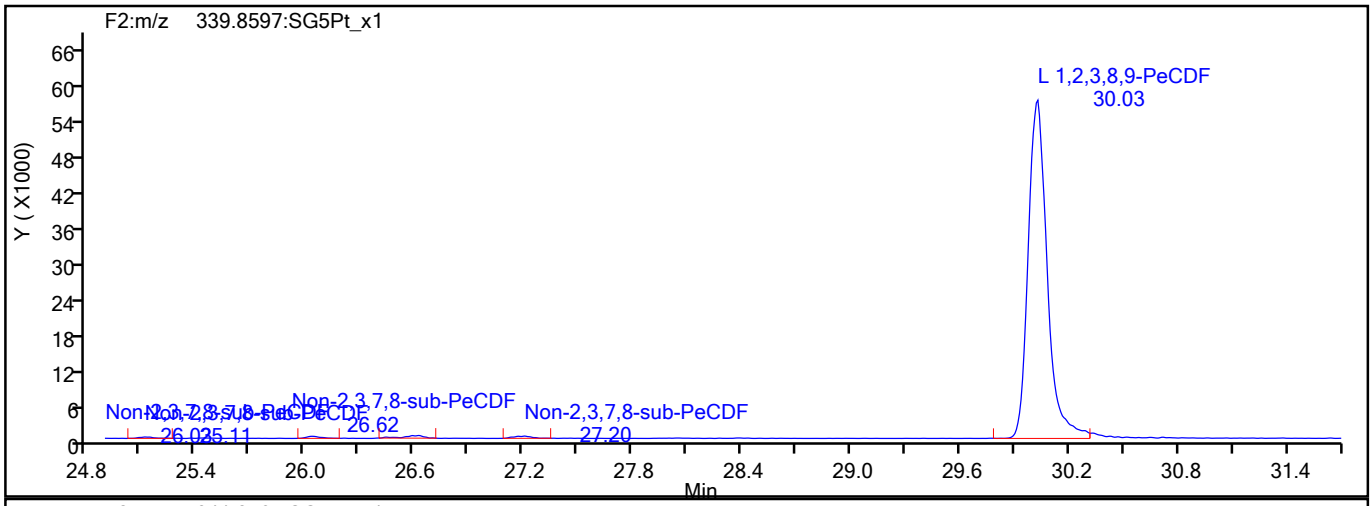

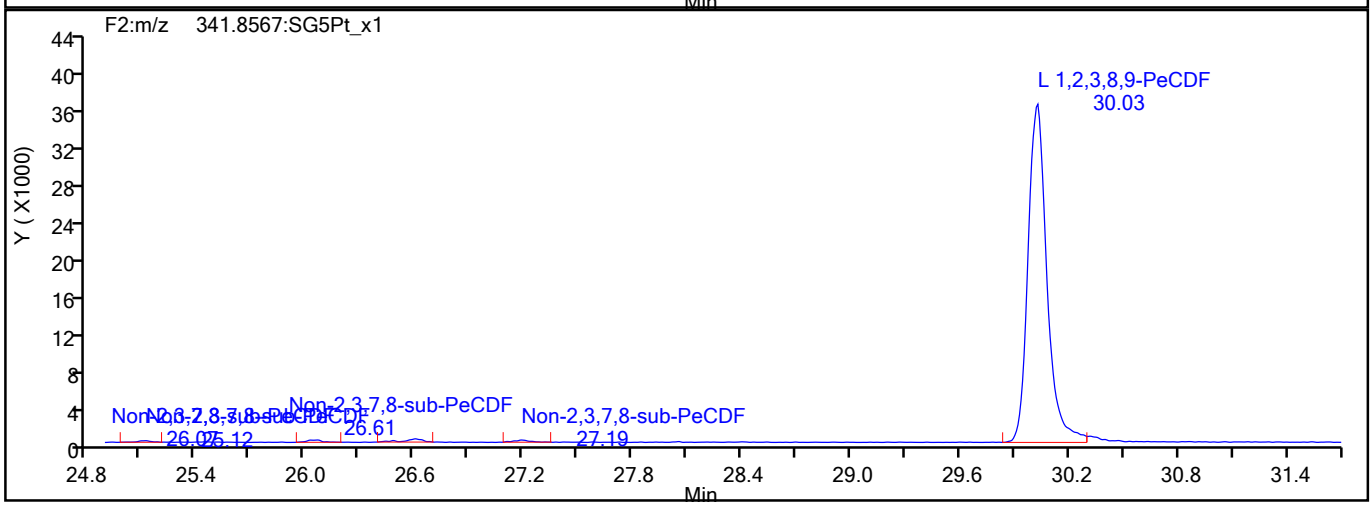

PeCDF Interference Mass

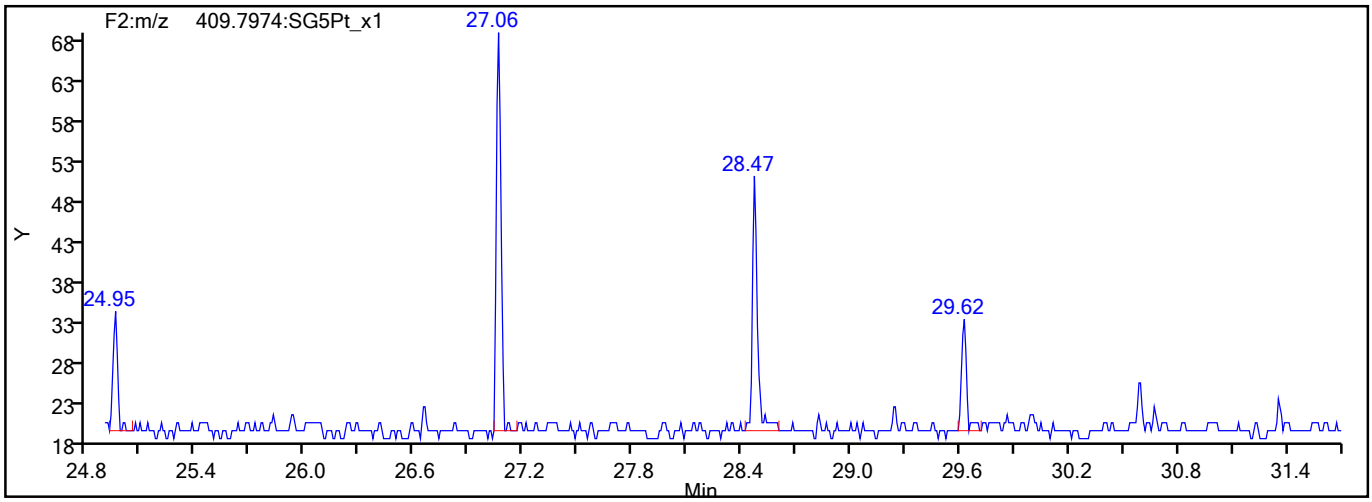

777204

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

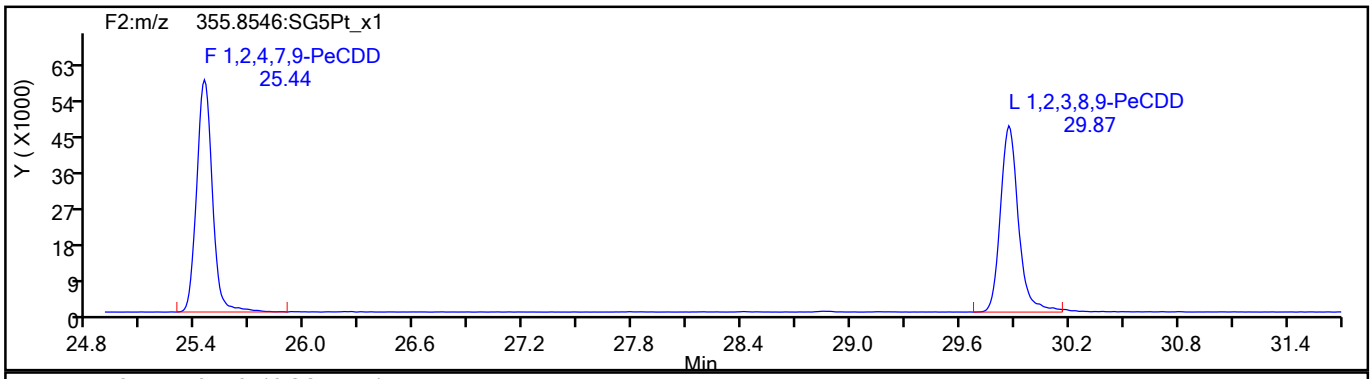

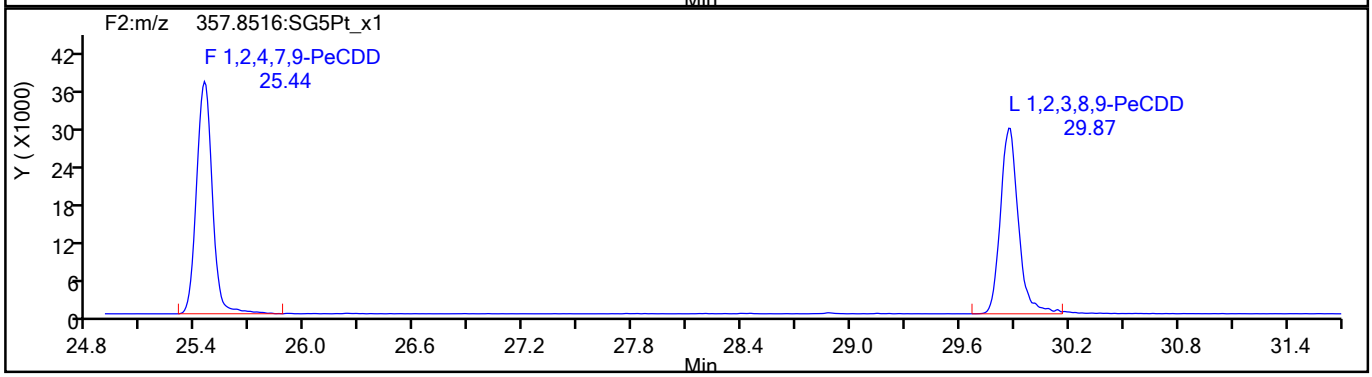

PeCDD Standards

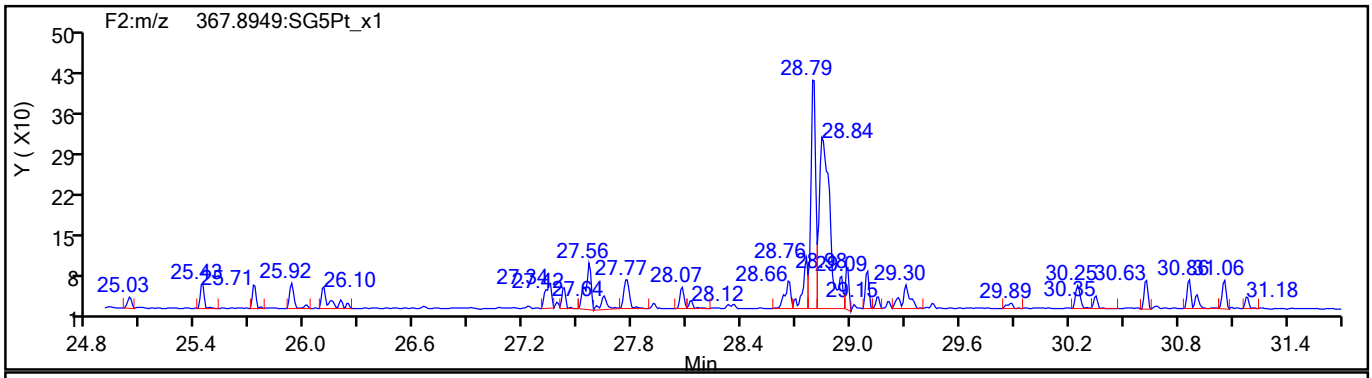

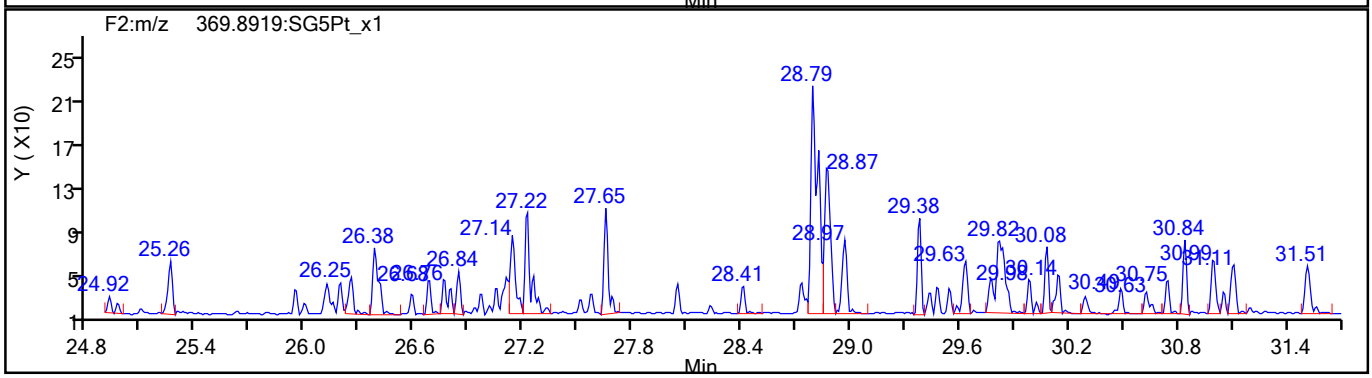

777205

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

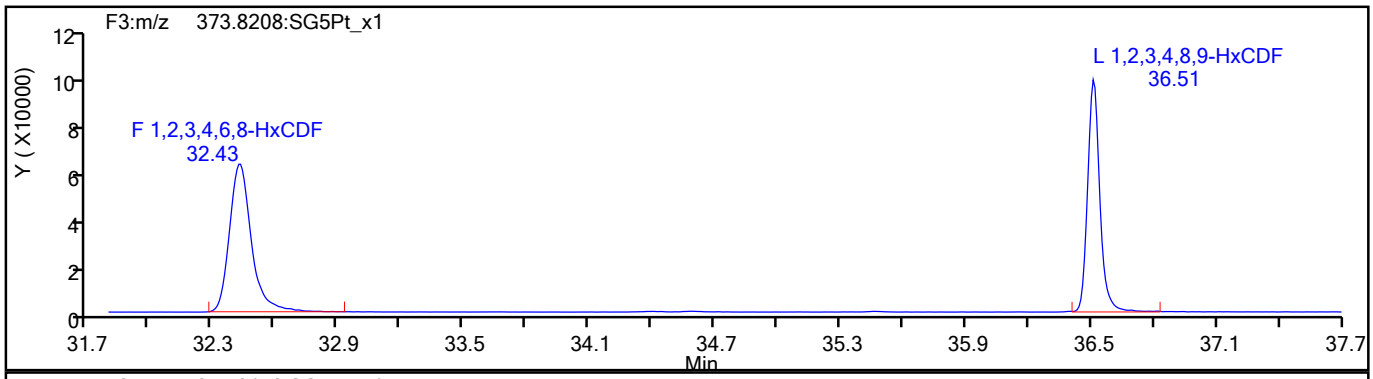

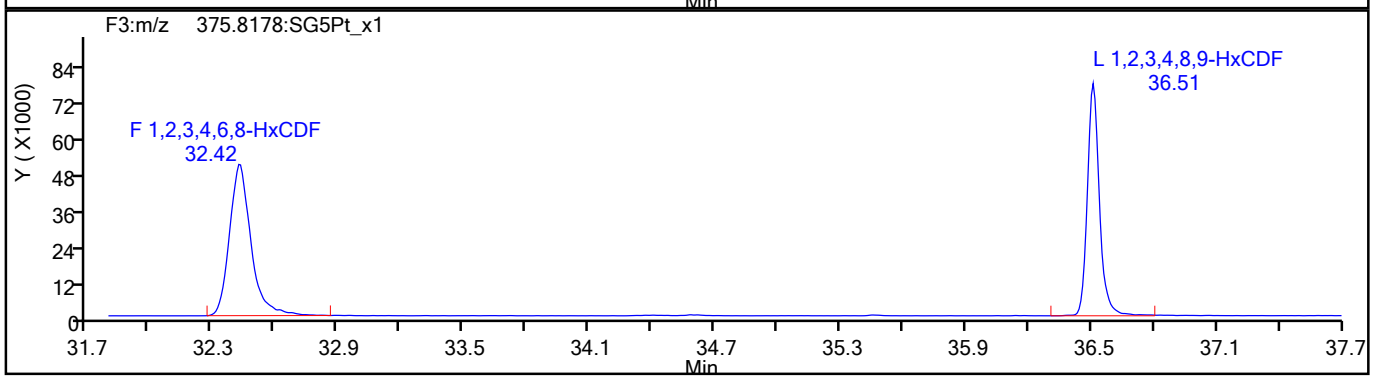

HxCDF Standards

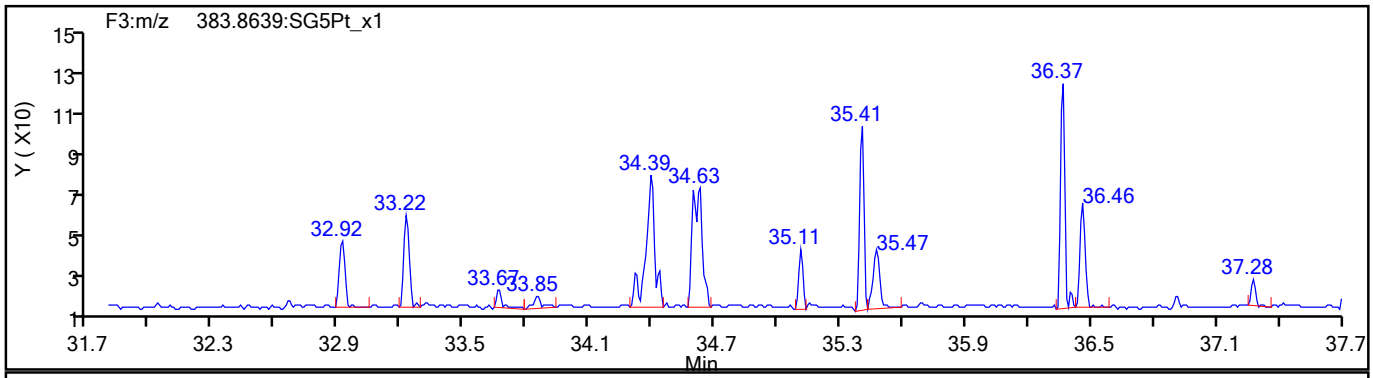

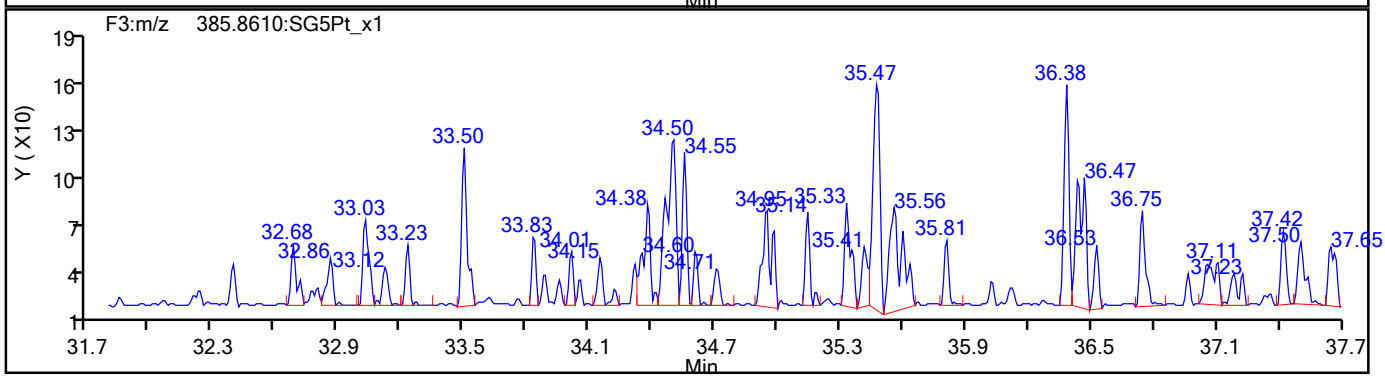

777206

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

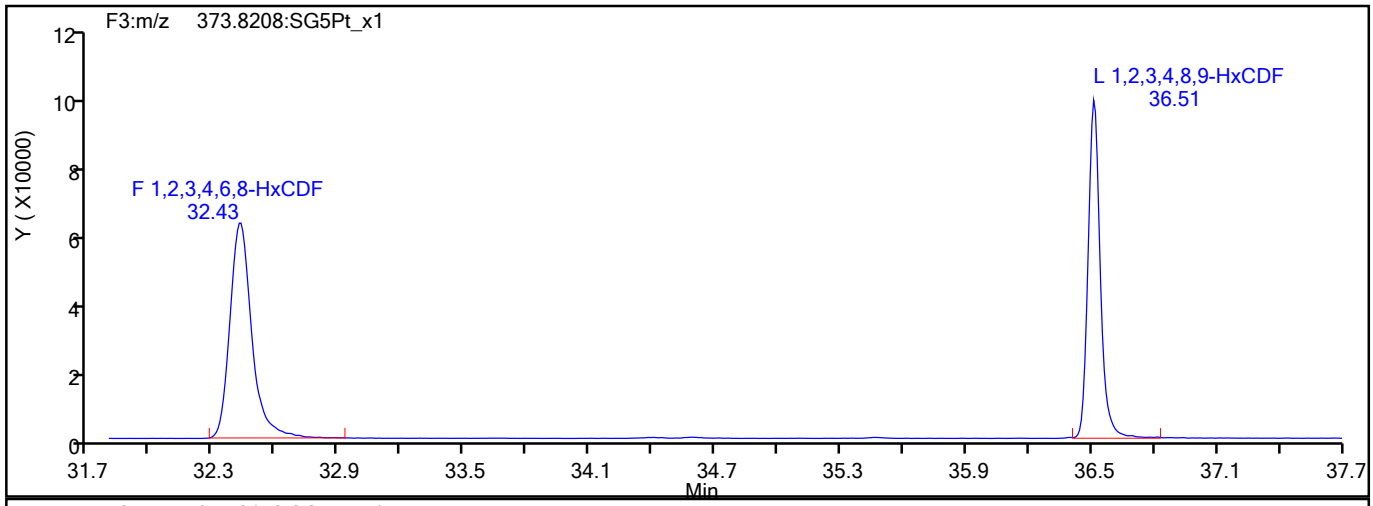

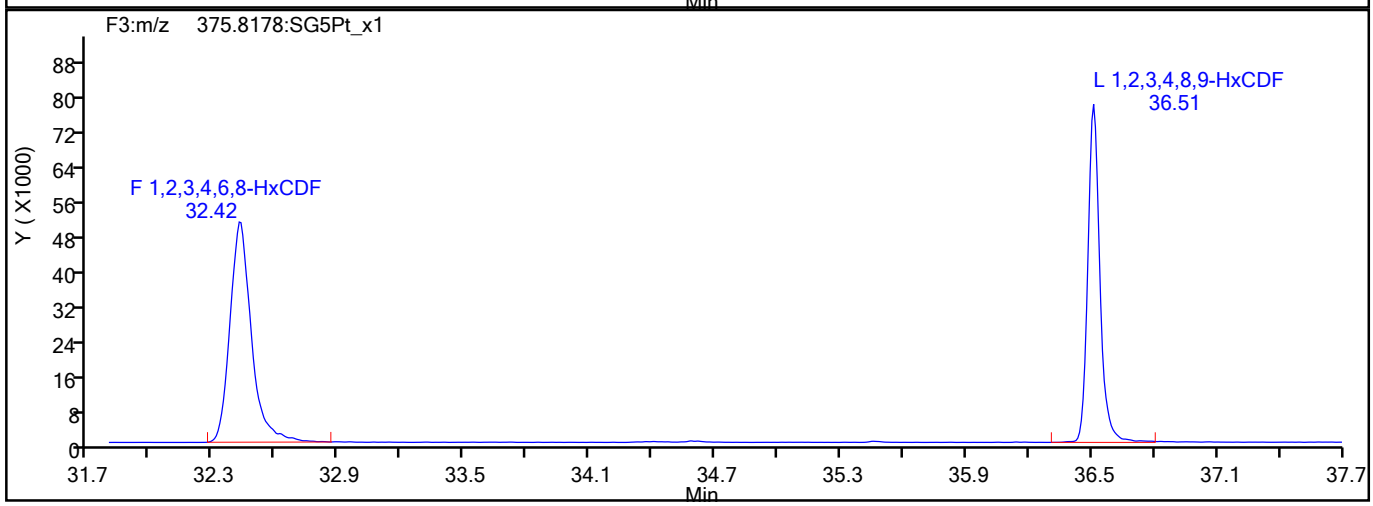

HxCDF Interference Mass

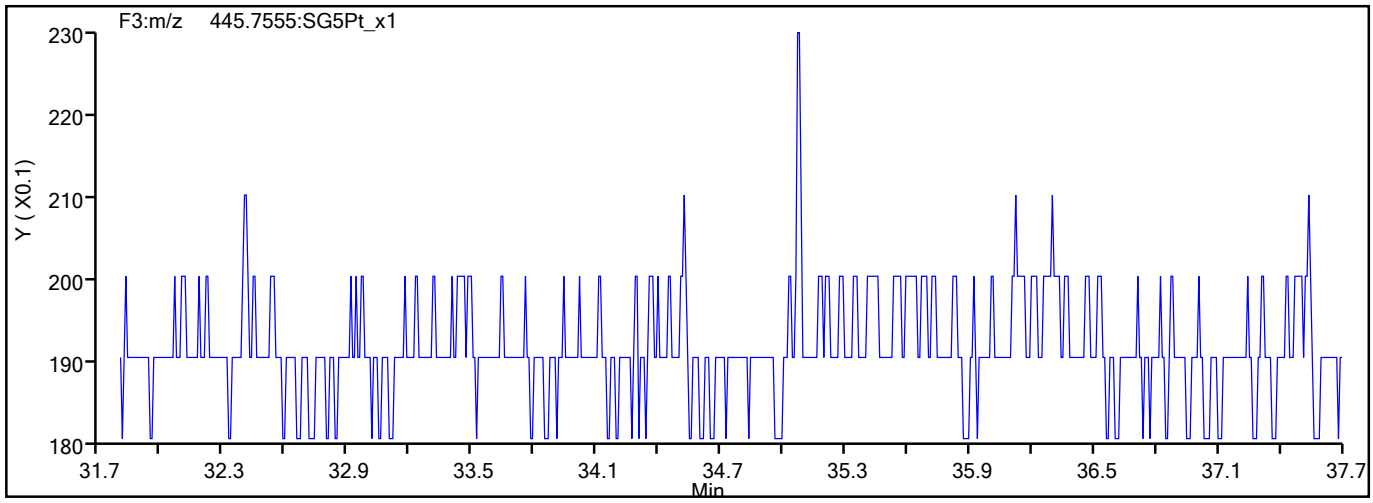

777207

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

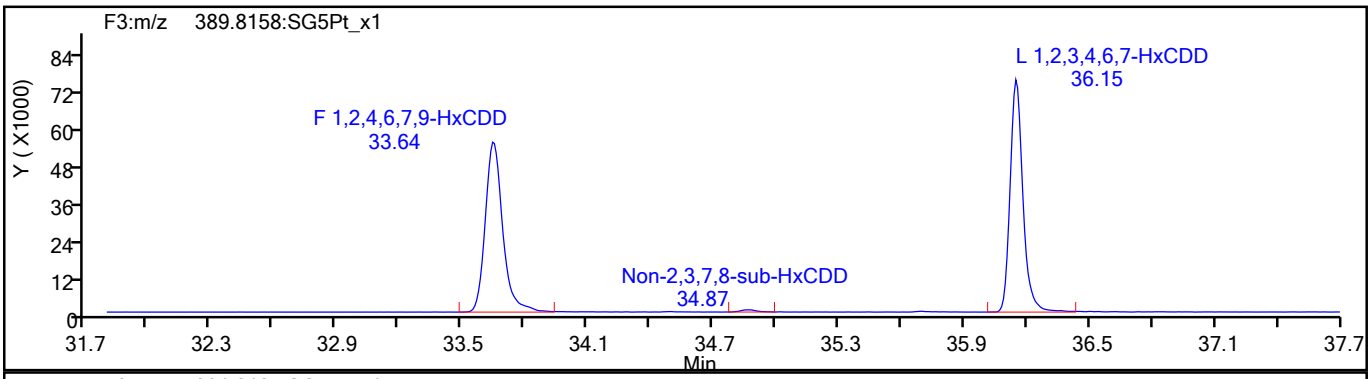

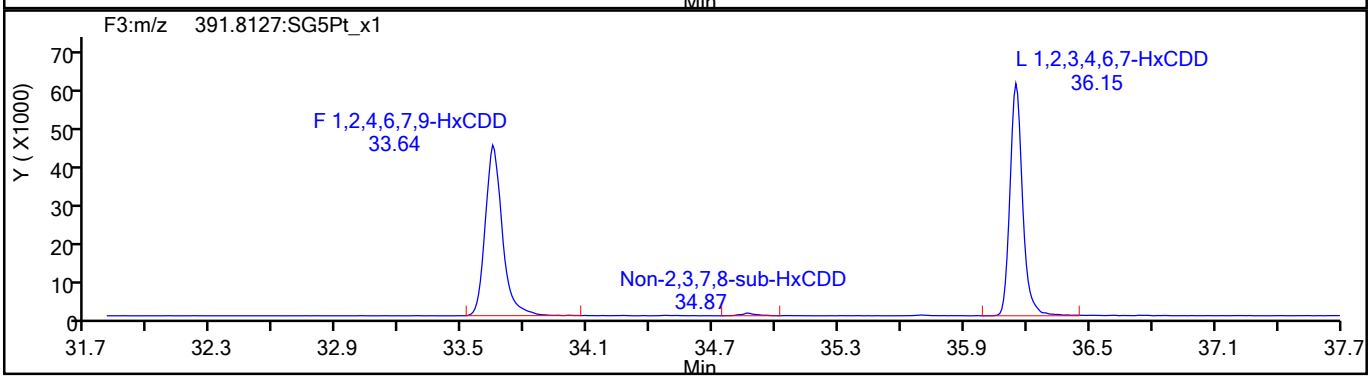

HxCDD Standards

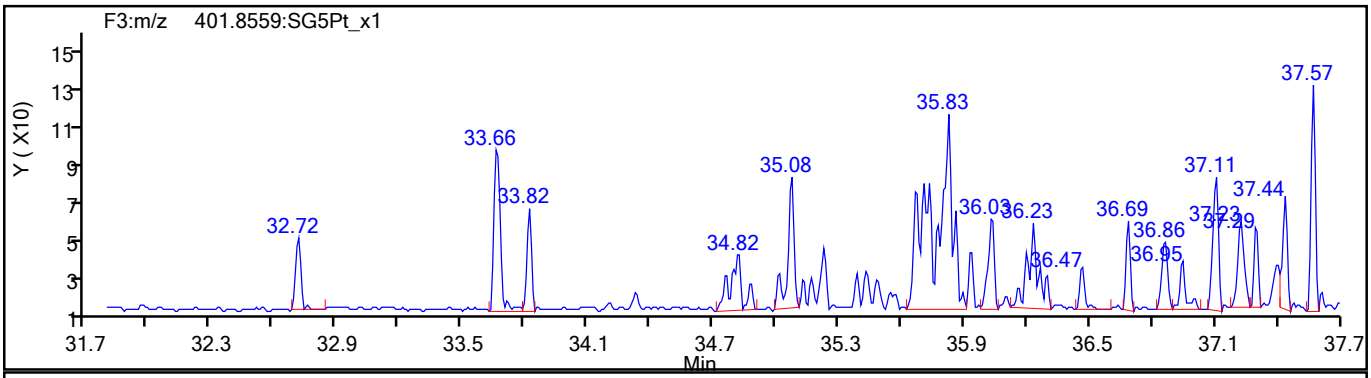

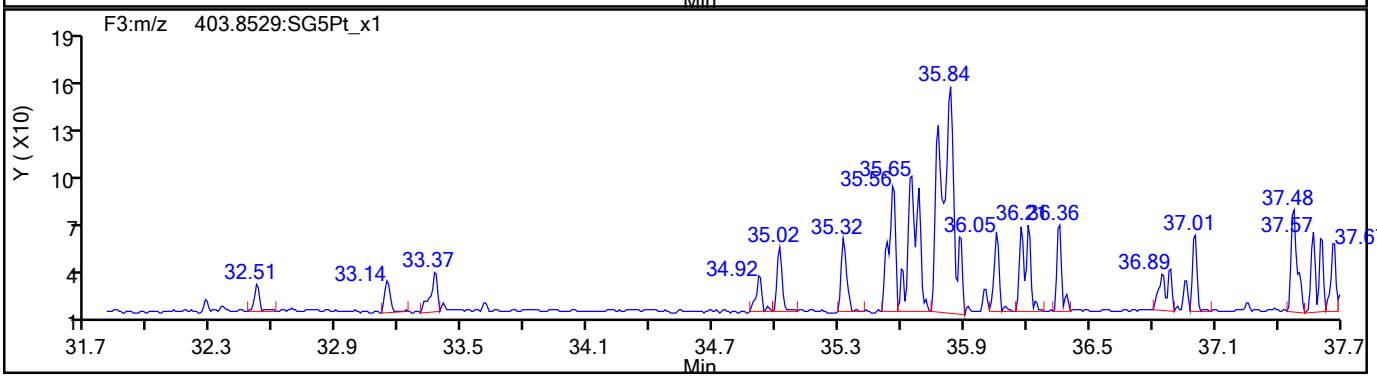

777208

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

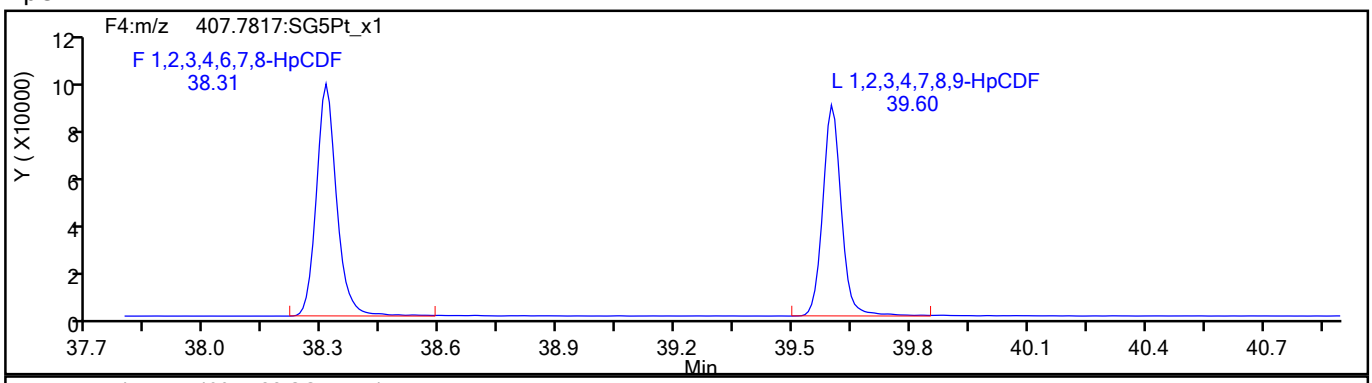

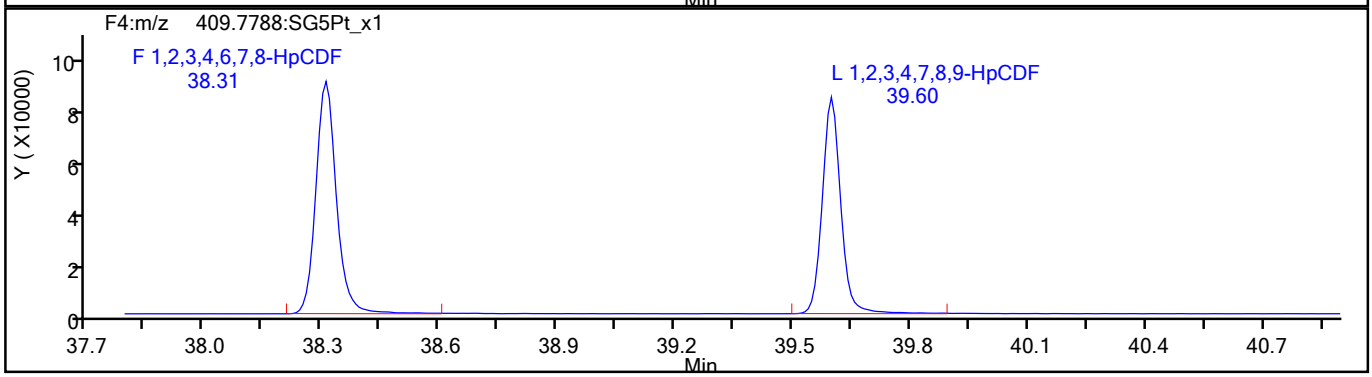

HpCDF Standards

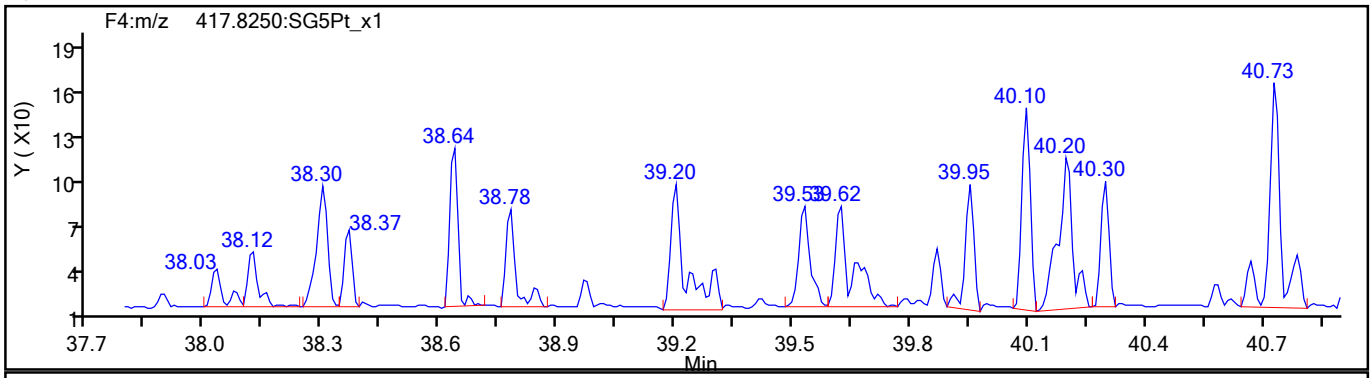

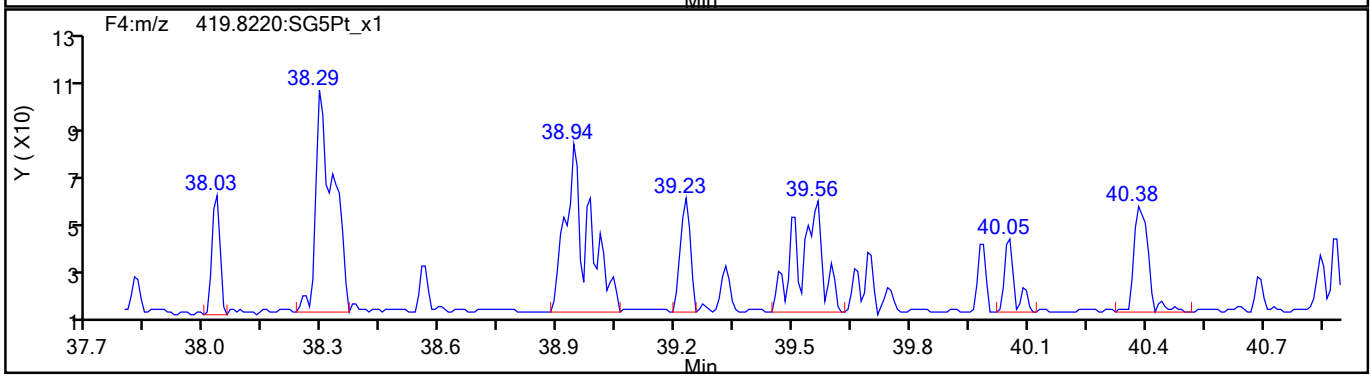

777209

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

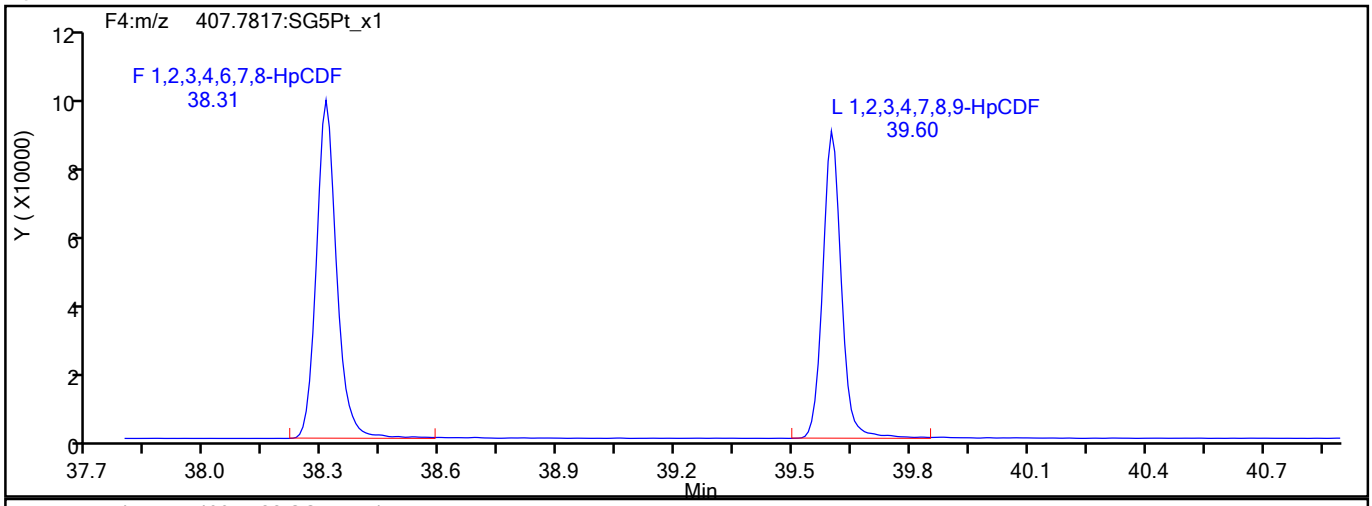

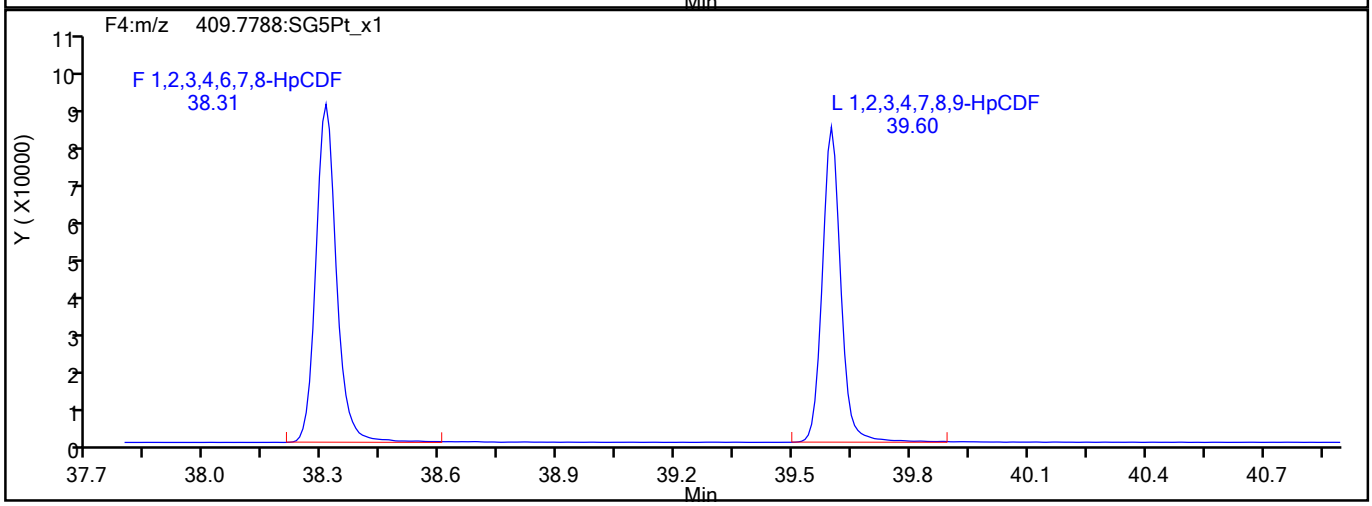

HpCDF Interference Mass

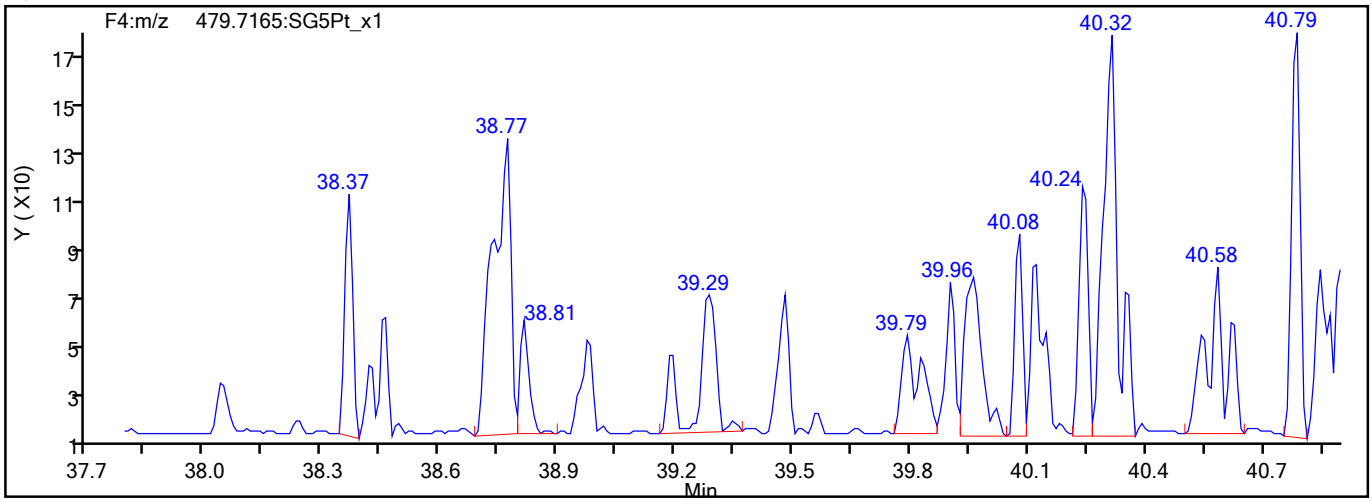

777210

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

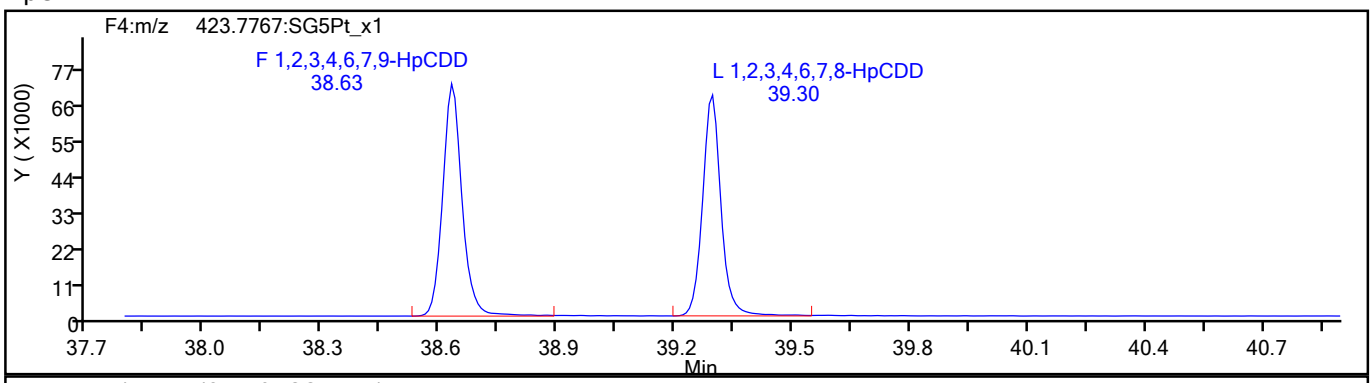

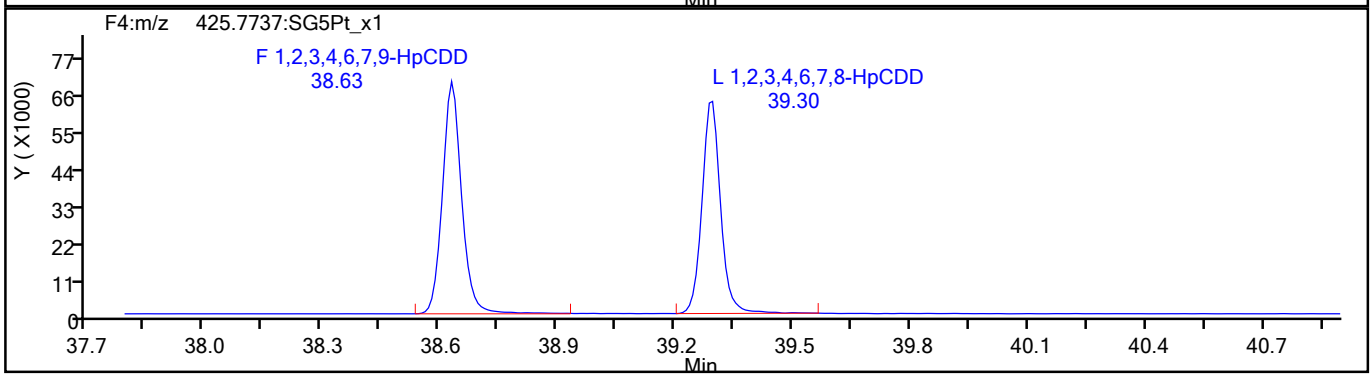

HpCDD Standards

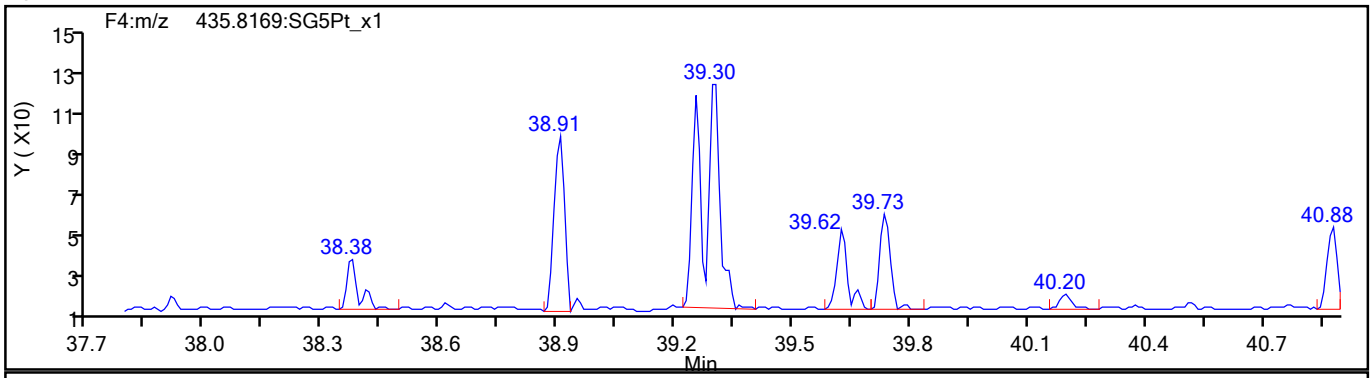

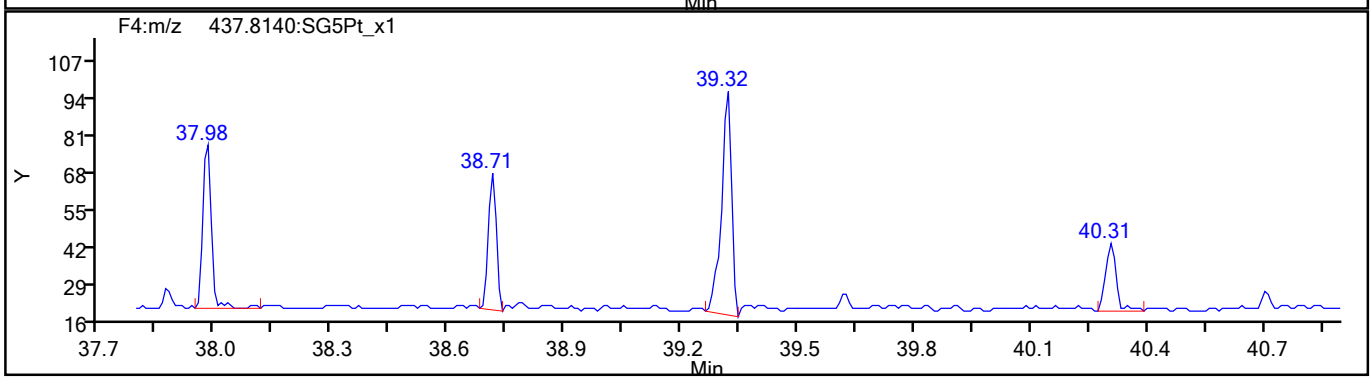

777211

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

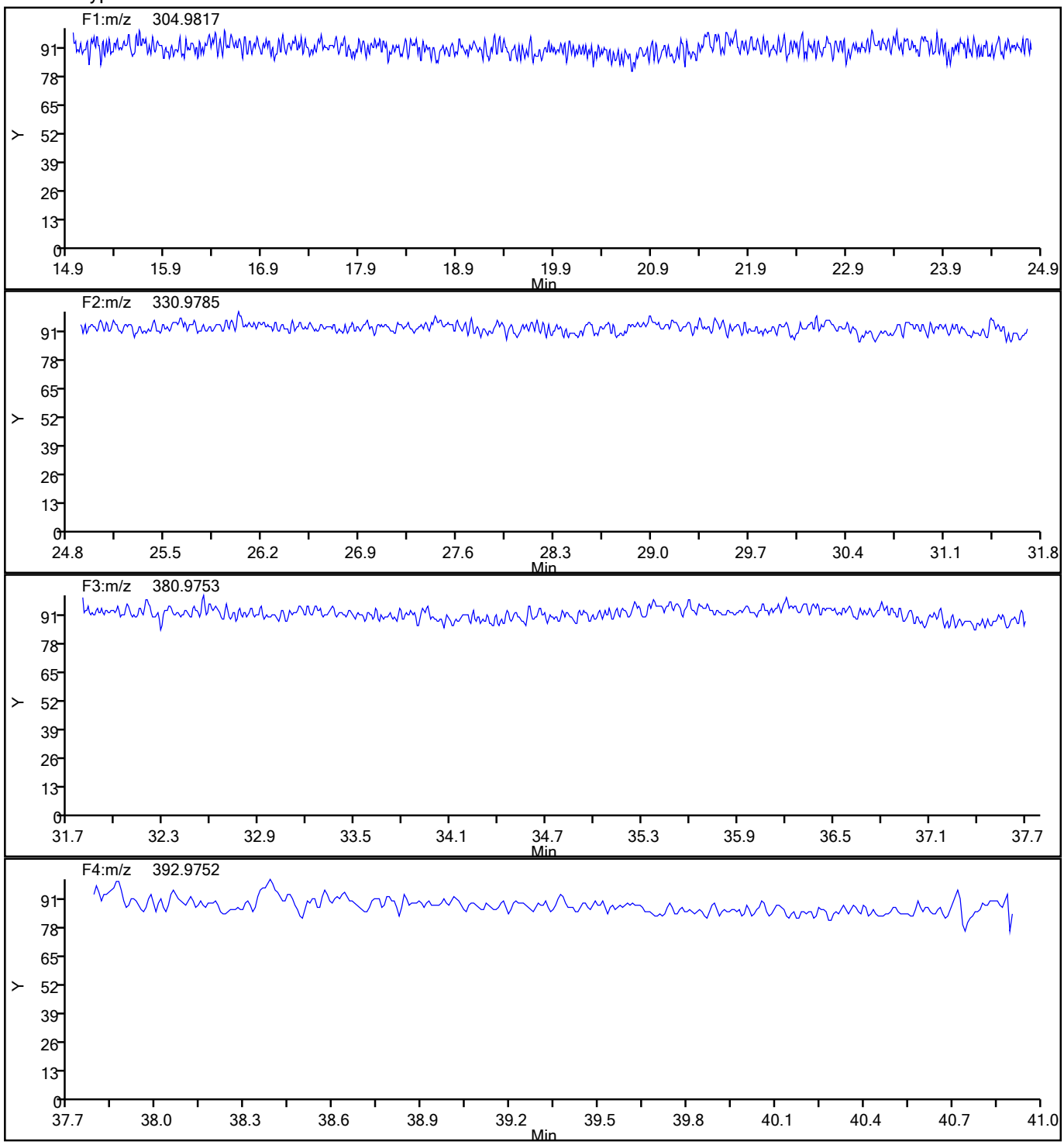

777212

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

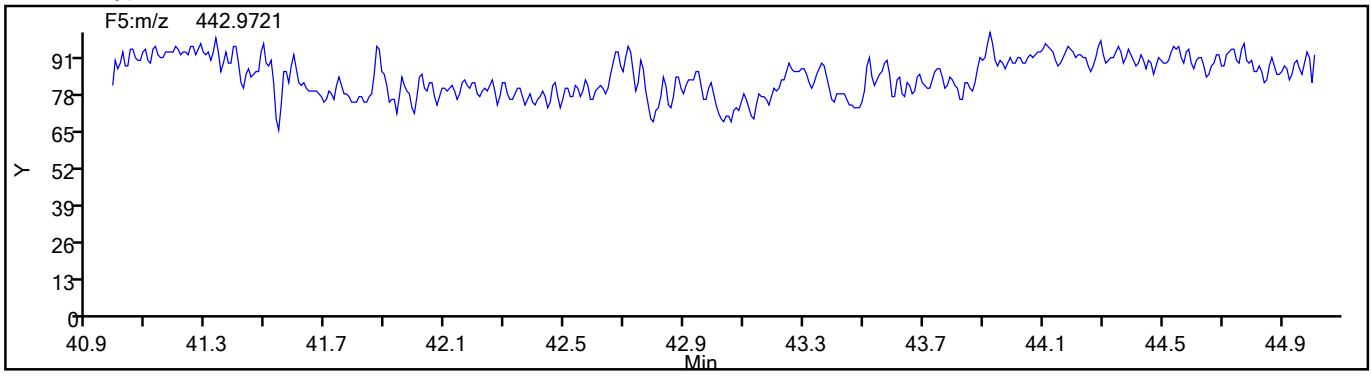

777213

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 17-Aug-2021 14:27:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 16:07:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.529	393112	0.77	1.3459					0.00	
2,3,7,8-TCDF	20.580	883074	0.78	1.0802	83.2	83.2	0.1765	0.1765		
A Non-2,3,7,8-sub-TCDF	19.983	14516	0.77	1.0802	1.441	1.367	0.1765	0.7533		RQ
S Total TCDF					84.6	84.6	0.1765	0.1765		RQ
D 13C-2,3,7,8-TCDD	21.902	237674	0.79	0.9317					0.00	
2,3,7,8-TCDD	21.928	282066	0.80	1.0753	44.1	44.1	0.1251	0.1251		
A Non-2,3,7,8-sub-TCDD	20.816						0.1251	0.1251		
S Total TCDD					44.1	44.1	0.1251	0.1251		
A F1 PeCDFs	24.695	314	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.196	12272	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.556						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.117	9319	1.28	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.475	5418	1.08	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.678	524513	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.925	436983	1.02	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.301						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.613	344276	1.05	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.297						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.251	552143	0.76							
1,3,6,8-TCDD	17.867	286795	0.81							
2,3,4,7-TCDF	20.580	883074	0.78							
1,2,3,7-TCDD	21.713	246746	0.80							
1,2,3,9-TCDF	22.091	375235	0.81							
1,2,3,9-TCDD	22.203	294638	0.78							
1,2,8,9-TCDF	23.714	427941	0.80							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.766	127271								
1,3,4,6,8-PeCDF	24.126	385071	1.61							
1,2,3,8,9-PeCDD	26.181	276939	1.58							
1,2,4,7,9-PeCDD	30.804	272114	1.59							
1,2,3,8,9-PeCDF	30.989	368041	1.62							
1,2,3,4,6,8-HxCDF	33.260	451714	1.27							
1,2,4,6,7,9-HxCDD	34.329	334369	1.26							
1,2,3,4,6,7-HxCDD	36.620	364948	1.23							
1,2,3,4,8,9-HxCDF	36.973	519420	1.27							
1,2,3,4,6,7,9-HpCDD	38.981	383342	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 17-Aug-2021 14:27:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 16:07:09

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.529	20.529	0	1.000	170513	24451	60	150	408		
317.9389	20.537	20.529	1	1.000	222599	31155	14	35	2225	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.580	20.580	0	1.003	386703	50727	45	112	1127		
305.8987	20.572	20.580	-1	1.002	496371	65154	61	152	1068	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.889	19.983	-65	0.920	1545	292	45	112	6		
305.8987	18.889	19.983	-65	0.920	1924	396	61	152	6	0.80(0.65-0.89)	
303.9016	19.808	19.983	-10	0.965	3532	597	45	112	13		
305.8987	19.825	19.983	-9	0.966	4465	768	61	152	13	0.79(0.65-0.89)	
303.9016	24.160	19.983	250	1.177	1327	241	45	112	5		
305.8987	24.126	19.983	248	1.175	2504	449	61	152	7	0.53(0.65-0.89)	
	Empc Correction				1723	312	61	152	5		
13C-2,3,7,8-TCDD											
331.9368	21.902	21.902	0	1.000	105089	13957	10	25	1396		
333.9338	21.876	21.902	-2	1.000	132585	19347	14	35	1382	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.928	21.928	0	1.001	125335	16412	25	62	656		
321.8936	21.928	21.928	0	1.001	156731	20206	20	50	1010	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.816						25	62			
321.8936	20.816						20	50			
A F1 PeCDFs											RQ
339.8597	24.925	24.695	14	1.000	191	35	2	5	18		
341.8567	24.950	24.695	15	1.000	174	103	8	20	13	1.10(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.844	28.196	-141	1.000	766	192	27	67	7		
341.8567	25.827	28.196	-142	1.000	749	122	20	50	6	1.02(1.32-1.78)	
339.8597	26.812	28.196	-83	1.000	1473	236	27	67	9		
341.8567	26.804	28.196	-83	1.000	1238	175	20	50	9	1.19(1.32-1.78)	
339.8597	27.242	28.196	-57	1.000	774	228	27	67	8		
341.8567	27.242	28.196	-57	1.000	414	129	20	50	6	1.87(1.32-1.78)	
339.8597	27.410	28.196	-47	1.000	2007	272	27	67	10		
341.8567	27.419	28.196	-47	1.000	1023	119	20	50	6	1.96(1.32-1.78)	
339.8597	28.009	28.196	-11	1.000	3045	480	27	67	18		
341.8567	28.000	28.196	-12	1.000	1881	272	20	50	14	1.62(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						31	77			
357.8516	28.556						12	30			
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028	35.117	-5	1.000	1563	301	78	195	4		
375.8178	35.028	35.117	-5	1.000	1453	309	63	157	5	1.08(1.05-1.43)	
373.8208	35.180	35.117	4	1.000	3670	776	78	195	10		
375.8178	35.171	35.117	3	1.000	2633	573	63	157	9	1.39(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.424	35.475	-3	1.000	2814	512	49	122	10		
391.8127	35.415	35.475	-4	1.000	2604	510	37	92	14	1.08(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.678	38.678	0	1.000	269858	70534	95	237	742		
409.7788	38.678	38.678	0	1.000	254655	66103	84	210	787	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.925	39.925	0	1.000	221169	60461	95	237	636		
409.7788	39.916	39.925	-1	1.000	215814	60231	84	210	717	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.301						95	237			
409.7788	39.301						84	210			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.613	39.613	0	1.000	176113	47810	61	152	784		
425.7737	39.613	39.613	0	1.000	168163	46077	62	155	743	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.297						61	152			
425.7737	39.297						62	155			
1,3,6,8-TCDF											
303.9016	16.251	16.251	0		238917	44390	45	112	986		
305.8987	16.251	16.251	0		313226	56510	61	152	926	0.76(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.867	17.867	0		128143	22094	25	62	884		
321.8936	17.876	17.867	1		158652	27668	20	50	1383	0.81(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.580	20.580	0		386703	50727	45	112	1127		
305.8987	20.572	20.580	-1		496371	65154	61	152	1068	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7-TCDD											
319.8965	21.713	21.713	0		109917	14539	25	62	582		
321.8936	21.713	21.713	0		136829	17891	20	50	895	0.80(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.091	22.091	0		167447	21351	45	112	474		
305.8987	22.100	22.091	1		207788	27306	61	152	448	0.81(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.203	22.203	0		128657	16375	25	62	655		
321.8936	22.194	22.203	-1		165981	21311	20	50	1066	0.78(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.714	23.714	0		189792	31730	45	112	705		
305.8987	23.714	23.714	0		238149	40152	61	152	658	0.80(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.766	23.766	0		127271	24228	25	62	969		
1,3,4,6,8-PeCDF											
339.8597	24.126	24.126	0		237485	45645	2	5	22823		
341.8567	24.117	24.126	-1		147586	28368	8	20	3546	1.61(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.181	26.181	0		169516	25557	31	77	824		
357.8516	26.181	26.181	0		107423	16002	12	30	1334	1.58(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.804	30.804	0		166968	21361	31	77	689		
357.8516	30.796	30.804	-1		105146	13117	12	30	1093	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.989	30.989	0		227678	26376	27	67	977		
341.8567	30.973	30.989	-1		140363	16634	20	50	832	1.62(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.260	33.260	0		252670	38083	78	195	488		
375.8178	33.260	33.260	0		199044	29014	63	157	461	1.27(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.329	34.329	0		186543	32347	49	122	660		
391.8127	34.321	34.329	-1		147826	25220	37	92	682	1.26(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.620	36.620	0		200927	47066	49	122	961		
391.8127	36.620	36.620	0		164021	38120	37	92	1030	1.23(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.973	36.973	0		290634	66772	78	195	856		
375.8178	36.973	36.973	0		228786	52982	63	157	841	1.27(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.981	38.981	0		196303	52734	61	152	864		
425.7737	38.981	38.981	0		187039	50357	62	155	812	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 17-Aug-2021 14:27:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.983

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	393112	55606

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	393112	55606

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.889	1545	292	1924	396	0.3268	0.80	
19.808	3532	597	4465	768	0.7533	0.79	
24.160	1327	241	2504	449	0.3609	0.53	RQ
24.160	1327	241	1723	312	0.2873		Empc Correction
Signal Totals:							
	6404	1130	8112	1476			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15297	2743				0.72	RQ
	14516	2606					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.441 = (15297 * 40.000) / (393112 * 1.080)
Empc Amount: 1.367 = (14516 * 40.000) / (393112 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

F1 PeCDFs, RT: 24.695

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.925	191	35	174	103		1.10	R
Signal Totals:							
	191	35	174	103			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	365	138				1.10	RQ
	314	57					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (365 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (314 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

Non-2,3,7,8-sub-PeCDF, RT: 28.196

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.844	766	192	749	122		1.02	R
26.812	1473	236	1238	175		1.19	R
27.242	774	228	414	129		1.87	R
27.410	2007	272	1023	119		1.96	R
28.009	3045	480	1881	272		1.62	
Signal Totals:							
	8065	1408	5305	817			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13370	2225				1.52	RQ
	12272	2086					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (13370 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (12272 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

Non-2,3,7,8-sub-HxCDF, RT: 35.117

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
35.028	1563	301	1453	309		1.08	
35.180	3670	776	2633	573		1.39	
Signal Totals:							
	5233	1077	4086	882			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9319	1959				1.28	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (9319 * 0.0) / (0 * 0.000)

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

Non-2,3,7,8-sub-HxCDD, RT: 35.475

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.424	2814	512	2604	510		1.08	
Signal Totals:							
	2814	512	2604	510			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5418	1022				1.08	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (5418 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

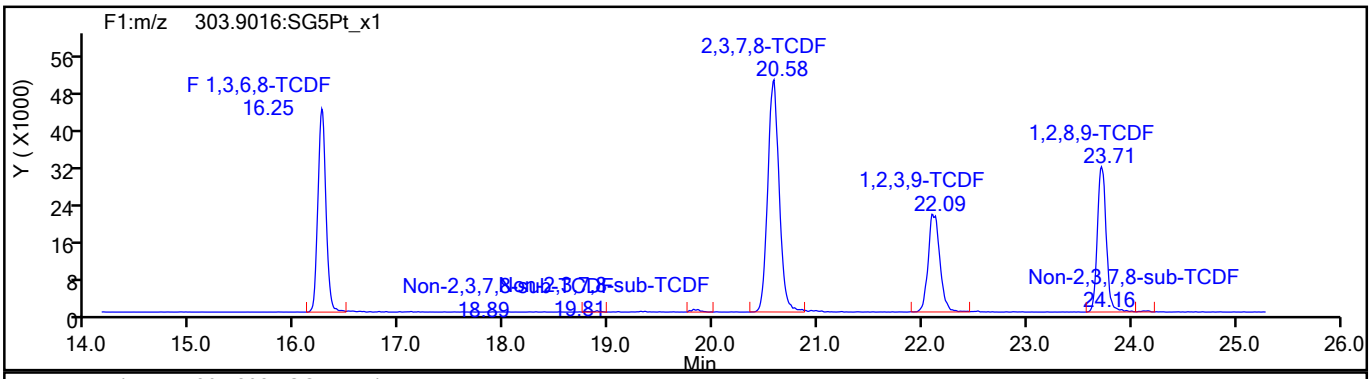

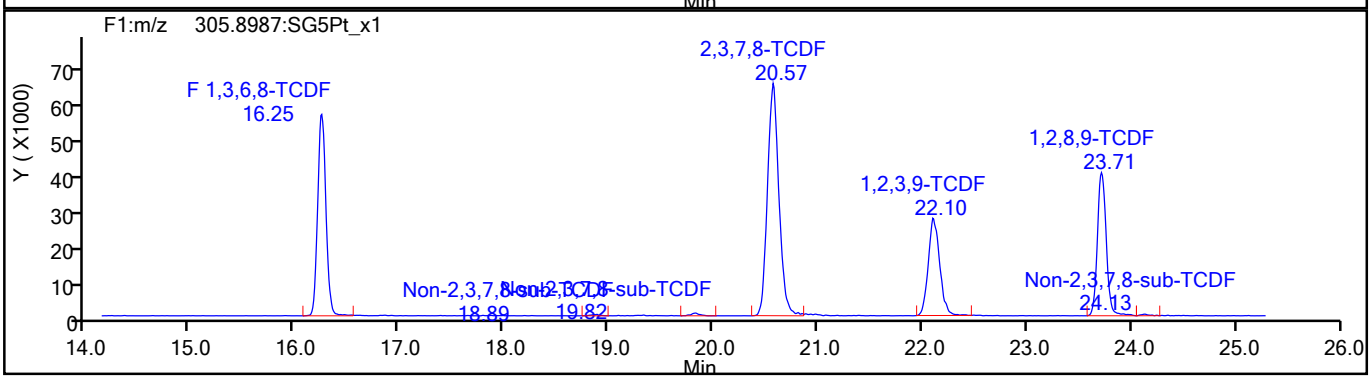

TCDF Standards

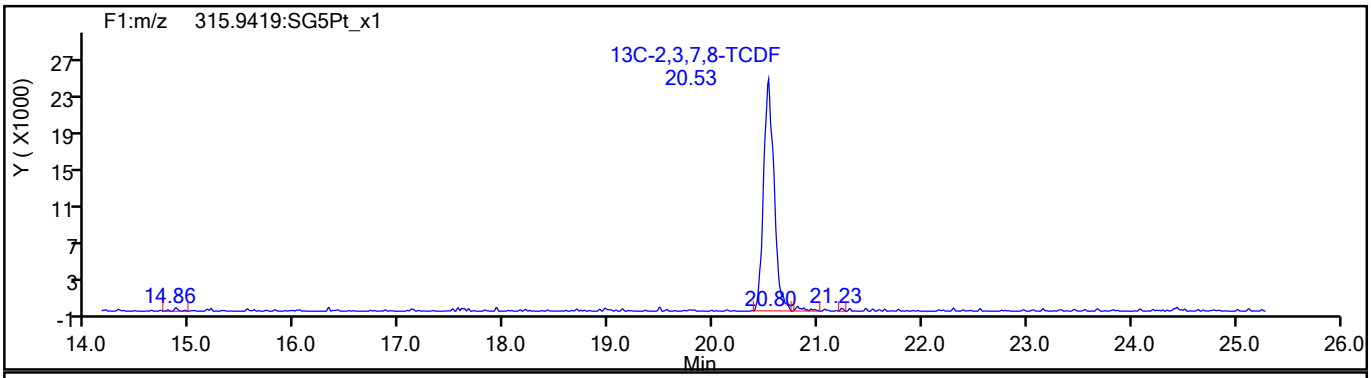

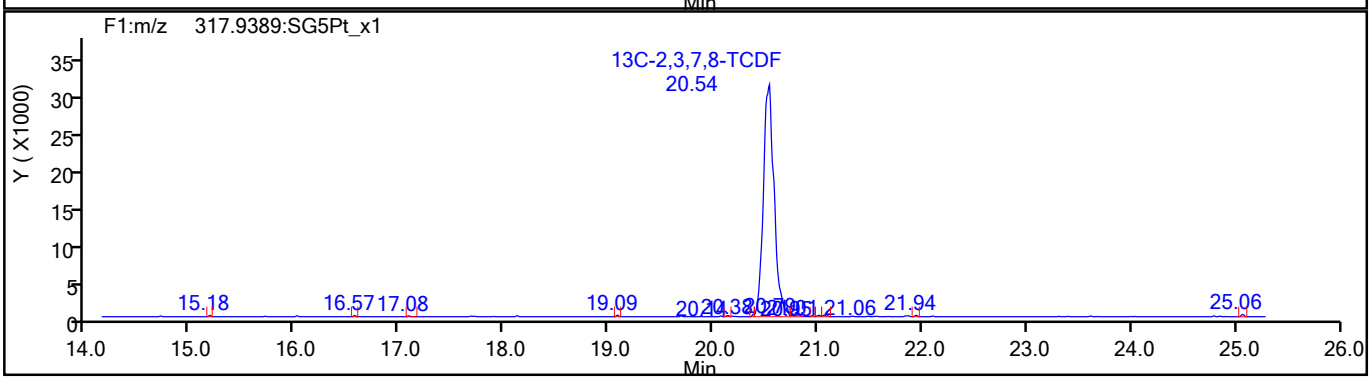

777225

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

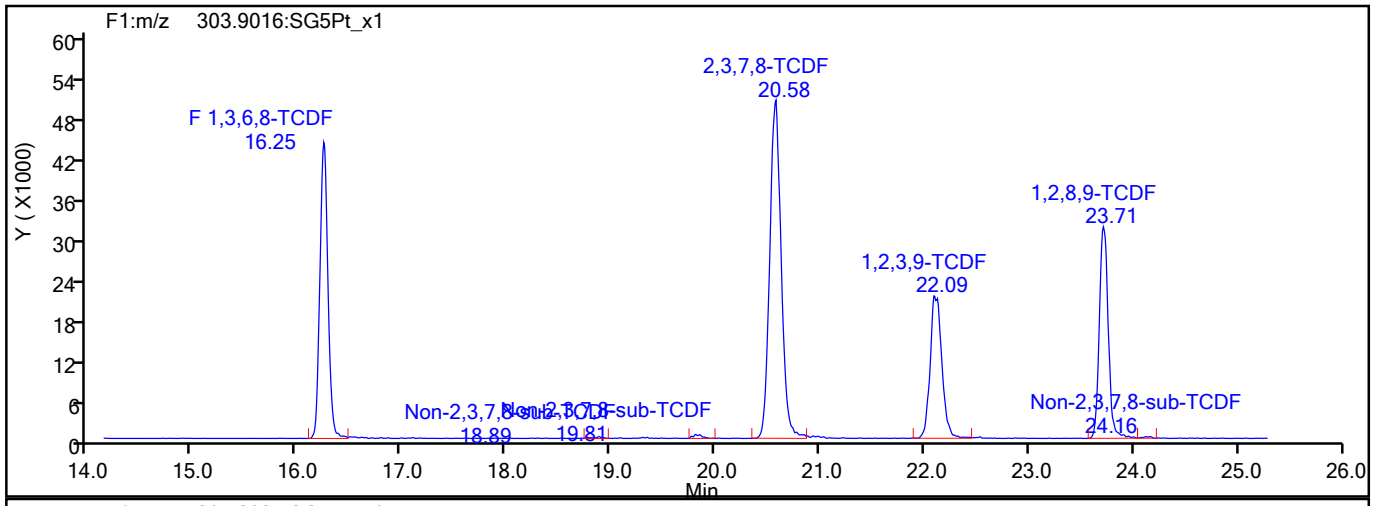

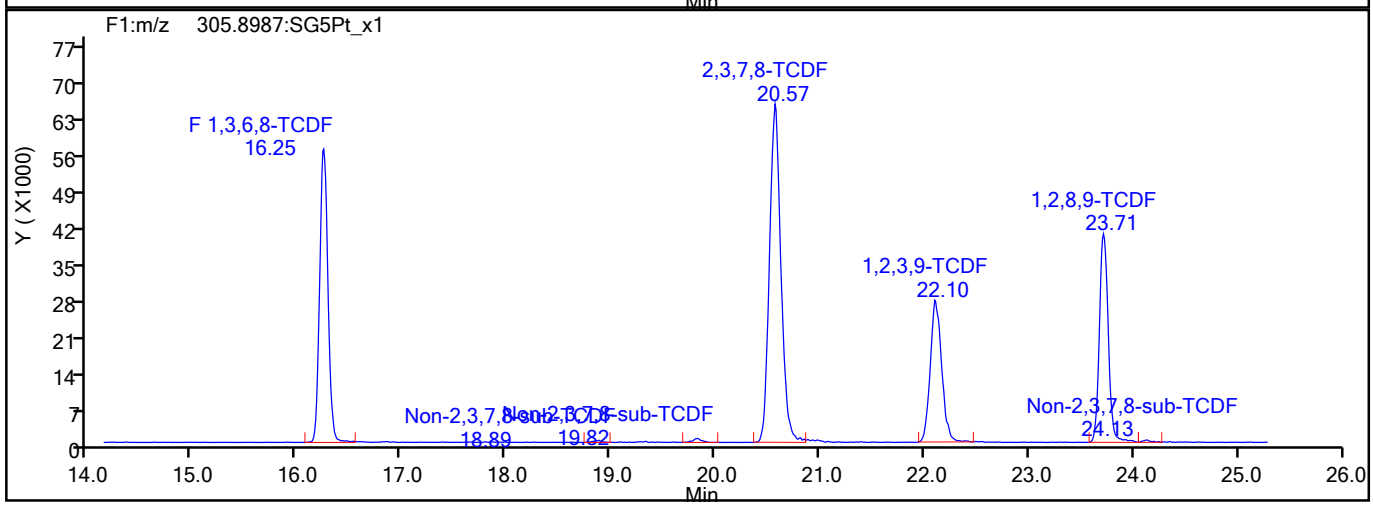

TCDF Interference Mass

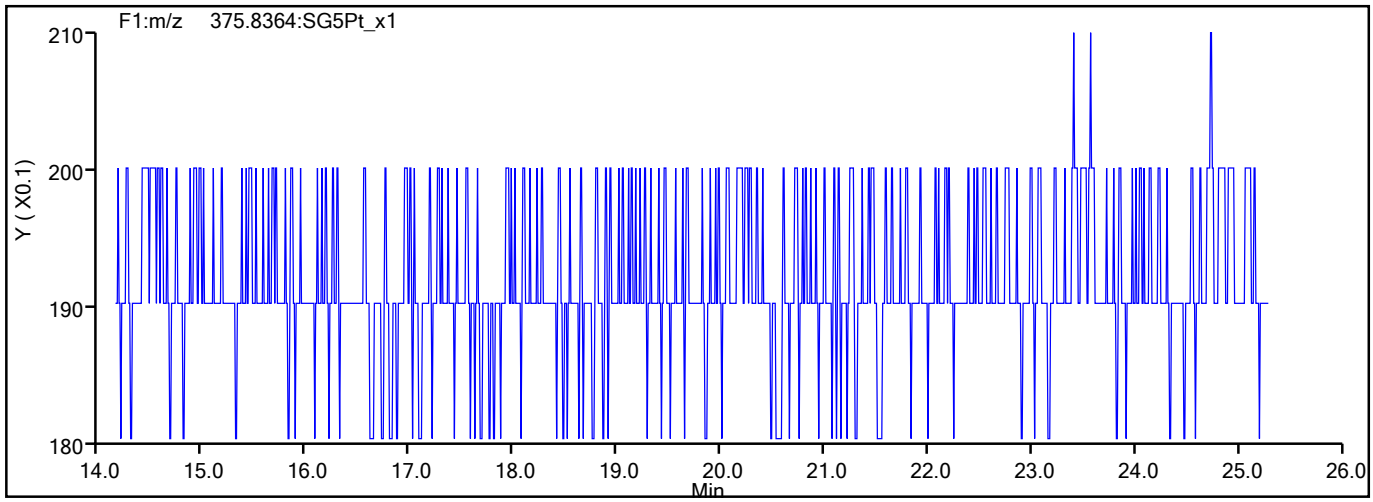

777226

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

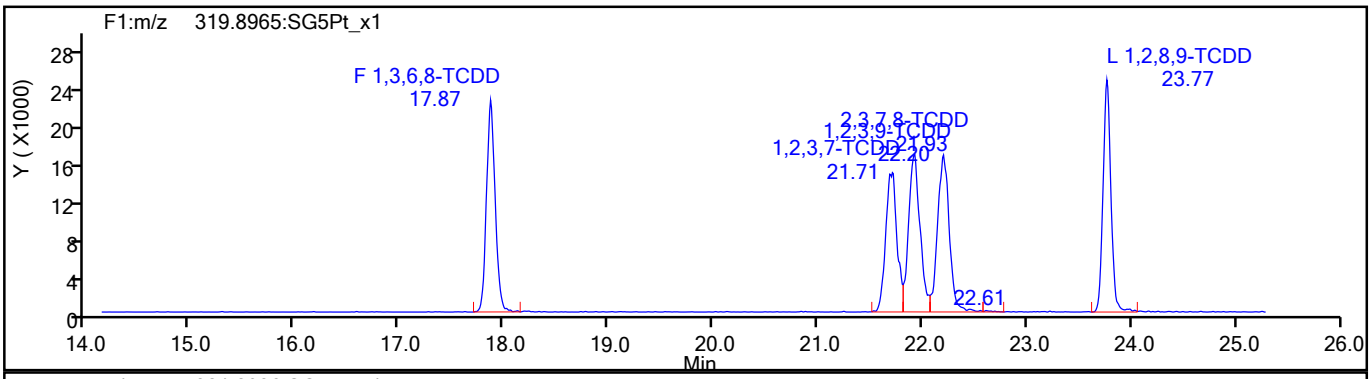

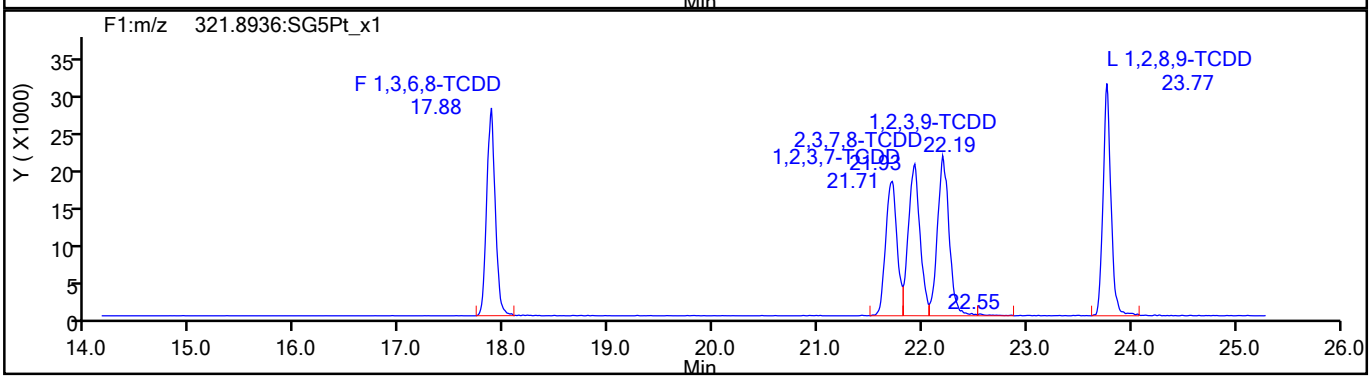

TCDD Standards

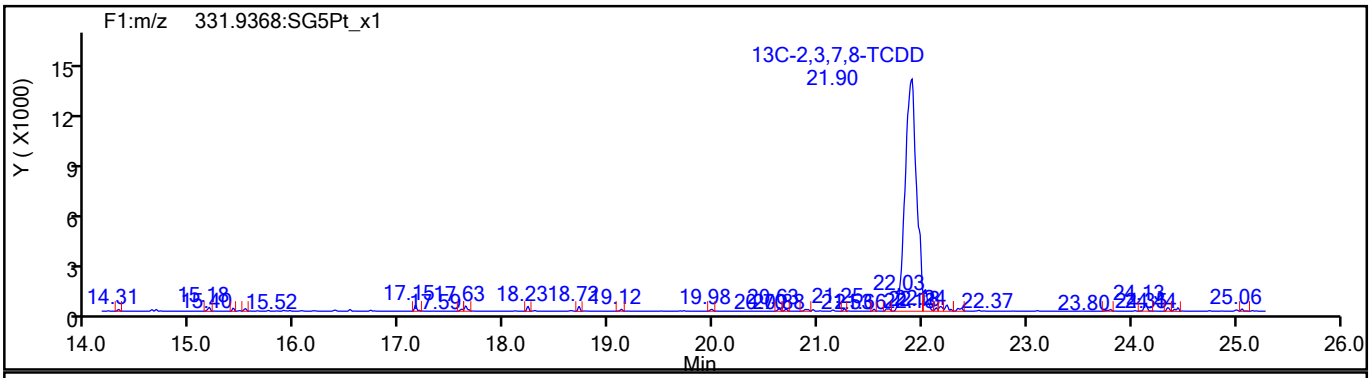

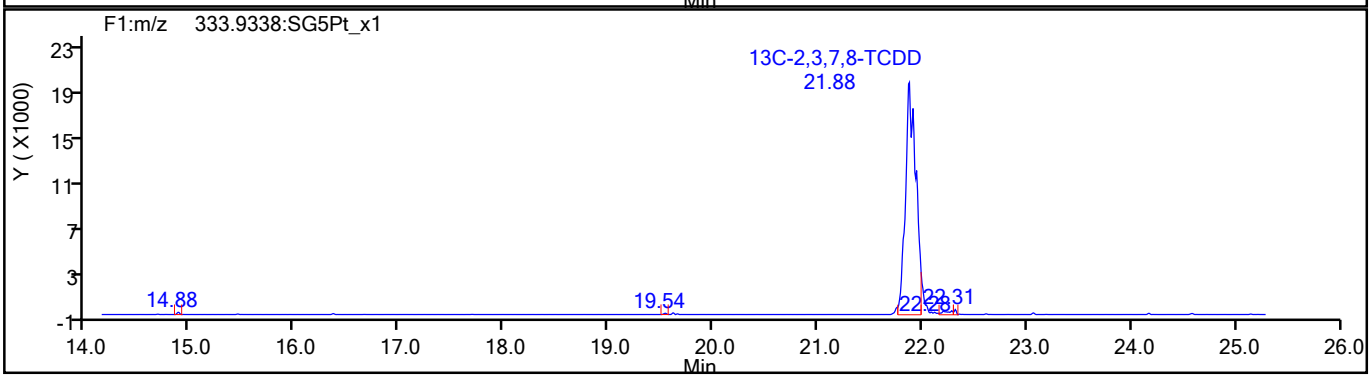

777227

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

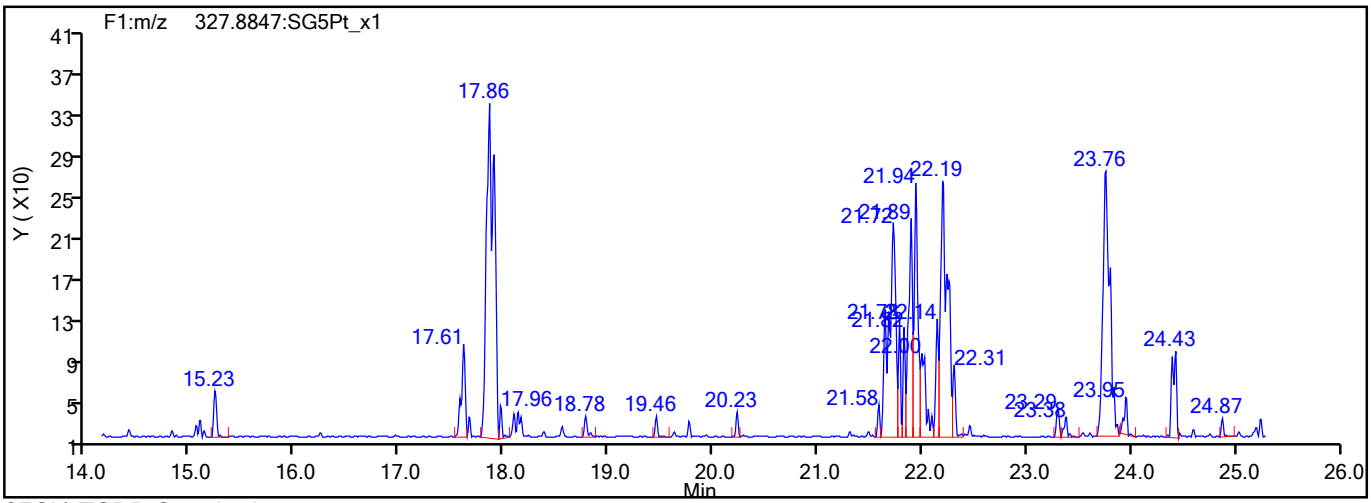

37Cl4-TCDD Standards

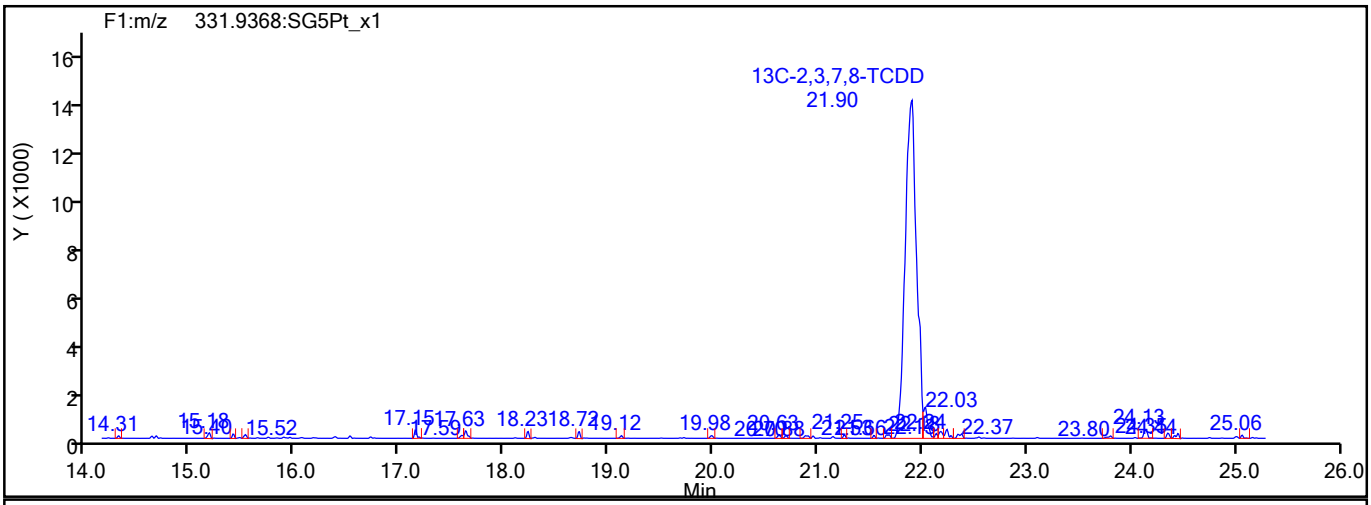

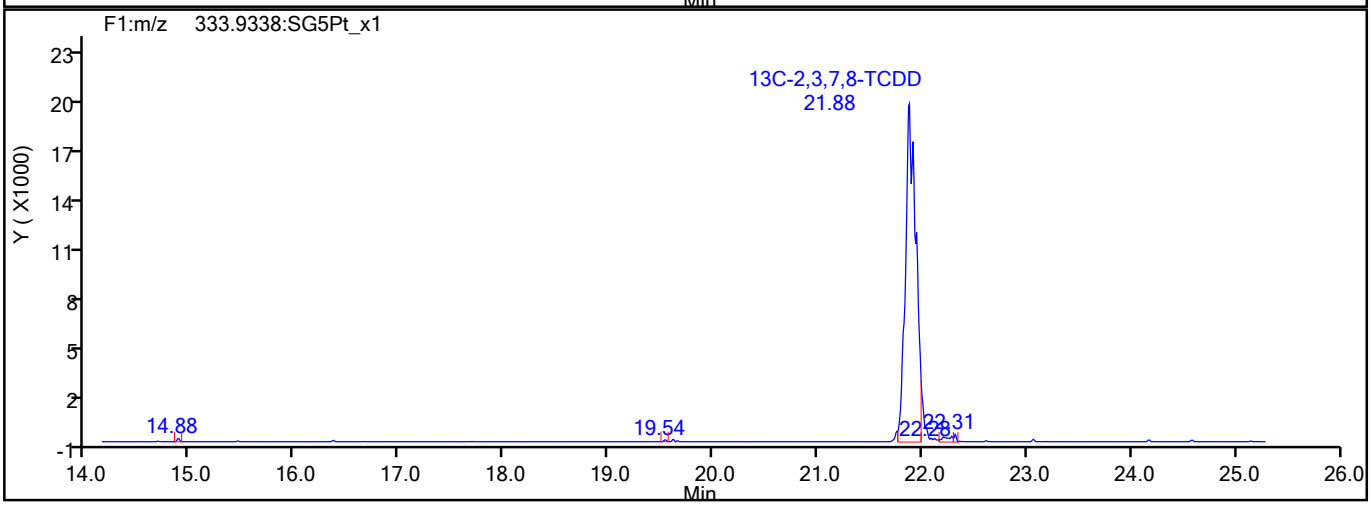

777228

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

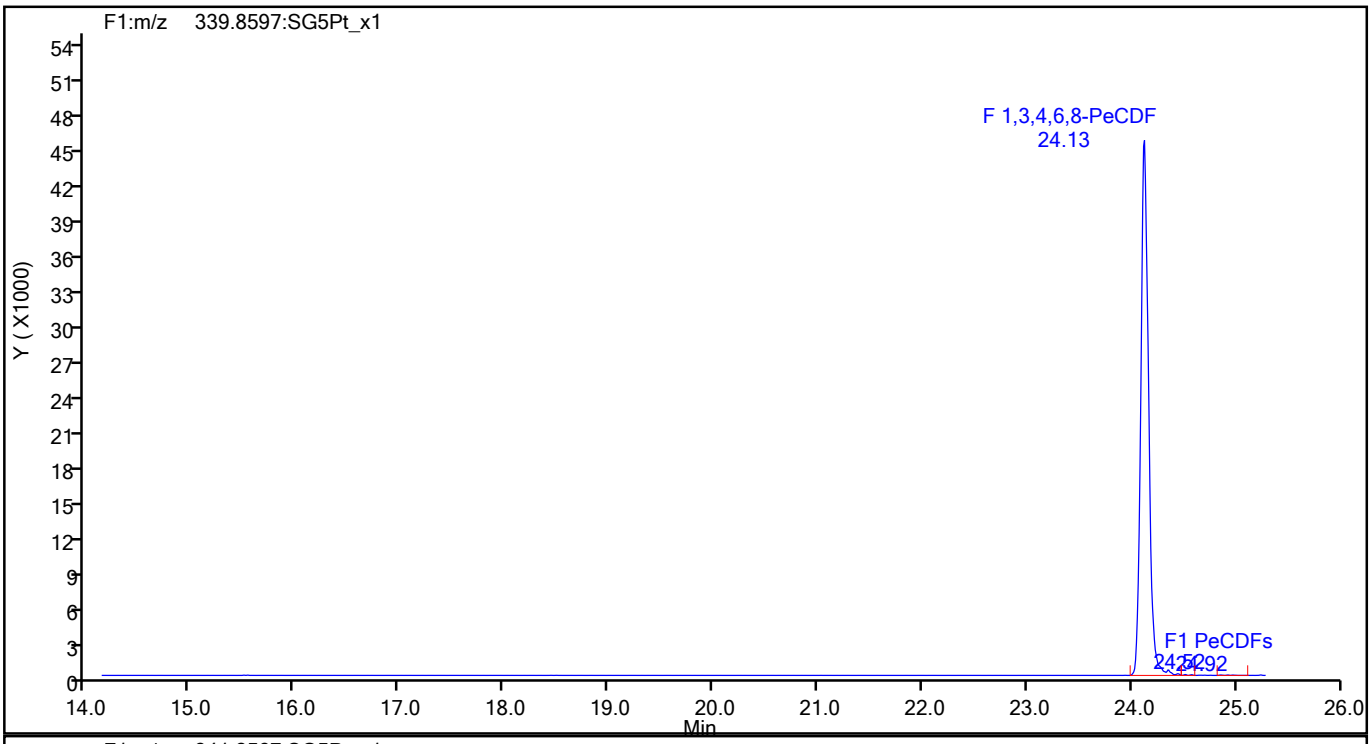

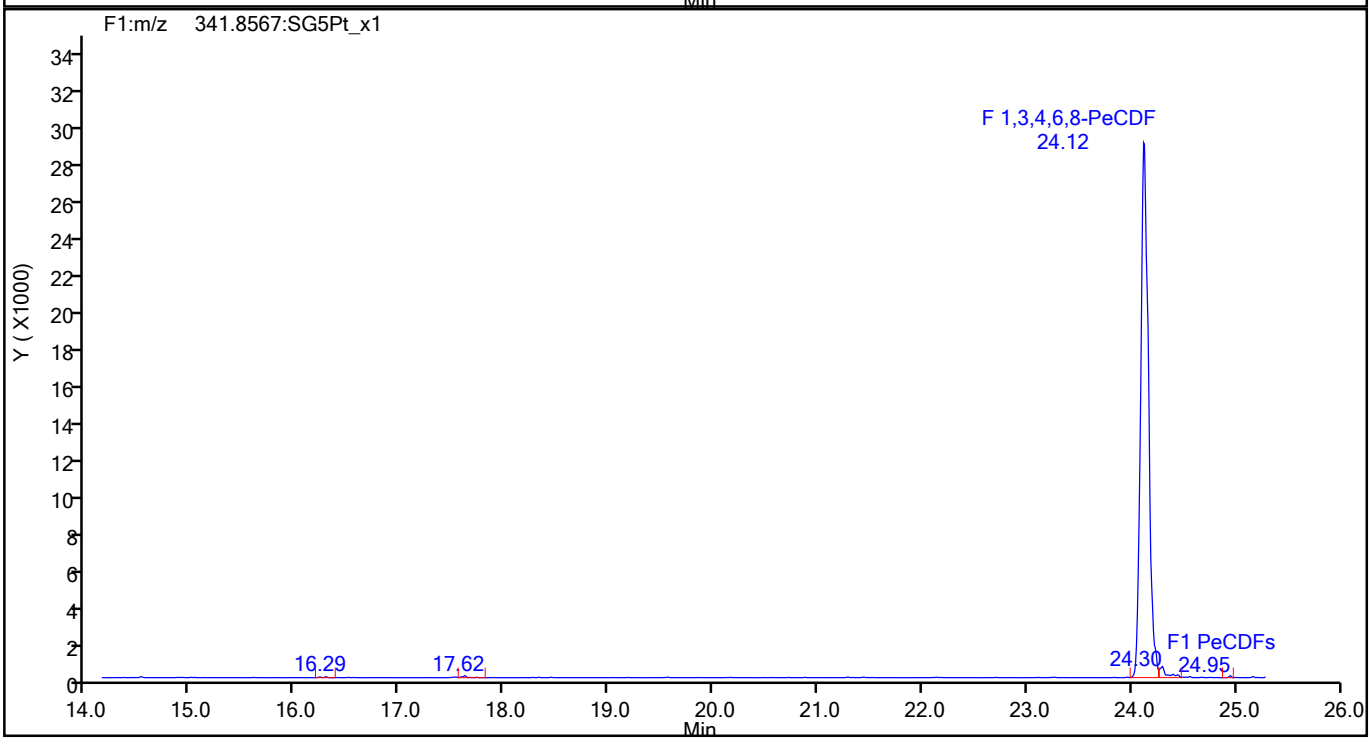

777229

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

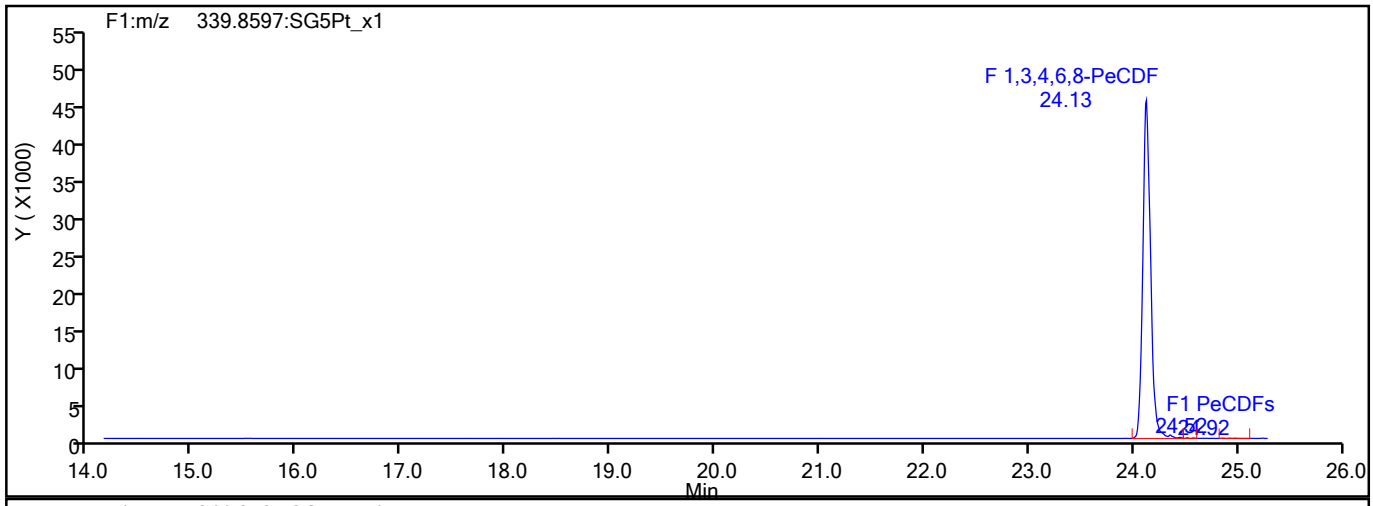

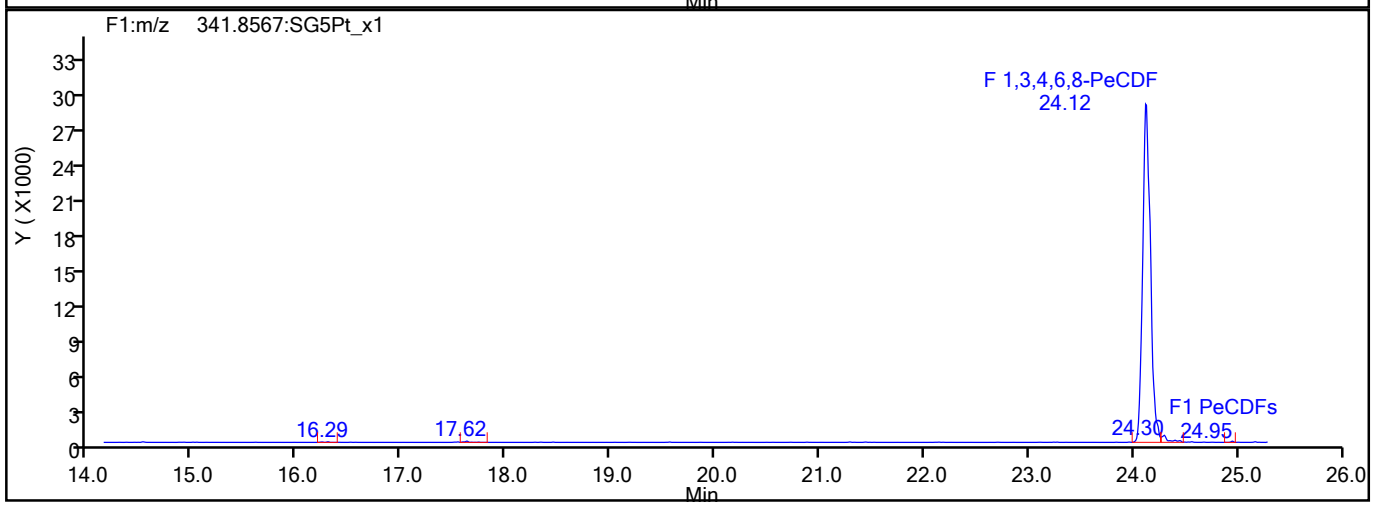

F1 PeCDFs Interference Mass

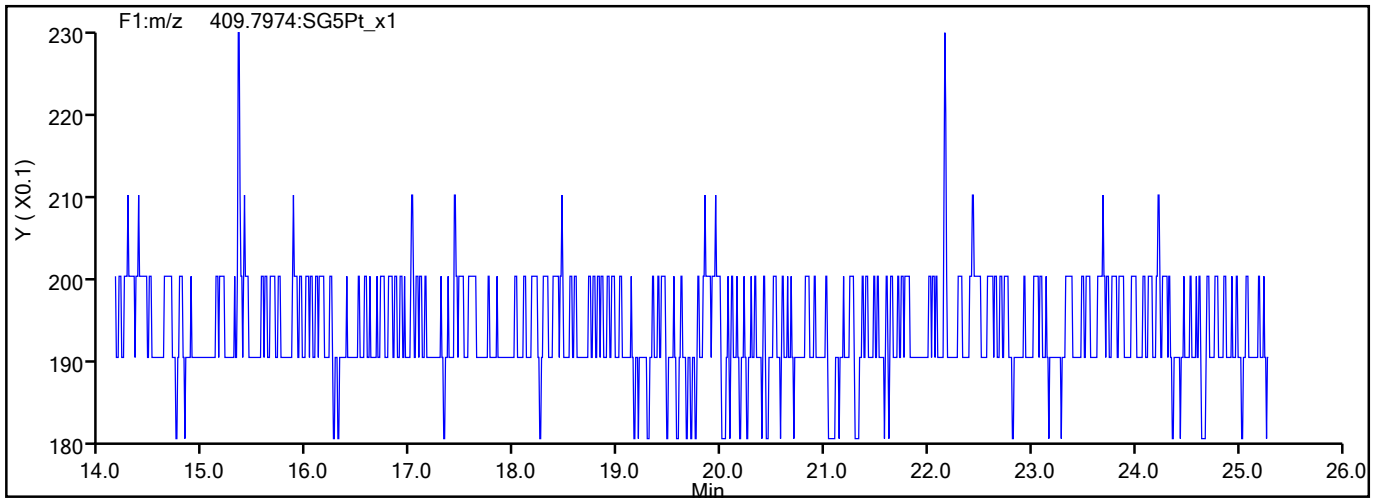

777230

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

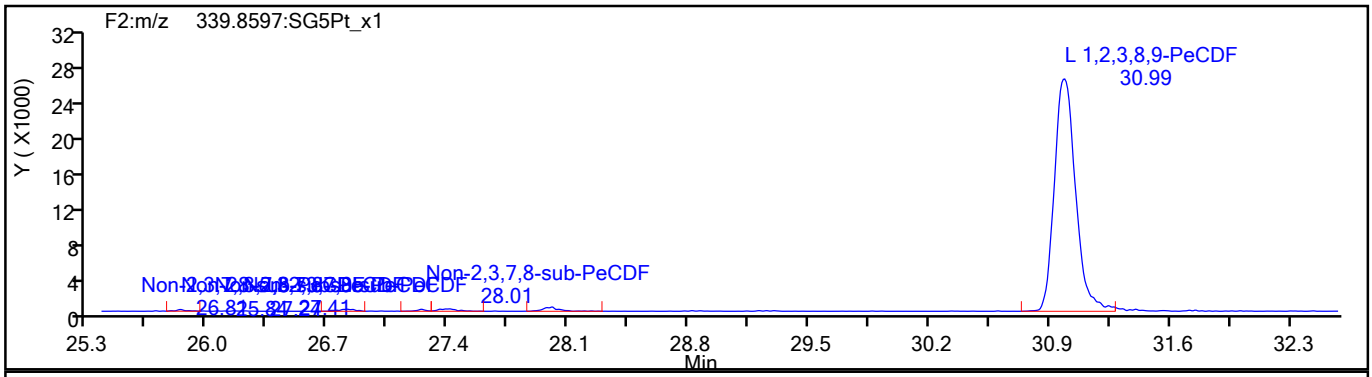

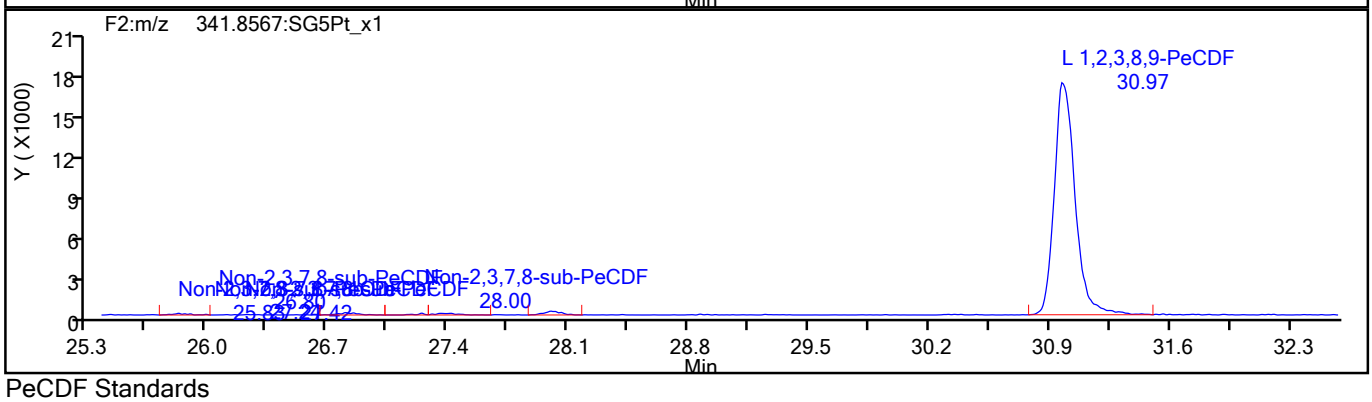

PeCDF Standards

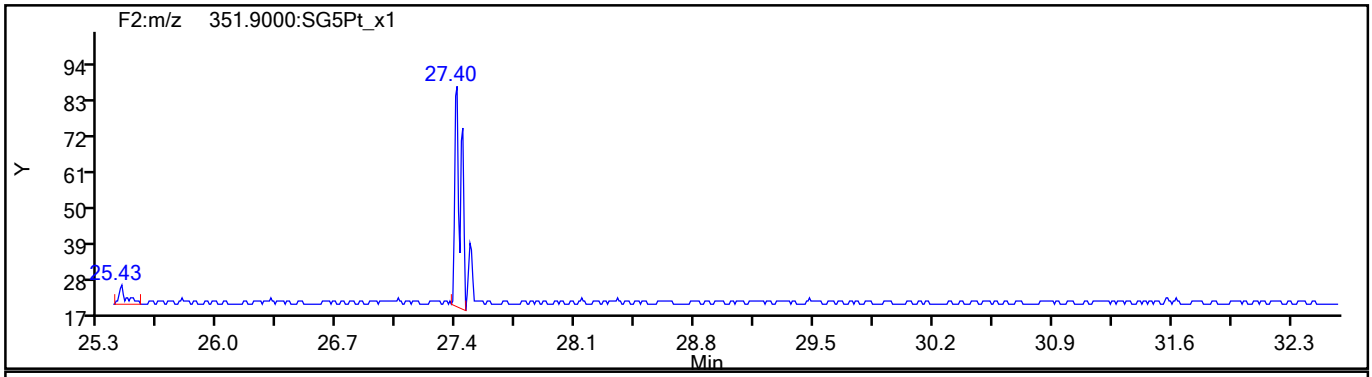

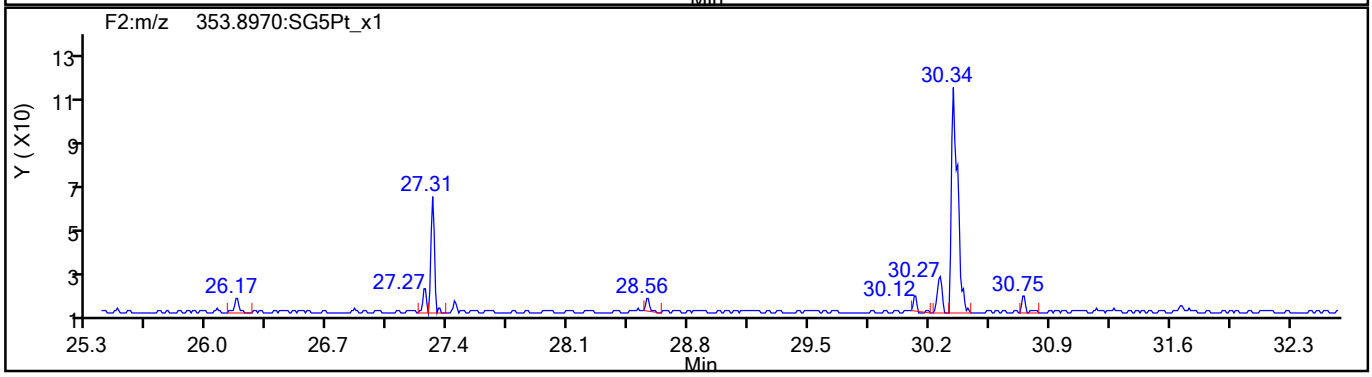

777231

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

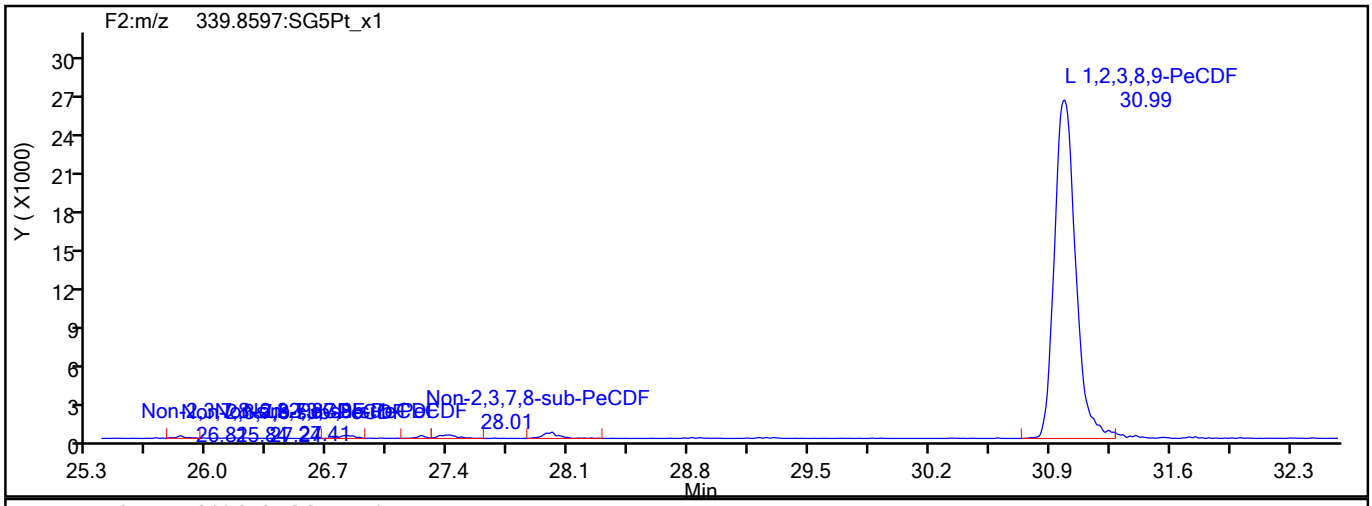

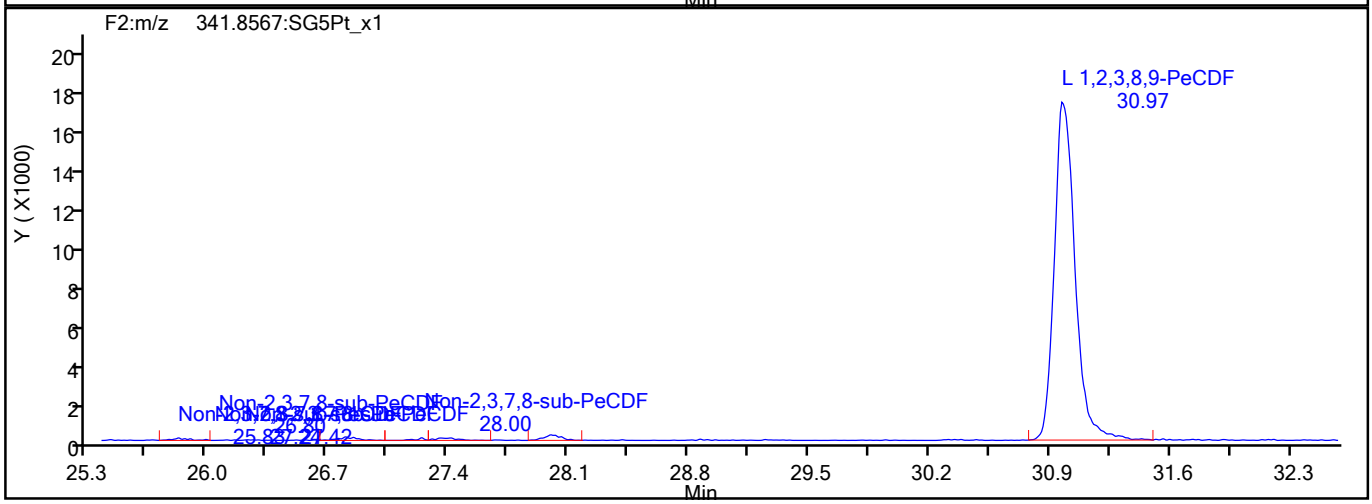

PeCDF Interference Mass

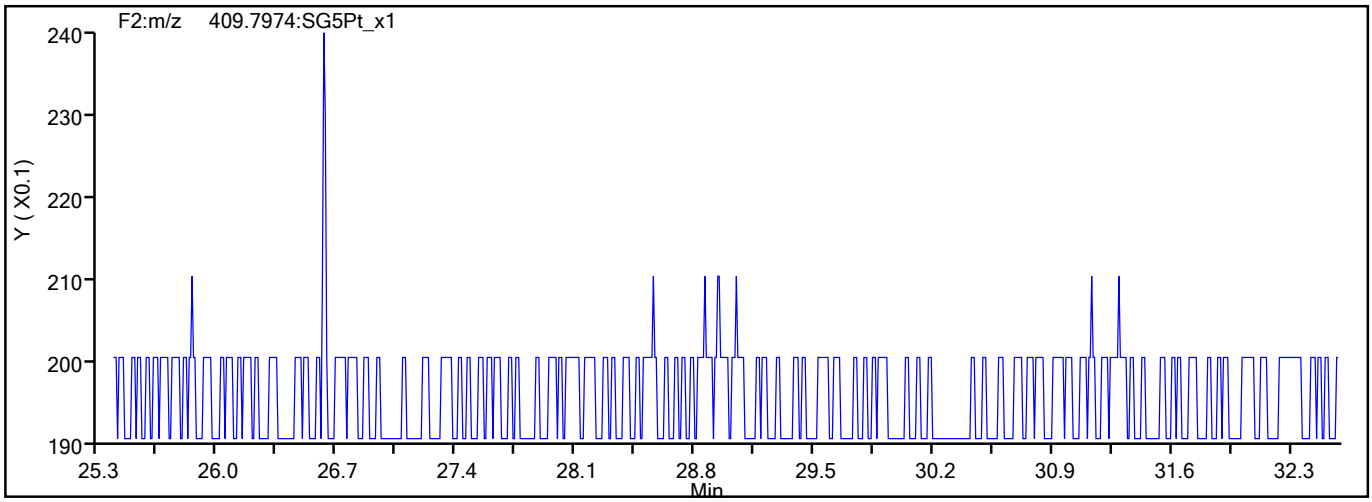

777232

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

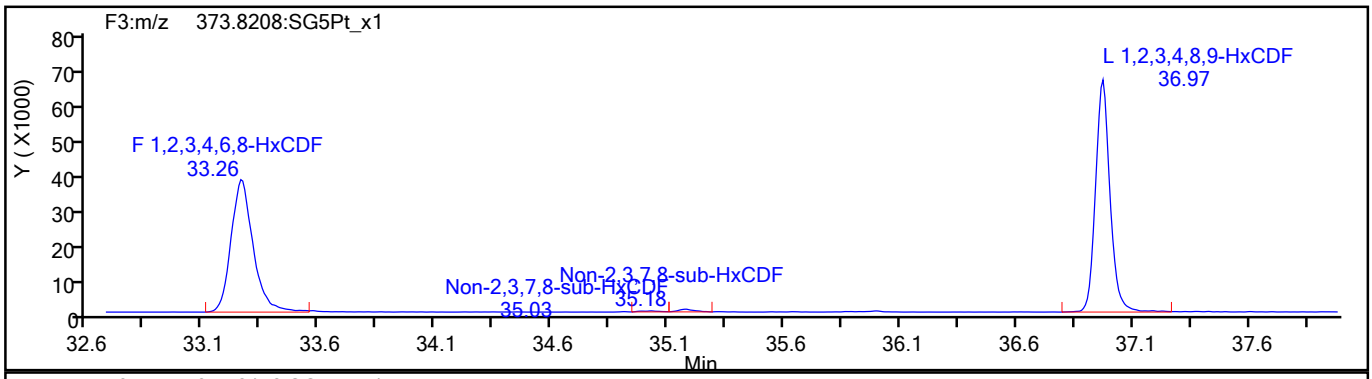

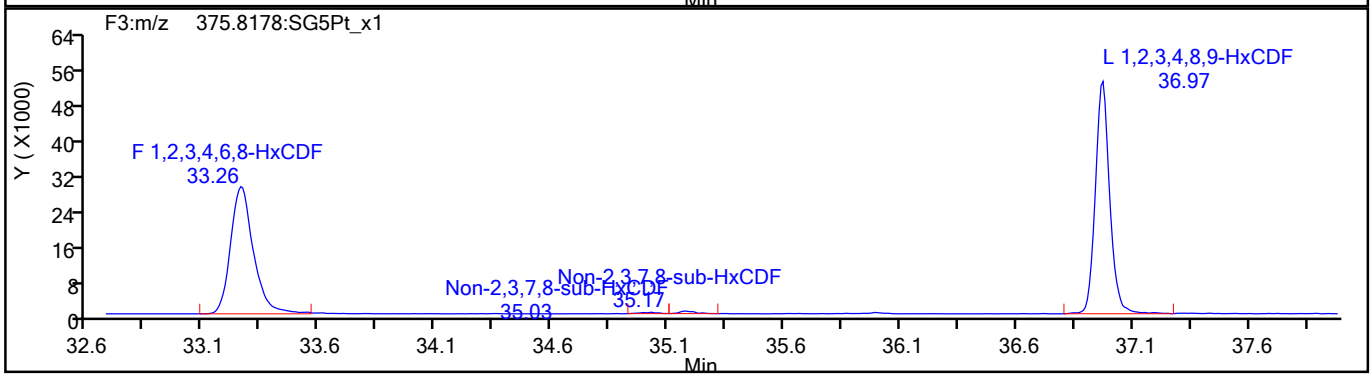

HxCDF Standards

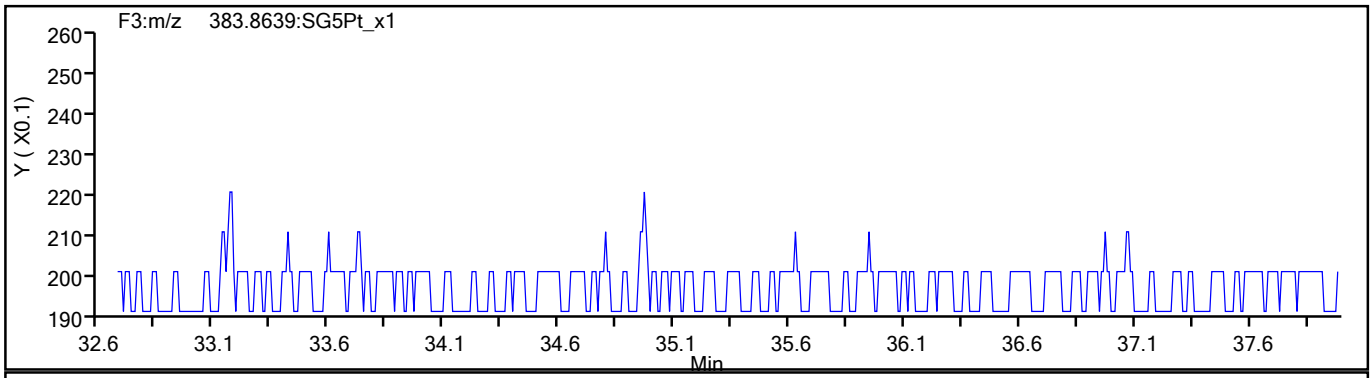

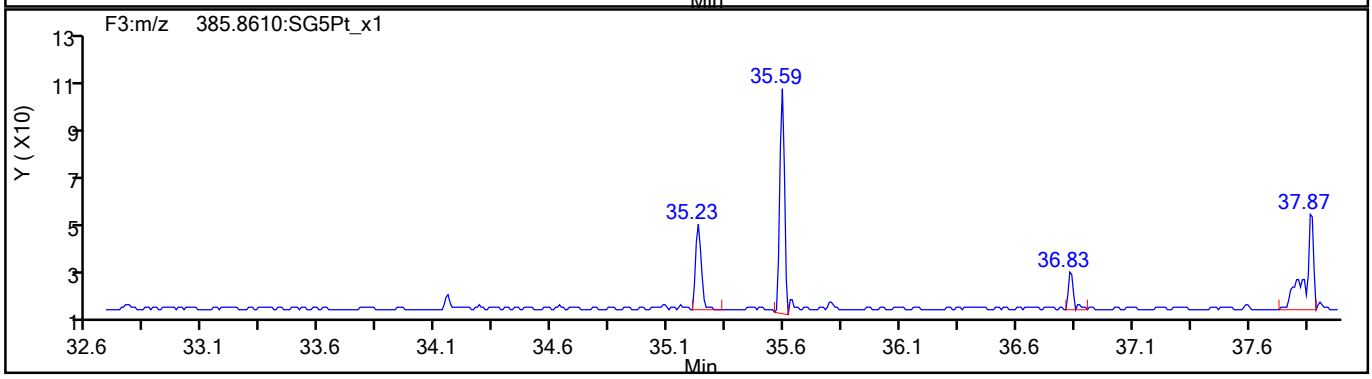

777233

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

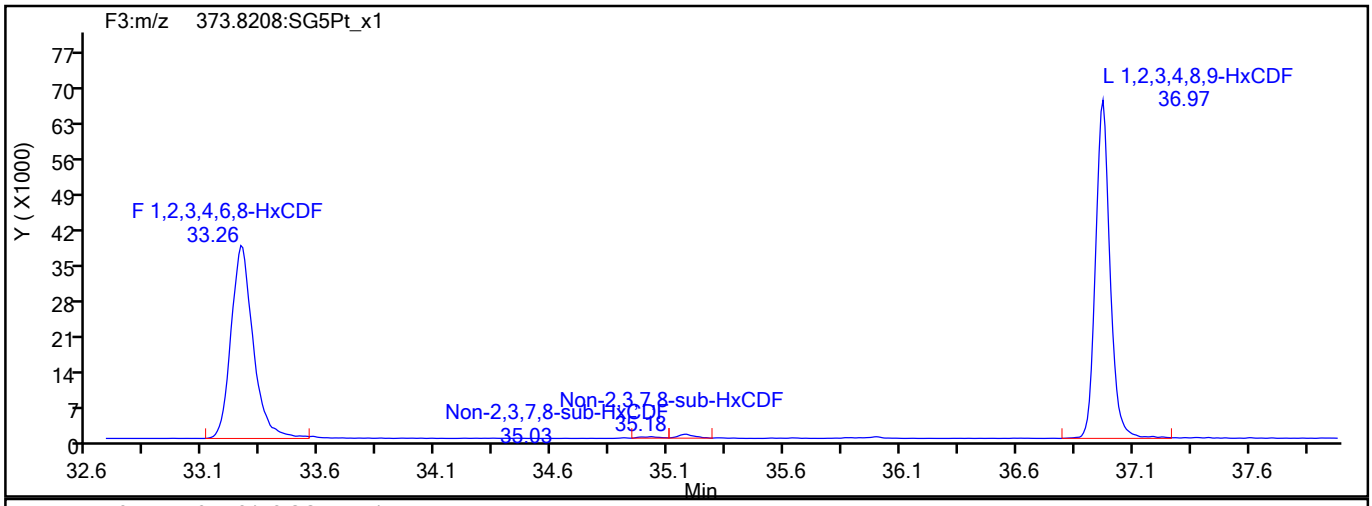

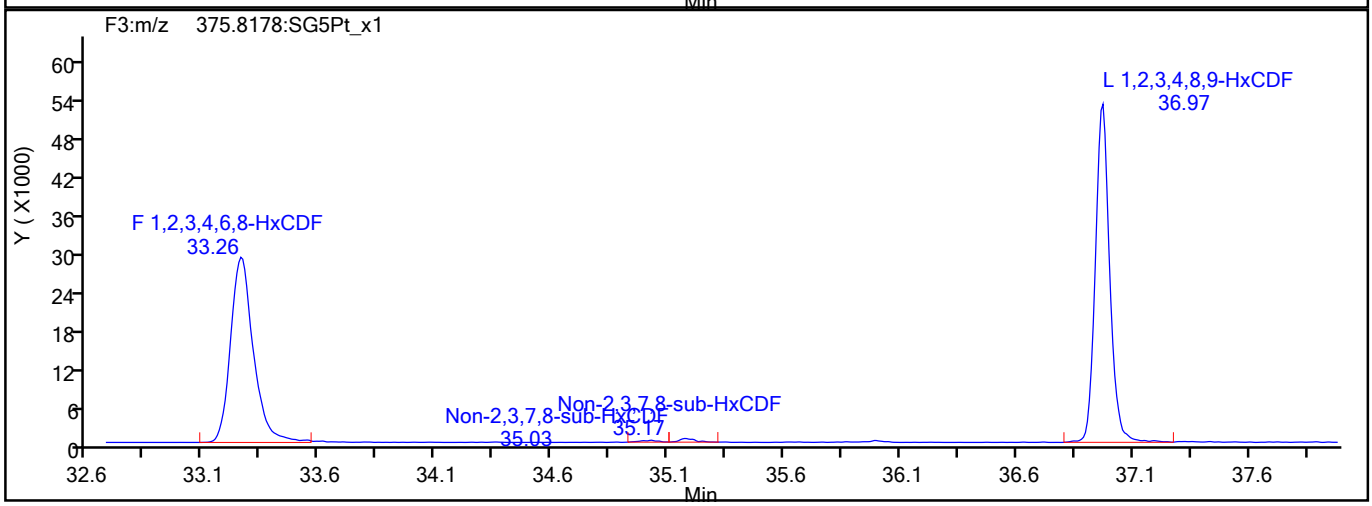

HxCDF Interference Mass

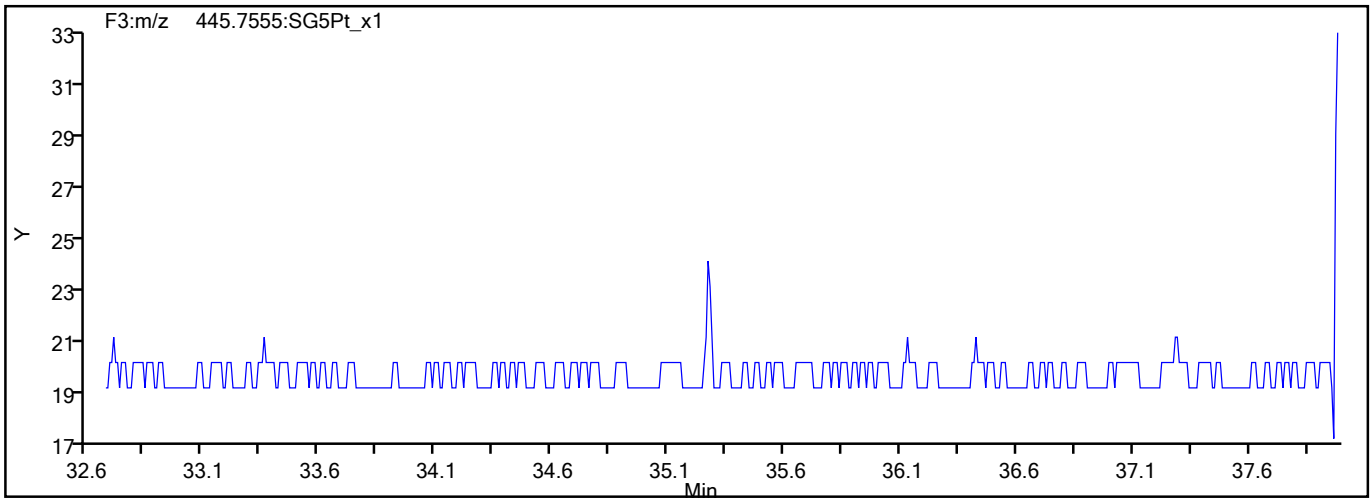

777234

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

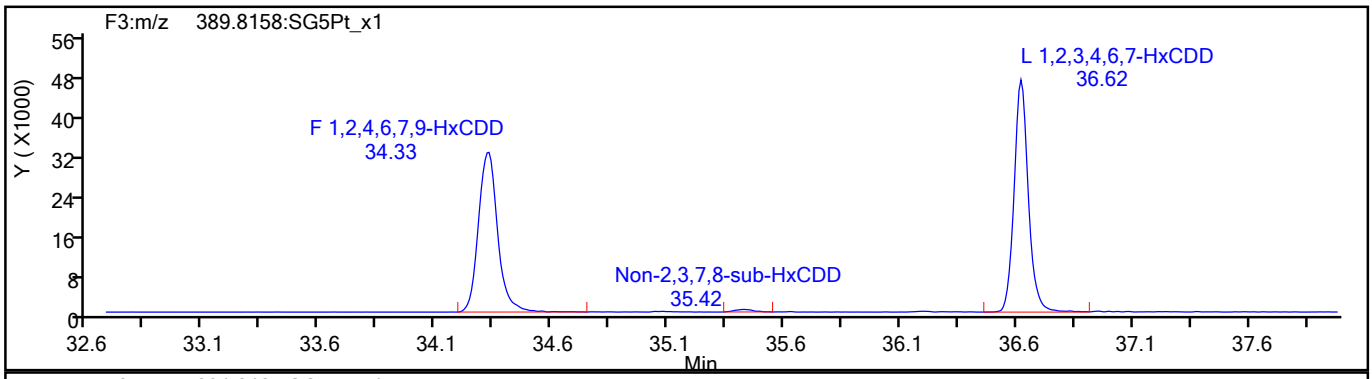

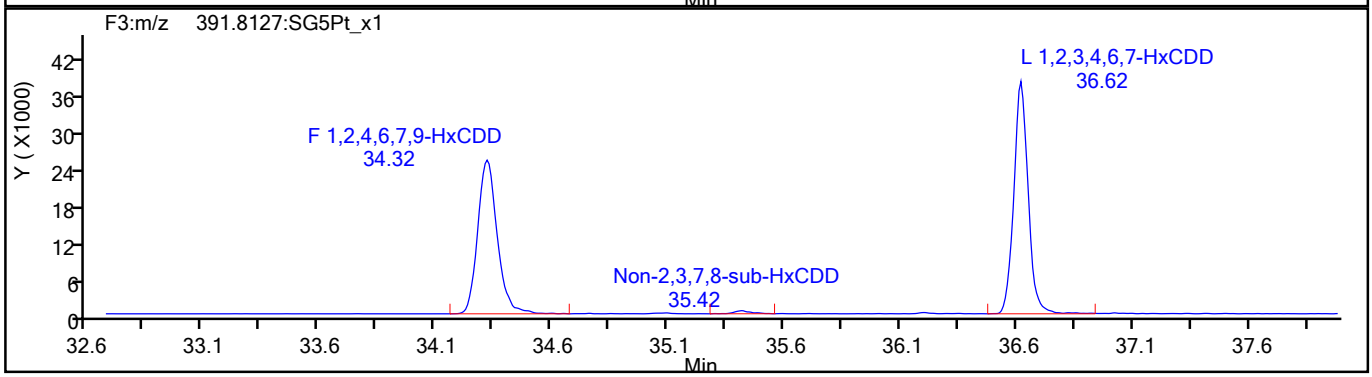

HxCDD Standards

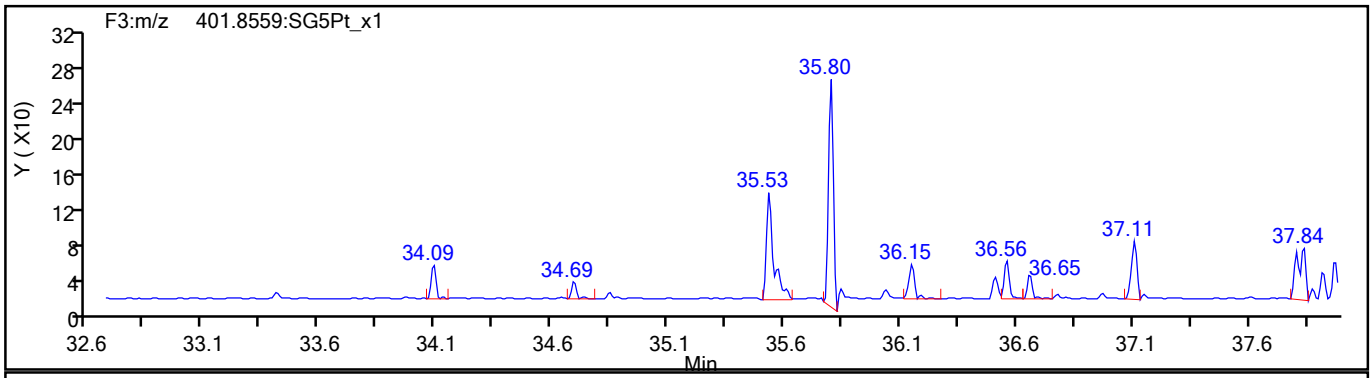

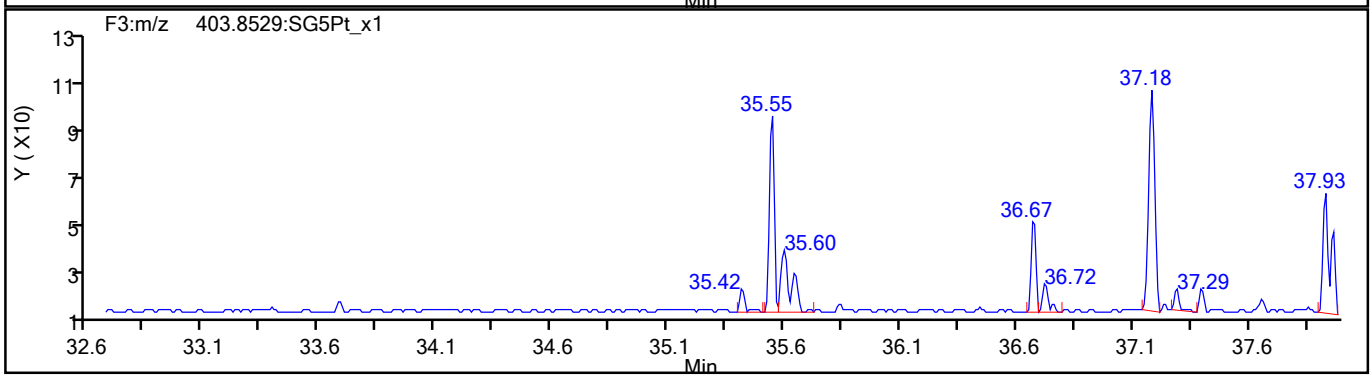

777235

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

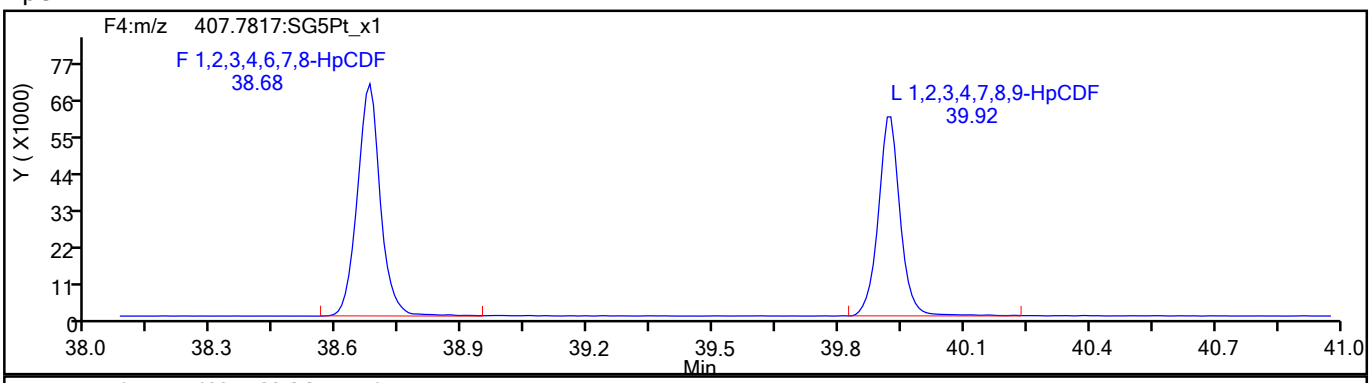

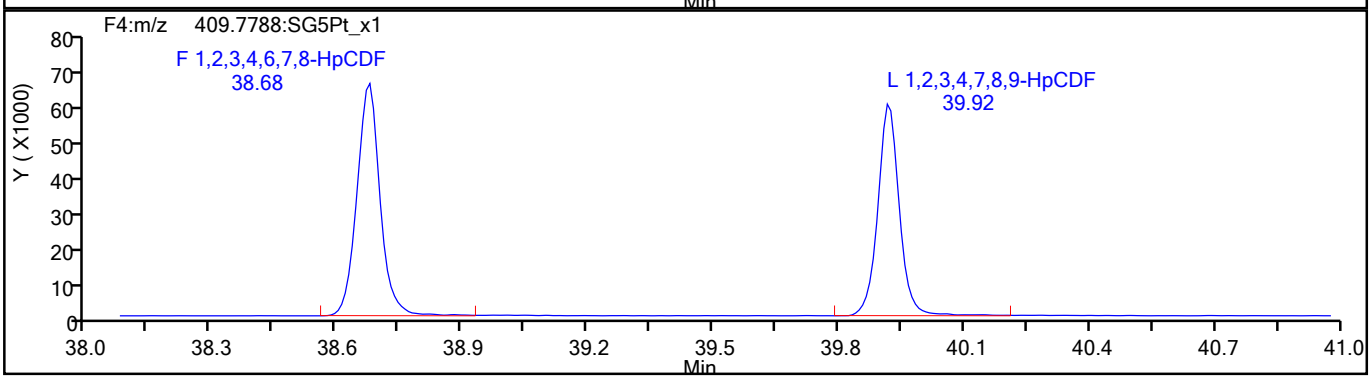

HpCDF Standards

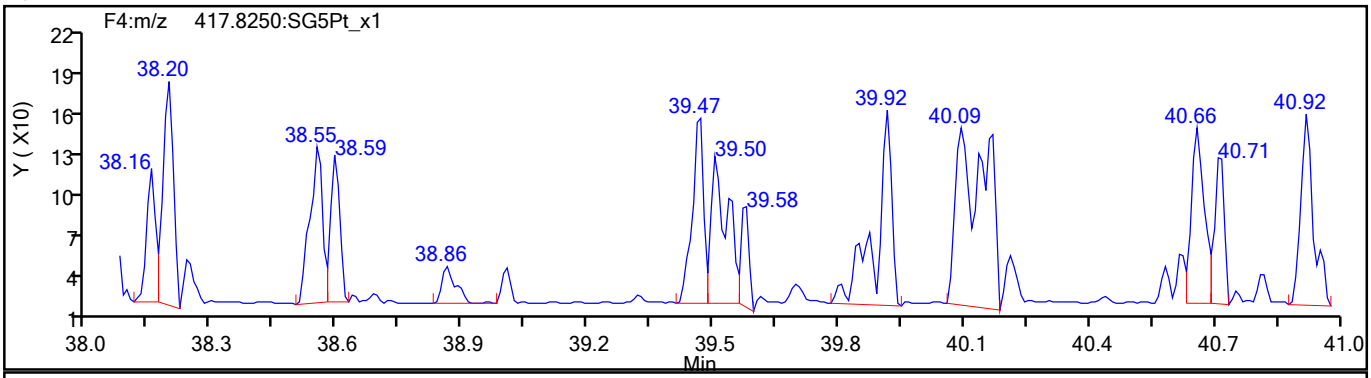

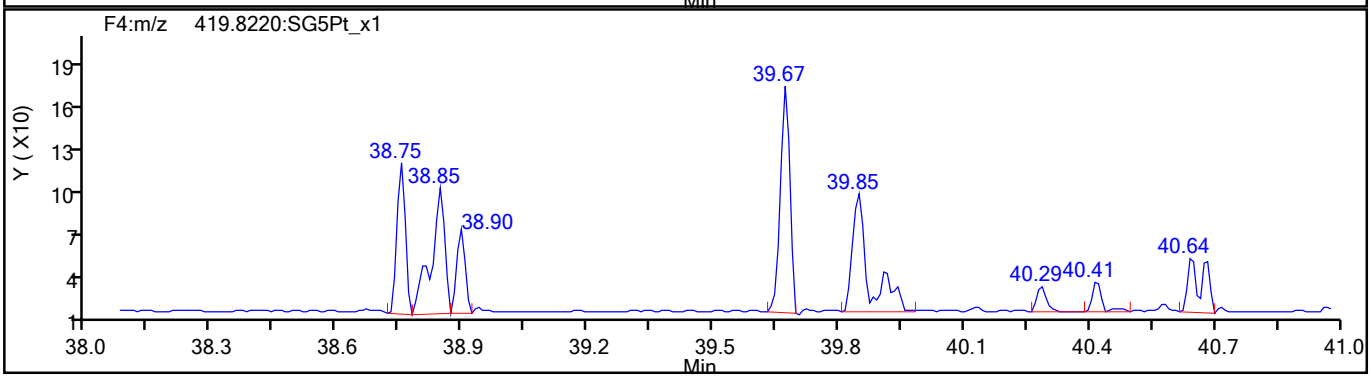

777236

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

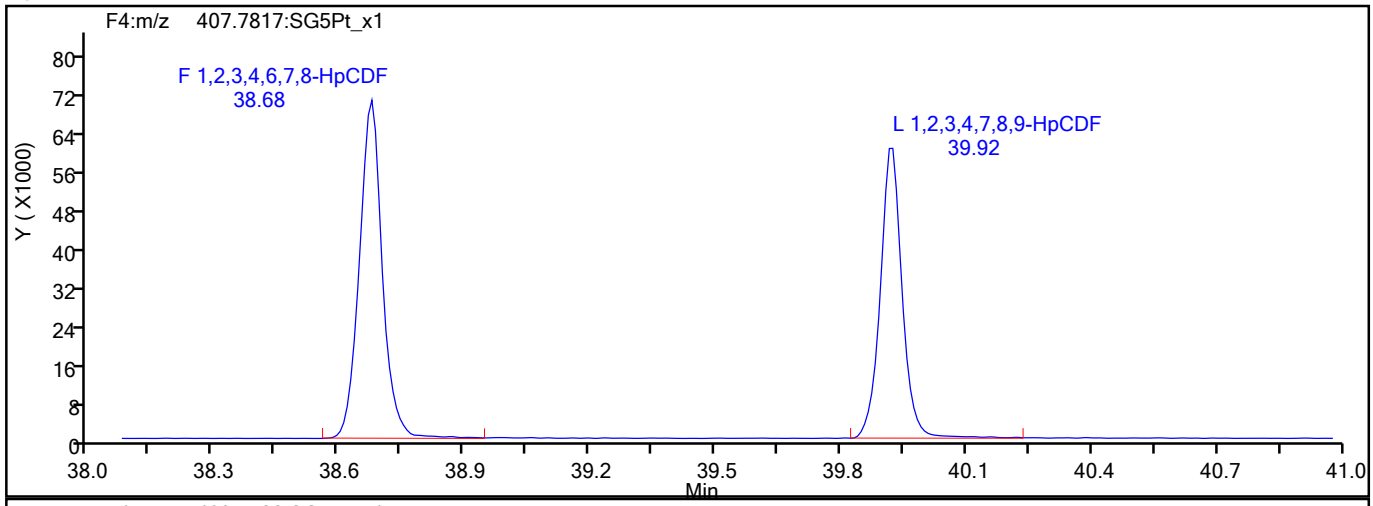

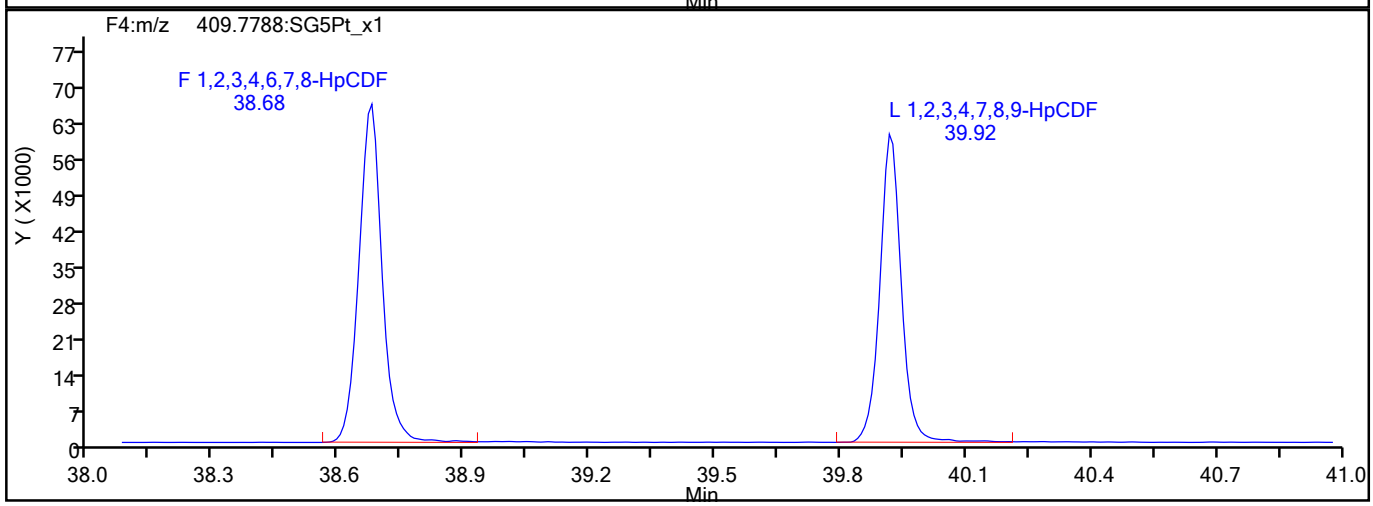

HpCDF Interference Mass

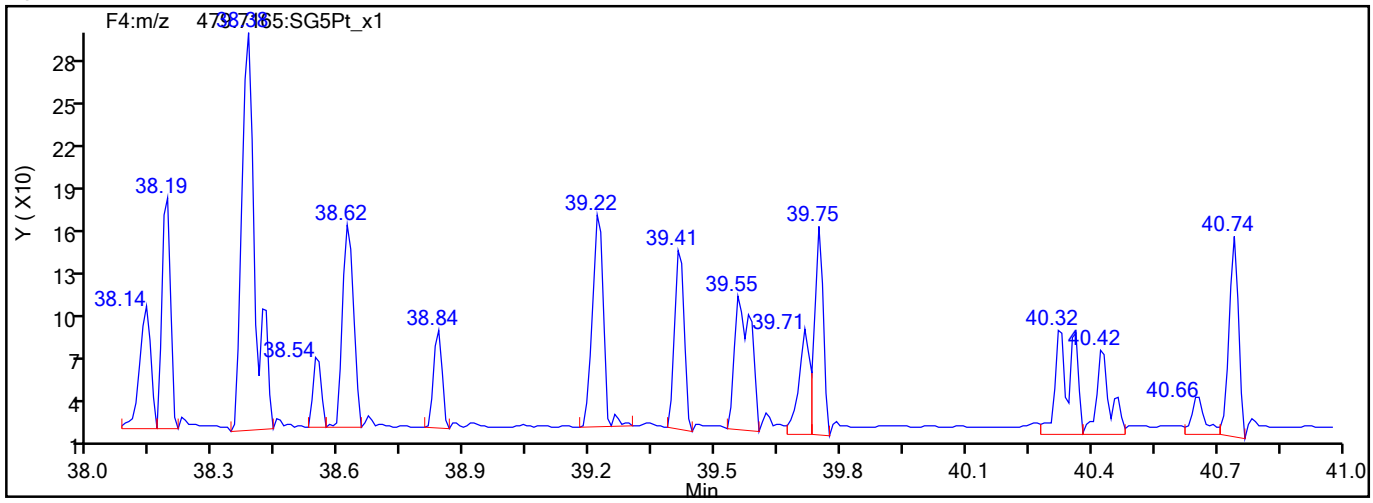

777237

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

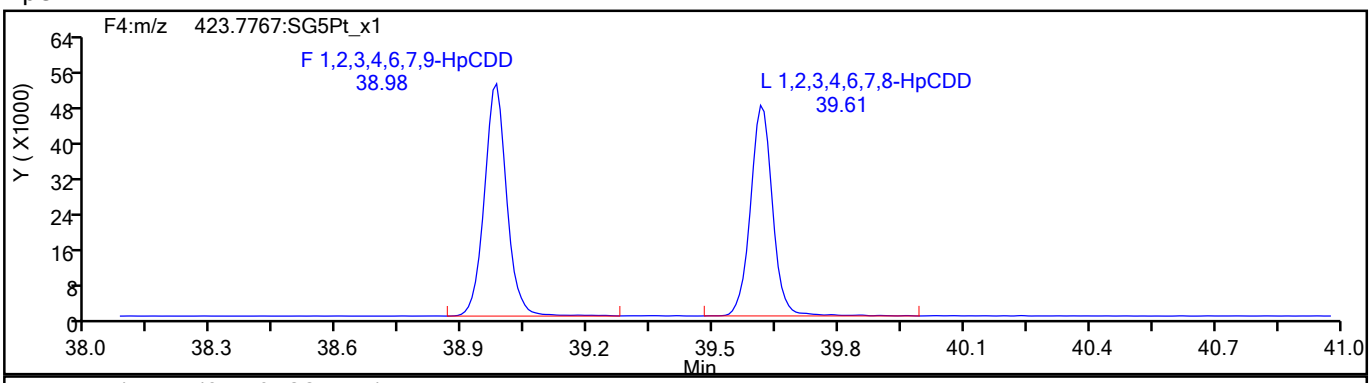

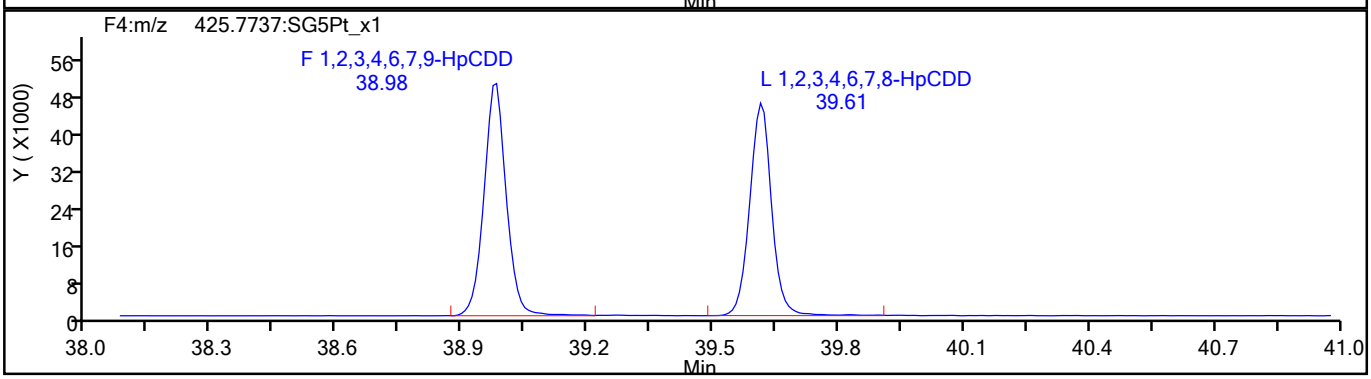

HpCDD Standards

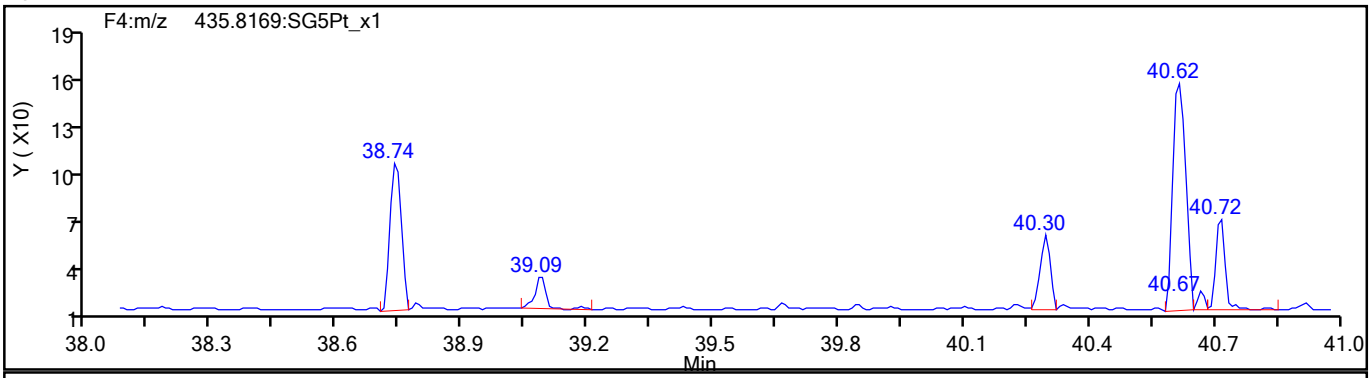

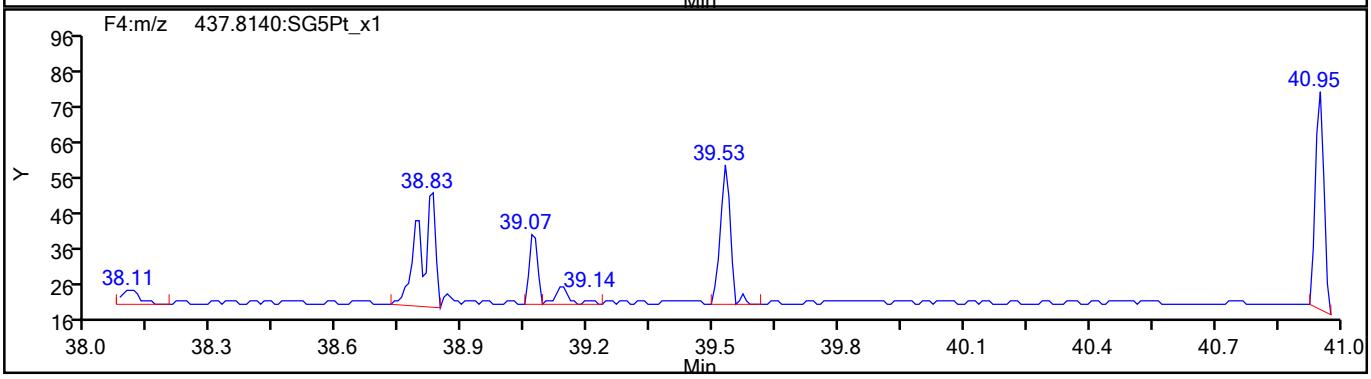

777238

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

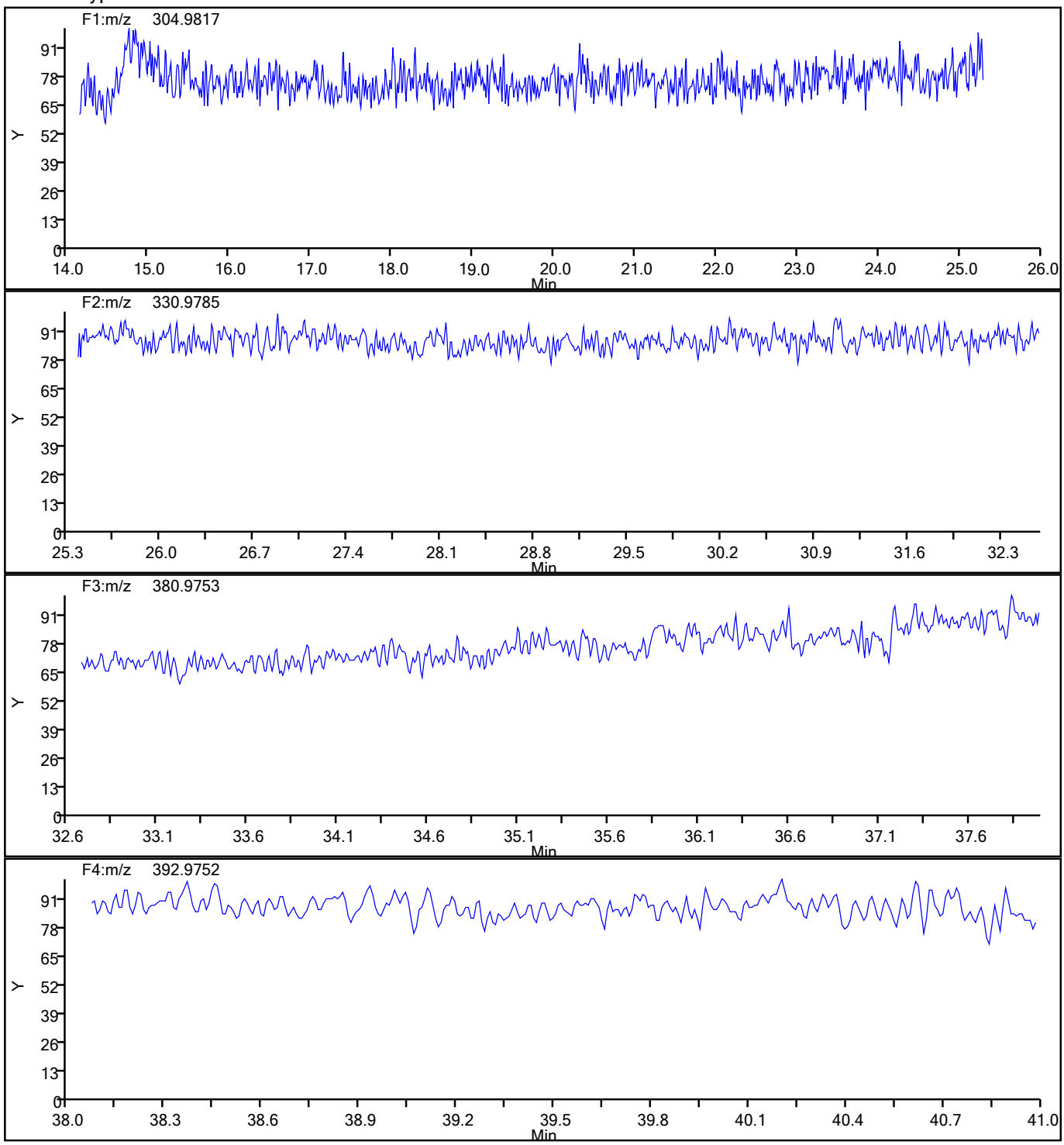

777239

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

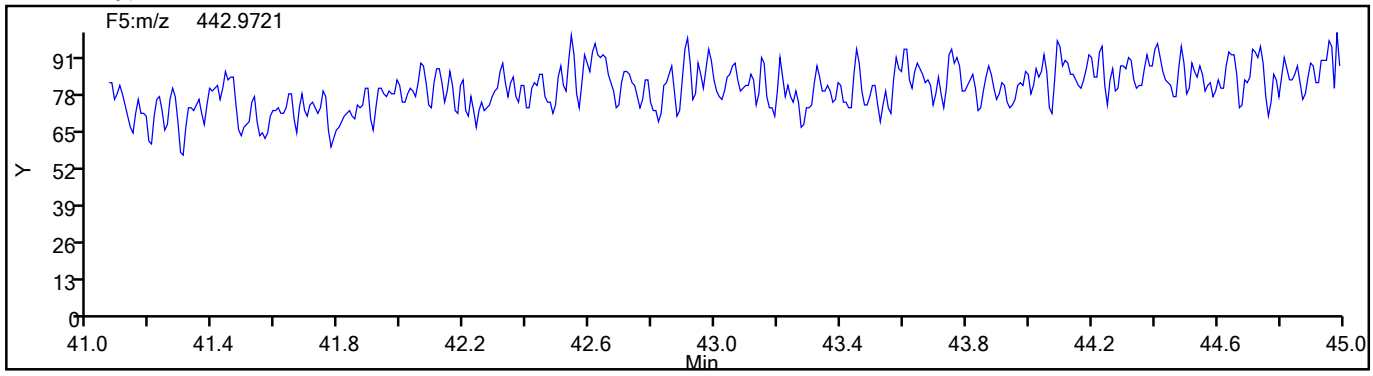

777240

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 02:55:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
2,3,7,8-TCDF	20.482	462457	0.73	1.0802	5438.2	5438.2	5.349	5.349		E
D 13C-2,3,7,8-TCDF	20.594	3149	0.93	1.3459					0.00	R
A Non-2,3,7,8-sub-TCDF	19.916	8786	0.77	1.0802	106.9	103.3	5.349	56.3		RQ
S Total TCDF					5545.1	5541.5	5.349	5.349		RQ
D 13C-2,3,7,8-TCDD	21.790	149359	0.71	0.9317					0.00	
2,3,7,8-TCDD	21.825	163506	0.79	1.0753	40.7	40.7	0.1407	0.1407		
A Non-2,3,7,8-sub-TCDD	20.750	1228	0.77	1.0753	0.3611	0.3058	0.1407	0.3058		RQ
S Total TCDD					41.1	41.0	0.1407	0.1407		RQ
A F1 PeCDFs	24.676						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	28.167	5463	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.556						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.074	4187	1.24	0.0000						RQ
S Total HxCDF										RQ
A Non-2,3,7,8-sub-HxCDD	35.432	3077	1.30	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.654	220428	1.04	1.4421						
1,2,3,4,7,8,9-HpCDF	39.900	199844	1.02	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.277						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.597	164185	1.04	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.277						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.183	265721	0.71							
1,3,6,8-TCDD	17.790	166185	0.82							
2,3,4,7-TCDF	20.482	462457	0.73							
1,2,3,7-TCDD	21.618	143186	0.76							
1,2,3,9-TCDF	22.006	191607	0.71							
1,2,3,9-TCDD	22.109	166850	0.79							
1,2,8,9-TCDF	23.649	195972	0.71							
1,2,8,9-TCDD	23.710	66144								

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,3,4,6,8-PeCDF	24.071	212213	1.60							
1,2,3,8,9-PeCDD	26.115	147669	1.57							
1,2,4,7,9-PeCDD	30.719	143633	1.60							
1,2,3,8,9-PeCDF	30.913	189150	1.56							
1,2,3,4,6,8-HxCDF	33.205	217265	1.24							
1,2,4,6,7,9-HxCDD	34.274	164975	1.28							
1,2,3,4,6,7-HxCDD	36.589	164395	1.26							
1,2,3,4,8,9-HxCDF	36.943	212653	1.19							
1,2,3,4,6,7,9-HpCDD	38.957	158509	1.07							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 02:55:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDF											E
303.9016	20.482	20.537	-3	0.995	195033	25531	21	52	1216		
305.8987	20.482	20.537	-3	0.995	267424	35779	36	90	994	0.73(0.65-0.89)	
13C-2,3,7,8-TCDF											R
315.9419	20.594	20.594	0	1.000	1515	523	14	35	37		
317.9389	20.637	20.594	3	1.000	1634	460	27	67	17	0.93(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.796	19.916	-67	0.913	595	146	21	52	7		
305.8987	18.762	19.916	-69	0.911	1078	203	36	90	6	0.55(0.65-0.89)	
	Empc Correction				772	189	36	90	5		
303.9016	19.751	19.916	-10	0.959	1160	216	21	52	10		
305.8987	19.759	19.916	-9	0.959	1472	267	36	90	7	0.79(0.65-0.89)	
303.9016	24.054	19.916	248	1.168	2062	334	21	52	16		
305.8987	24.046	19.916	247	1.168	2725	398	36	90	11	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.790	21.790	0	1.000	61924	8377	4	10	2094		
333.9338	21.799	21.790	1	1.000	87435	11448	1	2	11448	0.71(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.825	21.905	-5	1.002	71995	9349	16	40	584		
321.8936	21.816	21.905	-5	1.001	91511	11645	14	35	832	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.479	20.750	104	1.032	756	146	16	40	9		
	Empc Correction				534	91	16	40	6		
321.8936	22.531	20.750	107	1.034	694	119	14	35	9	1.09(0.65-0.89)	
A F1 PeCDFs											
339.8597	24.676						11	27			
341.8567	24.676						4	10			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.804	28.167	-142	1.000	425	67	13	32	5		
341.8567	25.762	28.167	-144	1.000	549	125	16	40	8	0.77(1.32-1.78)	
339.8597	26.746	28.167	-85	1.000	828	117	13	32	9		
341.8567	26.780	28.167	-83	1.000	363	73	16	40	5	2.28(1.32-1.78)	
339.8597	27.344	28.167	-49	1.000	1006	172	13	32	13		
341.8567	27.335	28.167	-50	1.000	832	105	16	40	7	1.21(1.32-1.78)	
339.8597	27.916	28.167	-15	1.000	1397	213	13	32	16		
341.8567	27.916	28.167	-15	1.000	787	138	16	40	9	1.78(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						14	35			
357.8516	28.556						10	25			
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	34.948	35.074	-8	1.000	835	149	35	87	4		
375.8178	34.973	35.074	-6	1.000	588	101	26	65	4	1.42(1.05-1.43)	
373.8208	35.124	35.074	3	1.000	2003	379	35	87	11		
375.8178	35.141	35.074	4	1.000	1234	298	26	65	11	1.62(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.385	35.432	-3	1.000	1738	276	23	57	12		
391.8127	35.369	35.432	-4	1.000	1339	253	18	45	14	1.30(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.654	38.654	0	1.000	112153	29783	44	110	677		
409.7788	38.654	38.654	0	1.000	108275	28966	35	87	828	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.900	39.900	0	1.000	100772	28275	44	110	643		
409.7788	39.900	39.900	0	1.000	99072	28616	35	87	818	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.277						44	110			
409.7788	39.277						35	87			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.597	39.597	0	1.000	83839	23245	30	75	775		
425.7737	39.588	39.597	-1	1.000	80346	22297	23	57	969	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.277						30	75			
425.7737	39.277						23	57			
1,3,6,8-TCDF											
303.9016	16.183	16.183	0		110656	20732	21	52	987		
305.8987	16.174	16.183	-1		155065	29700	36	90	825	0.71(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.790	17.790	0		74627	12096	16	40	756		
321.8936	17.782	17.790	-1		91558	15098	14	35	1078	0.82(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.482	20.482	0		195033	25531	21	52	1216		
305.8987	20.482	20.482	0		267424	35779	36	90	994	0.73(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7-TCDD											
319.8965	21.618	21.618	0		62041	8581	16	40	536		
321.8936	21.618	21.618	0		81145	11265	14	35	805	0.76(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.006	22.006	0		79525	10003	21	52	476		
305.8987	22.014	22.006	1		112082	15132	36	90	420	0.71(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.109	22.109	0		73542	9615	16	40	601		
321.8936	22.100	22.109	-1		93308	12054	14	35	861	0.79(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.649	23.649	0		81335	13400	21	52	638		
305.8987	23.658	23.649	1		114637	19189	36	90	533	0.71(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.710	23.710	0		66144	11936	16	40	746		
1,3,4,6,8-PeCDF											
339.8597	24.071	24.071	0		130490	23932	11	27	2176		
341.8567	24.063	24.071	-1		81723	14772	4	10	3693	1.60(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.115	26.115	0		90126	14014	14	35	1001		
357.8516	26.115	26.115	0		57543	8886	10	25	889	1.57(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.719	30.719	0		88424	11438	14	35	817		
357.8516	30.727	30.719	1		55209	7437	10	25	744	1.60(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.913	30.913	0		115346	13800	13	32	1062		
341.8567	30.921	30.913	1		73804	8928	16	40	558	1.56(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.205	33.205	0		120224	17363	35	87	496		
375.8178	33.197	33.205	-1		97041	14228	26	65	547	1.24(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.274	34.274	0		92566	15957	23	57	694		
391.8127	34.266	34.274	-1		72409	12820	18	45	712	1.28(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.589	36.589	0		91728	21178	23	57	921		
391.8127	36.589	36.589	0		72667	16993	18	45	944	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.943	36.943	0		115360	26865	35	87	768		
375.8178	36.943	36.943	0		97293	22438	26	65	863	1.19(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.957	38.957	0		82068	22904	30	75	763		
425.7737	38.957	38.957	0		76441	21326	23	57	927	1.07(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	18-Aug-2021 02:55:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	16

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	3149	983

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	3149	983

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.796	595	146	1078	203	19.7	0.55	RQ
18.796	595	146	772	189	16.1		Empc Correction
19.751	1160	216	1472	267	31.0	0.79	
24.054	2062	334	2725	398	56.3	0.76	
Signal Totals:							
	3817	696	4969	854			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9092	1564				0.72	RQ
	8786	1550					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 106.917 = (9092 * 40.000) / (3149 * 1.080)
Empc Amount: 103.318 = (8786 * 40.000) / (3149 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 02:55:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517281 Lims Sample ID: 16

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	40.000	149359	19825

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		40.000	149359	19825

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.479	756	146	694	119	0.3611	1.09	RQ
22.479	534	91	694	119	0.3058		Empc Correction
Signal Totals:							
	534	91	694	119			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1450	265				1.09	RQ
	1228	210					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3611 = (1450 * 40.000) / (149359 * 1.075)
Empc Amount: 0.3058 = (1228 * 40.000) / (149359 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	18-Aug-2021 02:55:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	16

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.804	425	67	549	125		0.77	R
26.746	828	117	363	73		2.28	R
27.344	1006	172	832	105		1.21	R
27.916	1397	213	787	138		1.78	
Signal Totals:							
	3656	569	2531	441			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6187	1010				1.44	RQ
	5463	929					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (6187 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (5463 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	18-Aug-2021 02:55:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	16

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
34.948	835	149	588	101		1.42	
35.124	2003	379	1234	298		1.62	R
Signal Totals:							
	2838	528	1822	399			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4660	927				1.56	RQ
	4187	917					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (4660 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (4187 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 02:55:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517281 Lims Sample ID: 16

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.385	1738	276	1339	253		1.30	
Signal Totals:							
	1738	276	1339	253			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3077	529				1.30	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (3077 * 0.0) / (0 * 0.000)

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

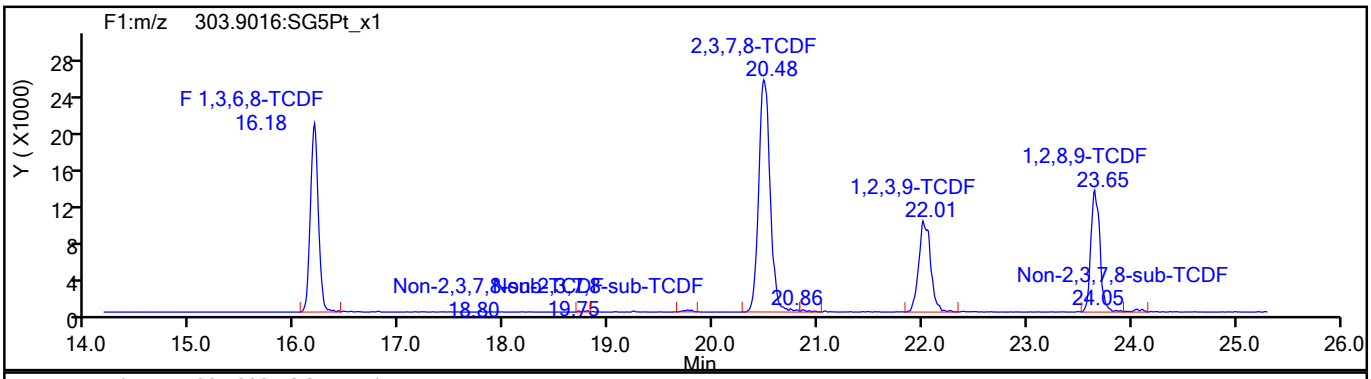

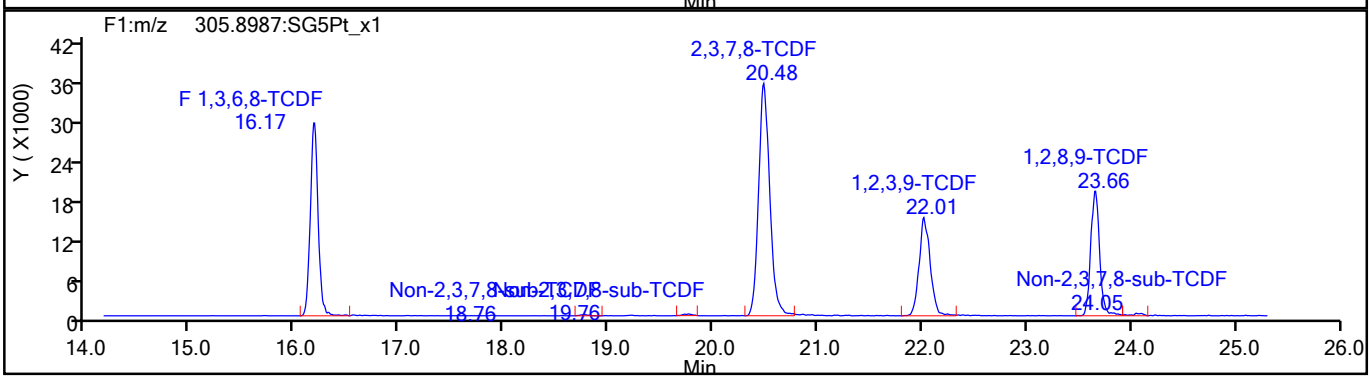

TCDF Standards

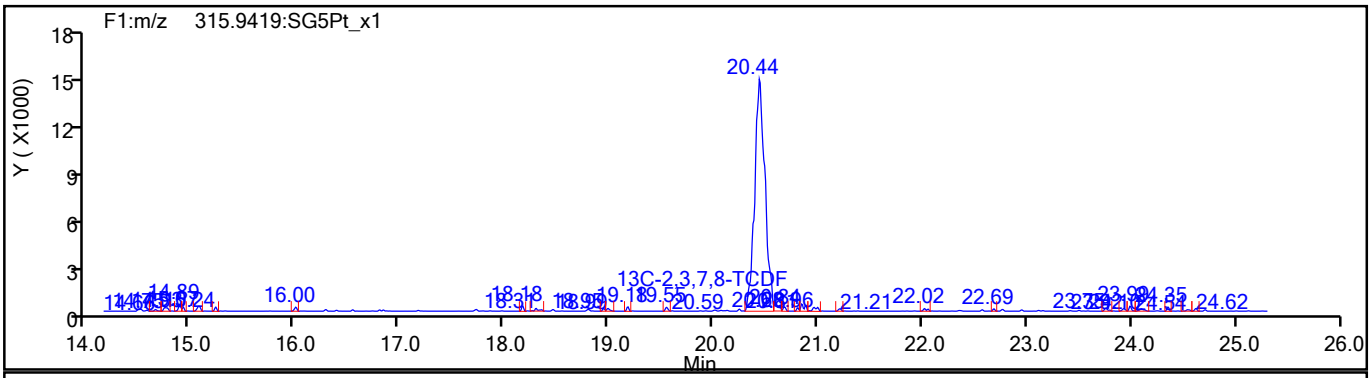

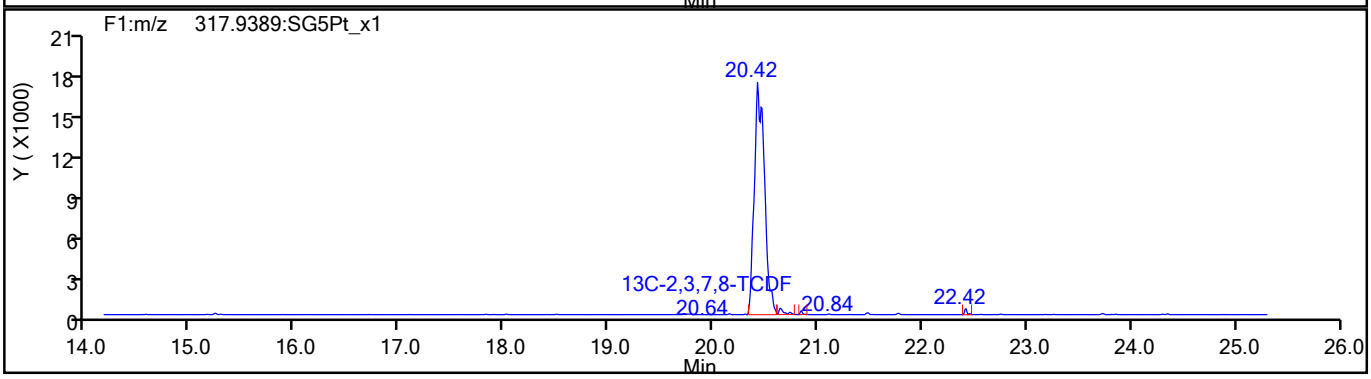

777252

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

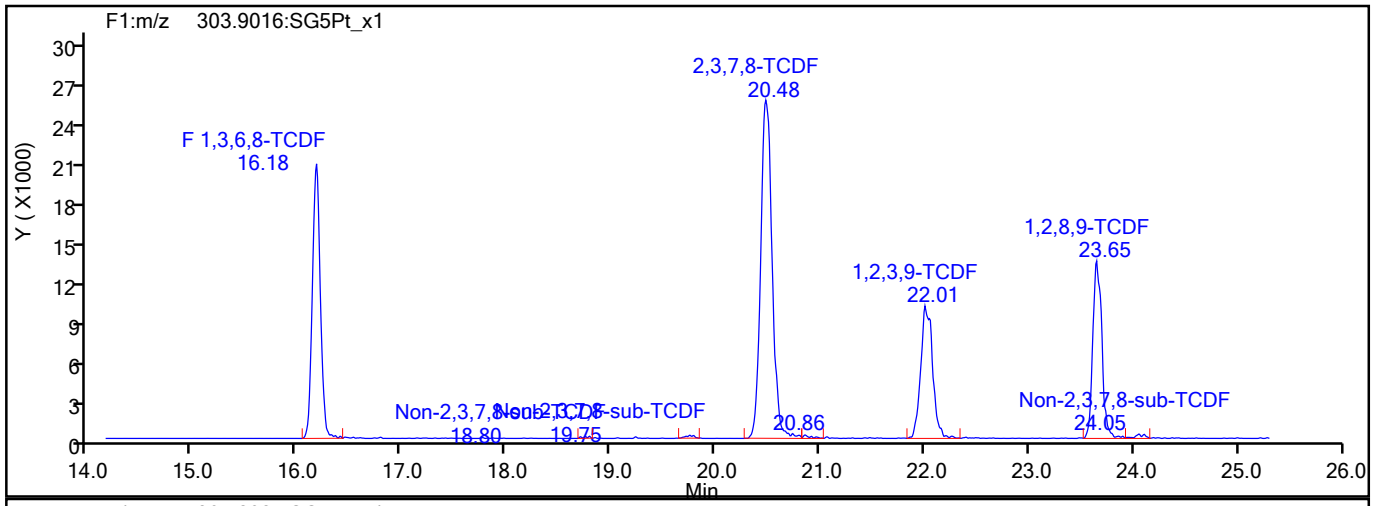

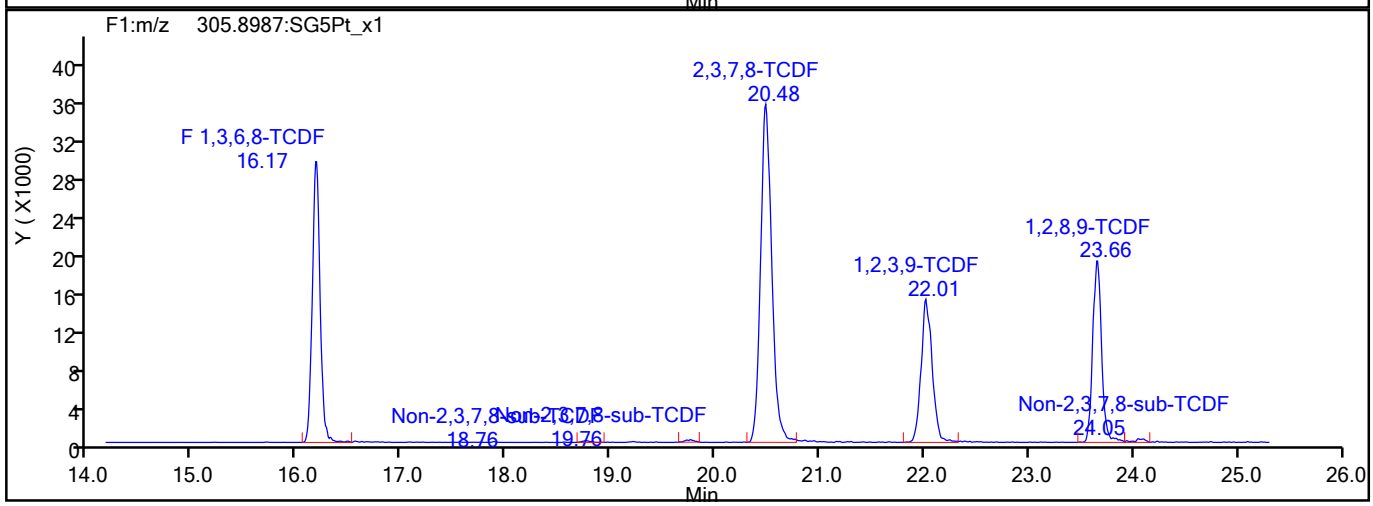

TCDF Interference Mass

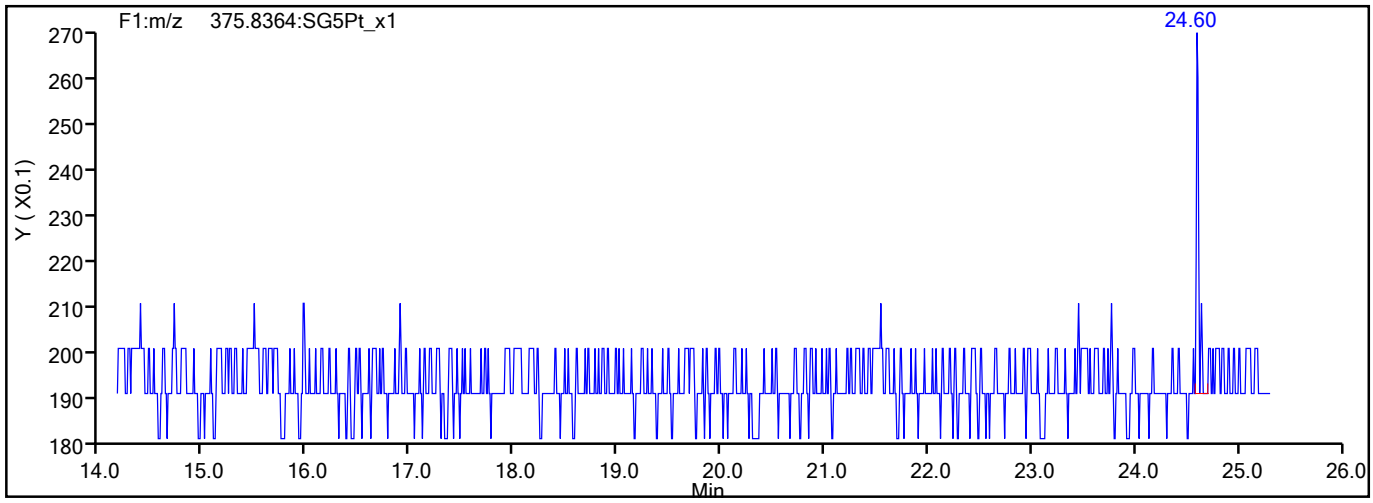

777253

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

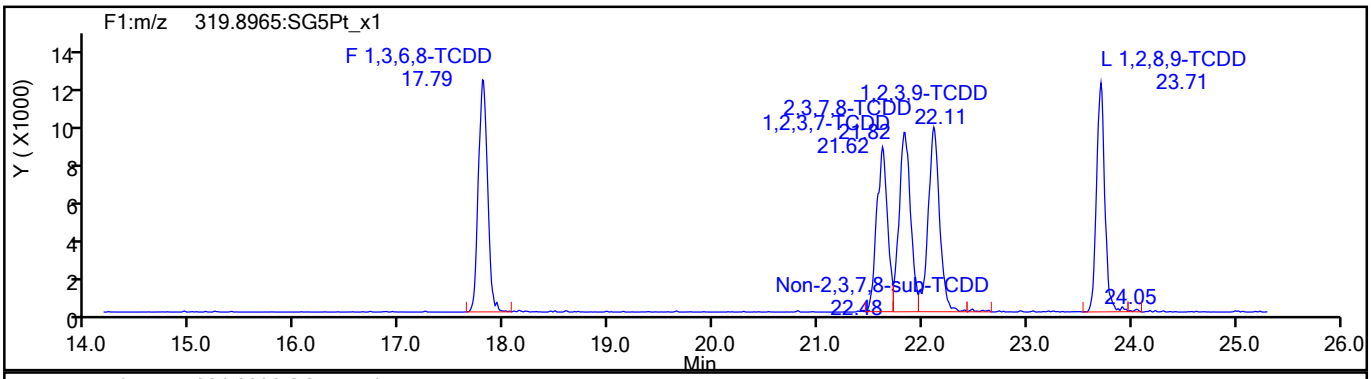

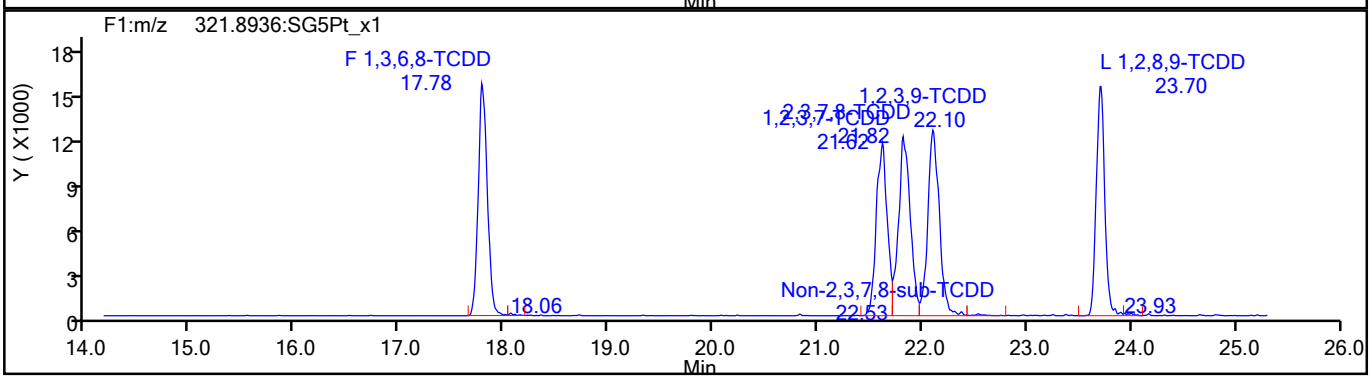

TCDD Standards

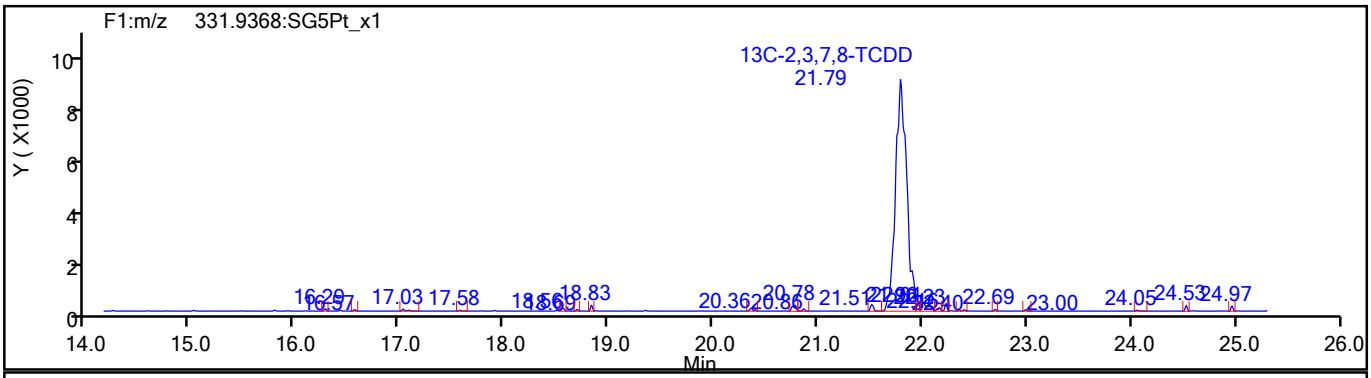

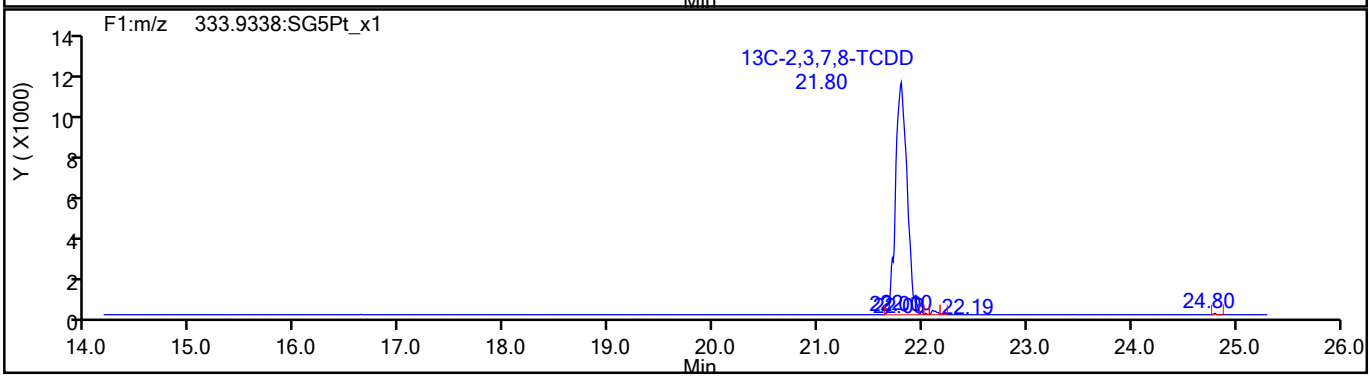

777254

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

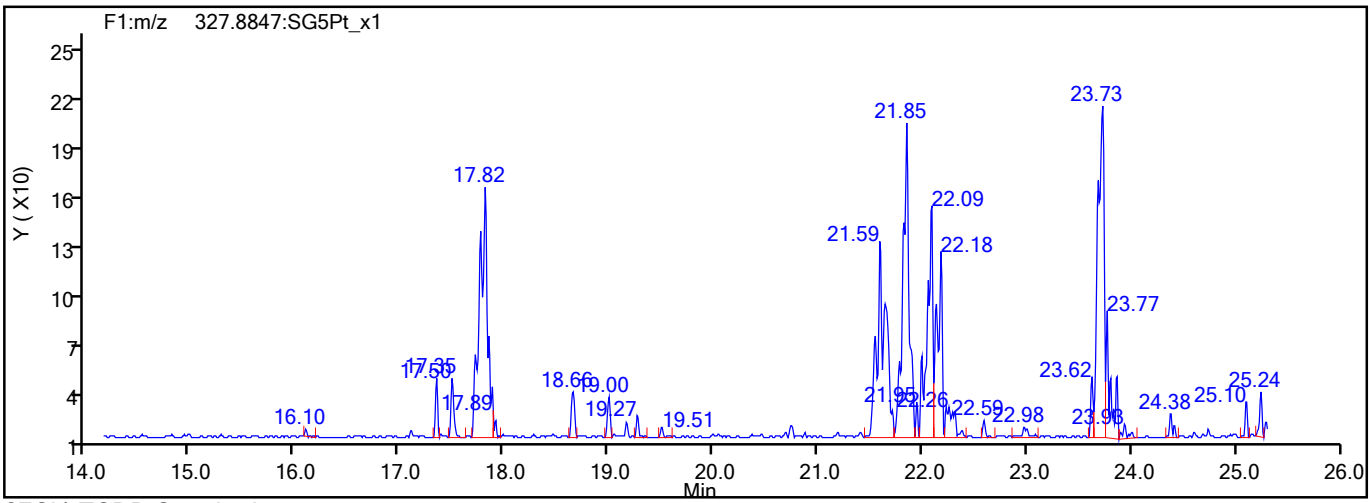

37Cl4-TCDD Standards

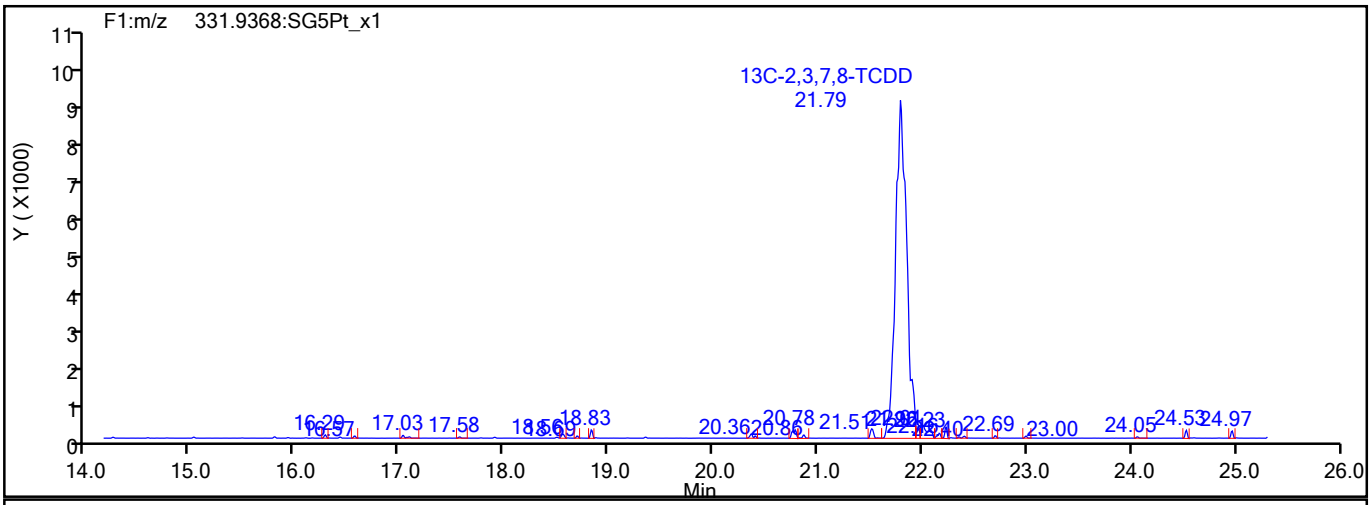

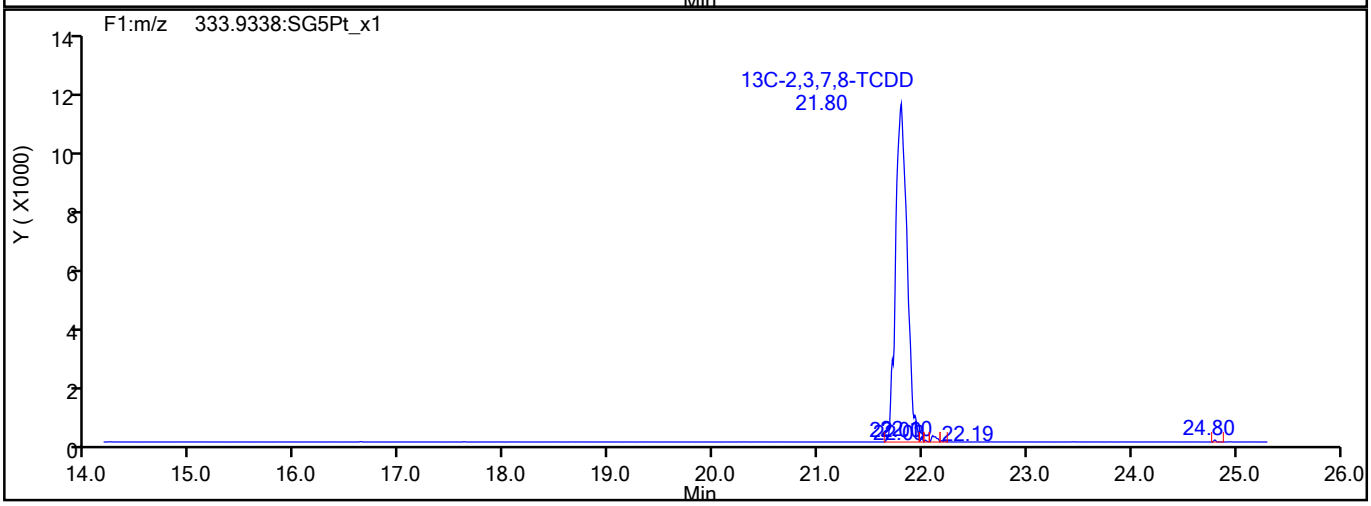

777255

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

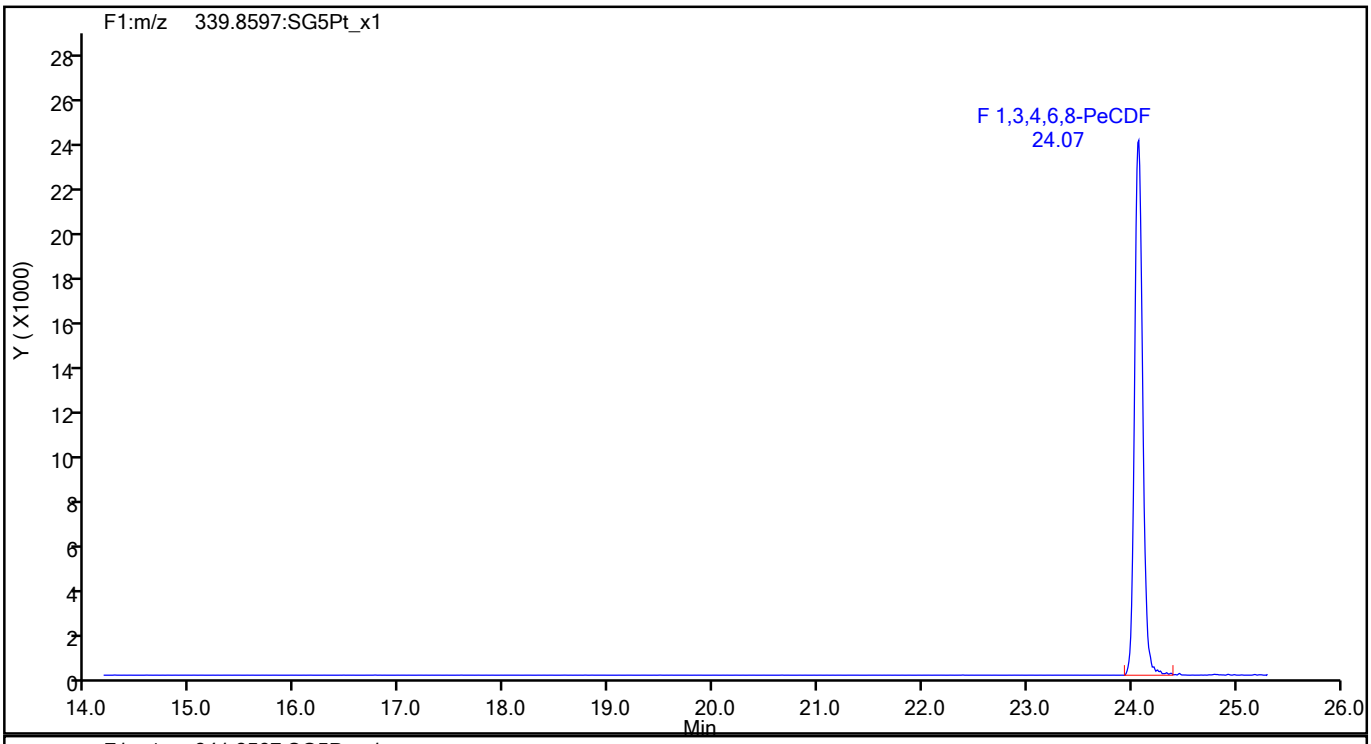

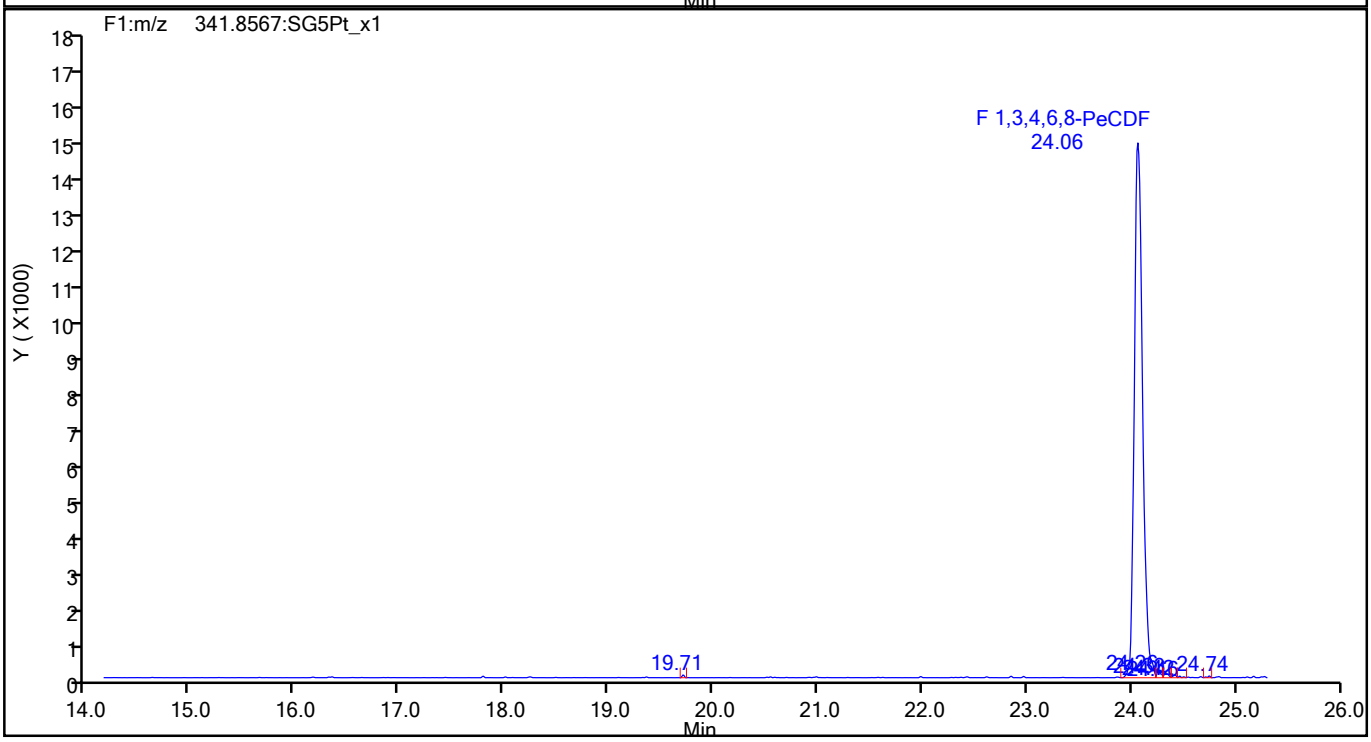

777256

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

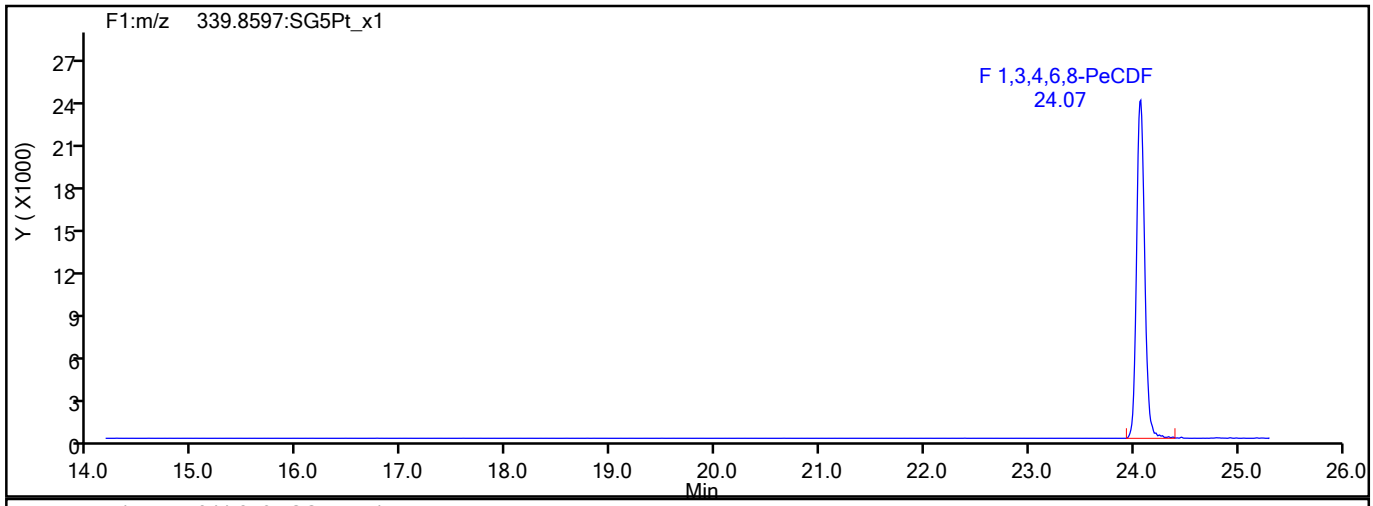

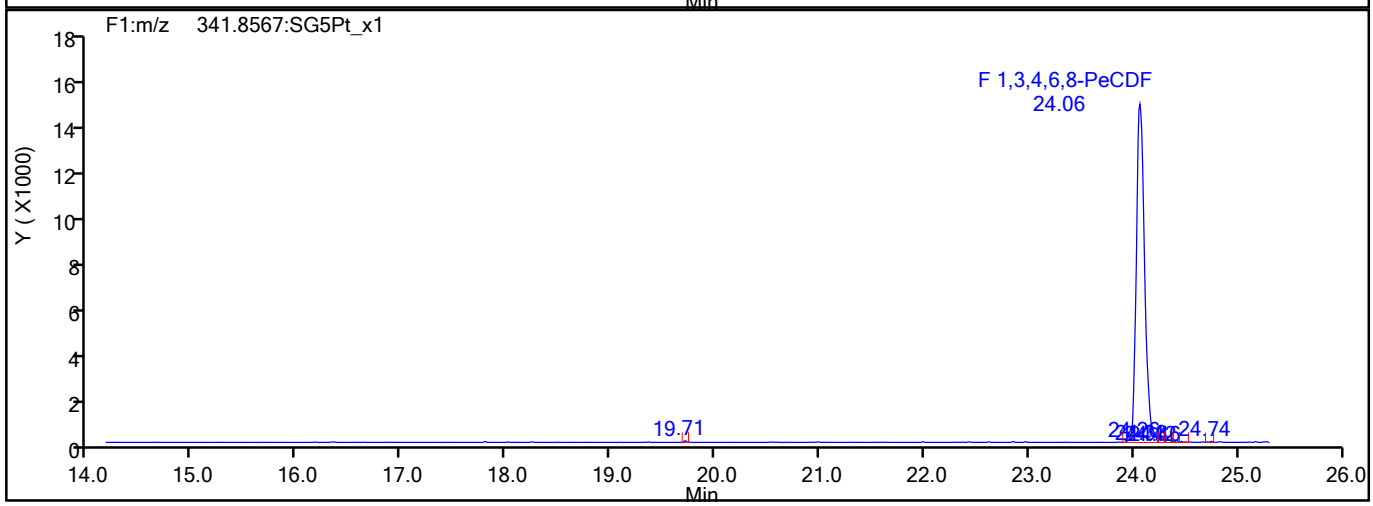

F1 PeCDFs Interference Mass

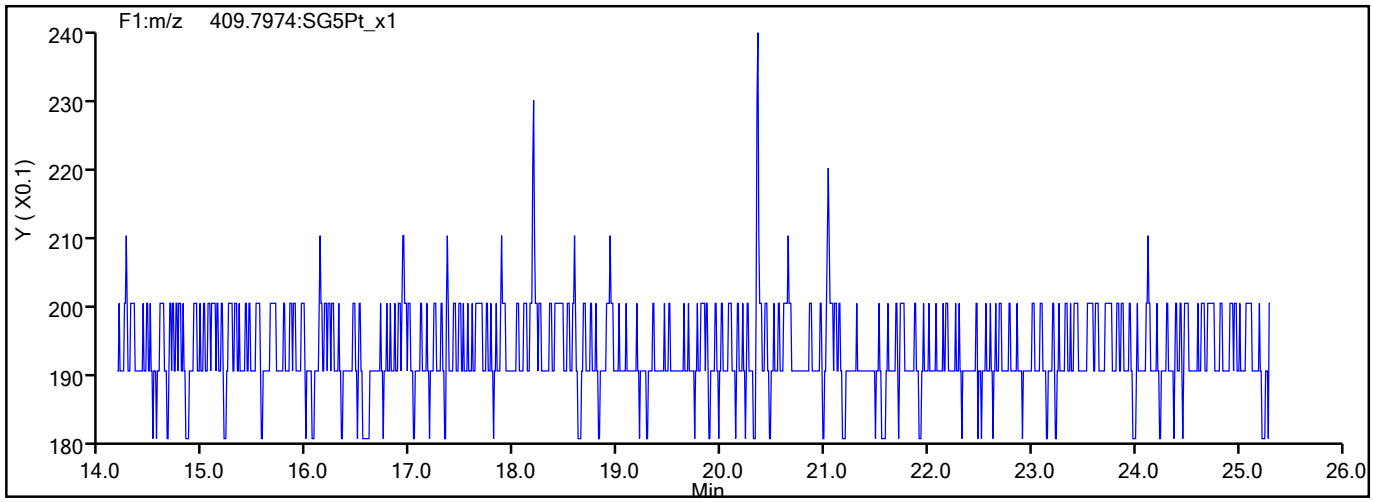

777257

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

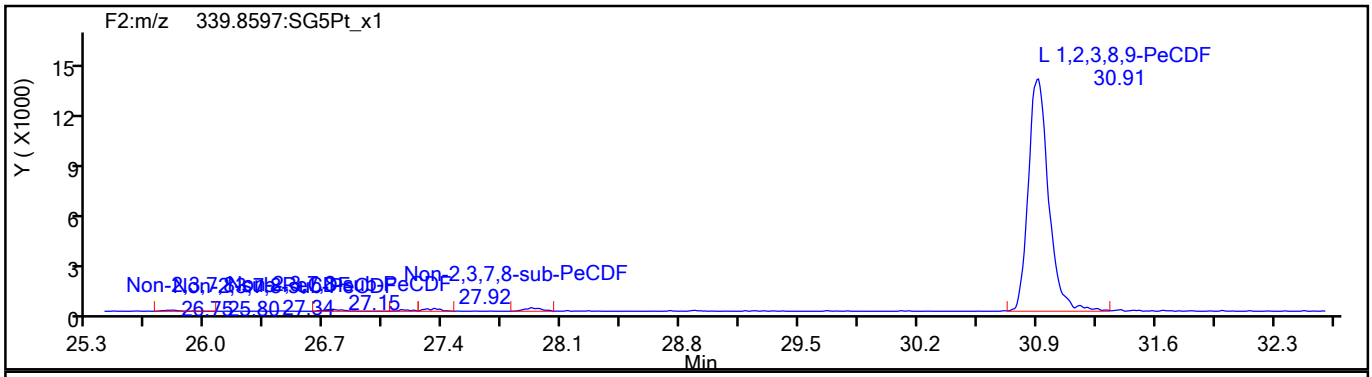

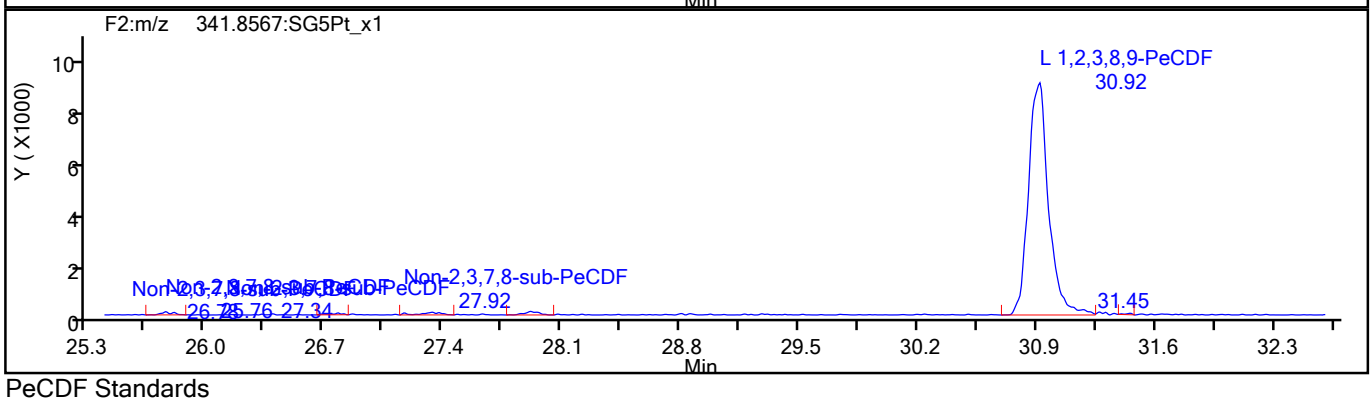

PeCDF Standards

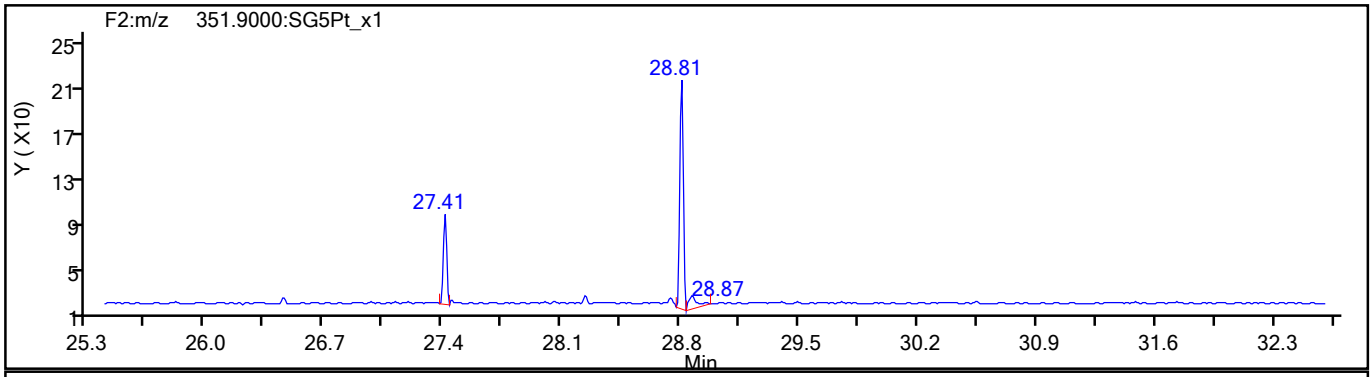

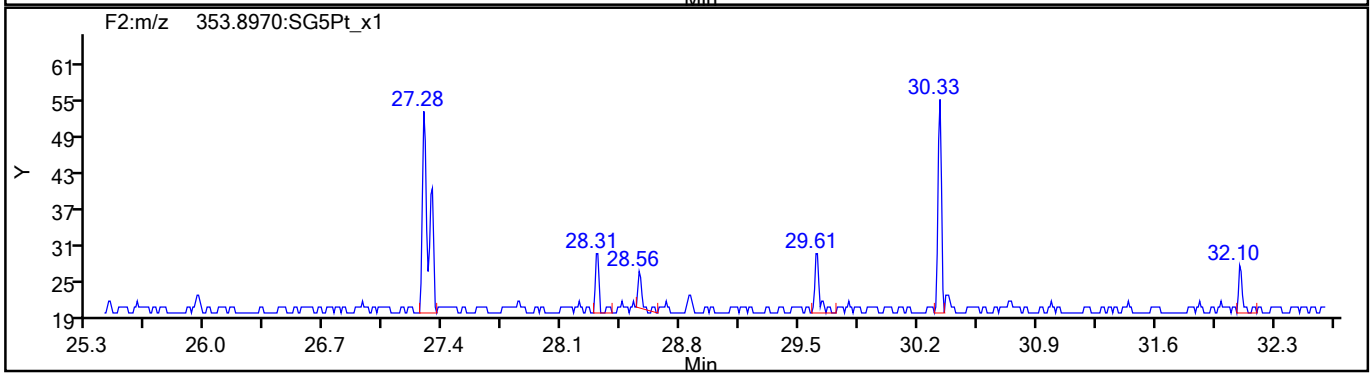

777258

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

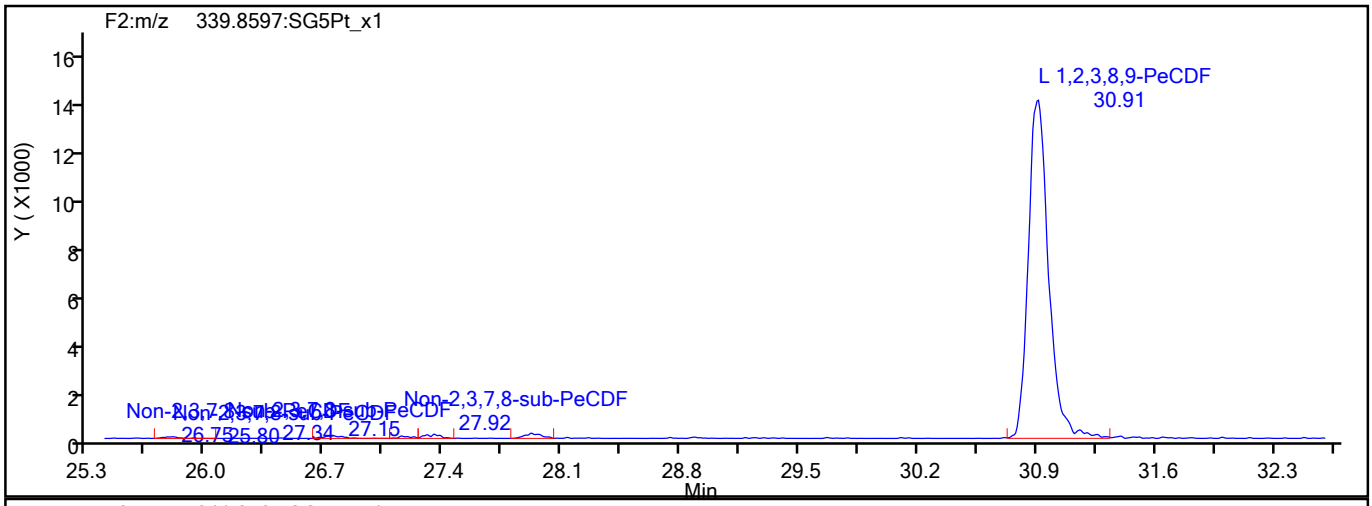

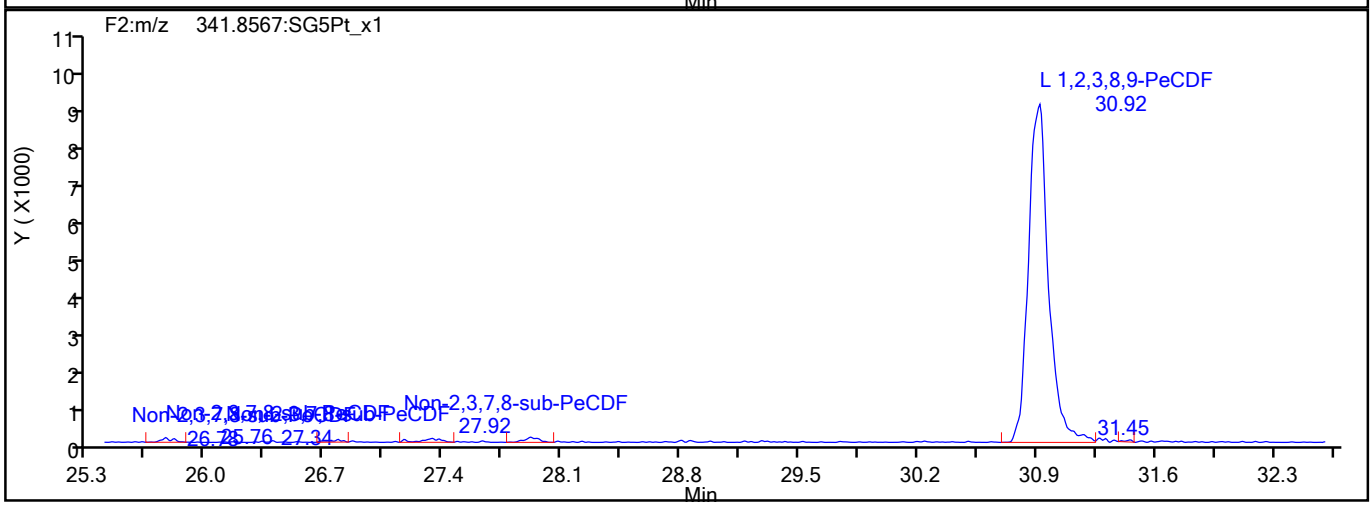

PeCDF Interference Mass

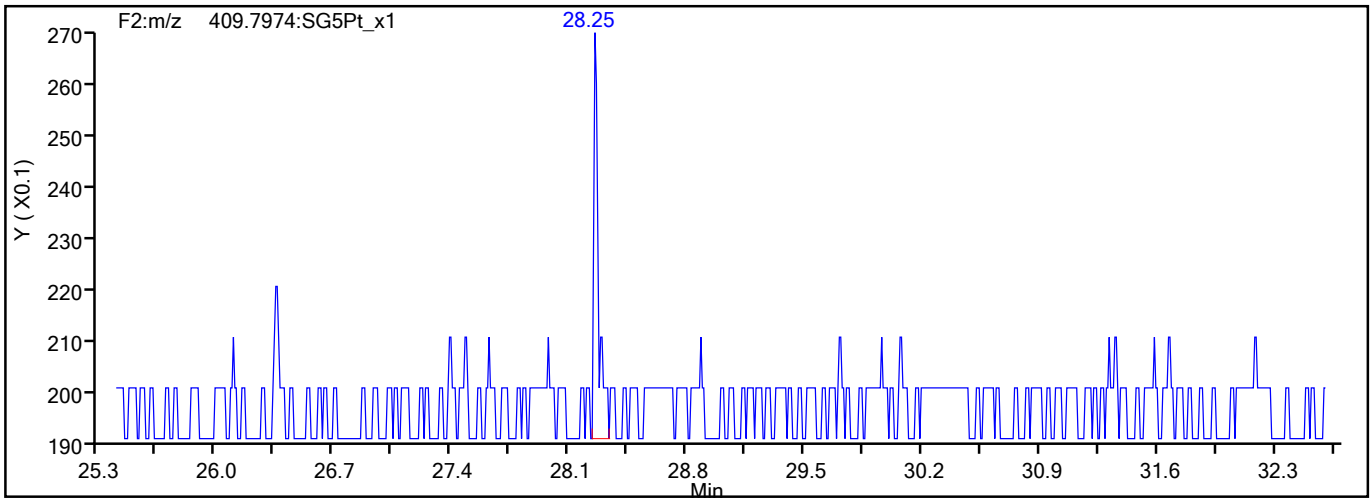

777259

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

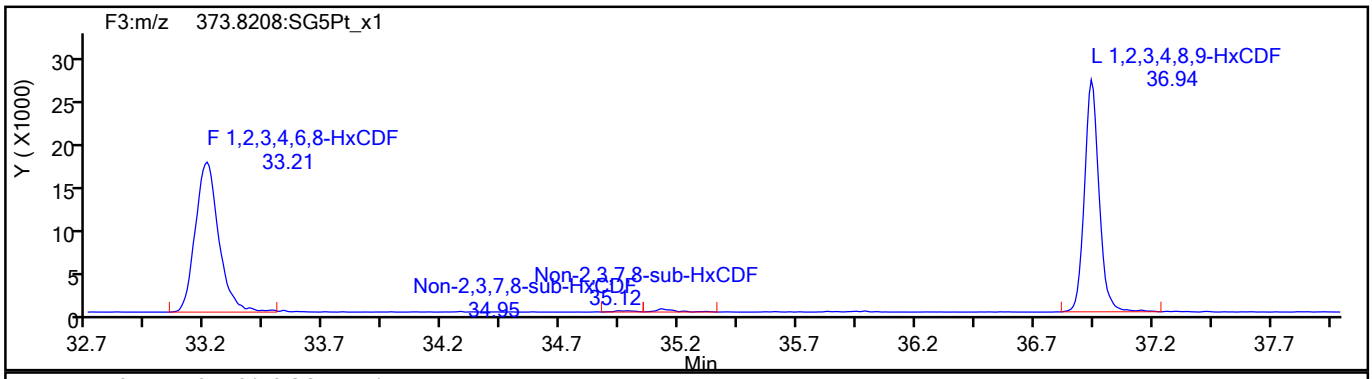

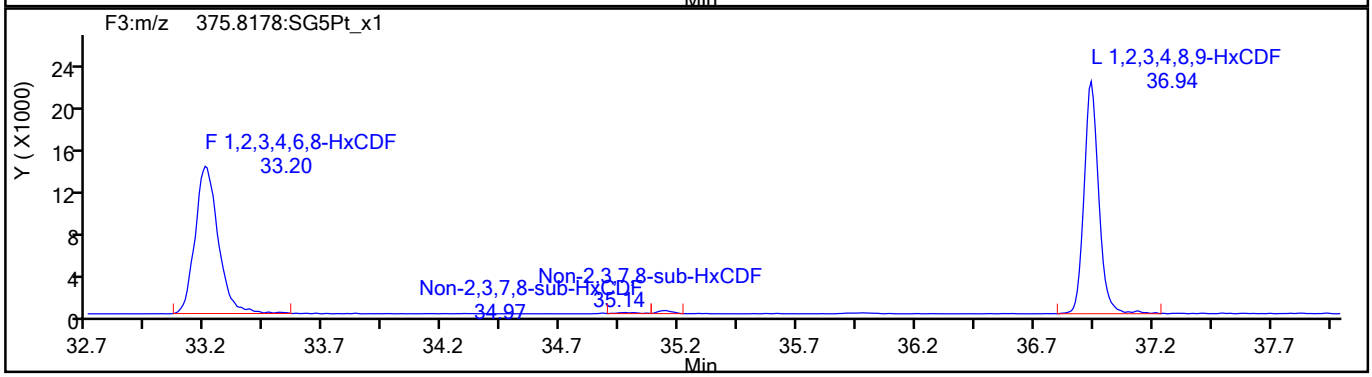

HxCDF Standards

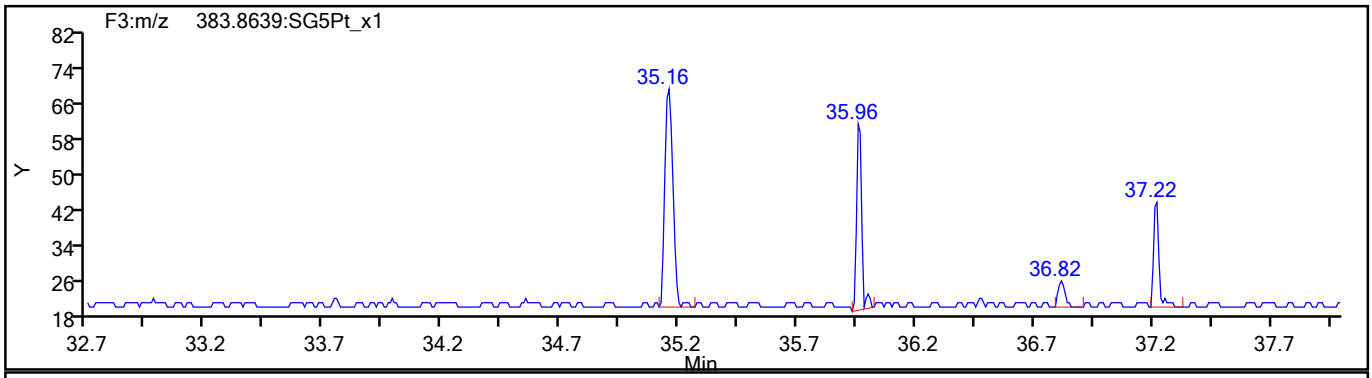

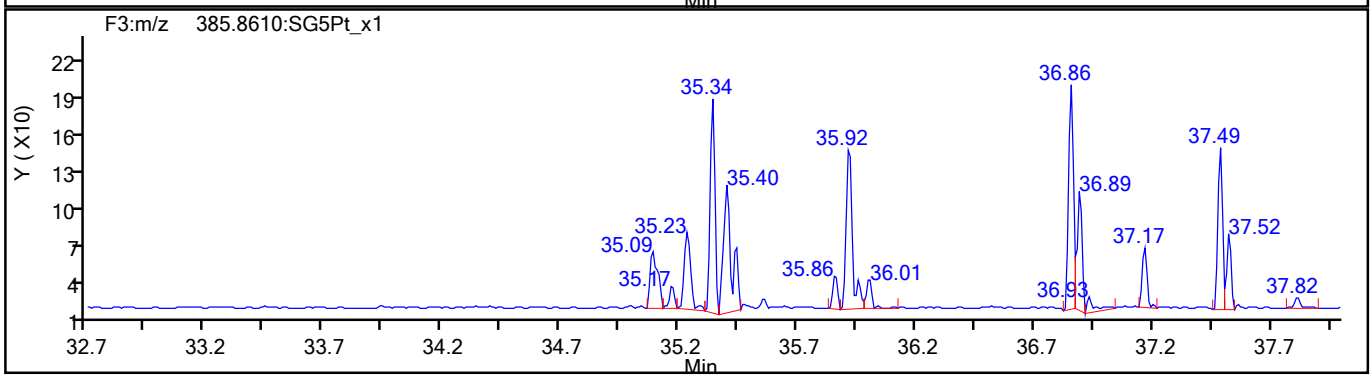

777260

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

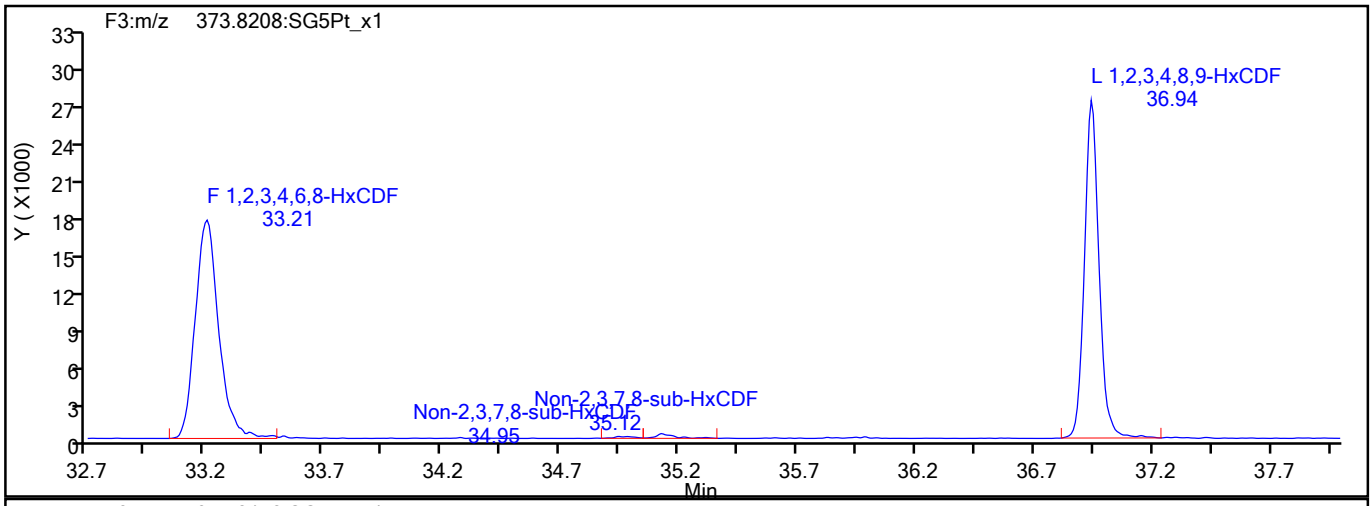

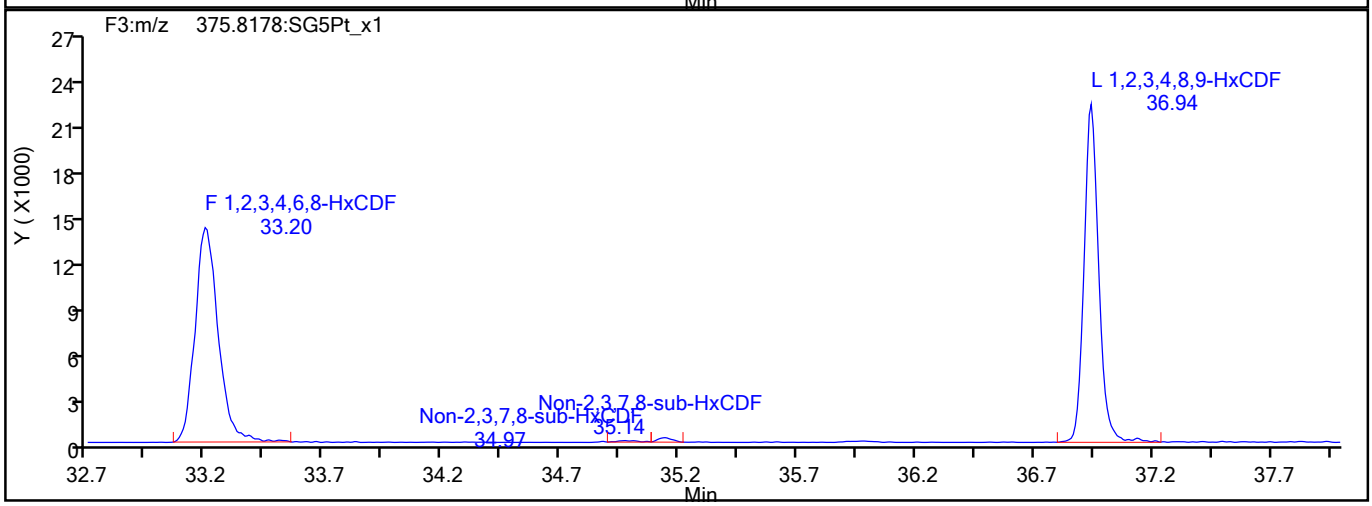

HxCDF Interference Mass

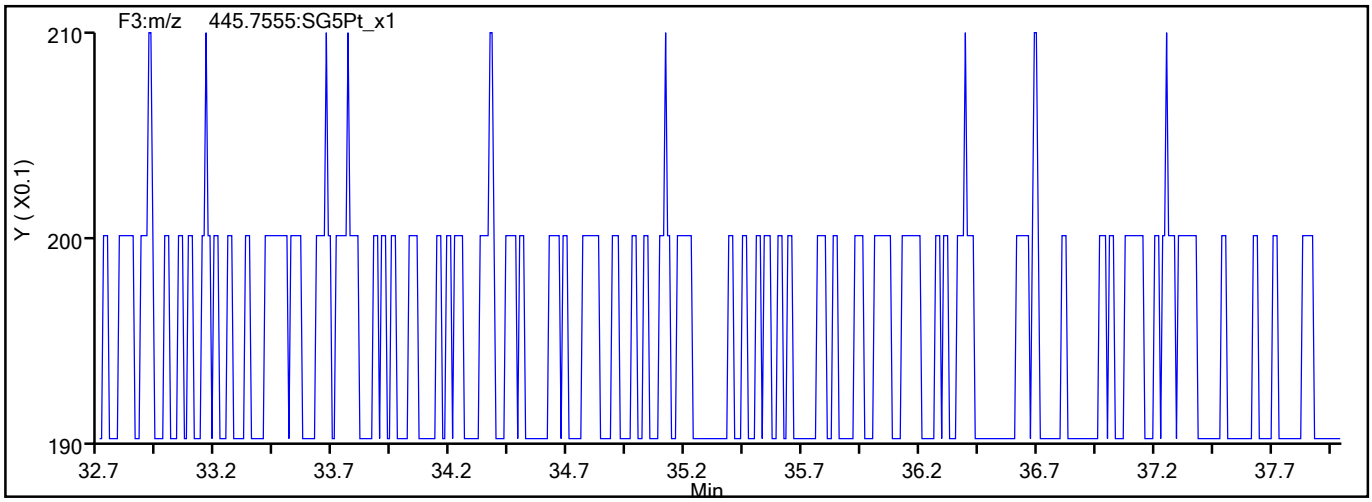

777261

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

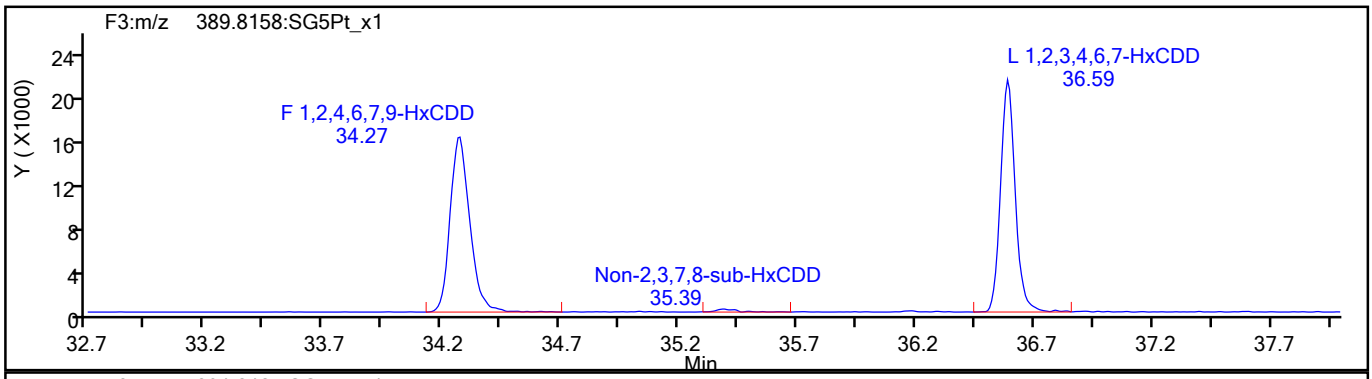

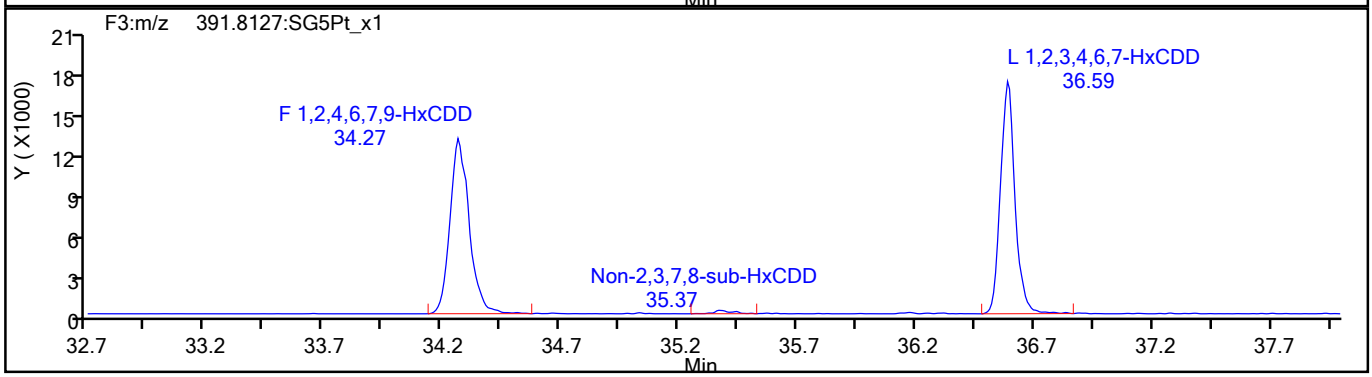

HxCDD Standards

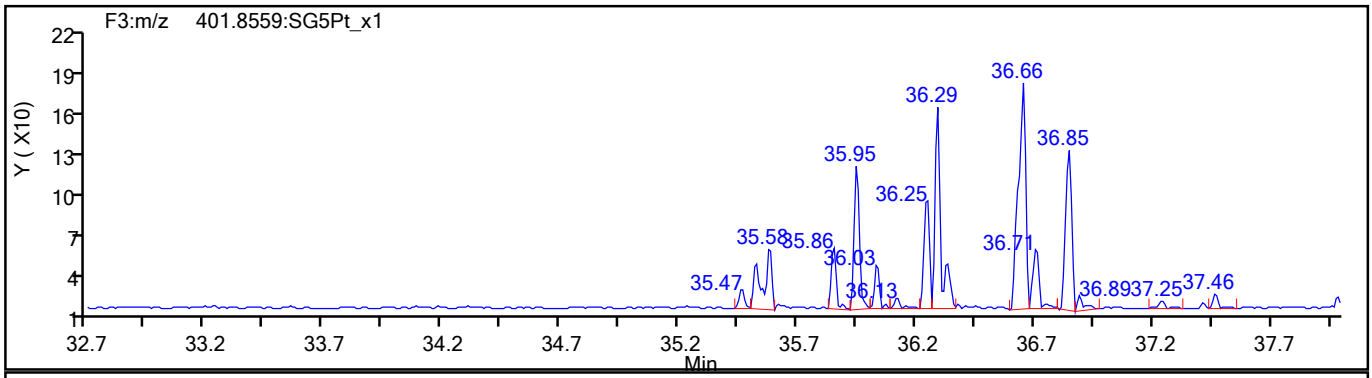

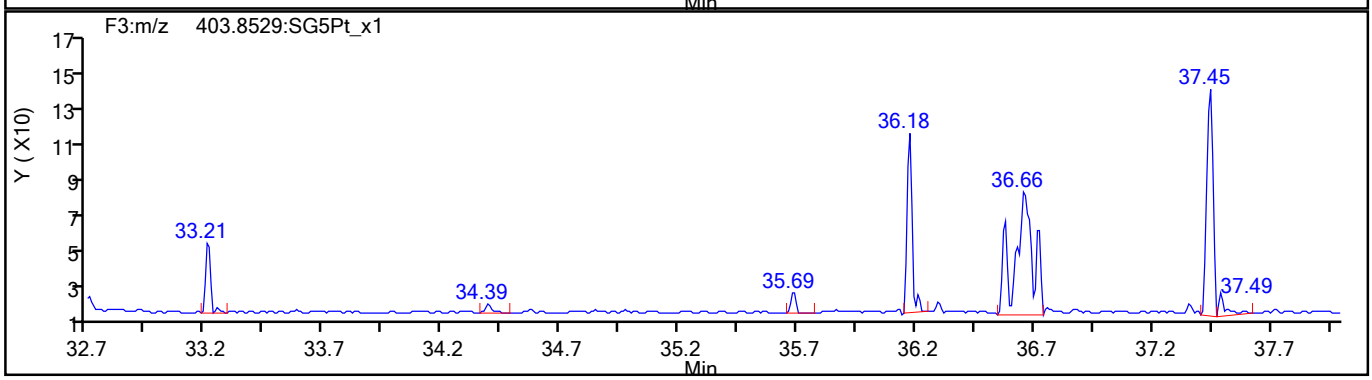

777262

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

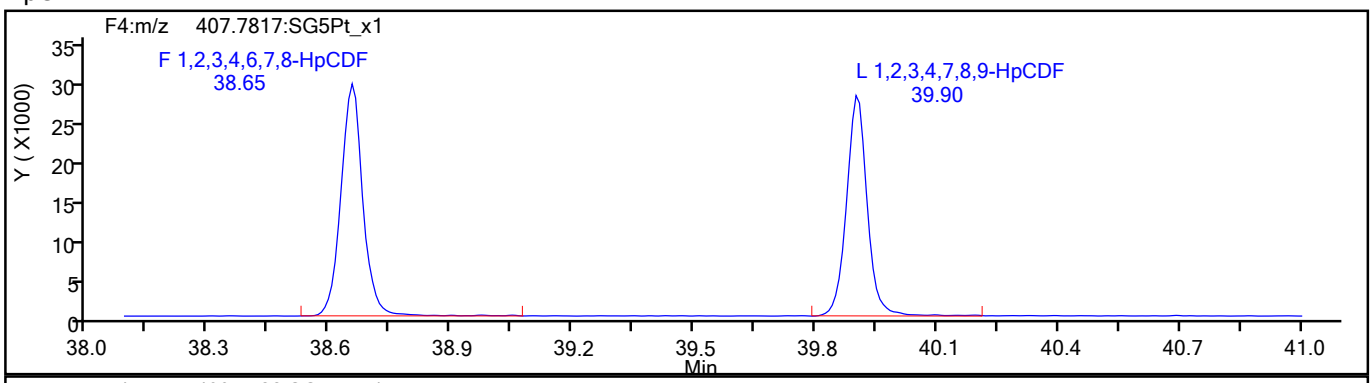

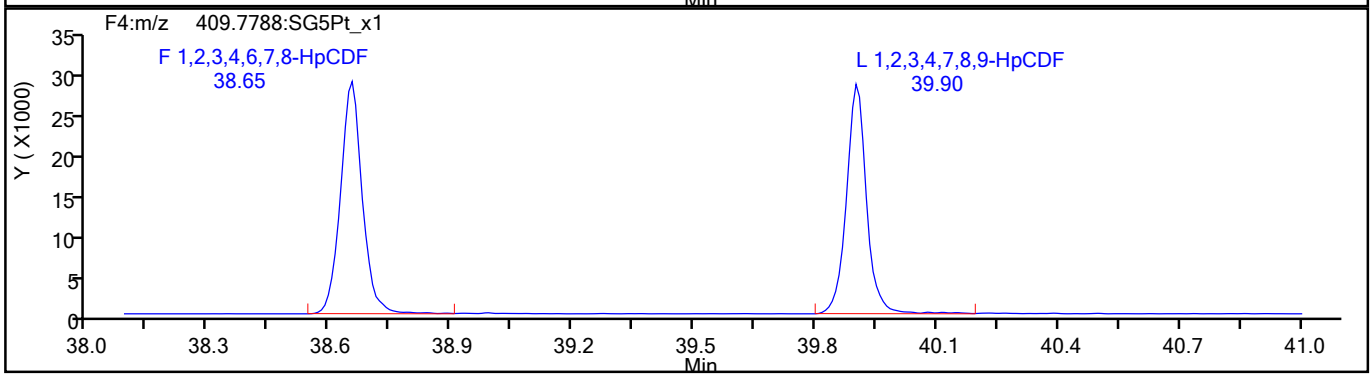

HpCDF Standards

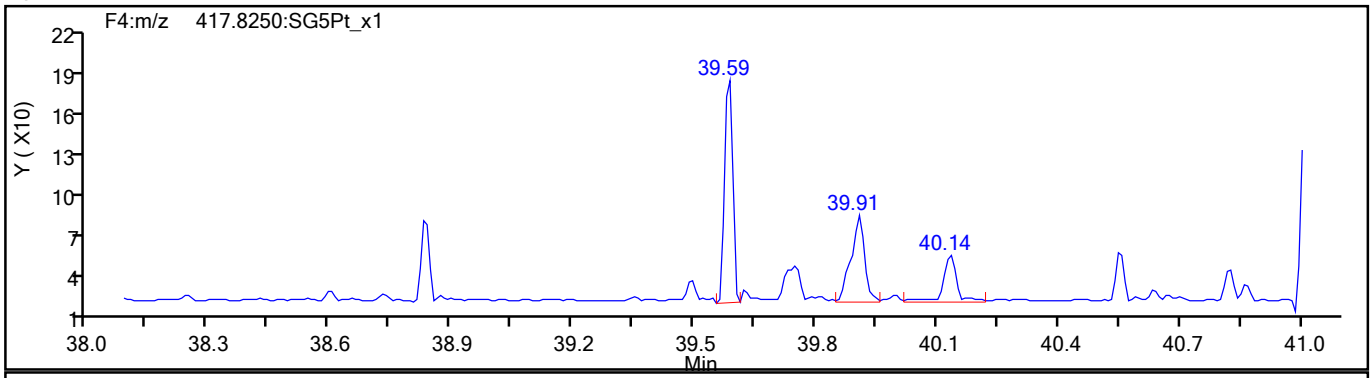

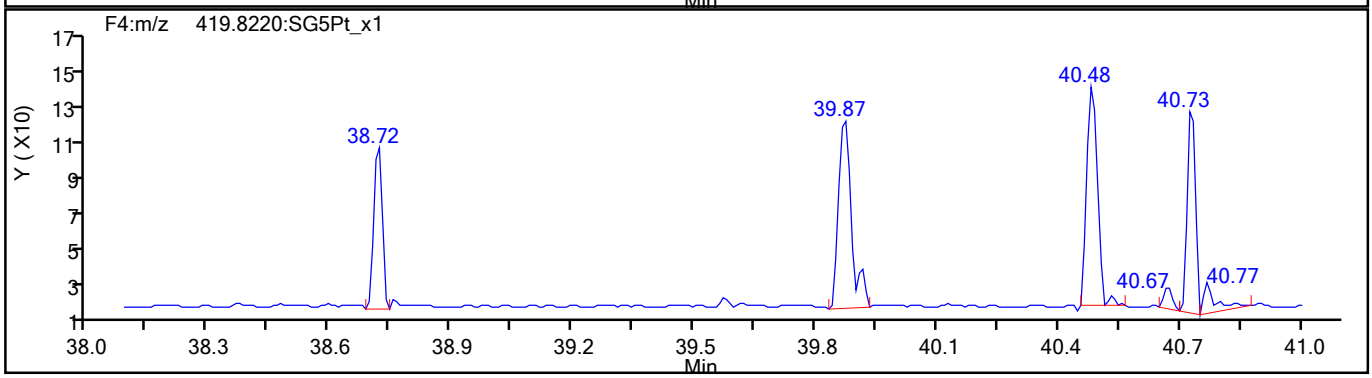

777263

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

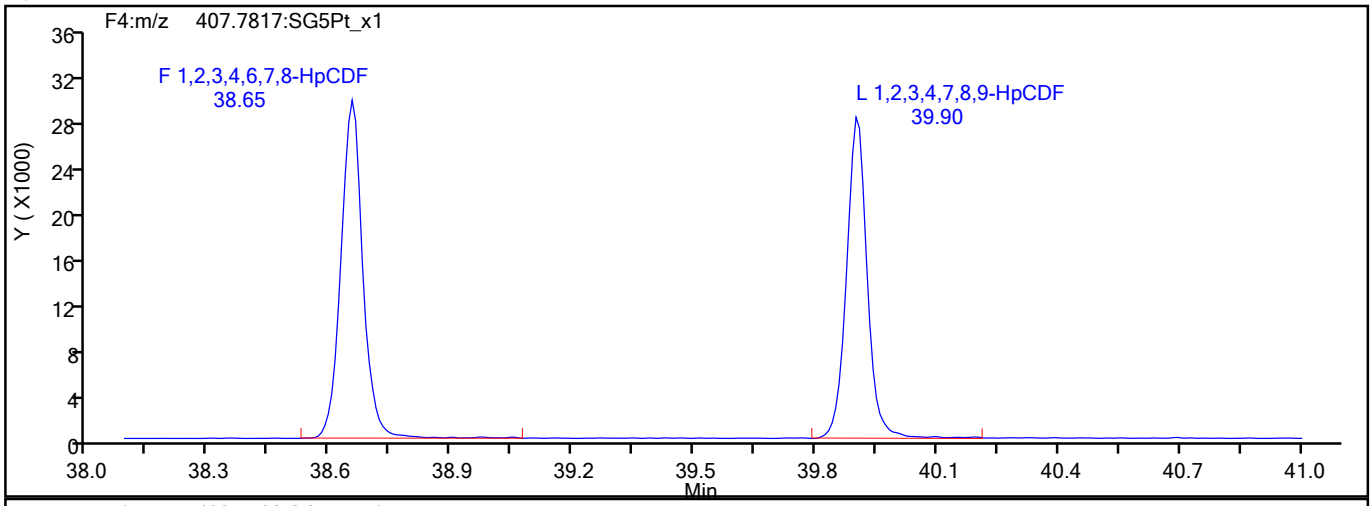

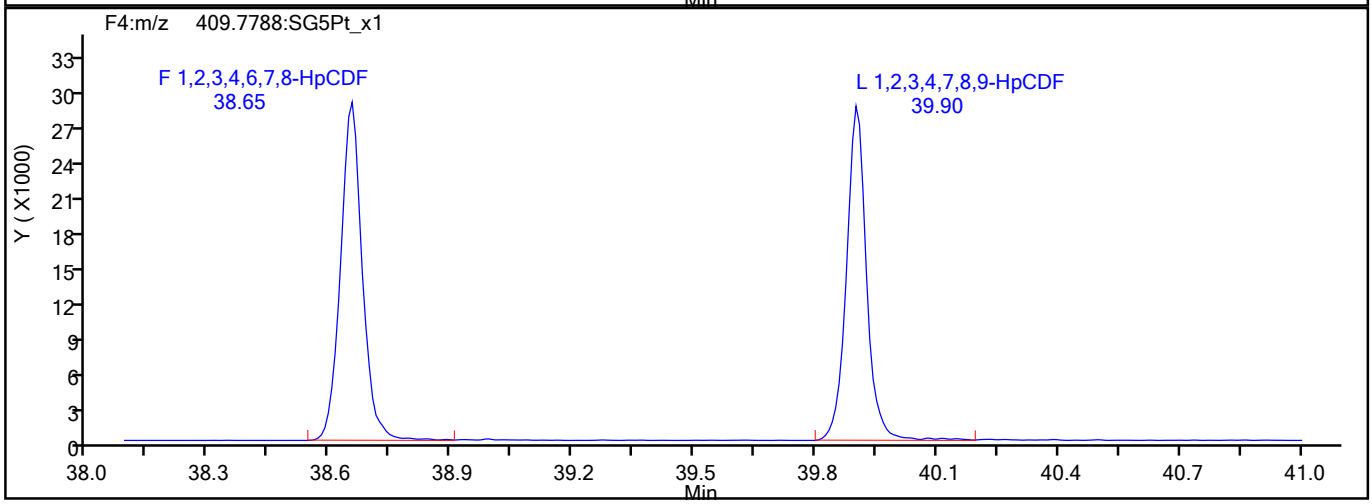

HpCDF Interference Mass

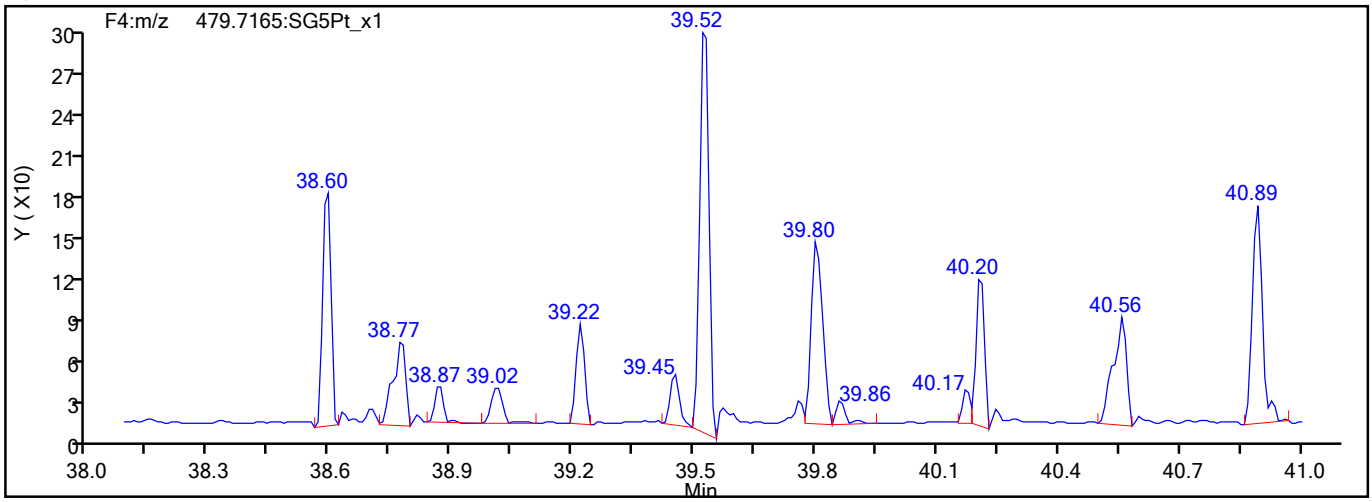

777264

Report Date: 18-Aug-2021 14:54:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

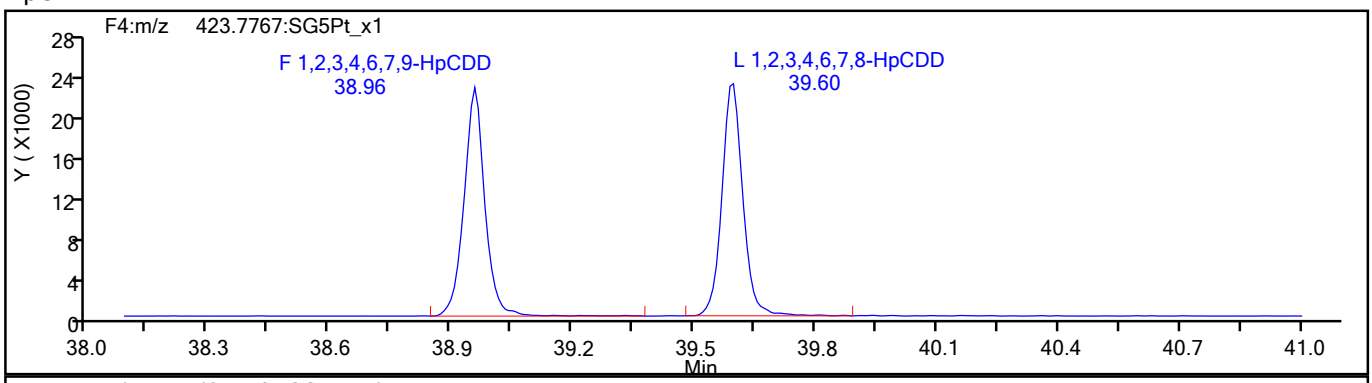

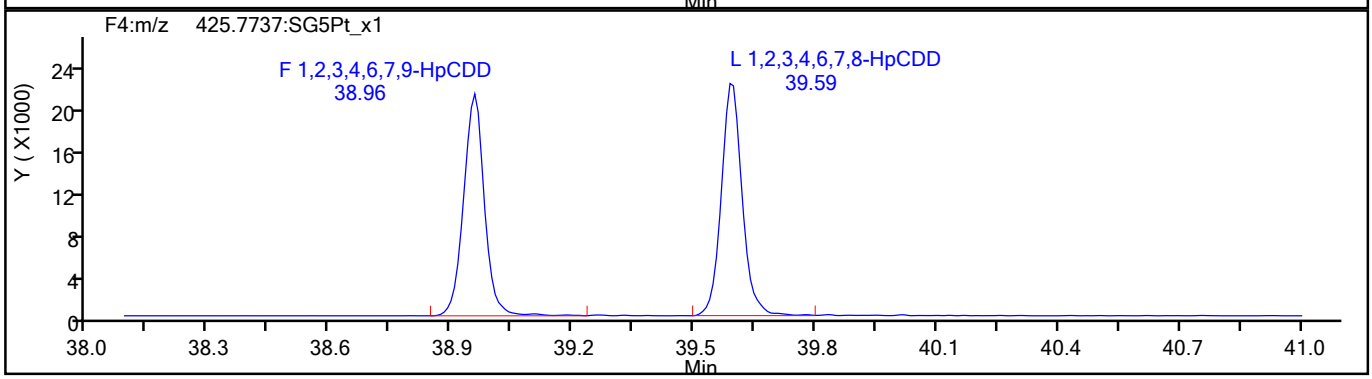

HpCDD Standards

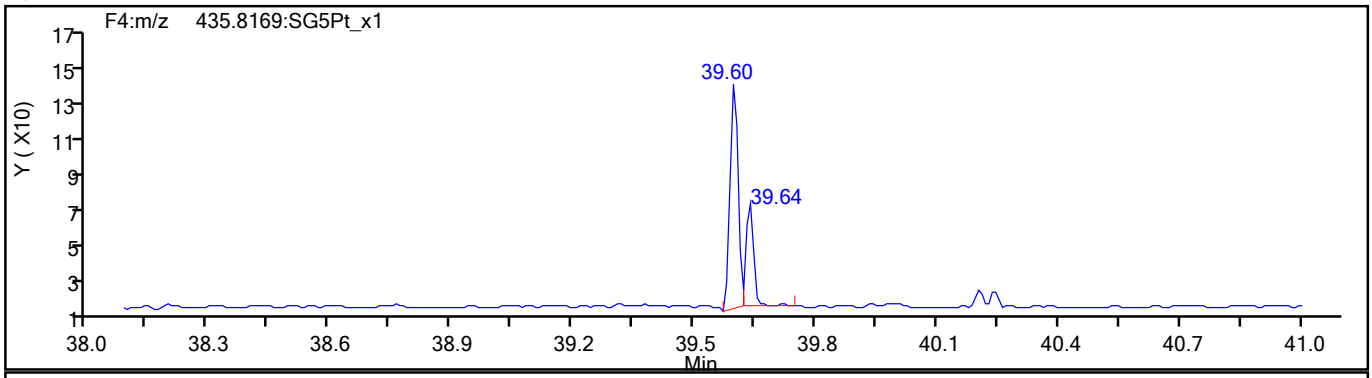

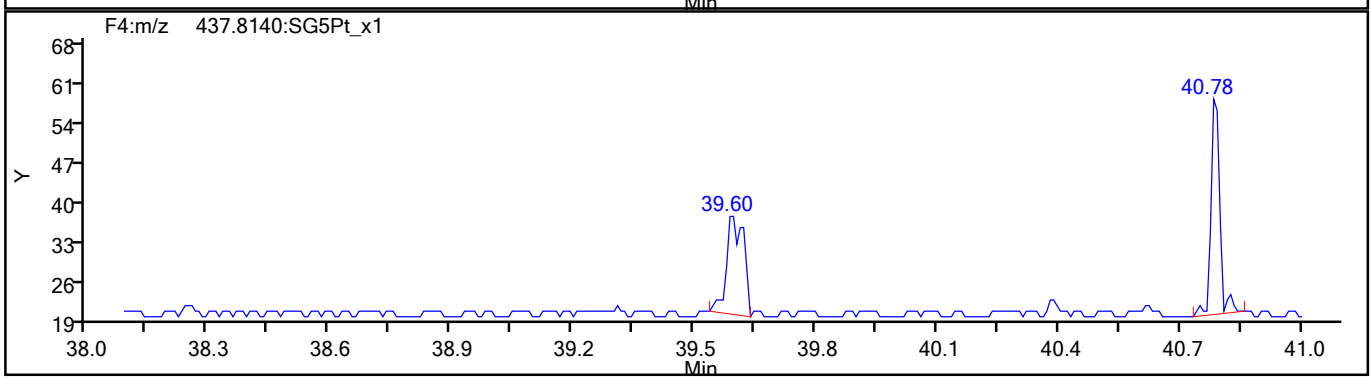

777265

Report Date: 18-Aug-2021 14:54:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

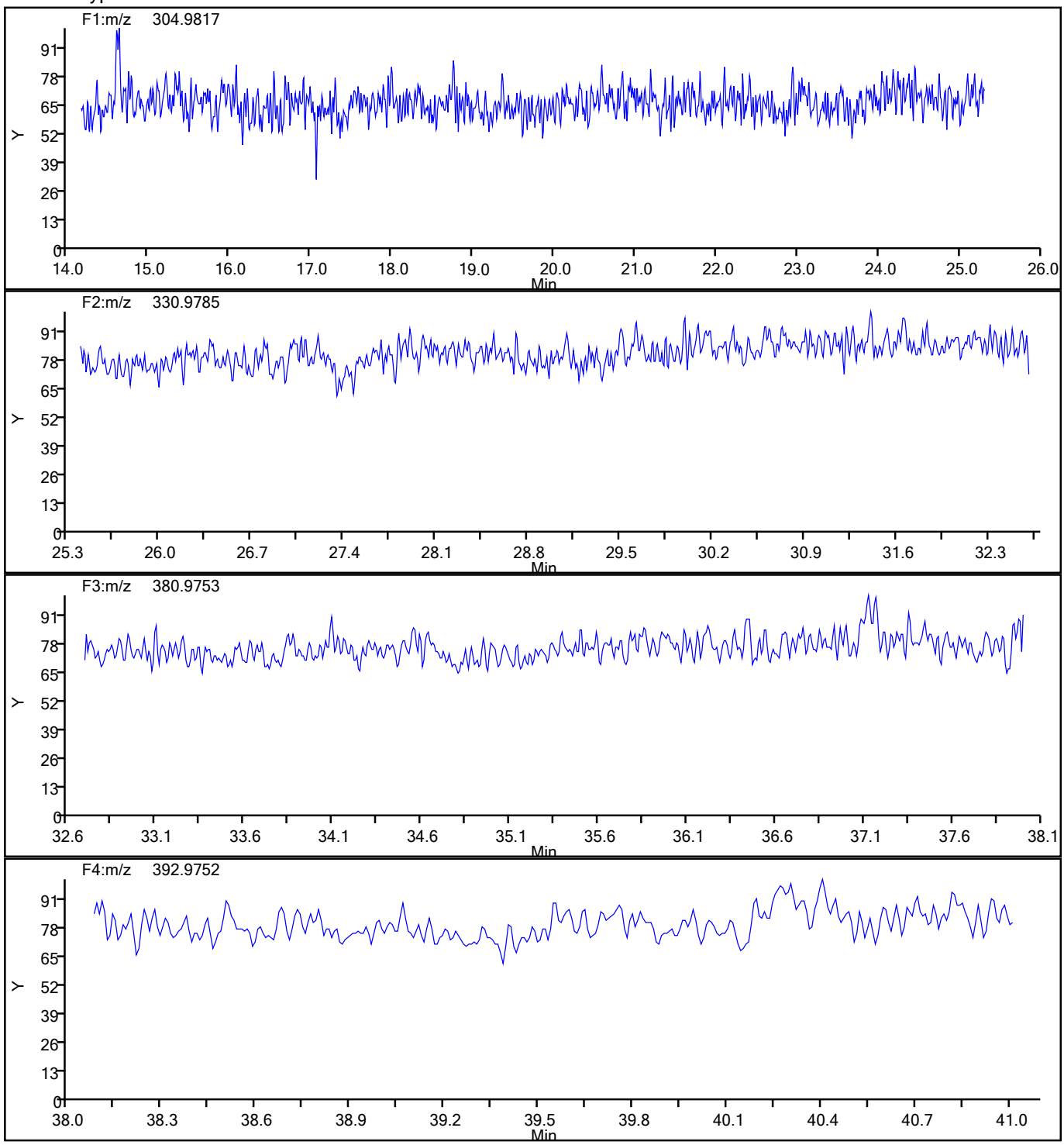

777266

Report Date: 18-Aug-2021 14:54:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

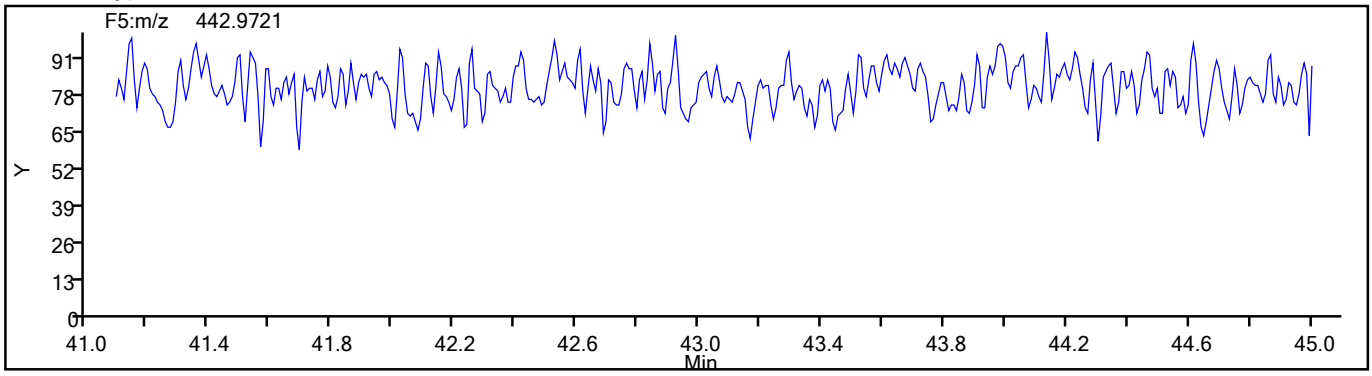

777267

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:50:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:40 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 17:49:01

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.515	79976	0.91	1.3459					0.00	R
2,3,7,8-TCDF	20.532	165011	0.80	1.0802	76.4	76.4	0.3112	0.3112		
A Non-2,3,7,8-sub-TCDF	19.946	3139	0.77	1.0802	2.721	1.453	0.3112	0.7927		RQ
S Total TCDF					79.1	77.9	0.3112	0.3112		RQ
D 13C-2,3,7,8-TCDD	21.874	21127	3.29	0.9317					0.00	R
2,3,7,8-TCDD	21.891	55608	0.81	1.0753	97.9	97.9	0.6109	0.6109		
A Non-2,3,7,8-sub-TCDD	20.781						0.6109	0.6109		
S Total TCDD					97.9	97.9	0.6109	0.6109		
A F1 PeCDFs	24.697	1039	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.194						0.0	0.0		
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.489						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.107						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.460	880	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.669	68328	1.07	1.4421						
1,2,3,4,7,8,9-HpCDF	39.907	44006	1.13	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.288						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.604	40915	1.01	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.288						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.186	98623	0.78							
1,3,6,8-TCDD	17.804	59806	0.85							
2,3,4,7-TCDF	20.532	165011	0.80							
1,2,3,7-TCDD	21.659	47985	0.81							
1,2,3,9-TCDF	22.072	74538	0.76							
1,2,3,9-TCDD	22.167	58731	0.76							
1,2,8,9-TCDF	23.706	76728	0.73							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.757	24107								
1,3,4,6,8-PeCDF	24.119	69782	1.60							
1,2,3,8,9-PeCDD	26.166	50624	1.46							
1,2,4,7,9-PeCDD	30.806	43678	1.58							
1,2,3,8,9-PeCDF	30.974	58543	1.62							
1,2,3,4,6,8-HxCDF	33.250	76257	1.26							
1,2,4,6,7,9-HxCDD	34.311	50756	1.33							
1,2,3,4,6,7-HxCDD	36.610	49652	1.28							
1,2,3,4,8,9-HxCDF	36.963	67795	1.20							
1,2,3,4,6,7,9-HpCDD	38.972	47358	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:50:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:40 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 17:49:01

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											R
315.9419	20.515	20.515	0	1.000	38178	5878	63	157	93		
317.9389	20.498	20.515	-1	1.000	41798	6617	4	10	1654	0.91(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.532	20.523	1	1.001	73204	9732	18	45	541		
305.8987	20.523	20.523	0	1.000	91807	11784	24	60	491	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	20.842	19.946	54	1.016	745	243	18	45	14		
305.8987	20.859	19.946	55	1.017	3144	272	24	60	11	0.24(0.65-0.89)	
	Empc Correction				967	315	24	60	13		
303.9016	24.075	19.946	247	1.174	621	118	18	45	7		
305.8987	24.119	19.946	250	1.176	1367	222	24	60	9	0.45(0.65-0.89)	
	Empc Correction				806	153	24	60	6		
13C-2,3,7,8-TCDD											R
331.9368	21.874	21.874	0	1.000	16200	2990	21	52	142		
333.9338	21.908	21.874	2	1.000	4927	2186	1	2	2186	3.29(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.891	21.882	1	1.001	24886	3342	27	67	124		
321.8936	21.874	21.882	-1	1.000	30722	4352	7	17	622	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.781						27	67			
321.8936	20.781						7	17			
A F1 PeCDFs											RQ
339.8597	15.816	24.697	-532	1.000	99	51	2	5	26		
341.8567	15.893	24.697	-527	1.000	68	44	4	10	11	1.46(1.32-1.78)	
339.8597	24.325	24.697	-22	1.000	587	136	2	5	68		
341.8567	24.316	24.697	-23	1.000	294	137	4	10	34	2.00(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	24.737	24.697	2	1.000	75	52	2	5	26		
341.8567	24.755	24.697	3	1.000	78	54	4	10	14	0.96(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.194						9	22			
341.8567	28.194						12	30			
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						13	32			
357.8516	28.489						10	25			
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.107						50	125			
375.8178	35.107						15	37			
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.430	35.460	-2	1.000	583	185	14	35	13		
391.8127	35.414	35.460	-3	1.000	393	84	12	30	7	1.48(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.669	38.638	2	1.000	35335	9256	22	55	421		
409.7788	38.669	38.638	2	1.000	32993	8367	11	27	761	1.07(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.907	39.885	1	1.000	23333	6317	22	55	287		
409.7788	39.916	39.885	2	1.000	20673	5103	11	27	464	1.13(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.288						22	55			
409.7788	39.288						11	27			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.604	39.582	1	1.000	20550	5578	12	30	465		
425.7737	39.596	39.582	1	1.000	20365	5300	10	25	530	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.288						12	30			
425.7737	39.288						10	25			
1,3,6,8-TCDF											
303.9016	16.186	16.186	0		43329	7699	18	45	428		
305.8987	16.186	16.186	0		55294	9985	24	60	416	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.804	17.804	0		27400	4703	27	67	174		
321.8936	17.813	17.804	1		32406	5212	7	17	745	0.85(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.532	20.532	0		73204	9732	18	45	541		
305.8987	20.523	20.532	-1		91807	11784	24	60	491	0.80(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.659	21.659	0		21515	2915	27	67	108		
321.8936	21.650	21.659	-1		26470	3363	7	17	480	0.81(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.072	22.072	0		32270	4169	18	45	232		
305.8987	22.063	22.072	-1		42268	5203	24	60	217	0.76(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.167	22.167	0		25374	3037	27	67	112		
321.8936	22.149	22.167	-1		33357	3722	7	17	532	0.76(0.65-0.89)	

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	23.706	23.706	0		32443	5107	18	45	284		
305.8987	23.697	23.706	-1		44285	7203	24	60	300	0.73(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.757	23.757	0		24107	4090	27	67	151		
1,3,4,6,8-PeCDF											
339.8597	24.119	24.119	0		42897	7179	2	5	3590		
341.8567	24.101	24.119	-1		26885	5048	4	10	1262	1.60(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.166	26.166	0		30013	4216	13	32	324		
357.8516	26.158	26.166	-1		20611	3257	10	25	326	1.46(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.806	30.806	0		26774	3220	13	32	248		
357.8516	30.815	30.806	1		16904	2007	10	25	201	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.974	30.974	0		36159	4045	9	22	449		
341.8567	31.000	30.974	2		22384	2622	12	30	219	1.62(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.250	33.250	0		42505	5788	50	125	116		
375.8178	33.267	33.250	1		33752	5024	15	37	335	1.26(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.311	34.311	0		29002	4807	14	35	343		
391.8127	34.319	34.311	1		21754	3912	12	30	326	1.33(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.610	36.610	0		27870	6094	14	35	435		
391.8127	36.610	36.610	0		21782	4999	12	30	417	1.28(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.963	36.963	0		37010	8343	50	125	167		
375.8178	36.963	36.963	0		30785	7337	15	37	489	1.20(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.972	38.972	0		24197	6959	12	30	580		
425.7737	38.972	38.972	0		23161	6428	10	25	643	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:50:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 30

Non-2,3,7,8-sub-TCDF, RT: 19.946

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	79976	12495

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	79976	12495

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
20.842	745	243	3144	272	1.80	0.24	RQ
20.842	745	243	967	315	0.7927		Empc Correction
24.075	621	118	1367	222	0.9205	0.45	RQ
24.075	621	118	806	153	0.6607		Empc Correction
Signal Totals:							
	1366	361	1773	468			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5877	855				0.30	RQ
	3139	829					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.721 = (5877 * 40.000) / (79976 * 1.080)
Empc Amount: 1.453 = (3139 * 40.000) / (79976 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	18-Aug-2021 14:50:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	30

F1 PeCDFs, RT: 24.697

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
15.816	99	51	68	44		1.46	
24.325	587	136	294	137		2.00	R
24.737	75	52	78	54		0.96	R
Signal Totals:							
	761	239	440	235			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1201	474				1.73	RQ
	1039	529					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (1201 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (1039 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	18-Aug-2021 14:50:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	30

Non-2,3,7,8-sub-HxCDD, RT: 35.460

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.430	583	185	393	84		1.48	R
Signal Totals:							
	583	185	393	84			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	976	269				1.48	RQ
	880	188					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (976 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (880 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

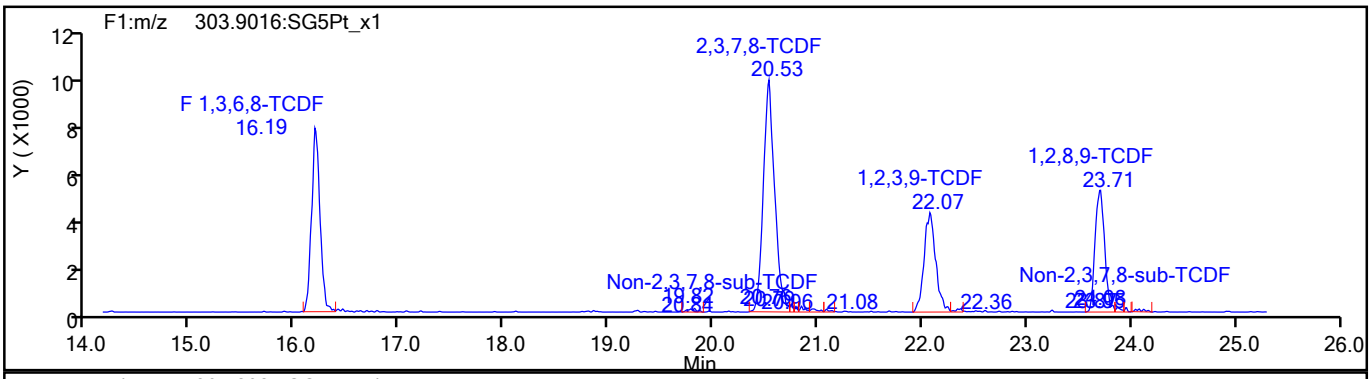

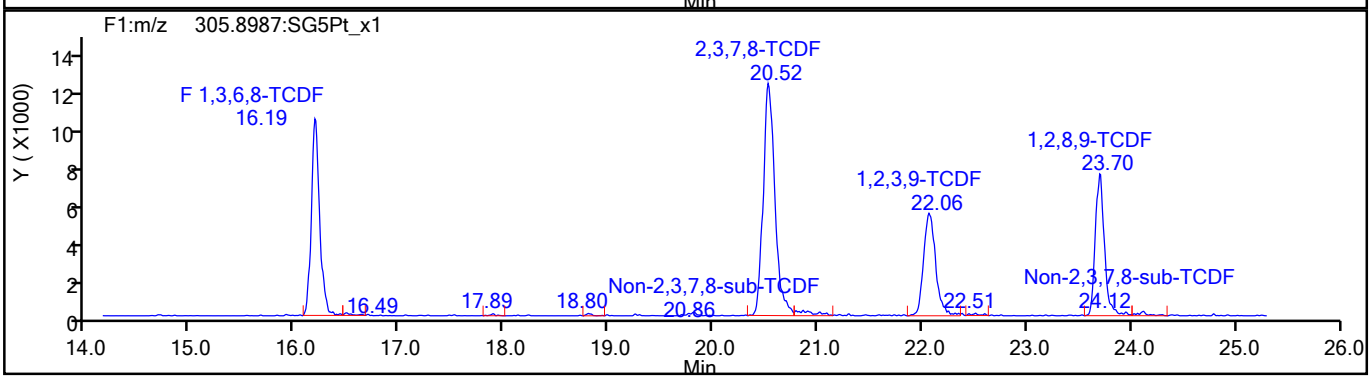

TCDF Standards

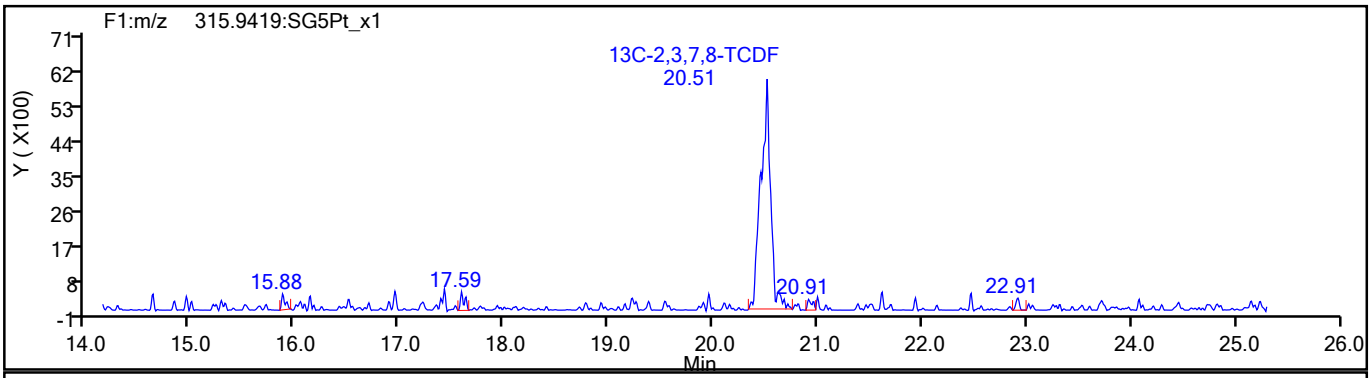

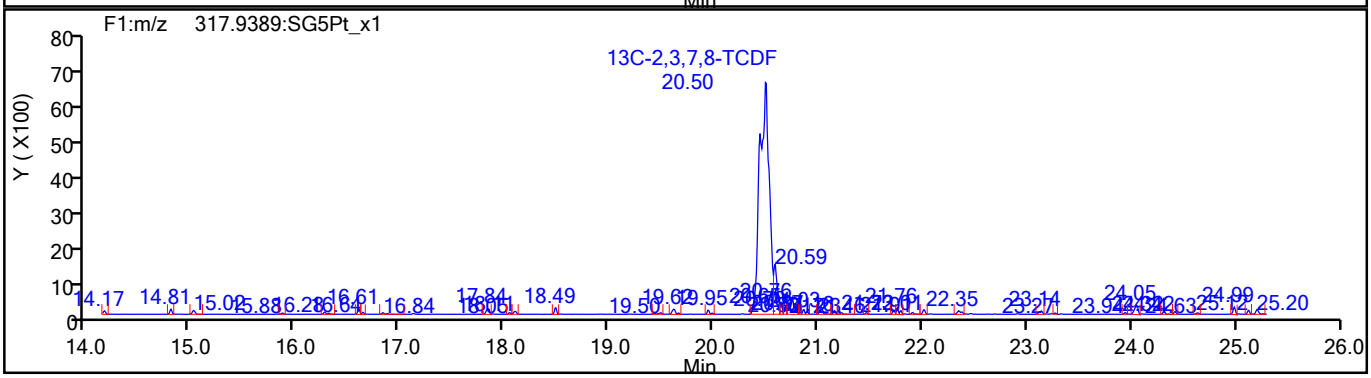

777276

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

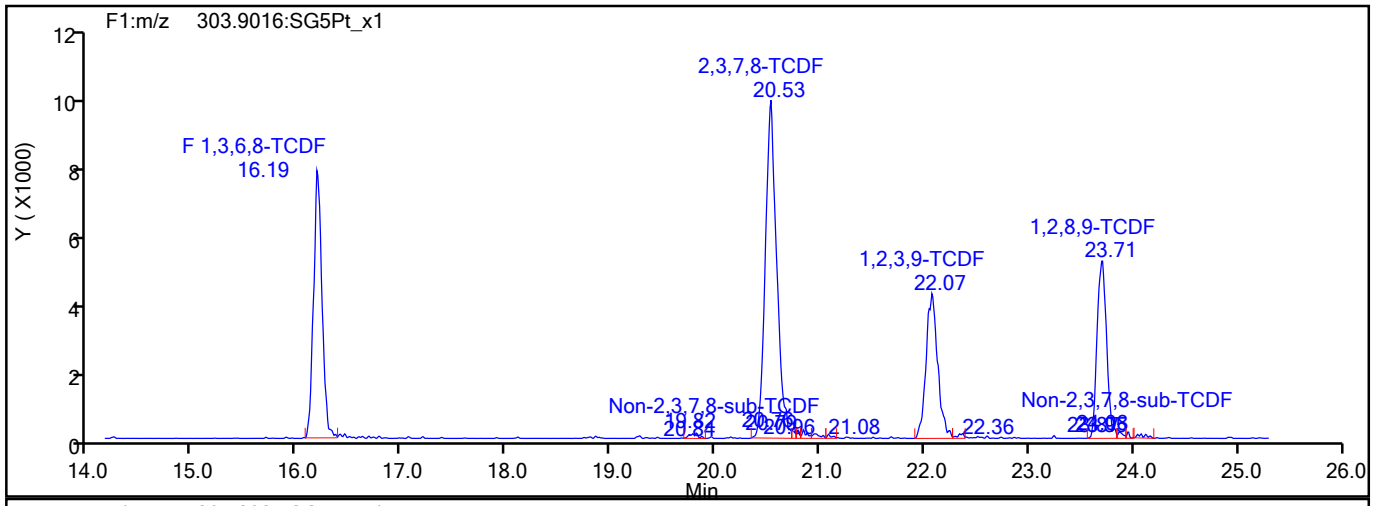

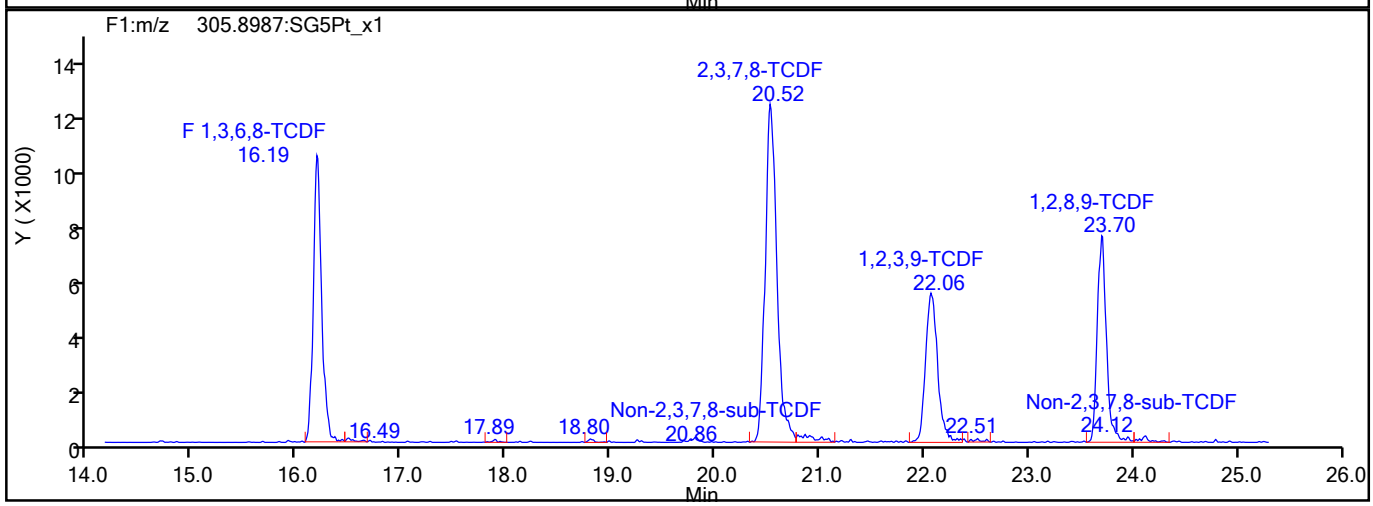

TCDF Interference Mass

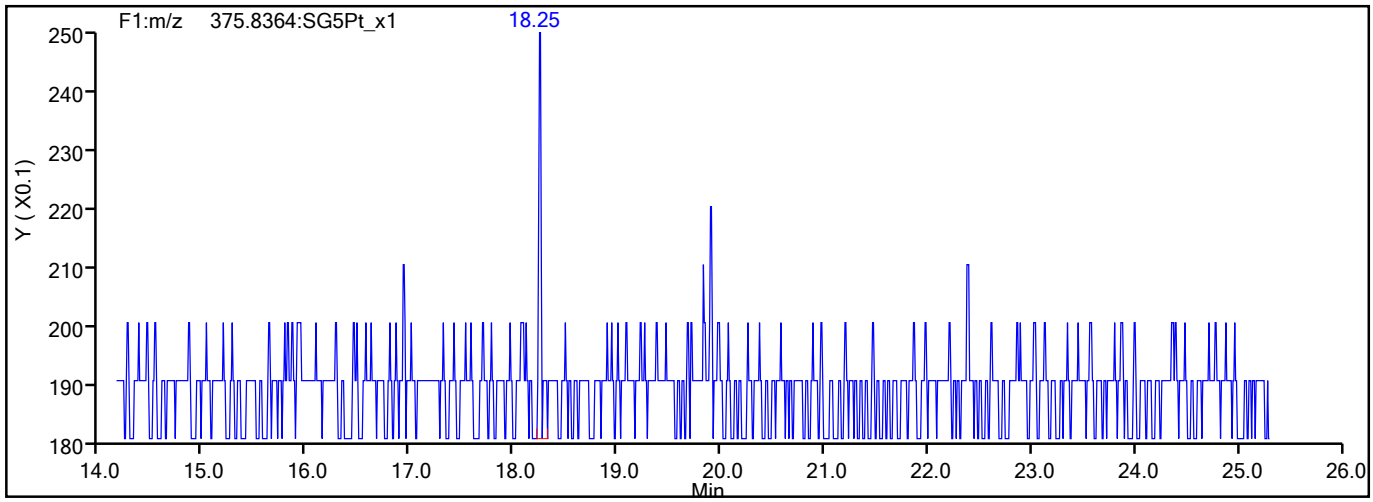

777277

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

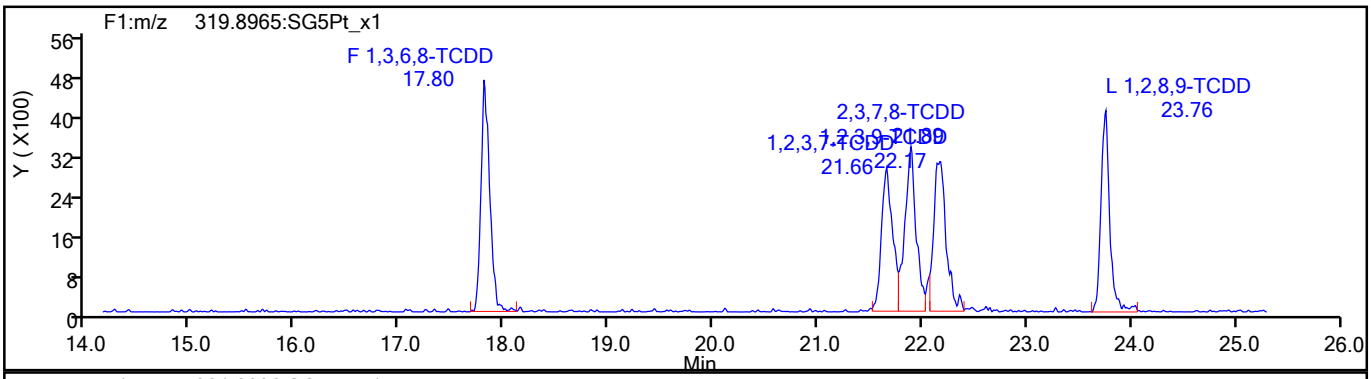

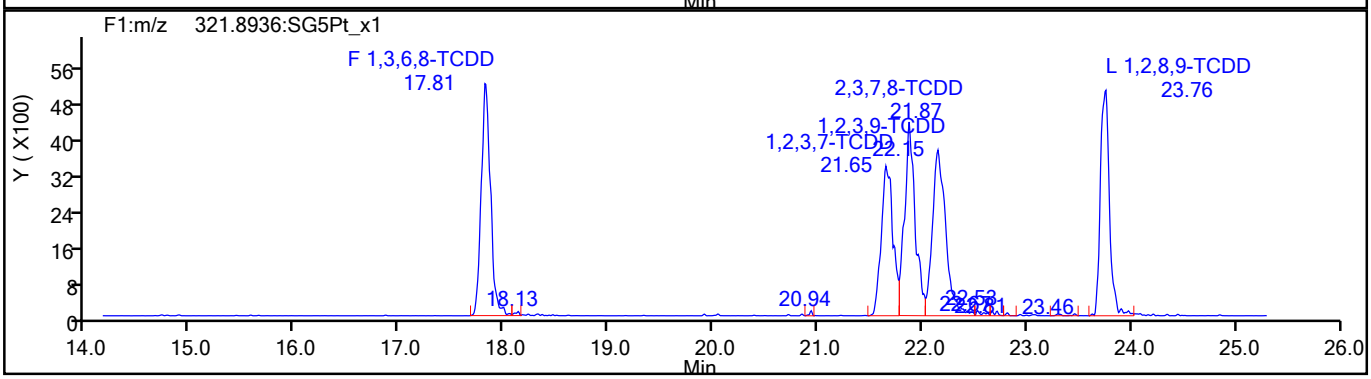

TCDD Standards

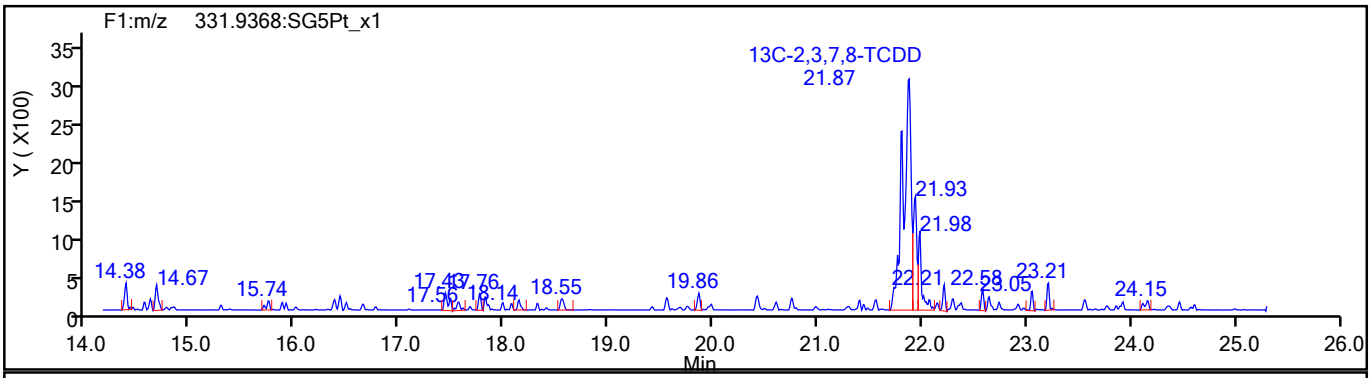

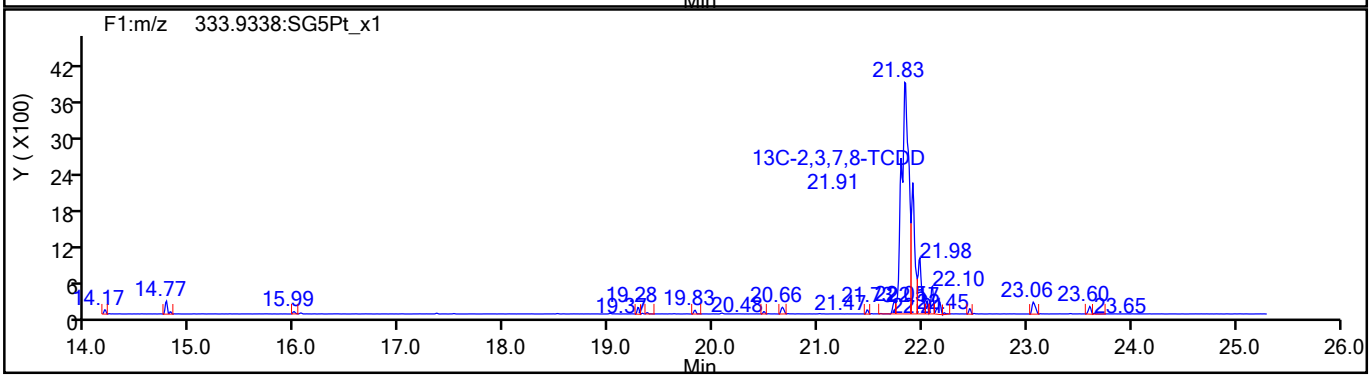

777278

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

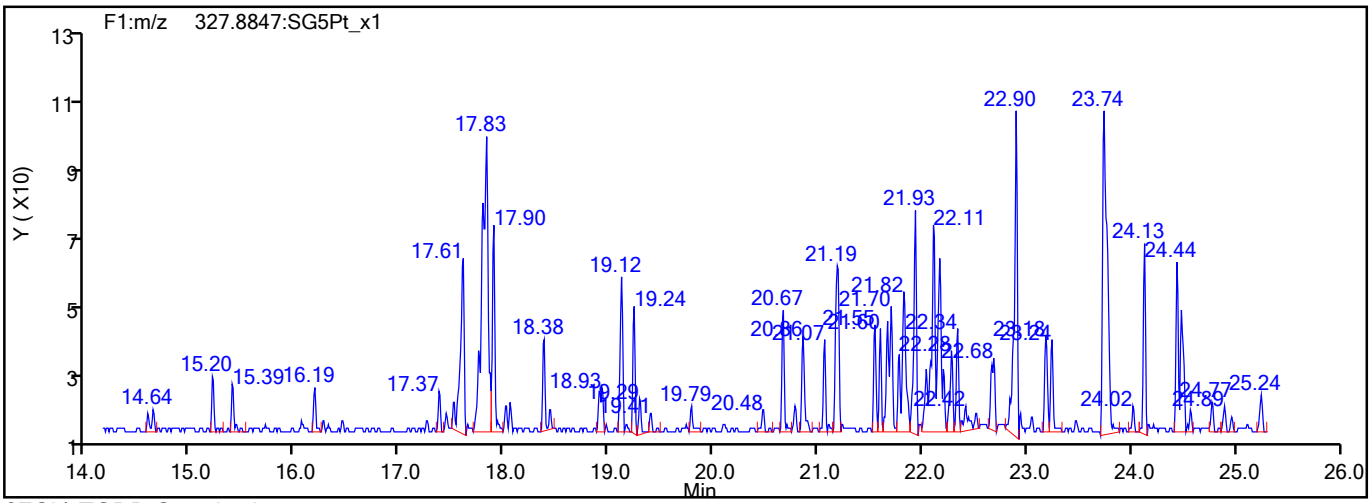

37Cl4-TCDD Standards

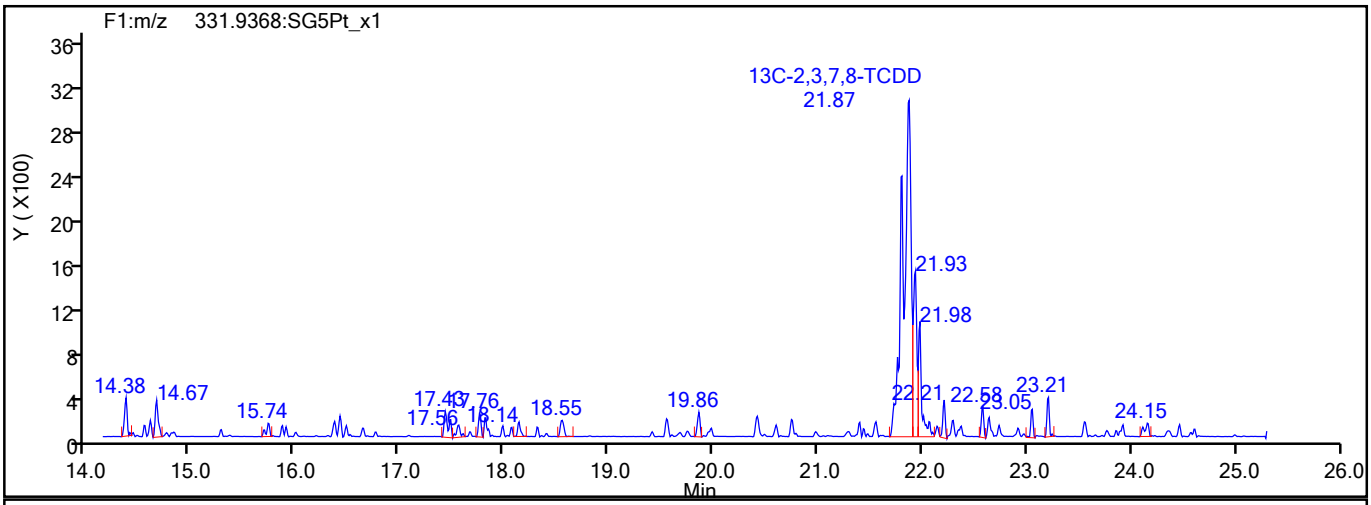

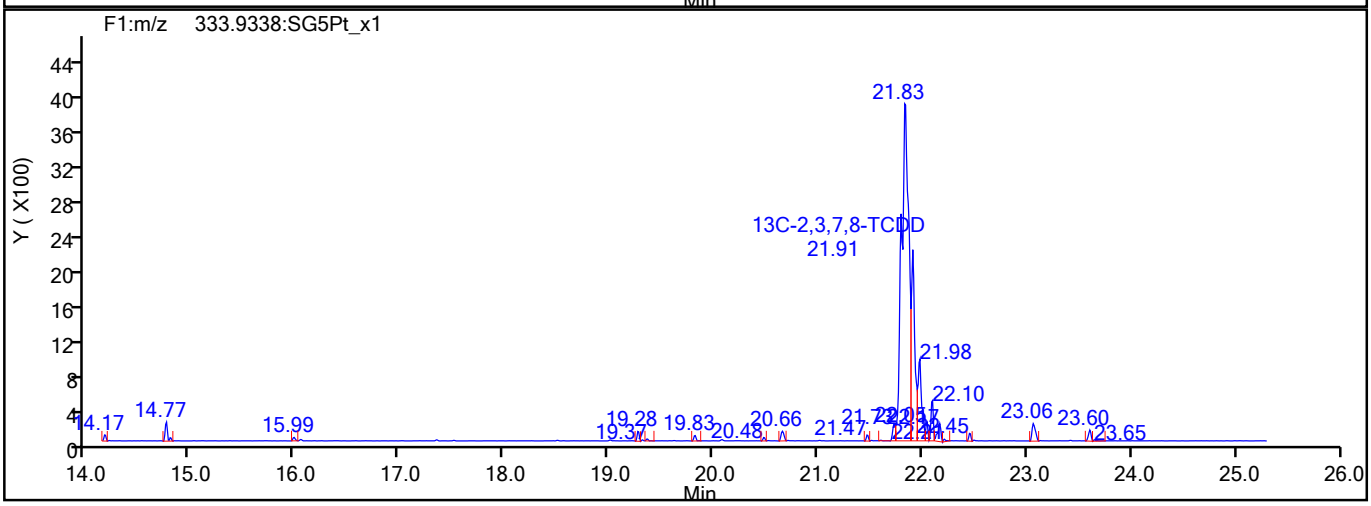

777279

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

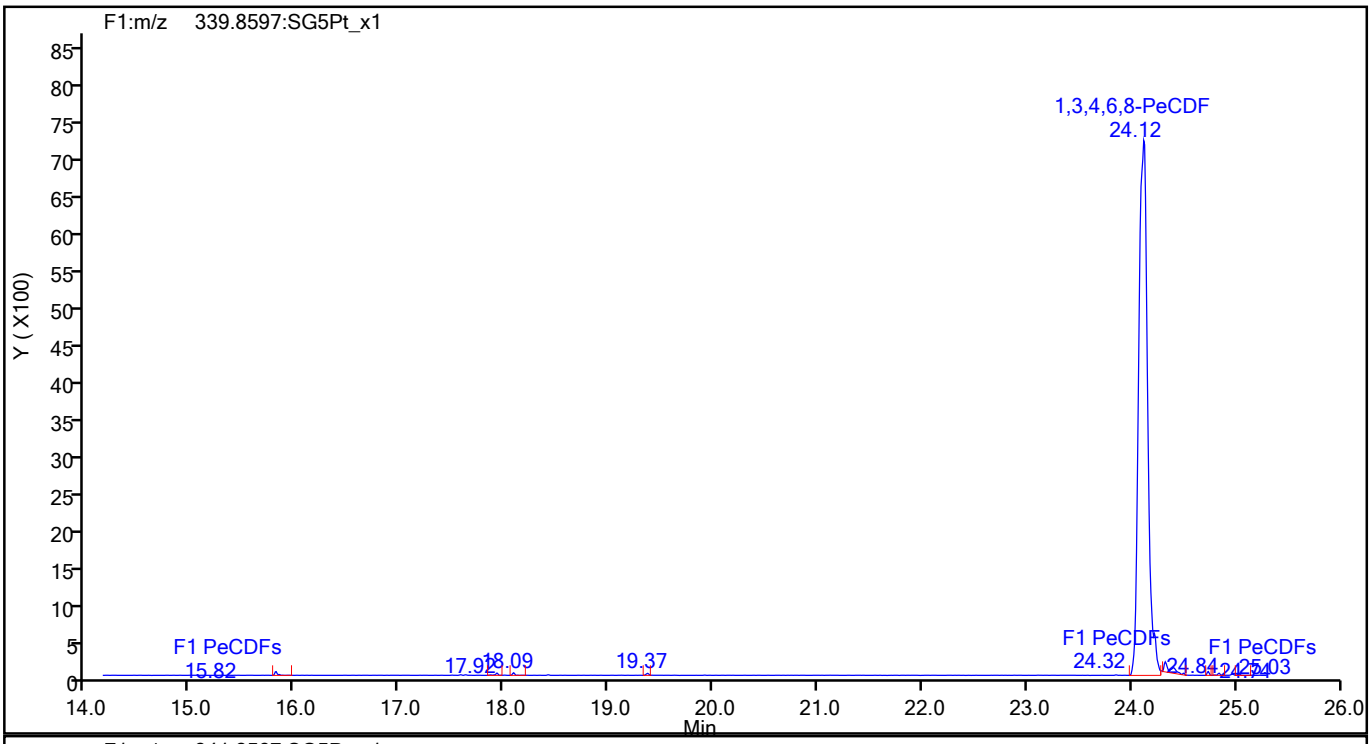

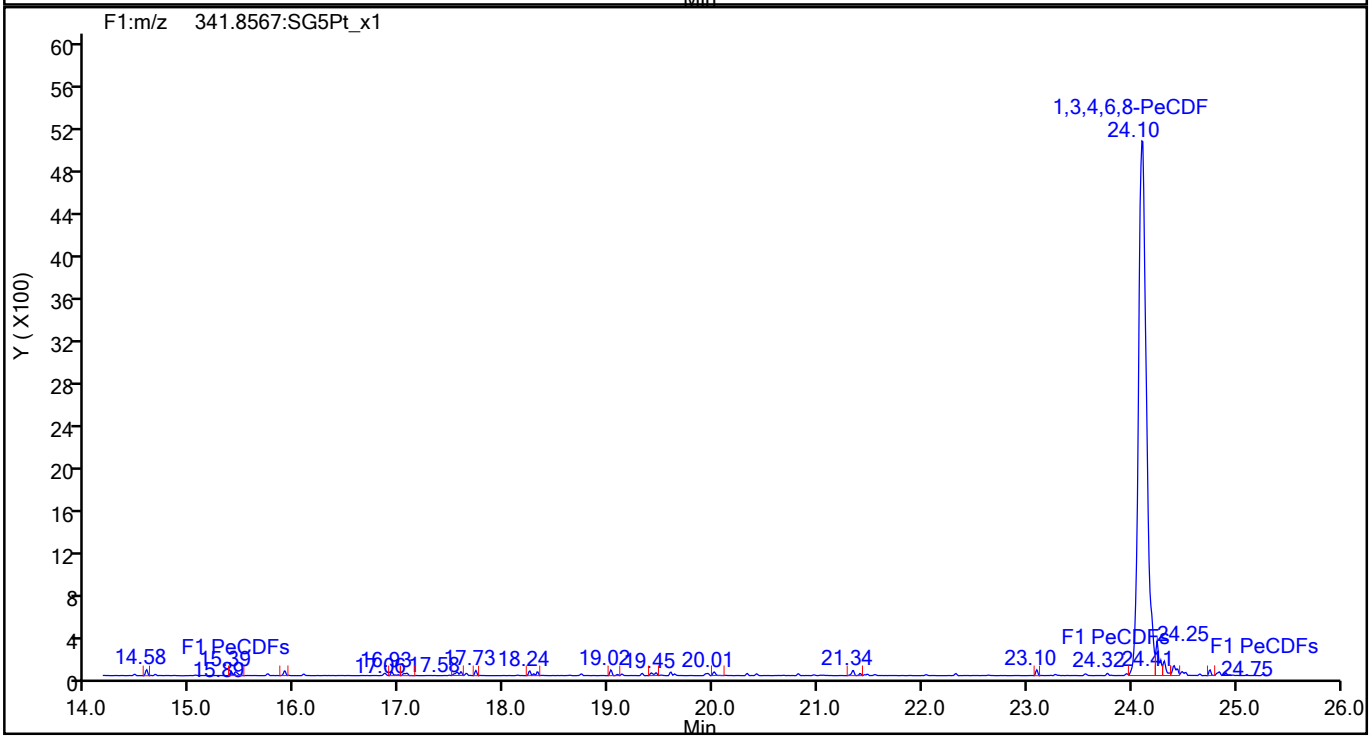

777280

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

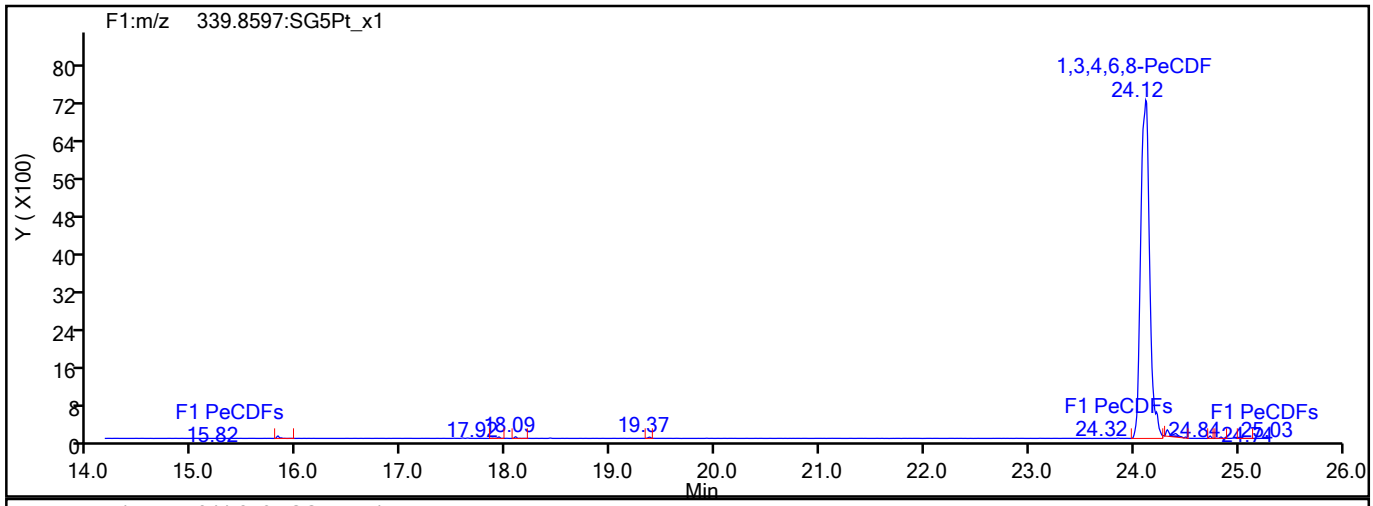

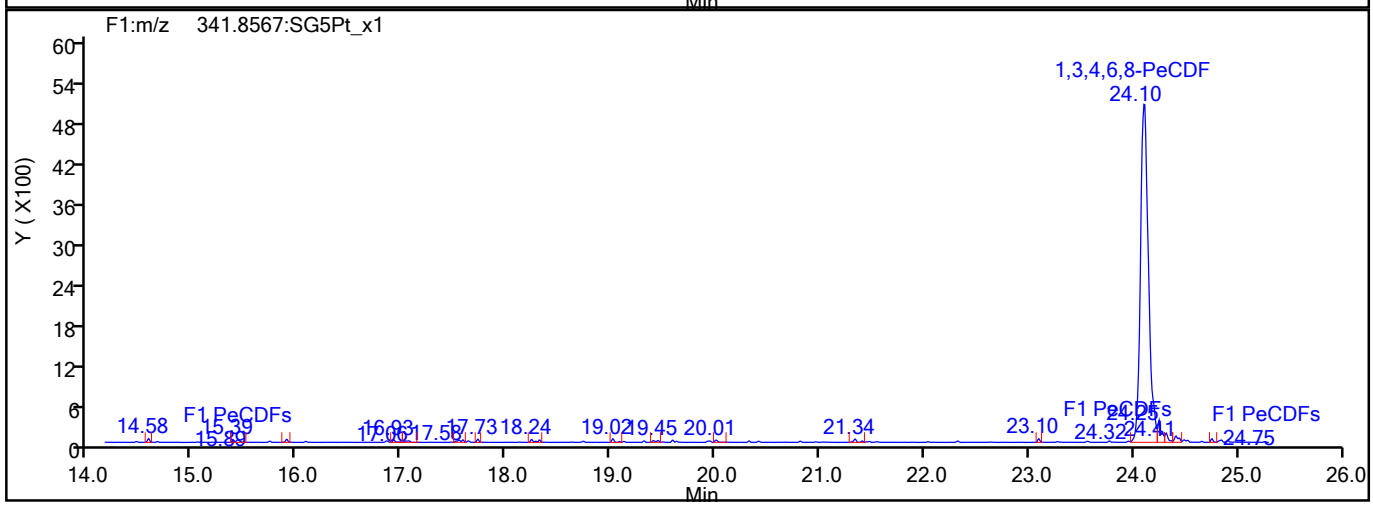

F1 PeCDFs Interference Mass

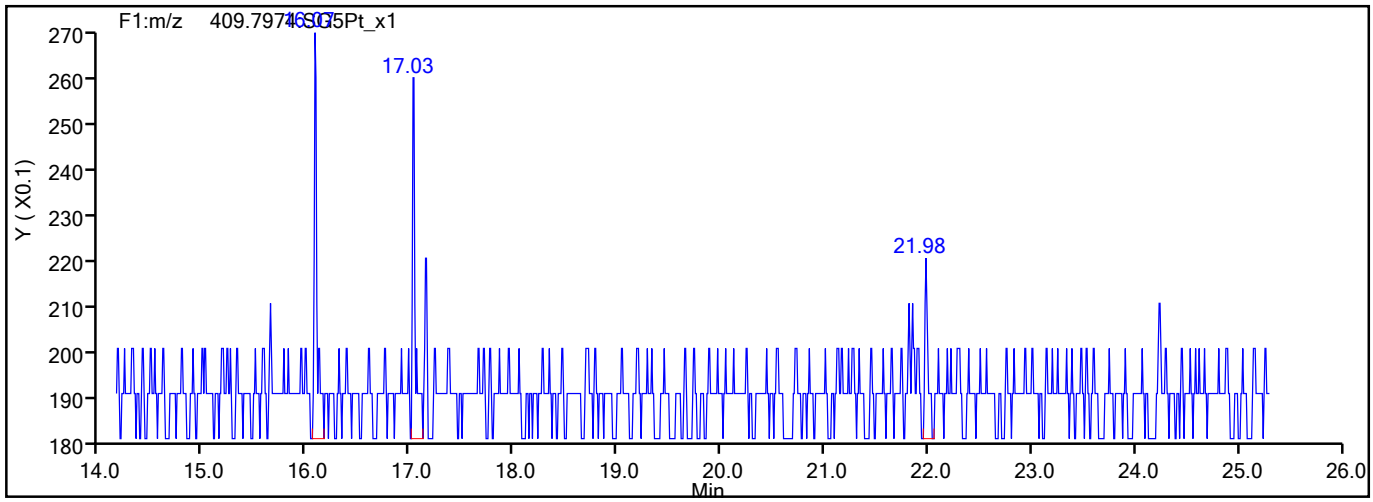

777281

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

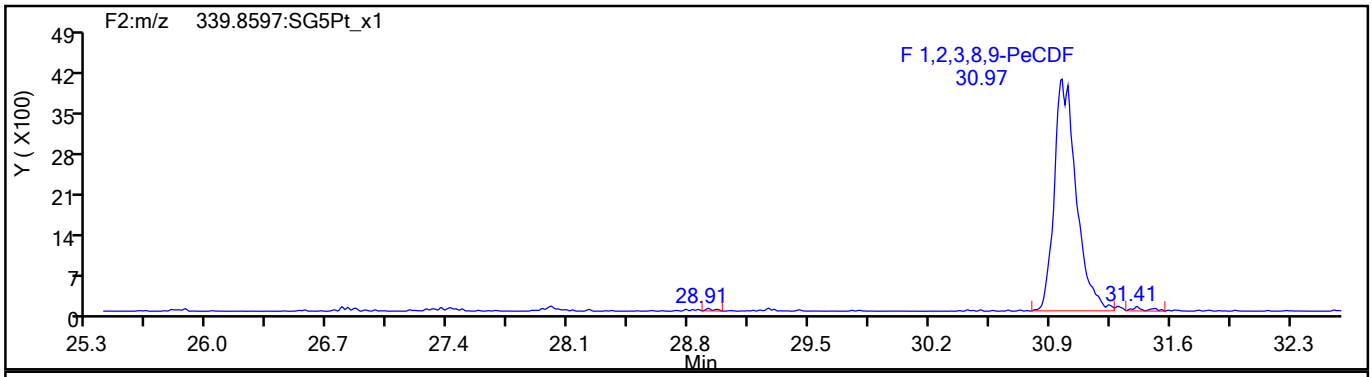

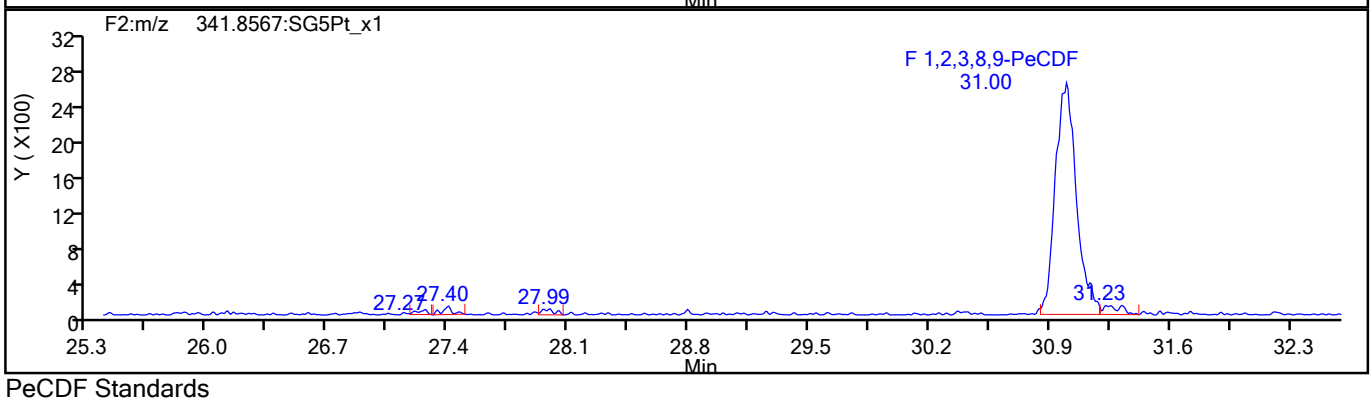

PeCDF Standards

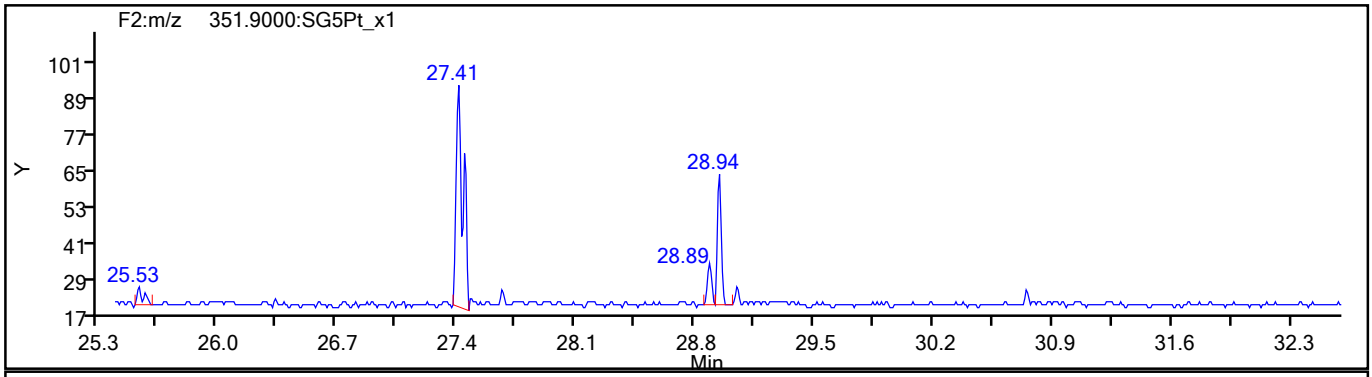

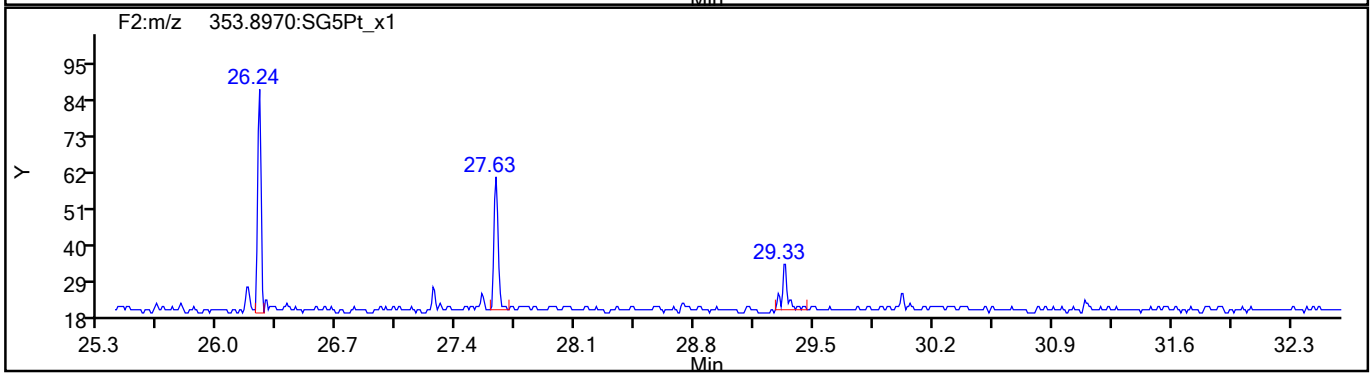

777282

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

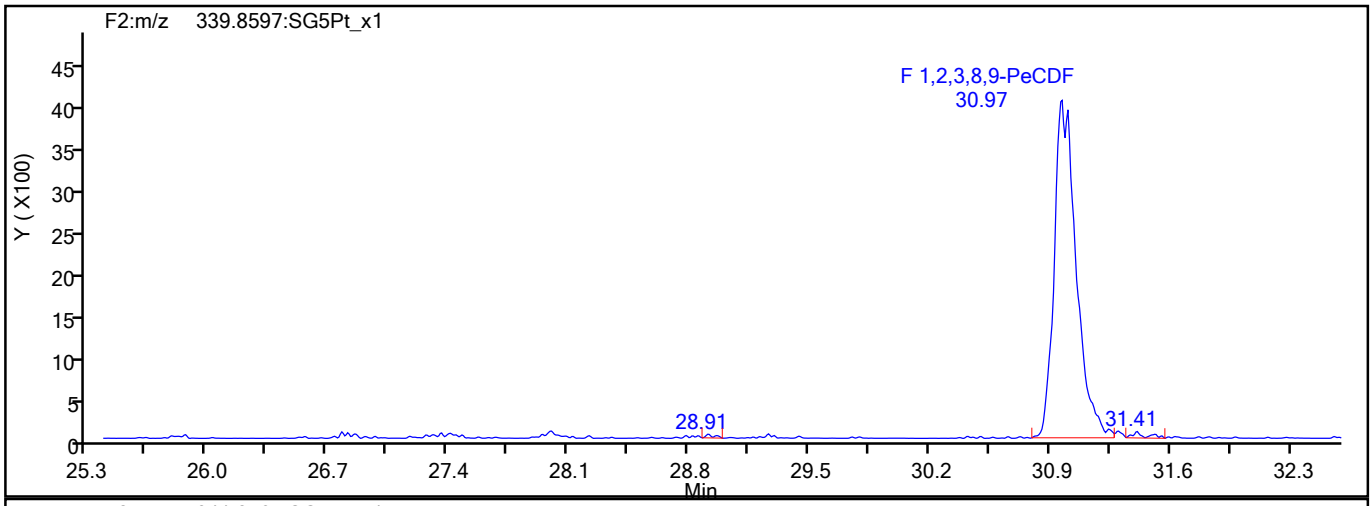

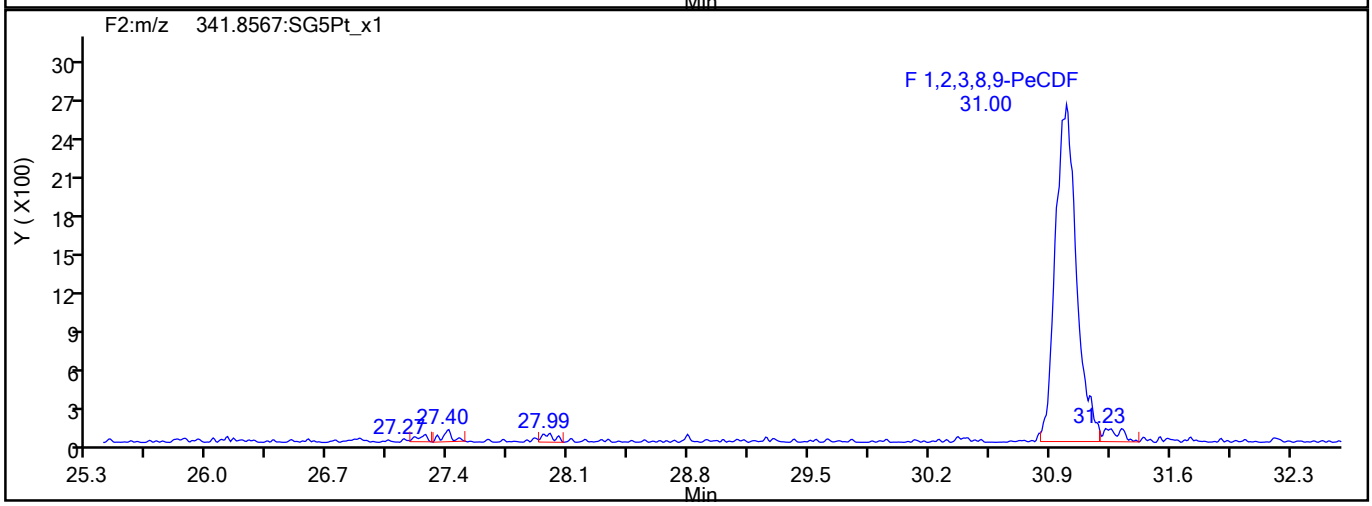

PeCDF Interference Mass

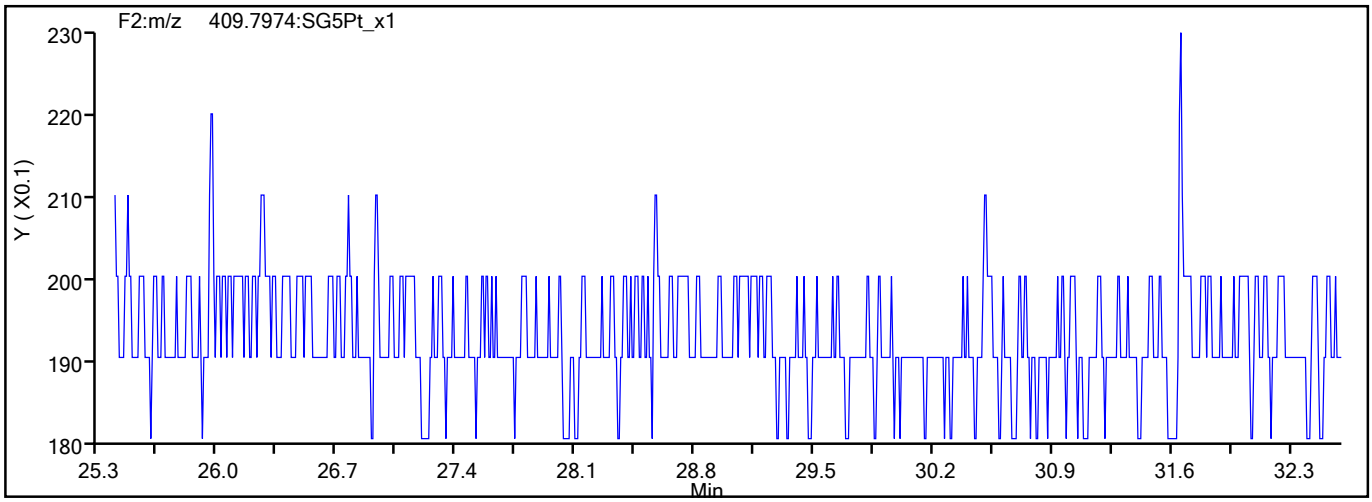

777283

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

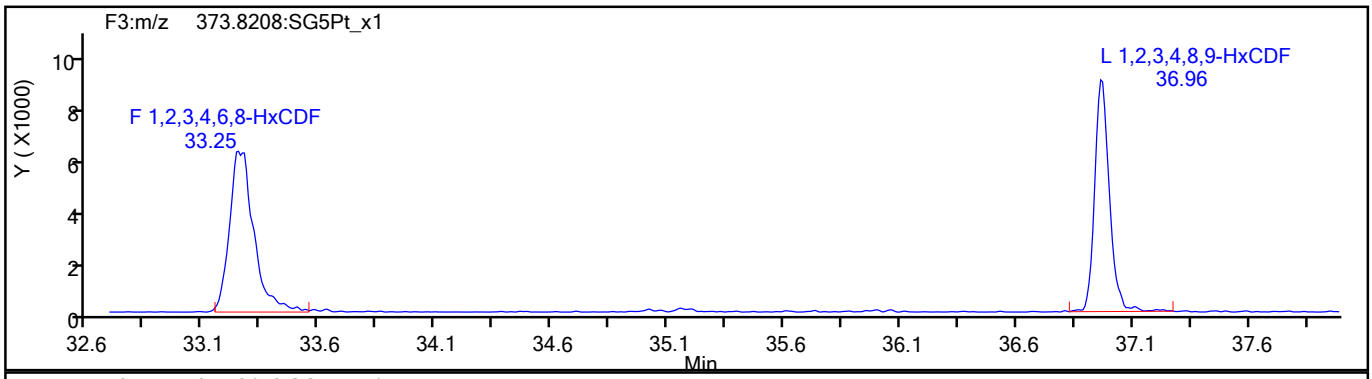

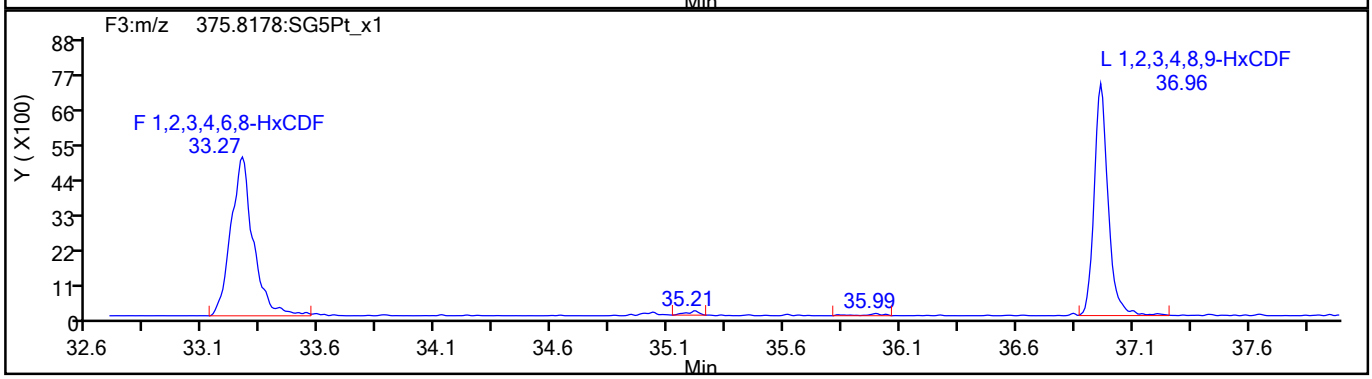

HxCDF Standards

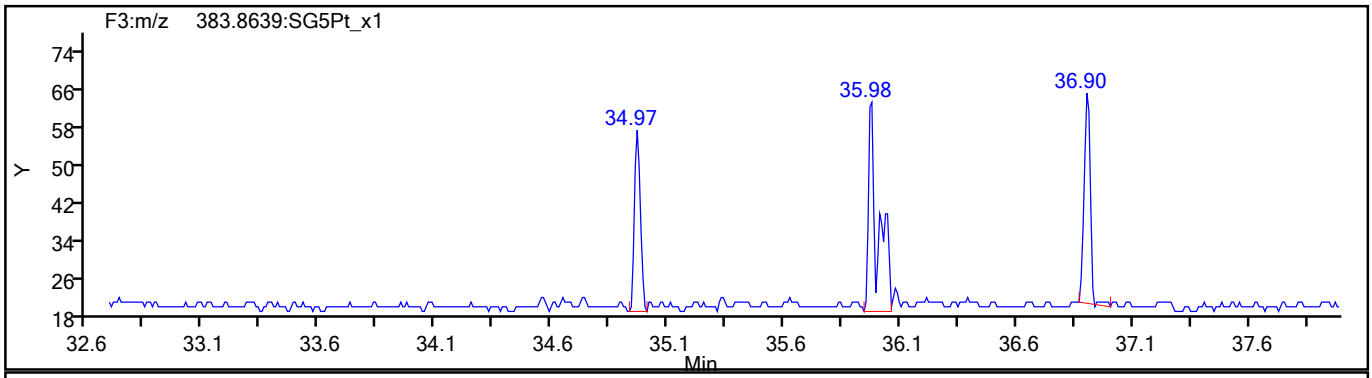

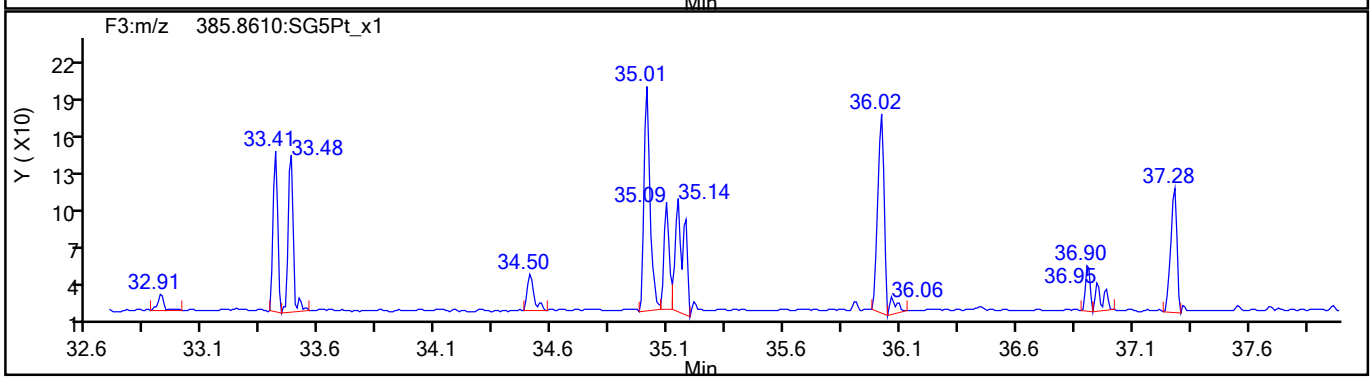

777284

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

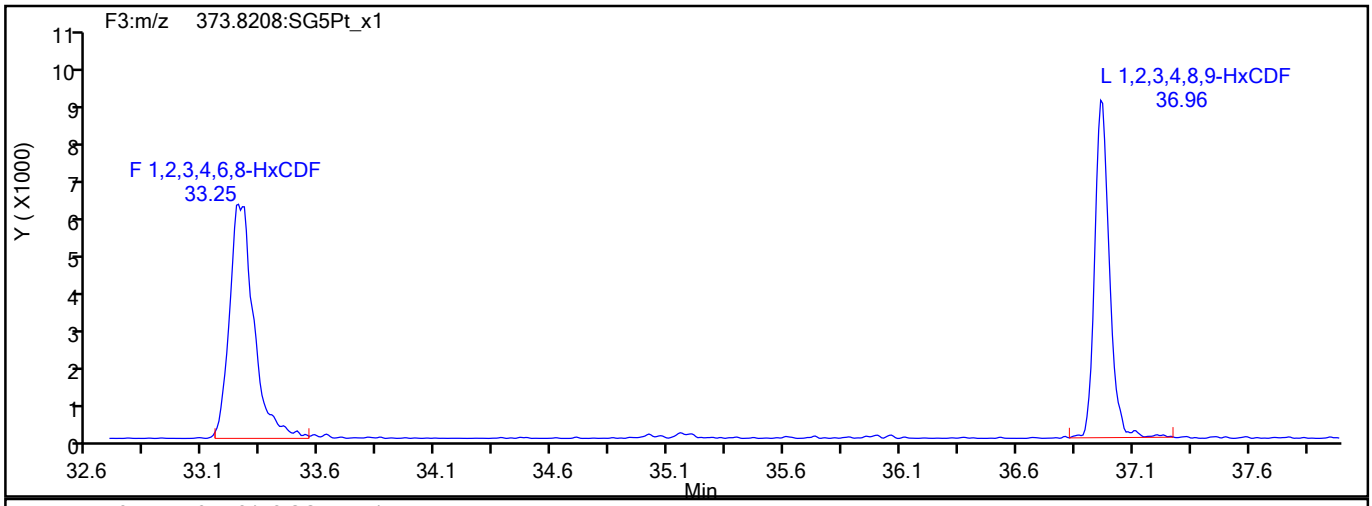

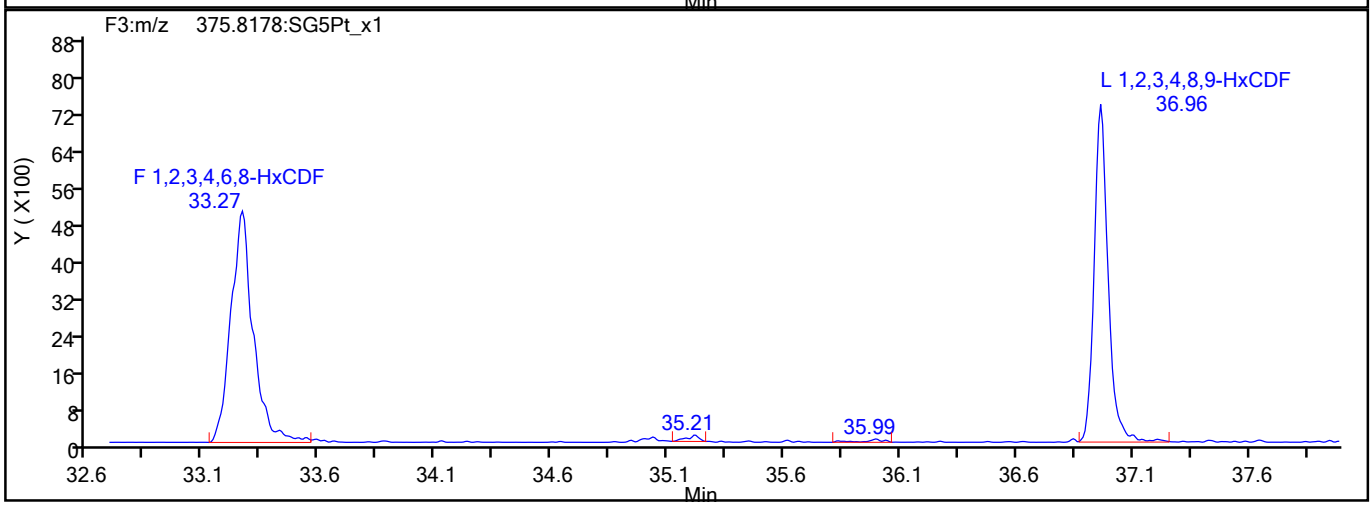

HxCDF Interference Mass

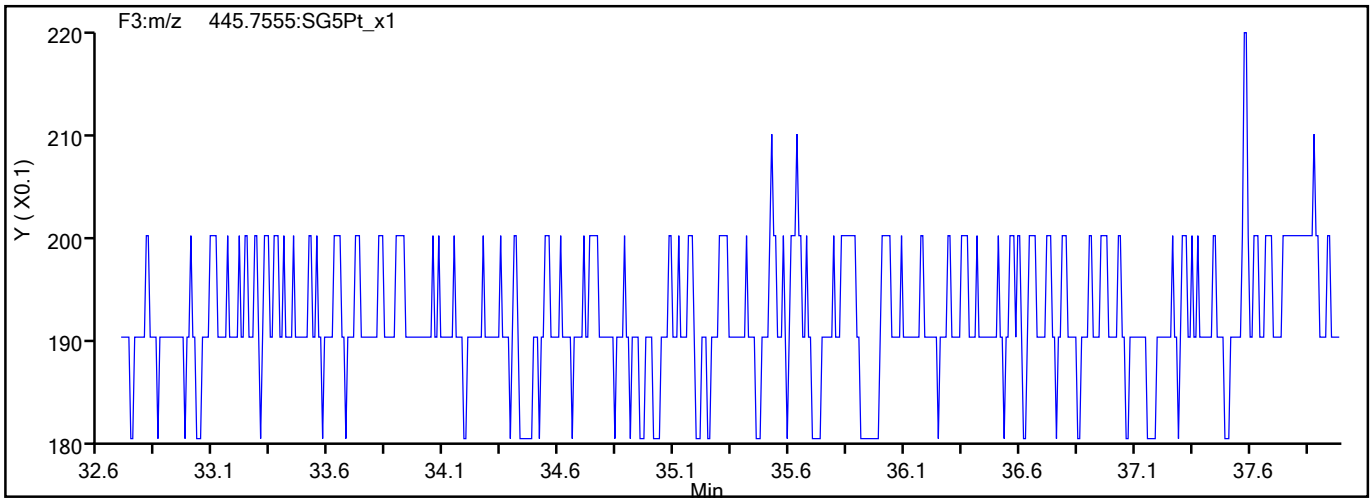

777285

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

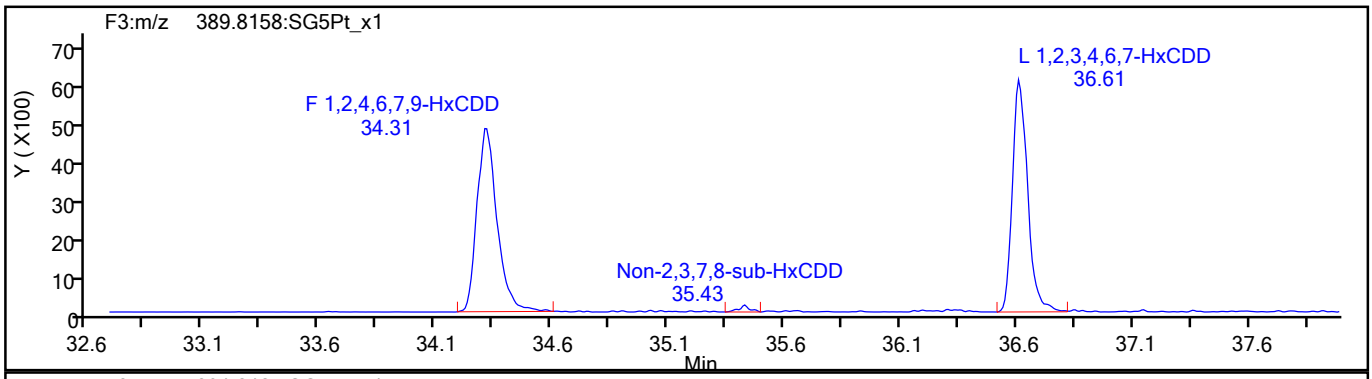

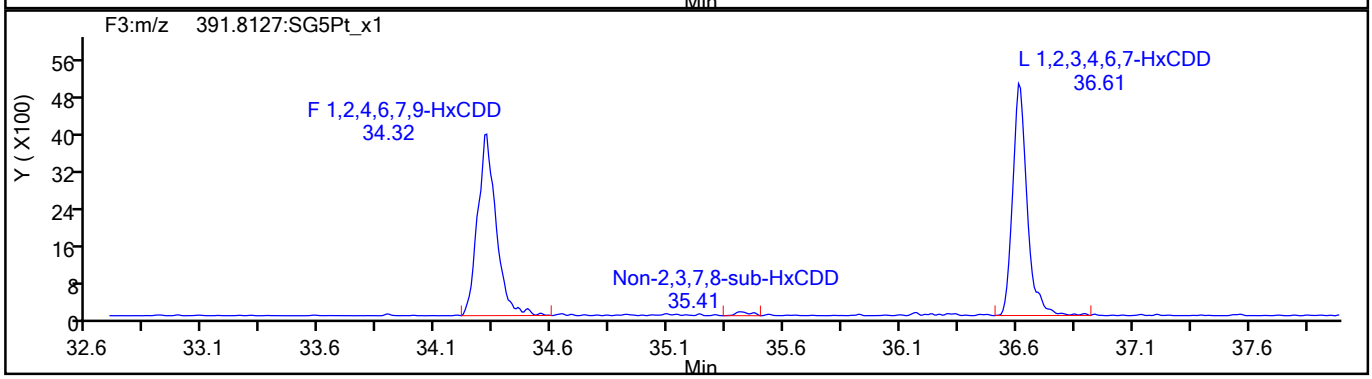

HxCDD Standards

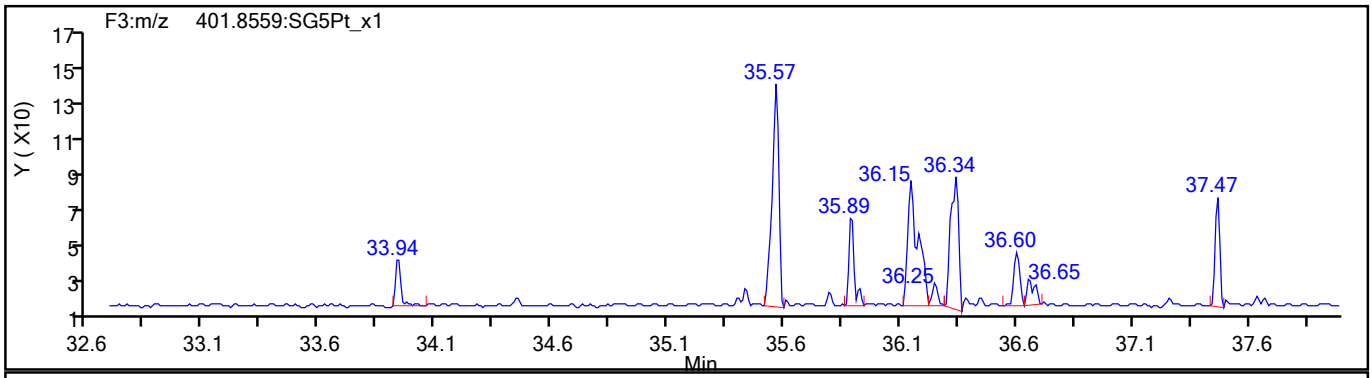

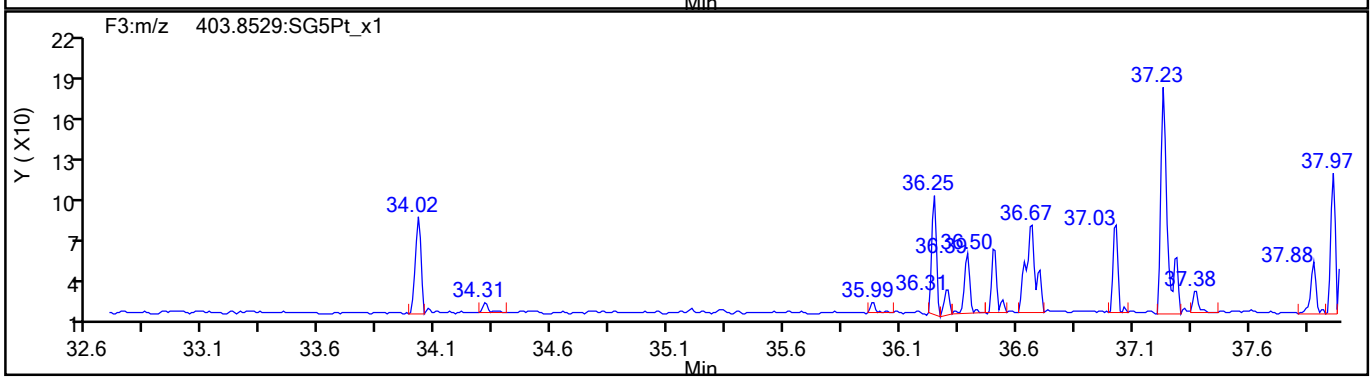

777286

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

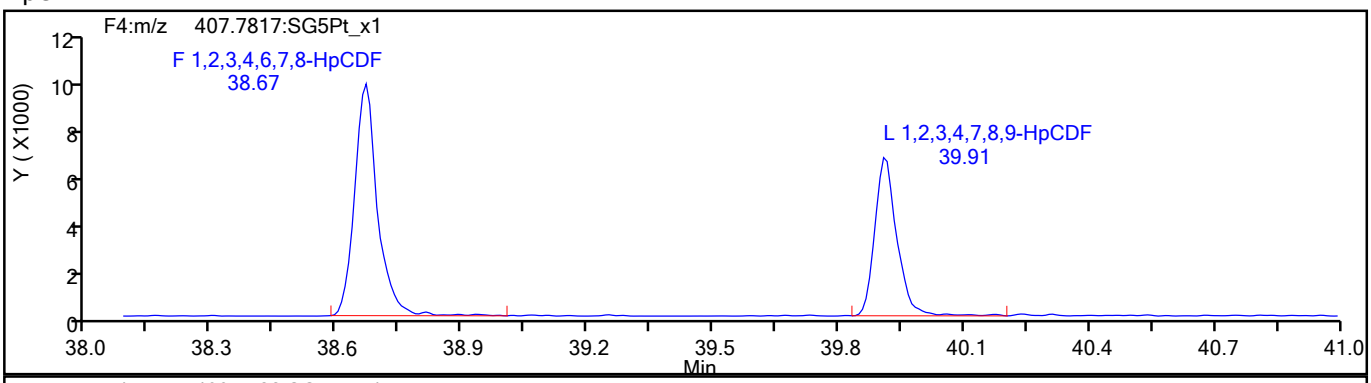

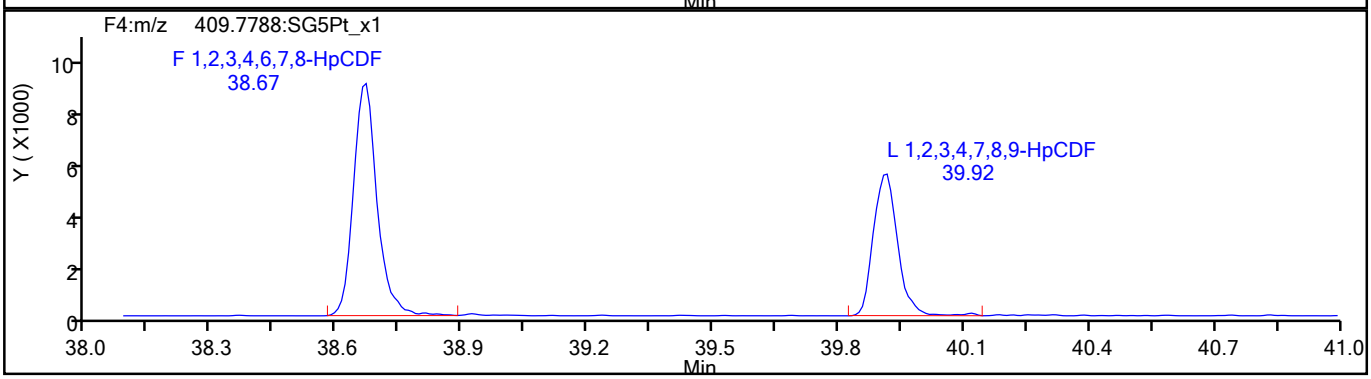

HpCDF Standards

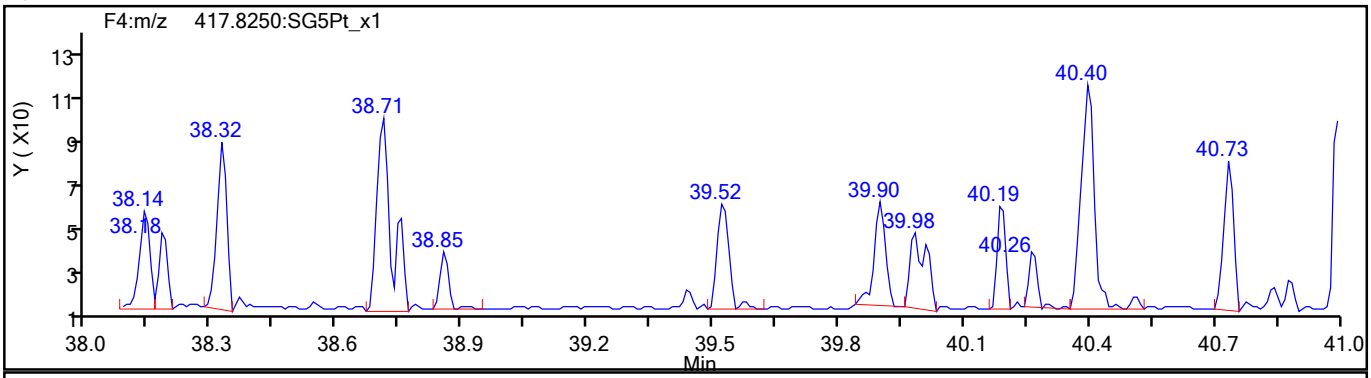

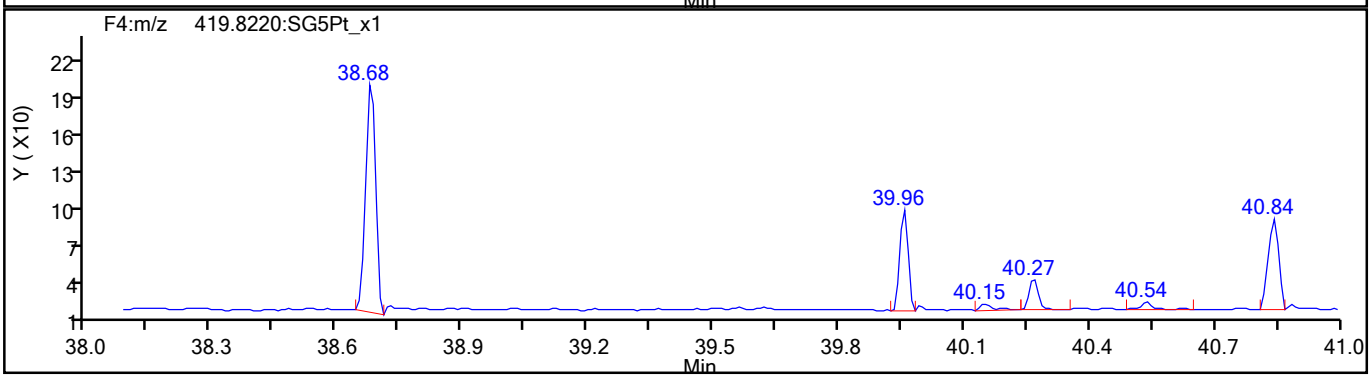

777287

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

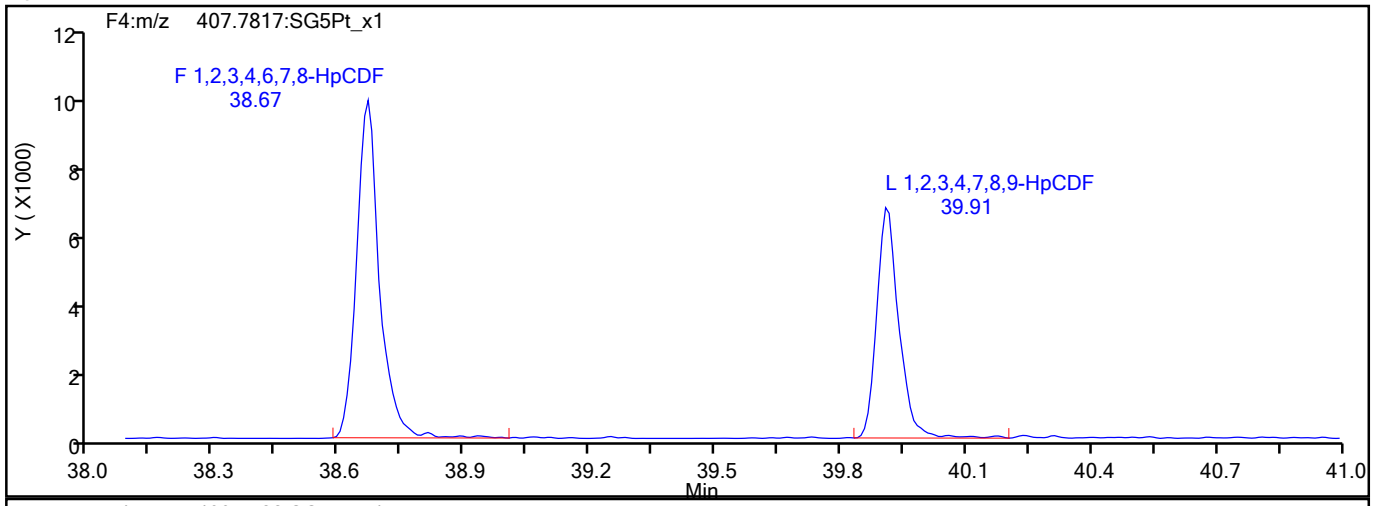

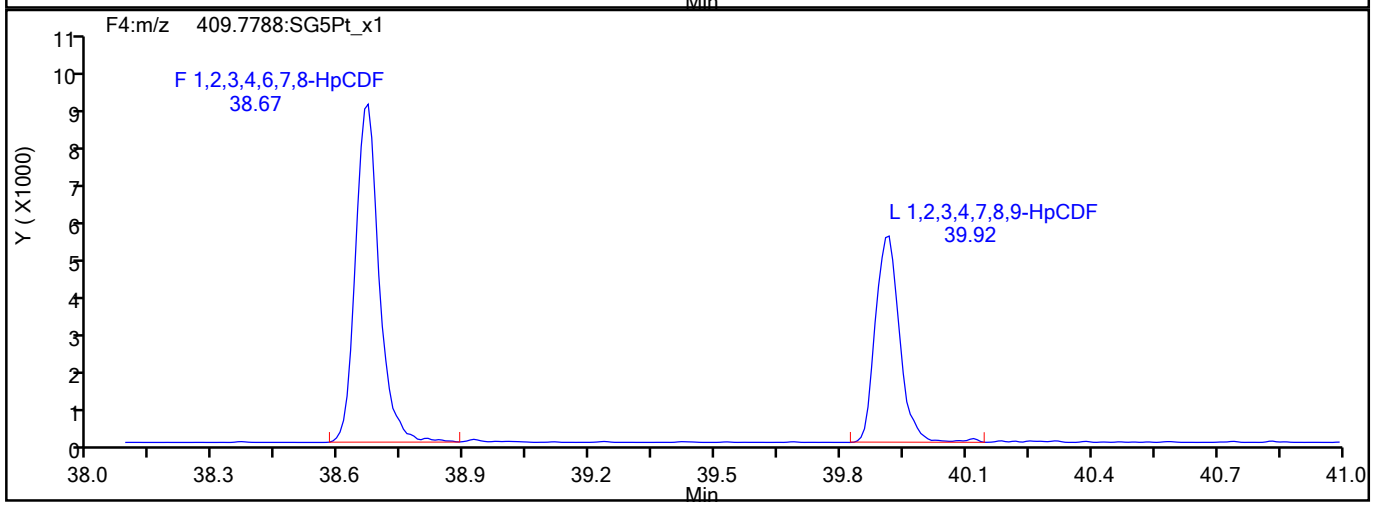

HpCDF Interference Mass

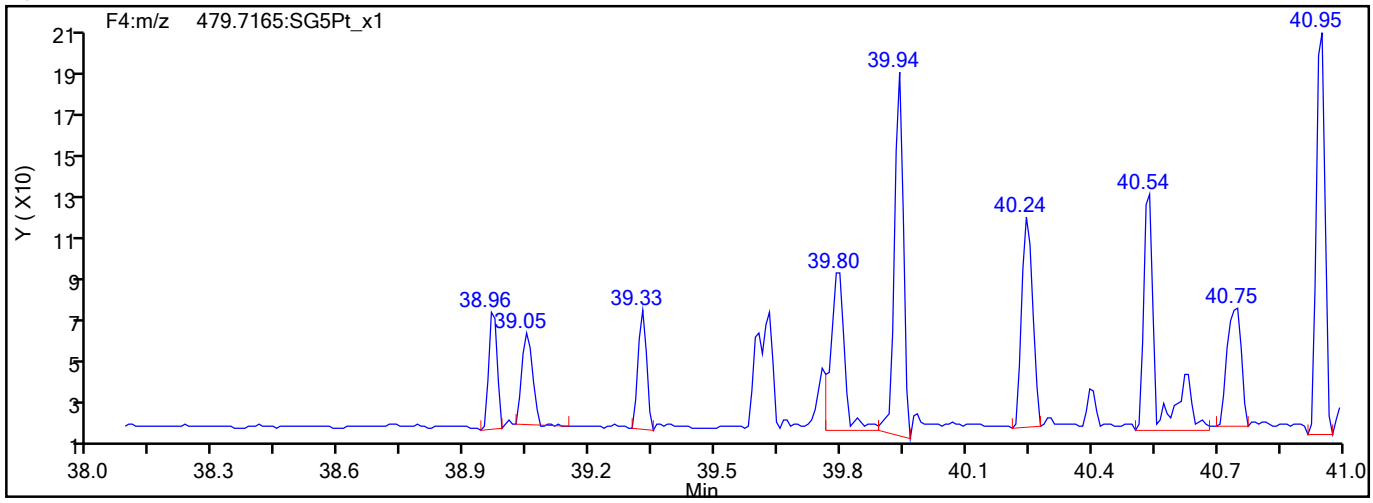

777288

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

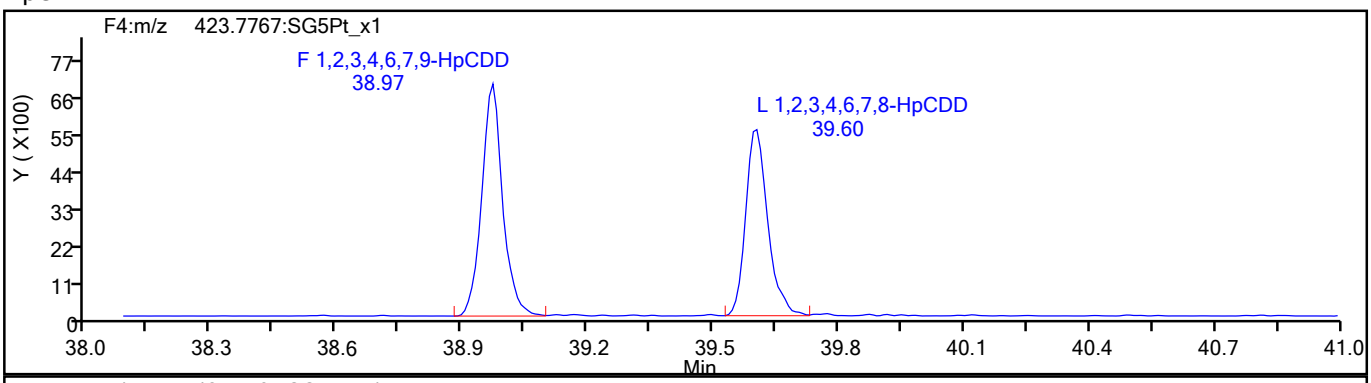

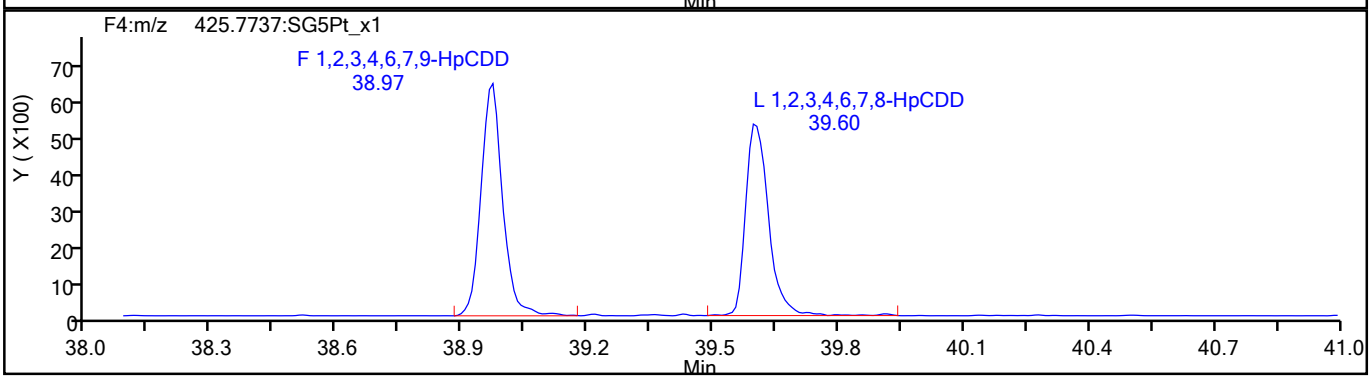

HpCDD Standards

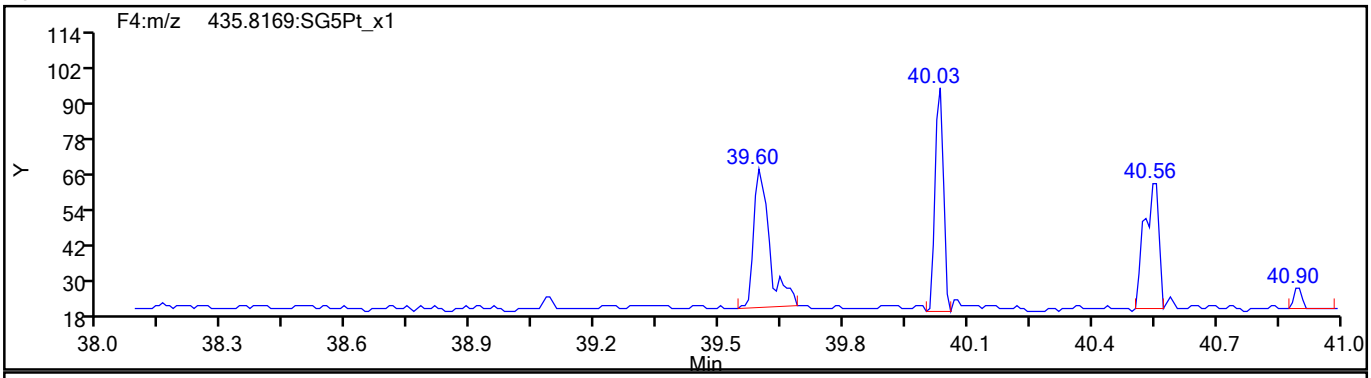

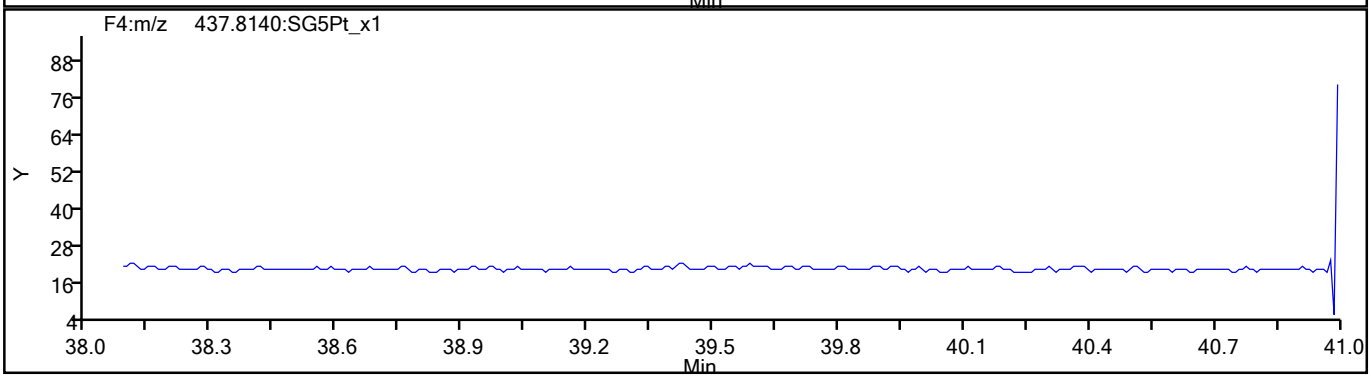

777289

Report Date: 19-Aug-2021 15:48:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

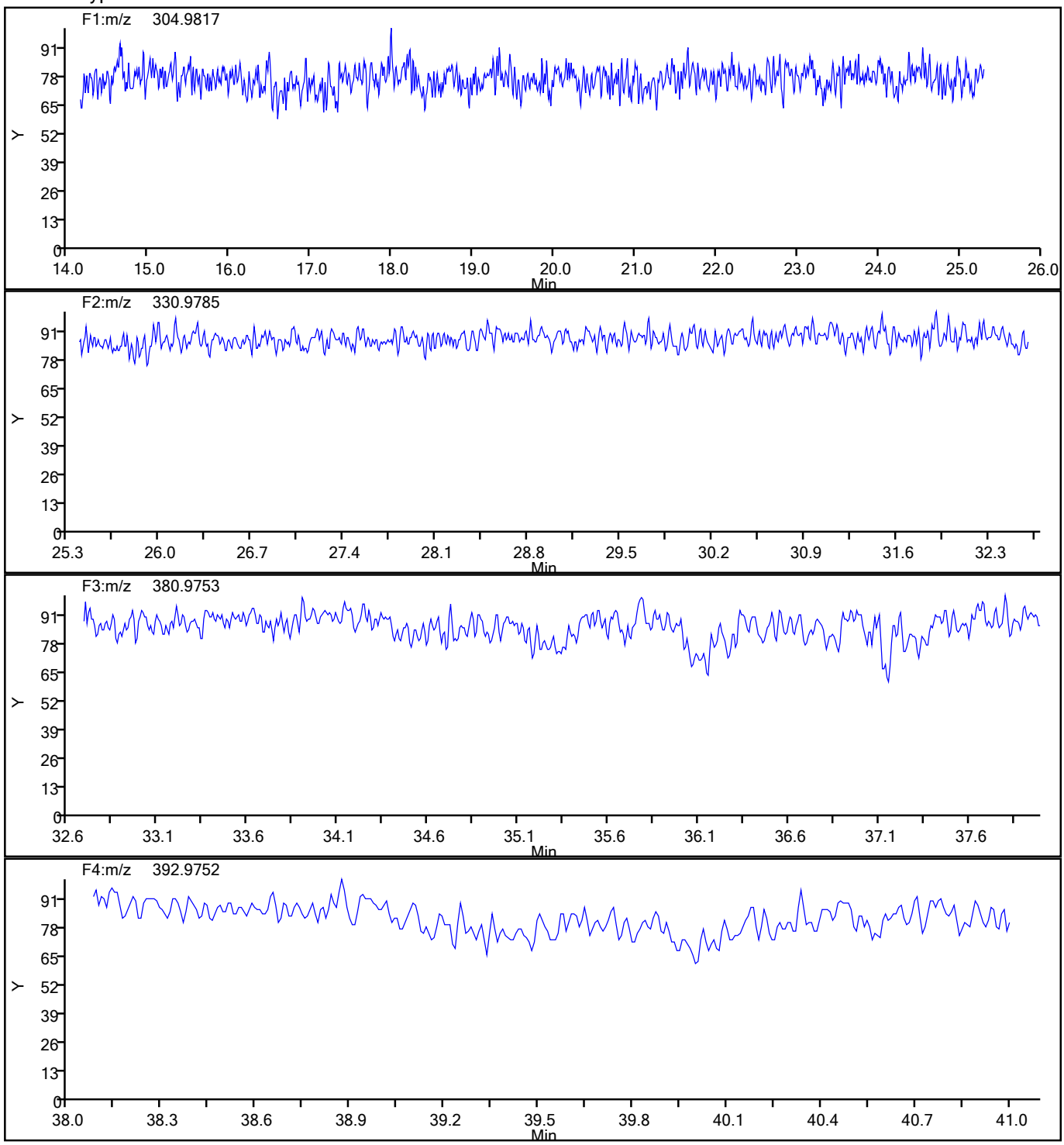

777290

Report Date: 19-Aug-2021 15:48:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

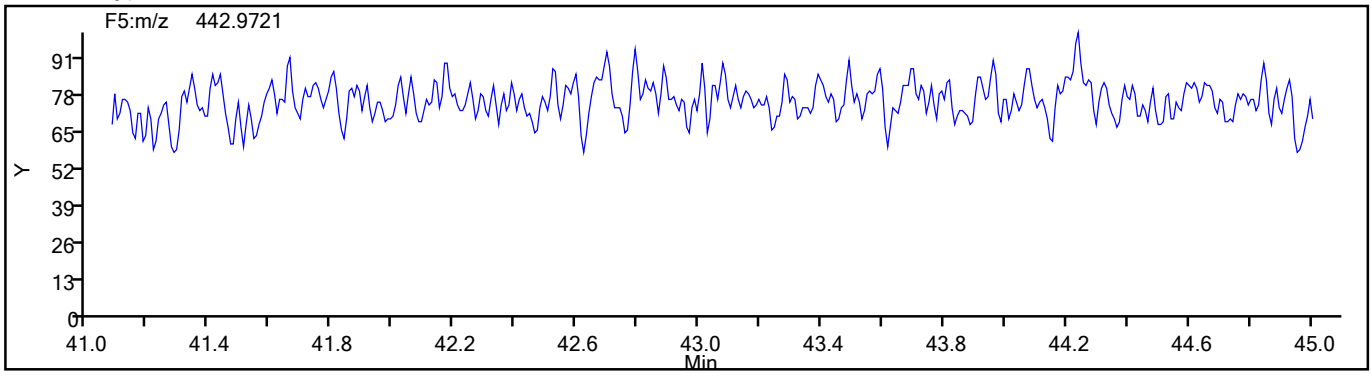

777291

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 02:19:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:24:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.401	485361	0.82	1.3459					0.00	
2,3,7,8-TCDF	20.436	1188413	0.84	1.0802	90.7	90.7	0.2813	0.2813		
A Non-2,3,7,8-sub-TCDF	19.878	19901	0.77	1.0802	1.727	1.518	0.2813	0.7822		RQ
S Total TCDF					92.4	92.2	0.2813	0.2813		RQ
D 13C-2,3,7,8-TCDD	21.743	329600	0.81	0.9317					0.00	
2,3,7,8-TCDD	21.777	370047	0.80	1.0753	41.8	41.8	0.1249	0.1249		
A Non-2,3,7,8-sub-TCDD	20.707	3685	0.77	1.0753	0.5012	0.4159	0.1249	0.4159		RQ
S Total TCDD					42.3	42.2	0.1249	0.1249		RQ
A F1 PeCDFs	24.648	904	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.125						0.0	0.0		
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.489	1055	1.45	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.028	10297	1.24	0.0000						RQ
S Total HxCDF										RQ
A Non-2,3,7,8-sub-HxCDD	35.394	4006	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.630	364225	1.07	1.4421						
1,2,3,4,7,8,9-HpCDF	39.885	322997	1.06	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.258						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.582	244067	1.05	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.258						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.156	689898	0.82							
1,3,6,8-TCDD	17.754	384589	0.80							
2,3,4,7-TCDF	20.436	1190538	0.84							
1,2,3,7-TCDD	21.545	321799	0.78							
1,2,3,9-TCDF	21.958	518792	0.84							
1,2,3,9-TCDD	22.035	386037	0.78							
1,2,8,9-TCDF	23.600	554349	0.82							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.660	159041								
1,3,4,6,8-PeCDF	24.022	462305	1.58							
1,2,3,8,9-PeCDD	26.056	316607	1.54							
1,2,4,7,9-PeCDD	30.652	304812	1.54							
1,2,3,8,9-PeCDF	30.838	407641	1.63							
1,2,3,4,6,8-HxCDF	33.138	482293	1.31							
1,2,4,6,7,9-HxCDD	34.224	313209	1.25							
1,2,3,4,6,7-HxCDD	36.564	309337	1.23							
1,2,3,4,8,9-HxCDF	36.918	413489	1.31							
1,2,3,4,6,7,9-HpCDD	38.934	270894	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 02:19:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:24:20

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.401	20.401	0	1.000	219196	29055	85	212	342		
317.9389	20.393	20.401	-1	1.000	266165	33471	26	65	1287	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.436	20.436	0	1.002	544208	70535	85	212	830		
305.8987	20.436	20.436	0	1.002	644205	86812	105	262	827	0.84(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.713	19.878	-10	0.966	6415	874	85	212	10		
	Empc Correction				4460	790	85	212	9		
305.8987	19.678	19.878	-12	0.965	5793	1027	105	262	10	1.11(0.65-0.89)	
303.9016	24.013	19.878	248	1.177	4973	730	85	212	9		
	Empc Correction				4197	736	85	212	9		
305.8987	24.004	19.878	247	1.177	5451	956	105	262	9	0.91(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.743	21.743	0	1.000	147378	19307	97	242	199		
333.9338	21.734	21.743	-1	1.000	182222	24457	55	137	445	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.777	21.777	0	1.002	164836	19708	37	92	533		
321.8936	21.769	21.777	-1	1.001	205211	24772	22	55	1126	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.396	20.707	101	1.030	2359	261	37	92	7		
	Empc Correction				1603	201	37	92	5		
321.8936	22.457	20.707	105	1.033	2082	262	22	55	12	1.13(0.65-0.89)	
A F1 PeCDFs											RQ
339.8597	24.434	24.648	-13	1.000	323	113	8	20	14		
341.8567	24.486	24.648	-10	1.000	477	79	7	17	11	0.68(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	24.873	24.648	14	1.000	227	52	8	20	7		
341.8567	24.890	24.648	15	1.000	236	71	7	17	10	0.96(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.125						28	70			
341.8567	28.125						115	287			
A Non-2,3,7,8-sub-PeCDD											
355.8546	26.898	28.489	-95	1.000	625	122	24	60	5		
357.8516	26.856	28.489	-98	1.000	430	72	13	32	6	1.45(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	34.973	35.028	-3	1.000	2250	338	67	167	5		
375.8178	34.956	35.028	-4	1.000	1567	325	45	112	7	1.44(1.05-1.43)	
373.8208	35.116	35.028	5	1.000	3879	551	67	167	8		
375.8178	35.125	35.028	6	1.000	2908	527	45	112	12	1.33(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.344	35.394	-3	1.000	2218	414	33	82	13		
391.8127	35.335	35.394	-4	1.000	2261	396	31	77	13	0.98(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.630	38.630	0	1.000	188441	47249	63	157	750		
409.7788	38.630	38.630	0	1.000	175784	44386	54	135	822	1.07(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885	39.885	0	1.000	166495	43364	63	157	688		
409.7788	39.877	39.885	-1	1.000	156502	41246	54	135	764	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						63	157			
409.7788	39.258						54	135			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.582	39.582	0	1.000	125253	34507	41	102	842		
425.7737	39.573	39.582	-1	1.000	118814	33009	40	100	825	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.258						41	102			
425.7737	39.258						40	100			
1,3,6,8-TCDF											
303.9016	16.156	16.156	0		310778	57406	85	212	675		
305.8987	16.148	16.156	-1		379120	70718	105	262	674	0.82(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.754	17.754	0		170993	27785	37	92	751		
321.8936	17.754	17.754	0		213596	36009	22	55	1637	0.80(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.436	20.436	0		545121	70571	85	212	830		
305.8987	20.436	20.436	0		645417	86859	105	262	827	0.84(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.545	21.545	0		141111	18226	37	92	493		
321.8936	21.545	21.545	0		180688	24656	22	55	1121	0.78(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.958	21.958	0		236345	29756	85	212	350		
305.8987	21.949	21.958	-1		282447	37233	105	262	355	0.84(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,9-TCDD											
319.8965	22.035	22.035	0		168553	20335	37	92	550		
321.8936	22.035	22.035	0		217484	26622	22	55	1210	0.78(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.600	23.600	0		249931	41792	85	212	492		
305.8987	23.609	23.600	1		304418	49051	105	262	467	0.82(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.660	23.660	0		159041	26777	37	92	724		
1,3,4,6,8-PeCDF											
339.8597	24.022	24.022	0		282879	51764	8	20	6471		
341.8567	24.022	24.022	0		179426	33084	7	17	4726	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.056	26.056	0		191787	27480	24	60	1145		
357.8516	26.056	26.056	0		124820	18312	13	32	1409	1.54(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.652	30.652	0		184760	22522	24	60	938		
357.8516	30.661	30.652	1		120052	14042	13	32	1080	1.54(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.838	30.838	0		252442	29783	28	70	1064		
341.8567	30.846	30.838	1		155199	17958	115	287	156	1.63(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.138	33.138	0		273839	36209	67	167	540		
375.8178	33.138	33.138	0		208454	28574	45	112	635	1.31(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.224	34.224	0		173942	30009	33	82	909		
391.8127	34.224	34.224	0		139267	24561	31	77	792	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.564	36.564	0		170654	37355	33	82	1132		
391.8127	36.556	36.564	-1		138683	30201	31	77	974	1.23(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.918	36.918	0		234506	51404	67	167	767		
375.8178	36.918	36.918	0		178983	40201	45	112	893	1.31(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.934	38.934	0		137960	35037	41	102	855		
425.7737	38.934	38.934	0		132934	34741	40	100	869	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	485361	62526

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	485361	62526

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.713	6415	874	5793	1027	0.9314	1.11	RQ
19.713	4460	790	5793	1027	0.7822		Empc Correction
24.013	4973	730	5451	956	0.7953	0.91	RQ
24.013	4197	736	5451	956	0.7361		Empc Correction
Signal Totals:							
	8657	1526	11244	1983			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	22632	3587				1.01	RQ
	19901	3509					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.727 = (22632 * 40.000) / (485361 * 1.080)
Empc Amount: 1.518 = (19901 * 40.000) / (485361 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 02:19:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 44

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	40.000	329600	43764

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		40.000	329600	43764

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.396	2359	261	2082	262	0.5012	1.13	RQ
22.396	1603	201	2082	262	0.4159		Empc Correction
Signal Totals:							
	1603	201	2082	262			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4441	523				1.13	RQ
	3685	463					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5012 = (4441 * 40.000) / (329600 * 1.075)
Empc Amount: 0.4159 = (3685 * 40.000) / (329600 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.434	323	113	477	79		0.68	R
24.873	227	52	236	71		0.96	R
Signal Totals:							
	550	165	713	150			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1263	315				0.77	RQ
	904	270					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1263 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (904 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.898	625	122	430	72		1.45	
Signal Totals:							
	625	122	430	72			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1055	194				1.45	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (1055 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
34.973	2250	338	1567	325		1.44	R
35.116	3879	551	2908	527		1.33	
Signal Totals:							
	6129	889	4475	852			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10604	1741				1.37	RQ
	10297	1806					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (10604 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (10297 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.344	2218	414	2261	396		0.98	R
Signal Totals:							
	2218	414	2261	396			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4479	810				0.98	RQ
	4006	747					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4479 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (4006 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

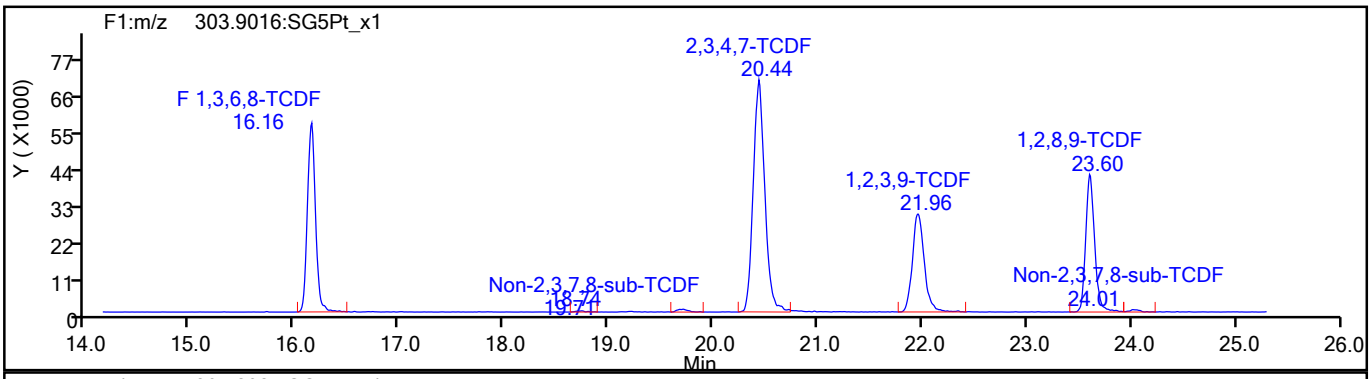

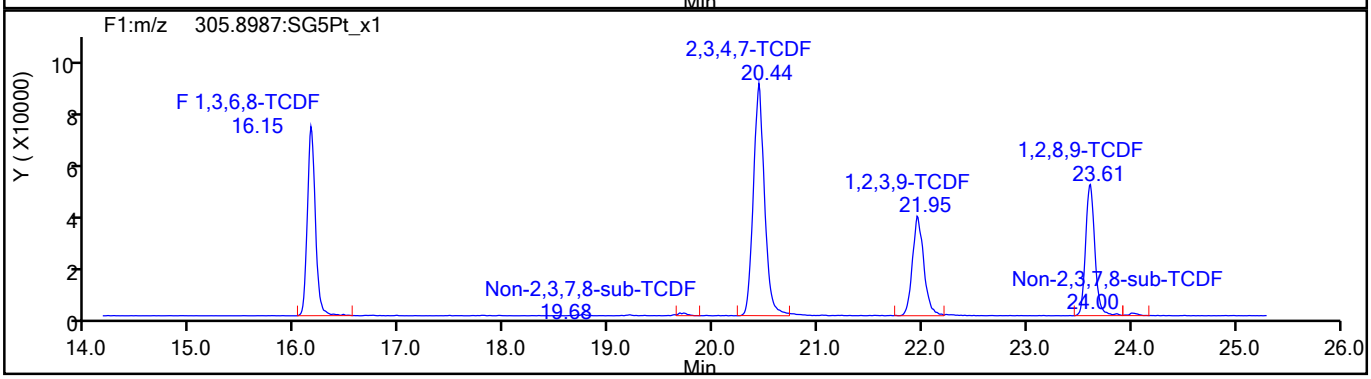

TCDF Standards

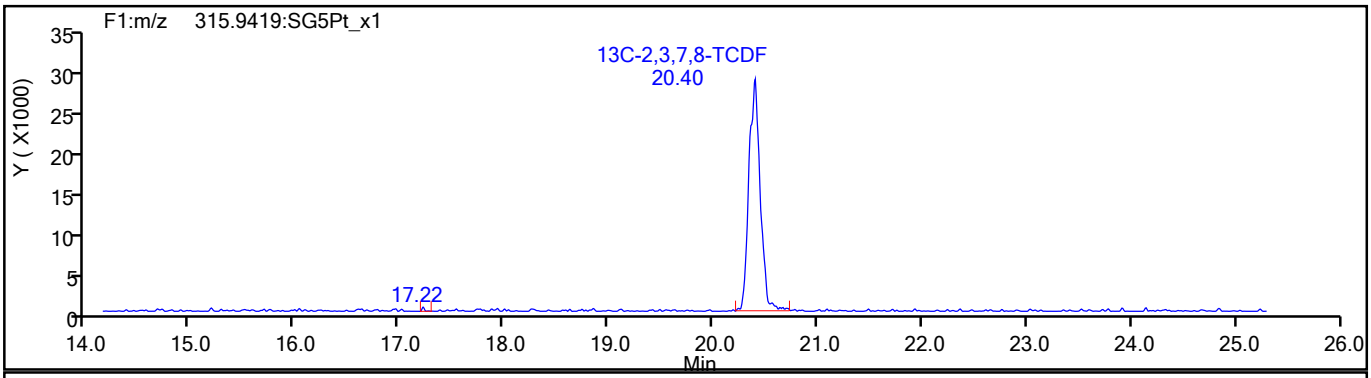

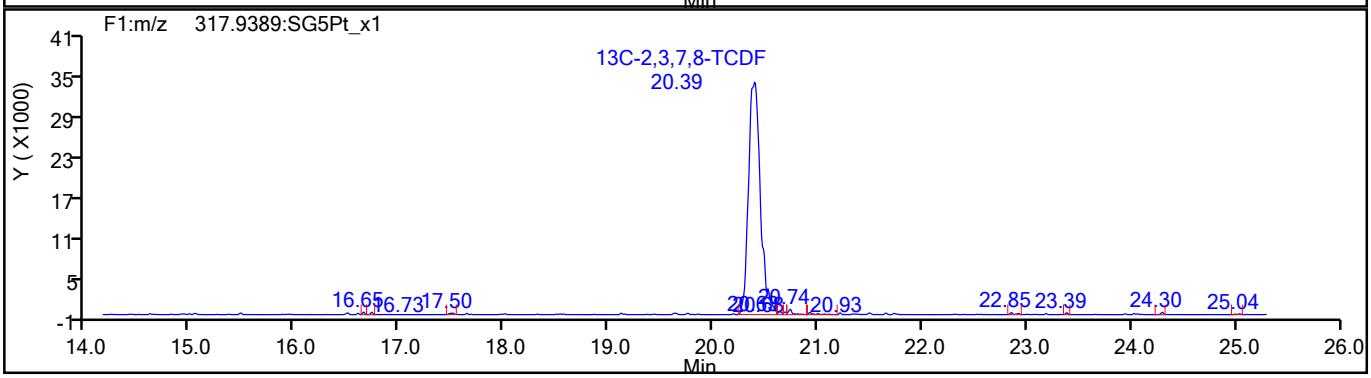

777303

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

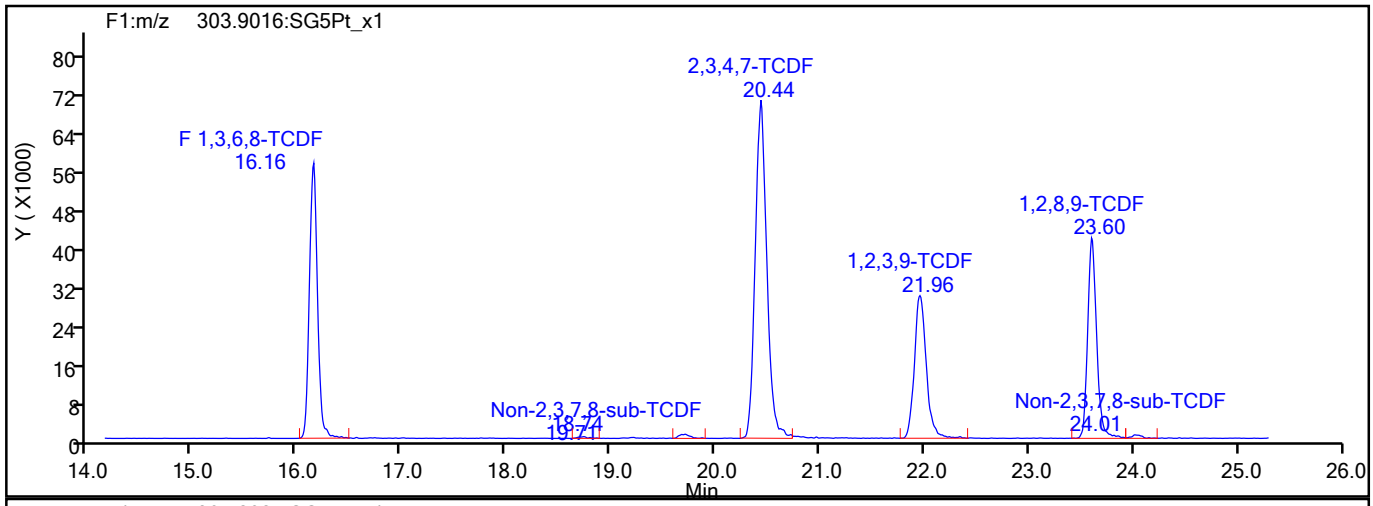

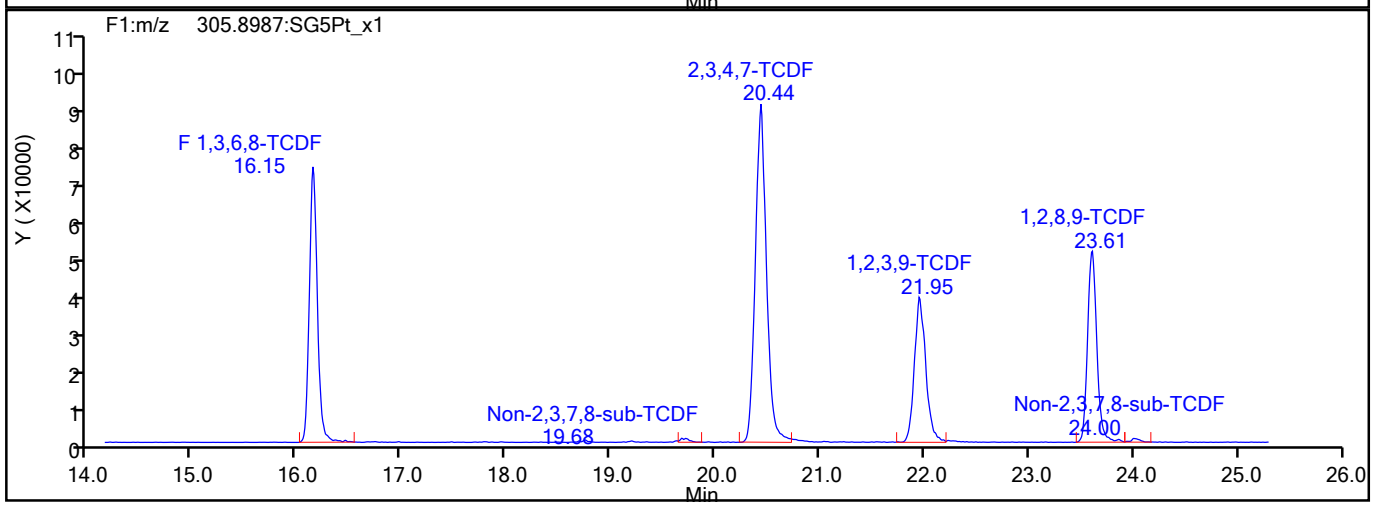

TCDF Interference Mass

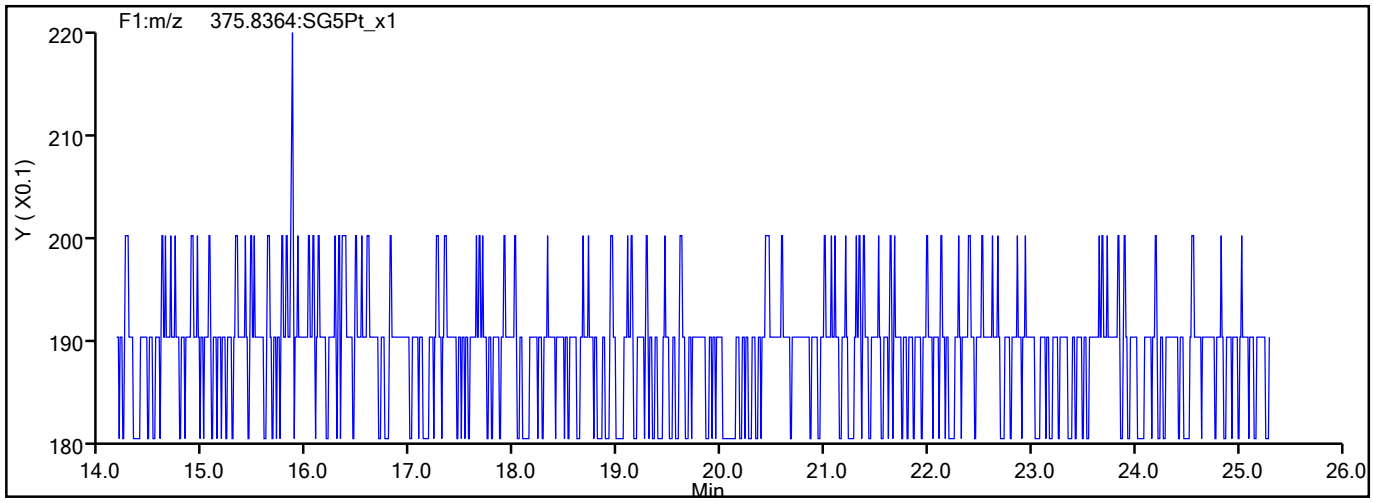

777304

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

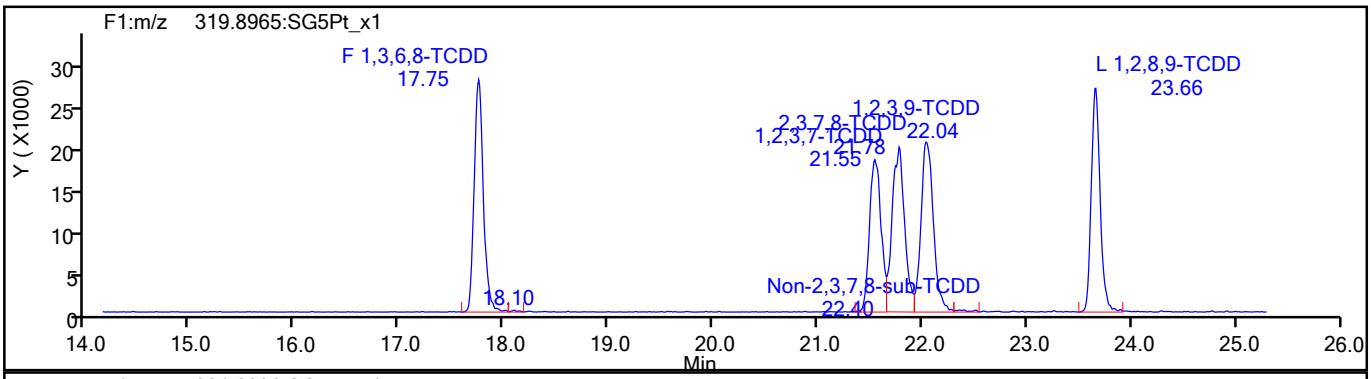

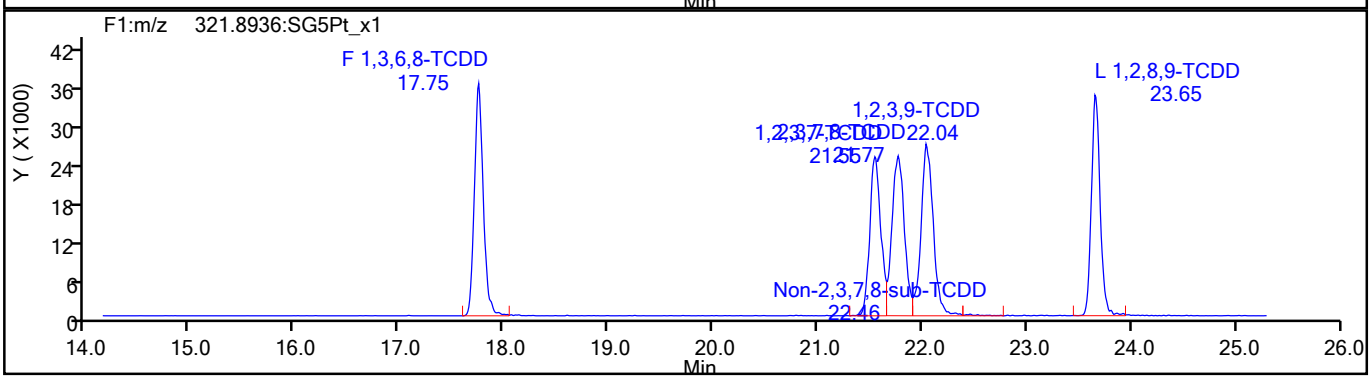

TCDD Standards

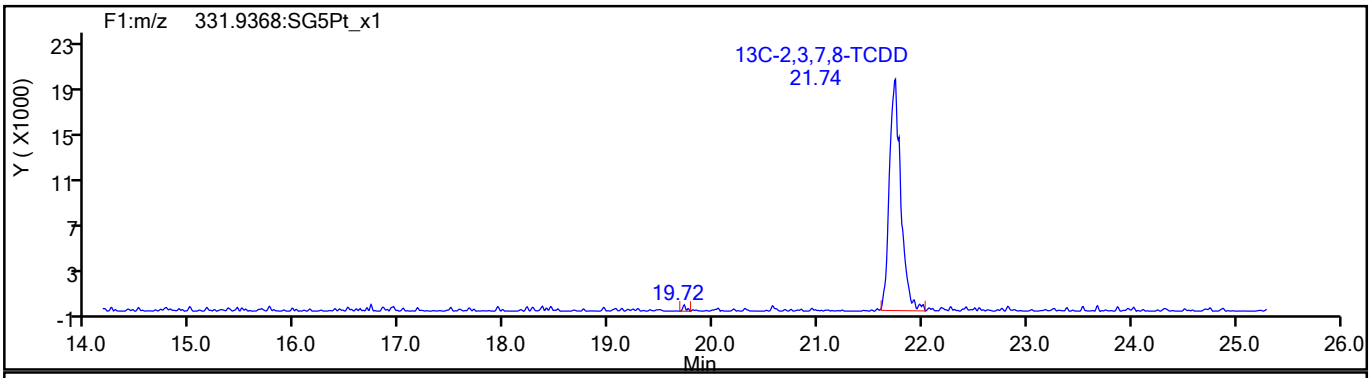

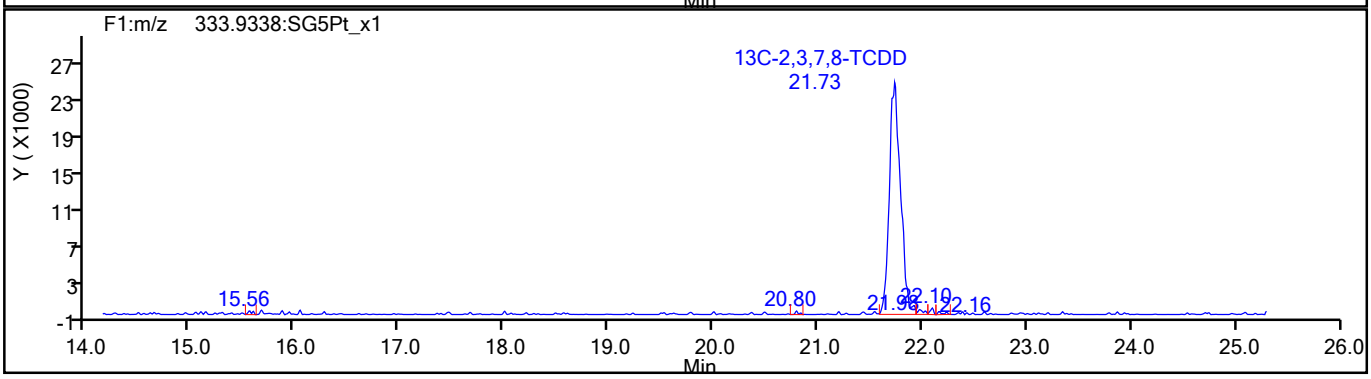

777305

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

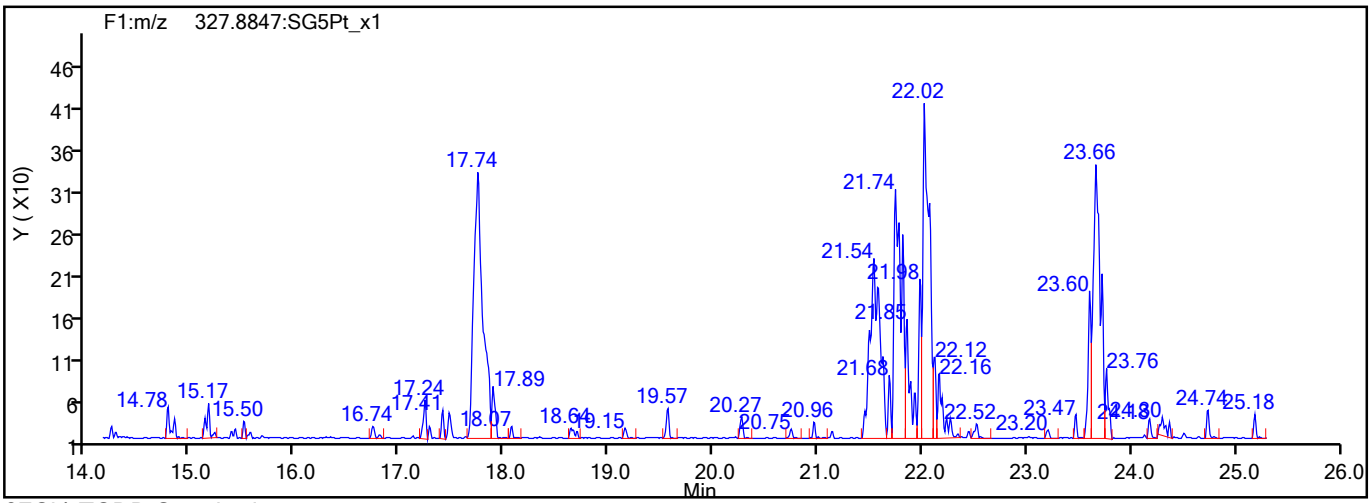

37Cl4-TCDD Standards

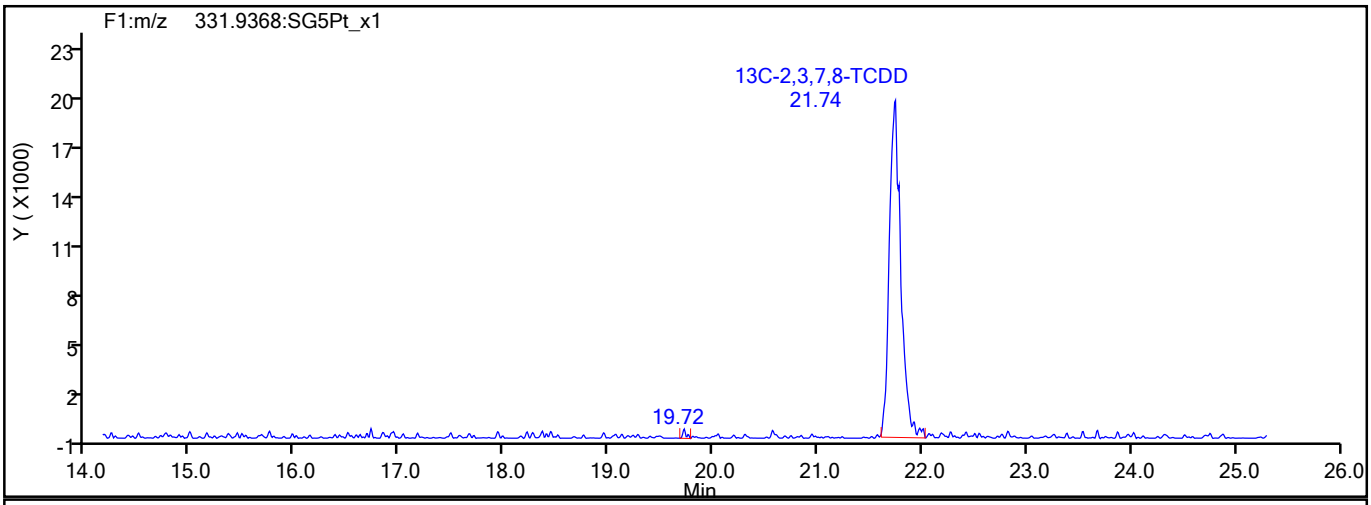

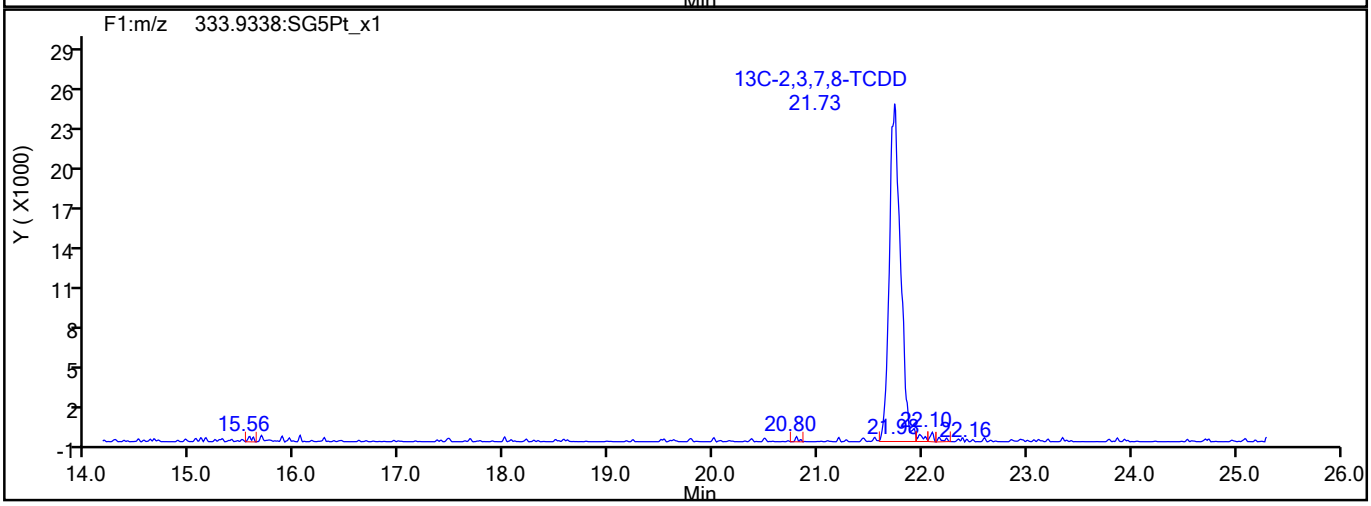

777306

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

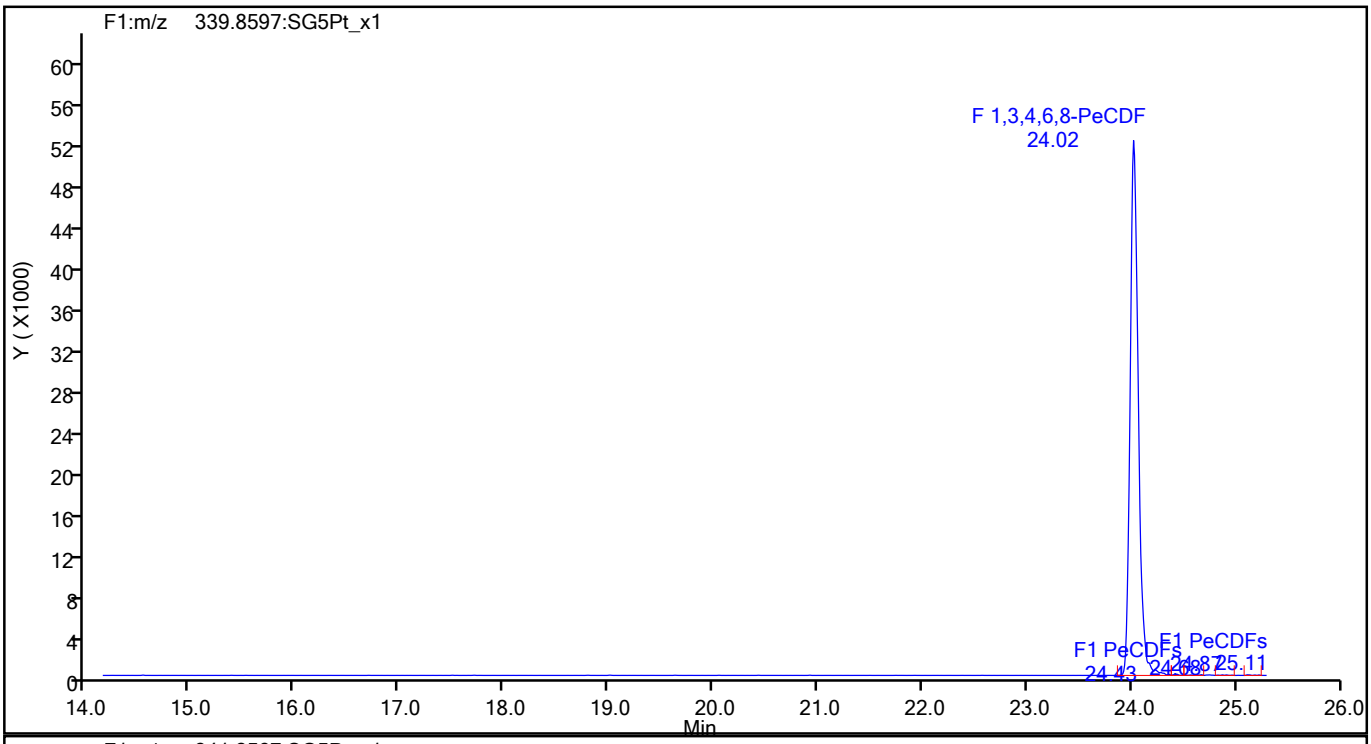

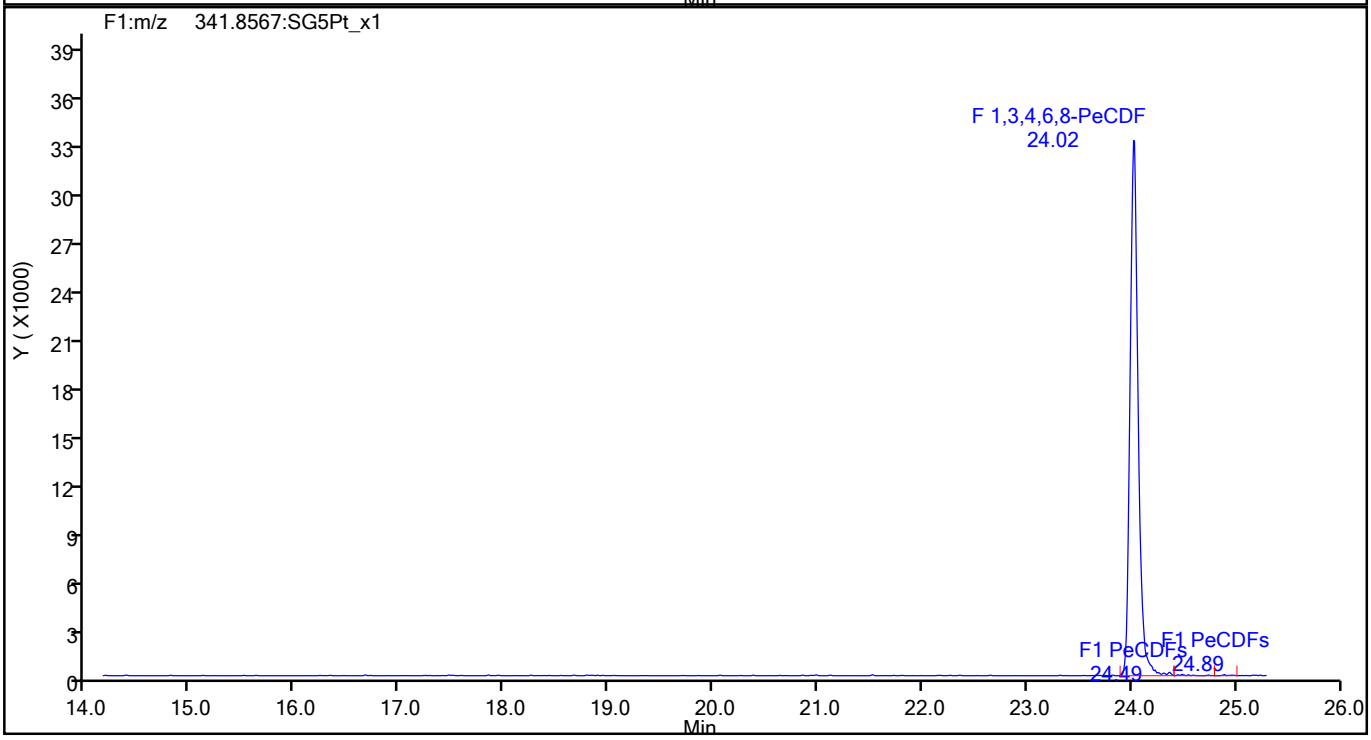

777307

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

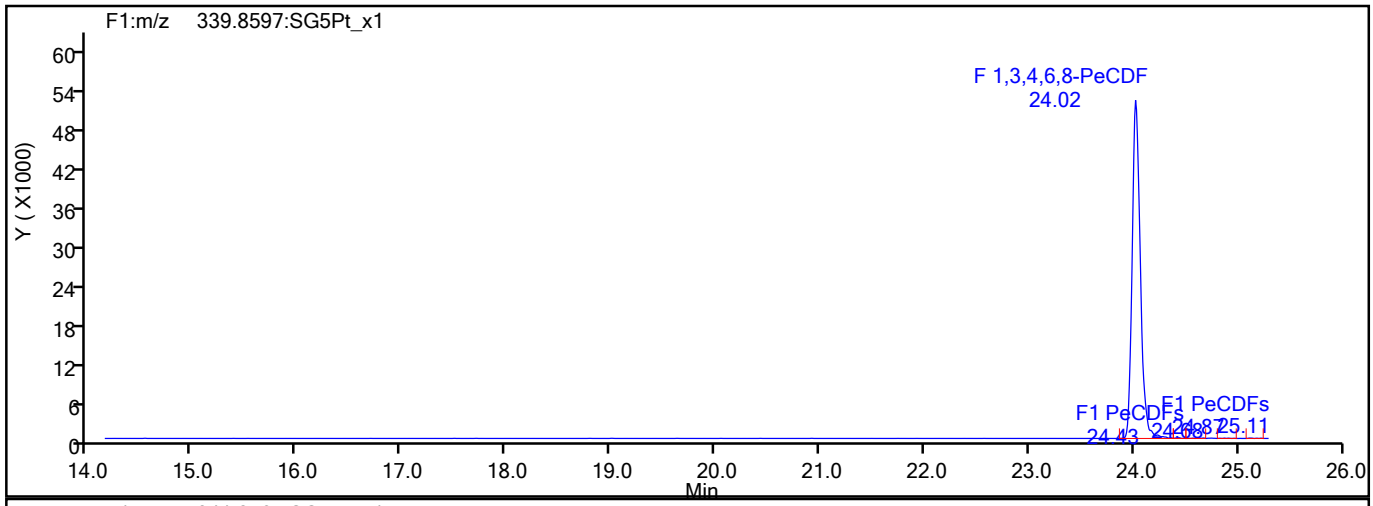

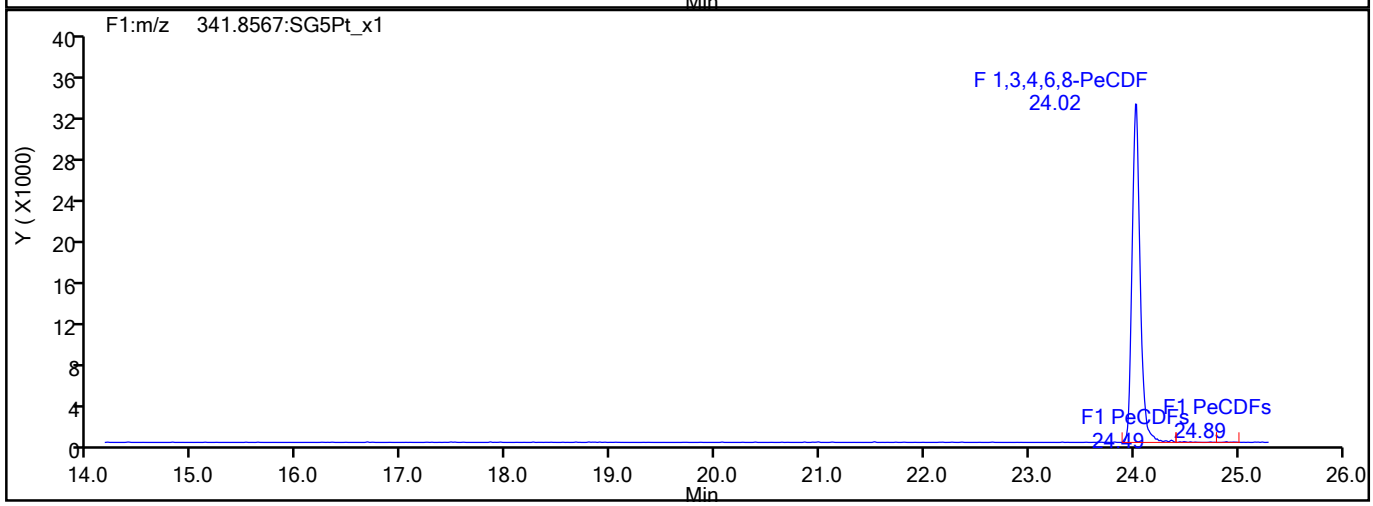

F1 PeCDFs Interference Mass

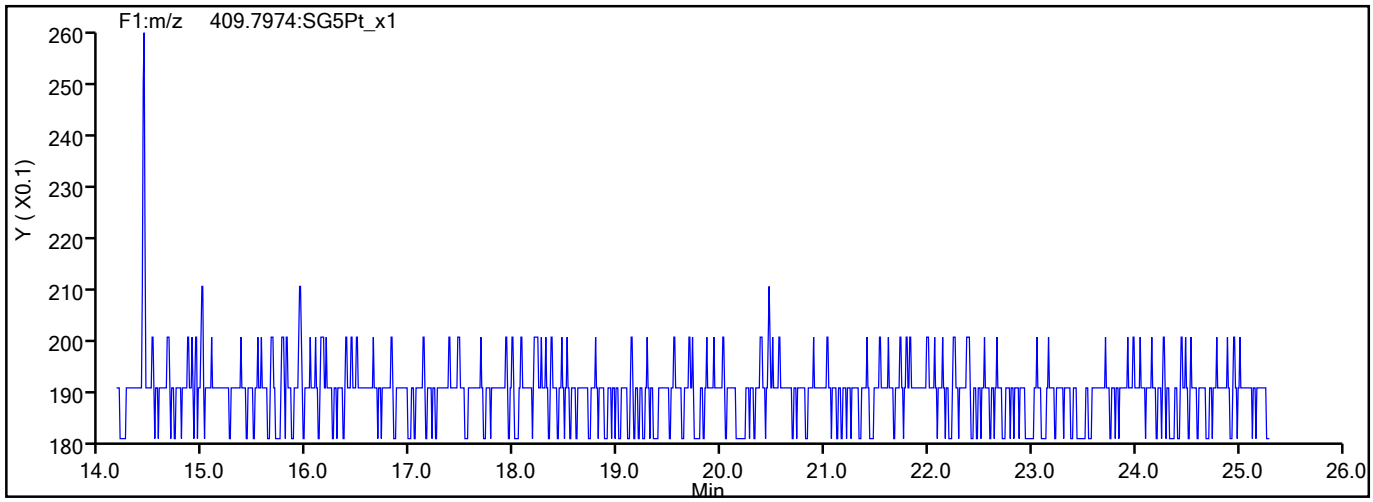

777308

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

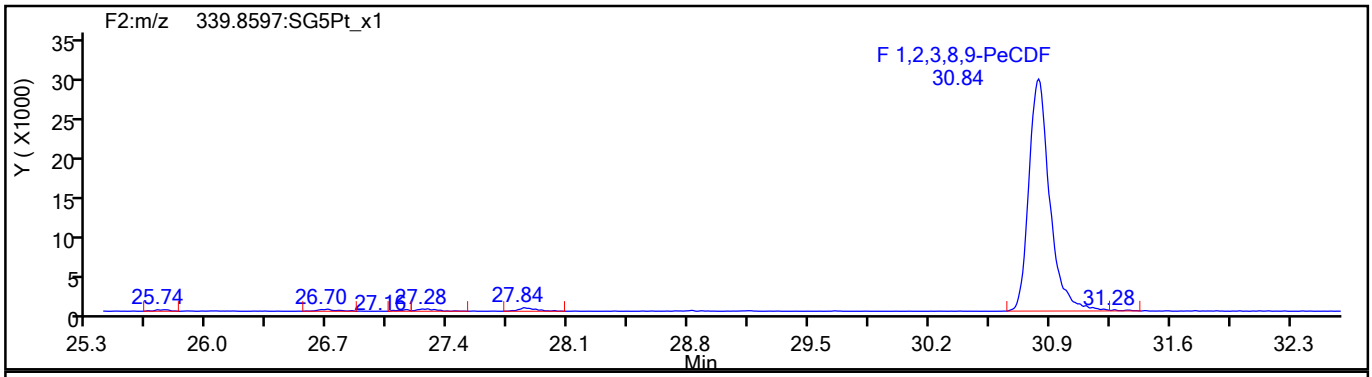

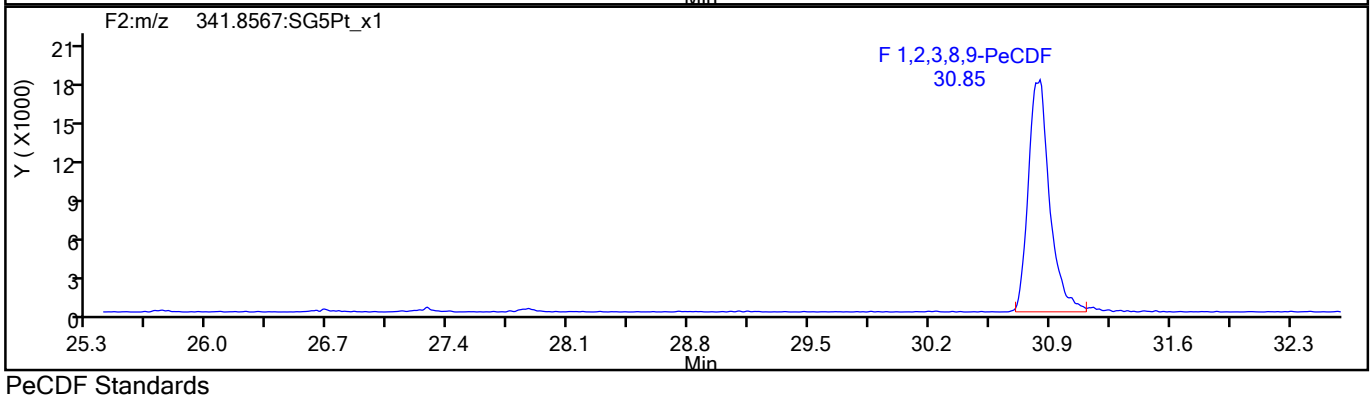

PeCDF Standards

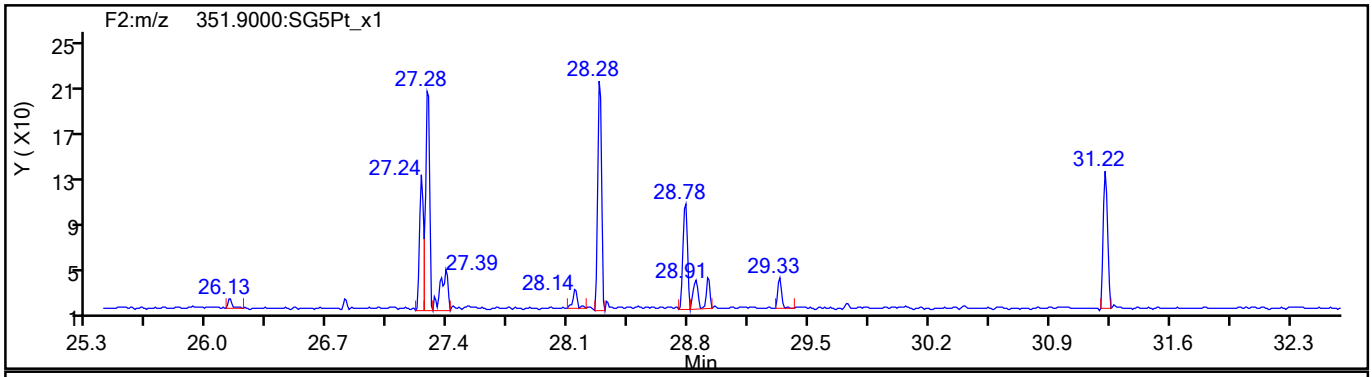

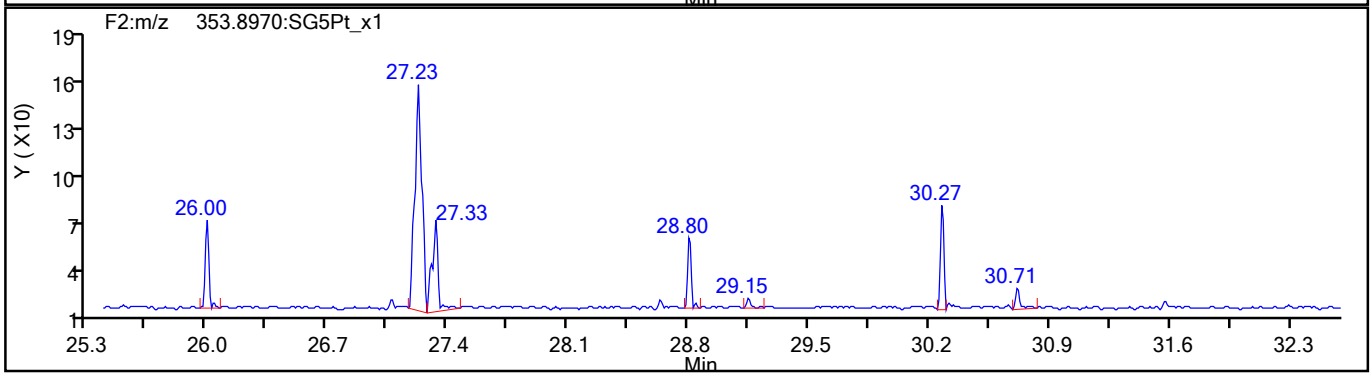

777309

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

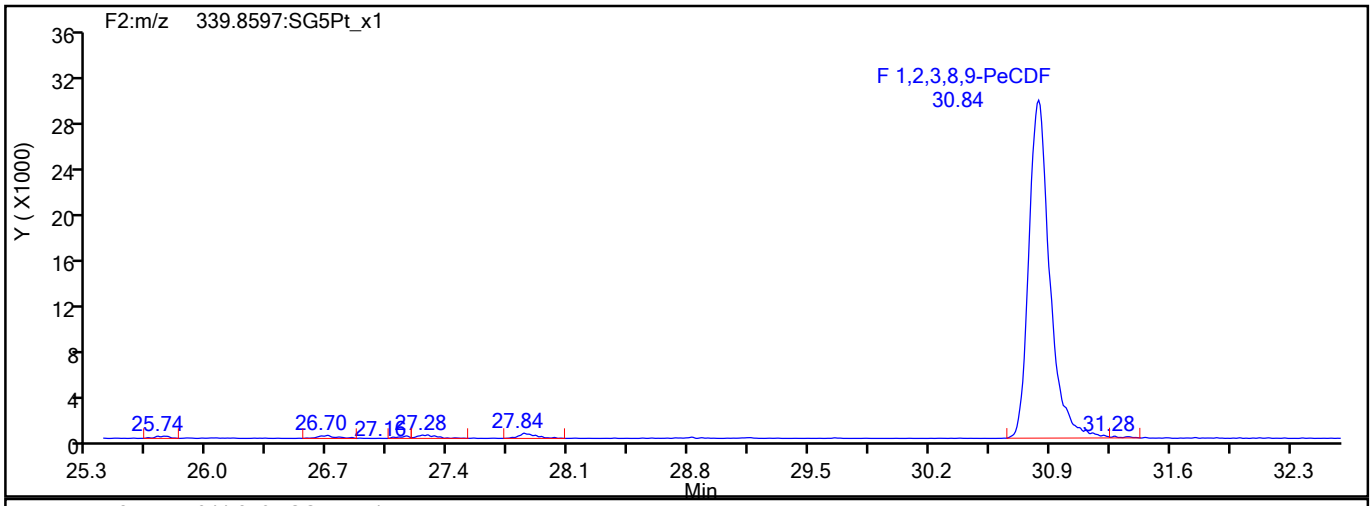

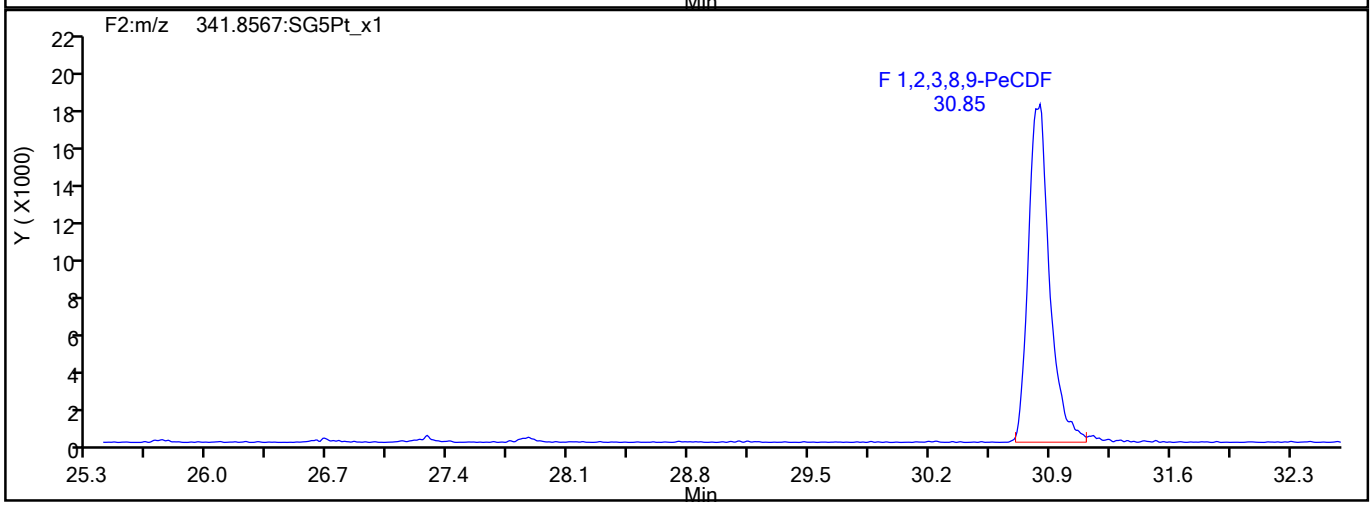

PeCDF Interference Mass

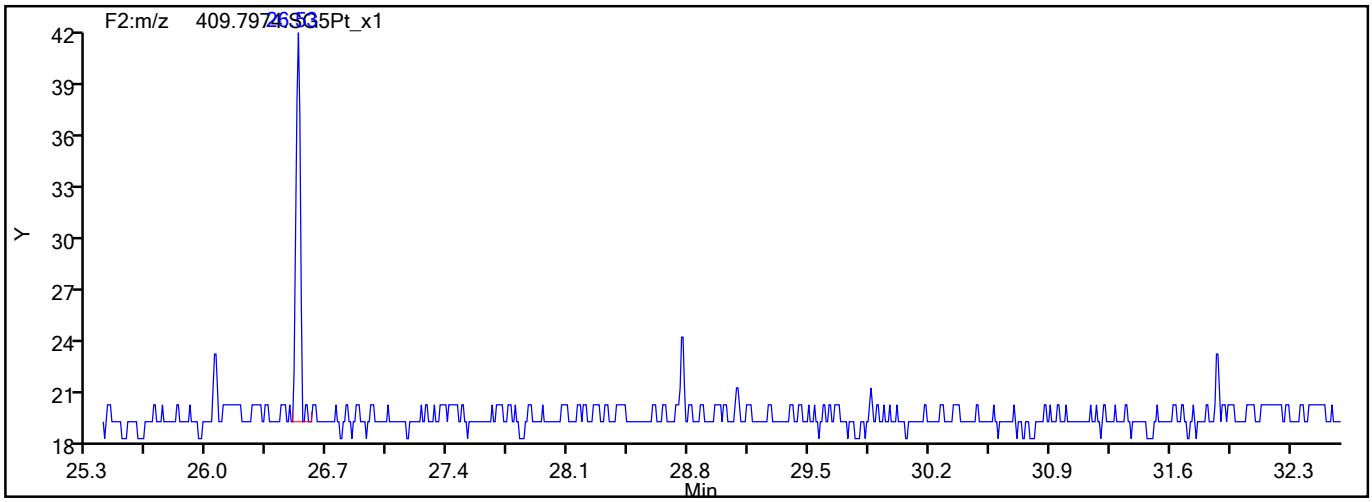

777310

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

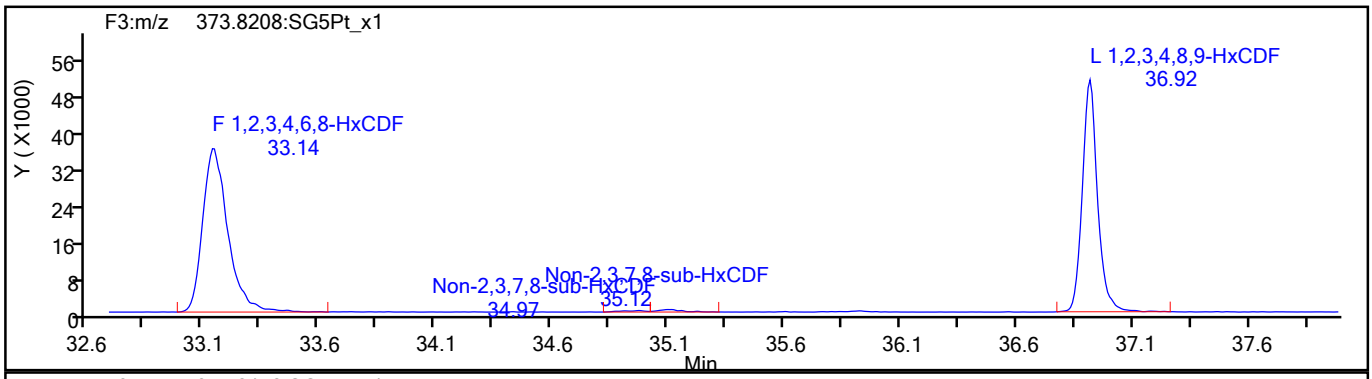

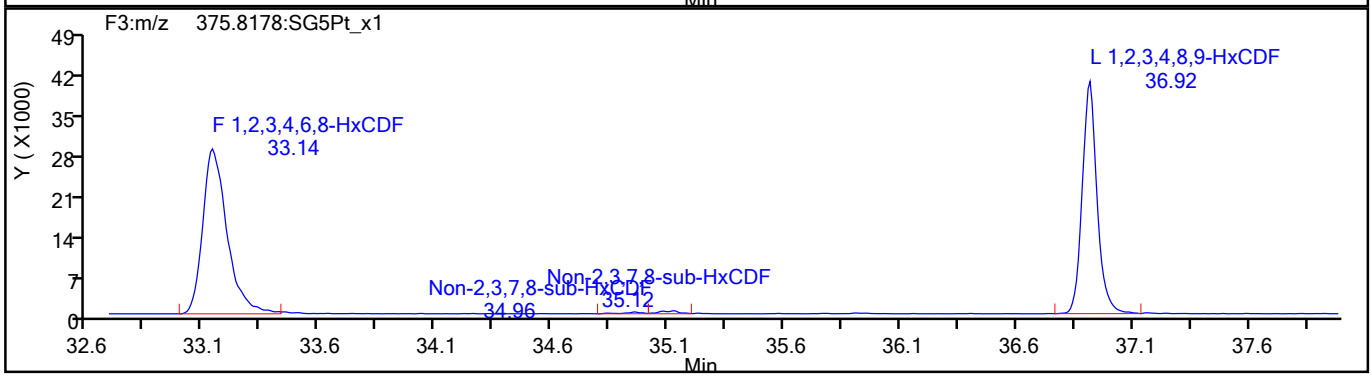

HxCDF Standards

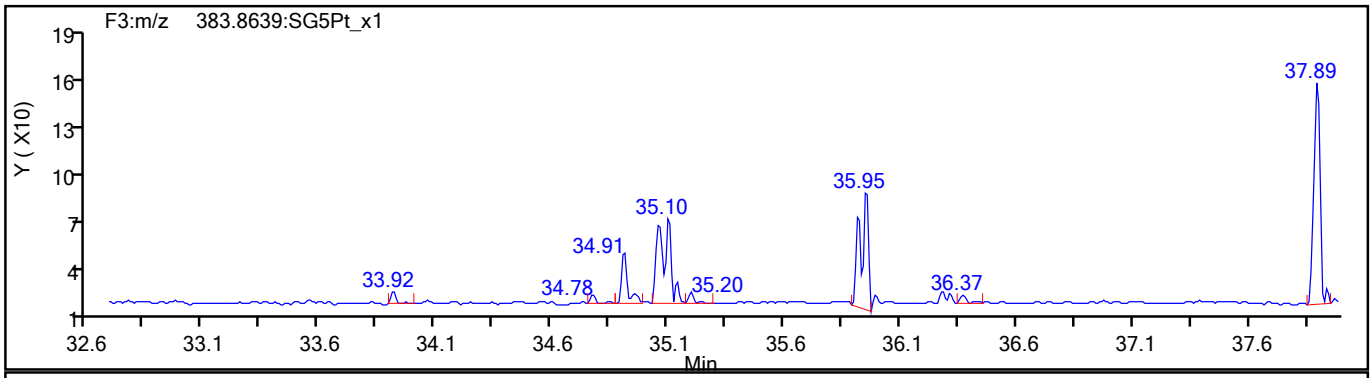

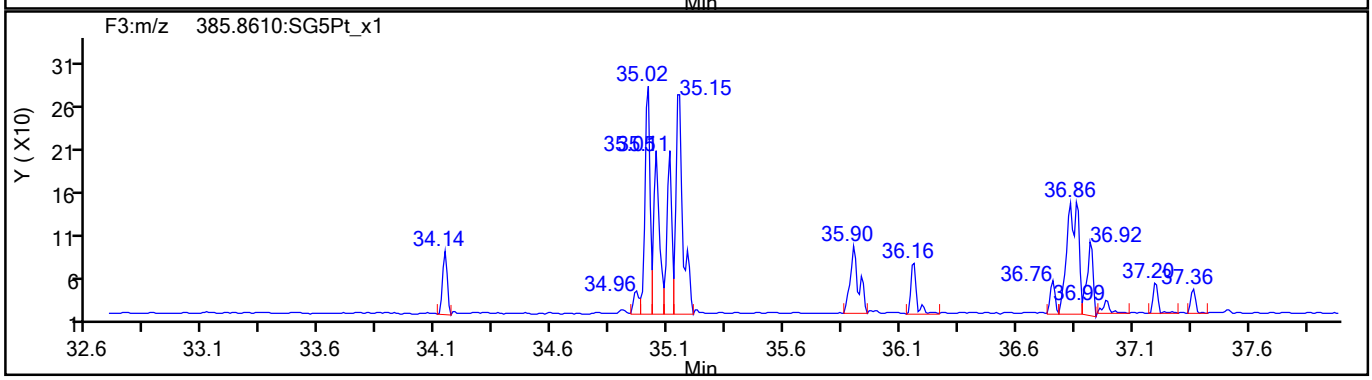

777311

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

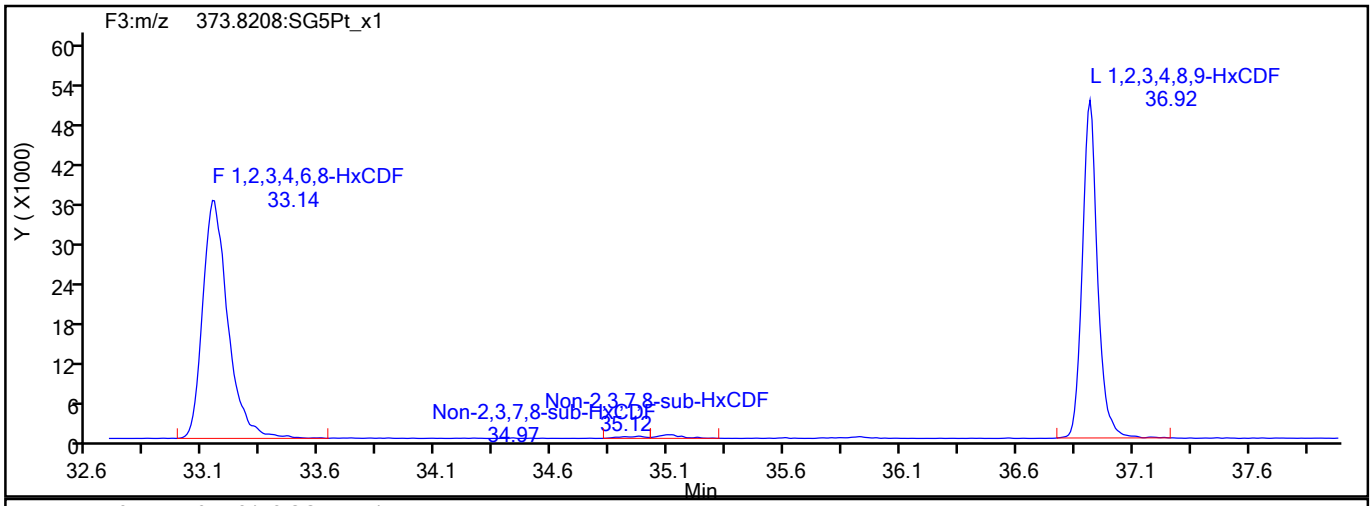

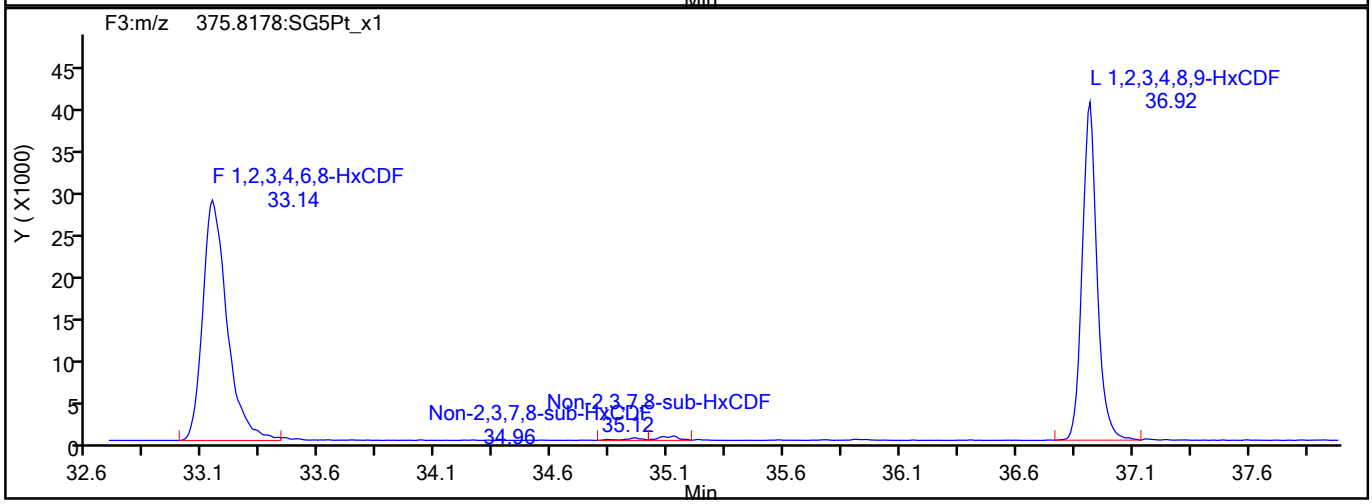

HxCDF Interference Mass

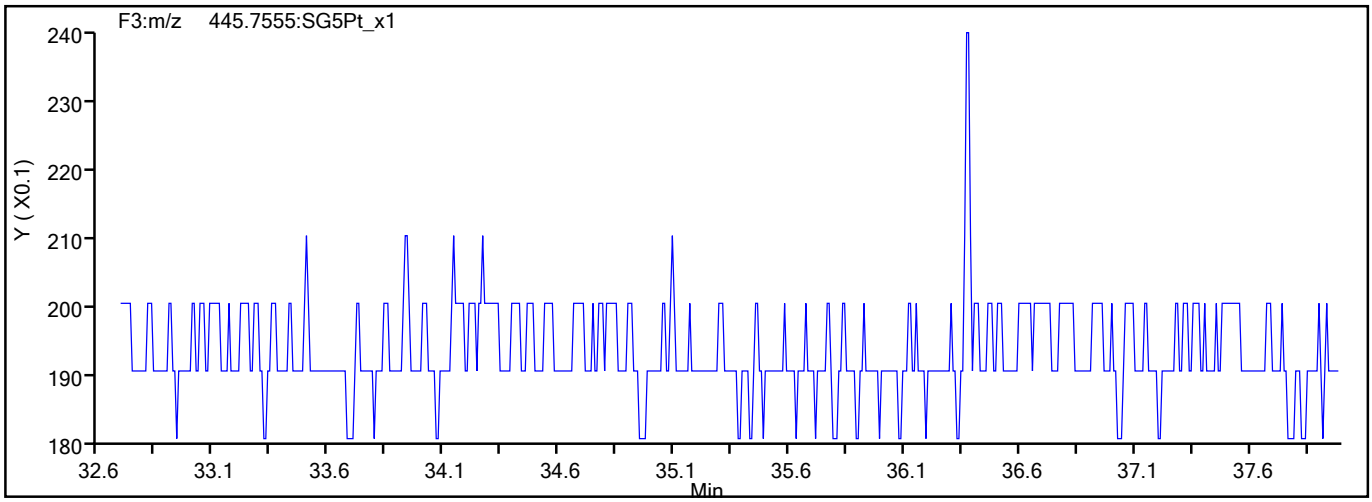

777312

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

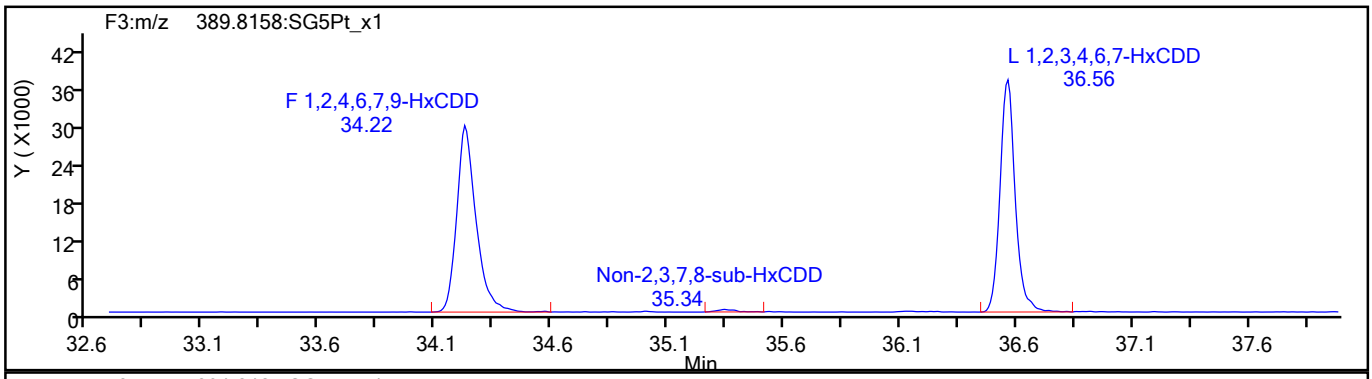

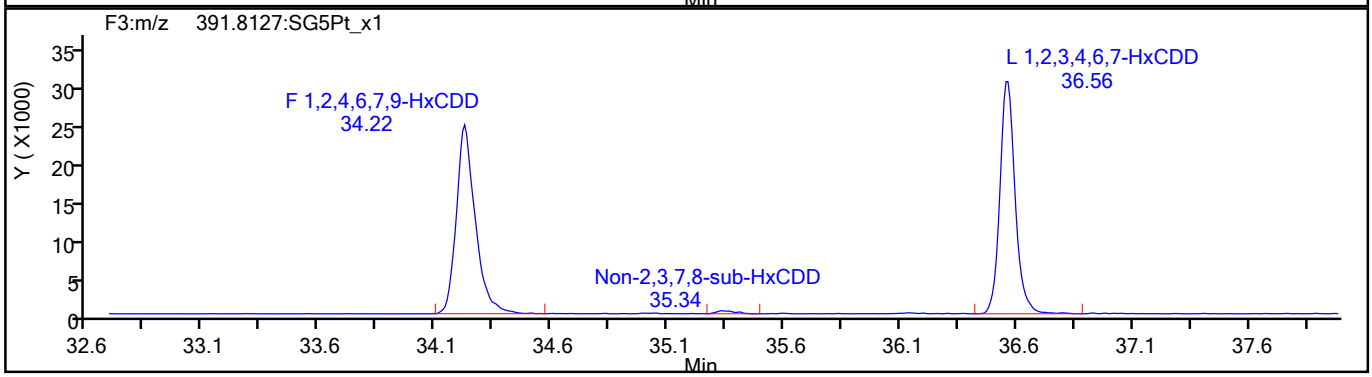

HxCDD Standards

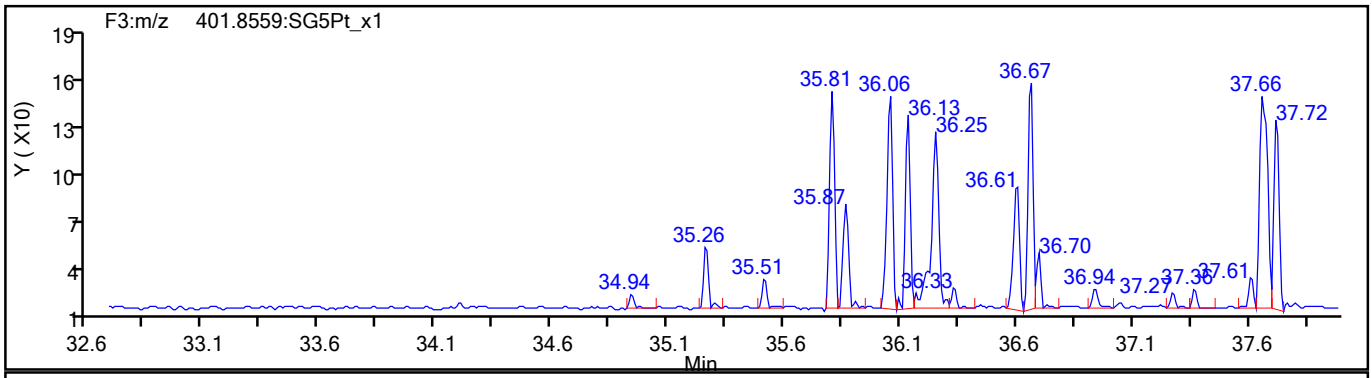

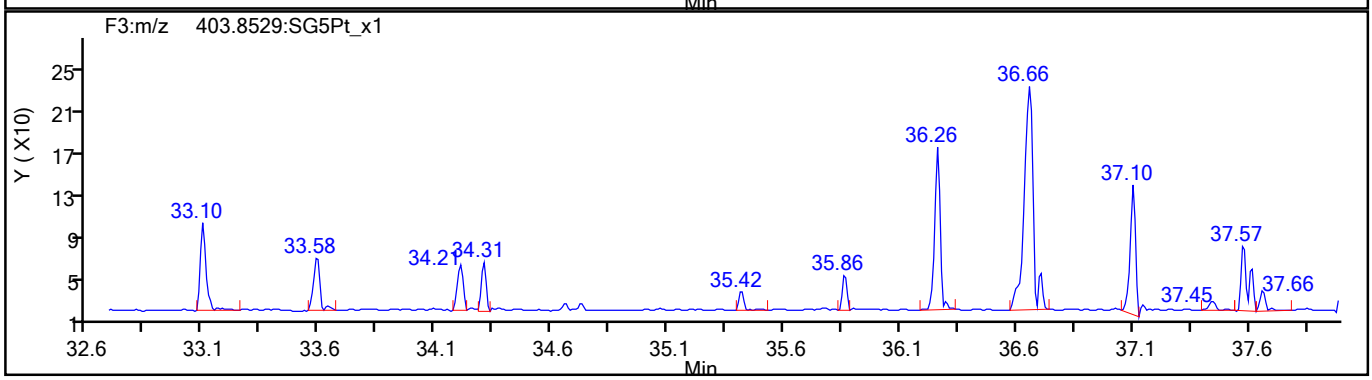

777313

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

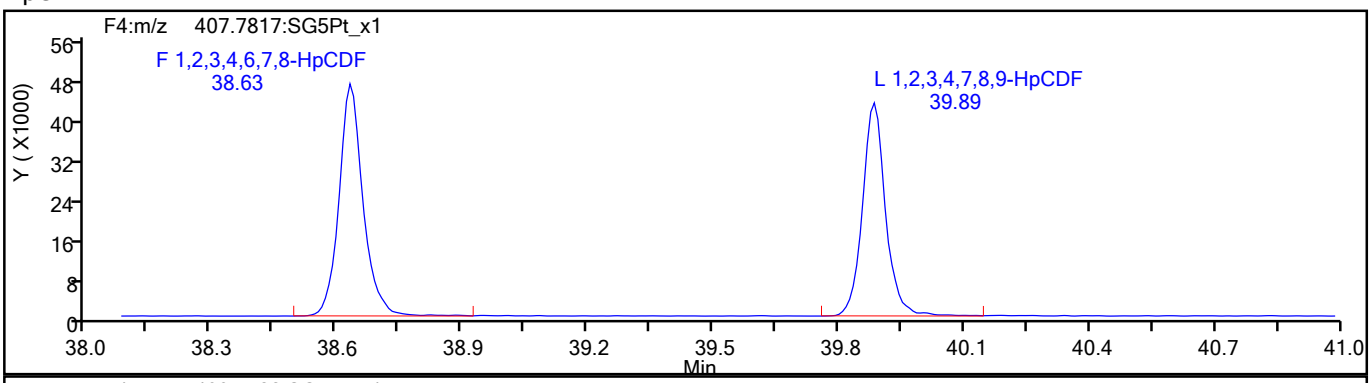

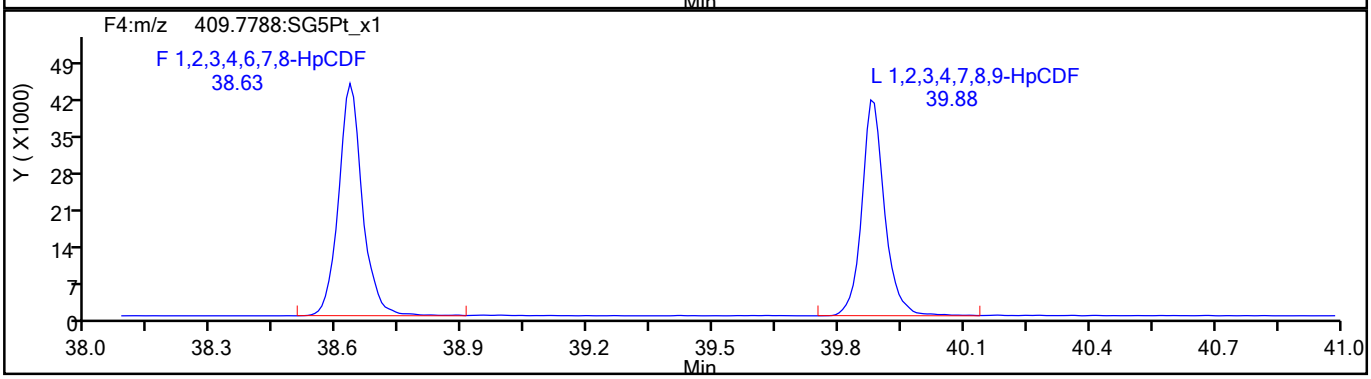

HpCDF Standards

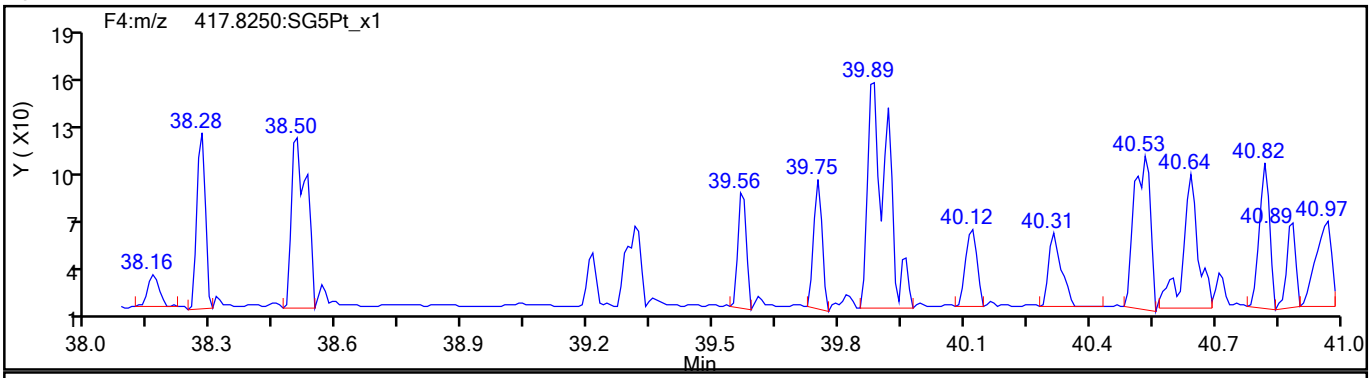

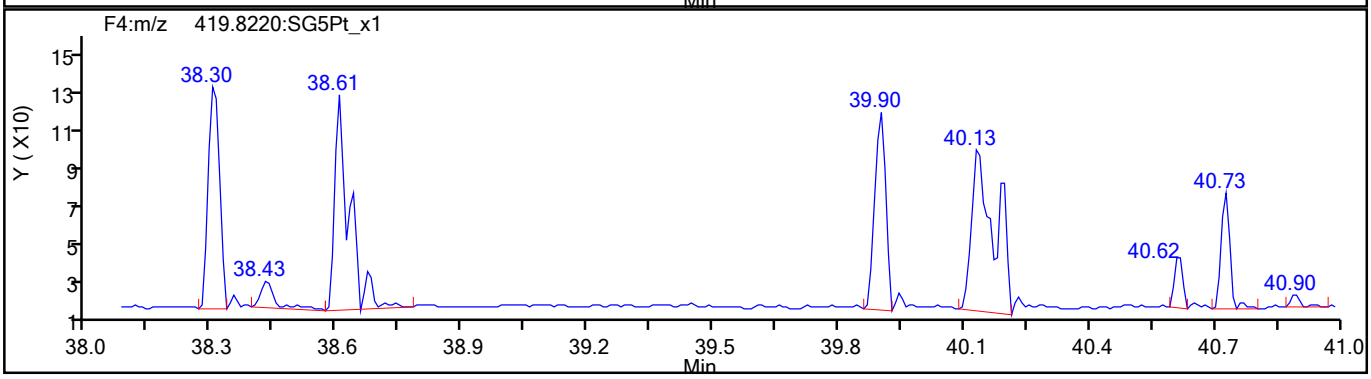

777314

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

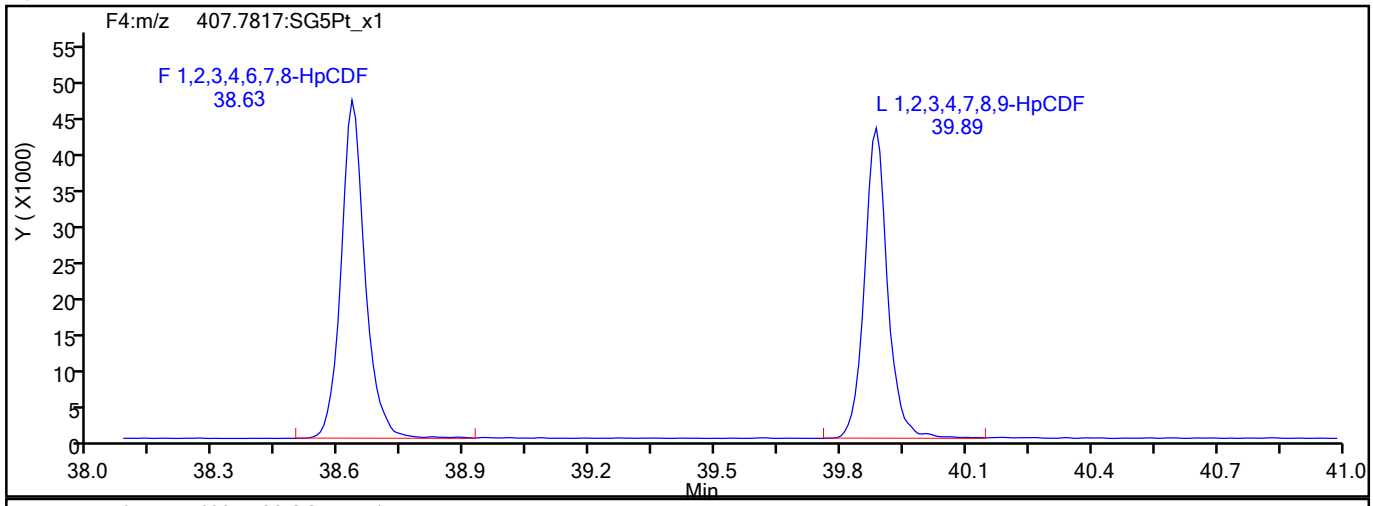

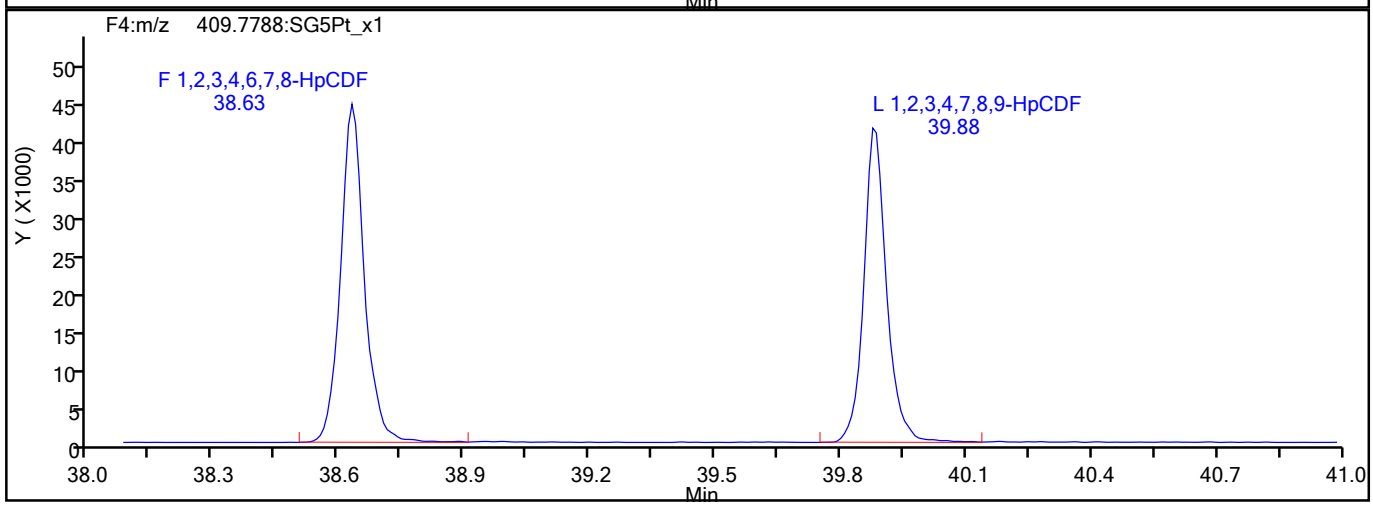

HpCDF Interference Mass

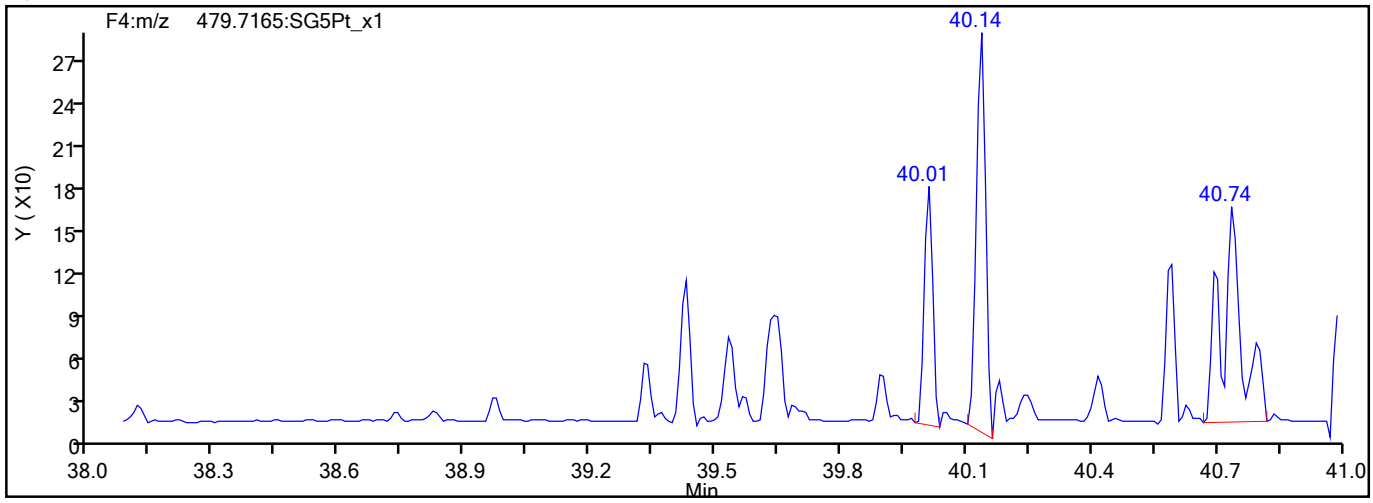

777315

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

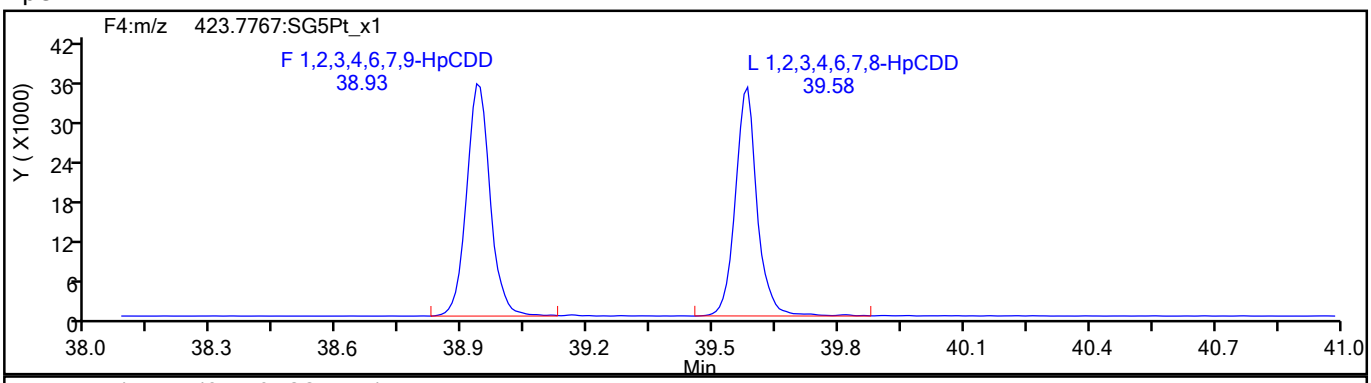

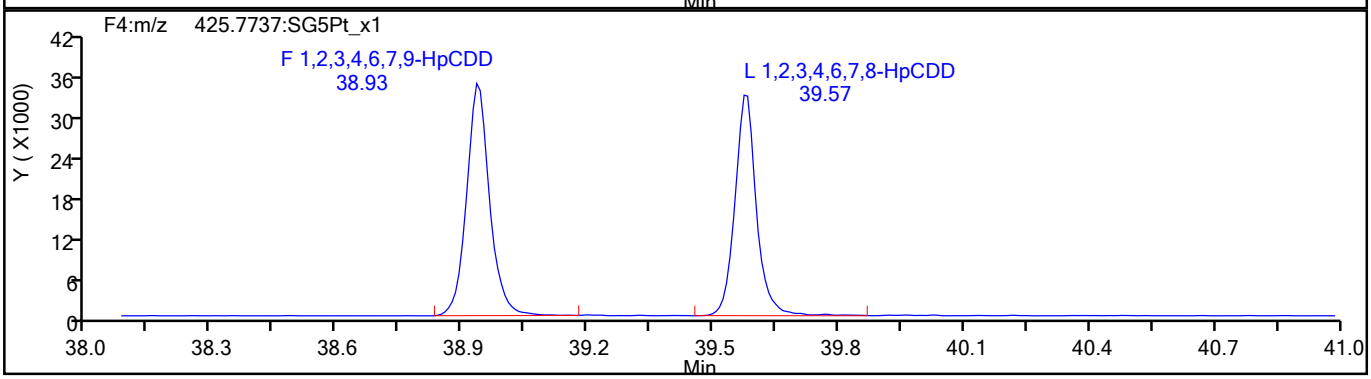

HpCDD Standards

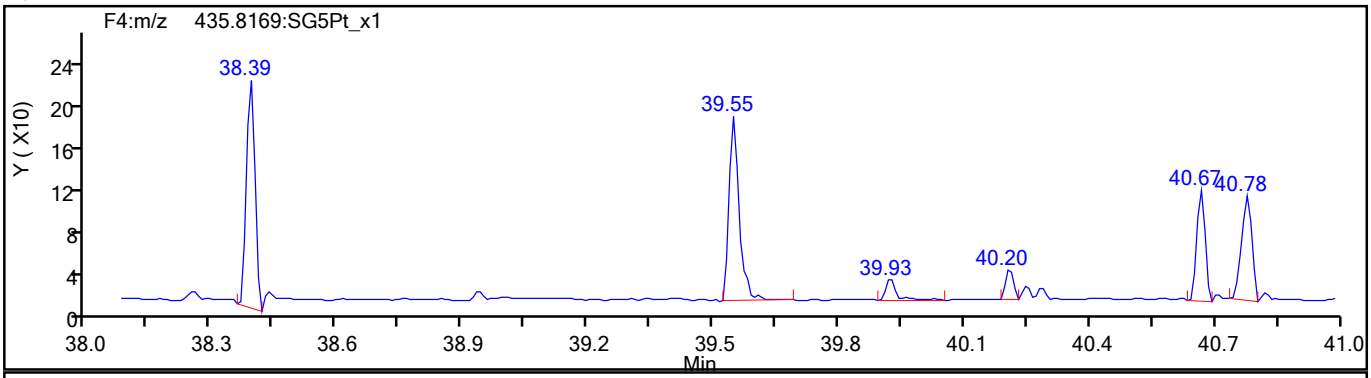

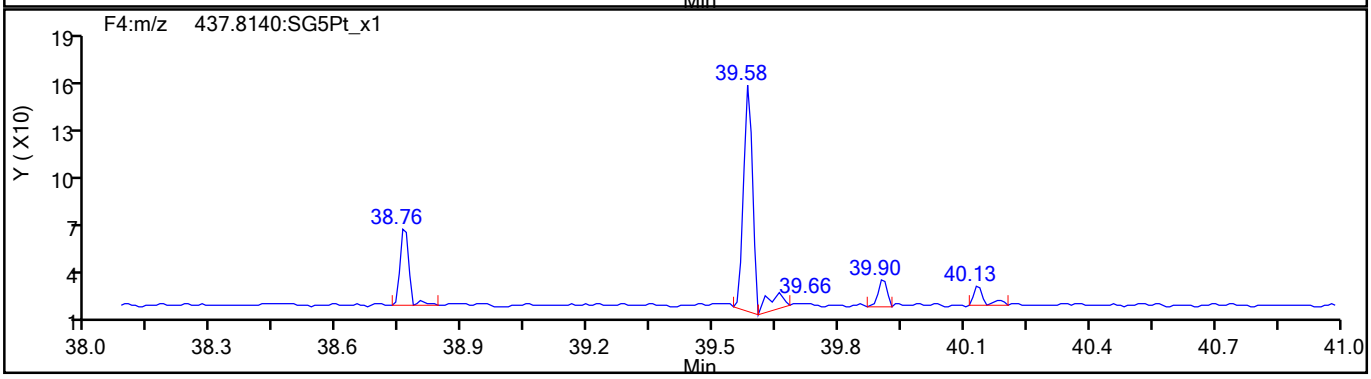

777316

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

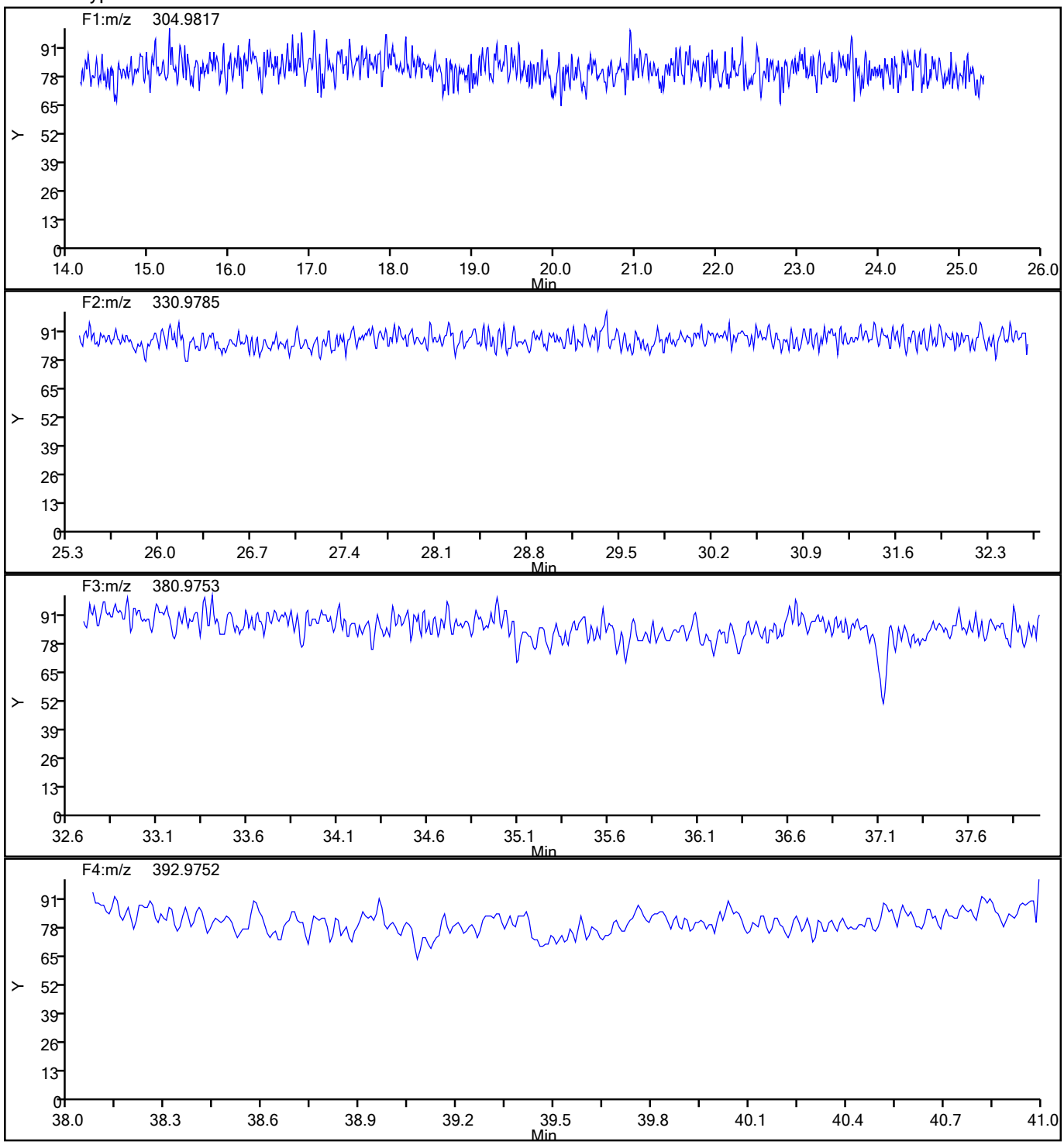

777317

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

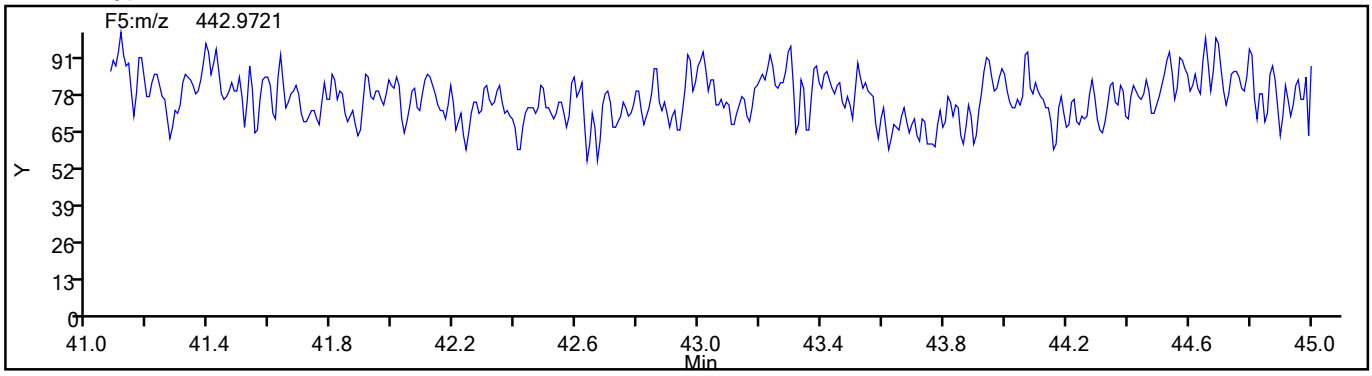

777318

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 13:59:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:08 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:37:44

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.414	82325	0.77	1.3459					0.00	
2,3,7,8-TCDF	20.465	207971	0.79	1.0802	93.5	93.5	0.3796	0.3796		
A Non-2,3,7,8-sub-TCDF	19.885	7691	0.77	1.0802	4.296	3.459	0.3796	0.998		RQ
S Total TCDF					97.8	97.0	0.3796	0.3796		RQ
D 13C-2,3,7,8-TCDD	21.782	52515	0.84	0.9317					0.00	
2,3,7,8-TCDD	21.842	61999	0.78	1.0753	43.9	43.9	0.8255	0.8255		
A Non-2,3,7,8-sub-TCDD	20.727	1960	0.77	1.0753	1.960	1.388	0.8255	1.388		RQ
S Total TCDD					45.9	45.3	0.8255	0.8255		RQ
A F1 PeCDFs	24.666	2431	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.176	71975	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.536	53316	1.56	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.073						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.427	1106	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.630	78952	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.876	71095	1.09	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.253						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.573	55161	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.253						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.121	116172	0.79							
1,3,6,8-TCDD	17.755	65500	0.83							
2,3,4,7-TCDF	20.465	207971	0.79							
1,2,3,7-TCDD	21.584	55945	0.75							
1,2,3,9-TCDF	22.005	88819	0.75							
1,2,3,9-TCDD	22.100	69760	0.77							
1,2,8,9-TCDF	23.649	94787	0.80							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.700	26243								
1,3,4,6,8-PeCDF	24.062	81931	1.50							
1,2,3,8,9-PeCDD	26.119	58169	1.69							
1,2,4,7,9-PeCDD	30.776	53316	1.56							a
1,2,3,8,9-PeCDF	30.944	68306	1.60							a
1,2,3,4,6,8-HxCDF	33.212	94798	1.31							
1,2,4,6,7,9-HxCDD	34.273	63223	1.25							
1,2,3,4,6,7-HxCDD	36.581	60887	1.16							
1,2,3,4,8,9-HxCDF	36.934	83283	1.29							
1,2,3,4,6,7,9-HpCDD	38.933	59370	1.04							

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 13:59:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:08 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:37:44

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.414	20.414	0	1.000	35682	5599	44	110	127		
317.9389	20.414	20.414	0	1.000	46643	6790	11	27	617	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.465	20.465	0	1.003	91905	11730	19	47	617		
305.8987	20.474	20.465	1	1.003	116066	13607	32	80	425	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.708	19.885	-11	0.965	1142	200	19	47	11		
	Empc Correction				920	249	19	47	13		
305.8987	19.742	19.885	-9	0.967	1195	324	32	80	10	0.96(0.65-0.89)	
303.9016	20.982	19.885	66	1.028	799	152	19	47	8		
305.8987	20.982	19.885	66	1.028	2231	334	32	80	10	0.36(0.65-0.89)	
	Empc Correction				1037	197	32	80	6		
303.9016	22.324	19.885	146	1.094	951	173	19	47	9		
305.8987	22.393	19.885	150	1.097	1268	204	32	80	6	0.75(0.65-0.89)	
303.9016	24.053	19.885	250	1.178	662	199	19	47	10		
305.8987	24.036	19.885	249	1.177	1302	181	32	80	6	0.51(0.65-0.89)	
	Empc Correction				859	258	32	80	8		
13C-2,3,7,8-TCDD											
331.9368	21.782	21.782	0	1.000	23953	3420	22	55	155		
333.9338	21.816	21.782	2	1.000	28562	4240	1	2	4240	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.842	21.842	0	1.003	27074	3242	31	77	105		
321.8936	21.816	21.842	-2	1.002	34925	4202	37	92	114	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.358	20.727	98	1.026	853	199	31	77	6		
321.8936	22.341	20.727	97	1.026	1914	264	37	92	7	0.45(0.65-0.89)	
	Empc Correction				1107	258	37	92	7		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A F1 PeCDFs											RQ
339.8597	24.268	24.666	-24	1.000	930	276	5	12	55		
341.8567	24.285	24.666	-23	1.000	557	133	3	7	44	1.67(1.32-1.78)	
339.8597	24.328	24.666	-20	1.000	574	173	5	12	35		
341.8567	24.397	24.666	-16	1.000	801	142	3	7	47	0.72(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.365	28.176	-49	1.000	493	76	7	17	11		
341.8567	27.323	28.176	-51	1.000	293	68	13	32	5	1.68(1.32-1.78)	
339.8597	30.944	28.176	166	1.000	42003	5021	7	17	717		
341.8567	30.952	28.176	166	1.000	26303	3283	13	32	253	1.60(1.32-1.78)	
339.8597	31.197	28.176	181	1.000	1166	325	7	17	46		
341.8567	31.155	28.176	178	1.000	921	220	13	32	17	1.27(1.32-1.78)	
339.8597	31.281	28.176	186	1.000	587	172	7	17	25		
341.8567	31.298	28.176	187	1.000	571	77	13	32	6	1.03(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	30.776	28.536	134	1.000	32522	3921	50	125	78		
357.8516	30.759	28.536	133	1.000	20794	2627	8	20	328	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						19	47			
375.8178	35.073						16	40			
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.385	35.427	-3	1.000	720	183	13	32	14		
391.8127	35.376	35.427	-3	1.000	494	115	10	25	12	1.46(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.630	38.630	0	1.000	40696	10611	27	67	393		
409.7788	38.630	38.630	0	1.000	38256	9931	15	37	662	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.876	39.876	0	1.000	37049	10134	27	67	375		
409.7788	39.876	39.876	0	1.000	34046	9582	15	37	639	1.09(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						27	67			
409.7788	39.253						15	37			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.573	39.573	0	1.000	28472	8182	15	37	545		
425.7737	39.573	39.573	0	1.000	26689	7927	18	45	440	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.253						15	37			
425.7737	39.253						18	45			
1,3,6,8-TCDF											
303.9016	16.121	16.121	0		51259	8761	19	47	461		
305.8987	16.129	16.121	1		64913	11170	32	80	349	0.79(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.755	17.755	0		29748	4895	31	77	158		
321.8936	17.772	17.755	1		35752	5364	37	92	145	0.83(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7-TCDF											
303.9016	20.465	20.465	0		91905	11730	19	47	617		
305.8987	20.474	20.465	1		116066	13607	32	80	425	0.79(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.584	21.584	0		24036	3484	31	77	112		
321.8936	21.601	21.584	1		31909	4496	37	92	122	0.75(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.005	22.005	0		38078	4978	19	47	262		
305.8987	22.005	22.005	0		50741	6292	32	80	197	0.75(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.100	22.100	0		30261	3819	31	77	123		
321.8936	22.117	22.100	1		39499	4583	37	92	124	0.77(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.649	23.649	0		42091	6762	19	47	356		
305.8987	23.640	23.649	-1		52696	8507	32	80	266	0.80(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.700	23.700	0		26243	4229	31	77	136		
1,3,4,6,8-PeCDF											
339.8597	24.062	24.062	0		49143	8715	5	12	1743		
341.8567	24.070	24.062	1		32788	6207	3	7	2069	1.50(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.119	26.119	0		36563	4902	50	125	98		
357.8516	26.136	26.119	1		21606	3187	8	20	398	1.69(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	30.776	30.776	0		32522	3921	50	125	78		a
357.8516	30.759	30.776	-1		20794	2627	8	20	328	1.56(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	30.944	30.944	0		42003	5021	7	17	717		a
341.8567	30.952	30.944	1		26303	3283	13	32	253	1.60(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.212	33.212	0		53745	7067	19	47	372		
375.8178	33.212	33.212	0		41053	5227	16	40	327	1.31(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.273	34.273	0		35102	5925	13	32	456		
391.8127	34.273	34.273	0		28121	4682	10	25	468	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.581	36.581	0		32760	7052	13	32	542		
391.8127	36.572	36.581	-1		28127	6383	10	25	638	1.16(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.934	36.934	0		46978	11482	19	47	604		
375.8178	36.926	36.934	-1		36305	9134	16	40	571	1.29(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.933	38.933	0		30305	8179	15	37	545		
425.7737	38.933	38.933	0		29065	7829	18	45	435	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	82325	12389

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	82325	12389

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.708	1142	200	1195	324	1.05	0.96	RQ
19.708	920	249	1195	324	0.9513		Empc Correction
20.982	799	152	2231	334	1.36	0.36	RQ
20.982	799	152	1037	197	0.8258		Empc Correction
22.324	951	173	1268	204	1.00	0.75	
24.053	662	199	1302	181	0.8834	0.51	RQ
24.053	662	199	859	258	0.6842		Empc Correction
Signal Totals:							
	3332	773	4359	983			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9550	1767				0.59	RQ
	7691	1756					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.296 = (9550 * 40.000) / (82325 * 1.080)
Empc Amount: 3.459 = (7691 * 40.000) / (82325 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 20.727

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	40.000	52515	7660

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		40.000	52515	7660

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.358	853	199	1914	264	1.96	0.45	RQ
22.358	853	199	1107	258	1.39		Empc Correction
Signal Totals:							
	853	199	1107	258			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2767	463				0.45	RQ
	1960	457					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.960 = (2767 * 40.000) / (52515 * 1.075)
Empc Amount: 1.388 = (1960 * 40.000) / (52515 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

F1 PeCDFs, RT: 24.666

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.268	930	276	557	133		1.67	
24.328	574	173	801	142		0.72	R
Signal Totals:							
	1504	449	1358	275			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2862	724				1.11	RQ
	2431	693					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (2862 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (2431 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.365	493	76	293	68		1.68	
30.944	42003	5021	26303	3283		1.60	
31.197	1166	325	921	220		1.27	R
31.281	587	172	571	77		1.03	R
Signal Totals:							
	44249	5594	28088	3648			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	72337	9242				1.58	RQ
	71975	9264					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (72337 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (71975 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.776	32522	3921	20794	2627		1.56	
Signal Totals:							
	32522	3921	20794	2627			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	53316	6548				1.56	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (53316 * 0.0) / (0 * 0.000)

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

Non-2,3,7,8-sub-HxCDD, RT: 35.427

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.385	720	183	494	115		1.46	R
Signal Totals:							
	720	183	494	115			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1214	298				1.46	RQ
	1106	257					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1214 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (1106 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

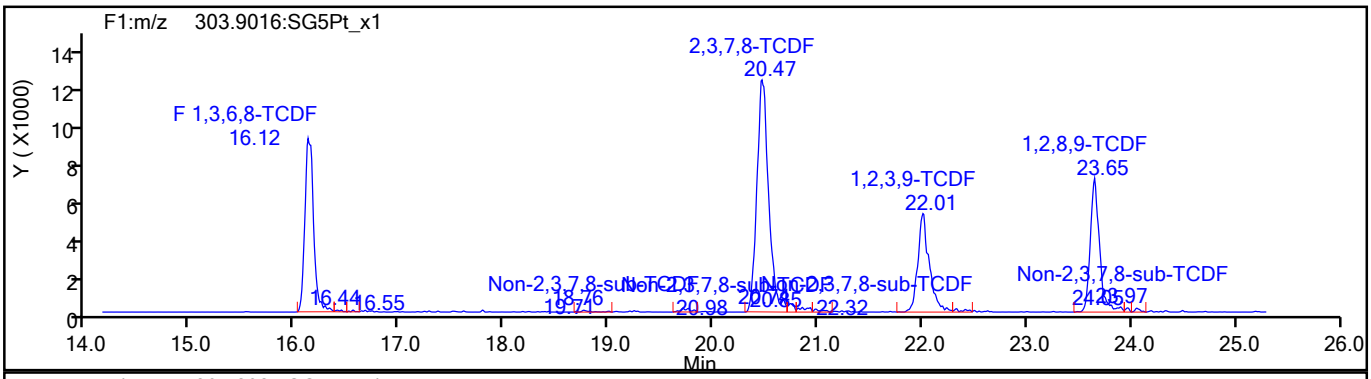

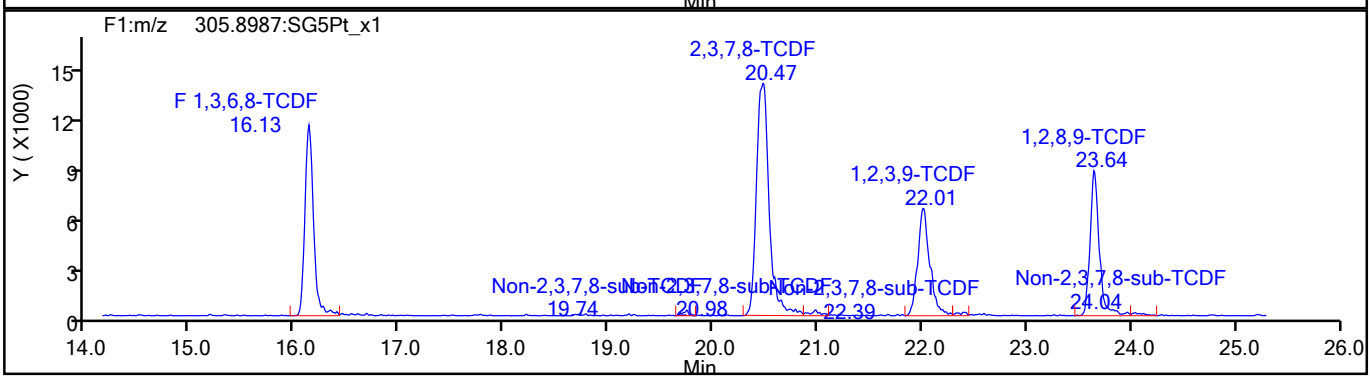

TCDF Standards

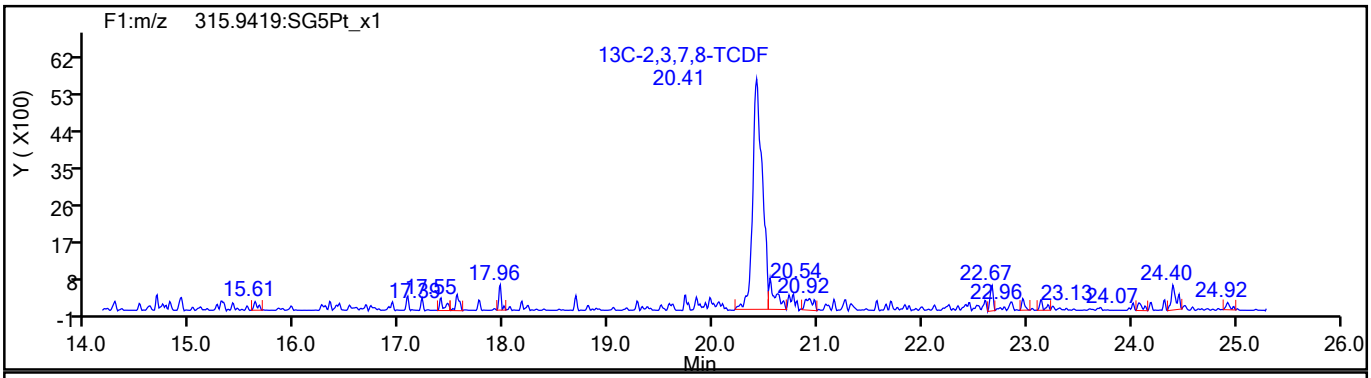

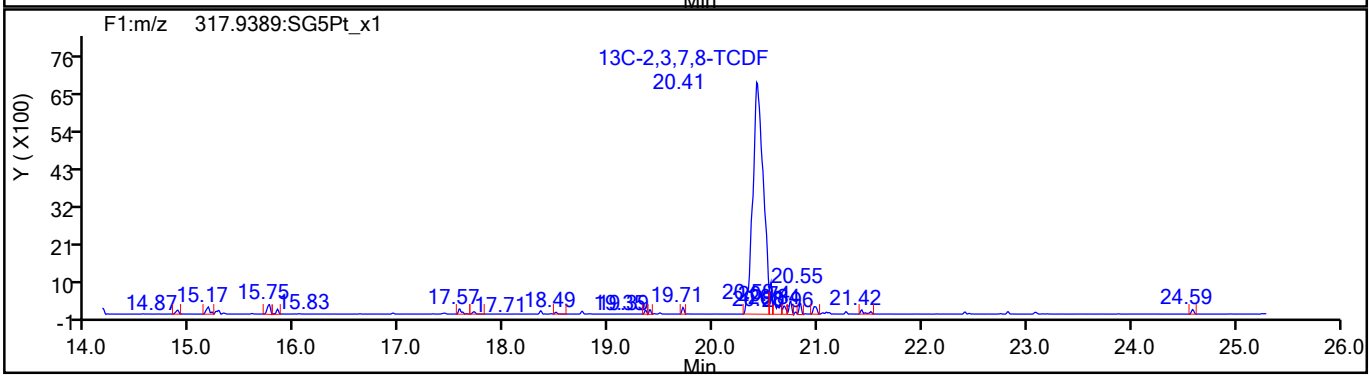

777331

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

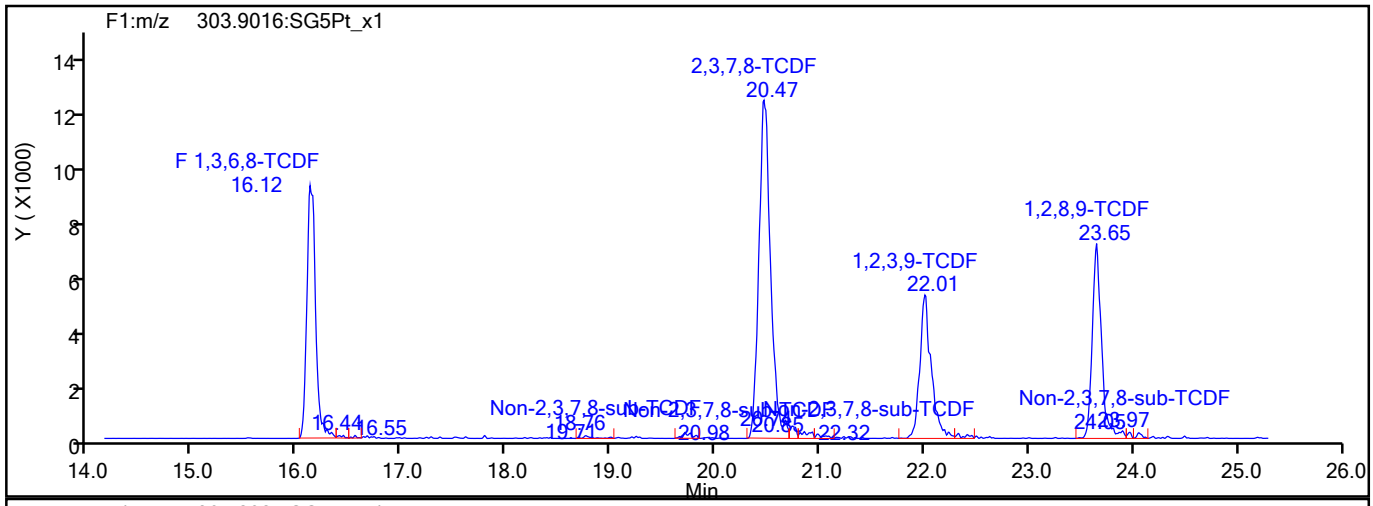

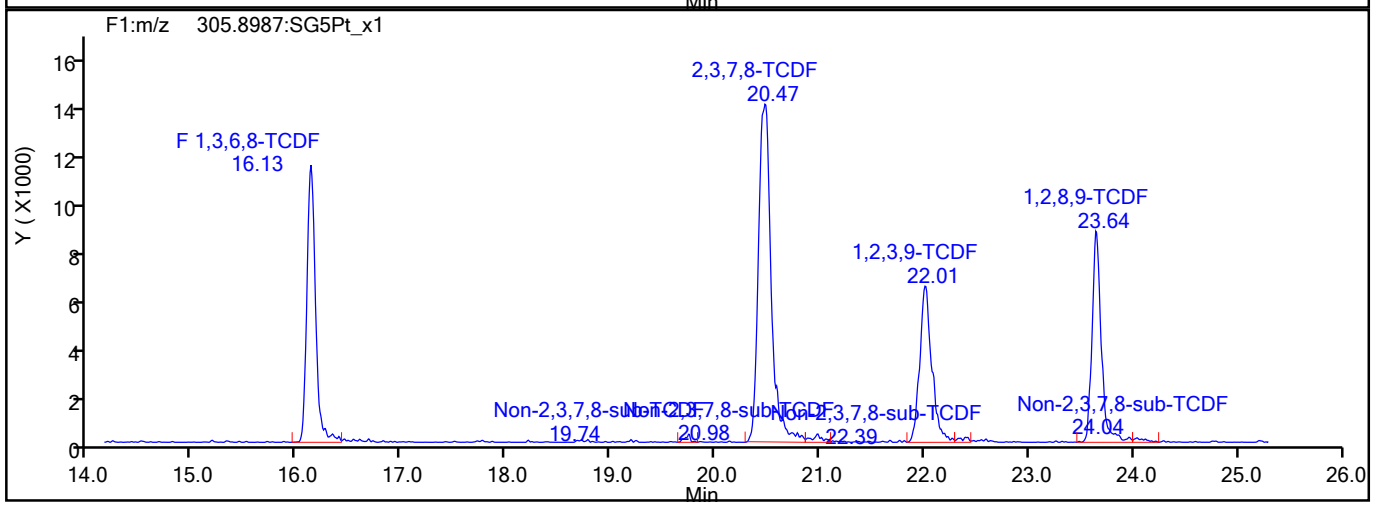

TCDF Interference Mass

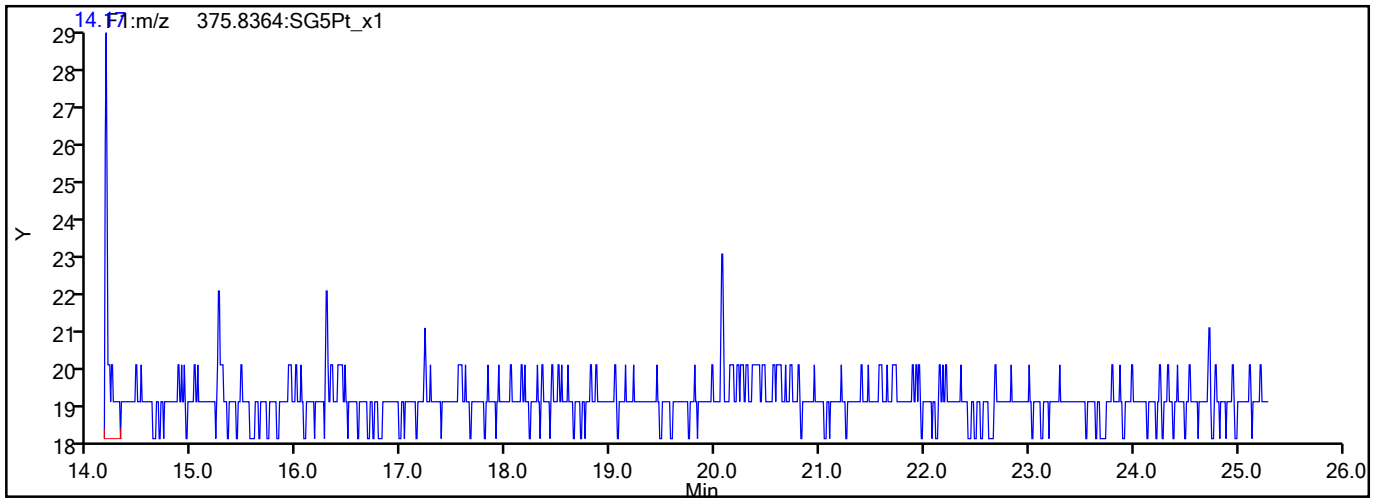

777332

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

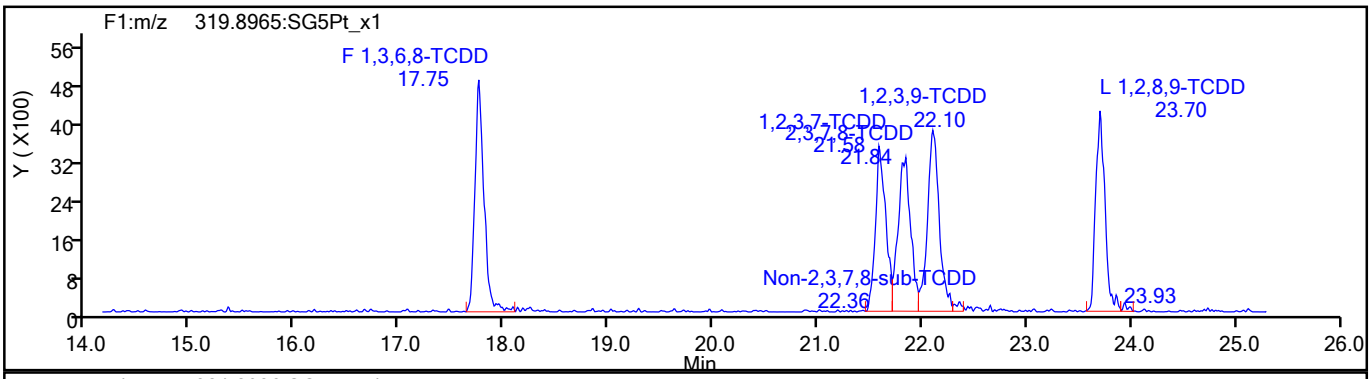

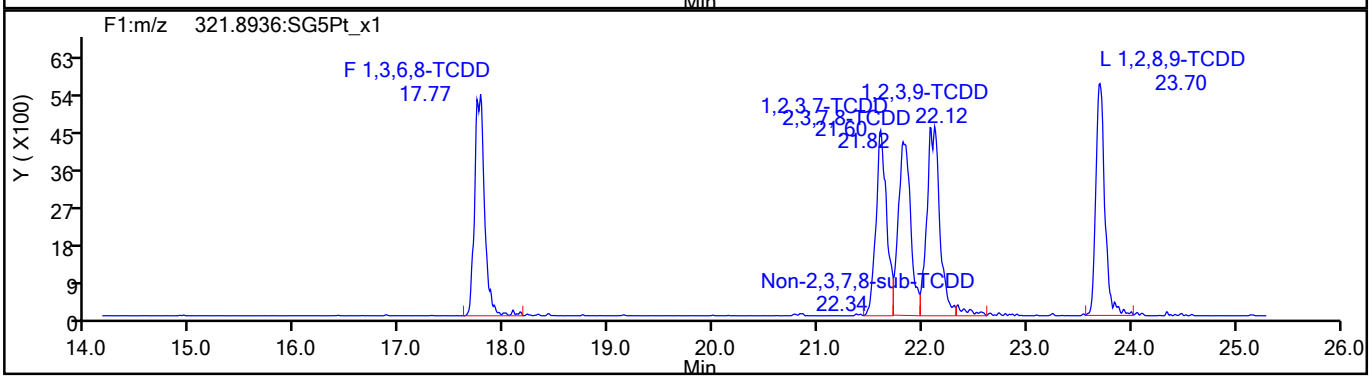

TCDD Standards

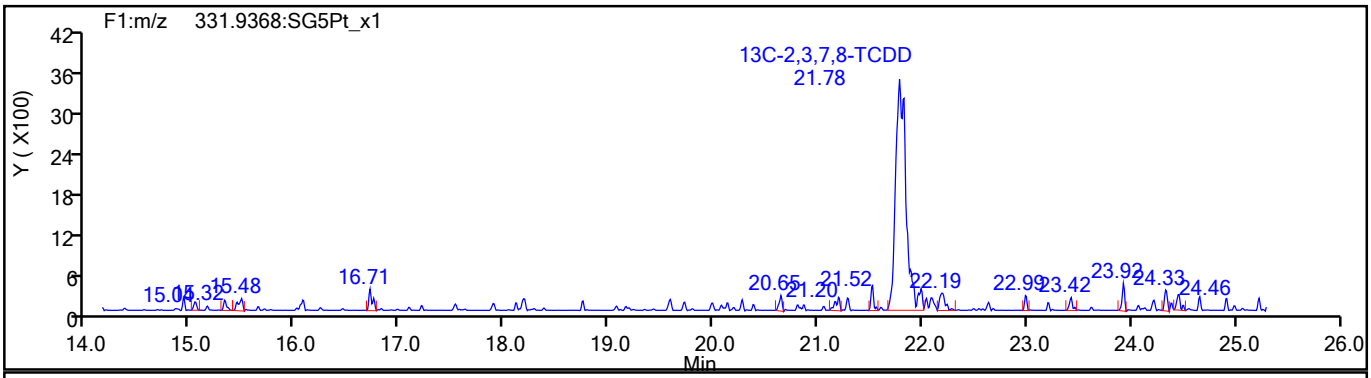

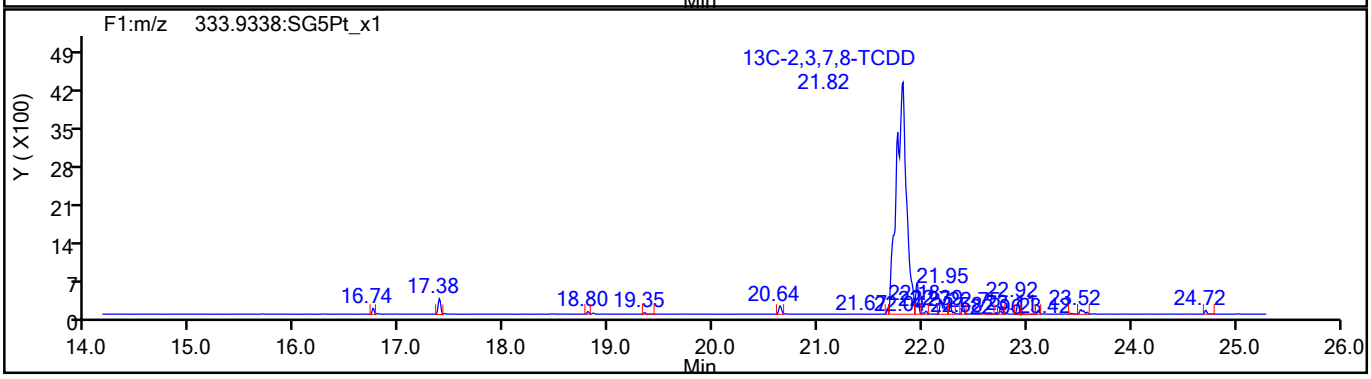

777333

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

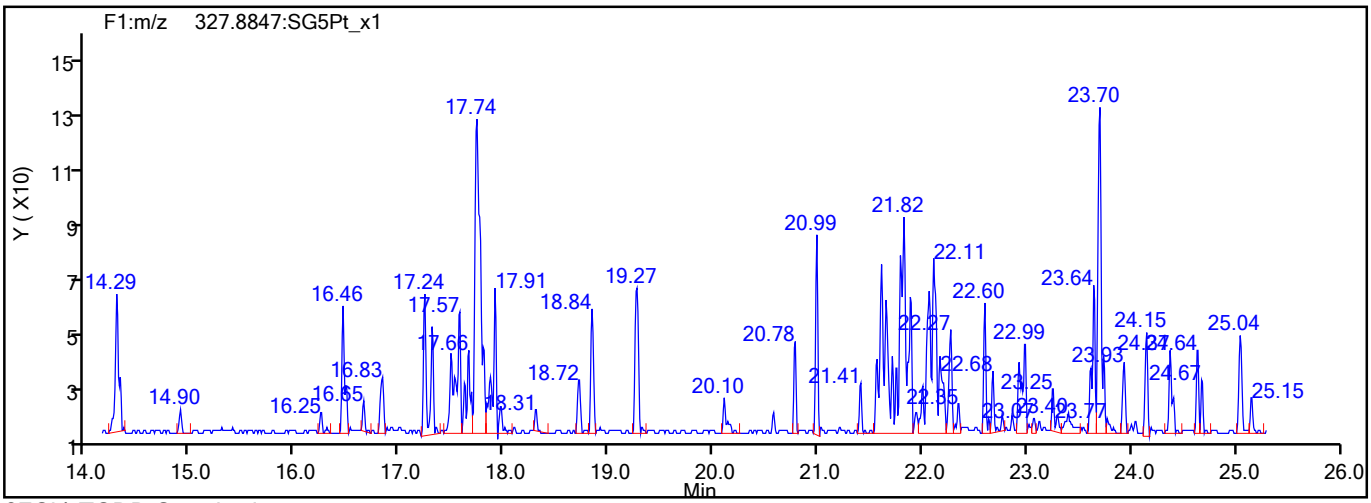

37Cl4-TCDD Standards

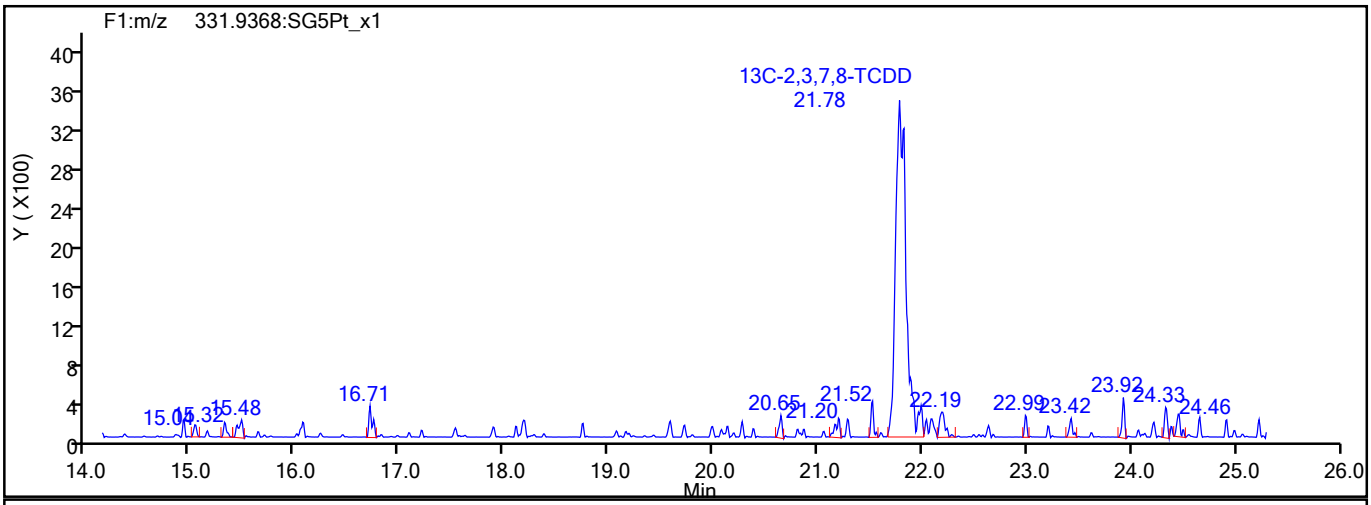

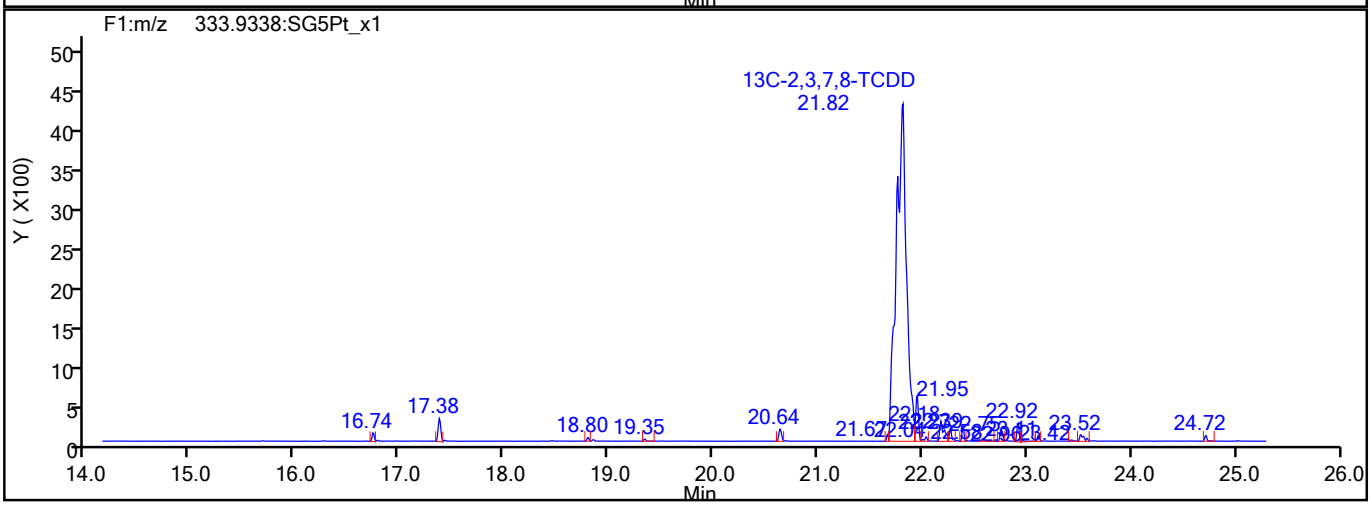

777334

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

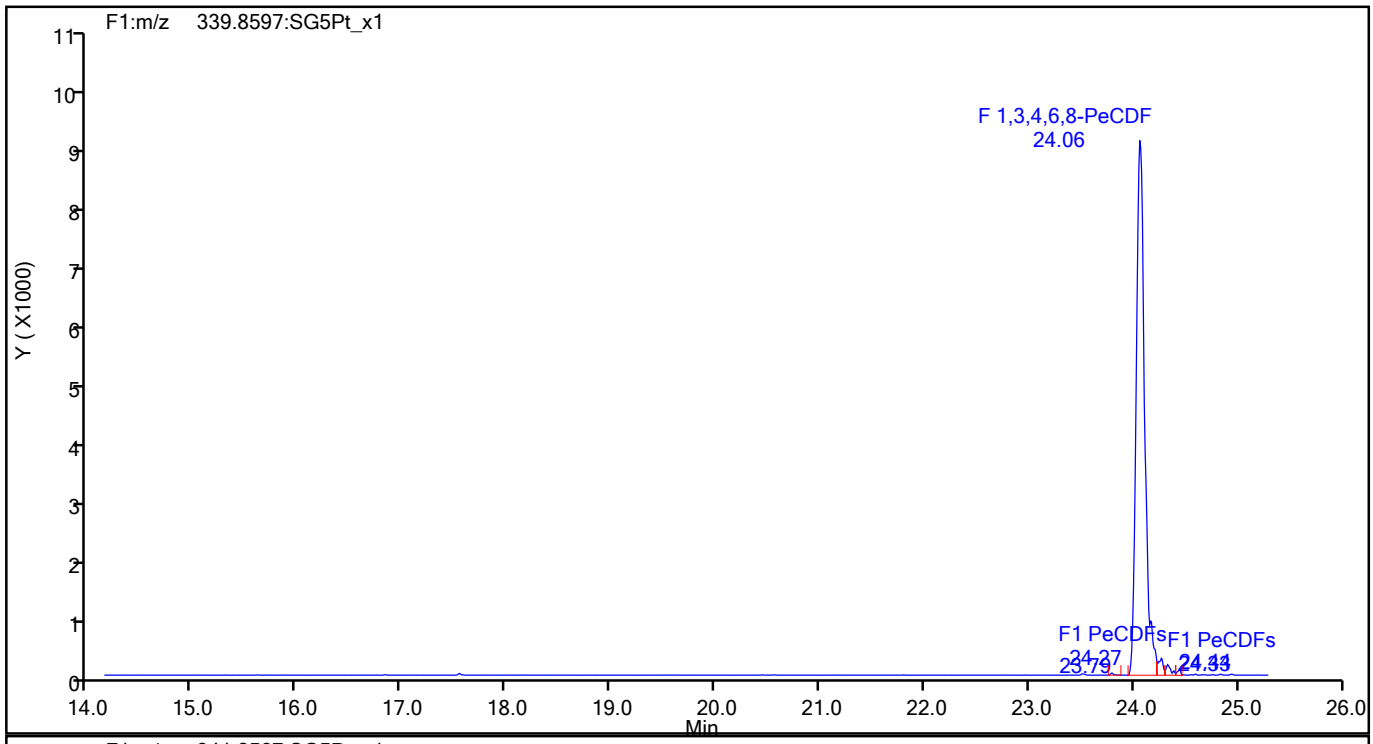

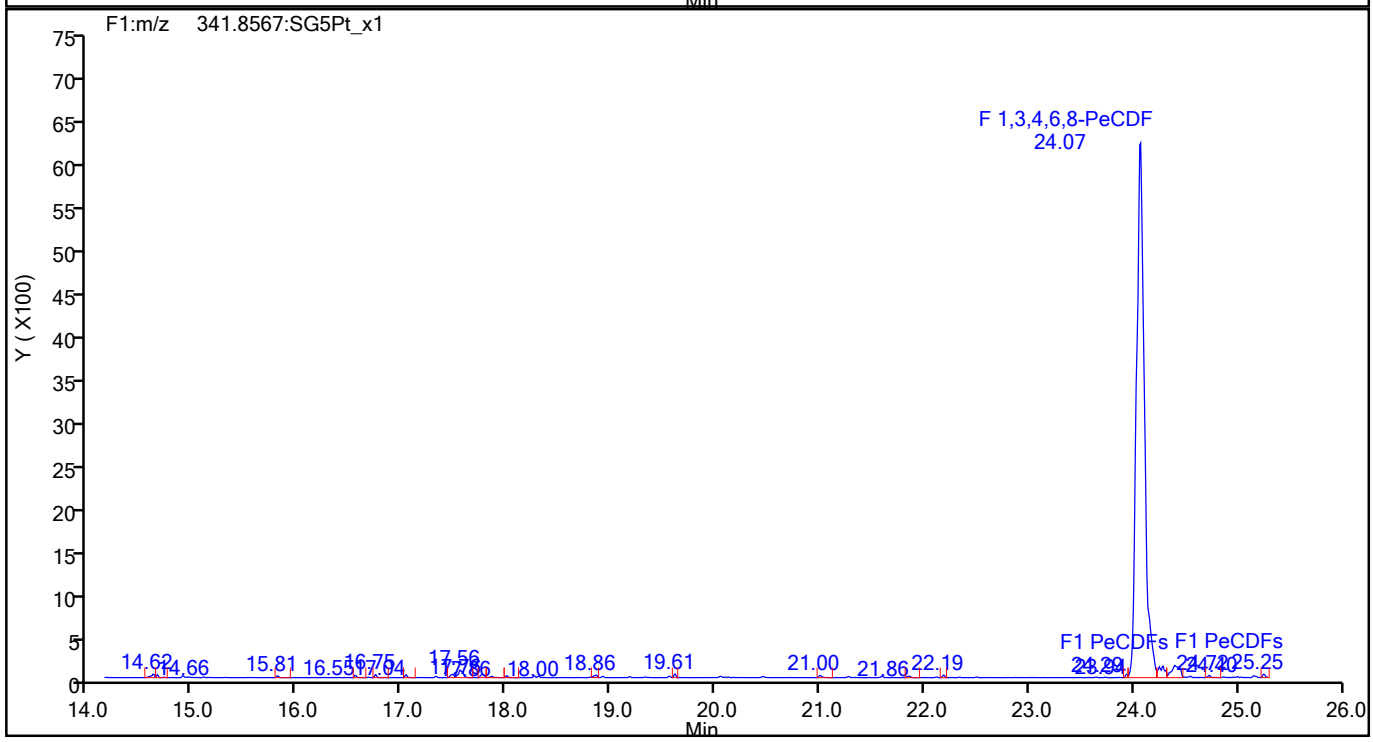

777335

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

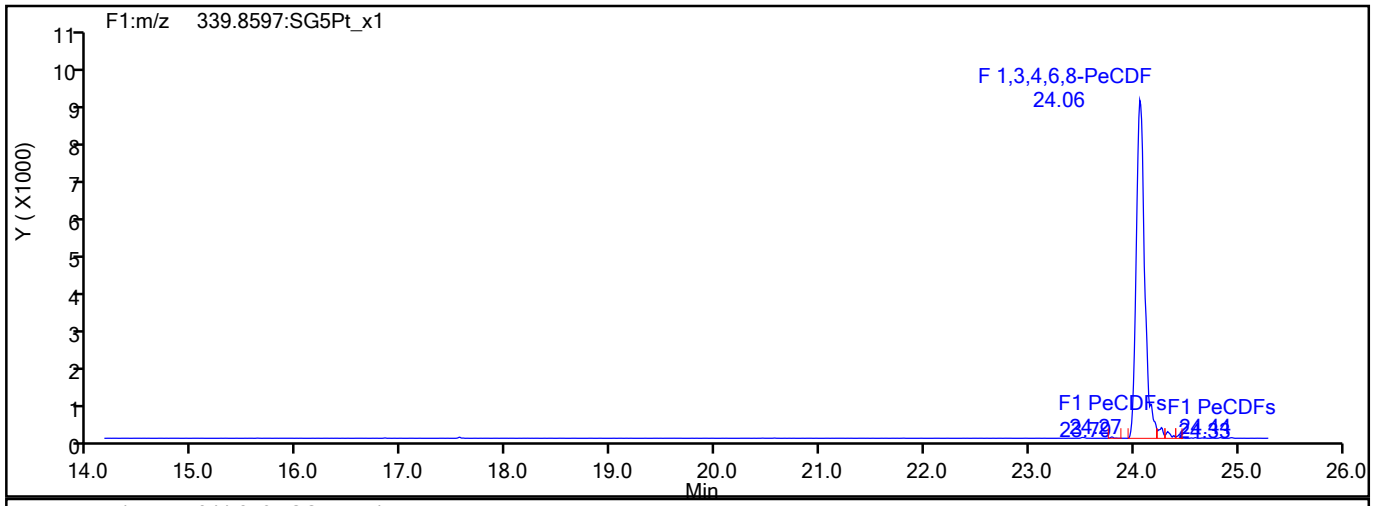

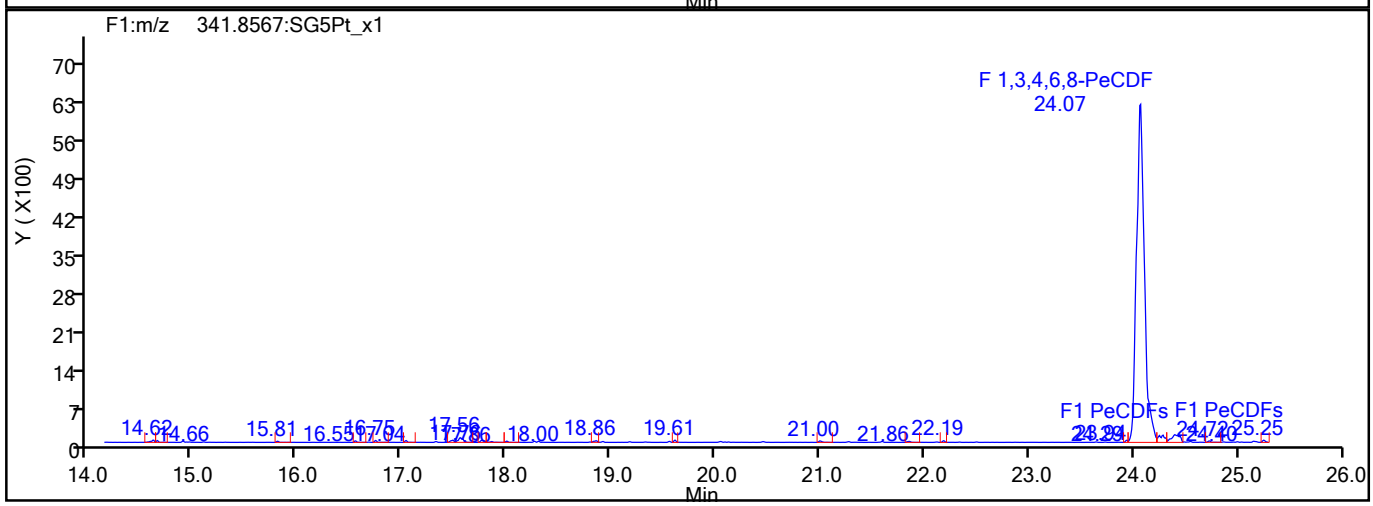

F1 PeCDFs Interference Mass

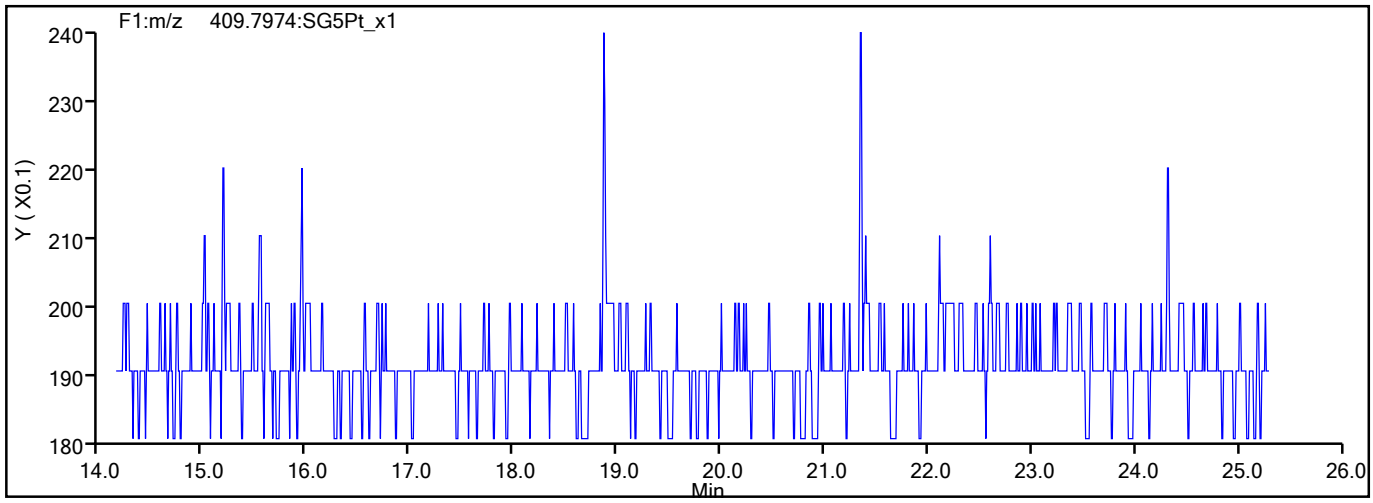

777336

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

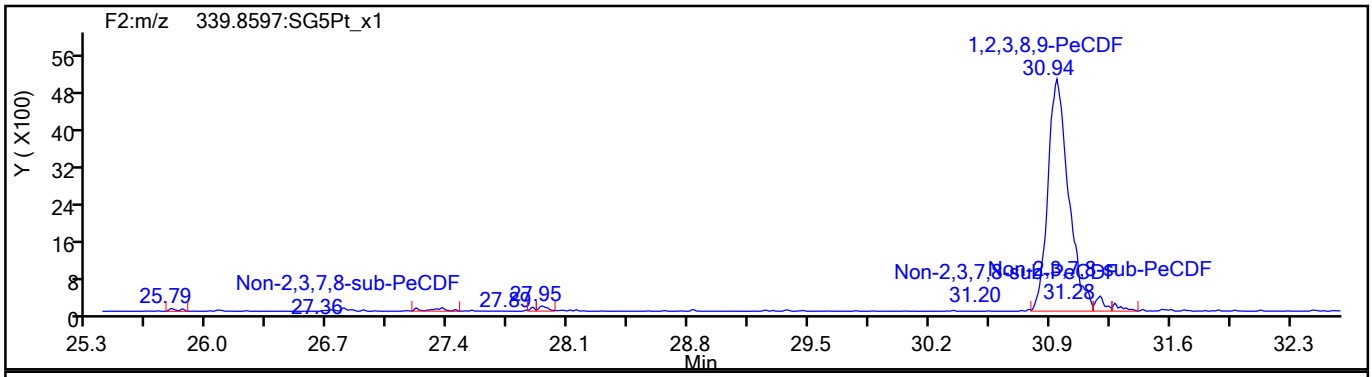

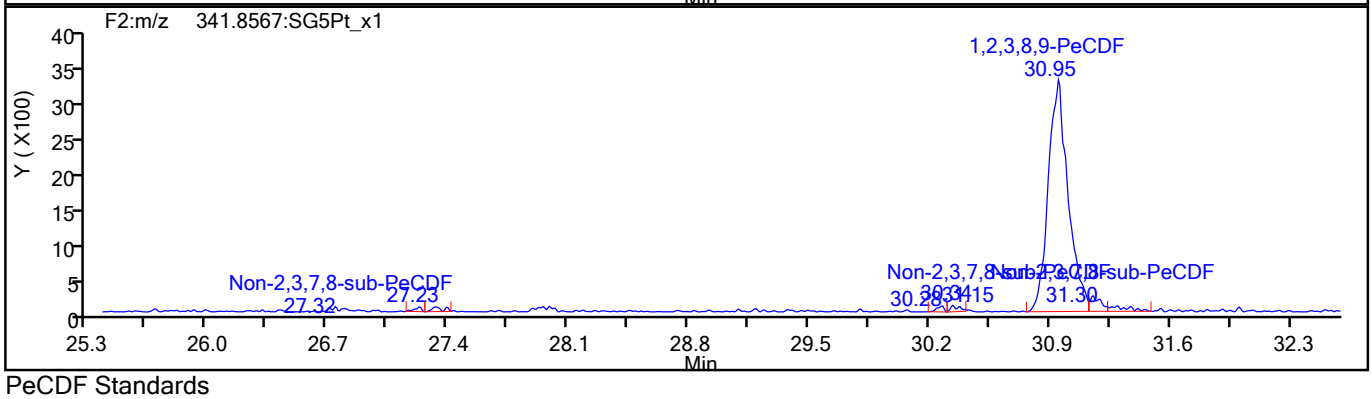

PeCDF Standards

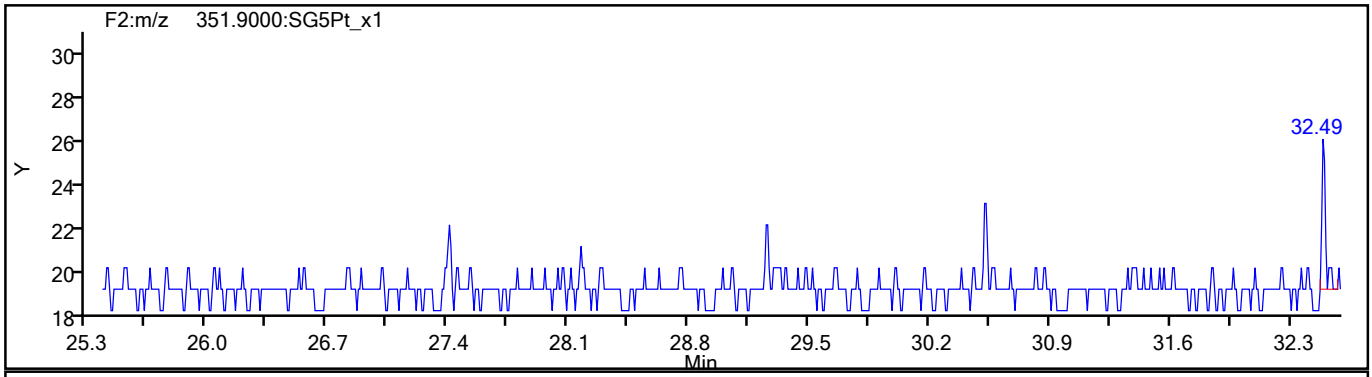

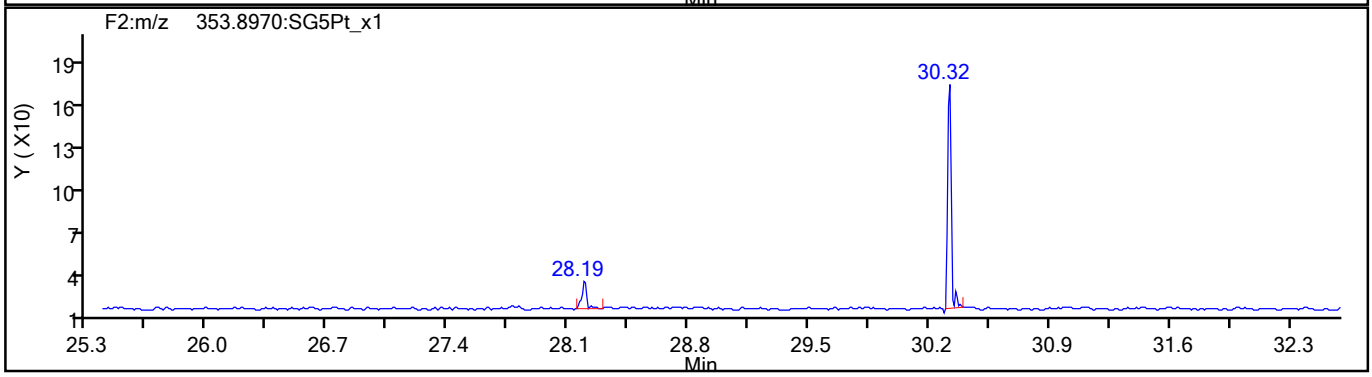

777337

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

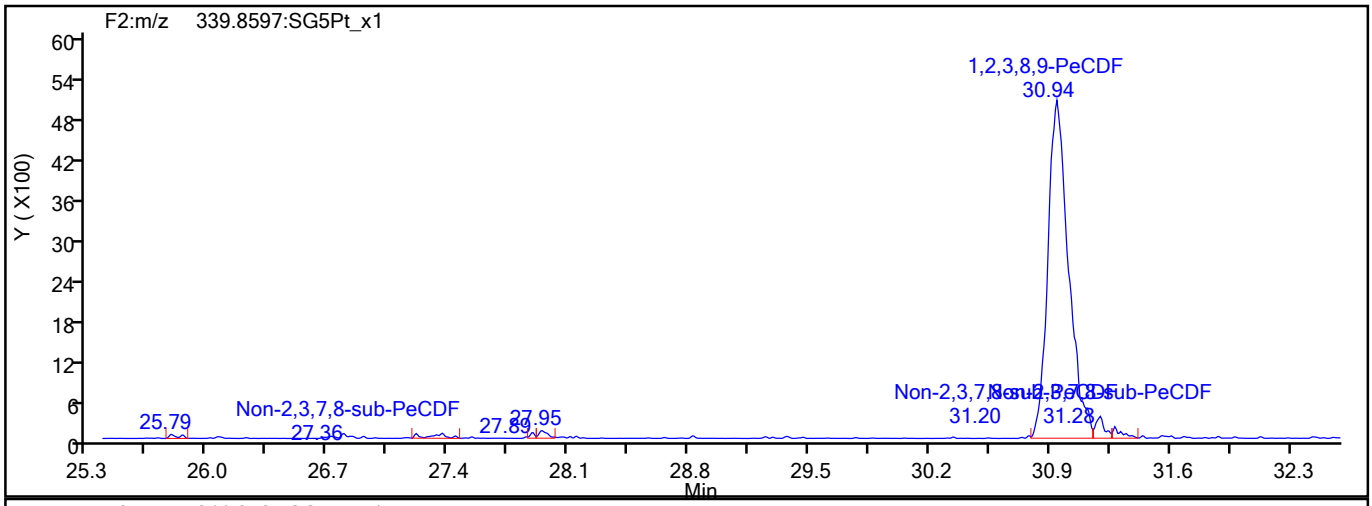

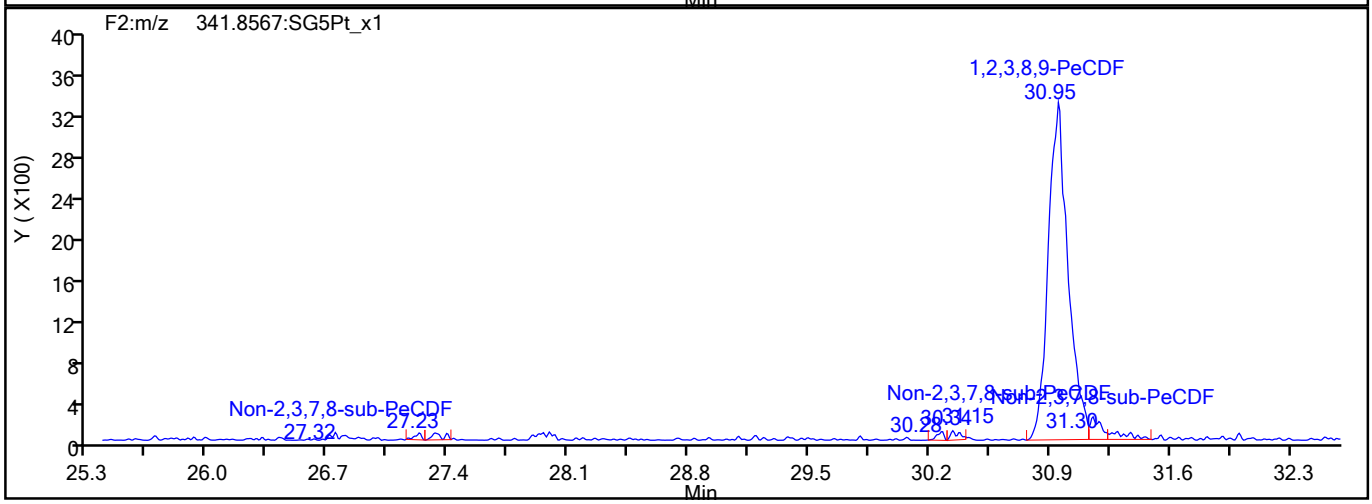

PeCDF Interference Mass

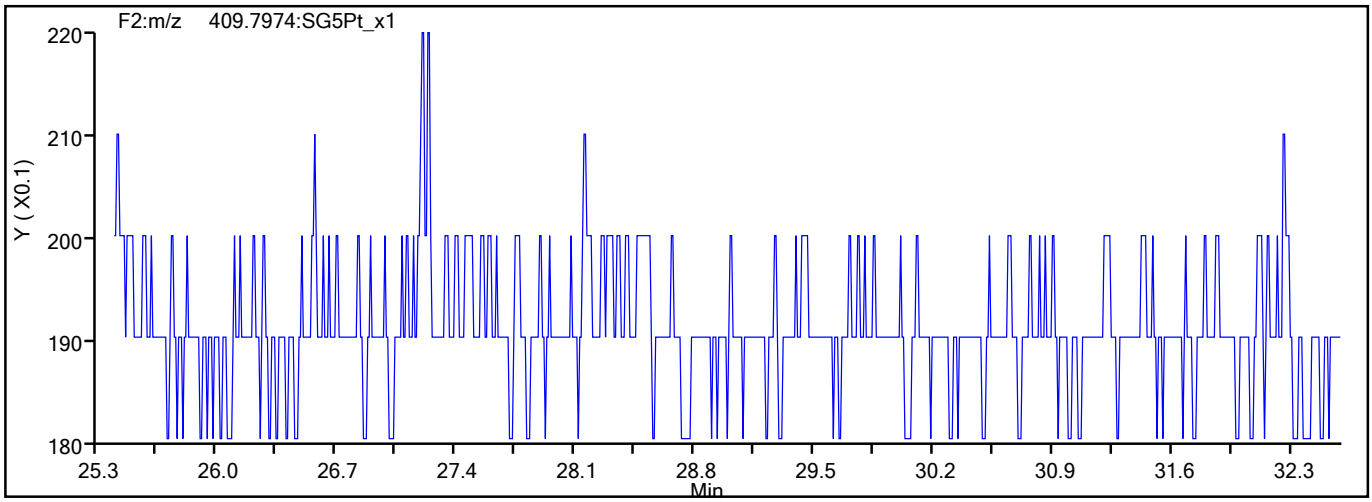

777338

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

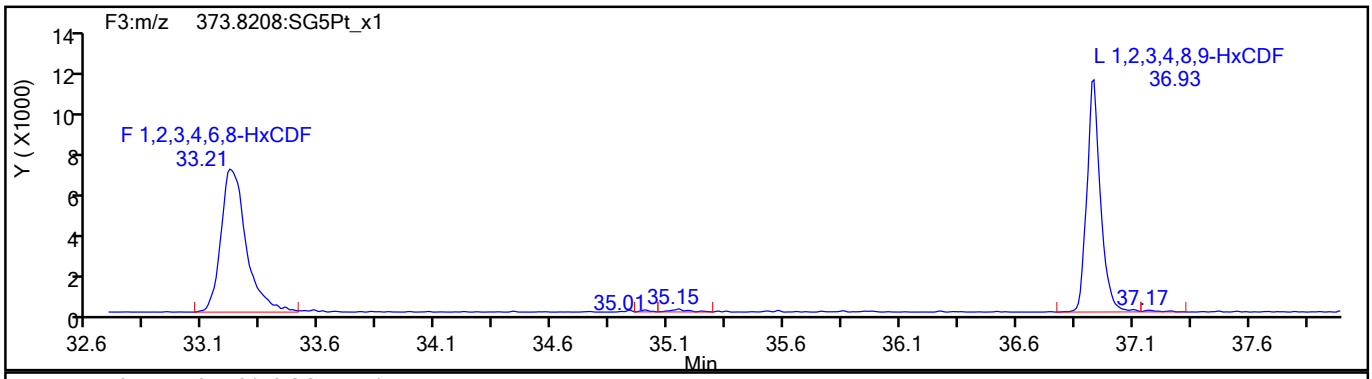

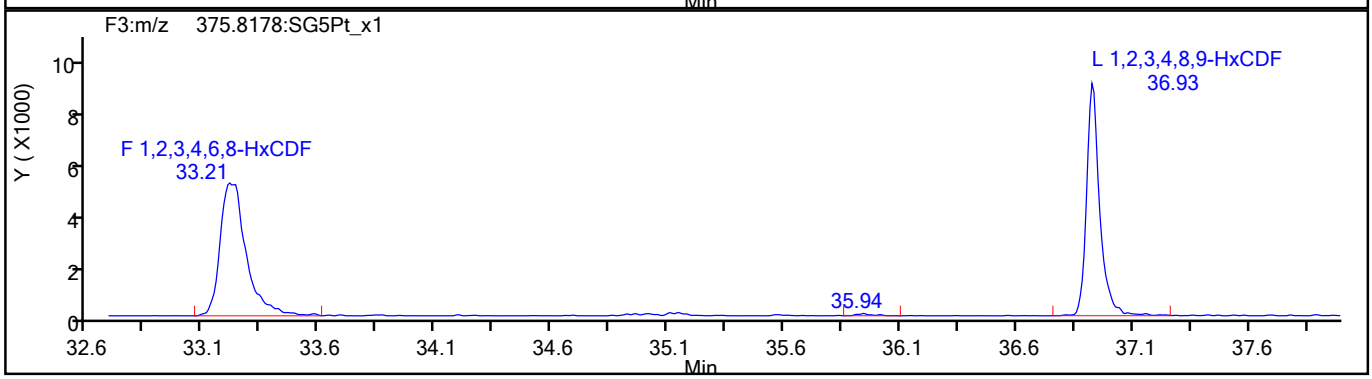

HxCDF Standards

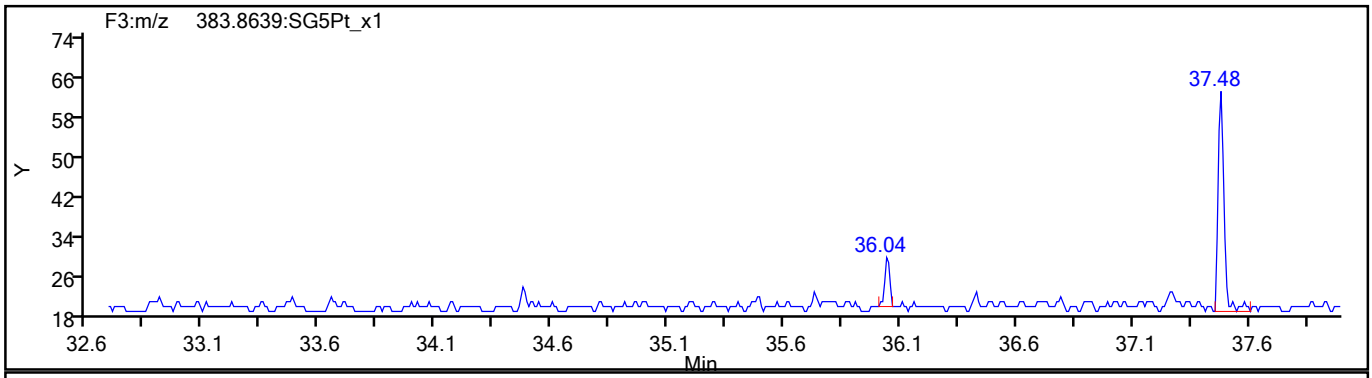

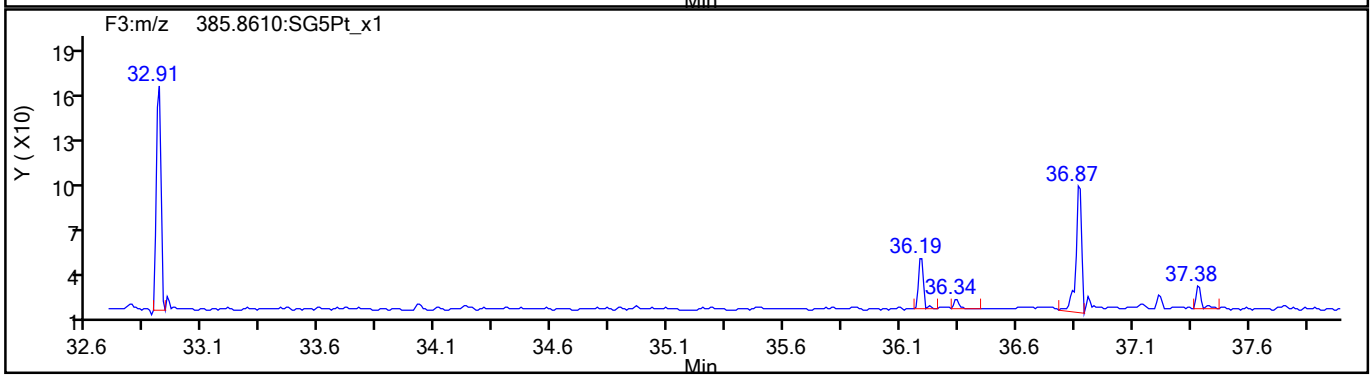

777339

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

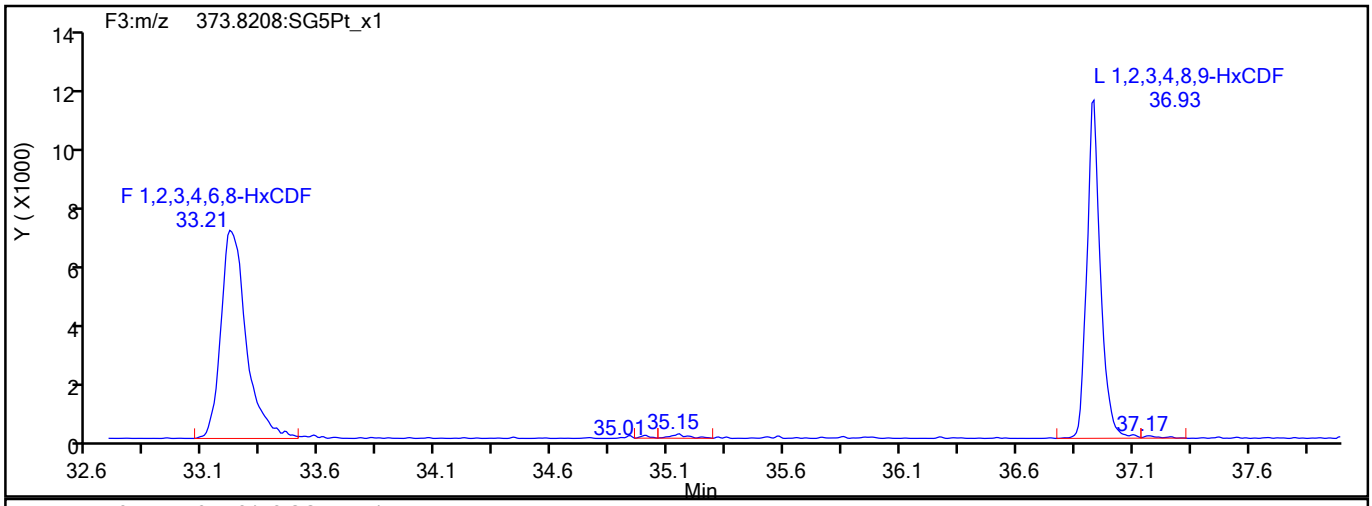

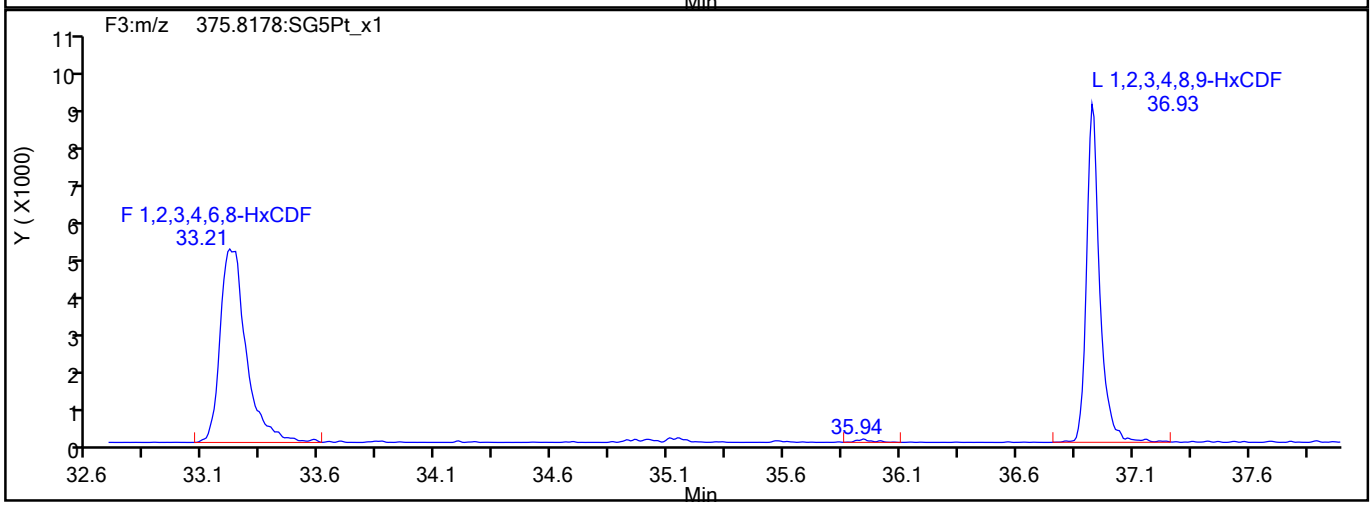

HxCDF Interference Mass

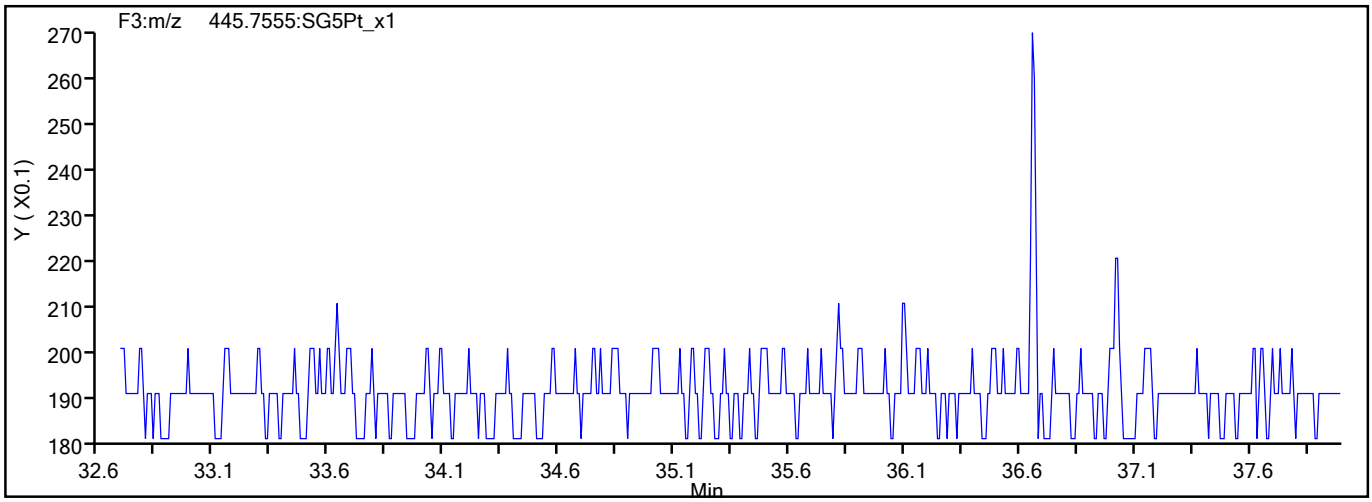

777340

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

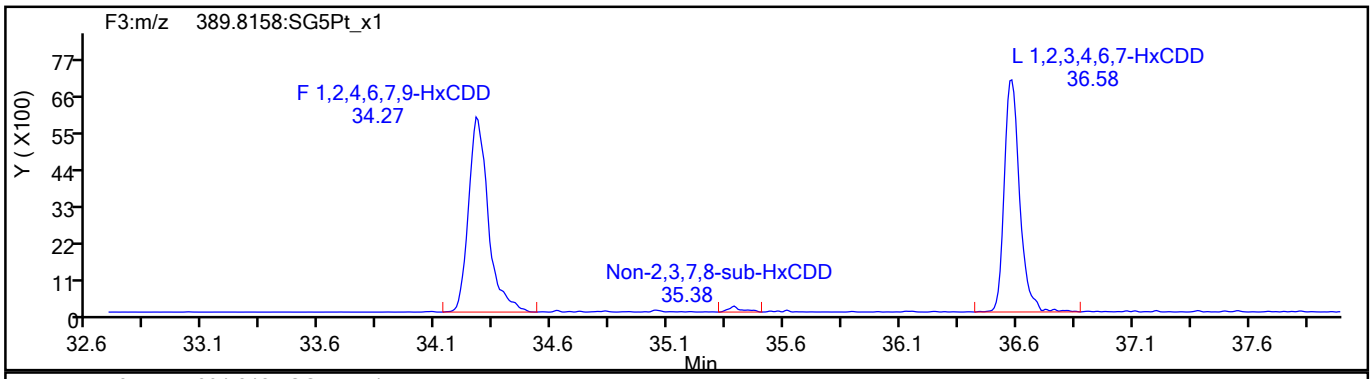

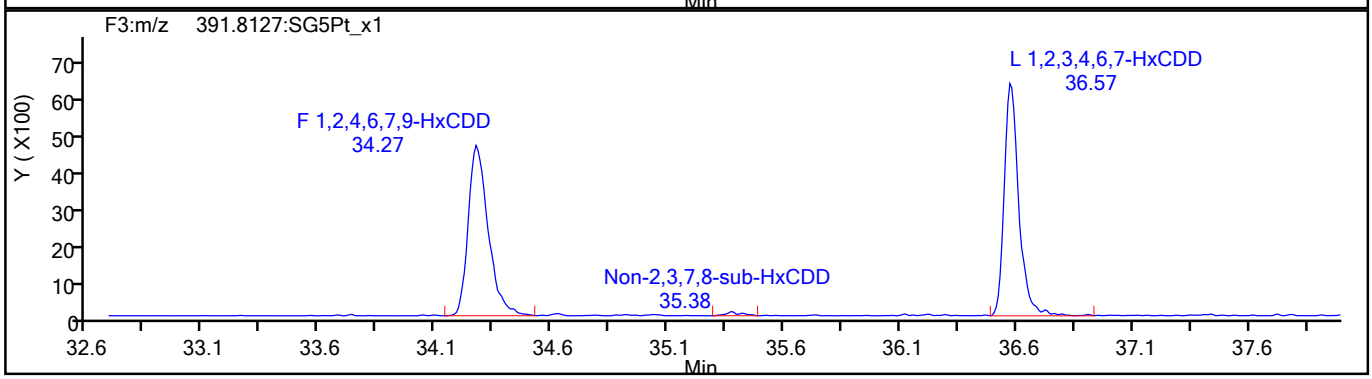

HxCDD Standards

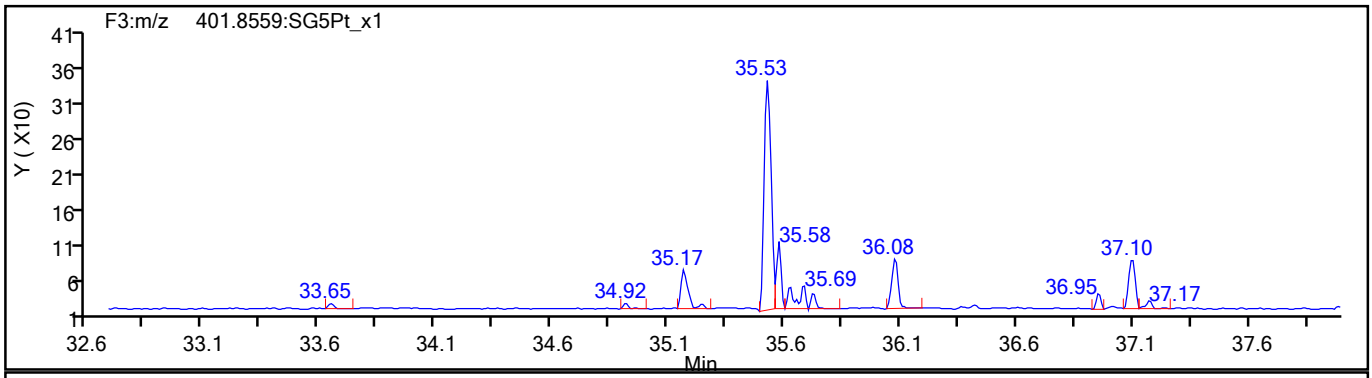

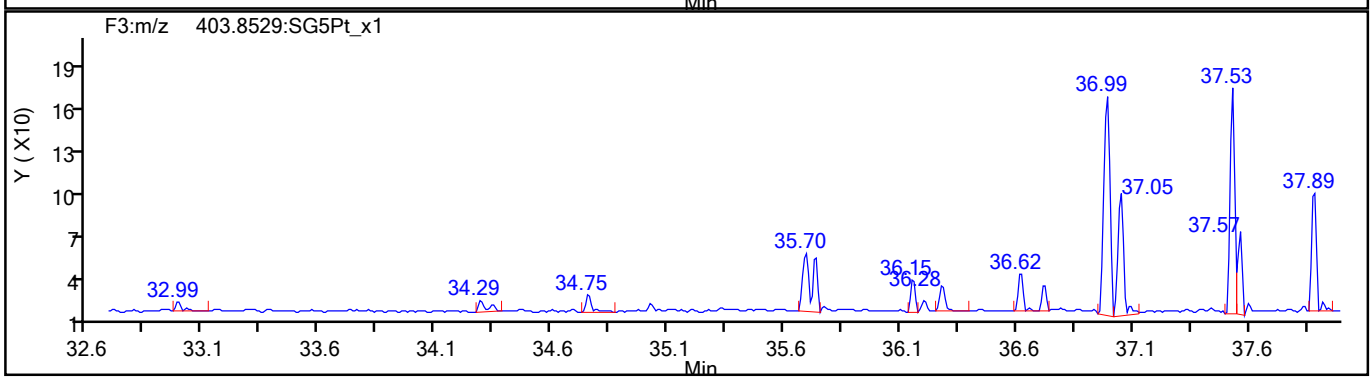

777341

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

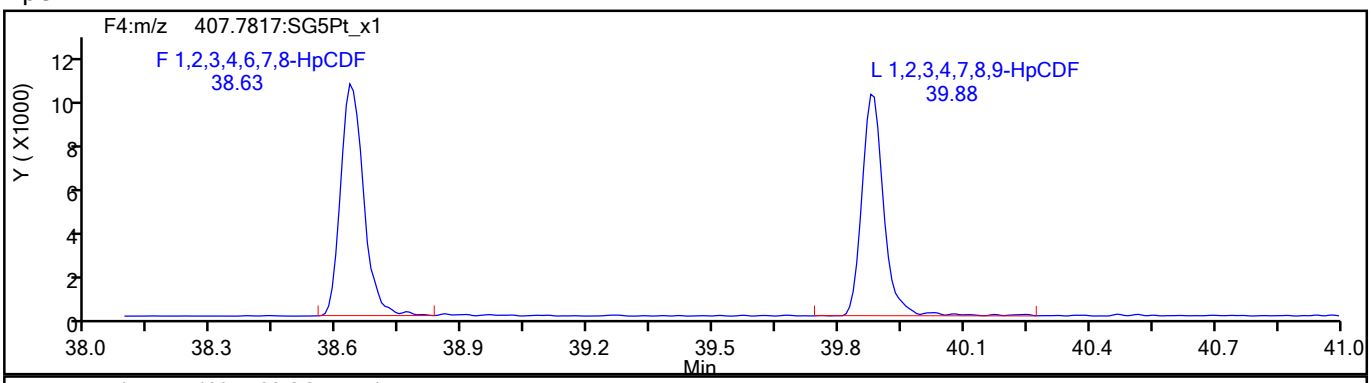

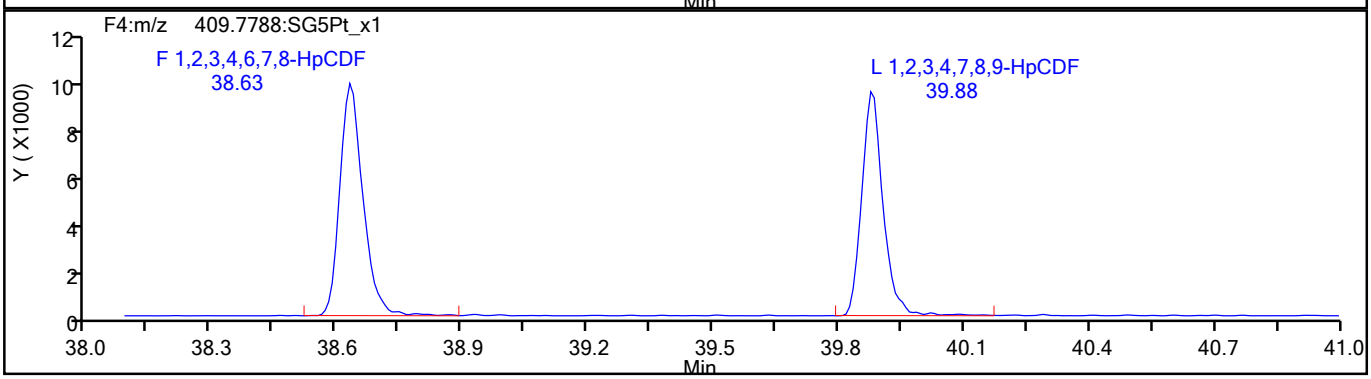

HpCDF Standards

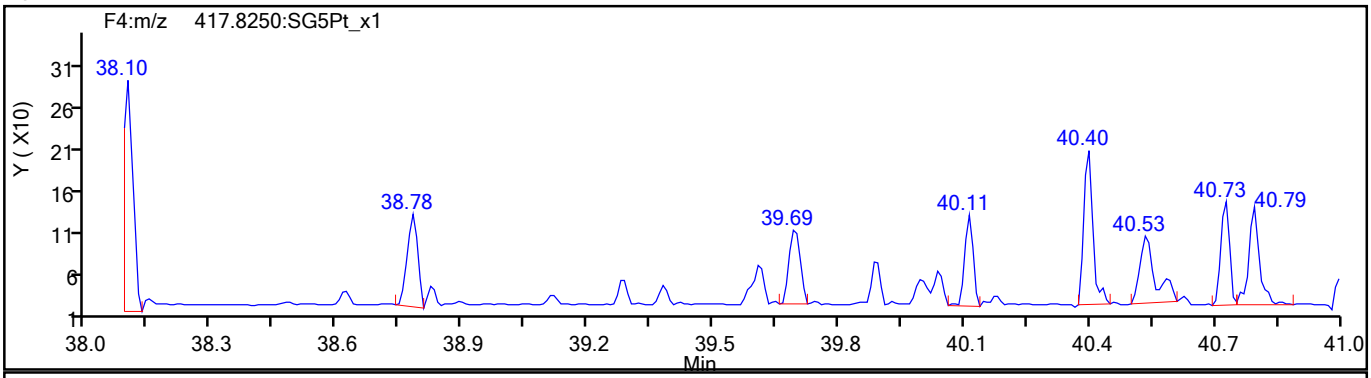

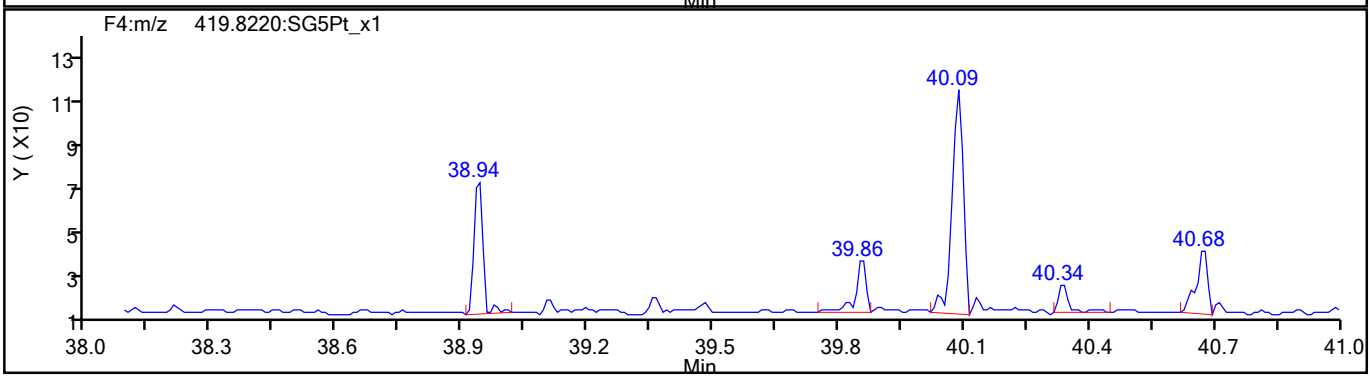

777342

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

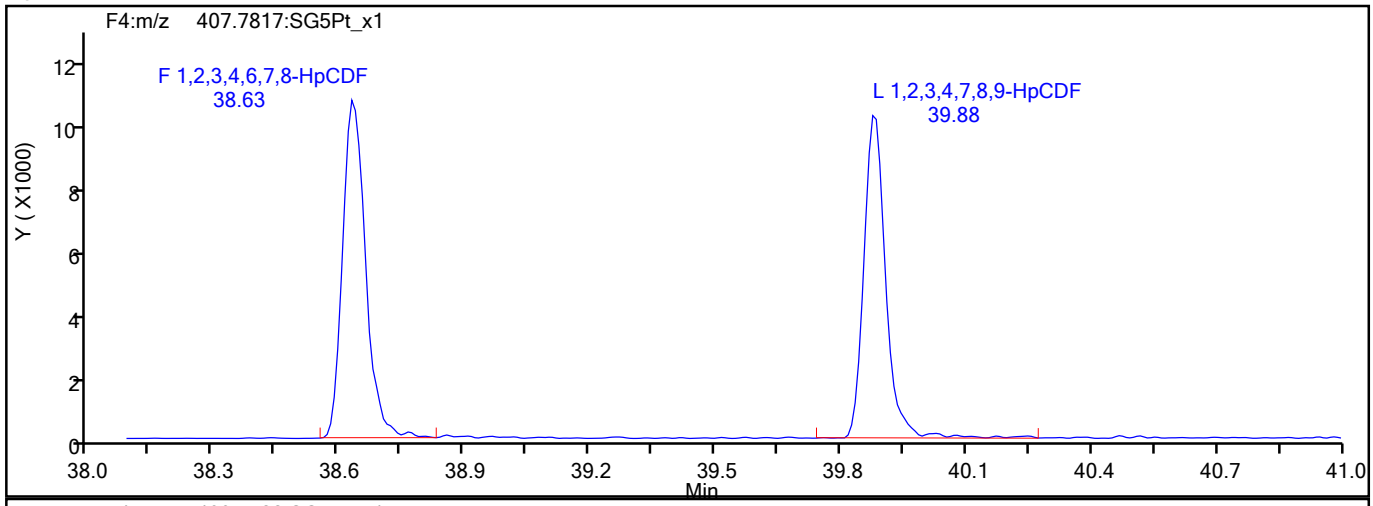

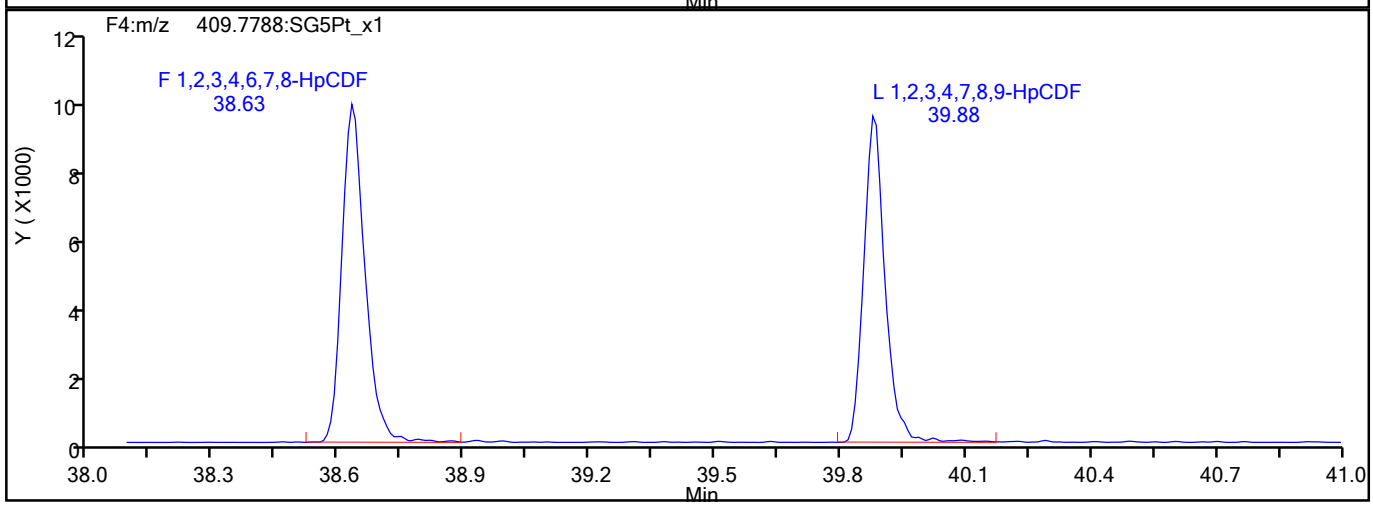

HpCDF Interference Mass

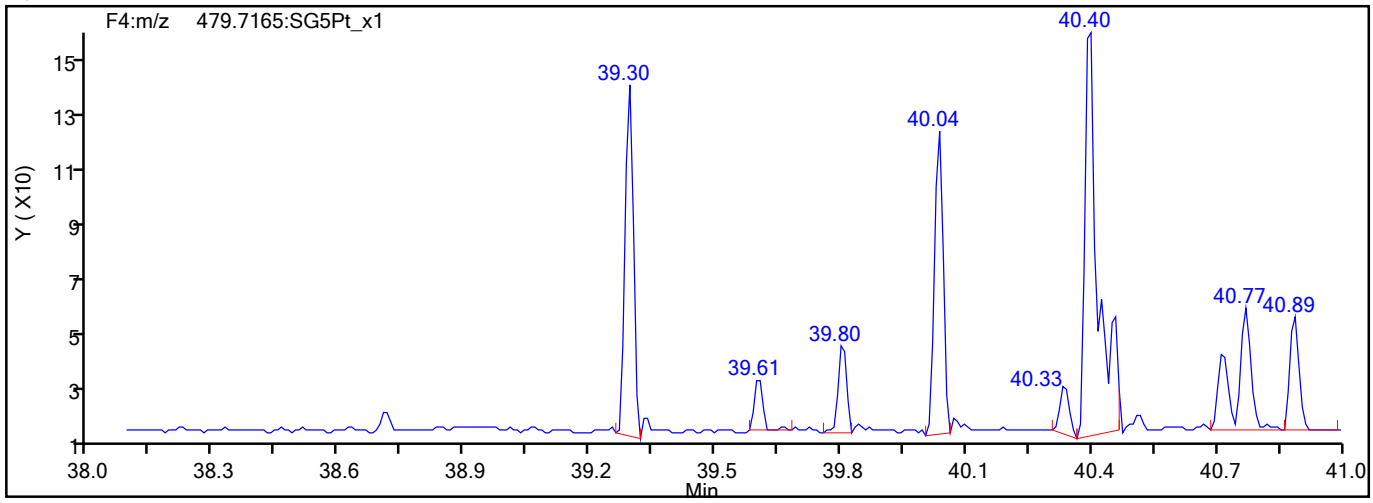

777343

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

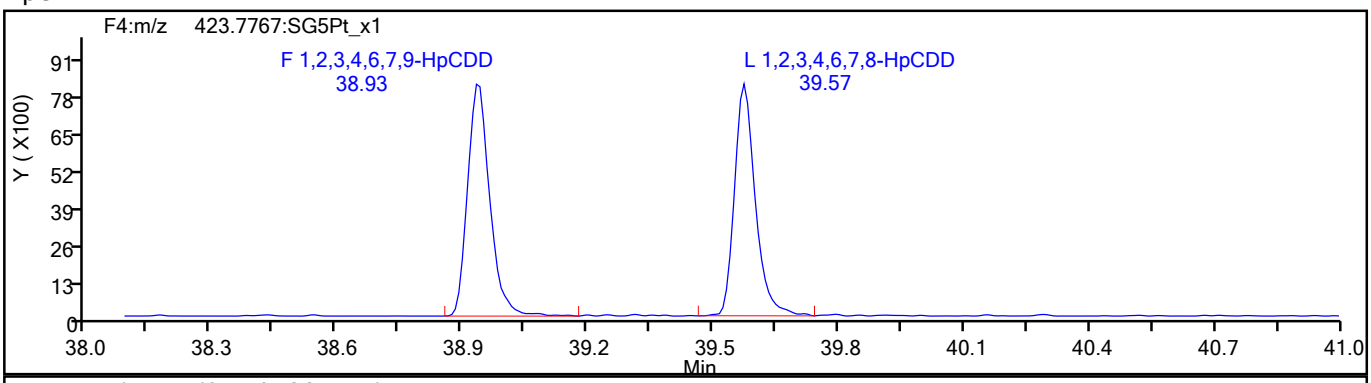

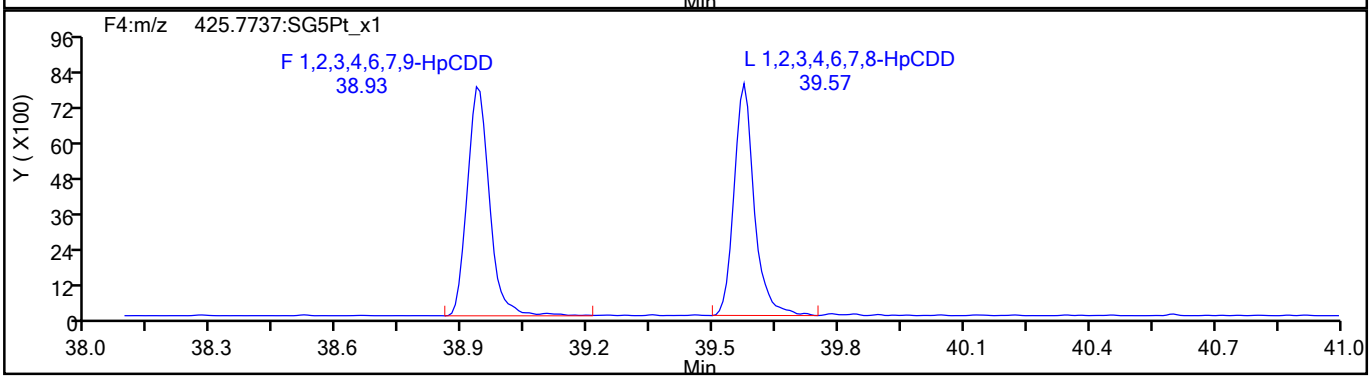

HpCDD Standards

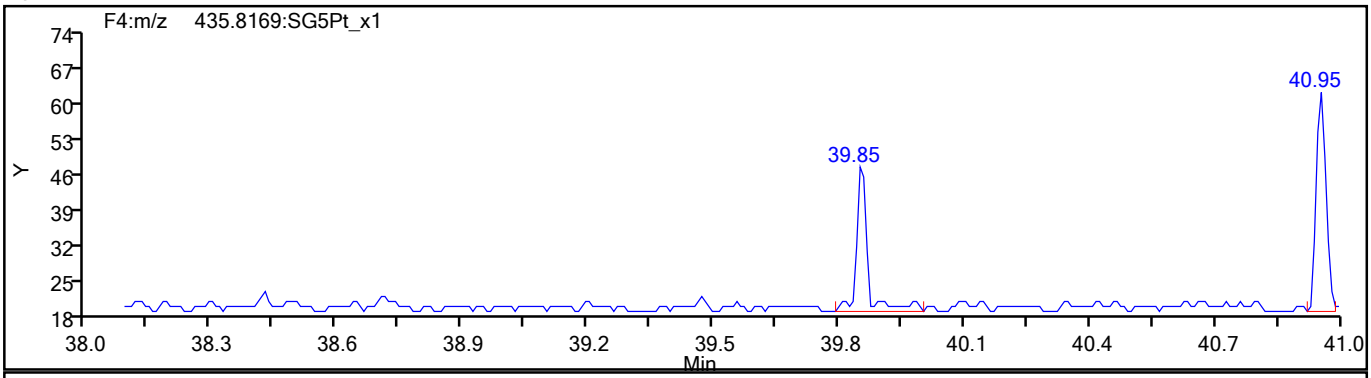

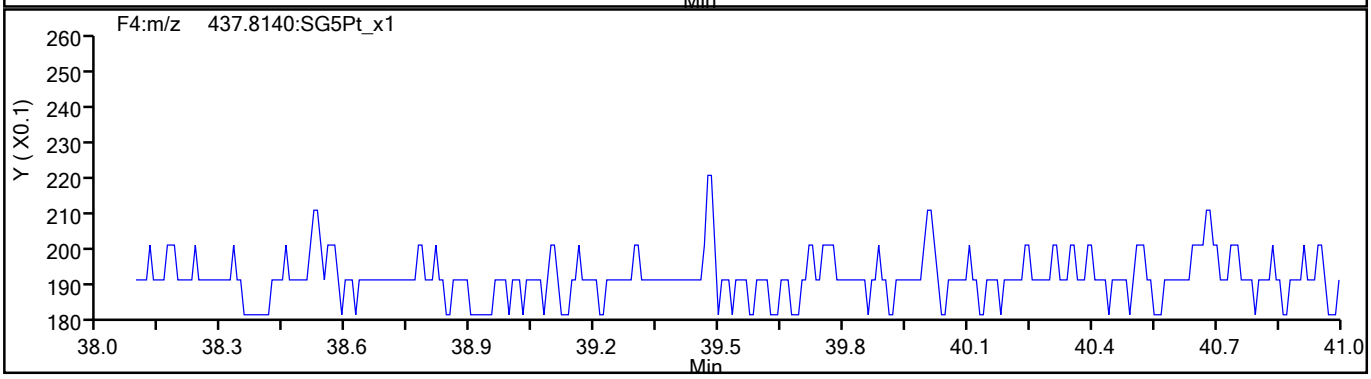

777344

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

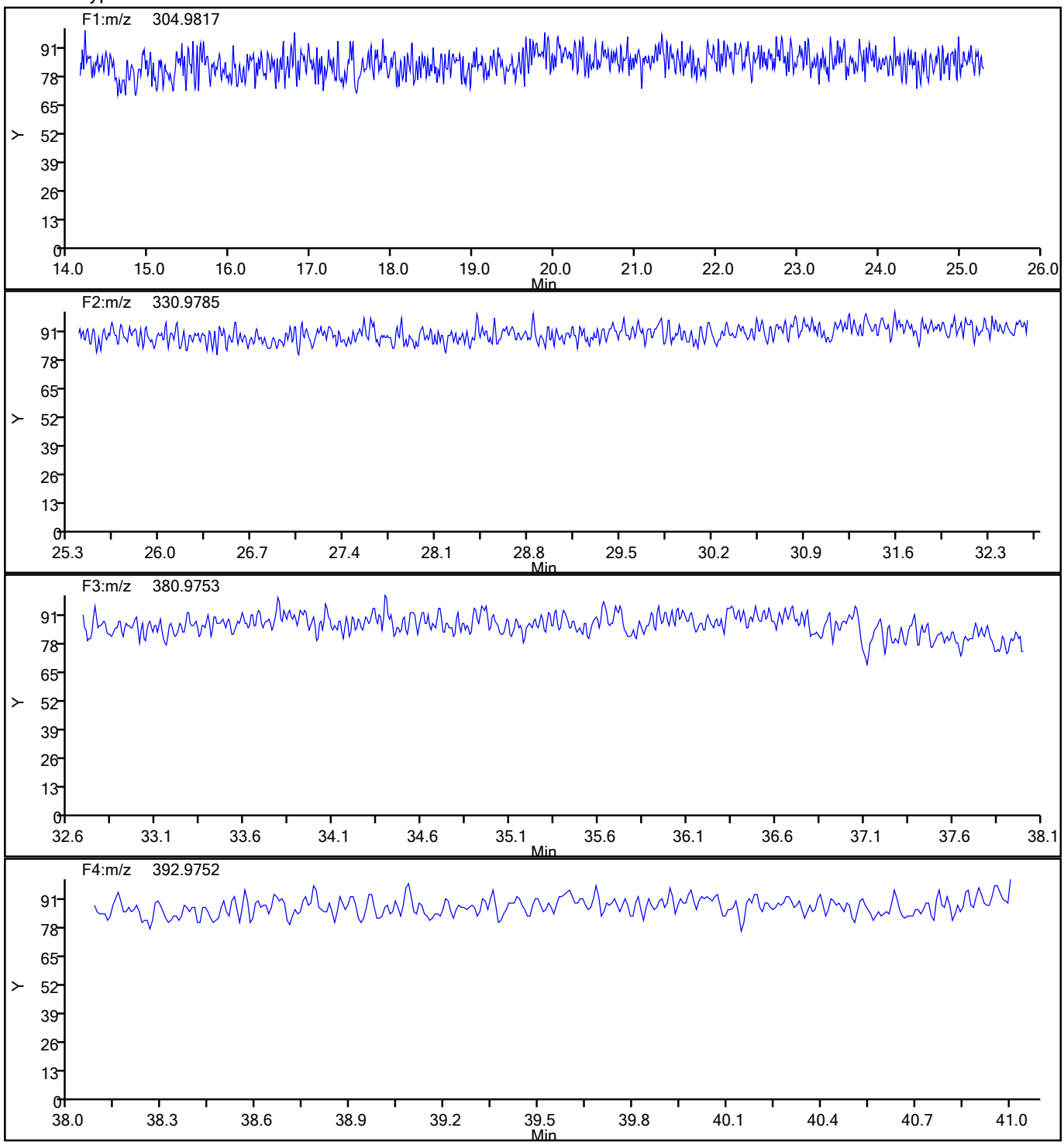

777345

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

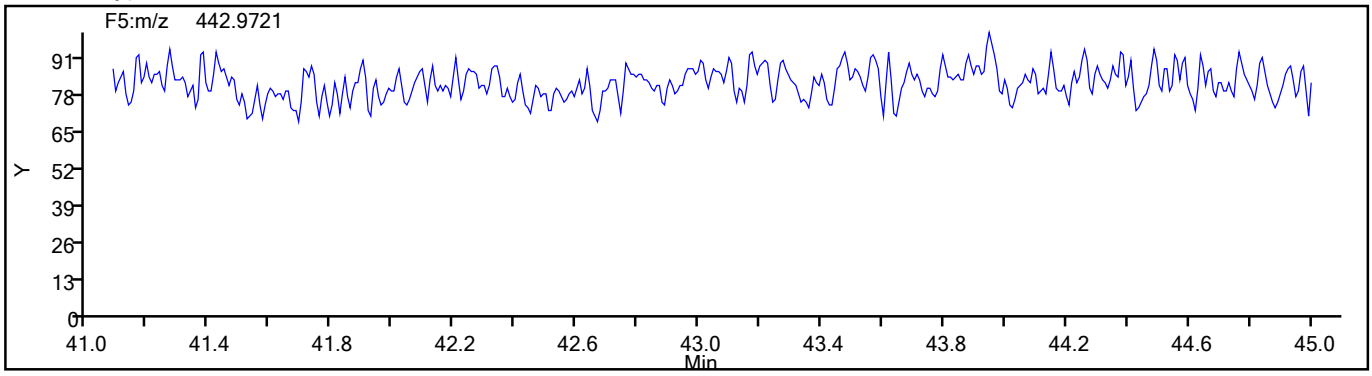

777346

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 20-Aug-2021 02:21:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:41 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:17:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.365	467833	0.81	1.3459					0.00	
2,3,7,8-TCDF	20.408	1028230	0.68	1.0802	81.4	81.4	0.2004	0.2004		
A Non-2,3,7,8-sub-TCDF	19.851	19218	0.77	1.0802	1.833	1.521	0.2004	0.6601		RQ
S Total TCDF					83.2	82.9	0.2004	0.2004		RQ
D 13C-2,3,7,8-TCDD	21.716	306095	0.83	0.9317					0.00	
2,3,7,8-TCDD	21.733	360703	0.82	1.0753	43.8	43.8	0.1149	0.1149		
A Non-2,3,7,8-sub-TCDD	20.684						0.1149	0.1149		
S Total TCDD					43.8	43.8	0.1149	0.1149		
A F1 PeCDFs	24.634	713	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.173	388340	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.478	284602	1.57	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.009	7010	1.24	0.0000						RQ
S Total HxCDF										RQ
A Non-2,3,7,8-sub-HxCDD	35.375	3880	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.618	417242	1.02	1.4421						
1,2,3,4,7,8,9-HpCDF	39.872	395176	1.06	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.245						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.561	315483	1.06	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.241						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.128	632851	0.68							
1,3,6,8-TCDD	17.726	345944	0.79							
2,3,4,7-TCDF	20.408	1028230	0.68							
1,2,3,7-TCDD	21.518	306508	0.76							
1,2,3,9-TCDF	21.939	443680	0.70							
1,2,3,9-TCDD	22.008	363657	0.82							
1,2,8,9-TCDF	23.574	570780	0.73							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.643	174001								
1,3,4,6,8-PeCDF	24.004	470784	1.65							
1,2,3,8,9-PeCDD	26.038	304807	1.59							
1,2,4,7,9-PeCDD	30.776						0.0	0.0		
1,2,3,8,9-PeCDF	30.944						0.0	0.0		
1,2,3,4,6,8-HxCDF	33.120	491975	1.24							
1,2,4,6,7,9-HxCDD	34.205	337333	1.27							
1,2,3,4,6,7-HxCDD	36.545	327967	1.27							
1,2,3,4,8,9-HxCDF	36.898	474737	1.23							
1,2,3,4,6,7,9-HpCDD	38.921	308708	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 20-Aug-2021 02:21:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:41 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:17:20

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.365	20.365	0	1.000	208816	29479	77	192	383		
317.9389	20.356	20.365	-1	1.000	259017	35573	20	50	1779	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.408	20.408	0	1.002	415746	51351	54	135	951		
305.8987	20.399	20.408	-1	1.002	612484	78065	87	217	897	0.68(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.731	19.851	-67	0.920	1292	284	54	135	5		
305.8987	18.714	19.851	-68	0.919	2953	608	87	217	7	0.44(0.65-0.89)	
	Empc Correction				1677	368	87	217	4		
303.9016	19.651	19.851	-12	0.965	3565	599	54	135	11		
305.8987	19.651	19.851	-12	0.965	4345	691	87	217	8	0.82(0.65-0.89)	
303.9016	23.995	19.851	248	1.178	3628	632	54	135	12		
305.8987	23.995	19.851	248	1.178	7371	1071	87	217	12	0.49(0.65-0.89)	
	Empc Correction				4711	820	87	217	9		
13C-2,3,7,8-TCDD											
331.9368	21.716	21.716	0	1.000	138947	18418	16	40	1151		
333.9338	21.681	21.716	-2	1.000	167148	21073	58	145	363	0.83(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.733	21.733	0	1.001	162087	21343	27	67	790		
321.8936	21.741	21.733	1	1.001	198616	25745	22	55	1170	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.684						27	67			
321.8936	20.684						22	55			
A F1 PeCDFs											RQ
339.8597	24.399	24.634	-14	1.000	637	92	7	17	13		
341.8567	24.408	24.634	-14	1.000	280	114	9	22	13	2.28(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.701	28.173	-148	1.000	1007	221	33	82	7		
341.8567	25.726	28.173	-147	1.000	618	105	25	62	4	1.63(1.32-1.78)	
339.8597	26.652	28.173	-91	1.000	1282	272	33	82	8		
341.8567	26.719	28.173	-87	1.000	1199	139	25	62	6	1.07(1.32-1.78)	
339.8597	27.233	28.173	-56	1.000	2704	359	33	82	11		
341.8567	27.266	28.173	-54	1.000	1654	276	25	62	11	1.63(1.32-1.78)	
339.8597	27.847	28.173	-20	1.000	2865	363	33	82	11		
341.8567	27.830	28.173	-21	1.000	1857	264	25	62	11	1.54(1.32-1.78)	
339.8597	30.801	28.173	157	1.000	228677	27894	33	82	845		
341.8567	30.801	28.173	157	1.000	146849	18011	25	62	720	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	30.624	28.478	129	1.000	173911	21451	25	62	858		
357.8516	30.624	28.478	129	1.000	110691	13444	22	55	611	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	35.097	35.009	5	1.000	3881	661	70	175	9		
375.8178	35.097	35.009	5	1.000	3878	670	63	157	11	1.00(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.316	35.375	-4	1.000	2148	405	37	92	11		
391.8127	35.333	35.375	-3	1.000	2394	461	29	72	16	0.90(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.618	38.618	0	1.000	210762	52957	76	190	697		
409.7788	38.610	38.618	-1	1.000	206480	51508	66	165	780	1.02(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872	39.872	0	1.000	203770	54845	76	190	722		
409.7788	39.864	39.872	-1	1.000	191406	52568	66	165	796	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.245						76	190			
409.7788	39.245						66	165			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.561	39.561	0	1.000	162373	45421	47	117	966		
425.7737	39.561	39.561	0	1.000	153110	43013	51	127	843	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.241						47	117			
425.7737	39.241						51	127			
1,3,6,8-TCDF											
303.9016	16.128	16.128	0		256933	49037	54	135	908		
305.8987	16.128	16.128	0		375918	69992	87	217	805	0.68(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.726	17.726	0		153088	25266	27	67	936		
321.8936	17.734	17.726	1		192856	31475	22	55	1431	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.408	20.408	0		415746	51351	54	135	951		
305.8987	20.399	20.408	-1		612484	78065	87	217	897	0.68(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7-TCDD											
319.8965	21.518	21.518	0		132540	17783	27	67	659		
321.8936	21.518	21.518	0		173968	25305	22	55	1150	0.76(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.939	21.939	0		182383	22694	54	135	420		
305.8987	21.931	21.939	-1		261297	32313	87	217	371	0.70(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.008	22.008	0		163777	22768	27	67	843		
321.8936	22.017	22.008	1		199880	26605	22	55	1209	0.82(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.574	23.574	0		240977	39036	54	135	723		
305.8987	23.574	23.574	0		329803	55021	87	217	632	0.73(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.643	23.643	0		174001	29575	27	67	1095		
1,3,4,6,8-PeCDF											
339.8597	24.004	24.004	0		293455	51890	7	17	7413		
341.8567	24.012	24.004	1		177329	31853	9	22	3539	1.65(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.038	26.038	0		187015	26181	25	62	1047		
357.8516	26.038	26.038	0		117792	16681	22	55	758	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.776						25	62			
357.8516	30.776						22	55			
1,2,3,8,9-PeCDF											
339.8597	30.944						33	82			
341.8567	30.944						25	62			
1,2,3,4,6,8-HxCDF											
373.8208	33.120	33.120	0		271876	38426	70	175	549		
375.8178	33.111	33.120	-1		220099	29793	63	157	473	1.24(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.205	34.205	0		188918	32295	37	92	873		
391.8127	34.197	34.205	-1		148415	25256	29	72	871	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.545	36.545	0		183615	42121	37	92	1138		
391.8127	36.536	36.545	-1		144352	33027	29	72	1139	1.27(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.898	36.898	0		262044	59186	70	175	846		
375.8178	36.898	36.898	0		212693	49326	63	157	783	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.921	38.921	0		157870	43353	47	117	922		
425.7737	38.921	38.921	0		150838	40670	51	127	797	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Inject. Date: 20-Aug-2021 02:21:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 16

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	467833	65052

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	467833	65052

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.731	1292	284	2953	608	0.3360	0.44	RQ
18.731	1292	284	1677	368	0.2350		Empc Correction
19.651	3565	599	4345	691	0.6261	0.82	
23.995	3628	632	7371	1071	0.8706	0.49	RQ
23.995	3628	632	4711	820	0.6601		Empc Correction
Signal Totals:							
	8485	1515	10733	1879			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23154	3885				0.58	RQ
	19218	3394					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.833 = (23154 * 40.000) / (467833 * 1.080)
Empc Amount: 1.521 = (19218 * 40.000) / (467833 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

F1 PeCDFs, RT: 24.634

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.399	637	92	280	114		2.28	R
Signal Totals:							
	637	92	280	114			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	917	206				2.28	RQ
	713	290					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount:	0.0 = (917 * 0.0) / (0 * 0.000)
Empc Amount:	0.0 = (713 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.701	1007	221	618	105		1.63	
26.652	1282	272	1199	139		1.07	R
27.233	2704	359	1654	276		1.63	
27.847	2865	363	1857	264		1.54	
30.801	228677	27894	146849	18011		1.56	
Signal Totals:							
	236535	29109	152177	18795			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	388712	47904				1.55	RQ
	388340	47940					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (388712 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (388340 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.624	173911	21451	110691	13444		1.57	
Signal Totals:							
	173911	21451	110691	13444			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	284602	34895				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (284602 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
35.097	3881	661	3878	670		1.00	R
Signal Totals:							
	3881	661	3878	670			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7759	1331				1.00	RQ
	7010	1194					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (7759 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (7010 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.316	2148	405	2394	461		0.90	R
Signal Totals:							
	2148	405	2394	461			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4542	866				0.90	RQ
	3880	731					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4542 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (3880 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

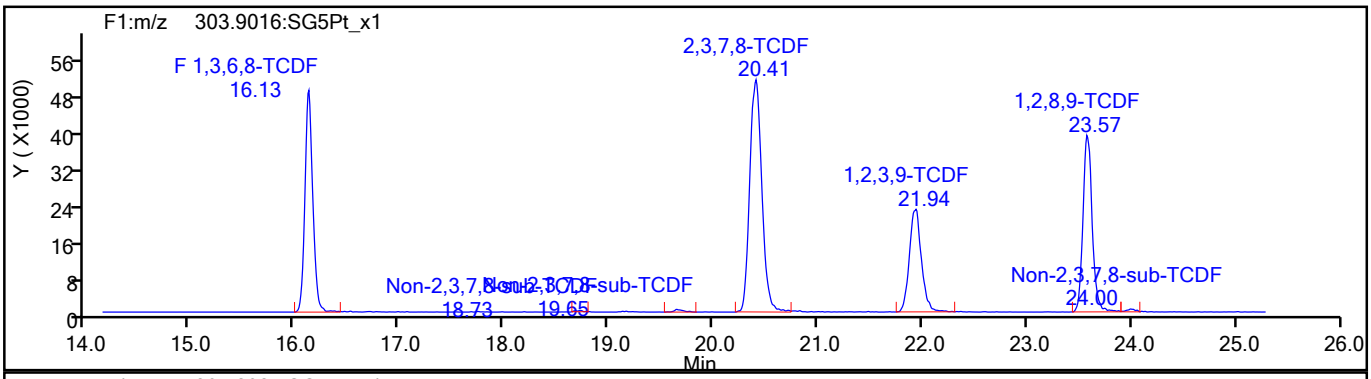

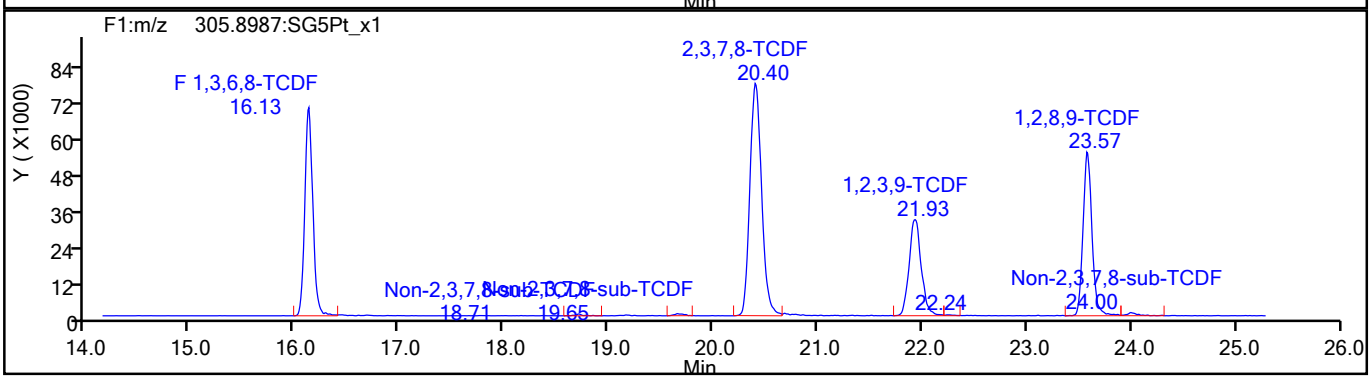

TCDF Standards

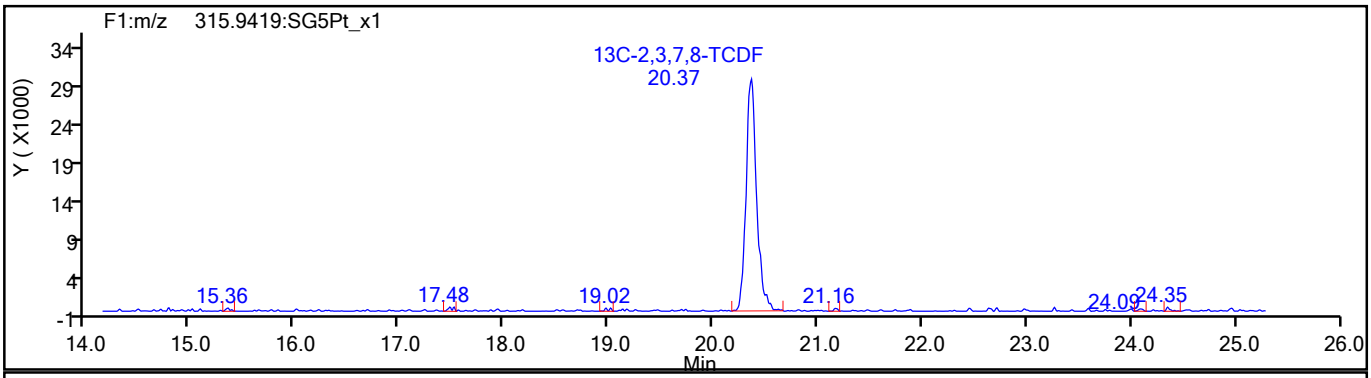

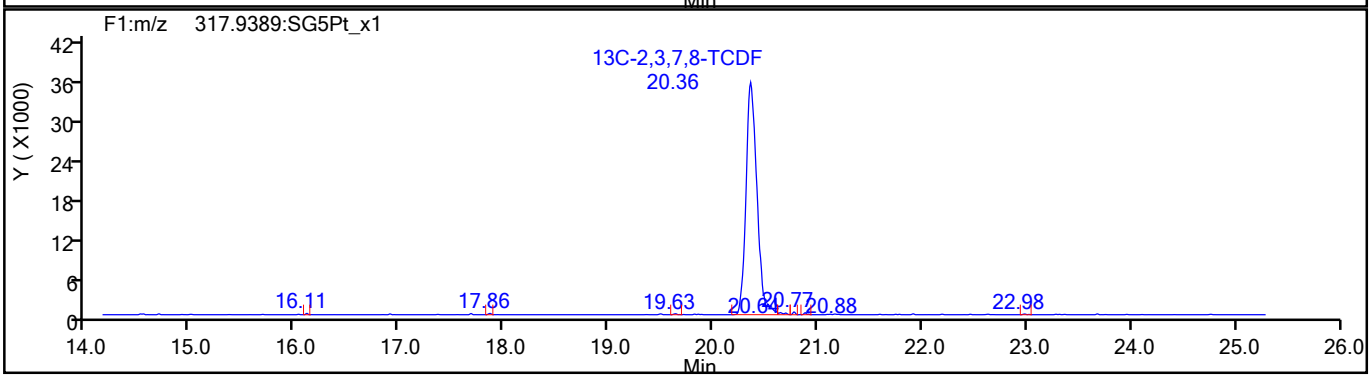

777359

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

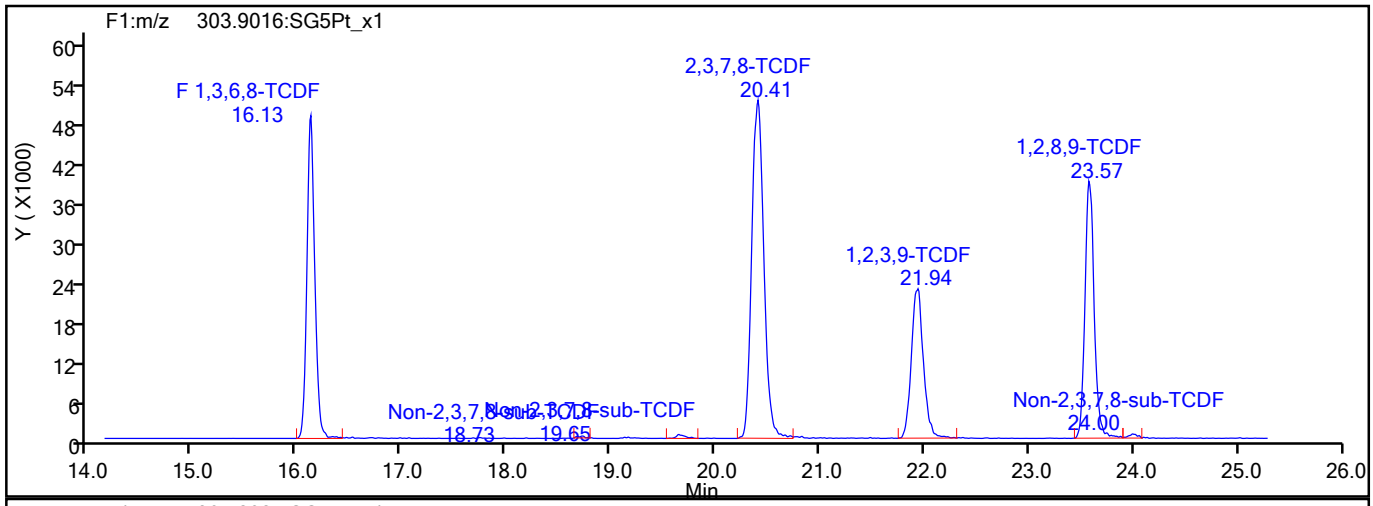

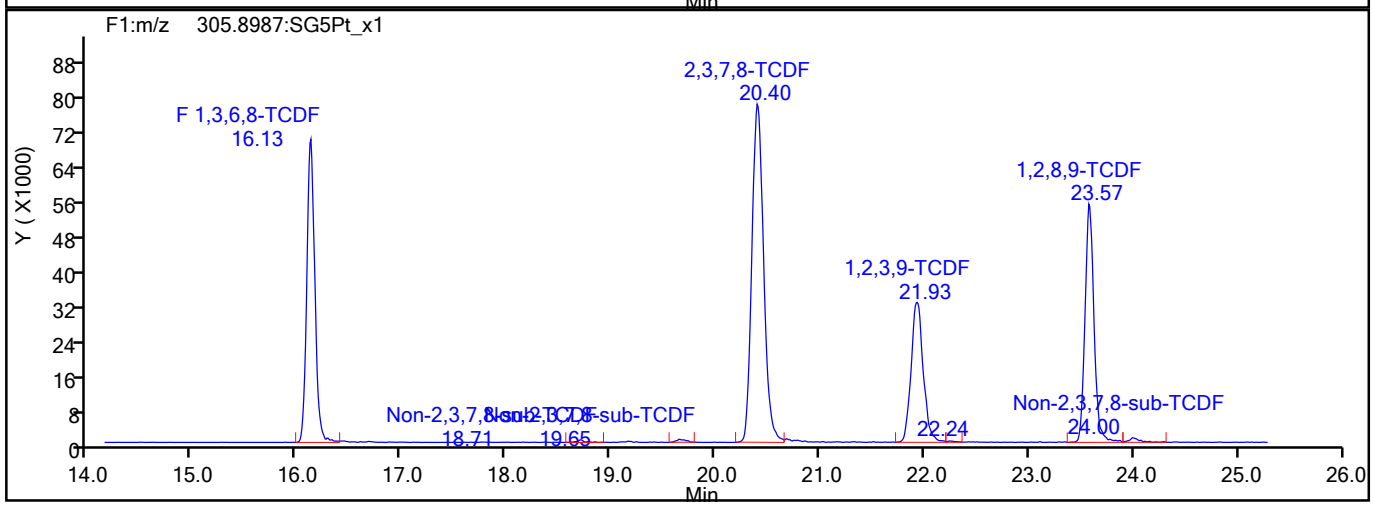

TCDF Interference Mass

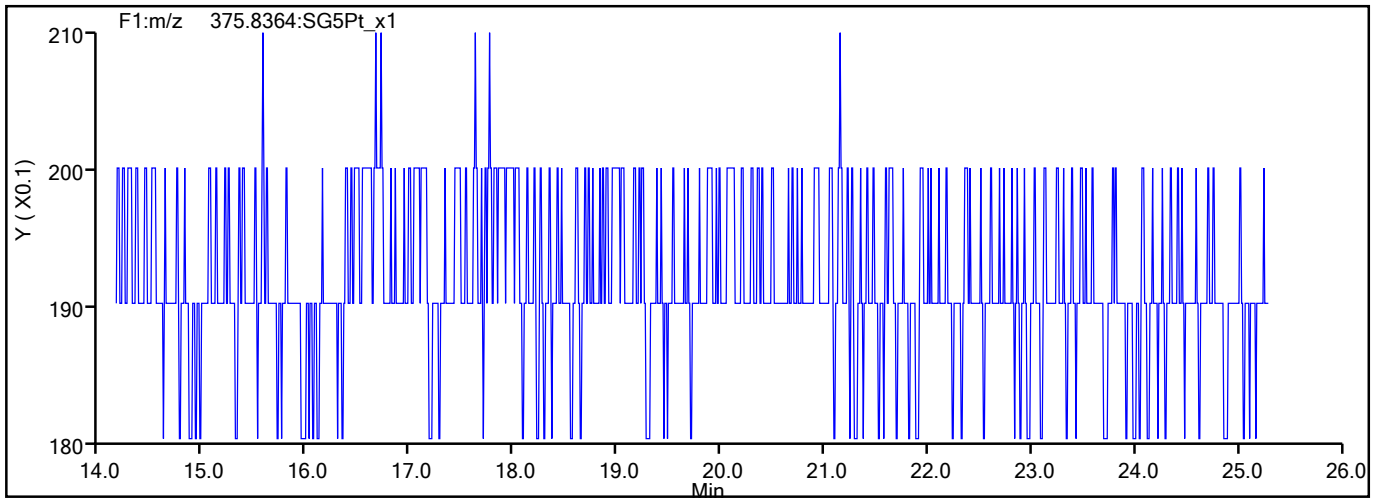

777360

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

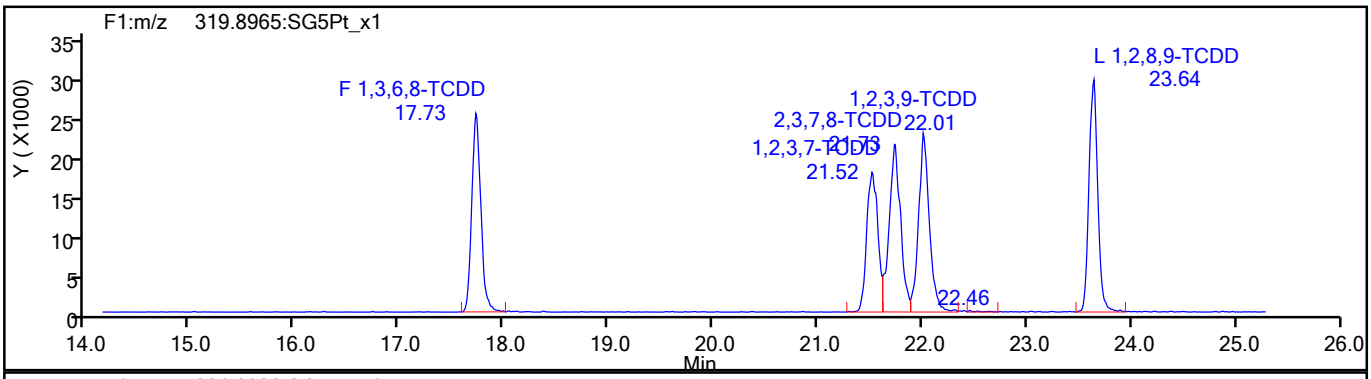

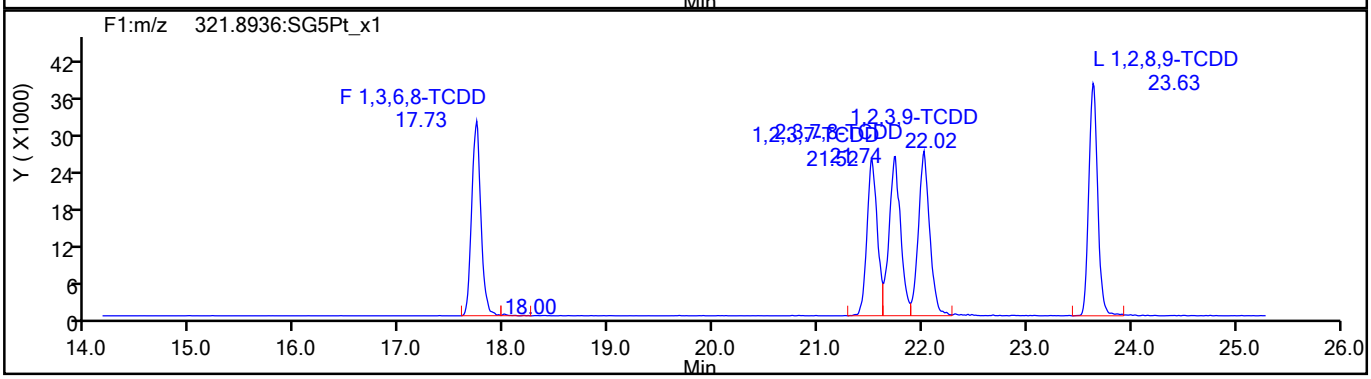

TCDD Standards

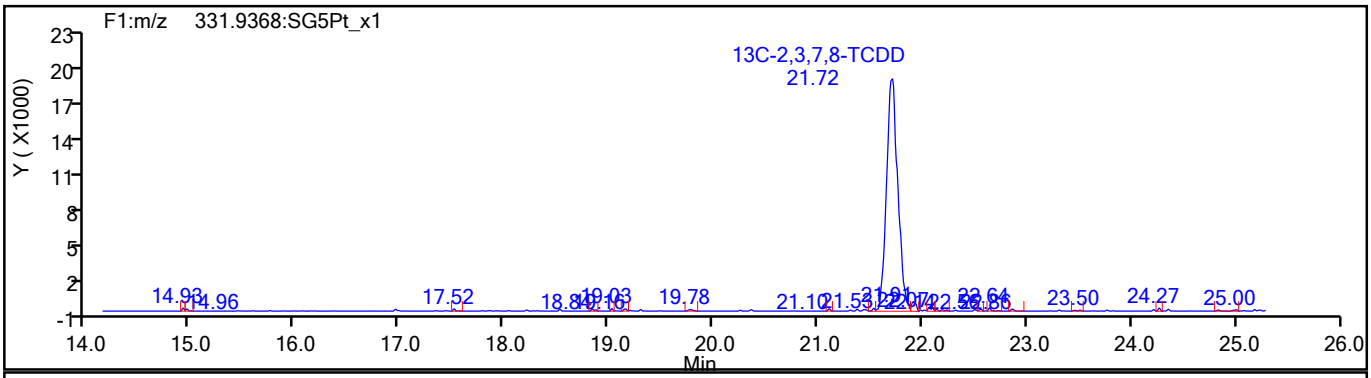

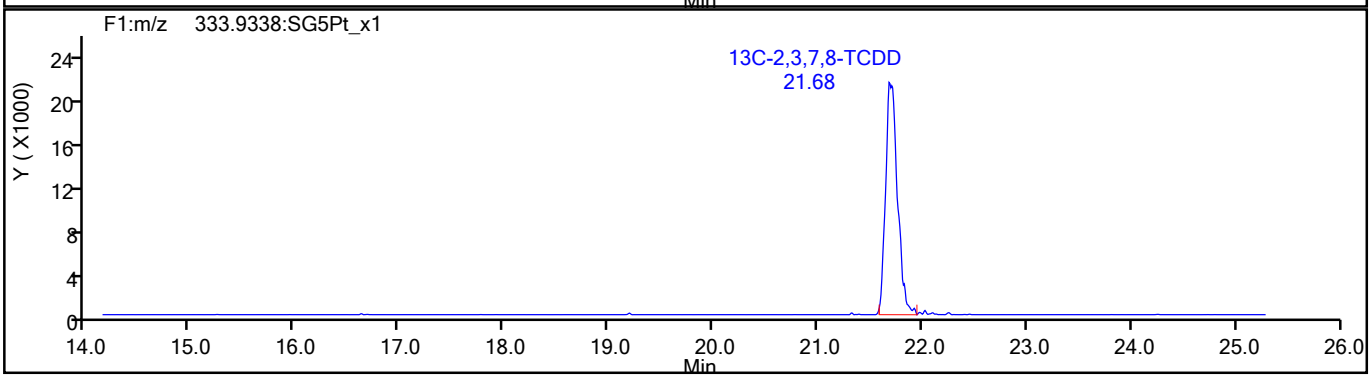

777361

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

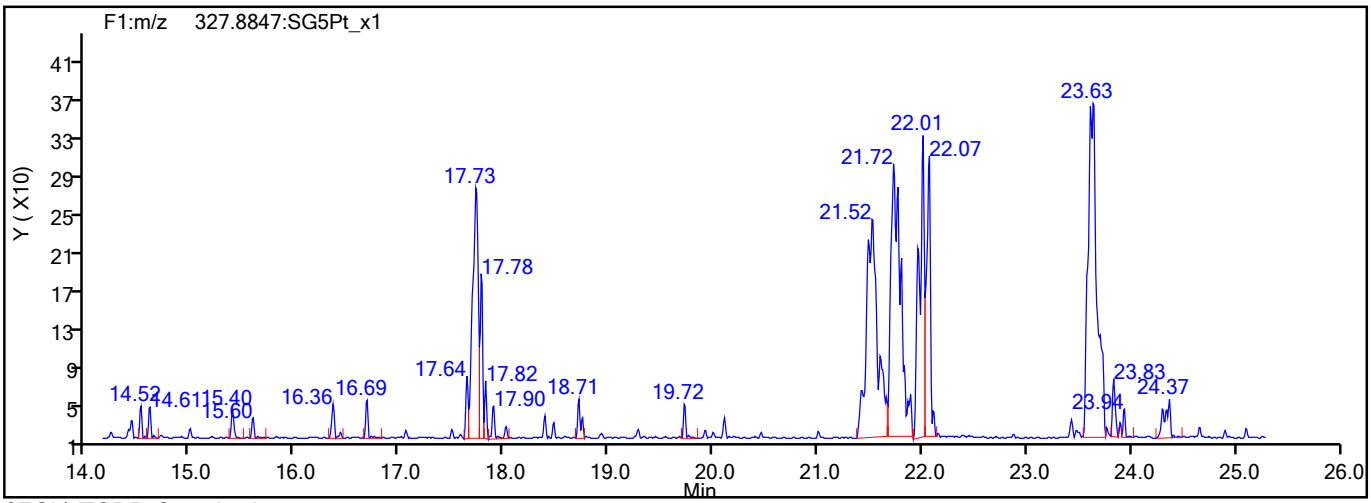

37Cl4-TCDD Standards

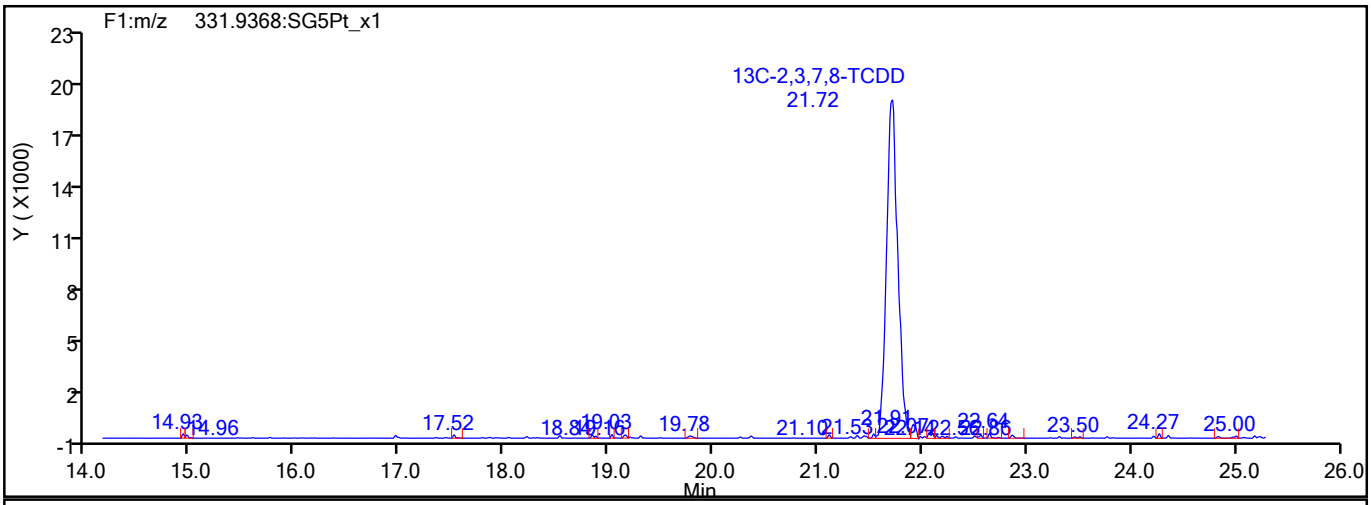

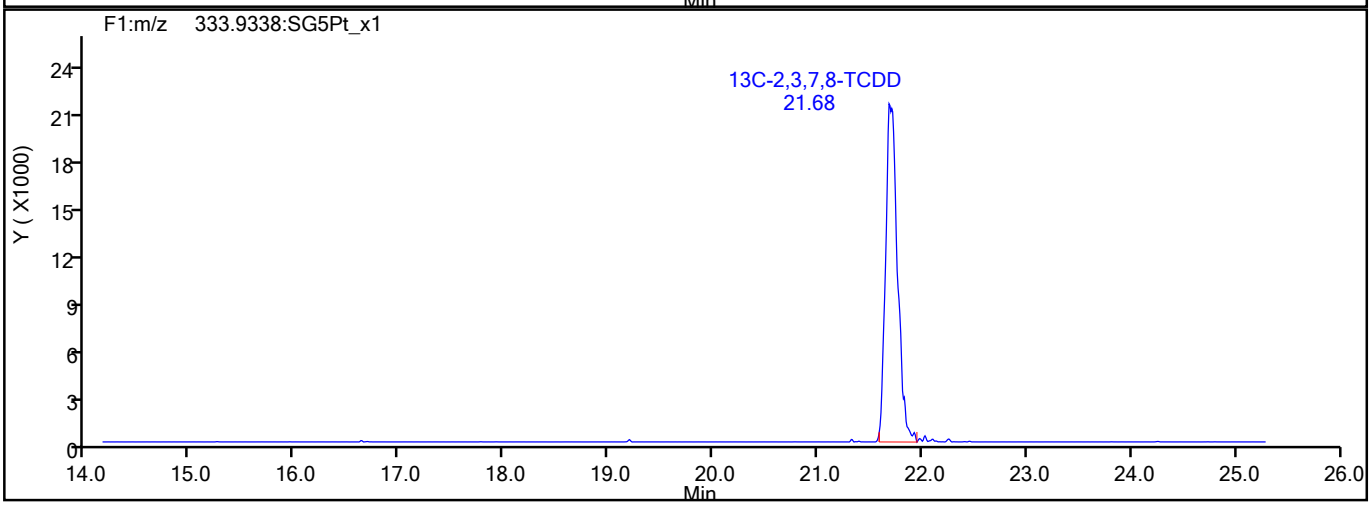

777362

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

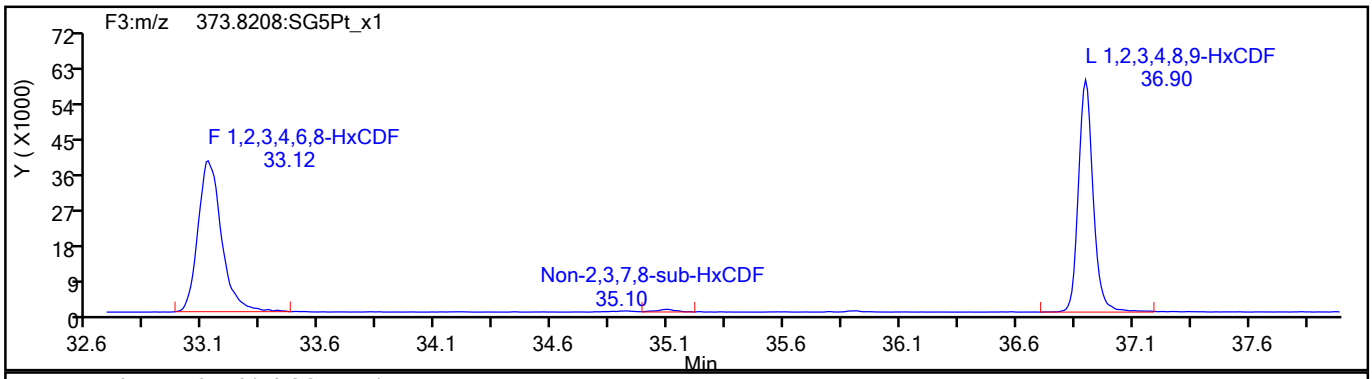

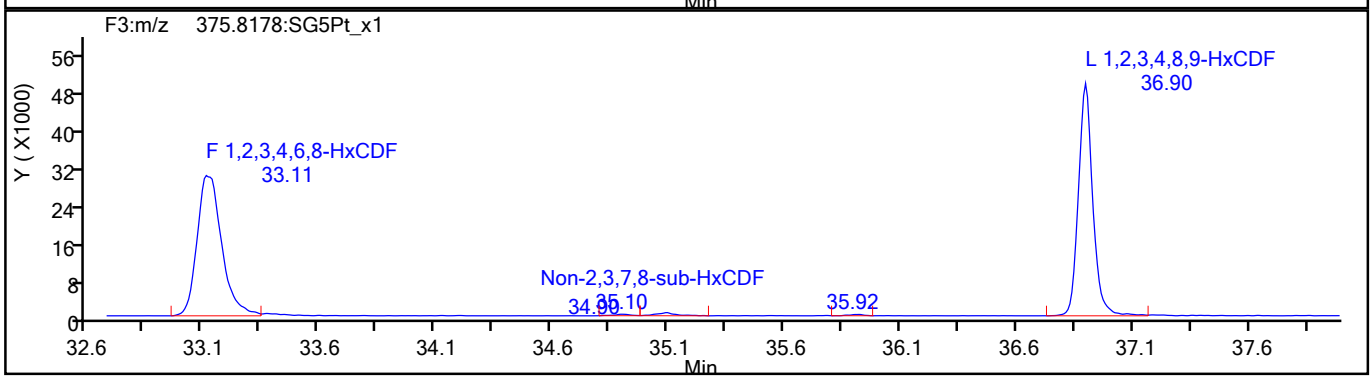

HxCDF Standards

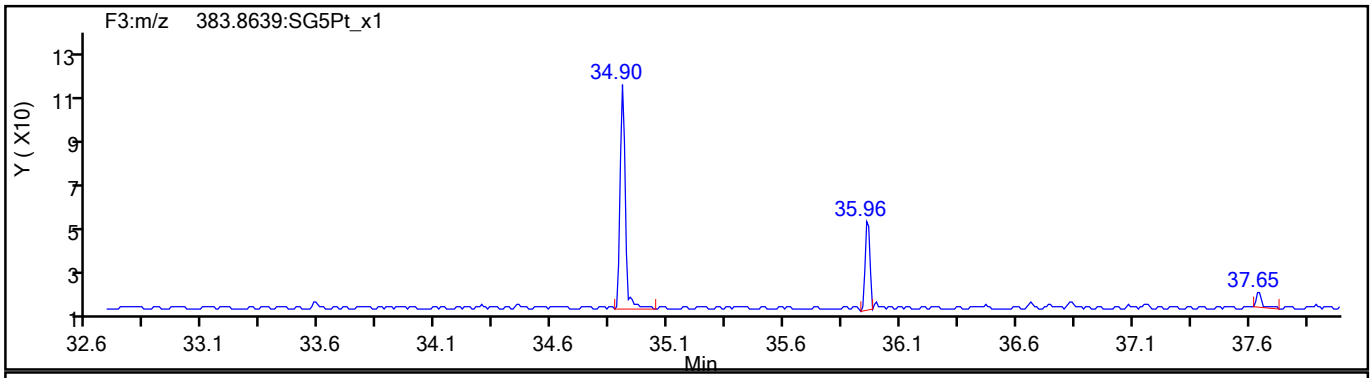

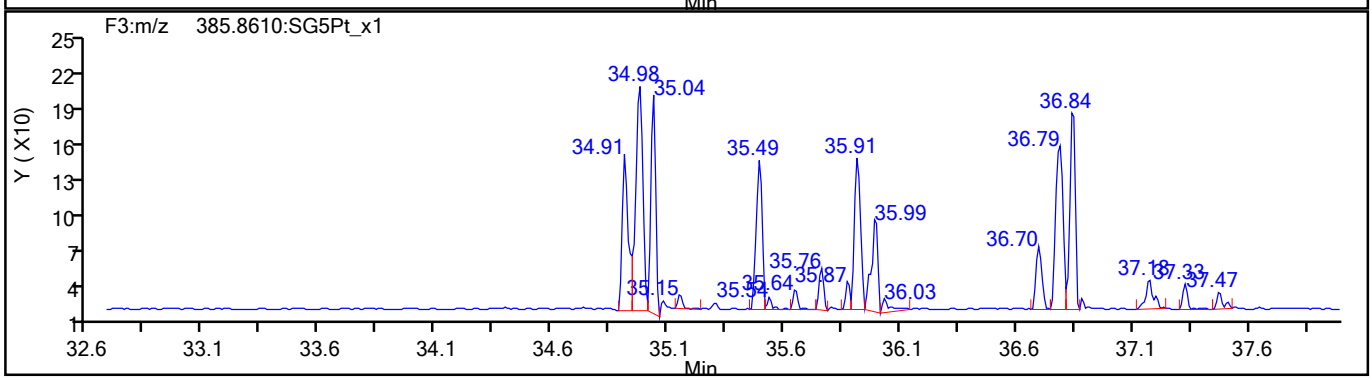

777363

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

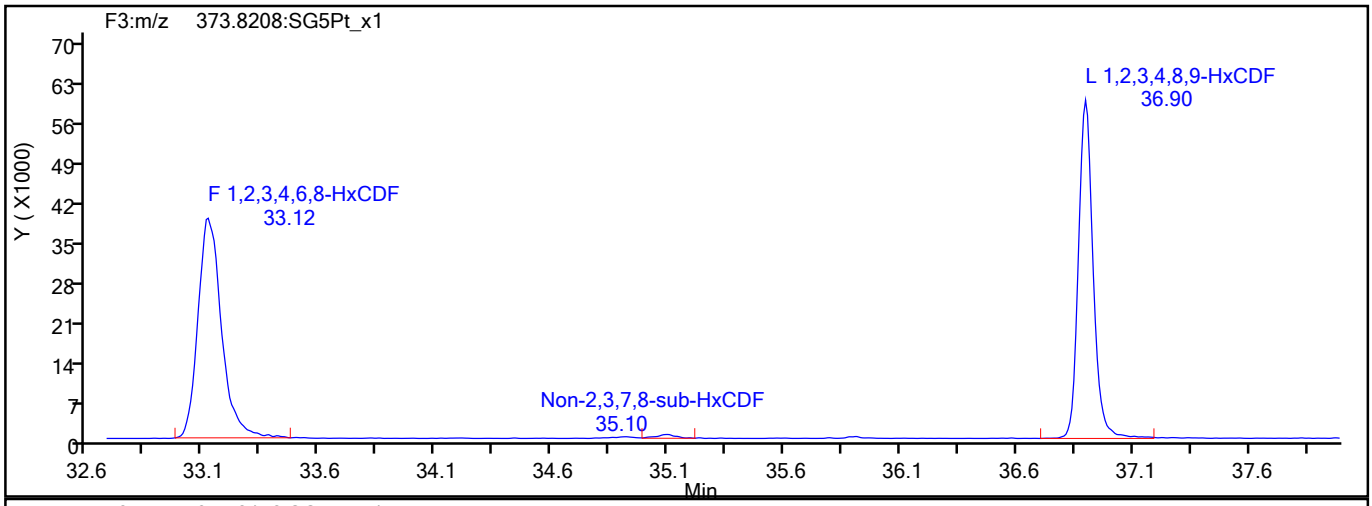

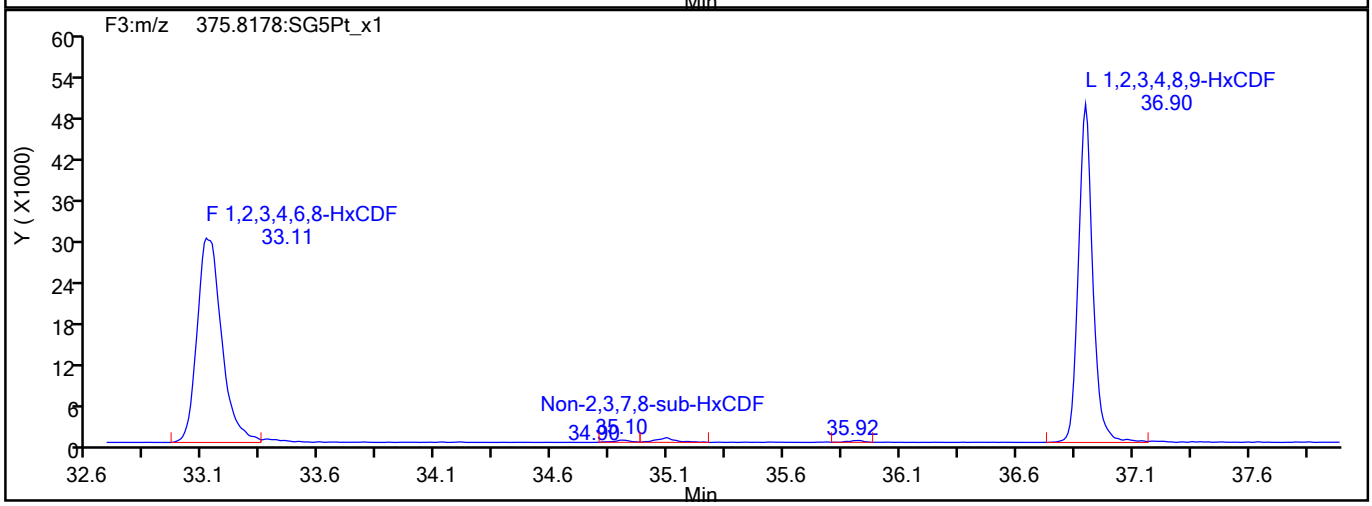

HxCDF Interference Mass

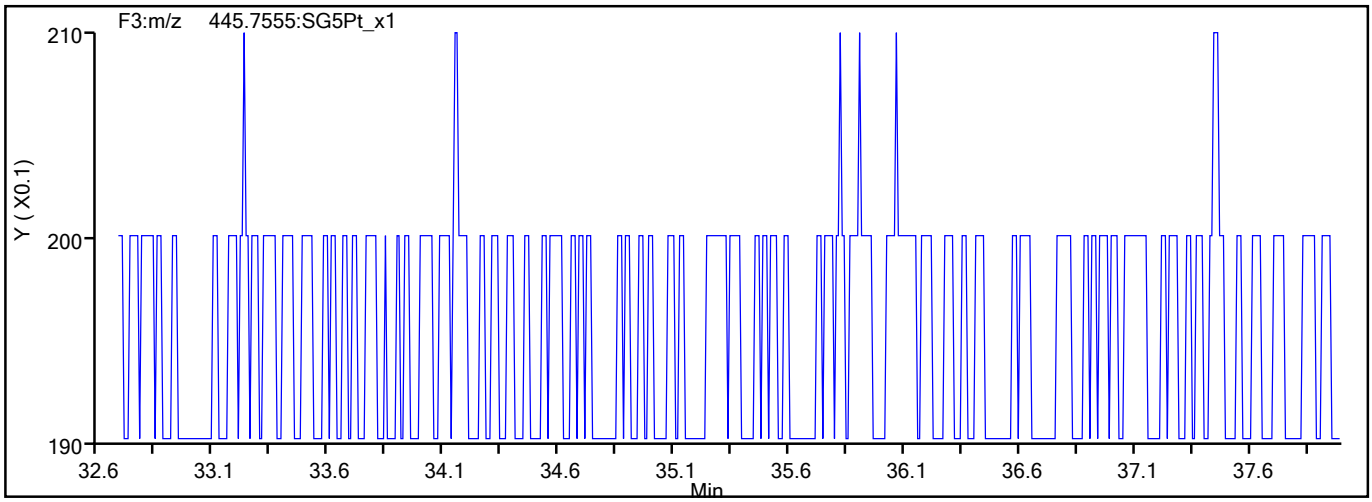

777364

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

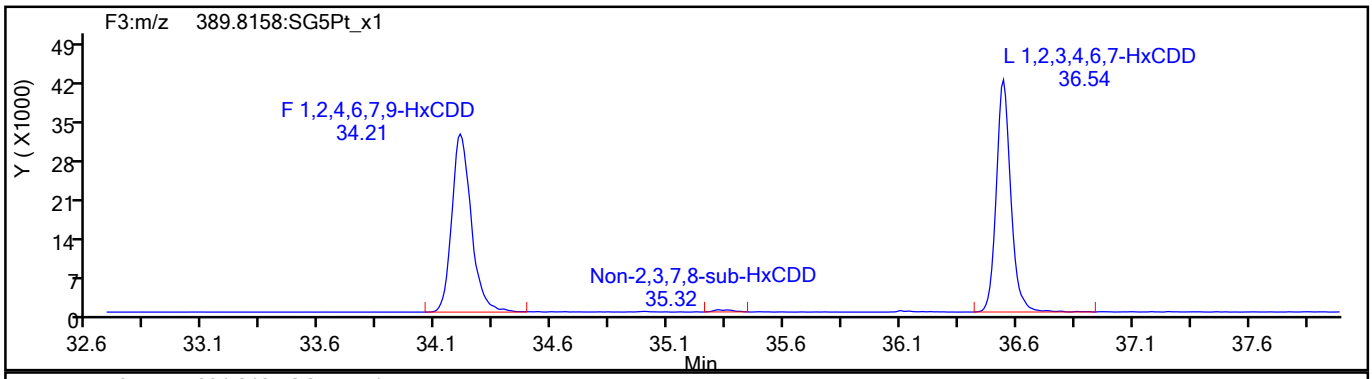

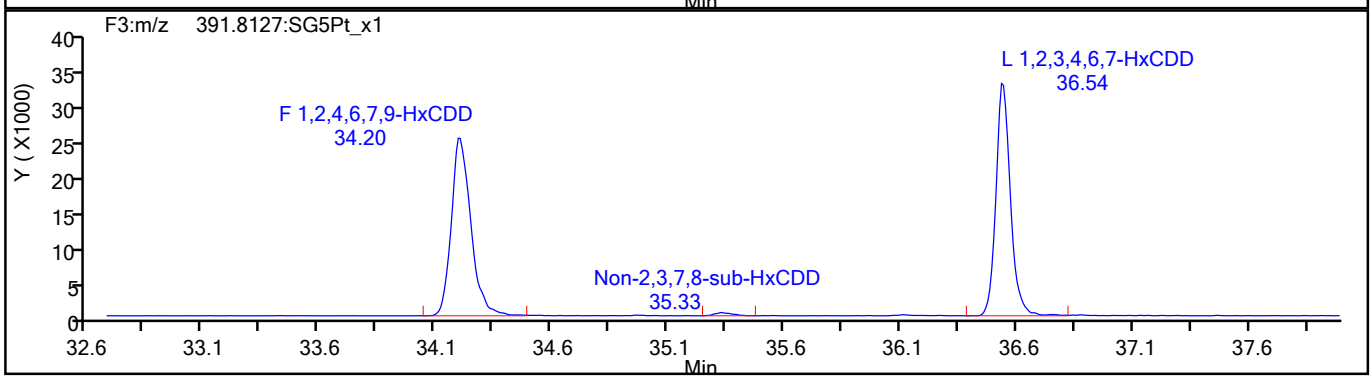

HxCDD Standards

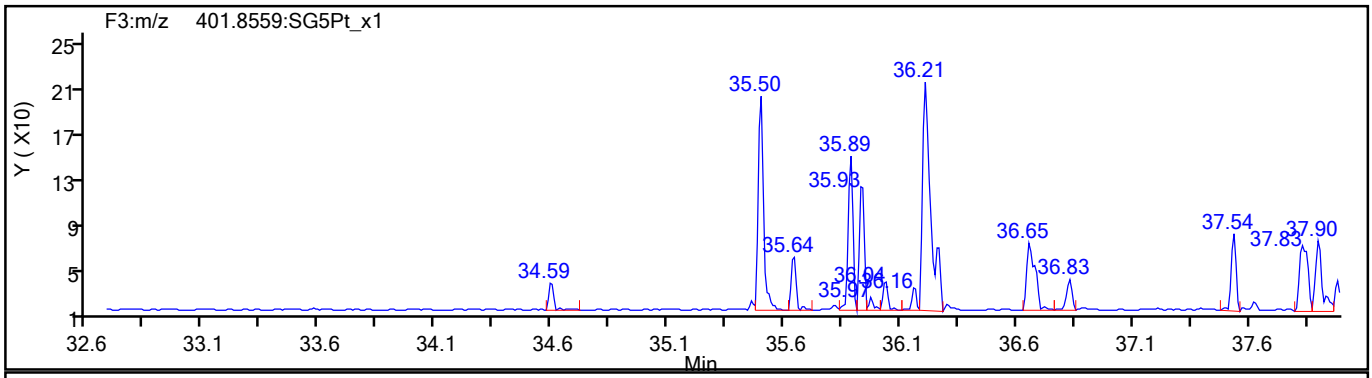

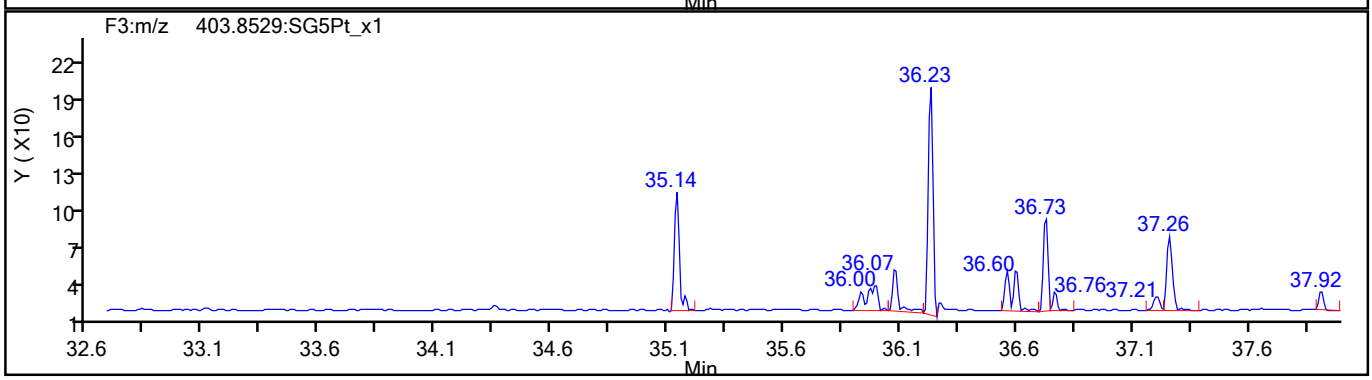

777365

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

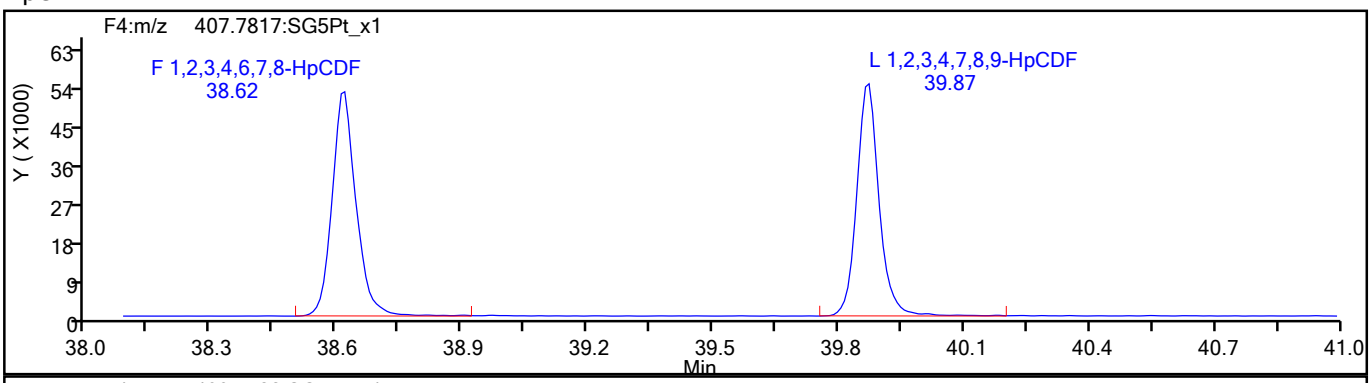

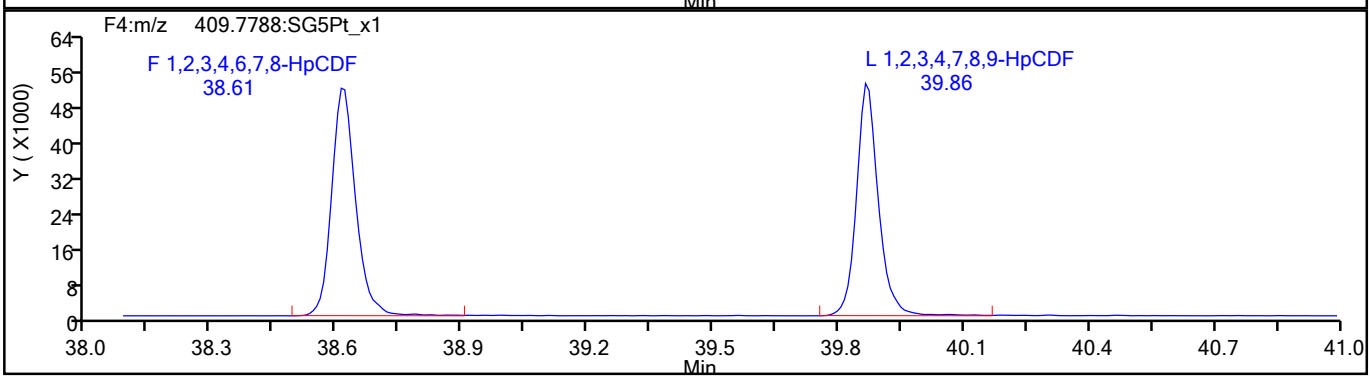

HpCDF Standards

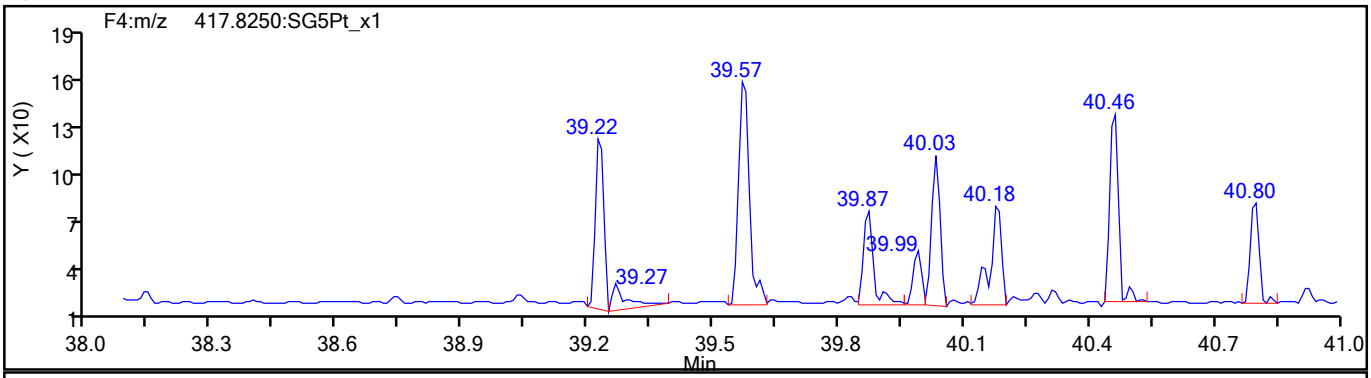

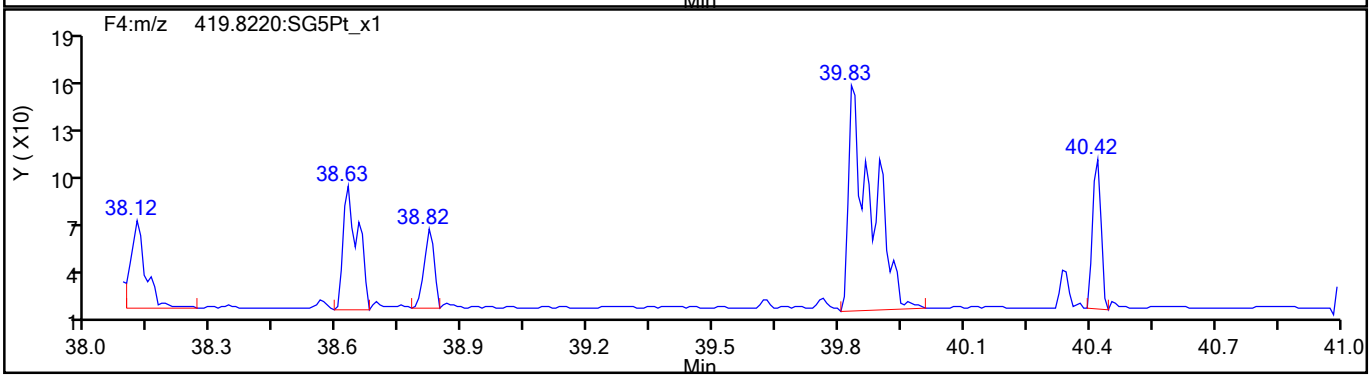

777366

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

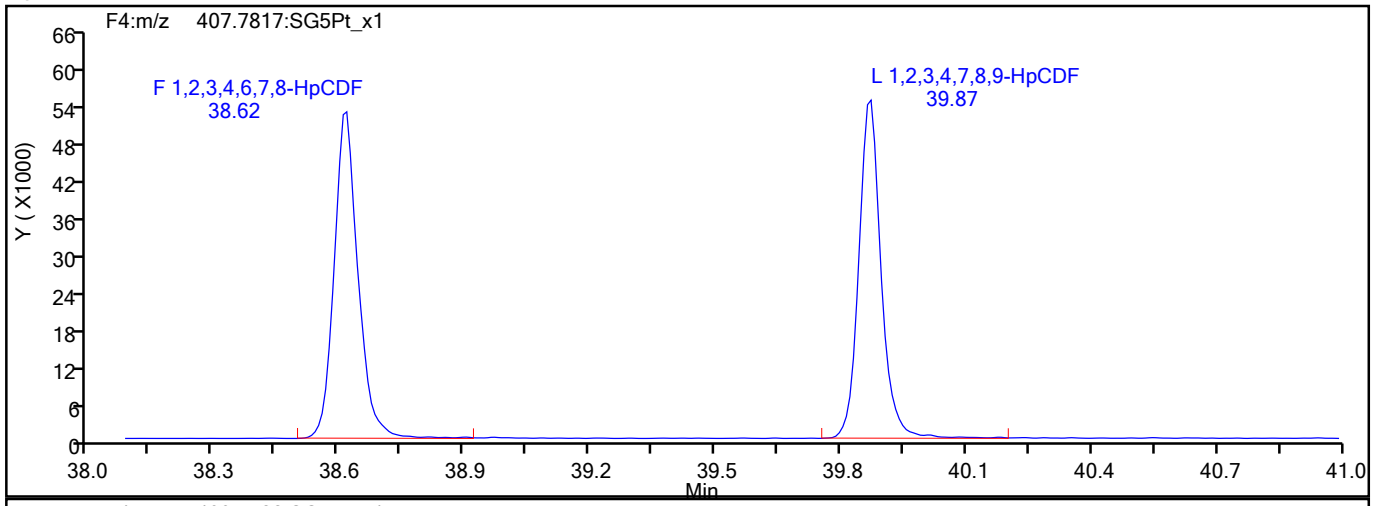

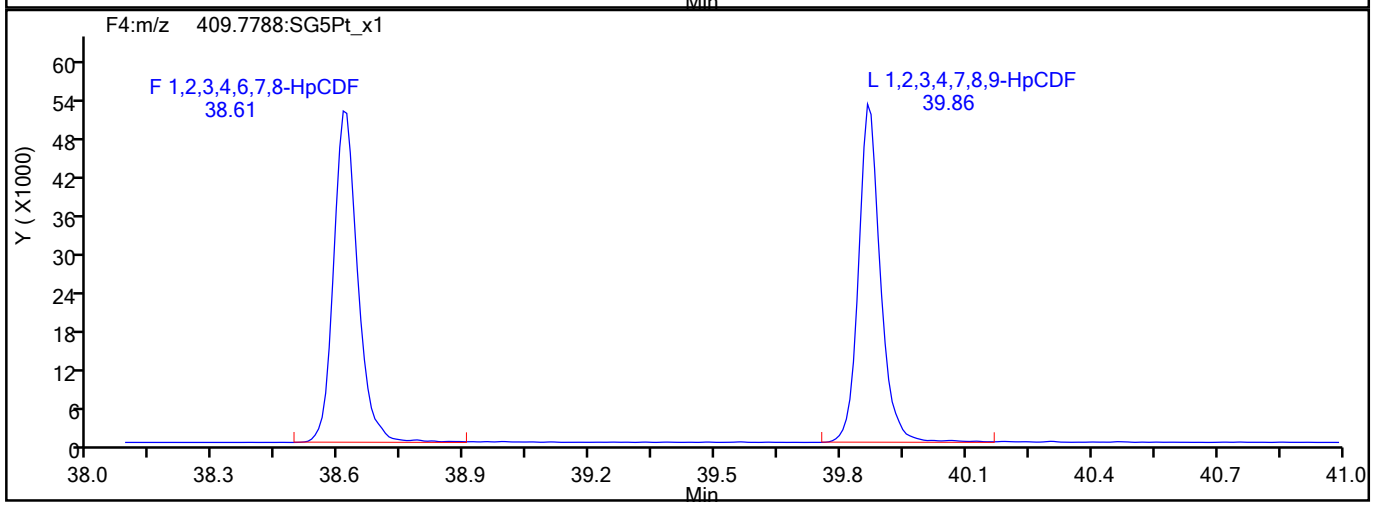

HpCDF Interference Mass

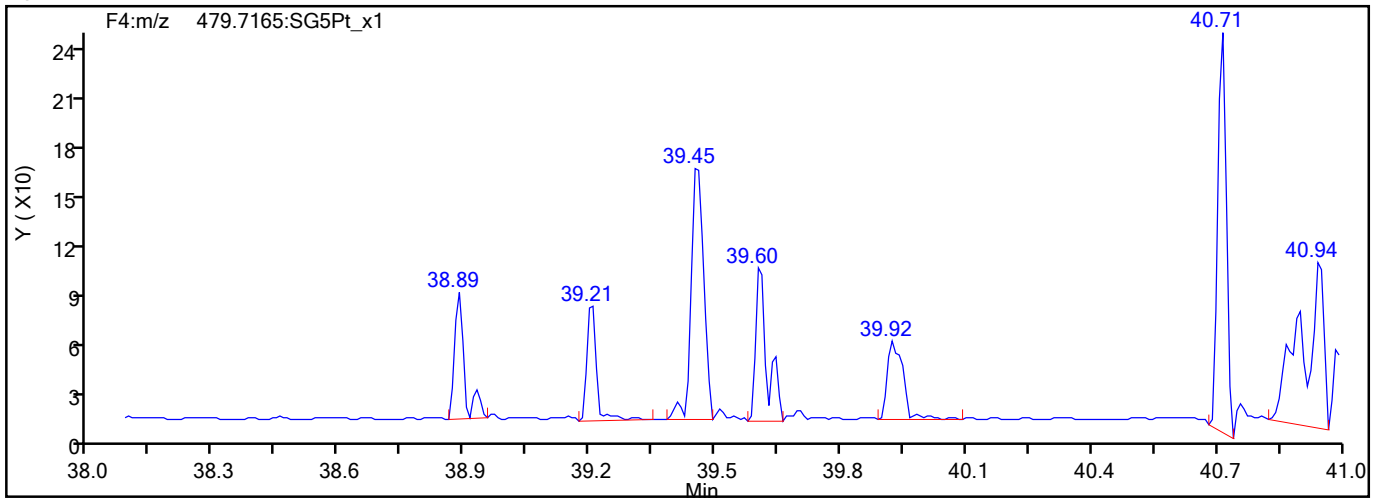

777367

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

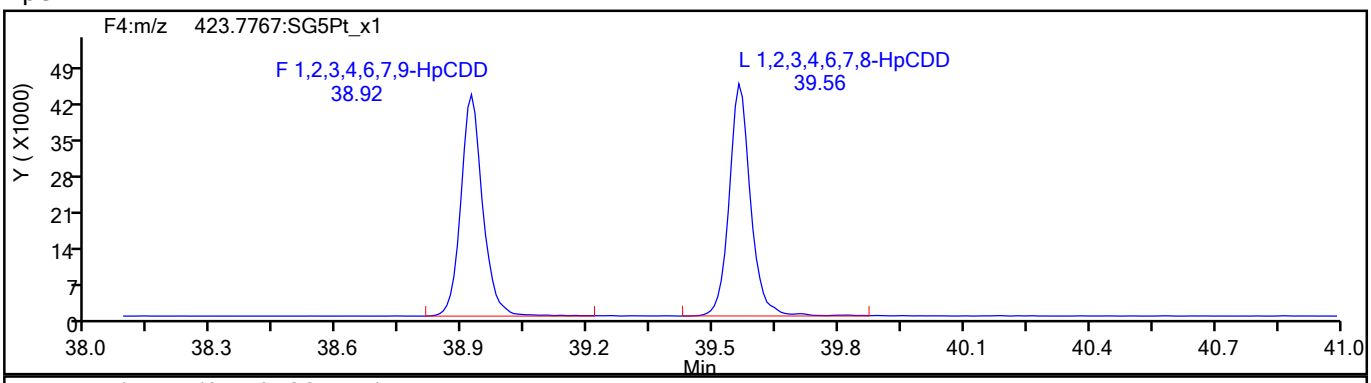

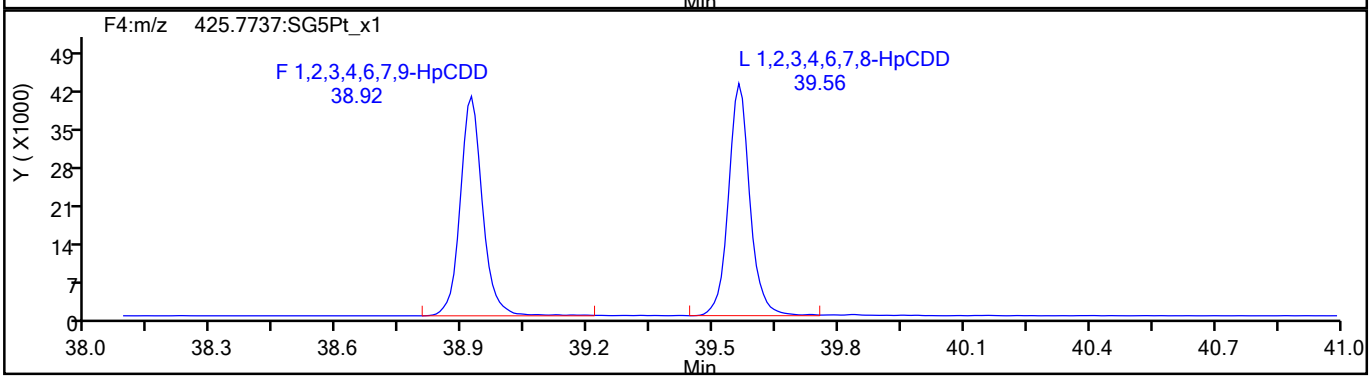

HpCDD Standards

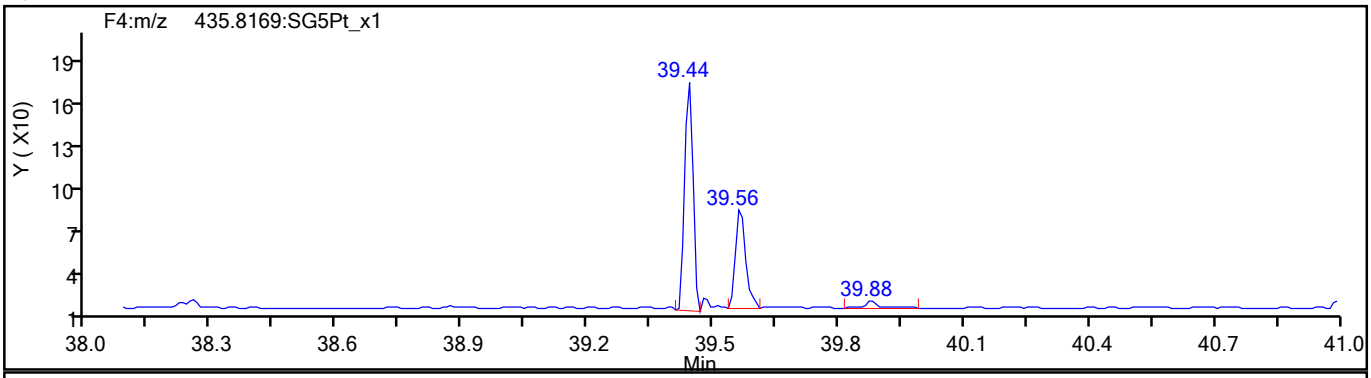

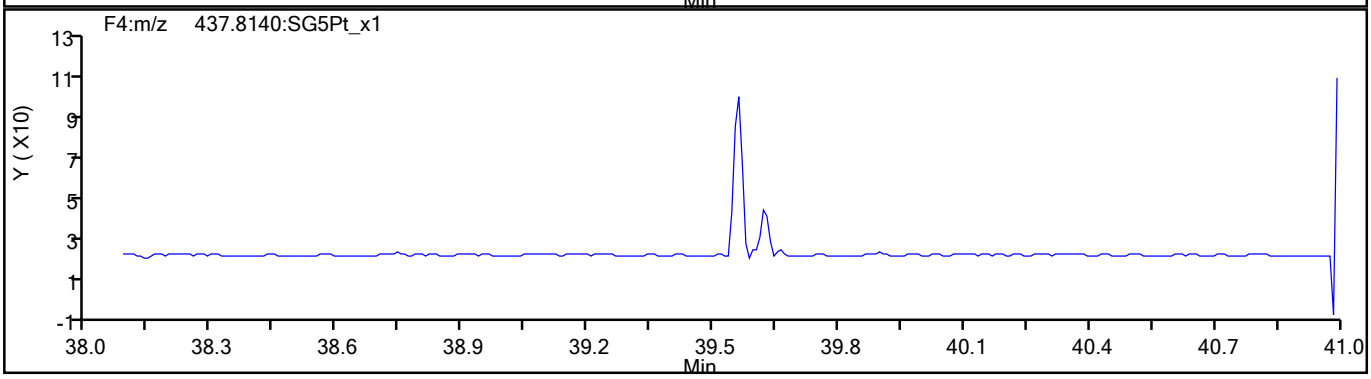

777368

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

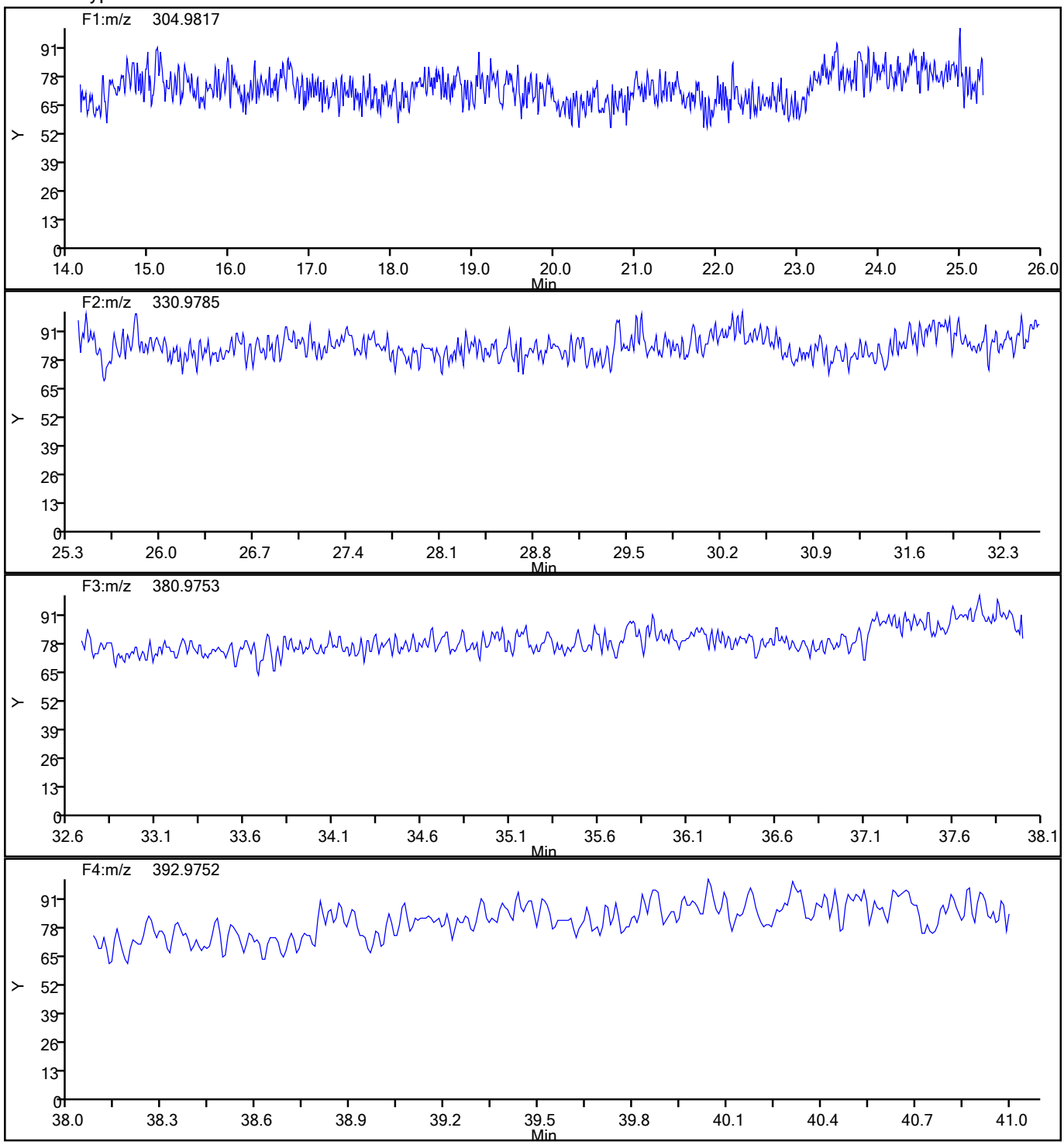

777369

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

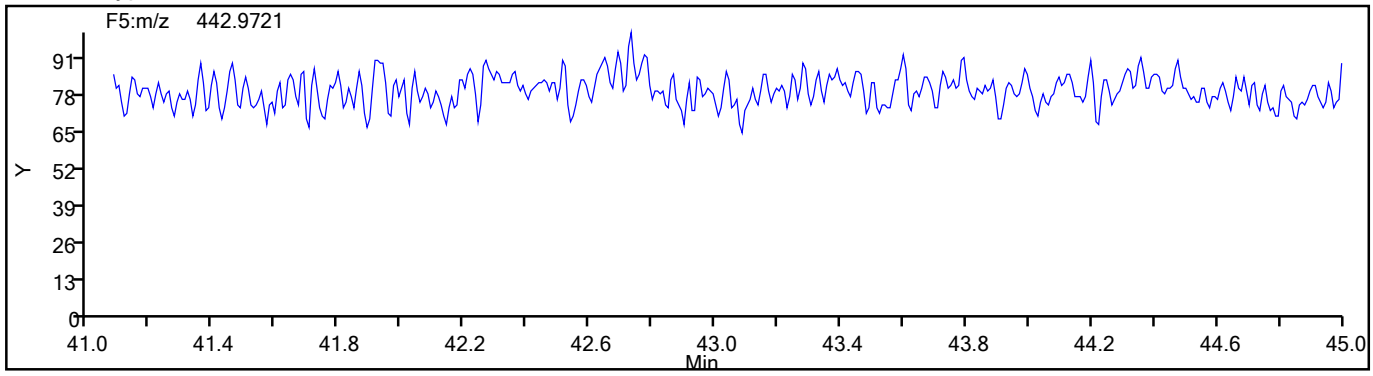

777370

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-513585/1-A
Matrix: Sediment
Lab File ID: 13AU2110D5_44.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10(g)
Date Analyzed: 08/15/2021 02:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.138	J	1.0	0.051
51207-31-9	2,3,7,8-TCDF	0.212	J	1.0	0.058
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.048
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.036
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.037
39227-28-6	1,2,3,4,7,8-HxCDD	0.154	J	5.0	0.031
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.032
19408-74-3	1,2,3,7,8,9-HxCDD	0.0515	J	5.0	0.028
70648-26-9	1,2,3,4,7,8-HxCDF	0.0458	J	5.0	0.030
57117-44-9	1,2,3,6,7,8-HxCDF	0.0416	J	5.0	0.031
72918-21-9	1,2,3,7,8,9-HxCDF	0.114	J	5.0	0.025
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.024
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.176	J	5.0	0.025
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.132	J	5.0	0.030
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.0991	J	5.0	0.038
3268-87-9	OCDD	1.05	J	10	0.049
39001-02-0	OCDF	0.316	J	10	0.035
41903-57-5	Total TCDD	0.138	J	1.0	0.051
30402-14-3	Total TCDF	0.212	J	1.0	0.058
36088-22-9	Total PeCDD	ND		5.0	0.048
30402-15-4	Total PeCDF	ND		5.0	0.037
34465-46-8	Total HxCDD	0.205	J	5.0	0.030
55684-94-1	Total HxCDF	0.202	J	5.0	0.028
37871-00-4	Total HpCDD	0.300	J	5.0	0.025
38998-75-3	Total HpCDF	0.231	J	5.0	0.034

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513585/1-A

Matrix: Sediment Lab File ID: 13AU2110D5_44.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:22

Sample wt/vol: 10(g) Date Analyzed: 08/15/2021 02:06

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 516847 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		25-164
89059-46-1	13C-2,3,7,8-TCDF	53		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	63		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	57		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	63		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	57		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	52		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	52		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	52		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	61		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	59		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	65		26-138
114423-97-1	13C-OCDD	72		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d
Lims ID: MB 320-513585/1-A
Client ID:
Sample Type: MB
Inject. Date: 15-Aug-2021 02:06:51 ALS Bottle#: 43 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513585/1-a mb 320-513585/1-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:47:55 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:38:07

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	54502210	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	46944204	0.76	1.6249	53.0	53.0	0.0869	0.0869	53.01	
2,3,7,8-TCDF	17.371	50882	0.77	1.0239	0.1184	0.1059	0.0288	0.0288		RQM
A Non-2,3,7,8-sub-TCDF	17.046						0.0288	0.0288		
S Total TCDF					0.1184	0.1059	0.0288	0.0288		RQ
D 13C-2,3,7,8-TCDD	18.051	27811584	0.79	0.8993	56.7	56.7	0.1350	0.1350	56.74	
2,3,7,8-TCDD	18.081	24019	0.77	1.2541	0.1142	0.0689	0.0253	0.0253		RQ
$ 37Cl4-2,3,7,8-TCDD	18.066	17375526		1.1071	28.8	28.8	0.0245	0.0245	71.99	
A Non-2,3,7,8-sub-TCDD	17.500						0.0253	0.0253		
S Total TCDD					0.1142	0.0689	0.0253	0.0253		RQ
D 13C-1,2,3,7,8-PeCDF	22.367	37424304	1.58	1.2101	56.7	56.7	0.1635	0.1635	56.75	
1,2,3,7,8-PeCDF	22.394						0.0182	0.0182		
D 13C-2,3,4,7,8-PeCDF	23.717	42626302	1.57	1.2395	63.1	63.1	0.1596	0.1596	63.10	
2,3,4,7,8-PeCDF	23.744						0.0184	0.0184		RQU
A F1 PeCDFs	20.093						0.0169	0.0169		
A Non-2,3,7,8-sub-PeCDF	23.241						0.0183	0.0183		U
S Total PeCDF							0.0184	0.0184		
D 13C-1,2,3,7,8-PeCDD	24.440	26276472	1.58	0.7612	63.3	63.3	0.0706	0.0706	63.33	
1,2,3,7,8-PeCDD	24.453						0.0238	0.0238		
A Non-2,3,7,8-sub-PeCDD	23.349						0.0238	0.0238		
S Total PeCDD							0.0238	0.0238		
D 13C-1,2,3,4,7,8-HxCDF	30.503	38733505	0.51	1.0837	56.6	56.6	0.2576	0.2576	56.58	
1,2,3,4,7,8-HxCDF	30.543	9625	1.26	1.0851	0.0229	0.0229	0.0152	0.0152		
D 13C-1,2,3,6,7,8-HxCDF	30.689	36862394	0.53	1.1279	51.7	51.7	0.2475	0.2475	51.74	
1,2,3,6,7,8-HxCDF	30.729	8626	1.24	1.1260	0.0331	0.0208	0.0155	0.0155		RQ
D 13C-2,3,4,6,7,8-HxCDF	31.514	34629986	0.51	1.0637	51.5	51.5	0.2624	0.2624	51.54	
2,3,4,6,7,8-HxCDF	31.514						0.0120	0.0120		
D 13C-1,2,3,7,8,9-HxCDF	32.326	31730219	0.51	0.9676	51.9	51.9	0.2885	0.2885	51.92	
1,2,3,7,8,9-HxCDF	32.340	21139	1.19	1.1664	0.0571	0.0571	0.0125	0.0125		M
A Non-2,3,7,8-sub-HxCDF	30.197						0.0136	0.0136		
S Total HxCDF					0.1131	0.1008	0.0138	0.0138		RQ

Report Date: 18-Aug-2021 10:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.140	63167532	1.22	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	26847442	1.24	0.7334	57.9	57.9	0.3037	0.3037	57.95	
1,2,3,4,7,8-HxCDD	31.714	21985	1.24	1.0640	0.0914	0.0770	0.0153	0.0153		RQM
D 13C-1,2,3,6,7,8-HxCDD	31.807	30890428	1.24	0.8802	55.6	55.6	0.2531	0.2531	55.56	
1,2,3,6,7,8-HxCDD	31.714						0.0158	0.0158		RQMU
1,2,3,7,8,9-HxCDD	32.153	8426	1.24	1.1325	0.0374	0.0258	0.0141	0.0141		RQM
A Non-2,3,7,8-sub-HxCDD	30.882						0.0150	0.0150		U
S Total HxCDD					0.1289	0.1027	0.0151	0.0151		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	28664304	0.44	0.7730	58.7	58.7	0.7062	0.7062	58.70	
1,2,3,4,6,7,8-HpCDF	33.778	27216	1.19	1.4413	0.0659	0.0659	0.0152	0.0152		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	28802781	0.43	0.7008	65.1	65.1	0.7789	0.7789	65.06	
1,2,3,4,7,8,9-HpCDF	34.860	18795	1.15	1.3174	0.0495	0.0495	0.0191	0.0191		M
A Non-2,3,7,8-sub-HpCDF	34.319						0.0170	0.0170		
S Total HpCDF					0.1154	0.1154	0.0172	0.0172		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	25079736	0.99	0.6472	61.3	61.3	0.3044	0.3044	61.34	
1,2,3,4,6,7,8-HpCDD	34.568	24141	1.04	1.0943	0.1003	0.0880	0.0125	0.0125		RQM
A Non-2,3,7,8-sub-HpCDD	34.301	16974	1.04	1.0943	0.0705	0.0618	0.0125	0.0618		RQM
S Total HpCDD					0.1708	0.1498	0.0125	0.0125		RQ
D 13C-OCDD	36.926	40417921	0.88	0.4472	143.1	143.1	0.1965	0.1965	71.55	
OCDF	37.010	45972	0.89	1.4382	0.1749	0.1582	0.0176	0.0176		RQM
OCDD	36.926	117937	0.92	1.1070	0.5272	0.5272	0.0243	0.0243		M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Report Date: 18-Aug-2021 10:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d
Lims ID: MB 320-513585/1-A
Client ID:
Sample Type: MB
Inject. Date: 15-Aug-2021 02:06:51 ALS Bottle#: 43 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513585/1-a mb 320-513585/1-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:47:55 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:38:07

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		24417241	5884095	3365	8412	1749		
333.9339	17.855	17.855	0		30084969	7240422	3009	7522	2406	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.356	-1	0.971	20211685	4770878	3887	9717	1227		
317.9389	17.341	17.356	-1	0.971	26732519	6213396	3528	8820	1761	0.76(0.65-0.89)	
2,3,7,8-TCDF											RQM
303.9016	17.371	17.371	0	1.002	28143	6702	573	1432	12		M
	Empc Correction				22135	4660	573	1432	8		
305.8987	17.371	17.371	0	1.002	28747	6052	723	1807	8	0.98(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.046						573	1432			
305.8987	17.046						723	1807			
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	12314684	2725802	3365	8412	810		
333.9339	18.051	18.051	0	1.011	15496900	3494801	3009	7522	1161	0.79(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	18.081	18.081	0	1.002	10449	1975	445	1112	4		
321.8936	18.066	18.081	-1	1.001	29374	5795	346	865	17	0.36(0.65-0.89)	
	Empc Correction				13570	2564	346	865	7		
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.081	-1	1.012	17375526	3851308	1422	3555	2708		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.500						445	1112			
321.8936	17.500						346	865			

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	22929872	3780145	6077	15192	622		
353.8970	22.367	22.367	0	1.253	14494432	2373292	4311	10777	551	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.394						186	465			
341.8567	22.394						289	722			
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.328	26055717	3915031	6077	15192	644		
353.8970	23.717	23.703	1	1.328	16570585	2408547	4311	10777	559	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											RQU
339.8597	23.730						186	465			
341.8567	23.730						289	722			
A F1 PeCDFs											
339.8597	20.093						149	372			
341.8567	20.093						290	725			
A Non-2,3,7,8-sub-PeCDF											U
339.8597	23.241						186	465			
341.8567	23.241						289	722			
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.369	16101236	2225135	1492	3730	1491		
369.8919	24.440	24.426	1	1.369	10175236	1407245	1328	3320	1060	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453						206	515			
357.8516	24.453						157	392			
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.349						206	515			
357.8516	23.349						157	392			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	13030966	2316087	6472	16180	358		
385.8610	30.516	30.503	1	0.949	25702539	4645960	11809	29522	393	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.543	30.529	1	1.001	5361	1682	256	640	7		
375.8178	30.529	30.529	0	1.001	4264	859	202	505	4	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	12801163	2253157	6472	16180	348		
385.8610	30.689	30.689	0	0.955	24061231	4312635	11809	29522	365	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQ
373.8208	30.729	30.716	1	1.001	9880	2137	256	640	8		
	Empc Correction				4775	1249	256	640	5		
375.8178	30.729	30.716	1	1.001	3851	1008	202	505	5	2.57(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	11709678	2774845	6472	16180	429		
385.8610	31.514	31.514	0	0.981	22920308	5386277	11809	29522	456	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						256	640			
375.8178	31.528						202	505			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.326	0	1.006	10661271	2676667	6472	16180	414		
385.8610	32.326	32.326	0	1.006	21068948	5165784	11809	29522	437	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.340	32.340	0	1.000	11469	3044	256	640	12		M
375.8178	32.340	32.340	0	1.000	9670	2523	202	505	12	1.19(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						256	640			
375.8178	30.197						202	505			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.140	0		34755658	9018840	8580	21450	1051		
403.8529	32.140	32.140	0		28411874	7355493	6009	15022	1224	1.22(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	14840212	4067399	8580	21450	474		
403.8529	31.701	31.701	0	0.986	12007230	3262253	6009	15022	543	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQM
389.8157	31.714	31.714	0	1.000	16307	4599	282	705	16		M
	Empc Correction				12170	3324	282	705	12		
391.8127	31.714	31.714	0	1.000	9815	2681	194	485	14	1.66(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	17090877	4132793	8580	21450	482		
403.8529	31.807	31.807	0	0.990	13799551	3391267	6009	15022	564	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQMU
389.8157	31.820						282	705			
391.8127	31.820						194	485			
1,2,3,7,8,9-HxCDD											RQM
389.8157	32.153	32.153	0	1.014	8478	2248	282	705	8		M
	Empc Correction				4664	1820	282	705	6		
391.8127	32.140	32.153	-1	1.014	3762	1468	194	485	8	2.25(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											U
389.8157	30.882						282	705			
391.8127	30.882						194	485			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.766	0	1.051	8695946	2853830	10519	26297	271		
419.8220	33.766	33.766	0	1.051	19968358	6346432	25235	63087	251	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.778	33.778	0	1.000	14795	4790	543	1357	9		M
409.7789	33.766	33.778	-1	1.000	12421	3954	263	657	15	1.19(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.084	8690655	2435730	10519	26297	232		
419.8220	34.847	34.847	0	1.084	20112126	5554808	25235	63087	220	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.860	34.860	0	1.000	10052	3115	543	1357	6		M
409.7789	34.847	34.860	-1	1.000	8743	3145	263	657	12	1.15(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						543	1357			
409.7789	34.319						263	657			

Report Date: 18-Aug-2021 10:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.568	-1	1.075	12506130	3600089	6533	16332	551		
437.8140	34.556	34.568	-1	1.075	12573606	3694644	6370	15925	580	0.99(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											RQM
423.7766	34.568	34.580	-1	1.000	15692	4181	215	537	19		M
	Empc Correction				12307	4331	215	537	20		
425.7737	34.568	34.580	-1	1.000	11834	4165	183	457	23	1.33(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											RQM
423.7766	34.021	34.301	-17	0.985	11018	3517	215	537	16		M
	Empc Correction				8653	4204	215	537	20		
425.7737	34.021	34.301	-17	0.985	8321	4043	183	457	22	1.32(0.88-1.20)	M
13C-OCDD											
469.7779	36.926	36.926	0	1.149	18880351	4491368	2785	6962	1613		
471.7750	36.914	36.926	-1	1.149	21537570	5150364	2971	7427	1734	0.88(0.76-1.02)	
OCDF											RQM
441.7428	37.010	37.022	-1	1.002	26520	6598	215	537	31		
	Empc Correction				21648	5527	215	537	26		
443.7399	37.010	37.022	-1	1.002	24324	6211	274	685	23	1.09(0.76-1.02)	M
OCDD											M
457.7377	36.926	36.938	-1	1.000	56431	12349	268	670	46		M
459.7348	36.926	36.938	-1	1.000	61506	16006	251	627	64	0.92(0.76-1.02)	M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Report Date: 18-Aug-2021 10:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d
Lims ID: MB 320-513585/1-A
Client ID:
Inject. Date: 15-Aug-2021 02:06:51 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 3

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	37424304	6153437
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	42626302	6323578

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	40025303	6238507

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 18-Aug-2021 10:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d
Lims ID: MB 320-513585/1-A
Client ID:
Inject. Date: 15-Aug-2021 02:06:51 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	26847442	7329652
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	30890428	7524060
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	28868935	7426856

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 18-Aug-2021 10:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d
Lims ID: MB 320-513585/1-A
Client ID:
Inject. Date: 15-Aug-2021 02:06:51 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 3

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	25079736	7294733

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	25079736	7294733

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	11018	3517	8321	4043	0.0705	1.32	RQM
34.021	8653	4204	8321	4043	0.0618		Empc Correction
Signal Totals:							
	8653	4204	8321	4043			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	19339	7560				1.32	RQM
	16974	8247					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0705 = (19339 * 100.000) / (25079736 * 1.094)
Empc Amount: 0.0618 = (16974 * 100.000) / (25079736 * 1.094)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.37
Area: 33921
Amount: 0.130377
Amount Units: pg/ul

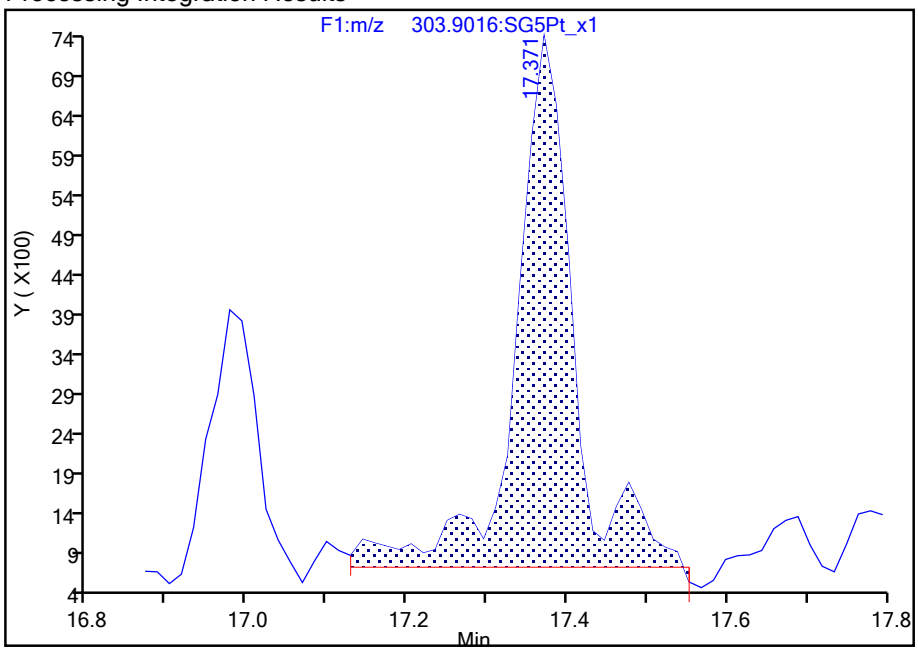

Manual Integration Results

RT: 17.37
Area: 28143
Amount: 0.118356
Amount Units: pg/ul

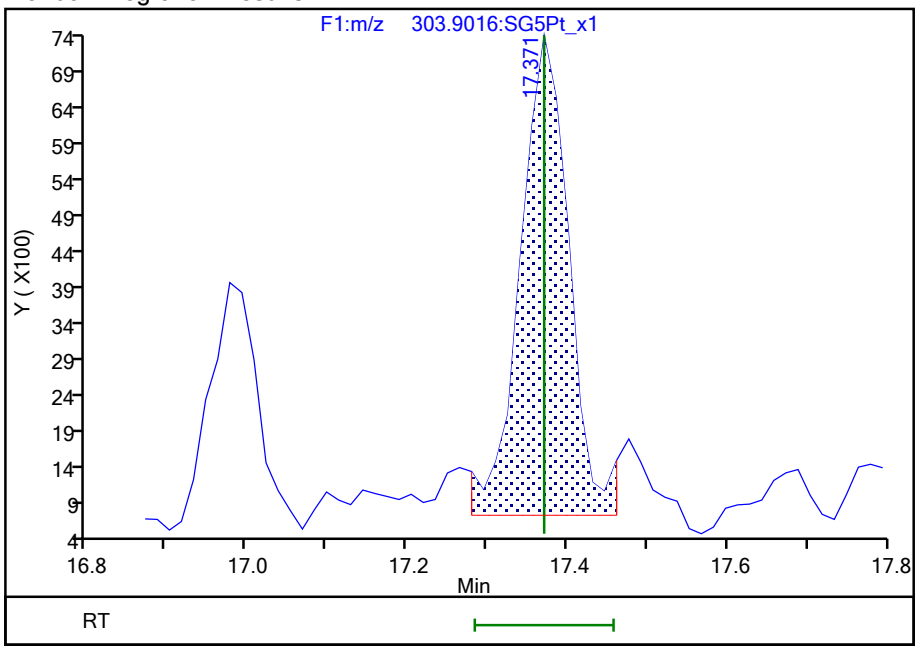

Reviewer: dadunj, 18-Aug-2021 10:45:20

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.34
Area: 12496
Amount: 0.066998
Amount Units: pg/ul

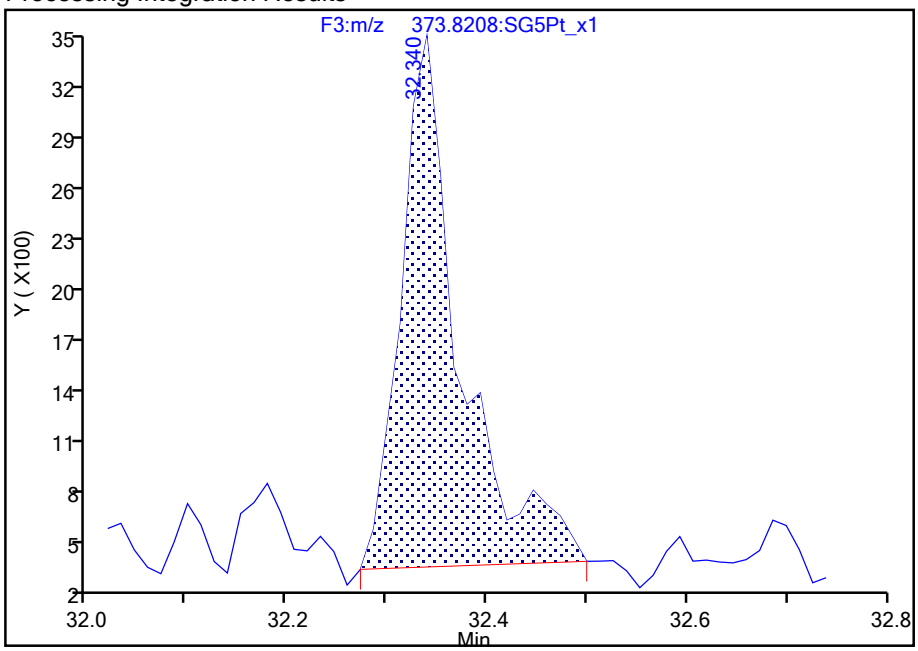

Manual Integration Results

RT: 32.34
Area: 11469
Amount: 0.057119
Amount Units: pg/ul

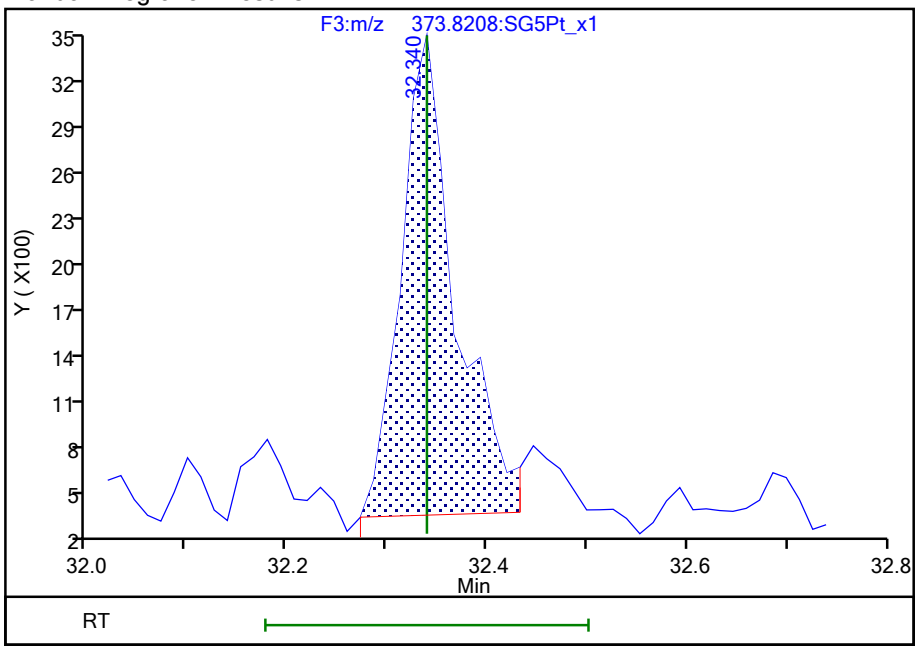

Reviewer: dadunj, 18-Aug-2021 10:45:39

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777383

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.34
Area: 12299
Amount: 0.066998
Amount Units: pg/ul

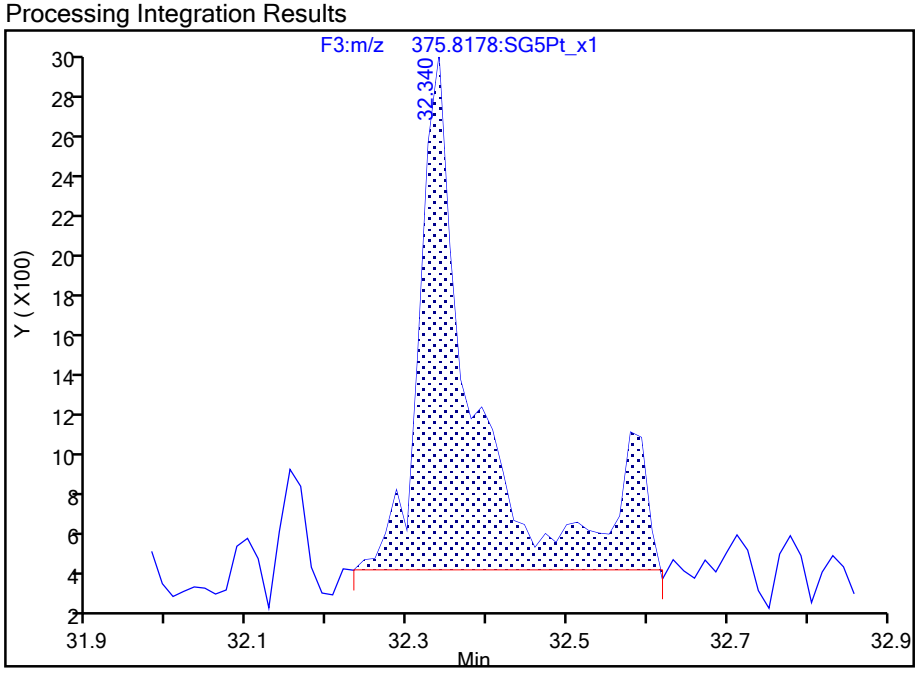

Manual Integration Results

RT: 32.34
Area: 9670
Amount: 0.057119
Amount Units: pg/ul

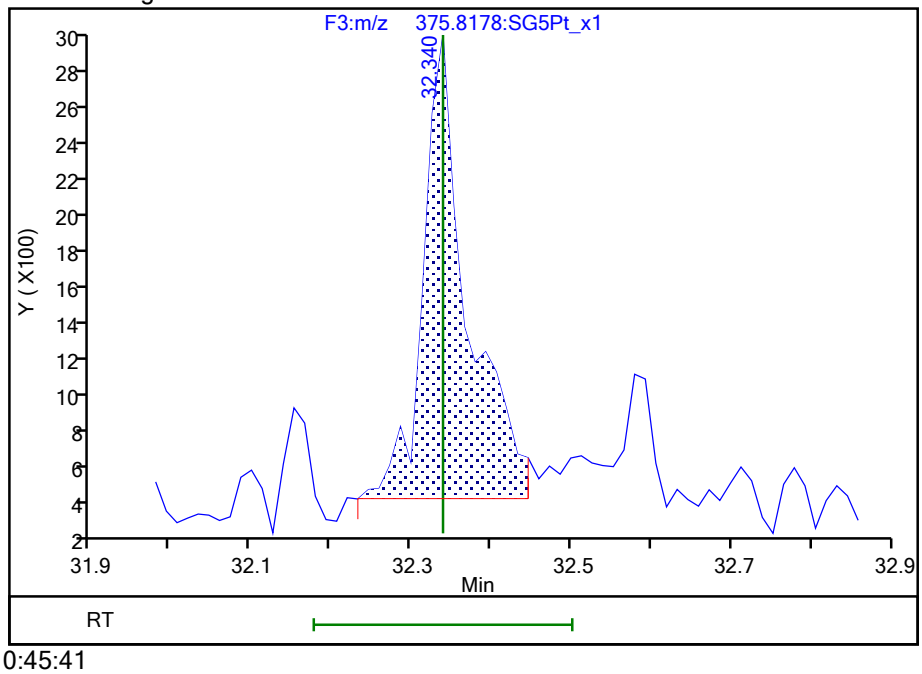

Reviewer: dadunj, 18-Aug-2021 10:45:41

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.71
Area: 21001
Amount: 0.114172
Amount Units: pg/ul

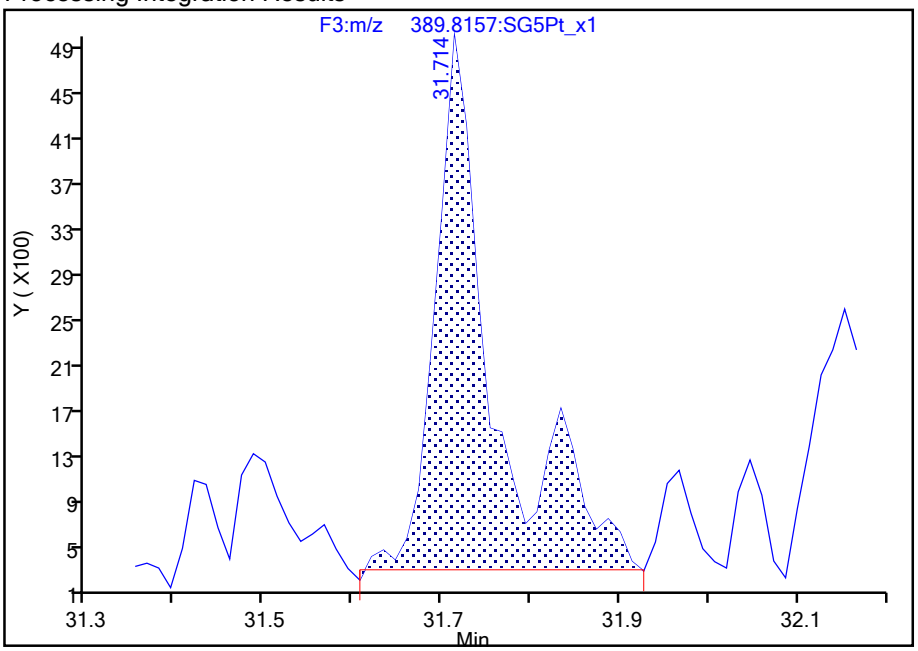

Manual Integration Results

RT: 31.71
Area: 16307
Amount: 0.091442
Amount Units: pg/ul

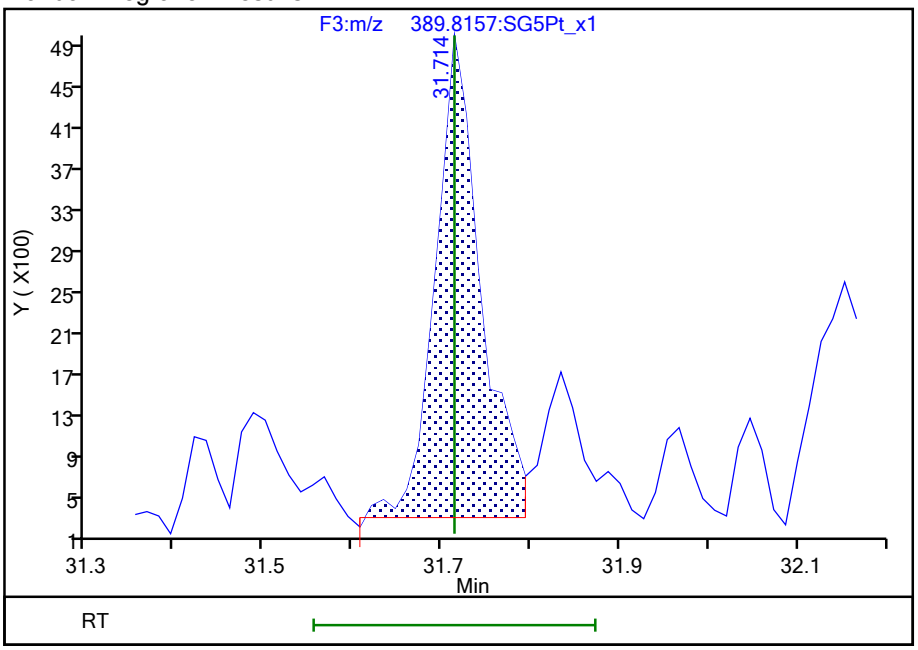

Reviewer: dadunj, 18-Aug-2021 10:45:47

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.71
Area: 11614
Amount: 0.114172
Amount Units: pg/ul

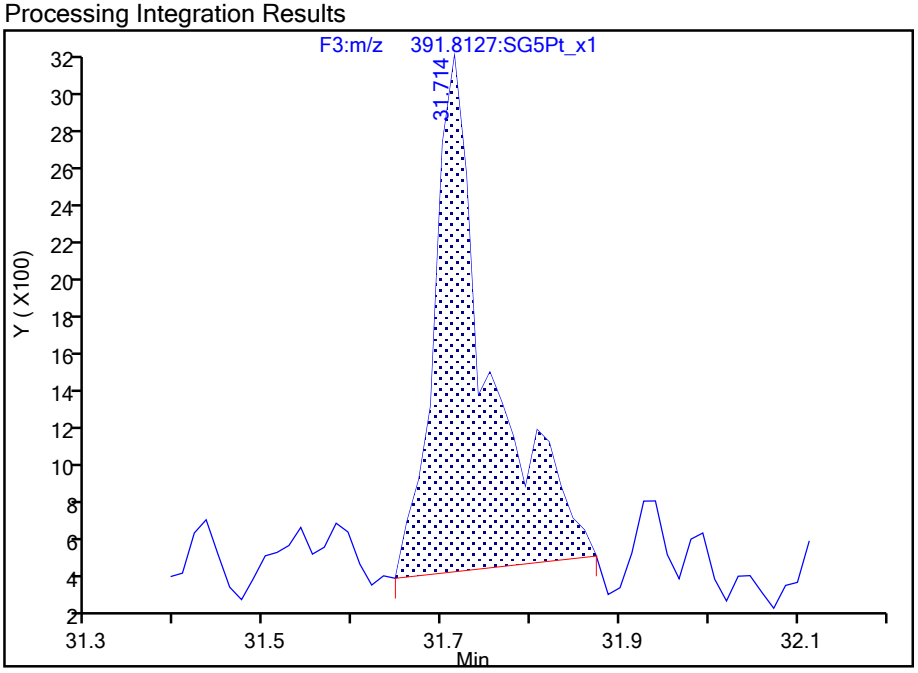

Manual Integration Results

RT: 31.71
Area: 9815
Amount: 0.091442
Amount Units: pg/ul

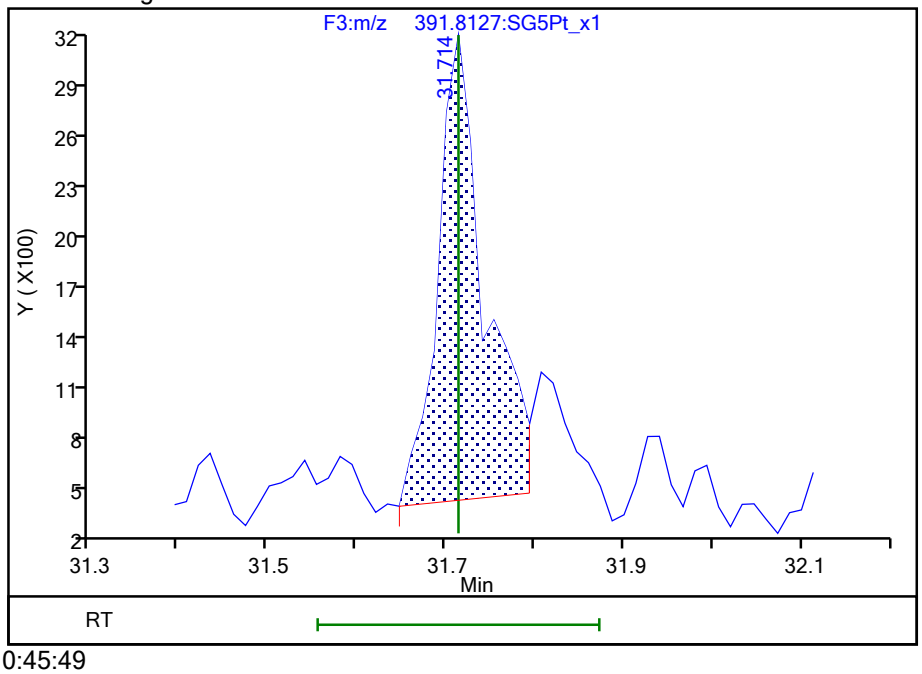

Reviewer: dadunj, 18-Aug-2021 10:45:49
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777386

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 32.15
Area: 21483
Amount: 0.084769
Amount Units: pg/ul

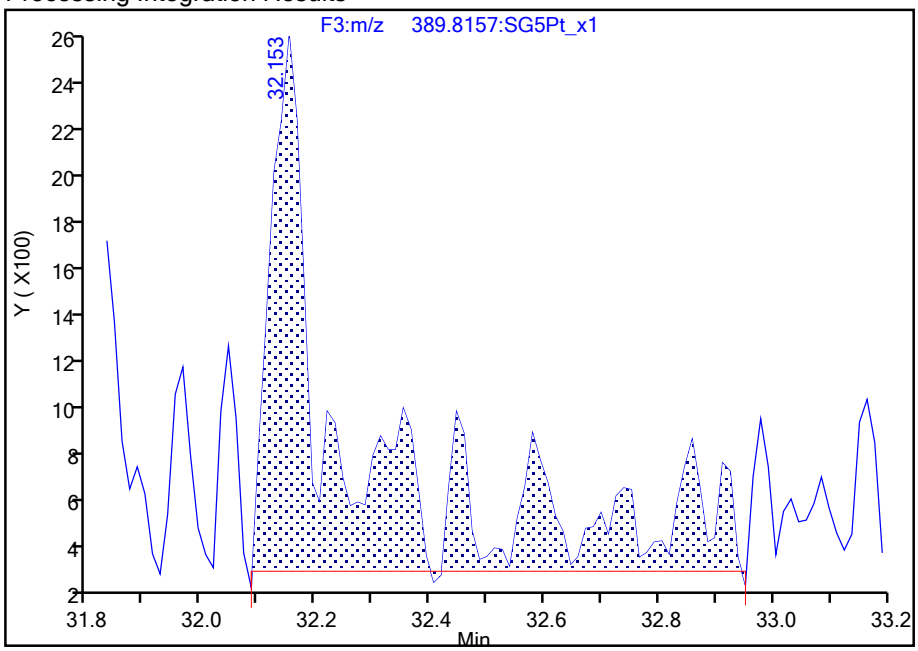

Manual Integration Results

RT: 32.15
Area: 8478
Amount: 0.037437
Amount Units: pg/ul

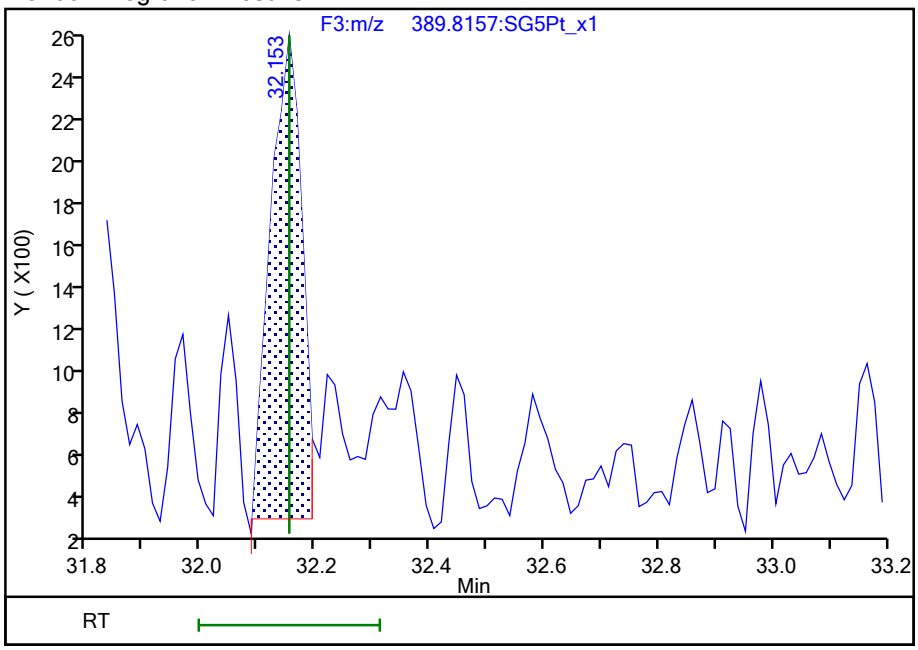

Reviewer: dadunj, 18-Aug-2021 10:45:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777387

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 32.14
Area: 6232
Amount: 0.084769
Amount Units: pg/ul

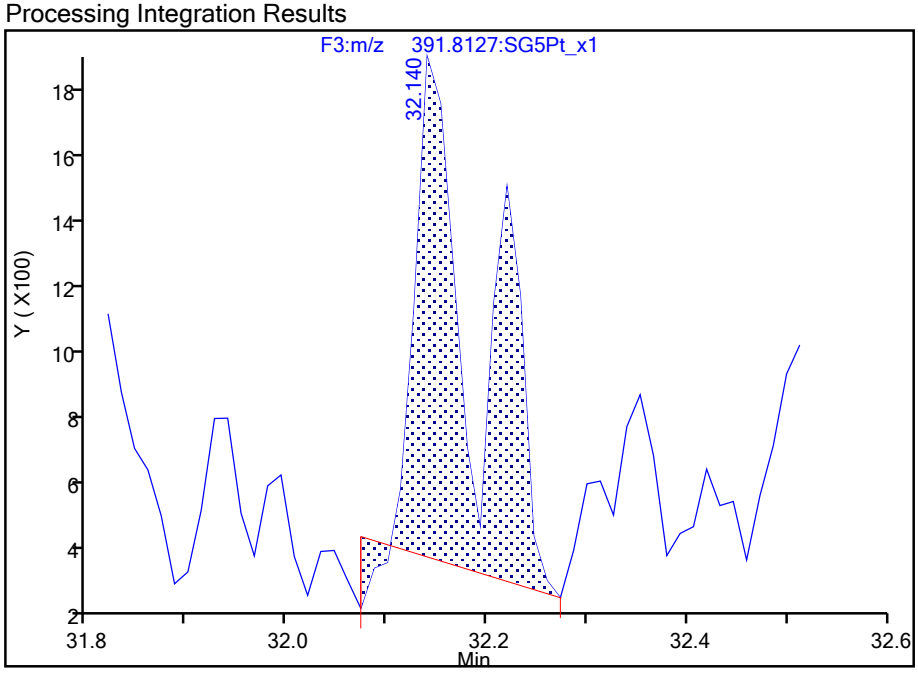

Manual Integration Results

RT: 32.14
Area: 3762
Amount: 0.037437
Amount Units: pg/ul

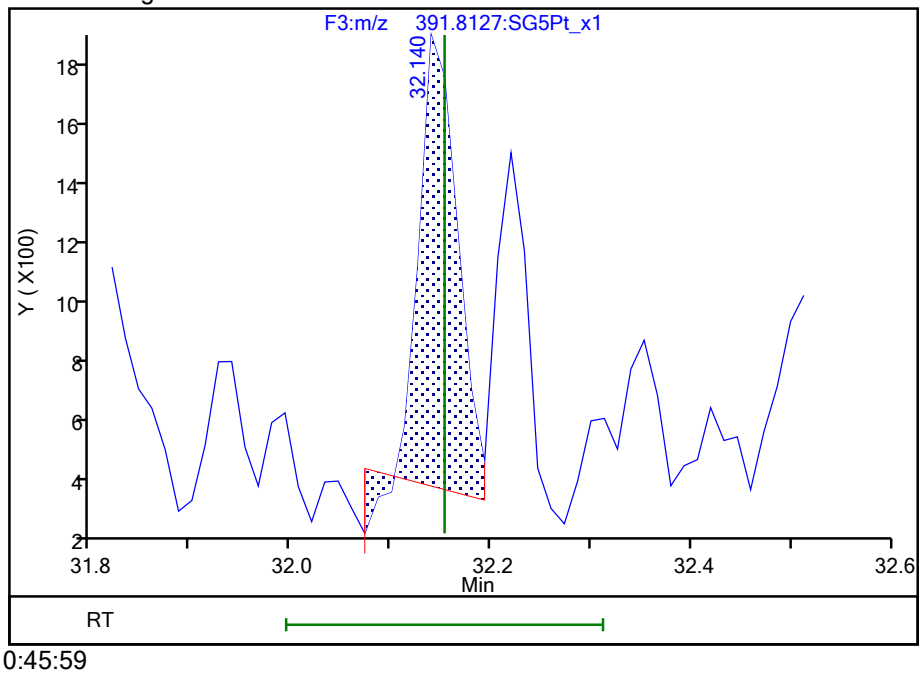

Reviewer: dadunj, 18-Aug-2021 10:45:59

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777388

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.78
Area: 20057
Amount: 0.079838
Amount Units: pg/ul

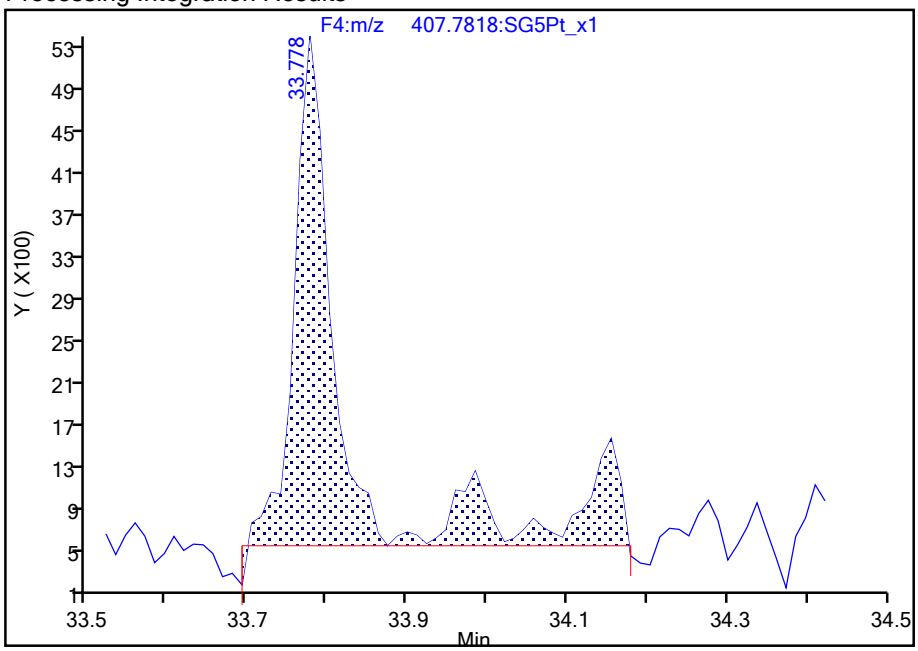

Manual Integration Results

RT: 33.78
Area: 14795
Amount: 0.065877
Amount Units: pg/ul

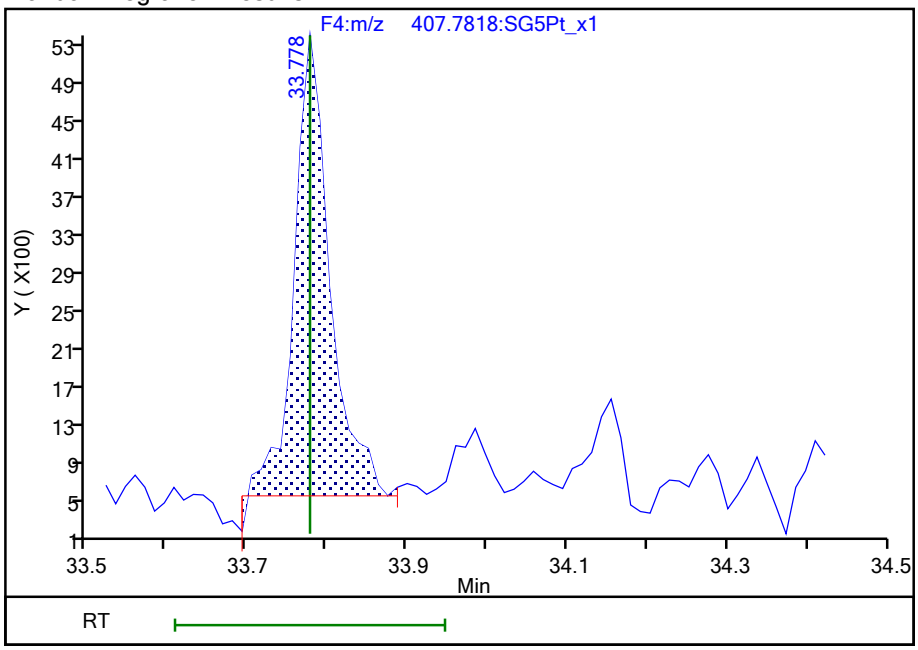

Reviewer: dadunj, 18-Aug-2021 10:46:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.77
Area: 12927
Amount: 0.079838
Amount Units: pg/ul

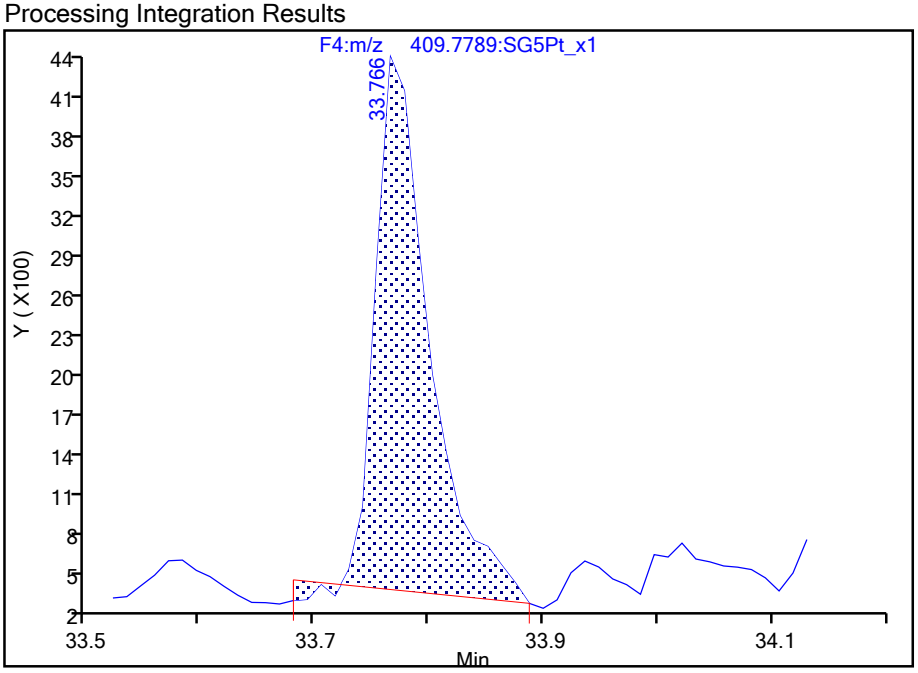

Manual Integration Results

RT: 33.77
Area: 12421
Amount: 0.065877
Amount Units: pg/ul

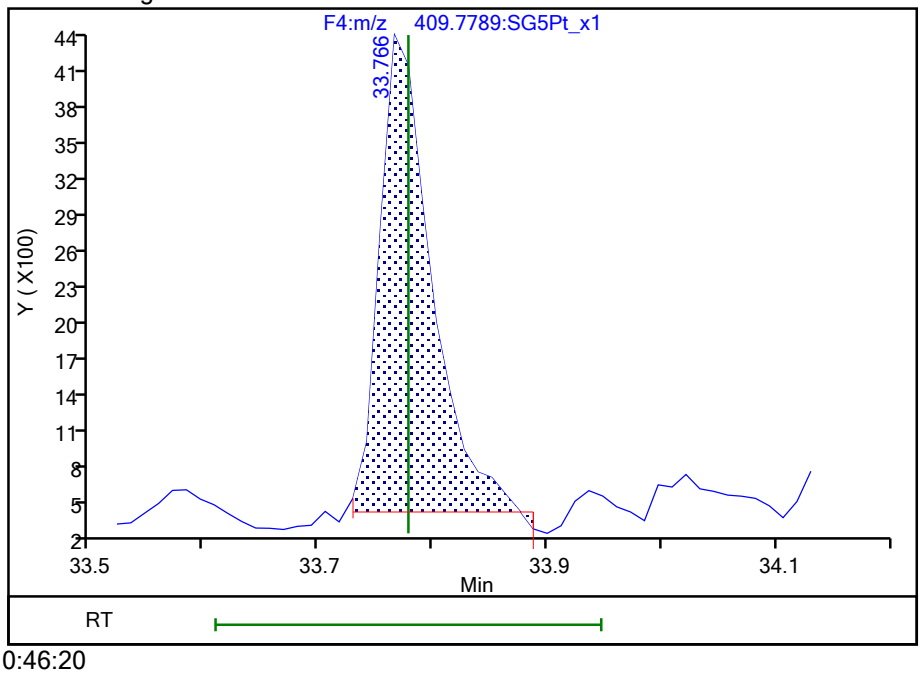

Reviewer: dadunj, 18-Aug-2021 10:46:20

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777390

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 2

Processing Integration Results

RT: 34.85
Area: 10820
Amount: 0.074203
Amount Units: pg/ul

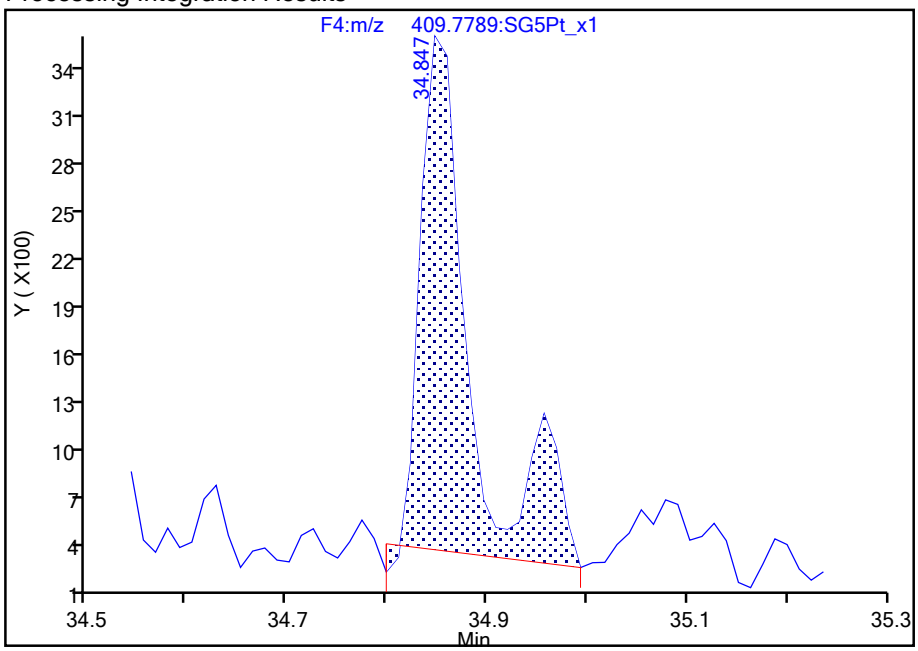

Manual Integration Results

RT: 34.85
Area: 8743
Amount: 0.049533
Amount Units: pg/ul

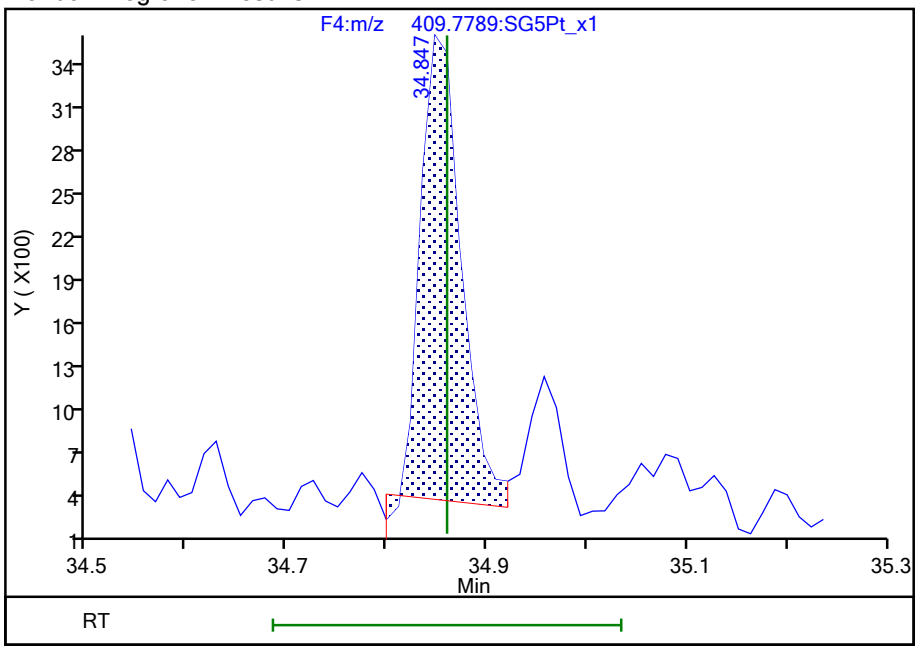

Reviewer: dadunj, 18-Aug-2021 10:46:25

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 34.86
Area: 17336
Amount: 0.074203
Amount Units: pg/ul

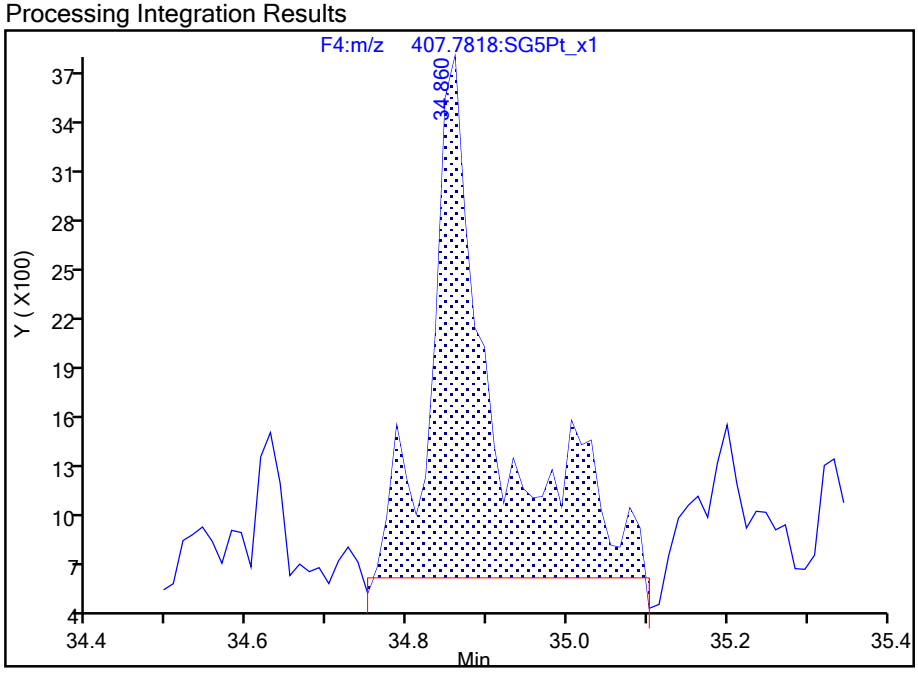

Manual Integration Results

RT: 34.86
Area: 10052
Amount: 0.049533
Amount Units: pg/ul

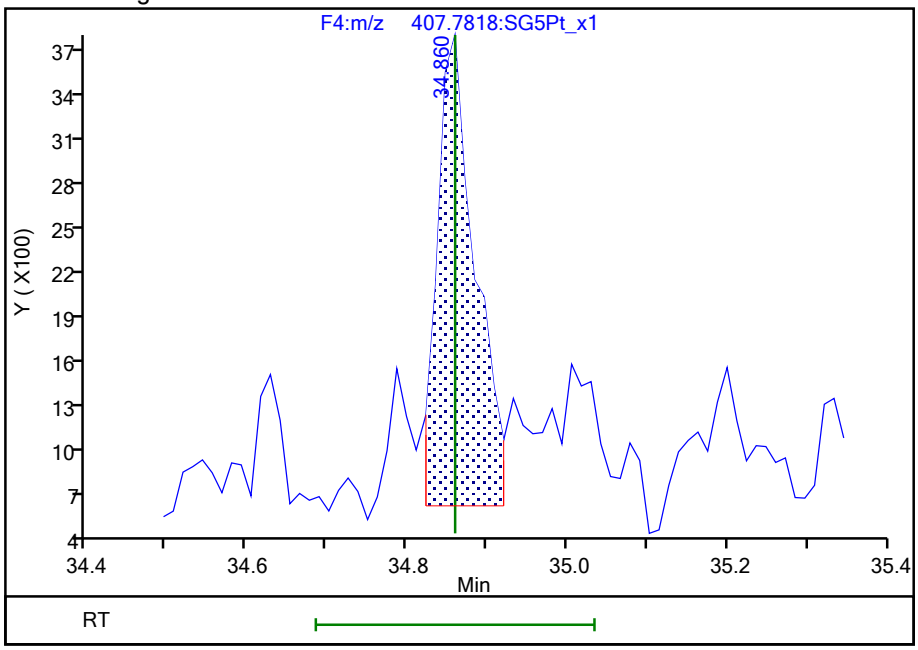

Reviewer: dadunj, 18-Aug-2021 10:46:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 34.57
Area: 14090
Amount: 0.098317
Amount Units: pg/ul

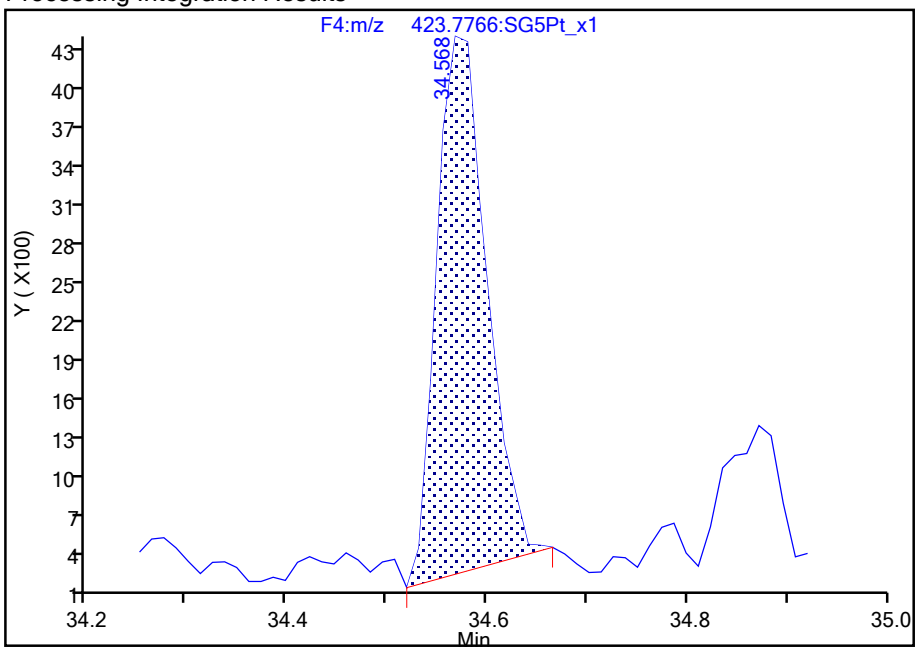

Manual Integration Results

RT: 34.57
Area: 15692
Amount: 0.100296
Amount Units: pg/ul

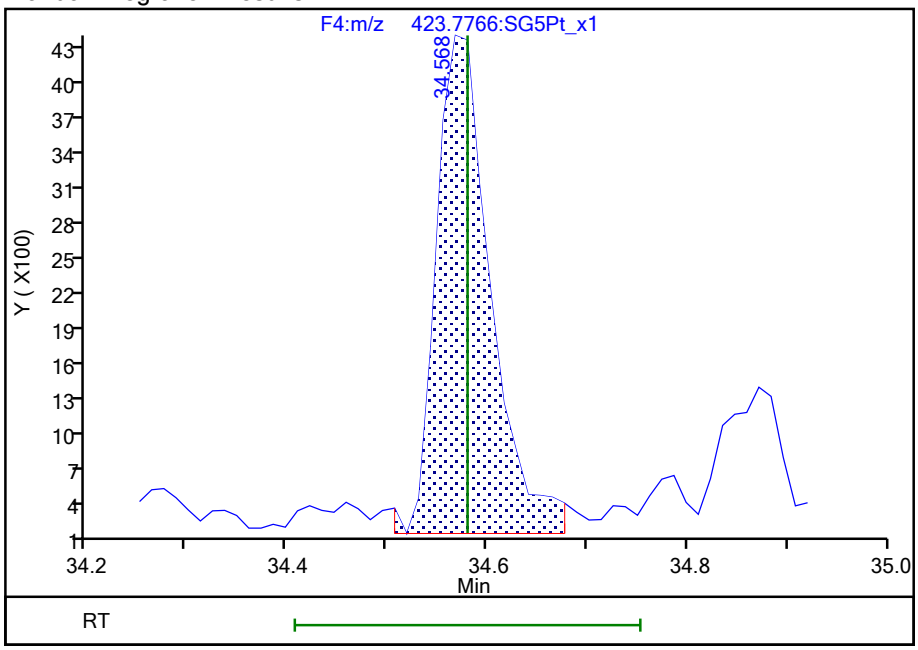

Reviewer: dadunj, 18-Aug-2021 10:46:34

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 34.57
Area: 12893
Amount: 0.098317
Amount Units: pg/ul

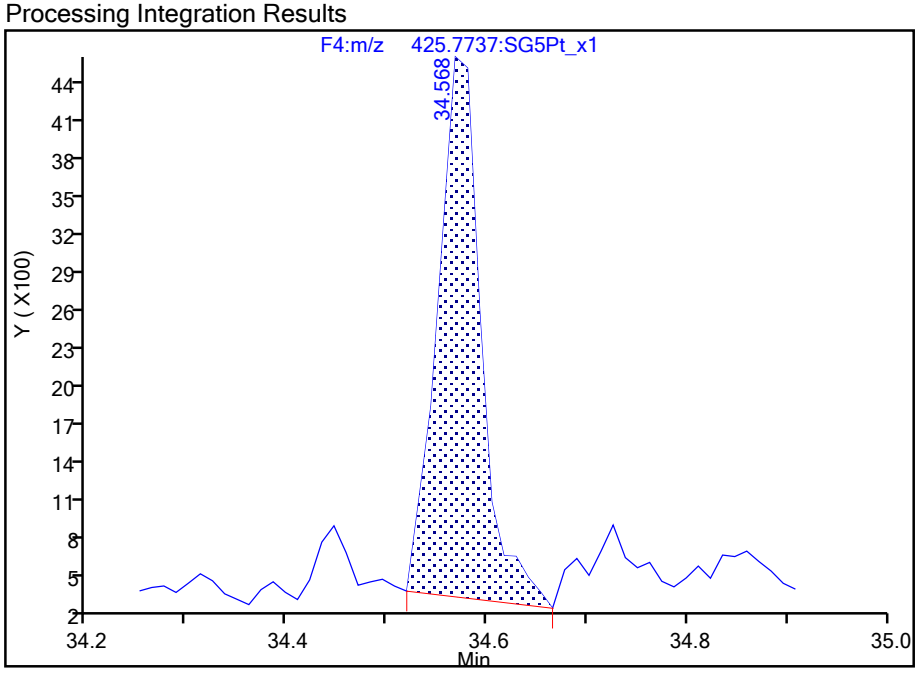

Manual Integration Results

RT: 34.57
Area: 11834
Amount: 0.100296
Amount Units: pg/ul

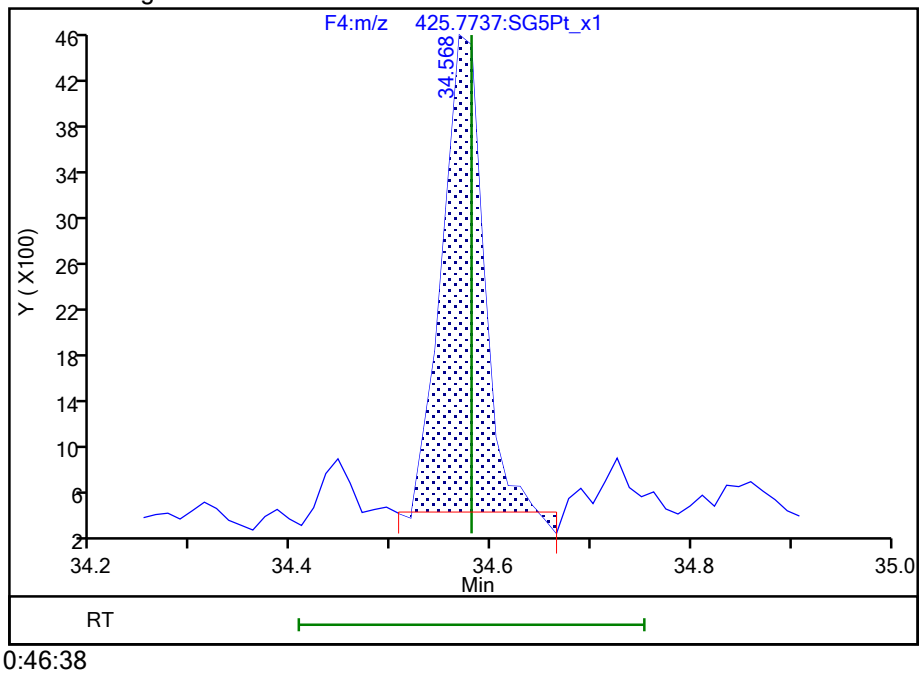

Reviewer: dadunj, 18-Aug-2021 10:46:38

Audit Action: Manually Integrated Audit Reason: Split Peak

777394

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 1, m/z: 423.7766, RT: (33.99- 34.61)

Signal: 1

Processing Integration Results

RT = 34.021 Area = 19698

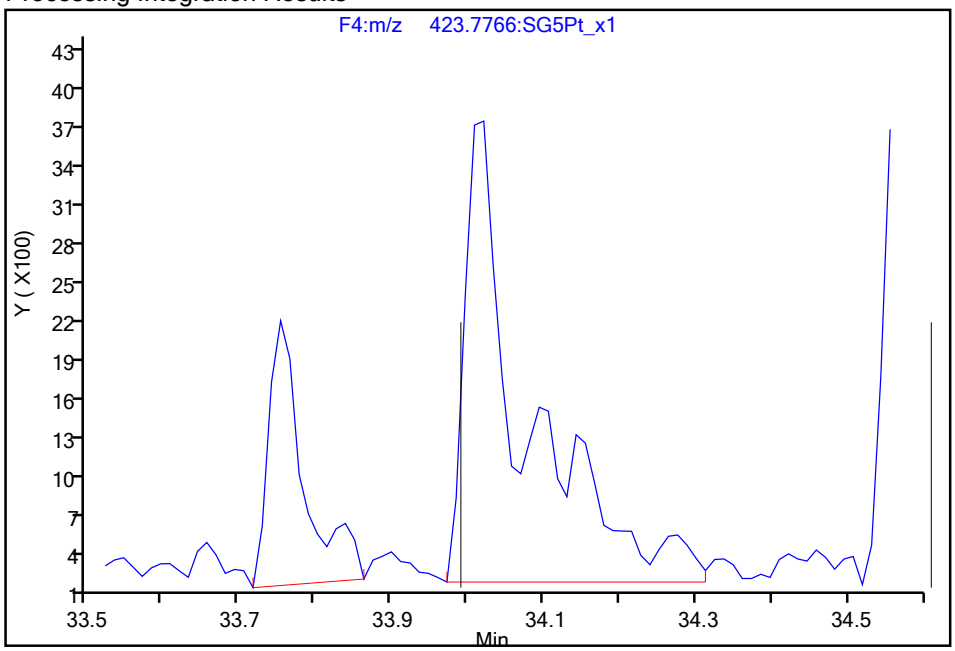

Manual Integration Results

RT = 34.021 Area = 11018 M

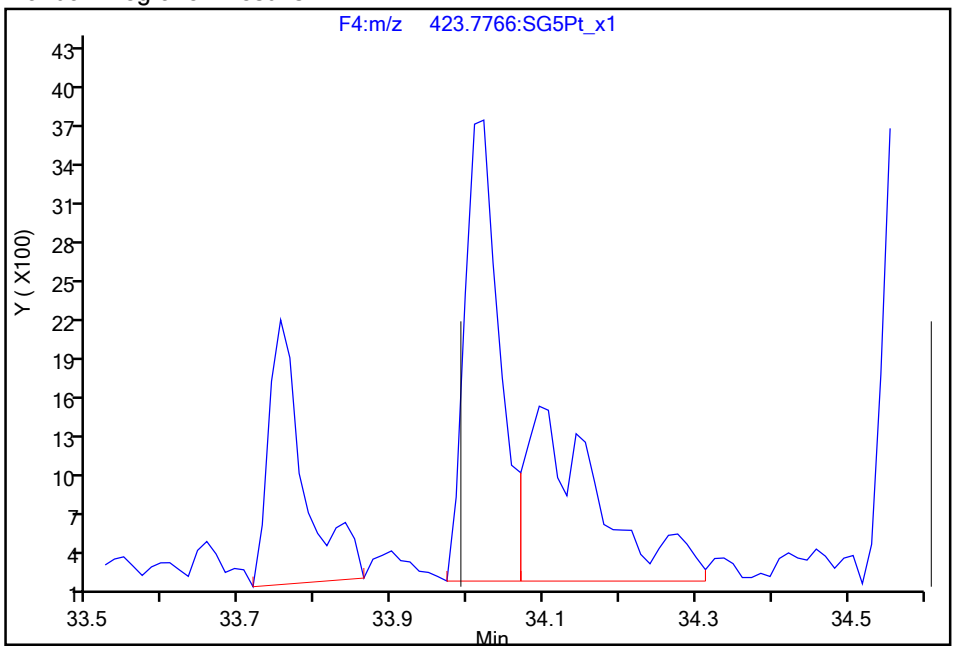

Reviewer: dadunj, 18-Aug-2021 10:46:43

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 2, m/z: 425.7737, RT: (33.99- 34.61)

Signal: 2

Processing Integration Results

RT = 34.021 Area = 9822

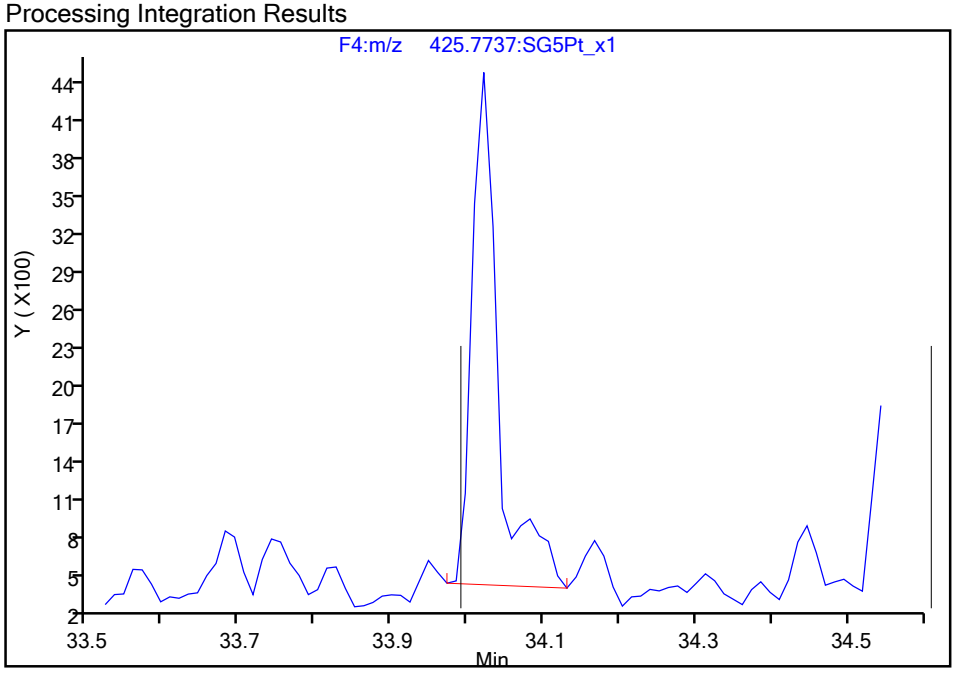

Manual Integration Results

RT = 34.021 Area = 8321 M

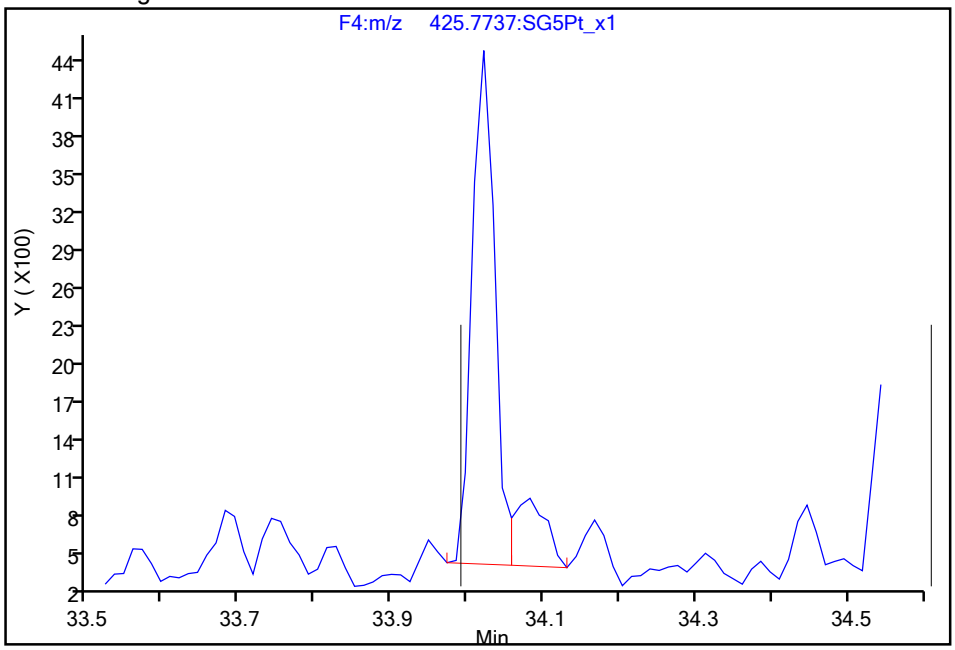

Reviewer: dadunj, 18-Aug-2021 10:46:45

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.01
Area: 30532
Amount: 0.196300
Amount Units: pg/ul

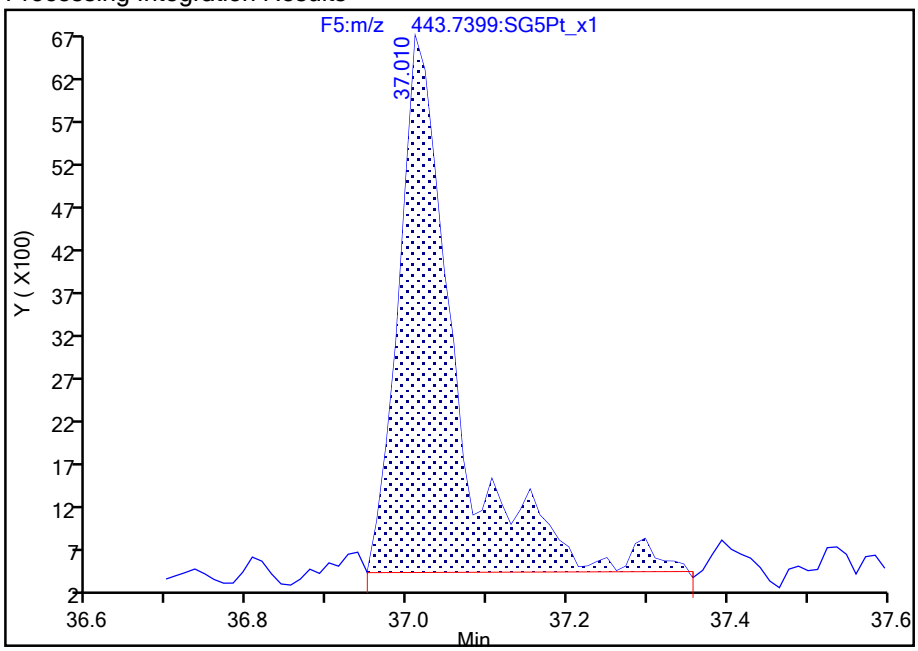

Manual Integration Results

RT: 37.01
Area: 24324
Amount: 0.174940
Amount Units: pg/ul

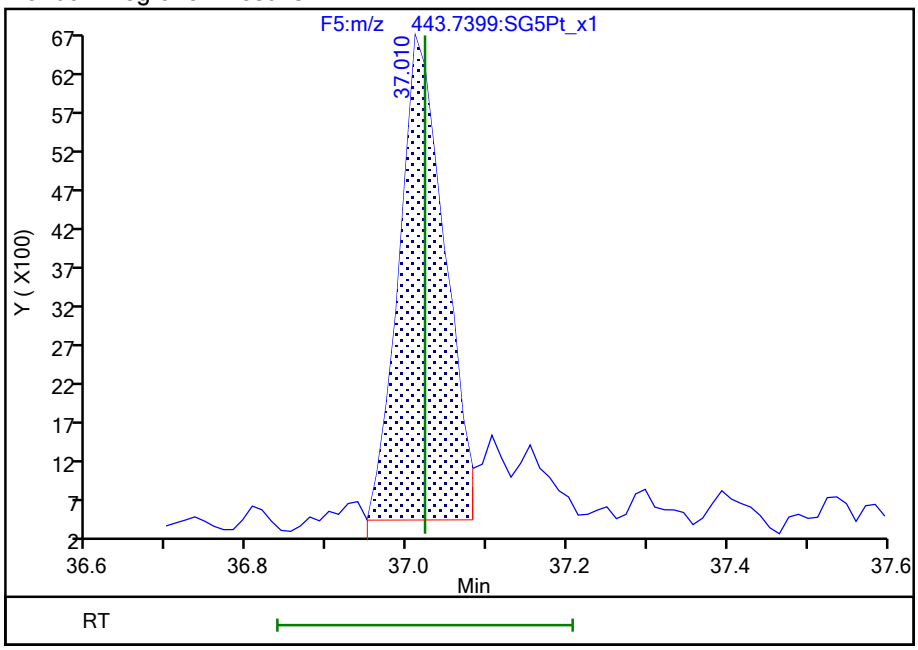

Reviewer: dadunj, 18-Aug-2021 10:46:51

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 2

Processing Integration Results

RT: 36.93
Area: 63235
Amount: 0.550028
Amount Units: pg/ul

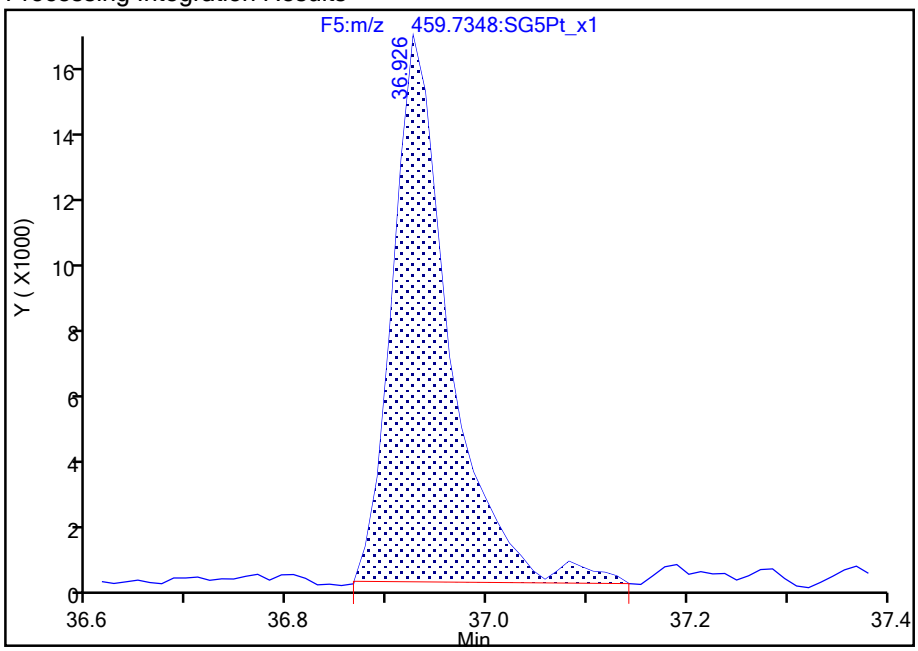

Manual Integration Results

RT: 36.93
Area: 61506
Amount: 0.527173
Amount Units: pg/ul

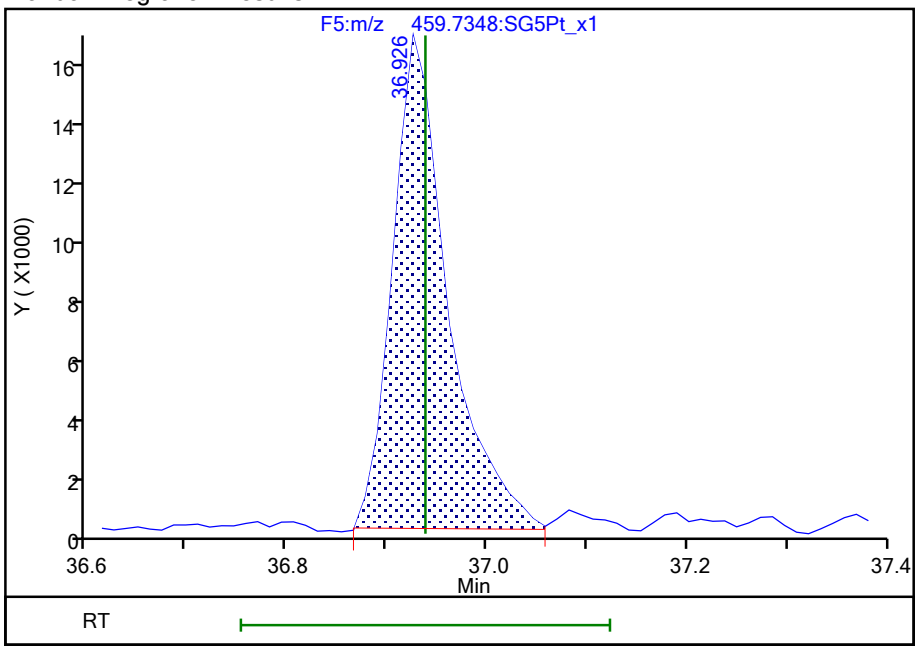

Reviewer: dadunj, 18-Aug-2021 10:46:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d				
Injection Date:	15-Aug-2021 02:06:51	Instrument ID:	10D5		
Lims ID:	MB 320-513585/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	43	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 36.93
Area: 59815
Amount: 0.550028
Amount Units: pg/ul

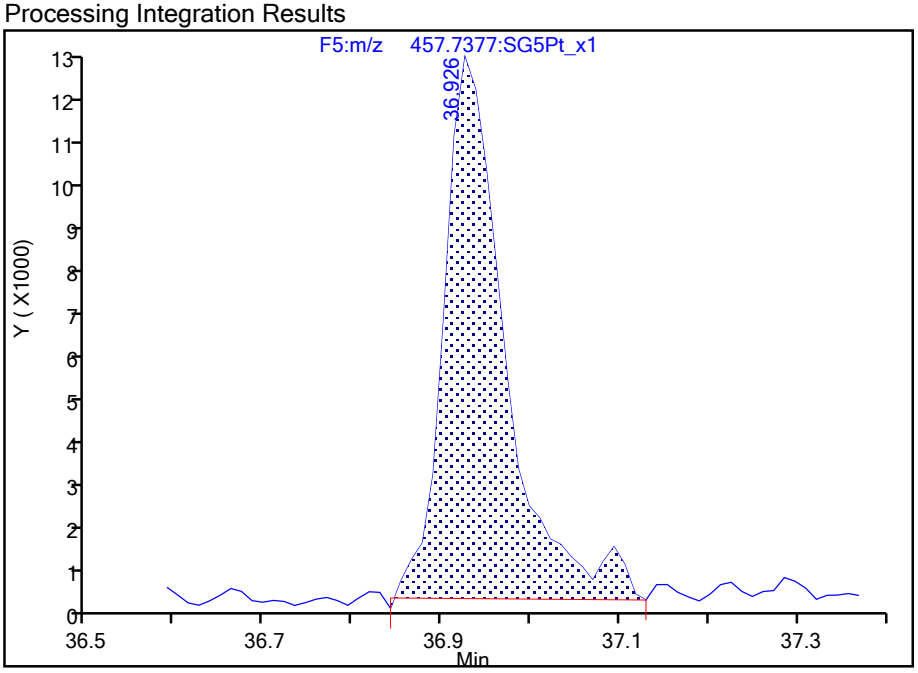

Manual Integration Results

RT: 36.93
Area: 56431
Amount: 0.527173
Amount Units: pg/ul

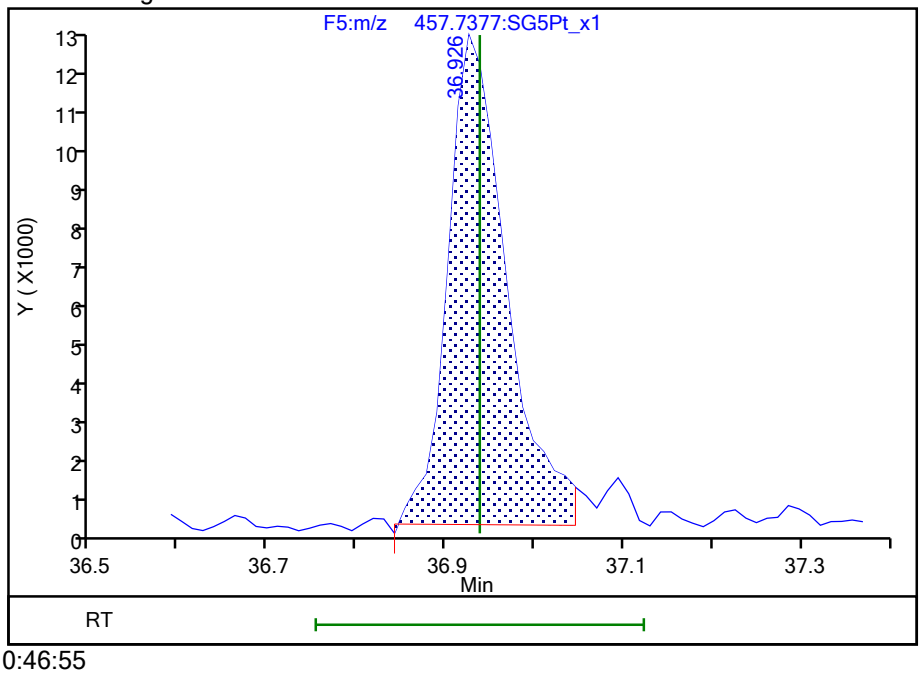

Reviewer: dadunj, 18-Aug-2021 10:46:55
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777399

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d		
Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

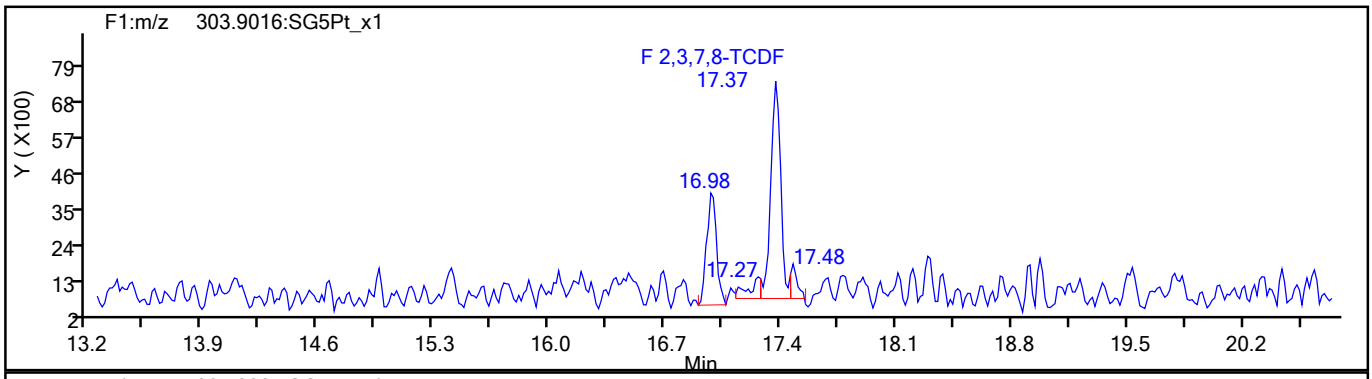

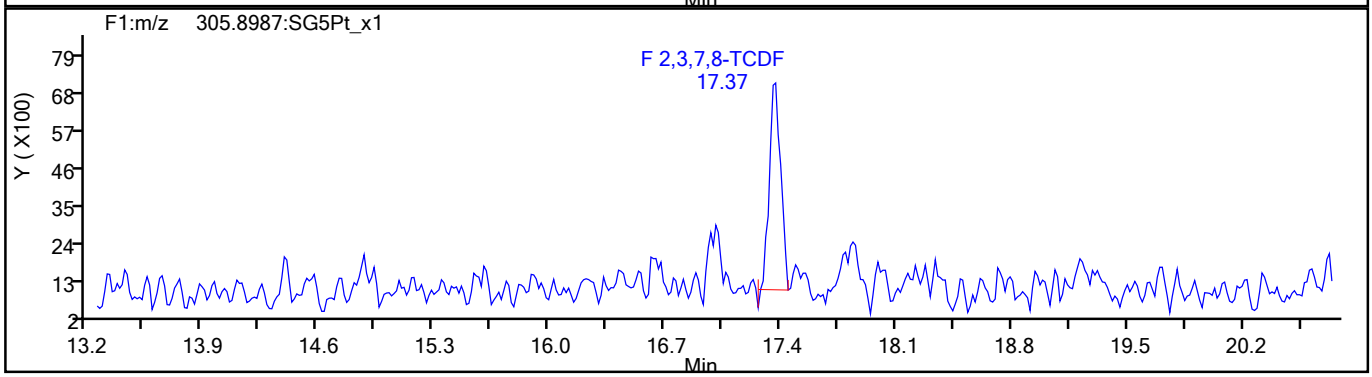

TCDF Standards

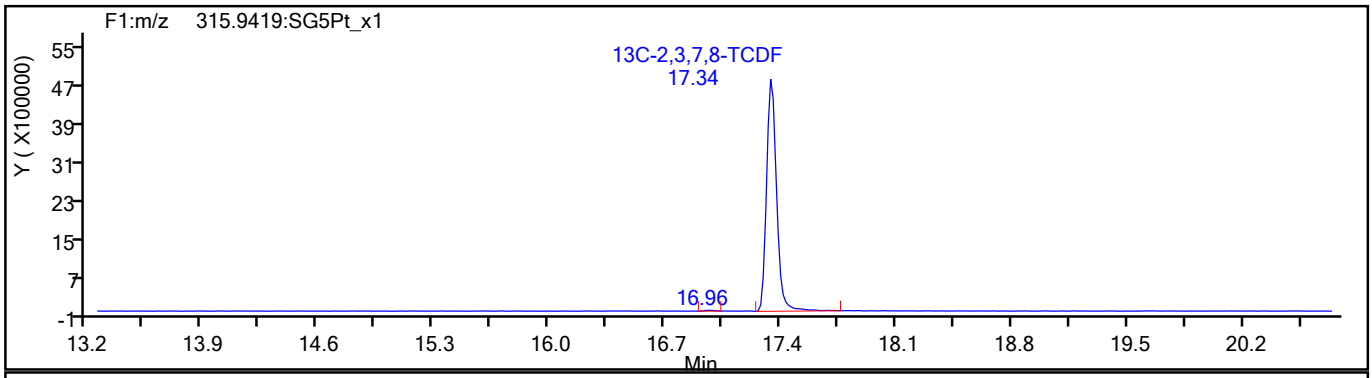

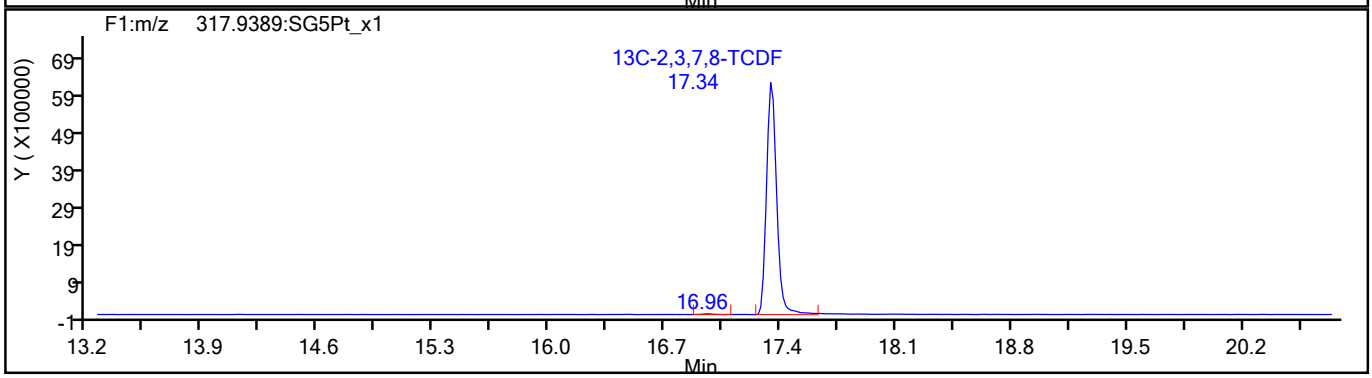

777400

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d		
Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

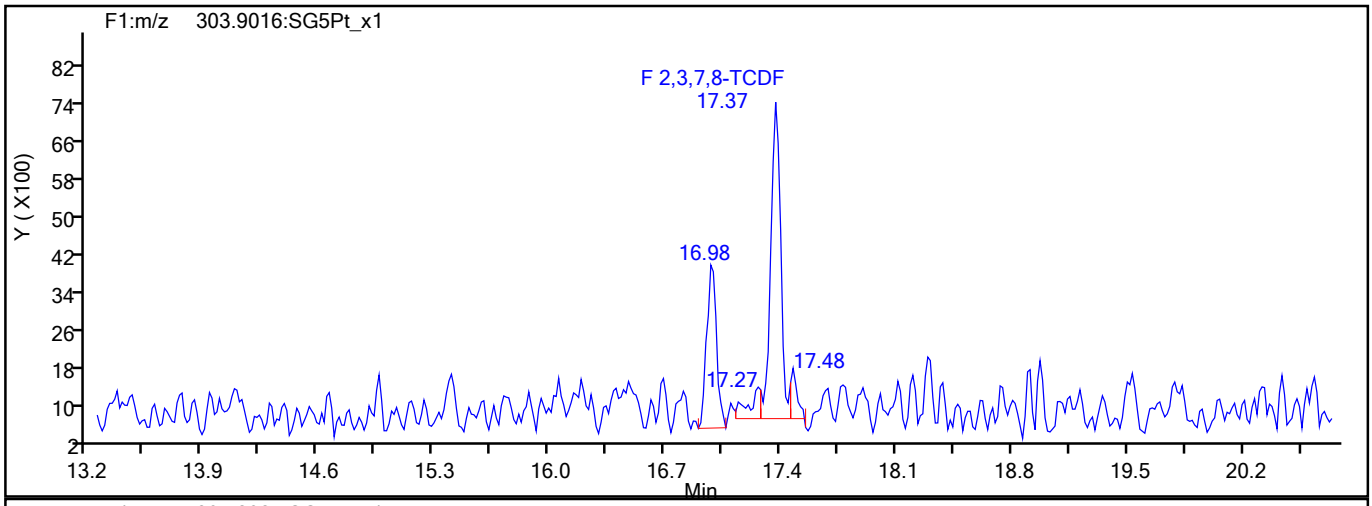

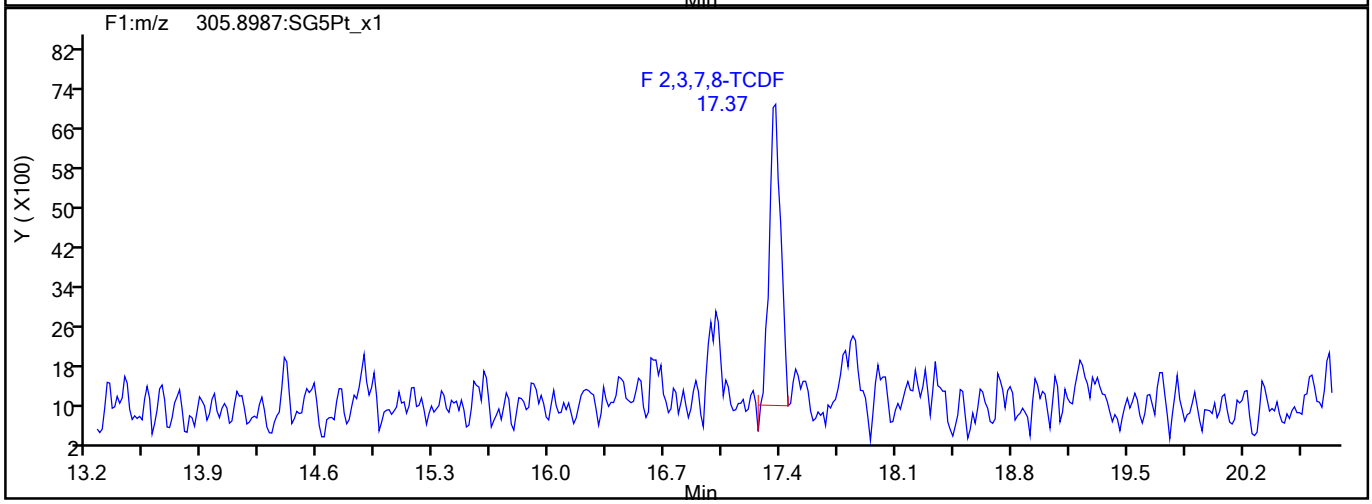

TCDF Interference Mass

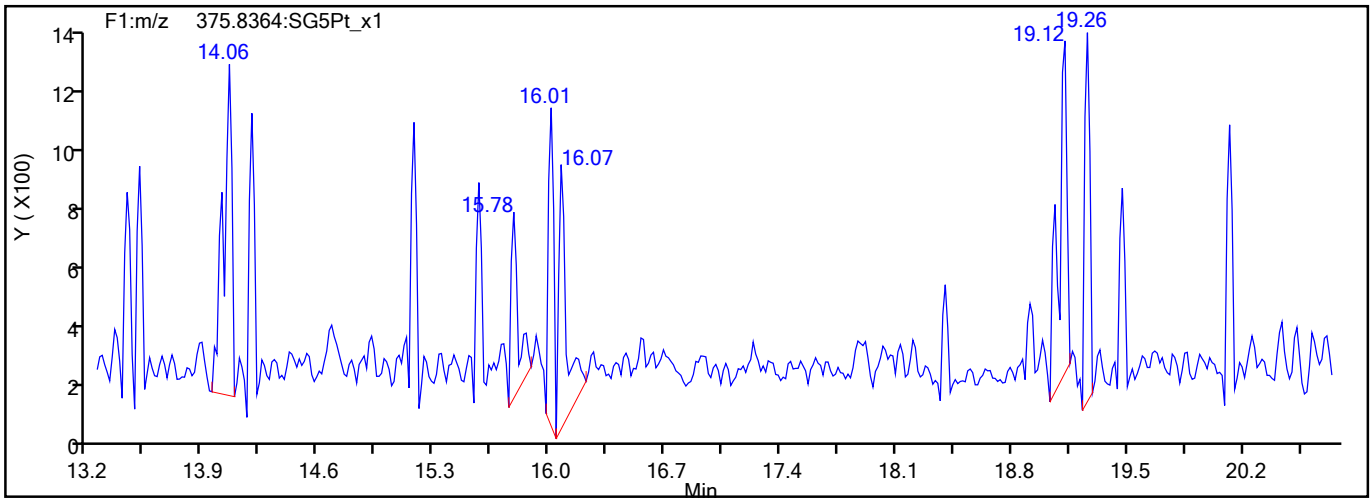

777401

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d		
Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

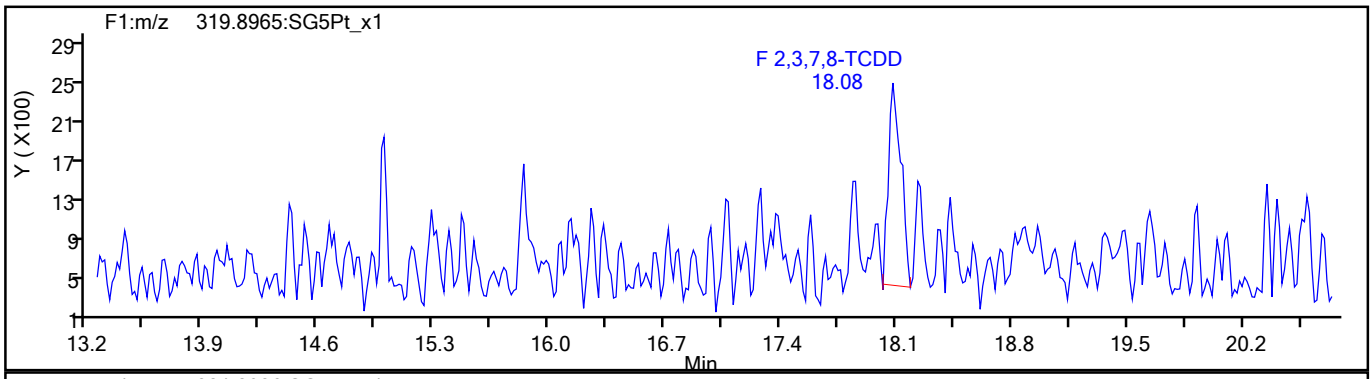

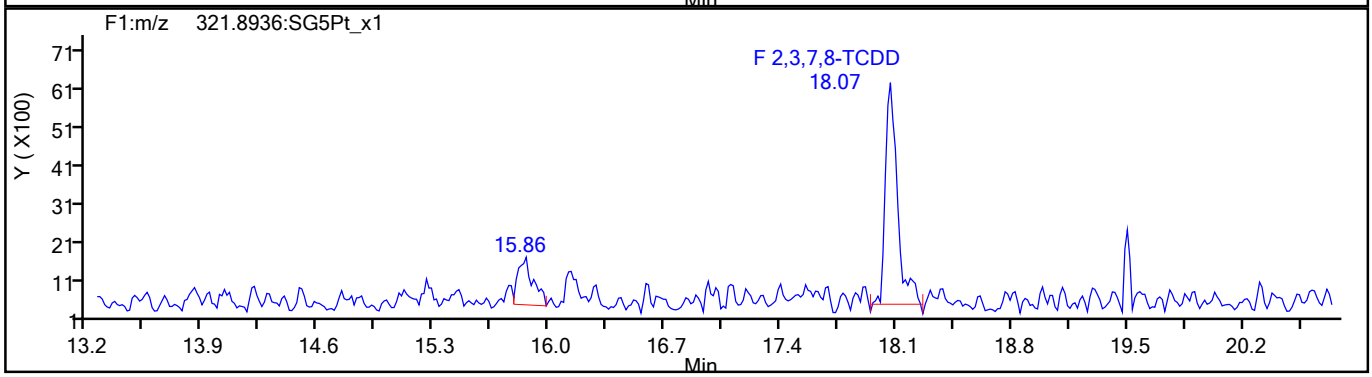

TCDD Standards

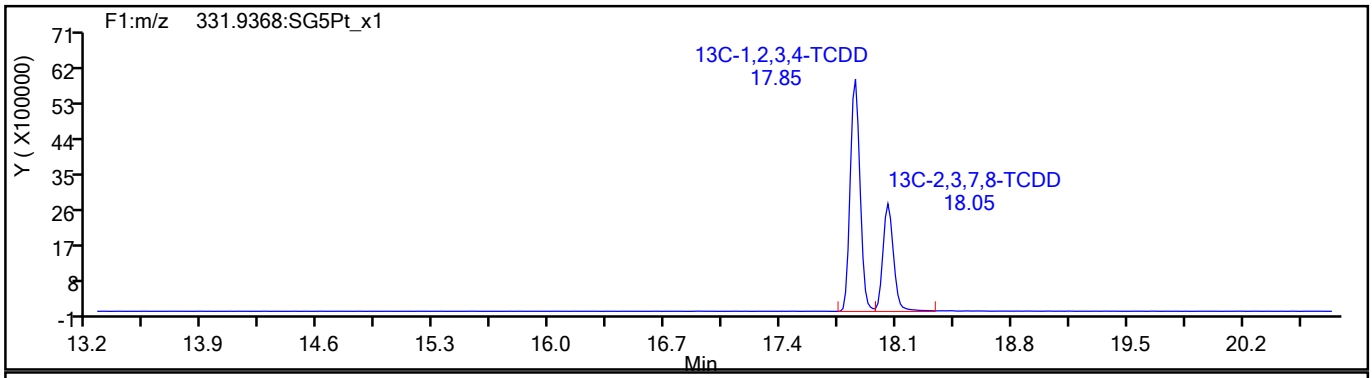

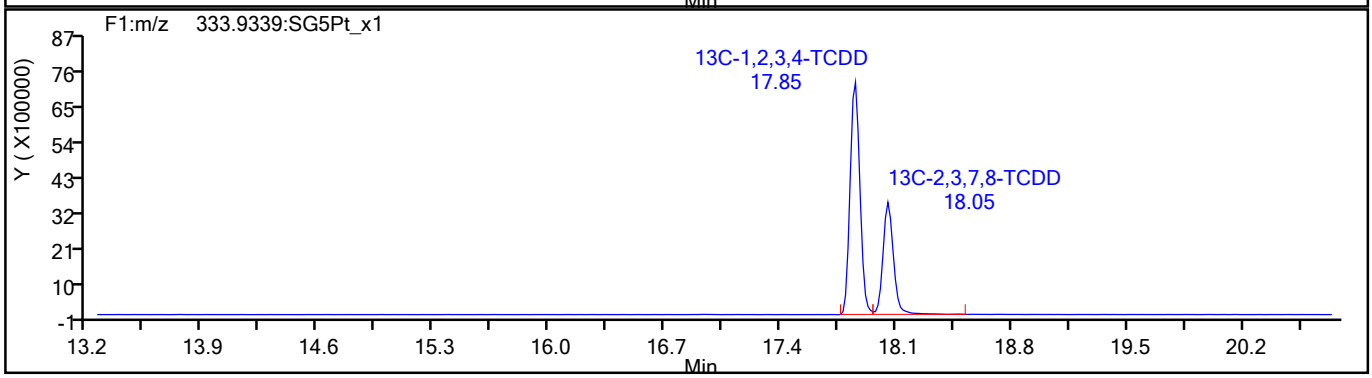

777402

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d		
Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

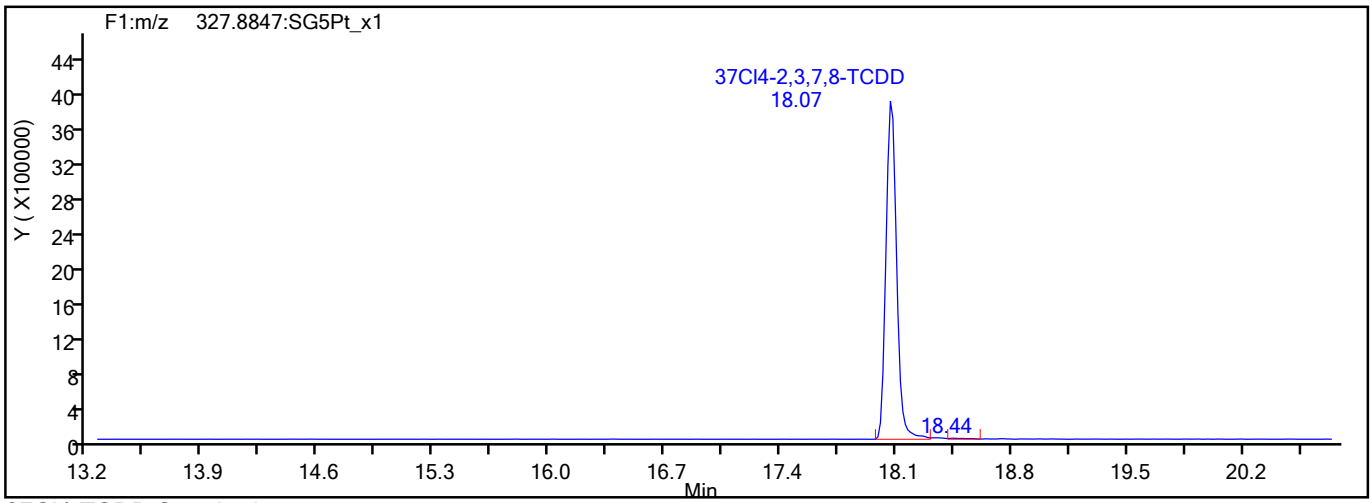

37Cl4-TCDD Standards

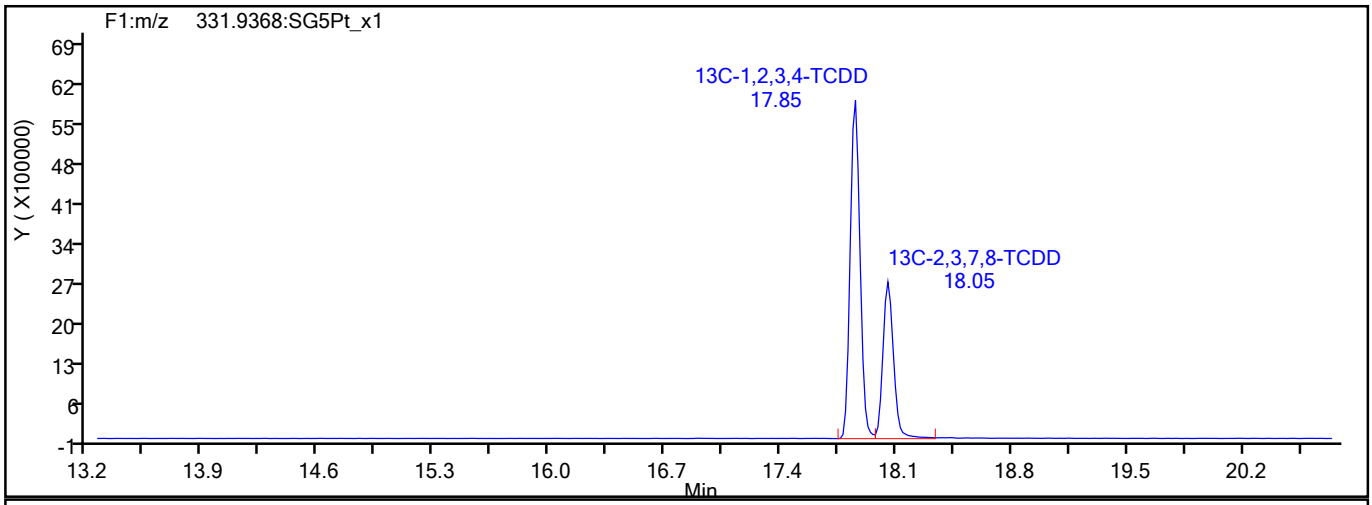

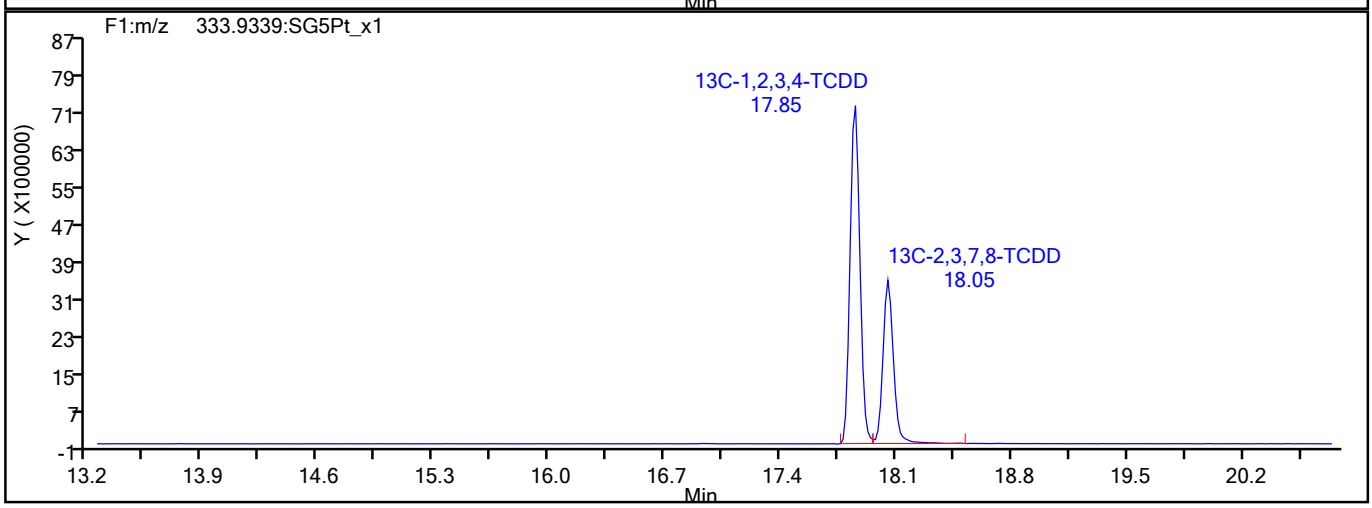

777403

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d		
Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

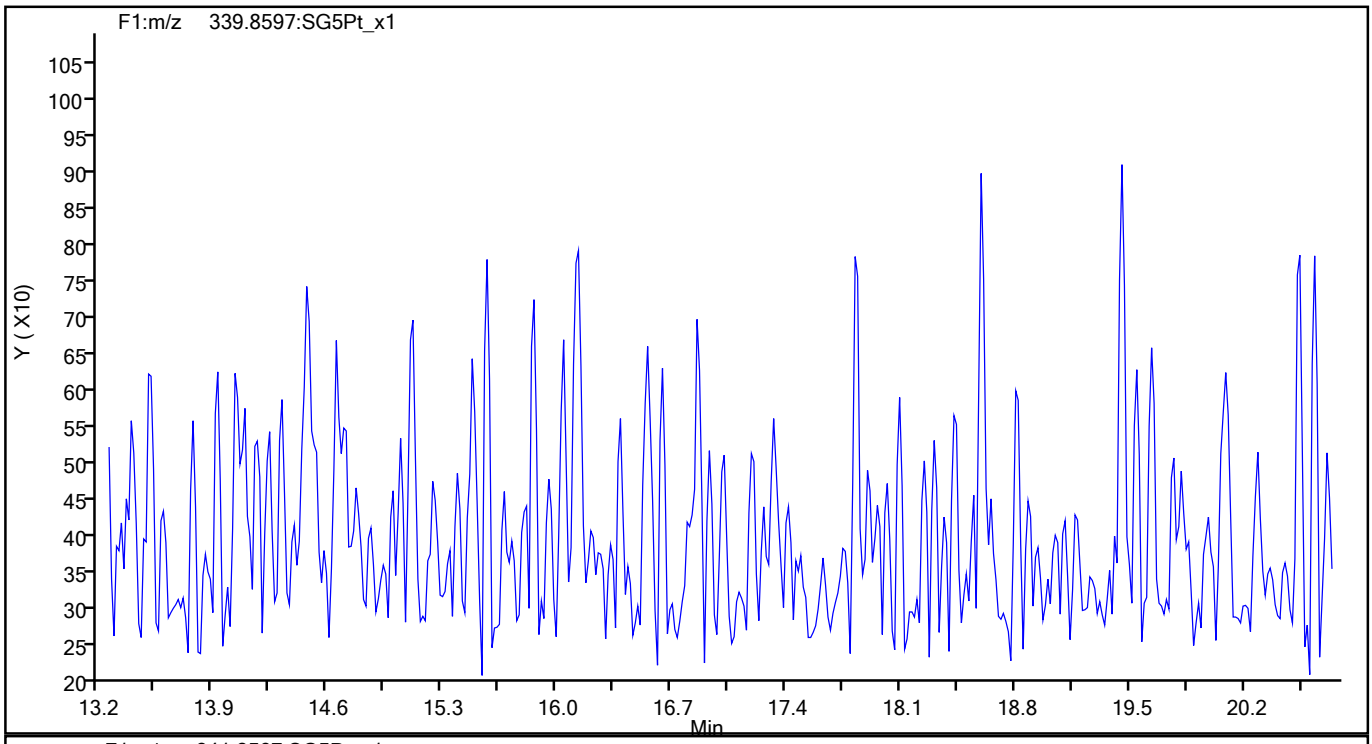

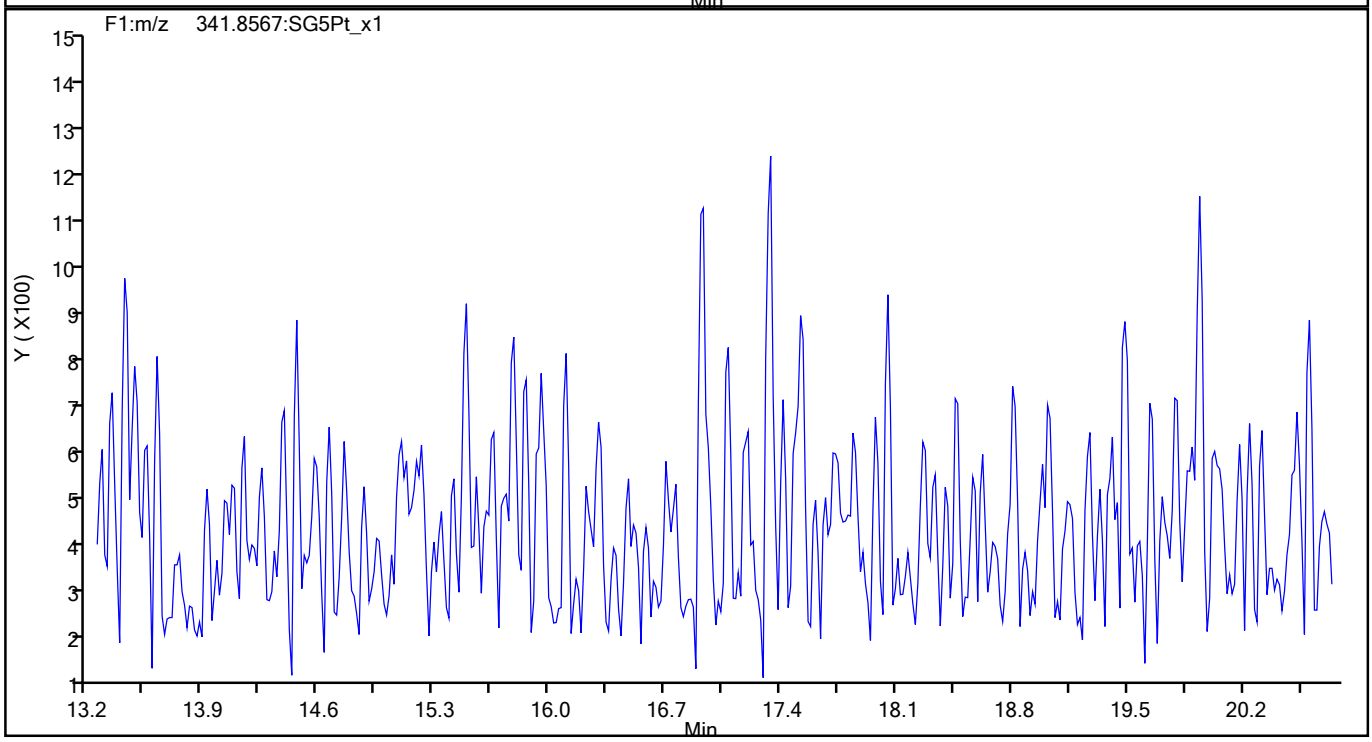

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d		
Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

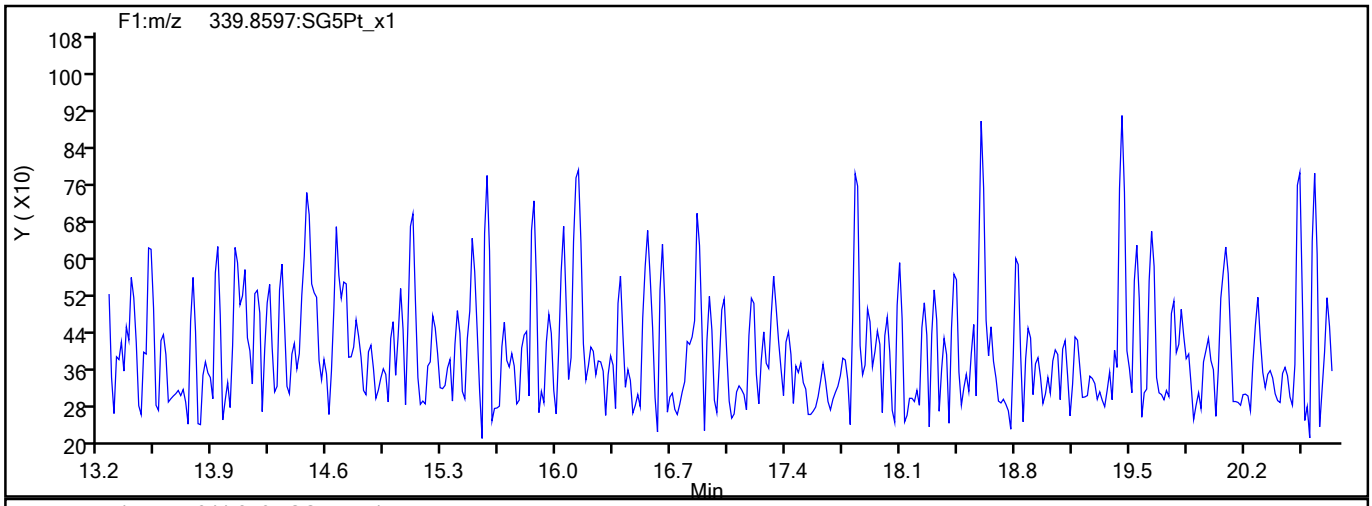

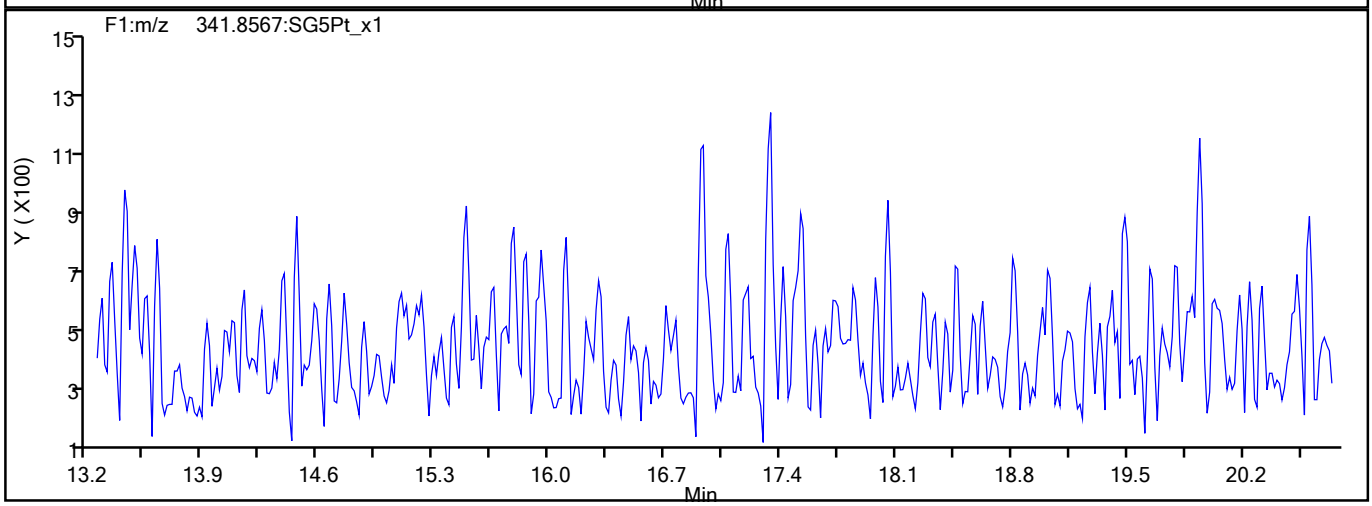

F1 PeCDFs Interference Mass

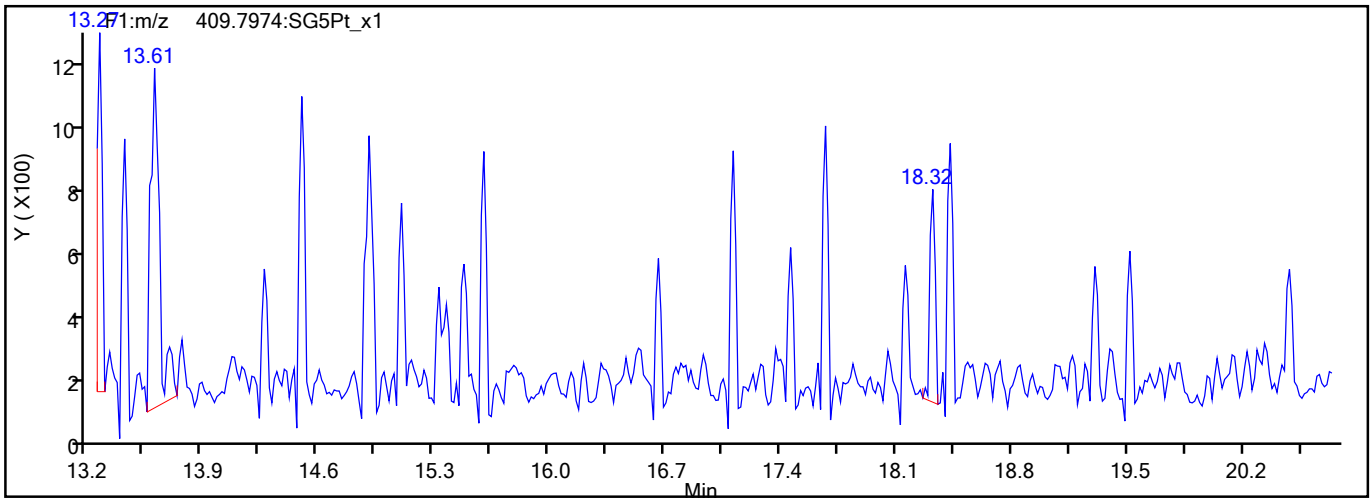

777405

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d		
Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

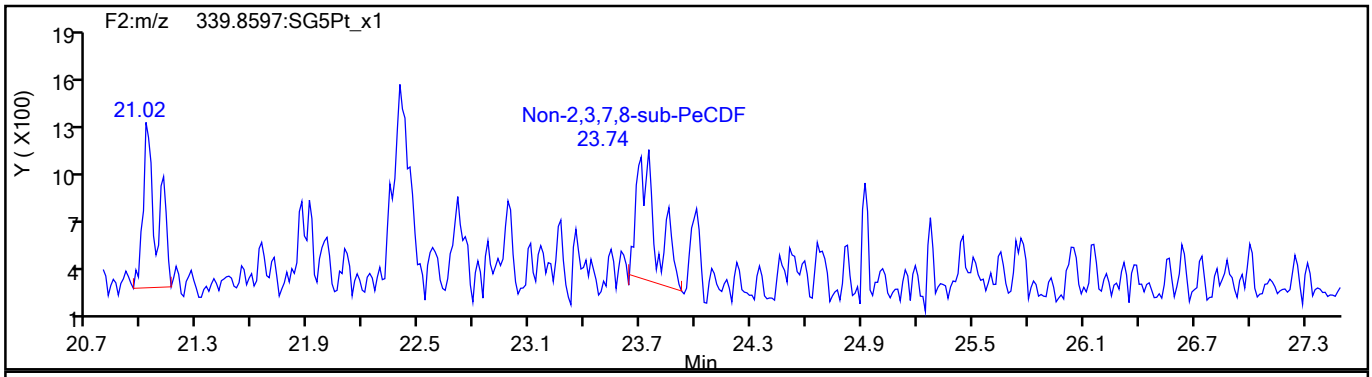

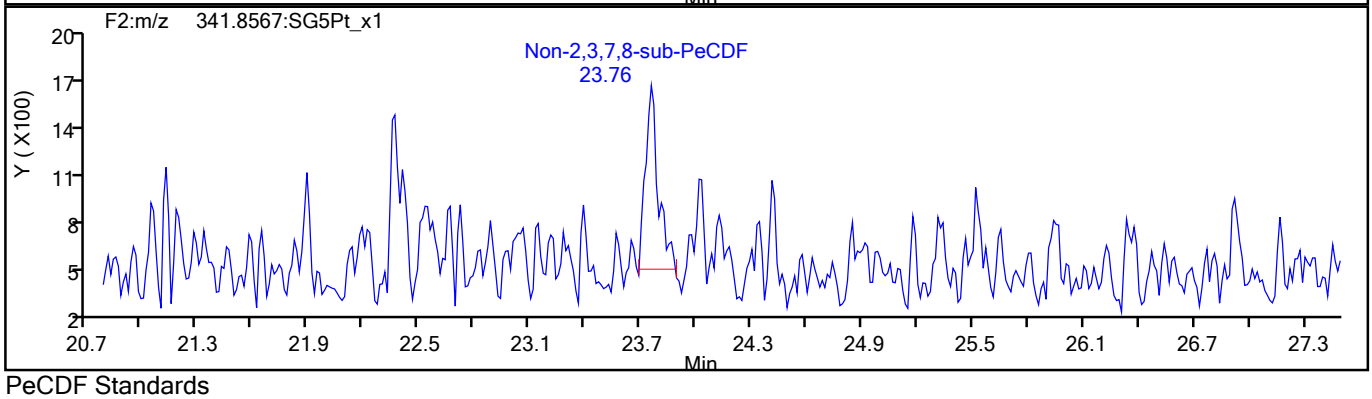

PeCDF Standards

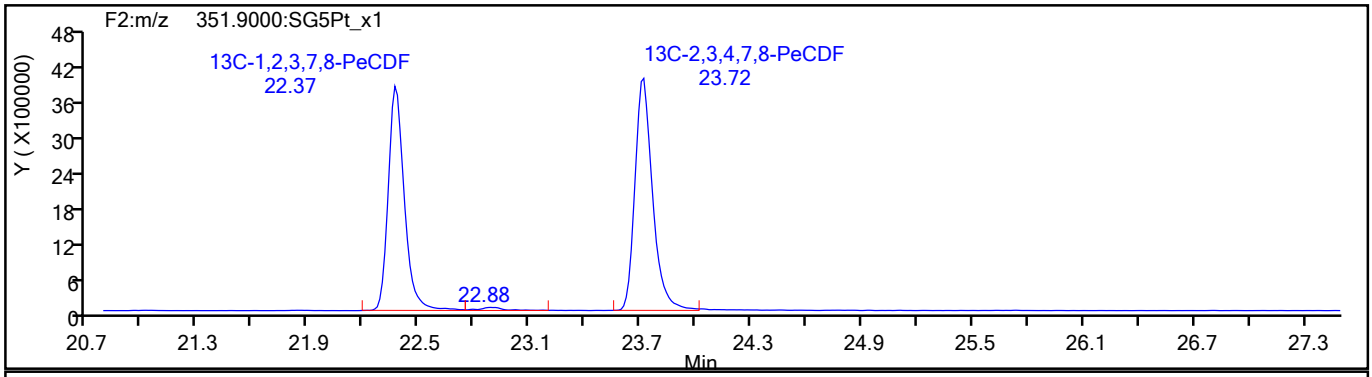

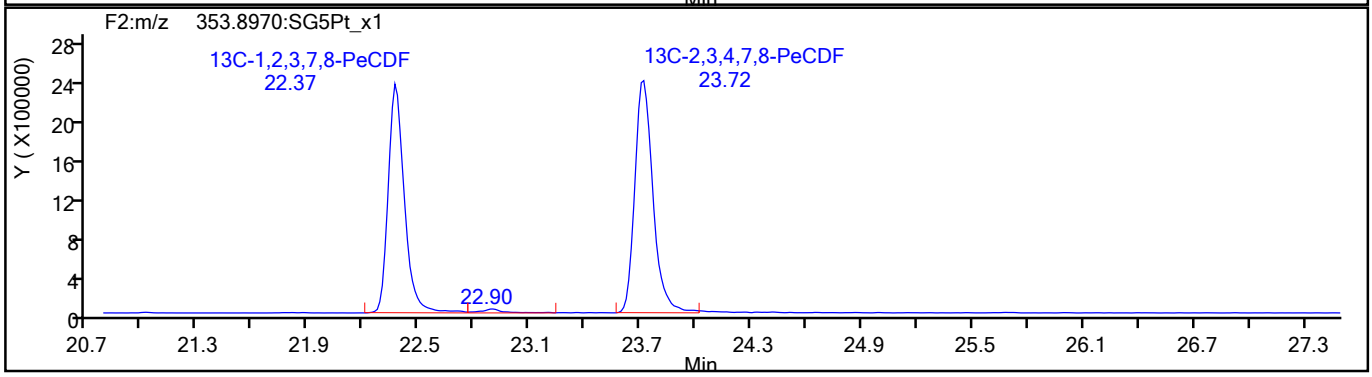

777406

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

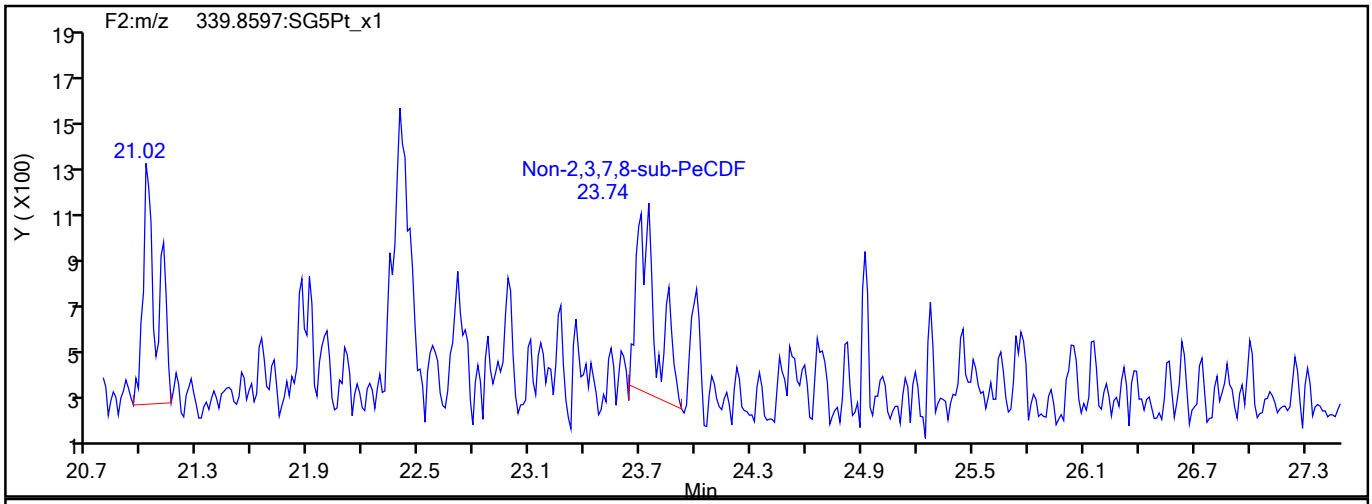

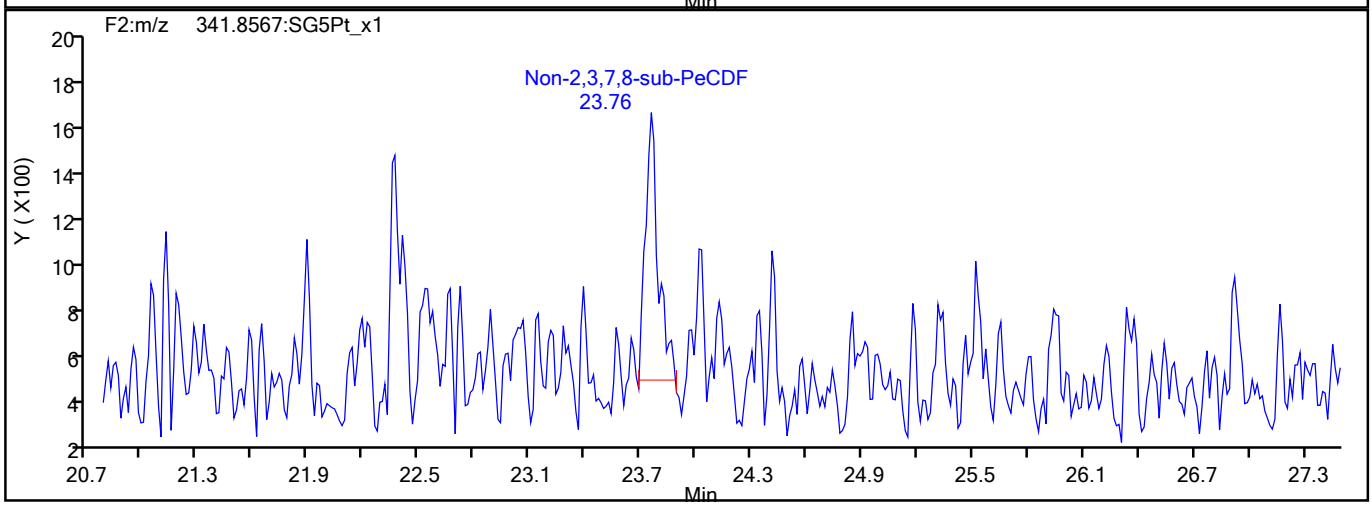

PeCDF Interference Mass

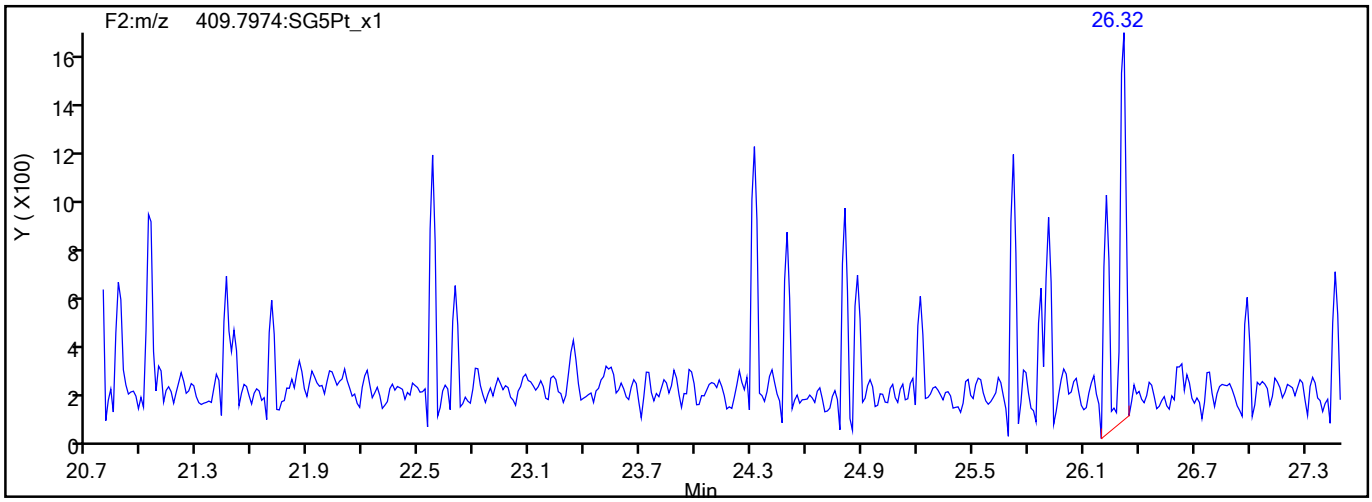

777407

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

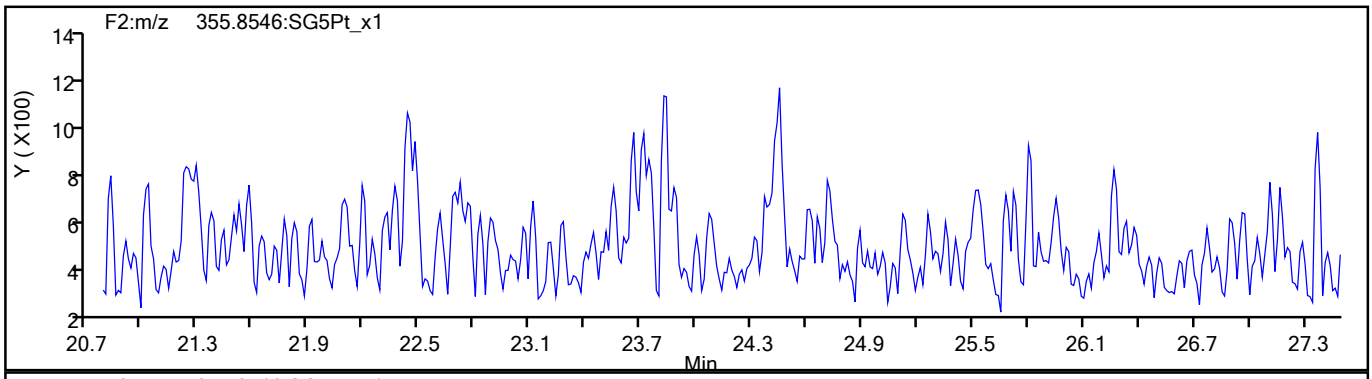

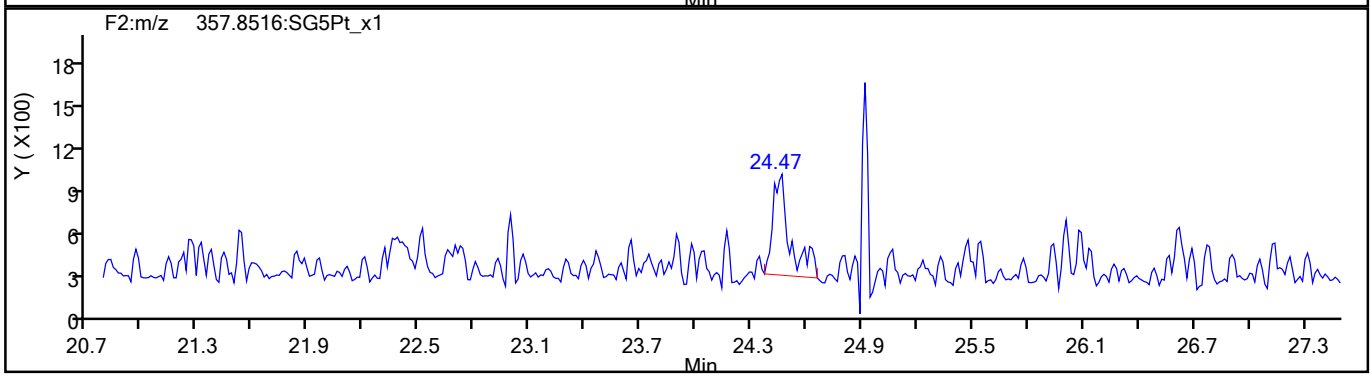

PeCDD Standards

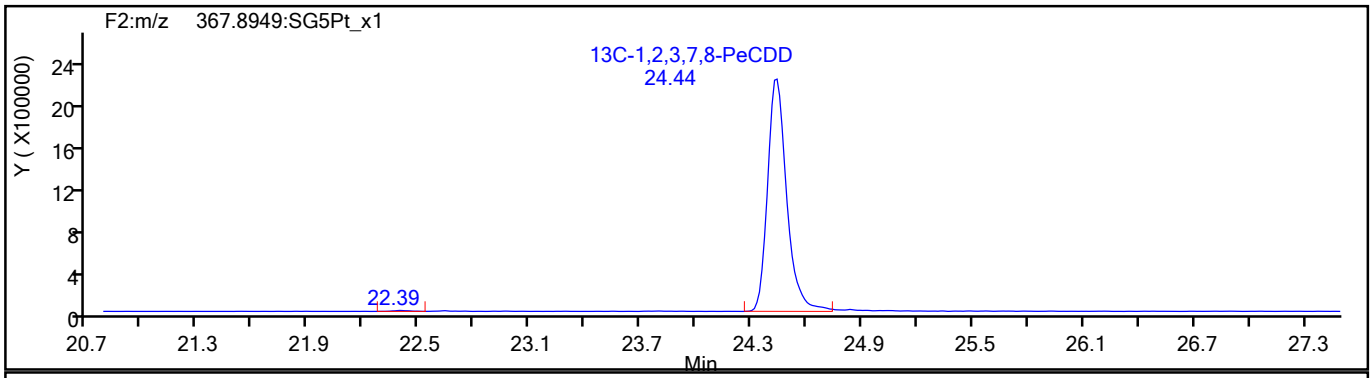

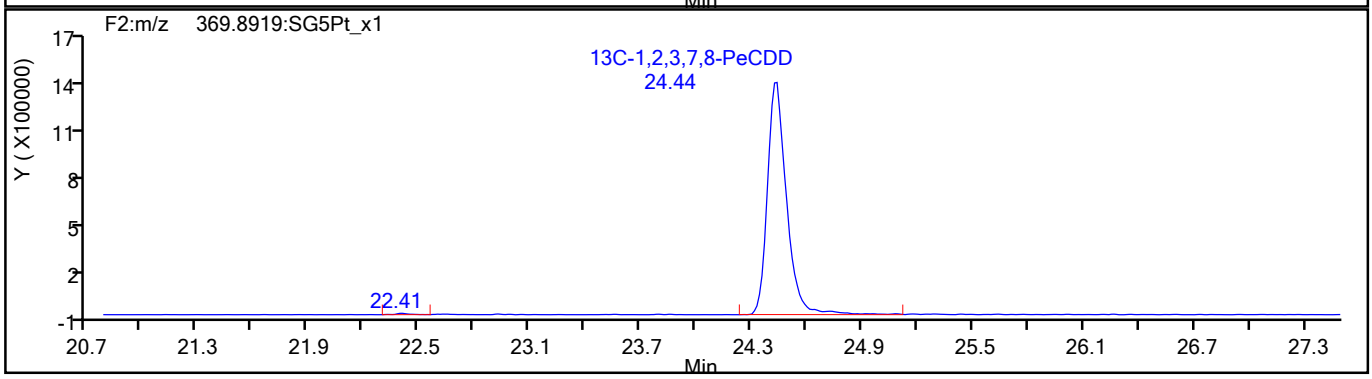

777408

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

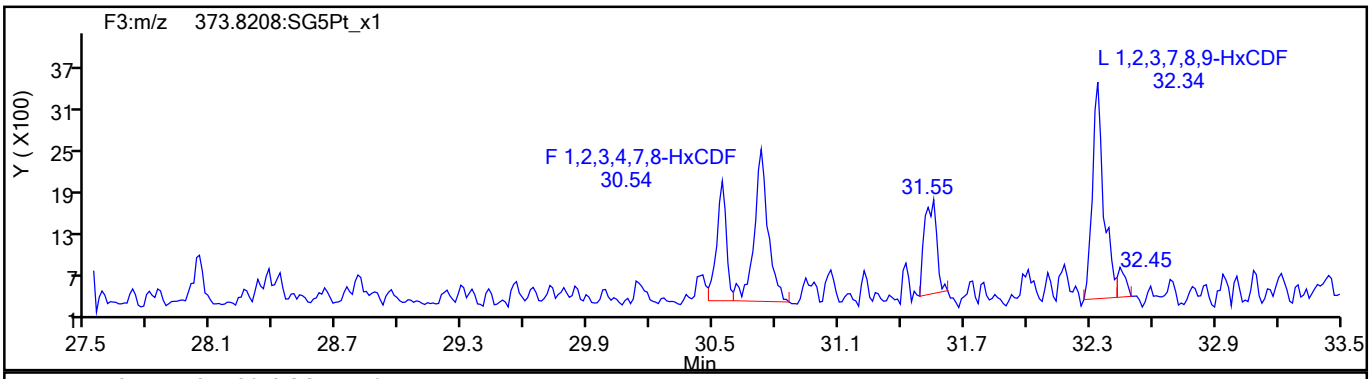

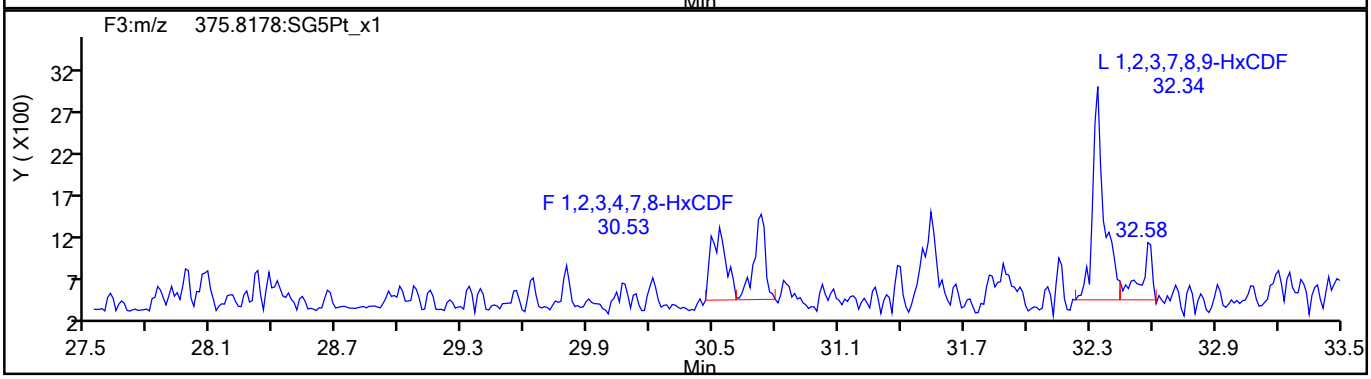

HxCDF Standards

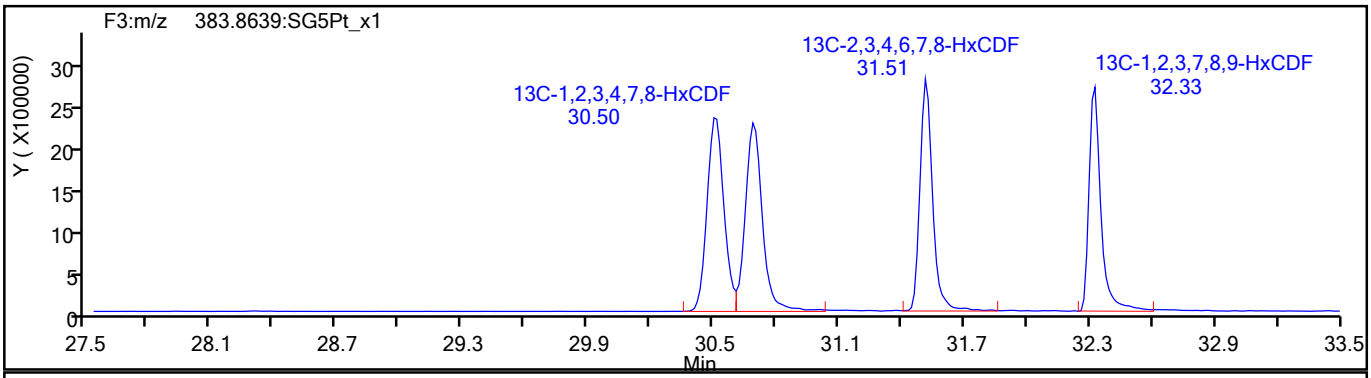

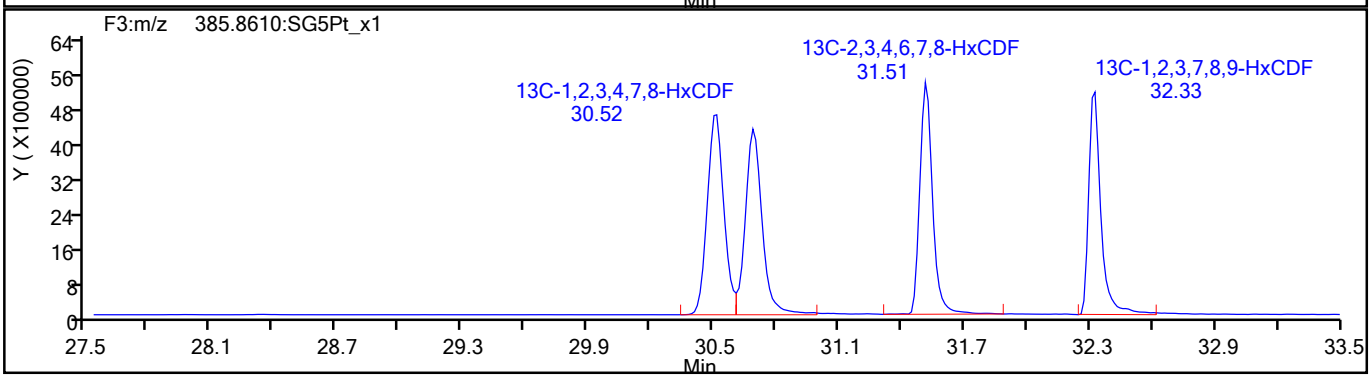

777409

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

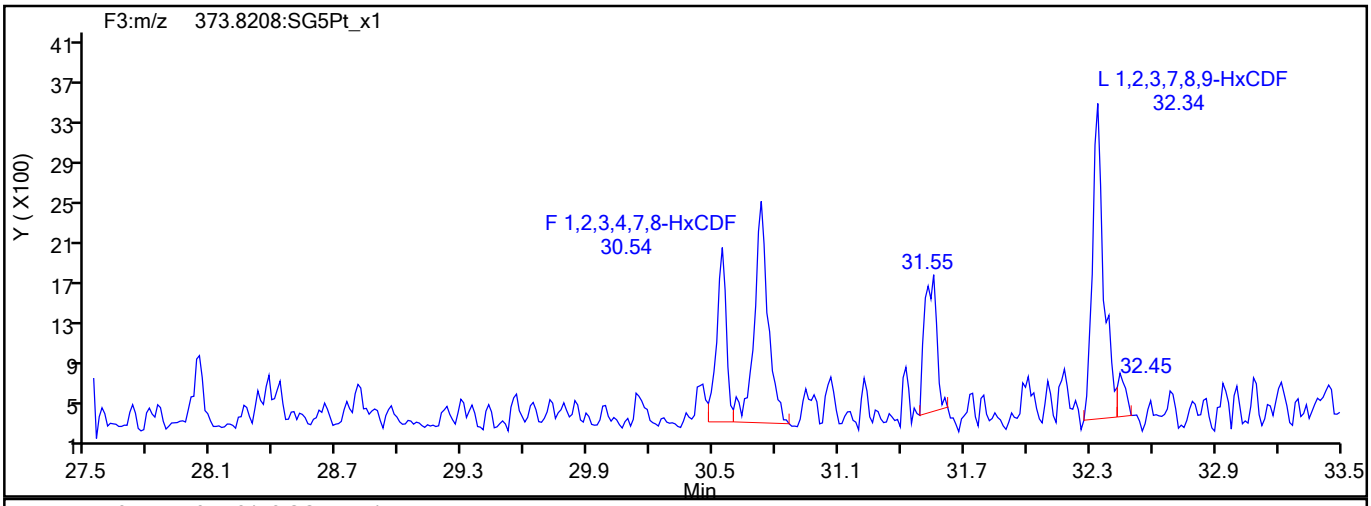

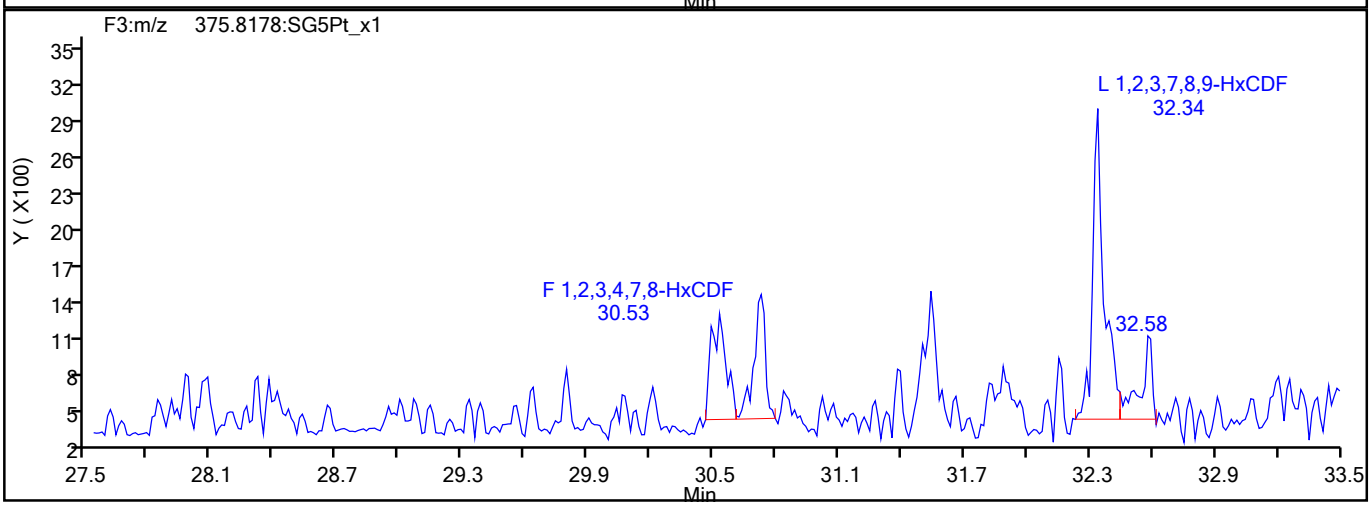

HxCDF Interference Mass

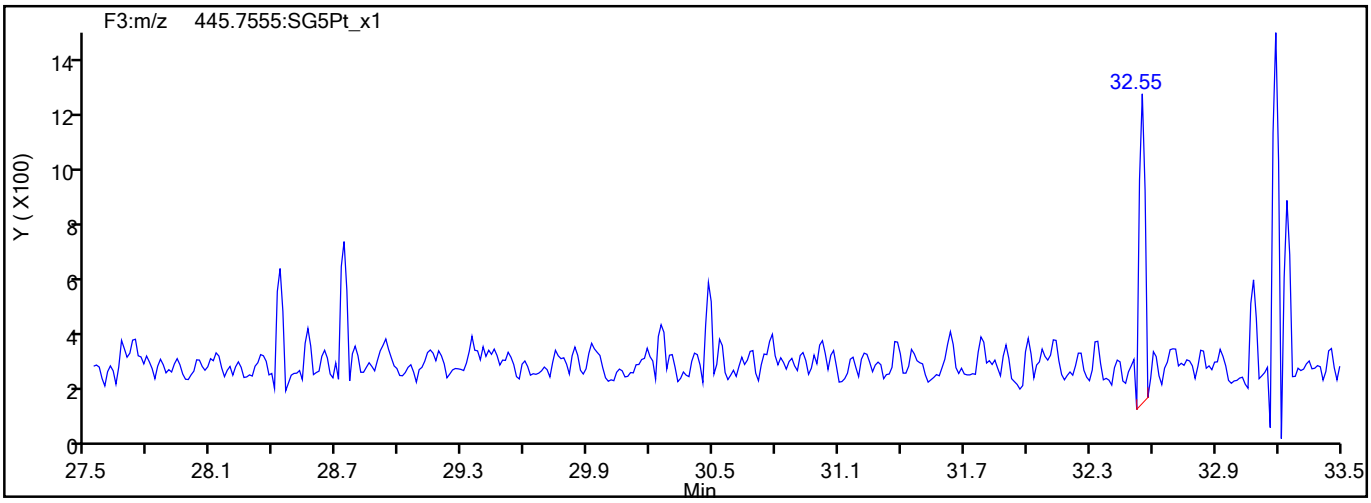

777410

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

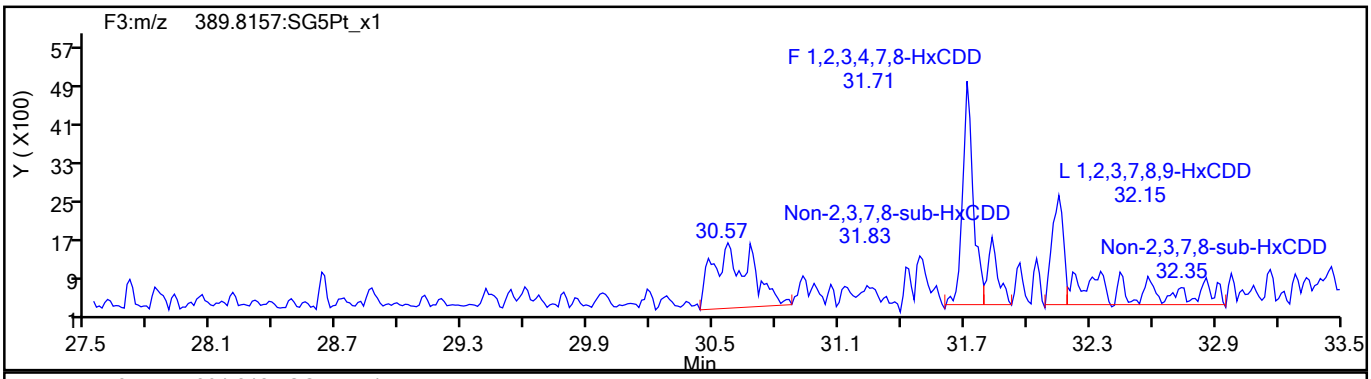

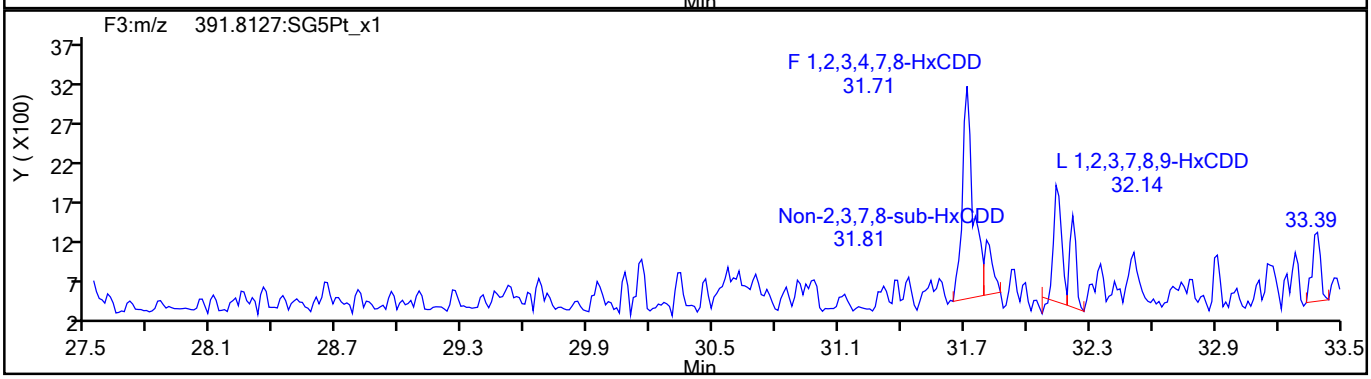

HxCDD Standards

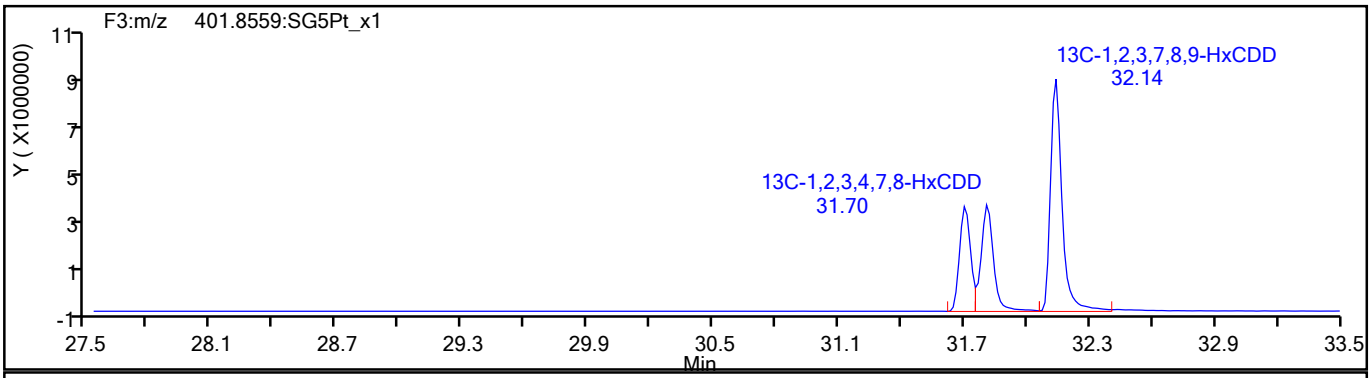

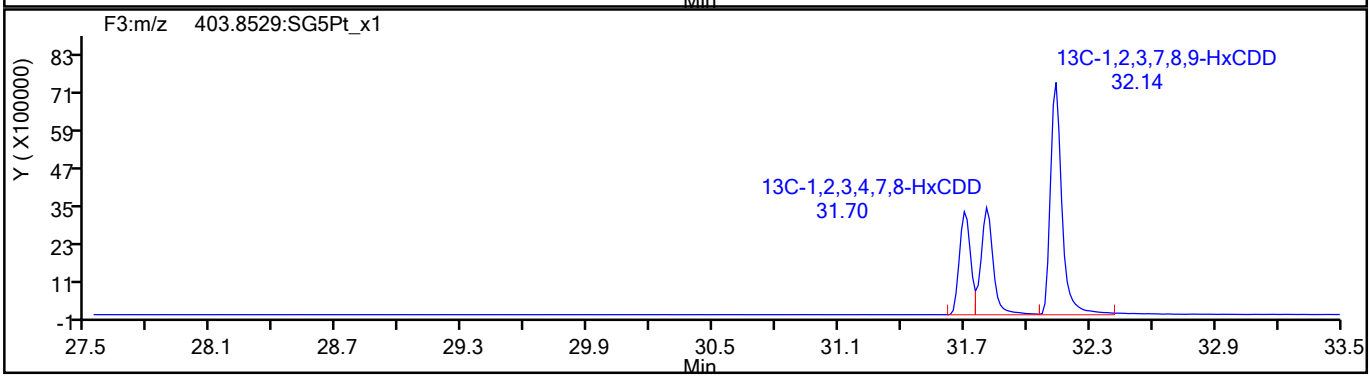

777411

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

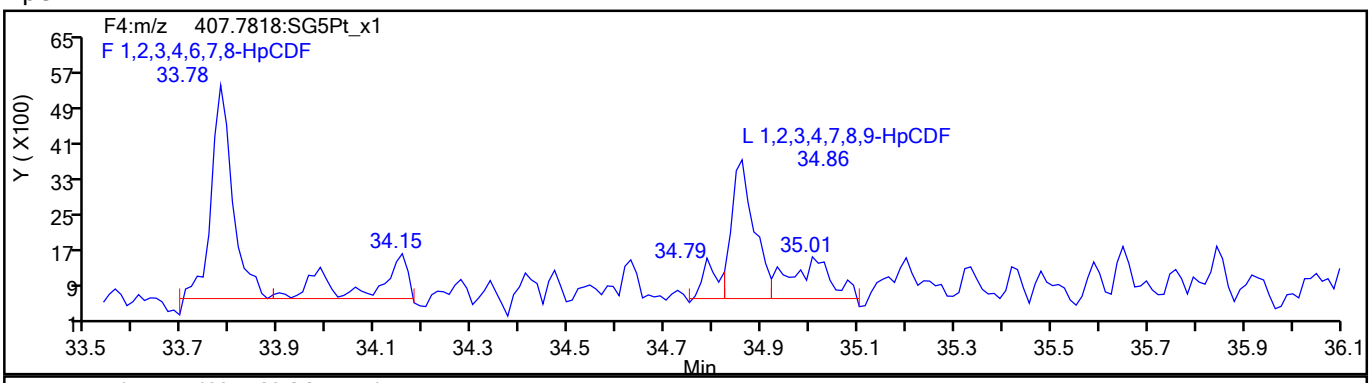

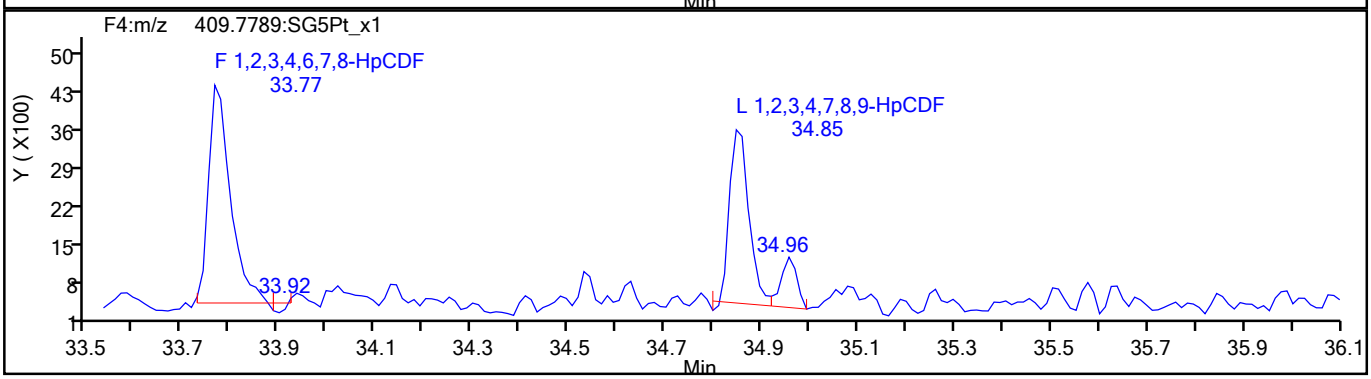

HpCDF Standards

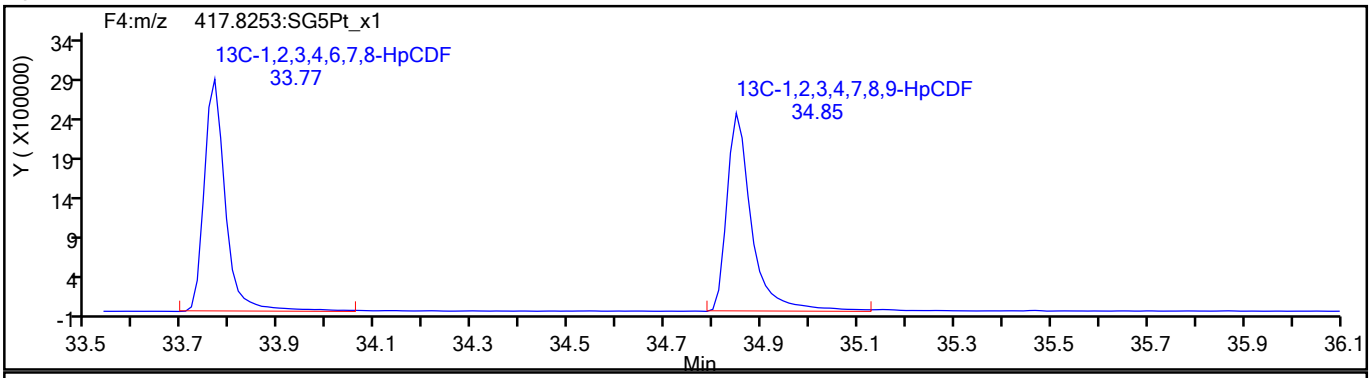

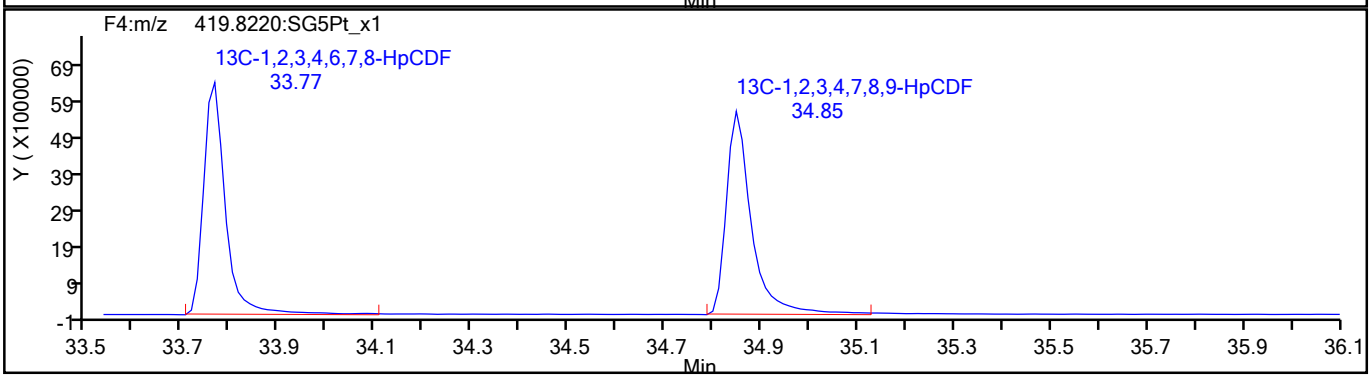

777412

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

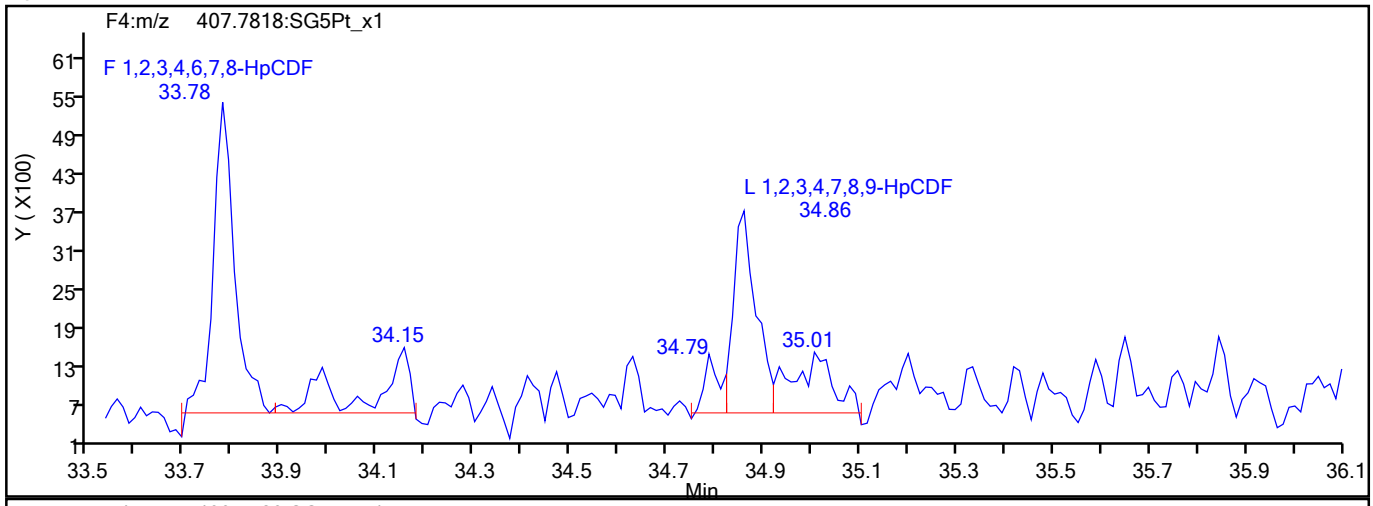

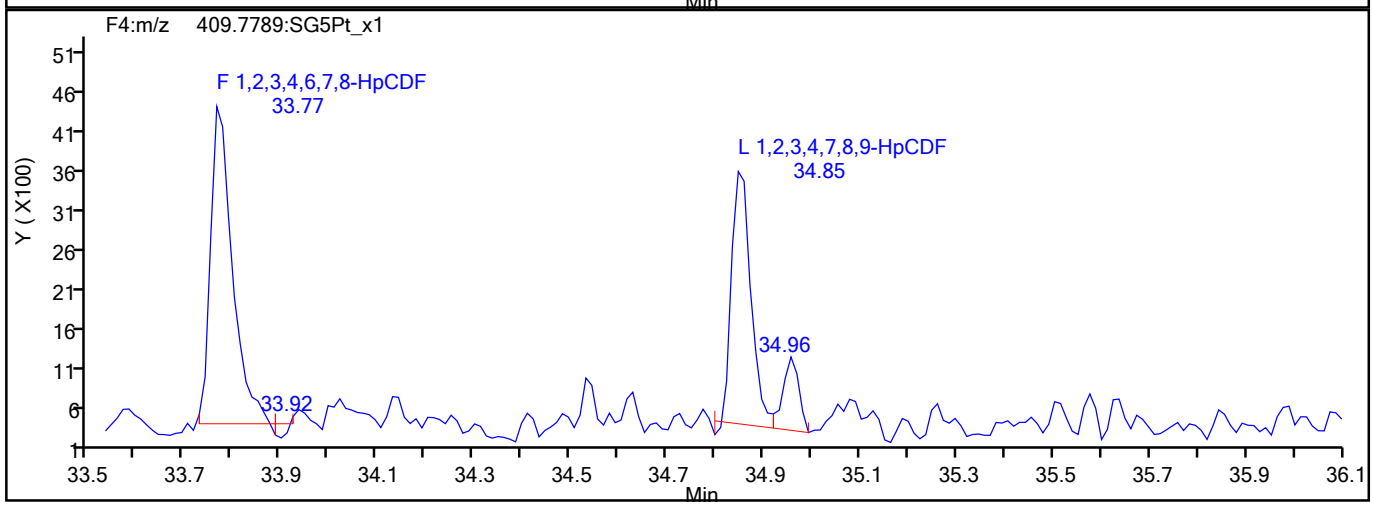

HpCDF Interference Mass

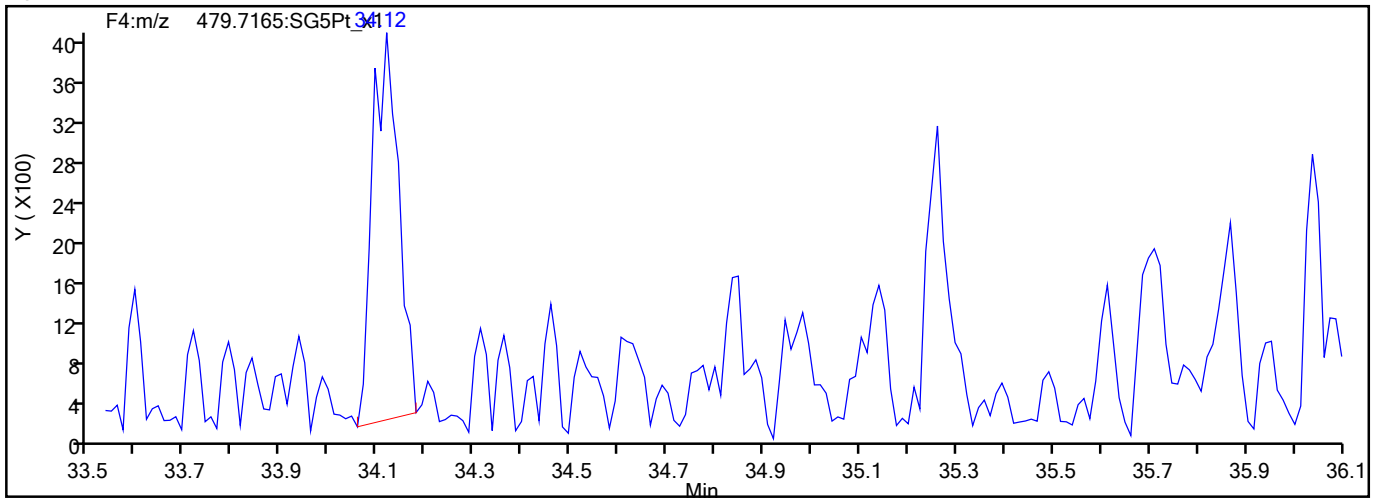

777413

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

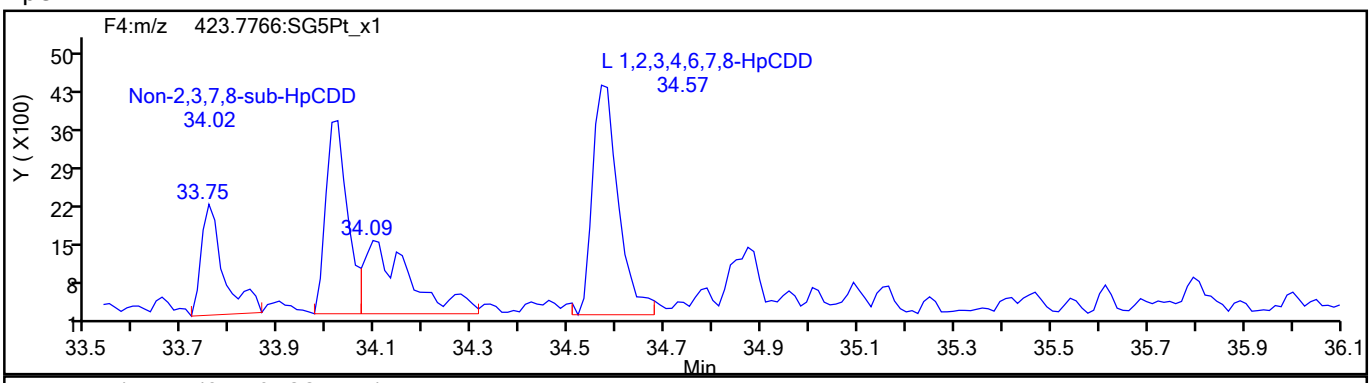

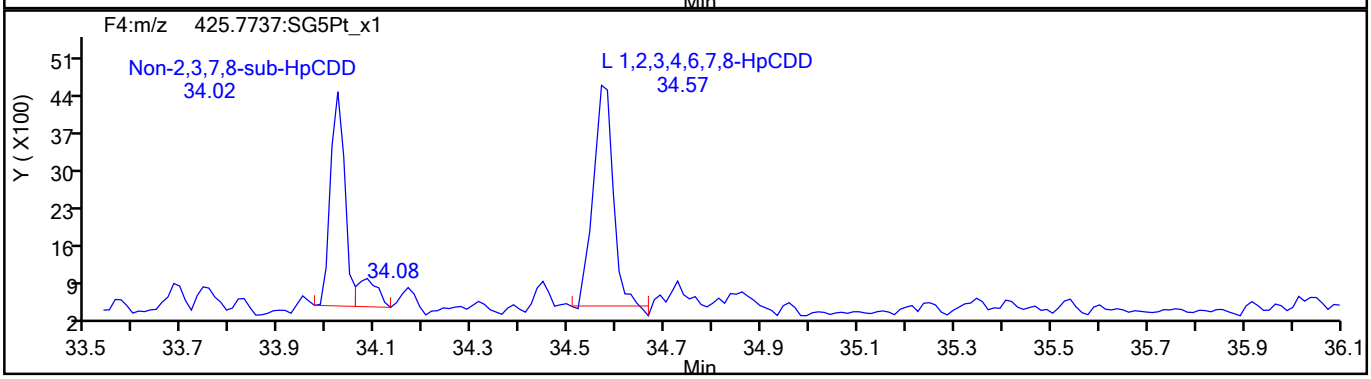

HpCDD Standards

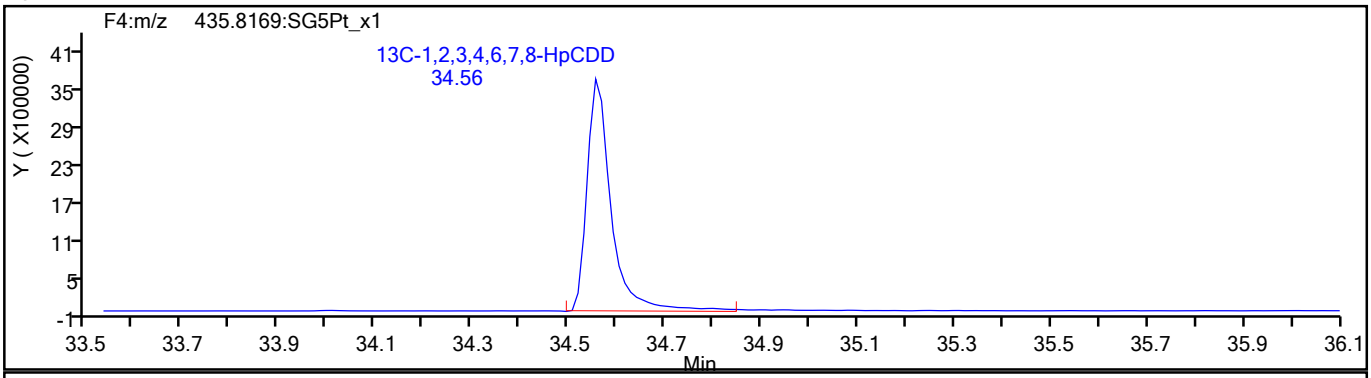

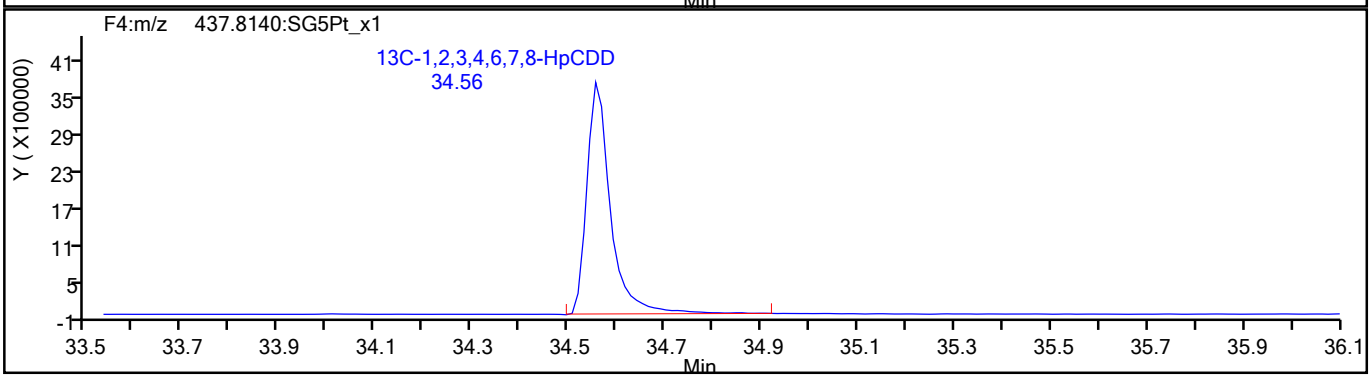

777414

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d		
Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

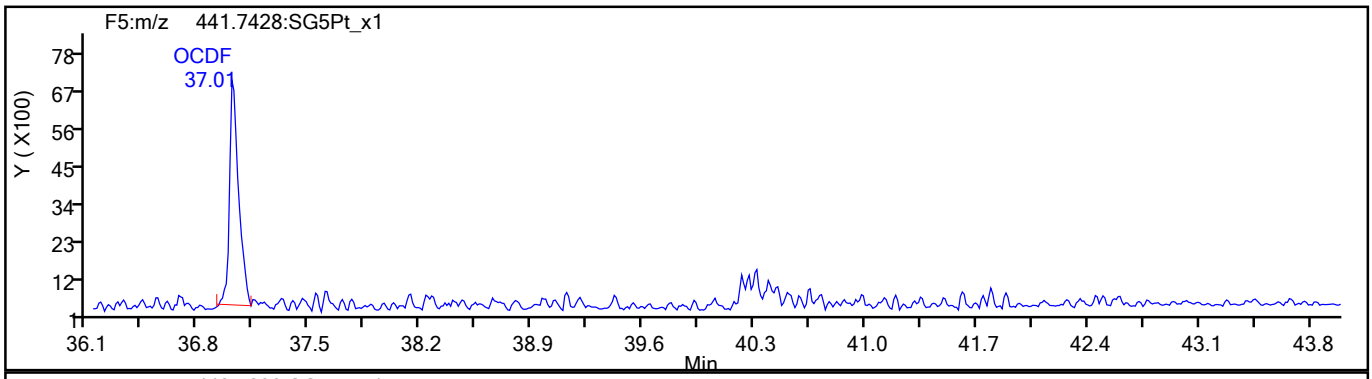

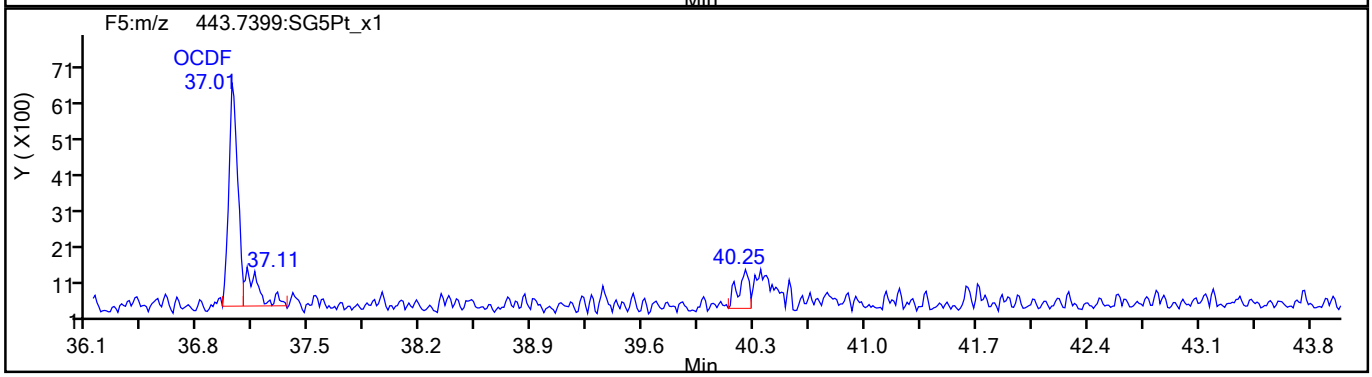

OCDF Standards

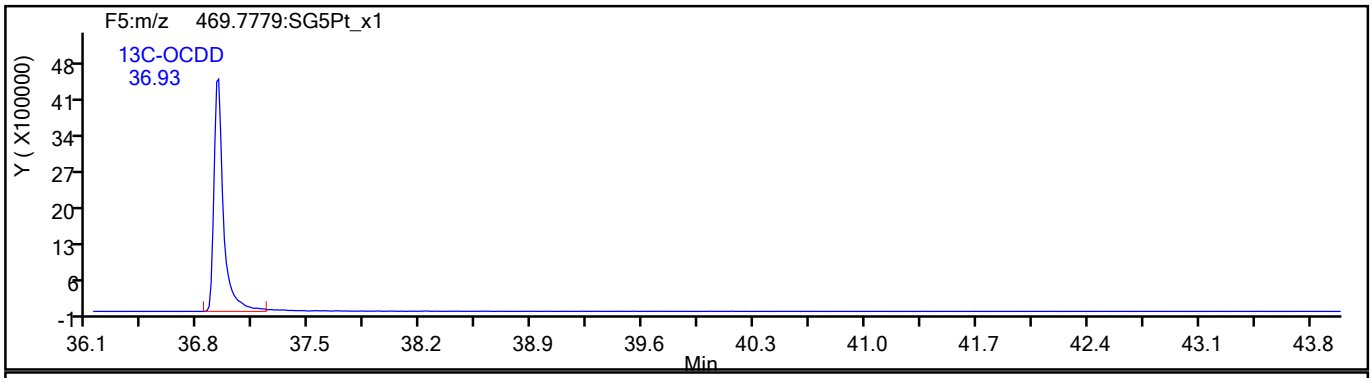

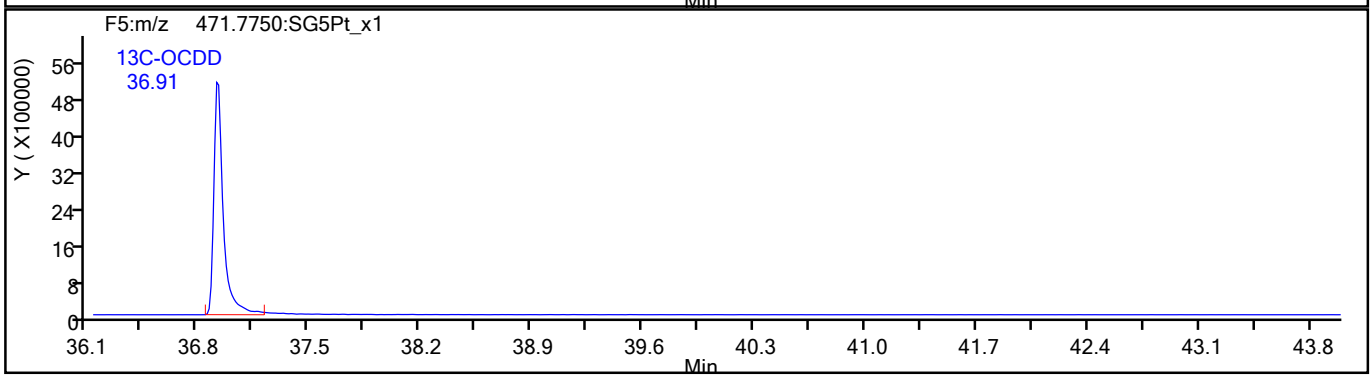

777415

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d		
Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

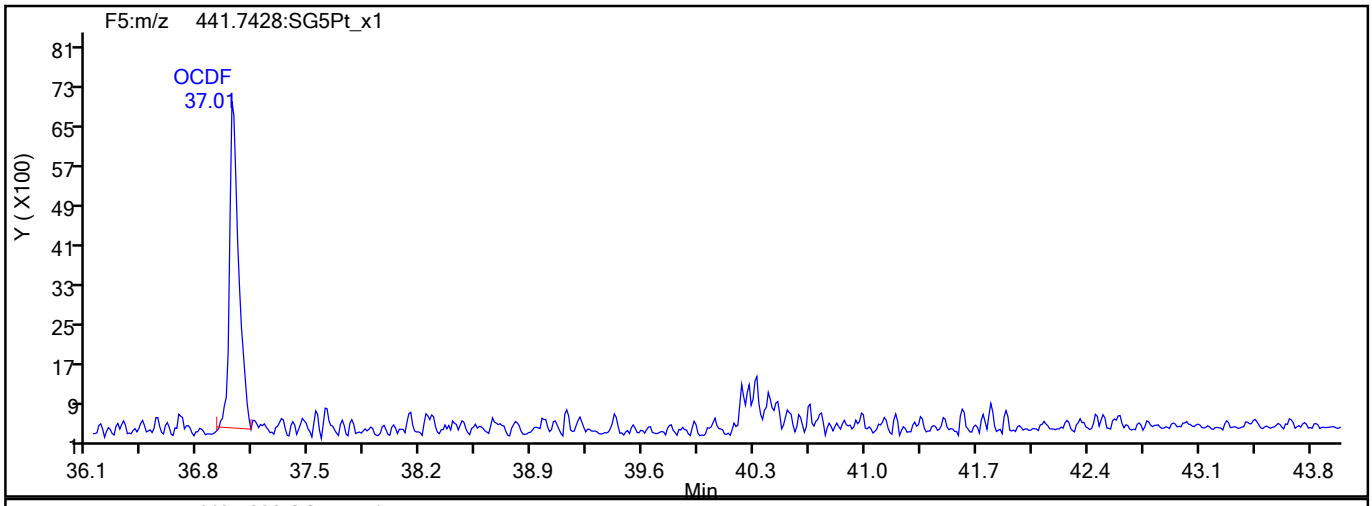

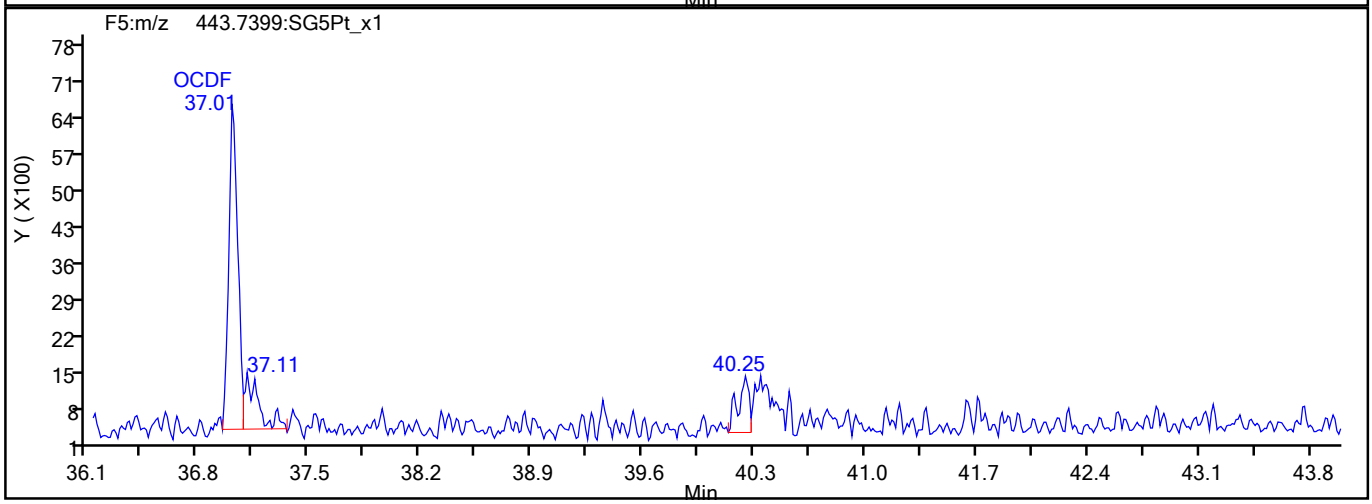

OCDF Interference Mass

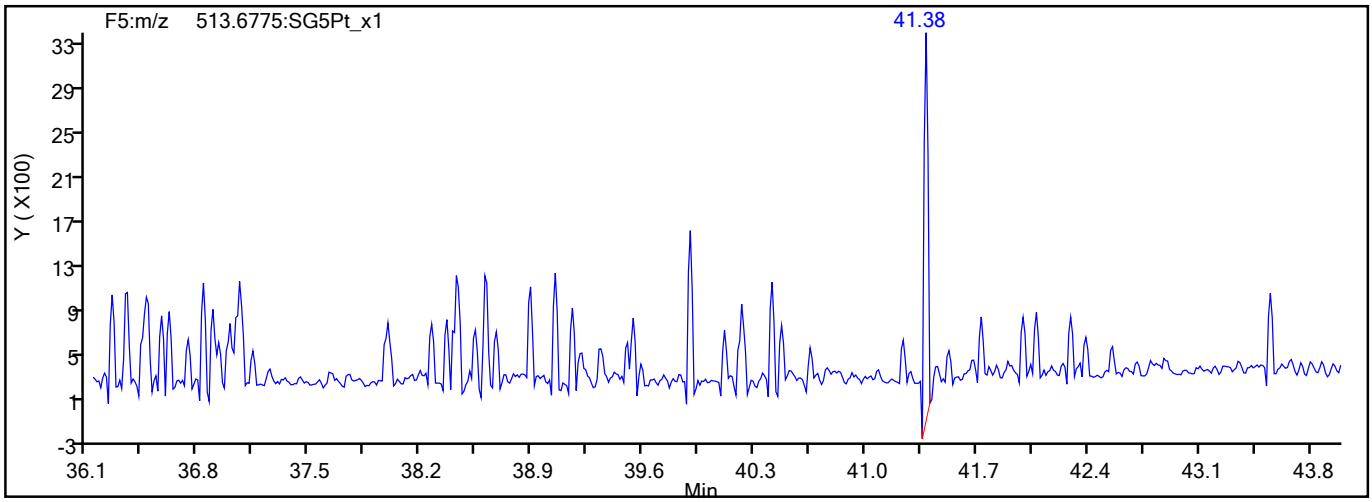

777416

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d		
Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

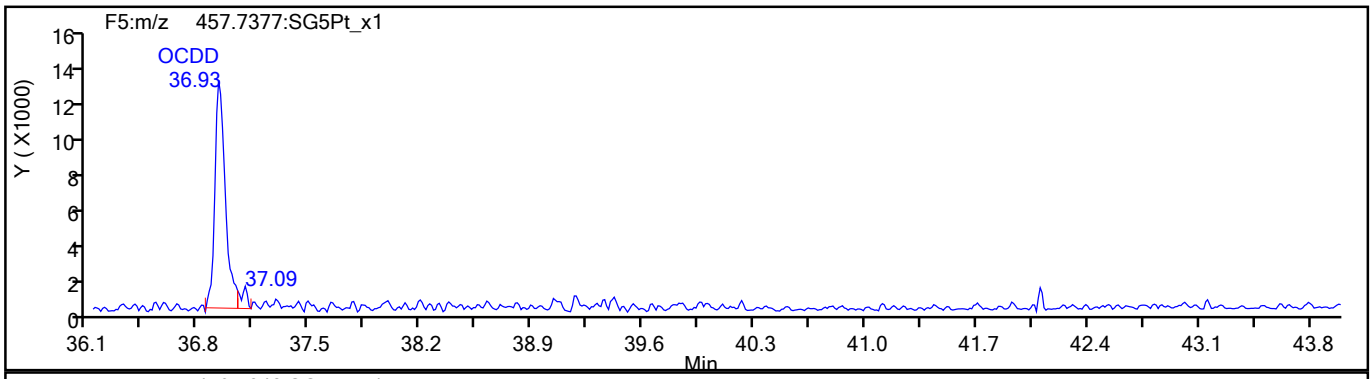

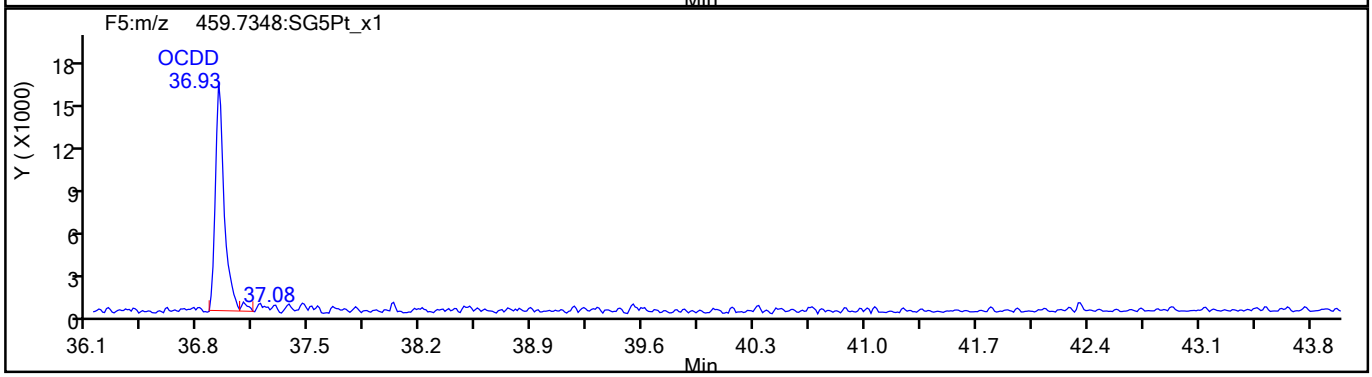

OCDD Standards

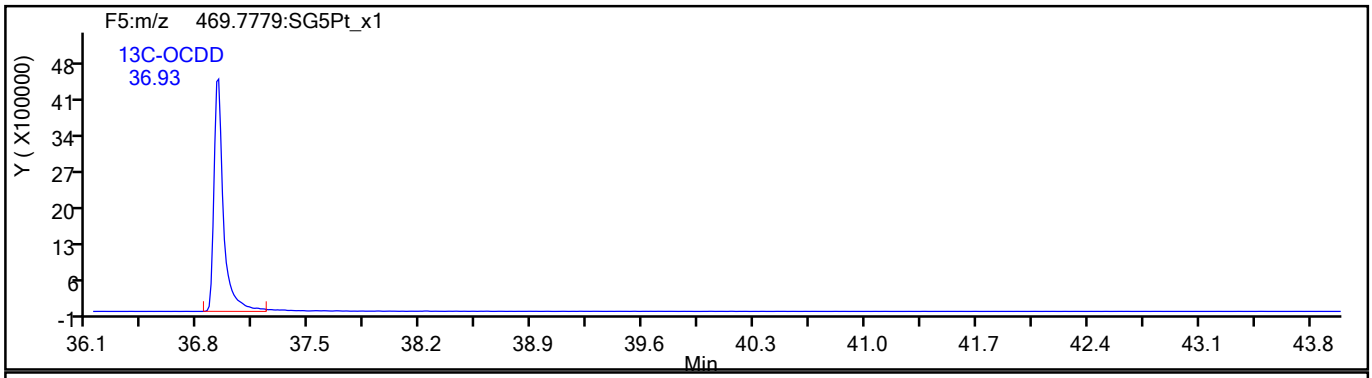

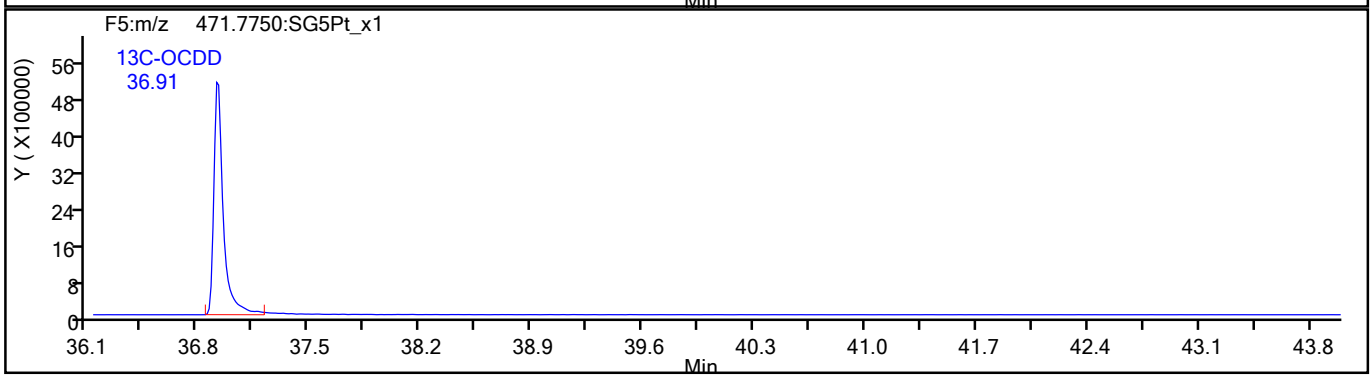

777417

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d		
Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

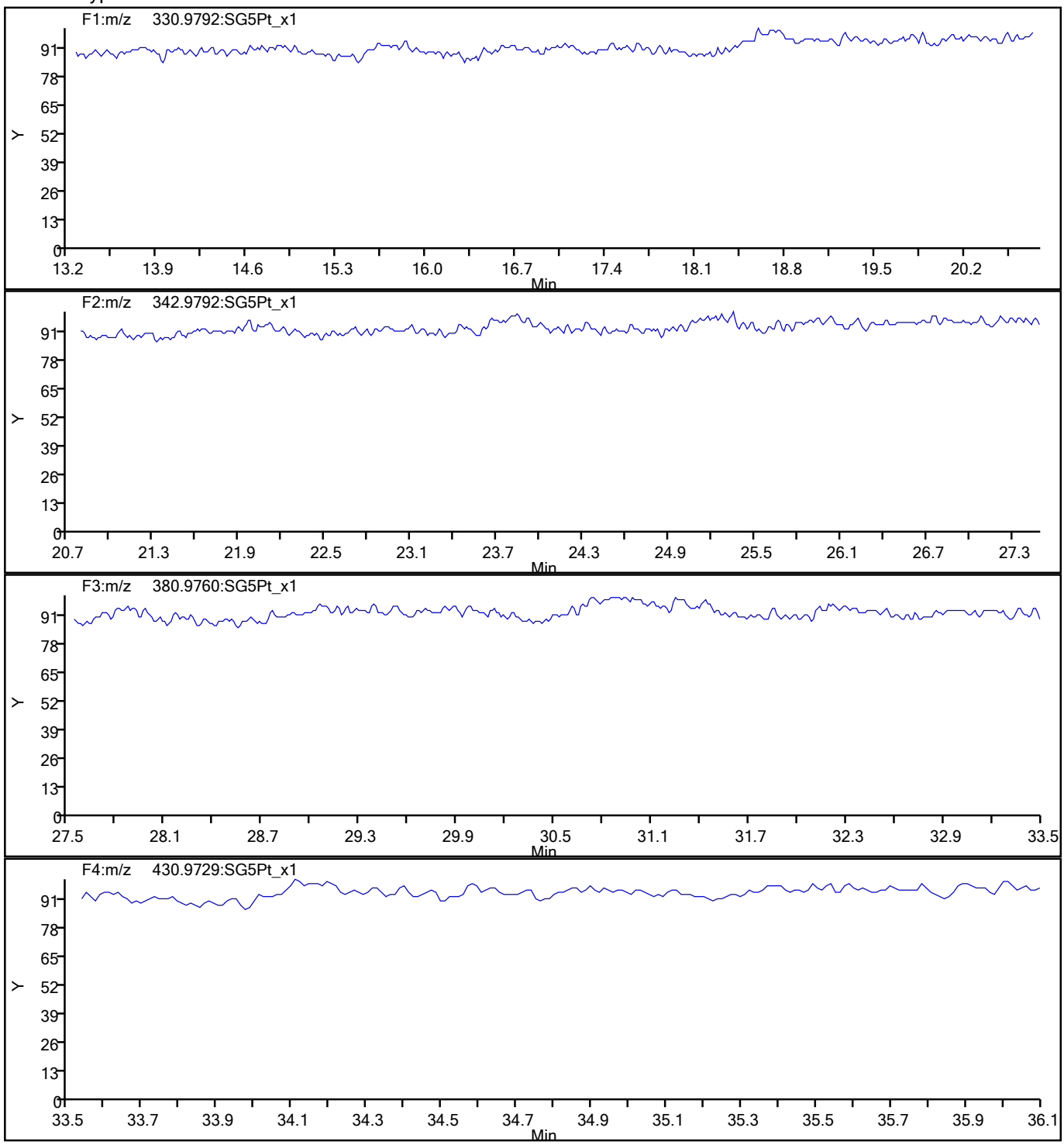

777418

Report Date: 18-Aug-2021 10:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_44.d		
Injection Date:	15-Aug-2021 02:06:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

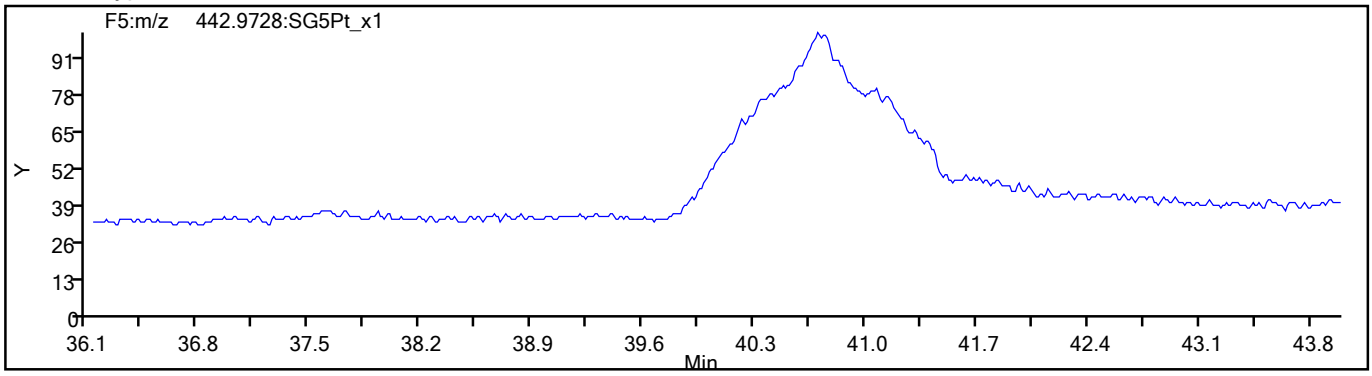

777419

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513586/1-A

Matrix: Sediment Lab File ID: 17au21dfs1_5.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10(g) Date Analyzed: 08/17/2021 17:01

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517196 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.031
51207-31-9	2,3,7,8-TCDF	ND		1.0	0.011
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.041
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.026
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.028
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.0	0.034
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.034
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.031
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.015
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.016
72918-21-9	1,2,3,7,8,9-HxCDF	ND		5.0	0.015
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.015
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.198	J	5.0	0.021
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		5.0	0.039
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.037
3268-87-9	OCDD	0.435	J	10	0.035
39001-02-0	OCDF	ND		10	0.061
41903-57-5	Total TCDD	ND		1.0	0.031
30402-14-3	Total TCDF	ND		1.0	0.13
36088-22-9	Total PeCDD	ND		5.0	0.16
30402-15-4	Total PeCDF	ND		5.0	0.028
34465-46-8	Total HxCDD	ND		5.0	0.16
55684-94-1	Total HxCDF	ND		5.0	0.036
37871-00-4	Total HpCDD	0.357	J	5.0	0.021
38998-75-3	Total HpCDF	ND		5.0	0.039

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513586/1-A

Matrix: Sediment Lab File ID: 17au21dfs1_5.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10(g) Date Analyzed: 08/17/2021 17:01

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517196 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	57		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	61		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	65		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	65		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	60		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	74		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	64		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	61		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	61		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	72		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	65		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	78		26-138
114423-97-1	13C-OCDD	76		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	68		35-197

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d
Lims ID: MB 320-513586/1-A
Client ID:
Sample Type: MB
Inject. Date: 17-Aug-2021 17:01:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513586/1-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:08:49 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 18:32:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.495	799097	0.80	2.1E+04	100.0	100.0				
2,3,7,8-TCDF	20.533						0.005480	0.005480		MU
D 13C-2,3,7,8-TCDF	20.533	613921	0.82	1.3459	57.1	57.1	0.1280	0.1280	57.08	
A Non-2,3,7,8-sub-TCDF	19.916						0.005480	0.0627		RQMU
S Total TCDF							0.0627	0.0627		
D 13C-2,3,7,8-TCDD	21.864	441482	0.78	0.9317	59.3	59.3	0.1206	0.1206	59.30	
2,3,7,8-TCDD	21.899						0.0157	0.0157		U
$ 37Cl4-2,3,7,8-TCDD	21.907	219939		1.0083	27.3	27.3	0.0155	0.0155	68.24	
A Non-2,3,7,8-sub-TCDD	20.750						0.0157	0.0157		RQU
S Total TCDD							0.0157	0.0157		
D 13C-1,2,3,7,8-PeCDF	27.350	557472	1.51	1.1405	61.2	61.2	0.2141	0.2141	61.17	
1,2,3,7,8-PeCDF	27.401						0.0130	0.0130		
D 13C-2,3,4,7,8-PeCDF	28.859	583289	1.60	1.1253	64.9	64.9	0.2170	0.2170	64.86	
2,3,4,7,8-PeCDF	28.934						0.0142	0.0142		
A F1 PeCDFs	24.676						0.005660	0.005660		
A Non-2,3,7,8-sub-PeCDF	28.167						0.0136	0.0136		
S Total PeCDF							0.0142	0.0142		
D 13C-1,2,3,7,8-PeCDD	29.675	334387	1.53	0.7165	58.4	58.4	0.0836	0.0836	58.41	
1,2,3,7,8-PeCDD	29.734						0.0203	0.0203		RQU
A Non-2,3,7,8-sub-PeCDD	28.556						0.0203	0.0777		RQU
S Total PeCDD							0.0777	0.0777		
D 13C-1,2,3,4,7,8-HxCDF	34.986	562635	0.53	0.9648	74.0	74.0	0.2255	0.2255	74.01	
1,2,3,4,7,8-HxCDF	35.028						0.007677	0.007677		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.146	535930	0.52	1.0708	63.5	63.5	0.2032	0.2032	63.52	
1,2,3,6,7,8-HxCDF	35.028						0.008144	0.008144		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.963	499899	0.53	1.0413	60.9	60.9	0.2089	0.2089	60.92	
2,3,4,6,7,8-HxCDF	36.148						0.007599	0.007599		RQU
D 13C-1,2,3,7,8,9-HxCDF	36.856	469783	0.53	0.9731	61.3	61.3	0.2236	0.2236	61.27	
1,2,3,7,8,9-HxCDF	37.025						0.007441	0.007441		RQU
A Non-2,3,7,8-sub-HxCDF	35.074						0.007701	0.0180		RQU
S Total HxCDF							0.0180	0.0180		
* 13C-1,2,3,7,8,9-HxCDD	36.654	787976	1.29	1.8E+04	100.0	100.0				

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-1,2,3,4,7,8-HxCDD	36.174	391222	1.29	0.7587	65.4	65.4	0.1682	0.1682	65.44	
1,2,3,4,7,8-HxCDD	36.182						0.0168	0.0168		U
D 13C-1,2,3,6,7,8-HxCDD	36.283	409175	1.25	0.8593	60.4	60.4	0.1485	0.1485	60.43	
1,2,3,6,7,8-HxCDD	36.182						0.0170	0.0170		U
1,2,3,7,8,9-HxCDD	36.684						0.0156	0.0156		
A Non-2,3,7,8-sub-HxCDD	35.432						0.0164	0.0822		RQU
S Total HxCDD							0.0822	0.0822		
D 13C-1,2,3,4,6,7,8-HpCDF	38.669	378902	0.49	0.7359	65.3	65.3	0.3017	0.3017	65.34	
1,2,3,4,6,7,8-HpCDF	38.686						0.0193	0.0193		RQU
1,2,3,4,7,8,9-HpCDF	40.043						0.0187	0.0187		RQU
D 13C-1,2,3,4,7,8,9-HpCDF	39.916	420192	0.49	0.6854	77.8	77.8	0.3240	0.3240	77.80	
A Non-2,3,7,8-sub-HpCDF	39.277						0.0189	0.0189		
S Total HpCDF							0.0193	0.0193		
D 13C-1,2,3,4,6,7,8-HpCDD	39.604	381174	1.05	0.6745	71.7	71.7	0.2350	0.2350	71.72	
1,2,3,4,6,7,8-HpCDD	39.613	397	1.04	1.0503	0.1097	0.0992	0.0107	0.0107		RQM
A Non-2,3,7,8-sub-HpCDD	39.277	318	1.04	1.0503	0.1034	0.0794	0.0107	0.0794		RQ
S Total HpCDD					0.2131	0.1786	0.0107	0.0107		RQ
D 13C-OCDD	42.111	656031	0.92	0.5446	152.9	152.9	0.1569	0.1569	76.43	
OCDF	42.170						0.0304	0.0304		RQU
OCDD	42.119	757	0.89	1.0620	0.2701	0.2173	0.0177	0.0177		RQM

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d
Lims ID: MB 320-513586/1-A
Client ID:
Sample Type: MB
Inject. Date: 17-Aug-2021 17:01:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513586/1-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:08:49 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 18:32:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.495	21.483	1		354691	47564	32	80	1486		
333.9338	21.486	21.483	0		444406	60975	17	42	3587	0.80(0.65-0.89)	
2,3,7,8-TCDF											MU
303.9016	20.482						1	2			
305.8987	20.482						1	2			
13C-2,3,7,8-TCDF											
315.9419	20.533	20.594	-4	0.955	276238	38140	51	127	748		
317.9389	20.533	20.594	-4	0.955	337683	46326	24	60	1930	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											MU
303.9016	17.312	19.916	-156	0.843	28	13	1	2	13		
305.8987	17.355	19.916	-153	0.845	68	44	1	2	44	0.41(0.65-0.89)	
	Empc Correction				36	16	1	2	16		
13C-2,3,7,8-TCDD											
331.9368	21.864	21.790	4	1.017	193397	25177	32	80	787		
333.9338	21.881	21.790	5	1.018	248085	34117	17	42	2007	0.78(0.65-0.89)	
2,3,7,8-TCDD											U
319.8965	21.825						3	7			
321.8936	21.825						1	2			
37Cl4-2,3,7,8-TCDD											
327.8847	21.907	21.905	0	1.019	219939	28238	7	17	4034		
A Non-2,3,7,8-sub-TCDD											U
319.8965	20.750	20.750	0	0.949	48	23	3	7			
	Empc Correction				30	19	3	7	0		
321.8936	20.750	20.750	0	0.949	40	25	1	2		1.20(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	27.350	27.343	0	1.272	335540	53824	58	145	928		
353.8970	27.350	27.343	0	1.272	221932	33777	48	120	704	1.51(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.368						1	2			
341.8567	27.368						4	10			
13C-2,3,4,7,8-PeCDF											
351.9000	28.859	28.867	0	1.343	359159	51112	58	145	881		
353.8970	28.875	28.867	1	1.343	224130	32642	48	120	680	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.884						1	2			
341.8567	28.884						4	10			
A F1 PeCDFs											
339.8597	24.676						1	2			
341.8567	24.676						1	2			
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.167						1	2			
341.8567	28.167						4	10			
13C-1,2,3,7,8-PeCDD											
367.8949	29.675	29.667	0	1.381	202336	27337	16	40	1709		
369.8919	29.684	29.667	1	1.381	132051	19768	10	25	1977	1.53(1.32-1.78)	
1,2,3,7,8-PeCDD											RQU
355.8546	29.692						3	7			
357.8516	29.692						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.556	28.556	0	0.962	304	118	3	7			
	Empc Correction				210	84	3	7	0		
357.8516	28.556	28.556	0	0.962	156	68	1	2		1.95(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.986	34.974	1	0.954	195123	37085	54	135	687		
385.8610	34.986	34.974	1	0.954	367512	76444	101	252	757	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	35.000						2	5			
375.8178	35.000						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.146	35.134	1	0.959	184147	34968	54	135	648		
385.8610	35.154	35.134	1	0.959	351783	65864	101	252	652	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.151						2	5			
375.8178	35.151						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.963	35.951	1	0.981	172829	38826	54	135	719		
385.8610	35.963	35.951	1	0.981	327070	69530	101	252	688	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQU
373.8208	35.968						2	5			
375.8178	35.968						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.856	36.843	1	1.006	163509	37541	54	135	695		
385.8610	36.848	36.843	0	1.005	306274	70829	101	252	701	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQU
373.8208	36.852						2	5			
375.8178	36.852						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.529	35.074	-93	0.958	61	31	2	5	16		
375.8178	33.571	35.074	-90	0.960	51	23	2	5	12	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.654	36.641	1		443438	99421	59	147	1685		
403.8529	36.654	36.641	1		344538	78478	32	80	2452	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.174	36.161	1	0.987	220623	48424	59	147	821		
403.8529	36.182	36.161	1	0.987	170599	35600	32	80	1113	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											U
389.8158	36.178						3	7			
391.8127	36.178						3	7			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.283	36.279	0	0.990	227133	50882	59	147	862		
403.8529	36.283	36.279	0	0.990	182042	38077	32	80	1190	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											U
389.8158	36.296						3	7			
391.8127	36.296						3	7			
1,2,3,7,8,9-HxCDD											
389.8158	36.658						3	7			
391.8127	36.658						3	7			
A Non-2,3,7,8-sub-HxCDD											U
389.8158	35.053	35.432	-23	0.966	183	48	3	7	16		
391.8127	35.062	35.432	-22	0.966	164	56	3	7	19	1.12(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.669	38.647	1	1.055	124116	30519	63	157	484		
419.8220	38.661	38.647	1	1.055	254786	66630	95	237	701	0.49(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQU
407.7817	38.654						9	22			
409.7788	38.654						2	5			
1,2,3,4,7,8,9-HpCDF											RQU
407.7817	39.900						9	22			
409.7788	39.900						2	5			
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.916	39.901	1	1.089	138143	37432	63	157	594		
419.8220	39.916	39.901	1	1.089	282049	73073	95	237	769	0.49(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.277						9	22			
409.7788	39.277						2	5			

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.604	39.590	1	1.080	195625	54023	53	132	1019		
437.8140	39.604	39.590	1	1.080	185549	52645	60	150	877	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											RQM
423.7767	39.613	39.597	1	1.000	244	64	4	10	16		M
	Empc Correction				202	77	4	10	19		
425.7737	39.621	39.597	1	1.000	195	75	1	2	75	1.25(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.989	39.277	-17	0.984	258	73	4	10	18		
	Empc Correction				162	42	4	10	11		
425.7737	38.964	39.277	-19	0.984	156	41	1	2	41	1.65(0.88-1.20)	
13C-OCDD											
469.7780	42.111	42.094	1	1.149	314902	77358	24	60	3223		
471.7750	42.111	42.094	1	1.149	341129	82612	37	92	2233	0.92(0.76-1.02)	
OCDF											RQU
441.7428	42.187						2	5			
443.7399	42.187						11	27			
OCDD											RQM
457.7377	42.119	42.103	1	1.000	540	229	3	7	76		M
	Empc Correction				356	164	3	7	55		
459.7348	42.119	42.103	1	1.000	401	185	3	7	62	1.35(0.76-1.02)	M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d
Lims ID: MB 320-513586/1-A
Client ID:
Inject. Date: 17-Aug-2021 17:01:00 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	613921	84466

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	613921	84466

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.312	28	13	68	44	0.0145	0.41	RQ
17.312	28	13	36	16	0.009651		Empc Correction
18.815	37	23	79	16	0.0175	0.47	RQ
18.815	37	23	48	29	0.0128		Empc Correction
19.253	9	7	53	21	0.009349	0.17	RQ
19.253	9	7	11	9	0.003016		Empc Correction
19.820	181	83	291	94	0.0712	0.62	RQ
19.820	181	83	235	107	0.0627		Empc Correction
19.863	92	55	104	72	0.0296	0.88	
20.645	94	53	64	39	0.0238	1.47	RQ
20.645	49	30	64	39	0.0170		Empc Correction
20.928	31	18	31	19	0.009349	1.00	RQ
20.928	23	14	31	19	0.008143		Empc Correction
23.547	26	13	31	15	0.008595	0.84	

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	441482	59294

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	441482	59294

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.122	48	23	40	25	0.0185	1.20	RQ
22.122	30	19	40	25	0.0147		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDD, RT: 28.556

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	334387	47105

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	334387	47105

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
28.791	42	25	12	7	0.0154	3.50	RQ
28.791	18	10	12	7	0.008573		Empc Correction
28.993	27	14	37	22	0.0183	0.73	RQ
28.993	27	14	17	9	0.0126		Empc Correction
30.307	235	79	107	39	0.0977	2.20	RQ
30.307	165	60	107	39	0.0777		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	562635	113529
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	535930	100832
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	499899	108356
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	469783	108370

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	517061	107771

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.529	61	31	51	23	0.0180	1.20	
36.308	89	40	34	21	0.0197	2.62	RQ
36.308	42	26	34	21	0.0122		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	391222	84024
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	409175	88959
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	400198	86491

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.053	183	48	164	56	0.0822	1.12	
35.963	128	44	157	22	0.0675	0.82	RQ
35.963	128	44	103	35	0.0547		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDF, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	378902	97149
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	420192	110505

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	399547	103827

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	381174	106668

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	381174	106668

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.989	258	73	156	41	0.1034	1.65	RQ
38.989	162	42	156	41	0.0794		Empc Correction
Signal Totals:							
	162	42	156	41			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	414	114				1.65	RQ
	318	83					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.1034 = (414 * 100.000) / (381174 * 1.050)

Empc Amount: 0.0794 = (318 * 100.000) / (381174 * 1.050)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 3

Processing Integration Results

RT: 39.61
Area: 310
Amount: 0.077433
Amount Units: pg/ul

Manual Integration Results

RT: 39.61
Area: 439
Amount: 0.109655
Amount Units: pg/ul
Reviewer: dadunj, 19-Aug-2021 12:07:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 39.61
Area: 153
Amount: 0.077433
Amount Units: pg/ul

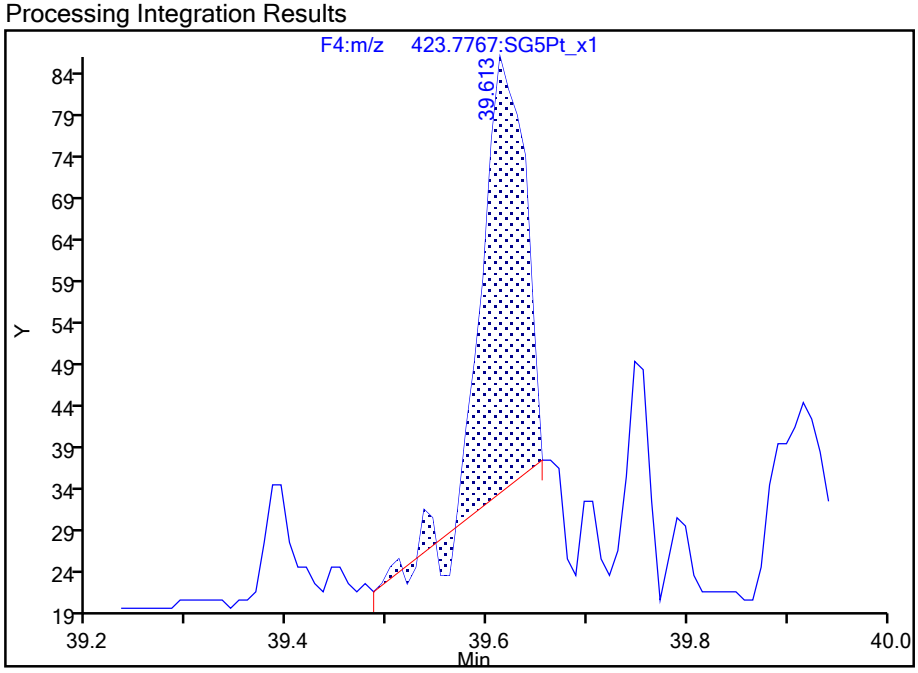

Manual Integration Results

RT: 39.61
Area: 244
Amount: 0.109655
Amount Units: pg/ul

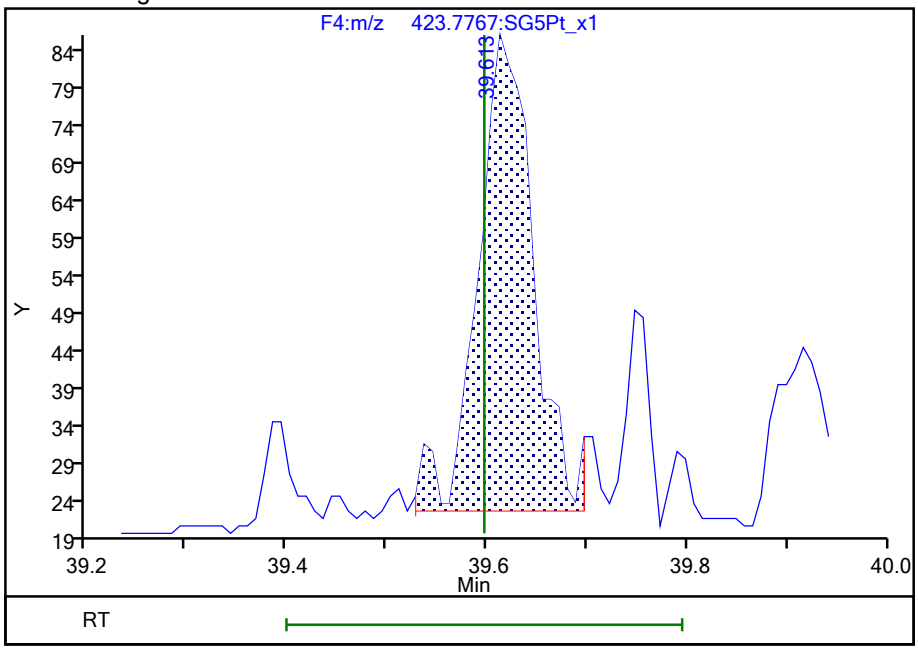

Reviewer: dadunj, 19-Aug-2021 12:07:16
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 39.62
Area: 157
Amount: 0.077433
Amount Units: pg/ul

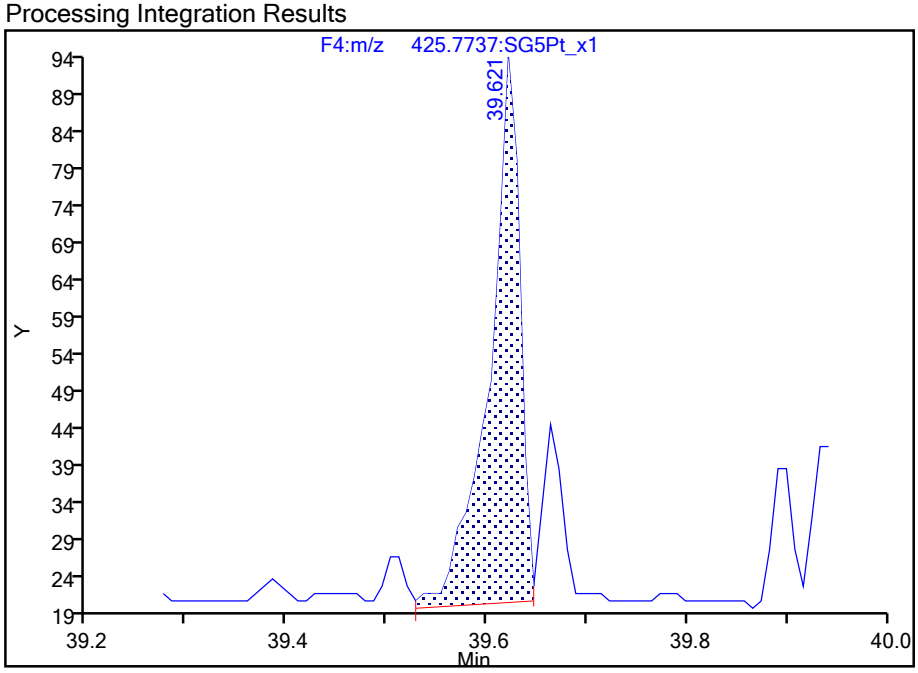

Manual Integration Results

RT: 39.62
Area: 195
Amount: 0.109655
Amount Units: pg/ul

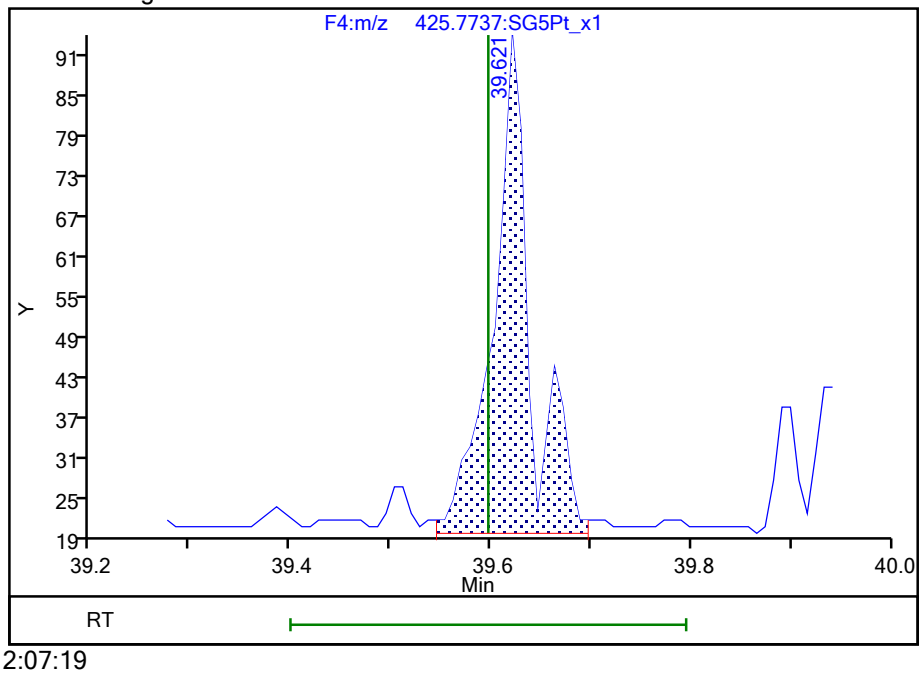

Reviewer: dadunj, 19-Aug-2021 12:07:19

Audit Action: Manually Integrated Audit Reason: Baseline

777437

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 2

Processing Integration Results

RT: 42.12
Area: 542
Amount: 0.343334
Amount Units: pg/ul

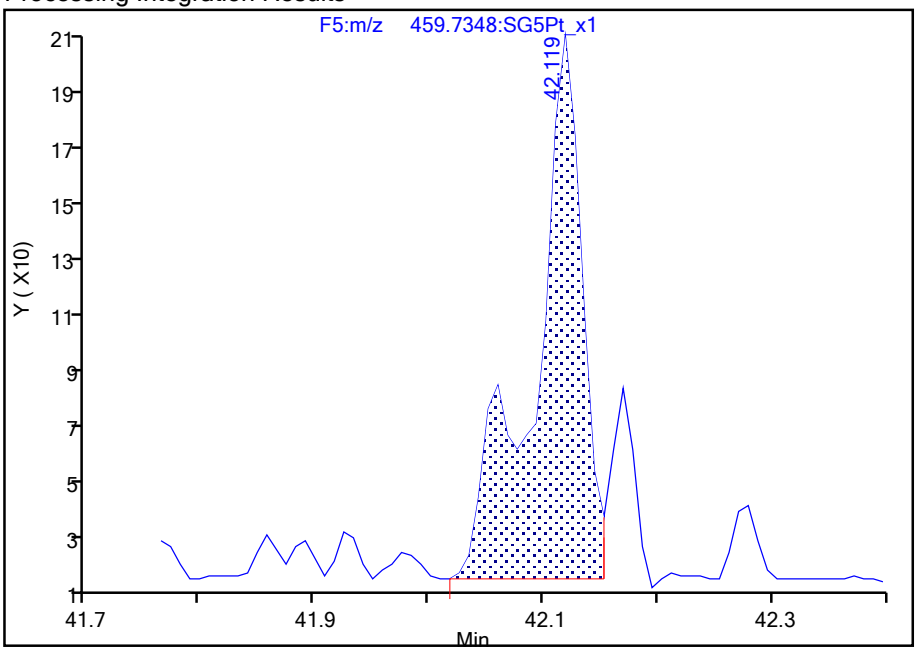

Manual Integration Results

RT: 42.12
Area: 401
Amount: 0.270132
Amount Units: pg/ul

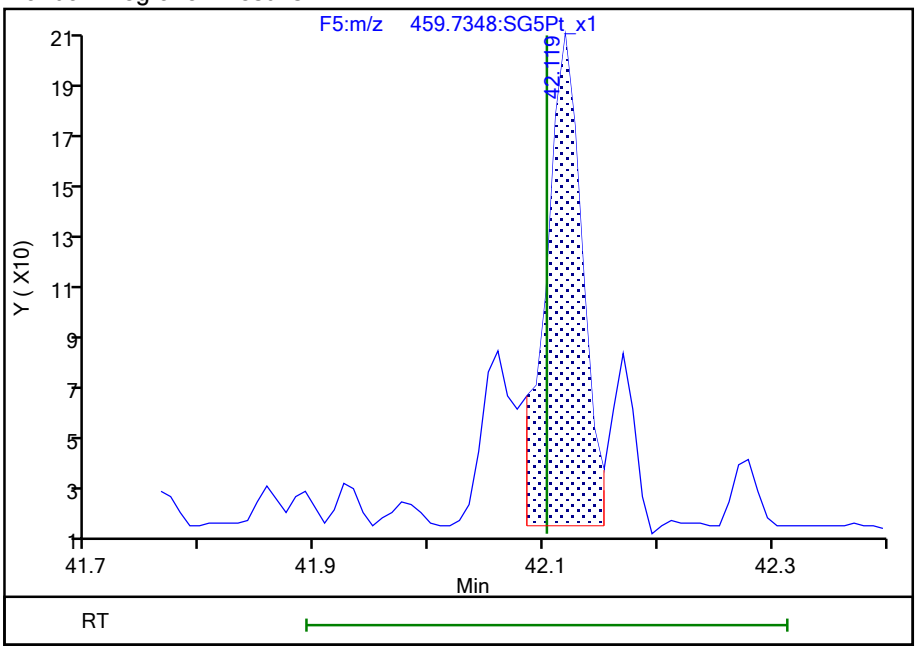

Reviewer: dadunj, 19-Aug-2021 12:07:46

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 42.12
Area: 654
Amount: 0.343334
Amount Units: pg/ul

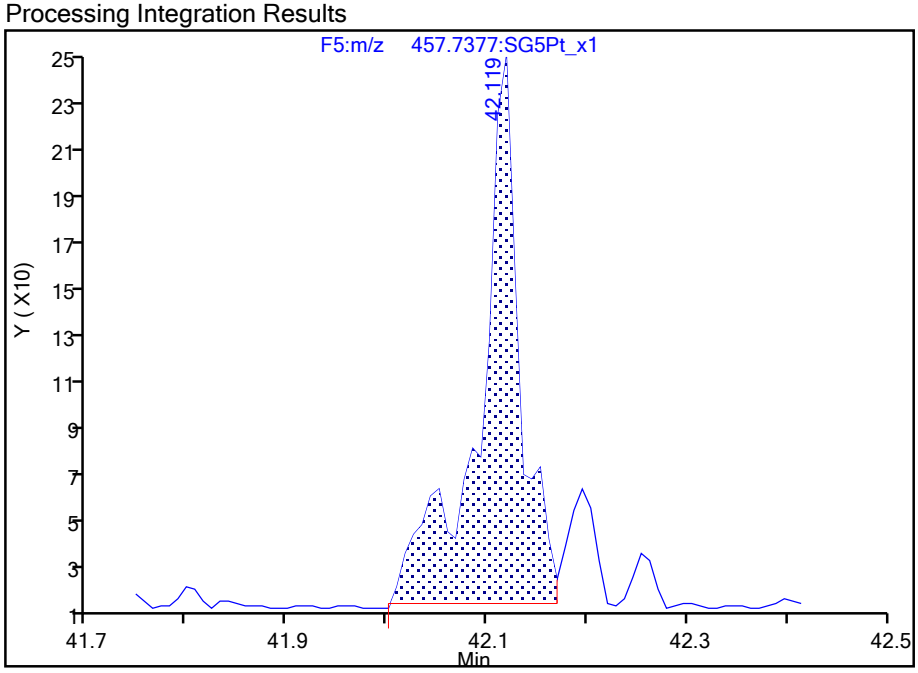

Manual Integration Results

RT: 42.12
Area: 540
Amount: 0.270132
Amount Units: pg/ul

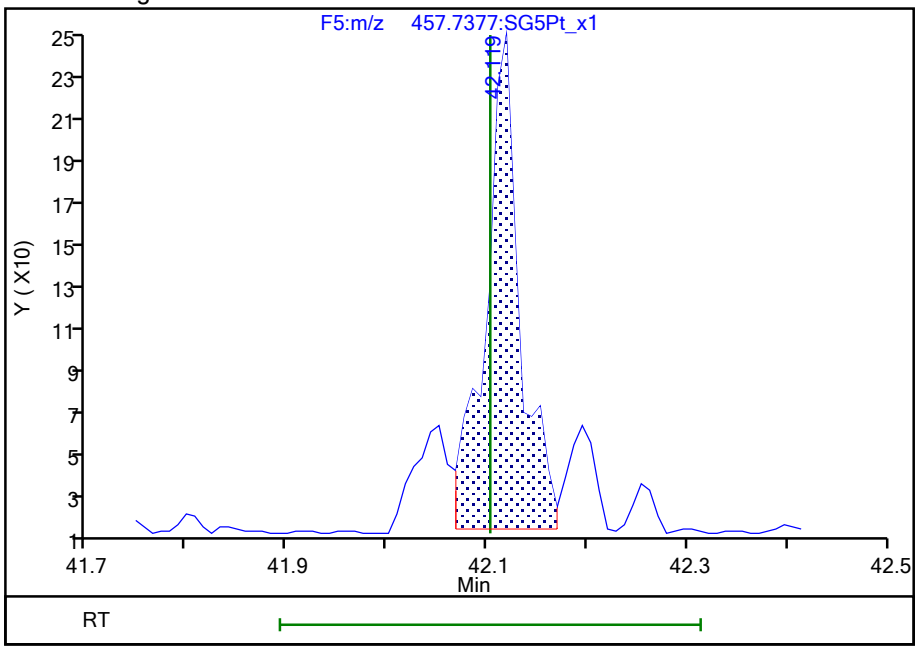

Reviewer: dadunj, 19-Aug-2021 12:07:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

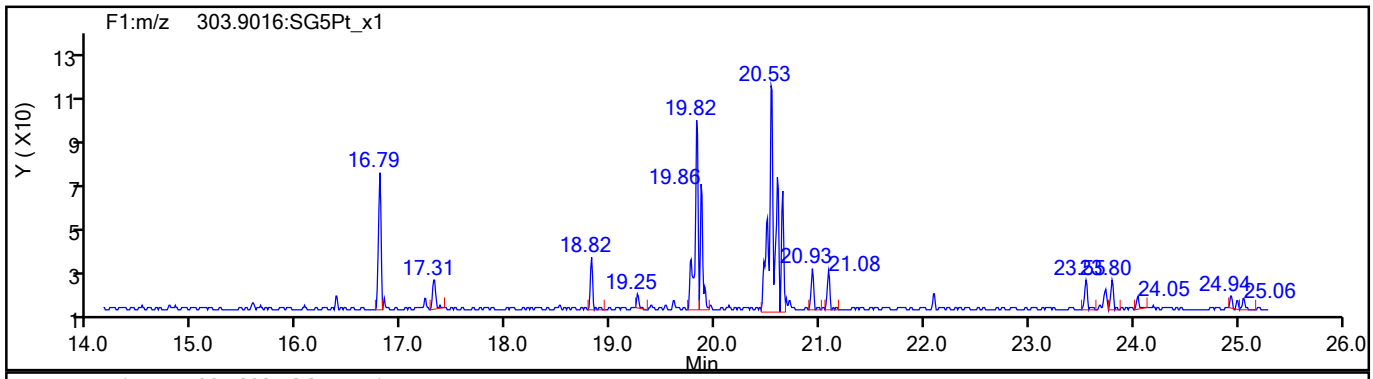

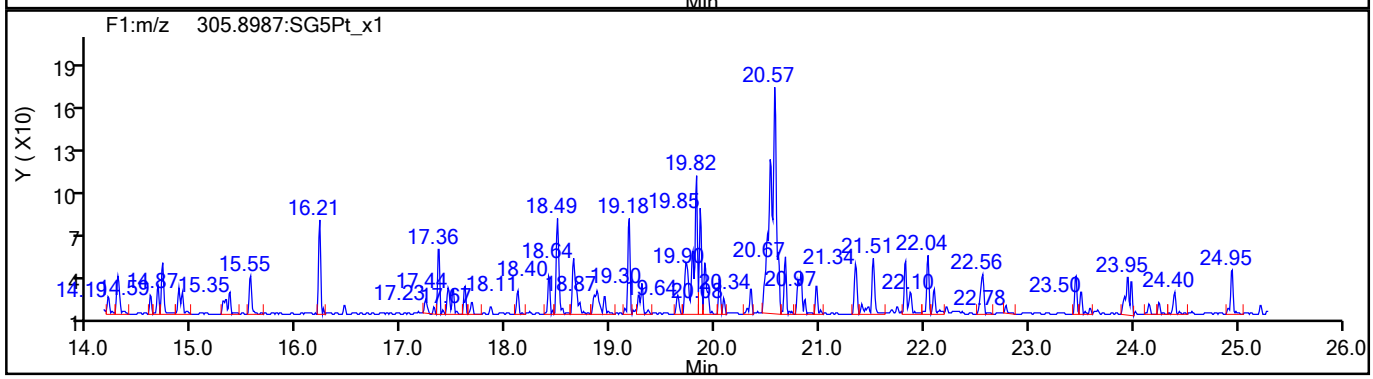

TCDF Standards

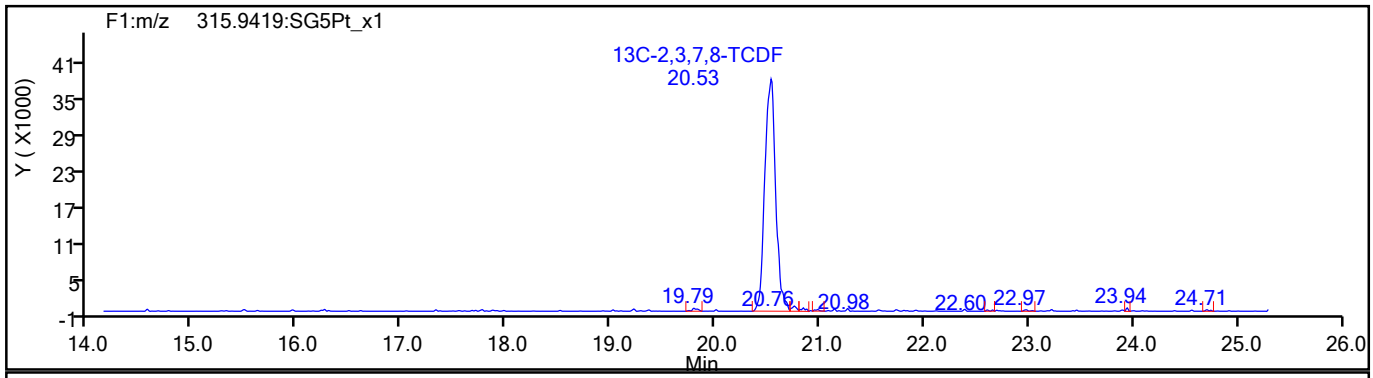

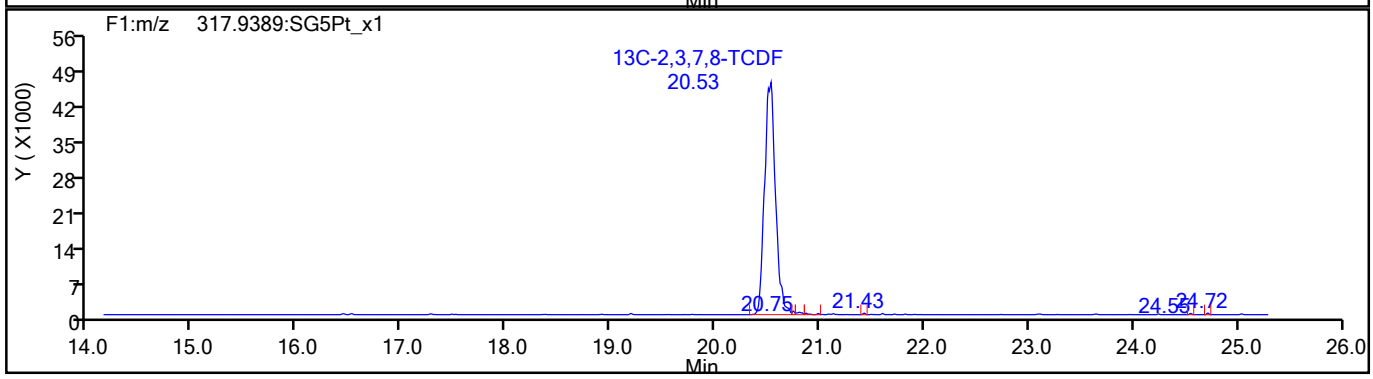

777440

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

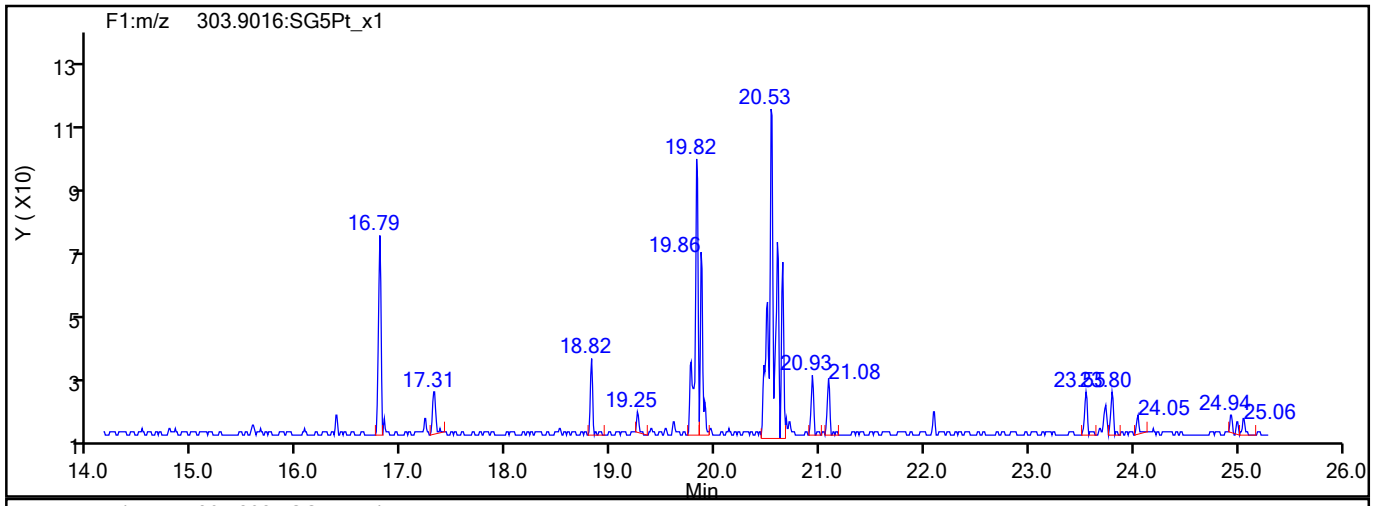

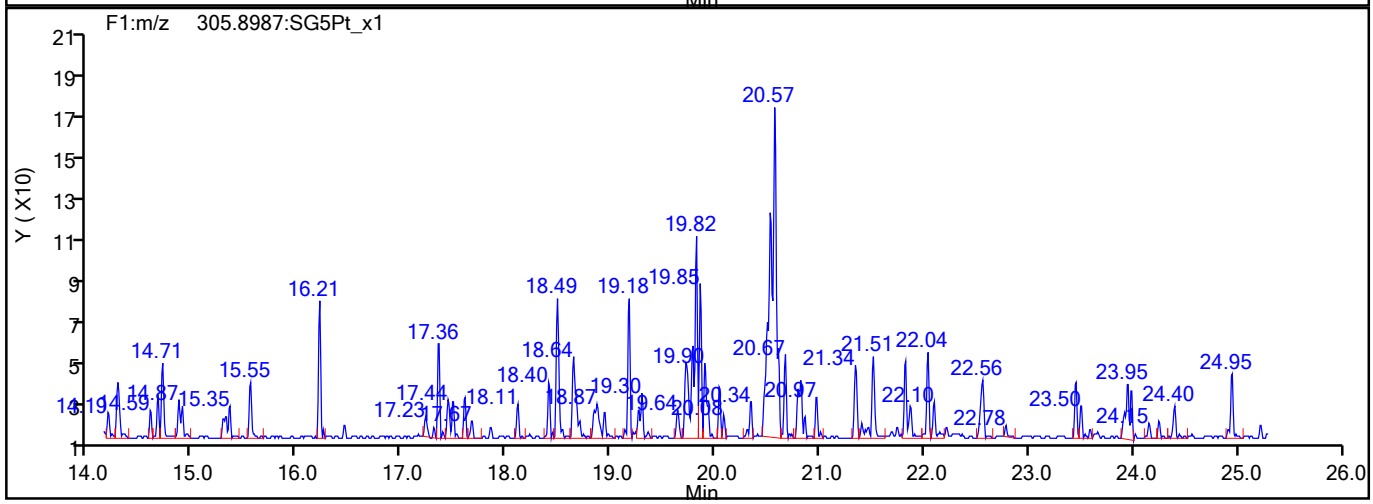

TCDF Interference Mass

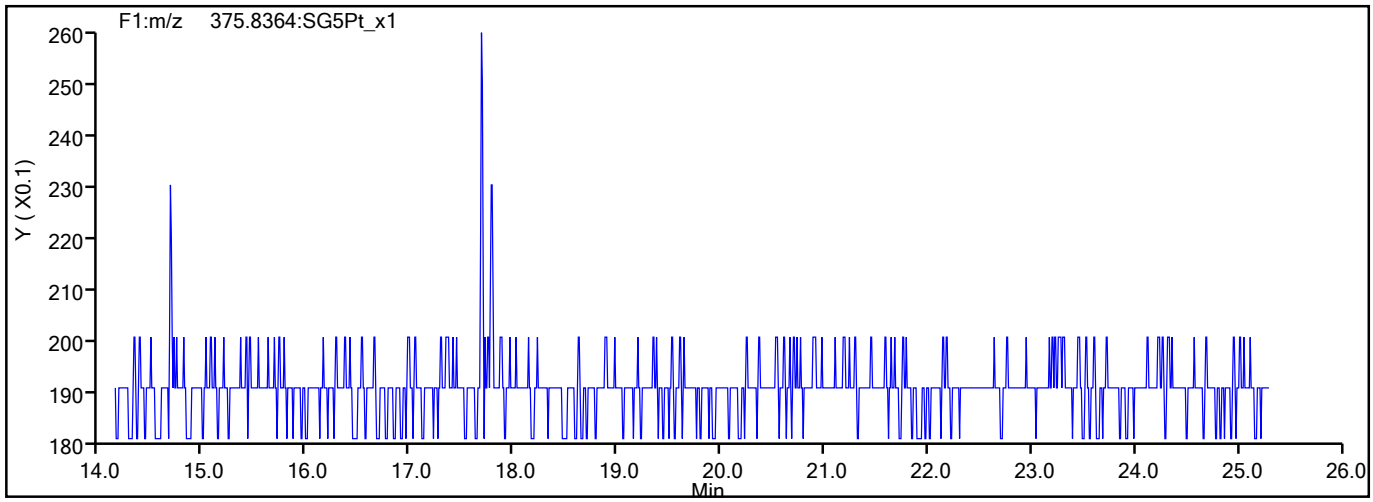

777441

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

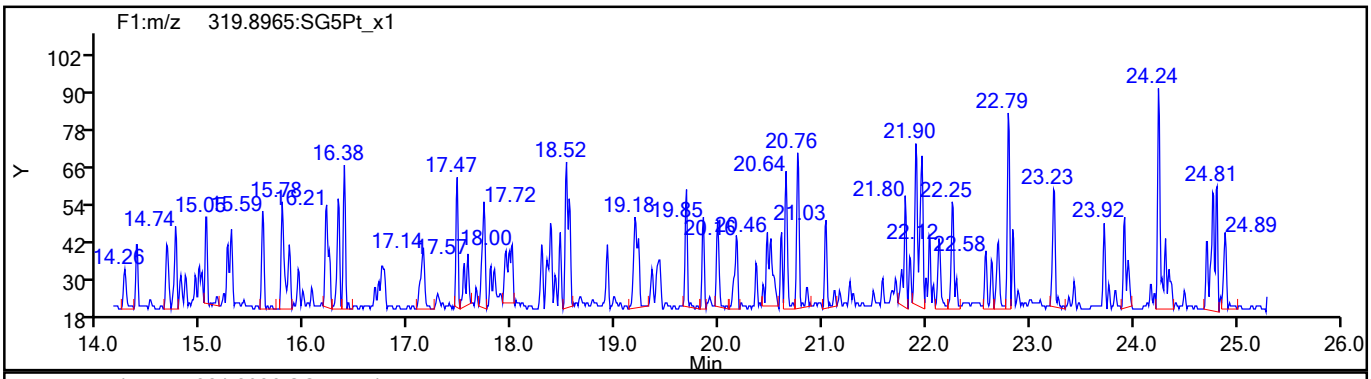

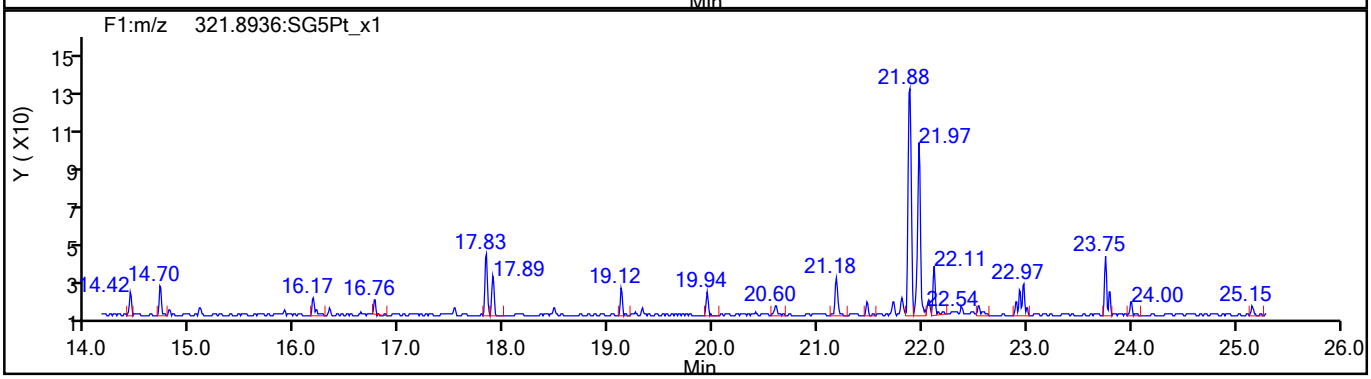

TCDD Standards

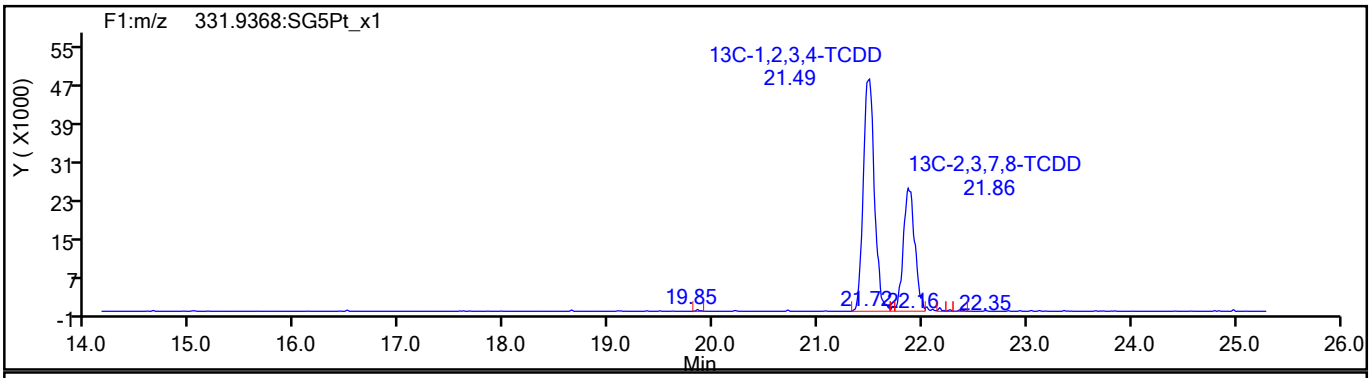

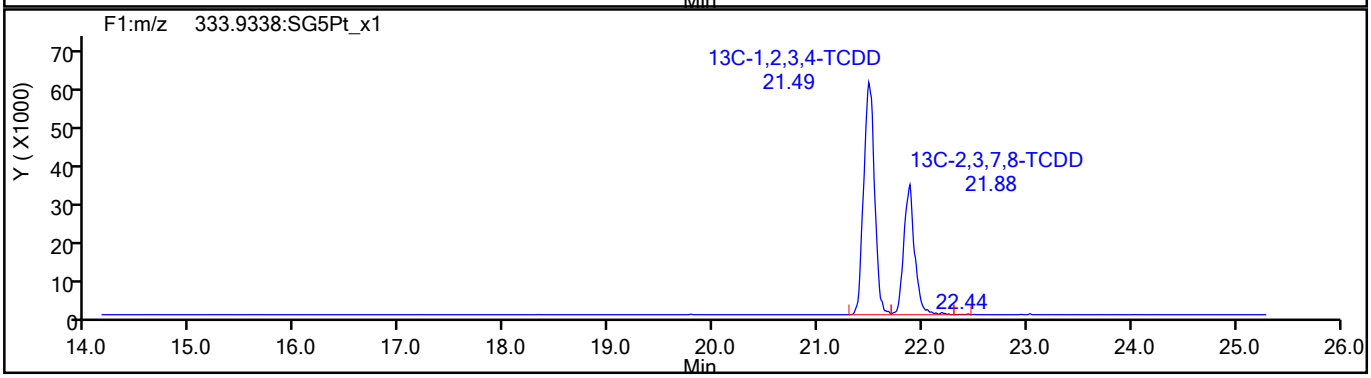

777442

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

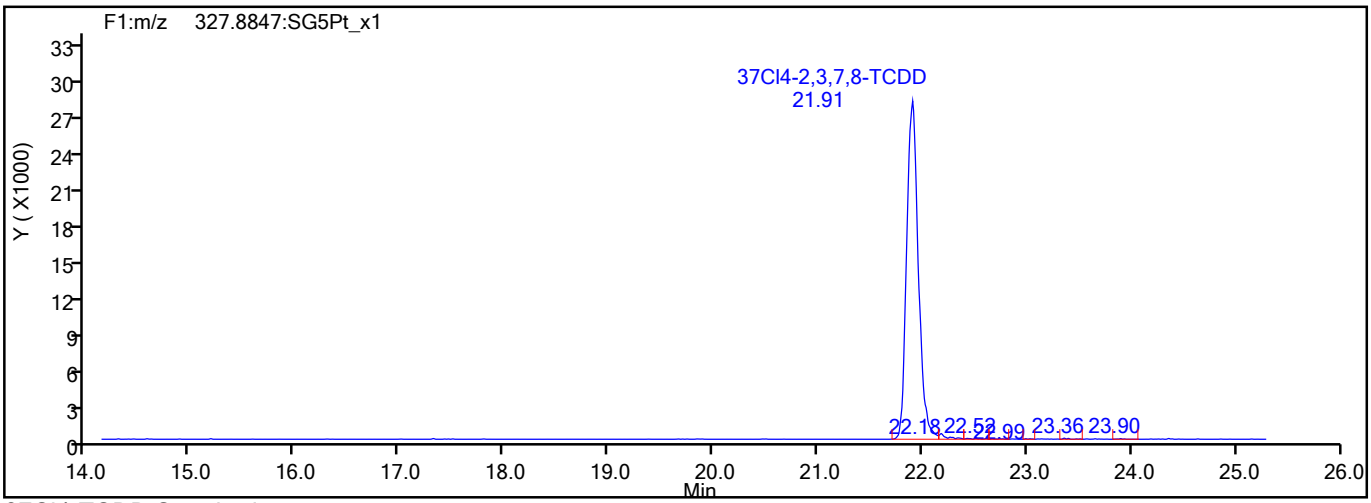

37Cl4-TCDD Standards

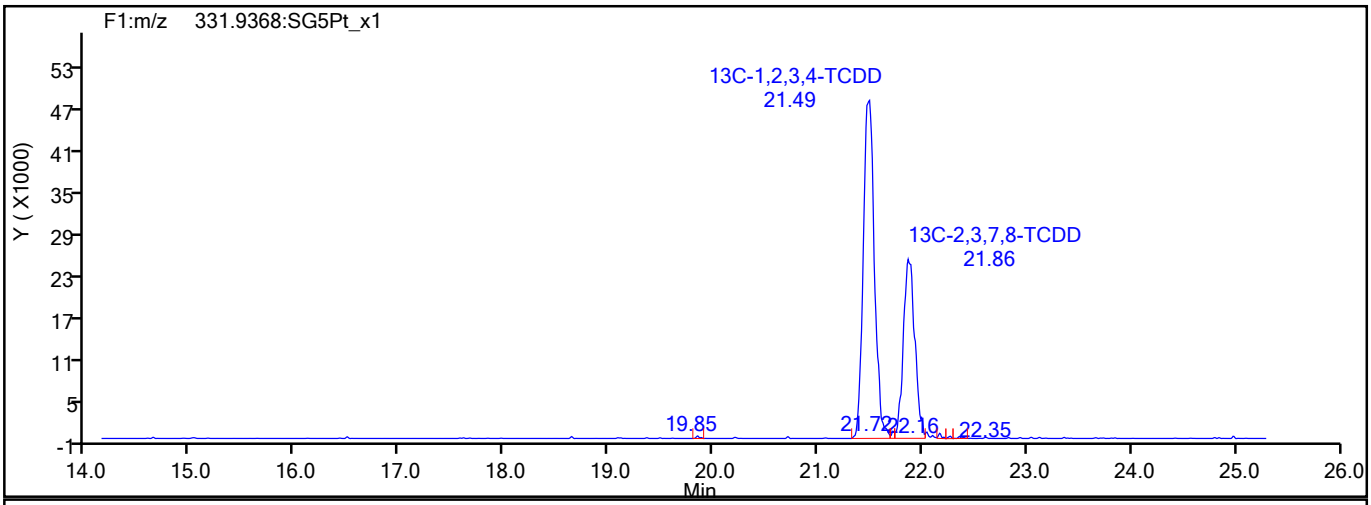

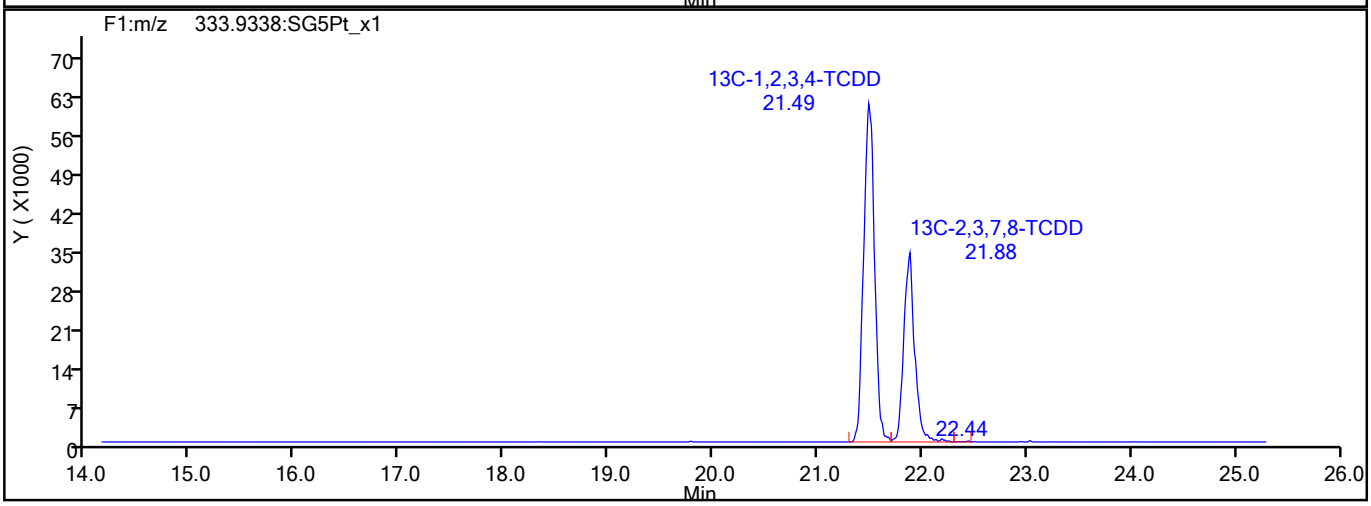

777443

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

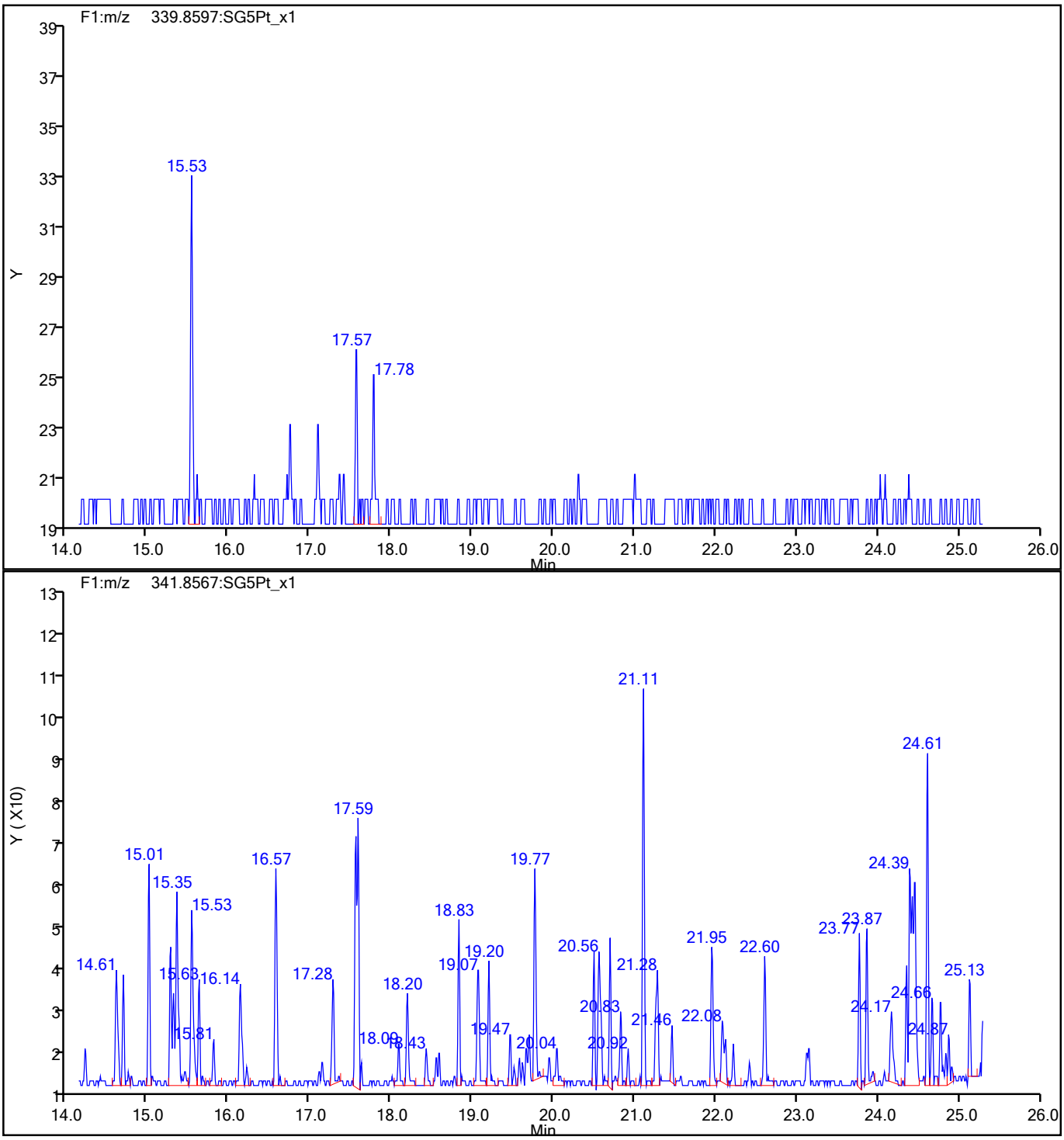

777444

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

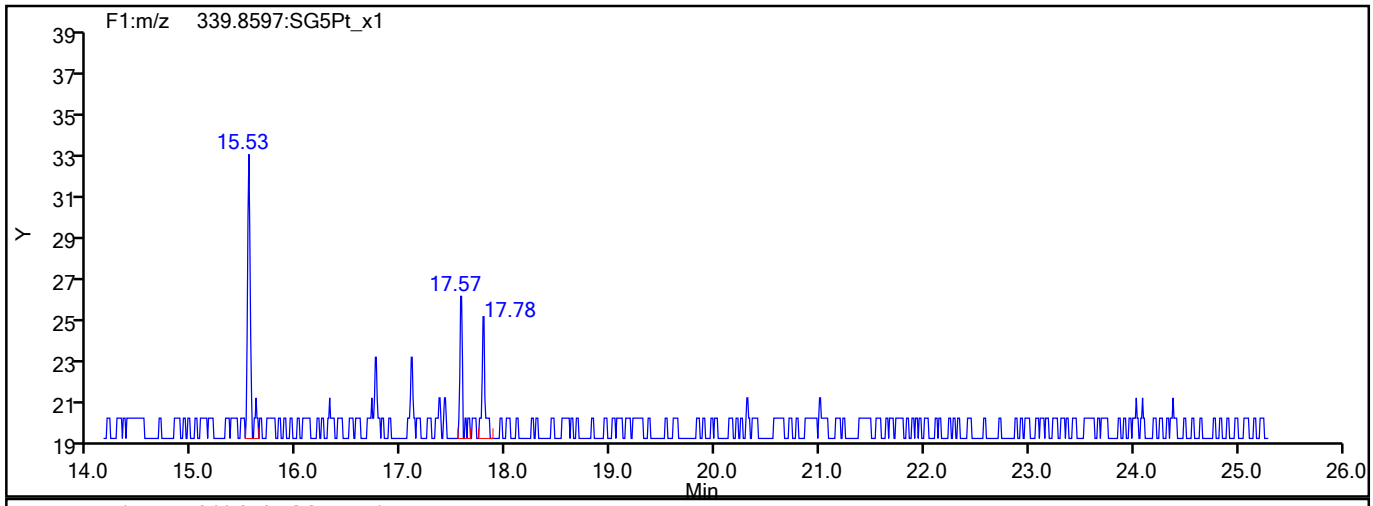

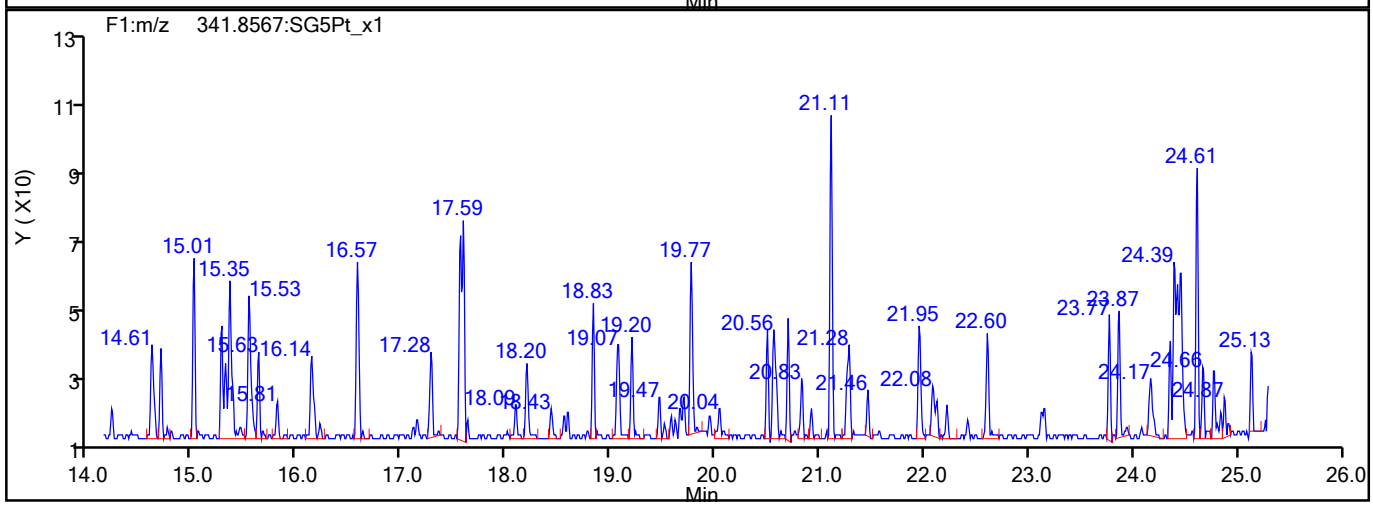

F1 PeCDFs Interference Mass

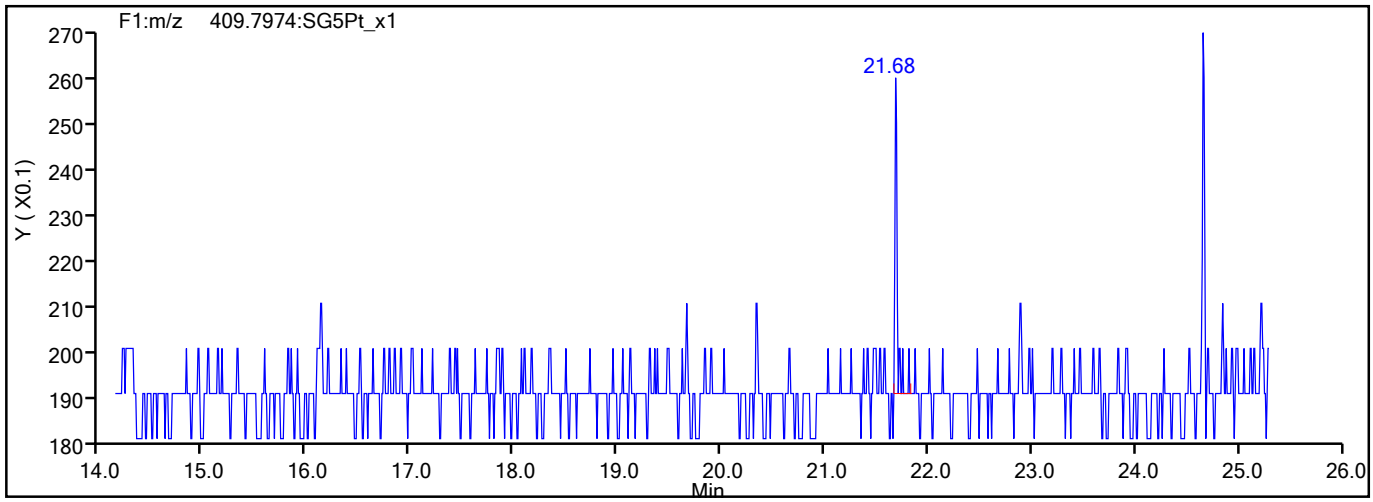

777445

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

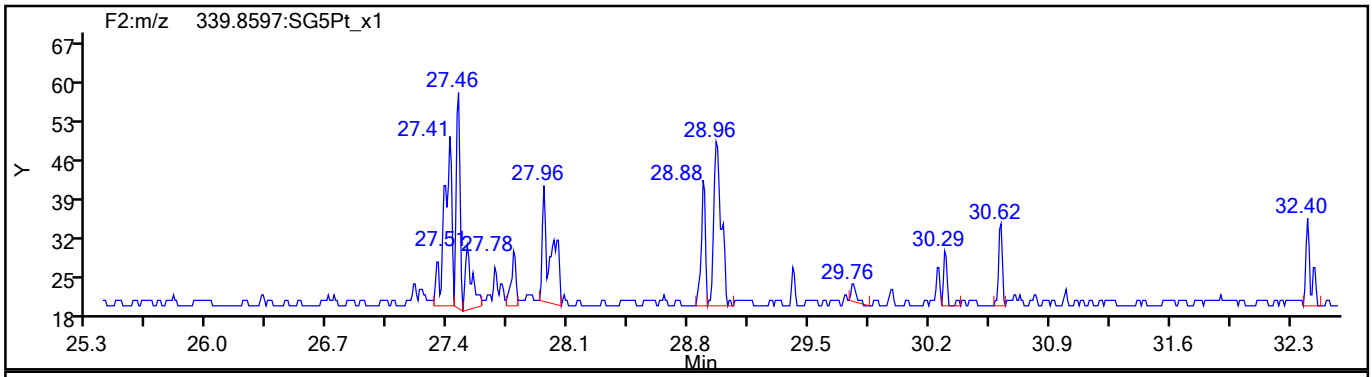

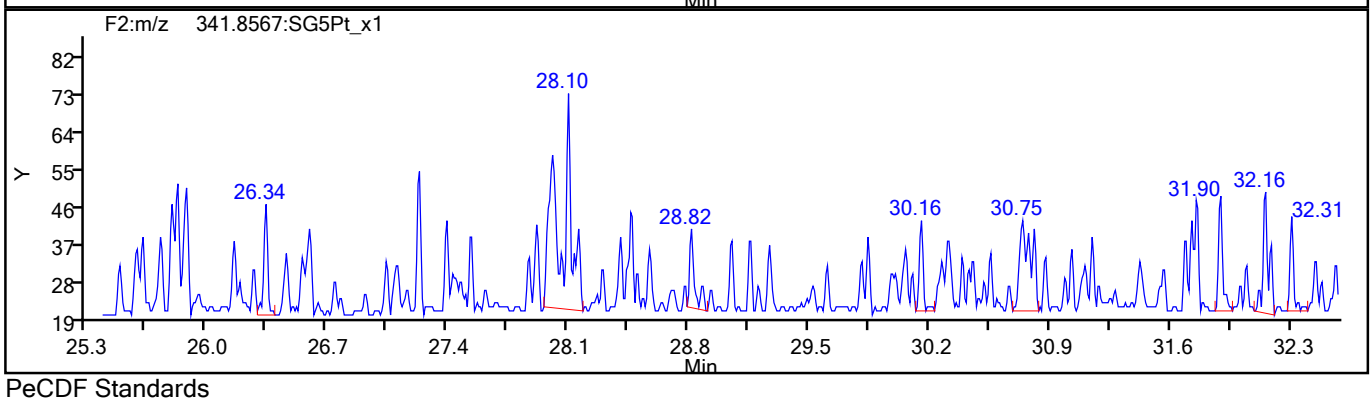

PeCDF Standards

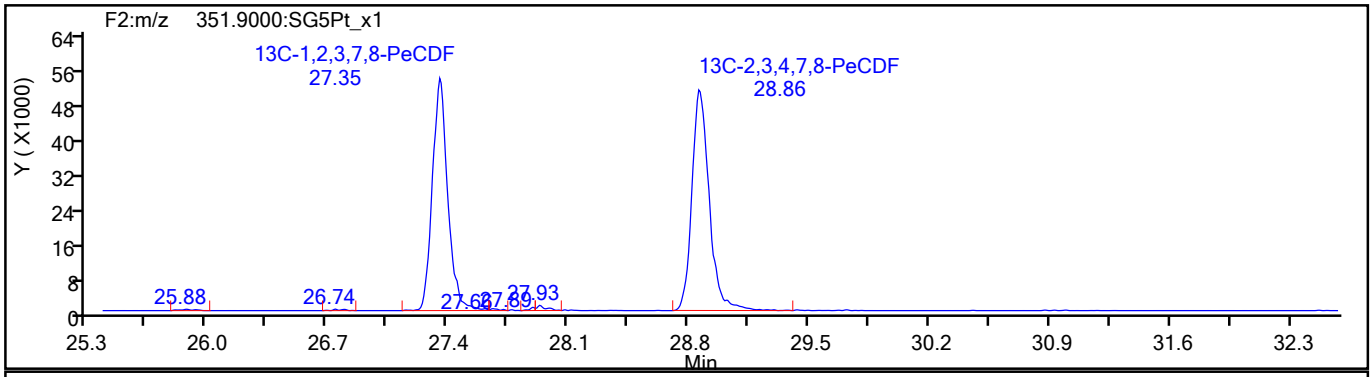

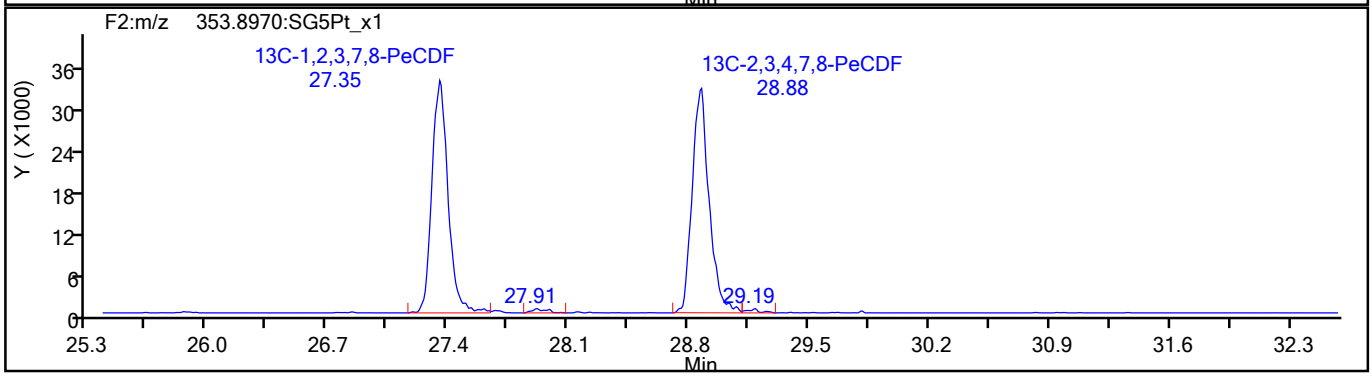

777446

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

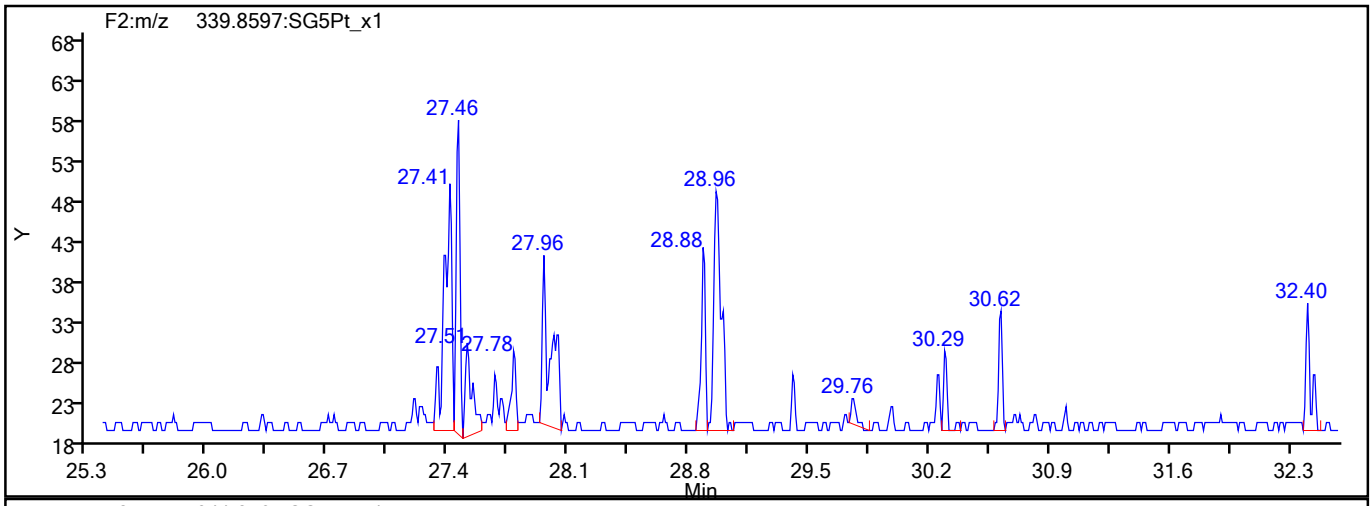

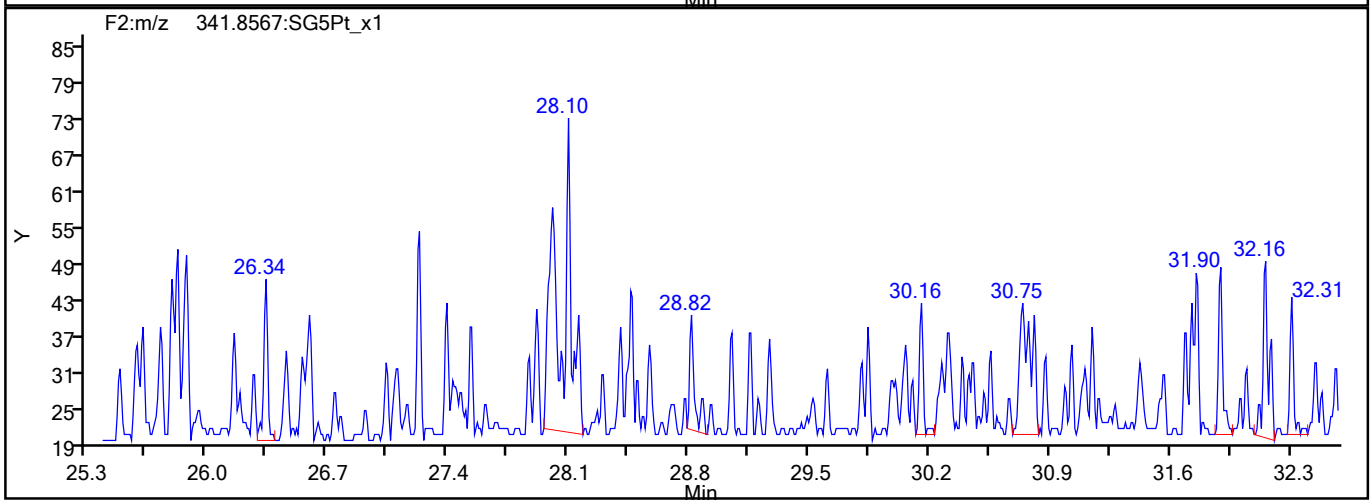

PeCDF Interference Mass

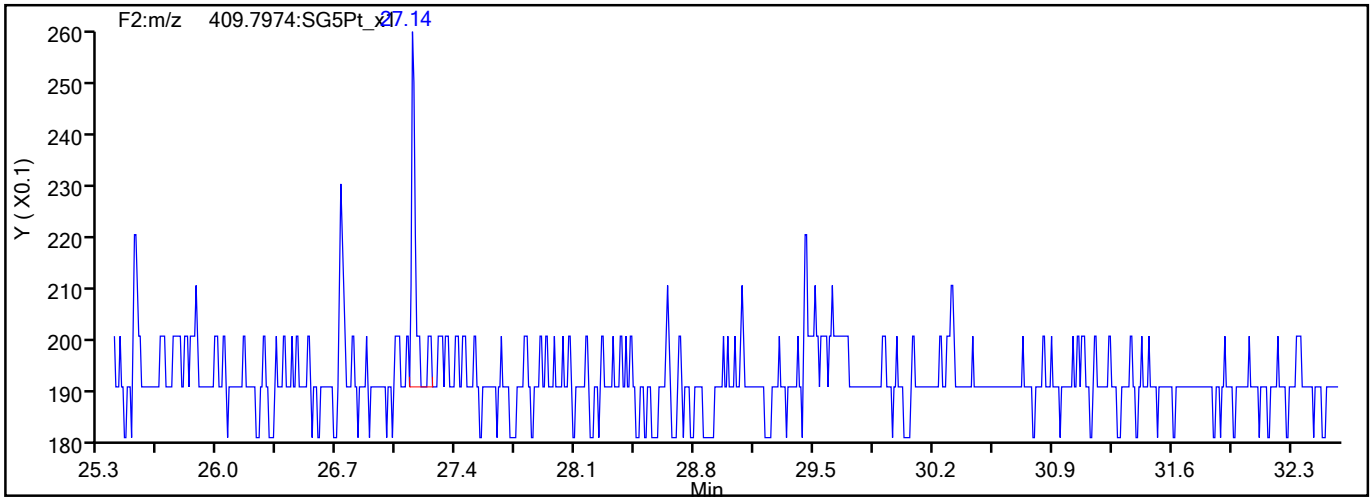

777447

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

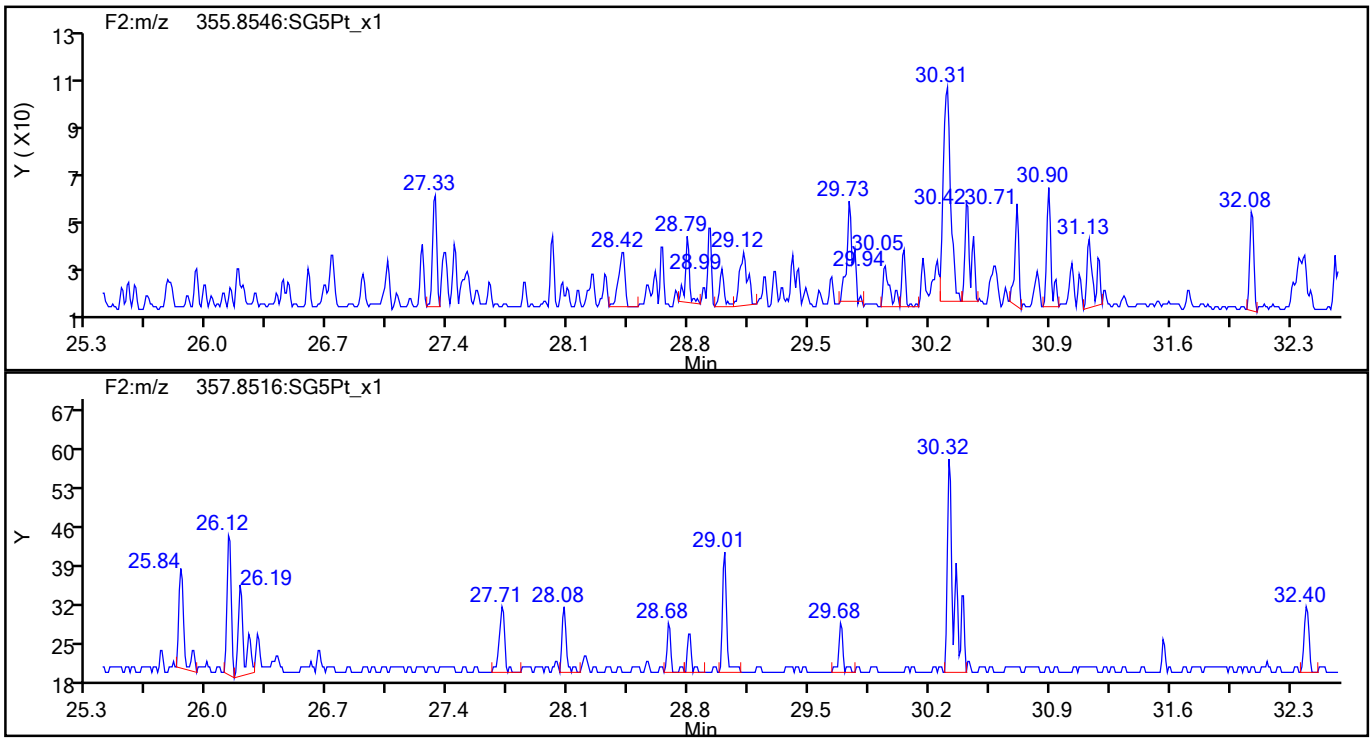

PeCDD Standards

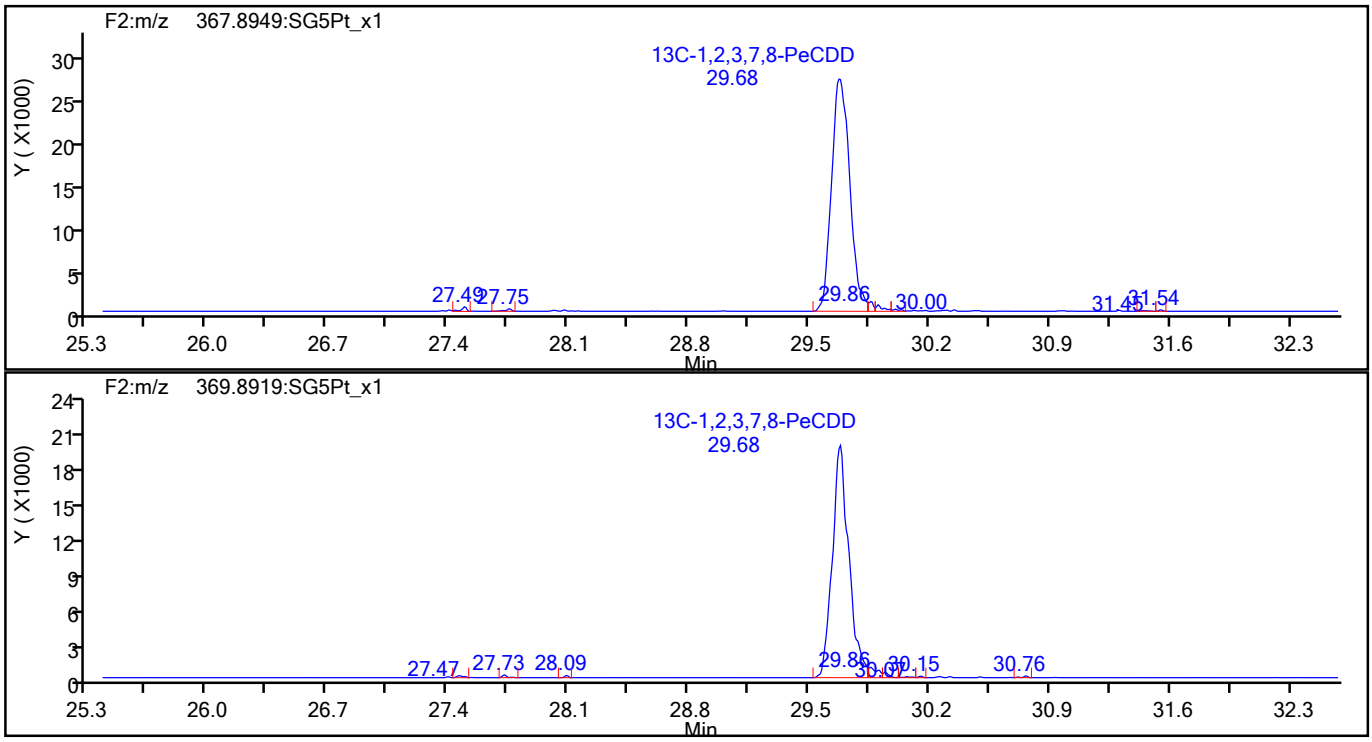

777448

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

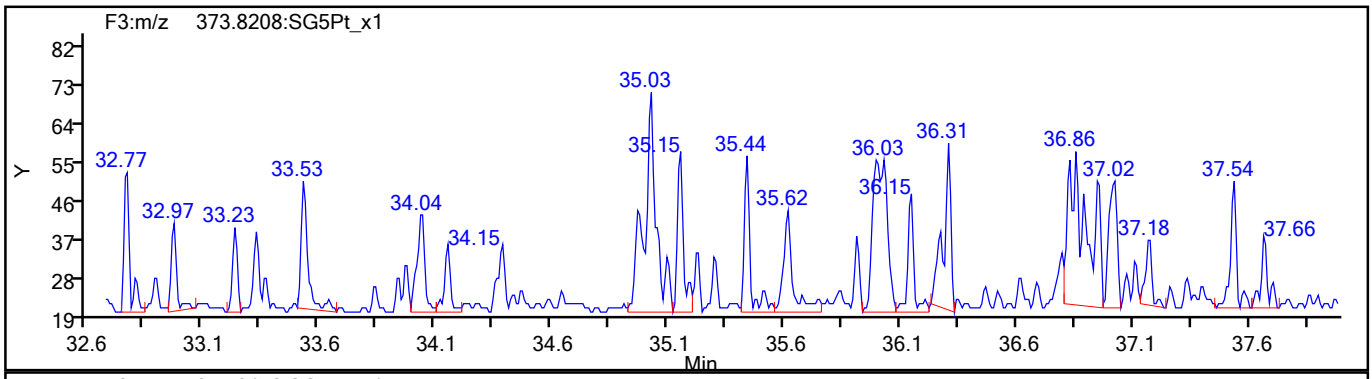

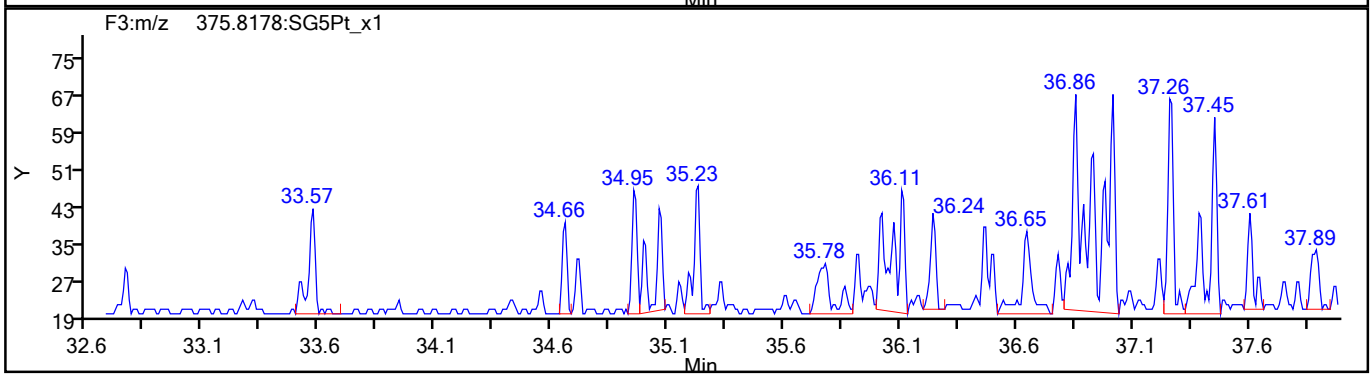

HxCDF Standards

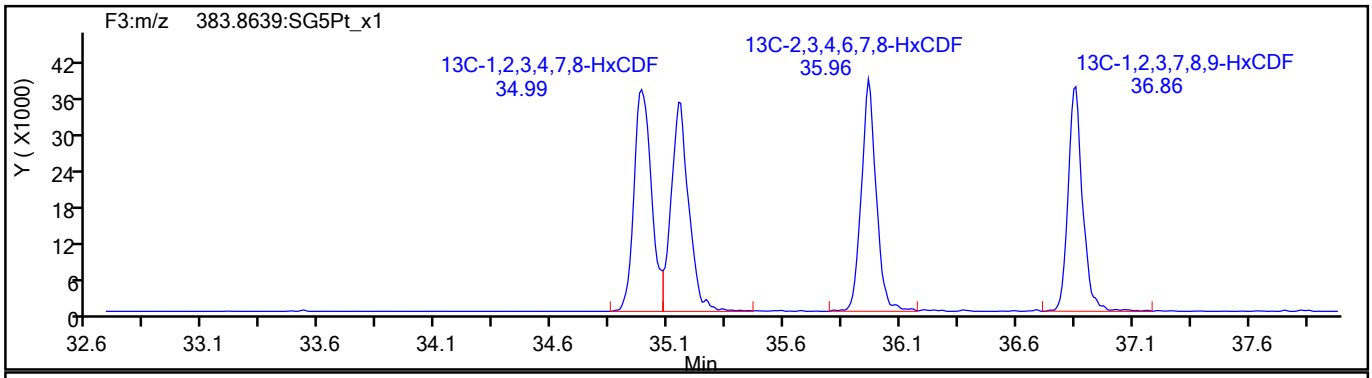

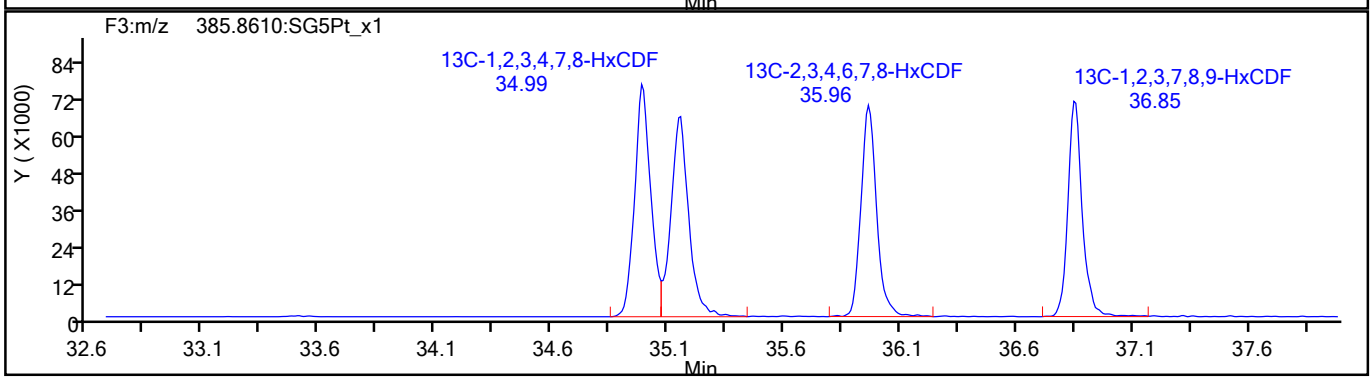

777449

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

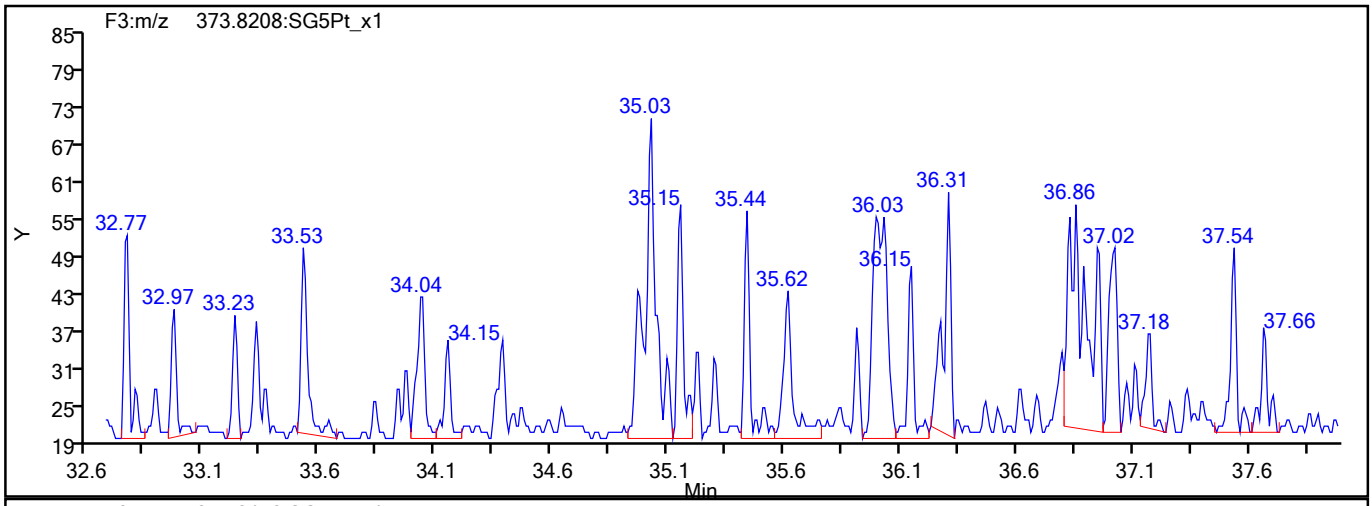

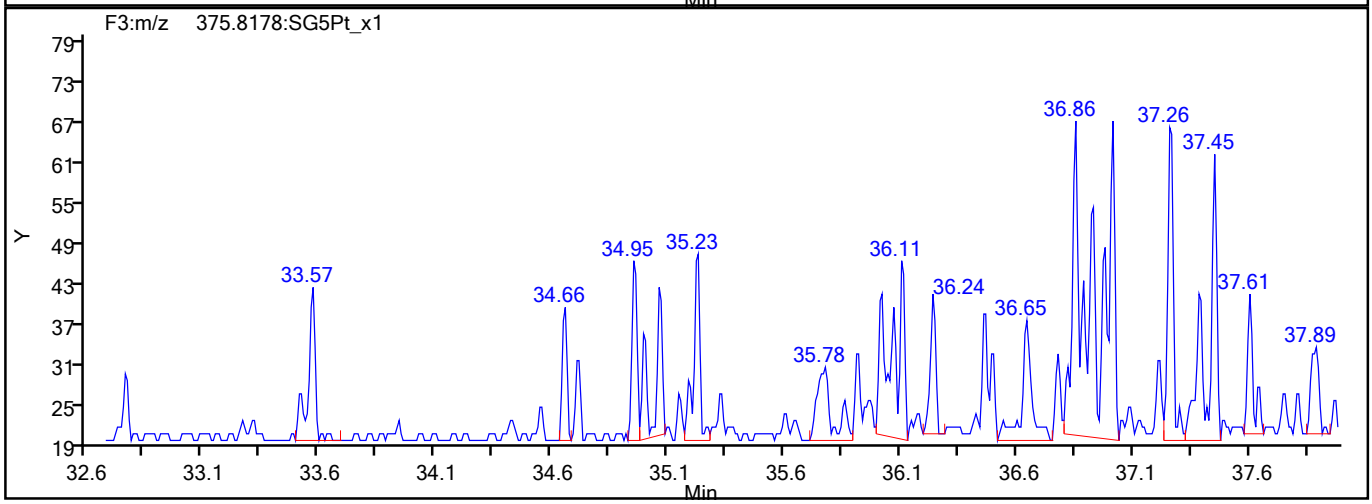

HxCDF Interference Mass

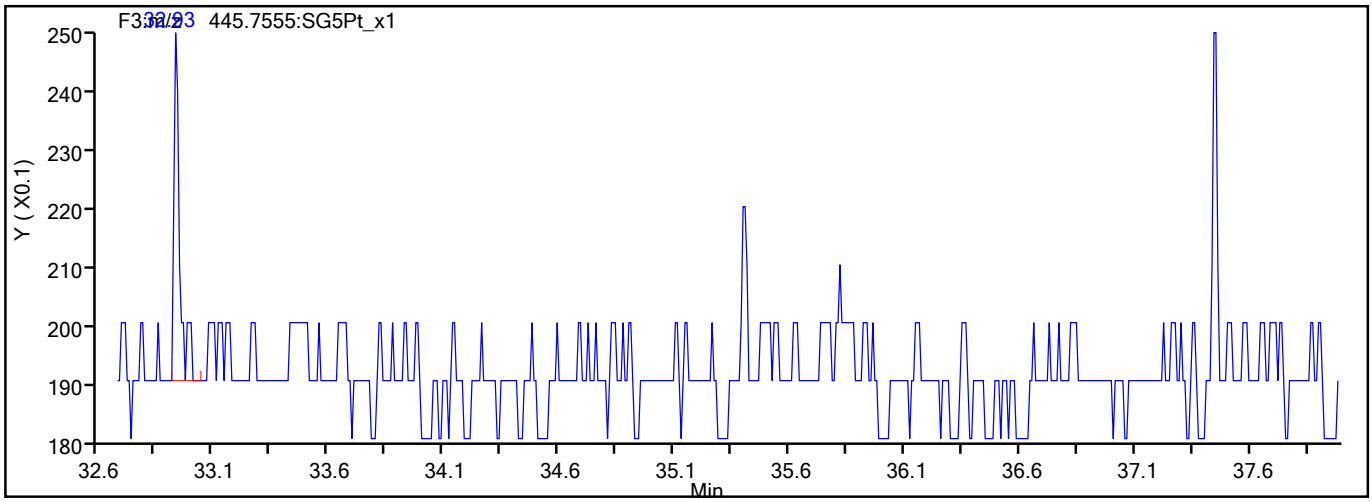

777450

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

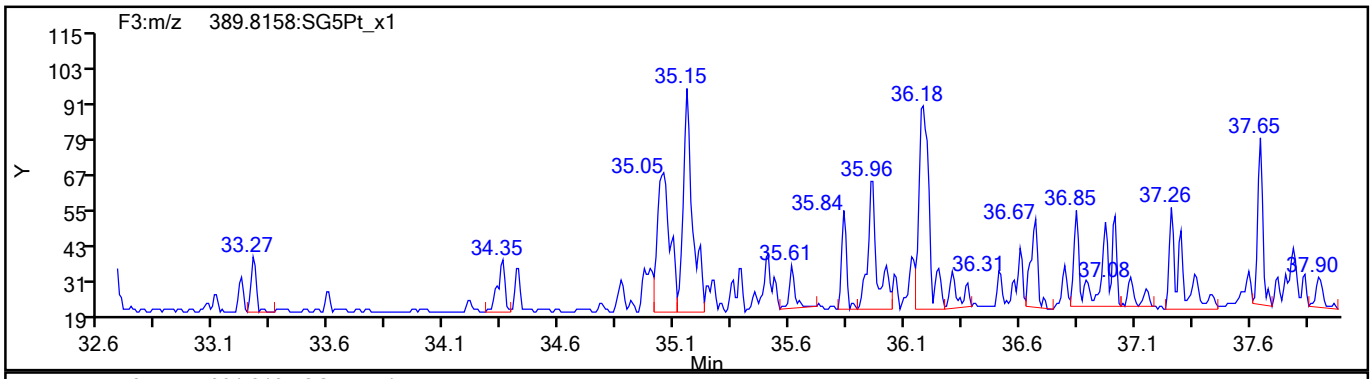

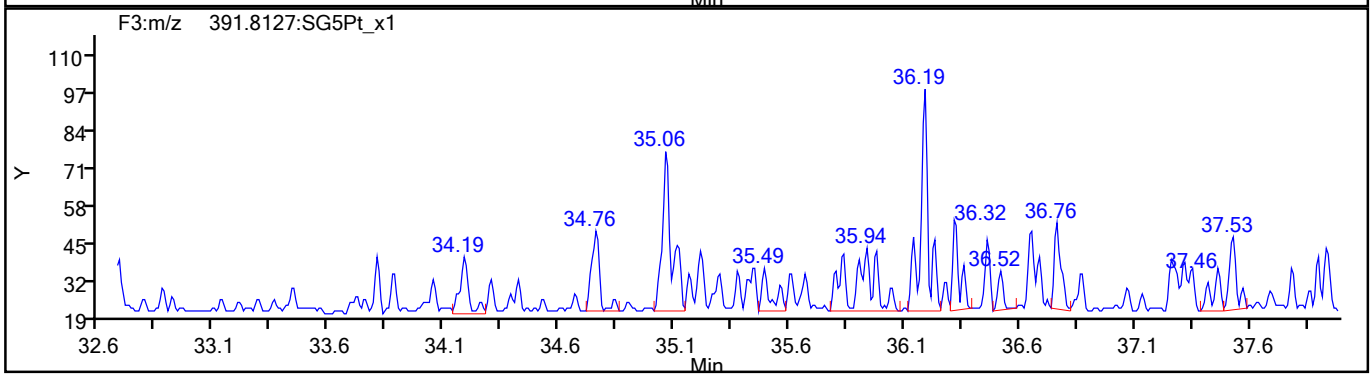

HxCDD Standards

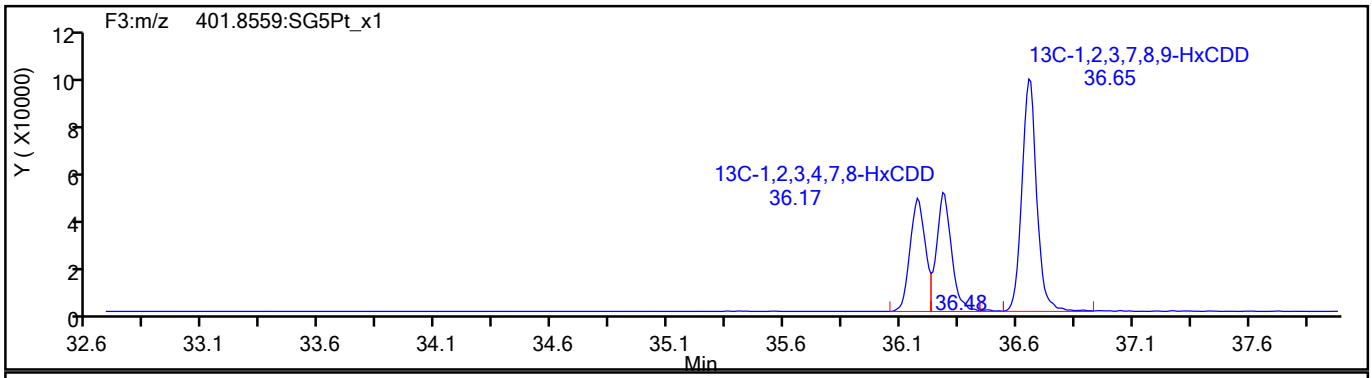

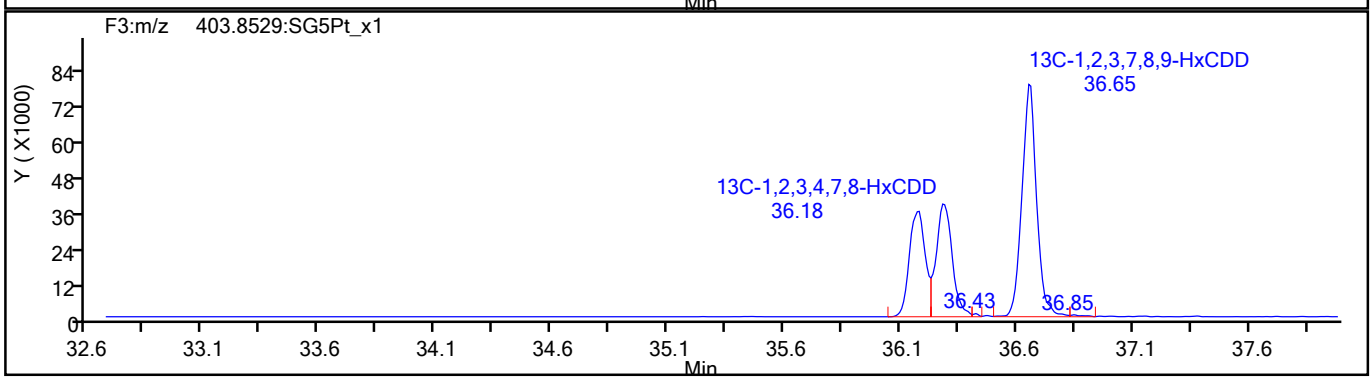

777451

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

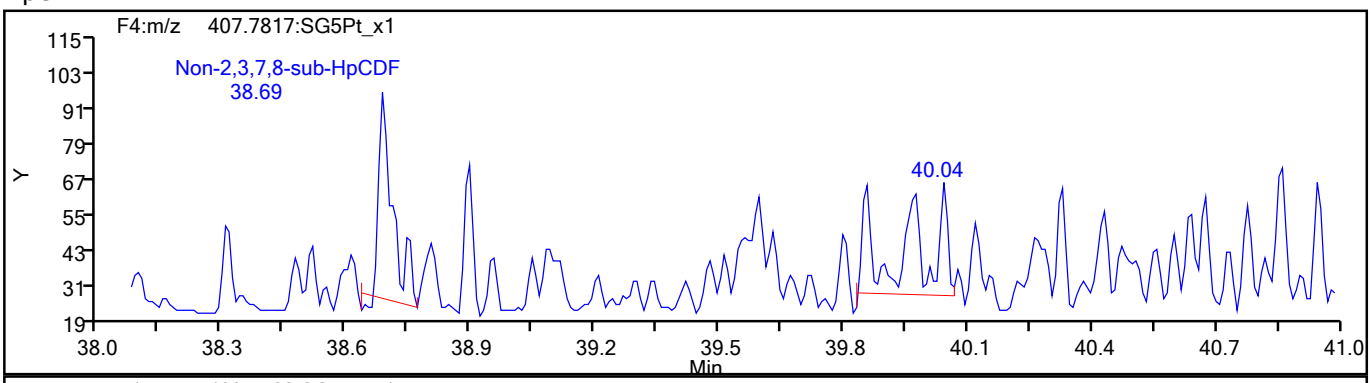

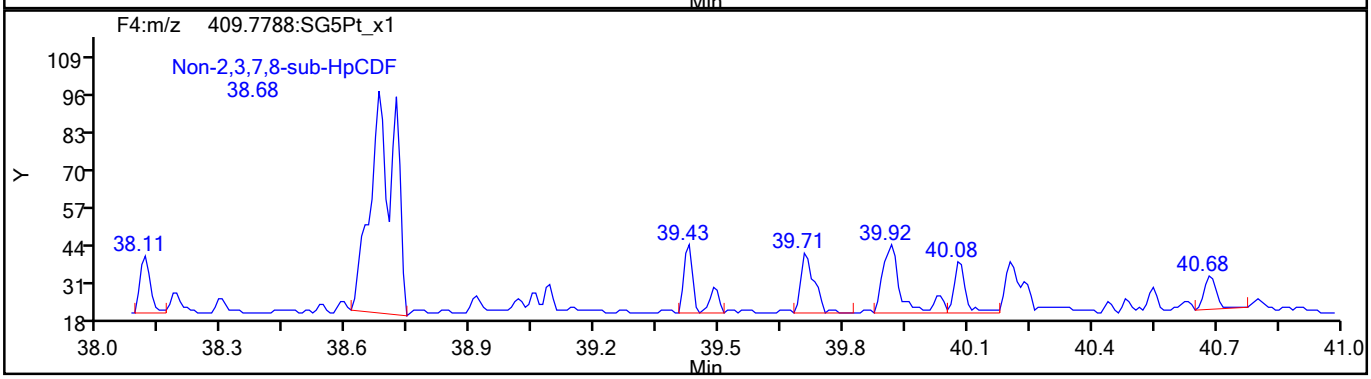

HpCDF Standards

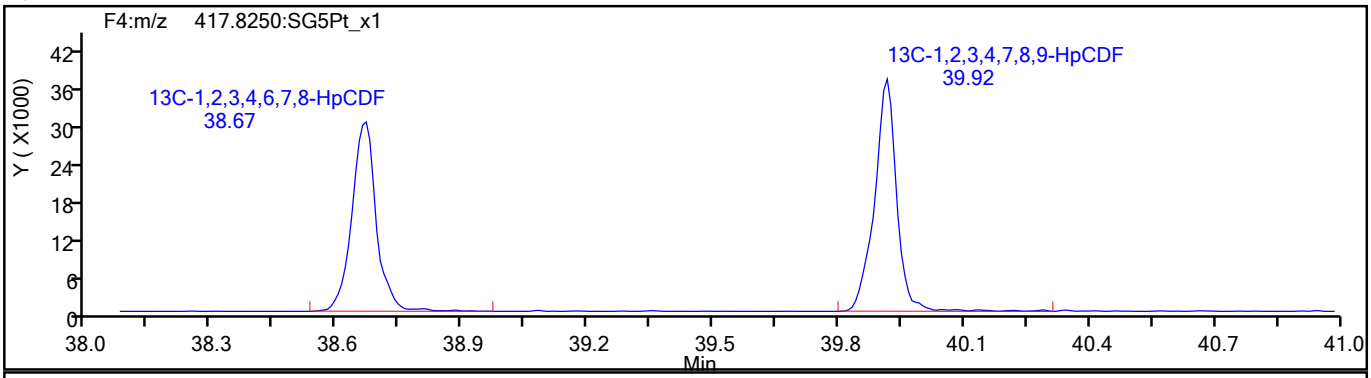

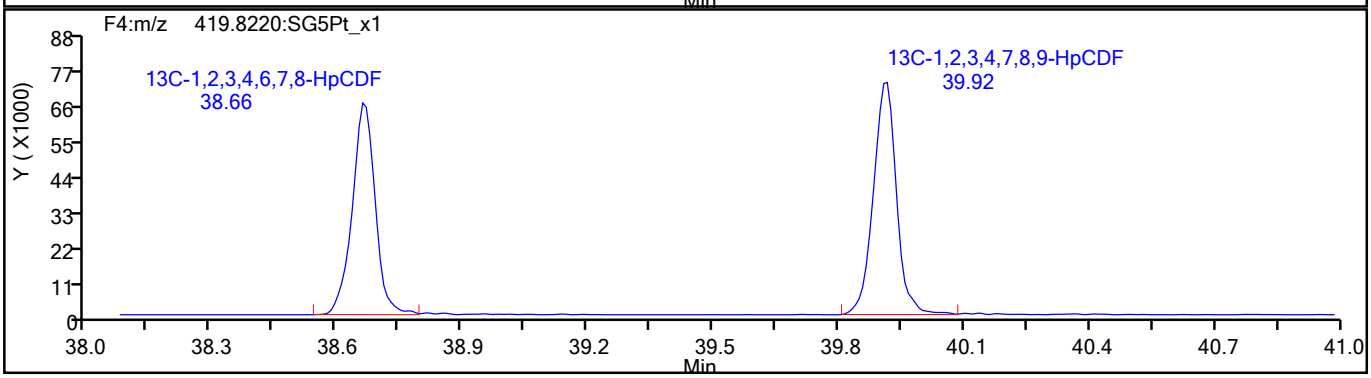

777452

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

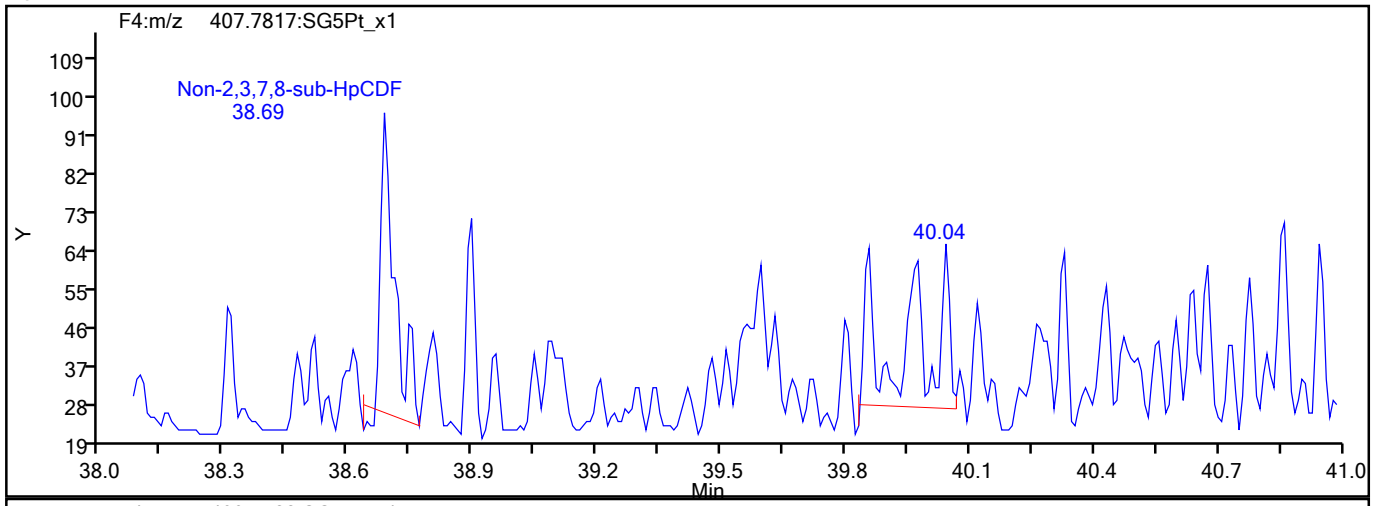

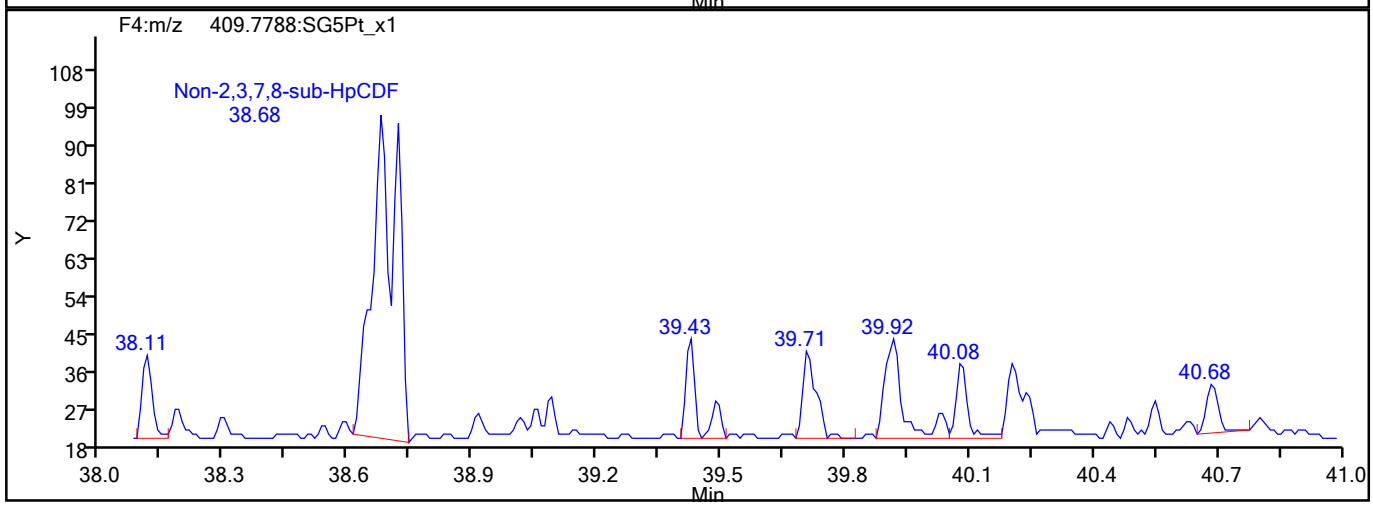

HpCDF Interference Mass

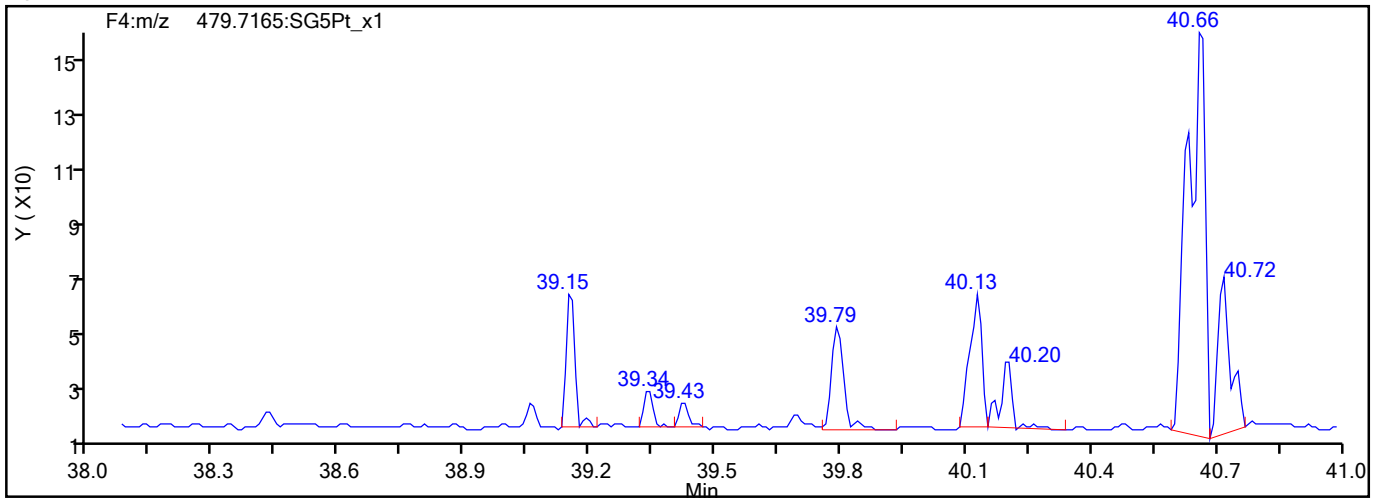

777453

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

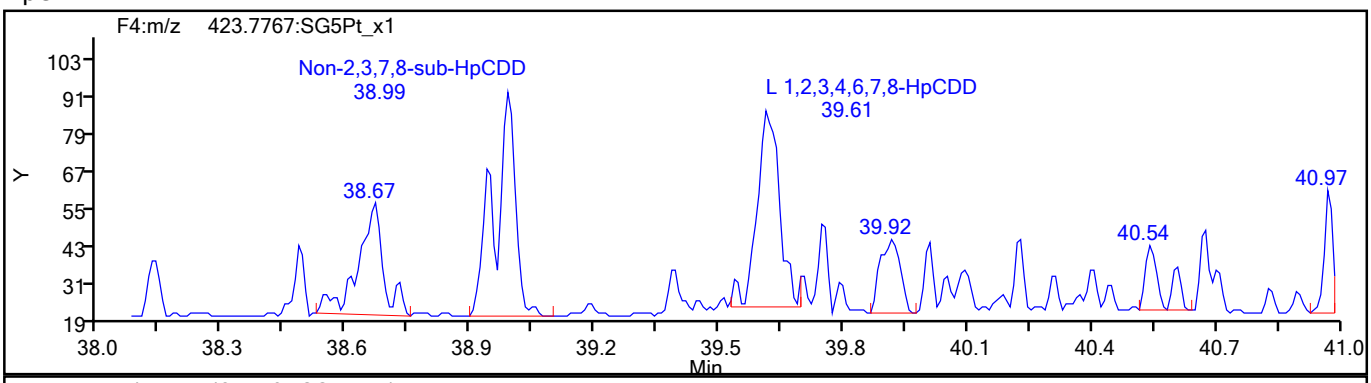

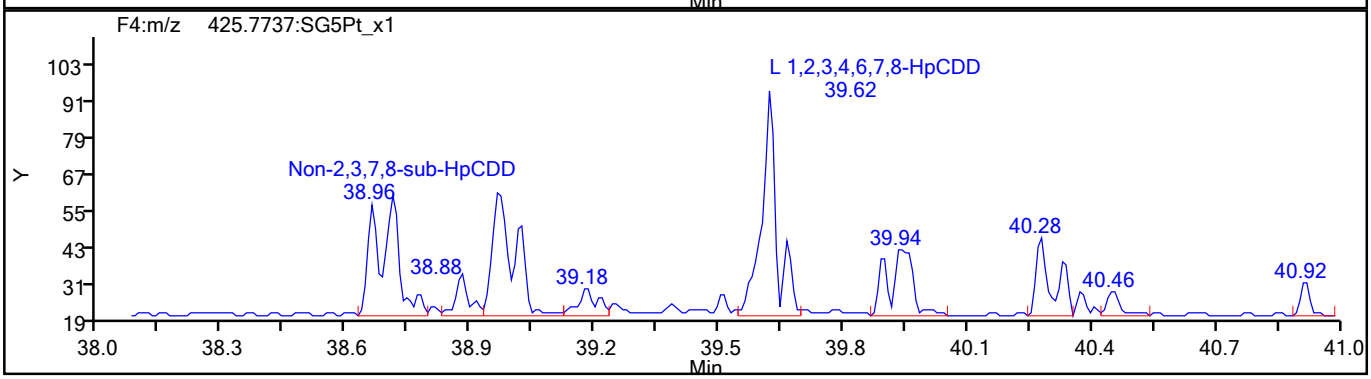

HpCDD Standards

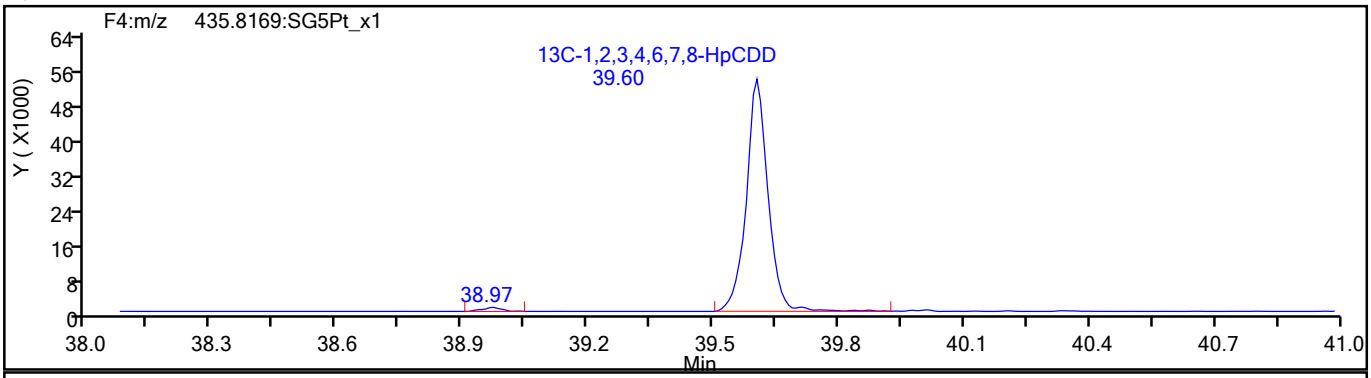

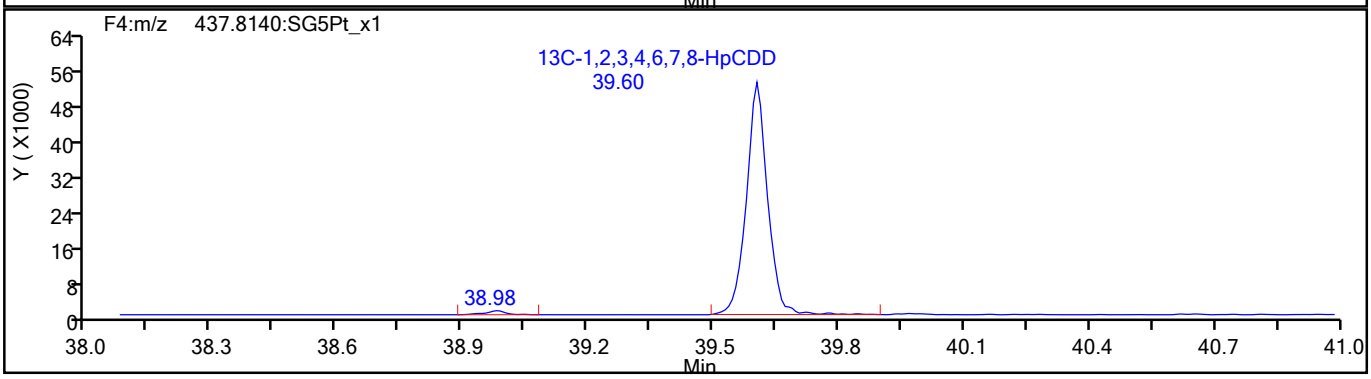

777454

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

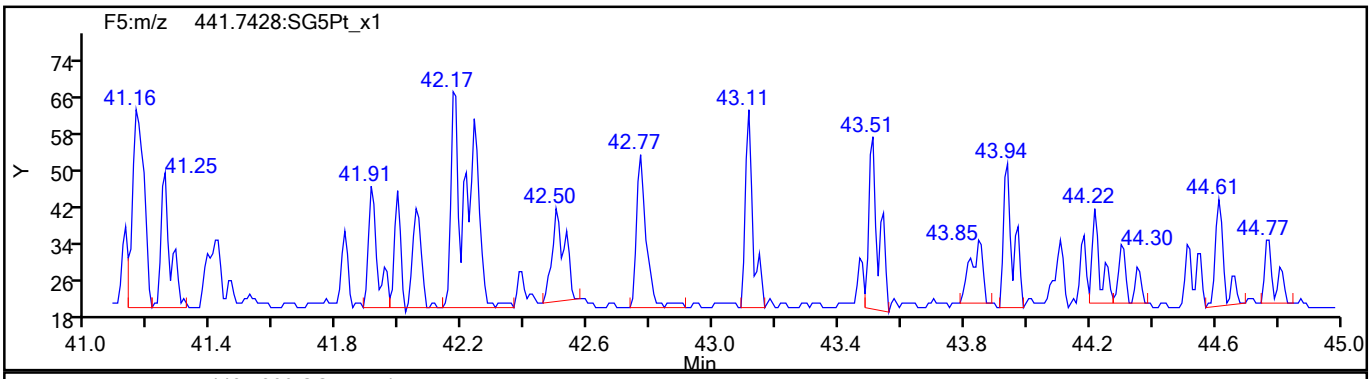

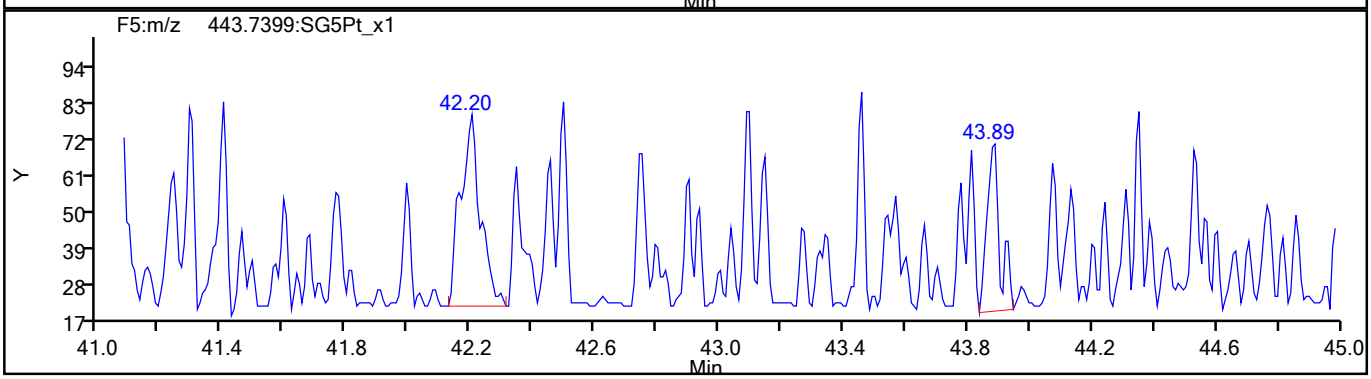

OCDF Standards

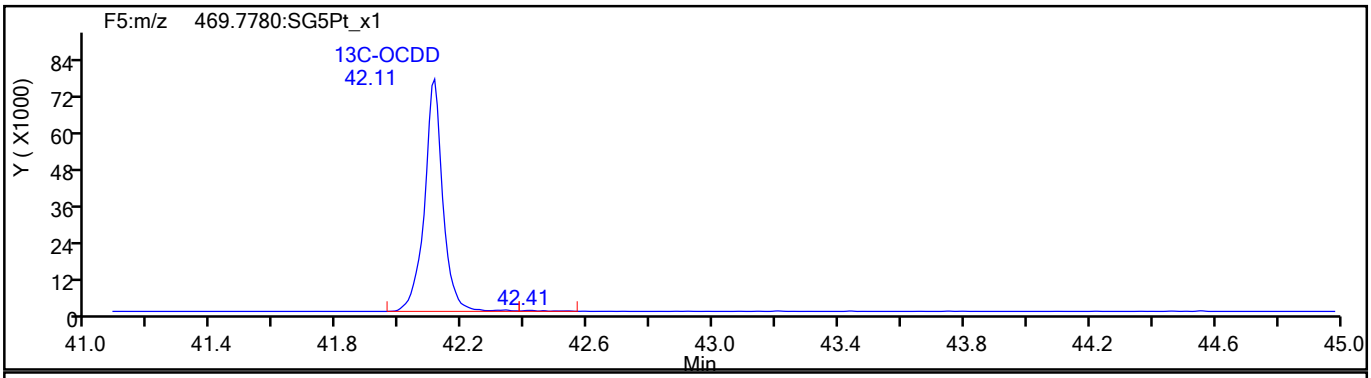

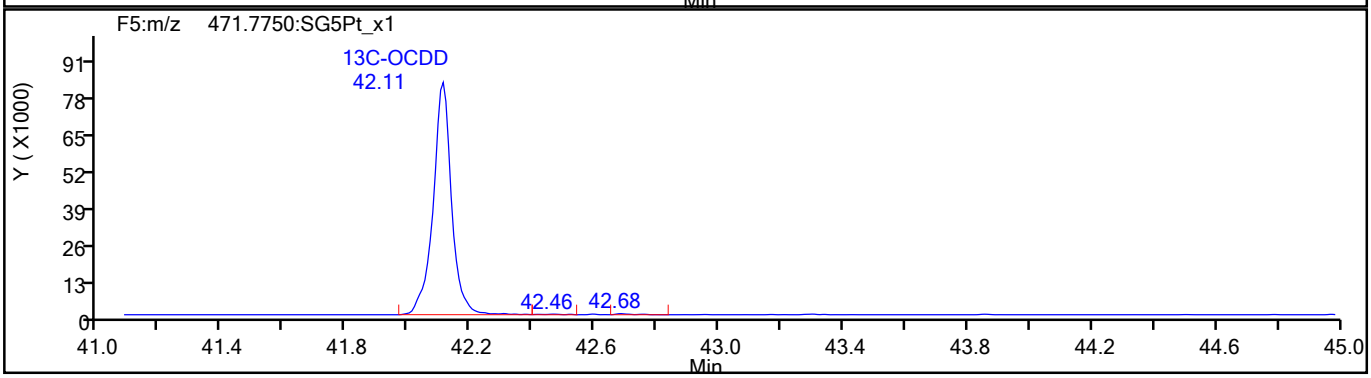

777455

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

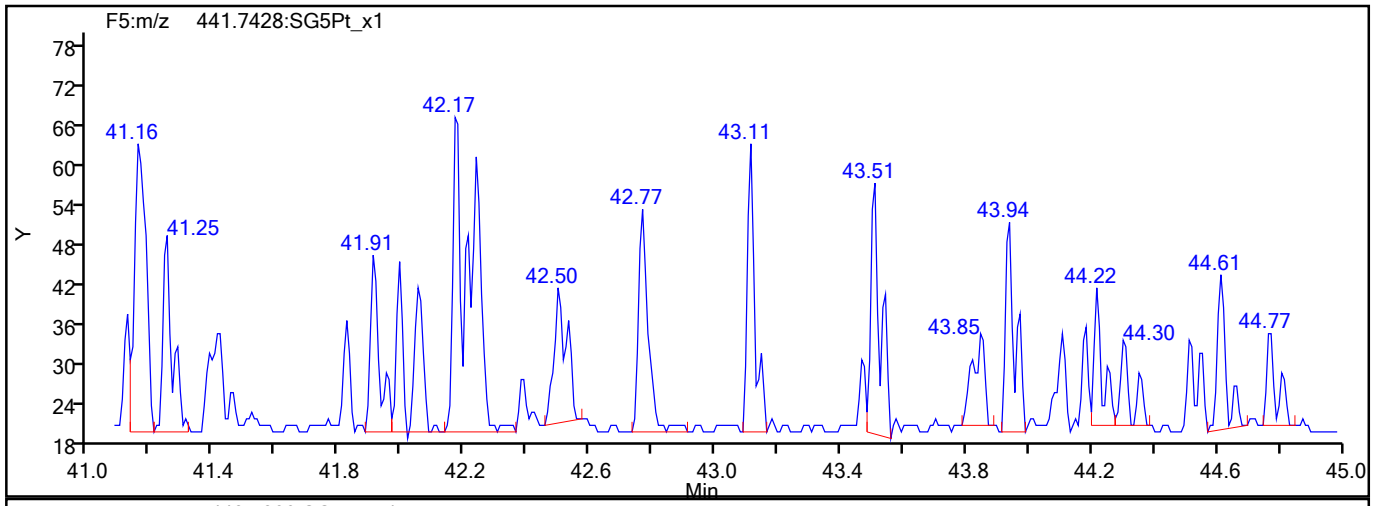

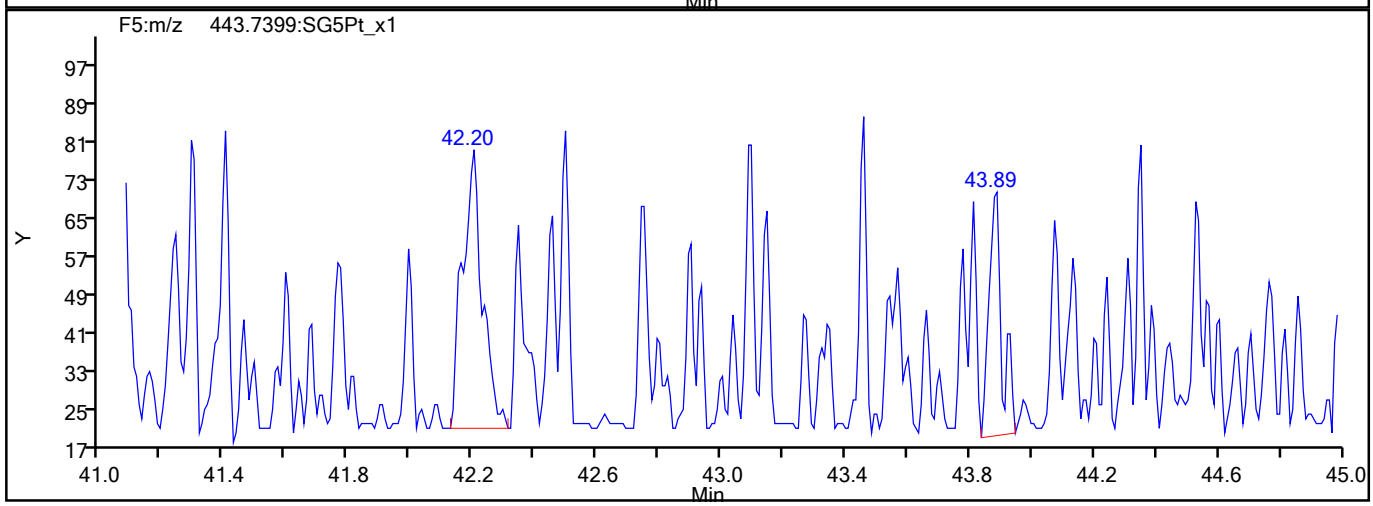

OCDF Interference Mass

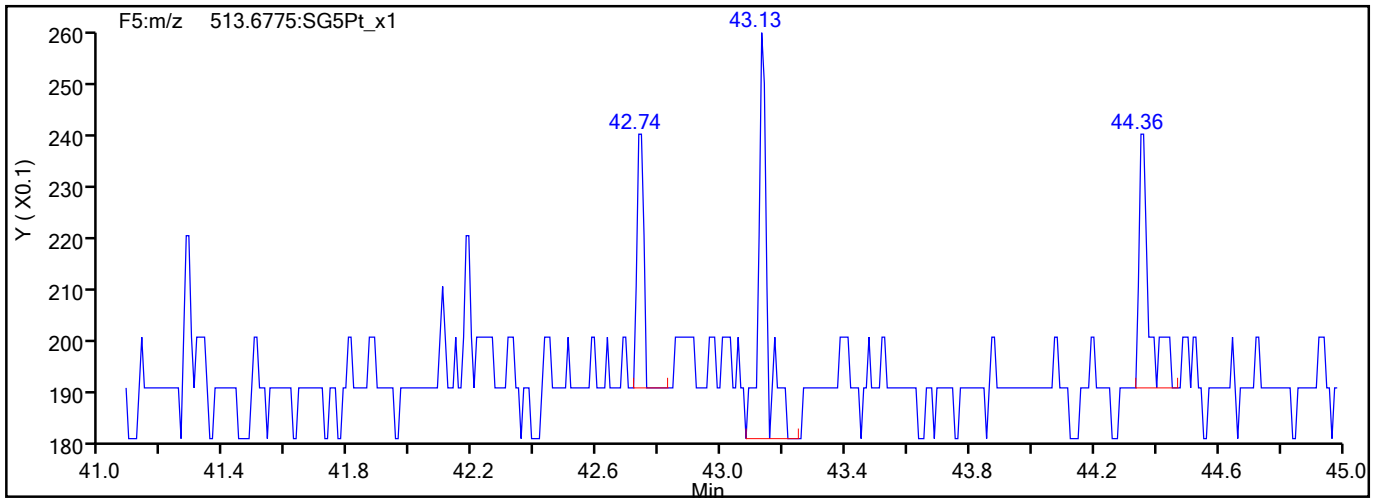

777456

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

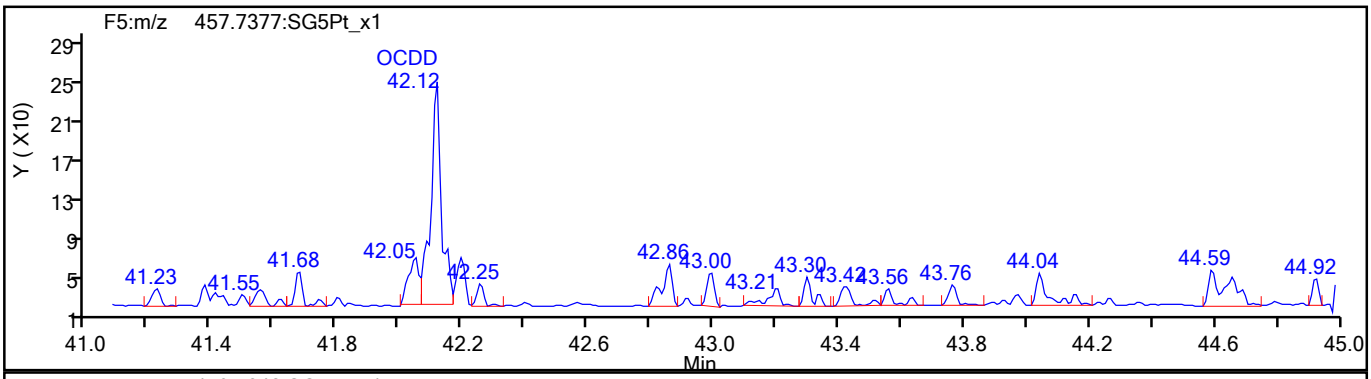

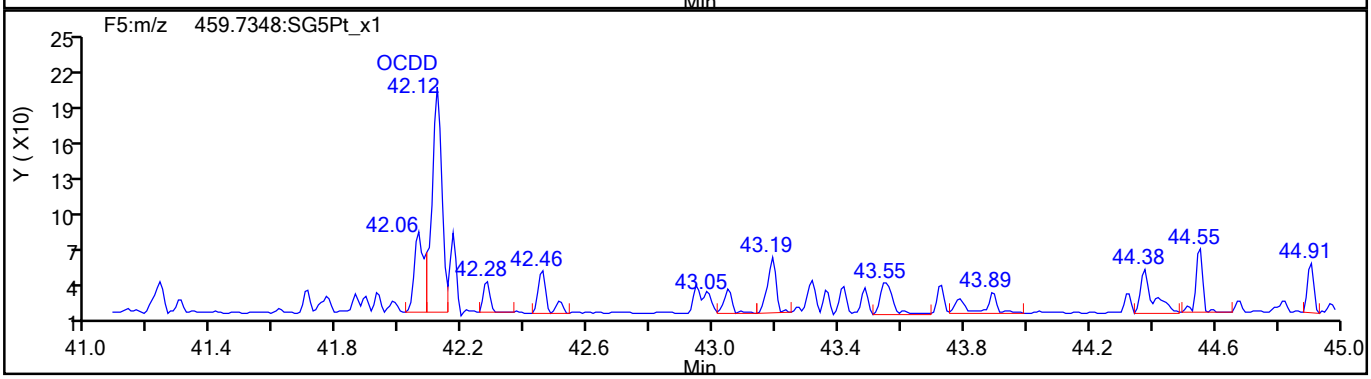

OCDD Standards

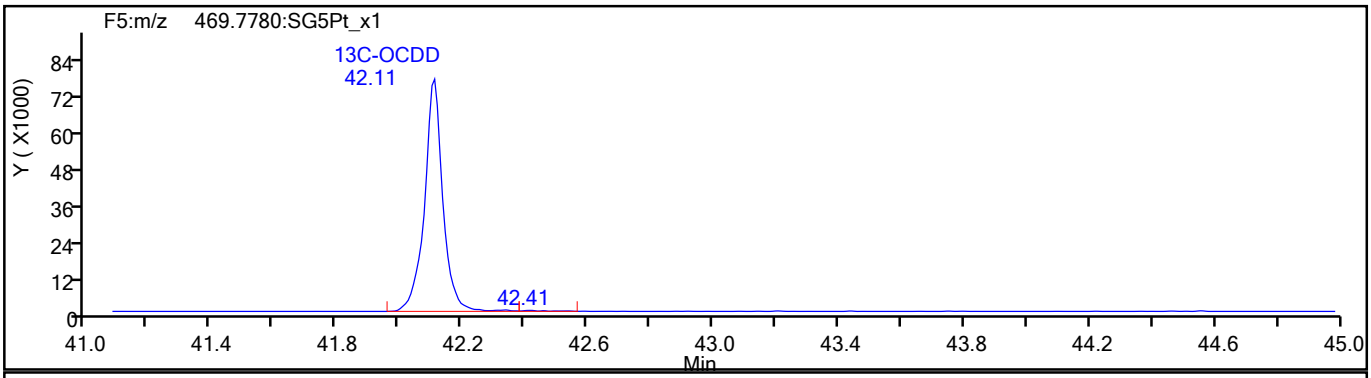

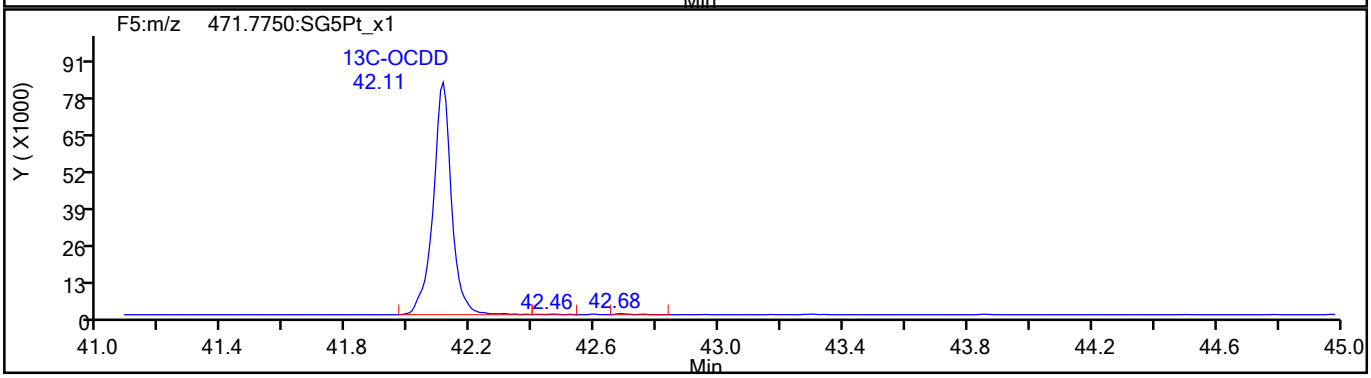

777457

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

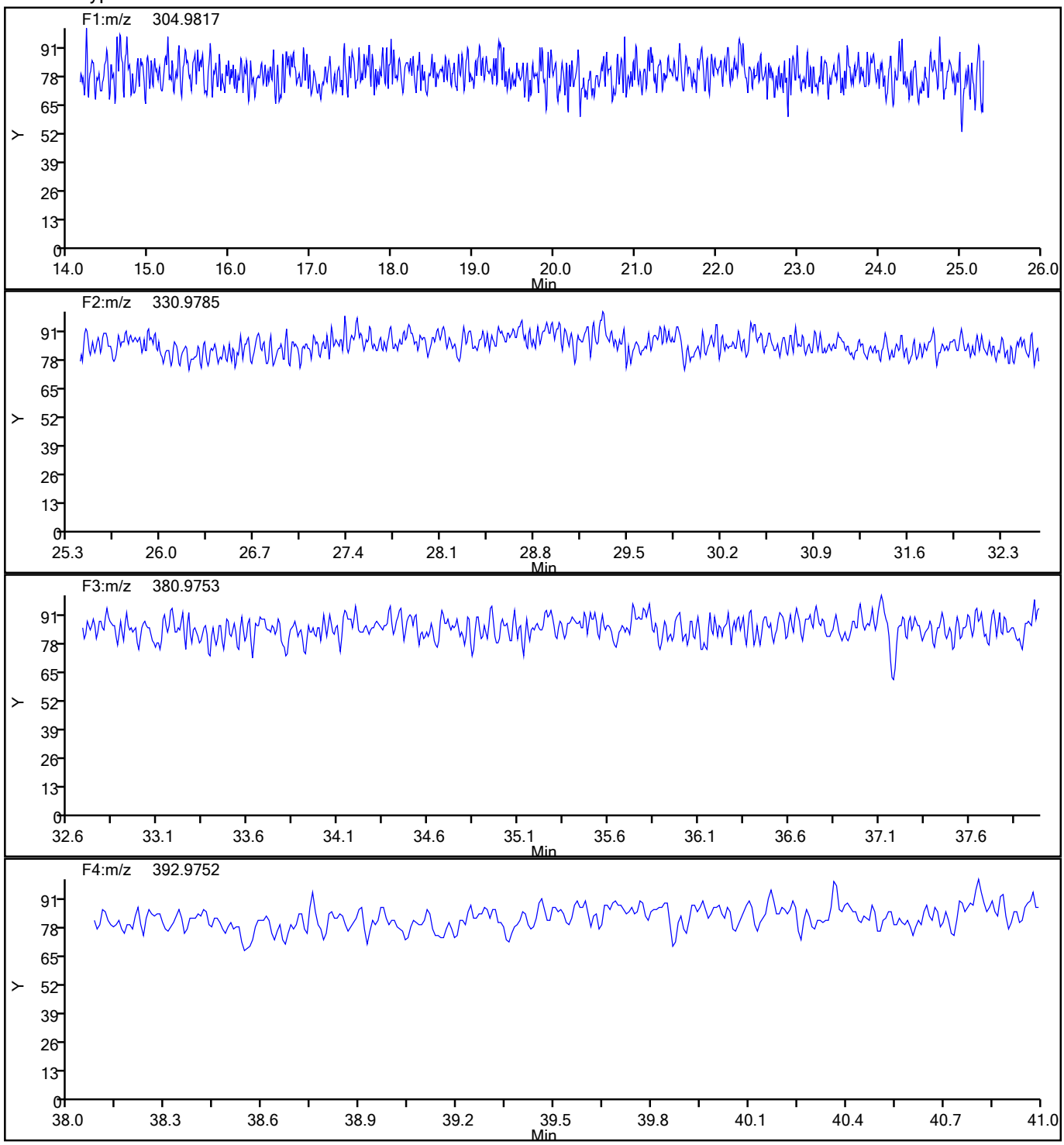

777458

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

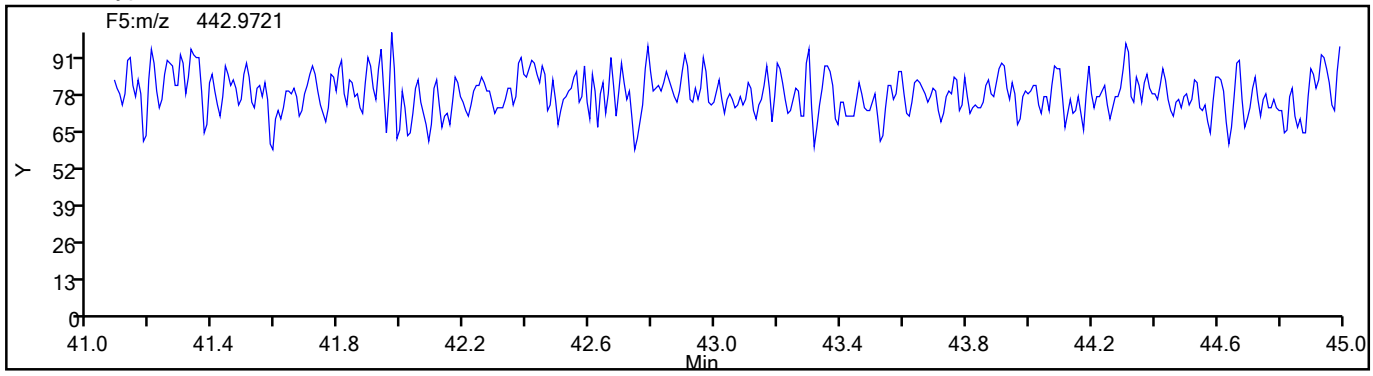

777459

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Lab File ID: 19au21dfs1_5.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10(g) Date Analyzed: 08/19/2021 16:27

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517891 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.073
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.067
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.052
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.055
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.0	0.042
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.046
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.041
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.021
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.020
72918-21-9	1,2,3,7,8,9-HxCDF	ND		5.0	0.020
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.022
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.338	J	5.0	0.032
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.177	J	5.0	0.038
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.041
3268-87-9	OCDD	1.21	J	10	0.029
39001-02-0	OCDF	ND		10	0.12
41903-57-5	Total TCDD	ND		1.0	0.14
30402-14-3	Total TCDF	4.06		1.0	0.047
36088-22-9	Total PeCDD	ND		5.0	0.21
30402-15-4	Total PeCDF	ND		5.0	0.055
34465-46-8	Total HxCDD	ND		5.0	0.19
55684-94-1	Total HxCDF	ND		5.0	0.040
37871-00-4	Total HpCDD	0.546	J	5.0	0.032
38998-75-3	Total HpCDF	0.177	J	5.0	0.039

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Lab File ID: 19au21dfs1_5.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/19/2021 16:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	36		25-164
89059-46-1	13C-2,3,7,8-TCDF	36		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	35		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	36		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	40		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	40		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	39		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	47		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	43		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	39		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	38		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	41		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	41		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	42		26-138
114423-97-1	13C-OCDD	36		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	46		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 19-Aug-2021 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513879/1-a RI
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 08:56:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: dadunj Date: 23-Aug-2021 08:56:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.367	999541	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.413	482916	0.81	1.3459	35.9	35.9	0.2062	0.2062	35.90	
2,3,7,8-TCDF	20.422	7680	0.67	1.0802	1.472	1.472	0.0237	0.0237		M
A Non-2,3,7,8-sub-TCDF	19.851	2918	0.78	1.0802	0.5594	0.5594	0.0237	0.5594		a
S Total TCDF					2.032	2.032	0.0237	0.0237		
D 13C-2,3,7,8-TCDD	21.745	331874	0.84	0.9317	35.6	35.6	0.1263	0.1263	35.64	
2,3,7,8-TCDD	21.797						0.0367	0.0367		RQU
$ 37Cl4-2,3,7,8-TCDD	21.780	184847		1.0083	18.3	18.3	0.0144	0.0144	45.85	
A Non-2,3,7,8-sub-TCDD	20.684						0.0367	0.0717		RQU
S Total TCDD							0.0717	0.0717		
D 13C-1,2,3,7,8-PeCDF	27.242	411361	1.64	1.1405	36.1	36.1	0.1592	0.1592	36.09	
1,2,3,7,8-PeCDF	27.263						0.0262	0.0262		
D 13C-2,3,4,7,8-PeCDF	28.759	451402	1.71	1.1253	40.1	40.1	0.1614	0.1614	40.13	
2,3,4,7,8-PeCDF	28.910						0.0273	0.0273		RQU
A F1 PeCDFs	24.634						0.007863	0.007863		RQU
A Non-2,3,7,8-sub-PeCDF	28.173						0.0267	0.0267		RQU
S Total PeCDF							0.0273	0.0273		
D 13C-1,2,3,7,8-PeCDD	29.559	251252	1.75	0.7165	35.1	35.1	0.0527	0.0527	35.08	
1,2,3,7,8-PeCDD	29.616						0.0337	0.0337		
A Non-2,3,7,8-sub-PeCDD	28.478						0.0337	0.1027		RQU
S Total PeCDD							0.1027	0.1027		
D 13C-1,2,3,4,7,8-HxCDF	34.909	442177	0.56	0.9648	46.8	46.8	0.1353	0.1353	46.82	
1,2,3,4,7,8-HxCDF	34.918						0.0106	0.0106		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.070	452714	0.55	1.0708	43.2	43.2	0.1220	0.1220	43.19	
1,2,3,6,7,8-HxCDF	35.087						0.009816	0.009816		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.887	384775	0.54	1.0413	37.7	37.7	0.1254	0.1254	37.75	
2,3,4,6,7,8-HxCDF	35.916						0.0110	0.0110		
D 13C-1,2,3,7,8,9-HxCDF	36.788	369514	0.55	0.9731	38.8	38.8	0.1342	0.1342	38.79	
1,2,3,7,8,9-HxCDF	36.791						0.0102	0.0102		
A Non-2,3,7,8-sub-HxCDF	35.009						0.0104	0.0199		RQU
S Total HxCDF							0.0199	0.0199		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.586	978844	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.097	300443	1.30	0.7587	40.5	40.5	0.1264	0.1264	40.46	
1,2,3,4,7,8-HxCDD	36.126						0.0212	0.0212		
D 13C-1,2,3,6,7,8-HxCDD	36.215	325228	1.26	0.8593	38.7	38.7	0.1116	0.1116	38.67	
1,2,3,6,7,8-HxCDD	36.244						0.0231	0.0231		
1,2,3,7,8,9-HxCDD	36.552						0.0205	0.0205		RQU
A Non-2,3,7,8-sub-HxCDD	35.375						0.0215	0.0943		RQU
S Total HxCDD							0.0943	0.0943		
D 13C-1,2,3,4,6,7,8-HpCDF	38.610	296829	0.48	0.7359	41.2	41.2	0.1807	0.1807	41.20	
1,2,3,4,6,7,8-HpCDF	38.619	379	0.90	1.4421	0.0885	0.0885	0.0188	0.0188		M
D 13C-1,2,3,4,7,8,9-HpCDF	39.857	279786	0.49	0.6854	41.7	41.7	0.1940	0.1940	41.70	
1,2,3,4,7,8,9-HpCDF	39.872						0.0205	0.0205		
A Non-2,3,7,8-sub-HpCDF	39.245						0.0196	0.0196		
S Total HpCDF					0.0885	0.0885	0.0197	0.0197		
D 13C-1,2,3,4,6,7,8-HpCDD	39.554	269457	1.07	0.6745	40.8	40.8	0.0880	0.0880	40.81	
1,2,3,4,6,7,8-HpCDD	39.570	478	1.01	1.0503	0.1689	0.1689	0.0159	0.0159		M
A Non-2,3,7,8-sub-HpCDD	39.241	295	1.12	1.0503	0.1042	0.1042	0.0159	0.1042		
S Total HpCDD					0.2731	0.2731	0.0159	0.0159		
D 13C-OCDD	42.051	387569	0.87	0.5446	72.7	72.7	0.2546	0.2546	36.35	
OCDF	42.157						0.0584	0.0584		
OCDD	42.068	1247	0.84	1.0620	0.6059	0.6059	0.0145	0.0145		M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 19-Aug-2021 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513879/1-a RI
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 08:56:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: dadunj Date: 23-Aug-2021 08:56:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.367	21.395	-2		448088	60917	46	115	1324		
333.9338	21.359	21.395	-2		551453	76764	19	47	4040	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.413	20.365	3	0.955	216659	29555	127	317	233		
317.9389	20.388	20.365	1	0.954	266257	36744	26	65	1413	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.422	20.408	1	1.000	3077	466	1	2	466		M
305.8987	20.422	20.408	1	1.000	4603	728	6	15	121	0.67(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	19.734	19.851	-7	0.967	1278	284	1	2	284		a
305.8987	19.709	19.851	-9	0.965	1640	273	6	15	46	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.745	21.716	2	1.018	151821	19232	46	115	418		
333.9338	21.737	21.716	1	1.017	180053	23875	19	47	1257	0.84(0.65-0.89)	
2,3,7,8-TCDD											RQU
319.8965	21.733						6	15			
321.8936	21.733						1	2			
37Cl4-2,3,7,8-TCDD											
327.8847	21.780	21.799	-1	1.019	184847	22658	8	20	2832		
A Non-2,3,7,8-sub-TCDD											U
319.8965	17.808	20.684	-172	0.819	189	61	6	15	10		
	Empc Correction				111	40	6	15	7		
321.8936	17.774	20.684	-174	0.817	145	52	1	2	52	1.30(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.242	27.251	-1	1.275	255453	37782	54	135	700		
353.8970	27.242	27.251	-1	1.275	155908	23687	46	115	515	1.64(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.276						1	2			
341.8567	27.276						6	15			
13C-2,3,4,7,8-PeCDF											
351.9000	28.759	28.757	0	1.346	284972	39477	54	135	731		
353.8970	28.742	28.757	-1	1.345	166430	22399	46	115	487	1.71(1.32-1.78)	
2,3,4,7,8-PeCDF											RQU
339.8597	28.791						1	2			
341.8567	28.791						6	15			
A F1 PeCDFs											U
339.8597	24.270	24.634	-22	0.891	14	10	1	2	10		
341.8567	24.347	24.634	-17	0.894	375	126	1	2	126	0.04(1.32-1.78)	
	Empc Correction				9	6	1	2	6		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	28.173	28.173	0	1.034	22	12	1	2			
341.8567	28.173	28.173	0	1.034	163	52	6	15		0.13(1.32-1.78)	
	Empc Correction				14	7	6	15	0		
13C-1,2,3,7,8-PeCDD											
367.8949	29.559	29.574	-1	1.383	159751	21868	10	25	2187		
369.8919	29.575	29.574	0	1.384	91501	12206	11	27	1110	1.75(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616						4	10			
357.8516	29.616						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.063	28.478	-145	0.882	120	38	4	10	10		
	Empc Correction				54	24	4	10	6		
357.8516	26.054	28.478	-145	0.881	35	16	1	2	16	3.43(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.909	34.906	0	0.954	159560	29606	34	85	871		
385.8610	34.909	34.906	0	0.954	282617	52423	76	190	690	0.56(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	34.922						2	5			
375.8178	34.922						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.070	35.066	0	0.959	161024	31293	34	85	920		
385.8610	35.061	35.066	0	0.958	291690	52360	76	190	689	0.55(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.082						2	5			
375.8178	35.082						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.887	35.890	0	0.981	134908	26852	34	85	790		
385.8610	35.887	35.890	0	0.981	249867	47678	76	190	627	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.907						2	5			
375.8178	35.907						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.788	36.782	0	1.006	131797	27710	34	85	815		
385.8610	36.780	36.782	0	1.005	237717	51610	76	190	679	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791						2	5			
375.8178	36.791						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.419	35.009	-95	0.957	41	29	2	5	15		
375.8178	33.427	35.009	-95	0.958	46	15	2	5	8	0.89(1.05-1.43)	
	Empc Correction				33	23	2	5	12		
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.586	36.581	0		542767	116573	46	115	2534		
403.8529	36.586	36.581	0		436077	94013	35	87	2686	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.097	36.092	0	0.987	169567	35941	46	115	781		
403.8529	36.097	36.092	0	0.987	130876	30793	35	87	880	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.109						4	10			
391.8127	36.109						2	5			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.215	36.210	0	0.990	181621	37484	46	115	815		
403.8529	36.215	36.210	0	0.990	143607	27866	35	87	796	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.227						4	10			
391.8127	36.227						2	5			
1,2,3,7,8,9-HxCDD											RQU
389.8158	36.597						4	10			
391.8127	36.597						2	5			
A Non-2,3,7,8-sub-HxCDD											U
389.8158	34.977	35.375	-24	0.966	247	48	4	10	12		
	Empc Correction				172	48	4	10	12		
391.8127	34.994	35.375	-23	0.966	139	39	2	5	20	1.78(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.610	38.596	1	1.055	96572	24055	41	102	587		
419.8220	38.610	38.596	1	1.055	200257	49761	71	177	701	0.48(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7817	38.619	38.618	0	1.000	180	61	6	15	10		
409.7788	38.619	38.618	0	1.000	199	84	2	5	42	0.90(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.857	39.850	0	1.089	91751	25313	41	102	617		
419.8220	39.857	39.850	0	1.089	188035	49089	71	177	691	0.49(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872						6	15			
409.7788	39.872						2	5			
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.245						6	15			
409.7788	39.245						2	5			

Report Date: 23-Aug-2021 08:56:17 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.554	39.547	0	1.081	139342	37216	23	57	1618		
437.8140	39.554	39.547	0	1.081	130115	34855	27	67	1291	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											M
423.7767	39.570	39.561	1	1.000	240	101	4	10	25		
425.7737	39.562	39.561	0	1.000	238	76	1	2	76	1.01(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.947	39.241	-18	0.985	156	65	4	10	16		
425.7737	38.914	39.241	-20	0.984	139	52	1	2	52	1.12(0.88-1.20)	
13C-OCDD											
469.7780	42.051	42.036	1	1.149	180767	43311	74	185	585		
471.7750	42.051	42.036	1	1.149	206802	47640	43	107	1108	0.87(0.76-1.02)	
OCDF											
441.7428	42.137						3	7			
443.7399	42.137						11	27			
OCDD											M
457.7377	42.068	42.053	1	1.000	569	118	1	2	118		M
459.7348	42.051	42.053	0	1.000	678	161	2	5	81	0.84(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	482916	66299

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	482916	66299

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.734	1278	284	1640	273	0.5594	0.78	a
Signal Totals:							
	1278	284	1640	273			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2918	557				0.78	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5594 = (2918 * 100.000) / (482916 * 1.080)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	331874	43107

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	331874	43107

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.808	189	61	145	52	0.0936	1.30	RQ
17.808	111	40	145	52	0.0717		Empc Correction
21.960	78	44	37	20	0.0322	2.11	RQ
21.960	28	15	37	20	0.0182		Empc Correction
23.385	139	62	10	5	0.0418	13.90	RQ
23.385	7	3	10	5	0.004764		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	411361	61469
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	451402	61876

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	431381	61672

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.270	14	10	375	126	0.0875	0.04	RQ
24.270	14	10	9	6	0.005171		Empc Correction
24.553	8	4	62	43	0.0157	0.13	RQ
24.553	8	4	5	2	0.002923		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	411361	61469
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	451402	61876

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	431381	61672

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
29.567	22	12	163	52	0.0416	0.13	RQ
29.567	22	12	14	7	0.008094		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	251252	34074

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	251252	34074

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.063	120	38	35	16	0.0590	3.43	RQ
26.063	54	24	35	16	0.0338		Empc Correction
26.374	55	36	12	6	0.0255	4.58	RQ
26.374	18	9	12	6	0.0114		Empc Correction
30.224	437	87	106	40	0.2065	4.12	RQ
30.224	164	61	106	40	0.1027		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	442177	82029
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	452714	83653
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	384775	74530
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	369514	79320

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	412295	79883

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.419	41	29	46	15	0.0175	0.89	RQ
33.419	41	29	33	23	0.0149		Empc Correction
35.407	52	27	47	31	0.0199	1.11	

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	300443	66734
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	325228	65350
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	312835	66042

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.977	247	48	139	39	0.1170	1.78	RQ
34.977	172	48	139	39	0.0943		Empc Correction
35.297	59	22	62	34	0.0367	0.95	RQ
35.297	59	22	47	17	0.0321		Empc Correction
35.904	124	47	45	32	0.0512	2.76	RQ
35.904	55	39	45	32	0.0303		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	269457	72071

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	269457	72071

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.947	156	65	139	52	0.1042	1.12	
Signal Totals:							
	156	65	139	52			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	295	117				1.12	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.1042 = (295 * 100.000) / (269457 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.42
Area: 2721
Amount: 1.404027
Amount Units: pg/ul

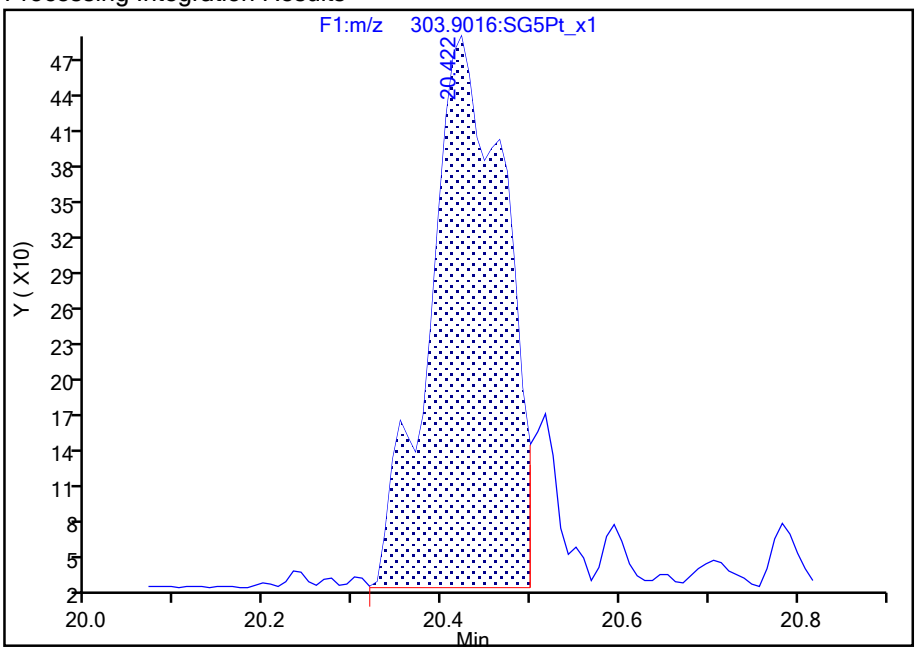

Manual Integration Results

RT: 20.42
Area: 3077
Amount: 1.472273
Amount Units: pg/ul

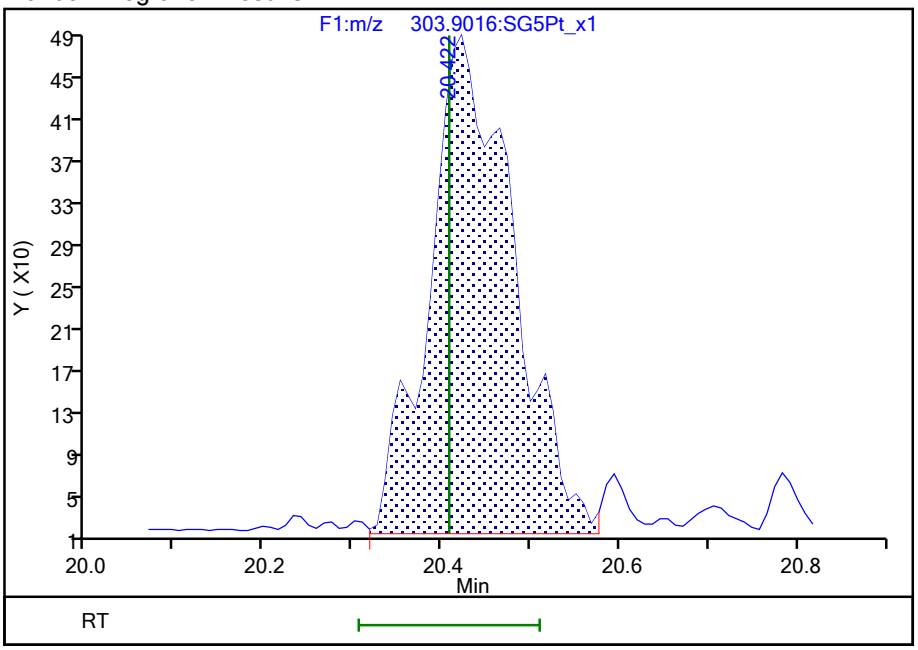

Reviewer: dadunj, 23-Aug-2021 08:53:56

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.62
Area: 339
Amount: 0.121248
Amount Units: pg/ul

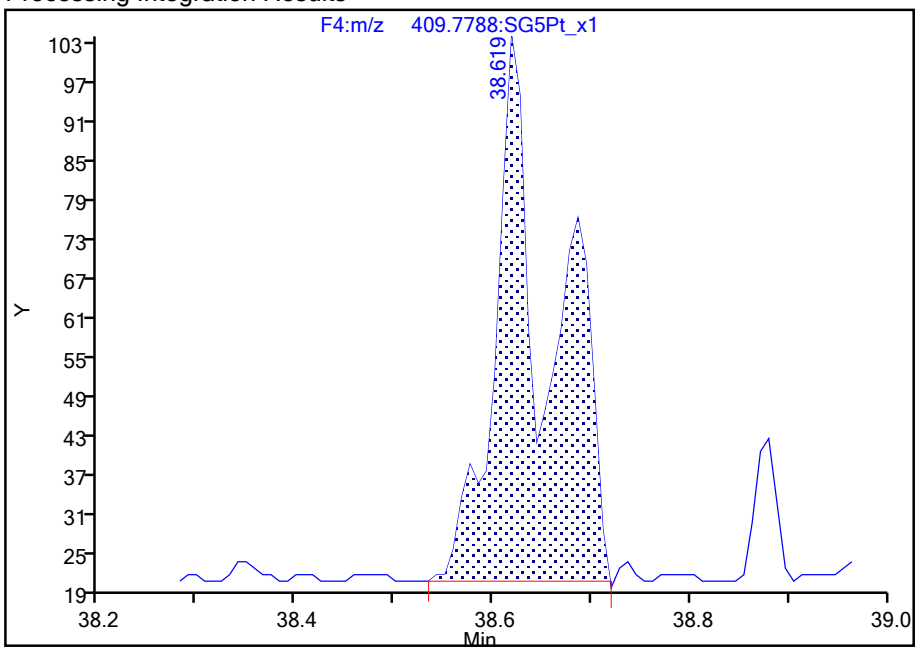

Manual Integration Results

RT: 38.62
Area: 199
Amount: 0.088541
Amount Units: pg/ul

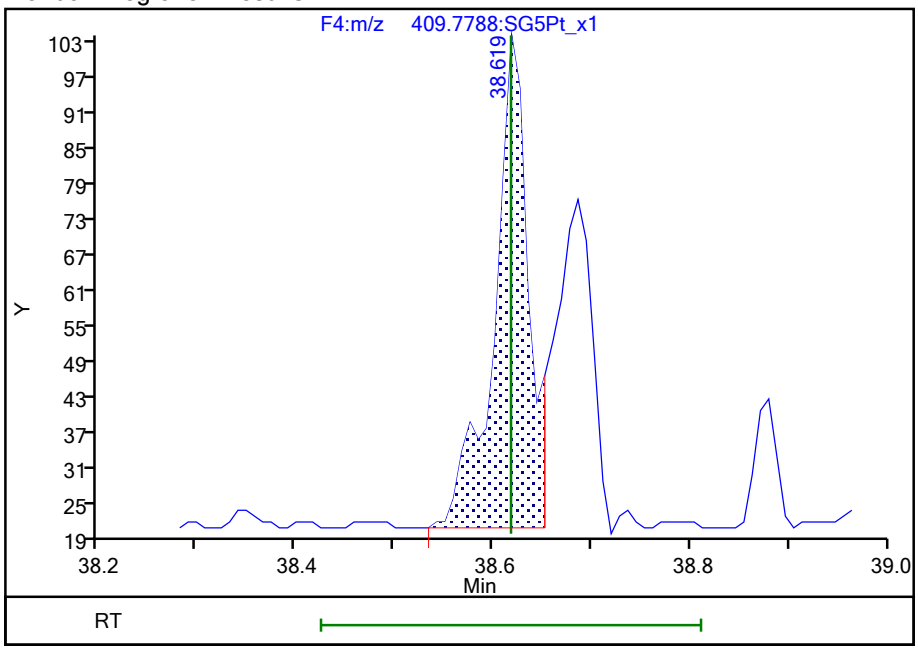

Reviewer: dadunj, 23-Aug-2021 08:55:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 39.56
Area: 255
Amount: 0.174905
Amount Units: pg/ul

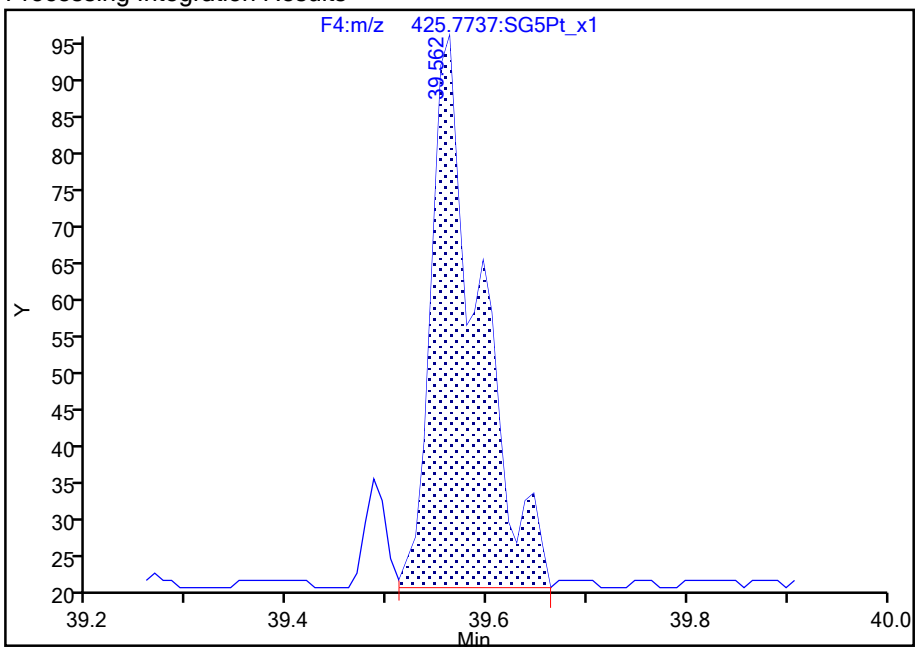

Manual Integration Results

RT: 39.56
Area: 238
Amount: 0.168898
Amount Units: pg/ul

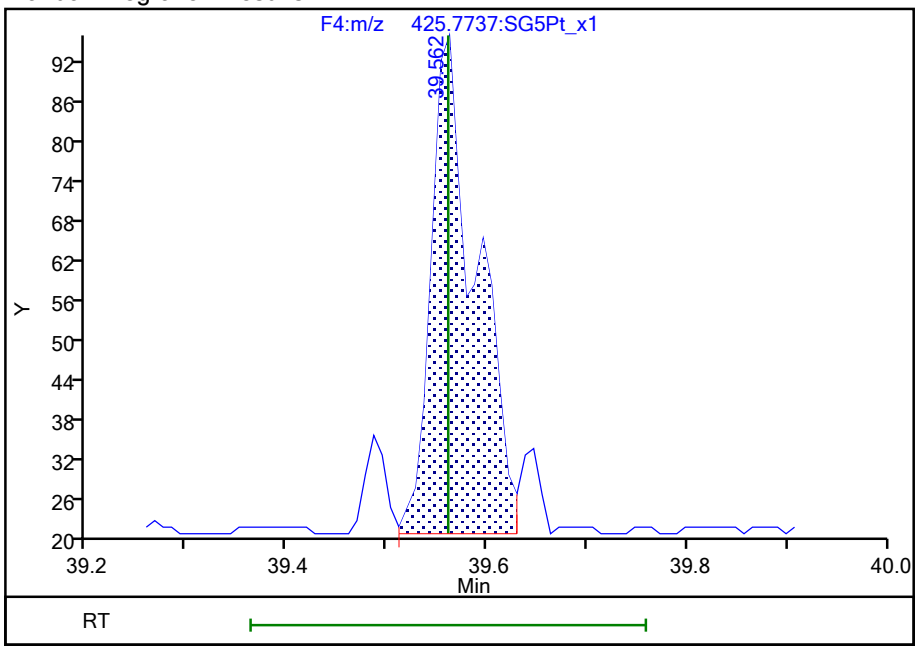

Reviewer: dadunj, 23-Aug-2021 08:55:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 42.07
Area: 520
Amount: 0.582127
Amount Units: pg/ul

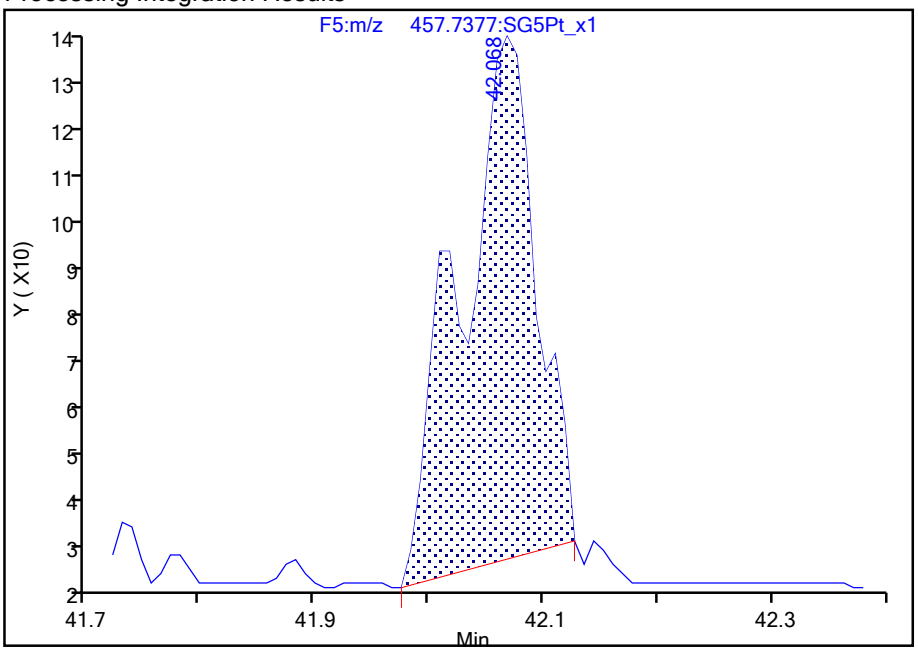

Manual Integration Results

RT: 42.07
Area: 569
Amount: 0.605937
Amount Units: pg/ul

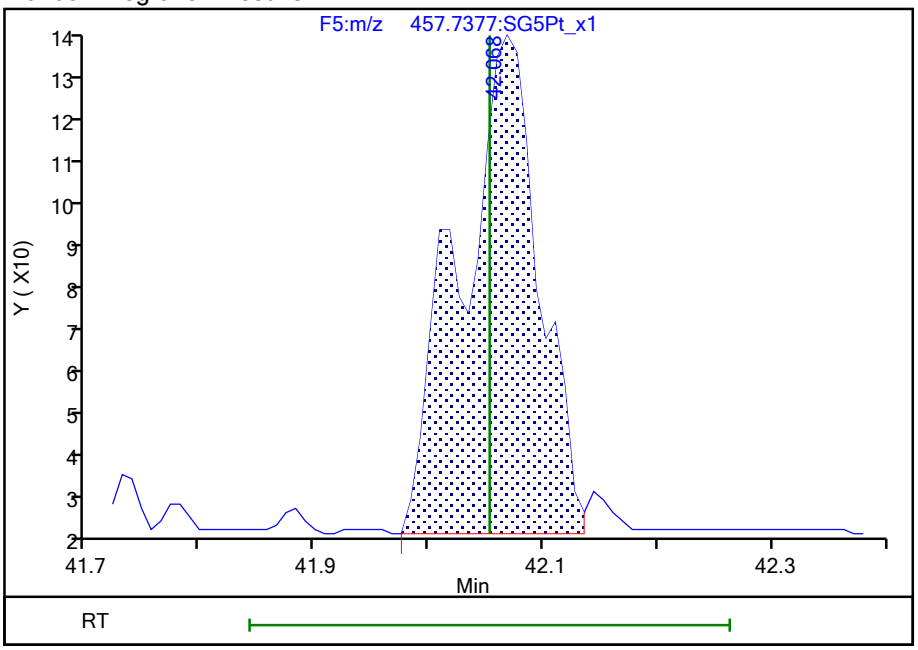

Reviewer: dadunj, 23-Aug-2021 08:55:45

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

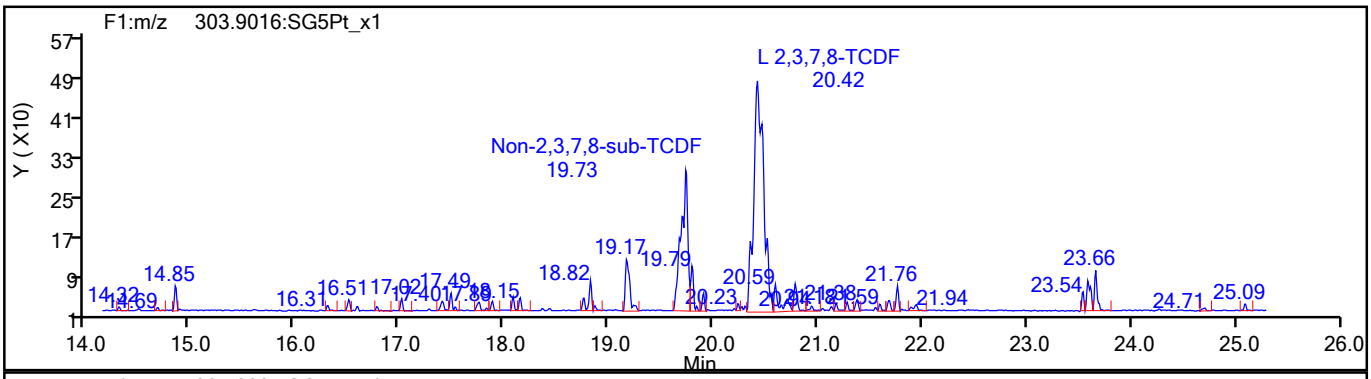

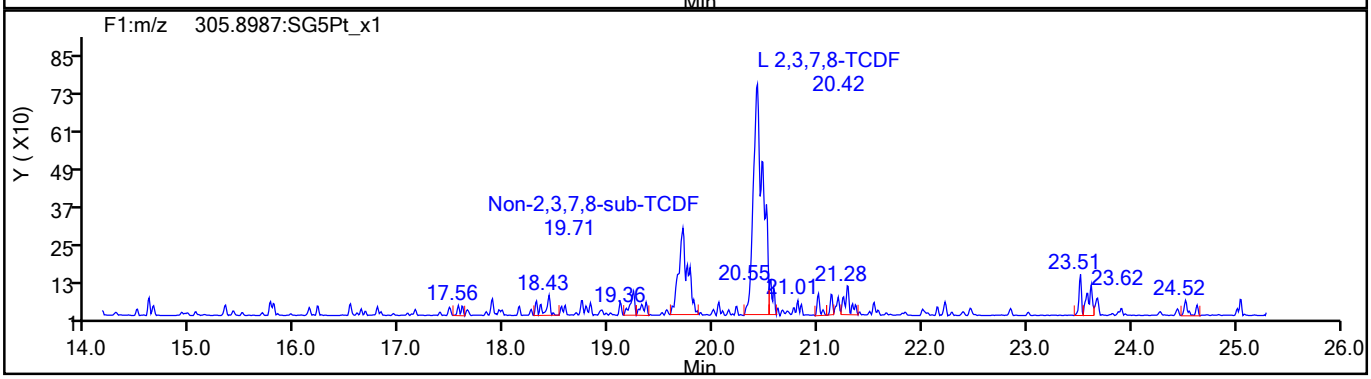

TCDF Standards

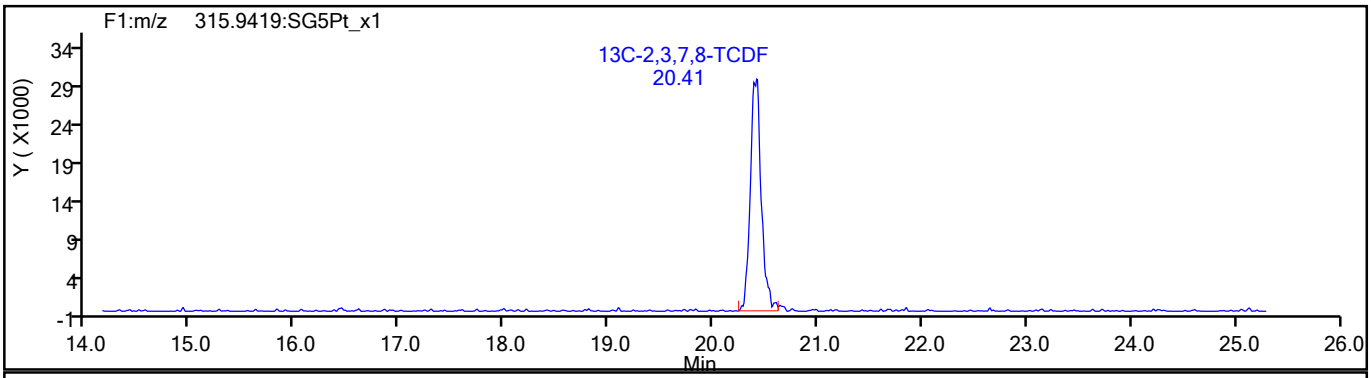

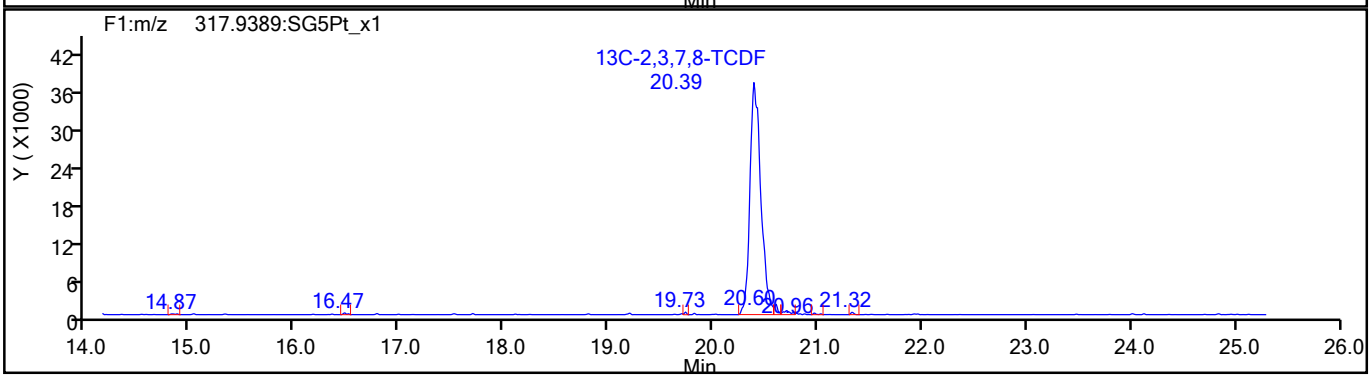

777480

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

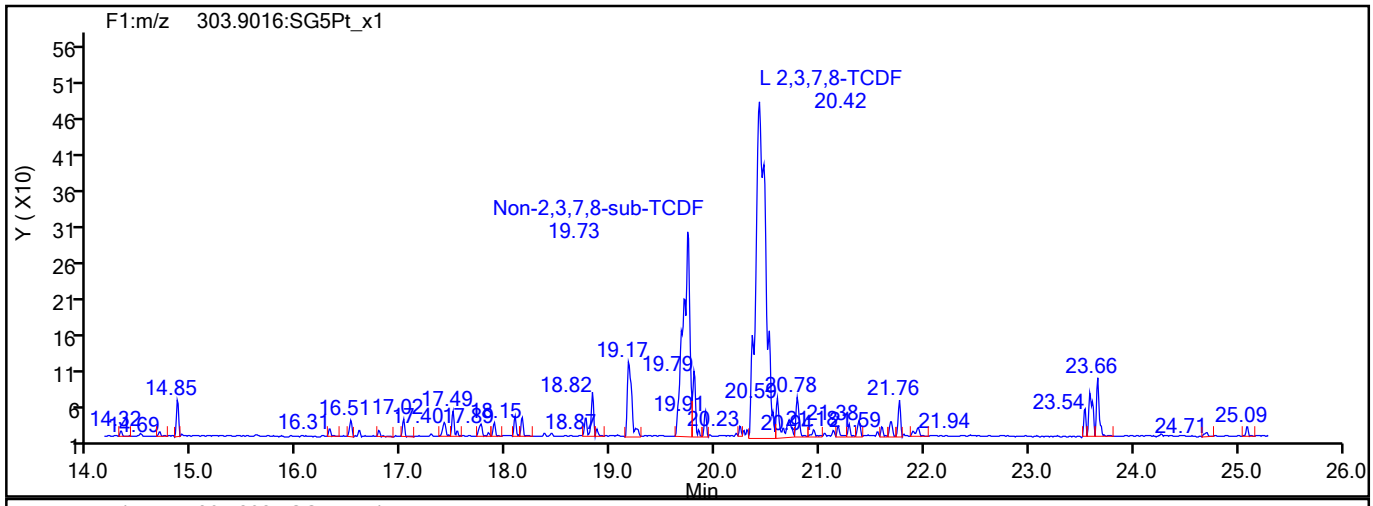

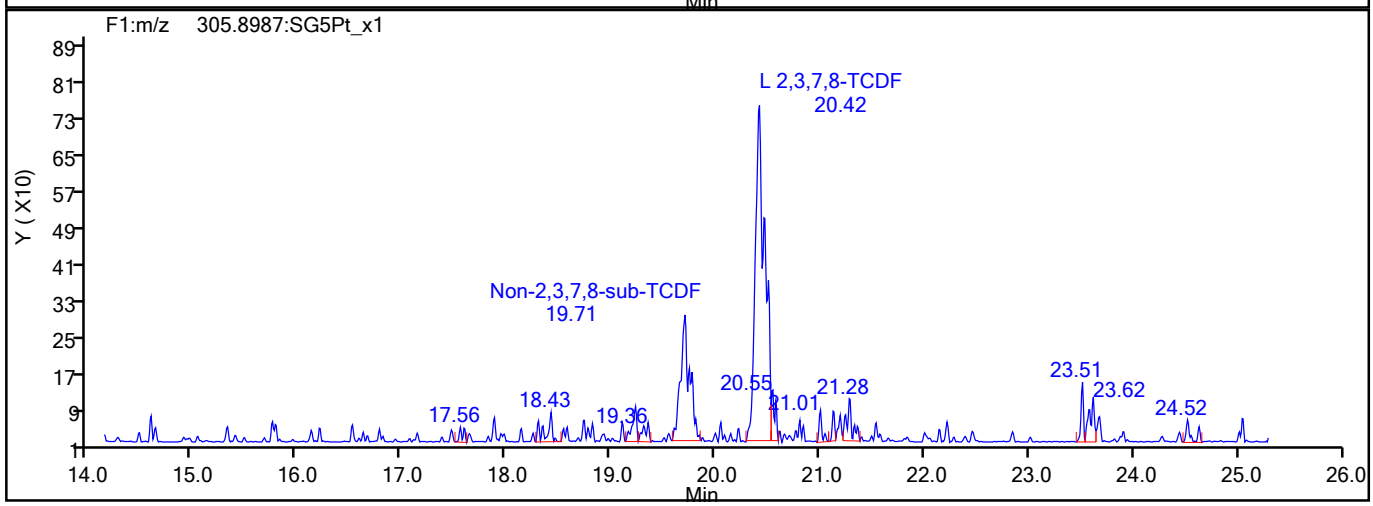

TCDF Interference Mass

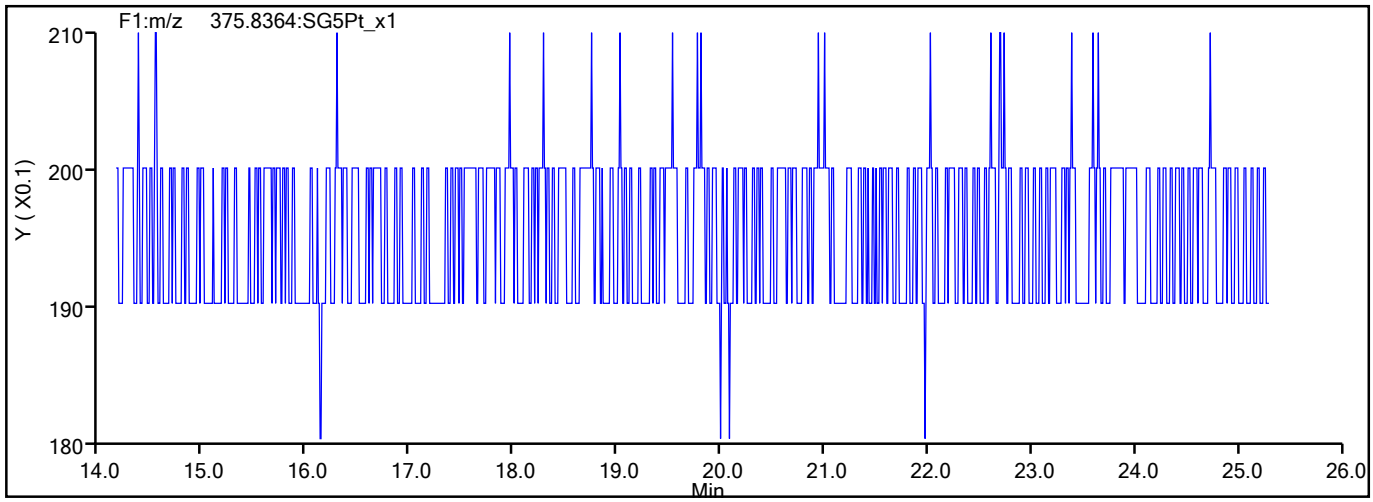

777481

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

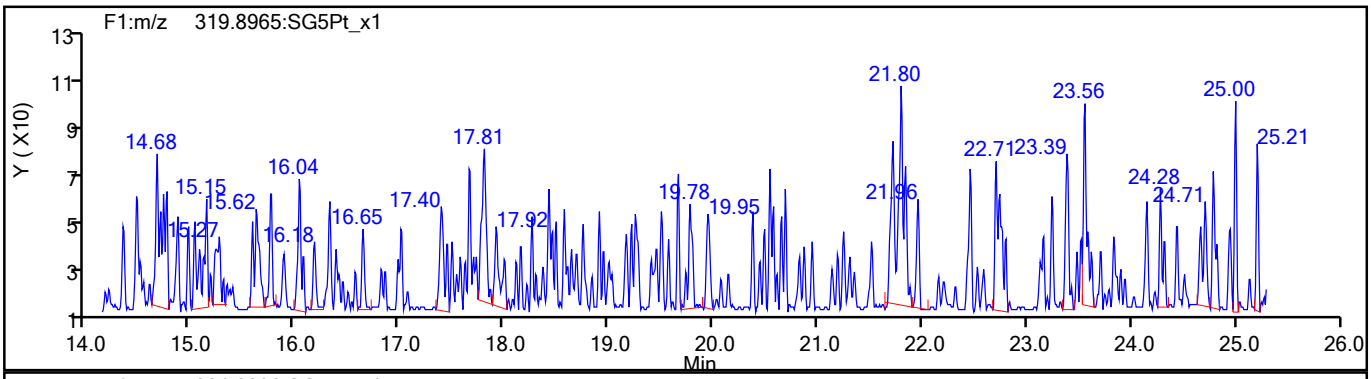

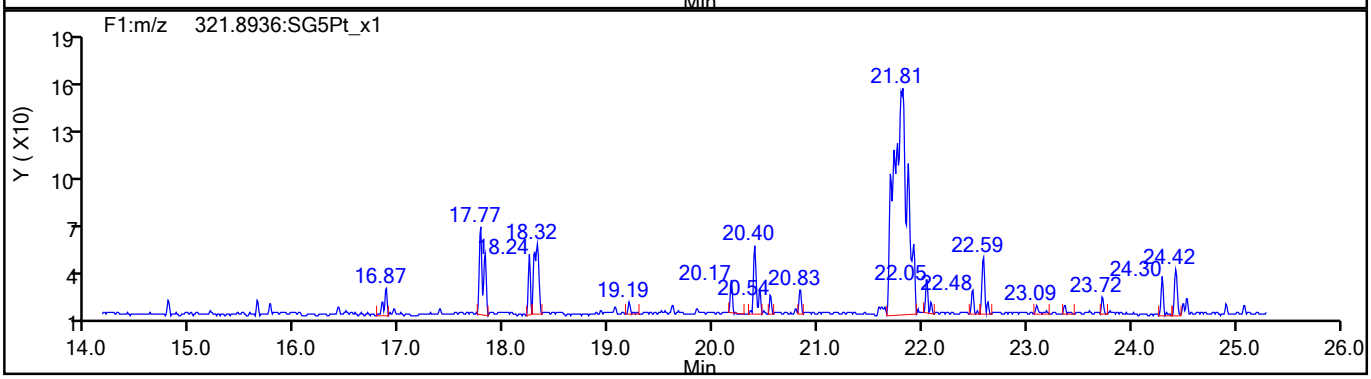

TCDD Standards

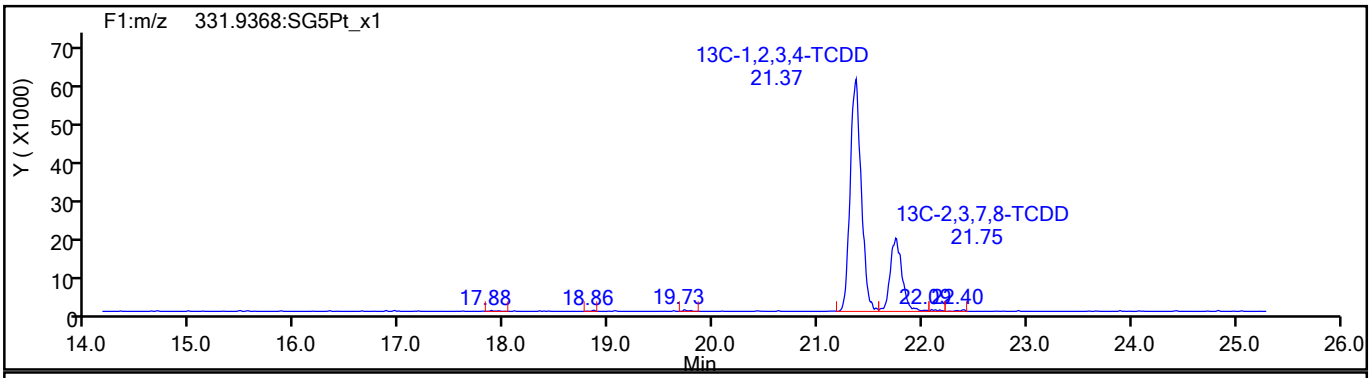

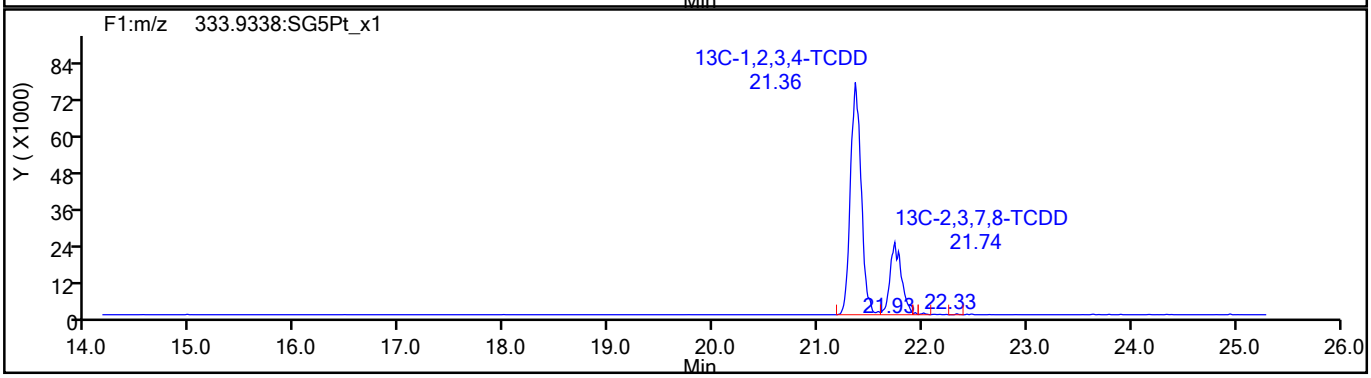

777482

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

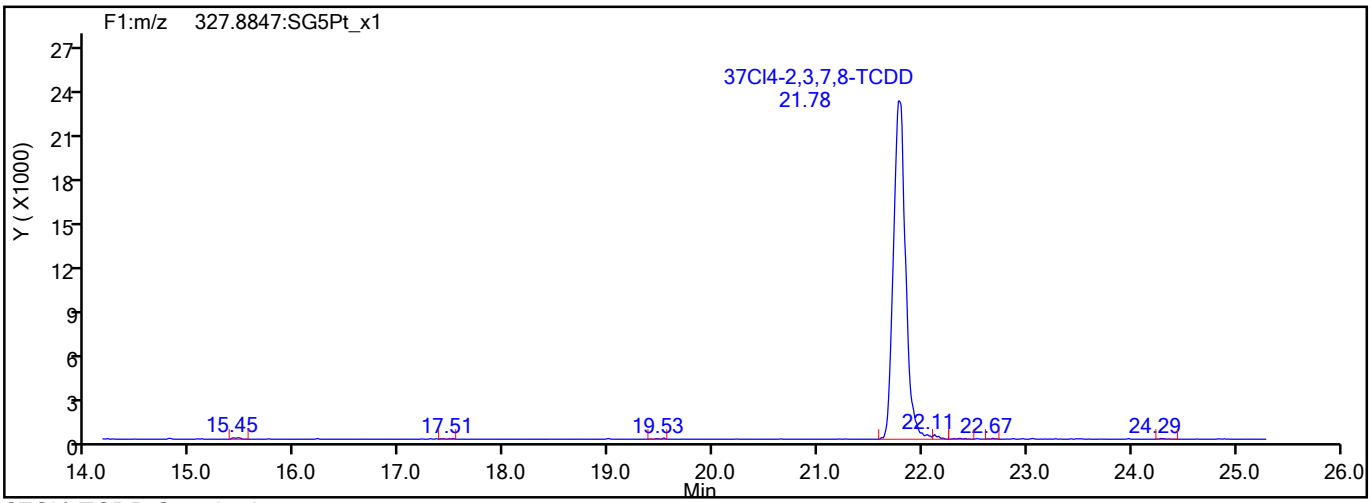

37Cl4-TCDD Standards

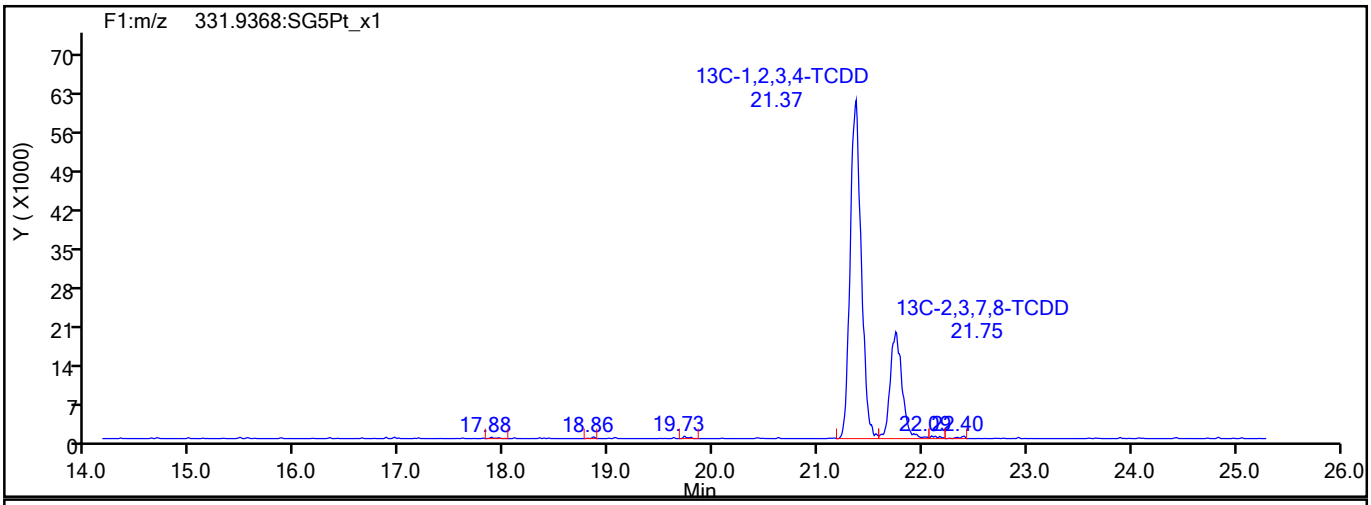

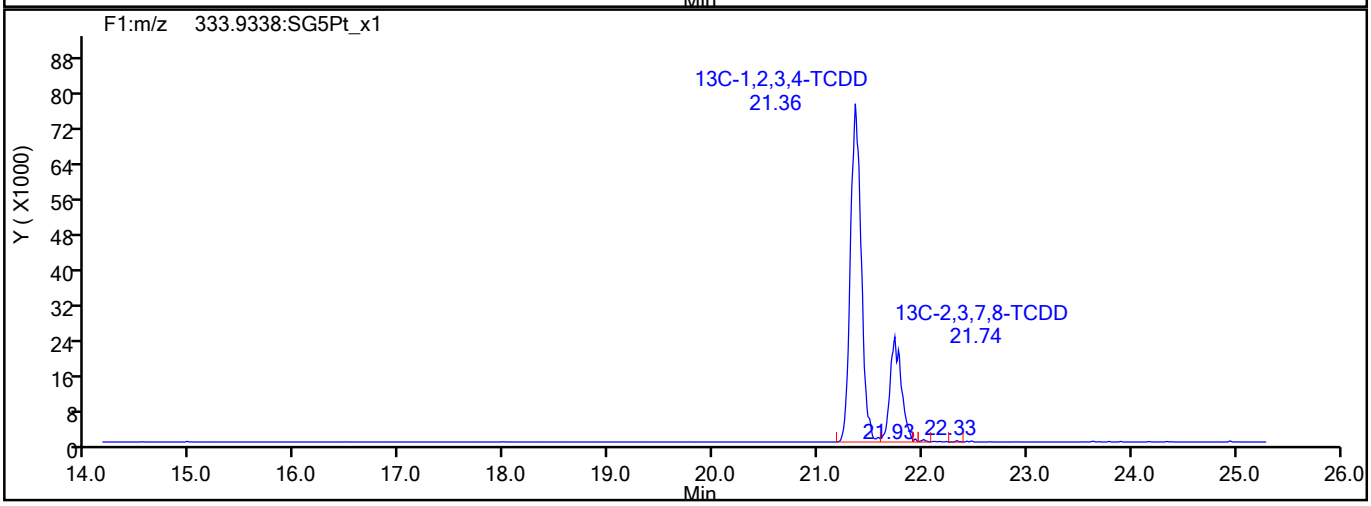

777483

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

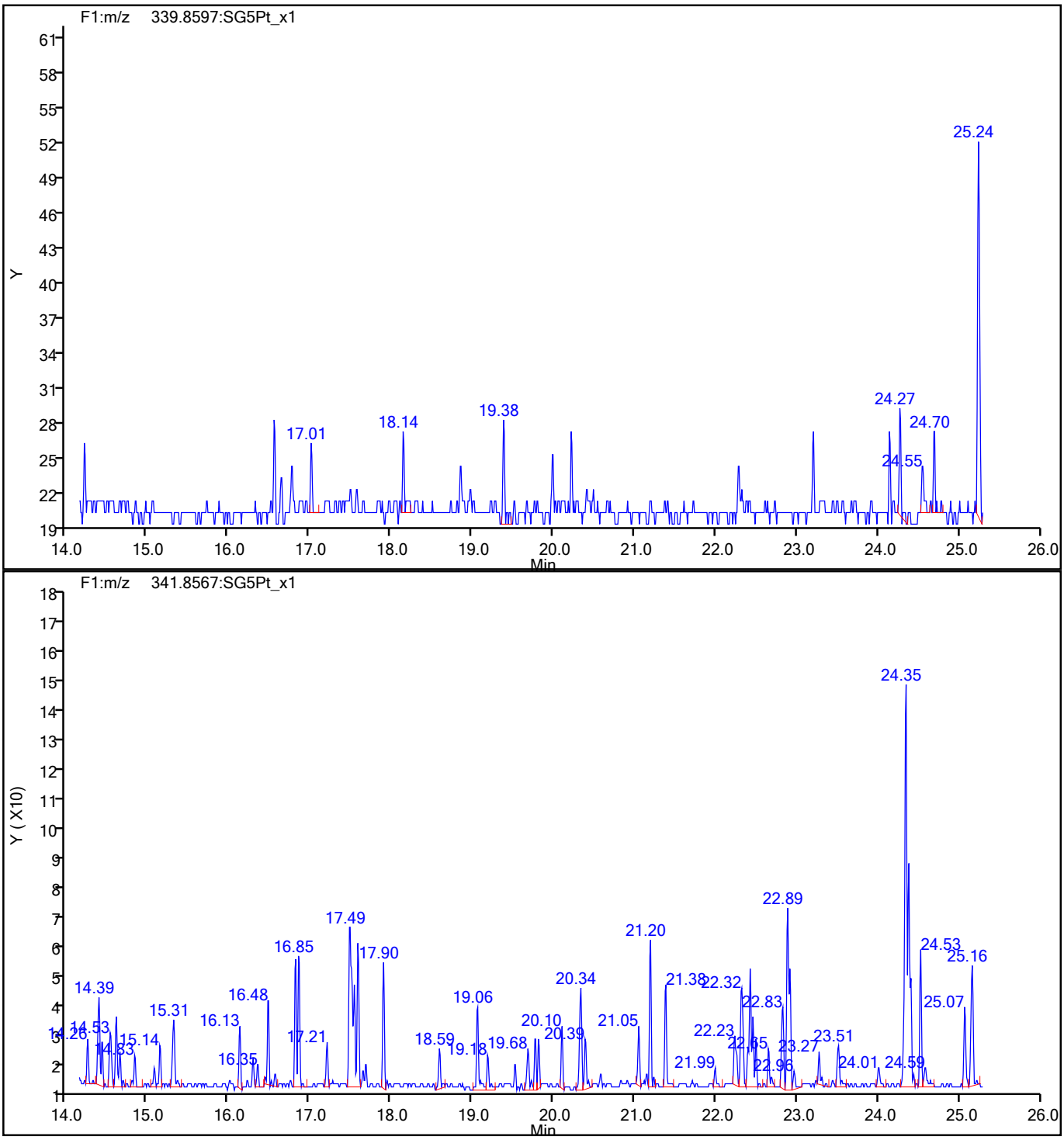

777484

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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F1 PeCDFs

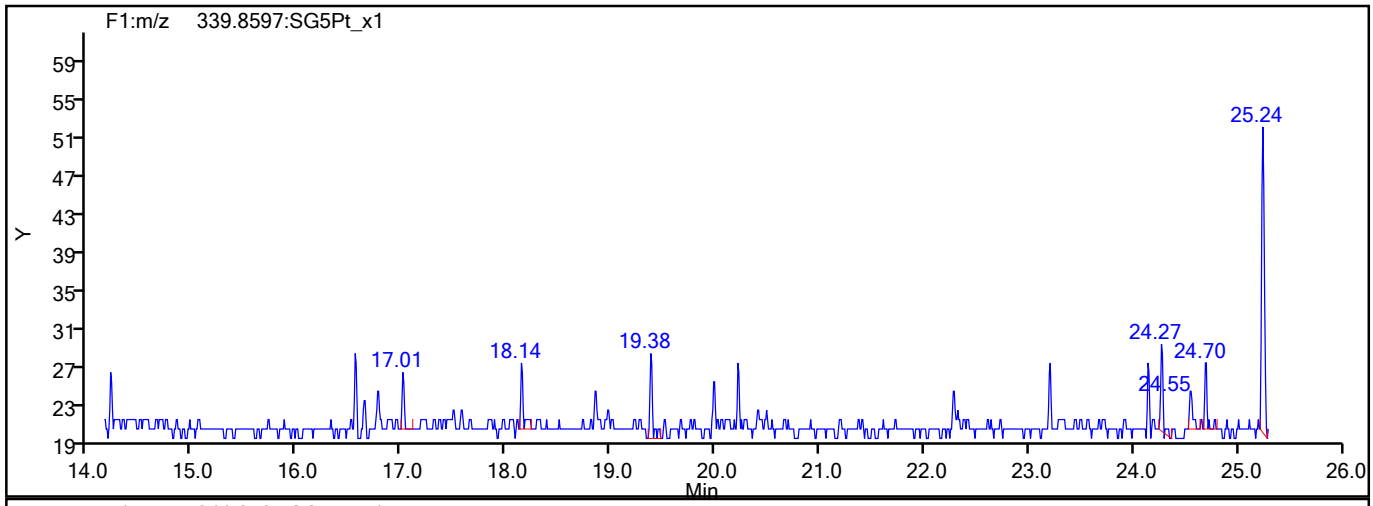

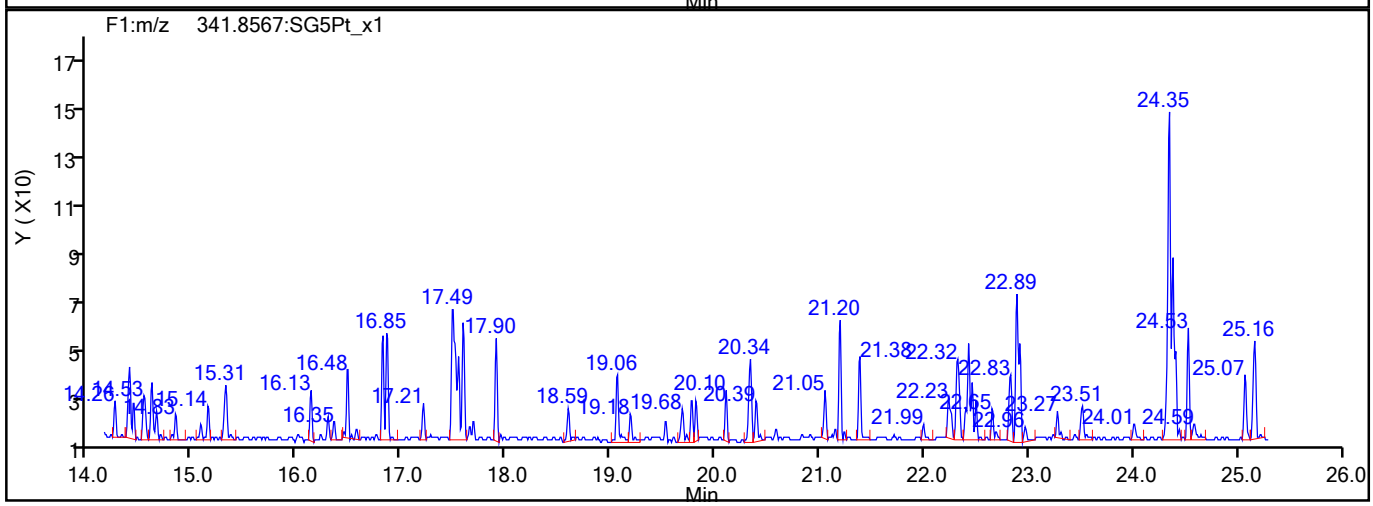

F1 PeCDFs Interference Mass

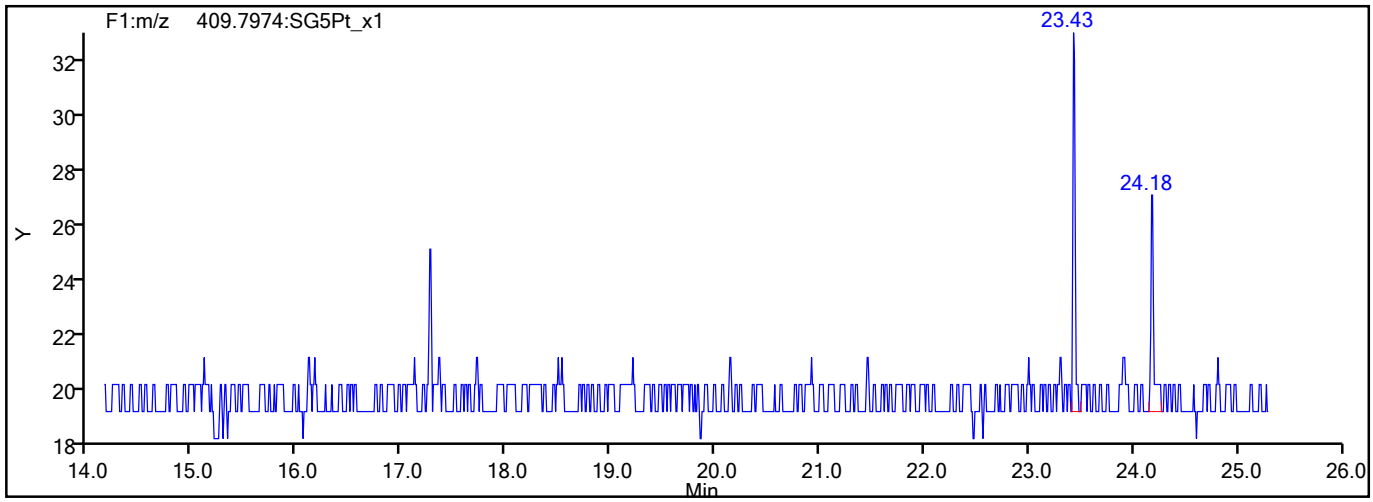

777485

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

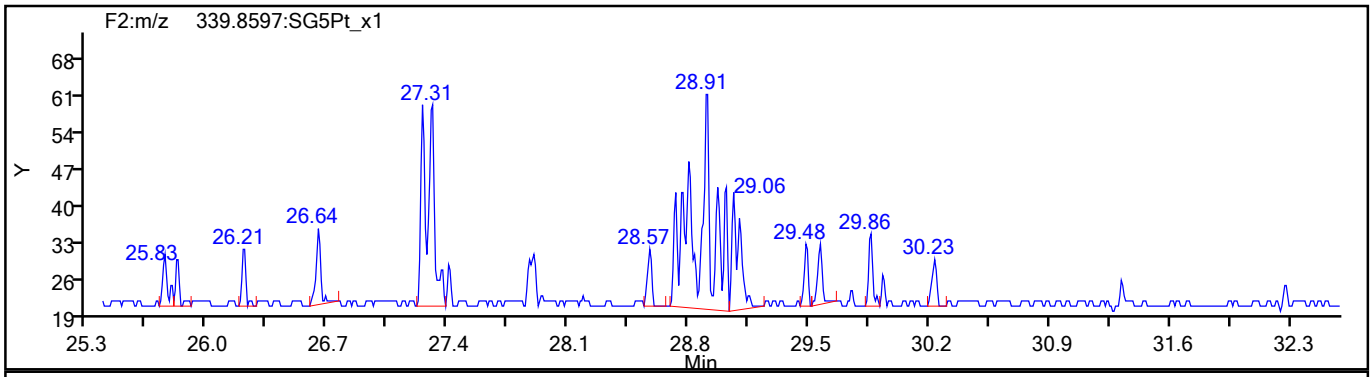

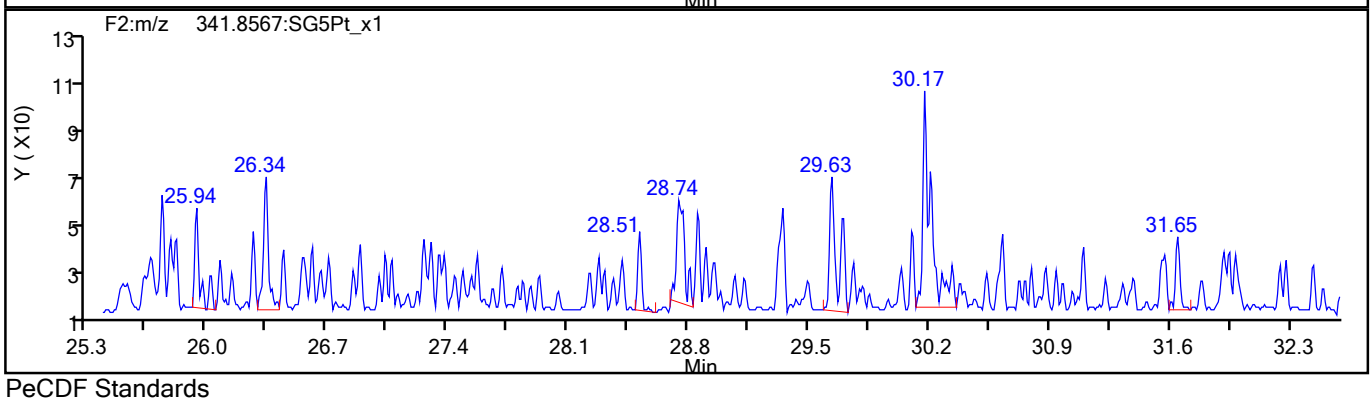

PeCDF Standards

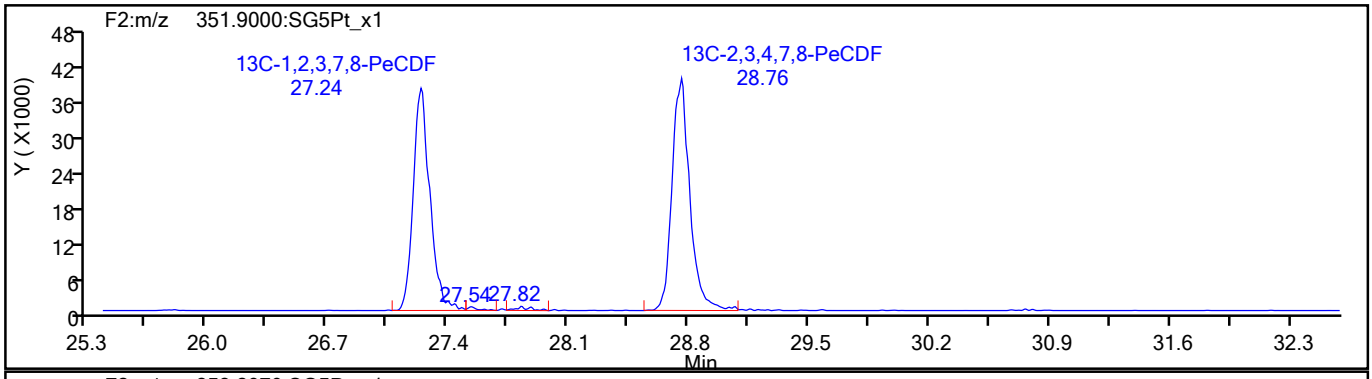

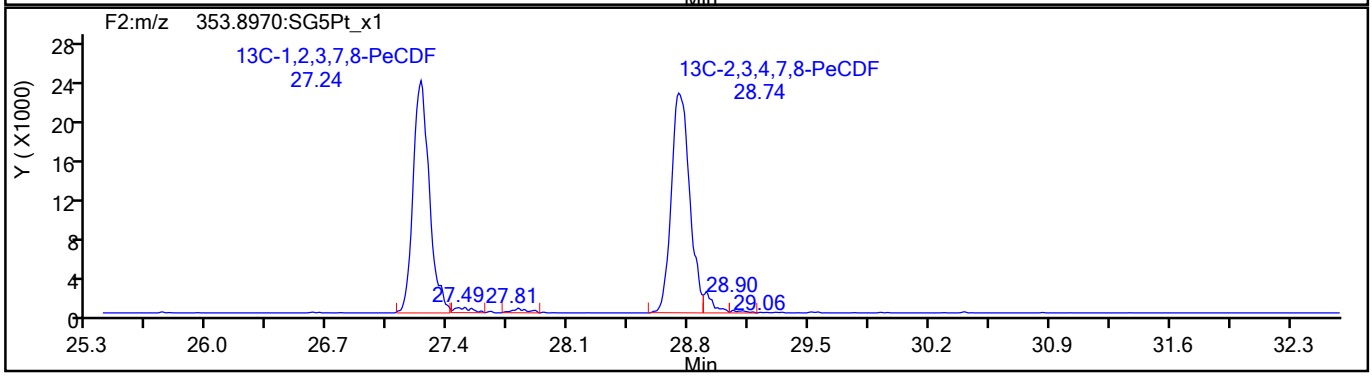

777486

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

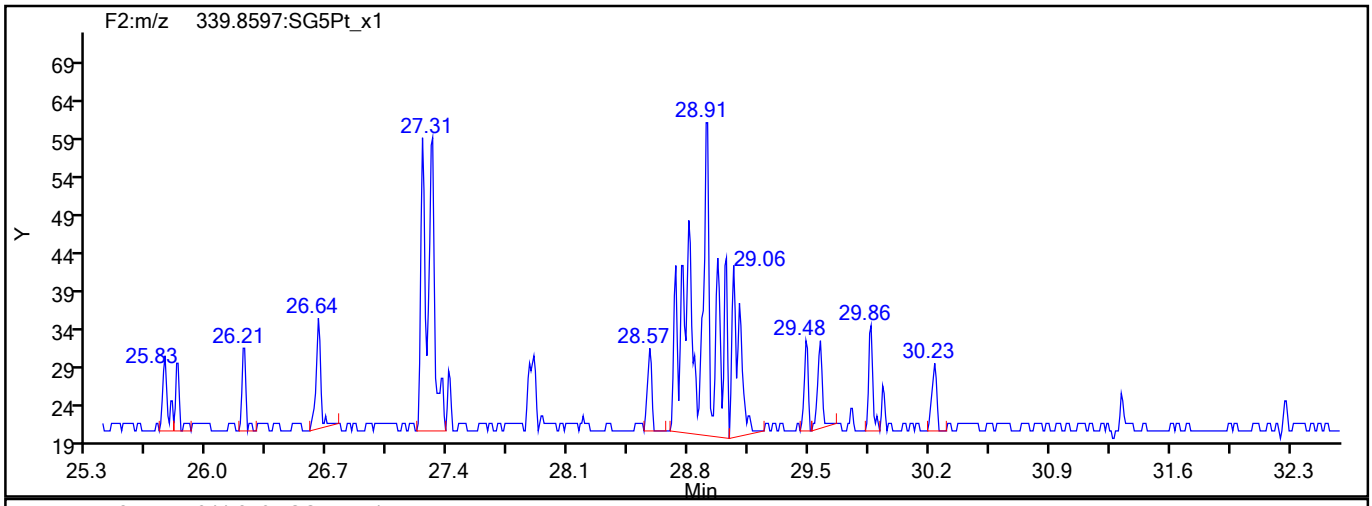

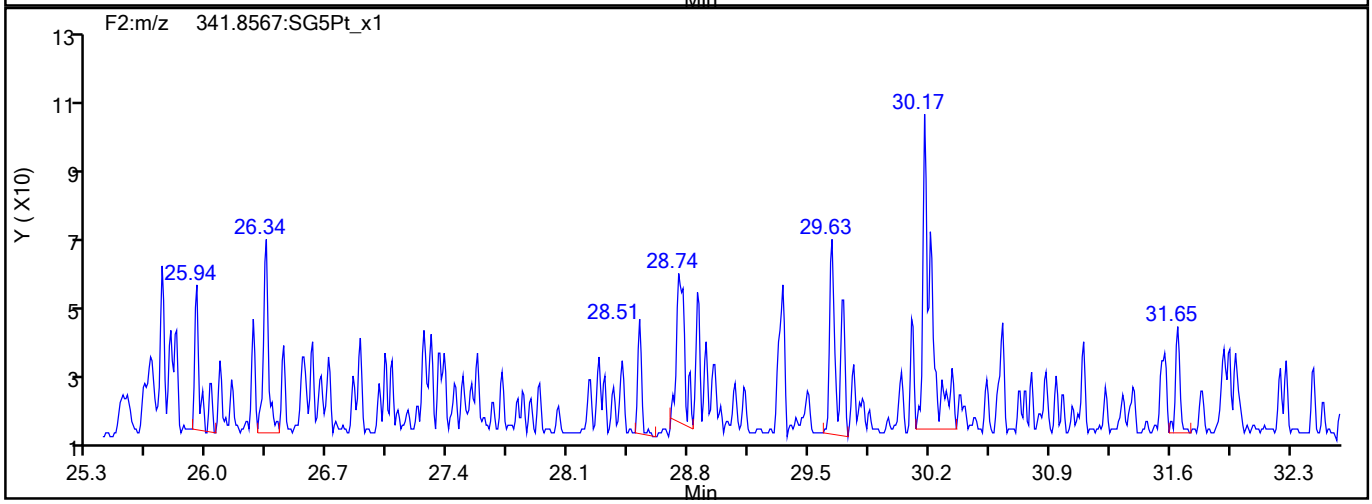

PeCDF Interference Mass

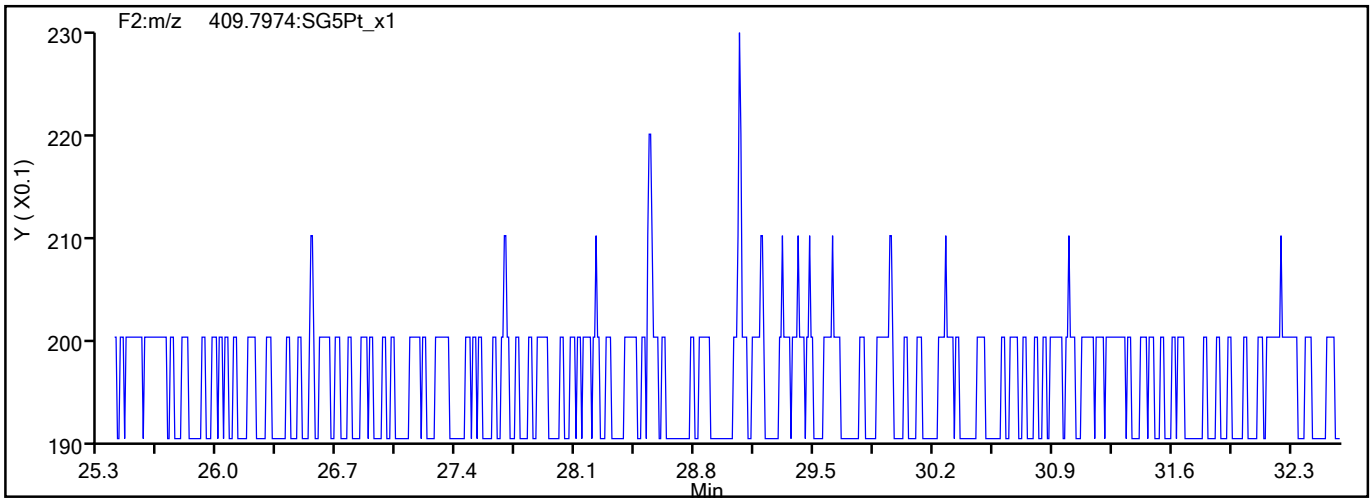

777487

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

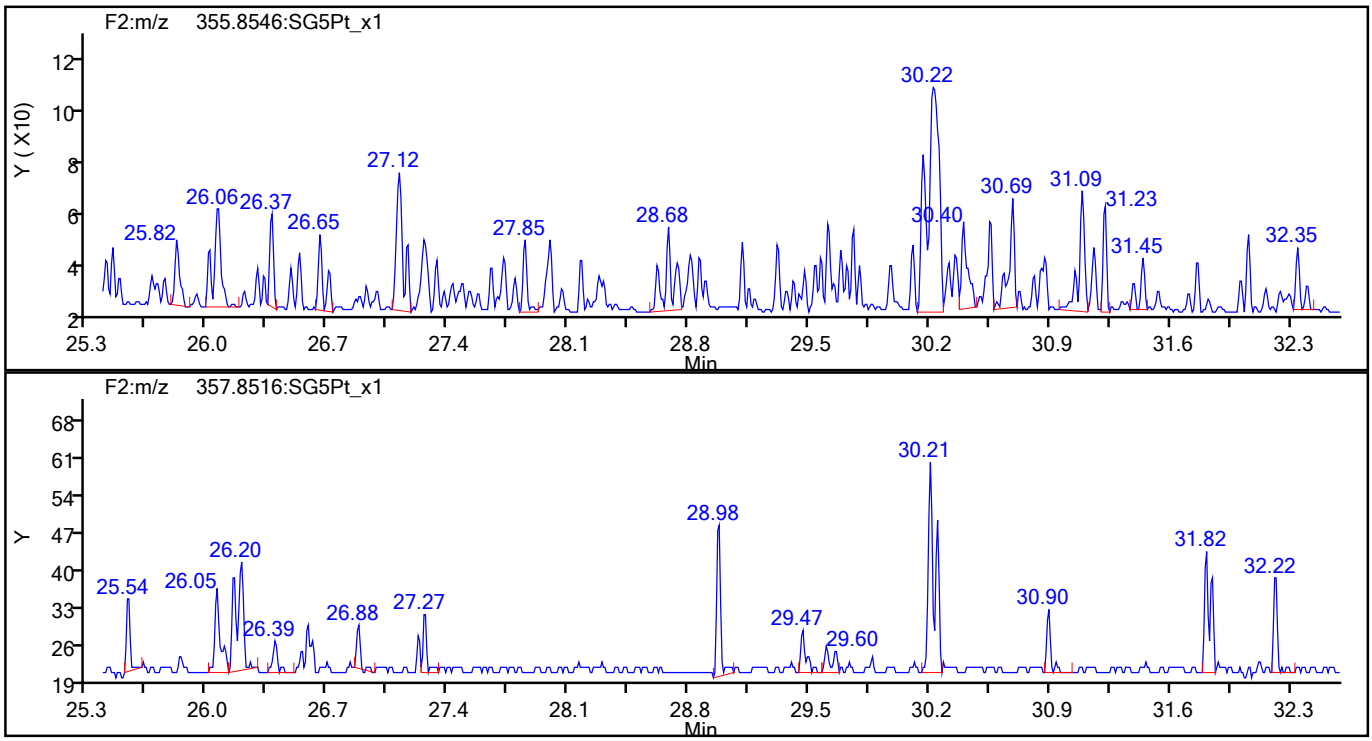

PeCDD Standards

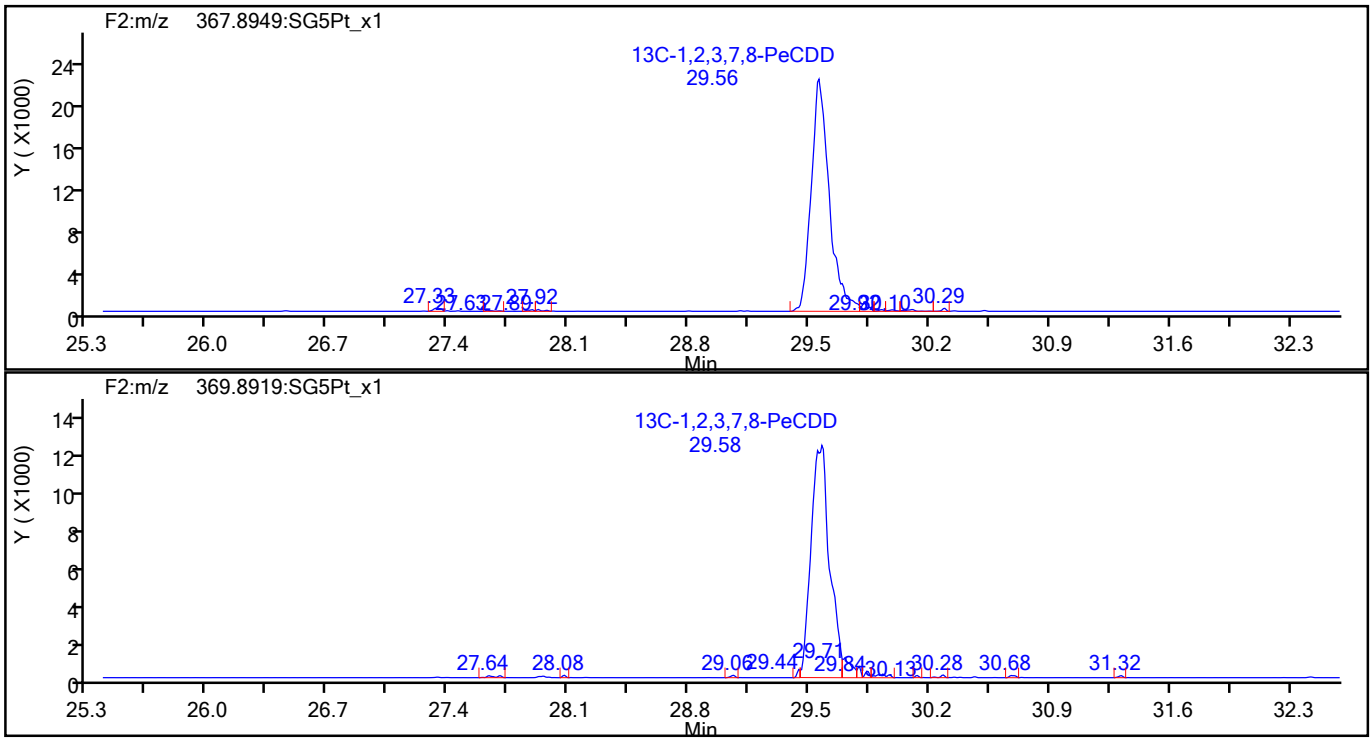

777488

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

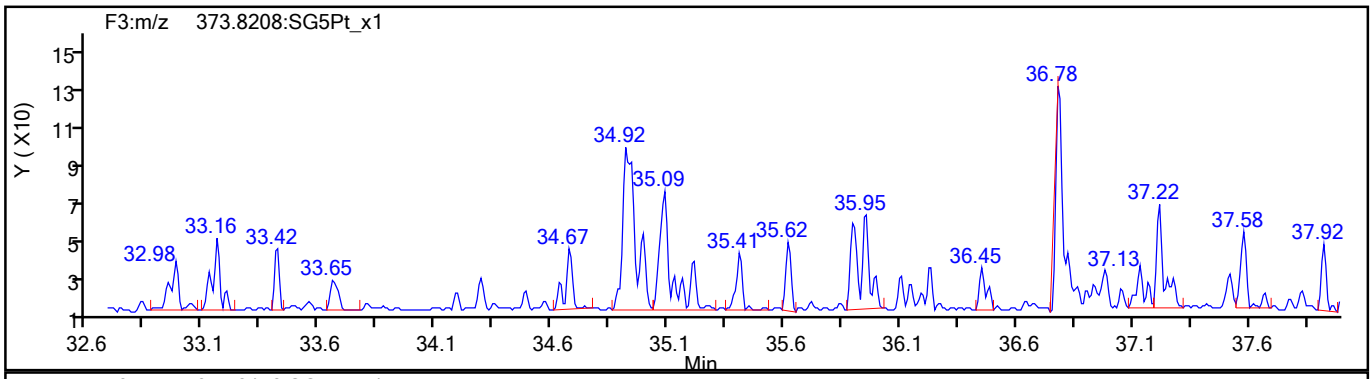

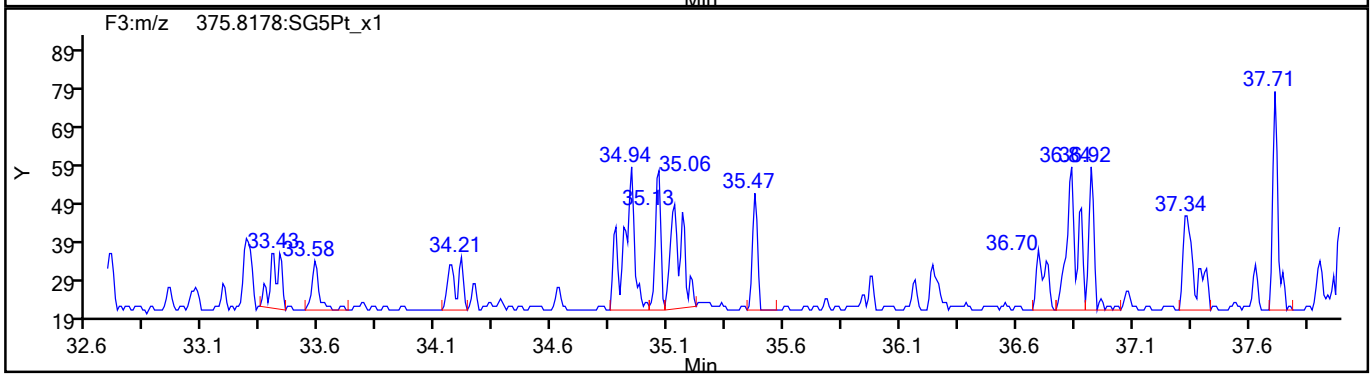

HxCDF Standards

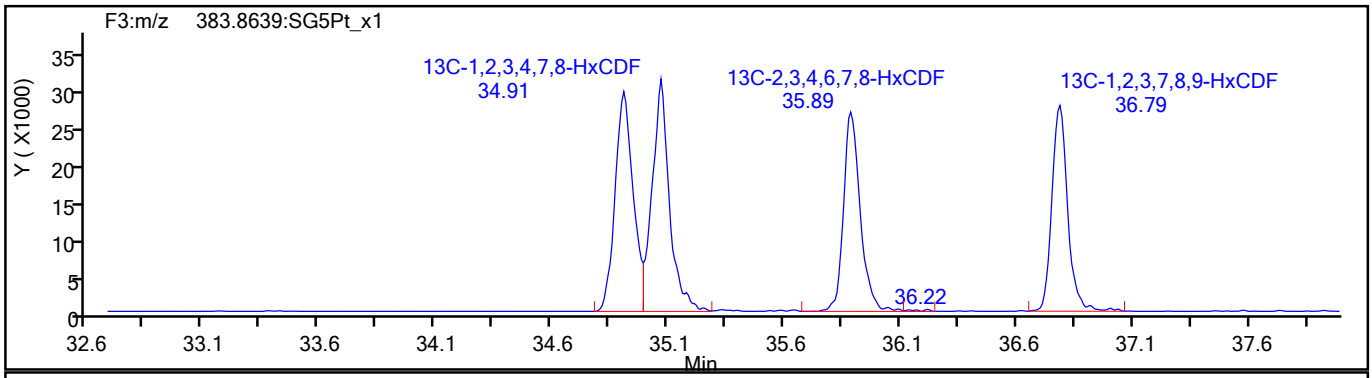

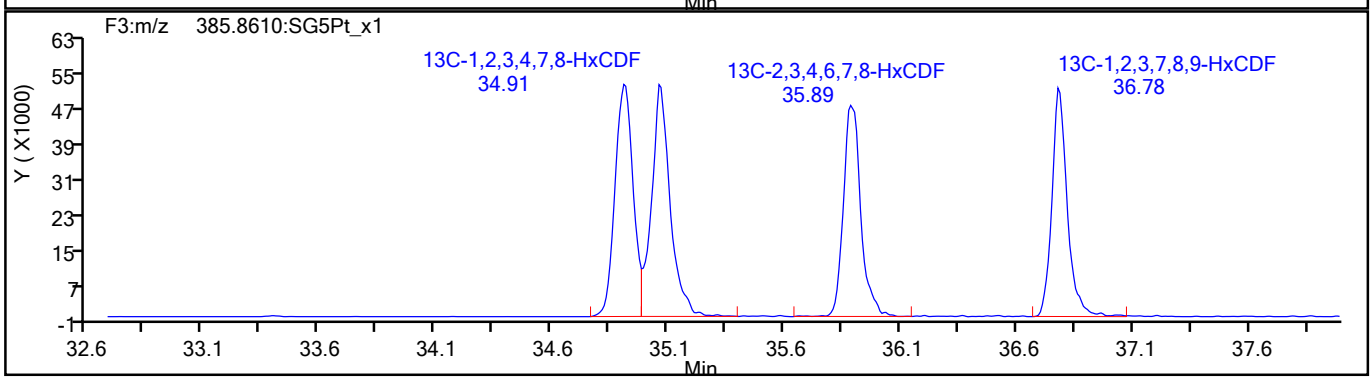

777489

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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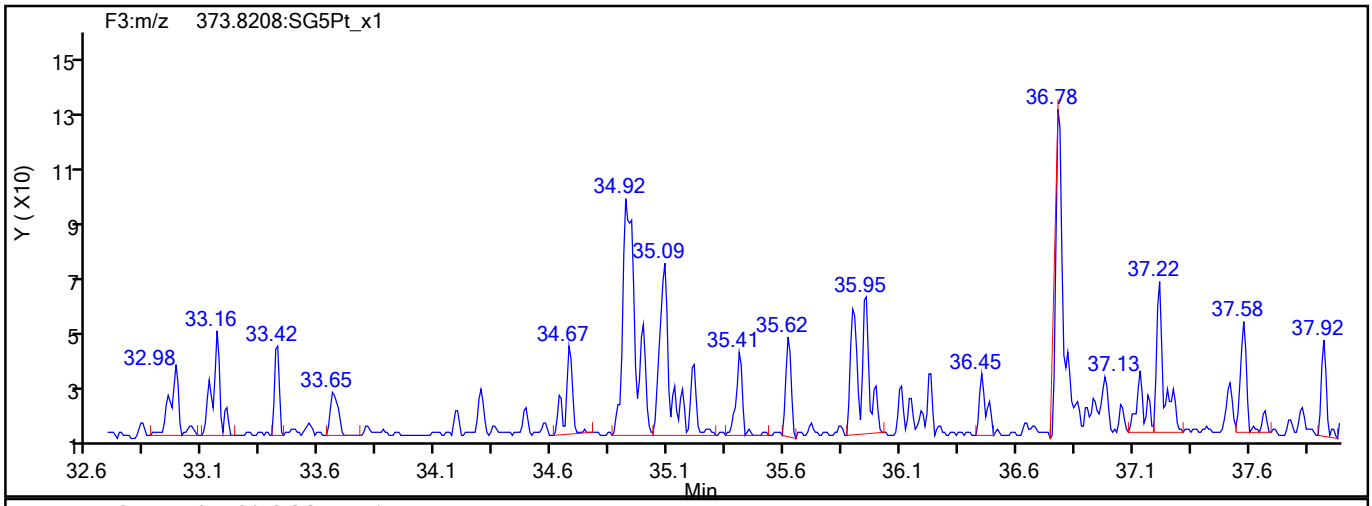

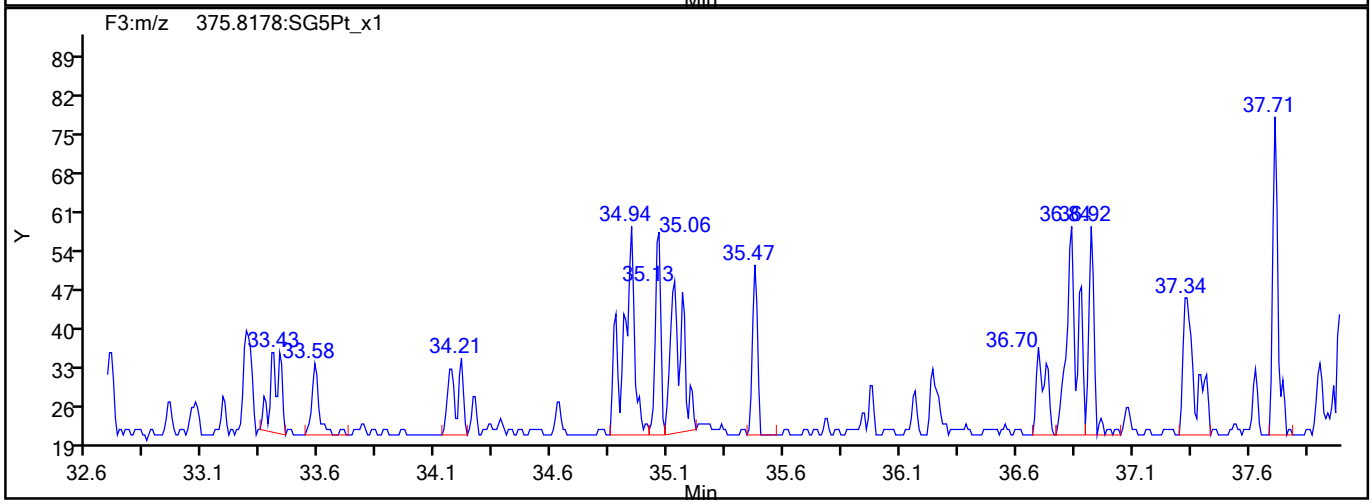

HxCDF Interference Mass

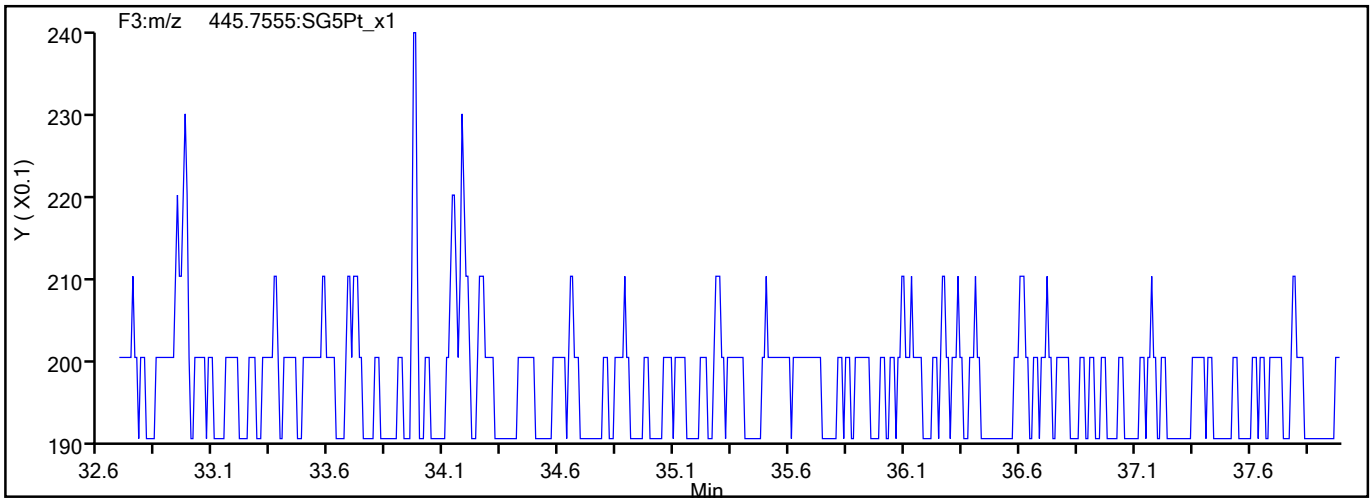

777490

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

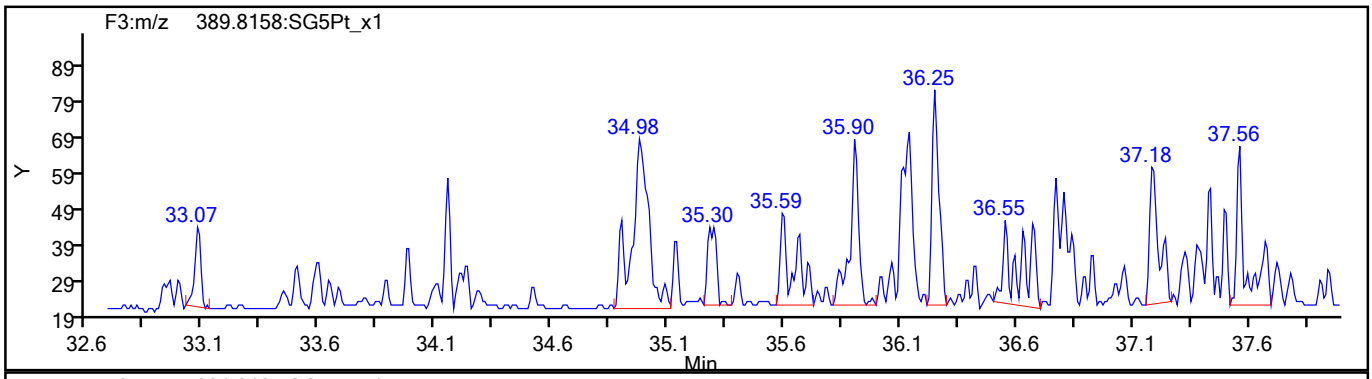

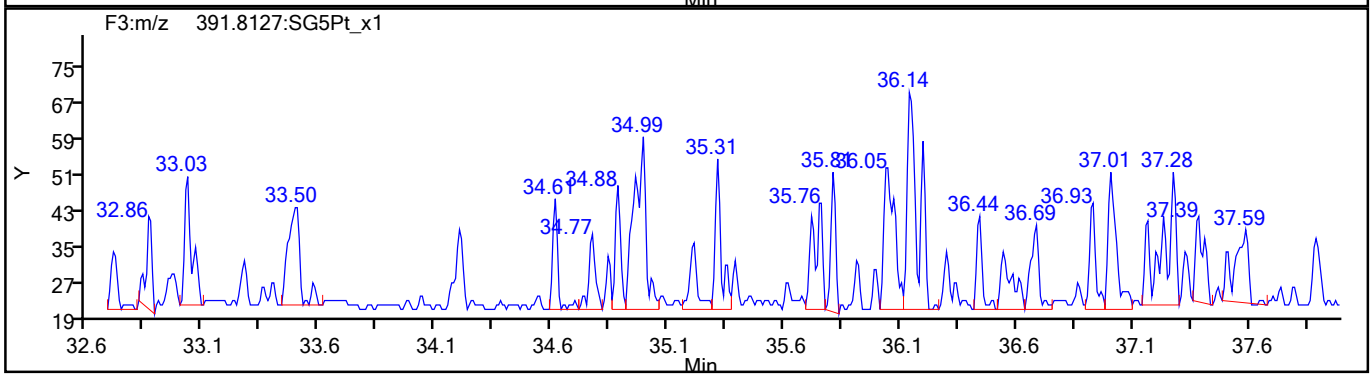

HxCDD Standards

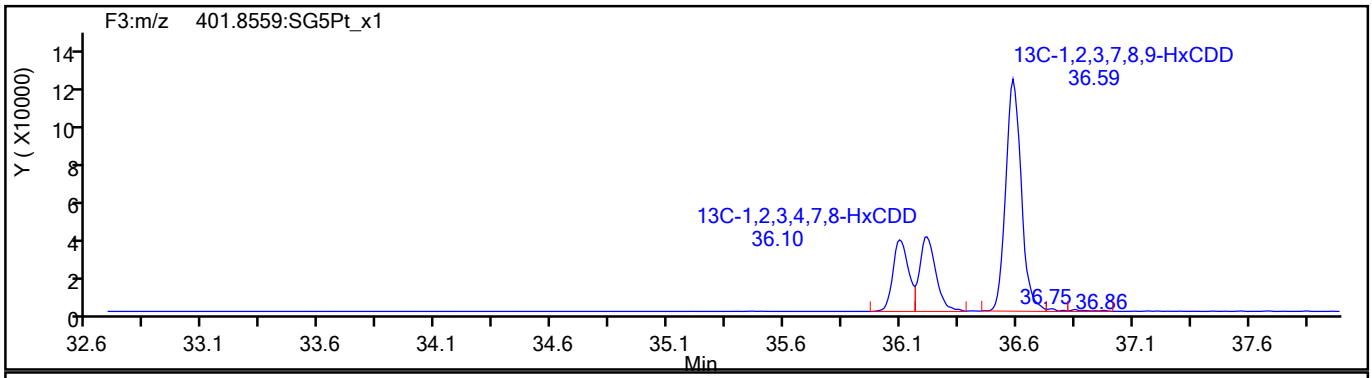

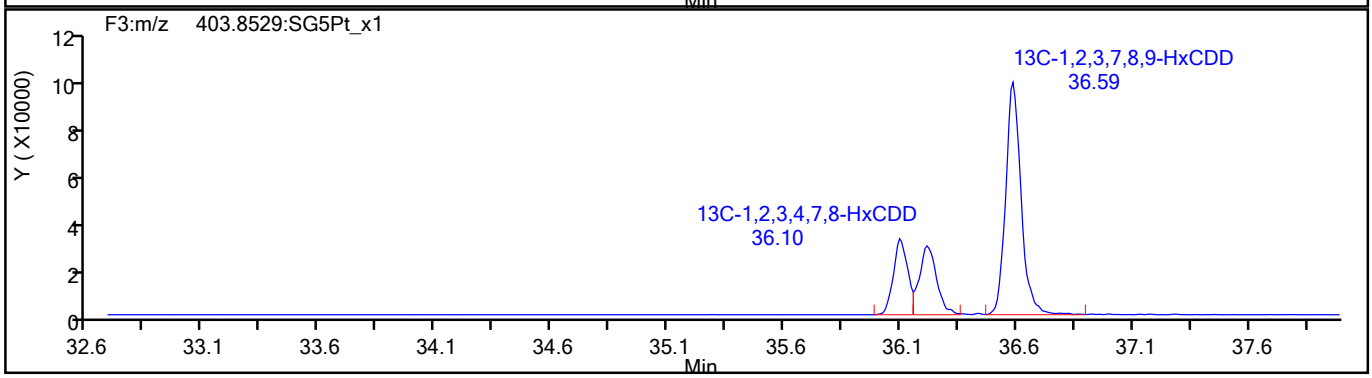

777491

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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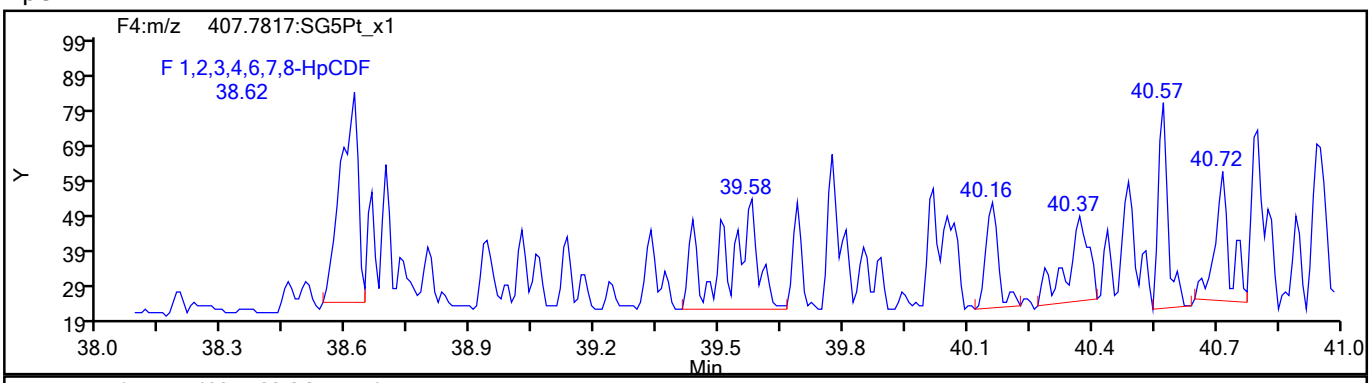

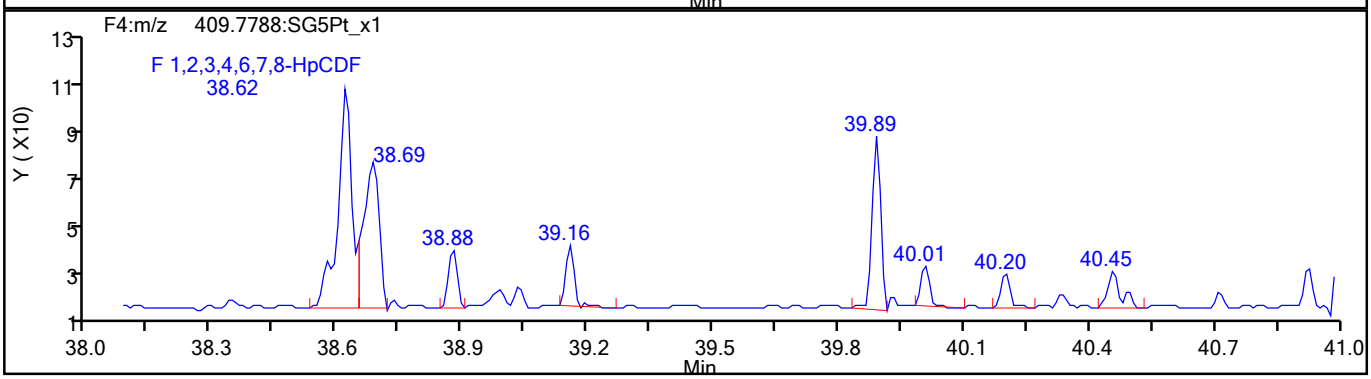

HpCDF Standards

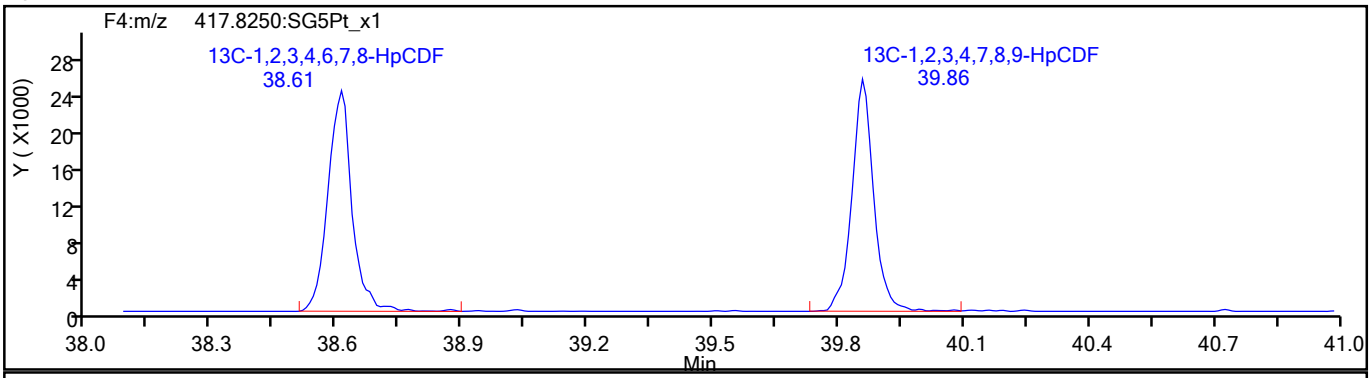

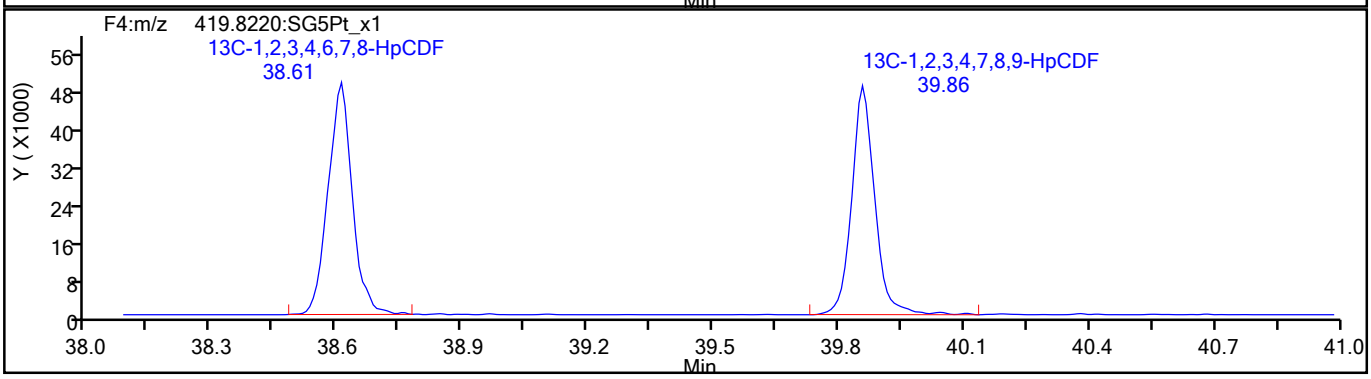

777492

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

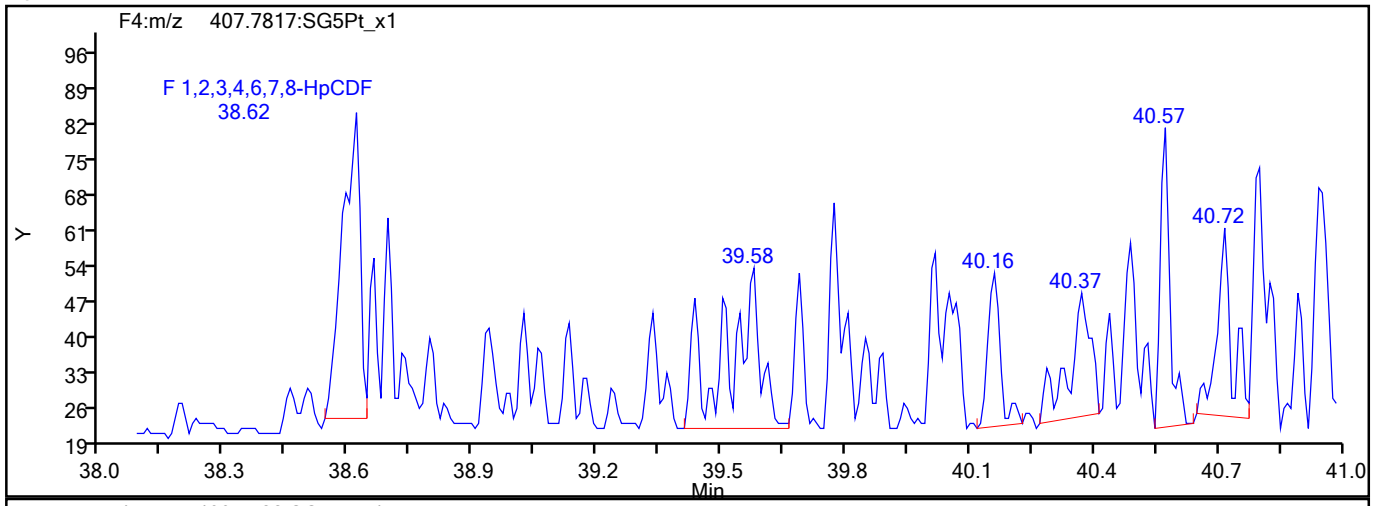

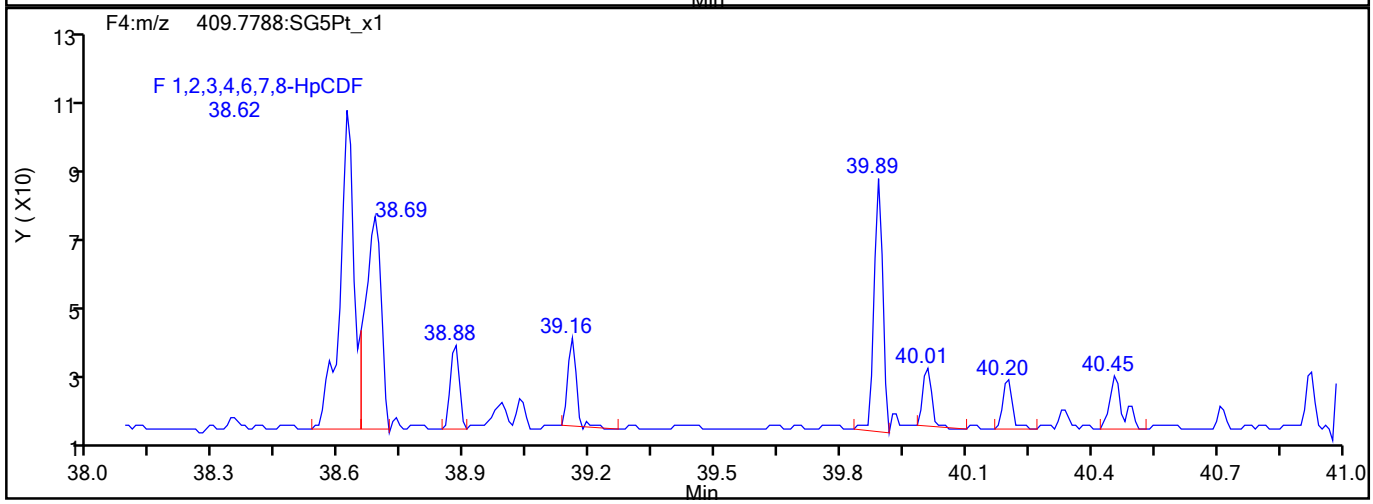

HpCDF Interference Mass

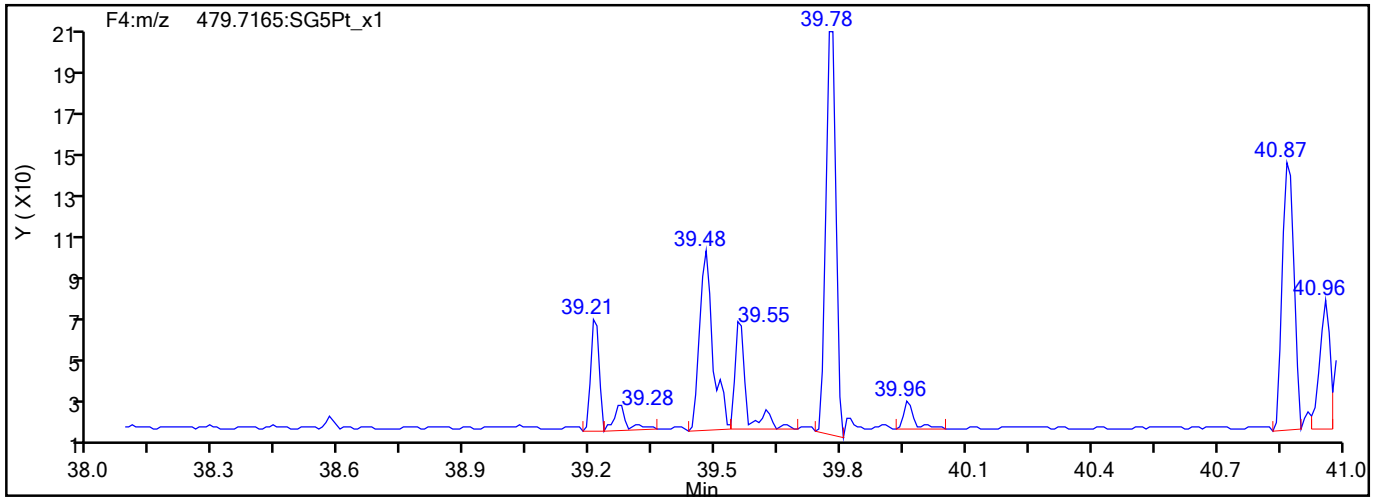

777493

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Eurofins TestAmerica, Sacramento

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HpCDD

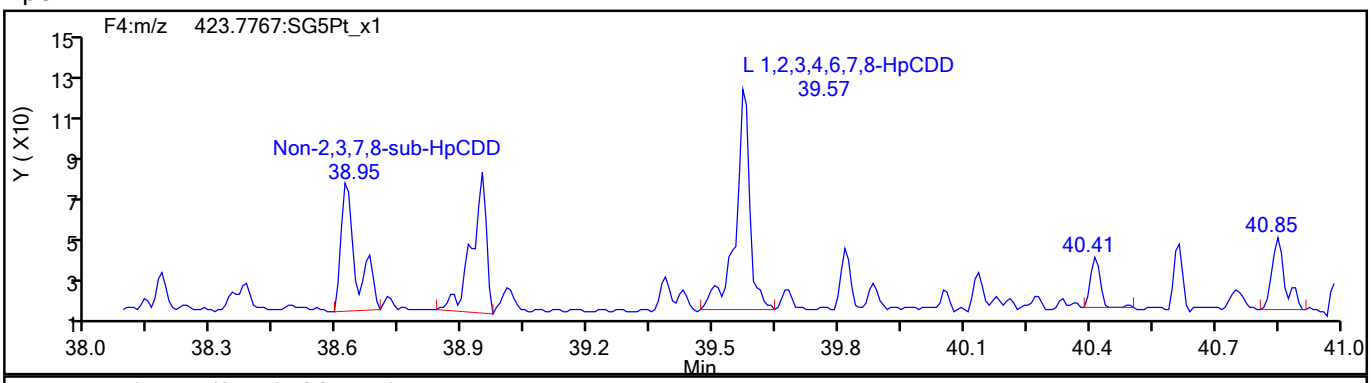

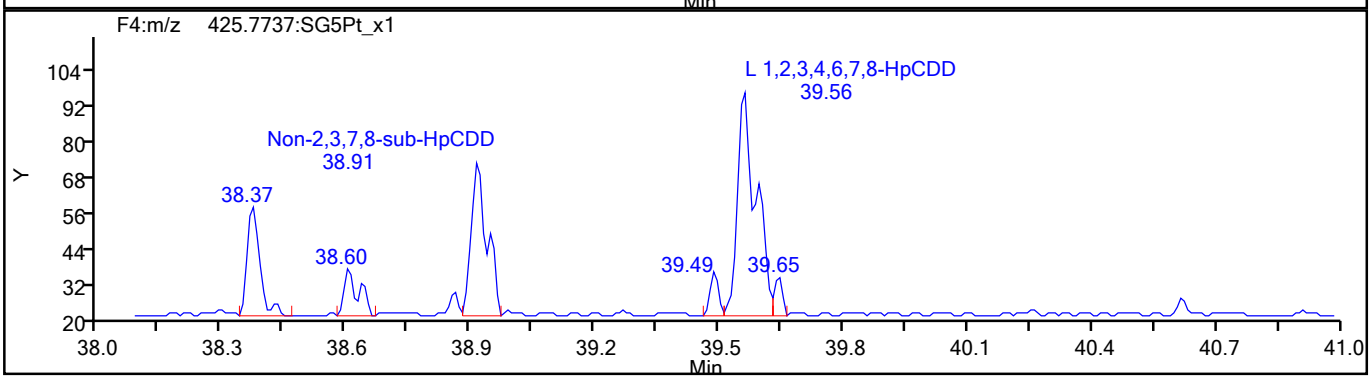

HpCDD Standards

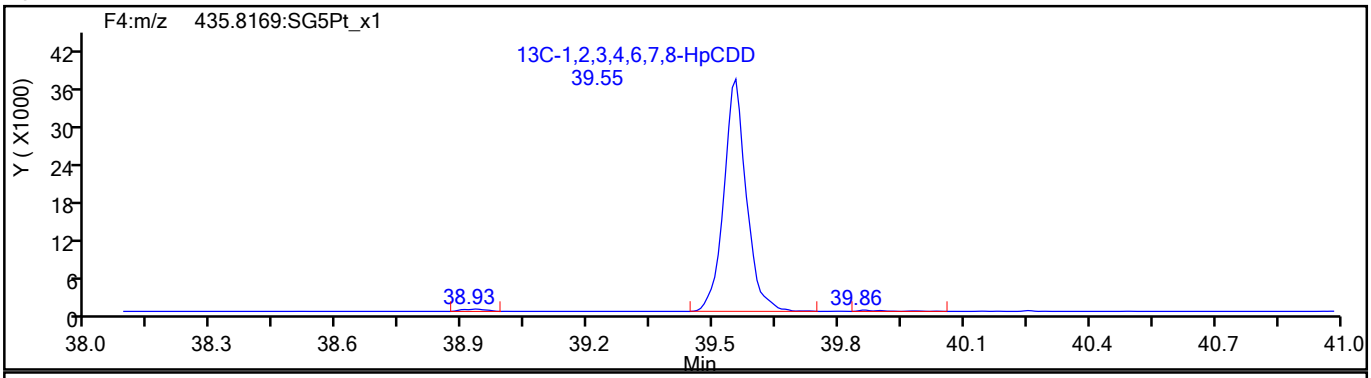

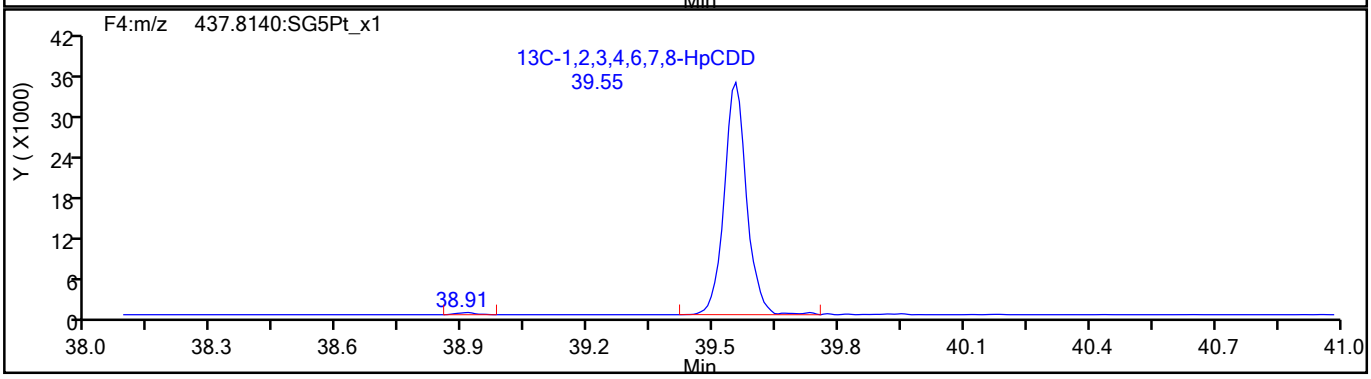

777494

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

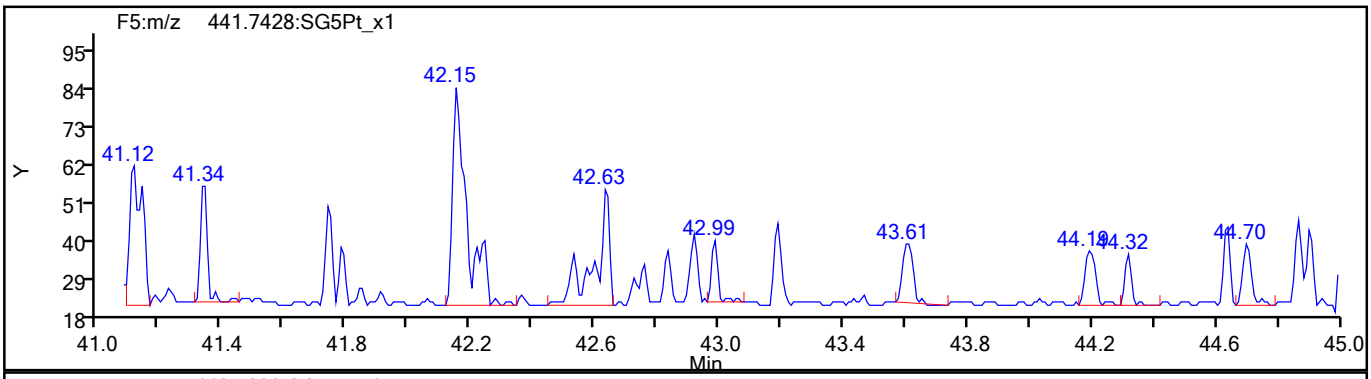

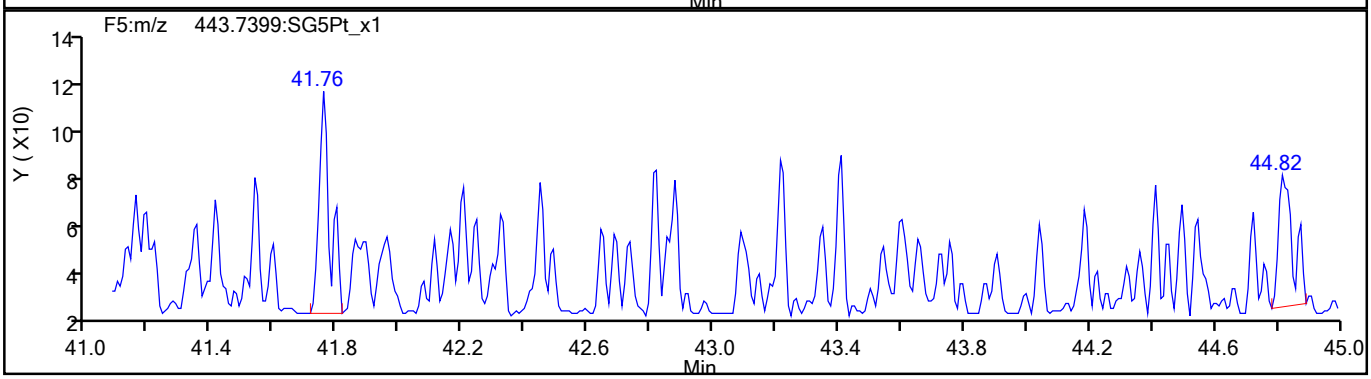

OCDF Standards

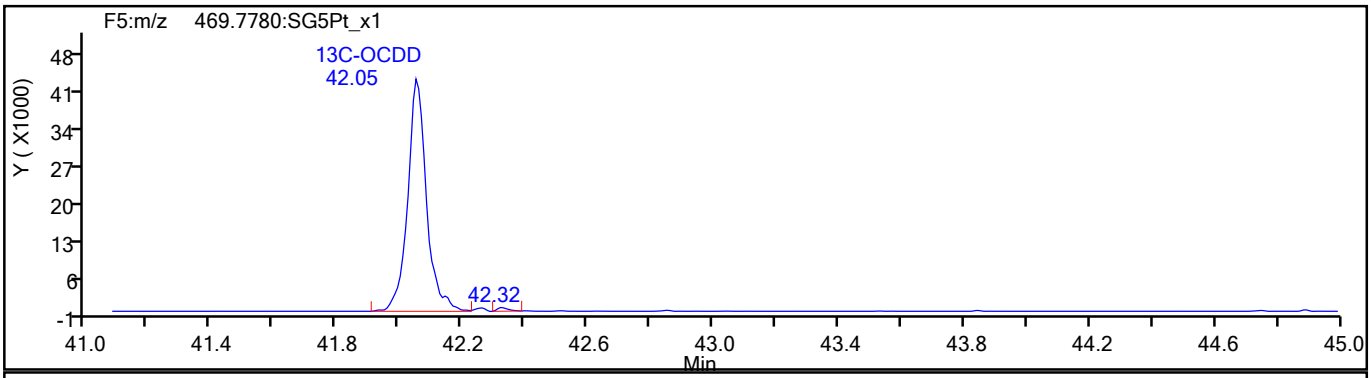

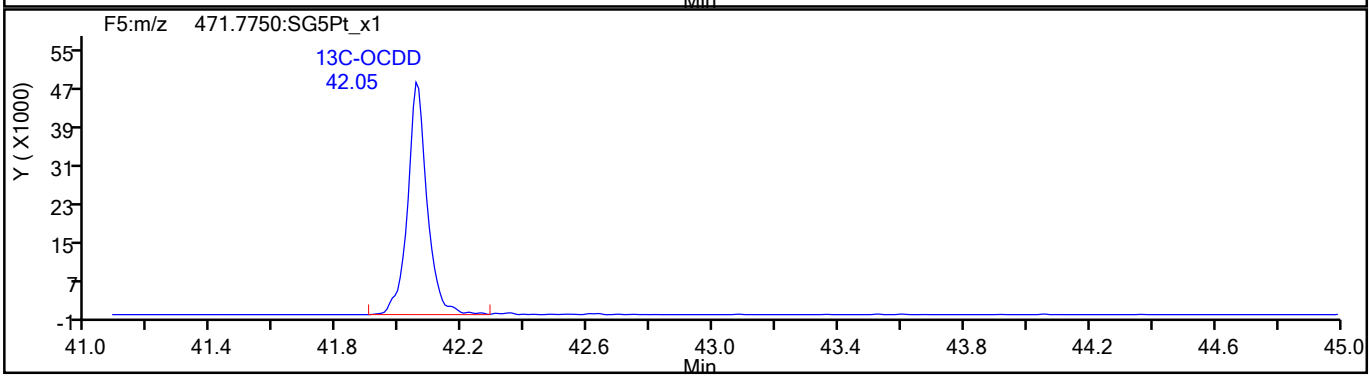

777495

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

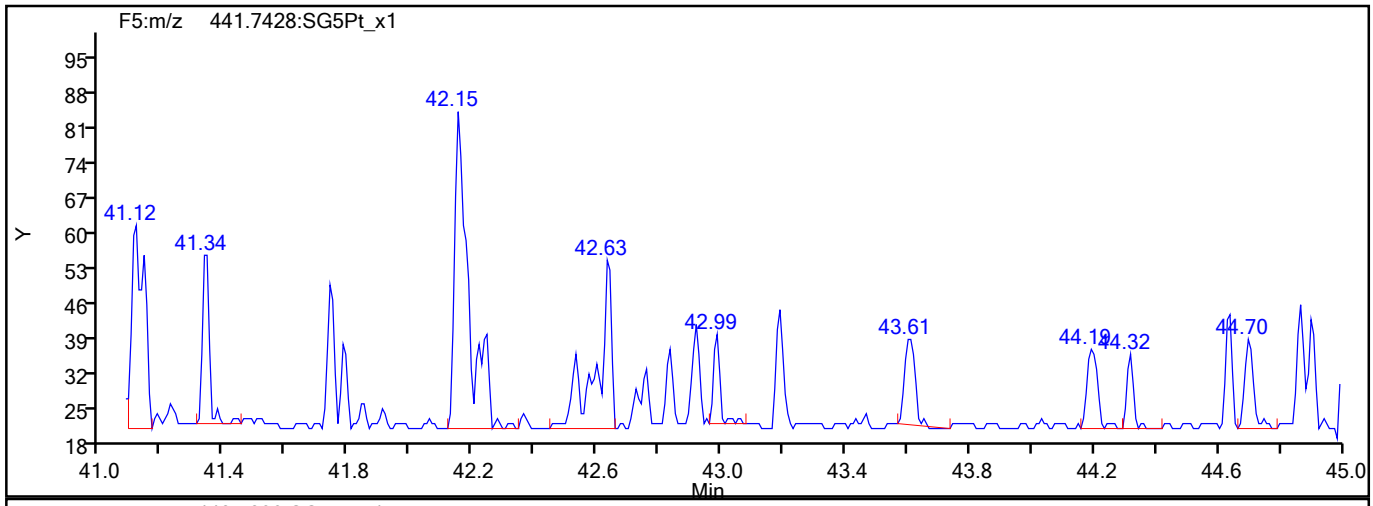

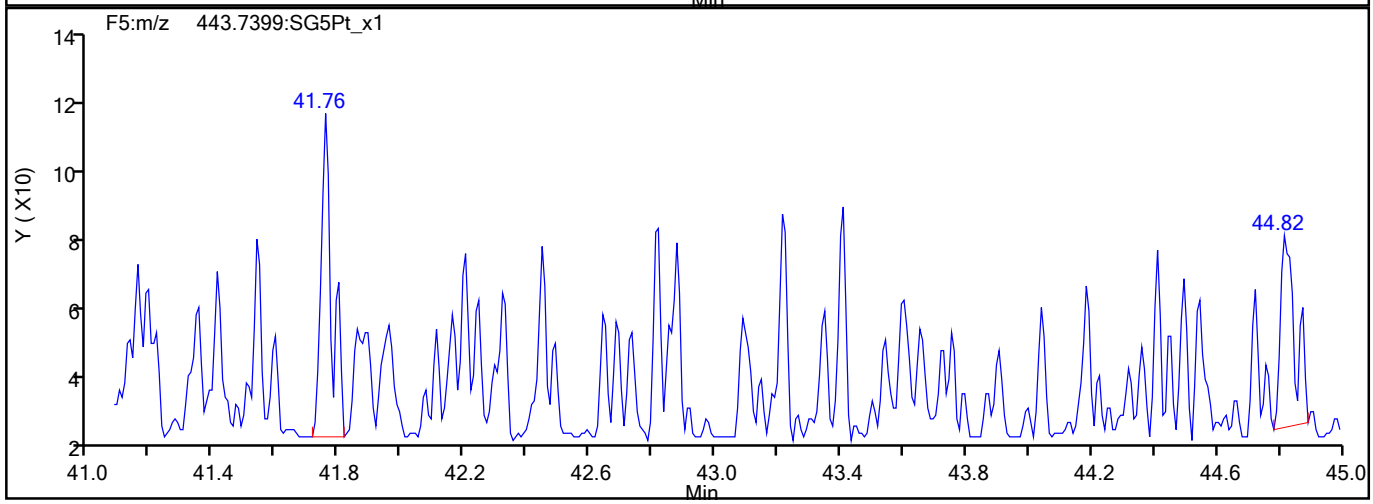

OCDF Interference Mass

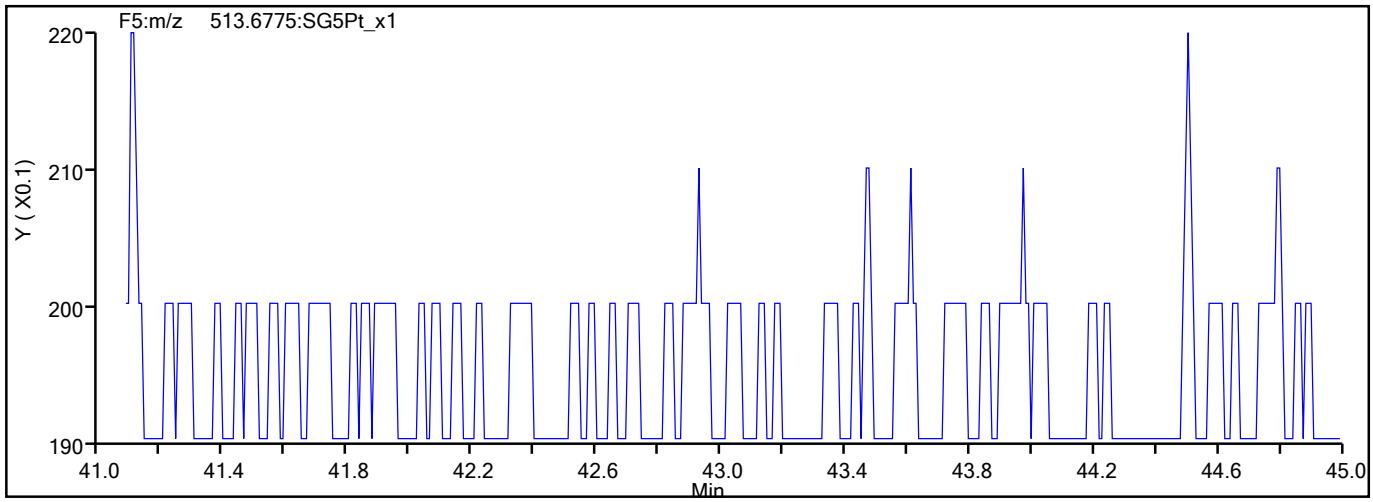

777496

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

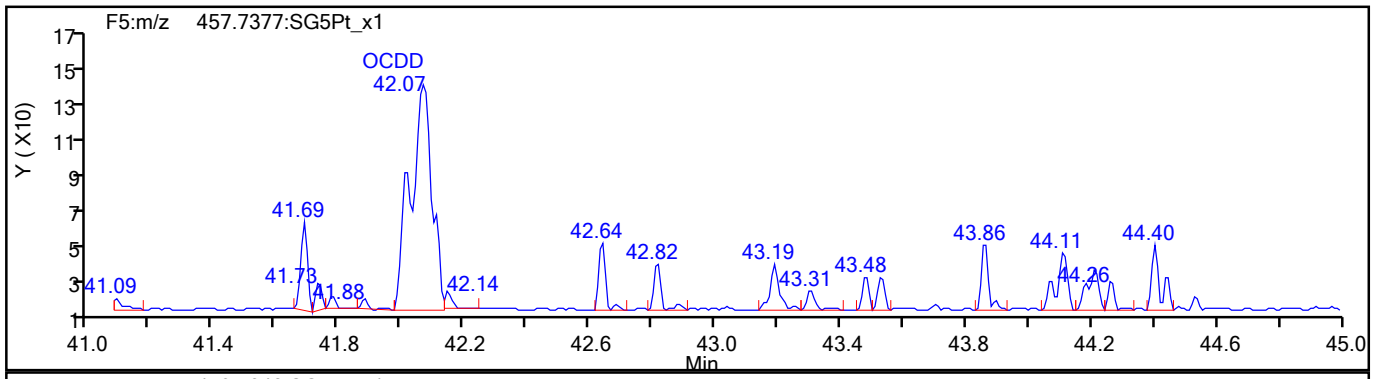

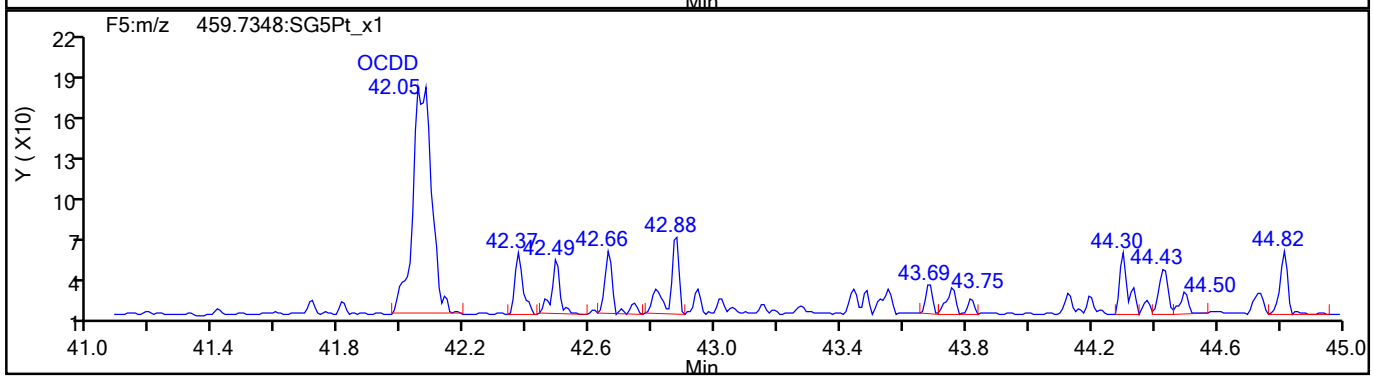

OCDD Standards

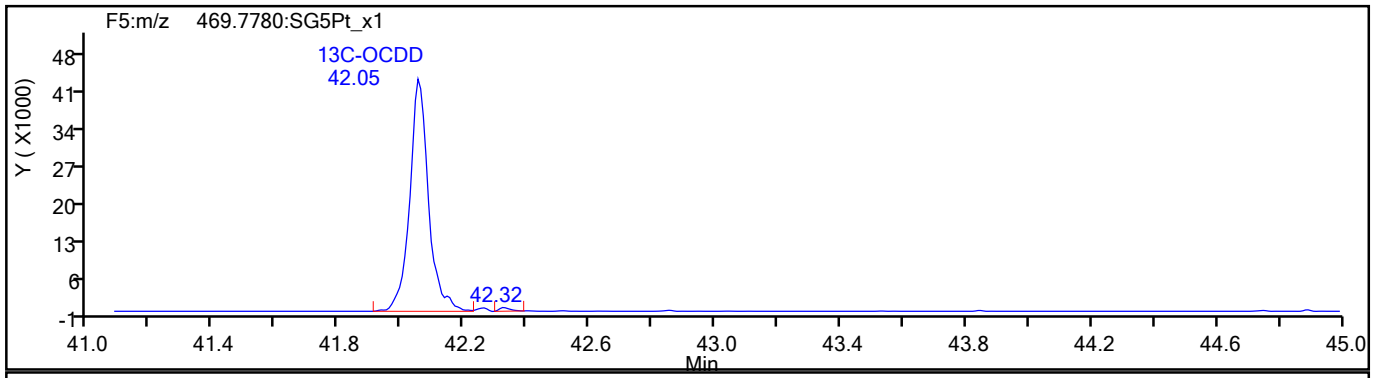

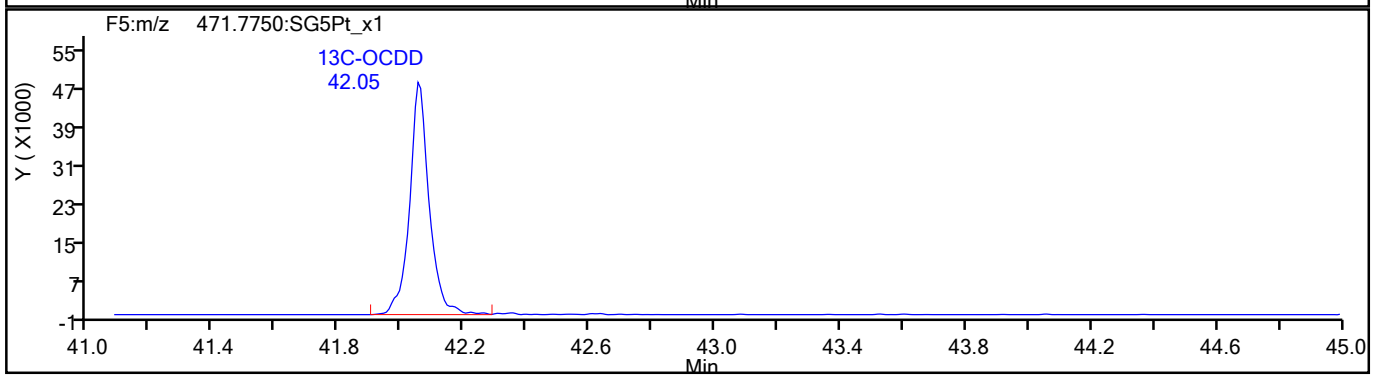

777497

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

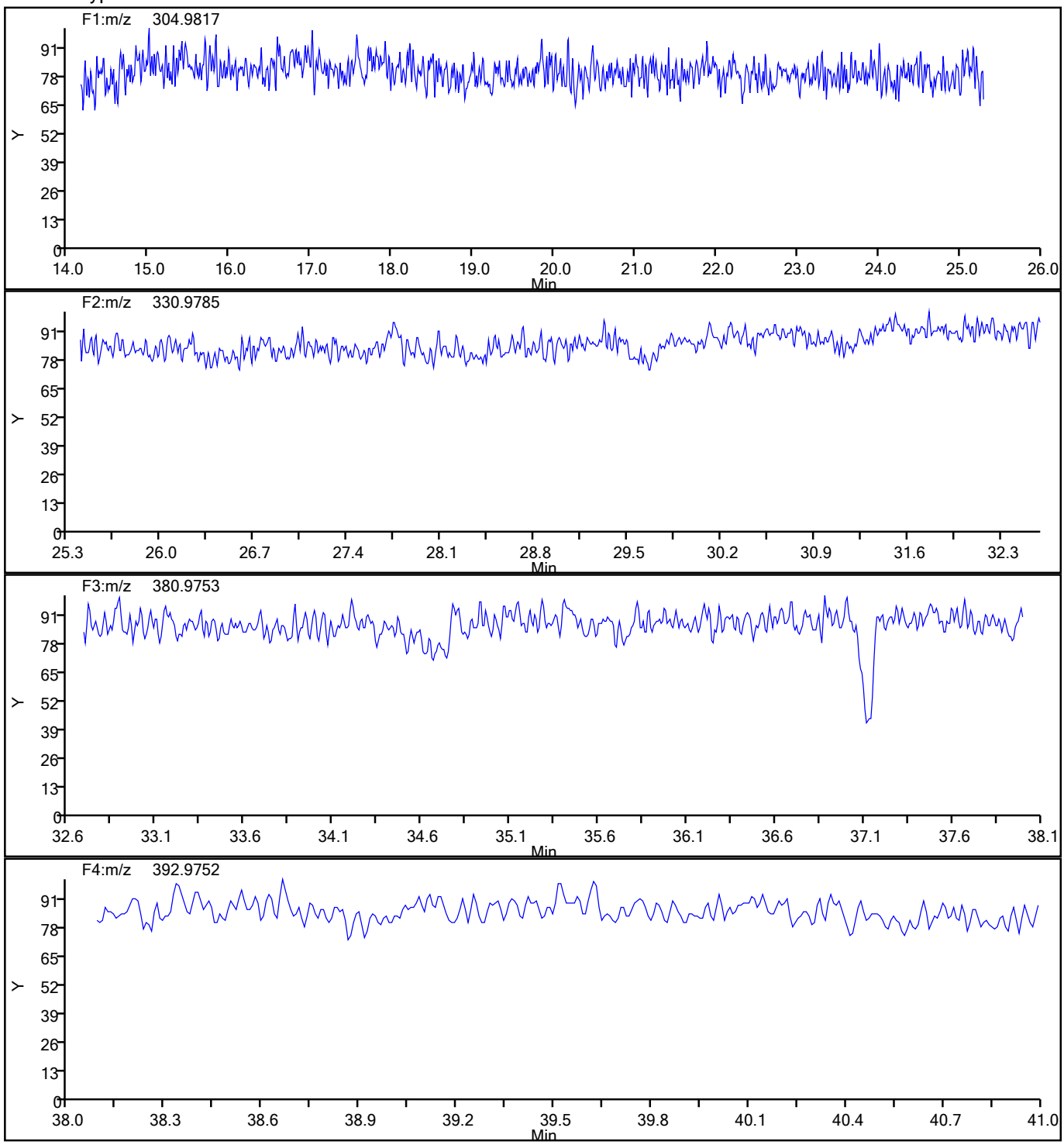

777498

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

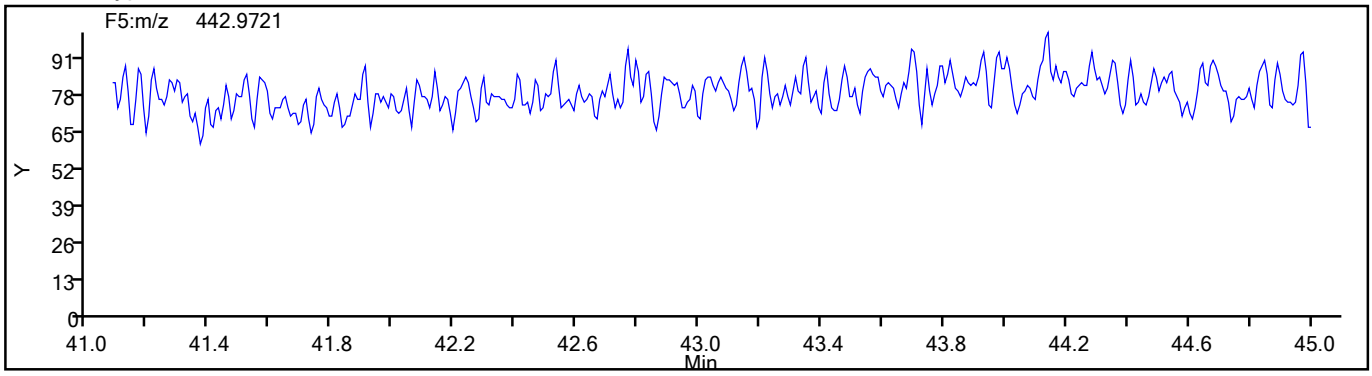

777499

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Lab File ID: 24AU2111D2_004.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/24/2021 10:23
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	2.39		1.0	0.22

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	37		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	50		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Aug-2021 10:23:51 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-513879/1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:45:21

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.296	33759459	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.599	16734440	0.77	1.3327	37.2	37.2	0.2026	0.2026	37.20	
2,3,7,8-TCDF	17.627	199129	0.67	0.9978	1.193	1.193	0.1094	0.1094		
D 13C-2,3,7,8-TCDD	16.063	10422147	0.73	0.8749	35.3	35.3	0.3776	0.3776	35.29	
$ 37Cl4-2,3,7,8-TCDD	16.077	5861410		0.8648	20.1	20.1	0.0638	0.0638	50.19	
2,3,7,8-TCDD	16.077	55715	0.68	1.0570	0.5058	0.5058	0.1084	0.1084		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Aug-2021 10:23:51 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-513879/1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:45:21

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.296	16.283	1		14575481	3405725	5651	14127	603		
333.9339	16.296	16.283	1		19183978	4267762	4489	11222	951	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.599	17.613	-1	1.080	7306406	1361111	3621	9052	376		
317.9389	17.613	17.613	0	1.081	9428034	1838509	4668	11670	394	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.627	17.641	-1	1.002	79942	15130	769	1922	20		
305.8987	17.640	17.641	0	1.002	119187	24047	628	1570	38	0.67(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.063	16.050	1	0.986	4380782	989974	5651	14127	175		
333.9339	16.063	16.050	1	0.986	6041365	1466938	4489	11222	327	0.73(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.077	16.063	1	0.987	5861410	1265710	1693	4232	748		
2,3,7,8-TCDD											
319.8965	16.077	16.077	0	1.001	22554	5305	627	1567	8		
321.8936	16.077	16.077	0	1.001	33161	10494	499	1247	21	0.68(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

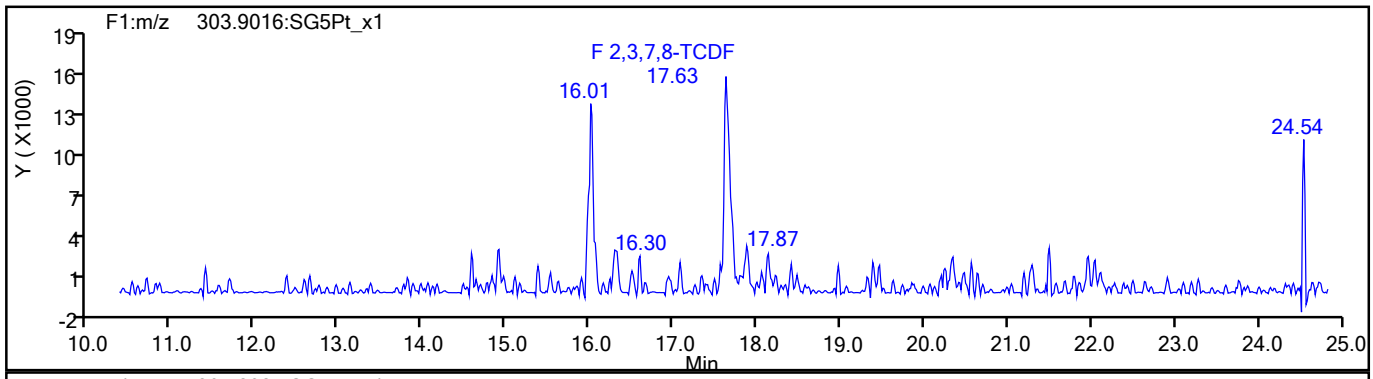

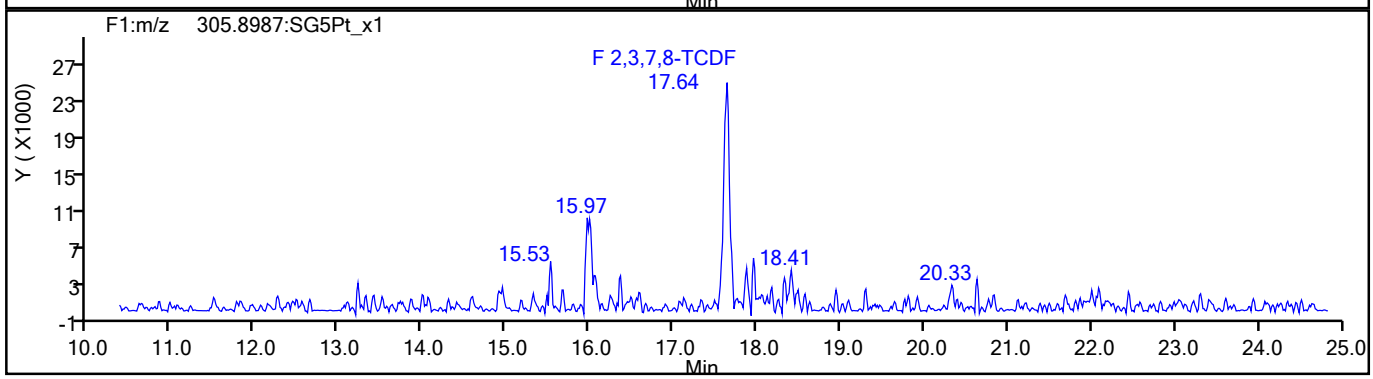

TCDF Standards

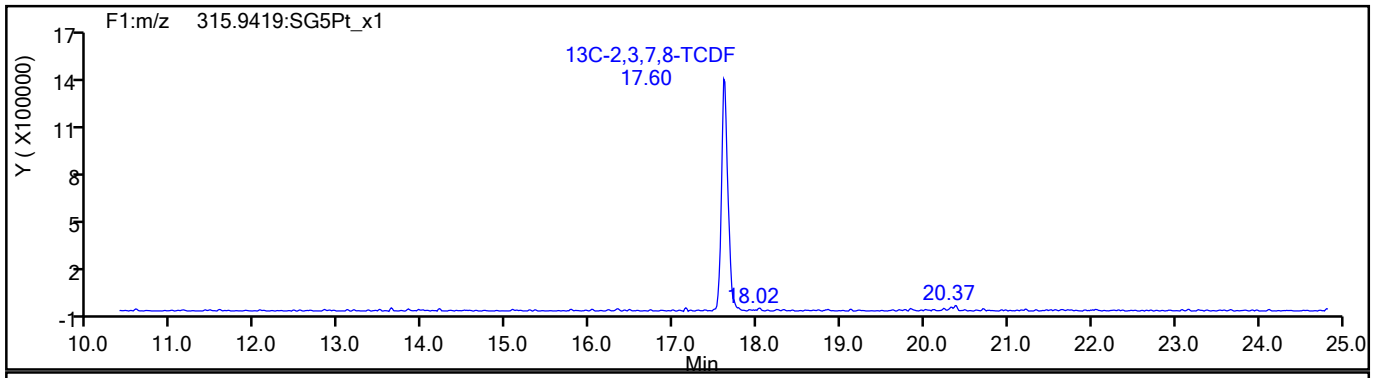

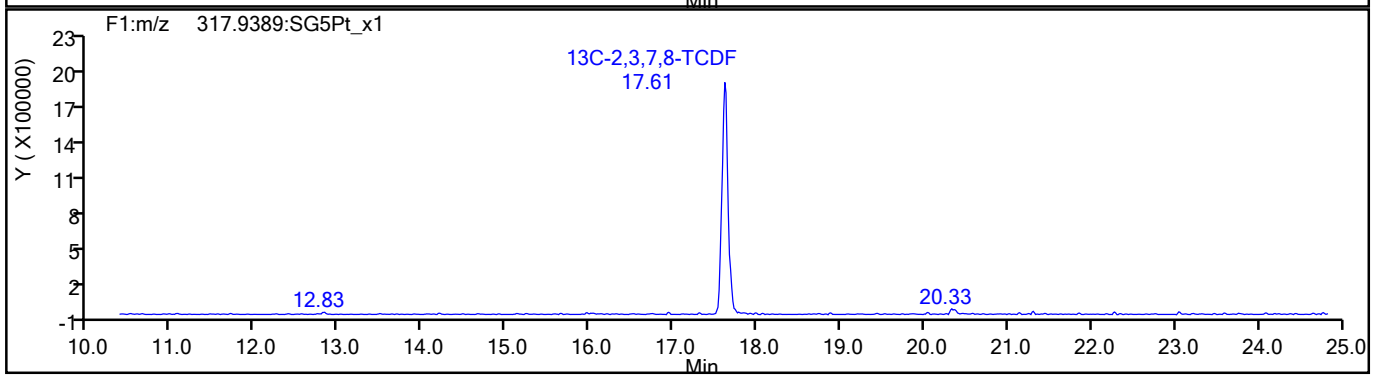

777503

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

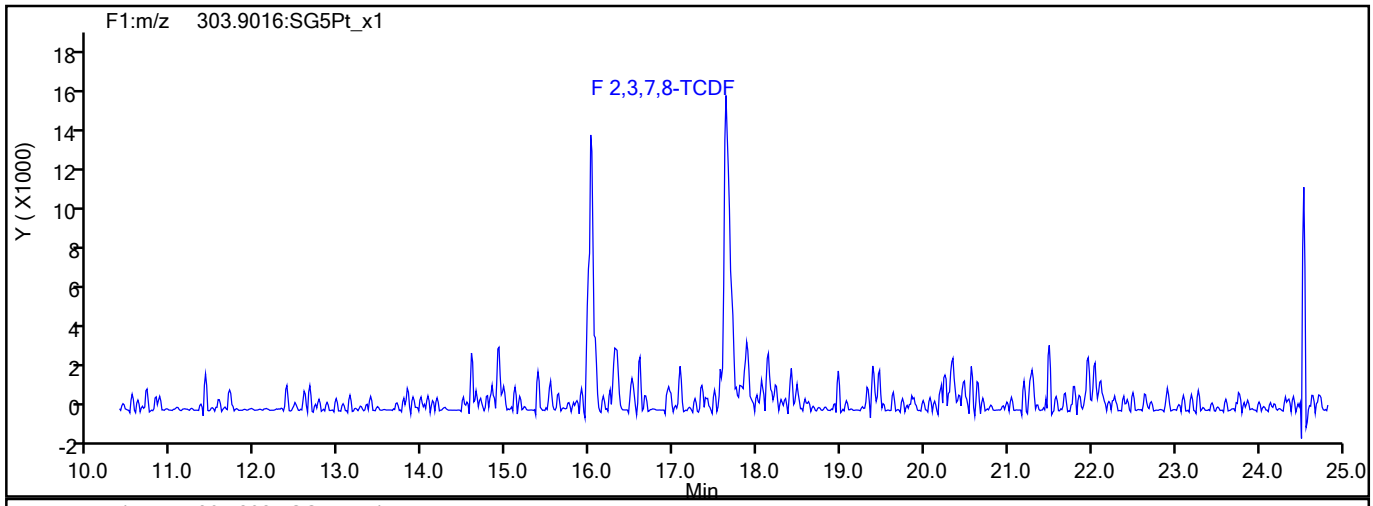

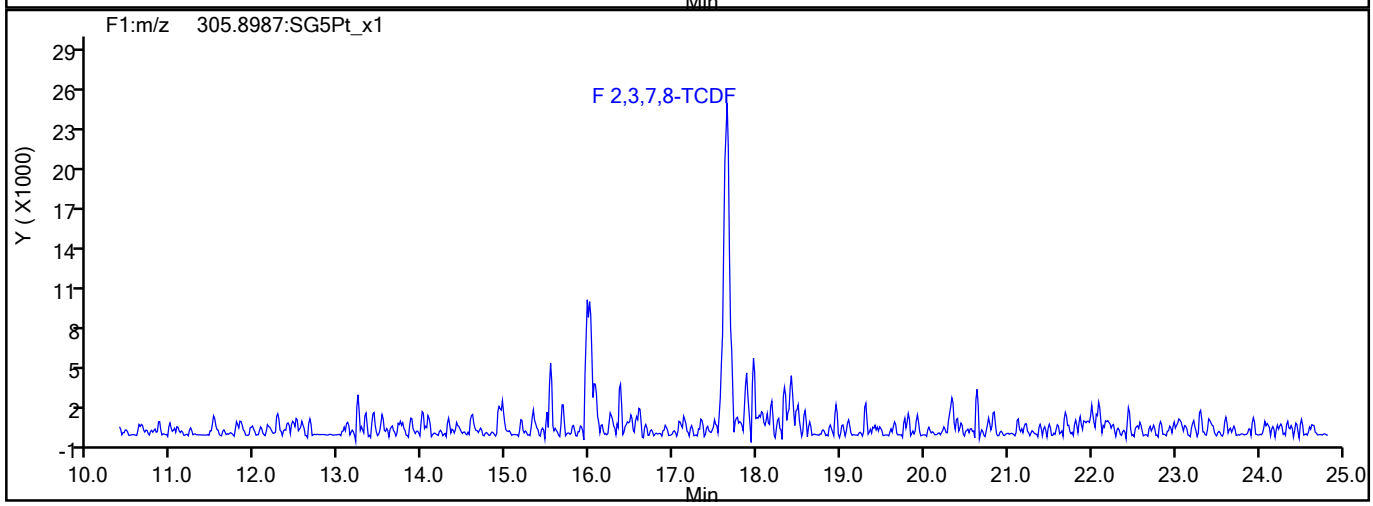

TCDF Interference Mass

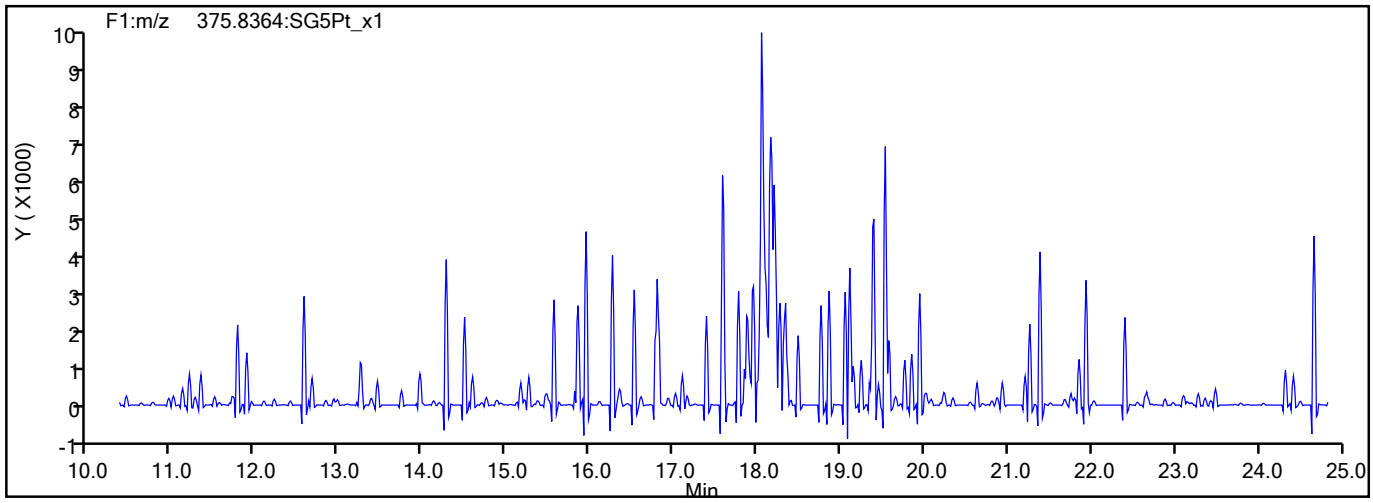

777504

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

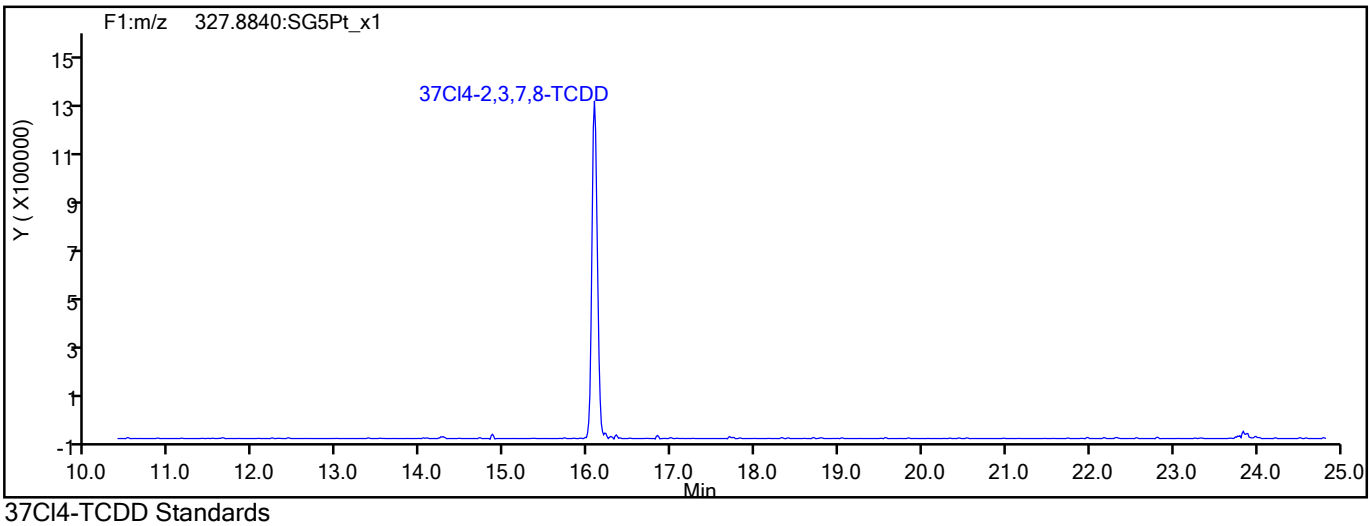

37Cl4-TCDD Standards

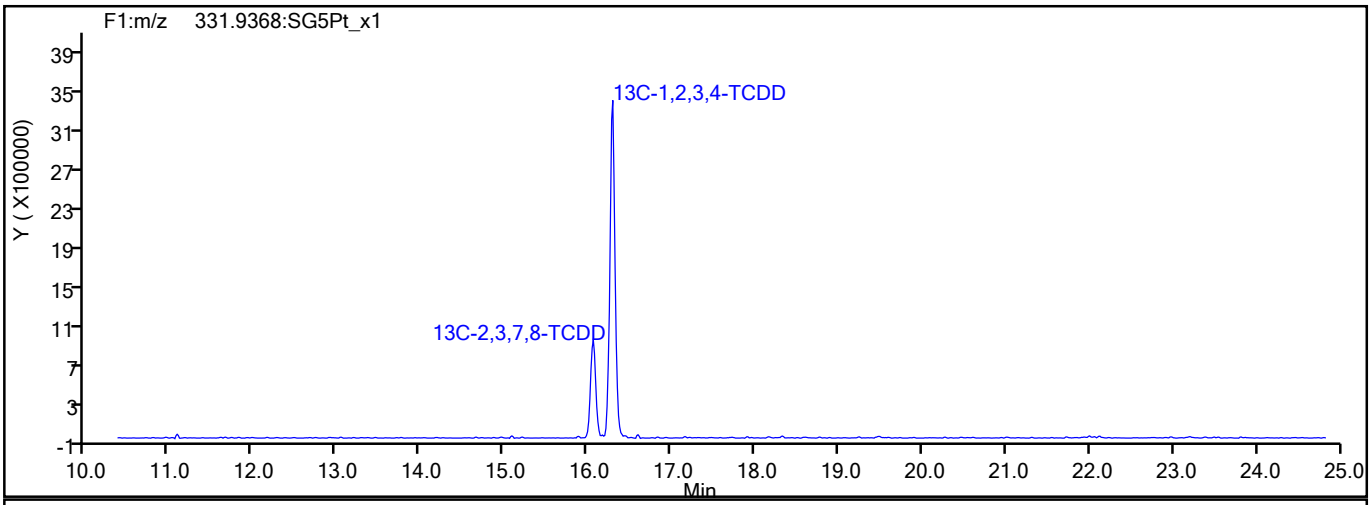

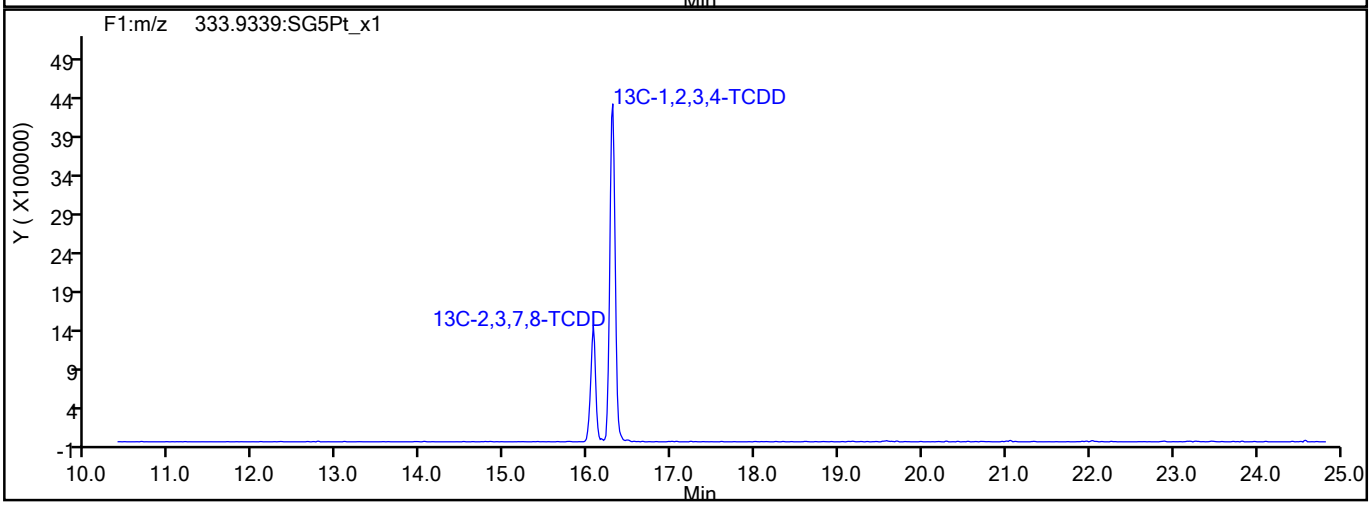

777505

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

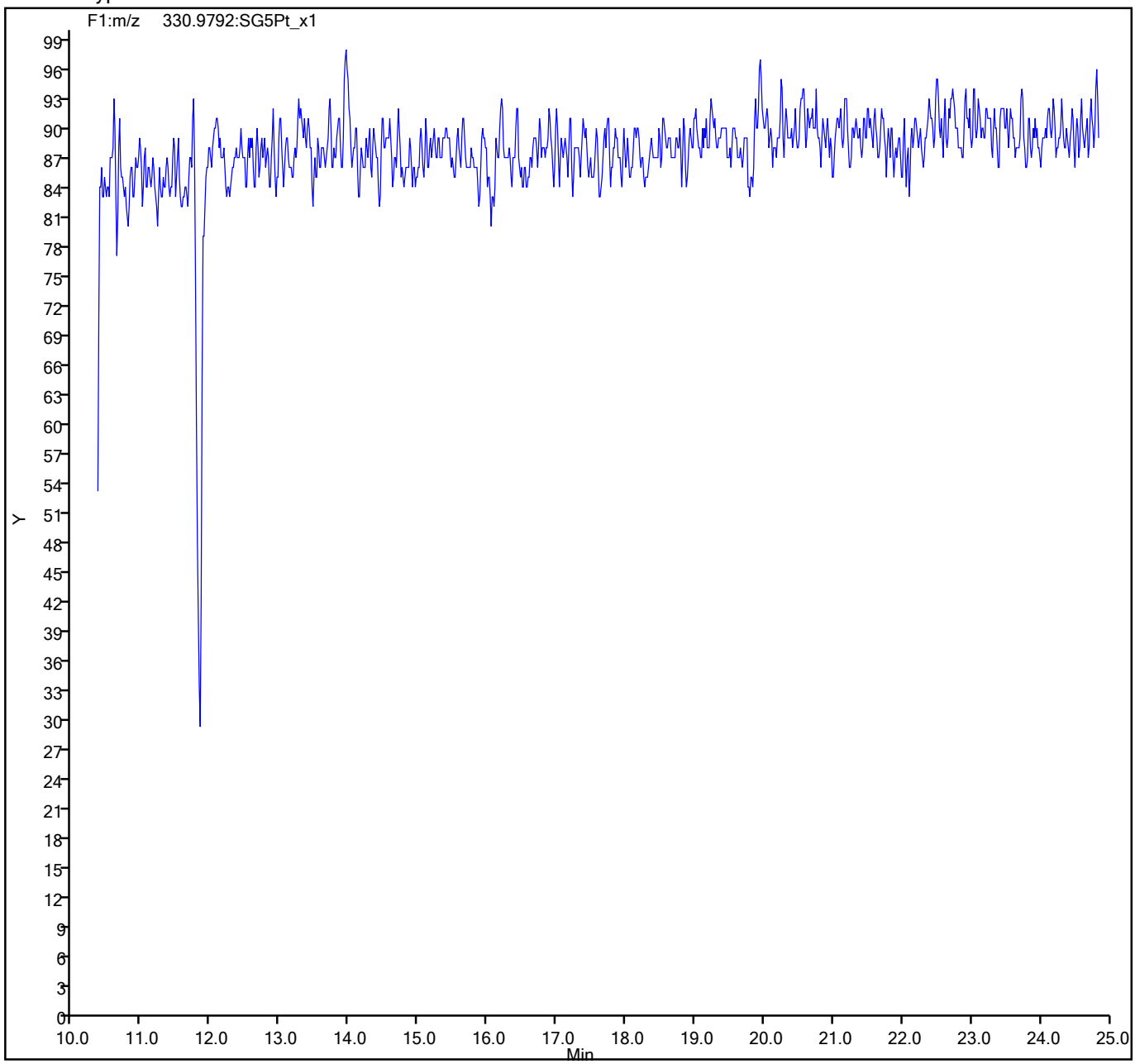

777506

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-513585/2-A
Matrix: Sediment
Lab File ID: 13AU2110D5_45.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10(g)
Date Analyzed: 08/15/2021 02:51
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	19.8		1.0	0.056
51207-31-9	2,3,7,8-TCDF	20.7		1.0	0.073
40321-76-4	1,2,3,7,8-PeCDD	105		5.0	0.15
57117-41-6	1,2,3,7,8-PeCDF	105		5.0	0.34
57117-31-4	2,3,4,7,8-PeCDF	97.0		5.0	0.34
39227-28-6	1,2,3,4,7,8-HxCDD	95.8		5.0	0.36
57653-85-7	1,2,3,6,7,8-HxCDD	107		5.0	0.38
19408-74-3	1,2,3,7,8,9-HxCDD	107		5.0	0.33
70648-26-9	1,2,3,4,7,8-HxCDF	92.9		5.0	0.64
57117-44-9	1,2,3,6,7,8-HxCDF	106		5.0	0.66
72918-21-9	1,2,3,7,8,9-HxCDF	103		5.0	0.51
60851-34-5	2,3,4,6,7,8-HxCDF	104		5.0	0.51
35822-46-9	1,2,3,4,6,7,8-HpCDD	107		5.0	0.44
67562-39-4	1,2,3,4,6,7,8-HpCDF	106		5.0	0.95
55673-89-7	1,2,3,4,7,8,9-HpCDF	97.7		5.0	1.2
3268-87-9	OCDD	206		10	0.26
39001-02-0	OCDF	200		10	0.22
41903-57-5	Total TCDD	19.8		1.0	0.056
30402-14-3	Total TCDF	21.0		1.0	0.073
36088-22-9	Total PeCDD	105		5.0	0.15
30402-15-4	Total PeCDF	203		5.0	0.34
34465-46-8	Total HxCDD	309		5.0	0.36
55684-94-1	Total HxCDF	406		5.0	0.58
37871-00-4	Total HpCDD	107		5.0	0.44
38998-75-3	Total HpCDF	204		5.0	1.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513585/2-A

Matrix: Sediment Lab File ID: 13AU2110D5_45.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:22

Sample wt/vol: 10(g) Date Analyzed: 08/15/2021 02:51

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 516847 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		20-175
89059-46-1	13C-2,3,7,8-TCDF	53		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	63		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	57		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	63		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	59		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	57		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	51		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	52		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	52		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	62		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	59		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	68		20-186
114423-97-1	13C-OCDD	71		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	73		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d
Lims ID: LCS 320-513585/2-A
Client ID:
Sample Type: LCS
Inject. Date: 15-Aug-2021 02:51:51 ALS Bottle#: 44 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513585/2-a lcs 320-513585/2-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:47:55 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:39:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	74621048	0.81	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.356	64104505	0.76	1.6249	52.9	52.9	0.0868	0.0868	52.87	
2,3,7,8-TCDF	17.371	6807599	0.76	1.0239	10.4	10.4	0.0367	0.0367	104	
A Non-2,3,7,8-sub-TCDF	17.046	83469	0.77	1.0239	0.1608	0.1272	0.0367	0.1272	0.00	RQ
S Total TCDF					10.5	10.5	0.0367	0.0367		RQ
D 13C-2,3,7,8-TCDD	18.066	38537706	0.81	0.8993	57.4	57.4	0.1111	0.1111	57.43	
2,3,7,8-TCDD	18.082	4792794	0.77	1.2541	9.917	9.917	0.0279	0.0279	99.17	
$ 37Cl4-2,3,7,8-TCDD	18.082	24015631		1.1071	29.1	29.1	0.0214	0.0214	72.67	
A Non-2,3,7,8-sub-TCDD	17.500						0.0279	0.0279		
S Total TCDD					9.917	9.917	0.0279	0.0279		
D 13C-1,2,3,7,8-PeCDF	22.367	51737483	1.57	1.2101	57.3	57.3	0.1516	0.1516	57.30	
1,2,3,7,8-PeCDF	22.394	28815451	1.61	1.0611	52.5	52.5	0.1700	0.1700	105	
D 13C-2,3,4,7,8-PeCDF	23.717	58332834	1.56	1.2395	63.1	63.1	0.1480	0.1480	63.07	
2,3,4,7,8-PeCDF	23.744	28798282	1.59	1.0184	48.5	48.5	0.1716	0.1716	96.95	
A F1 PeCDFs	20.093						0.0115	0.0115		
A Non-2,3,7,8-sub-PeCDF	23.241	316324	1.40	1.0398	0.5528	0.5528	0.1707	0.5528	0.00	
S Total PeCDF					101.5	101.5	0.1708	0.1708		
D 13C-1,2,3,7,8-PeCDD	24.440	36054474	1.61	0.7612	63.5	63.5	0.0777	0.0777	63.47	
1,2,3,7,8-PeCDD	24.467	19769265	1.60	1.0484	52.3	52.3	0.0774	0.0774	105	
A Non-2,3,7,8-sub-PeCDD	23.349						0.0774	0.0774		
S Total PeCDD					52.3	52.3	0.0774	0.0774		
D 13C-1,2,3,4,7,8-HxCDF	30.516	52239613	0.52	1.0837	57.1	57.1	0.2320	0.2320	57.07	
1,2,3,4,7,8-HxCDF	30.529	26342010	1.23	1.0851	46.5	46.5	0.3186	0.3186	92.94	
D 13C-1,2,3,6,7,8-HxCDF	30.689	48715704	0.52	1.1279	51.1	51.1	0.2229	0.2229	51.13	
1,2,3,6,7,8-HxCDF	30.716	29071321	1.22	1.1260	53.0	53.0	0.3280	0.3280	106	
D 13C-2,3,4,6,7,8-HxCDF	31.514	46541960	0.52	1.0637	51.8	51.8	0.2364	0.2364	51.80	
2,3,4,6,7,8-HxCDF	31.541	28230894	1.22	1.1675	52.0	52.0	0.2545	0.2545	104	
D 13C-1,2,3,7,8,9-HxCDF	32.326	42525847	0.52	0.9676	52.0	52.0	0.2598	0.2598	52.03	
1,2,3,7,8,9-HxCDF	32.340	25620565	1.23	1.1664	51.7	51.7	0.2548	0.2548	103	
A Non-2,3,7,8-sub-HxCDF	30.197						0.2855	0.2855		
S Total HxCDF					203.1	203.1	0.2890	0.2890		

Report Date: 18-Aug-2021 10:48:24 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.140	84469233	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	36366557	1.30	0.7334	58.7	58.7	0.2667	0.2667	58.70	
1,2,3,4,7,8-HxCDD	31.728	18533933	1.32	1.0640	47.9	47.9	0.1795	0.1795	95.79	
D 13C-1,2,3,6,7,8-HxCDD	31.807	40194248	1.21	0.8802	54.1	54.1	0.2222	0.2222	54.06	
1,2,3,6,7,8-HxCDD	31.834	21408957	1.22	1.0001	53.3	53.3	0.1878	0.1878	107	
1,2,3,7,8,9-HxCDD	32.153	23087587	1.27	1.1325	53.3	53.3	0.1673	0.1673	107	
A Non-2,3,7,8-sub-HxCDD	30.882						0.1778	0.1778		
S Total HxCDD					154.4	154.4	0.1782	0.1782		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	38562068	0.43	0.7730	59.1	59.1	0.6186	0.6186	59.06	
1,2,3,4,6,7,8-HpCDF	33.778	29590862	1.04	1.4413	53.2	53.2	0.4737	0.4737	106	
D 13C-1,2,3,4,7,8,9-HpCDF	34.848	40185815	0.43	0.7008	67.9	67.9	0.6824	0.6824	67.88	
1,2,3,4,7,8,9-HpCDF	34.860	25860992	1.04	1.3174	48.8	48.8	0.5914	0.5914	97.70	
A Non-2,3,7,8-sub-HpCDF	34.319						0.5276	0.5276		
S Total HpCDF					102.1	102.1	0.5325	0.5325		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	34044411	0.99	0.6472	62.3	62.3	0.3602	0.3602	62.27	
1,2,3,4,6,7,8-HpCDD	34.568	19950769	1.04	1.0943	53.6	53.6	0.2208	0.2208	107	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2208	0.2208		
S Total HpCDD					53.6	53.6	0.2208	0.2208		
D 13C-OCDD	36.926	53877979	0.87	0.4472	142.6	142.6	0.1502	0.1502	71.32	
OCDF	37.022	38661178	0.89	1.4382	99.8	99.8	0.1083	0.1083	99.79	
OCDD	36.938	30785076	0.89	1.1070	103.2	103.2	0.1311	0.1311	103	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Report Date: 18-Aug-2021 10:48:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d
Lims ID: LCS 320-513585/2-A
Client ID:
Sample Type: LCS
Inject. Date: 15-Aug-2021 02:51:51 ALS Bottle#: 44 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513585/2-a lcs 320-513585/2-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:47:55 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:39:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.870	17.855	1		33379162	7899918	3558	8895	2220		a
333.9339	17.855	17.855	0		41241886	9808844	3521	8802	2786	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.971	27699106	6610506	4559	11397	1450		
317.9389	17.356	17.356	0	0.971	36405399	8597322	5430	13575	1583	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.371	0	1.001	2943313	688205	911	2277	755		
305.8987	17.371	17.371	0	1.001	3864286	922262	1376	3440	670	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.993	17.046	-3	0.979	58393	12407	911	2277	14		
	Empc Correction				36311	10261	911	2277	11		
305.8987	16.993	17.046	-3	0.979	47158	13327	1376	3440	10	1.24(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	17223713	3889746	3558	8895	1093		
333.9339	18.066	18.051	1	1.011	21313993	4762581	3521	8802	1353	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.082	18.081	0	1.001	2092167	488825	639	1597	765		
321.8936	18.082	18.081	0	1.001	2700627	616535	574	1435	1074	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.081	0	1.012	24015631	5623089	1677	4192	3353		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.500						639	1597			
321.8936	17.500						574	1435			

777511

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.252	31586248	5301541	7673	19182	691		
353.8970	22.381	22.367	1	1.252	20151235	3419154	5323	13307	642	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.394	22.394	0	1.001	17769811	2963921	4066	10165	729		
341.8567	22.394	22.394	0	1.001	11045640	1825417	2225	5562	820	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.327	35543734	5481376	7673	19182	714		
353.8970	23.717	23.703	1	1.327	22789100	3520359	5323	13307	661	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.744	23.730	1	1.001	17658334	2718158	4066	10165	669		
341.8567	23.744	23.730	1	1.001	11139948	1714764	2225	5562	771	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						140	350			
341.8567	20.093						285	712			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.912	23.241	-20	1.024	184786	25857	4066	10165	6		
341.8567	22.912	23.241	-20	1.024	131538	16797	2225	5562	8	1.40(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.368	22254483	3246298	2564	6410	1266		
369.8919	24.440	24.426	1	1.368	13799991	1930723	1627	4067	1187	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.467	24.453	1	1.001	12156900	1809104	1069	2672	1692		
357.8516	24.467	24.453	1	1.001	7612365	1134597	611	1527	1857	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.349						1069	2672			
357.8516	23.349						611	1527			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	17868867	3317503	7857	19642	422		
385.8610	30.516	30.503	1	0.949	34370746	6262191	14870	37175	421	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.000	14518158	2750486	7231	18077	380		
375.8178	30.529	30.529	0	1.000	11823852	2267686	6017	15042	377	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	16675976	3087122	7857	19642	393		
385.8610	30.689	30.689	0	0.955	32039728	5881297	14870	37175	396	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.716	30.716	0	1.001	15948155	2994842	7231	18077	414		
375.8178	30.716	30.716	0	1.001	13123166	2442379	6017	15042	406	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	15937155	3859905	7857	19642	491		
385.8610	31.514	31.514	0	0.981	30604805	7286245	14870	37175	490	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.541	31.528	1	1.001	15533219	3724971	7231	18077	515		
375.8178	31.541	31.528	1	1.001	12697675	2977711	6017	15042	495	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.326	0	1.006	14542540	3828301	7857	19642	487		
385.8610	32.326	32.326	0	1.006	27983307	7314319	14870	37175	492	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.340	32.340	0	1.000	14126048	3635723	7231	18077	503		
375.8178	32.340	32.340	0	1.000	11494517	2950153	6017	15042	490	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						7231	18077			
375.8178	30.197						6017	15042			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.140	0		46673991	12435851	9377	23442	1326		
403.8529	32.140	32.140	0		37795242	10162994	8305	20762	1224	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	20551182	5339234	9377	23442	569		
403.8529	31.701	31.701	0	0.986	15815375	4419480	8305	20762	532	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.728	31.714	1	1.001	10535205	2785224	4326	10815	644		
391.8127	31.728	31.714	1	1.001	7998728	2181790	3130	7825	697	1.32(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	21996761	5587553	9377	23442	596		
403.8529	31.807	31.807	0	0.990	18197487	4335409	8305	20762	522	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.834	31.820	1	1.001	11763410	2958470	4326	10815	684		
391.8127	31.821	31.820	0	1.000	9645547	2329396	3130	7825	744	1.22(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.153	0	1.014	12923885	3433579	4326	10815	794		
391.8127	32.153	32.153	0	1.014	10163702	2725204	3130	7825	871	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						4326	10815			
391.8127	30.882						3130	7825			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.766	0	1.051	11543135	3850952	12414	31035	310		
419.8220	33.766	33.766	0	1.051	27018933	8893650	30816	77040	289	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	15091304	4981451	17681	44202	282		
409.7789	33.778	33.778	0	1.000	14499558	4779341	17121	42802	279	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.848	34.847	0	1.084	12116439	3393611	12414	31035	273		
419.8220	34.848	34.847	0	1.084	28069376	7773832	30816	77040	252	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860	34.860	0	1.000	13160932	3742951	17681	44202	212		
409.7789	34.860	34.860	0	1.000	12700060	3575806	17121	42802	209	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						17681	44202			
409.7789	34.319						17121	42802			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.076	16905357	4956476	7764	19410	638		
437.8140	34.568	34.568	0	1.076	17139054	4933144	13313	33282	371	0.99(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.580	-1	1.000	10170461	2946412	4716	11790	625		
425.7737	34.568	34.580	-1	1.000	9780308	2954050	4841	12102	610	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						4716	11790			
425.7737	34.301						4841	12102			
13C-OCDD											
469.7779	36.926	36.926	0	1.149	25140510	6263694	3452	8630	1815		
471.7750	36.926	36.926	0	1.149	28737469	7098461	2619	6547	2710	0.87(0.76-1.02)	
OCDF											
441.7428	37.022	37.022	0	1.003	18251085	4678318	1869	4672	2503		
443.7399	37.022	37.022	0	1.003	20410093	5209340	2295	5737	2270	0.89(0.76-1.02)	
OCDD											
457.7377	36.938	36.938	0	1.000	14468339	3514141	1967	4917	1787		
459.7348	36.926	36.938	-1	1.000	16316737	4005416	1912	4780	2095	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Report Date: 18-Aug-2021 10:48:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d
Lims ID: LCS 320-513585/2-A
Client ID:
Inject. Date: 15-Aug-2021 02:51:51 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	64104505	15207828

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	64104505	15207828

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.993	58393	12407	47158	13327	0.1608	1.24	RQ
16.993	36311	10261	47158	13327	0.1272		Empc Correction
Signal Totals:							
	36311	10261	47158	13327			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	105551	25734				1.24	RQ
	83469	23588					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1608 = (105551 * 100.000) / (64104505 * 1.024)
Empc Amount: 0.1272 = (83469 * 100.000) / (64104505 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:48:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d
Lims ID: LCS 320-513585/2-A
Client ID:
Inject. Date: 15-Aug-2021 02:51:51 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 4

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	51737483	8720695
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	58332834	9001735

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	55035158	8861215

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.912	184786	25857	131538	16797	0.5528	1.40	
Signal Totals:							
	184786	25857	131538	16797			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	316324	42654				1.40	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5528 = (316324 * 100.000) / (55035158 * 1.040)

Report Date: 18-Aug-2021 10:48:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
Injection Date:	15-Aug-2021 02:51:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

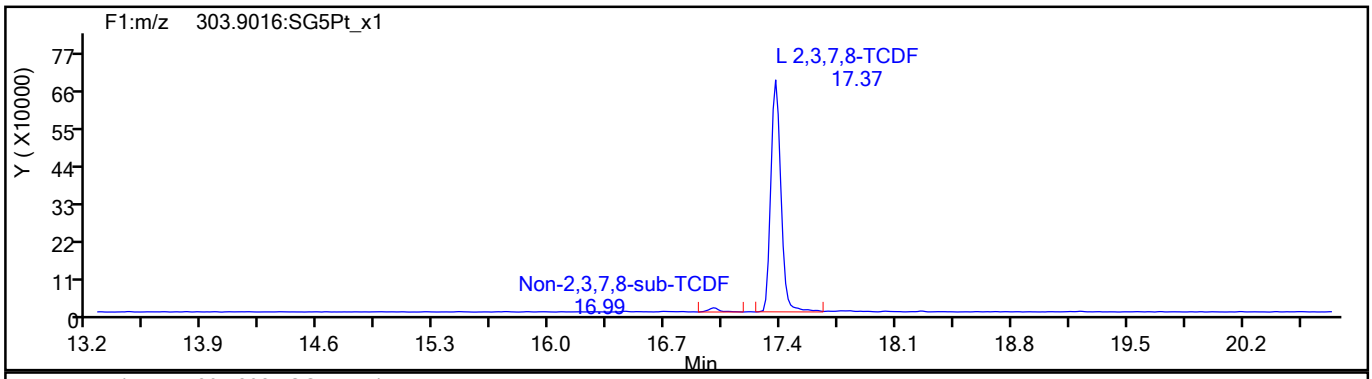

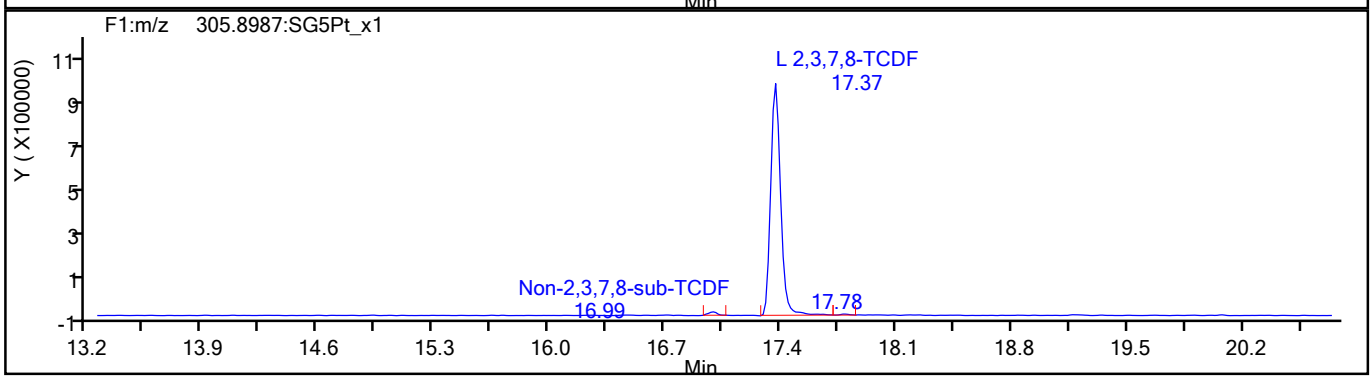

TCDF Standards

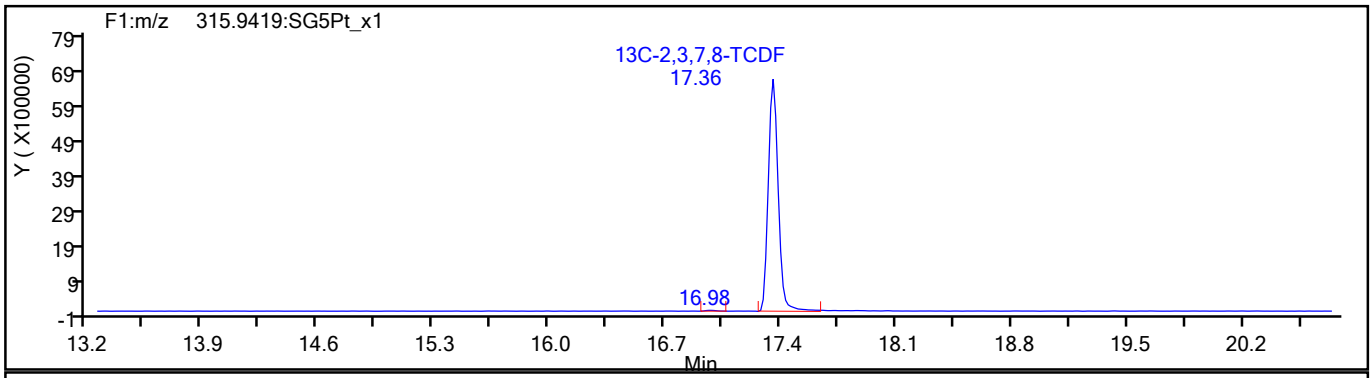

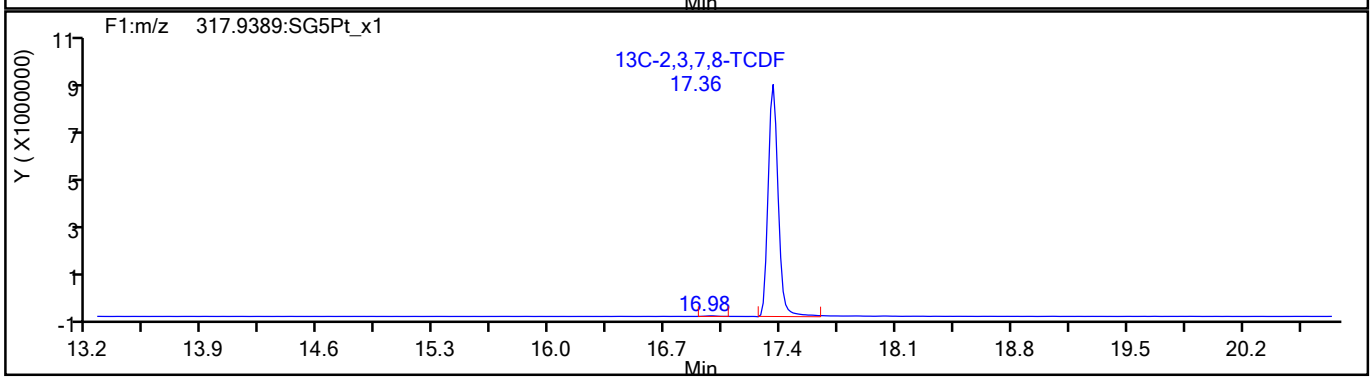

777517

Report Date: 18-Aug-2021 10:48:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
Injection Date:	15-Aug-2021 02:51:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

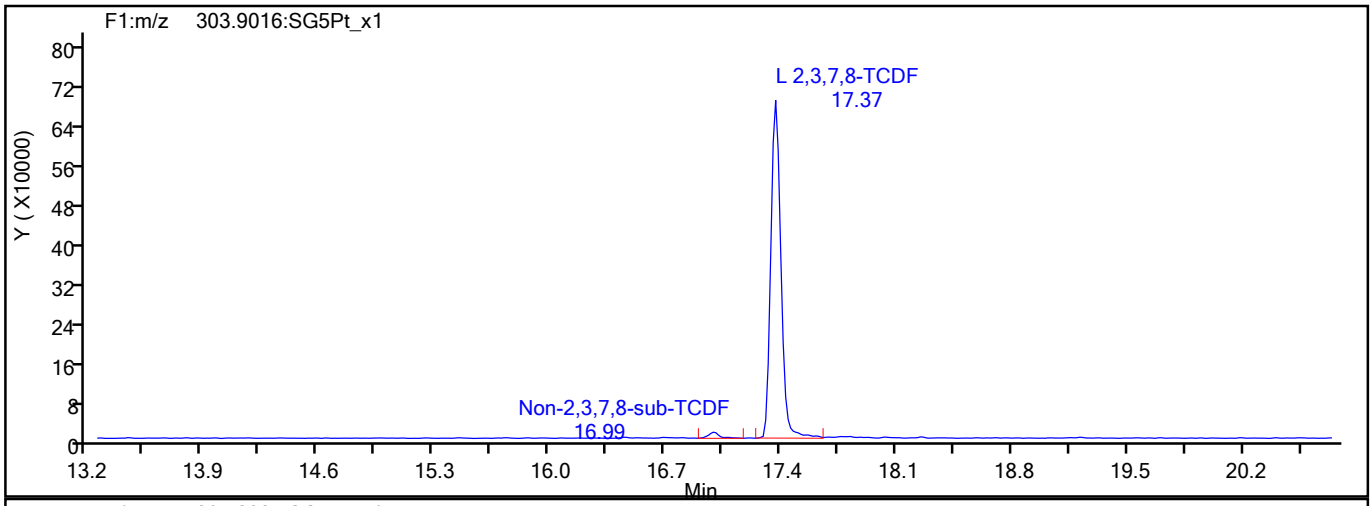

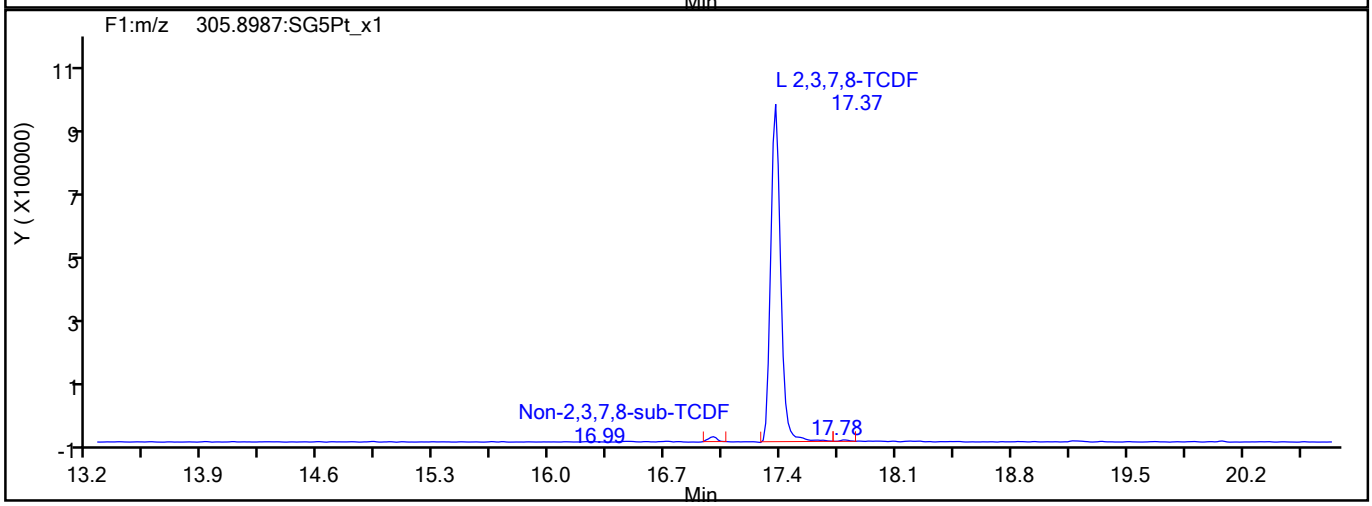

TCDF Interference Mass

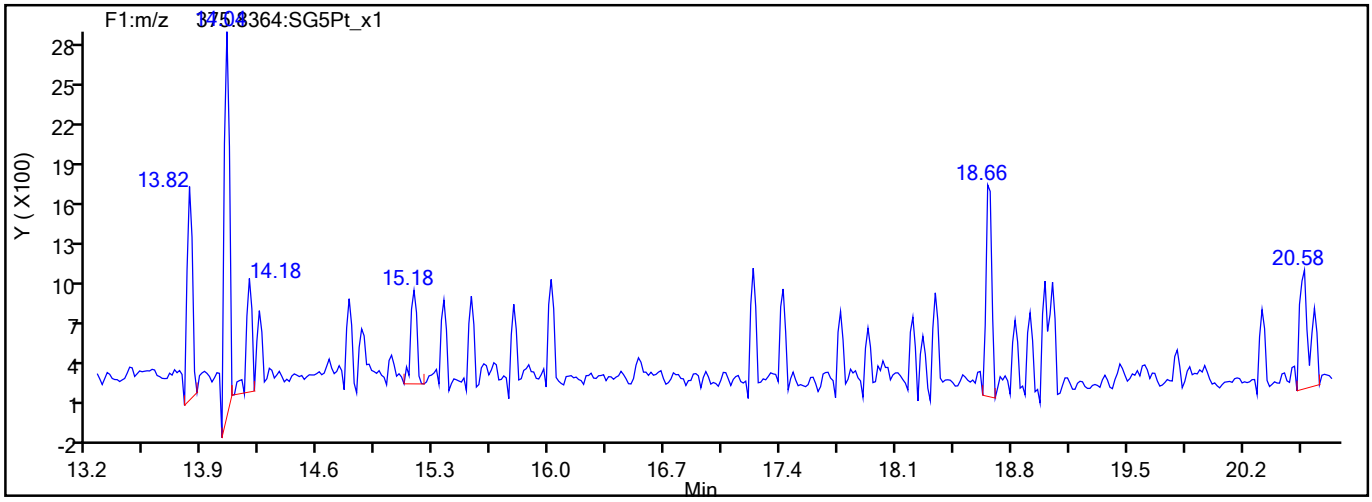

777518

Report Date: 18-Aug-2021 10:48:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
Injection Date:	15-Aug-2021 02:51:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

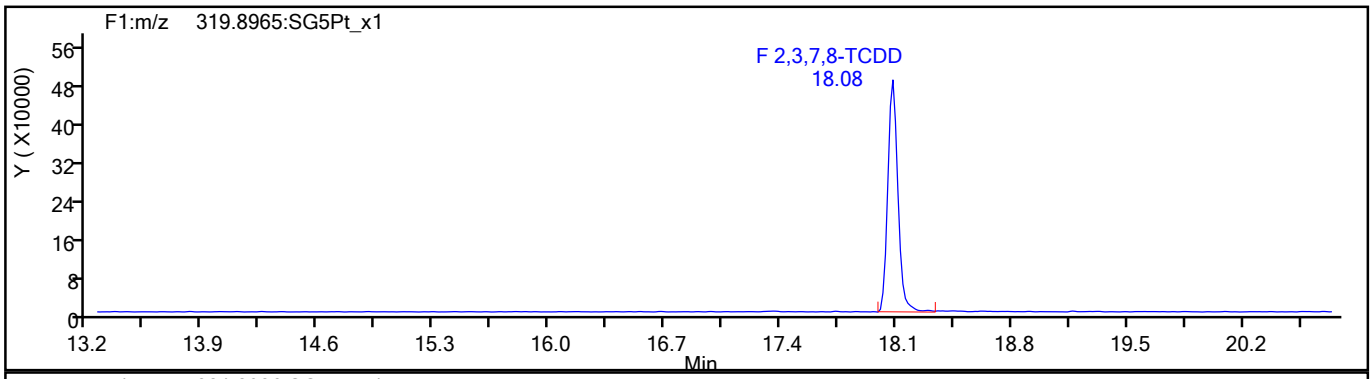

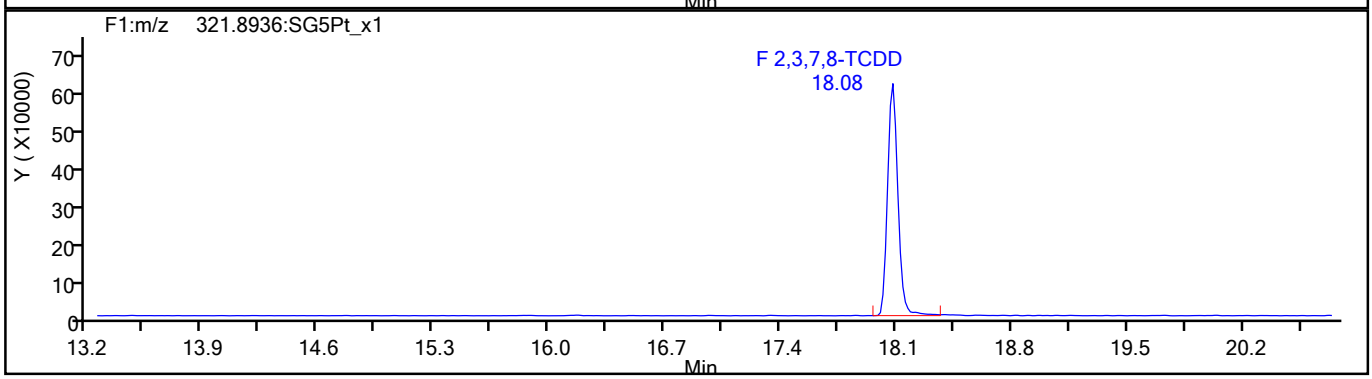

TCDD Standards

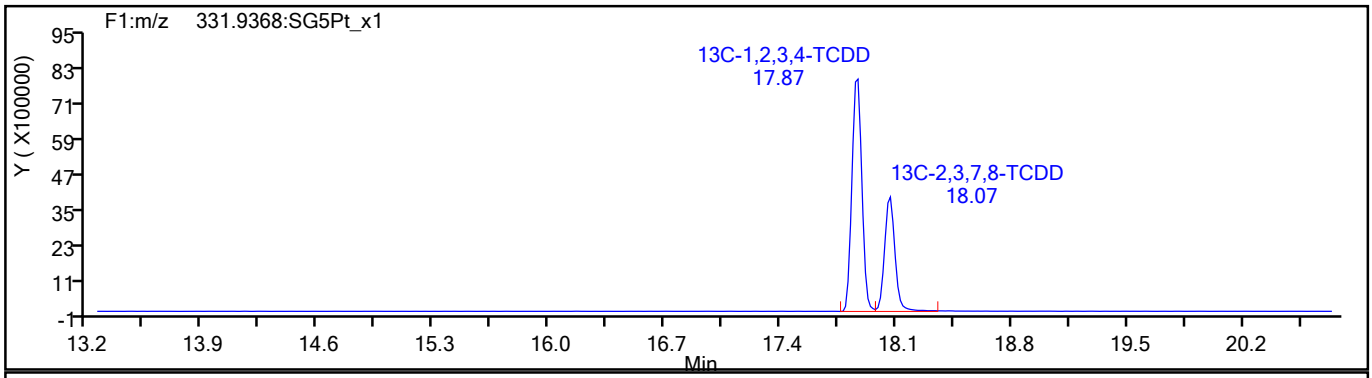

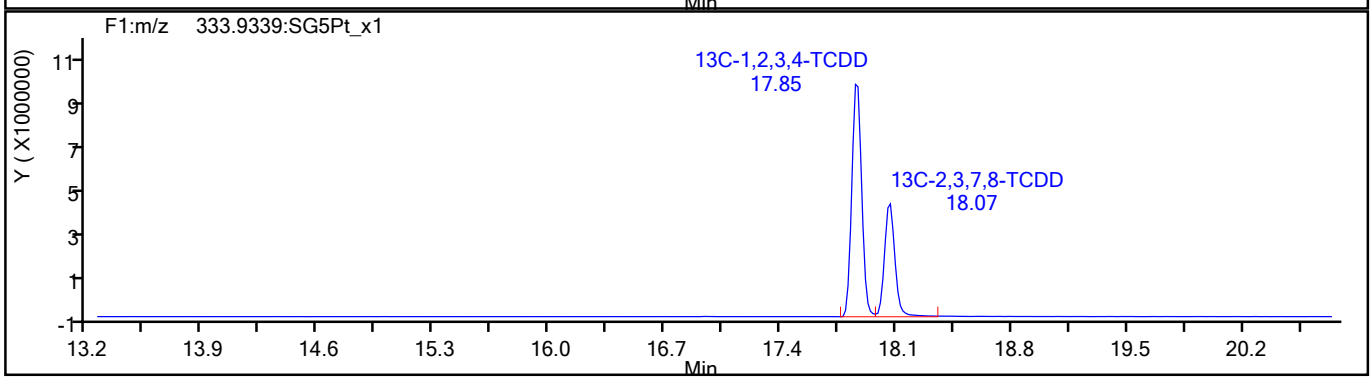

777519

Report Date: 18-Aug-2021 10:48:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
Injection Date:	15-Aug-2021 02:51:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

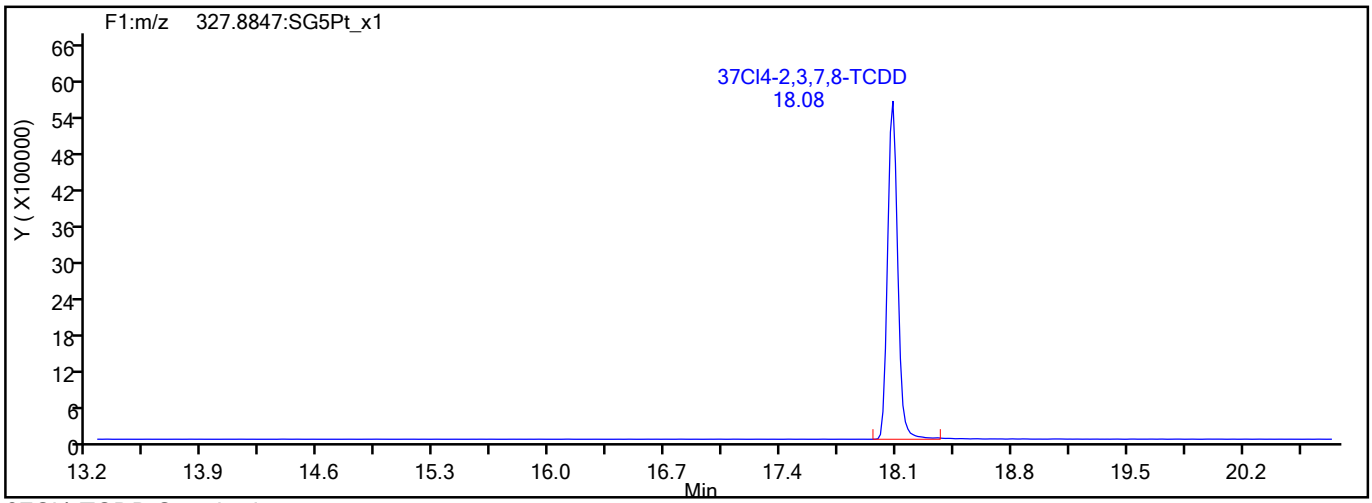

37Cl4-TCDD Standards

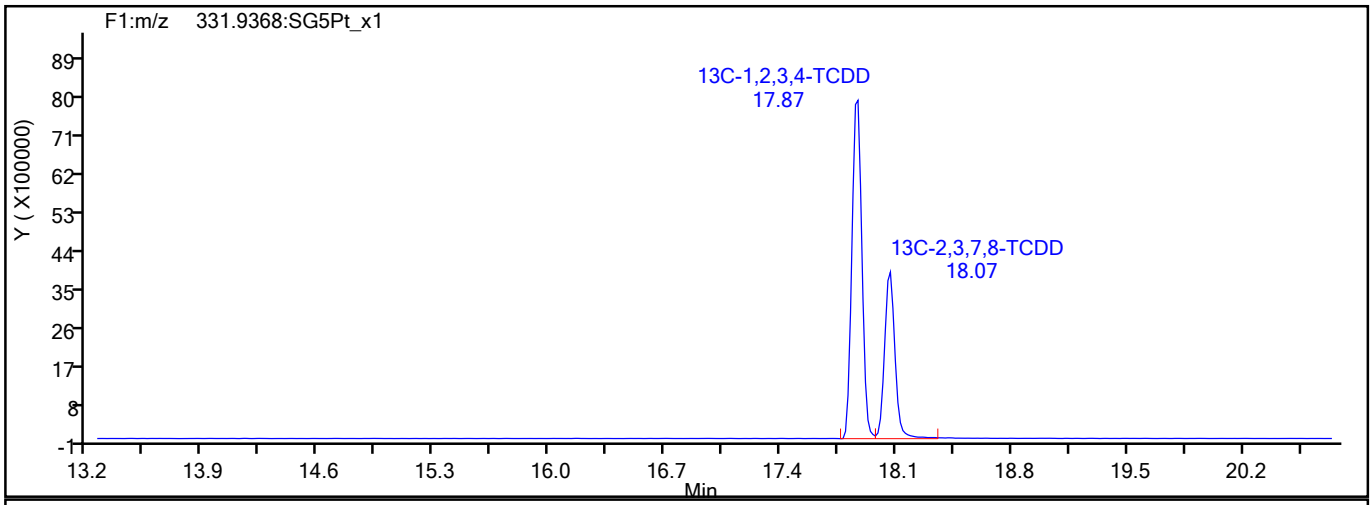

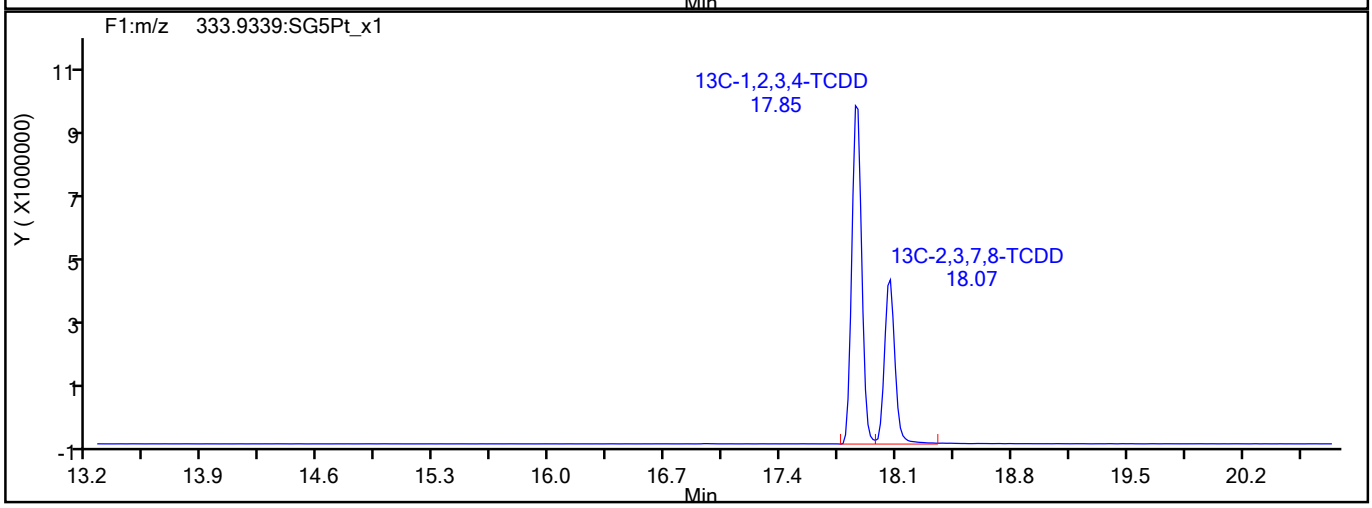

777520

Report Date: 18-Aug-2021 10:48:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
Injection Date:	15-Aug-2021 02:51:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

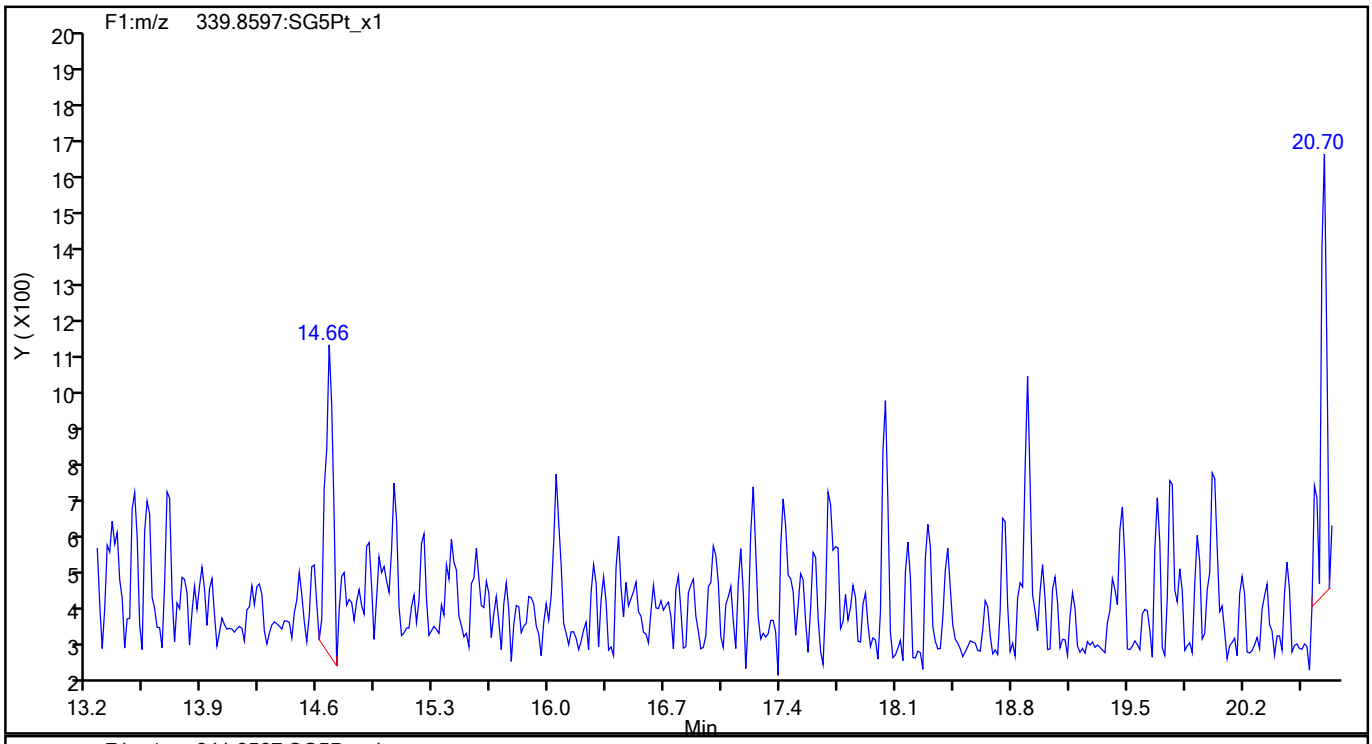

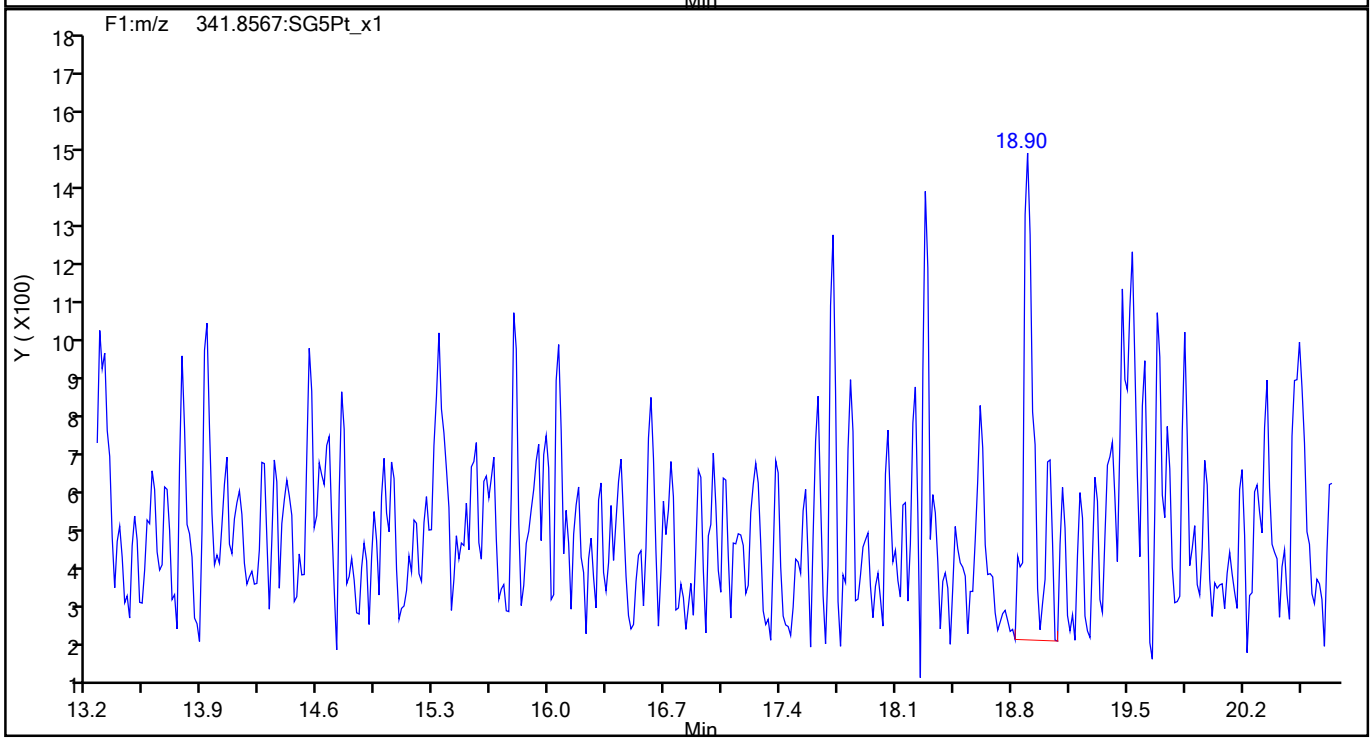

777521

Report Date: 18-Aug-2021 10:48:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
Injection Date:	15-Aug-2021 02:51:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

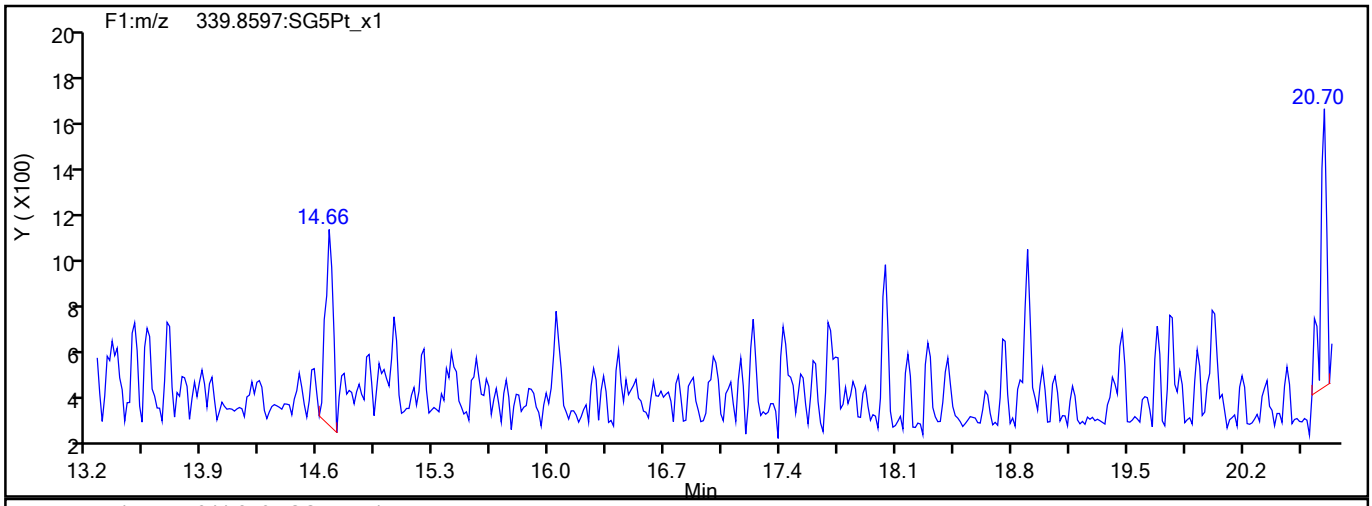

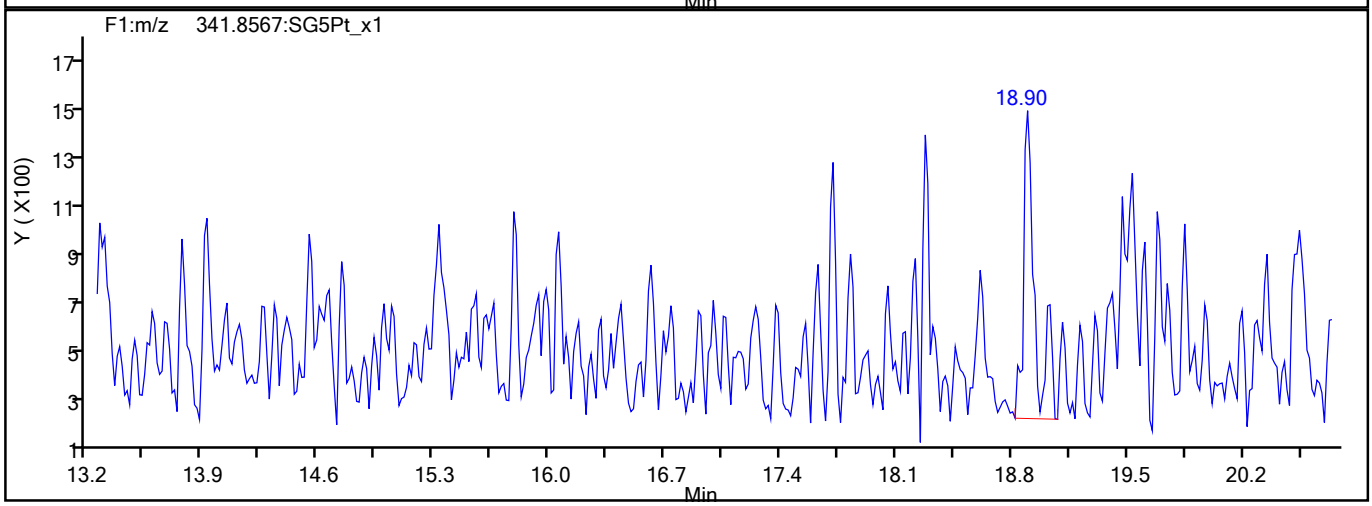

F1 PeCDFs Interference Mass

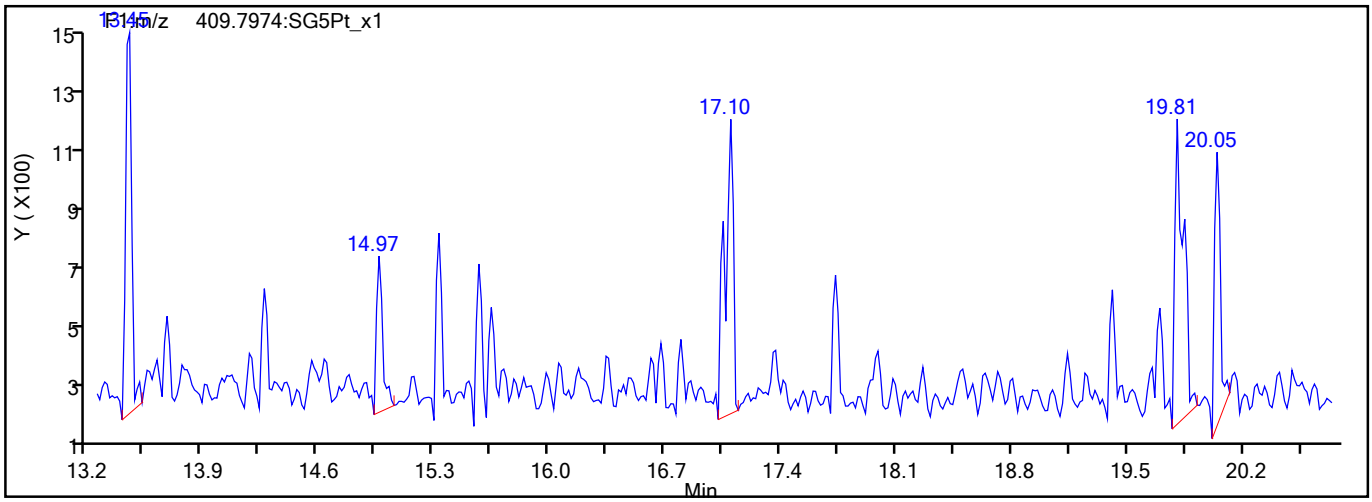

777522

Report Date: 18-Aug-2021 10:48:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
Injection Date:	15-Aug-2021 02:51:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

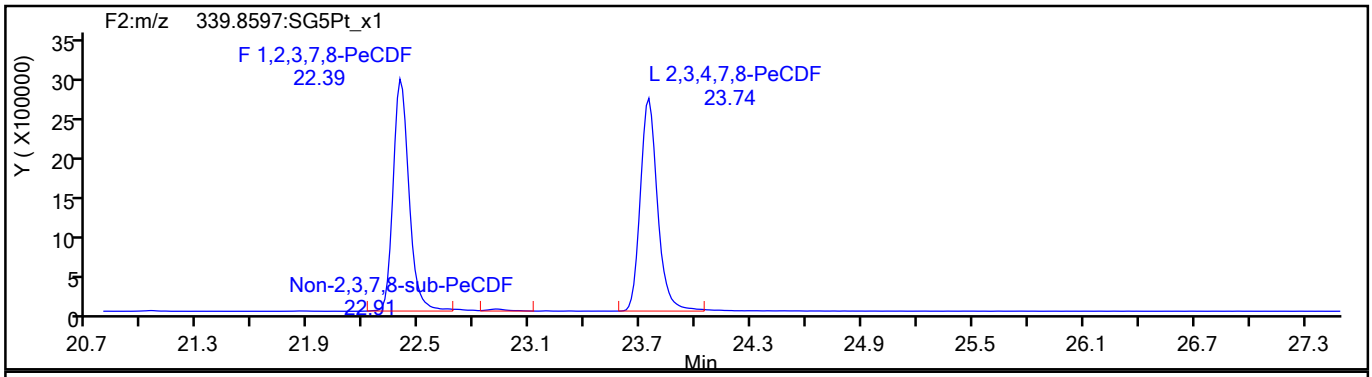

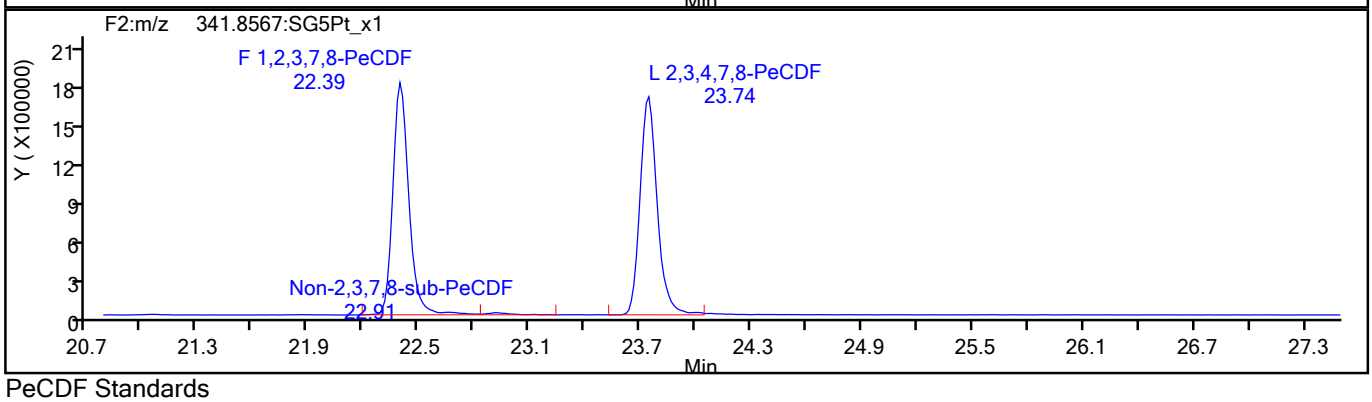

PeCDF Standards

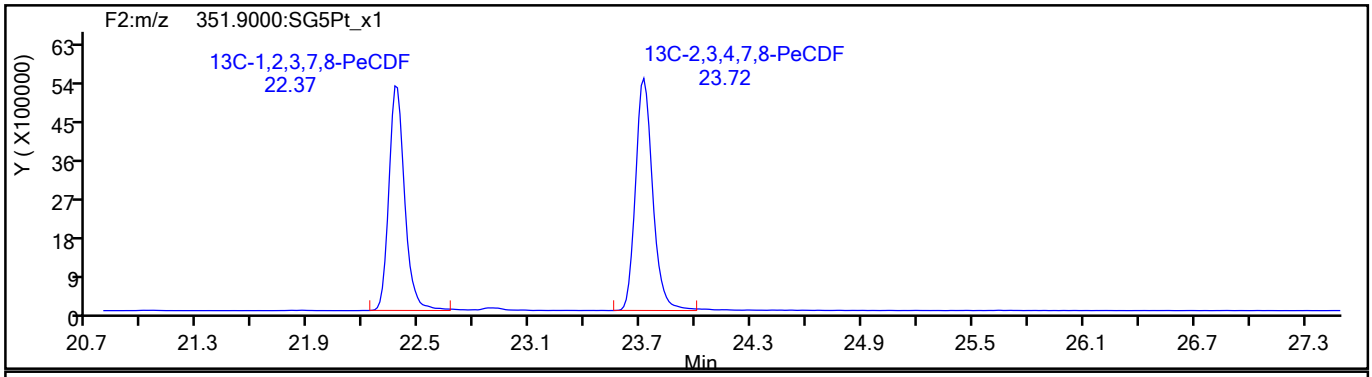

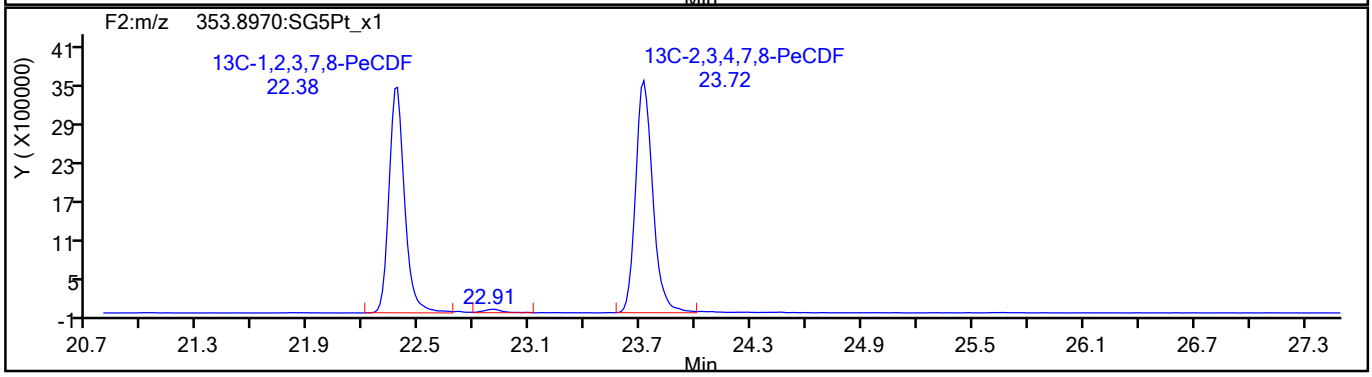

777523

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
Injection Date:	15-Aug-2021 02:51:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

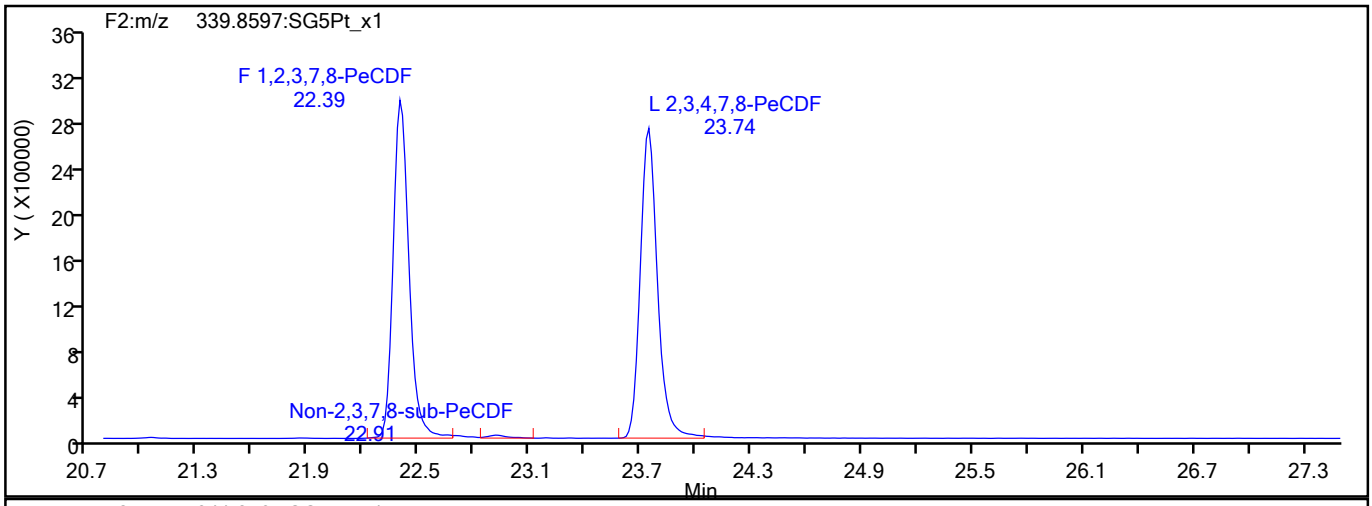

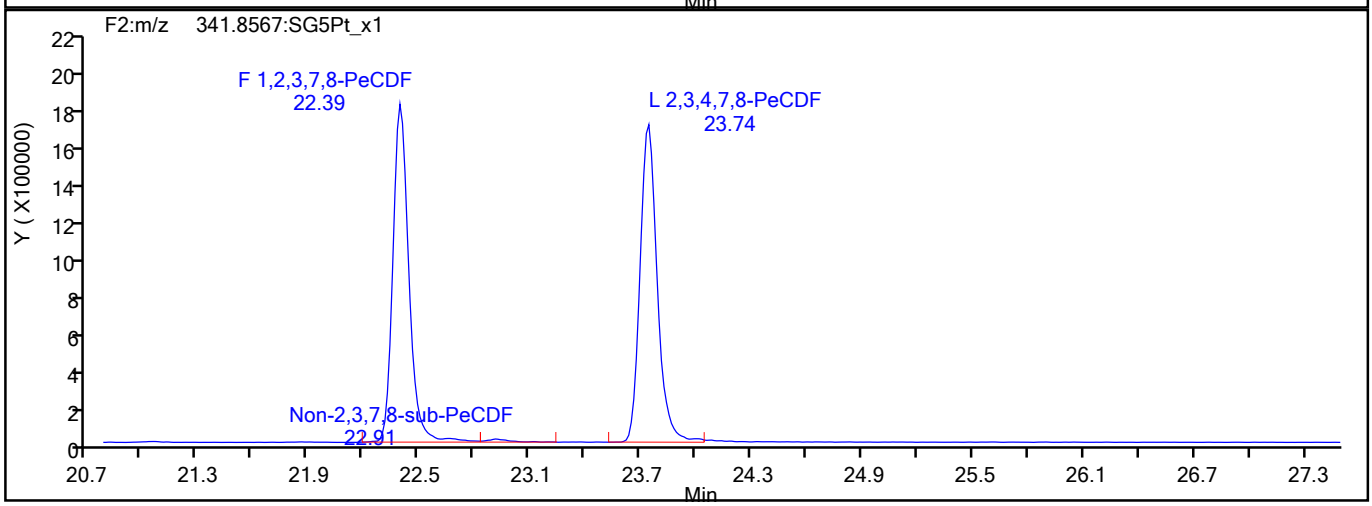

PeCDF Interference Mass

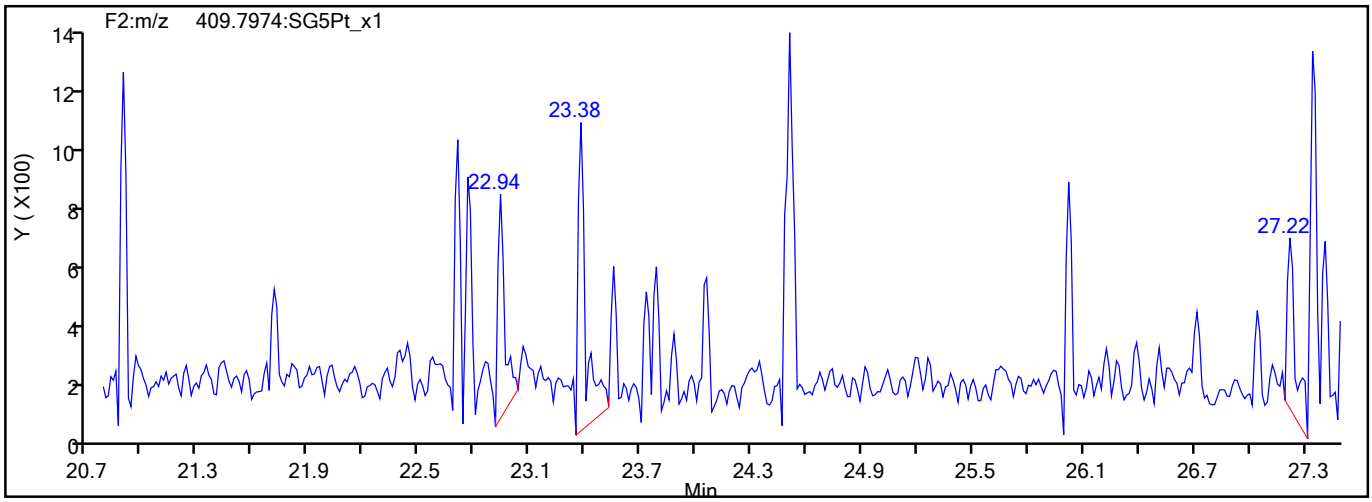

777524

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
Injection Date:	15-Aug-2021 02:51:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

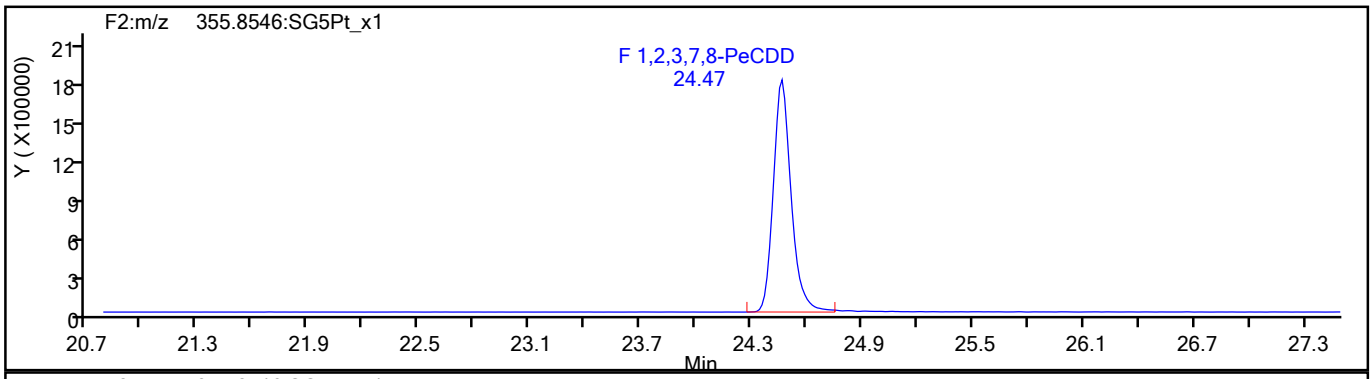

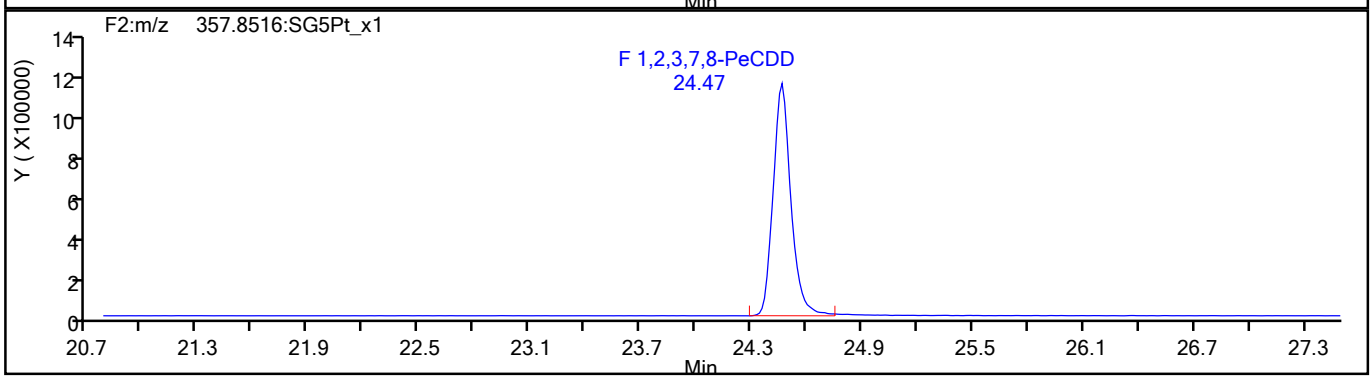

PeCDD Standards

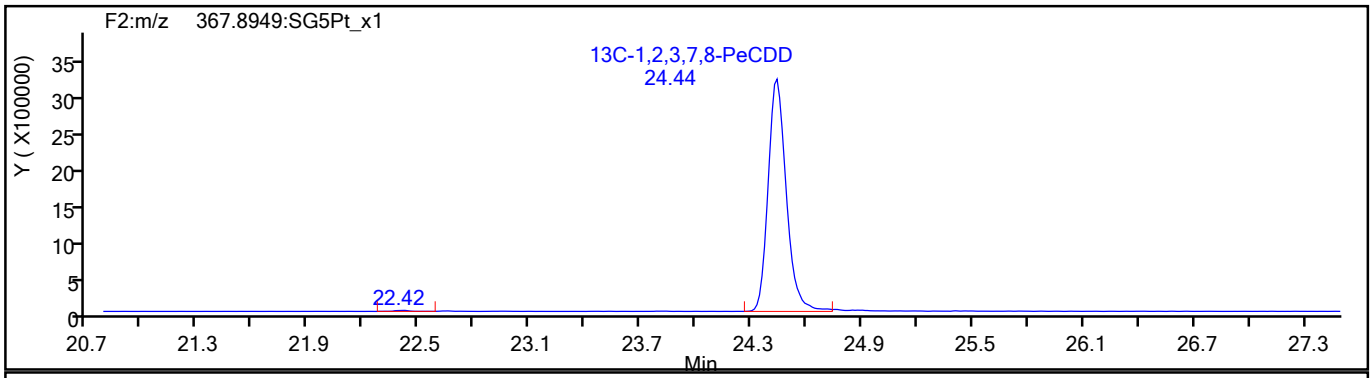

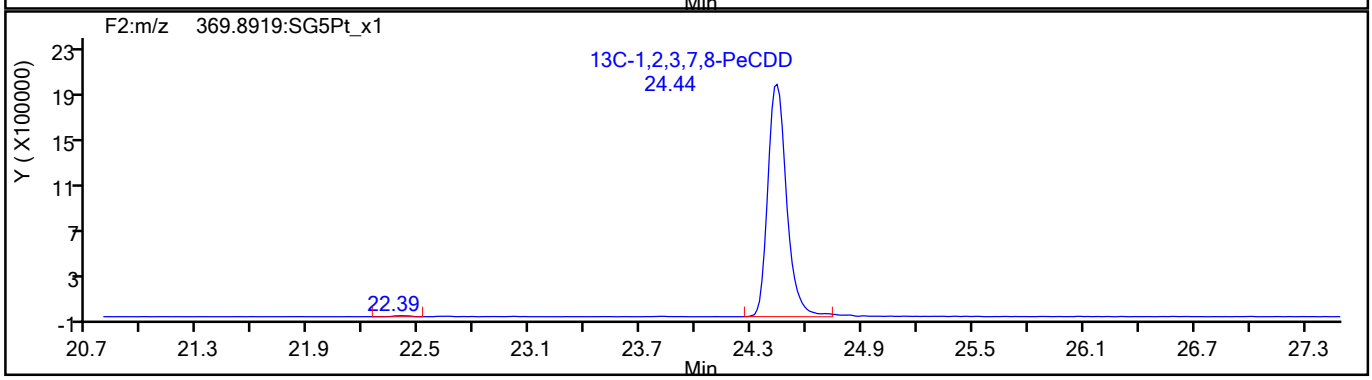

777525

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

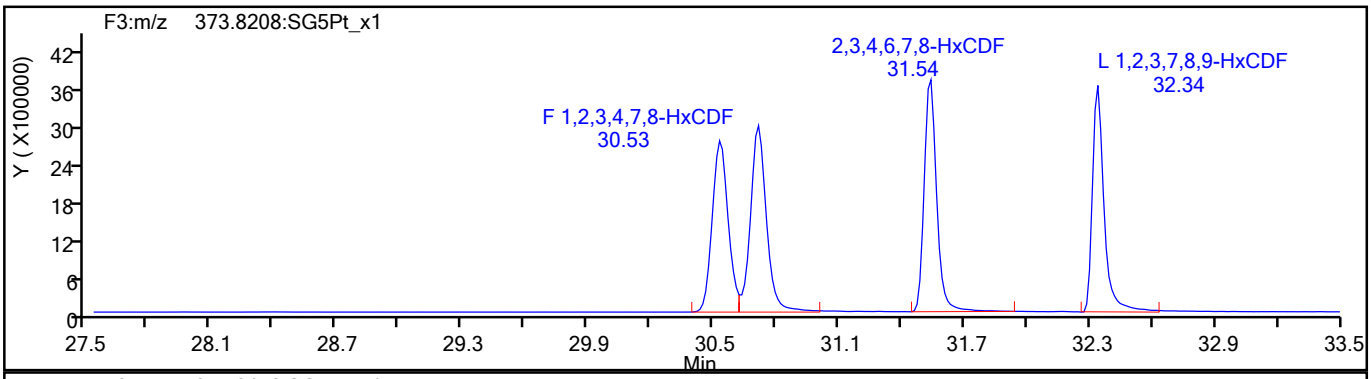

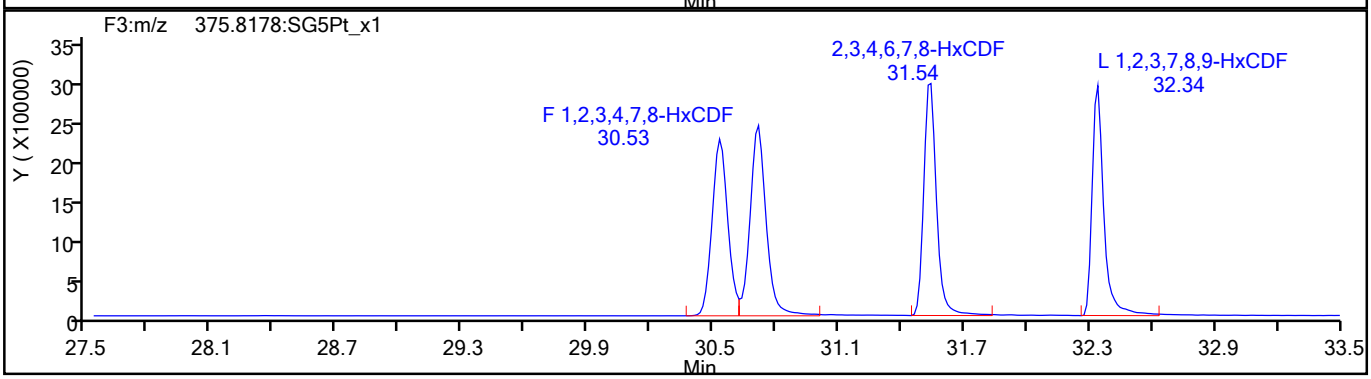

HxCDF Standards

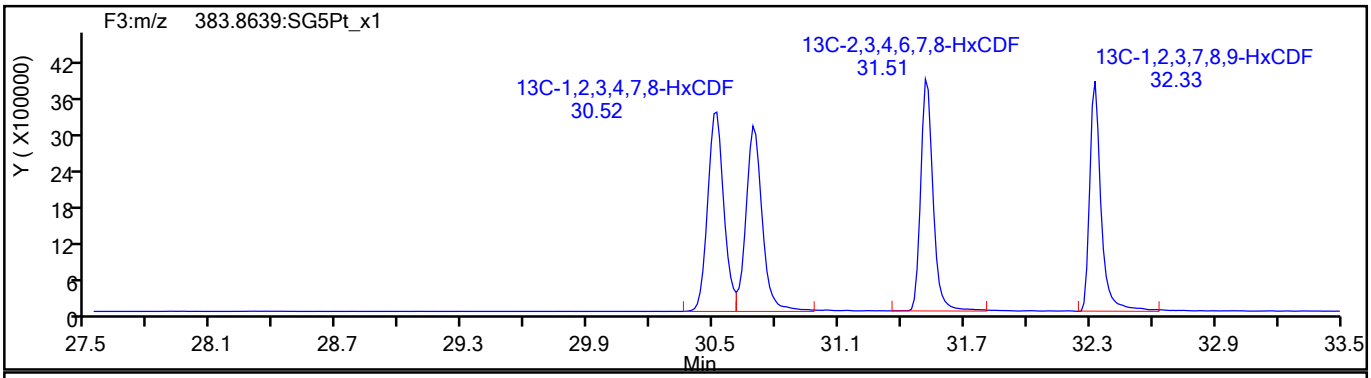

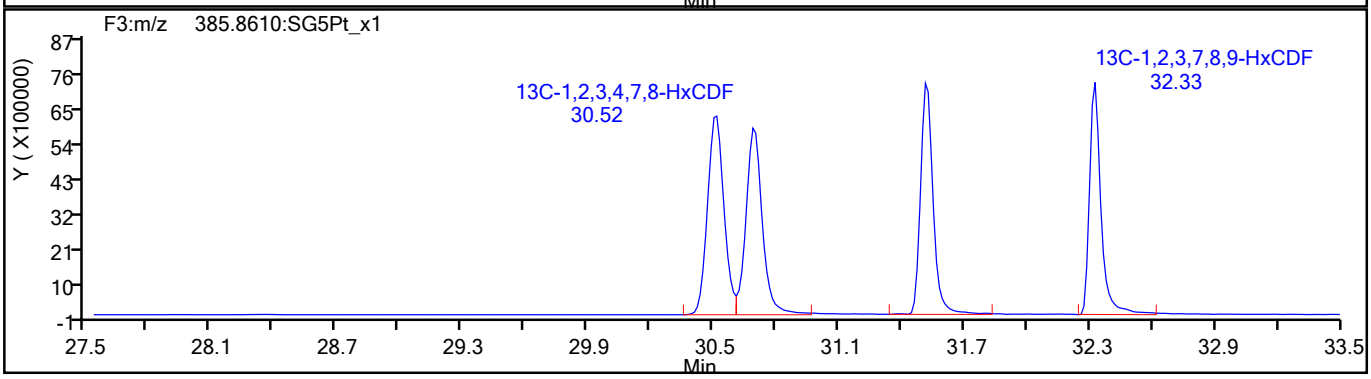

777526

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

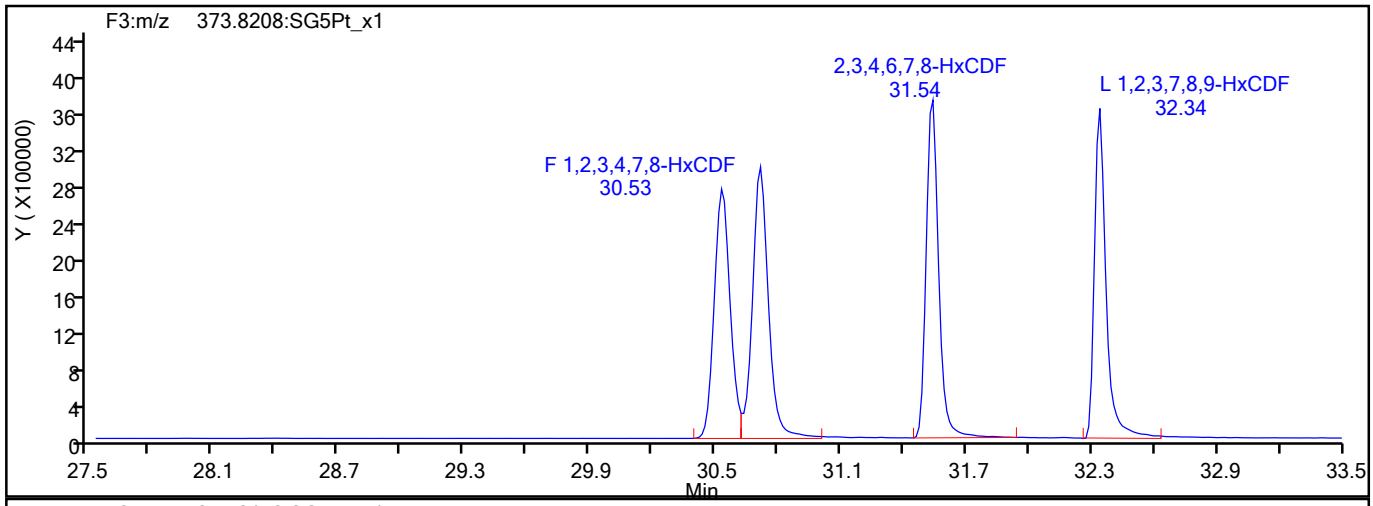

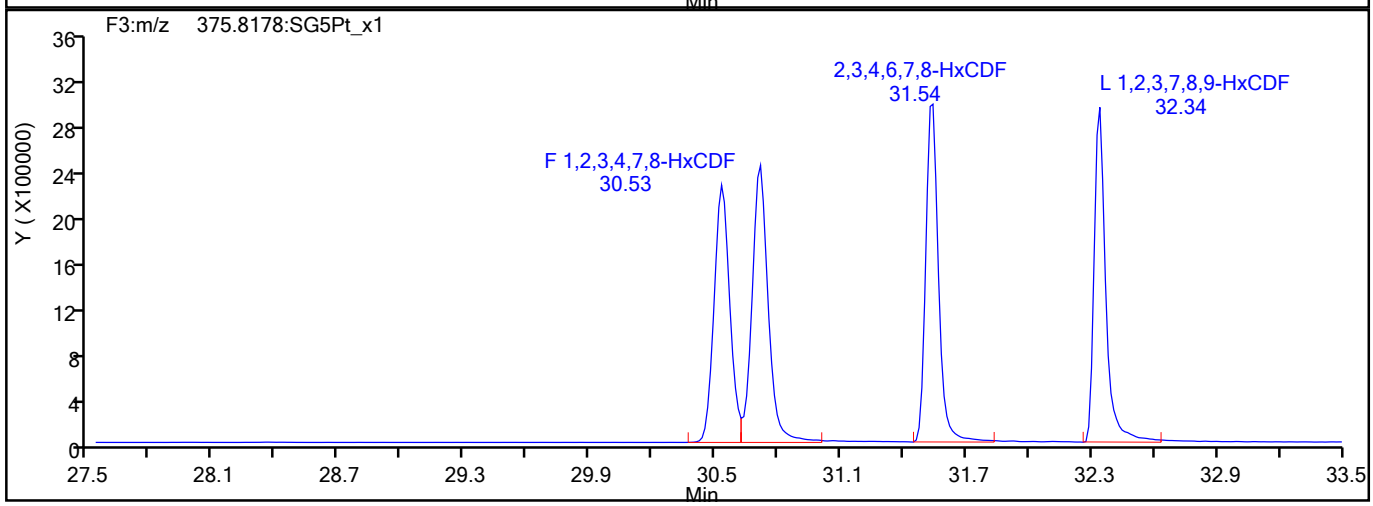

HxCDF Interference Mass

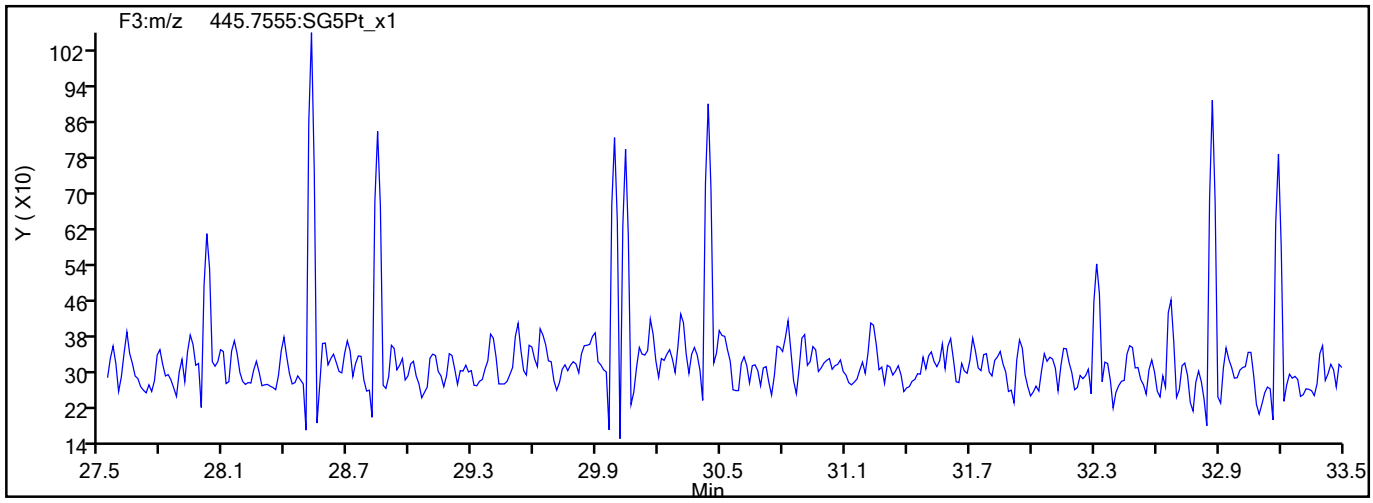

777527

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

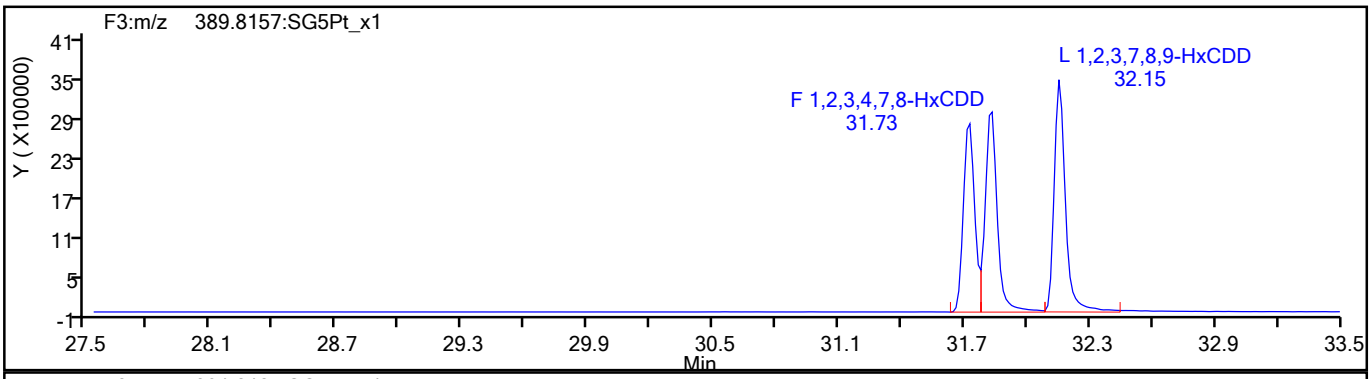

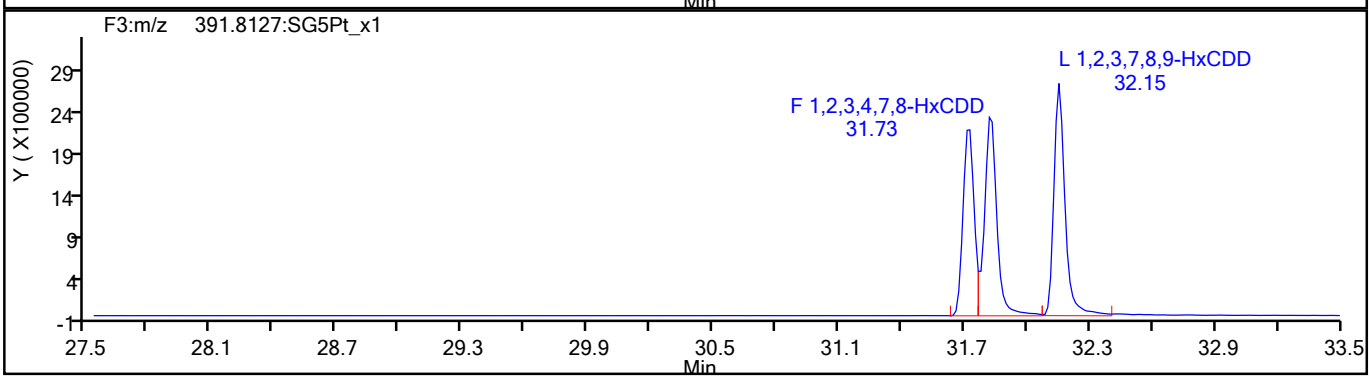

HxCDD Standards

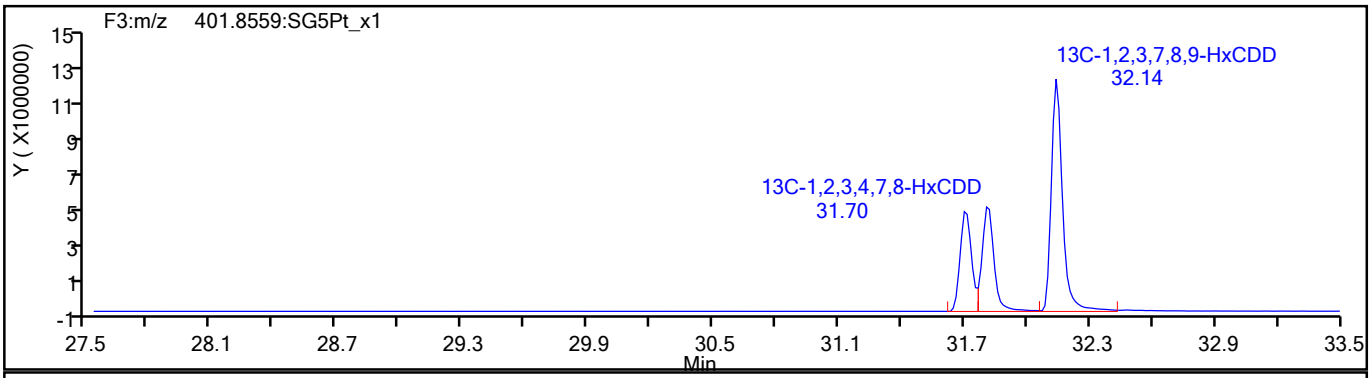

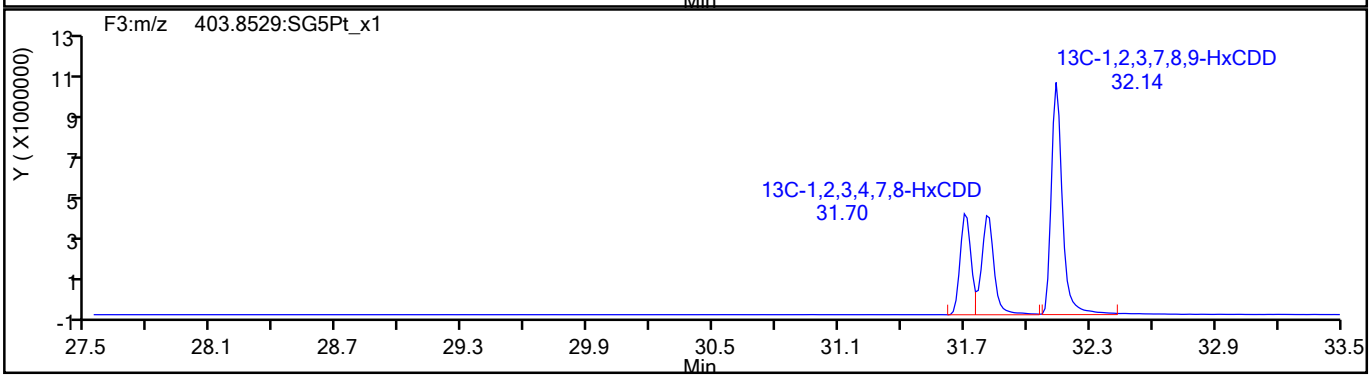

777528

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
Injection Date:	15-Aug-2021 02:51:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
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HpCDF

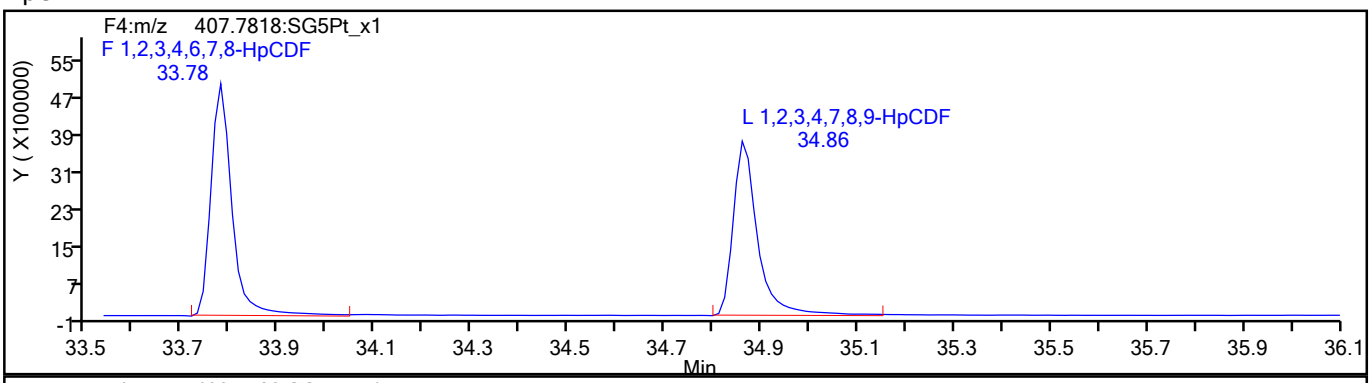

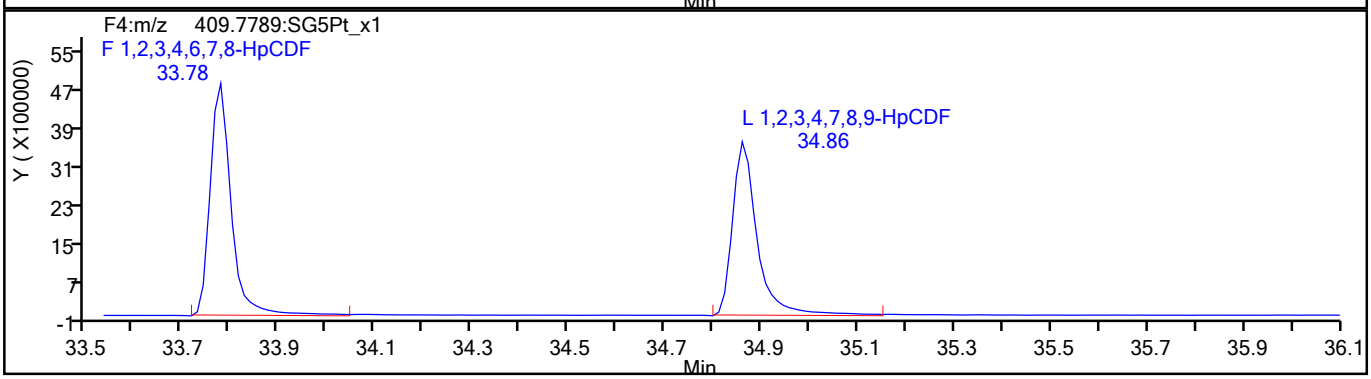

HpCDF Standards

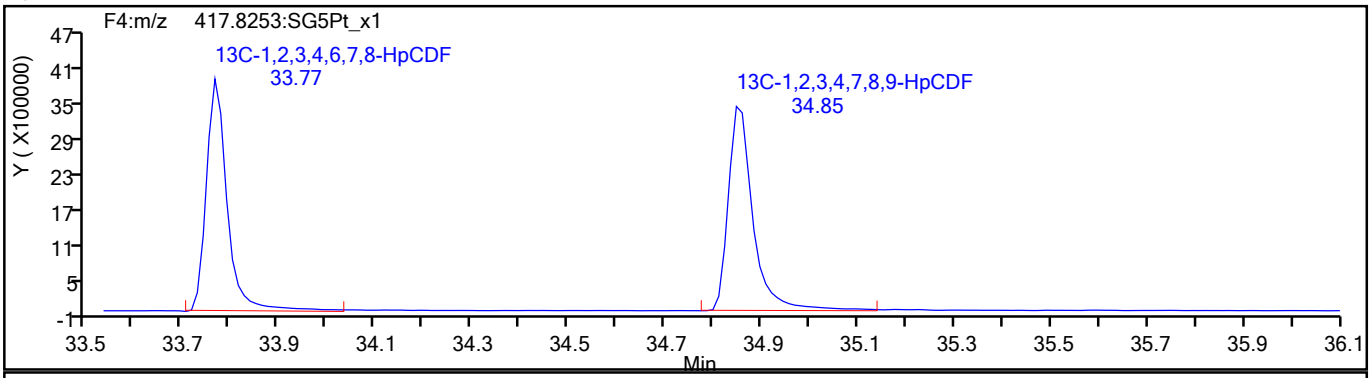

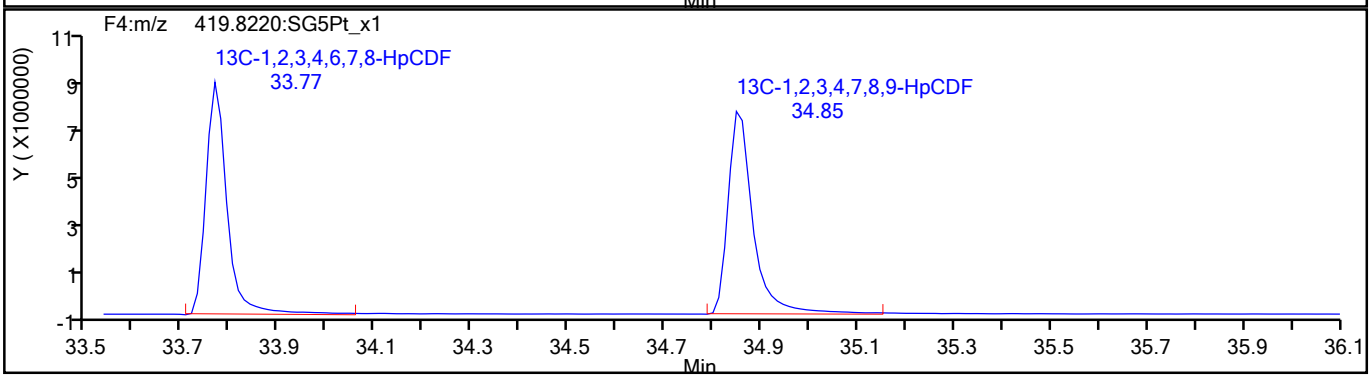

777529

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

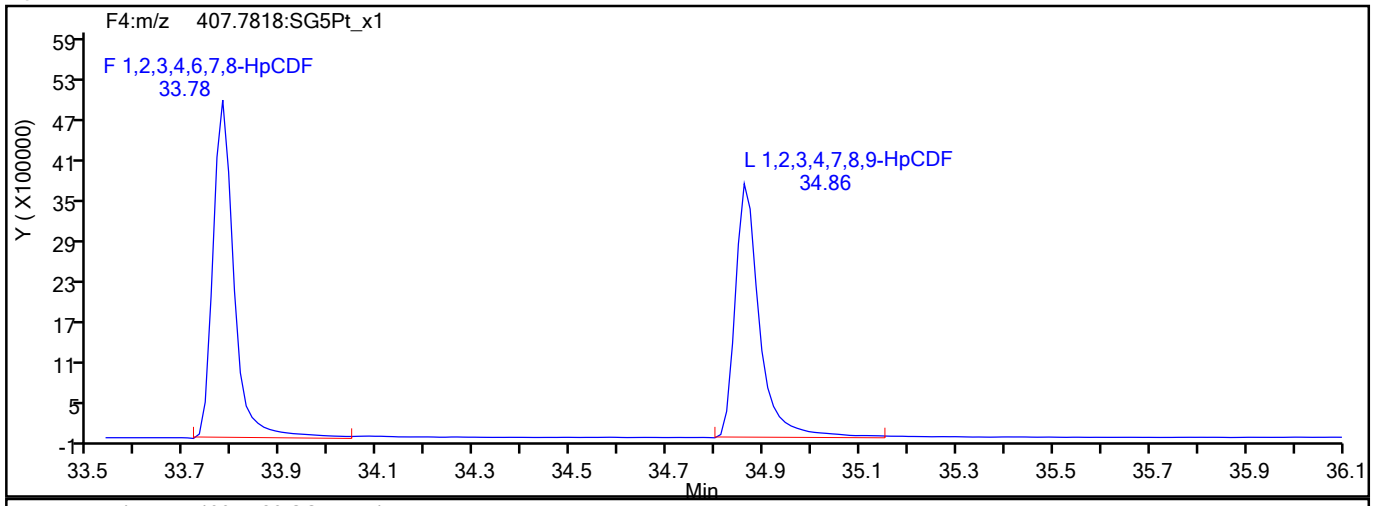

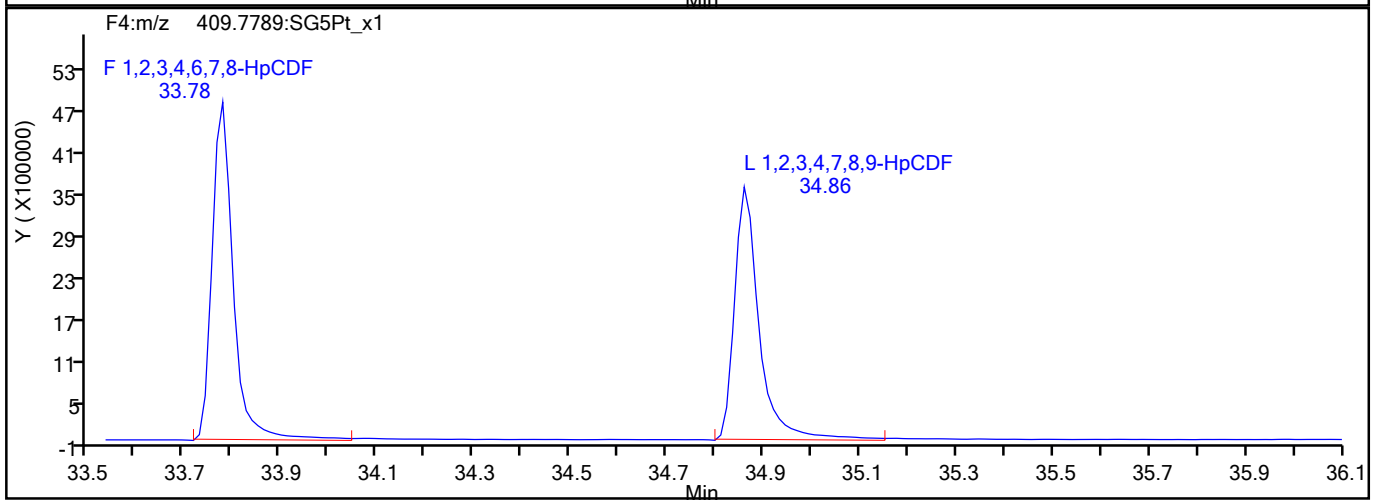

HpCDF Interference Mass

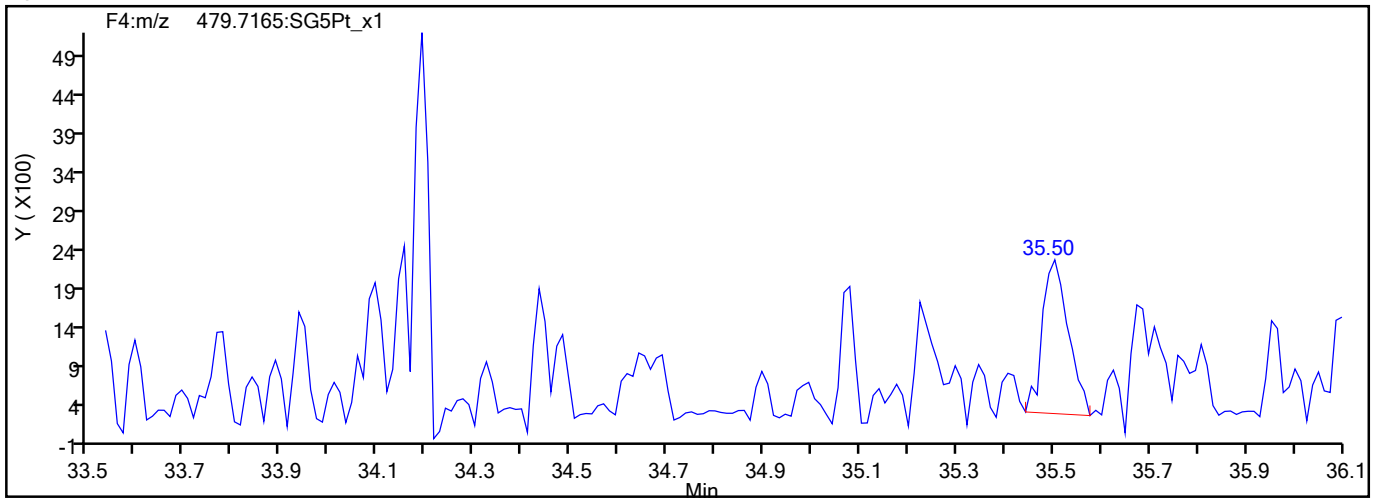

777530

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

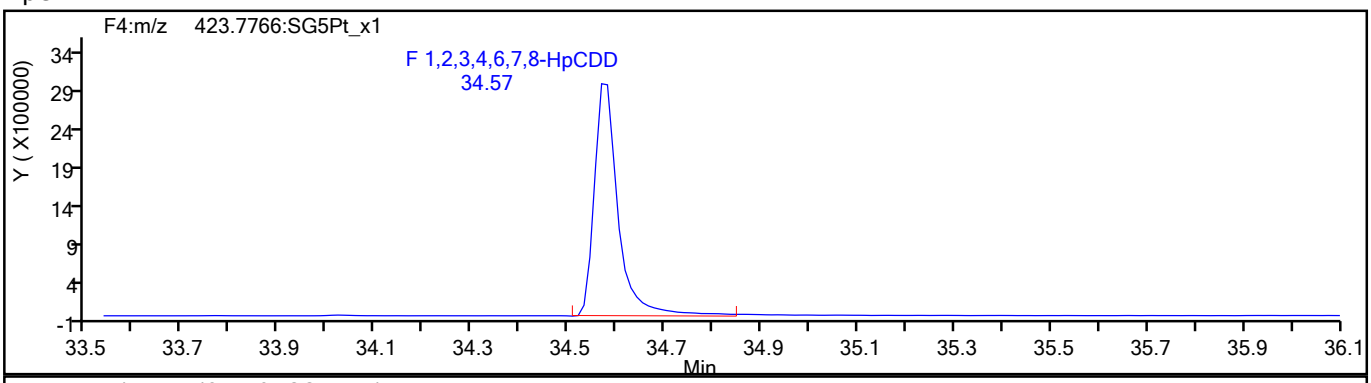

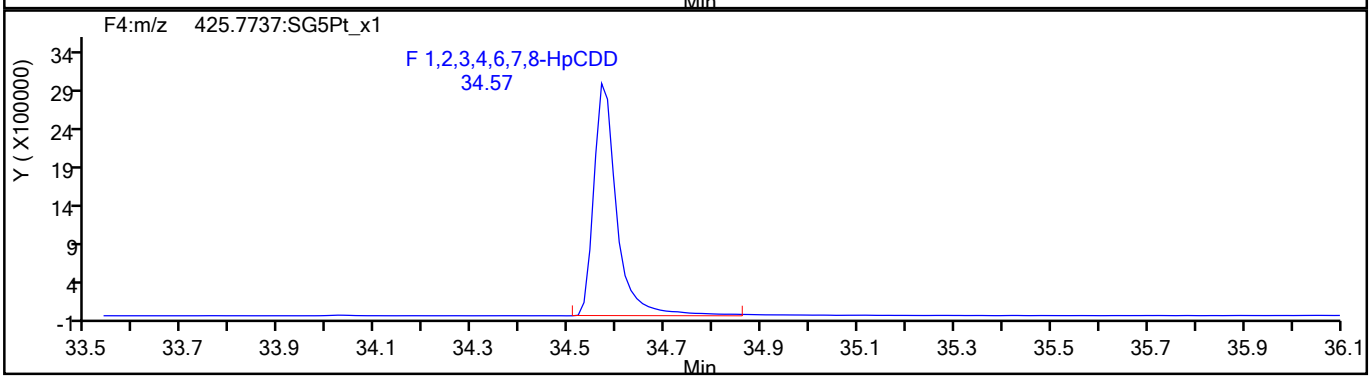

HpCDD Standards

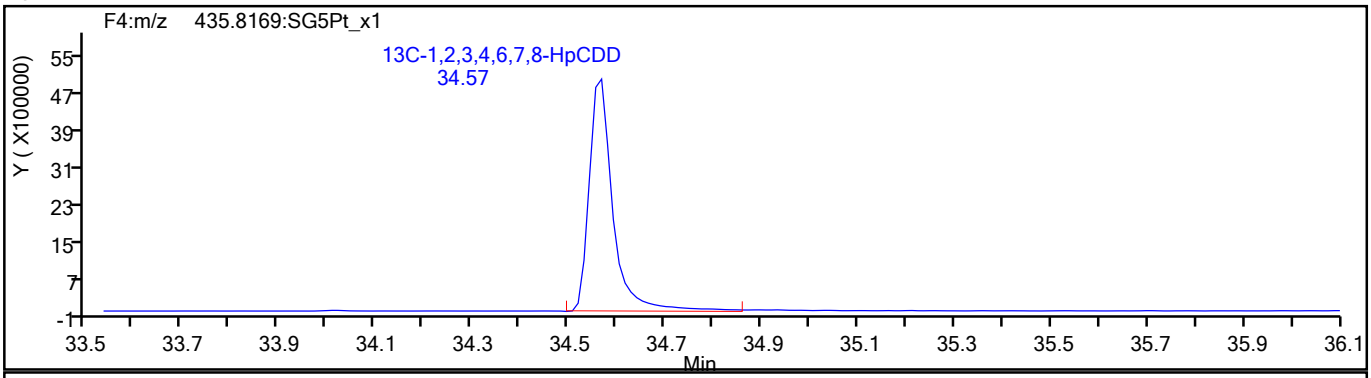

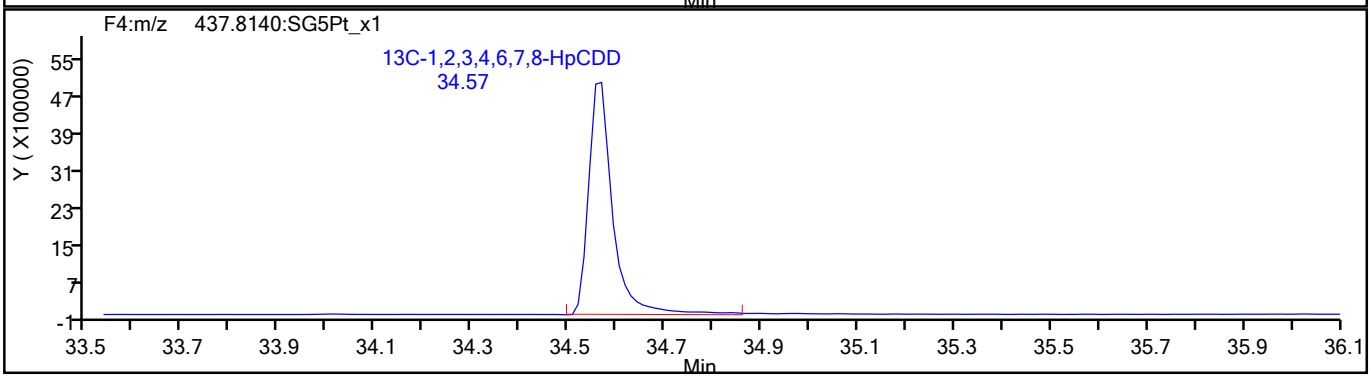

777531

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

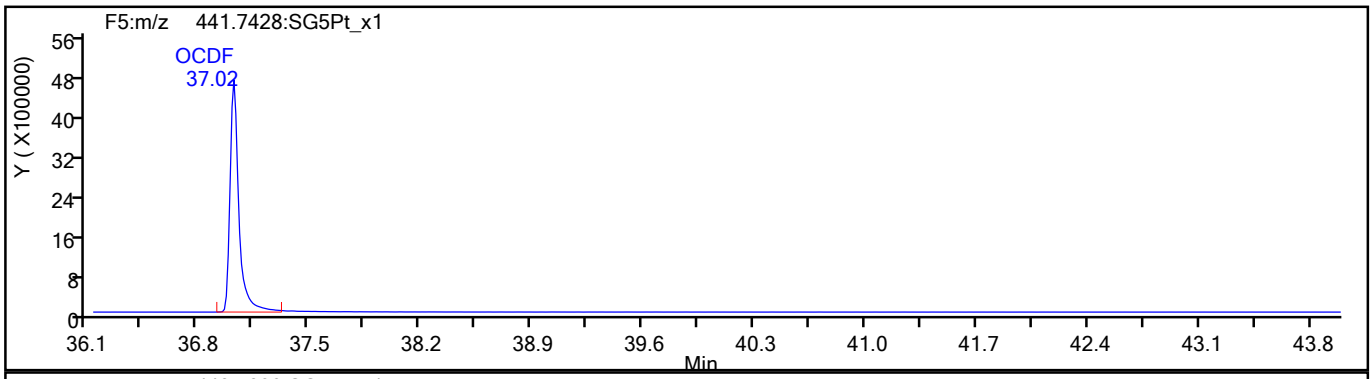

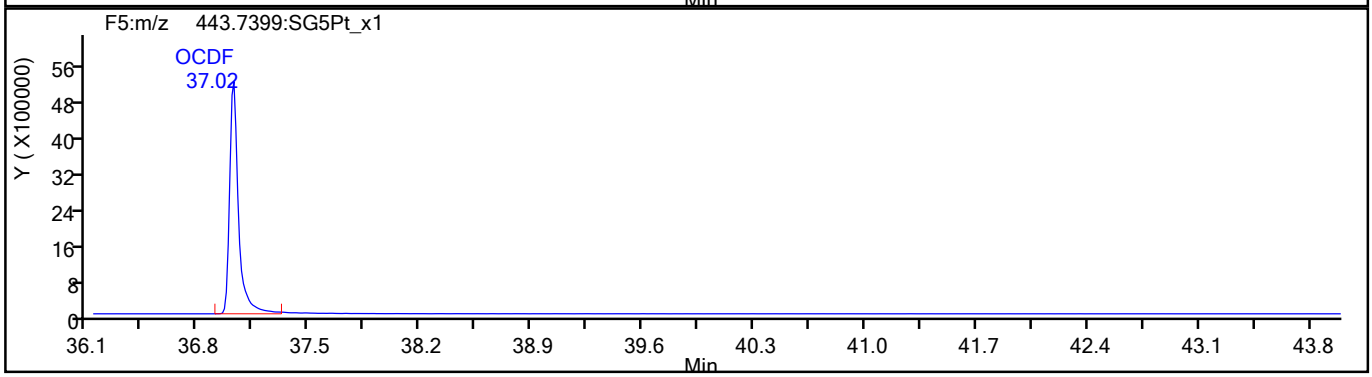

OCDF Standards

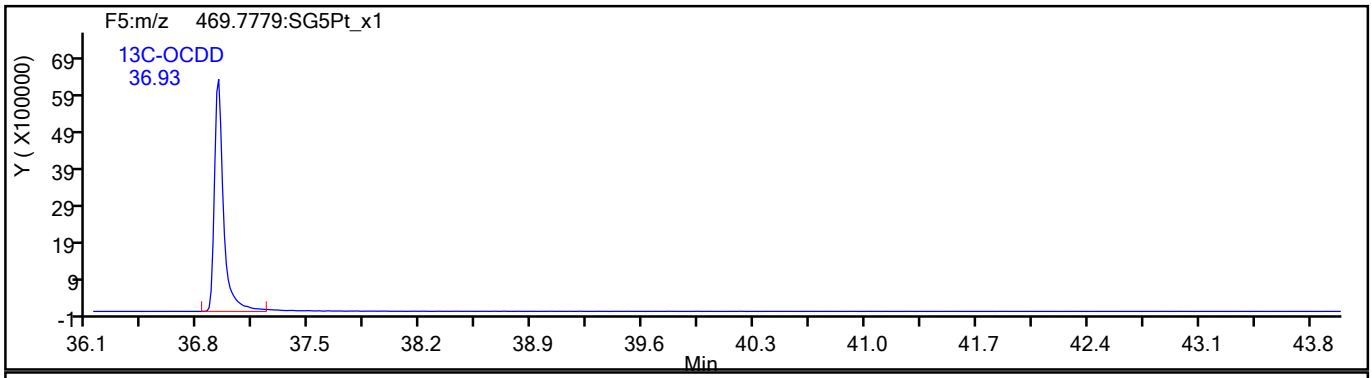

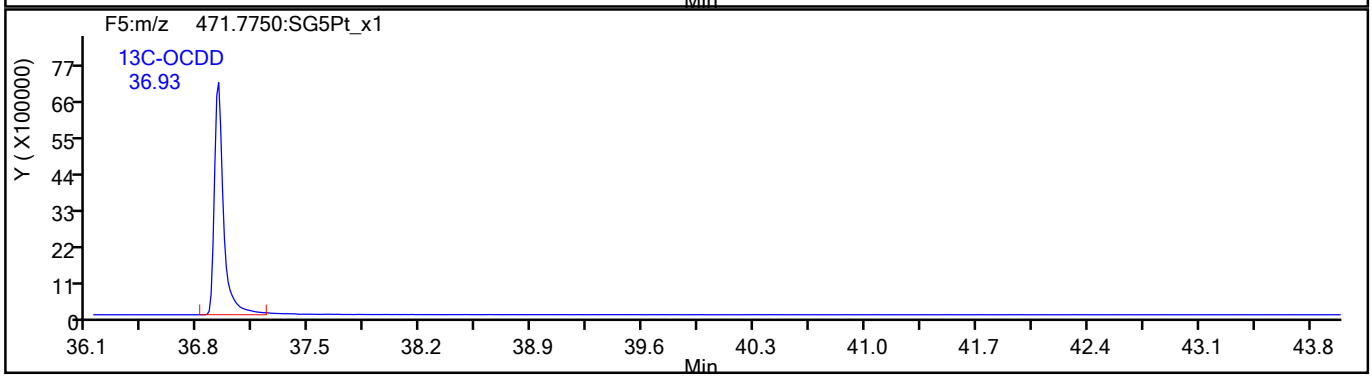

777532

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

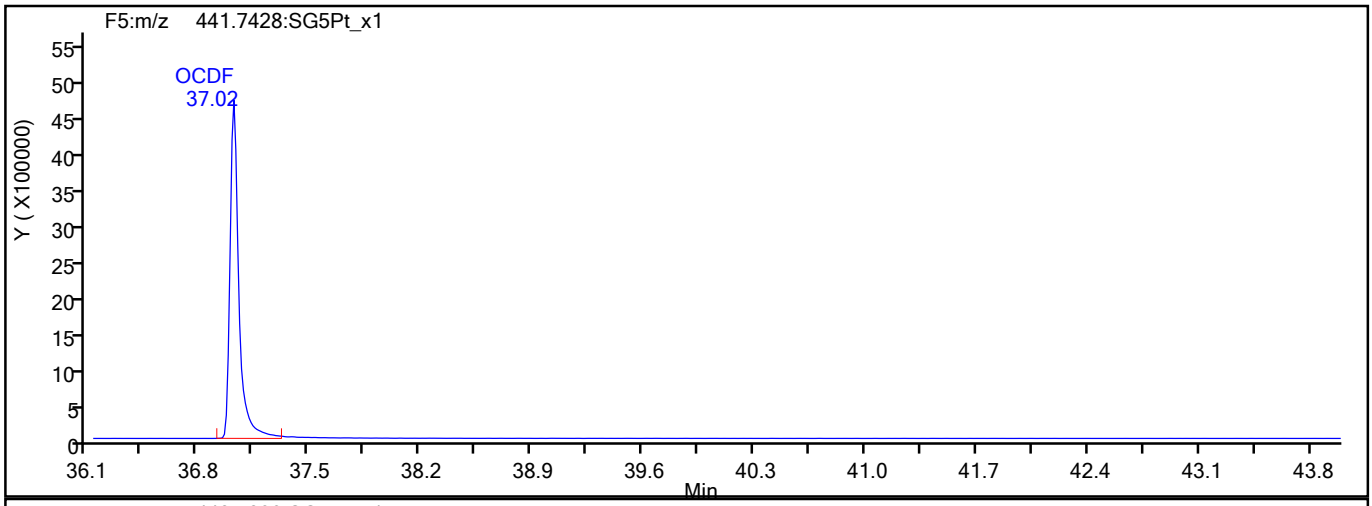

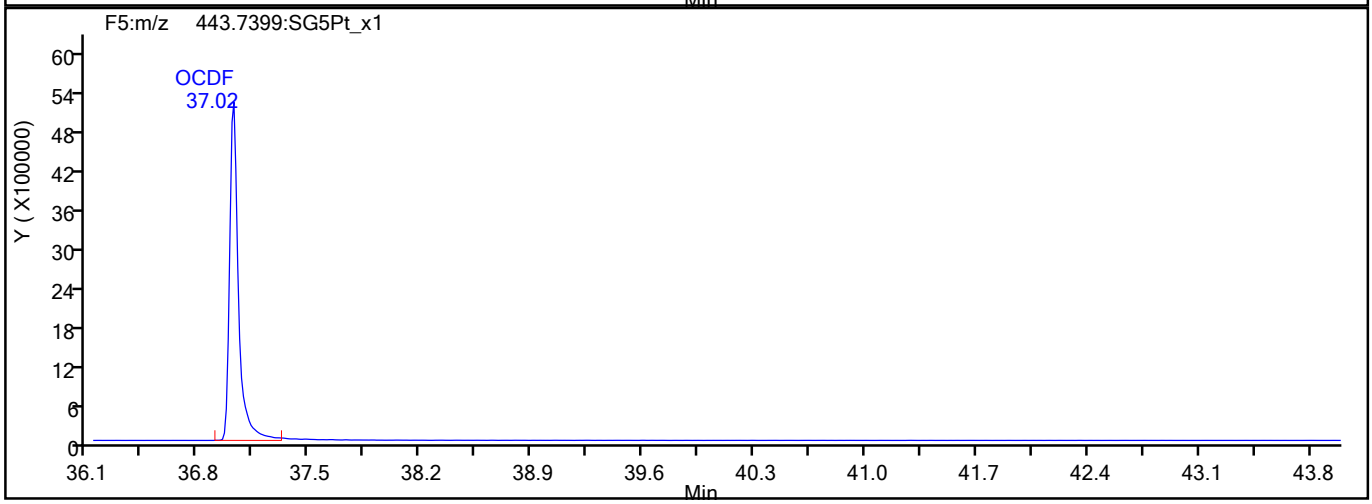

OCDF Interference Mass

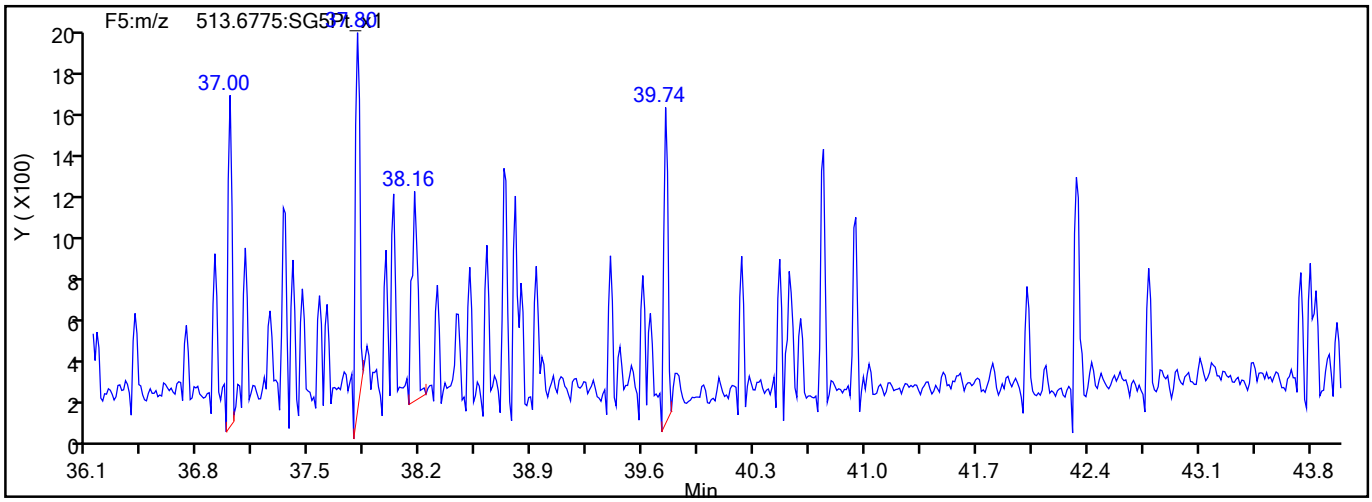

777533

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
Injection Date:	15-Aug-2021 02:51:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

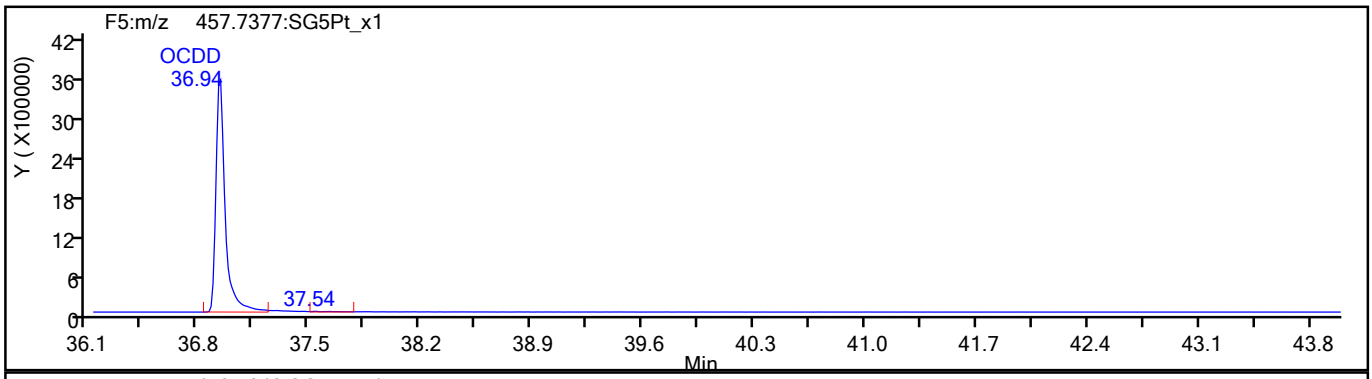

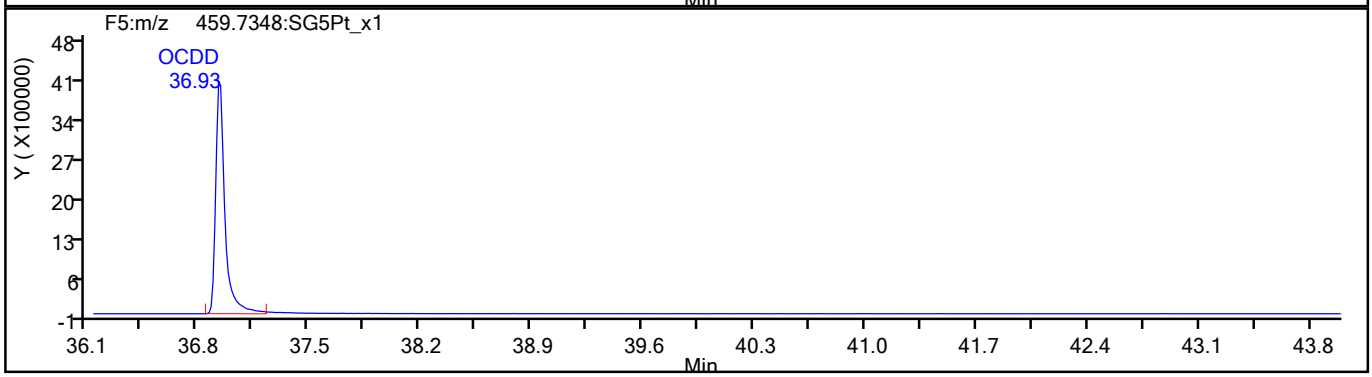

OCDD Standards

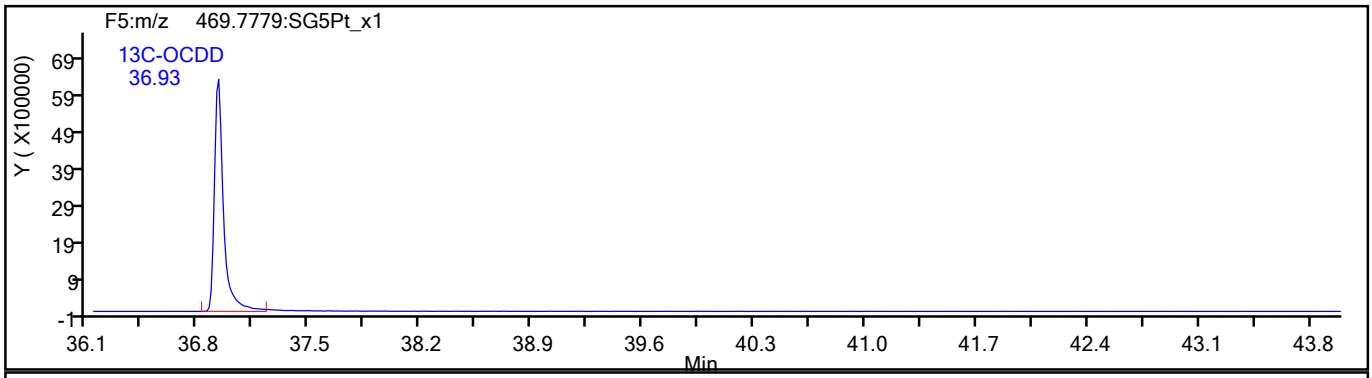

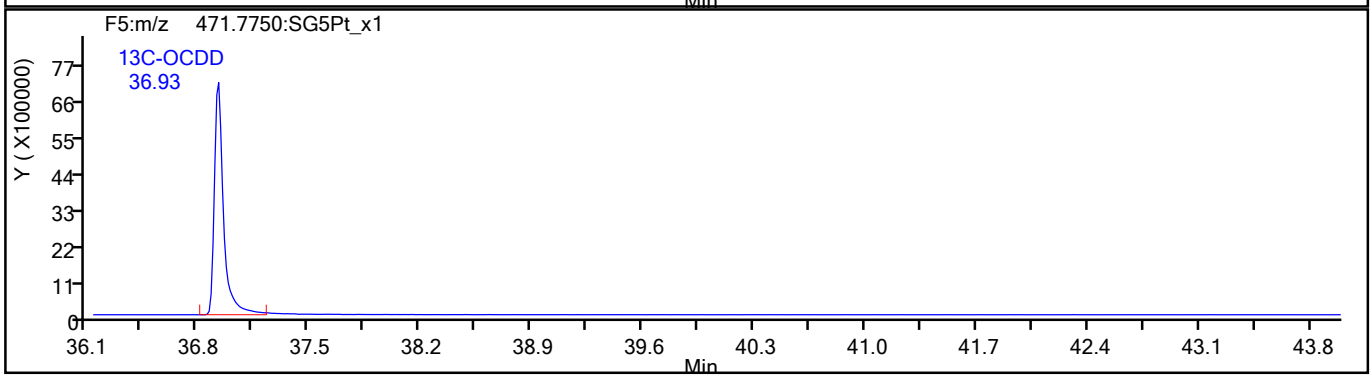

777534

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_45.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

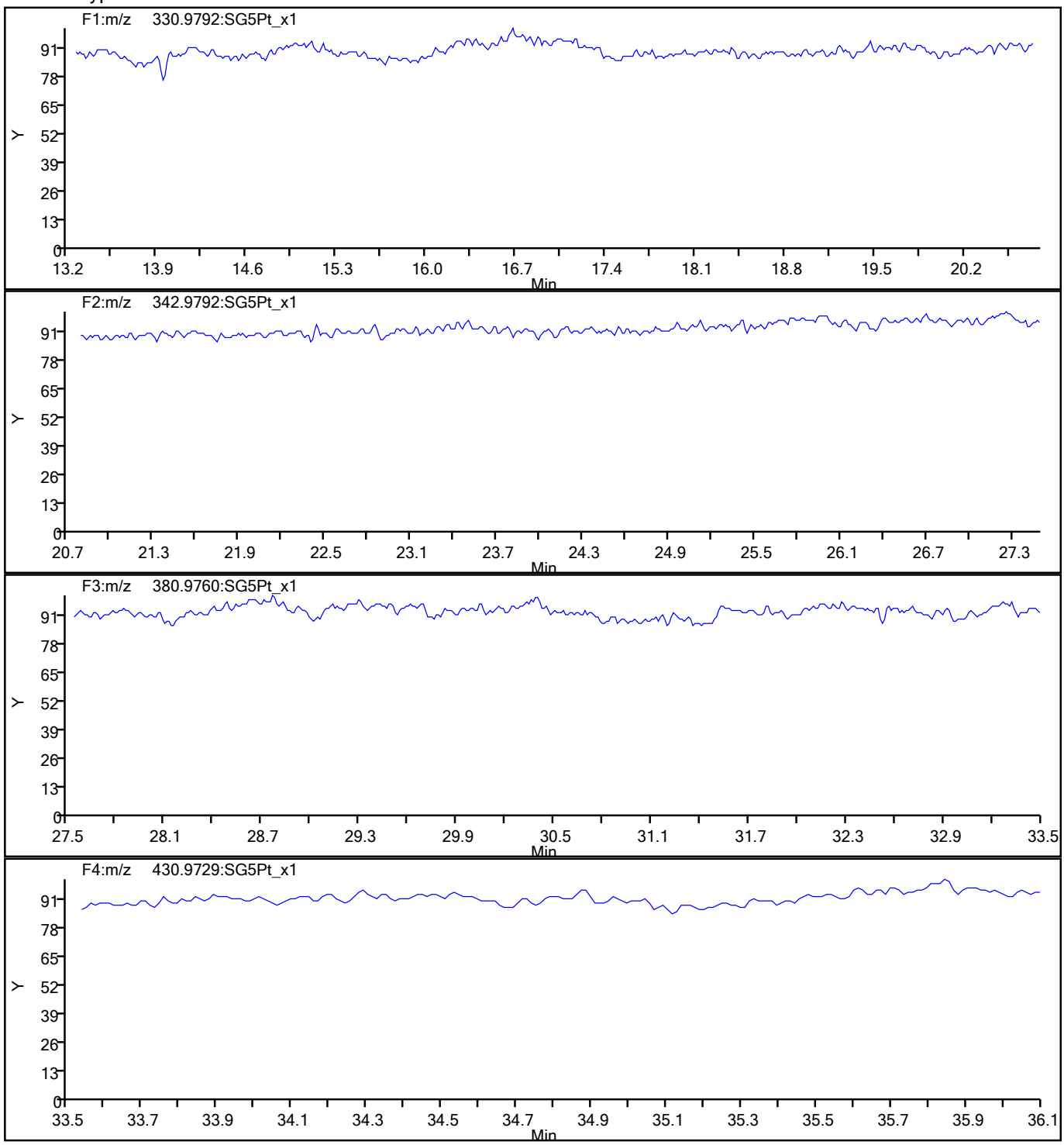

777535

Report Date: 18-Aug-2021 10:48:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516847	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

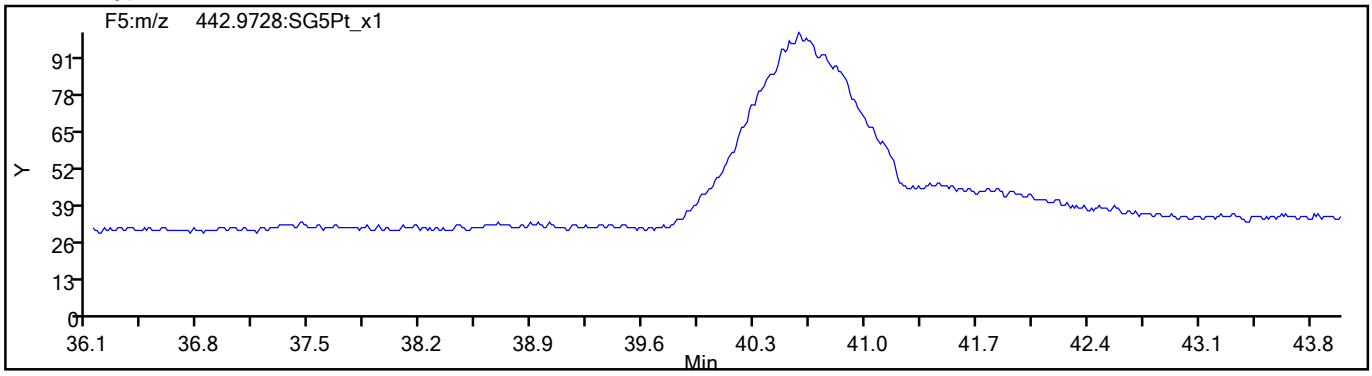

777536

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513586/2-A

Matrix: Sediment Lab File ID: 17au21dfs1_6.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10(g) Date Analyzed: 08/17/2021 17:49

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517196 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	21.3		1.0	0.15
51207-31-9	2,3,7,8-TCDF	21.8		1.0	0.046
40321-76-4	1,2,3,7,8-PeCDD	112		5.0	0.19
57117-41-6	1,2,3,7,8-PeCDF	114		5.0	0.31
57117-31-4	2,3,4,7,8-PeCDF	105		5.0	0.32
39227-28-6	1,2,3,4,7,8-HxCDD	101		5.0	0.22
57653-85-7	1,2,3,6,7,8-HxCDD	111		5.0	0.26
19408-74-3	1,2,3,7,8,9-HxCDD	110		5.0	0.22
70648-26-9	1,2,3,4,7,8-HxCDF	107		5.0	0.41
57117-44-9	1,2,3,6,7,8-HxCDF	112		5.0	0.40
72918-21-9	1,2,3,7,8,9-HxCDF	116		5.0	0.41
60851-34-5	2,3,4,6,7,8-HxCDF	117		5.0	0.41
35822-46-9	1,2,3,4,6,7,8-HpCDD	108		5.0	0.29
67562-39-4	1,2,3,4,6,7,8-HpCDF	112		5.0	0.51
55673-89-7	1,2,3,4,7,8,9-HpCDF	105		5.0	0.48
3268-87-9	OCDD	228		10	0.25
39001-02-0	OCDF	248		10	0.31
41903-57-5	Total TCDD	21.3		1.0	0.15
30402-14-3	Total TCDF	21.8		1.0	0.046
36088-22-9	Total PeCDD	112		5.0	0.19
30402-15-4	Total PeCDF	221		5.0	0.31
34465-46-8	Total HxCDD	322		5.0	0.24
55684-94-1	Total HxCDF	452		5.0	0.41
37871-00-4	Total HpCDD	110		5.0	0.29
38998-75-3	Total HpCDF	217		5.0	0.49

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513586/2-A

Matrix: Sediment Lab File ID: 17au21dfs1_6.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10(g) Date Analyzed: 08/17/2021 17:49

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517196 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		20-175
89059-46-1	13C-2,3,7,8-TCDF	54		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	59		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	56		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	63		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	60		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	67		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	58		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	67		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	63		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	72		20-186
114423-97-1	13C-OCDD	71		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	69		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d
Lims ID: LCS 320-513586/2-A
Client ID:
Sample Type: LCS
Inject. Date: 17-Aug-2021 17:49:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513586/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:09:35 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 19:22:53

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.491	781428	0.79	2.1E+04	100.0	100.0				
2,3,7,8-TCDF	20.555	66994	0.76	1.0802	10.9	10.9	0.0232	0.0232	109	
D 13C-2,3,7,8-TCDF	20.520	568874	0.80	1.3459	54.1	54.1	0.1036	0.1036	54.09	
A Non-2,3,7,8-sub-TCDF	19.916						0.0232	0.1455		RQU
S Total TCDF					10.9	10.9	0.0232	0.0232		
D 13C-2,3,7,8-TCDD	21.860	395704	0.85	0.9317	54.4	54.4	0.2364	0.2364	54.35	
2,3,7,8-TCDD	21.894	45397	0.79	1.0753	10.7	10.7	0.0774	0.0774	107	
$ 37Cl4-2,3,7,8-TCDD	21.903	217136		1.0083	27.6	27.6	0.0138	0.0138	68.90	
A Non-2,3,7,8-sub-TCDD	20.750						0.0774	0.0774		
S Total TCDD					10.7	10.7	0.0774	0.0774		
D 13C-1,2,3,7,8-PeCDF	27.335	501609	1.68	1.1405	56.3	56.3	0.2160	0.2160	56.28	
1,2,3,7,8-PeCDF	27.368	301701	1.58	1.0543	57.1	57.1	0.1540	0.1540	114	
D 13C-2,3,4,7,8-PeCDF	28.868	556312	1.55	1.1253	63.3	63.3	0.2189	0.2189	63.26	
2,3,4,7,8-PeCDF	28.893	295657	1.58	1.0079	52.7	52.7	0.1609	0.1609	105	
A F1 PeCDFs	24.676						0.006051	0.006051		
A Non-2,3,7,8-sub-PeCDF	28.167	3852	1.43	1.0311	0.7063	0.7063	0.1573	0.7063	0.00	
S Total PeCDF					110.5	110.5	0.1574	0.1574		
D 13C-1,2,3,7,8-PeCDD	29.685	328312	1.73	0.7165	58.6	58.6	0.0778	0.0778	58.64	
1,2,3,7,8-PeCDD	29.710	192359	1.58	1.0465	56.0	56.0	0.0962	0.0962	112	
A Non-2,3,7,8-sub-PeCDD	28.556						0.0962	0.0962		
S Total PeCDD					56.0	56.0	0.0962	0.0962		
D 13C-1,2,3,4,7,8-HxCDF	34.995	518980	0.54	0.9648	66.5	66.5	0.2256	0.2256	66.55	
1,2,3,4,7,8-HxCDF	35.012	317201	1.24	1.1474	53.3	53.3	0.2039	0.2039	107	
D 13C-1,2,3,6,7,8-HxCDF	35.147	504596	0.52	1.0708	58.3	58.3	0.2032	0.2032	58.30	
1,2,3,6,7,8-HxCDF	35.163	344779	1.28	1.2178	56.1	56.1	0.2020	0.2020	112	
D 13C-2,3,4,6,7,8-HxCDF	35.964	451934	0.54	1.0413	53.7	53.7	0.2090	0.2090	53.70	
2,3,4,6,7,8-HxCDF	35.981	321341	1.25	1.2145	58.5	58.5	0.2027	0.2027	117	
D 13C-1,2,3,7,8,9-HxCDF	36.849	420297	0.54	0.9731	53.4	53.4	0.2236	0.2236	53.44	
1,2,3,7,8,9-HxCDF	36.865	303602	1.26	1.2401	58.2	58.2	0.2065	0.2065	116	
A Non-2,3,7,8-sub-HxCDF	35.074						0.2036	0.2036		
S Total HxCDF					226.2	226.2	0.2038	0.2038		

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.663	808260	1.30	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.174	370303	1.28	0.7587	60.4	60.4	0.1486	0.1486	60.39	
1,2,3,4,7,8-HxCDD	36.191	199314	1.29	1.0608	50.7	50.7	0.1112	0.1112	101	
D 13C-1,2,3,6,7,8-HxCDD	36.301	375488	1.28	0.8593	54.1	54.1	0.1312	0.1312	54.07	
1,2,3,6,7,8-HxCDD	36.309	206353	1.27	0.9933	55.3	55.3	0.1309	0.1309	111	
1,2,3,7,8,9-HxCDD	36.672	226911	1.24	1.1094	54.8	54.8	0.1115	0.1115	110	
A Non-2,3,7,8-sub-HxCDD	35.432						0.1173	0.1173		
S Total HxCDD					160.9	160.9	0.1178	0.1178		
D 13C-1,2,3,4,6,7,8-HpCDF	38.662	374575	0.44	0.7359	63.0	63.0	0.2745	0.2745	62.97	
1,2,3,4,6,7,8-HpCDF	38.679	302379	1.04	1.4421	56.0	56.0	0.2544	0.2544	112	
1,2,3,4,7,8,9-HpCDF	39.926	272343	1.03	1.3092	52.5	52.5	0.2383	0.2383	105	
D 13C-1,2,3,4,7,8,9-HpCDF	39.918	396261	0.47	0.6854	71.5	71.5	0.2947	0.2947	71.53	
A Non-2,3,7,8-sub-HpCDF	39.277						0.2451	0.2451		
S Total HpCDF					108.5	108.5	0.2463	0.2463		
D 13C-1,2,3,4,6,7,8-HpCDD	39.606	363095	1.10	0.6745	66.6	66.6	0.1365	0.1365	66.60	
1,2,3,4,6,7,8-HpCDD	39.614	206552	1.03	1.0503	54.2	54.2	0.1430	0.1430	108	
A Non-2,3,7,8-sub-HpCDD	39.277	2982	1.01	1.0503	0.7819	0.7819	0.1430	0.7819	0.00	
S Total HpCDD					54.9	54.9	0.1430	0.1430		
D 13C-OCDD	42.111	621791	0.91	0.5446	141.3	141.3	0.2018	0.2018	70.63	
OCDF	42.203	507114	0.92	1.3168	123.9	123.9	0.1527	0.1527	124	
OCDD	42.119	376368	0.89	1.0620	114.0	114.0	0.1262	0.1262	114	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d
Lims ID: LCS 320-513586/2-A
Client ID:
Sample Type: LCS
Inject. Date: 17-Aug-2021 17:49:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513586/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:09:35 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 19:22:53

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.491	21.483	0		345437	48384	25	62	1935		
333.9338	21.499	21.483	1		435991	59201	70	175	846	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.555	20.482	4	1.002	28976	4280	3	7	1427		
305.8987	20.546	20.482	4	1.001	38018	5339	5	12	1068	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.520	20.594	-4	0.955	253688	35207	40	100	880		
317.9389	20.503	20.594	-5	0.954	315186	44524	20	50	2226	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											U
303.9016	18.958	19.916	-57	0.924	113	44	3	7	15		
305.8987	18.915	19.916	-60	0.922	130	46	5	12	9	0.87(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.860	21.790	4	1.017	181844	25019	25	62	1001		
333.9338	21.860	21.790	4	1.017	213860	31474	70	175	450	0.85(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.894	21.825	4	1.002	20103	2896	5	12	579		
321.8936	21.885	21.825	4	1.001	25294	3228	14	35	231	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.903	21.905	0	1.019	217136	27685	6	15	4614		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.750						5	12			
321.8936	20.750						14	35			
13C-1,2,3,7,8-PeCDF											
351.9000	27.335	27.343	-1	1.272	314240	51089	53	132	964		
353.8970	27.335	27.343	-1	1.272	187369	29006	53	132	547	1.68(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.368	27.368	0	1.001	184883	27670	28	70	988		
341.8567	27.377	27.368	1	1.002	116818	17194	24	60	716	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.868	28.867	0	1.343	337792	50728	53	132	957		
353.8970	28.851	28.867	-1	1.343	218520	29455	53	132	556	1.55(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.893	28.884	1	1.001	181094	26198	28	70	936		
341.8567	28.893	28.884	1	1.001	114563	15264	24	60	636	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.676						1	2			
341.8567	24.676						1	2			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.950	28.167	-13	1.023	2268	309	28	70	11		
341.8567	27.950	28.167	-13	1.023	1584	237	24	60	10	1.43(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.685	29.667	1	1.381	207955	29249	18	45	1625		
369.8919	29.668	29.667	0	1.381	120357	17448	6	15	2908	1.73(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.710	29.692	1	1.001	117826	15707	10	25	1571		
357.8516	29.710	29.692	1	1.001	74533	10483	9	22	1165	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						10	25			
357.8516	28.556						9	22			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.995	34.974	1	0.954	182167	37932	50	125	759		
385.8610	34.995	34.974	1	0.954	336813	65518	106	265	618	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.012	35.000	1	1.000	175404	35496	51	127	696		
375.8178	35.012	35.000	1	1.000	141797	28810	46	115	626	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.147	35.134	1	0.959	173057	33255	50	125	665		
385.8610	35.147	35.134	1	0.959	331539	65113	106	265	614	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.163	35.151	1	1.000	193669	35743	51	127	701		
375.8178	35.163	35.151	1	1.000	151110	27401	46	115	596	1.28(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.964	35.951	1	0.981	158326	33846	50	125	677		
385.8610	35.972	35.951	1	0.981	293608	64464	106	265	608	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.981	35.968	1	1.000	178371	37689	51	127	739		
375.8178	35.981	35.968	1	1.000	142970	29993	46	115	652	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.849	36.843	0	1.005	147959	32965	50	125	659		
385.8610	36.857	36.843	1	1.005	272338	61538	106	265	581	0.54(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	36.865	36.852	1	1.000	169544	38440	51	127	754		
375.8178	36.865	36.852	1	1.000	134058	29629	46	115	644	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.074						51	127			
375.8178	35.074						46	115			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.663	36.641	1		456380	101107	56	140	1805		
403.8529	36.663	36.641	1		351880	78100	25	62	3124	1.30(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.174	36.161	1	0.987	208027	48736	56	140	870		
403.8529	36.174	36.161	1	0.987	162276	37765	25	62	1511	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.191	36.178	1	1.000	112420	24753	24	60	1031		
391.8127	36.183	36.178	0	1.000	86894	19685	17	42	1158	1.29(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.301	36.279	1	0.990	211074	44321	56	140	791		
403.8529	36.292	36.279	1	0.990	164414	34129	25	62	1365	1.28(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.309	36.296	1	1.000	115636	24833	24	60	1035		
391.8127	36.309	36.296	1	1.000	90717	19079	17	42	1122	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.672	36.658	1	1.014	125718	28435	24	60	1185		
391.8127	36.672	36.658	1	1.014	101193	23432	17	42	1378	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.432						24	60			
391.8127	35.432						17	42			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.662	38.647	1	1.055	114724	29183	61	152	478		
419.8220	38.662	38.647	1	1.055	259851	63486	84	210	756	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.679	38.654	1	1.000	154442	40275	70	175	575		
409.7788	38.679	38.654	1	1.000	147937	37501	66	165	568	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.926	39.900	2	1.000	138266	38599	70	175	551		
409.7788	39.926	39.900	2	1.000	134077	37292	66	165	565	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.918	39.901	1	1.089	127445	35018	61	152	574		
419.8220	39.918	39.901	1	1.089	268816	73983	84	210	881	0.47(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.277						70	175			
409.7788	39.277						66	165			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.606	39.590	1	1.080	190429	52166	37	92	1410		
437.8140	39.606	39.590	1	1.080	172666	51054	29	72	1760	1.10(0.88-1.20)	

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.614	39.597	1	1.000	104986	29398	34	85	865		
425.7737	39.614	39.597	1	1.000	101566	28626	28	70	1022	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.982	39.277	-18	0.984	1500	459	34	85	14		
425.7737	38.982	39.277	-18	0.984	1482	509	28	70	18	1.01(0.88-1.20)	
13C-OCDD											
469.7780	42.111	42.094	1	1.149	296333	71223	40	100	1781		
471.7750	42.111	42.094	1	1.149	325458	77952	39	97	1999	0.91(0.76-1.02)	
OCDF											
441.7428	42.203	42.187	1	1.002	242906	58135	26	65	2236		
443.7399	42.203	42.187	1	1.002	264208	61787	34	85	1817	0.92(0.76-1.02)	
OCDD											
457.7377	42.119	42.103	1	1.000	177310	43889	19	47	2310		
459.7348	42.119	42.103	1	1.000	199058	47902	21	52	2281	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Lims ID:	LCS 320-513586/2-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:49:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	5

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	568874	79731

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	568874	79731

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.958	113	44	130	46	0.0395	0.87	
19.842	389	66	786	257	0.1912	0.49	RQ
19.842	389	66	505	85	0.1455		Empc Correction
20.847	174	115	289	72	0.0753	0.60	RQ
20.847	174	115	225	149	0.0649		Empc Correction
20.941	55	26	93	39	0.0241	0.59	RQ
20.941	55	26	71	33	0.0205		Empc Correction
21.336	192	40	250	57	0.0719	0.77	

Compound is Marked ND

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Lims ID:	LCS 320-513586/2-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:49:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	5

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	501609	80095
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	556312	80183

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	528960	80139

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.950	2268	309	1584	237	0.7063	1.43	
Signal Totals:							
	2268	309	1584	237			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3852	546				1.43	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.7063 = (3852 * 100.000) / (528960 * 1.031)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Lims ID:	LCS 320-513586/2-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:49:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	5

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	363095	103220

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	363095	103220

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.982	1500	459	1482	509	0.7819	1.01	
Signal Totals:							
	1500	459	1482	509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2982	968				1.01	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.7819 = (2982 * 100.000) / (363095 * 1.050)

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

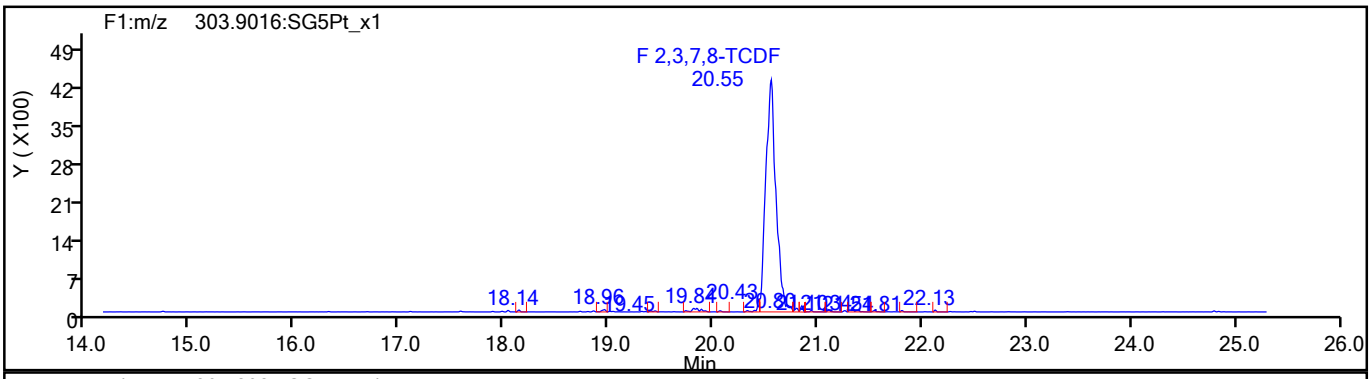

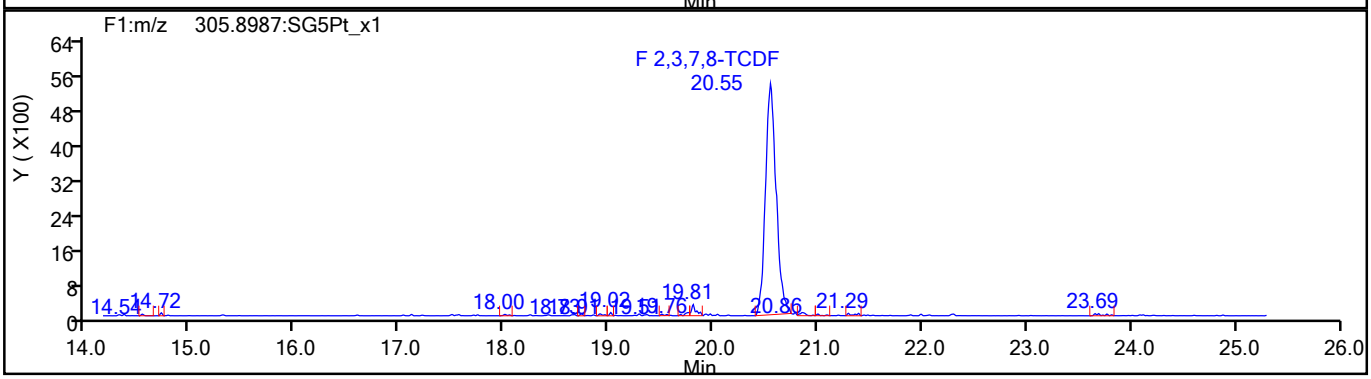

TCDF Standards

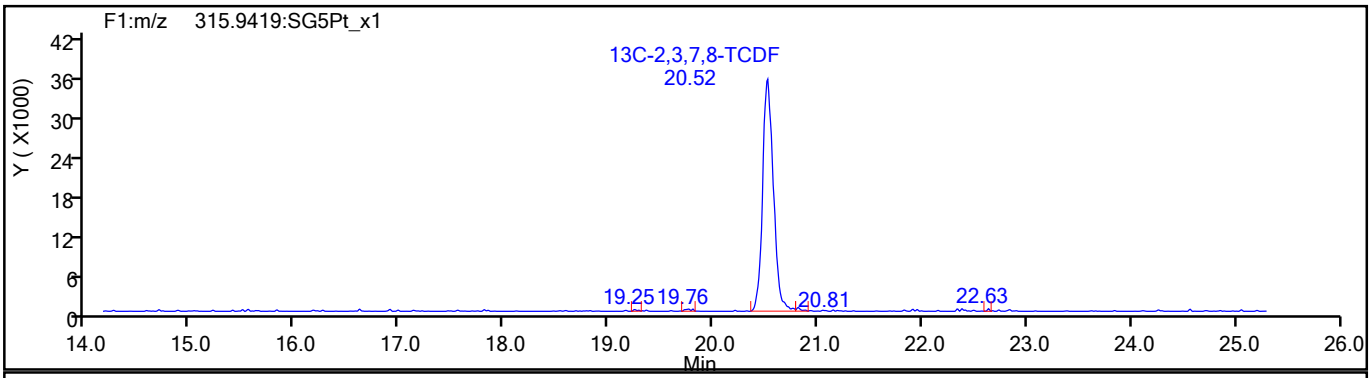

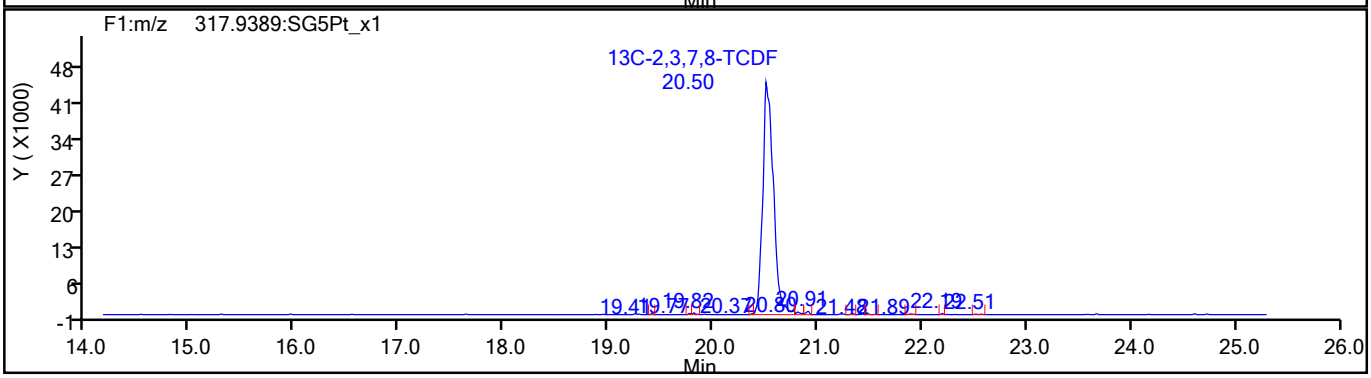

777548

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

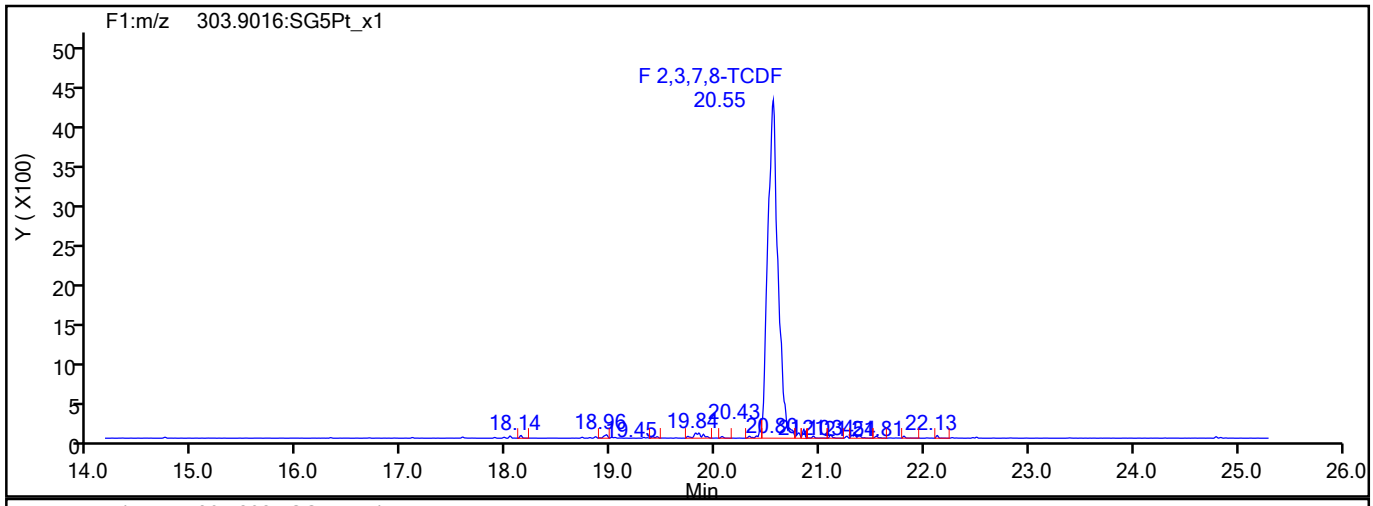

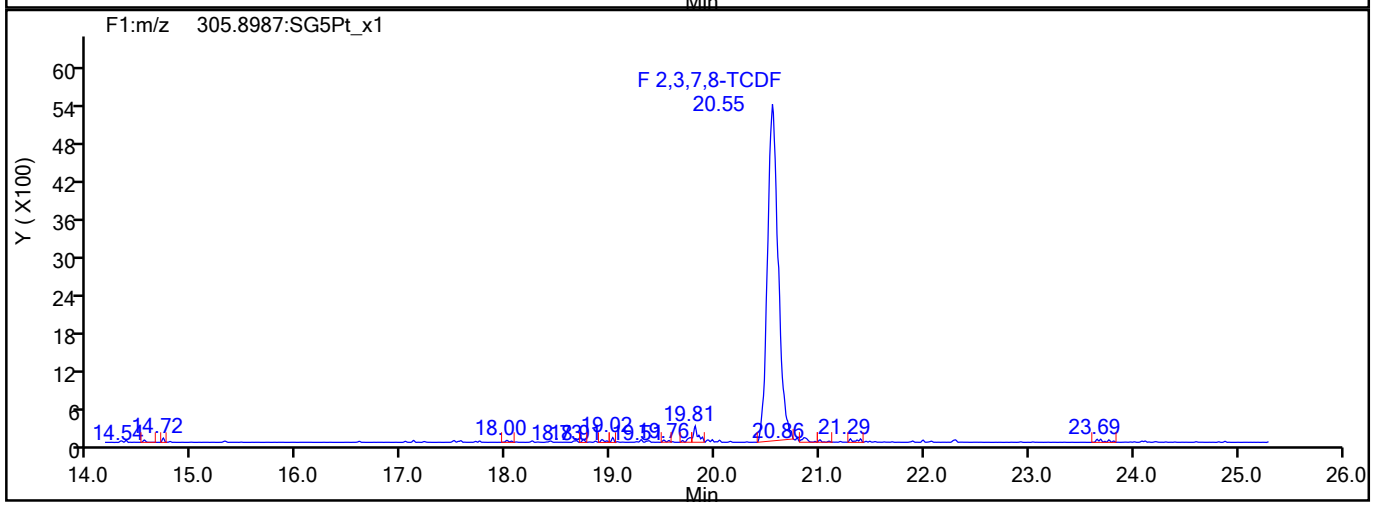

TCDF Interference Mass

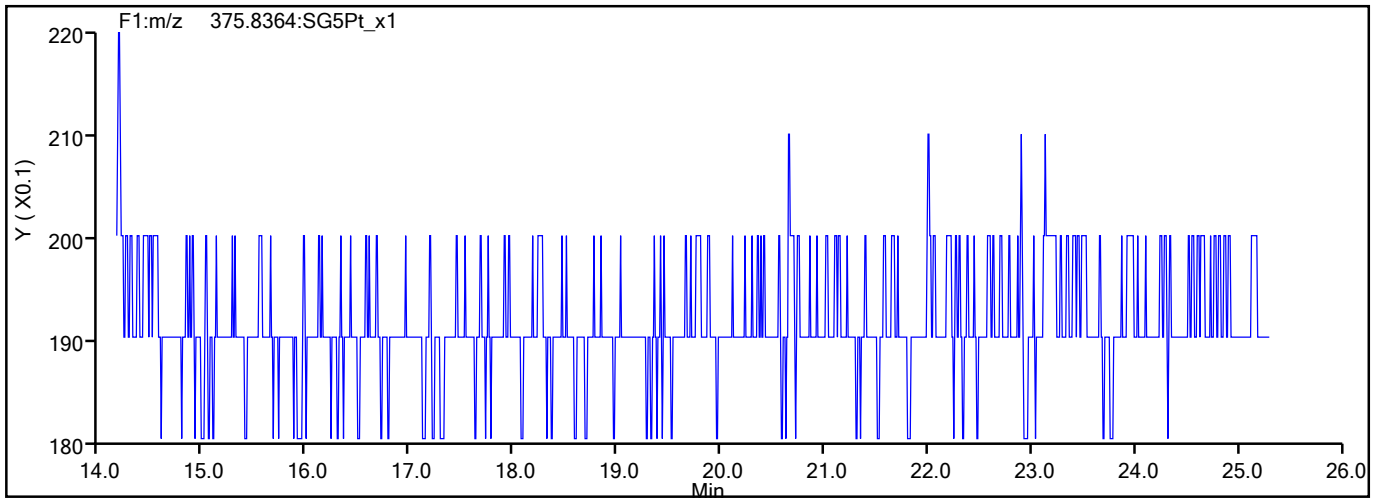

777549

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

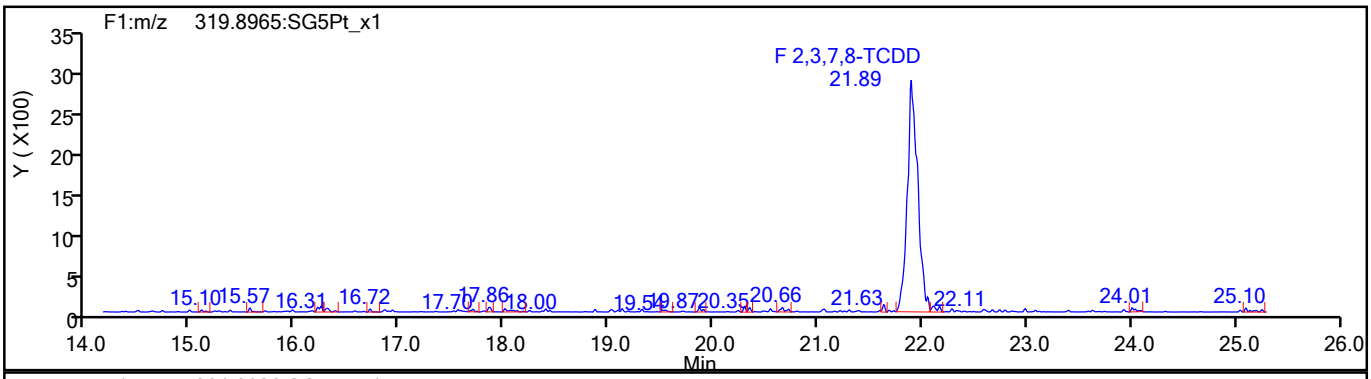

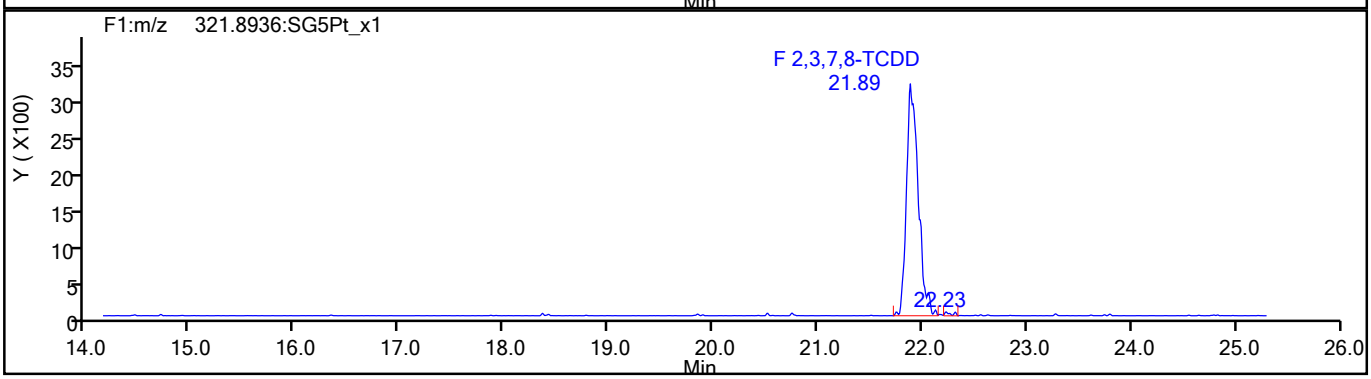

TCDD Standards

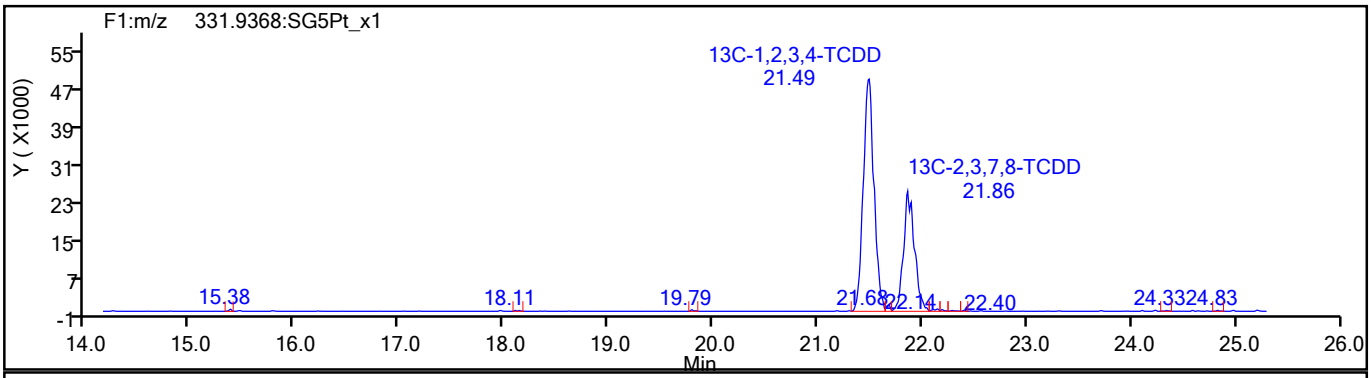

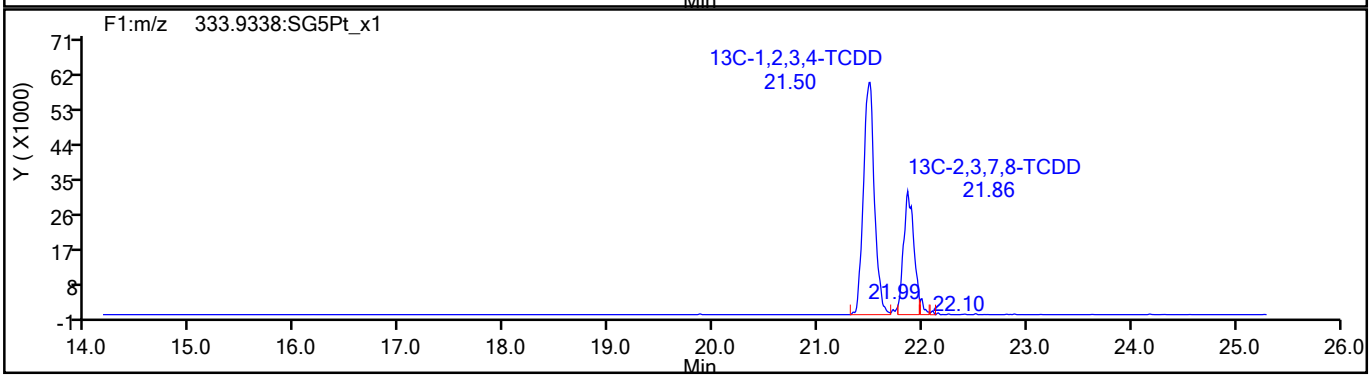

777550

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

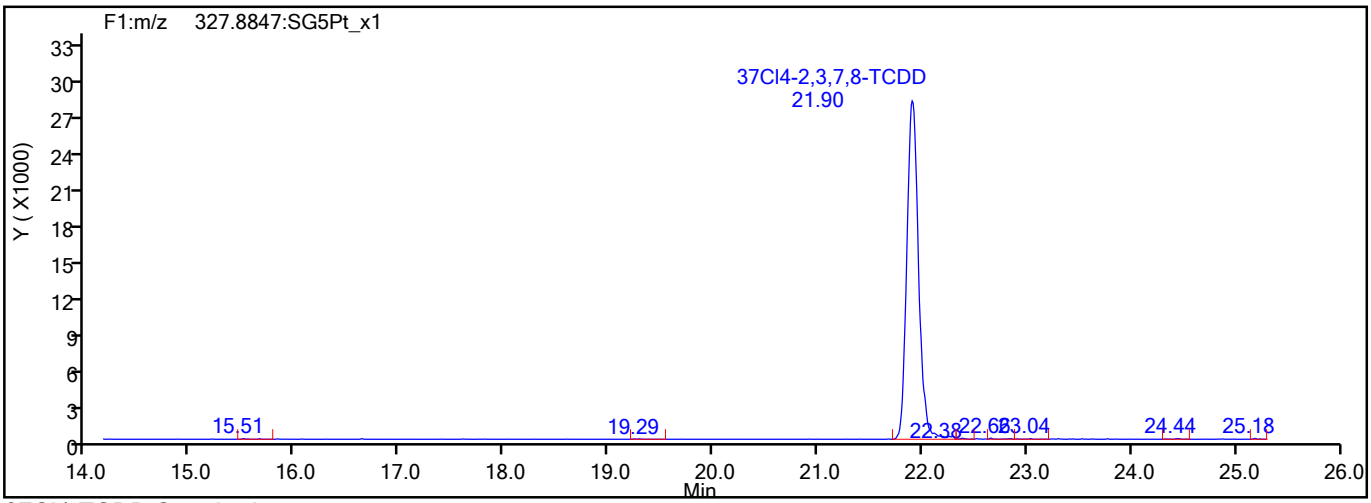

37Cl4-TCDD Standards

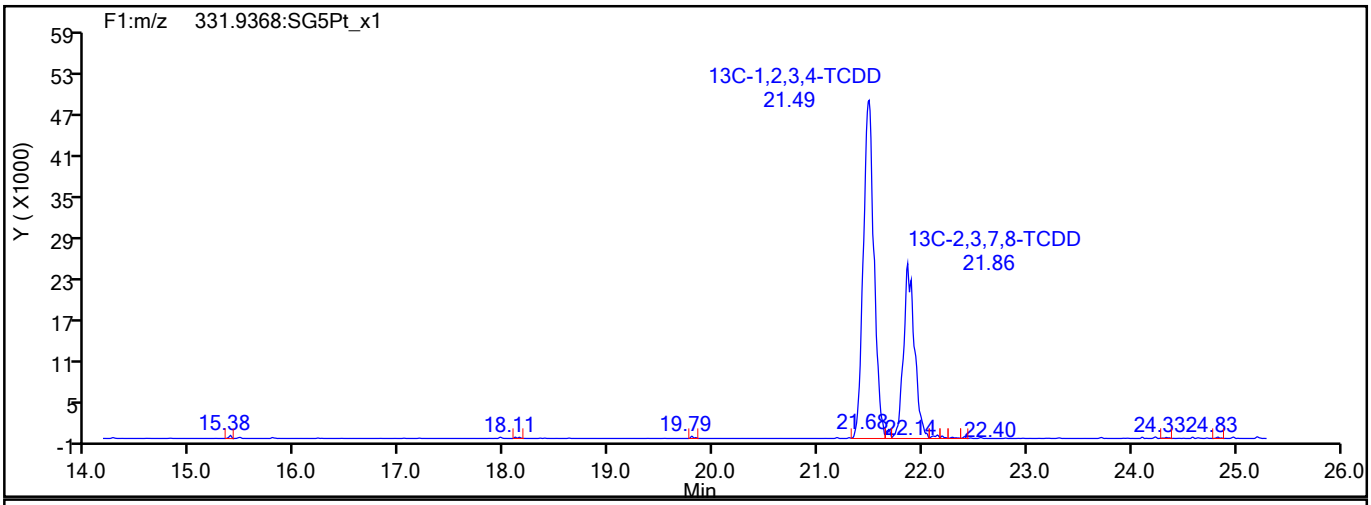

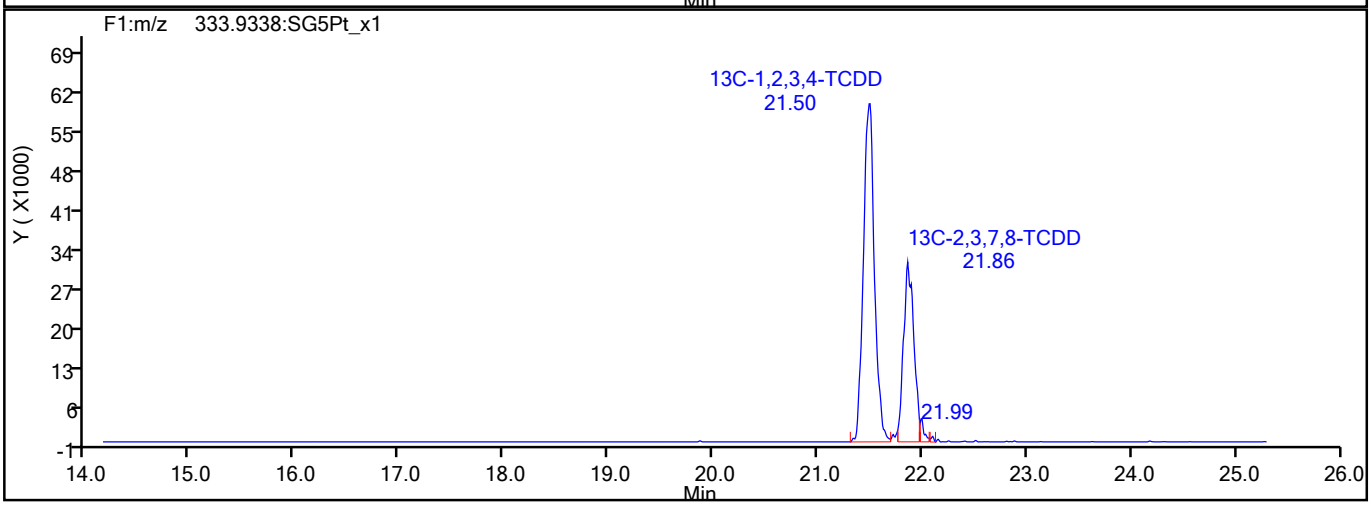

777551

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

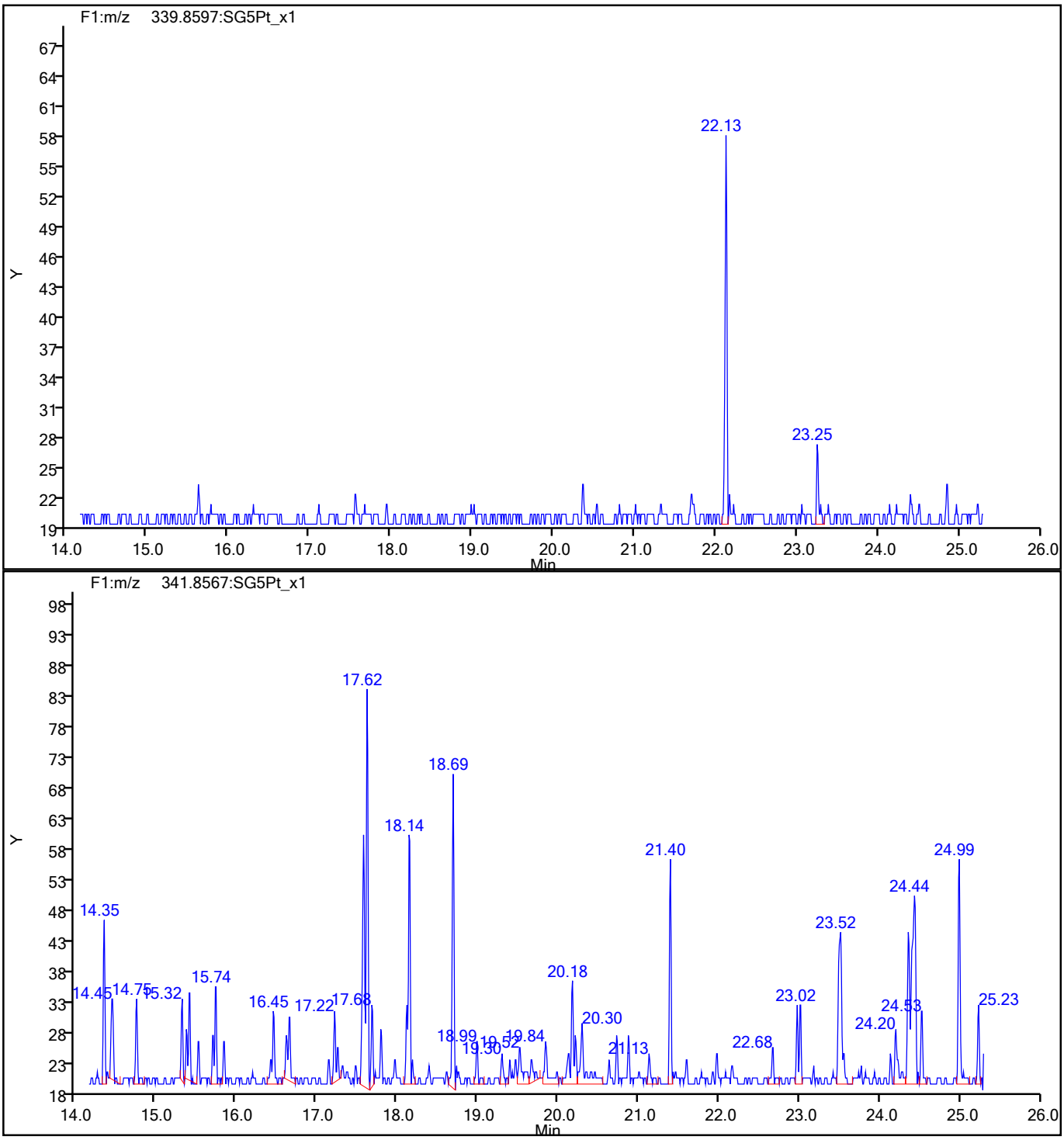

777552

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

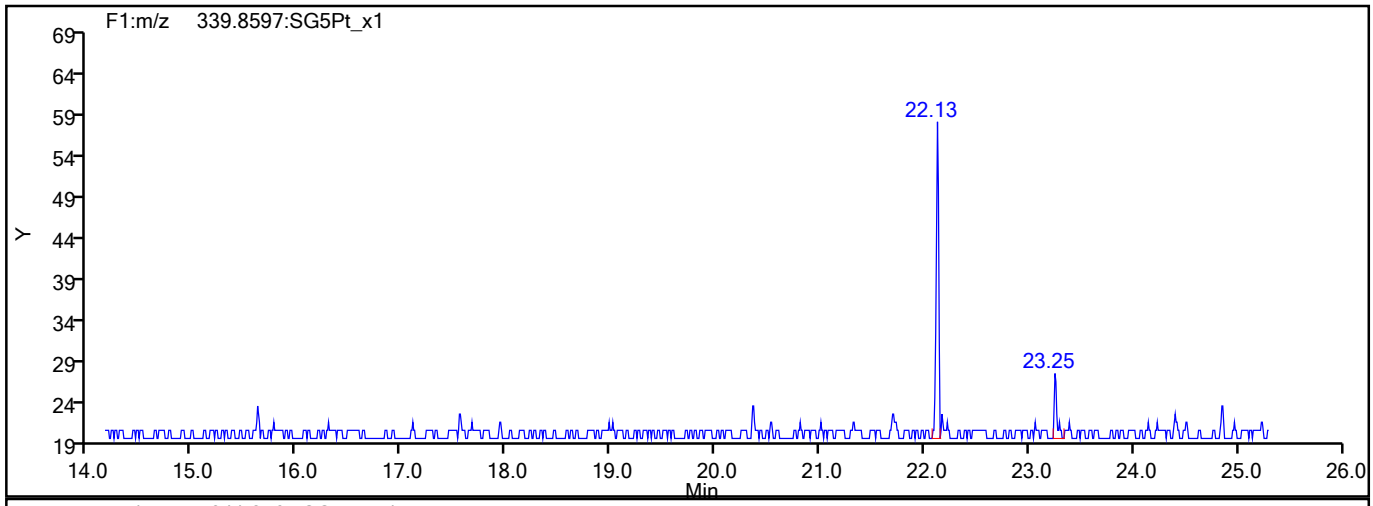

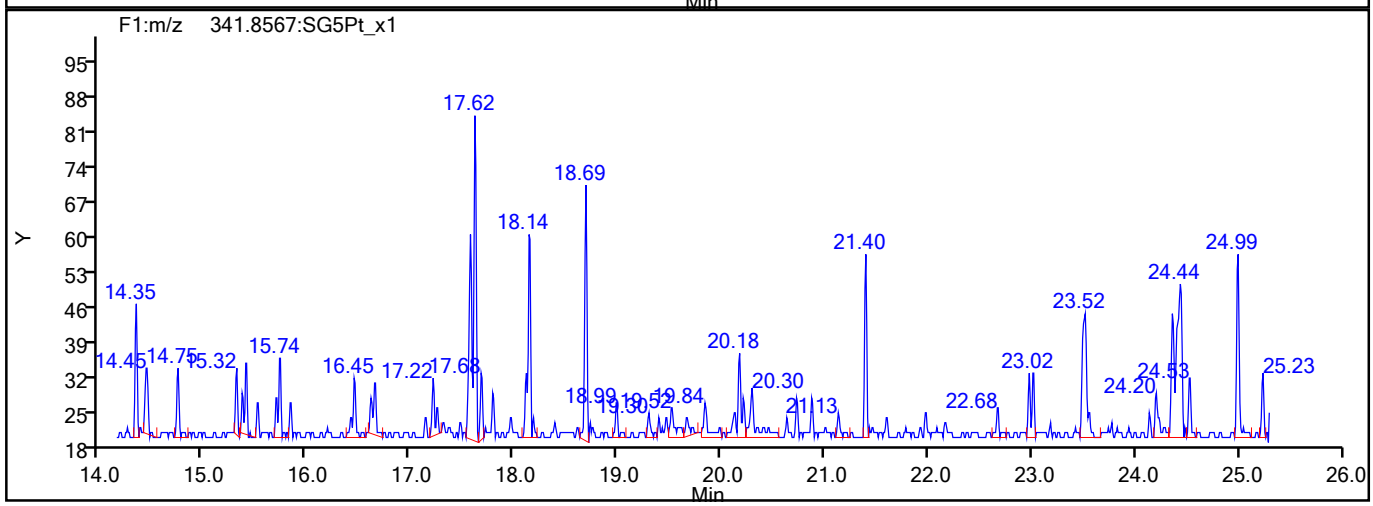

F1 PeCDFs Interference Mass

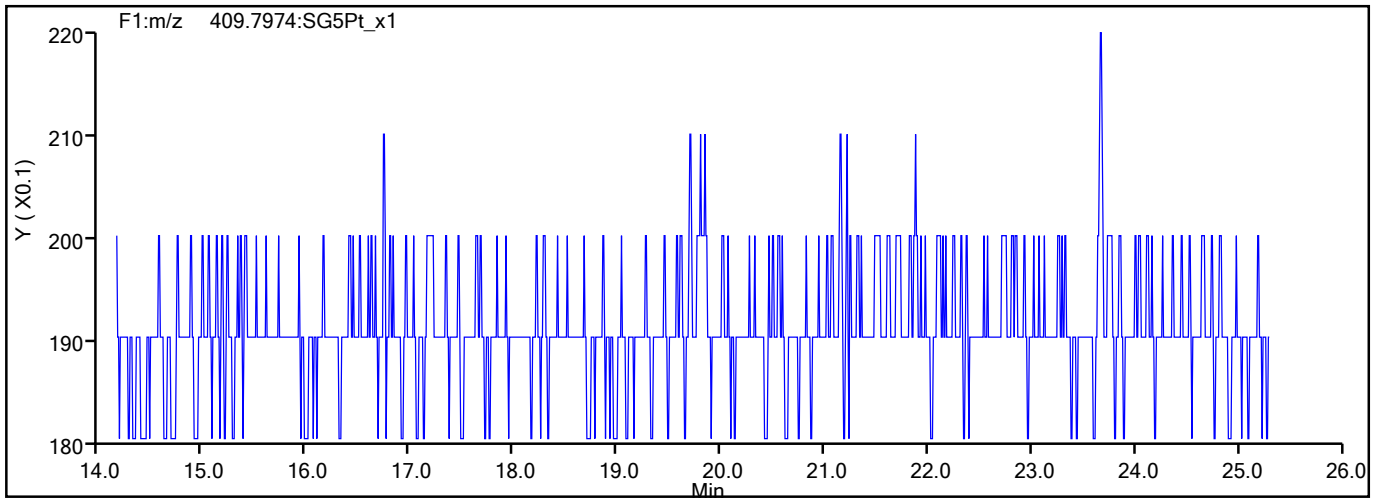

777553

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

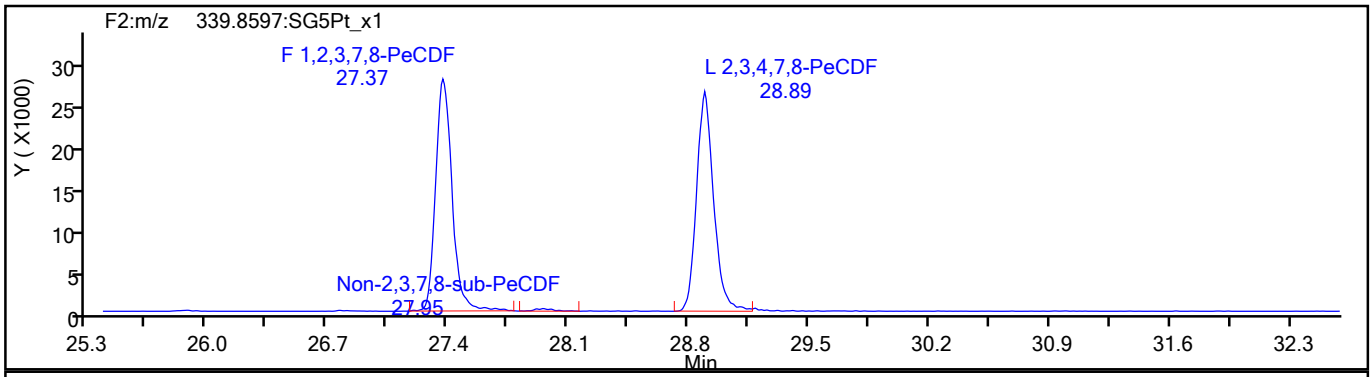

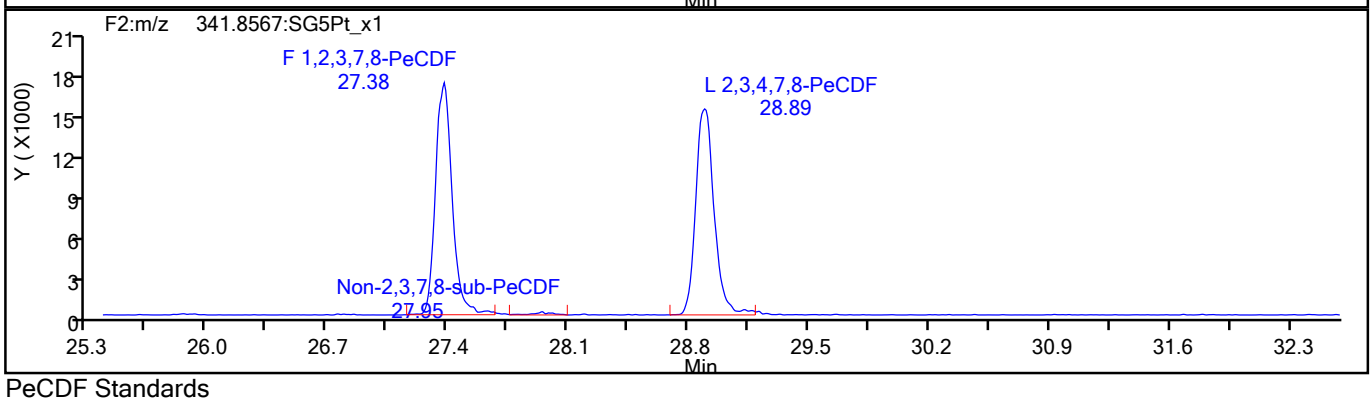

PeCDF Standards

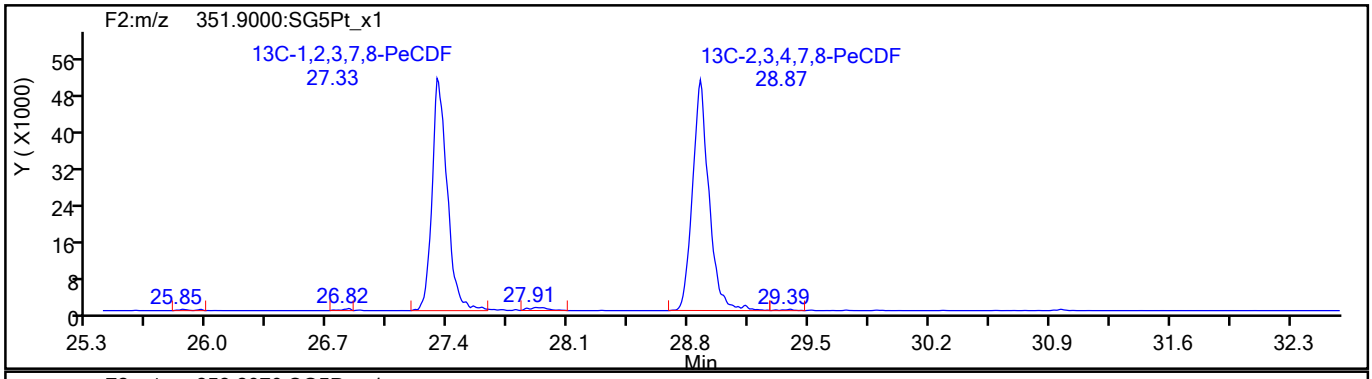

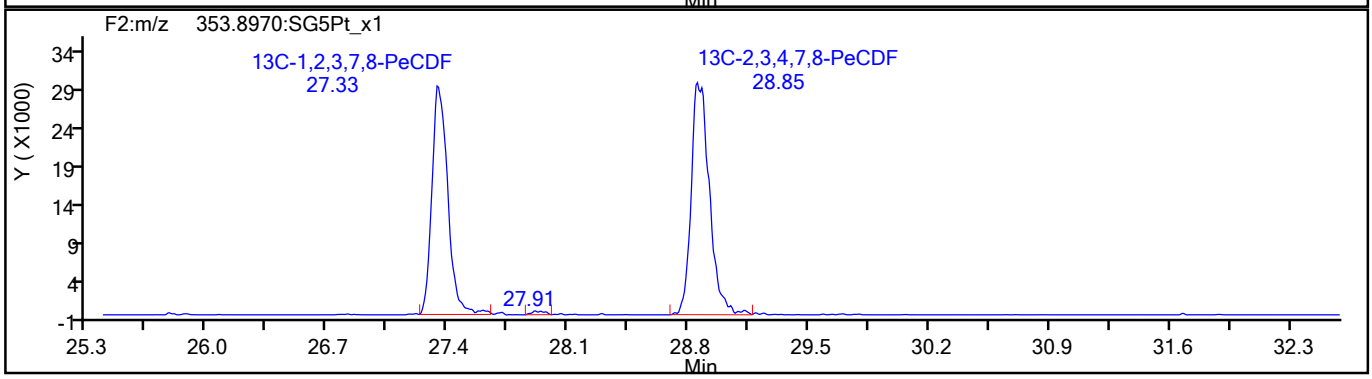

777554

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

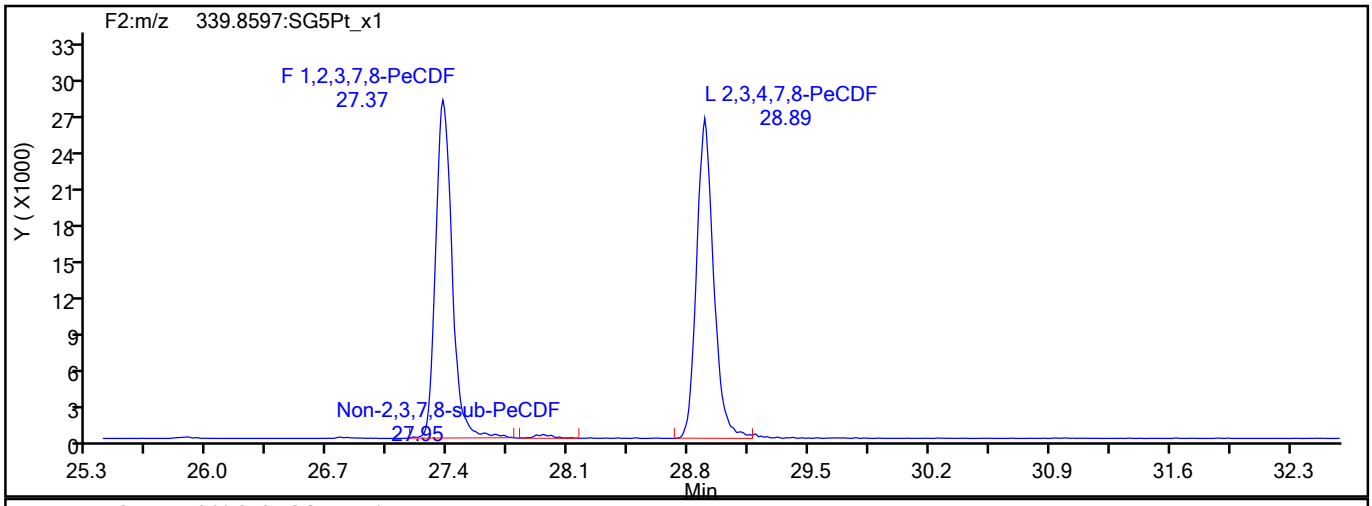

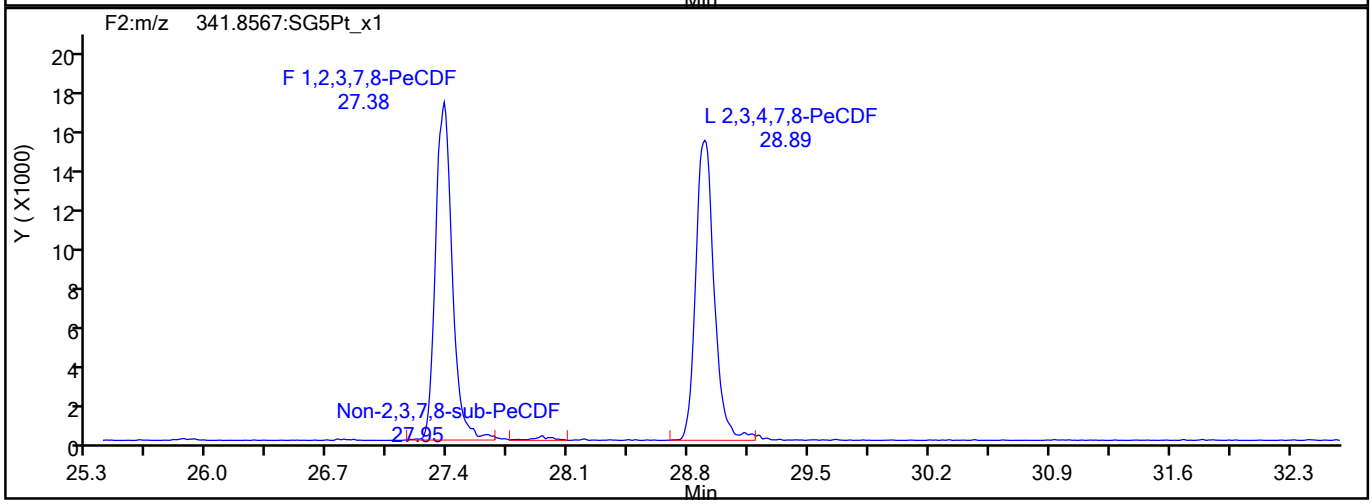

PeCDF Interference Mass

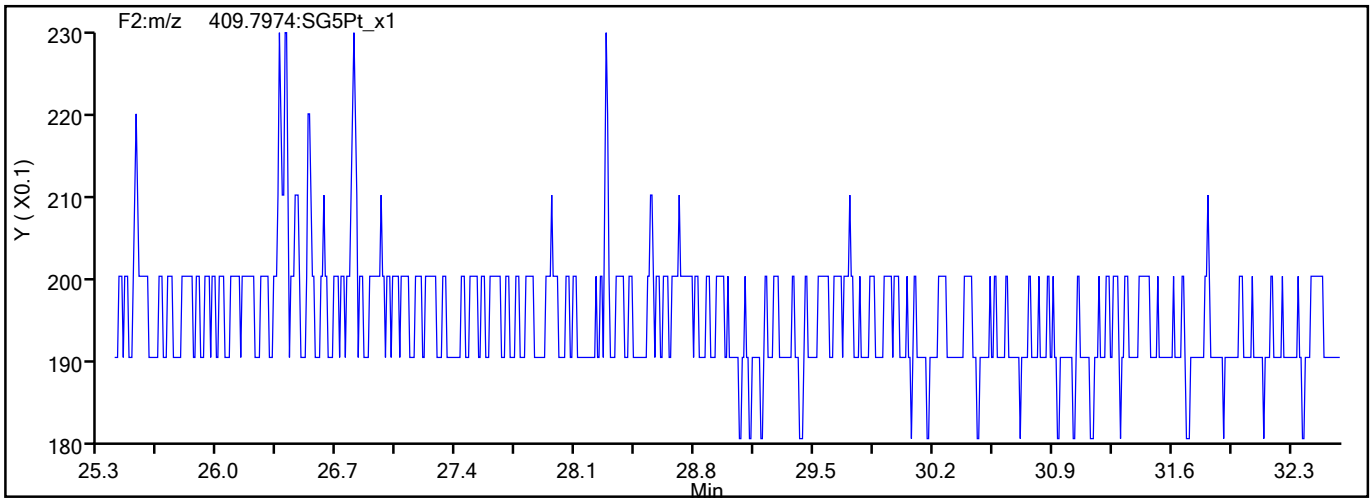

777555

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

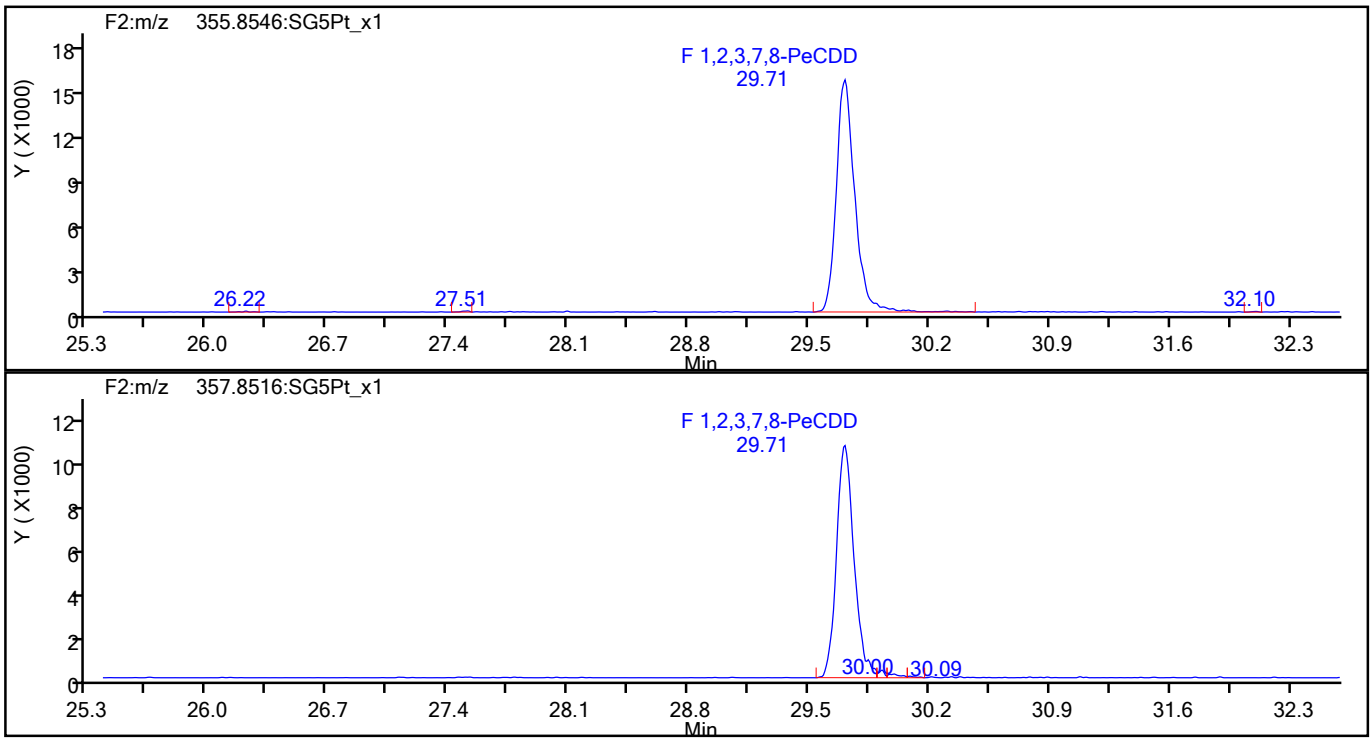

PeCDD Standards

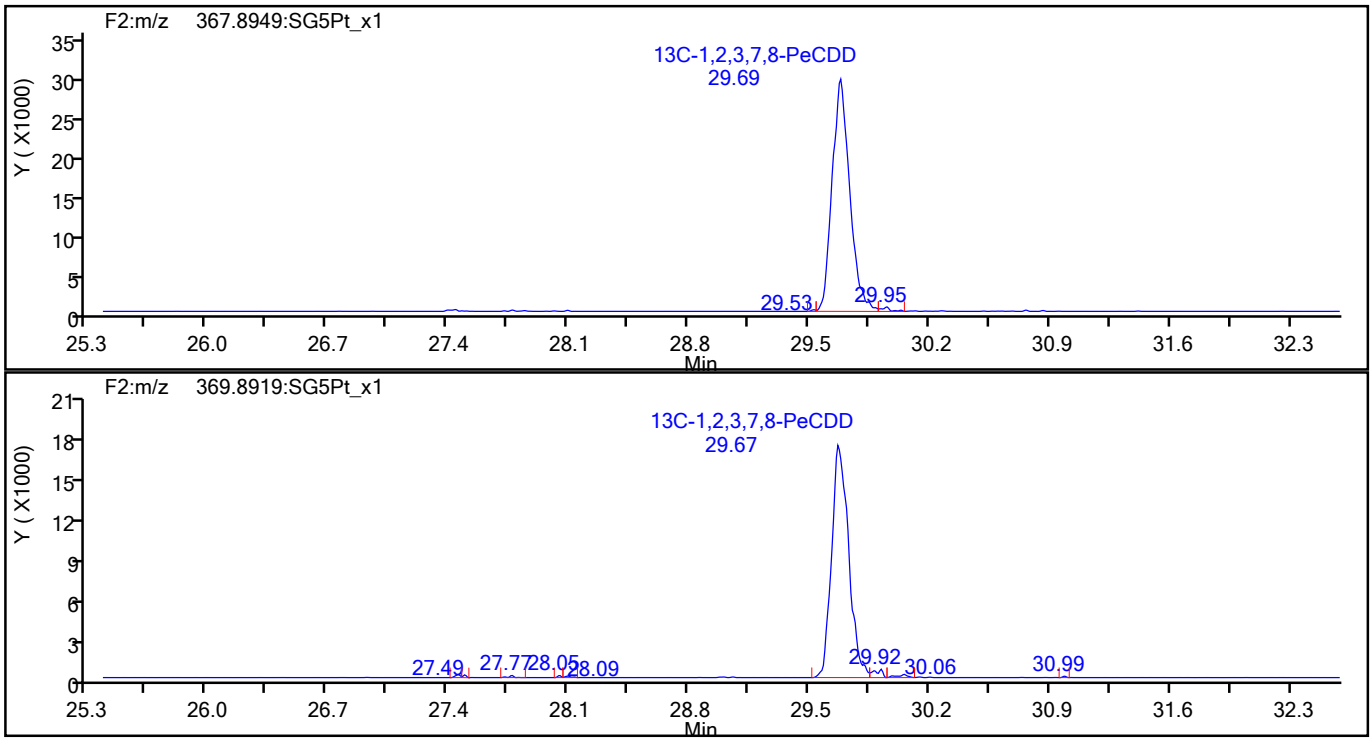

777556

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

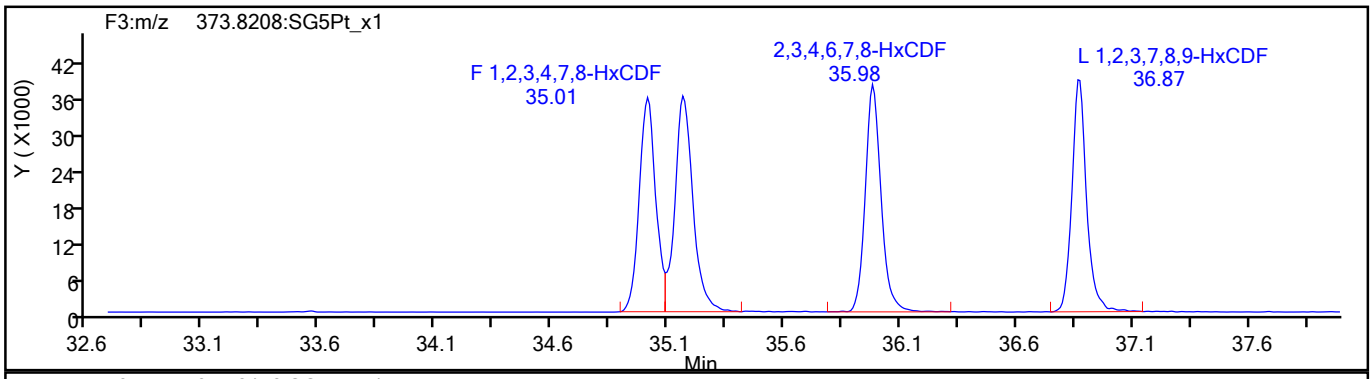

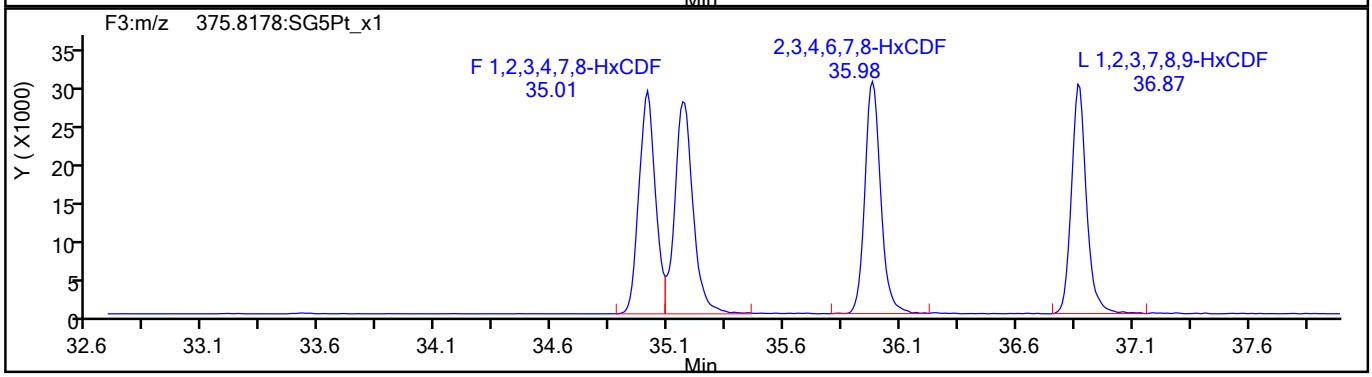

HxCDF Standards

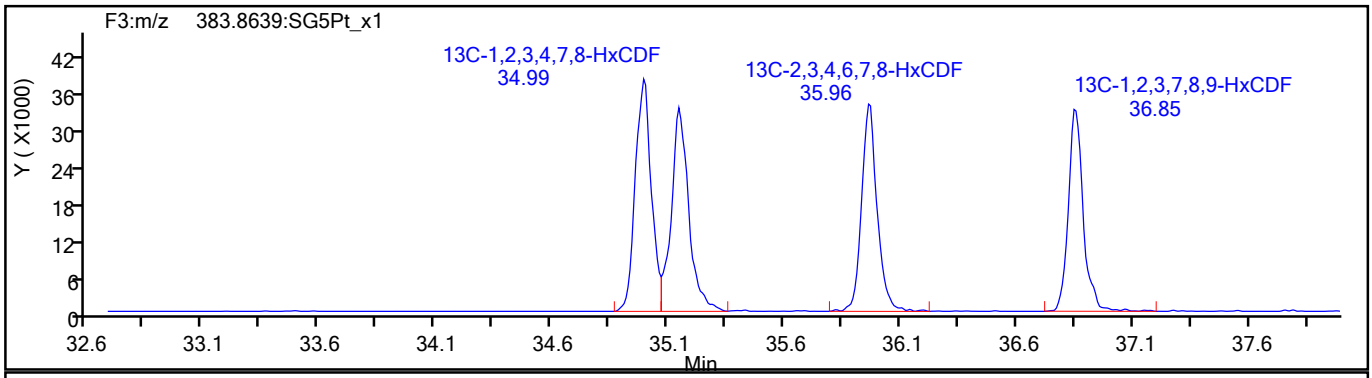

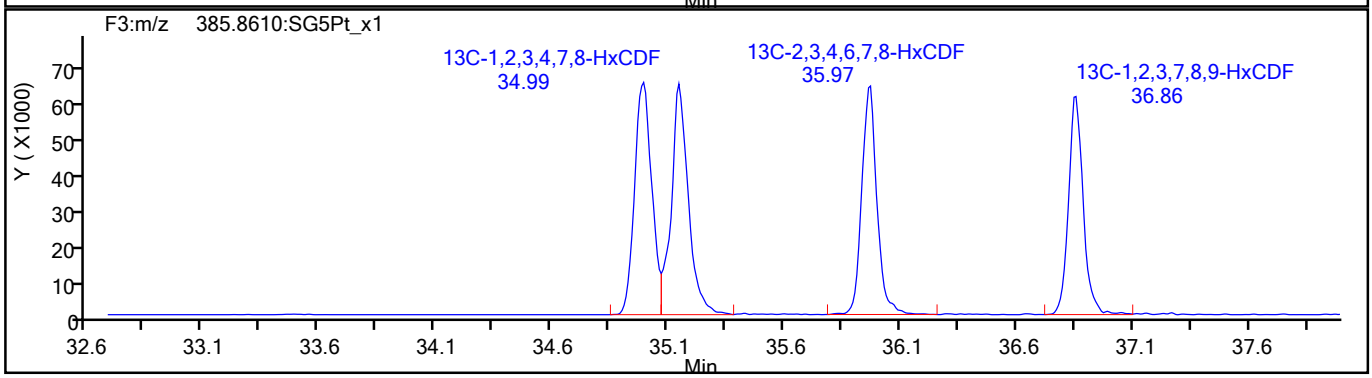

777557

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

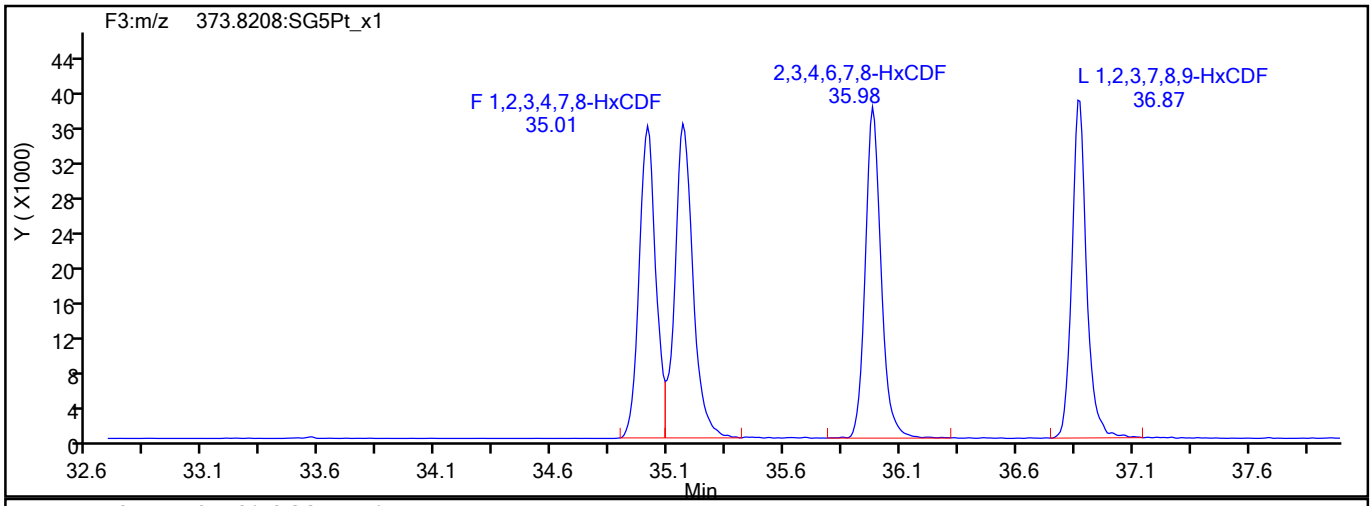

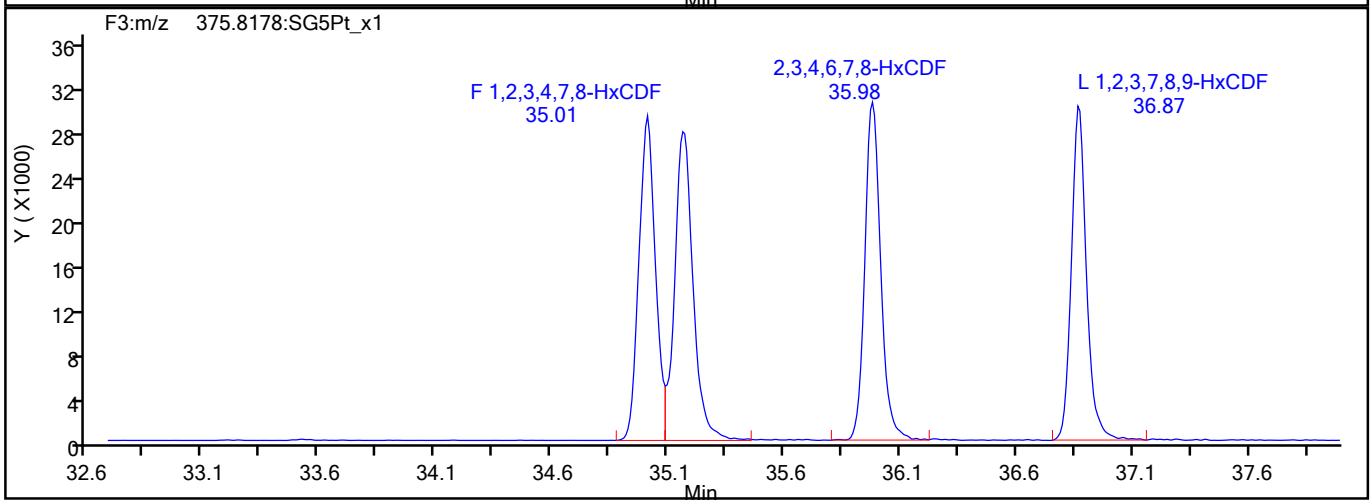

HxCDF Interference Mass

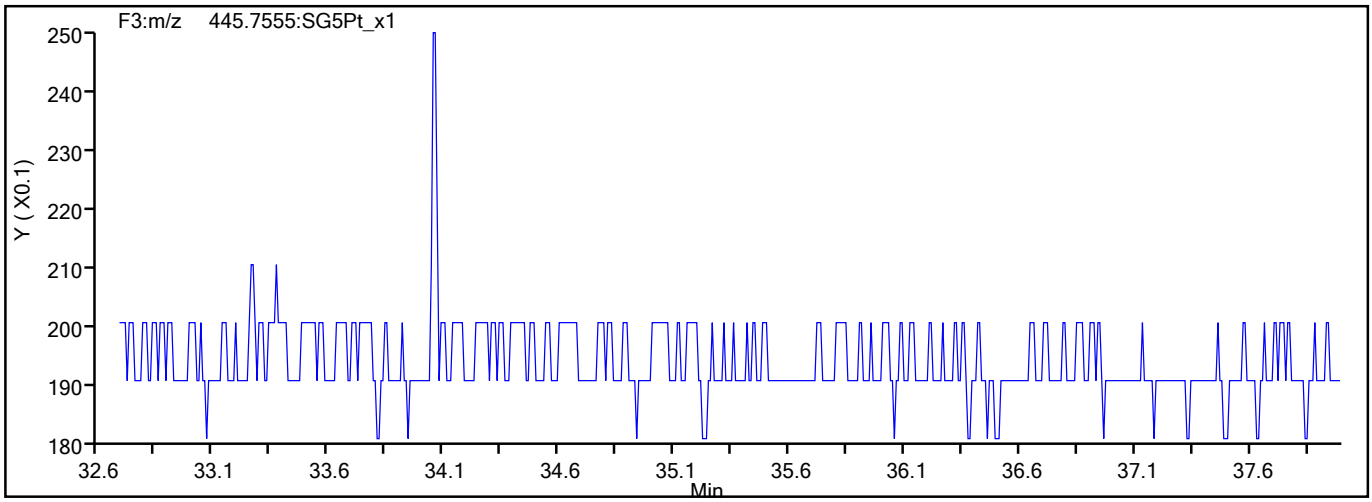

777558

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

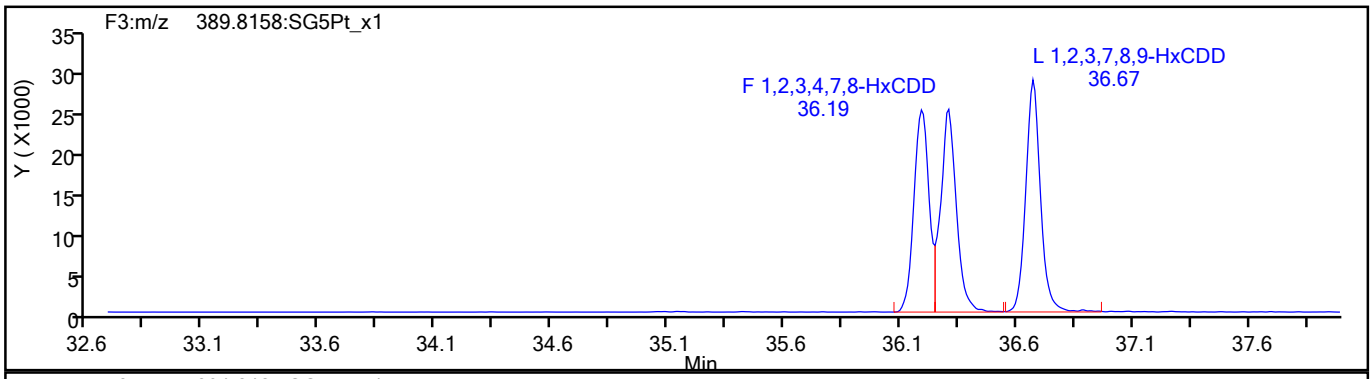

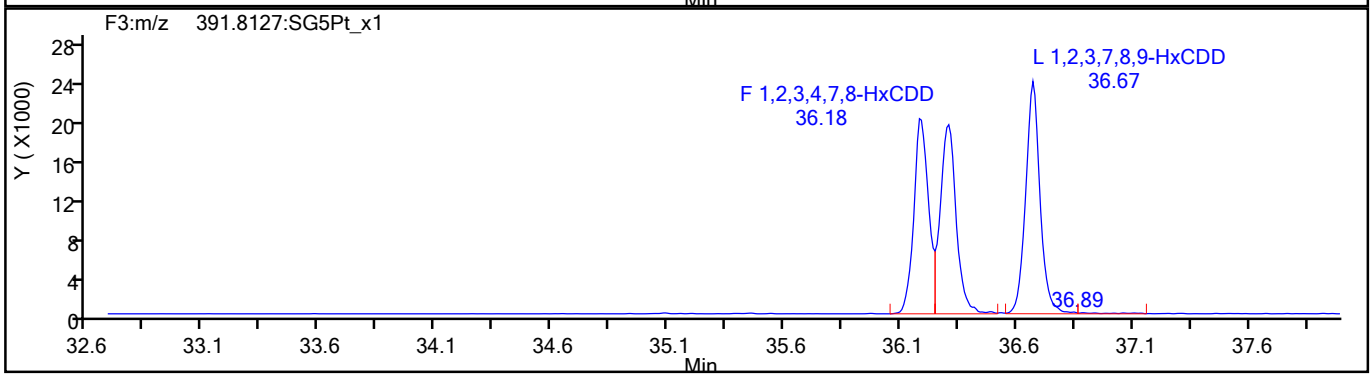

HxCDD Standards

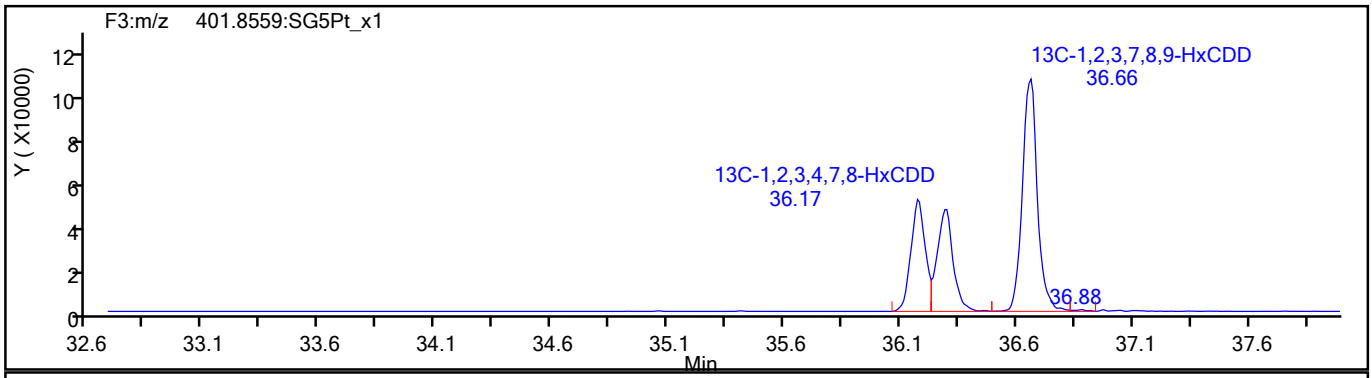

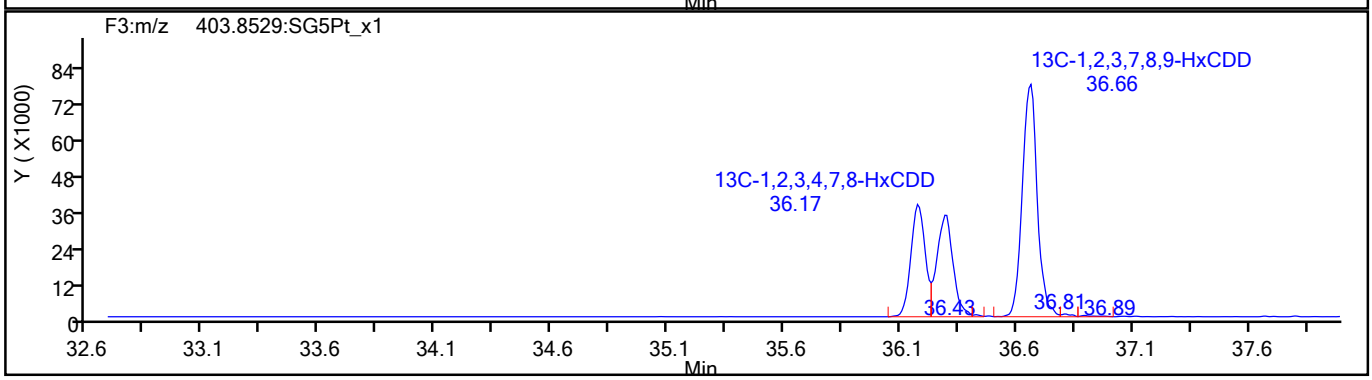

777559

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

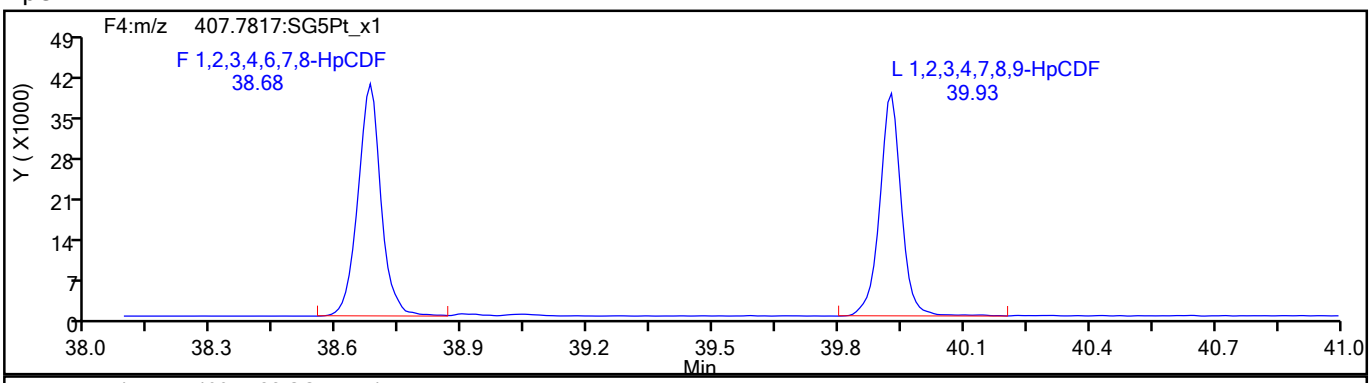

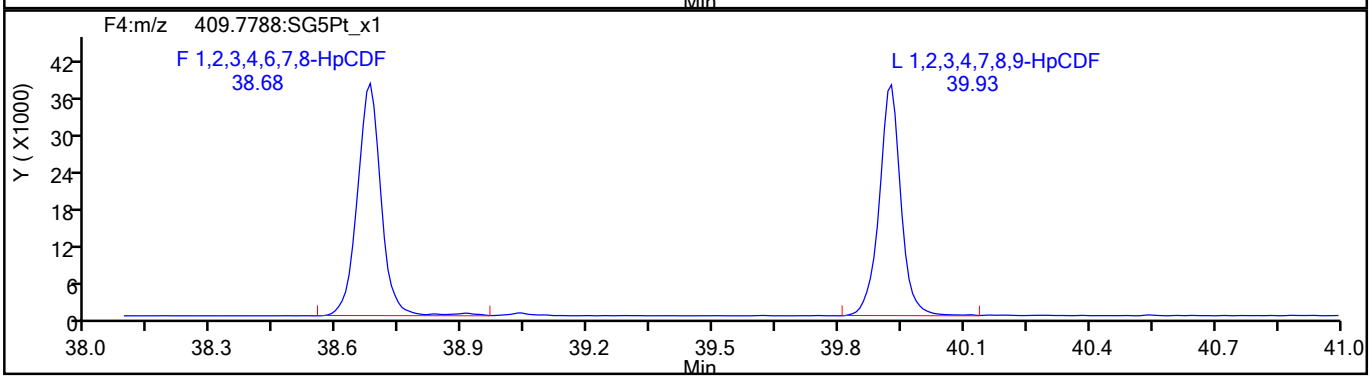

HpCDF Standards

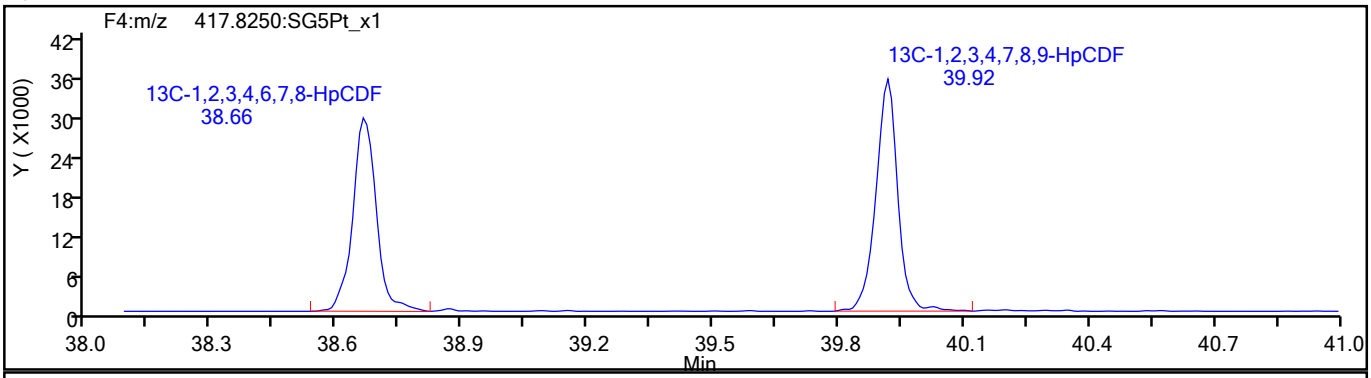

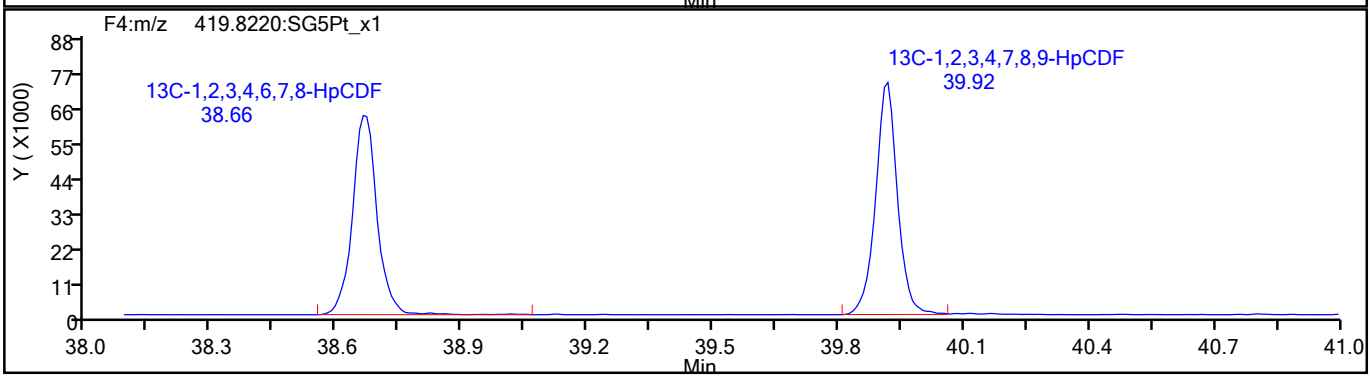

777560

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

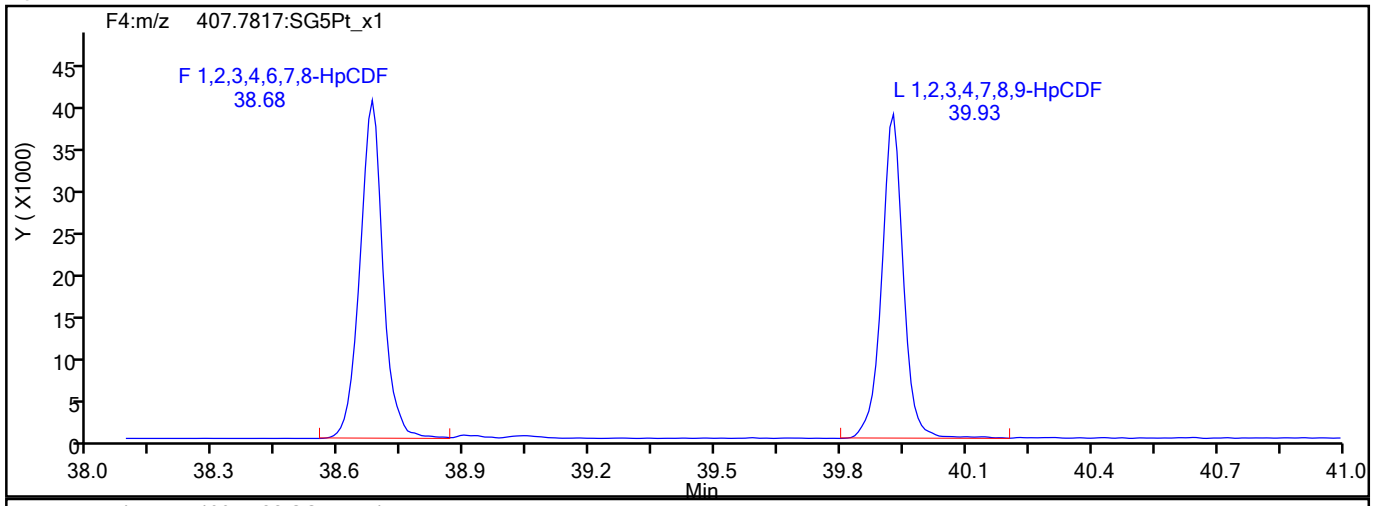

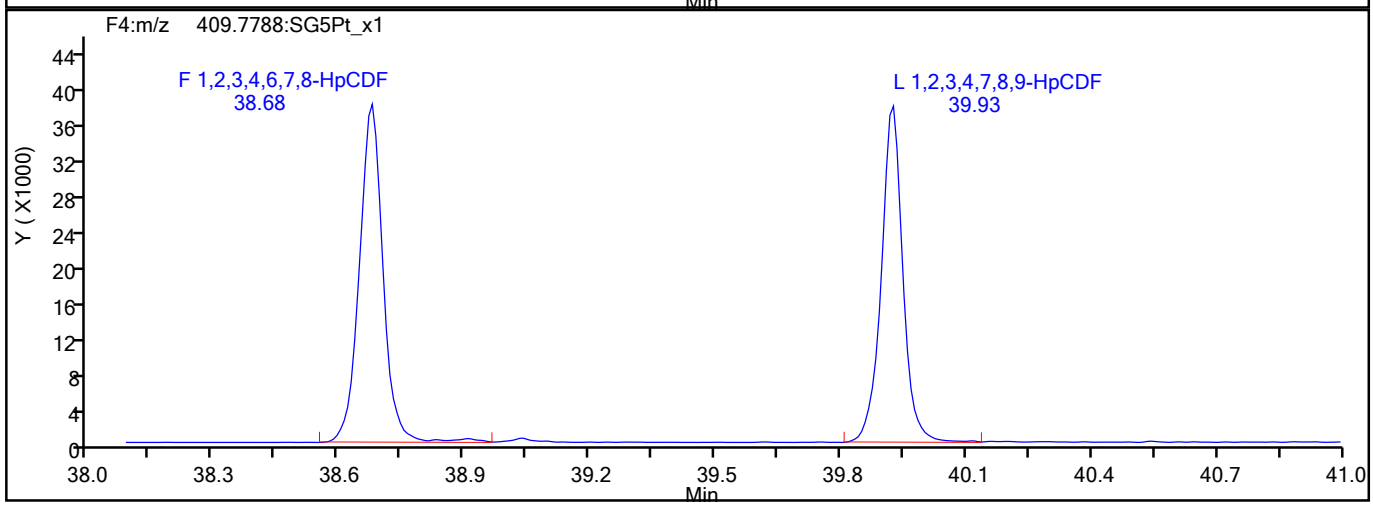

HpCDF Interference Mass

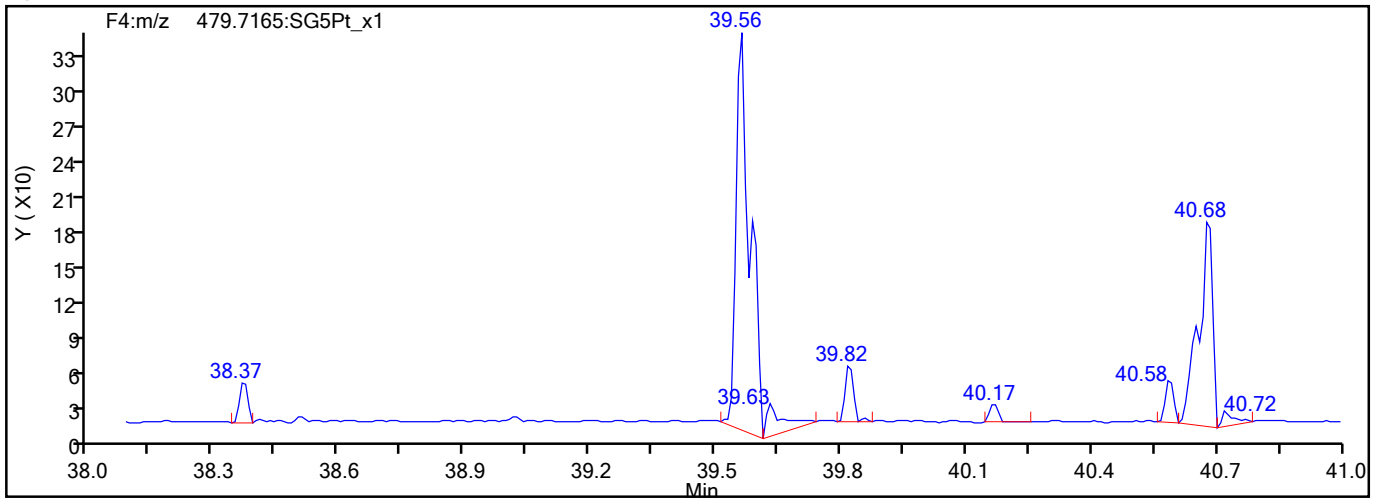

777561

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

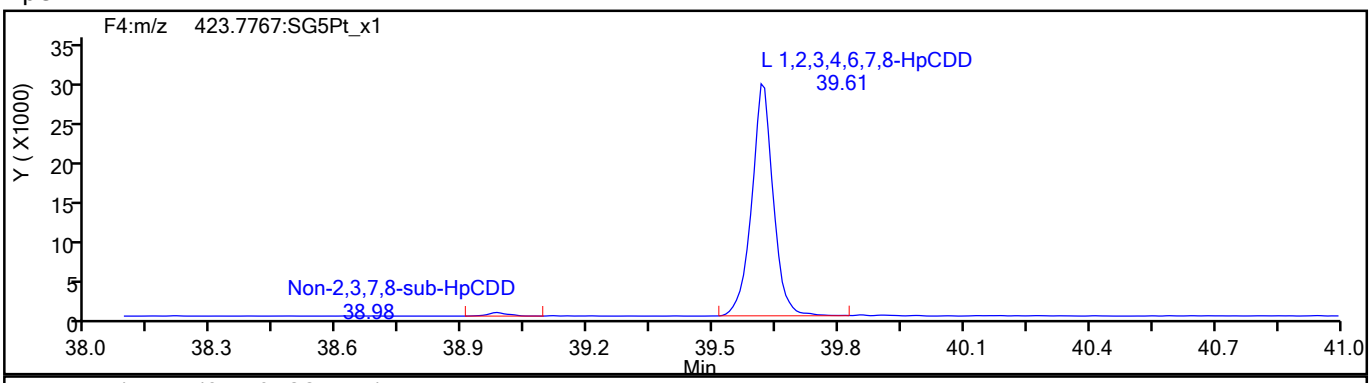

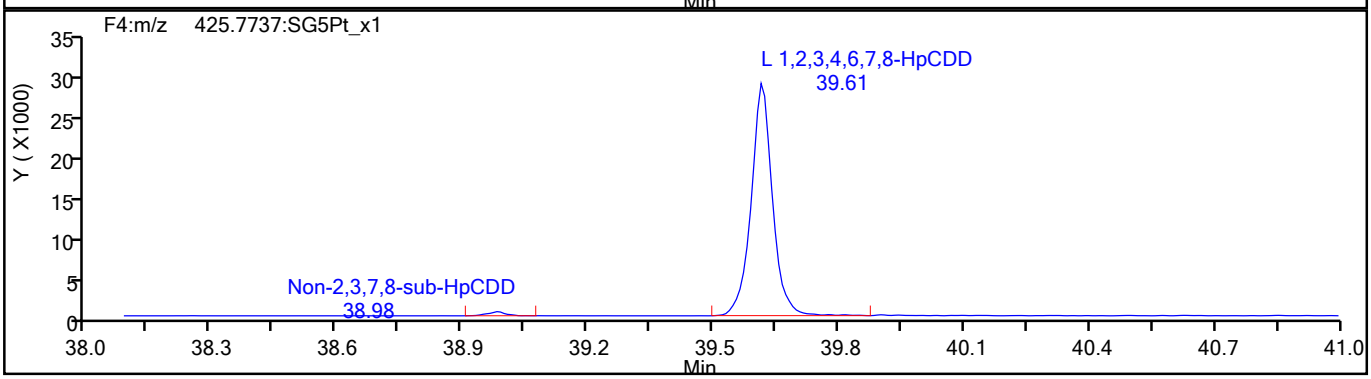

HpCDD Standards

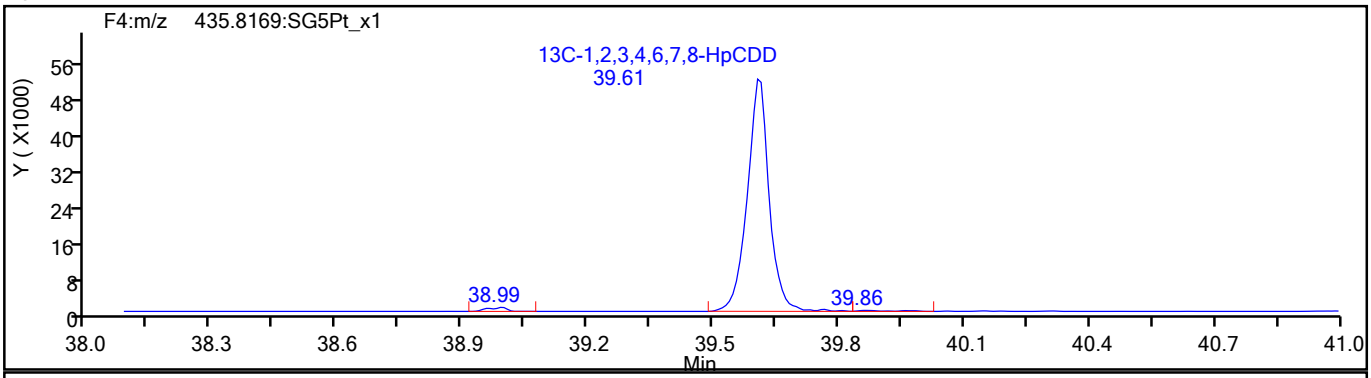

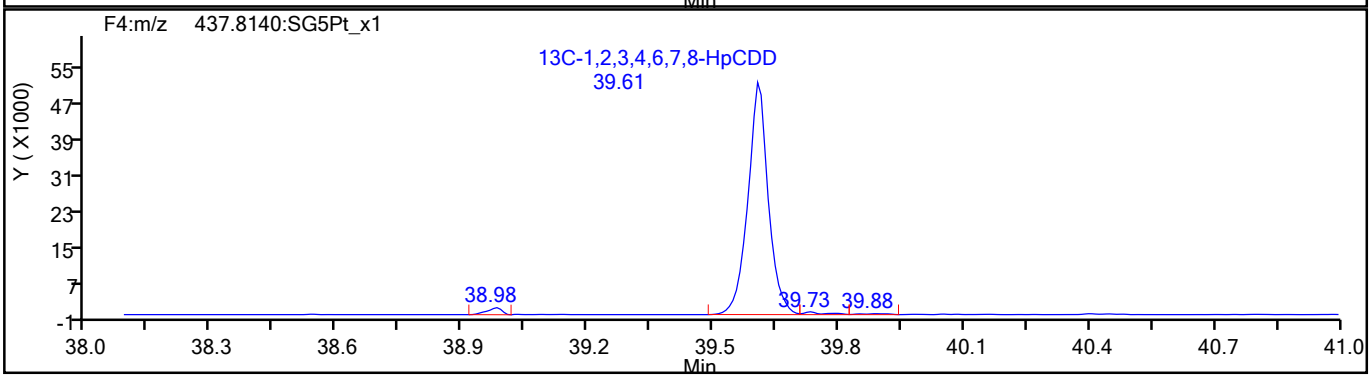

777562

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

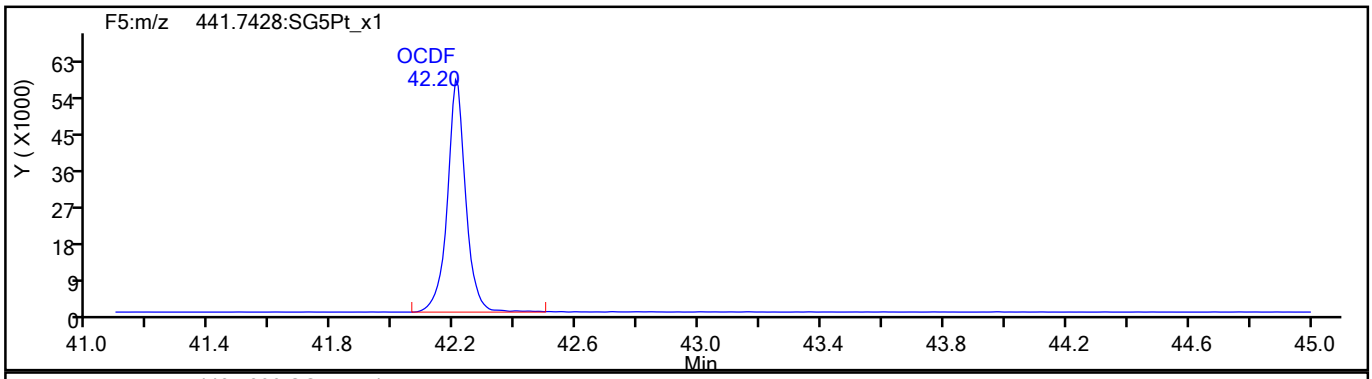

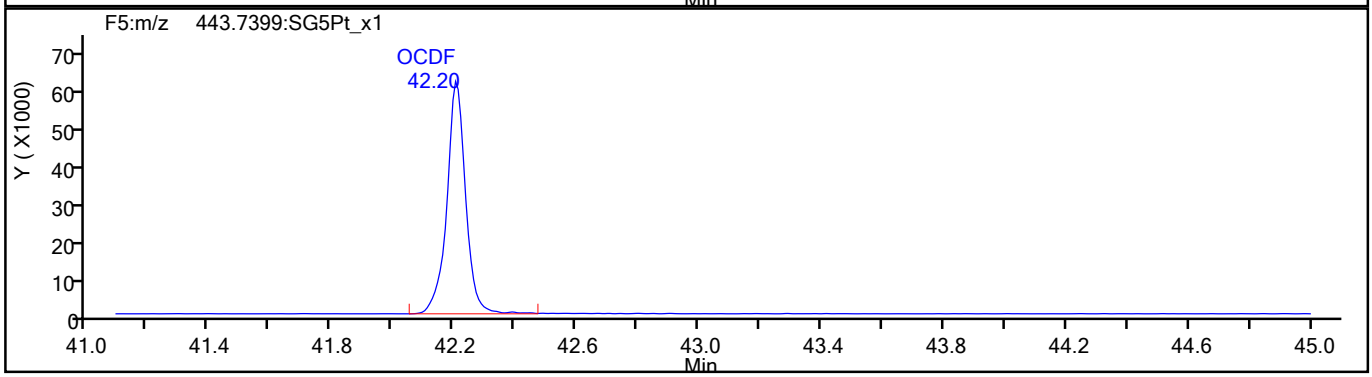

OCDF Standards

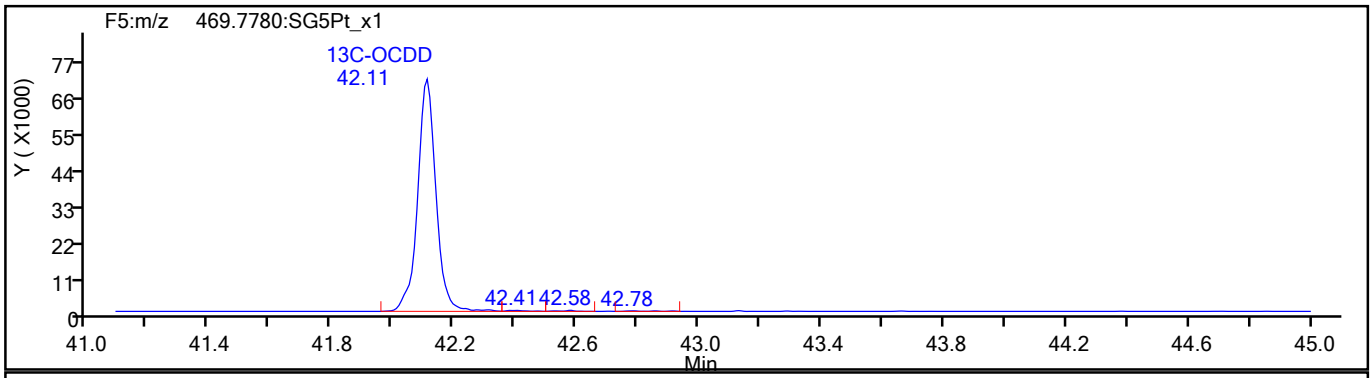

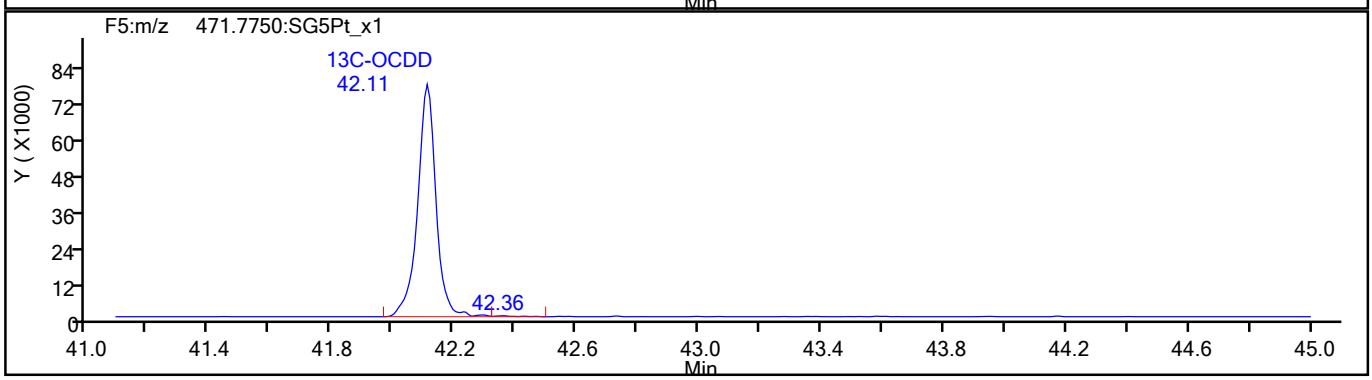

777563

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

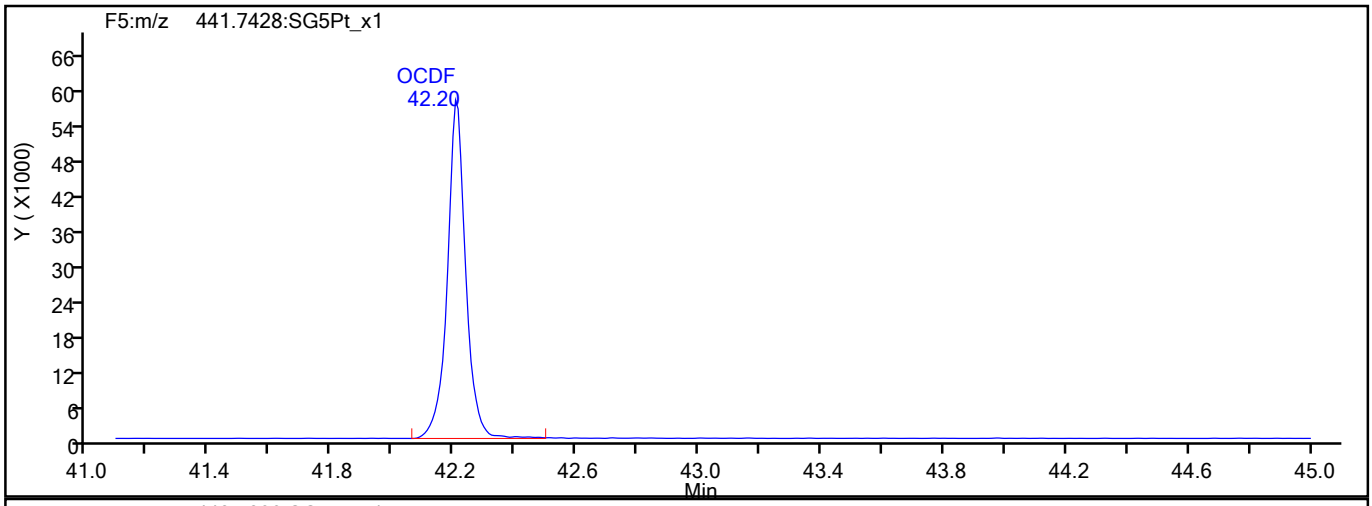

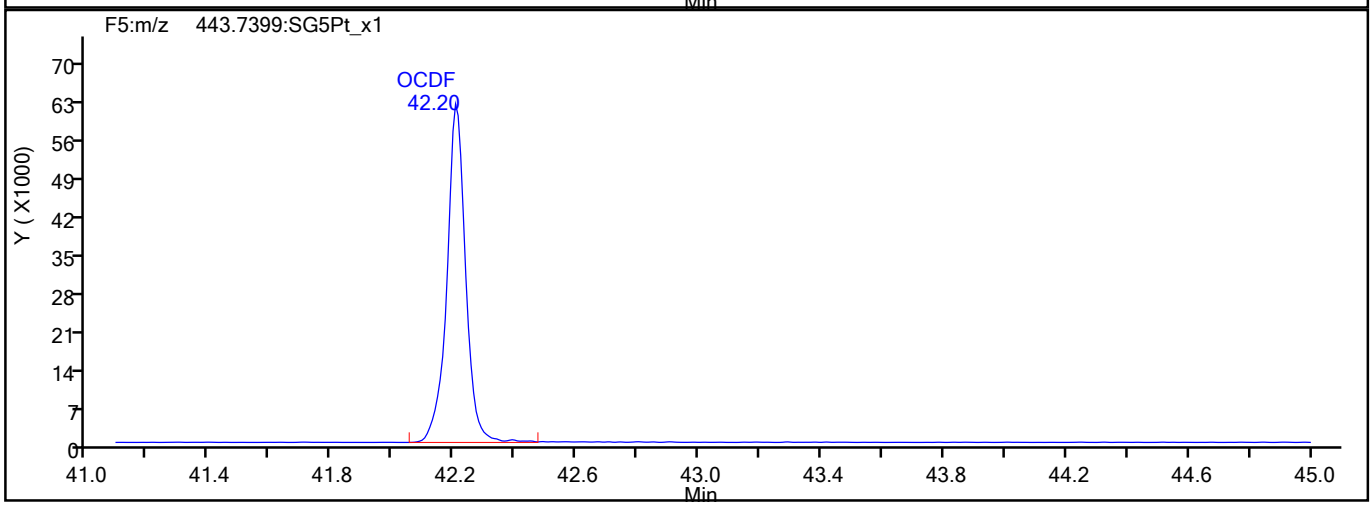

OCDF Interference Mass

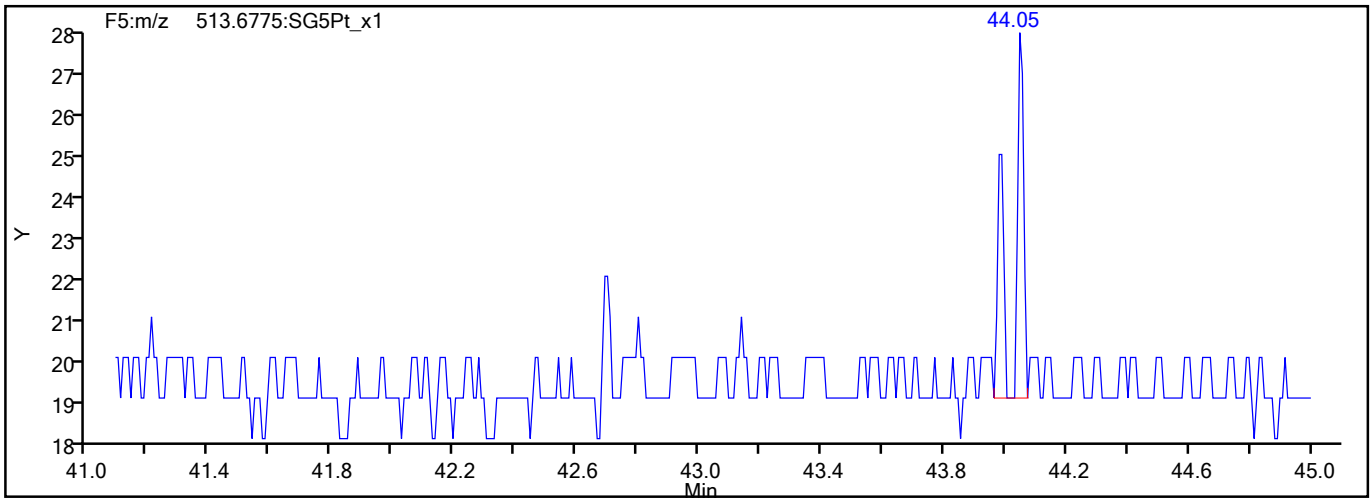

777564

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
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OCDD

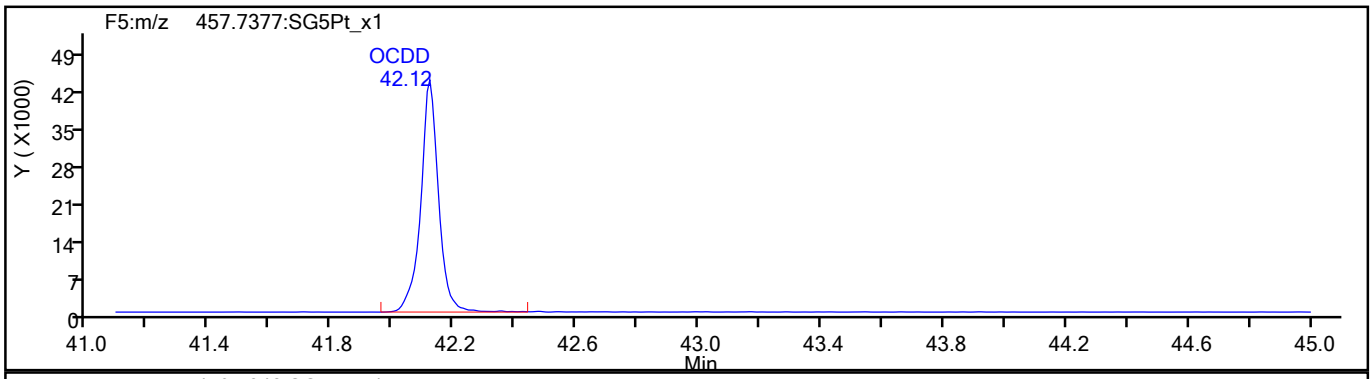

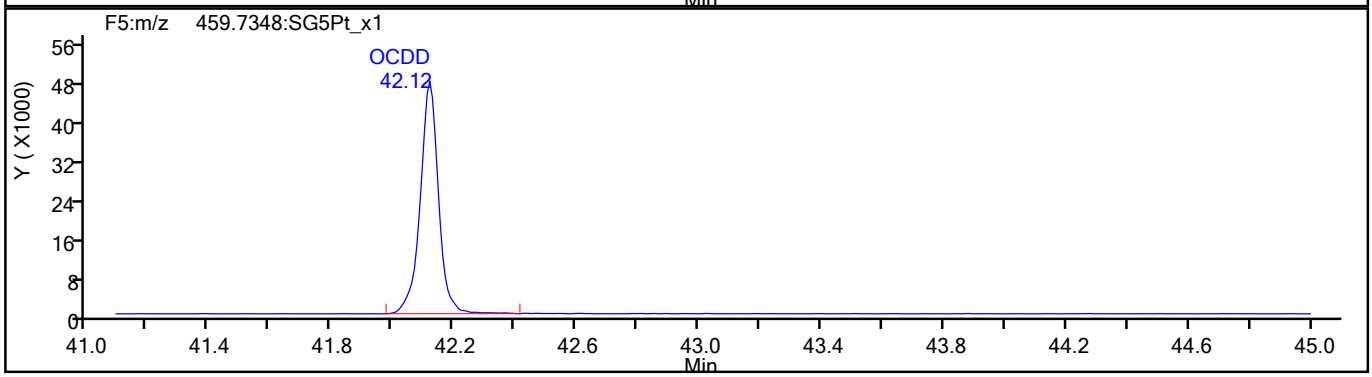

OCDD Standards

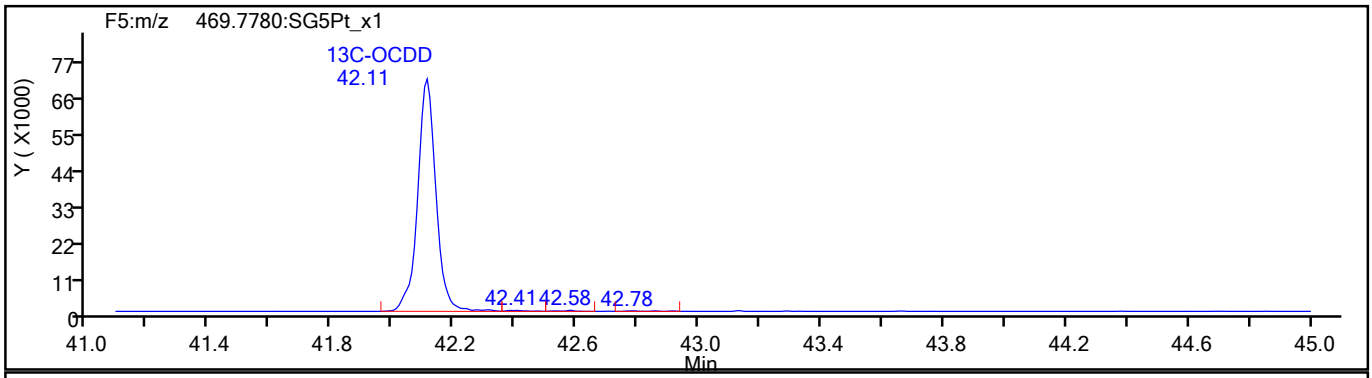

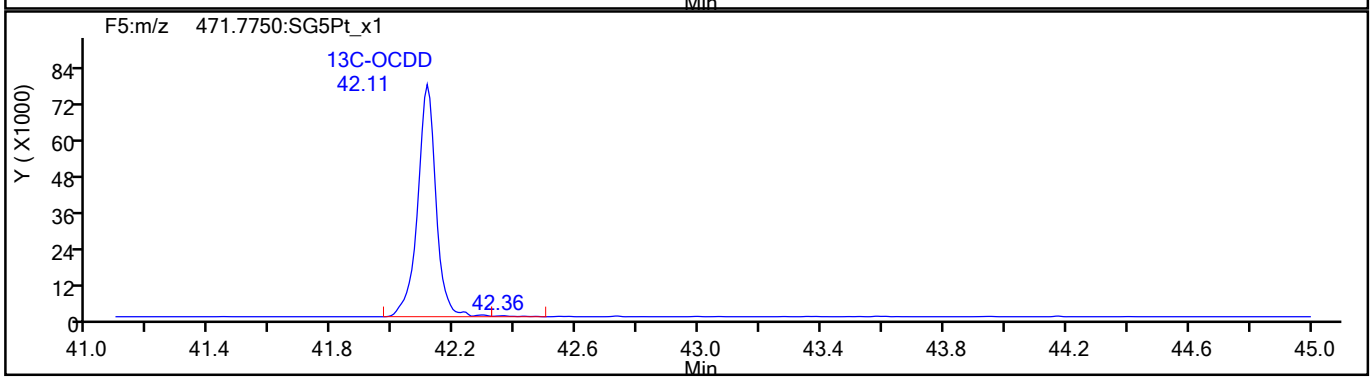

777565

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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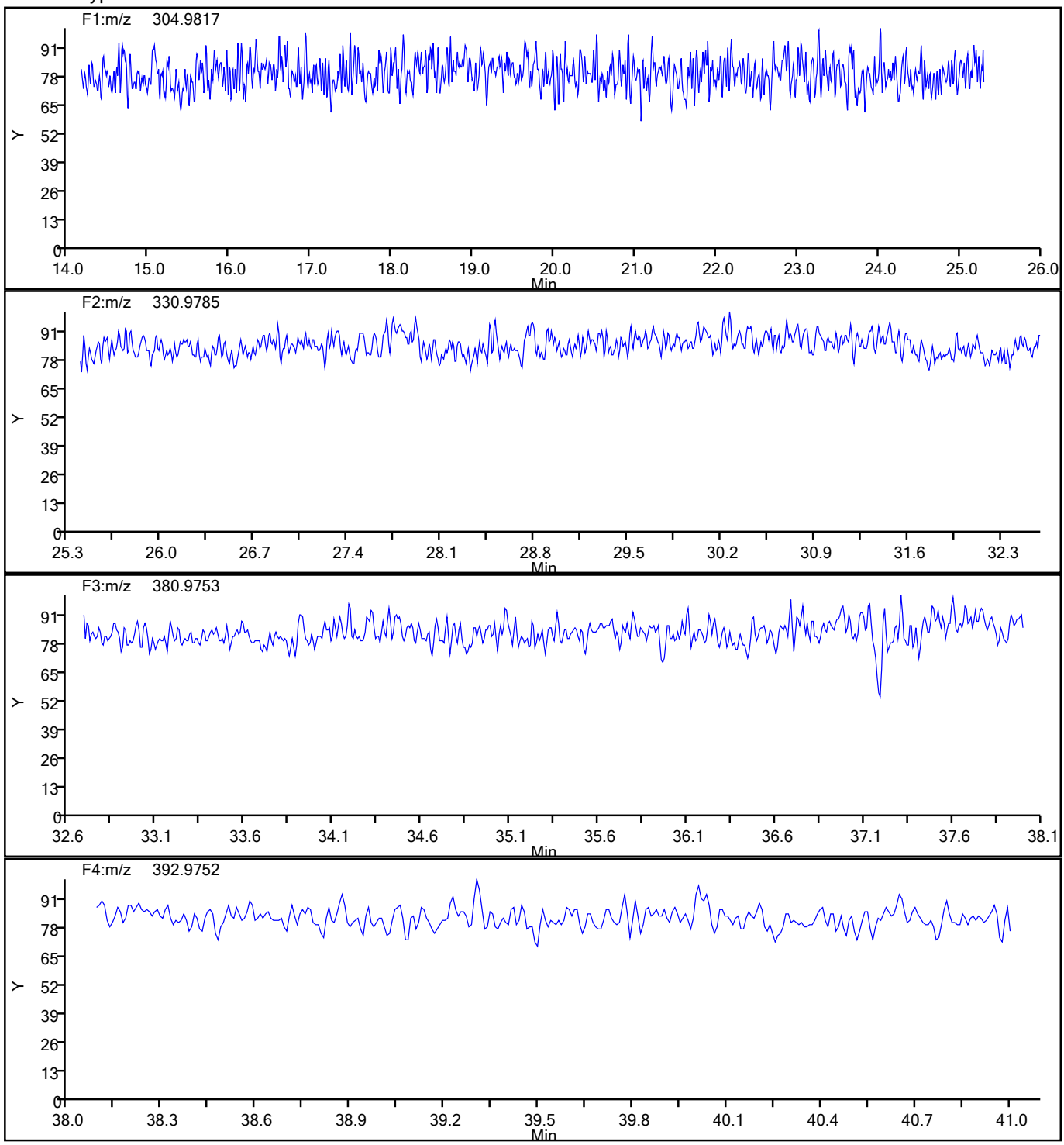

777566

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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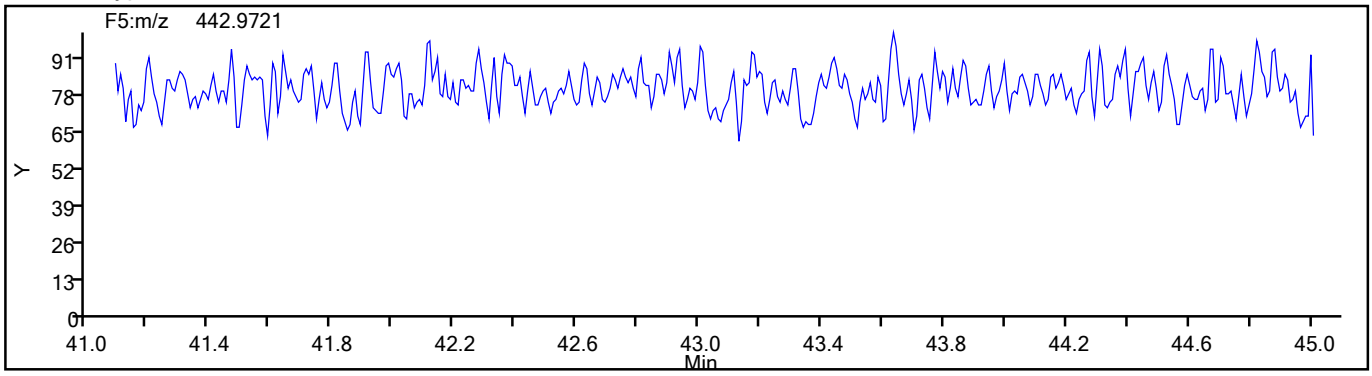

777567

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-513879/2-A
Matrix: Sediment
Lab File ID: 17au21dfs1_51.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/19/2021 04:43
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	22.3		1.0	0.27
51207-31-9	2,3,7,8-TCDF	23.1		1.0	0.098
40321-76-4	1,2,3,7,8-PeCDD	113		5.0	0.26
57117-41-6	1,2,3,7,8-PeCDF	117		5.0	0.36
57117-31-4	2,3,4,7,8-PeCDF	109		5.0	0.38
39227-28-6	1,2,3,4,7,8-HxCDD	101		5.0	0.22
57653-85-7	1,2,3,6,7,8-HxCDD	112		5.0	0.27
19408-74-3	1,2,3,7,8,9-HxCDD	109		5.0	0.23
70648-26-9	1,2,3,4,7,8-HxCDF	114		5.0	0.35
57117-44-9	1,2,3,6,7,8-HxCDF	120		5.0	0.36
72918-21-9	1,2,3,7,8,9-HxCDF	118		5.0	0.36
60851-34-5	2,3,4,6,7,8-HxCDF	121		5.0	0.36
35822-46-9	1,2,3,4,6,7,8-HpCDD	111		5.0	0.32
67562-39-4	1,2,3,4,6,7,8-HpCDF	118		5.0	0.50
55673-89-7	1,2,3,4,7,8,9-HpCDF	108		5.0	0.50
3268-87-9	OCDD	232		10	0.36
39001-02-0	OCDF	243		10	0.38
41903-57-5	Total TCDD	22.3		1.0	0.27
30402-14-3	Total TCDF	23.1		1.0	0.098
36088-22-9	Total PeCDD	113		5.0	0.26
30402-15-4	Total PeCDF	226		5.0	0.37
34465-46-8	Total HxCDD	322		5.0	0.24
55684-94-1	Total HxCDF	474		5.0	0.36
37871-00-4	Total HpCDD	112		5.0	0.32
38998-75-3	Total HpCDF	227		5.0	0.50

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513879/2-A

Matrix: Sediment Lab File ID: 17au21dfs1_51.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10(g) Date Analyzed: 08/19/2021 04:43

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517462 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	34		20-175
89059-46-1	13C-2,3,7,8-TCDF	36		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	34		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	31		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	36		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	37		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	35		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	42		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	37		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	32		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	33		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	36		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	35		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	40		20-186
114423-97-1	13C-OCDD	39		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	47		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Aug-2021 04:43:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513879/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:46:32 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:28:21

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.378	1152953	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.398	552191	0.79	1.3459	35.6	35.6	0.2111	0.2111	35.59	
2,3,7,8-TCDF	20.449	68815	0.80	1.0802	11.5	11.5	0.0489	0.0489	115	
A Non-2,3,7,8-sub-TCDF	19.878						0.0489	0.3566		RQU
S Total TCDF					11.5	11.5	0.0489	0.0489		
D 13C-2,3,7,8-TCDD	21.765	368595	0.88	0.9317	34.3	34.3	0.2791	0.2791	34.31	
2,3,7,8-TCDD	21.782	44148	0.88	1.0753	11.1	11.1	0.1343	0.1343	111	
$ 37Cl4-2,3,7,8-TCDD	21.799	220145		1.0083	18.9	18.9	0.0142	0.0142	47.34	
A Non-2,3,7,8-sub-TCDD	20.707						0.1343	0.1343		
S Total TCDD					11.1	11.1	0.1343	0.1343		
D 13C-1,2,3,7,8-PeCDF	27.239	404112	1.57	1.1405	30.7	30.7	0.0980	0.0980	30.73	
1,2,3,7,8-PeCDF	27.272	248460	1.62	1.0543	58.3	58.3	0.1811	0.1811	117	
D 13C-2,3,4,7,8-PeCDF	28.763	466834	1.64	1.1253	36.0	36.0	0.0994	0.0994	35.98	
2,3,4,7,8-PeCDF	28.779	256500	1.56	1.0079	54.5	54.5	0.1893	0.1893	109	
A F1 PeCDFs	24.648						0.0108	0.0108		RQU
A Non-2,3,7,8-sub-PeCDF	28.125						0.1851	0.6069		U
S Total PeCDF					112.8	112.8	0.1852	0.1852		
D 13C-1,2,3,7,8-PeCDD	29.571	282216	1.56	0.7165	34.2	34.2	0.1243	0.1243	34.16	
1,2,3,7,8-PeCDD	29.588	167577	1.56	1.0465	56.7	56.7	0.1285	0.1285	113	
A Non-2,3,7,8-sub-PeCDD	28.489						0.1285	0.1629		RQU
S Total PeCDD					56.7	56.7	0.1285	0.1285		
D 13C-1,2,3,4,7,8-HxCDF	34.920	440250	0.54	0.9648	41.5	41.5	0.1289	0.1289	41.52	
1,2,3,4,7,8-HxCDF	34.937	287979	1.27	1.1474	57.0	57.0	0.1753	0.1753	114	
D 13C-1,2,3,6,7,8-HxCDF	35.064	437444	0.52	1.0708	37.2	37.2	0.1162	0.1162	37.17	
1,2,3,6,7,8-HxCDF	35.106	320805	1.31	1.2178	60.2	60.2	0.1818	0.1818	120	
D 13C-2,3,4,6,7,8-HxCDF	35.897	380639	0.55	1.0413	33.3	33.3	0.1194	0.1194	33.26	
2,3,4,6,7,8-HxCDF	35.914	279720	1.28	1.2145	60.5	60.5	0.1780	0.1780	121	
D 13C-1,2,3,7,8,9-HxCDF	36.790	347505	0.54	0.9731	32.5	32.5	0.1278	0.1278	32.49	
1,2,3,7,8,9-HxCDF	36.807	255102	1.35	1.2401	59.2	59.2	0.1804	0.1804	118	
A Non-2,3,7,8-sub-HxCDF	35.028						0.1786	0.1786		
S Total HxCDF					236.9	236.9	0.1789	0.1789		
* 13C-1,2,3,7,8,9-HxCDD	36.596	1099079	1.26	1.8E+04	100.0	100.0				

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-1,2,3,4,7,8-HxCDD	36.108	308239	1.13	0.7587	37.0	37.0	0.1300	0.1300	36.97	
1,2,3,4,7,8-HxCDD	36.125	165063	1.25	1.0608	50.5	50.5	0.1116	0.1116	101	
D 13C-1,2,3,6,7,8-HxCDD	36.226	327063	1.26	0.8593	34.6	34.6	0.1148	0.1148	34.63	
1,2,3,6,7,8-HxCDD	36.243	182721	1.24	0.9933	56.2	56.2	0.1330	0.1330	112	
1,2,3,7,8,9-HxCDD	36.605	191715	1.22	1.1094	54.4	54.4	0.1126	0.1126	109	
A Non-2,3,7,8-sub-HxCDD	35.394						0.1184	0.1184		
S Total HxCDD					161.1	161.1	0.1191	0.1191		
D 13C-1,2,3,4,6,7,8-HpCDF	38.620	285196	0.46	0.7359	35.3	35.3	0.1457	0.1457	35.26	
1,2,3,4,6,7,8-HpCDF	38.628	243533	1.05	1.4421	59.2	59.2	0.2492	0.2492	118	
D 13C-1,2,3,4,7,8,9-HpCDF	39.874	302406	0.45	0.6854	40.1	40.1	0.1564	0.1564	40.14	
1,2,3,4,7,8,9-HpCDF	39.882	214074	1.05	1.3092	54.1	54.1	0.2481	0.2481	108	
A Non-2,3,7,8-sub-HpCDF	39.258						0.2480	0.2480		
S Total HpCDF					113.3	113.3	0.2487	0.2487		
D 13C-1,2,3,4,6,7,8-HpCDD	39.562	268592	1.02	0.6745	36.2	36.2	0.0922	0.0922	36.23	
1,2,3,4,6,7,8-HpCDD	39.579	156038	1.04	1.0503	55.3	55.3	0.1617	0.1617	111	
A Non-2,3,7,8-sub-HpCDD	39.258	1484	1.04	1.0503	0.5969	0.5261	0.1617	0.5261	0.00	RQ
S Total HpCDD					55.9	55.8	0.1617	0.1617		RQ
D 13C-OCDD	42.068	462455	0.94	0.5446	77.3	77.3	0.1394	0.1394	38.63	
OCDF	42.161	370595	0.96	1.3168	121.7	121.7	0.1900	0.1900	122	
OCDD	42.068	284636	0.91	1.0620	115.9	115.9	0.1799	0.1799	116	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 09:46:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Aug-2021 04:43:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513879/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:46:32 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:28:21

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.378	21.427	-3		512123	71188	71	177	1003		a
333.9338	21.378	21.427	-3		640830	82634	89	222	928	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.398	20.401	0	0.954	243971	33108	139	347	238		
317.9389	20.415	20.401	1	0.955	308220	42563	36	90	1182	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.449	20.436	1	1.003	30521	4146	6	15	691		
305.8987	20.432	20.436	0	1.002	38294	5319	10	25	532	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											U
303.9016	18.739	19.878	-68	0.919	162	68	6	15	11		
	Empc Correction				119	50	6	15	8		
305.8987	18.765	19.878	-67	0.920	155	65	10	25	7	1.05(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.765	21.743	1	1.018	172091	21636	71	177	305		
333.9338	21.739	21.743	0	1.017	196504	24757	89	222	278	0.88(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.782	21.777	0	1.001	20673	2465	24	60	103		
321.8936	21.773	21.777	0	1.000	23475	3194	3	7	1065	0.88(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.799	21.849	-3	1.020	220145	28798	9	22	3200		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.707						24	60			
321.8936	20.707						3	7			
13C-1,2,3,7,8-PeCDF											
351.9000	27.239	27.288	-3	1.274	246750	37936	50	125	759		
353.8970	27.247	27.288	-2	1.275	157362	24926	19	47	1312	1.57(1.32-1.78)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.272	27.313	-2	1.001	153449	22468	27	67	832		
341.8567	27.281	27.313	-2	1.002	95011	14063	21	52	670	1.62(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.763	28.795	-2	1.345	290330	39582	50	125	792		
353.8970	28.754	28.795	-2	1.345	176504	23330	19	47	1228	1.64(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.779	28.820	-2	1.001	156208	20762	27	67	769		
341.8567	28.779	28.820	-2	1.001	100292	13170	21	52	627	1.56(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.618	24.648	-2	0.904	12	5	1	2	5		
341.8567	24.610	24.648	-2	0.903	37	18	2	5	9	0.32(1.32-1.78)	
	Empc Correction				7	3	2	5	2		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	27.879	28.125	-15	1.023	1729	241	27	67	9		
341.8567	27.811	28.125	-19	1.021	996	151	21	52	7	1.74(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.571	29.612	-2	1.383	171861	22744	21	52	1083		
369.8919	29.554	29.612	-3	1.382	110355	14435	34	85	425	1.56(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.588	29.637	-3	1.001	102094	13051	15	37	870		
357.8516	29.596	29.637	-2	1.001	65483	8320	5	12	1664	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.489	28.489	0	0.963	712	141	15	37			
	Empc Correction				292	51	15	37	0		
357.8516	28.489	28.489	0	0.963	189	33	5	12		3.77(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.920	34.942	-1	0.954	154382	28905	45	112	642		
385.8610	34.912	34.942	-2	0.954	285868	51650	71	177	727	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.937	34.959	-1	1.000	161292	30332	39	97	778		
375.8178	34.937	34.959	-1	1.000	126687	23452	26	65	902	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.064	35.111	-3	0.958	149152	25148	45	112	559		
385.8610	35.089	35.111	-1	0.959	288292	48027	71	177	676	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.106	35.119	-1	1.001	181702	30359	39	97	778		
375.8178	35.097	35.119	-1	1.001	139103	24502	26	65	942	1.31(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.897	35.919	-1	0.981	134384	27782	45	112	617		
385.8610	35.897	35.919	-1	0.981	246255	47138	71	177	664	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.914	35.936	-1	1.000	157261	31460	39	97	807		
375.8178	35.914	35.936	-1	1.000	122459	23907	26	65	920	1.28(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.790	36.811	-1	1.005	121621	25275	45	112	562		
385.8610	36.790	36.811	-1	1.005	225884	47153	71	177	664	0.54(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	36.807	36.828	-1	1.000	146578	31137	39	97	798		
375.8178	36.807	36.828	-1	1.000	108524	22657	26	65	871	1.35(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						39	97			
375.8178	35.028						26	65			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.596	36.609	-1		613234	129054	45	112	2868		
403.8529	36.596	36.609	-1		485845	104110	47	117	2215	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.108	36.129	-1	0.987	163698	37090	45	112	824		
403.8529	36.108	36.129	-1	0.987	144541	30477	47	117	648	1.13(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.125	36.146	-1	1.000	91763	20395	15	37	1360		
391.8127	36.125	36.146	-1	1.000	73300	15889	17	42	935	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.226	36.247	-1	0.990	182318	33355	45	112	741		
403.8529	36.226	36.247	-1	0.990	144745	27185	47	117	578	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.243	36.264	-1	1.000	101151	20151	15	37	1343		
391.8127	36.234	36.264	-2	1.000	81570	15244	17	42	897	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.605	36.626	-1	1.014	105175	22152	15	37	1477		
391.8127	36.613	36.626	-1	1.014	86540	19124	17	42	1125	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.394						15	37			
391.8127	35.394						17	42			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.620	38.626	0	1.055	90235	21930	39	97	562		
419.8220	38.620	38.626	0	1.055	194961	46799	61	152	767	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.628	38.630	0	1.000	124835	30815	56	140	550		
409.7788	38.628	38.630	0	1.000	118698	28856	43	107	671	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.874	39.880	0	1.090	94287	23632	39	97	606		
419.8220	39.874	39.880	0	1.090	208119	52415	61	152	859	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.882	39.885	0	1.000	109760	27352	56	140	488		
409.7788	39.874	39.885	-1	1.000	104314	26341	43	107	613	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						56	140			
409.7788	39.258						43	107			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.562	39.569	0	1.081	135567	36294	24	60	1512		
437.8140	39.562	39.569	0	1.081	133025	32596	34	85	959	1.02(0.88-1.20)	

Report Date: 20-Aug-2021 09:46:32 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.579	39.582	0	1.000	79370	19810	28	70	708		
425.7737	39.571	39.582	-1	1.000	76668	19293	19	47	1015	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.931	39.258	-20	0.984	757	201	28	70	7		
425.7737	38.940	39.258	-19	0.984	927	213	19	47	11	0.82(0.88-1.20)	
	Empc Correction				727	193	19	47	10		
13C-OCDD											
469.7780	42.068	42.072	0	1.150	224125	50031	47	117	1064		
471.7750	42.059	42.072	-1	1.149	238330	51486	24	60	2145	0.94(0.76-1.02)	
OCDF											
441.7428	42.161	42.165	0	1.002	181285	39296	22	55	1786		
443.7399	42.161	42.165	0	1.002	189310	43296	29	72	1493	0.96(0.76-1.02)	
OCDD											
457.7377	42.068	42.081	-1	1.000	135245	30903	20	50	1545		
459.7348	42.068	42.081	-1	1.000	149391	32862	19	47	1730	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	552191	75671

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	552191	75671

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.739	162	68	155	65	0.0531	1.05	RQ
18.739	119	50	155	65	0.0459		Empc Correction
19.427	92	39	339	85	0.0723	0.27	RQ
19.427	92	39	119	50	0.0354		Empc Correction
19.728	942	162	1185	362	0.3566	0.79	
20.570	1237	306	356	162	0.2671	3.47	RQ
20.570	274	124	356	162	0.1056		Empc Correction
20.759	320	67	178	119	0.0835	1.80	RQ
20.759	137	91	178	119	0.0528		Empc Correction

Compound is Marked ND

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	404112	62862
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	466834	62912

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	435473	62887

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.618	12	5	37	18	0.0109	0.32	RQ
24.618	12	5	7	3	0.004232		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	404112	62862
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	466834	62912

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	435473	62887

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.879	1729	241	996	151	0.6069	1.74	

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	282216	37179

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	282216	37179

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.245	712	141	189	33	0.3051	3.77	RQ
30.245	292	51	189	33	0.1629		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	268592	68890

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	268592	68890

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.931	757	201	927	213	0.5969	0.82	RQ
38.931	757	201	727	193	0.5261		Empc Correction
Signal Totals:							
	757	201	727	193			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1684	414				0.82	RQ
	1484	394					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5969 = (1684 * 100.000) / (268592 * 1.050)

Empc Amount: 0.5261 = (1484 * 100.000) / (268592 * 1.050)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

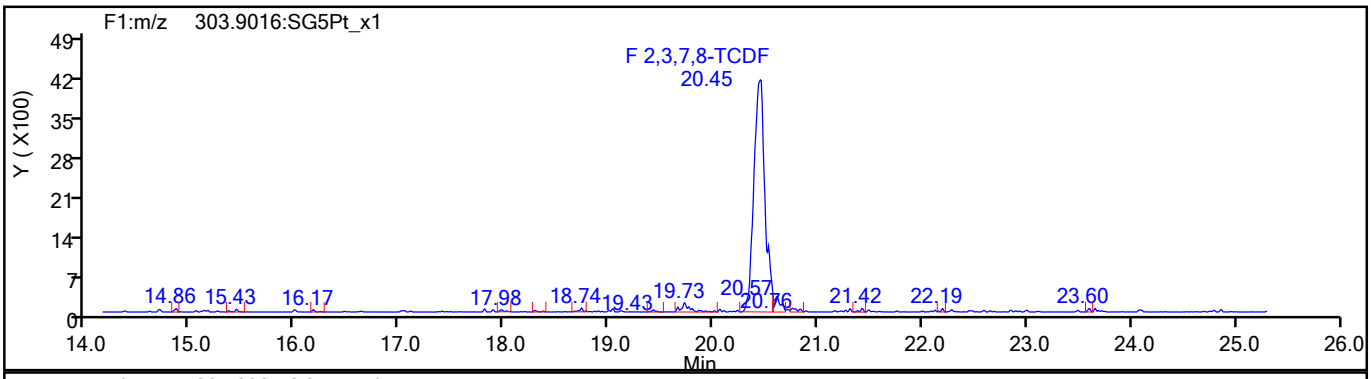

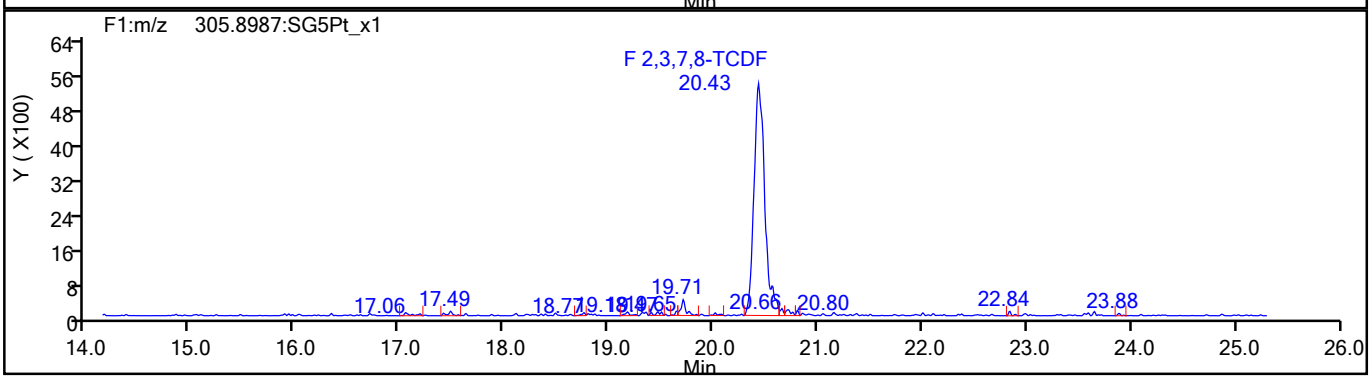

TCDF Standards

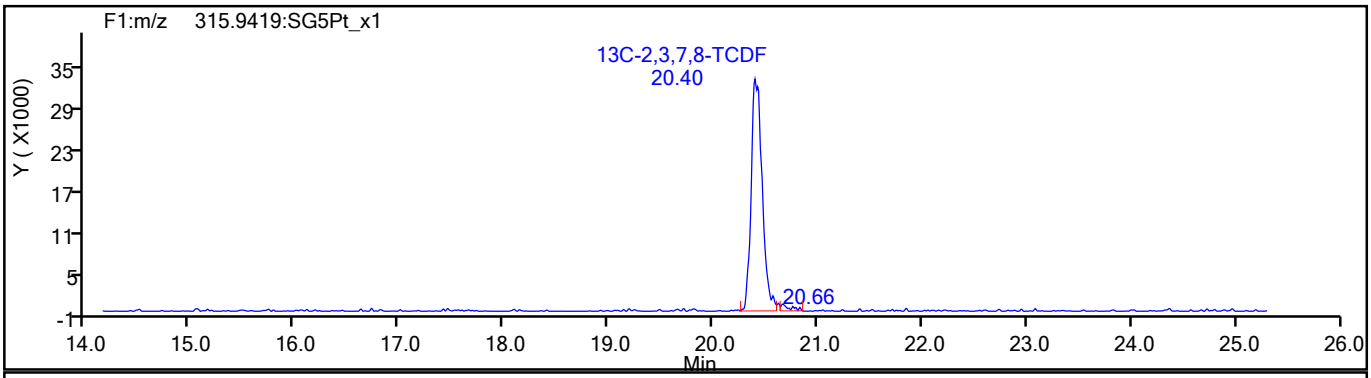

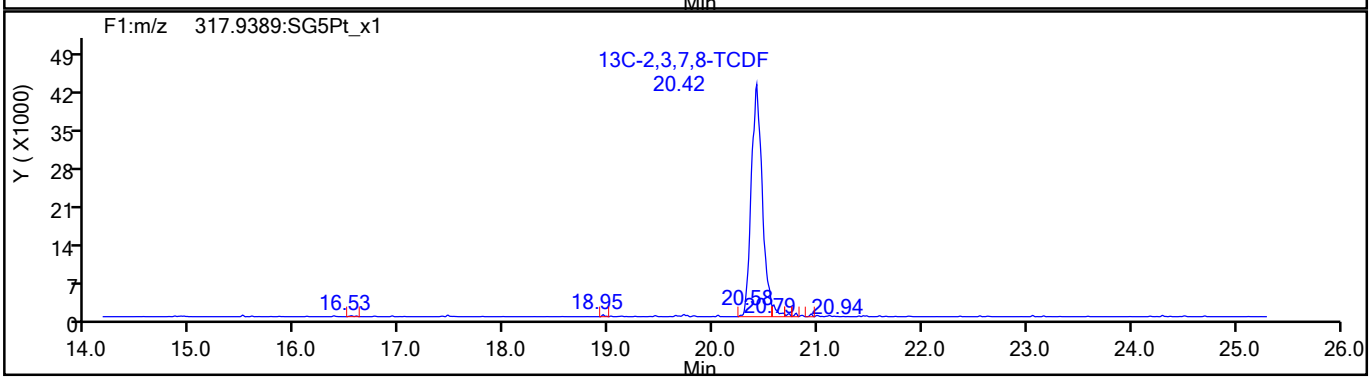

777581

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

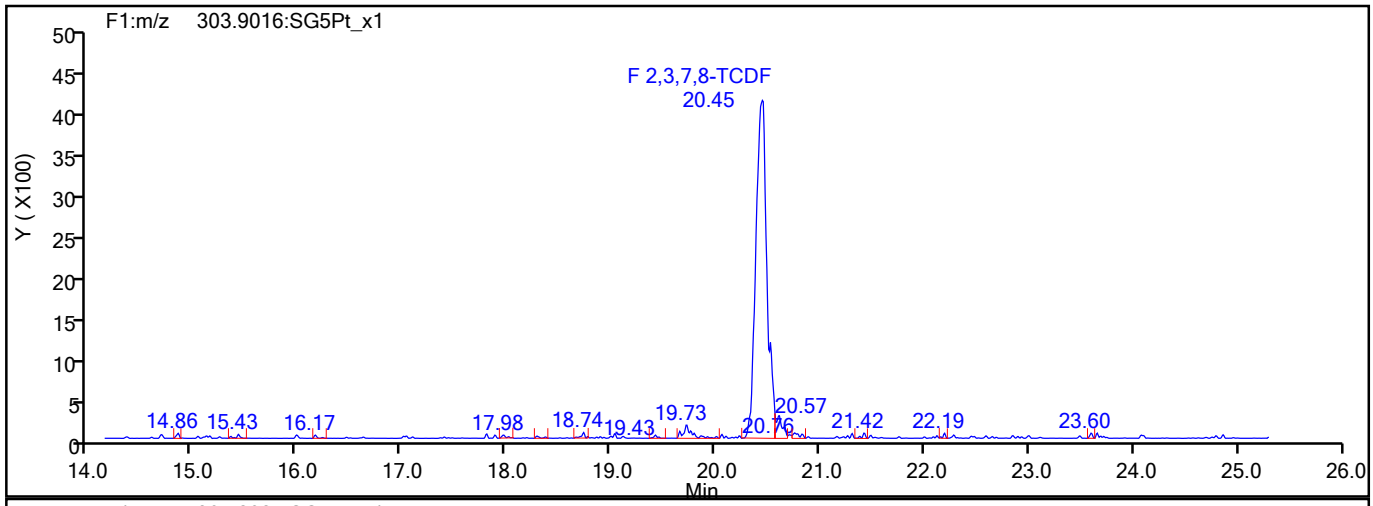

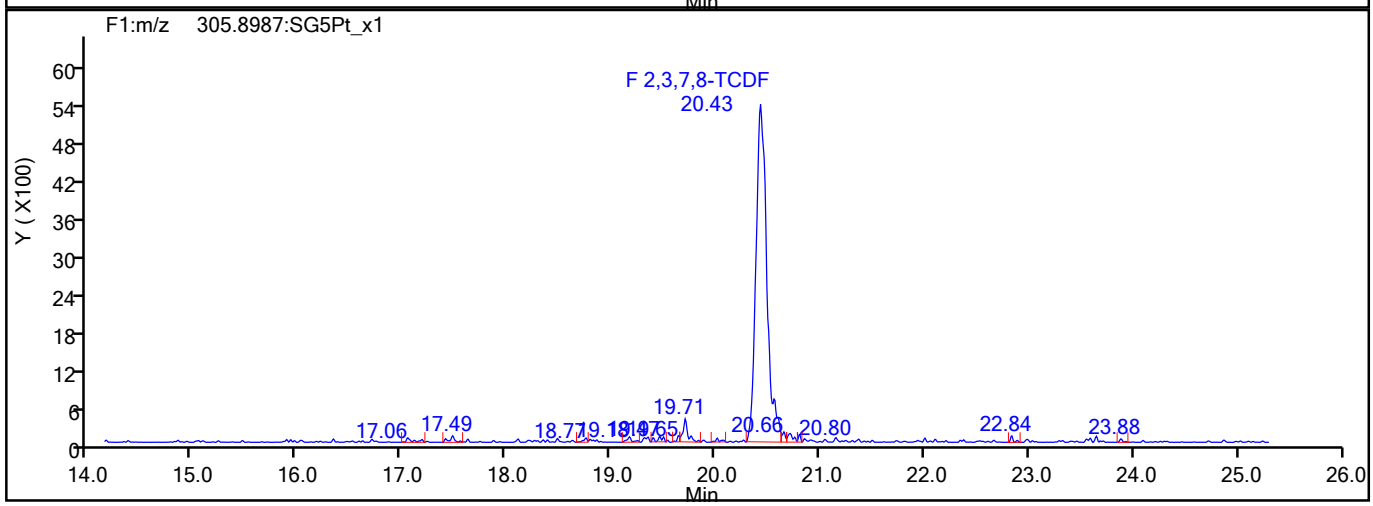

TCDF Interference Mass

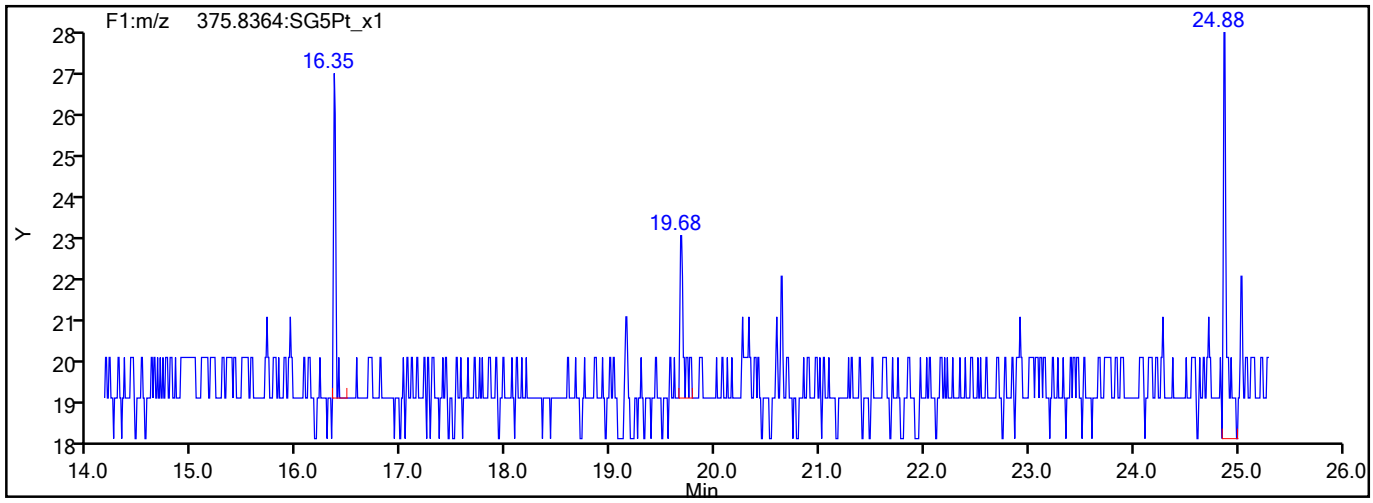

777582

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

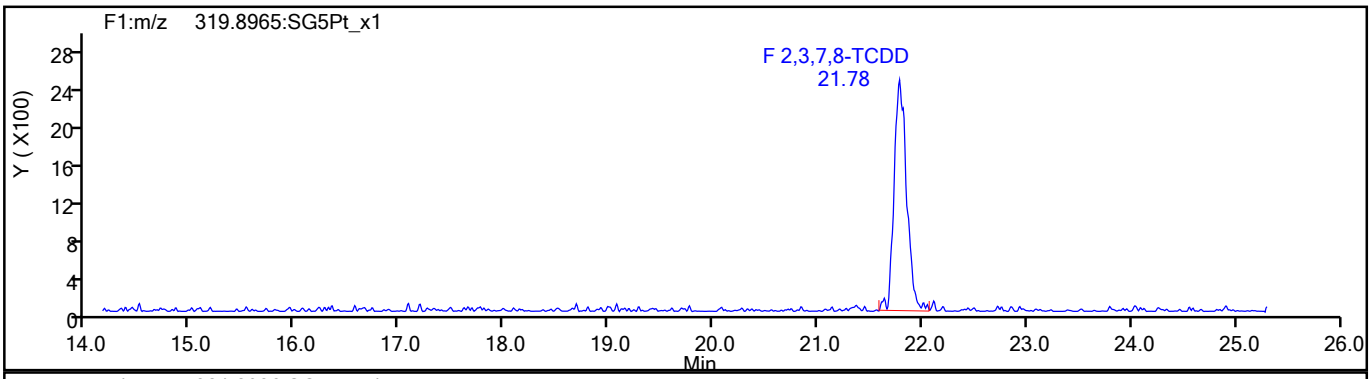

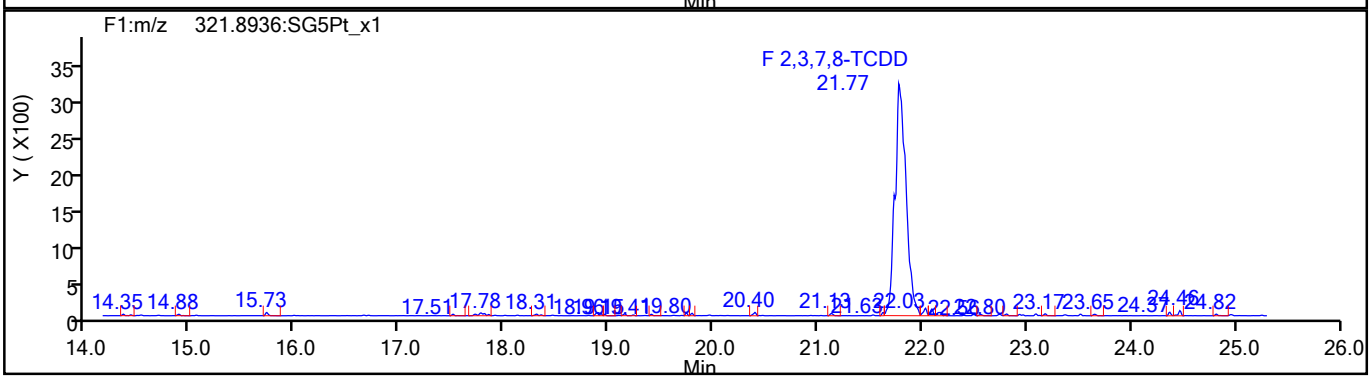

TCDD Standards

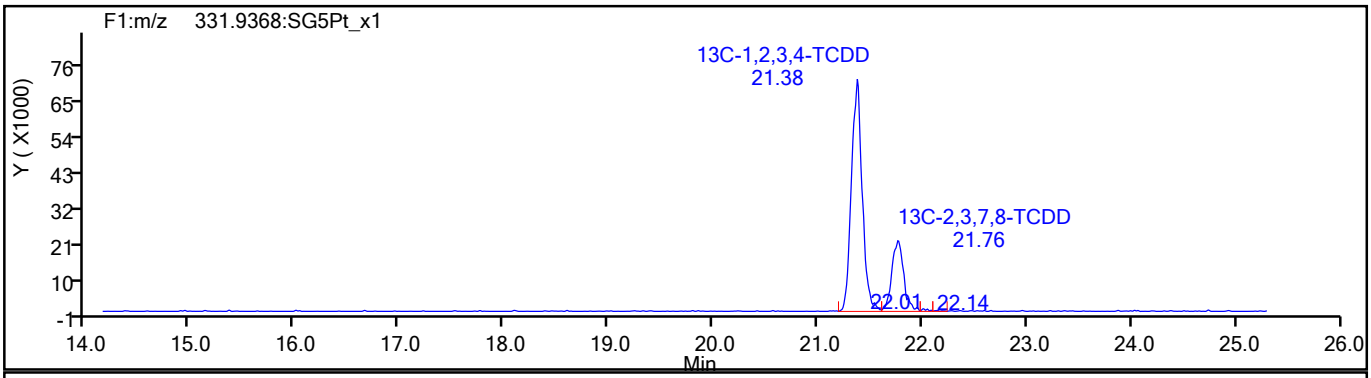

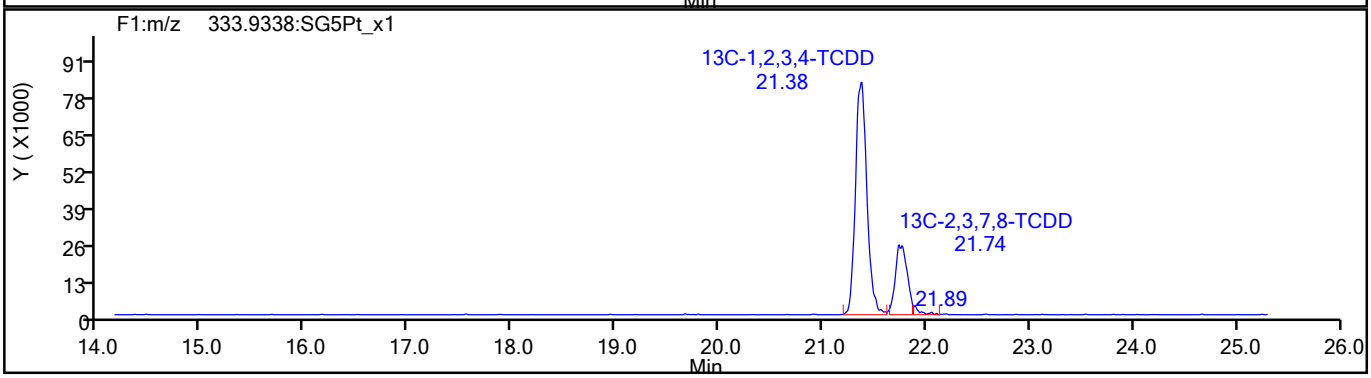

777583

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

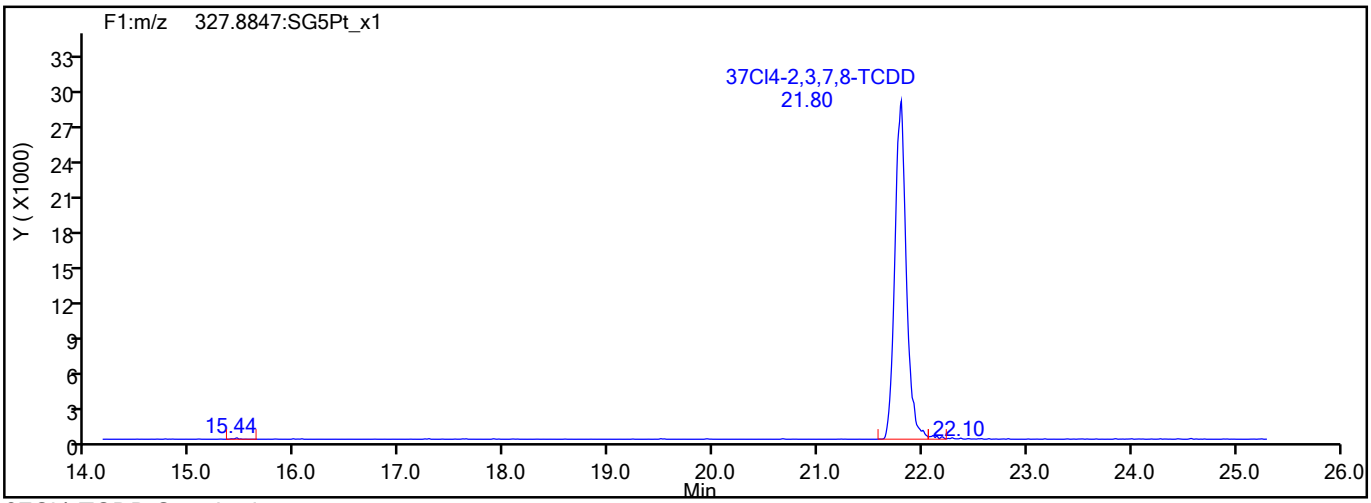

37Cl4-TCDD Standards

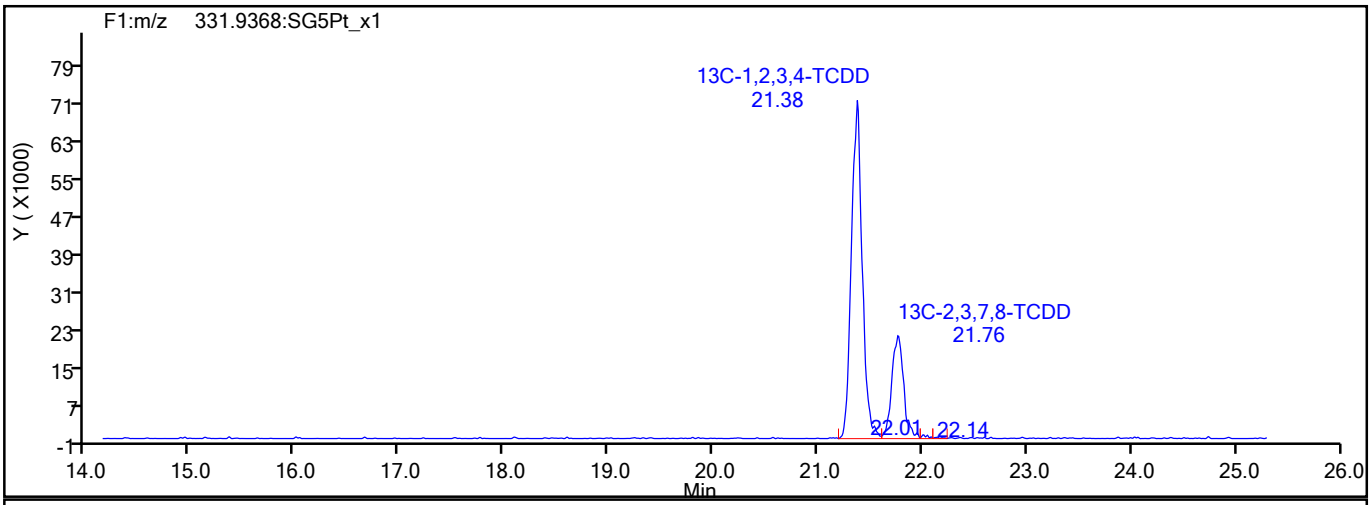

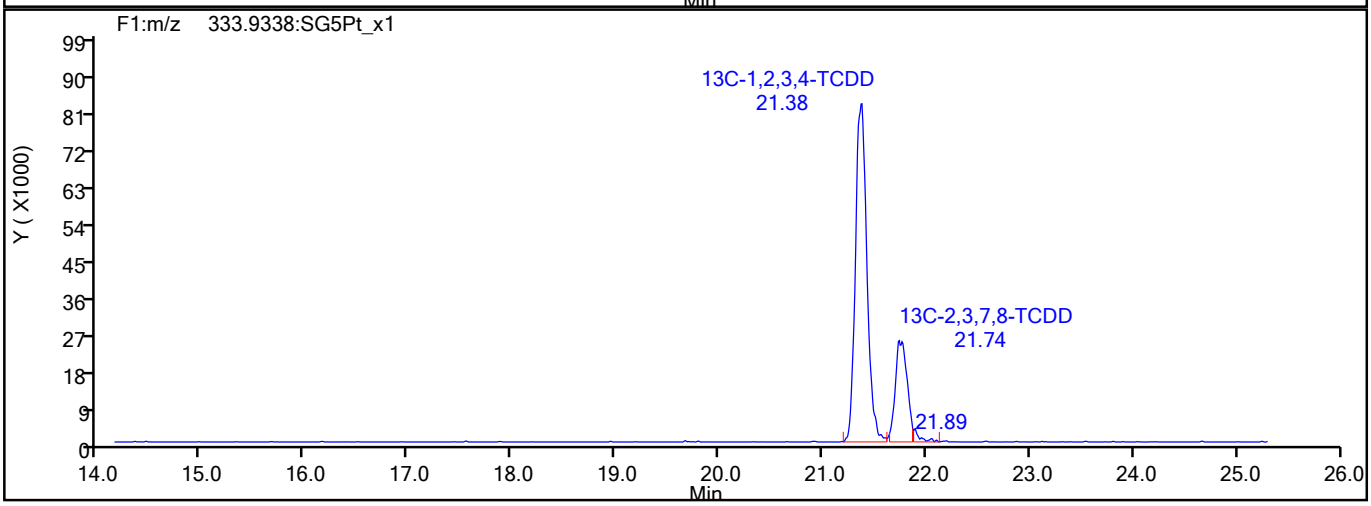

777584

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

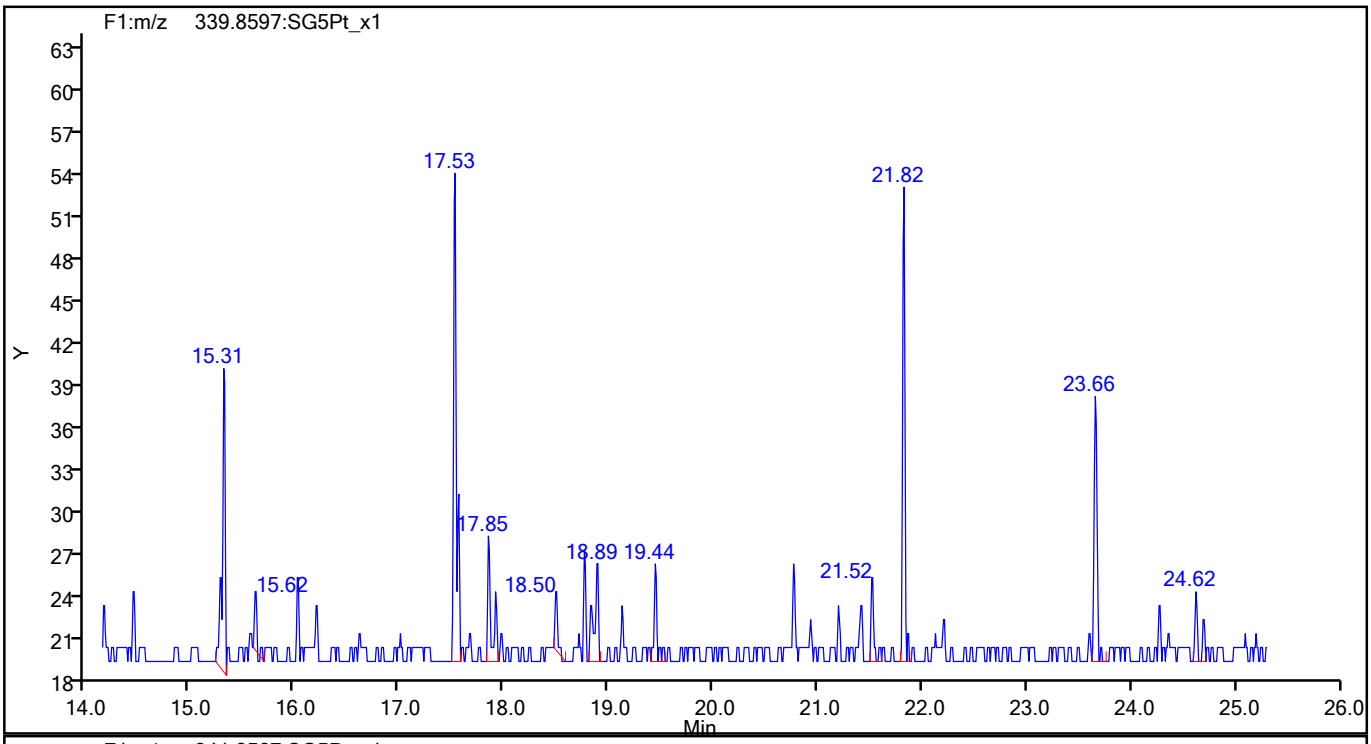

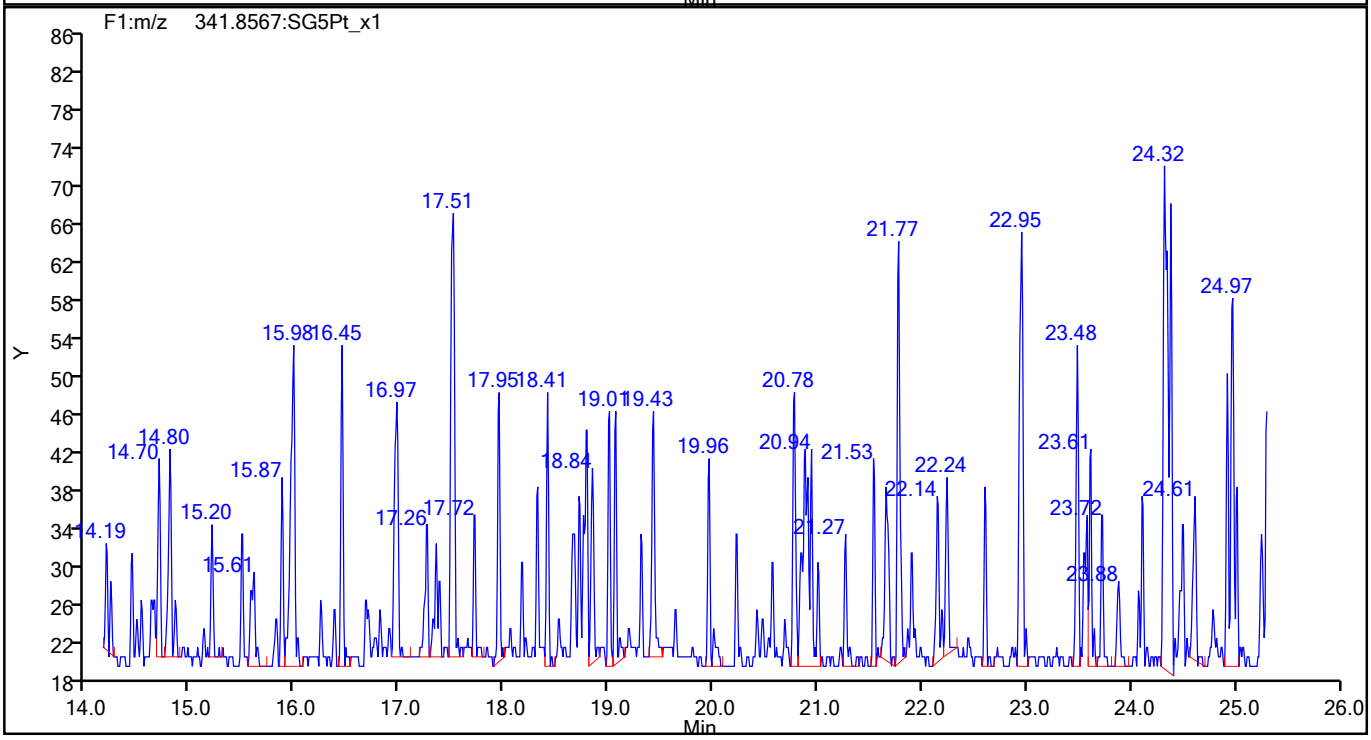

777585

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

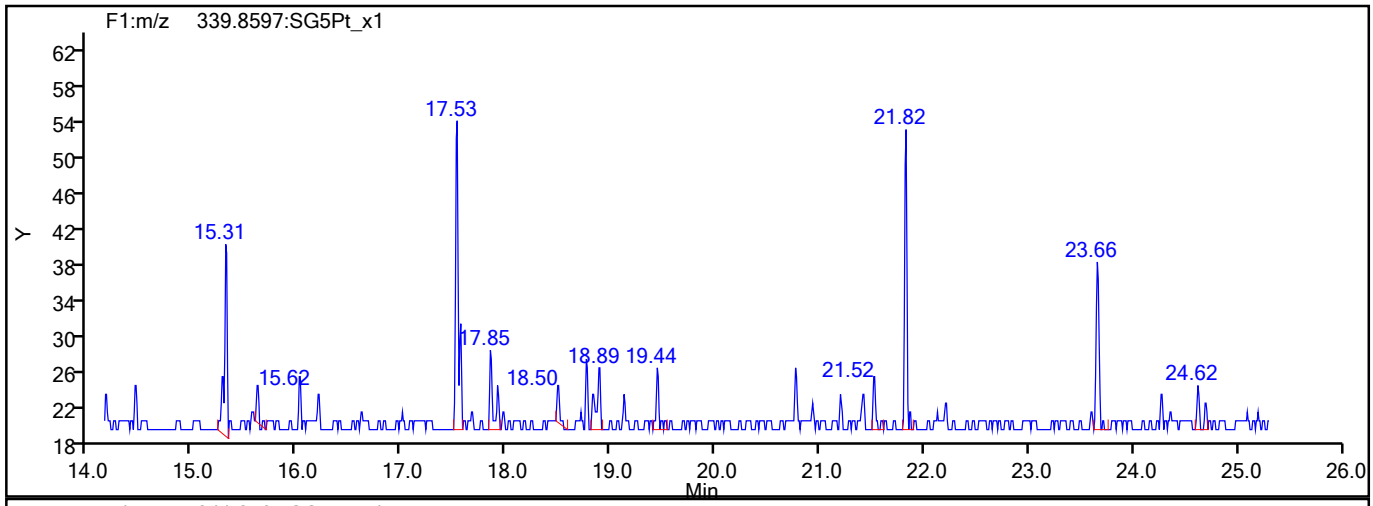

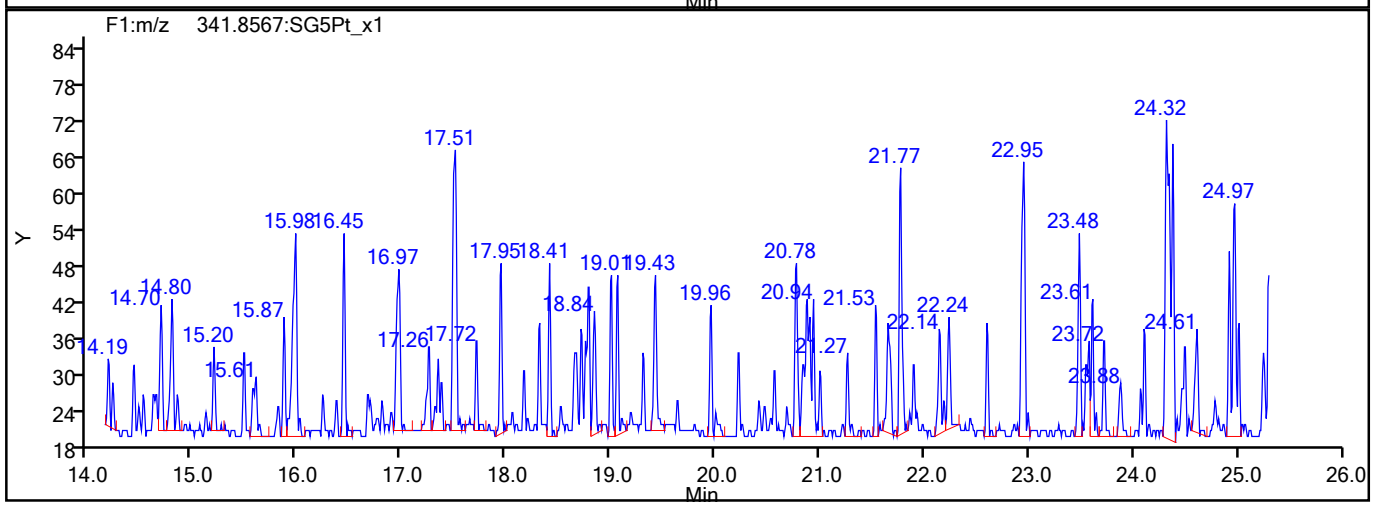

F1 PeCDFs Interference Mass

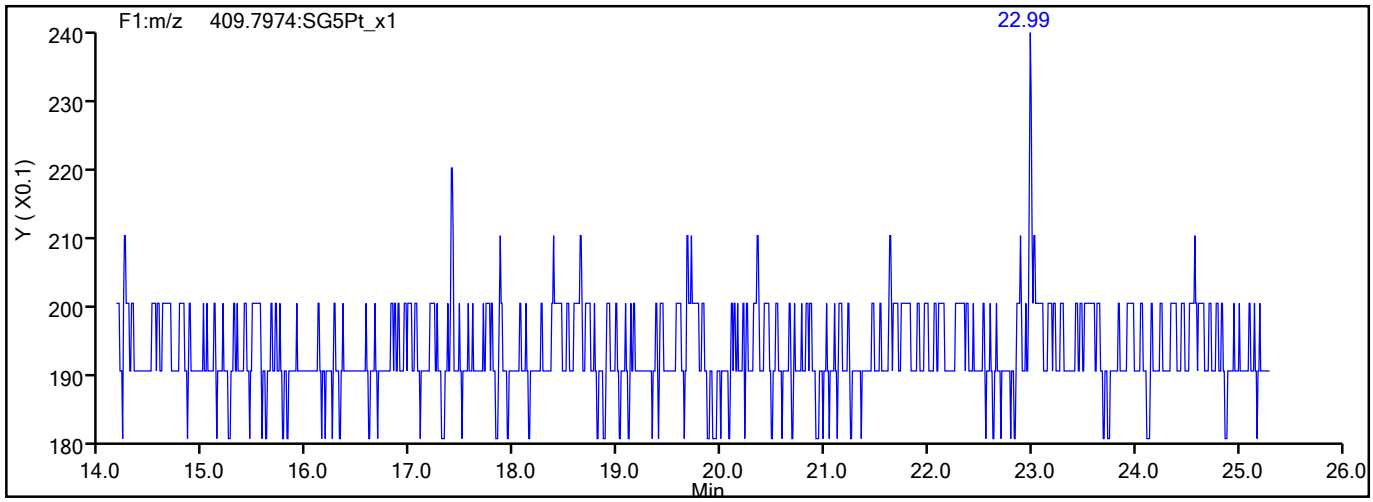

777586

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

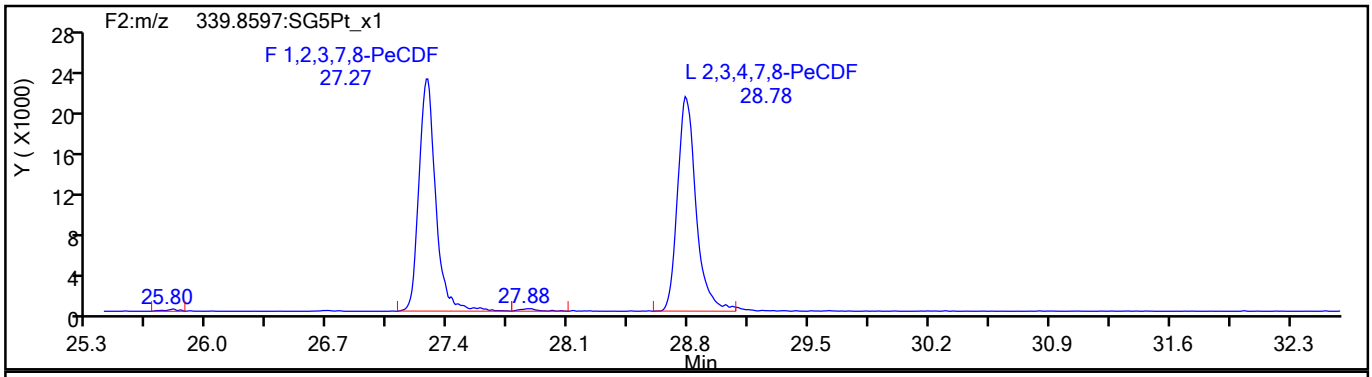

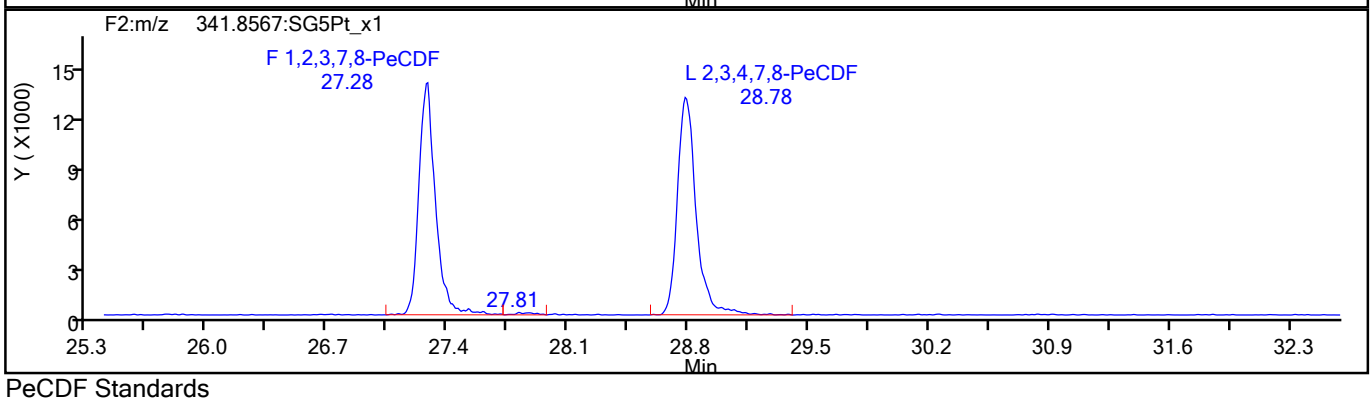

PeCDF Standards

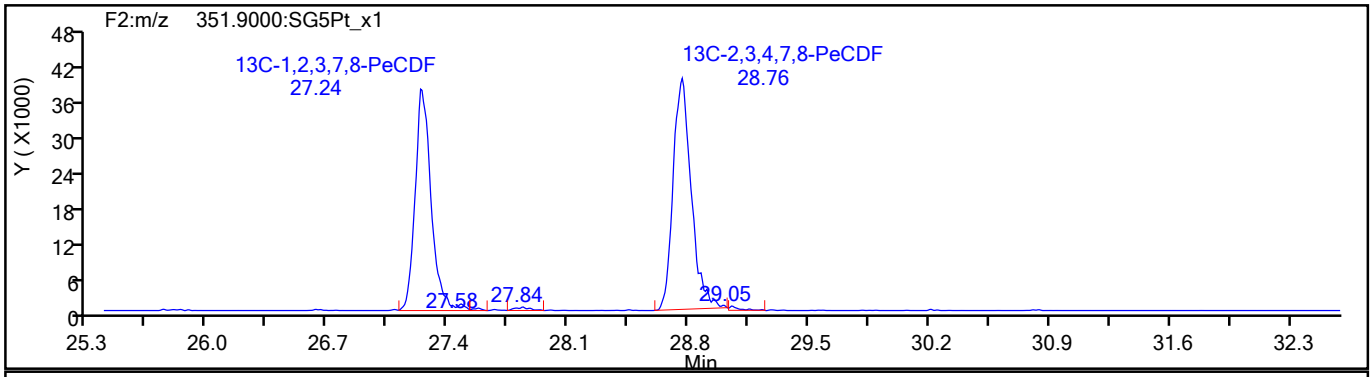

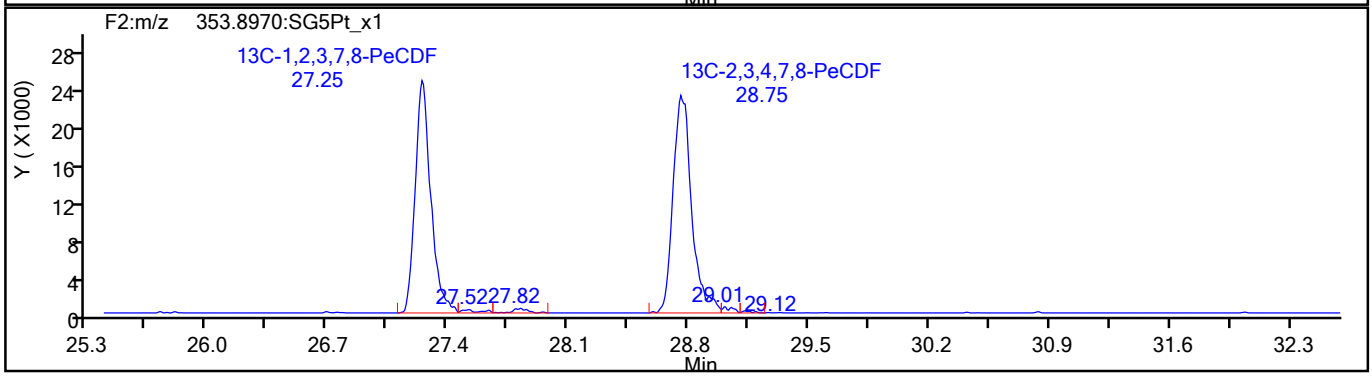

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Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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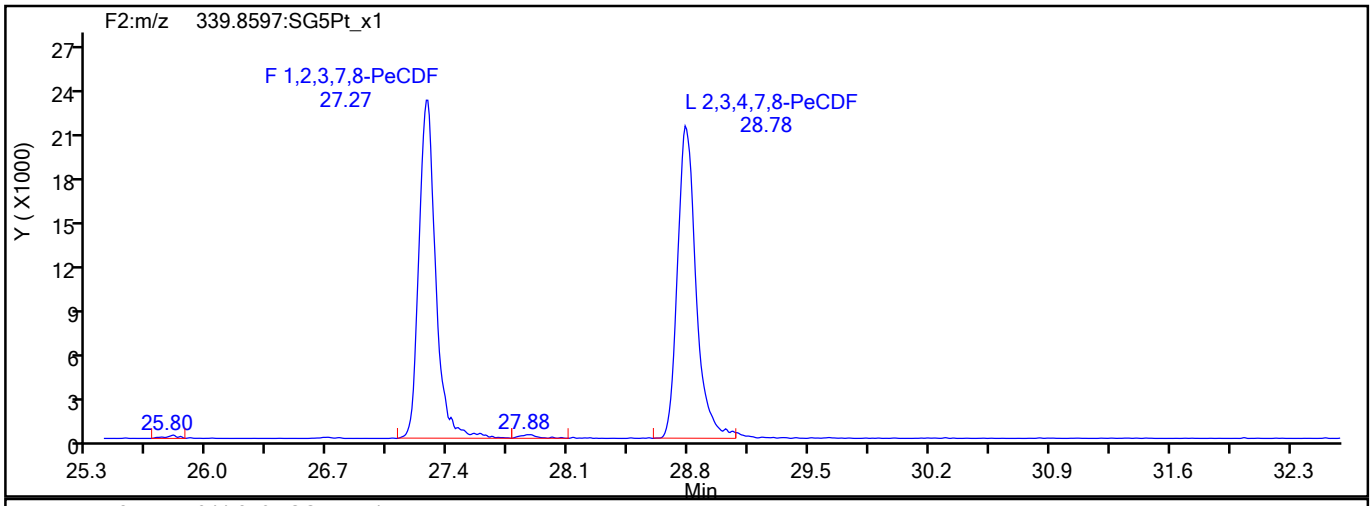

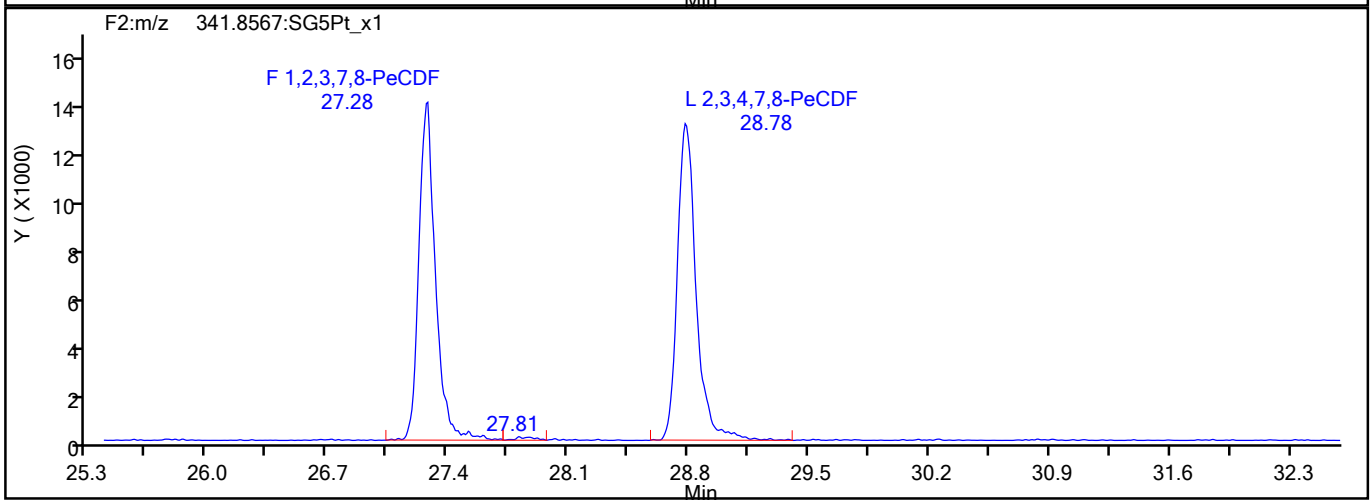

PeCDF Interference Mass

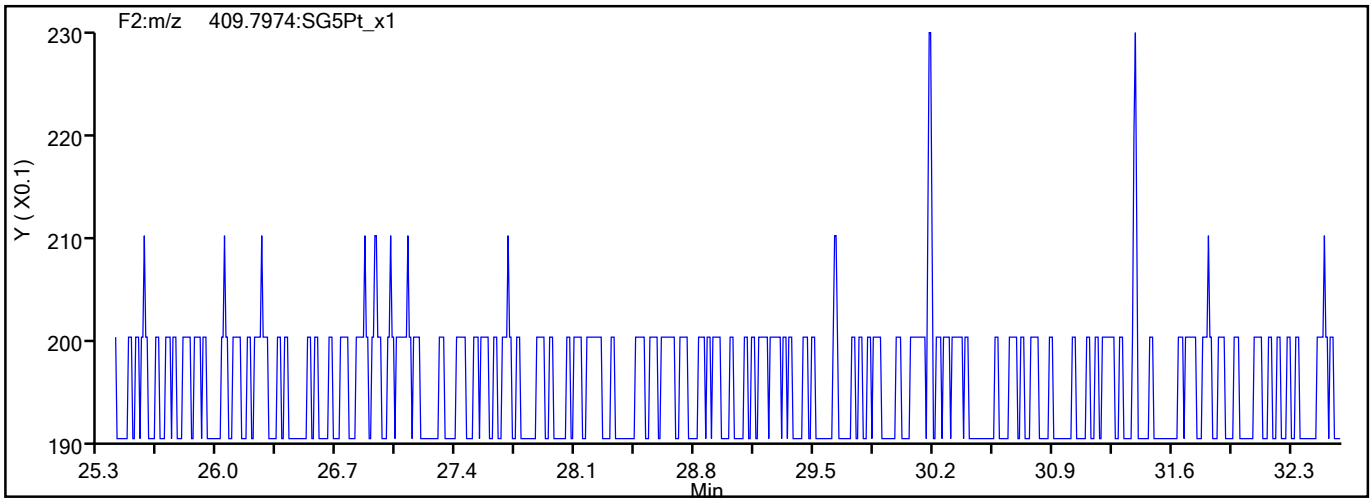

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Eurofins TestAmerica, Sacramento

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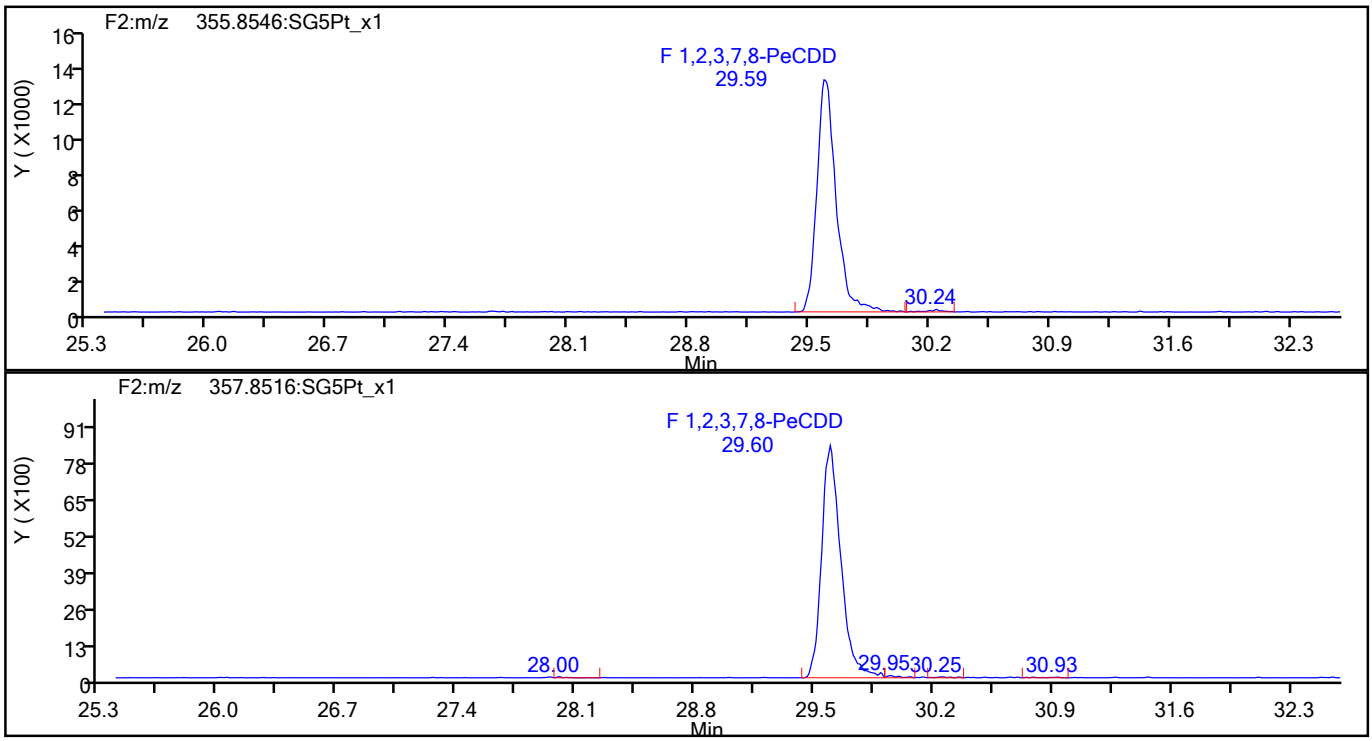

PeCDD Standards

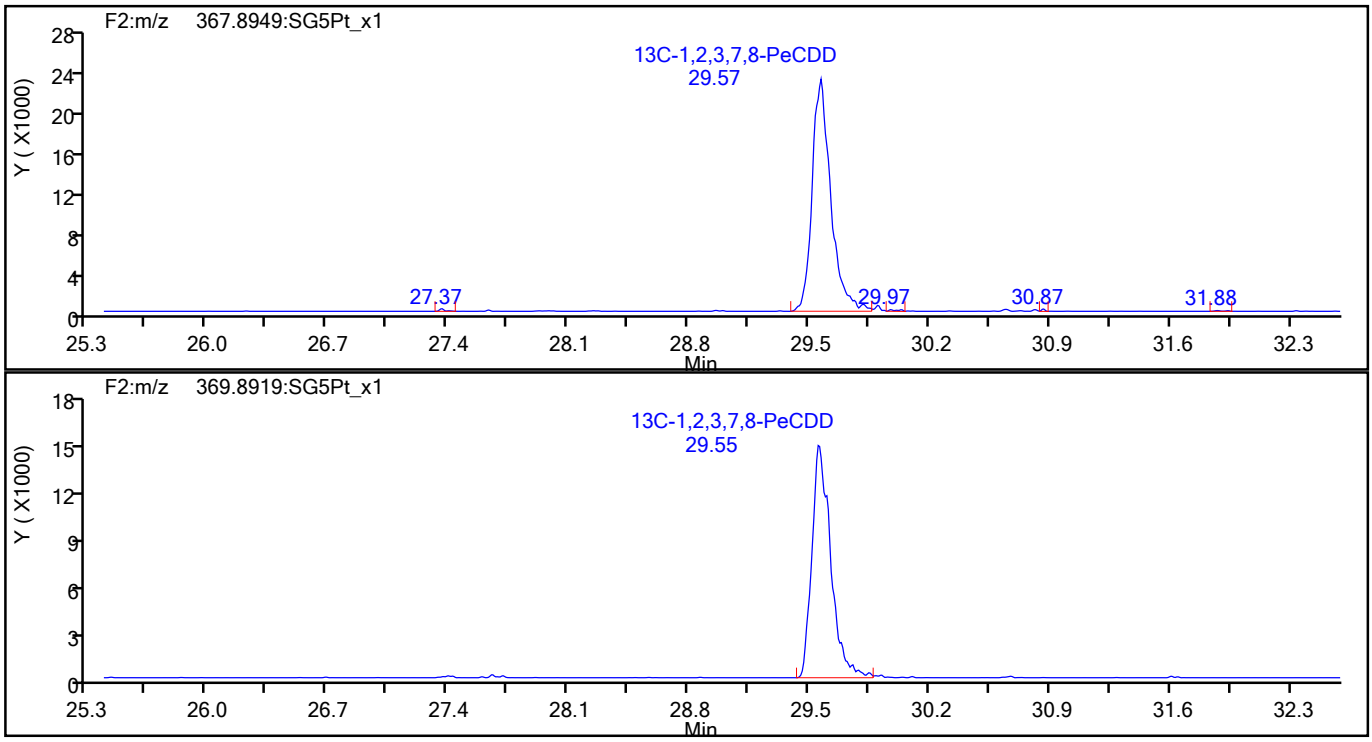

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Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

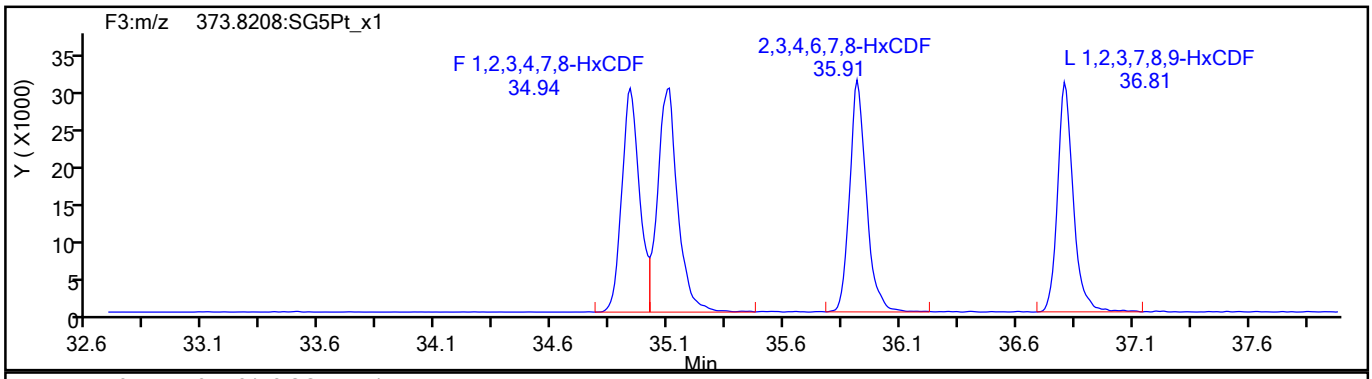

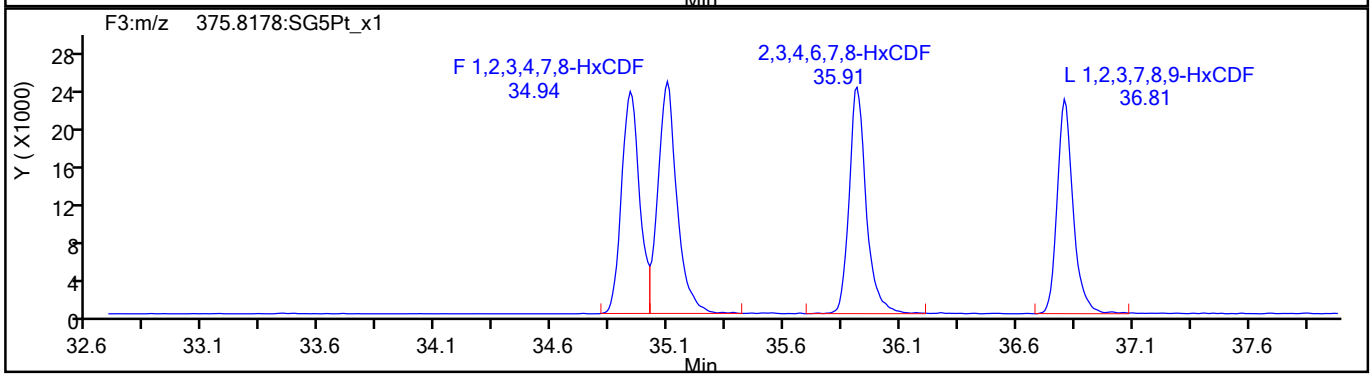

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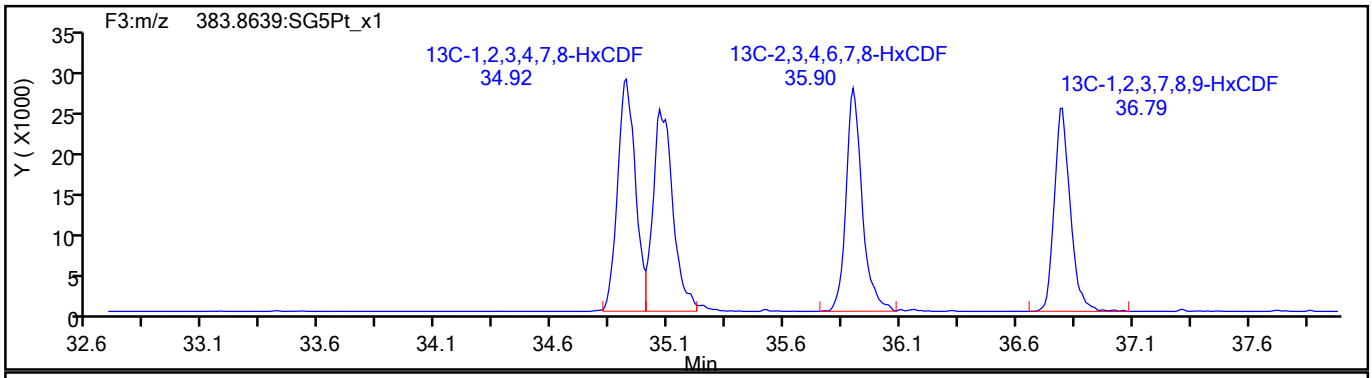

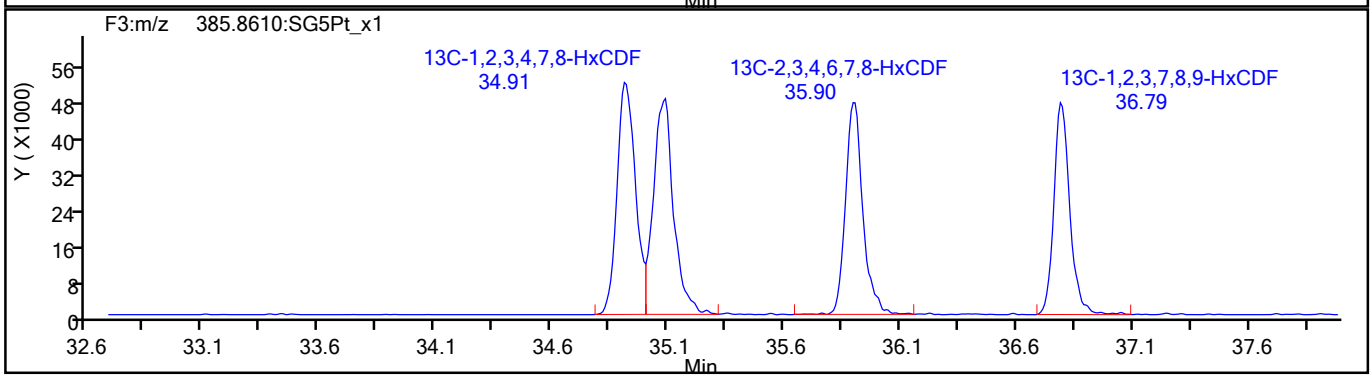

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Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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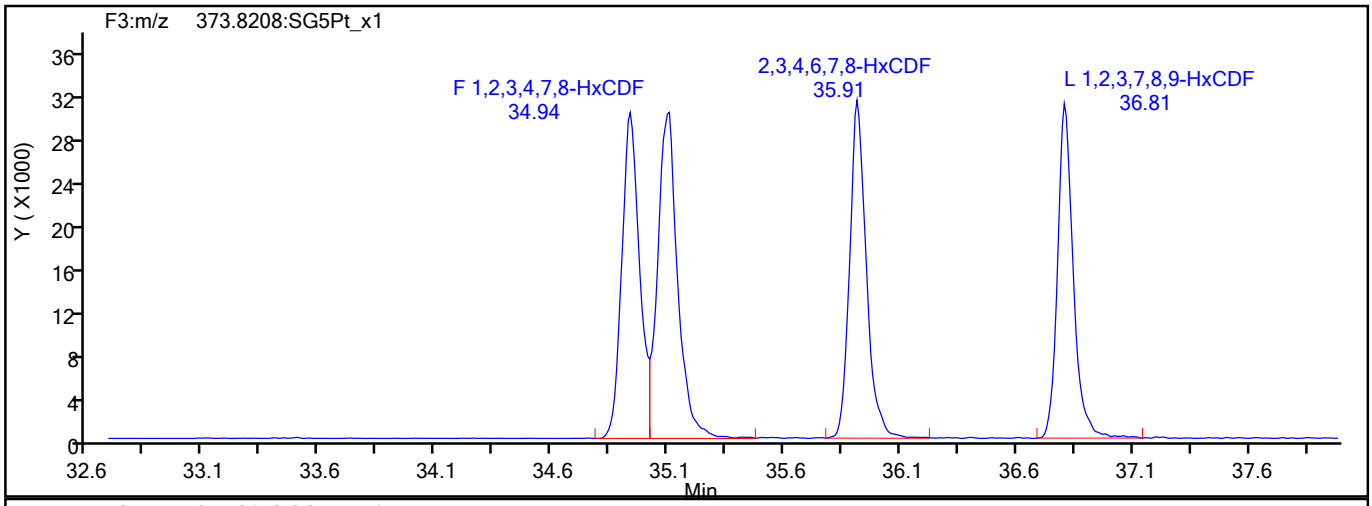

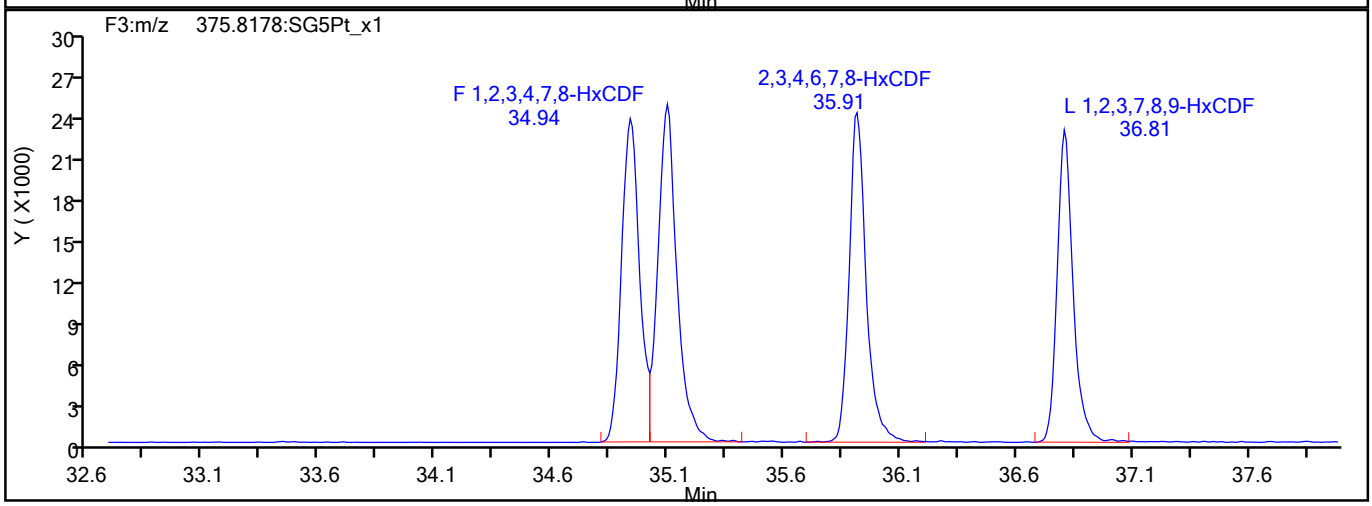

HxCDF Interference Mass

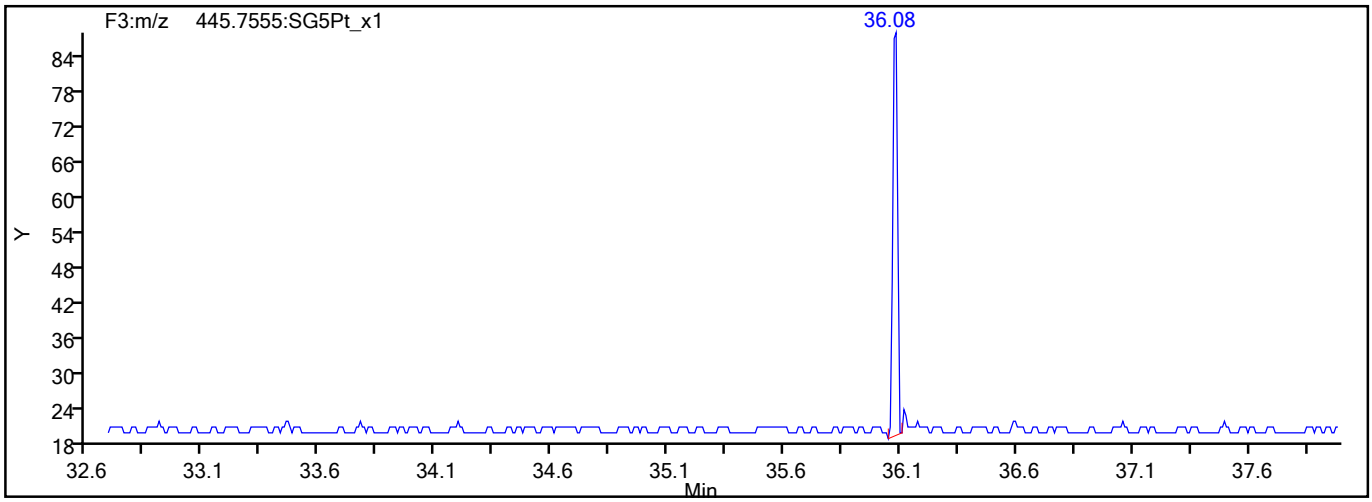

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Eurofins TestAmerica, Sacramento

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HxCDD

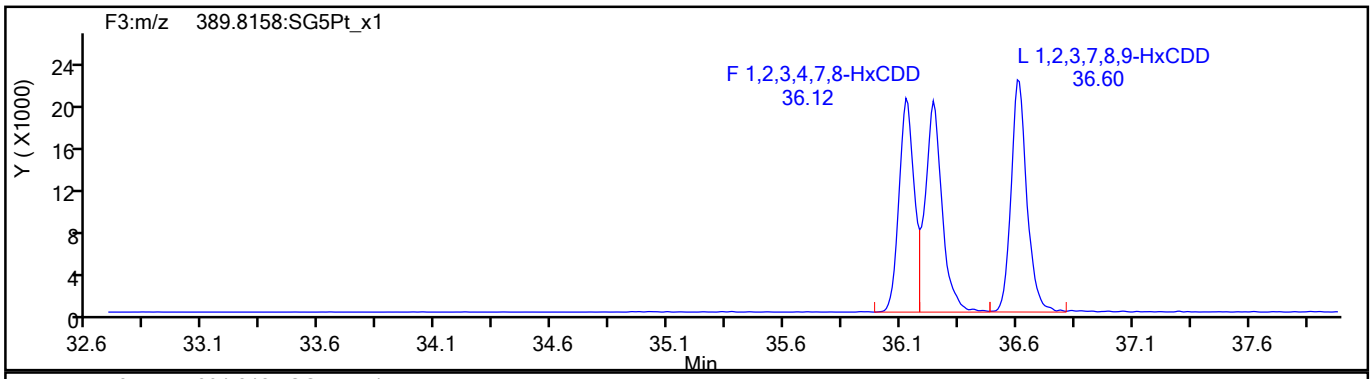

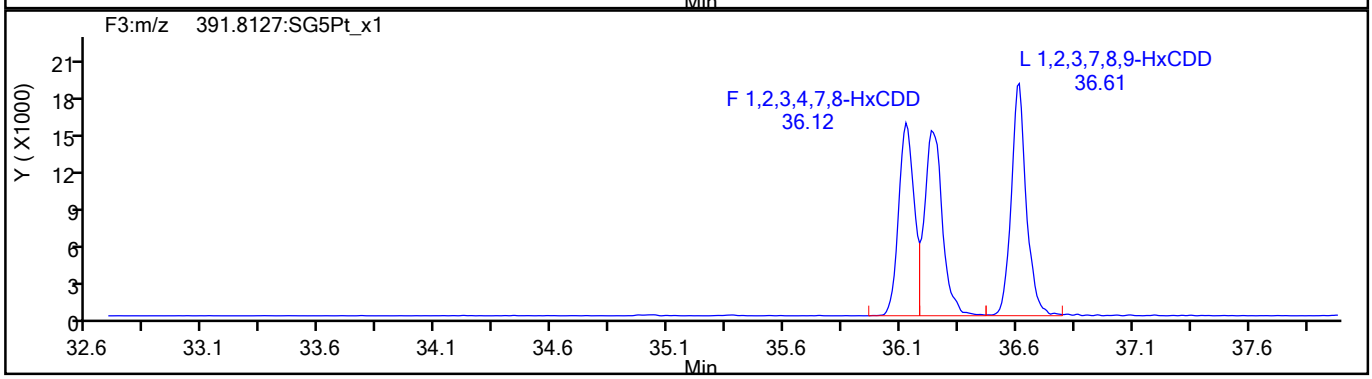

HxCDD Standards

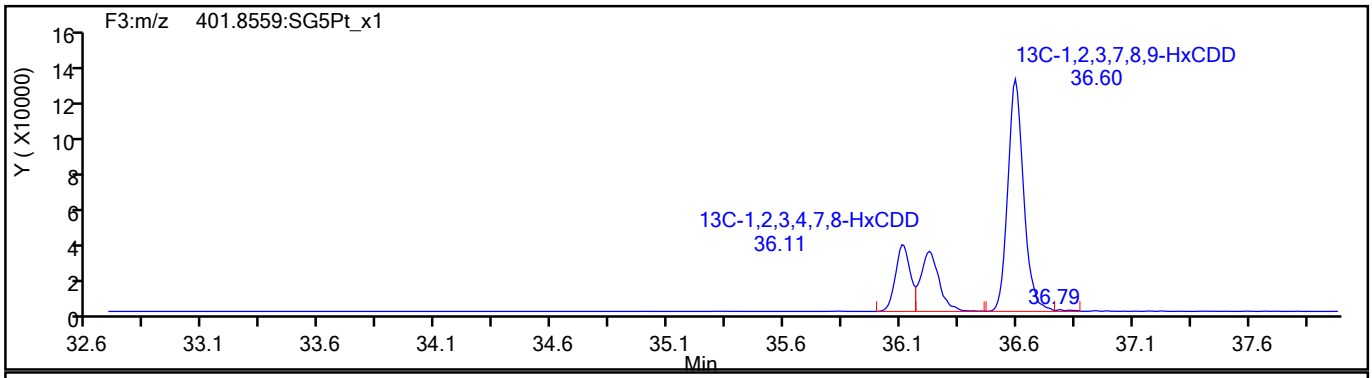

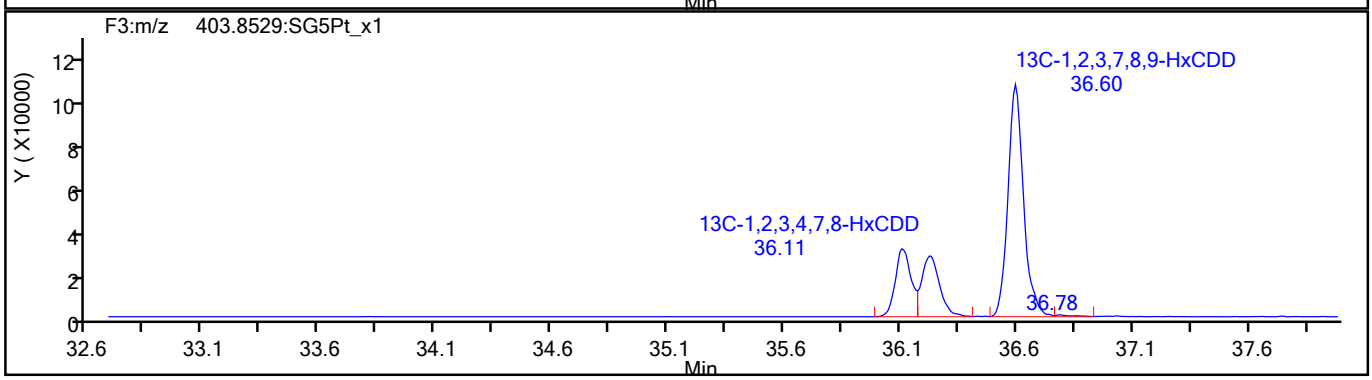

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Eurofins TestAmerica, Sacramento

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HpCDF

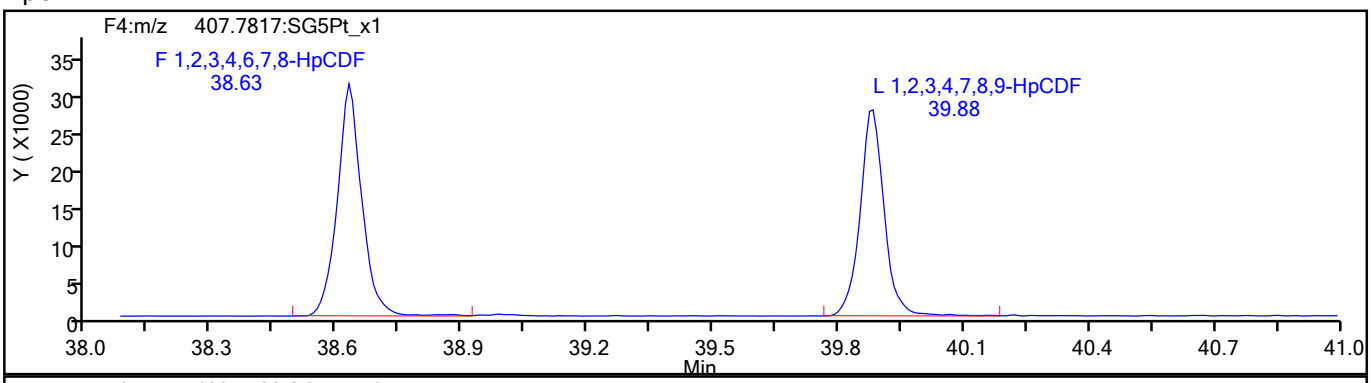

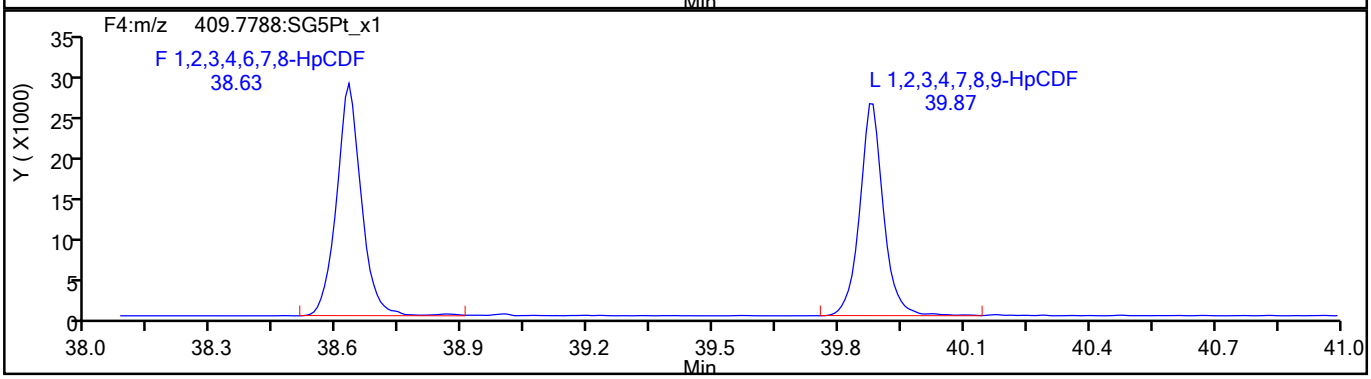

HpCDF Standards

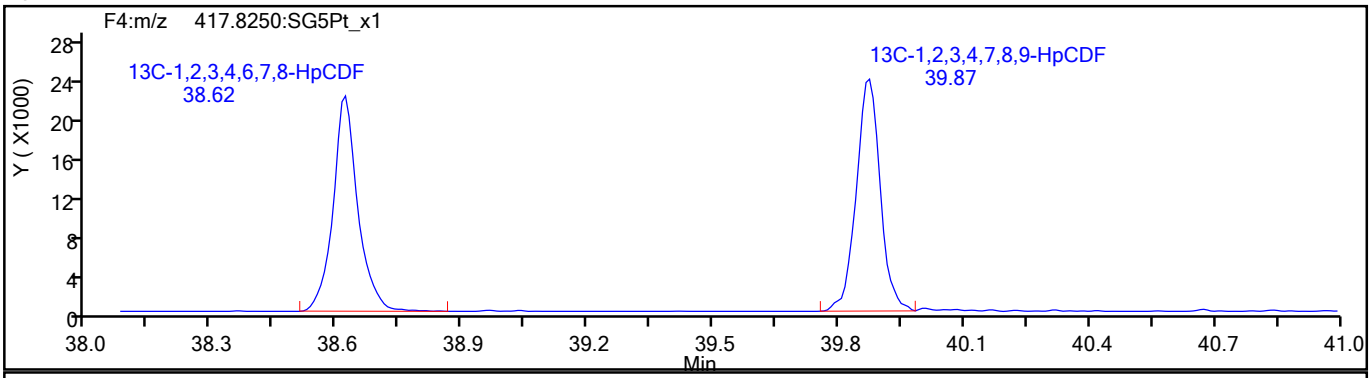

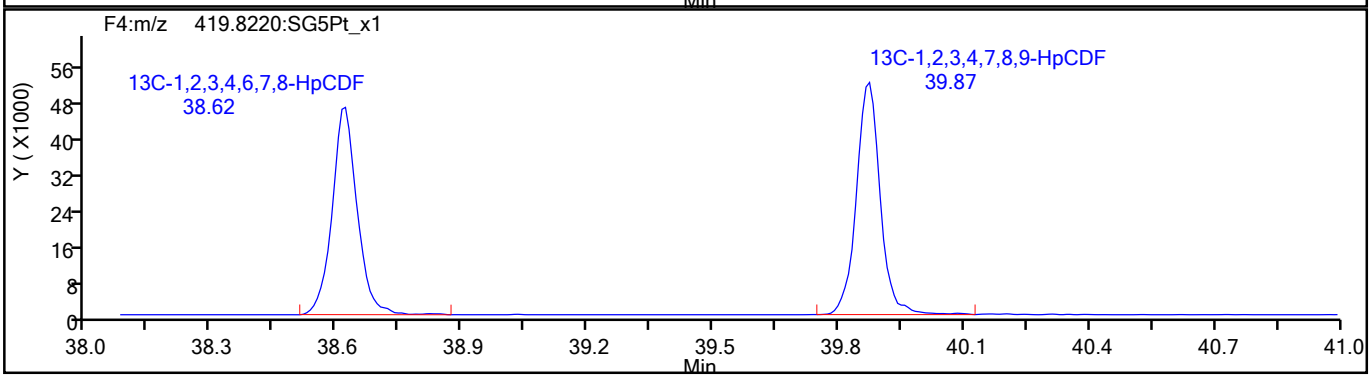

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Eurofins TestAmerica, Sacramento

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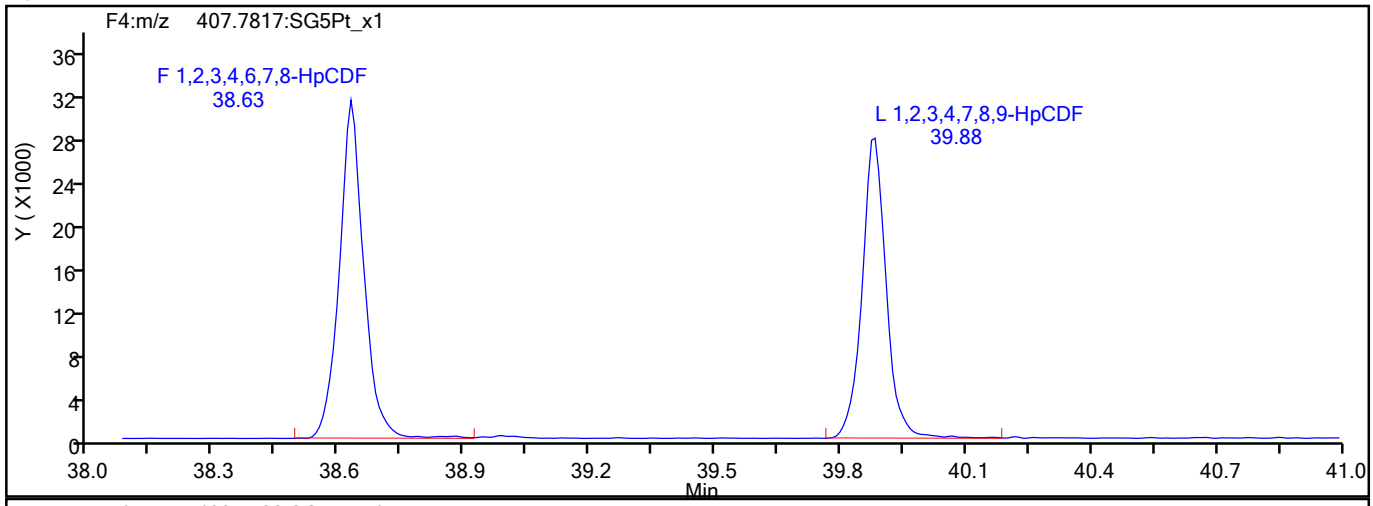

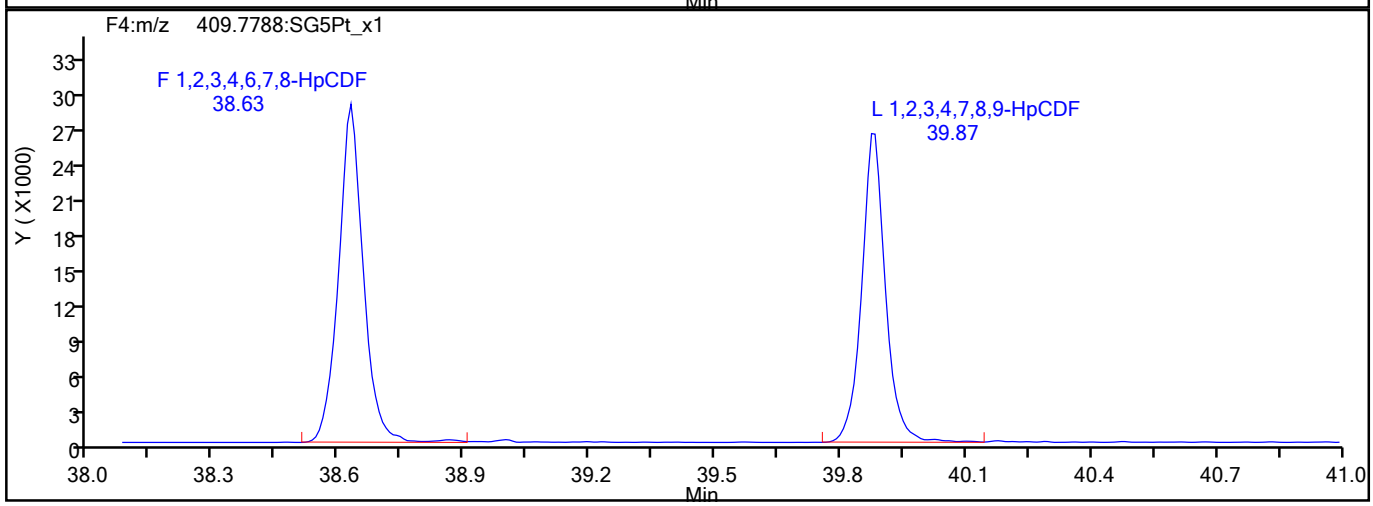

HpCDF Interference Mass

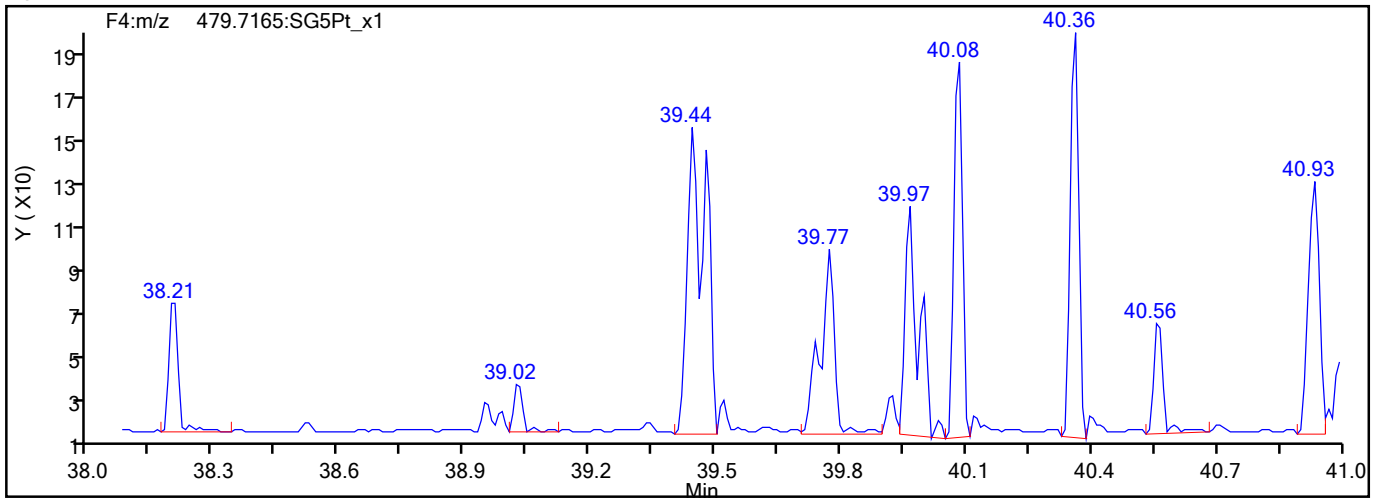

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Eurofins TestAmerica, Sacramento

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HpCDD

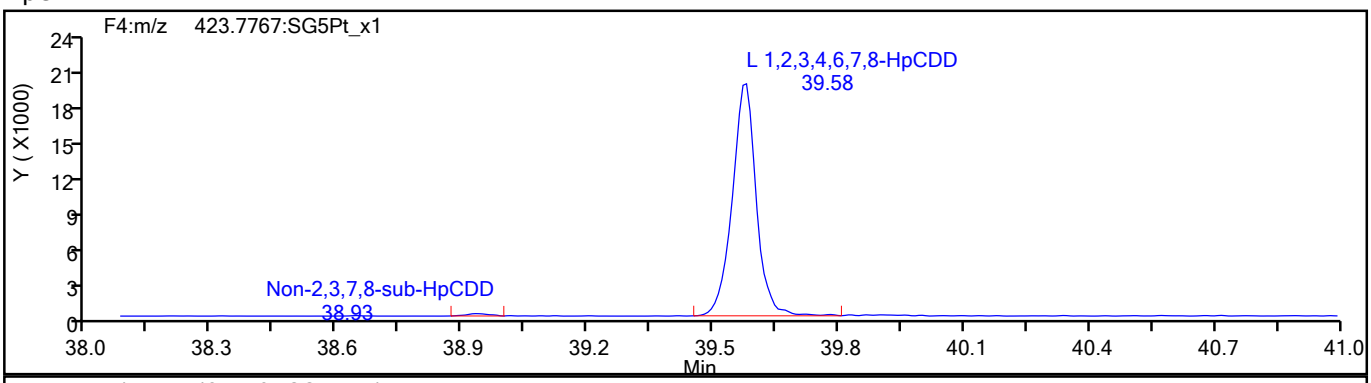

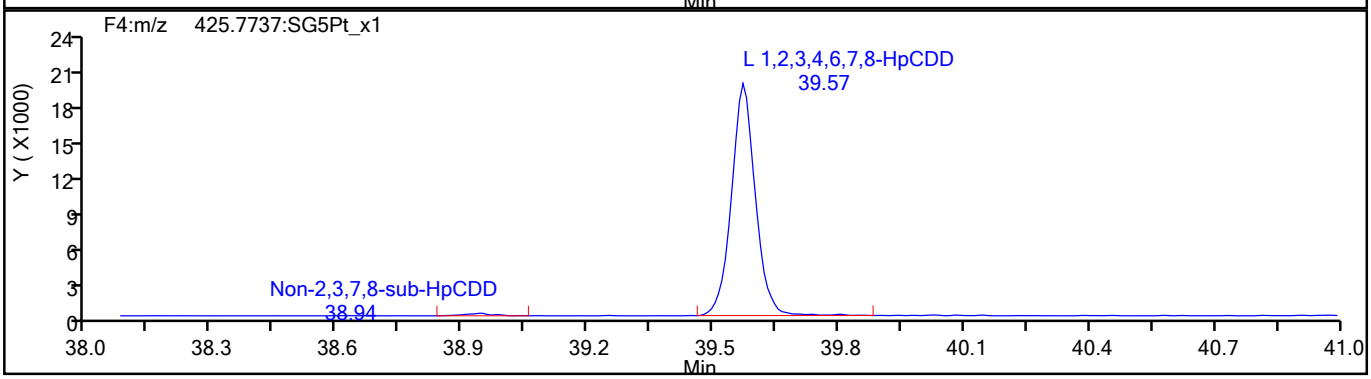

HpCDD Standards

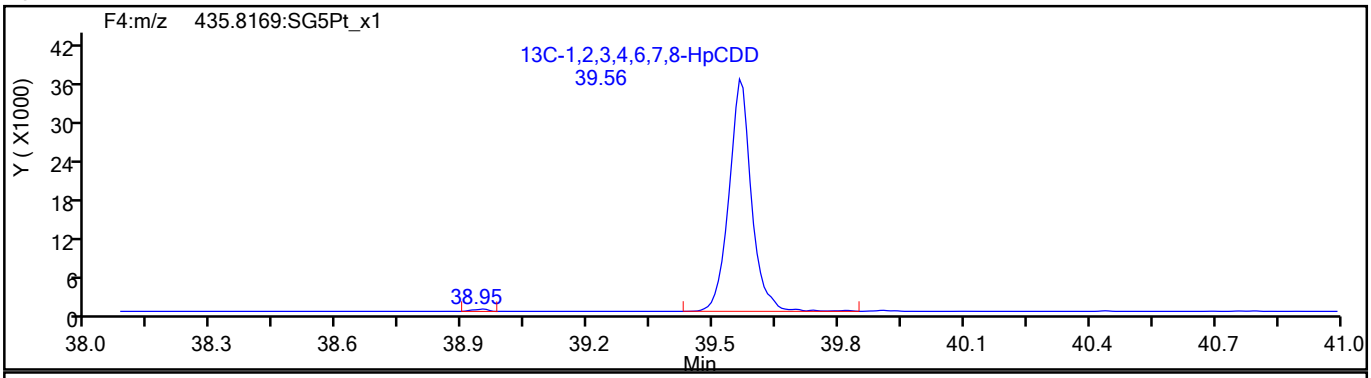

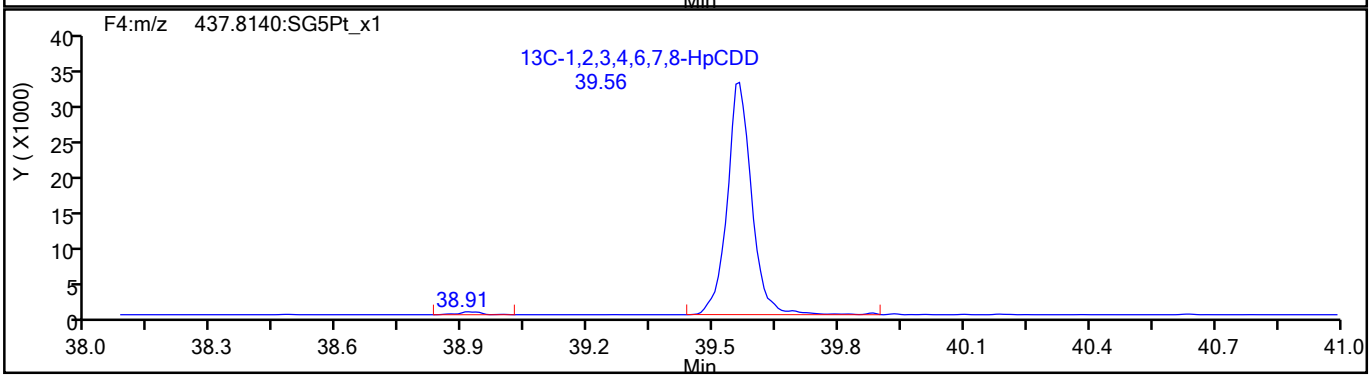

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Eurofins TestAmerica, Sacramento

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OCDF

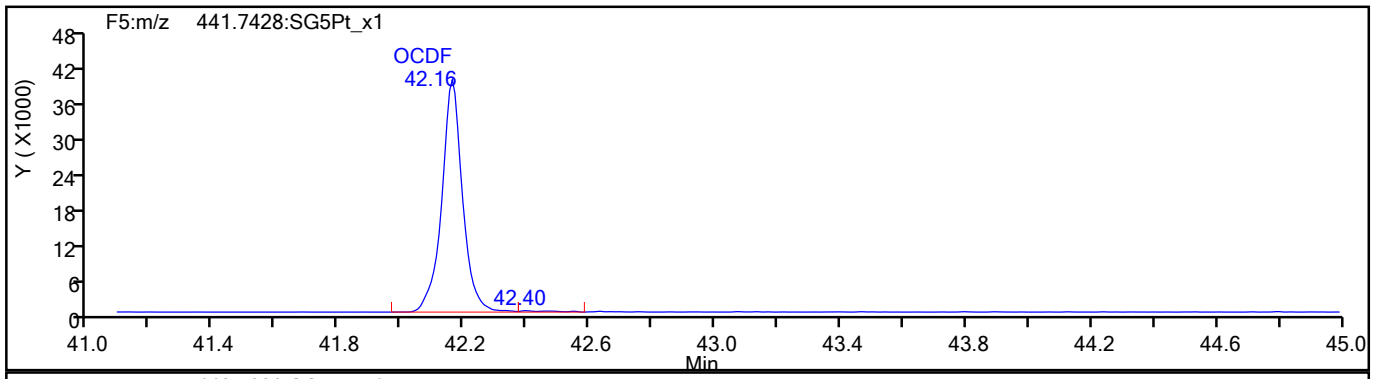

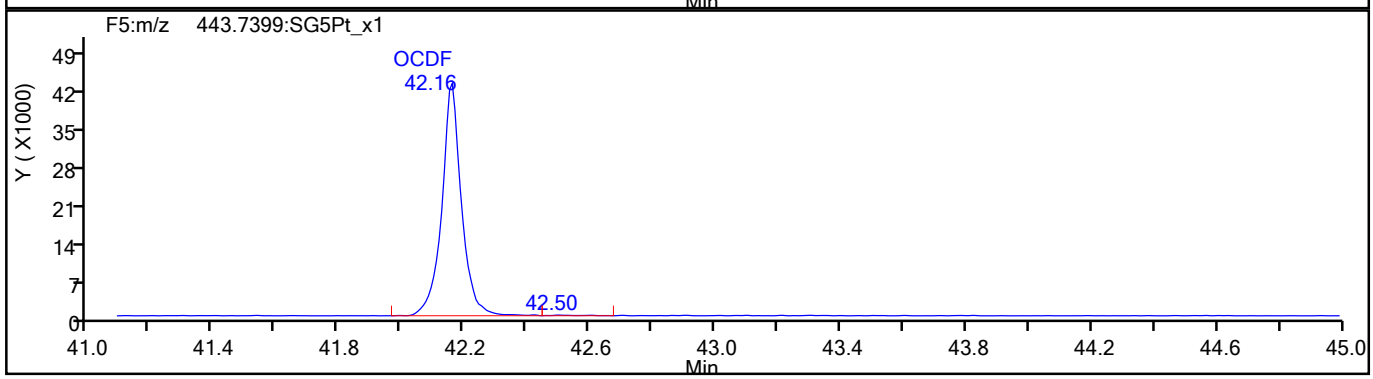

OCDF Standards

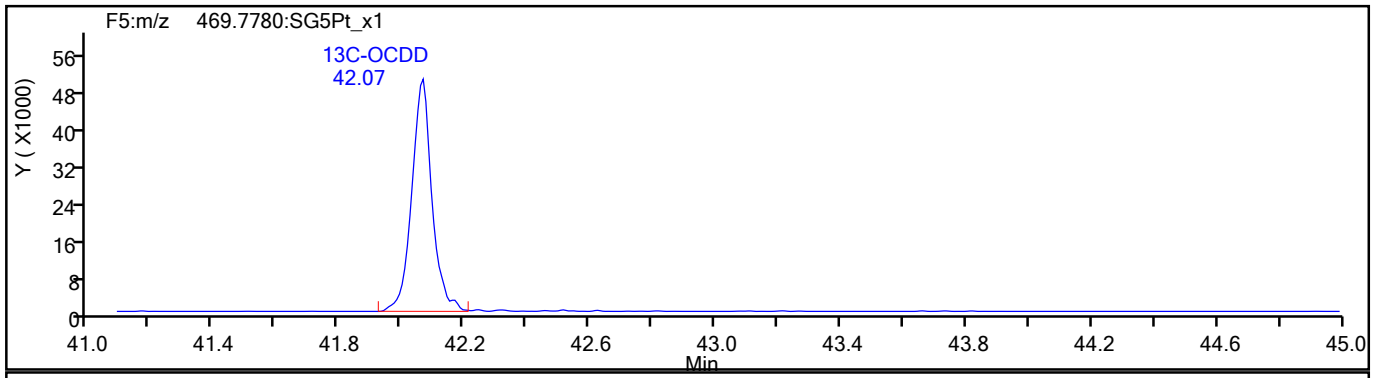

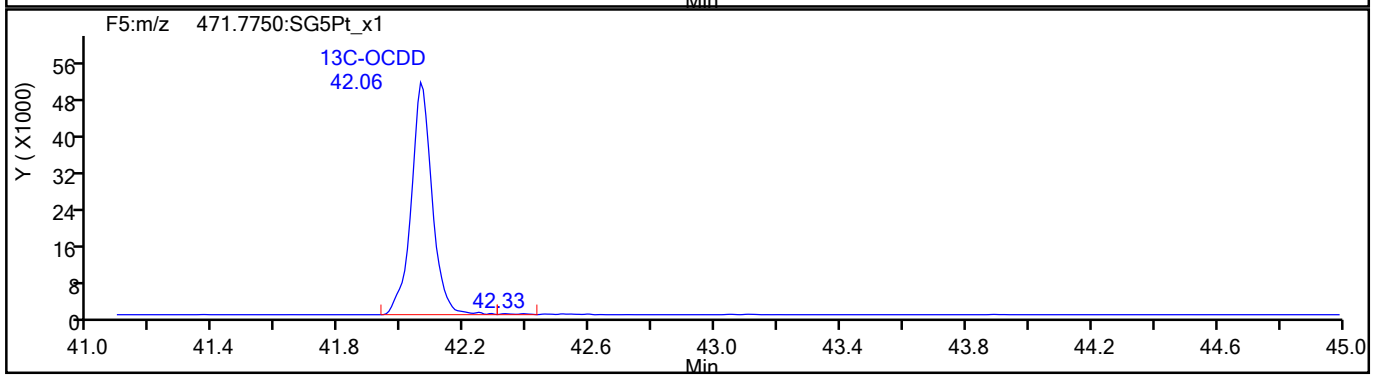

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Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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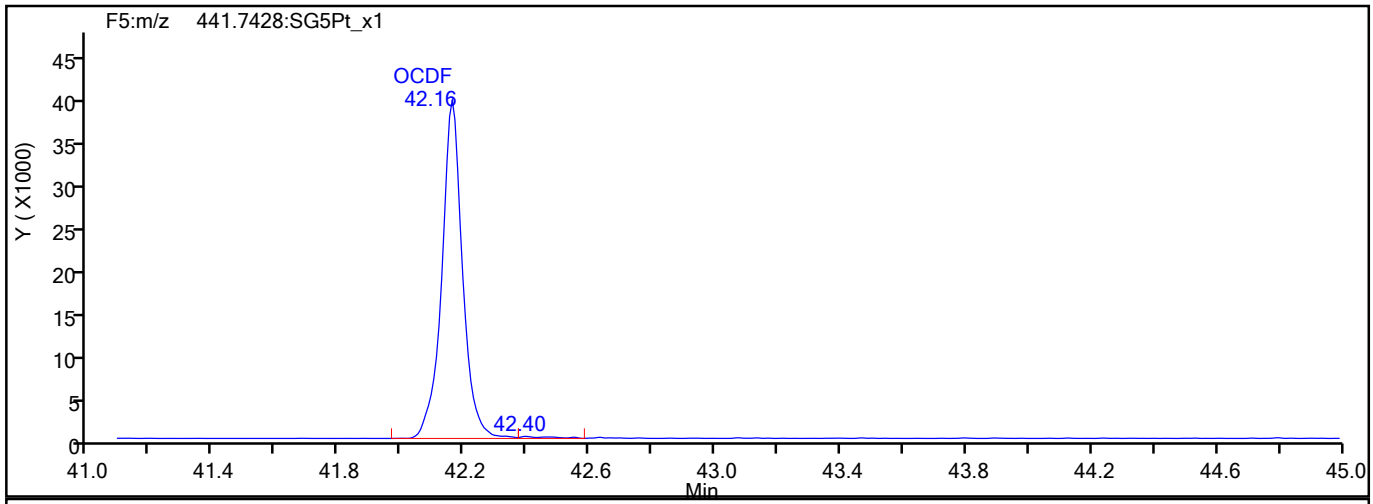

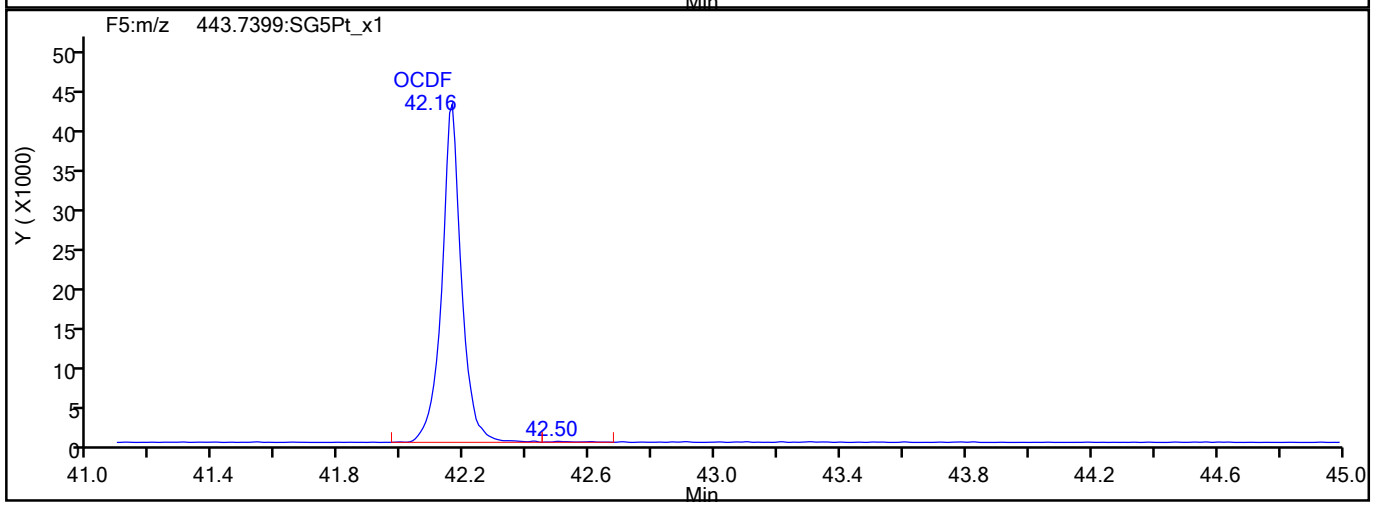

OCDF Interference Mass

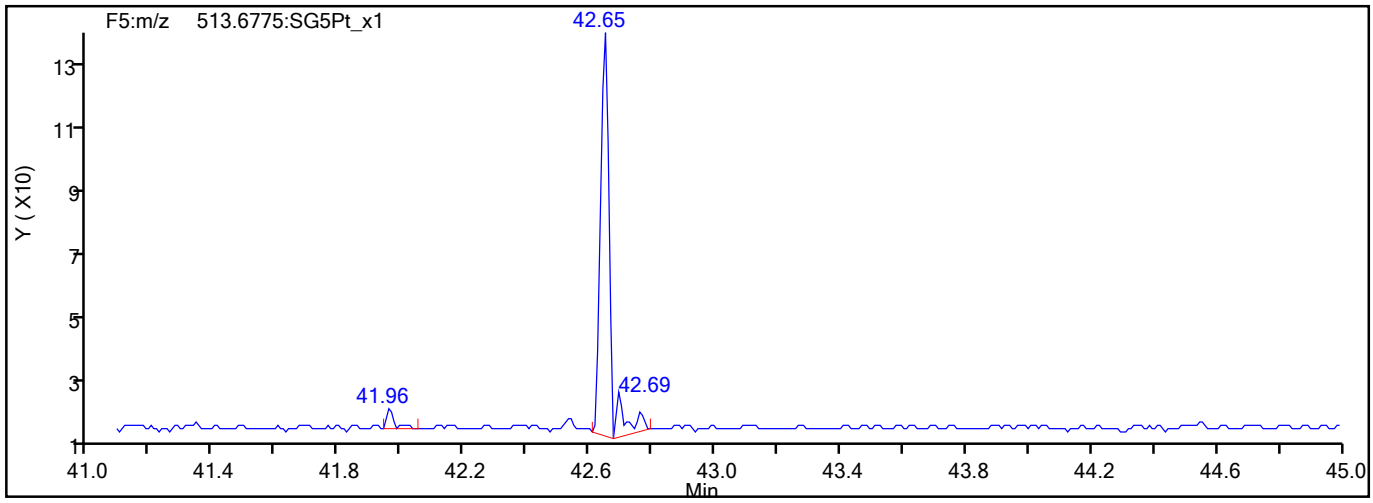

777597

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

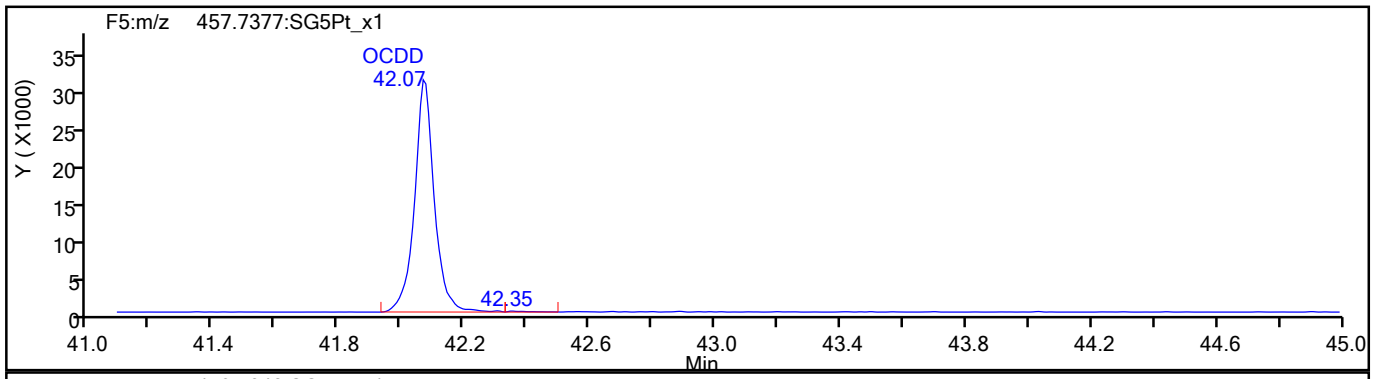

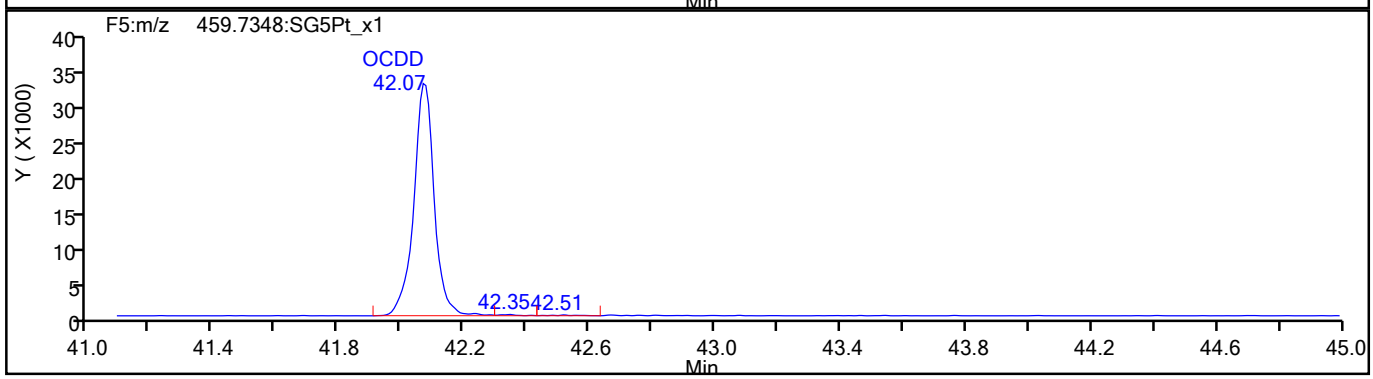

OCDD Standards

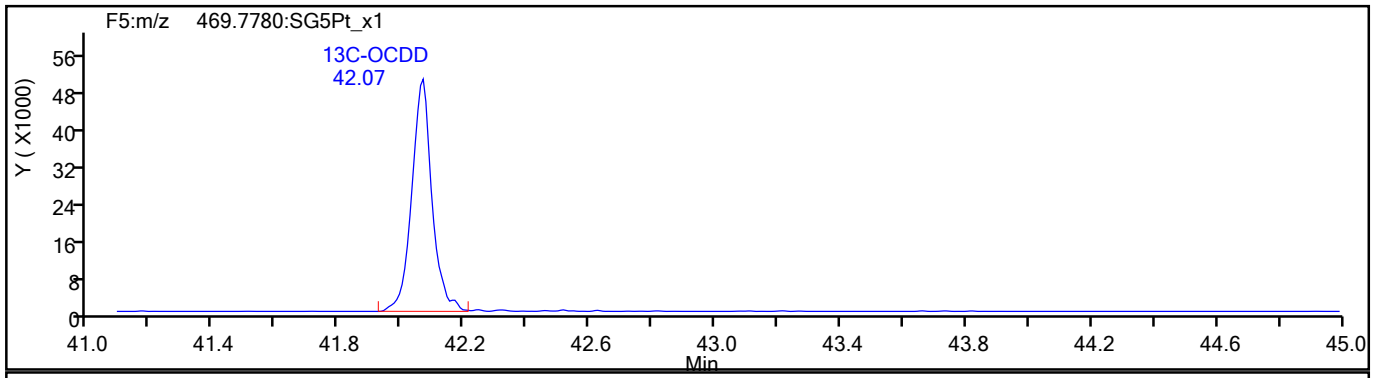

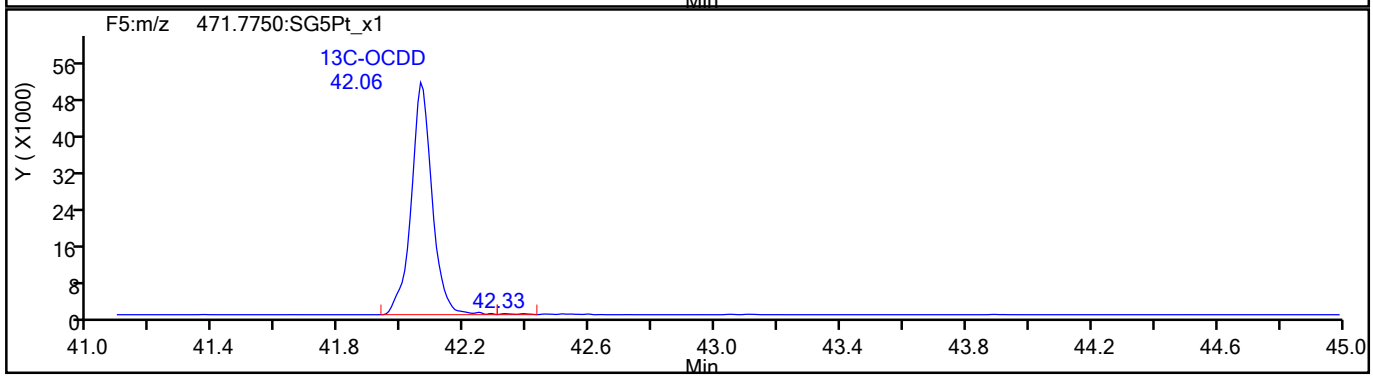

777598

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

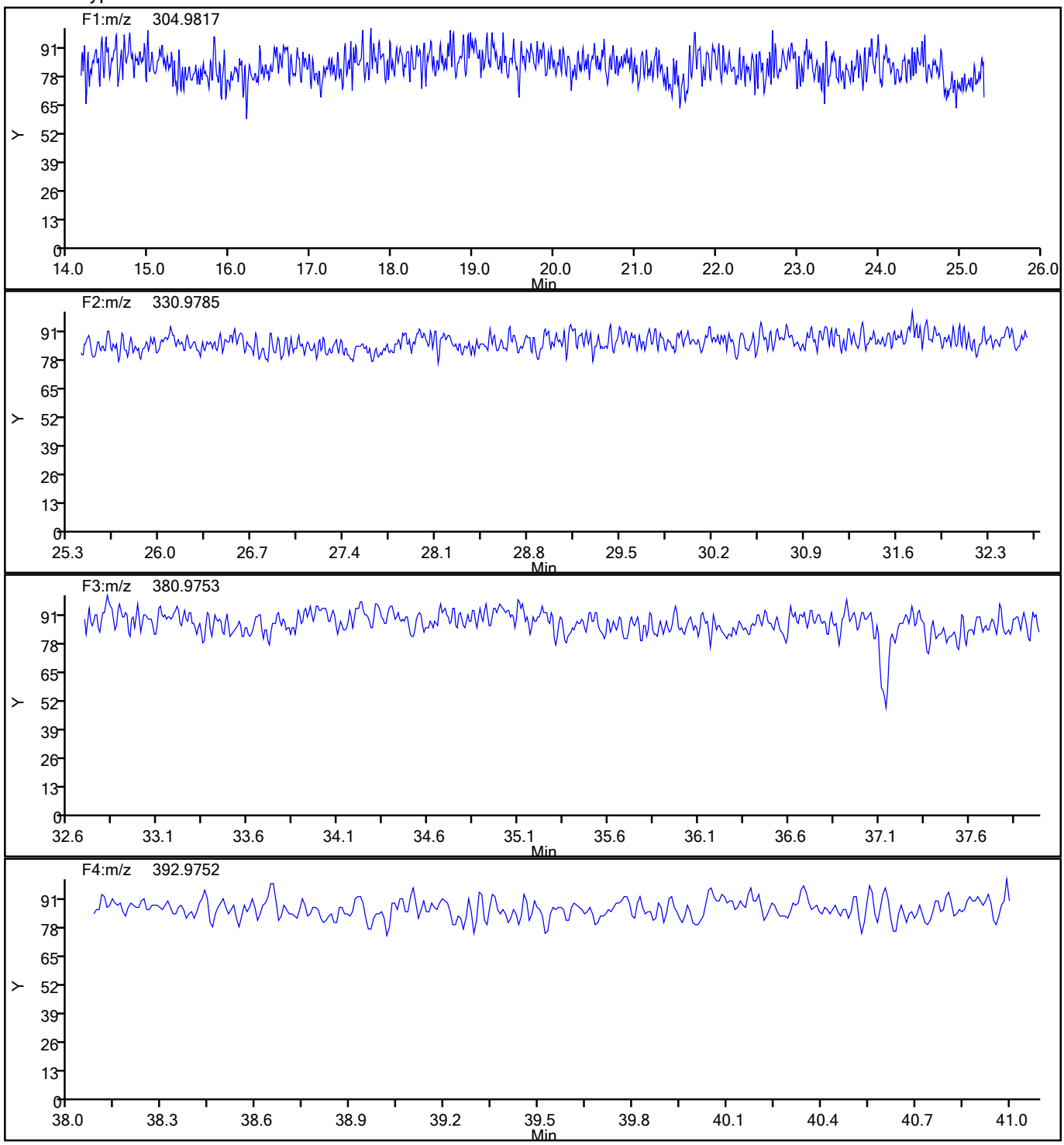

777599

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

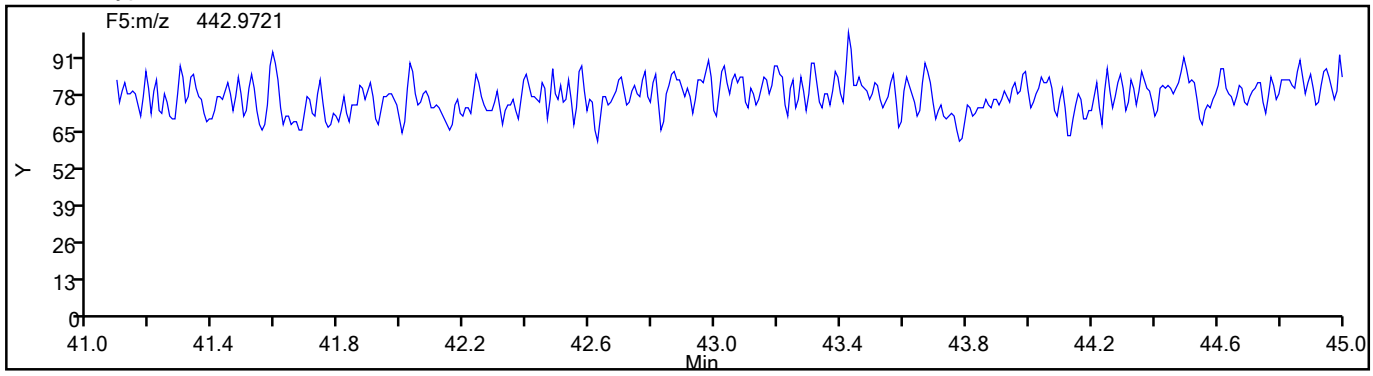

777600

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) MS
Lab Sample ID: 320-76769-1 MS
Matrix: Sediment
Lab File ID: 13AU2110D5_48.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.55(g)
Date Analyzed: 08/15/2021 05:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	18000		33	33
40321-76-4	1,2,3,7,8-PeCDD	337		8.5	2.3
57117-41-6	1,2,3,7,8-PeCDF	2170		15	15
57117-31-4	2,3,4,7,8-PeCDF	1200		15	15
39227-28-6	1,2,3,4,7,8-HxCDD	170		8.5	2.8
57653-85-7	1,2,3,6,7,8-HxCDD	199		8.5	3.1
19408-74-3	1,2,3,7,8,9-HxCDD	178		8.5	2.7
70648-26-9	1,2,3,4,7,8-HxCDF	3560		13	13
57117-44-9	1,2,3,6,7,8-HxCDF	1100		11	11
72918-21-9	1,2,3,7,8,9-HxCDF	234		9.3	9.3
60851-34-5	2,3,4,6,7,8-HxCDF	276		9.0	9.0
35822-46-9	1,2,3,4,6,7,8-HpCDD	748		8.5	6.1
67562-39-4	1,2,3,4,6,7,8-HpCDF	1310		8.5	7.9
55673-89-7	1,2,3,4,7,8,9-HpCDF	518		8.7	8.7
3268-87-9	OCDD	7670		17	6.3
39001-02-0	OCDF	781		17	0.64
41903-57-5	Total TCDD	19700		33	33
30402-14-3	Total TCDF	77000		240	240
36088-22-9	Total PeCDD	356		8.5	2.3
30402-15-4	Total PeCDF	4930		15	15
34465-46-8	Total HxCDD	620		8.5	2.9
55684-94-1	Total HxCDF	5690		11	11
37871-00-4	Total HpCDD	1250		8.5	6.1
38998-75-3	Total HpCDF	2080		8.5	8.3

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) MS
Lab Sample ID: 320-76769-1 MS
Matrix: Sediment
Lab File ID: 13AU2110D5_48.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.55(g)
Date Analyzed: 08/15/2021 05:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	65		25-164
89059-46-1	13C-2,3,7,8-TCDF	54		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	76		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	68		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	75		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	68		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	57		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	64		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	55		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	58		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	57		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	66		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	61		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	72		26-138
114423-97-1	13C-OCDD	79		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	124		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Sample Type: MS
Inject. Date: 15-Aug-2021 05:06:53 ALS Bottle#: 47 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-1-b ms 320-76769-a-1-b ms
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:58:29 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:45:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.991	80787117	0.81	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.492	70478972	0.79	1.6249	53.7	53.7	0.5191	0.5191	53.69	
2,3,7,8-TCDF	17.507	9187862491	0.88	1.0239	12732	12732	70.8	70.8	1.3E+005	Ea
A Non-2,3,7,8-sub-TCDF	17.046	7127077034	0.78	1.0239	9876.2	9876.2	70.8	6979.6	0.00	
S Total TCDF					22608	22608	70.8	70.8		
D 13C-2,3,7,8-TCDD	18.172	47064341	0.82	0.8993	64.8	64.8	1.045	1.045	64.78	a
2,3,7,8-TCDD	18.188	3117439202	0.79	1.2541	5281.6	5281.6	9.612	9.612	52816	Ea
$ 37Cl4-2,3,7,8-TCDD	18.188	44526873		1.1071	49.8	49.8	0.4329	0.4329	124	
A Non-2,3,7,8-sub-TCDD	17.500	293313881	0.77	1.2541	502.8	496.9	9.612	449.3	0.00	RQa
S Total TCDD					5784.4	5778.6	9.612	9.612		RQ
D 13C-1,2,3,7,8-PeCDF	22.544	66674182	1.61	1.2101	68.2	68.2	0.3109	0.3109	68.20	
1,2,3,7,8-PeCDF	22.571	450365959	1.57	1.0611	636.6	636.6	4.265	4.265	1273	a
D 13C-2,3,4,7,8-PeCDF	23.867	74992103	1.60	1.2395	74.9	74.9	0.3036	0.3036	74.89	
2,3,4,7,8-PeCDF	23.894	269717454	1.58	1.0184	353.2	353.2	4.493	4.493	706	a
A F1 PeCDFs	20.093	1464185	1.56	1.0398	1.988	1.988	0.0430	1.988	0.00	
A Non-2,3,7,8-sub-PeCDF	23.241	335851246	1.58	1.0398	456.0	456.0	4.377	199.3	0.00	a
S Total PeCDF					1447.7	1447.7	4.379	4.379		
D 13C-1,2,3,7,8-PeCDD	24.562	47024426	1.61	0.7612	76.5	76.5	0.2293	0.2293	76.47	
1,2,3,7,8-PeCDD	24.590	48812340	1.60	1.0484	99.0	99.0	0.6812	0.6812	198	a
A Non-2,3,7,8-sub-PeCDD	23.349	2724582	1.55	1.0484	6.174	5.526	0.6812	2.277	0.00	RQ
S Total PeCDD					105.2	104.5	0.6812	0.6812		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.583	68357920	0.52	1.0837	63.5	63.5	0.2469	0.2469	63.52	
1,2,3,4,7,8-HxCDF	30.596	774679602	1.22	1.0851	1044.4	1044.4	3.722	3.722	2089	E
D 13C-1,2,3,6,7,8-HxCDF	30.756	61536720	0.52	1.1279	54.9	54.9	0.2372	0.2372	54.94	
1,2,3,6,7,8-HxCDF	30.769	224462340	1.19	1.1260	323.9	323.9	3.335	3.335	648	
D 13C-2,3,4,6,7,8-HxCDF	31.554	59688372	0.53	1.0637	56.5	56.5	0.2515	0.2515	56.50	
2,3,4,6,7,8-HxCDF	31.567	56488070	1.19	1.1675	81.1	81.1	2.637	2.637	162	
D 13C-1,2,3,7,8,9-HxCDF	32.340	55327095	0.52	0.9676	57.6	57.6	0.2765	0.2765	57.58	
1,2,3,7,8,9-HxCDF	32.353	44297524	1.20	1.1664	68.6	68.6	2.728	2.728	137	M
A Non-2,3,7,8-sub-HxCDF	30.197	105003992	1.22	1.1363	150.9	150.9	3.053	65.1	0.00	Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					1668.9	1668.9	3.106	3.106		
* 13C-1,2,3,7,8,9-HxCDD	32.167	99308684	1.23	6.2E+05	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	31.740	49168297	1.28	0.7334	67.5	67.5	0.3002	0.3002	67.51	
1,2,3,4,7,8-HxCDD	31.754	26113765	1.32	1.0640	49.9	49.9	0.8248	0.8248	99.83	
D 13C-1,2,3,6,7,8-HxCDD	31.834	50043826	1.17	0.8802	57.3	57.3	0.2502	0.2502	57.25	
1,2,3,6,7,8-HxCDD	31.847	29265857	1.22	1.0001	58.5	58.5	0.9004	0.9004	117	
1,2,3,7,8,9-HxCDD	32.180	29332559	1.29	1.1325	52.2	52.2	0.7849	0.7849	104	
A Non-2,3,7,8-sub-HxCDD	30.882	11266726	1.29	1.0655	21.3	21.3	0.8342	11.9	0.00	
S Total HxCDD					181.9	181.9	0.8367	0.8367		
D 13C-1,2,3,4,6,7,8-HpCDF	33.778	47107285	0.43	0.7730	61.4	61.4	0.6154	0.6154	61.36	
1,2,3,4,6,7,8-HpCDF	33.790	261469846	1.05	1.4413	385.1	385.1	2.305	2.305	770	
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	50271094	0.44	0.7008	72.2	72.2	0.6788	0.6788	72.23	
1,2,3,4,7,8,9-HpCDF	34.860	100745892	1.04	1.3174	152.1	152.1	2.556	2.556	304	
A Non-2,3,7,8-sub-HpCDF	34.319	49603163	1.11	1.3793	73.9	73.9	2.425	73.9	0.00	
S Total HpCDF					611.1	611.1	2.431	2.431		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	42655998	0.99	0.6472	66.4	66.4	0.2953	0.2953	66.36	
1,2,3,4,6,7,8-HpCDD	34.580	102525081	1.04	1.0943	219.6	219.6	1.799	1.799	439	
A Non-2,3,7,8-sub-HpCDD	34.301	68273962	1.03	1.0943	146.3	146.3	1.799	146.3	0.00	a
S Total HpCDD					365.9	365.9	1.799	1.799		
D 13C-OCDD	36.926	70195385	0.87	0.4472	158.1	158.1	0.2270	0.2270	79.04	
OCDF	37.022	115665535	0.90	1.4382	229.1	229.1	0.1865	0.1865	229	
OCDD	36.938	874905735	0.89	1.1070	2251.8	2251.8	1.849	1.849	2252	E
1,3,6,8-TCDF	14.922						0.0	0.0		
1,3,6,8-TCDD	15.829						0.0	0.0		
2,3,4,7-TCDF	17.326	181582374	0.82							
1,2,3,7-TCDD	18.082	31624120	1.09							R
1,2,3,9-TCDF	18.157	157808139	0.77							
1,2,3,9-TCDD	18.188						0.0	0.0		U
1,2,8,9-TCDD	19.170						0.0	0.0		
1,2,8,9-TCDF	19.170						0.0	0.0		
1,3,4,6,8-PeCDF	19.442						0.0	0.0		
1,2,4,7,9-PeCDD	21.235						0.0	0.0		
1,2,3,8,9-PeCDD	25.462						0.0	0.0		
1,2,3,8,9-PeCDF	25.681						0.0	0.0		
1,2,3,4,6,8-HxCDF	27.974						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.544						0.0	0.0		
1,2,3,4,6,7-HxCDD	32.180						0.0	0.0		U
1,2,3,4,8,9-HxCDF	32.353						0.0	0.0		MU
1,2,3,4,6,7,9-HpCDF	33.790						0.0	0.0		U
1,2,3,4,6,7,9-HpCDD	34.021						0.0	0.0		U
1,2,3,8-TCDD	0.0						0.0	0.0		
1,3,7,9-TCDD	0.0						0.0	0.0		
1,2,3,4,7-PeCDD	0.0						0.0	0.0		
1,4,7,8-TCDD	0.0						0.0	0.0		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Sample Type: MS
Inject. Date: 15-Aug-2021 05:06:53 ALS Bottle#: 47 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-1-b ms 320-76769-a-1-b ms
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:58:29 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:45:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.991	17.855	8		36093068	9742421	27068	67670	360		a
333.9339	17.991	17.855	8		44694049	11986576	54628	136570	219	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.492	17.356	8	0.972	31127868	8925918	30565	76412	292		
317.9389	17.492	17.356	8	0.972	39351104	11383896	42749	106872	266	0.79(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.507	17.371	8	1.001	4295146214	1104376006	23844155961037		463		ae
305.8987	17.507	17.371	8	1.001	4892716277	1138840130	35086028771505		325	0.88(0.65-0.89)	e
A Non-2,3,7,8-sub-TCDF											
303.9016	16.071	17.046	-58	0.919	83800662	15035267	23844155961037		6		
305.8987	16.071	17.046	-58	0.919	108062677	19209116	35086028771505		5	0.78(0.65-0.89)	
303.9016	16.358	17.046	-41	0.935	116529540	22613974	23844155961037		9		
305.8987	16.358	17.046	-41	0.935	148824967	29378223	35086028771505		8	0.78(0.65-0.89)	
303.9016	16.585	17.046	-28	0.948	141844028	37876100	23844155961037		16		
305.8987	16.585	17.046	-28	0.948	183978151	49349762	35086028771505		14	0.77(0.65-0.89)	
303.9016	16.812	17.046	-14	0.961	233820837	62391236	23844155961037		26		
305.8987	16.812	17.046	-14	0.961	302371574	79725479	35086028771505		23	0.77(0.65-0.89)	
303.9016	17.084	17.046	2	0.977	2206178458	498250958	23844155961037		209		
305.8987	17.084	17.046	2	0.977	2830592095	635026929	35086028771505		181	0.78(0.65-0.89)	
303.9016	17.930	17.046	53	1.025	337535368	99866227	23844155961037		42		
305.8987	17.930	17.046	53	1.025	433538677	126910549	35086028771505		36	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	18.172	18.051	7	1.010	21164860	5273340	27068	67670	195		a
333.9339	18.172	18.051	7	1.010	25899481	6458067	54628	136570	118	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											Ea
319.8965	18.188	18.081	6	1.001	1378697958	334670430	249241	623102	1343		a
321.8936	18.188	18.081	6	1.001	1738741244	423463153	316418	791045	1338	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.188	18.081	6	1.011	44526873	10745236	41660	104150	258		
A Non-2,3,7,8-sub-TCDD											RQa
319.8965	18.082	17.500	35	0.995	15667063	4384739	249241	623102	18		a
	Empc Correction				12220220	4053908	249241	623102	16		
321.8936	18.082	17.500	35	0.995	15870417	5264816	316418	791045	17	0.99(0.65-0.89)	
319.8965	18.535	17.500	62	1.020	120174386	24573245	249241	623102	99		
321.8936	18.535	17.500	62	1.020	145048858	30755676	316418	791045	97	0.83(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.544	22.367	11	1.253	41105541	7419502	18789	46972	395		
353.8970	22.544	22.367	11	1.253	25568641	4586587	13914	34785	330	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.571	22.394	11	1.001	275443367	51643006	133652	334130	386		a
341.8567	22.571	22.394	11	1.001	174922592	33024821	83689	209222	395	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.867	23.703	10	1.327	46099725	7274339	18789	46972	387		
353.8970	23.867	23.703	10	1.327	28892378	4599982	13914	34785	331	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	23.894	23.730	10	1.001	165311278	26819690	133652	334130	201		a
341.8567	23.894	23.730	10	1.001	104406176	17017353	83689	209222	203	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.654	20.093	-26	0.872	893261	204263	857	2142	238		
341.8567	19.654	20.093	-26	0.872	570924	134410	1278	3195	105	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											a
339.8597	21.208	23.241	-122	0.941	89877991	21823019	133652	334130	163		
341.8567	21.208	23.241	-122	0.941	56912101	13821660	83689	209222	165	1.58(1.32-1.78)	
339.8597	22.067	23.241	-70	0.979	6966637	806882	133652	334130	6		
341.8567	22.067	23.241	-70	0.979	4334221	492786	83689	209222	6	1.61(1.32-1.78)	
339.8597	22.435	23.241	-48	0.995	13795646	2968859	133652	334130	22		a
341.8567	22.435	23.241	-48	0.995	8814384	1862099	83689	209222	22	1.57(1.32-1.78)	
339.8597	23.090	23.241	-9	1.024	59615302	10798754	133652	334130	81		
341.8567	23.076	23.241	-10	1.024	37632435	6876820	83689	209222	82	1.58(1.32-1.78)	
339.8597	24.221	23.241	59	1.074	35608045	5239833	133652	334130	39		
341.8567	24.221	23.241	59	1.074	22294484	3324034	83689	209222	40	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.562	24.426	8	1.365	28981450	5300675	9061	22652	585		
369.8919	24.562	24.426	8	1.365	18042976	3280092	6110	15275	537	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											a
355.8546	24.590	24.453	8	1.001	30026901	5347661	15852	39630	337		a
357.8516	24.590	24.453	8	1.001	18785439	3362023	8660	21650	388	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
355.8546	22.571	23.349	-47	0.919	682419	142137	15852	39630	9		
357.8516	22.571	23.349	-47	0.919	578810	115274	8660	21650	13	1.18(1.32-1.78)	
	Empc Correction				440270	91701	8660	21650	11		
355.8546	22.817	23.349	-32	0.929	432209	84132	15852	39630	5		
357.8516	22.817	23.349	-32	0.929	292263	57307	8660	21650	7	1.48(1.32-1.78)	
355.8546	25.108	23.349	105	1.022	714296	82648	15852	39630	5		
	Empc Correction				533334	60998	15852	39630	4		
357.8516	25.094	23.349	105	1.022	344087	39354	8660	21650	5	2.08(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.583	30.503	5	0.951	23401105	4471854	12540	31350	357		
385.8610	30.583	30.503	5	0.951	44956815	8552611	17029	42572	502	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											E
373.8208	30.596	30.529	4	1.000	425061878	83295760	115720	289300	720		
375.8178	30.596	30.529	4	1.000	349617724	68993222	94721	236802	728	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.756	30.689	4	0.956	20952020	4804315	12540	31350	383		
385.8610	30.756	30.689	4	0.956	40584700	9205830	17029	42572	541	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.769	30.716	3	1.000	121745363	27435777	115720	289300	237		
375.8178	30.769	30.716	3	1.000	102716977	22842560	94721	236802	241	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.554	31.514	2	0.981	20583291	5926097	12540	31350	473		
385.8610	31.554	31.514	2	0.981	39105081	11159244	17029	42572	655	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.567	31.528	2	1.000	30733892	9008700	115720	289300	78		
375.8178	31.567	31.528	2	1.000	25754178	7509173	94721	236802	79	1.19(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.340	32.326	1	1.005	18945938	5696013	12540	31350	454		
385.8610	32.340	32.326	1	1.005	36381157	10841591	17029	42572	637	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.353	32.340	1	1.000	24198991	7499453	115720	289300	65		M
375.8178	32.353	32.340	1	1.000	20098533	6245315	94721	236802	66	1.20(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	28.520	30.197	-100	0.933	24859887	3862925	115720	289300	33		
375.8178	28.506	30.197	-101	0.932	20453793	3169663	94721	236802	33	1.22(1.05-1.43)	
373.8208	29.824	30.197	-22	0.975	11501407	1999802	115720	289300	17		
375.8178	29.824	30.197	-22	0.975	9318631	1612049	94721	236802	17	1.23(1.05-1.43)	
373.8208	32.433	30.197	134	1.060	21438643	7030302	115720	289300	61		M
375.8178	32.433	30.197	134	1.060	17431631	5858325	94721	236802	62	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	32.167	32.140	2		54755846	15305070	13121	32802	1166		a
403.8529	32.167	32.140	2		44552838	12323045	11215	28037	1099	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.740	31.701	2	0.987	27557706	8055725	13121	32802	614		
403.8529	31.740	31.701	2	0.987	21610591	6488399	11215	28037	579	1.28(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDD											
389.8157	31.754	31.714	2	1.000	14866655	4515920	28292	70730	160		
391.8127	31.754	31.714	2	1.000	11247110	3443356	22767	56917	151	1.32(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.834	31.807	2	0.990	26957395	7741624	13121	32802	590		
403.8529	31.834	31.807	2	0.990	23086431	6433607	11215	28037	574	1.17(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.847	31.820	2	1.000	16090350	4553214	28292	70730	161		
391.8127	31.847	31.820	2	1.000	13175507	3604643	22767	56917	158	1.22(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.180	32.153	2	1.014	16528564	4775200	28292	70730	169		
391.8127	32.180	32.153	2	1.014	12803995	3718558	22767	56917	163	1.29(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.677	30.882	-72	0.932	2318974	303517	28292	70730	11		
391.8127	29.691	30.882	-71	0.933	1853912	234527	22767	56917	10	1.25(1.05-1.43)	
389.8157	30.649	30.882	-14	0.963	450607	108340	28292	70730	4		
391.8127	30.649	30.882	-14	0.963	366351	91609	22767	56917	4	1.23(1.05-1.43)	
389.8157	31.008	30.882	8	0.974	3579798	783304	28292	70730	28		
391.8127	31.008	30.882	8	0.974	2697084	609432	22767	56917	27	1.33(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.778	33.766	1	1.050	14217326	4957847	15792	39480	314		
419.8220	33.778	33.766	1	1.050	32889959	11308365	36782	91955	307	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.790	33.778	1	1.000	133691603	45155245	129265	323162	349		
409.7789	33.778	33.778	0	1.000	127778243	44194492	86892	217230	509	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.083	15401175	4955078	15792	39480	314		
419.8220	34.847	34.847	0	1.083	34869919	11093103	36782	91955	302	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860	34.860	0	1.000	51444026	16659262	129265	323162	129		
409.7789	34.860	34.860	0	1.000	49301866	16105618	86892	217230	185	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.082	34.319	-14	1.009	26083642	9639147	129265	323162	75		
409.7789	34.082	34.319	-14	1.009	23519521	8956872	86892	217230	103	1.11(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.075	21273113	6884181	10285	25712	669		
437.8140	34.568	34.568	0	1.075	21382885	6911283	10840	27100	638	0.99(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	52217583	16627118	52064	130160	319		
425.7737	34.568	34.580	-1	1.000	50307498	15886076	56595	141487	281	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	34.021	34.301	-17	0.984	34705571	12426861	52064	130160	239		a
425.7737	34.021	34.301	-17	0.984	33568391	12292199	56595	141487	217	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.926	0	1.148	32661330	9520699	6184	15460	1540		
471.7750	36.926	36.926	0	1.148	37534055	10683918	5032	12580	2123	0.87(0.76-1.02)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											
441.7428	37.022	37.022	0	1.003	54799996	15648086	5274	13185	2967		
443.7399	37.022	37.022	0	1.003	60865539	17053664	5563	13907	3066	0.90(0.76-1.02)	
OCDD											E
457.7377	36.938	36.938	0	1.000	412099228	116162026	36349	90872	3196		
459.7348	36.938	36.938	0	1.000	462806507	127770184	46352	115880	2757	0.89(0.76-1.02)	
1,3,6,8-TCDF											
303.9016	14.922						23844155961037				
305.8987	14.922						35086028771505				
1,3,6,8-TCDD											
319.8965	15.829						249241	623102			
321.8936	15.829						316418	791045			
2,3,4,7-TCDF											
303.9016	17.326	17.356	-2		81643734	14471031	23844155961037		6		
305.8987	17.326	17.356	-2		99938640	18144790	35086028771505		5	0.82(0.65-0.89)	
1,2,3,7-TCDD											R
319.8965	18.082	18.066	1		16507747	4517130	249241	623102	18		
321.8936	18.082	18.066	1		15116373	5209319	316418	791045	16	1.09(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	18.157	18.218	-4		68835560	15991347	23844155961037		7		
305.8987	18.157	18.218	-4		88972579	20667964	35086028771505		6	0.77(0.65-0.89)	
1,2,3,9-TCDD											U
319.8965	18.218						249241	623102			
321.8936	18.218						316418	791045			
1,2,8,9-TCDD											
319.8965	19.170						249241	623102			
1,2,8,9-TCDF											
303.9016	19.170						23844155961037				
305.8987	19.170						35086028771505				
1,3,4,6,8-PeCDF											
339.8597	19.458						857	2142			
341.8567	19.458						1278	3195			
1,2,4,7,9-PeCDD											
355.8546	21.235						15852	39630			
357.8516	21.235						8660	21650			
1,2,3,8,9-PeCDD											
355.8546	25.462						15852	39630			
357.8516	25.462						8660	21650			
1,2,3,8,9-PeCDF											
339.8597	25.681						133652	334130			
341.8567	25.681						83689	209222			
1,2,3,4,6,8-HxCDF											
373.8208	27.974						115720	289300			
375.8178	27.974						94721	236802			
1,2,4,6,7,9-HxCDD											
389.8157	29.544						28292	70730			
391.8127	29.544						22767	56917			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7-HxCDD											U
389.8157	32.113						28292	70730			
391.8127	32.113						22767	56917			
1,2,3,4,8,9-HxCDF											MU
373.8208	32.419						115720	289300			
375.8178	32.419						94721	236802			
1,2,3,4,6,7,9-HpCDF											U
407.7818	33.916						129265	323162			
409.7789	33.916						86892	217230			
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.021						52064	130160			
425.7737	34.021						56595	141487			
1,2,3,8-TCDD											
319.8965	0.0						249241	623102			
321.8936	0.0						316418	791045			
1,3,7,9-TCDD											
319.8965	0.0						249241	623102			
321.8936	0.0						316418	791045			
1,2,3,4,7-PeCDD											
355.8546	0.0						15852	39630			
357.8516	0.0						8660	21650			
1,4,7,8-TCDD											
319.8965	0.0						249241	623102			
321.8936	0.0						316418	791045			

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:06:53 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	70478972	20309814

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	70478972	20309814

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.071	83800662	15035267	108062677	19209116	265.9	0.78	
16.358	116529540	22613974	148824967	29378223	367.7	0.78	
16.585	141844028	37876100	183978151	49349762	451.5	0.77	
16.812	233820837	62391236	302371574	79725479	743.0	0.77	
17.084	2206178458	498250958	2830592095	635026929	6979.6	0.78	
17.930	337535368	99866227	433538677	126910549	1068.5	0.78	
Signal Totals:							
	3119708893	736033762	4007368141	939600058			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7127077034	1675633820				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 9876.2 = (7127077034 * 100.000) / (70478972 * 1.024)

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:06:53 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	47064341	11731407

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	47064341	11731407

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.082	15667063	4384739	15870417	5264816	53.4	0.99	RQa
18.082	12220220	4053908	15870417	5264816	47.6		Empc Correction
18.535	120174386	24573245	145048858	30755676	449.3	0.83	
Signal Totals:							
	132394606	28627153	160919275	36020492			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	296760724	64978476				0.84	RQa
	293313881	64647645					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 502.777 = (296760724 * 100.000) / (47064341 * 1.254)
Empc Amount: 496.937 = (293313881 * 100.000) / (47064341 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:06:53 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 7

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	66674182	12006089
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	74992103	11874321

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70833142	11940205

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.654	893261	204263	570924	134410	1.99	1.56	
Signal Totals:							
	893261	204263	570924	134410			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1464185	338673				1.56	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.988 = (1464185 * 100.000) / (70833142 * 1.040)

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:06:53 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 7

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	66674182	12006089
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	74992103	11874321

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70833142	11940205

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.208	89877991	21823019	56912101	13821660	199.3	1.58	
22.067	6966637	806882	4334221	492786	15.3	1.61	
22.435	13795646	2968859	8814384	1862099	30.7	1.57	a
23.090	59615302	10798754	37632435	6876820	132.0	1.58	
24.221	35608045	5239833	22294484	3324034	78.6	1.60	
Signal Totals:							
	205863621	41637347	129987625	26377399			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	335851246	68014746				1.58	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 456.006 = (335851246 * 100.000) / (70833142 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:06:53 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 7

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	47024426	8580767

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	47024426	8580767

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.571	682419	142137	578810	115274	2.56	1.18	RQ
22.571	682419	142137	440270	91701	2.28		Empc Correction
22.817	432209	84132	292263	57307	1.47	1.48	
25.108	714296	82648	344087	39354	2.15	2.08	RQ
25.108	533334	60998	344087	39354	1.78		Empc Correction
Signal Totals:							
	1647962	287267	1076620	188362			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3044084	520852				1.51	RQ
	2724582	475629					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.174 = (3044084 * 100.000) / (47024426 * 1.048)
Empc Amount: 5.526 = (2724582 * 100.000) / (47024426 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:06:53 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 7

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	68357920	13024465
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	61536720	14010145
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	59688372	17085341
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	55327095	16537604

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	61227526	15164388

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.520	24859887	3862925	20453793	3169663	65.1	1.22	
29.824	11501407	1999802	9318631	1612049	29.9	1.23	
32.433	21438643	7030302	17431631	5858325	55.9	1.23	Ma
Signal Totals:							
	57799937	12893029	47204055	10640037			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	105003992	23533066				1.22	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 150.932 = (105003992 * 100.000) / (61227526 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:06:53 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 7

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	49168297	14544124
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	50043826	14175231
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	49606061	14359677

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.677	2318974	303517	1853912	234527	7.89	1.25	
30.649	450607	108340	366351	91609	1.55	1.23	
31.008	3579798	783304	2697084	609432	11.9	1.33	
Signal Totals:							
	6349379	1195161	4917347	935568			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11266726	2130729				1.29	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 21.315 = (11266726 * 100.000) / (49606061 * 1.066)

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:06:53 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 7

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	47107285	16266212
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	50271094	16048181

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	48689189	16157196

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.082	26083642	9639147	23519521	8956872	73.9	1.11	
Signal Totals:							
	26083642	9639147	23519521	8956872			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	49603163	18596019				1.11	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 73.859 = (49603163 * 100.000) / (48689189 * 1.379)

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:06:53 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 7

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	42655998	13795464

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	42655998	13795464

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	34705571	12426861	33568391	12292199	146.3	1.03	a
Signal Totals:							
	34705571	12426861	33568391	12292199			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	68273962	24719060				1.03	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 146.264 = (68273962 * 100.000) / (42655998 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.33
Area: 97652381
Amount: 246.1739
Amount Units: pg/ul

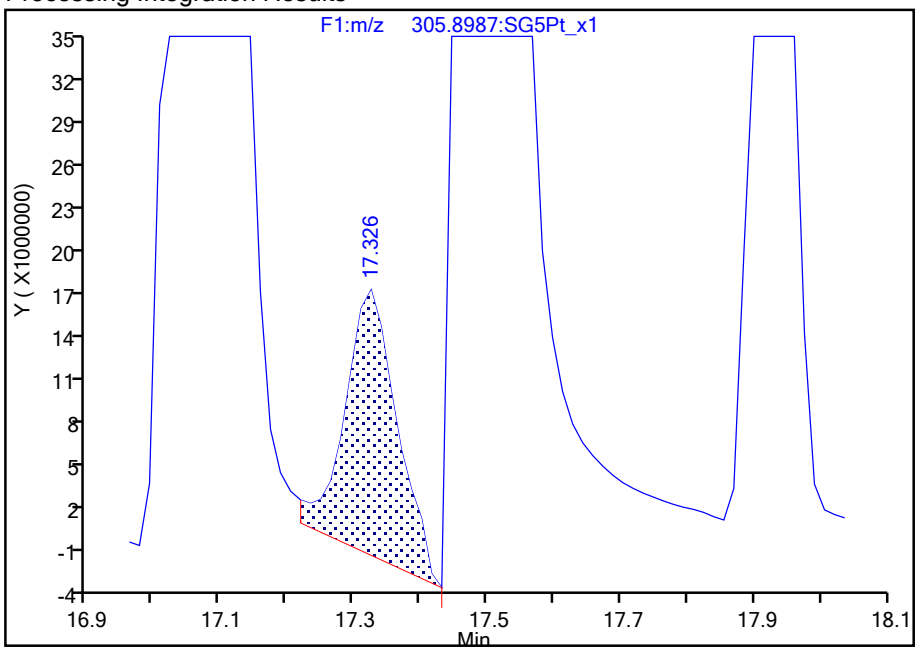

Manual Integration Results

RT: 17.51
Area: 4892716277
Amount: 12732
Amount Units: pg/ul

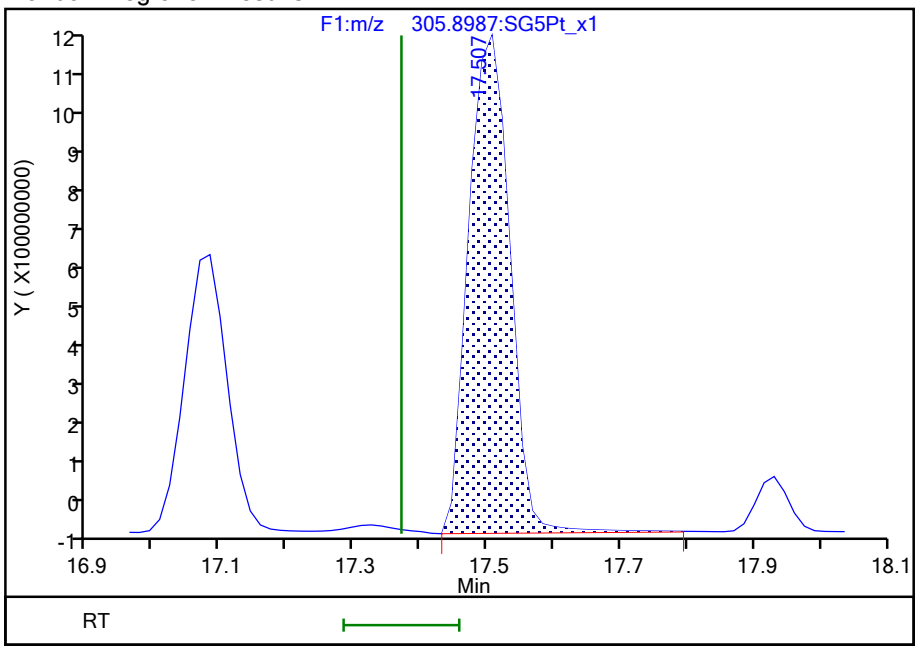

Reviewer: dadunj, 18-Aug-2021 10:54:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 3

RT: 17.33
Area: 177649312
Amount: 246.1739
Amount Units: pg/ul

Processing Integration Results

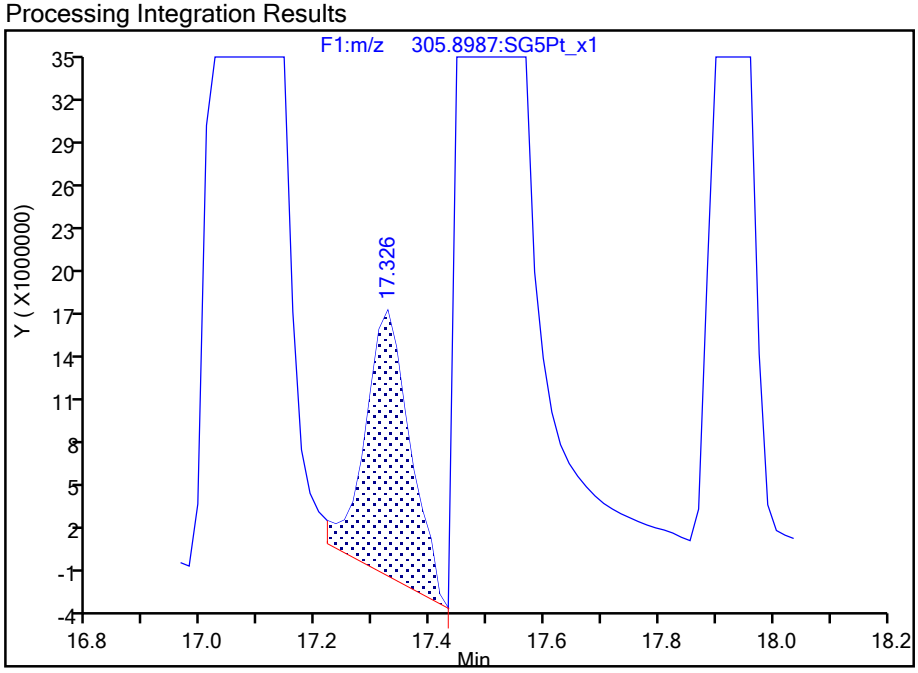

Manual Integration Results

RT: 17.51
Area: 9187862491
Amount: 12732
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 10:54:52
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.33
Area: 79996931
Amount: 246.1739
Amount Units: pg/ul

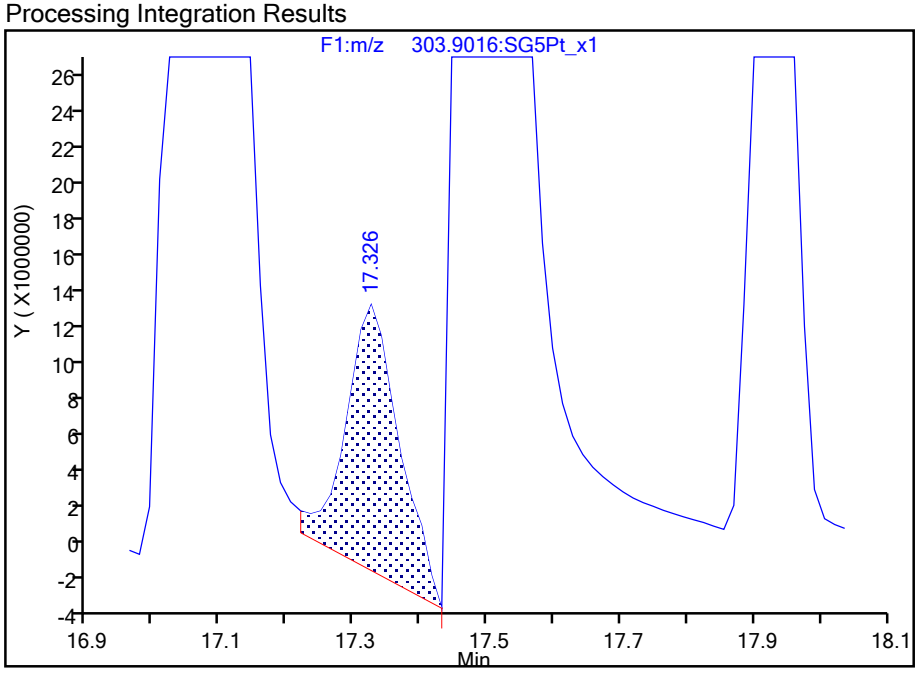

Manual Integration Results

RT: 17.51
Area: 4295146214
Amount: 12732
Amount Units: pg/ul

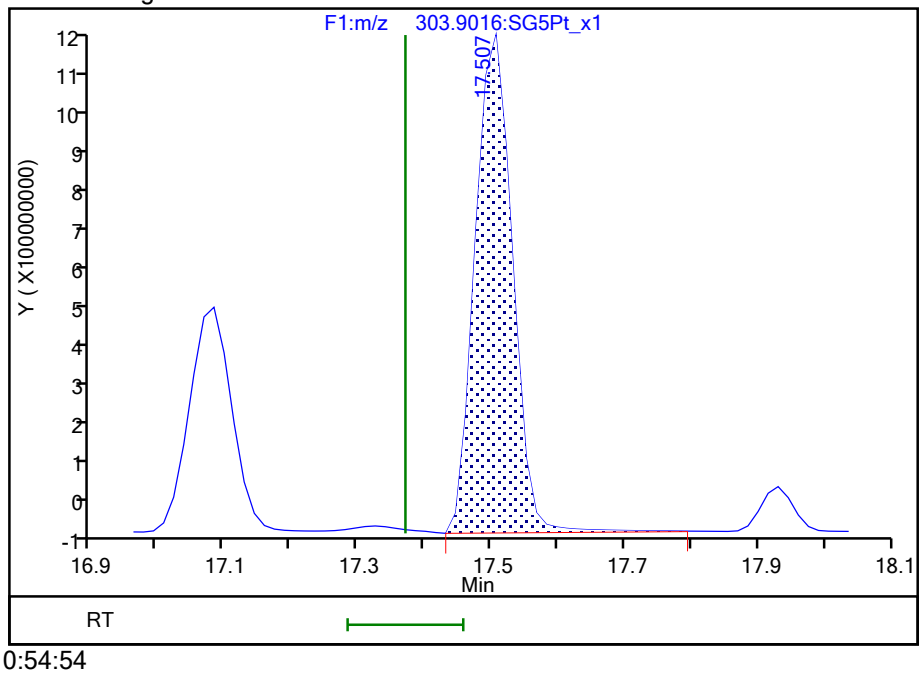

Reviewer: dadunj, 18-Aug-2021 10:54:54

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

777623

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 17.99
Area: 36093068
Amount: 111.1955
Amount Units: pg/ul

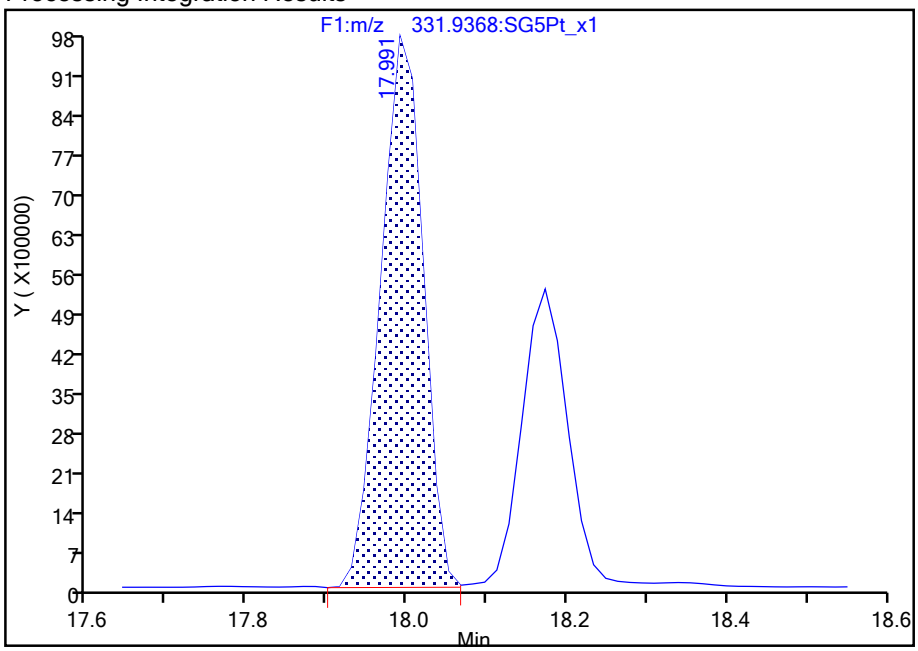

Manual Integration Results

RT: 18.17
Area: 21164860
Amount: 64.779449
Amount Units: pg/ul

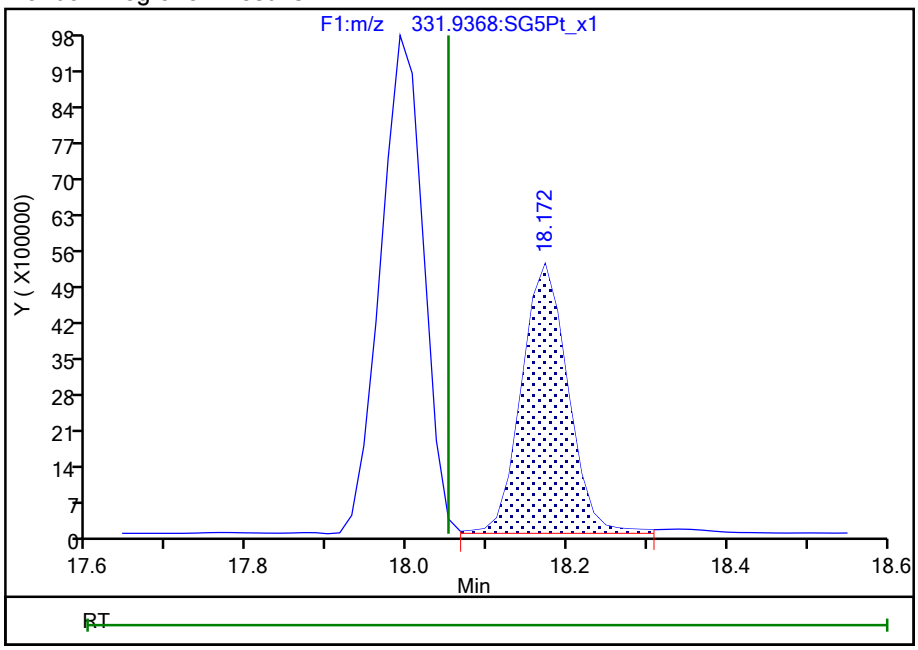

Reviewer: bennettd, 17-Aug-2021 16:44:03

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.08
Area: 15667063
Amount: 53.431328
Amount Units: pg/ul

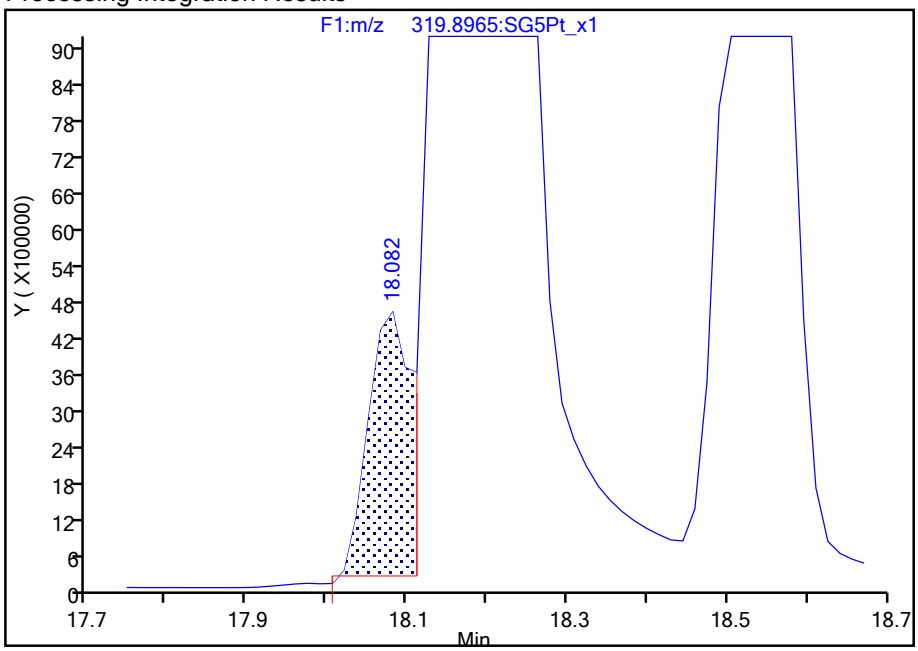

Manual Integration Results

RT: 18.19
Area: 1378697958
Amount: 5281.6179
Amount Units: pg/ul

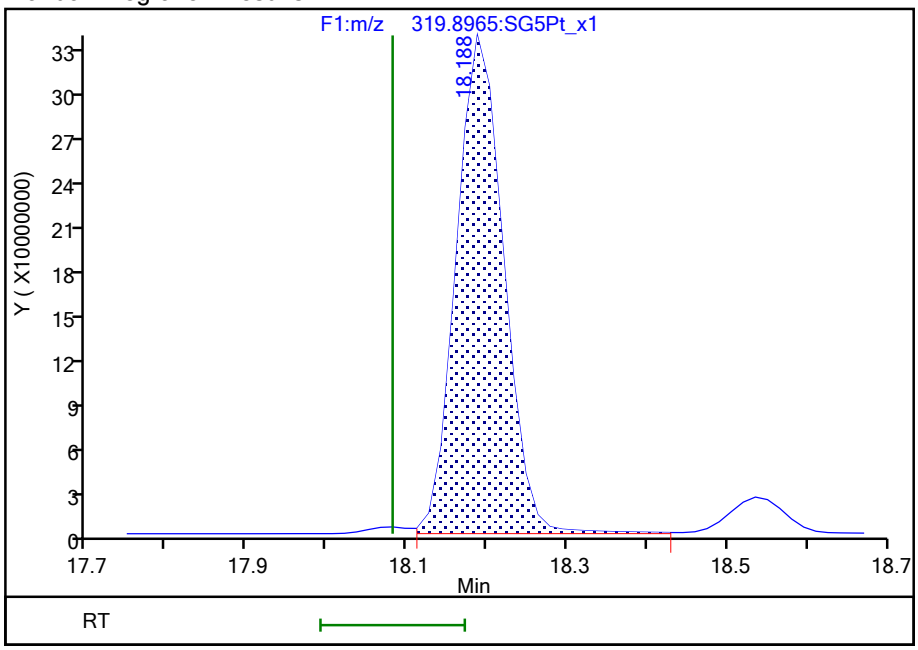

Reviewer: bennettd, 17-Aug-2021 16:44:11

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.43
Area: 8814384
Amount: 31.957509
Amount Units: pg/ul

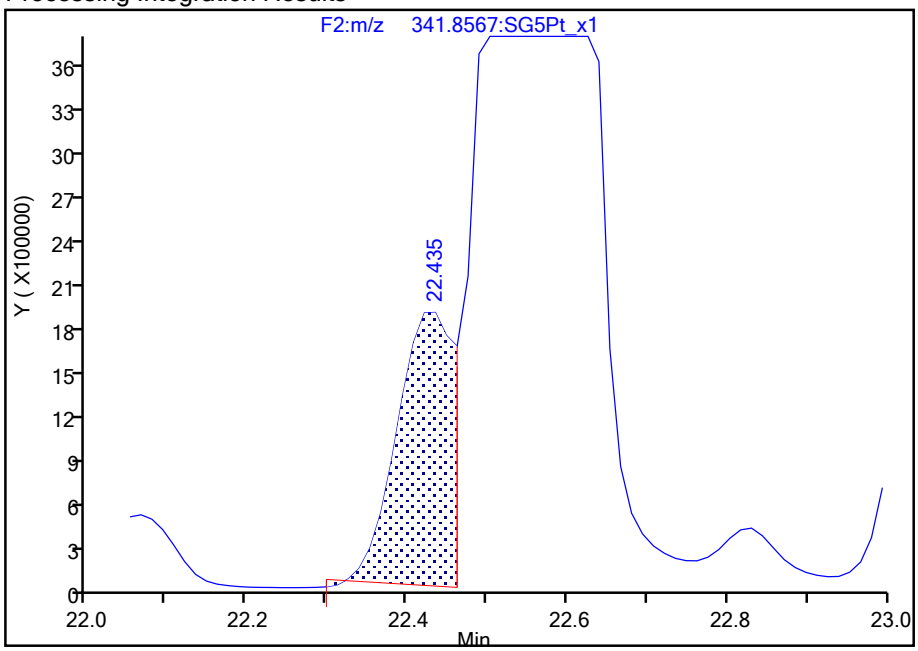

Manual Integration Results

RT: 22.57
Area: 174922592
Amount: 636.5571
Amount Units: pg/ul

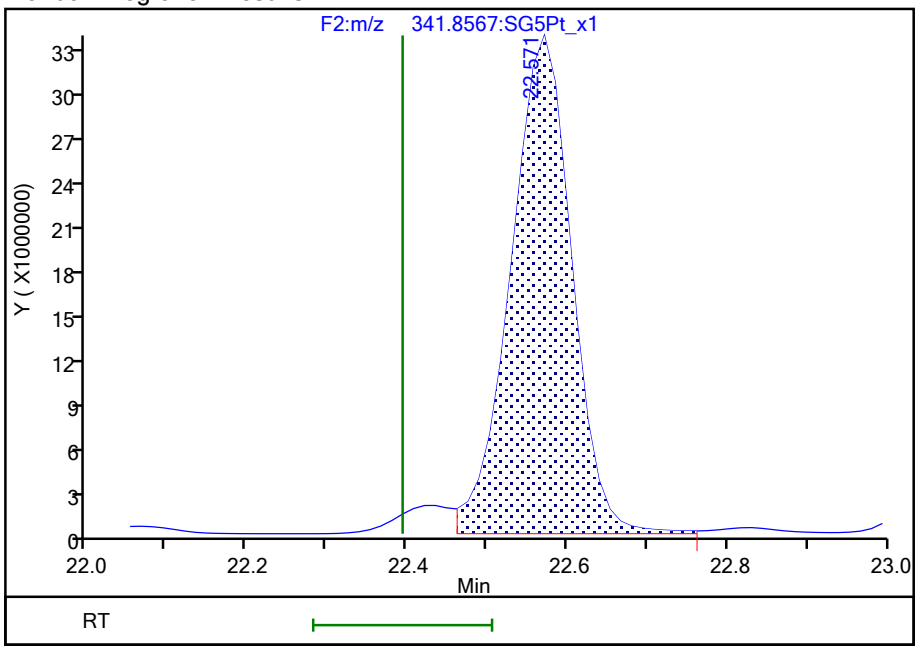

Reviewer: dadunj, 18-Aug-2021 10:55:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

Processing Integration Results

RT: 22.43
Area: 22610030
Amount: 31.957509
Amount Units: pg/ul

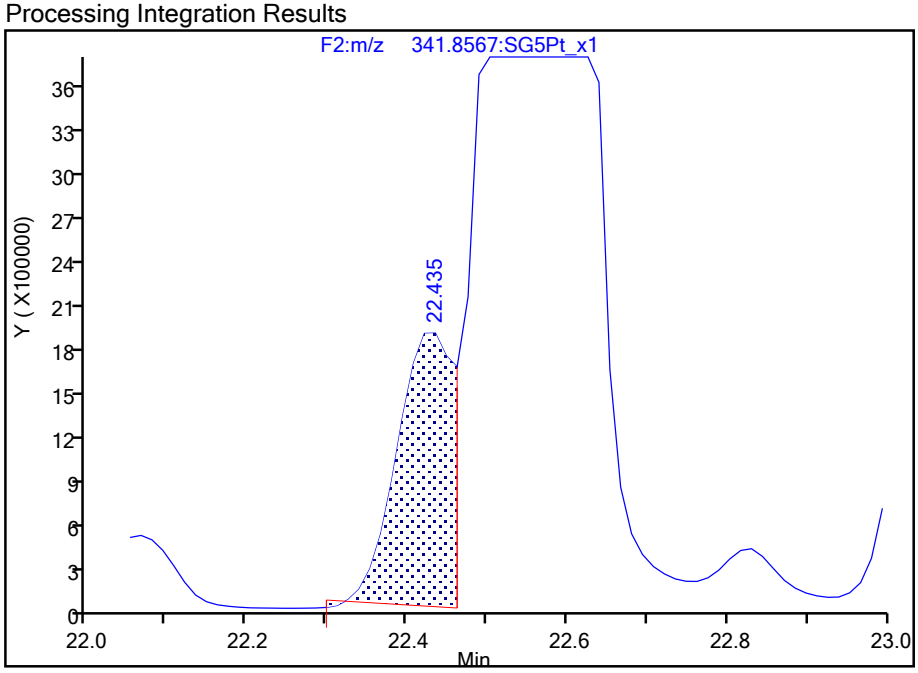

Manual Integration Results

RT: 22.57
Area: 450365959
Amount: 636.5571
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 10:55:42
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.43
Area: 13795646
Amount: 31.957509
Amount Units: pg/ul

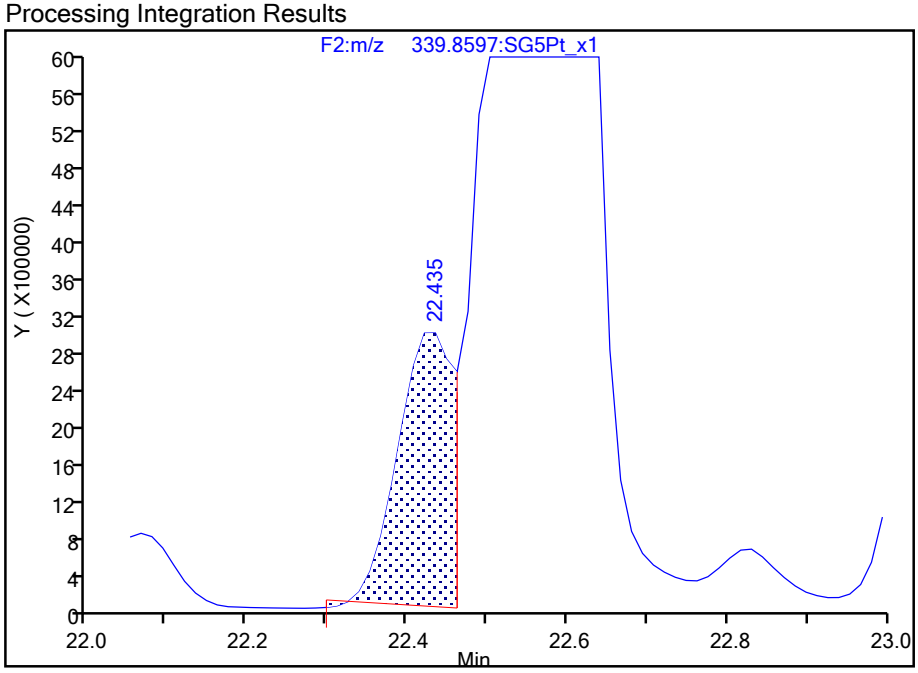

Manual Integration Results

RT: 22.57
Area: 275443367
Amount: 636.5571
Amount Units: pg/ul

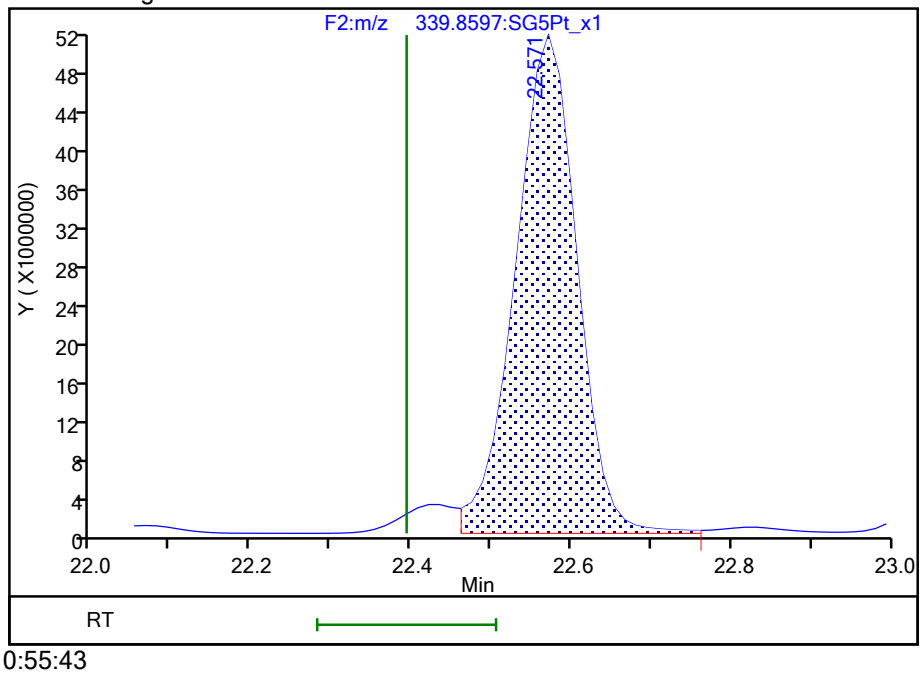

Reviewer: dadunj, 18-Aug-2021 10:55:43

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Not Detected
Expected RT: 23.73

Processing Integration Results

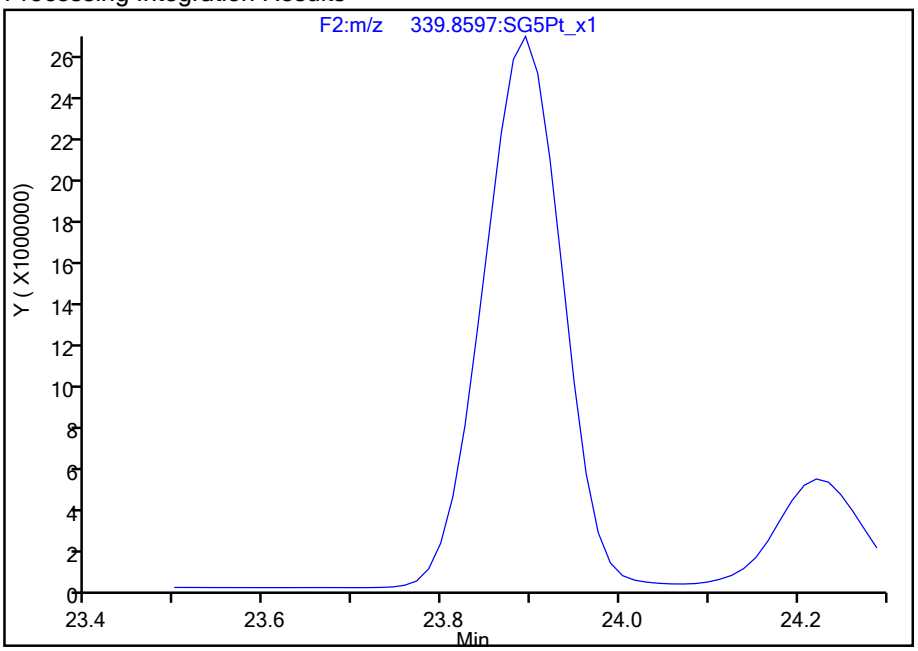

RT: 23.89
Area: 165311278
Amount: 353.1567
Amount Units: pg/ul

Manual Integration Results

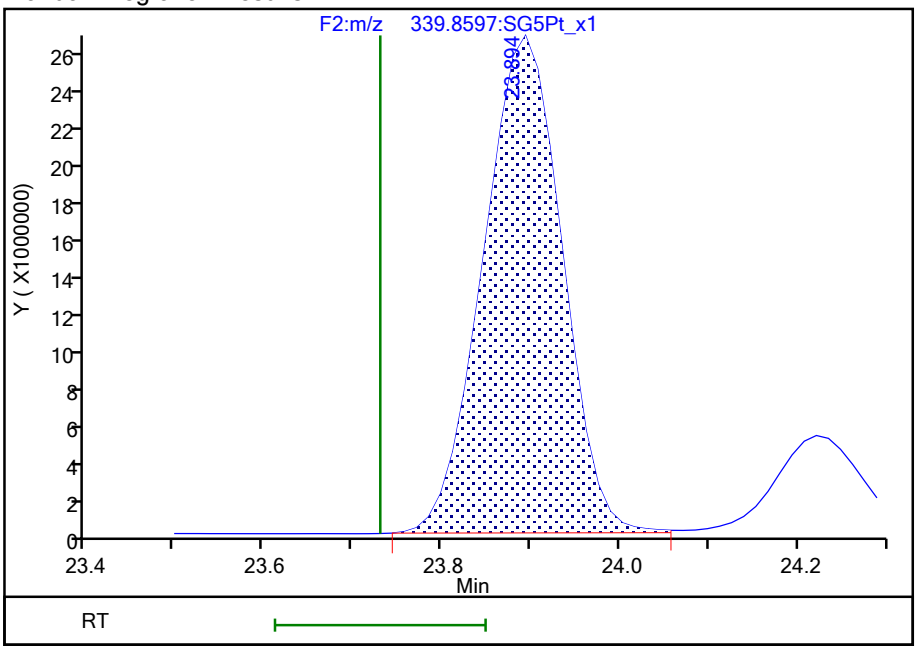

Reviewer: dadunj, 18-Aug-2021 10:55:46
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

777629

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Not Detected
Expected RT: 24.45

Processing Integration Results

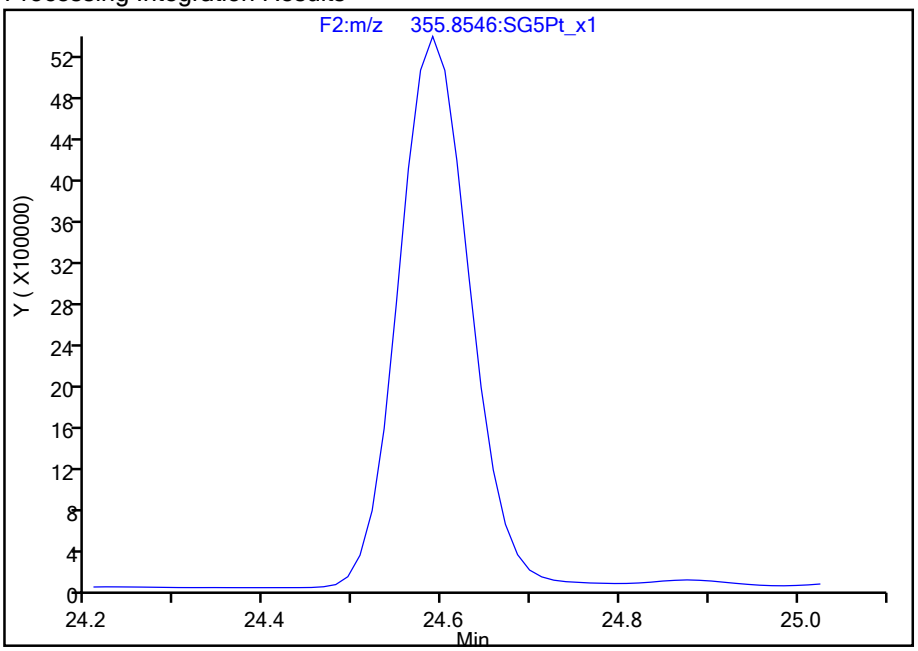

Manual Integration Results

RT: 24.59
Area: 30026901
Amount: 99.007132
Amount Units: pg/ul

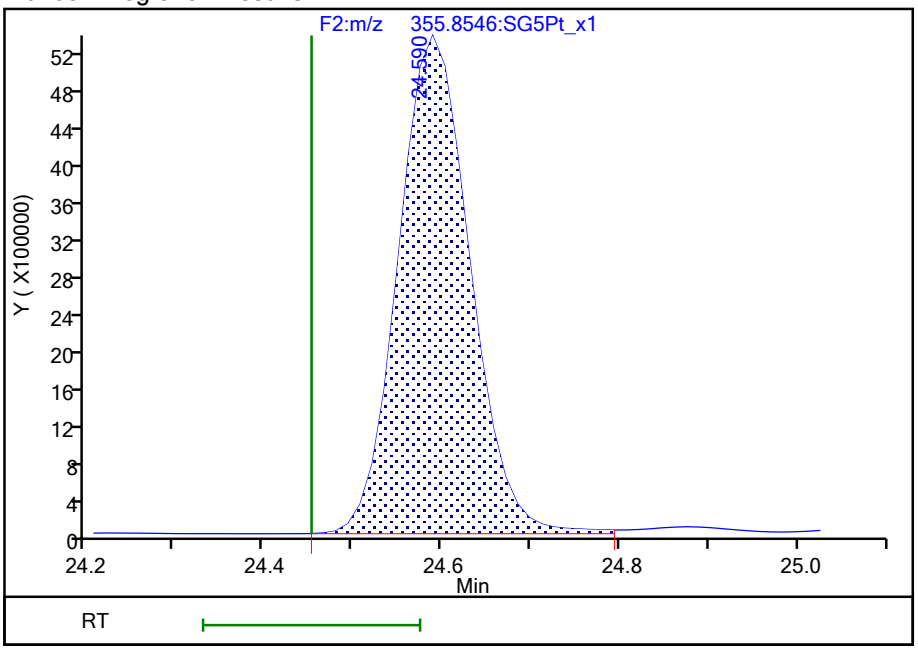

Reviewer: dadunj, 18-Aug-2021 10:56:16
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.35
Area: 45637836
Amount: 128.8816
Amount Units: pg/ul

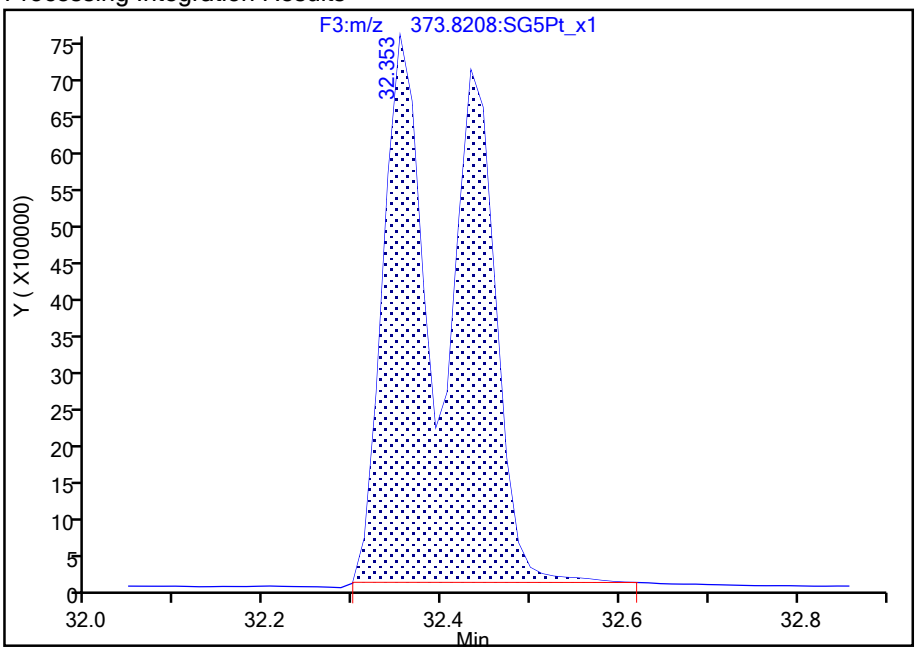

Manual Integration Results

RT: 32.35
Area: 24198991
Amount: 68.645517
Amount Units: pg/ul

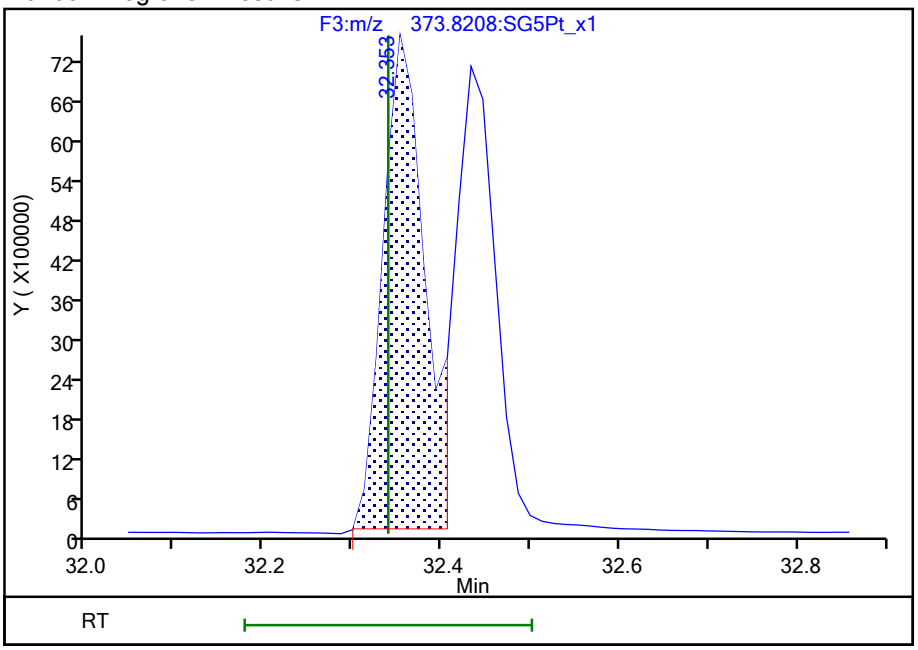

Reviewer: dadunj, 18-Aug-2021 10:56:40

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.35
Area: 37530550
Amount: 128.8816
Amount Units: pg/ul

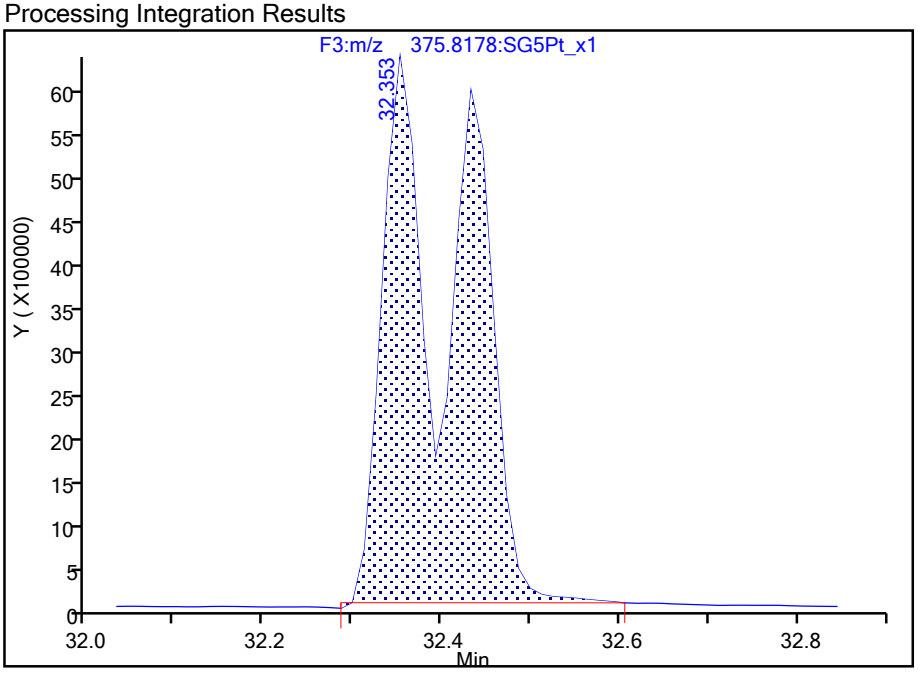

Manual Integration Results

RT: 32.35
Area: 20098533
Amount: 68.645517
Amount Units: pg/ul

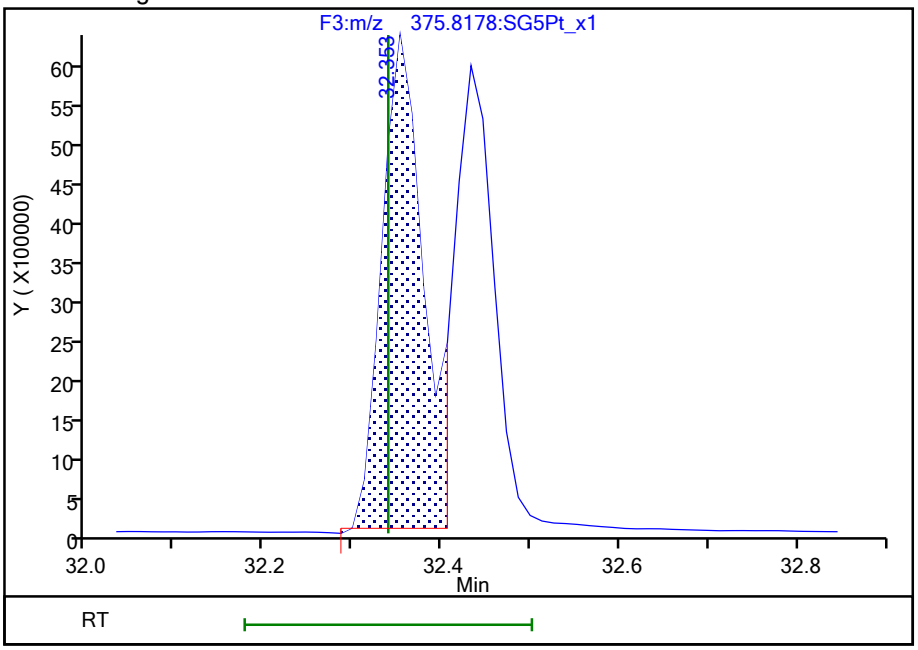

Reviewer: dadunj, 18-Aug-2021 10:56:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d				
Injection Date:	15-Aug-2021 05:06:53	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	47	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

Not Detected

RT: 27.94- 32.45

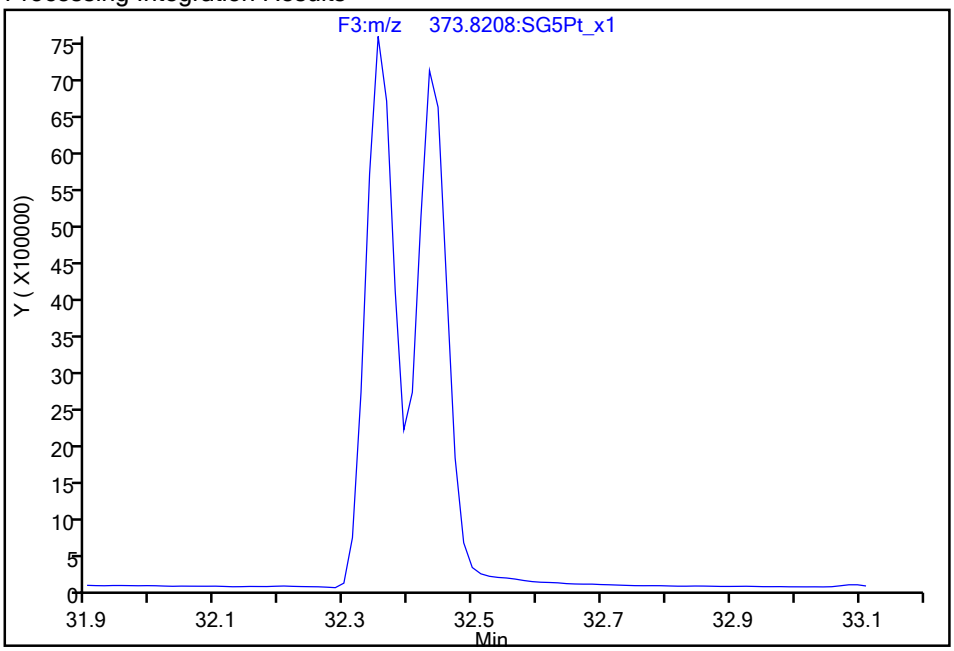

Manual Integration Results

RT = 32.433 Area = 21438643 M

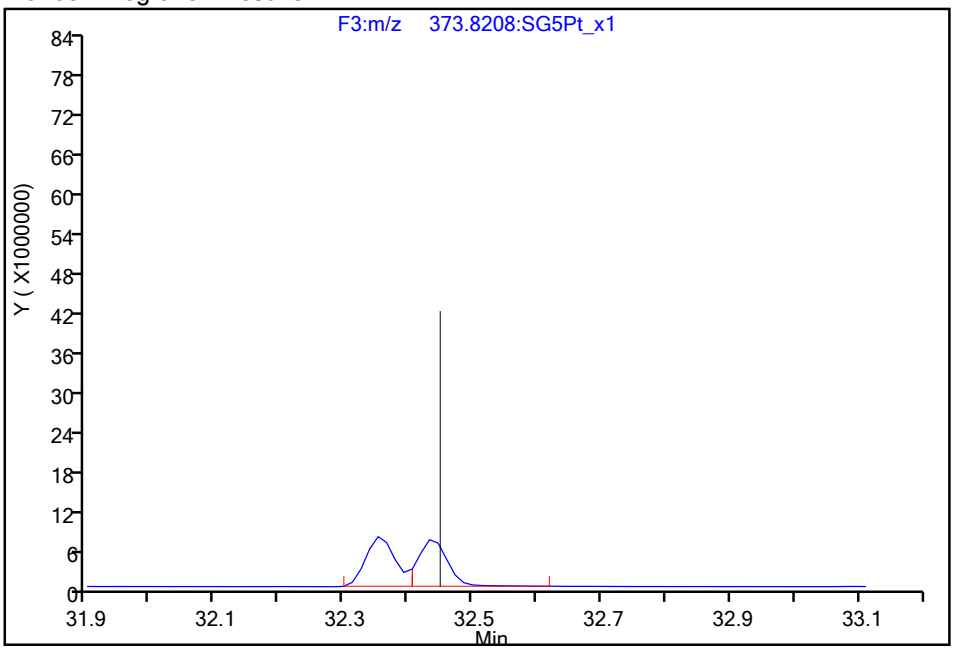

Reviewer: dadunj, 18-Aug-2021 10:57:16

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

777633

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d		
Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

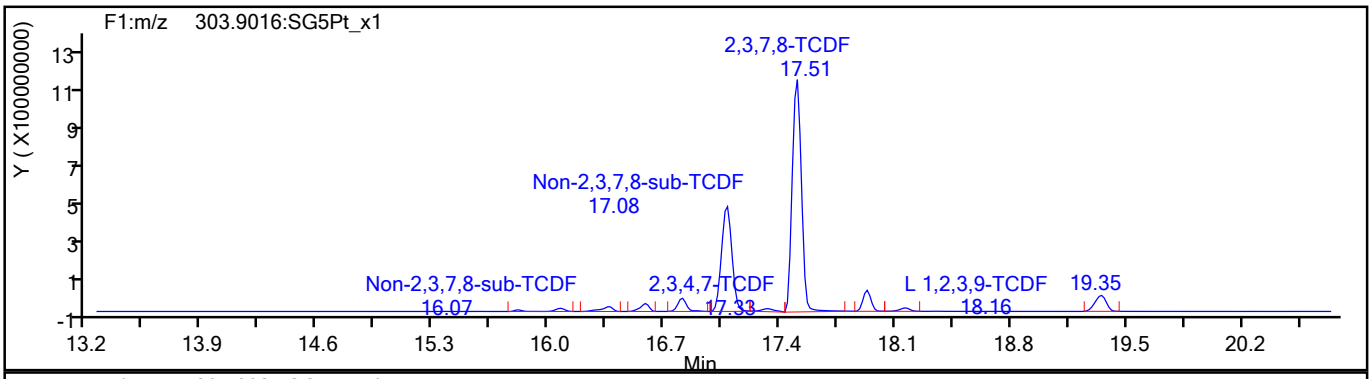

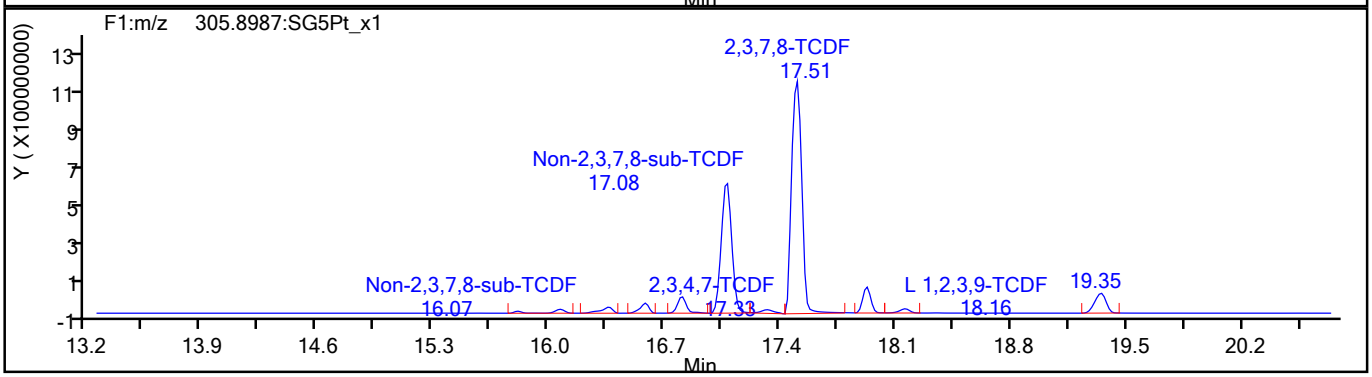

TCDF Standards

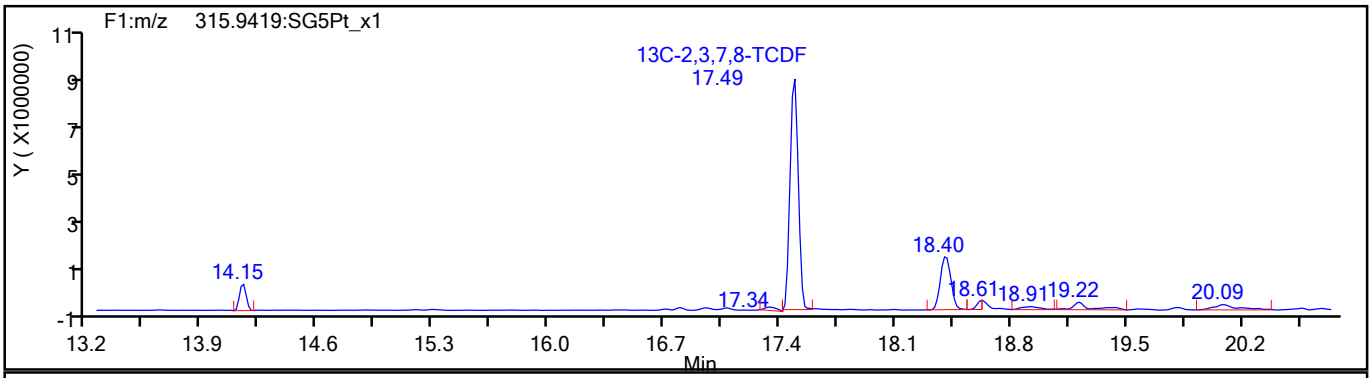

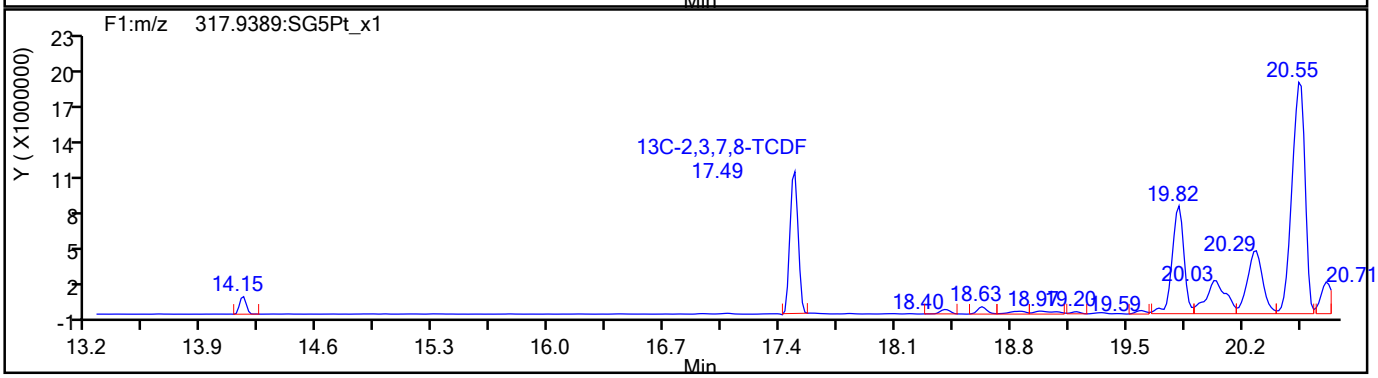

777634

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d		
Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

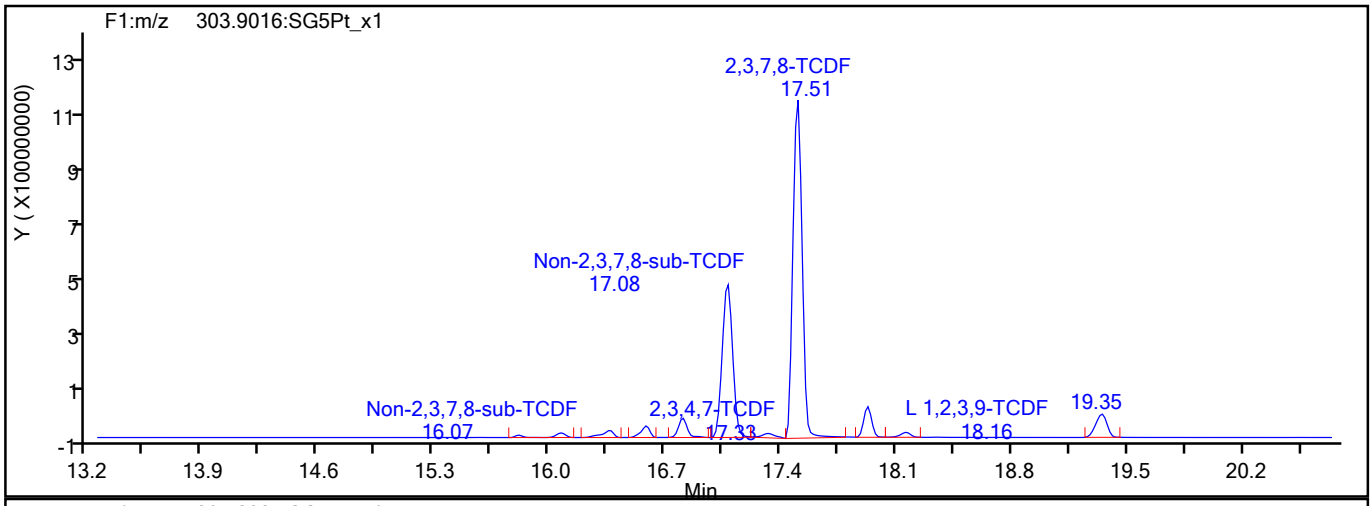

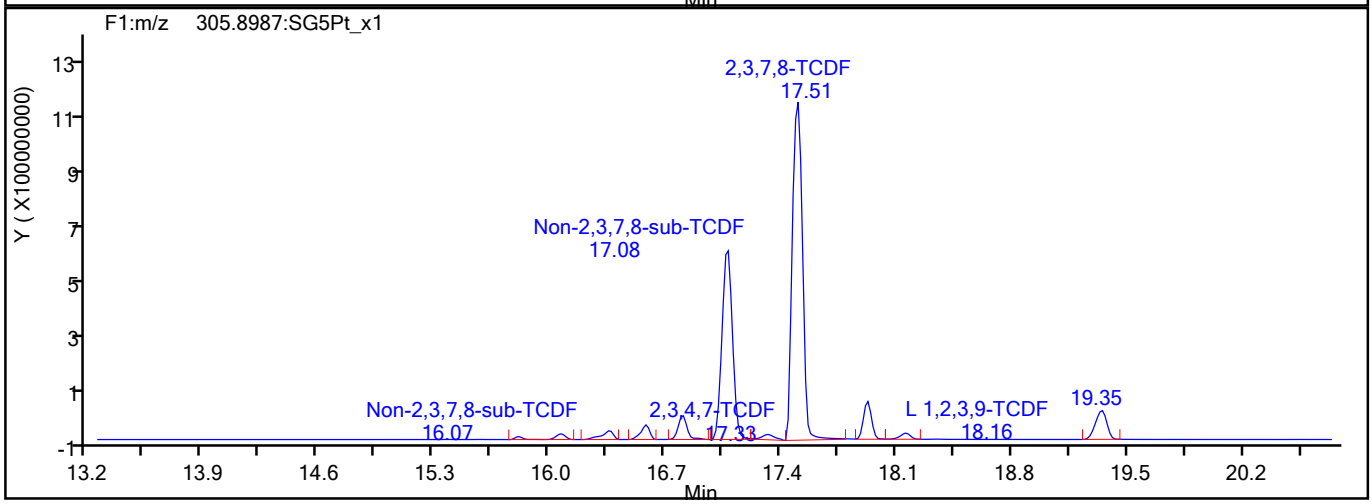

TCDF Interference Mass

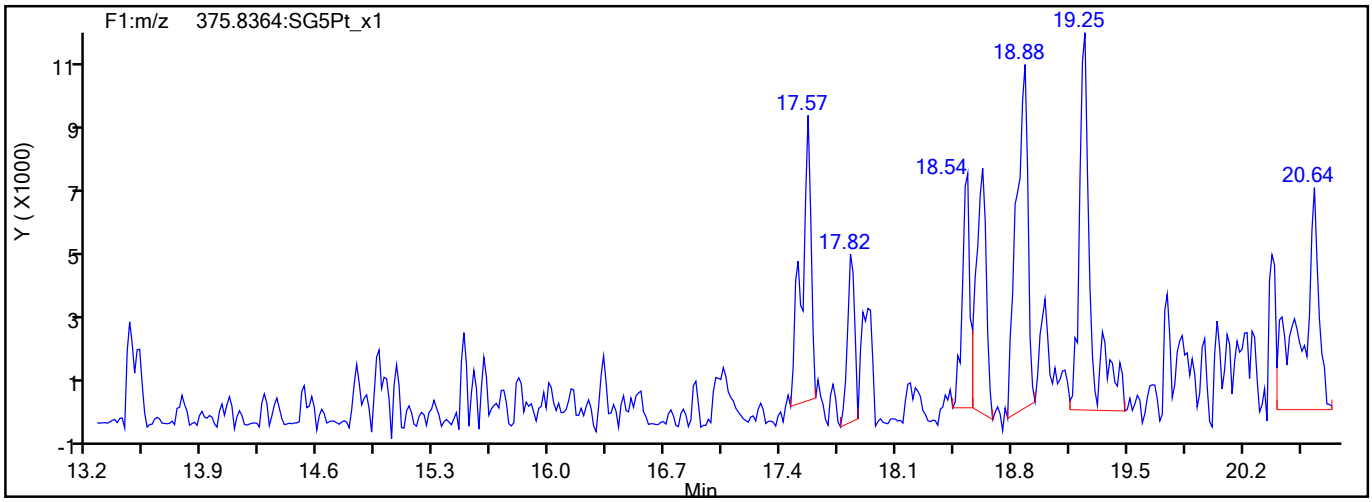

777635

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d		
Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

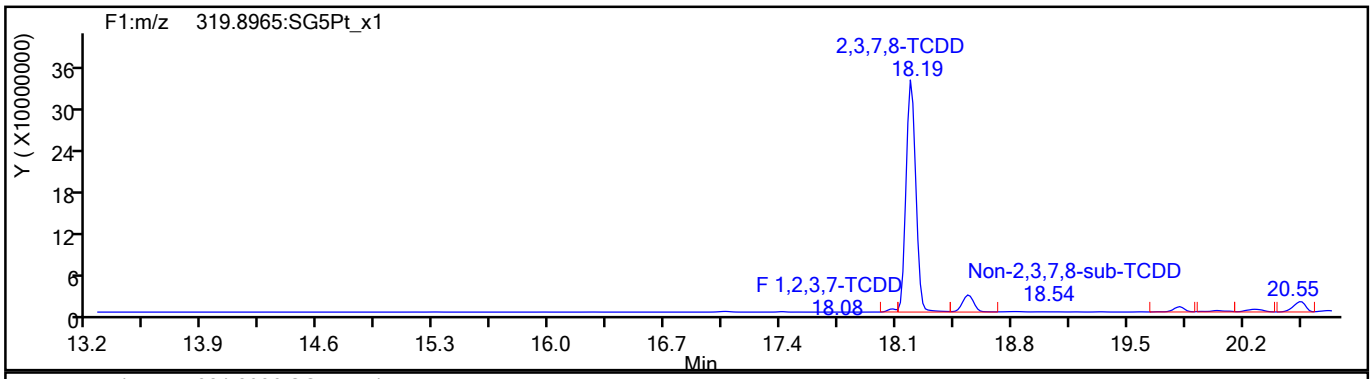

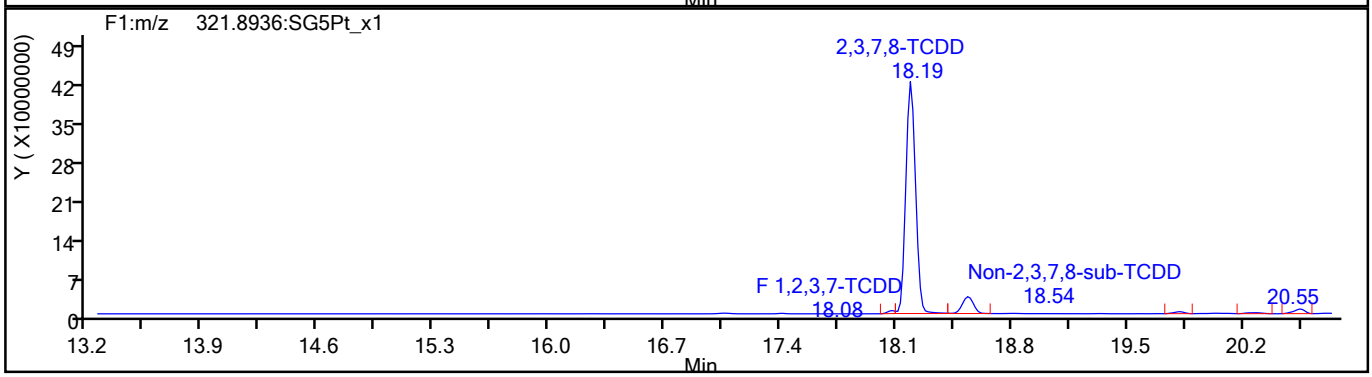

TCDD Standards

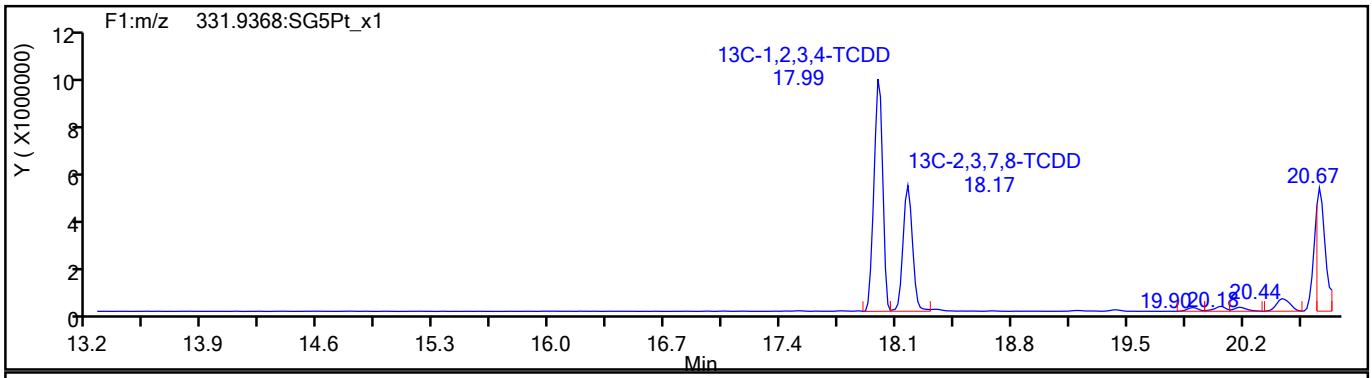

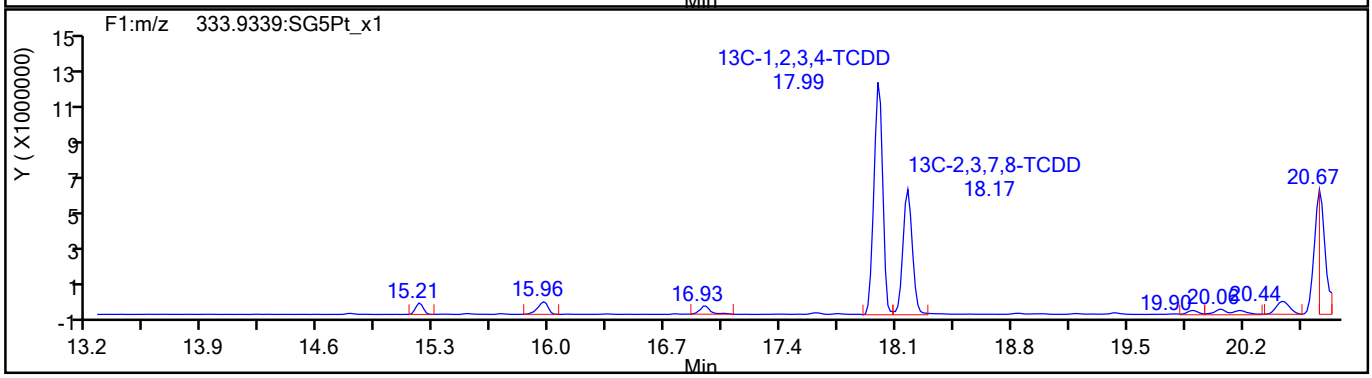

777636

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d		
Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

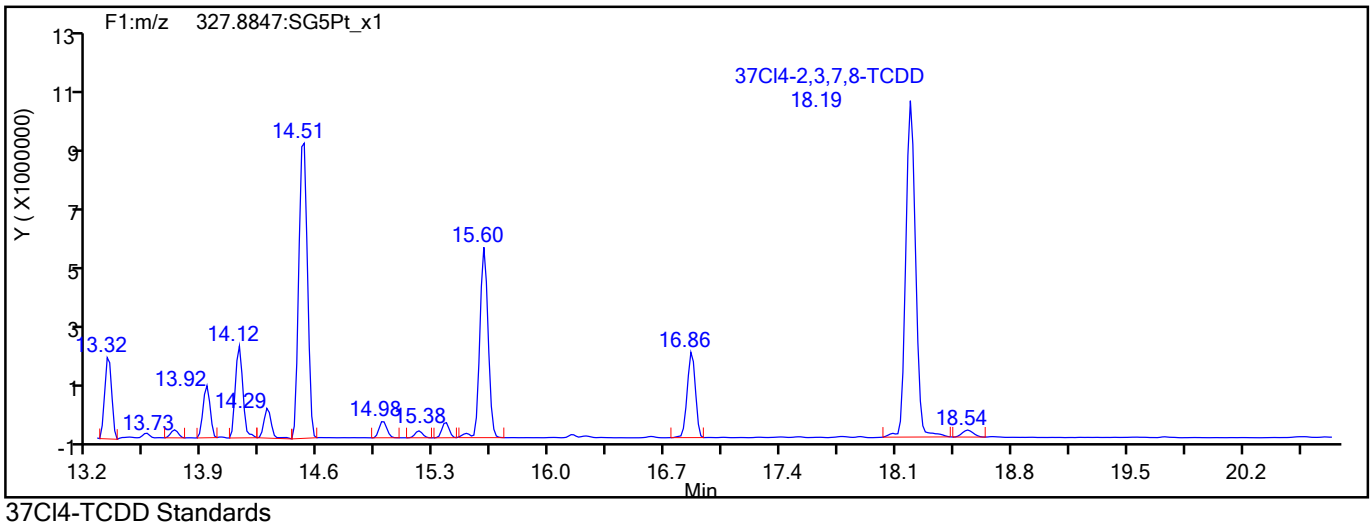

37Cl4-TCDD Standards

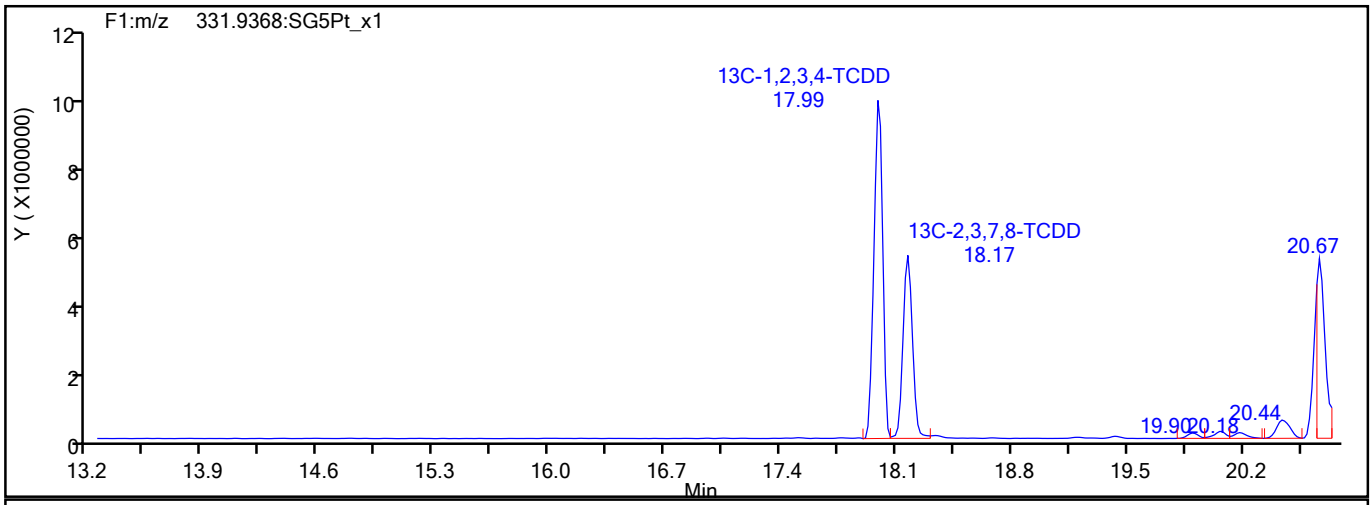

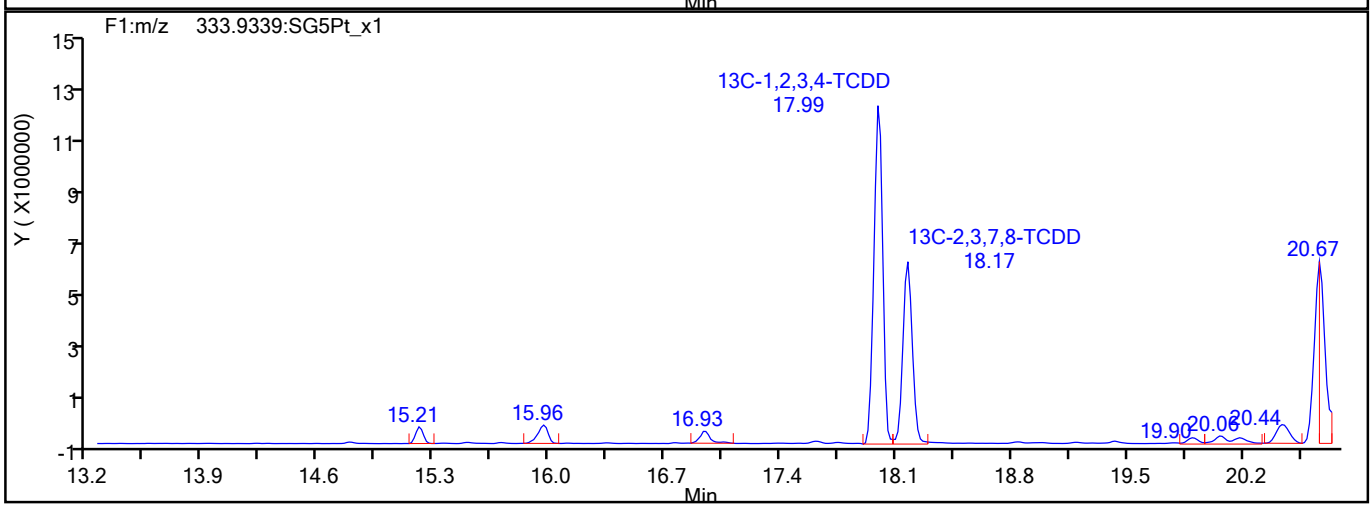

777637

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

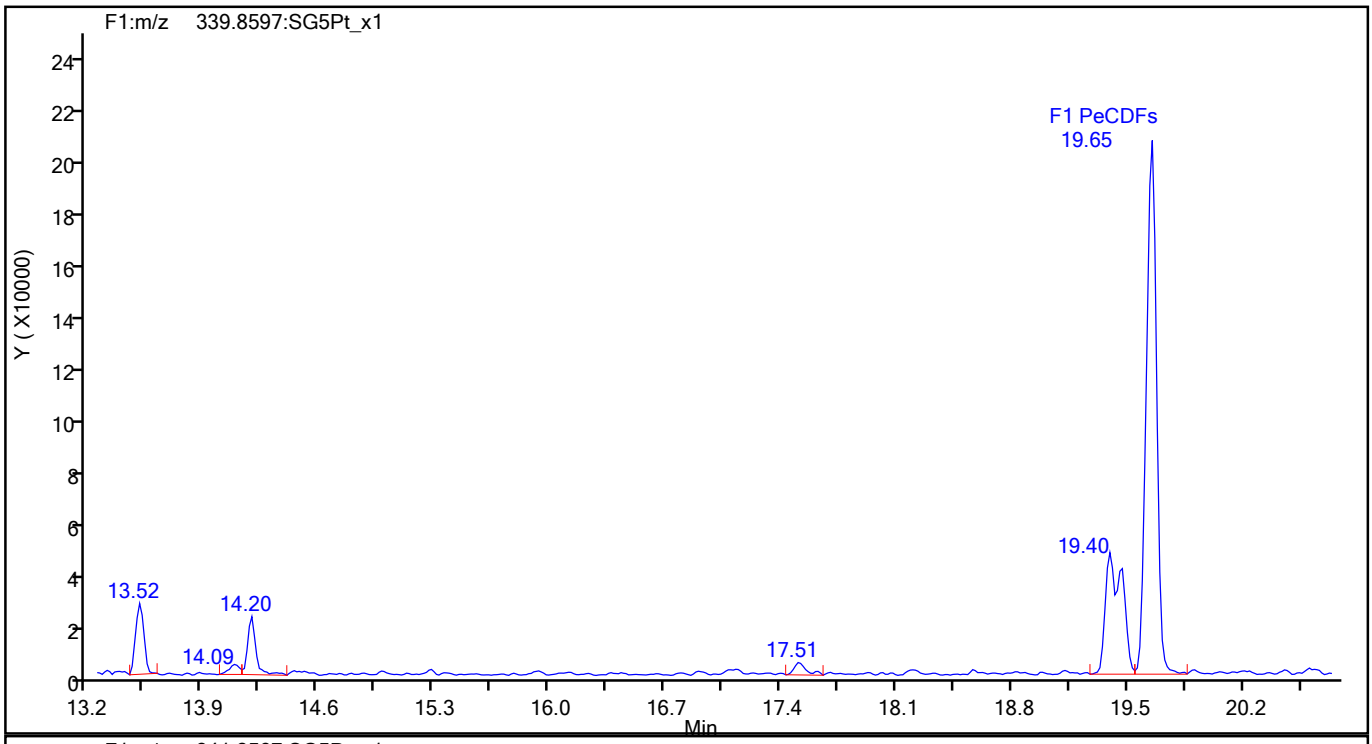

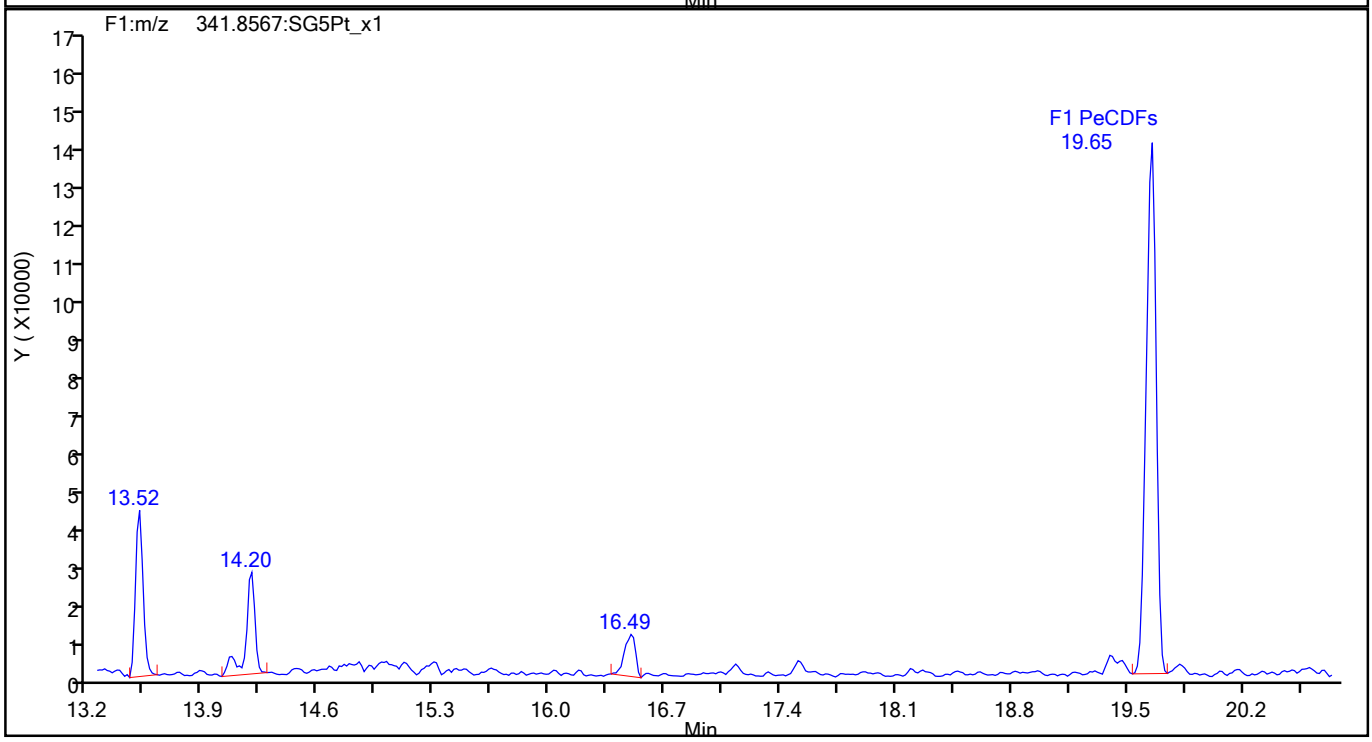

777638

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d		
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Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

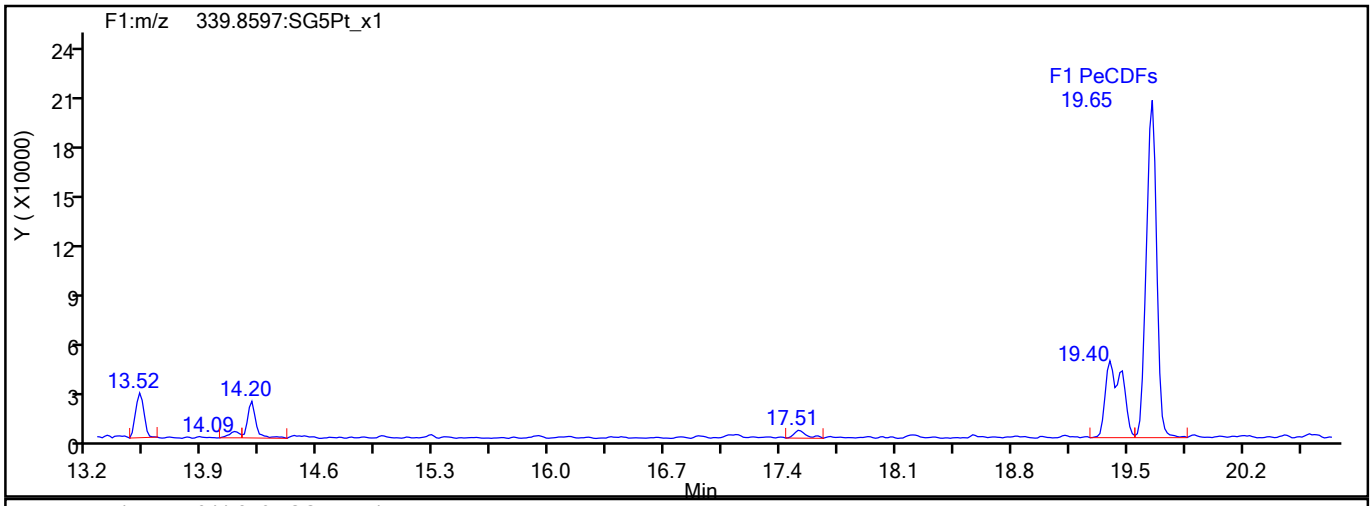

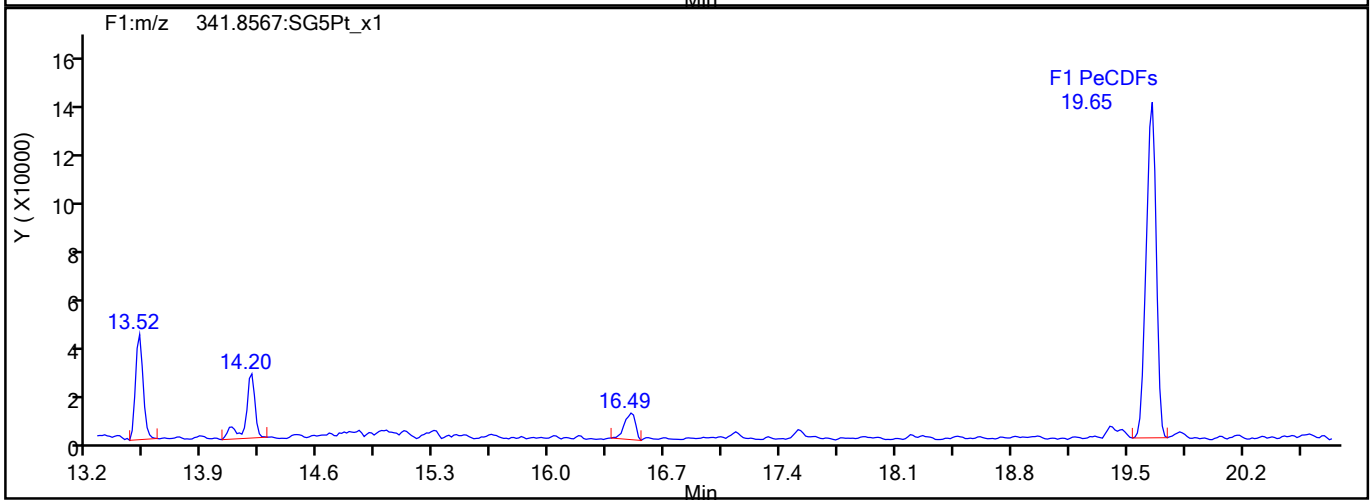

F1 PeCDFs Interference Mass

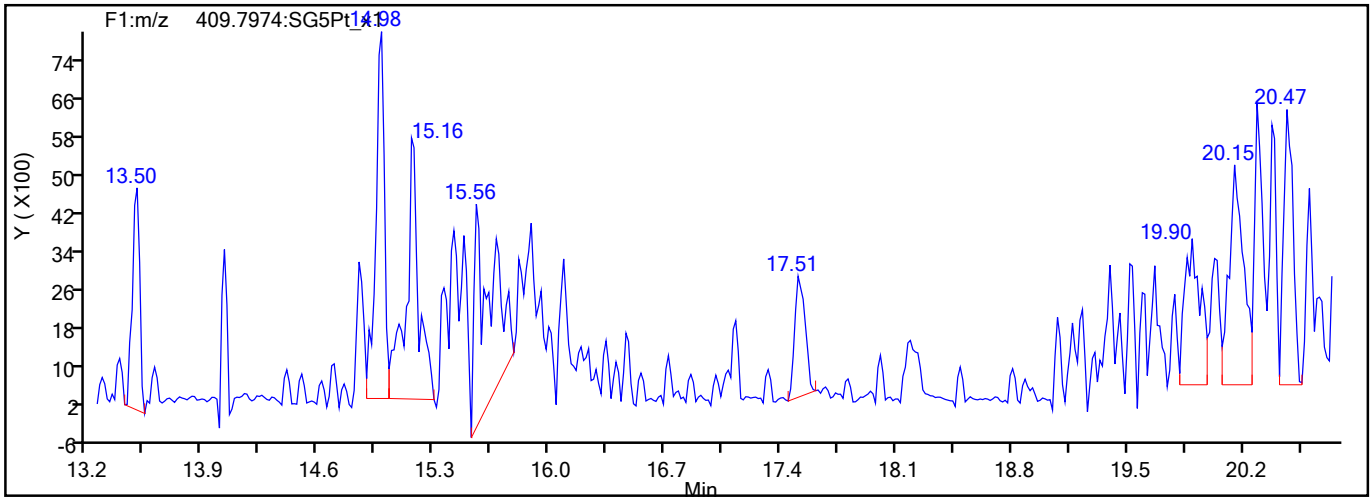

777639

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
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Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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PeCDF

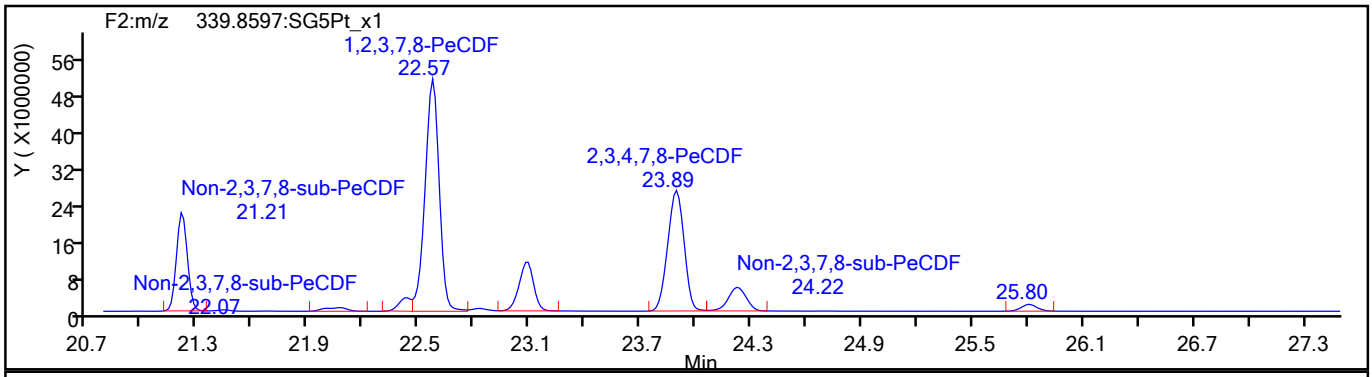

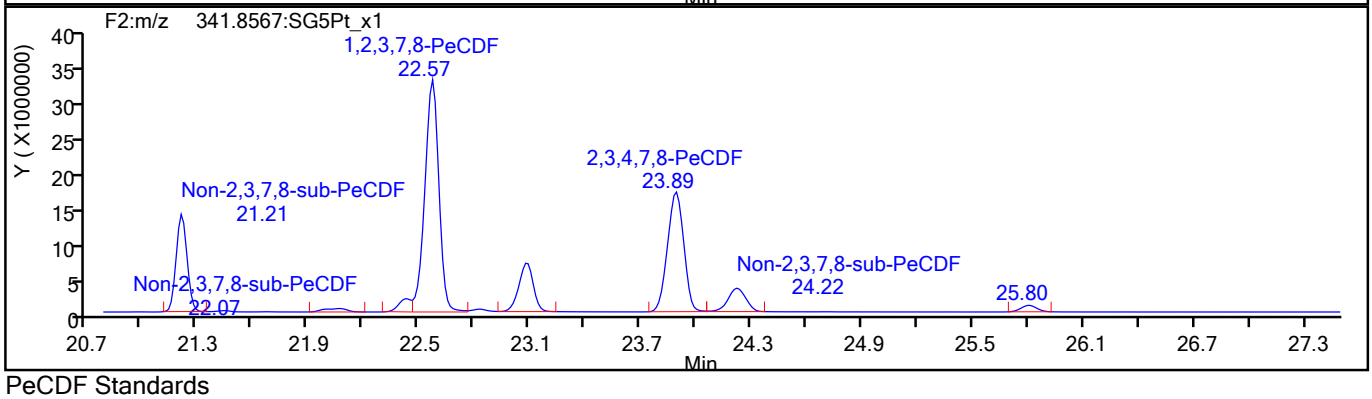

PeCDF Standards

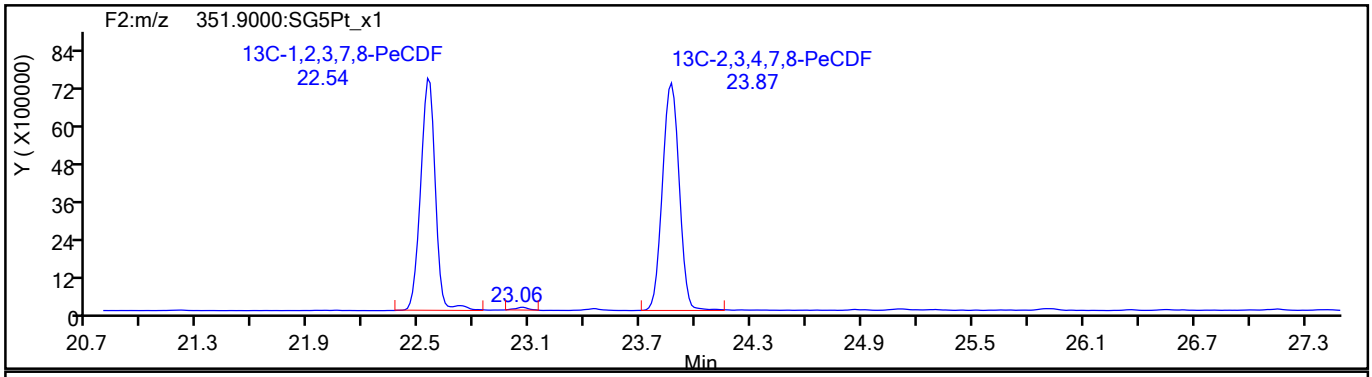

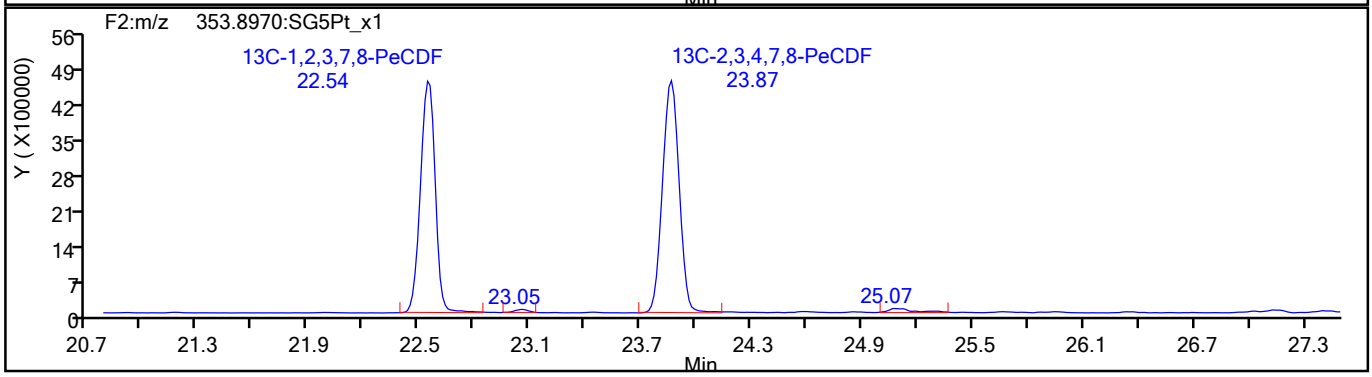

777640

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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PeCDF

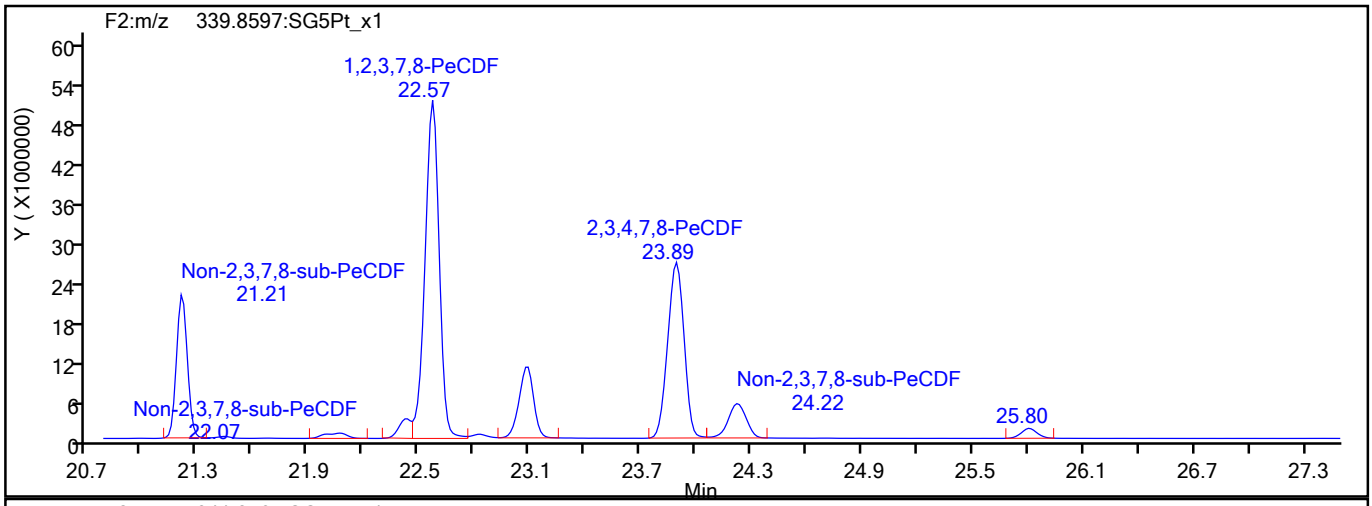

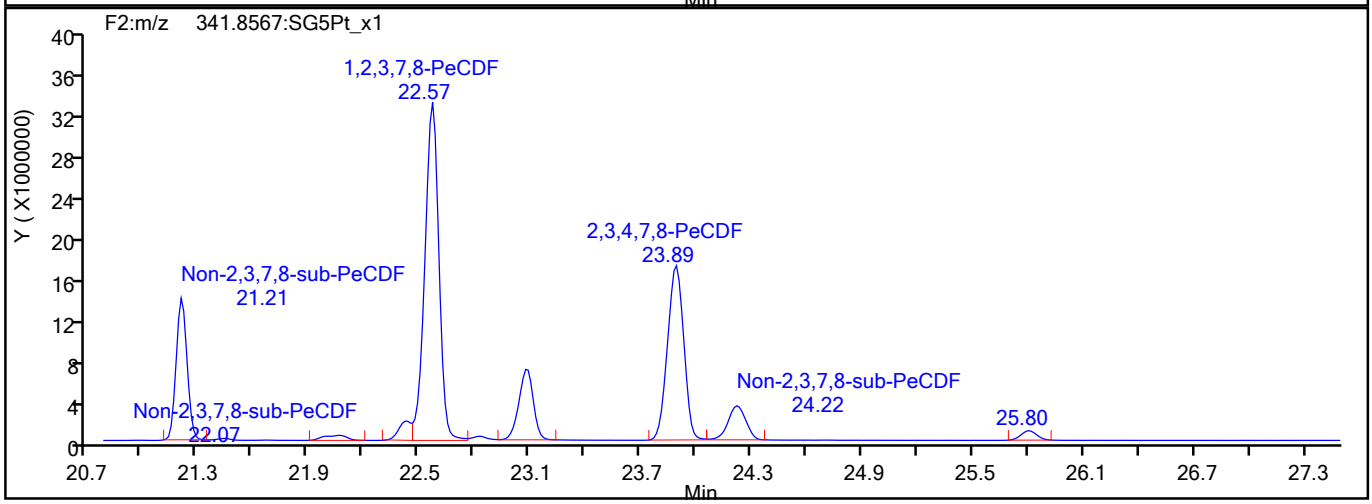

PeCDF Interference Mass

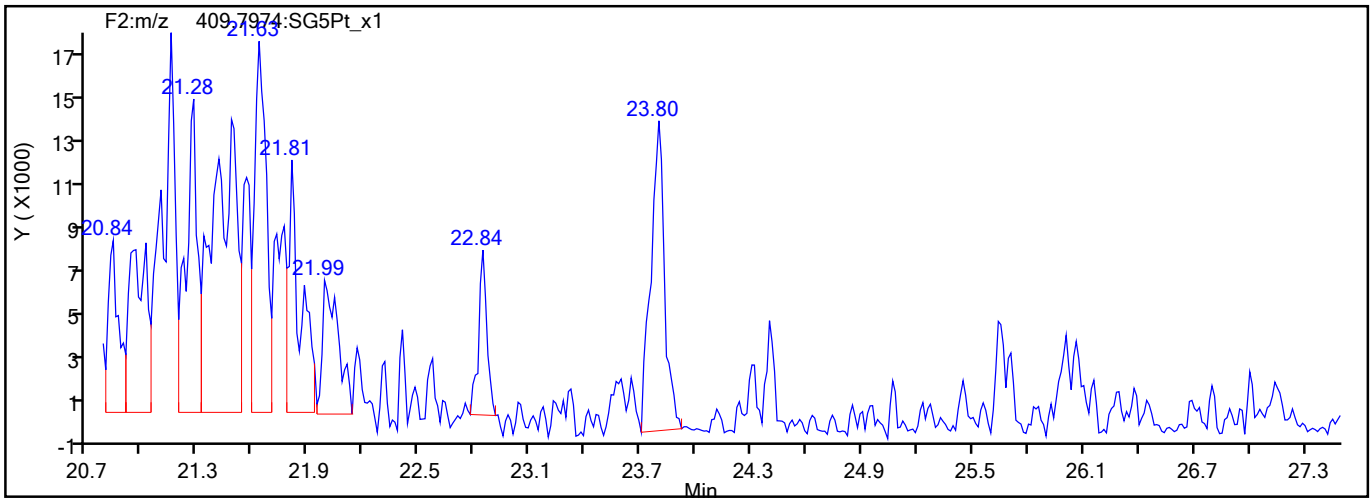

777641

Report Date: 18-Aug-2021 10:58:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

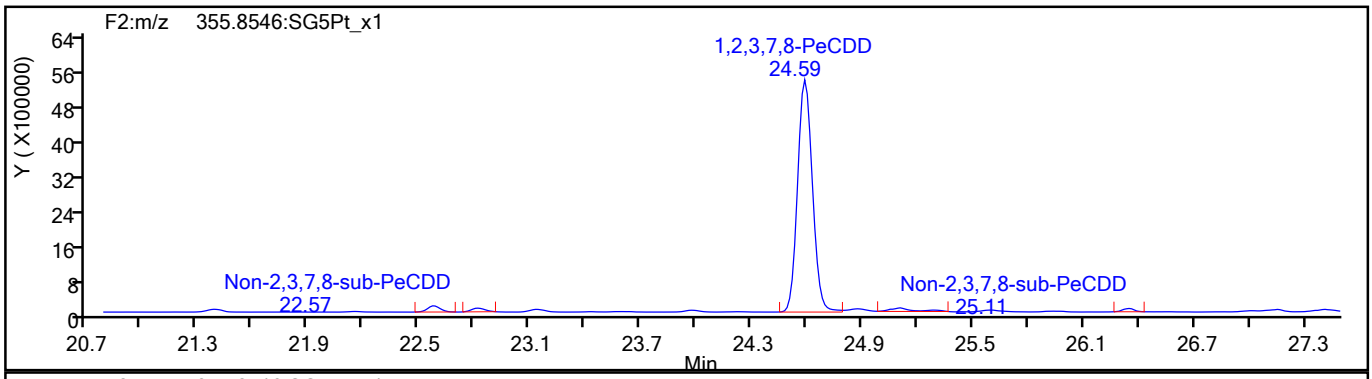

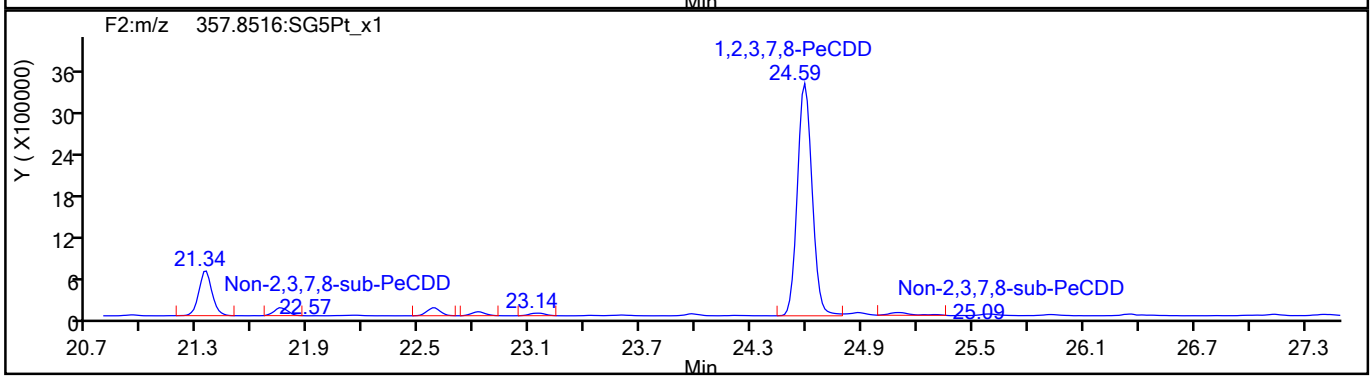

PeCDD Standards

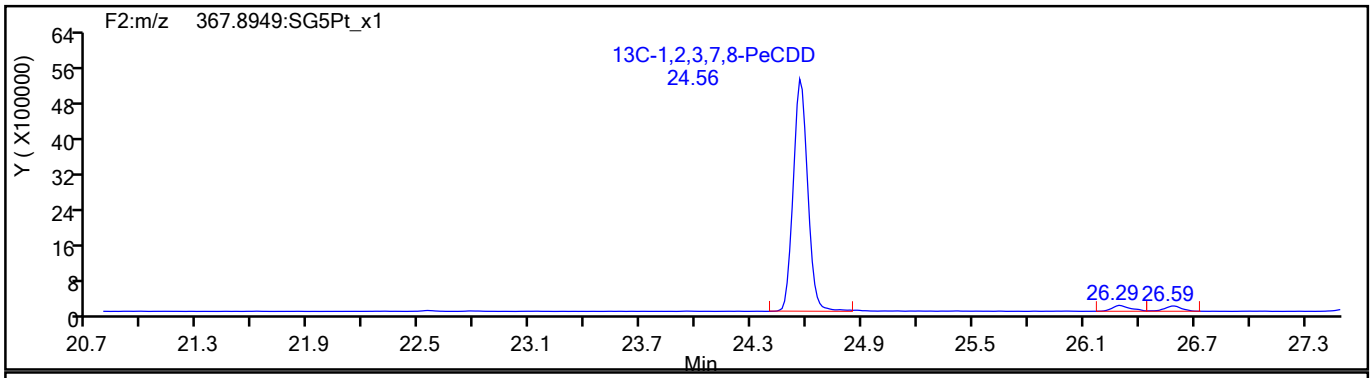

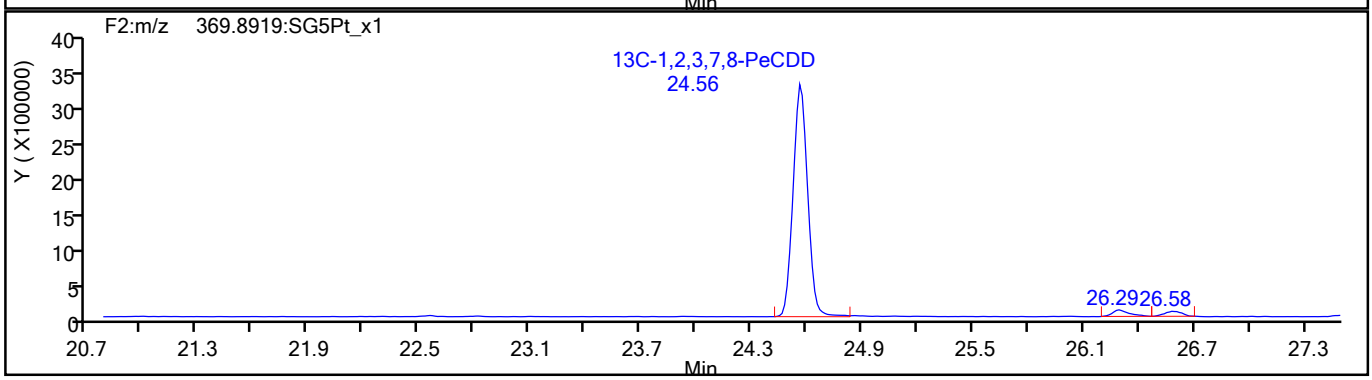

777642

Report Date: 18-Aug-2021 10:58:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

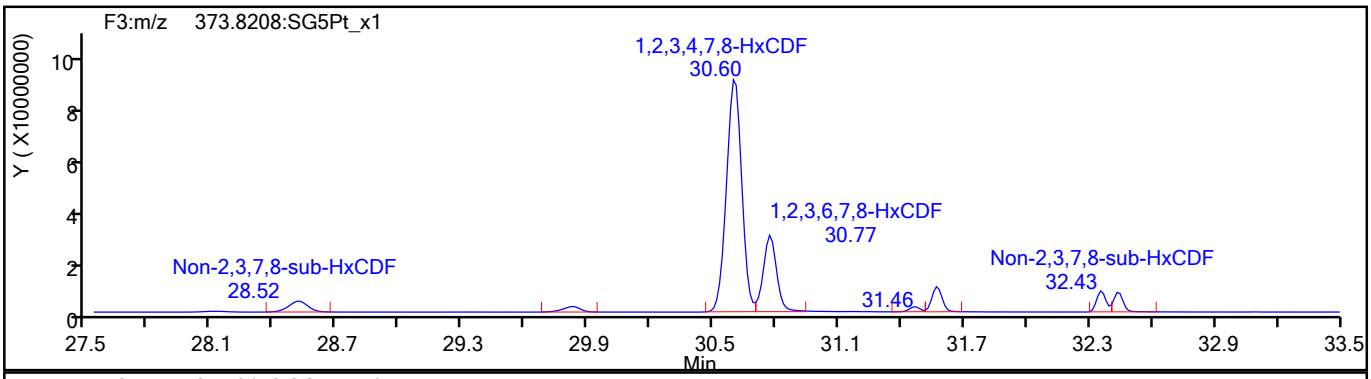

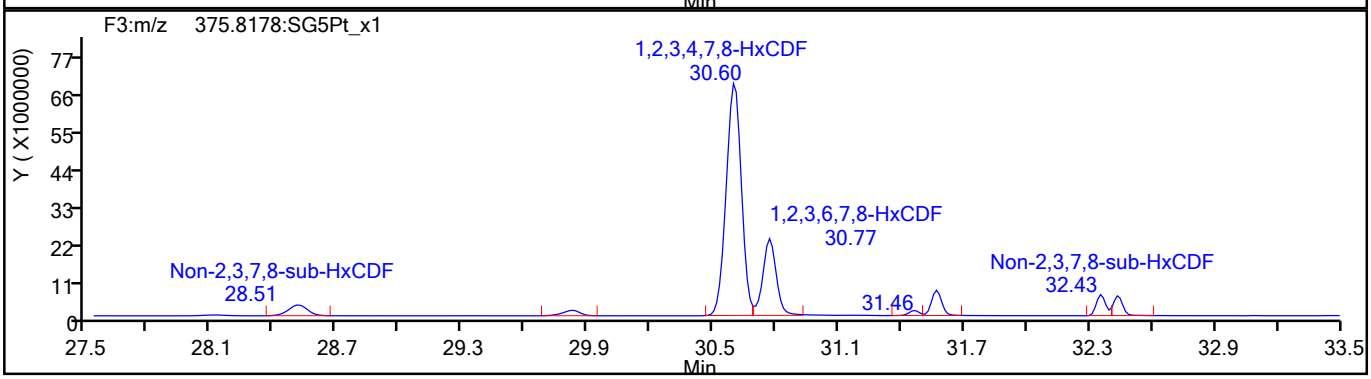

HxCDF Standards

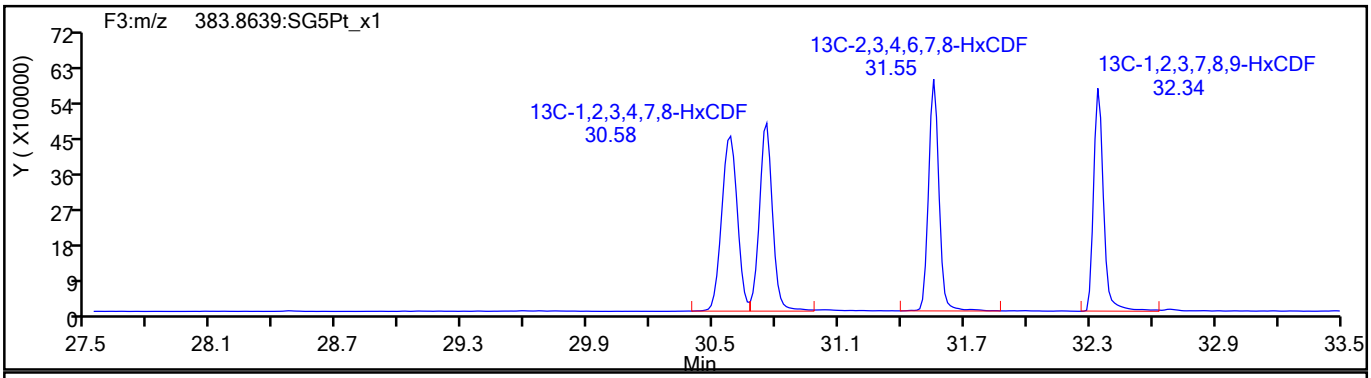

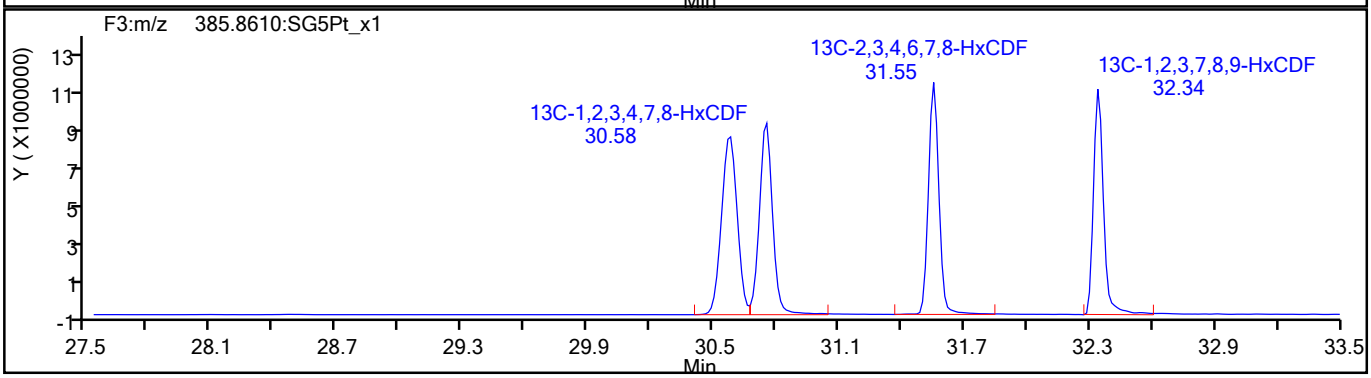

777643

Report Date: 18-Aug-2021 10:58:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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HxCDF

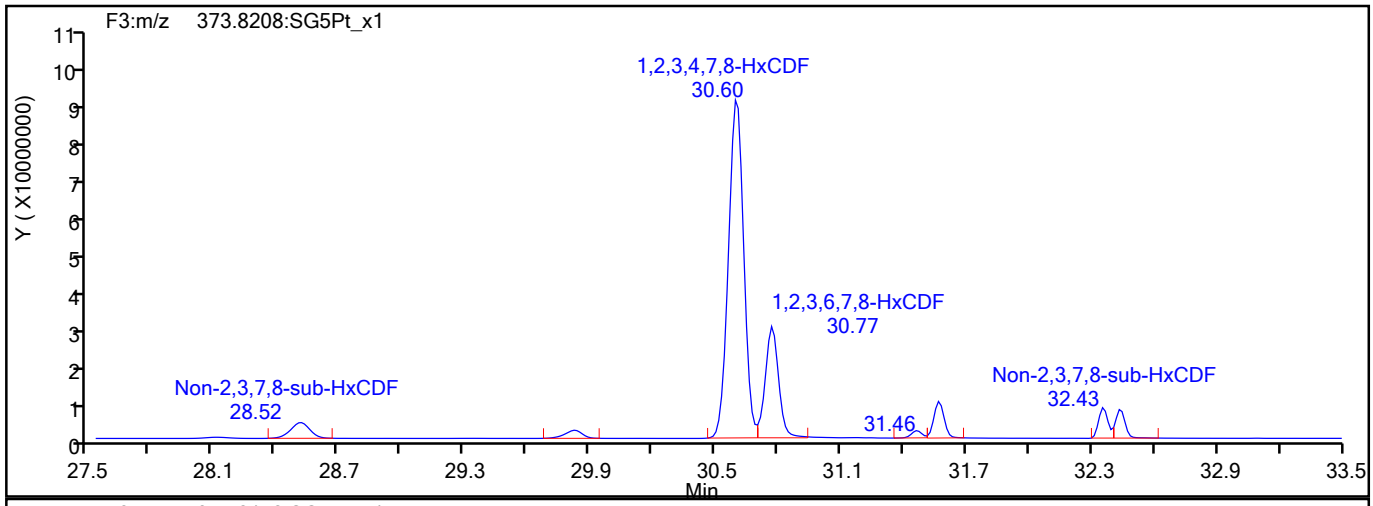

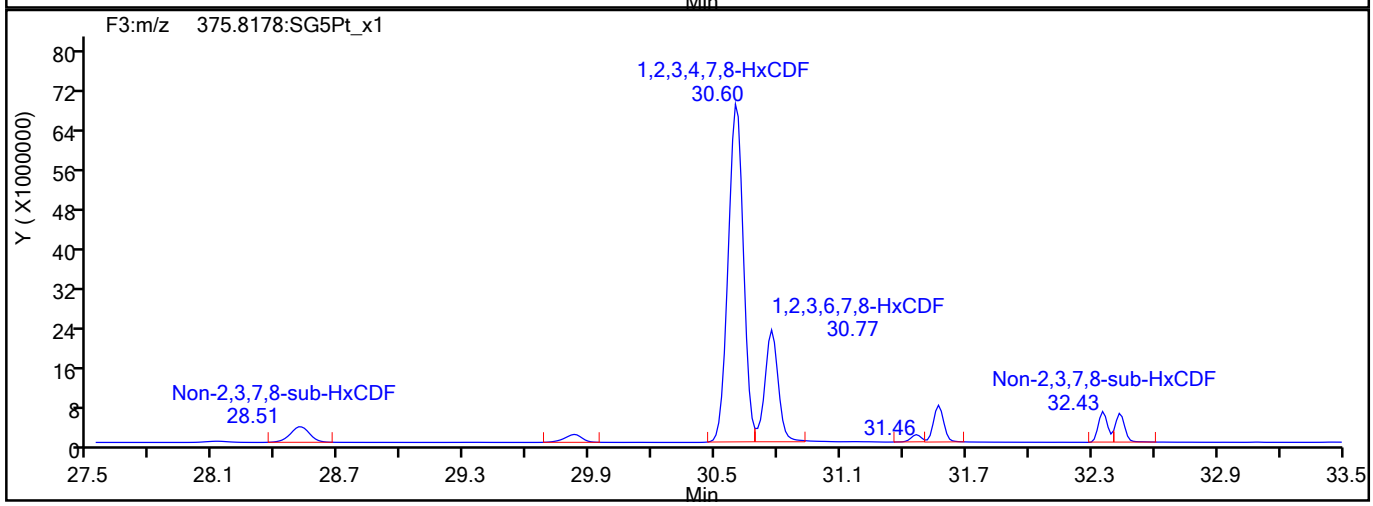

HxCDF Interference Mass

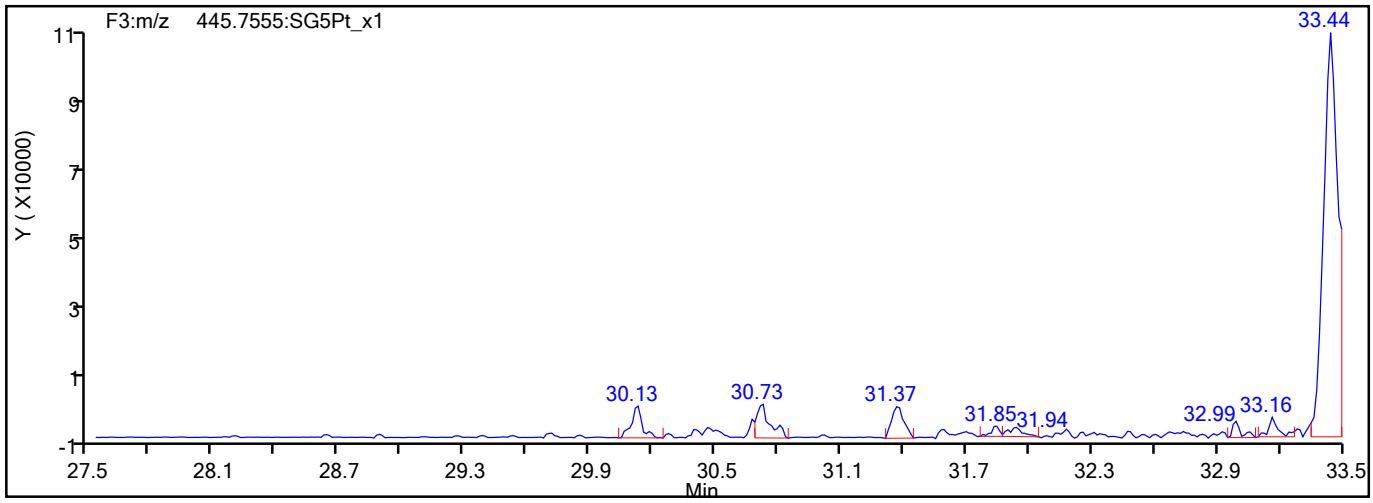

777644

Report Date: 18-Aug-2021 10:58:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

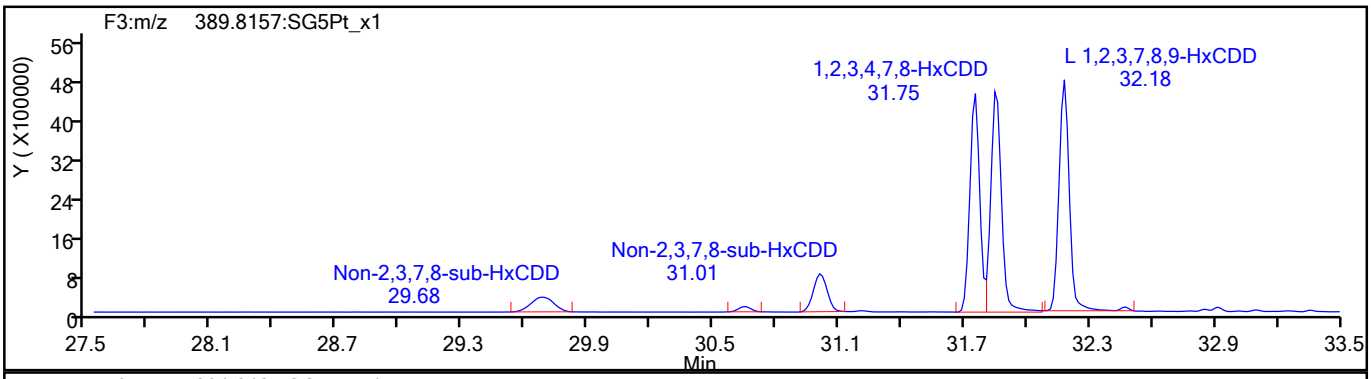

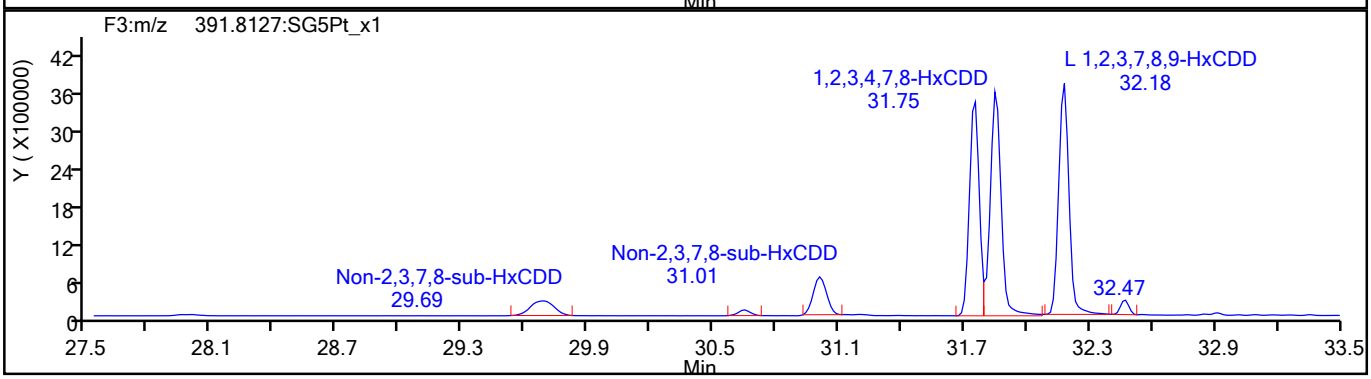

HxCDD Standards

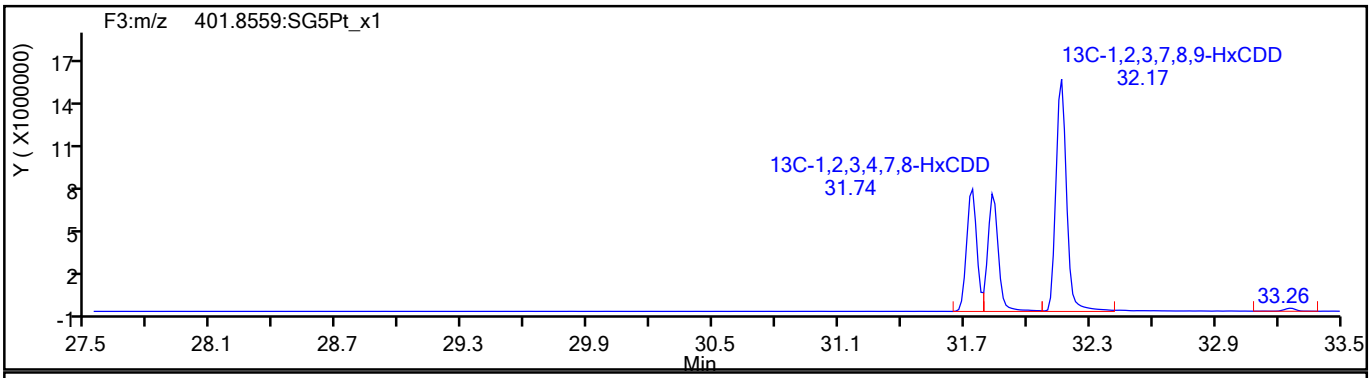

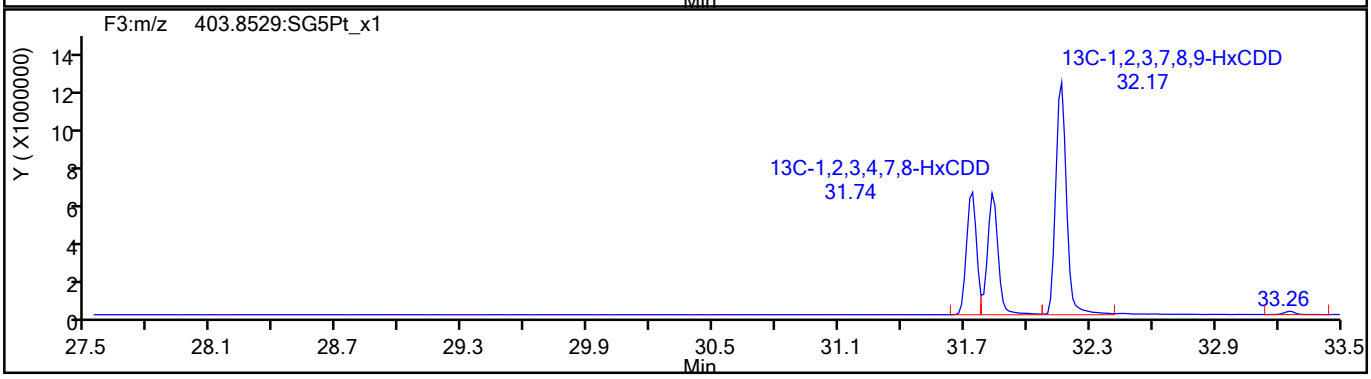

777645

Report Date: 18-Aug-2021 10:58:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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HpCDF

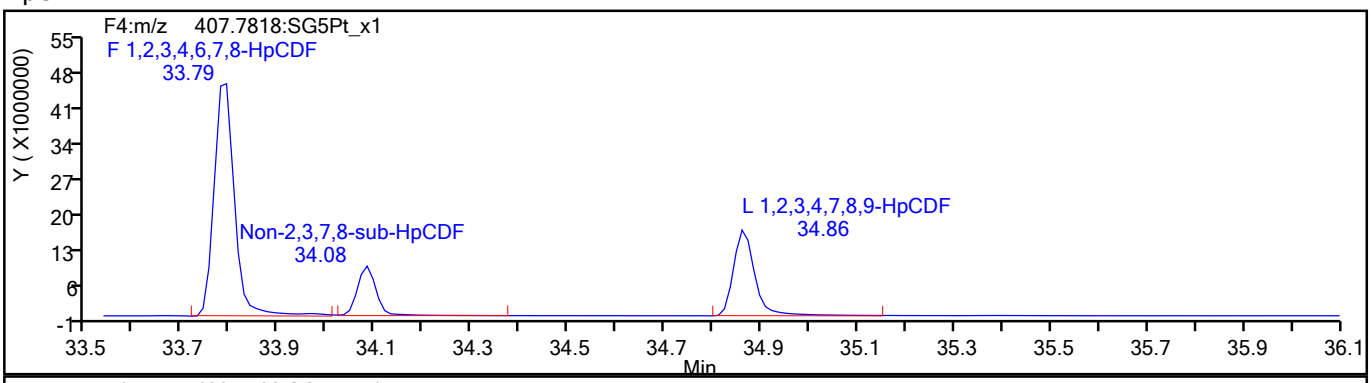

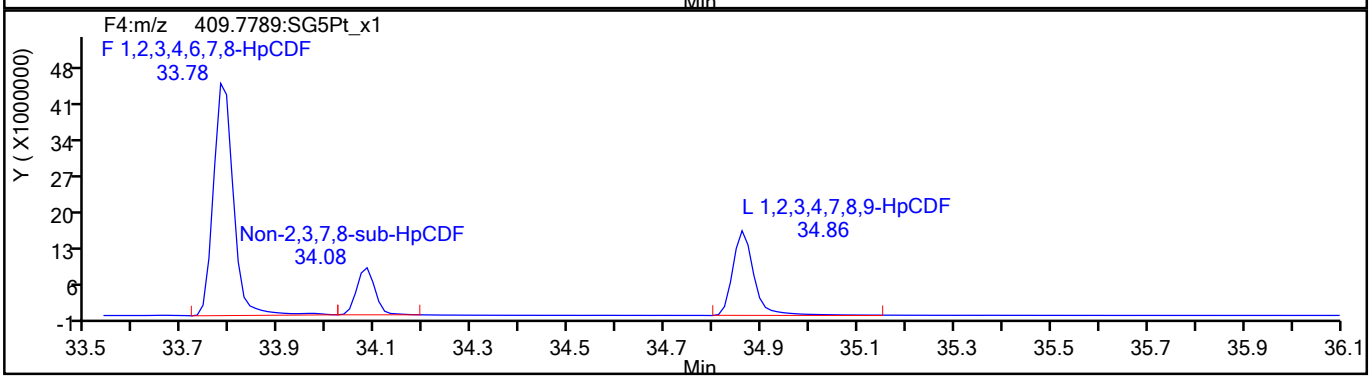

HpCDF Standards

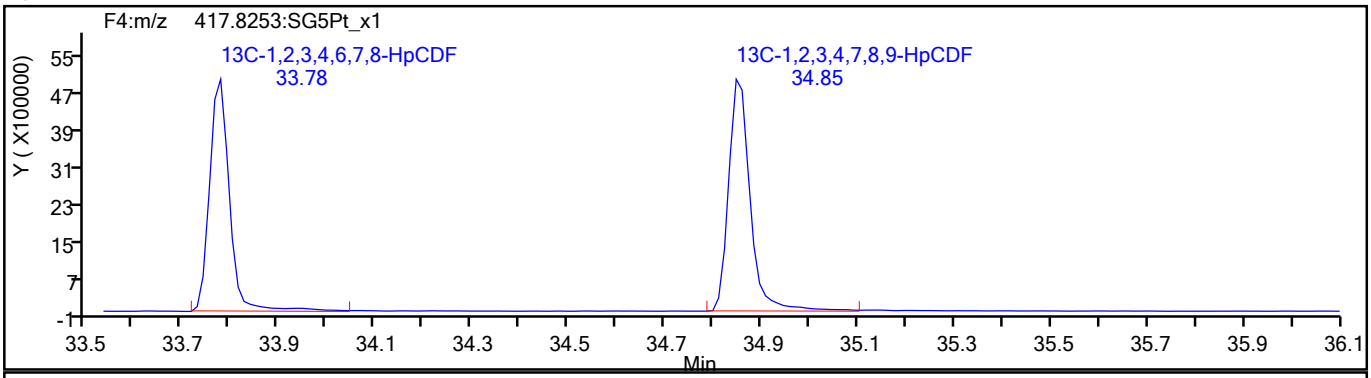

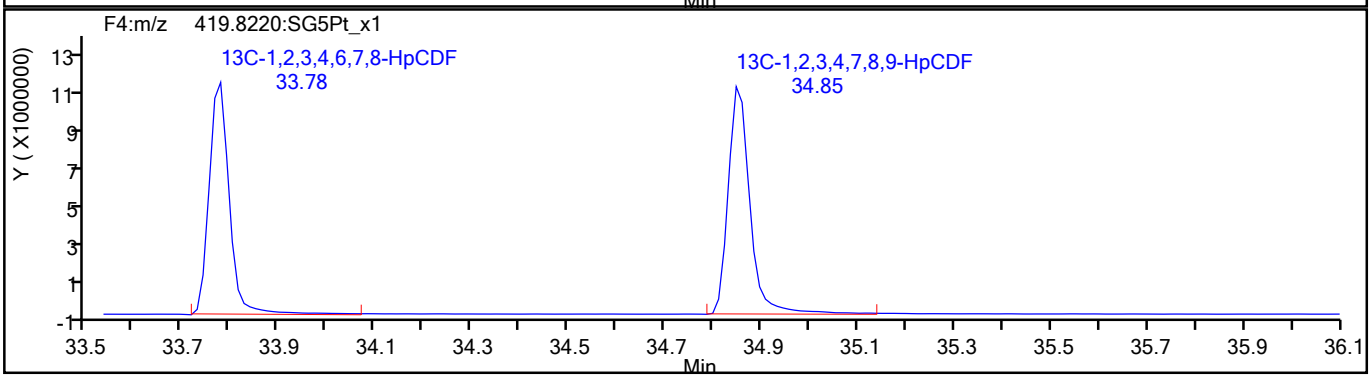

777646

Report Date: 18-Aug-2021 10:58:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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HpCDF

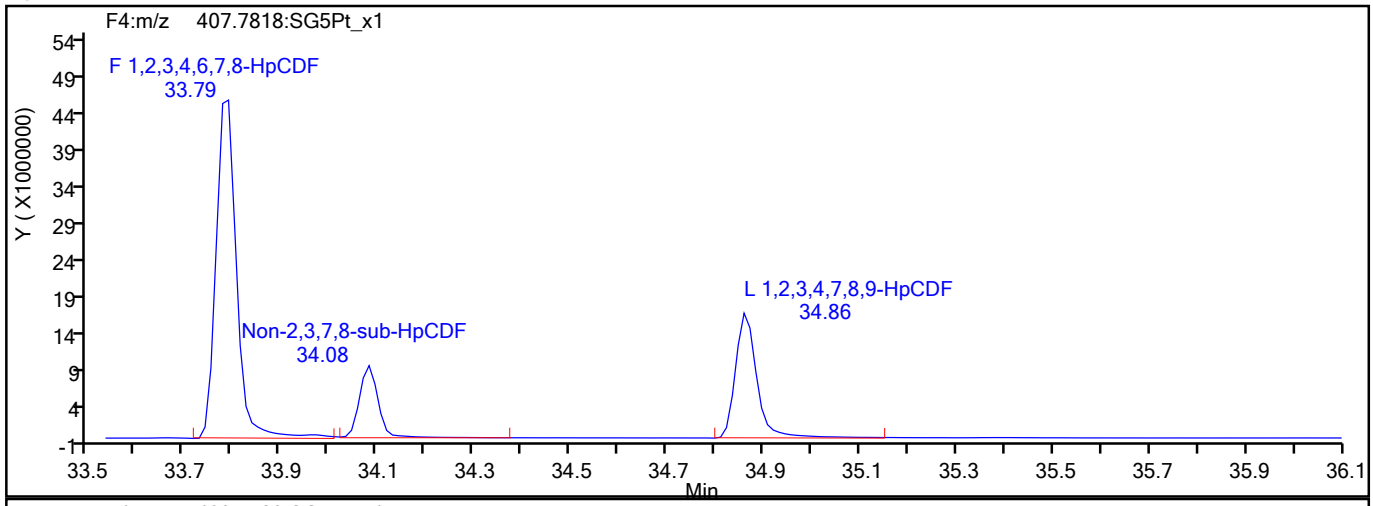

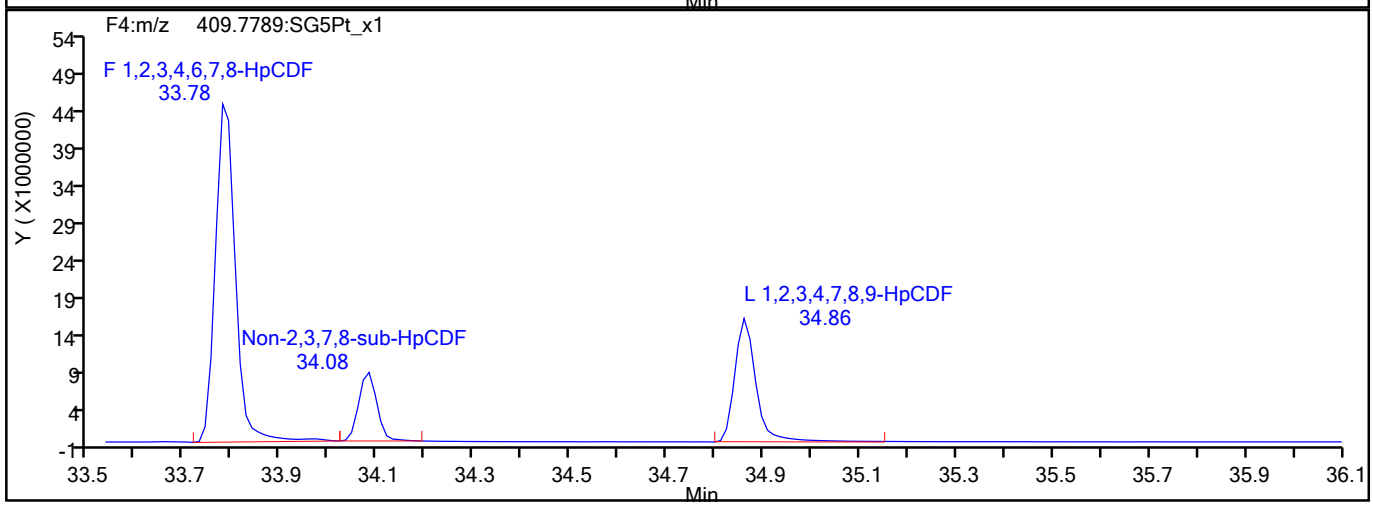

HpCDF Interference Mass

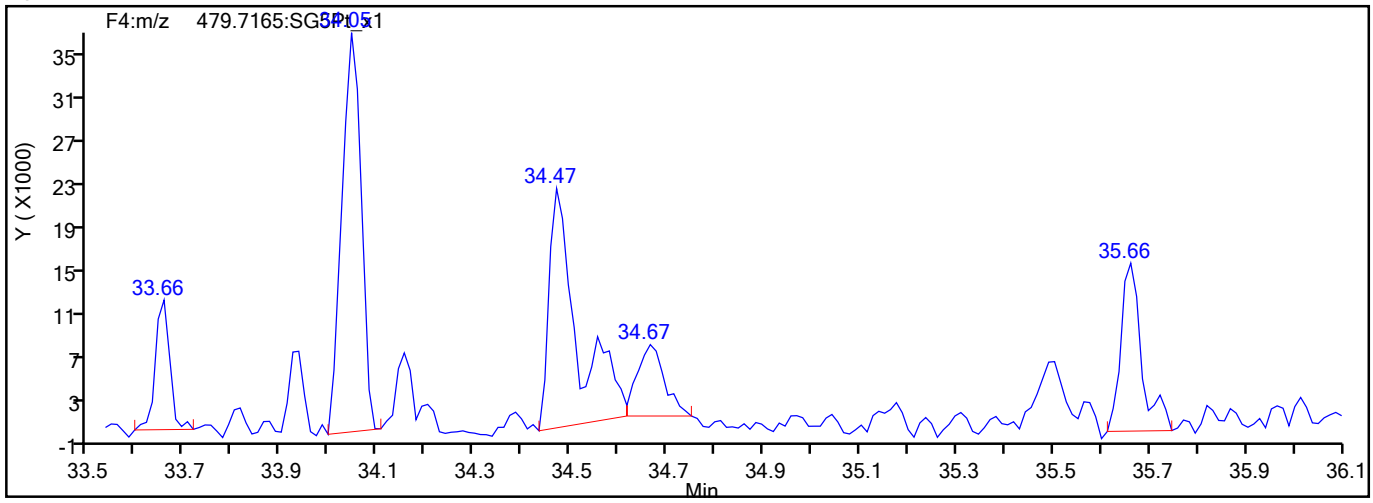

777647

Report Date: 18-Aug-2021 10:58:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d		
Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

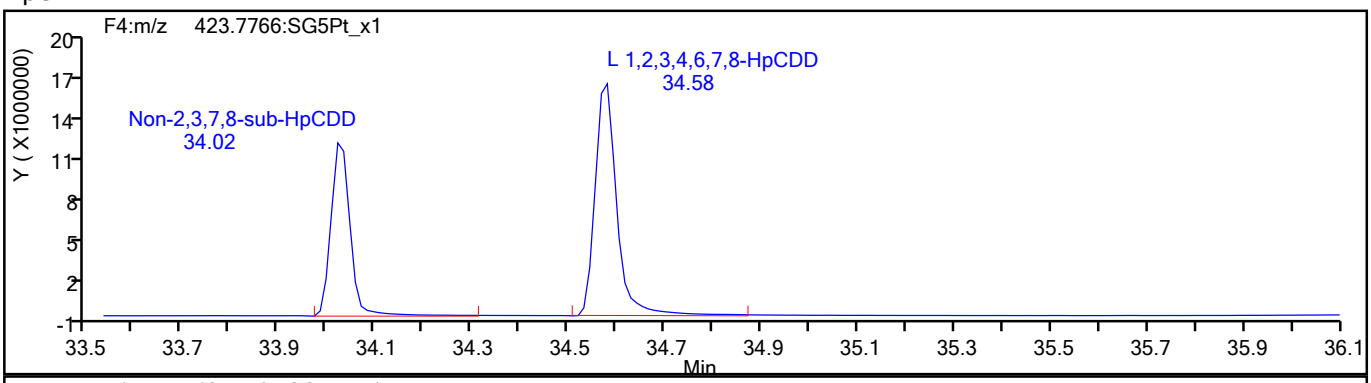

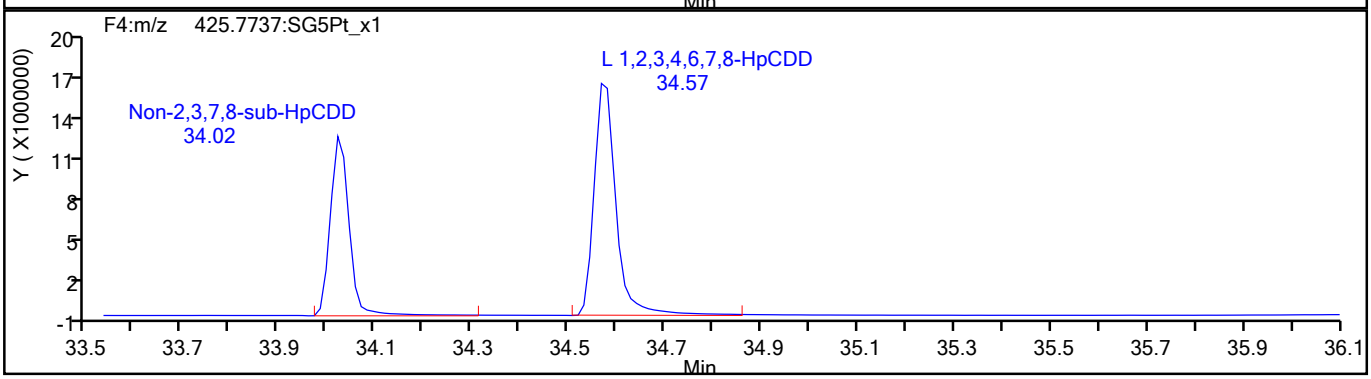

HpCDD Standards

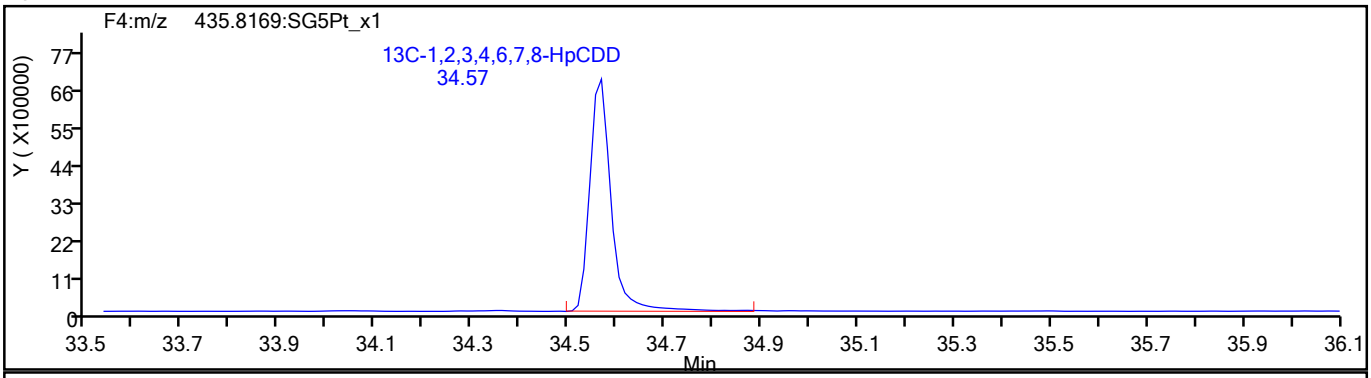

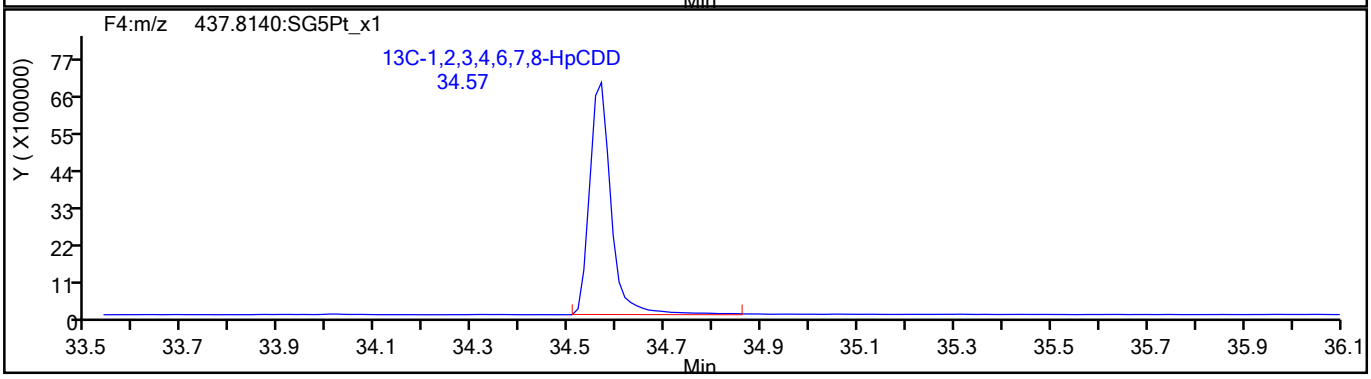

777648

Report Date: 18-Aug-2021 10:58:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d		
Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

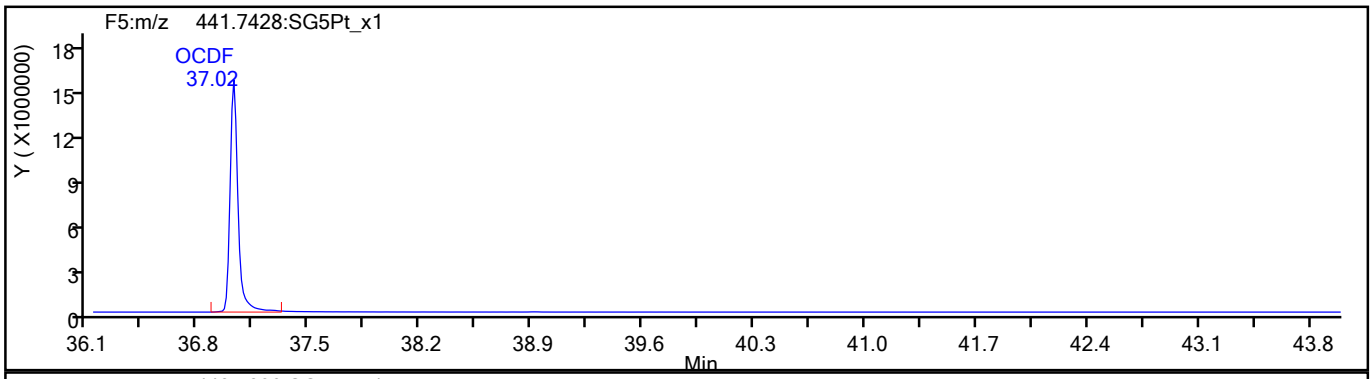

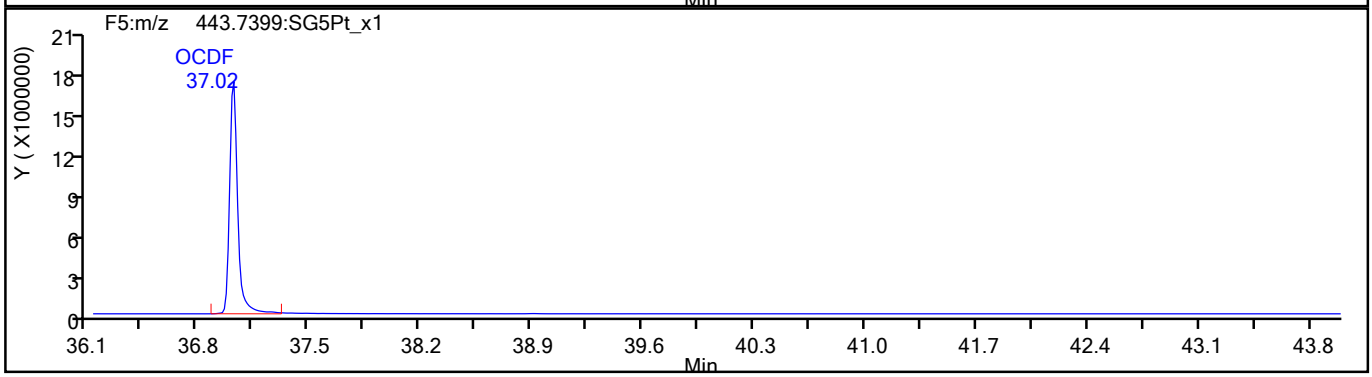

OCDF Standards

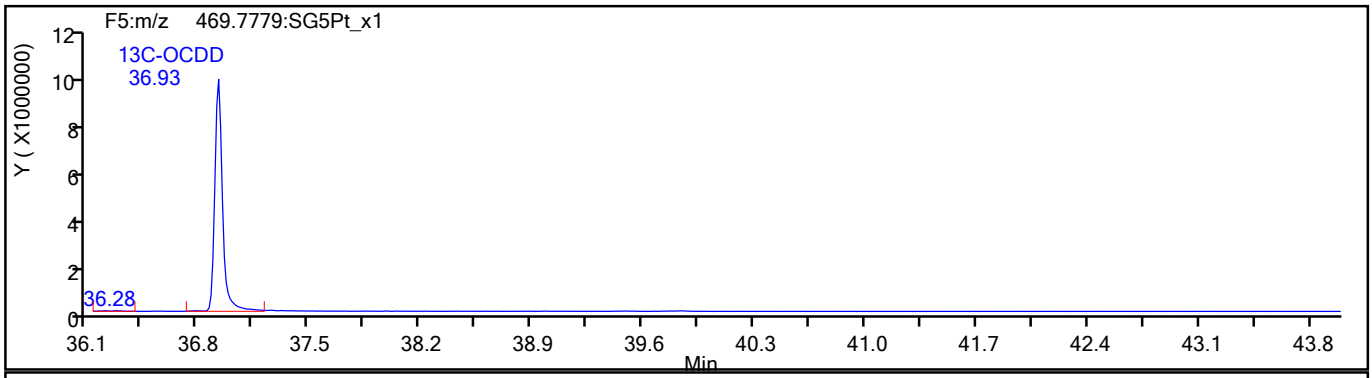

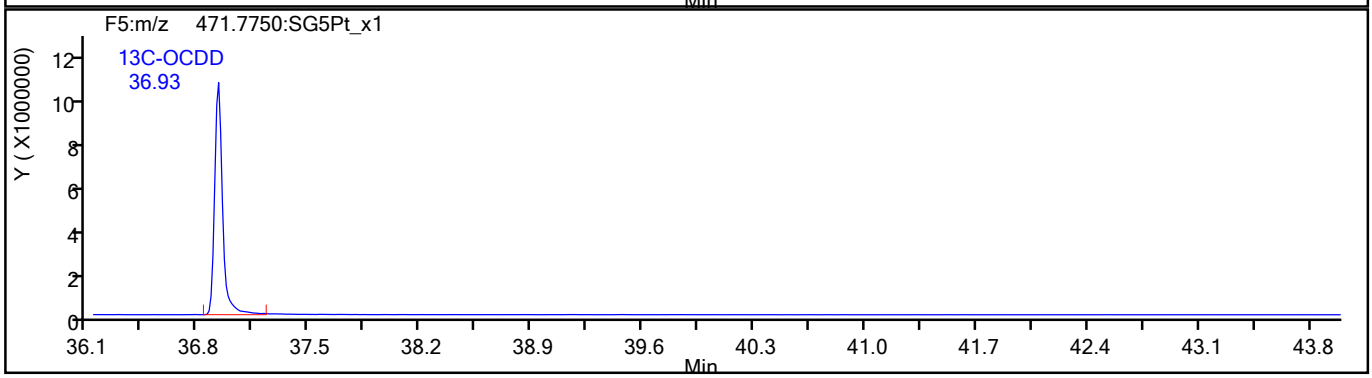

777649

Report Date: 18-Aug-2021 10:58:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d		
Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

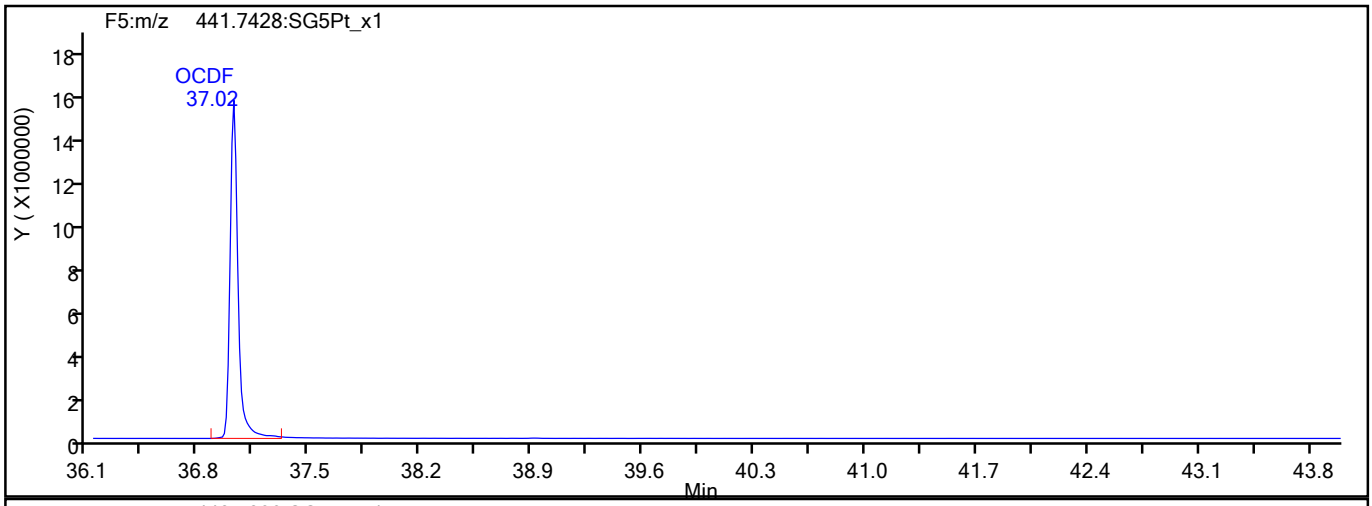

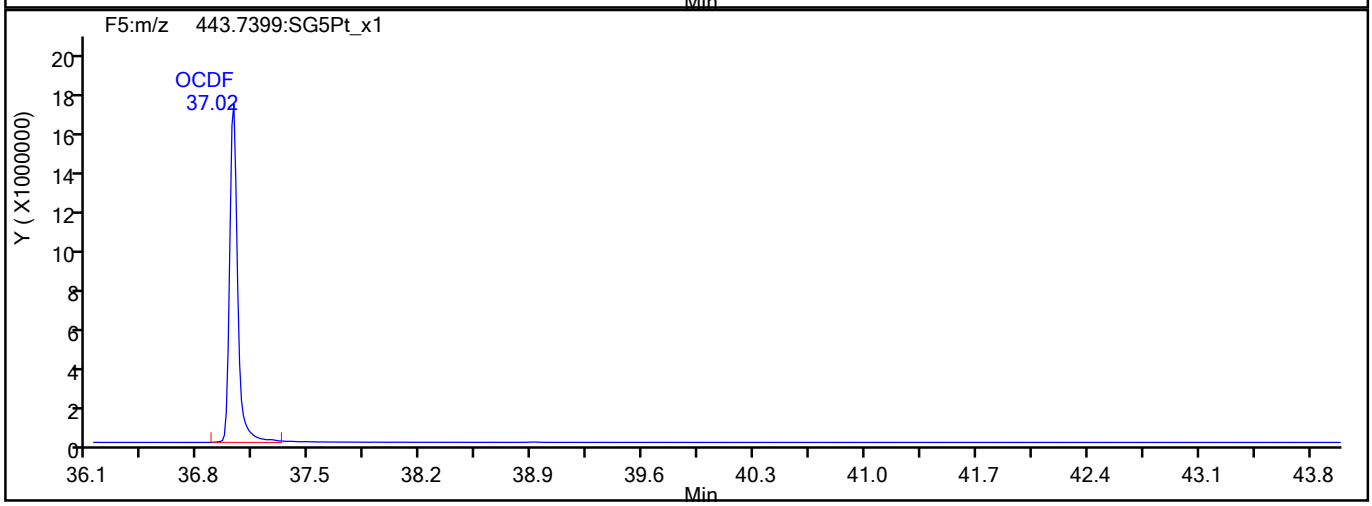

OCDF Interference Mass

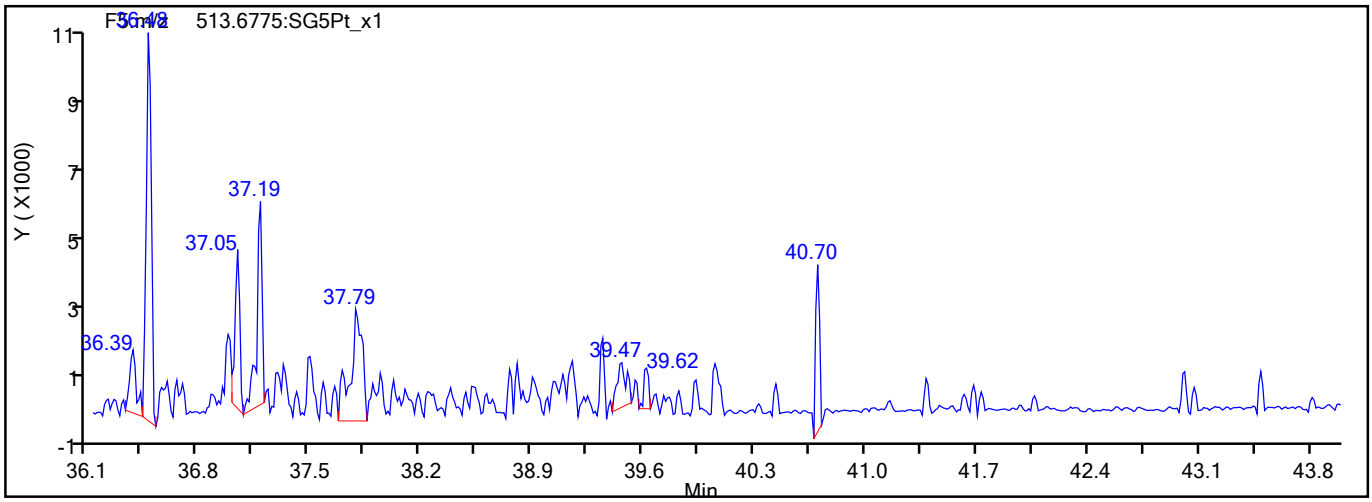

777650

Report Date: 18-Aug-2021 10:58:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d		
Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

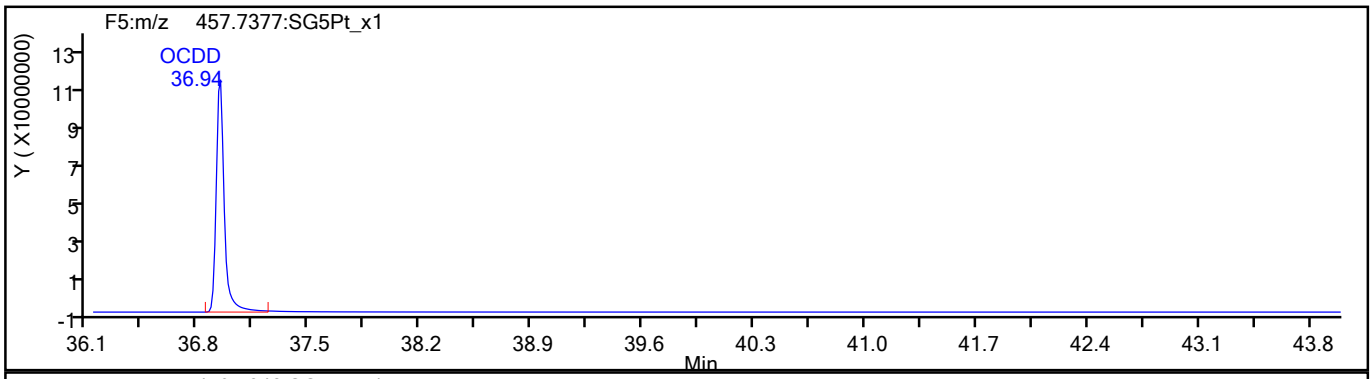

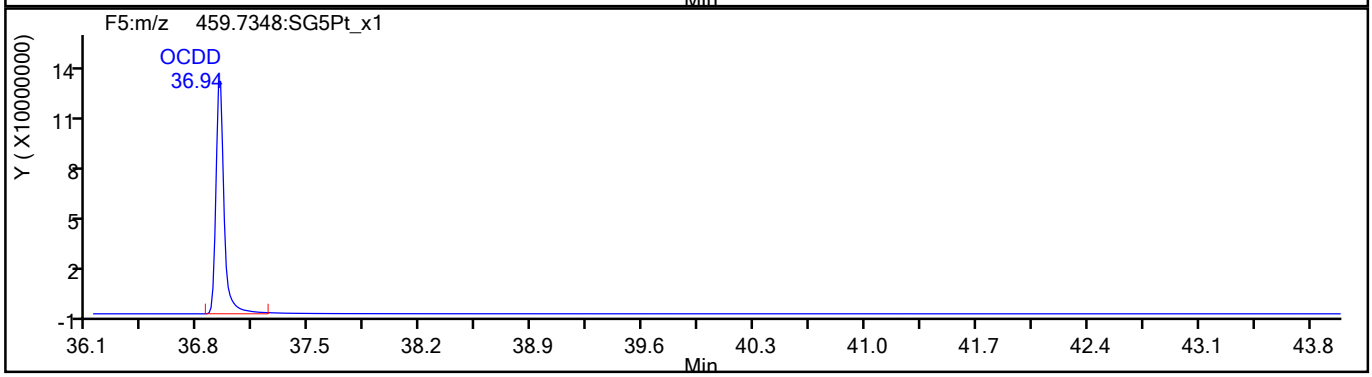

OCDD Standards

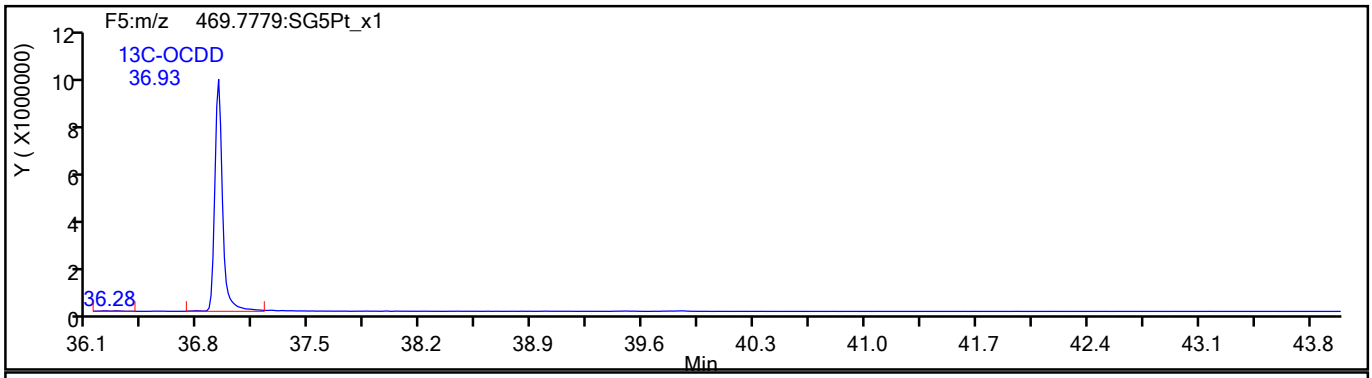

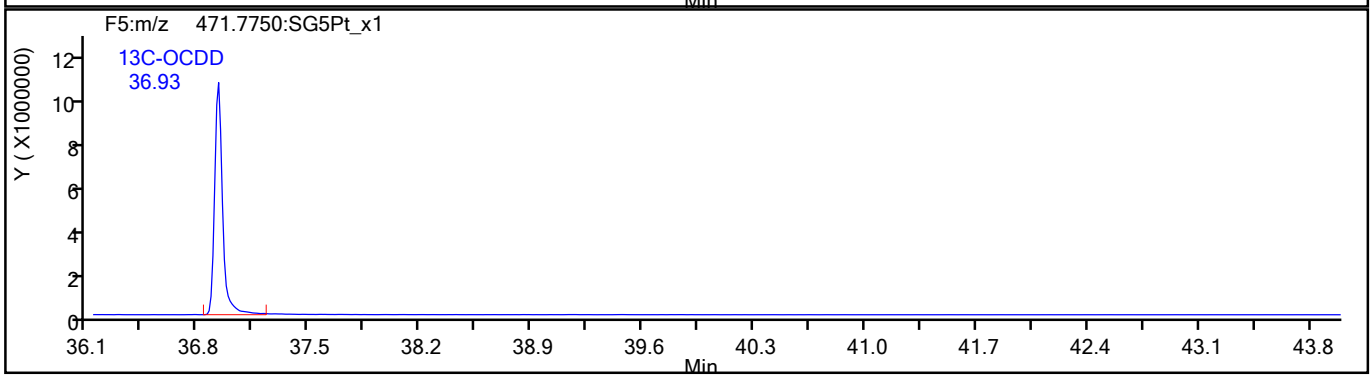

777651

Report Date: 18-Aug-2021 10:58:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d		
Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

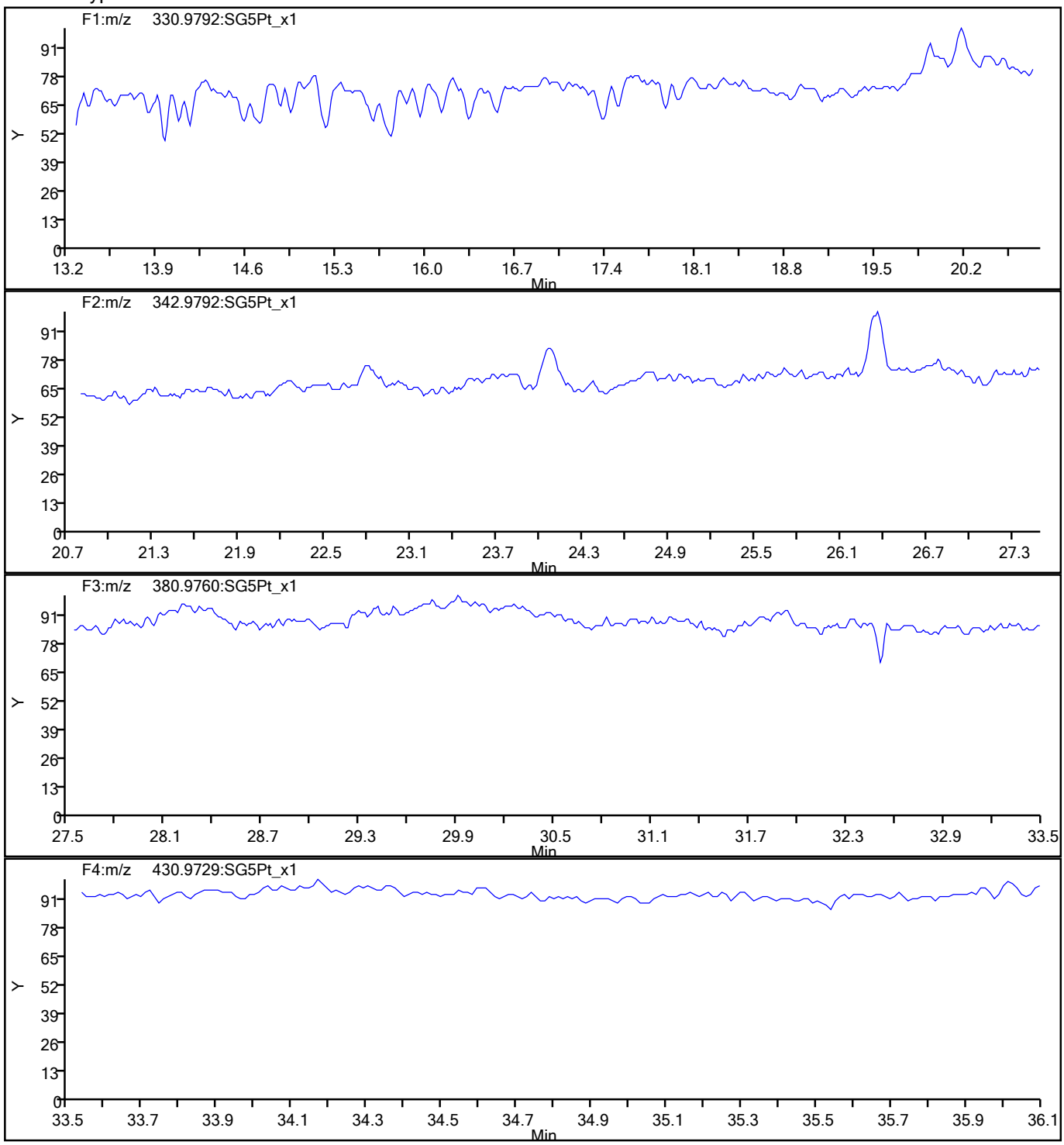

777652

Report Date: 18-Aug-2021 10:58:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_48.d		
Injection Date:	15-Aug-2021 05:06:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

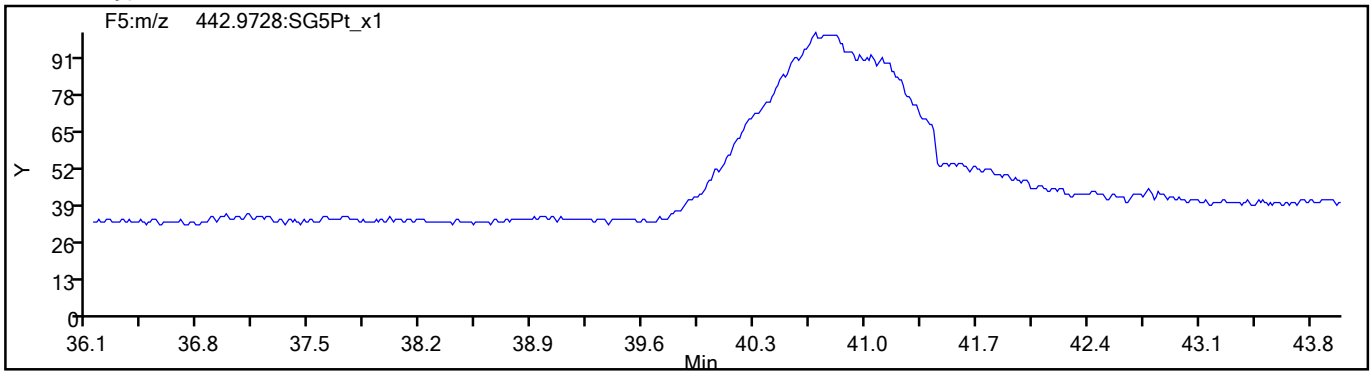

777653

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) MS RA
Lab Sample ID: 320-76769-1 MS RA
Matrix: Sediment
Lab File ID: 23AU2111D2_008.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 9.55(g)
Date Analyzed: 08/23/2021 14:00
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518958
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	43300		43	43

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	54		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	98		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_008.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Sample Type: MS
Inject. Date: 23-Aug-2021 14:00:21 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-1-B MS X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:53:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.352	3678496	0.85	7.2E+05	20.0	20.0				M
D 13C-2,3,7,8-TCDF	17.668	2646551	0.72	1.3327	10.8	10.8	0.8209	0.8209	53.99	M
2,3,7,8-TCDF	17.682	335272048	0.75	0.9978	2539.2	2539.2	2.541	2.541	1.3E+005	E
D 13C-2,3,7,8-TCDD	16.105	1910140	0.68	0.8749	11.9	11.9	17.5	17.5	59.35	nMa
2,3,7,8-TCDD	16.118	95241678	0.78	1.0570	943.5	943.5	3.361	3.361	47173	Ea
$ 37Cl4-2,3,7,8-TCDD	16.118	1246139		0.8648	7.834	7.834	0.1983	0.1983	97.93	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 23-Aug-2021 15:56:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_008.d
Lims ID: 320-76769-A-1-B MS
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Sample Type: MS
Inject. Date: 23-Aug-2021 14:00:21 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-1-B MS X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:53:19

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.352	16.312	2		1694486	330208	91998	229995	4		M
333.9339	16.352	16.312	2		1984010	341764	114169	285422	3	0.85(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.668	17.615	3	1.081	1112080	201088	8346	20865	24		
317.9389	17.655	17.615	2	1.080	1534471	275366	6356	15890	43	0.72(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.682	17.643	2	1.001	143420179	26475266	11809	29522	2242		
305.8987	17.682	17.643	2	1.001	191851869	35234929	12348	30870	2853	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											nMa
331.9368	16.105	16.065	2	0.985	775945	159601	91998	229995	2		M
333.9339	16.105	16.065	2	0.985	1134195	210417	114169	285422	2	0.68(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	16.118	16.093	2	1.001	41713648	8935725	16117	40292	554		a
321.8936	16.118	16.093	2	1.001	53528030	11695578	10170	25425	1150	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.118	16.093	2	0.986	1246139	270769	2305	5762	117		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_008.d				
Injection Date:	23-Aug-2021 14:00:21	Instrument ID:	11D2		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.65
Area: 1611564
Amount: 11.111744
Amount Units: pg/ul

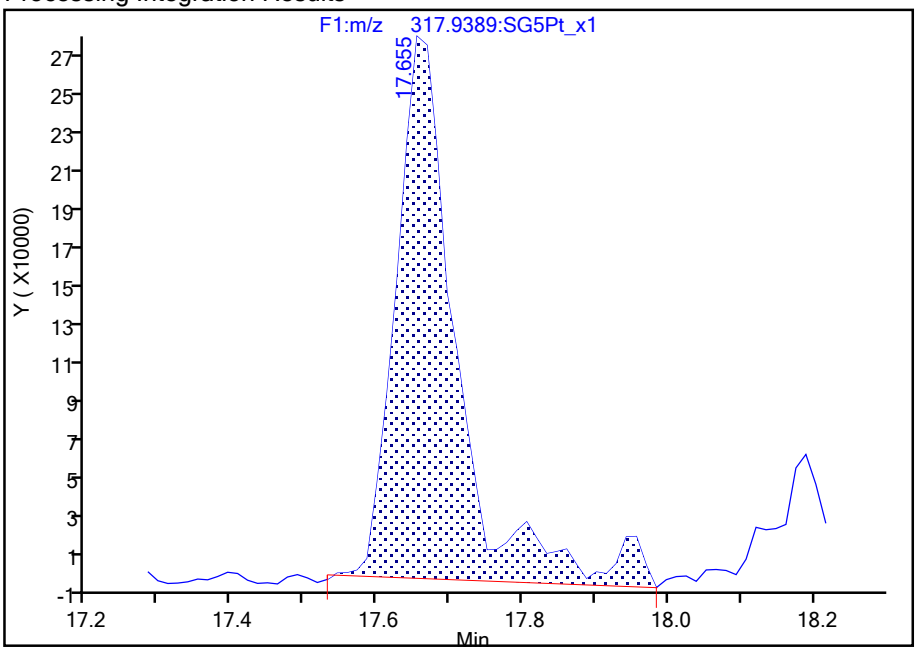

Manual Integration Results

RT: 17.65
Area: 1534471
Amount: 10.797225
Amount Units: pg/ul

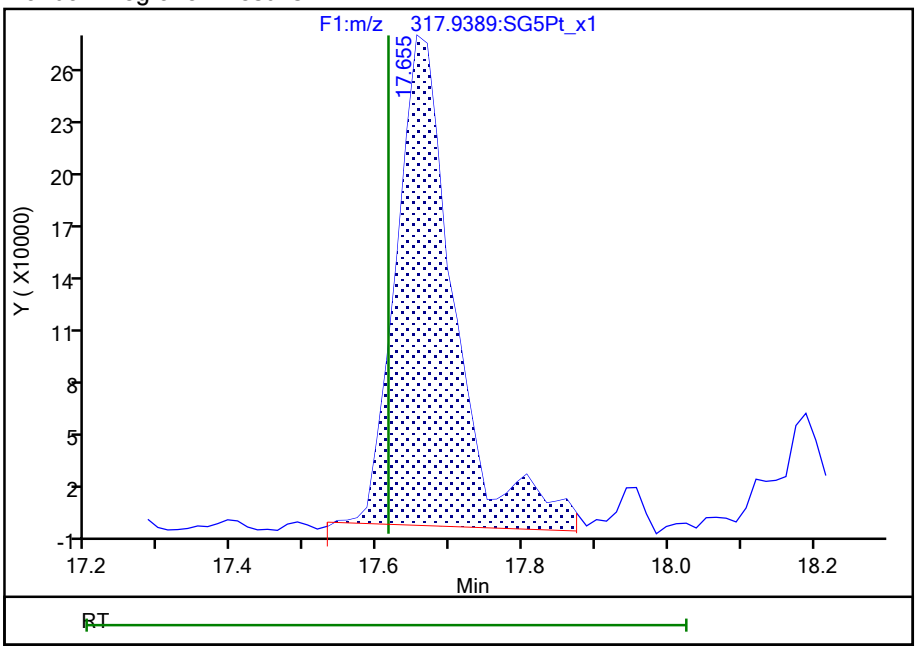

Reviewer: bennettd, 23-Aug-2021 15:53:07

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_008.d				
Injection Date:	23-Aug-2021 14:00:21	Instrument ID:	11D2		
Lims ID:	320-76769-A-1-B MS				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.09

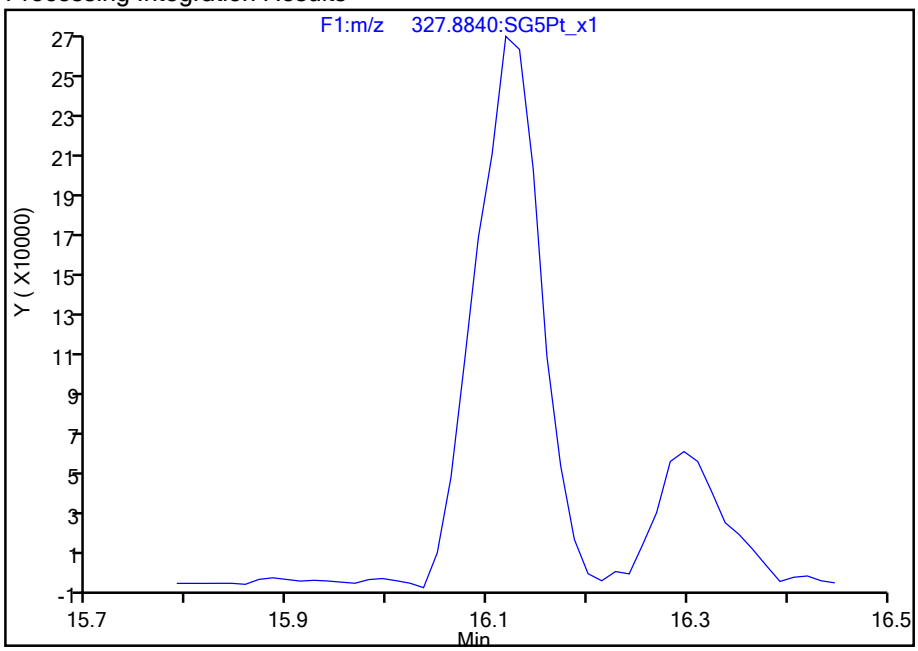

Manual Integration Results

RT: 16.12
Area: 1246139
Amount: 7.834340
Amount Units: pg/ul

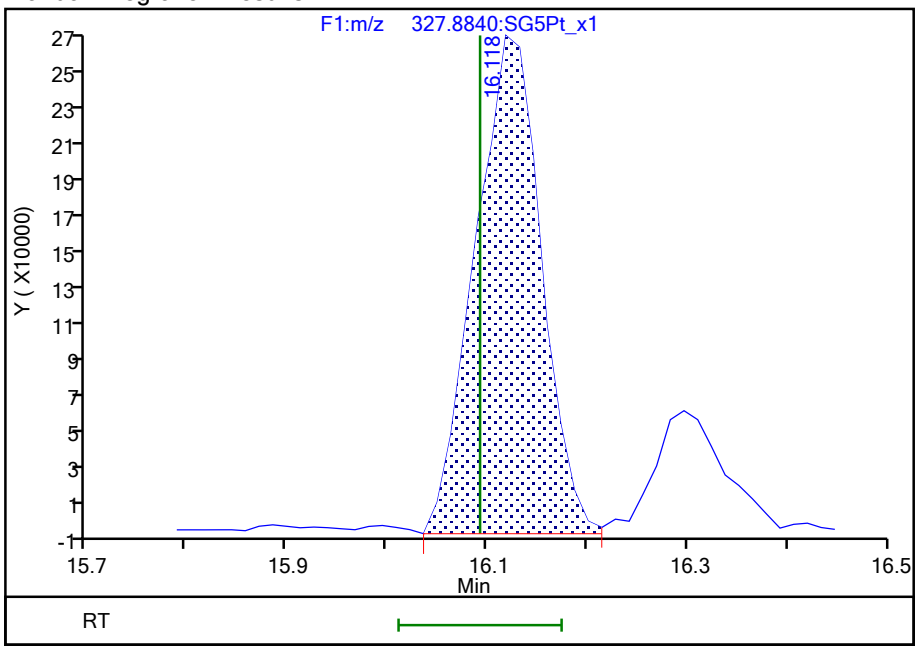

Reviewer: bennettd, 23-Aug-2021 15:52:43
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Report Date: 23-Aug-2021 15:56:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_008.d		
Injection Date:	23-Aug-2021 14:00:21	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	518958	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

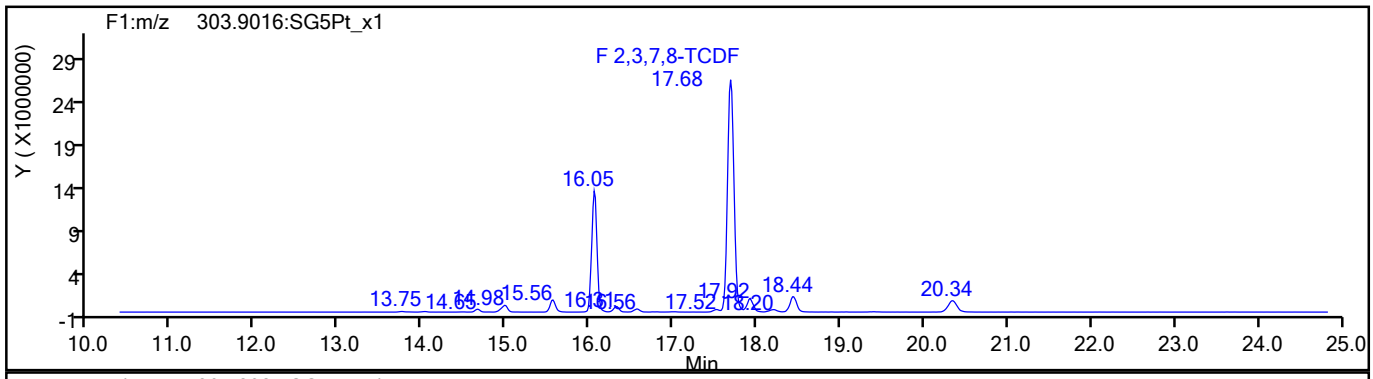

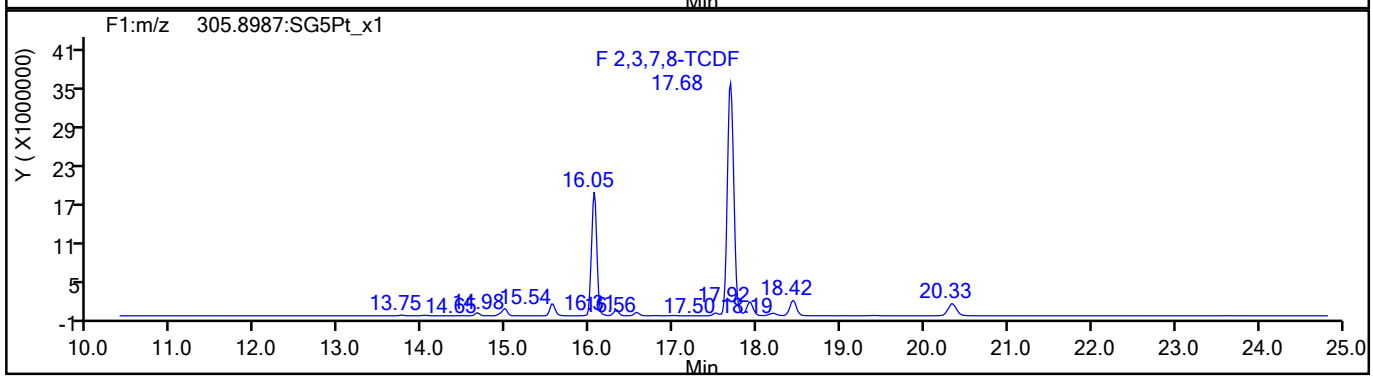

TCDF Standards

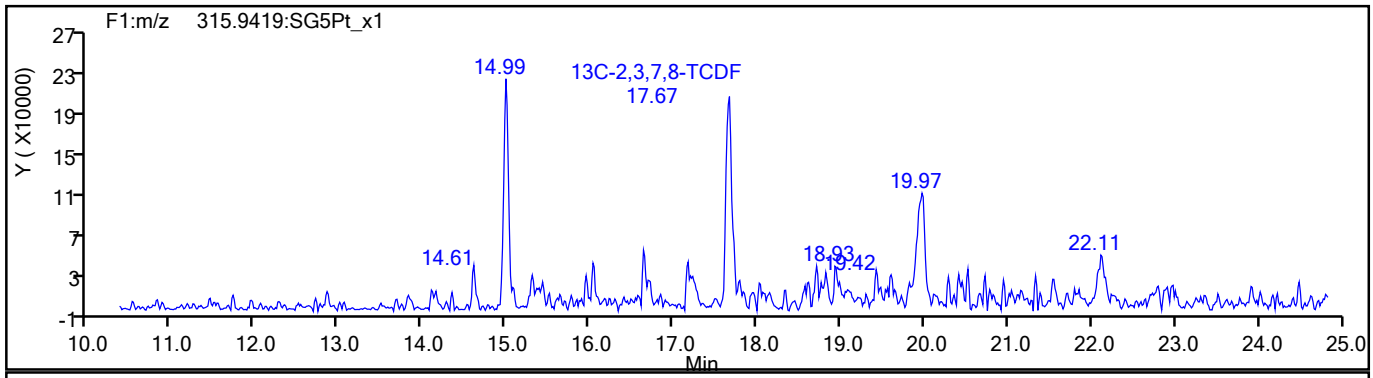

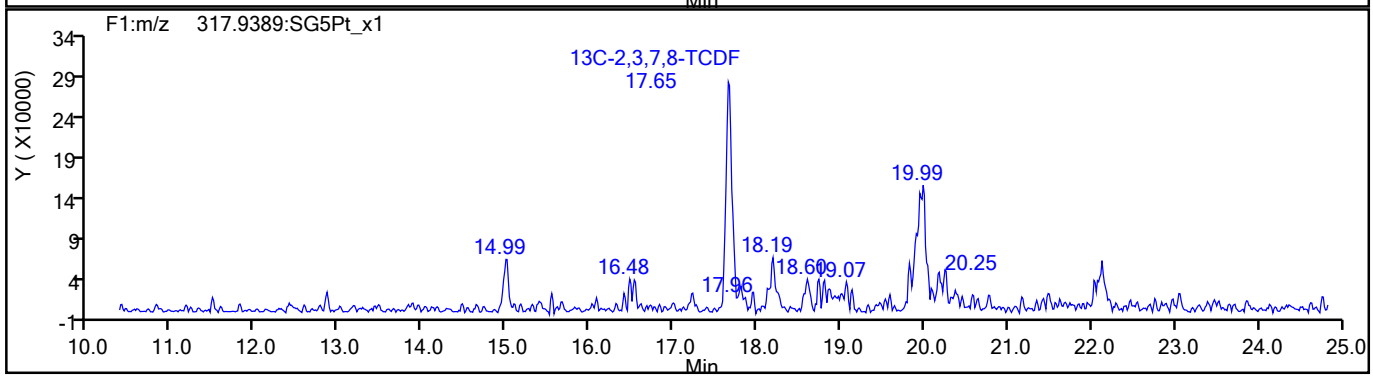

777659

Report Date: 23-Aug-2021 15:56:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_008.d		
Injection Date:	23-Aug-2021 14:00:21	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	518958	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

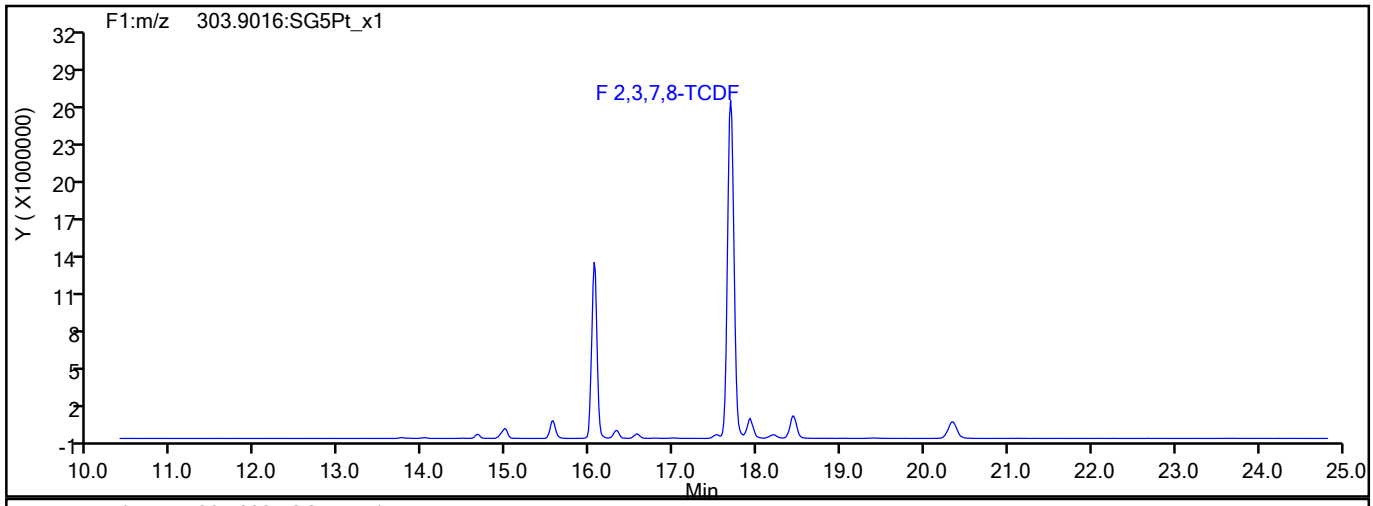

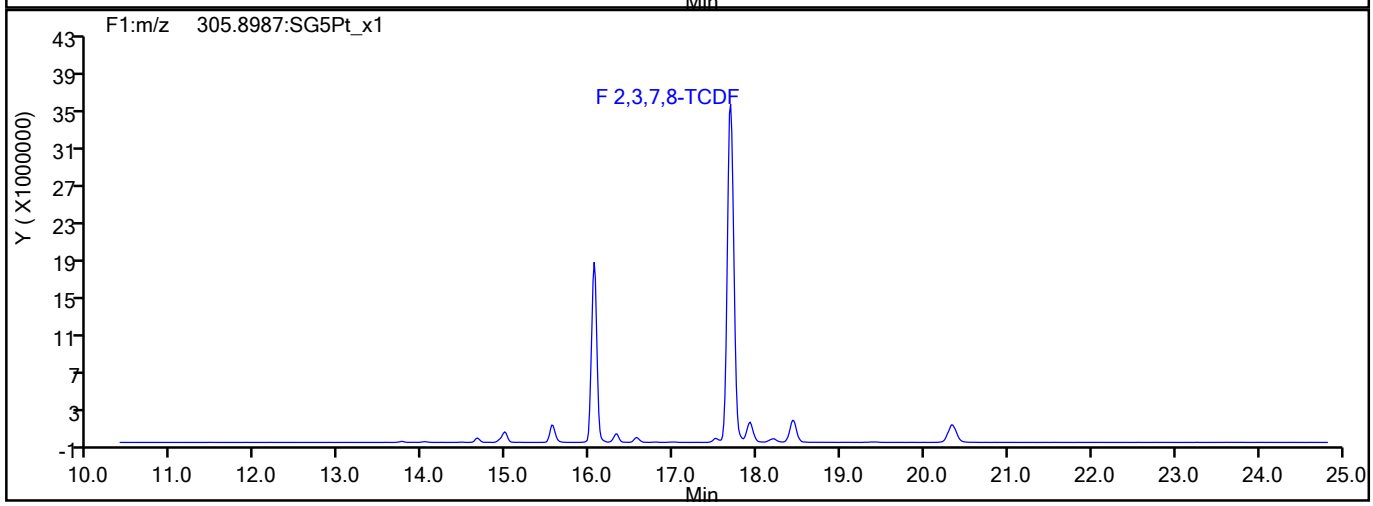

TCDF Interference Mass

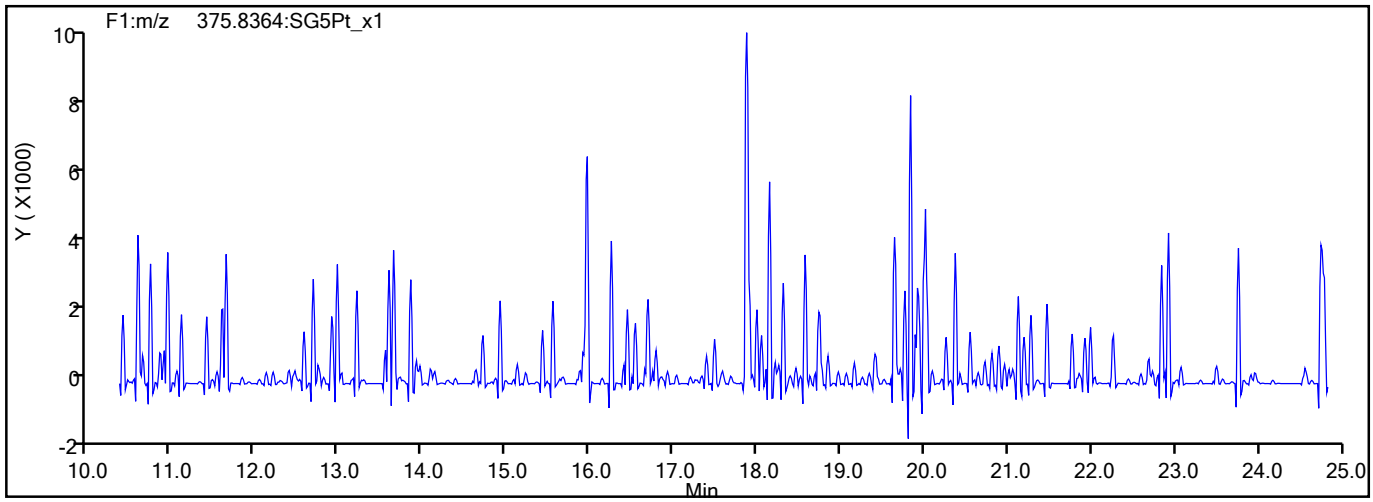

777660

Report Date: 23-Aug-2021 15:56:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_008.d		
Injection Date:	23-Aug-2021 14:00:21	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	518958	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

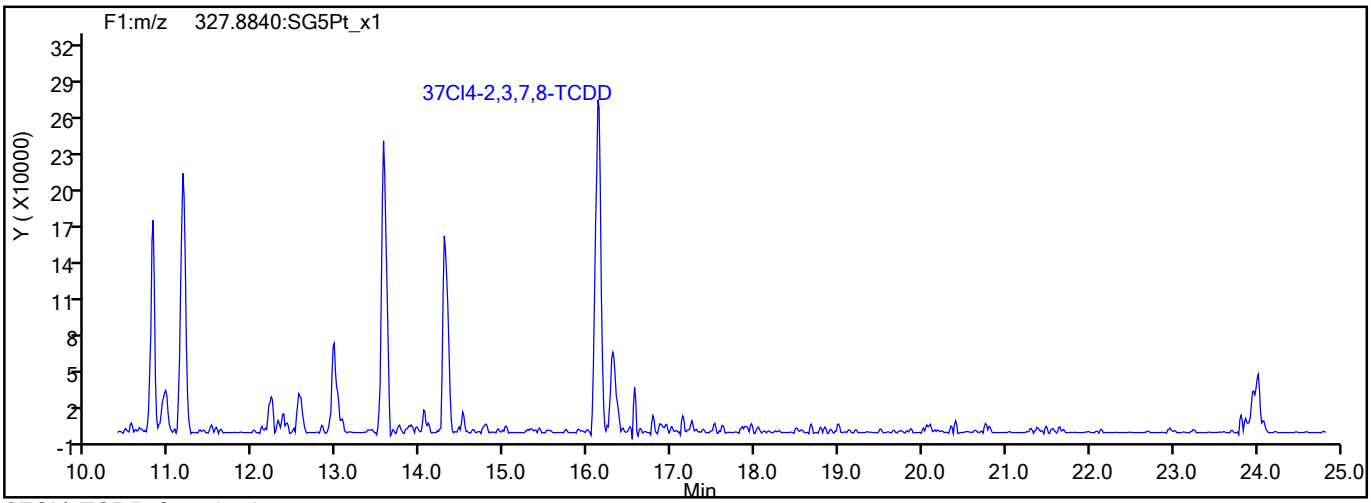

37Cl4-TCDD Standards

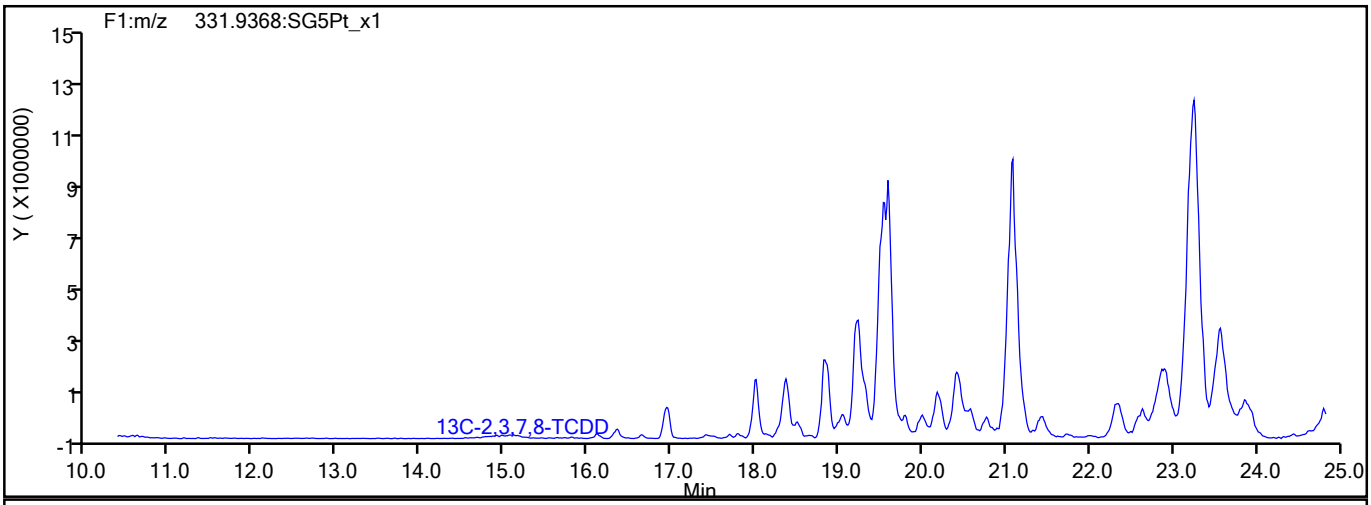

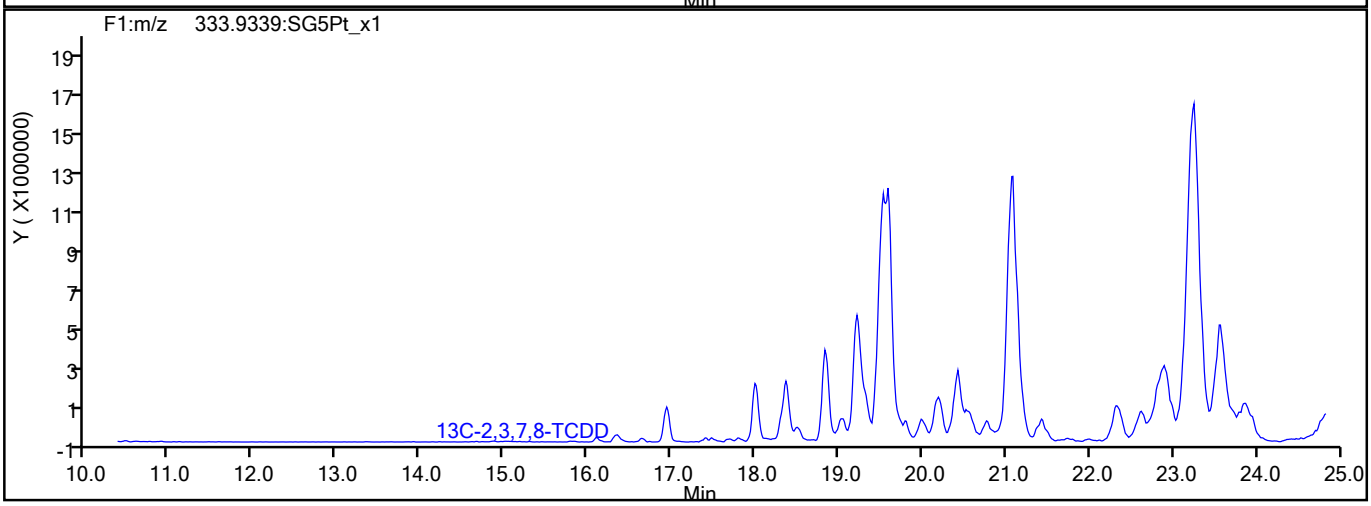

777661

Report Date: 23-Aug-2021 15:56:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_008.d		
Injection Date:	23-Aug-2021 14:00:21	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	518958	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

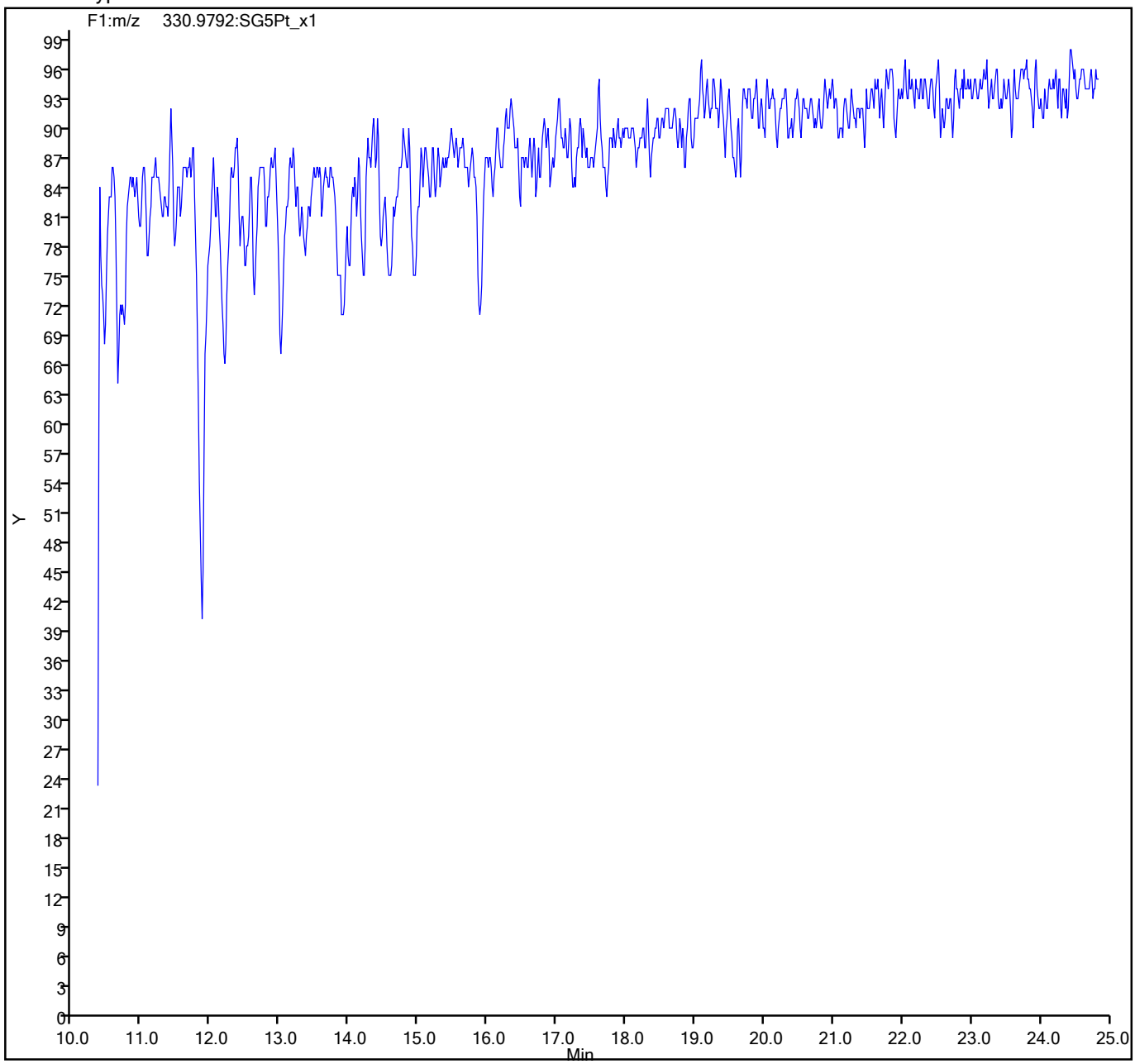

777662

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) MS
Lab Sample ID: 320-76769-27 MS
Matrix: Sediment
Lab File ID: 17au21dfs1_41.d
Analysis Method: 1613B
Date Collected: 07/22/2021 15:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.97(g)
Date Analyzed: 08/18/2021 21:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2320		2.6	2.6
40321-76-4	1,2,3,7,8-PeCDD	169		6.6	0.89
57117-41-6	1,2,3,7,8-PeCDF	478		6.6	1.9
57117-31-4	2,3,4,7,8-PeCDF	321		6.6	2.2
39227-28-6	1,2,3,4,7,8-HxCDD	128		6.6	0.81
57653-85-7	1,2,3,6,7,8-HxCDD	154		6.6	0.89
19408-74-3	1,2,3,7,8,9-HxCDD	150		6.6	0.79
70648-26-9	1,2,3,4,7,8-HxCDF	639		6.6	4.4
57117-44-9	1,2,3,6,7,8-HxCDF	277		6.6	4.5
72918-21-9	1,2,3,7,8,9-HxCDF	158		6.6	4.1
60851-34-5	2,3,4,6,7,8-HxCDF	172		6.6	4.1
35822-46-9	1,2,3,4,6,7,8-HpCDD	796		6.6	2.7
67562-39-4	1,2,3,4,6,7,8-HpCDF	291		6.6	1.1
55673-89-7	1,2,3,4,7,8,9-HpCDF	179		6.6	1.1
3268-87-9	OCDD	12800		13	8.1
39001-02-0	OCDF	415		13	0.38
41903-57-5	Total TCDD	2530		2.6	2.6
30402-14-3	Total TCDF	14100		12	12
36088-22-9	Total PeCDD	172		6.6	0.89
30402-15-4	Total PeCDF	1040		6.6	2.0
34465-46-8	Total HxCDD	469		6.6	0.83
55684-94-1	Total HxCDF	1320		6.6	4.2
37871-00-4	Total HpCDD	1620		6.6	2.7
38998-75-3	Total HpCDF	502		6.6	1.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) MS
Lab Sample ID: 320-76769-27 MS
Matrix: Sediment
Lab File ID: 17au21dfs1_41.d
Analysis Method: 1613B
Date Collected: 07/22/2021 15:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.97(g)
Date Analyzed: 08/18/2021 21:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	53		25-164
89059-46-1	13C-2,3,7,8-TCDF	56		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	51		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	53		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	53		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	65		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	58		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	57		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	61		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	65		26-138
114423-97-1	13C-OCDD	63		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	69		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d
Lims ID: 320-76769-A-27-B MS
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MS
Inject. Date: 18-Aug-2021 21:12:00 ALS Bottle#: 0 Worklist Smp#: 38
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-B MS
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:24:31 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: dadunj Date: 20-Aug-2021 09:24:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.435	1285392	0.85	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.462	976264	0.79	1.3459	56.4	56.4	0.2710	0.2710	56.43	
2,3,7,8-TCDF	20.497	33551603	0.81	1.0802	3181.6	3181.6	4.717	4.717	31816	E
A Non-2,3,7,8-sub-TCDF	19.878	22628741	0.80	1.0802	2145.8	2145.8	4.717	1275.1	0.00	
S Total TCDF					5327.4	5327.4	4.717	4.717		
D 13C-2,3,7,8-TCDD	21.813	639817	0.77	0.9317	53.4	53.4	0.3224	0.3224	53.43	
2,3,7,8-TCDD	21.839	6037306	0.79	1.0753	877.5	877.5	0.9666	0.9666	8775	E
$ 37Cl4-2,3,7,8-TCDD	21.839	356637		1.0083	27.5	27.5	0.3717	0.3717	68.79	
A Non-2,3,7,8-sub-TCDD	20.707	548533	0.78	1.0753	79.7	79.7	0.9666	69.6	0.00	
S Total TCDD					957.2	957.2	0.9666	0.9666		
D 13C-1,2,3,7,8-PeCDF	27.298	772147	1.56	1.1405	52.7	52.7	0.1152	0.1152	52.67	
1,2,3,7,8-PeCDF	27.306	1475050	1.61	1.0543	181.2	181.2	0.7104	0.7104	362	M
D 13C-2,3,4,7,8-PeCDF	28.805	762679	1.59	1.1253	52.7	52.7	0.1168	0.1168	52.73	
2,3,4,7,8-PeCDF	28.822	934572	1.61	1.0079	121.6	121.6	0.8150	0.8150	243	
A F1 PeCDFs	24.648	4913	1.55	1.0311	0.6798	0.6209	0.0133	0.6209	0.00	RQM
A Non-2,3,7,8-sub-PeCDF	28.125	720923	1.60	1.0311	91.1	91.1	0.7599	35.8	0.00	Ma
S Total PeCDF					394.6	394.5	0.7627	0.7627		RQ
D 13C-1,2,3,7,8-PeCDD	29.614	467497	1.65	0.7165	50.8	50.8	0.0937	0.0937	50.76	
1,2,3,7,8-PeCDD	29.639	312533	1.57	1.0465	63.9	63.9	0.3375	0.3375	128	
A Non-2,3,7,8-sub-PeCDD	28.489	6020	1.55	1.0465	15.5	1.230	0.3375	0.6721	0.00	RQ
S Total PeCDD					79.4	65.1	0.3375	0.3375		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.939	670794	0.54	0.9648	65.1	65.1	0.1813	0.1813	65.14	
1,2,3,4,7,8-HxCDF	34.947	1865218	1.33	1.1474	242.3	242.3	1.661	1.661	485	
D 13C-1,2,3,6,7,8-HxCDF	35.099	667407	0.53	1.0708	58.4	58.4	0.1634	0.1634	58.40	
1,2,3,6,7,8-HxCDF	35.107	853539	1.28	1.2178	105.0	105.0	1.692	1.692	210	
D 13C-2,3,4,6,7,8-HxCDF	35.916	629478	0.53	1.0413	56.6	56.6	0.1680	0.1680	56.64	
2,3,4,6,7,8-HxCDF	35.932	498575	1.34	1.2145	65.2	65.2	1.540	1.540	130	M
D 13C-1,2,3,7,8,9-HxCDF	36.808	551884	0.53	0.9731	53.1	53.1	0.1798	0.1798	53.14	
1,2,3,7,8,9-HxCDF	36.825	409434	1.27	1.2401	59.8	59.8	1.544	1.544	120	M
A Non-2,3,7,8-sub-HxCDF	35.028	203138	1.24	1.2049	27.0	26.8	1.606	11.7	0.00	RQMa
S Total HxCDF					499.4	499.2	1.609	1.609		RQ

Report Date: 20-Aug-2021 09:24:31 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.606	1067227	1.28	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.126	471918	1.23	0.7587	58.3	58.3	0.1549	0.1549	58.28	
1,2,3,4,7,8-HxCDD	36.143	243617	1.23	1.0608	48.7	48.7	0.3088	0.3088	97.33	
D 13C-1,2,3,6,7,8-HxCDD	36.244	509905	1.24	0.8593	55.6	55.6	0.1368	0.1368	55.60	
1,2,3,6,7,8-HxCDD	36.253	294915	1.25	0.9933	58.2	58.2	0.3385	0.3385	116	
1,2,3,7,8,9-HxCDD	36.623	309232	1.25	1.1094	56.8	56.8	0.2991	0.2991	114	
A Non-2,3,7,8-sub-HxCDD	35.394	72457	1.26	1.0545	14.0	14.0	0.3147	7.460	0.00	
S Total HxCDD					177.7	177.7	0.3154	0.3154		
D 13C-1,2,3,4,6,7,8-HpCDF	38.630	471892	0.45	0.7359	60.1	60.1	0.2683	0.2683	60.08	
1,2,3,4,6,7,8-HpCDF	38.638	750577	1.07	1.4421	110.3	110.3	0.4079	0.4079	221	
D 13C-1,2,3,4,7,8,9-HpCDF	39.876	472762	0.44	0.6854	64.6	64.6	0.2881	0.2881	64.63	
1,2,3,4,7,8,9-HpCDF	39.893	420749	1.05	1.3092	68.0	68.0	0.4040	0.4040	136	
A Non-2,3,7,8-sub-HpCDF	39.258	77270	1.07	1.3756	11.9	11.9	0.4049	11.9	0.00	
S Total HpCDF					190.2	190.2	0.4059	0.4059		
D 13C-1,2,3,4,6,7,8-HpCDD	39.573	435689	1.07	0.6745	60.5	60.5	0.2274	0.2274	60.52	
1,2,3,4,6,7,8-HpCDD	39.581	1380590	1.03	1.0503	301.7	301.7	1.022	1.022	603	
A Non-2,3,7,8-sub-HpCDD	39.258	1426012	1.03	1.0503	311.6	311.6	1.022	311.6	0.00	
S Total HpCDD					613.3	613.3	1.022	1.022		
D 13C-OCDD	42.079	732173	0.92	0.5446	126.0	126.0	0.1547	0.1547	62.98	
OCDF	42.172	758219	0.96	1.3168	157.3	157.3	0.1449	0.1449	157	
OCDD	42.079	18820892	0.90	1.0620	4841.0	4841.0	3.087	3.087	4841	E

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 20-Aug-2021 09:24:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d
Lims ID: 320-76769-A-27-B MS
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MS
Inject. Date: 18-Aug-2021 21:12:00 ALS Bottle#: 0 Worklist Smp#: 38
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-B MS
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:24:31 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: dadunj Date: 20-Aug-2021 09:24:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.435	21.427	0		589499	84644	122	305	694		
333.9338	21.426	21.427	0		695893	94147	93	232	1012	0.85(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.462	20.401	4	0.955	430998	60116	133	332	452		
317.9389	20.479	20.401	5	0.955	545266	73623	128	320	575	0.79(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.497	20.436	4	1.002	15048221	2062257	1519	3797	1358		
305.8987	20.497	20.436	4	1.002	18503382	2540474	1207	3017	2105	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.520	19.878	-141	0.856	53528	9688	1519	3797	6		
305.8987	17.511	19.878	-142	0.856	71928	13352	1207	3017	11	0.74(0.65-0.89)	
303.9016	17.958	19.878	-115	0.878	182738	29010	1519	3797	19		
305.8987	17.958	19.878	-115	0.878	242894	37627	1207	3017	31	0.75(0.65-0.89)	
303.9016	18.458	19.878	-85	0.902	323635	41525	1519	3797	27		
305.8987	18.449	19.878	-86	0.902	400751	49949	1207	3017	41	0.81(0.65-0.89)	
303.9016	18.879	19.878	-60	0.923	357718	41984	1519	3797	28		
305.8987	18.879	19.878	-60	0.923	450560	52354	1207	3017	43	0.79(0.65-0.89)	
303.9016	19.258	19.878	-37	0.941	781177	109333	1519	3797	72		
305.8987	19.258	19.878	-37	0.941	972560	135413	1207	3017	112	0.80(0.65-0.89)	
303.9016	19.765	19.878	-7	0.966	5989809	857561	1519	3797	565		
305.8987	19.765	19.878	-7	0.966	7456963	1068054	1207	3017	885	0.80(0.65-0.89)	
303.9016	20.178	19.878	18	0.986	170547	22482	1519	3797	15		
305.8987	20.161	19.878	17	0.985	207259	25780	1207	3017	21	0.82(0.65-0.89)	
303.9016	21.263	19.878	83	1.039	1018982	131736	1519	3797	87		
305.8987	21.271	19.878	83	1.040	1272546	166677	1207	3017	138	0.80(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.710	19.878	110	1.061	262140	33384	1519	3797	22		
305.8987	21.693	19.878	109	1.060	334603	40891	1207	3017	34	0.78(0.65-0.89)	
303.9016	23.662	19.878	227	1.156	935181	165577	1519	3797	109		
305.8987	23.662	19.878	227	1.156	1143222	205259	1207	3017	170	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.813	21.743	4	1.018	279288	34597	122	305	284		
333.9338	21.822	21.743	5	1.018	360529	46701	93	232	502	0.77(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	21.839	21.777	4	1.001	2660037	338883	166	415	2041		
321.8936	21.839	21.777	4	1.001	3377269	432824	172	430	2516	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.839	21.849	-1	1.019	356637	46414	268	670	173		
A Non-2,3,7,8-sub-TCDD											
319.8965	19.800	20.707	-54	0.908	7362	1093	166	415	7		
321.8936	19.808	20.707	-54	0.908	10635	1252	172	430	7	0.69(0.65-0.89)	
319.8965	21.641	20.707	56	0.992	22592	4310	166	415	26		
321.8936	21.633	20.707	55	0.992	29102	5169	172	430	30	0.78(0.65-0.89)	
319.8965	22.519	20.707	108	1.032	210357	27025	166	415	163		
321.8936	22.519	20.707	108	1.032	268485	32867	172	430	191	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.298	27.288	1	1.274	470286	69643	53	132	1314		
353.8970	27.298	27.288	1	1.274	301861	44790	41	102	1092	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.306	27.313	0	1.000	910910	136985	198	495	692		M
341.8567	27.306	27.313	0	1.000	564140	83914	145	362	579	1.61(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.805	28.795	1	1.344	468031	64918	53	132	1225		
353.8970	28.797	28.795	0	1.343	294648	39411	41	102	961	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.822	28.820	0	1.001	576363	80767	198	495	408		
341.8567	28.822	28.820	0	1.001	358209	50785	145	362	350	1.61(1.32-1.78)	
A F1 PeCDFs											RQM
339.8597	24.092	24.648	-33	0.883	3452	687	1	2	687		M
	Empc Correction				2986	567	1	2	567		
341.8567	24.084	24.648	-34	0.882	1927	366	5	12	73	1.79(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDF											Ma
339.8597	25.833	28.125	-137	0.946	171191	28472	198	495	144		
341.8567	25.833	28.125	-137	0.946	111985	17746	145	362	122	1.53(1.32-1.78)	
339.8597	26.750	28.125	-82	0.980	17349	1992	198	495	10		
341.8567	26.750	28.125	-82	0.980	10202	1139	145	362	8	1.70(1.32-1.78)	
339.8597	27.197	28.125	-56	0.996	22890	5563	198	495	28		M
341.8567	27.197	28.125	-56	0.996	13720	3681	145	362	25	1.67(1.32-1.78)	
339.8597	27.896	28.125	-14	1.022	127078	19234	198	495	97		
341.8567	27.887	28.125	-14	1.022	77726	12054	145	362	83	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	29.150	28.125	61	1.068	85329	10684	198	495	54		
341.8567	29.159	28.125	62	1.068	51450	6367	145	362	44	1.66(1.32-1.78)	
339.8597	30.877	28.125	165	1.131	19734	2880	198	495	15		
341.8567	30.868	28.125	164	1.131	12269	1802	145	362	12	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.614	29.612	0	1.382	291255	38161	30	75	1272		
369.8919	29.588	29.612	-1	1.380	176242	22707	18	45	1262	1.65(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.639	29.637	0	1.001	191116	24756	33	82	750		
357.8516	29.639	29.637	0	1.001	121417	16038	53	132	303	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.094	28.489	-143	0.881	1661	265	33	82	8		
357.8516	26.153	28.489	-140	0.883	66956	11318	53	132	214	0.02(1.32-1.78)	
	Empc Correction				1071	170	53	132	3		
355.8546	27.441	28.489	-63	0.927	1999	365	33	82	11		
357.8516	27.559	28.489	-56	0.931	5138	697	53	132	13	0.39(1.32-1.78)	
	Empc Correction				1289	235	53	132	4		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.939	34.942	0	0.954	235893	46819	48	120	975		
385.8610	34.939	34.942	0	0.954	434901	79872	114	285	701	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.947	34.959	-1	1.000	1063472	197464	583	1457	339		
375.8178	34.947	34.959	-1	1.000	801746	152253	383	957	398	1.33(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.099	35.111	-1	0.959	231350	39560	48	120	824		
385.8610	35.090	35.111	-1	0.959	436057	77662	114	285	681	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.107	35.119	-1	1.000	479278	86700	583	1457	149		
375.8178	35.107	35.119	-1	1.000	374261	67216	383	957	175	1.28(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.916	35.919	0	0.981	219193	47484	48	120	989		
385.8610	35.916	35.919	0	0.981	410285	81680	114	285	716	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.932	35.936	0	1.000	285516	59341	583	1457	102		M
375.8178	35.924	35.936	-1	1.000	213059	45349	383	957	118	1.34(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.808	36.811	0	1.006	190960	44555	48	120	928		
385.8610	36.808	36.811	0	1.006	360924	81593	114	285	716	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.825	36.828	0	1.000	229450	52916	583	1457	91		M
375.8178	36.825	36.828	0	1.000	179984	42678	383	957	111	1.27(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.448	35.028	-95	0.957	44104	7210	583	1457	12		
375.8178	33.457	35.028	-94	0.958	32016	5402	383	957	14	1.38(1.05-1.43)	
373.8208	34.316	35.028	-43	0.982	21230	3853	583	1457	7		M
375.8178	34.326	35.028	-42	0.000			383	957		0.00(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	35.806	35.028	47	1.025	11258	3199	583	1457	5		M
	Empc Correction				9285	2409	583	1457	4		
375.8178	35.798	35.028	46	1.025	7488	1943	383	957	5	1.50(1.05-1.43)	
373.8208	36.892	35.028	112	1.056	50417	11876	583	1457	20		M
375.8178	36.909	35.028	113	1.056	38598	9430	383	957	25	1.31(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.606	36.609	0		599751	129821	57	142	2278		
403.8529	36.606	36.609	0		467476	101655	52	130	1955	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.126	36.129	0	0.987	260463	60206	57	142	1056		
403.8529	36.118	36.129	-1	0.987	211455	46657	52	130	897	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.143	36.146	0	1.000	134587	31552	54	135	584		
391.8127	36.143	36.146	0	1.000	109030	24358	86	215	283	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.244	36.247	0	0.990	282293	56803	57	142	997		
403.8529	36.244	36.247	0	0.990	227612	47299	52	130	910	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.253	36.264	-1	1.000	163951	32884	54	135	609		
391.8127	36.253	36.264	-1	1.000	130964	26929	86	215	313	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.623	36.626	0	1.014	171782	38447	54	135	712		
391.8127	36.623	36.626	0	1.014	137450	30169	86	215	351	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.257	35.394	-68	0.945	18394	3281	54	135	61		
391.8127	34.249	35.394	-69	0.945	15444	2664	86	215	31	1.19(1.05-1.43)	
389.8158	35.369	35.394	-2	0.976	21990	3803	54	135	70		
391.8127	35.369	35.394	-2	0.976	16629	3184	86	215	37	1.32(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.630	38.626	0	1.055	146475	37313	100	250	373		
419.8220	38.630	38.626	0	1.055	325417	72692	83	207	876	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.638	38.630	0	1.000	388420	92978	135	337	689		
409.7788	38.638	38.630	0	1.000	362157	89678	124	310	723	1.07(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.876	39.880	0	1.089	145347	37888	100	250	379		
419.8220	39.876	39.880	0	1.089	327415	84455	83	207	1018	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.893	39.885	0	1.000	215104	55415	135	337	410		
409.7788	39.884	39.885	0	1.000	205645	53331	124	310	430	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.000	39.258	-15	1.010	39908	10633	135	337	79		
409.7788	39.000	39.258	-15	1.010	37362	9627	124	310	78	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.573	39.569	0	1.081	224868	58400	77	192	758		
437.8140	39.573	39.569	0	1.081	210821	56794	65	162	874	1.07(0.88-1.20)	

Report Date: 20-Aug-2021 09:24:31 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.581	39.582	0	1.000	700458	188080	263	657	715		
425.7737	39.581	39.582	0	1.000	680132	184966	232	580	797	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.941	39.258	-19	0.984	723791	191876	263	657	730		
425.7737	38.941	39.258	-19	0.984	702221	184135	232	580	794	1.03(0.88-1.20)	
13C-OCDD											
469.7780	42.079	42.072	0	1.150	351421	84559	50	125	1691		
471.7750	42.079	42.072	0	1.150	380752	93694	28	70	3346	0.92(0.76-1.02)	
OCDF											
441.7428	42.172	42.165	0	1.002	371663	83035	35	87	2372		
443.7399	42.172	42.165	0	1.002	386556	85503	33	82	2591	0.96(0.76-1.02)	
OCDD											E
457.7377	42.079	42.081	0	1.000	8927540	2153810	564	1410	3819		
459.7348	42.079	42.081	0	1.000	9893352	2397239	605	1512	3962	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	976264	133739

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	976264	133739

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.520	53528	9688	71928	13352	11.9	0.74	
17.958	182738	29010	242894	37627	40.4	0.75	
18.458	323635	41525	400751	49949	68.7	0.81	
18.879	357718	41984	450560	52354	76.6	0.79	
19.258	781177	109333	972560	135413	166.3	0.80	
19.765	5989809	857561	7456963	1068054	1275.1	0.80	
20.178	170547	22482	207259	25780	35.8	0.82	
21.263	1018982	131736	1272546	166677	217.3	0.80	
21.710	262140	33384	334603	40891	56.6	0.78	
23.662	935181	165577	1143222	205259	197.1	0.82	
Signal Totals:							
	10075455	1442280	12553286	1795356			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	22628741	3237636				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2145.8 = (22628741 * 100.000) / (976264 * 1.080)

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	639817	81298

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	639817	81298

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.800	7362	1093	10635	1252	2.62	0.69	
21.641	22592	4310	29102	5169	7.51	0.78	
22.519	210357	27025	268485	32867	69.6	0.78	
Signal Totals:							
	240311	32428	308222	39288			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	548533	71716				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 79.726 = (548533 * 100.000) / (639817 * 1.075)

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	772147	114433
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	762679	104329

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	767413	109381

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.092	3452	687	1927	366	0.6798	1.79	RQM
24.092	2986	567	1927	366	0.6209		Empc Correction
Signal Totals:							
	2986	567	1927	366			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5379	1053				1.79	RQM
	4913	933					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6798 = (5379 * 100.000) / (767413 * 1.031)
Empc Amount: 0.6209 = (4913 * 100.000) / (767413 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	772147	114433
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	762679	104329

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	767413	109381

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.833	171191	28472	111985	17746	35.8	1.53	
26.750	17349	1992	10202	1139	3.48	1.70	
27.197	22890	5563	13720	3681	4.63	1.67	Ma
27.896	127078	19234	77726	12054	25.9	1.63	
29.150	85329	10684	51450	6367	17.3	1.66	
30.877	19734	2880	12269	1802	4.04	1.61	
Signal Totals:							
	443571	68825	277352	42789			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	720923	111614				1.60	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 91.112 = (720923 * 100.000) / (767413 * 1.031)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	467497	60868

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	467497	60868

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.094	1661	265	66956	11318	14.0	0.02	RQ
26.094	1661	265	1071	170	0.5584		Empc Correction
27.441	1999	365	5138	697	1.46	0.39	RQ
27.441	1999	365	1289	235	0.6721		Empc Correction
Signal Totals:							
	3660	630	2360	405			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	75754	12645				0.05	RQ
	6020	1035					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 15.484 = (75754 * 100.000) / (467497 * 1.046)
Empc Amount: 1.230 = (6020 * 100.000) / (467497 * 1.046)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	670794	126691
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	667407	117222
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	629478	129164
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	551884	126148

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	629890	124806

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.448	44104	7210	32016	5402	10.0	1.38	
34.316	21230	3853	0	0	2.80	0.00	M
35.806	11258	3199	7488	1943	2.47	1.50	RQMa
35.806	9285	2409	7488	1943	2.21		Empc Correction
36.892	50417	11876	38598	9430	11.7	1.31	Ma
Signal Totals:							
	125036	25348	78102	16775			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	205111	42913				1.63	RQMa
	203138	42123					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 27.025 = (205111 * 100.000) / (629890 * 1.205)

Empc Amount: 26.765 = (203138 * 100.000) / (629890 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	471918	106863
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	509905	104102
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	490911	105482

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.257	18394	3281	15444	2664	6.54	1.19	
35.369	21990	3803	16629	3184	7.46	1.32	
Signal Totals:							
	40384	7084	32073	5848			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	72457	12932				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.997 = (72457 * 100.000) / (490911 * 1.055)

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	471892	110005
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	472762	122343

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	472327	116174

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
39.000	39908	10633	37362	9627	11.9	1.07	
Signal Totals:							
	39908	10633	37362	9627			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	77270	20260				1.07	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 11.892 = (77270 * 100.000) / (472327 * 1.376)

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	435689	115194

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	435689	115194

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.941	723791	191876	702221	184135	311.6	1.03	
Signal Totals:							
	723791	191876	702221	184135			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1426012	376011				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 311.626 = (1426012 * 100.000) / (435689 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.31
Area: 933806
Amount: 185.6977
Amount Units: pg/ul

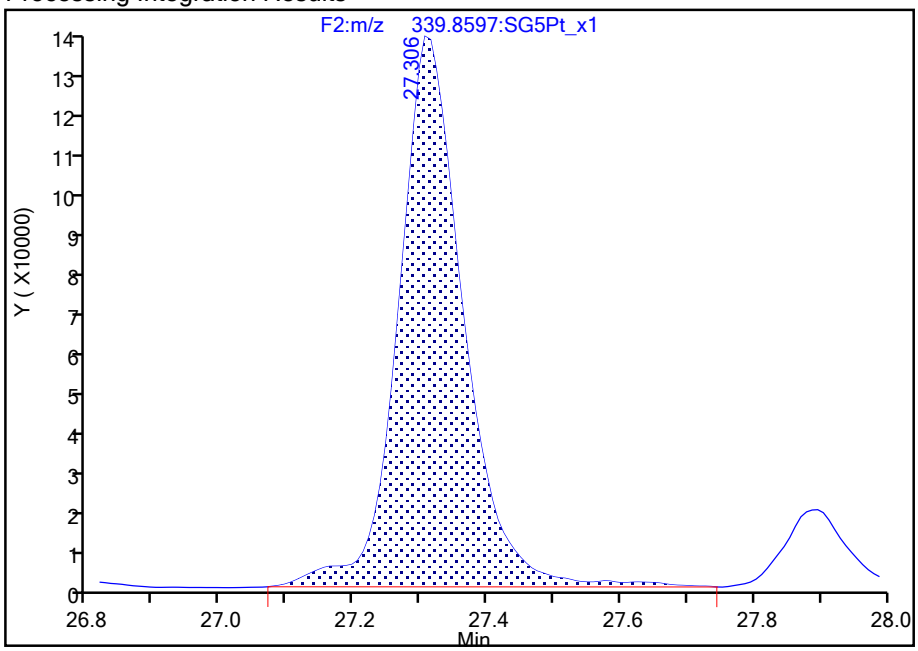

Manual Integration Results

RT: 27.31
Area: 910910
Amount: 181.1998
Amount Units: pg/ul

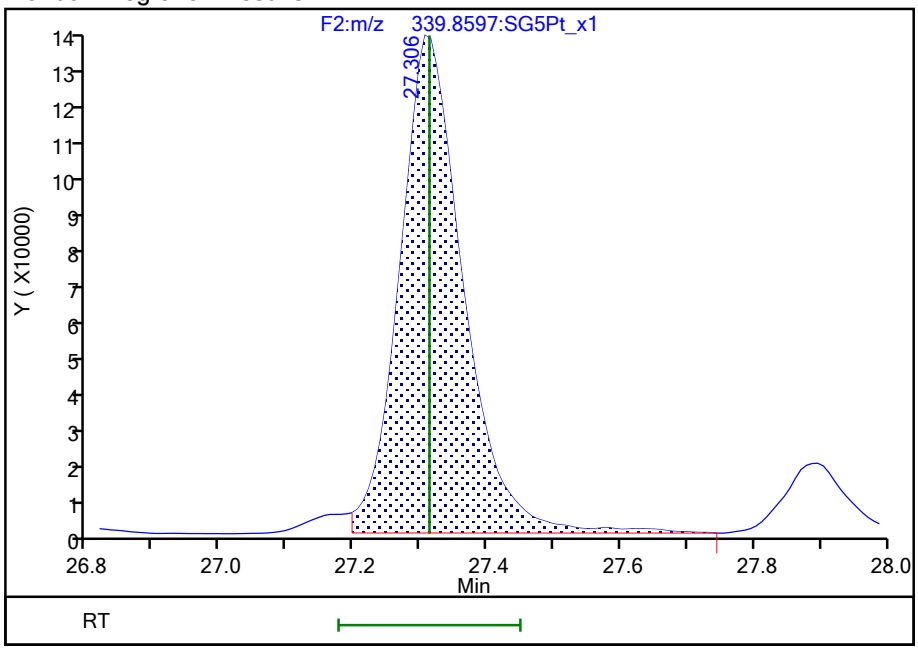

Reviewer: dadunj, 20-Aug-2021 09:21:39

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777682

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.31
Area: 577859
Amount: 185.6977
Amount Units: pg/ul

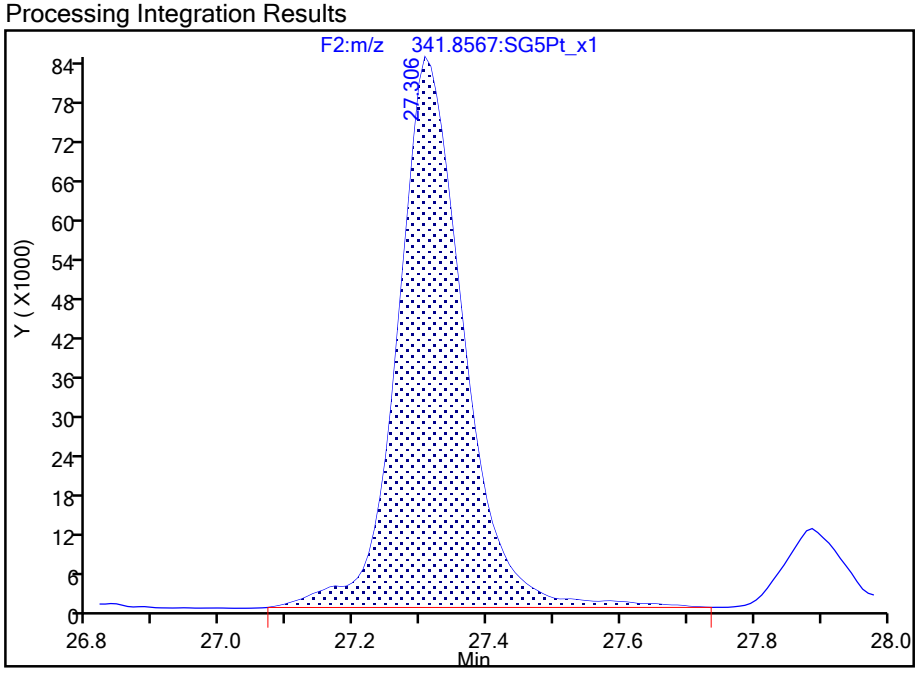

Manual Integration Results

RT: 27.31
Area: 564140
Amount: 181.1998
Amount Units: pg/ul

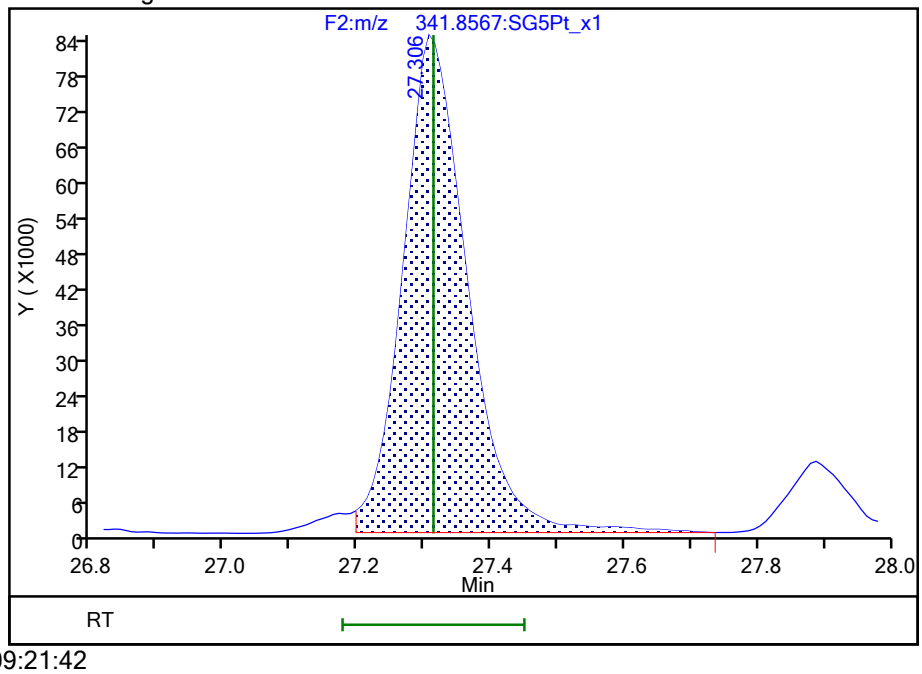

Reviewer: dadunj, 20-Aug-2021 09:21:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

F1 PeCDFs, Signal: 1, m/z: 339.8597, RT: (23.99- 25.30)

Signal: 1

Processing Integration Results

RT = 24.092 Area = 3452

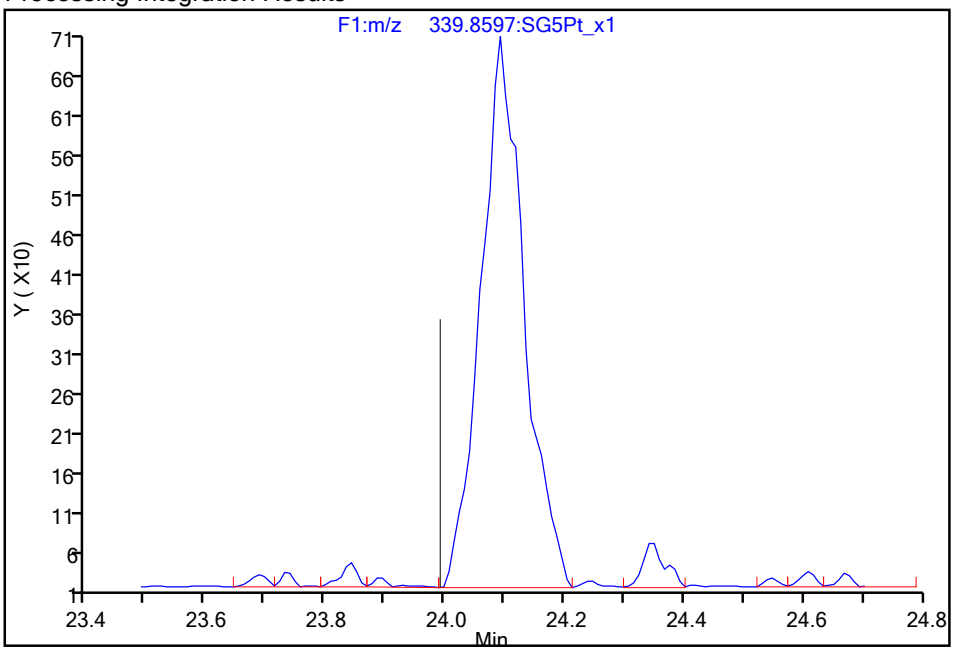

Manual Integration Results

RT = 24.092 Area = 3452

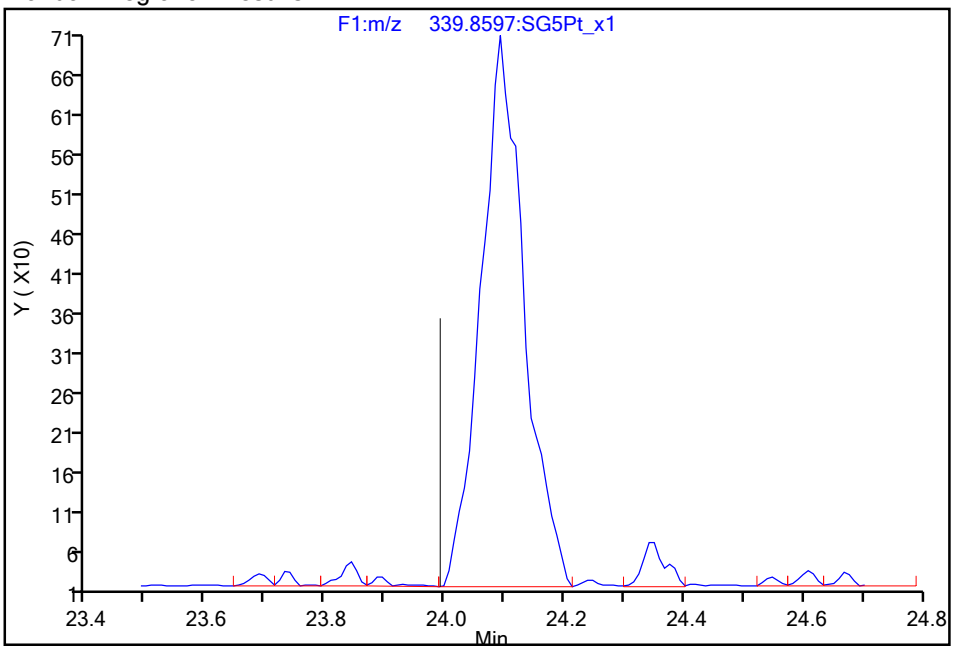

Reviewer: dadunj, 20-Aug-2021 09:21:49

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

F1 PeCDFs, Signal: 2, m/z: 341.8567, RT: (23.99- 25.30)

Signal: 2

Processing Integration Results

RT = 24.084 Area = 1787

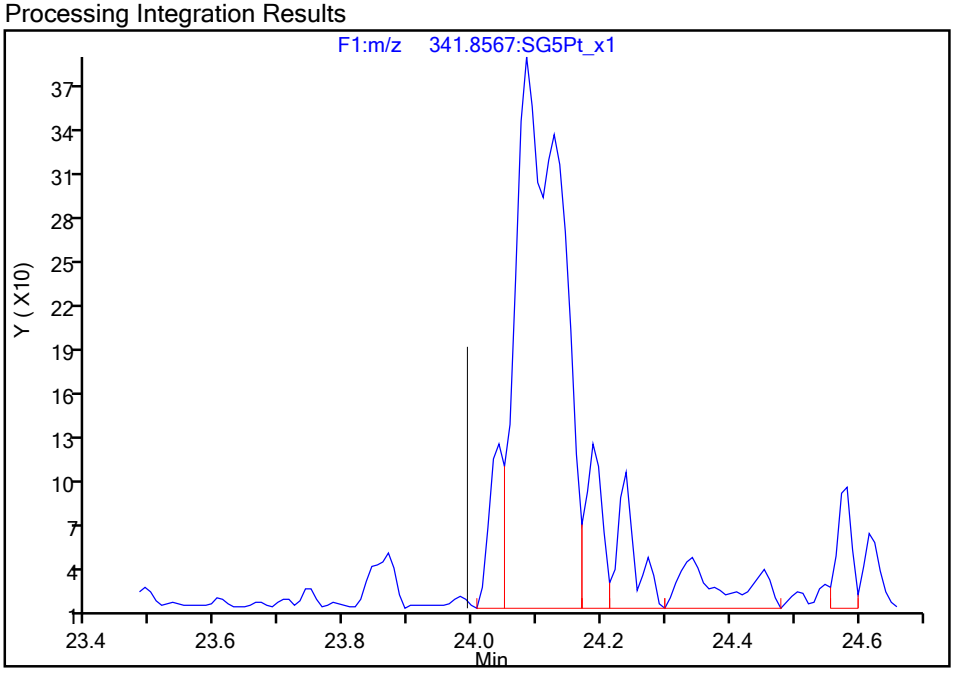

Manual Integration Results

RT = 24.084 Area = 1927 M

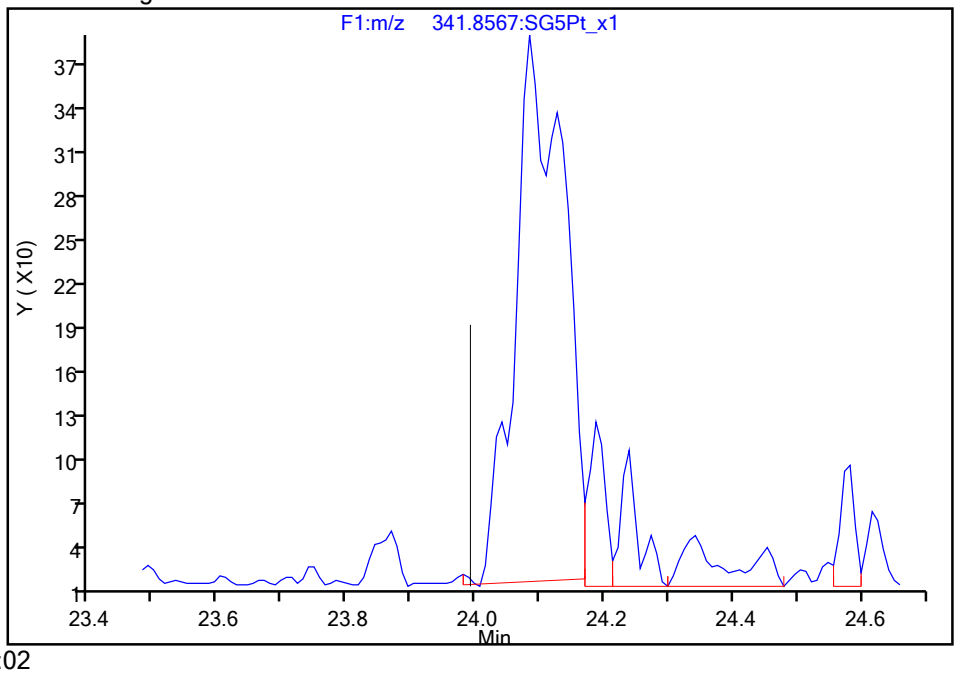

Reviewer: dadunj, 20-Aug-2021 09:22:02

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.38- 30.87)

Signal: 1

Processing Integration Results

Not Detected
RT: 25.38- 30.87

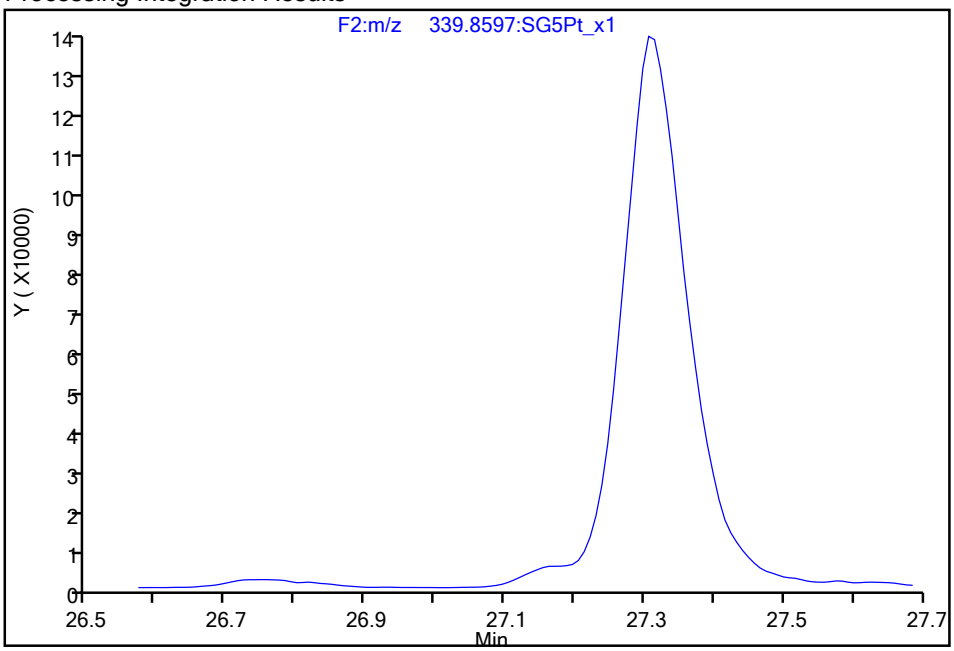

Manual Integration Results

RT = 27.197 Area = 22890 M

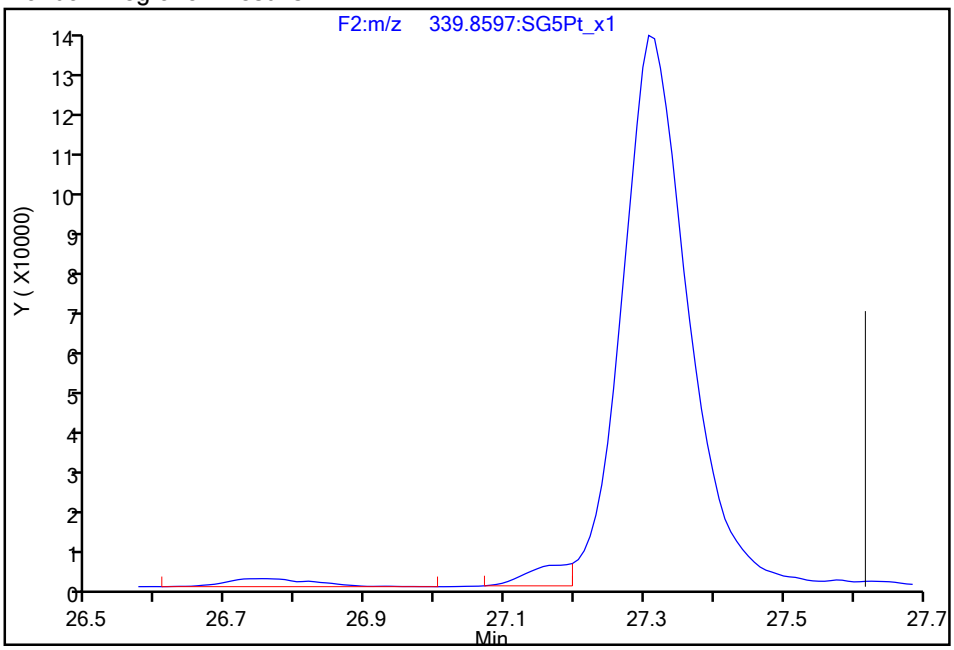

Reviewer: dadunj, 20-Aug-2021 09:22:09

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

777686

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.93
Area: 296775
Amount: 65.580491
Amount Units: pg/ul

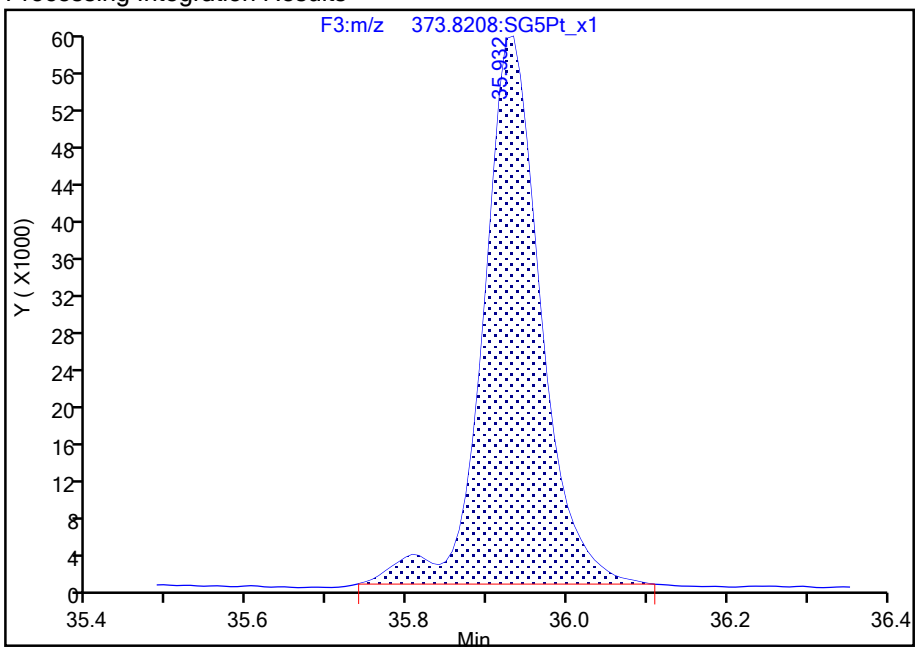

Manual Integration Results

RT: 35.93
Area: 285516
Amount: 65.217369
Amount Units: pg/ul

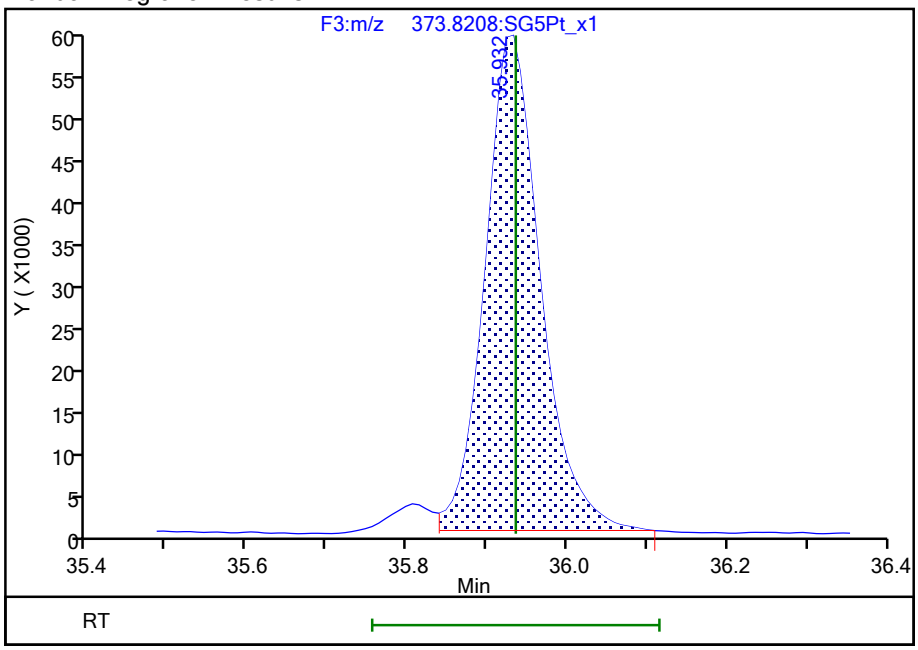

Reviewer: dadunj, 20-Aug-2021 09:22:31

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777687

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 35.92
Area: 204576
Amount: 65.580491
Amount Units: pg/ul

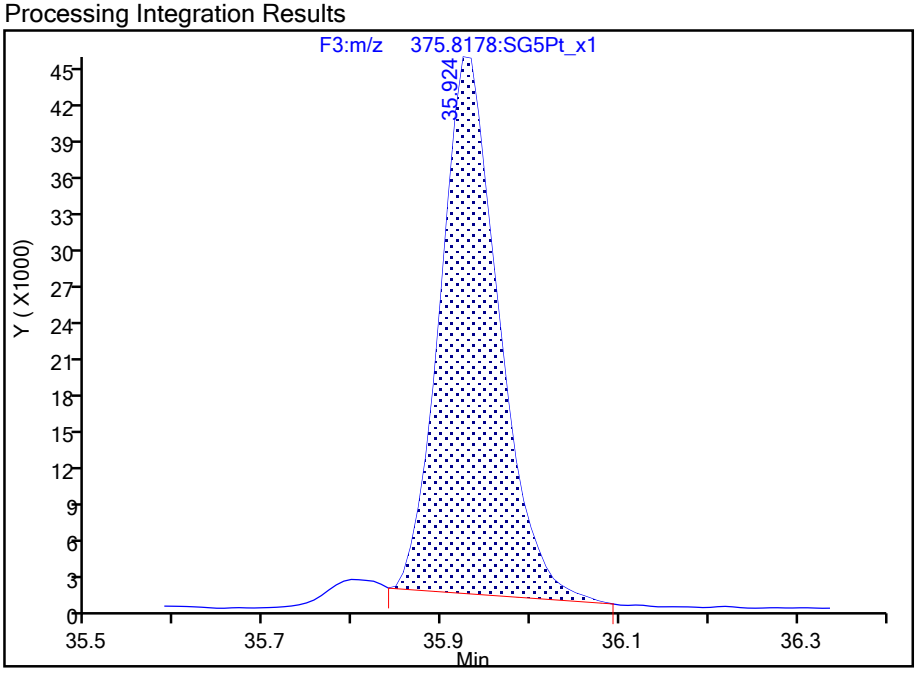

Manual Integration Results

RT: 35.92
Area: 213059
Amount: 65.217369
Amount Units: pg/ul

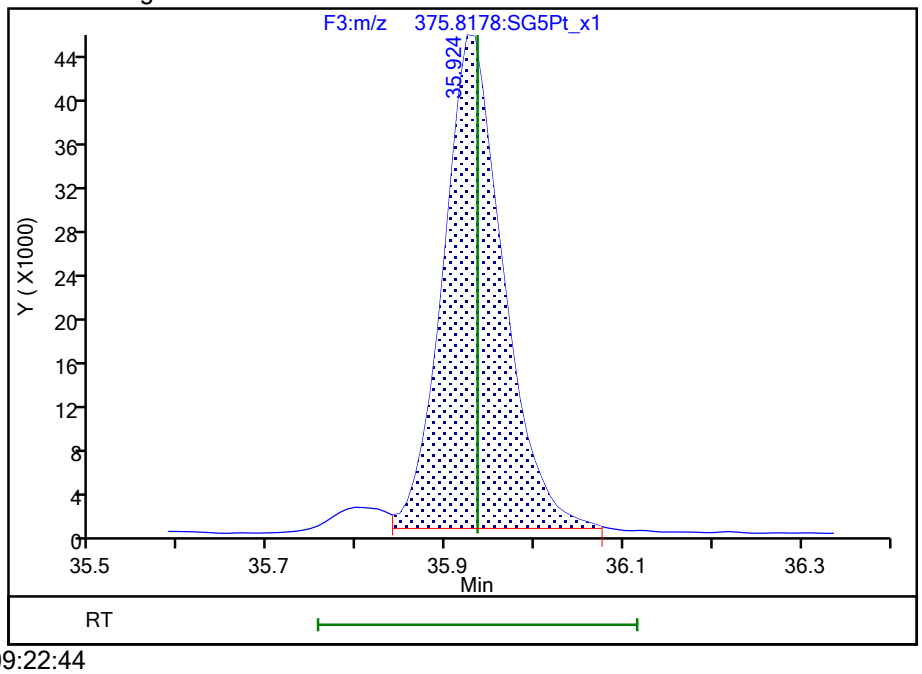

Reviewer: dadunj, 20-Aug-2021 09:22:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777688

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.82
Area: 279822
Amount: 72.824326
Amount Units: pg/ul

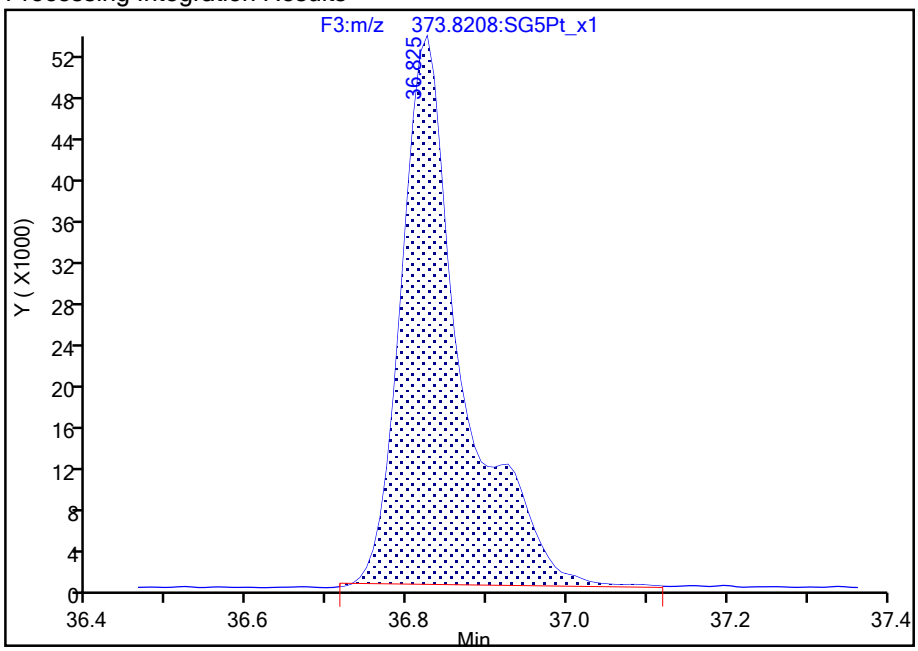

Manual Integration Results

RT: 36.82
Area: 229450
Amount: 59.823630
Amount Units: pg/ul

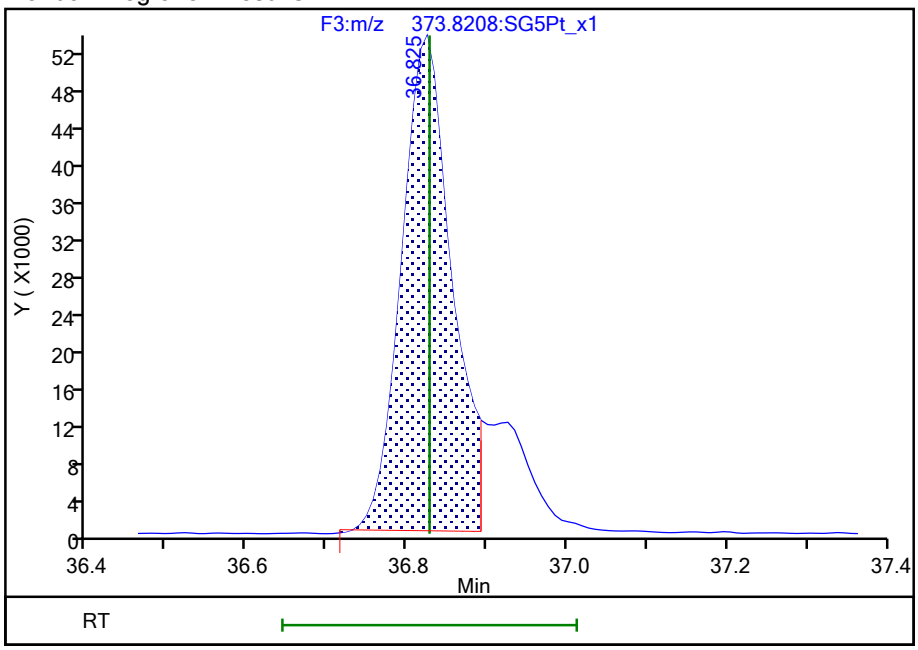

Reviewer: dadunj, 20-Aug-2021 09:23:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.82
Area: 218589
Amount: 72.824326
Amount Units: pg/ul

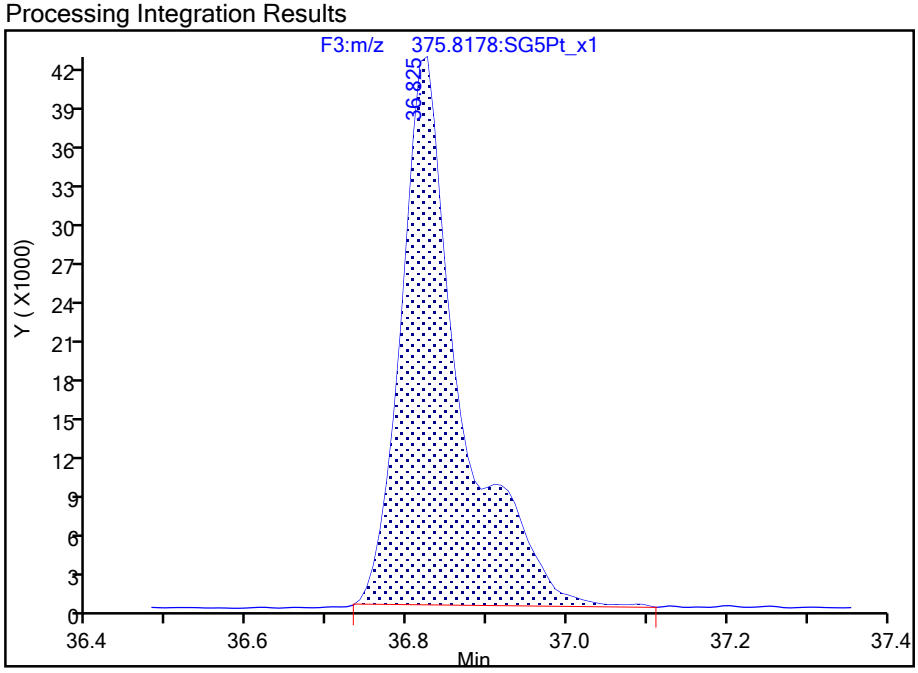

Manual Integration Results

RT: 36.82
Area: 179984
Amount: 59.823630
Amount Units: pg/ul

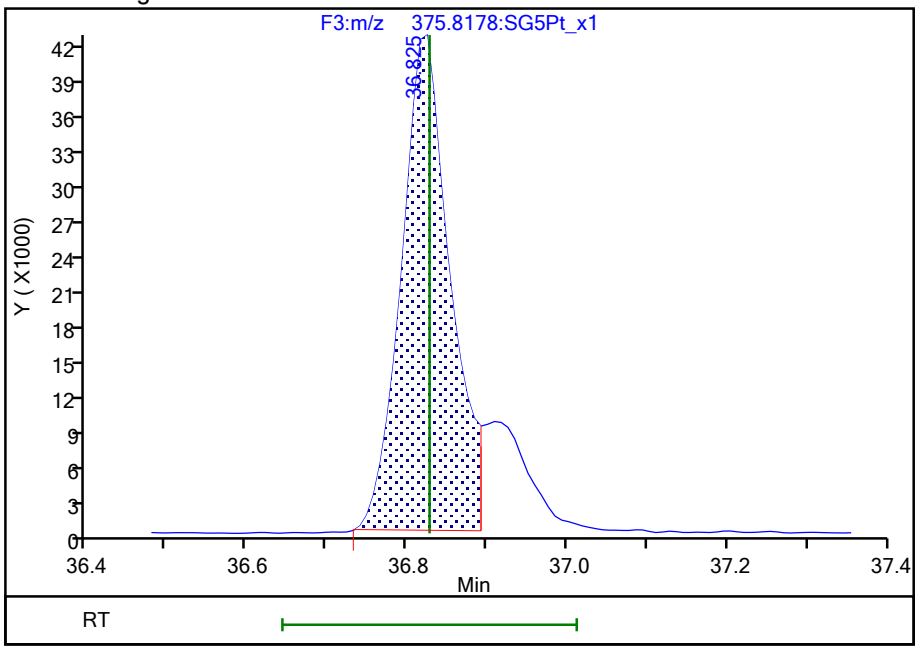

Reviewer: dadunj, 20-Aug-2021 09:23:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.11- 36.95)

Signal: 1

Processing Integration Results

Not Detected
RT: 33.11- 36.95

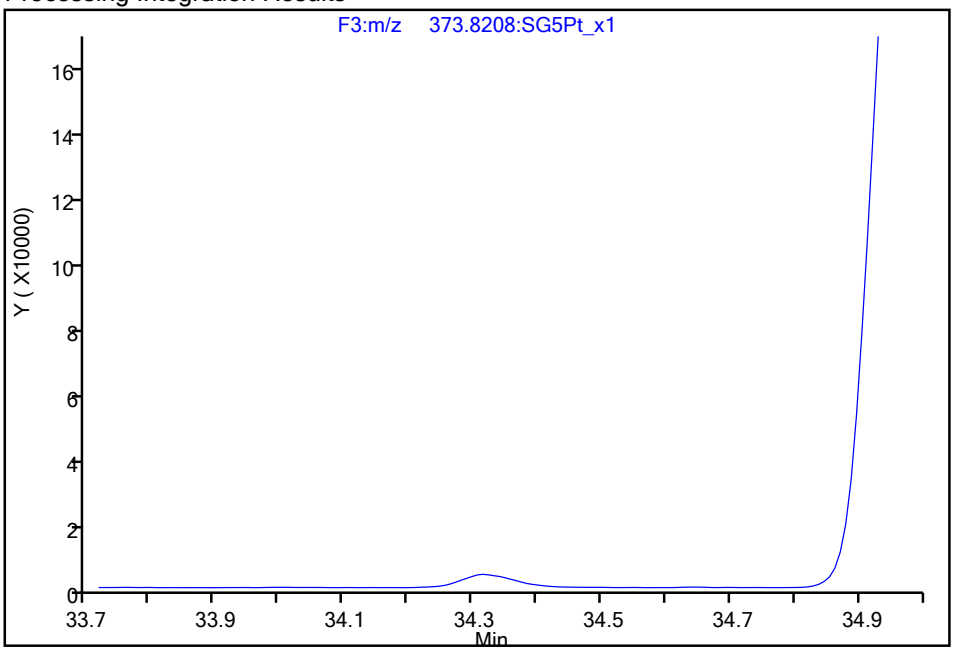

Manual Integration Results

RT = 34.316 Area = 21230 M

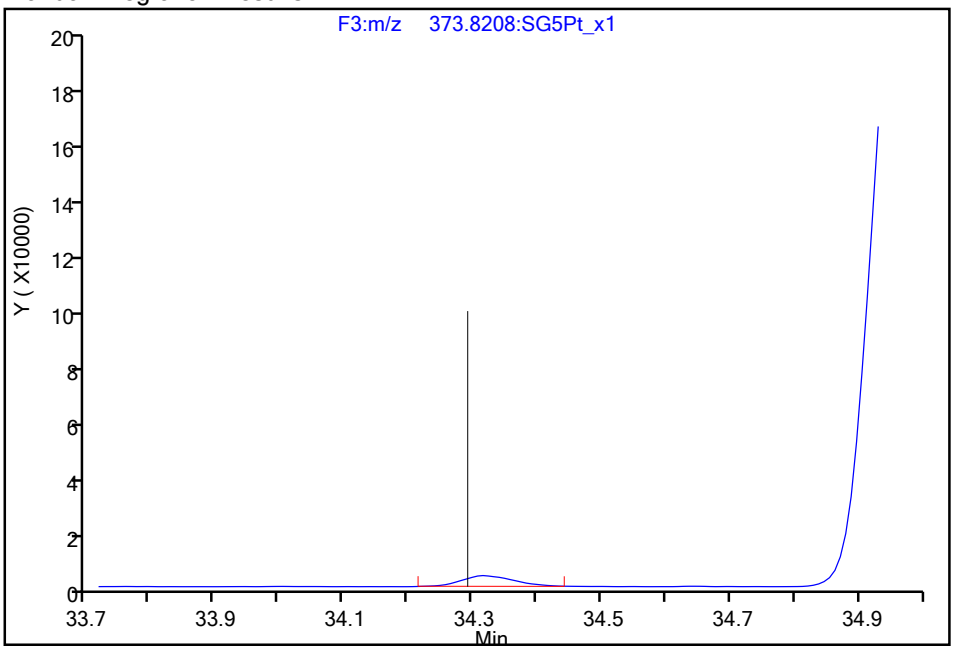

Reviewer: dadunj, 20-Aug-2021 09:23:28

Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.11- 36.95)

Signal: 1

Not Detected
RT: 33.11- 36.95

Processing Integration Results

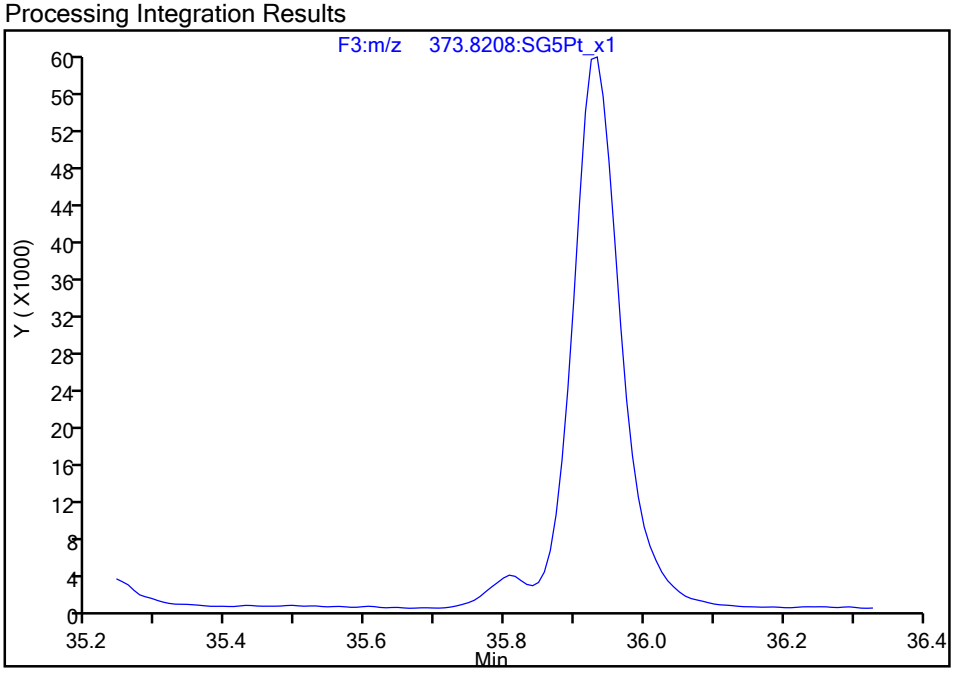

RT = 35.806 Area = 11258 M

Manual Integration Results

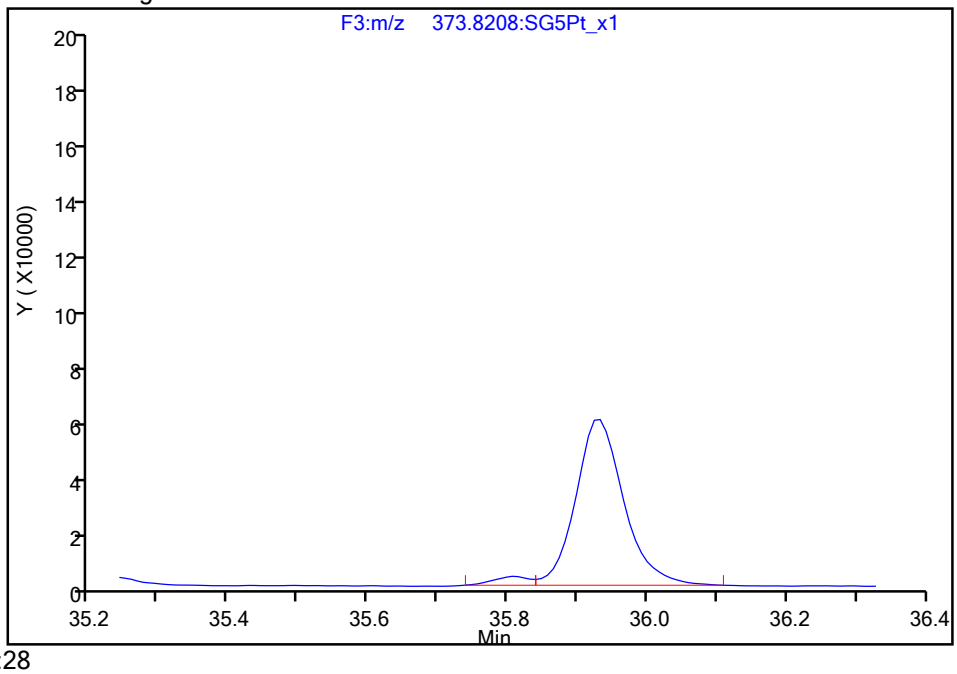

Reviewer: dadunj, 20-Aug-2021 09:23:28
Audit Action: Manually Integrated Audit Reason: Assign Peak

777692

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.11- 36.95)

Signal: 1

Processing Integration Results

Not Detected
RT: 33.11- 36.95

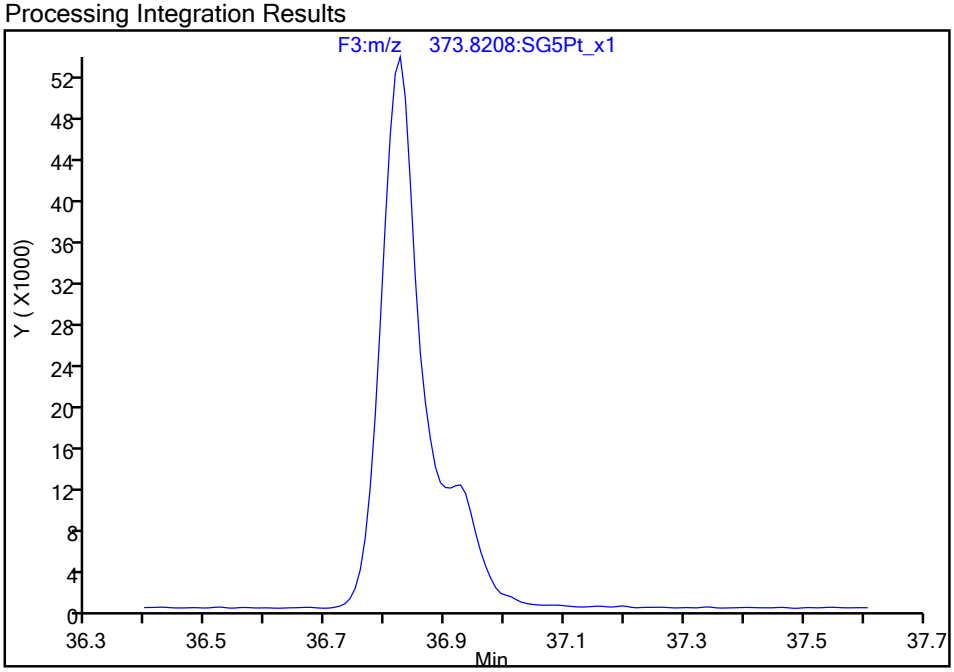

Manual Integration Results

RT = 36.892 Area = 50417 M

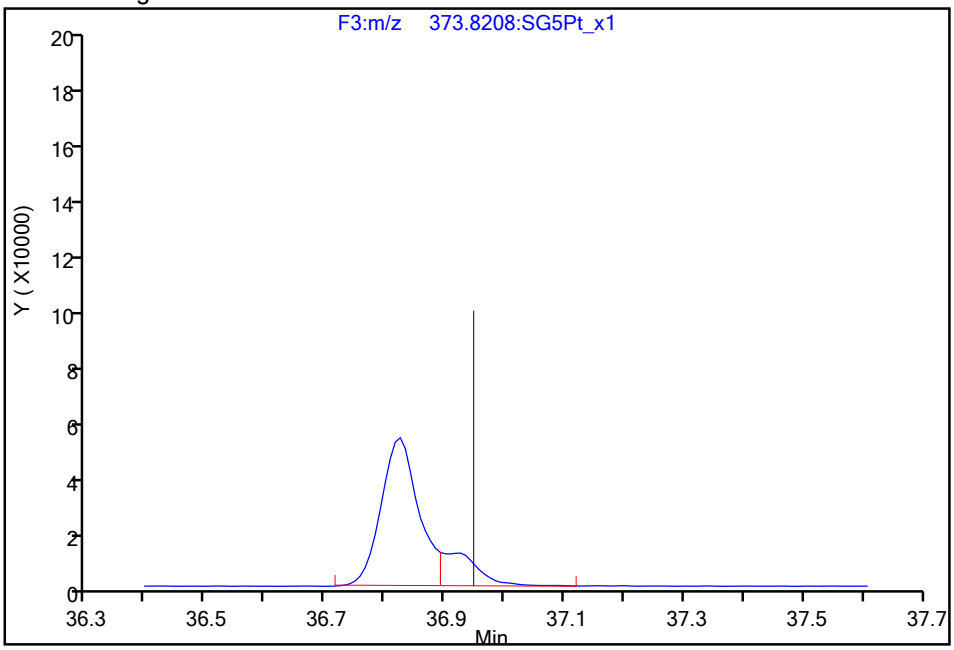

Reviewer: dadunj, 20-Aug-2021 09:23:28

Audit Action: Manually Integrated Audit Reason: Assign Peak

777693

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

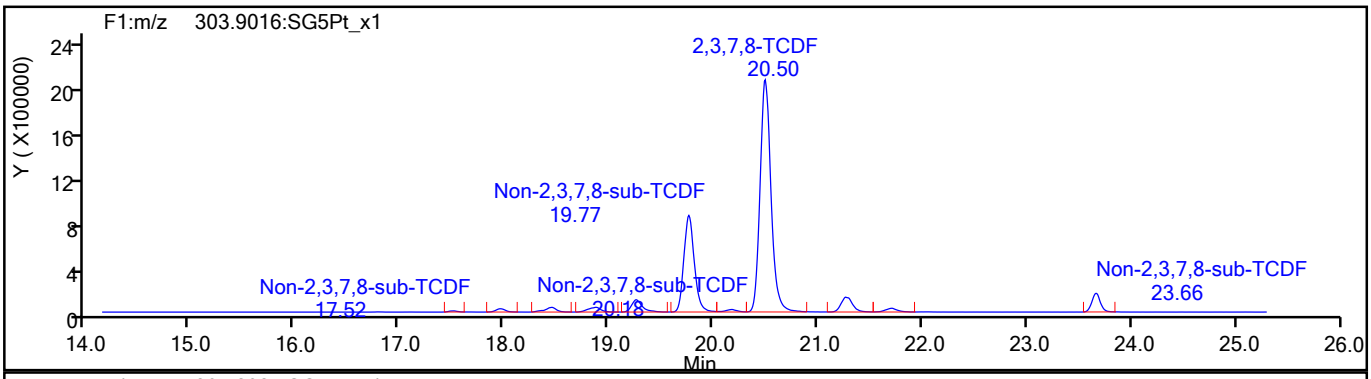

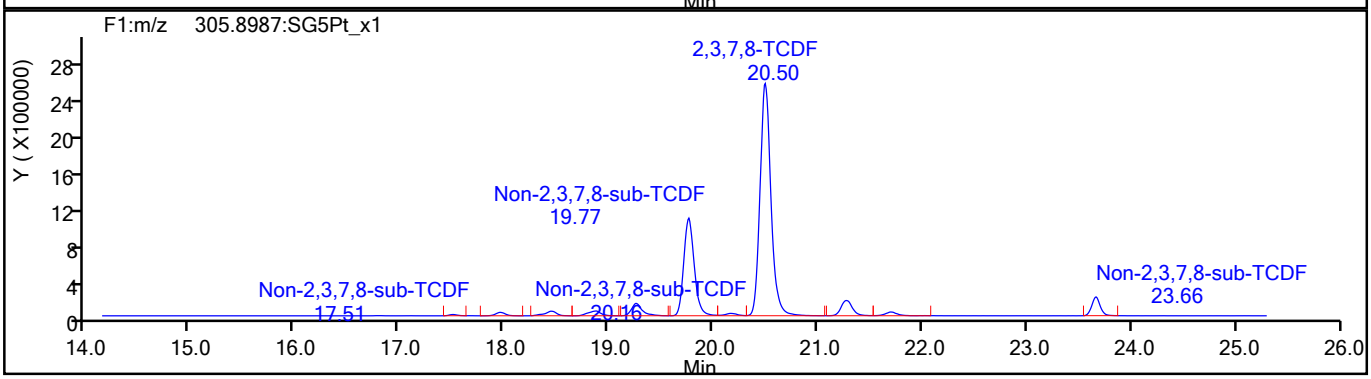

TCDF Standards

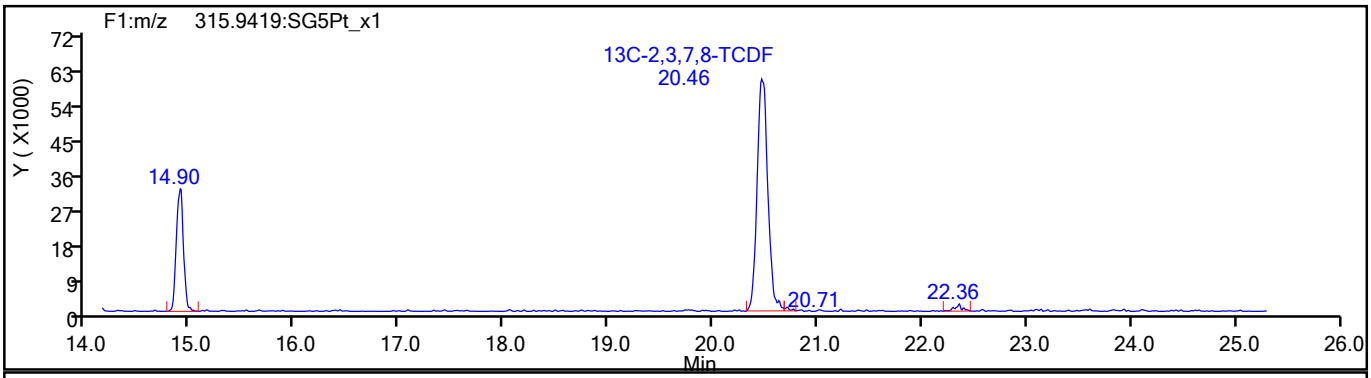

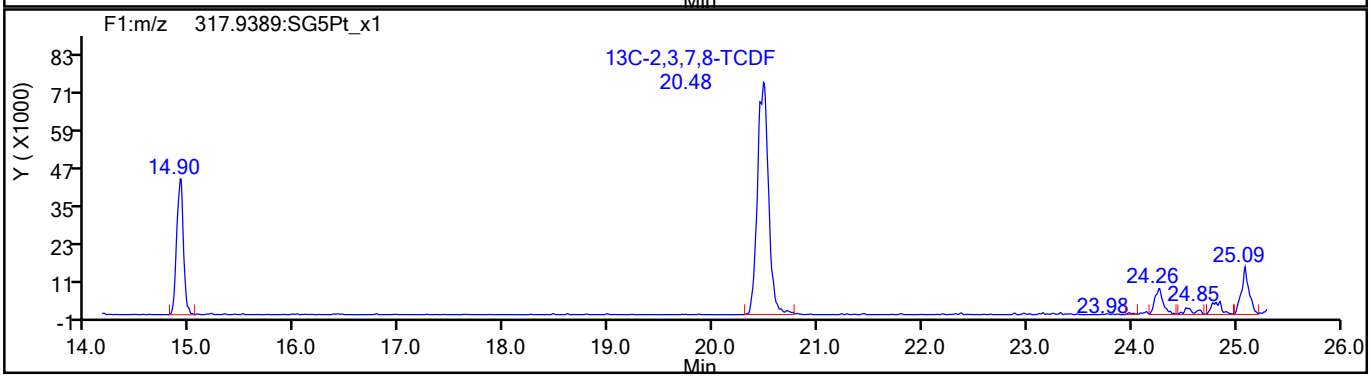

777694

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

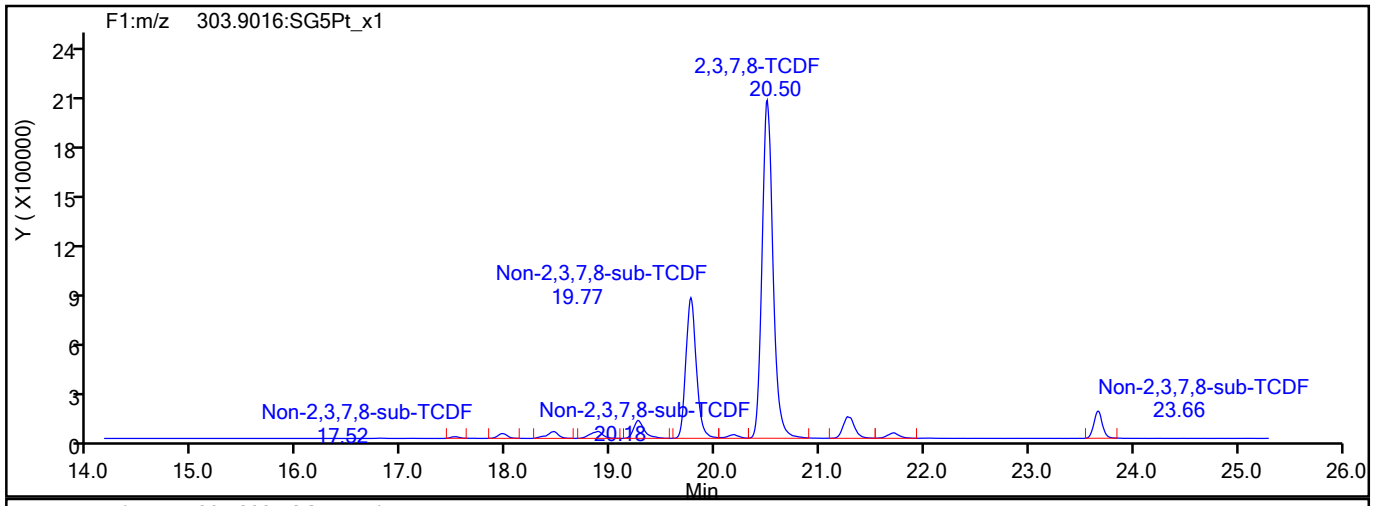

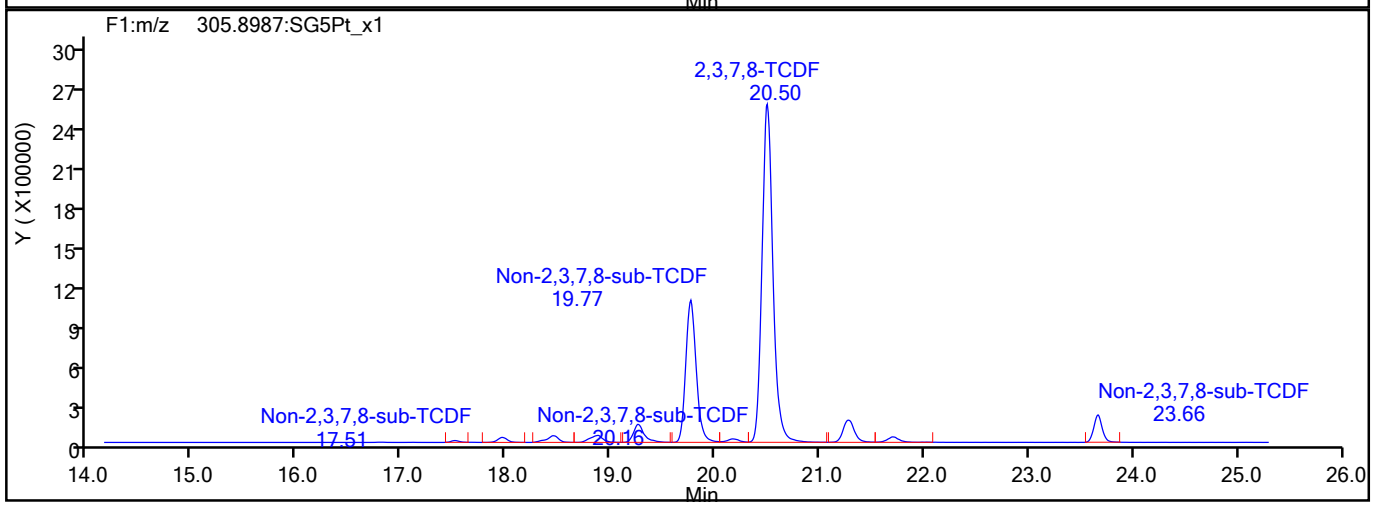

TCDF Interference Mass

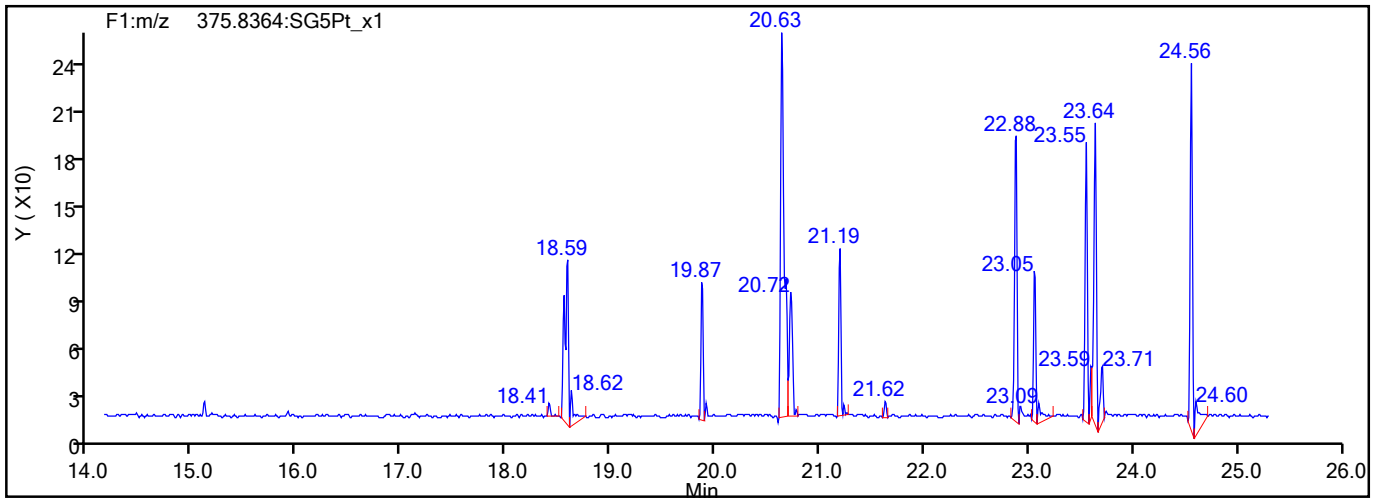

777695

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

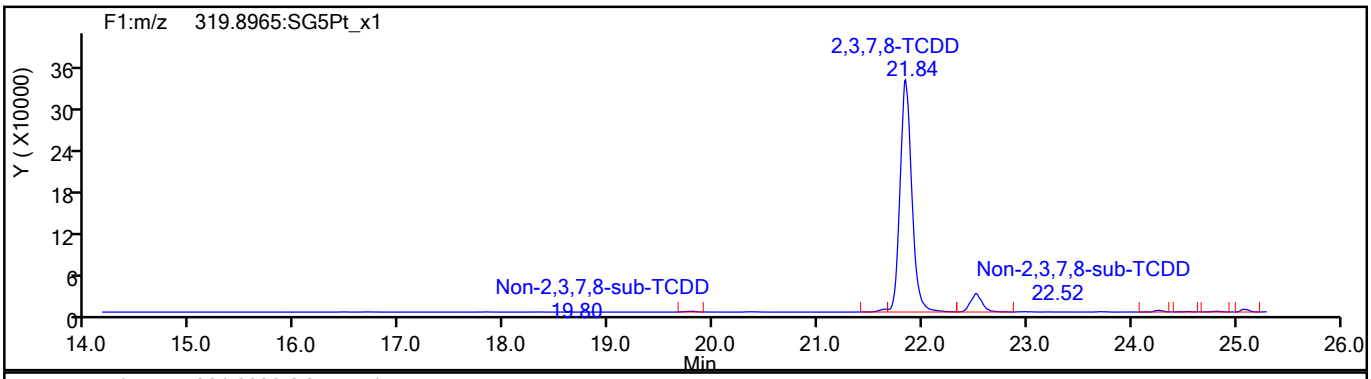

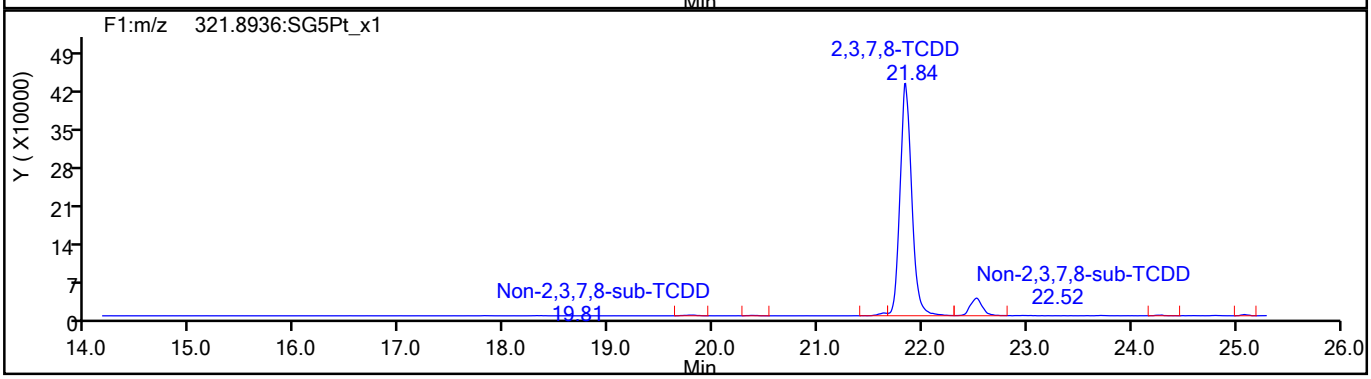

TCDD Standards

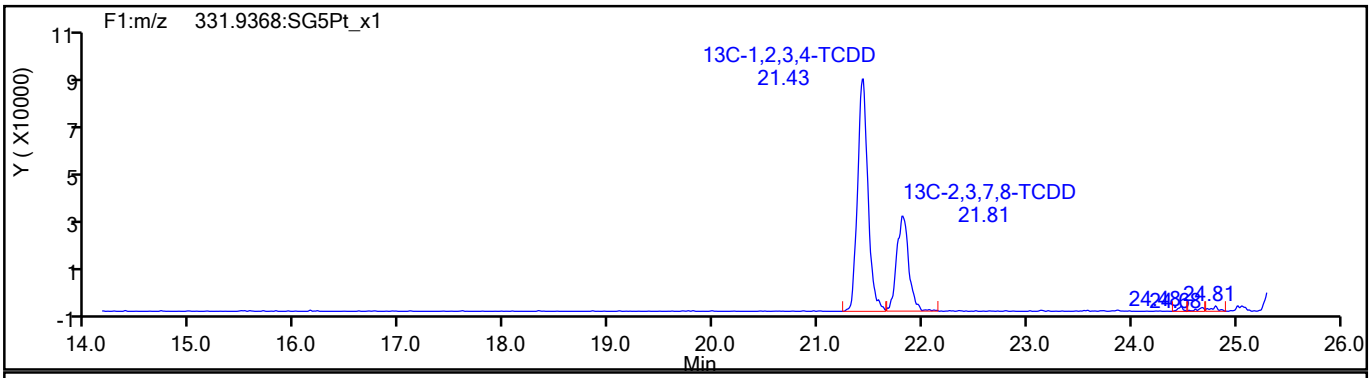

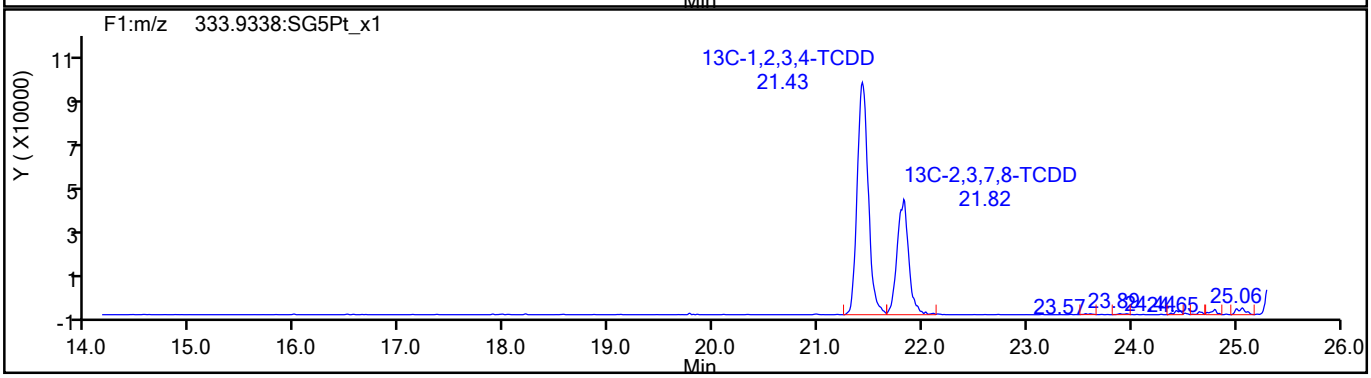

777696

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

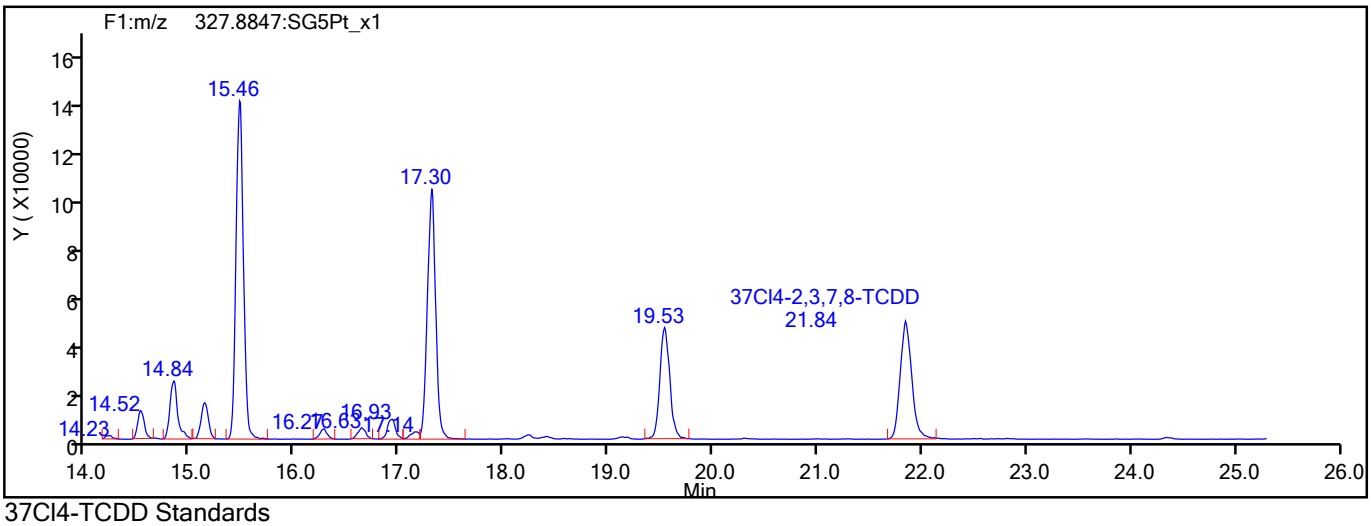

37Cl4-TCDD Standards

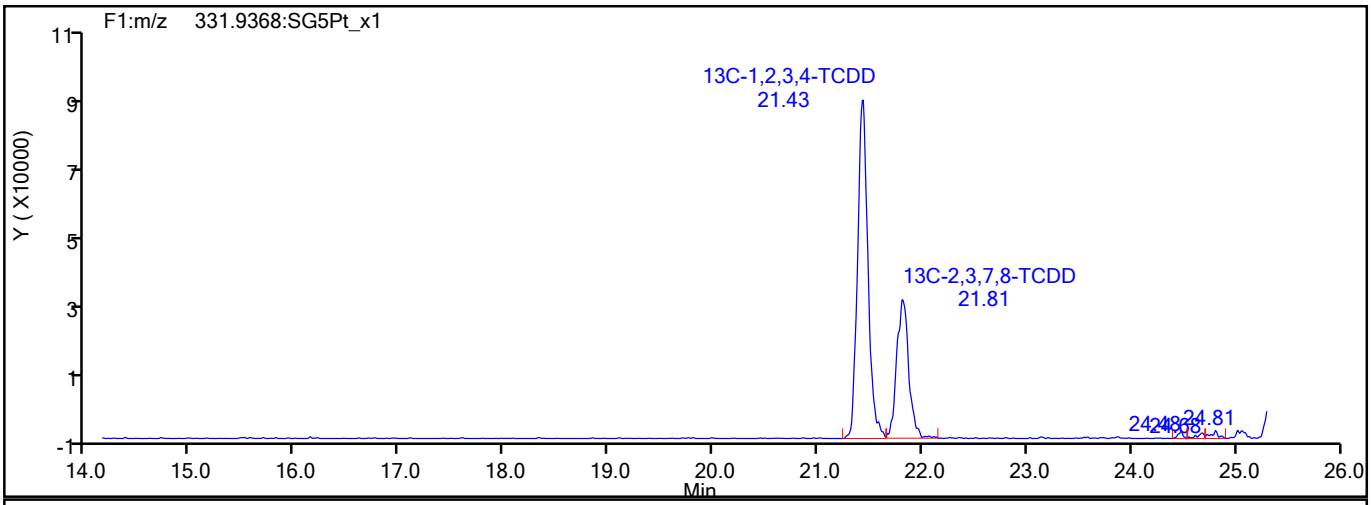

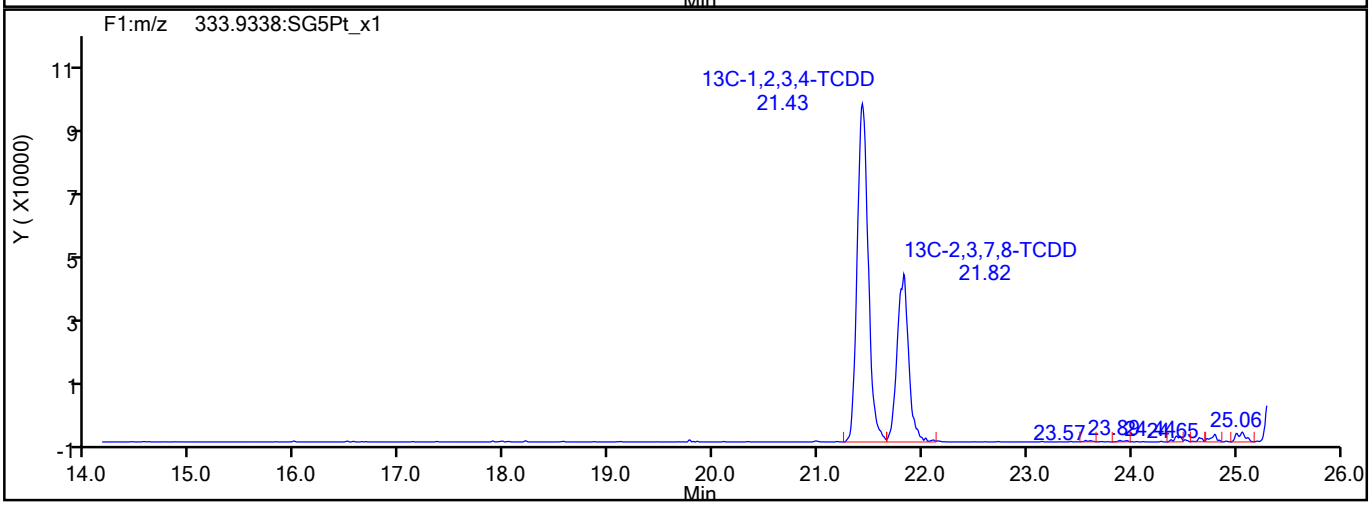

777697

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

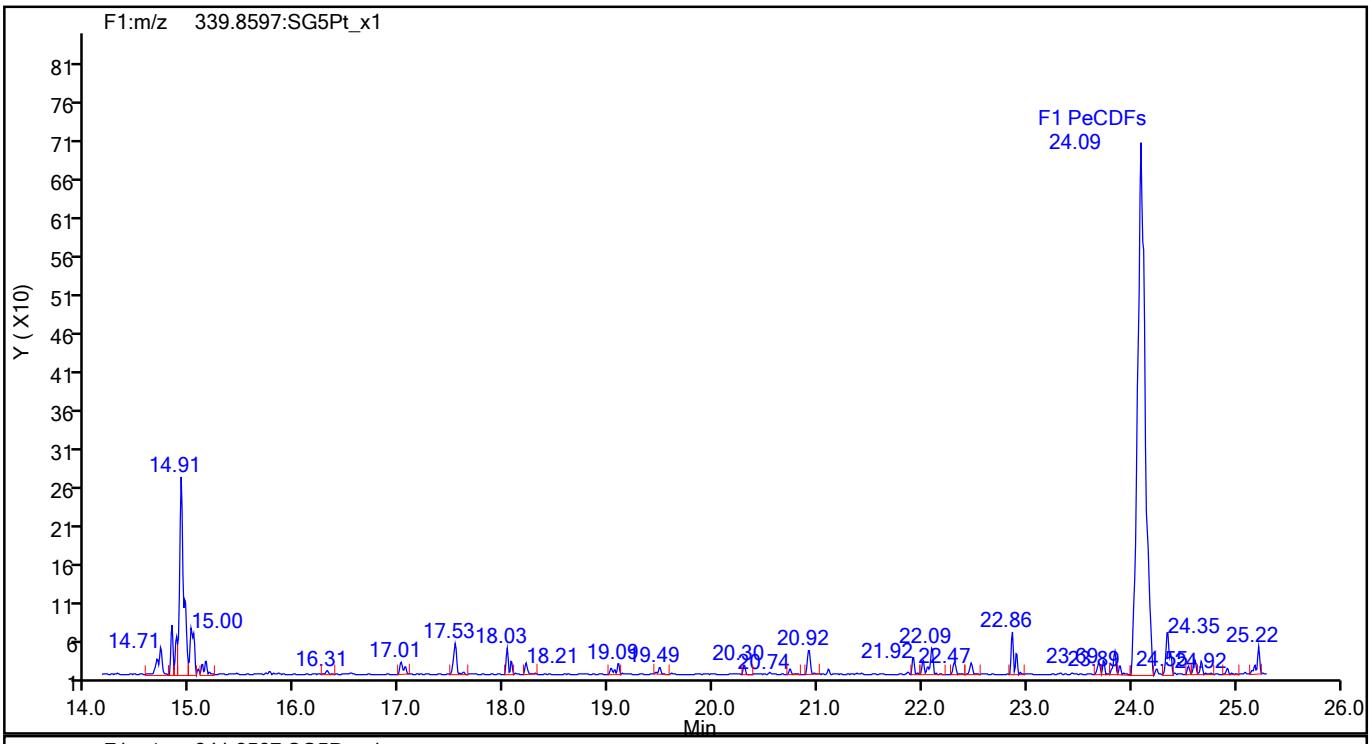

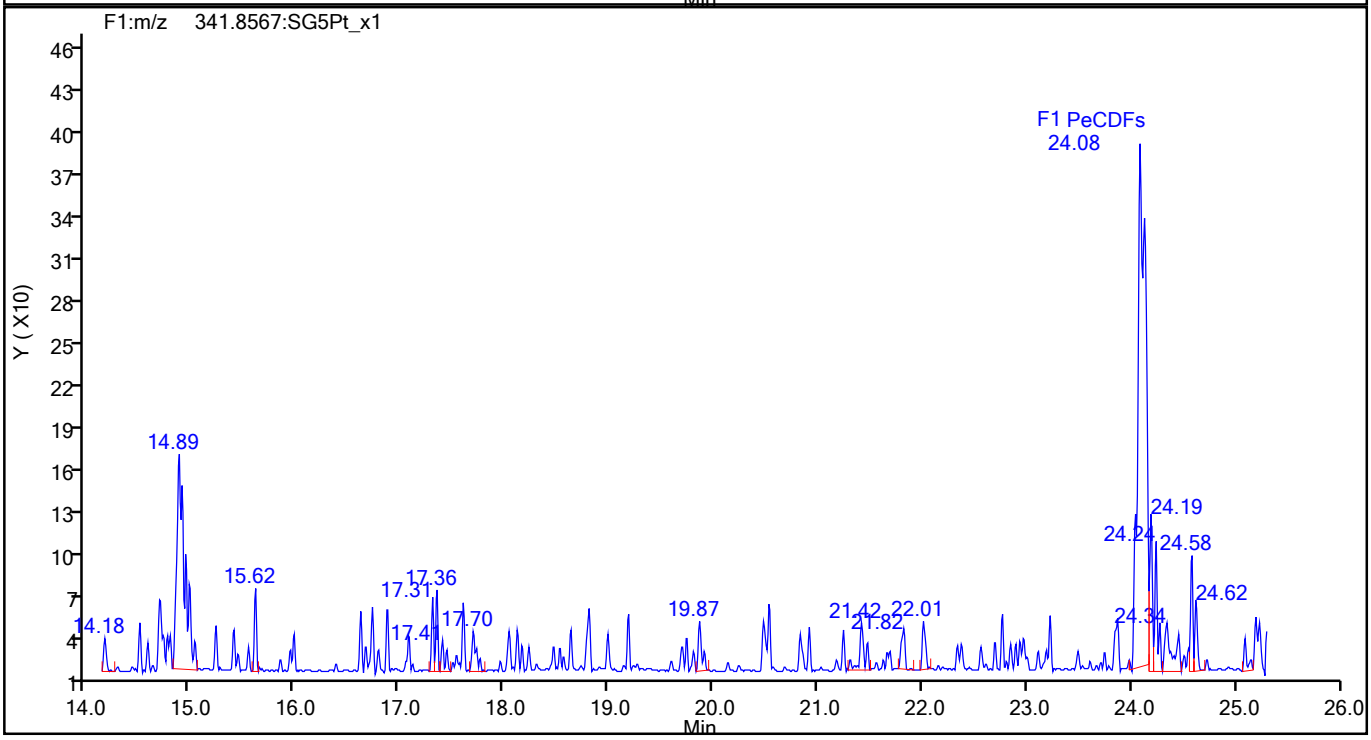

777698

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

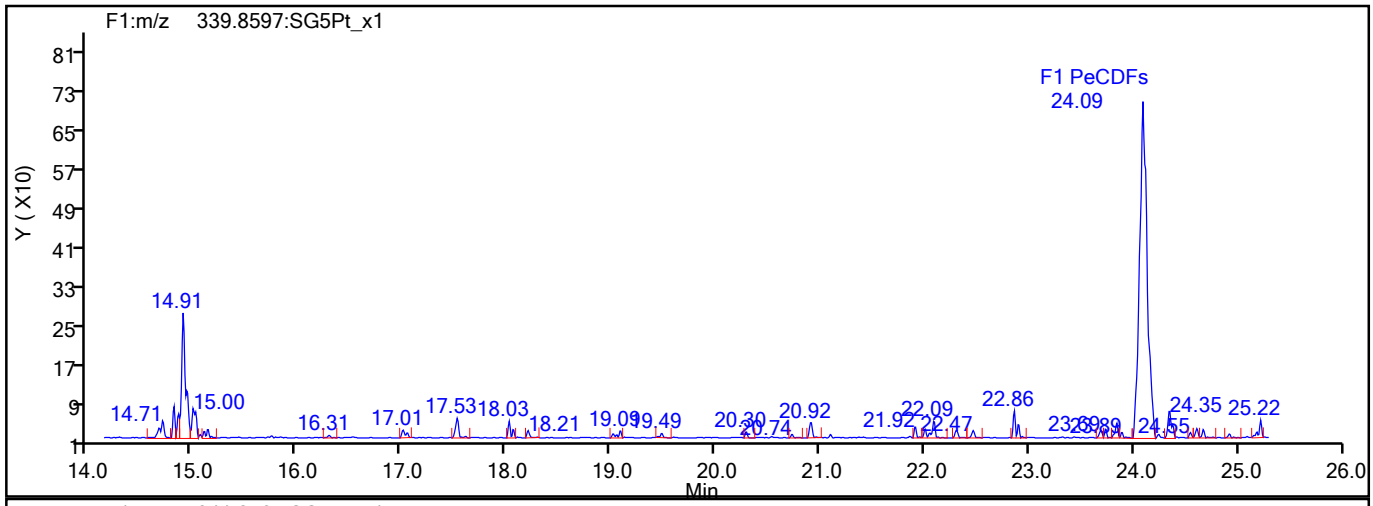

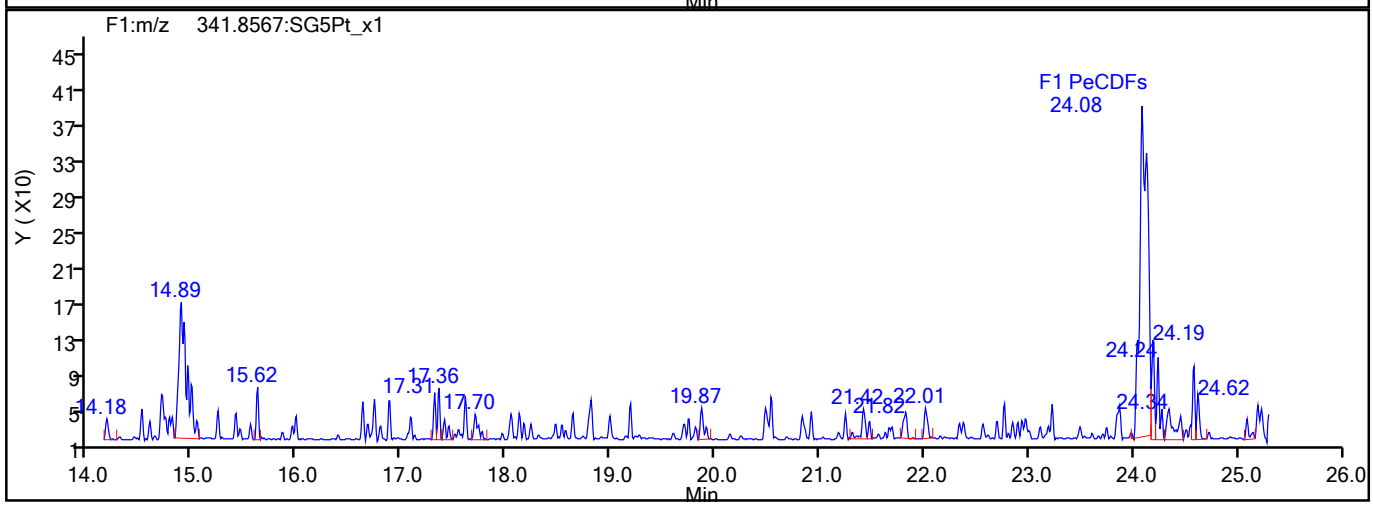

F1 PeCDFs Interference Mass

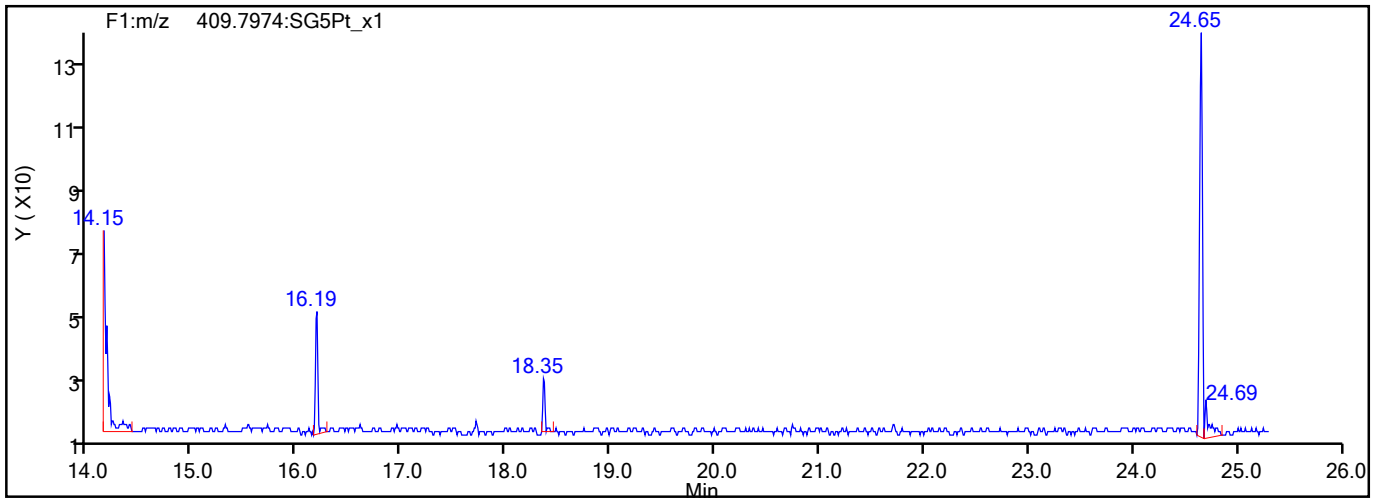

777699

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

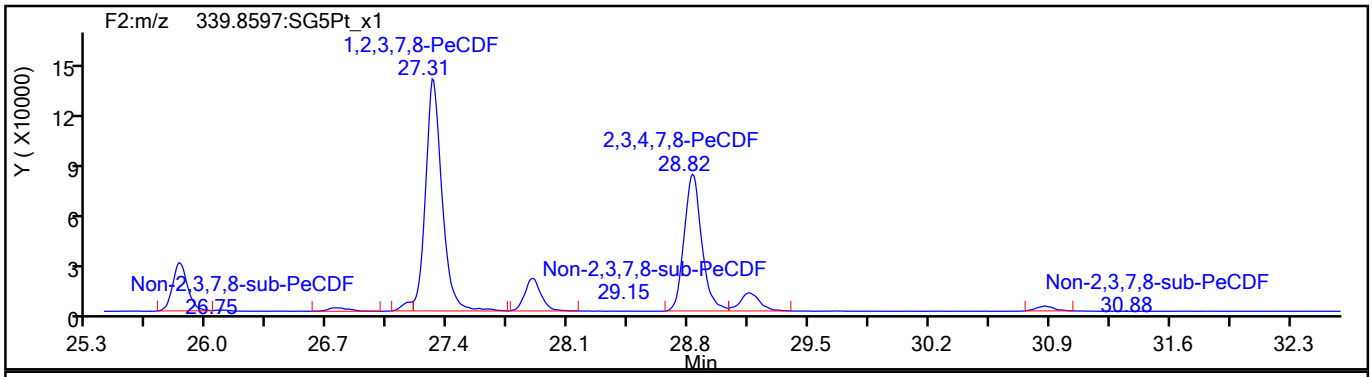

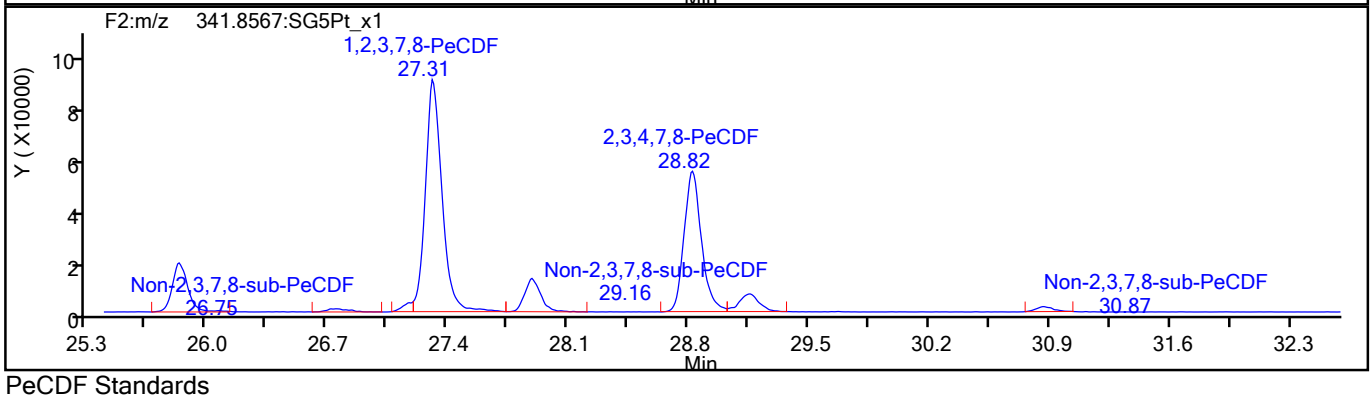

PeCDF Standards

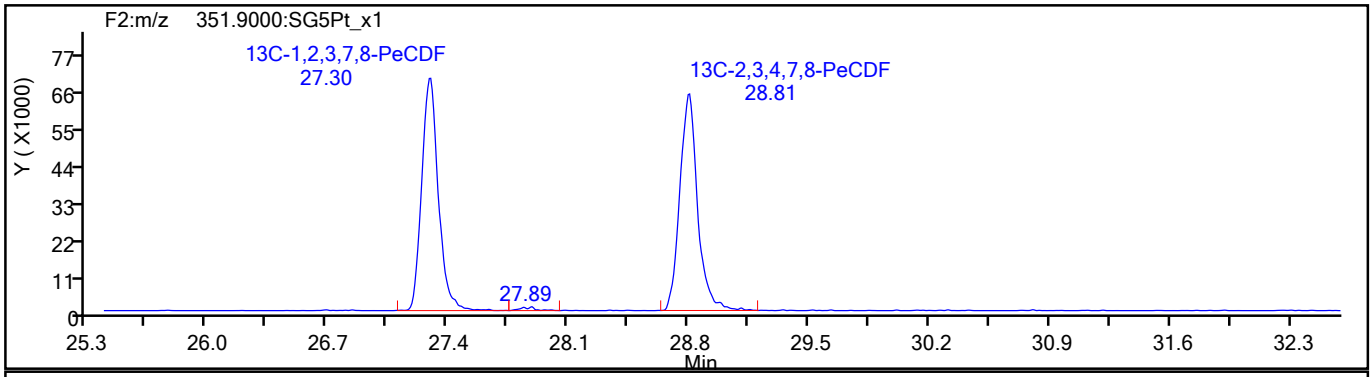

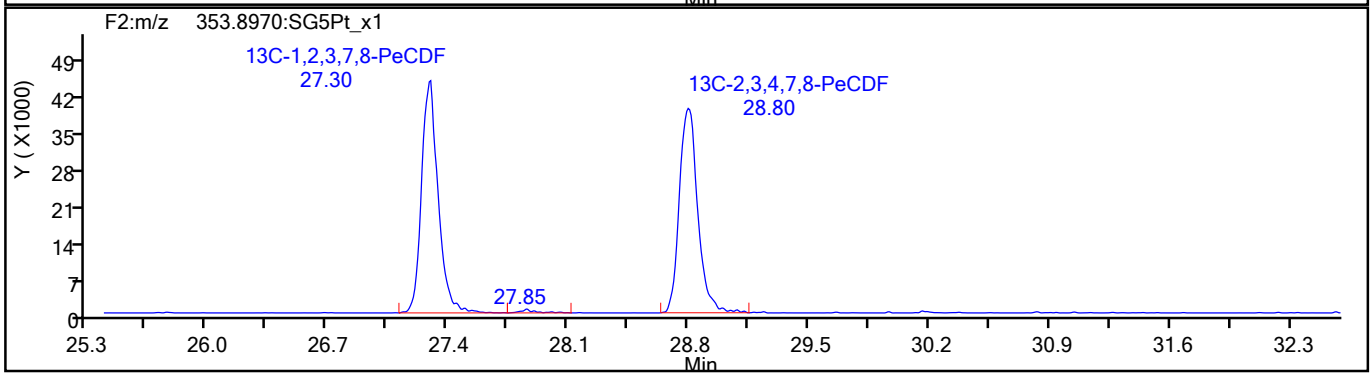

777700

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

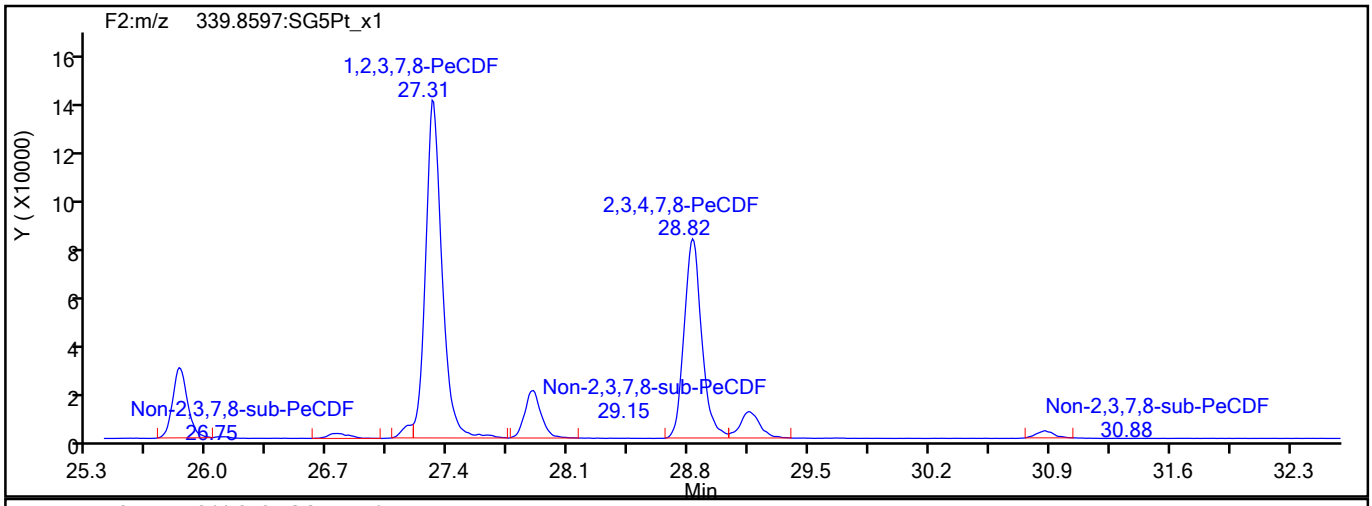

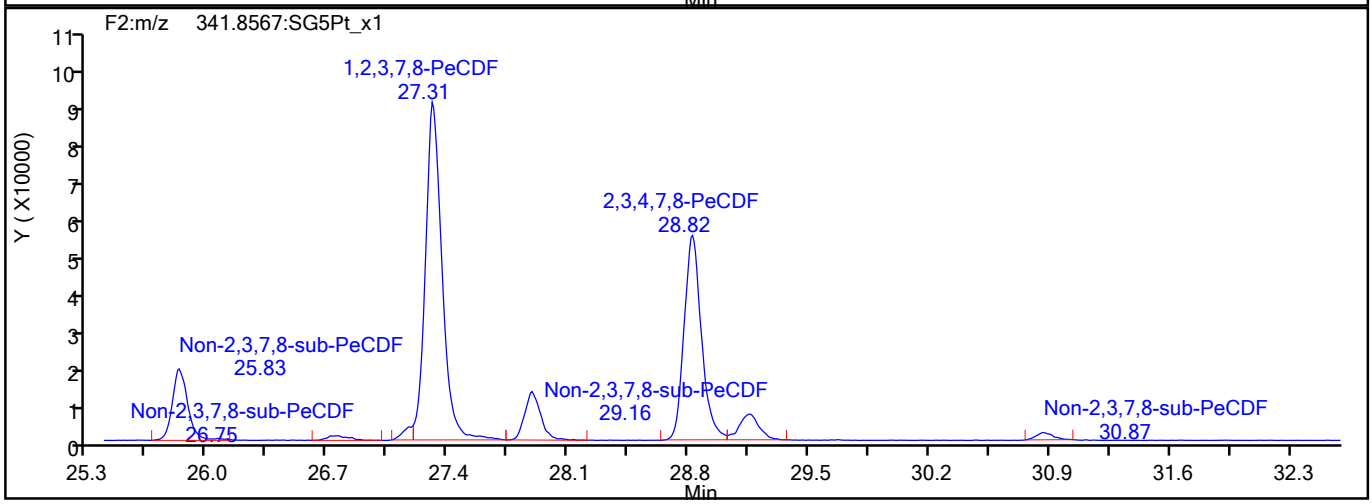

PeCDF Interference Mass

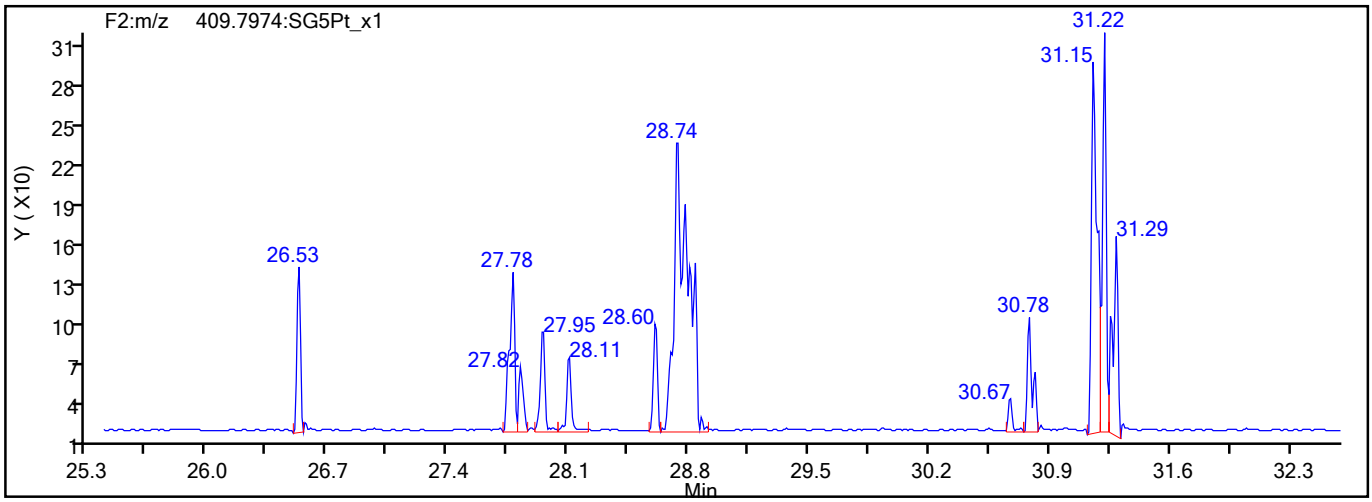

777701

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

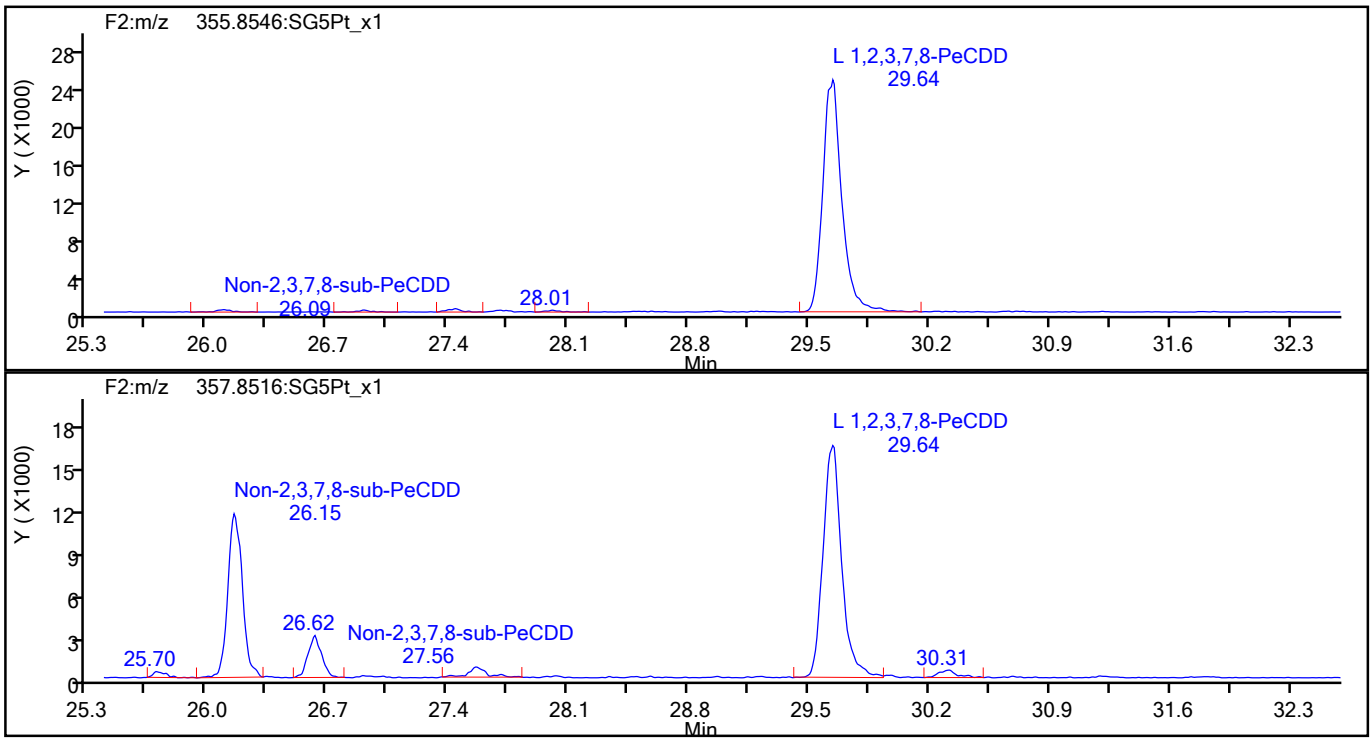

PeCDD Standards

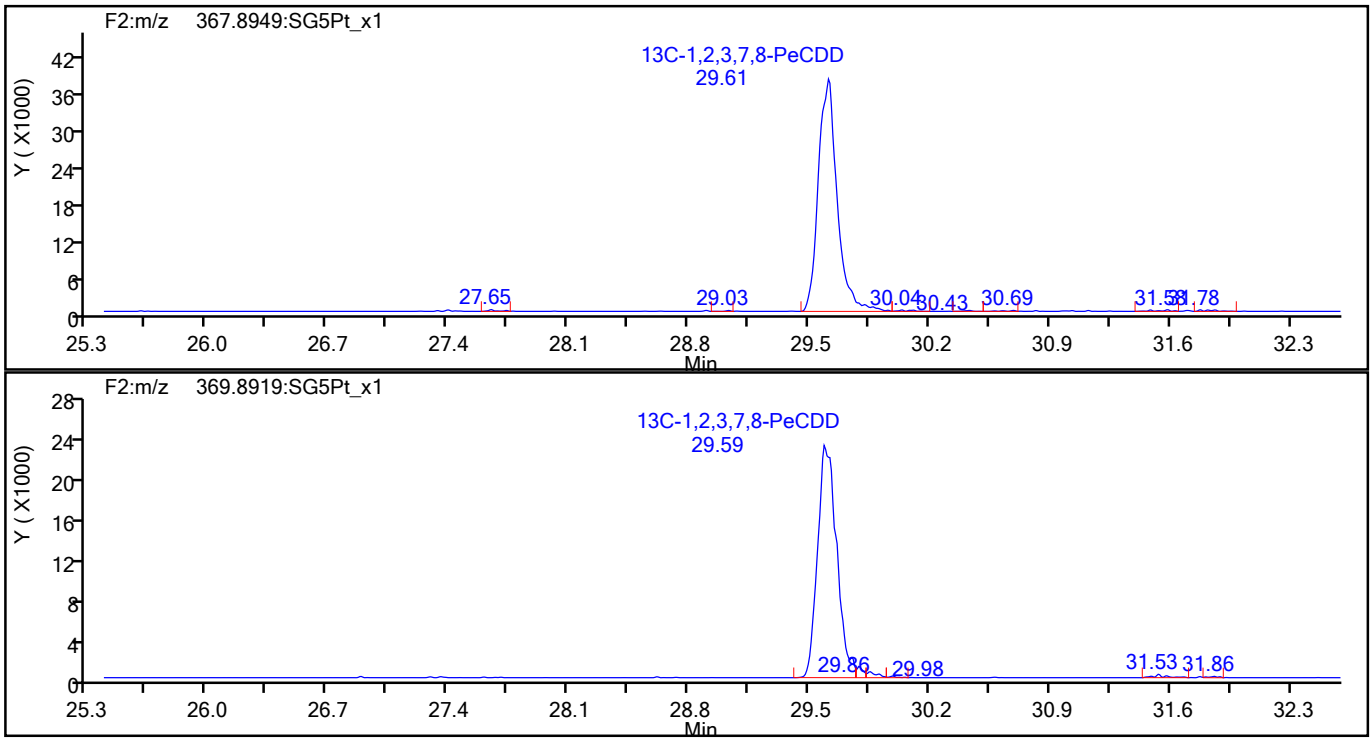

777702

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

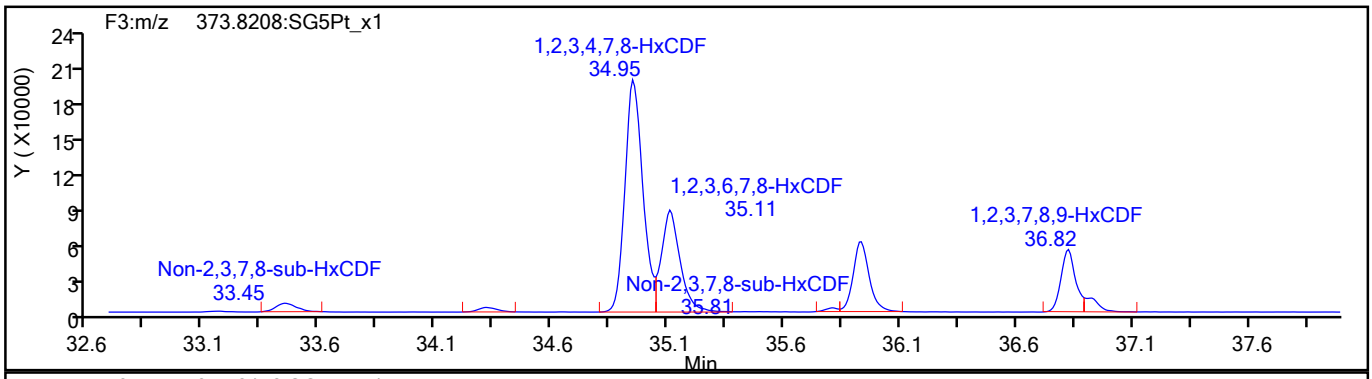

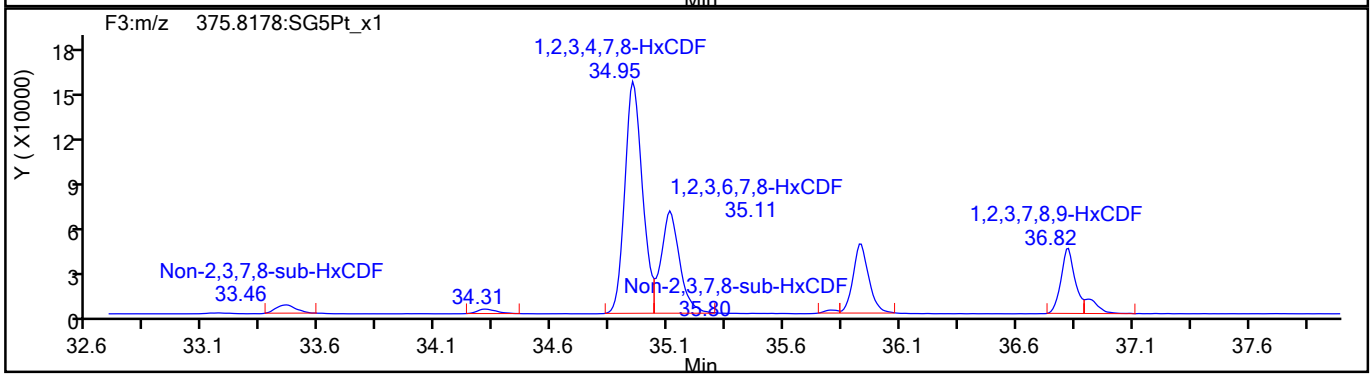

HxCDF Standards

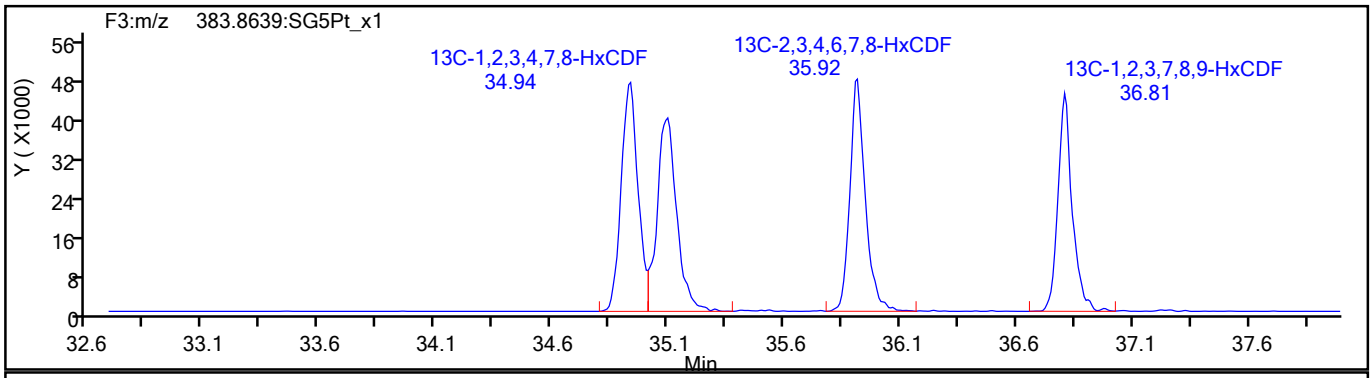

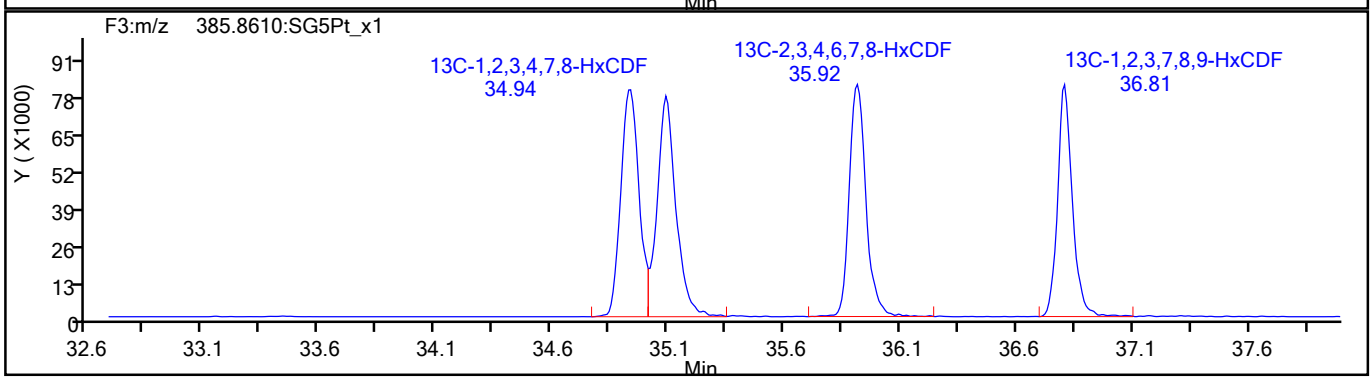

777703

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

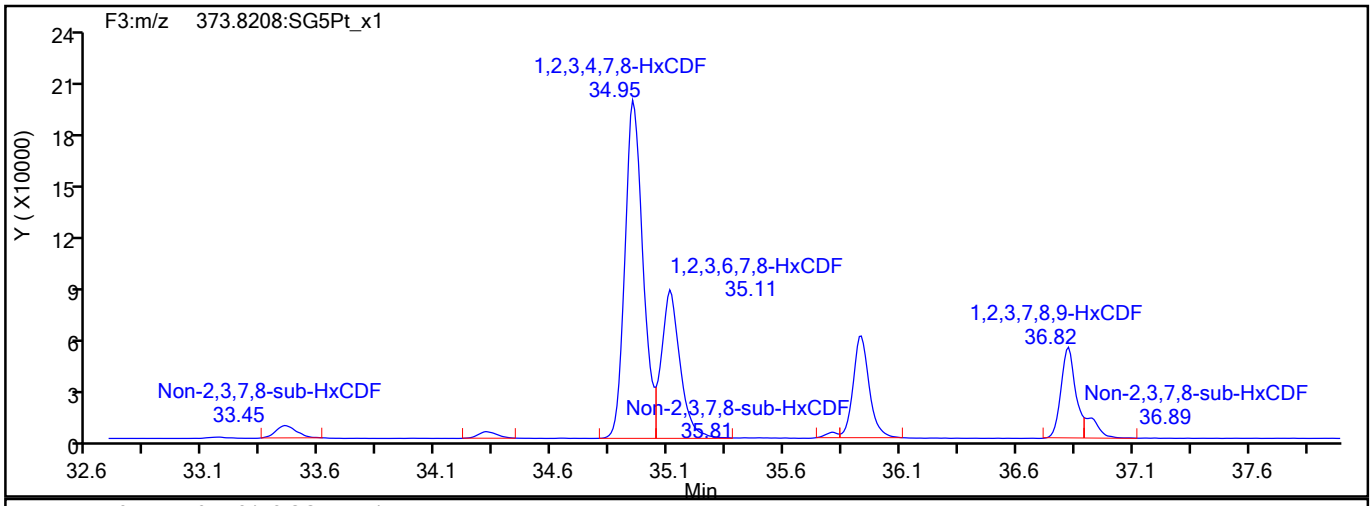

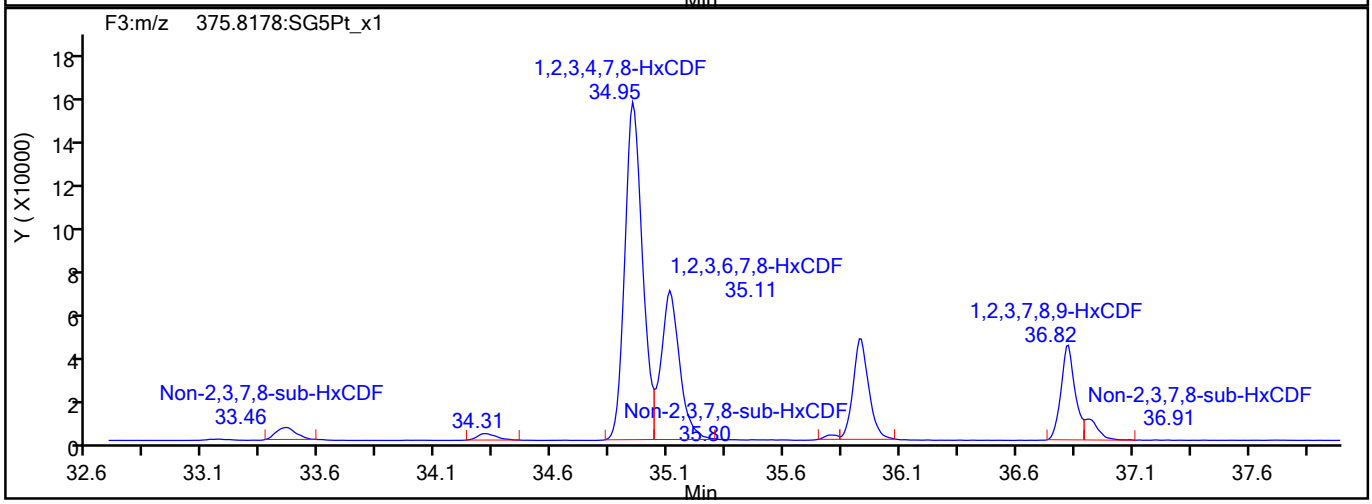

HxCDF Interference Mass

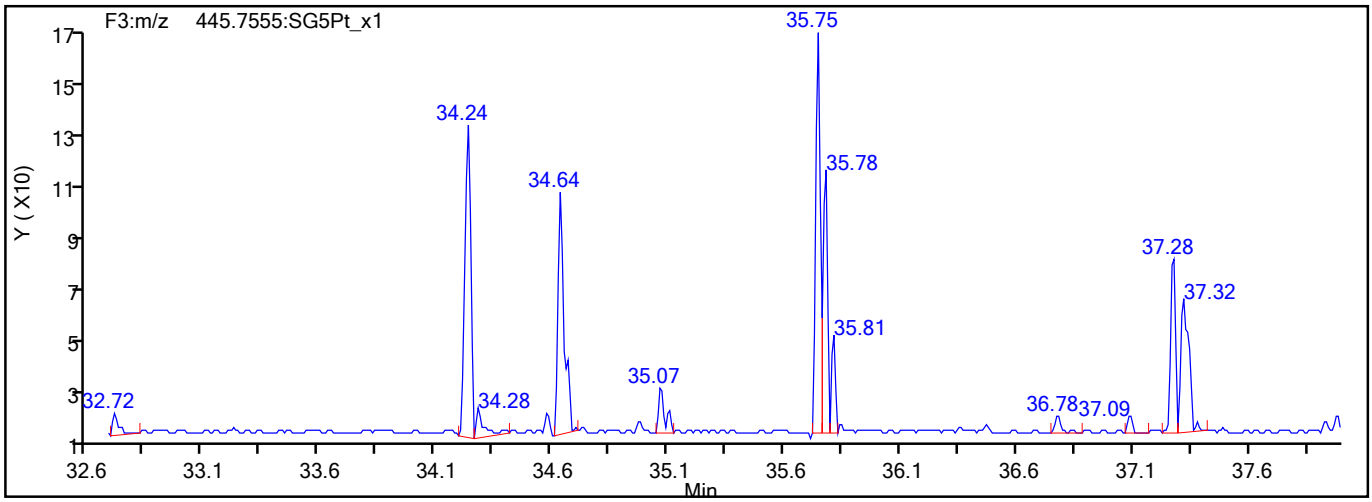

777704

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

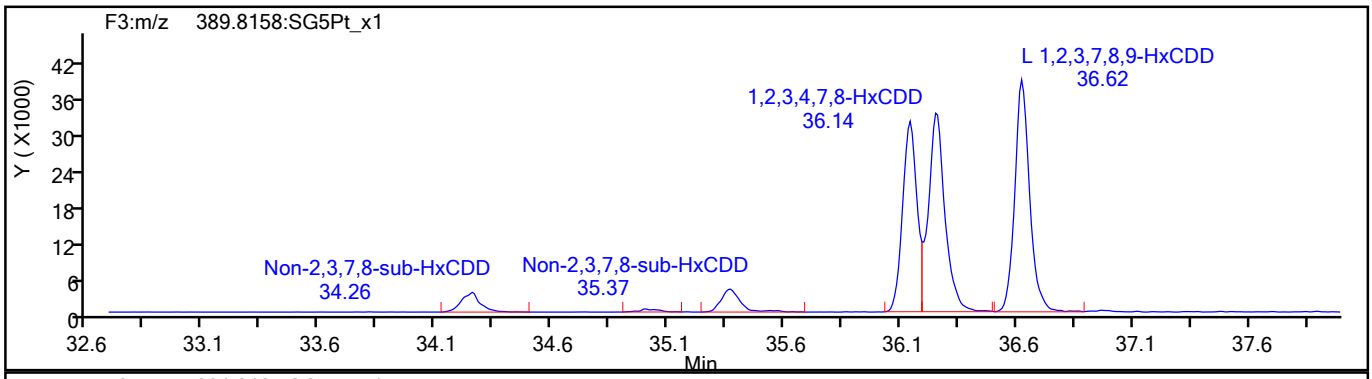

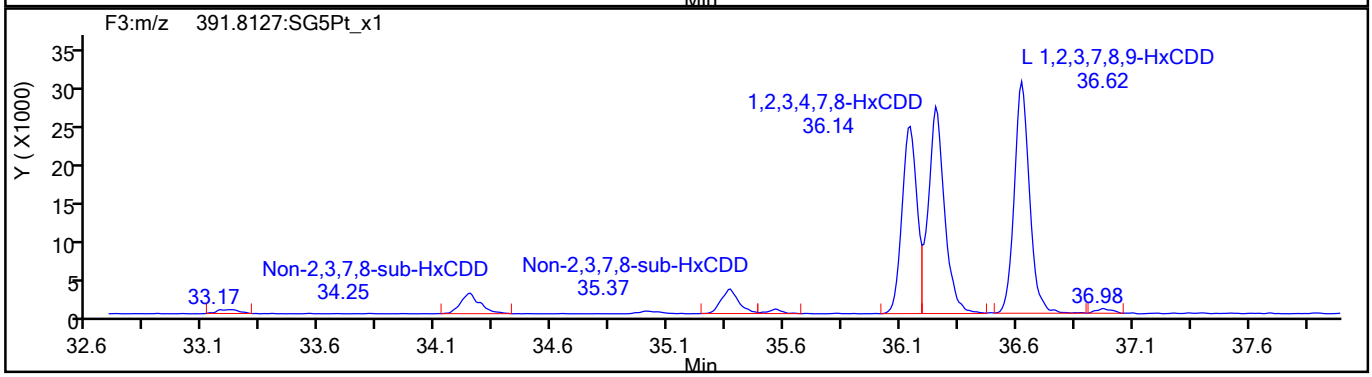

HxCDD Standards

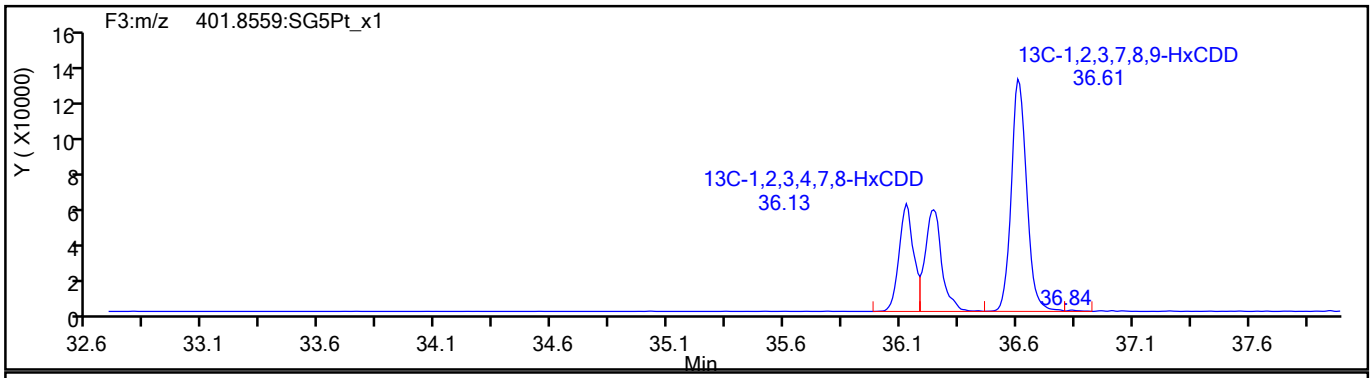

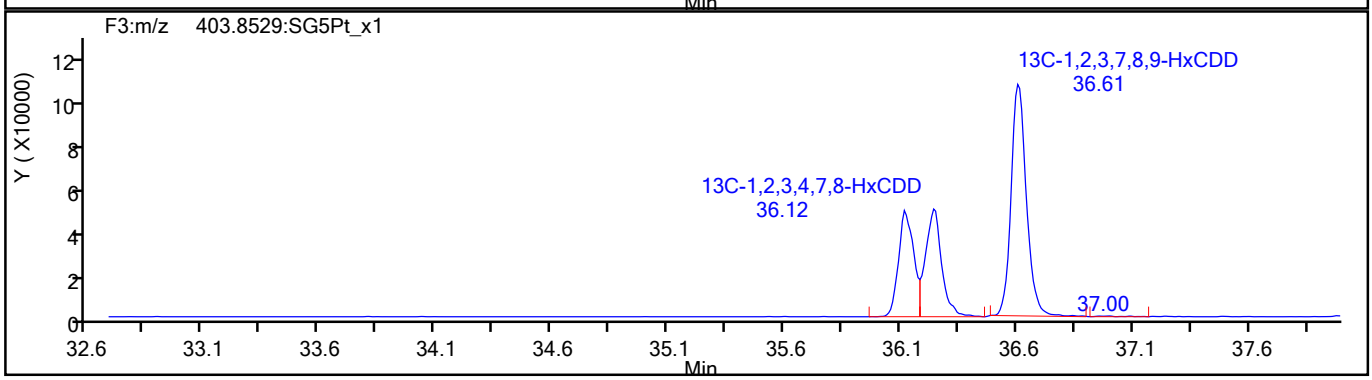

777705

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

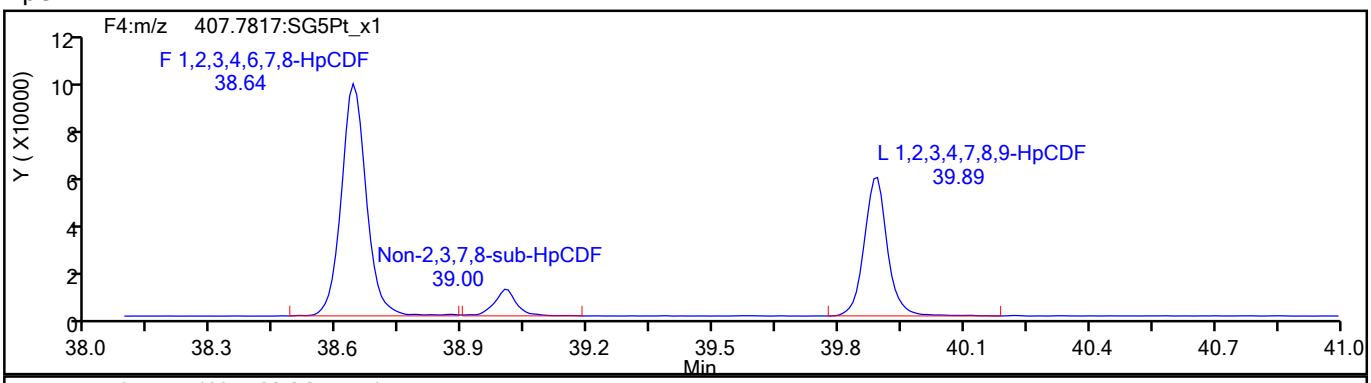

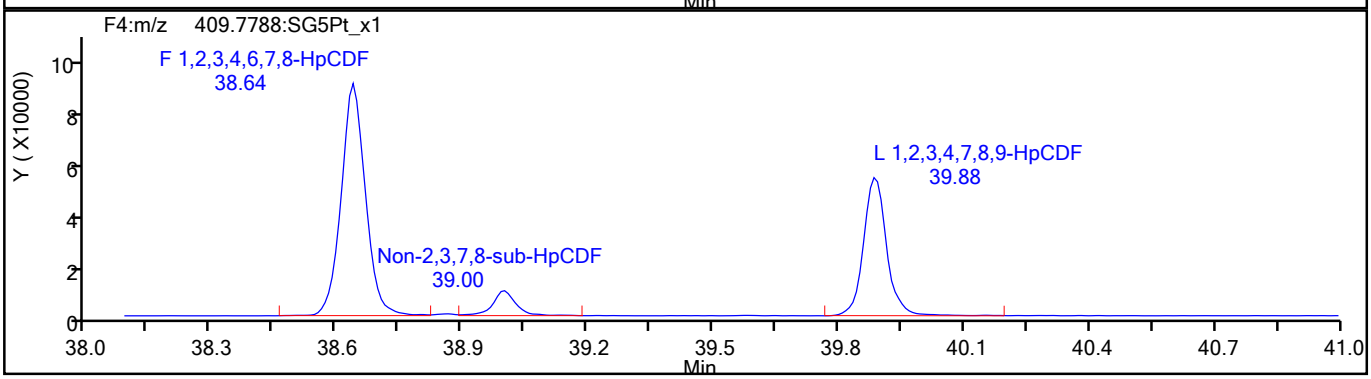

HpCDF Standards

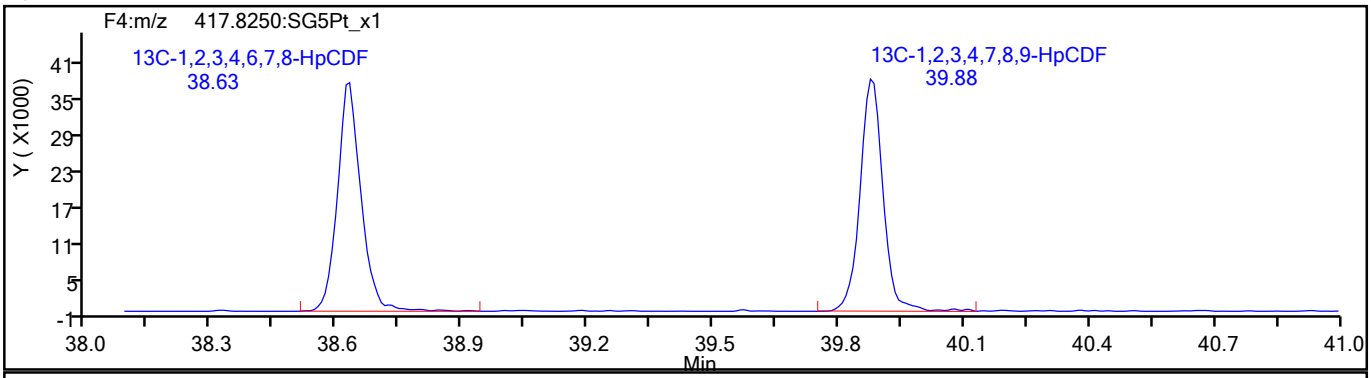

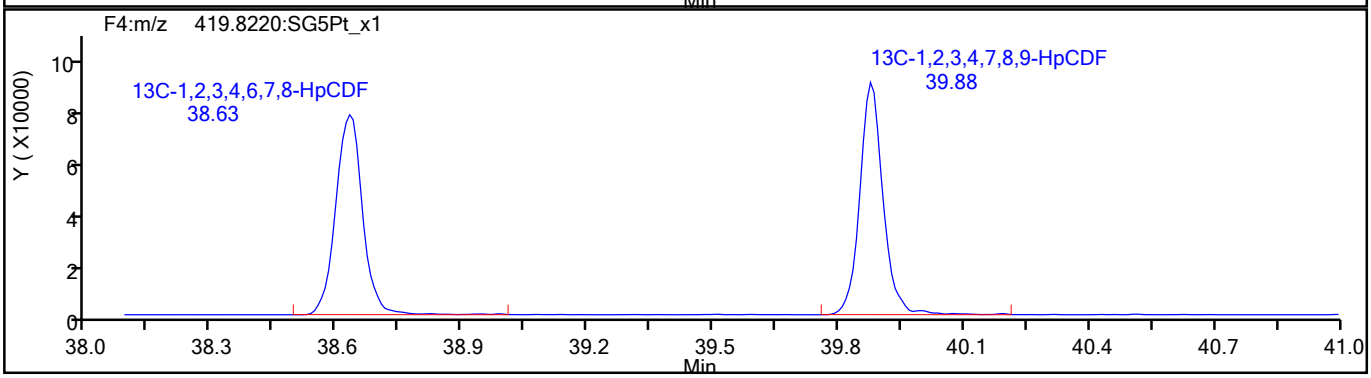

777706

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

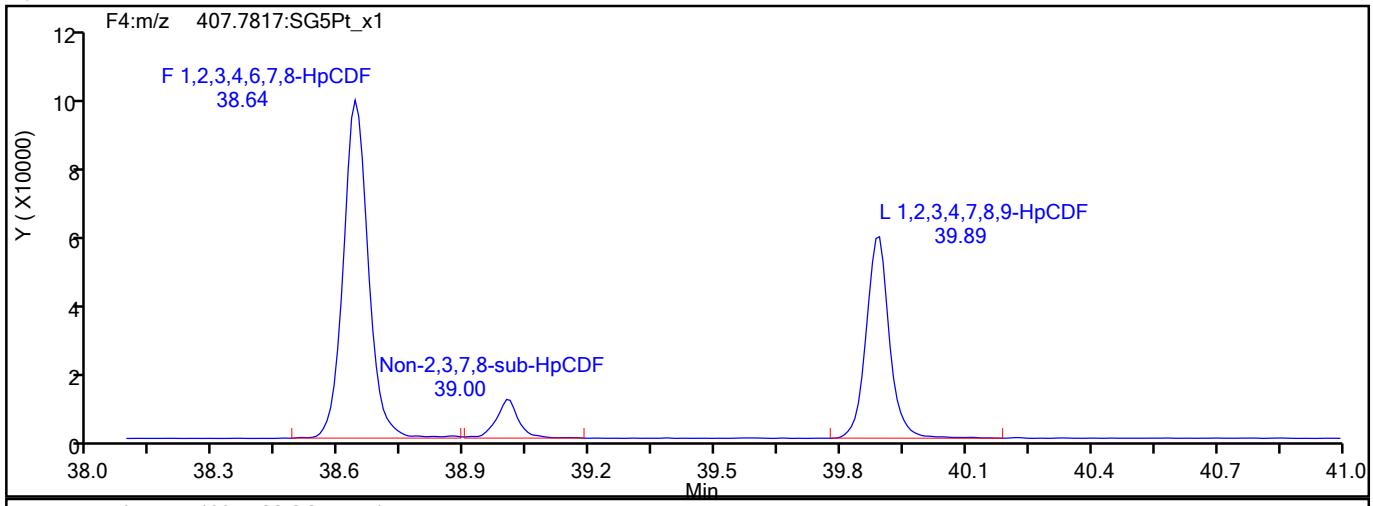

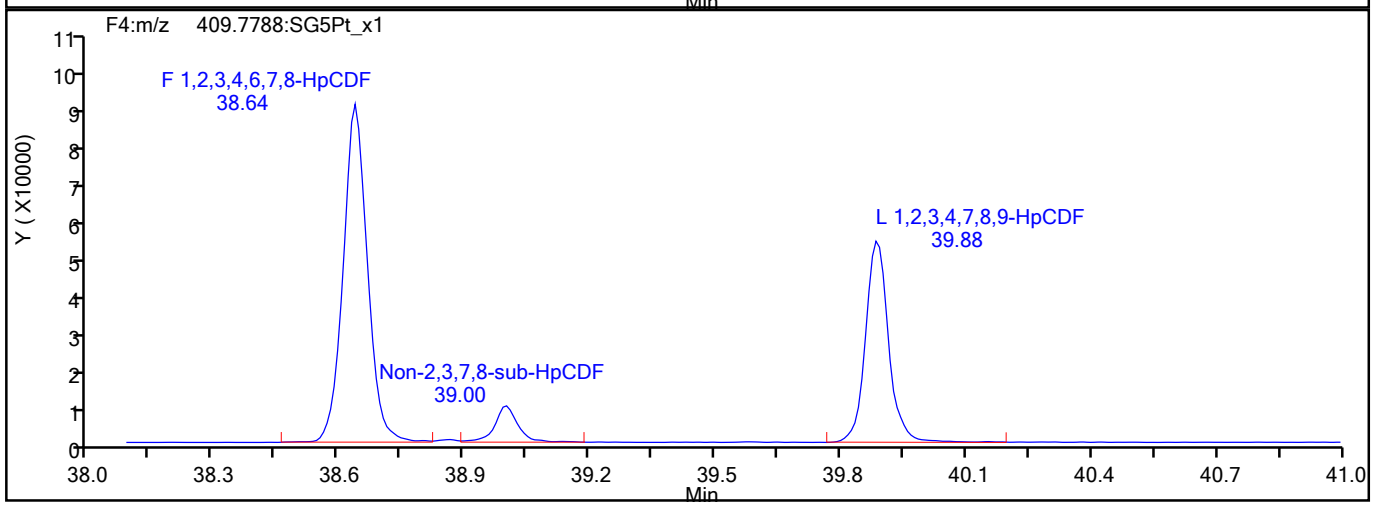

HpCDF Interference Mass

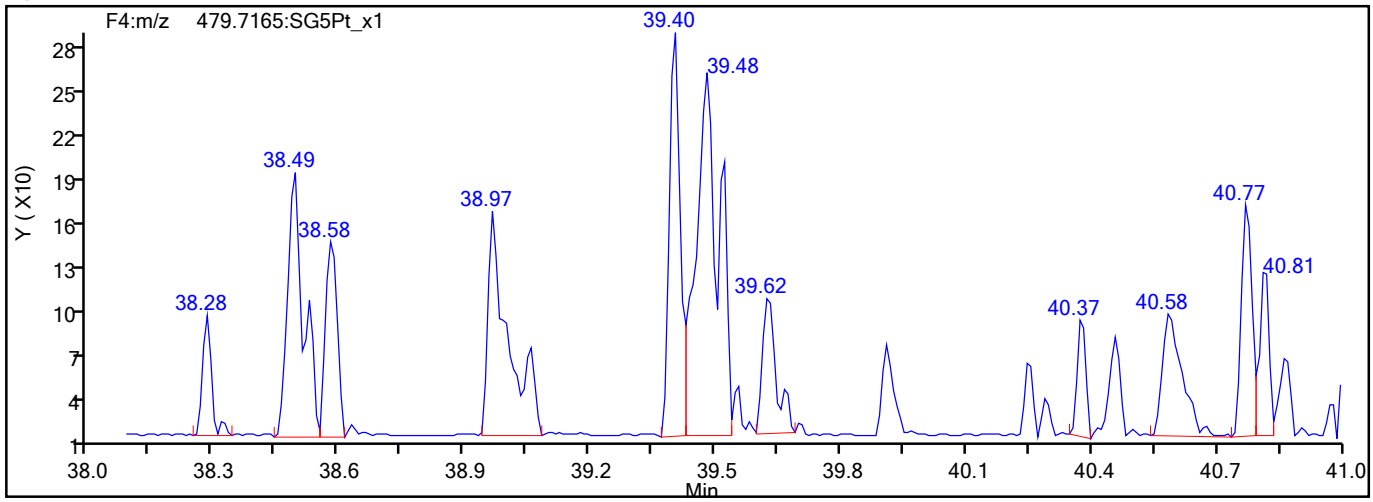

777707

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

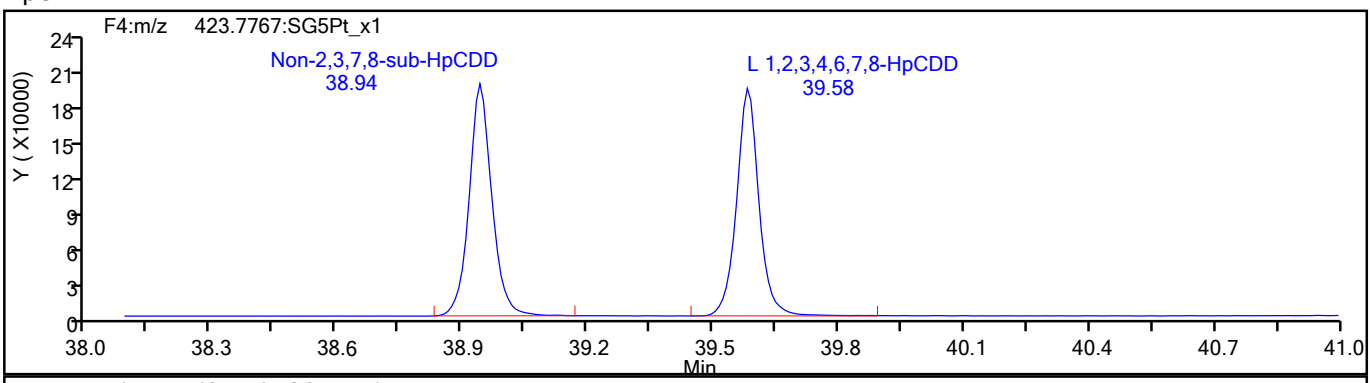

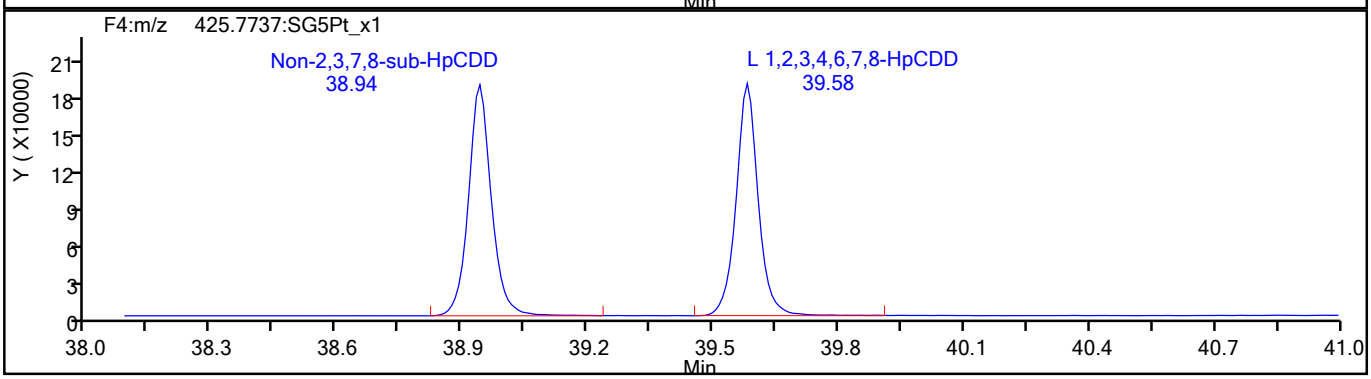

HpCDD Standards

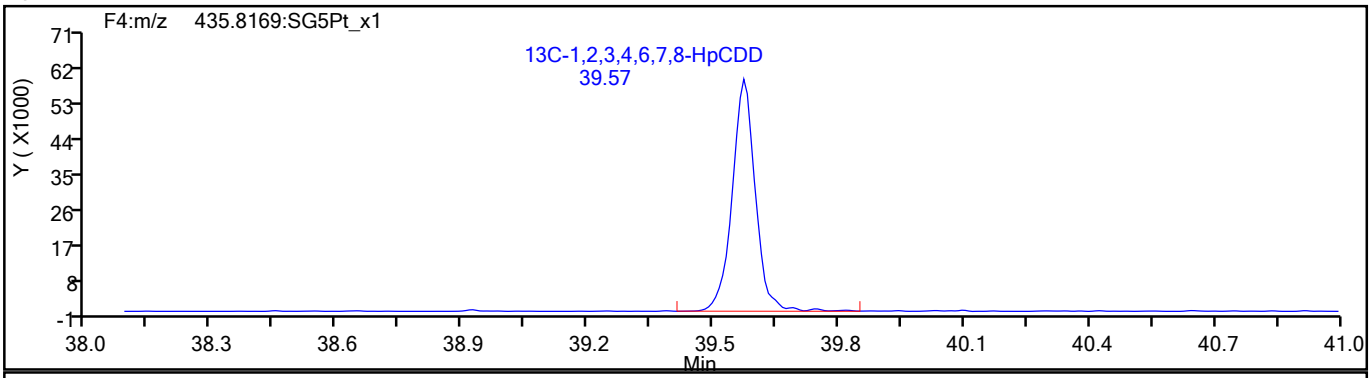

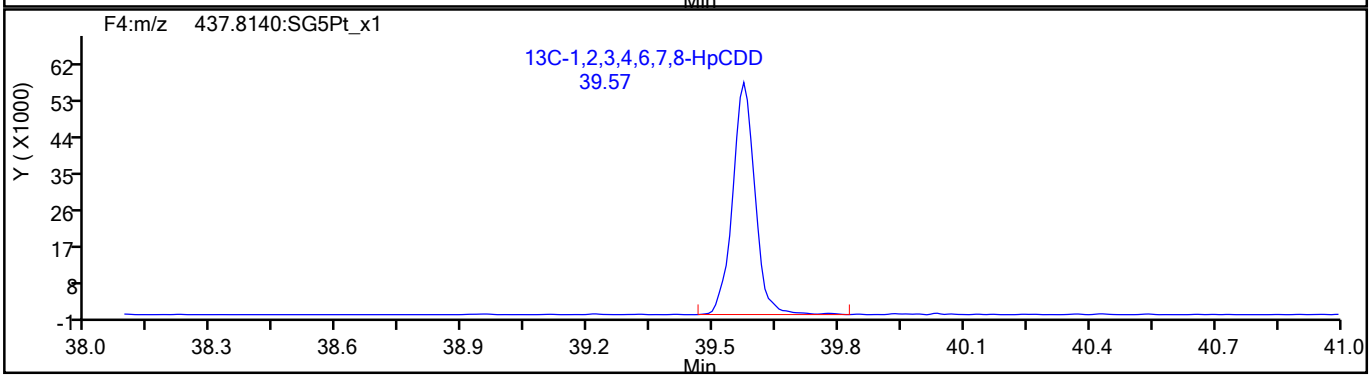

777708

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

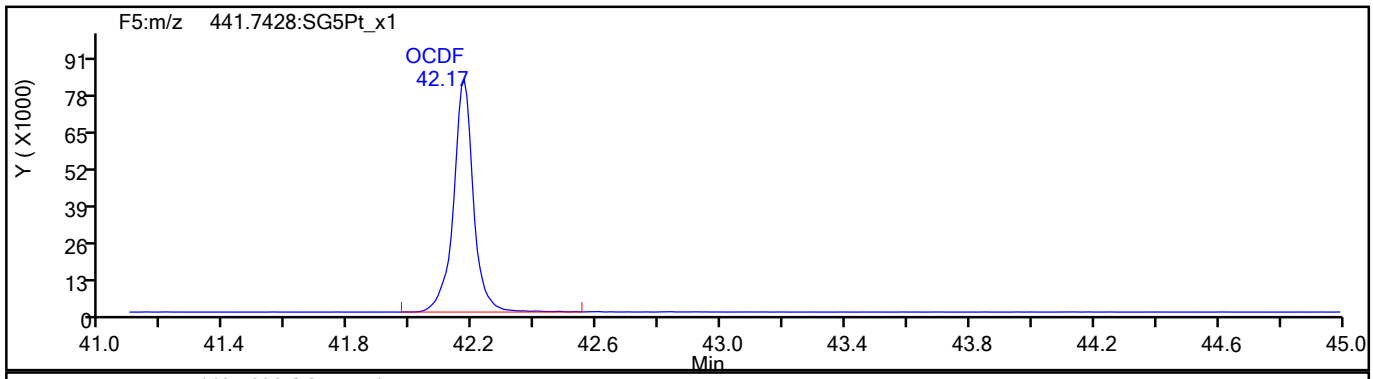

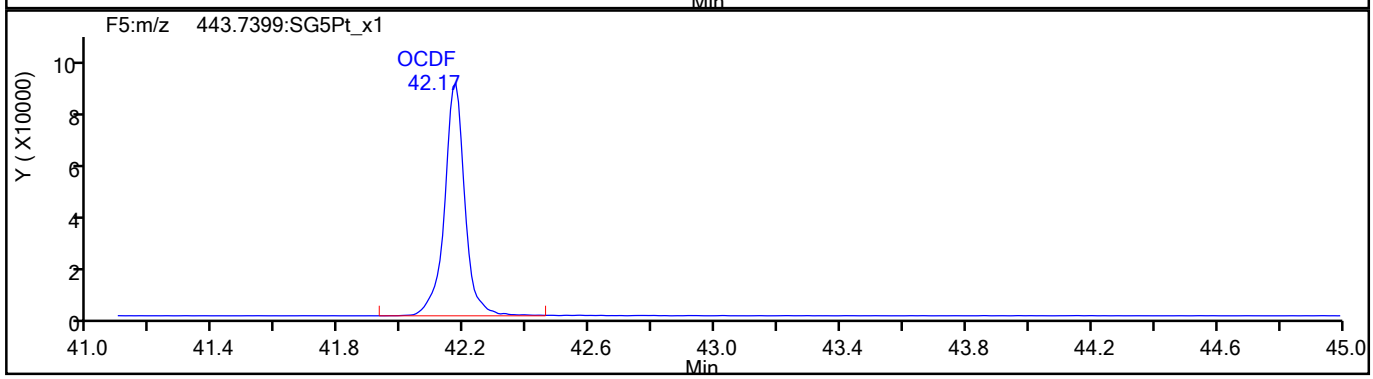

OCDF Standards

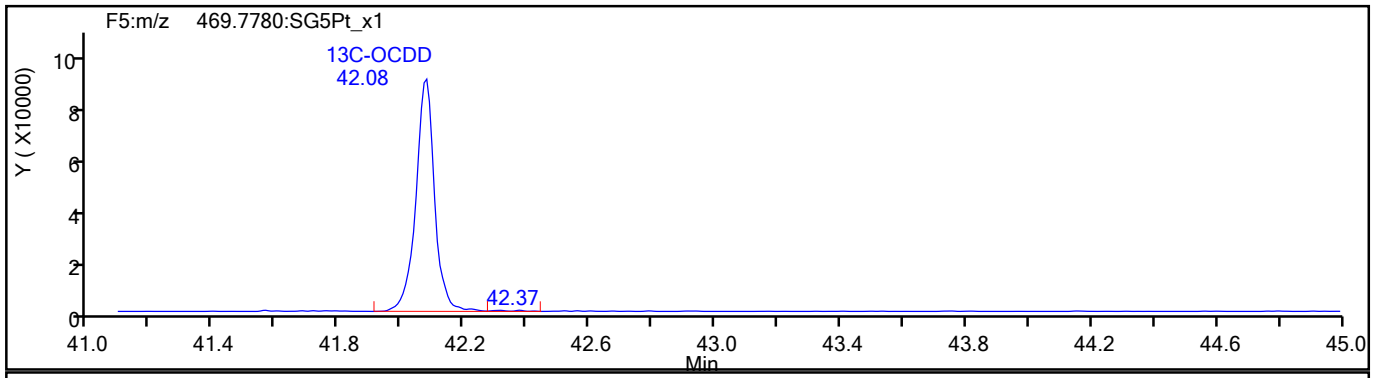

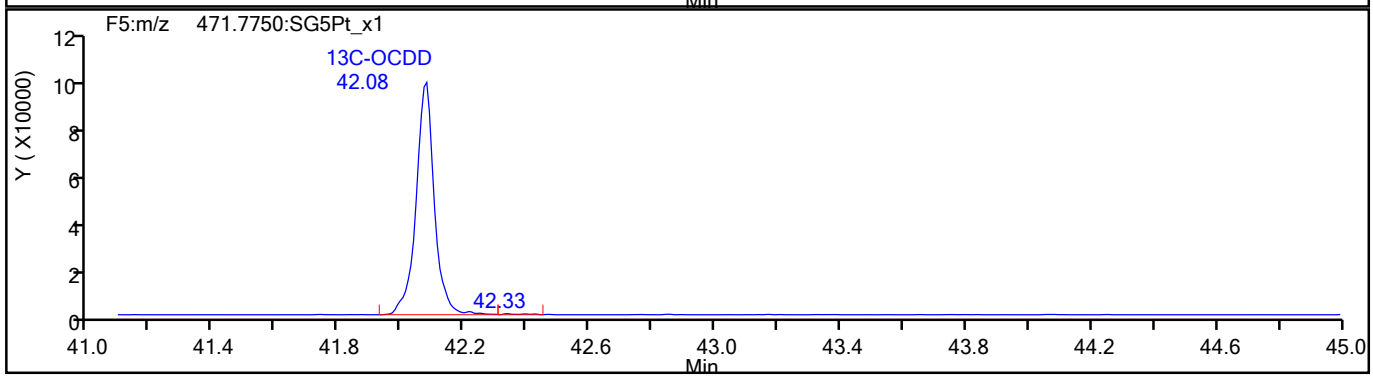

777709

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

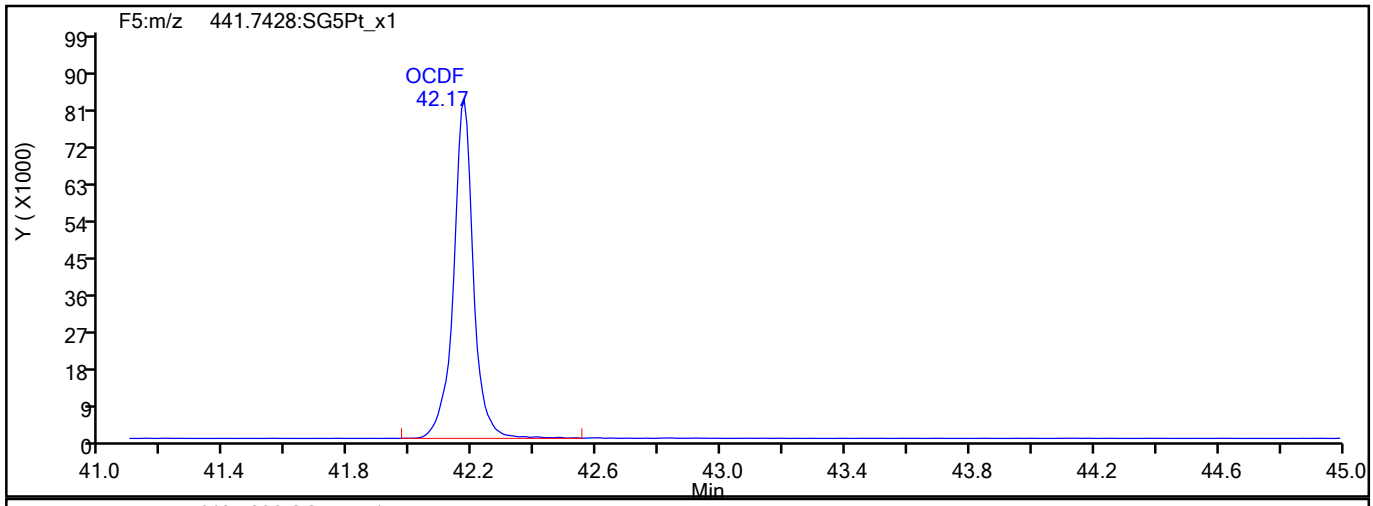

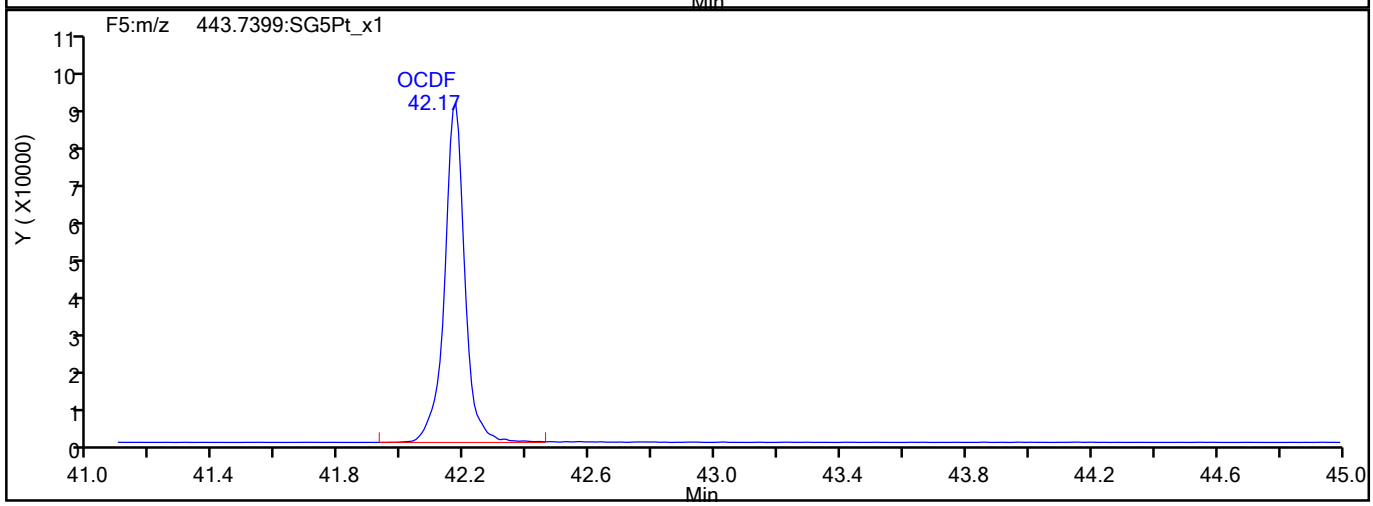

OCDF Interference Mass

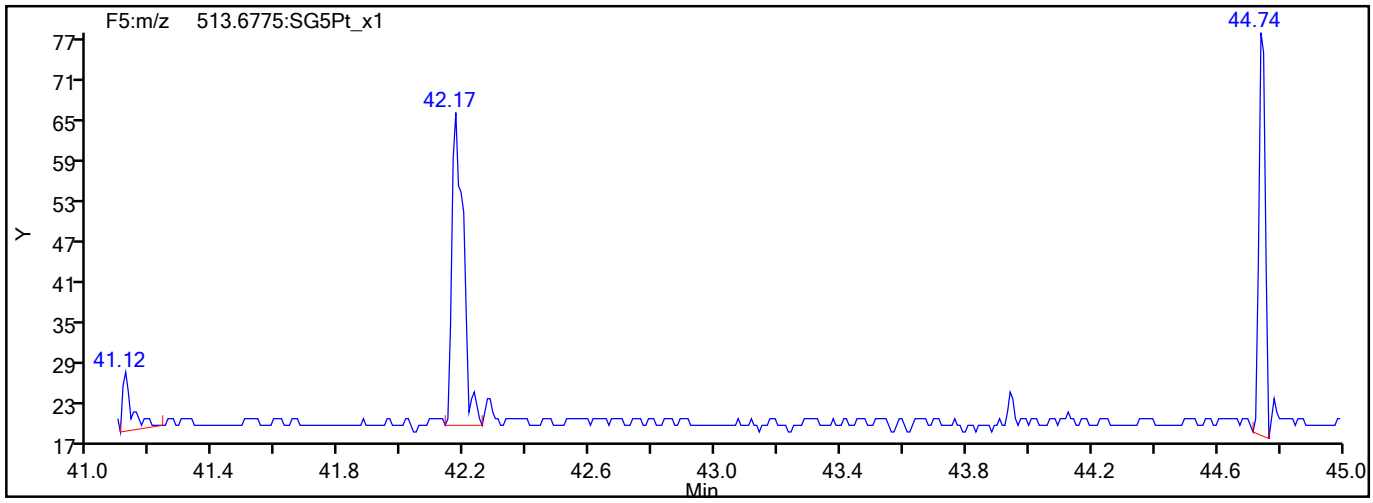

777710

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

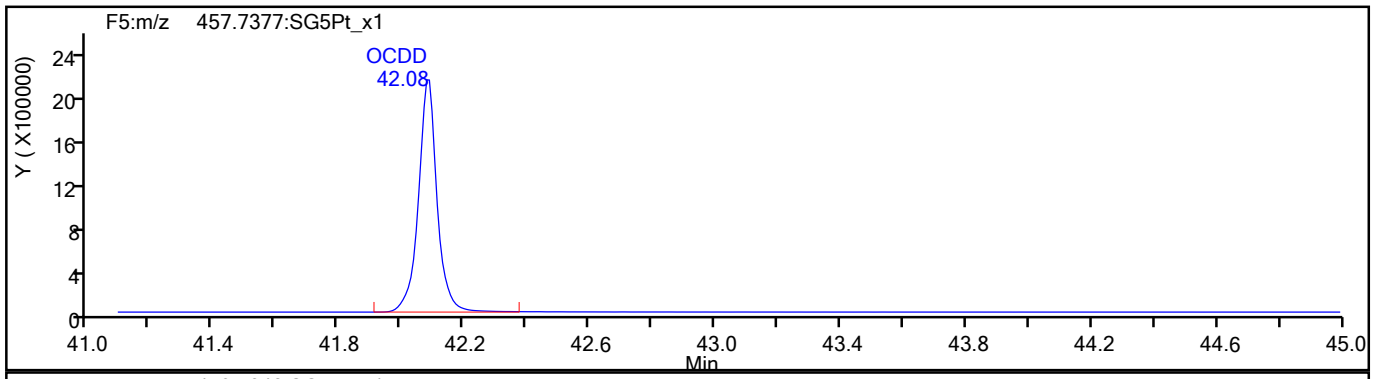

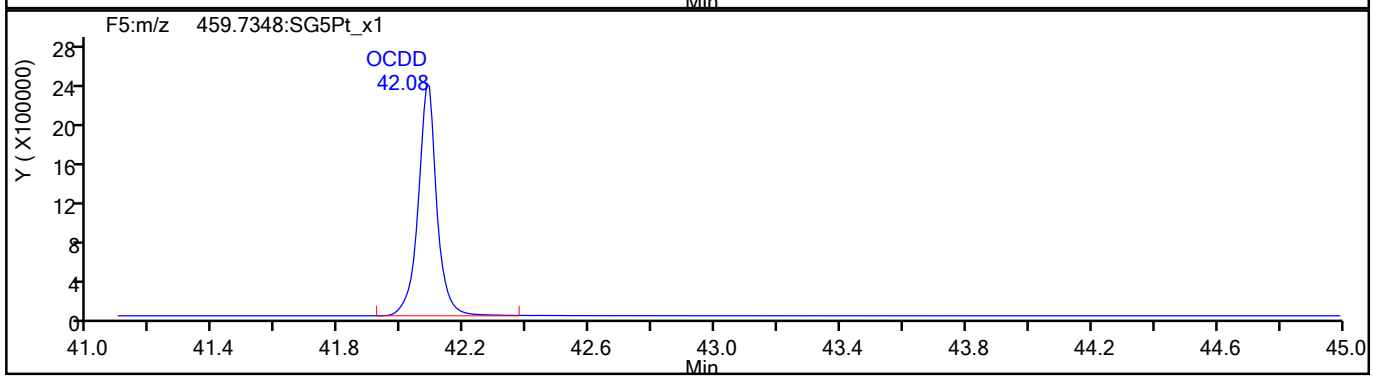

OCDD Standards

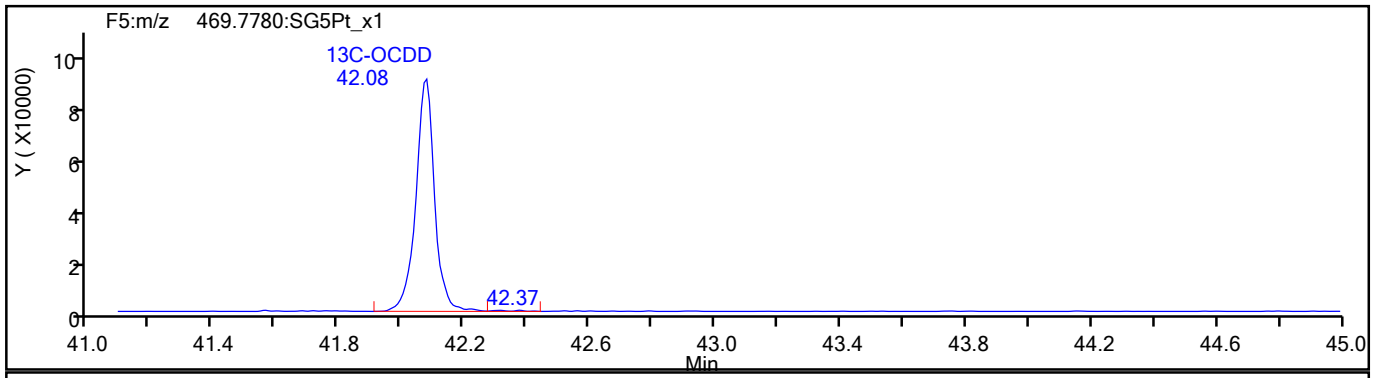

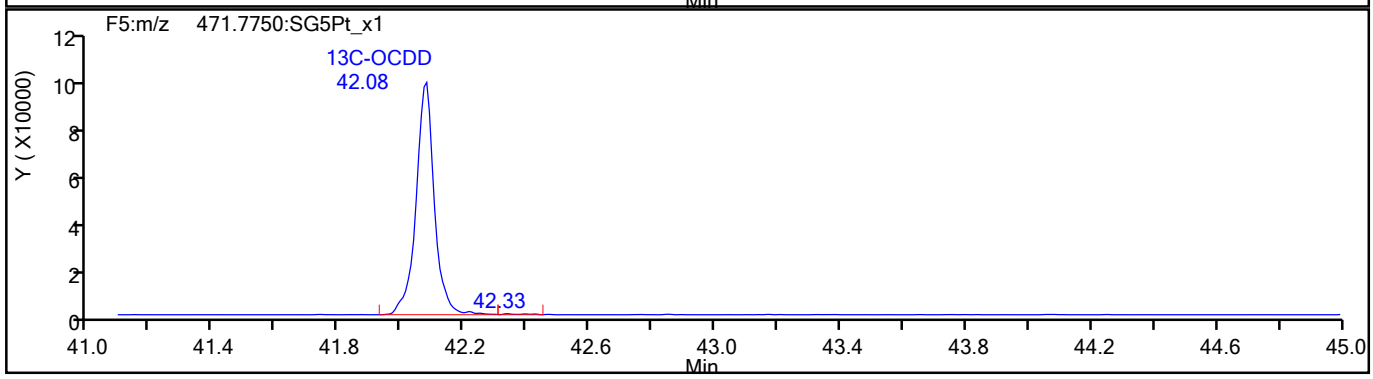

777711

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

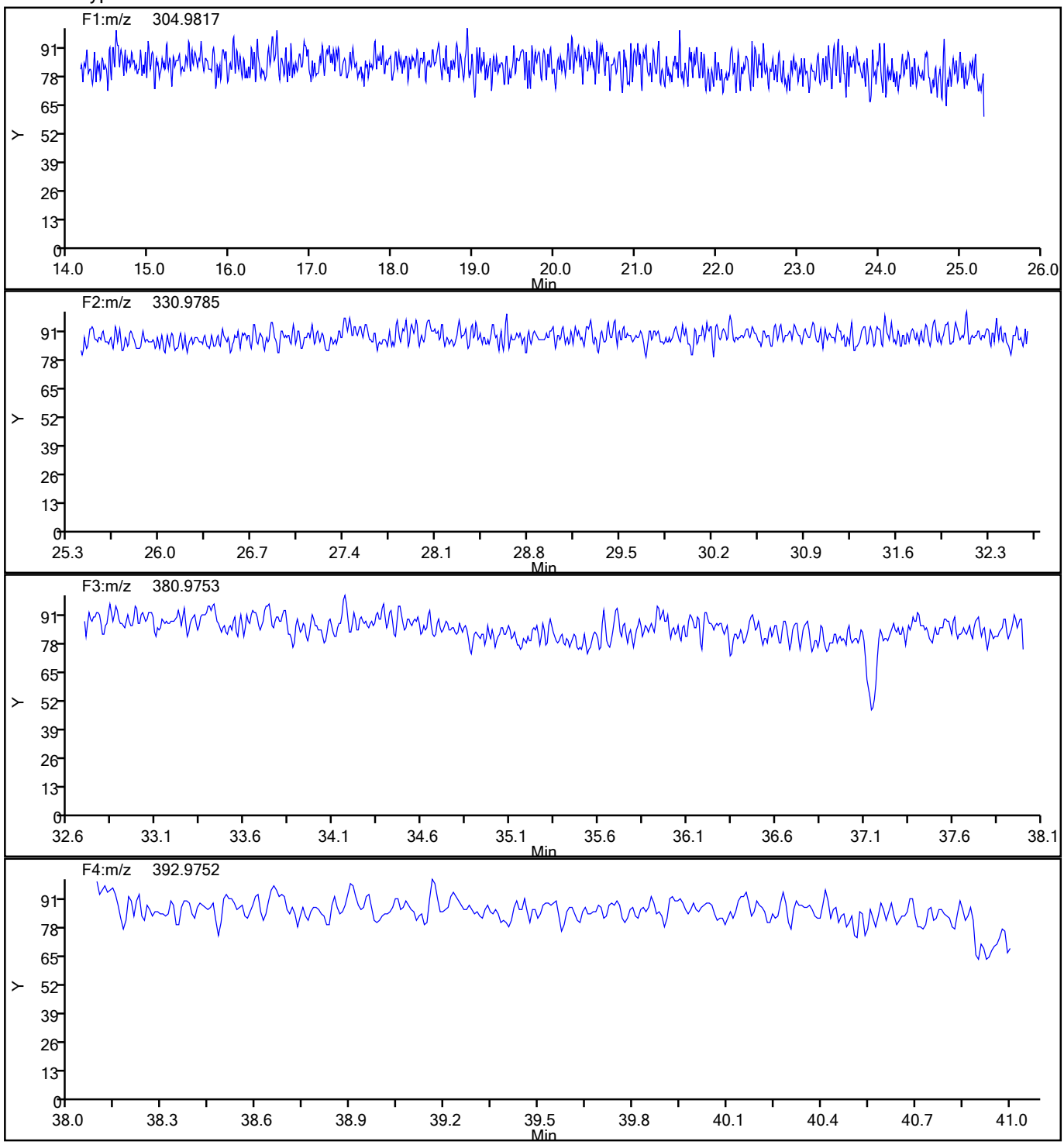

777712

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

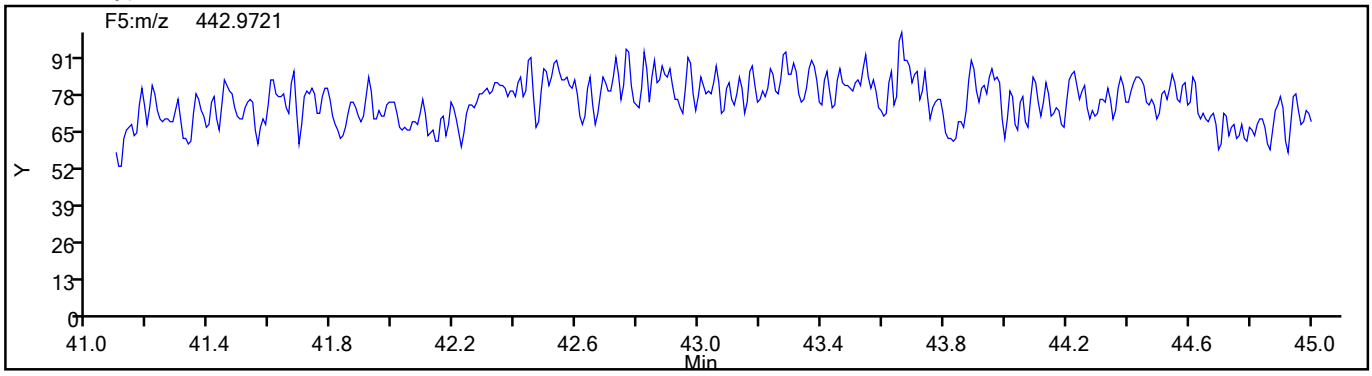

777713

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) MS RA
Lab Sample ID: 320-76769-27 MS RA
Matrix: Sediment
Lab File ID: 24AU2111D2_011.d
Analysis Method: 1613B
Date Collected: 07/22/2021 15:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.97(g)
Date Analyzed: 08/24/2021 14:51
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	8400		7.9	7.9

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	65		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	86		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_011.d
Lims ID: 320-76769-A-27-B MS
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MS
Inject. Date: 24-Aug-2021 14:51:57 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 17:06:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.313	37290757	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.629	32417604	0.74	1.3327	65.2	65.2	0.6438	0.6438	65.23	
2,3,7,8-TCDF	17.643	1030151401	0.79	0.9978	3184.7	3184.7	2.981	2.981	31847	E
D 13C-2,3,7,8-TCDD	16.066	18864522	0.74	0.8749	57.8	57.8	10.6	10.6	57.82	
$ 37Cl4-2,3,7,8-TCDD	16.093	11106063		0.8648	34.4	34.4	0.5629	0.5629	86.09	
2,3,7,8-TCDD	16.093	222317338	0.79	1.0570	1115.0	1115.0	4.269	4.269	11150	E
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Report Date: 24-Aug-2021 17:07:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_011.d
Lims ID: 320-76769-A-27-B MS
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MS
Inject. Date: 24-Aug-2021 14:51:57 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 17:06:39

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.313	16.283	2		16046941	3522783	160725	401812	22		
333.9339	16.299	16.283	1		21243816	4715637	145599	363997	32	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.629	17.613	1	1.081	13742060	2632188	14171	35427	186		
317.9389	17.629	17.613	1	1.081	18675544	3280445	14104	35260	233	0.74(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.643	17.641	0	1.001	453905541	86379332	25457	63642	3393		
305.8987	17.643	17.641	0	1.001	576245860	111179021	44896	112240	2476	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.050	1	0.985	8052220	1858364	160725	401812	12		
333.9339	16.066	16.050	1	0.985	10812302	2455953	145599	363997	17	0.74(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.093	16.063	2	0.987	11106063	2552134	16041	40102	159		
2,3,7,8-TCDD											E
319.8965	16.093	16.077	1	1.002	98104792	22337139	45890	114725	487		
321.8936	16.093	16.077	1	1.002	124212546	28198006	31989	79972	881	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 24-Aug-2021 17:07:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_011.d		
Injection Date:	24-Aug-2021 14:51:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

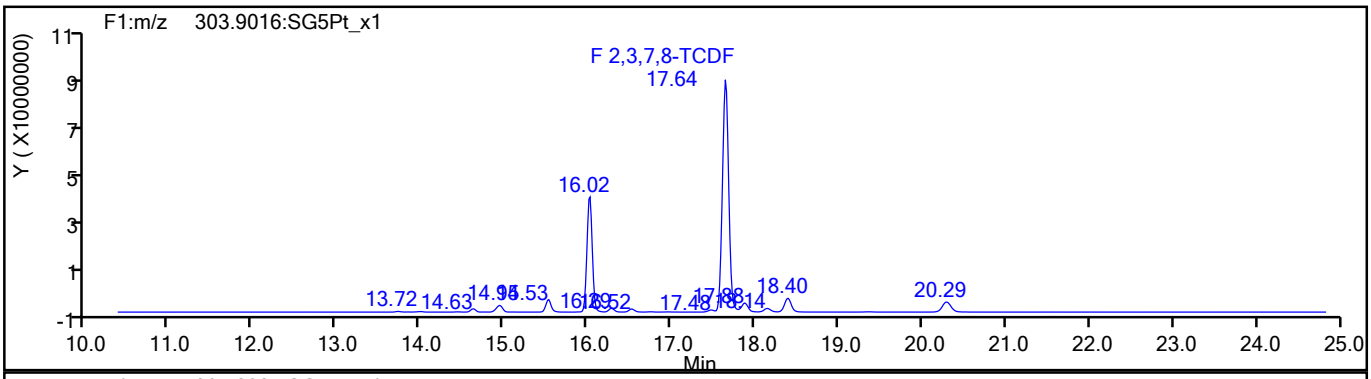

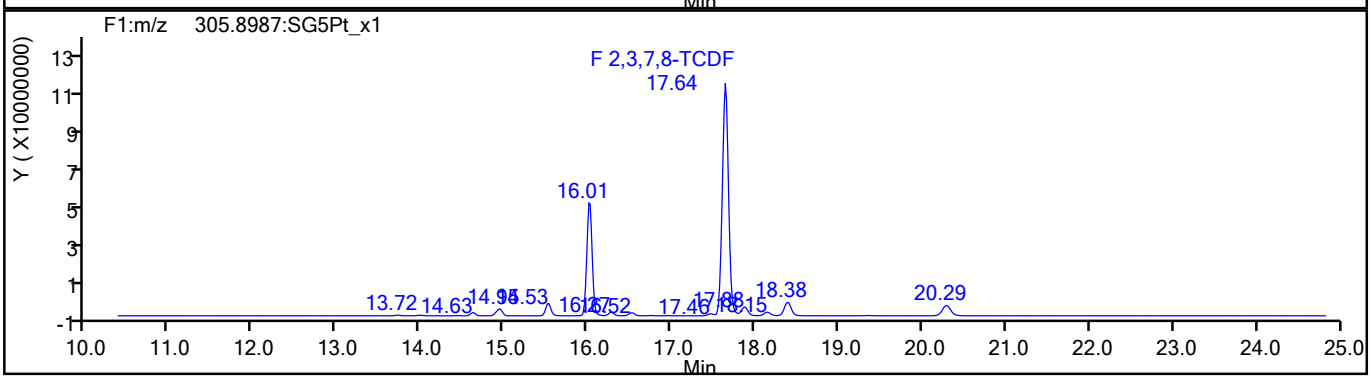

TCDF Standards

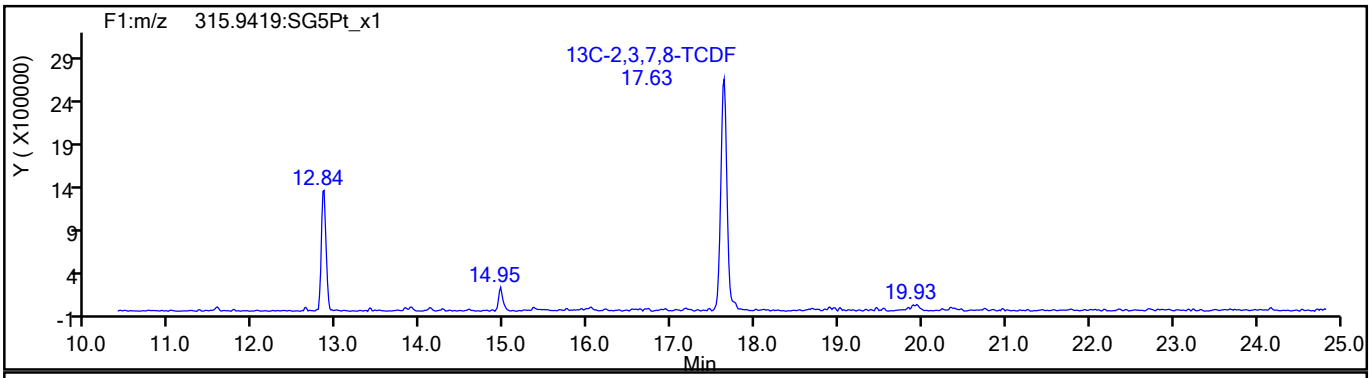

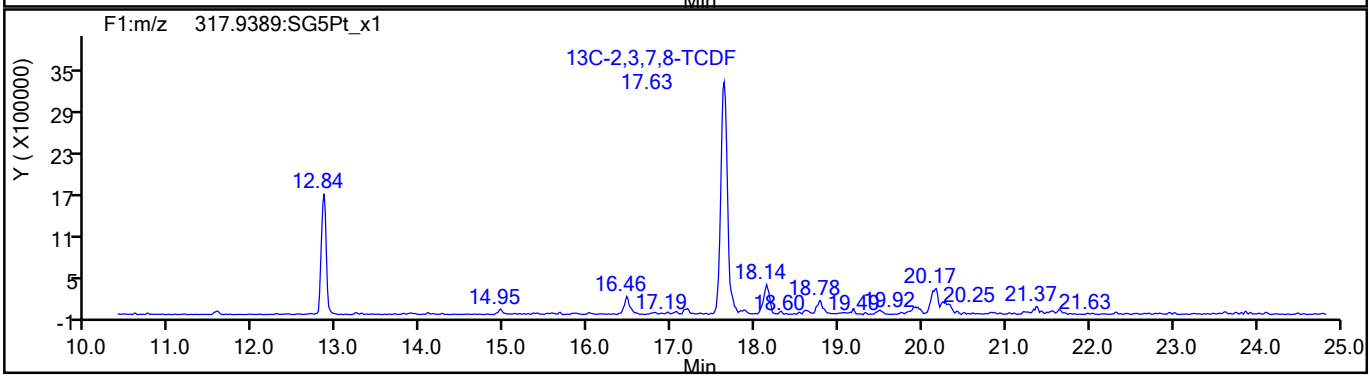

777717

Report Date: 24-Aug-2021 17:07:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_011.d		
Injection Date:	24-Aug-2021 14:51:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

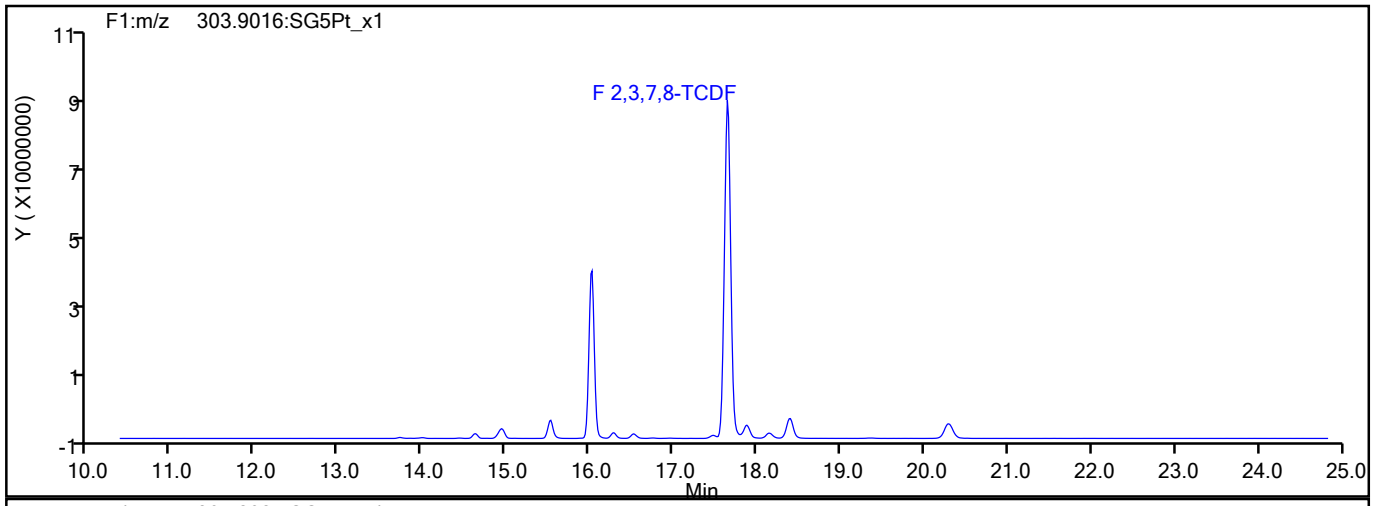

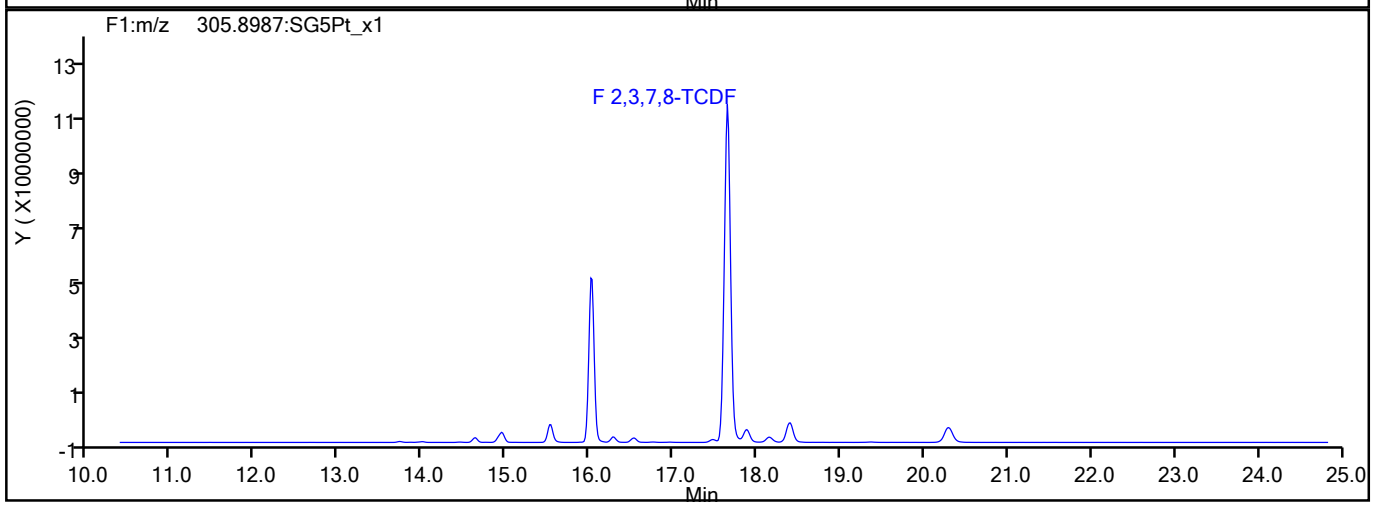

TCDF Interference Mass

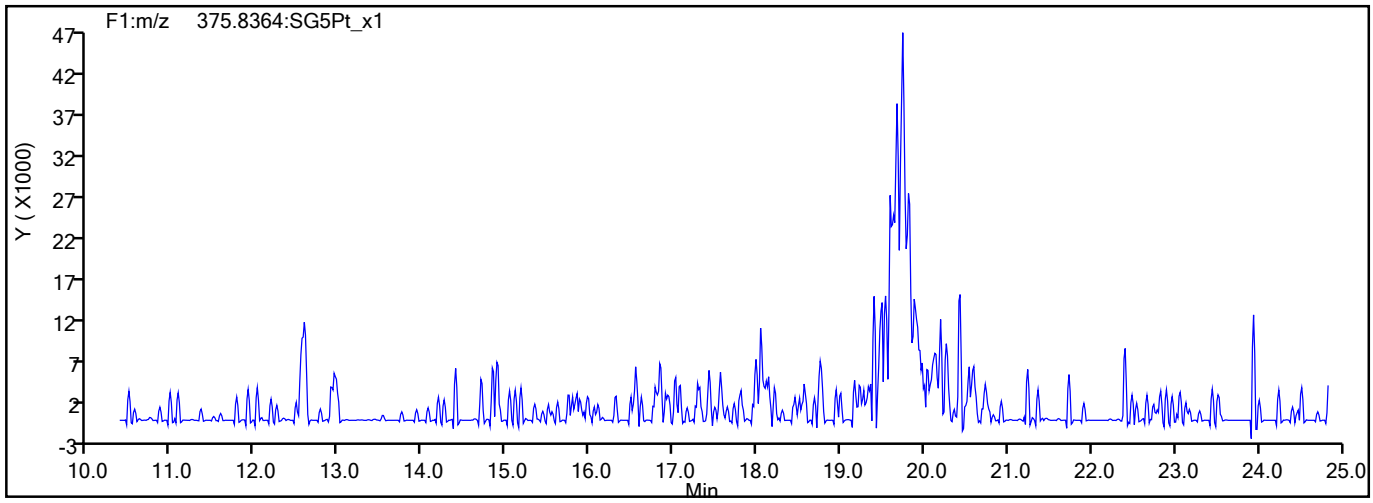

777718

Report Date: 24-Aug-2021 17:07:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_011.d		
Injection Date:	24-Aug-2021 14:51:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

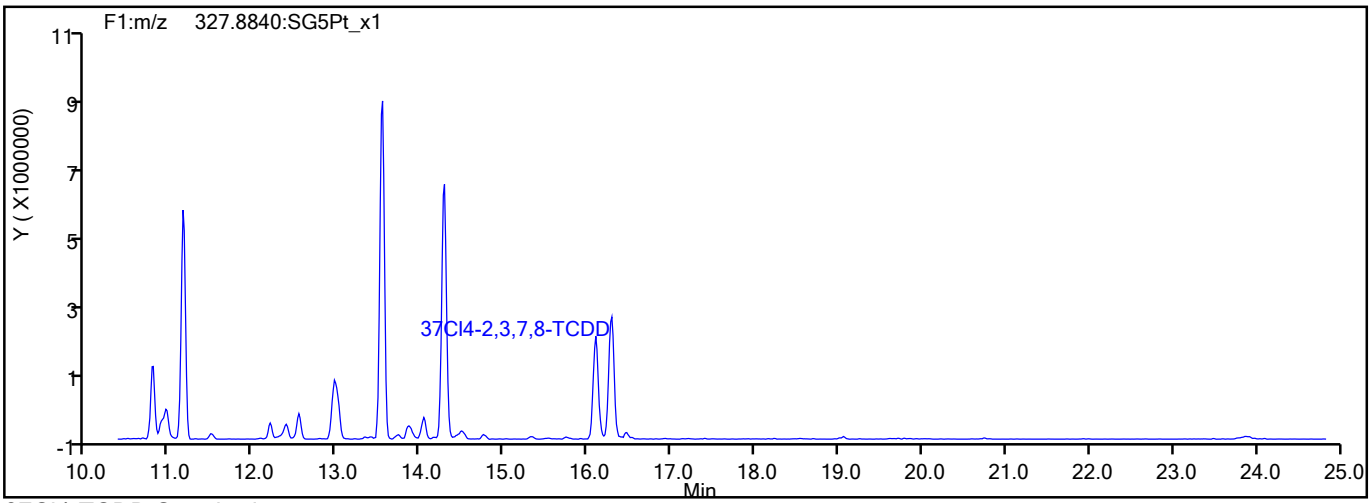

37Cl4-TCDD Standards

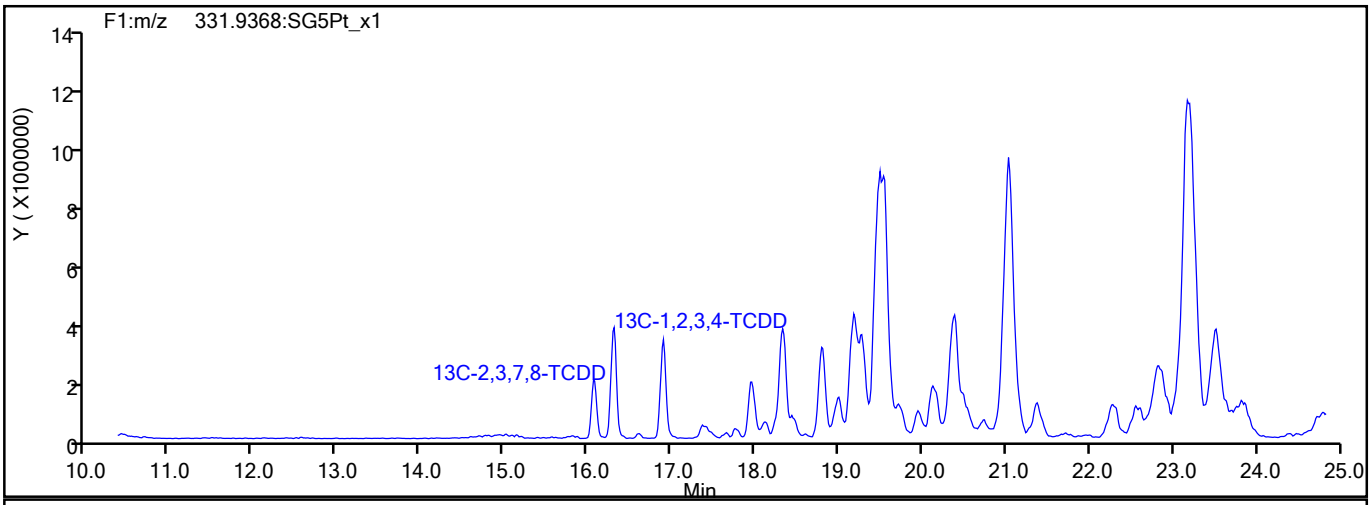

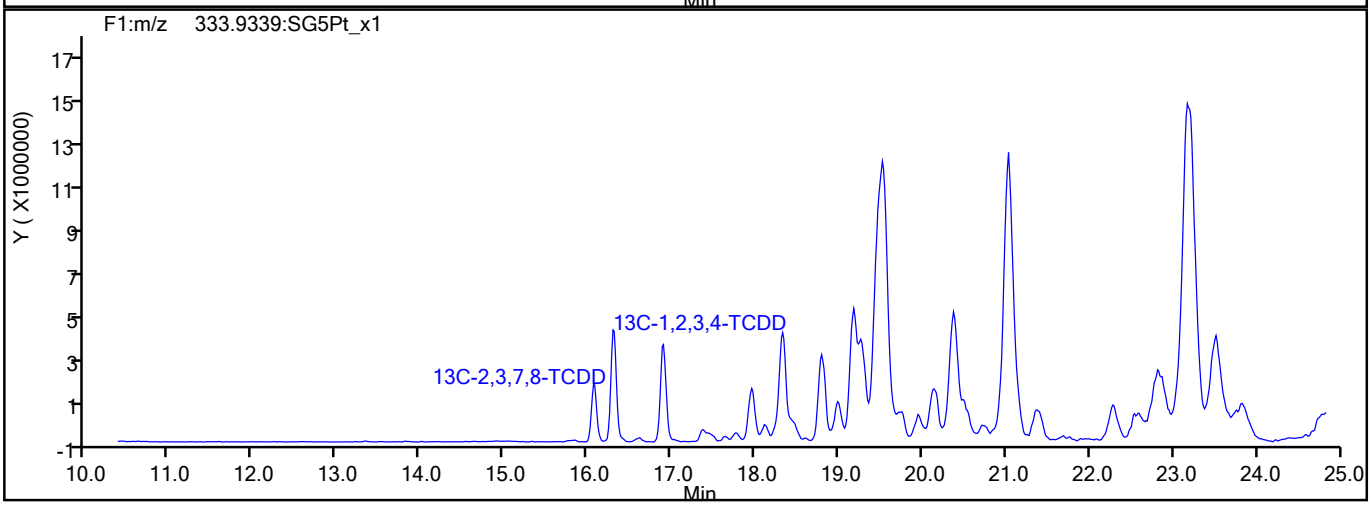

777719

Report Date: 24-Aug-2021 17:07:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_011.d		
Injection Date:	24-Aug-2021 14:51:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

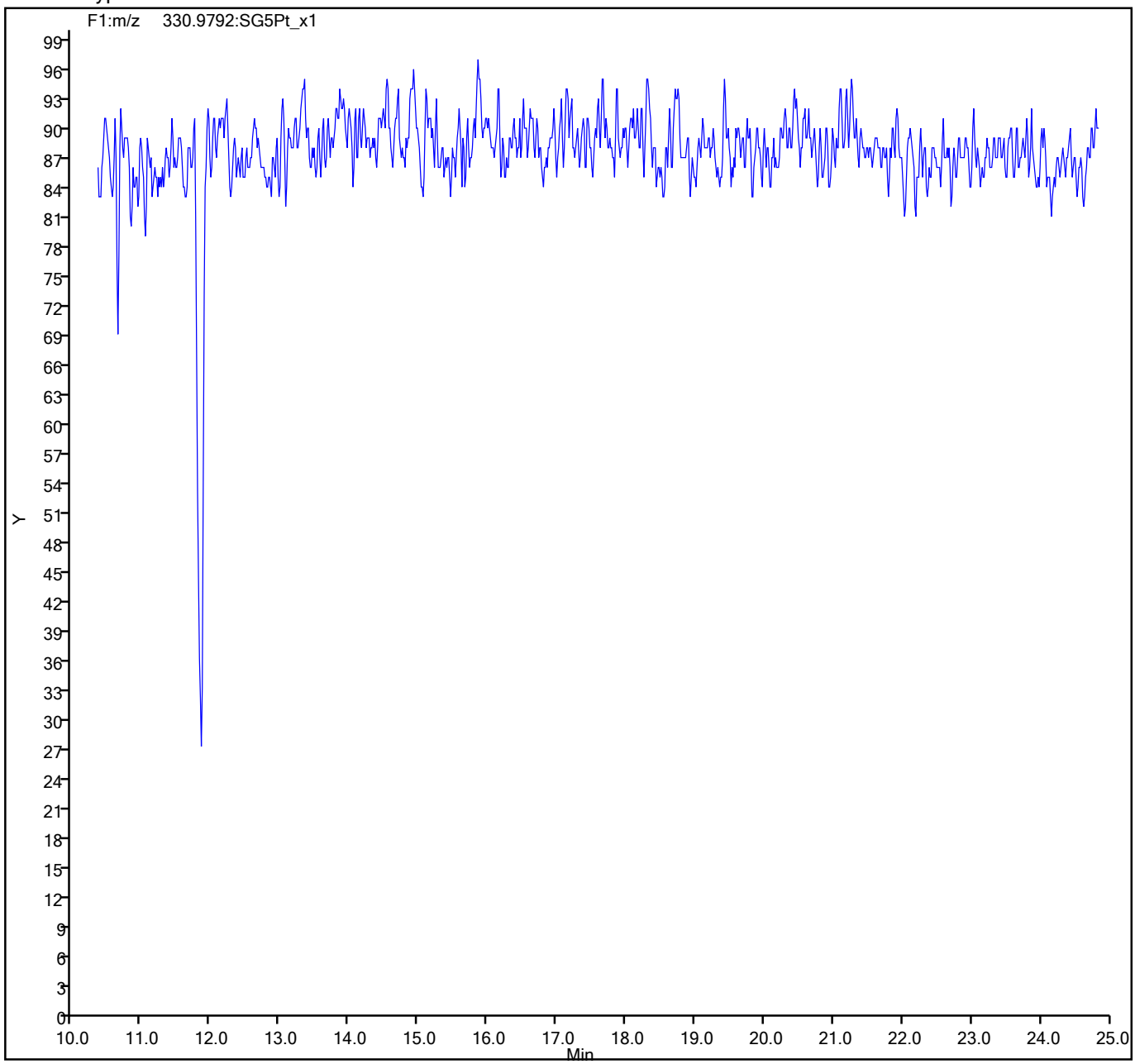

777720

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76888-A-1-B MS
Matrix: Sediment
Lab File ID: 19au21dfs1_22.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.30(g)
Date Analyzed: 08/20/2021 05:33
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	22000		32	32
51207-31-9	2,3,7,8-TCDF	115000		150	150
40321-76-4	1,2,3,7,8-PeCDD	470		90	6.7
57117-41-6	1,2,3,7,8-PeCDF	2670		90	14
57117-31-4	2,3,4,7,8-PeCDF	1900		90	14
39227-28-6	1,2,3,4,7,8-HxCDD	196		90	1.9
57653-85-7	1,2,3,6,7,8-HxCDD	203		90	2.1
19408-74-3	1,2,3,7,8,9-HxCDD	201		90	1.8
70648-26-9	1,2,3,4,7,8-HxCDF	3130		90	12
57117-44-9	1,2,3,6,7,8-HxCDF	1040		90	13
72918-21-9	1,2,3,7,8,9-HxCDF	251		90	13
60851-34-5	2,3,4,6,7,8-HxCDF	367		90	14
35822-46-9	1,2,3,4,6,7,8-HpCDD	265		90	1.1
67562-39-4	1,2,3,4,6,7,8-HpCDF	1100		90	3.6
55673-89-7	1,2,3,4,7,8,9-HpCDF	495		90	3.7
3268-87-9	OCDD	1050		180	2.9
39001-02-0	OCDF	890		180	3.4
41903-57-5	Total TCDD	24100		32	32
30402-14-3	Total TCDF	200000		150	150
36088-22-9	Total PeCDD	470		90	6.7
30402-15-4	Total PeCDF	7700		90	14
34465-46-8	Total HxCDD	612		90	1.9
55684-94-1	Total HxCDF	5290		90	13
37871-00-4	Total HpCDD	326		90	1.1
38998-75-3	Total HpCDF	1760		90	3.6

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: Lab Sample ID: 320-76888-A-1-B MS

Matrix: Sediment Lab File ID: 19au21dfs1_22.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10.30(g) Date Analyzed: 08/20/2021 05:33

Con. Extract Vol.: 20.0(uL) Dilution Factor: 10

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 46.3 GPC Cleanup:(Y/N) N

Analysis Batch No.: 518043 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	44		25-164
89059-46-1	13C-2,3,7,8-TCDF	41		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	39	q	25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	38		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	46		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	41		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	42		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	51		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	41		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	38		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	35		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	41		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	39		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	44		26-138
114423-97-1	13C-OCDD	41		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	90		35-197

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d
Lims ID: 320-76888-A-1-B MS
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MS
Inject. Date: 20-Aug-2021 05:33:00 ALS Bottle#: 0 Worklist Smp#: 20
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-b ms
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:22:19 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 16:58:35

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.444	145175	0.78	2.1E+04	10.0	10.0				a
D 13C-2,3,7,8-TCDF	20.456	80549	0.78	1.3459	4.123	4.123	0.2601	0.2601	41.23	
2,3,7,8-TCDF	20.473	27598918	0.80	1.0802	3172.0	3172.0	4.145	4.145	3.2E+005	E
A Non-2,3,7,8-sub-TCDF	19.851	20632522	0.77	1.0802	2373.0	2371.3	4.145	1392.8	0.00	RQMa
S Total TCDF					5545.0	5543.3	4.145	4.145		RQ
D 13C-2,3,7,8-TCDD	21.823	59738	0.84	0.9317	4.417	4.417	0.3983	0.3983	44.17	M
2,3,7,8-TCDD	21.848	3903989	0.80	1.0753	607.7	607.7	0.8976	0.8976	60773	Ea
$ 37Cl4-2,3,7,8-TCDD	21.840	52578		1.0083	3.592	3.592	0.2126	0.2126	89.80	
A Non-2,3,7,8-sub-TCDD	20.684	387719	0.76	1.0753	60.4	60.4	0.8976	54.1	0.00	a
S Total TCDD					668.1	668.1	0.8976	0.8976		
D 13C-1,2,3,7,8-PeCDF	27.290	63269	1.55	1.1405	3.821	3.821	0.0714	0.0714	38.21	
1,2,3,7,8-PeCDF	27.306	492047	1.57	1.0543	73.8	73.8	0.3792	0.3792	1475	M
D 13C-2,3,4,7,8-PeCDF	28.763	74448	1.66	1.1253	4.557	4.557	0.0724	0.0724	45.57	M
2,3,4,7,8-PeCDF	28.805	395052	1.62	1.0079	52.7	52.7	0.3814	0.3814	1053	
A F1 PeCDFs	24.634	4501	1.60	1.0311	0.6340	0.6340	0.006336	0.6340	0.00	a
A Non-2,3,7,8-sub-PeCDF	28.173	610241	1.55	1.0311	86.2	86.0	0.3802	27.8	0.00	RQMa
S Total PeCDF					213.2	213.0	0.3803	0.3803		RQ
D 13C-1,2,3,7,8-PeCDD	29.571	40060	1.55	0.7165	4.233	3.851	0.0131	0.0131	42.33	RQM
1,2,3,7,8-PeCDD	29.613	59938	1.58	1.0465	13.0	13.0	0.1840	0.1840	260	
A Non-2,3,7,8-sub-PeCDD	28.478						0.1840	0.3421		RQU
S Total PeCDD					13.0	13.0	0.1840	0.1840		
D 13C-1,2,3,4,7,8-HxCDF	34.920	72925	0.59	0.9648	5.092	5.092	0.0236	0.0236	50.92	
1,2,3,4,7,8-HxCDF	34.920	725377	1.26	1.1474	86.7	86.7	0.3418	0.3418	1734	
D 13C-1,2,3,6,7,8-HxCDF	35.063	64671	0.53	1.0708	4.069	4.069	0.0212	0.0212	40.69	
1,2,3,6,7,8-HxCDF	35.080	226831	1.31	1.2178	28.8	28.8	0.3582	0.3582	576	
D 13C-2,3,4,6,7,8-HxCDF	35.896	53384	0.48	1.0413	3.454	3.454	0.0219	0.0219	34.54	
2,3,4,6,7,8-HxCDF	35.905	65869	1.24	1.2145	10.2	10.2	0.3940	0.3940	203	M
D 13C-1,2,3,7,8,9-HxCDF	36.788	54492	0.59	0.9731	3.773	3.773	0.0234	0.0234	37.73	
1,2,3,7,8,9-HxCDF	36.797	46987	1.27	1.2401	6.953	6.953	0.3615	0.3615	139	M
A Non-2,3,7,8-sub-HxCDF	35.009	102124	1.28	1.2049	13.8	13.8	0.3623	5.889	0.00	Ma
S Total HxCDF					146.4	146.4	0.3639	0.3639		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.587	148437	1.20	1.8E+04	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	36.107	45625	1.20	0.7587	4.051	4.051	0.0311	0.0311	40.51	
1,2,3,4,7,8-HxCDD	36.115	26231	1.15	1.0608	5.420	5.420	0.0531	0.0531	108	
D 13C-1,2,3,6,7,8-HxCDD	36.225	53461	1.30	0.8593	4.191	4.191	0.0275	0.0275	41.91	
1,2,3,6,7,8-HxCDD	36.233	29812	1.32	0.9933	5.614	5.614	0.0569	0.0569	112	
1,2,3,7,8,9-HxCDD	36.603	30588	1.14	1.1094	5.565	5.565	0.0509	0.0509	111	
A Non-2,3,7,8-sub-HxCDD	35.375	1689	1.24	1.0545	0.4136	0.3233	0.0535	0.3233	0.00	RQ
S Total HxCDD					17.0	16.9	0.0537	0.0537		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.601	43082	0.45	0.7359	3.944	3.944	0.0385	0.0385	39.44	
1,2,3,4,6,7,8-HpCDF	38.618	188467	1.04	1.4421	30.3	30.3	0.0994	0.0994	607	
D 13C-1,2,3,4,7,8,9-HpCDF	39.855	44371	0.39	0.6854	4.361	4.361	0.0413	0.0413	43.61	
1,2,3,4,7,8,9-HpCDF	39.864	79474	1.04	1.3092	13.7	13.7	0.1011	0.1011	274	
A Non-2,3,7,8-sub-HpCDF	39.245	27529	0.98	1.3756	4.577	4.577	0.1001	4.577	0.00	
S Total HpCDF					48.6	48.6	0.1003	0.1003		
D 13C-1,2,3,4,6,7,8-HpCDD	39.552	40710	1.08	0.6745	4.066	4.066	0.0329	0.0329	40.66	
1,2,3,4,6,7,8-HpCDD	39.561	31383	1.04	1.0503	7.340	7.340	0.0316	0.0316	147	
A Non-2,3,7,8-sub-HpCDD	39.241	7160	1.09	1.0503	1.675	1.675	0.0316	1.675	0.00	
S Total HpCDD					9.014	9.014	0.0316	0.0316		
D 13C-OCDD	42.042	67064	0.94	0.5446	8.296	8.296	0.0204	0.0204	41.48	M
OCDF	42.143	108661	0.94	1.3168	24.6	24.6	0.0947	0.0947	246	
OCDD	42.058	103328	0.93	1.0620	29.0	29.0	0.0806	0.0806	290	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d
Lims ID: 320-76888-A-1-B MS
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MS
Inject. Date: 20-Aug-2021 05:33:00 ALS Bottle#: 0 Worklist Smp#: 20
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-b ms
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:22:19 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 16:58:35

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.444	21.395	3		63834	7696	139	347	55		a
333.9338	21.427	21.395	2		81341	10359	129	322	80	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.456	20.365	5	0.954	35423	5280	130	325	41		
317.9389	20.439	20.365	4	0.953	45126	6391	123	307	52	0.78(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.473	20.408	4	1.001	12289808	1660343	940	2350	1766		
305.8987	20.473	20.408	4	1.001	15309110	2023975	1150	2875	1760	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	17.484	19.851	-142	0.855	69116	10380	940	2350	11		
	Empc Correction				54235	9875	940	2350	11		
305.8987	17.475	19.851	-142	0.854	70436	12825	1150	2875	11	0.98(0.65-0.89)	
303.9016	17.939	19.851	-114	0.877	281154	45390	940	2350	48		M
305.8987	17.939	19.851	-114	0.877	383250	61627	1150	2875	54	0.73(0.65-0.89)	
303.9016	18.446	19.851	-84	0.902	444737	53615	940	2350	57		
305.8987	18.446	19.851	-84	0.902	578794	68145	1150	2875	59	0.77(0.65-0.89)	
303.9016	18.867	19.851	-59	0.922	350179	46885	940	2350	50		
305.8987	18.867	19.851	-59	0.922	477599	62212	1150	2875	54	0.73(0.65-0.89)	
303.9016	19.245	19.851	-36	0.941	510917	76027	940	2350	81		
305.8987	19.245	19.851	-36	0.941	689900	101976	1150	2875	89	0.74(0.65-0.89)	
303.9016	19.743	19.851	-6	0.965	5099293	705019	940	2350	750		
305.8987	19.743	19.851	-6	0.965	7019342	987260	1150	2875	858	0.73(0.65-0.89)	
303.9016	20.164	19.851	19	0.986	201158	25767	940	2350	27		
305.8987	20.155	19.851	18	0.985	259484	34071	1150	2875	30	0.78(0.65-0.89)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.264	19.851	85	1.039	845519	110231	940	2350	117		
305.8987	21.264	19.851	85	1.039	1097397	136256	1150	2875	118	0.77(0.65-0.89)	
303.9016	21.737	19.851	113	1.063	171040	20124	940	2350	21		
305.8987	21.737	19.851	113	1.063	198883	22852	1150	2875	20	0.86(0.65-0.89)	
303.9016	23.645	19.851	227	1.156	834964	149841	940	2350	159		a
305.8987	23.645	19.851	227	1.156	1064241	193906	1150	2875	169	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											M
331.9368	21.823	21.716	6	1.018	27283	4319	139	347	31		M
333.9338	21.831	21.716	7	1.018	32455	5109	129	322	40	0.84(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	21.848	21.733	7	1.001	1733583	235645	223	557	1057		a
321.8936	21.848	21.733	7	1.001	2170406	290704	141	352	2062	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.840	21.799	2	1.018	52578	6582	155	387	42		
A Non-2,3,7,8-sub-TCDD											a
319.8965	21.668	20.684	59	0.993	17625	3070	223	557	14		a
321.8936	21.676	20.684	59	0.993	22714	3651	141	352	26	0.78(0.65-0.89)	
319.8965	22.510	20.684	109	1.032	149960	19158	223	557	86		
321.8936	22.485	20.684	108	1.030	197420	24959	141	352	177	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.290	27.251	2	1.273	38454	6459	44	110	147		
353.8970	27.273	27.251	1	1.272	24815	4046	15	37	270	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.306	27.276	2	1.001	300367	46396	97	242	478		M
341.8567	27.306	27.276	2	1.001	191680	29517	71	177	416	1.57(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											M
351.9000	28.763	28.757	0	1.341	46440	6381	44	110	145		
353.8970	28.771	28.757	1	1.342	28008	4544	15	37	303	1.66(1.32-1.78)	M
2,3,4,7,8-PeCDF											
339.8597	28.805	28.791	1	1.001	244436	36383	97	242	375		
341.8567	28.805	28.791	1	1.001	150616	22570	71	177	318	1.62(1.32-1.78)	
A F1 PeCDFs											a
339.8597	24.084	24.634	-33	0.883	2771	554	1	2	554		a
341.8567	24.101	24.634	-32	0.883	1730	349	2	5	175	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQMa
339.8597	25.825	28.173	-141	0.946	122139	21289	97	242	219		M
341.8567	25.825	28.173	-141	0.000			71	177		0.00(1.32-1.78)	
339.8597	25.825	28.173	-141	0.946	122139	21289	97	242	219		M
341.8567	25.825	28.173	-141	0.946	75507	13119	71	177	185	1.62(1.32-1.78)	
339.8597	26.734	28.173	-86	0.980	10475	1450	97	242	15		
341.8567	26.759	28.173	-85	0.981	8471	1080	71	177	15	1.24(1.32-1.78)	
	Empc Correction				6758	935	71	177	13		
339.8597	27.205	28.173	-58	0.997	24506	4814	97	242	50		M
341.8567	27.205	28.173	-58	0.997	15766	3089	71	177	44	1.55(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	27.879	28.173	-18	1.022	82659	12627	97	242	130		
341.8567	27.871	28.173	-18	1.021	51258	7432	71	177	105	1.61(1.32-1.78)	
339.8597	29.150	28.173	58	1.068	49543	6205	97	242	64		
341.8567	29.150	28.173	58	1.068	30729	3938	71	177	55	1.61(1.32-1.78)	
339.8597	30.817	28.173	158	1.129	11059	1608	97	242	17		
341.8567	30.867	28.173	161	1.131	7703	1071	71	177	15	1.44(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											RQM
367.8949	29.571	29.574	0	1.379	28316	4114	4	10	1029		
	Empc Correction				24350	3442	4	10	861		
369.8919	29.588	29.574	1	1.380	15710	2221	3	7	740	1.80(1.32-1.78)	M
1,2,3,7,8-PeCDD											
355.8546	29.613	29.616	0	1.001	36745	5186	26	65	199		
357.8516	29.613	29.616	0	1.001	23193	3064	23	57	133	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	27.694	28.478	-47	0.937	841	241	26	65	9		
357.8516	27.669	28.478	-48	0.936	640	182	23	57	8	1.31(1.32-1.78)	
	Empc Correction				542	155	23	57	0		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.920	34.906	1	0.954	27119	4754	8	20	594		
385.8610	34.903	34.906	0	0.954	45806	9322	25	62	373	0.59(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.920	34.922	0	1.000	404263	77876	126	315	618		
375.8178	34.920	34.922	0	1.000	321114	61250	95	237	645	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.063	35.066	0	0.958	22497	4200	8	20	525		
385.8610	35.063	35.066	0	0.958	42174	8455	25	62	338	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.080	35.082	0	1.000	128747	22463	126	315	178		
375.8178	35.080	35.082	0	1.000	98084	18158	95	237	191	1.31(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.896	35.890	0	0.981	17305	4048	8	20	506		
385.8610	35.896	35.890	0	0.981	36079	7488	25	62	300	0.48(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.905	35.907	0	1.000	36445	7727	126	315	61		M
375.8178	35.913	35.907	0	1.000	29424	5487	95	237	58	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.788	36.782	0	1.006	20316	4766	8	20	596		
385.8610	36.780	36.782	0	1.005	34176	7546	25	62	302	0.59(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.797	36.791	0	1.000	26260	6668	126	315	53		M
375.8178	36.797	36.791	0	1.000	20727	4699	95	237	49	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	33.430	35.009	-95	0.957	24603	4308	126	315	34		
375.8178	33.447	35.009	-94	0.958	18946	3039	95	237	32	1.30(1.05-1.43)	
373.8208	34.297	35.009	-43	0.982	10304	2218	126	315	18		
375.8178	34.314	35.009	-42	0.983	8200	1492	95	237	16	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	36.898	35.009	113	1.057	22472	5249	126	315	42		M
375.8178	36.890	35.009	113	1.056	17599	3968	95	237	42	1.28(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.587	36.581	0		80966	18844	20	50	942		
403.8529	36.587	36.581	0		67471	17193	14	35	1228	1.20(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.107	36.092	1	0.987	24843	6005	20	50	300		
403.8529	36.107	36.092	1	0.987	20782	4995	14	35	357	1.20(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.115	36.109	0	1.000	14019	3195	11	27	290		
391.8127	36.124	36.109	1	1.000	12212	2787	14	35	199	1.15(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.225	36.210	1	0.990	30250	6519	20	50	326		
403.8529	36.225	36.210	1	0.990	23211	4444	14	35	317	1.30(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.233	36.227	0	1.000	16944	3736	11	27	340		
391.8127	36.241	36.227	1	1.000	12868	2755	14	35	197	1.32(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.603	36.597	0	1.014	16279	4014	11	27	365		
391.8127	36.603	36.597	0	1.014	14309	3301	14	35	236	1.14(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.349	35.375	-2	0.976	935	228	11	27	21		
391.8127	35.349	35.375	-2	0.976	1226	259	14	35	19	0.76(1.05-1.43)	
	Empc Correction				754	183	14	35	13		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.601	38.596	0	1.055	13397	3428	20	50	171		
419.8220	38.601	38.596	0	1.055	29685	7870	21	52	375	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.618	38.618	0	1.000	96158	24605	37	92	665		
409.7788	38.618	38.618	0	1.000	92309	23023	28	70	822	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.855	39.850	0	1.089	12549	3463	20	50	173		
419.8220	39.855	39.850	0	1.089	31822	8773	21	52	418	0.39(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.864	39.872	-1	1.000	40609	11150	37	92	301		
409.7788	39.864	39.872	-1	1.000	38865	11157	28	70	398	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.980	39.245	-16	1.010	13643	3852	37	92	104		
409.7788	38.980	39.245	-16	1.010	13886	4037	28	70	144	0.98(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.552	39.547	0	1.081	21127	6529	21	52	311		
437.8140	39.552	39.547	0	1.081	19583	6112	11	27	556	1.08(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.561	39.561	0	1.000	16002	4575	11	27	416		
425.7737	39.561	39.561	0	1.000	15381	4426	6	15	738	1.04(0.88-1.20)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.921	39.241	-19	0.984	3738	1014	11	27	92		
425.7737	38.921	39.241	-19	0.984	3422	1021	6	15	170	1.09(0.88-1.20)	
13C-OCDD											M
469.7780	42.042	42.036	0	1.149	32462	8295	12	30	691		
471.7750	42.050	42.036	1	1.149	34602	8057	4	10	2014	0.94(0.76-1.02)	M
OCDF											
441.7428	42.143	42.137	0	1.002	52566	12871	11	27	1170		
443.7399	42.143	42.137	0	1.002	56095	13731	30	75	458	0.94(0.76-1.02)	
OCDD											
457.7377	42.058	42.053	0	1.000	49742	12229	13	32	941		
459.7348	42.058	42.053	0	1.000	53586	12524	15	37	835	0.93(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	80549	11671

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		10.000	80549	11671

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.484	69116	10380	70436	12825	16.0	0.98	RQ
17.484	54235	9875	70436	12825	14.3		Empc Correction
17.939	281154	45390	383250	61627	76.4	0.73	M
18.446	444737	53615	578794	68145	117.6	0.77	
18.867	350179	46885	477599	62212	95.1	0.73	
19.245	510917	76027	689900	101976	138.0	0.74	
19.743	5099293	705019	7019342	987260	1392.8	0.73	
20.164	201158	25767	259484	34071	52.9	0.78	
21.264	845519	110231	1097397	136256	223.3	0.77	
21.737	171040	20124	198883	22852	42.5	0.86	
23.645	834964	149841	1064241	193906	218.3	0.78	a
Signal Totals:							
	8793196	1242774	11839326	1681130			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	20647403	2924409				0.74	RQMa
	20632522	2923904					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2373.0 = (20647403 * 10.000) / (80549 * 1.080)

Empc Amount: 2371.3 = (20632522 * 10.000) / (80549 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	59738	9428

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		10.000	59738	9428

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.668	17625	3070	22714	3651	6.28	0.78	a
22.510	149960	19158	197420	24959	54.1	0.76	
Signal Totals:							
	167585	22228	220134	28610			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	387719	50838				0.76	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 60.356 = (387719 * 10.000) / (59738 * 1.075)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	63269	10505
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	74448	10925

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	68858	10715

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.084	2771	554	1730	349	0.6340	1.60	a
Signal Totals:							
	2771	554	1730	349			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4501	903				1.60	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6340 = (4501 * 10.000) / (68858 * 1.031)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	63269	10505
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	74448	10925

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	68858	10715

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.825	122139	21289	0	0	17.2	0.00	M
25.825	122139	21289	75507	13119	27.8	1.62	Ma
26.734	10475	1450	8471	1080	2.67	1.24	RQ
26.734	10475	1450	6758	935	2.43		Empc Correction
27.205	24506	4814	15766	3089	5.67	1.55	Ma
27.879	82659	12627	51258	7432	18.9	1.61	
29.150	49543	6205	30729	3938	11.3	1.61	
30.817	11059	1608	7703	1071	2.64	1.44	
Signal Totals:							
	422520	69282	187721	29584			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	611954	99011				2.23	RQMa
	610241	98866					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 86.195 = (611954 * 10.000) / (68858 * 1.031)

Empc Amount: 85.953 = (610241 * 10.000) / (68858 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	44026	6335

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		10.000	44026	6335

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
27.694	841	241	640	182	0.3421	1.31	RQ
27.694	841	241	542	155			Empc Correction

Compound is Marked ND

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	72925	14076
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	64671	12655
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	53384	11536
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	54492	12312

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		10.000	61368	12644

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.430	24603	4308	18946	3039	5.89	1.30	
34.297	10304	2218	8200	1492	2.50	1.26	
36.898	22472	5249	17599	3968	5.42	1.28	Ma
Signal Totals:							
	57379	11775	44745	8499			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	102124	20274				1.28	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.811 = (102124 * 10.000) / (61368 * 1.205)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	45625	11000
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	53461	10963
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		10.000	49543	10981

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.349	935	228	1226	259	0.4136	0.76	RQ
35.349	935	228	754	183	0.3233		Empc Correction
Signal Totals:							
	935	228	754	183			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2161	487				0.76	RQ
	1689	411					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.4136 = (2161 * 10.000) / (49543 * 1.055)

Empc Amount: 0.3233 = (1689 * 10.000) / (49543 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	43082	11298
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	44371	12236

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		10.000	43726	11767

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.980	13643	3852	13886	4037	4.58	0.98	
Signal Totals:							
	13643	3852	13886	4037			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	27529	7889				0.98	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.577 = (27529 * 10.000) / (43726 * 1.376)

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	40710	12641

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		10.000	40710	12641

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.921	3738	1014	3422	1021	1.67	1.09	
Signal Totals:							
	3738	1014	3422	1021			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7160	2035				1.09	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.675 = (7160 * 10.000) / (40710 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 17.930 Area = 126754

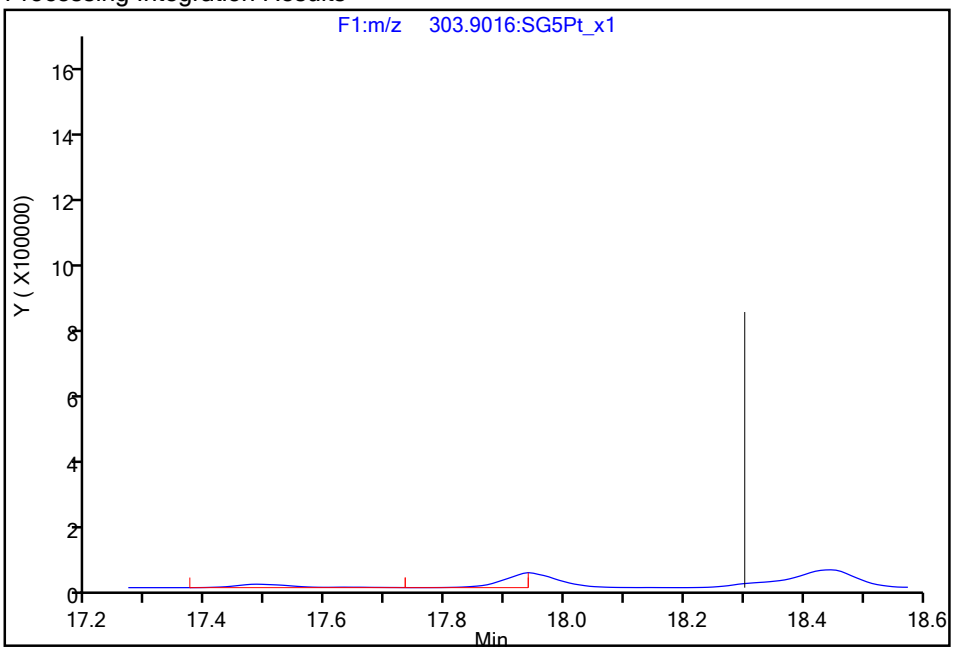

Manual Integration Results

RT = 17.939 Area = 281154 M

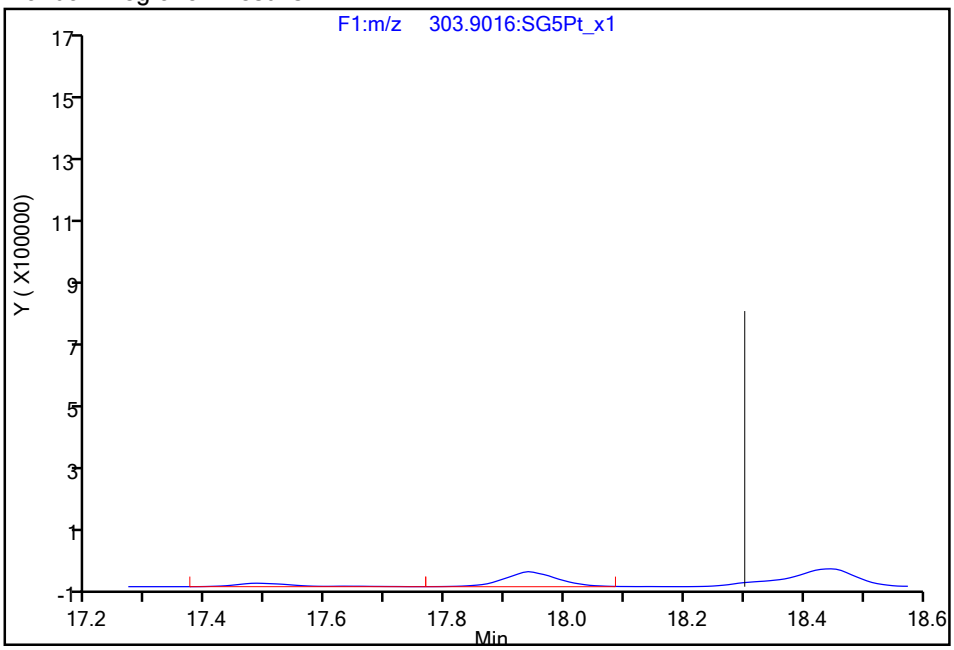

Reviewer: krenns, 25-Aug-2021 15:05:49

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 21.82
Area: 14496
Amount: 3.471308
Amount Units: pg/ul

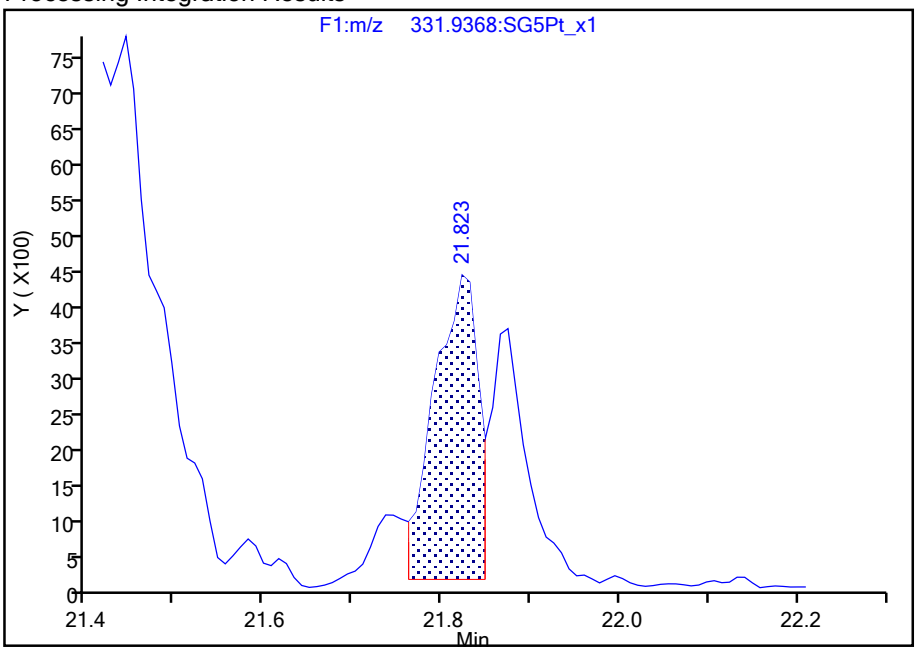

Manual Integration Results

RT: 21.82
Area: 27283
Amount: 4.416711
Amount Units: pg/ul

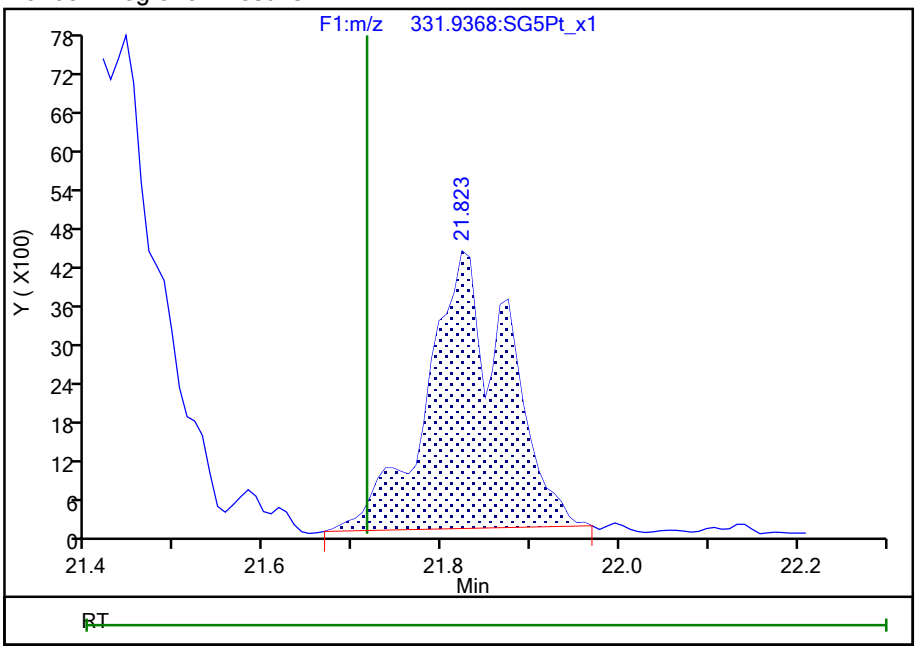

Reviewer: krenns, 25-Aug-2021 15:21:51

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.67
Area: 17625
Amount: 6.279515
Amount Units: pg/ul

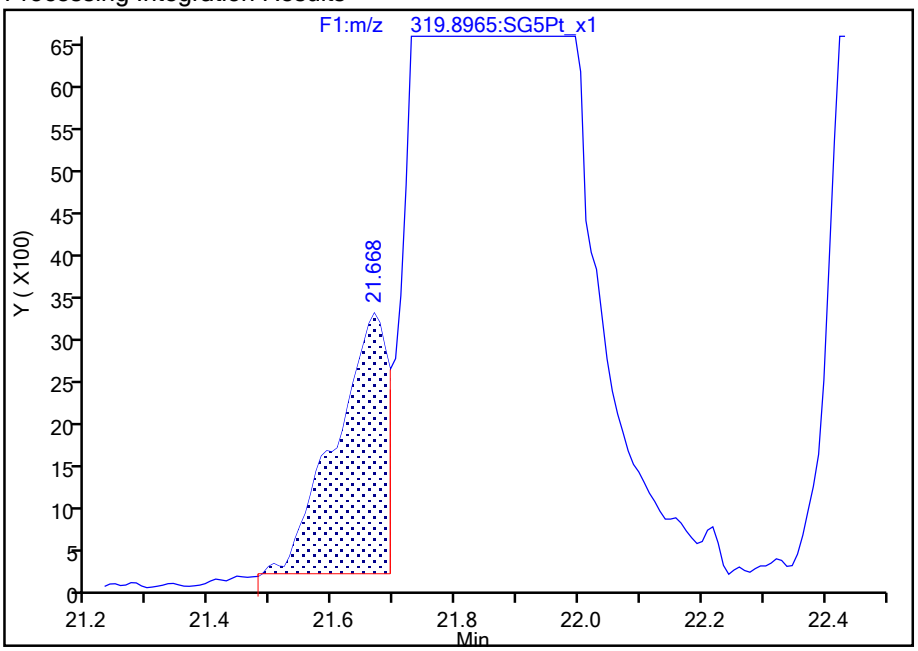

Manual Integration Results

RT: 21.85
Area: 1733583
Amount: 607.7285
Amount Units: pg/ul

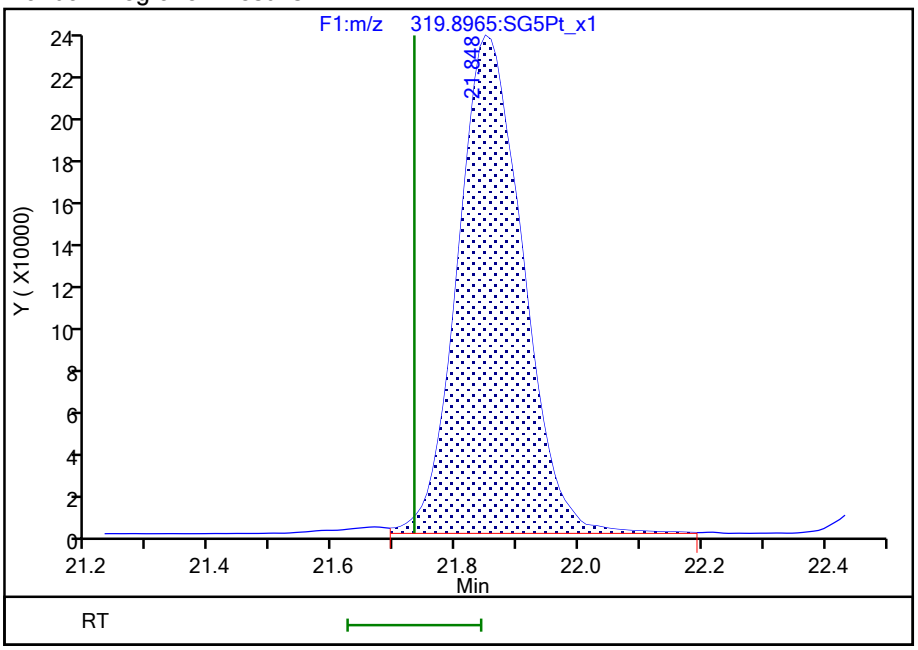

Reviewer: krenns, 25-Aug-2021 15:22:00

Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.31
Area: 324568
Amount: 79.758886
Amount Units: pg/ul

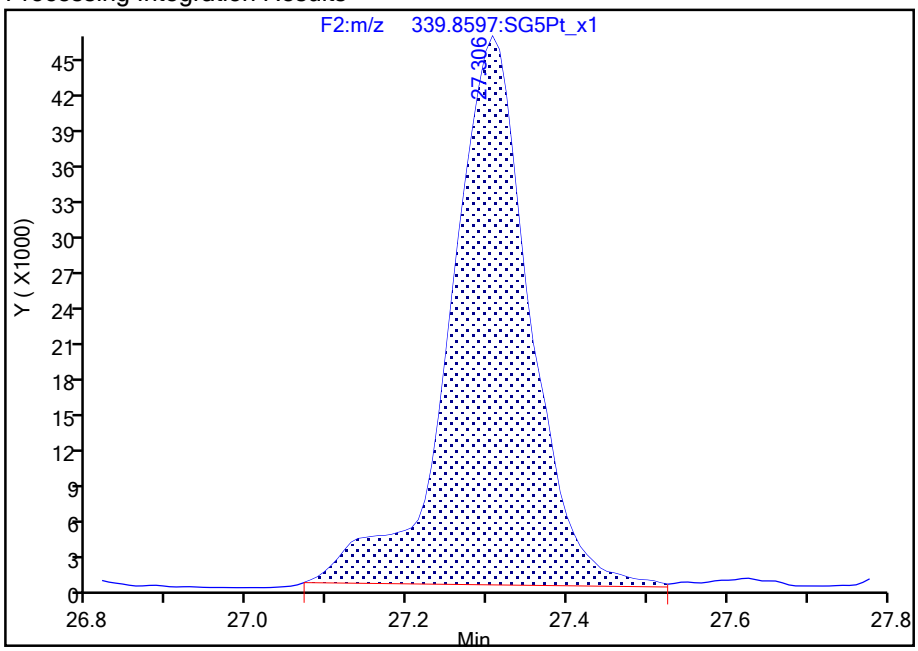

Manual Integration Results

RT: 27.31
Area: 300367
Amount: 73.767775
Amount Units: pg/ul

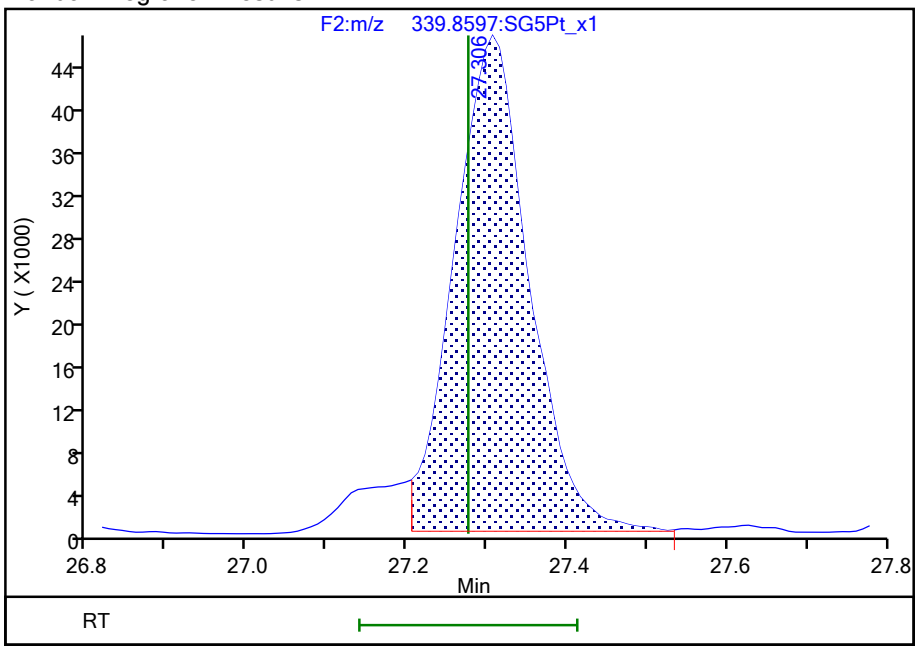

Reviewer: dadunj, 23-Aug-2021 09:39:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.31
Area: 207441
Amount: 79.758886
Amount Units: pg/ul

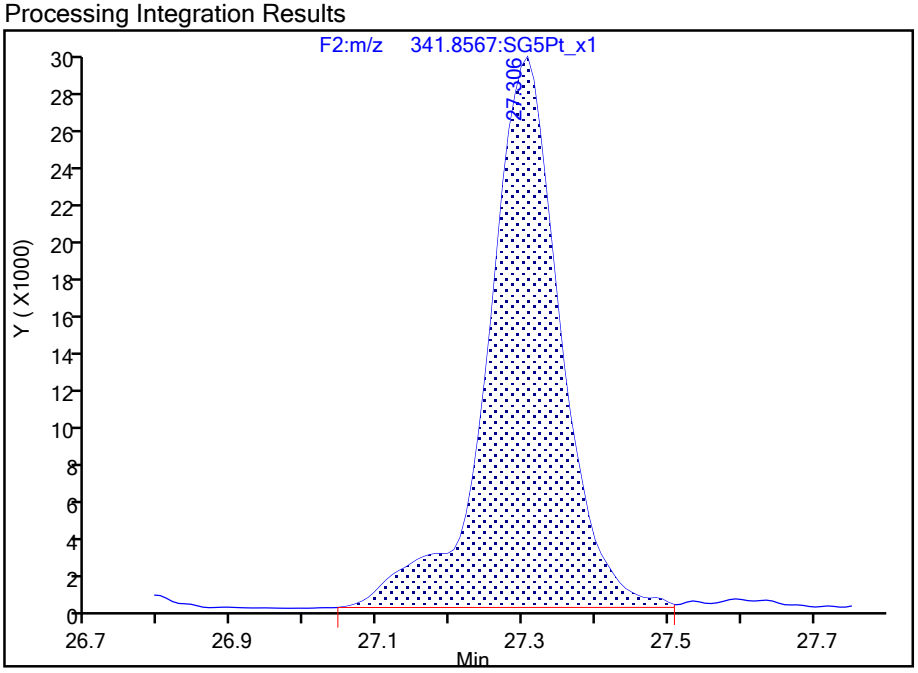

Manual Integration Results

RT: 27.31
Area: 191680
Amount: 73.767775
Amount Units: pg/ul

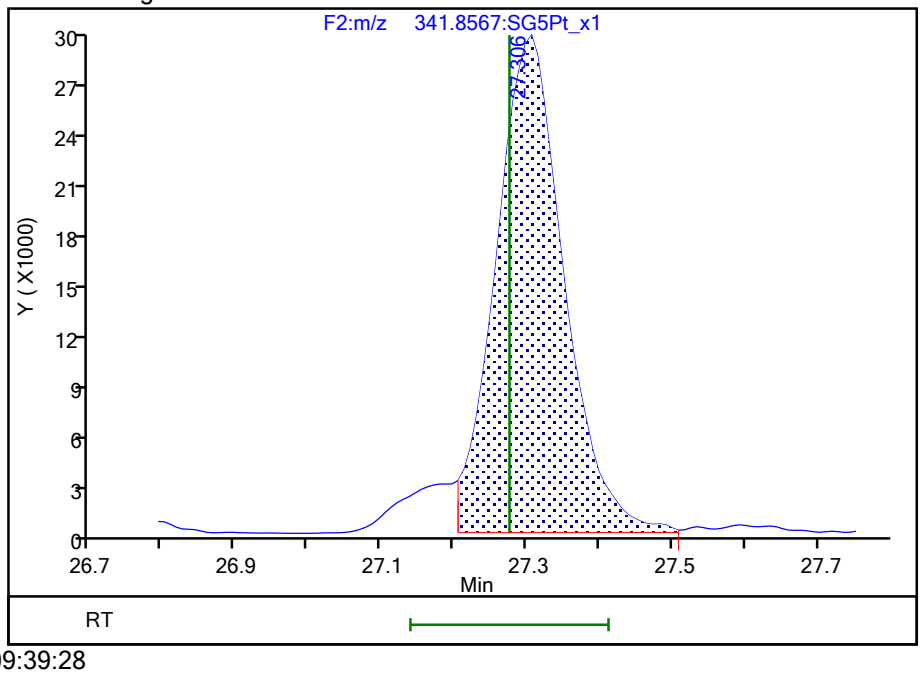

Reviewer: dadunj, 23-Aug-2021 09:39:28
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777745

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 2

Processing Integration Results

RT: 28.77
Area: 24273
Amount: 4.328418
Amount Units: pg/ul

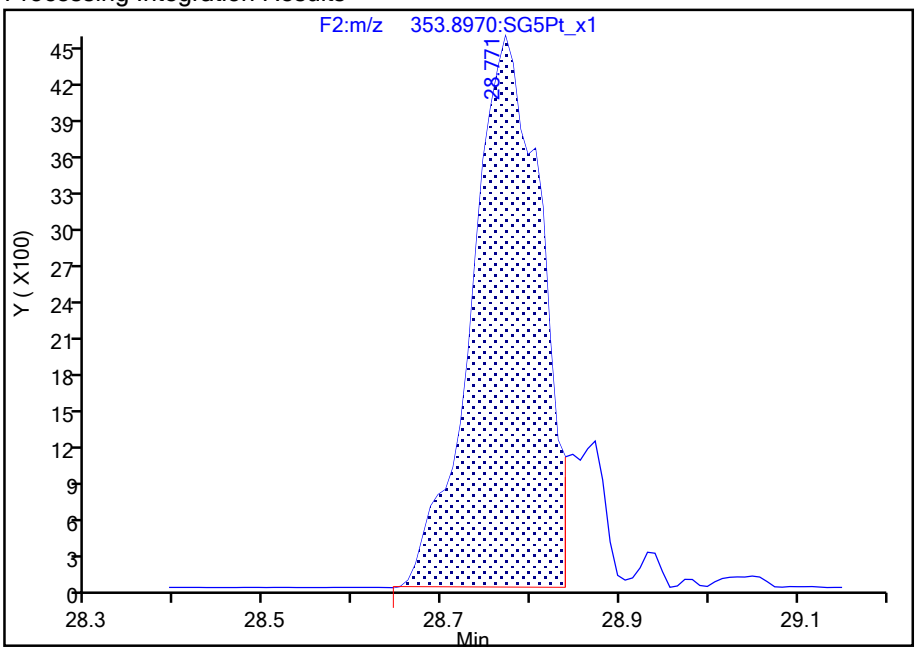

Manual Integration Results

RT: 28.77
Area: 28008
Amount: 4.557042
Amount Units: pg/ul

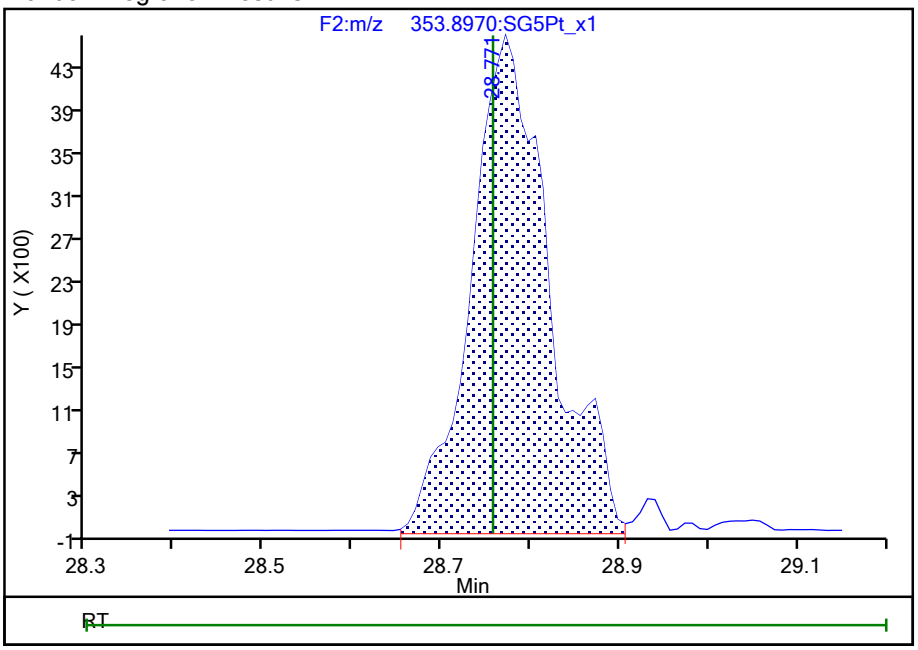

Reviewer: dadunj, 23-Aug-2021 09:42:06

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Processing Integration Results

RT = 25.825 Area = 124540

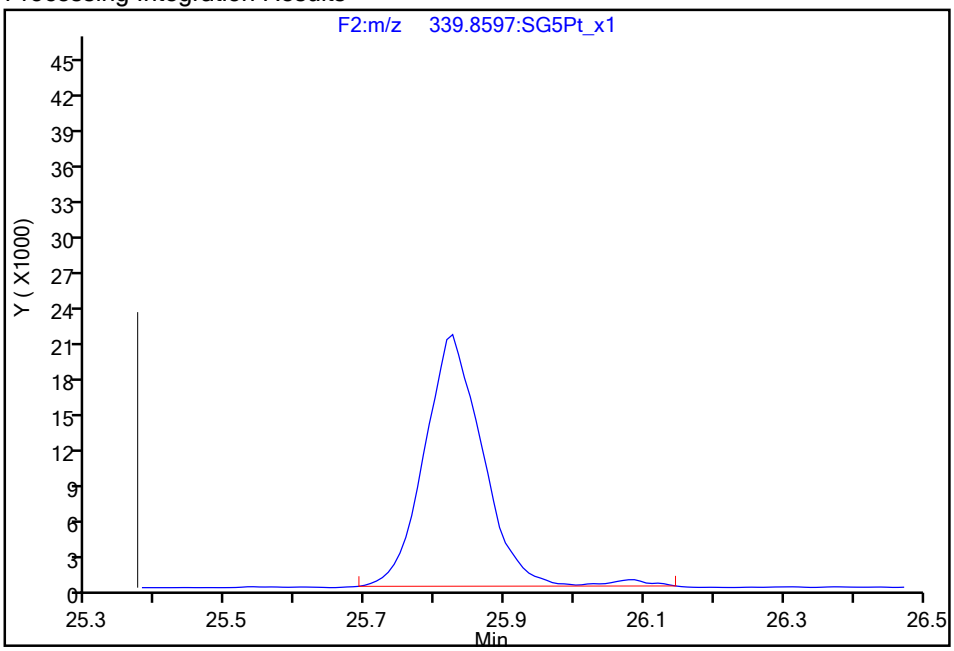

Manual Integration Results

RT = 25.825 Area = 122139 M

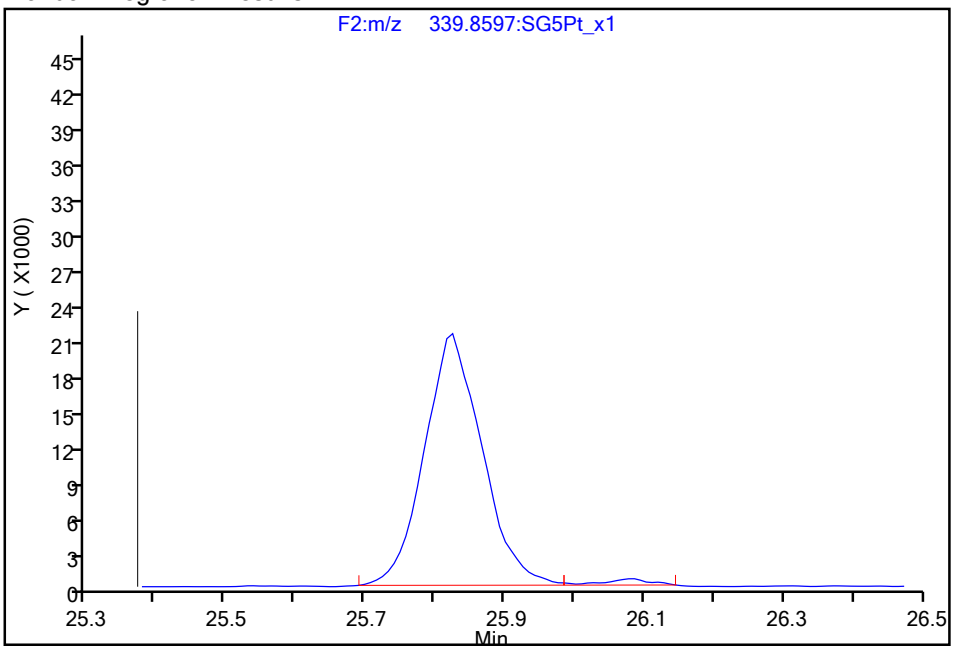

Reviewer: dadunj, 23-Aug-2021 09:39:53

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

777747

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Processing Integration Results

RT = 25.825 Area = 124540

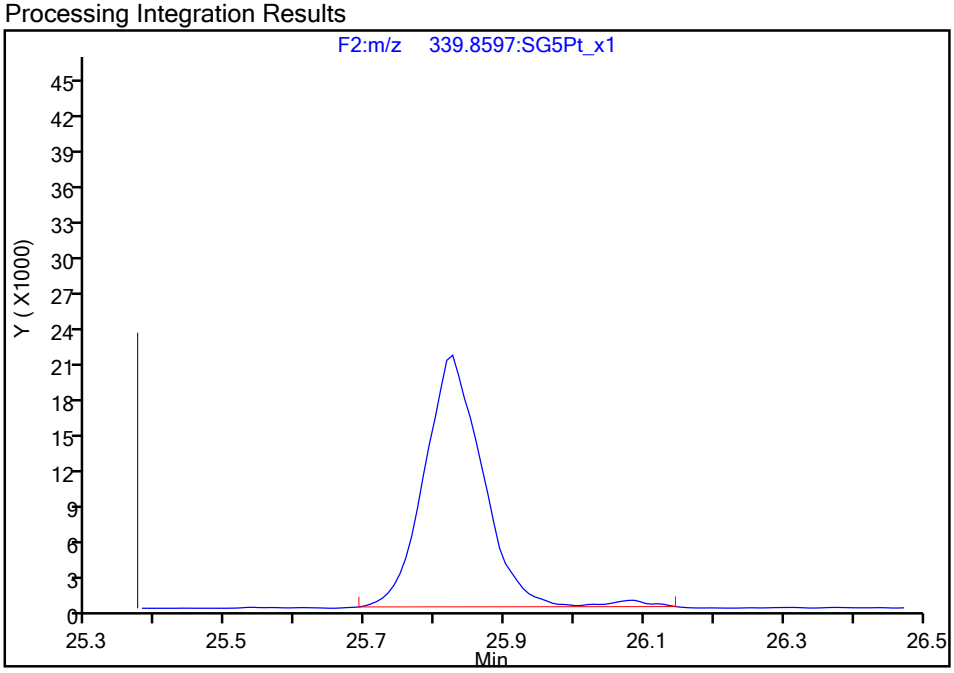

Manual Integration Results

RT = 25.825 Area = 122139 M

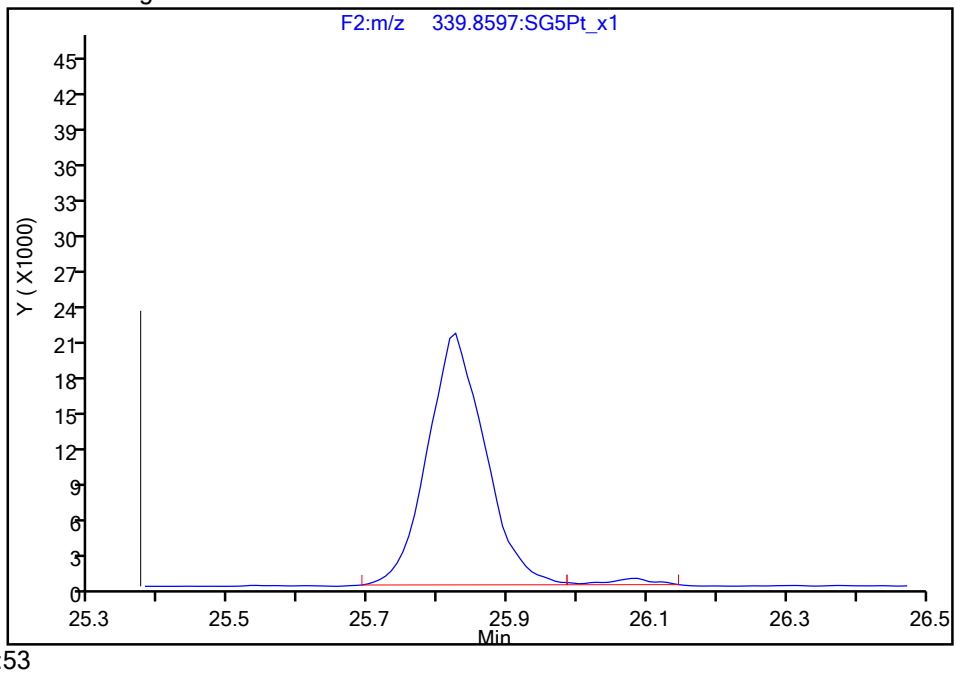

Reviewer: dadunj, 23-Aug-2021 09:39:53

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

777748

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Not Detected
RT: 25.37- 30.97

Processing Integration Results

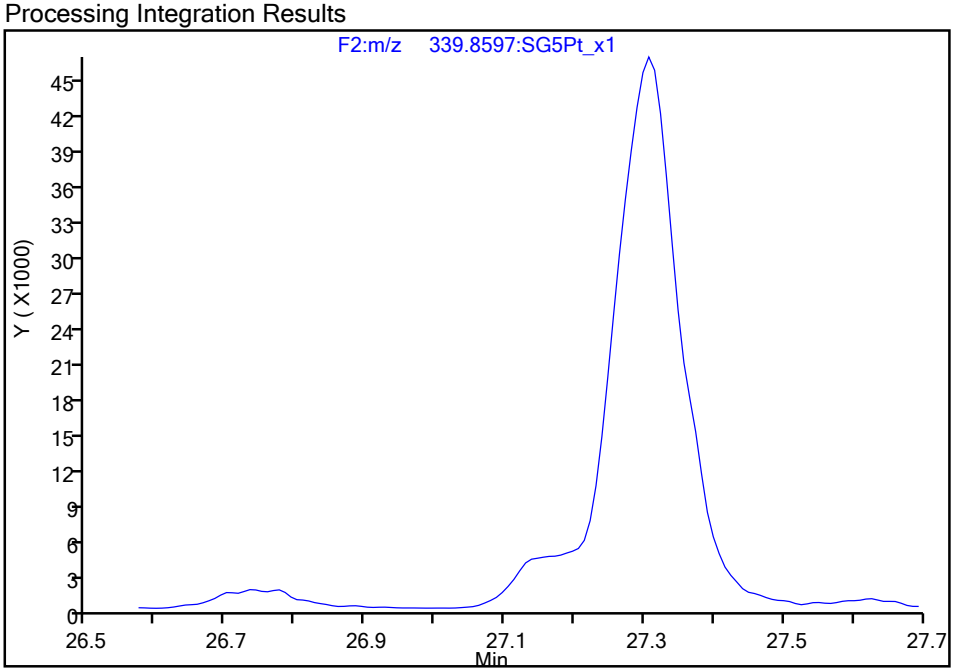

RT = 27.205 Area = 24506 M

Manual Integration Results

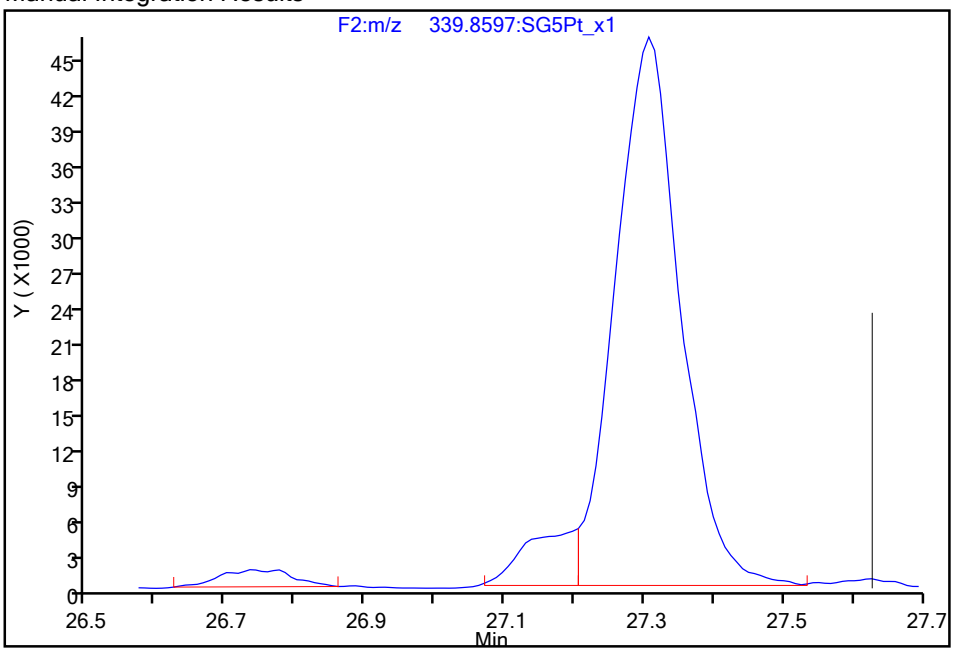

Reviewer: dadunj, 23-Aug-2021 09:39:53
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

777749

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 2

Processing Integration Results

RT: 29.59
Area: 13049
Amount: 3.976893
Amount Units: pg/ul

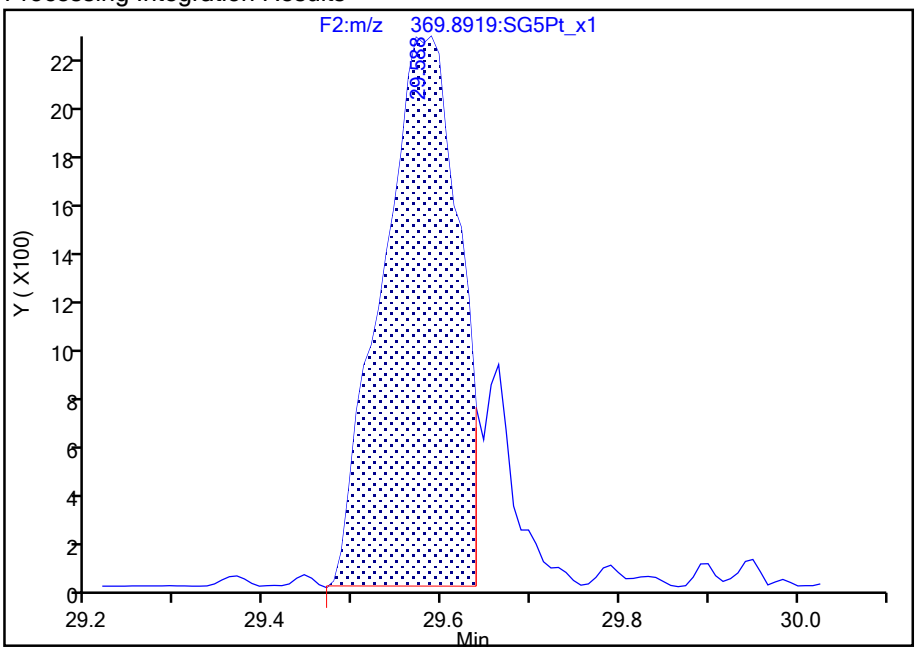

Manual Integration Results

RT: 29.59
Area: 15710
Amount: 4.232725
Amount Units: pg/ul

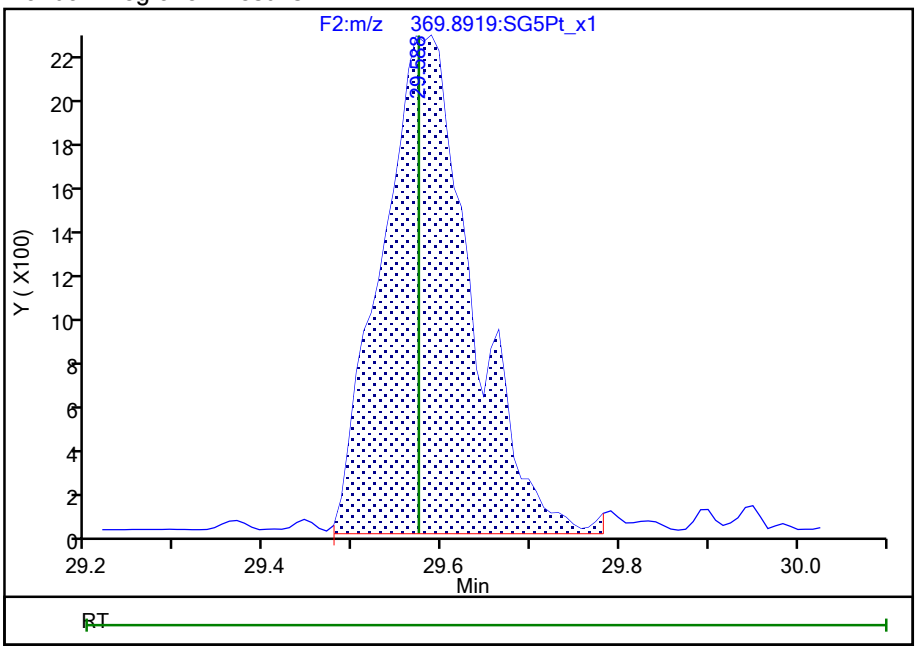

Reviewer: dadunj, 23-Aug-2021 09:42:19

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.90
Area: 42529
Amount: 11.098164
Amount Units: pg/ul

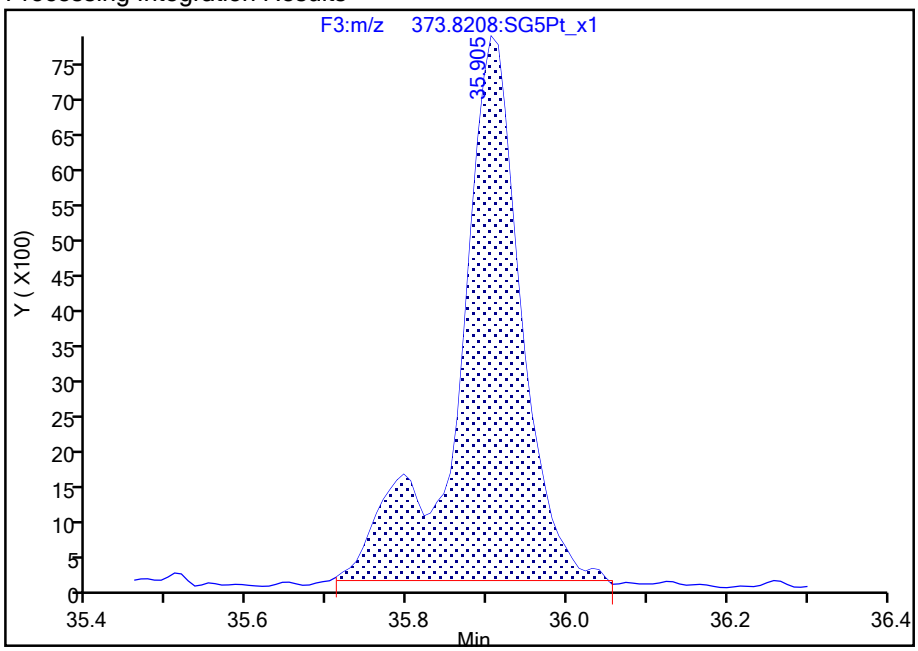

Manual Integration Results

RT: 35.90
Area: 36445
Amount: 10.159756
Amount Units: pg/ul

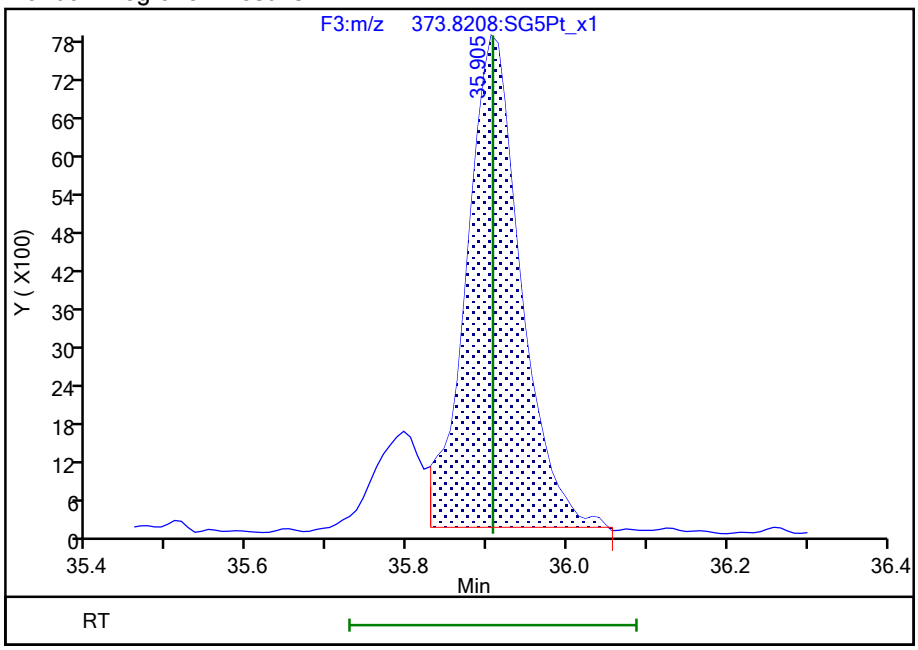

Reviewer: dadunj, 23-Aug-2021 09:40:41

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.80
Area: 48733
Amount: 10.278712
Amount Units: pg/ul

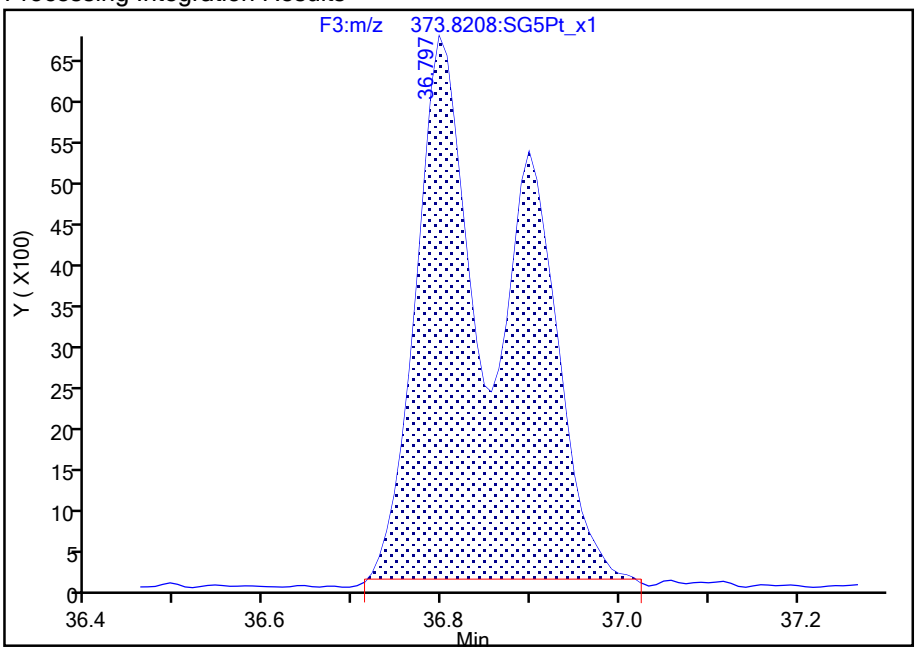

Manual Integration Results

RT: 36.80
Area: 26260
Amount: 6.953151
Amount Units: pg/ul

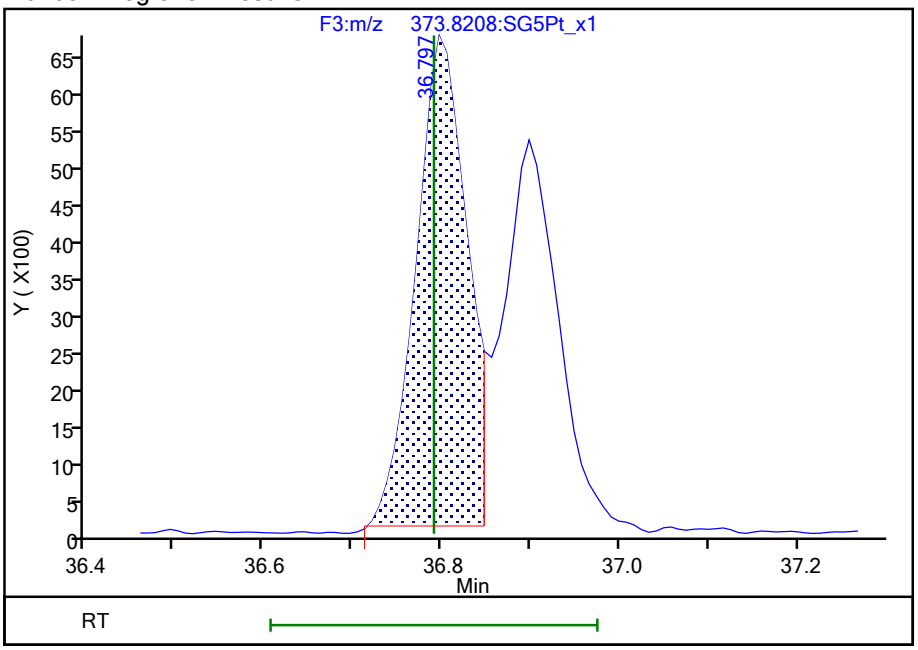

Reviewer: dadunj, 23-Aug-2021 09:40:47

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

Not Detected
RT: 33.09- 36.93

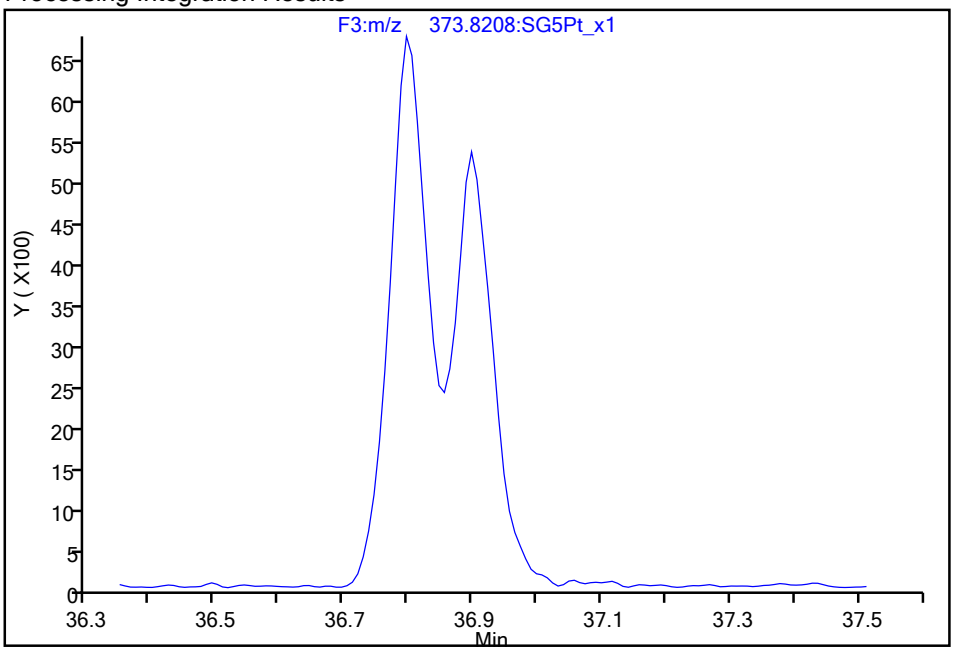

Manual Integration Results

RT = 36.898 Area = 22472 M

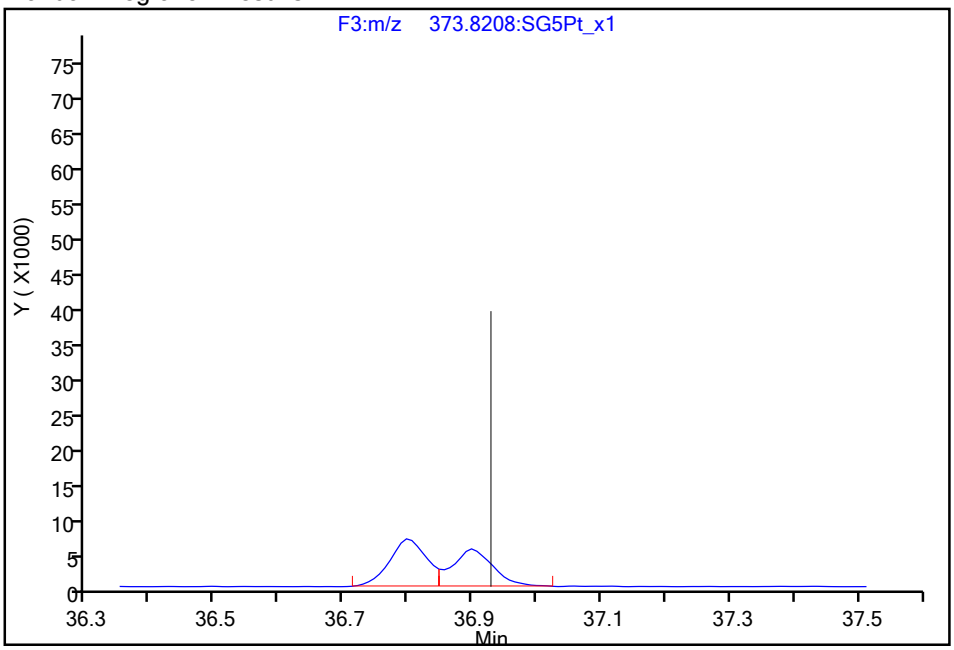

Reviewer: dadunj, 23-Aug-2021 09:40:54

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

777753

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

13C-OCDD, CAS: 114423-97-1

Signal: 2

Processing Integration Results

RT: 42.05
Area: 36345
Amount: 8.511216
Amount Units: pg/ul

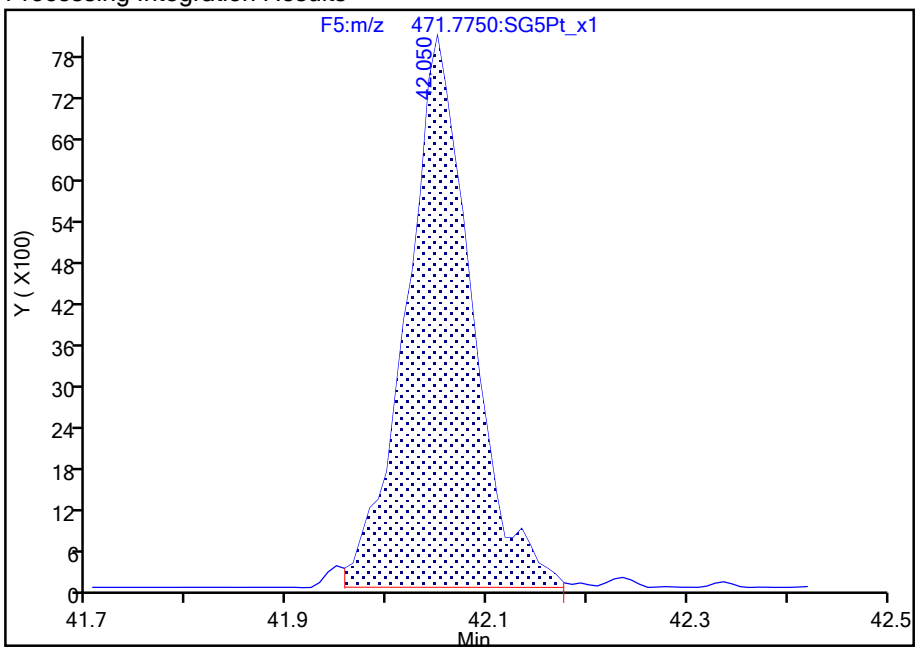

Manual Integration Results

RT: 42.05
Area: 34602
Amount: 8.295612
Amount Units: pg/ul

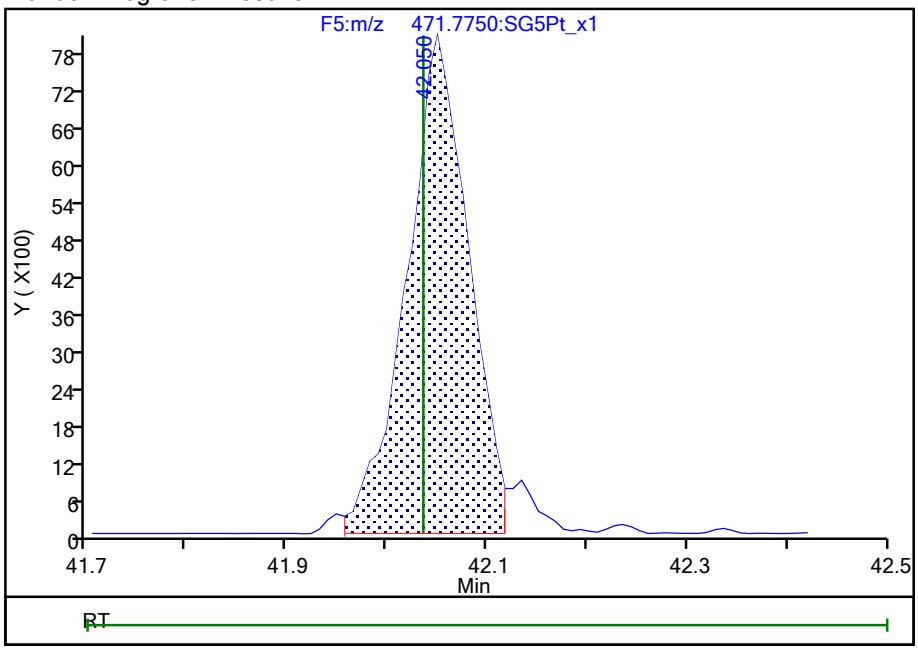

Reviewer: dadunj, 23-Aug-2021 09:41:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

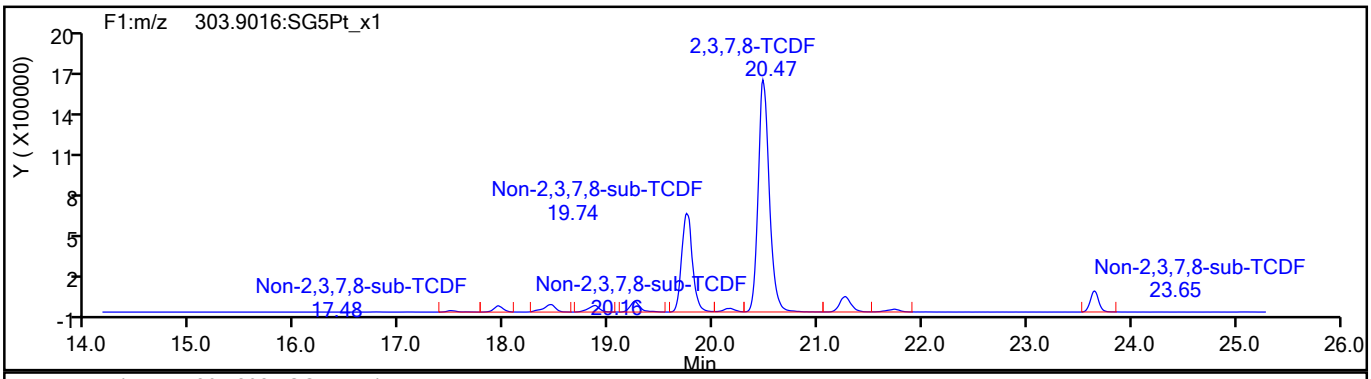

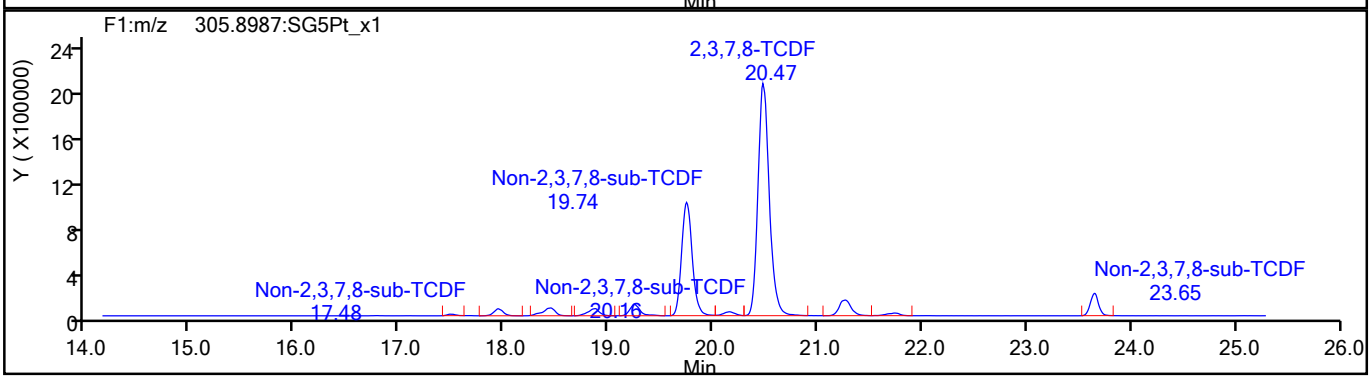

TCDF Standards

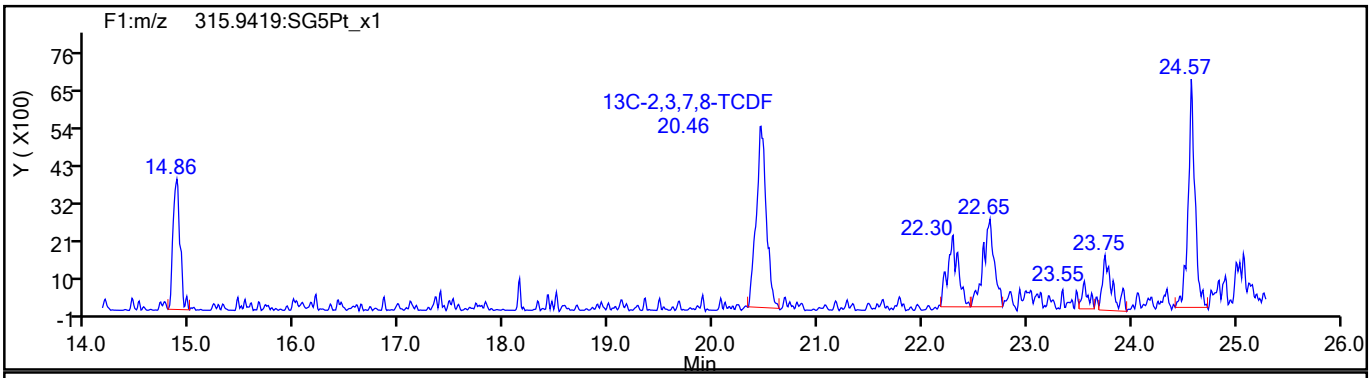

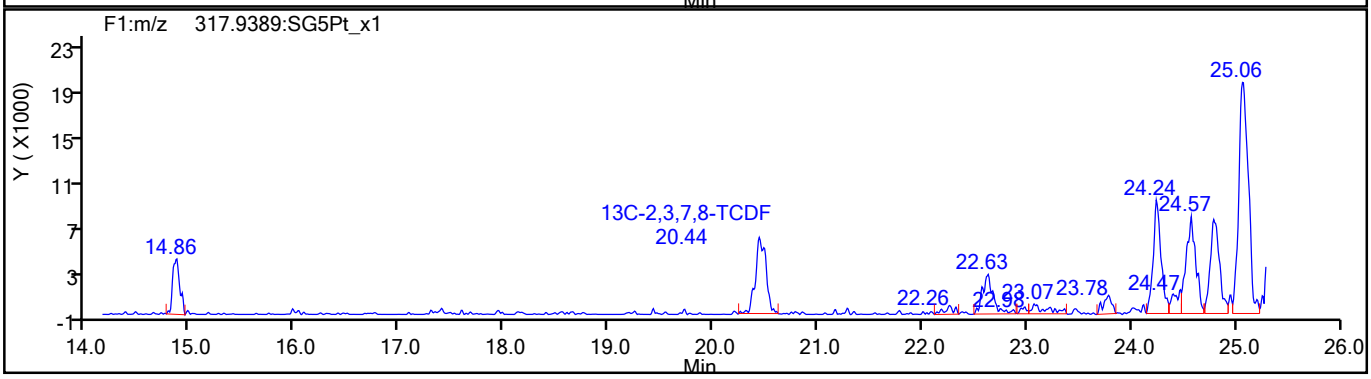

777755

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

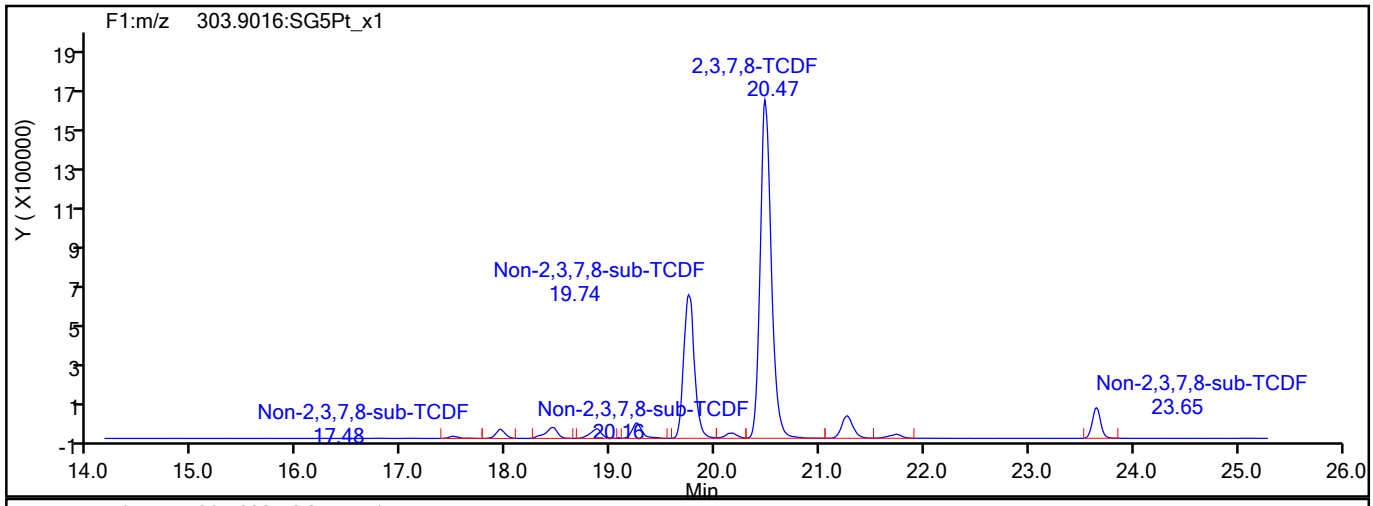

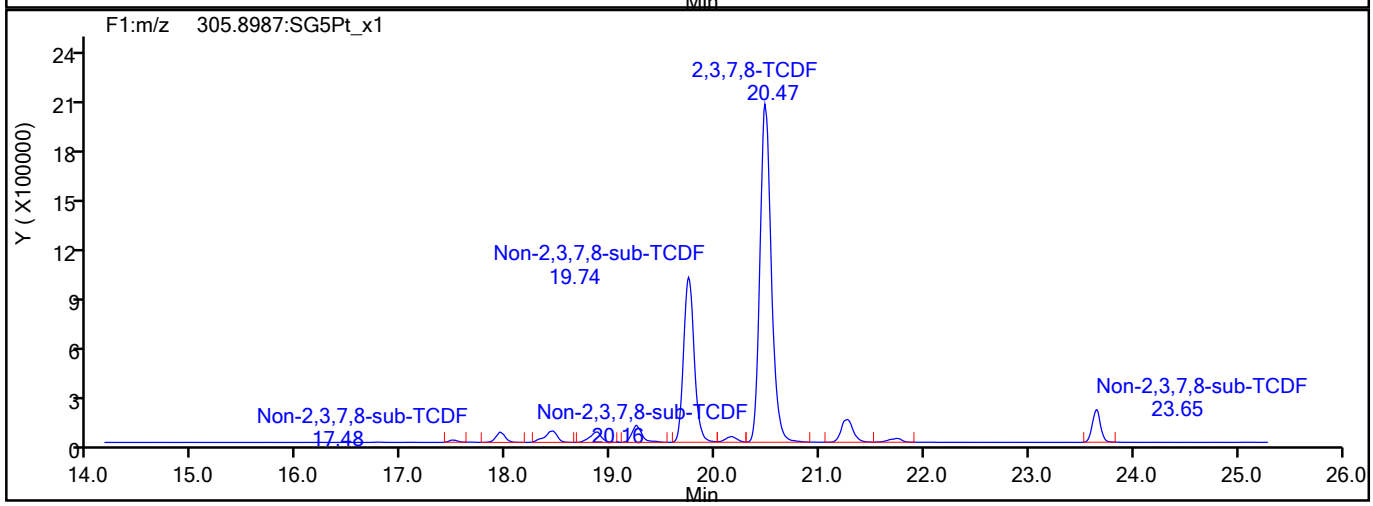

TCDF Interference Mass

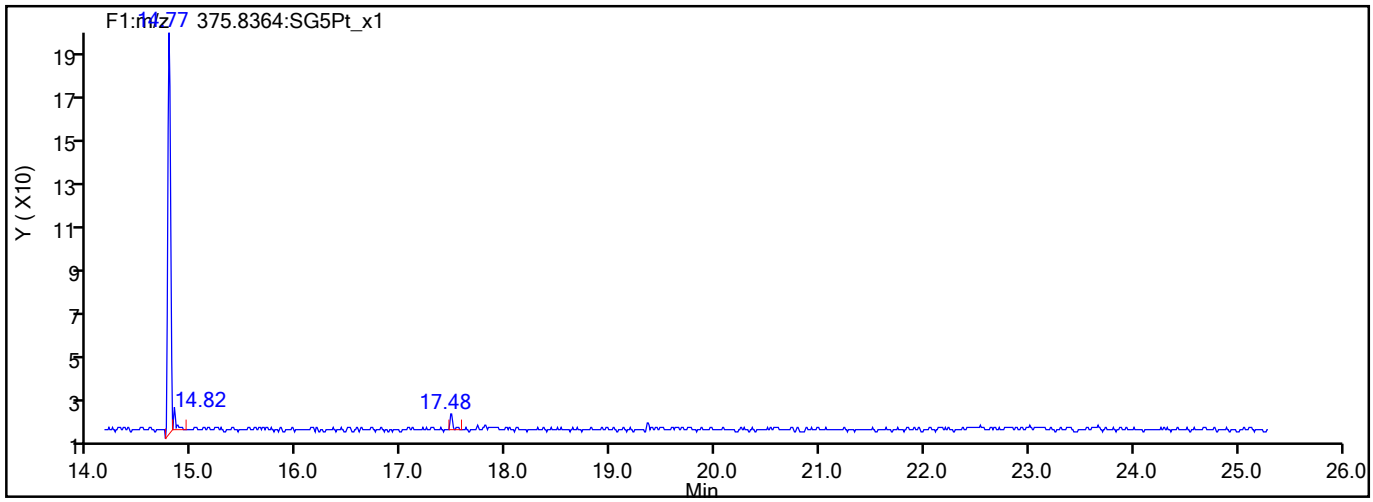

777756

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

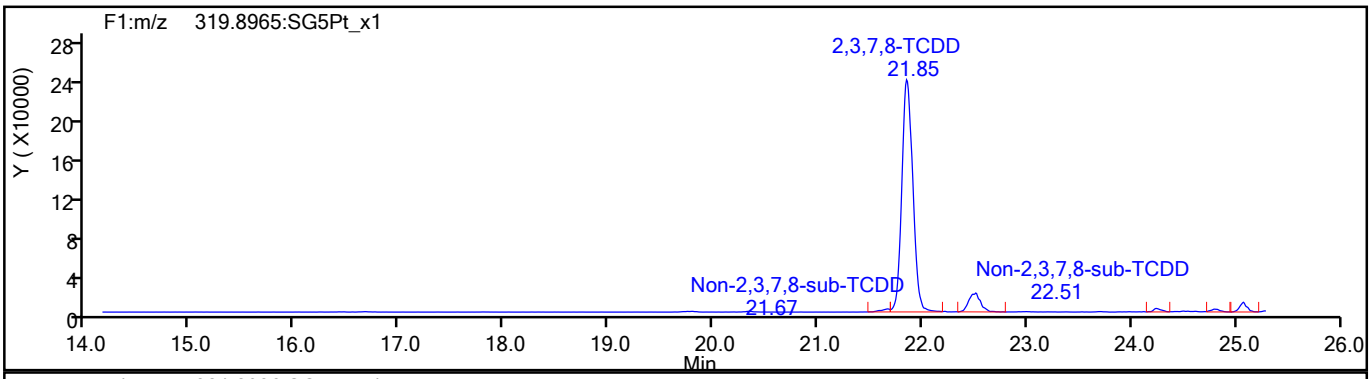

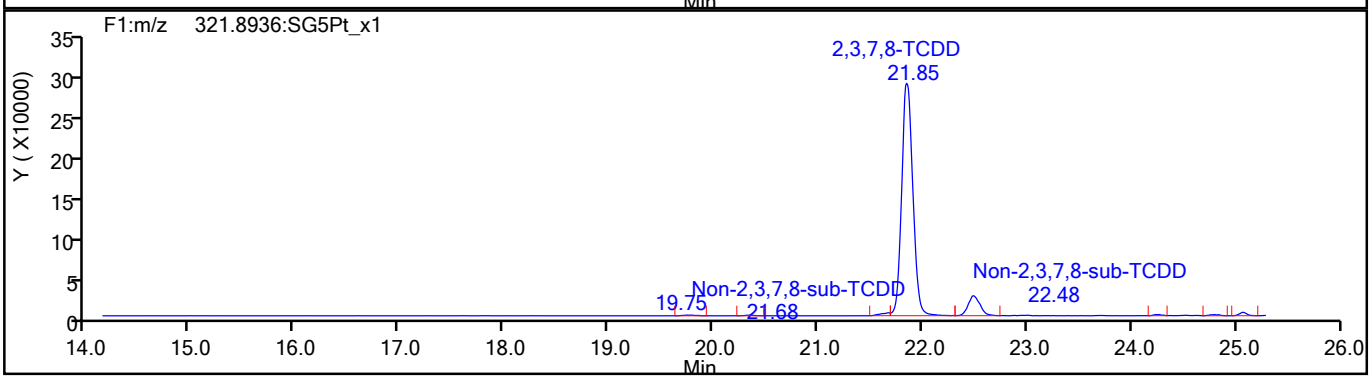

TCDD Standards

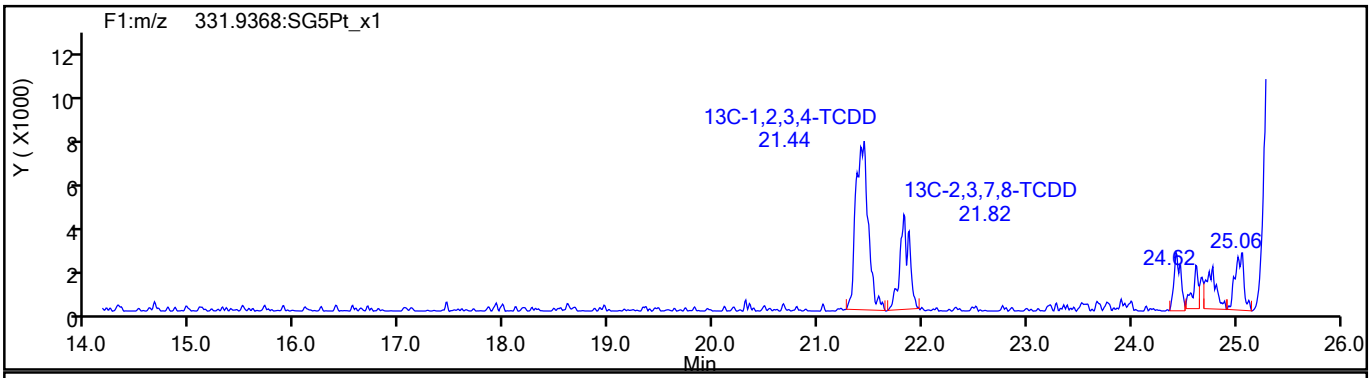

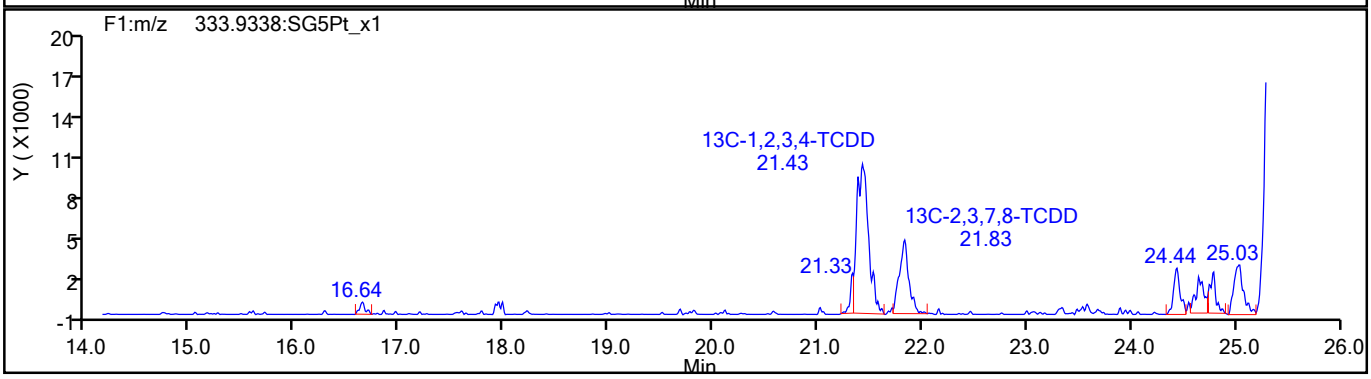

777757

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

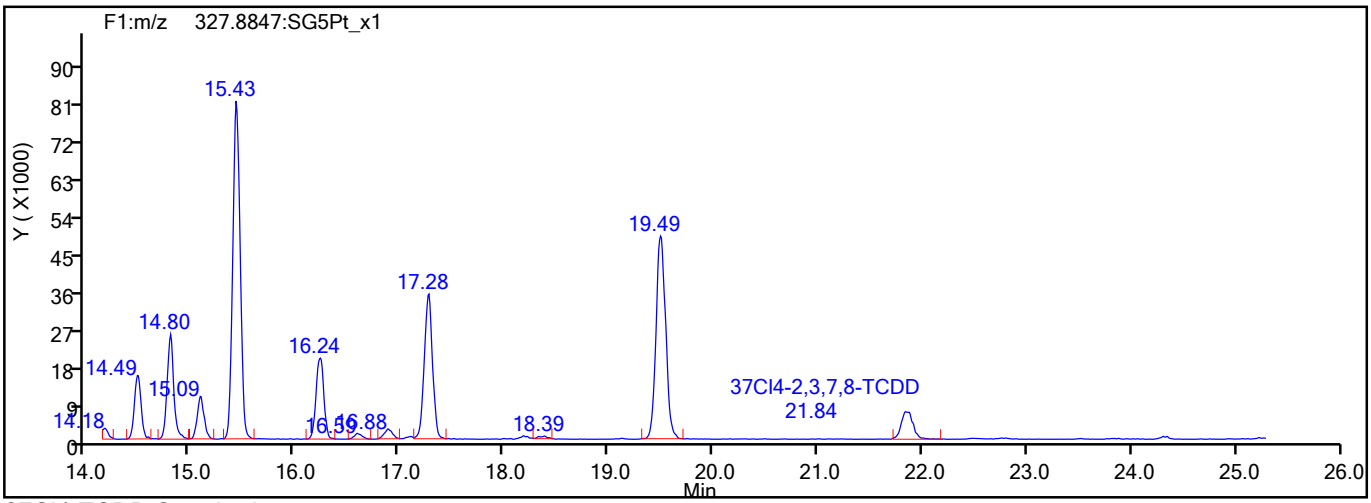

37Cl4-TCDD Standards

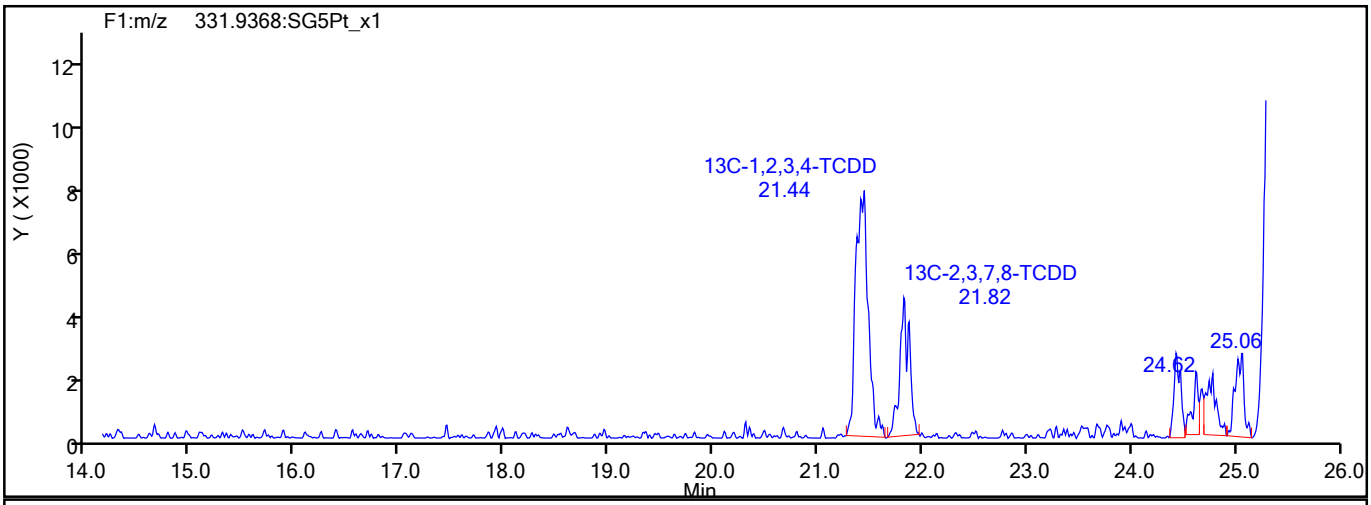

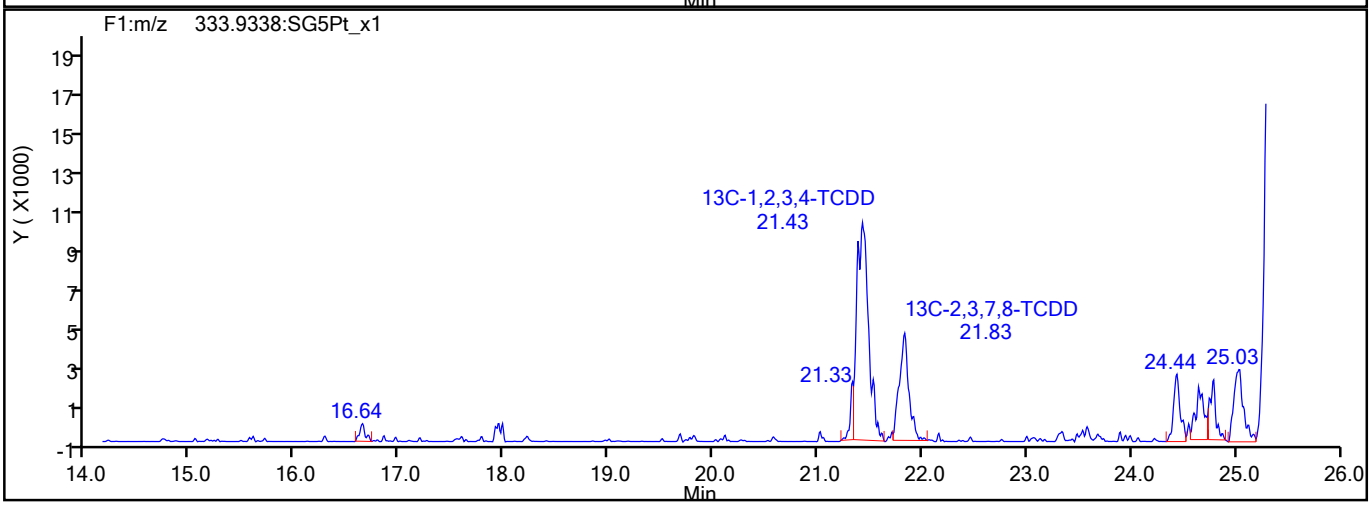

777758

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

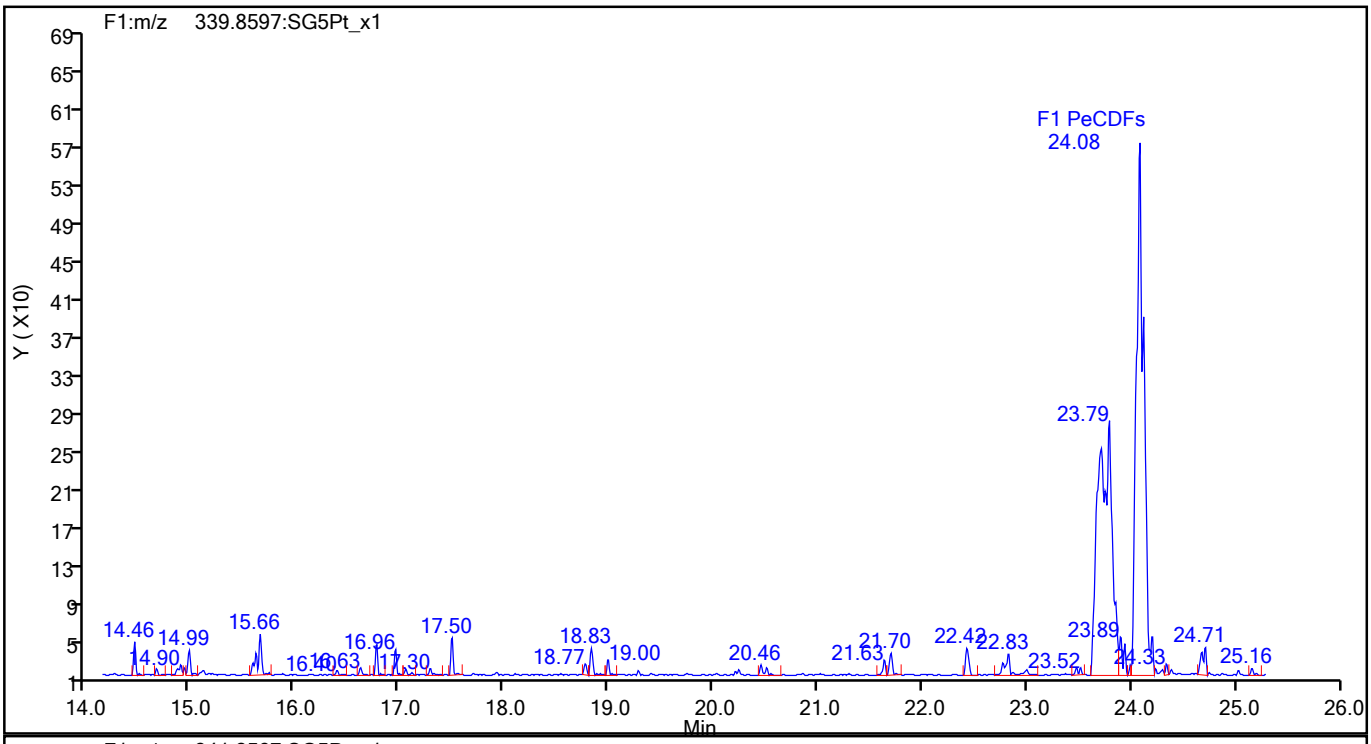

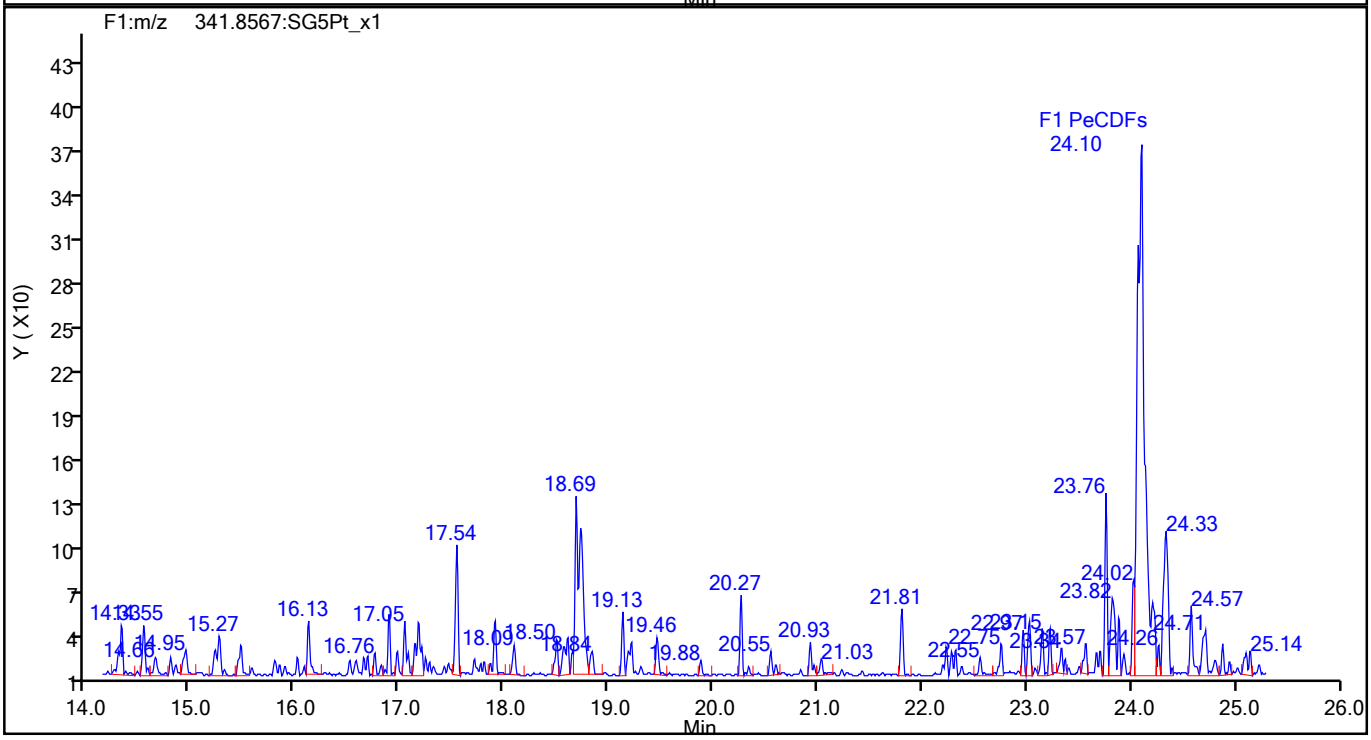

777759

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

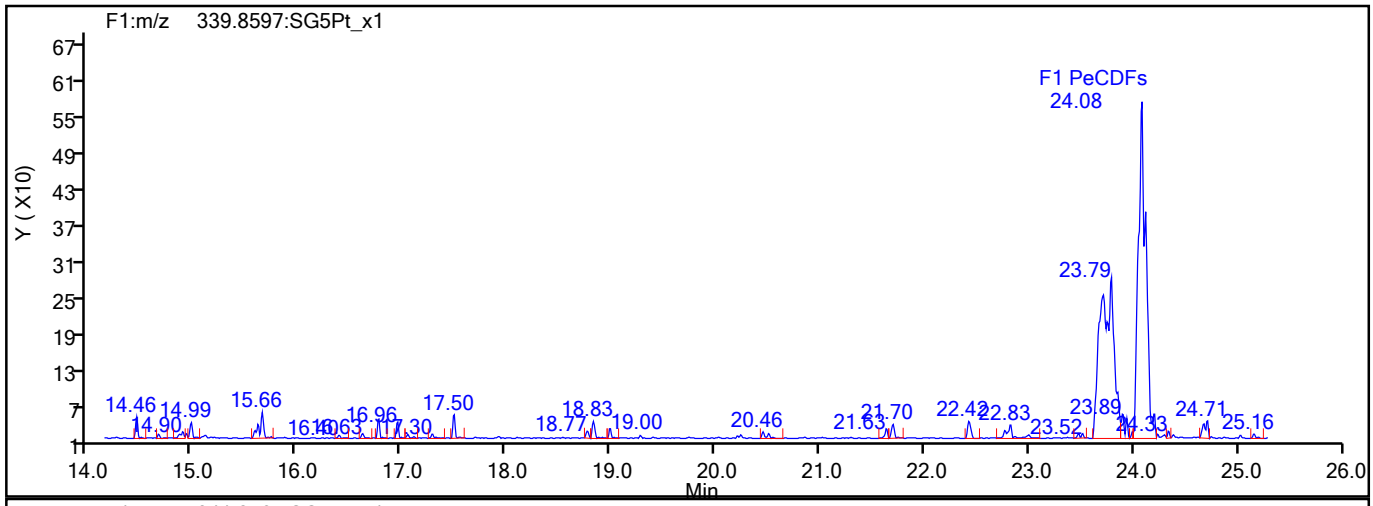

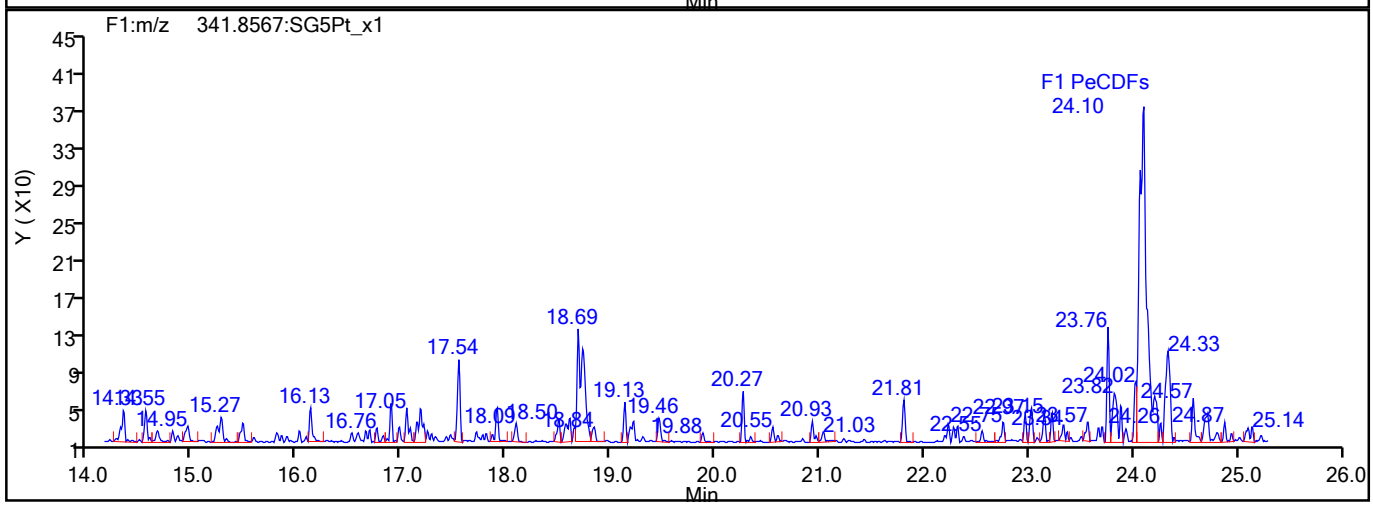

F1 PeCDFs Interference Mass

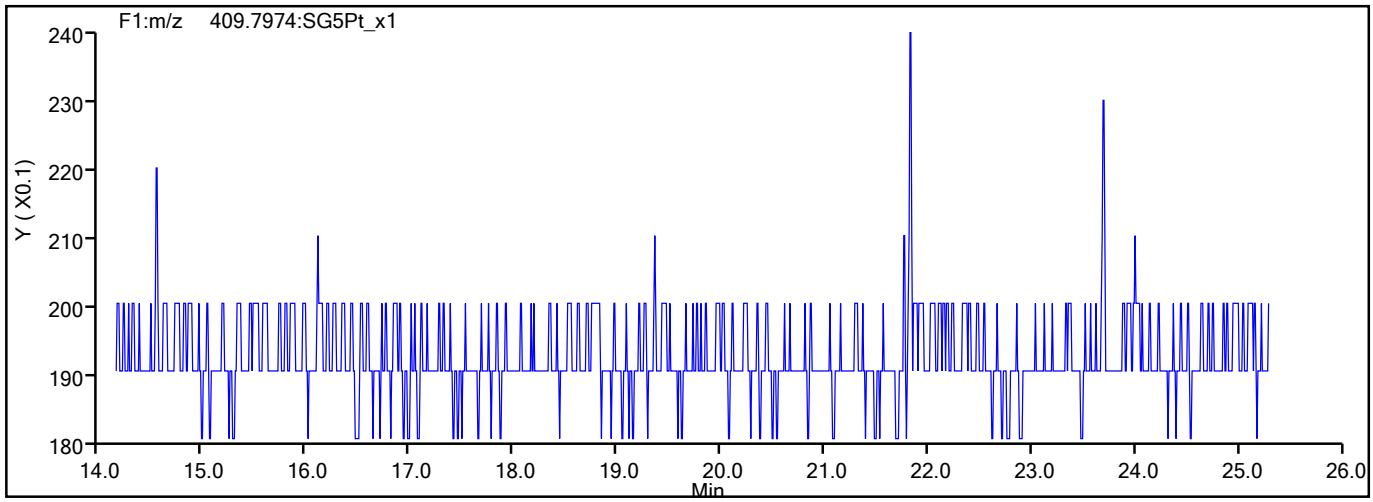

777760

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

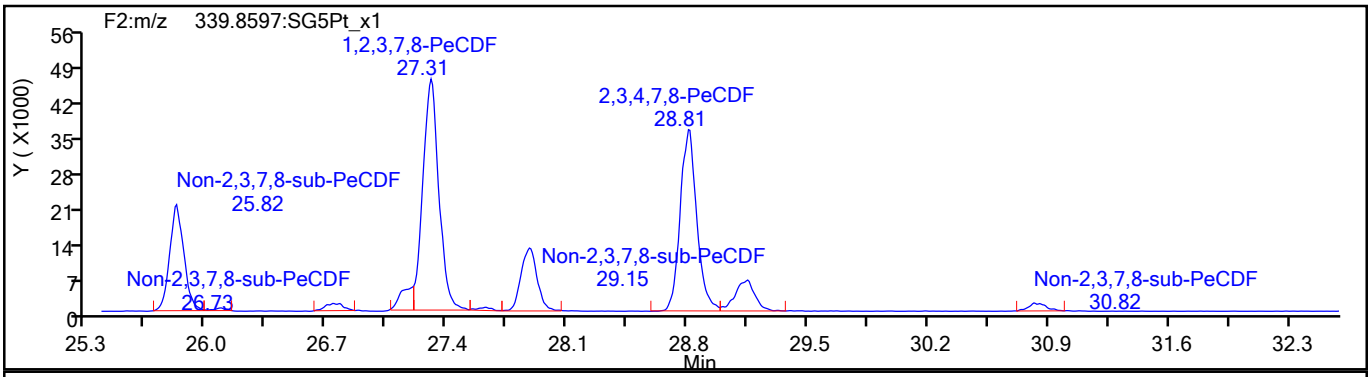

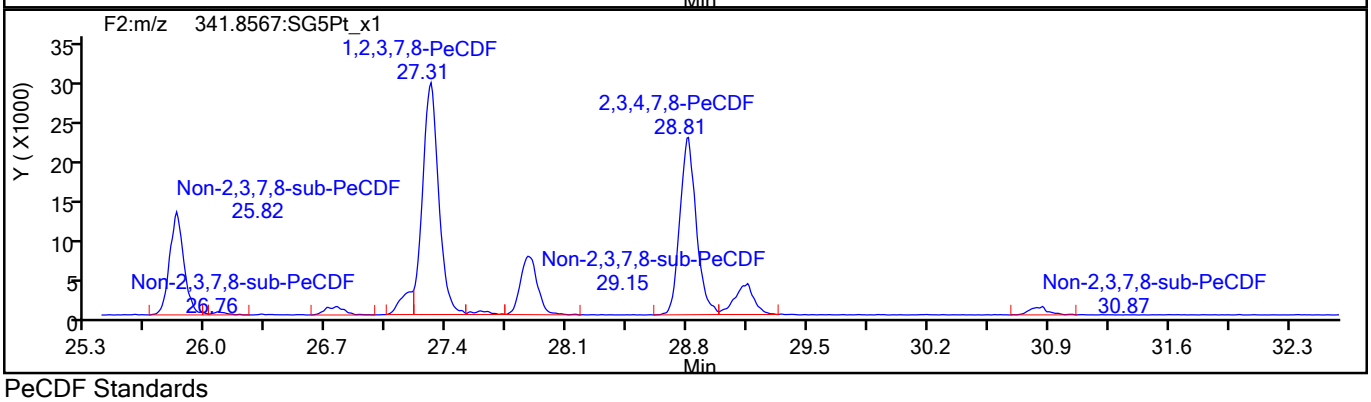

PeCDF Standards

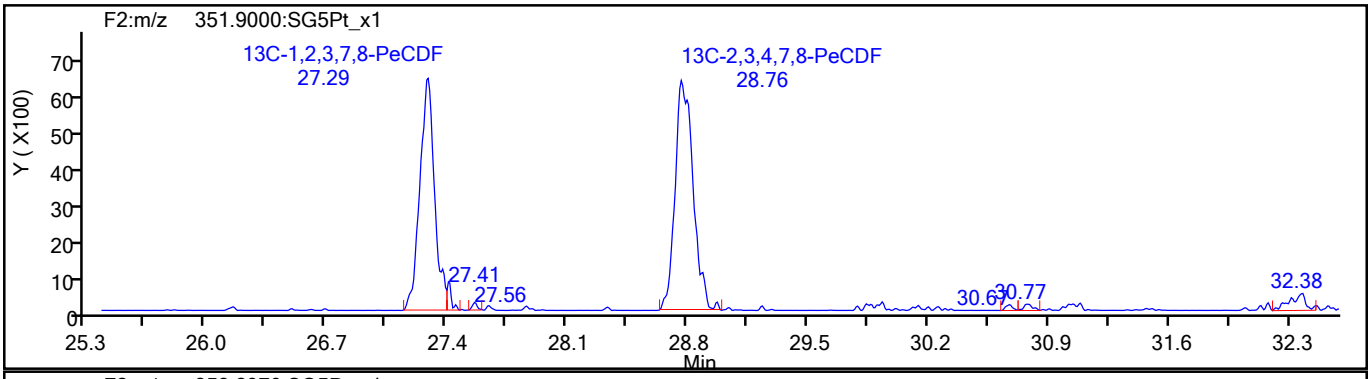

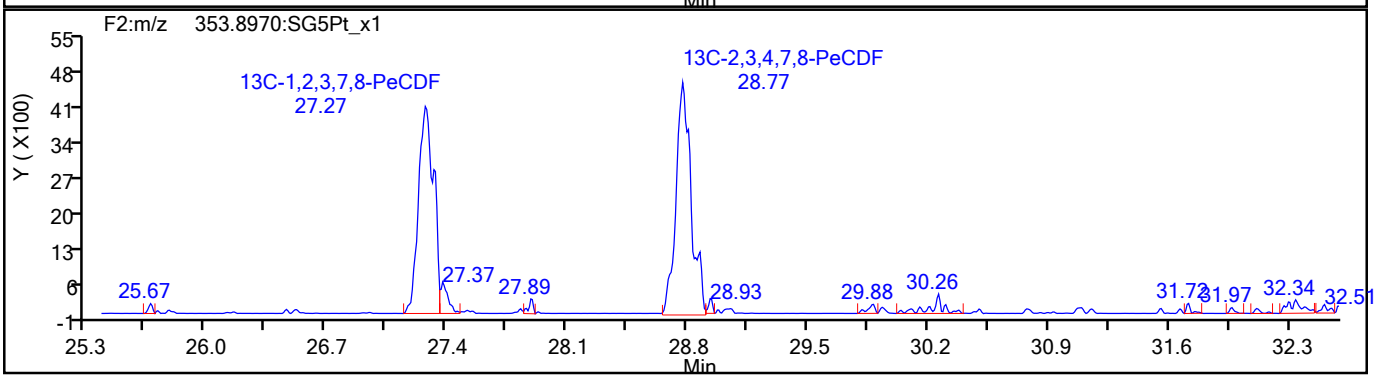

777761

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

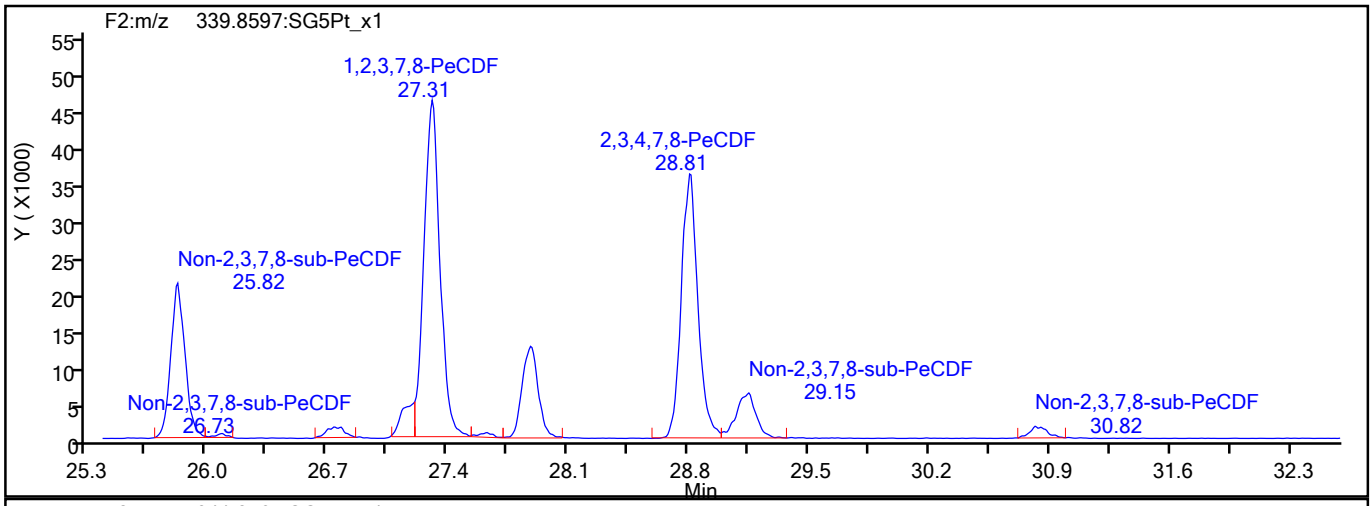

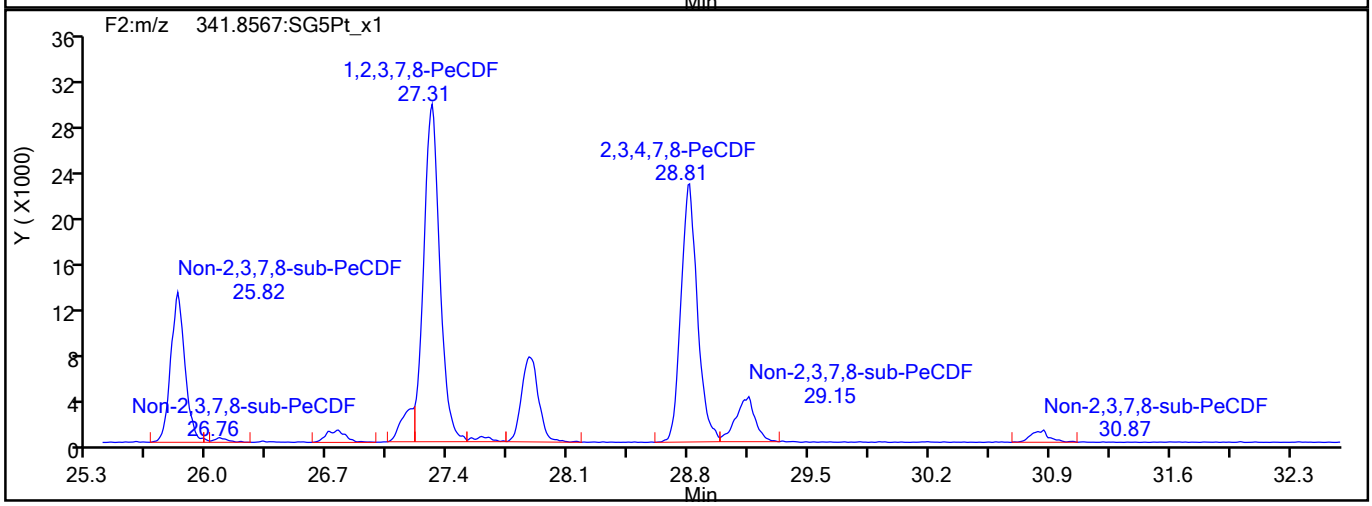

PeCDF Interference Mass

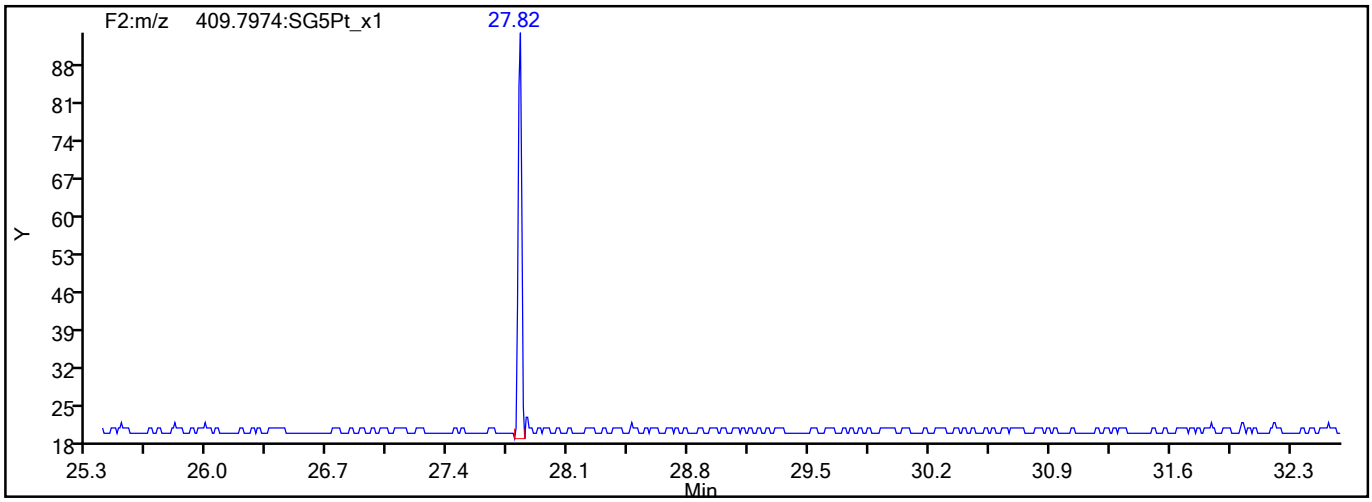

777762

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

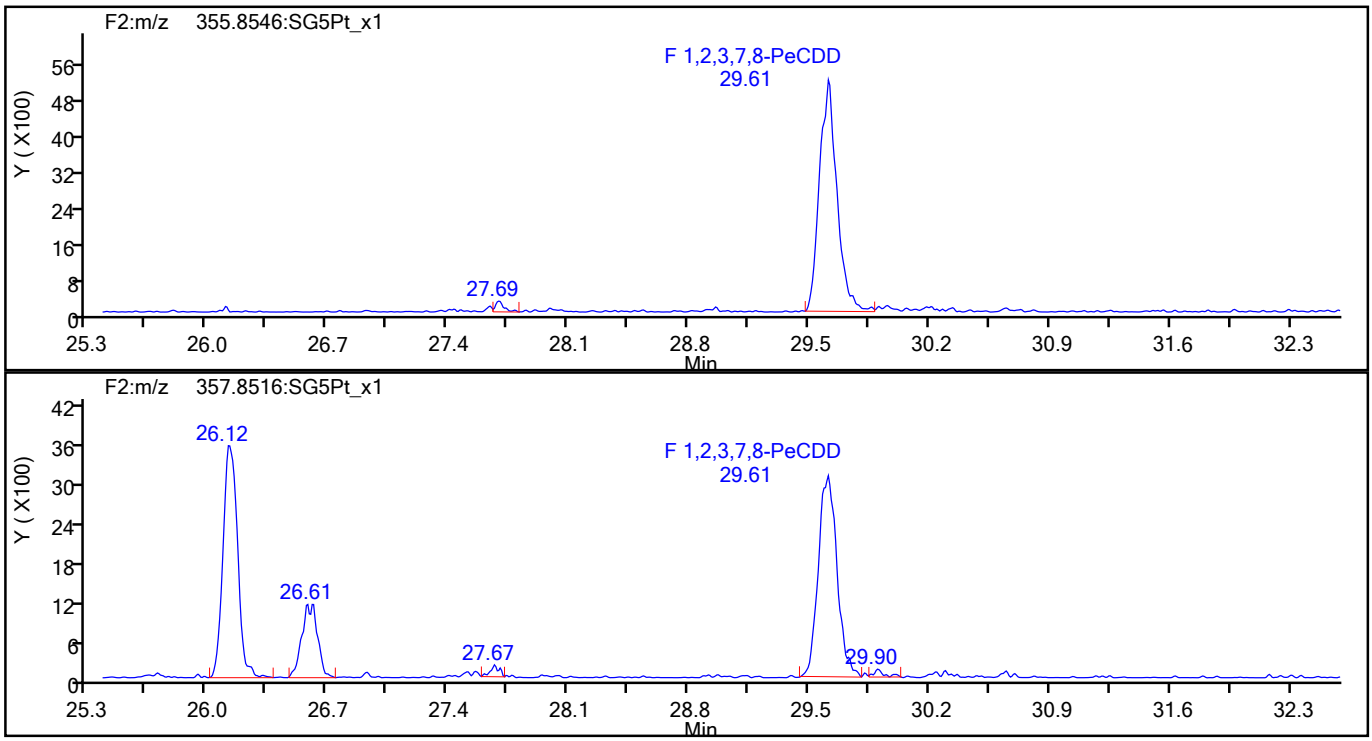

PeCDD Standards

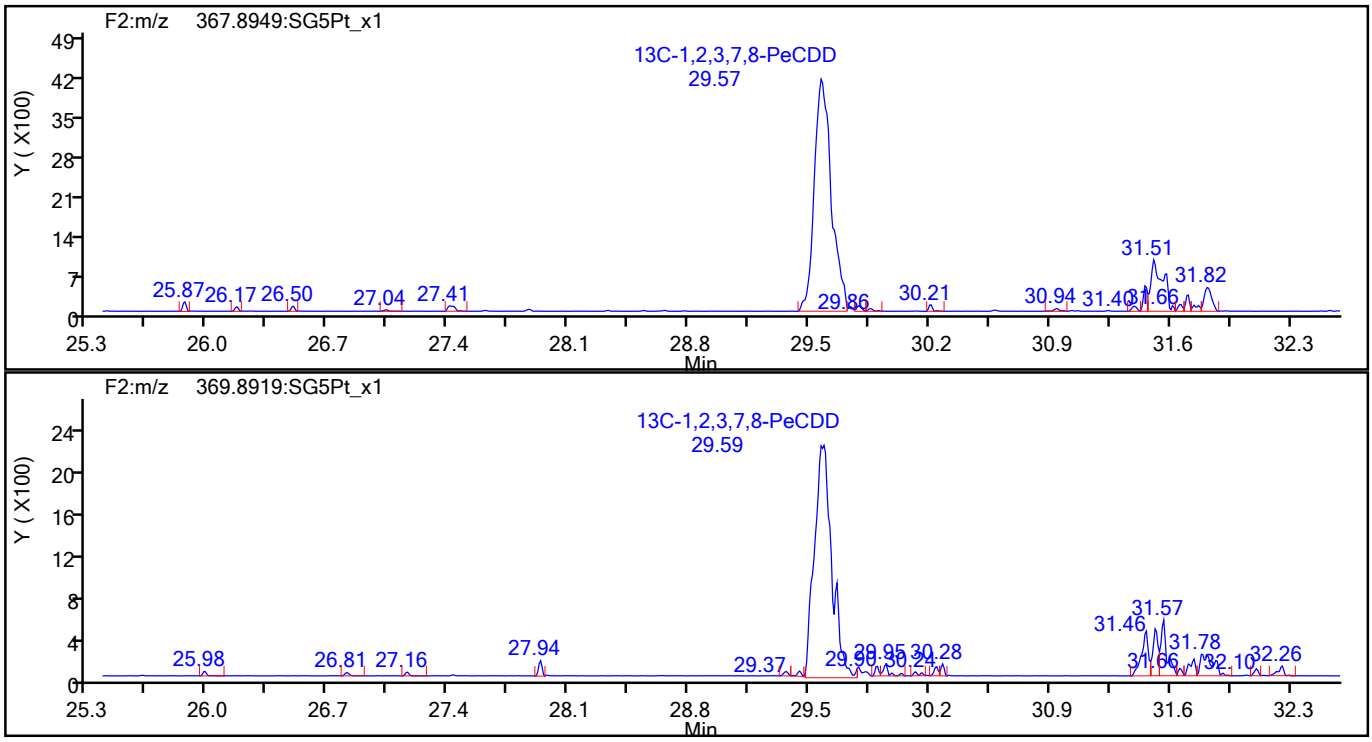

777763

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

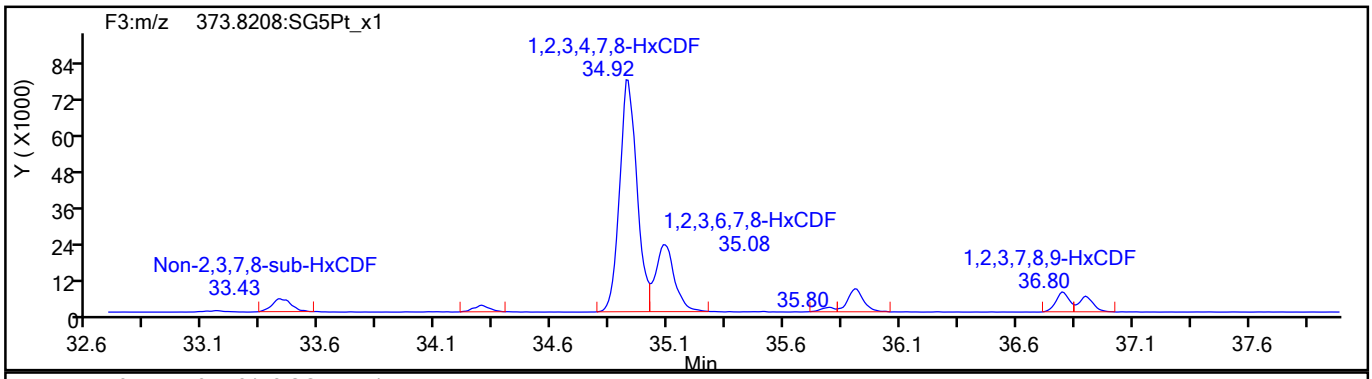

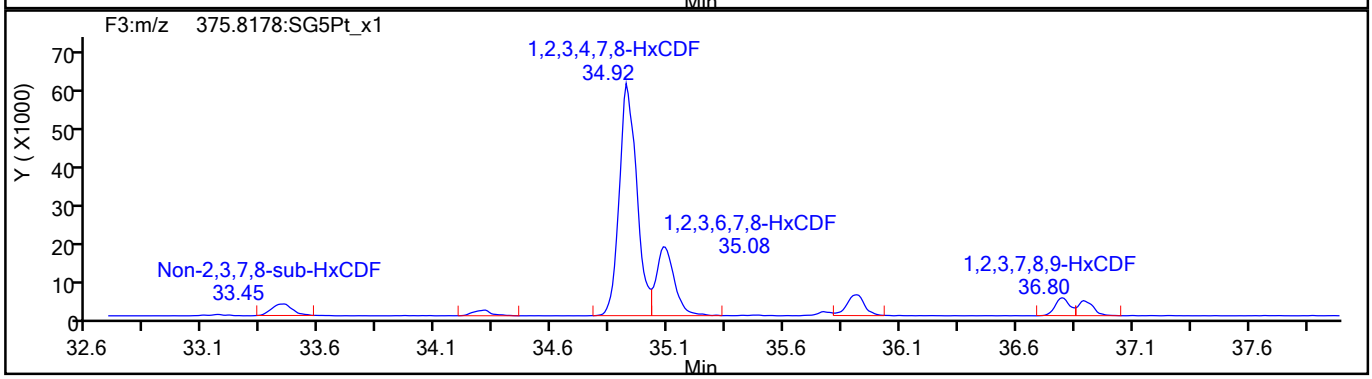

HxCDF Standards

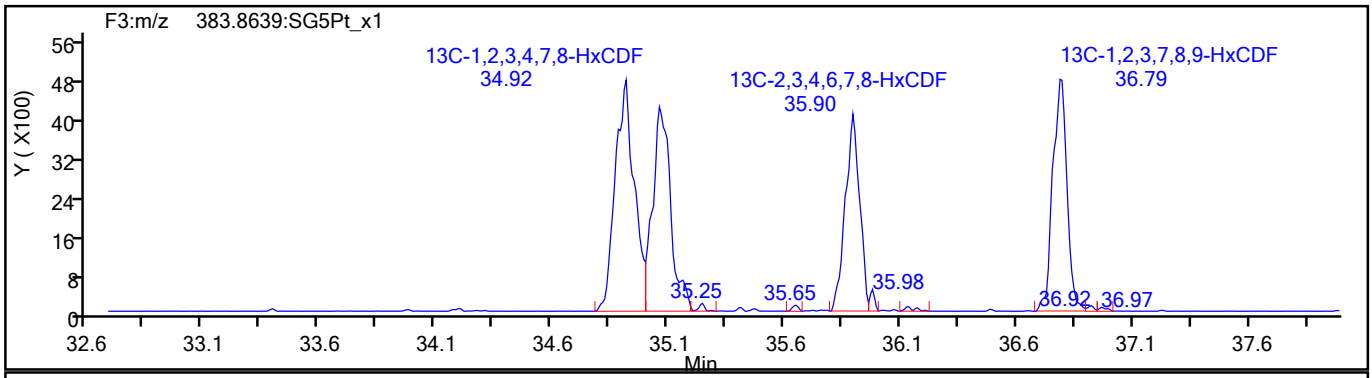

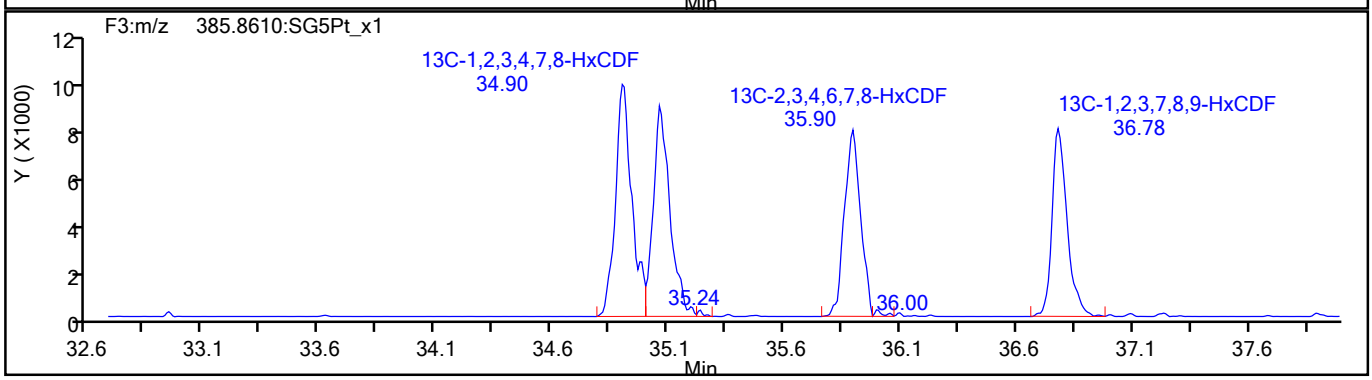

777764

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

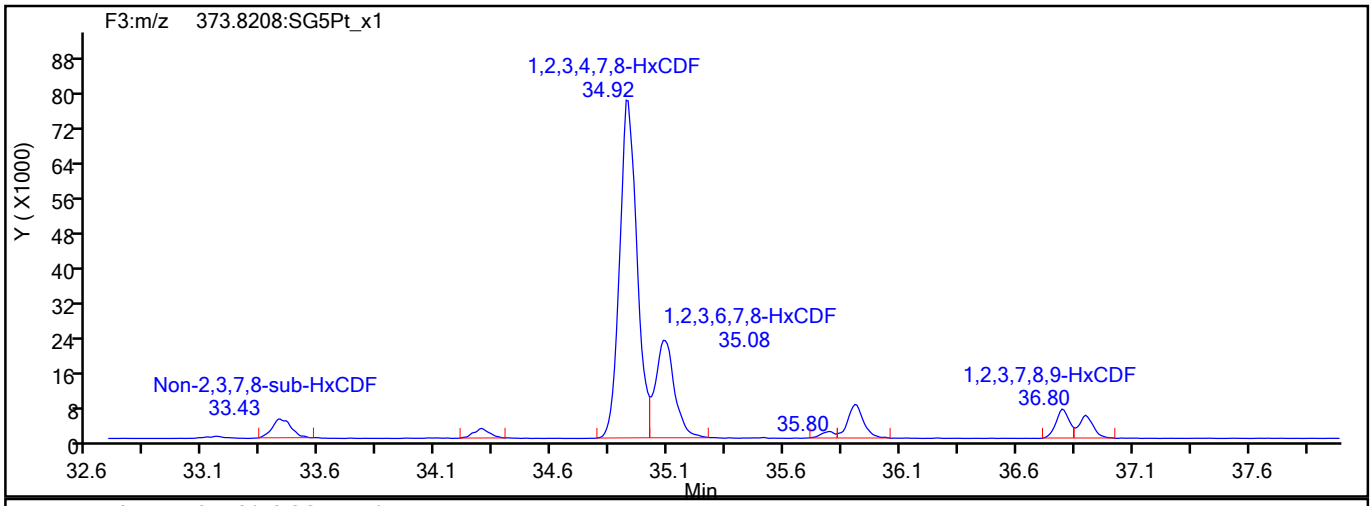

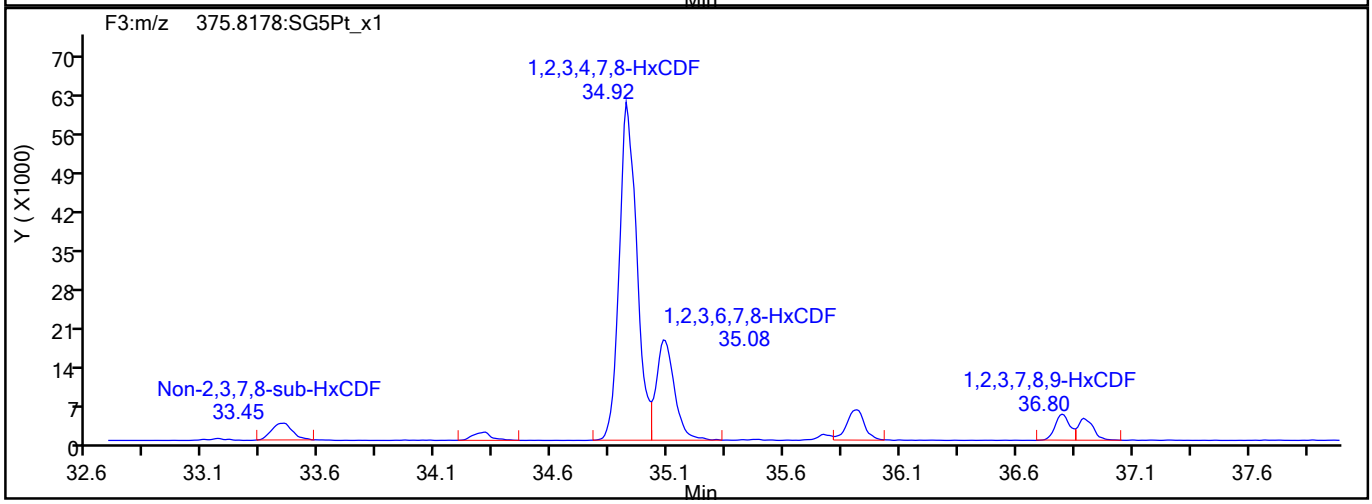

HxCDF Interference Mass

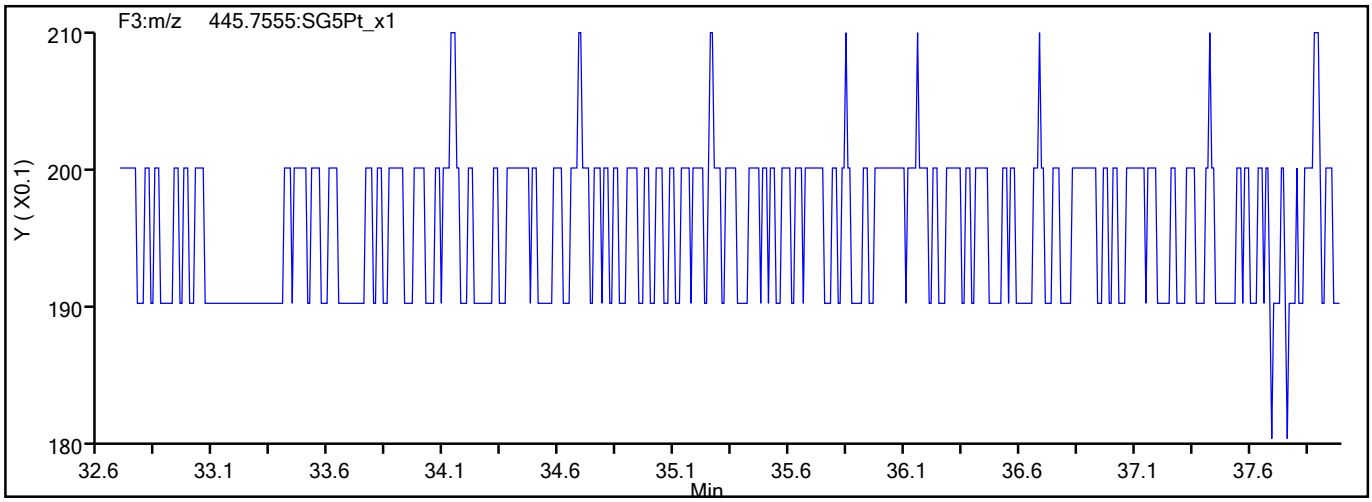

777765

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

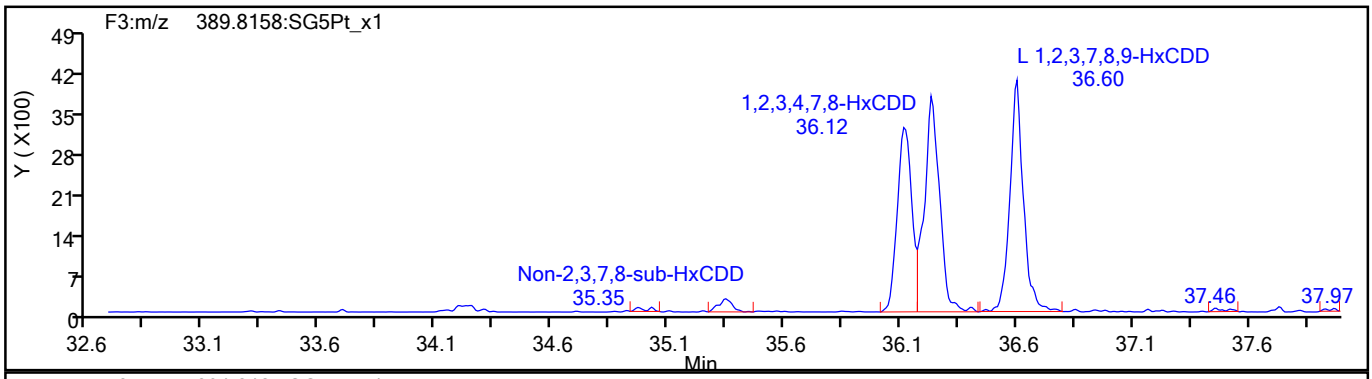

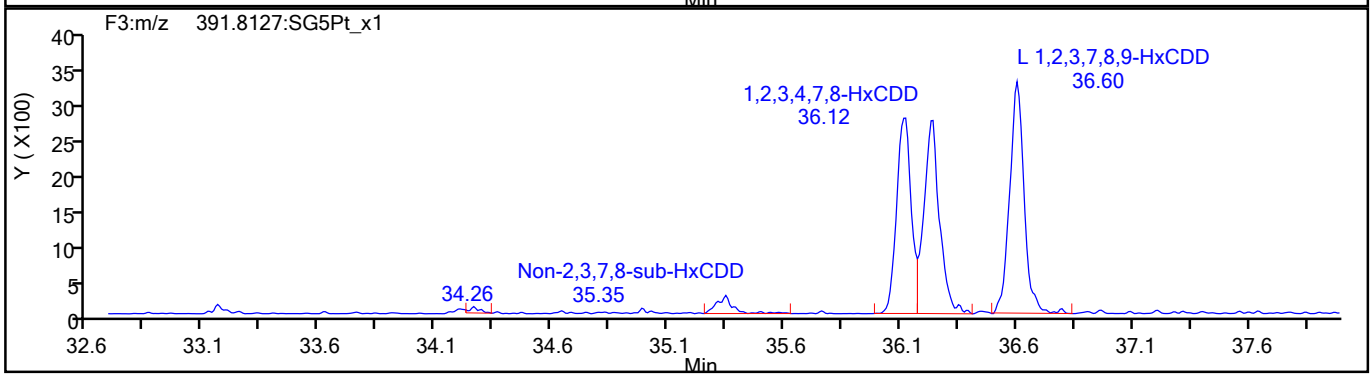

HxCDD Standards

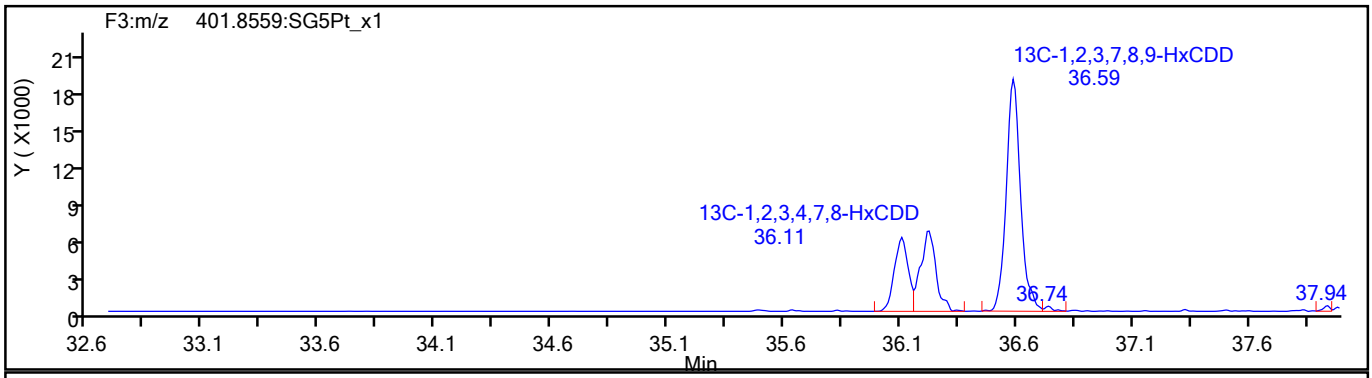

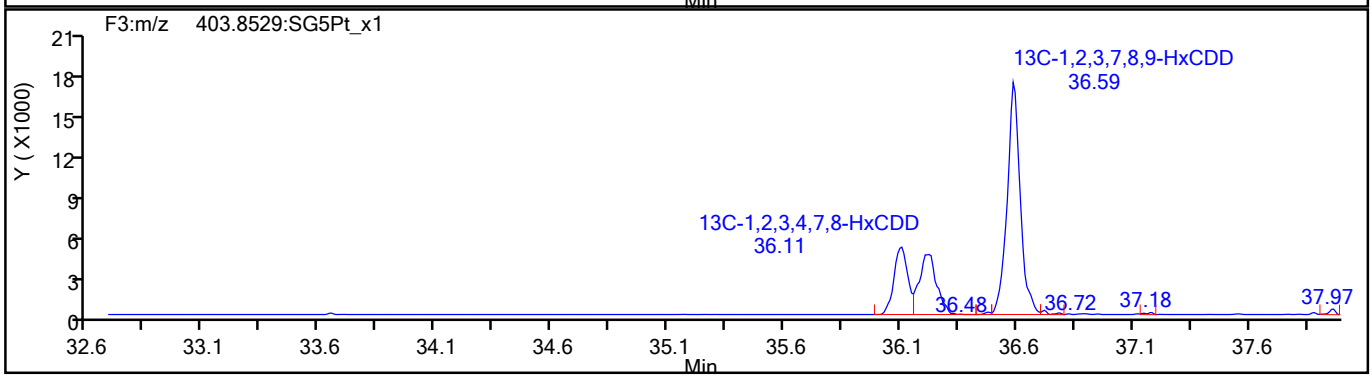

777766

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

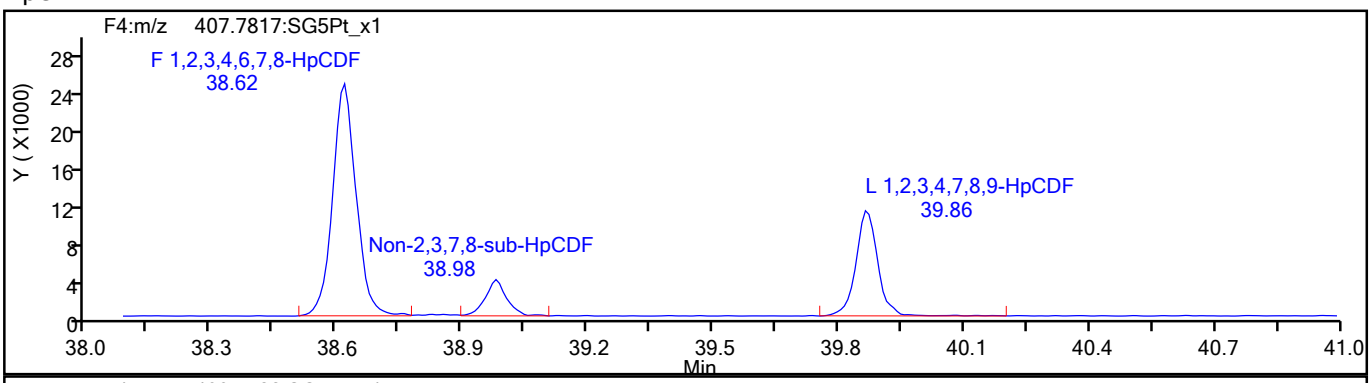

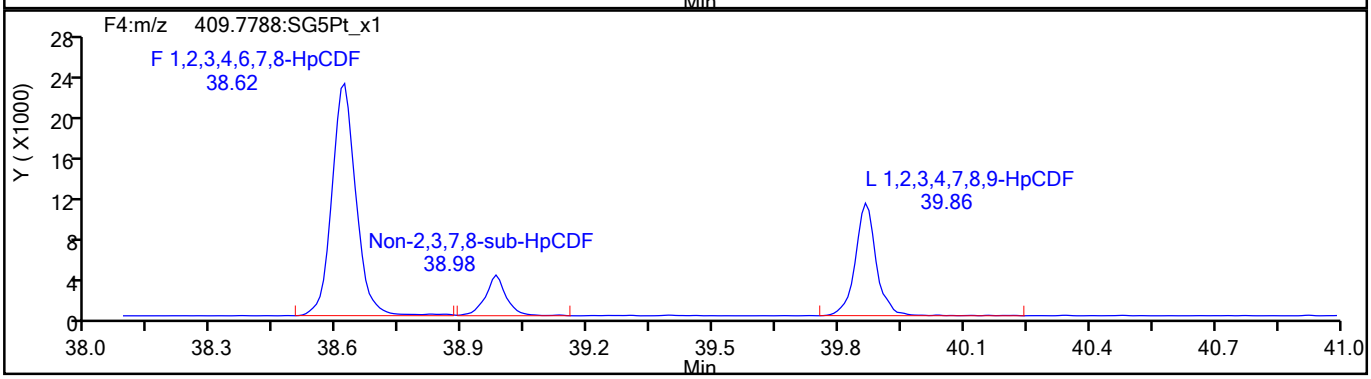

HpCDF Standards

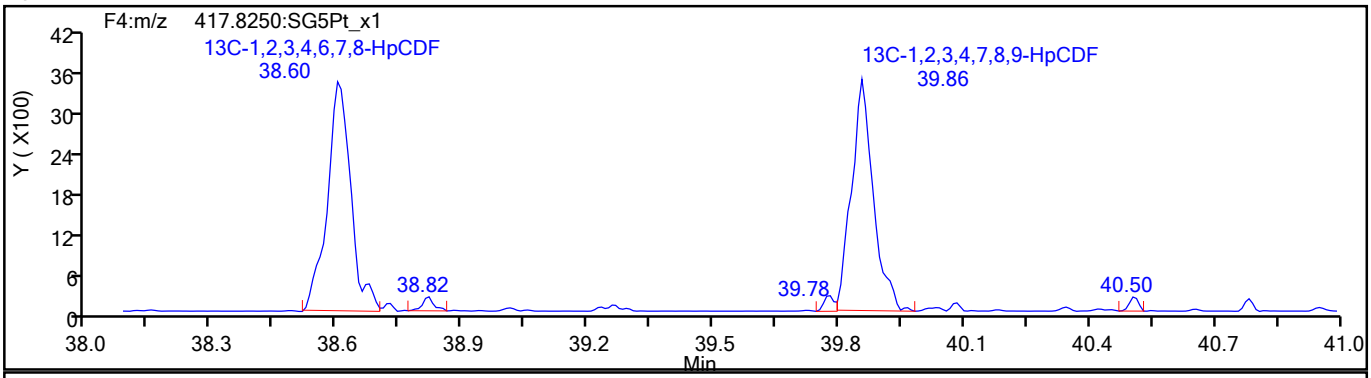

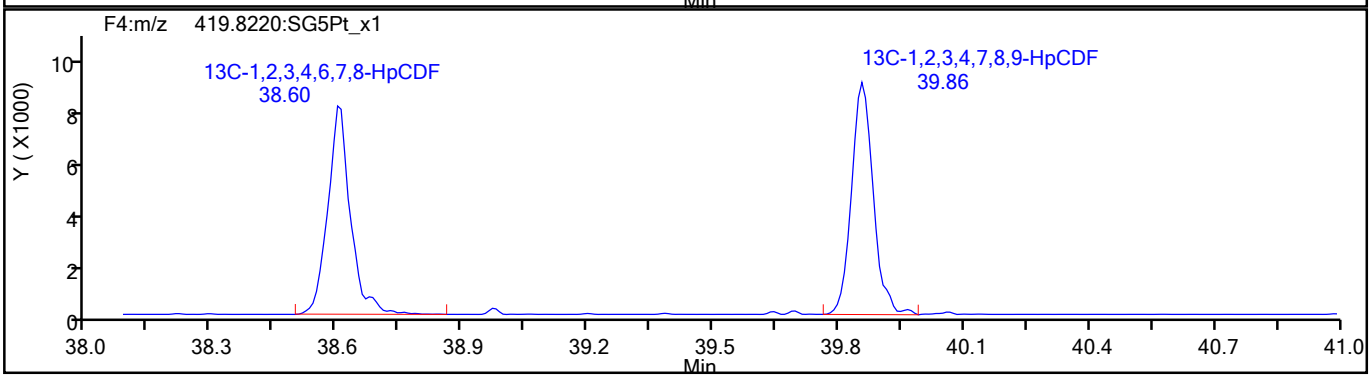

777767

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

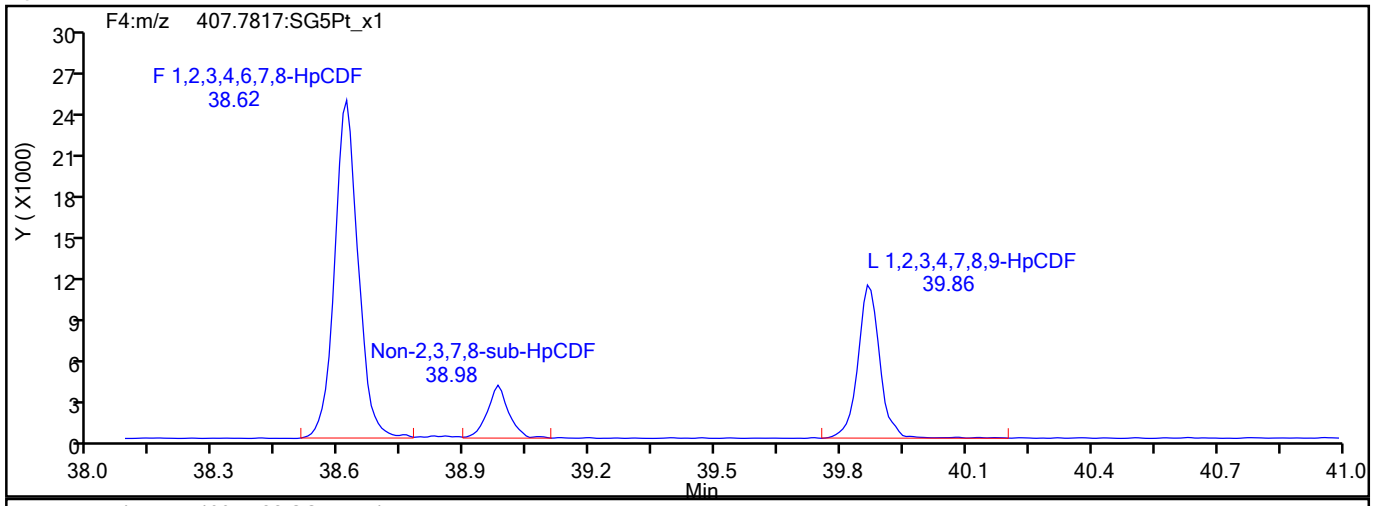

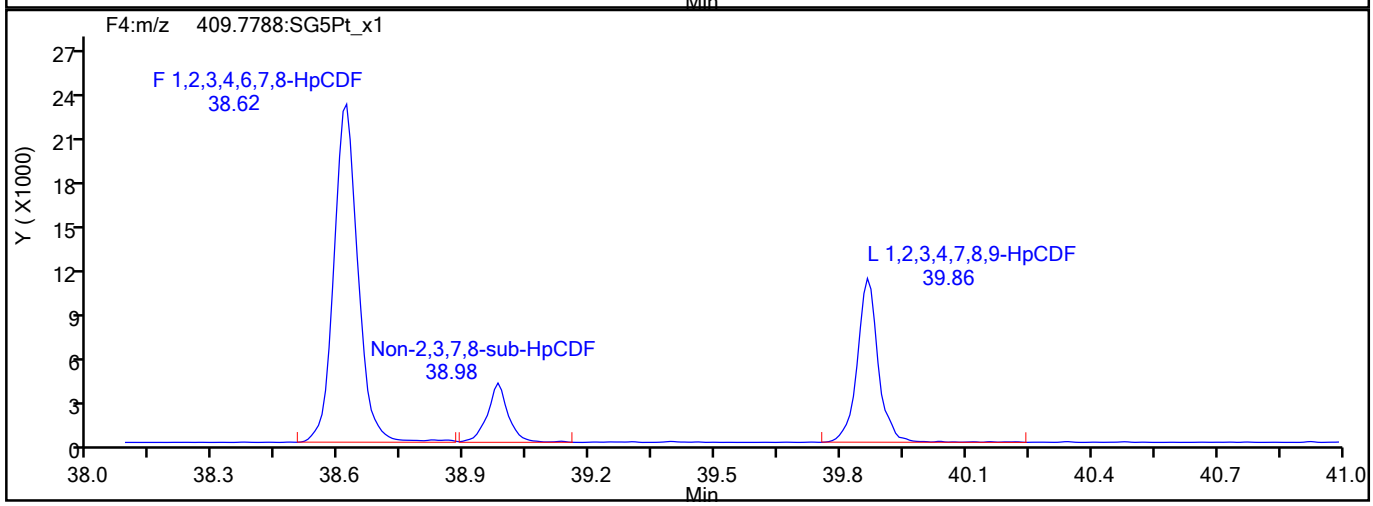

HpCDF Interference Mass

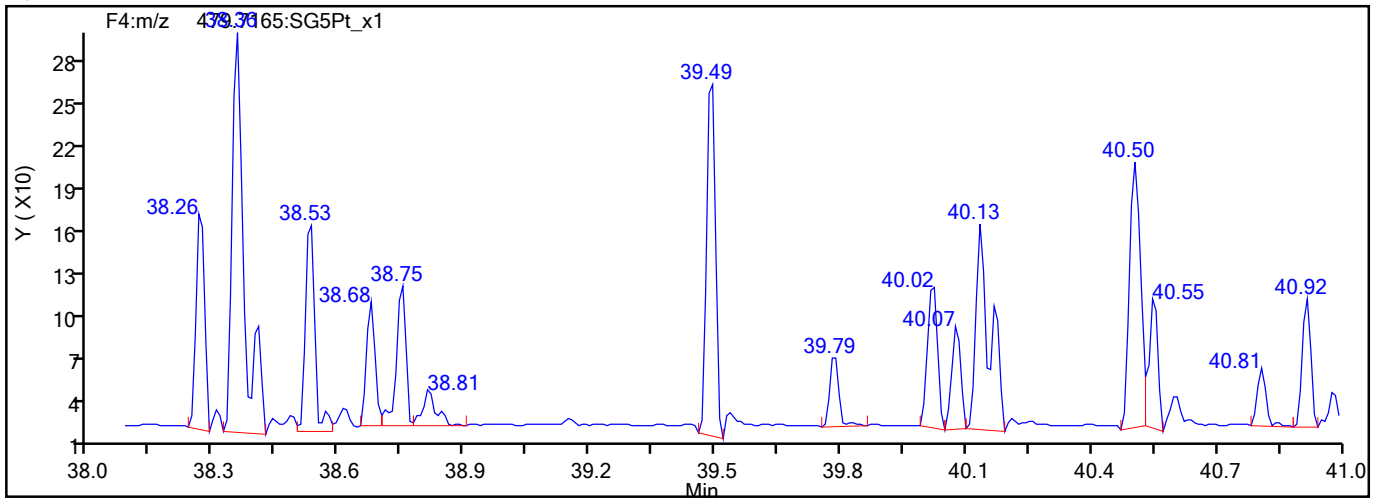

777768

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
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HpCDD

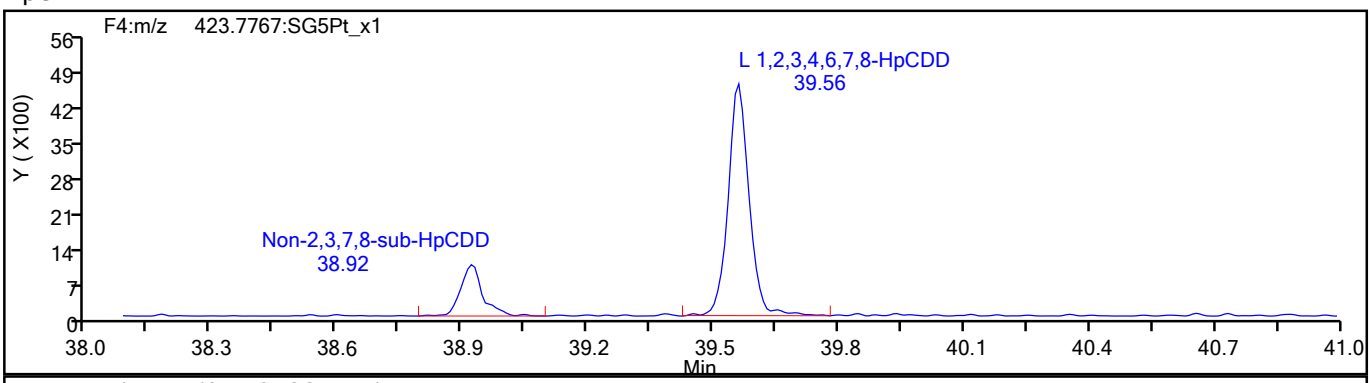

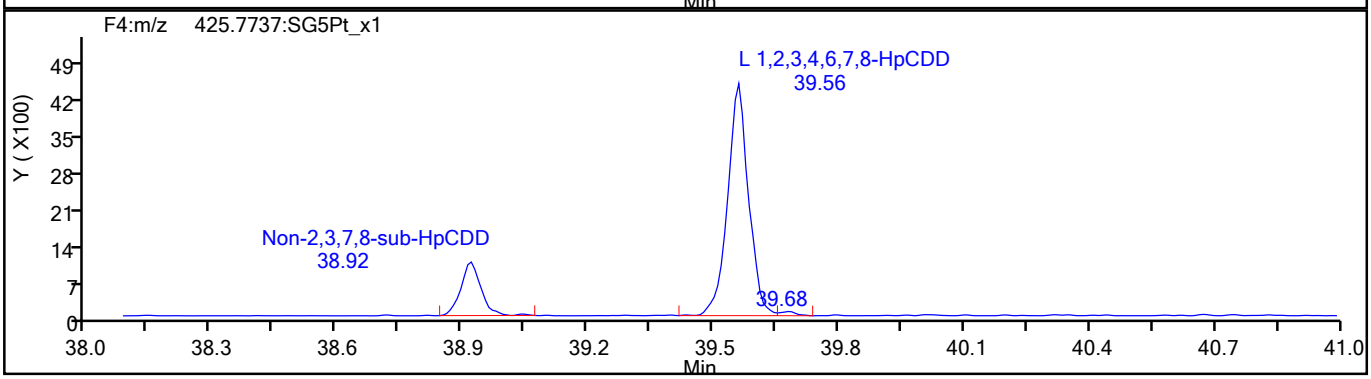

HpCDD Standards

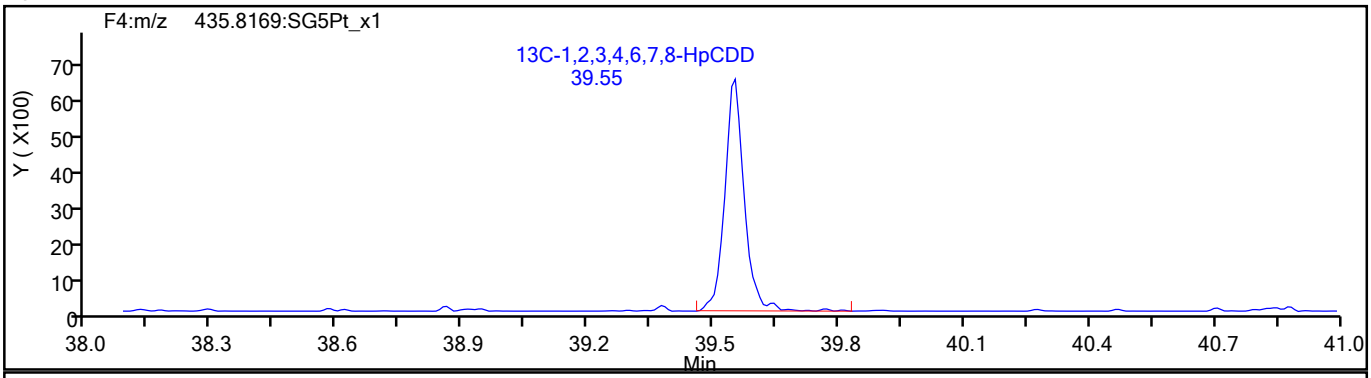

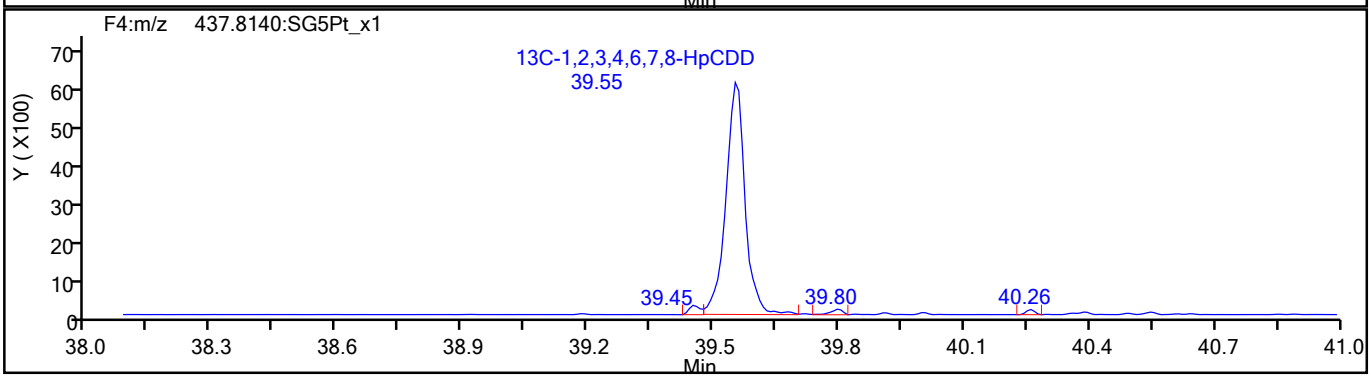

777769

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

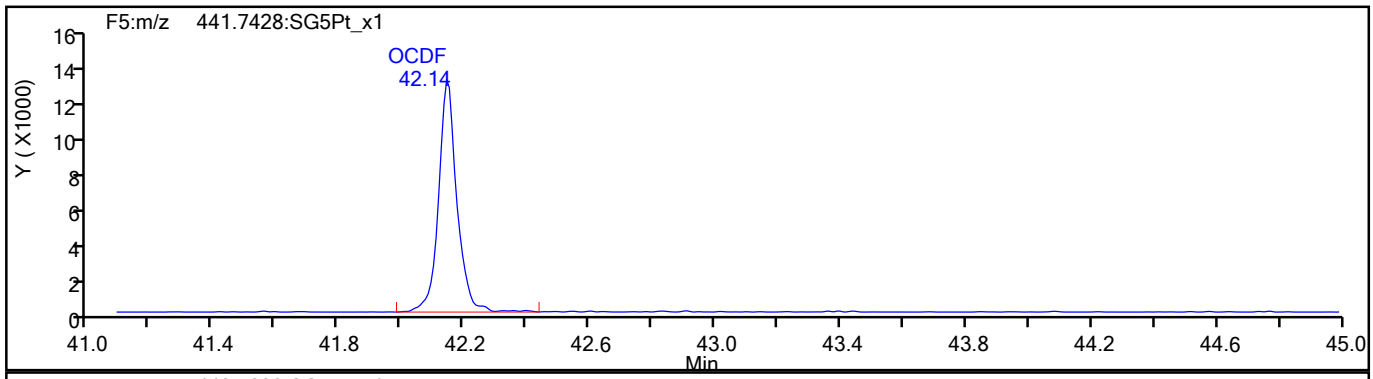

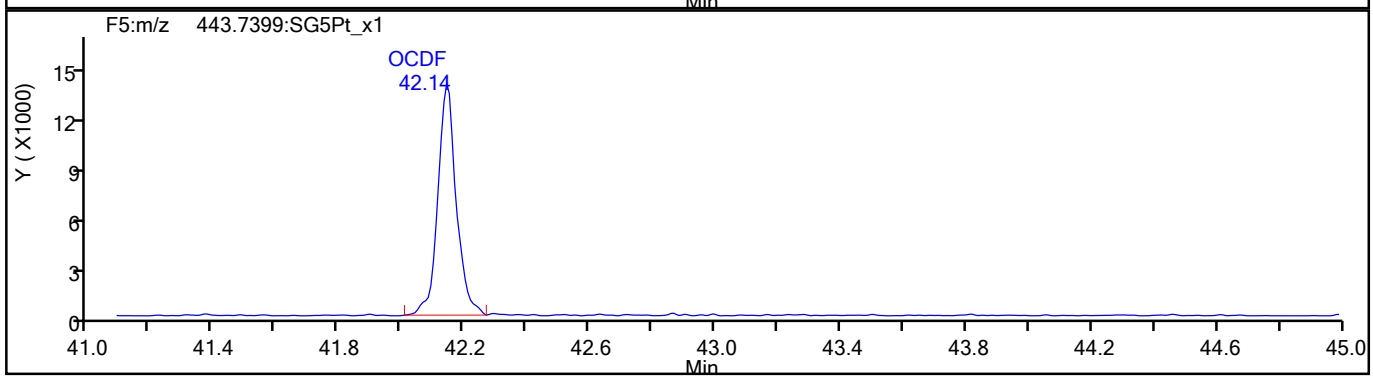

OCDF Standards

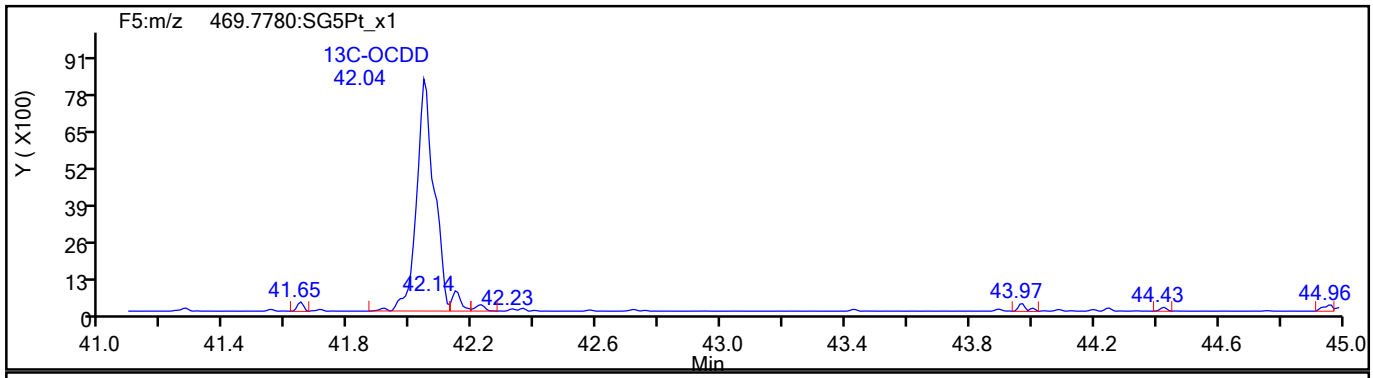

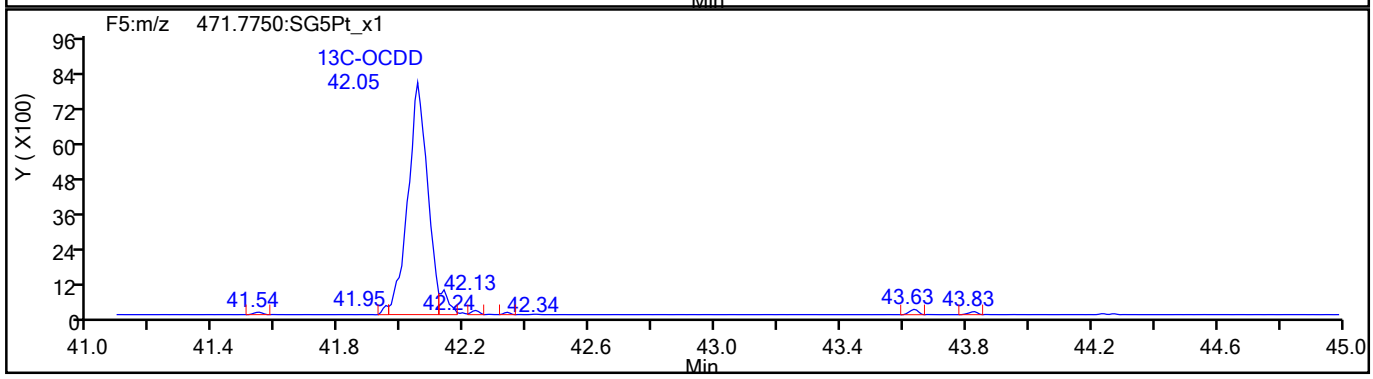

777770

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

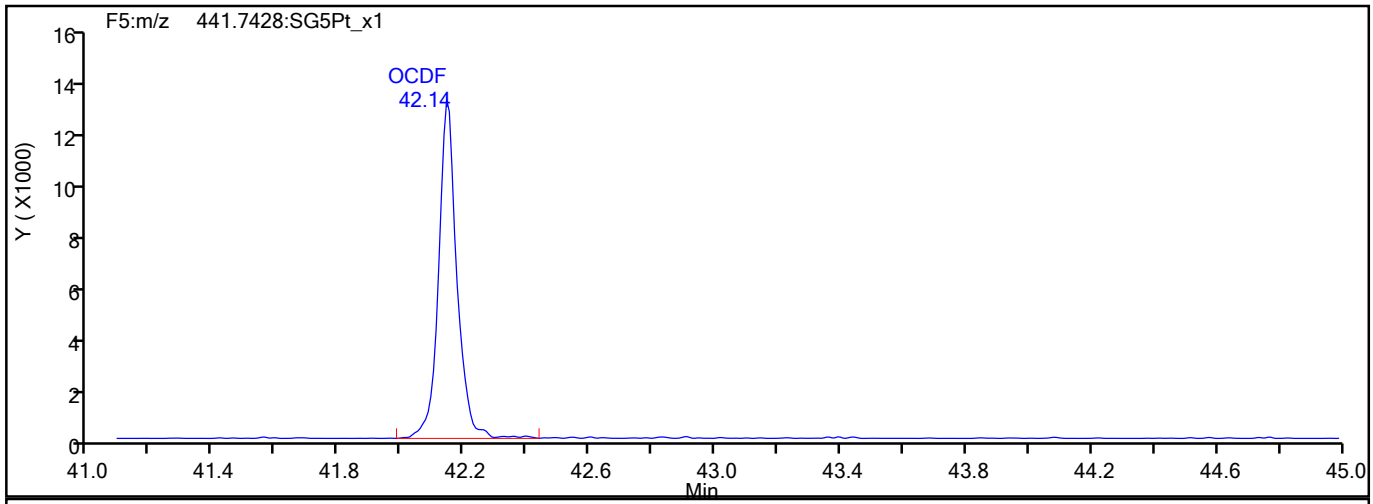

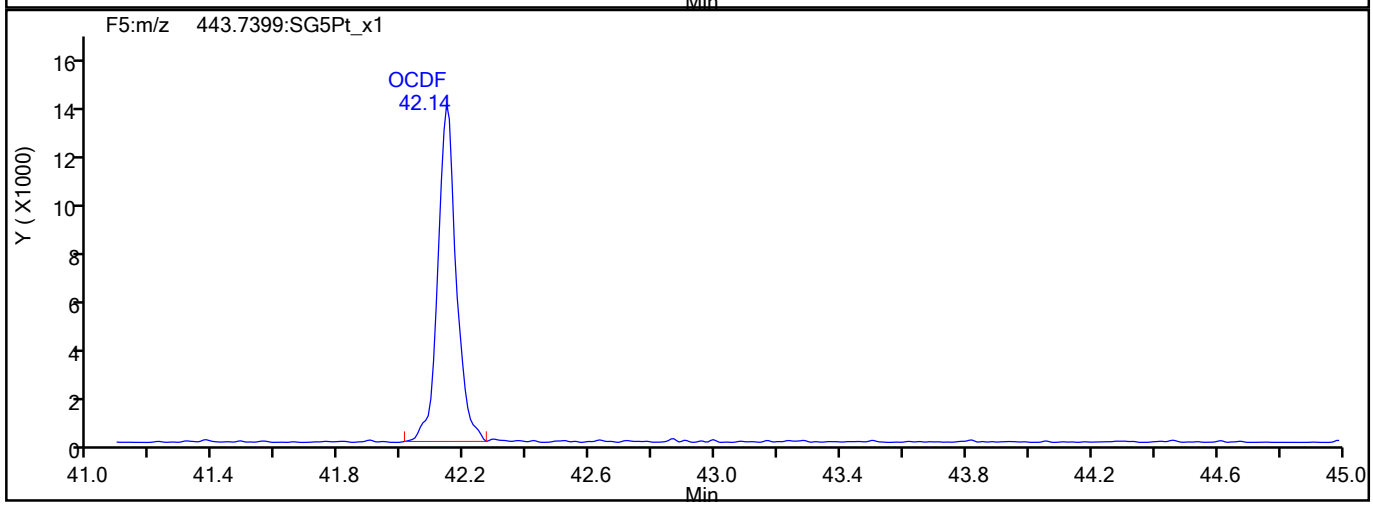

OCDF Interference Mass

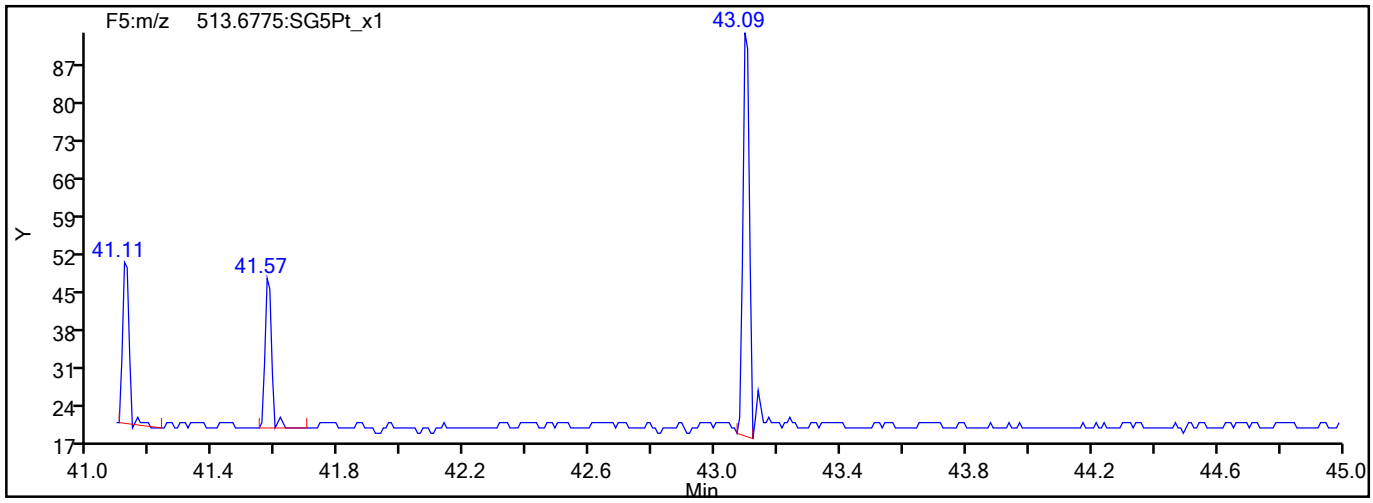

777771

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

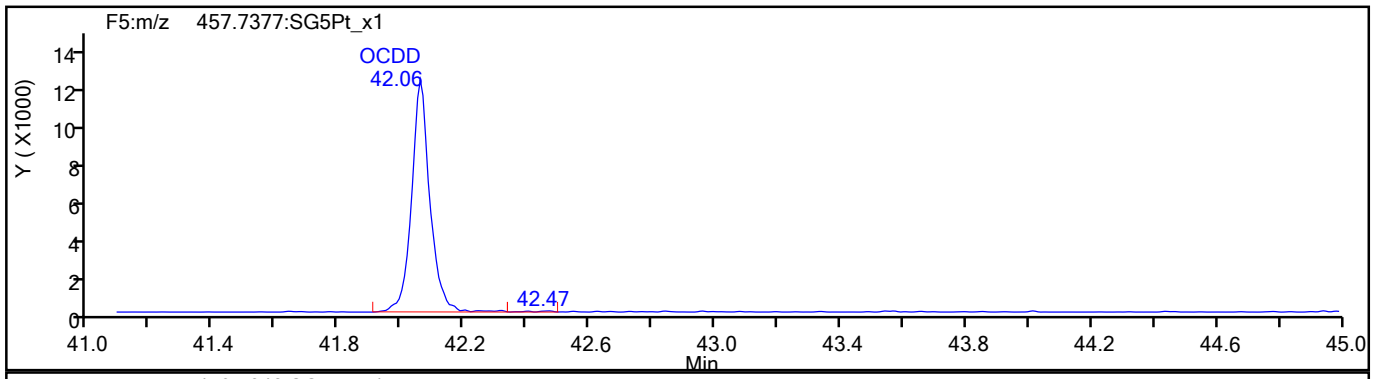

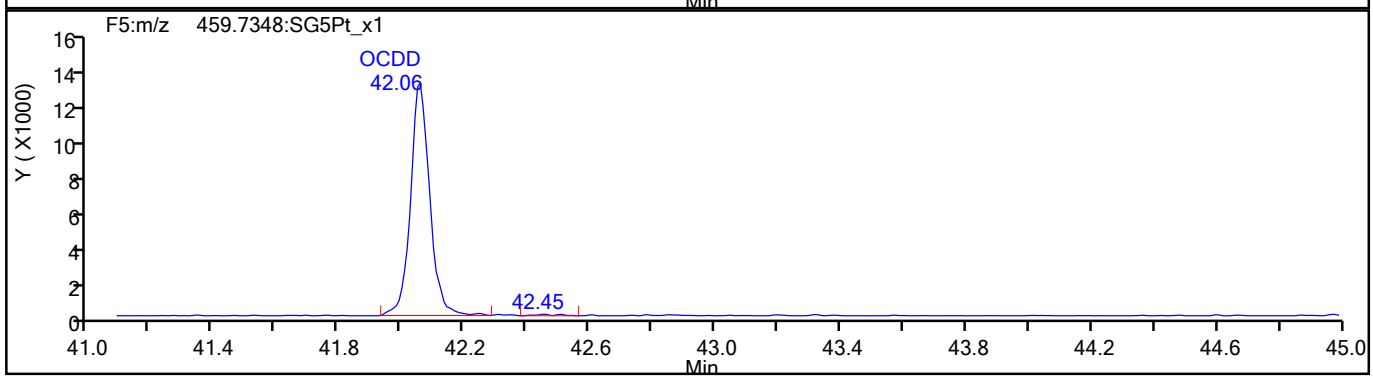

OCDD Standards

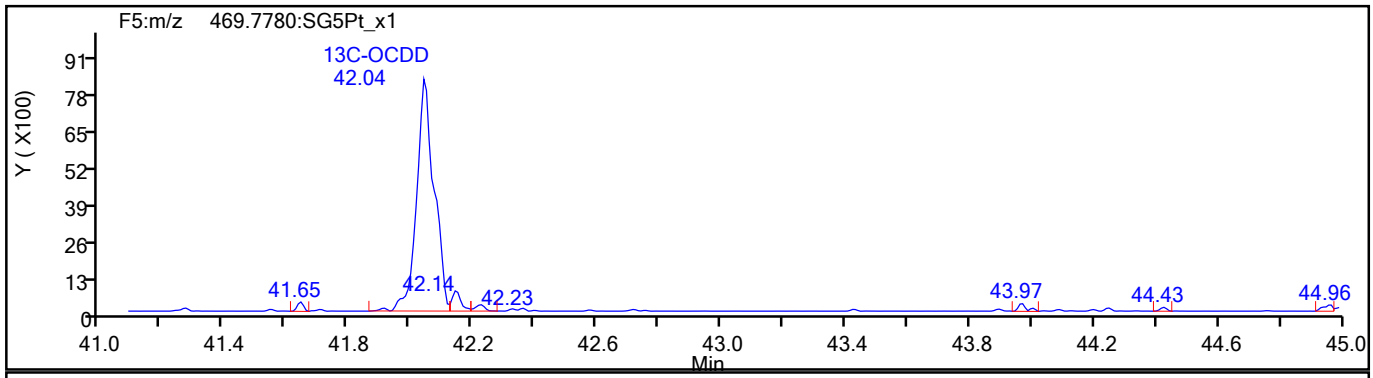

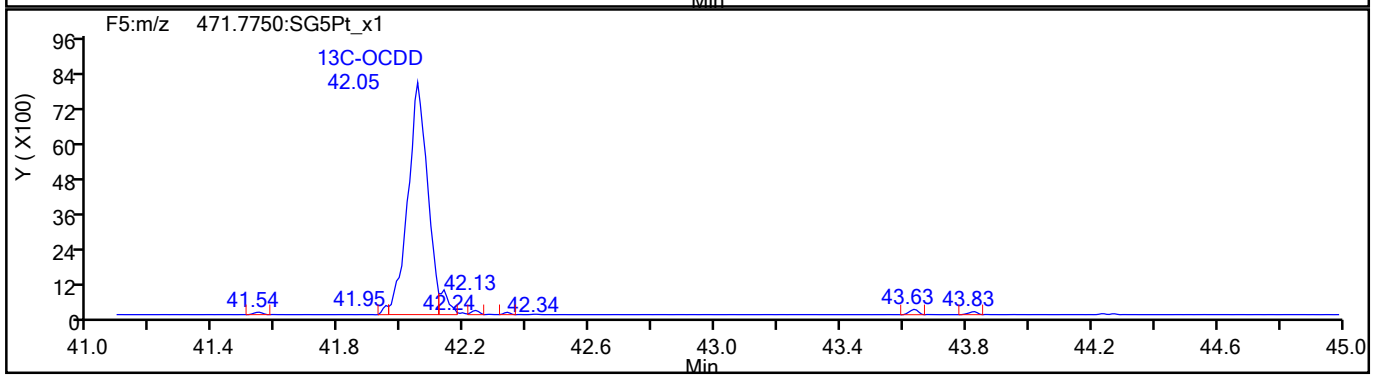

777772

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

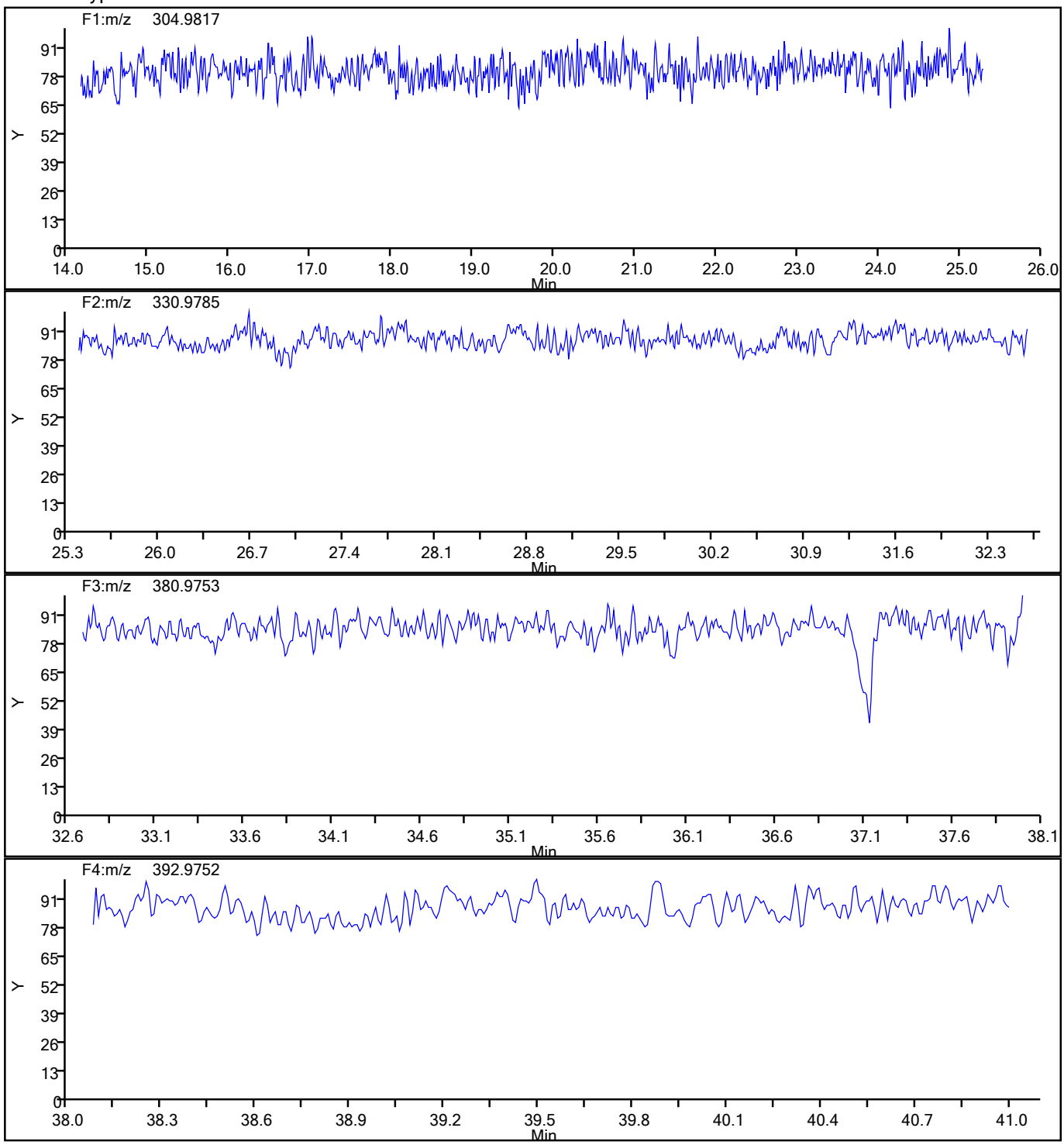

777773

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
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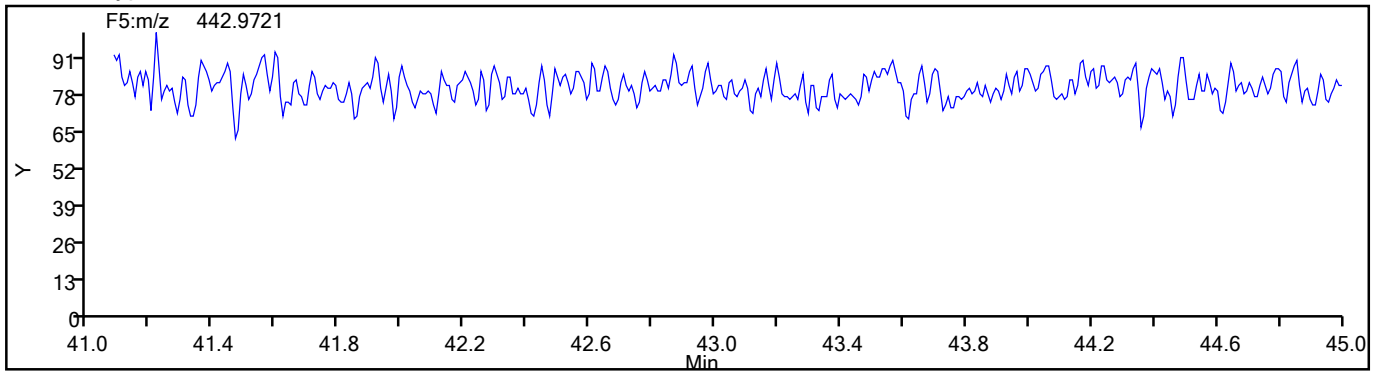

777774

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76888-A-1-B MS RA
Matrix: Sediment
Lab File ID: 25AU2111D2_005.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.30(g)
Date Analyzed: 08/25/2021 11:28
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519650
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	121000		99	99

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	29		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	56		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d
Lims ID: 320-76888-A-1-B MS
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MS
Inject. Date: 25-Aug-2021 11:28:39 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-B MS X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:17:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.357	6847273	0.88	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.687	2646635	0.82	1.3327	2.900	2.900	1.094	1.094	29.00	a
2,3,7,8-TCDF	17.701	882531971	0.79	0.9978	3341.9	3341.9	2.744	2.744	3.3E+005	Ea
D 13C-2,3,7,8-TCDD	16.110	2214123	0.71	0.8749	3.696	3.696	8.075	8.075	36.96	nM
2,3,7,8-TCDD	16.137	136342870	0.79	1.0570	582.6	582.6	2.356	2.356	58258	Ea
$ 37Cl4-2,3,7,8-TCDD	16.151	1328723		0.8648	2.244	2.244	0.2056	0.2056	56.10	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d
Lims ID: 320-76888-A-1-B MS
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MS
Inject. Date: 25-Aug-2021 11:28:39 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-B MS X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:17:11

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.357	16.285	4		3197075	672996	204683	511707	3		M
333.9339	16.357	16.285	4		3650198	767052	202295	505737	4	0.88(0.65-0.89)	M
13C-2,3,7,8-TCDF											a
315.9419	17.687	17.601	5	1.081	1191927	240522	34955	87387	7		a
317.9389	17.660	17.601	3	1.080	1454708	284087	49007	122517	6	0.82(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.701	17.629	4	1.001	389582918	71251385	26379	65947	2701		a
305.8987	17.687	17.629	3	1.000	492949053	90251282	31068	77670	2905	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.110	16.051	3	0.985	918126	196548	204683	511707	1		M
333.9339	16.110	16.051	3	0.985	1295997	234740	202295	505737	1	0.71(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.137	16.079	3	1.002	60108927	13495486	24660	61650	547		a
321.8936	16.137	16.079	3	1.002	76233943	16893308	18305	45762	923	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.151	16.079	4	0.987	1328723	259553	10240	25600	25		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d				
Injection Date:	25-Aug-2021 11:28:39	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 18.58
Area: 683863
Amount: 1.788574
Amount Units: pg/ul

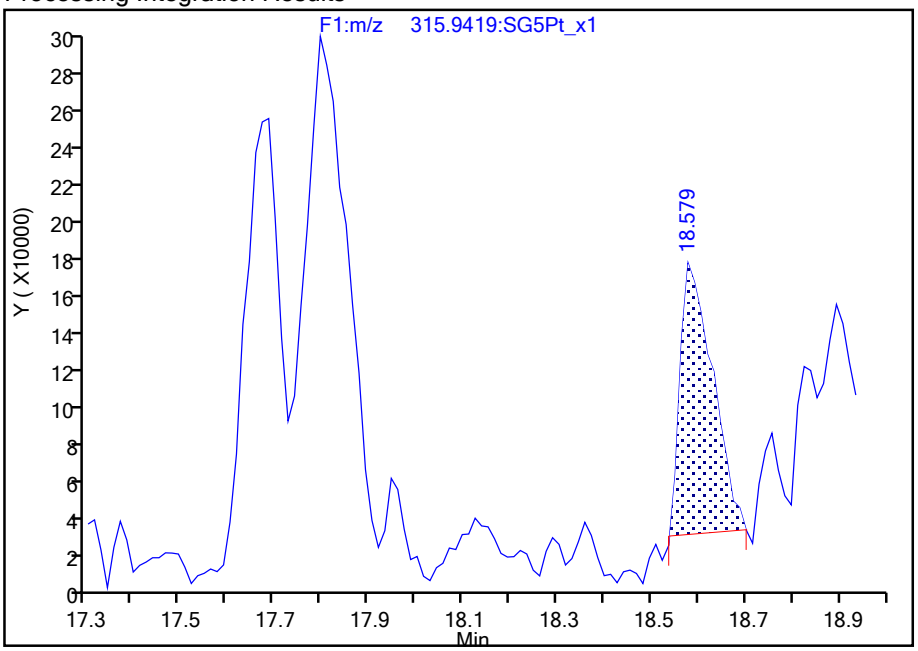

Manual Integration Results

RT: 17.69
Area: 1191927
Amount: 2.900338
Amount Units: pg/ul

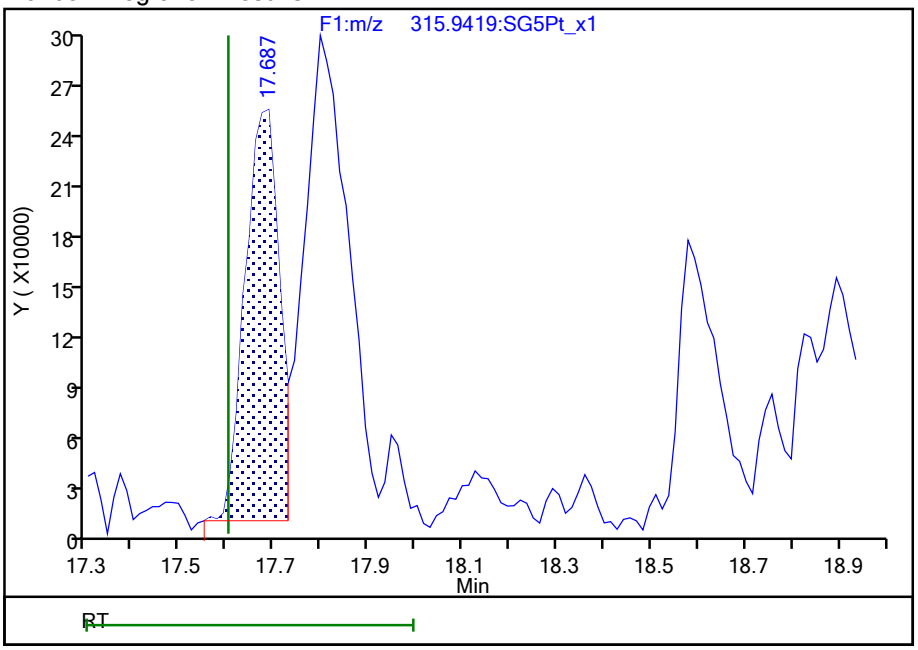

Reviewer: bennettd, 25-Aug-2021 13:16:44

Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d				
Injection Date:	25-Aug-2021 11:28:39	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.63

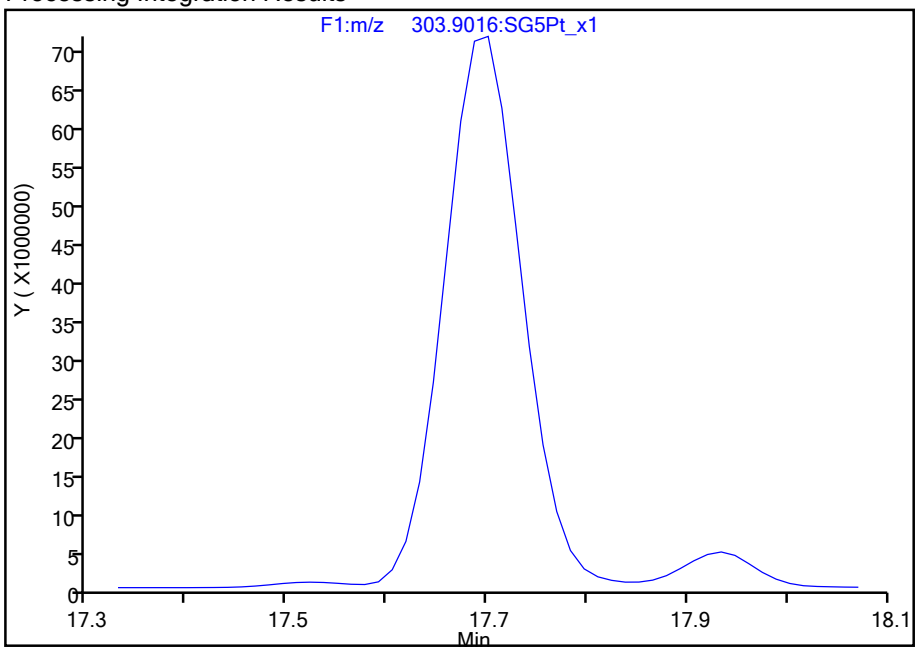

Manual Integration Results

RT: 17.70
Area: 389582918
Amount: 3341.8730
Amount Units: pg/ul

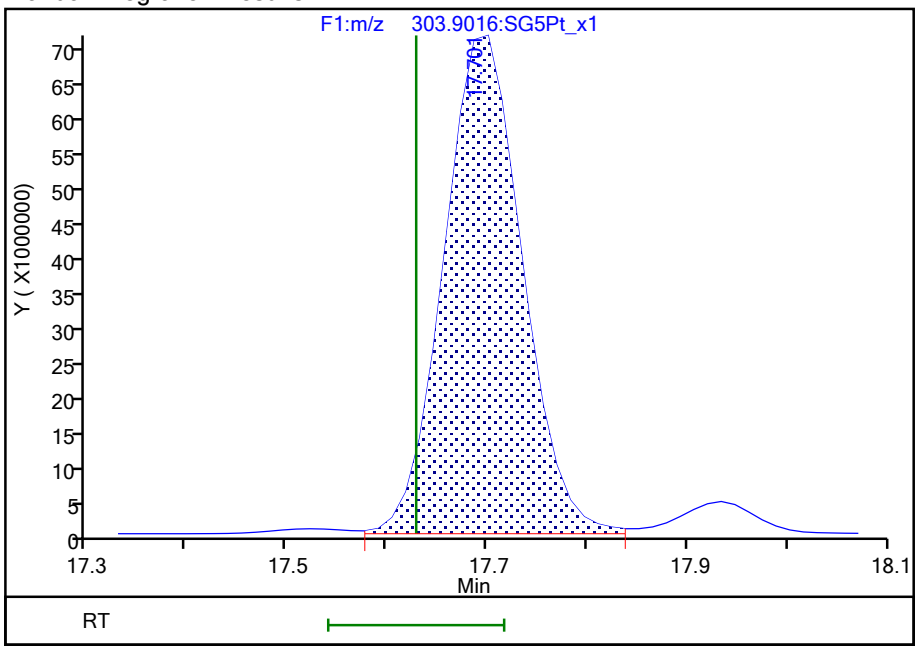

Reviewer: bennettd, 25-Aug-2021 13:17:05
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

777779

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d				
Injection Date:	25-Aug-2021 11:28:39	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

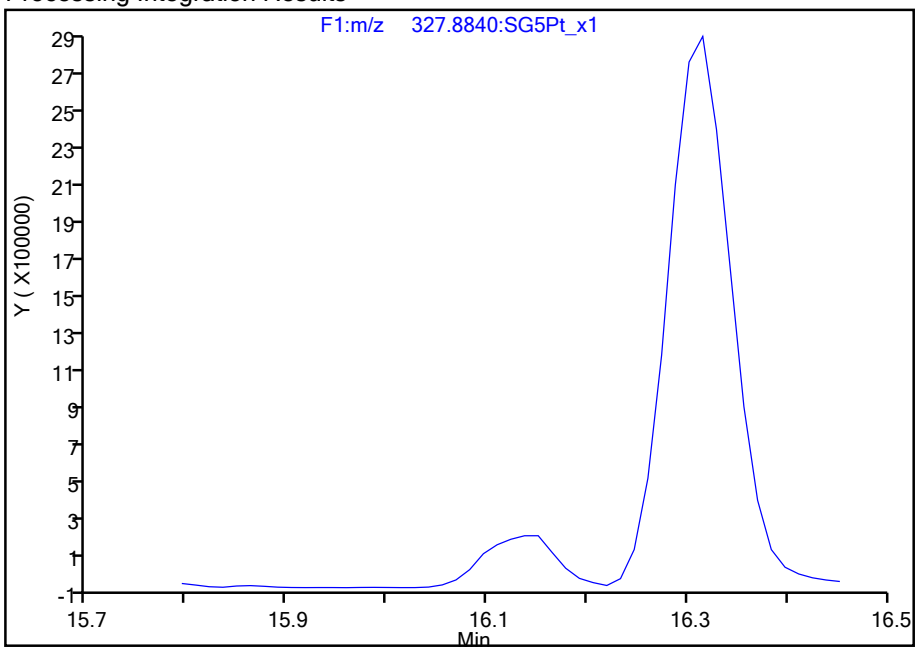

Manual Integration Results

RT: 16.15
Area: 1328723
Amount: 2.243846
Amount Units: pg/ul

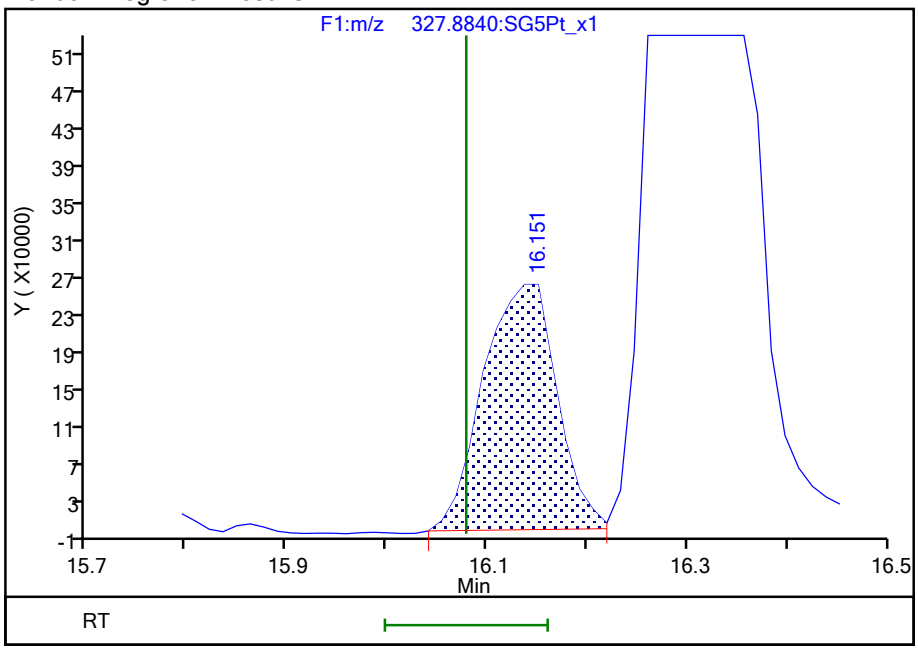

Reviewer: bennettd, 25-Aug-2021 13:16:34
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

777780

Report Date: 25-Aug-2021 13:23:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d		
Injection Date:	25-Aug-2021 11:28:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

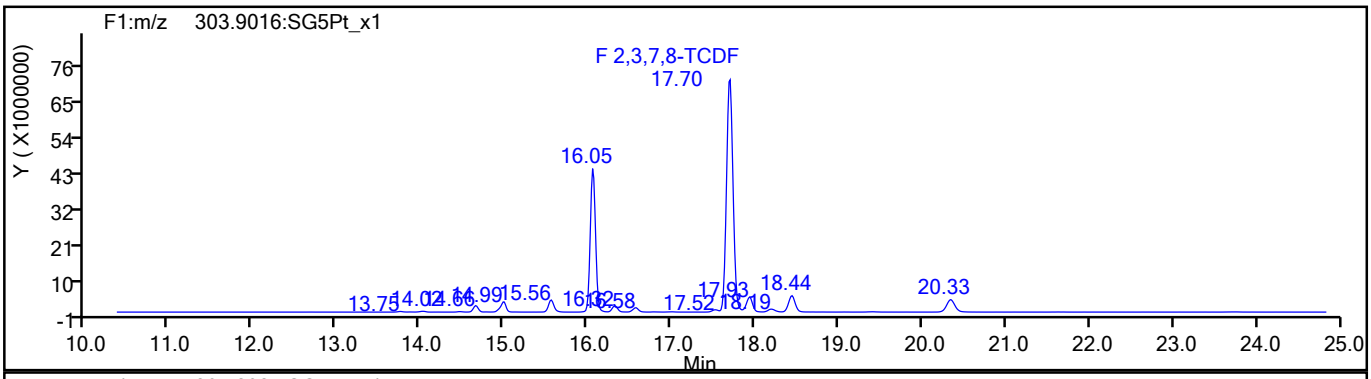

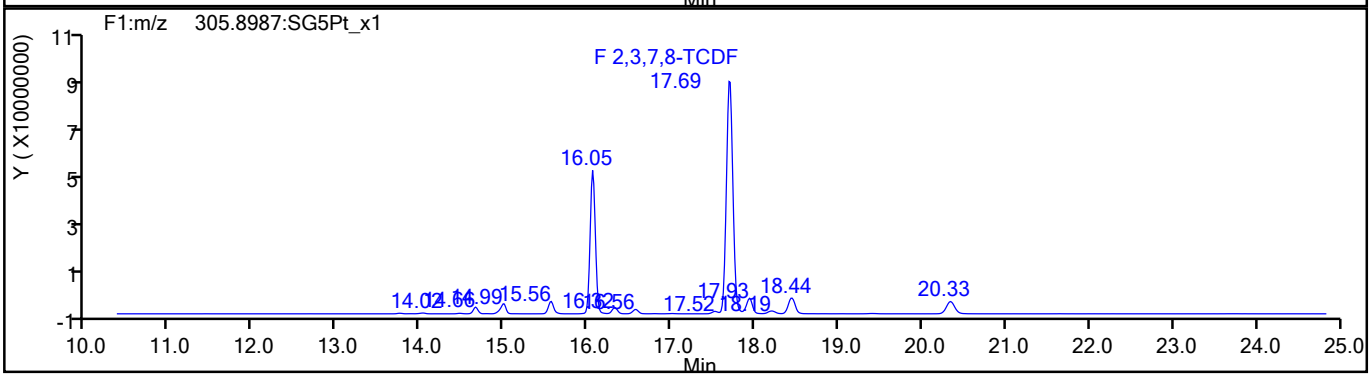

TCDF Standards

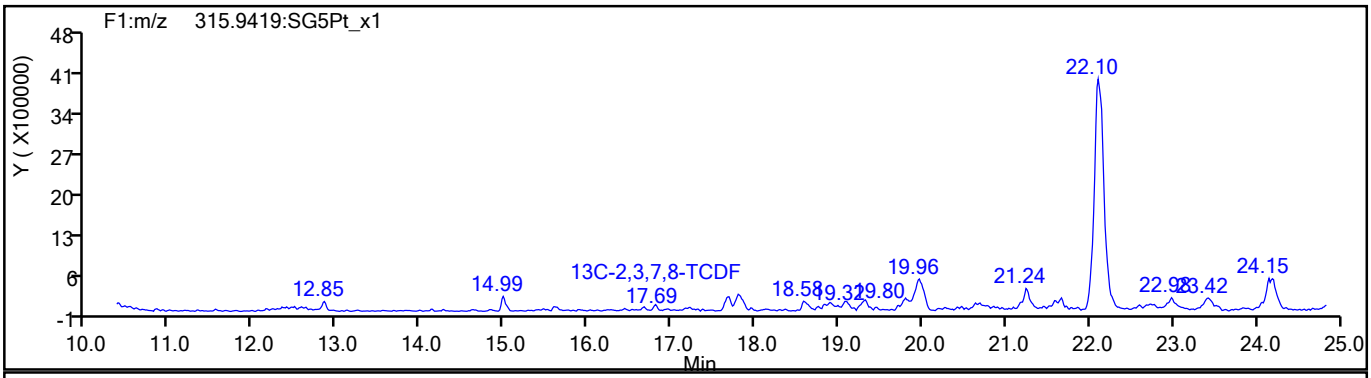

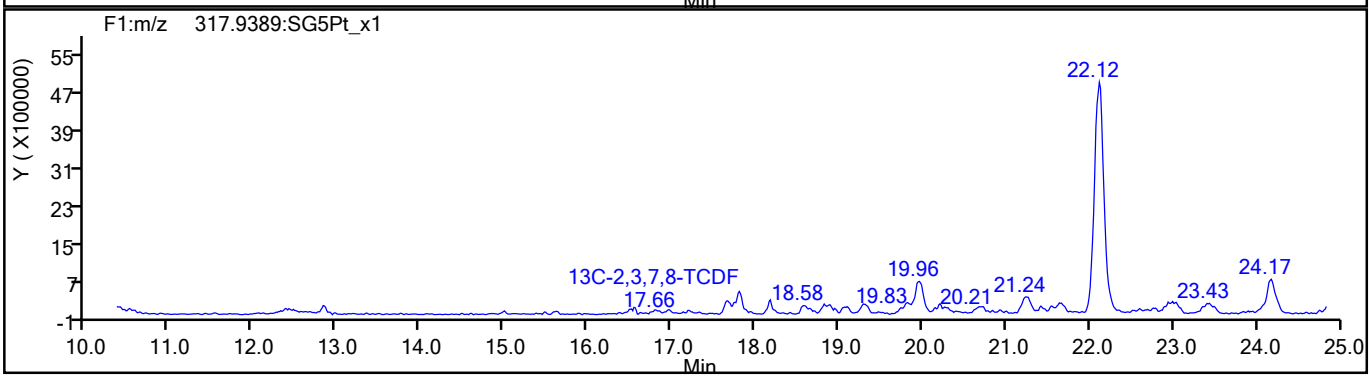

777781

Report Date: 25-Aug-2021 13:23:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d		
Injection Date:	25-Aug-2021 11:28:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

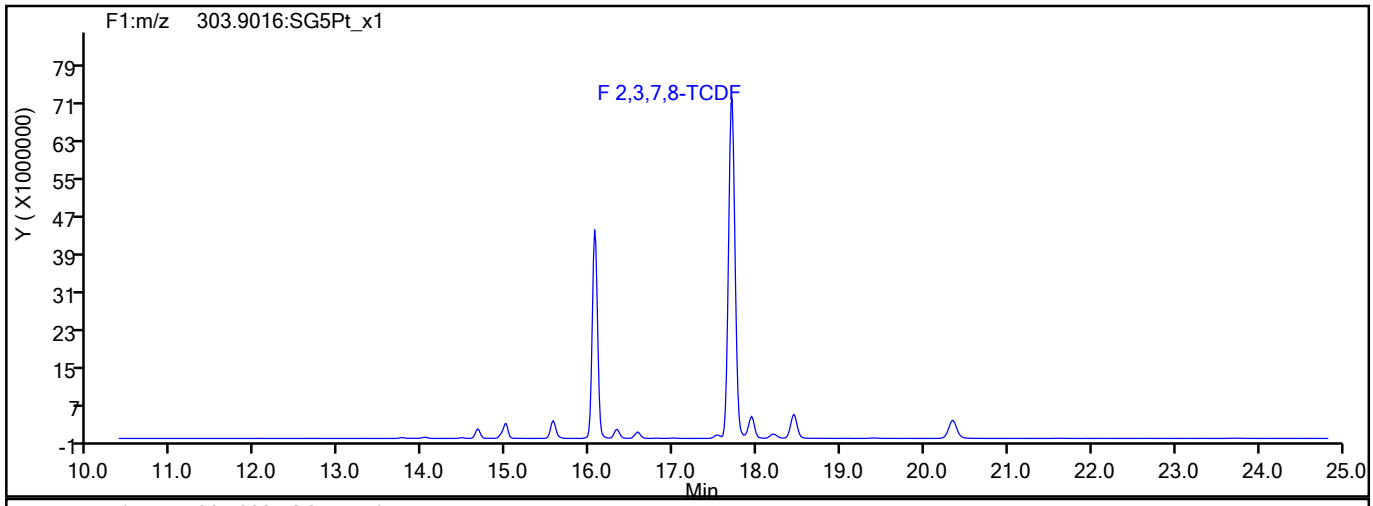

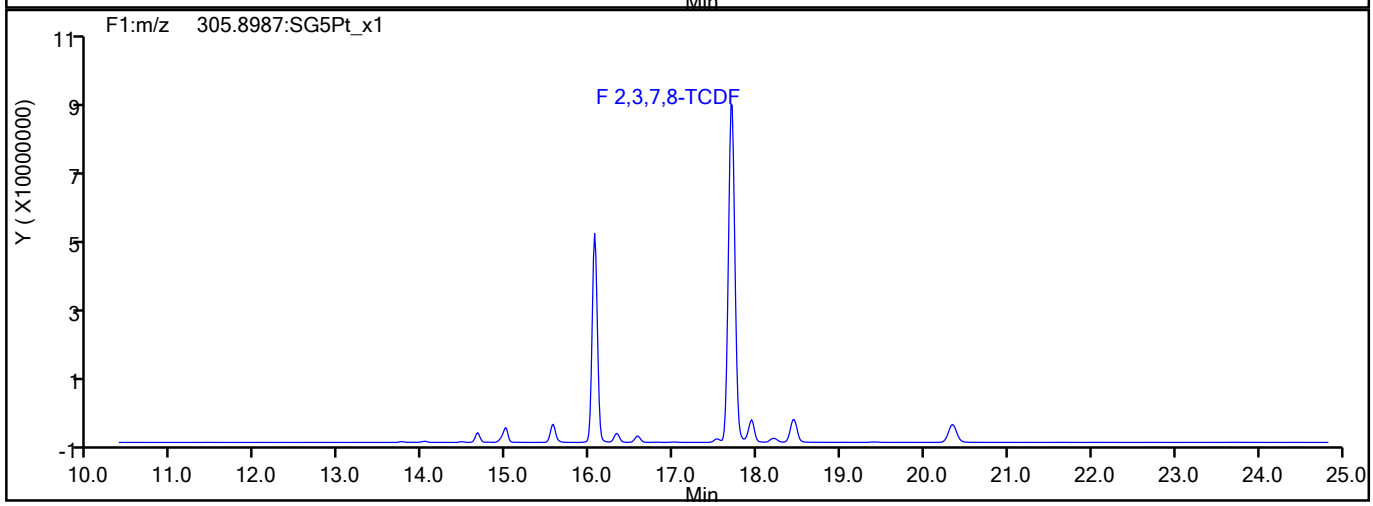

TCDF Interference Mass

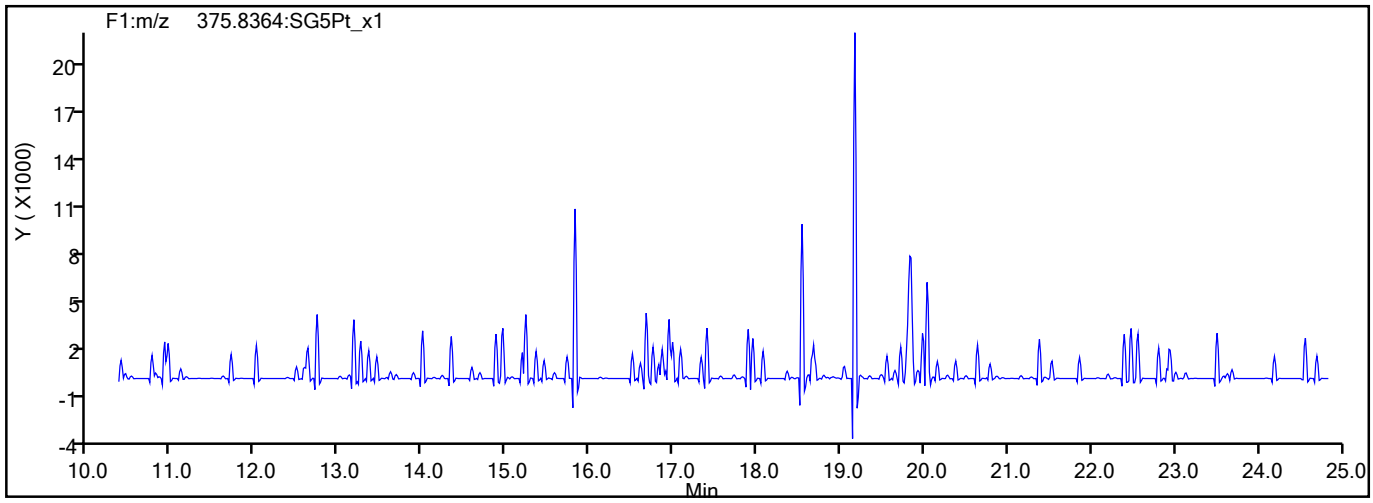

777782

Report Date: 25-Aug-2021 13:23:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d		
Injection Date:	25-Aug-2021 11:28:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

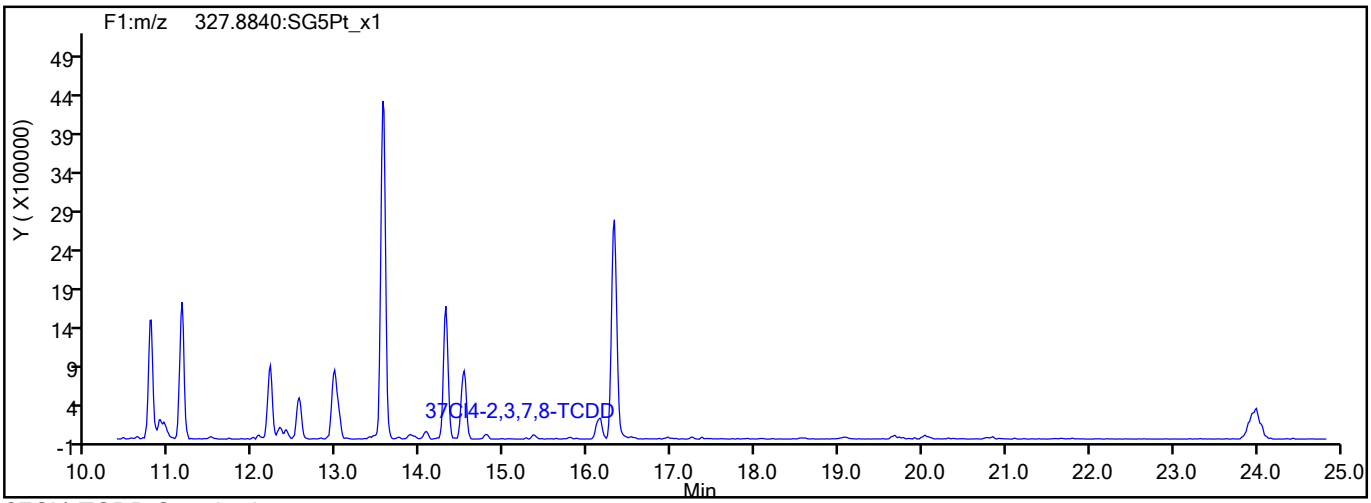

37Cl4-TCDD Standards

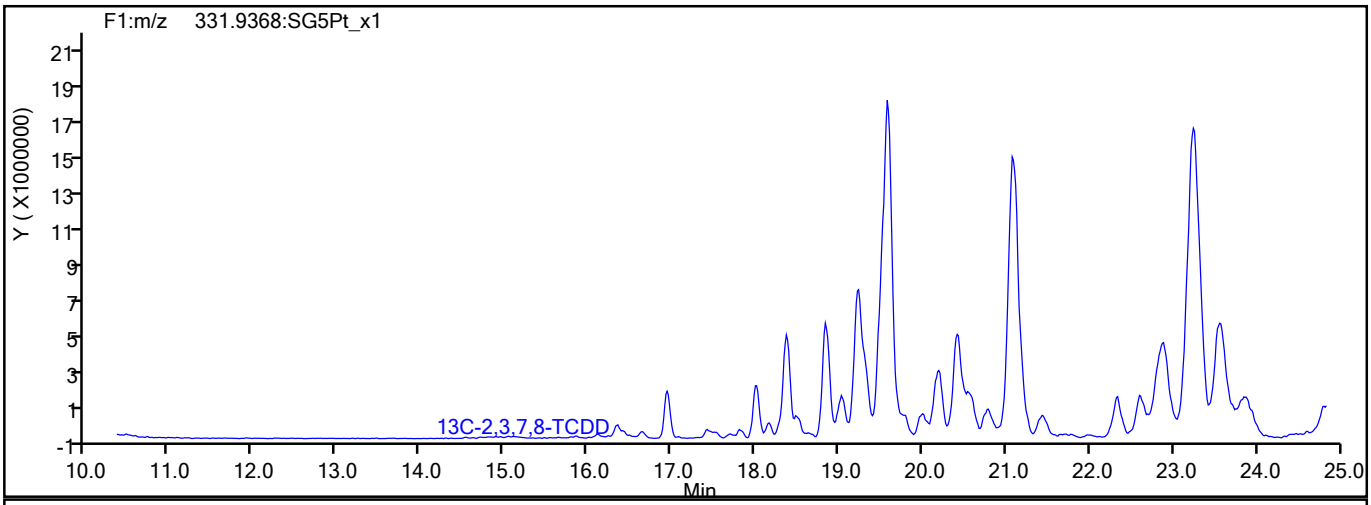

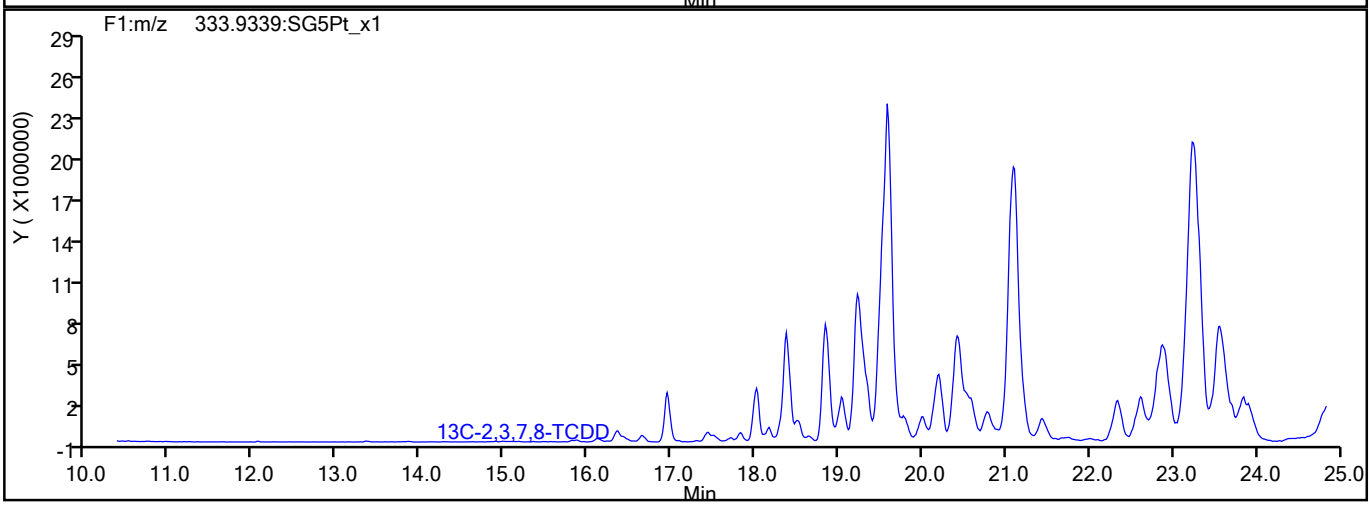

777783

Report Date: 25-Aug-2021 13:23:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d		
Injection Date:	25-Aug-2021 11:28:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

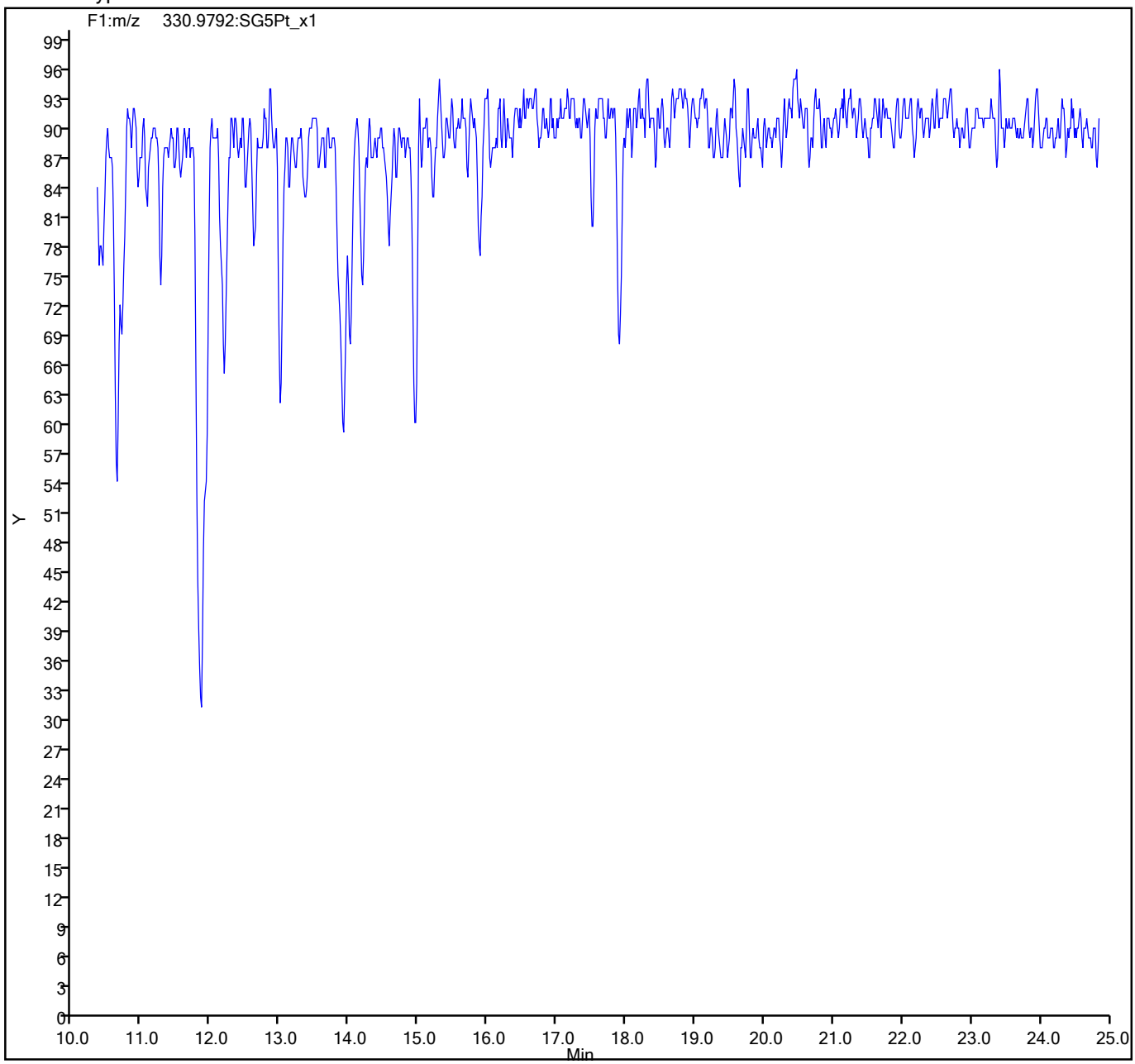

777784

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) MSD
Lab Sample ID: 320-76769-1 MSD
Matrix: Sediment
Lab File ID: 13AU2110D5_49.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.34(g)
Date Analyzed: 08/15/2021 05:51
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	16400		32	32
40321-76-4	1,2,3,7,8-PeCDD	313		7.9	2.2
57117-41-6	1,2,3,7,8-PeCDF	2140		14	14
57117-31-4	2,3,4,7,8-PeCDF	1170		15	15
39227-28-6	1,2,3,4,7,8-HxCDD	162		7.9	2.6
57653-85-7	1,2,3,6,7,8-HxCDD	185		7.9	2.7
19408-74-3	1,2,3,7,8,9-HxCDD	166		7.9	2.4
70648-26-9	1,2,3,4,7,8-HxCDF	3390		16	16
57117-44-9	1,2,3,6,7,8-HxCDF	1040		15	15
72918-21-9	1,2,3,7,8,9-HxCDF	205		12	12
60851-34-5	2,3,4,6,7,8-HxCDF	256		12	12
35822-46-9	1,2,3,4,6,7,8-HpCDD	666		7.9	6.1
67562-39-4	1,2,3,4,6,7,8-HpCDF	1200		7.9	6.2
55673-89-7	1,2,3,4,7,8,9-HpCDF	481		7.9	6.7
3268-87-9	OCDD	7020		16	6.9
39001-02-0	OCDF	735		16	0.61
41903-57-5	Total TCDD	17900		32	32
30402-14-3	Total TCDF	66200		200	200
36088-22-9	Total PeCDD	647		7.9	2.2
30402-15-4	Total PeCDF	4850		14	14
34465-46-8	Total HxCDD	572		7.9	2.6
55684-94-1	Total HxCDF	5430		14	14
37871-00-4	Total HpCDD	1100		7.9	6.1
38998-75-3	Total HpCDF	1910		7.9	6.4

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) MSD
Lab Sample ID: 320-76769-1 MSD
Matrix: Sediment
Lab File ID: 13AU2110D5_49.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.34(g)
Date Analyzed: 08/15/2021 05:51
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516847
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	61		25-164
89059-46-1	13C-2,3,7,8-TCDF	51		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	72		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	64		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	70		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	63		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	61		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	53		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	56		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	55		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	64		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	71		26-138
114423-97-1	13C-OCDD	77		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	119		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d
Lims ID: 320-76769-A-1-C MSD
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Sample Type: MSD
Inject. Date: 15-Aug-2021 05:51:55 ALS Bottle#: 48 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-1-c msd 320-76769-a-1-c msd
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:02:08 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:46:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.991	92291178	0.83	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.492	76937962	0.79	1.6249	51.3	51.3	0.5809	0.5809	51.30	
2,3,7,8-TCDF	17.507	8918815097	0.77	1.0239	12143	11322	62.5	62.5	1.2E+005	REQa
A Non-2,3,7,8-sub-TCDF	17.046	7655052261	0.77	1.0239	9766.3	9717.3	62.5	6862.3	0.00	RQ
S Total TCDF					21909	21039	62.5	62.5		RQ
D 13C-2,3,7,8-TCDD	18.172	50261273	0.84	0.8993	60.6	60.6	0.4765	0.4765	60.56	a
2,3,7,8-TCDD	18.187	3285776775	0.79	1.2541	5212.7	5212.7	10.2	10.2	52127	Ea
$ 37Cl4-2,3,7,8-TCDD	18.187	48556297		1.1071	47.5	47.5	0.4124	0.4124	119	
A Non-2,3,7,8-sub-TCDD	17.500	308148124	0.78	1.2541	488.9	488.9	10.2	432.0	0.00	Ma
S Total TCDD					5701.6	5701.6	10.2	10.2		
D 13C-1,2,3,7,8-PeCDF	22.558	71975307	1.59	1.2101	64.4	64.4	0.2695	0.2695	64.45	
1,2,3,7,8-PeCDF	22.572	520383284	1.59	1.0611	681.3	681.3	4.383	4.383	1363	a
D 13C-2,3,4,7,8-PeCDF	23.867	80482517	1.59	1.2395	70.4	70.4	0.2631	0.2631	70.36	
2,3,4,7,8-PeCDF	23.908	303467229	1.58	1.0184	370.2	370.2	4.734	4.734	740	a
A F1 PeCDFs	20.093	1828842	1.53	1.0398	2.307	2.307	0.0443	2.307	0.00	
A Non-2,3,7,8-sub-PeCDF	23.241	386151446	1.58	1.0398	487.2	487.2	4.553	216.9	0.00	a
S Total PeCDF					1541.1	1541.1	4.558	4.558		
D 13C-1,2,3,7,8-PeCDD	24.576	50566456	1.63	0.7612	72.0	72.0	0.1705	0.1705	71.98	
1,2,3,7,8-PeCDD	24.603	52767114	1.59	1.0484	99.5	99.5	0.6916	0.6916	199	a
A Non-2,3,7,8-sub-PeCDD	23.349	56311028	1.55	1.0484	111.3	106.2	0.6916	99.5	0.00	RQ
S Total PeCDD					210.8	205.7	0.6916	0.6916		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.583	74174212	0.52	1.0837	60.7	60.7	0.2838	0.2838	60.70	
1,2,3,4,7,8-HxCDF	30.609	867503886	1.20	1.0851	1077.8	1077.8	5.076	5.076	2156	E
D 13C-1,2,3,6,7,8-HxCDF	30.756	67943262	0.52	1.1279	53.4	53.4	0.2726	0.2726	53.42	
1,2,3,6,7,8-HxCDF	30.782	252048105	1.20	1.1260	329.5	329.5	4.722	4.722	659	
D 13C-2,3,4,6,7,8-HxCDF	31.567	65955248	0.52	1.0637	55.0	55.0	0.2891	0.2891	54.99	
2,3,4,6,7,8-HxCDF	31.581	62551259	1.20	1.1675	81.2	81.2	3.742	3.742	162	a
D 13C-1,2,3,7,8,9-HxCDF	32.353	61200260	0.53	0.9676	56.1	56.1	0.3178	0.3178	56.10	
1,2,3,7,8,9-HxCDF	32.366	46457945	1.18	1.1664	65.1	65.1	3.710	3.710	130	M
A Non-2,3,7,8-sub-HxCDF	30.197	130712352	1.18	1.1363	170.9	170.9	4.243	65.1	0.00	Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					1724.5	1724.5	4.312	4.312		
* 13C-1,2,3,7,8,9-HxCDD	32.167	112756429	1.25	6.2E+05	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	31.740	52427861	1.23	0.7334	63.4	63.4	0.2986	0.2986	63.40	
1,2,3,4,7,8-HxCDD	31.754	28630816	1.26	1.0640	51.3	51.3	0.8125	0.8125	103	
D 13C-1,2,3,6,7,8-HxCDD	31.847	55254824	1.24	0.8802	55.7	55.7	0.2488	0.2488	55.67	
1,2,3,6,7,8-HxCDD	31.860	32539236	1.27	1.0001	58.9	58.9	0.8637	0.8637	118	
1,2,3,7,8,9-HxCDD	32.193	32075923	1.25	1.1325	52.6	52.6	0.7630	0.7630	105	
A Non-2,3,7,8-sub-HxCDD	30.882	10921913	1.25	1.0655	19.0	19.0	0.8110	11.6	0.00	
S Total HxCDD					181.8	181.8	0.8131	0.8131		
D 13C-1,2,3,4,6,7,8-HpCDF	33.778	52573338	0.44	0.7730	60.3	60.3	0.7870	0.7870	60.32	
1,2,3,4,6,7,8-HpCDF	33.790	289929893	1.03	1.4413	382.6	382.6	1.955	1.955	765	
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	55904795	0.44	0.7008	70.7	70.7	0.8682	0.8682	70.75	
1,2,3,4,7,8,9-HpCDF	34.872	112652951	1.04	1.3174	153.0	153.0	2.128	2.128	306	
A Non-2,3,7,8-sub-HpCDF	34.319	54149127	0.98	1.3793	72.4	72.4	2.037	72.4	0.00	
S Total HpCDF					608.0	608.0	2.041	2.041		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	46902562	1.01	0.6472	64.3	64.3	0.4423	0.4423	64.27	
1,2,3,4,6,7,8-HpCDD	34.580	108640738	1.03	1.0943	211.7	211.7	1.932	1.932	423	
A Non-2,3,7,8-sub-HpCDD	34.301	70779867	1.03	1.0943	137.9	137.9	1.932	137.9	0.00	a
S Total HpCDD					349.6	349.6	1.932	1.932		
D 13C-OCDD	36.938	77906419	0.88	0.4472	154.5	154.5	0.1973	0.1973	77.26	
OCDF	37.034	130799953	0.89	1.4382	233.5	233.5	0.1948	0.1948	233	
OCDD	36.938	962451250	0.89	1.1070	2231.9	2231.9	2.182	2.182	2232	E
1,3,6,8-TCDF	14.922						0.0	0.0		
1,3,6,8-TCDD	15.829						0.0	0.0		
2,3,4,7-TCDF	17.326	200404504	0.78							
1,2,3,7-TCDD	18.081	34939311	0.77							M
1,2,3,9-TCDF	18.157	171849235	0.77							
1,2,3,9-TCDD	18.187						0.0	0.0		U
1,2,8,9-TCDD	19.170						0.0	0.0		
1,2,8,9-TCDF	19.170						0.0	0.0		
1,3,4,6,8-PeCDF	19.472						0.0	0.0		RU
1,2,4,7,9-PeCDD	21.235						0.0	0.0		
1,2,3,8,9-PeCDD	25.462						0.0	0.0		
1,2,3,8,9-PeCDF	25.681						0.0	0.0		
1,2,3,4,6,8-HxCDF	27.974						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.544						0.0	0.0		
1,2,3,4,6,7-HxCDD	32.193						0.0	0.0		U
1,2,3,4,8,9-HxCDF	32.366						0.0	0.0		RU
1,2,3,4,6,7,9-HpCDF	33.790						0.0	0.0		U
1,2,3,4,6,7,9-HpCDD	34.033						0.0	0.0		U
1,2,3,8-TCDD	0.0						0.0	0.0		
1,3,7,9-TCDD	0.0						0.0	0.0		
1,2,3,4,7-PeCDD	0.0						0.0	0.0		
1,4,7,8-TCDD	0.0						0.0	0.0		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 18-Aug-2021 11:02:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d
Lims ID: 320-76769-A-1-C MSD
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Sample Type: MSD
Inject. Date: 15-Aug-2021 05:51:55 ALS Bottle#: 48 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-1-c msd 320-76769-a-1-c msd
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:02:08 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 16:46:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.991	17.855	8		41918532	11385117	18136	45340	628		a
333.9339	17.991	17.855	8		50372646	13630524	24747	61867	551	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.492	17.356	8	0.972	33874265	9761894	32355	80887	302		
317.9389	17.492	17.356	8	0.972	43063697	12316685	62094	155235	198	0.79(0.65-0.89)	
2,3,7,8-TCDF											REQa
303.9016	17.507	17.371	8	1.001	4527088811	1142056497	22817755704437		501		ae
	Empc Correction				3879936518	875986080	22817755704437		384		
305.8987	17.507	17.371	8	1.001	5038878579	1137644305	33715348428835		337	0.90(0.65-0.89)	e
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.071	17.046	-58	0.919	69288918	17625633	22817755704437		8		
305.8987	16.071	17.046	-58	0.919	128624858	22883126	33715348428835		7	0.54(0.65-0.89)	
	Empc Correction				89985612	22890431	33715348428835		7		
303.9016	16.358	17.046	-41	0.935	135118913	26295486	22817755704437		12		
305.8987	16.358	17.046	-41	0.935	174537855	34441043	33715348428835		10	0.77(0.65-0.89)	
303.9016	16.585	17.046	-28	0.948	158551063	42473068	22817755704437		19		
305.8987	16.585	17.046	-28	0.948	203540834	54756525	33715348428835		16	0.78(0.65-0.89)	
303.9016	16.812	17.046	-14	0.961	254476410	66778466	22817755704437		29		
305.8987	16.812	17.046	-14	0.961	328344110	84932012	33715348428835		25	0.78(0.65-0.89)	
303.9016	17.084	17.046	2	0.977	2372377220	535363647	22817755704437		235		
305.8987	17.084	17.046	2	0.977	3033571153	679306907	33715348428835		201	0.78(0.65-0.89)	
303.9016	17.930	17.046	53	1.025	365495314	107977882	22817755704437		47		
305.8987	17.930	17.046	53	1.025	469764859	138181207	33715348428835		41	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											a
331.9368	18.172	18.051	7	1.010	22931534	5708125	18136	45340	315		a
333.9339	18.172	18.051	7	1.010	27329739	6984564	24747	61867	282	0.84(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	18.187	18.081	6	1.001	1452345042	347842843	330205	825512	1053		a
321.8936	18.187	18.081	6	1.001	1833431733	439801043	318043	795107	1383	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.187	18.081	6	1.011	48556297	11487232	45693	114232	251		
A Non-2,3,7,8-sub-TCDD											Ma
319.8965	18.081	17.500	35	0.995	15181534	4418080	330205	825512	13		M
321.8936	18.081	17.500	35	0.995	20653382	5774501	318043	795107	18	0.74(0.65-0.89)	
319.8965	18.535	17.500	62	1.020	119866968	24756996	330205	825512	75		
321.8936	18.535	17.500	62	1.020	152446240	31342914	318043	795107	99	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.558	22.367	11	1.254	44145896	7993982	17134	42835	467		
353.8970	22.558	22.367	11	1.254	27829411	5133222	15497	38742	331	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.572	22.394	11	1.001	319339965	59149753	149333	373332	396		a
341.8567	22.572	22.394	11	1.001	201043319	37626319	94863	237157	397	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.867	23.703	10	1.327	49428166	7716166	17134	42835	450		
353.8970	23.867	23.703	10	1.327	31054351	4946181	15497	38742	319	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	23.908	23.730	11	1.002	185641454	30055900	149333	373332	201		a
341.8567	23.908	23.730	11	1.002	117825775	18892735	94863	237157	199	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.654	20.093	-26	0.871	1105927	263163	1169	2922	225		
341.8567	19.654	20.093	-26	0.871	722915	171599	1207	3017	142	1.53(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											a
339.8597	21.221	23.241	-121	0.941	105390555	25078458	149333	373332	168		
341.8567	21.208	23.241	-122	0.940	66557159	15958389	94863	237157	168	1.58(1.32-1.78)	
339.8597	22.080	23.241	-69	0.979	7829715	886493	149333	373332	6		
341.8567	22.080	23.241	-69	0.979	4809998	549386	94863	237157	6	1.63(1.32-1.78)	
339.8597	22.435	23.241	-48	0.995	14602729	3406162	149333	373332	23		a
341.8567	22.435	23.241	-48	0.995	9221874	2124715	94863	237157	22	1.58(1.32-1.78)	
339.8597	23.090	23.241	-9	1.024	68225589	12603081	149333	373332	84		
341.8567	23.090	23.241	-9	1.024	43216631	8067613	94863	237157	85	1.58(1.32-1.78)	
339.8597	24.235	23.241	60	1.074	40618248	5974098	149333	373332	40		
341.8567	24.235	23.241	60	1.074	25678948	3770499	94863	237157	40	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.576	24.426	9	1.366	31357306	5684357	7694	19235	739		
369.8919	24.576	24.426	9	1.366	19209150	3483421	5296	13240	658	1.63(1.32-1.78)	
1,2,3,7,8-PeCDD											a
355.8546	24.603	24.453	9	1.001	32391255	5817539	17188	42970	338		a
357.8516	24.603	24.453	9	1.001	20375859	3679721	9401	23502	391	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.399	23.349	-117	0.871	450964	79918	17188	42970	5		
357.8516	21.358	23.349	-119	0.869	2821260	513420	9401	23502	55	0.16(1.32-1.78)	
	Empc Correction				290944	51560	9401	23502	5		
355.8546	22.585	23.349	-46	0.919	792855	159915	17188	42970	9		
357.8516	22.585	23.349	-46	0.919	667169	137318	9401	23502	15	1.19(1.32-1.78)	
	Empc Correction				511519	103170	9401	23502	11		
355.8546	22.830	23.349	-31	0.929	520003	93137	17188	42970	5		
357.8516	22.830	23.349	-31	0.929	349671	66046	9401	23502	7	1.49(1.32-1.78)	
355.8546	23.144	23.349	-12	0.942	374476	67104	17188	42970	4		
357.8516	23.144	23.349	-12	0.942	253482	44866	9401	23502	5	1.48(1.32-1.78)	
355.8546	24.603	23.349	75	1.001	32391255	5817539	17188	42970	338		
357.8516	24.603	23.349	75	1.001	20375859	3679721	9401	23502	391	1.59(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.583	30.503	5	0.951	25377235	4901568	13704	34260	358		
385.8610	30.583	30.503	5	0.951	48796977	9641460	24100	60250	400	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											E
373.8208	30.609	30.529	5	1.001	474067504	96090481	214148	535370	449		
375.8178	30.609	30.529	5	1.001	393436382	79993779	106267	265667	753	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.756	30.689	4	0.956	23186445	5173727	13704	34260	378		
385.8610	30.756	30.689	4	0.956	44756817	9892999	24100	60250	410	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.782	30.716	4	1.001	137712536	30651073	214148	535370	143		
375.8178	30.782	30.716	4	1.001	114335569	25358183	106267	265667	239	1.20(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.567	31.514	3	0.981	22663459	6315150	13704	34260	461		
385.8610	31.567	31.514	3	0.981	43291789	12021856	24100	60250	499	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											a
373.8208	31.581	31.528	3	1.000	34090989	9979913	214148	535370	47		a
375.8178	31.581	31.528	3	1.000	28460270	8185243	106267	265667	77	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.353	32.326	2	1.006	21173661	6488649	13704	34260	473		
385.8610	32.353	32.326	2	1.006	40026599	12021954	24100	60250	499	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.366	32.340	2	1.000	25126277	8418814	214148	535370	39		
375.8178	32.366	32.340	2	1.000	21331668	6873768	106267	265667	65	1.18(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	28.520	30.197	-100	0.933	26912779	4269091	214148	535370	20		
375.8178	28.520	30.197	-100	0.933	22849392	3595567	106267	265667	34	1.18(1.05-1.43)	
373.8208	29.837	30.197	-22	0.976	12251148	2181255	214148	535370	10		
375.8178	29.837	30.197	-22	0.976	10243004	1780664	106267	265667	17	1.20(1.05-1.43)	
373.8208	31.474	30.197	77	1.029	6625951	2041429	214148	535370	10		a
375.8178	31.474	30.197	77	1.029	5838126	1696312	106267	265667	16	1.13(1.05-1.43)	
373.8208	32.446	30.197	135	1.061	24885688	8036411	214148	535370	38		M
375.8178	32.446	30.197	135	1.061	21106264	6715826	106267	265667	63	1.18(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											a
401.8559	32.167	32.140	2		62549882	16943255	14001	35002	1210		a
403.8529	32.167	32.140	2		50206547	13792848	12926	32315	1067	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.740	31.701	2	0.987	28902675	8689547	14001	35002	621		
403.8529	31.740	31.701	2	0.987	23525186	7028086	12926	32315	544	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.754	31.714	2	1.000	15943654	4824633	29823	74557	162		
391.8127	31.754	31.714	2	1.000	12687162	3895904	24531	61327	159	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.847	31.807	2	0.990	30538173	8721933	14001	35002	623		
403.8529	31.847	31.807	2	0.990	24716651	7009230	12926	32315	542	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.860	31.820	2	1.000	18227967	5195311	29823	74557	174		
391.8127	31.860	31.820	2	1.000	14311269	4038540	24531	61327	165	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.193	32.153	2	1.014	17842221	5035299	29823	74557	169		
391.8127	32.180	32.153	2	1.014	14233702	4056649	24531	61327	165	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.691	30.882	-71	0.932	2353893	321788	29823	74557	11		
391.8127	29.691	30.882	-71	0.932	1908168	262280	24531	61327	11	1.23(1.05-1.43)	
389.8157	31.022	30.882	8	0.974	3720781	839854	29823	74557	28		
391.8127	31.022	30.882	8	0.974	2939071	649750	24531	61327	26	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.778	33.766	1	1.050	16076857	5503237	20146	50365	273		
419.8220	33.778	33.766	1	1.050	36496481	12810759	54655	136637	234	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.790	33.778	1	1.000	147445313	52723222	105912	264780	498		
409.7789	33.790	33.778	1	1.000	142484580	51191033	100515	251287	509	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.847	1	1.084	17001995	5646371	20146	50365	280		
419.8220	34.860	34.847	1	1.084	38902800	12765633	54655	136637	234	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.860	1	1.000	57501010	18763248	105912	264780	177		
409.7789	34.872	34.860	1	1.000	55151941	17811353	100515	251287	177	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.094	34.319	-13	1.009	26851906	10152818	105912	264780	96		
409.7789	34.082	34.319	-14	1.009	27297221	9657090	100515	251287	96	0.98(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.075	23571261	7805537	23592	58980	331		
437.8140	34.568	34.568	0	1.075	23331301	7800079	11602	29005	672	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	55027305	18300832	63503	158757	288		
425.7737	34.580	34.580	0	1.000	53613433	18044704	68495	171237	263	1.03(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											a
423.7766	34.033	34.301	-16	0.985	35995028	13303065	63503	158757	209		a
425.7737	34.033	34.301	-16	0.985	34784839	12878401	68495	171237	188	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.938	36.926	1	1.148	36367141	10233115	6017	15042	1701		
471.7750	36.938	36.926	1	1.148	41539278	11524963	4829	12072	2387	0.88(0.76-1.02)	
OCDF											
441.7428	37.034	37.022	1	1.003	61735850	17533653	5789	14472	3029		
443.7399	37.034	37.022	1	1.003	69064103	19099892	6404	16010	2982	0.89(0.76-1.02)	
OCDD											E
457.7377	36.938	36.938	0	1.000	454433282	126238044	45155	112887	2796		
459.7348	36.938	36.938	0	1.000	508017968	143268926	59956	149890	2390	0.89(0.76-1.02)	
1,3,6,8-TCDF											
303.9016	14.922						22817755704437				
305.8987	14.922						33715348428835				
1,3,6,8-TCDD											
319.8965	15.829						330205	825512			
321.8936	15.829						318043	795107			
2,3,4,7-TCDF											
303.9016	17.326	17.356	-2		87830931	15965183	22817755704437		7		
305.8987	17.326	17.356	-2		112573573	20313409	33715348428835		6	0.78(0.65-0.89)	
1,2,3,7-TCDD											M
319.8965	18.081	18.066	1		15181534	4418080	330205	825512	13		M
321.8936	18.081	18.066	1		19757777	5596822	318043	795107	18	0.77(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	18.157	18.218	-4		74718562	17303258	22817755704437		8		
305.8987	18.157	18.218	-4		97130673	22613191	33715348428835		7	0.77(0.65-0.89)	
1,2,3,9-TCDD											U
319.8965	18.218						330205	825512			
321.8936	18.218						318043	795107			
1,2,8,9-TCDD											
319.8965	19.170						330205	825512			
1,2,8,9-TCDF											
303.9016	19.170						22817755704437				
305.8987	19.170						33715348428835				
1,3,4,6,8-PeCDF											RU
339.8597	19.458						1169	2922			
341.8567	19.458						1207	3017			
1,2,4,7,9-PeCDD											
355.8546	21.235						17188	42970			
357.8516	21.235						9401	23502			
1,2,3,8,9-PeCDD											
355.8546	25.462						17188	42970			
357.8516	25.462						9401	23502			
1,2,3,8,9-PeCDF											
339.8597	25.681						149333	373332			
341.8567	25.681						94863	237157			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,8-HxCDF											
373.8208	27.974						214148	535370			
375.8178	27.974						106267	265667			
1,2,4,6,7,9-HxCDD											
389.8157	29.544						29823	74557			
391.8127	29.544						24531	61327			
1,2,3,4,6,7-HxCDD											U
389.8157	32.113						29823	74557			
391.8127	32.113						24531	61327			
1,2,3,4,8,9-HxCDF											RU
373.8208	32.419						214148	535370			
375.8178	32.419						106267	265667			
1,2,3,4,6,7,9-HpCDF											U
407.7818	33.916						105912	264780			
409.7789	33.916						100515	251287			
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.021						63503	158757			
425.7737	34.021						68495	171237			
1,2,3,8-TCDD											
319.8965	0.0						330205	825512			
321.8936	0.0						318043	795107			
1,3,7,9-TCDD											
319.8965	0.0						330205	825512			
321.8936	0.0						318043	795107			
1,2,3,4,7-PeCDD											
355.8546	0.0						17188	42970			
357.8516	0.0						9401	23502			
1,4,7,8-TCDD											
319.8965	0.0						330205	825512			
321.8936	0.0						318043	795107			

QC Flag Legend

Processing Flags

- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags

- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 11:02:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d
Lims ID: 320-76769-A-1-C MSD
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:51:55 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	76937962	22078579

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	76937962	22078579

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.071	69288918	17625633	128624858	22883126	251.2	0.54	RQ
16.071	69288918	17625633	89985612	22890431	202.2		Empc Correction
16.358	135118913	26295486	174537855	34441043	393.1	0.77	
16.585	158551063	42473068	203540834	54756525	459.6	0.78	
16.812	254476410	66778466	328344110	84932012	739.8	0.78	
17.084	2372377220	535363647	3033571153	679306907	6862.3	0.78	
17.930	365495314	107977882	469764859	138181207	1060.3	0.78	
Signal Totals:							
	3355307838	796514182	4299744423	1014508125			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7693691507	1811015002				0.77	RQ
	7655052261	1811022307					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 9766.3 = (7693691507 * 100.000) / (76937962 * 1.024)
Empc Amount: 9717.3 = (7655052261 * 100.000) / (76937962 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 11:02:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d
Lims ID: 320-76769-A-1-C MSD
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:51:55 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDD, RT: 17.500

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50261273	12692689

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50261273	12692689

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.081	15181534	4418080	20653382	5774501	56.9	0.74	M
18.535	119866968	24756996	152446240	31342914	432.0	0.79	
Signal Totals:							
	135048502	29175076	173099622	37117415			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	308148124	66292491				0.78	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 488.863 = (308148124 * 100.000) / (50261273 * 1.254)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 11:02:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d
Lims ID: 320-76769-A-1-C MSD
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:51:55 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 8

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	71975307	13127204
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	80482517	12662347

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	76228912	12894775

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.654	1105927	263163	722915	171599	2.31	1.53	
Signal Totals:							
	1105927	263163	722915	171599			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1828842	434762				1.53	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.307 = (1828842 * 100.000) / (76228912 * 1.040)

Report Date: 18-Aug-2021 11:02:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d
Lims ID: 320-76769-A-1-C MSD
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:51:55 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 8

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	71975307	13127204
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	80482517	12662347

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	76228912	12894775

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.221	105390555	25078458	66557159	15958389	216.9	1.58	
22.080	7829715	886493	4809998	549386	15.9	1.63	
22.435	14602729	3406162	9221874	2124715	30.1	1.58	a
23.090	68225589	12603081	43216631	8067613	140.6	1.58	
24.235	40618248	5974098	25678948	3770499	83.6	1.58	
Signal Totals:							
	236666836	47948292	149484610	30470602			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	386151446	78418894				1.58	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 487.190 = (386151446 * 100.000) / (76228912 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 11:02:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Lims ID:	320-76769-A-1-C MSD		
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Inject. Date:	15-Aug-2021 05:51:55	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516847	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	50566456	9167778

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	50566456	9167778

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.399	450964	79918	2821260	513420	6.17	0.16	RQ
21.399	450964	79918	290944	51560	1.40		Empc Correction
22.585	792855	159915	667169	137318	2.75	1.19	RQ
22.585	792855	159915	511519	103170	2.46		Empc Correction
22.830	520003	93137	349671	66046	1.64	1.49	
23.144	374476	67104	253482	44866	1.18	1.48	
24.603	32391255	5817539	20375859	3679721	99.5	1.59	
Signal Totals:							
	34529553	6217613	21781475	3945363			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	58996994	10658984				1.41	RQ
	56311028	10162976					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 111.283 = (58996994 * 100.000) / (50566456 * 1.048)

Empc Amount: 106.216 = (56311028 * 100.000) / (50566456 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 11:02:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d
Lims ID: 320-76769-A-1-C MSD
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:51:55 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	74174212	14543028
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	67943262	15066726
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	65955248	18337006
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	61200260	18510603

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	67318245	16614340

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.520	26912779	4269091	22849392	3595567	65.1	1.18	
29.837	12251148	2181255	10243004	1780664	29.4	1.20	
31.474	6625951	2041429	5838126	1696312	16.3	1.13	a
32.446	24885688	8036411	21106264	6715826	60.1	1.18	Ma
Signal Totals:							
	70675566	16528186	60036786	13788369			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	130712352	30316555				1.18	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 170.886 = (130712352 * 100.000) / (67318245 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d
Lims ID: 320-76769-A-1-C MSD
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:51:55 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	52427861	15717633
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	55254824	15731163
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	53841342	15724398

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.691	2353893	321788	1908168	262280	7.43	1.23	
31.022	3720781	839854	2939071	649750	11.6	1.27	
Signal Totals:							
	6074674	1161642	4847239	912030			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10921913	2073672				1.25	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 19.038 = (10921913 * 100.000) / (53841342 * 1.066)

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d
Lims ID: 320-76769-A-1-C MSD
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:51:55 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	52573338	18313996
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	55904795	18412004

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	54239066	18363000

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.094	26851906	10152818	27297221	9657090	72.4	0.98	
Signal Totals:							
	26851906	10152818	27297221	9657090			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	54149127	19809908				0.98	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 72.378 = (54149127 * 100.000) / (54239066 * 1.379)

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d
Lims ID: 320-76769-A-1-C MSD
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Inject. Date: 15-Aug-2021 05:51:55 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516847 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	46902562	15605616

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	46902562	15605616

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.033	35995028	13303065	34784839	12878401	137.9	1.03	a
Signal Totals:							
	35995028	13303065	34784839	12878401			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	70779867	26181466				1.03	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 137.904 = (70779867 * 100.000) / (46902562 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.33
Area: 109735968
Amount: 248.2530
Amount Units: pg/ul

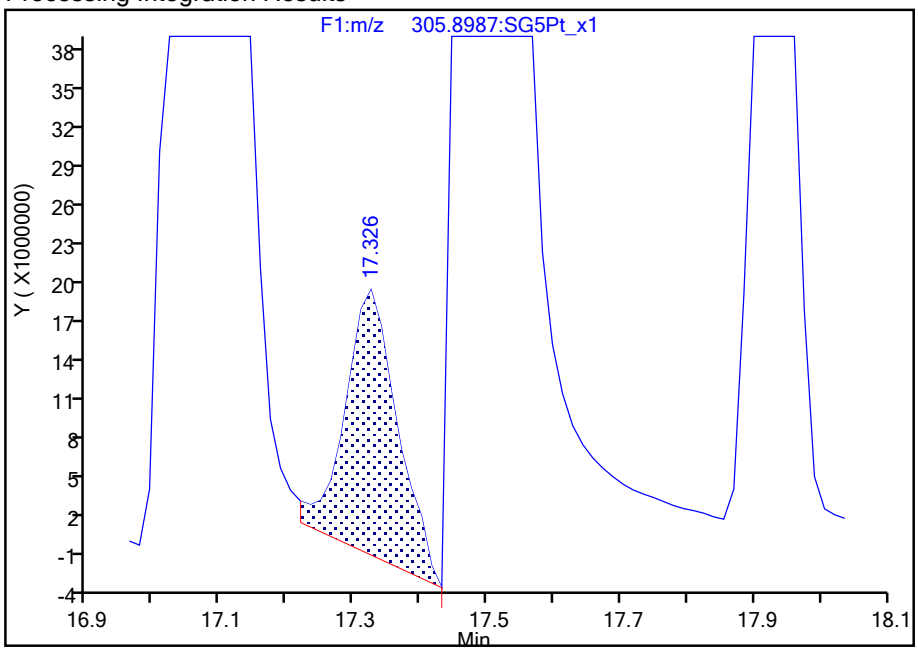

Manual Integration Results

RT: 17.51
Area: 5038878579
Amount: 12143
Amount Units: pg/ul

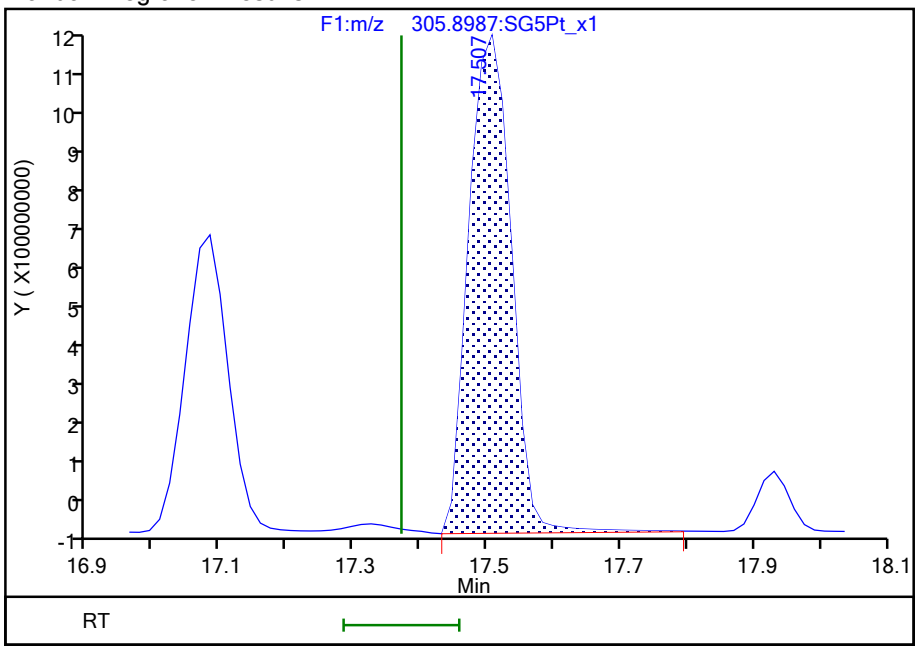

Reviewer: dadunj, 18-Aug-2021 10:58:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 3

RT: 17.33
Area: 195567764
Amount: 248.2530
Amount Units: pg/ul

Processing Integration Results

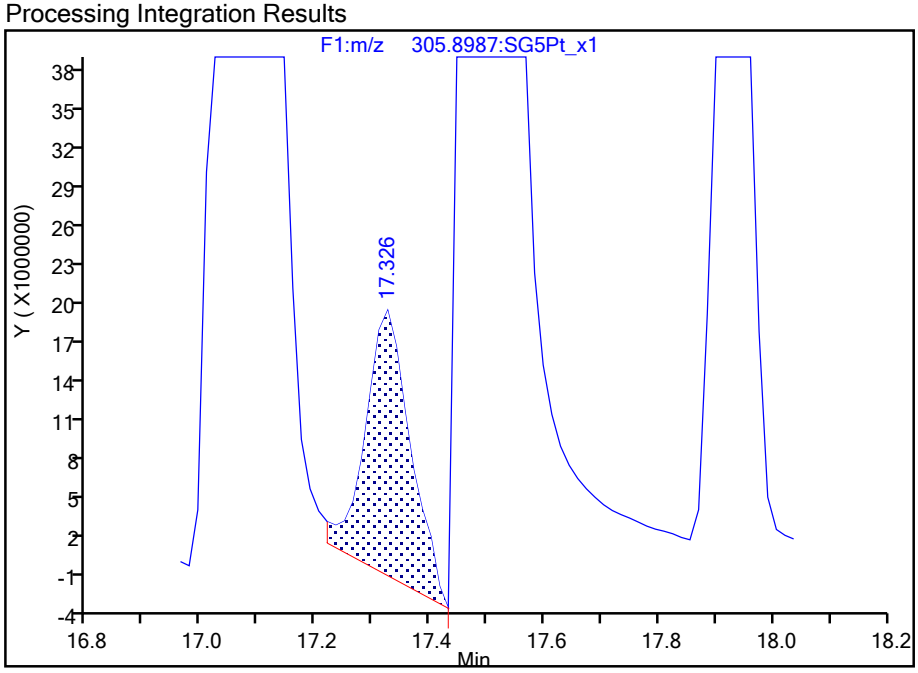

Manual Integration Results

RT: 17.51
Area: 9565967390
Amount: 12143
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 10:58:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.33
Area: 85831796
Amount: 248.2530
Amount Units: pg/ul

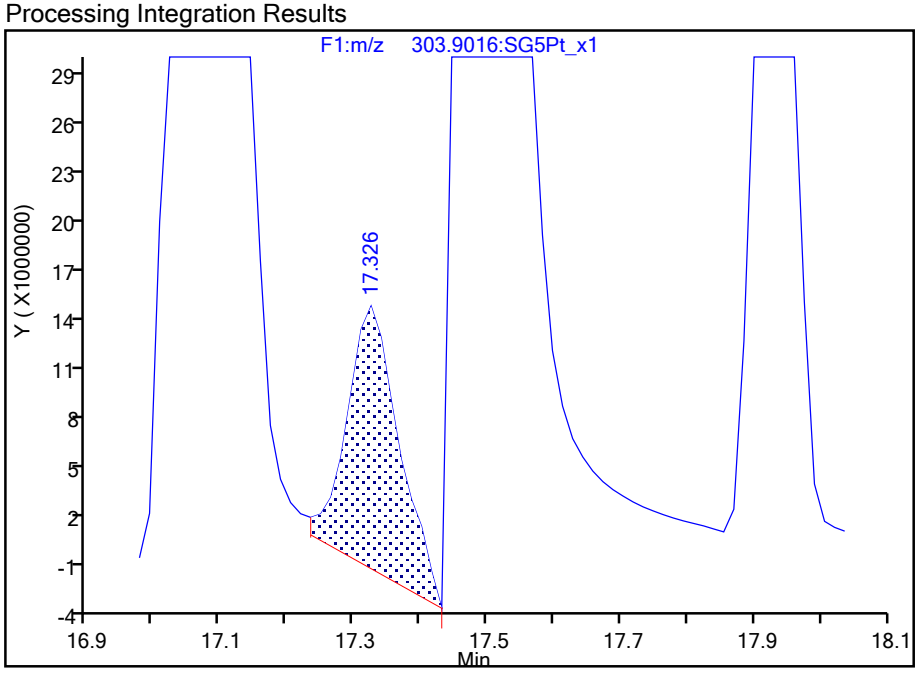

Manual Integration Results

RT: 17.51
Area: 4527088811
Amount: 12143
Amount Units: pg/ul

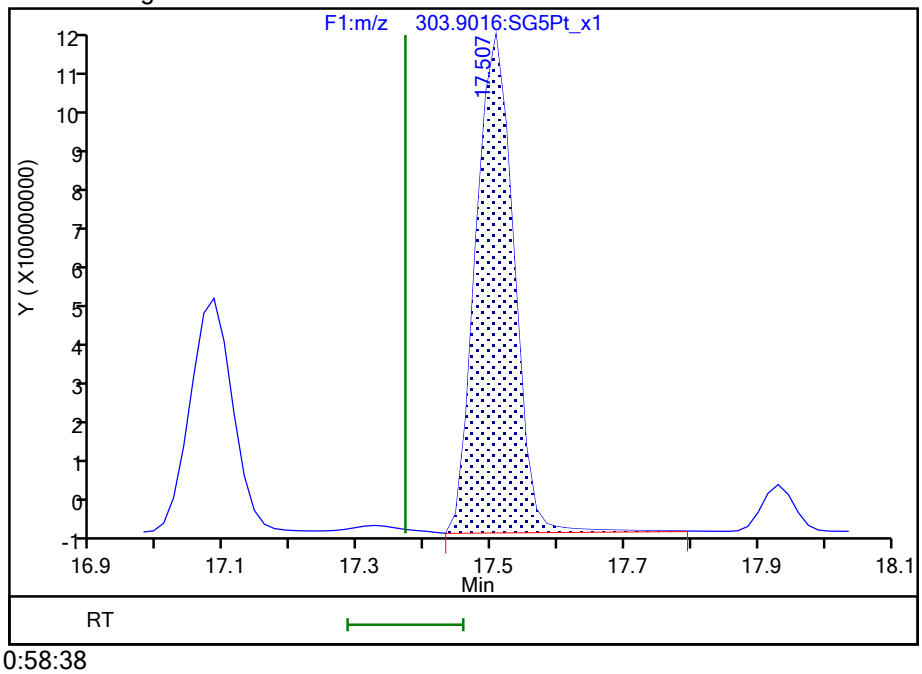

Reviewer: dadunj, 18-Aug-2021 10:58:38

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 17.99
Area: 41918532
Amount: 111.1955
Amount Units: pg/ul

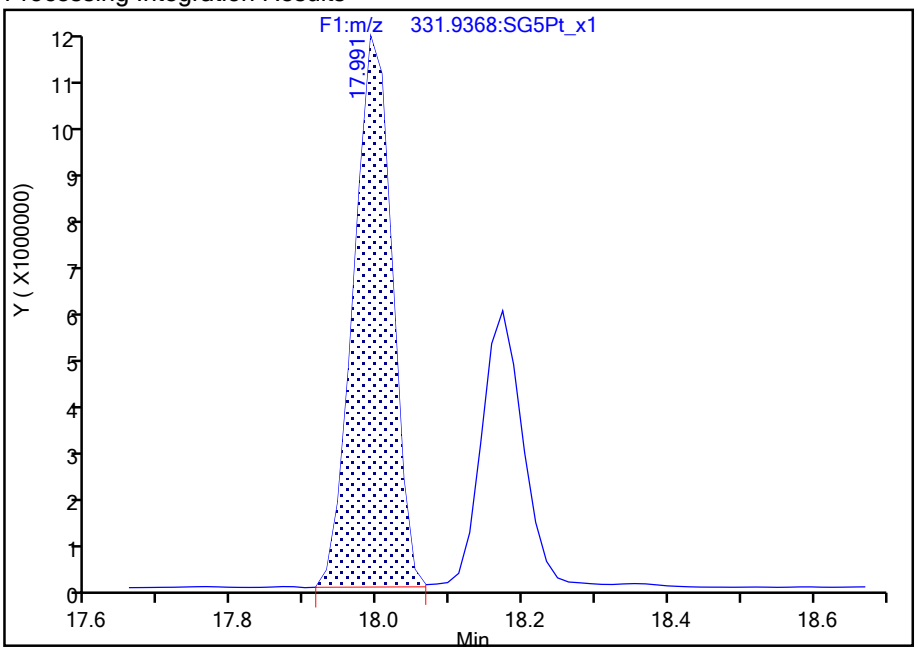

Manual Integration Results

RT: 18.17
Area: 22931534
Amount: 60.556487
Amount Units: pg/ul

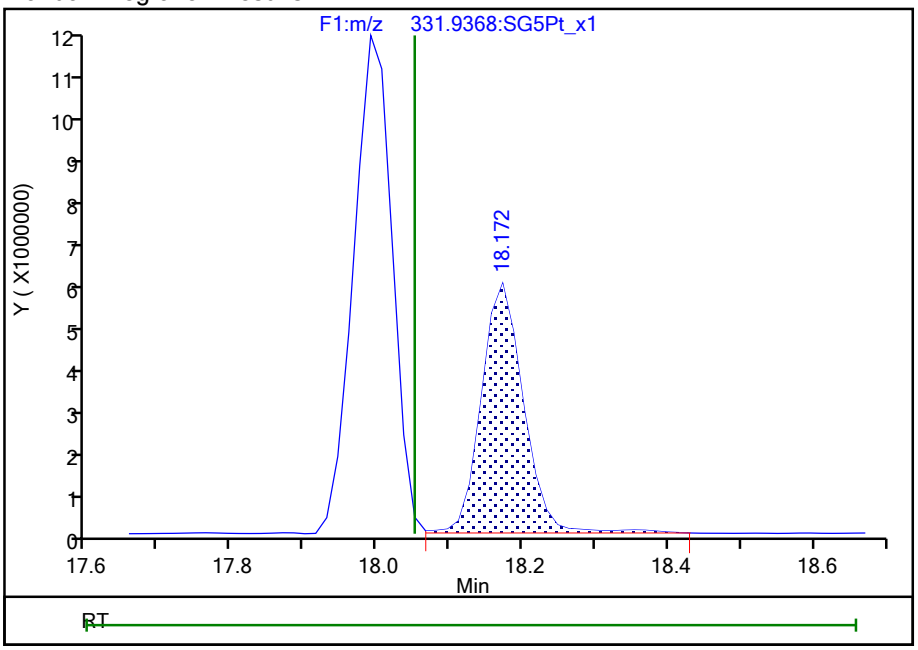

Reviewer: bennettd, 17-Aug-2021 16:45:38

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

777808

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.08
Area: 4235644
Amount: 39.485295
Amount Units: pg/ul

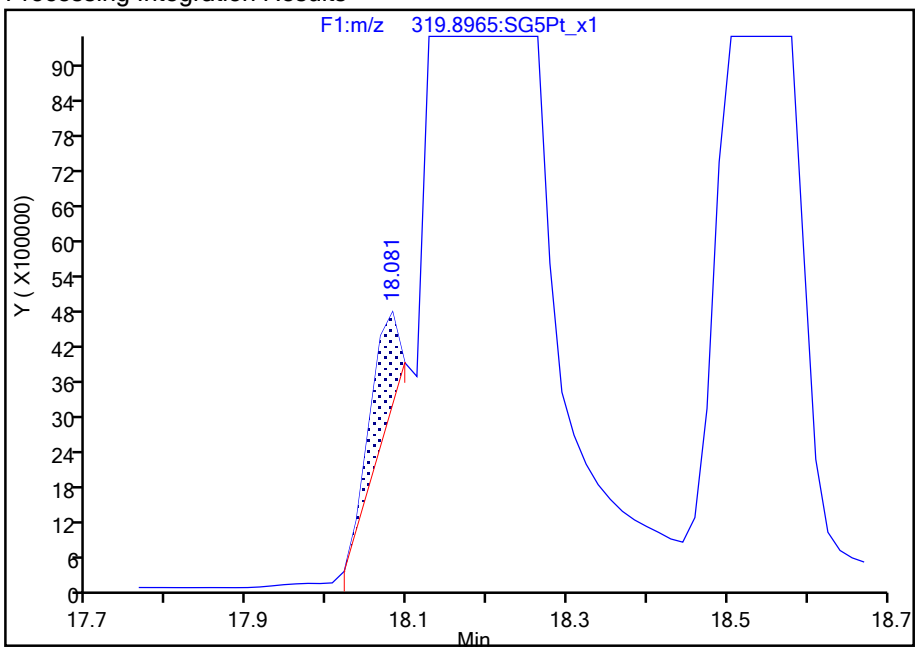

Manual Integration Results

RT: 18.19
Area: 1452345042
Amount: 5212.7337
Amount Units: pg/ul

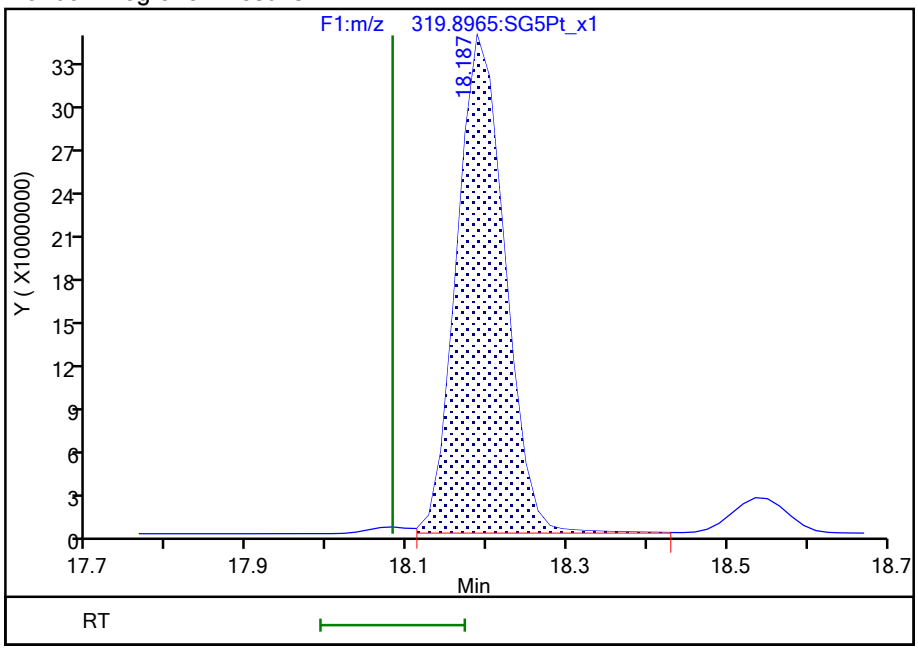

Reviewer: bennettd, 17-Aug-2021 16:45:46

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.80- 19.20)

Signal: 1

Processing Integration Results

RT = 18.081 Area = 4235644

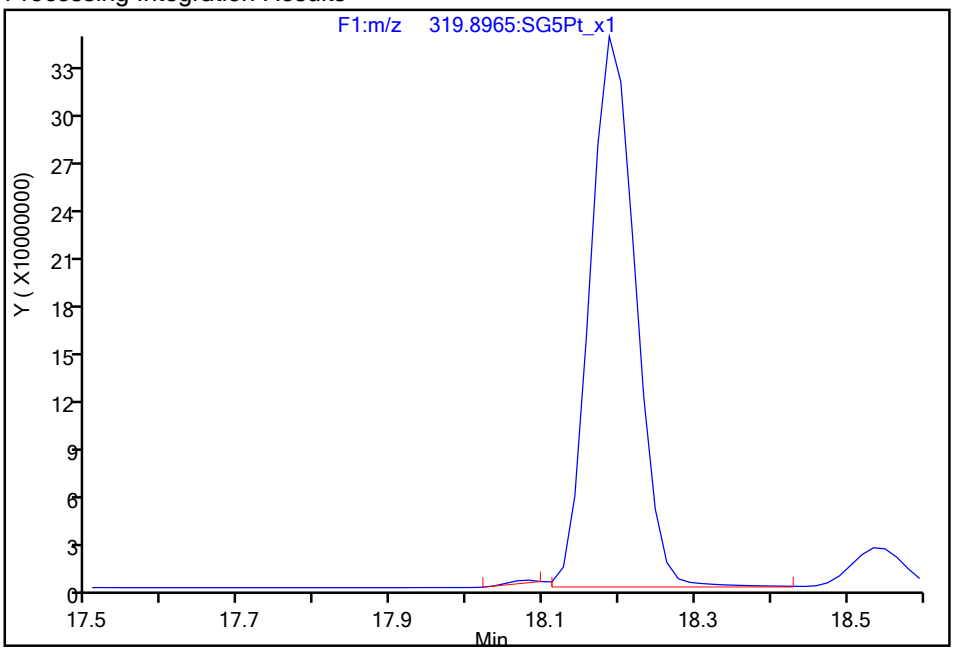

Manual Integration Results

RT = 18.081 Area = 15181534 M

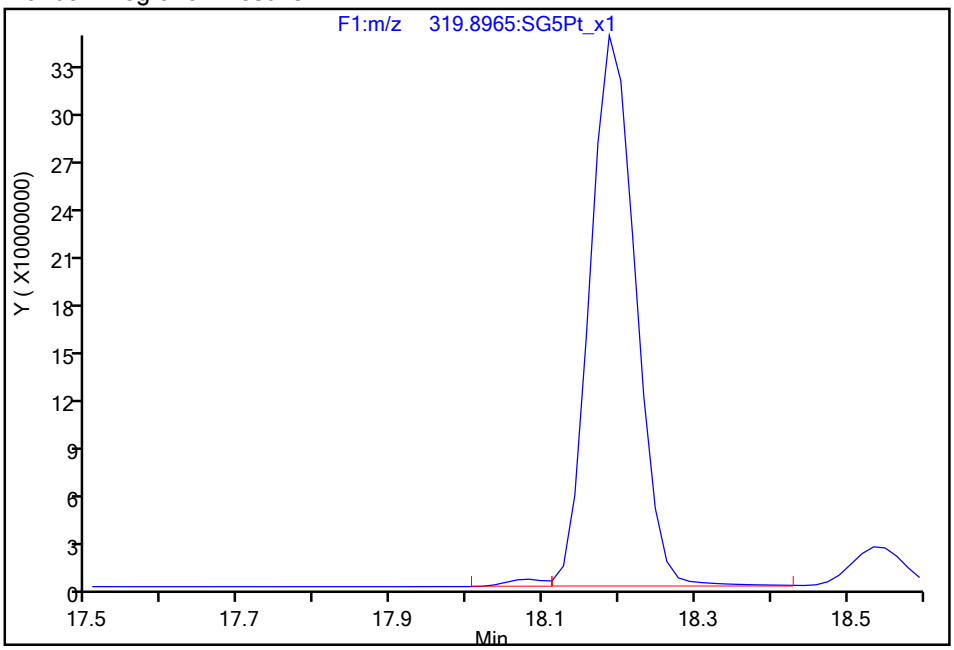

Reviewer: dadunj, 18-Aug-2021 10:59:30

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.43
Area: 9221874
Amount: 31.194040
Amount Units: pg/ul

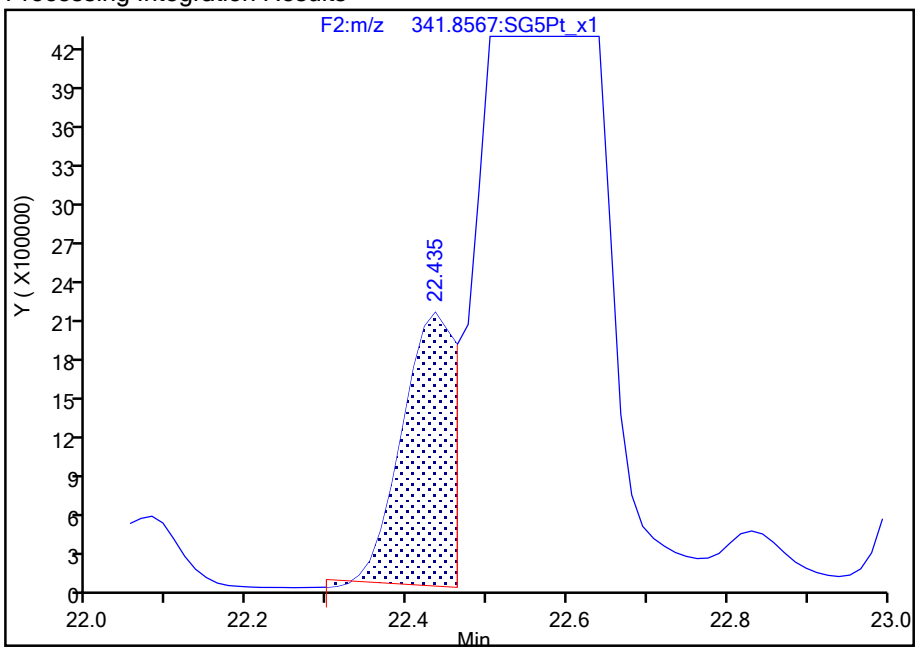

Manual Integration Results

RT: 22.57
Area: 201043319
Amount: 681.3485
Amount Units: pg/ul

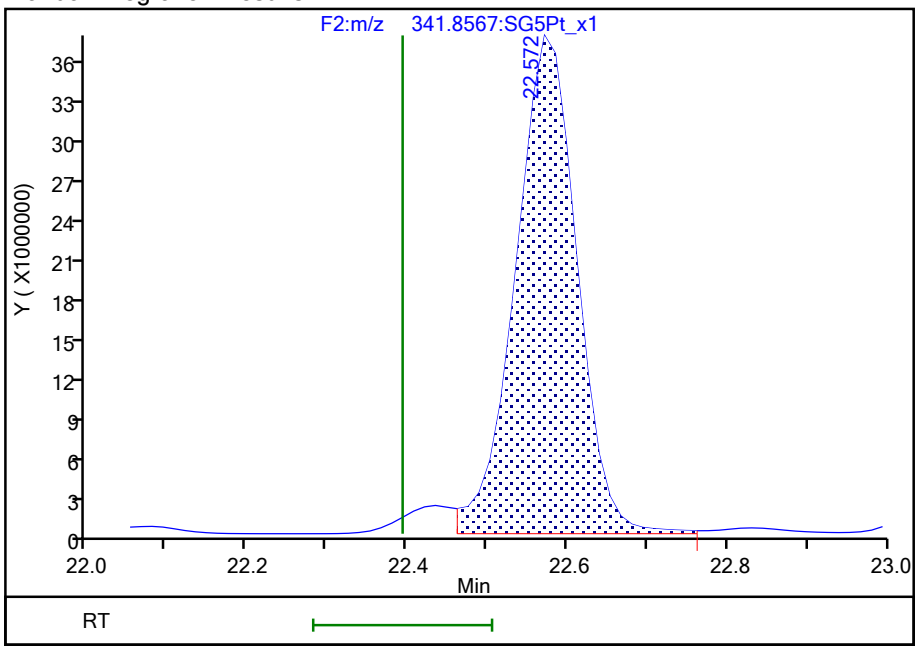

Reviewer: dadunj, 18-Aug-2021 10:59:36
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

Processing Integration Results

RT: 22.43
Area: 23824603
Amount: 31.194040
Amount Units: pg/ul

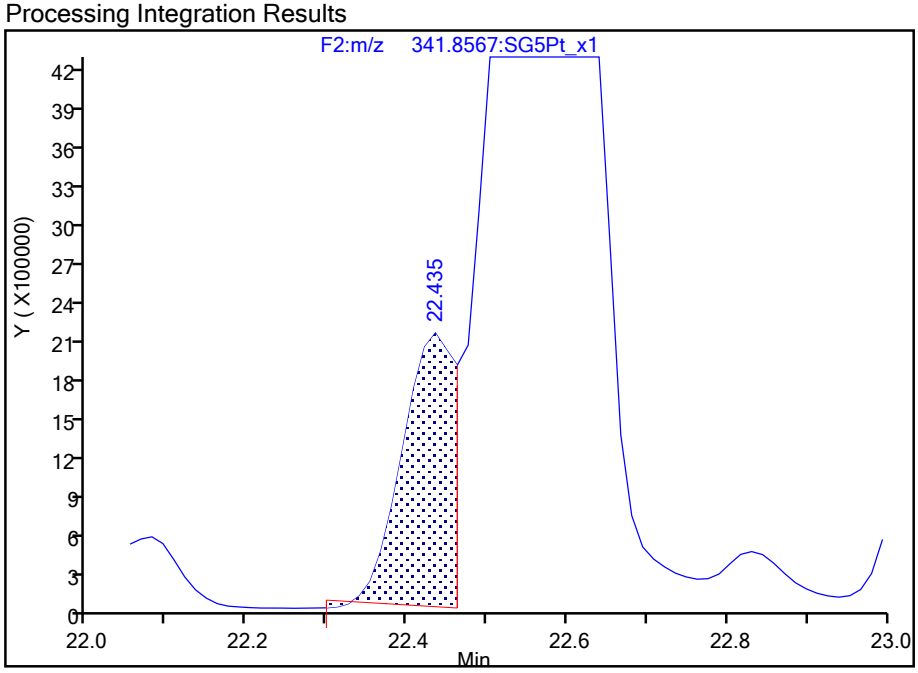

Manual Integration Results

RT: 22.57
Area: 520383284
Amount: 681.3485
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 10:59:36
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.43
Area: 14602729
Amount: 31.194040
Amount Units: pg/ul

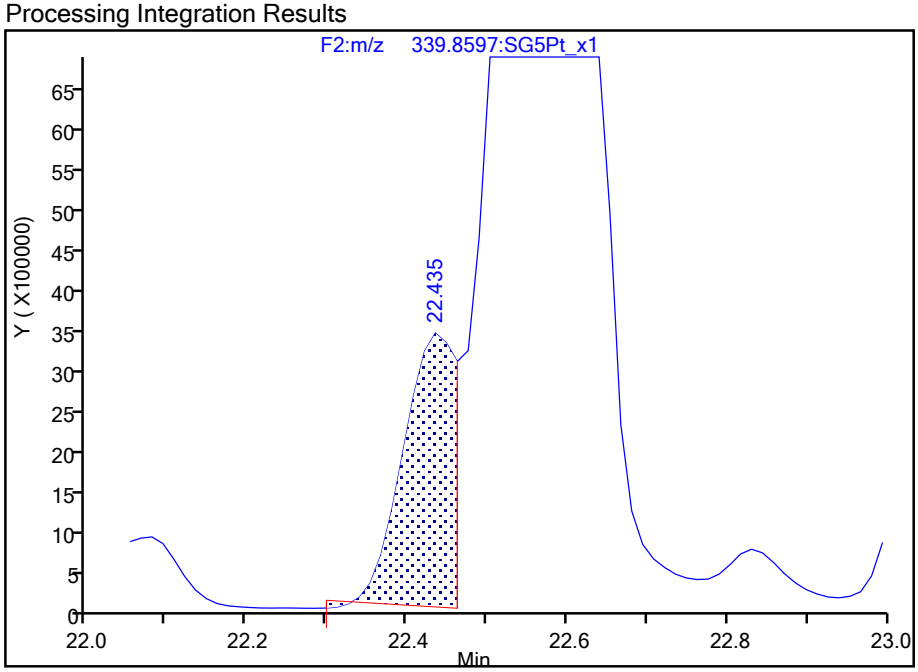

Manual Integration Results

RT: 22.57
Area: 319339965
Amount: 681.3485
Amount Units: pg/ul

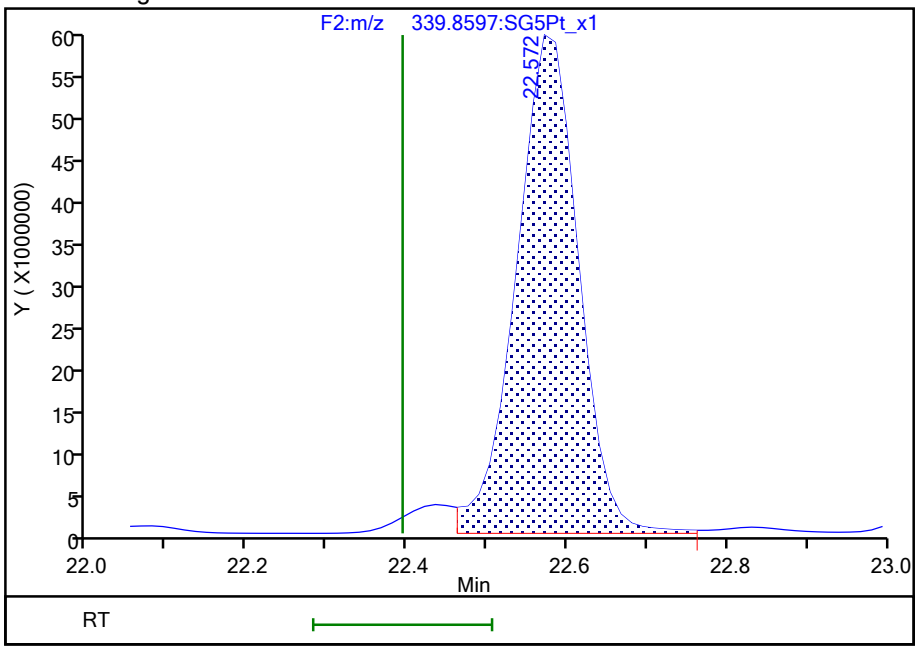

Reviewer: dadunj, 18-Aug-2021 10:59:37

Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Not Detected
Expected RT: 23.73

Processing Integration Results

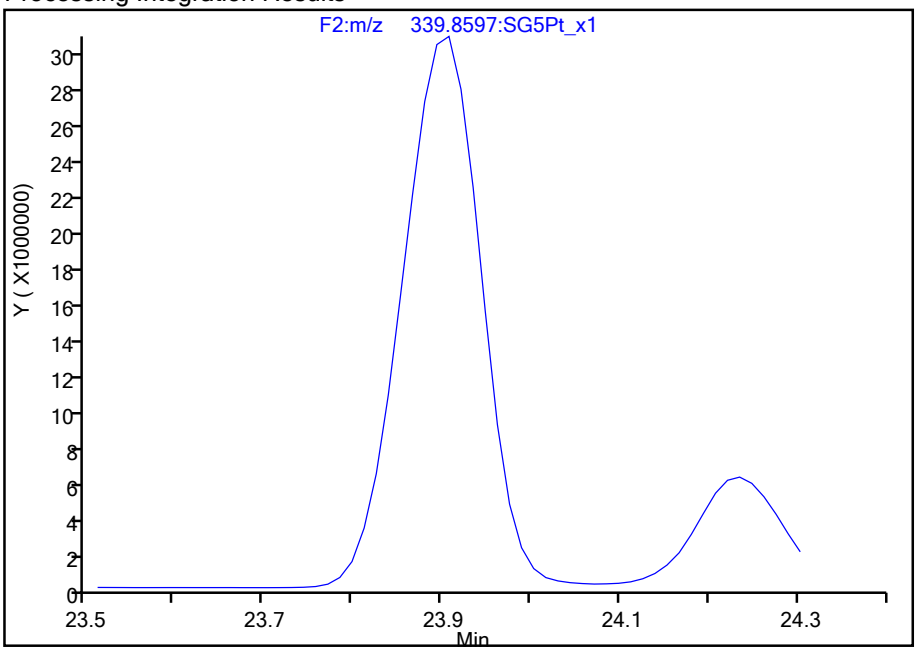

RT: 23.91
Area: 185641454
Amount: 370.2407
Amount Units: pg/ul

Manual Integration Results

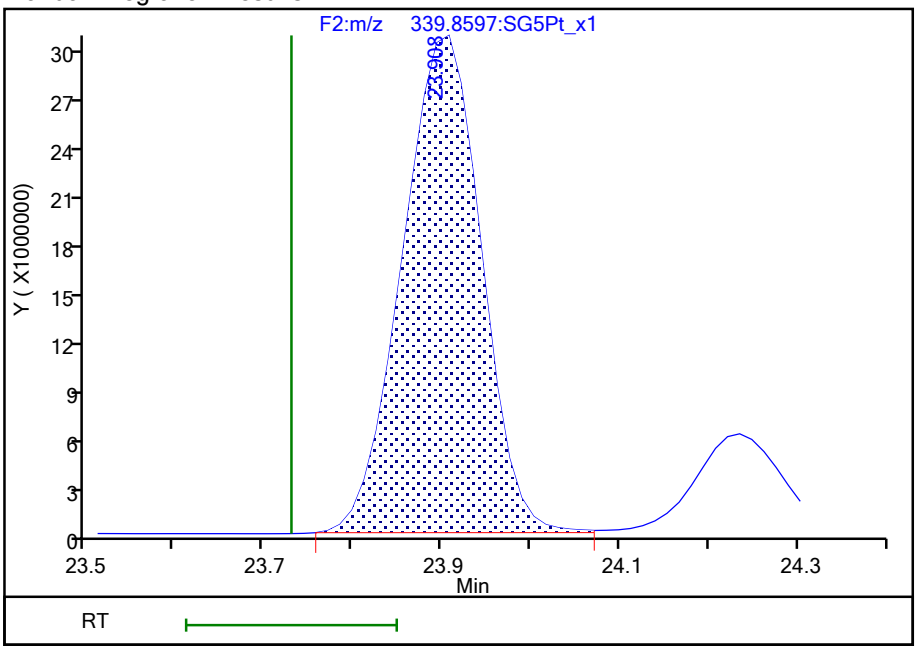

Reviewer: dadunj, 18-Aug-2021 10:59:41
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

777814

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Not Detected
Expected RT: 24.45

Processing Integration Results

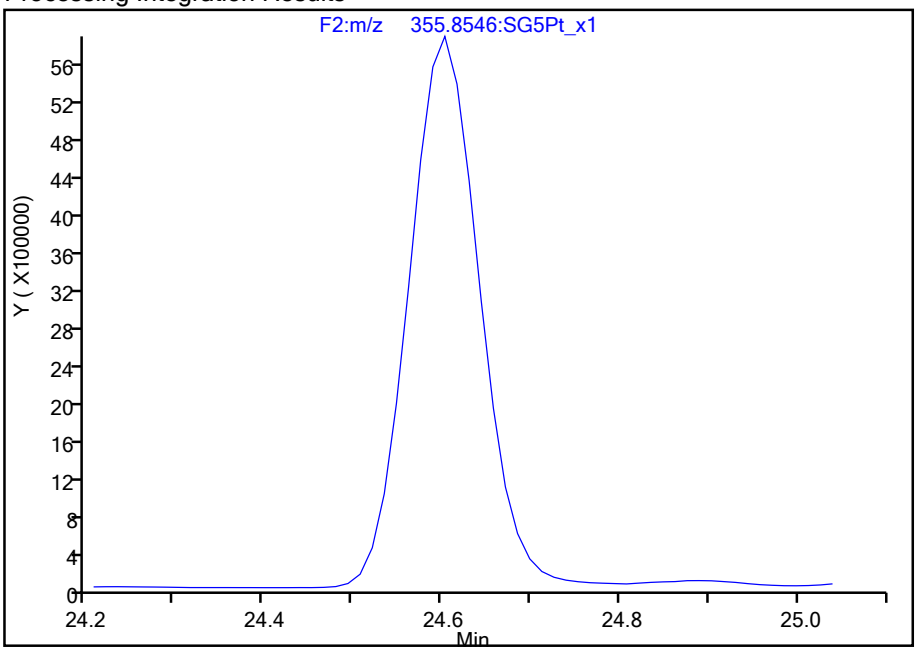

Manual Integration Results

RT: 24.60
Area: 32391255
Amount: 99.531645
Amount Units: pg/ul

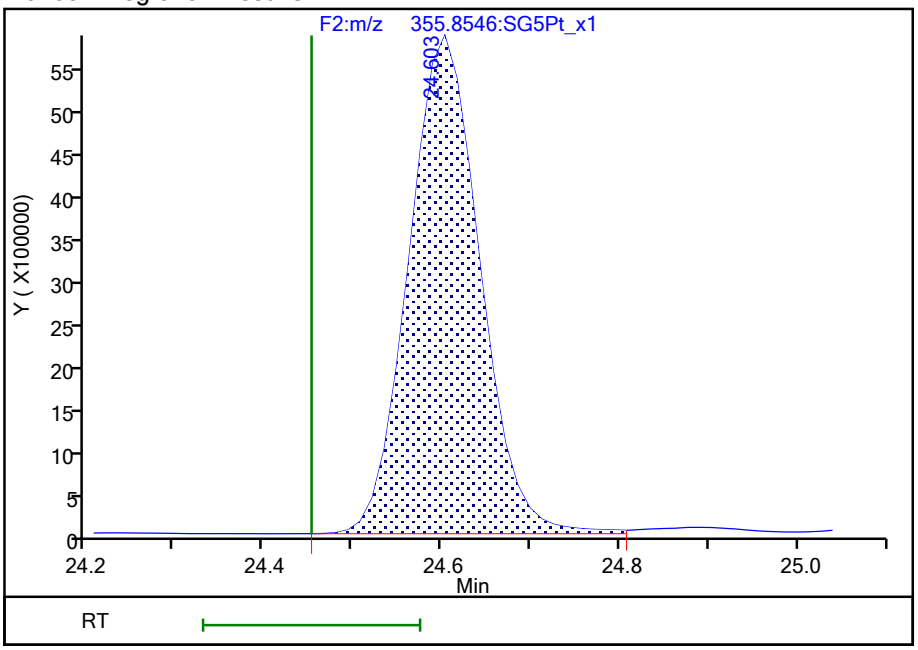

Reviewer: dadunj, 18-Aug-2021 11:00:09
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

777815

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.47
Area: 5838126
Amount: 16.185992
Amount Units: pg/ul

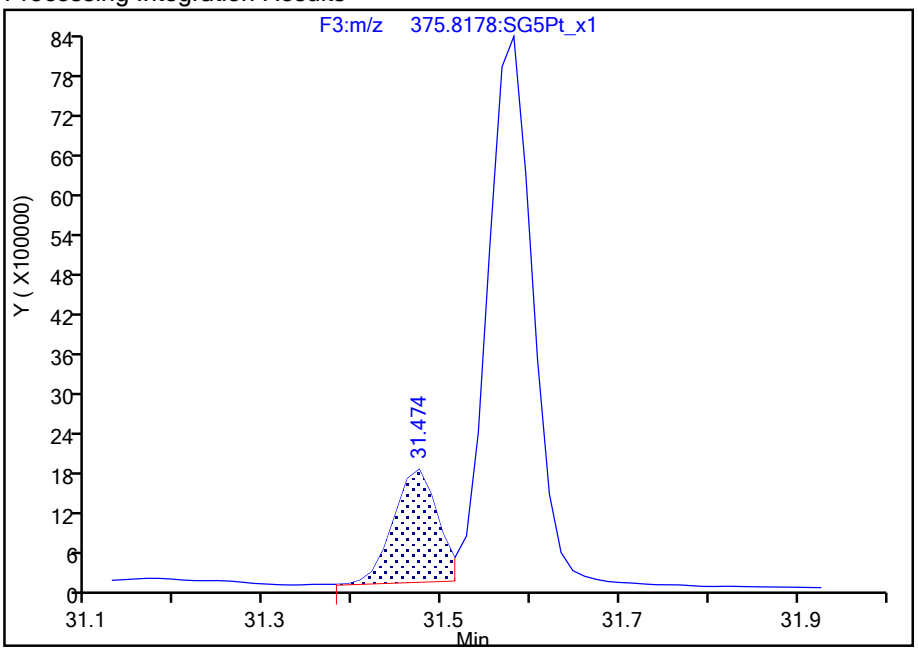

Manual Integration Results

RT: 31.58
Area: 28460270
Amount: 81.229775
Amount Units: pg/ul

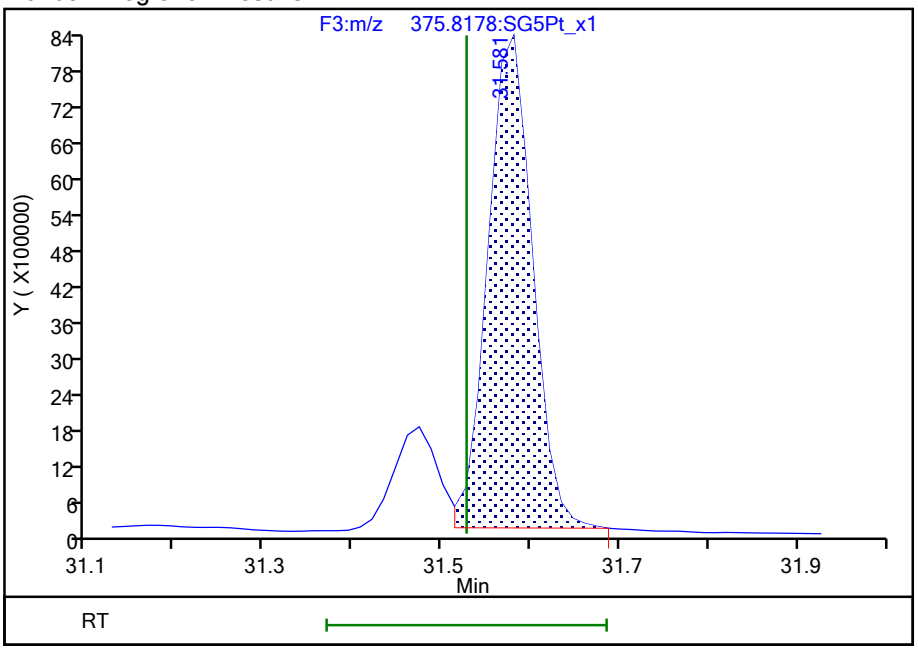

Reviewer: dadunj, 18-Aug-2021 11:00:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 3

Processing Integration Results

RT: 31.47
Area: 12464077
Amount: 16.185992
Amount Units: pg/ul

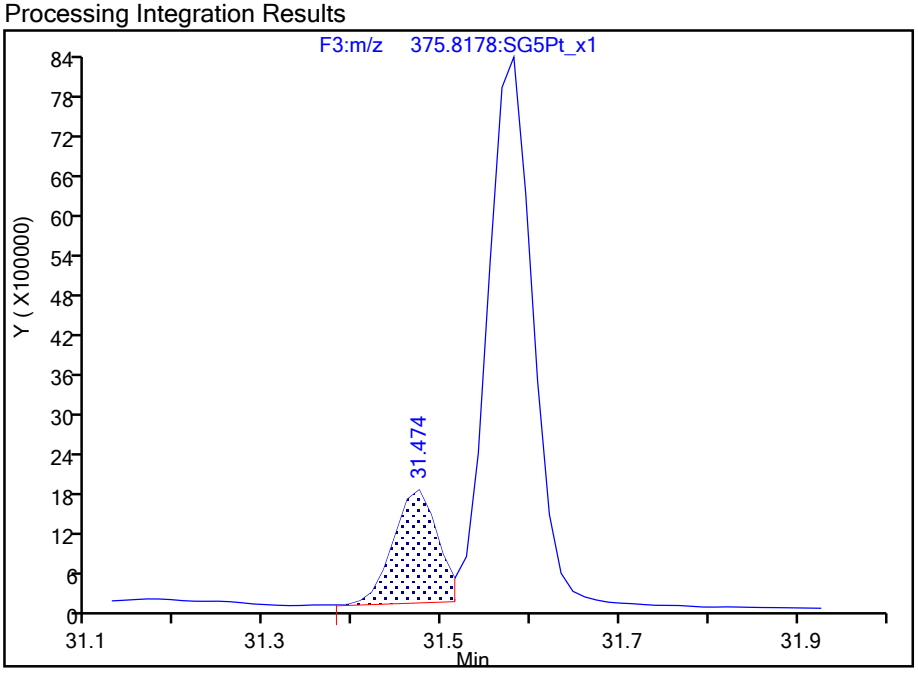

Manual Integration Results

RT: 31.58
Area: 62551259
Amount: 81.229775
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 11:00:19
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.47
Area: 6625951
Amount: 16.185992
Amount Units: pg/ul

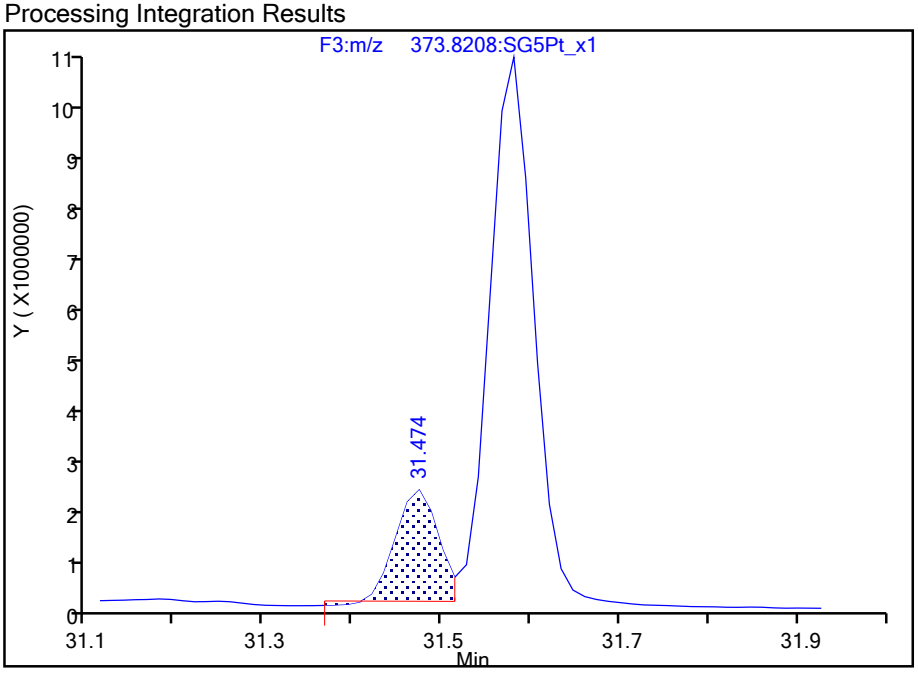

Manual Integration Results

RT: 31.58
Area: 34090989
Amount: 81.229775
Amount Units: pg/ul

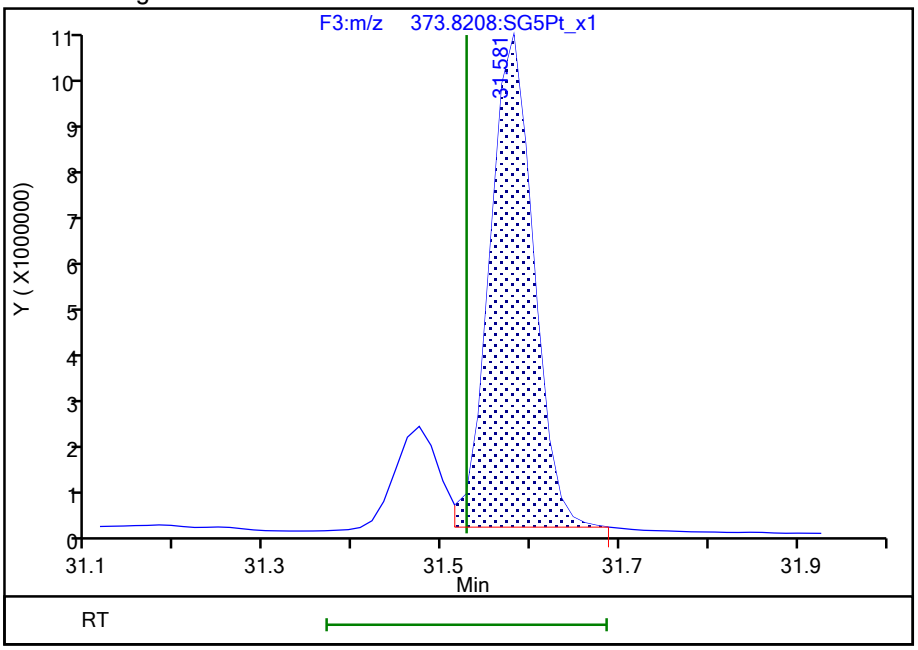

Reviewer: dadunj, 18-Aug-2021 11:00:21
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

777818

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.37
Area: 42437933
Amount: 94.652924
Amount Units: pg/ul

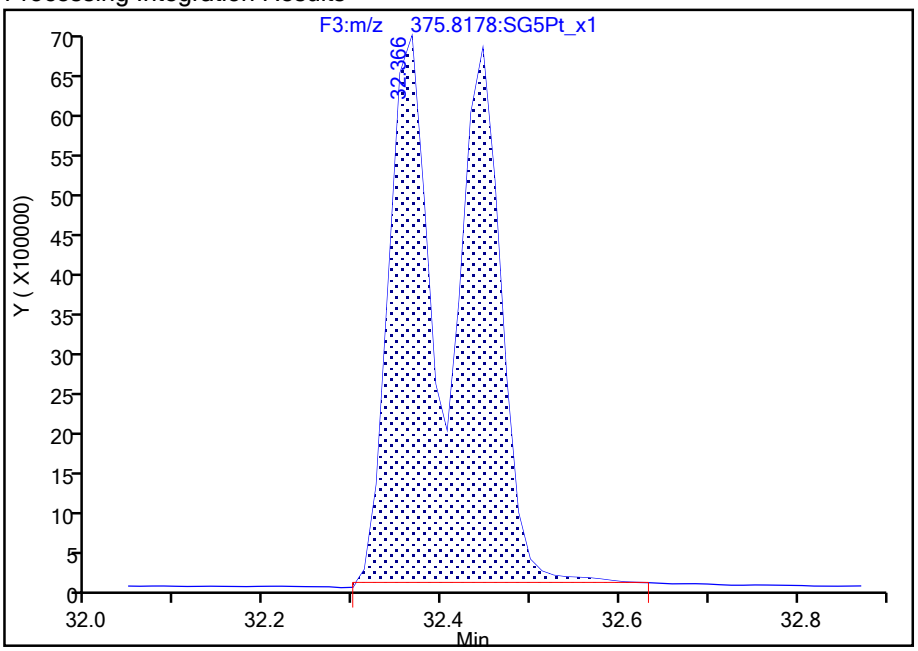

Manual Integration Results

RT: 32.37
Area: 21331668
Amount: 65.084463
Amount Units: pg/ul

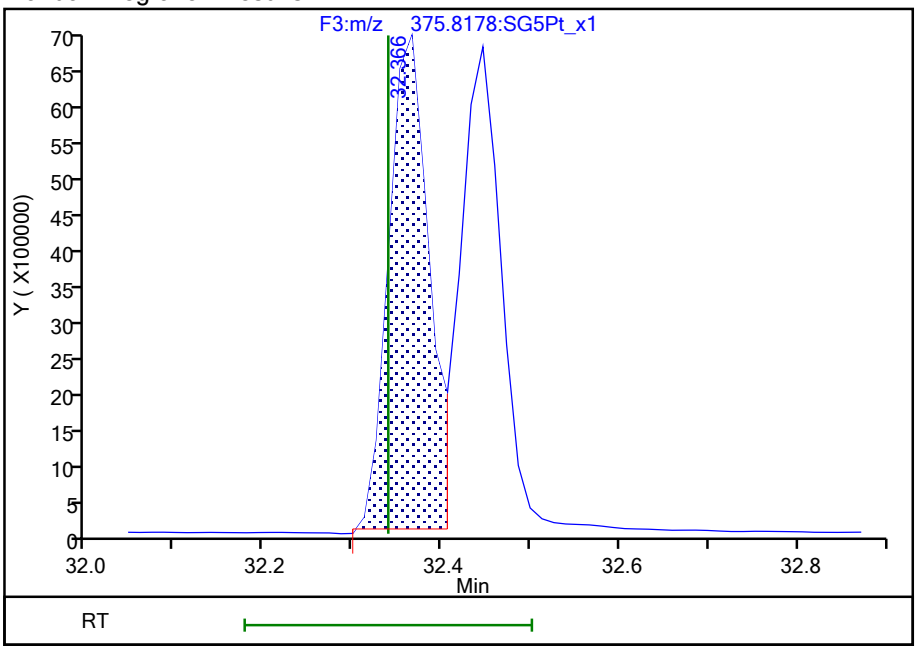

Reviewer: dadunj, 18-Aug-2021 11:00:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777819

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d				
Injection Date:	15-Aug-2021 05:51:55	Instrument ID:	10D5		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:	DB	ALS Bottle#:	48	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.446 Area = 24885688

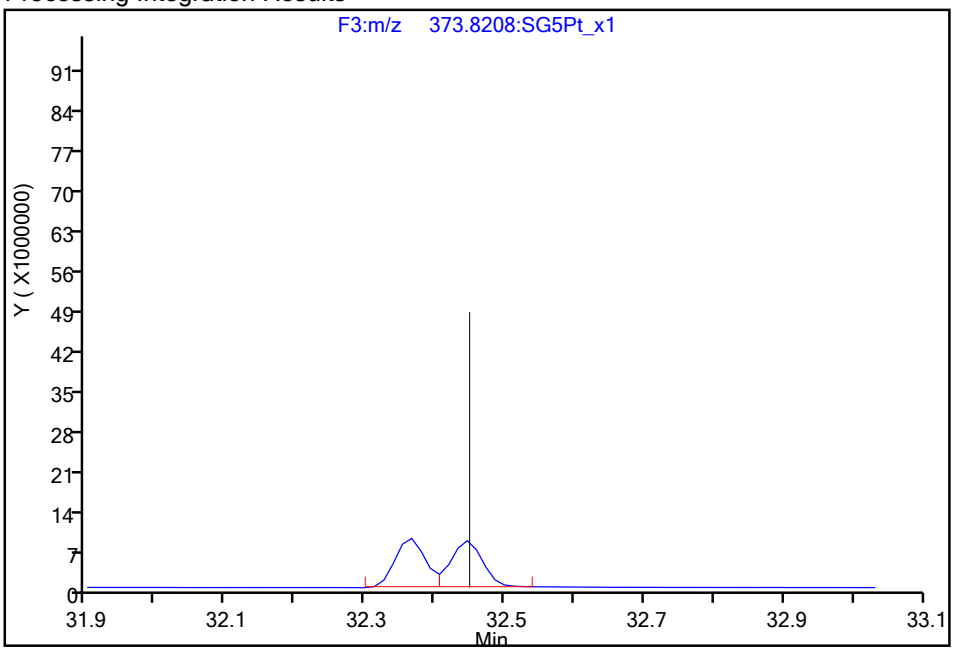

Manual Integration Results

RT = 32.446 Area = 24885688

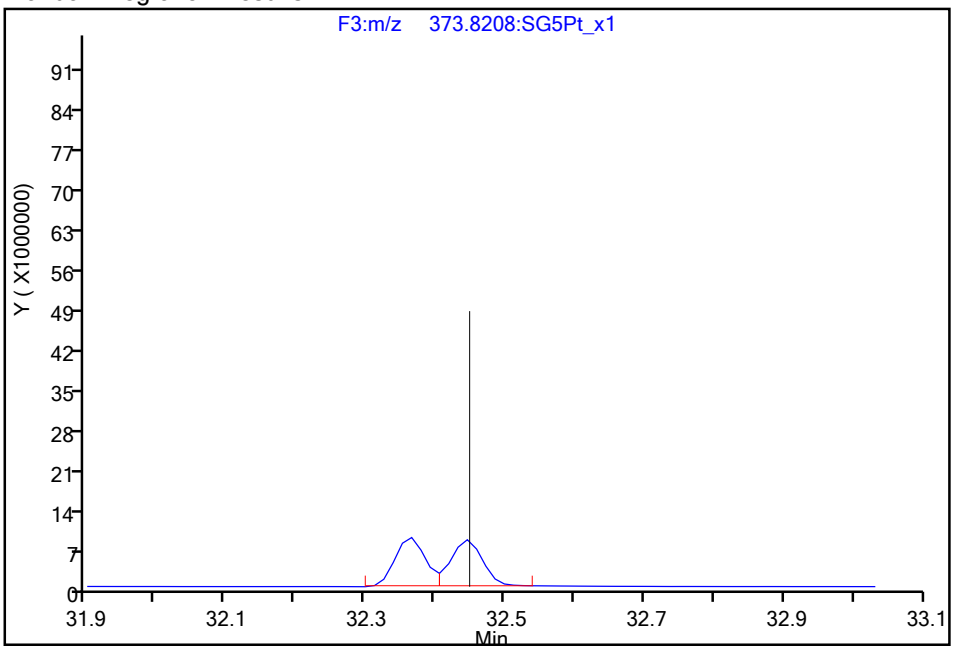

Reviewer: dadunj, 18-Aug-2021 11:00:42

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

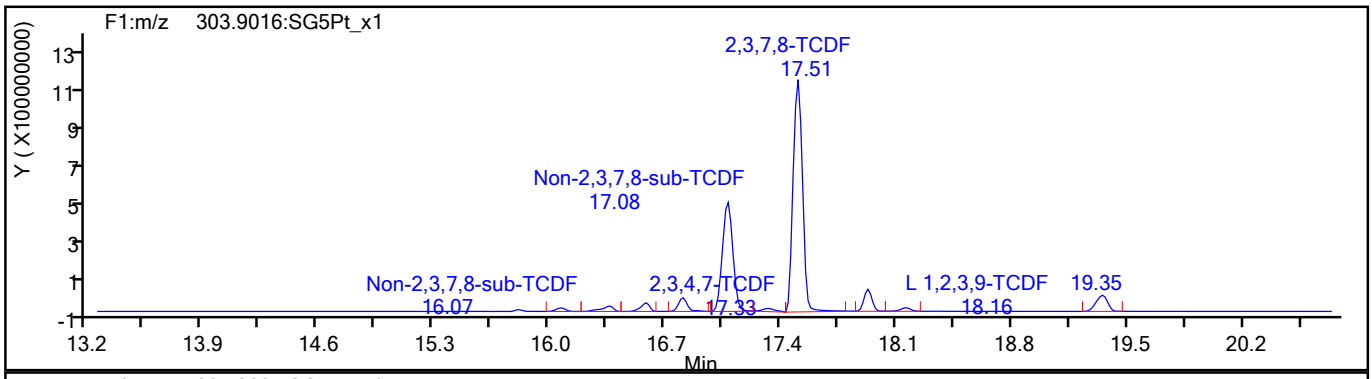

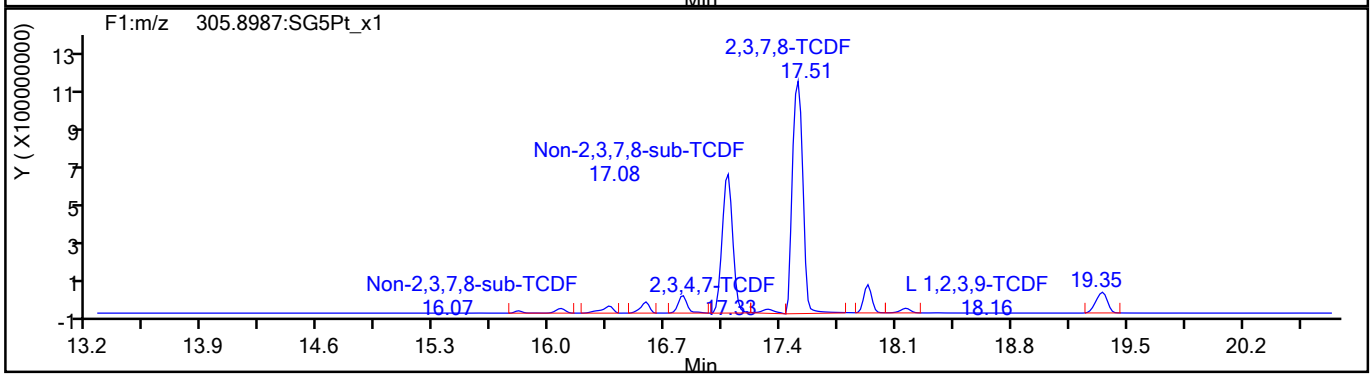

TCDF Standards

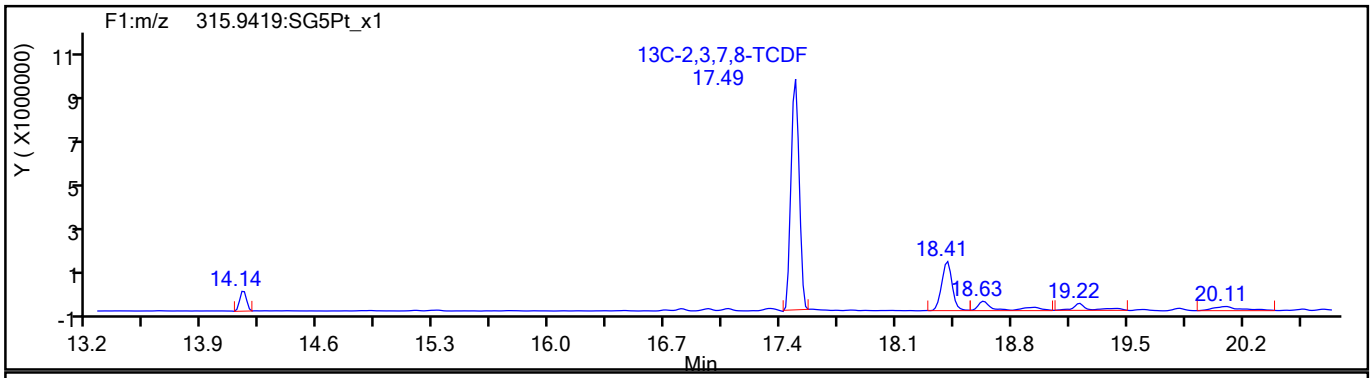

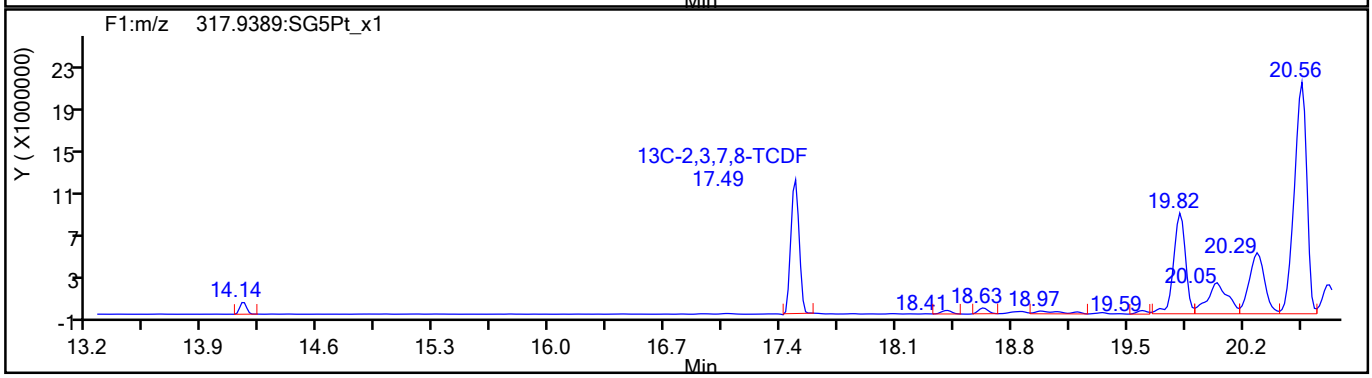

777821

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

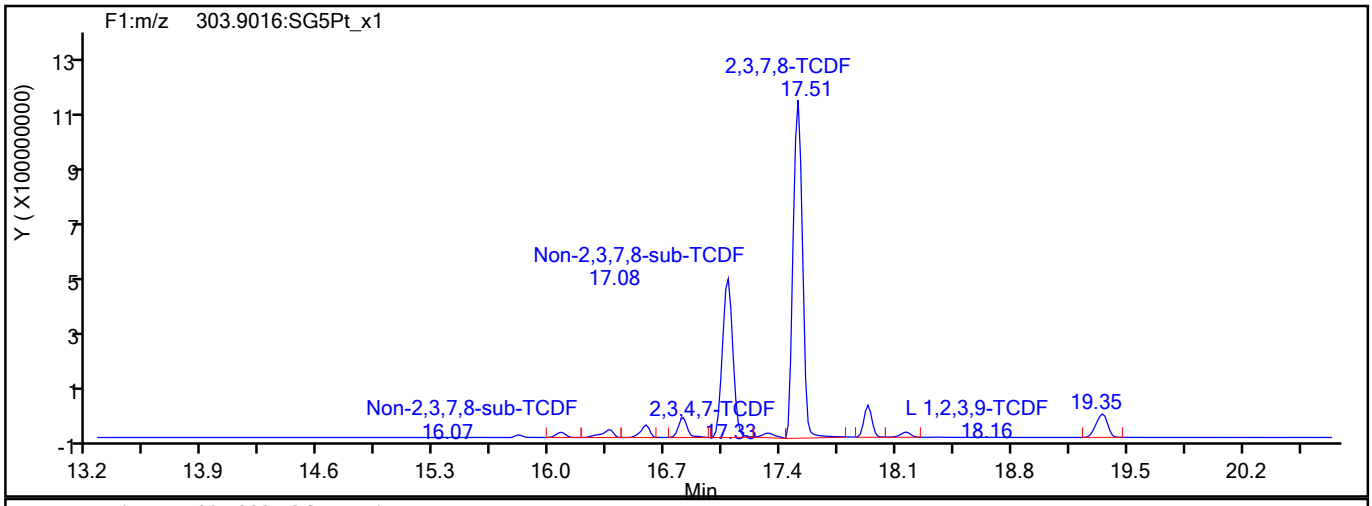

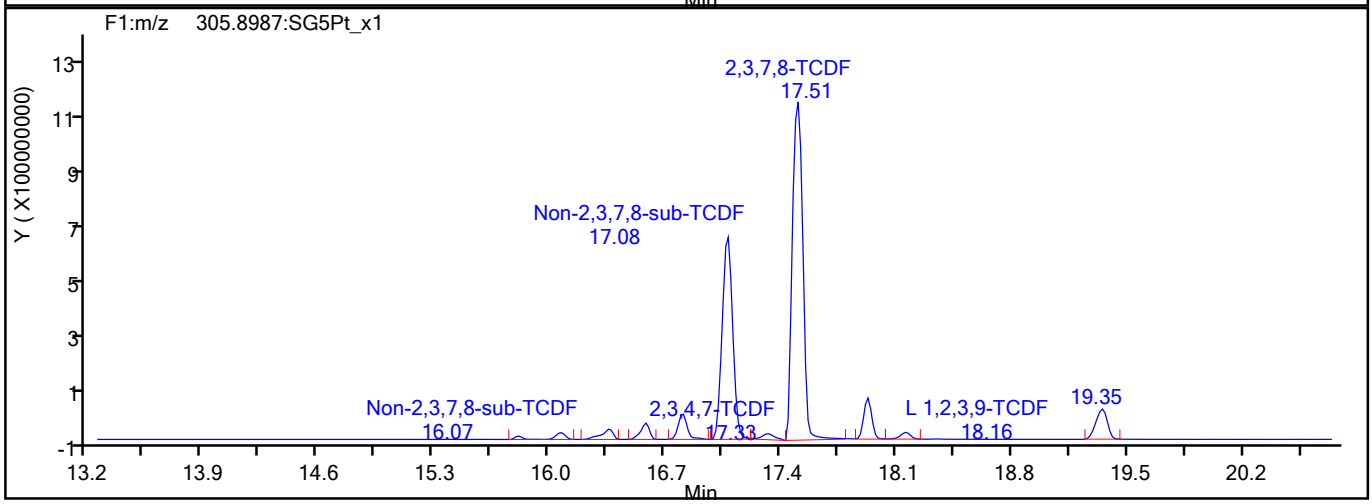

TCDF Interference Mass

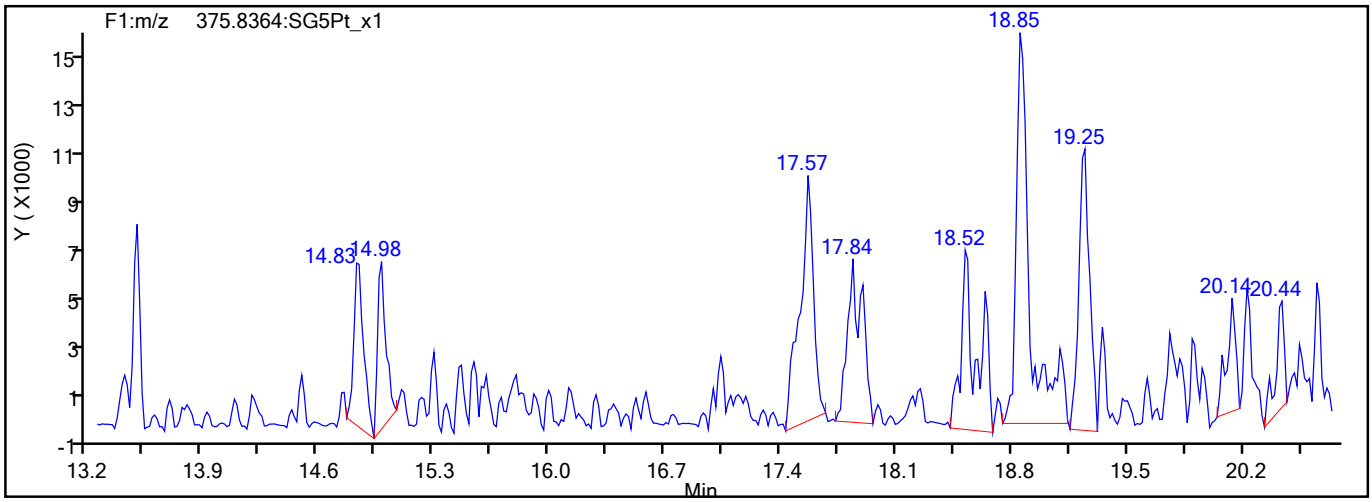

777822

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

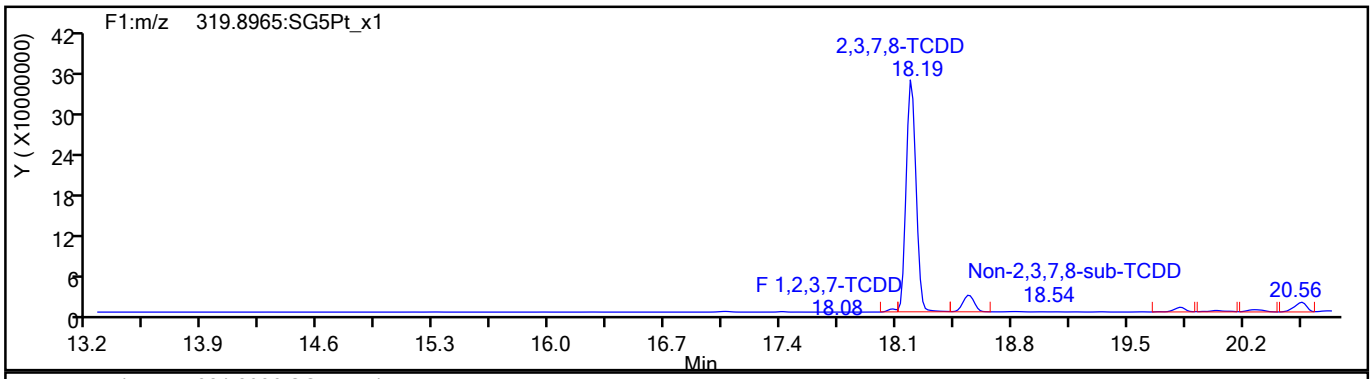

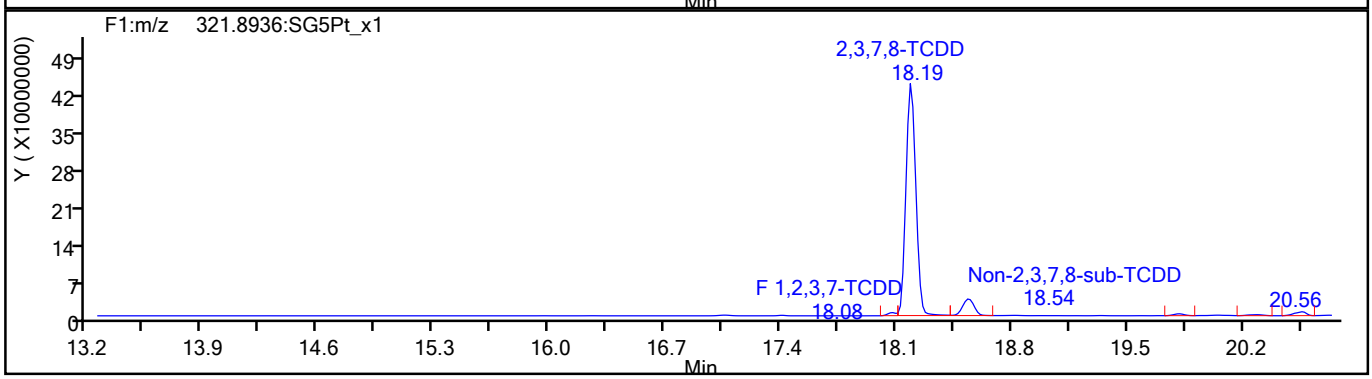

TCDD Standards

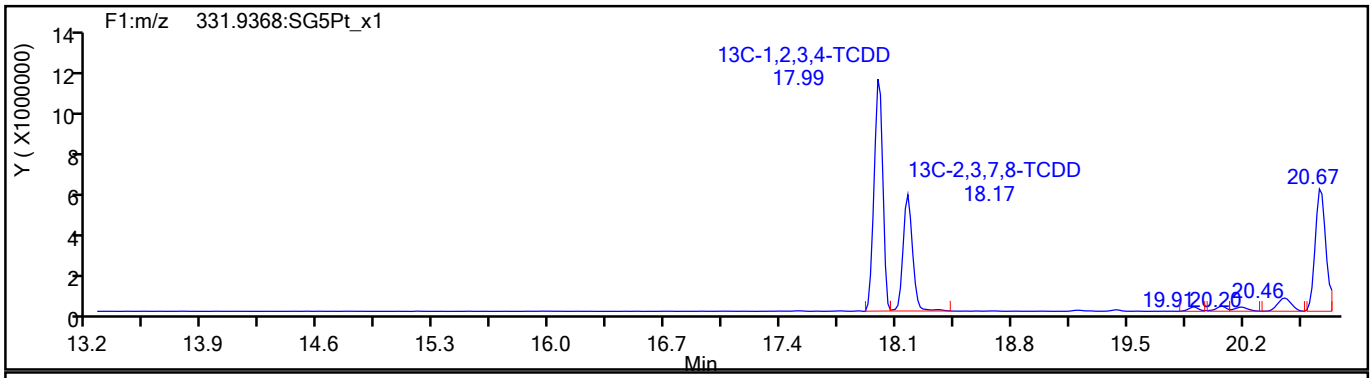

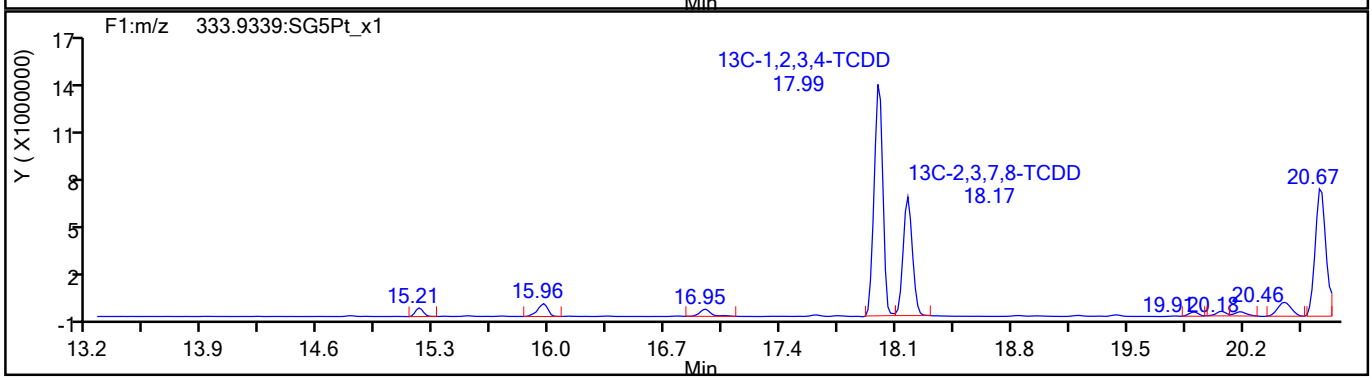

777823

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

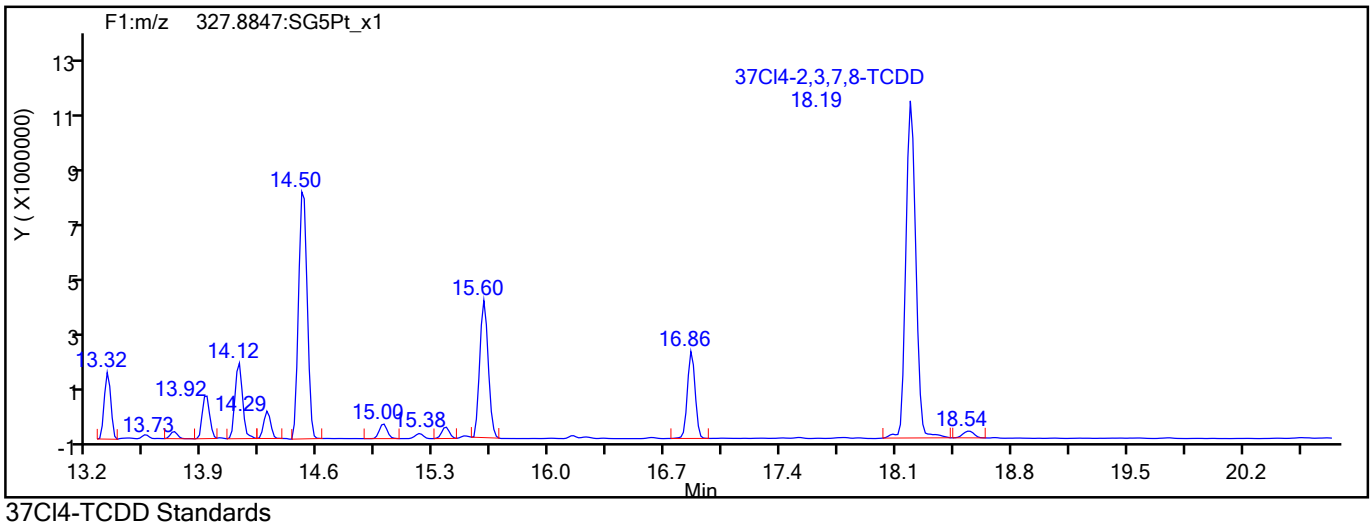

37Cl4-TCDD Standards

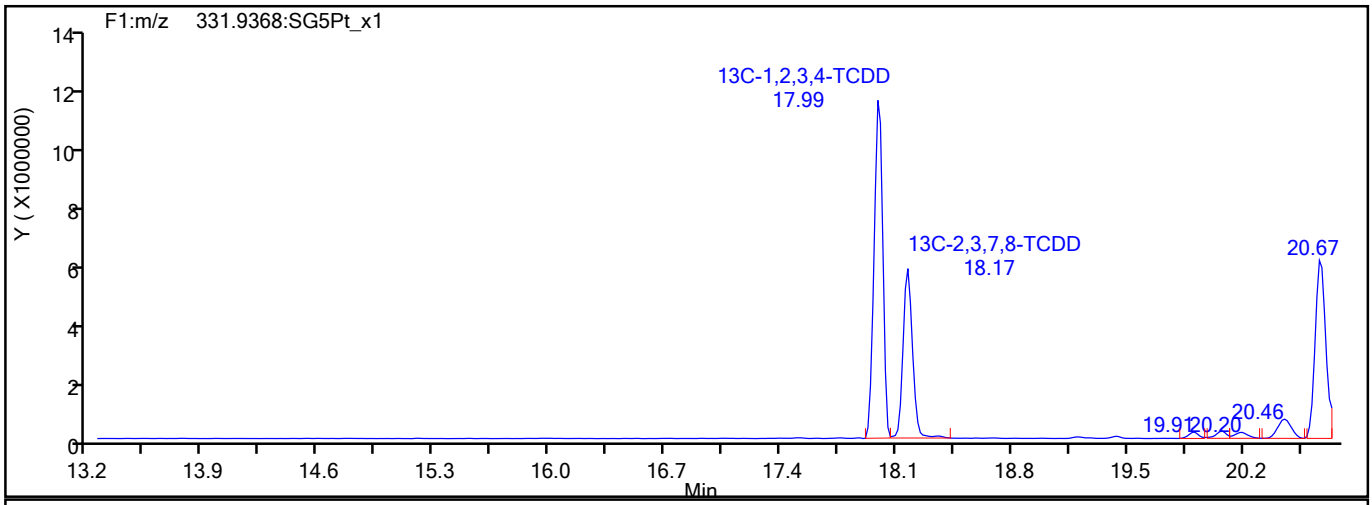

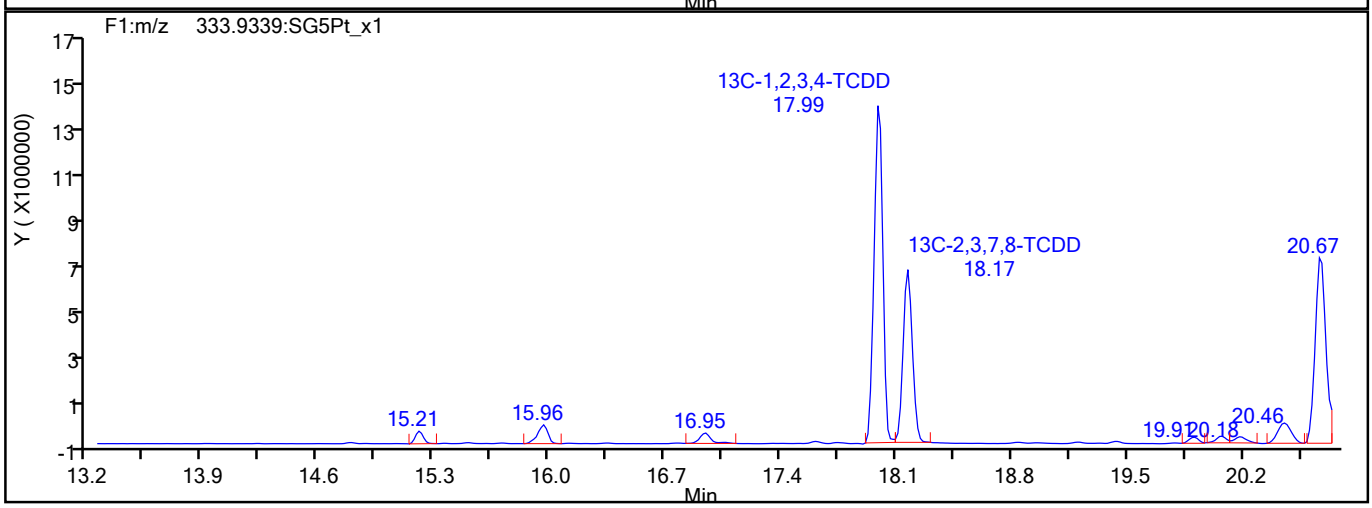

777824

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

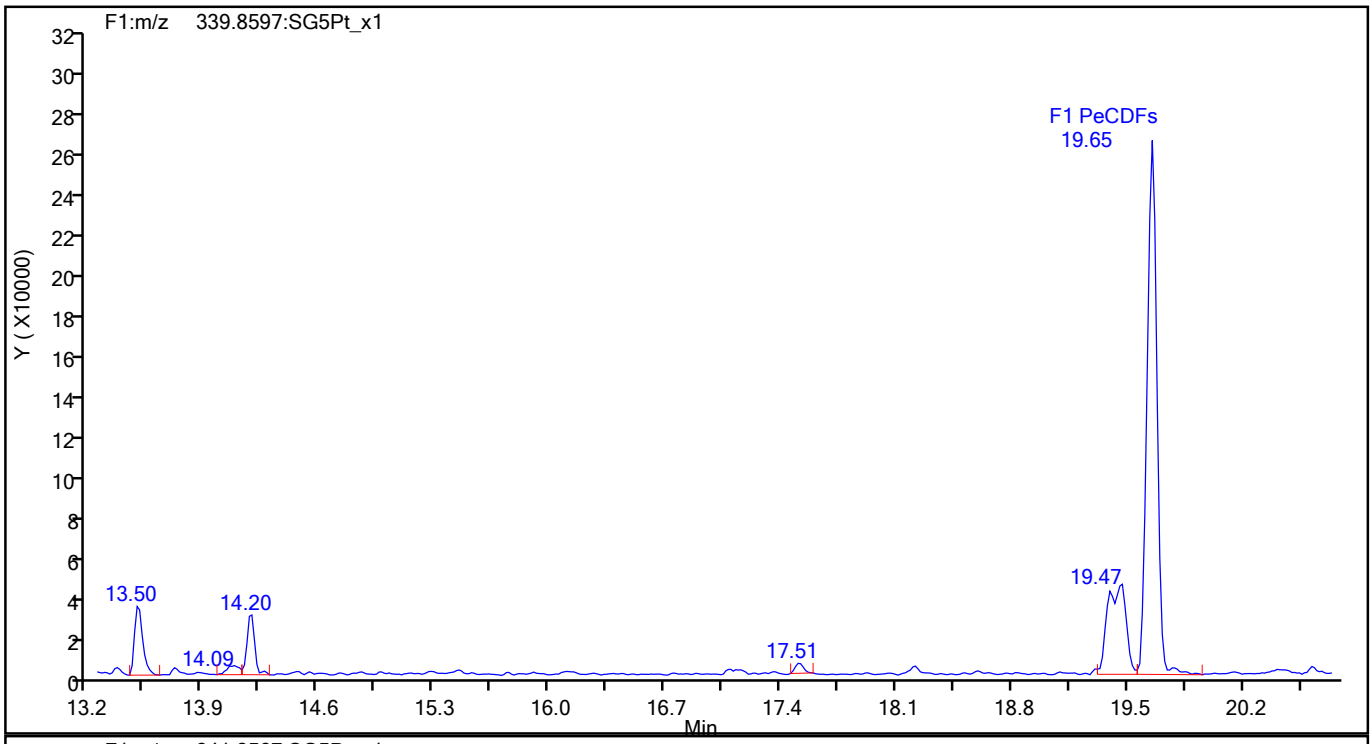

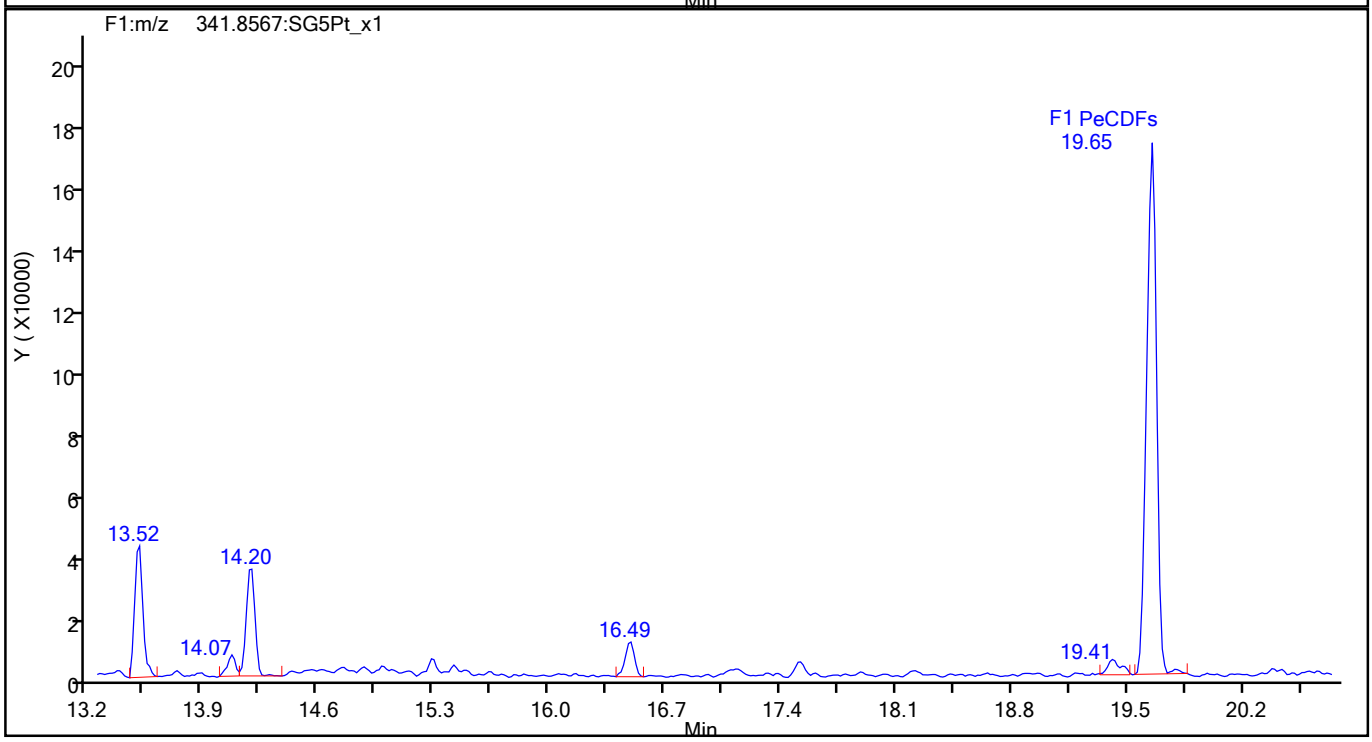

777825

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

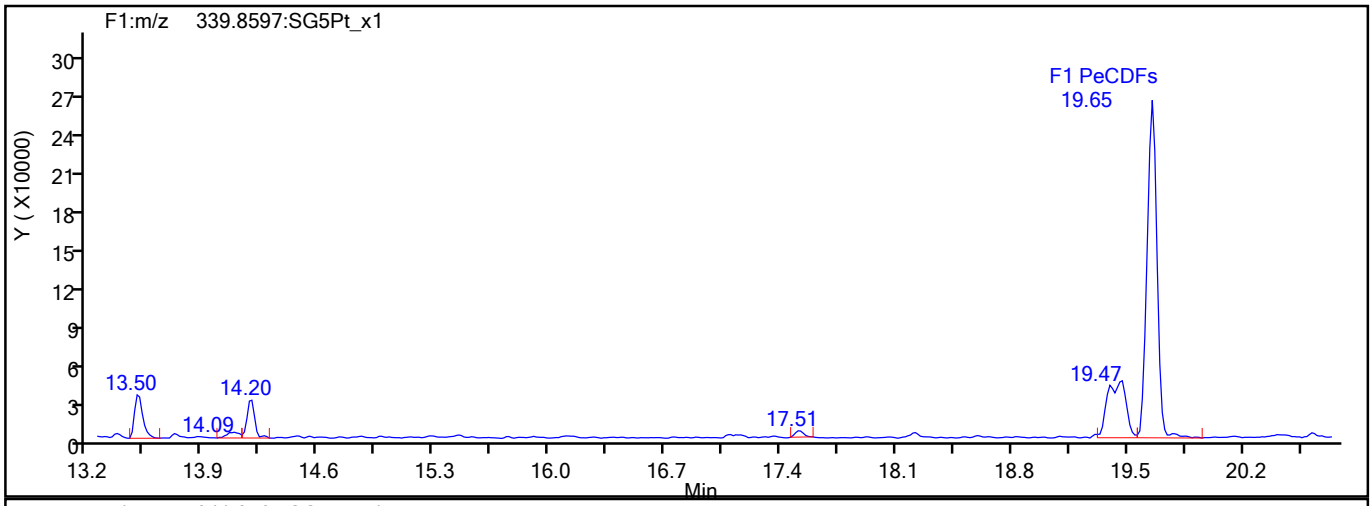

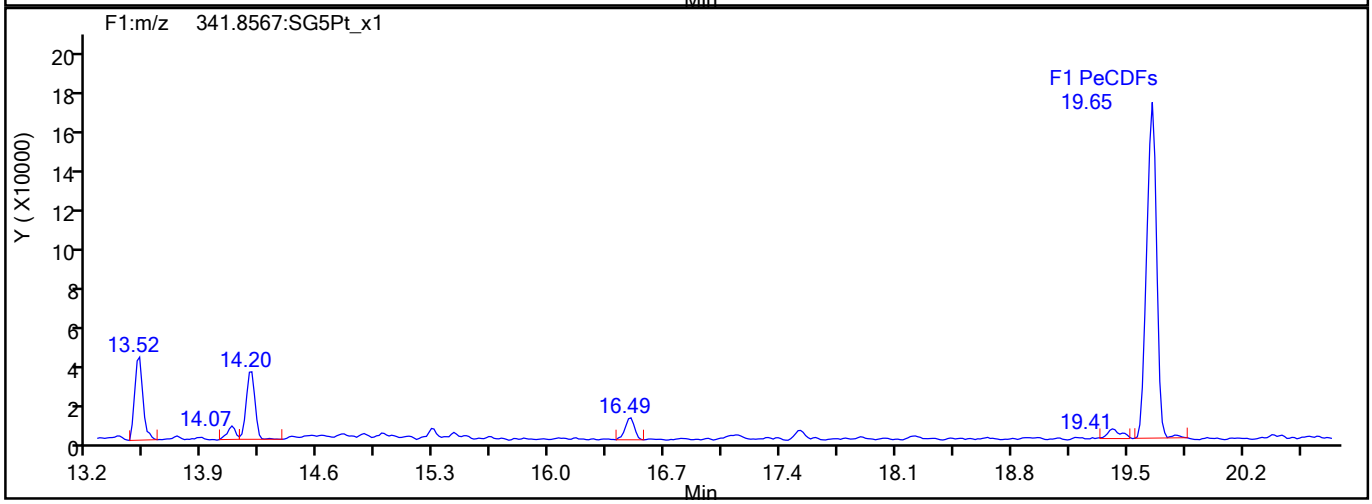

F1 PeCDFs Interference Mass

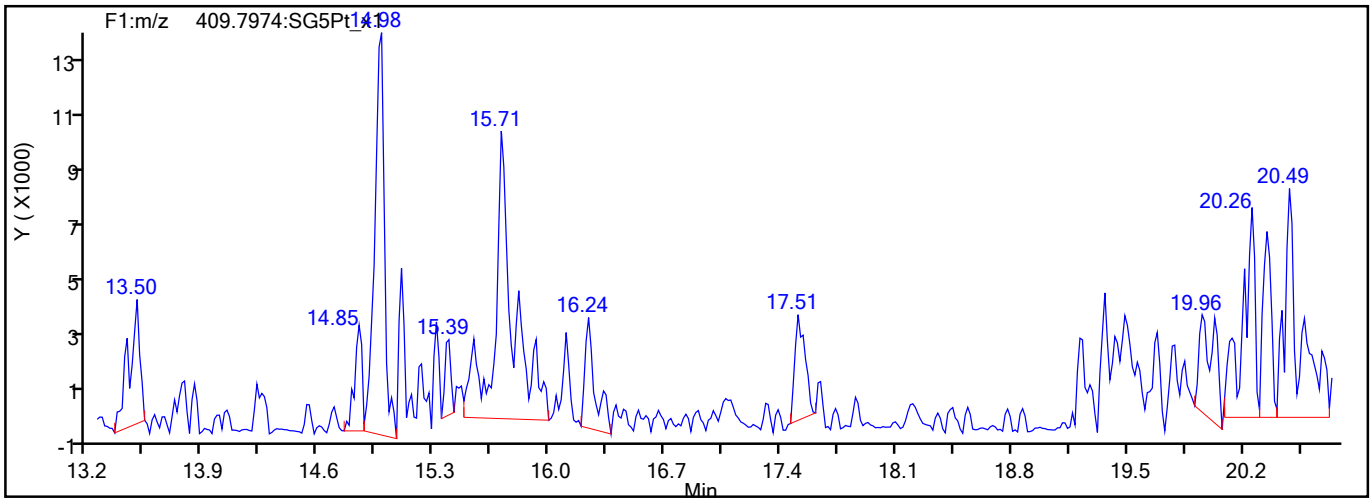

777826

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

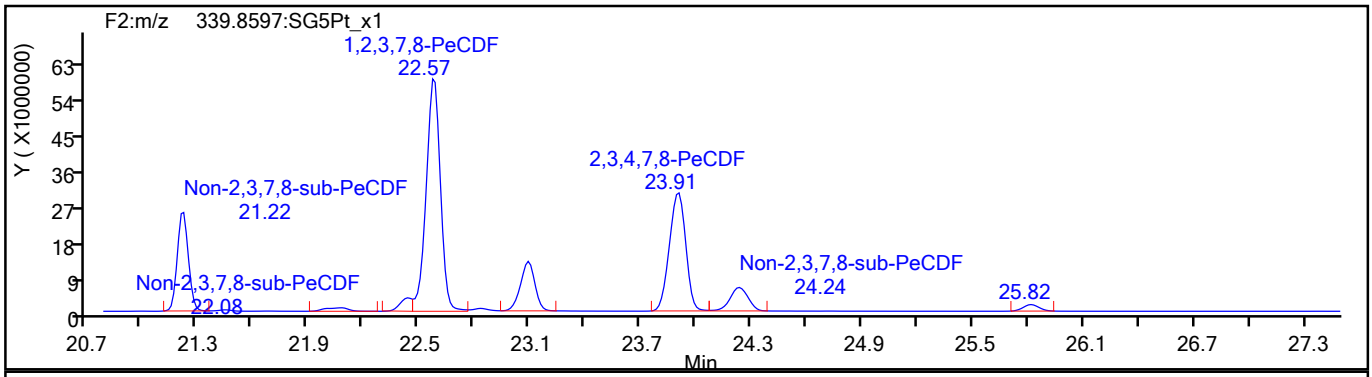

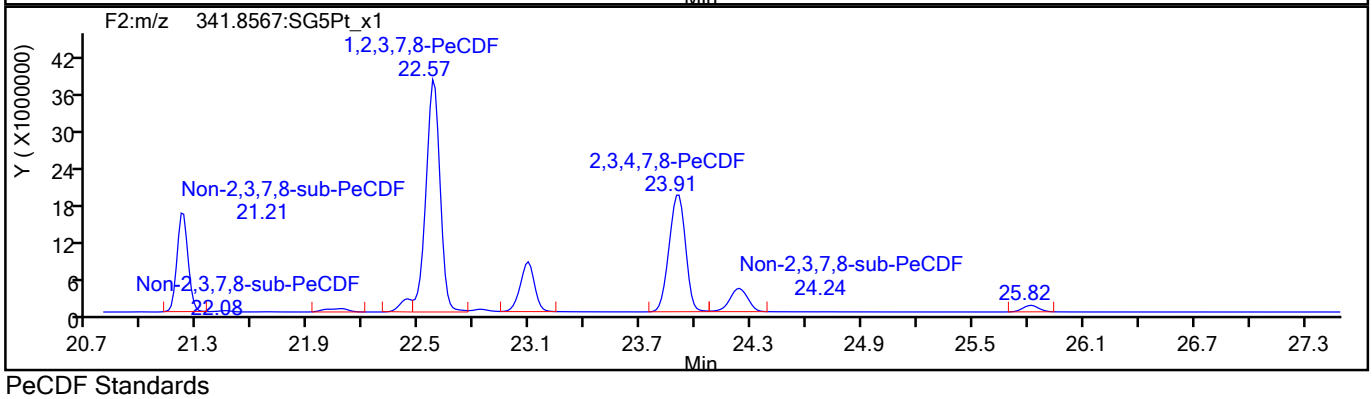

PeCDF Standards

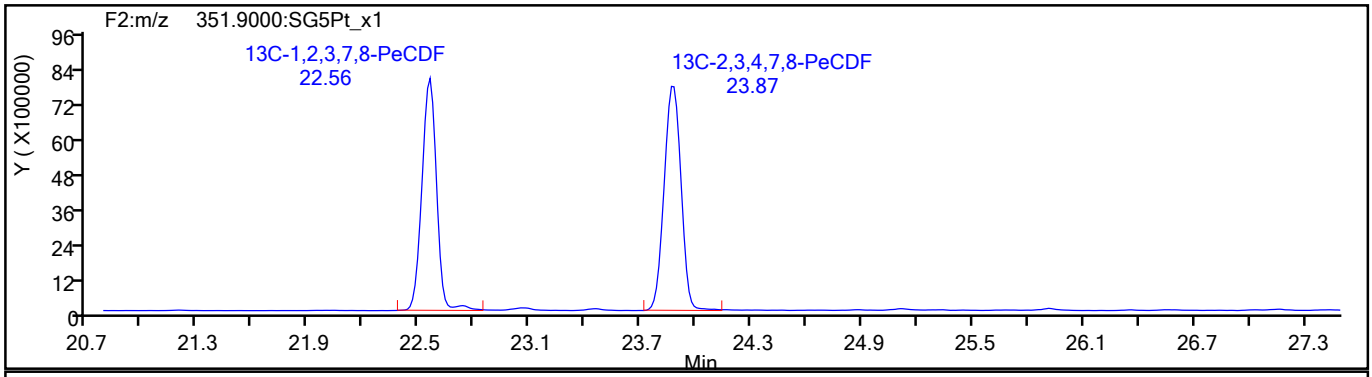

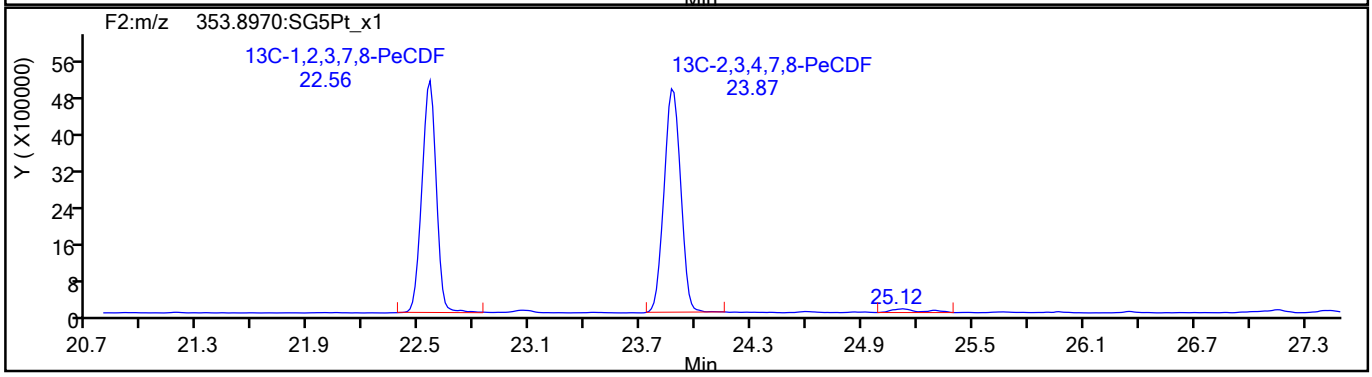

777827

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

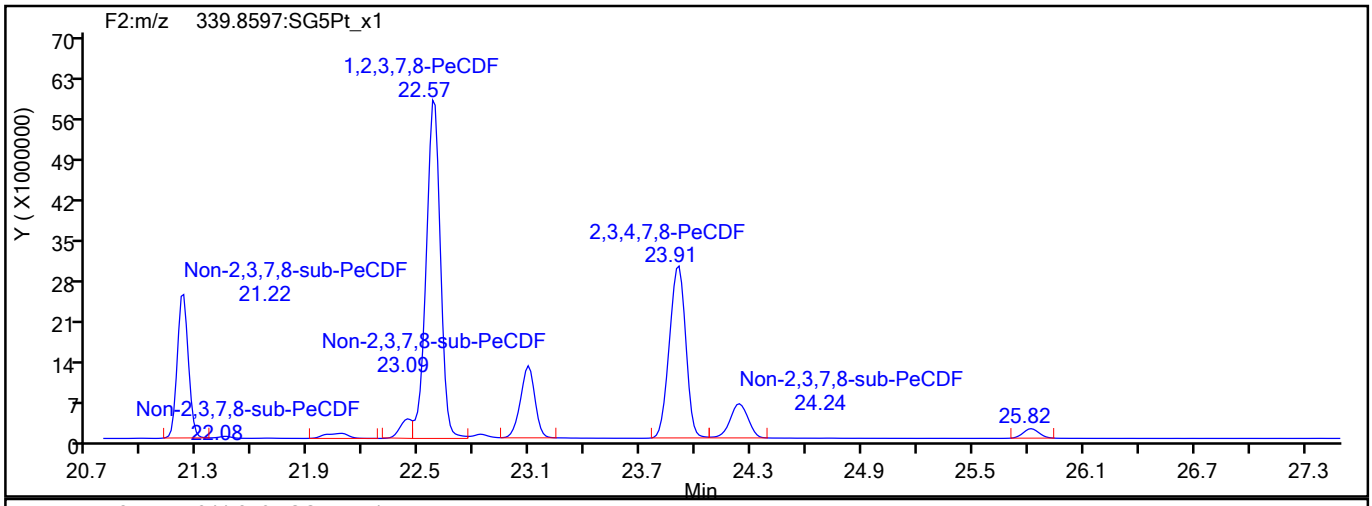

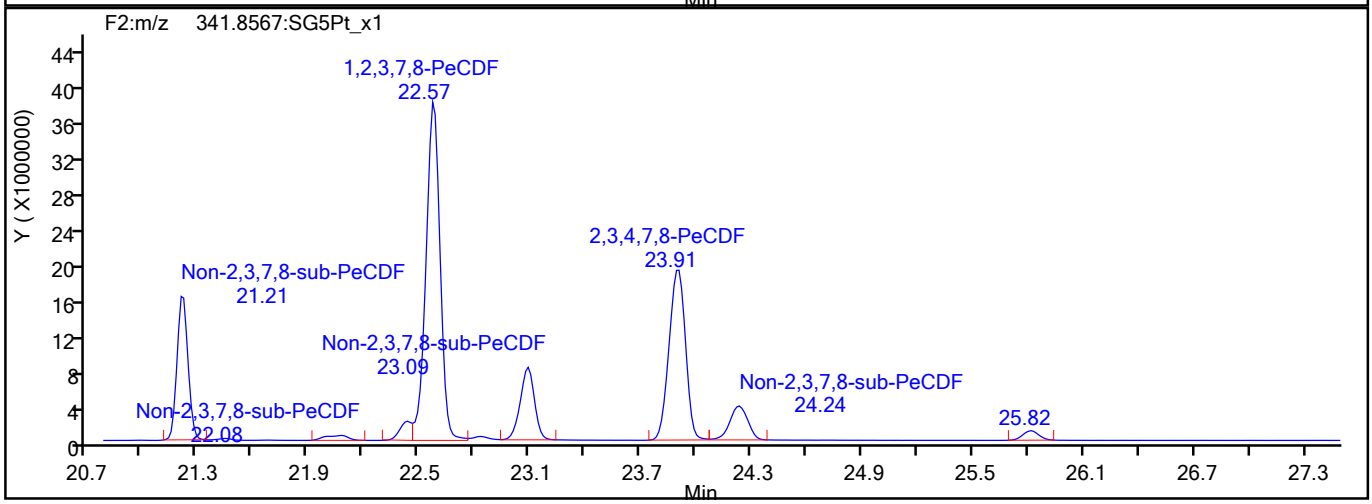

PeCDF Interference Mass

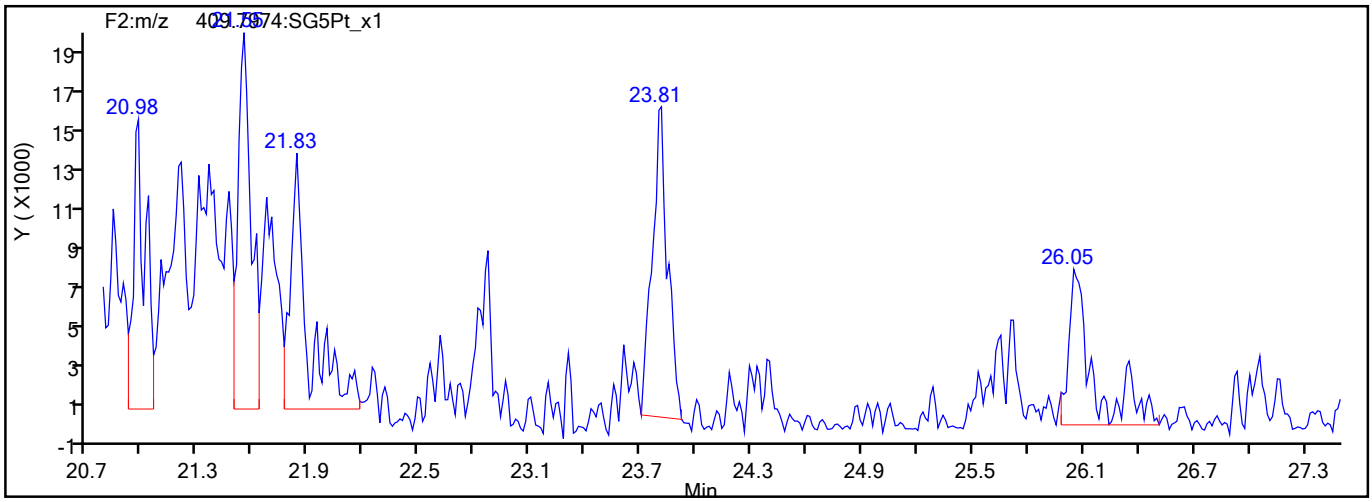

777828

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

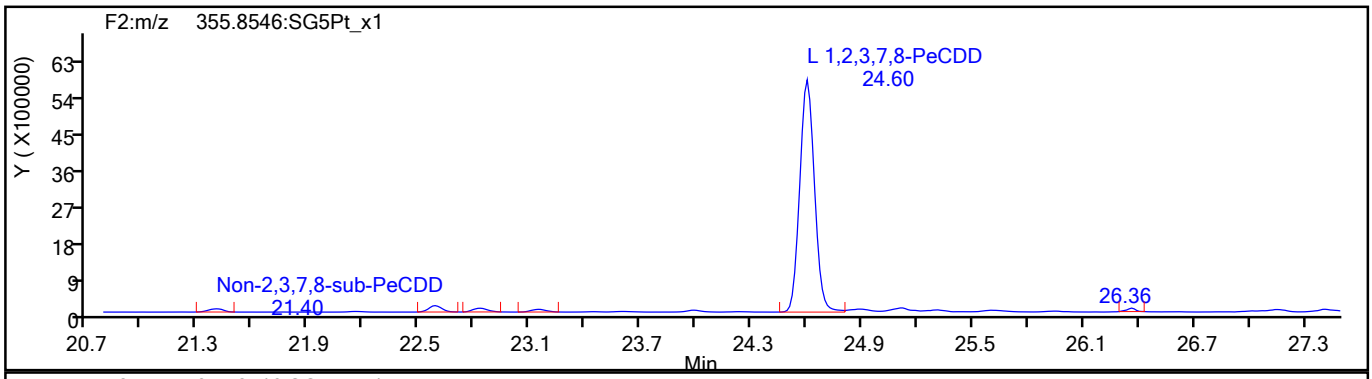

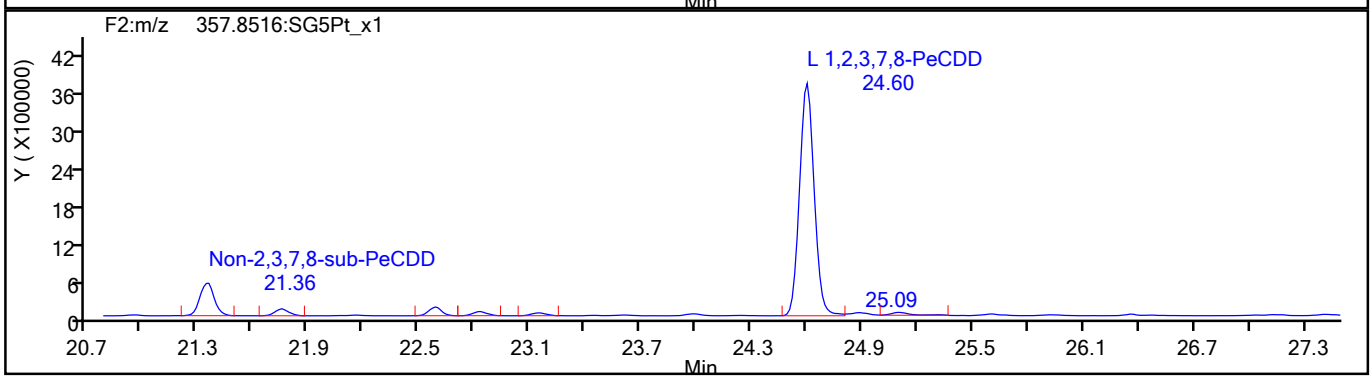

PeCDD Standards

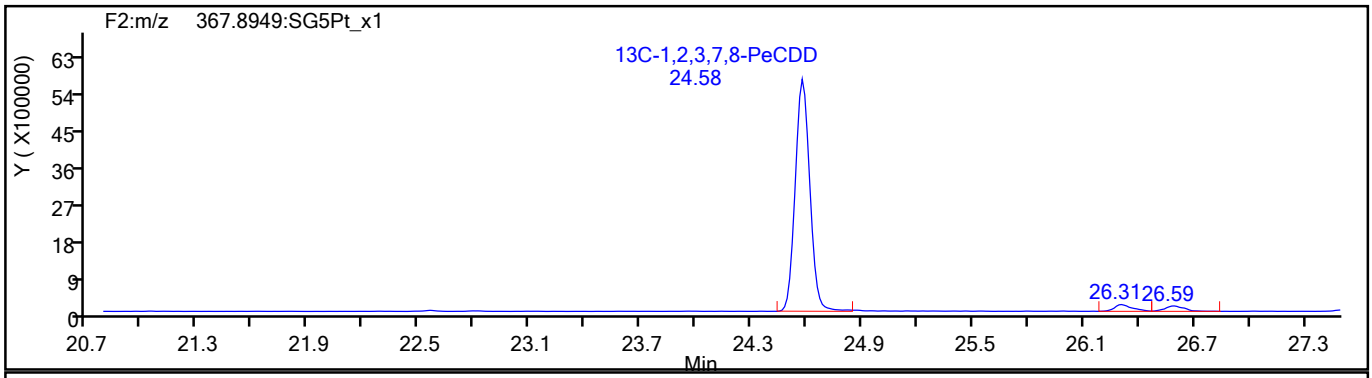

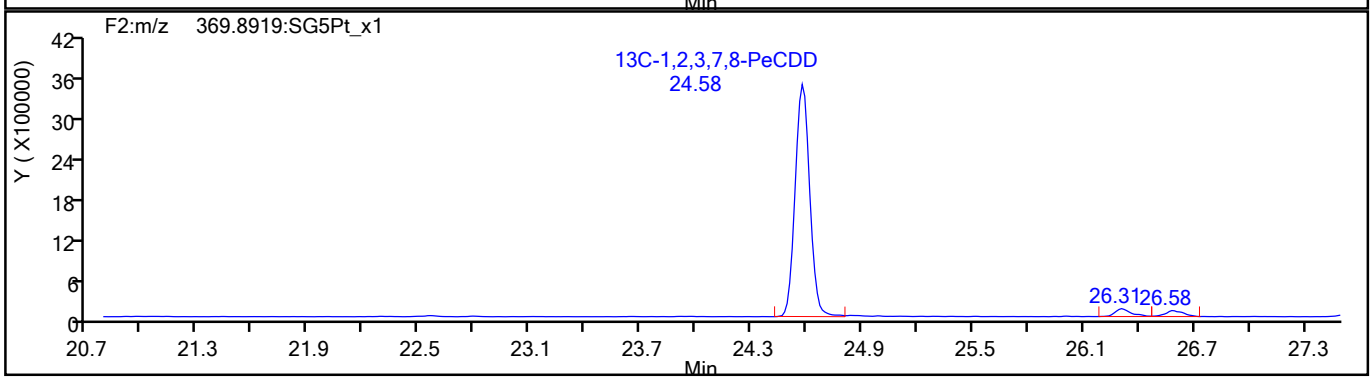

777829

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

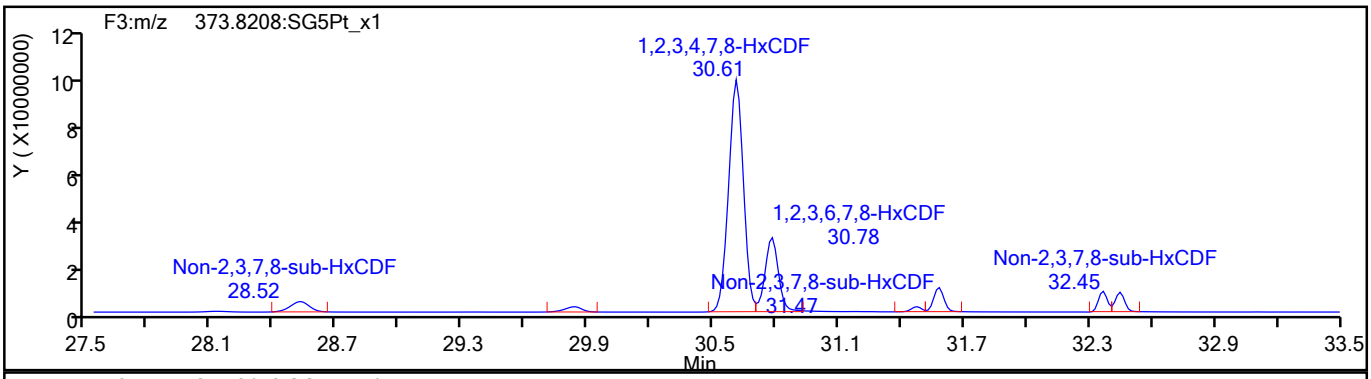

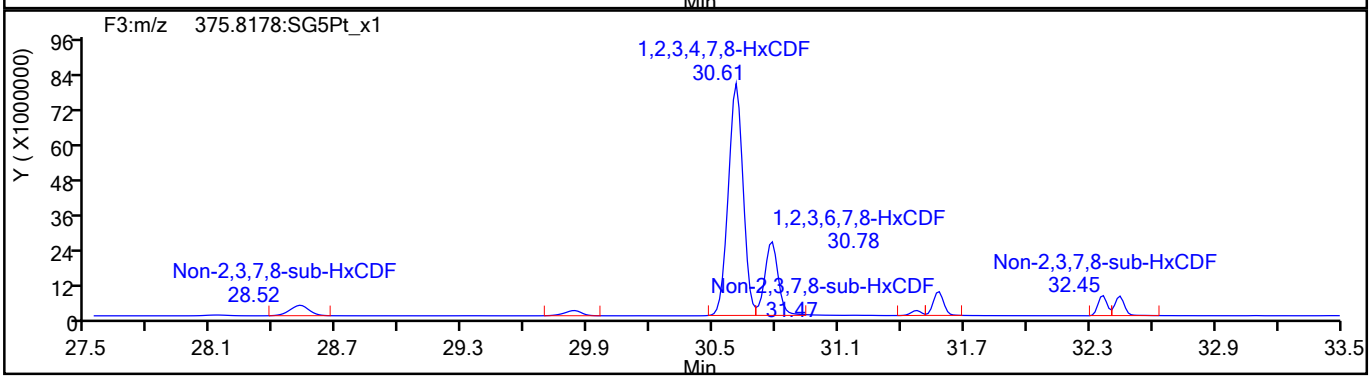

HxCDF Standards

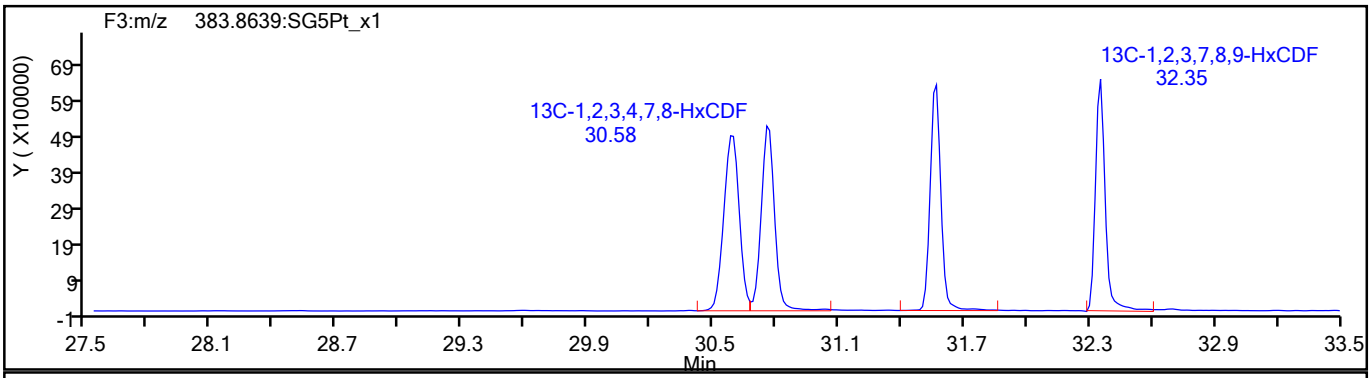

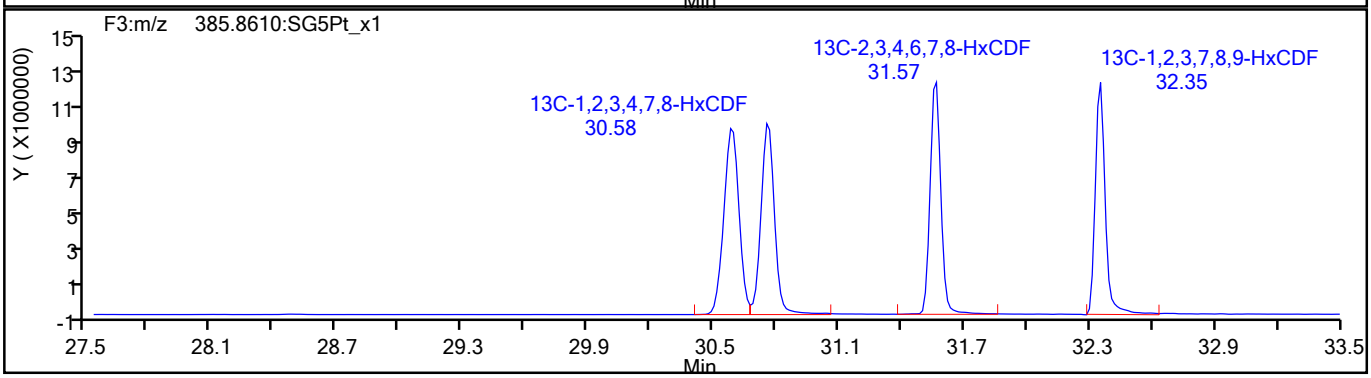

777830

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

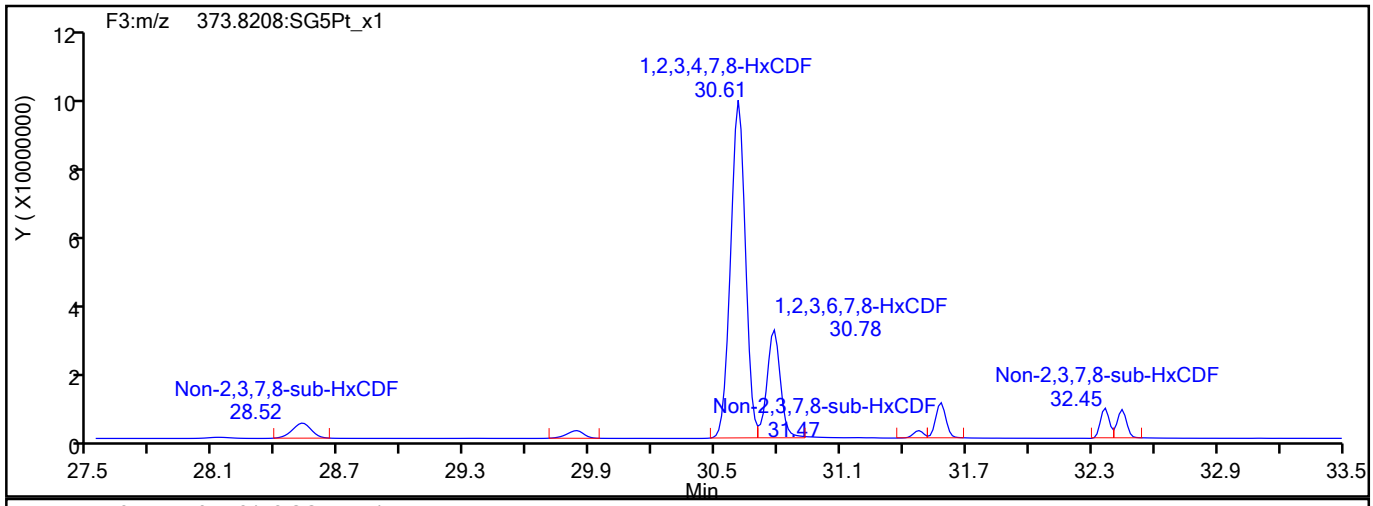

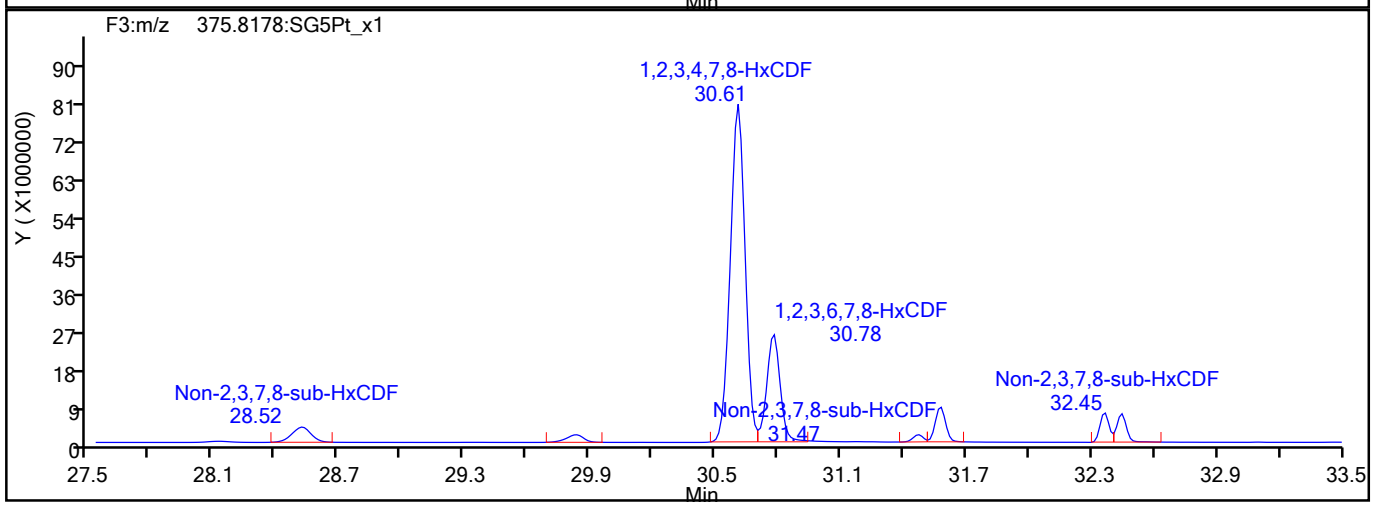

HxCDF Interference Mass

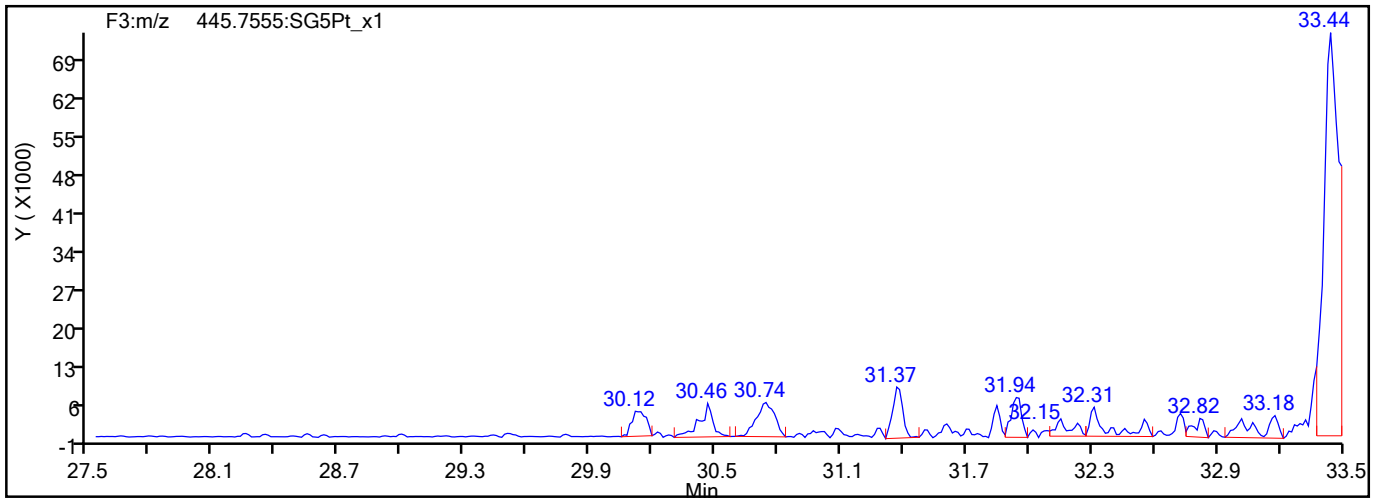

777831

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

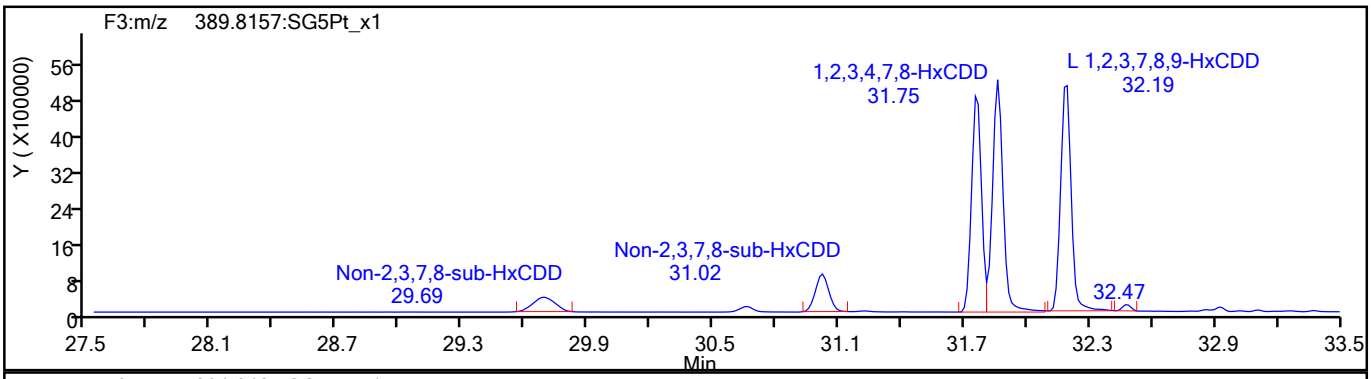

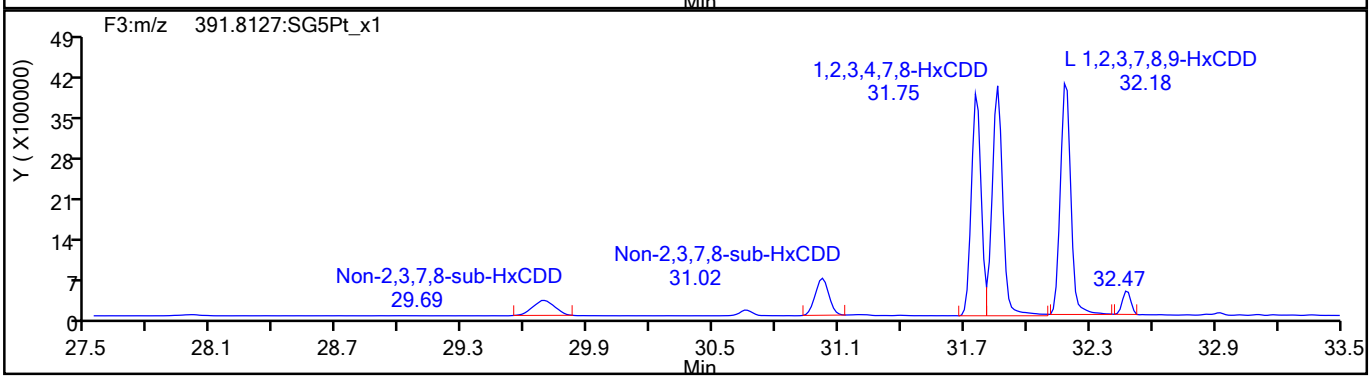

HxCDD Standards

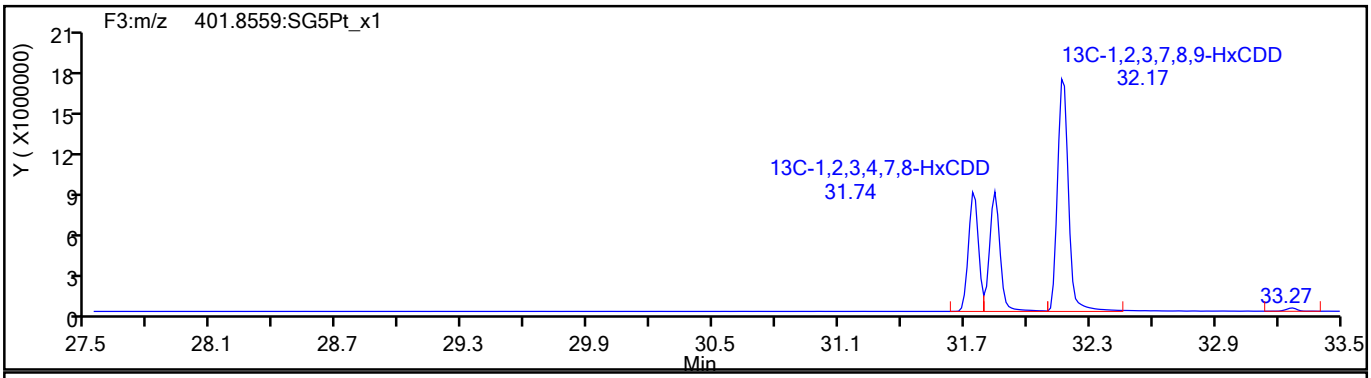

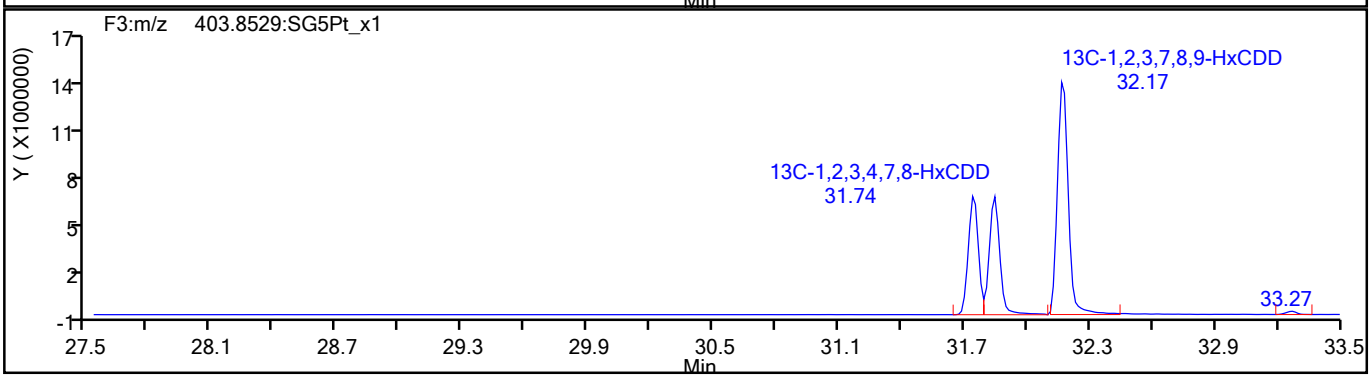

777832

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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HpCDF

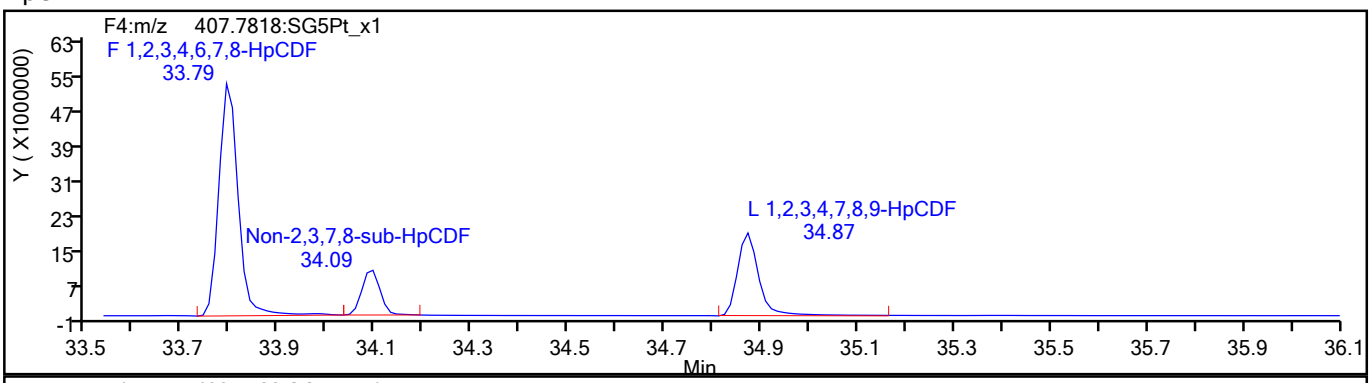

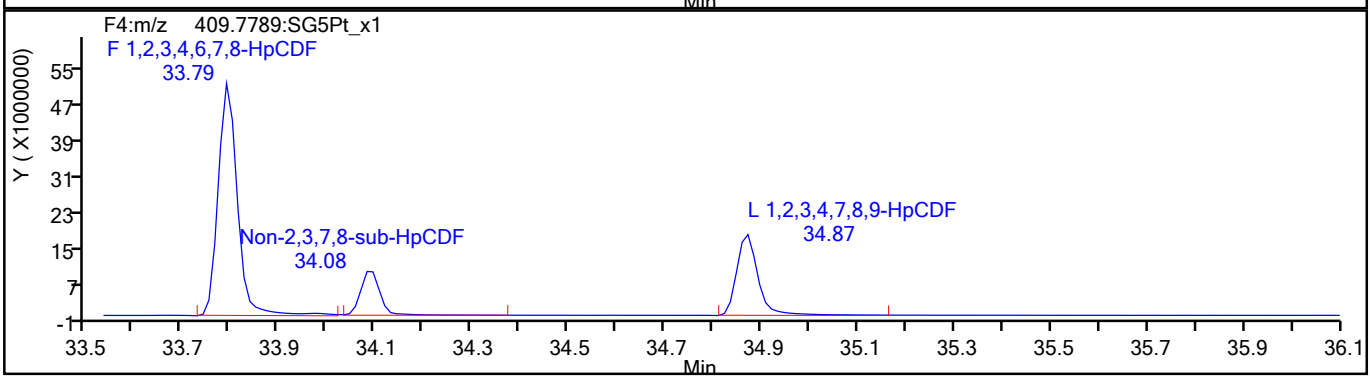

HpCDF Standards

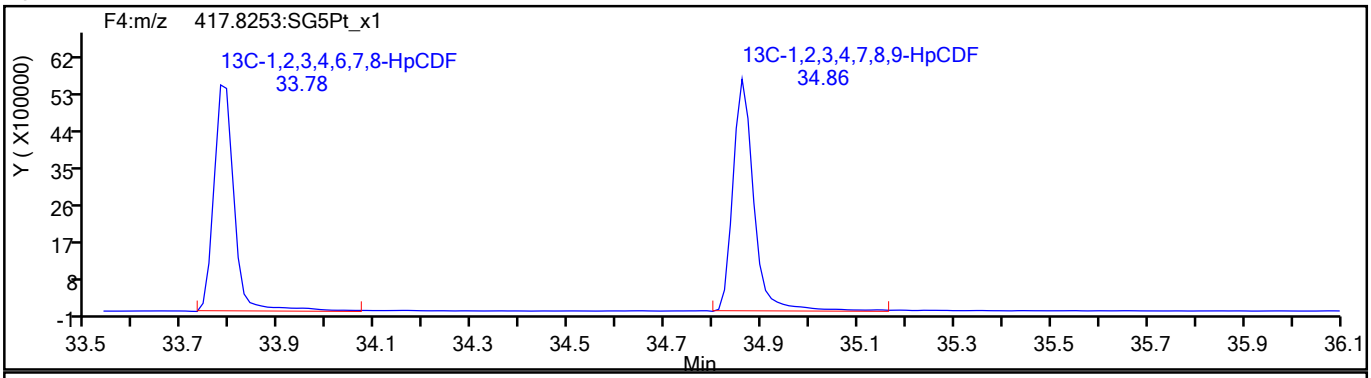

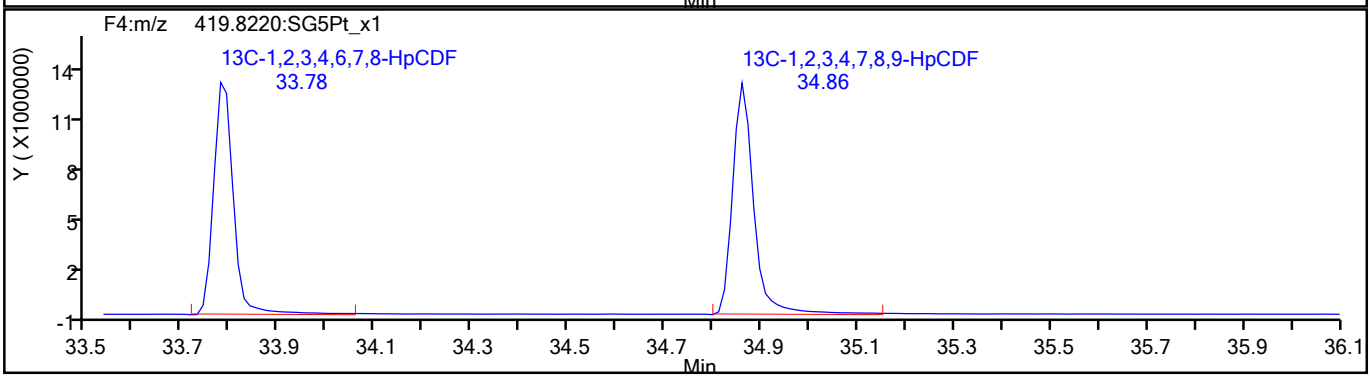

777833

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

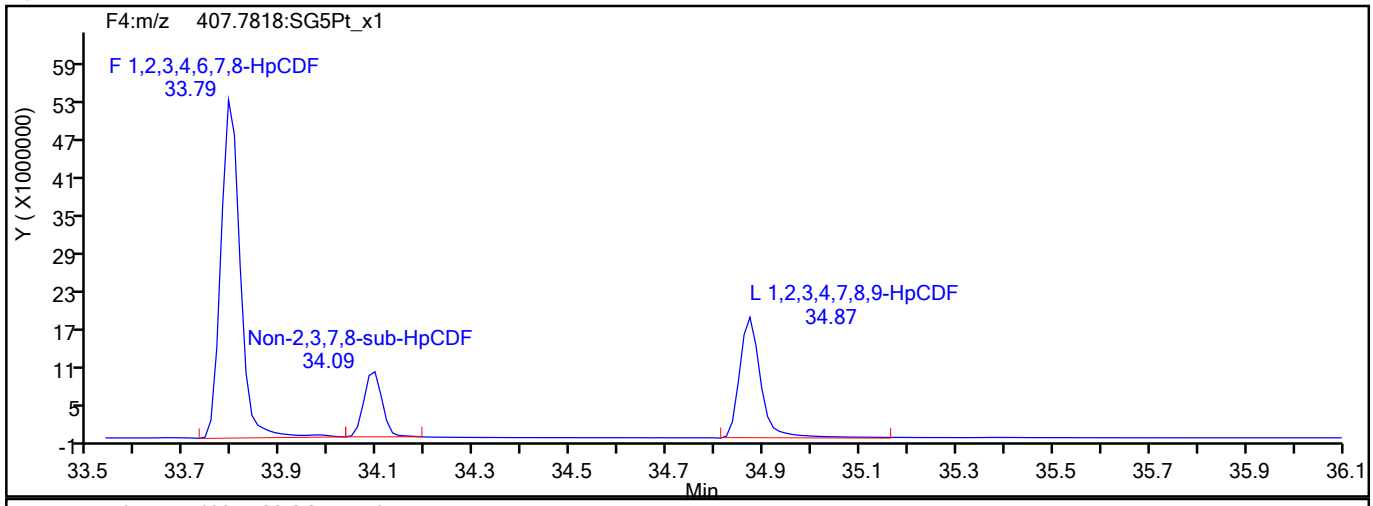

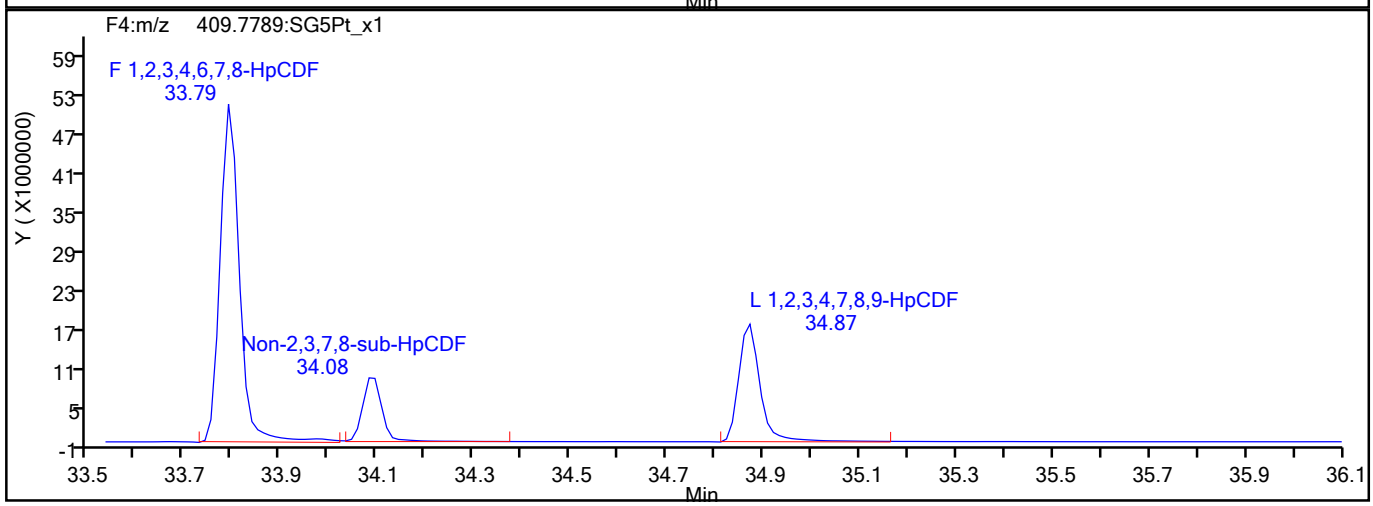

HpCDF Interference Mass

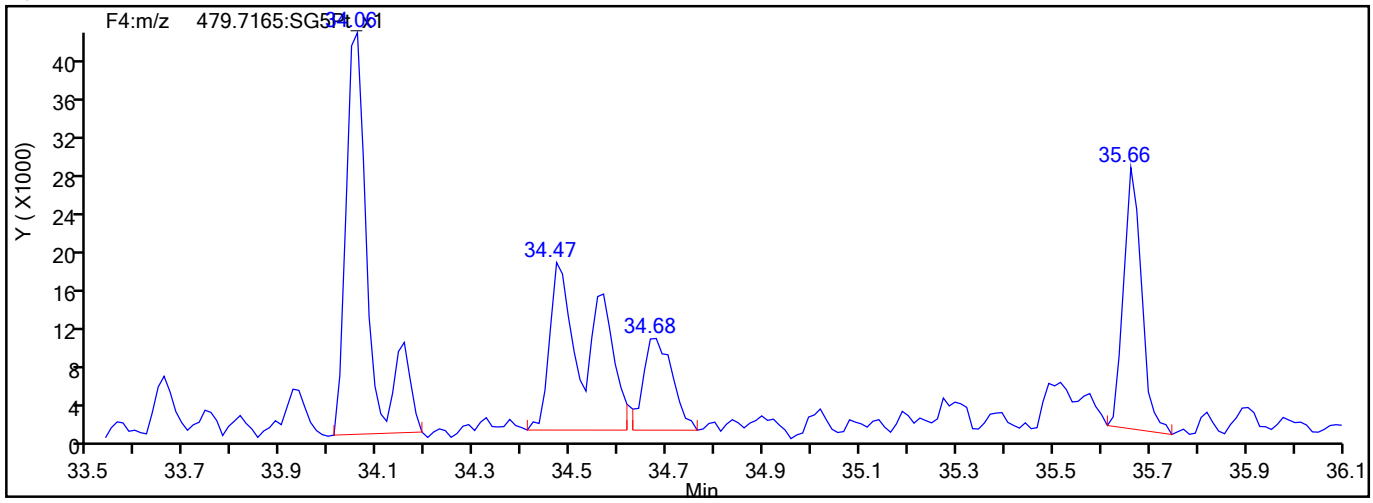

777834

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

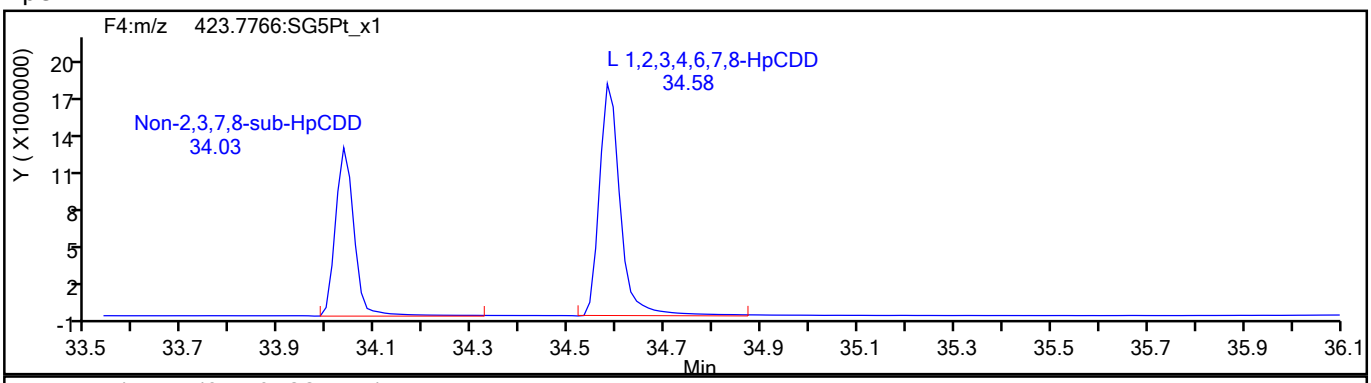

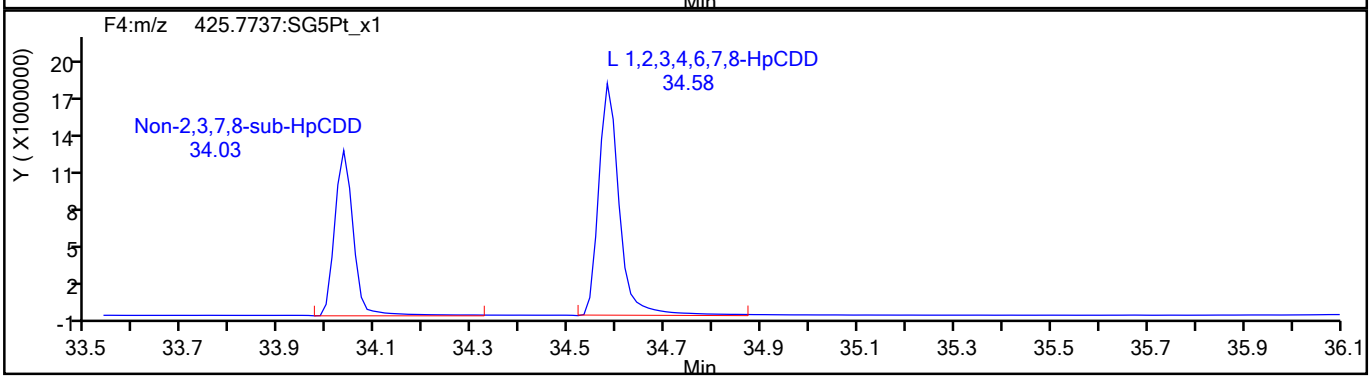

HpCDD Standards

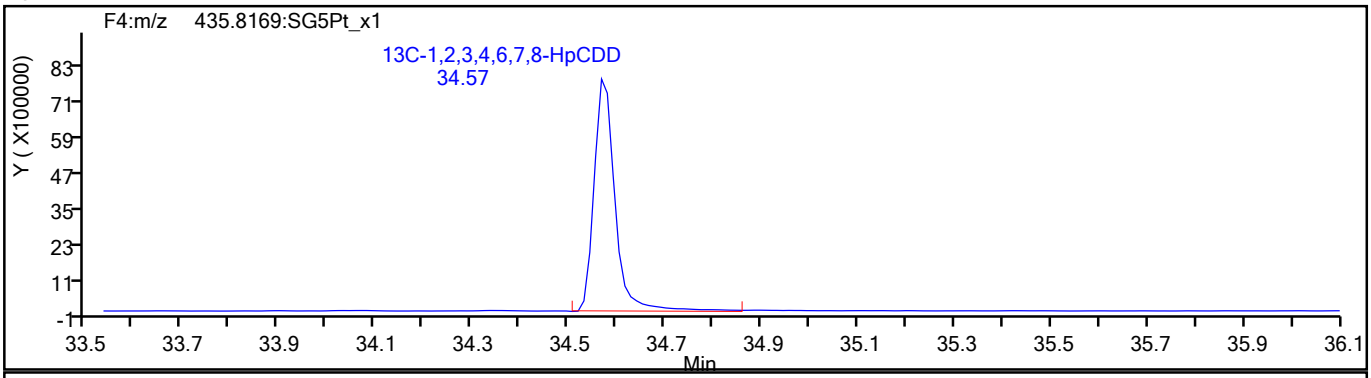

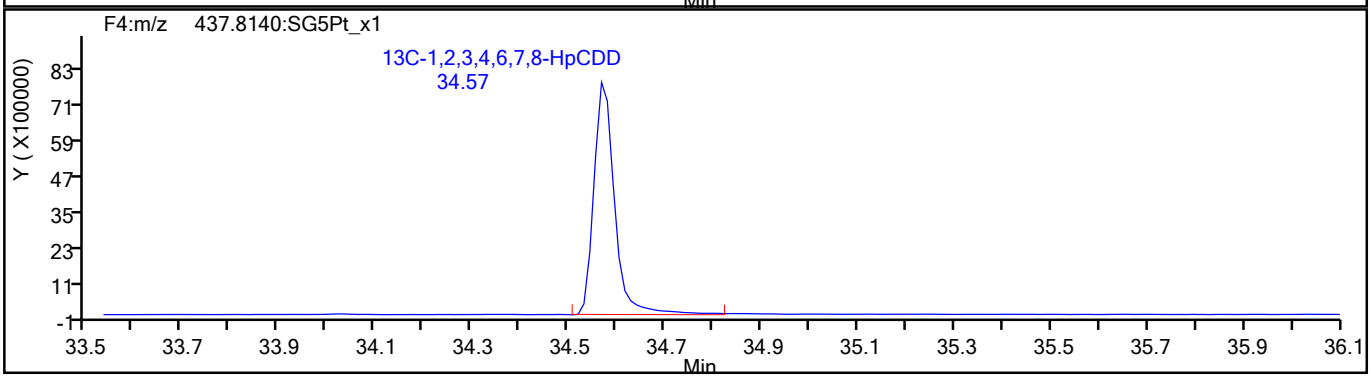

777835

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

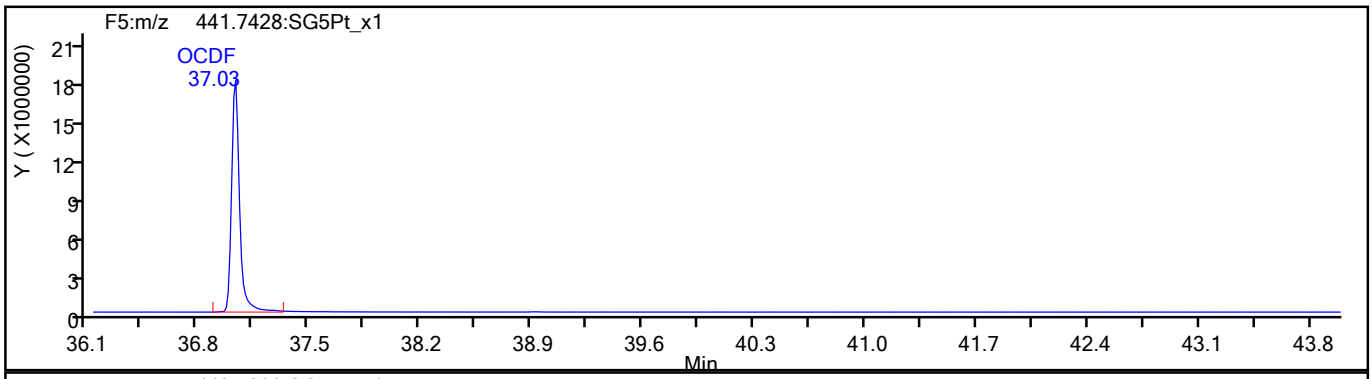

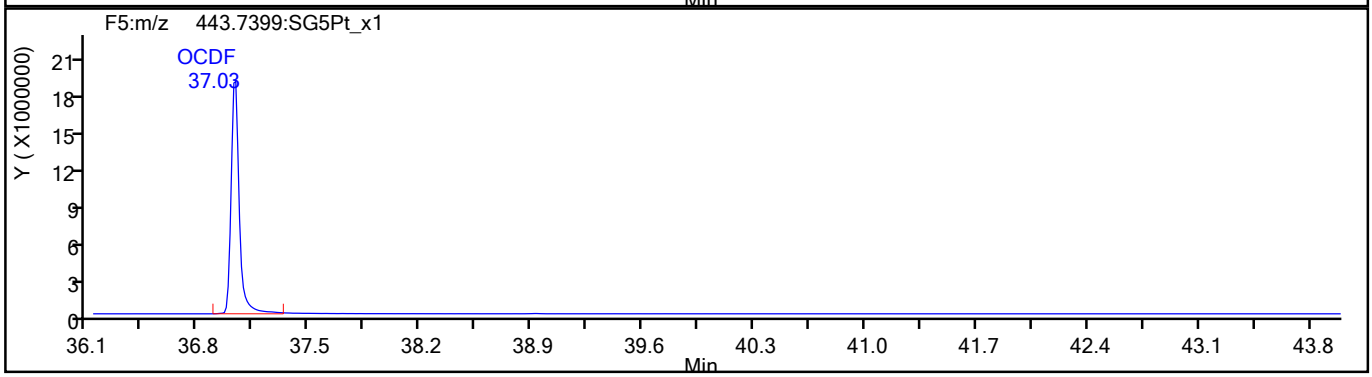

OCDF Standards

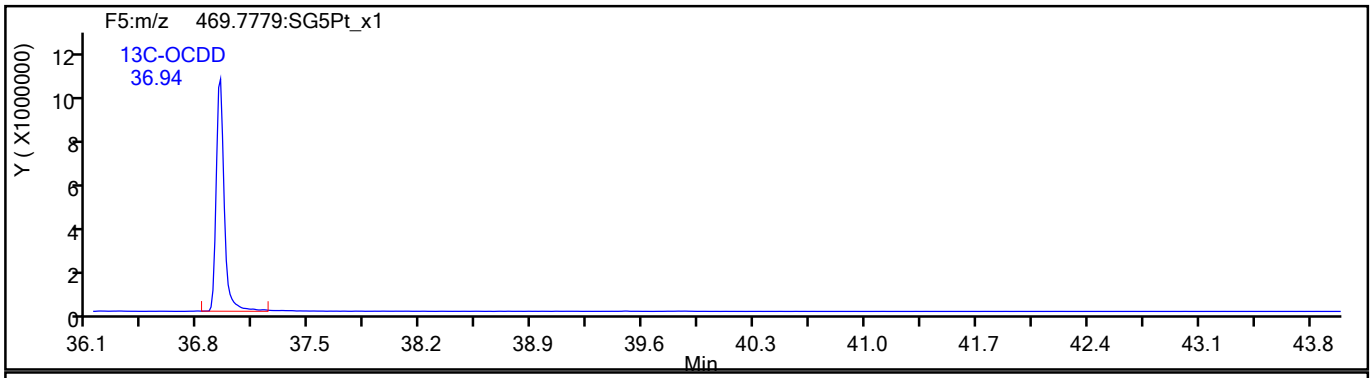

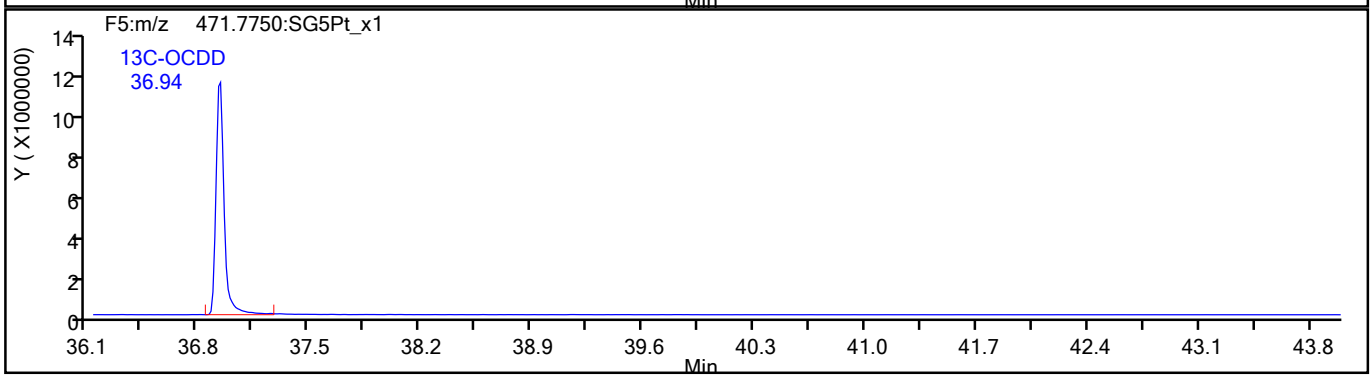

777836

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

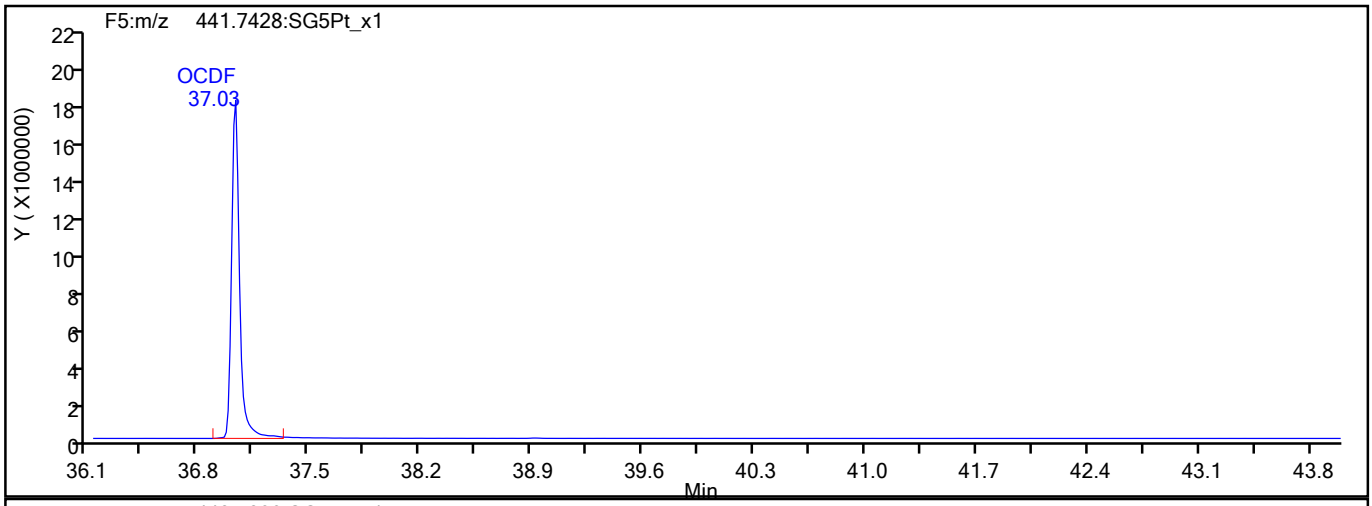

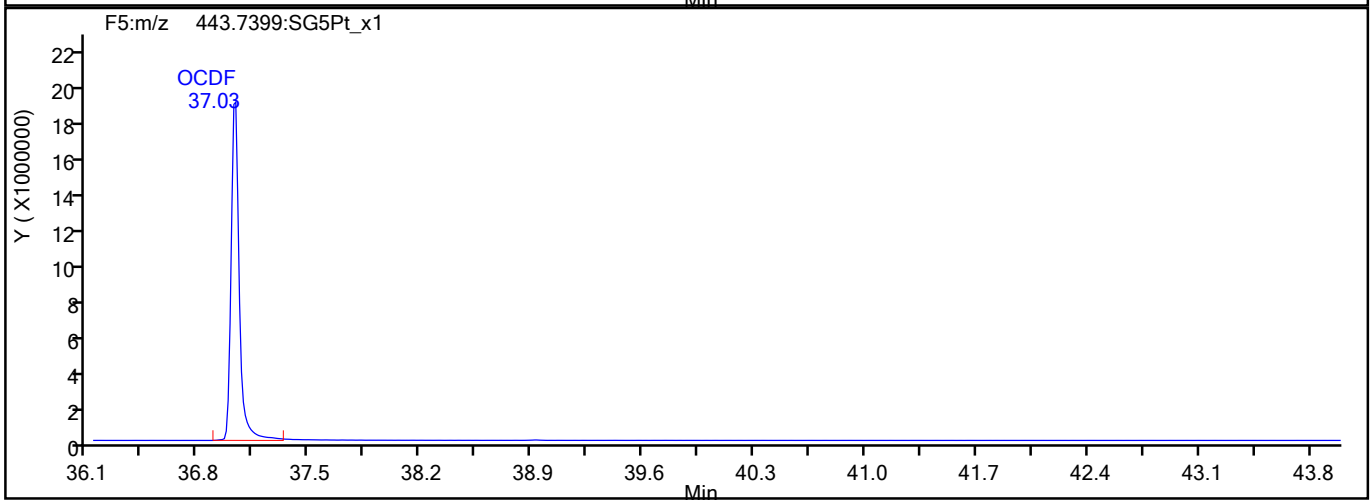

OCDF Interference Mass

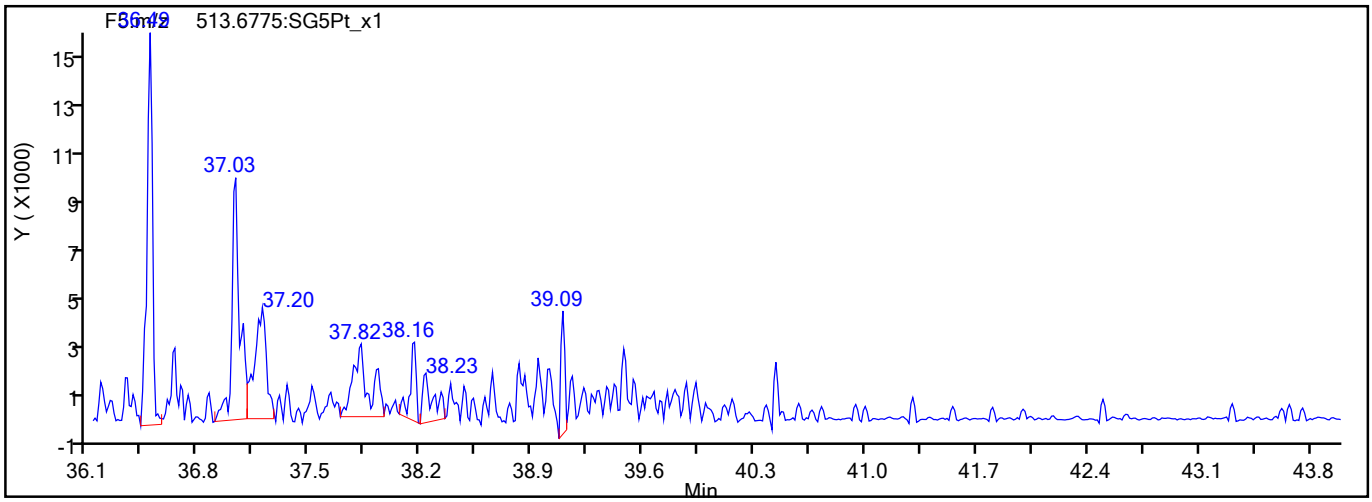

777837

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

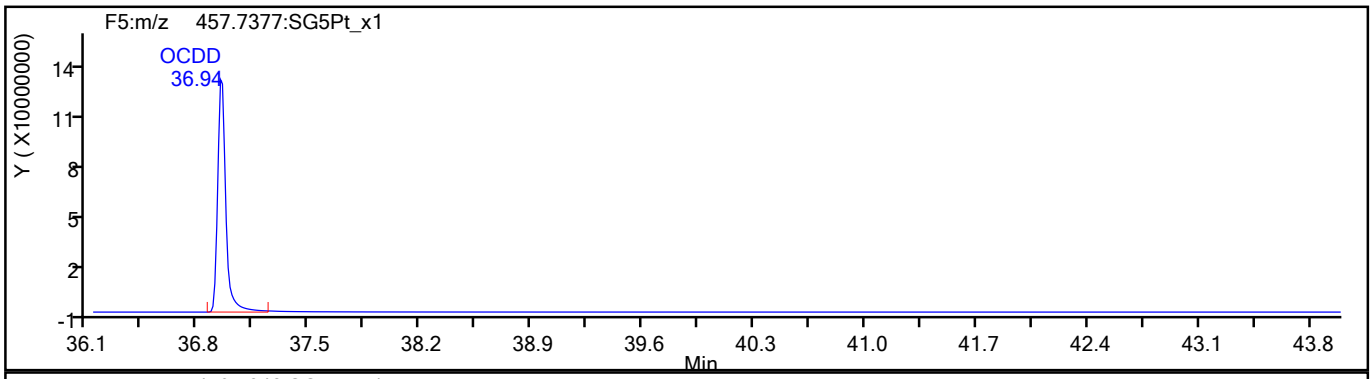

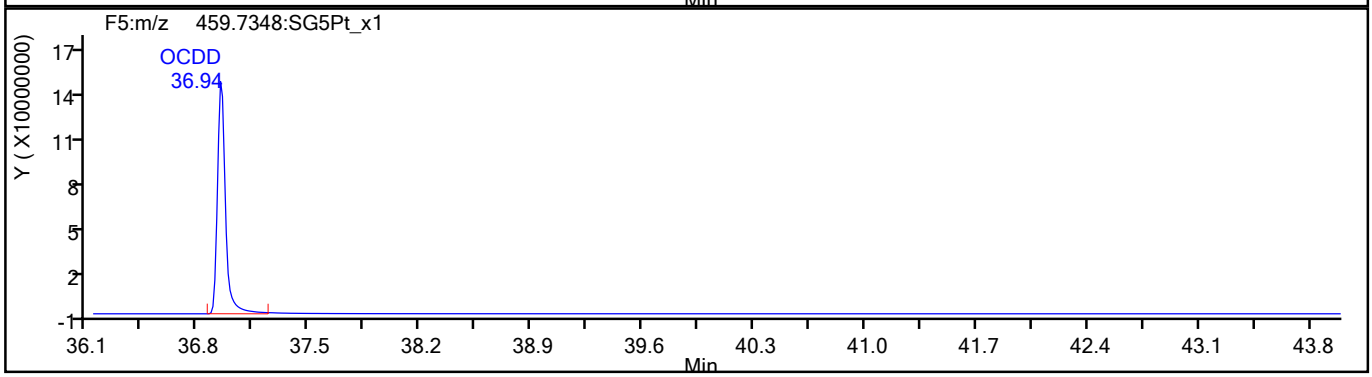

OCDD Standards

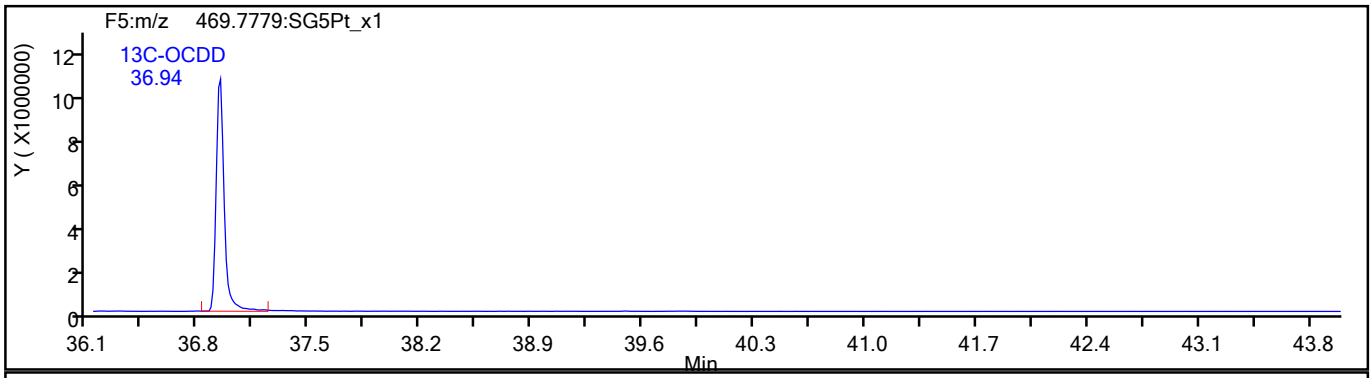

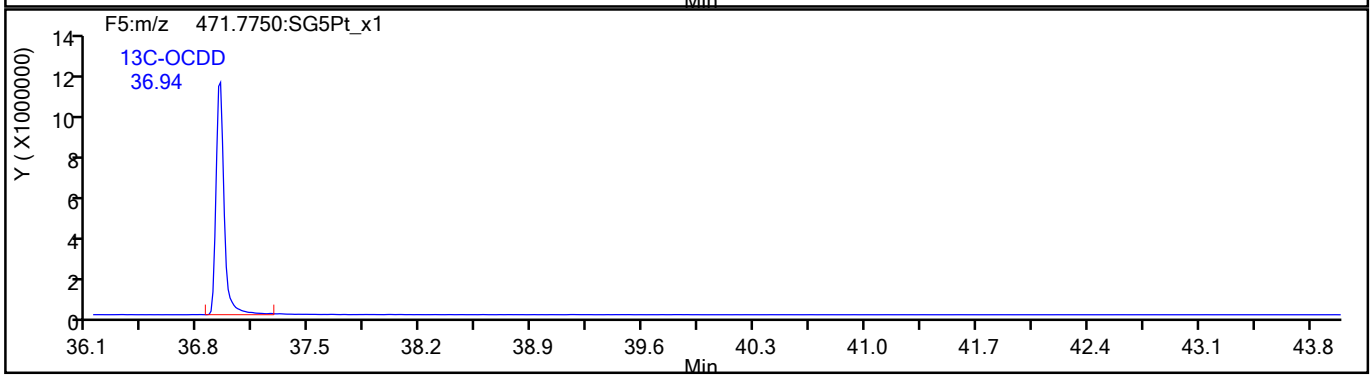

777838

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

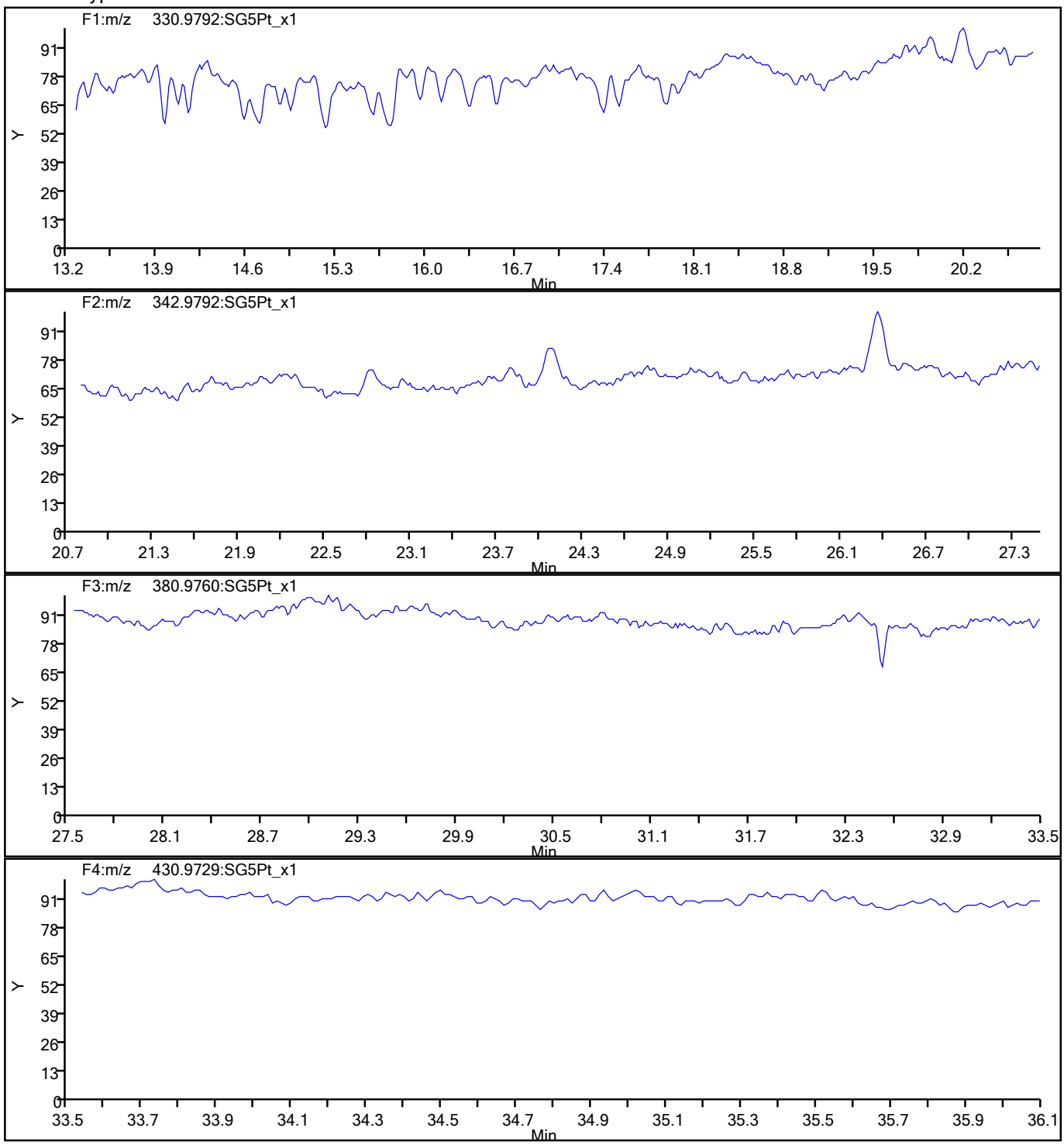

777839

Report Date: 18-Aug-2021 11:02:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125079.b\13AU2110D5_49.d		
Injection Date:	15-Aug-2021 05:51:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	516847	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

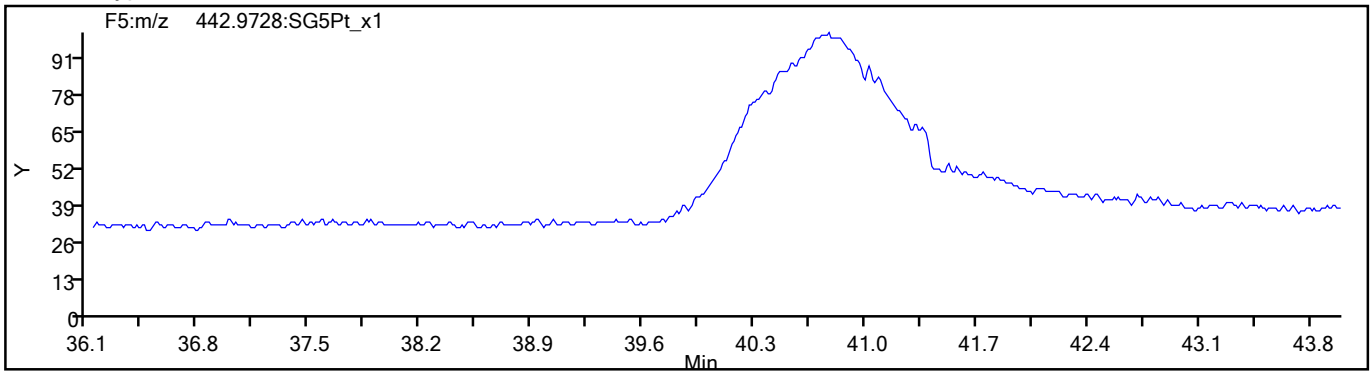

777840

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (0-2) MSD RA
Lab Sample ID: 320-76769-1 MSD RA
Matrix: Sediment
Lab File ID: 23AU2111D2_009.d
Analysis Method: 1613B
Date Collected: 07/22/2021 08:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:22
Sample wt/vol: 10.34(g)
Date Analyzed: 08/23/2021 14:38
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518958
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	43100		45	45

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	47		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	96		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_009.d
Lims ID: 320-76769-A-1-C MSD
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Sample Type: MSD
Inject. Date: 23-Aug-2021 14:38:38 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-1-C MSD X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:55:58

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	4865021	0.74	7.2E+05	20.0	20.0				M
D 13C-2,3,7,8-TCDF	17.657	3019032	0.66	1.3327	9.313	9.313	0.6115	0.6115	46.56	M
2,3,7,8-TCDF	17.671	412510246	0.73	0.9978	2738.7	2738.7	2.872	2.872	1.4E+005	E
D 13C-2,3,7,8-TCDD	16.094	2192360	0.73	0.8749	10.3	10.3	14.1	14.1	51.51	nMa
2,3,7,8-TCDD	16.121	121305976	0.78	1.0570	1047.0	1047.0	3.644	3.644	52348	Ea
$ 37Cl4-2,3,7,8-TCDD	16.121	1613712		0.8648	7.671	7.671	0.1774	0.1774	95.89	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 23-Aug-2021 15:56:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_009.d
Lims ID: 320-76769-A-1-C MSD
Client ID: 11215702-072221-SS-SJSB080 (0-2)
Sample Type: MSD
Inject. Date: 23-Aug-2021 14:38:38 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76769-A-1-C MSD X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:55:58

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.327	16.312	1		2062362	432757	116124	290310	4		M
333.9339	16.327	16.312	1		2802659	502101	113932	284830	4	0.74(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.657	17.615	3	1.081	1196619	243147	9341	23352	26		M
317.9389	17.644	17.615	2	1.081	1822413	300691	5896	14740	51	0.66(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.671	17.643	2	1.001	173761750	32678900	11824	29560	2764		
305.8987	17.671	17.643	2	1.001	238748496	45477897	19351	48377	2350	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											nMa
331.9368	16.094	16.065	2	0.986	926933	184228	116124	290310	2		M
333.9339	16.094	16.065	2	0.986	1265427	282788	113932	284830	2	0.73(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.121	16.093	2	1.002	53230994	11854287	19524	48810	607		a
321.8936	16.121	16.093	2	1.002	68074982	14947177	16454	41135	908	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.121	16.093	2	0.987	1613712	365875	2869	7172	128		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_009.d				
Injection Date:	23-Aug-2021 14:38:38	Instrument ID:	11D2		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.66
Area: 1266423
Amount: 9.648872
Amount Units: pg/ul

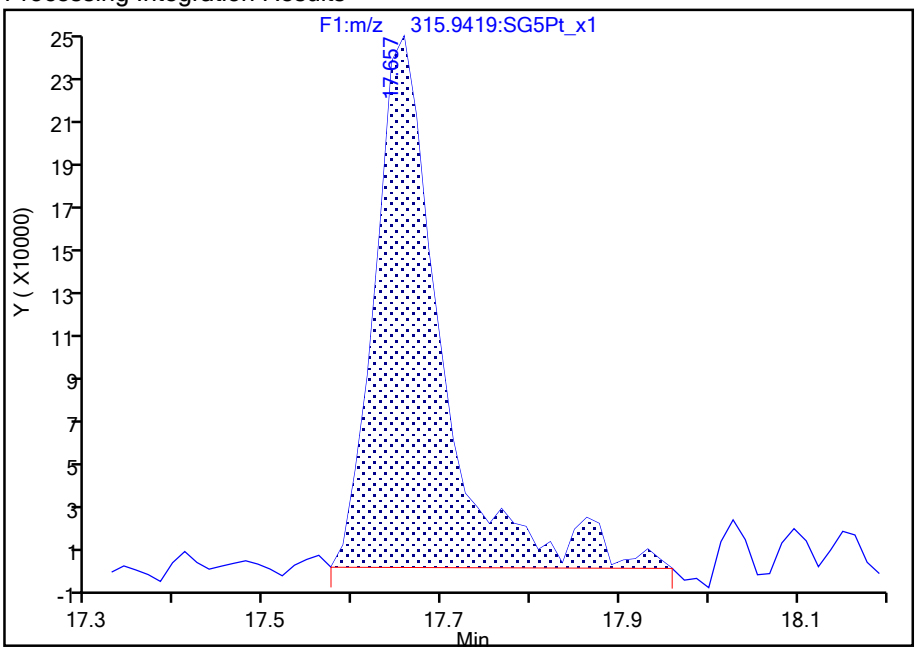

Manual Integration Results

RT: 17.66
Area: 1196619
Amount: 9.312905
Amount Units: pg/ul

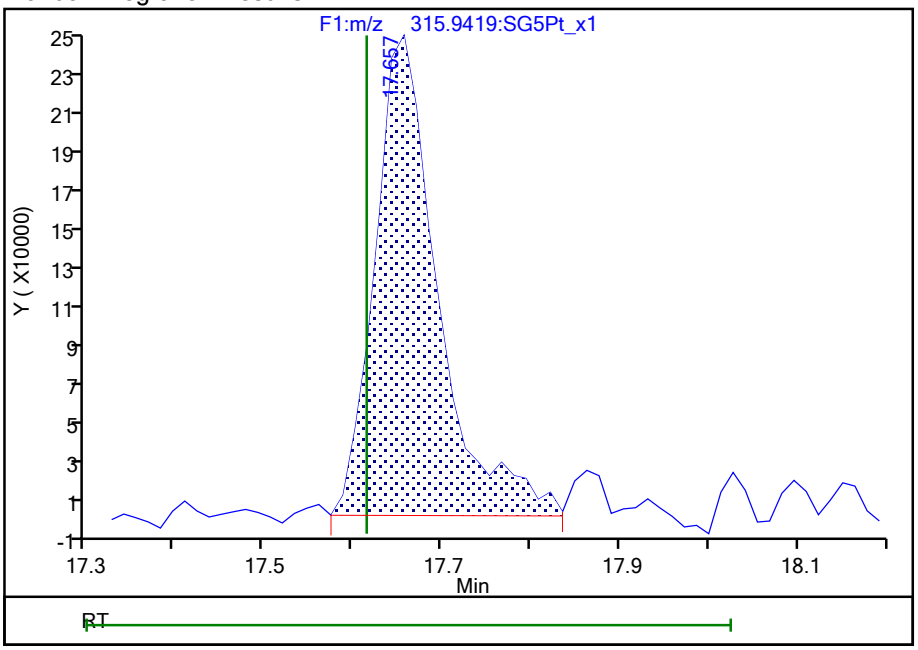

Reviewer: bennettd, 23-Aug-2021 15:55:39

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_009.d				
Injection Date:	23-Aug-2021 14:38:38	Instrument ID:	11D2		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.64
Area: 1861522
Amount: 9.648872
Amount Units: pg/ul

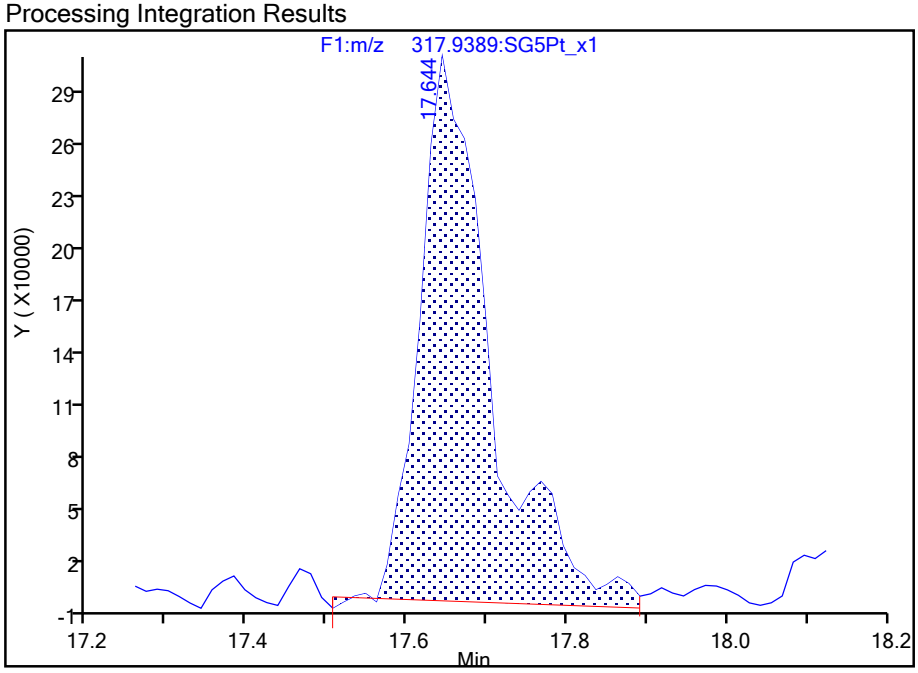

Manual Integration Results

RT: 17.64
Area: 1822413
Amount: 9.312905
Amount Units: pg/ul

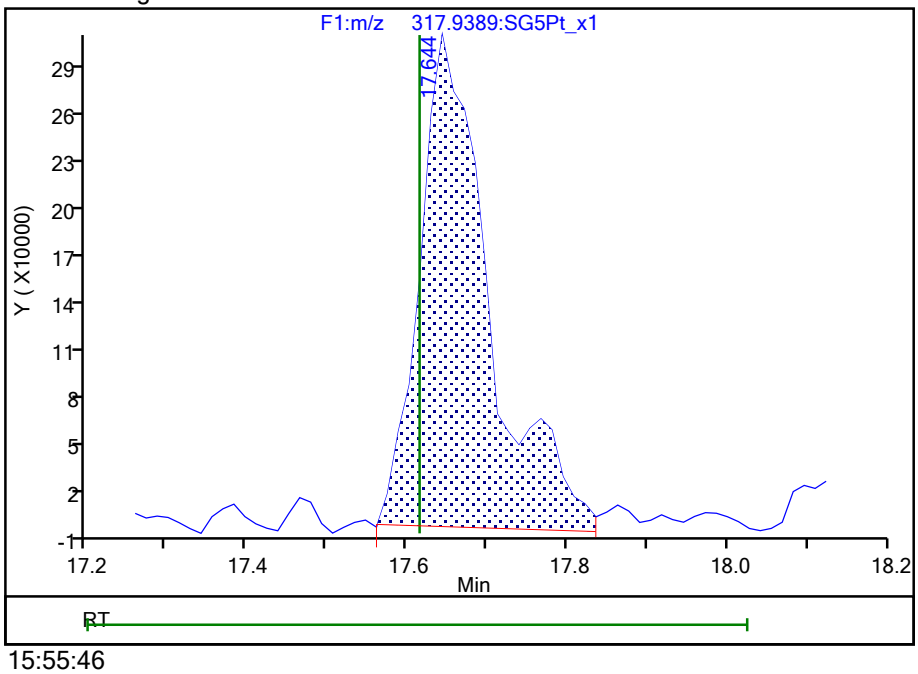

Reviewer: bennettd, 23-Aug-2021 15:55:46

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_009.d				
Injection Date:	23-Aug-2021 14:38:38	Instrument ID:	11D2		
Lims ID:	320-76769-A-1-C MSD				
Client ID:	11215702-072221-SS-SJSB080 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.09

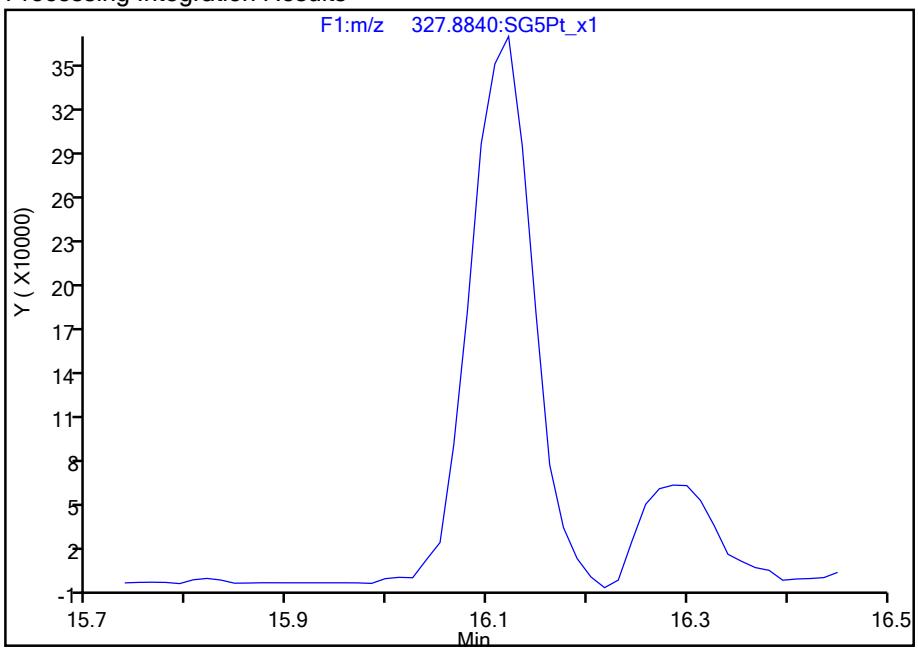

Manual Integration Results

RT: 16.12
Area: 1613712
Amount: 7.670921
Amount Units: pg/ul

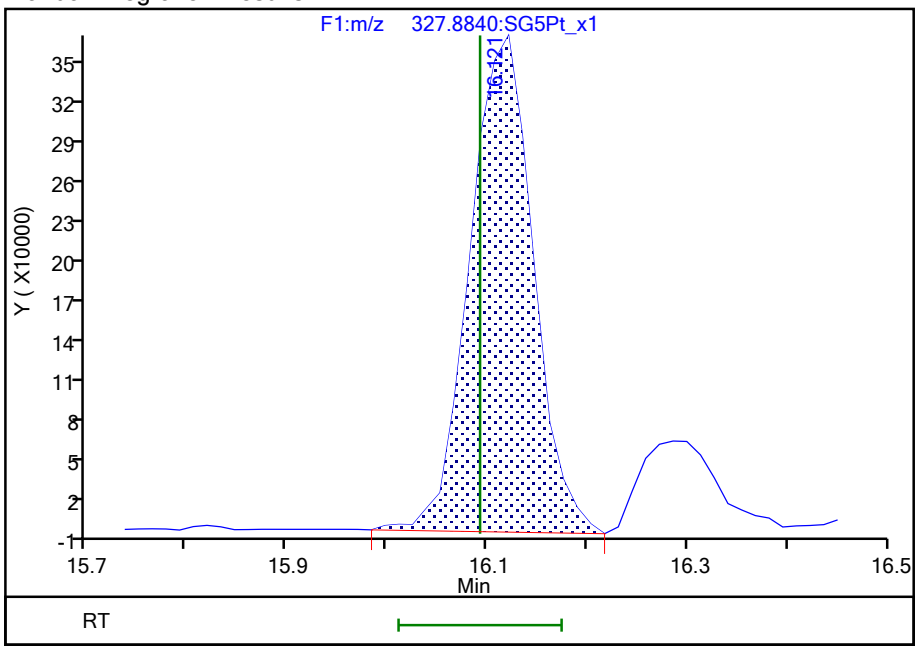

Reviewer: bennettd, 23-Aug-2021 15:55:25
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Report Date: 23-Aug-2021 15:56:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_009.d		
Injection Date:	23-Aug-2021 14:38:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	518958	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

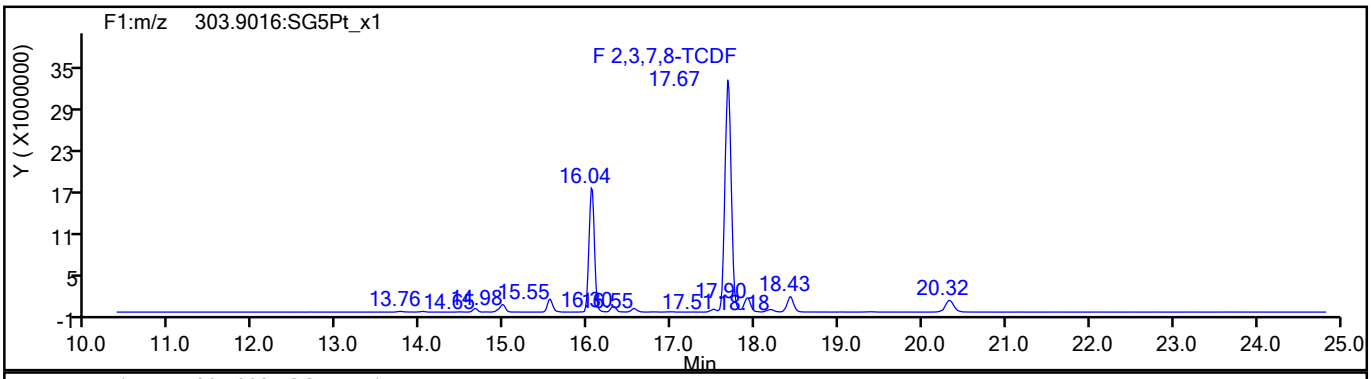

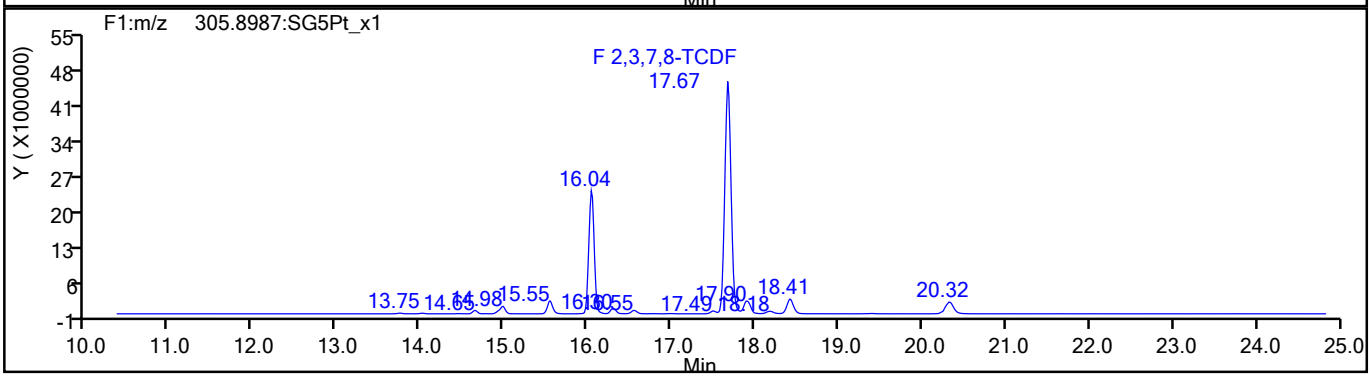

TCDF Standards

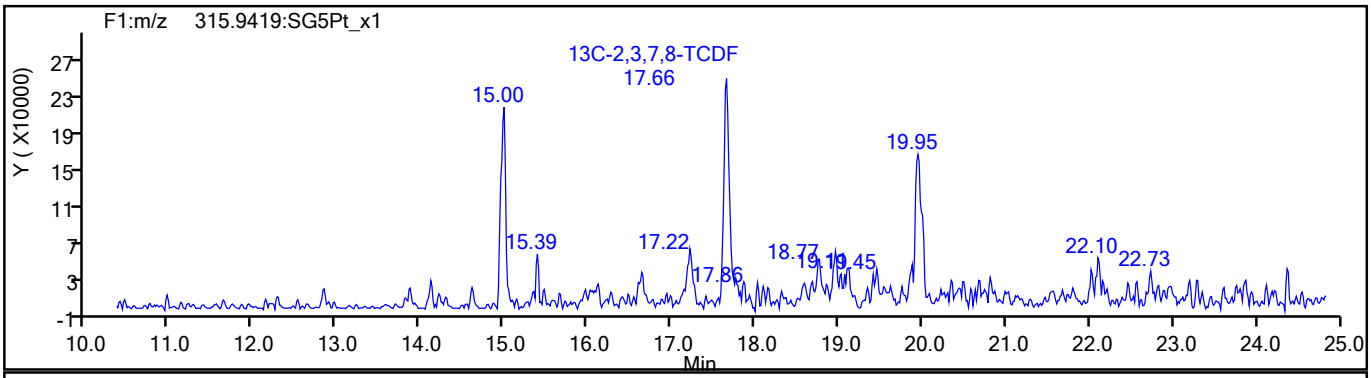

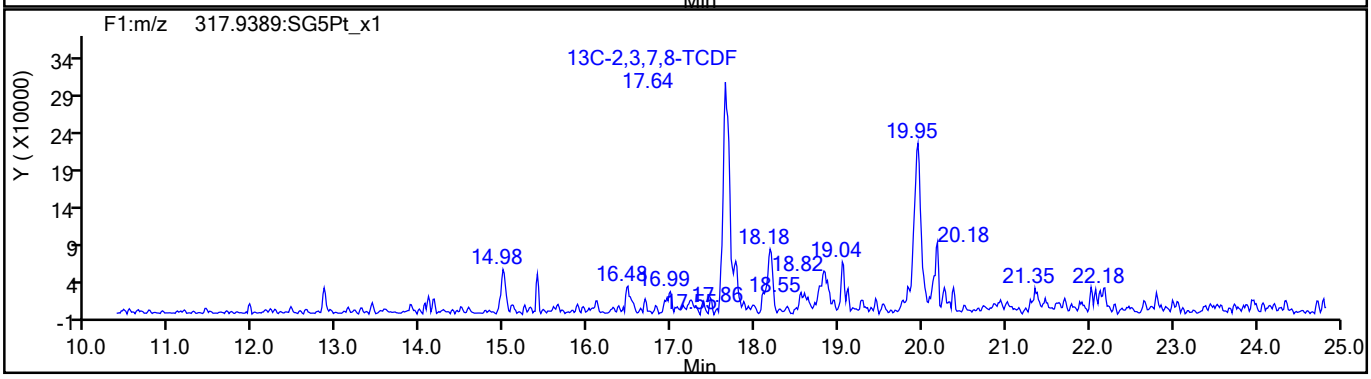

777847

Report Date: 23-Aug-2021 15:56:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_009.d		
Injection Date:	23-Aug-2021 14:38:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	518958	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

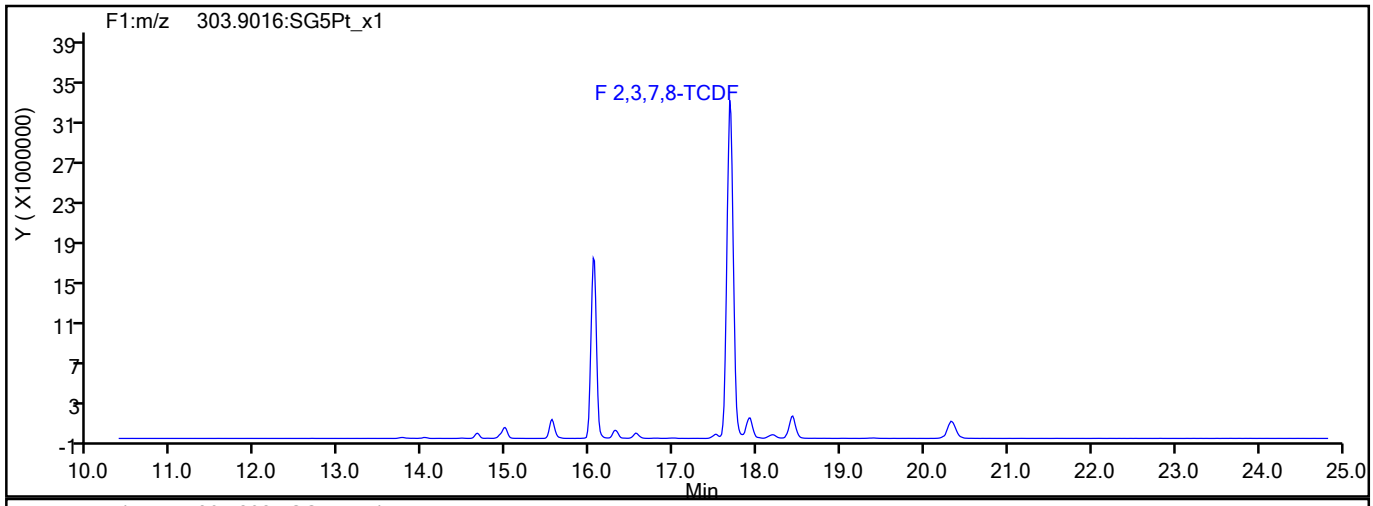

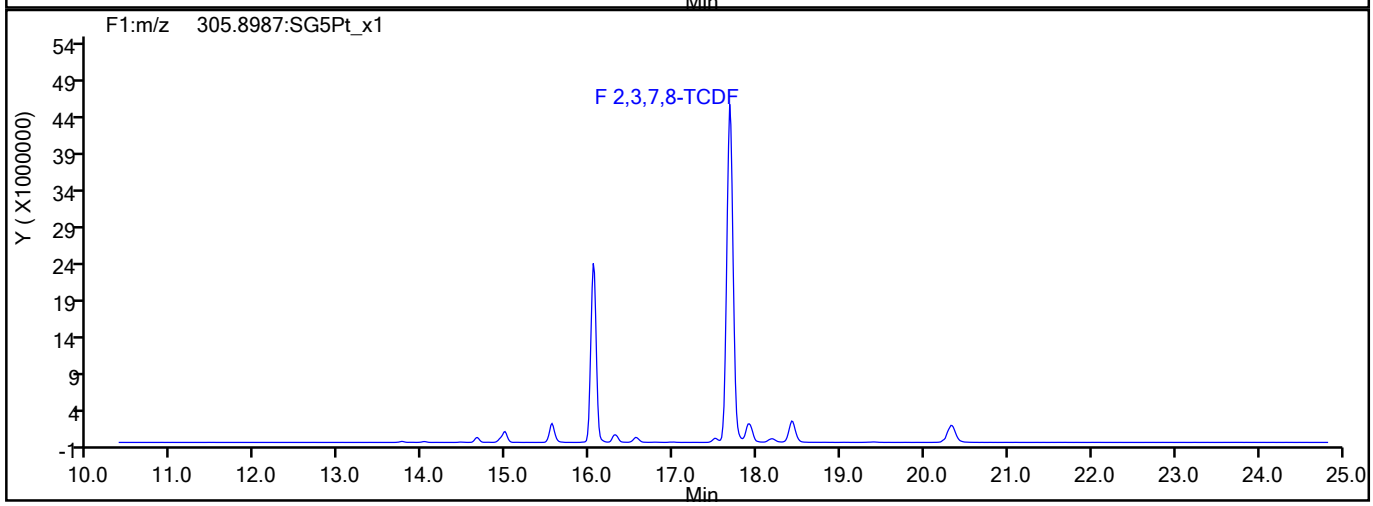

TCDF Interference Mass

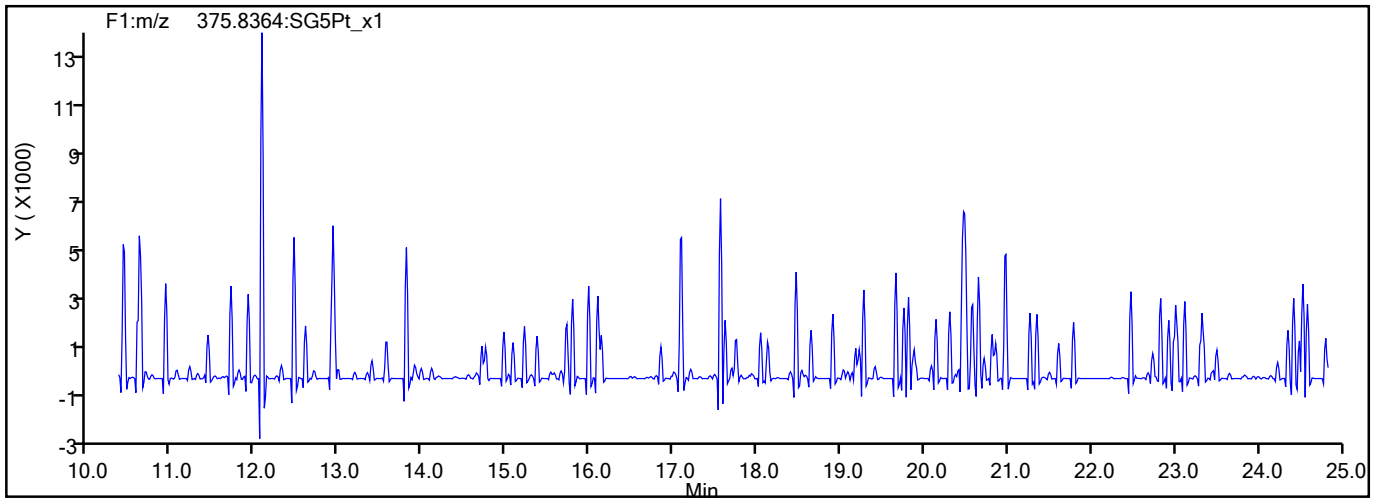

777848

Report Date: 23-Aug-2021 15:56:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_009.d		
Injection Date:	23-Aug-2021 14:38:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	518958	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

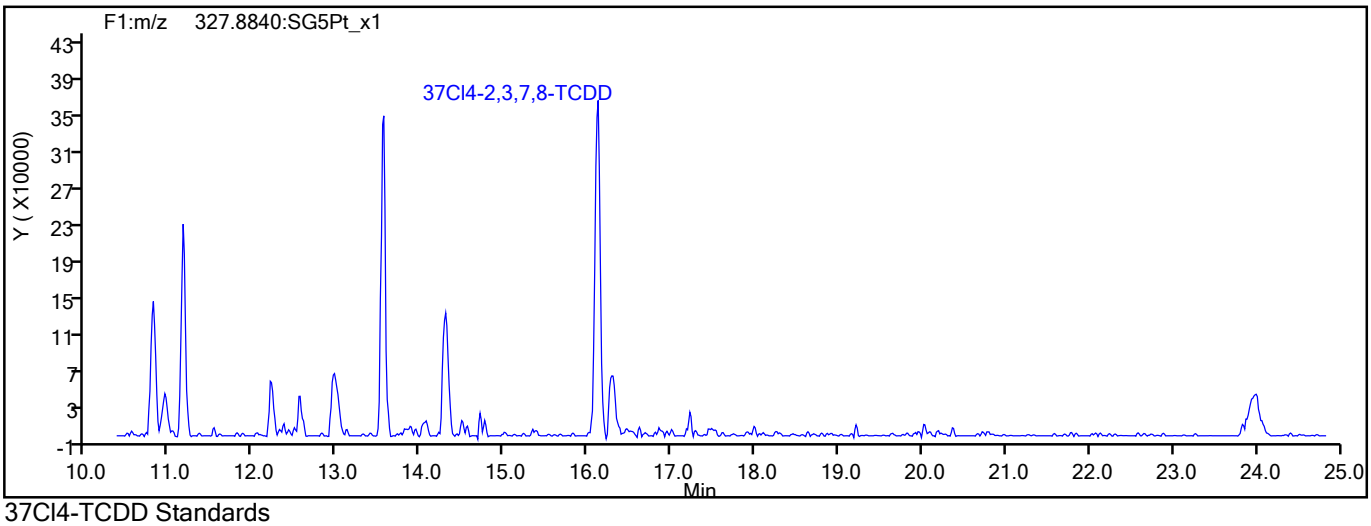

37Cl4-TCDD Standards

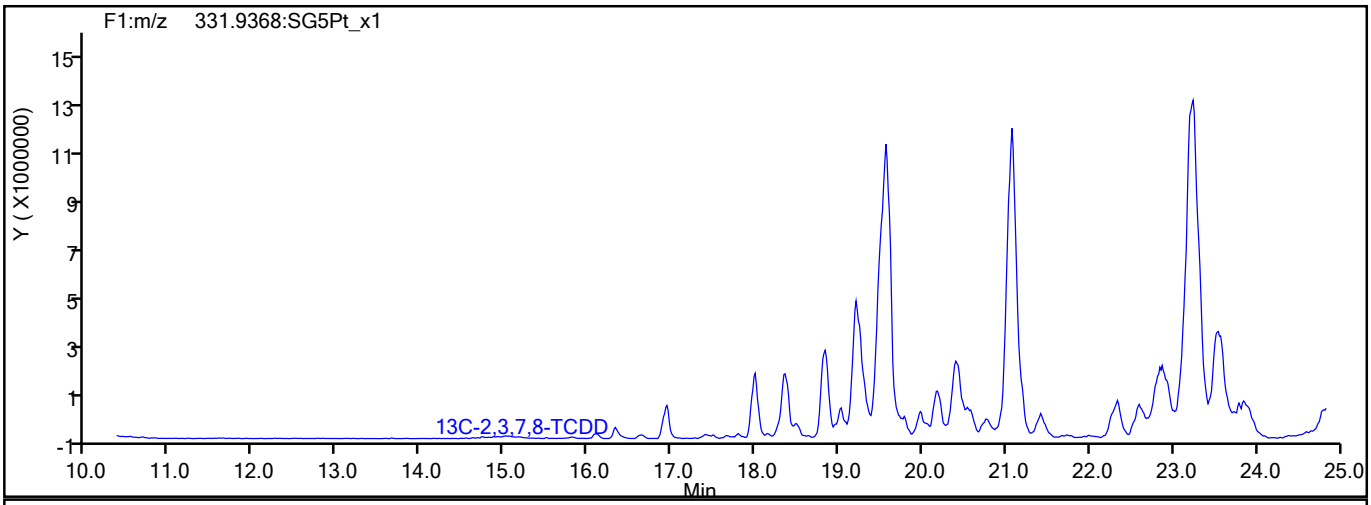

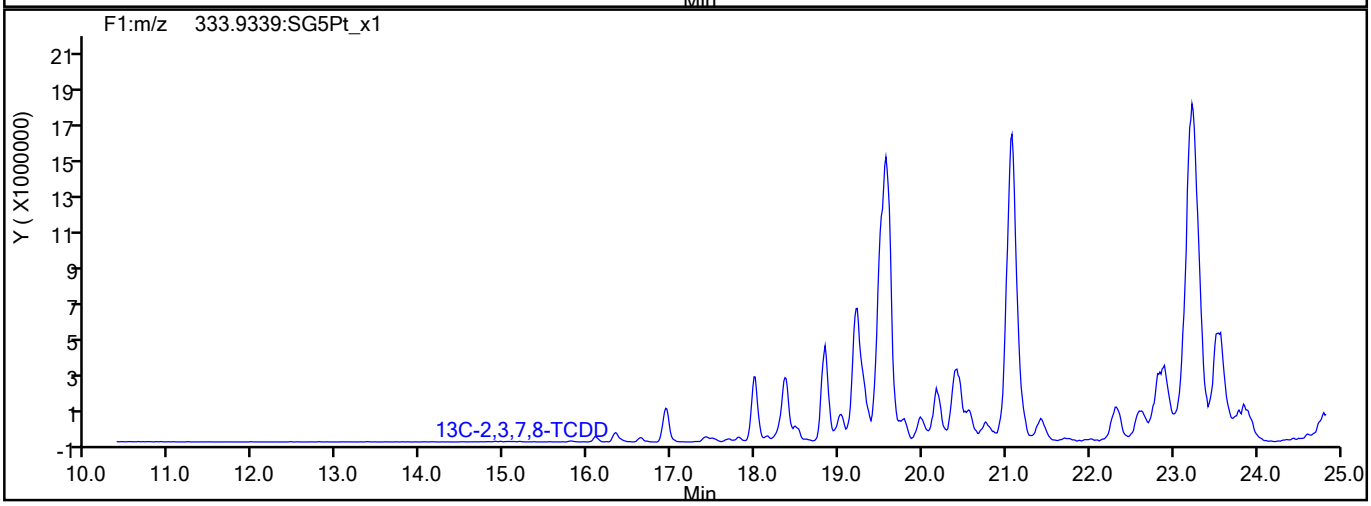

777849

Report Date: 23-Aug-2021 15:56:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_009.d		
Injection Date:	23-Aug-2021 14:38:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (0-2)		
Worklist#:	518958	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

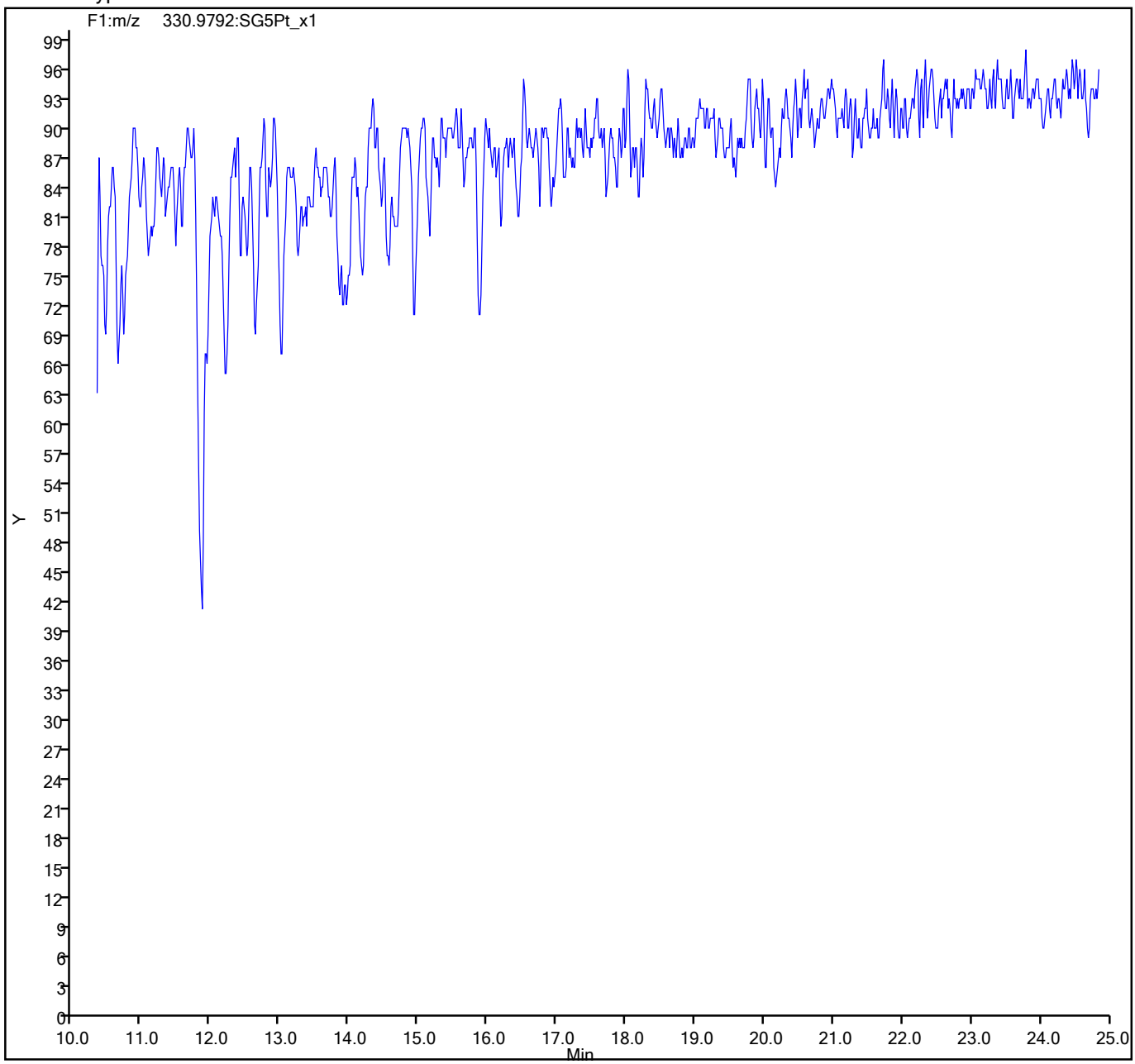

777850

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) MSD
Lab Sample ID: 320-76769-27 MSD
Matrix: Sediment
Lab File ID: 17au21dfs1_42.d
Analysis Method: 1613B
Date Collected: 07/22/2021 15:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.06(g)
Date Analyzed: 08/18/2021 22:00
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	1820		2.7	2.7
40321-76-4	1,2,3,7,8-PeCDD	163		6.5	0.62
57117-41-6	1,2,3,7,8-PeCDF	426		6.5	2.0
57117-31-4	2,3,4,7,8-PeCDF	280		6.5	1.9
39227-28-6	1,2,3,4,7,8-HxCDD	121		6.5	1.2
57653-85-7	1,2,3,6,7,8-HxCDD	148		6.5	1.5
19408-74-3	1,2,3,7,8,9-HxCDD	131		6.5	1.2
70648-26-9	1,2,3,4,7,8-HxCDF	581		6.5	0.98
57117-44-9	1,2,3,6,7,8-HxCDF	251		6.5	1.0
72918-21-9	1,2,3,7,8,9-HxCDF	159		6.5	0.91
60851-34-5	2,3,4,6,7,8-HxCDF	183		6.5	0.89
35822-46-9	1,2,3,4,6,7,8-HpCDD	204		6.5	0.50
67562-39-4	1,2,3,4,6,7,8-HpCDF	275		6.5	0.94
55673-89-7	1,2,3,4,7,8,9-HpCDF	178		6.5	1.1
3268-87-9	OCDD	1410		13	1.1
39001-02-0	OCDF	353		13	0.55
41903-57-5	Total TCDD	1990		2.7	2.7
30402-14-3	Total TCDF	12300		7.9	7.9
36088-22-9	Total PeCDD	167		6.5	0.62
30402-15-4	Total PeCDF	956		6.5	2.0
34465-46-8	Total HxCDD	415		6.5	1.3
55684-94-1	Total HxCDF	1250		6.5	0.95
37871-00-4	Total HpCDD	297		6.5	0.50
38998-75-3	Total HpCDF	486		6.5	1.0

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) MSD
Lab Sample ID: 320-76769-27 MSD
Matrix: Sediment
Lab File ID: 17au21dfs1_42.d
Analysis Method: 1613B
Date Collected: 07/22/2021 15:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.06(g)
Date Analyzed: 08/18/2021 22:00
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	60		25-164
89059-46-1	13C-2,3,7,8-TCDF	61		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	61		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	52		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	60		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	72		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	63		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	69		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	61		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	63		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	60		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	57		26-138
114423-97-1	13C-OCDD	53		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	77		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d
Lims ID: 320-76769-A-27-C MSD
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MSD
Inject. Date: 18-Aug-2021 22:00:00 ALS Bottle#: 0 Worklist Smp#: 39
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-C MSD
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 12:00:19 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1608

First Level Reviewer: krenns Date: 24-Aug-2021 12:00:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.437	1099026	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.473	903886	0.82	1.3459	61.1	61.1	0.2144	0.2144	61.11	
2,3,7,8-TCDF	20.508	27122188	0.88	1.0802	2777.9	2777.9	3.009	3.009	27779	E
A Non-2,3,7,8-sub-TCDF	19.878	18814248	0.88	1.0802	1927.0	1927.0	3.009	1055.3	0.00	
S Total TCDF					4704.8	4704.8	3.009	3.009		
D 13C-2,3,7,8-TCDD	21.815	613876	0.83	0.9317	60.0	60.0	0.4082	0.4082	59.95	
2,3,7,8-TCDD	21.849	4595749	0.78	1.0753	696.2	696.2	1.043	1.043	6962	E
$ 37Cl4-2,3,7,8-TCDD	21.849	340505		1.0083	30.7	30.7	0.1008	0.1008	76.82	
A Non-2,3,7,8-sub-TCDD	20.707	422757	0.79	1.0753	64.0	64.0	1.043	57.7	0.00	
S Total TCDD					760.2	760.2	1.043	1.043		
D 13C-1,2,3,7,8-PeCDF	27.331	654109	1.58	1.1405	52.2	52.2	0.2599	0.2599	52.19	
1,2,3,7,8-PeCDF	27.357	1123807	1.62	1.0543	163.0	163.0	0.7794	0.7794	326	M
D 13C-2,3,4,7,8-PeCDF	28.847	739607	1.55	1.1253	59.8	59.8	0.2634	0.2634	59.80	M
2,3,4,7,8-PeCDF	28.856	798128	1.63	1.0079	107.1	107.1	0.7158	0.7158	214	
A F1 PeCDFs	24.648	5498	1.55	1.0311	0.8683	0.7652	0.0123	0.7652	0.00	RQa
A Non-2,3,7,8-sub-PeCDF	28.125	680089	1.70	1.0311	94.7	94.7	0.7451	41.6	0.00	Ma
S Total PeCDF					365.6	365.5	0.7476	0.7476		RQ
D 13C-1,2,3,7,8-PeCDD	29.638	482832	1.56	0.7165	61.3	61.3	0.3817	0.3817	61.32	
1,2,3,7,8-PeCDD	29.672	314380	1.54	1.0465	62.2	62.2	0.2363	0.2363	124	
A Non-2,3,7,8-sub-PeCDD	28.489	9207	1.55	1.0465	3.836	1.822	0.2363	0.7546	0.00	RQ
S Total PeCDD					66.1	64.0	0.2363	0.2363		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.990	644550	0.57	0.9648	68.8	68.8	0.1285	0.1285	68.84	
1,2,3,4,7,8-HxCDF	35.015	1642380	1.33	1.1474	222.1	222.1	0.3763	0.3763	444	
D 13C-1,2,3,6,7,8-HxCDF	35.150	637909	0.52	1.0708	61.4	61.4	0.1158	0.1158	61.38	
1,2,3,6,7,8-HxCDF	35.167	745835	1.33	1.2178	96.0	96.0	0.3854	0.3854	192	
D 13C-2,3,4,6,7,8-HxCDF	35.975	634196	0.55	1.0413	62.8	62.8	0.1190	0.1190	62.76	
2,3,4,6,7,8-HxCDF	36.000	537812	1.32	1.2145	69.8	69.8	0.3402	0.3402	140	
D 13C-1,2,3,7,8,9-HxCDF	36.859	517638	0.54	0.9731	54.8	54.8	0.1274	0.1274	54.81	
1,2,3,7,8,9-HxCDF	36.875	391257	1.34	1.2401	60.9	60.9	0.3470	0.3470	122	M
A Non-2,3,7,8-sub-HxCDF	35.028	223389	1.24	1.2049	30.6	30.5	0.3612	12.9	0.00	RQMa
S Total HxCDF					479.5	479.3	0.3622	0.3622		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.673	970478	1.24	1.8E+04	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	36.185	528846	1.27	0.7587	71.8	71.8	0.0961	0.0961	71.83	
1,2,3,4,7,8-HxCDD	36.202	260422	1.30	1.0608	46.4	46.4	0.4518	0.4518	92.84	
D 13C-1,2,3,6,7,8-HxCDD	36.286	522225	1.17	0.8593	62.6	62.6	0.0848	0.0848	62.62	
1,2,3,6,7,8-HxCDD	36.320	293874	1.21	0.9933	56.7	56.7	0.5625	0.5625	113	
1,2,3,7,8,9-HxCDD	36.682	292676	1.24	1.1094	50.2	50.2	0.4650	0.4650	100	
A Non-2,3,7,8-sub-HxCDD	35.394	29861	1.38	1.0545	5.388	5.388	0.4892	2.696	0.00	
S Total HxCDD					158.7	158.7	0.4931	0.4931		
D 13C-1,2,3,4,6,7,8-HpCDF	38.697	430857	0.45	0.7359	60.3	60.3	0.1583	0.1583	60.33	
1,2,3,4,6,7,8-HpCDF	38.705	653630	1.09	1.4421	105.2	105.2	0.3599	0.3599	210	
D 13C-1,2,3,4,7,8,9-HpCDF	39.935	377427	0.47	0.6854	56.7	56.7	0.1700	0.1700	56.74	M
1,2,3,4,7,8,9-HpCDF	39.943	337174	1.09	1.3092	68.2	68.2	0.4081	0.4081	136	
A Non-2,3,7,8-sub-HpCDF	39.258	69665	1.04	1.3756	12.5	12.5	0.3828	12.5	0.00	
S Total HpCDF					186.0	186.0	0.3840	0.3840		
D 13C-1,2,3,4,6,7,8-HpCDD	39.632	394976	1.07	0.6745	60.3	60.3	0.2036	0.2036	60.34	
1,2,3,4,6,7,8-HpCDD	39.640	323032	1.01	1.0503	77.9	77.9	0.1904	0.1904	156	
A Non-2,3,7,8-sub-HpCDD	39.258	148570	1.03	1.0503	35.8	35.8	0.1904	35.8	0.00	
S Total HpCDD					113.7	113.7	0.1904	0.1904		
D 13C-OCDD	42.172	555162	0.90	0.5446	105.0	105.0	0.2322	0.2322	52.52	a
OCDF	42.265	493875	0.99	1.3168	135.1	135.1	0.2086	0.2086	135	
OCDD	42.181	1592806	0.89	1.0620	540.3	540.3	0.4390	0.4390	540	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d
Lims ID: 320-76769-A-27-C MSD
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MSD
Inject. Date: 18-Aug-2021 22:00:00 ALS Bottle#: 0 Worklist Smp#: 39
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-C MSD
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 12:00:19 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1608

First Level Reviewer: krenns Date: 24-Aug-2021 12:00:19

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.437	21.427	1		488732	65803	104	260	633		
333.9338	21.437	21.427	1		610294	86692	128	320	677	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.473	20.401	4	0.955	406854	56328	110	275	512		
317.9389	20.465	20.401	4	0.955	497032	67666	66	165	1025	0.82(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.508	20.436	4	1.002	12699667	1647691	871	2177	1892		
305.8987	20.499	20.436	4	1.001	14422521	1854996	741	1852	2503	0.88(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.512	19.878	-142	0.855	59903	11532	871	2177	13		
305.8987	17.512	19.878	-142	0.855	87969	13378	741	1852	18	0.68(0.65-0.89)	
303.9016	17.960	19.878	-115	0.877	235488	37740	871	2177	43		
305.8987	17.960	19.878	-115	0.877	265321	41380	741	1852	56	0.89(0.65-0.89)	
303.9016	18.450	19.878	-86	0.901	424648	52340	871	2177	60		
305.8987	18.450	19.878	-86	0.901	489153	59165	741	1852	80	0.87(0.65-0.89)	
303.9016	18.881	19.878	-60	0.922	415659	52009	871	2177	60		
305.8987	18.881	19.878	-60	0.922	467983	56798	741	1852	77	0.89(0.65-0.89)	
303.9016	19.260	19.878	-37	0.941	697734	93402	871	2177	107		
305.8987	19.260	19.878	-37	0.941	800507	104166	741	1852	141	0.87(0.65-0.89)	
303.9016	19.768	19.878	-7	0.966	4847007	690776	871	2177	793		
305.8987	19.759	19.878	-7	0.965	5456513	755229	741	1852	1019	0.89(0.65-0.89)	
303.9016	20.172	19.878	18	0.985	211702	26369	871	2177	30		
305.8987	20.164	19.878	17	0.985	248104	29813	741	1852	40	0.85(0.65-0.89)	
303.9016	21.282	19.878	84	1.040	899244	121385	871	2177	139		
305.8987	21.282	19.878	84	1.040	1025308	137241	741	1852	185	0.88(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.712	19.878	110	1.061	290250	31240	871	2177	36		
305.8987	21.703	19.878	109	1.060	332068	36212	741	1852	49	0.87(0.65-0.89)	
303.9016	23.664	19.878	227	1.156	728492	132112	871	2177	152		
305.8987	23.664	19.878	227	1.156	831195	151430	741	1852	204	0.88(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.815	21.743	4	1.018	278157	35188	104	260	338		
333.9338	21.832	21.743	5	1.018	335719	41065	128	320	321	0.83(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	21.849	21.777	4	1.002	2016825	237582	203	507	1170		
321.8936	21.849	21.777	4	1.002	2578924	304495	139	347	2191	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.849	21.849	0	1.019	340505	40061	62	155	646		
A Non-2,3,7,8-sub-TCDD											
319.8965	21.635	20.707	56	0.992	18978	3426	203	507	17		
321.8936	21.652	20.707	57	0.993	22908	4083	139	347	29	0.83(0.65-0.89)	
319.8965	22.546	20.707	110	1.034	167198	19106	203	507	94		
321.8936	22.529	20.707	109	1.033	213673	24857	139	347	179	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.331	27.288	3	1.275	400181	54211	122	305	444		
353.8970	27.331	27.288	3	1.275	253928	34268	59	147	581	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.357	27.313	3	1.001	695351	97080	168	420	578		M
341.8567	27.357	27.313	3	1.001	428456	57312	123	307	466	1.62(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											M
351.9000	28.847	28.795	3	1.346	449787	61890	122	305	507		
353.8970	28.839	28.795	3	1.345	289820	38884	59	147	659	1.55(1.32-1.78)	M
2,3,4,7,8-PeCDF											
339.8597	28.856	28.820	2	1.000	494637	69064	168	420	411		
341.8567	28.856	28.820	2	1.000	303491	43476	123	307	353	1.63(1.32-1.78)	
A F1 PeCDFs											RQa
339.8597	24.095	24.648	-33	0.882	3342	636	1	2	636		a
341.8567	24.086	24.648	-34	0.881	2897	610	4	10	153	1.15(1.32-1.78)	
	Empc Correction				2156	410	4	10	103		
A Non-2,3,7,8-sub-PeCDF											Ma
339.8597	25.858	28.125	-136	0.946	187294	29848	168	420	178		
341.8567	25.858	28.125	-136	0.946	111941	19514	123	307	159	1.67(1.32-1.78)	
339.8597	26.759	28.125	-82	0.979	16925	2224	168	420	13		
341.8567	26.759	28.125	-82	0.979	9916	1162	123	307	9	1.71(1.32-1.78)	
339.8597	27.230	28.125	-54	0.996	21297	5268	168	420	31		M
341.8567	27.230	28.125	-54	0.996	12498	2919	123	307	24	1.70(1.32-1.78)	
339.8597	27.929	28.125	-12	1.022	112194	17009	168	420	101		
341.8567	27.937	28.125	-11	1.022	64910	9353	123	307	76	1.73(1.32-1.78)	
339.8597	29.184	28.125	63	1.068	74664	8434	168	420	50		
341.8567	29.175	28.125	63	1.067	43521	5553	123	307	45	1.72(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	30.902	28.125	166	1.131	15816	2053	168	420	12		
341.8567	30.919	28.125	167	1.131	9113	1200	123	307	10	1.74(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.638	29.612	2	1.383	293990	35599	55	137	647		
369.8919	29.630	29.612	1	1.382	188842	23033	112	280	206	1.56(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.672	29.637	2	1.001	190789	23886	32	80	746		
357.8516	29.664	29.637	2	1.001	123591	15506	26	65	596	1.54(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.102	28.489	-143	0.881	2045	311	32	80	10		
357.8516	26.153	28.489	-140	0.882	10968	1742	26	65	67	0.19(1.32-1.78)	
	Empc Correction				1319	200	26	65	8		
355.8546	27.441	28.489	-63	0.926	2247	399	32	80	12		
357.8516	27.449	28.489	-62	0.926	1566	188	26	65	7	1.43(1.32-1.78)	
355.8546	27.744	28.489	-45	0.936	1234	245	32	80	8		
357.8516	27.777	28.489	-43	0.937	1325	229	26	65	9	0.93(1.32-1.78)	
	Empc Correction				796	158	26	65	6		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.990	34.942	3	0.954	234632	34470	44	110	783		
385.8610	34.990	34.942	3	0.954	409918	69065	56	140	1233	0.57(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.015	34.959	3	1.001	936643	138978	106	265	1311		
375.8178	35.015	34.959	3	1.001	705737	105677	73	182	1448	1.33(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.150	35.111	2	0.958	218457	33519	44	110	762		
385.8610	35.159	35.111	3	0.959	419452	61714	56	140	1102	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.167	35.119	3	1.000	425542	68906	106	265	650		
375.8178	35.175	35.119	3	1.001	320293	50995	73	182	699	1.33(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.975	35.919	3	0.981	224666	37900	44	110	861		
385.8610	35.975	35.919	3	0.981	409530	70299	56	140	1255	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	36.000	35.936	4	1.001	305688	49616	106	265	468		
375.8178	35.991	35.936	3	1.000	232124	37813	73	182	518	1.32(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.859	36.811	3	1.005	180613	36708	44	110	834		
385.8610	36.859	36.811	3	1.005	337025	67165	56	140	1199	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.875	36.828	3	1.000	223859	46540	106	265	439		M
375.8178	36.875	36.828	3	1.000	167398	34410	73	182	471	1.34(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.289	35.028	-104	0.951	5223	700	106	265	7		
	Empc Correction				4087	742	106	265	7		
375.8178	33.272	35.028	-105	0.951	3296	599	73	182	8	1.58(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	33.551	35.028	-88	0.959	54398	7327	106	265	69		
375.8178	33.534	35.028	-89	0.958	39880	5983	73	182	82	1.36(1.05-1.43)	
373.8208	34.375	35.028	-39	0.982	23068	3849	106	265	36		
375.8178	34.375	35.028	-39	0.982	18893	2883	73	182	39	1.22(1.05-1.43)	
373.8208	36.943	35.028	115	1.056	46805	12820	106	265	121		M
375.8178	36.943	35.028	115	1.056	32962	9895	73	182	136	1.42(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	36.673	36.609	4		537105	110221	29	72	3801		a
403.8529	36.665	36.609	3		433373	91450	30	75	3048	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.185	36.129	3	0.987	295839	57347	29	72	1977		
403.8529	36.193	36.129	4	0.987	233007	48451	30	75	1615	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.202	36.146	3	1.000	147102	29601	116	290	255		
391.8127	36.202	36.146	3	1.000	113320	23311	87	217	268	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.286	36.247	2	0.989	281616	49557	29	72	1709		
403.8529	36.295	36.247	3	0.990	240609	41187	30	75	1373	1.17(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.320	36.264	3	1.001	160685	30290	116	290	261		
391.8127	36.320	36.264	3	1.001	133189	23796	87	217	274	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.682	36.626	3	1.014	162122	34494	116	290	297		
391.8127	36.682	36.626	3	1.014	130554	28031	87	217	322	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.299	35.394	-66	0.945	8575	1403	116	290	12		
391.8127	34.308	35.394	-65	0.945	6367	981	87	217	11	1.35(1.05-1.43)	
389.8158	35.436	35.394	3	0.977	8739	1462	116	290	13		
391.8127	35.436	35.394	3	0.977	6180	1023	87	217	12	1.41(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.697	38.626	4	1.055	133895	30642	46	115	666		
419.8220	38.697	38.626	4	1.055	296962	68961	48	120	1437	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.705	38.630	4	1.000	341198	77775	116	290	670		
409.7788	38.705	38.630	4	1.000	312432	73041	91	227	803	1.09(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											M
417.8250	39.935	39.880	3	1.089	120969	31229	46	115	679		M
419.8220	39.935	39.880	3	1.089	256458	65542	48	120	1365	0.47(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.943	39.885	3	1.000	175722	44236	116	290	381		
409.7788	39.943	39.885	3	1.000	161452	40405	91	227	444	1.09(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.059	39.258	-12	1.009	35468	8026	116	290	69		
409.7788	39.059	39.258	-12	1.009	34197	7570	91	227	83	1.04(0.88-1.20)	

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.632	39.569	4	1.081	204322	52325	65	162	805		
437.8140	39.632	39.569	4	1.081	190654	46173	46	115	1004	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.640	39.582	3	1.000	161941	41681	35	87	1191		
425.7737	39.640	39.582	3	1.000	161091	41237	44	110	937	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.009	39.258	-15	0.984	75230	17861	35	87	510		
425.7737	39.000	39.258	-15	0.984	73340	17284	44	110	393	1.03(0.88-1.20)	
13C-OCDD											a
469.7780	42.172	42.072	6	1.150	263579	58937	65	162	907		a
471.7750	42.172	42.072	6	1.150	291583	68467	37	92	1850	0.90(0.76-1.02)	
OCDF											
441.7428	42.265	42.165	6	1.002	246007	55945	33	82	1695		
443.7399	42.265	42.165	6	1.002	247868	52538	37	92	1420	0.99(0.76-1.02)	
OCDD											
457.7377	42.181	42.081	6	1.000	749612	170910	58	145	2947		
459.7348	42.181	42.081	6	1.000	843194	191671	61	152	3142	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	903886	123994

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	903886	123994

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.512	59903	11532	87969	13378	15.1	0.68	
17.960	235488	37740	265321	41380	51.3	0.89	
18.450	424648	52340	489153	59165	93.6	0.87	
18.881	415659	52009	467983	56798	90.5	0.89	
19.260	697734	93402	800507	104166	153.4	0.87	
19.768	4847007	690776	5456513	755229	1055.3	0.89	
20.172	211702	26369	248104	29813	47.1	0.85	
21.282	899244	121385	1025308	137241	197.1	0.88	
21.712	290250	31240	332068	36212	63.7	0.87	
23.664	728492	132112	831195	151430	159.7	0.88	
Signal Totals:	8810127	1248905	10004121	1384812			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	18814248	2633717				0.88	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1927.0 = (18814248 * 100.000) / (903886 * 1.080)

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	613876	76253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	613876	76253

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.635	18978	3426	22908	4083	6.35	0.83	
22.546	167198	19106	213673	24857	57.7	0.78	
Signal Totals:							
	186176	22532	236581	28940			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	422757	51472				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 64.042 = (422757 * 100.000) / (613876 * 1.075)

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	654109	88479
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	739607	100774

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	696858	94626

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.095	3342	636	2897	610	0.8683	1.15	RQa
24.095	3342	636	2156	410	0.7652		Empc Correction
Signal Totals:							
	3342	636	2156	410			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6239	1246				1.15	RQa
	5498	1046					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8683 = (6239 * 100.000) / (696858 * 1.031)
Empc Amount: 0.7652 = (5498 * 100.000) / (696858 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	654109	88479
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	739607	100774

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	696858	94626

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.858	187294	29848	111941	19514	41.6	1.67	
26.759	16925	2224	9916	1162	3.74	1.71	
27.230	21297	5268	12498	2919	4.70	1.70	Ma
27.929	112194	17009	64910	9353	24.6	1.73	
29.184	74664	8434	43521	5553	16.4	1.72	
30.902	15816	2053	9113	1200	3.47	1.74	
Signal Totals:							
	428190	64836	251899	39701			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	680089	104537				1.70	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 94.654 = (680089 * 100.000) / (696858 * 1.031)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	482832	58632

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	482832	58632

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.102	2045	311	10968	1742	2.58	0.19	RQ
26.102	2045	311	1319	200	0.6658		Empc Correction
27.441	2247	399	1566	188	0.7546	1.43	
27.744	1234	245	1325	229	0.5064	0.93	RQ
27.744	1234	245	796	158	0.4018		Empc Correction
Signal Totals:							
	5526	955	3681	546			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	19385	3114				0.40	RQ
	9207	1501					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.836 = (19385 * 100.000) / (482832 * 1.046)

Empc Amount: 1.822 = (9207 * 100.000) / (482832 * 1.046)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	644550	103535
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	637909	95233
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	634196	108199
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	517638	103873

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	608573	102710

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.289	5223	700	3296	599	1.16	1.58	RQ
33.289	4087	742	3296	599	1.01		Empc Correction
33.551	54398	7327	39880	5983	12.9	1.36	
34.375	23068	3849	18893	2883	5.72	1.22	
36.943	46805	12820	32962	9895	10.9	1.42	Ma
Signal Totals:							
	128358	24738	95031	19360			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	224525	44056				1.36	RQMa
	223389	44098					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 30.619 = (224525 * 100.000) / (608573 * 1.205)

Empc Amount: 30.464 = (223389 * 100.000) / (608573 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	528846	105798
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	522225	90744
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	525535	98271

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.299	8575	1403	6367	981	2.70	1.35	
35.436	8739	1462	6180	1023	2.69	1.41	
Signal Totals:							
	17314	2865	12547	2004			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	29861	4869				1.38	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 5.388 = (29861 * 100.000) / (525535 * 1.055)

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	430857	99603
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	377427	96771

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	404142	98187

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
39.059	35468	8026	34197	7570	12.5	1.04	
Signal Totals:							
	35468	8026	34197	7570			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	69665	15596				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 12.531 = (69665 * 100.000) / (404142 * 1.376)

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	394976	98498

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	394976	98498

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
39.009	75230	17861	73340	17284	35.8	1.03	
Signal Totals:							
	75230	17861	73340	17284			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	148570	35145				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 35.814 = (148570 * 100.000) / (394976 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.36
Area: 716651
Amount: 167.8656
Amount Units: pg/ul

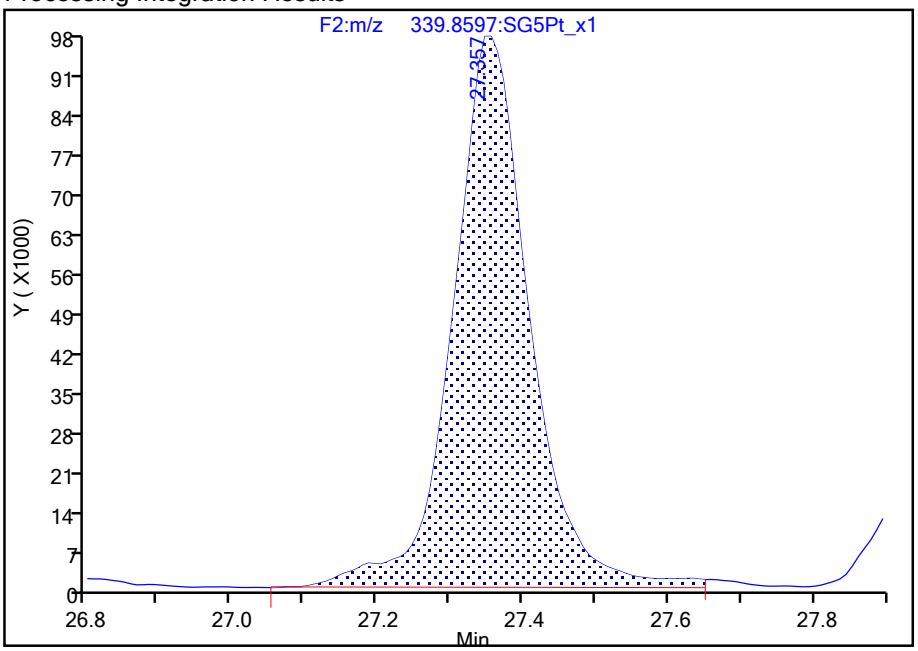

Manual Integration Results

RT: 27.36
Area: 695351
Amount: 162.9644
Amount Units: pg/ul

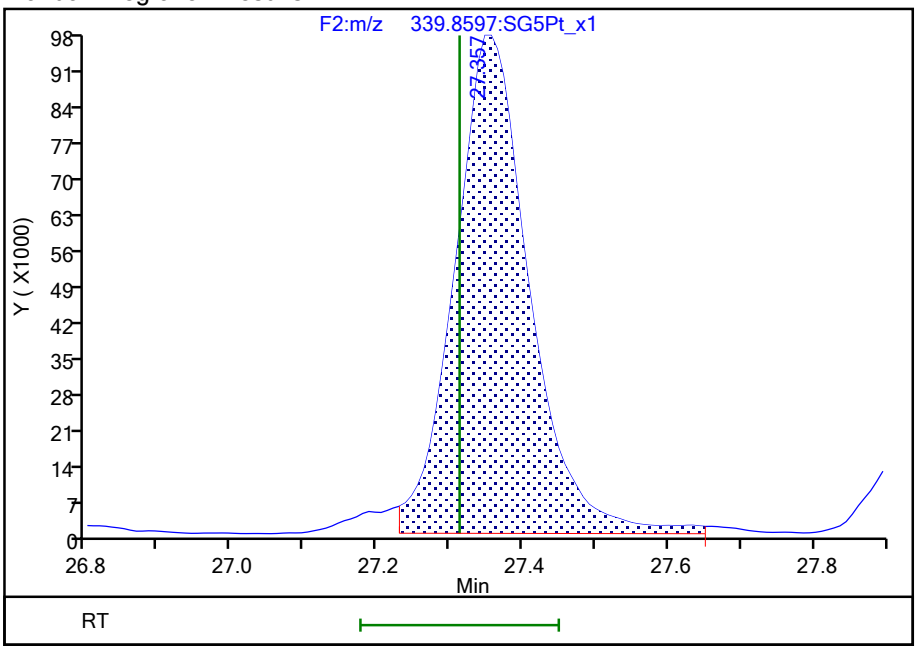

Reviewer: dadunj, 20-Aug-2021 09:25:30

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.36
Area: 440955
Amount: 167.8656
Amount Units: pg/ul

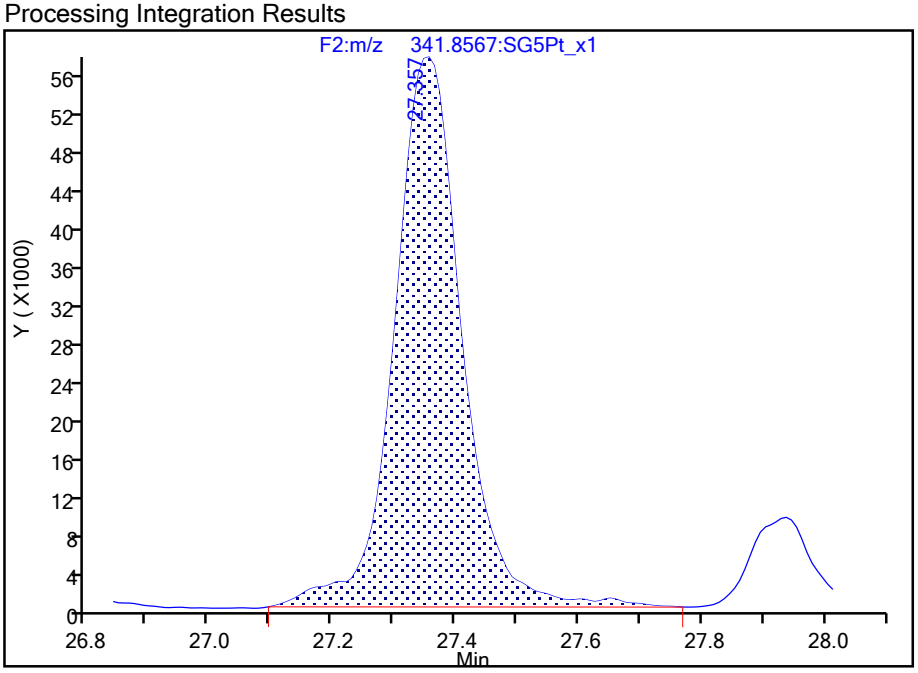

Manual Integration Results

RT: 27.36
Area: 428456
Amount: 162.9644
Amount Units: pg/ul

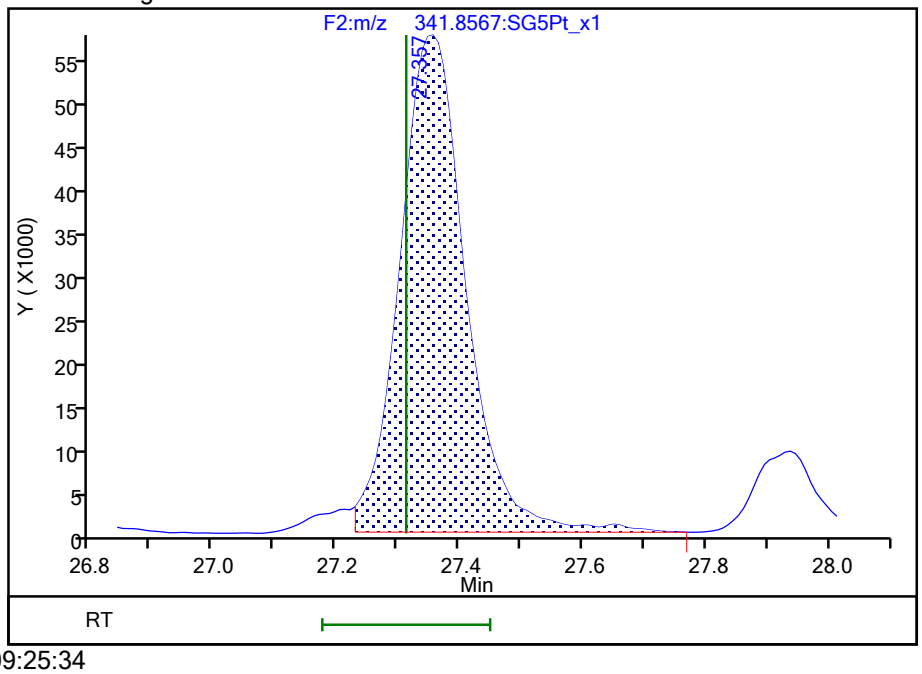

Reviewer: dadunj, 20-Aug-2021 09:25:34

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777871

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 2

Processing Integration Results

RT: 28.84
Area: 294461
Amount: 60.177134
Amount Units: pg/ul

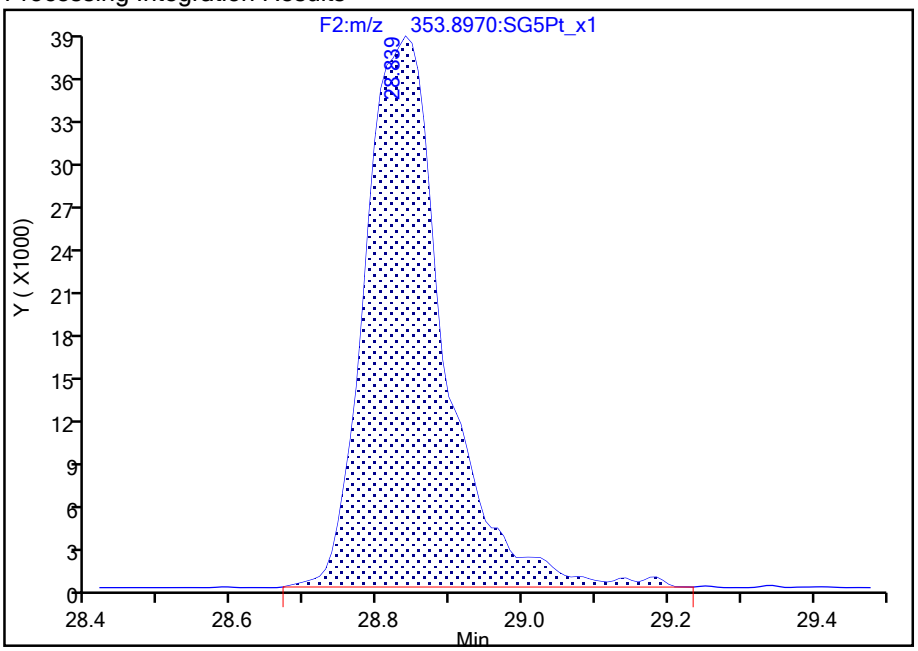

Manual Integration Results

RT: 28.84
Area: 289820
Amount: 59.801880
Amount Units: pg/ul

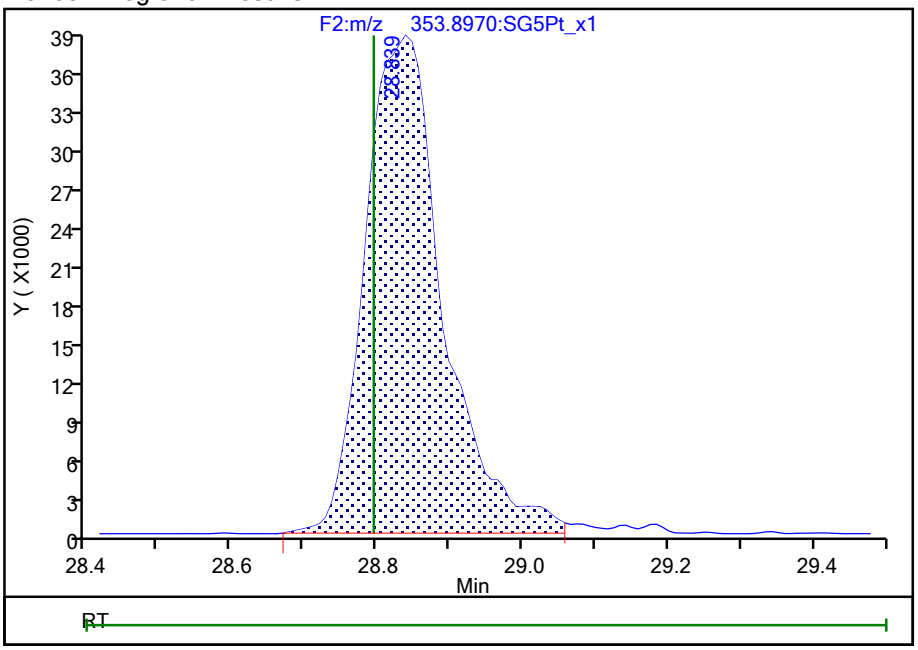

Reviewer: dadunj, 20-Aug-2021 09:26:24

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.38- 30.87)

Signal: 1

Processing Integration Results

Not Detected
RT: 25.38- 30.87

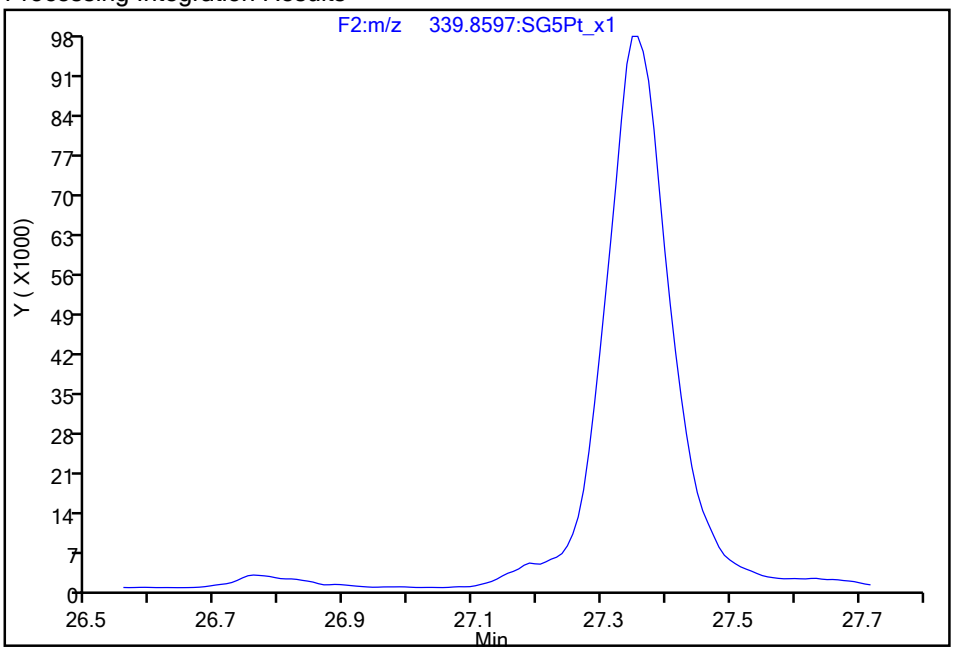

Manual Integration Results

RT = 27.230 Area = 21297 M

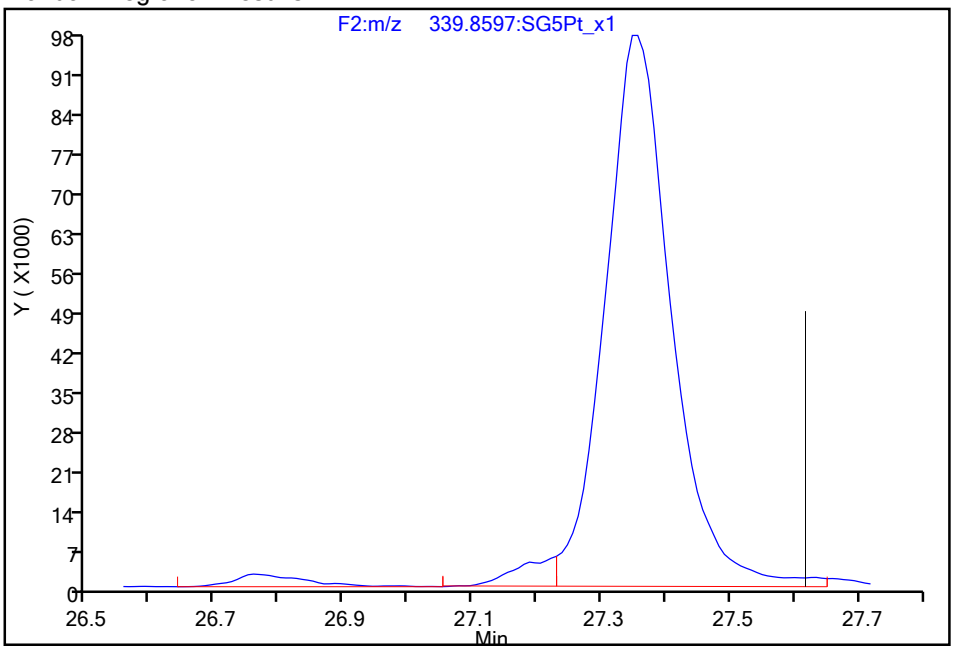

Reviewer: dadunj, 20-Aug-2021 09:26:38

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

777873

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.88
Area: 270669
Amount: 73.377320
Amount Units: pg/ul

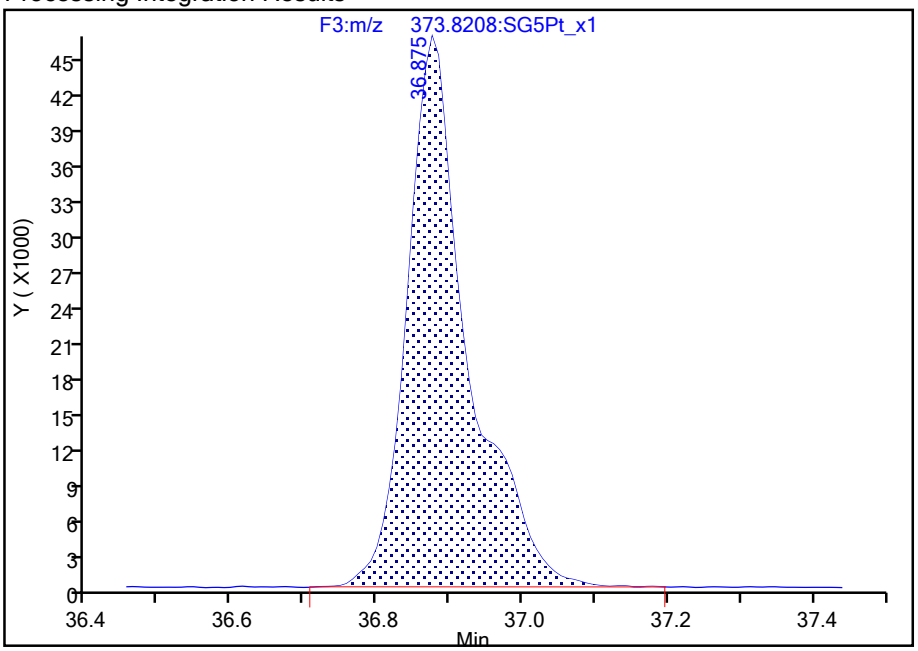

Manual Integration Results

RT: 36.88
Area: 223859
Amount: 60.949849
Amount Units: pg/ul

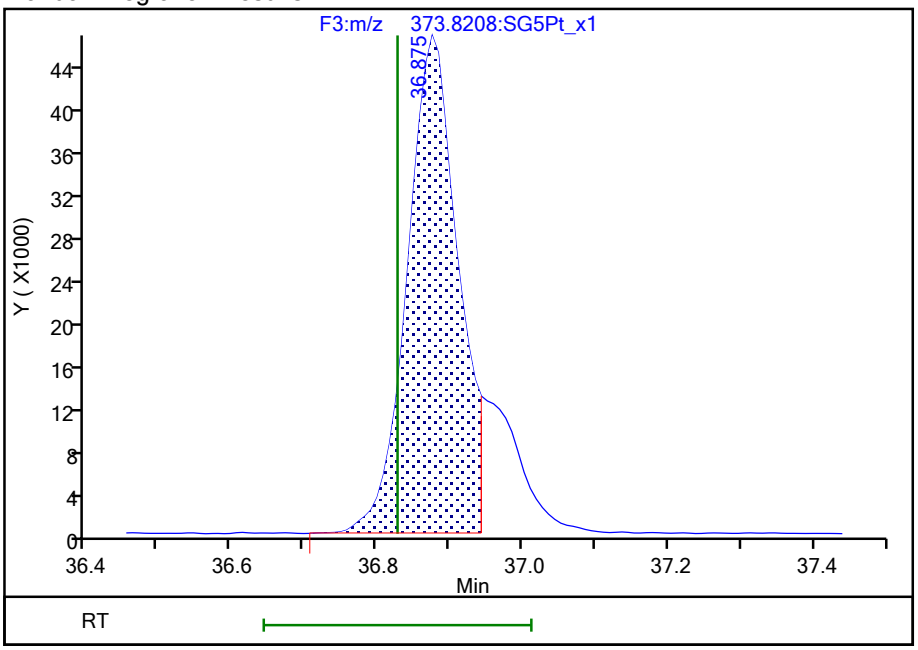

Reviewer: dadunj, 20-Aug-2021 09:27:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.88
Area: 200364
Amount: 73.377320
Amount Units: pg/ul

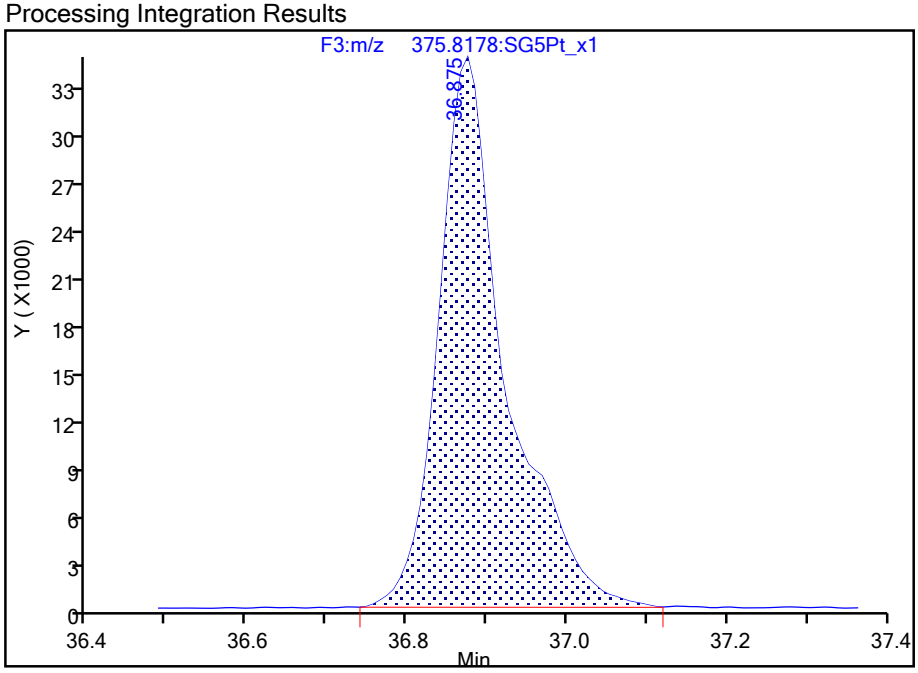

Manual Integration Results

RT: 36.88
Area: 167398
Amount: 60.949849
Amount Units: pg/ul

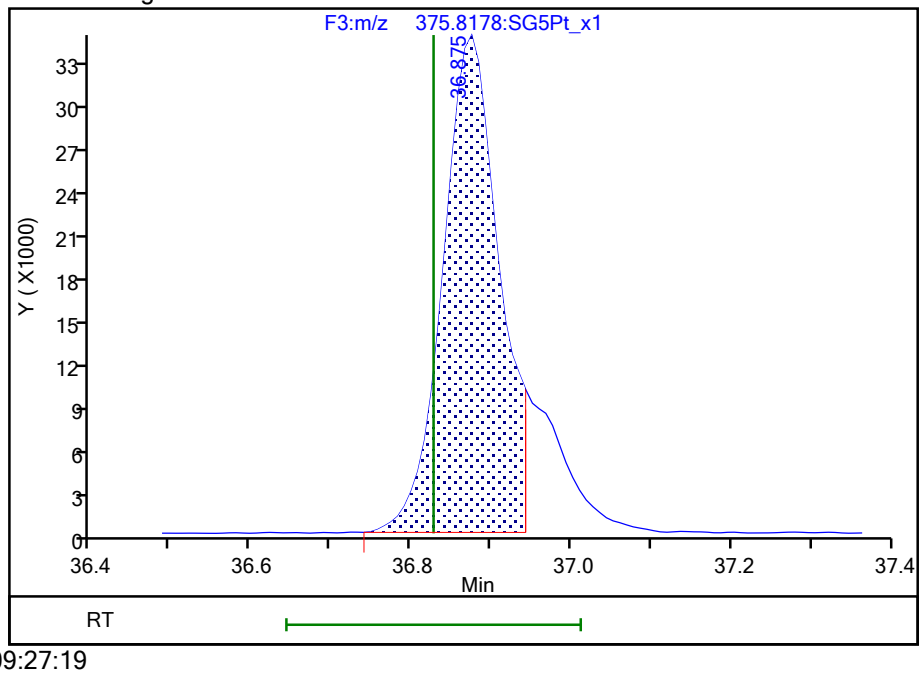

Reviewer: dadunj, 20-Aug-2021 09:27:19

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

777875

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.11- 36.95)

Signal: 1

Processing Integration Results

Not Detected
RT: 33.11- 36.95

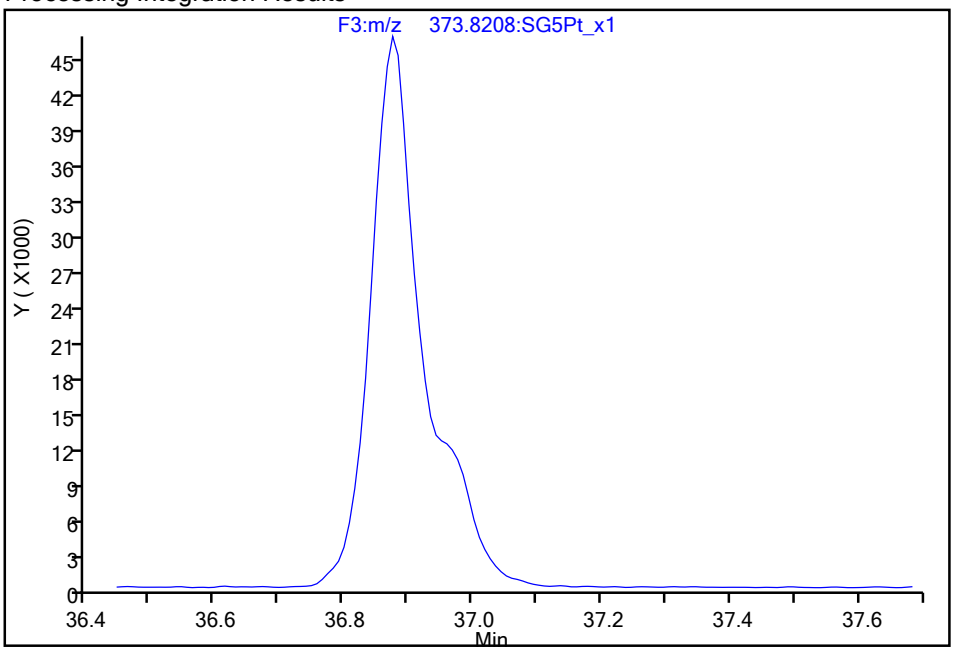

Manual Integration Results

RT = 36.943 Area = 46805 M

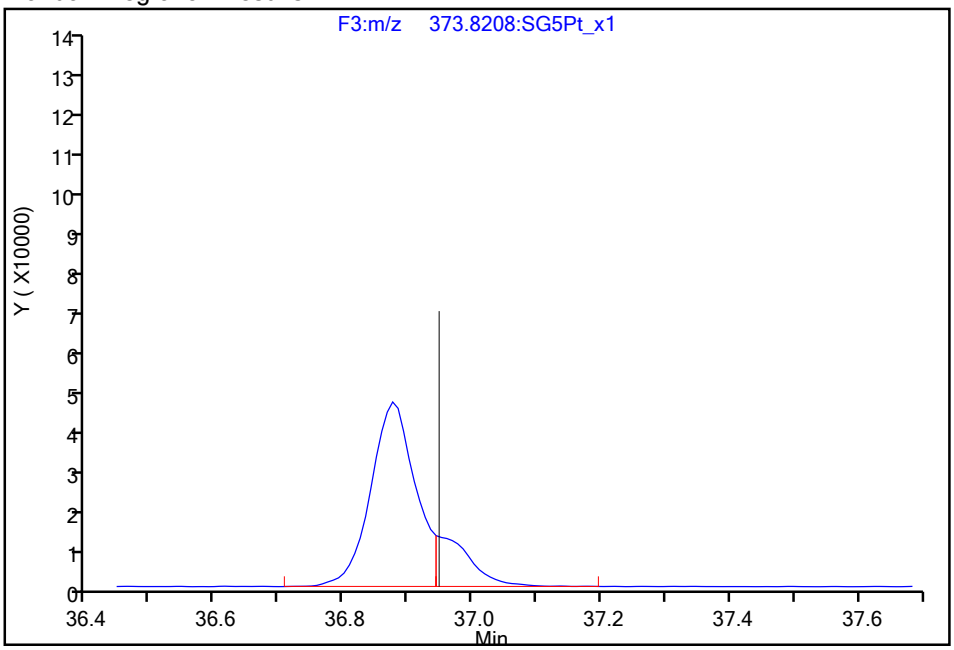

Reviewer: dadunj, 20-Aug-2021 09:27:24

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

777876

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

RT: 39.93
Area: 117547
Amount: 56.229132
Amount Units: pg/ul

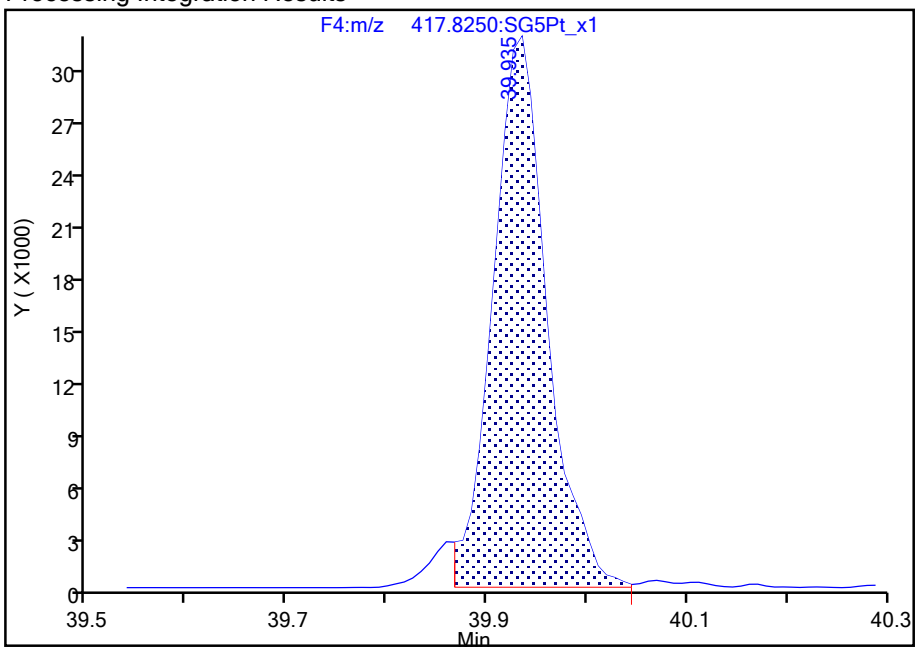

Manual Integration Results

RT: 39.93
Area: 120969
Amount: 56.743606
Amount Units: pg/ul

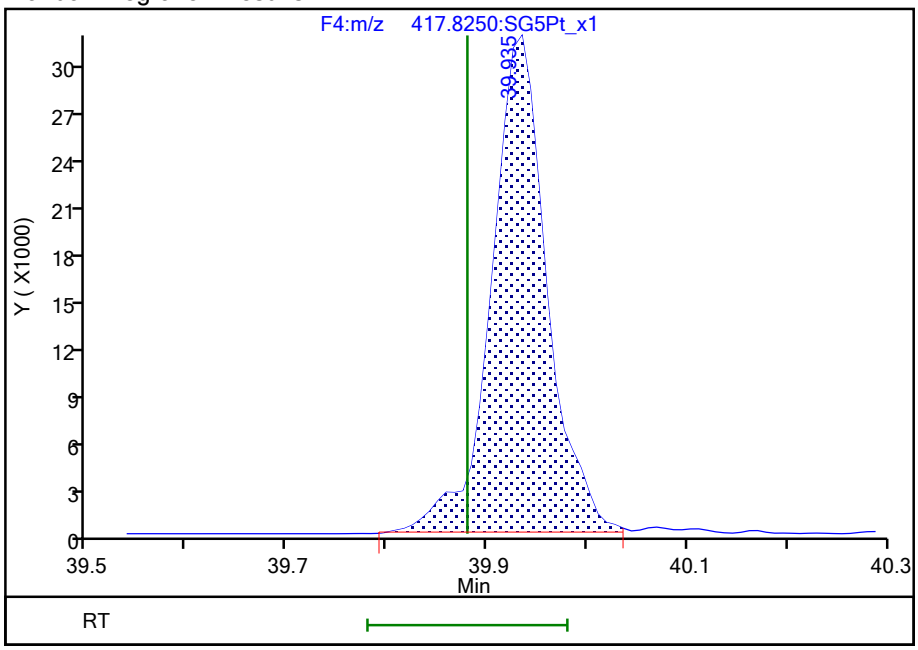

Reviewer: dadunj, 20-Aug-2021 09:28:05

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

13C-OCDD, CAS: 114423-97-1

Signal: 1

Processing Integration Results

RT: 42.03
Area: 2474
Amount: 0.646110
Amount Units: pg/ul

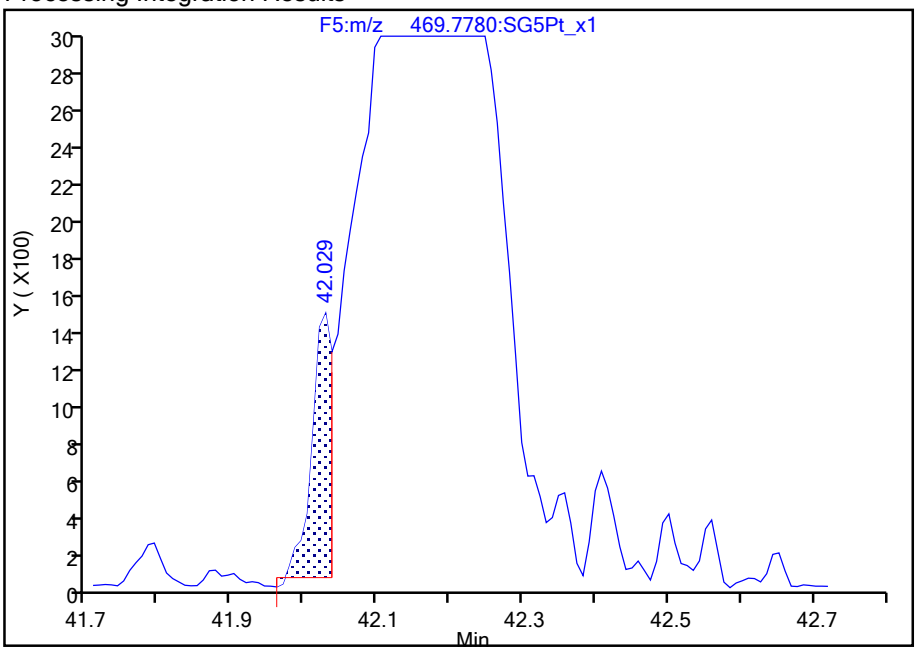

Manual Integration Results

RT: 42.17
Area: 263579
Amount: 105.0353
Amount Units: pg/ul

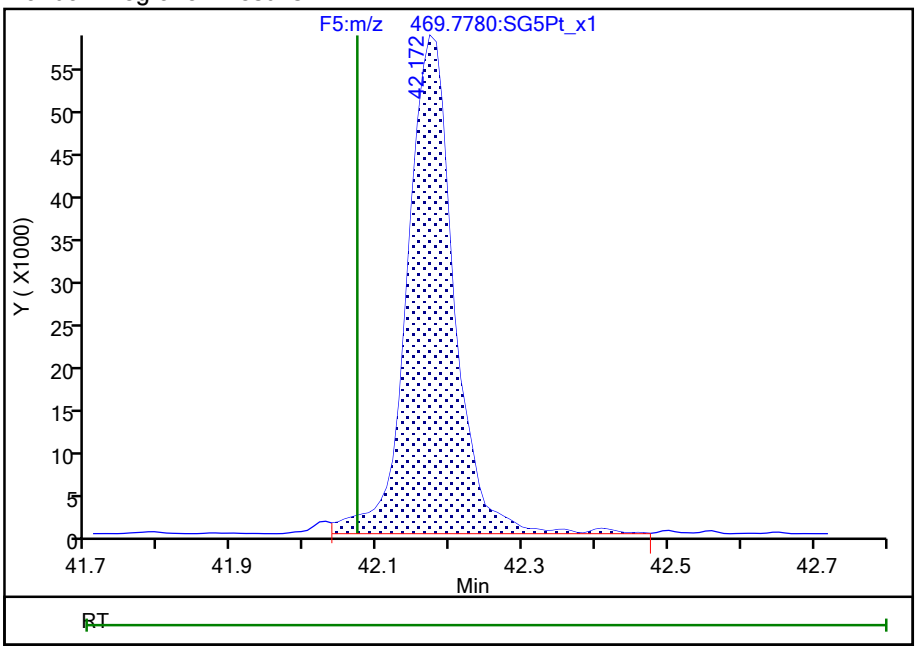

Reviewer: krenns, 24-Aug-2021 12:00:14

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

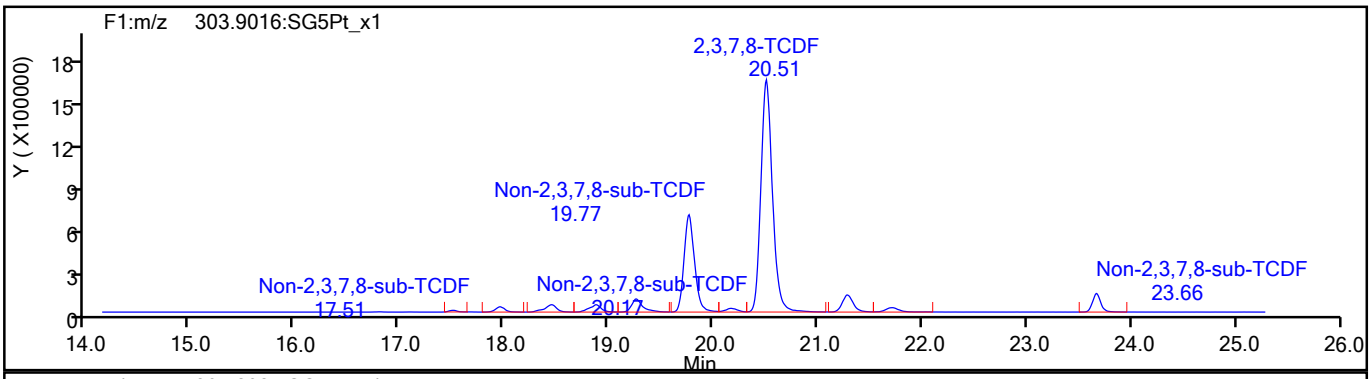

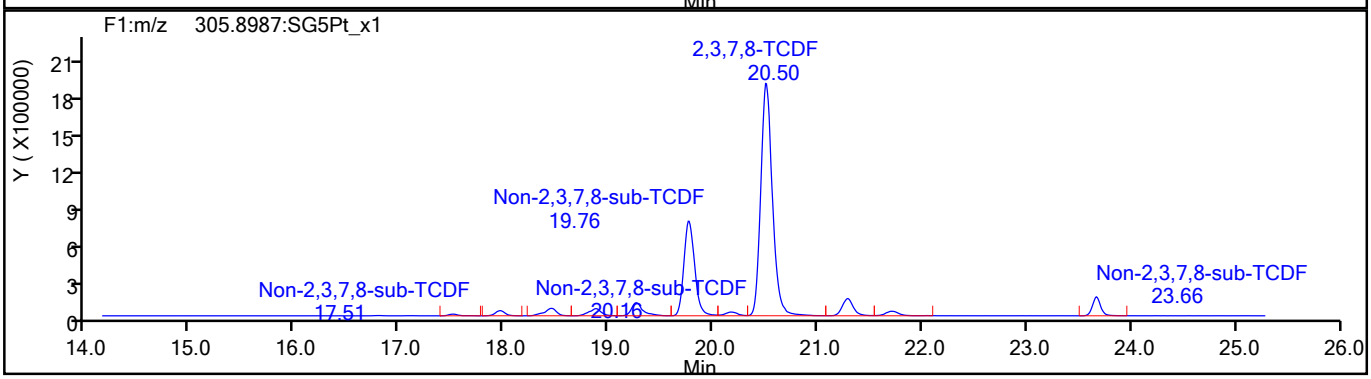

TCDF Standards

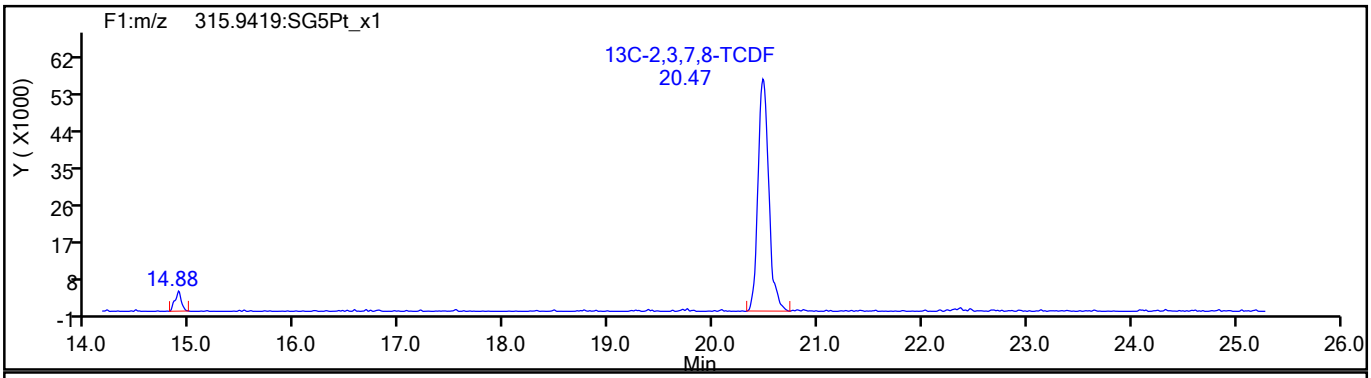

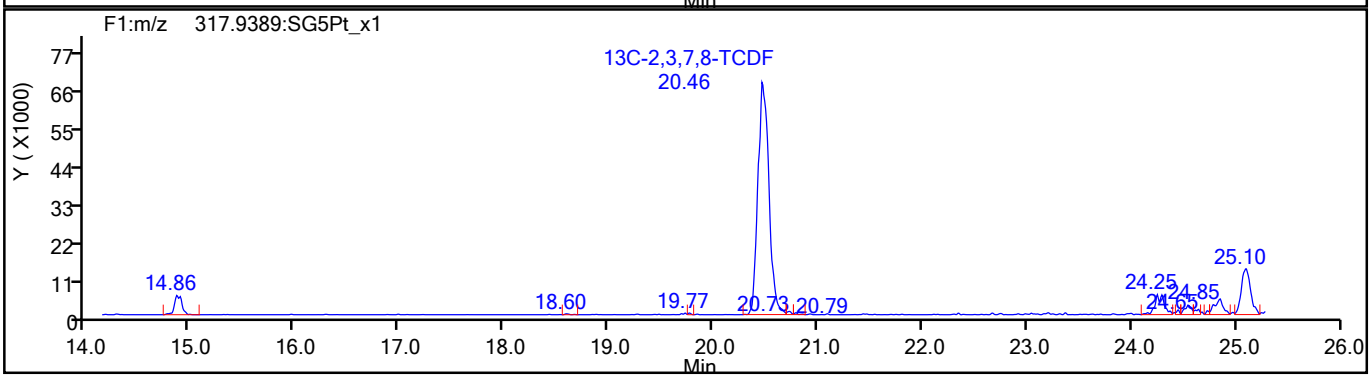

777879

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

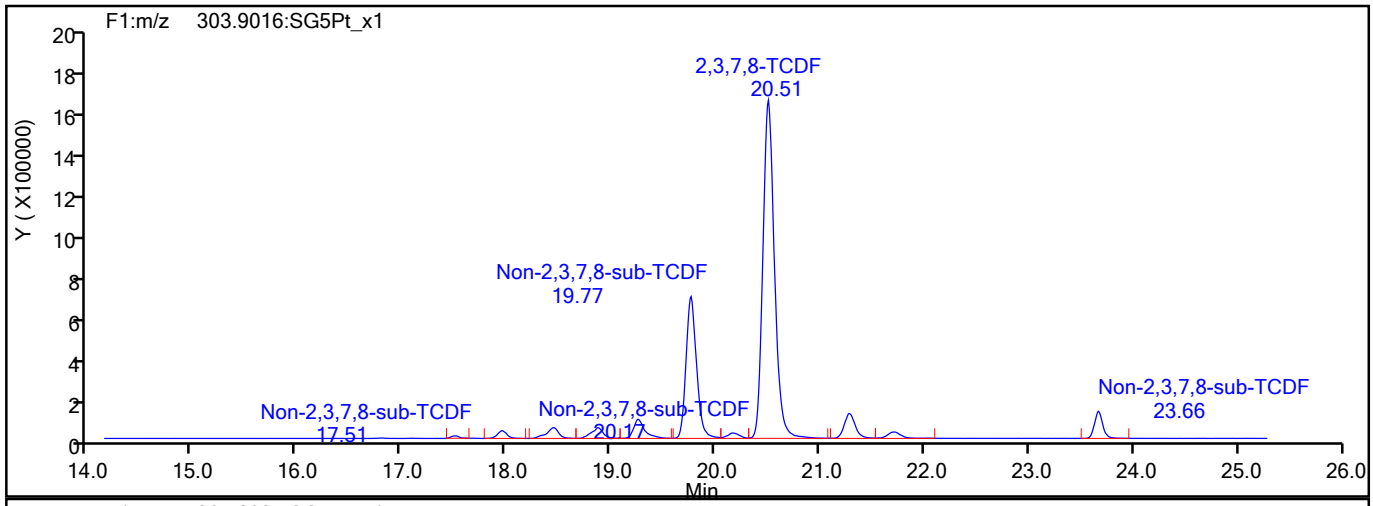

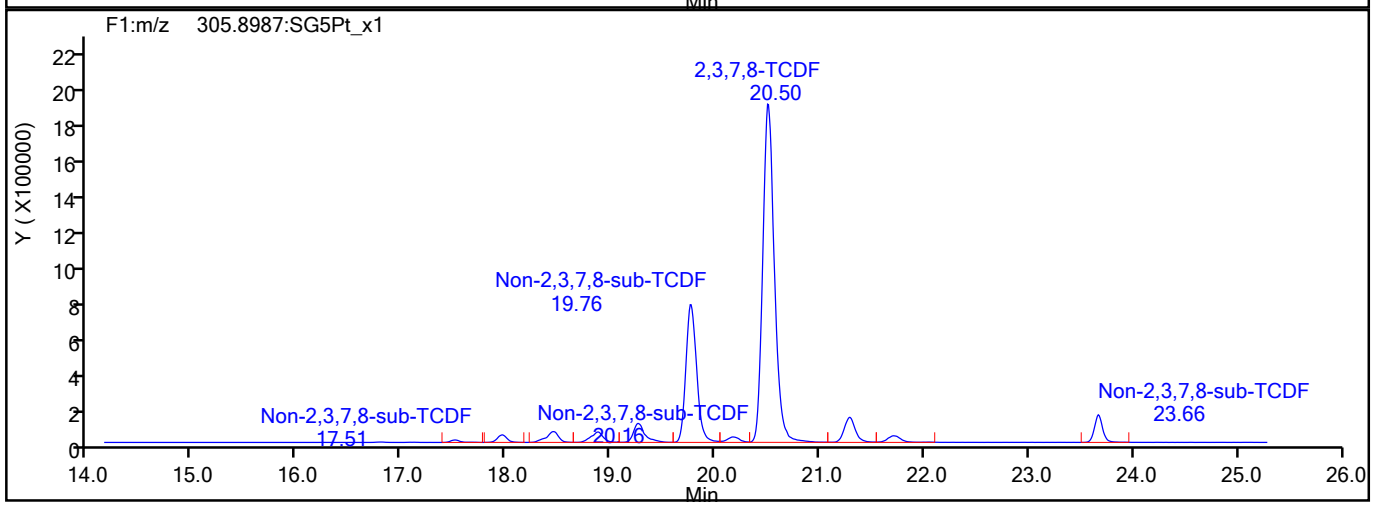

TCDF Interference Mass

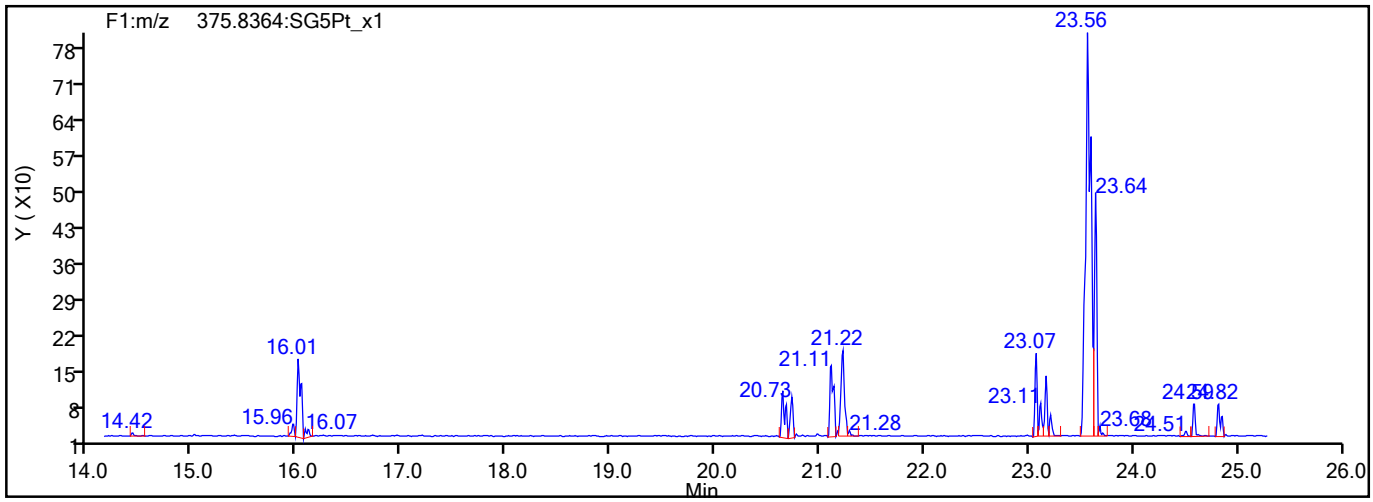

777880

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

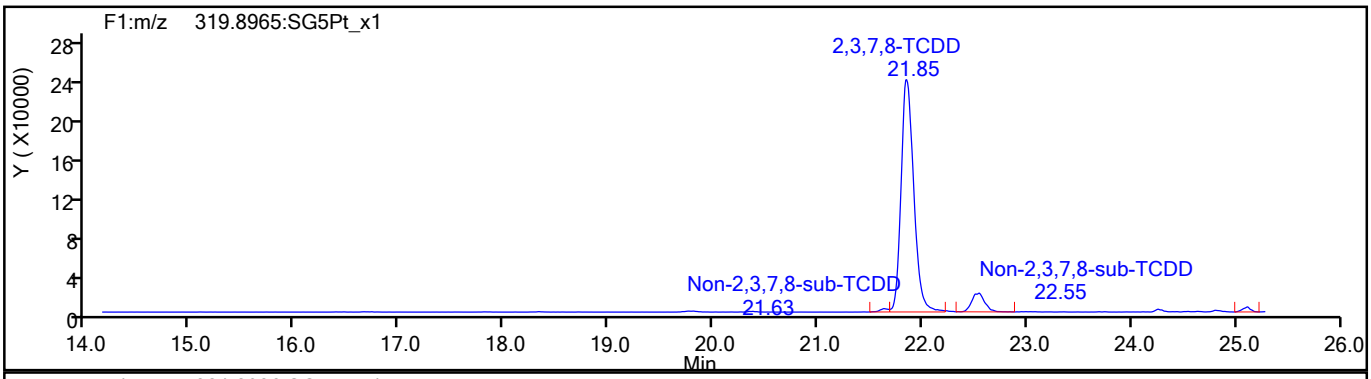

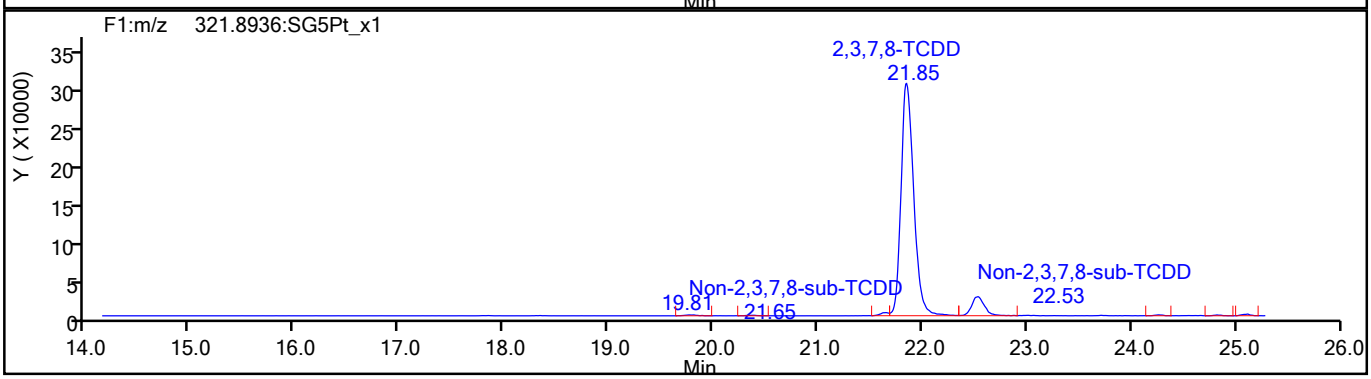

TCDD Standards

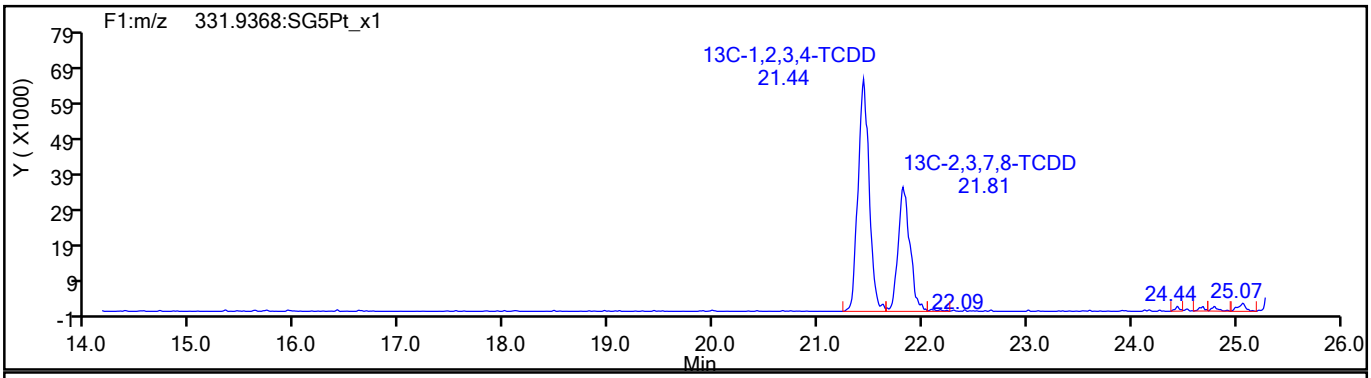

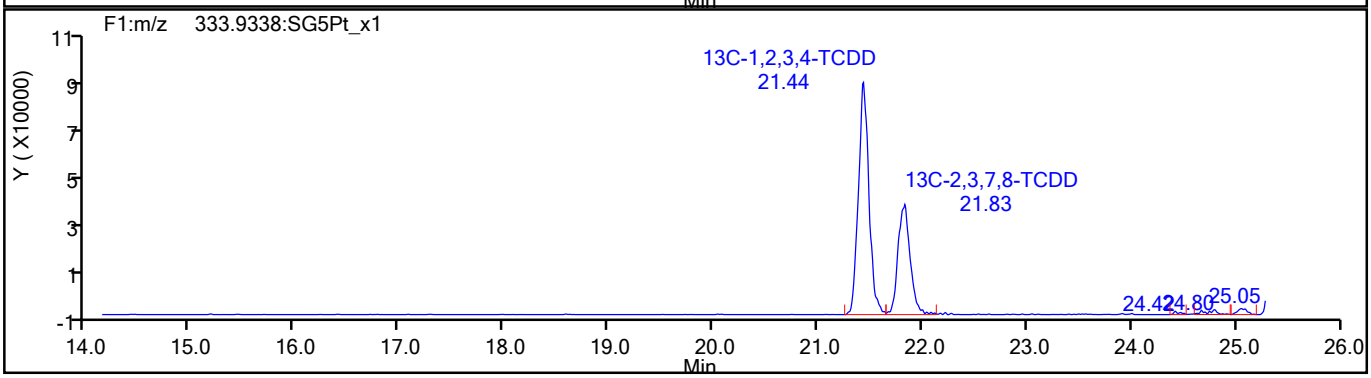

777881

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

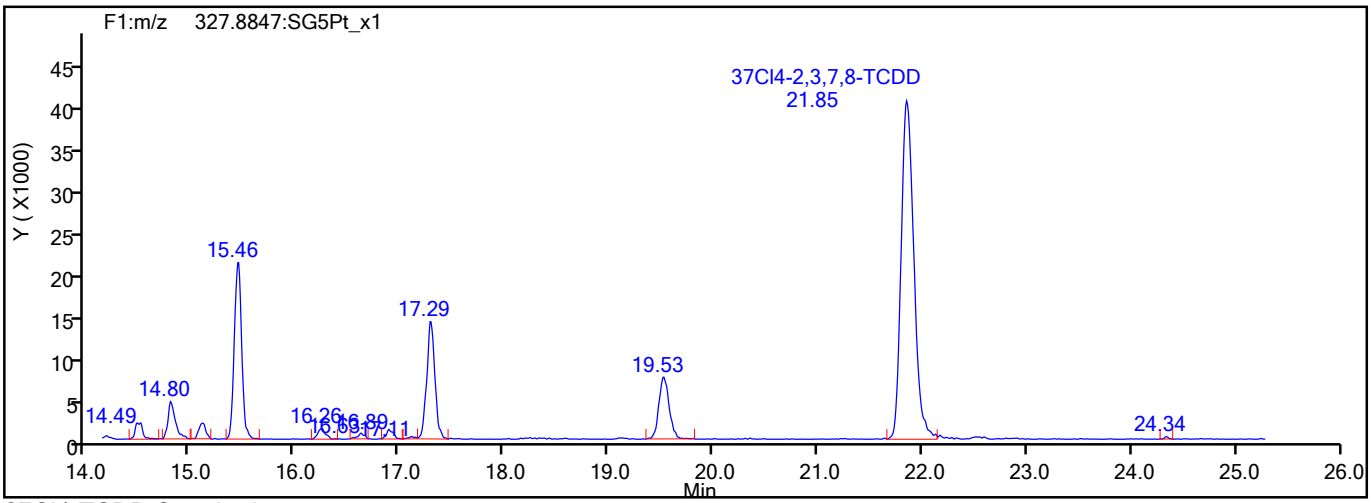

37Cl4-TCDD Standards

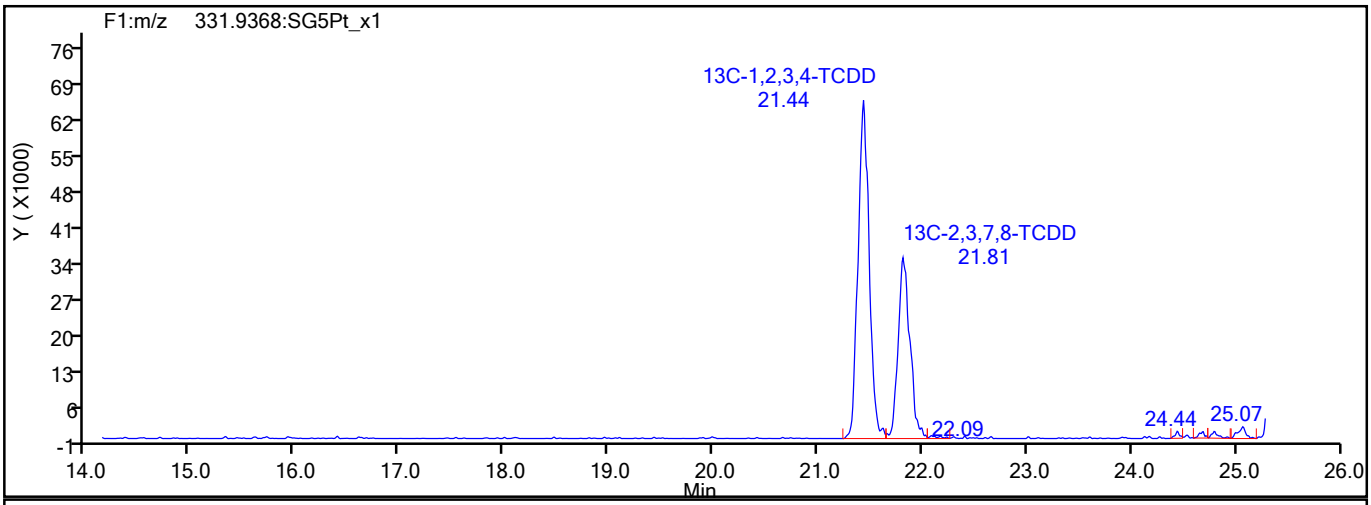

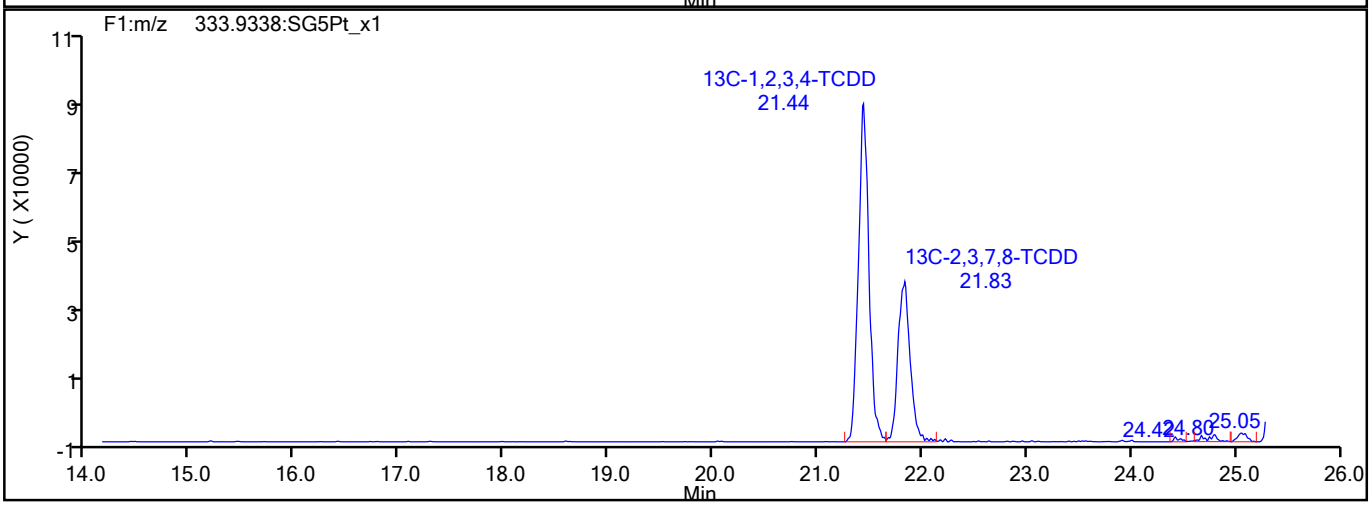

777882

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

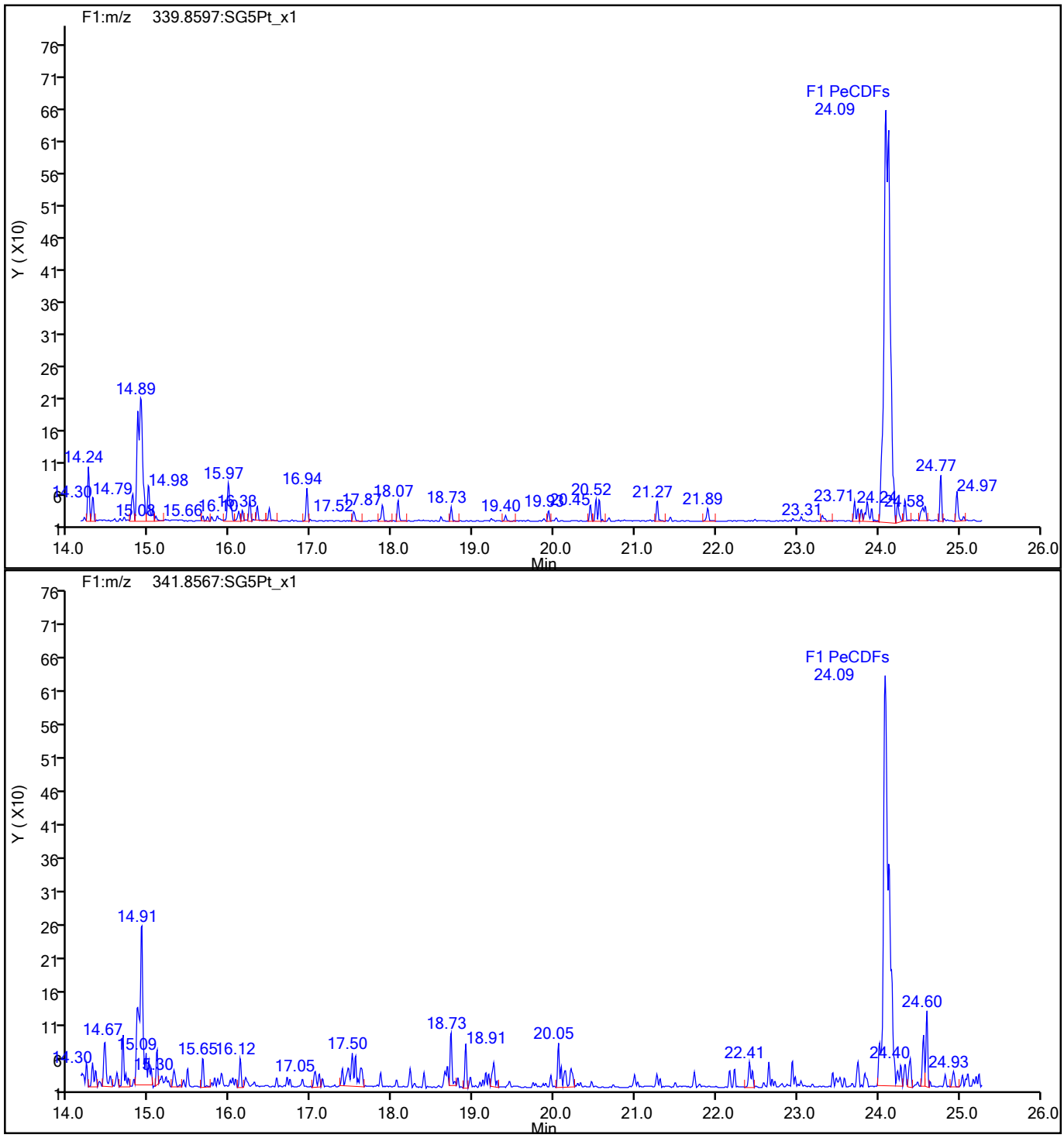

777883

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

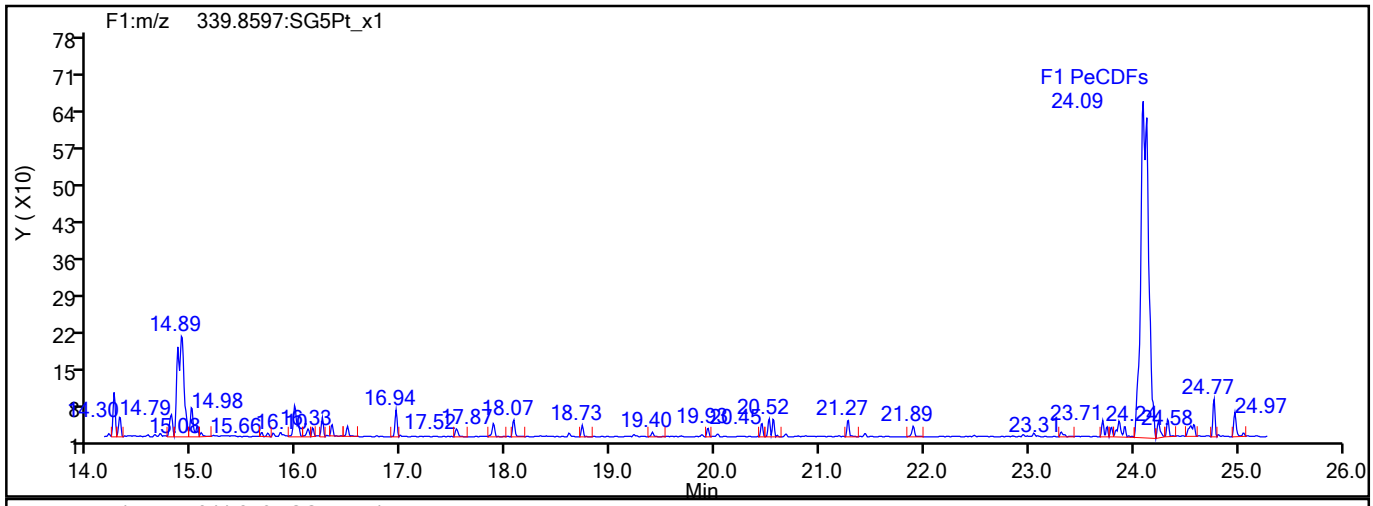

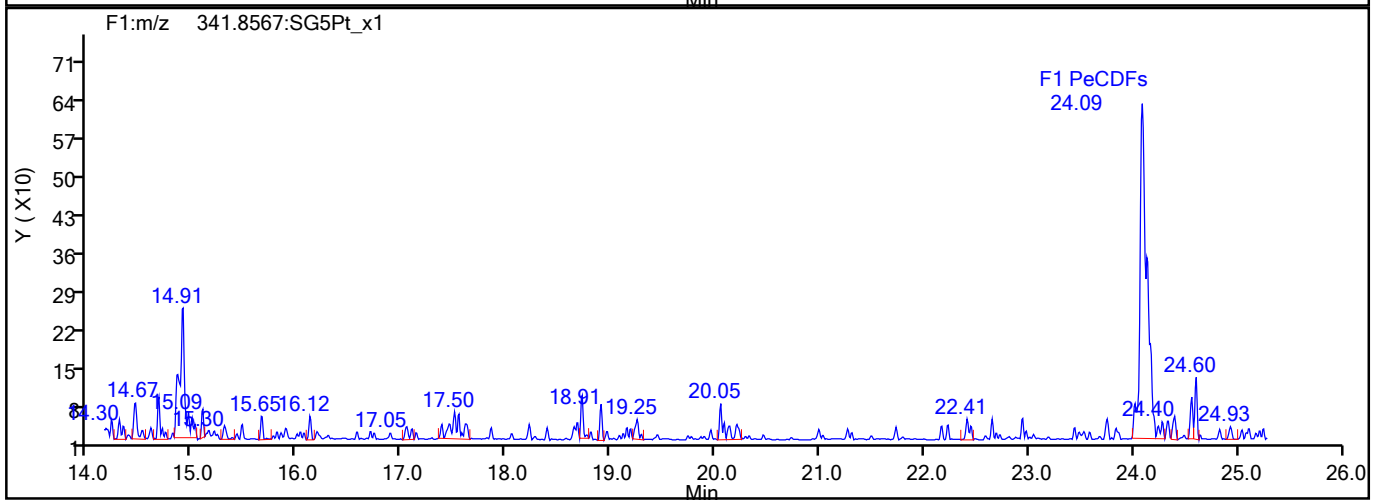

F1 PeCDFs Interference Mass

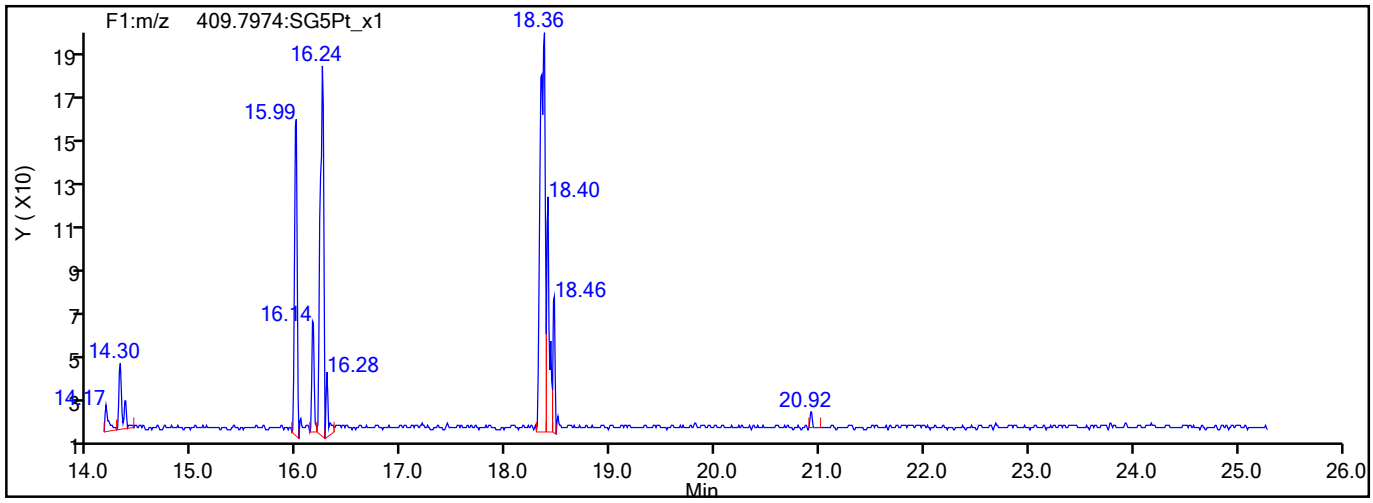

777884

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

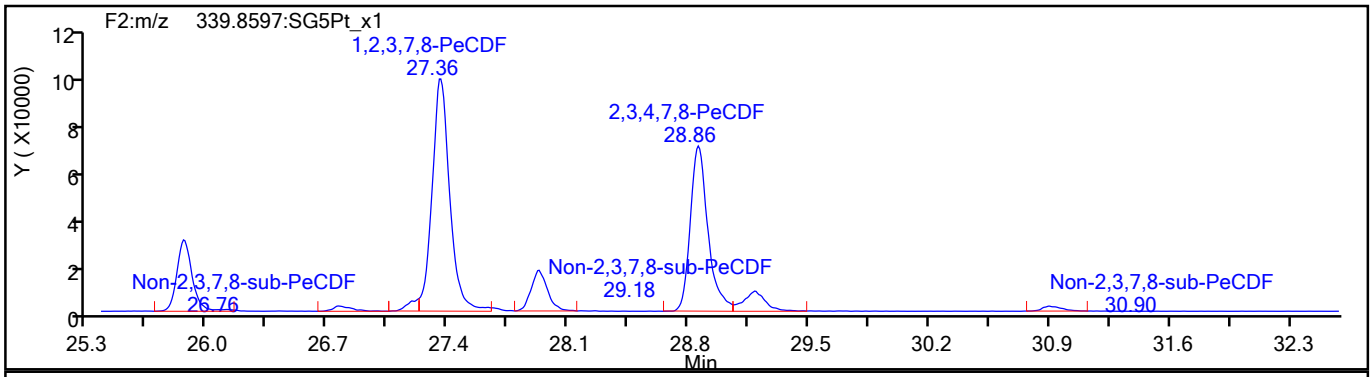

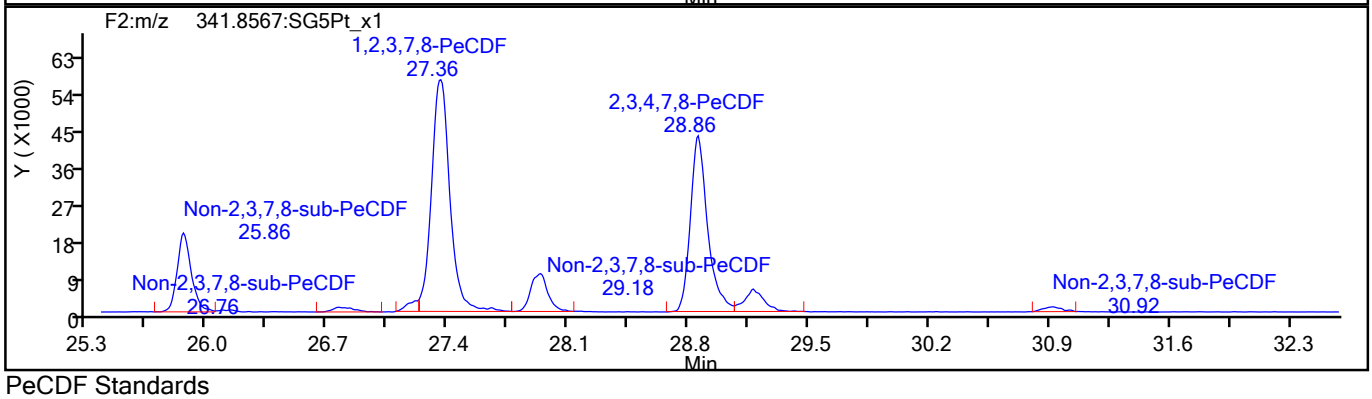

PeCDF Standards

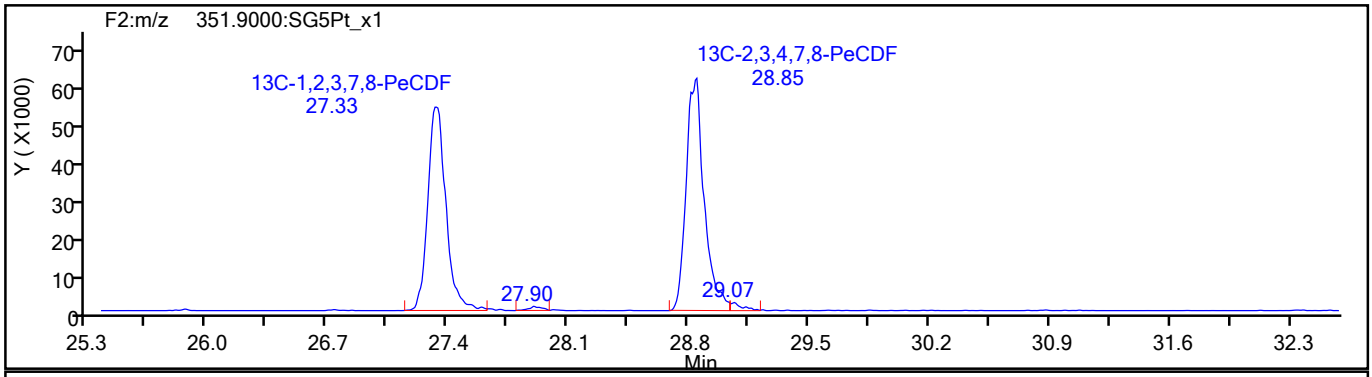

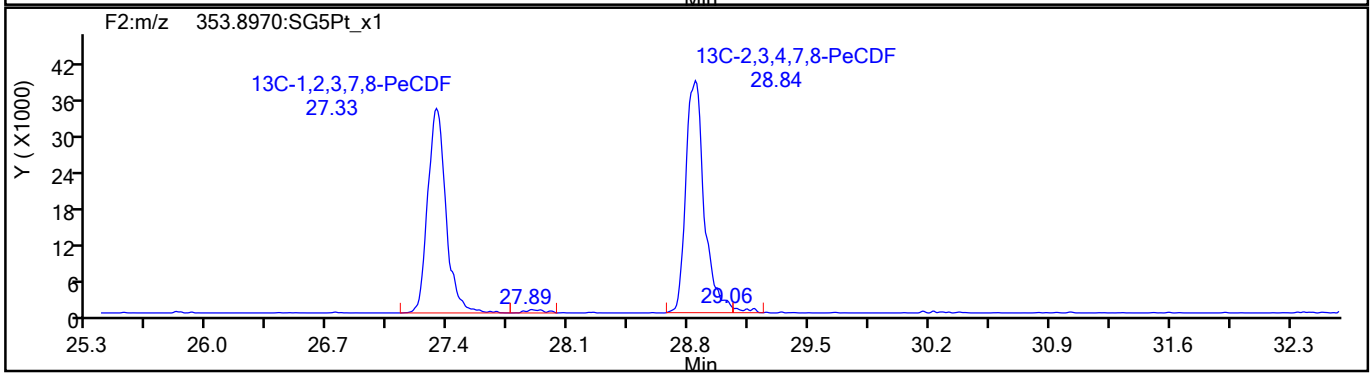

777885

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
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PeCDF

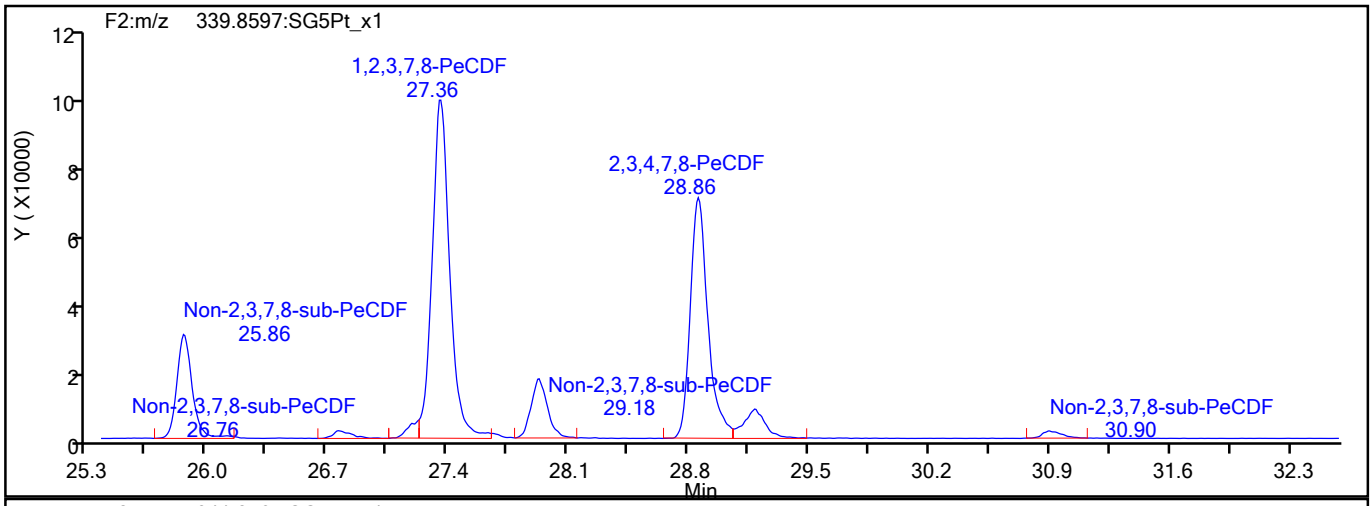

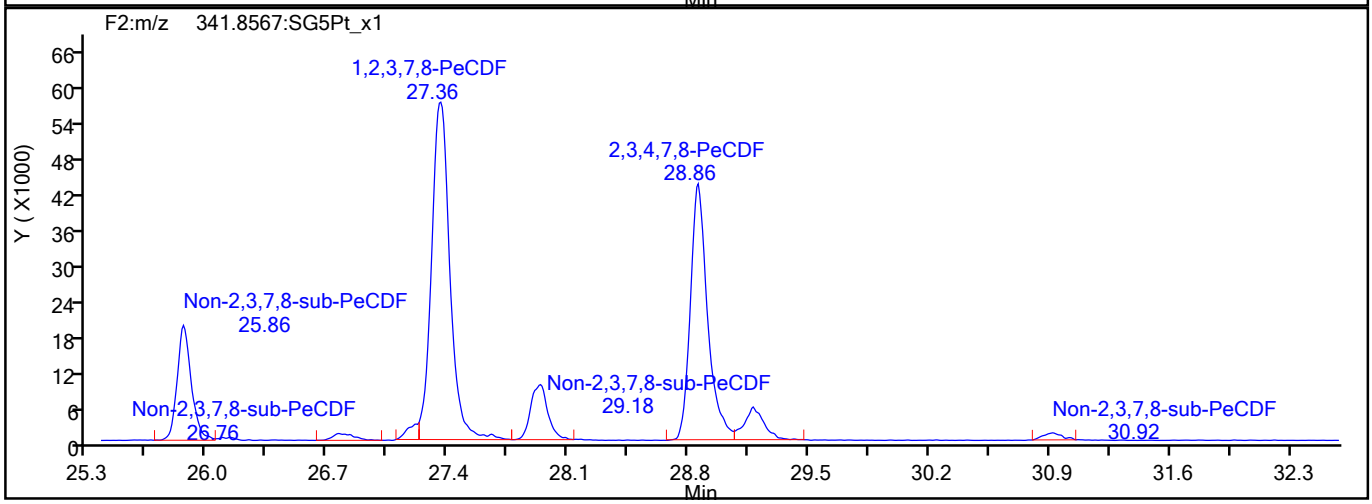

PeCDF Interference Mass

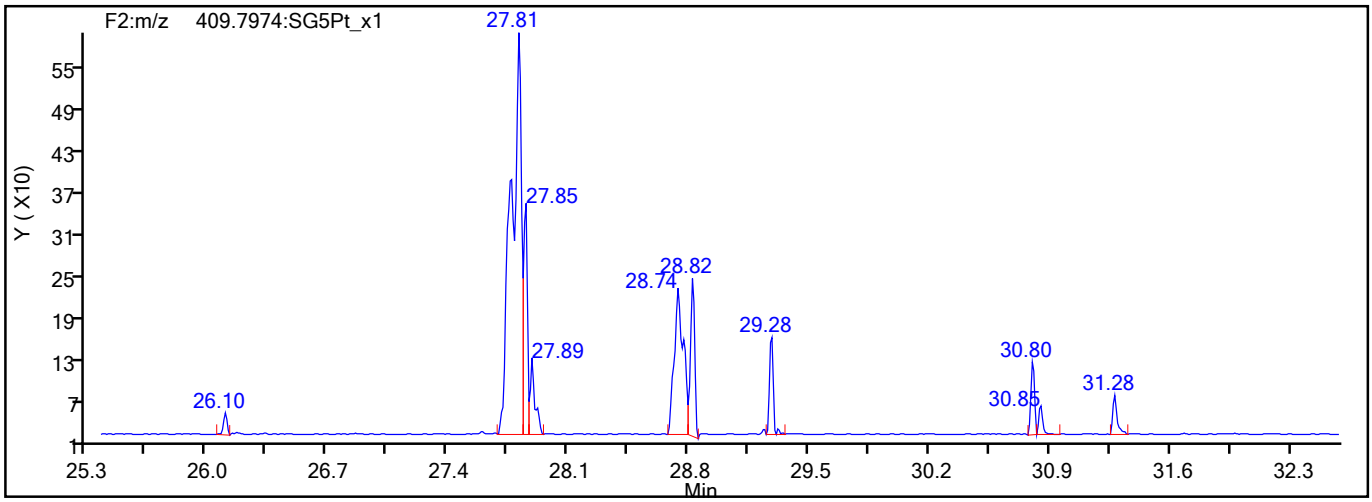

777886

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

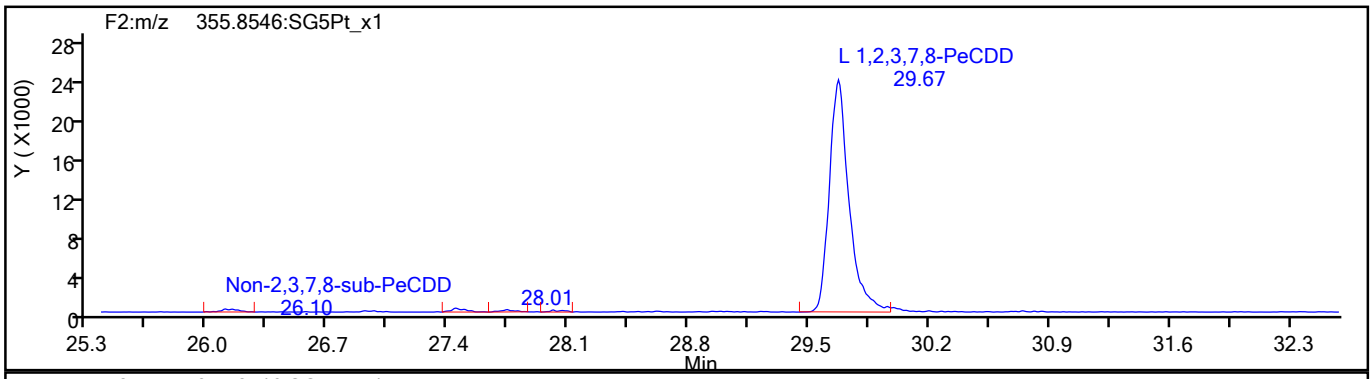

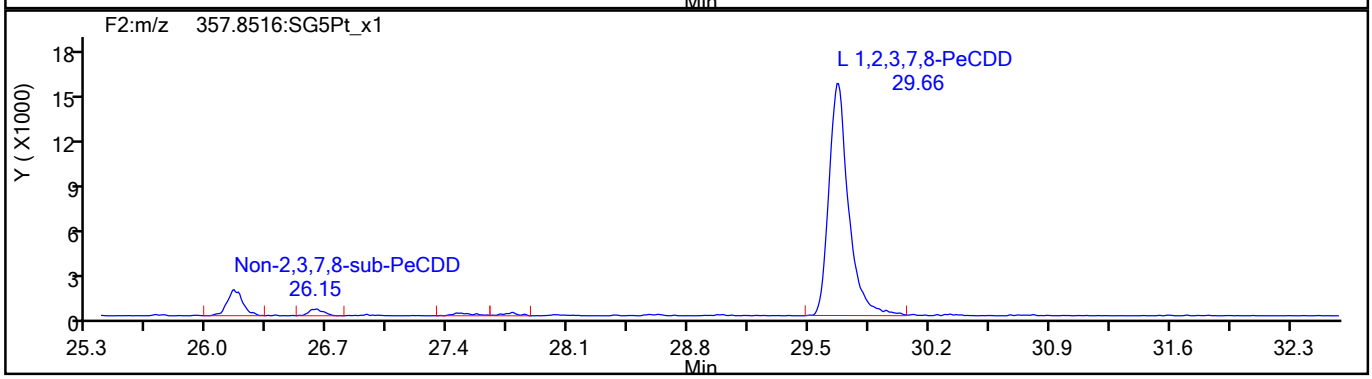

PeCDD Standards

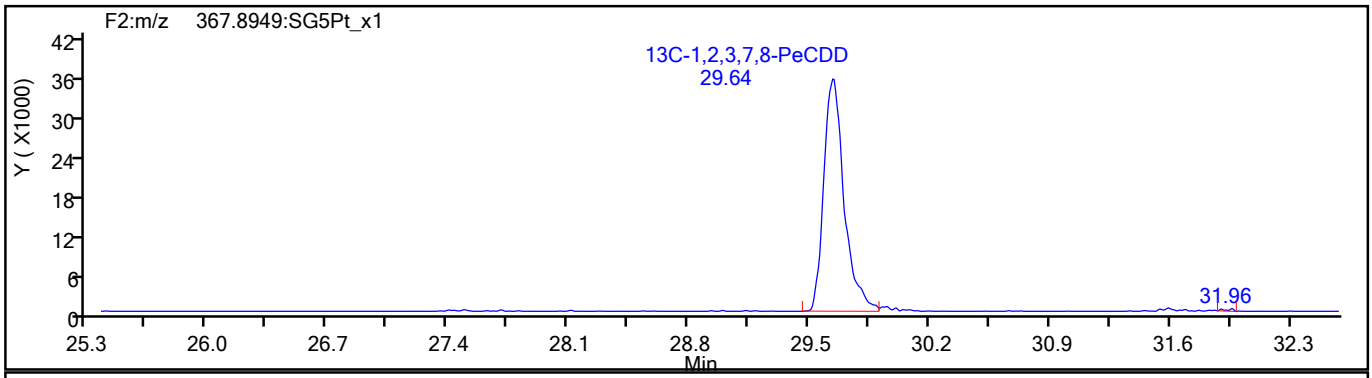

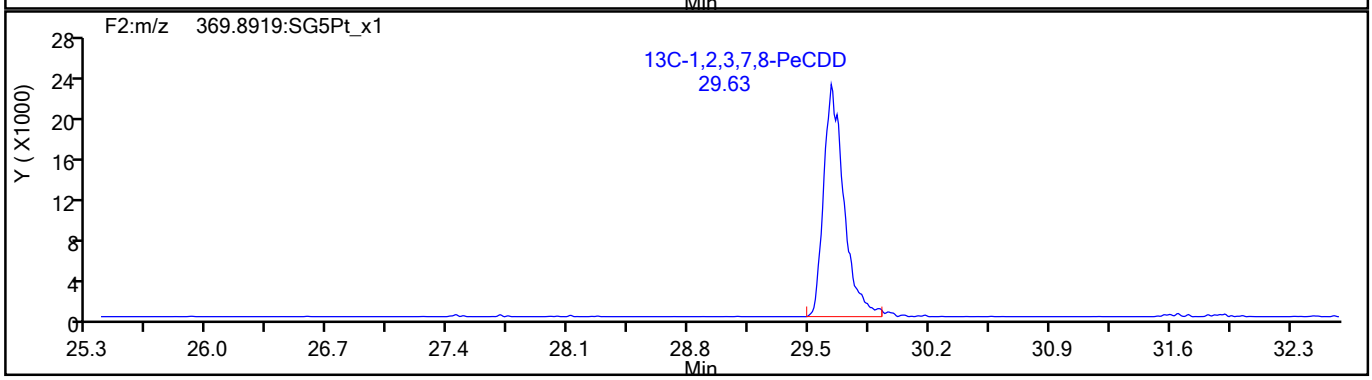

777887

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

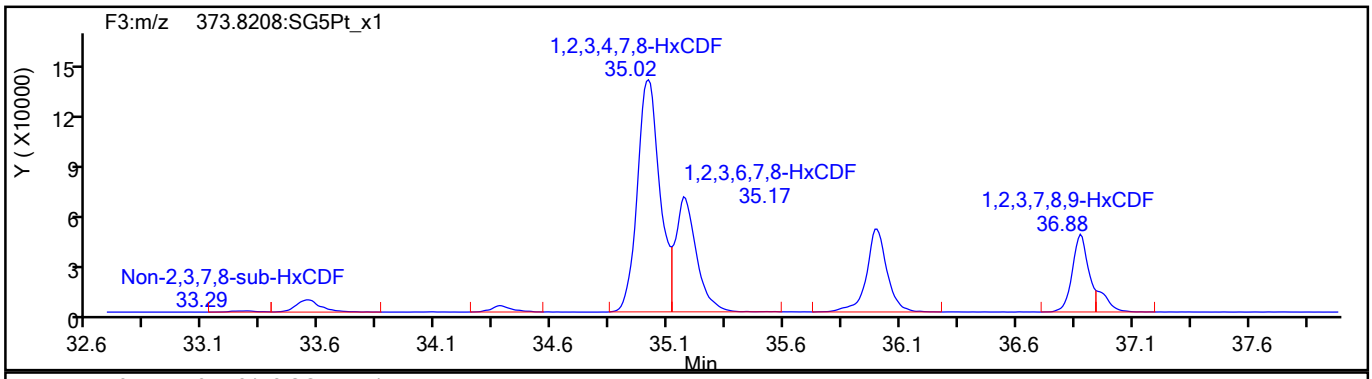

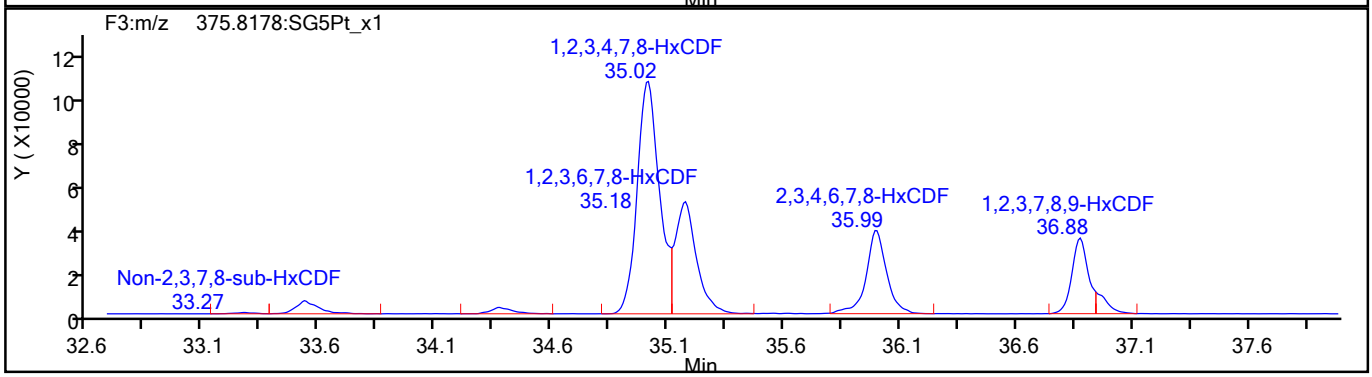

HxCDF Standards

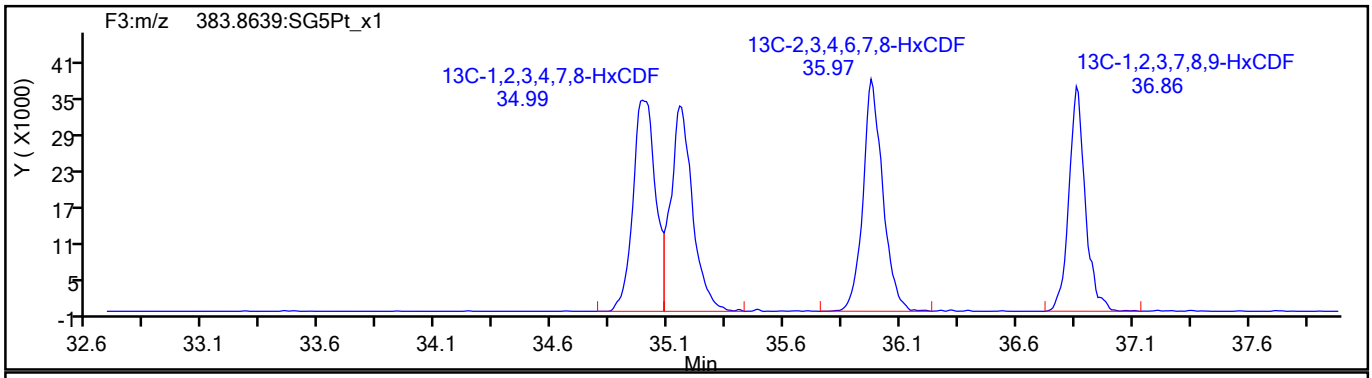

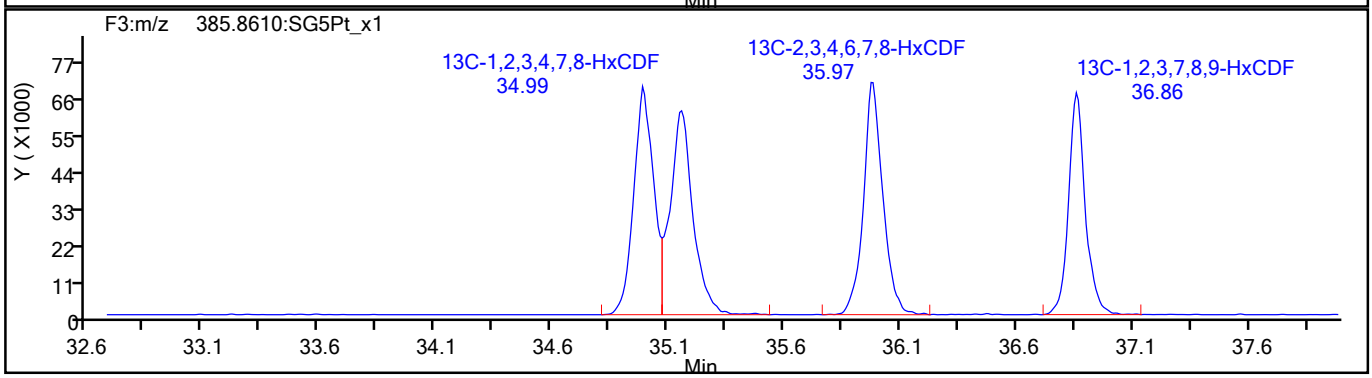

777888

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

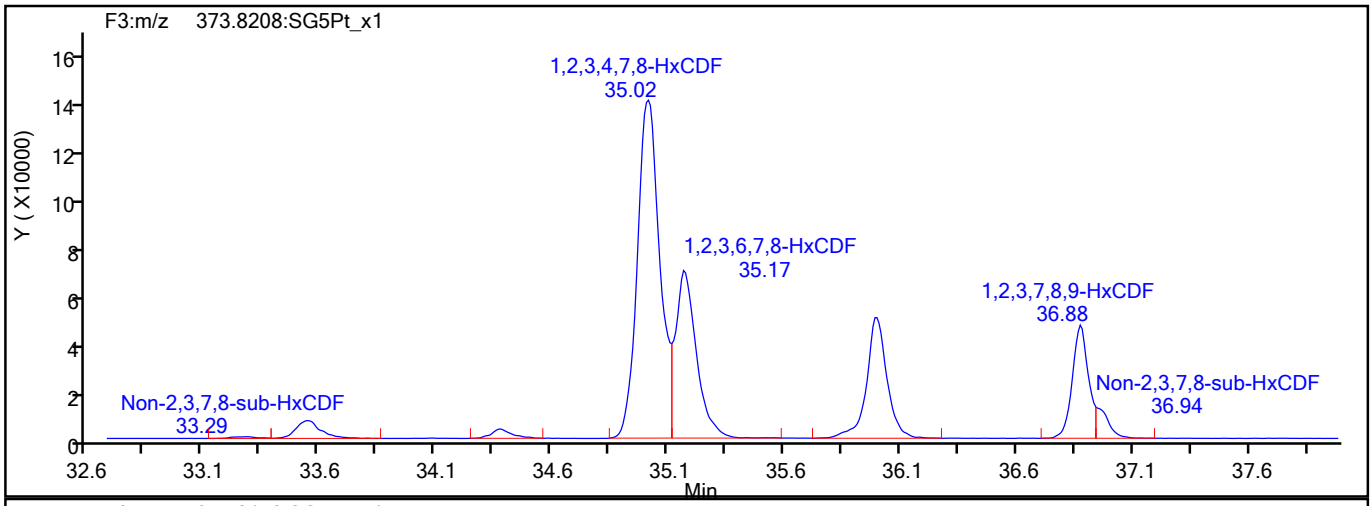

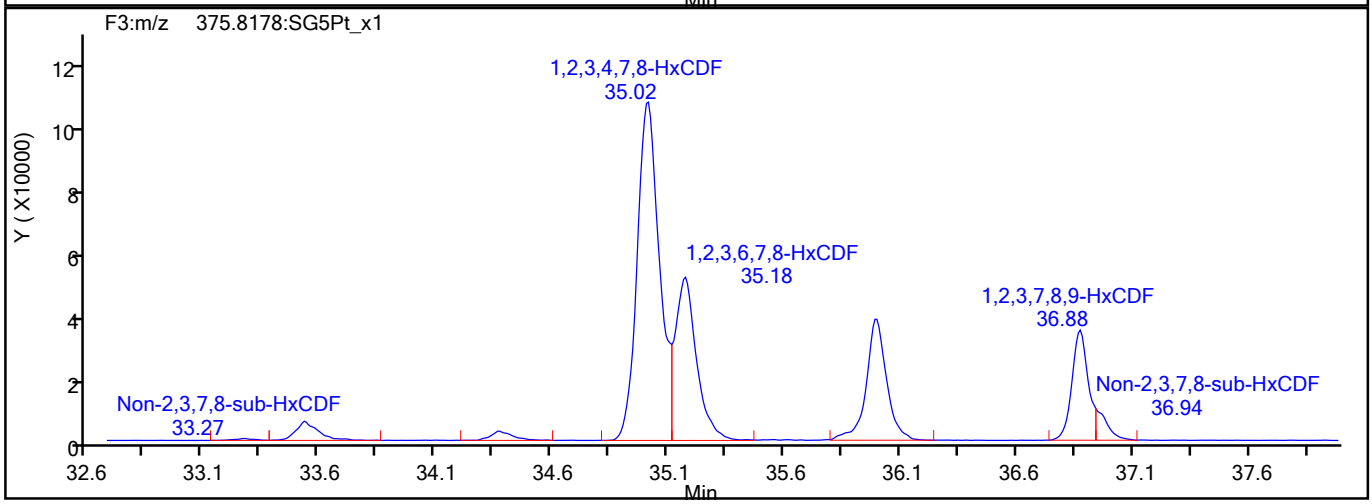

HxCDF Interference Mass

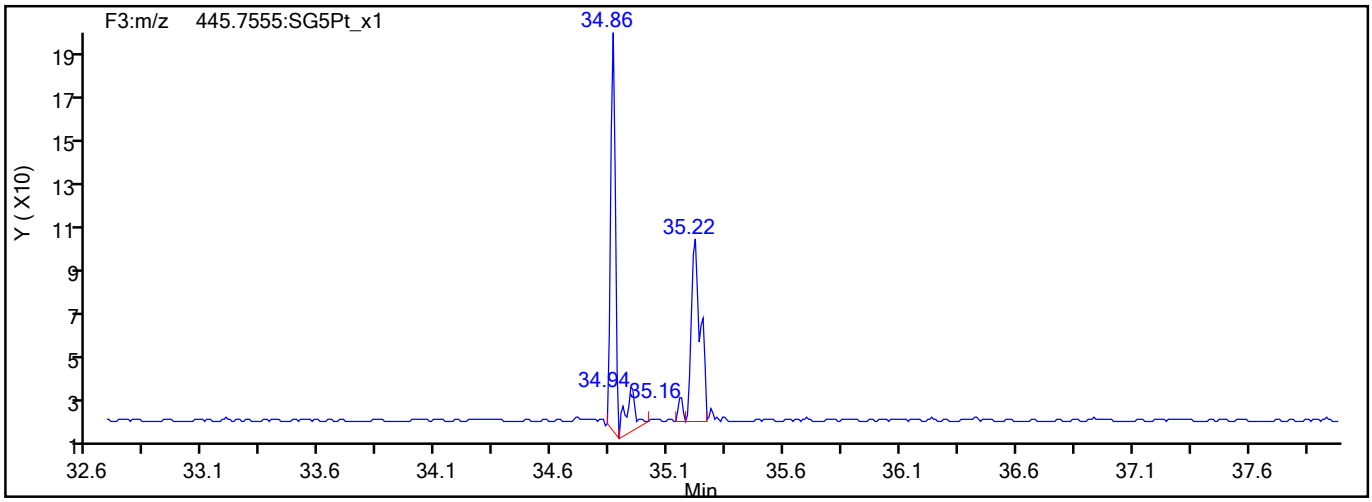

777889

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

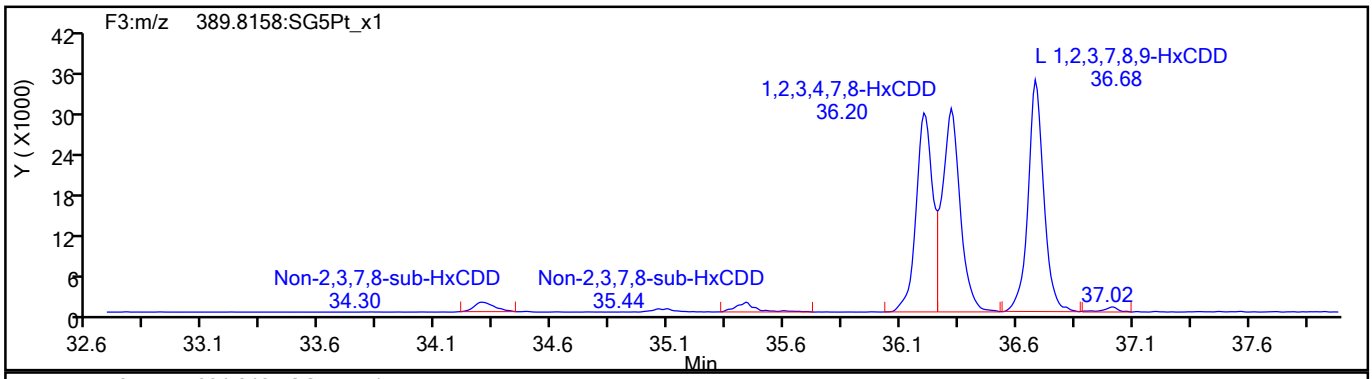

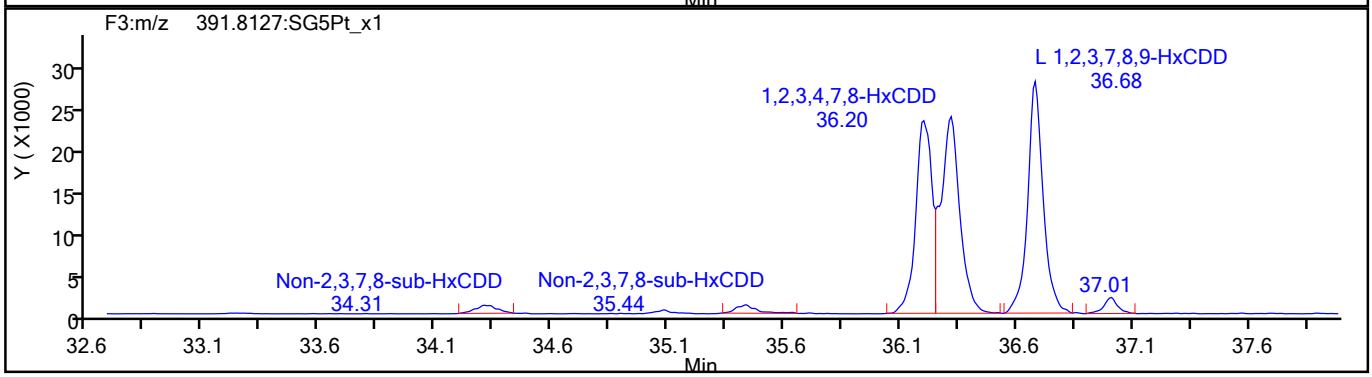

HxCDD Standards

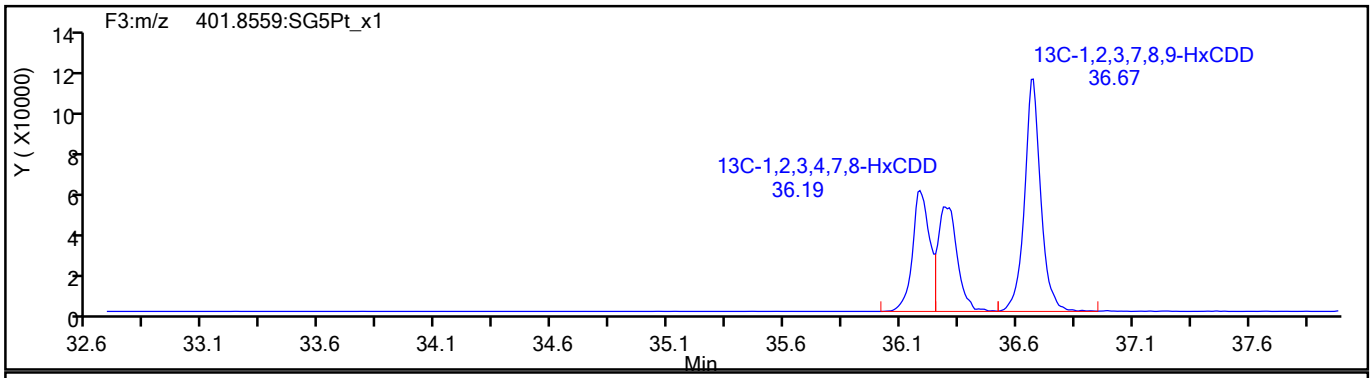

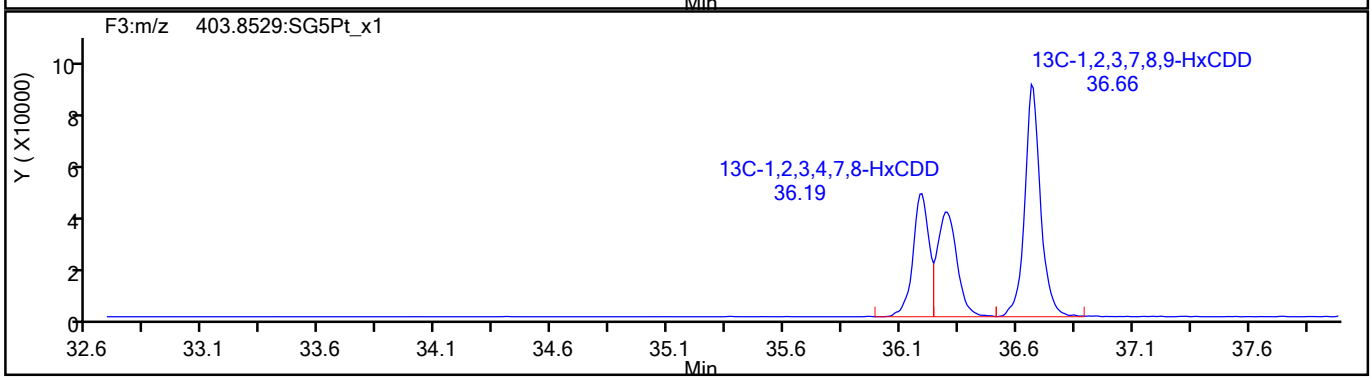

777890

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

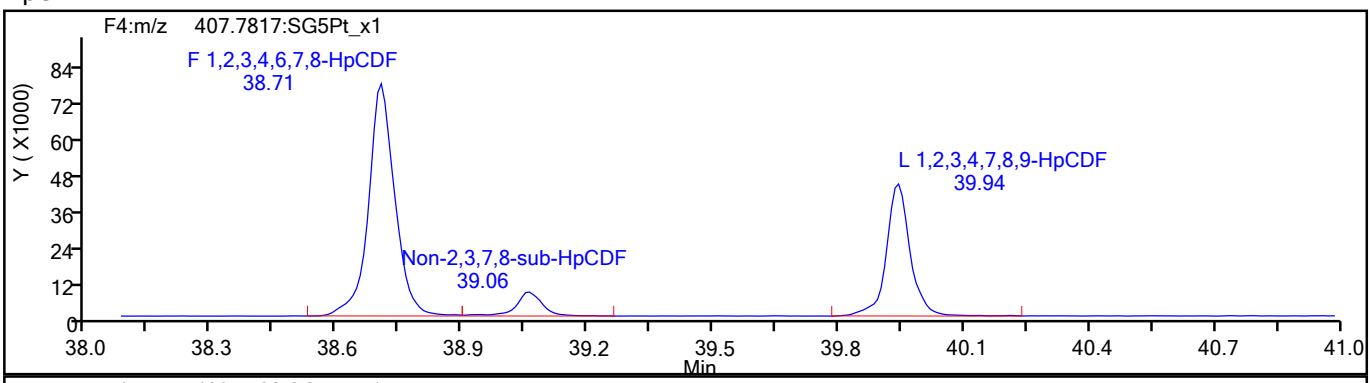

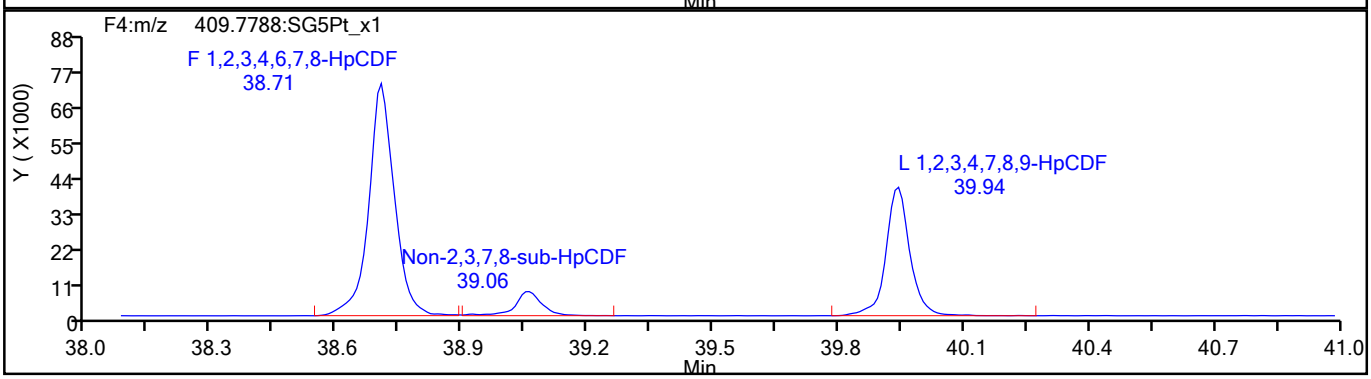

HpCDF Standards

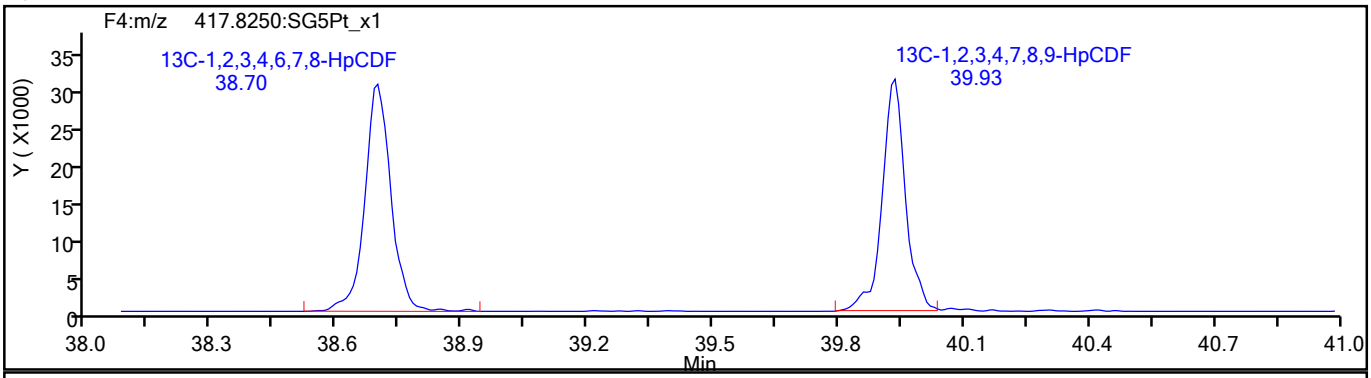

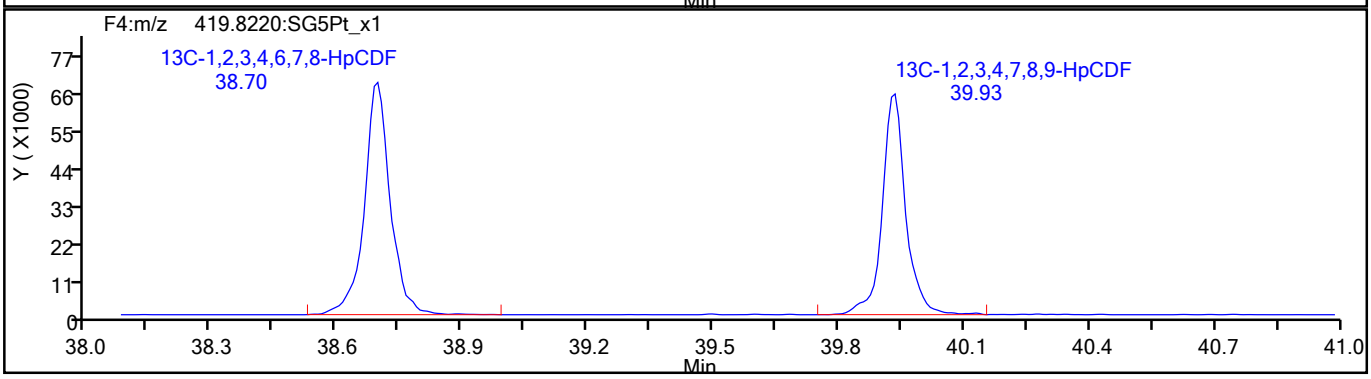

777891

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

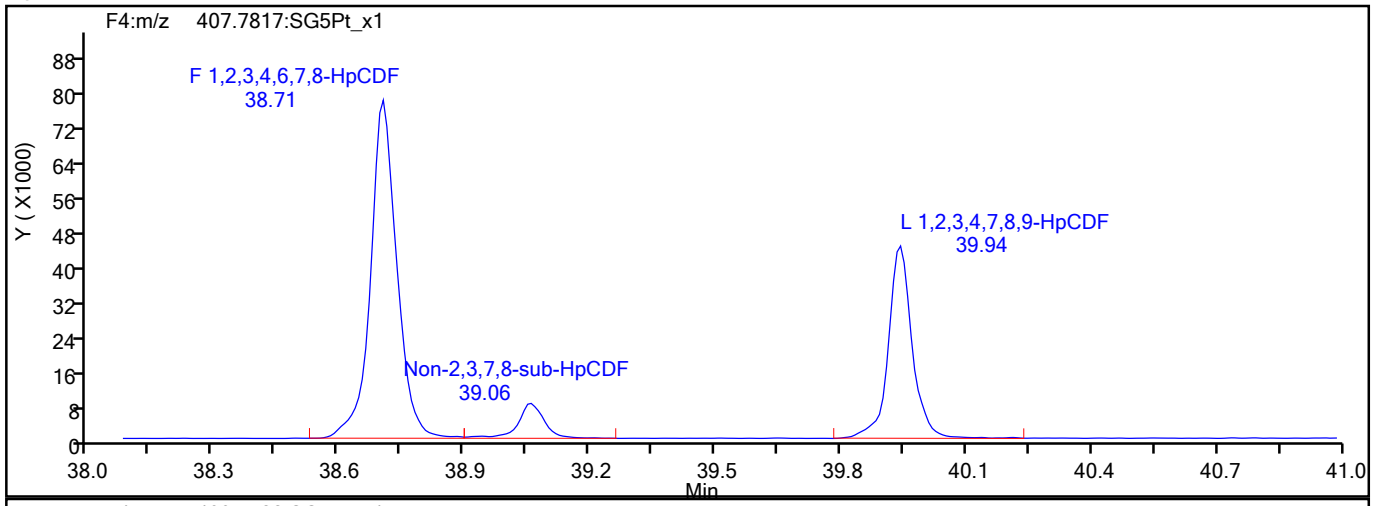

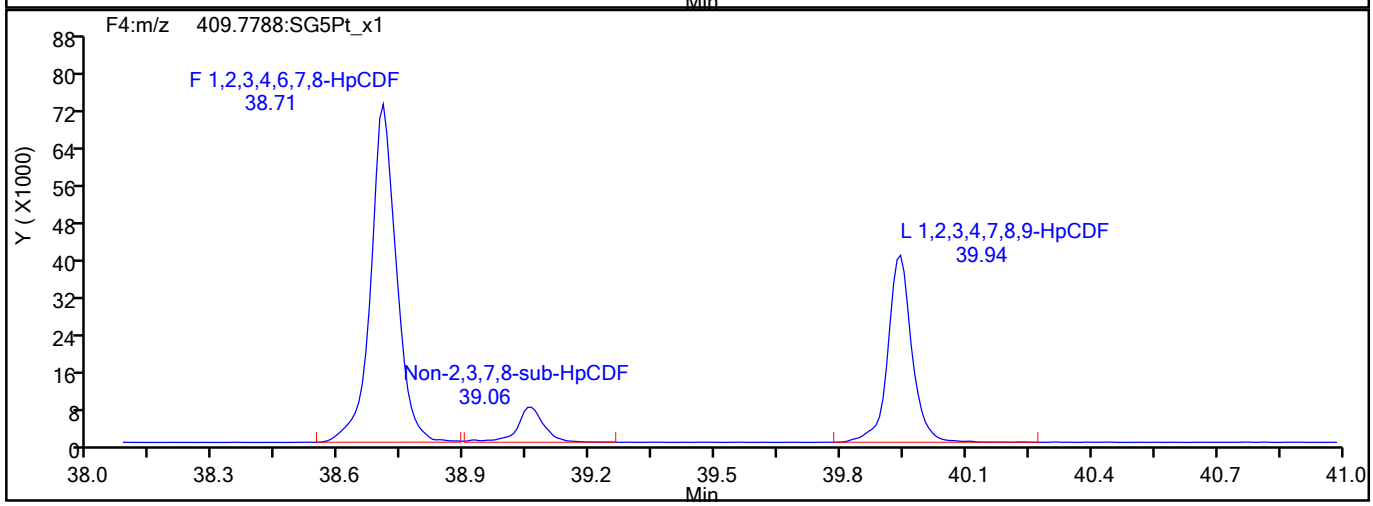

HpCDF Interference Mass

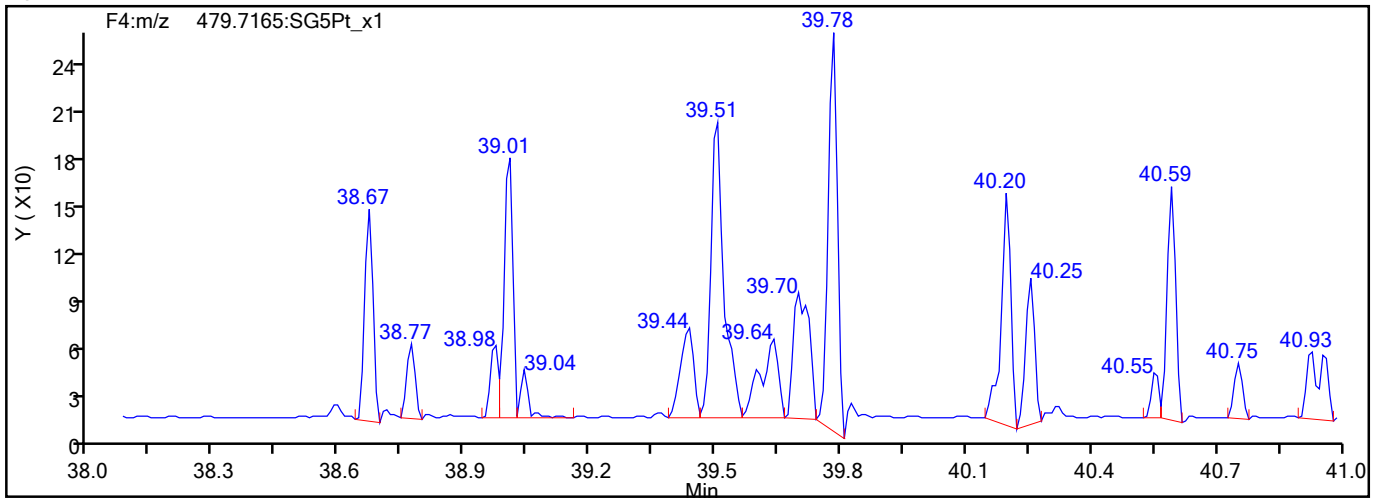

777892

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

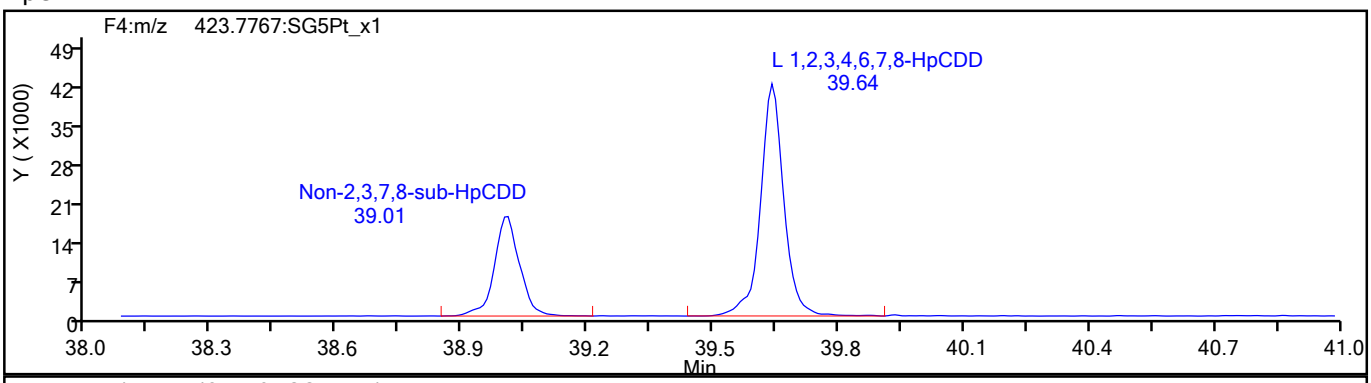

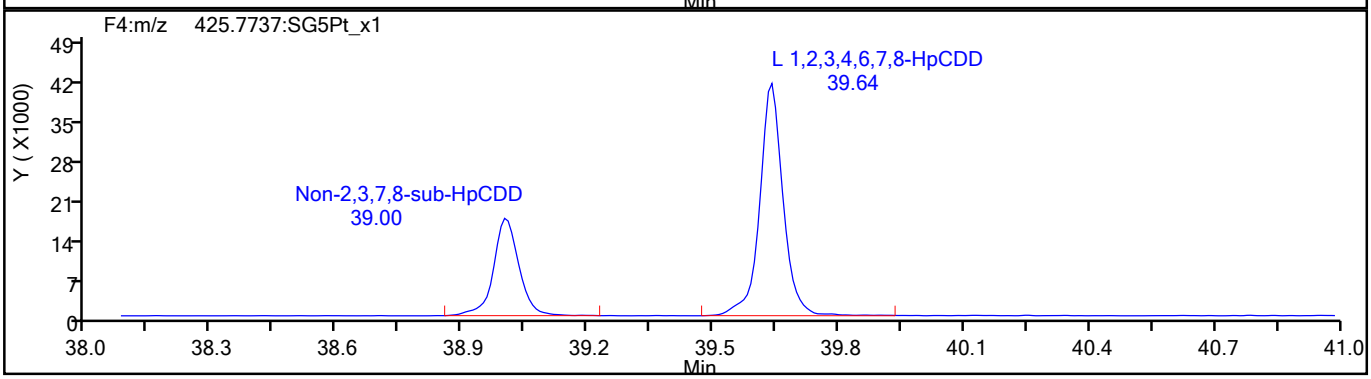

HpCDD Standards

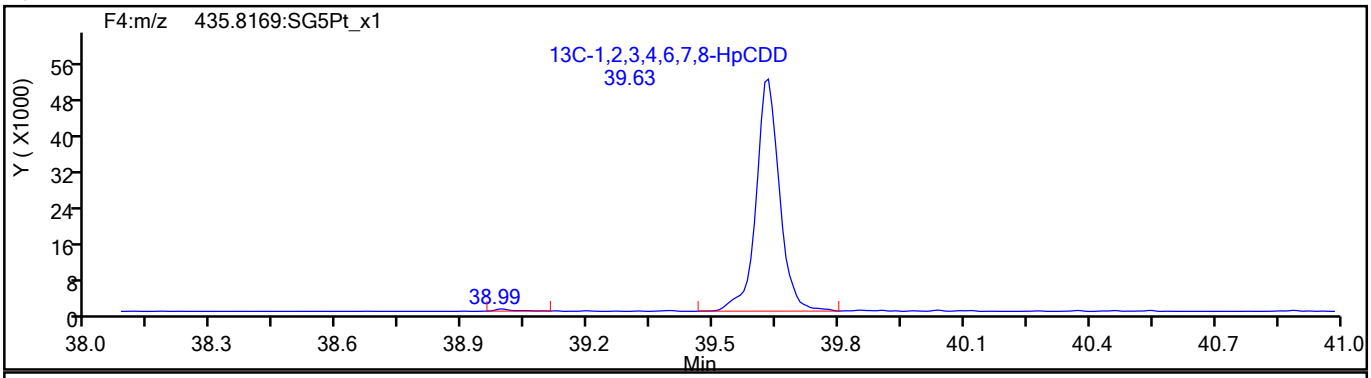

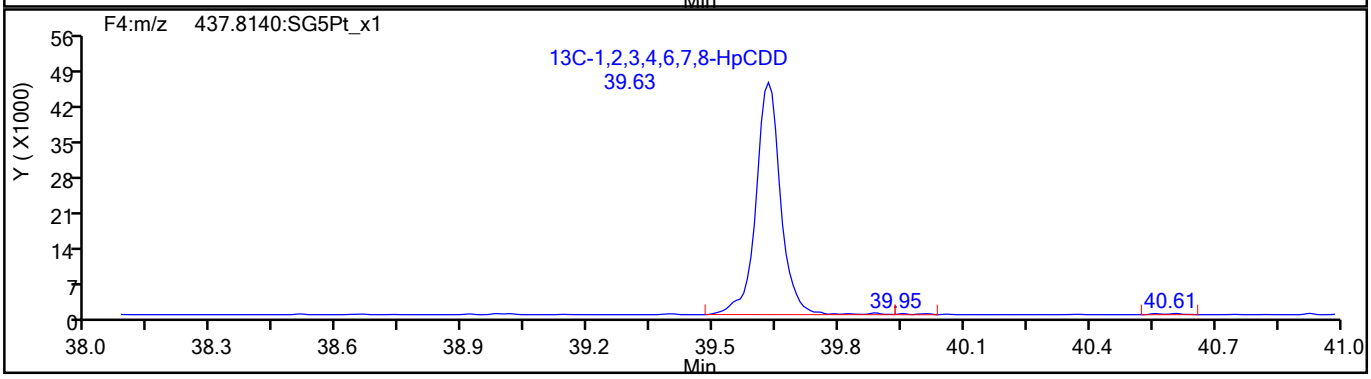

777893

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

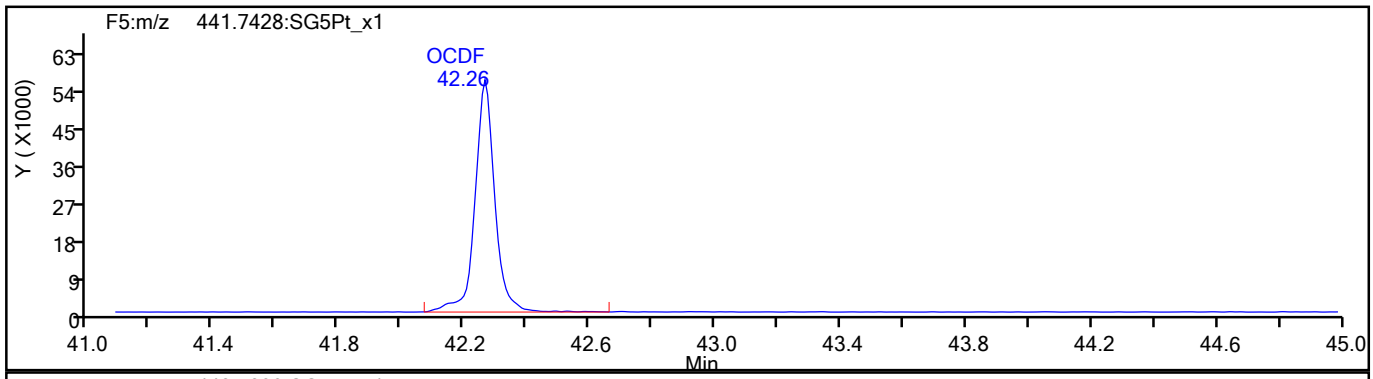

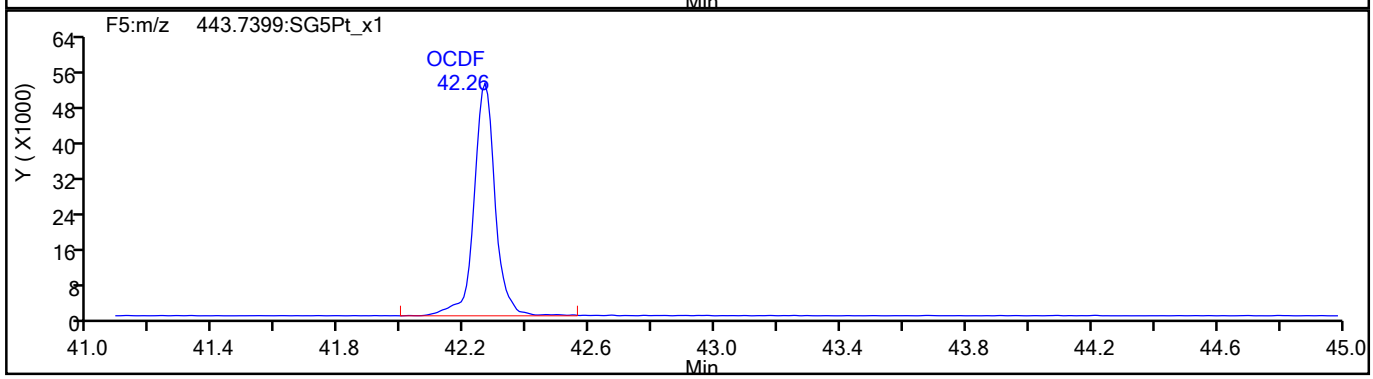

OCDF Standards

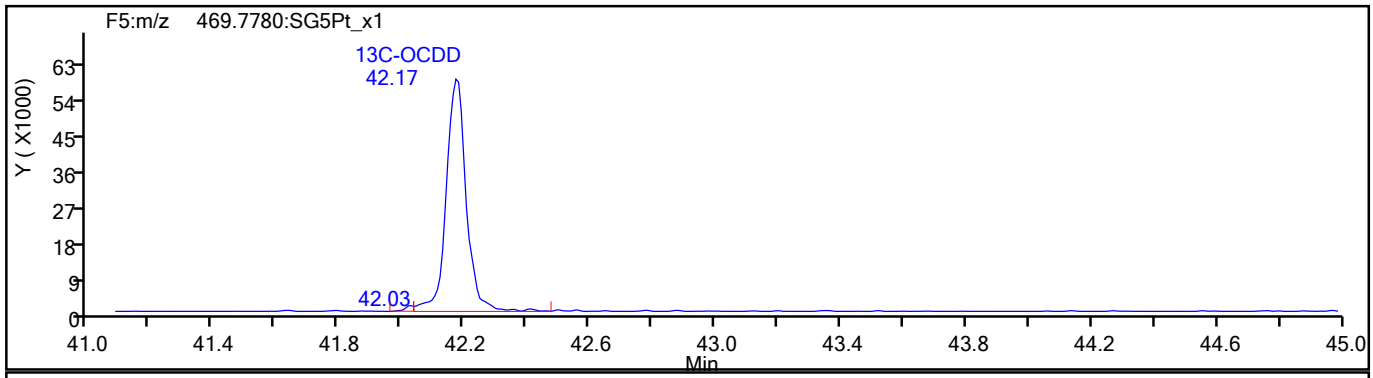

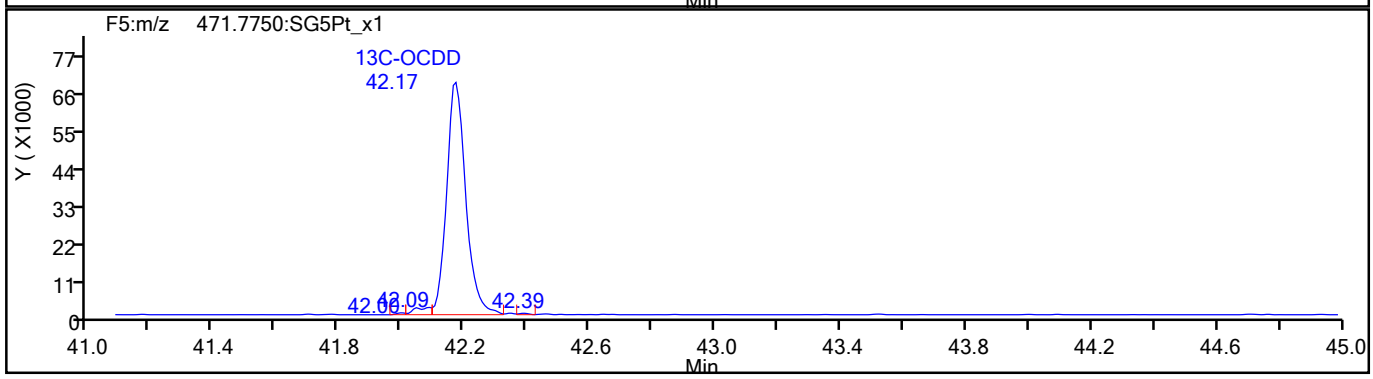

777894

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

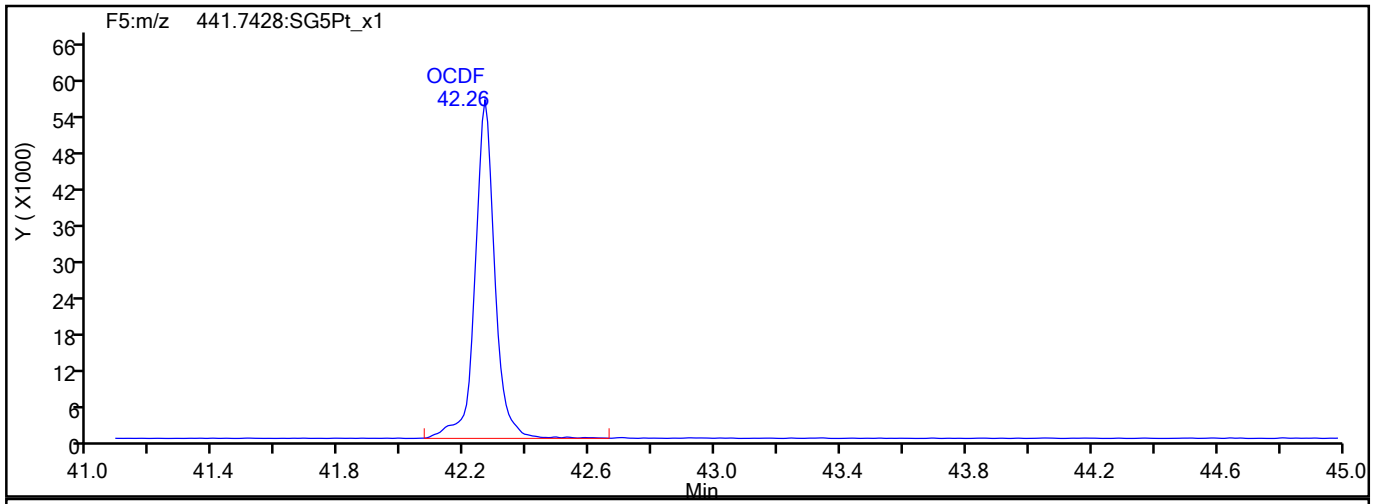

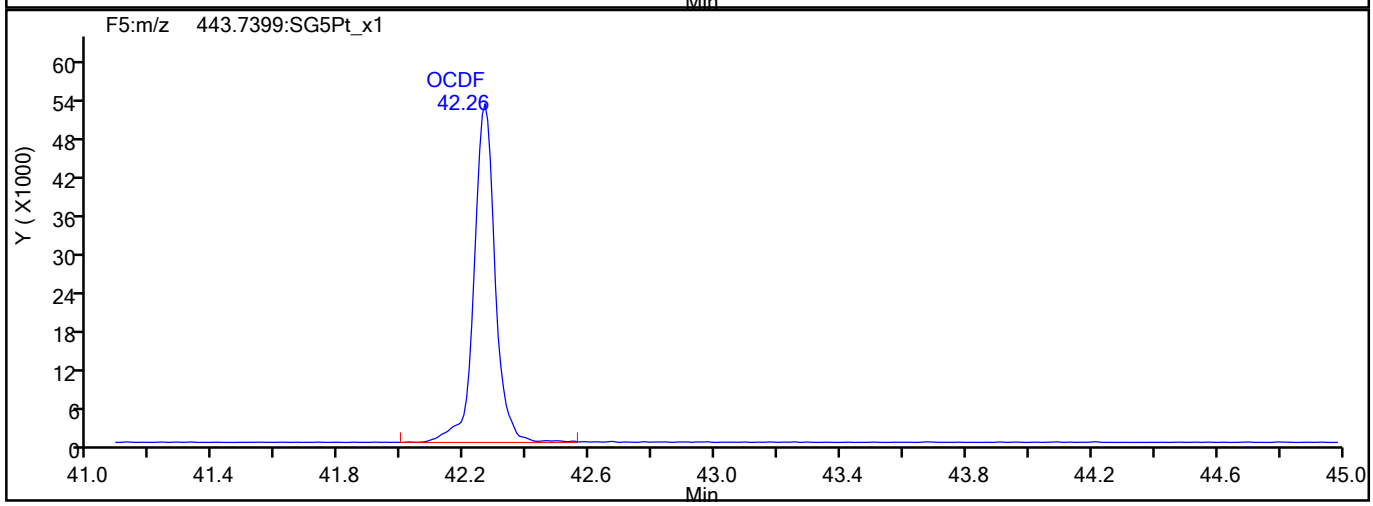

OCDF Interference Mass

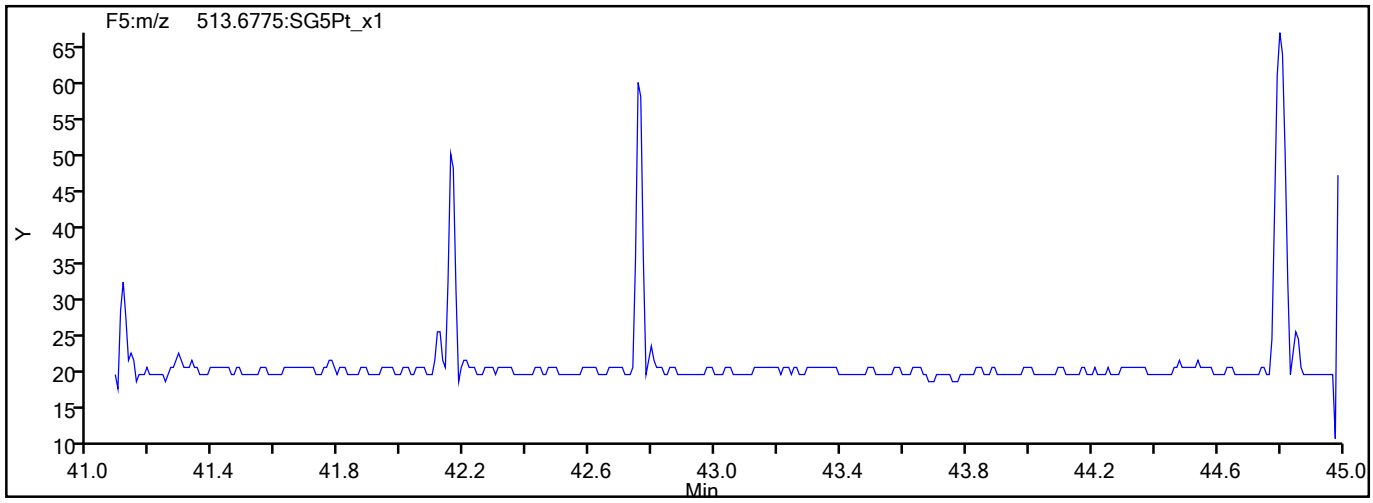

777895

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

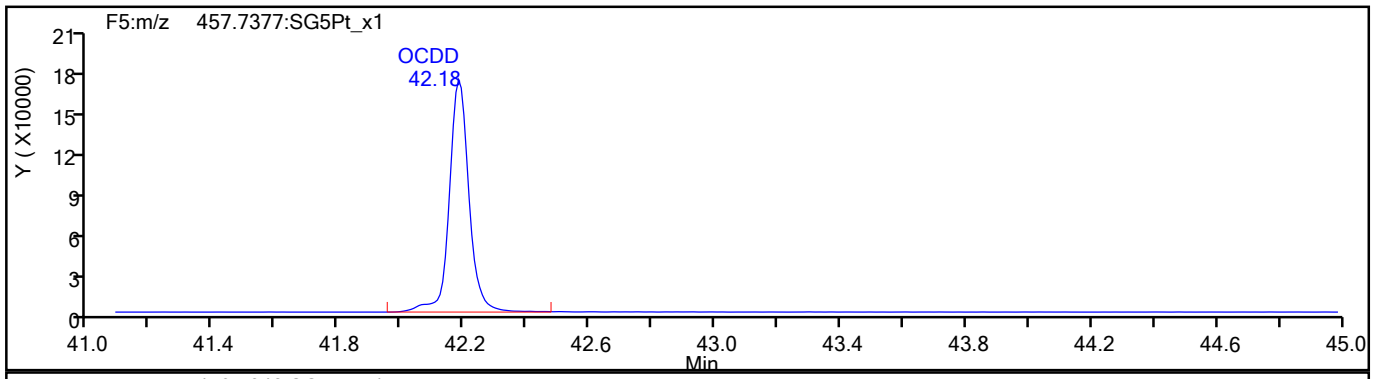

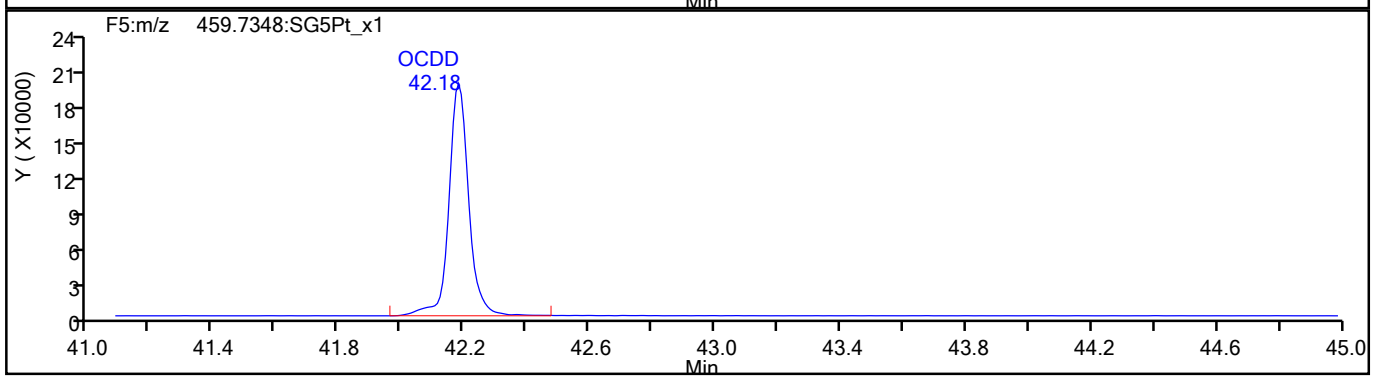

OCDD Standards

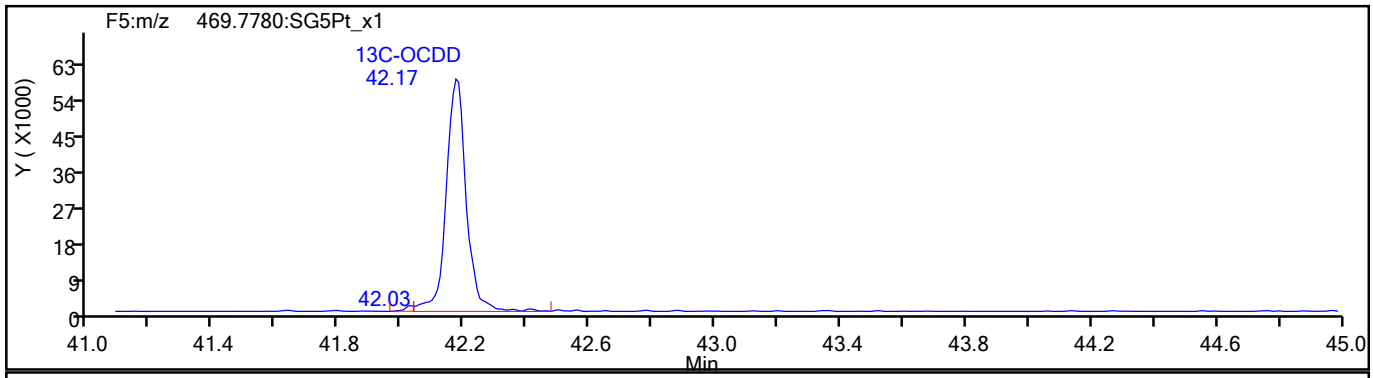

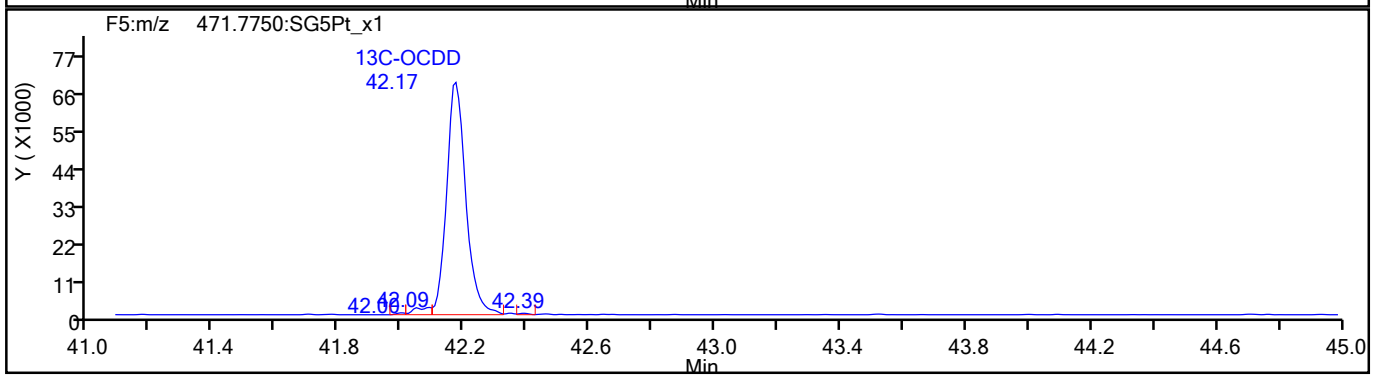

777896

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

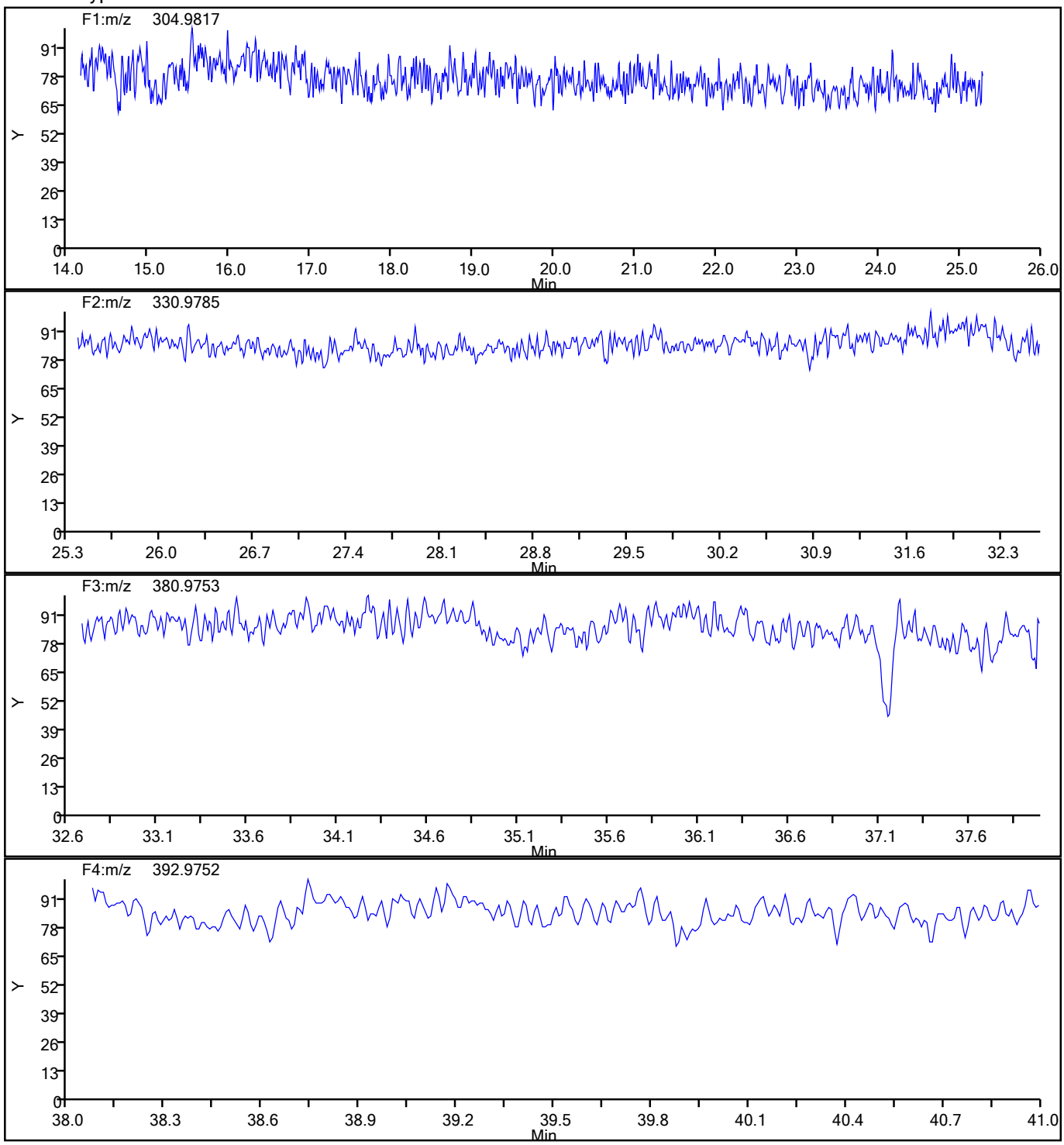

777897

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

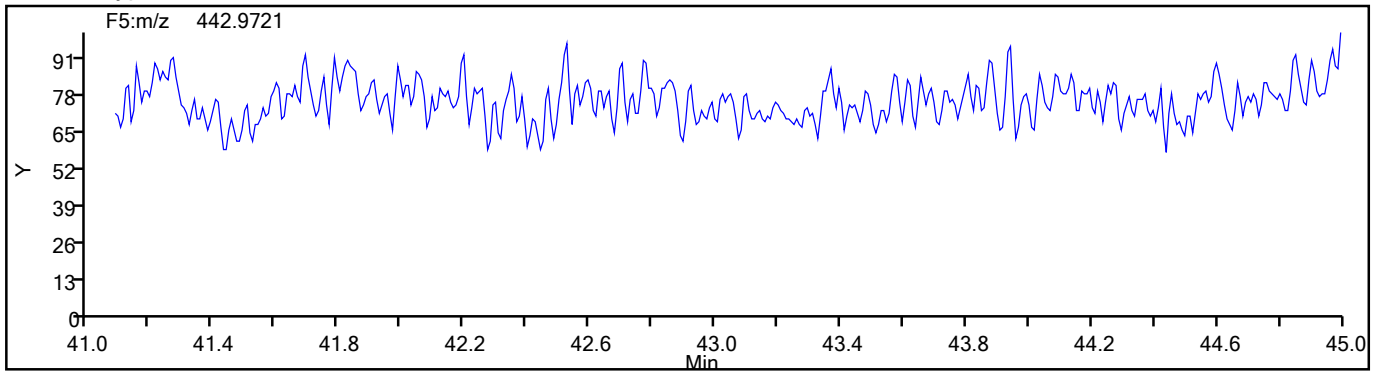

777898

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (0-2) MSD RA
Lab Sample ID: 320-76769-27 MSD RA
Matrix: Sediment
Lab File ID: 24AU2111D2_012.d
Analysis Method: 1613B
Date Collected: 07/22/2021 15:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.06(g)
Date Analyzed: 08/24/2021 15:30
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	6770		4.8	4.8

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	70		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	90		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_012.d
Lims ID: 320-76769-A-27-C MSD
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MSD
Inject. Date: 24-Aug-2021 15:30:14 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 17:07:01

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	22883320	0.80	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	21379841	0.75	1.3327	70.1	70.1	0.7964	0.7964	70.11	
2,3,7,8-TCDF	17.669	552274289	0.78	0.9978	2588.8	2588.8	1.831	1.831	25888	E
D 13C-2,3,7,8-TCDD	16.092	12210461	0.80	0.8749	61.0	61.0	10.7	10.7	60.99	
$ 37Cl4-2,3,7,8-TCDD	16.105	7106630		0.8648	35.9	35.9	0.3340	0.3340	89.78	
2,3,7,8-TCDD	16.105	115079206	0.78	1.0570	891.6	891.6	4.498	4.498	8916	E
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_012.d
Lims ID: 320-76769-A-27-C MSD
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MSD
Inject. Date: 24-Aug-2021 15:30:14 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 17:07:01

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.283	3		10195097	2341760	88793	221982	26		
333.9339	16.325	16.283	3		12688223	2817688	104370	260925	27	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.613	2	1.081	9128357	1680297	11284	28210	149		
317.9389	17.655	17.613	3	1.081	12251484	1915326	10621	26552	180	0.75(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.669	17.641	2	1.002	242807170	45434681	11637	29092	3904		
305.8987	17.669	17.641	2	1.002	309467119	57763573	14646	36615	3944	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.092	16.050	3	0.986	5416847	1254610	88793	221982	14		
333.9339	16.092	16.050	3	0.986	6793614	1576842	104370	260925	15	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.105	16.063	3	0.987	7106630	1646984	5962	14905	276		
2,3,7,8-TCDD											E
319.8965	16.105	16.077	2	1.001	50486305	11437979	31830	79575	359		
321.8936	16.105	16.077	2	1.001	64592901	14351854	22014	55035	652	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 24-Aug-2021 17:07:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_012.d		
Injection Date:	24-Aug-2021 15:30:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

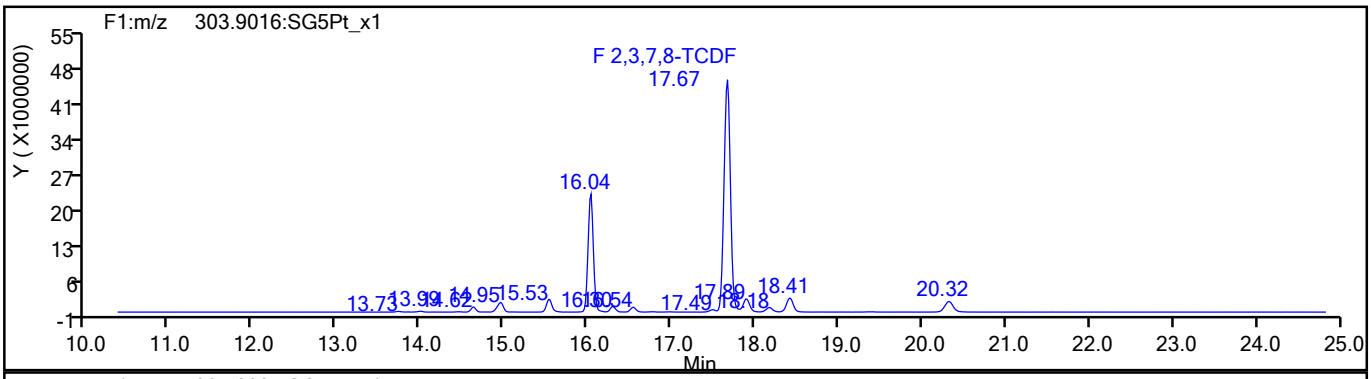

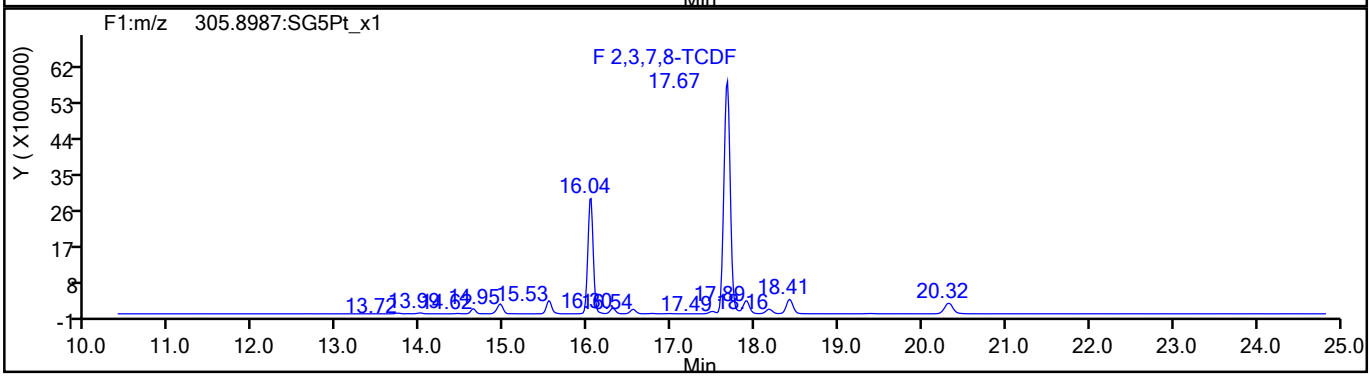

TCDF Standards

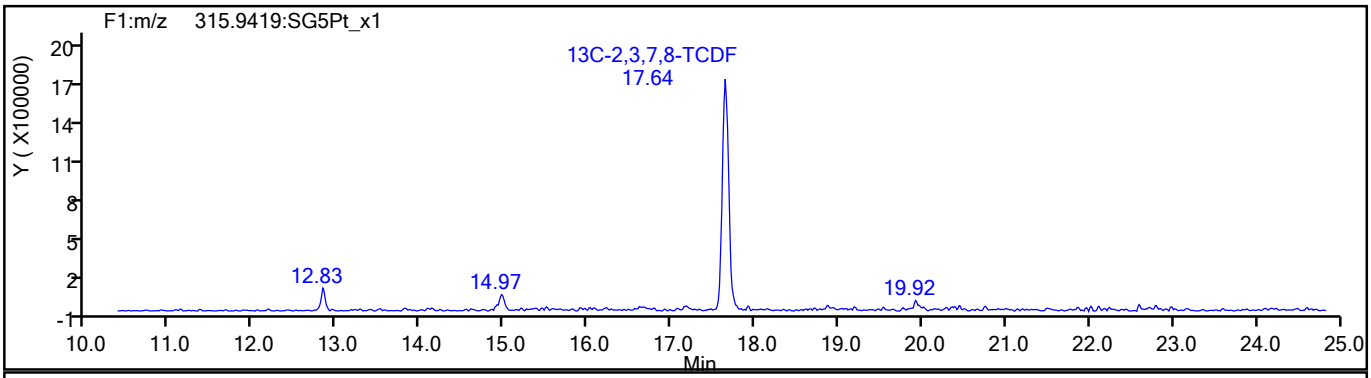

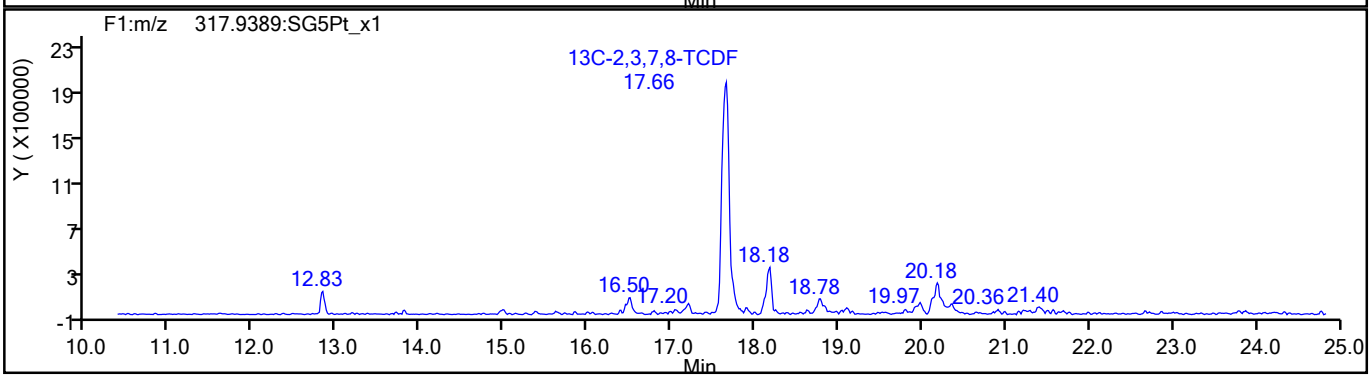

777902

Report Date: 24-Aug-2021 17:07:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_012.d		
Injection Date:	24-Aug-2021 15:30:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

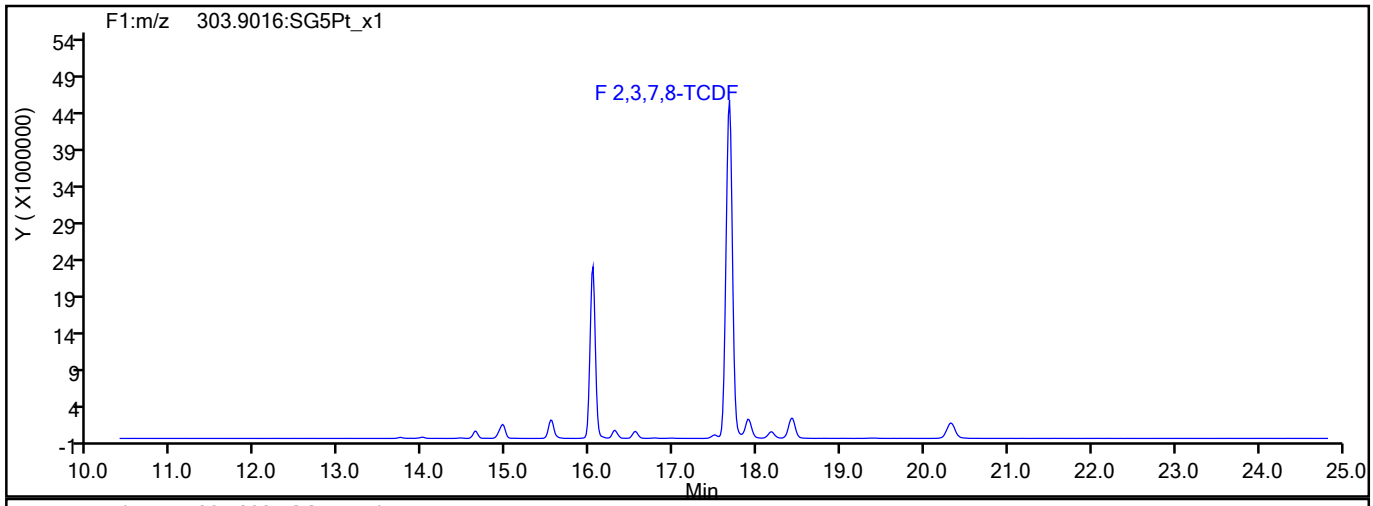

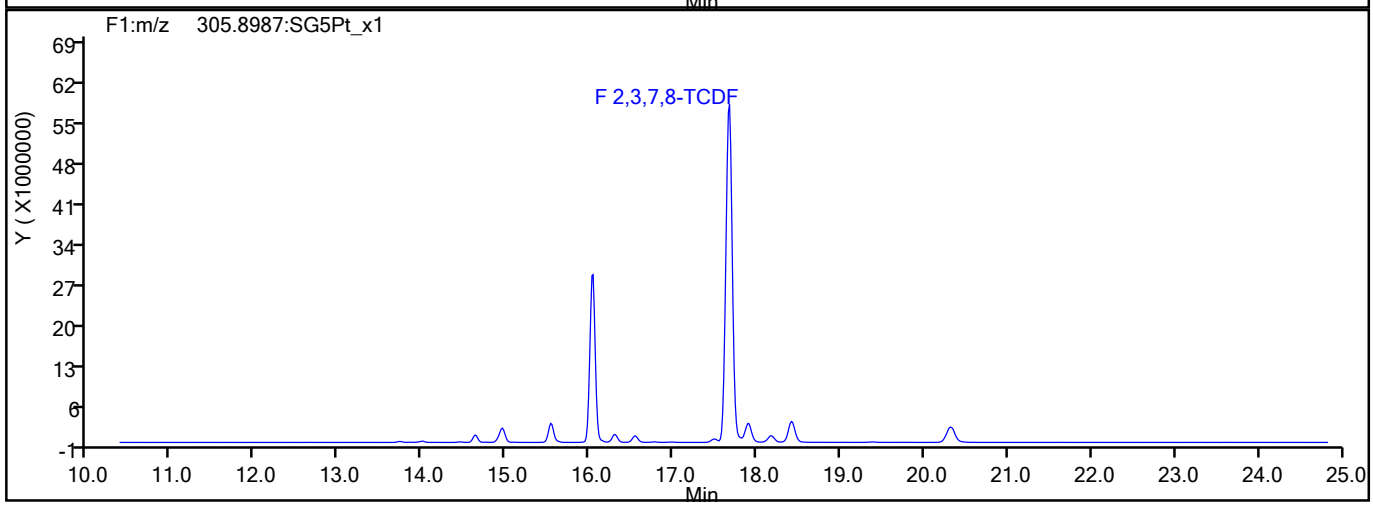

TCDF Interference Mass

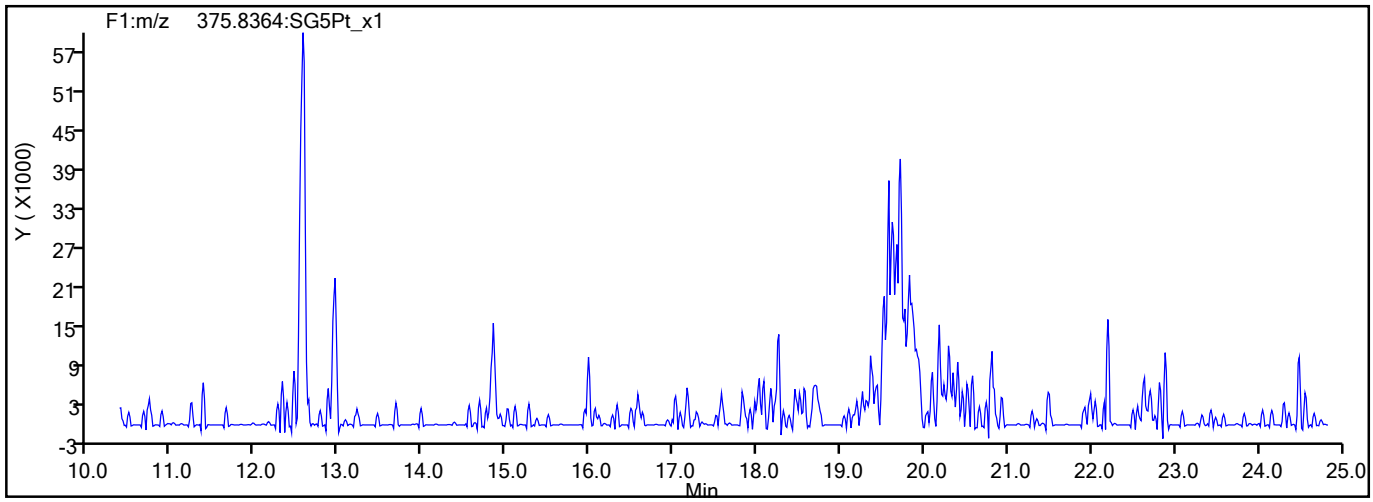

777903

Report Date: 24-Aug-2021 17:07:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_012.d		
Injection Date:	24-Aug-2021 15:30:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

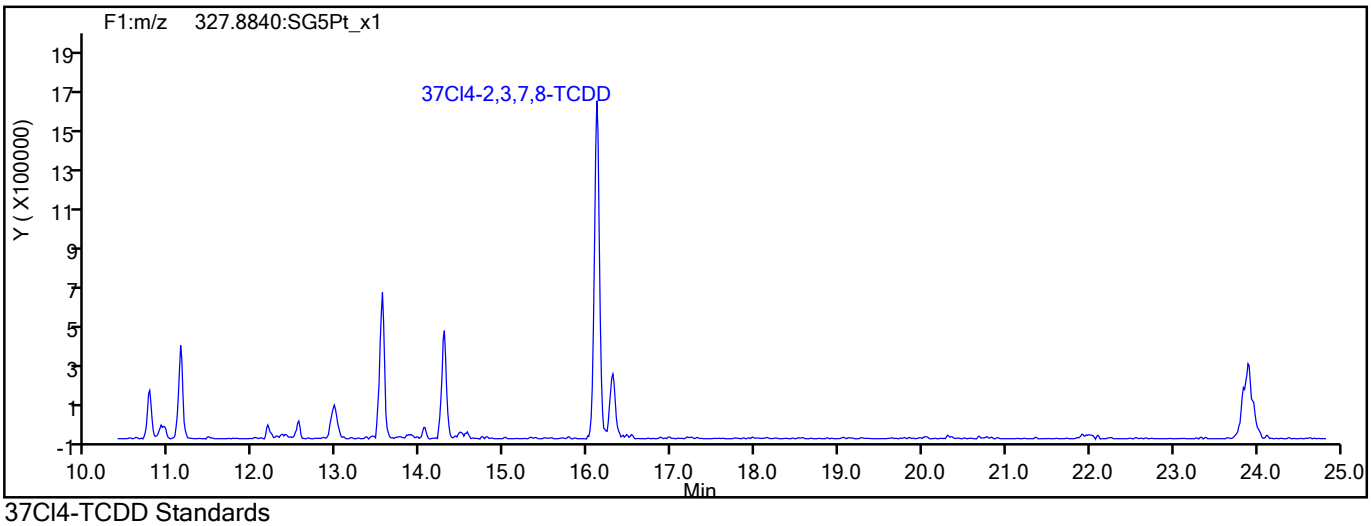

37Cl4-TCDD Standards

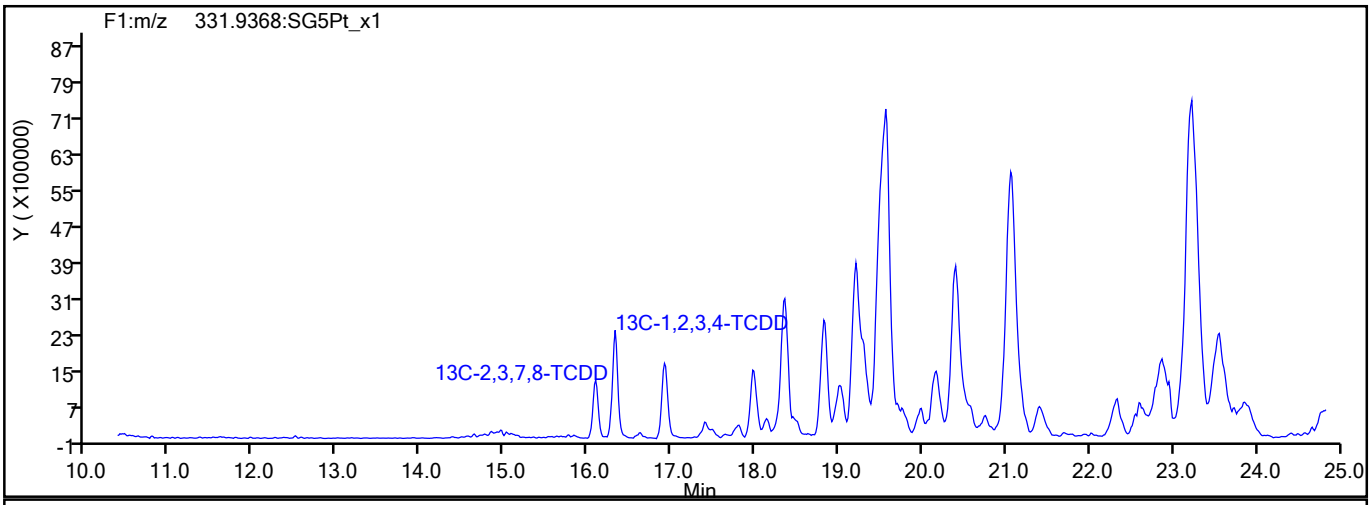

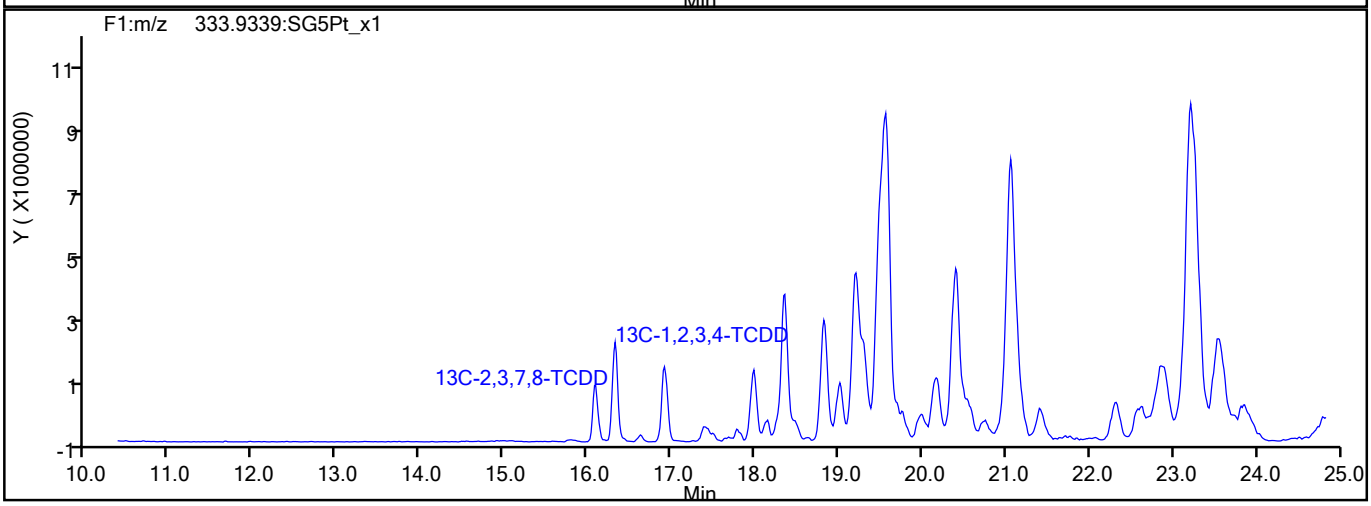

777904

Report Date: 24-Aug-2021 17:07:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_012.d		
Injection Date:	24-Aug-2021 15:30:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

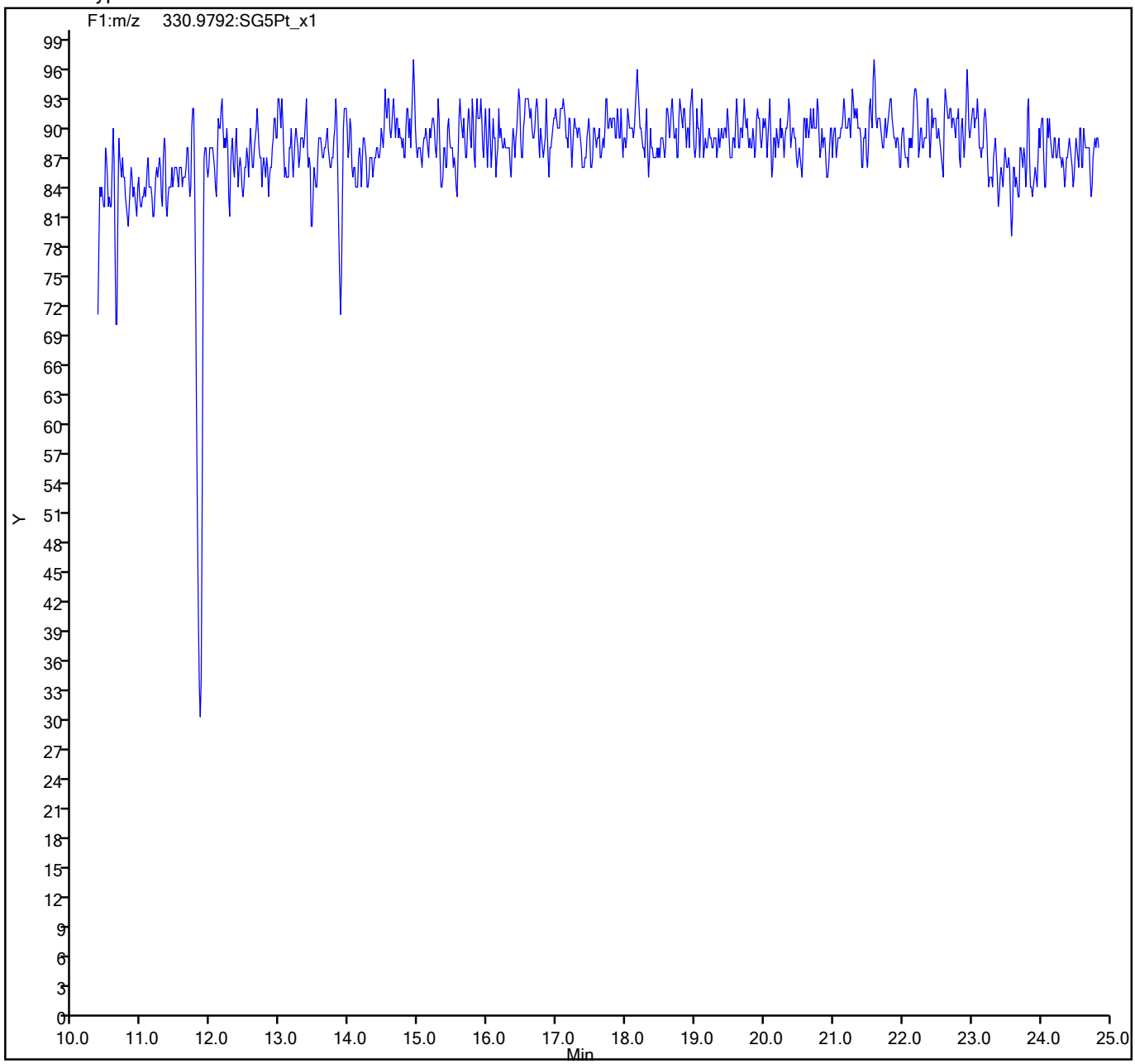

777905

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76888-A-1-C MSD
Matrix: Sediment
Lab File ID: 19au21dfs1_23.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.36(g)
Date Analyzed: 08/20/2021 06:21
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	25300		41	41
51207-31-9	2,3,7,8-TCDF	138000		180	180
40321-76-4	1,2,3,7,8-PeCDD	508		90	24
57117-41-6	1,2,3,7,8-PeCDF	2550		90	17
57117-31-4	2,3,4,7,8-PeCDF	2150		90	18
39227-28-6	1,2,3,4,7,8-HxCDD	199		90	4.2
57653-85-7	1,2,3,6,7,8-HxCDD	202		90	4.7
19408-74-3	1,2,3,7,8,9-HxCDD	188		90	4.1
70648-26-9	1,2,3,4,7,8-HxCDF	3640		90	13
57117-44-9	1,2,3,6,7,8-HxCDF	1130		90	14
72918-21-9	1,2,3,7,8,9-HxCDF	238		90	14
60851-34-5	2,3,4,6,7,8-HxCDF	342		90	15
35822-46-9	1,2,3,4,6,7,8-HpCDD	262		90	1.9
67562-39-4	1,2,3,4,6,7,8-HpCDF	1310		90	4.3
55673-89-7	1,2,3,4,7,8,9-HpCDF	474		90	4.5
3268-87-9	OCDD	921		180	3.3
39001-02-0	OCDF	925		180	4.0
41903-57-5	Total TCDD	27600		41	41
30402-14-3	Total TCDF	254000		180	180
36088-22-9	Total PeCDD	508		90	24
30402-15-4	Total PeCDF	7520		90	18
34465-46-8	Total HxCDD	588		90	4.4
55684-94-1	Total HxCDF	5950		90	14
37871-00-4	Total HpCDD	326		90	1.9
38998-75-3	Total HpCDF	1990		90	4.4

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Client Sample ID: Lab Sample ID: 320-76888-A-1-C MSD

Matrix: Sediment Lab File ID: 19au21dfs1_23.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10.36(g) Date Analyzed: 08/20/2021 06:21

Con. Extract Vol.: 20.0(uL) Dilution Factor: 10

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 46.3 GPC Cleanup:(Y/N) N

Analysis Batch No.: 518043 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	40		25-164
89059-46-1	13C-2,3,7,8-TCDF	37		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	38		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	36		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	40		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	37		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	34	q	28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	44		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	37		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	35		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	34		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	38		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	39		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	44		26-138
114423-97-1	13C-OCDD	37	q	17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	123		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d
Lims ID: 320-76888-A-1-C MSD
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MSD
Inject. Date: 20-Aug-2021 06:21:00 ALS Bottle#: 0 Worklist Smp#: 21
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-c msd
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:07:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 16:59:30

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.449	138210	0.78	2.1E+04	10.0	10.0				a
D 13C-2,3,7,8-TCDF	20.470	68524	0.81	1.3459	3.684	3.684	0.7768	0.7768	36.84	
2,3,7,8-TCDF	20.487	28433784	0.84	1.0802	3841.4	3841.4	4.976	4.976	3.8E+005	E
A Non-2,3,7,8-sub-TCDF	19.851	23839604	0.83	1.0802	3220.7	3220.7	4.976	1819.2	0.00	Ma
S Total TCDF					7062.1	7062.1	4.976	4.976		
D 13C-2,3,7,8-TCDD	21.835	51215	0.66	0.9317	3.977	3.977	0.4530	0.4530	39.77	M
2,3,7,8-TCDD	21.870	3874224	0.80	1.0753	703.5	703.5	1.147	1.147	70346	Ea
$ 37Cl4-2,3,7,8-TCDD	21.861	68453		1.0083	4.912	4.912	1.763	1.763	123	M
A Non-2,3,7,8-sub-TCDD	20.684	356920	0.78	1.0753	64.8	64.8	1.147	64.8	0.00	
S Total TCDD					768.3	768.3	1.147	1.147		
D 13C-1,2,3,7,8-PeCDF	27.281	56214	1.55	1.1405	3.566	3.566	0.1095	0.1095	35.66	
1,2,3,7,8-PeCDF	27.315	419855	1.55	1.0543	70.8	70.8	0.4734	0.4734	1417	M
D 13C-2,3,4,7,8-PeCDF	28.788	61827	1.58	1.1253	3.975	3.975	0.1110	0.1110	39.75	
2,3,4,7,8-PeCDF	28.797	372480	1.58	1.0079	59.8	59.8	0.5072	0.5072	1196	
A F1 PeCDFs	24.634	6909	1.39	1.0311	1.135	1.135	0.0184	1.135	0.00	M
A Non-2,3,7,8-sub-PeCDF	28.173	471813	1.55	1.0311	78.1	77.5	0.4899	32.2	0.00	RQ
S Total PeCDF					209.9	209.3	0.4903	0.4903		RQ
D 13C-1,2,3,7,8-PeCDD	29.588	37227	1.51	0.7165	3.759	3.759	0.0399	0.0399	37.59	
1,2,3,7,8-PeCDD	29.613	55102	1.65	1.0465	14.1	14.1	0.6794	0.6794	283	
A Non-2,3,7,8-sub-PeCDD	28.478						0.6794	2.233		RQU
S Total PeCDD					14.1	14.1	0.6794	0.6794		
D 13C-1,2,3,4,7,8-HxCDF	34.920	56995	0.53	0.9648	4.433	4.433	0.0307	0.0307	44.33	
1,2,3,4,7,8-HxCDF	34.920	662470	1.31	1.1474	101.3	101.3	0.3694	0.3694	2026	
D 13C-1,2,3,6,7,8-HxCDF	35.072	52865	0.51	1.0708	3.705	3.705	0.0277	0.0277	37.05	
1,2,3,6,7,8-HxCDF	35.080	201850	1.32	1.2178	31.4	31.4	0.3863	0.3863	627	
D 13C-2,3,4,6,7,8-HxCDF	35.896	47514	0.56	1.0413	3.424	3.424	0.0285	0.0285	34.24	
2,3,4,6,7,8-HxCDF	35.913	54946	1.31	1.2145	9.522	9.522	0.4273	0.4273	190	M
D 13C-1,2,3,7,8,9-HxCDF	36.772	44941	0.48	0.9731	3.466	3.466	0.0305	0.0305	34.66	
1,2,3,7,8,9-HxCDF	36.789	36983	1.29	1.2401	6.636	6.636	0.3791	0.3791	133	M
A Non-2,3,7,8-sub-HxCDF	35.009	102459	1.24	1.2049	17.3	16.8	0.3888	7.987	0.00	RQMa
S Total HxCDF					166.1	165.6	0.3905	0.3905		RQ

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.578	133245	1.23	1.8E+04	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	36.098	37529	1.26	0.7587	3.712	3.712	0.0431	0.0431	37.12	
1,2,3,4,7,8-HxCDD	36.107	22054	1.21	1.0608	5.540	5.540	0.1173	0.1173	111	
D 13C-1,2,3,6,7,8-HxCDD	36.208	38825	1.24	0.8593	3.694	3.391	0.0381	0.0381	36.94	RQ
1,2,3,6,7,8-HxCDD	36.225	23579	1.17	0.9933	5.613	5.613	0.1316	0.1316	112	
1,2,3,7,8,9-HxCDD	36.587	23129	1.15	1.1094	5.224	5.224	0.1149	0.1149	104	
A Non-2,3,7,8-sub-HxCDD	35.375						0.1209	0.5320		RQU
S Total HxCDD					16.4	16.4	0.1213	0.1213		
D 13C-1,2,3,4,6,7,8-HpCDF	38.594	38033	0.45	0.7359	3.878	3.878	0.0382	0.0382	38.78	
1,2,3,4,6,7,8-HpCDF	38.611	199609	1.05	1.4421	36.4	36.4	0.1190	0.1190	728	
D 13C-1,2,3,4,7,8,9-HpCDF	39.831	40572	0.41	0.6854	4.443	4.443	0.0411	0.0411	44.43	
1,2,3,4,7,8,9-HpCDF	39.857	70025	1.04	1.3092	13.2	13.2	0.1243	0.1243	264	
A Non-2,3,7,8-sub-HpCDF	39.245	31032	1.05	1.3756	5.740	5.740	0.1214	5.740	0.00	
S Total HpCDF					55.3	55.3	0.1216	0.1216		
D 13C-1,2,3,4,6,7,8-HpCDD	39.536	33956	1.02	0.6745	3.778	3.778	0.0440	0.0440	37.78	
1,2,3,4,6,7,8-HpCDD	39.553	25965	1.02	1.0503	7.280	7.280	0.0531	0.0531	146	
A Non-2,3,7,8-sub-HpCDD	39.241	6349	1.13	1.0503	1.780	1.780	0.0531	1.780	0.00	
S Total HpCDD					9.061	9.061	0.0531	0.0531		
D 13C-OCDD	42.041	53507	0.89	0.5446	8.025	7.373	0.0601	0.0601	40.12	RQ
OCDF	42.134	98732	0.92	1.3168	25.8	25.8	0.1102	0.1102	258	
OCDD	42.049	79235	0.95	1.0620	25.6	25.6	0.0920	0.0920	256	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d
Lims ID: 320-76888-A-1-C MSD
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MSD
Inject. Date: 20-Aug-2021 06:21:00 ALS Bottle#: 0 Worklist Smp#: 21
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-c msd
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:07:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 16:59:30

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.449	21.395	3		60502	7748	213	532	36		a
333.9338	21.415	21.395	1		77708	10425	94	235	111	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.470	20.365	6	0.954	30577	5056	319	797	16		
317.9389	20.461	20.365	6	0.954	37947	6590	441	1102	15	0.81(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.487	20.408	5	1.001	13021278	1692235	1119	2797	1512		
305.8987	20.487	20.408	5	1.001	15412506	1998792	1385	3462	1443	0.84(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											Ma
303.9016	17.505	19.851	-140	0.855	106502	16483	1119	2797	15		
305.8987	17.497	19.851	-141	0.855	133459	20220	1385	3462	15	0.80(0.65-0.89)	
303.9016	17.961	19.851	-113	0.877	591745	92100	1119	2797	82		
305.8987	17.961	19.851	-113	0.877	722111	112767	1385	3462	81	0.82(0.65-0.89)	
303.9016	18.450	19.851	-84	0.901	731123	82962	1119	2797	74		M
305.8987	18.442	19.851	-84	0.901	853786	99475	1385	3462	72	0.86(0.65-0.89)	
303.9016	18.880	19.851	-58	0.922	455938	62064	1119	2797	55		
305.8987	18.880	19.851	-58	0.922	535530	77917	1385	3462	56	0.85(0.65-0.89)	M
303.9016	19.258	19.851	-35	0.941	603486	85468	1119	2797	76		
305.8987	19.258	19.851	-35	0.941	736111	106921	1385	3462	77	0.82(0.65-0.89)	
303.9016	19.757	19.851	-6	0.965	6089350	847511	1119	2797	757		
305.8987	19.748	19.851	-6	0.965	7375844	1002645	1385	3462	724	0.83(0.65-0.89)	
303.9016	20.178	19.851	20	0.986	289291	39805	1119	2797	36		
305.8987	20.169	19.851	19	0.985	366265	49828	1385	3462	36	0.79(0.65-0.89)	
303.9016	21.269	19.851	85	1.039	909444	118945	1119	2797	106		
305.8987	21.269	19.851	85	1.039	1104797	146602	1385	3462	106	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.741	19.851	113	1.062	162481	19854	1119	2797	18		
305.8987	21.741	19.851	113	1.062	217585	26688	1385	3462	19	0.75(0.65-0.89)	
303.9016	23.650	19.851	227	1.155	838734	147936	1119	2797	132		a
305.8987	23.650	19.851	227	1.155	1016022	177105	1385	3462	128	0.83(0.65-0.89)	
13C-2,3,7,8-TCDD											M
331.9368	21.835	21.716	7	1.018	20413	3804	213	532	18		M
333.9338	21.844	21.716	8	1.018	30802	5313	94	235	57	0.66(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	21.870	21.733	8	1.002	1721088	240273	316	790	760		a
321.8936	21.870	21.733	8	1.002	2153136	290245	134	335	2166	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											M
327.8847	21.861	21.799	4	1.019	68453	9214	1292	3230	7		M
A Non-2,3,7,8-sub-TCDD											
319.8965	22.497	20.684	109	1.030	156488	19243	316	790	61		
321.8936	22.515	20.684	110	1.031	200432	24996	134	335	187	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.281	27.251	2	1.272	34154	5359	48	120	112		
353.8970	27.281	27.251	2	1.272	22060	3697	43	107	86	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.315	27.276	2	1.001	255428	36339	108	270	336		
341.8567	27.306	27.276	2	1.001	164427	23624	73	182	324	1.55(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.788	28.757	2	1.342	37845	5744	48	120	120		
353.8970	28.797	28.757	2	1.343	23982	3099	43	107	72	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.797	28.791	0	1.000	228170	32104	108	270	297		
341.8567	28.805	28.791	1	1.001	144310	20942	73	182	287	1.58(1.32-1.78)	
A F1 PeCDFs											M
339.8597	24.114	24.634	-31	0.884	4024	771	2	5	386		
341.8567	24.096	24.634	-32	0.883	2885	601	5	12	120	1.39(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.841	28.173	-140	0.947	119912	18630	108	270	173		
341.8567	25.833	28.173	-140	0.947	75920	12658	73	182	173	1.58(1.32-1.78)	
339.8597	26.734	28.173	-86	0.980	14944	2070	108	270	19		
341.8567	26.750	28.173	-85	0.981	9505	1272	73	182	17	1.57(1.32-1.78)	
339.8597	27.172	28.173	-60	0.996	24297	5589	108	270	52		
	Empc Correction				20714	4935	108	270	46		
341.8567	27.163	28.173	-60	0.996	13364	3184	73	182	44	1.82(1.32-1.78)	
339.8597	27.887	28.173	-17	1.022	78953	12923	108	270	120		
341.8567	27.879	28.173	-18	1.022	48409	7766	73	182	106	1.63(1.32-1.78)	
339.8597	29.141	28.173	58	1.068	43351	5702	108	270	53		
341.8567	29.141	28.173	58	1.068	25728	3776	73	182	52	1.68(1.32-1.78)	
339.8597	30.859	28.173	161	1.131	13466	1661	108	270	15		
341.8567	30.817	28.173	158	1.130	7547	956	73	182	13	1.78(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	29.588	29.574	1	1.379	22368	3016	18	45	168		
369.8919	29.596	29.574	1	1.380	14859	2118	3	7	706	1.51(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.613	29.616	0	1.001	34290	4663	18	45	259		
357.8516	29.596	29.616	-1	1.000	20812	3125	128	320	24	1.65(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.478	28.478	0	0.963	1176	162	18	45			
357.8516	28.478	28.478	0	0.963	7524	1272	128	320		0.16(1.32-1.78)	
	Empc Correction				758	104	128	320	0		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.920	34.906	1	0.955	19789	4295	13	32	330		
385.8610	34.895	34.906	-1	0.954	37206	7738	26	65	298	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.920	34.922	0	1.000	375459	70118	112	280	626		
375.8178	34.920	34.922	0	1.000	287011	53983	92	230	587	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.072	35.066	0	0.959	17755	3322	13	32	256		
385.8610	35.063	35.066	0	0.959	35110	7518	26	65	289	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.080	35.082	0	1.000	114870	21691	112	280	194		
375.8178	35.080	35.082	0	1.000	86980	15842	92	230	172	1.32(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.896	35.890	0	0.981	17022	3468	13	32	267		
385.8610	35.871	35.890	-1	0.981	30492	6360	26	65	245	0.56(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.913	35.907	0	1.000	31204	6157	112	280	55		M
375.8178	35.905	35.907	0	1.000	23742	5195	92	230	56	1.31(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.772	36.782	-1	1.005	14551	3798	13	32	292		
385.8610	36.780	36.782	0	1.006	30390	7050	26	65	271	0.48(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.789	36.791	0	1.000	20849	5322	112	280	48		
375.8178	36.789	36.791	0	1.000	16134	4109	92	230	45	1.29(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.430	35.009	-95	0.957	27974	4493	112	280	40		
375.8178	33.455	35.009	-93	0.958	20702	3187	92	230	35	1.35(1.05-1.43)	
373.8208	34.289	35.009	-43	0.982	9138	1772	112	280	16		
375.8178	34.272	35.009	-44	0.981	6541	1211	92	230	13	1.40(1.05-1.43)	
373.8208	35.779	35.009	46	1.025	4871	1348	112	280	12		M
375.8178	35.779	35.009	46	1.025	4223	1010	92	230	11	1.15(1.05-1.43)	
373.8208	36.889	35.009	113	1.056	18936	4271	112	280	38		M
	Empc Correction				16059	4028	112	280	36		
375.8178	36.889	35.009	113	1.056	12951	3249	92	230	35	1.46(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.578	36.581	0		73478	17452	29	72	602		
403.8529	36.578	36.581	0		59767	15246	14	35	1089	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.098	36.092	0	0.987	20908	5002	29	72	172		
403.8529	36.098	36.092	0	0.987	16621	4239	14	35	303	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.107	36.109	0	1.000	12061	2852	20	50	143		
391.8127	36.107	36.109	0	1.000	9993	2495	26	65	96	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											RQ
401.8559	36.208	36.210	0	0.990	24960	5055	29	72	174		
	Empc Correction				21492	4642	29	72	160		
403.8529	36.216	36.210	0	0.990	17333	3744	14	35	267	1.44(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.225	36.227	0	1.000	12709	2772	20	50	139		
391.8127	36.225	36.227	0	1.000	10870	2331	26	65	90	1.17(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.587	36.597	-1	1.014	12363	2971	20	50	149		
391.8127	36.587	36.597	-1	1.014	10766	2572	26	65	99	1.15(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											U
389.8158	34.238	35.375	-68	0.946	285	75	20	50	4		
391.8127	34.230	35.375	-69	0.945	1279	205	26	65	8	0.22(1.05-1.43)	
	Empc Correction				229	60	26	65	0		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.594	38.596	0	1.055	11871	3298	22	55	150		
419.8220	38.586	38.596	-1	1.055	26162	7013	15	37	468	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.611	38.618	0	1.000	102272	25855	39	97	663		
409.7788	38.602	38.618	-1	1.000	97337	24500	32	80	766	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.831	39.850	-1	1.089	11895	2988	22	55	136		
419.8220	39.848	39.850	0	1.089	28677	7893	15	37	526	0.41(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.857	39.872	-1	1.001	35702	9875	39	97	253		
409.7788	39.857	39.872	-1	1.001	34323	9081	32	80	284	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.964	39.245	-17	1.010	15859	3968	39	97	102		
409.7788	38.964	39.245	-17	1.010	15173	4339	32	80	136	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.536	39.547	-1	1.081	17168	4282	26	65	165		
437.8140	39.536	39.547	-1	1.081	16788	4687	13	32	361	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.553	39.561	0	1.000	13128	3640	12	30	303		
425.7737	39.553	39.561	0	1.000	12837	3417	8	20	427	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.905	39.241	-20	0.984	3366	1040	12	30	87		
425.7737	38.914	39.241	-20	0.984	2983	835	8	20	104	1.13(0.88-1.20)	
13C-OCDD											RQ
469.7780	42.041	42.036	0	1.149	29922	8735	34	85	257		
	Empc Correction				25196	5349	34	85	157		
471.7750	42.041	42.036	0	1.149	28311	6011	9	22	668	1.06(0.76-1.02)	

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											
441.7428	42.134	42.137	0	1.002	47366	11244	14	35	803		
443.7399	42.134	42.137	0	1.002	51366	12876	29	72	444	0.92(0.76-1.02)	
OCDD											
457.7377	42.049	42.053	0	1.000	38506	8593	14	35	614		
459.7348	42.049	42.053	0	1.000	40729	9402	15	37	627	0.95(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	68524	11646

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		10.000	68524	11646

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.505	106502	16483	133459	20220	32.4	0.80	
17.961	591745	92100	722111	112767	177.5	0.82	
18.450	731123	82962	853786	99475	214.1	0.86	Ma
18.880	455938	62064	535530	77917	133.9	0.85	M
19.258	603486	85468	736111	106921	181.0	0.82	
19.757	6089350	847511	7375844	1002645	1819.2	0.83	
20.178	289291	39805	366265	49828	88.6	0.79	
21.269	909444	118945	1104797	146602	272.1	0.82	
21.741	162481	19854	217585	26688	51.3	0.75	
23.650	838734	147936	1016022	177105	250.6	0.83	a
Signal Totals:	10778094	1513128	13061510	1820168			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23839604	3333296				0.83	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3220.7 = (23839604 * 10.000) / (68524 * 1.080)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	51215	9117

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		10.000	51215	9117

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.497	156488	19243	200432	24996	64.8	0.78	
Signal Totals:							
	156488	19243	200432	24996			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	356920	44239				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 64.808 = (356920 * 10.000) / (51215 * 1.075)

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	56214	9056
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	61827	8843

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	59020	8949

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.114	4024	771	2885	601	1.14	1.39	M
Signal Totals:							
	4024	771	2885	601			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6909	1372				1.39	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.135 = (6909 * 10.000) / (59020 * 1.031)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	56214	9056
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	61827	8843

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	59020	8949

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.841	119912	18630	75920	12658	32.2	1.58	
26.734	14944	2070	9505	1272	4.02	1.57	
27.172	24297	5589	13364	3184	6.19	1.82	RQ
27.172	20714	4935	13364	3184	5.60		Empc Correction
27.887	78953	12923	48409	7766	20.9	1.63	
29.141	43351	5702	25728	3776	11.4	1.68	
30.859	13466	1661	7547	956	3.45	1.78	
Signal Totals:							
	291340	45921	180473	29612			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	475396	76187				1.63	RQ
	471813	75533					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 78.122 = (475396 * 10.000) / (59020 * 1.031)
Empc Amount: 77.533 = (471813 * 10.000) / (59020 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	37227	5134

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		10.000	37227	5134

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.194	1176	162	7524	1272	2.23	0.16	RQ
30.194	1176	162	758	104			Empc Correction

Compound is Marked ND

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	56995	12033
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	52865	10840
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	47514	9828
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	44941	10848

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		10.000	50578	10887

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.430	27974	4493	20702	3187	7.99	1.35	
34.289	9138	1772	6541	1211	2.57	1.40	
35.779	4871	1348	4223	1010	1.49	1.15	Ma
36.889	18936	4271	12951	3249	5.23	1.46	RQMa
36.889	16059	4028	12951	3249	4.76		Empc Correction
Signal Totals:							
	58042	11641	44417	8657			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	105336	20541				1.37	RQMa
	102459	20298					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 17.284 = (105336 * 10.000) / (50578 * 1.205)

Empc Amount: 16.812 = (102459 * 10.000) / (50578 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	37529	9241
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	42293	8799
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		10.000	39911	9020

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.238	285	75	1279	205	0.3716	0.22	RQ
34.238	285	75	229	60			Empc Correction
35.332	1383	240	856	180	0.5320	1.62	RQ
35.332	1061	223	856	180			Empc Correction

Compound is Marked ND

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	38033	10311
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	40572	10881

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		10.000	39302	10596

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.964	15859	3968	15173	4339	5.74	1.05	
Signal Totals:							
	15859	3968	15173	4339			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	31032	8307				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 5.740 = (31032 * 10.000) / (39302 * 1.376)

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	33956	8969

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		10.000	33956	8969

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.905	3366	1040	2983	835	1.78	1.13	
Signal Totals:							
	3366	1040	2983	835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6349	1875				1.13	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.780 = (6349 * 10.000) / (33956 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 18.450 Area = 731123

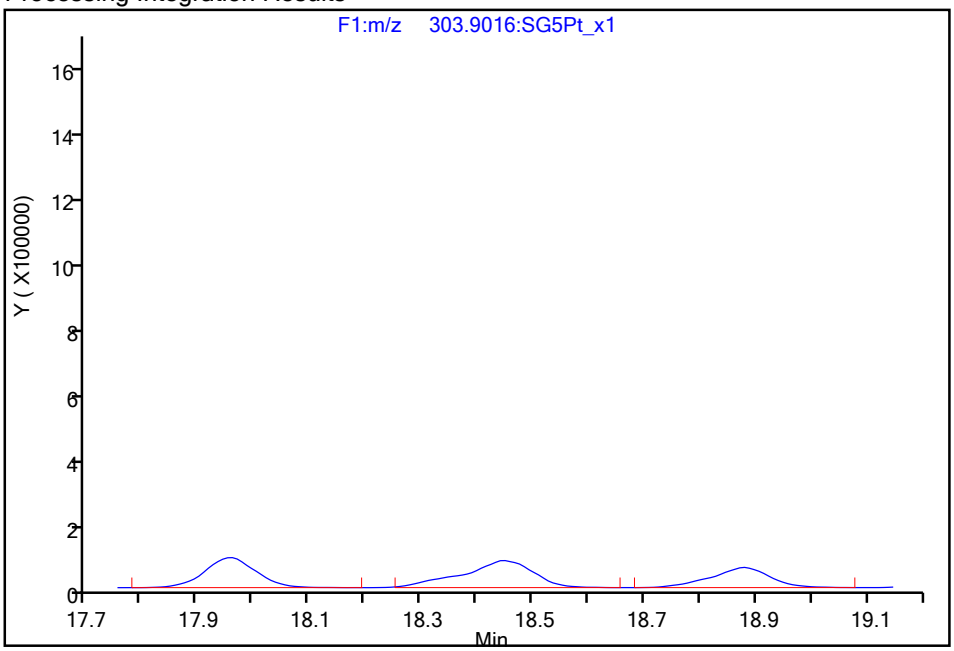

Manual Integration Results

RT = 18.450 Area = 731123

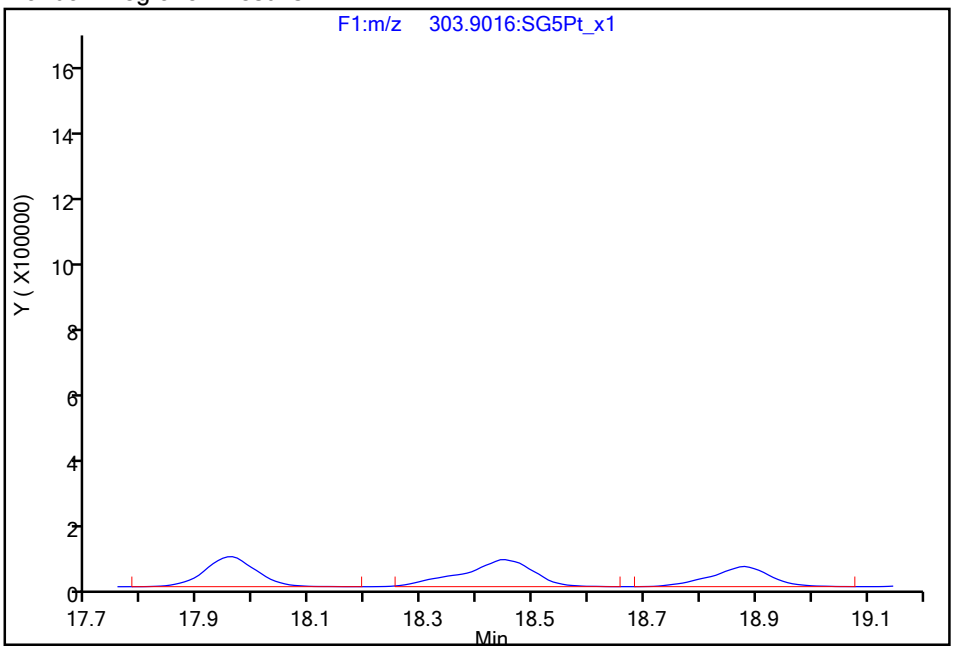

Reviewer: krenns, 25-Aug-2021 15:06:34

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (16.10- 23.60)

Signal: 2

Processing Integration Results

RT = 18.880 Area = 417302

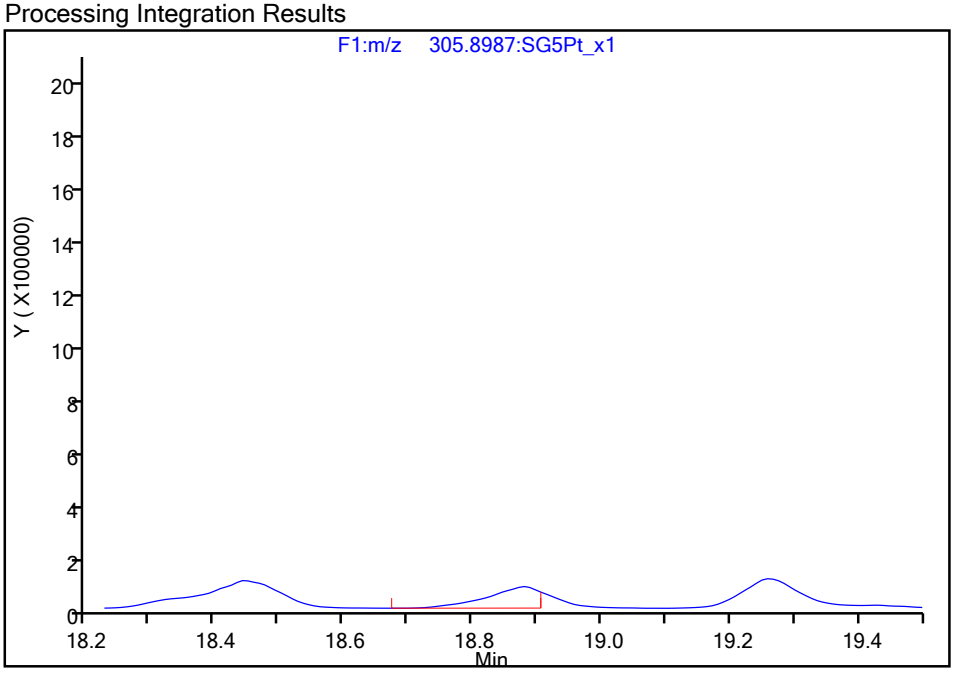

Manual Integration Results

RT = 18.880 Area = 535530 M

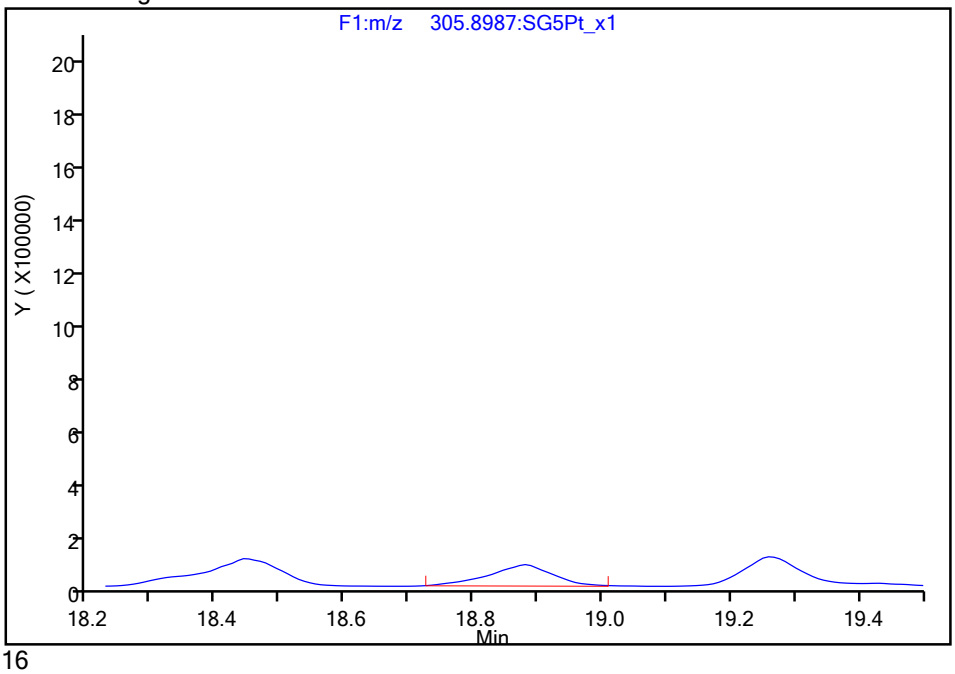

Reviewer: dadunj, 23-Aug-2021 09:43:16

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 21.84
Area: 11899
Amount: 3.316185
Amount Units: pg/ul

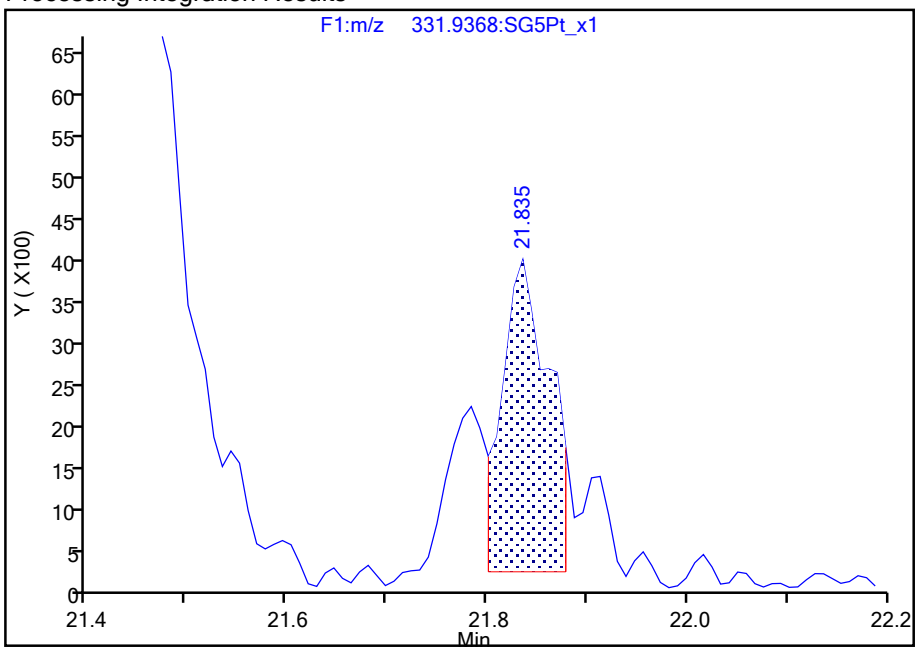

Manual Integration Results

RT: 21.84
Area: 20413
Amount: 3.977387
Amount Units: pg/ul

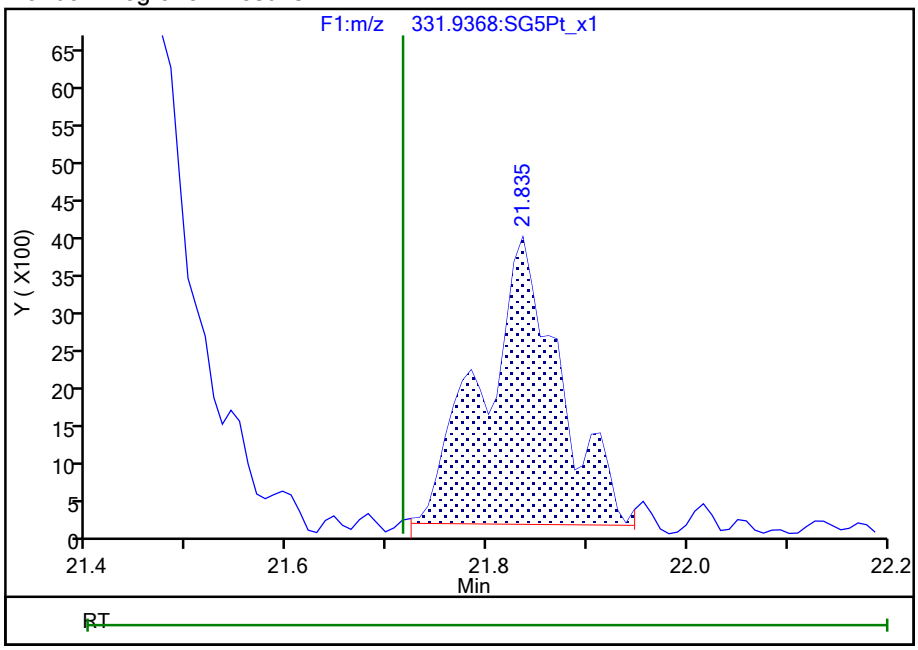

Reviewer: dadunj, 23-Aug-2021 09:45:23

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 21.64
Area: 14080
Amount: 2.916447
Amount Units: pg/ul

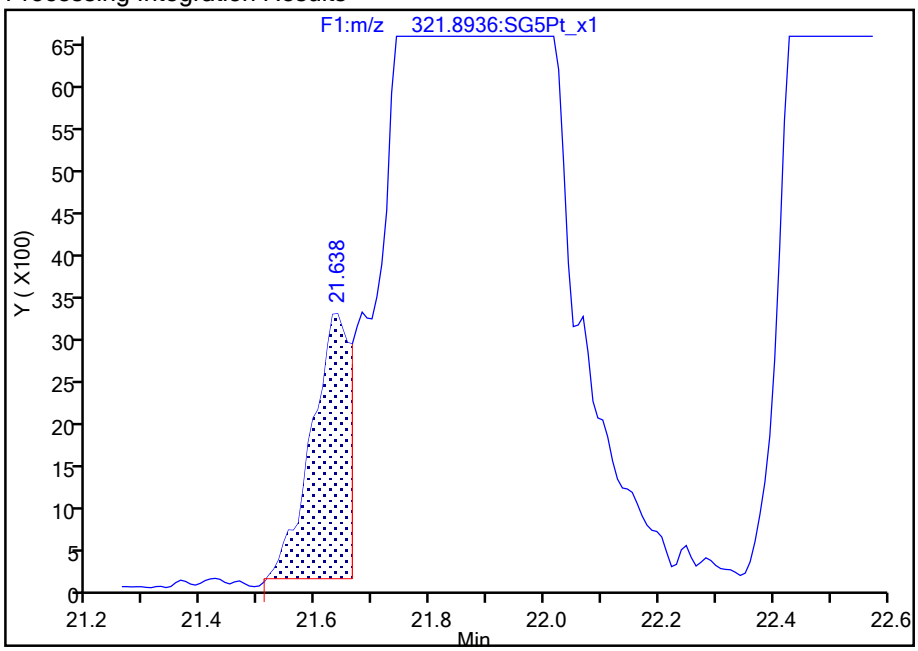

Manual Integration Results

RT: 21.87
Area: 2153136
Amount: 703.4597
Amount Units: pg/ul

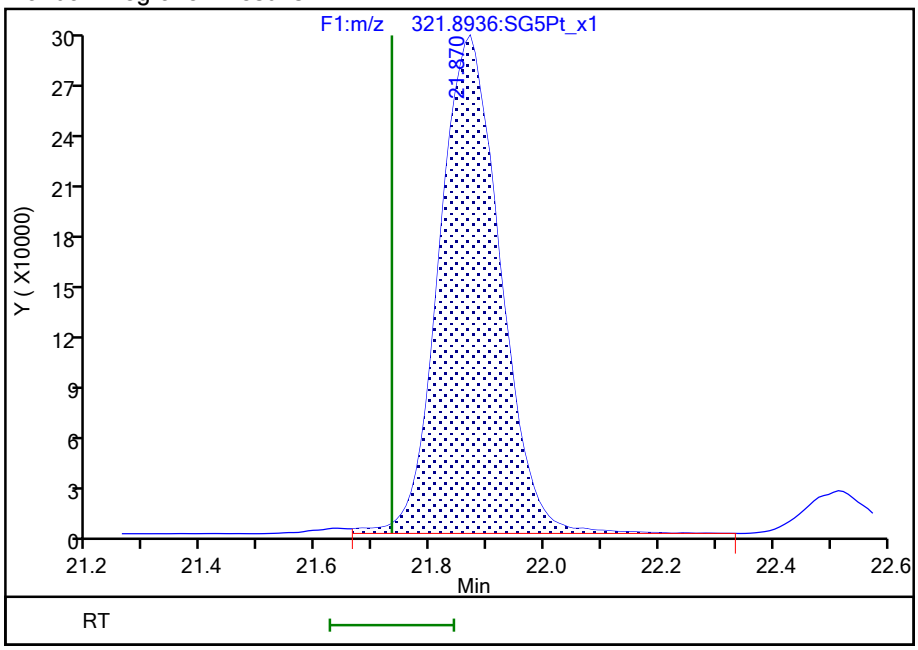

Reviewer: dadunj, 23-Aug-2021 09:45:30

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

RT: 21.66
Area: 16062
Amount: 2.916447
Amount Units: pg/ul

Processing Integration Results

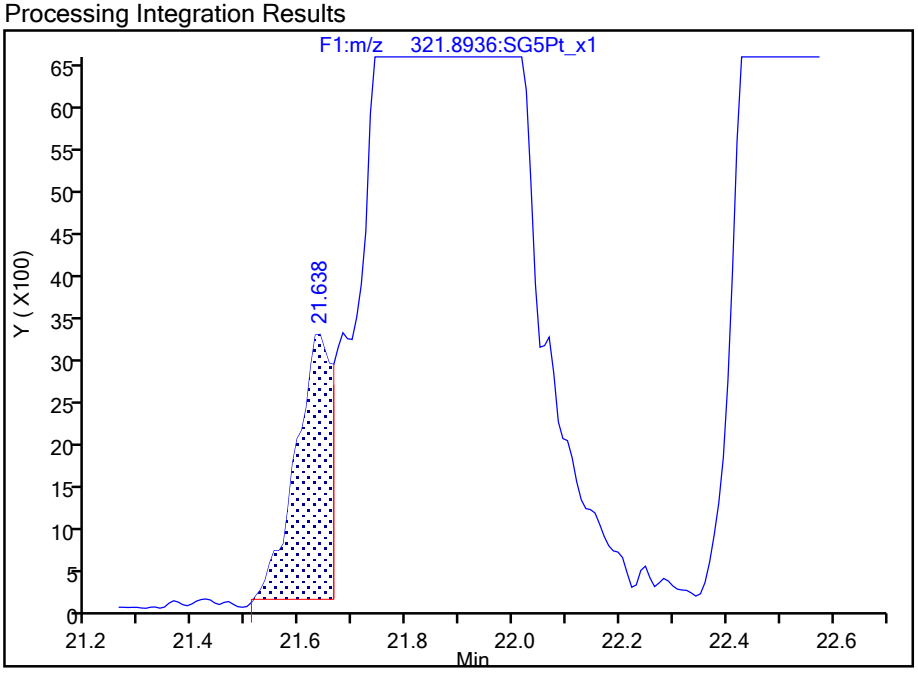

Manual Integration Results

RT: 21.87
Area: 3874224
Amount: 703.4597
Amount Units: pg/ul
Reviewer: dadunj, 23-Aug-2021 09:45:30
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.66
Area: 1982
Amount: 2.916447
Amount Units: pg/ul

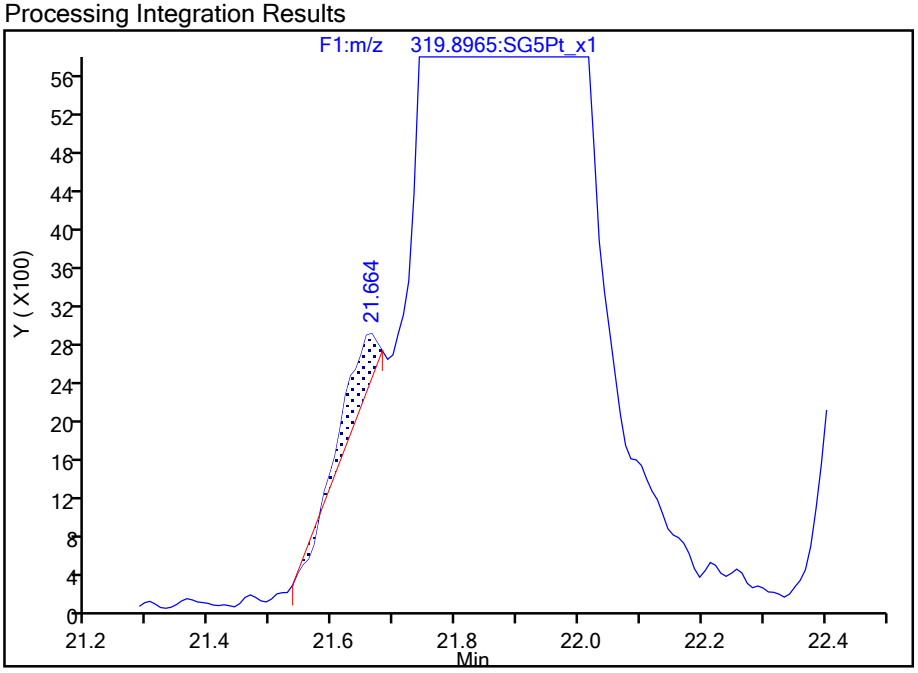

Manual Integration Results

RT: 21.87
Area: 1721088
Amount: 703.4597
Amount Units: pg/ul

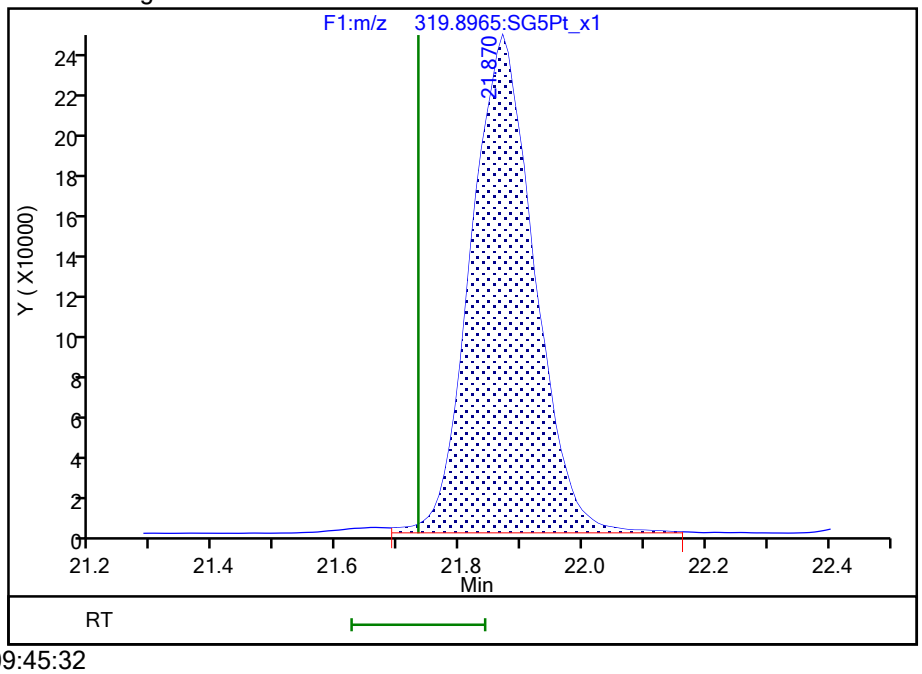

Reviewer: dadunj, 23-Aug-2021 09:45:32
Audit Action: Assigned Compound ID Audit Reason: Baseline

777930

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.80

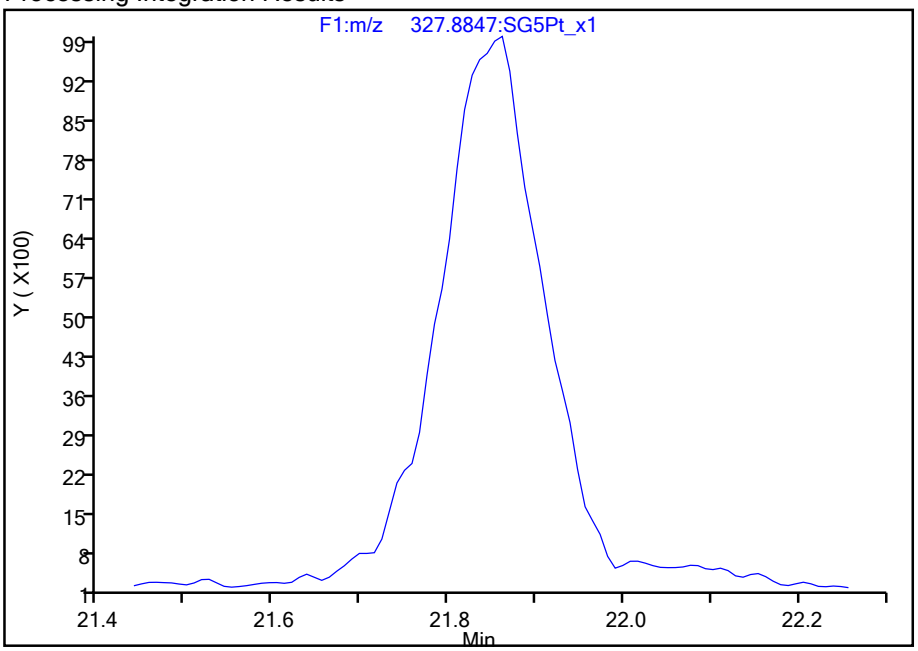

Manual Integration Results

RT: 21.86
Area: 68453
Amount: 4.912080
Amount Units: pg/ul

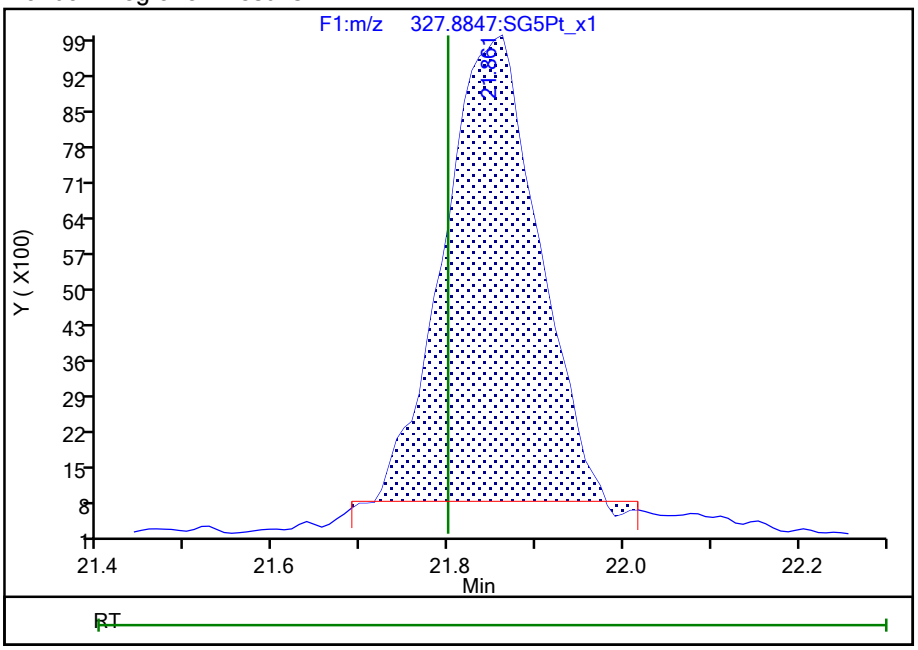

Reviewer: dadunj, 23-Aug-2021 09:45:49
Audit Action: Manually Integrated Audit Reason: Assign Peak

777931

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.31
Area: 167247
Amount: 71.320297
Amount Units: pg/ul

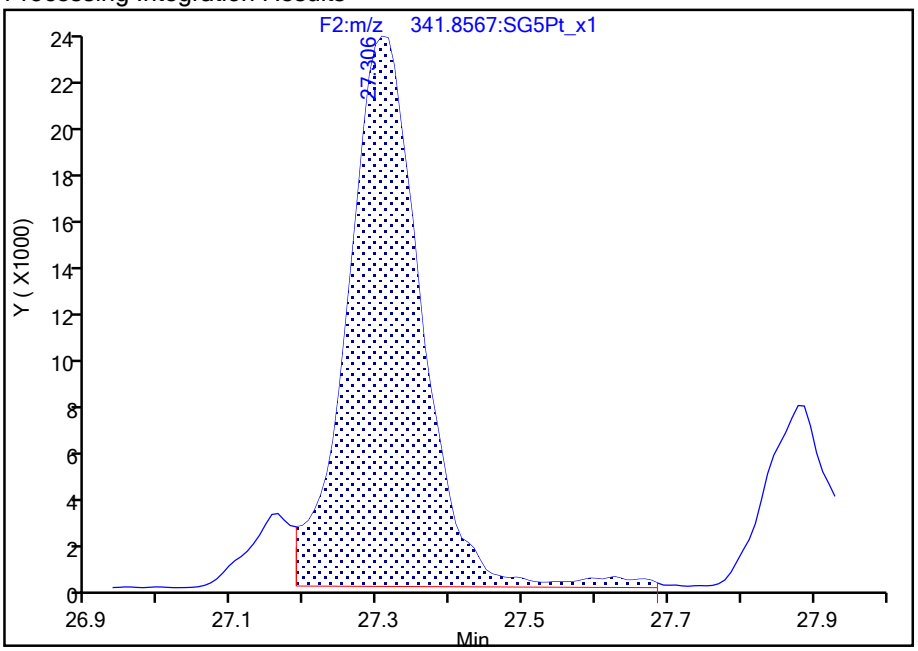

Manual Integration Results

RT: 27.31
Area: 164427
Amount: 70.844462
Amount Units: pg/ul

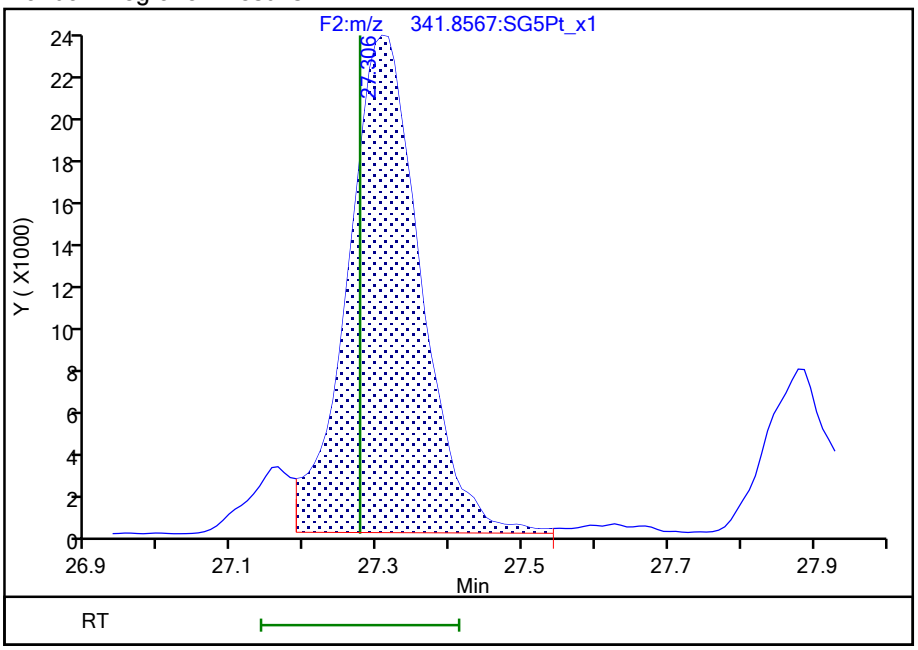

Reviewer: dadunj, 23-Aug-2021 09:46:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

F1 PeCDFs, Signal: 2, m/z: 341.8567, RT: (23.97- 25.29)

Signal: 2

Processing Integration Results

RT = 24.096 Area = 3196

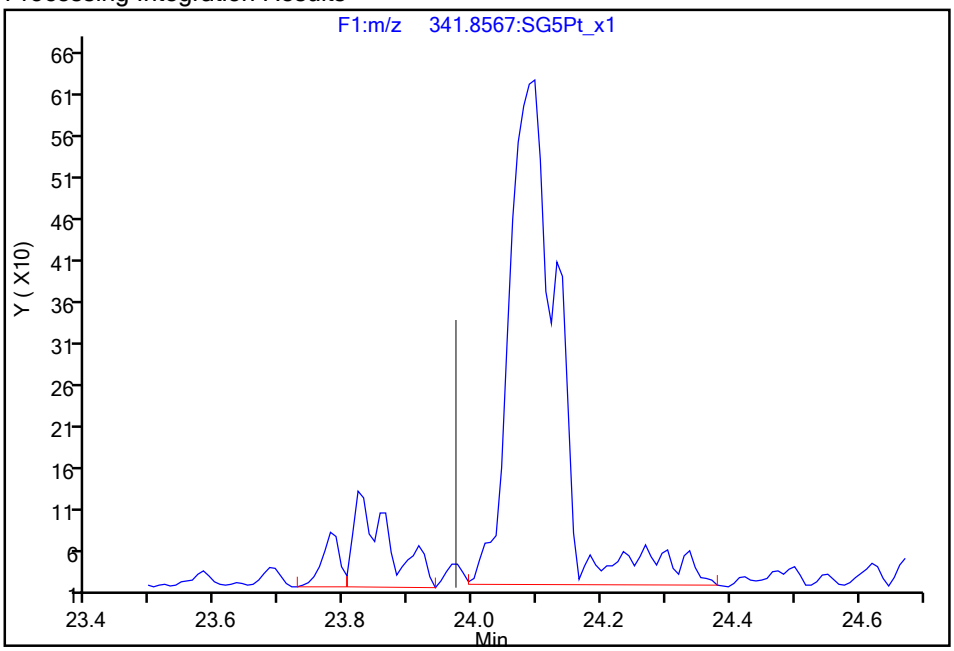

Manual Integration Results

RT = 24.096 Area = 2885 M

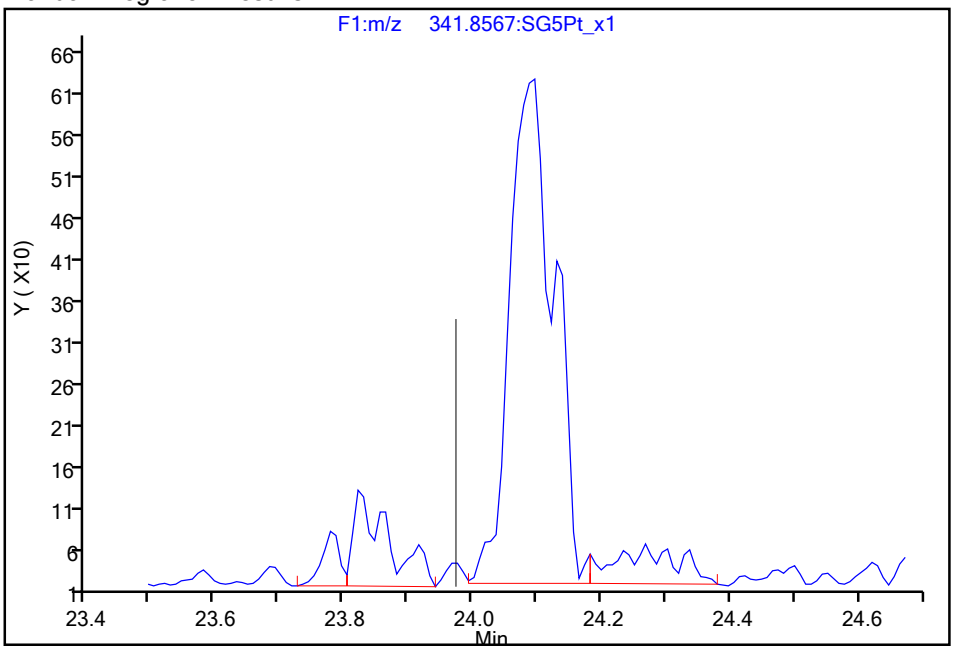

Reviewer: dadunj, 23-Aug-2021 09:46:19

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 35.90
Area: 27971
Amount: 10.323319
Amount Units: pg/ul

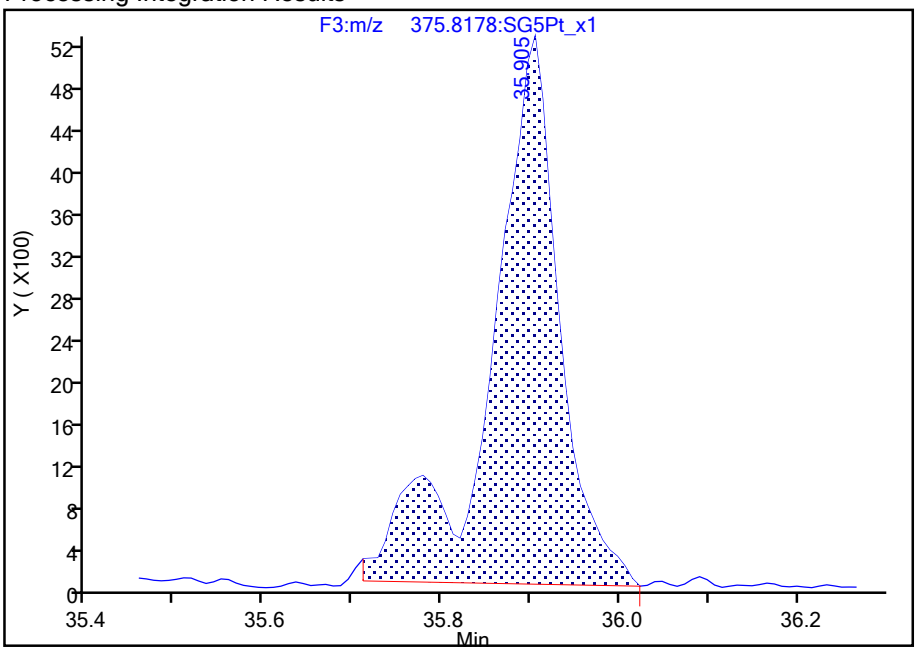

Manual Integration Results

RT: 35.90
Area: 23742
Amount: 9.521992
Amount Units: pg/ul

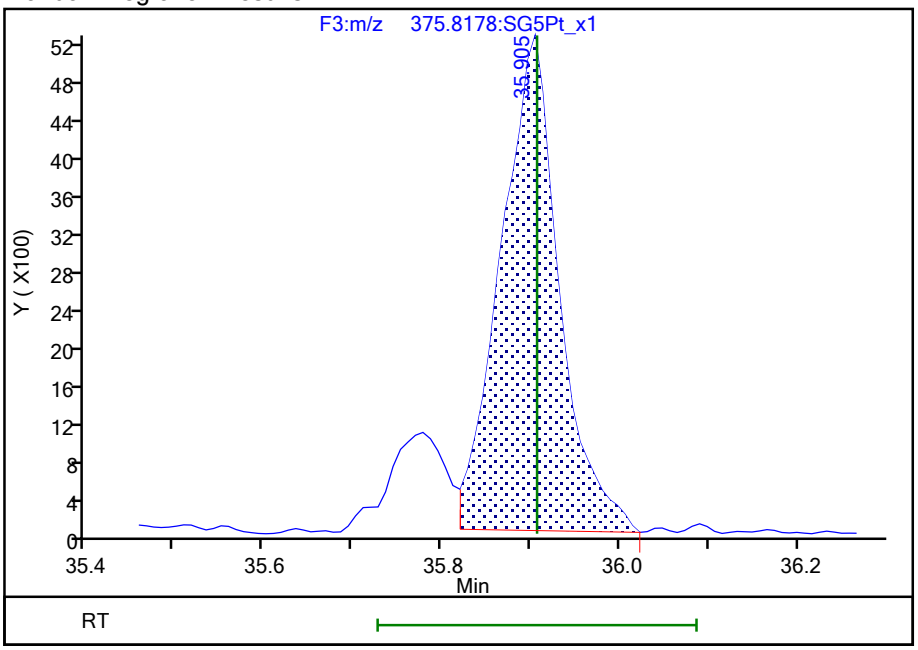

Reviewer: dadunj, 23-Aug-2021 09:46:45

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.91
Area: 31599
Amount: 10.323319
Amount Units: pg/ul

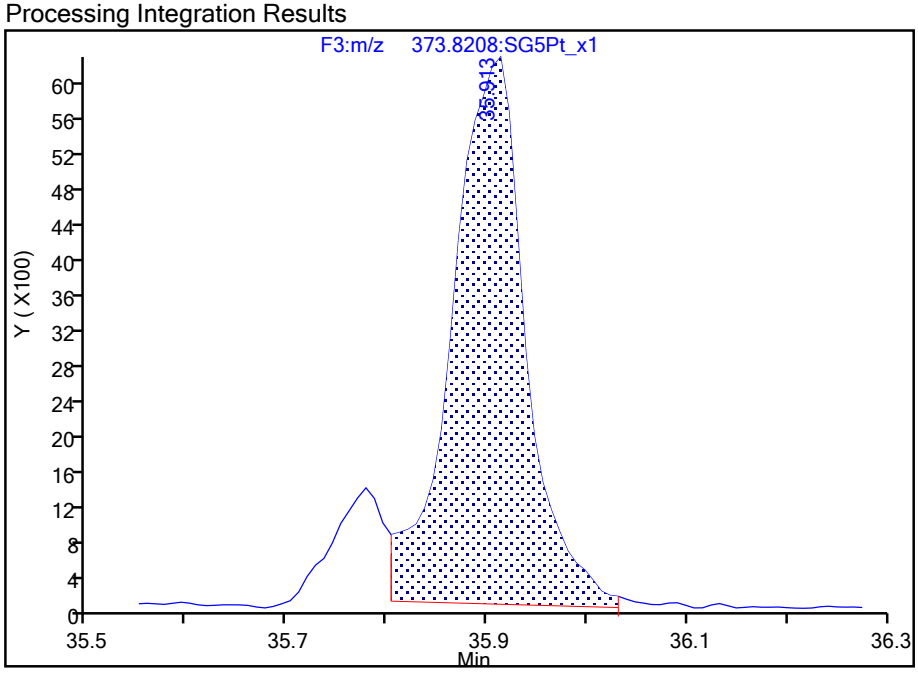

Manual Integration Results

RT: 35.91
Area: 31204
Amount: 9.521992
Amount Units: pg/ul

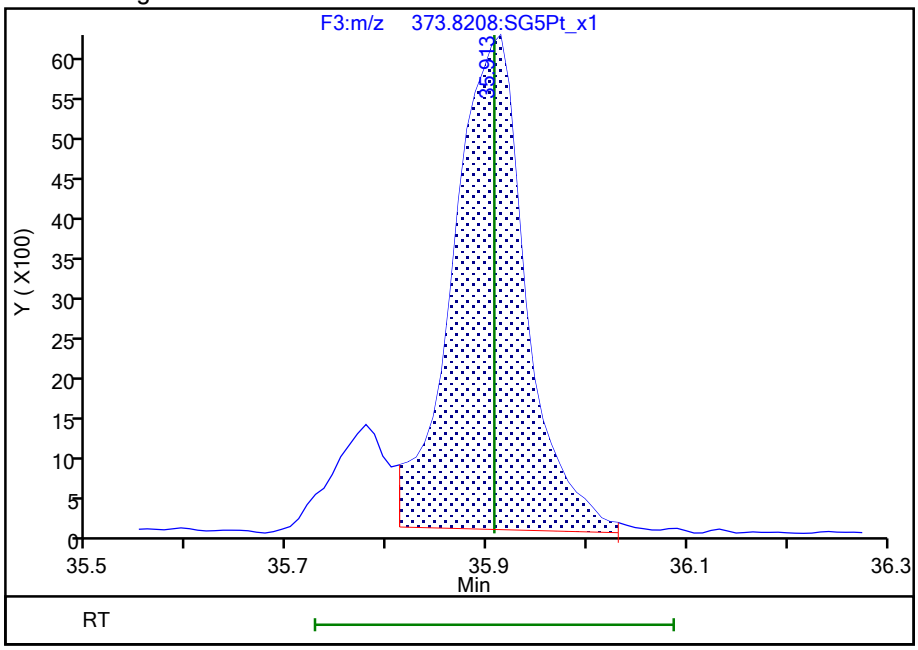

Reviewer: dadunj, 23-Aug-2021 09:46:48

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.79
Area: 29086
Amount: 8.959814
Amount Units: pg/ul

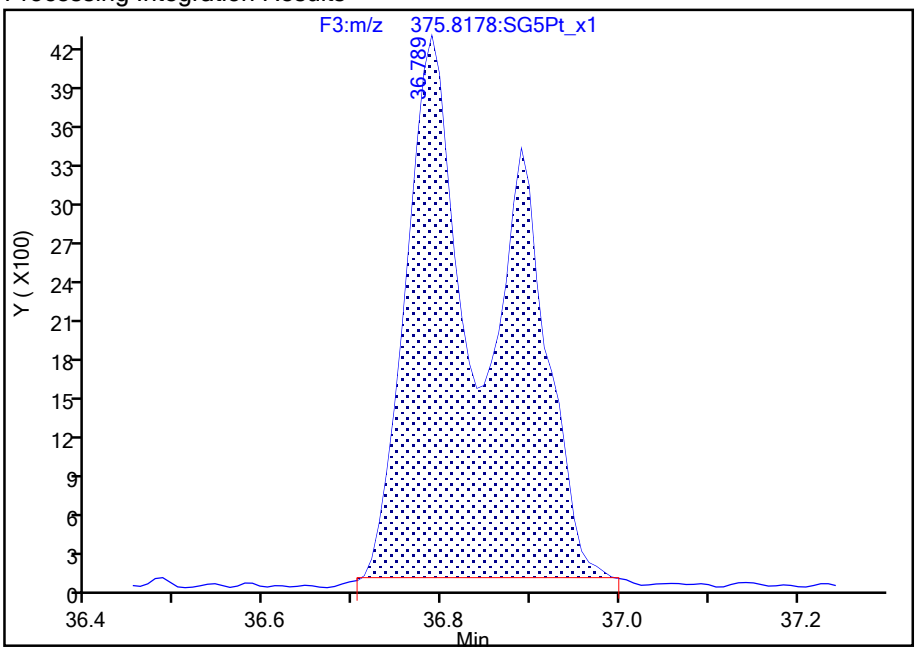

Manual Integration Results

RT: 36.79
Area: 16134
Amount: 6.635842
Amount Units: pg/ul

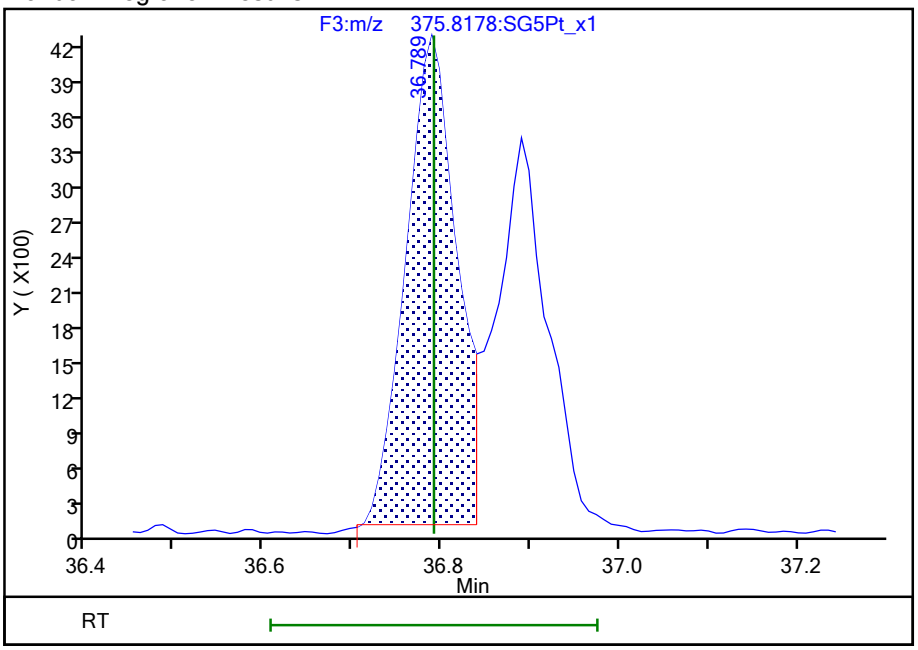

Reviewer: dadunj, 23-Aug-2021 09:46:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 35.779 Area = 4871

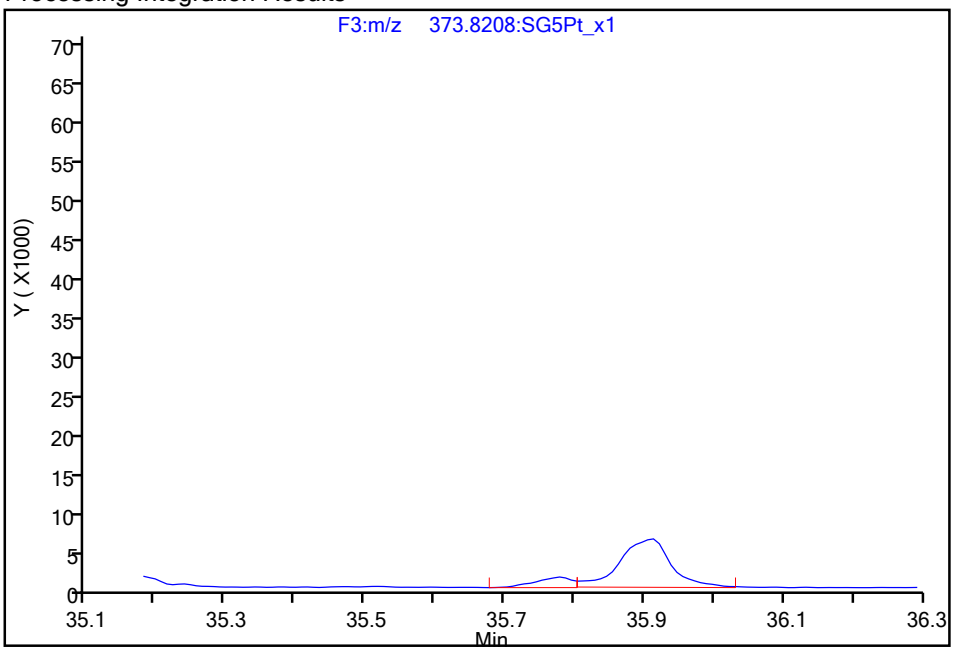

Manual Integration Results

RT = 35.779 Area = 4871

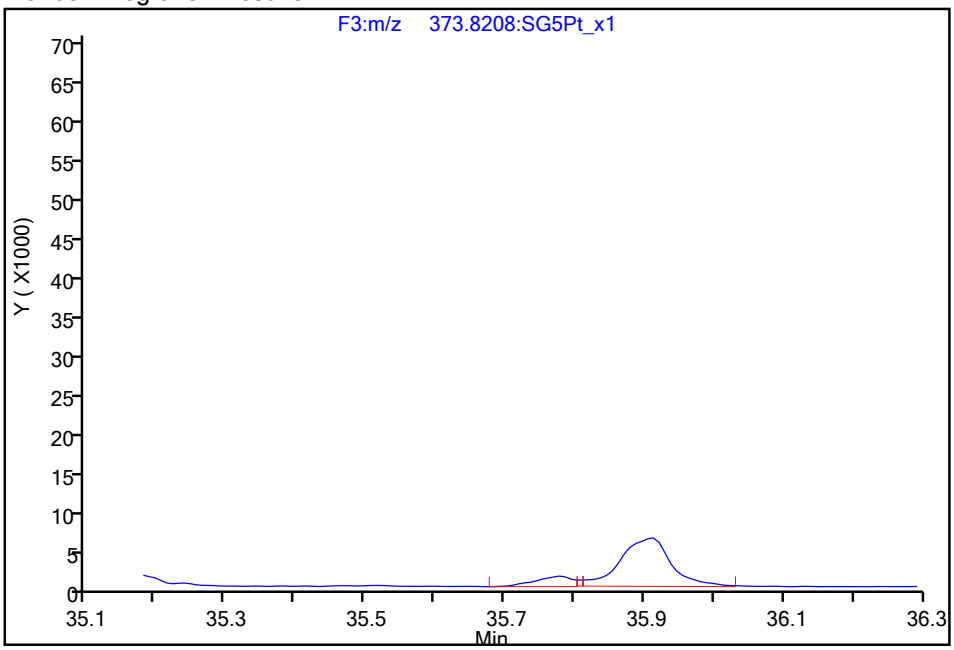

Reviewer: dadunj, 23-Aug-2021 09:47:02

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 36.889 Area = 18936

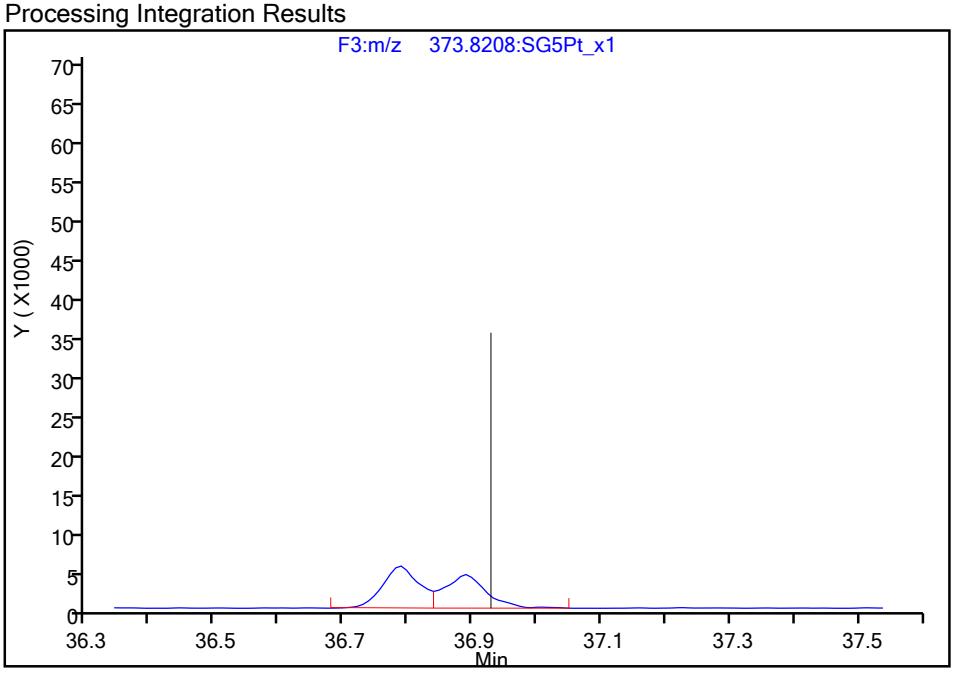

Manual Integration Results

RT = 36.889 Area = 18936

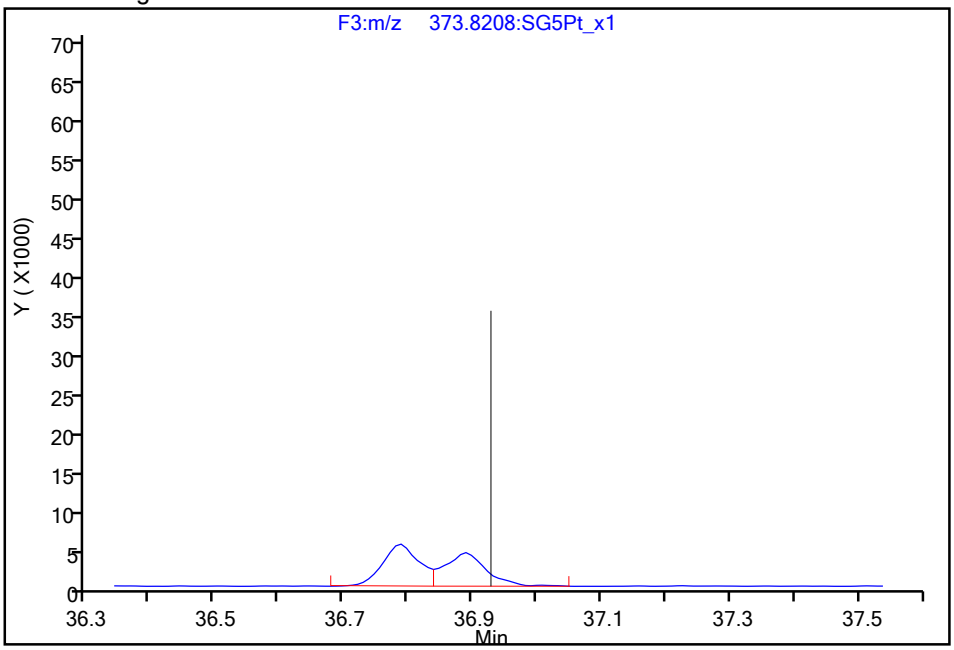

Reviewer: dadunj, 23-Aug-2021 09:47:02

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

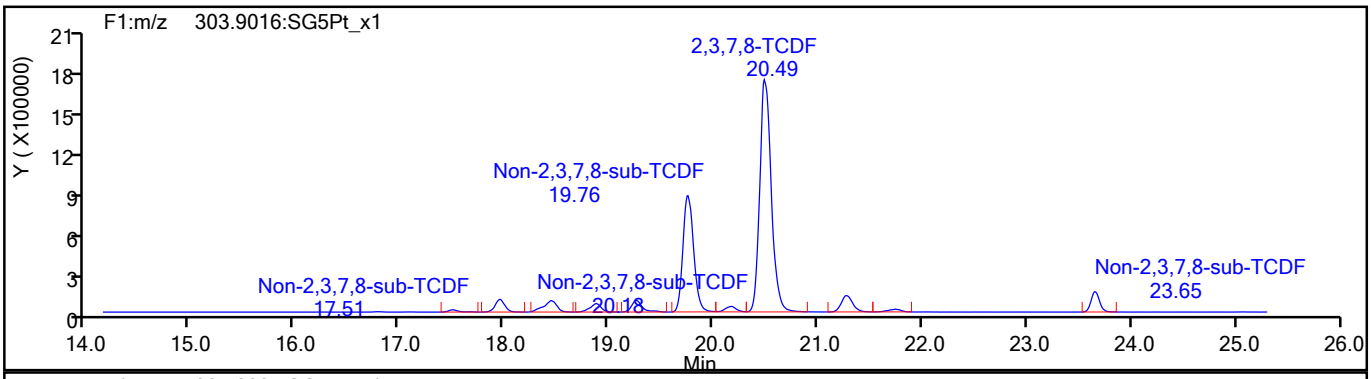

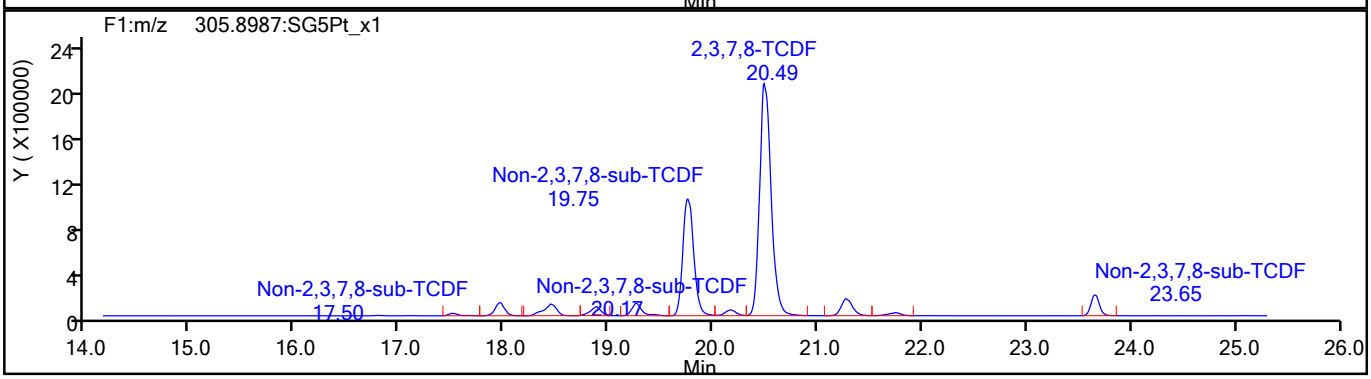

TCDF Standards

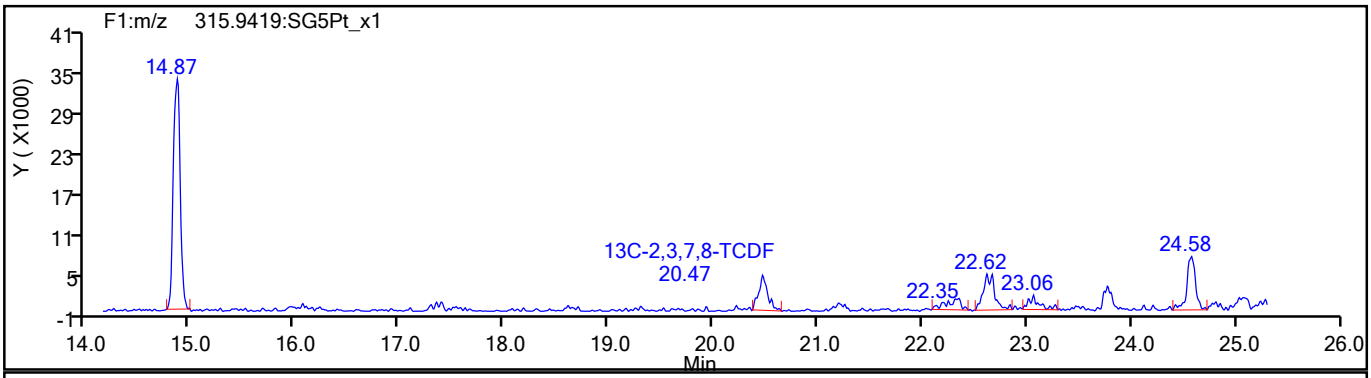

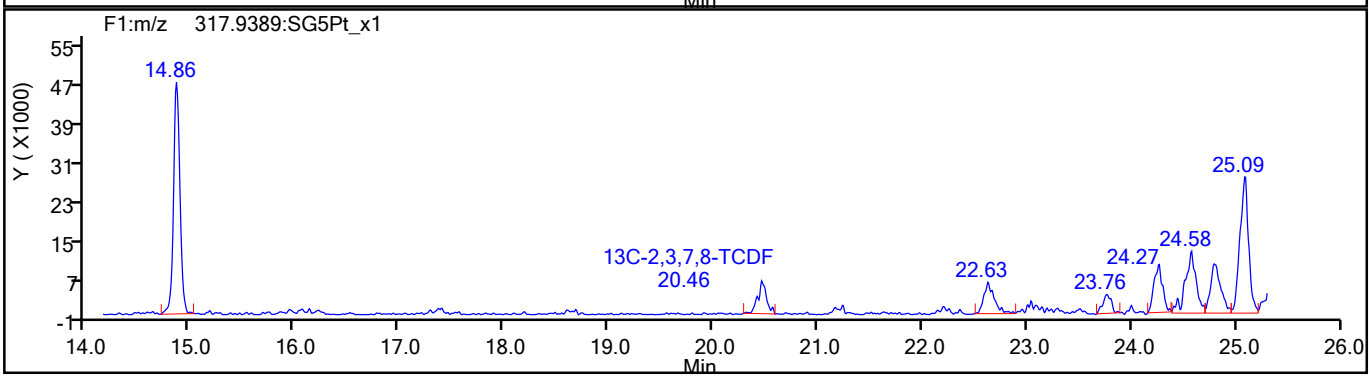

777939

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

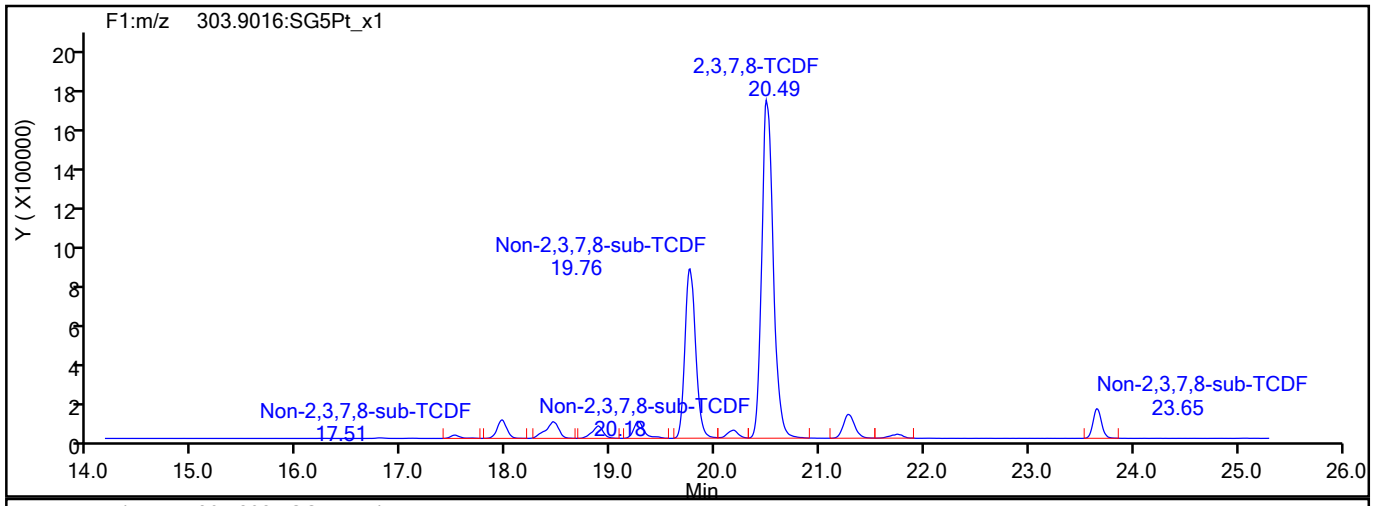

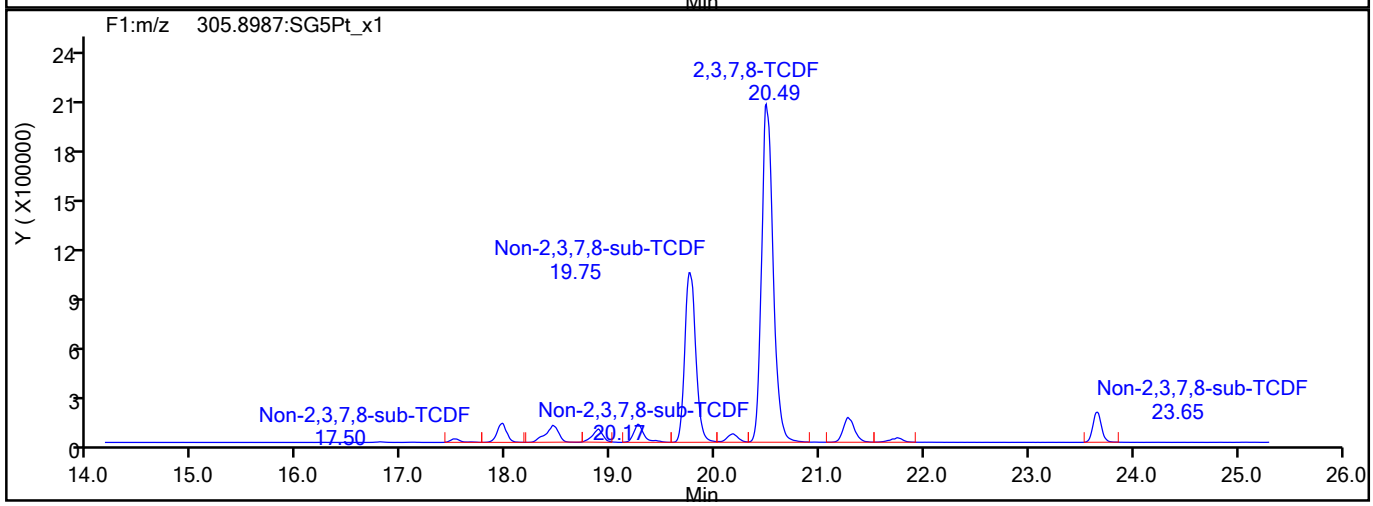

TCDF Interference Mass

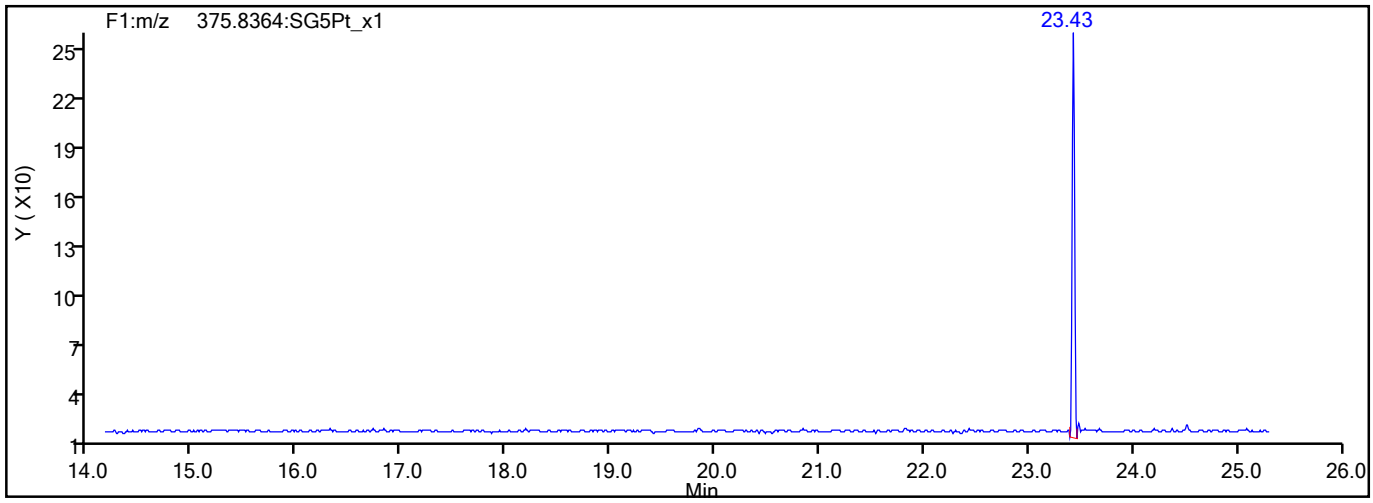

777940

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

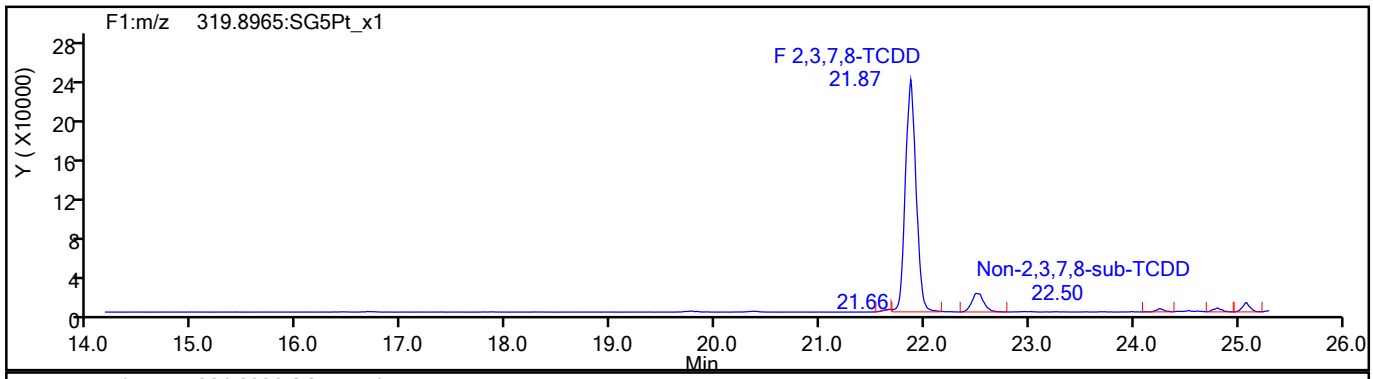

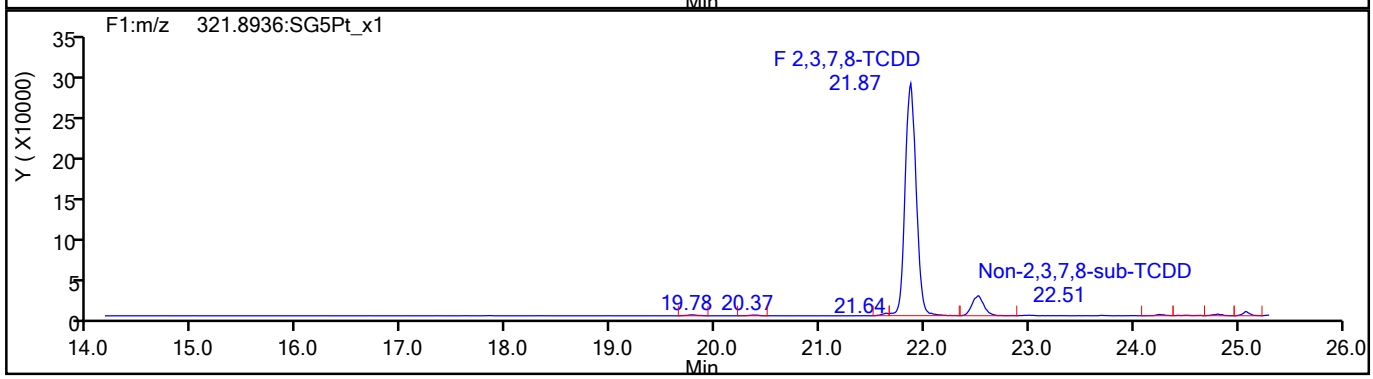

TCDD Standards

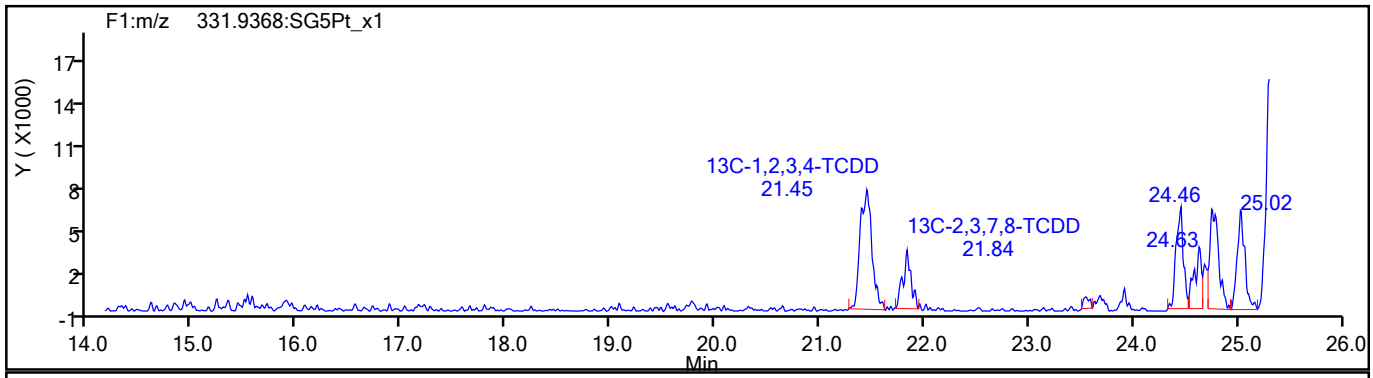

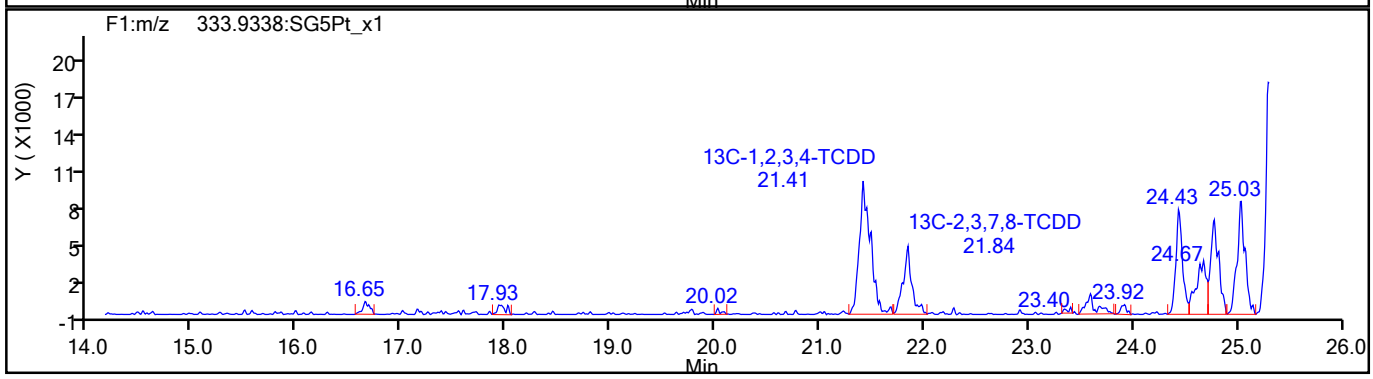

777941

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

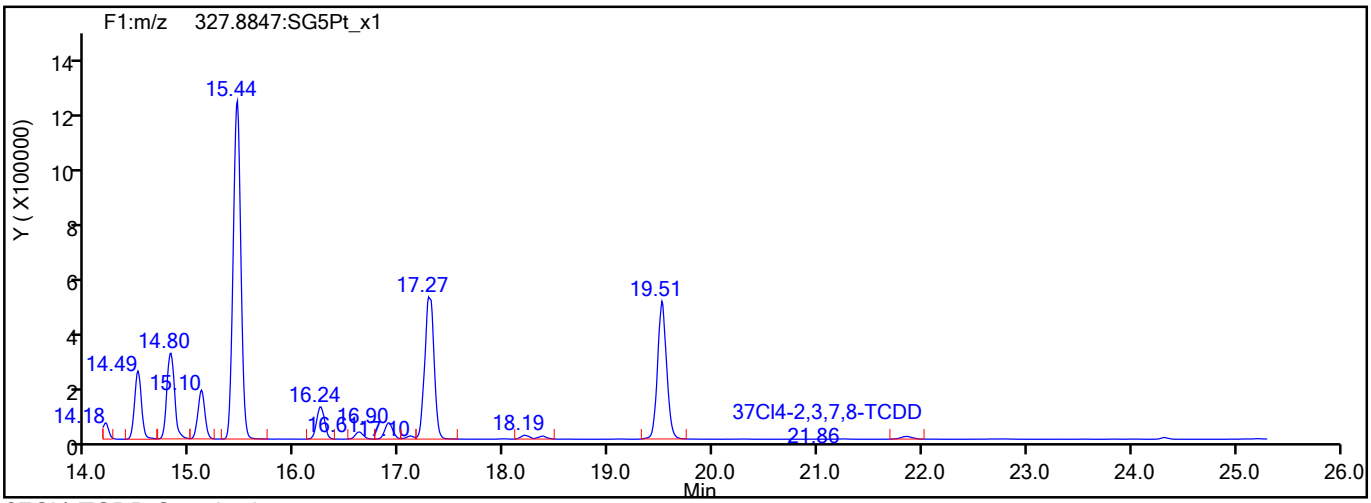

37Cl4-TCDD Standards

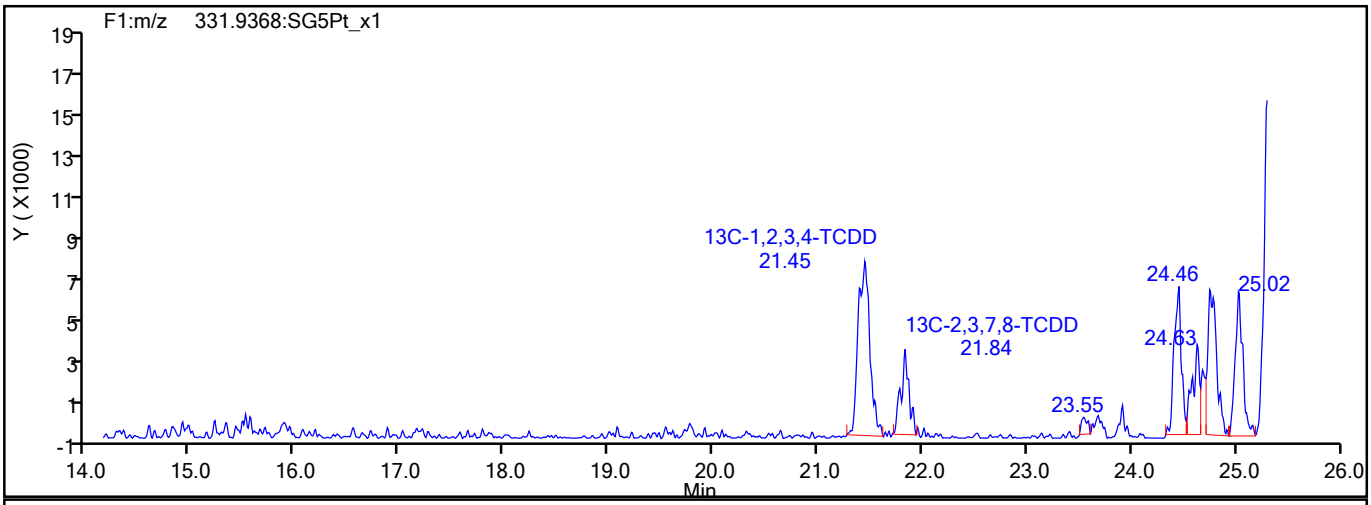

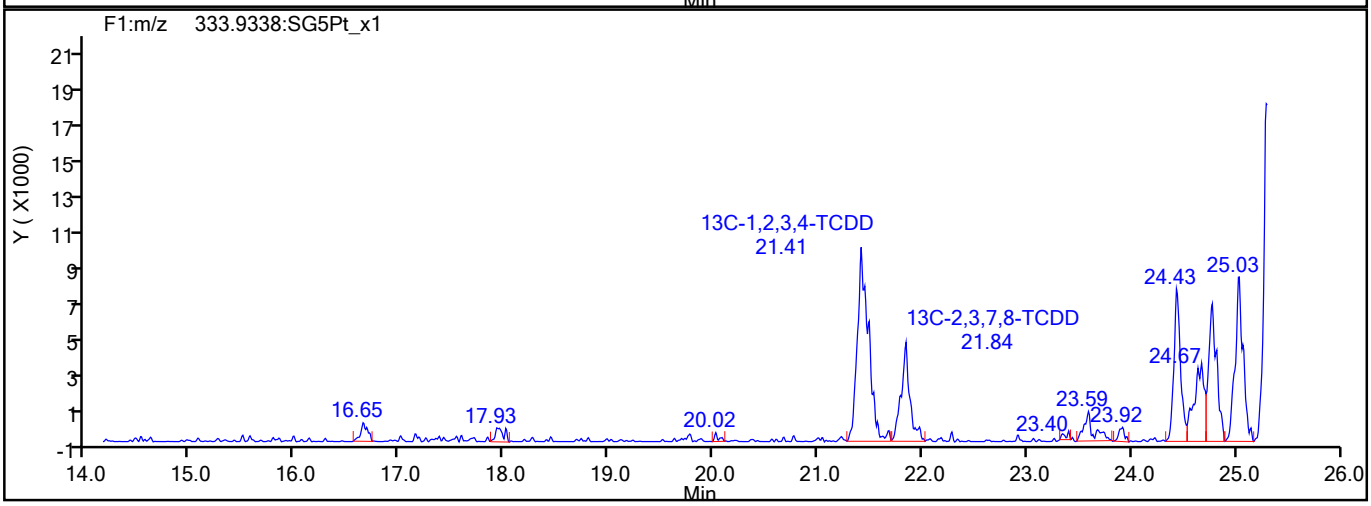

777942

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

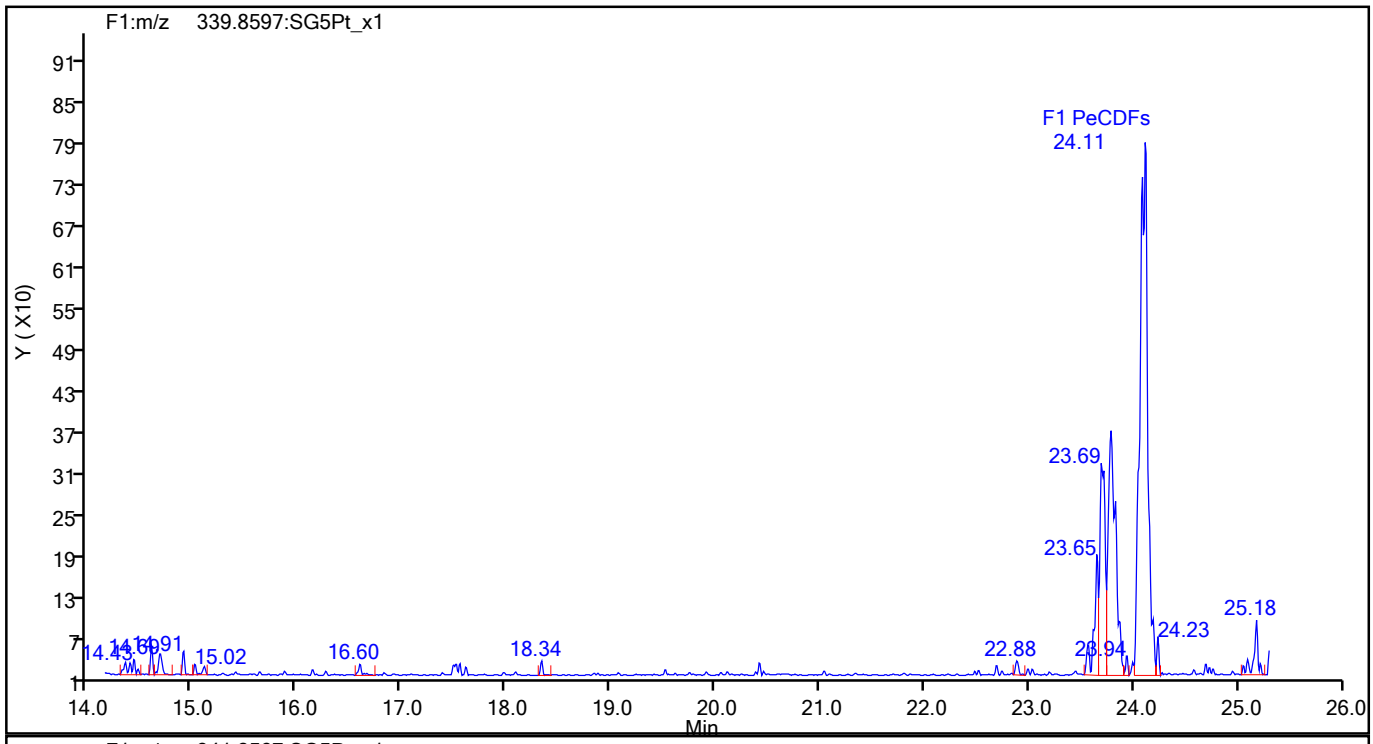

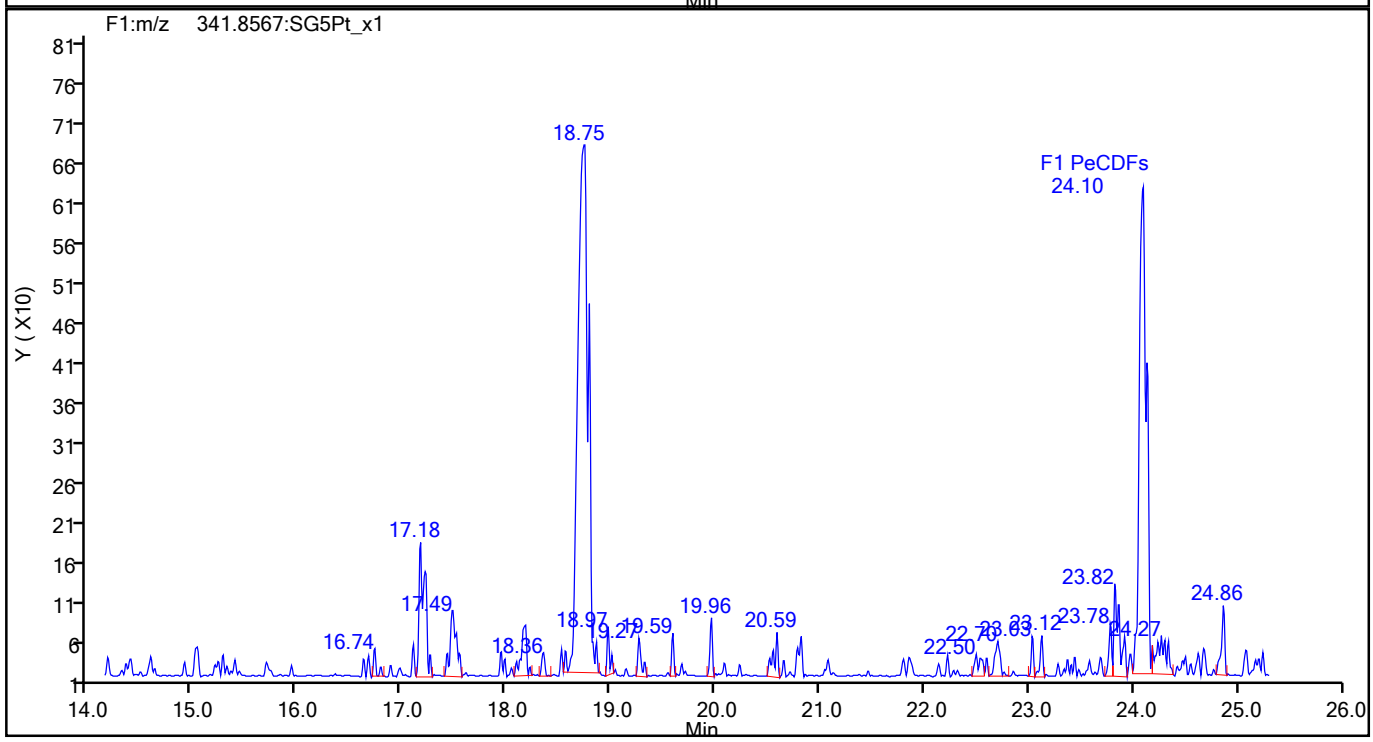

777943

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

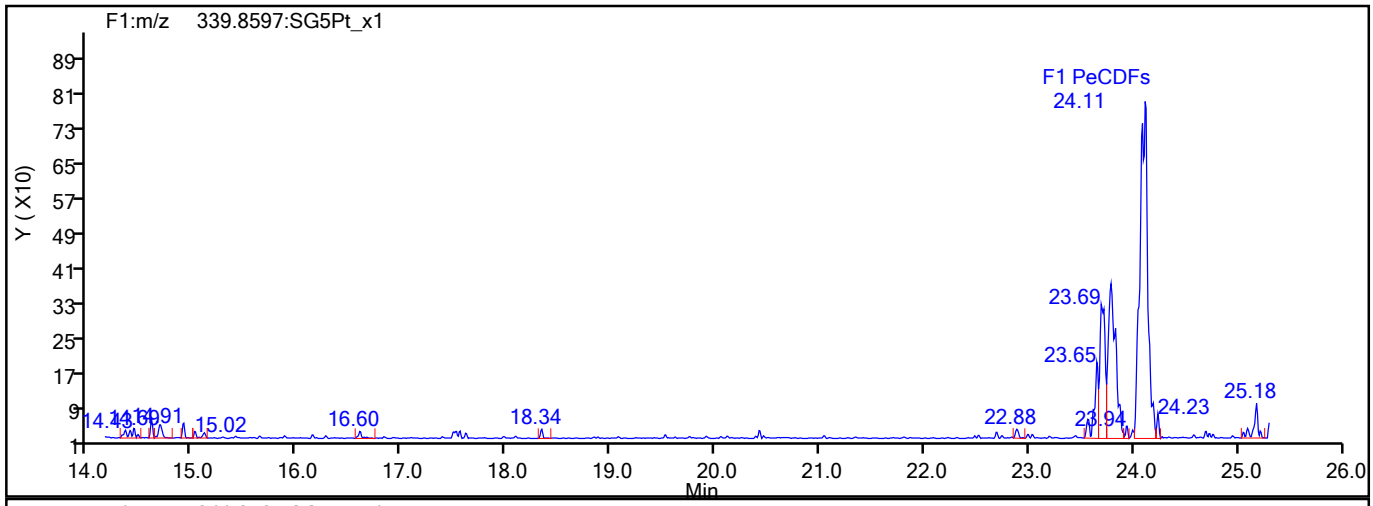

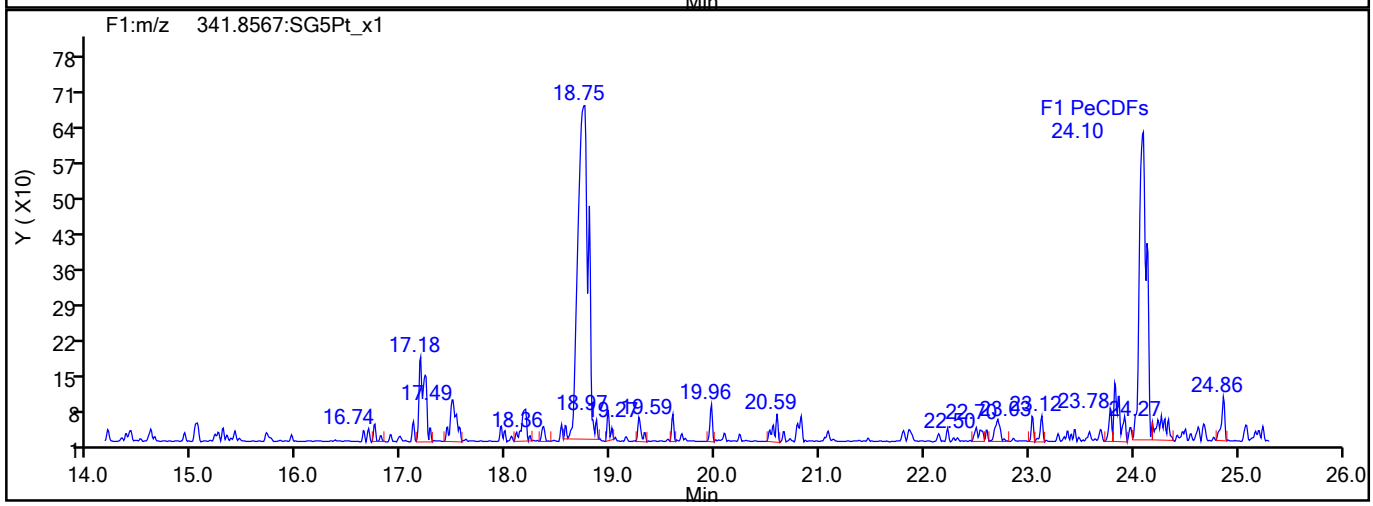

F1 PeCDFs Interference Mass

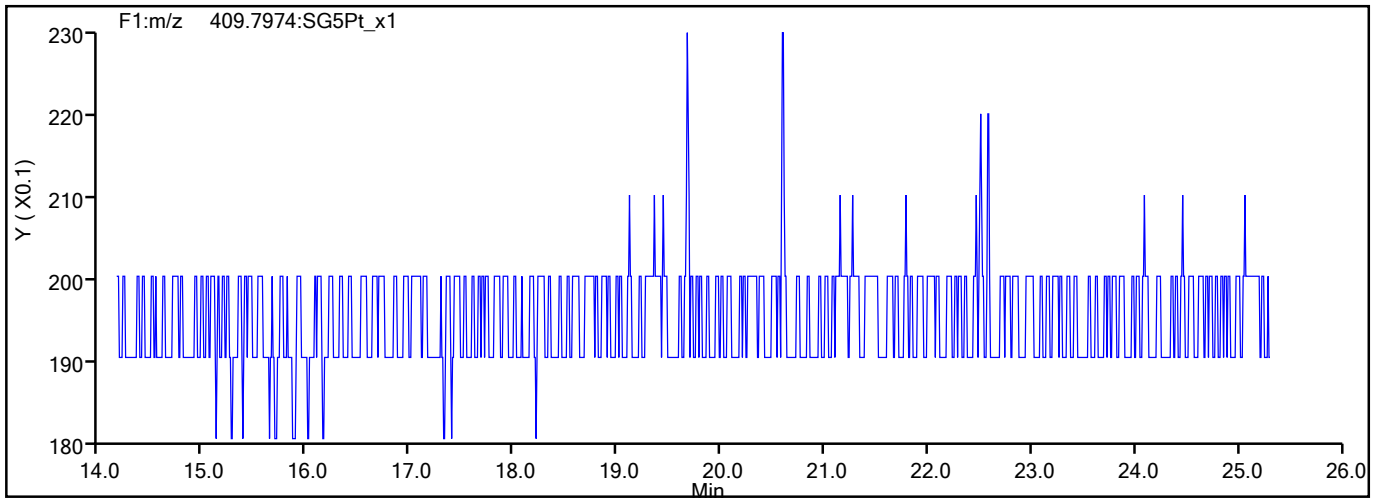

777944

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

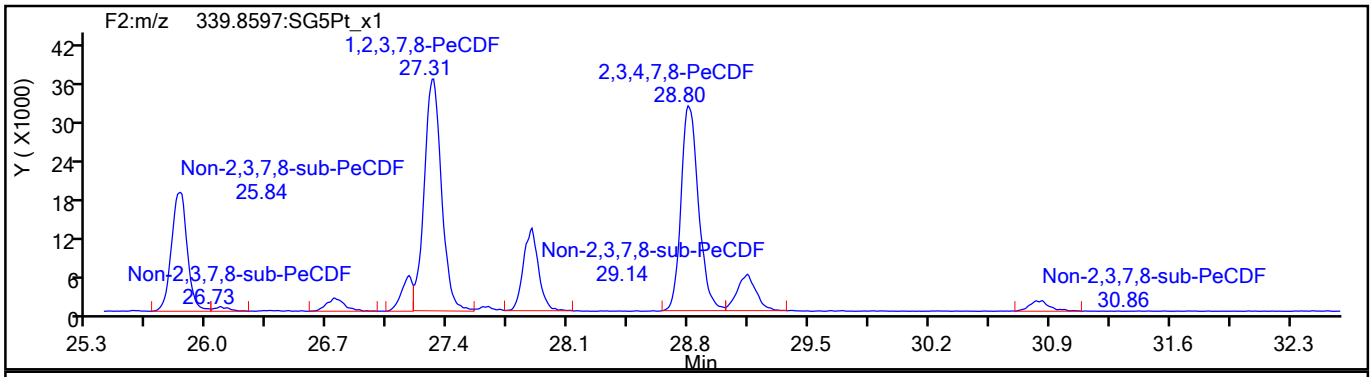

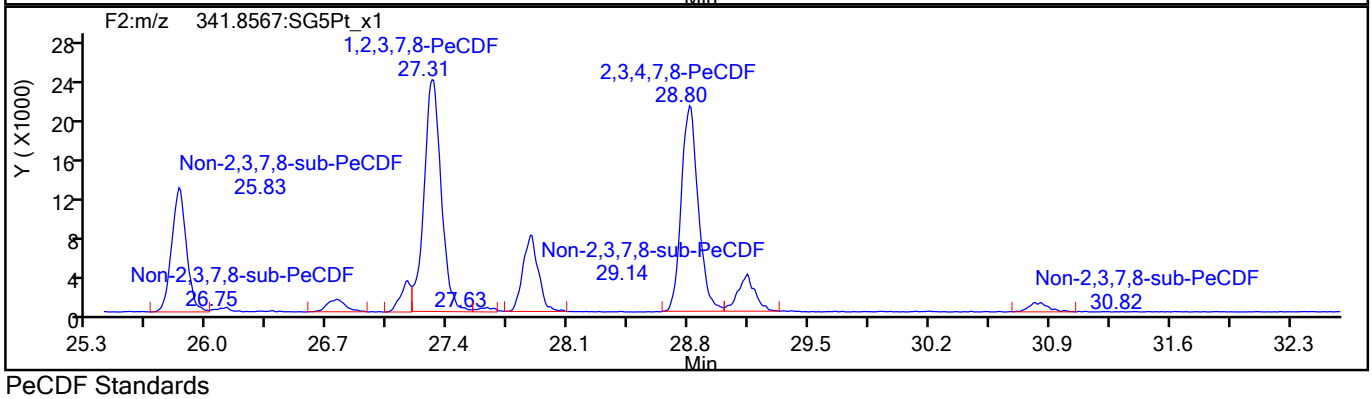

PeCDF Standards

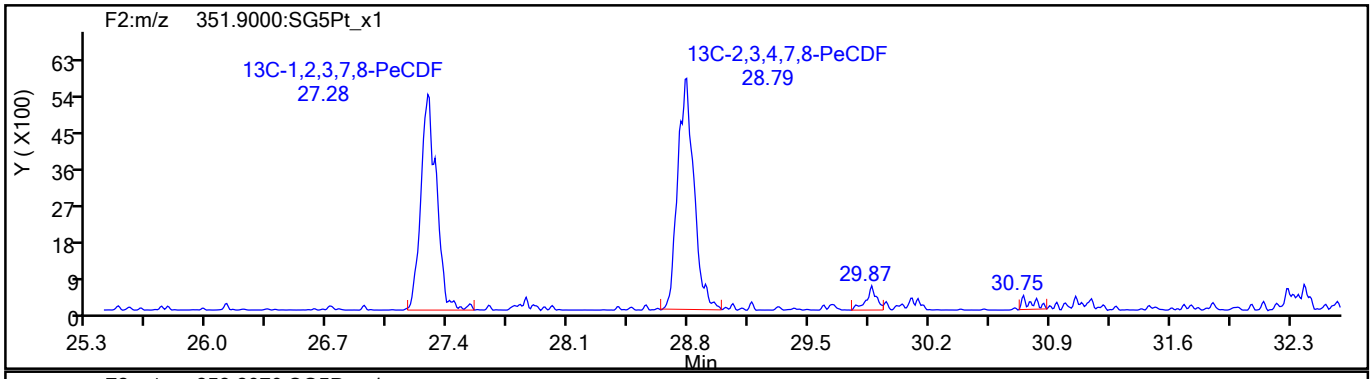

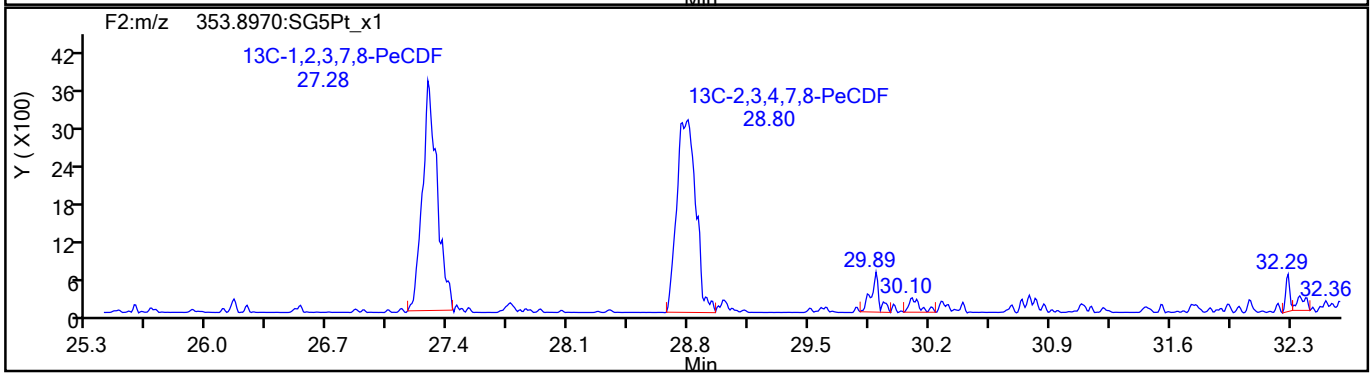

777945

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

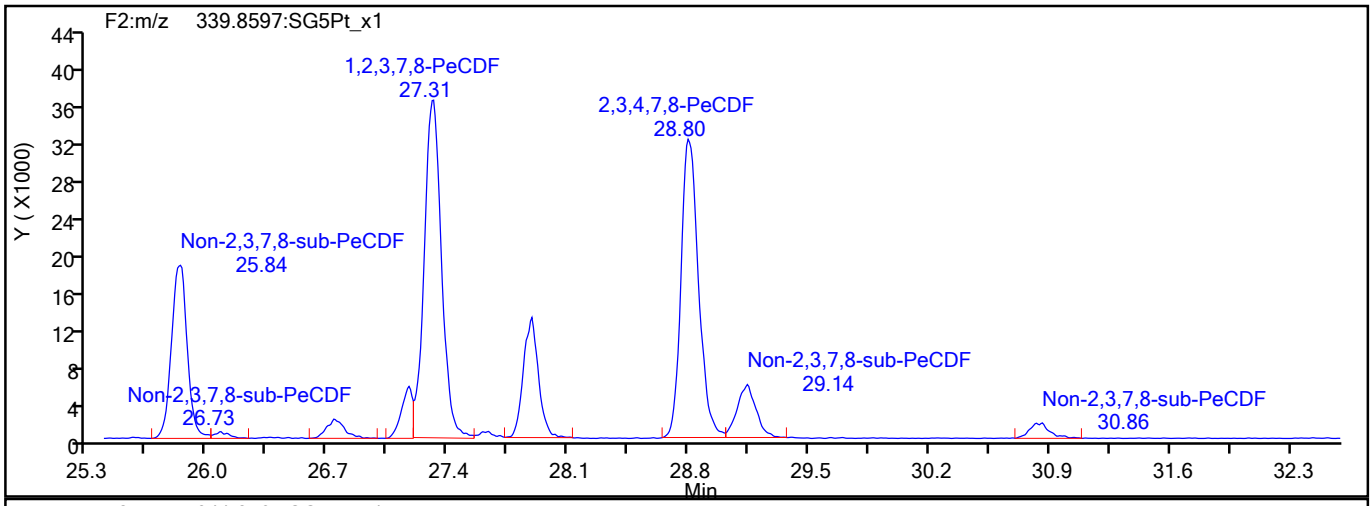

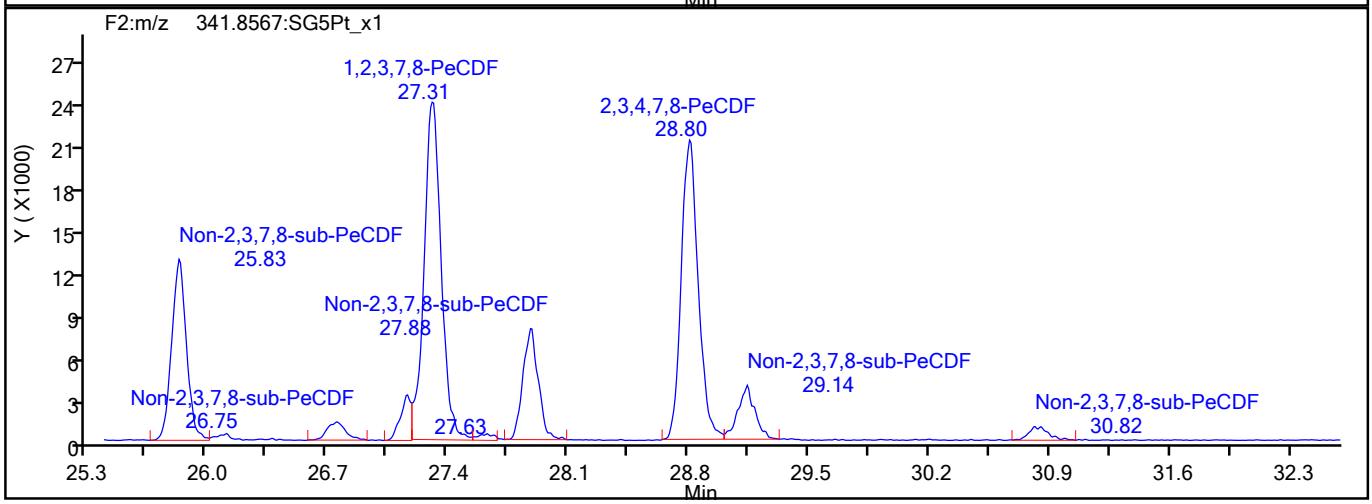

PeCDF Interference Mass

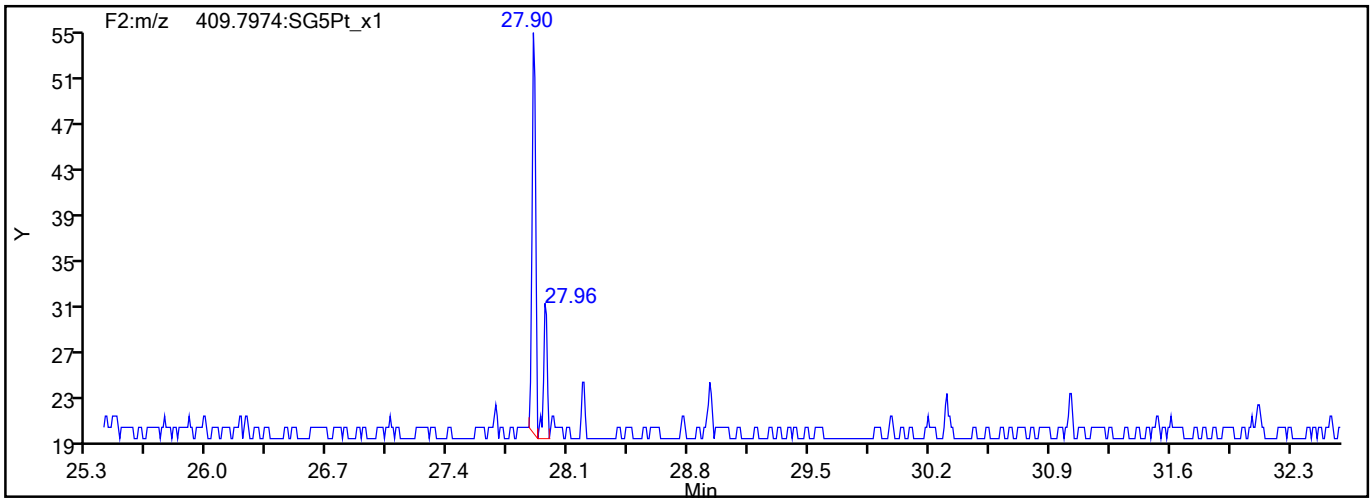

777946

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

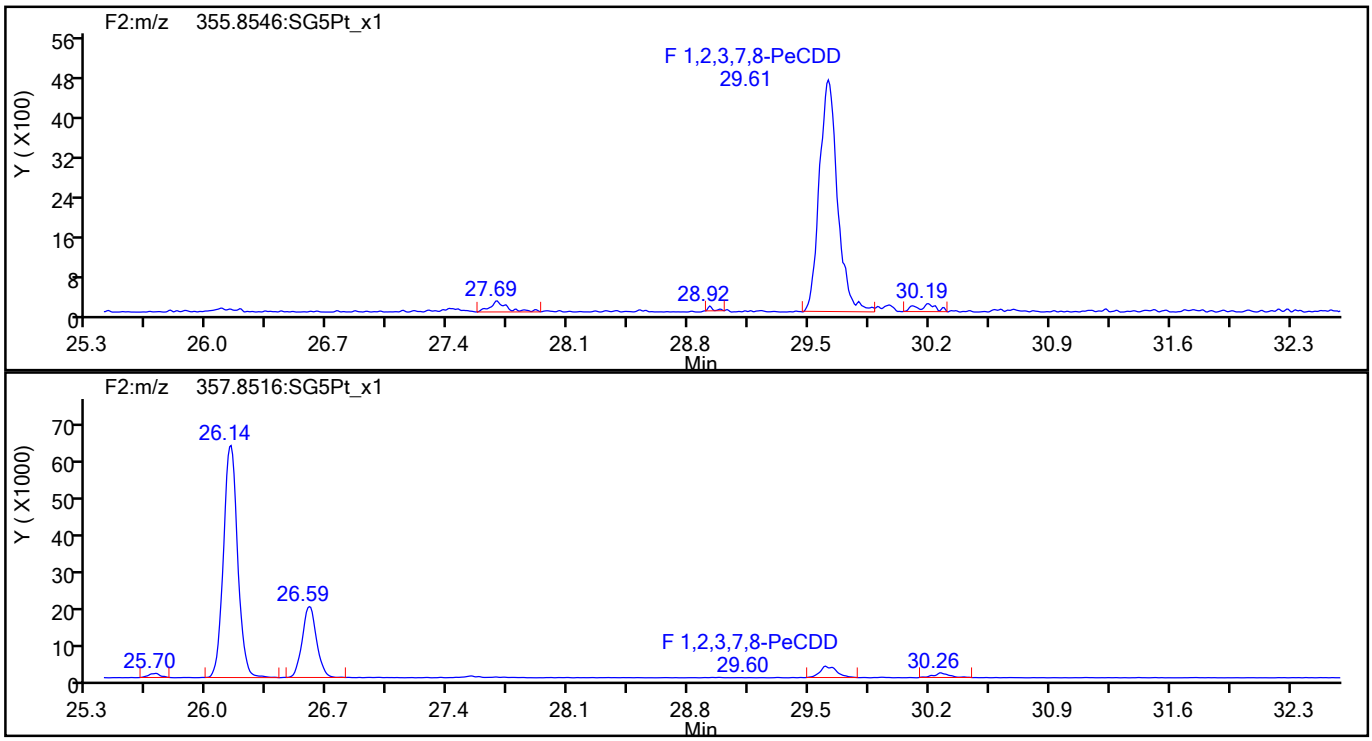

PeCDD Standards

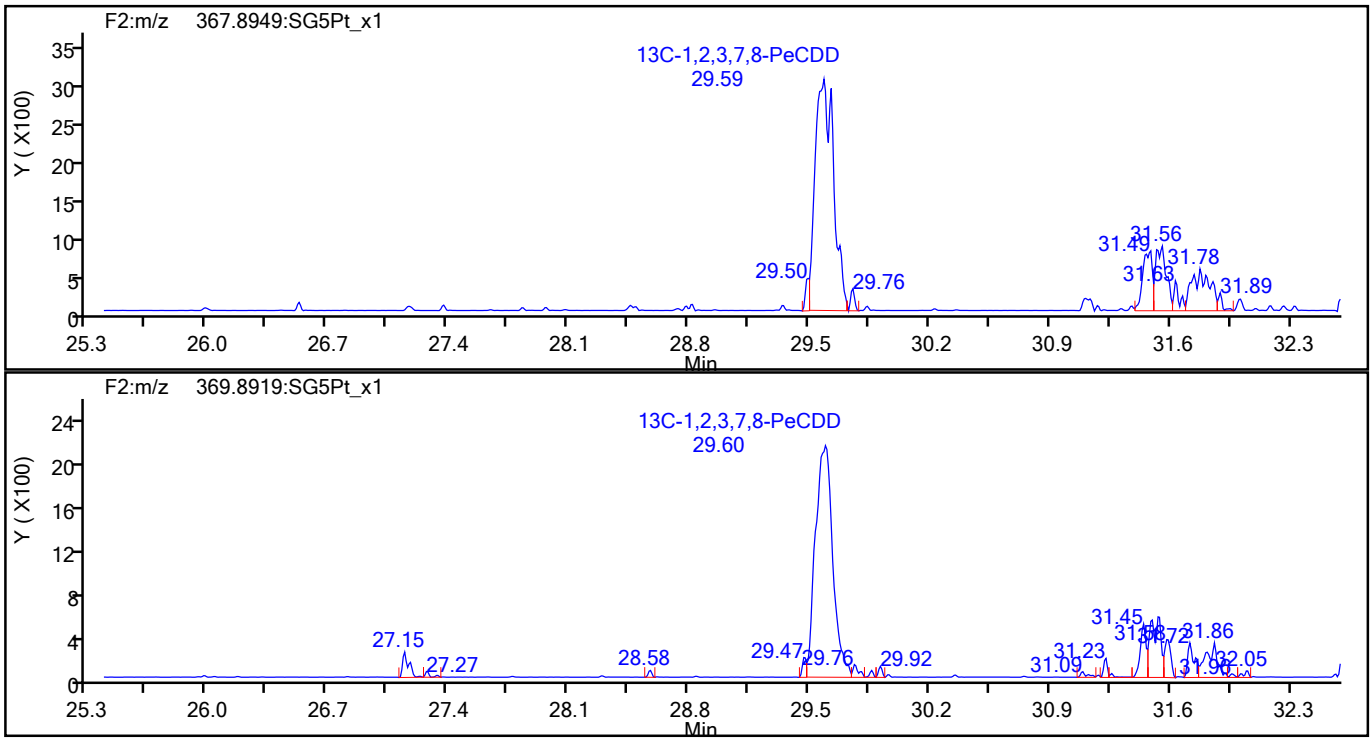

777947

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

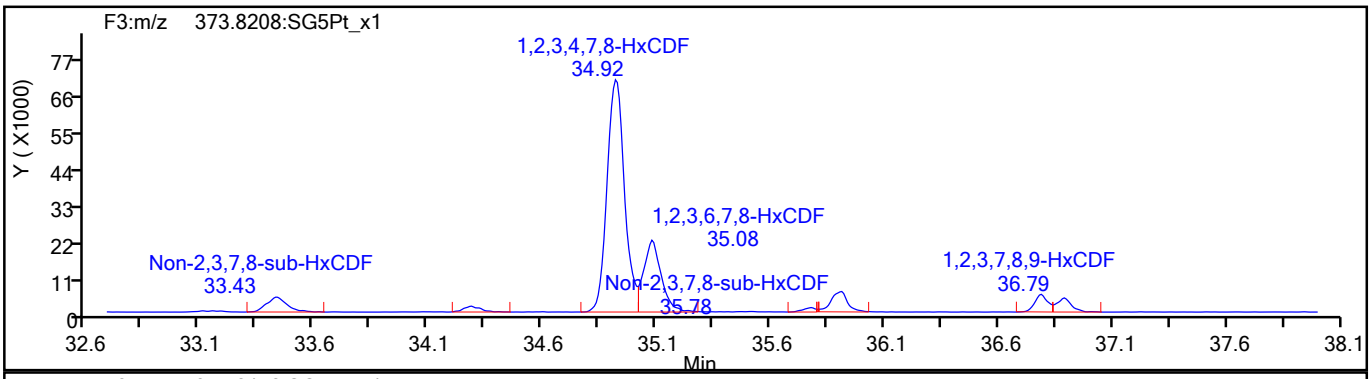

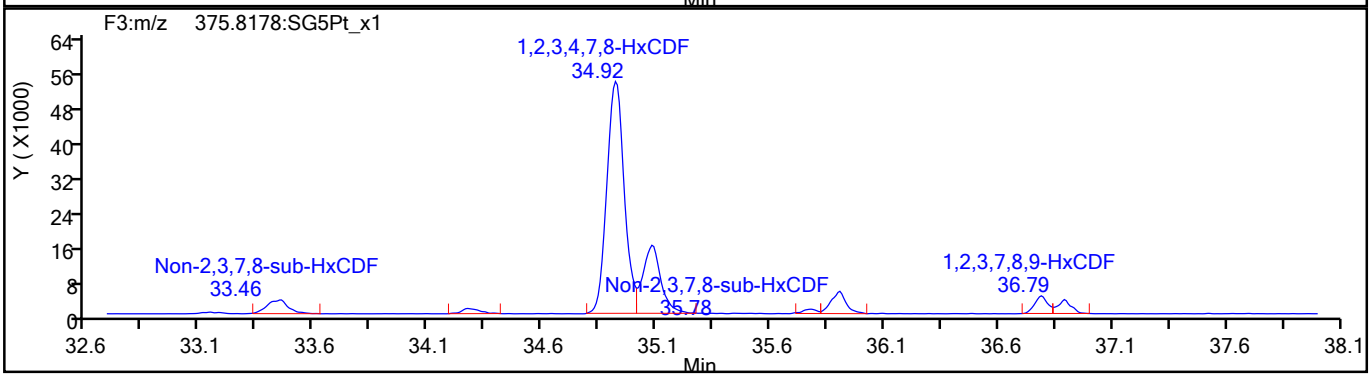

HxCDF Standards

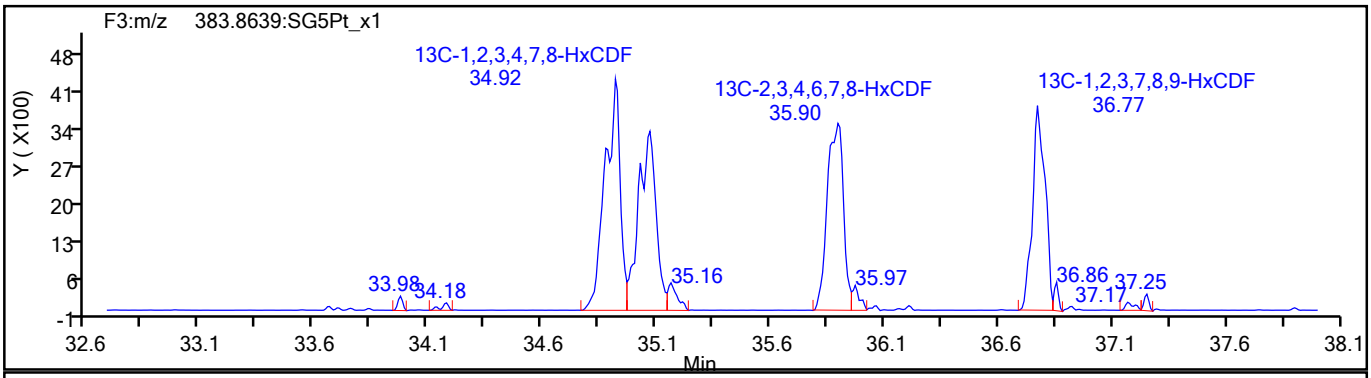

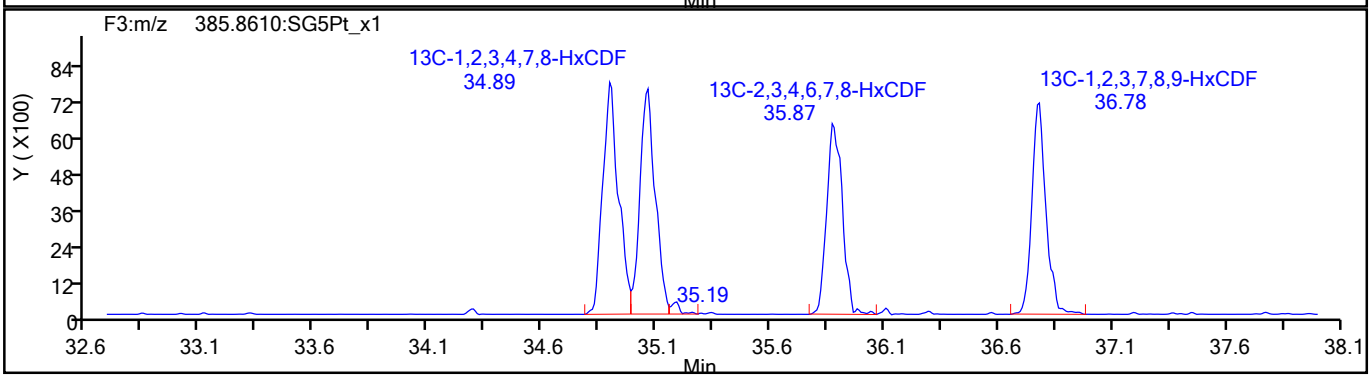

777948

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

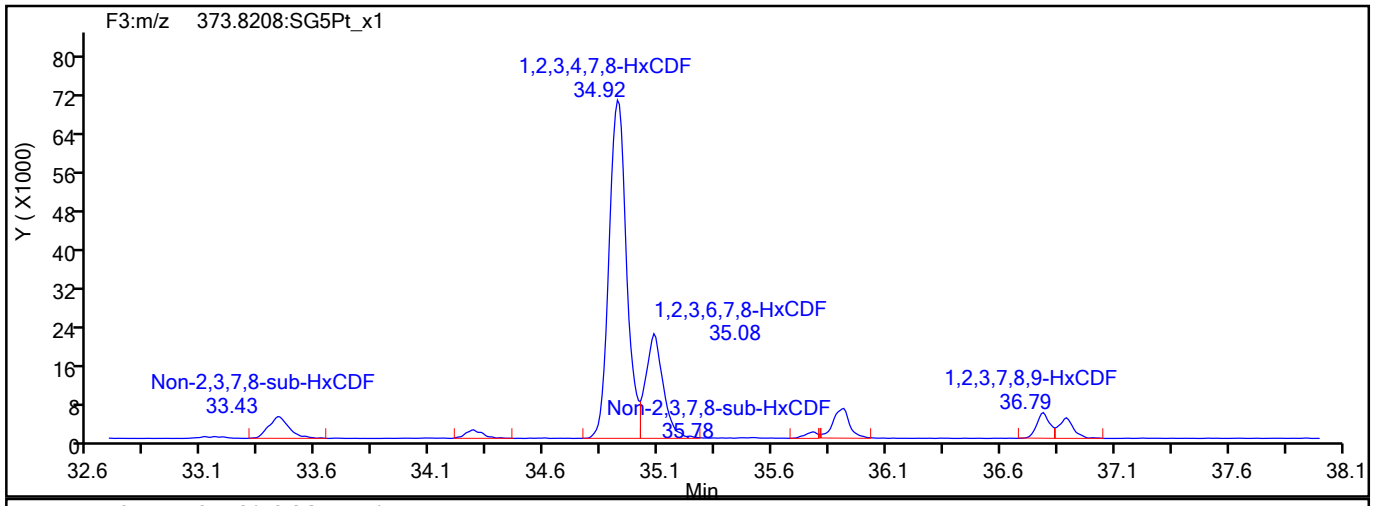

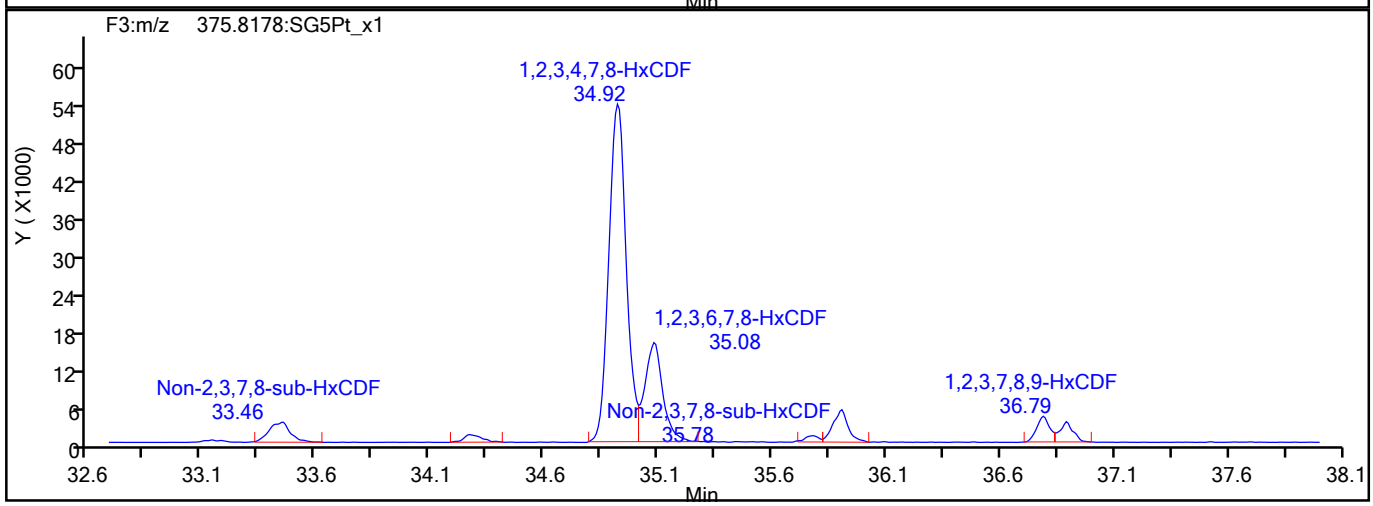

HxCDF Interference Mass

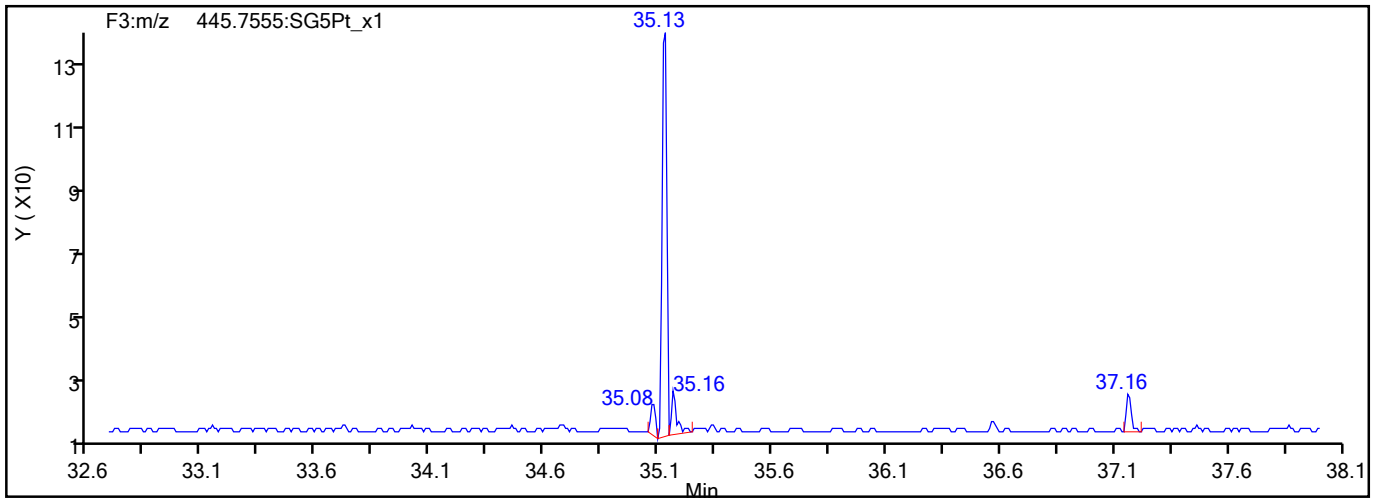

777949

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

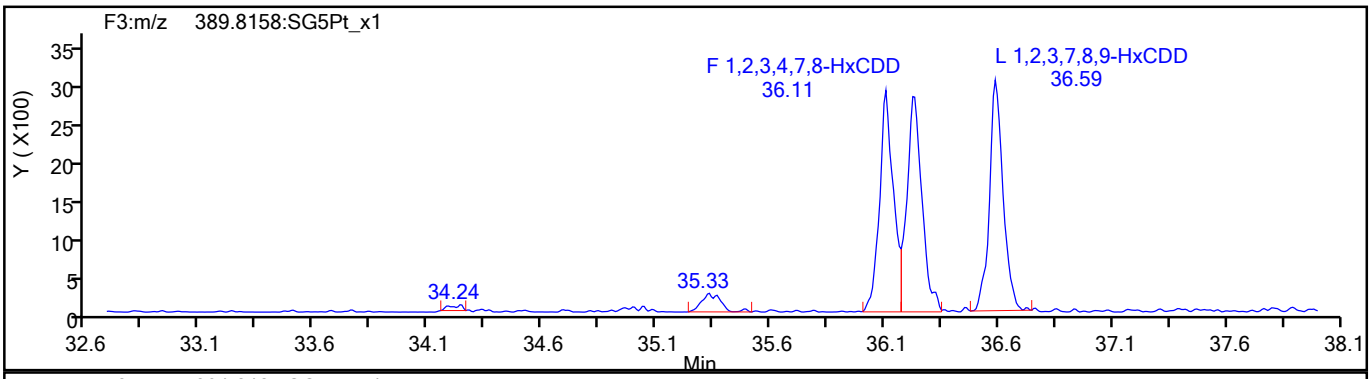

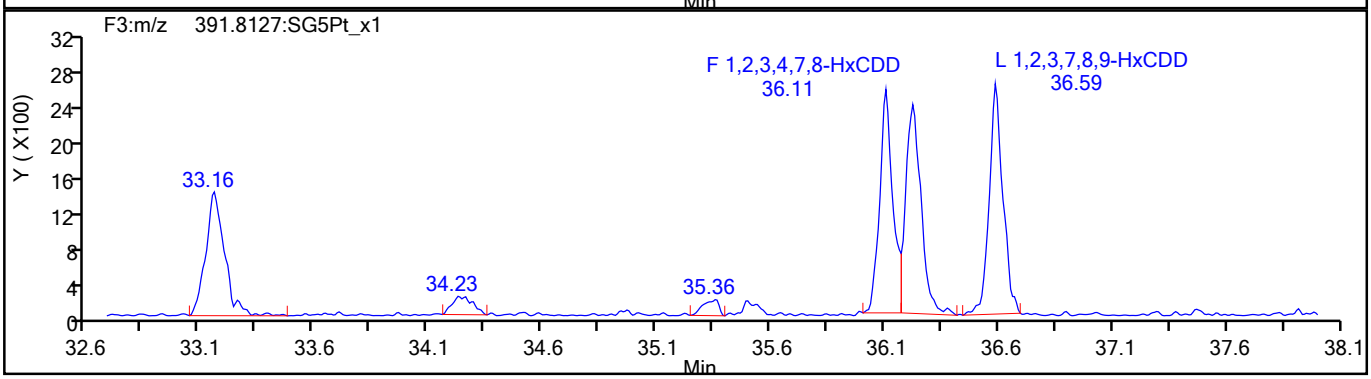

HxCDD Standards

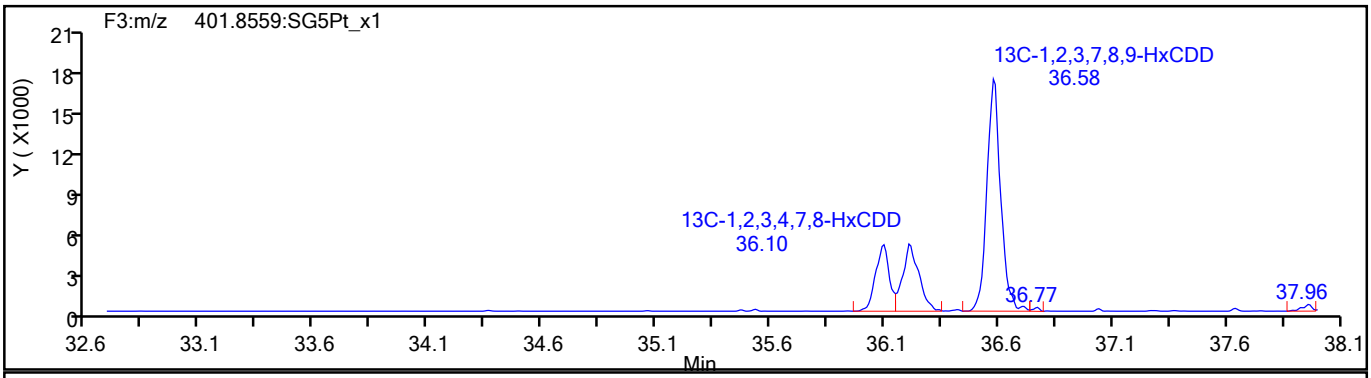

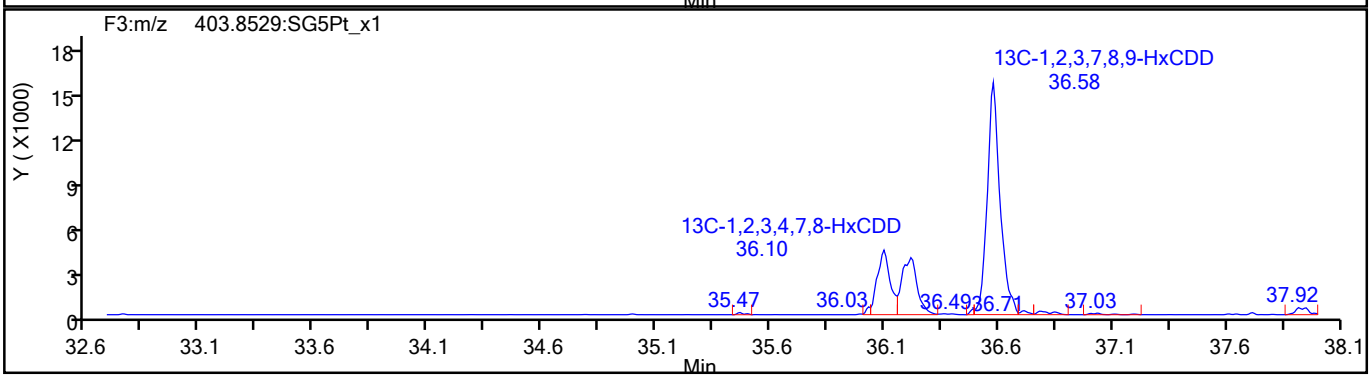

777950

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

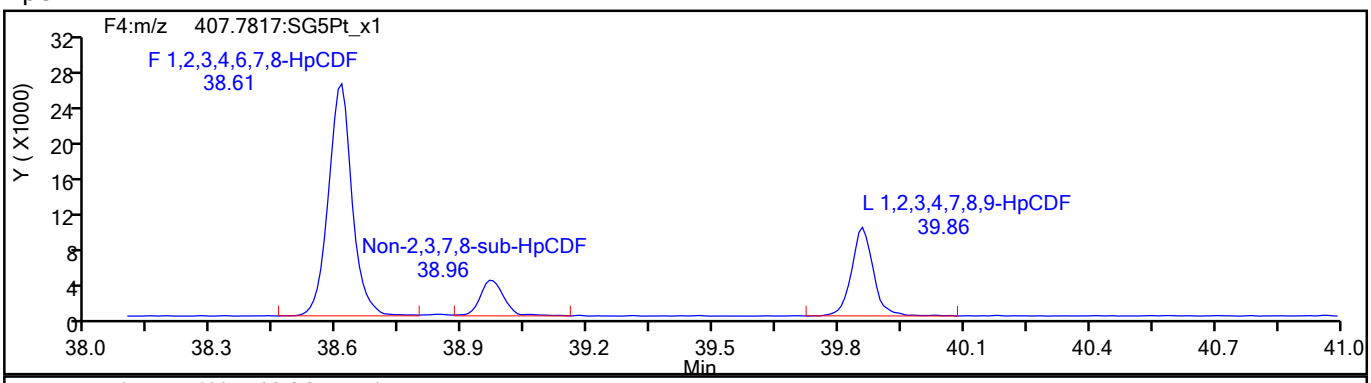

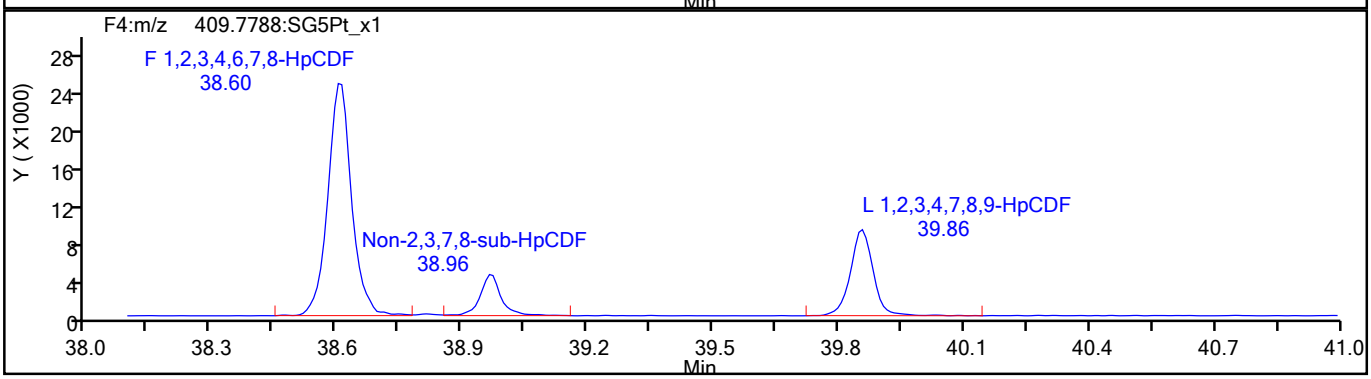

HpCDF Standards

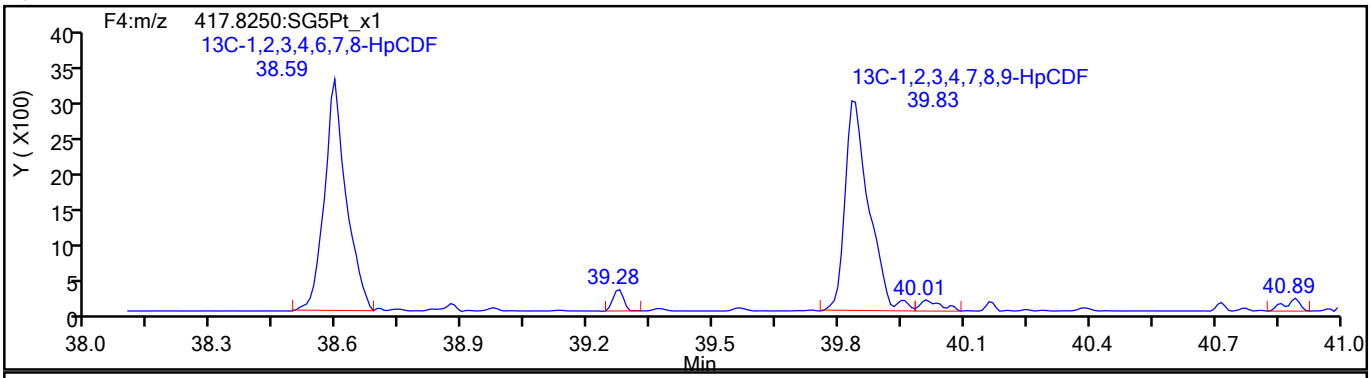

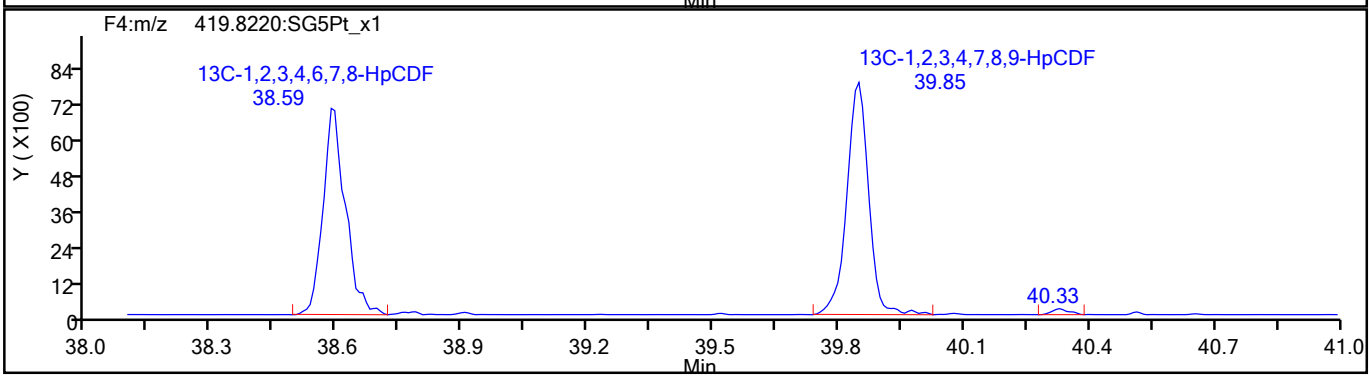

777951

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

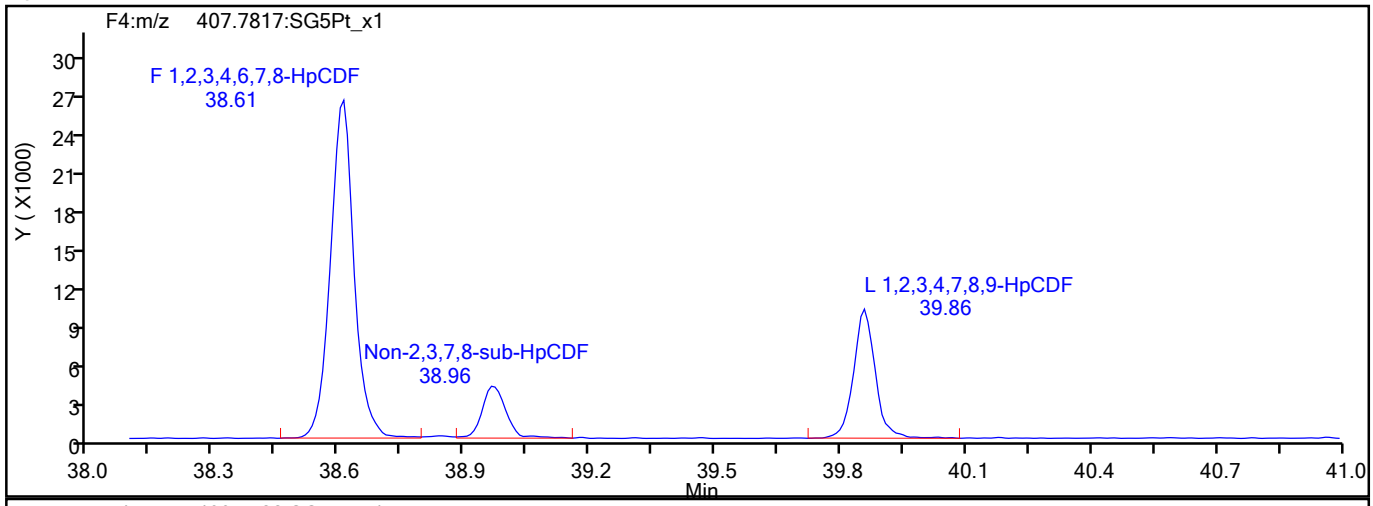

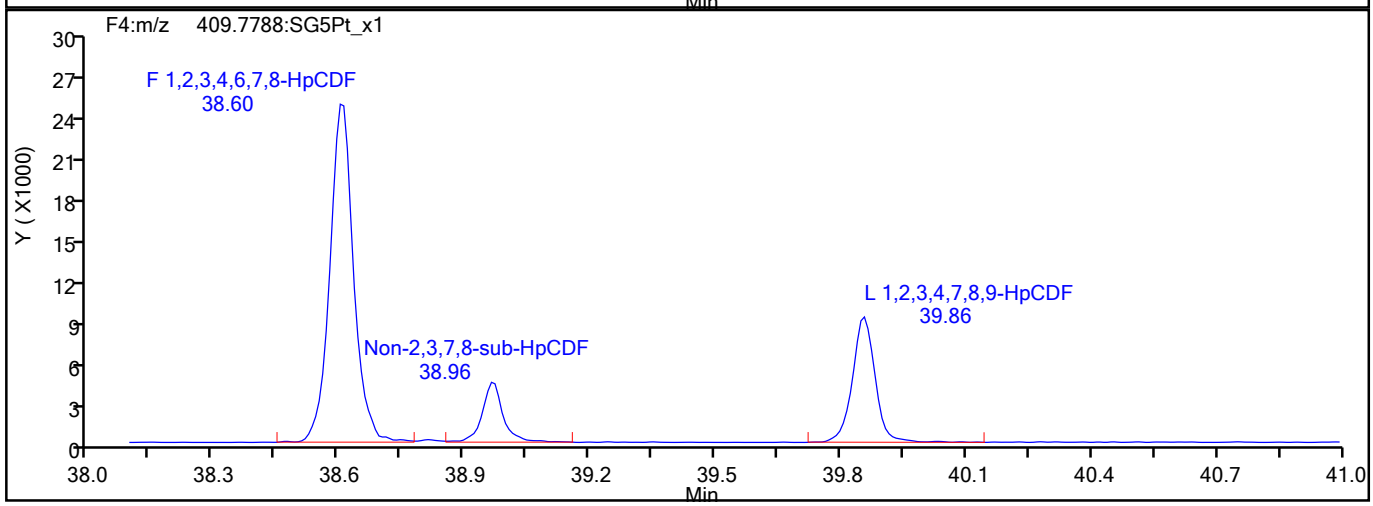

HpCDF Interference Mass

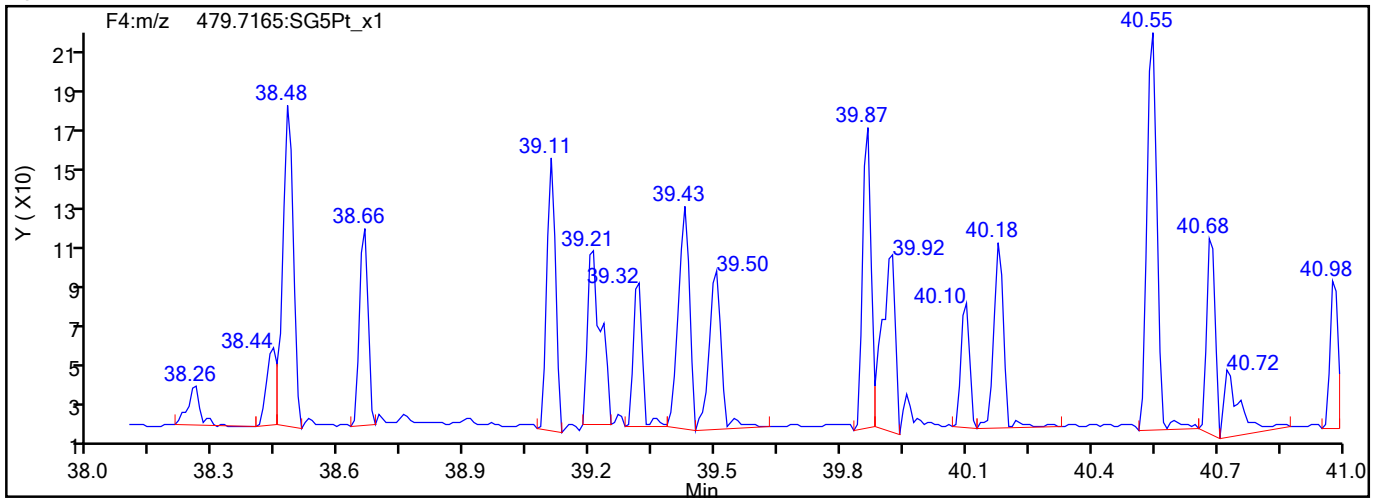

777952

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

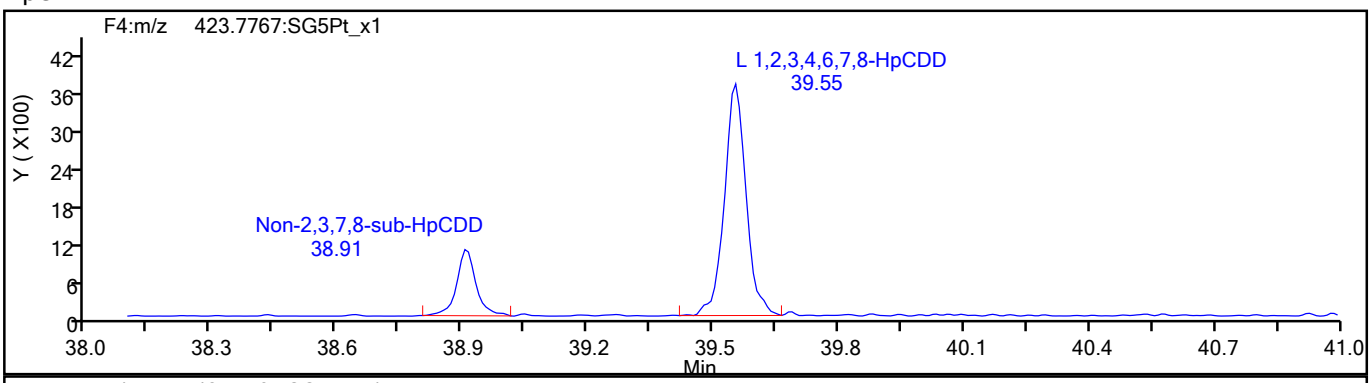

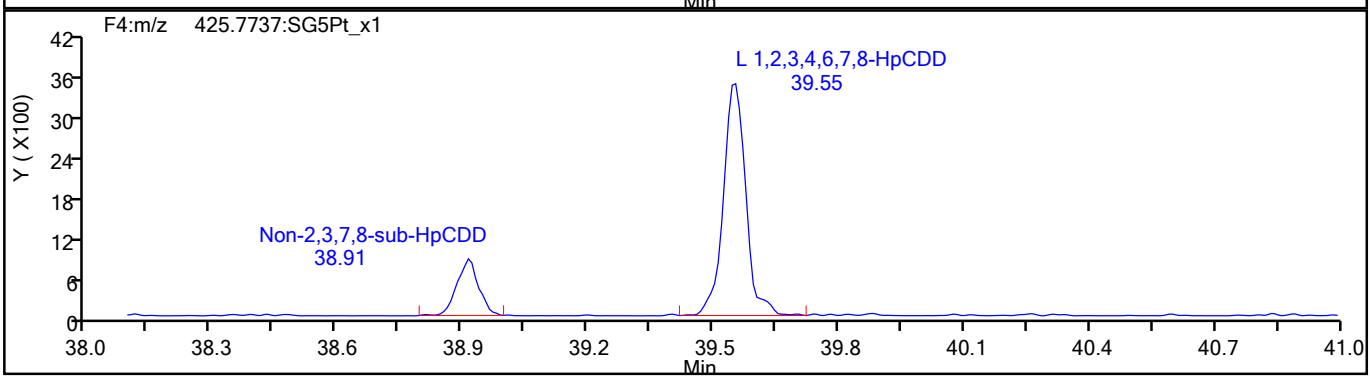

HpCDD Standards

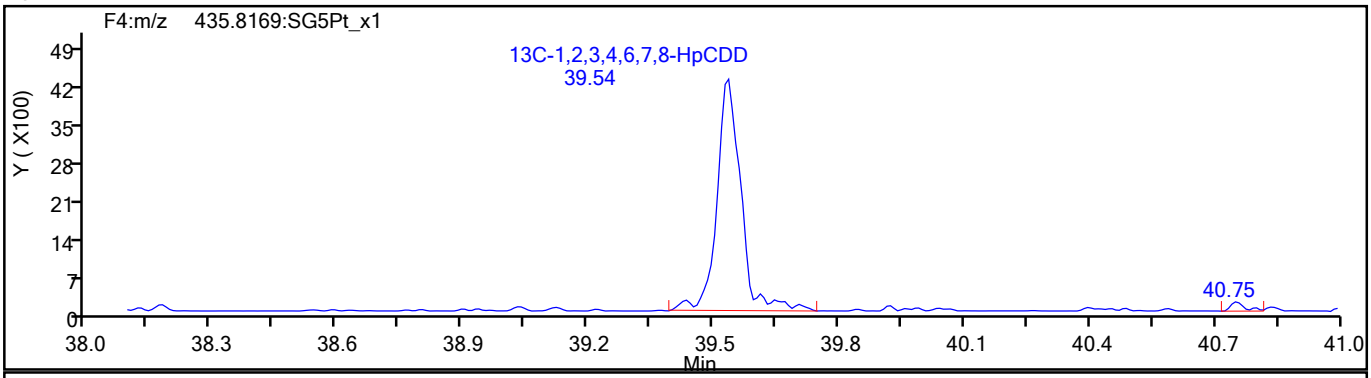

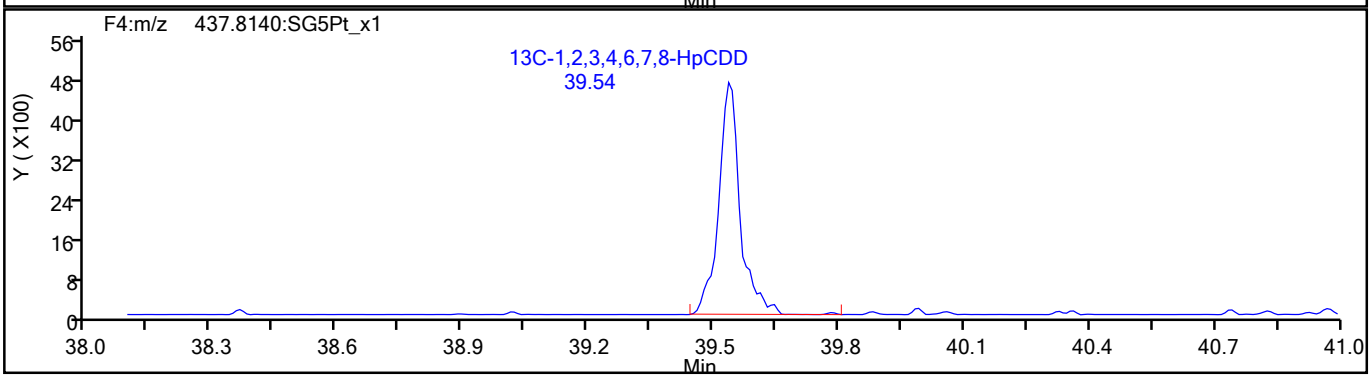

777953

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

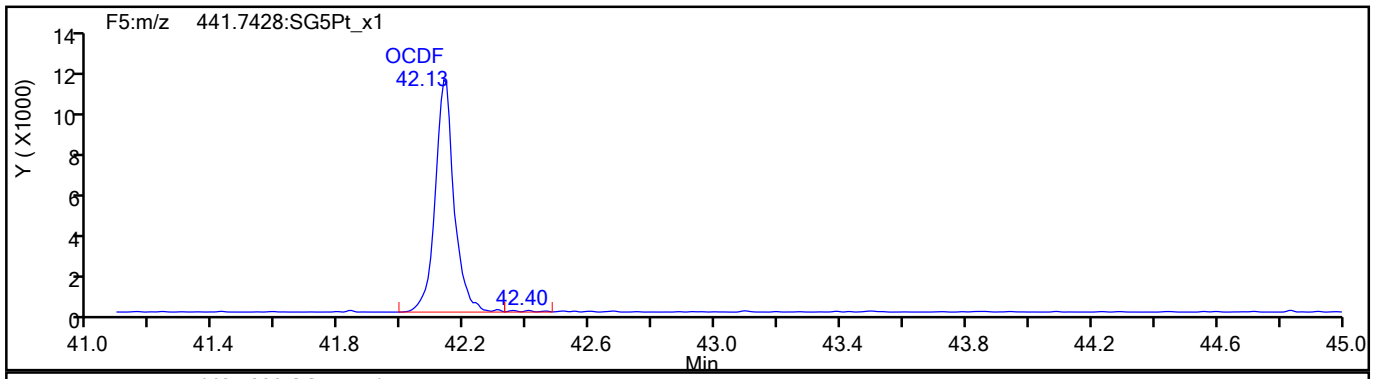

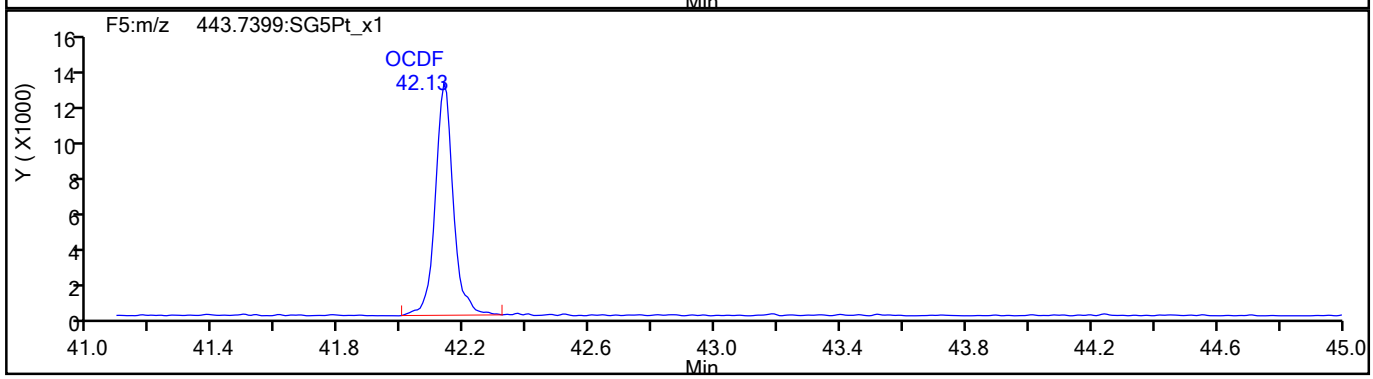

OCDF Standards

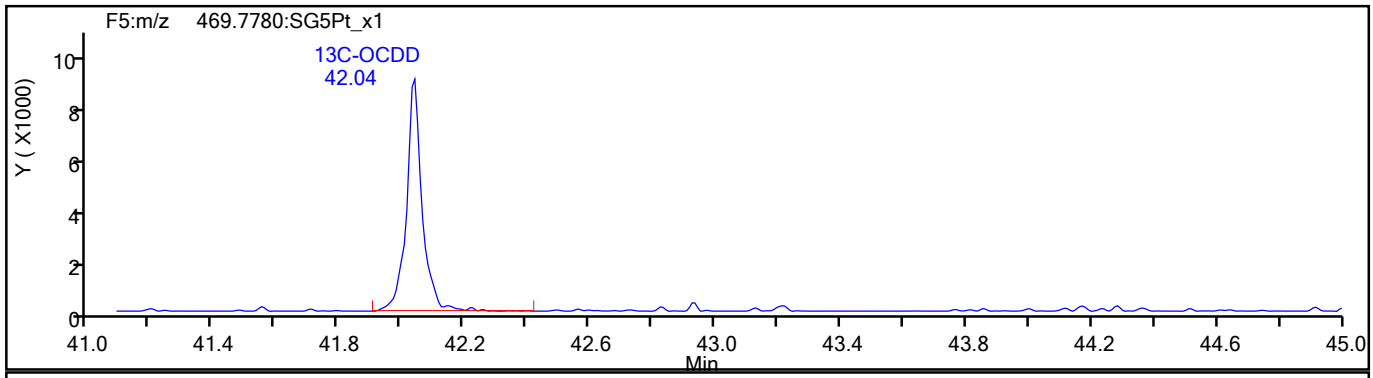

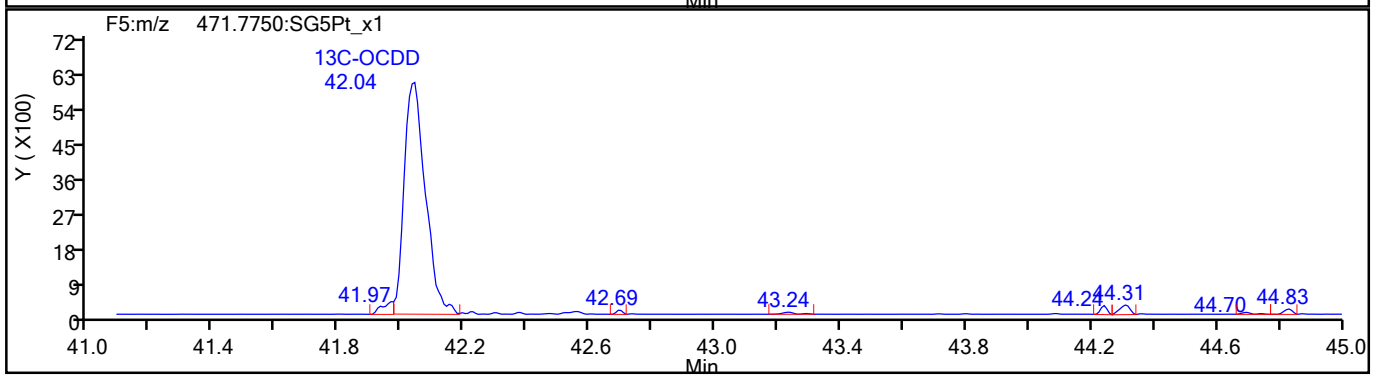

777954

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

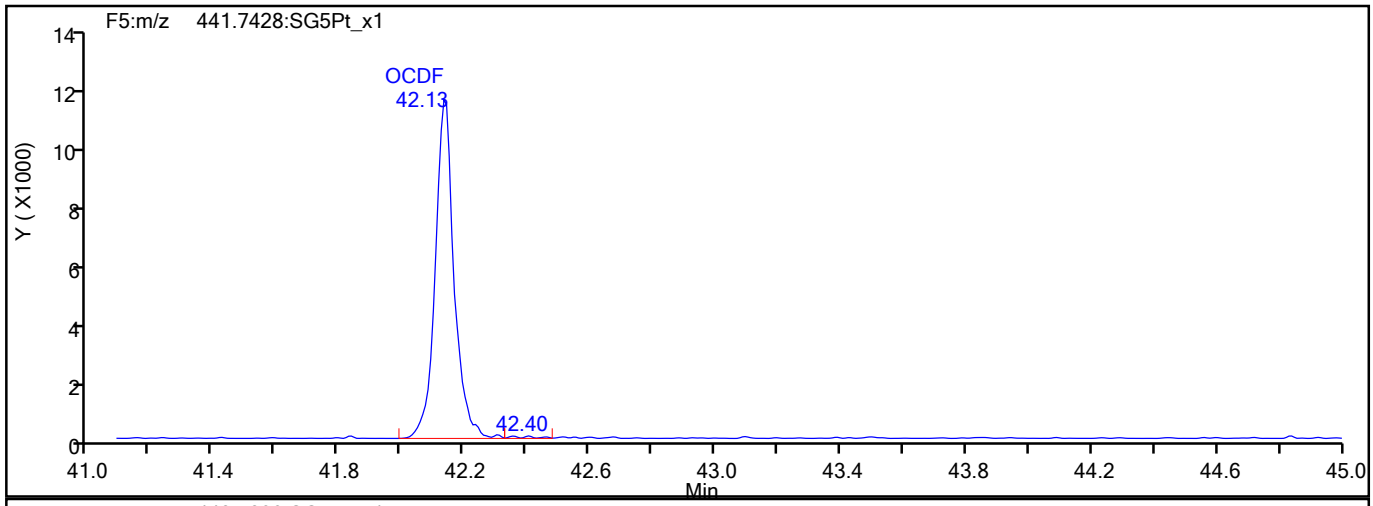

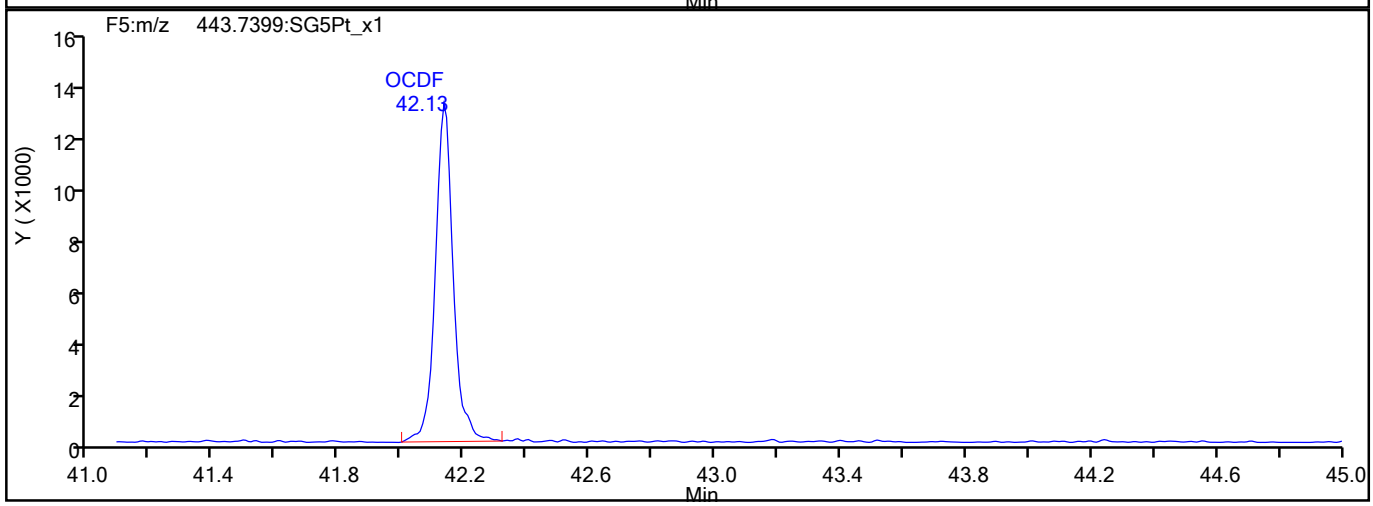

OCDF Interference Mass

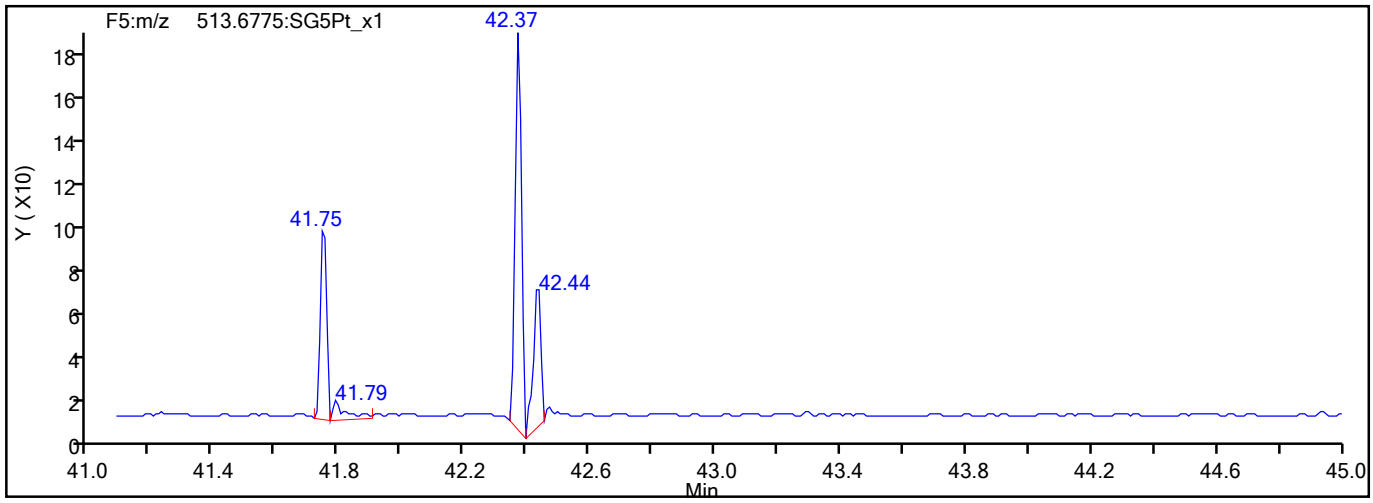

777955

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

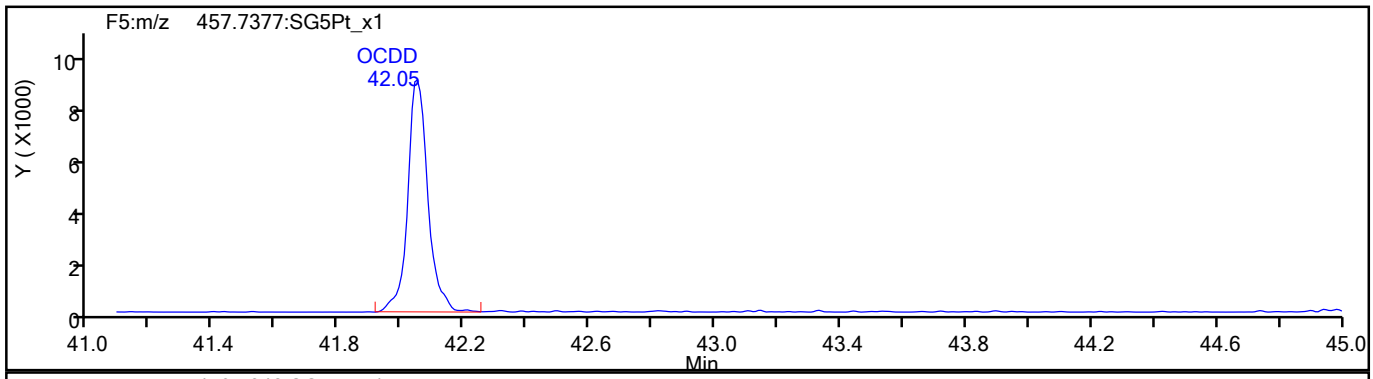

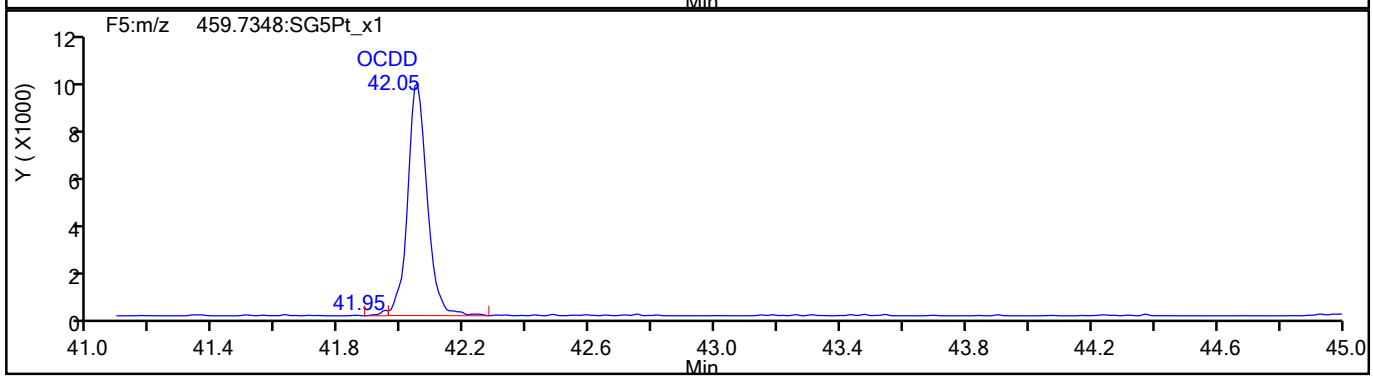

OCDD Standards

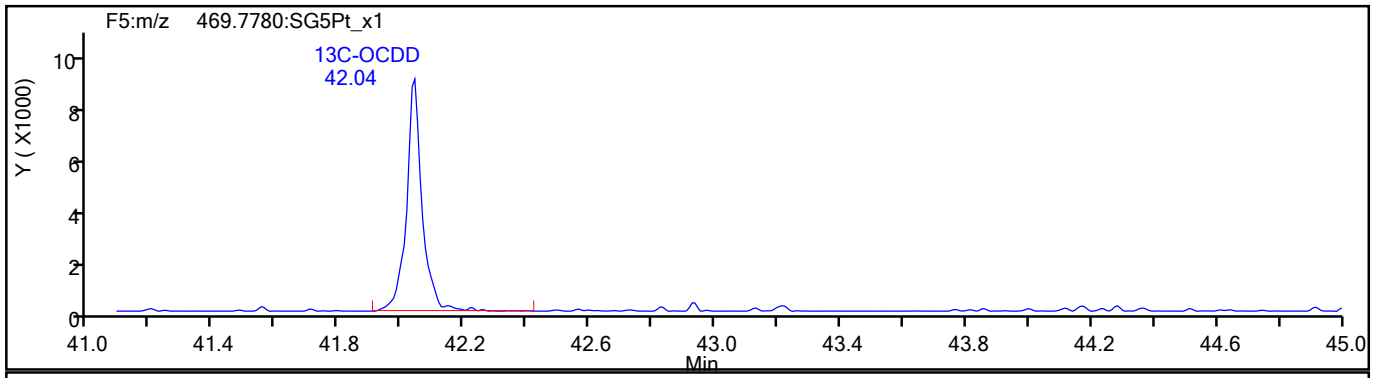

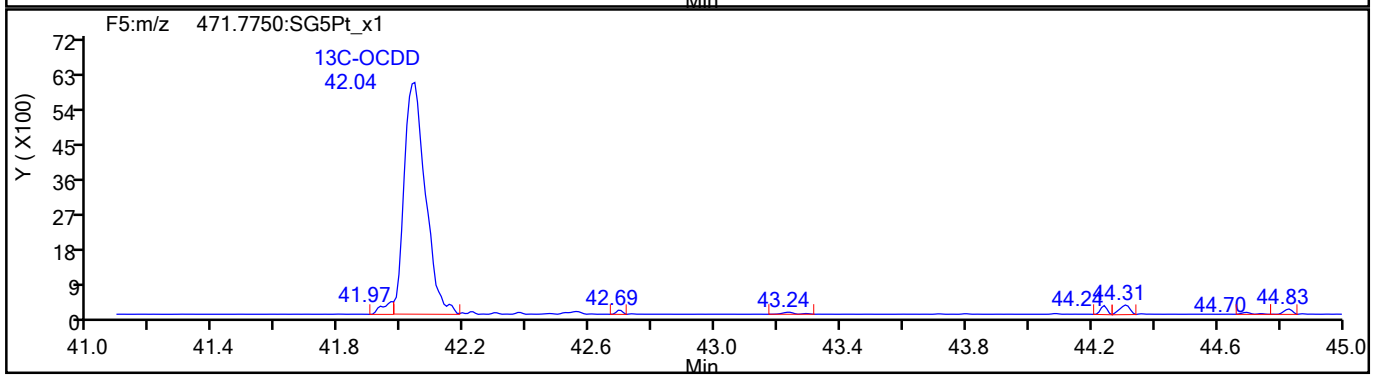

777956

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

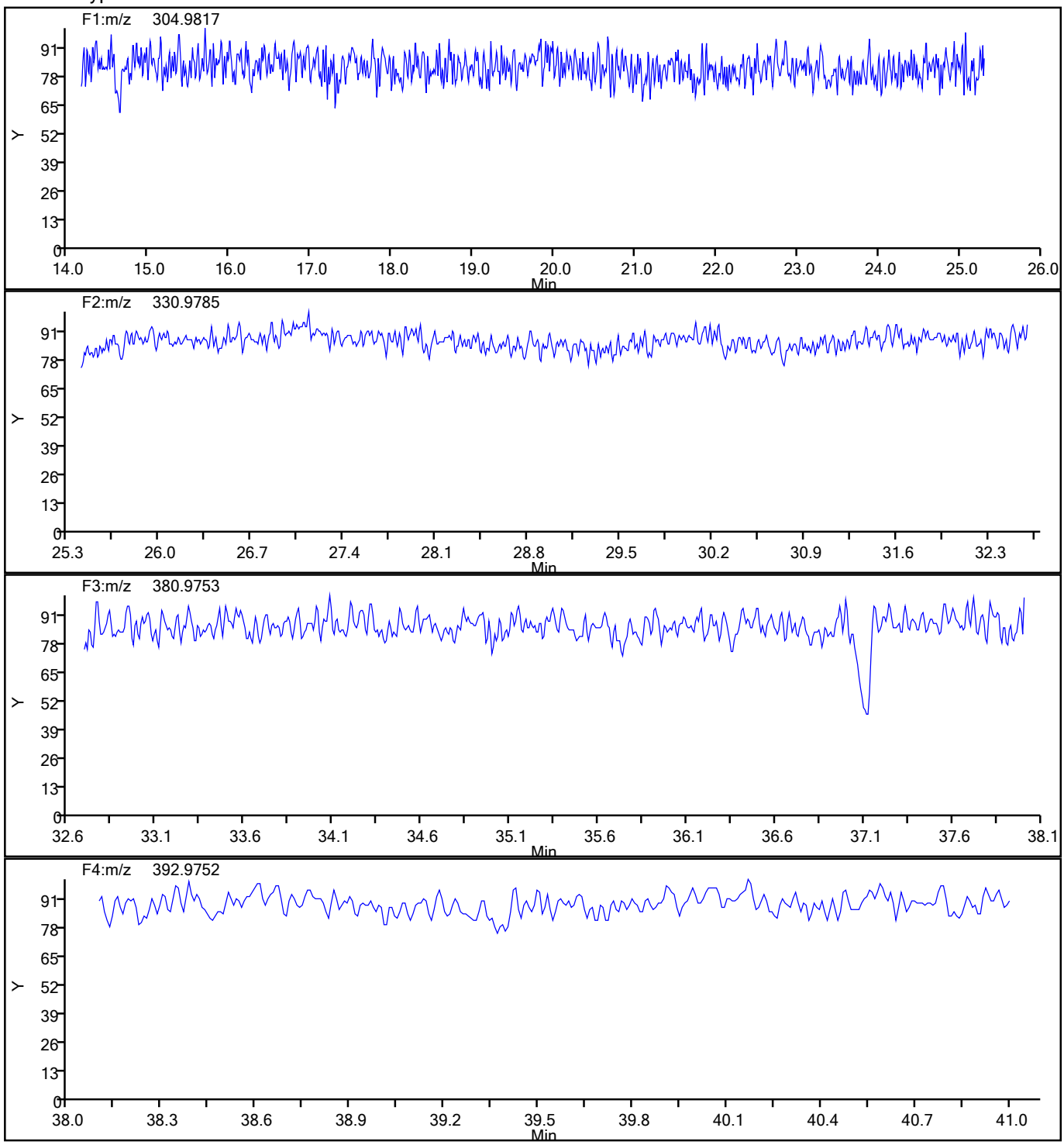

777957

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

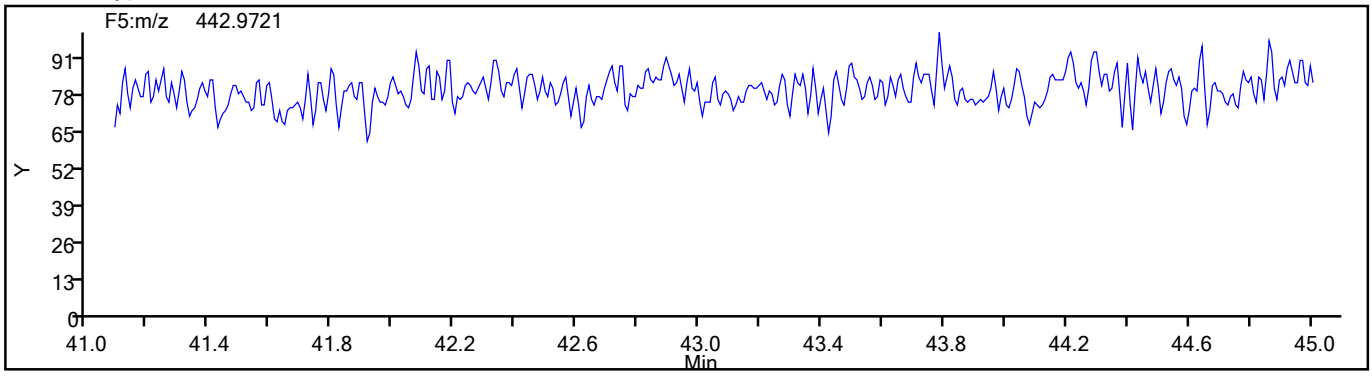

777958

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-1
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76888-A-1-C MSD RA
Matrix: Sediment
Lab File ID: 25AU2111D2_006.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.36(g)
Date Analyzed: 08/25/2021 12:07
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519650
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	127000		110	110

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	23	*5-	24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	61		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d
Lims ID: 320-76888-A-1-C MSD
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MSD
Inject. Date: 25-Aug-2021 12:07:01 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-C MSD X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:20:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.341	8547708	0.82	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.657	2639901	0.66	1.3327	2.317	2.317	1.261	1.261	23.17	M
2,3,7,8-TCDF	17.671	931284861	0.79	0.9978	3535.5	3535.5	3.082	3.082	3.5E+005	Ea
D 13C-2,3,7,8-TCDD	16.094	2719216	0.78	0.8749	3.636	3.636	9.357	9.357	36.36	nM
2,3,7,8-TCDD	16.121	148296810	0.79	1.0570	516.0	516.0	2.909	2.909	51596	Ea
$ 37Cl4-2,3,7,8-TCDD	16.107	1809354		0.8648	2.448	2.448	1.570	1.570	61.19	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d
Lims ID: 320-76888-A-1-C MSD
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MSD
Inject. Date: 25-Aug-2021 12:07:01 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-C MSD X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:20:59

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.341	16.285	3		3856388	730206	258415	646037	3		M
333.9339	16.341	16.285	3		4691320	1004175	309553	773882	3	0.82(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.657	17.601	3	1.081	1052419	236656	55121	137802	4		M
317.9389	17.657	17.601	3	1.081	1587482	327976	61453	153632	5	0.66(0.65-0.89)	M
2,3,7,8-TCDF											Ea
303.9016	17.671	17.629	3	1.001	411435531	74175810	31598	78995	2347		a
305.8987	17.671	17.629	3	1.001	519849330	94085549	37866	94665	2485	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.094	16.051	3	0.985	1189415	205031	258415	646037	1		M
333.9339	16.107	16.051	3	0.986	1529801	283888	309553	773882	1	0.78(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.121	16.079	3	1.002	65493228	14816597	35528	88820	417		a
321.8936	16.121	16.079	3	1.002	82803582	18212476	24597	61492	740	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											M
327.8840	16.107	16.079	2	0.986	1809354	314916	94219	235547	3		M

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d				
Injection Date:	25-Aug-2021 12:07:01	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.79
Area: 5037434
Amount: 11.149494
Amount Units: pg/ul

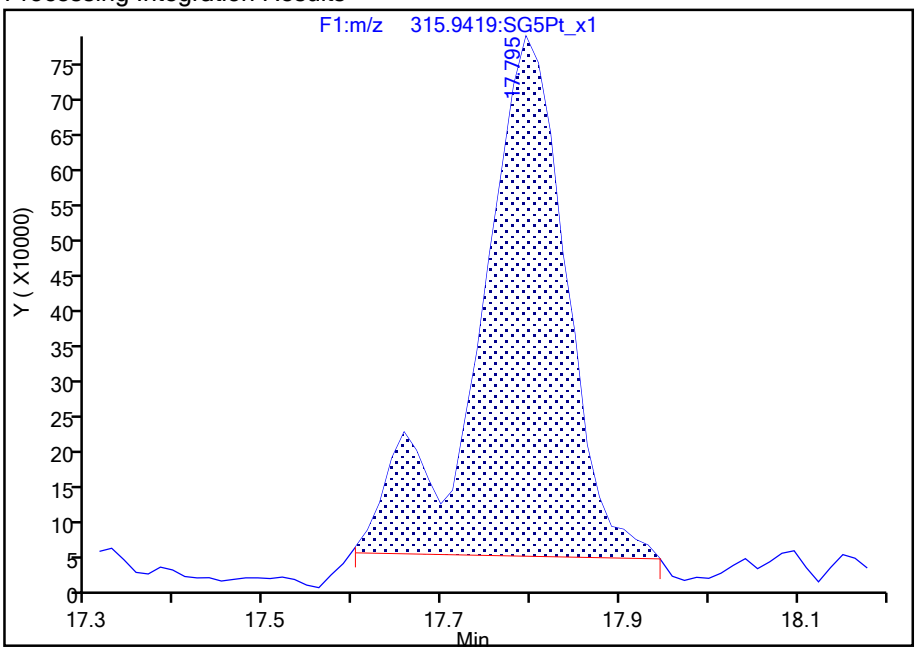

Manual Integration Results

RT: 17.66
Area: 1052419
Amount: 2.317449
Amount Units: pg/ul

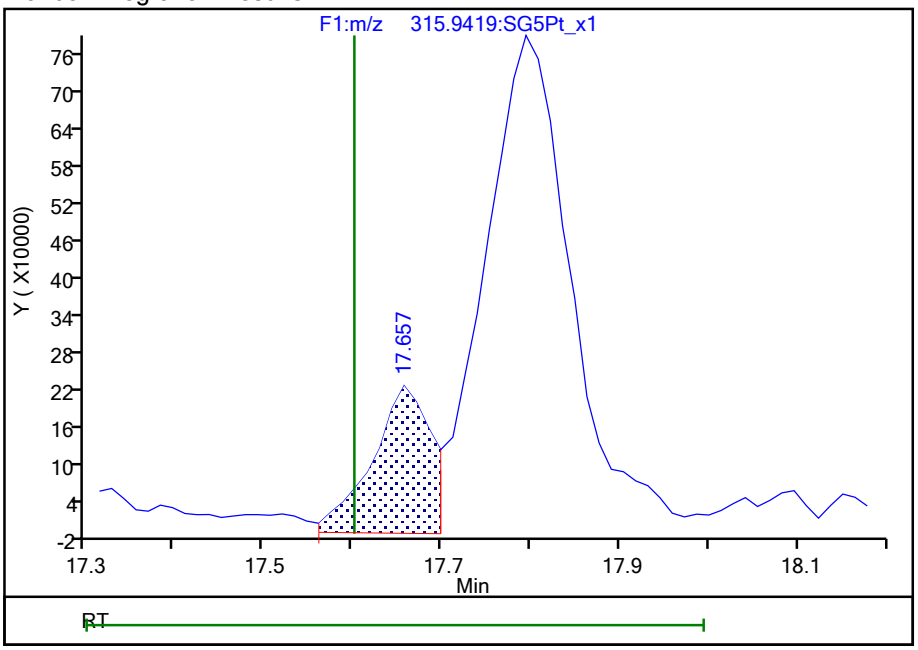

Reviewer: bennettd, 25-Aug-2021 13:22:23

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

777962

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d				
Injection Date:	25-Aug-2021 12:07:01	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.79
Area: 7663413
Amount: 11.149494
Amount Units: pg/ul

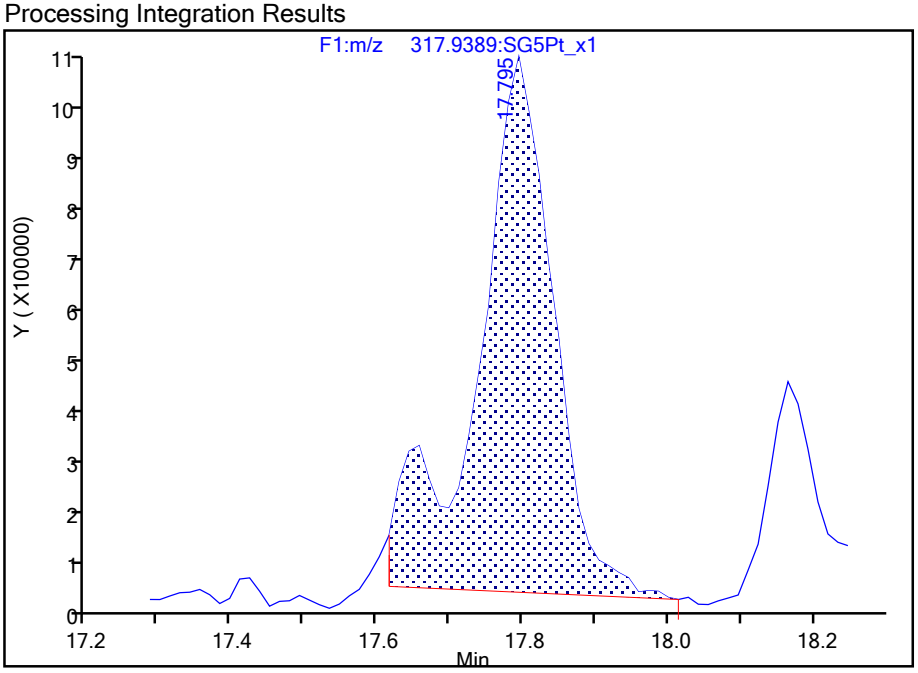

Manual Integration Results

RT: 17.66
Area: 1587482
Amount: 2.317449
Amount Units: pg/ul

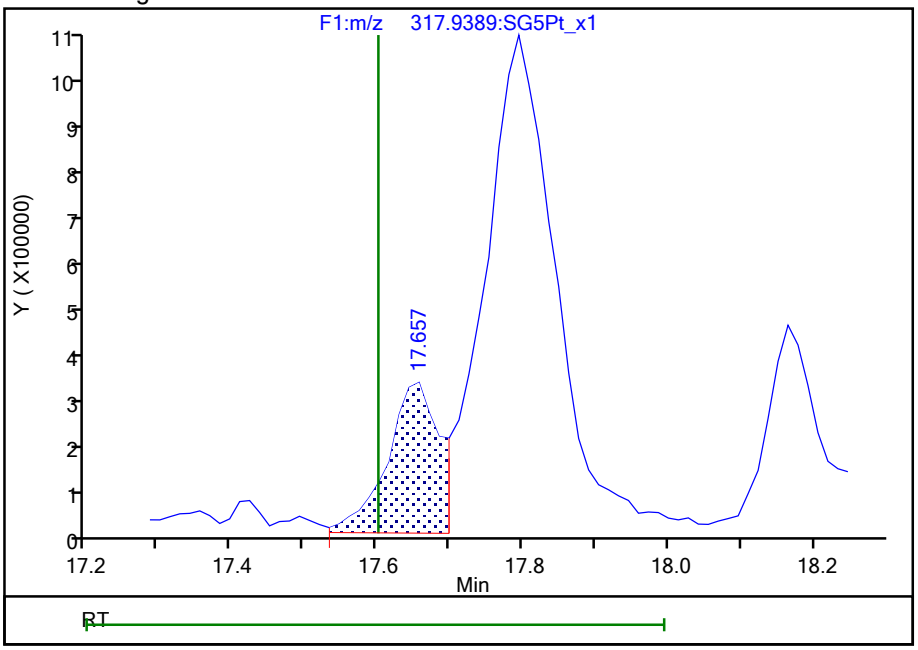

Reviewer: bennettd, 25-Aug-2021 13:22:42

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

777963

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d				
Injection Date:	25-Aug-2021 12:07:01	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.63

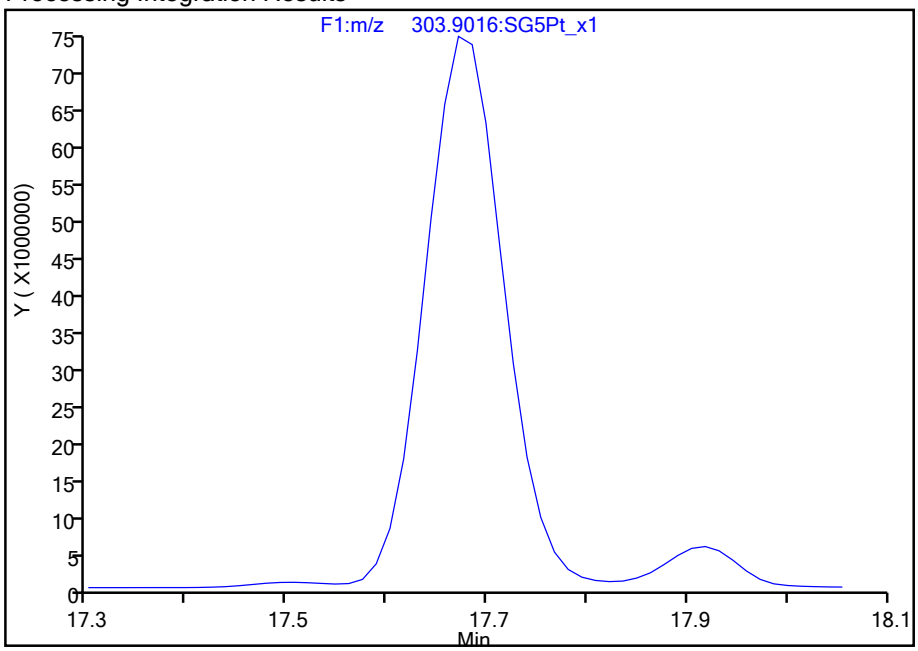

Manual Integration Results

RT: 17.67
Area: 411435531
Amount: 3535.4806
Amount Units: pg/ul

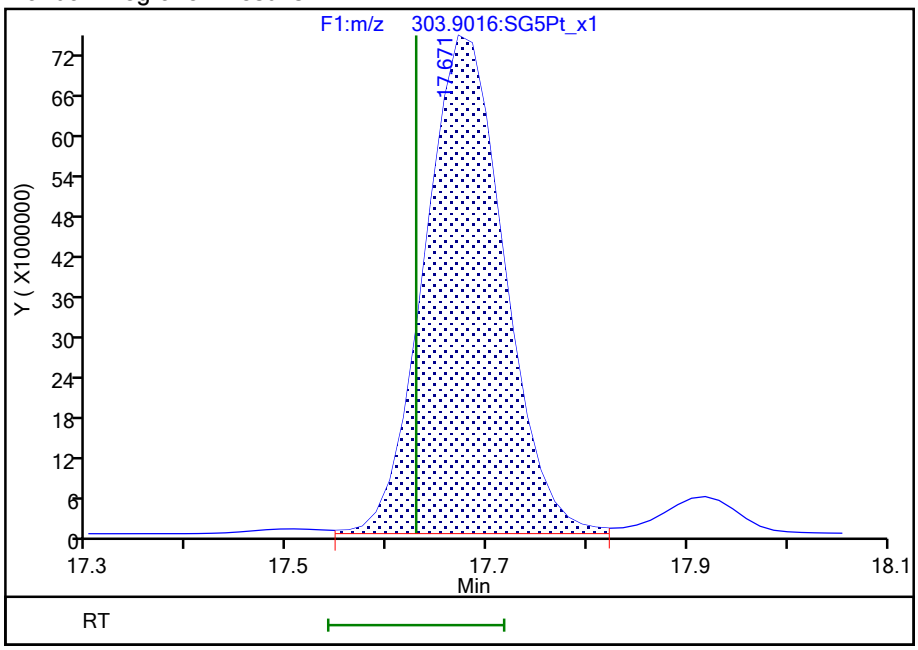

Reviewer: bennettd, 25-Aug-2021 13:22:54
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d				
Injection Date:	25-Aug-2021 12:07:01	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

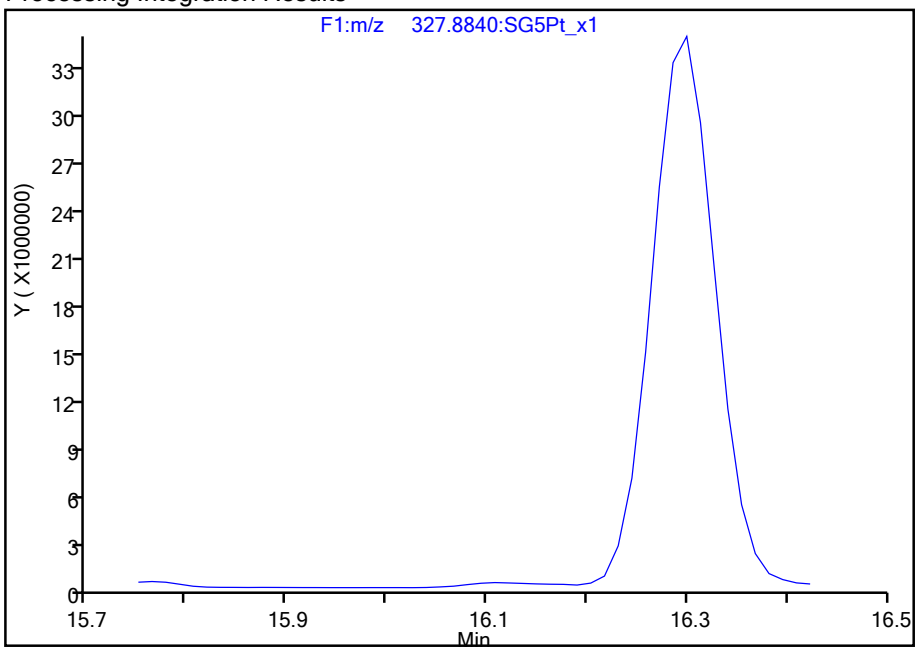

Manual Integration Results

RT: 16.11
Area: 1809354
Amount: 2.447654
Amount Units: pg/ul

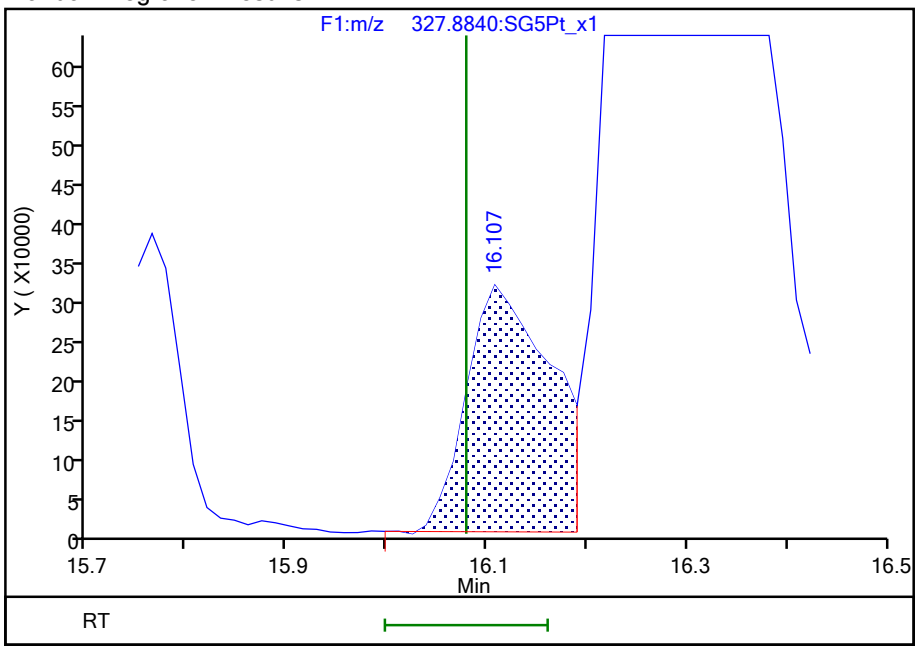

Reviewer: bennettd, 25-Aug-2021 13:21:32
Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d		
Injection Date:	25-Aug-2021 12:07:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

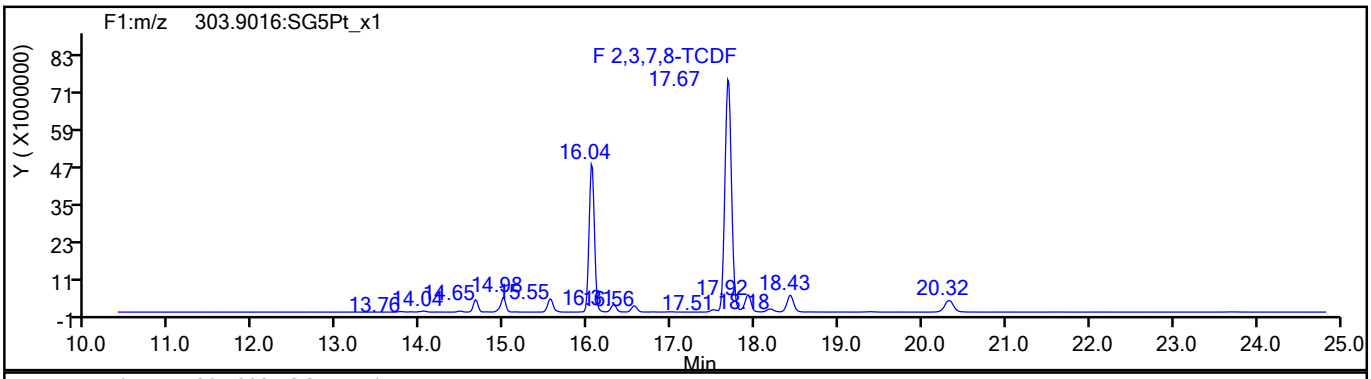

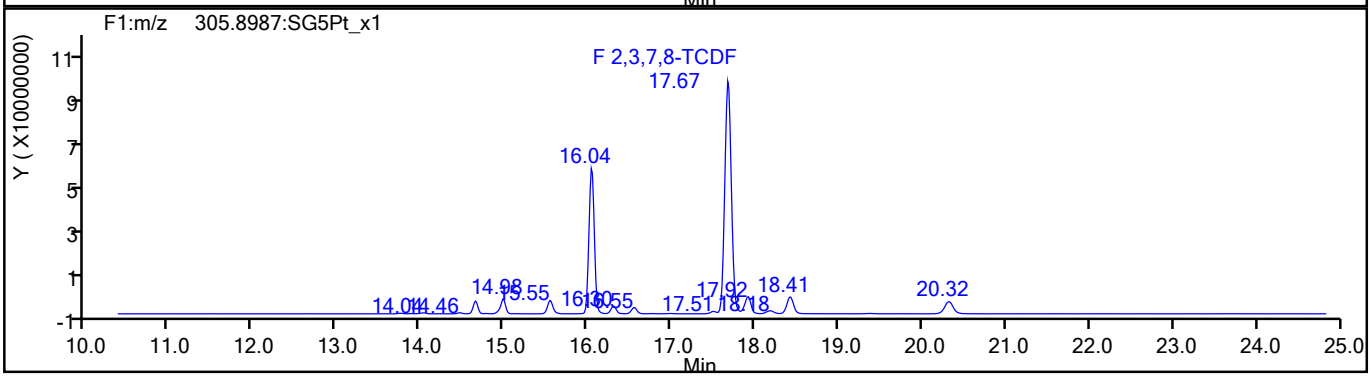

TCDF Standards

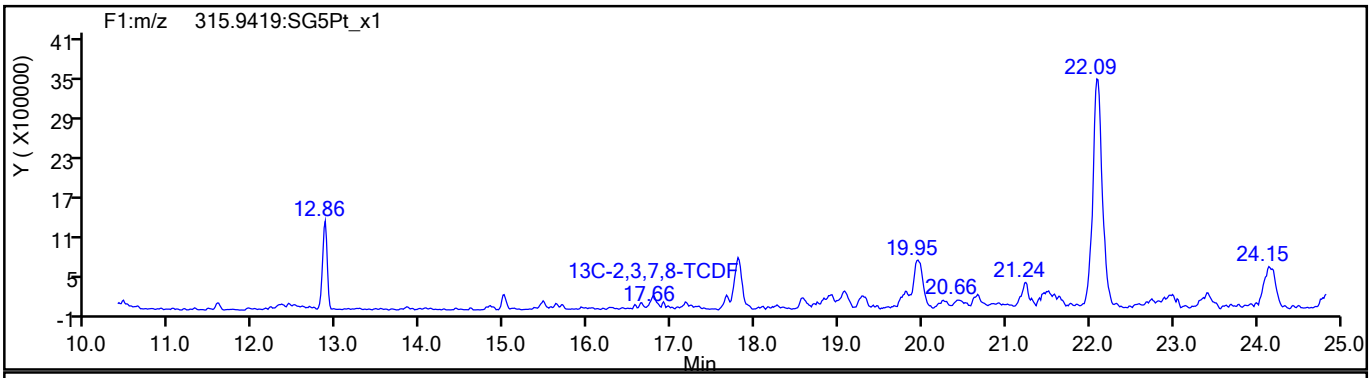

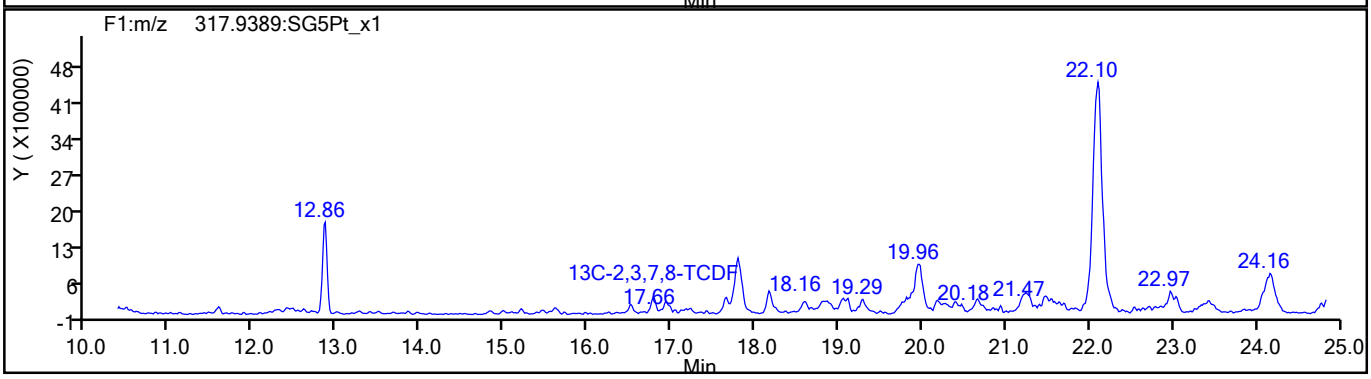

777966

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d		
Injection Date:	25-Aug-2021 12:07:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

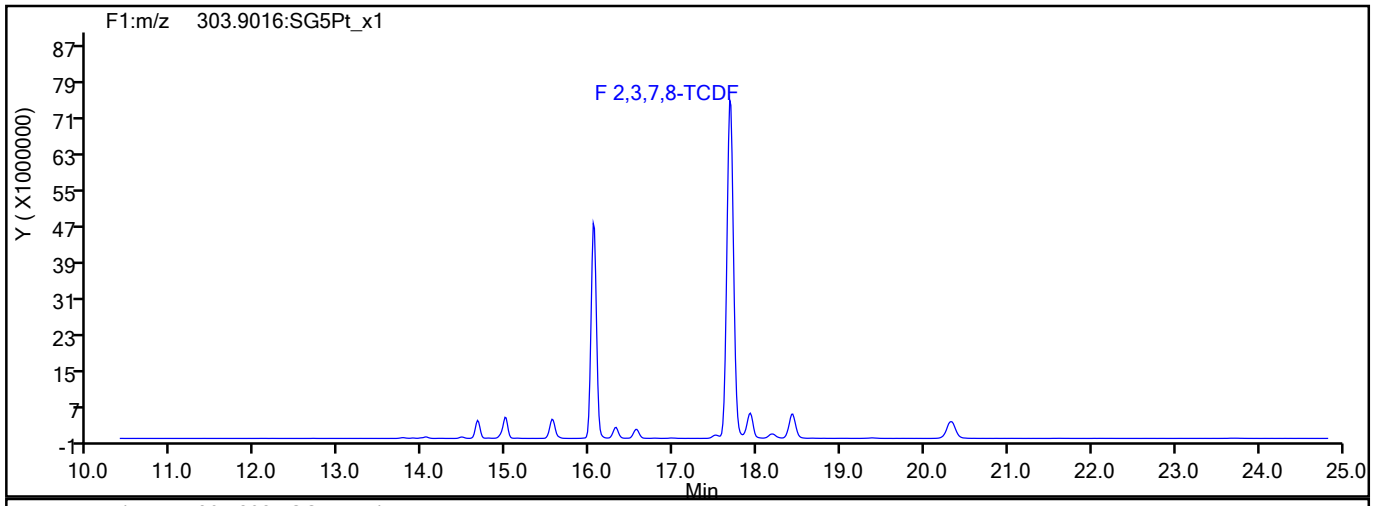

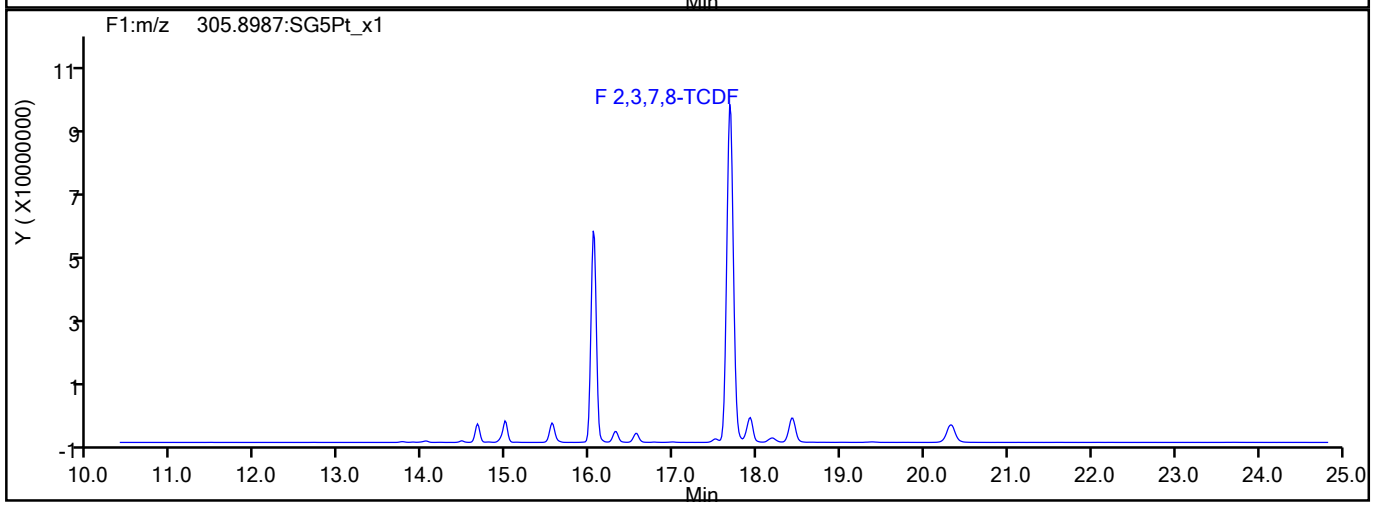

TCDF Interference Mass

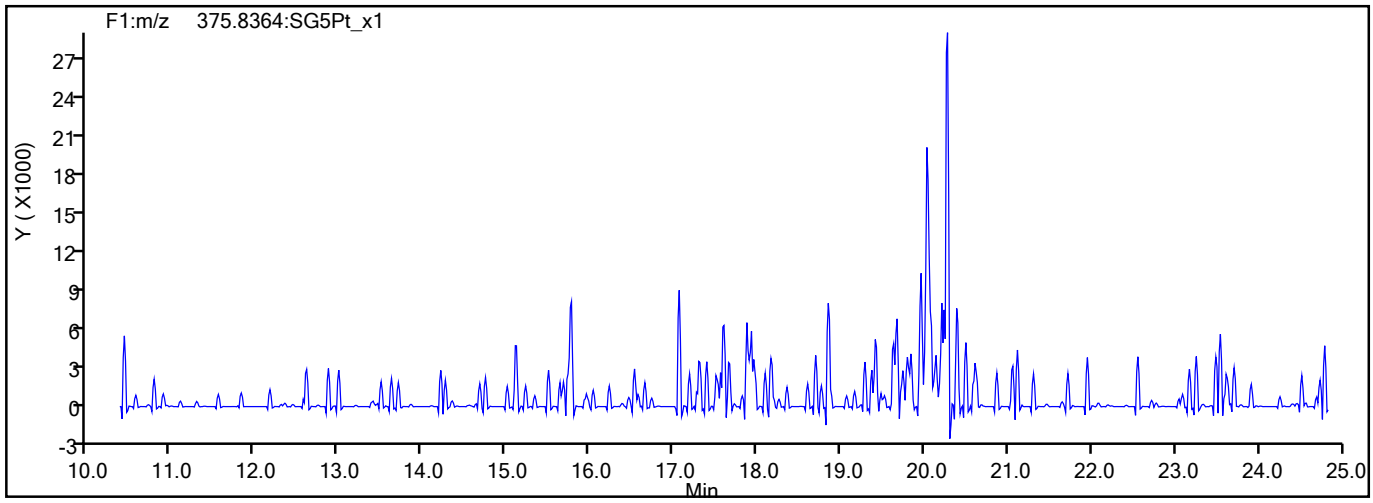

777967

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d		
Injection Date:	25-Aug-2021 12:07:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

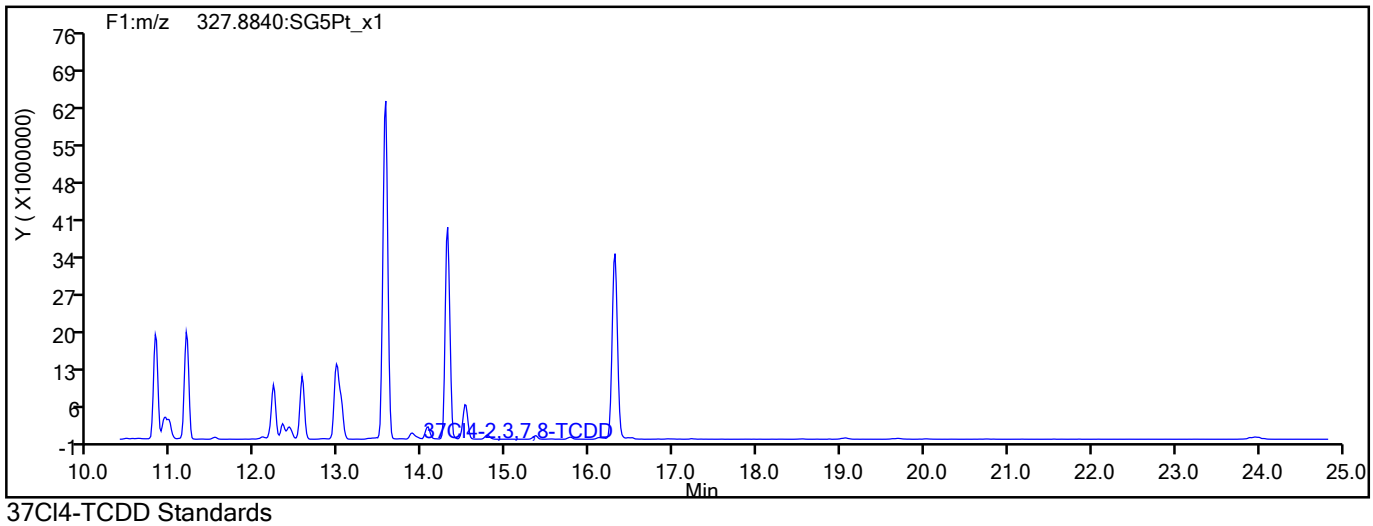

37Cl4-TCDD Standards

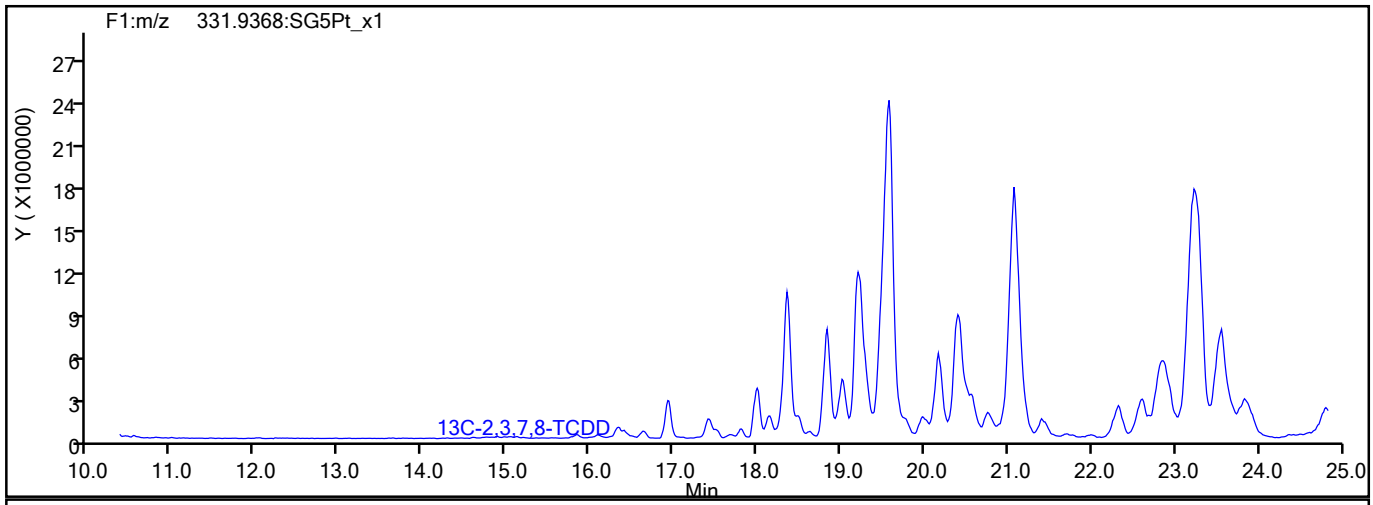

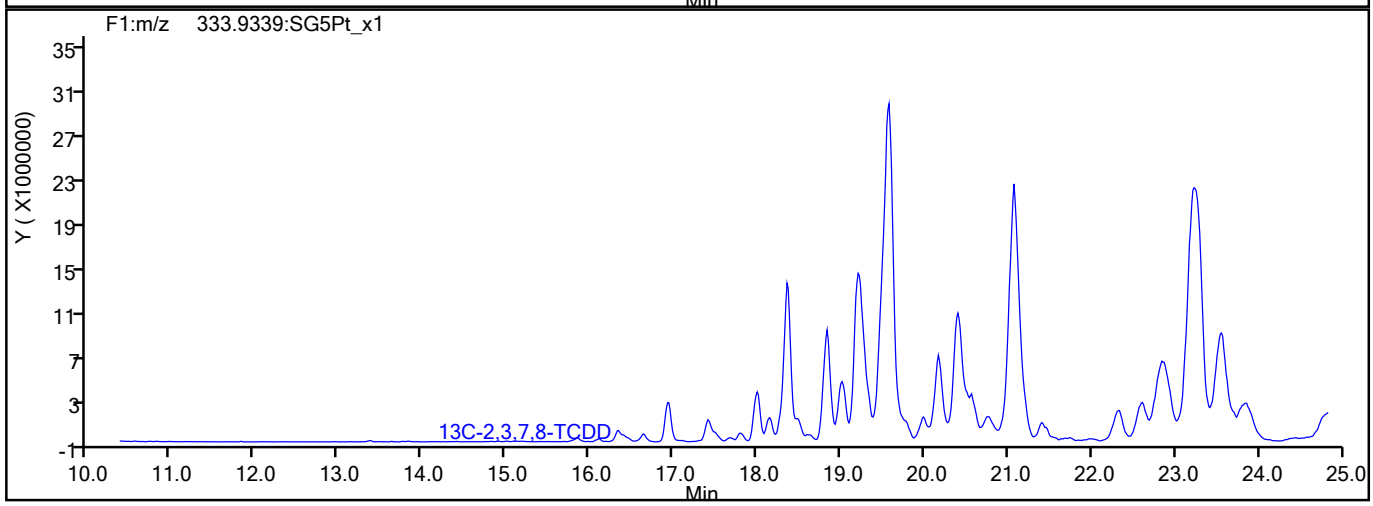

777968

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d		
Injection Date:	25-Aug-2021 12:07:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

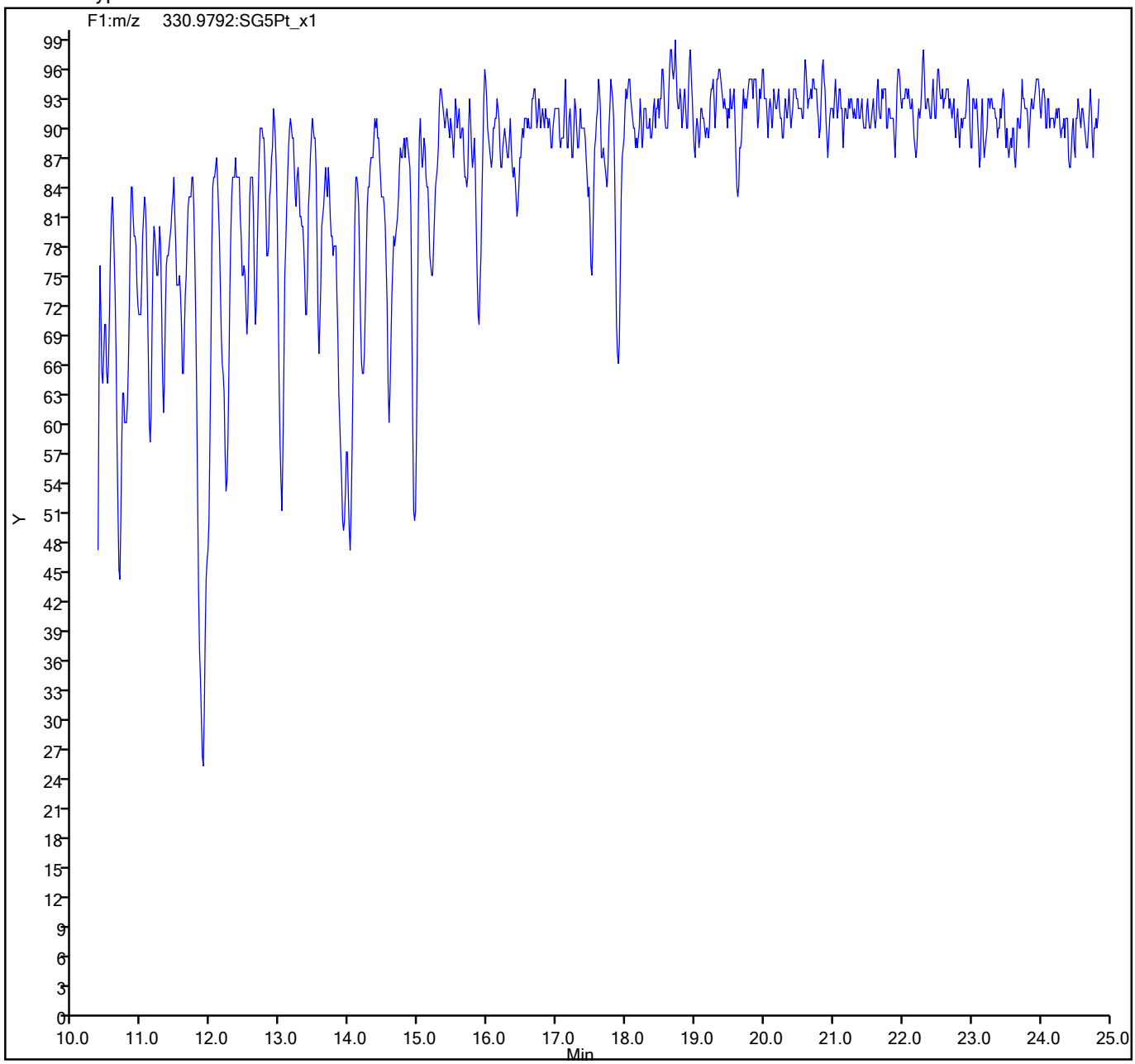

777969

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Start Date: 06/08/2021 12:40

Analysis Batch Number: 496688 End Date: 06/08/2021 19:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-496688/1		06/08/2021 12:40	1	08jn21adfs1_2.d	DB-5 0.32(mm)
IC 320-496688/3		06/08/2021 14:18	1	08jn21adfs1_4.d	DB-5 0.32(mm)
IC 320-496688/4		06/08/2021 15:06	1	08jn21adfs1_5.d	DB-5 0.32(mm)
IC 320-496688/5		06/08/2021 15:54	1	08jn21adfs1_6.d	DB-5 0.32(mm)
IC 320-496688/6		06/08/2021 16:42	1	08jn21adfs1_7.d	DB-5 0.32(mm)
IC 320-496688/7		06/08/2021 17:30	1	08jn21adfs1_8.d	DB-5 0.32(mm)
ICV 320-496688/9		06/08/2021 19:25	1	08jn21adfs1_11.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Start Date: 07/26/2021 09:21

Analysis Batch Number: 510264 End Date: 07/26/2021 15:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-510264/1		07/26/2021 09:21	1	26JL2110D5_1.d	DB-5 0.32(mm)
IC 320-510264/3		07/26/2021 10:51	1	26JL2110D5_3.d	DB-5 0.32(mm)
IC 320-510264/4		07/26/2021 11:36	1	26JL2110D5_4.d	DB-5 0.32(mm)
IC 320-510264/5		07/26/2021 12:21	1	26JL2110D5_5.d	DB-5 0.32(mm)
IC 320-510264/6		07/26/2021 13:06	1	26JL2110D5_6.d	DB-5 0.32(mm)
IC 320-510264/7		07/26/2021 13:51	1	26JL2110D5_7.d	DB-5 0.32(mm)
ICV 320-510264/9		07/26/2021 15:31	1	26JL2110D5_9.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/15/2021 00:36

Analysis Batch Number: 516847 End Date: 08/15/2021 11:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-516847/1		08/15/2021 00:36	1	13AU2110D5_42.d	DB-5 0.32(mm)
CCV 320-516847/2		08/15/2021 01:21	1	13AU2110D5_43.d	DB-5 0.32(mm)
MB 320-513585/1-A		08/15/2021 02:06	1	13AU2110D5_44.d	DB-5 0.32(mm)
LCS 320-513585/2-A		08/15/2021 02:51	1	13AU2110D5_45.d	DB-5 0.32(mm)
ZZZZZ		08/15/2021 03:36	1		DB-5 0.32(mm)
320-76769-1	11215702-072221-SS-SJ SB080 (0-2)	08/15/2021 04:21	1	13AU2110D5_47.d	DB-5 0.32(mm)
320-76769-1 MS	11215702-072221-SS-SJ SB080 (0-2) MS	08/15/2021 05:06	1	13AU2110D5_48.d	DB-5 0.32(mm)
320-76769-1 MSD	11215702-072221-SS-SJ SB080 (0-2) MSD	08/15/2021 05:51	1	13AU2110D5_49.d	DB-5 0.32(mm)
320-76769-2	11215702-072221-SS-SJ SB080 (2-4)	08/15/2021 06:36	1	13AU2110D5_50.d	DB-5 0.32(mm)
320-76769-3	11215702-072221-SS-SJ SB080 (4-6)	08/15/2021 07:21	1	13AU2110D5_51.d	DB-5 0.32(mm)
320-76769-5	11215702-072221-SS-SJ SB080 (8-10)	08/15/2021 08:06	1	13AU2110D5_52.d	DB-5 0.32(mm)
320-76769-6	11215702-072221-SS-SJ SB080 (10-12)	08/15/2021 08:51	1	13AU2110D5_53.d	DB-5 0.32(mm)
320-76769-7	11215702-072221-SS-SJ SB080 (12-14)	08/15/2021 09:36	1	13AU2110D5_54.d	DB-5 0.32(mm)
320-76769-8	11215702-072221-SS-SJ SB080 (14-16)	08/15/2021 10:21	1	13AU2110D5_55.d	DB-5 0.32(mm)
ZZZZZ		08/15/2021 11:16	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/15/2021 12:12

Analysis Batch Number: 516848 End Date: 08/15/2021 22:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-516848/16		08/15/2021 12:12	1	13AU2110D5_57.d	DB-5 0.32(mm)
CCV 320-516848/17		08/15/2021 12:57	1	13AU2110D5_58.d	DB-5 0.32(mm)
320-76769-13	11215702-072221-SS-SJ SB074 (0-2)	08/15/2021 13:42	1	13AU2110D5_59.d	DB-5 0.32(mm)
320-76769-15	11215702-072221-SS-SJ SB074 (4-6)	08/15/2021 14:27	1	13AU2110D5_60.d	DB-5 0.32(mm)
320-76769-16	11215702-072221-SS-SJ SB074 (6-8)	08/15/2021 15:12	1	13AU2110D5_61.d	DB-5 0.32(mm)
320-76769-17	11215702-072221-SS-SJ SB074 (8-10)	08/15/2021 15:57	1	13AU2110D5_62.d	DB-5 0.32(mm)
320-76769-18	11215702-072221-SS-SJ SB074 (10-12)	08/15/2021 16:42	1	13AU2110D5_63.d	DB-5 0.32(mm)
320-76769-19	11215702-072221-SS-SJ SB074 (12-14)	08/15/2021 17:27	1	13AU2110D5_64.d	DB-5 0.32(mm)
320-76769-20	11215702-072221-SS-SJ SB074 (14-16)	08/15/2021 18:12	1	13AU2110D5_65.d	DB-5 0.32(mm)
320-76769-25	11215702-072221-DUP-4	08/15/2021 18:57	1	13AU2110D5_66.d	DB-5 0.32(mm)
320-76769-26	11215702-072221-DUP-5	08/15/2021 19:42	1	13AU2110D5_67.d	DB-5 0.32(mm)
320-76769-28	11215702-072221-SS-SJ SB076 (2-4)	08/15/2021 20:27	1	13AU2110D5_68.d	DB-5 0.32(mm)
320-76769-14	11215702-072221-SS-SJ SB074 (2-4)	08/15/2021 21:12	1	13AU2110D5_69.d	DB-5 0.32(mm)
ZZZZZ		08/15/2021 22:07	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/17/2021 14:27

Analysis Batch Number: 517196 End Date: 08/18/2021 00:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-517196/1		08/17/2021 14:27	1	17au21dfs1_2.d	DB-5 0.32(mm)
CCV 320-517196/2		08/17/2021 15:14	1	17au21dfs1_3.d	DB-5 0.32(mm)
MB 320-513586/1-A		08/17/2021 17:01	1	17au21dfs1_5.d	DB-5 0.32(mm)
LCS 320-513586/2-A		08/17/2021 17:49	1	17au21dfs1_6.d	DB-5 0.32(mm)
ZZZZZ		08/17/2021 18:37	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 19:24	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 20:12	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 21:00	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 21:48	5		DB-5 0.32(mm)
320-76769-30	11215702-072221-SS-SJ SB076 (6-8)	08/17/2021 22:36	1	17au21dfs1_12.d	DB-5 0.32(mm)
ZZZZZ		08/17/2021 23:24	1		DB-5 0.32(mm)
320-76769-32	11215702-072221-SS-SJ SB076 (10-12)	08/18/2021 00:12	1	17au21dfs1_14.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/18/2021 02:07

Analysis Batch Number: 517281 End Date: 08/18/2021 11:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-517281/15		08/18/2021 02:07	1	17au21dfs1_17.d	DB-5 0.32(mm)
WDM 320-517281/16		08/18/2021 02:55	1	17au21dfs1_18.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 03:43	1		DB-5 0.32(mm)
320-76769-33	11215702-072221-SS-SJ SB076 (12-14)	08/18/2021 04:31	1	17au21dfs1_20.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 05:18	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 06:06	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 06:54	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 07:42	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 08:30	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 09:18	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 10:06	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 10:54	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 11:42	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/18/2021 13:48

Analysis Batch Number: 517461 End Date: 08/18/2021 23:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-517461/29		08/18/2021 13:48	1	17au21dfs1_32.d	DB-5 0.32(mm)
WDM 320-517461/30		08/18/2021 14:50	1	17au21dfs1_33.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 15:37	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 16:25	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 17:13	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 18:01	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 18:49	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 19:36	1		DB-5 0.32(mm)
320-76769-27	11215702-072221-SS-SJ SB076 (0-2)	08/18/2021 20:24	1	17au21dfs1_40.d	DB-5 0.32(mm)
320-76769-27 MS	11215702-072221-SS-SJ SB076 (0-2) MS	08/18/2021 21:12	1	17au21dfs1_41.d	DB-5 0.32(mm)
320-76769-27 MSD	11215702-072221-SS-SJ SB076 (0-2) MSD	08/18/2021 22:00	1	17au21dfs1_42.d	DB-5 0.32(mm)
320-76769-29	11215702-072221-SS-SJ SB076 (4-6)	08/18/2021 22:48	1	17au21dfs1_43.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 23:36	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/19/2021 01:32

Analysis Batch Number: 517462 End Date: 08/19/2021 11:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-517462/43		08/19/2021 01:32	1	17au21dfs1_47.d	DB-5 0.32(mm)
WDM 320-517462/44		08/19/2021 02:19	1	17au21dfs1_48.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 03:55	1		DB-5 0.32(mm)
LCS 320-513879/2-A		08/19/2021 04:43	1	17au21dfs1_51.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 05:30	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 06:18	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 07:06	1		DB-5 0.32(mm)
320-76769-4	11215702-072221-SS-SJ SB080 (6-8)	08/19/2021 07:54	1	17au21dfs1_55.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 08:42	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 09:30	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 10:18	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 11:06	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/18/2021 14:15

Analysis Batch Number: 517729 End Date: 08/18/2021 21:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-517729/1		08/18/2021 14:15	1	18AU2110D5_1.d	DB-5 0.32(mm)
CCV 320-517729/2		08/18/2021 15:00	1	18AU2110D5_2.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 15:49	1		DB-5 0.32(mm)
320-76769-31	11215702-072221-SS-SJ SB076 (8-10)	08/18/2021 17:19	1	18AU2110D5_5.d	DB-5 0.32(mm)
320-76769-34	11215702-072221-SS-SJ SB076 (14-16)	08/18/2021 18:04	1	18AU2110D5_6.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 18:49	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 19:34	10		DB-5 0.32(mm)
ZZZZZ		08/18/2021 20:19	10		DB-5 0.32(mm)
ZZZZZ		08/18/2021 21:04	10		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/19/2021 13:59

Analysis Batch Number: 517891 End Date: 08/19/2021 23:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-517891/1		08/19/2021 13:59	1	19au21dfs1_2.d	DB-5 0.32(mm)
CCV 320-517891/2		08/19/2021 14:46	1	19au21dfs1_3.d	DB-5 0.32(mm)
MB 320-513879/1-A		08/19/2021 16:27	1	19au21dfs1_5.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 17:15	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 18:03	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 18:51	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 19:39	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 20:27	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 21:15	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 22:02	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 22:50	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 23:38	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/20/2021 01:34

Analysis Batch Number: 518043 End Date: 08/20/2021 09:32

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-518043/15		08/20/2021 01:34	1	19au21dfs1_17.d	DB-5 0.32(mm)
WDM 320-518043/16		08/20/2021 02:21	1	19au21dfs1_18.d	DB-5 0.32(mm)
ZZZZZ		08/20/2021 03:09	1		DB-5 0.32(mm)
ZZZZZ		08/20/2021 03:57	5		DB-5 0.32(mm)
ZZZZZ		08/20/2021 04:45	10		DB-5 0.32(mm)
320-76888-A-1-B MS		08/20/2021 05:33	10	19au21dfs1_22.d	DB-5 0.32(mm)
320-76888-A-1-C MSD		08/20/2021 06:21	10	19au21dfs1_23.d	DB-5 0.32(mm)
ZZZZZ		08/20/2021 07:09	10		DB-5 0.32(mm)
ZZZZZ		08/20/2021 07:57	10		DB-5 0.32(mm)
ZZZZZ		08/20/2021 08:44	10		DB-5 0.32(mm)
ZZZZZ		08/20/2021 09:32	10		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/21/2021 13:54

Analysis Batch Number: 518850 End Date: 08/22/2021 00:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-518850/1		08/21/2021 13:54	1	21AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-518850/2		08/21/2021 14:32	1	21AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/21/2021 15:49	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 16:27	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 17:06	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 17:44	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 18:23	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 19:01	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 19:39	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 20:18	1		DB-225 0.32(mm)
320-76769-5 RA	11215702-072221-SS-SJ SB080 (8-10) RA	08/21/2021 20:56	1	21AU2111D2_012.d	DB-225 0.32(mm)
320-76769-3 RA	11215702-072221-SS-SJ SB080 (4-6) RA	08/21/2021 21:34	1	21AU2111D2_013.d	DB-225 0.32(mm)
320-76769-13 RA	11215702-072221-SS-SJ SB074 (0-2) RA	08/21/2021 22:13	1	21AU2111D2_014.d	DB-225 0.32(mm)
320-76769-15 RA	11215702-072221-SS-SJ SB074 (4-6) RA	08/21/2021 22:51	1	21AU2111D2_015.d	DB-225 0.32(mm)
ZZZZZ		08/21/2021 23:30	1		DB-225 0.32(mm)
ZZZZZ		08/22/2021 00:08	1		DB-225 0.32(mm)
ZZZZZ		08/22/2021 00:46	1		DB-225 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/23/2021 09:32

Analysis Batch Number: 518958 End Date: 08/23/2021 14:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-518958/1		08/23/2021 09:32	1	23AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-518958/2		08/23/2021 10:10	1	23AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/23/2021 10:48	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 11:27	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 12:05	1		DB-225 0.32(mm)
320-76769-20 RA	11215702-072221-SS-SJ SB074 (14-16) RA	08/23/2021 12:43	1	23AU2111D2_006.d	DB-225 0.32(mm)
320-76769-1 RA	11215702-072221-SS-SJ SB080 (0-2) RA	08/23/2021 13:22	5	23AU2111D2_007.d	DB-225 0.32(mm)
320-76769-1 MS RA	11215702-072221-SS-SJ SB080 (0-2) MS RA	08/23/2021 14:00	5	23AU2111D2_008.d	DB-225 0.32(mm)
320-76769-1 MSD RA	11215702-072221-SS-SJ SB080 (0-2) MSD RA	08/23/2021 14:38	5	23AU2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/23/2021 15:34

Analysis Batch Number: 518979 End Date: 08/24/2021 02:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-518979/1		08/23/2021 15:34	1	23AU21A11D2_001.d	DB-225 0.32(mm)
CCV 320-518979/2		08/23/2021 16:12	1	23AU21A11D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/23/2021 16:51	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 17:29	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 18:07	1		DB-225 0.32(mm)
320-76769-8 RA	11215702-072221-SS-SJSB080 (14-16) RA	08/23/2021 18:46	1	23AU21A11D2_006.d	DB-225 0.32(mm)
320-76769-6 RA	11215702-072221-SS-SJSB080 (10-12) RA	08/23/2021 19:24	1	23AU21A11D2_007.d	DB-225 0.32(mm)
320-76769-7 RA	11215702-072221-SS-SJSB080 (12-14) RA	08/23/2021 20:02	1	23AU21A11D2_008.d	DB-225 0.32(mm)
320-76769-25 RA	11215702-072221-DUP-4 RA	08/23/2021 20:41	1	23AU21A11D2_009.d	DB-225 0.32(mm)
ZZZZZ		08/23/2021 21:19	1		DB-225 0.32(mm)
320-76769-34 RA	11215702-072221-SS-SJSB076 (14-16) RA	08/23/2021 21:58	1	23AU21A11D2_011.d	DB-225 0.32(mm)
320-76769-17 RA	11215702-072221-SS-SJSB074 (8-10) RA	08/23/2021 22:36	1	23AU21A11D2_012.d	DB-225 0.32(mm)
320-76769-31 RA	11215702-072221-SS-SJSB076 (8-10) RA	08/23/2021 23:14	1	23AU21A11D2_013.d	DB-225 0.32(mm)
320-76769-33 RA	11215702-072221-SS-SJSB076 (12-14) RA	08/23/2021 23:53	1	23AU21A11D2_014.d	DB-225 0.32(mm)
320-76769-16 RA	11215702-072221-SS-SJSB074 (6-8) RA	08/24/2021 00:31	1	23AU21A11D2_015.d	DB-225 0.32(mm)
320-76769-32 RA	11215702-072221-SS-SJSB076 (10-12) RA	08/24/2021 01:09	1	23AU21A11D2_016.d	DB-225 0.32(mm)
320-76769-30 RA	11215702-072221-SS-SJSB076 (6-8) RA	08/24/2021 01:48	1	23AU21A11D2_017.d	DB-225 0.32(mm)
320-76769-4 RA	11215702-072221-SS-SJSB080 (6-8) RA	08/24/2021 02:26	1	23AU21A11D2_018.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/24/2021 08:28

Analysis Batch Number: 519438 End Date: 08/24/2021 15:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-519438/1		08/24/2021 08:28	1	24AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-519438/2		08/24/2021 09:07	1	24AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/24/2021 09:45	1		DB-225 0.32(mm)
MB 320-513879/1-A		08/24/2021 10:23	1	24AU2111D2_004.d	DB-225 0.32(mm)
320-76769-18 RA	11215702-072221-SS-SJ SB074 (10-12) RA	08/24/2021 11:02	1	24AU2111D2_005.d	DB-225 0.32(mm)
320-76769-2 RA	11215702-072221-SS-SJ SB080 (2-4) RA	08/24/2021 11:40	5	24AU2111D2_006.d	DB-225 0.32(mm)
320-76769-14 RA	11215702-072221-SS-SJ SB074 (2-4) RA	08/24/2021 12:18	5	24AU2111D2_007.d	DB-225 0.32(mm)
320-76769-26 RA	11215702-072221-DUP-5 RA	08/24/2021 12:57	5	24AU2111D2_008.d	DB-225 0.32(mm)
320-76769-28 RA	11215702-072221-SS-SJ SB076 (2-4) RA	08/24/2021 13:35	5	24AU2111D2_009.d	DB-225 0.32(mm)
320-76769-27 RA	11215702-072221-SS-SJ SB076 (0-2) RA	08/24/2021 14:13	1	24AU2111D2_010.d	DB-225 0.32(mm)
320-76769-27 MS RA	11215702-072221-SS-SJ SB076 (0-2) MS RA	08/24/2021 14:51	1	24AU2111D2_011.d	DB-225 0.32(mm)
320-76769-27 MSD RA	11215702-072221-SS-SJ SB076 (0-2) MSD RA	08/24/2021 15:30	1	24AU2111D2_012.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/24/2021 16:36

Analysis Batch Number: 519540 End Date: 08/25/2021 02:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-519540/1		08/24/2021 16:36	1	24AU21A11D2_001.d	DB-225 0.32(mm)
CPS 320-519540/2		08/24/2021 17:15	1	24AU21A11D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/24/2021 17:53	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 18:32	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 19:10	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 19:48	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 20:27	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 21:05	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 21:43	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 22:22	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 23:00	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 23:38	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 00:17	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 00:55	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 01:34	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 02:12	1		DB-225 0.32(mm)
320-76769-29 RA	11215702-072221-SS-SJSB076 (4-6) RA	08/25/2021 02:50	5	24AU21A11D2_017.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/25/2021 08:48

Analysis Batch Number: 519650 End Date: 08/25/2021 12:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-519650/1		08/25/2021 08:48	1	25AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-519650/2		08/25/2021 09:27	1	25AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/25/2021 10:50	10		DB-225 0.32(mm)
320-76888-A-1-B MS RA		08/25/2021 11:28	10	25AU2111D2_005.d	DB-225 0.32(mm)
320-76888-A-1-C MSD RA		08/25/2021 12:07	10	25AU2111D2_006.d	DB-225 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 513585 Batch Start Date: 08/06/21 05:22 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/12/21 18:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	HRDXNIDA 00479	HRDXNIS 00137
MB 320-513585/1		HRMS-Sox, 1613B		10 g	20.0 uL	C1	65	1 mL	20 uL
LCS 320-513585/2		HRMS-Sox, 1613B		10 g	20.0 uL	C2	77	1 mL	20 uL
320-76769-A-1	11215702-072221-SS-SJSB080 (0-2)	HRMS-Sox, 1613B	T	9.94 g	20.0 uL	C4	18	1 mL	20 uL
320-76769-A-1 MS	11215702-072221-SS-SJSB080 (0-2)	HRMS-Sox, 1613B	T	9.55 g	20.0 uL	C5	81	1 mL	20 uL
320-76769-A-1 MSD	11215702-072221-SS-SJSB080 (0-2)	HRMS-Sox, 1613B	T	10.34 g	20.0 uL	C6	27	1 mL	20 uL
320-76769-A-2	11215702-072221-SS-SJSB080 (2-4)	HRMS-Sox, 1613B	T	9.73 g	20.0 uL	D1	94	1 mL	20 uL
320-76769-A-3	11215702-072221-SS-SJSB080 (4-6)	HRMS-Sox, 1613B	T	9.87 g	20.0 uL	D2	8	1 mL	20 uL
320-76769-A-5	11215702-072221-SS-SJSB080 (8-10)	HRMS-Sox, 1613B	T	9.67 g	20.0 uL	D4	71	1 mL	20 uL
320-76769-A-6	11215702-072221-SS-SJSB080 (10-12)	HRMS-Sox, 1613B	T	9.86 g	20.0 uL	D5	48	1 mL	20 uL
320-76769-A-7	11215702-072221-SS-SJSB080 (12-14)	HRMS-Sox, 1613B	T	9.97 g	20.0 uL	D6	84	1 mL	20 uL
320-76769-A-8	11215702-072221-SS-SJSB080 (14-16)	HRMS-Sox, 1613B	T	10.39 g	20.0 uL	E1	28	1 mL	20 uL
320-76769-A-13	11215702-072221-SS-SJSB074 (0-2)	HRMS-Sox, 1613B	T	10.08 g	20.0 uL	E2	69	1 mL	20 uL
320-76769-A-14	11215702-072221-SS-SJSB074 (2-4)	HRMS-Sox, 1613B	T	10.09 g	20.0 uL	E3	55	1 mL	20 uL
320-76769-A-15	11215702-072221-SS-SJSB074 (4-6)	HRMS-Sox, 1613B	T	9.68 g	20.0 uL	E4	110	1 mL	20 uL
320-76769-A-16	11215702-072221-SS-SJSB074 (6-8)	HRMS-Sox, 1613B	T	10.00 g	20.0 uL	E5	75	1 mL	20 uL
320-76769-A-17	11215702-072221-SS-SJSB074 (8-10)	HRMS-Sox, 1613B	T	10.01 g	20.0 uL	E6	74	1 mL	20 uL
320-76769-A-18	11215702-072221-SS-SJSB074 (10-12)	HRMS-Sox, 1613B	T	10.06 g	20.0 uL	F1	46	1 mL	20 uL
320-76769-A-19	11215702-072221-SS-SJSB074 (12-14)	HRMS-Sox, 1613B	T	10.67 g	20.0 uL	F2	23	1 mL	20 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 513585 Batch Start Date: 08/06/21 05:22 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/12/21 18:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	HRDXNIDA 00479	HRDXNIS 00137
320-76769-A-20	11215702-072221-SS-SJSB074 (14-16)	HRMS-Sox, 1613B	T	10.16 g	20.0 uL	F3	68	1 mL	20 uL
320-76769-A-25	11215702-072221-DUP-4	HRMS-Sox, 1613B	T	10.26 g	20.0 uL	F4	58	1 mL	20 uL
320-76769-A-26	11215702-072221-DUP-5	HRMS-Sox, 1613B	T	10.54 g	20.0 uL	F5	51	1 mL	20 uL
320-76769-A-28	11215702-072221-SS-SJSB076 (2-4)	HRMS-Sox, 1613B	T	10.29 g	20.0 uL	F6	24	1 mL	20 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNSU 00255	HRDXNTA 00137				
MB 320-513585/1		HRMS-Sox, 1613B		1 mL					
LCS 320-513585/2		HRMS-Sox, 1613B		1 mL	50 uL				
320-76769-A-1	11215702-072221-SS-SJSB080 (0-2)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-1 MS	11215702-072221-SS-SJSB080 (0-2)	HRMS-Sox, 1613B	T	1 mL	50 uL				
320-76769-A-1 MSD	11215702-072221-SS-SJSB080 (0-2)	HRMS-Sox, 1613B	T	1 mL	50 uL				
320-76769-A-2	11215702-072221-SS-SJSB080 (2-4)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-3	11215702-072221-SS-SJSB080 (4-6)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-5	11215702-072221-SS-SJSB080 (8-10)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-6	11215702-072221-SS-SJSB080 (10-12)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-7	11215702-072221-SS-SJSB080 (12-14)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-8	11215702-072221-SS-SJSB080 (14-16)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-13	11215702-072221-SS-SJSB074 (0-2)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-14	11215702-072221-SS-SJSB074 (2-4)	HRMS-Sox, 1613B	T	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 513585 Batch Start Date: 08/06/21 05:22 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/12/21 18:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNSU 00255	HRDXNTA 00137				
320-76769-A-15	11215702-072221-SS-SJSB074 (4-6)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-16	11215702-072221-SS-SJSB074 (6-8)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-17	11215702-072221-SS-SJSB074 (8-10)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-18	11215702-072221-SS-SJSB074 (10-12)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-19	11215702-072221-SS-SJSB074 (12-14)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-20	11215702-072221-SS-SJSB074 (14-16)	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-25	11215702-072221-DUP-4	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-26	11215702-072221-DUP-5	HRMS-Sox, 1613B	T	1 mL					
320-76769-A-28	11215702-072221-SS-SJSB076 (2-4)	HRMS-Sox, 1613B	T	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 513585 Batch Start Date: 08/06/21 05:22 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/12/21 18:00

Batch Notes	
20% DCM:Hexane ID	DH28_00193 mL
65% DCM:Hexane ID	DH6535_00546
Acid Silica Gel ID	SA5644_00731
Acid Alumina ID	Acid_Alumina_00018
Balance ID	QA-074
Hexane ID	Hexane_00287
IFB Clean Up	TGL 08/12/21
Na2SO4 ID	SodiumSulfate_00166
Analyst ID - IDA Reagent Drop	FC 8/6/21 HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	GLB 08/06/21
Analyst ID - IS Reagent Drop	SR 08/12/21 DB15270 HRDXNIS_00137 B-1/4 20.0 uL
Analyst ID - IS Reagent Drop Witness	RCR 08/12/21
Analyst ID - SU Reagent Drop	GLB 08/12/21 HD05018 HRDXNSU_00255 B-3/5 1.0 mL
Analyst ID - SU Reagent Drop Witness	IP 08/12/21
Analyst ID - TA Reagent Drop	FC 8/6/21 DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	GLB 08/06/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/6/21 9:50
Soxhlet/Soxtherm Start	8/6/21 6:50
Storage Box ID	DXN - 265
Toluene ID	Toluene_00110

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 513586 Batch Start Date: 08/06/21 05:28 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/13/21 17:05

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-513586/1		HRMS-Sox, 1613B		10 g	20.0 uL	G-1	73	1	1 mL
LCS 320-513586/2		HRMS-Sox, 1613B		10 g	20.0 uL	G-2	7	3	1 mL
320-76769-A-27	11215702-072221-SS-SJSB076 (0-2)	HRMS-Sox, 1613B	T	10.65 g	20.0 uL	G-3	53	1	1 mL
320-76769-A-27 MS	11215702-072221-SS-SJSB076 (0-2)	HRMS-Sox, 1613B	T	9.97 g	20.0 uL	G-4	39	3	1 mL
320-76769-A-27 MSD	11215702-072221-SS-SJSB076 (0-2)	HRMS-Sox, 1613B	T	10.06 g	20.0 uL	G-5	67	1	1 mL
320-76769-A-29	11215702-072221-SS-SJSB076 (4-6)	HRMS-Sox, 1613B	T	9.98 g	20.0 uL	G-6	38	3	1 mL
320-76769-A-30	11215702-072221-SS-SJSB076 (6-8)	HRMS-Sox, 1613B	T	9.73 g	20.0 uL	H-1	64	1	1 mL
320-76769-A-31	11215702-072221-SS-SJSB076 (8-10)	HRMS-Sox, 1613B	T	10.24 g	20.0 uL	H-2	83	3	1 mL
320-76769-A-32	11215702-072221-SS-SJSB076 (10-12)	HRMS-Sox, 1613B	T	9.57 g	20.0 uL	H-3	37	1	1 mL
320-76769-A-33	11215702-072221-SS-SJSB076 (12-14)	HRMS-Sox, 1613B	T	10.23 g	20.0 uL	H-4	49	3	1 mL
320-76769-A-34	11215702-072221-SS-SJSB076 (14-16)	HRMS-Sox, 1613B	T	9.94 g	20.0 uL	H-5	11	1	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-513586/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-513586/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76769-A-27	11215702-072221-SS-SJSB076 (0-2)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76769-A-27 MS	11215702-072221-SS-SJSB076 (0-2)	HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76769-A-27 MSD	11215702-072221-SS-SJSB076 (0-2)	HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76769-A-29	11215702-072221-SS-SJSB076 (4-6)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76769-A-30	11215702-072221-SS-SJSB076 (6-8)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 513586 Batch Start Date: 08/06/21 05:28 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/13/21 17:05

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
320-76769-A-31	11215702-072221-SS-SJSB076 (8-10)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76769-A-32	11215702-072221-SS-SJSB076 (10-12)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76769-A-33	11215702-072221-SS-SJSB076 (12-14)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76769-A-34	11215702-072221-SS-SJSB076 (14-16)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 513586 Batch Start Date: 08/06/21 05:28 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/13/21 17:05

Batch Notes	
20% DCM:Hexane ID	DH28_00193 mL
65% DCM:Hexane ID	DH6535_00546
Acid Silica Gel ID	SA5644_00732
Acid Alumina ID	Acid_Alumina_00019
Balance ID	QA-074
Batch Comment	Samples were brought up to 10.0 mL and 20.0 uL was aliquoted for screening.
C14 ID	2414812
Sulfuric Acid Lot Number	2623518
Hexane ID	Hexane_00285
IFB Clean Up	SKV 08/13/21
Na2SO4 ID	SodiumSulfate_00166
Option C Clean Up	GLB 08/13/21
Analyst ID - IDA Reagent Drop	FC 8/6/21 HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	IP 08/06/21
Analyst ID - IS Reagent Drop	SR 08/13/21 DB15270 HRDXNIS_00137 B-1/4 20.0 uL
Analyst ID - IS Reagent Drop Witness	SKV 08/13/21
Analyst ID - SU Reagent Drop	GLB 08/13/21 HD05018 HRDXNSU_00255 B-4/5 1.0 mL
Analyst ID - SU Reagent Drop Witness	FC 08/13/21
Analyst ID - TA Reagent Drop	FC 8/6/21 DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	IP 08/06/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/6/21 11:40
Soxhlet/Soxtherm Start	8/6/21 8:40
Storage Box ID	DXN -266
Toluene ID	Toluene_00110

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 513879 Batch Start Date: 08/06/21 12:57 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/14/21 06:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-513879/1		HRMS-Sox, 1613B		10 g	20.0 uL	C,1	66	1	1 mL
LCS 320-513879/2		HRMS-Sox, 1613B		10 g	20.0 uL	2	39	3	1 mL
320-76769-A-4	11215702-072221-SS-SJSB080 (6-8)	HRMS-Sox, 1613B	T	10.04 g	20.0 uL	3	65	1	1 mL
320-76888-A-1 MS		HRMS-Sox, 1613B	T	10.30 g	20.0 uL	5	40	1	1 mL
320-76888-A-1 MSD		HRMS-Sox, 1613B	T	10.36 g	20.0 uL	6	101	3	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-513879/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-513879/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76769-A-4	11215702-072221-SS-SJSB080 (6-8)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76888-A-1 MS		HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76888-A-1 MSD		HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 513879 Batch Start Date: 08/06/21 12:57 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/14/21 06:30

Batch Notes	
20% DCM:Hexane ID	DH28_00193 mL
65% DCM:Hexane ID	DH6535_00546
Acid Silica Gel ID	SA5644_00732
Acid Alumina ID	Acid_Alumina_00019
Balance ID	QA-0
Sulfuric Acid Lot Number	H2SO400152
Hexane ID	Hexane_00285
IFB Clean Up	GLB 8-14-21
Na2SO4 ID	SodiumSulfate_00166
Analyst ID - IDA Reagent Drop	HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	EMG 8/7/21
Analyst ID - IS Reagent Drop	GLB 8-14-21 DB15270 HRDXNIS00137 B 1/4 20uL
Analyst ID - IS Reagent Drop Witness	HK 8-14-21
Analyst ID - SU Reagent Drop	SR 8/13/21 HD05018 HRDXNSU00255 B 4/5 1.0mL
Analyst ID - SU Reagent Drop Witness	TGL 8-13-21
Analyst ID - TA Reagent Drop	DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	EMG 8/7/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/7/21 10:00
Soxhlet/Soxtherm Start	8/7/21 7:00
Storage Box ID	DXN -267
Toluene ID	Toluene_00110

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

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Sacramento
Dilution Report Form – HRMS Tests

Use this form for documenting dilutions. All dilutions are based on removing sample from the original extract, unless otherwise noted. The final volume for the dilutions listed is the sum of the solvent and the sample.

Attach the completed form to the original bench sheet, for archive with the lot data.

Table 1: How Dilutions Are Made

Dilution required	**Amount of Solvent (µL)** DXN Methods: 8290, 1613B, TO-9, EPA 23, EPA 0023A; Solvent (tetradecane C_{14}) PCB Methods: 1668A, 1668C; Solvent (dodecane C_{12})	Amount of sample (µl) to be added to solvent
2X	5.0	5.0
5X	8.0	2.0
10X	18.0	2.0
20X	38.0	2.0
25X	48.0	2.0
30X	58.0	2.0
40X	78.0	2.0
50X	98.0	2.0
100X	198.0	2.0

Sample Dilutions Made

Job Number	Sample ID	Dilution Made	Reagent (Solvent)/ IS ID*	Pipette/ Syringe ID	Analyst	Date
320-76769	A-1-A	5X	TETRADECANE -00015	10µl NA	DB	8/20/21
	A-1-B MS	5X			DB	8/20/21
	A-1-C MSD	5X			DB	8/20/21
	A-2-A	5X			DB	8/20/21
	A-14-A	5X			DB	8/20/21
	A-26-A	5X			DB	8/20/21
	A-28-A	5X			DB	8/20/21
			DB 8/20/21			

Log solvents into TALS, use TALS Reagent ID here; if adding IS, also input TALS Reagent ID for IS.

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Sacramento
Dilution Report Form – HRMS Tests

Use this form for documenting dilutions. All dilutions are based on removing sample from the original extract, unless otherwise noted. The final volume for the dilutions listed is the sum of the solvent and the sample.

Attach the completed form to the original bench sheet, for archive with the lot data.

Table 1: How Dilutions Are Made

Dilution required	**Amount of Solvent (µL)** DXN Methods: 8290, 1613B, TO-9, EPA 23, EPA 0023A; Solvent (tetradecane C_{14}) PCB Methods: 1668A, 1668C; Solvent (dodecane C_{12})	Amount of sample (µl) to be added to solvent
2X	5.0	5.0
5X	8.0	2.0
10X	18.0	2.0
20X	38.0	2.0
25X	48.0	2.0
30X	58.0	2.0
40X	78.0	2.0
50X	98.0	2.0
100X	198.0	2.0

Sample Dilutions Made

Job Number	Sample ID	Dilution Made	Reagent (Solvent)/ IS ID*	Pipette/ Syringe ID	Analyst	Date
320-76769	A-29-A	5X	TETRADECANE_00015	10µl NA	DB	8/24/21
			DB 8/24/21			

Log solvents into TALS, use TALS Reagent ID here; if adding IS, also input TALS Reagent ID for IS.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-76769-1

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-072221-SS-SJSB080 (0-2)	320-76769-1
11215702-072221-SS-SJSB080 (2-4)	320-76769-2
11215702-072221-SS-SJSB080 (4-6)	320-76769-3
11215702-072221-SS-SJSB080 (6-8)	320-76769-4
11215702-072221-SS-SJSB080 (8-10)	320-76769-5
11215702-072221-SS-SJSB080 (10-12)	320-76769-6
11215702-072221-SS-SJSB080 (12-14)	320-76769-7
11215702-072221-SS-SJSB080 (14-16)	320-76769-8
11215702-072221-SS-SJSB074 (0-2)	320-76769-13
11215702-072221-SS-SJSB074 (2-4)	320-76769-14
11215702-072221-SS-SJSB074 (4-6)	320-76769-15
11215702-072221-SS-SJSB074 (6-8)	320-76769-16
11215702-072221-SS-SJSB074 (8-10)	320-76769-17
11215702-072221-SS-SJSB074 (10-12)	320-76769-18
11215702-072221-SS-SJSB074 (12-14)	320-76769-19
11215702-072221-SS-SJSB074 (14-16)	320-76769-20
11215702-072221-DUP-4	320-76769-25
11215702-072221-DUP-5	320-76769-26
11215702-072221-SS-SJSB076 (0-2)	320-76769-27
11215702-072221-SS-SJSB076 (2-4)	320-76769-28
11215702-072221-SS-SJSB076 (4-6)	320-76769-29
11215702-072221-SS-SJSB076 (6-8)	320-76769-30
11215702-072221-SS-SJSB076 (8-10)	320-76769-31
11215702-072221-SS-SJSB076 (10-12)	320-76769-32
11215702-072221-SS-SJSB076 (12-14)	320-76769-33
11215702-072221-SS-SJSB076 (14-16)	320-76769-34

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76769-1

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76769-1

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/29/2021 11:22 End Date: 07/29/2021 11:22

Lab Sample Id	D/F	Type	Time	Analytes																								
				% Sol	Moist																							
ZZZZZZ			11:22																									
ZZZZZZ			11:22																									
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ZZZZZZ			11:22																									
320-76769-25	1	T	11:22	X	X																							
320-76769-25 DU	1	T	11:22	X	X																							

Prep Types:
T = Total/NA

FORM XIII-IN

778003

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/29/2021 11:22 End Date: 07/29/2021 11:22

Lab Sample Id	D/F	Type	Time	Analytes																								
				% Sol	Moist																							
320-76769-26	1	T	11:22	X	X																							
320-76769-26 DU	1	T	11:22	X	X																							
ZZZZZZ			11:22																									
ZZZZZZ			11:22																									
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Prep Types:
T = Total/NA

FORM XIII-IN

778004

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/29/2021 14:17 End Date: 07/29/2021 14:17

Lab Sample Id	D/F	Type	Time	Analytes	
				% Sol	Moist
ZZZZZZ			14:17		
320-76864-A-1 DU	1	T	14:17	X	X
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
320-76769-27	1	T	14:17	X	X
320-76769-28	1	T	14:17	X	X
320-76769-29	1	T	14:17	X	X
320-76769-30	1	T	14:17	X	X
320-76769-31	1	T	14:17	X	X
320-76769-32	1	T	14:17	X	X
320-76769-33	1	T	14:17	X	X
320-76769-34	1	T	14:17	X	X
ZZZZZZ			14:17		

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/29/2021 14:17 End Date: 07/29/2021 14:17

Lab Sample Id	D/F	Type	Time	Analytes																							
				% Sol	Moist																						
320-76769-1	1	T	14:17	X	X																						
320-76769-1 DU	1	T	14:17	X	X																						
320-76769-2	1	T	14:17	X	X																						
320-76769-3	1	T	14:17	X	X																						
320-76769-4	1	T	14:17	X	X																						
320-76769-5	1	T	14:17	X	X																						
320-76769-6	1	T	14:17	X	X																						
320-76769-7	1	T	14:17	X	X																						
320-76769-8	1	T	14:17	X	X																						
ZZZZZZ			14:17																								
320-76769-13	1	T	14:17	X	X																						
320-76769-14	1	T	14:17	X	X																						
320-76769-15	1	T	14:17	X	X																						
320-76769-16	1	T	14:17	X	X																						
320-76769-17	1	T	14:17	X	X																						
320-76769-18	1	T	14:17	X	X																						
320-76769-19	1	T	14:17	X	X																						
320-76769-20	1	T	14:17	X	X																						
ZZZZZZ			14:17																								

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 511281 Batch Start Date: 07/29/21 11:22 Batch Analyst: Burrick, Kristen D

Batch Method: D 2216 Batch End Date: 07/30/21 08:54

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76769-A-25	11215702-072221-DUP-4	D 2216	T	19	1.03 g	10.23 g	8.47 g	19.1304347826087 %	80.8695652173913 %
320-76769-A-25 DU	11215702-072221-DUP-4	D 2216	T	20	1.01 g	6.71 g	5.57 g	20 %	80 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	07/30/2021 08:00
Date and Time Samples out of Desiccator	07/30/2021 08:54
Date samples were placed in the oven	07/29/2021
Oven Temp In	114 Degrees C
Time samples were place in the oven	11:22
Date samples were removed from oven	07/30/2021
Oven Temp Out	111 Degrees C
Time Samples were removed from oven	08:00
Oven ID	Soil Prep #2
Thermometer ID	151969607

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 511294 Batch Start Date: 07/29/21 11:22 Batch Analyst: Burrick, Kristen D

Batch Method: D 2216 Batch End Date: 07/30/21 08:54

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76769-A-26	11215702-072221-DUP-5	D 2216	T	1	1.02 g	8.13 g	5.15 g	41.9127988748242 %	58.0872011251758 %
320-76769-A-26 DU	11215702-072221-DUP-5	D 2216	T	2	1.01 g	8.44 g	5.44 g	40.3768506056528 %	59.6231493943472 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	07/30/2021 08:00
Date and Time Samples out of Desiccator	07/30/2021 08:54
Date samples were placed in the oven	07/29/2021
Oven Temp In	114 Degrees C
Time samples were place in the oven	11:22
Date samples were removed from oven	07/30/2021
Oven Temp Out	111 Degrees C
Time Samples were removed from oven	08:00
Oven ID	Soil Prep #2
Thermometer ID	151969607

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 511355 Batch Start Date: 07/29/21 14:17 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 07/30/21 08:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76864-A-1 DU		D 2216	T	2	1.05 g	7.84 g	7.51 g	4.860088365243 %	95.139911634757 %
320-76769-A-27	11215702-072221-SS-SJSB076 (0-2)	D 2216	T	11	1.06 g	7.40 g	5.88 g	23.974763406940 1 %	76.025236593059 9 %
320-76769-A-28	11215702-072221-SS-SJSB076 (2-4)	D 2216	T	12	1.06 g	7.05 g	4.10 g	49.248747913188 7 %	50.751252086811 3 %
320-76769-A-29	11215702-072221-SS-SJSB076 (4-6)	D 2216	T	13	1.03 g	8.11 g	4.12 g	56.355932203389 8 %	43.644067796610 2 %
320-76769-A-30	11215702-072221-SS-SJSB076 (6-8)	D 2216	T	14	1.01 g	7.16 g	5.73 g	23.252032520325 2 %	76.747967479674 8 %
320-76769-A-31	11215702-072221-SS-SJSB076 (8-10)	D 2216	T	15	1.03 g	6.13 g	5.18 g	18.627450980392 1 %	81.372549019607 9 %
320-76769-A-32	11215702-072221-SS-SJSB076 (10-12)	D 2216	T	16	1.03 g	7.59 g	6.39 g	18.292682926829 3 %	81.707317073170 7 %
320-76769-A-33	11215702-072221-SS-SJSB076 (12-14)	D 2216	T	17	1.03 g	8.45 g	6.00 g	33.018867924528 3 %	66.981132075471 7 %
320-76769-A-34	11215702-072221-SS-SJSB076 (14-16)	D 2216	T	18	1.02 g	6.74 g	5.30 g	25.174825174825 2 %	74.825174825174 8 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	07/30/2021 08:00
Date and Time Samples out of Desiccator	07/30/2021 08:47
Date samples were placed in the oven	07/29/2021
Oven Temp In	110 Degrees C
Time samples were place in the oven	14:17
Date samples were removed from oven	07/30/2021
Oven Temp Out	108 Degrees C
Time Samples were removed from oven	08:00
Oven ID	Soil Prep #3
Thermometer ID	200416337

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 511355 Batch Start Date: 07/29/21 14:17 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 07/30/21 08:47

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 511356 Batch Start Date: 07/29/21 14:17 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 07/30/21 08:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76769-A-1	11215702-072221-SS-SJSB080 (0-2)	D 2216	T	1	1.00 g	6.32 g	4.27 g	38.5338345864662 %	61.4661654135338 %
320-76769-A-1 DU	11215702-072221-SS-SJSB080 (0-2)	D 2216	T	2	1.00 g	6.02 g	3.98 g	40.6374501992032 %	59.3625498007968 %
320-76769-A-2	11215702-072221-SS-SJSB080 (2-4)	D 2216	T	3	1.02 g	6.03 g	4.13 g	37.9241516966068 %	62.0758483033932 %
320-76769-A-3	11215702-072221-SS-SJSB080 (4-6)	D 2216	T	4	1.02 g	8.78 g	6.21 g	33.1185567010309 %	66.8814432989691 %
320-76769-A-4	11215702-072221-SS-SJSB080 (6-8)	D 2216	T	5	1.01 g	6.28 g	4.66 g	30.7400379506641 %	69.2599620493359 %
320-76769-A-5	11215702-072221-SS-SJSB080 (8-10)	D 2216	T	6	1.00 g	7.52 g	6.12 g	21.4723926380368 %	78.5276073619632 %
320-76769-A-6	11215702-072221-SS-SJSB080 (10-12)	D 2216	T	7	1.01 g	6.37 g	5.41 g	17.910447761194 %	82.089552238806 %
320-76769-A-7	11215702-072221-SS-SJSB080 (12-14)	D 2216	T	8	1.01 g	6.09 g	5.15 g	18.503937007874 %	81.496062992126 %
320-76769-A-8	11215702-072221-SS-SJSB080 (14-16)	D 2216	T	9	1.01 g	6.55 g	5.53 g	18.411552346570 4 %	81.588447653429 6 %
320-76769-A-13	11215702-072221-SS-SJSB074 (0-2)	D 2216	T	11	1.01 g	7.66 g	5.95 g	25.714285714285 7 %	74.285714285714 3 %
320-76769-A-14	11215702-072221-SS-SJSB074 (2-4)	D 2216	T	12	1.02 g	6.65 g	3.92 g	48.490230905861 5 %	51.509769094138 5 %
320-76769-A-15	11215702-072221-SS-SJSB074 (4-6)	D 2216	T	13	1.02 g	6.80 g	4.35 g	42.387543252595 2 %	57.612456747404 8 %
320-76769-A-16	11215702-072221-SS-SJSB074 (6-8)	D 2216	T	14	1.02 g	7.66 g	6.35 g	19.728915662650 6 %	80.271084337349 4 %
320-76769-A-17	11215702-072221-SS-SJSB074 (8-10)	D 2216	T	15	1.03 g	8.96 g	7.67 g	16.267339218158 9 %	83.732660781841 1 %
320-76769-A-18	11215702-072221-SS-SJSB074 (10-12)	D 2216	T	16	1.02 g	9.93 g	8.49 g	16.161616161616 2 %	83.838383838383 8 %
320-76769-A-19	11215702-072221-SS-SJSB074 (12-14)	D 2216	T	17	1.05 g	7.61 g	6.50 g	16.920731707317 1 %	83.079268292682 9 %
320-76769-A-20	11215702-072221-SS-SJSB074 (14-16)	D 2216	T	18	1.02 g	11.19 g	9.45 g	17.109144542772 9 %	82.890855457227 1 %

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-1

SDG No.:

Batch Number: 511356 Batch Start Date: 07/29/21 14:17 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 07/30/21 08:47

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	07/30/2021 08:00
Date and Time Samples out of Desiccator	07/30/2021 08:47
Date samples were placed in the oven	07/29/2021
Oven Temp In	110 Degrees C
Time samples were place in the oven	14:17
Date samples were removed from oven	07/30/2021
Oven Temp Out	108 Degrees C
Time Samples were removed from oven	08:00
Oven ID	Soil Prep #3
Thermometer ID	200416337

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-76769-1

Batch: 511281
Method: D 2216

Analyst Initials: KDB
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76769-A-25 **Analysis Date: Jul 29, 2021 11:22**

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	19.1304347826087	%
Percent Solids	None	1	80.8695652173913	%

Lab Sample ID: 320-76769-A-25 DU **Analysis Date: Jul 29, 2021 11:22**

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	20	%
Percent Solids	None	1	80	%

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Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

General Chemistry Raw Data Report

Job ID: 320-76769-1

Batch: 511294
Method: D 2216

Analyst Initials: KDB
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76769-A-26 **Analysis Date: Jul 29, 2021 11:22**

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	41.9127988748242	%
Percent Solids	None	1	58.0872011251758	%

Lab Sample ID: 320-76769-A-26 DU **Analysis Date: Jul 29, 2021 11:22**

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	40.3768506056528	%
Percent Solids	None	1	59.6231493943472	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

General Chemistry Raw Data Report

Job ID: 320-76769-1

Batch: 511355
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76864-A-1 DU

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	4.860088365243	%
Percent Solids	None	1	95.139911634757	%

Lab Sample ID: 320-76769-A-27

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	23.9747634069401	%
Percent Solids	None	1	76.0252365930599	%

Lab Sample ID: 320-76769-A-28

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	49.2487479131887	%
Percent Solids	None	1	50.7512520868113	%

Lab Sample ID: 320-76769-A-29

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	56.3559322033898	%
Percent Solids	None	1	43.6440677966102	%

Lab Sample ID: 320-76769-A-30

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	23.2520325203252	%
Percent Solids	None	1	76.7479674796748	%

Lab Sample ID: 320-76769-A-31

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	18.6274509803921	%
Percent Solids	None	1	81.3725490196079	%

Lab Sample ID: 320-76769-A-32

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	18.2926829268293	%
Percent Solids	None	1	81.7073170731707	%

Lab Sample ID: 320-76769-A-33

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	33.0188679245283	%
Percent Solids	None	1	66.9811320754717	%

Lab Sample ID: 320-76769-A-34

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	25.1748251748252	%
Percent Solids	None	1	74.8251748251748	%

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Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

General Chemistry Raw Data Report

Job ID: 320-76769-1

Batch: 511356
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76769-A-1

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	38.5338345864662	%
Percent Solids	None	1	61.4661654135338	%

Lab Sample ID: 320-76769-A-1 DU

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	40.6374501992032	%
Percent Solids	None	1	59.3625498007968	%

Lab Sample ID: 320-76769-A-2

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	37.9241516966068	%
Percent Solids	None	1	62.0758483033932	%

Lab Sample ID: 320-76769-A-3

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	33.1185567010309	%
Percent Solids	None	1	66.8814432989691	%

Lab Sample ID: 320-76769-A-4

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	30.7400379506641	%
Percent Solids	None	1	69.2599620493359	%

Lab Sample ID: 320-76769-A-5

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	21.4723926380368	%
Percent Solids	None	1	78.5276073619632	%

Lab Sample ID: 320-76769-A-6

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	17.910447761194	%
Percent Solids	None	1	82.089552238806	%

Lab Sample ID: 320-76769-A-7

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	18.503937007874	%
Percent Solids	None	1	81.496062992126	%

Lab Sample ID: 320-76769-A-8

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	18.4115523465704	%
Percent Solids	None	1	81.5884476534296	%

Batch: 511356 (Continued)
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76769-A-13

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	25.7142857142857	%
Percent Solids	None	1	74.2857142857143	%

Lab Sample ID: 320-76769-A-14

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	48.4902309058615	%
Percent Solids	None	1	51.5097690941385	%

Lab Sample ID: 320-76769-A-15

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	42.3875432525952	%
Percent Solids	None	1	57.6124567474048	%

Lab Sample ID: 320-76769-A-16

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	19.7289156626506	%
Percent Solids	None	1	80.2710843373494	%

Lab Sample ID: 320-76769-A-17

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	16.2673392181589	%
Percent Solids	None	1	83.7326607818411	%

Lab Sample ID: 320-76769-A-18

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	16.1616161616162	%
Percent Solids	None	1	83.8383838383838	%

Lab Sample ID: 320-76769-A-19

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	16.9207317073171	%
Percent Solids	None	1	83.0792682926829	%

Lab Sample ID: 320-76769-A-20

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	17.1091445427729	%
Percent Solids	None	1	82.8908554572271	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins Environment Testing TestAmerica

778023

Client Information				
Sampler: Stephen Sellker	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:	
Client Contact: Janie Smith	Phone: 832 228 1568	E-Mail:	Page: 1 of 4	
Company: GHD Services Inc.			Job #: 11215702	
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702 - 2021-001			

Analysis Requested

320-76769 Chain of Custody

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Ignitability	TCLP 8260D	TCLP 8270D	TCLP 8081B	TCLP 8151A	TCLP 6010C/7470A	9014	paint filter	pH	8082A	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
11215702-072221-SS-SJSB080 (0-2)	7/22/21	840	G	S	N	Y	X	X	X												MS/MSD
11215702-072221-SS-SJSB080 (2-4)		845				N	X	X	X												
11215702-072221-SS-SJSB080 (4-6)		850				N	X	X	X												
11215702-072221-SS-SJSB080 (6-8)		855				N	X	X	X												
11215702-072221-SS-SJSB080 (8-10)		900				N	X	X	X												
11215702-072221-SS-SJSB080 (10-12)		905				N	X	X	X												
11215702-072221-SS-SJSB080 (12-14)		910				N	X	X	X												
11215702-072221-SS-SJSB080 (14-16)		915				N	X	X	X												
11215702-072221-SS-SJSB080 (16-18)		920				N	X	X	X												Primary
11215702-072221-SS-SJSB080 (18-20)		925				N	X	X	X	HOLD											HOLD
11215702-072221-SS-SJSB080 (20-22)		930				N	X	X	X	HOLD											HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	7/22/21 1100	GHD	[signature]	7/22/21 945	EAC

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 3.1

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

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Client Information	Sampler: Stephen Sthw	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 832 228568	E-Mail:		Page: 2 of 4
Company: GHD Services Inc.				Job #: 11215702
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Ignitability	TCLP 8260D	TCLP 8270D	TCLP 8081B	TCLP 8151A	TCLP 6010C/7470A	9014	paint filter	pH	8082A	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
11215702-072221-SS-SJSB080 (22-24)	7/22/21	935	G	S	N	N	X	X	X	HOLD											HOLD
11215702-072221-SS-SJSB074 (0-2)		1300					X	X	X												
11215702-072221-SS-SJSB074 (2-4)		1305					X	X	X												
11215702-072221-SS-SJSB074 (4-6)		1310					X	X	X												
11215702-072221-SS-SJSB074 (6-8)		1315					X	X	X												
11215702-072221-SS-SJSB074 (8-10)		1320					X	X	X												
11215702-072221-SS-SJSB074 (10-12)		1325					X	X	X												
11215702-072221-SS-SJSB074 (12-14)		1330					X	X	X												
11215702-072221-SS-SJSB074 (14-16)		1335					X	X	X												
11215702-072221-SS-SJSB074 (16-18)		1340					X	X	X												Priority
11215702-072221-SS-SJSB074 (18-20)		1345					X	X	X	HOLD											HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	7/26/21 1100	GHD	[signature]	7/27/21 945	ETAsac

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
Δ Yes Δ No		

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

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778025

Client Information				
Sampler: Stephen Stilwell	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:	
Client Contact: Janie Smith	Phone: 832 228 1568	E-Mail:	Page: 3 of 4	
Company: GHD Services Inc.			Job #: 11215702	
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Wash P.I.S	SSOW#: 11215702 - 2021-001			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Ignitability	TCLP 8260D	TCLP 8270D	TCLP 8081B	TCLP 8151A	TCLP 6010C/7470A	9014	paint filter	pH	8082A	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
11215702-072221-SS-STSB074(20-22)	7/22/21	1350	G	S	N	N	X	X	X	HOLD											HOLD
11215702-072221-SS-STSB074(22-24)	↓	1355	↓	↓	N	N	X	X	X	HOLD											HOLD
11215702-072221-DUP-4		—			N	N	X	X	X												
11215702-072221-DUP-5		—			N	N	X	X	X												
11215702-072221-SS-STSB076(0-2)		1550			Y	Y	X	X	X												MS/MSD
11215702-072221-SS-STSB076(2-4)		1555			N	N	X	X	X												
11215702-072221-SS-STSB076(4-6)		1600			N	N	X	X	X												
11215702-072221-SS-STSB076(6-8)		1605			N	N	X	X	X												
11215702-072221-SS-STSB076(8-10)		1610			N	N	X	X	X												
11215702-072221-SS-STSB076(10-12)		1615			N	N	X	X	X												
11215702-072221-SS-STSB076(12-14)	↓	1620	↓	↓	N	N	X	X	X												

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 7/26/21 1100	Company: GHD	Received by:	Date/Time: 7/27/21 - 945	Company: EASAc
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins Environment Testing TestAmerica

778026

Client Information					
Sampler: Stefan Sikl	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:		
Client Contact: Janie Smith	Phone: 832 228 1568	E-Mail:	Page: 4 of 4		
Company: GHD Services Inc.			Job #: 11215702		
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:				
City: Baton Rouge	TAT Requested (days): 15 business days				
State, Zip: LA, 70808					
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested				
Email: janie.smith@ghd.com	WO #:				
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702				
Site: San Jacinto Wtr P.15	SSOW#: 11215702 - 2021 - 001				

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Ignitability	TCLP 8260D	TCLP 8270D	TCLP 8081B	TCLP 8151A	TCLP 6010C/7470A	9014	paint filter	pH	8082A	Total Number of containers	Special Instructions/Note:
Preservation Code:																					
11215702-07221-SS-SJSB076 (14-16)	7/22/21	1625	G	S	N	N	X	X	X												
11215702-07221-SS-SJSB076 (16-18)	↓	1630	↓	↓	↓	↓	X	X	X												Prior
11215702-07221-SS-SJSB076 (18-20)		1635					X	X	X		HOLD										HOLD
11215702-07221-SS-SJSB076 (20-22)		1640					X	X	X		HOLD										HOLD
11215702-07221-SS-SJSB076 (22-24)	↓	1645	↓	↓	↓	↓	X	X	X		HOLD										HOLD

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 7/26/21 1100	Company: GHD	Received by:	Date/Time: 7/27/21-945	Company: ETASN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-76769-1

Login Number: 76769
List Number: 1
Creator: Guzman, Juan

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1519270
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Job Number: 320-76769-2

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
8/23/2021 3:47 PM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
08/23/2021

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 7/27/2021 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.1º C.

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Job ID: 320-76769-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072221-SS-SJSB080 (16-18) — Lab Sample ID: 320-76769-9

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	9.1		1.4	0.065	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.20	J q	6.9	0.049	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	1.1	J	6.9	0.045	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.66	J	6.9	0.046	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.28	J B	6.9	0.052	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.18	J	6.9	0.054	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.27	J B q	6.9	0.048	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	1.3	J	6.9	0.030	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.42	J	6.9	0.032	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.31	J B	6.9	0.026	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.059	J q	6.9	0.024	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	3.5	J B	6.9	0.086	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.55	J B	6.9	0.032	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.22	J	6.9	0.039	pg/g	1	☼	1613B	Total/NA
OCDD	72	B	14	0.13	pg/g	1	☼	1613B	Total/NA
OCDF	0.89	J B	14	0.025	pg/g	1	☼	1613B	Total/NA
Total TCDD	10	B	1.4	0.065	pg/g	1	☼	1613B	Total/NA
Total TCDF	50	B	1.4	0.11	pg/g	1	☼	1613B	Total/NA
Total PeCDD	0.81	J q	6.9	0.049	pg/g	1	☼	1613B	Total/NA
Total PeCDF	2.4	J q	6.9	0.046	pg/g	1	☼	1613B	Total/NA
Total HxCDD	3.6	J B q	6.9	0.052	pg/g	1	☼	1613B	Total/NA
Total HxCDF	2.3	J B q	6.9	0.028	pg/g	1	☼	1613B	Total/NA
Total HpCDD	12	B	6.9	0.086	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1.0	J B	6.9	0.035	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	27	B	1.4	0.37	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072221-SS-SJSB074 (16-18) — Lab Sample ID: 320-76769-21

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.38	J q	1.2	0.029	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF	0.66	J B	1.2	0.017	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.12	J q	6.1	0.049	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.18	J	6.1	0.024	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.056	J	6.1	0.025	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.26	J B q	6.1	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.27	J q	6.1	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.67	J B	6.1	0.10	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.067	J	6.1	0.019	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.22	J B	6.1	0.016	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	9.6	B	6.1	0.29	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.096	J B	6.1	0.022	pg/g	1	☼	1613B	Total/NA
OCDD	200	B	12	0.25	pg/g	1	☼	1613B	Total/NA
OCDF	0.12	J B q	12	0.018	pg/g	1	☼	1613B	Total/NA
Total TCDD	2.0	B q	1.2	0.029	pg/g	1	☼	1613B	Total/NA
Total TCDF	1.3	B q	1.2	0.017	pg/g	1	☼	1613B	Total/NA
Total PeCDD	2.4	J q	6.1	0.049	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.29	J q	6.1	0.024	pg/g	1	☼	1613B	Total/NA
Total HxCDD	11	B q	6.1	0.11	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.28	J B	6.1	0.017	pg/g	1	☼	1613B	Total/NA
Total HpCDD	37	B	6.1	0.29	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.096	J B	6.1	0.025	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Job ID: 320-76769-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072221-SS-SJSB076 (16-18) Lab Sample ID: 320-76769-35

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	2.2		1.4	0.054	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.22	J	7.0	0.067	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.41	J	7.0	0.032	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.16	J	7.0	0.032	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.45	J B	7.0	0.16	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.53	J	7.0	0.17	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.4	J B	7.0	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.39	J	7.0	0.024	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.13	J q	7.0	0.025	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.23	J B	7.0	0.020	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	18	B	7.0	0.47	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.21	J B	7.0	0.022	pg/g	1	☼	1613B	Total/NA
OCDD	400	B	14	0.55	pg/g	1	☼	1613B	Total/NA
OCDF	0.24	J B	14	0.020	pg/g	1	☼	1613B	Total/NA
Total TCDD	5.7	q B	1.4	0.054	pg/g	1	☼	1613B	Total/NA
Total TCDF	11	q B	1.4	0.040	pg/g	1	☼	1613B	Total/NA
Total PeCDD	4.2	J q	7.0	0.067	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.81	J q	7.0	0.032	pg/g	1	☼	1613B	Total/NA
Total HxCDD	21	q B	7.0	0.16	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.76	J q B	7.0	0.022	pg/g	1	☼	1613B	Total/NA
Total HpCDD	77	B	7.0	0.47	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.32	J B	7.0	0.024	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	6.5	B	1.4	0.16	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072221-SS-SJSB080 (16-18) Lab Sample ID: 320-76769-9

Date Collected: 07/22/21 09:20 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24.7		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	75.3		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB080 (16-18) Lab Sample ID: 320-76769-9

Date Collected: 07/22/21 09:20 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 75.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	9.1		1.4	0.065	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
1,2,3,7,8-PeCDD	0.20	J q	6.9	0.049	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
1,2,3,7,8-PeCDF	1.1	J	6.9	0.045	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
2,3,4,7,8-PeCDF	0.66	J	6.9	0.046	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
1,2,3,4,7,8-HxCDD	0.28	J B	6.9	0.052	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
1,2,3,6,7,8-HxCDD	0.18	J	6.9	0.054	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
1,2,3,7,8,9-HxCDD	0.27	J B q	6.9	0.048	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
1,2,3,4,7,8-HxCDF	1.3	J	6.9	0.030	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
1,2,3,6,7,8-HxCDF	0.42	J	6.9	0.032	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
1,2,3,7,8,9-HxCDF	0.31	J B	6.9	0.026	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
2,3,4,6,7,8-HxCDF	0.059	J q	6.9	0.024	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
1,2,3,4,6,7,8-HpCDD	3.5	J B	6.9	0.086	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
1,2,3,4,6,7,8-HpCDF	0.55	J B	6.9	0.032	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
1,2,3,4,7,8,9-HpCDF	0.22	J	6.9	0.039	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
OCDD	72	B	14	0.13	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
OCDF	0.89	J B	14	0.025	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
Total TCDD	10	B	1.4	0.065	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
Total TCDF	50	B	1.4	0.11	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
Total PeCDD	0.81	J q	6.9	0.049	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
Total PeCDF	2.4	J q	6.9	0.046	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
Total HxCDD	3.6	J B q	6.9	0.052	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
Total HxCDF	2.3	J B q	6.9	0.028	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
Total HpCDD	12	B	6.9	0.086	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1
Total HpCDF	1.0	J B	6.9	0.035	pg/g	☼	08/05/21 06:41	08/13/21 08:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*62*		*25 - 164*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-2,3,7,8-TCDF	*58*		*24 - 169*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-1,2,3,7,8-PeCDD	*60*		*25 - 181*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-1,2,3,7,8-PeCDF	*58*		*24 - 185*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-2,3,4,7,8-PeCDF	*63*		*21 - 178*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-1,2,3,4,7,8-HxCDD	*64*		*32 - 141*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-1,2,3,6,7,8-HxCDD	*61*		*28 - 130*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-1,2,3,4,7,8-HxCDF	*63*		*26 - 152*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-1,2,3,6,7,8-HxCDF	*58*		*26 - 123*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-1,2,3,7,8,9-HxCDF	*57*		*29 - 147*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-2,3,4,6,7,8-HxCDF	*57*		*28 - 136*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*66*		*23 - 140*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*65*		*28 - 143*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*73*		*26 - 138*	*08/05/21 06:41*	*08/13/21 08:48*	*1*
13C-OCDD	*74*		*17 - 157*	*08/05/21 06:41*	*08/13/21 08:48*	*1*

Client Sample ID: 11215702-072221-SS-SJSB080 (16-18) Lab Sample ID: 320-76769-9

Date Collected: 07/22/21 09:20 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 75.3**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	79		35 - 197	08/05/21 06:41	08/13/21 08:48	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	27	B	1.4	0.37	pg/g	☼	08/05/21 06:41	08/21/21 15:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	64		24 - 169	08/05/21 06:41	08/21/21 15:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	78		35 - 197	08/05/21 06:41	08/21/21 15:49	1

Client Sample ID: 11215702-072221-SS-SJSB074 (16-18) Lab Sample ID: 320-76769-21

Date Collected: 07/22/21 13:40 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20.5		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	79.5		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB074 (16-18) Lab Sample ID: 320-76769-21

Date Collected: 07/22/21 13:40 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 79.5**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.38	J q	1.2	0.029	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
2,3,7,8-TCDF	0.66	J B	1.2	0.017	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
1,2,3,7,8-PeCDD	0.12	J q	6.1	0.049	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
1,2,3,7,8-PeCDF	0.18	J	6.1	0.024	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
2,3,4,7,8-PeCDF	0.056	J	6.1	0.025	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
1,2,3,4,7,8-HxCDD	0.26	J B q	6.1	0.11	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
1,2,3,6,7,8-HxCDD	0.27	J q	6.1	0.12	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
1,2,3,7,8,9-HxCDD	0.67	J B	6.1	0.10	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
1,2,3,4,7,8-HxCDF	0.067	J	6.1	0.019	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
1,2,3,6,7,8-HxCDF	ND		6.1	0.019	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
1,2,3,7,8,9-HxCDF	0.22	J B	6.1	0.016	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
2,3,4,6,7,8-HxCDF	ND		6.1	0.016	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
1,2,3,4,6,7,8-HpCDD	9.6	B	6.1	0.29	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
1,2,3,4,6,7,8-HpCDF	0.096	J B	6.1	0.022	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
1,2,3,4,7,8,9-HpCDF	ND		6.1	0.027	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
OCDD	200	B	12	0.25	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
OCDF	0.12	J B q	12	0.018	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
Total TCDD	2.0	B q	1.2	0.029	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
Total TCDF	1.3	B q	1.2	0.017	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
Total PeCDD	2.4	J q	6.1	0.049	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
Total PeCDF	0.29	J q	6.1	0.024	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
Total HxCDD	11	B q	6.1	0.11	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
Total HxCDF	0.28	J B	6.1	0.017	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
Total HpCDD	37	B	6.1	0.29	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1
Total HpCDF	0.096	J B	6.1	0.025	pg/g	☼	08/05/21 06:41	08/13/21 09:33	1

Client Sample Results

Client: GHD Services Inc. Job ID: 320-76769-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072221-SS-SJSB074 (16-18) Lab Sample ID: 320-76769-21

Date Collected: 07/22/21 13:40 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 79.5**

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*59*		*25 - 164*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-2,3,7,8-TCDF	*56*		*24 - 169*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-1,2,3,7,8-PeCDD	*59*		*25 - 181*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-1,2,3,7,8-PeCDF	*55*		*24 - 185*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-2,3,4,7,8-PeCDF	*61*		*21 - 178*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-1,2,3,4,7,8-HxCDD	*64*		*32 - 141*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-1,2,3,6,7,8-HxCDD	*55*		*28 - 130*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-1,2,3,4,7,8-HxCDF	*60*		*26 - 152*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-1,2,3,6,7,8-HxCDF	*54*		*26 - 123*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-1,2,3,7,8,9-HxCDF	*53*		*29 - 147*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-2,3,4,6,7,8-HxCDF	*54*		*28 - 136*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*62*		*23 - 140*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*59*		*28 - 143*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*66*		*26 - 138*	*08/05/21 06:41*	*08/13/21 09:33*	*1*
13C-OCDD	*66*		*17 - 157*	*08/05/21 06:41*	*08/13/21 09:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*83*		*35 - 197*	*08/05/21 06:41*	*08/13/21 09:33*	*1*

Client Sample ID: 11215702-072221-SS-SJSB076 (16-18) Lab Sample ID: 320-76769-35

Date Collected: 07/22/21 16:30 **Matrix: Sediment**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**27.5**		0.1	0.1	%			07/29/21 14:17	1
Percent Solids	**72.5**		0.1	0.1	%			07/29/21 14:17	1

Client Sample ID: 11215702-072221-SS-SJSB076 (16-18) Lab Sample ID: 320-76769-35

Date Collected: 07/22/21 16:30 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 72.5**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**2.2**		1.4	0.054	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
1,2,3,7,8-PeCDD	**0.22**	**J**	7.0	0.067	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
1,2,3,7,8-PeCDF	**0.41**	**J**	7.0	0.032	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
2,3,4,7,8-PeCDF	**0.16**	**J**	7.0	0.032	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
1,2,3,4,7,8-HxCDD	**0.45**	**J B**	7.0	0.16	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
1,2,3,6,7,8-HxCDD	**0.53**	**J**	7.0	0.17	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
1,2,3,7,8,9-HxCDD	**1.4**	**J B**	7.0	0.15	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
1,2,3,4,7,8-HxCDF	**0.39**	**J**	7.0	0.024	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
1,2,3,6,7,8-HxCDF	**0.13**	**J q**	7.0	0.025	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
1,2,3,7,8,9-HxCDF	**0.23**	**J B**	7.0	0.020	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
2,3,4,6,7,8-HxCDF	ND		7.0	0.019	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
1,2,3,4,6,7,8-HpCDD	**18**	**B**	7.0	0.47	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
1,2,3,4,6,7,8-HpCDF	**0.21**	**J B**	7.0	0.022	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
1,2,3,4,7,8,9-HpCDF	ND		7.0	0.027	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
OCDD	**400**	**B**	14	0.55	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
OCDF	**0.24**	**J B**	14	0.020	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
Total TCDD	**5.7**	**q B**	1.4	0.054	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
Total TCDF	**11**	**q B**	1.4	0.040	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1

Client Sample ID: 11215702-072221-SS-SJSB076 (16-18) Lab Sample ID: 320-76769-35

Date Collected: 07/22/21 16:30 **Matrix: Sediment**
Date Received: 07/27/21 09:45 **Percent Solids: 72.5**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDD	4.2	J q	7.0	0.067	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
Total PeCDF	0.81	J q	7.0	0.032	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
Total HxCDD	21	q B	7.0	0.16	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
Total HxCDF	0.76	J q B	7.0	0.022	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
Total HpCDD	77	B	7.0	0.47	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1
Total HpCDF	0.32	J B	7.0	0.024	pg/g	☼	08/05/21 06:41	08/13/21 10:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*61*		*25 - 164*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-2,3,7,8-TCDF	*58*		*24 - 169*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-1,2,3,7,8-PeCDD	*63*		*25 - 181*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-1,2,3,7,8-PeCDF	*59*		*24 - 185*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-2,3,4,7,8-PeCDF	*64*		*21 - 178*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-1,2,3,4,7,8-HxCDD	*66*		*32 - 141*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-1,2,3,6,7,8-HxCDD	*59*		*28 - 130*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-1,2,3,4,7,8-HxCDF	*64*		*26 - 152*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-1,2,3,6,7,8-HxCDF	*57*		*26 - 123*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-1,2,3,7,8,9-HxCDF	*56*		*29 - 147*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-2,3,4,6,7,8-HxCDF	*57*		*28 - 136*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*67*		*23 - 140*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*63*		*28 - 143*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*73*		*26 - 138*	*08/05/21 06:41*	*08/13/21 10:18*	*1*
13C-OCDD	*75*		*17 - 157*	*08/05/21 06:41*	*08/13/21 10:18*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*79*		*35 - 197*	*08/05/21 06:41*	*08/13/21 10:18*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	6.5	B	1.4	0.16	pg/g	☼	08/05/21 06:41	08/21/21 16:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*61*		*24 - 169*	*08/05/21 06:41*	*08/21/21 16:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*83*		*35 - 197*	*08/05/21 06:41*	*08/21/21 16:27*	*1*

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-2

Client Sample ID: 11215702-072221-SS-SJSB080 (16-18) — Lab Sample ID: 320-76769-9

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	9.1		1.4	0.065	pg/g	1	9.1	1613B
1,2,3,7,8-PeCDD	0.20	J q	6.9	0.049	pg/g	1	0.20	1613B
1,2,3,7,8-PeCDF	1.1	J	6.9	0.045	pg/g	0.03	0.033	1613B
2,3,4,7,8-PeCDF	0.66	J	6.9	0.046	pg/g	0.3	0.20	1613B
1,2,3,4,7,8-HxCDD	0.28	J B	6.9	0.052	pg/g	0.1	0.028	1613B
1,2,3,6,7,8-HxCDD	0.18	J	6.9	0.054	pg/g	0.1	0.018	1613B
1,2,3,7,8,9-HxCDD	0.27	J B q	6.9	0.048	pg/g	0.1	0.027	1613B
1,2,3,4,7,8-HxCDF	1.3	J	6.9	0.030	pg/g	0.1	0.13	1613B
1,2,3,6,7,8-HxCDF	0.42	J	6.9	0.032	pg/g	0.1	0.042	1613B
1,2,3,7,8,9-HxCDF	0.31	J B	6.9	0.026	pg/g	0.1	0.031	1613B
2,3,4,6,7,8-HxCDF	0.059	J q	6.9	0.024	pg/g	0.1	0.0059	1613B
1,2,3,4,6,7,8-HpCDD	3.5	J B	6.9	0.086	pg/g	0.01	0.035	1613B
1,2,3,4,6,7,8-HpCDF	0.55	J B	6.9	0.032	pg/g	0.01	0.0055	1613B
1,2,3,4,7,8,9-HpCDF	0.22	J	6.9	0.039	pg/g	0.01	0.0022	1613B
OCDD	72	B	14	0.13	pg/g	0.0003	0.022	1613B
OCDF	0.89	J B	14	0.025	pg/g	0.0003	0.00027	1613B
2,3,7,8-TCDF - RA	27	B	1.4	0.37	pg/g	0.1	2.7	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		13	TEQ

Client Sample ID: 11215702-072221-SS-SJSB074 (16-18) — Lab Sample ID: 320-76769-21

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	0.38	J q	1.2	0.029	pg/g	1	0.38	1613B
2,3,7,8-TCDF	0.66	J B	1.2	0.017	pg/g	0.1	0.066	1613B
1,2,3,7,8-PeCDD	0.12	J q	6.1	0.049	pg/g	1	0.12	1613B
1,2,3,7,8-PeCDF	0.18	J	6.1	0.024	pg/g	0.03	0.0054	1613B
2,3,4,7,8-PeCDF	0.056	J	6.1	0.025	pg/g	0.3	0.017	1613B
1,2,3,4,7,8-HxCDD	0.26	J B q	6.1	0.11	pg/g	0.1	0.026	1613B
1,2,3,6,7,8-HxCDD	0.27	J q	6.1	0.12	pg/g	0.1	0.027	1613B
1,2,3,7,8,9-HxCDD	0.67	J B	6.1	0.10	pg/g	0.1	0.067	1613B
1,2,3,4,7,8-HxCDF	0.067	J	6.1	0.019	pg/g	0.1	0.0067	1613B
1,2,3,6,7,8-HxCDF	ND		6.1	0.019	pg/g	0.1	0.00095	1613B
1,2,3,7,8,9-HxCDF	0.22	J B	6.1	0.016	pg/g	0.1	0.022	1613B
2,3,4,6,7,8-HxCDF	ND		6.1	0.016	pg/g	0.1	0.00080	1613B
1,2,3,4,6,7,8-HpCDD	9.6	B	6.1	0.29	pg/g	0.01	0.096	1613B
1,2,3,4,6,7,8-HpCDF	0.096	J B	6.1	0.022	pg/g	0.01	0.00096	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.1	0.027	pg/g	0.01	0.00014	1613B
OCDD	200	B	12	0.25	pg/g	0.0003	0.060	1613B
OCDF	0.12	J B q	12	0.018	pg/g	0.0003	0.000036	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-2

Client Sample ID: 11215702-072221-SS-SJSB074 (16-18) (Continued)

Lab Sample ID: 320-76769-21

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		0.90	TEQ

Client Sample ID: 11215702-072221-SS-SJSB076 (16-18)

Lab Sample ID: 320-76769-35

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**2.2**		1.4	0.054	pg/g	1	**2.2**	1613B
1,2,3,7,8-PeCDD	**0.22**	**J**	7.0	0.067	pg/g	1	**0.22**	1613B
1,2,3,7,8-PeCDF	**0.41**	**J**	7.0	0.032	pg/g	0.03	**0.012**	1613B
2,3,4,7,8-PeCDF	**0.16**	**J**	7.0	0.032	pg/g	0.3	**0.048**	1613B
1,2,3,4,7,8-HxCDD	**0.45**	**J B**	7.0	0.16	pg/g	0.1	**0.045**	1613B
1,2,3,6,7,8-HxCDD	**0.53**	**J**	7.0	0.17	pg/g	0.1	**0.053**	1613B
1,2,3,7,8,9-HxCDD	**1.4**	**J B**	7.0	0.15	pg/g	0.1	**0.14**	1613B
1,2,3,4,7,8-HxCDF	**0.39**	**J**	7.0	0.024	pg/g	0.1	**0.039**	1613B
1,2,3,6,7,8-HxCDF	**0.13**	**J q**	7.0	0.025	pg/g	0.1	**0.013**	1613B
1,2,3,7,8,9-HxCDF	**0.23**	**J B**	7.0	0.020	pg/g	0.1	**0.023**	1613B
2,3,4,6,7,8-HxCDF	ND		7.0	0.019	pg/g	0.1	0.00095	1613B
1,2,3,4,6,7,8-HpCDD	**18**	**B**	7.0	0.47	pg/g	0.01	**0.18**	1613B
1,2,3,4,6,7,8-HpCDF	**0.21**	**J B**	7.0	0.022	pg/g	0.01	**0.0021**	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.0	0.027	pg/g	0.01	0.00014	1613B
OCDD	**400**	**B**	14	0.55	pg/g	0.0003	**0.12**	1613B
OCDF	**0.24**	**J B**	14	0.020	pg/g	0.0003	**0.000072**	1613B
2,3,7,8-TCDF - RA	**6.5**	**B**	1.4	0.16	pg/g	0.1	**0.65**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		3.7	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-76769-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-76769-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (35-197)							
320-76769-9	11215702-072221-SS-SJSB080	79							
320-76769-9 - RA	11215702-072221-SS-SJSB080 (16-18)	78							
320-76769-21	11215702-072221-SS-SJSB074 (16-18)	83							
320-76769-35	11215702-072221-SS-SJSB076 (16-18)	79							
320-76769-35 - RA	11215702-072221-SS-SJSB076 (16-18)	83							
MB 320-513227/1-A	Method Blank	80							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (31-191)							
LCS 320-513227/2-A	Lab Control Sample	79							
LCSD 320-513227/3-A	Lab Control Sample Dup	81							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76769-9	11215702-072221-SS-SJSB080	62	58	60	58	63	64	61	63
320-76769-9 - RA	11215702-072221-SS-SJSB080 (16-18)		64						
320-76769-21	11215702-072221-SS-SJSB074 (16-18)	59	56	59	55	61	64	55	60
320-76769-35	11215702-072221-SS-SJSB076 (16-18)	61	58	63	59	64	66	59	64
320-76769-35 - RA	11215702-072221-SS-SJSB076 (16-18)		61						
MB 320-513227/1-A	Method Blank	62	58	63	59	64	64	58	61

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76769-9	11215702-072221-SS-SJSB080	58	57	57	66	65	73	74
320-76769-9 - RA	11215702-072221-SS-SJSB080 (16-18)							
320-76769-21	11215702-072221-SS-SJSB074 (16-18)	54	53	54	62	59	66	66
320-76769-35	11215702-072221-SS-SJSB076 (16-18)	57	56	57	67	63	73	75
320-76769-35 - RA	11215702-072221-SS-SJSB076 (16-18)							
MB 320-513227/1-A	Method Blank	56	57	56	69	65	73	79

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-513227/2-A	Lab Control Sample	57	54	58	55	61	61	56	59
LCSD 320-513227/3-A	Lab Control Sample Dup	57	54	57	54	59	62	56	60

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76769-2

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-513227/2-A	Lab Control Sample	53	52	53	62	60	67	69
LCSD 320-513227/3-A	Lab Control Sample Dup	54	54	53	62	60	68	69

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-513227/1-A
Matrix: Sediment
Analysis Batch: 515770

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513227

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.038	pg/g		08/05/21 06:41	08/13/21 06:33	1
2,3,7,8-TCDF	0.113	J q	1.0	0.021	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,7,8-PeCDD	ND		5.0	0.051	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,7,8-PeCDF	ND		5.0	0.035	pg/g		08/05/21 06:41	08/13/21 06:33	1
2,3,4,7,8-PeCDF	ND		5.0	0.035	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,4,7,8-HxCDD	0.175	J	5.0	0.030	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.032	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,7,8,9-HxCDD	0.0808	J	5.0	0.028	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.026	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.026	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,7,8,9-HxCDF	0.150	J	5.0	0.021	pg/g		08/05/21 06:41	08/13/21 06:33	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.021	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,4,6,7,8-HpCDD	0.227	J	5.0	0.044	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,4,6,7,8-HpCDF	0.143	J q	5.0	0.029	pg/g		08/05/21 06:41	08/13/21 06:33	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.036	pg/g		08/05/21 06:41	08/13/21 06:33	1
OCDD	0.685	J	10	0.042	pg/g		08/05/21 06:41	08/13/21 06:33	1
OCDF	0.144	J	10	0.023	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total TCDD	0.0948	J q	1.0	0.038	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total TCDF	0.210	J q	1.0	0.021	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total PeCDD	ND		5.0	0.051	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total PeCDF	ND		5.0	0.035	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total HxCDD	0.451	J	5.0	0.030	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total HxCDF	0.150	J	5.0	0.023	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total HpCDD	0.472	J	5.0	0.044	pg/g		08/05/21 06:41	08/13/21 06:33	1
Total HpCDF	0.143	J q	5.0	0.032	pg/g		08/05/21 06:41	08/13/21 06:33	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*62*		*25 - 164*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-2,3,7,8-TCDF	*58*		*24 - 169*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,7,8-PeCDD	*63*		*25 - 181*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,7,8-PeCDF	*59*		*24 - 185*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-2,3,4,7,8-PeCDF	*64*		*21 - 178*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,4,7,8-HxCDD	*64*		*32 - 141*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,6,7,8-HxCDD	*58*		*28 - 130*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,4,7,8-HxCDF	*61*		*26 - 152*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,6,7,8-HxCDF	*56*		*26 - 123*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,7,8,9-HxCDF	*57*		*29 - 147*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-2,3,4,6,7,8-HxCDF	*56*		*28 - 136*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*69*		*23 - 140*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*65*		*28 - 143*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*73*		*26 - 138*	*08/05/21 06:41*	*08/13/21 06:33*	*1*
13C-OCDD	*79*		*17 - 157*	*08/05/21 06:41*	*08/13/21 06:33*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*80*		*35 - 197*	*08/05/21 06:41*	*08/13/21 06:33*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-513227/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 515770 **Prep Batch: 513227**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	20.2		pg/g		101	67 - 158
2,3,7,8-TCDF	20.0	20.9		pg/g		104	75 - 158
1,2,3,7,8-PeCDD	100	107		pg/g		107	70 - 142
1,2,3,7,8-PeCDF	100	108		pg/g		108	80 - 134
2,3,4,7,8-PeCDF	100	97.4		pg/g		97	68 - 160
1,2,3,4,7,8-HxCDD	100	97.1		pg/g		97	70 - 164
1,2,3,6,7,8-HxCDD	100	106		pg/g		106	76 - 134
1,2,3,7,8,9-HxCDD	100	105		pg/g		105	64 - 162
1,2,3,4,7,8-HxCDF	100	96.7		pg/g		97	72 - 134
1,2,3,6,7,8-HxCDF	100	107		pg/g		107	84 - 130
1,2,3,7,8,9-HxCDF	100	106		pg/g		106	78 - 130
2,3,4,6,7,8-HxCDF	100	105		pg/g		105	70 - 156
1,2,3,4,6,7,8-HpCDD	100	107		pg/g		107	70 - 140
1,2,3,4,6,7,8-HpCDF	100	106		pg/g		106	82 - 122
1,2,3,4,7,8,9-HpCDF	100	98.8		pg/g		99	78 - 138
OCDD	200	214		pg/g		107	78 - 144
OCDF	200	205		pg/g		103	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*57*		*20 - 175*
13C-2,3,7,8-TCDF	*54*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*58*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*55*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*61*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*61*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*56*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*59*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*53*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*52*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*53*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*62*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*67*		*20 - 186*
13C-OCDD	*69*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*79*		*31 - 191*

Lab Sample ID: LCSD 320-513227/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 515770 **Prep Batch: 513227**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	20.0	20.2		pg/g		101	67 - 158	0	50
2,3,7,8-TCDF	20.0	20.9		pg/g		105	75 - 158	0	50
1,2,3,7,8-PeCDD	100	107		pg/g		107	70 - 142	1	50
1,2,3,7,8-PeCDF	100	107		pg/g		107	80 - 134	1	50
2,3,4,7,8-PeCDF	100	97.4		pg/g		97	68 - 160	0	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-513227/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 515770 **Prep Batch: 513227**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,7,8-HxCDD			100	98.2		pg/g		98	70 - 164	1	50
1,2,3,6,7,8-HxCDD			100	104		pg/g		104	76 - 134	3	50
1,2,3,7,8,9-HxCDD			100	103		pg/g		103	64 - 162	2	50
1,2,3,4,7,8-HxCDF			100	96.6		pg/g		97	72 - 134	0	50
1,2,3,6,7,8-HxCDF			100	105		pg/g		105	84 - 130	2	50
1,2,3,7,8,9-HxCDF			100	104		pg/g		104	78 - 130	2	50
2,3,4,6,7,8-HxCDF			100	106		pg/g		106	70 - 156	1	50
1,2,3,4,6,7,8-HpCDD			100	108		pg/g		108	70 - 140	1	50
1,2,3,4,6,7,8-HpCDF			100	107		pg/g		107	82 - 122	1	50
1,2,3,4,7,8,9-HpCDF			100	98.1		pg/g		98	78 - 138	1	50
OCDD			200	212		pg/g		106	78 - 144	1	50
OCDF			200	204		pg/g		102	63 - 170	1	50

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*57*		*20 - 175*
13C-2,3,7,8-TCDF	*54*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*57*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*54*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*59*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*62*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*56*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*60*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*54*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*54*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*53*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*62*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*68*		*20 - 186*
13C-OCDD	*69*		*13 - 199*

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*81*		*31 - 191*

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-76864-A-1 DU **Client Sample ID: Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 511355

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	4.3			4.9		%				12	20
Percent Solids	95.7			95.1		%				0.6	20

Lab Sample ID: 320-76769-A-1 DU **Client Sample ID: Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 511356

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	38.5			40.6		%				5	20

Method: D 2216 - Percent Moisture (Continued)

Lab Sample ID: 320-76769-A-1 DU
Client Sample ID: Duplicate
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 511356

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	61.5			59.4		%				3	20

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-76769-2
Project/Site: SJRWP Supplemental Design Investigation

Specialty Organics

Prep Batch: 513227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-9	11215702-072221-SS-SJSB080 (16-18)	Total/NA	Sediment	HRMS-Sox	
320-76769-9 - RA	11215702-072221-SS-SJSB080 (16-18)	Total/NA	Sediment	HRMS-Sox	
320-76769-21	11215702-072221-SS-SJSB074 (16-18)	Total/NA	Sediment	HRMS-Sox	
320-76769-35	11215702-072221-SS-SJSB076 (16-18)	Total/NA	Sediment	HRMS-Sox	
320-76769-35 - RA	11215702-072221-SS-SJSB076 (16-18)	Total/NA	Sediment	HRMS-Sox	
MB 320-513227/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-513227/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
LCSD 320-513227/3-A	Lab Control Sample Dup	Total/NA	Sediment	HRMS-Sox	

Analysis Batch: 515770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-9	11215702-072221-SS-SJSB080 (16-18)	Total/NA	Sediment	1613B	513227
320-76769-21	11215702-072221-SS-SJSB074 (16-18)	Total/NA	Sediment	1613B	513227
320-76769-35	11215702-072221-SS-SJSB076 (16-18)	Total/NA	Sediment	1613B	513227
MB 320-513227/1-A	Method Blank	Total/NA	Sediment	1613B	513227
LCS 320-513227/2-A	Lab Control Sample	Total/NA	Sediment	1613B	513227
LCSD 320-513227/3-A	Lab Control Sample Dup	Total/NA	Sediment	1613B	513227

Analysis Batch: 518850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-9 - RA	11215702-072221-SS-SJSB080 (16-18)	Total/NA	Sediment	1613B	513227
320-76769-35 - RA	11215702-072221-SS-SJSB076 (16-18)	Total/NA	Sediment	1613B	513227

General Chemistry

Analysis Batch: 511355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-35	11215702-072221-SS-SJSB076 (16-18)	Total/NA	Sediment	D 2216	
320-76864-A-1 DU	Duplicate	Total/NA	Sediment	D 2216	

Analysis Batch: 511356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-9	11215702-072221-SS-SJSB080 (16-18)	Total/NA	Sediment	D 2216	
320-76769-21	11215702-072221-SS-SJSB074 (16-18)	Total/NA	Sediment	D 2216	
320-76769-A-1 DU	Duplicate	Total/NA	Sediment	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-2

Client Sample ID: 11215702-072221-SS-SJSB080 (16-18)
Lab Sample ID: 320-76769-9
Date Collected: 07/22/21 09:20
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB080 (16-18)
Lab Sample ID: 320-76769-9
Date Collected: 07/22/21 09:20
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 75.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513227	08/05/21 06:41	FC	TAL SAC
Total/NA	Analysis	1613B		1	515770	08/13/21 08:48	SMA	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513227	08/05/21 06:41	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518850	08/21/21 15:49	DB	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (16-18)
Lab Sample ID: 320-76769-21
Date Collected: 07/22/21 13:40
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511356	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB074 (16-18)
Lab Sample ID: 320-76769-21
Date Collected: 07/22/21 13:40
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513227	08/05/21 06:41	FC	TAL SAC
Total/NA	Analysis	1613B		1	515770	08/13/21 09:33	SMA	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (16-18)
Lab Sample ID: 320-76769-35
Date Collected: 07/22/21 16:30
Matrix: Sediment
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511355	07/29/21 14:17	TCS	TAL SAC

Client Sample ID: 11215702-072221-SS-SJSB076 (16-18)
Lab Sample ID: 320-76769-35
Date Collected: 07/22/21 16:30
Matrix: Sediment
Date Received: 07/27/21 09:45
Percent Solids: 72.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513227	08/05/21 06:41	FC	TAL SAC
Total/NA	Analysis	1613B		1	515770	08/13/21 10:18	SMA	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513227	08/05/21 06:41	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518850	08/21/21 16:27	DB	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-76769-2
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDD
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDF
1613B	HRMS-Sox	Sediment	OCDD
1613B	HRMS-Sox	Sediment	OCDF
1613B	HRMS-Sox	Sediment	Total HpCDD
1613B	HRMS-Sox	Sediment	Total HpCDF
1613B	HRMS-Sox	Sediment	Total HxCDD
1613B	HRMS-Sox	Sediment	Total HxCDF
1613B	HRMS-Sox	Sediment	Total PeCDD
1613B	HRMS-Sox	Sediment	Total PeCDF
1613B	HRMS-Sox	Sediment	Total TCDD
1613B	HRMS-Sox	Sediment	Total TCDF
D 2216		Sediment	Percent Moisture
D 2216		Sediment	Percent Solids
TEQ		Sediment	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-2

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76769-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76769-9	11215702-072221-SS-SJSB080 (16-18)	Sediment	07/22/21 09:20	07/27/21 09:45
320-76769-21	11215702-072221-SS-SJSB074 (16-18)	Sediment	07/22/21 13:40	07/27/21 09:45
320-76769-35	11215702-072221-SS-SJSB076 (16-18)	Sediment	07/22/21 16:30	07/27/21 09:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: WDM 320-510264/1 Client Sample ID:

Date Analyzed: 07/26/21 09:21 Lab File ID: 26JL2110D5_1.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,6,8-TCDF	15.13	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,6,8-TCDD	16.07	Peak assignment corrected	arghestanis	07/26/21 12:21
2,3,4,7-TCDF	17.63	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,7-TCDD	18.22	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDD	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDF	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,8,9-TCDD	19.47	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,8,9-TCDF	19.49	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,4,6,8-PeCDF	19.76	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,4,7,9-PeCDD	21.58	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDD	25.91	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDF	26.14	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,8-HxCDF	28.48	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,4,6,7,9-HxCDD	30.02	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,7-HxCDD	32.30	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,3,4,8,9-HxCDF	32.61	Peak assignment corrected	arghestanis	07/26/21 12:23

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: IC 320-510264/3 Client Sample ID:

Date Analyzed: 07/26/21 10:51 Lab File ID: 26JL2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.35	Invalid Compound ID	stephensk	07/27/21 08:15

Lab Sample ID: IC 320-510264/4 Client Sample ID:

Date Analyzed: 07/26/21 11:36 Lab File ID: 26JL2110D5_4.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,4,7,8-PeCDF	24.13	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDF	30.84	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDD	31.93	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8,9-HpCDF	35.01	Peak assignment corrected	arghestanis	07/26/21 12:31

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 515770

Lab Sample ID: MB 320-513227/1-A Client Sample ID:

Date Analyzed: 08/13/21 06:33 Lab File ID: 12AU2110D5_25.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/16/21 13:36
2,3,7,8-TCDF	17.36	Baseline	dadunj	08/16/21 13:35
1,2,3,4,7,8-HxCDD	31.73	Split Peak	dadunj	08/16/21 13:36
1,2,3,7,8,9-HxCDD	32.15	Split Peak	dadunj	08/16/21 13:37
1,2,3,7,8,9-HxCDF	32.35	Split Peak	dadunj	08/16/21 13:36
1,2,3,4,6,7,8-HpCDF	33.79	Split Peak	dadunj	08/16/21 13:37
1,2,3,4,6,7,8-HpCDD	34.58	Split Peak	dadunj	08/16/21 13:37
OCDD	36.95	Split Peak	dadunj	08/16/21 13:38
OCDF	37.02	Split Peak	dadunj	08/16/21 13:37

Lab Sample ID: 320-76769-9 Client Sample ID: 11215702-072221-SS-SJSB080 (16-18)

Date Analyzed: 08/13/21 08:48 Lab File ID: 12AU2110D5_28.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.08	Split Peak	dadunj	08/16/21 13:45
1,2,3,7,8-PeCDF	22.41	Split Peak	dadunj	08/16/21 13:41
2,3,4,7,8-PeCDF	23.76	Split Peak	dadunj	08/16/21 13:41
1,2,3,7,8-PeCDD	24.49	Split Peak	dadunj	08/16/21 13:42
2,3,4,6,7,8-HxCDF	31.54	Split Peak	dadunj	08/16/21 13:42
1,2,3,4,7,8-HxCDD	31.73	Invalid Compound ID	dadunj	08/16/21 13:43
1,2,3,6,7,8-HxCDD	31.85	Split Peak	dadunj	08/16/21 13:43
1,2,3,7,8,9-HxCDD	32.15	Split Peak	dadunj	08/16/21 13:43
1,2,3,7,8,9-HxCDF	32.34	Split Peak	dadunj	08/16/21 13:42
1,2,3,4,7,8,9-HpCDF	34.86	Split Peak	dadunj	08/16/21 13:44
OCDF	37.02	Split Peak	dadunj	08/16/21 13:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 515770

Lab Sample ID: 320-76769-21 Client Sample ID: 11215702-072221-SS-SJSB074 (16-18)

Date Analyzed: 08/13/21 09:33 Lab File ID: 12AU2110D5_29.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/16/21 13:59
2,3,7,8-TCDF	17.37	Split Peak	dadunj	08/16/21 13:57
2,3,7,8-TCDD	18.08	Split Peak	dadunj	08/16/21 13:57
1,2,3,7,8-PeCDF	22.41	Baseline	dadunj	08/16/21 13:58
2,3,4,7,8-PeCDF	23.74	Baseline	dadunj	08/16/21 13:58
1,2,3,4,7,8-HxCDF	30.57	Baseline	dadunj	08/16/21 13:59
1,2,3,4,7,8-HxCDD	31.73	Split Peak	dadunj	08/16/21 14:00
1,2,3,6,7,8-HxCDD	31.83	Split Peak	dadunj	08/16/21 14:00
1,2,3,7,8,9-HxCDF	32.34	Split Peak	dadunj	08/16/21 13:59
OCDF	37.02	Split Peak	dadunj	08/16/21 14:00

Lab Sample ID: 320-76769-35 Client Sample ID: 11215702-072221-SS-SJSB076 (16-18)

Date Analyzed: 08/13/21 10:18 Lab File ID: 12AU2110D5_30.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/16/21 14:03
2,3,7,8-TCDD	18.08	Split Peak	dadunj	08/16/21 14:02
1,2,3,7,8-PeCDF	22.42	Split Peak	dadunj	08/16/21 14:02
2,3,4,7,8-PeCDF	23.77	Split Peak	dadunj	08/16/21 14:02
1,2,3,4,7,8-HxCDF	30.53	Split Peak	dadunj	08/16/21 14:03
1,2,3,6,7,8-HxCDF	30.73	Split Peak	dadunj	08/16/21 14:03
1,2,3,7,8,9-HxCDF	32.34	Split Peak	dadunj	08/16/21 14:03
1,2,3,4,6,7,8-HpCDF	33.78	Split Peak	dadunj	08/16/21 14:03
OCDF	37.01	Split Peak	dadunj	08/16/21 14:04

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76769-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 518850

Lab Sample ID: 320-76769-9 RA Client Sample ID: 11215702-072221-SS-SJSB080 (16-18) RA

Date Analyzed: 08/21/21 15:49 Lab File ID: 21AU2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.68	Peak Tail	bennettd	08/23/21 10:01

Lab Sample ID: 320-76769-35 RA Client Sample ID: 11215702-072221-SS-SJSB076 (16-18) RA

Date Analyzed: 08/21/21 16:27 Lab File ID: 21AU2111D2_005.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.66	Peak Tail	bennettd	08/23/21 10:01

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
...HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30	CIL, Lot ER09031903			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

778079

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

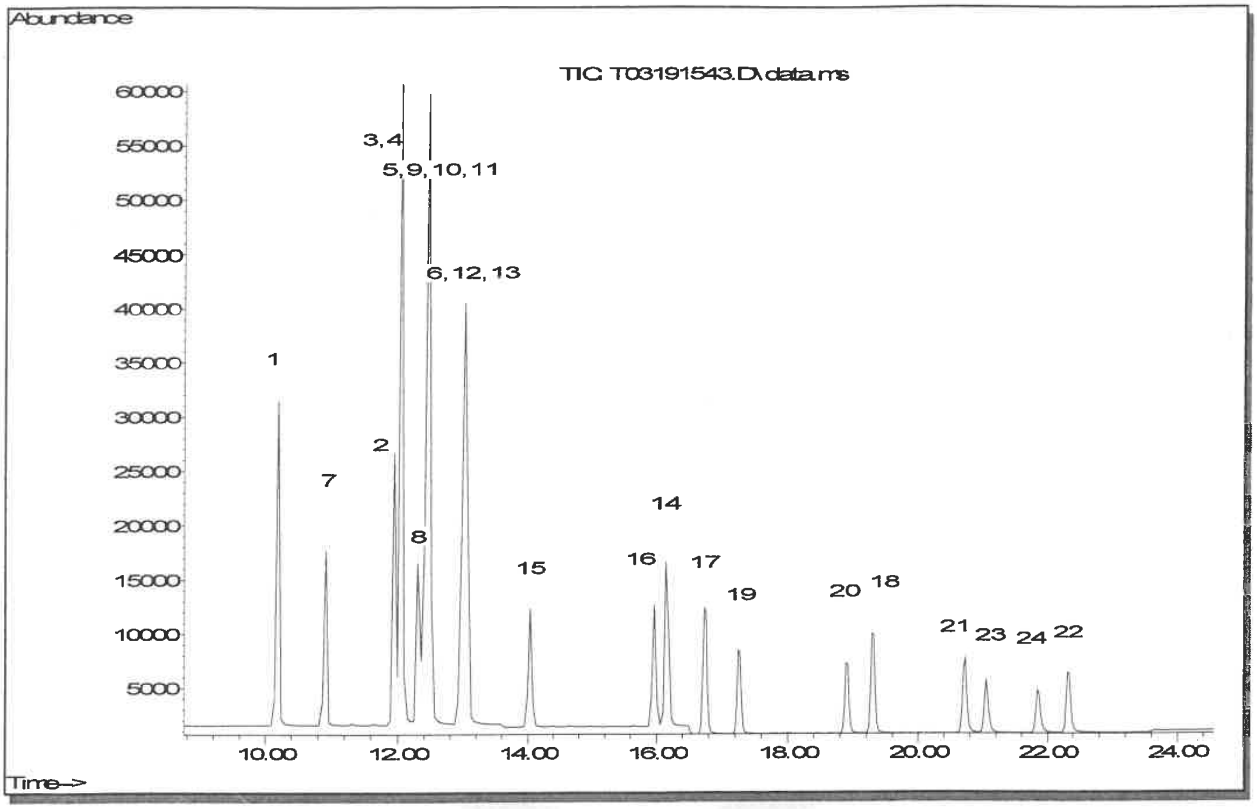

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

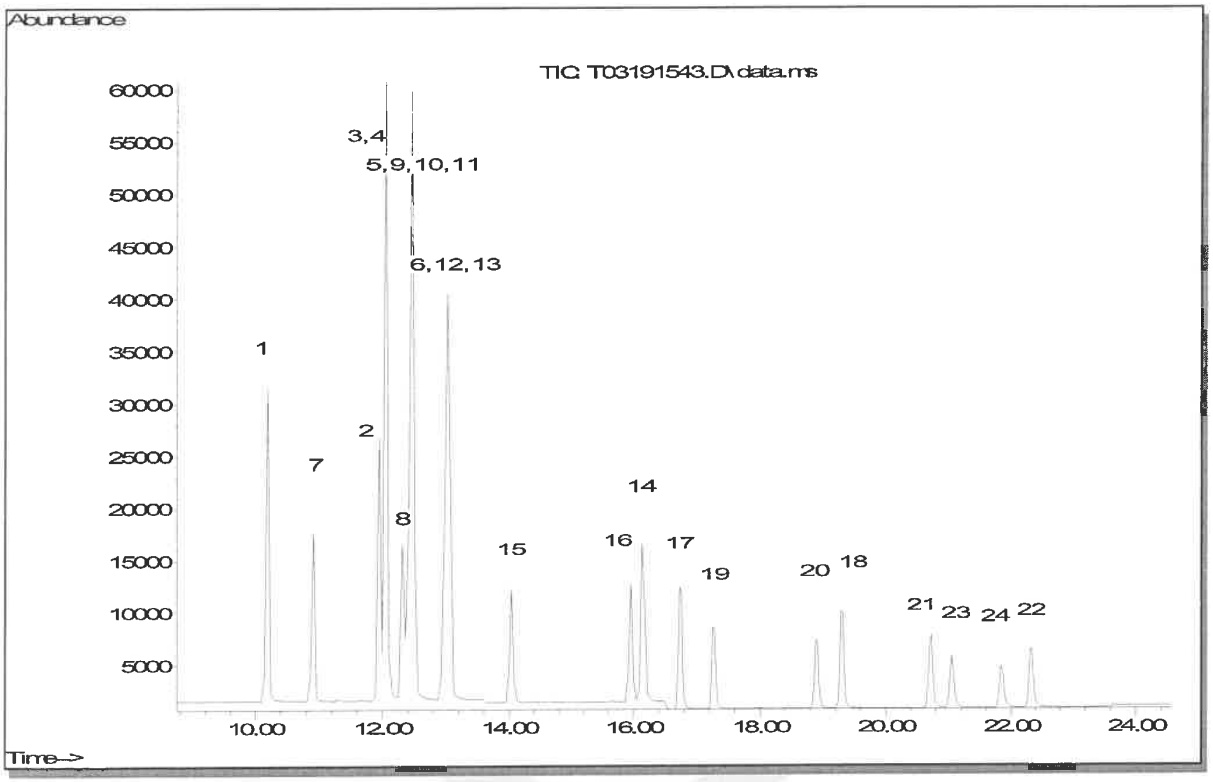

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r. 3/30/20

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

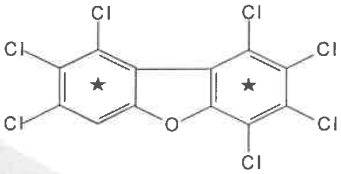

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

778093

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

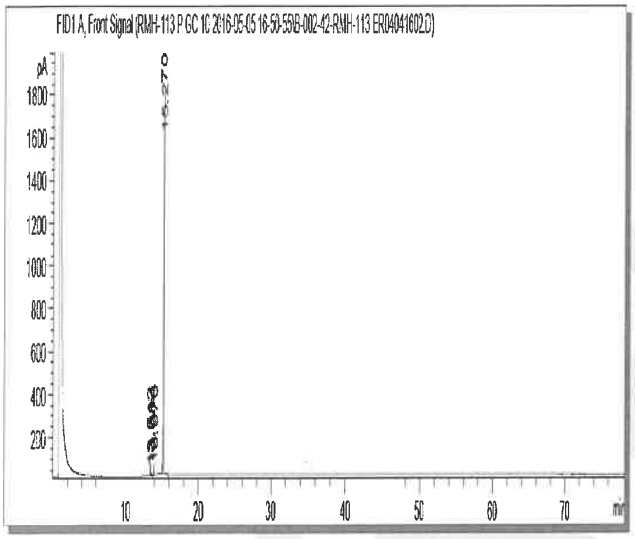

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

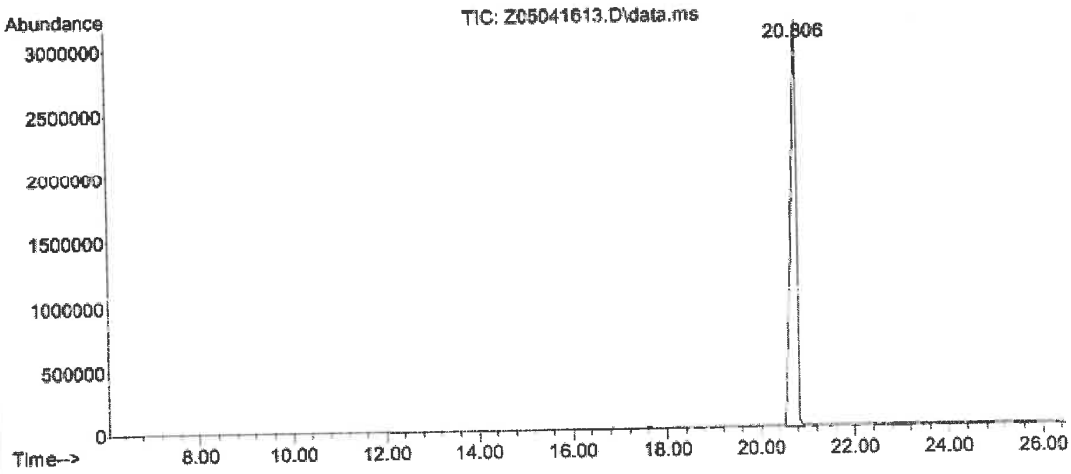

Mass Spectrum

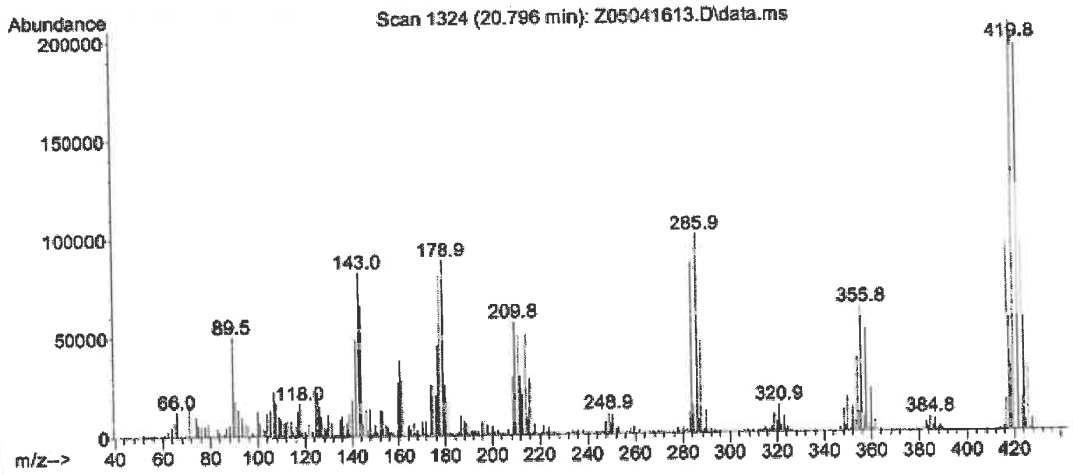

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 SAL

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

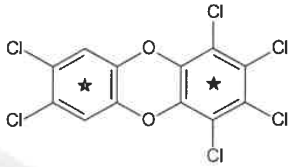

Catalog Number: ED-946
Solution Lot: ER04211601
Expiration Date: June 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

778100

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

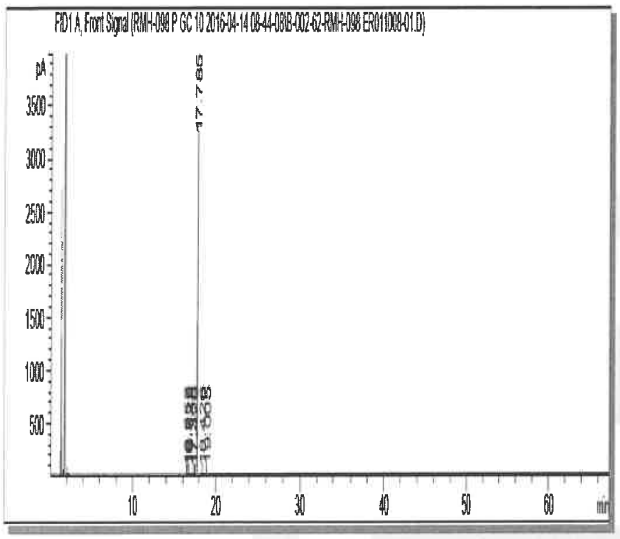

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument:	GC#10
Sample Name:	ER011008-01
Acquired:	April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

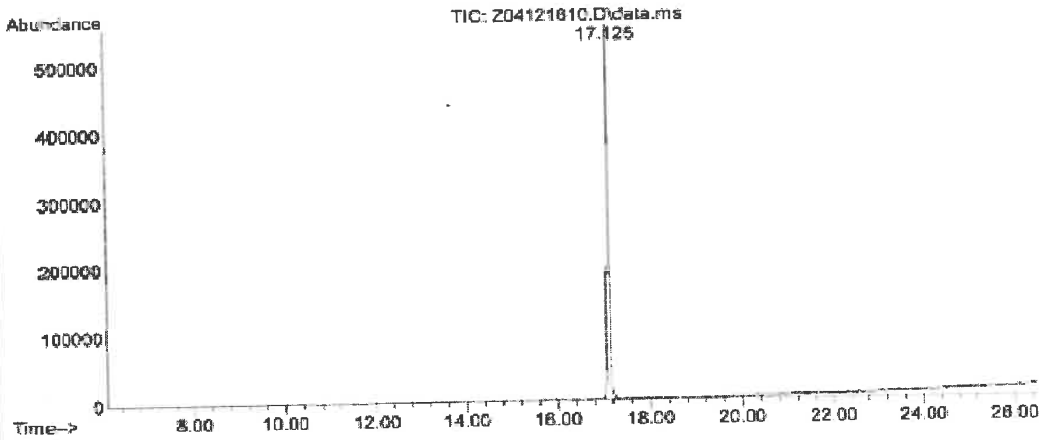

Mass Spectrum

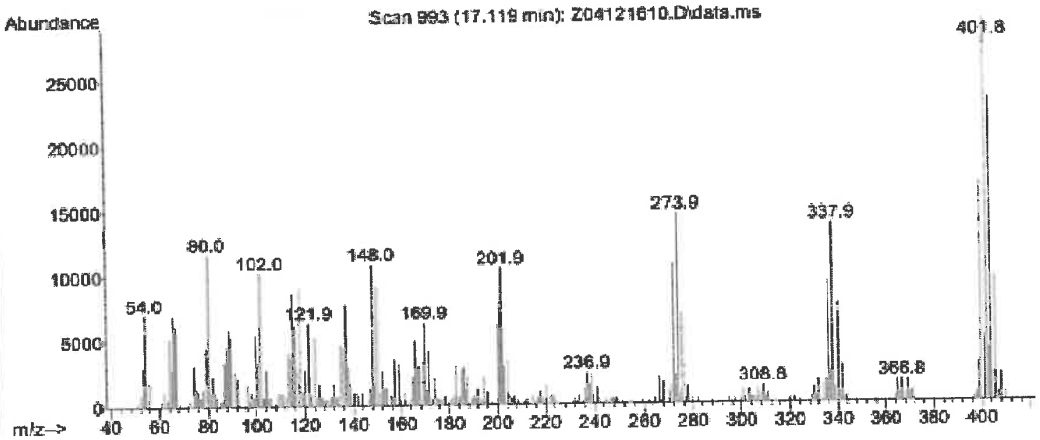

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

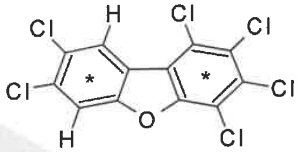

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot:	ER11281601

Chemical Formula:	$^{13}C_{12}Cl_6H_2O$
CAS Number:	114423-98-2
Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

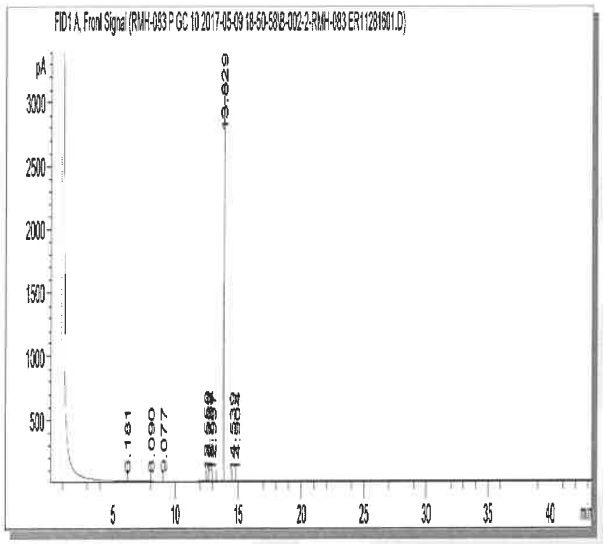

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

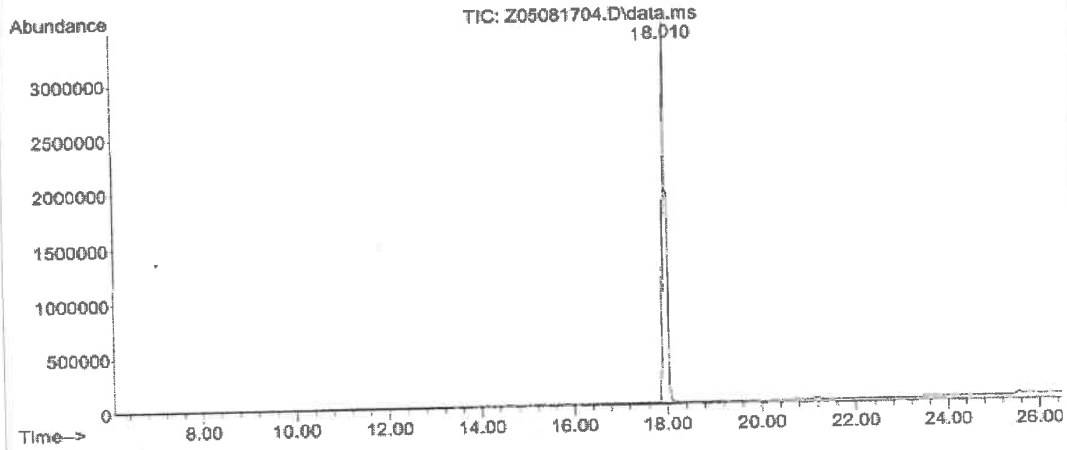

Mass Spectrum

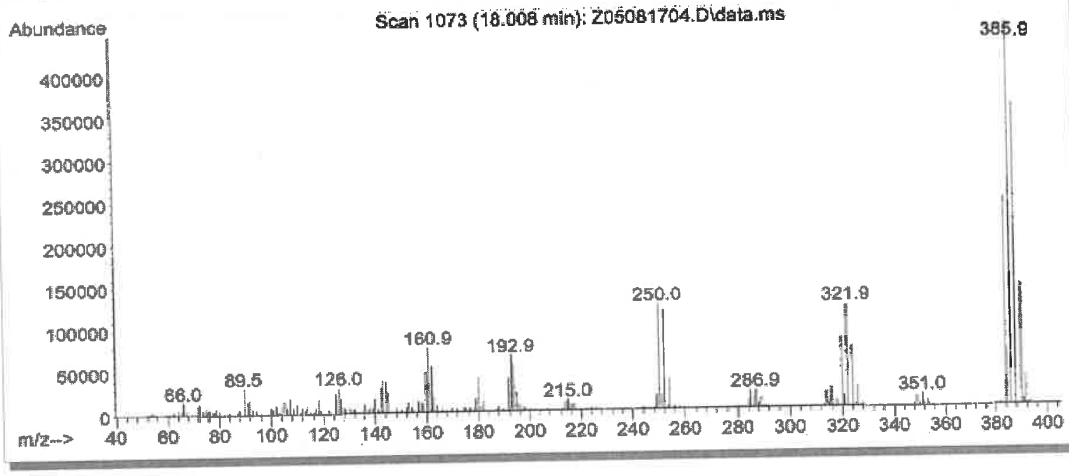

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

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Cerilliant Quality
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ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

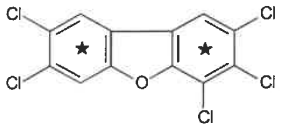

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

778110

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

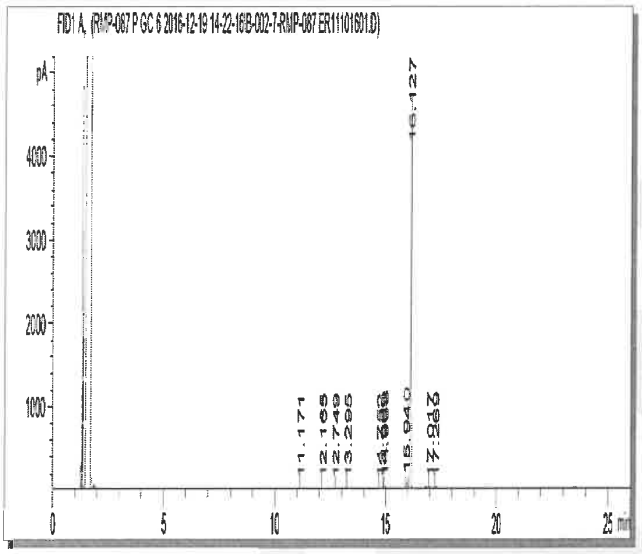

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

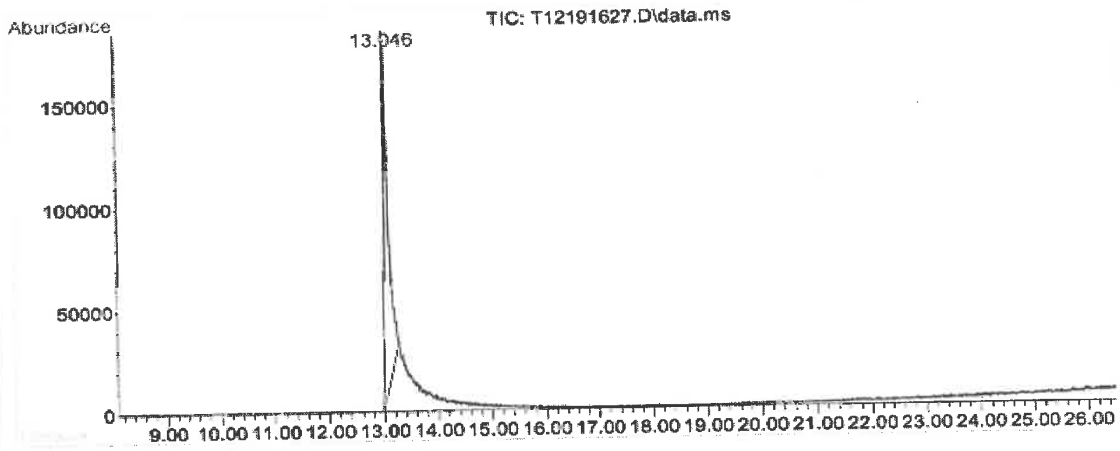

Mass Spectrum

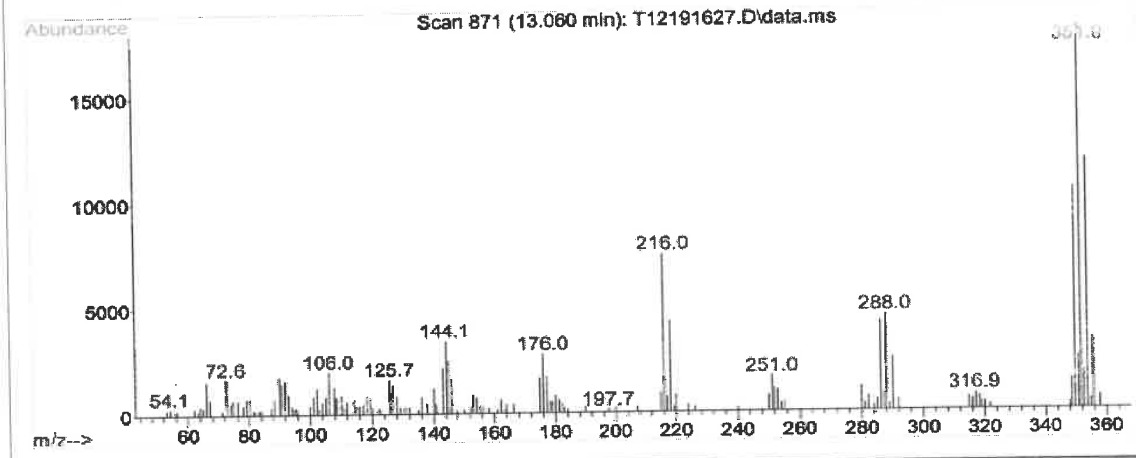

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

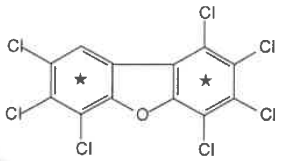

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

778115

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}HCl_7O$
Compound Lot:	ER020507-02	**CAS Number:**	109719-84-8
		Molecular Weight:	421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

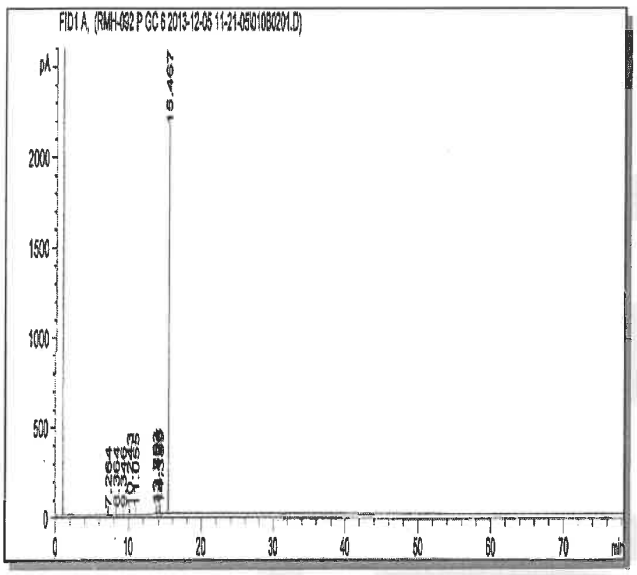

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Data File Name: RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument: GC#6
Sample Name: ER020507-02
Acquired: December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

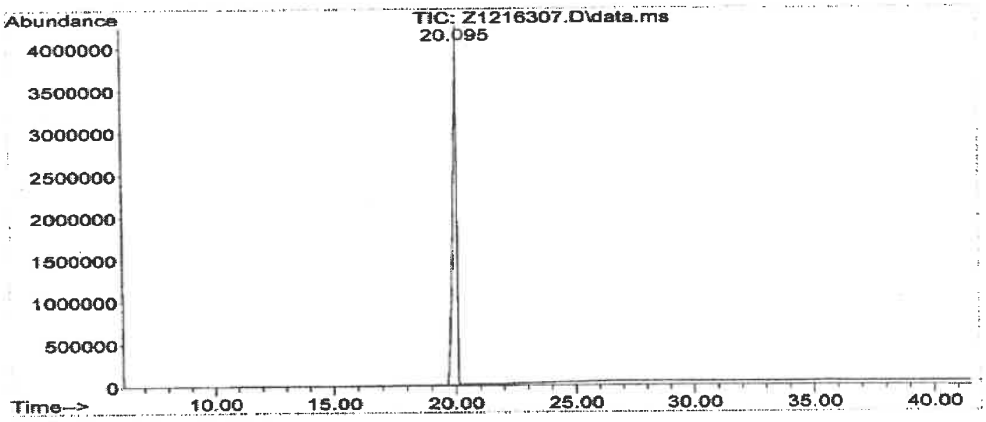

Mass Spectrum

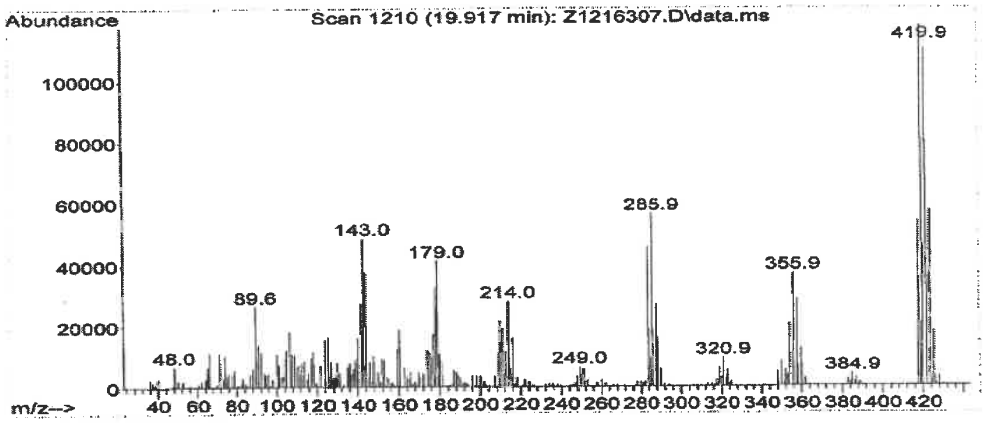

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

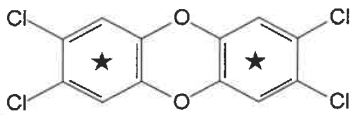

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

778122

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

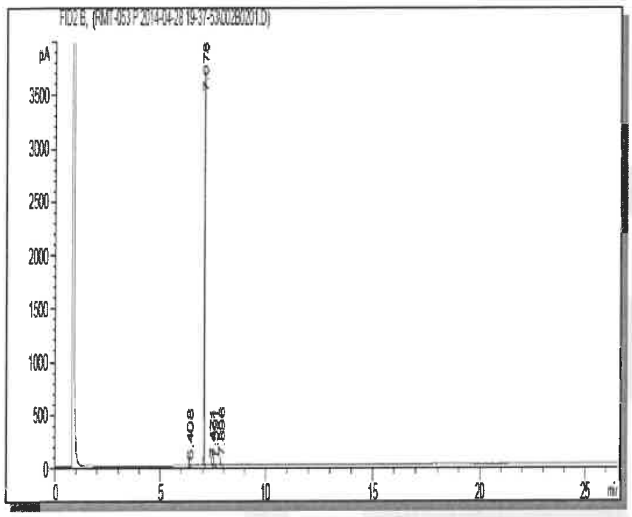

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

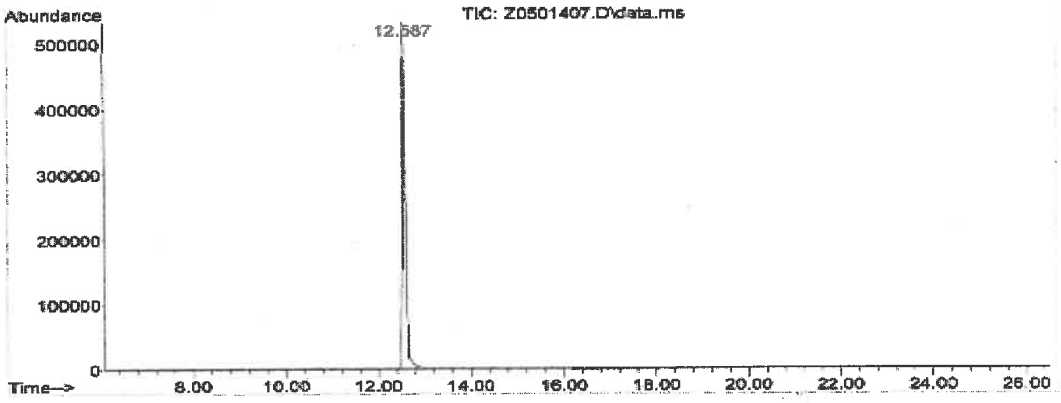

Mass Spectrum

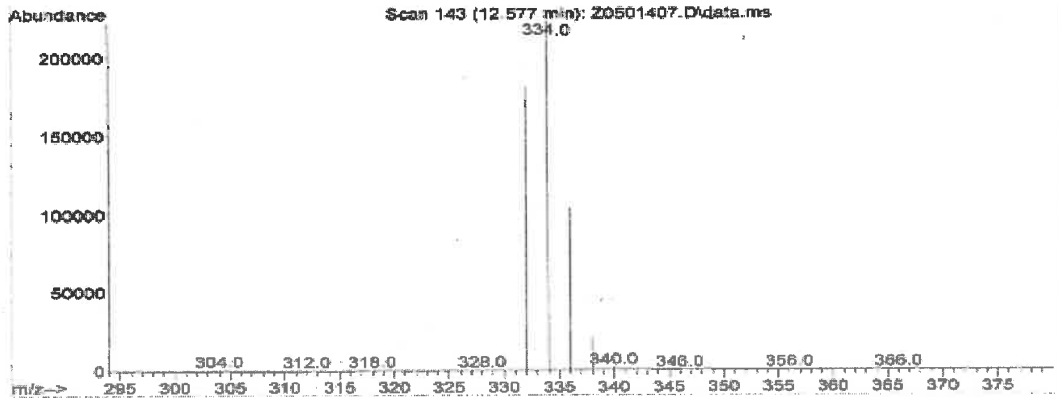

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

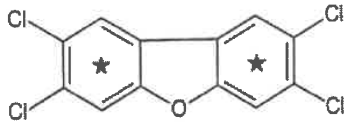

Catalog Number:	EF-904
Solution Lot:	ER09131601
Expiration Date:	September 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

778127

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/FID

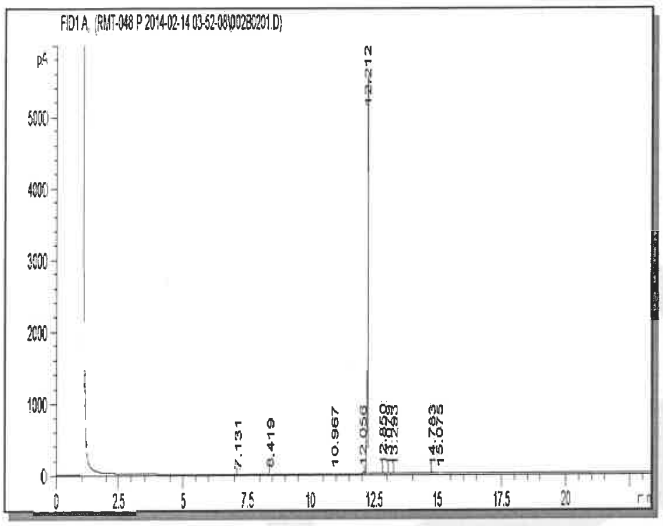

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

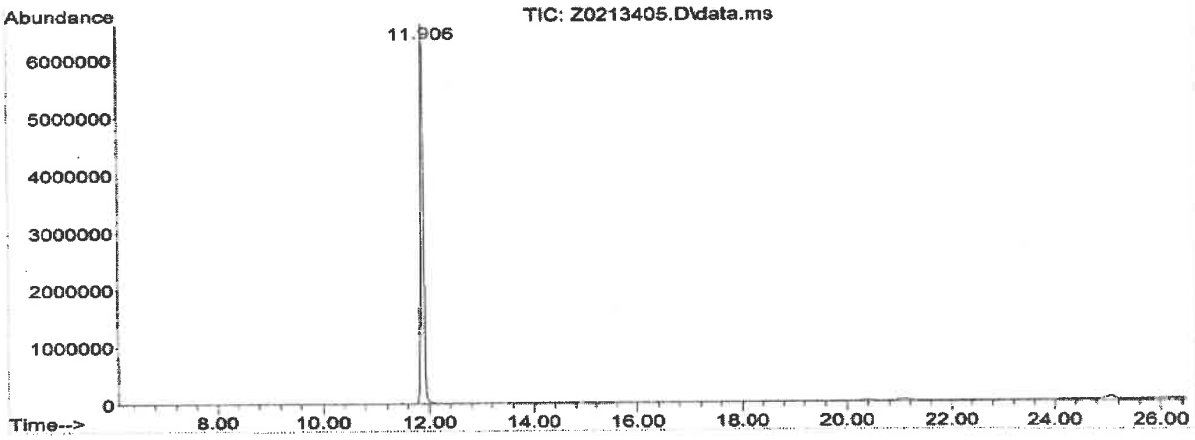

Mass Spectrum

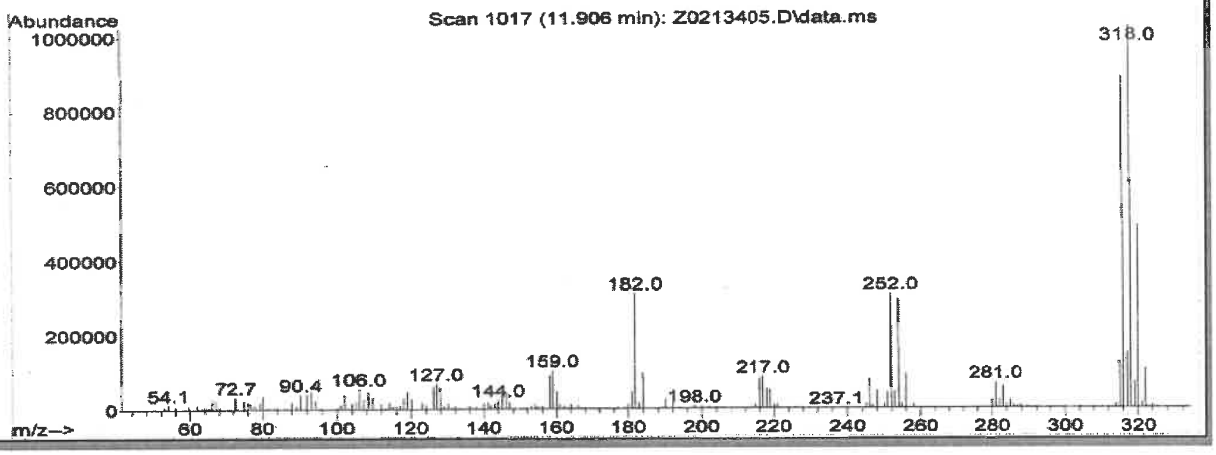

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

Reagent

HRDXNIDA_00443

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

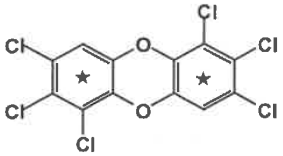

Catalog Number: ED-966
Solution Lot: ER03151801
Expiration Date: March 2028
Solvent: n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

778132

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

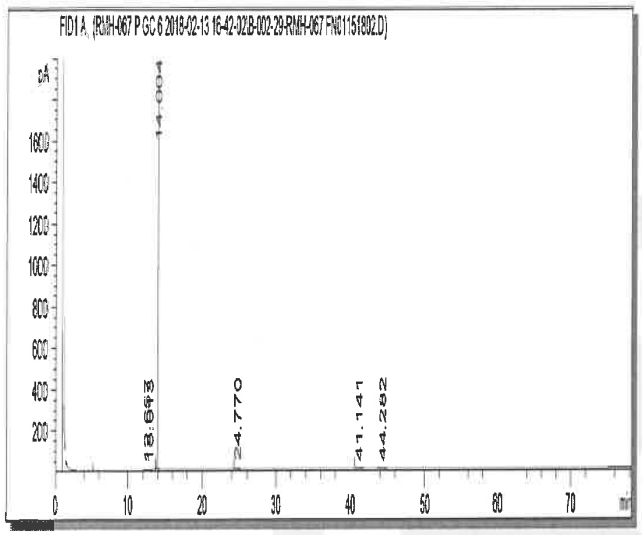

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: FN01151802
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Mar 05 10:17:33 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

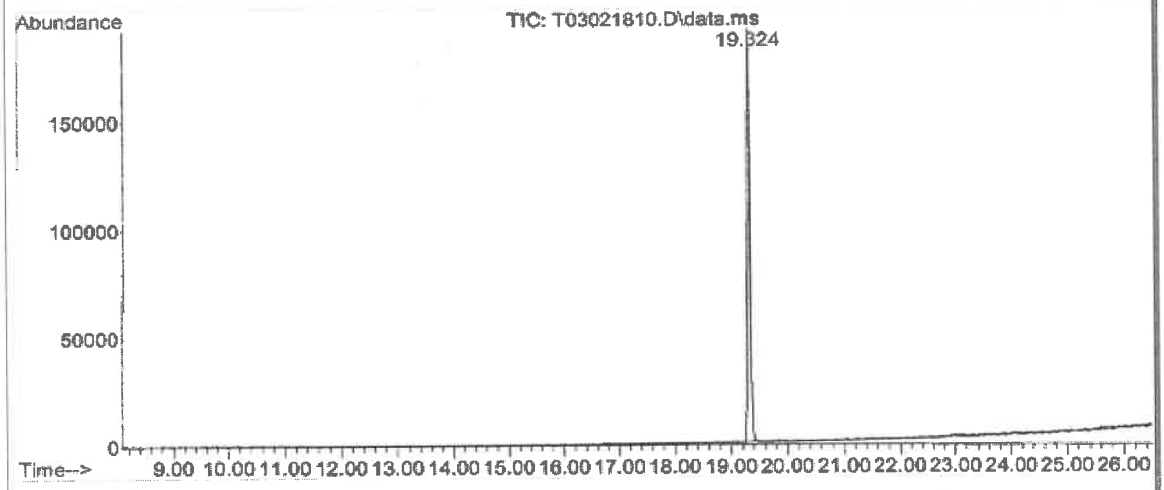

Mass Spectrum

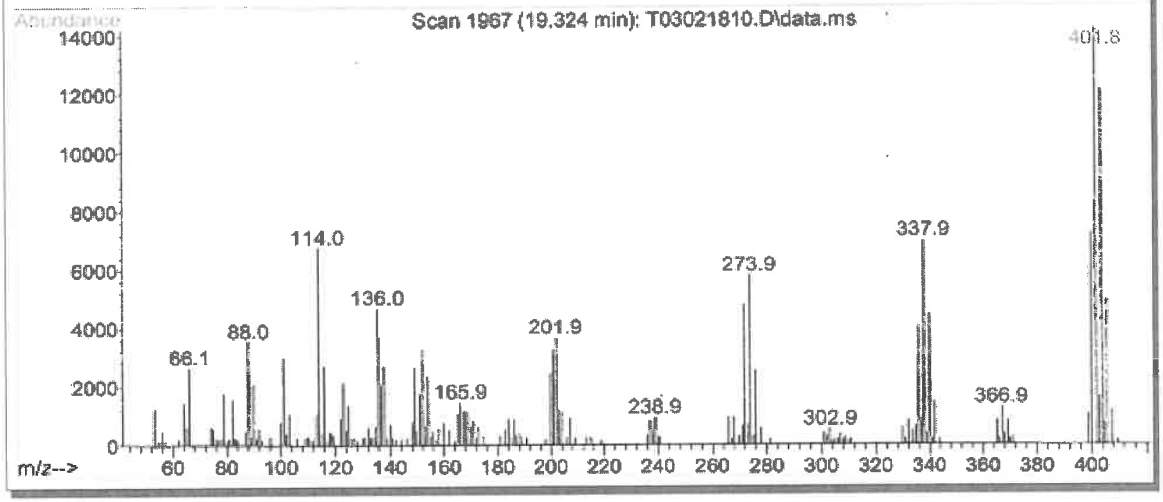

Reagent

HRDXNIDA_00457

r: 1/18/21 SW

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

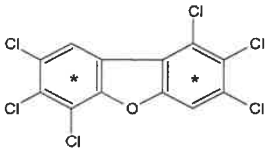

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

778137

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

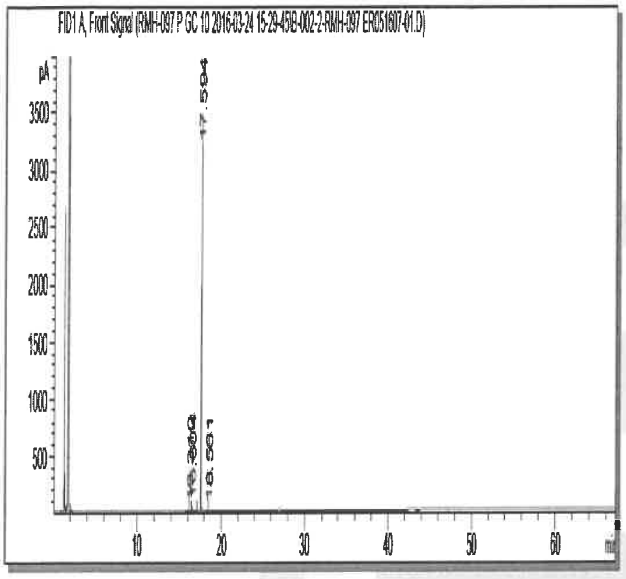

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

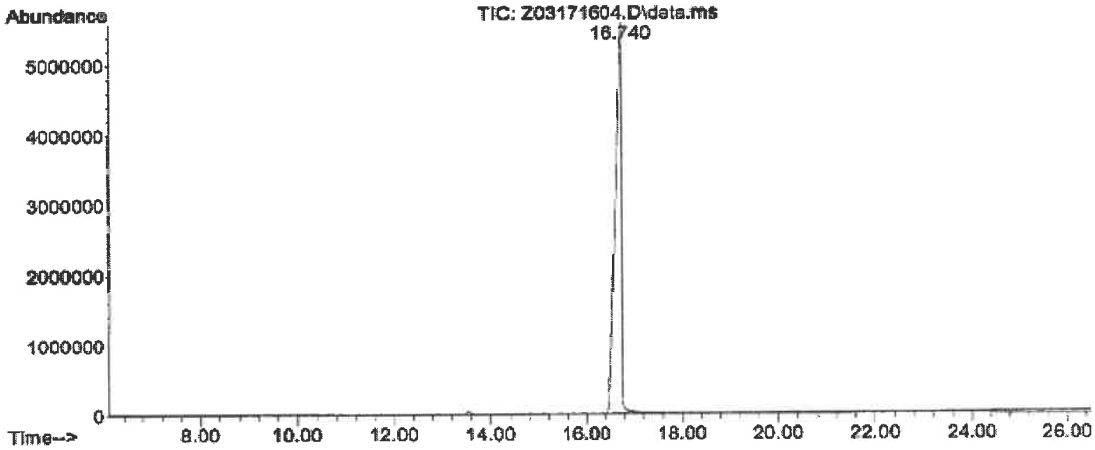

Mass Spectrum

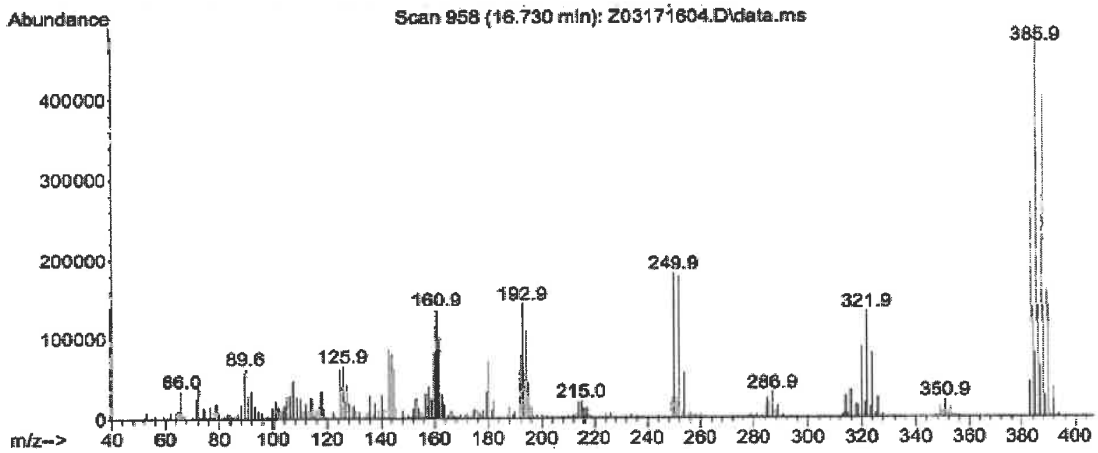

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
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CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

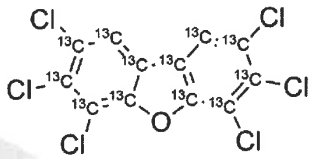

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

778144

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER09051801

Chemical Formula: $^{13}C_{12}H_2Cl_6O$
CAS Number: 116843-05-1
Molecular Weight: 386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

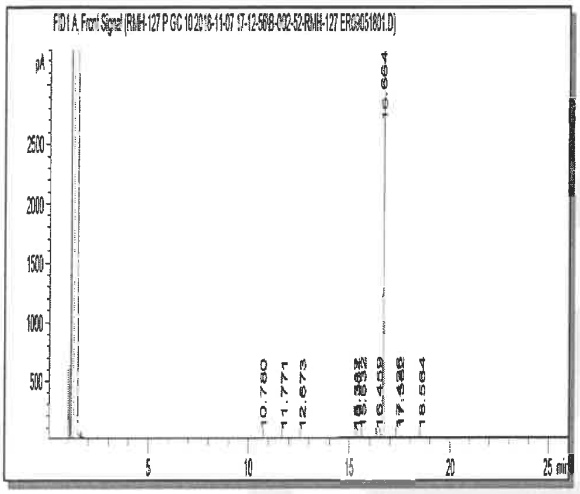

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

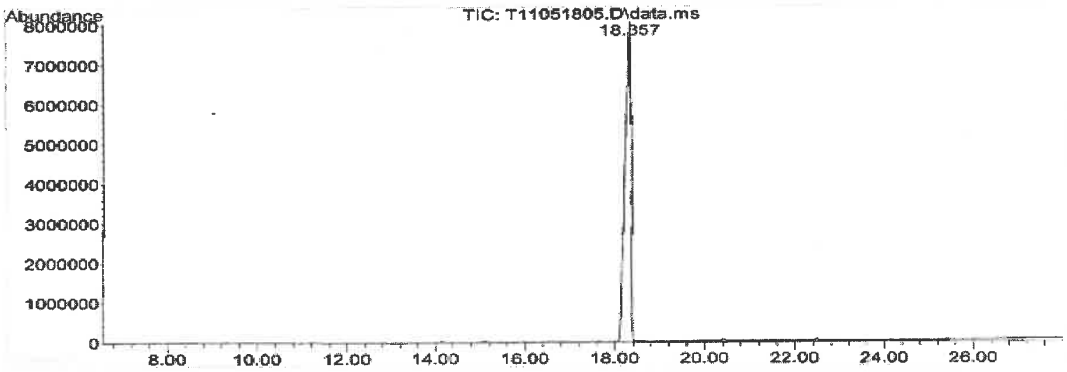

Mass Spectrum

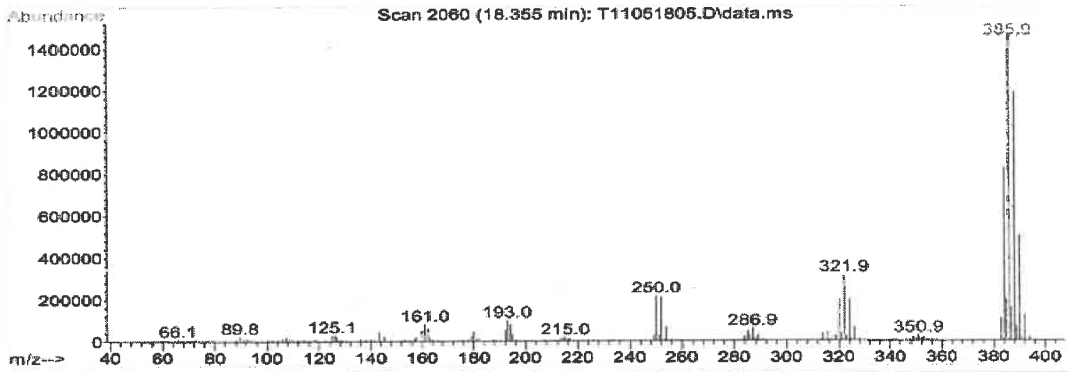

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

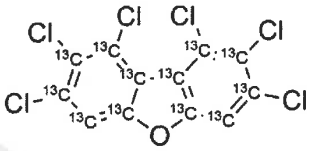

Catalog Number:	EF-986
Solution Lot:	ER01062016
Expiration Date:	January 2030
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

778151

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

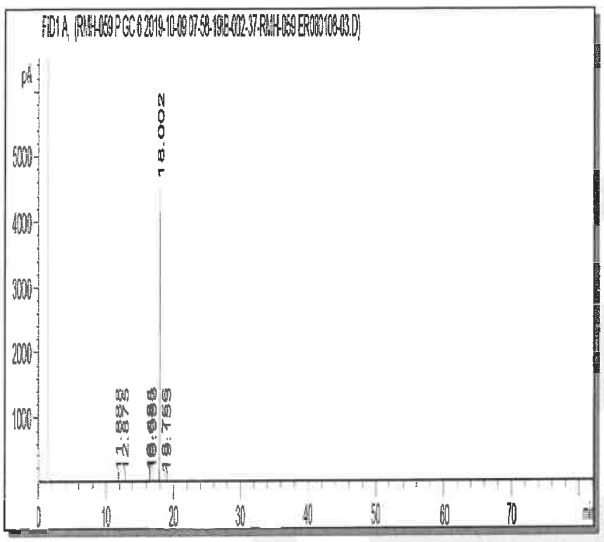

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

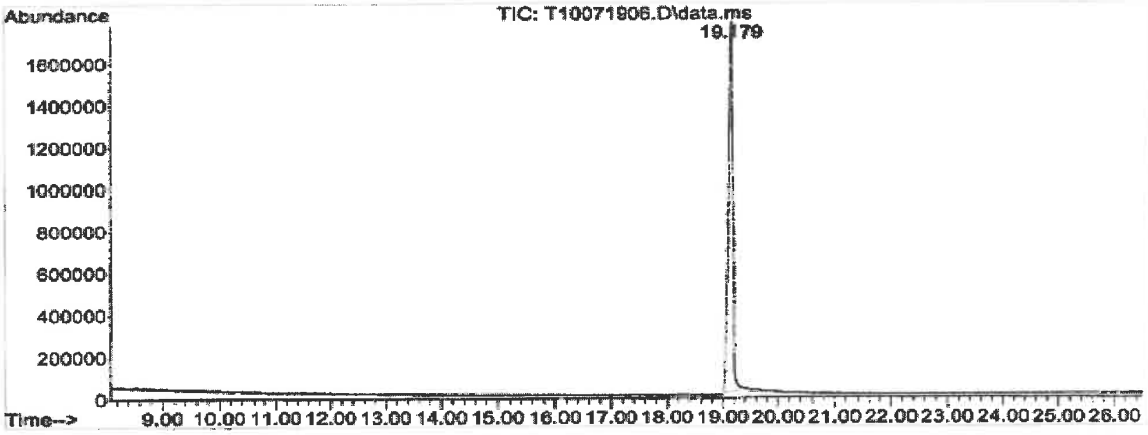

Mass Spectrum

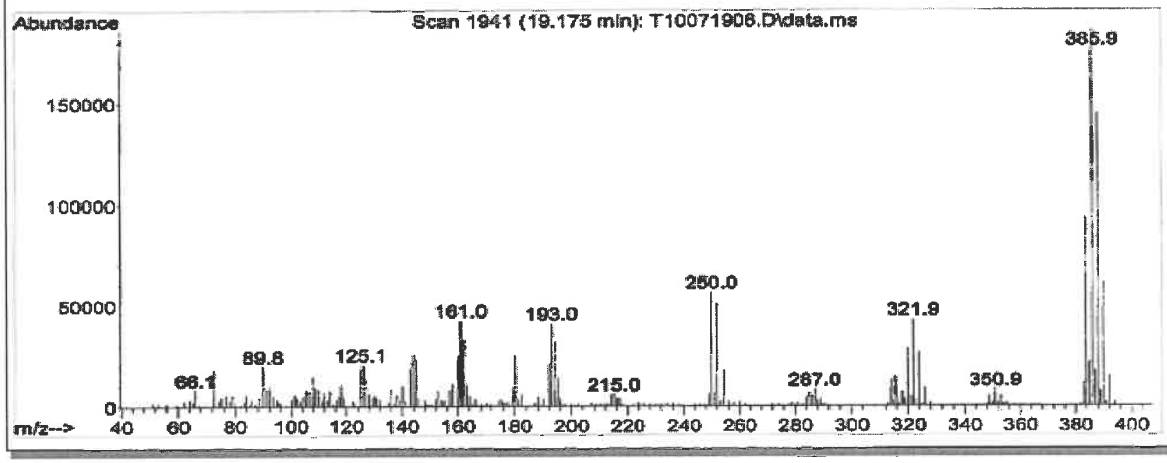

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

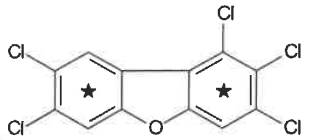

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

778158

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O$
Compound Lot:	ER090110-01	**CAS Number:**	109719-77-9
		Molecular Weight:	352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

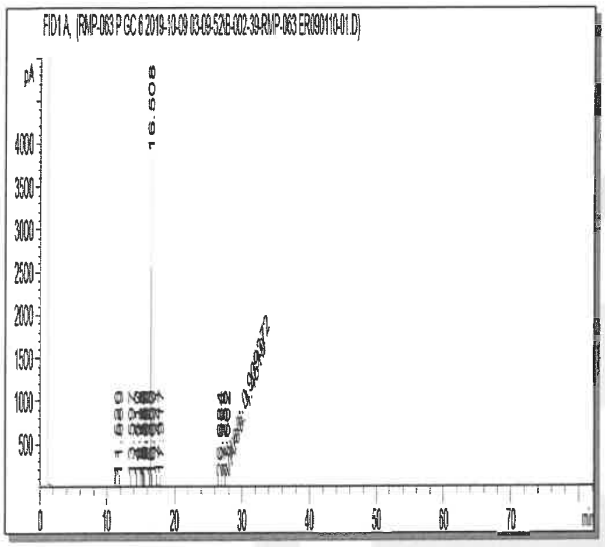

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Sample Name: ER090110-01
Acquired: October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

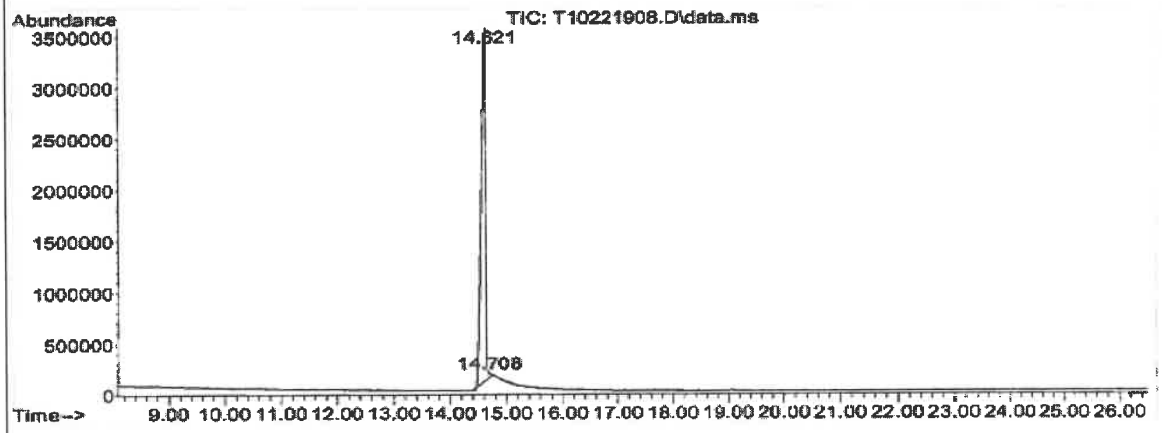

Mass Spectrum

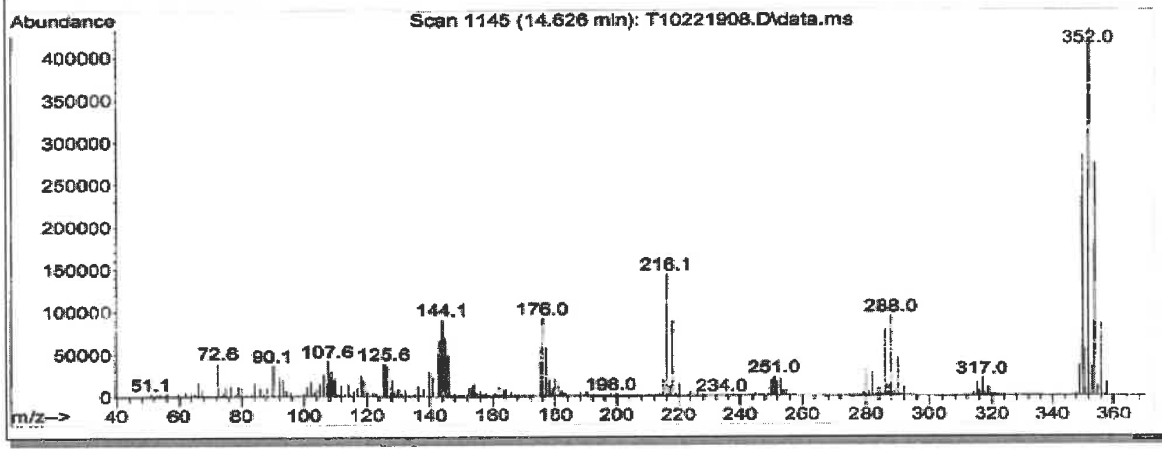

778161

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

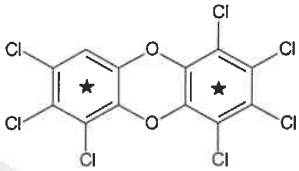

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

778165

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 0.999

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER100110-01

Chemical Formula: $^{13}C_{12}HCl_7O_2$
CAS Number: 109719-83-7
Molecular Weight: 437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

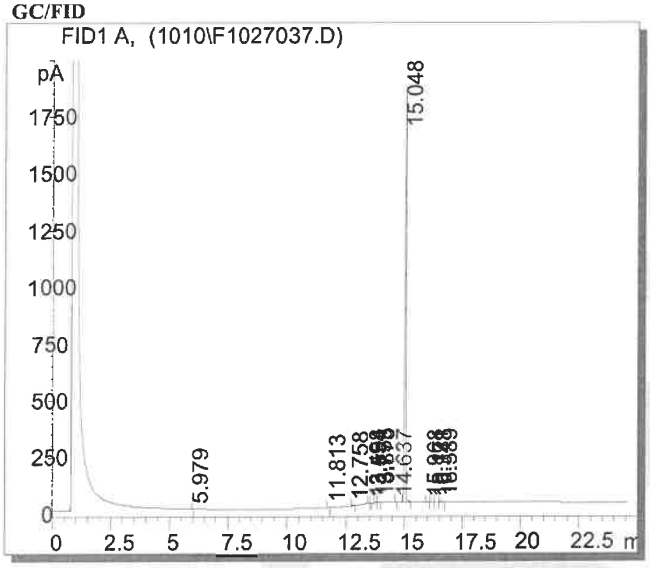

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

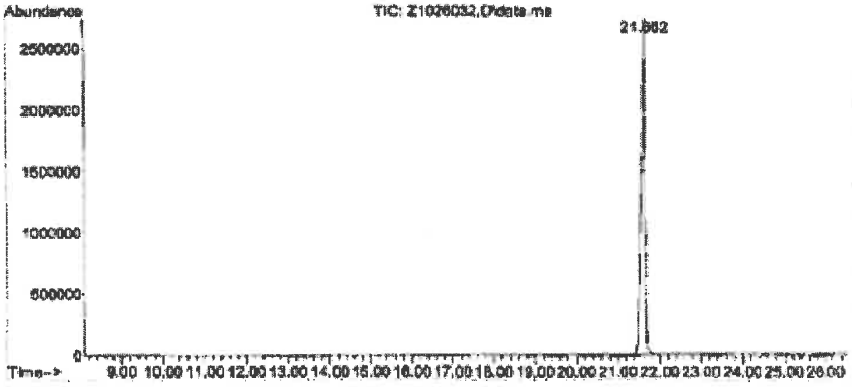

Mass Spectrum

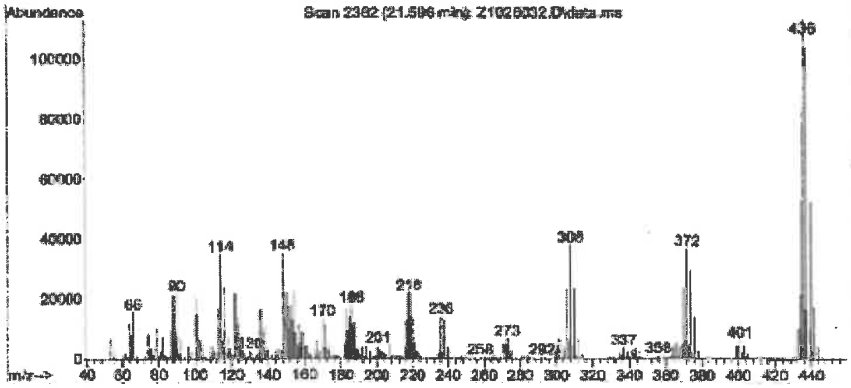

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

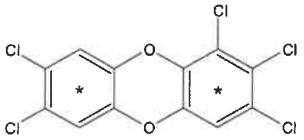

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

778170

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O_2$
Compound Lot:	ER06241403	**CAS Number:**	109719-79-1
		Molecular Weight:	368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

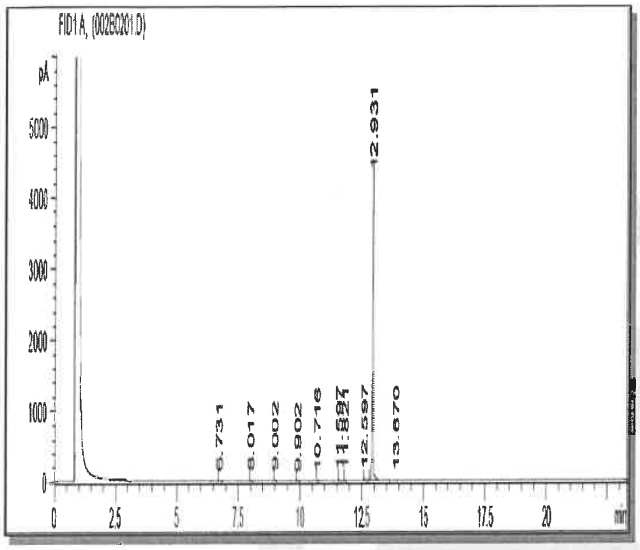

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

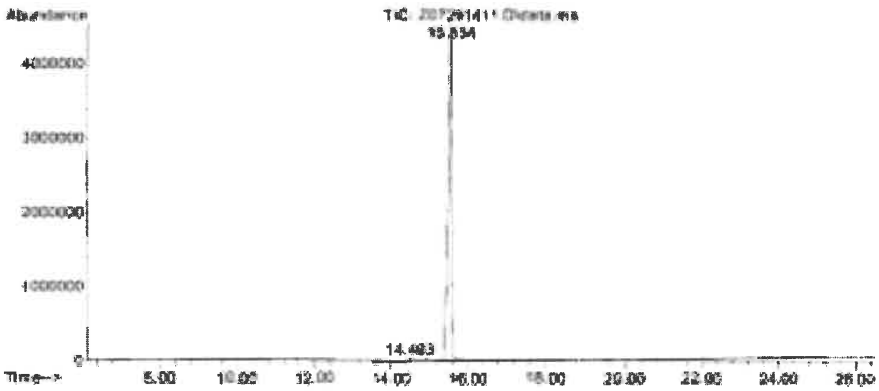

Mass Spectrum

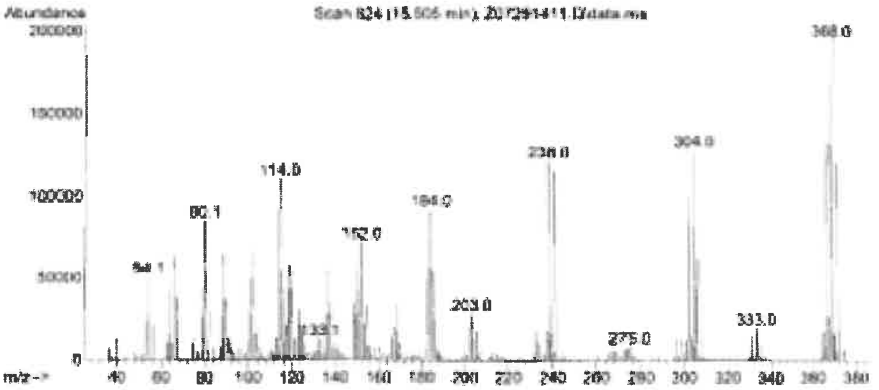

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

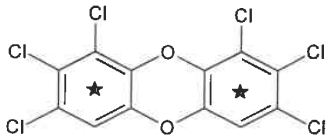

Catalog Number: ED-996
Solution Lot: ER08221601
Expiration Date: September 2026
Solvent: n-Nonane:Toluene (80:20)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

778177

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER110510-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-82-6
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

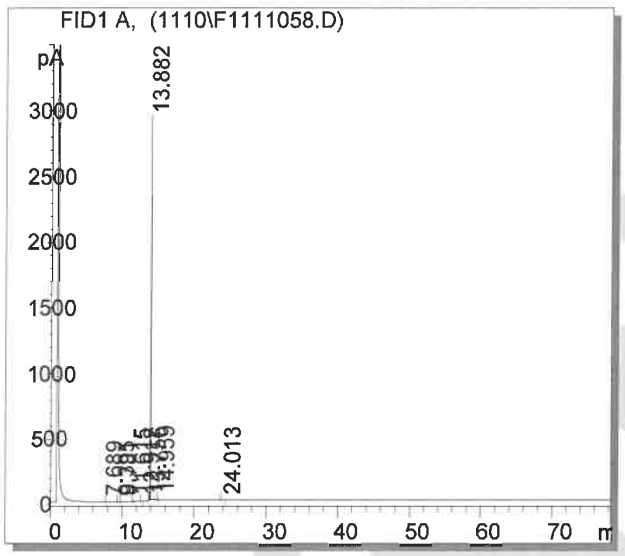

Column:	DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1110\F1111058.D
Instrument:	GC#6
Sample Name:	ER110510-01
Acquired:	November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

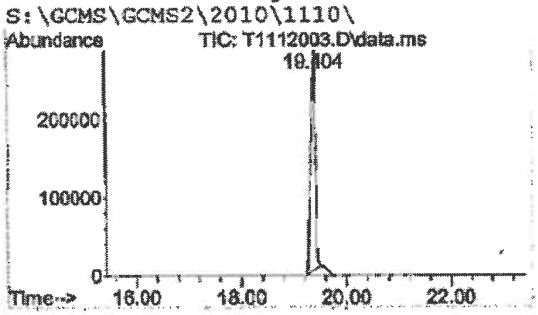

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

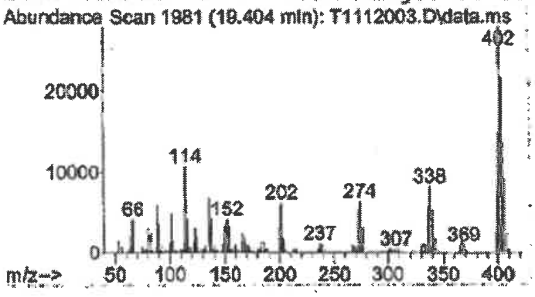

SIM Ion Chromatogram 1

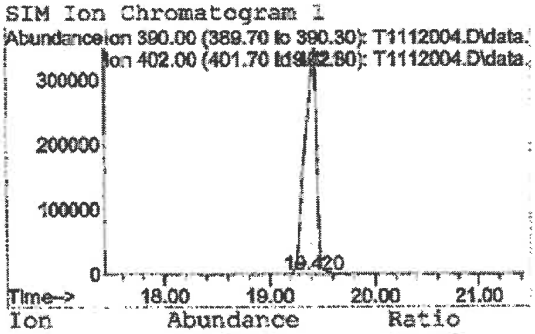

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

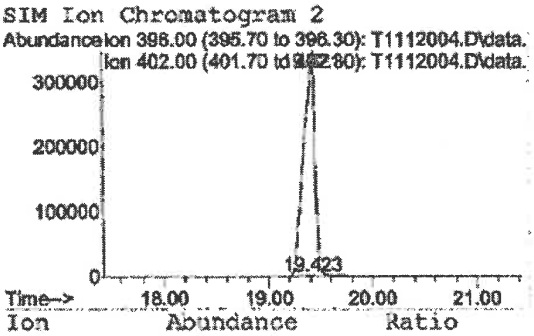

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

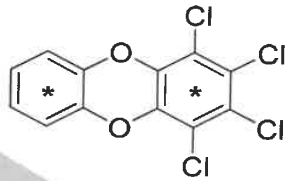

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 13194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

778184

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

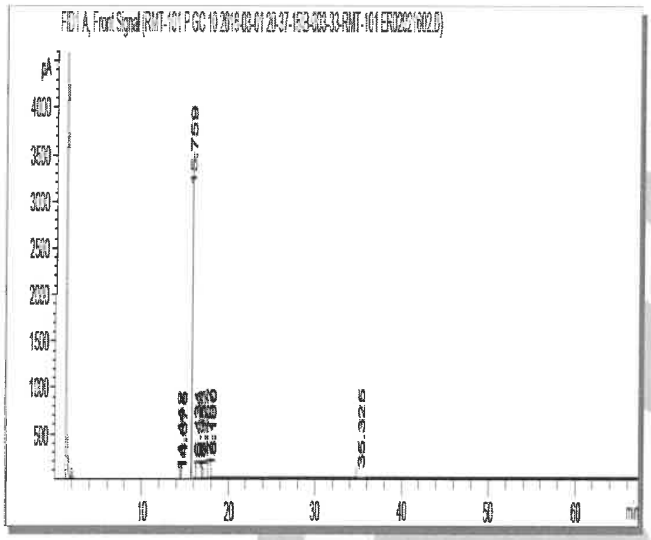

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

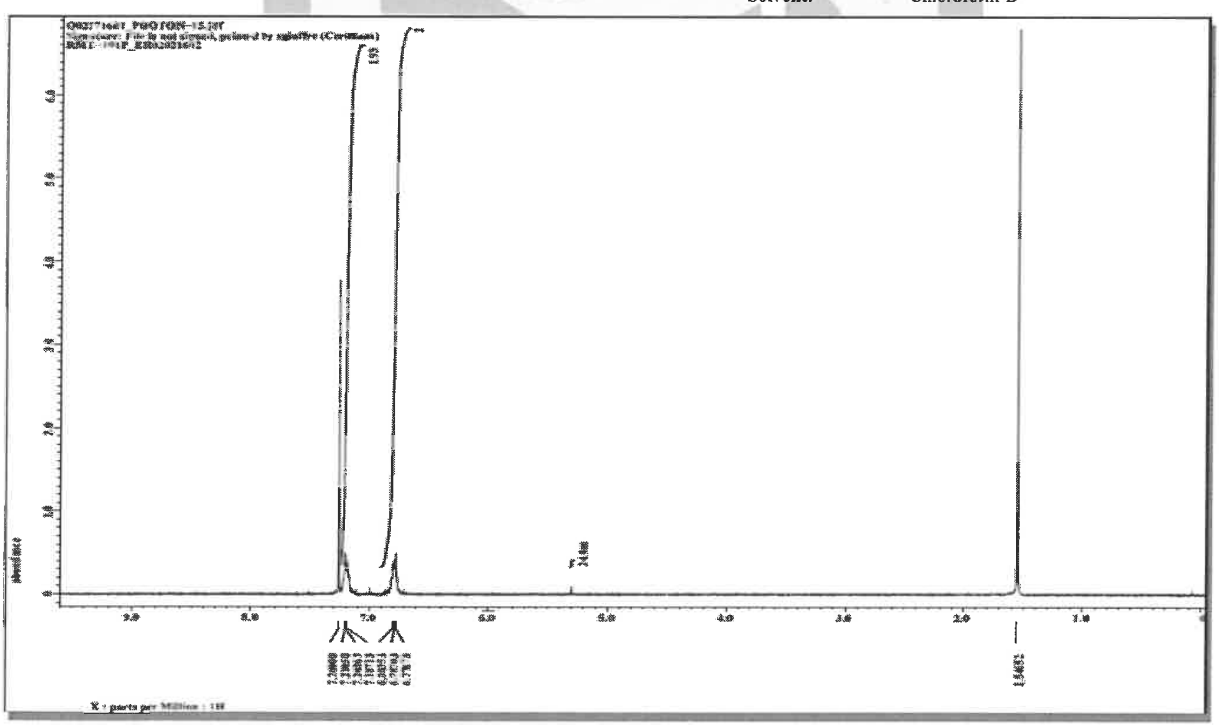

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER02021602
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Fri Feb 19 12:55:12 2016
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

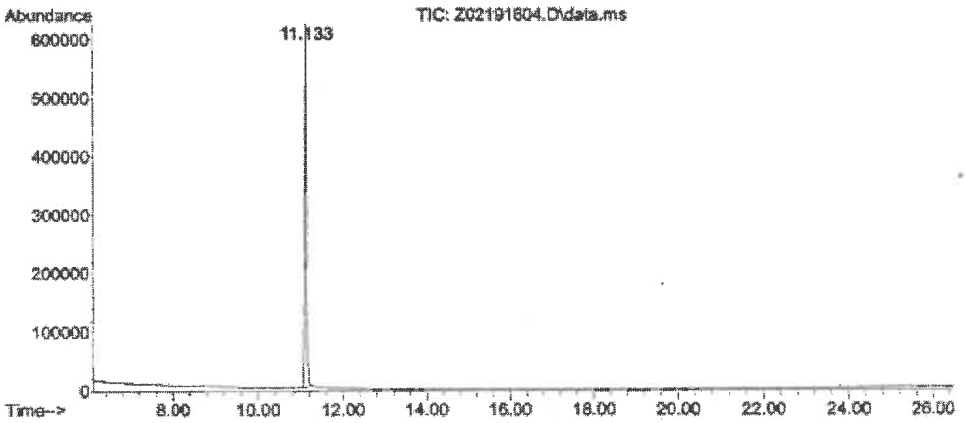

Mass Spectrum

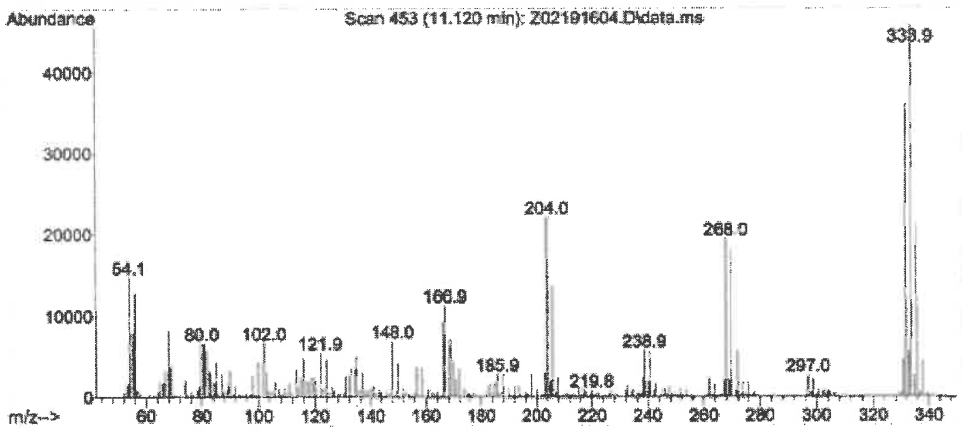

Reagent

HRDXNTA_00108

(2)

P: 4ba/19 SKJ

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

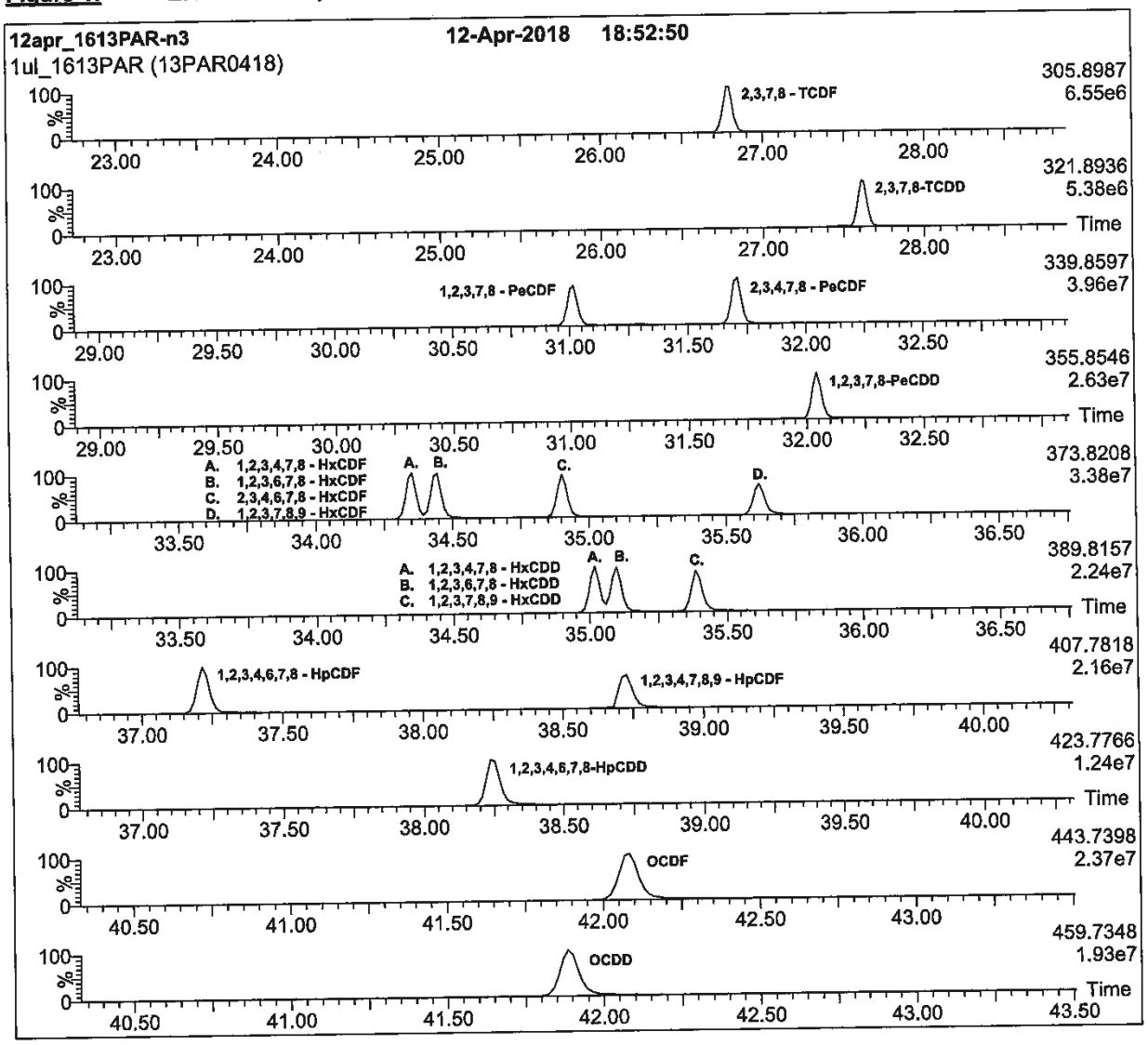

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

③

P: 4/3dic SXV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-7999-10X
Solution Lot:	ER02241602
Expiration Date:	April 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

778194

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method: GC/ECD
Column: DB-5ms, 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program: 140°C to 200°C at 40°C/min, 200°C to 300°C at 4°C/min hold 3 min
Injector Temp: Cool on-column
Detector Temp: 280°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397.1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386.6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0.8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0.7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

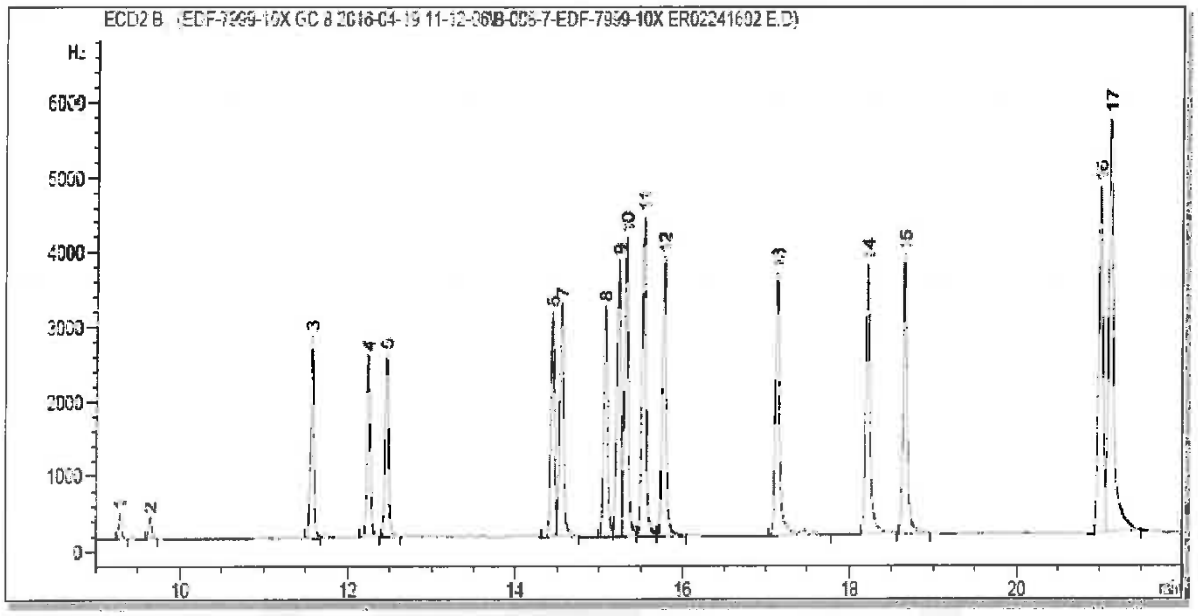

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

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Analytical Reference Standards
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Certificate of Analysis

Method 1613 PAR Stock Solution

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

778199

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

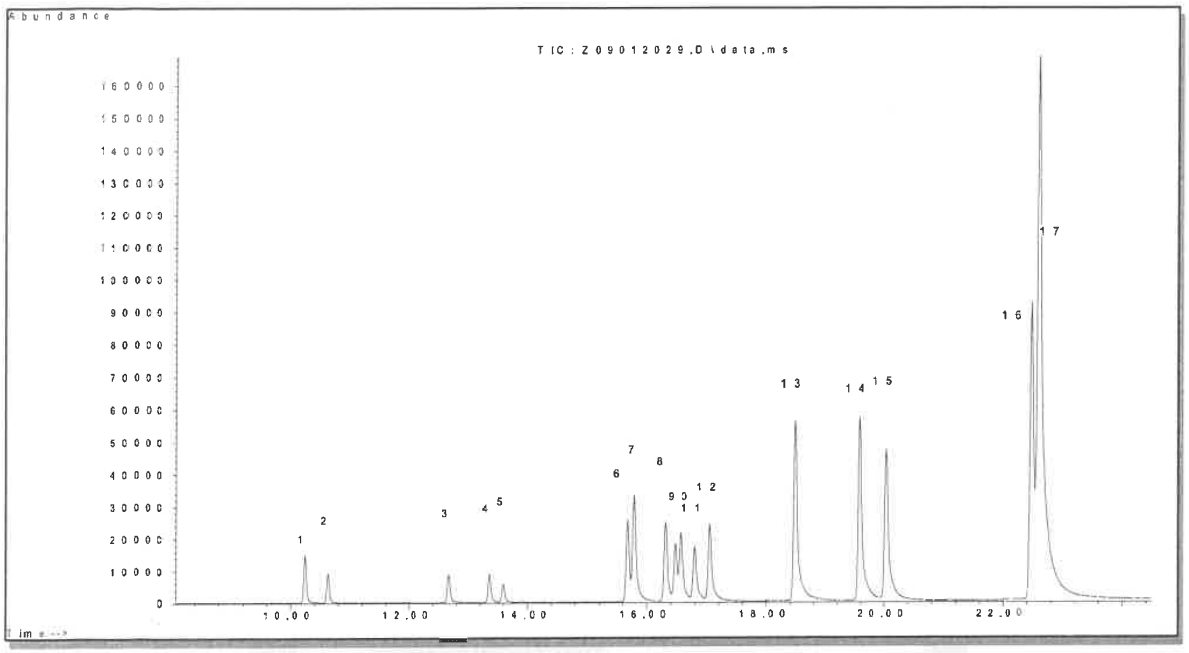

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-513227/2-A	54	57	79	55	61	58	59	53
	LCSD 320-513227/3-A	54	57	81	54	59	57	60	54

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-513227/2-A	53	61	56	52	60	62	67	69
	LCSD 320-513227/3-A	53	62	56	54	60	62	68	69

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-072221-SS -SJSB080 (16-18) RA	320-76769-9 RA	64	78
11215702-072221-SS -SJSB076 (16-18) RA	320-76769-35 RA	61	83

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-072221-SS -SJSB080 (16-18)	320-76769-9	58	62	79	58	63	60	63	58
11215702-072221-SS -SJSB074 (16-18)	320-76769-21	56	59	83	55	61	59	60	54
11215702-072221-SS -SJSB076 (16-18)	320-76769-35	58	61	79	59	64	63	64	57
	MB 320-513227/1-A	58	62	80	59	64	63	61	56

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072221-SS -SJSB080 (16-18)	320-76769-9	57	64	61	57	65	66	73	74
11215702-072221-SS -SJSB074 (16-18)	320-76769-21	54	64	55	53	59	62	66	66
11215702-072221-SS -SJSB076 (16-18)	320-76769-35	57	66	59	56	63	67	73	75
	MB 320-513227/1-A	56	64	58	57	65	69	73	79

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 12AU2110D5_26.d

Lab ID: LCS 320-513227/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	20.2	101	67-158	
2,3,7,8-TCDF	20.0	20.9	104	75-158	
1,2,3,7,8-PeCDD	100	107	107	70-142	
1,2,3,7,8-PeCDF	100	108	108	80-134	
2,3,4,7,8-PeCDF	100	97.4	97	68-160	
1,2,3,4,7,8-HxCDD	100	97.1	97	70-164	
1,2,3,6,7,8-HxCDD	100	106	106	76-134	
1,2,3,7,8,9-HxCDD	100	105	105	64-162	
1,2,3,4,7,8-HxCDF	100	96.7	97	72-134	
1,2,3,6,7,8-HxCDF	100	107	107	84-130	
1,2,3,7,8,9-HxCDF	100	106	106	78-130	
2,3,4,6,7,8-HxCDF	100	105	105	70-156	
1,2,3,4,6,7,8-HpCDD	100	107	107	70-140	
1,2,3,4,6,7,8-HpCDF	100	106	106	82-122	
1,2,3,4,7,8,9-HpCDF	100	98.8	99	78-138	
OCDD	200	214	107	78-144	
OCDF	200	205	103	63-170	
13C-2,3,7,8-TCDD	200	115	57	20-175	
13C-2,3,7,8-TCDF	200	109	54	22-152	
13C-1,2,3,7,8-PeCDD	200	117	58	21-227	
13C-1,2,3,7,8-PeCDF	200	110	55	21-192	
13C-2,3,4,7,8-PeCDF	200	121	61	13-328	
13C-1,2,3,4,7,8-HxCDD	200	122	61	21-193	
13C-1,2,3,6,7,8-HxCDD	200	112	56	25-163	
13C-1,2,3,4,7,8-HxCDF	200	118	59	19-202	
13C-1,2,3,6,7,8-HxCDF	200	106	53	21-159	
13C-1,2,3,7,8,9-HxCDF	200	105	52	17-205	
13C-2,3,4,6,7,8-HxCDF	200	105	53	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	125	62	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	119	60	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	134	67	20-186	
13C-OCDD	400	276	69	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 12AU2110D5_27.d

Lab ID: LCSD 320-513227/3-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCSD CONCENTRATION (pg/g)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	20.2	101	0	50	67-158	
2,3,7,8-TCDF	20.0	20.9	105	0	50	75-158	
1,2,3,7,8-PeCDD	100	107	107	1	50	70-142	
1,2,3,7,8-PeCDF	100	107	107	1	50	80-134	
2,3,4,7,8-PeCDF	100	97.4	97	0	50	68-160	
1,2,3,4,7,8-HxCDD	100	98.2	98	1	50	70-164	
1,2,3,6,7,8-HxCDD	100	104	104	3	50	76-134	
1,2,3,7,8,9-HxCDD	100	103	103	2	50	64-162	
1,2,3,4,7,8-HxCDF	100	96.6	97	0	50	72-134	
1,2,3,6,7,8-HxCDF	100	105	105	2	50	84-130	
1,2,3,7,8,9-HxCDF	100	104	104	2	50	78-130	
2,3,4,6,7,8-HxCDF	100	106	106	1	50	70-156	
1,2,3,4,6,7,8-HpCDD	100	108	108	1	50	70-140	
1,2,3,4,6,7,8-HpCDF	100	107	107	1	50	82-122	
1,2,3,4,7,8,9-HpCDF	100	98.1	98	1	50	78-138	
OCDD	200	212	106	1	50	78-144	
OCDF	200	204	102	1	50	63-170	
13C-2,3,7,8-TCDD	200	114	57			20-175	
13C-2,3,7,8-TCDF	200	108	54			22-152	
13C-1,2,3,7,8-PeCDD	200	114	57			21-227	
13C-1,2,3,7,8-PeCDF	200	109	54			21-192	
13C-2,3,4,7,8-PeCDF	200	118	59			13-328	
13C-1,2,3,4,7,8-HxCDD	200	124	62			21-193	
13C-1,2,3,6,7,8-HxCDD	200	112	56			25-163	
13C-1,2,3,4,7,8-HxCDF	200	119	60			19-202	
13C-1,2,3,6,7,8-HxCDF	200	108	54			21-159	
13C-1,2,3,7,8,9-HxCDF	200	108	54			17-205	
13C-2,3,4,6,7,8-HxCDF	200	106	53			22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	124	62			26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	120	60			21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	136	68			20-186	
13C-OCDD	400	275	69			13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Lab File ID: 12AU2110D5_25.d Lab Sample ID: MB 320-513227/1-A

Matrix: Sediment Date Extracted: 08/05/2021 06:41

Instrument ID: 10D5 Date Analyzed: 08/13/2021 06:33

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-513227/2-A	12AU2110D5_26.d	08/13/2021 07:18
	LCSD 320-513227/3-A	12AU2110D5_27.d	08/13/2021 08:03
11215702-072221-SS-SJSB080 (16-18)	320-76769-9	12AU2110D5_28.d	08/13/2021 08:48
11215702-072221-SS-SJSB074 (16-18)	320-76769-21	12AU2110D5_29.d	08/13/2021 09:33
11215702-072221-SS-SJSB076 (16-18)	320-76769-35	12AU2110D5_30.d	08/13/2021 10:18
11215702-072221-SS-SJSB080 (16-18) RA	320-76769-9 RA	21AU2111D2_004.d	08/21/2021 15:49
11215702-072221-SS-SJSB076 (16-18) RA	320-76769-35 RA	21AU2111D2_005.d	08/21/2021 16:27

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-2
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (16-18)
Lab Sample ID: 320-76769-9
Matrix: Sediment
Lab File ID: 12AU2110D5_28.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:20
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 9.66(g)
Date Analyzed: 08/13/2021 08:48
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 515770
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	9.1		1.4	0.065
40321-76-4	1,2,3,7,8-PeCDD	0.20	J q	6.9	0.049
57117-41-6	1,2,3,7,8-PeCDF	1.1	J	6.9	0.045
57117-31-4	2,3,4,7,8-PeCDF	0.66	J	6.9	0.046
39227-28-6	1,2,3,4,7,8-HxCDD	0.28	J B	6.9	0.052
57653-85-7	1,2,3,6,7,8-HxCDD	0.18	J	6.9	0.054
19408-74-3	1,2,3,7,8,9-HxCDD	0.27	J B q	6.9	0.048
70648-26-9	1,2,3,4,7,8-HxCDF	1.3	J	6.9	0.030
57117-44-9	1,2,3,6,7,8-HxCDF	0.42	J	6.9	0.032
72918-21-9	1,2,3,7,8,9-HxCDF	0.31	J B	6.9	0.026
60851-34-5	2,3,4,6,7,8-HxCDF	0.059	J q	6.9	0.024
35822-46-9	1,2,3,4,6,7,8-HpCDD	3.5	J B	6.9	0.086
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.55	J B	6.9	0.032
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.22	J	6.9	0.039
3268-87-9	OCDD	72	B	14	0.13
39001-02-0	OCDF	0.89	J B	14	0.025
41903-57-5	Total TCDD	10	B	1.4	0.065
30402-14-3	Total TCDF	50	B	1.4	0.11
36088-22-9	Total PeCDD	0.81	J q	6.9	0.049
30402-15-4	Total PeCDF	2.4	J q	6.9	0.046
34465-46-8	Total HxCDD	3.6	J B q	6.9	0.052
55684-94-1	Total HxCDF	2.3	J B q	6.9	0.028
37871-00-4	Total HpCDD	12	B	6.9	0.086
38998-75-3	Total HpCDF	1.0	J B	6.9	0.035

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-2
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (16-18)
Lab Sample ID: 320-76769-9
Matrix: Sediment
Lab File ID: 12AU2110D5_28.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:20
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 9.66(g)
Date Analyzed: 08/13/2021 08:48
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 515770
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	62		25-164
89059-46-1	13C-2,3,7,8-TCDF	58		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	60		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	58		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	63		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	64		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	61		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	63		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	58		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	57		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	57		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	66		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	65		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	73		26-138
114423-97-1	13C-OCDD	74		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	79		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d
Lims ID: 320-76769-A-9-A
Client ID: 11215702-072221-SS-SJSB080 (16-18)
Sample Type: Client
Inject. Date: 13-Aug-2021 08:48:13 ALS Bottle#: 32 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-9-a 320-76769-a-9-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:57:13 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: arghestanis Date: 13-Aug-2021 15:40:34

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	130221289	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	122926659	0.78	1.6249	58.1	58.1	0.0968	0.0968	58.09	
2,3,7,8-TCDF	17.371	13498858	0.77	1.0239	10.7	10.7	0.0394	0.0394		
A Non-2,3,7,8-sub-TCDF	17.069	9575648	0.76	1.0239	7.608	7.608	0.0394	4.617		Ma
S Total TCDF					18.3	18.3	0.0394	0.0394		
D 13C-2,3,7,8-TCDD	18.066	72267255	0.81	0.8993	61.7	61.7	0.0993	0.0993	61.71	
2,3,7,8-TCDD	18.082	3003259	0.75	1.2541	3.314	3.314	0.0238	0.0238		M
$ 37Cl4-2,3,7,8-TCDD	18.082	45590185		1.1071	31.6	31.6	0.0504	0.0504	79.05	
A Non-2,3,7,8-sub-TCDD	17.530	392742	0.75	1.2541	0.4333	0.4333	0.0238	0.3211		
S Total TCDD					3.747	3.747	0.0238	0.0238		
D 13C-1,2,3,7,8-PeCDF	22.394	91648871	1.58	1.2101	58.2	58.2	0.1334	0.1334	58.16	
1,2,3,7,8-PeCDF	22.408	392835	1.61	1.0611	0.4039	0.4039	0.0165	0.0165		M
D 13C-2,3,4,7,8-PeCDF	23.744	101587571	1.58	1.2395	62.9	62.9	0.1302	0.1302	62.94	
2,3,4,7,8-PeCDF	23.758	250140	1.56	1.0184	0.2418	0.2418	0.0167	0.0167		M
A F1 PeCDFs	20.108						0.0103	0.0103		
A Non-2,3,7,8-sub-PeCDF	23.261	229422	1.55	1.0398	0.2392	0.2284	0.0166	0.1528		RQ
S Total PeCDF					0.8849	0.8741	0.0166	0.0166		RQ
D 13C-1,2,3,7,8-PeCDD	24.467	59608250	1.60	0.7612	60.1	60.1	0.0606	0.0606	60.13	
1,2,3,7,8-PeCDD	24.494	44937	1.55	1.0484	0.0772	0.0719	0.0179	0.0179		RQM
A Non-2,3,7,8-sub-PeCDD	23.376	138126	1.55	1.0484	0.2261	0.2210	0.0179	0.1031		RQ
S Total PeCDD					0.3034	0.2929	0.0179	0.0179		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.529	82745855	0.52	1.0837	63.4	63.4	0.2427	0.2427	63.38	
1,2,3,4,7,8-HxCDF	30.543	425960	1.18	1.0851	0.4744	0.4744	0.0109	0.0109		
D 13C-1,2,3,6,7,8-HxCDF	30.716	78385289	0.53	1.1279	57.7	57.7	0.2332	0.2332	57.69	
1,2,3,6,7,8-HxCDF	30.716	134546	1.10	1.1260	0.1524	0.1524	0.0116	0.0116		
D 13C-2,3,4,6,7,8-HxCDF	31.528	73579301	0.52	1.0637	57.4	57.4	0.2473	0.2473	57.42	
2,3,4,6,7,8-HxCDF	31.541	18467	1.24	1.1675	0.0276	0.0215	0.008904	0.008904		RQM
D 13C-1,2,3,7,8,9-HxCDF	32.326	66516772	0.52	0.9676	57.1	57.1	0.2719	0.2719	57.06	
1,2,3,7,8,9-HxCDF	32.340	87396	1.14	1.1664	0.1126	0.1126	0.009449	0.009449		M
A Non-2,3,7,8-sub-HxCDF	30.223	78415	1.24	1.1363	0.0974	0.0916	0.0101	0.0488		RQMa

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.8645	0.8526	0.0102	0.0102		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.153	120470715	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	56873102	1.25	0.7334	64.4	64.4	0.2786	0.2786	64.37	
1,2,3,4,7,8-HxCDD	31.727	61228	1.17	1.0640	0.1012	0.1012	0.0190	0.0190		Ma
D 13C-1,2,3,6,7,8-HxCDD	31.820	64402478	1.24	0.8802	60.7	60.7	0.2321	0.2321	60.74	
1,2,3,6,7,8-HxCDD	31.847	42556	1.14	1.0001	0.0661	0.0661	0.0196	0.0196		Ma
1,2,3,7,8,9-HxCDD	32.153	67056	1.24	1.1325	0.1096	0.0976	0.0176	0.0176		RQM
A Non-2,3,7,8-sub-HxCDD	30.895	668166	1.24	1.0655	1.053	1.034	0.0187	0.7235		RQ
S Total HxCDD					1.330	1.299	0.0187	0.0187		RQ
1,2,3,4,6,7,8-HpCDF	33.778	173664	0.94	1.4413	0.1993	0.1993	0.0116	0.0116		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	60458006	0.44	0.7730	64.9	64.9	0.9416	0.9416	64.92	
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	61830296	0.44	0.7008	73.2	73.2	1.039	1.039	73.23	
1,2,3,4,7,8,9-HpCDF	34.860	64854	1.13	1.3174	0.0796	0.0796	0.0141	0.0141		M
A Non-2,3,7,8-sub-HpCDF	34.325	75901	0.97	1.3793	0.0900	0.0900	0.0128	0.0900		M
S Total HpCDF					0.3689	0.3689	0.0129	0.0129		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	51606221	0.99	0.6472	66.2	66.2	0.3797	0.3797	66.19	
1,2,3,4,6,7,8-HpCDD	34.580	722090	1.05	1.0943	1.279	1.279	0.0313	0.0313		
A Non-2,3,7,8-sub-HpCDD	34.301	1652939	1.03	1.0943	2.927	2.927	0.0313	2.927		
S Total HpCDD					4.206	4.206	0.0313	0.0313		
D 13C-OCDD	36.926	79639342	0.88	0.4472	147.8	147.8	0.2228	0.2228	73.92	
OCDF	37.022	185133	0.91	1.4382	0.3233	0.3233	0.009103	0.009103		M
OCDD	36.938	11494177	0.90	1.1070	26.1	26.1	0.0462	0.0462		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d
Lims ID: 320-76769-A-9-A
Client ID: 11215702-072221-SS-SJSB080 (16-18)
Sample Type: Client
Inject. Date: 13-Aug-2021 08:48:13 ALS Bottle#: 32 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-9-a 320-76769-a-9-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:57:13 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: arghestanis Date: 13-Aug-2021 15:40:34

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.885	-1		58514446	14225387	4708	11770	3022		
333.9339	17.870	17.885	-1		71706843	17231390	6525	16312	2641	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.971	53749598	13037172	9328	23320	1398		
317.9389	17.356	17.356	0	0.971	69177061	16512842	10458	26145	1579	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.386	-1	1.001	5862900	1343779	2131	5327	631		
305.8987	17.371	17.386	-1	1.001	7635958	1763856	2640	6600	668	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											Ma
303.9016	15.950	17.069	-67	0.919	76708	20990	2131	5327	10		
305.8987	15.950	17.069	-67	0.919	97714	28203	2640	6600	11	0.79(0.65-0.89)	
303.9016	16.237	17.069	-50	0.936	157844	36935	2131	5327	17		M
305.8987	16.237	17.069	-50	0.936	183853	42127	2640	6600	16	0.86(0.65-0.89)	
303.9016	16.464	17.069	-36	0.949	161549	42512	2131	5327	20		
305.8987	16.449	17.069	-37	0.948	192658	48017	2640	6600	18	0.84(0.65-0.89)	M
303.9016	16.706	17.069	-22	0.963	266195	59426	2131	5327	28		
305.8987	16.691	17.069	-23	0.962	329289	70553	2640	6600	27	0.81(0.65-0.89)	
303.9016	16.993	17.069	-5	0.979	2495865	605303	2131	5327	284		
305.8987	16.978	17.069	-5	0.978	3314832	824242	2640	6600	312	0.75(0.65-0.89)	
303.9016	17.205	17.069	8	0.991	91656	18568	2131	5327	9		
305.8987	17.205	17.069	8	0.991	134448	27615	2640	6600	10	0.68(0.65-0.89)	
303.9016	17.794	17.069	43	1.025	412093	88936	2131	5327	42		
305.8987	17.794	17.069	43	1.025	548620	113962	2640	6600	43	0.75(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.036	17.069	58	1.039	89209	17136	2131	5327	8		
305.8987	18.051	17.069	59	1.040	119787	21899	2640	6600	8	0.74(0.65-0.89)	
303.9016	19.201	17.069	128	1.106	375652	77029	2131	5327	36		
305.8987	19.201	17.069	128	1.106	527676	112493	2640	6600	43	0.71(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.066	0	1.011	32337385	7317140	4708	11770	1554		
333.9339	18.066	18.066	0	1.011	39929870	8955166	6525	16312	1372	0.81(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	18.082	18.082	0	1.001	1286985	285716	1021	2552	280		
321.8936	18.082	18.082	0	1.001	1716274	386114	919	2297	420	0.75(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.097	-1	1.012	45590185	10454460	7028	17570	1488		
A Non-2,3,7,8-sub-TCDD											
319.8965	16.948	17.530	-35	0.938	46891	9847	1021	2552	10		
321.8936	16.933	17.530	-36	0.937	54802	13348	919	2297	15	0.86(0.65-0.89)	
319.8965	18.444	17.530	55	1.021	121481	24931	1021	2552	24		
321.8936	18.444	17.530	55	1.021	169568	33861	919	2297	37	0.72(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.394	22.408	-1	1.253	56083998	9218973	12391	30977	744		
353.8970	22.394	22.408	-1	1.253	35564873	5914063	7917	19792	747	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.408	22.435	-2	1.001	242473	43597	440	1100	99		
341.8567	22.408	22.435	-2	1.001	150362	24063	618	1545	39	1.61(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.744	23.758	-1	1.329	62224555	9536105	12391	30977	770		
353.8970	23.744	23.758	-1	1.329	39363016	6036612	7917	19792	762	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	23.758	23.785	-2	1.001	152297	21745	440	1100	49		
341.8567	23.744	23.785	-2	1.000	97843	13367	618	1545	22	1.56(1.32-1.78)	M
A F1 PeCDFs											
339.8597	20.108						225	562			
341.8567	20.108						434	1085			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.058	23.261	-132	0.940	96358	16046	440	1100	36		
341.8567	21.099	23.261	-130	0.942	57123	8554	618	1545	14	1.69(1.32-1.78)	
339.8597	22.953	23.261	-18	1.025	57025	9916	440	1100	23		
	Empc Correction				46160	7669	440	1100	17		
341.8567	22.912	23.261	-21	1.023	29781	4948	618	1545	8	1.91(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.467	24.481	-1	1.369	36713724	5354278	3448	8620	1553		
369.8919	24.467	24.481	-1	1.369	22894526	3298213	2353	5882	1402	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											RQM
355.8546	24.494	24.508	-1	1.001	27315	4071	416	1040	10		M
357.8516	24.480	24.508	-2	1.001	20956	3328	233	582	14	1.30(1.32-1.78)	
	Empc Correction				17622	2626	233	582	11		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.262	23.376	-127	0.869	28179	4728	416	1040	11		
357.8516	21.249	23.376	-127	0.868	16334	3248	233	582	14	1.73(1.32-1.78)	
355.8546	21.999	23.376	-82	0.899	39865	6971	416	1040	17		
357.8516	21.985	23.376	-83	0.899	24577	4479	233	582	19	1.62(1.32-1.78)	
355.8546	23.471	23.376	6	0.959	20915	2710	416	1040	7		
	Empc Correction				17731	2669	416	1040	6		
357.8516	23.512	23.376	8	0.961	11440	1722	233	582	7	1.83(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.529	30.543	-1	0.949	28307831	5396263	11370	28425	475		
385.8610	30.529	30.543	-1	0.949	54438024	10338913	21897	54742	472	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.543	30.569	-2	1.000	230783	40037	371	927	108		
375.8178	30.543	30.569	-2	1.000	195177	36036	373	932	97	1.18(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.716	30.716	0	0.955	27046002	4939514	11370	28425	434		
385.8610	30.716	30.716	0	0.955	51339287	9307006	21897	54742	425	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.716	30.743	-2	1.000	70354	12343	371	927	33		
375.8178	30.742	30.743	0	1.001	64192	10590	373	932	28	1.10(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.528	31.541	-1	0.981	25051211	6120547	11370	28425	538		
385.8610	31.528	31.541	-1	0.981	48528090	11770847	21897	54742	538	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQM
373.8208	31.541	31.554	-1	1.000	10223	3594	371	927	10		M
375.8178	31.541	31.554	-1	1.000	13467	4021	373	932	11	0.76(1.05-1.43)	M
	Empc Correction				8244	2898	373	932	8		
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.340	-1	1.005	22887136	5784449	11370	28425	509		
385.8610	32.326	32.340	-1	1.005	43629636	11093111	21897	54742	507	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.340	32.353	-1	1.000	46610	13229	371	927	36		M
375.8178	32.340	32.353	-1	1.000	40786	12555	373	932	34	1.14(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	28.413	30.223	-108	0.931	17979	2055	371	927	6		
375.8178	28.400	30.223	-109	0.930	14838	2593	373	932	7	1.21(1.05-1.43)	
373.8208	31.421	30.223	72	1.029	2124	1191	371	927	3		M
375.8178	31.448	30.223	73	1.030	6677	1616	373	932	4	0.32(1.05-1.43)	
	Empc Correction				1712	960	373	932	3		
373.8208	32.433	30.223	132	1.062	22938	5041	371	927	14		M
375.8178	32.419	30.223	132	1.062	18824	4721	373	932	13	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.153	0		66830132	17577452	13171	32927	1335		
403.8529	32.153	32.153	0		53640583	14038022	12666	31665	1108	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.727	-1	0.986	31558272	8793160	13171	32927	668		
403.8529	31.714	31.727	-1	0.986	25314830	7031527	12666	31665	555	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											Ma
389.8157	31.727	31.741	-1	1.000	33027	8111	706	1765	11		M
391.8127	31.727	31.741	-1	1.000	28201	7161	574	1435	12	1.17(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.834	-1	0.990	35617201	9012438	13171	32927	684		
403.8529	31.820	31.834	-1	0.990	28785277	7296289	12666	31665	576	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											Ma
389.8157	31.847	31.847	0	1.001	22651	5415	706	1765	8		M
391.8127	31.834	31.847	-1	1.000	19905	5597	574	1435	10	1.14(1.05-1.43)	
1,2,3,7,8,9-HxCDD											RQM
389.8157	32.153	32.167	-1	1.014	45310	10068	706	1765	14		
	Empc Correction				37120	9052	706	1765	13		
391.8127	32.153	32.167	-1	1.014	29936	7300	574	1435	13	1.51(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.584	30.895	-79	0.930	264848	33610	706	1765	48		
391.8127	29.611	30.895	-77	0.931	202614	24411	574	1435	43	1.31(1.05-1.43)	
389.8157	30.609	30.895	-17	0.962	43458	4910	706	1765	7		
	Empc Correction				31261	5055	706	1765	7		
391.8127	30.596	30.895	-18	0.962	25211	4077	574	1435	7	1.72(1.05-1.43)	
389.8157	30.969	30.895	4	0.973	76225	14373	706	1765	20		
391.8127	30.995	30.895	6	0.974	68007	11862	574	1435	21	1.12(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	83970	29698	885	2212	34		
409.7789	33.778	33.778	0	1.000	89694	30474	392	980	78	0.94(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.778	-1	1.050	18502858	5834310	26890	67225	217		
419.8220	33.766	33.778	-1	1.050	41955148	13245333	65163	162907	203	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.860	0	1.084	18933990	5344136	26890	67225	199		
419.8220	34.860	34.860	0	1.084	42896306	11781499	65163	162907	181	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.860	34.872	-1	1.000	34421	10426	885	2212	12		M
409.7789	34.860	34.872	-1	1.000	30433	8668	392	980	22	1.13(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											M
407.7818	34.082	34.325	-15	1.009	37447	10973	885	2212	12		M
409.7789	34.082	34.325	-15	1.009	38454	11847	392	980	30	0.97(0.88-1.20)	M
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.075	25625400	7727380	14782	36955	523		
437.8140	34.568	34.568	0	1.075	25980821	7748250	16299	40747	475	0.99(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	369339	108773	1079	2697	101		
425.7737	34.580	34.580	0	1.000	352751	105262	1039	2597	101	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.984	836907	251416	1079	2697	233		
425.7737	34.021	34.301	-17	0.984	816032	244186	1039	2597	235	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.926	0	1.148	37258637	9166212	5491	13727	1669		
471.7750	36.926	36.926	0	1.148	42380705	10389400	7107	17767	1462	0.88(0.76-1.02)	
OCDF											M
441.7428	37.022	37.034	-1	1.003	88405	20560	207	517	99		M
443.7399	37.022	37.034	-1	1.003	96728	25720	305	762	84	0.91(0.76-1.02)	M
OCDD											
457.7377	36.938	36.938	0	1.000	5444325	1359162	953	2382	1426		
459.7348	36.938	36.938	0	1.000	6049852	1491845	1049	2622	1422	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 16-Aug-2021 13:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d
Lims ID: 320-76769-A-9-A
Client ID: 11215702-072221-SS-SJSB080 (16-18)
Inject. Date: 13-Aug-2021 08:48:13 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	122926659	29550014

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	122926659	29550014

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.950	76708	20990	97714	28203	0.1386	0.79	
16.237	157844	36935	183853	42127	0.2715	0.86	Ma
16.464	161549	42512	192658	48017	0.2814	0.84	M
16.706	266195	59426	329289	70553	0.4731	0.81	
16.993	2495865	605303	3314832	824242	4.62	0.75	
17.205	91656	18568	134448	27615	0.1796	0.68	
17.794	412093	88936	548620	113962	0.7633	0.75	
18.036	89209	17136	119787	21899	0.1660	0.74	
19.201	375652	77029	527676	112493	0.7177	0.71	
Signal Totals:							
	4126771	966835	5448877	1289111			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9575648	2255946				0.76	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.608 = (9575648 * 100.000) / (122926659 * 1.024)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d
Lims ID: 320-76769-A-9-A
Client ID: 11215702-072221-SS-SJSB080 (16-18)
Inject. Date: 13-Aug-2021 08:48:13 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	72267255	16272306

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	72267255	16272306

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.948	46891	9847	54802	13348	0.1122	0.86	
18.444	121481	24931	169568	33861	0.3211	0.72	
Signal Totals:							
	168372	34778	224370	47209			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	392742	81987				0.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4333 = (392742 * 100.000) / (72267255 * 1.254)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d
Lims ID: 320-76769-A-9-A
Client ID: 11215702-072221-SS-SJSB080 (16-18)
Inject. Date: 13-Aug-2021 08:48:13 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 6

Non-2,3,7,8-sub-PeCDF, RT: 23.261

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	91648871	15133036
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	101587571	15572717

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	96618221	15352876

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.058	96358	16046	57123	8554	0.1528	1.69	
22.953	57025	9916	29781	4948	0.0864	1.91	RQ
22.953	46160	7669	29781	4948	0.0756		Empc Correction
Signal Totals:							
	142518	23715	86904	13502			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	240287	39464				1.76	RQ
	229422	37217					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2392 = (240287 * 100.000) / (96618221 * 1.040)
Empc Amount: 0.2284 = (229422 * 100.000) / (96618221 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 16-Aug-2021 13:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d		
Lims ID:	320-76769-A-9-A		
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Inject. Date:	13-Aug-2021 08:48:13	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	515770	Lims Sample ID:	6

Non-2,3,7,8-sub-PeCDD, RT: 23.376

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	59608250	8652491

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	59608250	8652491

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.262	28179	4728	16334	3248	0.0712	1.73	
21.999	39865	6971	24577	4479	0.1031	1.62	
23.471	20915	2710	11440	1722	0.0518	1.83	RQ
23.471	17731	2669	11440	1722	0.0467		Empc Correction
Signal Totals:							
	85775	14368	52351	9449			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141310	23858				1.70	RQ
	138126	23817					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2261 = (141310 * 100.000) / (59608250 * 1.048)
Empc Amount: 0.2210 = (138126 * 100.000) / (59608250 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 16-Aug-2021 13:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d
Lims ID: 320-76769-A-9-A
Client ID: 11215702-072221-SS-SJSB080 (16-18)
Inject. Date: 13-Aug-2021 08:48:13 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 6

Non-2,3,7,8-sub-HxCDF, RT: 30.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	82745855	15735176
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	78385289	14246520
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	73579301	17891394
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	66516772	16877560

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	75306804	16187662

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.413	17979	2055	14838	2593	0.0384	1.21	
31.421	2124	1191	6677	1616	0.0103	0.32	RQMa
31.421	2124	1191	1712	960	0.004483		Empc Correction
32.433	22938	5041	18824	4721	0.0488	1.22	Ma
Signal Totals:							
	43041	8287	35374	8274			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	83380	17217				1.07	RQMa
	78415	16561					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0974 = (83380 * 100.000) / (75306804 * 1.136)
Empc Amount: 0.0916 = (78415 * 100.000) / (75306804 * 1.136)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 16-Aug-2021 13:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d		
Lims ID:	320-76769-A-9-A		
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Inject. Date:	13-Aug-2021 08:48:13	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	515770	Lims Sample ID:	6

Non-2,3,7,8-sub-HxCDD, RT: 30.895

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	56873102	15824687
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	64402478	16308727
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	60637790	16066707

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.584	264848	33610	202614	24411	0.7235	1.31	
30.609	43458	4910	25211	4077	0.1063	1.72	RQ
30.609	31261	5055	25211	4077	0.0874		Empc Correction
30.969	76225	14373	68007	11862	0.2232	1.12	
Signal Totals:							
	372334	53038	295832	40350			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	680363	93243				1.30	RQ
	668166	93388					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.053 = (680363 * 100.000) / (60637790 * 1.066)

Empc Amount: 1.034 = (668166 * 100.000) / (60637790 * 1.066)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 16-Aug-2021 13:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d
Lims ID: 320-76769-A-9-A
Client ID: 11215702-072221-SS-SJSB080 (16-18)
Inject. Date: 13-Aug-2021 08:48:13 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 6

Non-2,3,7,8-sub-HpCDF, RT: 34.325

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	60458006	19079643
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	61830296	17125635

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	61144151	18102639

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.082	37447	10973	38454	11847	0.0900	0.97	M
Signal Totals:							
	37447	10973	38454	11847			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	75901	22820				0.97	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0900 = (75901 * 100.000) / (61144151 * 1.379)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 16-Aug-2021 13:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d
Lims ID: 320-76769-A-9-A
Client ID: 11215702-072221-SS-SJSB080 (16-18)
Inject. Date: 13-Aug-2021 08:48:13 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 6

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	51606221	15475630

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	51606221	15475630

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	836907	251416	816032	244186	2.93	1.03	
Signal Totals:							
	836907	251416	816032	244186			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1652939	495602				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.927 = (1652939 * 100.000) / (51606221 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.91- 19.23)

Signal: 1

Processing Integration Results

RT = 16.237 Area = 157844

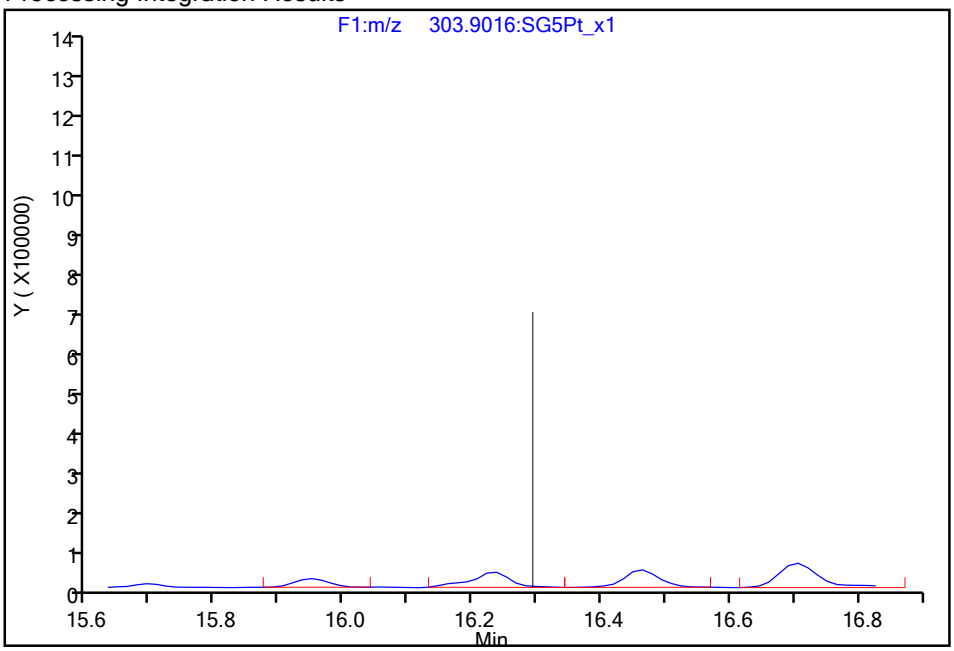

Manual Integration Results

RT = 16.237 Area = 157844

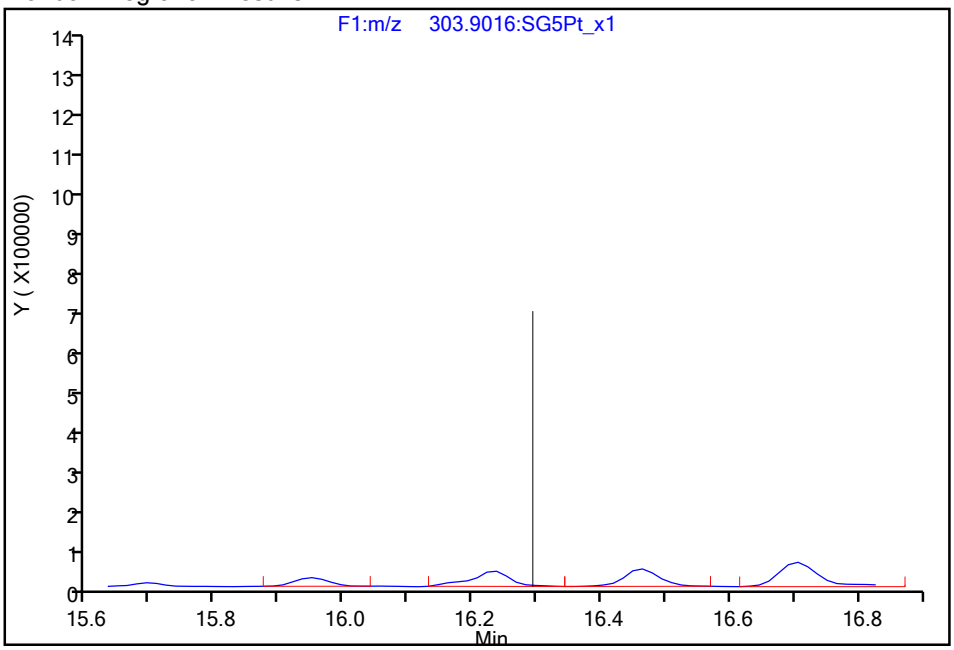

Reviewer: dadunj, 16-Aug-2021 13:41:10

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.91- 19.23)

Signal: 2

Processing Integration Results

RT = 16.434 Area = 75506

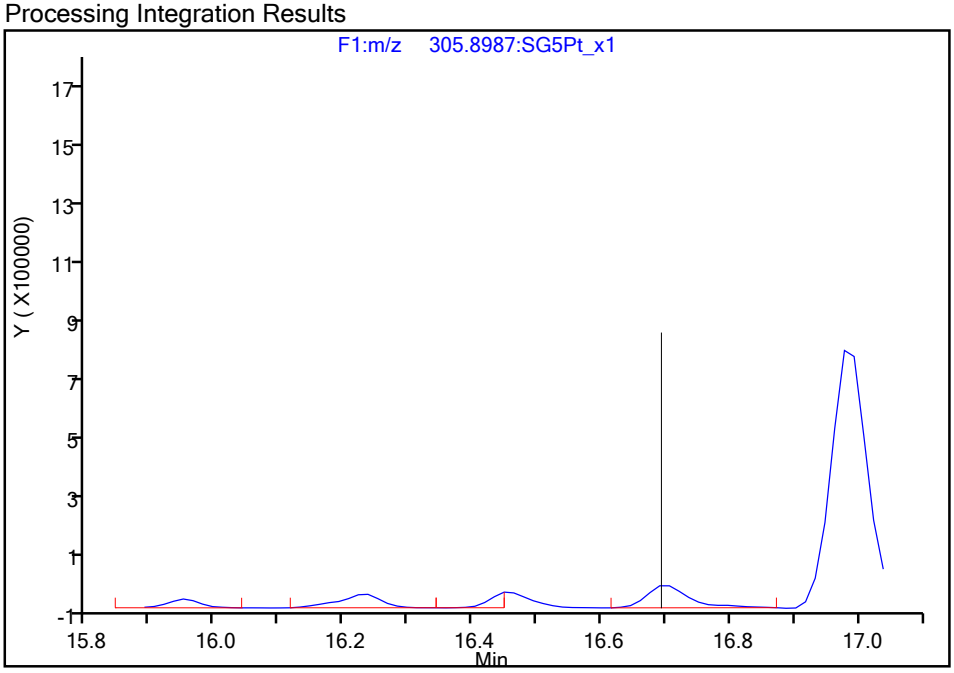

Manual Integration Results

RT = 16.449 Area = 192658 M

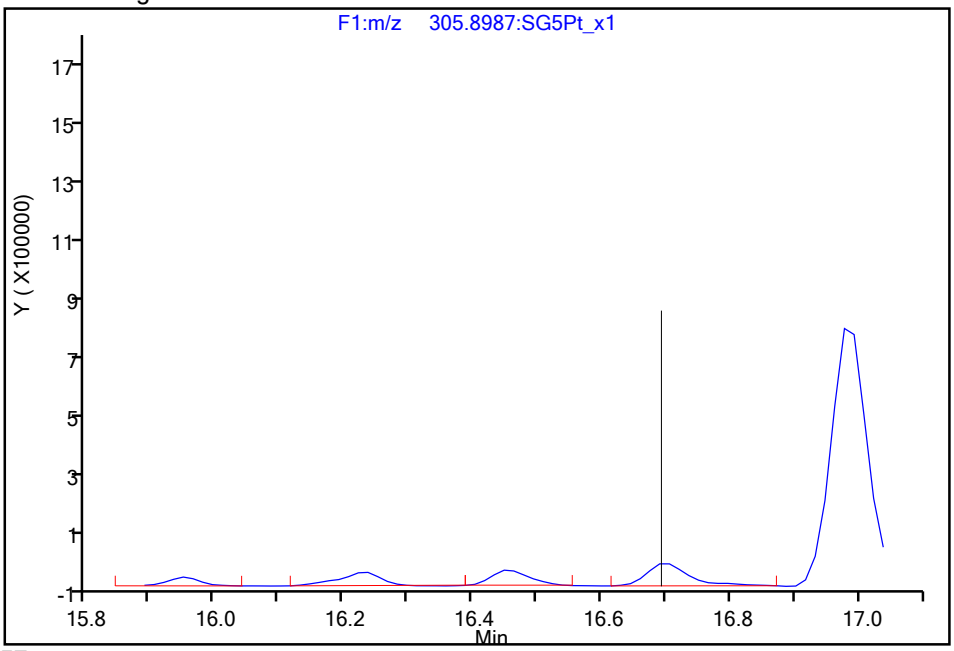

Reviewer: dadunj, 16-Aug-2021 13:40:57

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.08
Area: 1727447
Amount: 3.326020
Amount Units: pg/ul

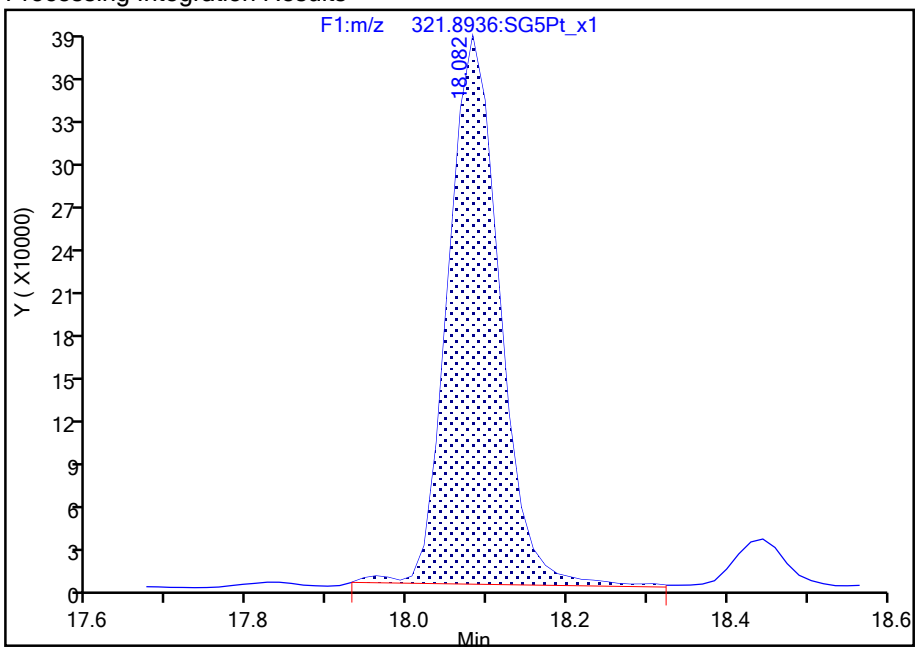

Manual Integration Results

RT: 18.08
Area: 1716274
Amount: 3.313692
Amount Units: pg/ul

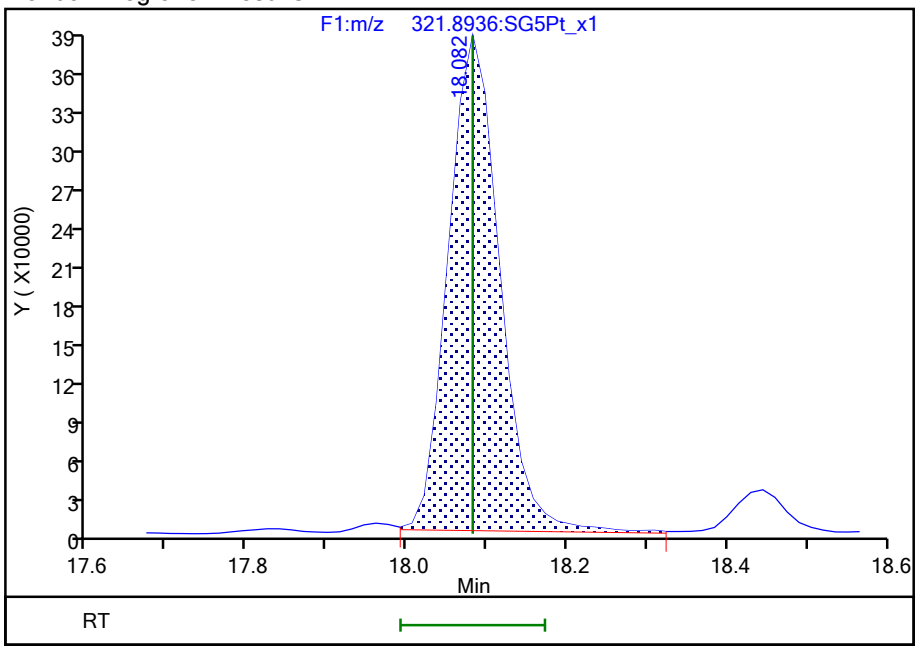

Reviewer: dadunj, 16-Aug-2021 13:45:39

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.41
Area: 156733
Amount: 0.410487
Amount Units: pg/ul

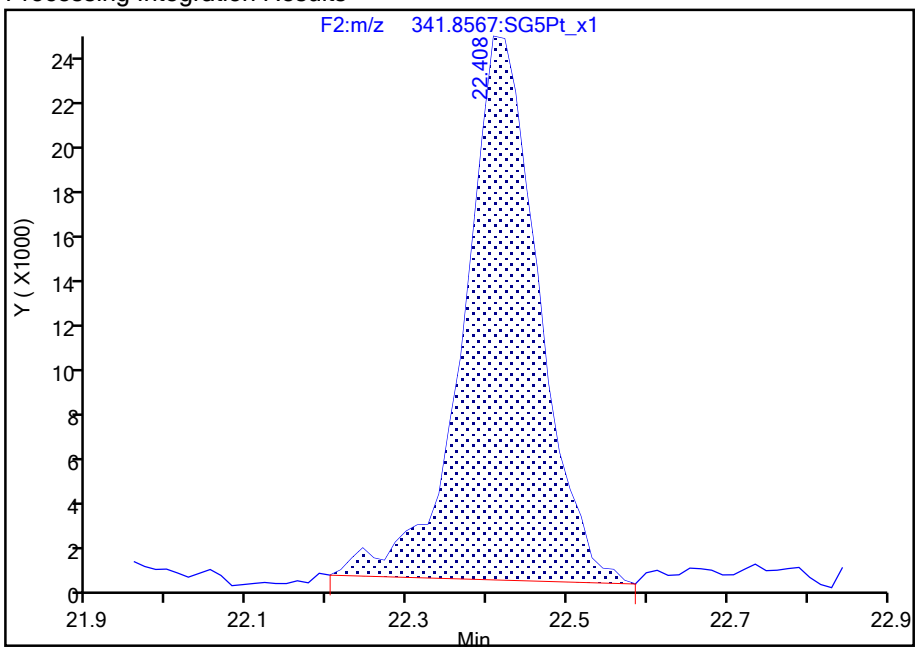

Manual Integration Results

RT: 22.41
Area: 150362
Amount: 0.403936
Amount Units: pg/ul

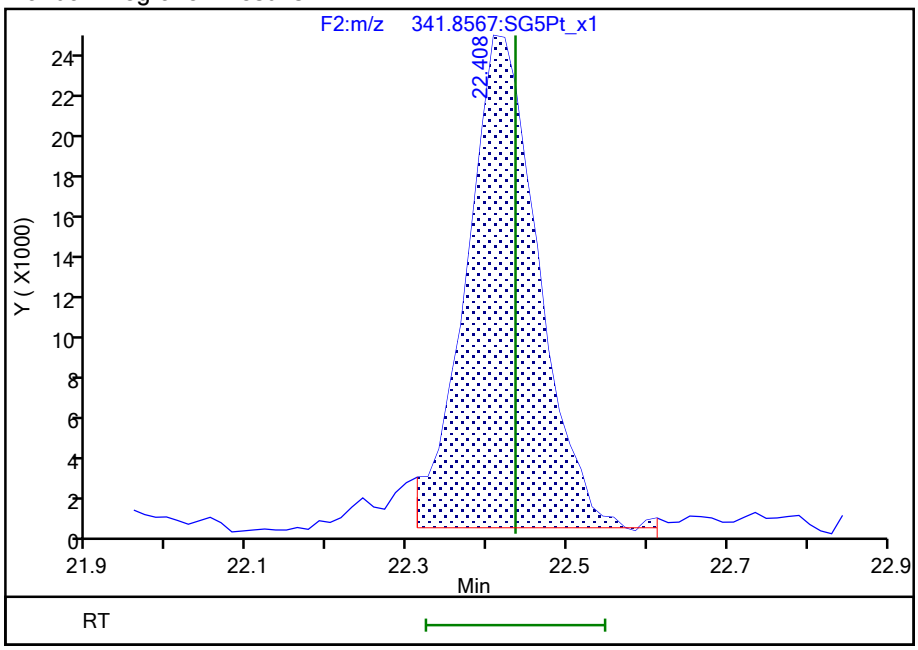

Reviewer: dadunj, 16-Aug-2021 13:41:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

Not Detected
Expected RT: 23.79

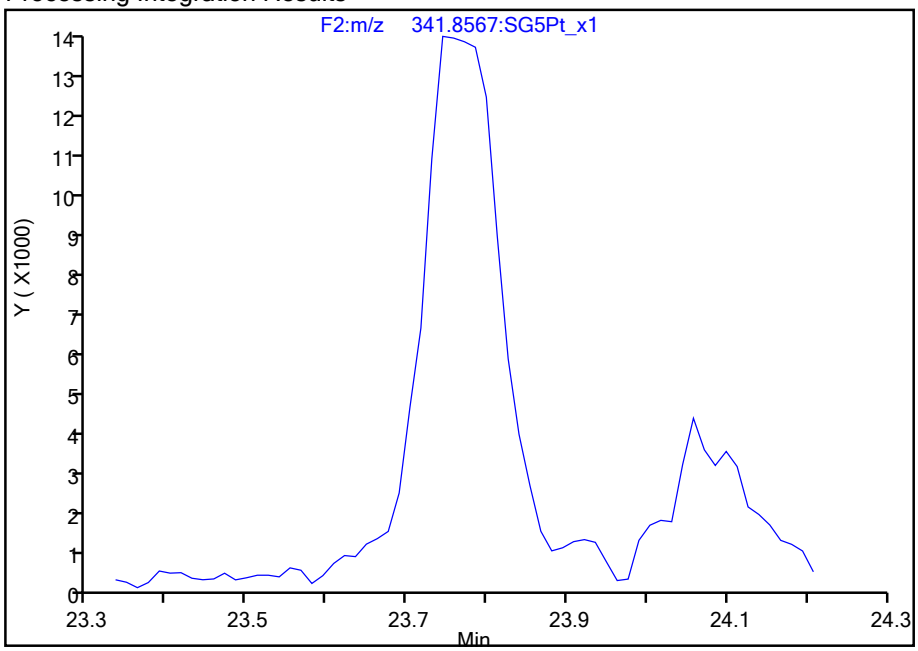

Manual Integration Results

RT: 23.74
Area: 97843
Amount: 0.241778
Amount Units: pg/ul

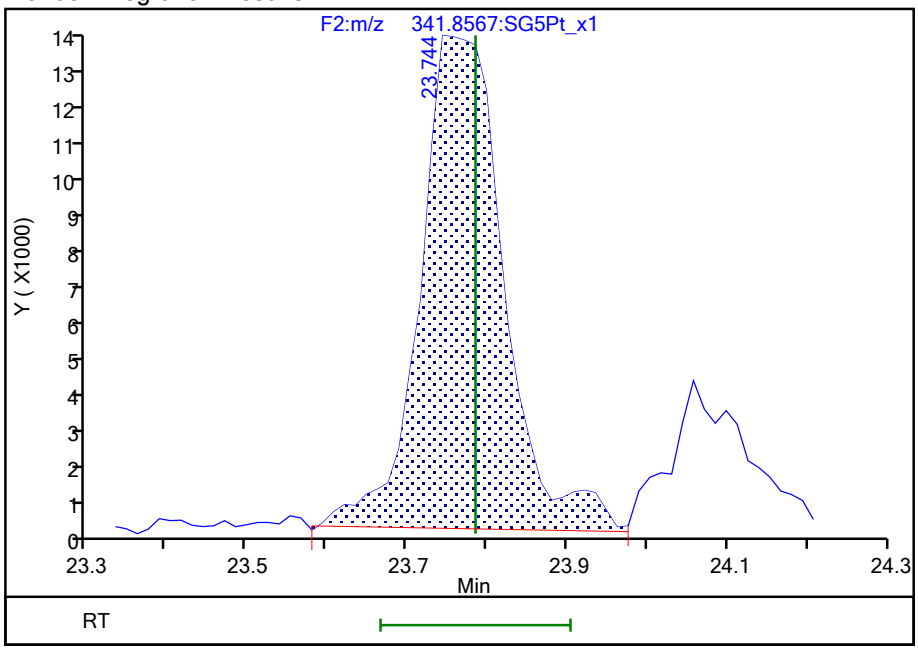

Reviewer: dadunj, 16-Aug-2021 13:41:58
Audit Action: Manually Integrated Audit Reason: Split Peak

778234

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

RT: 24.49
Area: 28675
Amount: 0.079416
Amount Units: pg/ul

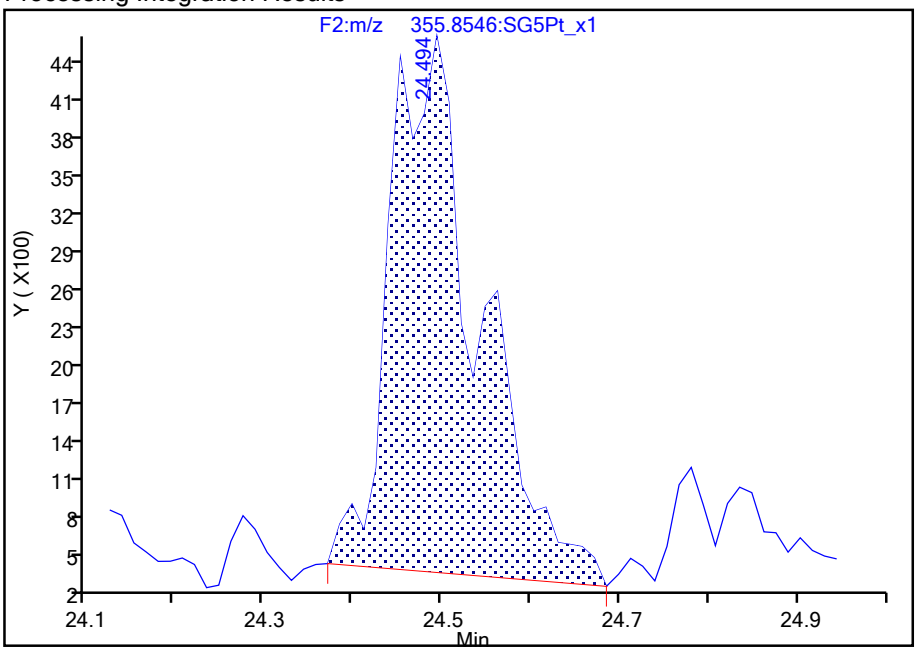

Manual Integration Results

RT: 24.49
Area: 27315
Amount: 0.077240
Amount Units: pg/ul

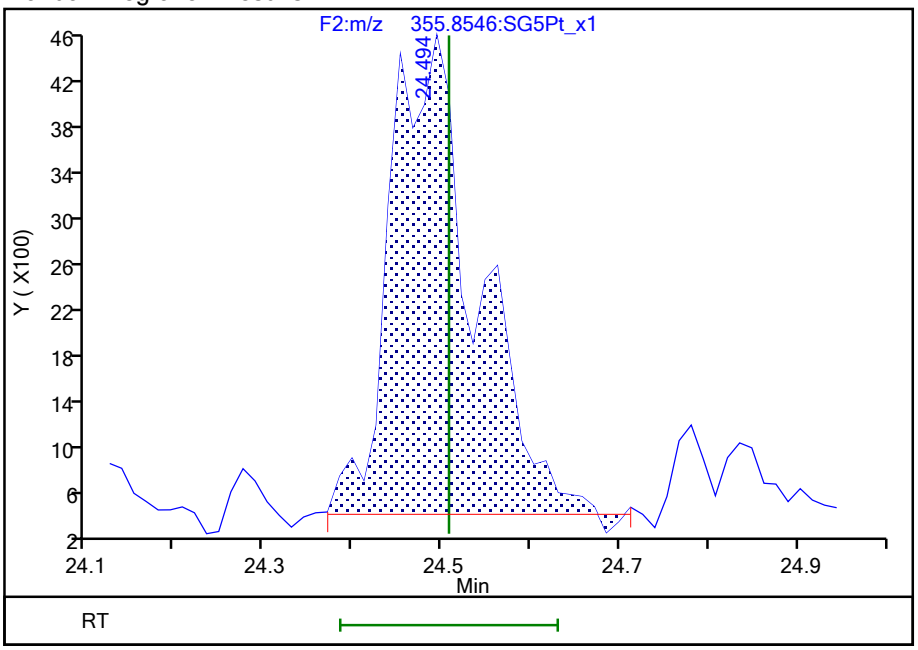

Reviewer: dadunj, 16-Aug-2021 13:42:11

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.54
Area: 21260
Amount: 0.048198
Amount Units: pg/ul

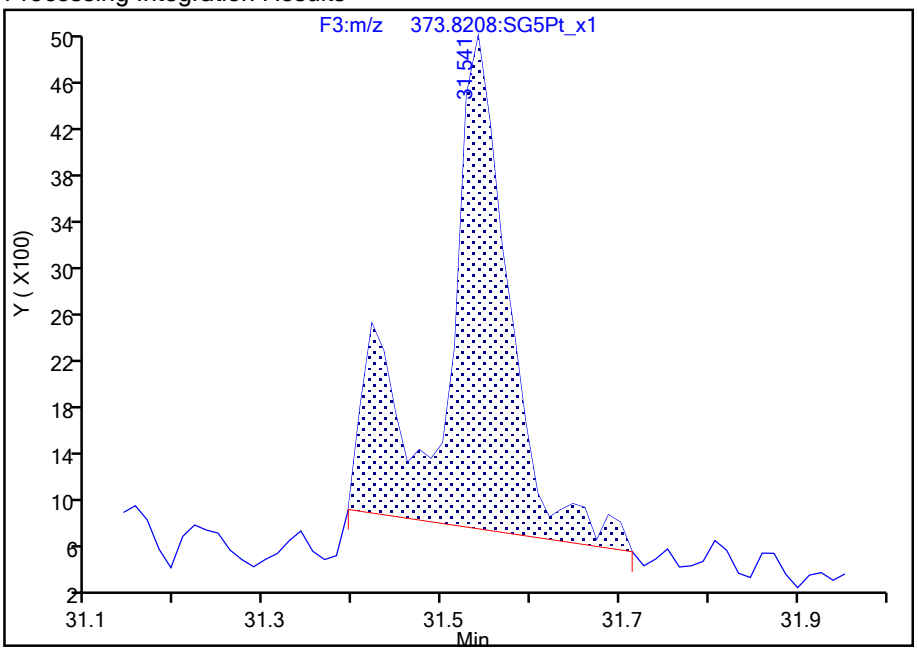

Manual Integration Results

RT: 31.54
Area: 10223
Amount: 0.027576
Amount Units: pg/ul

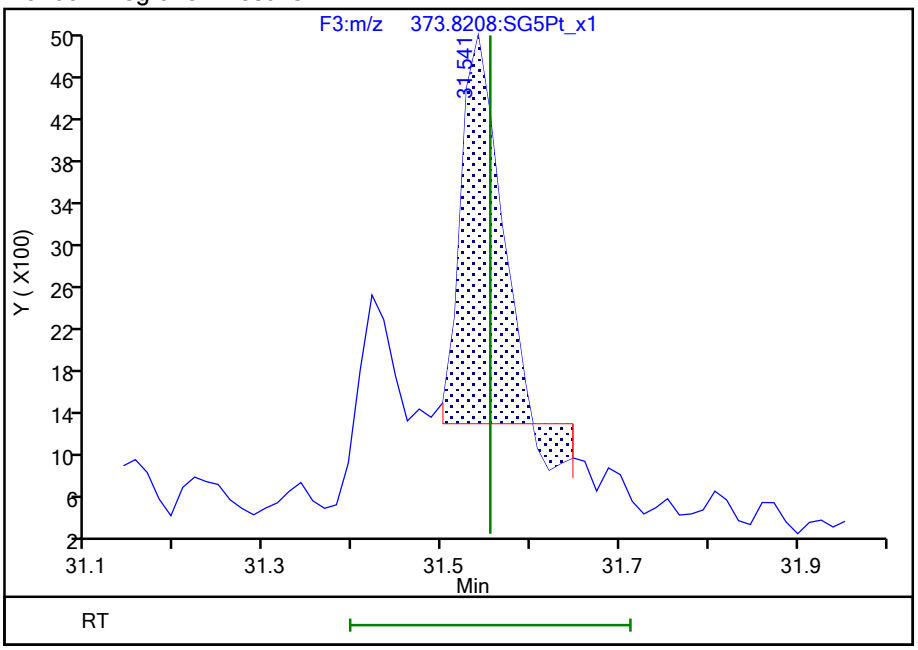

Reviewer: dadunj, 16-Aug-2021 13:42:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778236

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.54
Area: 20145
Amount: 0.048198
Amount Units: pg/ul

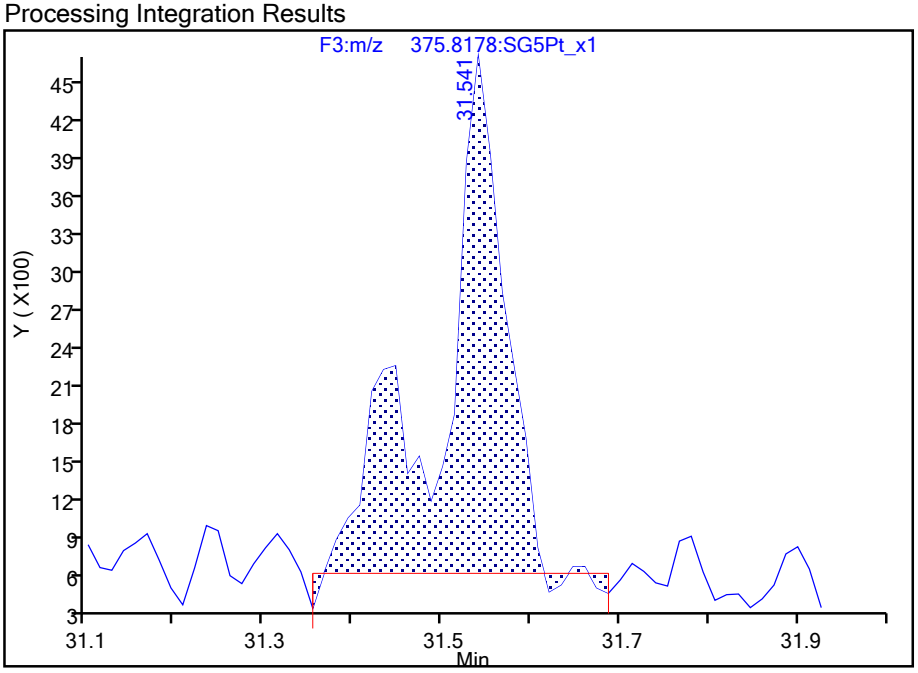

Manual Integration Results

RT: 31.54
Area: 13467
Amount: 0.027576
Amount Units: pg/ul

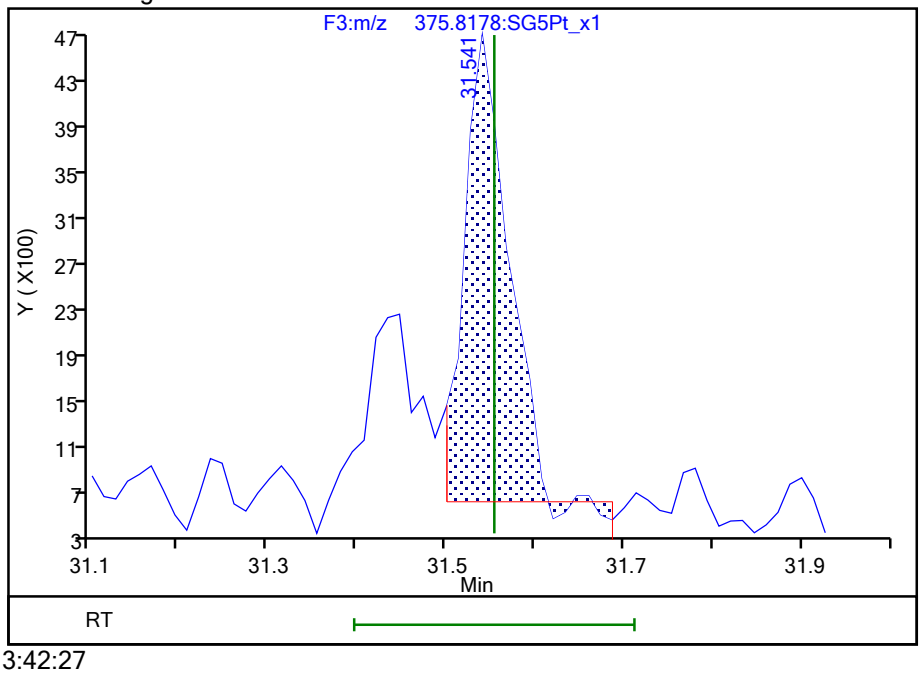

Reviewer: dadunj, 16-Aug-2021 13:42:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778237

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.34
Area: 69574
Amount: 0.166544
Amount Units: pg/ul

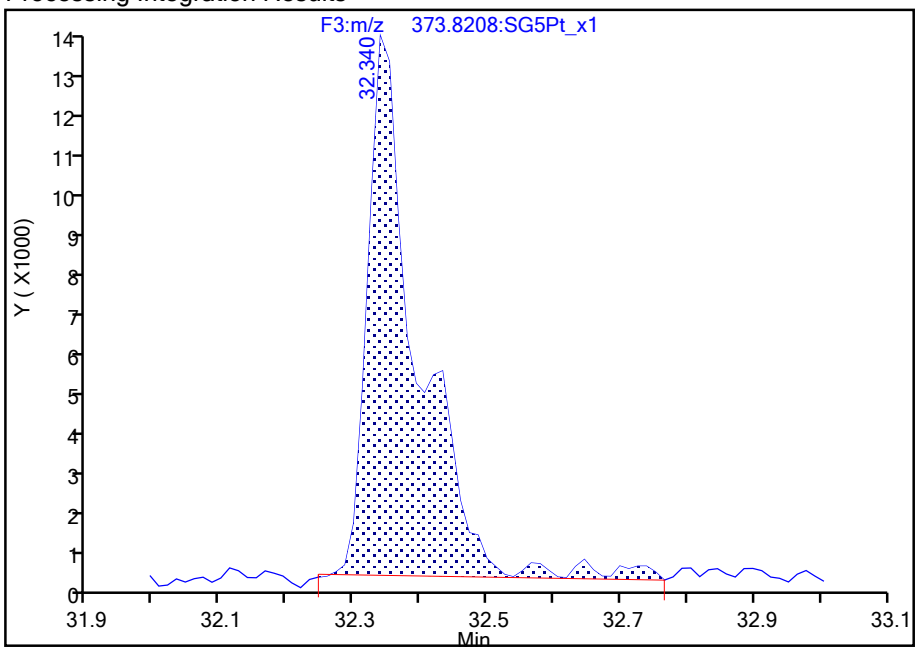

Manual Integration Results

RT: 32.34
Area: 46610
Amount: 0.112650
Amount Units: pg/ul

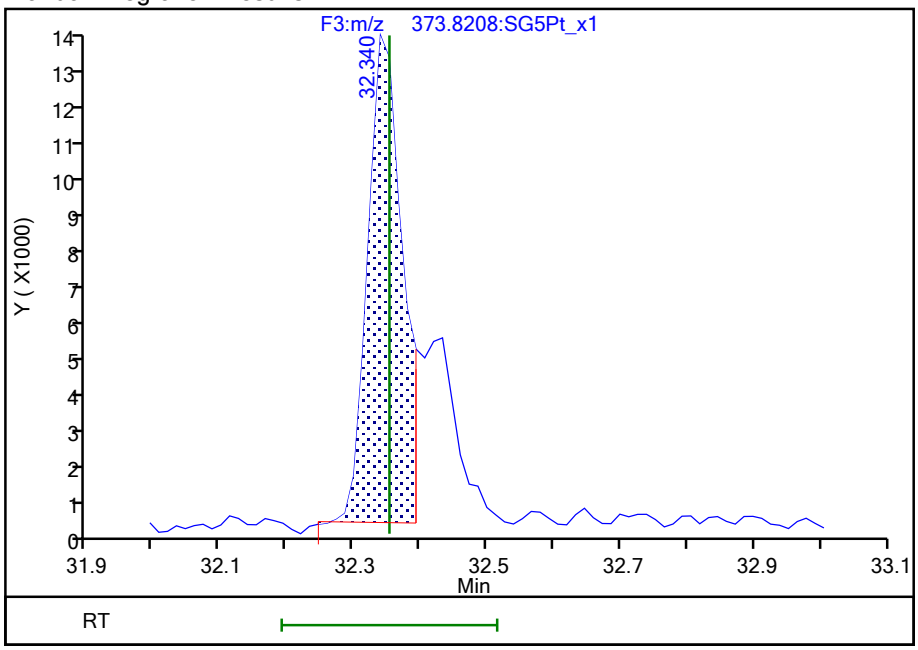

Reviewer: dadunj, 16-Aug-2021 13:42:32
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778238

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.34
Area: 59634
Amount: 0.166544
Amount Units: pg/ul

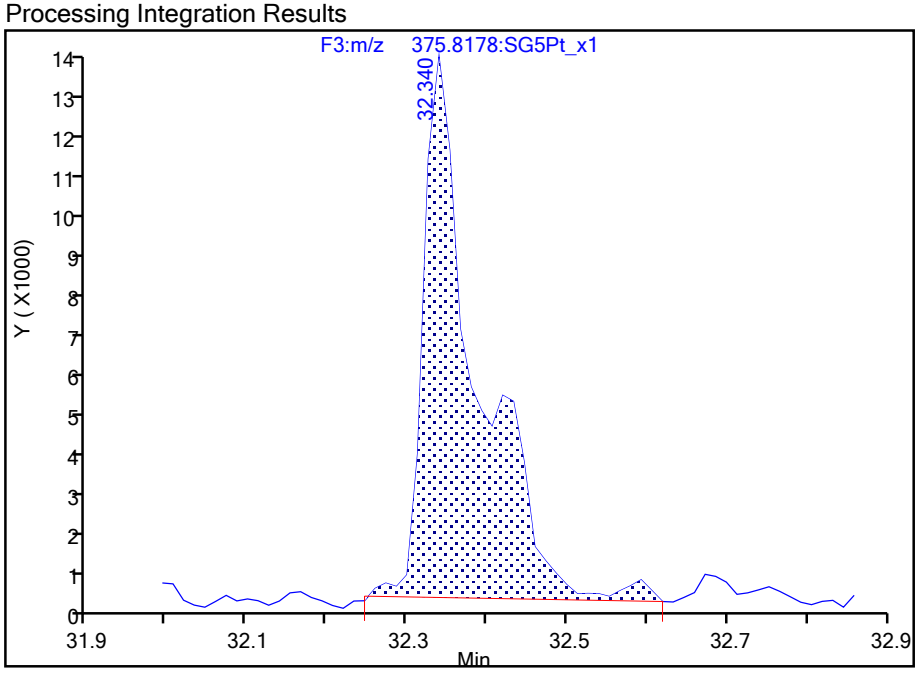

Manual Integration Results

RT: 32.34
Area: 40786
Amount: 0.112650
Amount Units: pg/ul

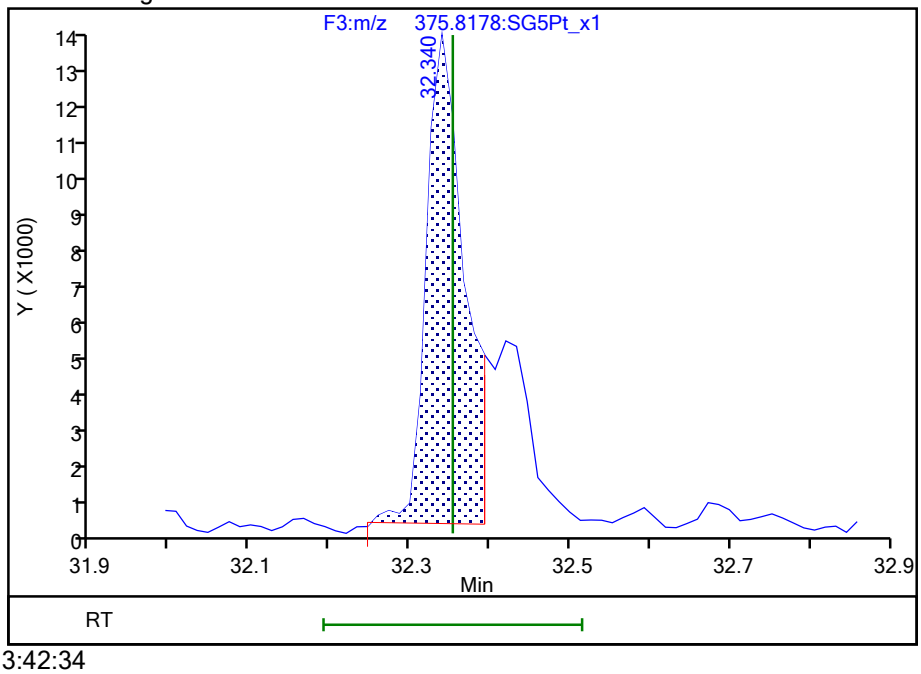

Reviewer: dadunj, 16-Aug-2021 13:42:34

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778239

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.98- 32.46)

Signal: 1

Not Detected
RT: 27.98- 32.46

Processing Integration Results

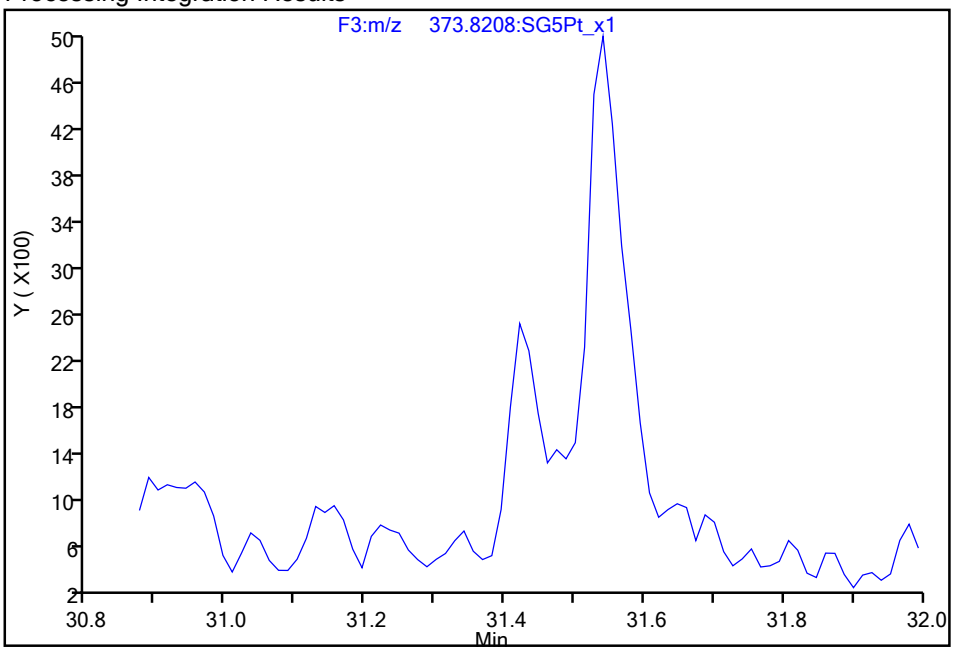

RT = 31.421 Area = 2124 M

Manual Integration Results

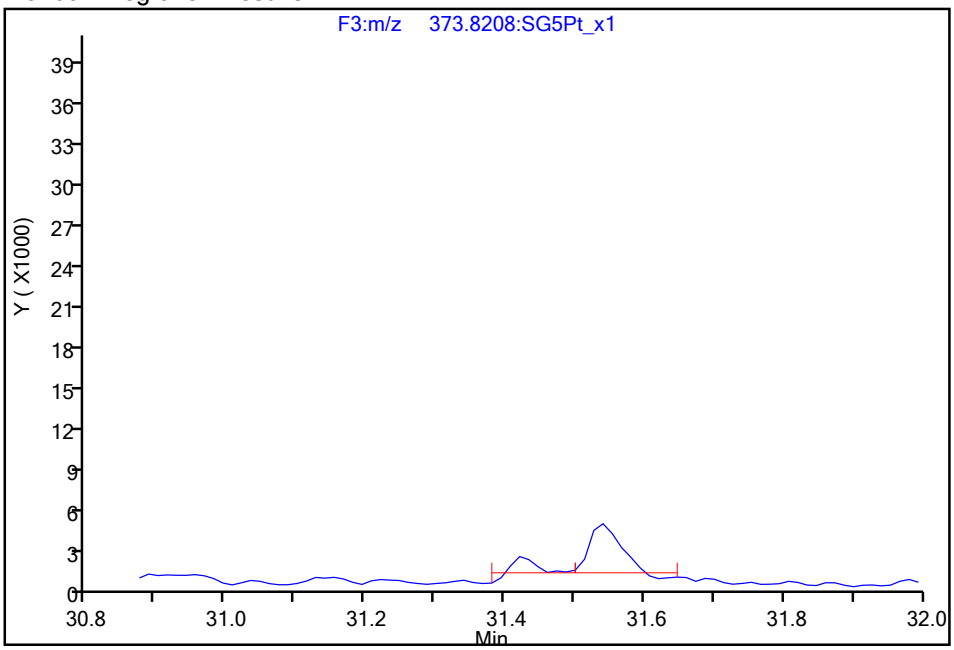

Reviewer: dadunj, 16-Aug-2021 13:42:43

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.98- 32.46)

Signal: 1

Not Detected
RT: 27.98- 32.46

Processing Integration Results

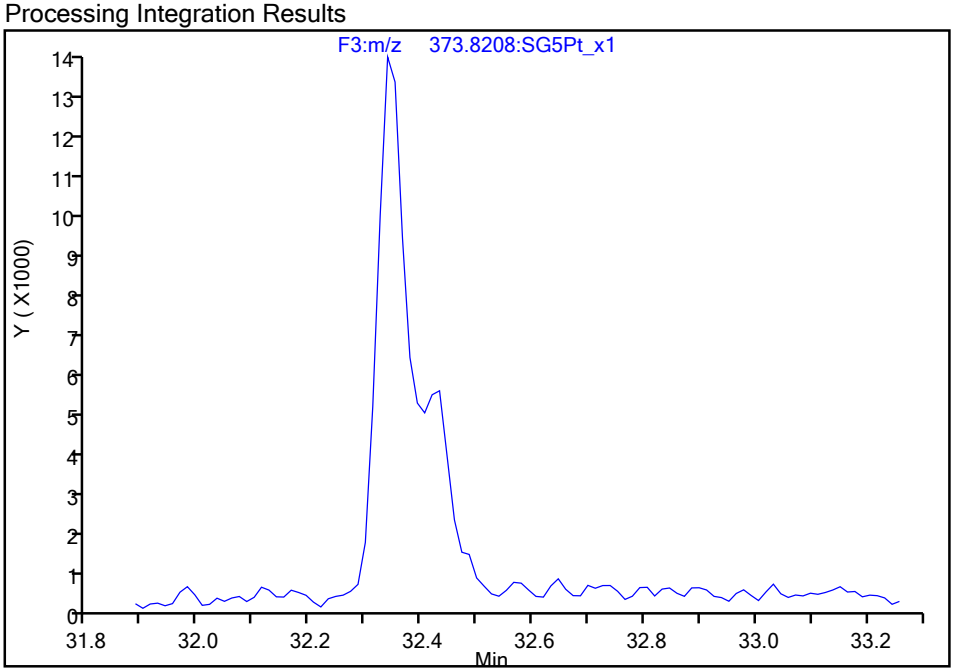

Manual Integration Results

RT = 32.433 Area = 22938 M

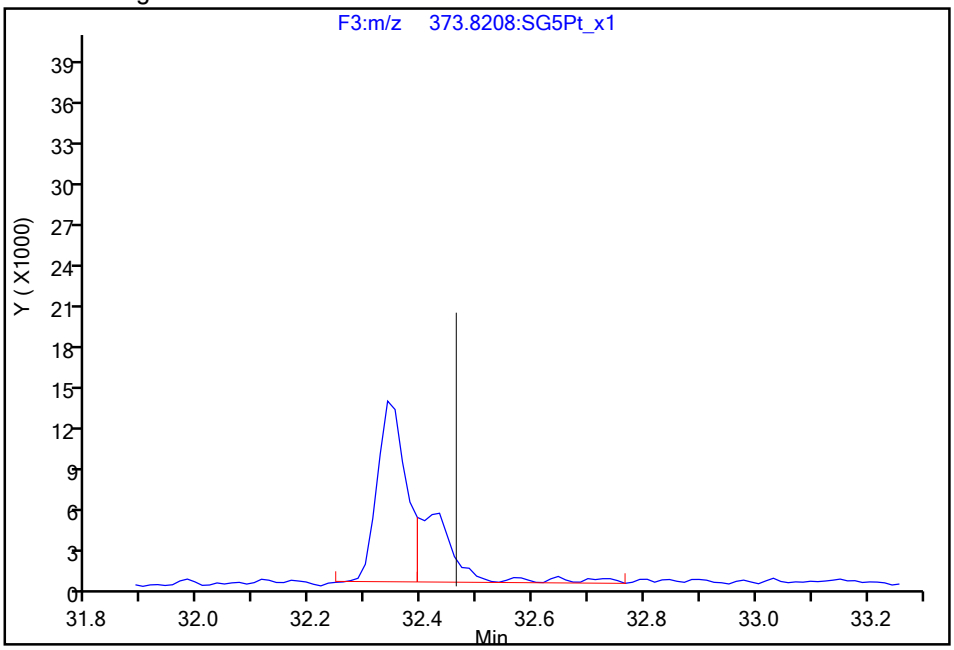

Reviewer: dadunj, 16-Aug-2021 13:42:43
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

778241

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.73
Area: 27214
Amount: 0.136978
Amount Units: pg/ul

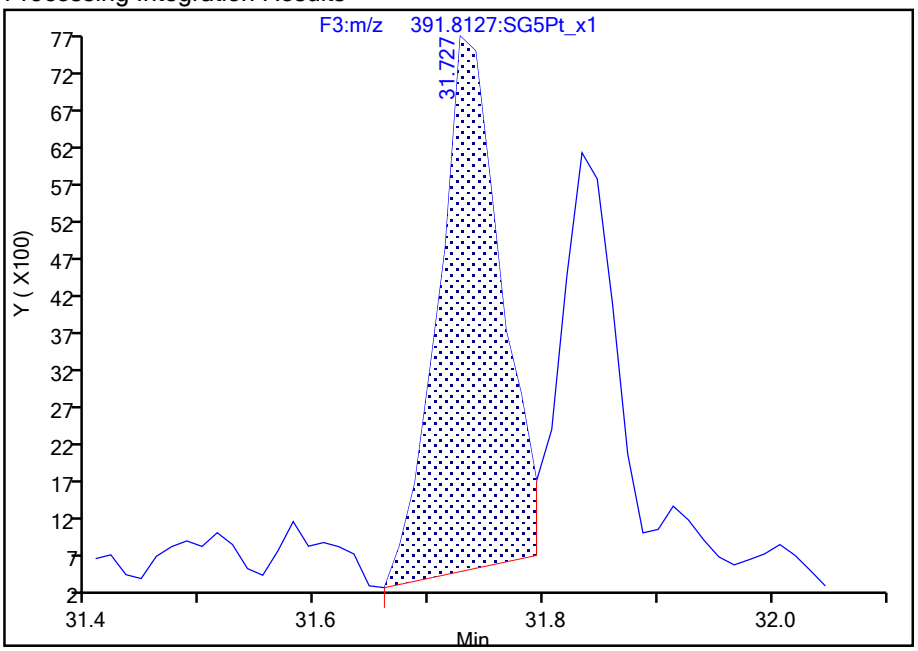

Manual Integration Results

RT: 31.73
Area: 28201
Amount: 0.101178
Amount Units: pg/ul

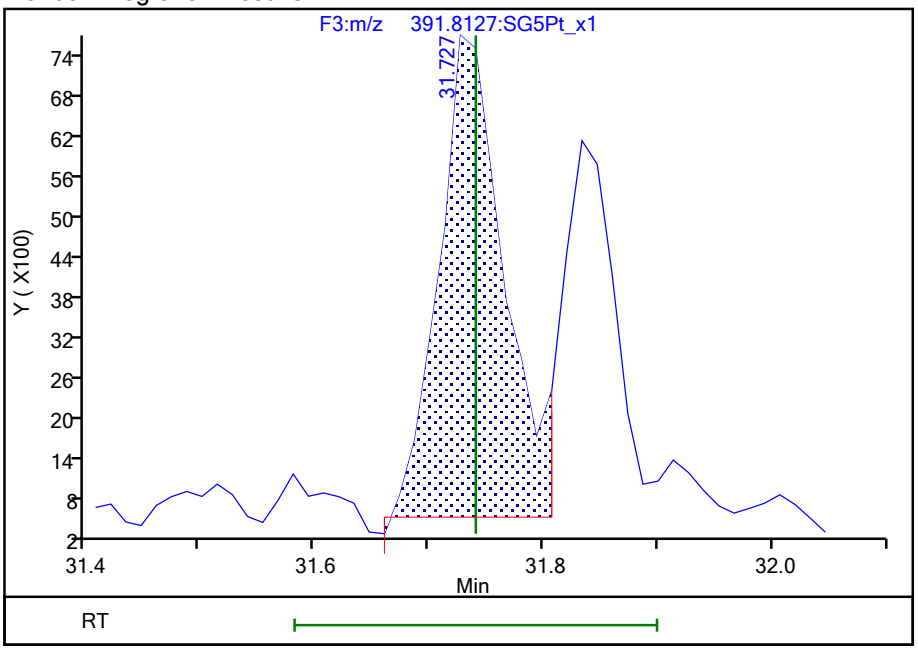

Reviewer: dadunj, 16-Aug-2021 13:43:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

778242

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

Processing Integration Results

RT: 31.73
Area: 82892
Amount: 0.136978
Amount Units: pg/ul

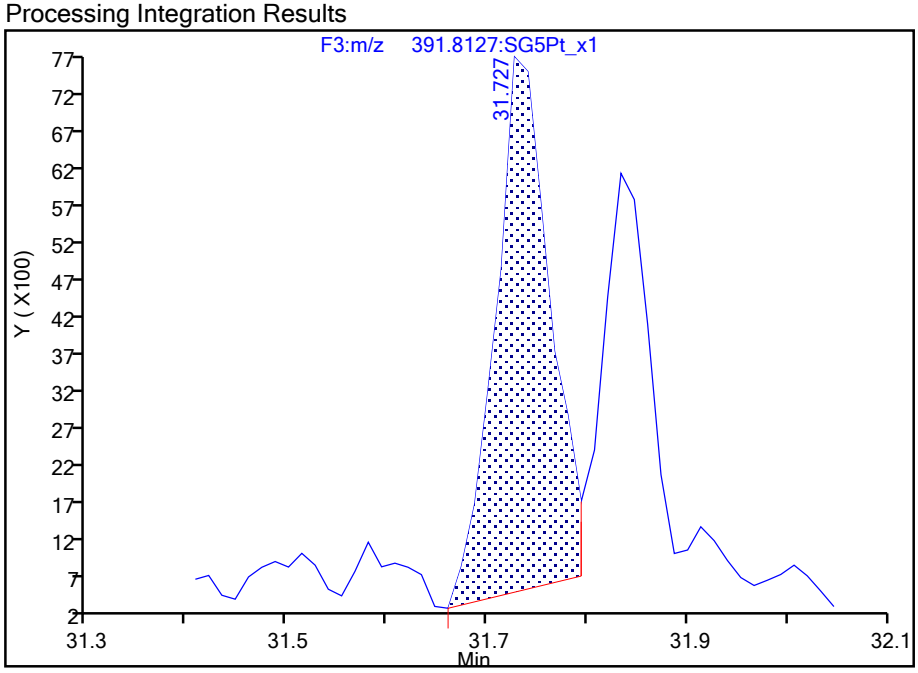

Manual Integration Results

RT: 31.73
Area: 61228
Amount: 0.101178
Amount Units: pg/ul
Reviewer: dadunj, 16-Aug-2021 13:43:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.73
Area: 55678
Amount: 0.136978
Amount Units: pg/ul

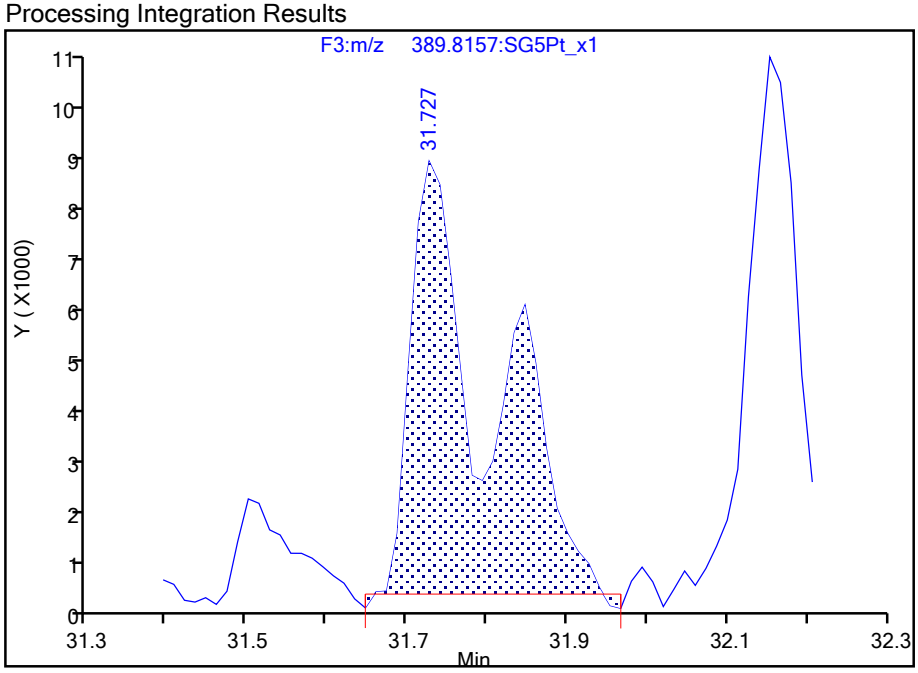

Manual Integration Results

RT: 31.73
Area: 33027
Amount: 0.101178
Amount Units: pg/ul

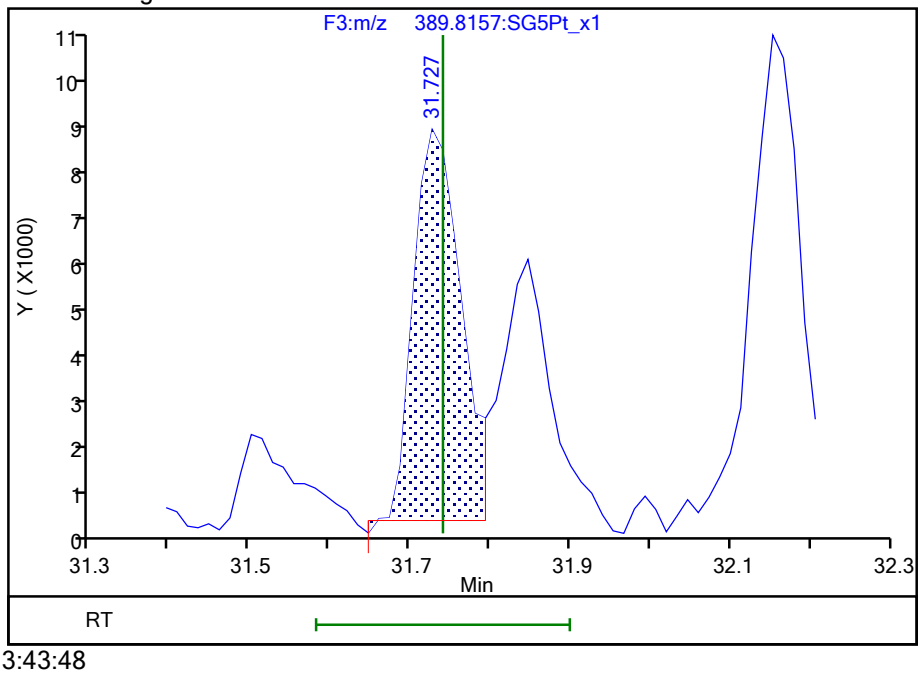

Reviewer: dadunj, 16-Aug-2021 13:43:48

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

778244

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.73
Area: 27214
Amount: 0.128699
Amount Units: pg/ul

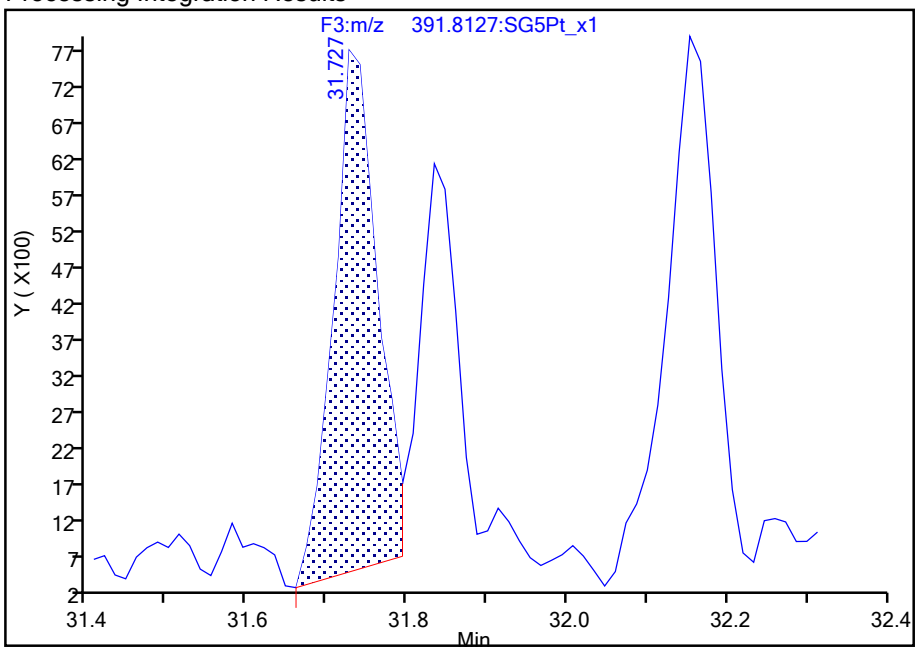

Manual Integration Results

RT: 31.83
Area: 19905
Amount: 0.066073
Amount Units: pg/ul

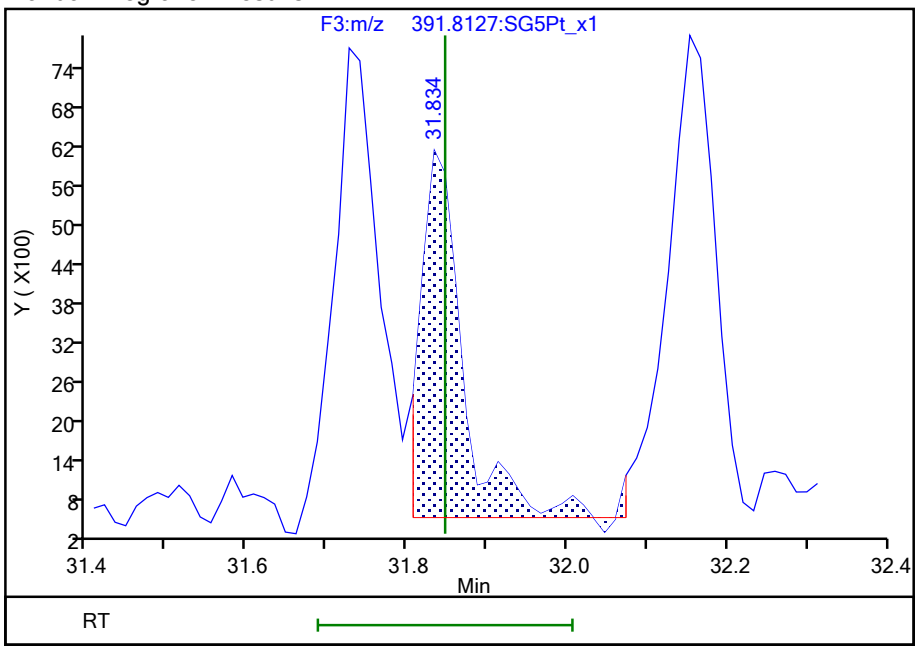

Reviewer: dadunj, 16-Aug-2021 13:43:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778245

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.73
Area: 55678
Amount: 0.128699
Amount Units: pg/ul

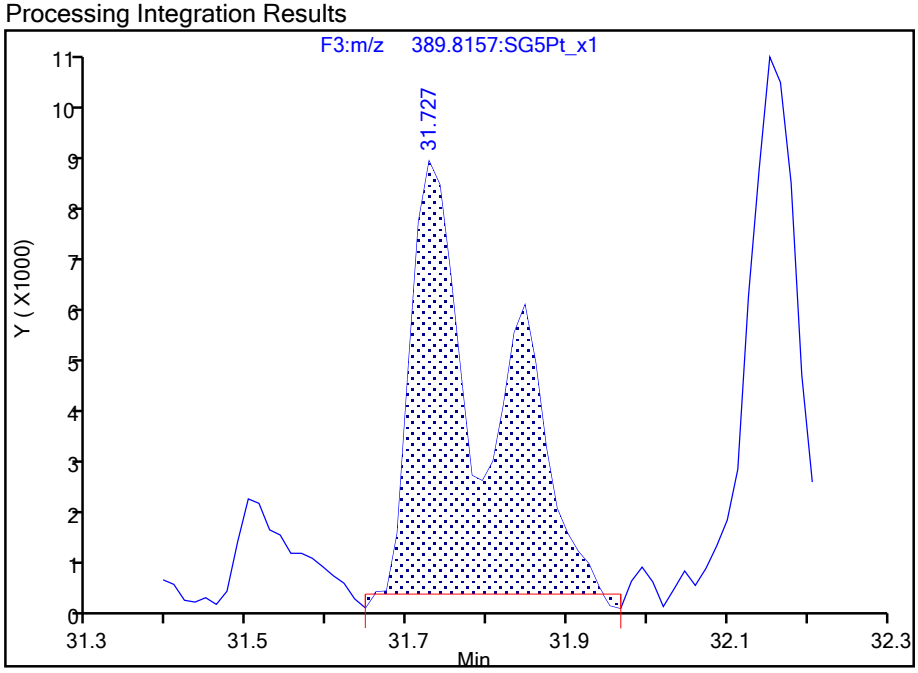

Manual Integration Results

RT: 31.85
Area: 22651
Amount: 0.066073
Amount Units: pg/ul

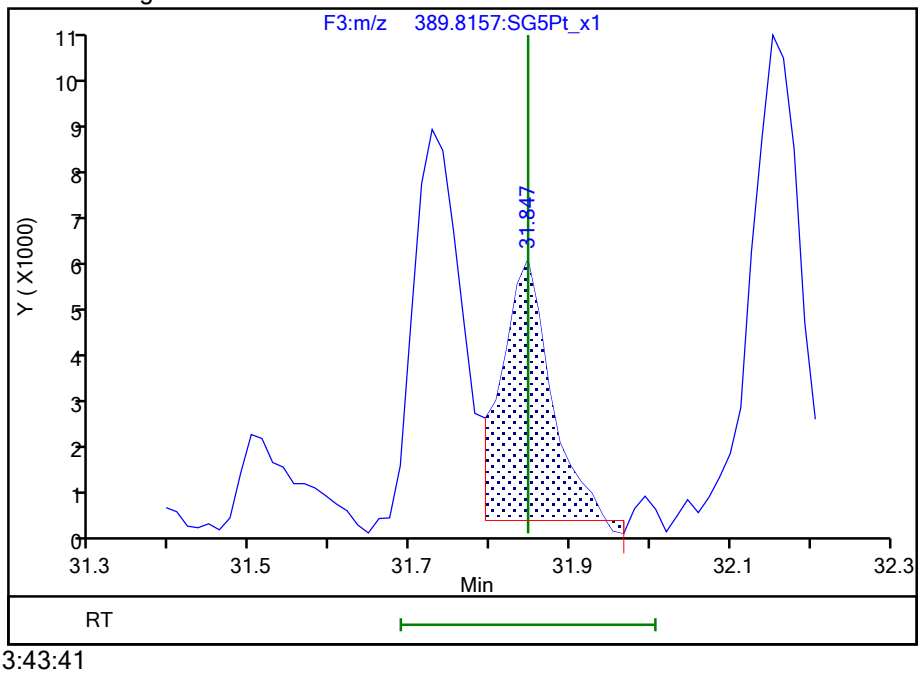

Reviewer: dadunj, 16-Aug-2021 13:43:41

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

778246

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 32.15
Area: 29385
Amount: 0.108768
Amount Units: pg/ul

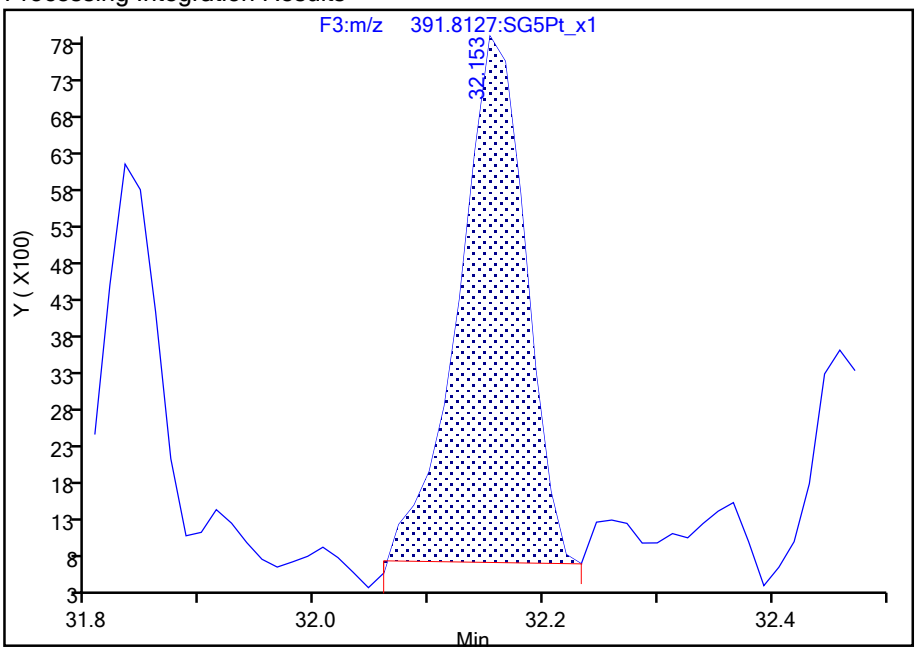

Manual Integration Results

RT: 32.15
Area: 29936
Amount: 0.109570
Amount Units: pg/ul

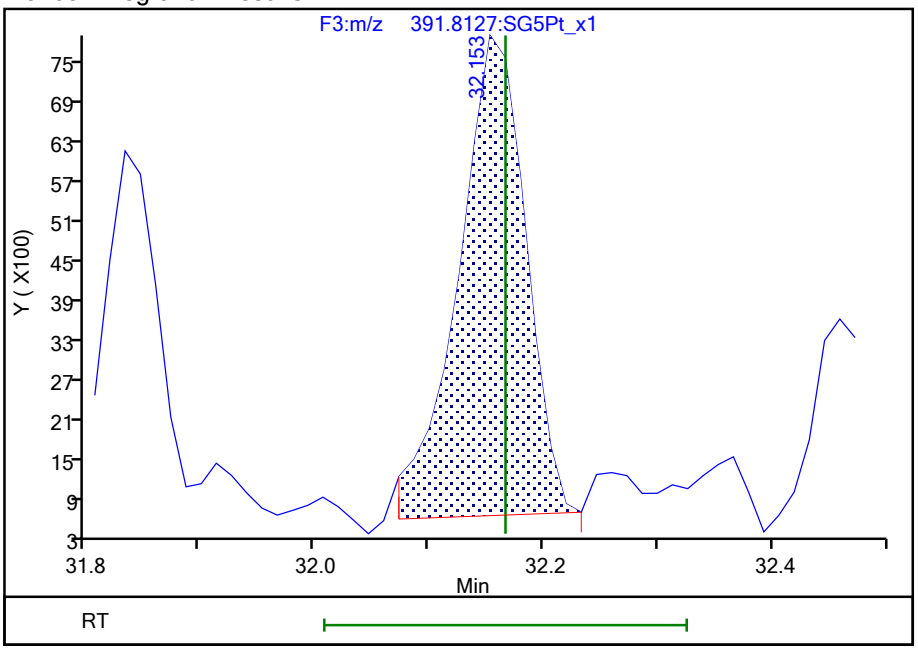

Reviewer: dadunj, 16-Aug-2021 13:43:26

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 34.86
Area: 40497
Amount: 0.087080
Amount Units: pg/ul

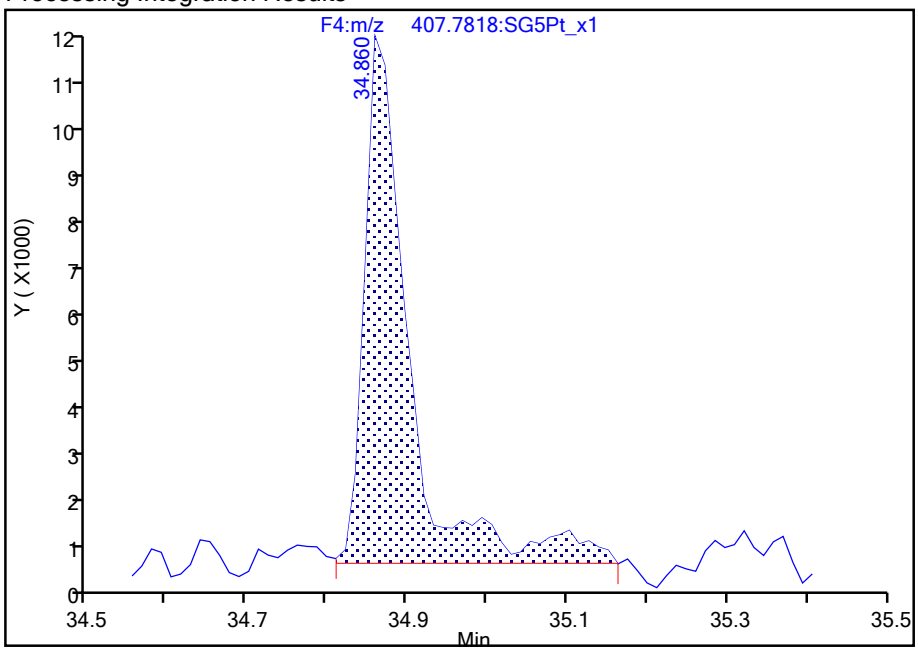

Manual Integration Results

RT: 34.86
Area: 34421
Amount: 0.079620
Amount Units: pg/ul

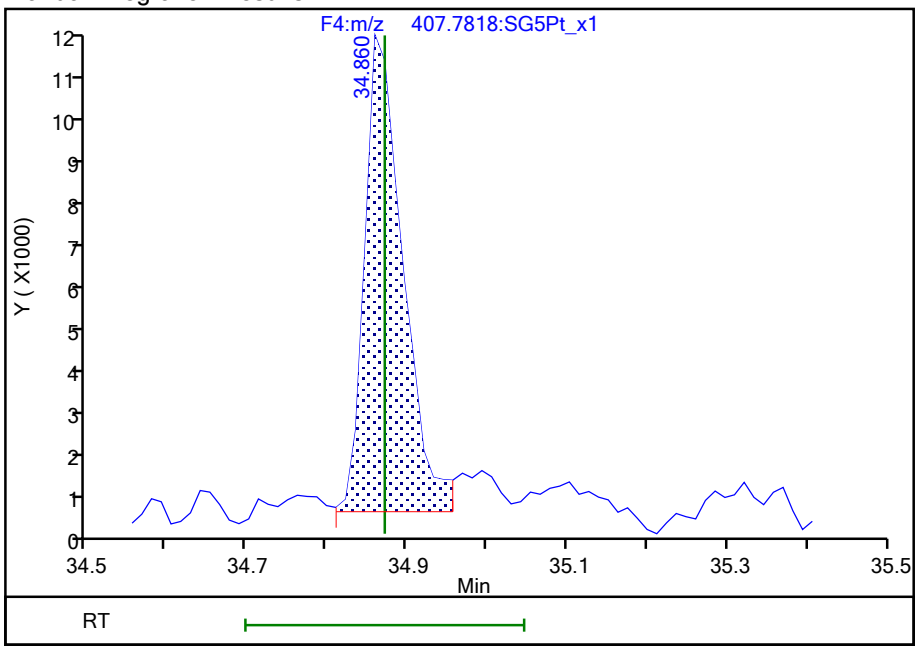

Reviewer: dadunj, 16-Aug-2021 13:44:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778248

Report Date: 16-Aug-2021 13:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7818, RT: (33.75- 34.90)

Signal: 1

Processing Integration Results

RT = 34.082 Area = 42278

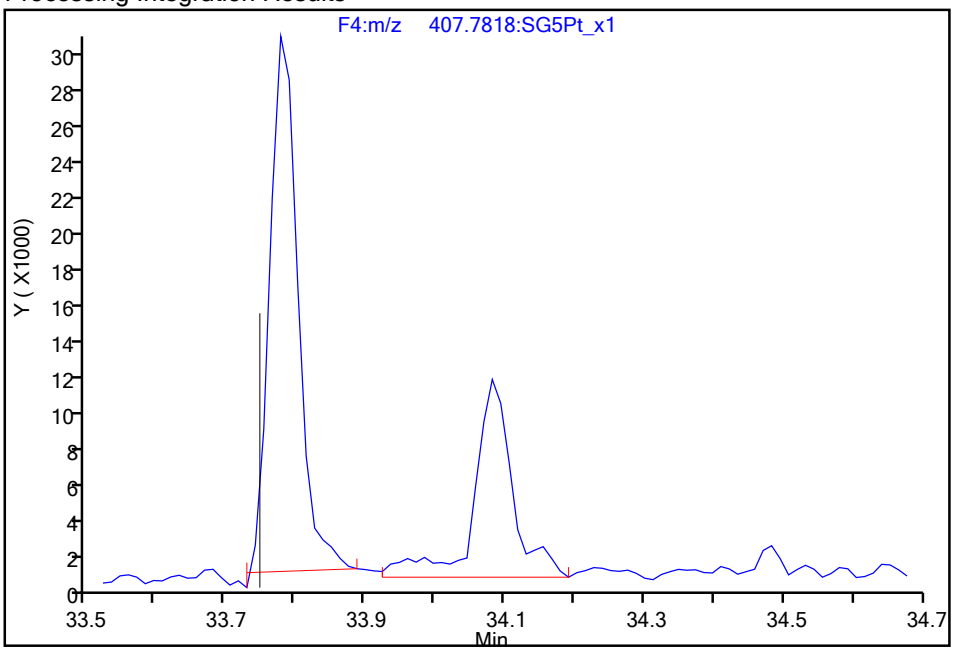

Manual Integration Results

RT = 34.082 Area = 37447 M

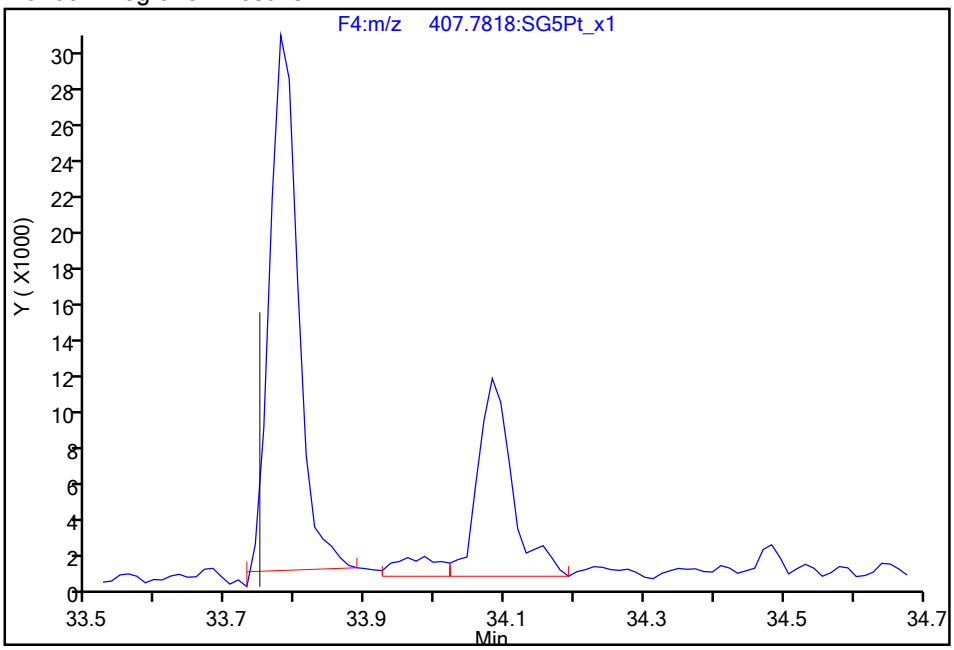

Reviewer: dadunj, 16-Aug-2021 13:57:00

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778249

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 2, m/z: 409.7789, RT: (33.75- 34.90)

Signal: 2

Processing Integration Results

RT = 34.082 Area = 40103

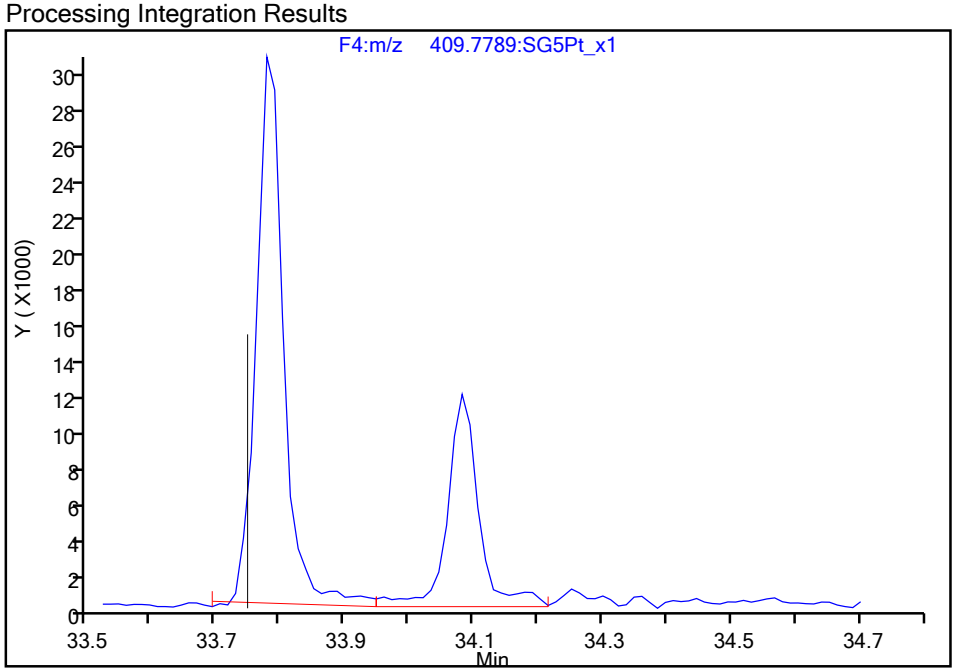

Manual Integration Results

RT = 34.082 Area = 38454 M

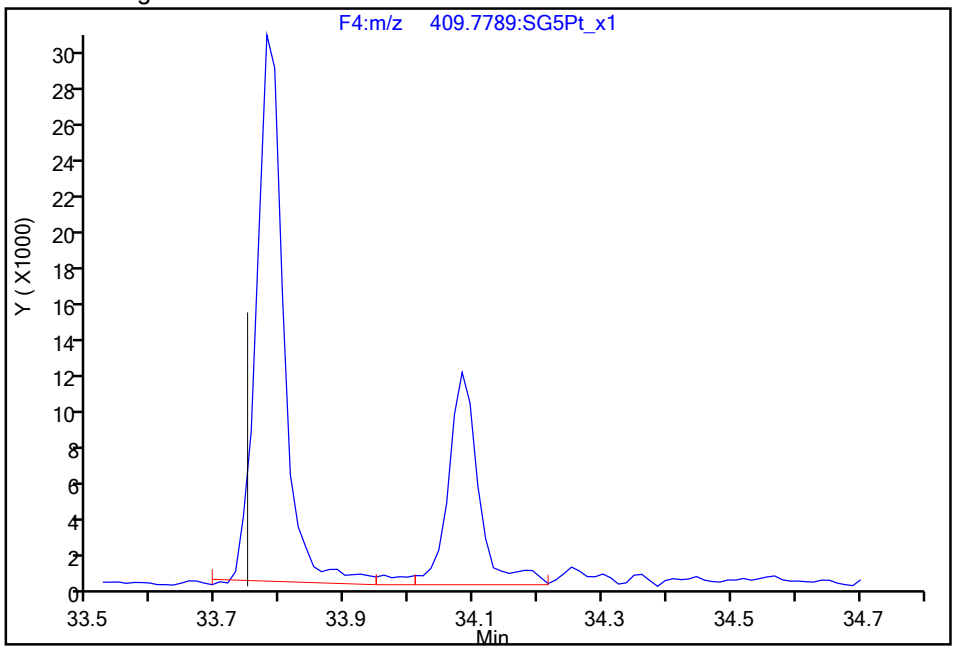

Reviewer: dadunj, 16-Aug-2021 13:57:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778250

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.02
Area: 107346
Amount: 0.351408
Amount Units: pg/ul

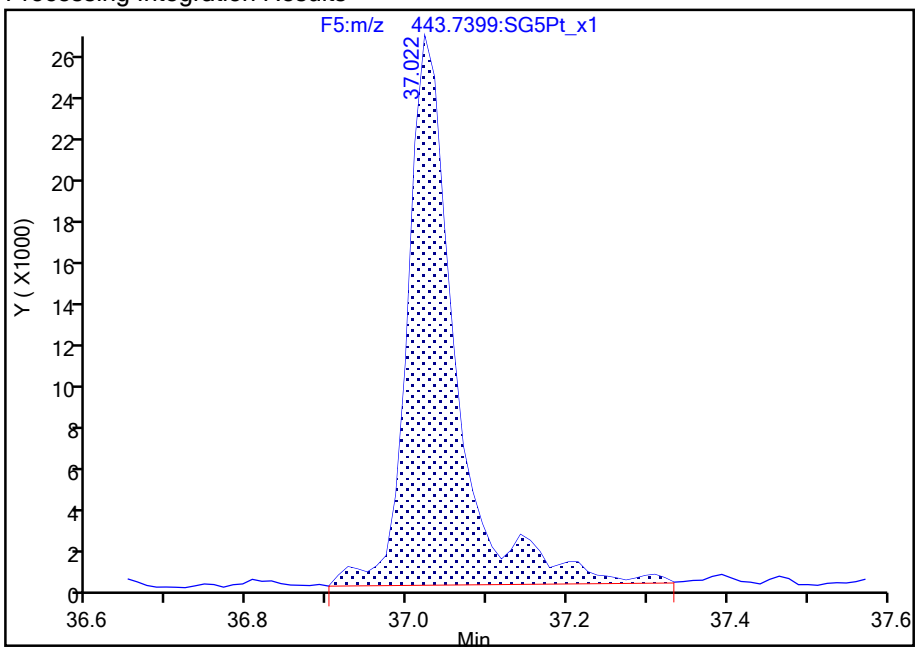

Manual Integration Results

RT: 37.02
Area: 96728
Amount: 0.323280
Amount Units: pg/ul

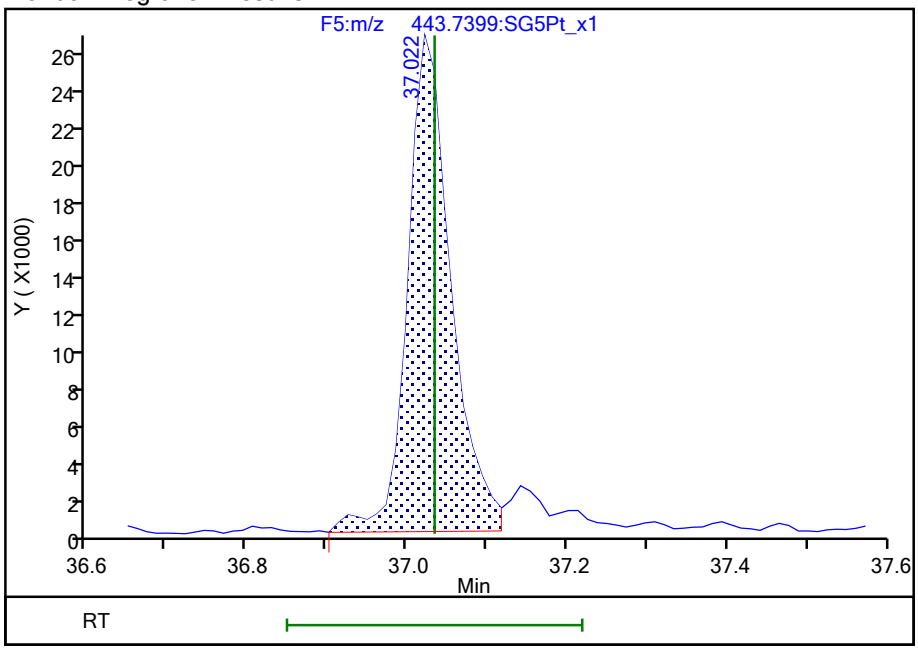

Reviewer: dadunj, 16-Aug-2021 13:45:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d				
Injection Date:	13-Aug-2021 08:48:13	Instrument ID:	10D5		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 93895
Amount: 0.351408
Amount Units: pg/ul

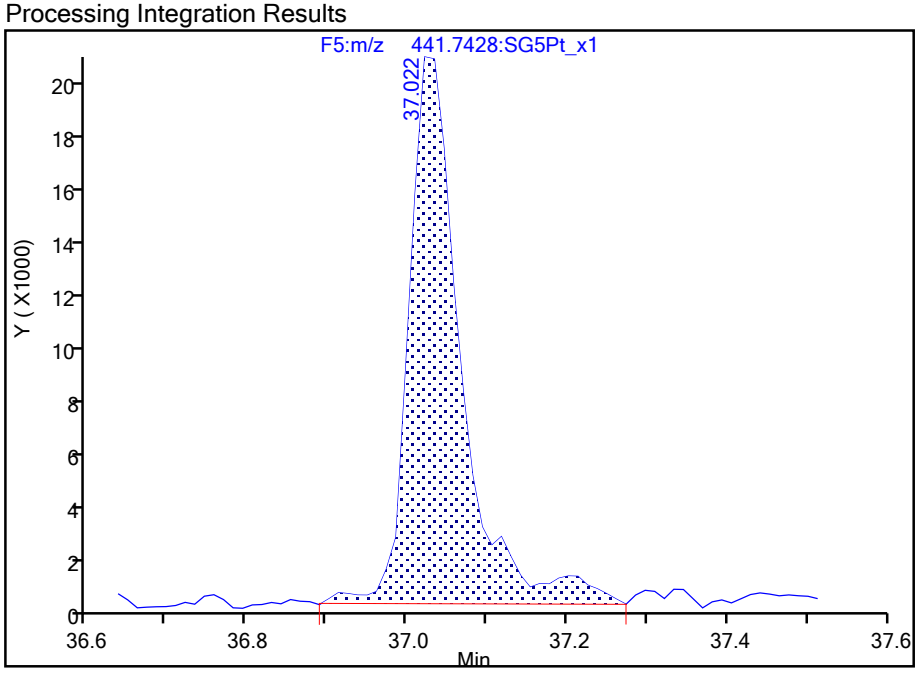

Manual Integration Results

RT: 37.02
Area: 88405
Amount: 0.323280
Amount Units: pg/ul

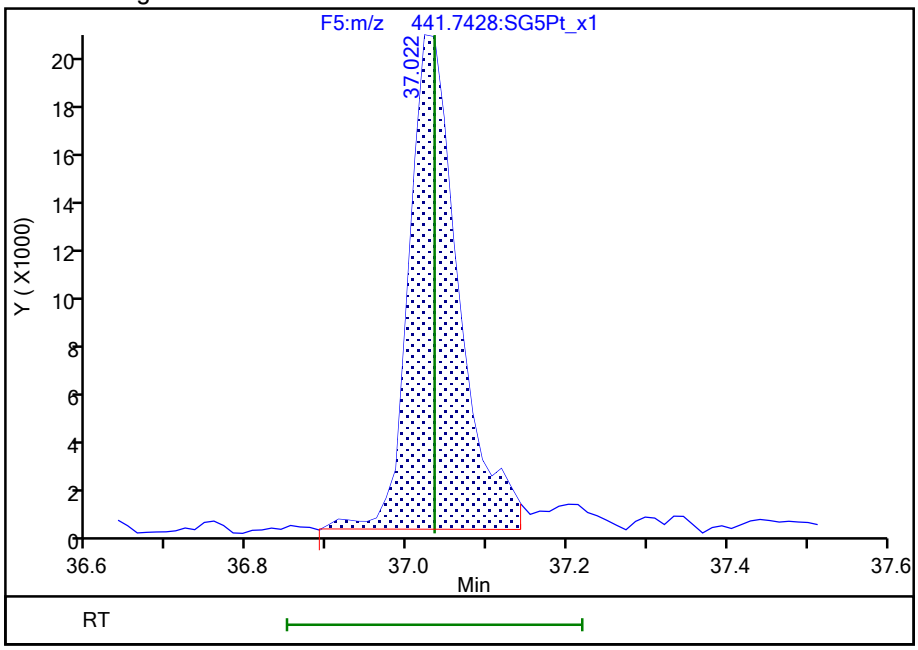

Reviewer: dadunj, 16-Aug-2021 13:45:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778252

Report Date: 16-Aug-2021 13:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d		
Injection Date:	13-Aug-2021 08:48:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

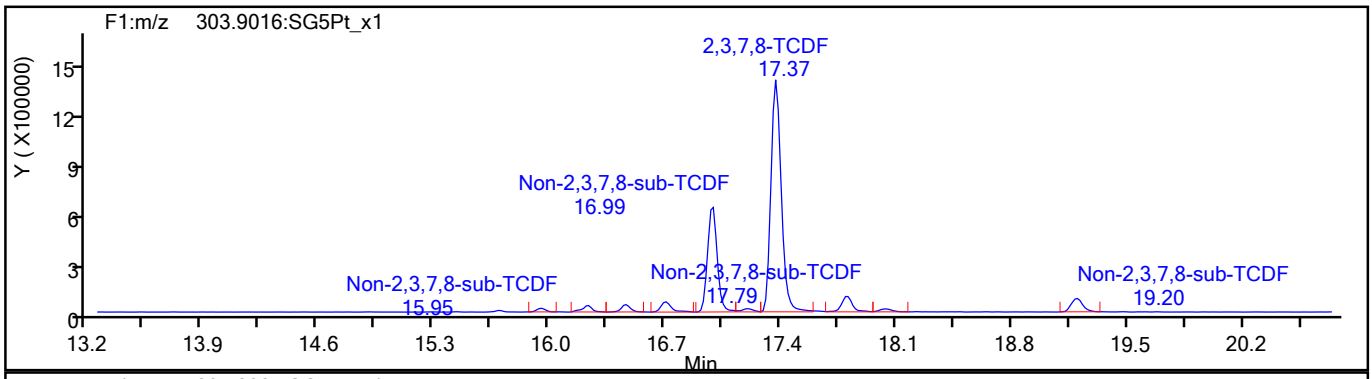

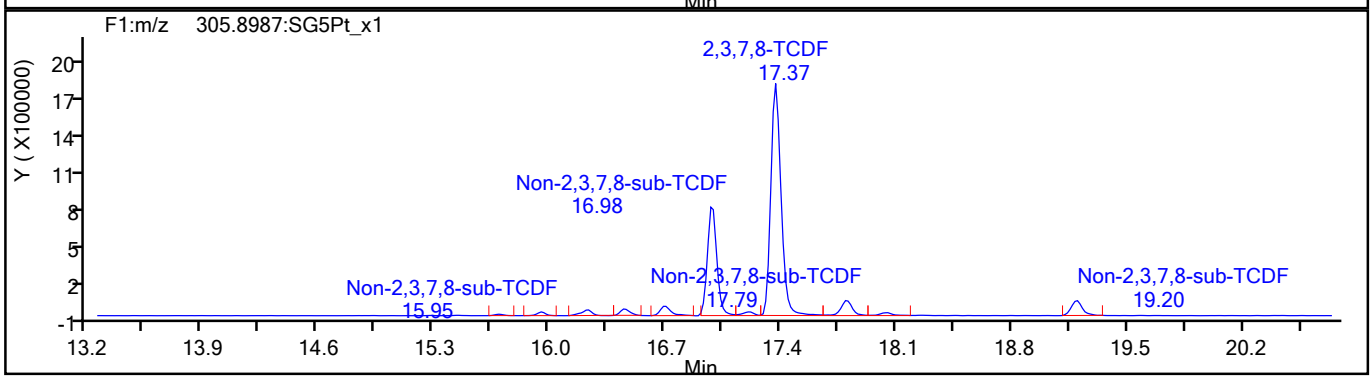

TCDF Standards

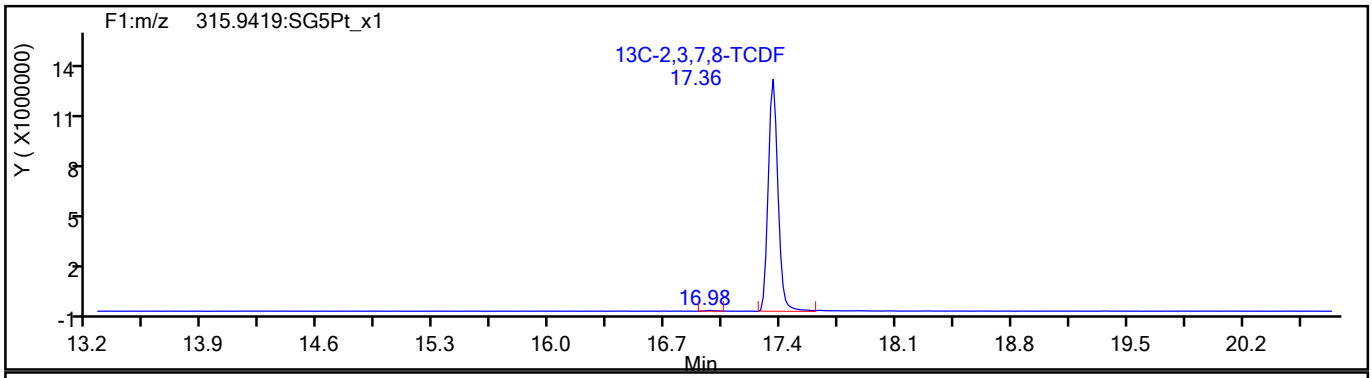

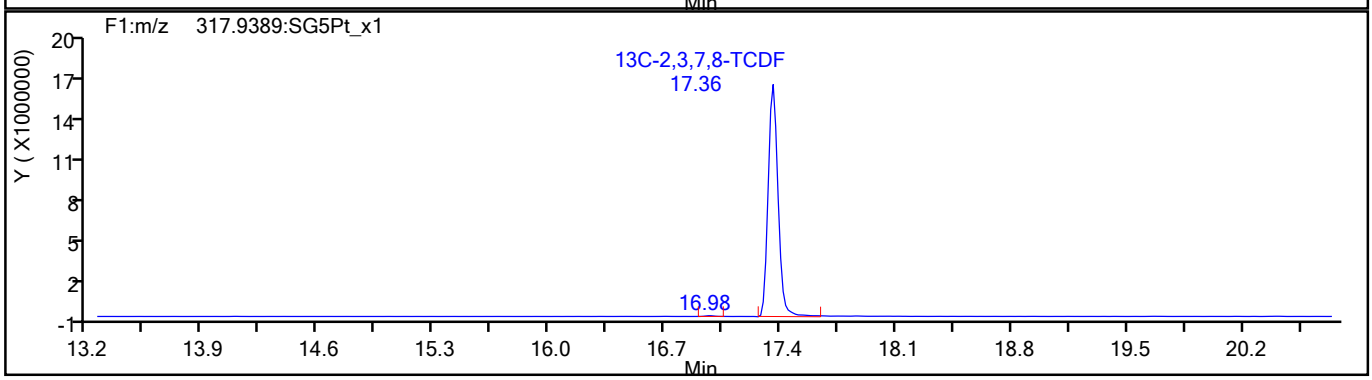

778253

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d		
Injection Date:	13-Aug-2021 08:48:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

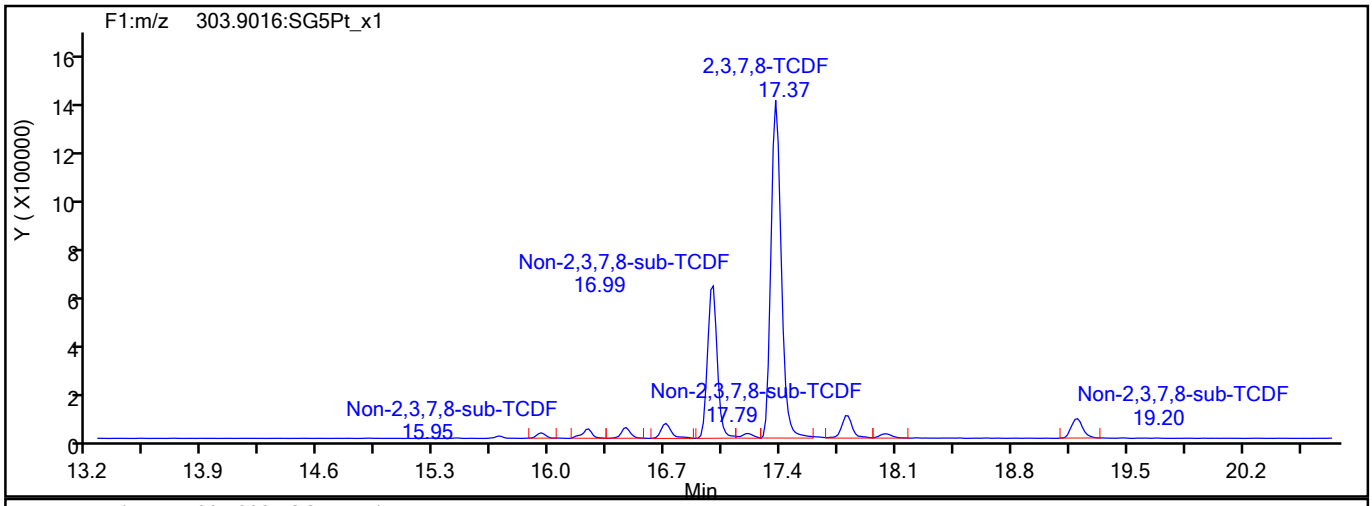

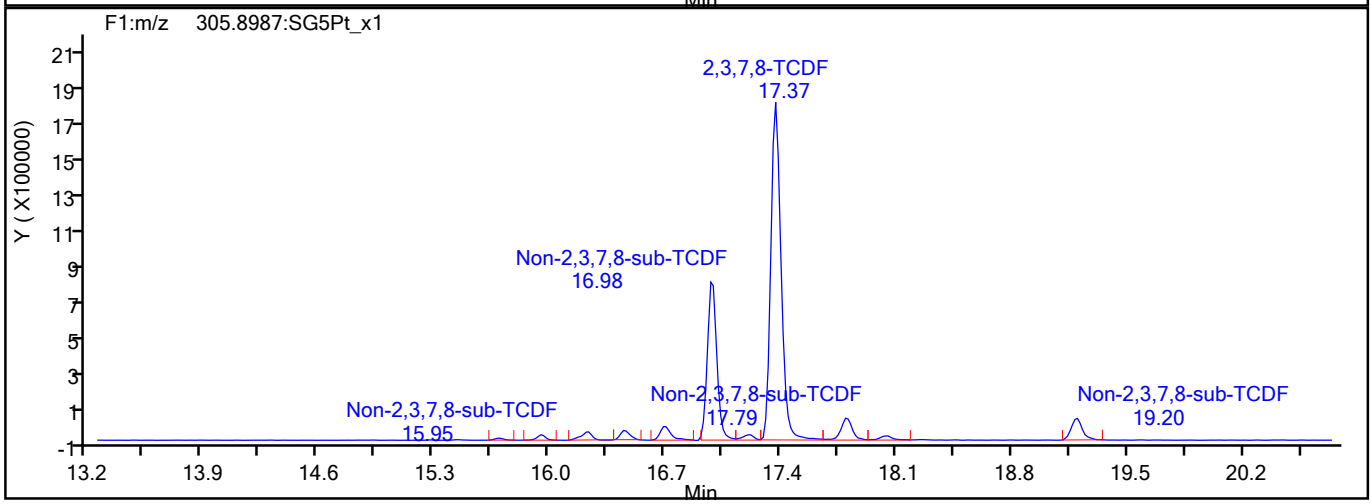

TCDF Interference Mass

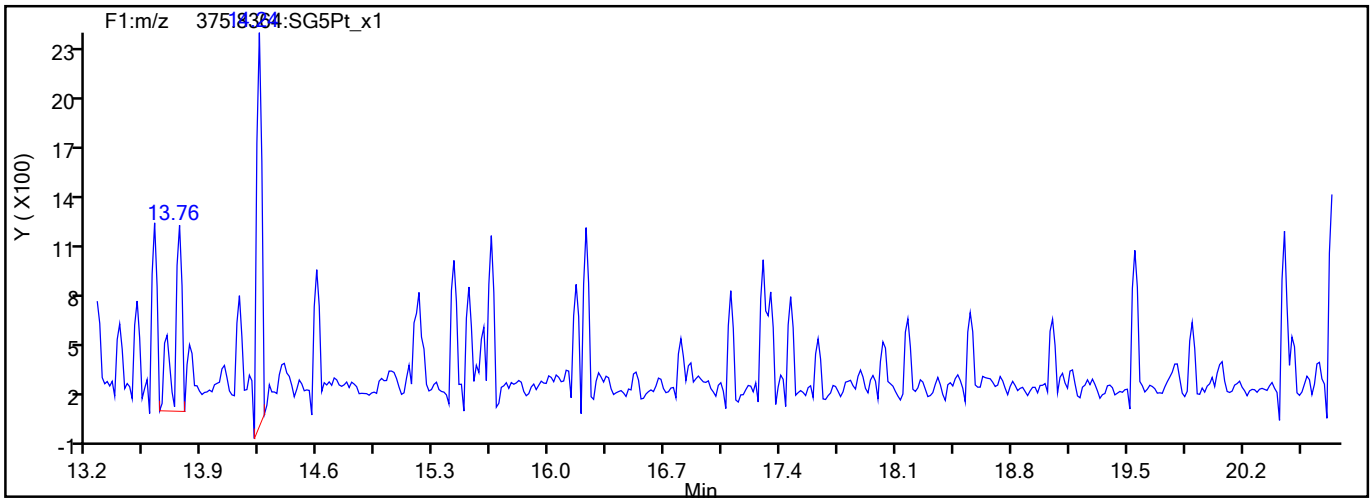

778254

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d		
Injection Date:	13-Aug-2021 08:48:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

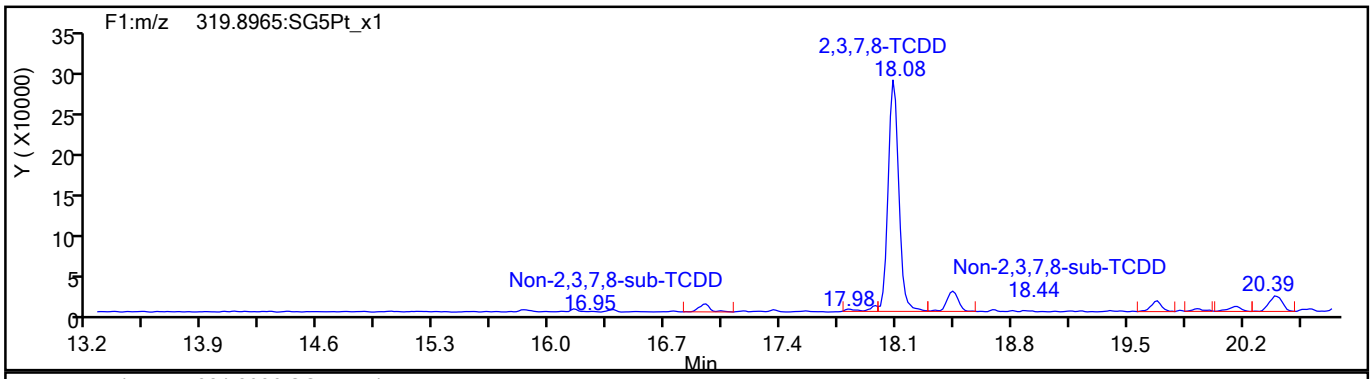

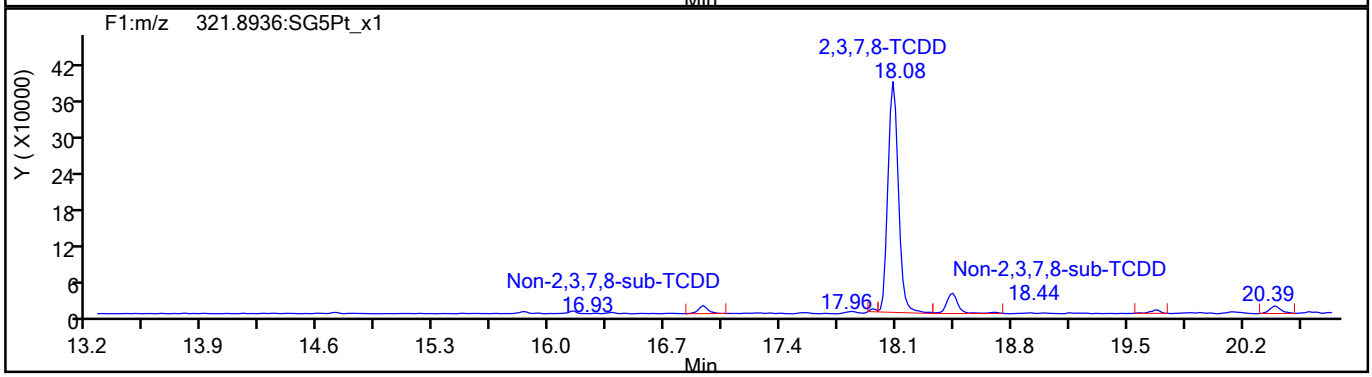

TCDD Standards

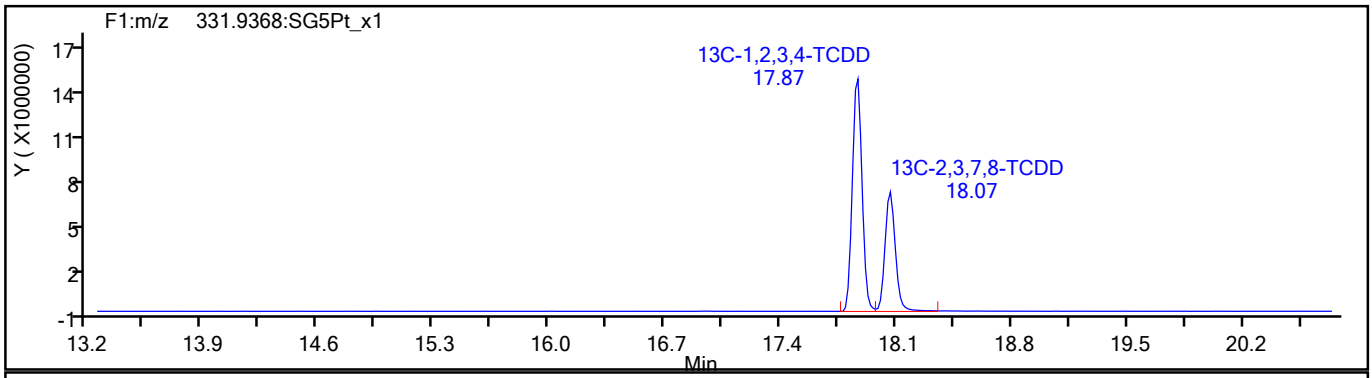

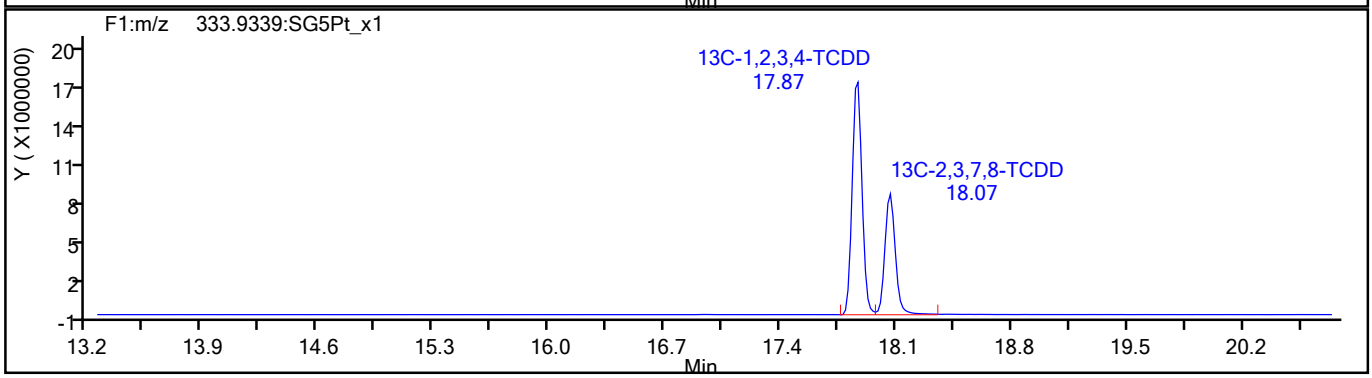

778255

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d		
Injection Date:	13-Aug-2021 08:48:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

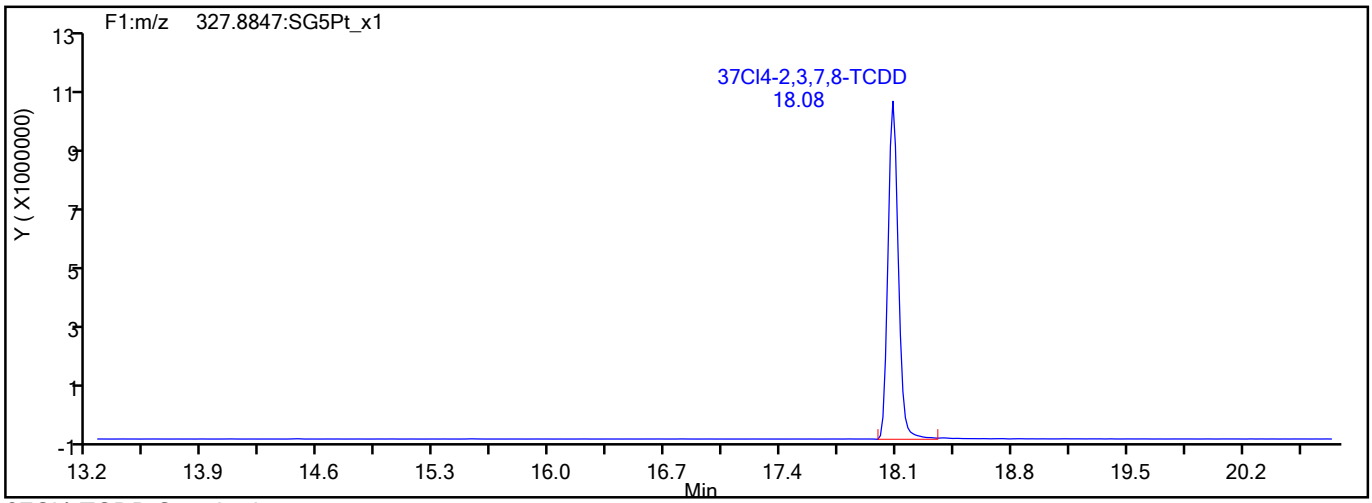

37Cl4-TCDD Standards

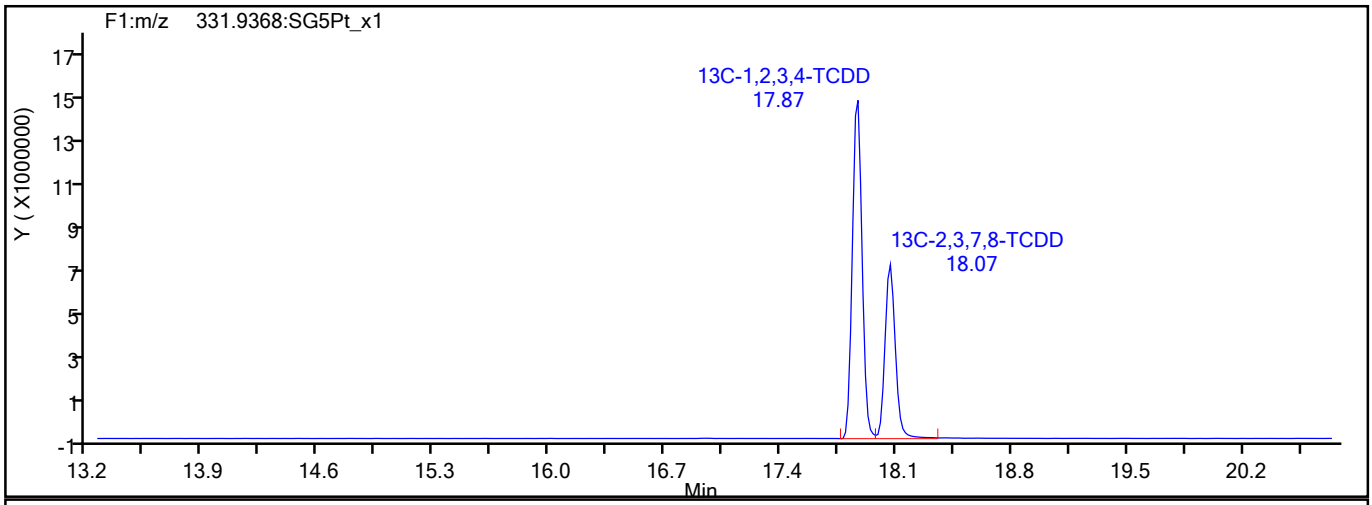

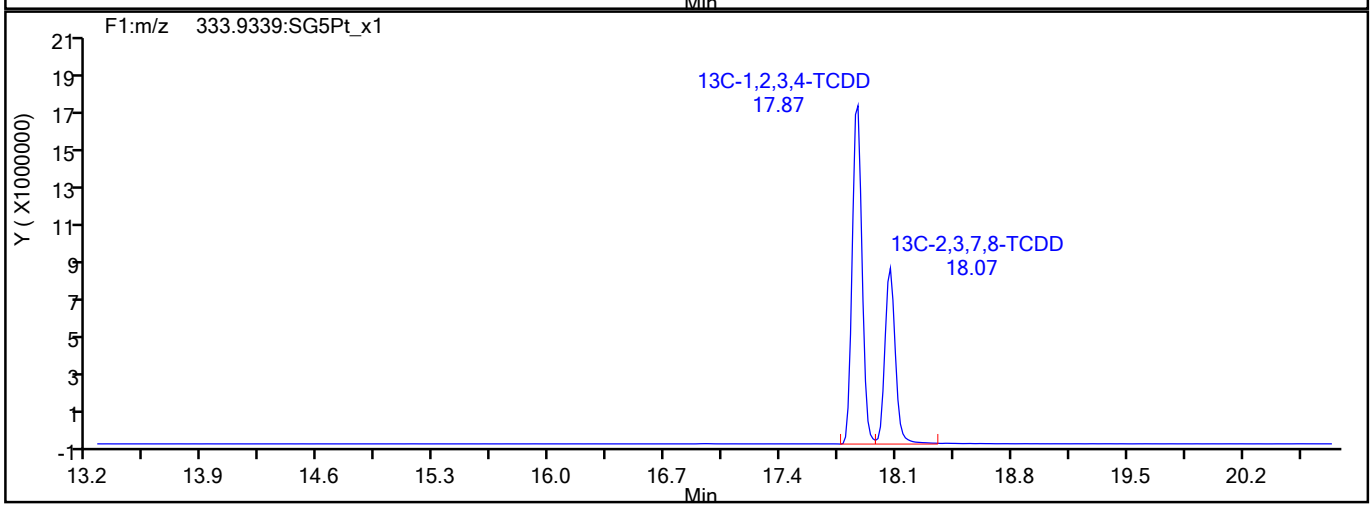

778256

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d		
Injection Date:	13-Aug-2021 08:48:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

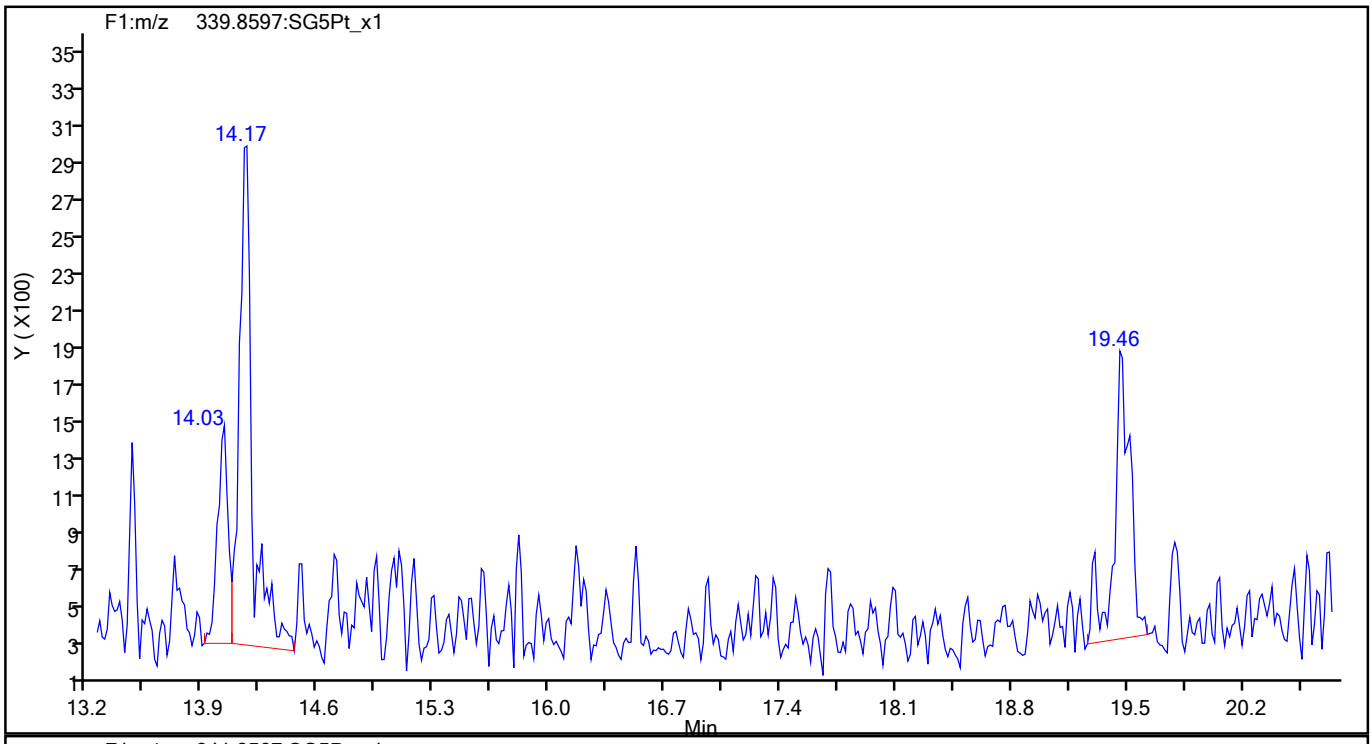

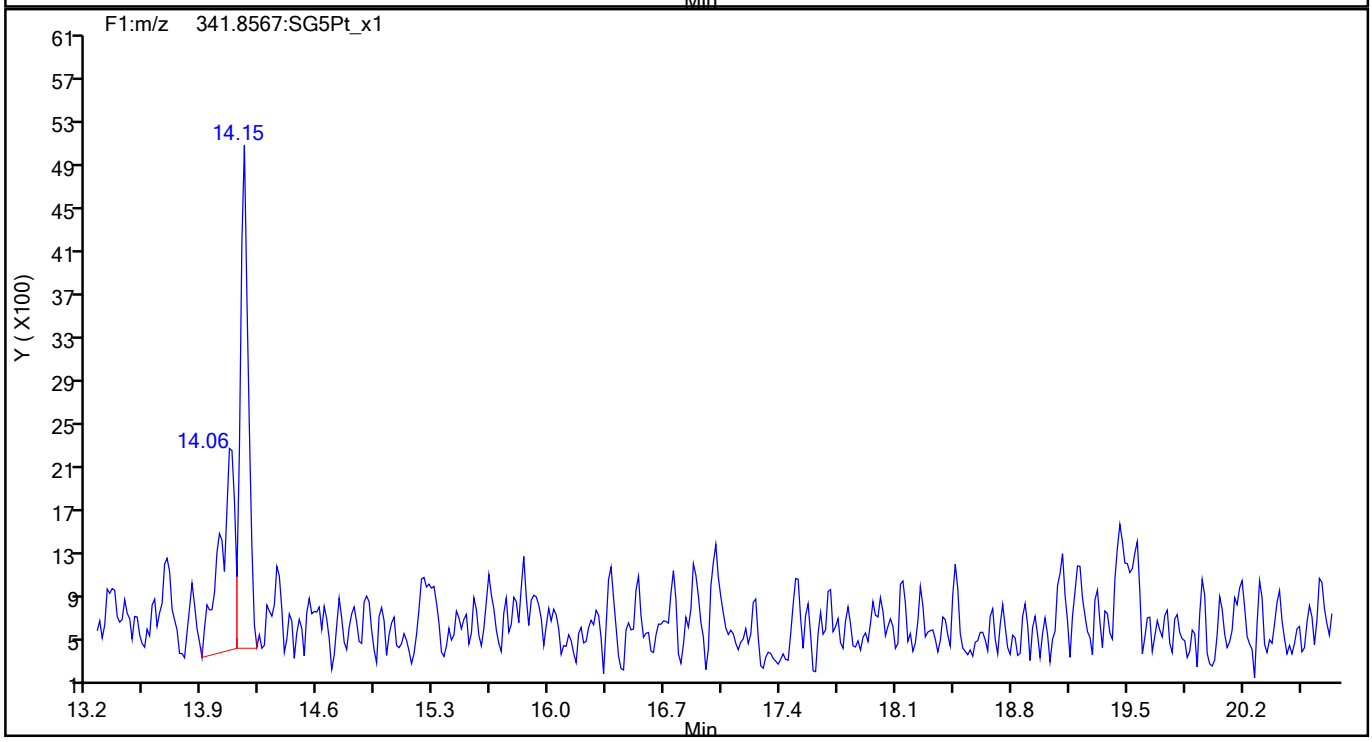

778257

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d		
Injection Date:	13-Aug-2021 08:48:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

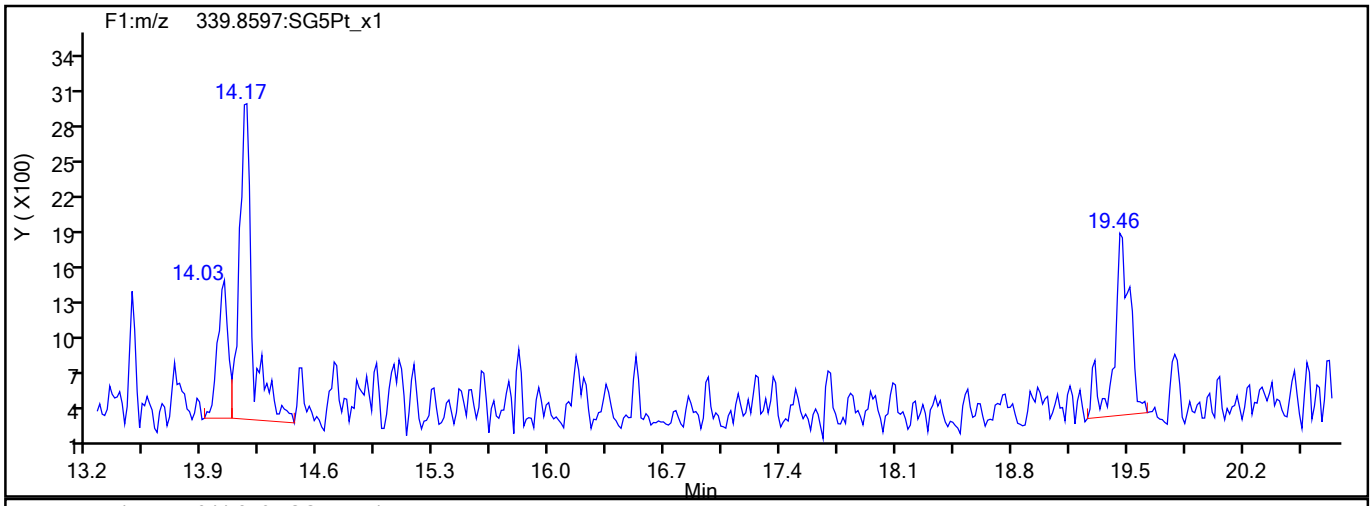

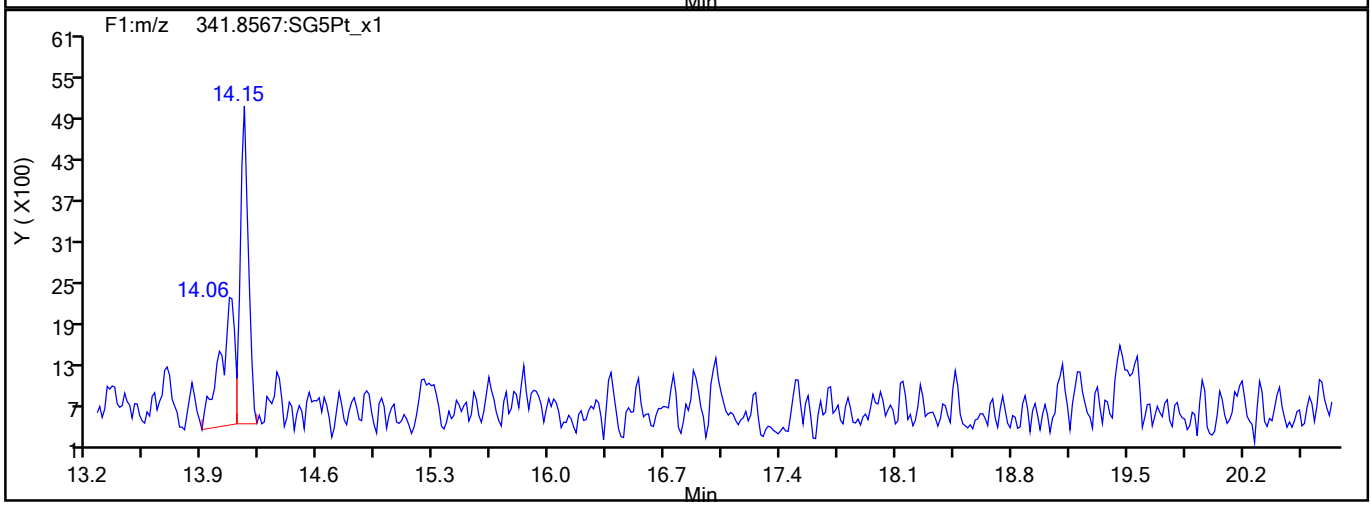

F1 PeCDFs Interference Mass

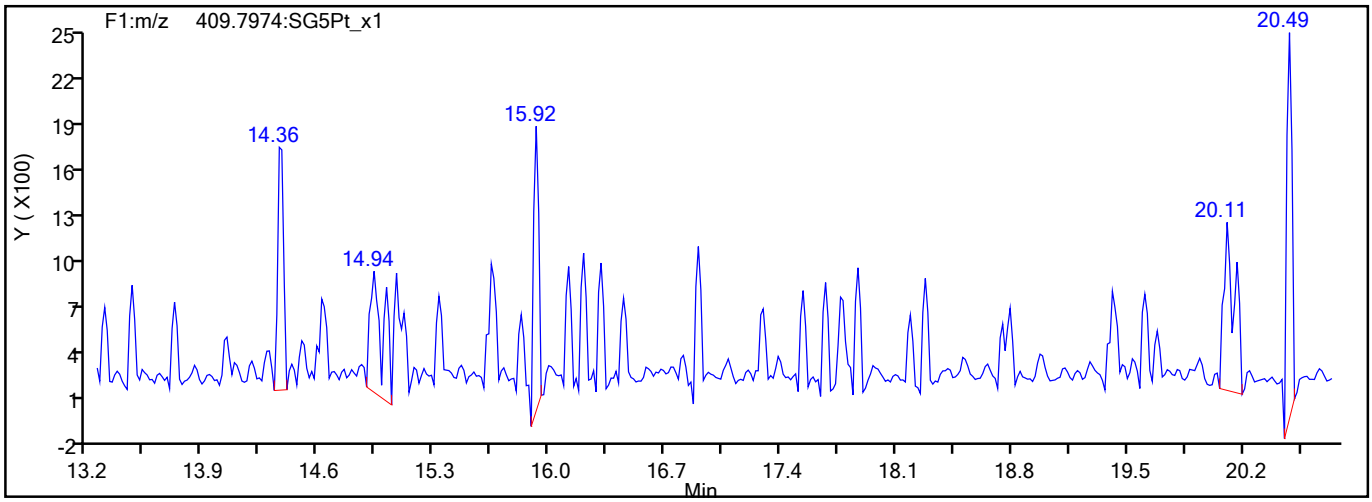

778258

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

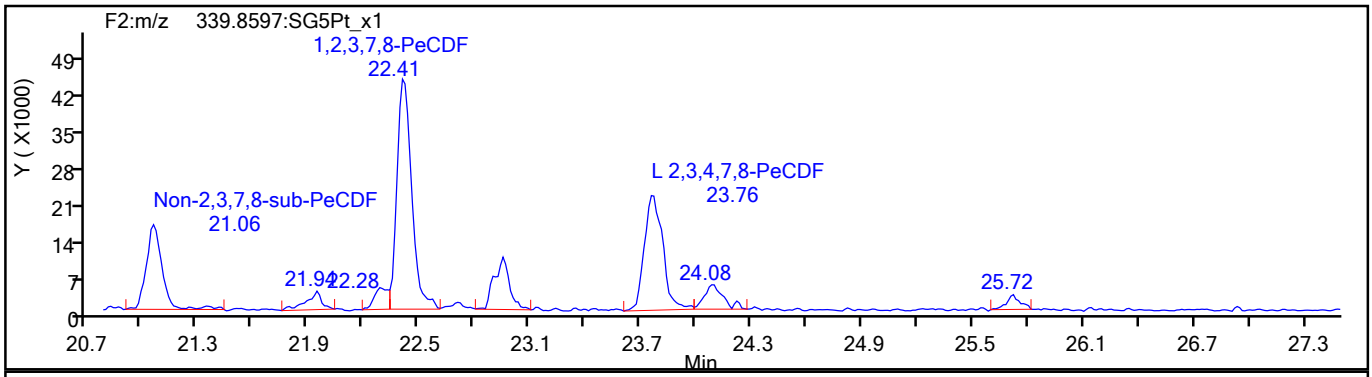

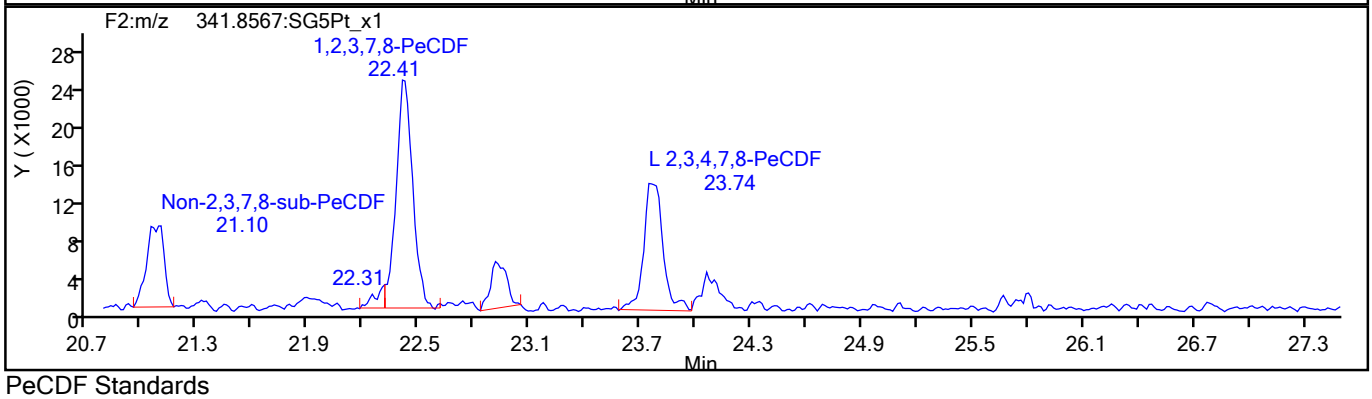

PeCDF Standards

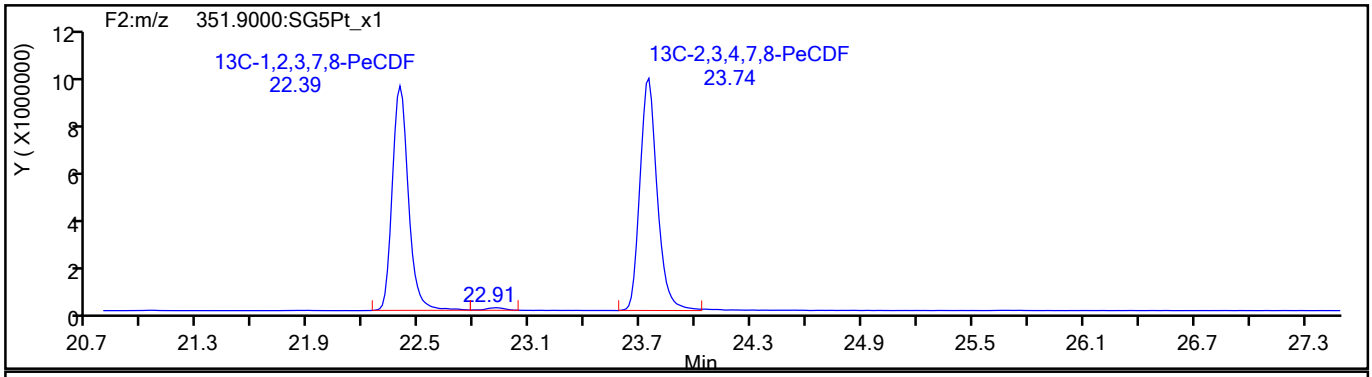

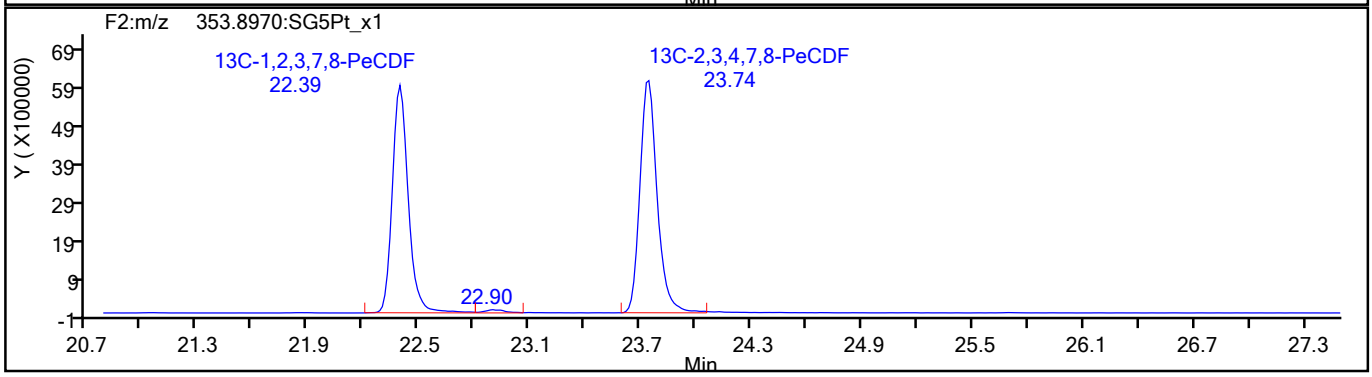

778259

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

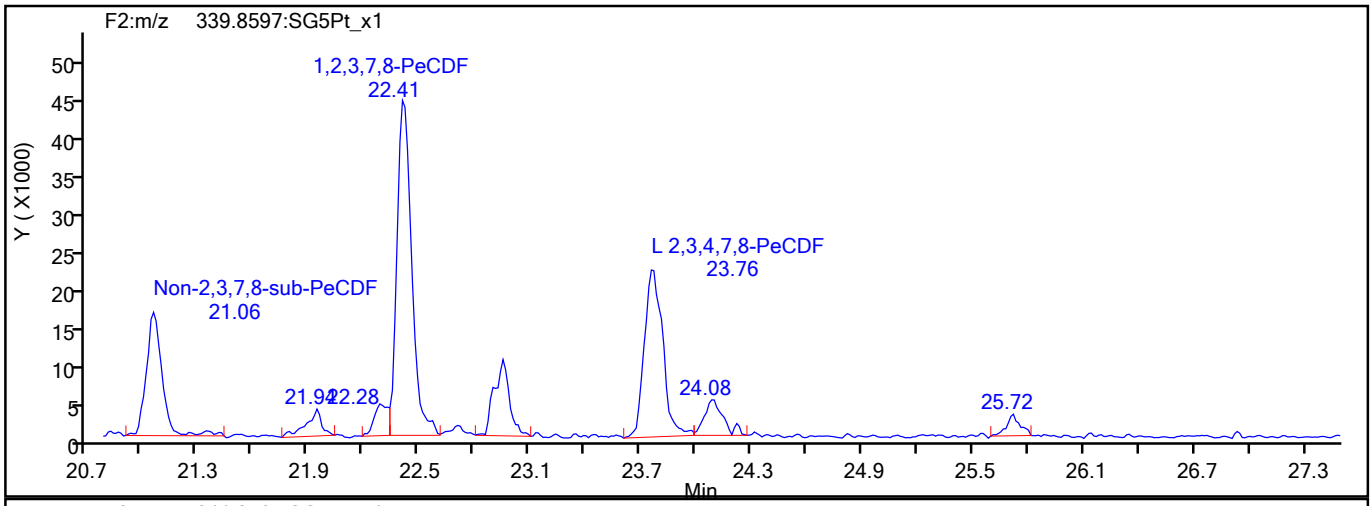

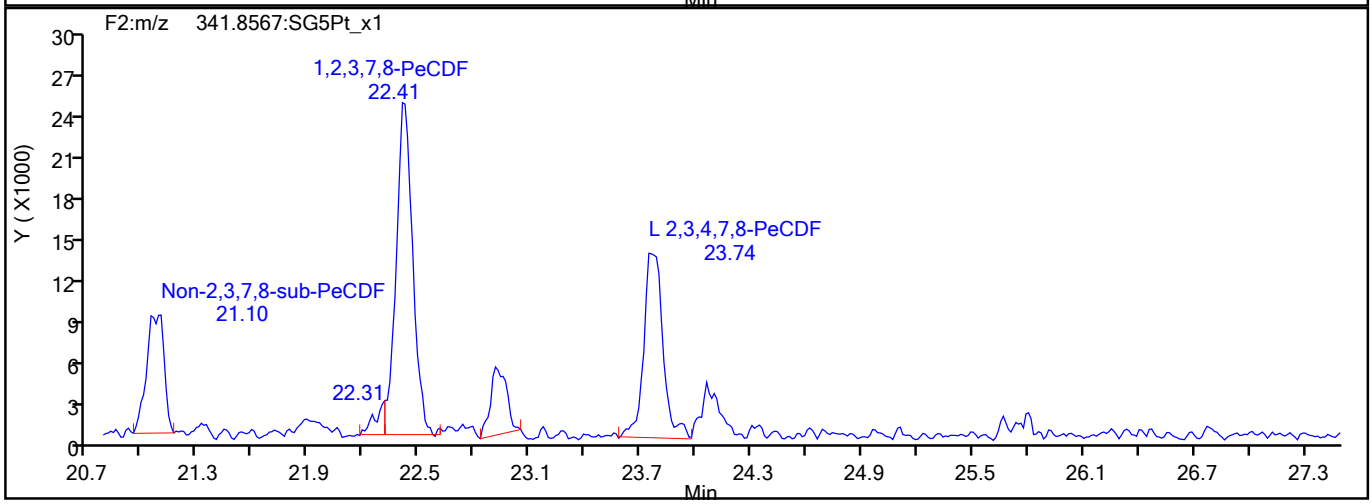

PeCDF Interference Mass

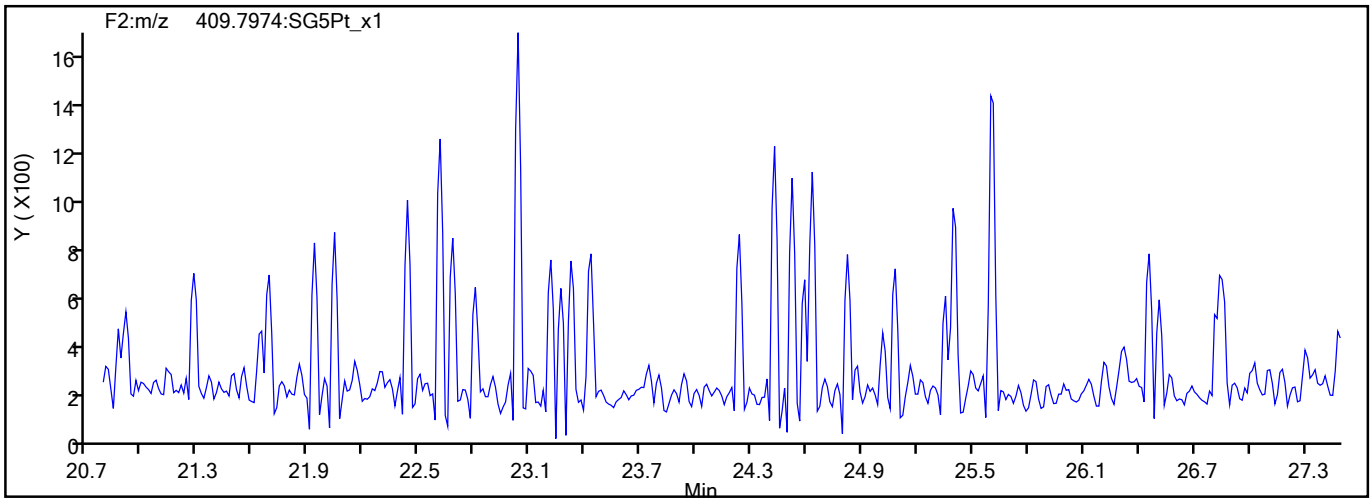

778260

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

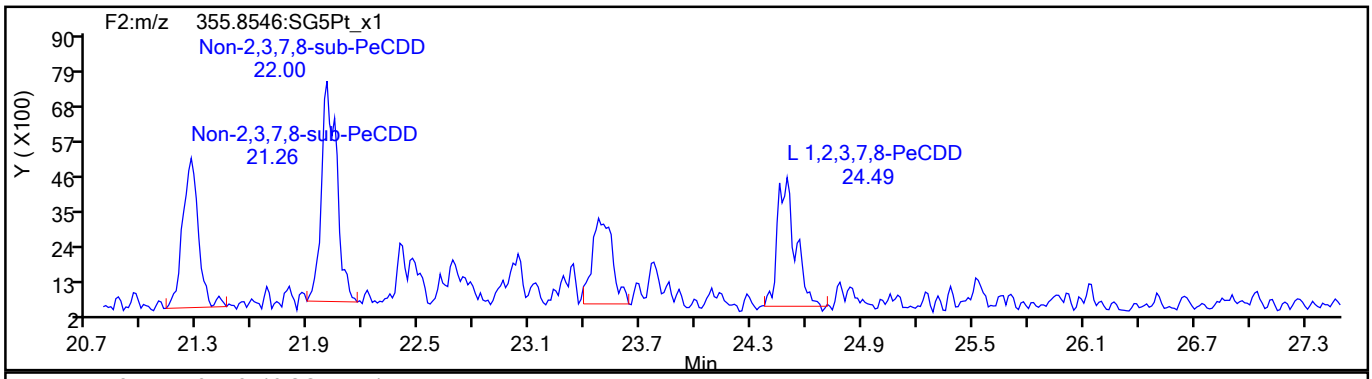

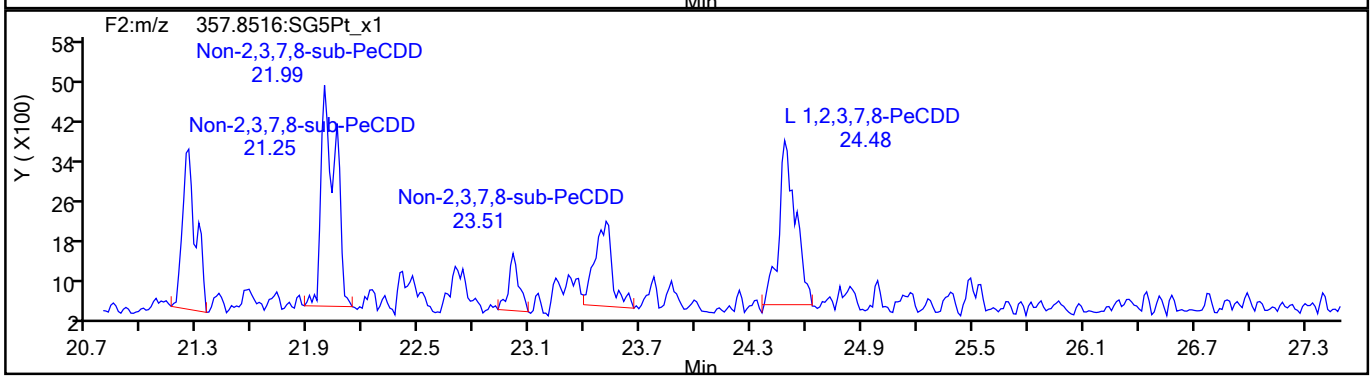

PeCDD Standards

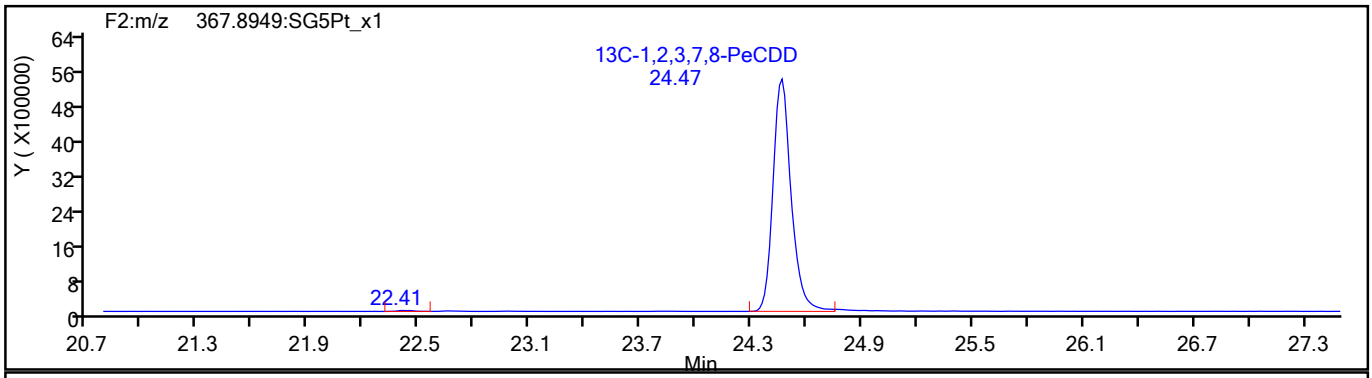

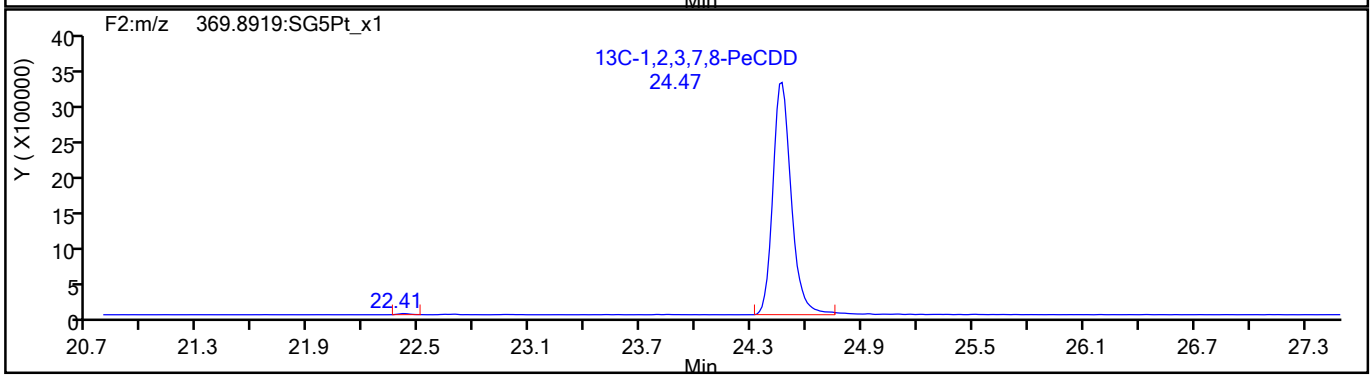

778261

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:	11215702-072221-SS-SJSB080 (16-18)		
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HxCDF

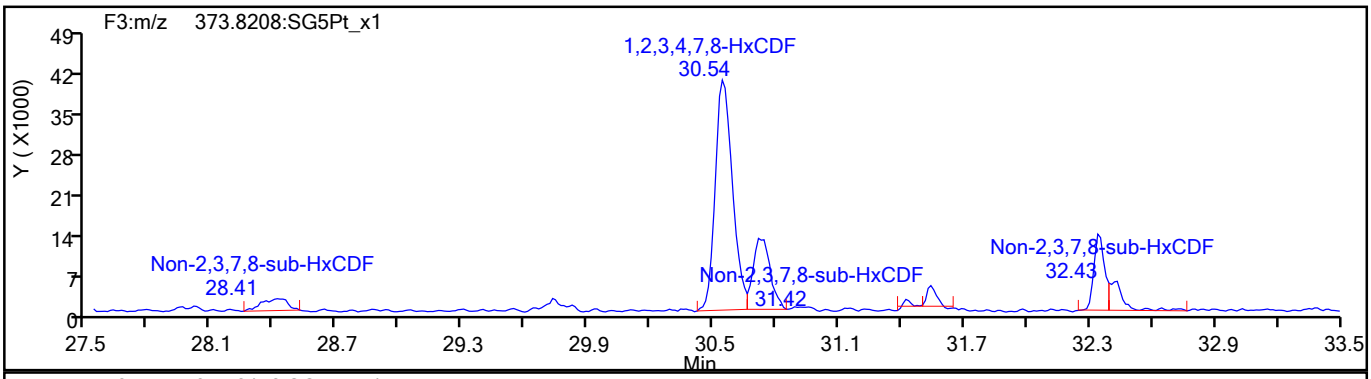

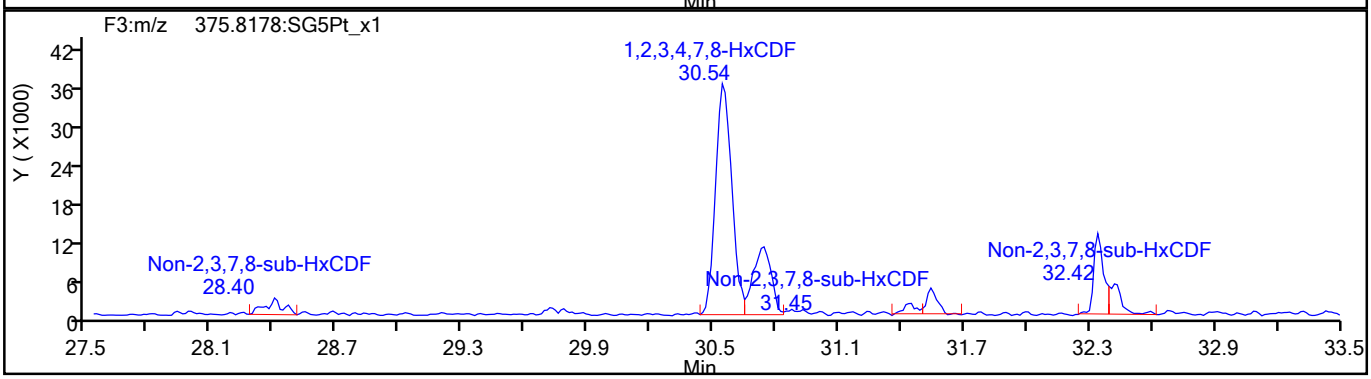

HxCDF Standards

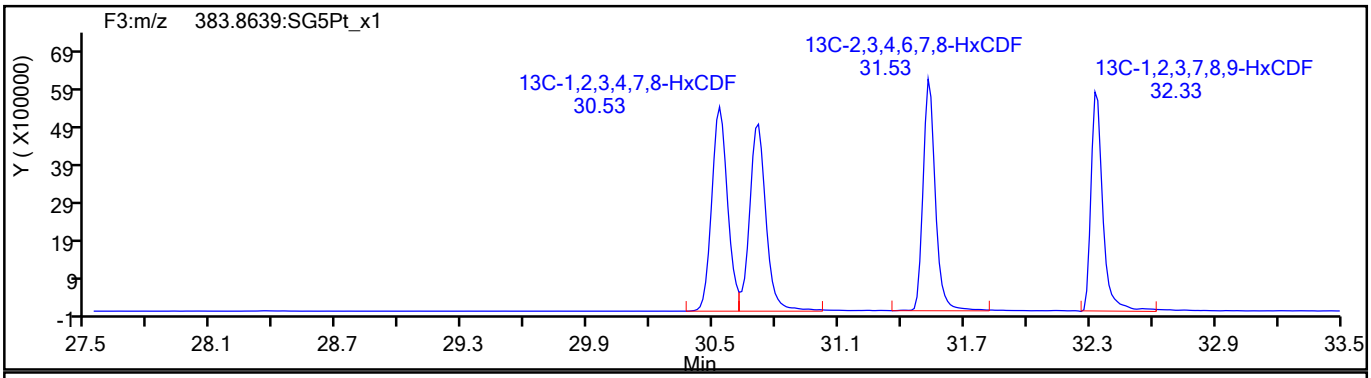

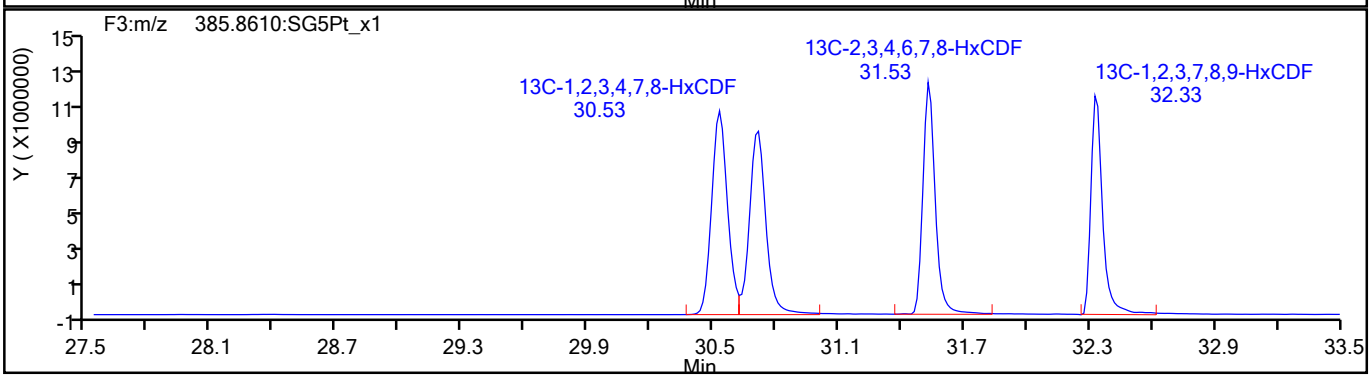

778262

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
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HxCDF

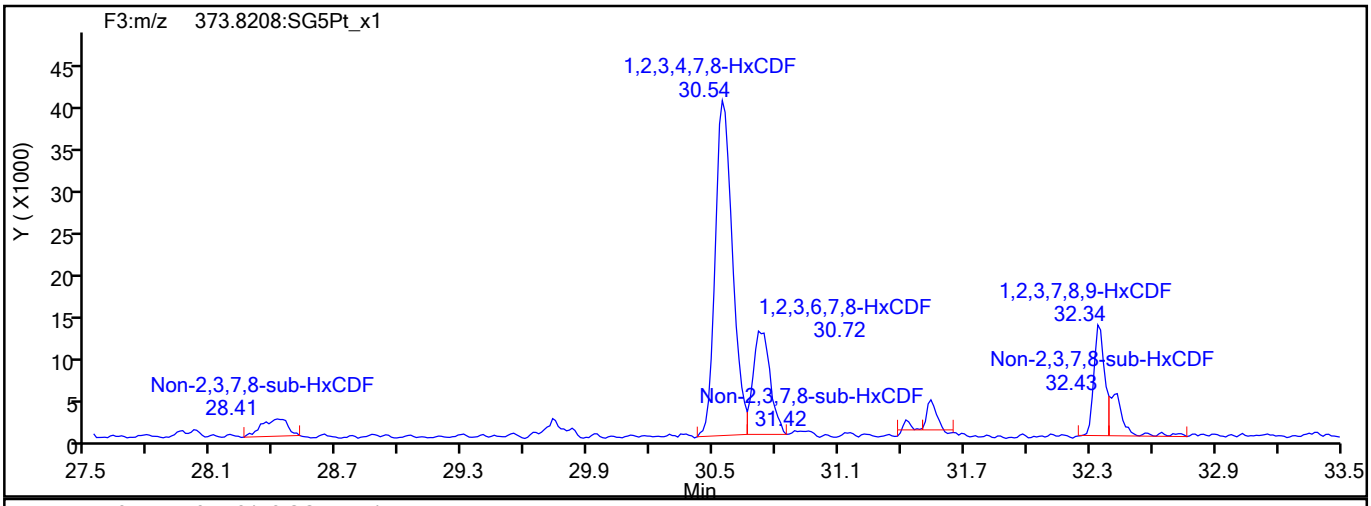

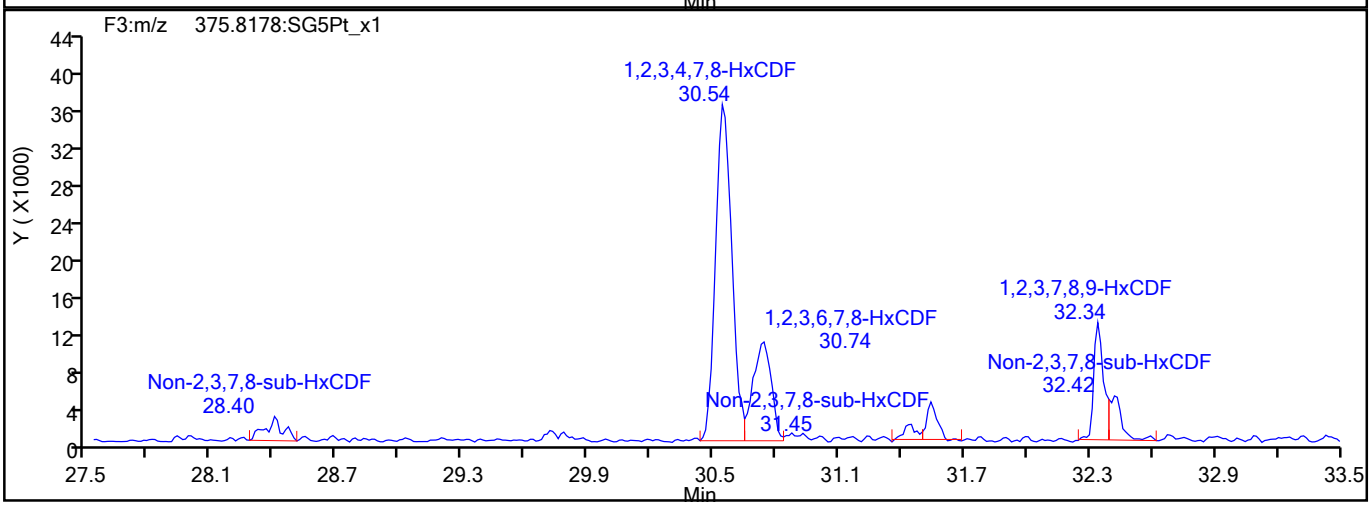

HxCDF Interference Mass

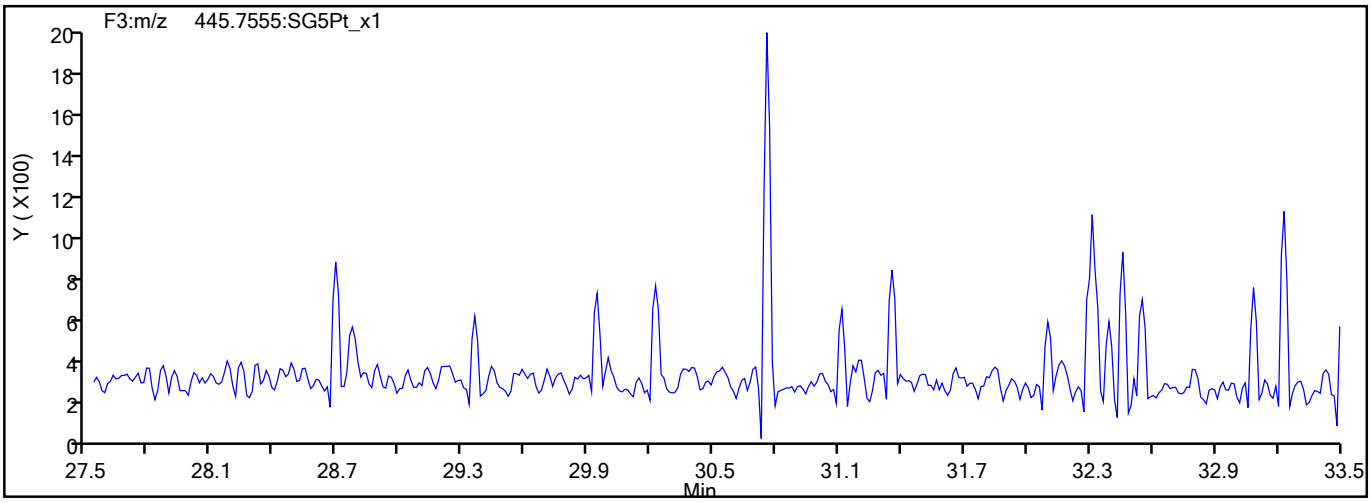

778263

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

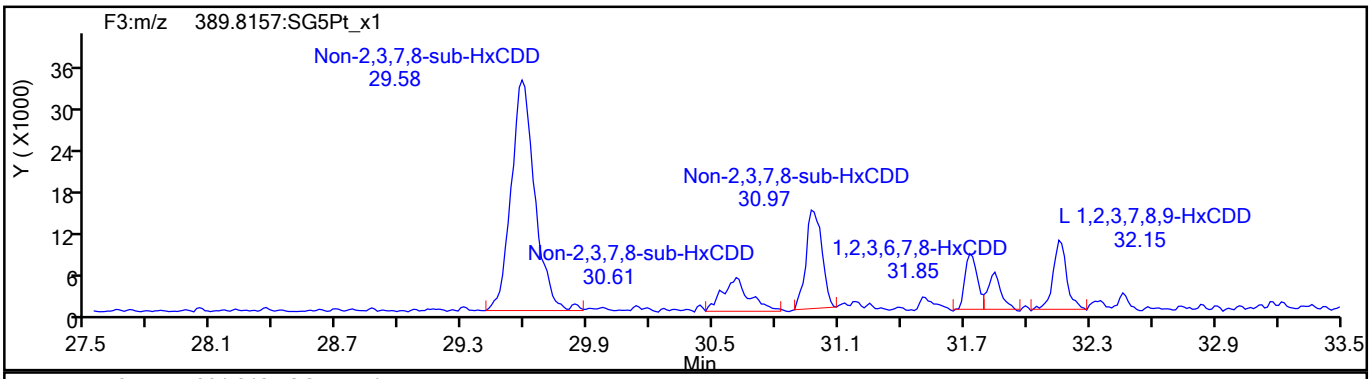

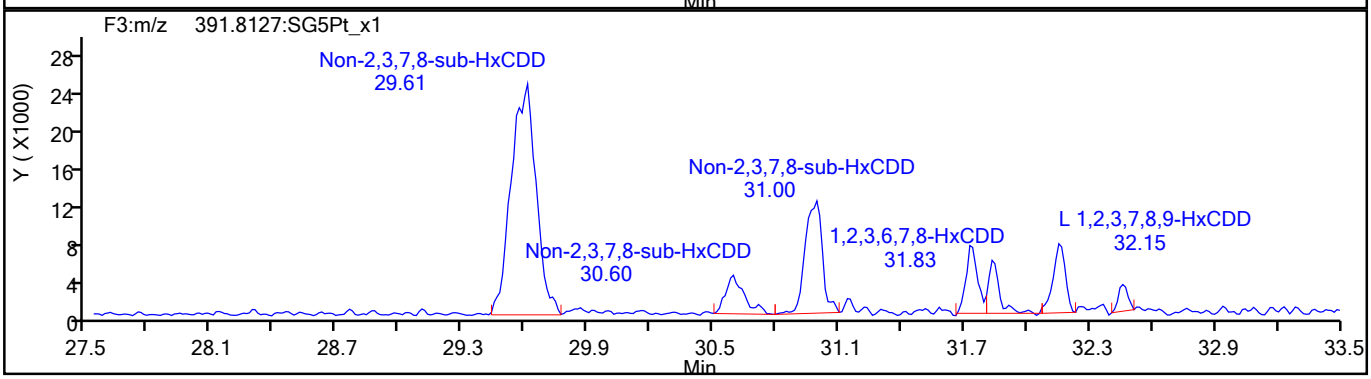

HxCDD Standards

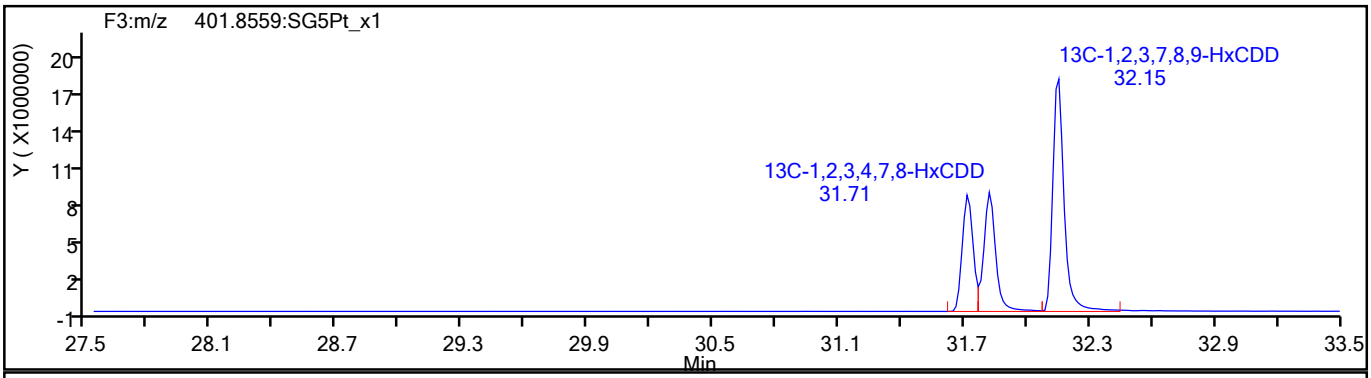

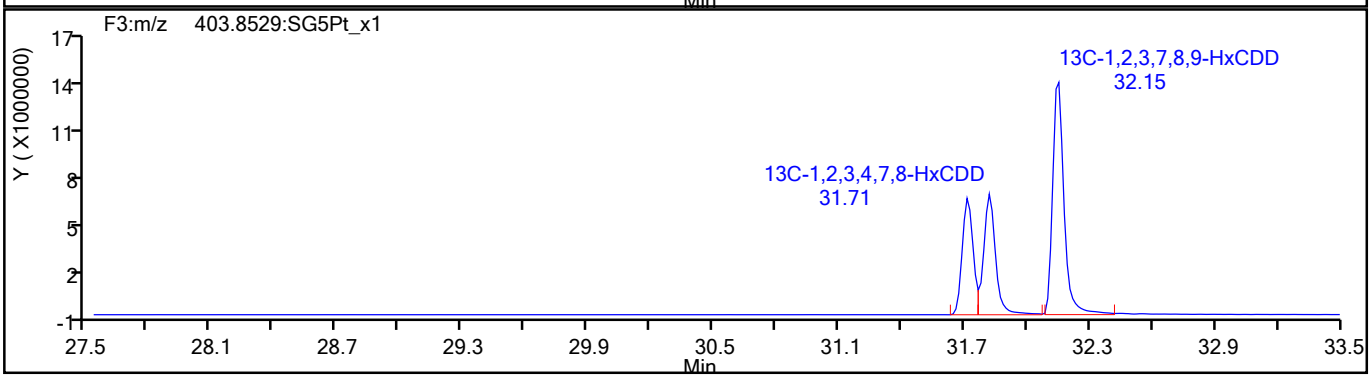

778264

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
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HpCDF

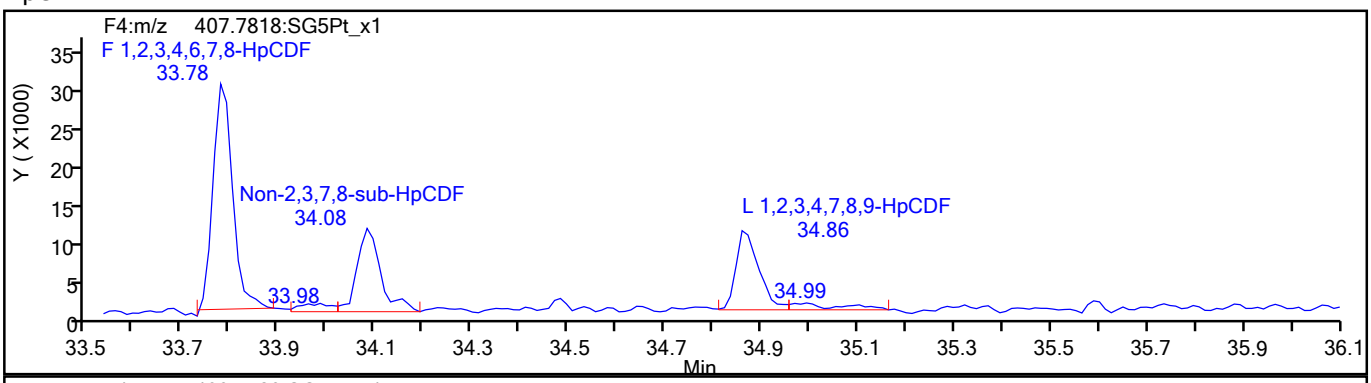

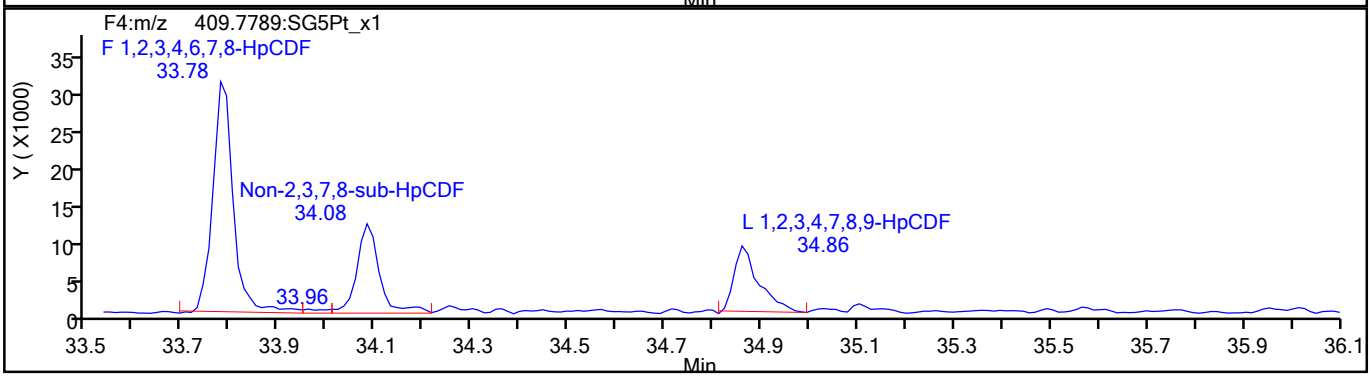

HpCDF Standards

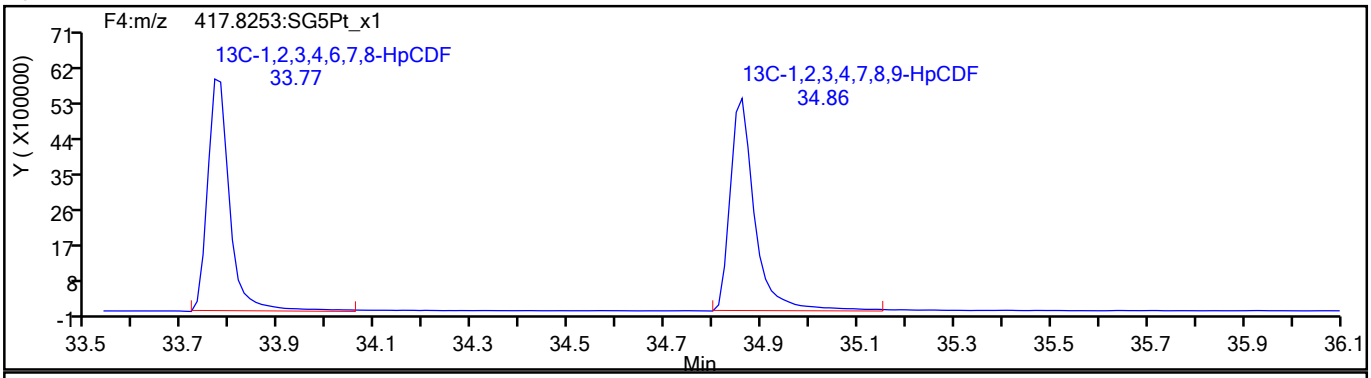

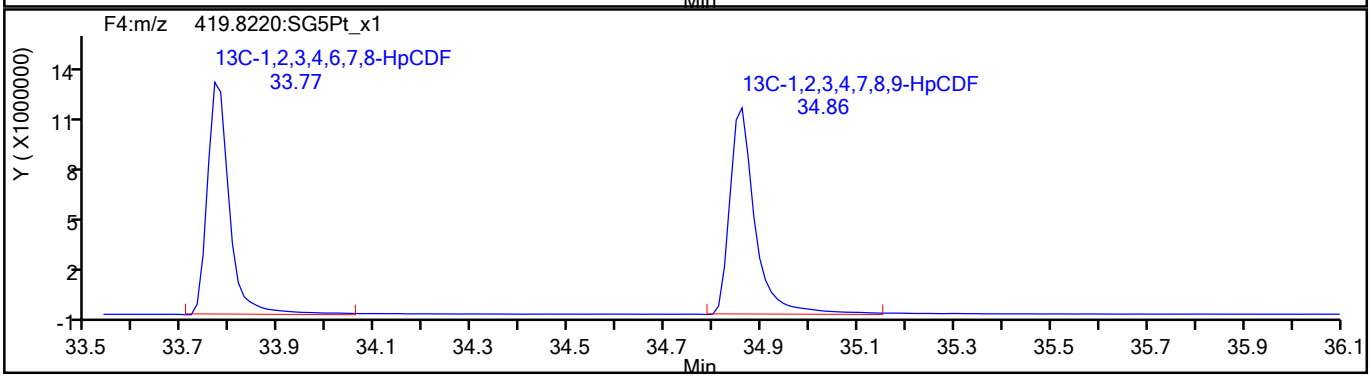

778265

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 08:48:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
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HpCDF

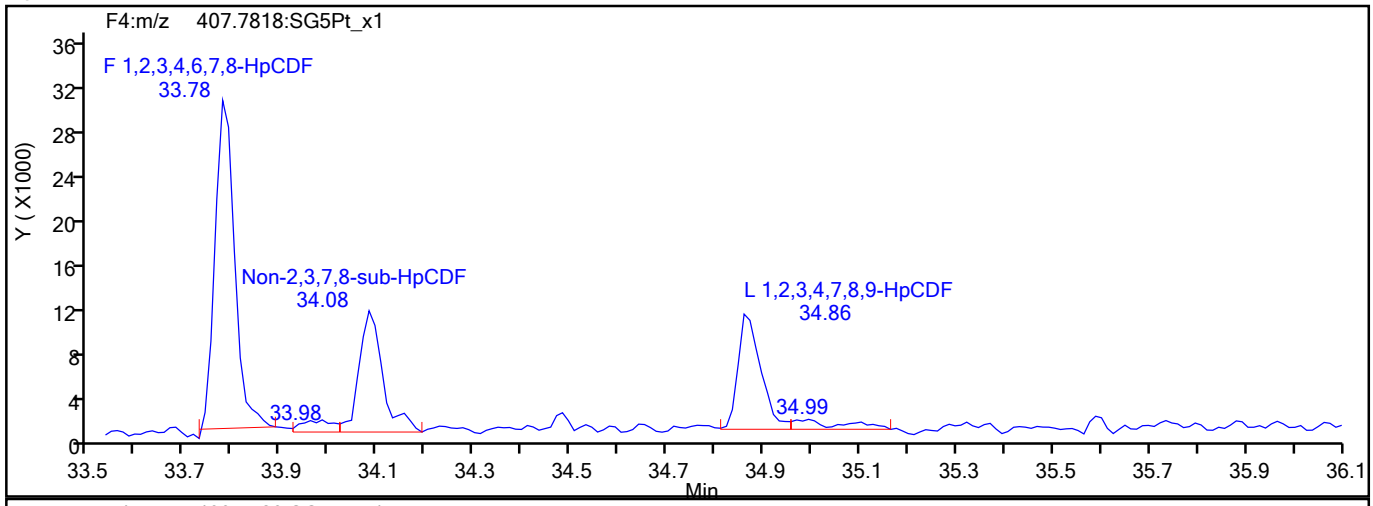

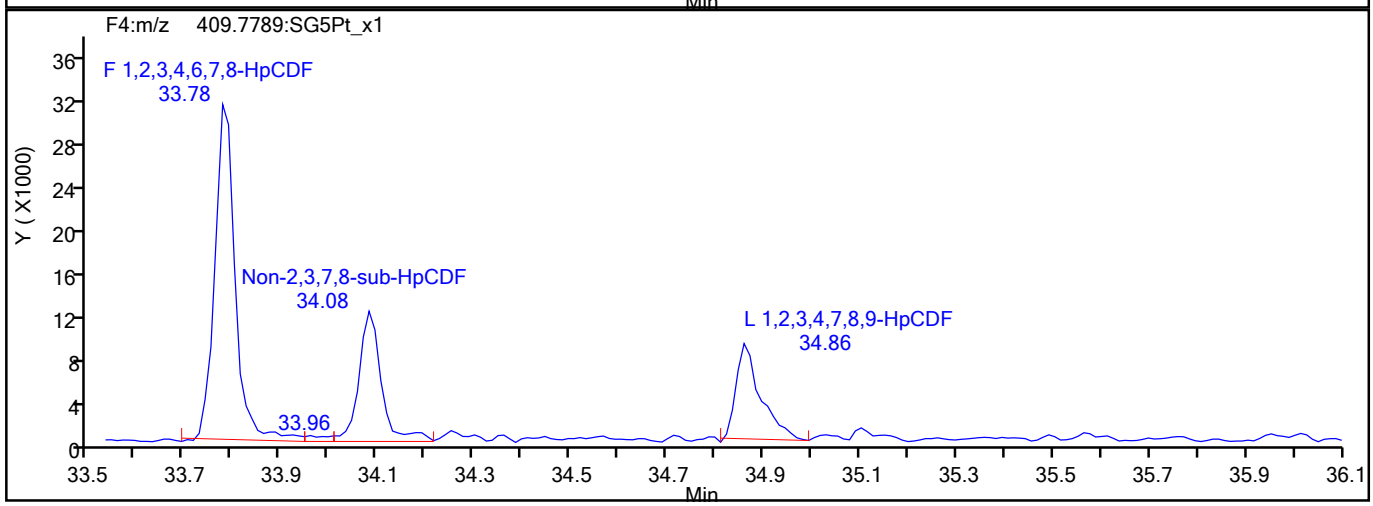

HpCDF Interference Mass

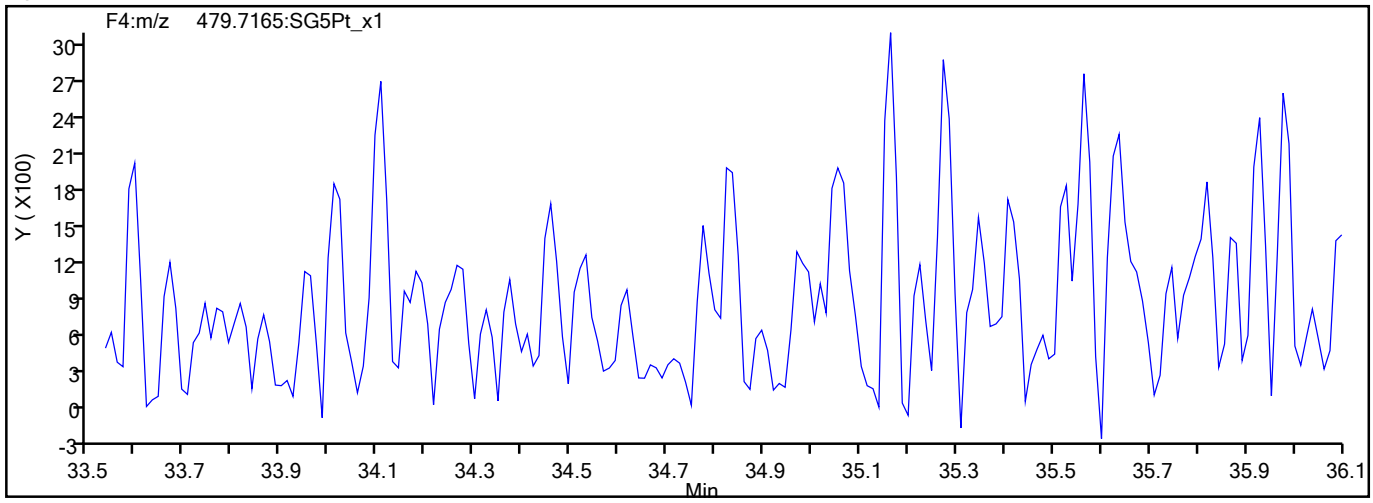

778266

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

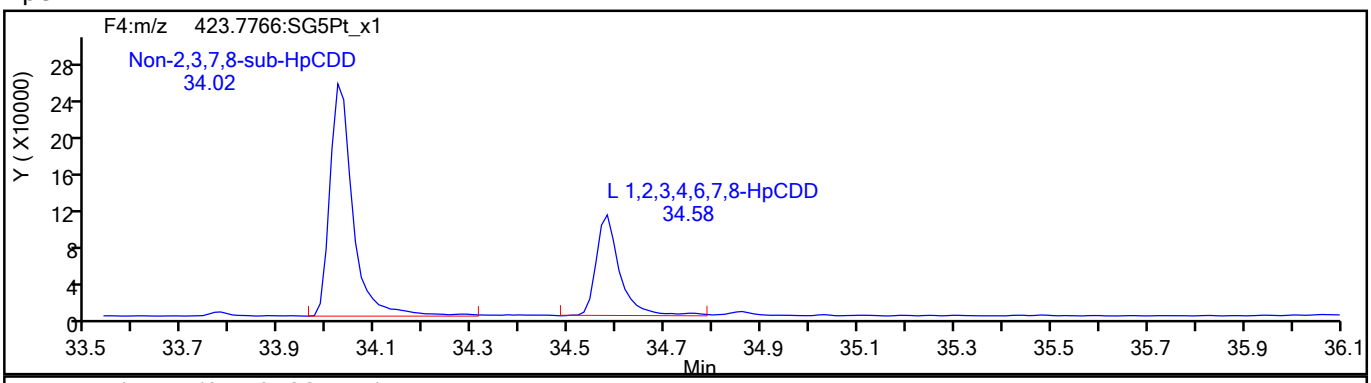

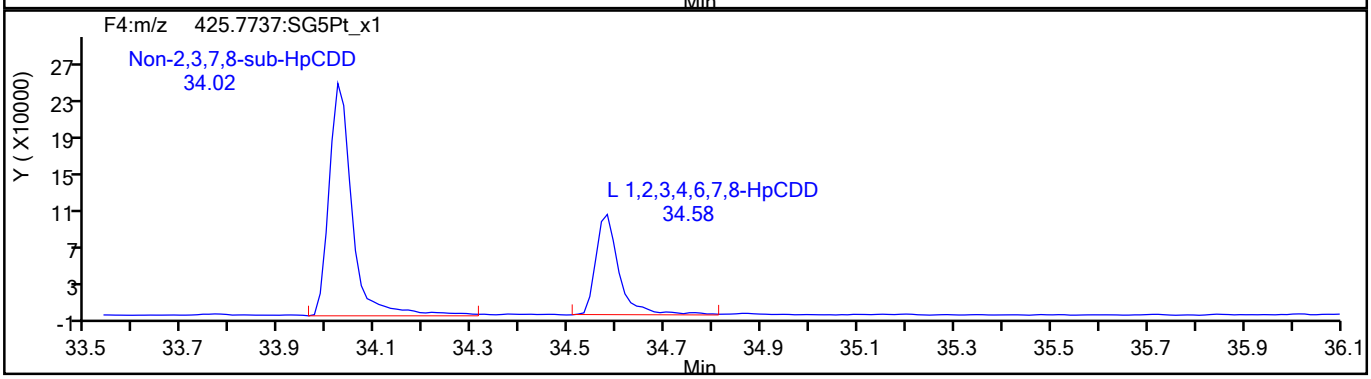

HpCDD Standards

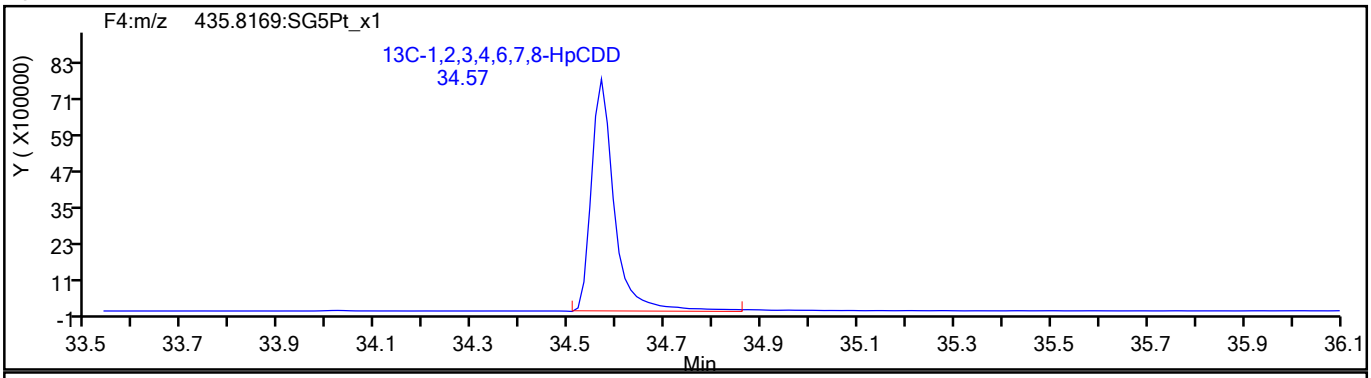

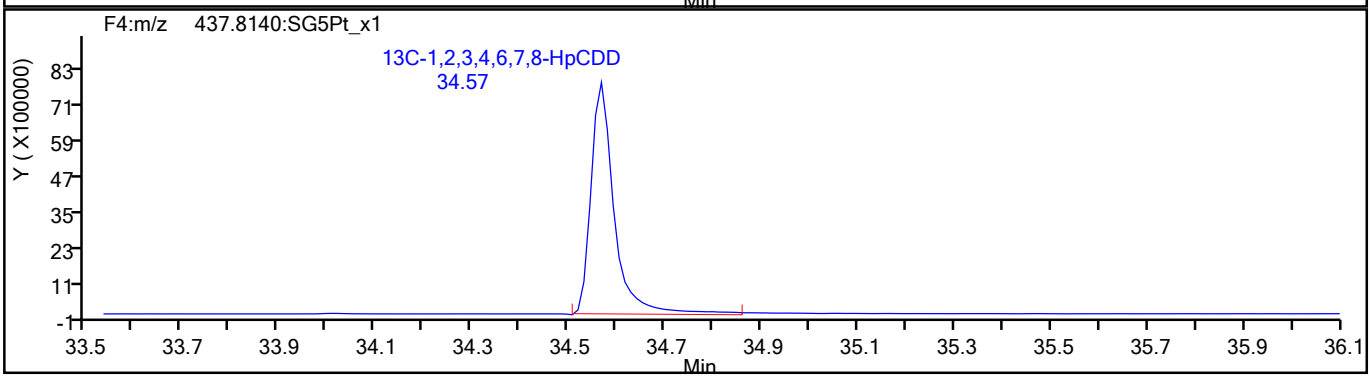

778267

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

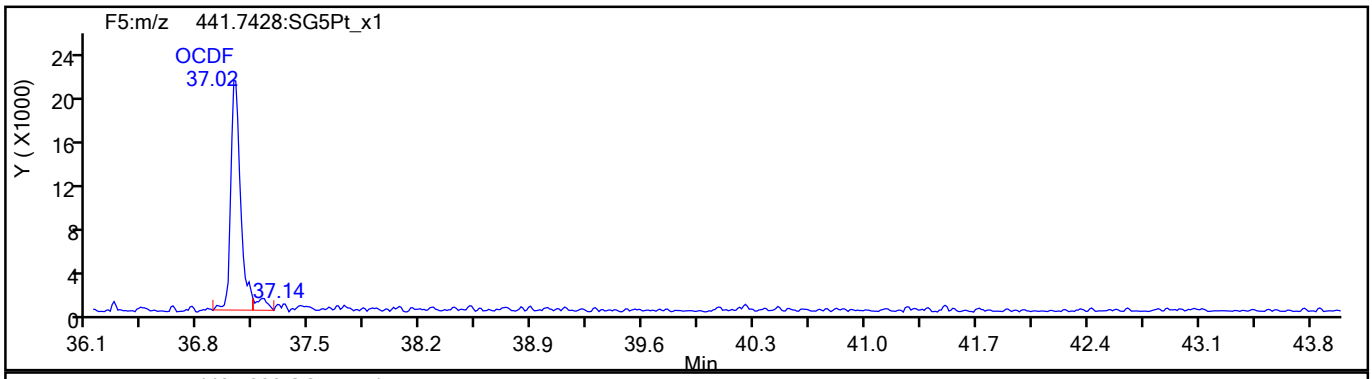

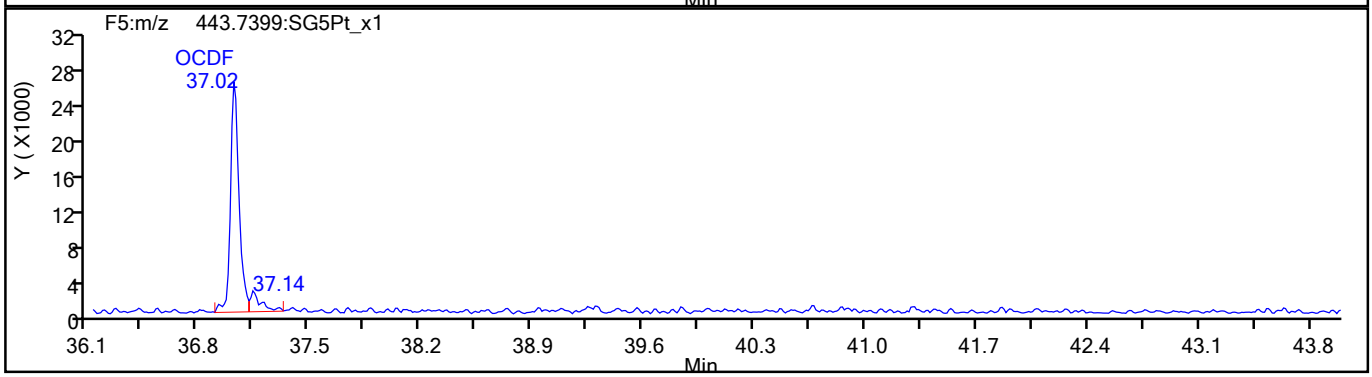

OCDF Standards

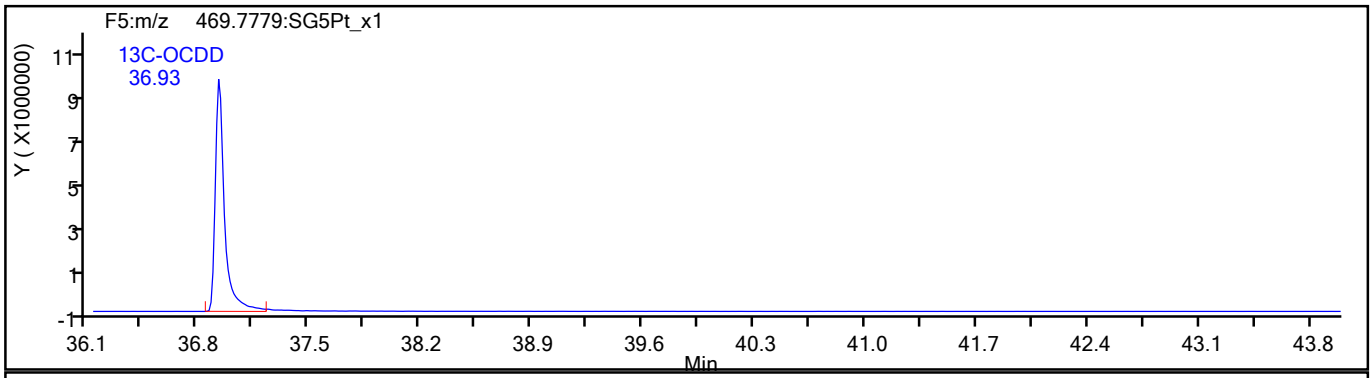

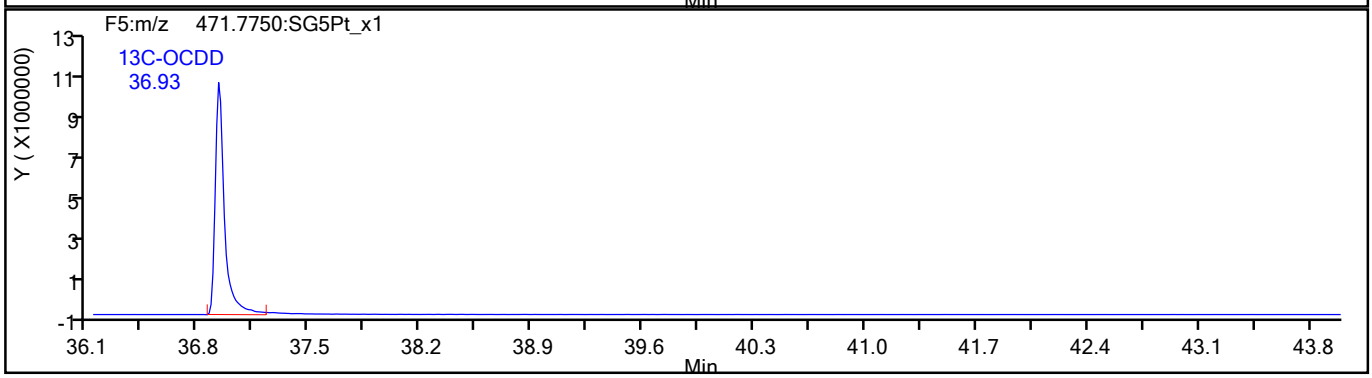

778268

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 08:48:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

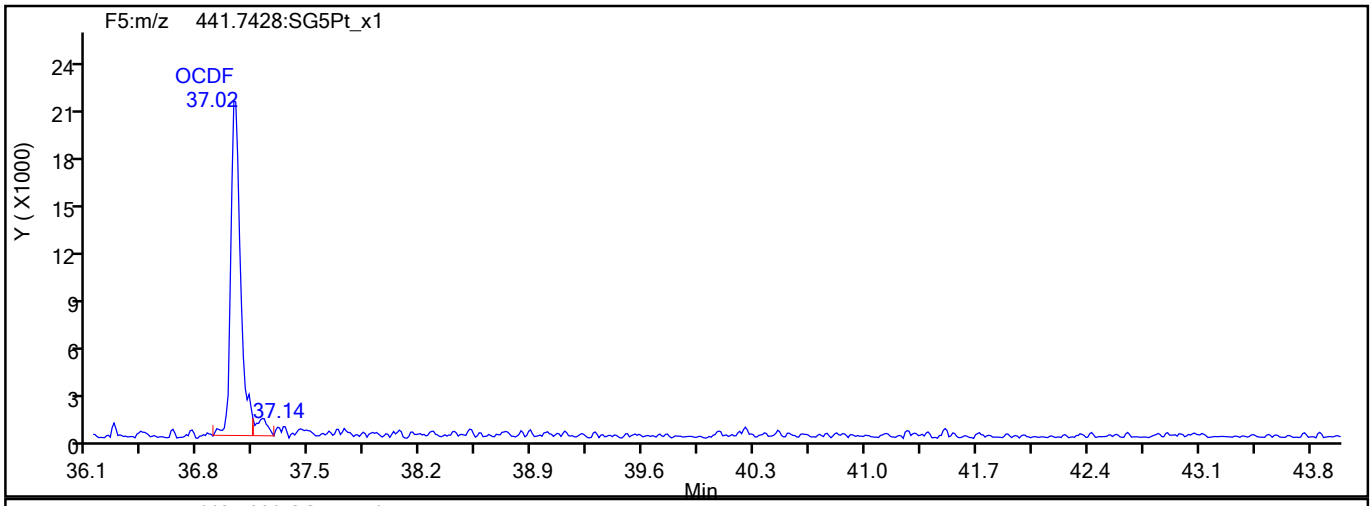

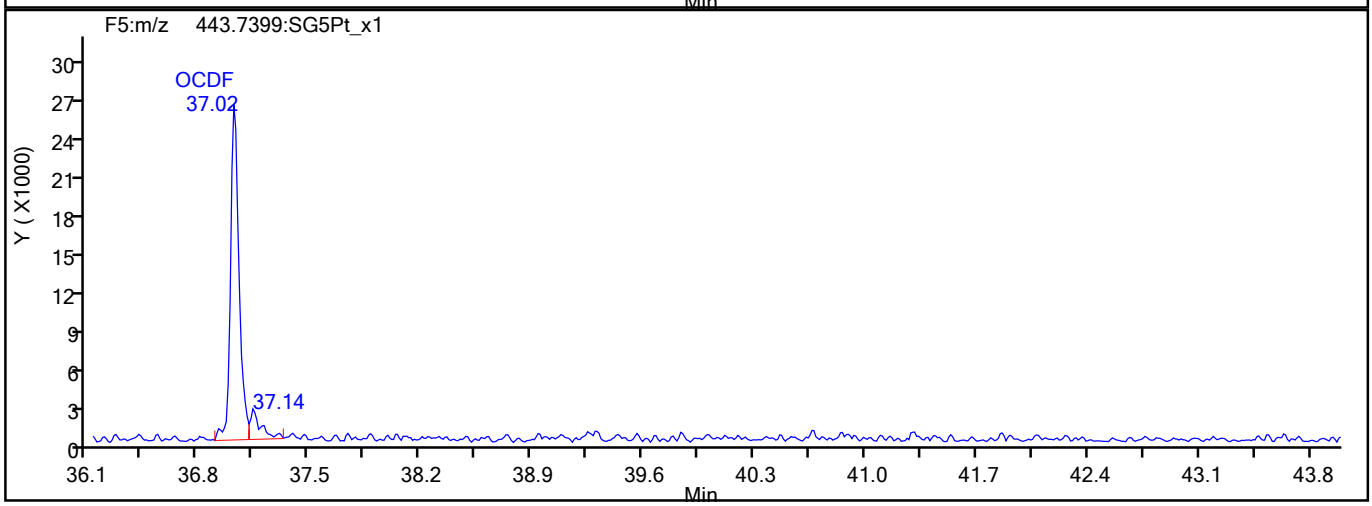

OCDF Interference Mass

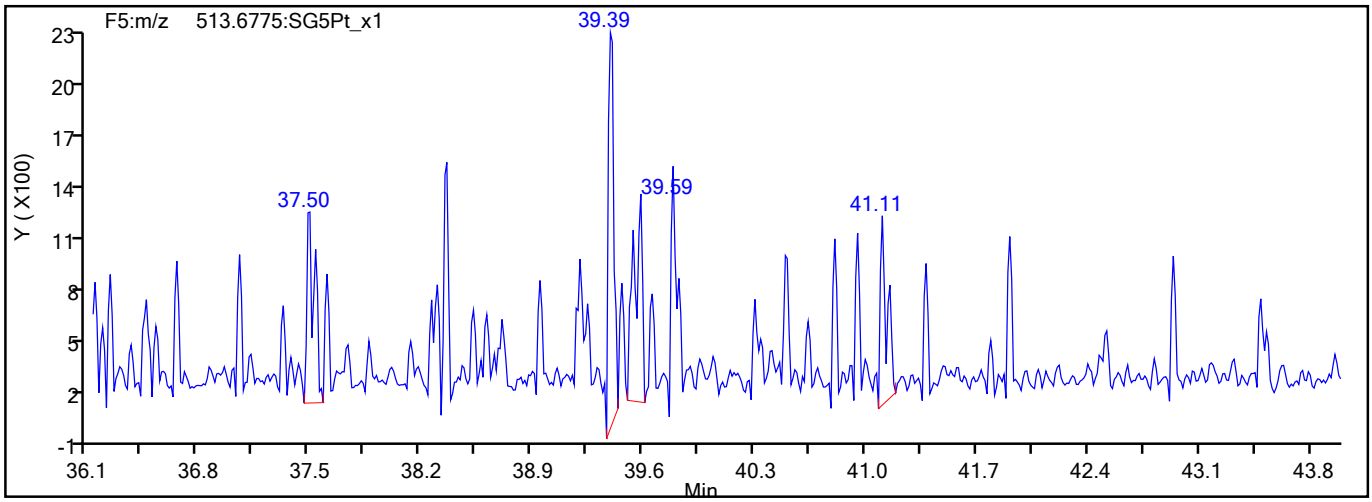

778269

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d		
Injection Date:	13-Aug-2021 08:48:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

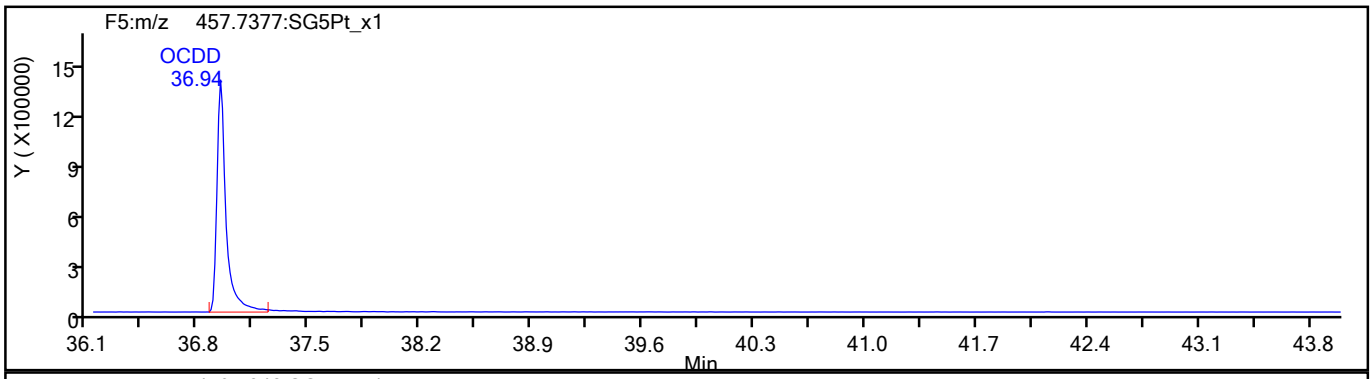

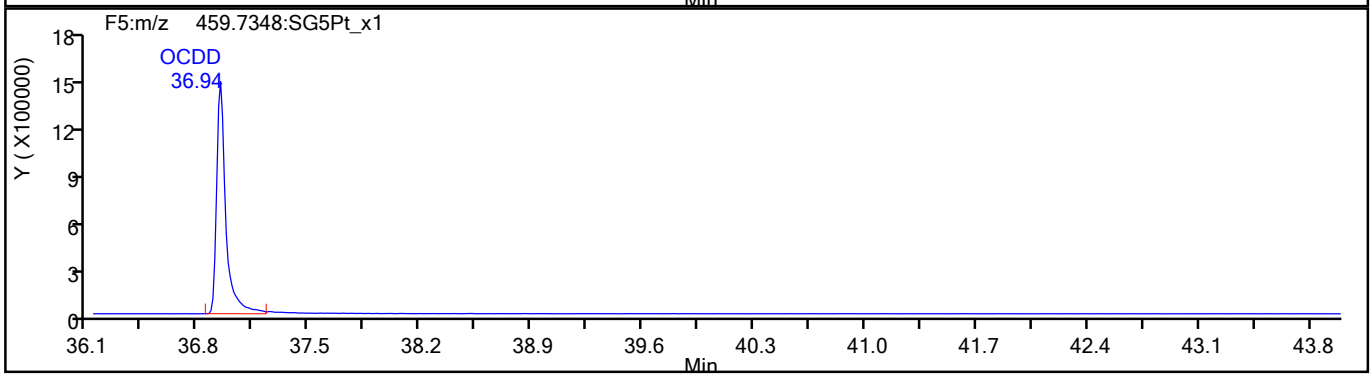

OCDD Standards

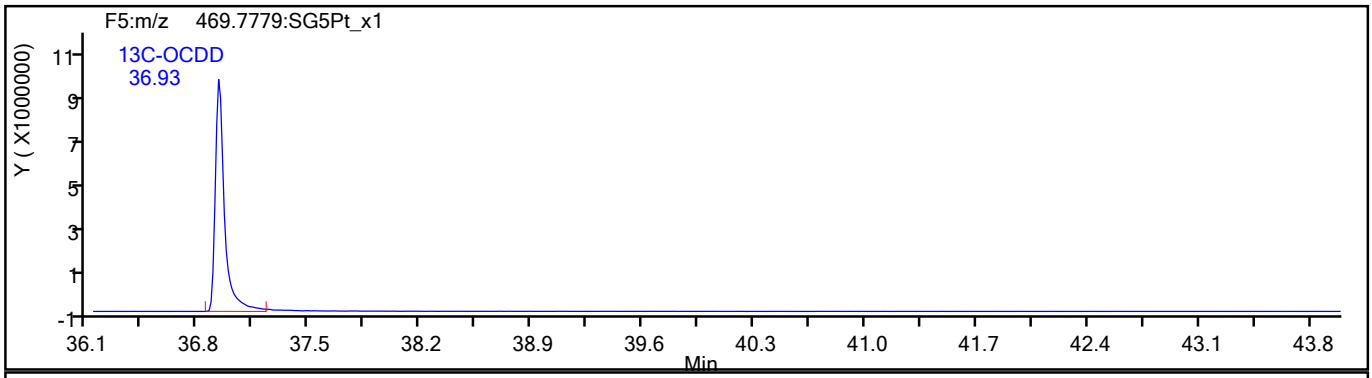

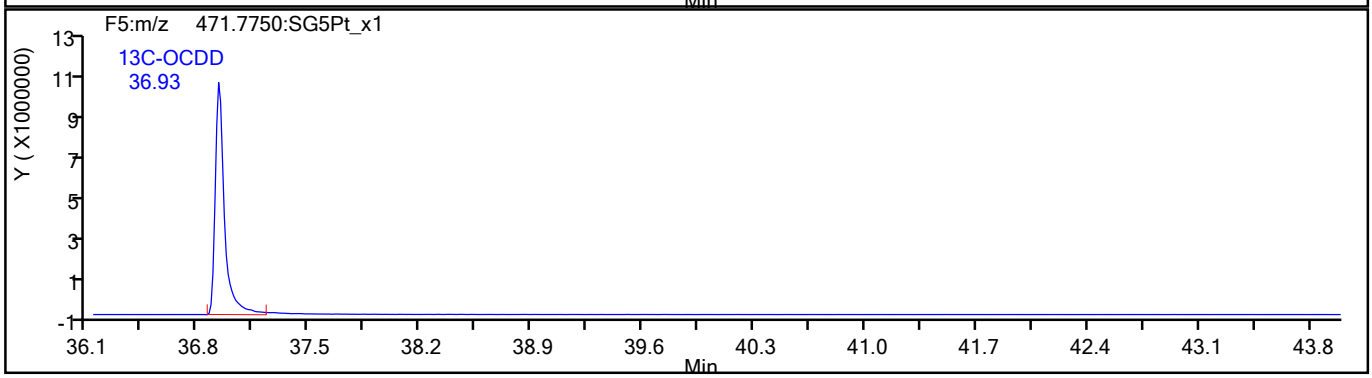

778270

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d		
Injection Date:	13-Aug-2021 08:48:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

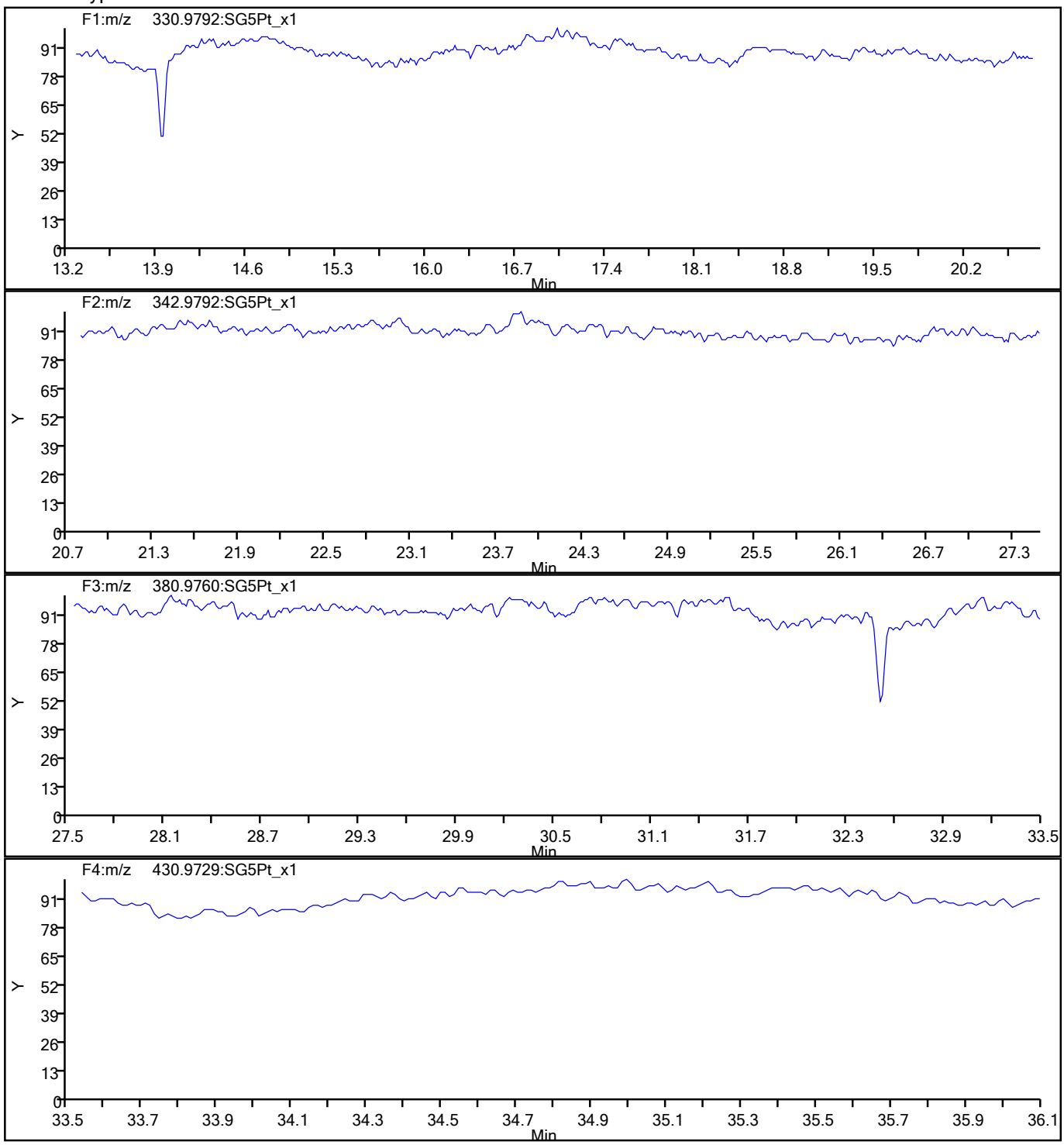

778271

Report Date: 16-Aug-2021 13:57:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_28.d		
Injection Date:	13-Aug-2021 08:48:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	515770	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

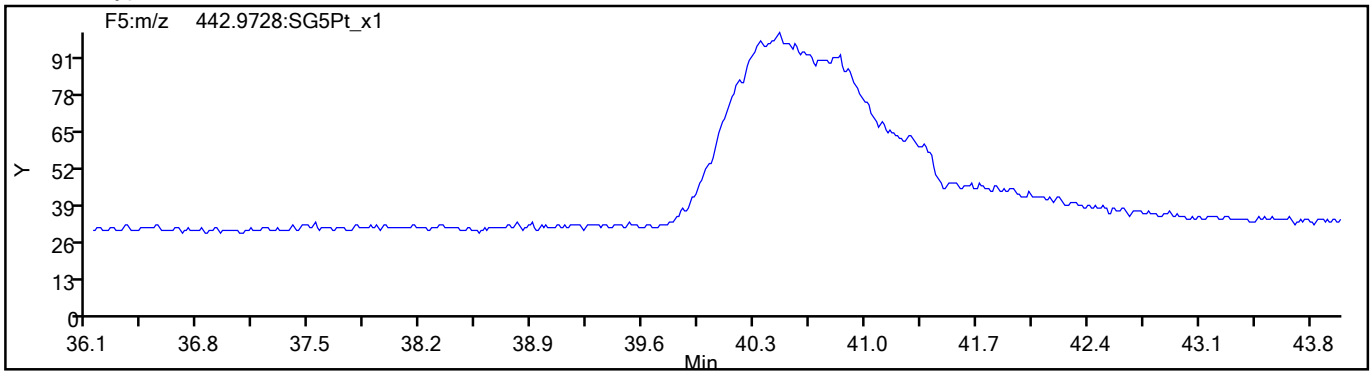

778272

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-2
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB080 (16-18) RA
Lab Sample ID: 320-76769-9 RA
Matrix: Sediment
Lab File ID: 21AU2111D2_004.d
Analysis Method: 1613B
Date Collected: 07/22/2021 09:20
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 9.66(g)
Date Analyzed: 08/21/2021 15:49
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518850
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	27	B	1.4	0.37

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	64		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	78		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_004.d
Lims ID: 320-76769-A-9-A
Client ID: 11215702-072221-SS-SJSB080 (16-18)
Sample Type: Client
Inject. Date: 21-Aug-2021 15:49:31 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-9-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:01:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.338	21486635	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.668	18448963	0.77	1.3327	64.4	64.4	0.3985	0.3985	64.43	
2,3,7,8-TCDF	17.682	1818199	0.78	0.9978	9.877	9.877	0.1359	0.1359		M
D 13C-2,3,7,8-TCDD	16.105	11157039	0.75	0.8749	59.3	59.3	0.9732	0.9732	59.35	
2,3,7,8-TCDD	16.132	440765	0.81	1.0570	3.738	3.738	0.1599	0.1599		
$ 37Cl4-2,3,7,8-TCDD	16.119	5789912		0.8648	31.2	31.2	0.1029	0.1029	77.90	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_004.d
Lims ID: 320-76769-A-9-A
Client ID: 11215702-072221-SS-SJSB080 (16-18)
Sample Type: Client
Inject. Date: 21-Aug-2021 15:49:31 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-9-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:01:19

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.338	16.309	2		9228911	2019438	9064	22660	223		
333.9339	16.338	16.309	2		12257724	2748991	7177	17942	383	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.668	17.640	2	1.081	8030337	1400853	5276	13190	266		
317.9389	17.668	17.640	2	1.081	10418626	2059178	4854	12135	424	0.77(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.682	17.653	2	1.001	798506	149126	793	1982	188		M
305.8987	17.682	17.653	2	1.001	1019693	192069	1084	2710	177	0.78(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.105	16.076	2	0.986	4777947	1083489	9064	22660	120		
333.9339	16.105	16.076	2	0.986	6379092	1436260	7177	17942	200	0.75(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.132	16.103	2	1.002	196856	47195	837	2092	56		
321.8936	16.132	16.103	2	1.002	243909	54136	867	2167	62	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.119	16.103	1	0.987	5789912	1345277	1698	4245	792		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_004.d				
Injection Date:	21-Aug-2021 15:49:31	Instrument ID:	11D2		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.68
Area: 803648
Amount: 9.992862
Amount Units: pg/ul

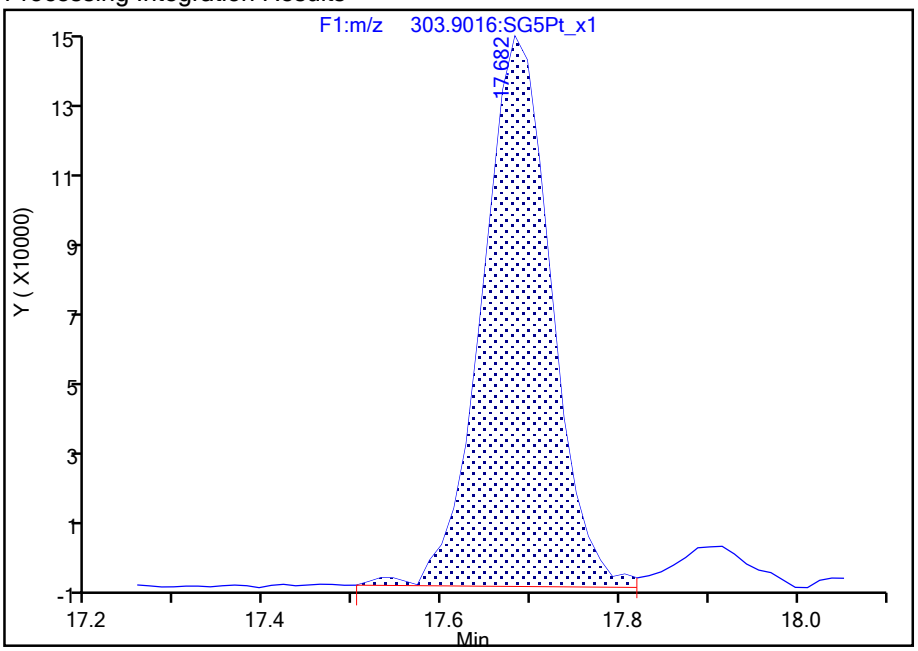

Manual Integration Results

RT: 17.68
Area: 798506
Amount: 9.876953
Amount Units: pg/ul

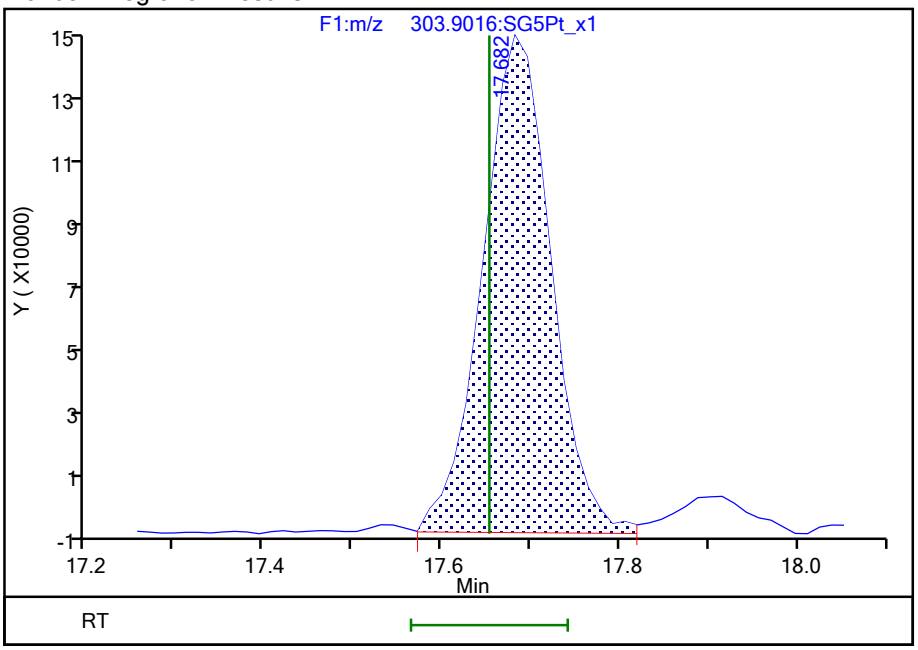

Reviewer: bennettd, 23-Aug-2021 10:01:08

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

778276

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_004.d				
Injection Date:	21-Aug-2021 15:49:31	Instrument ID:	11D2		
Lims ID:	320-76769-A-9-A	Lab Sample ID:	320-76769-9		
Client ID:	11215702-072221-SS-SJSB080 (16-18)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.68
Area: 1035888
Amount: 9.992862
Amount Units: pg/ul

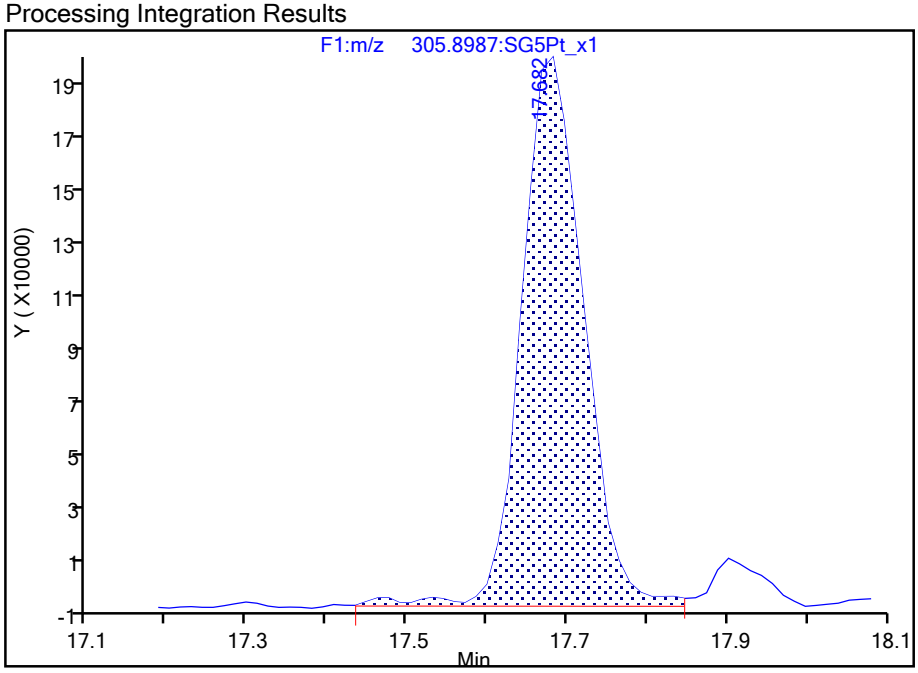

Manual Integration Results

RT: 17.68
Area: 1019693
Amount: 9.876953
Amount Units: pg/ul

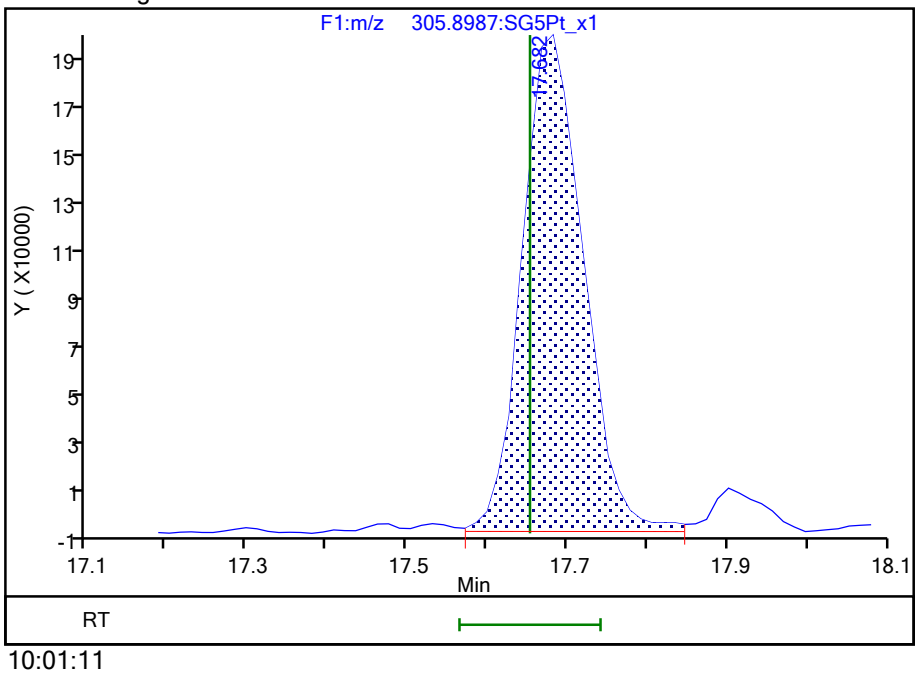

Reviewer: bennettd, 23-Aug-2021 10:01:11

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

778277

Report Date: 23-Aug-2021 10:28:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_004.d		
Injection Date:	21-Aug-2021 15:49:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	518850	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

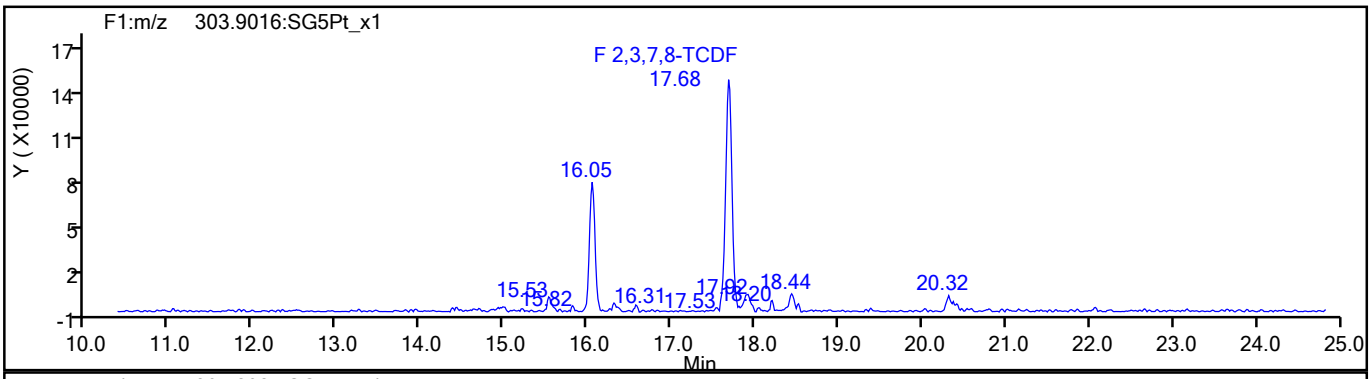

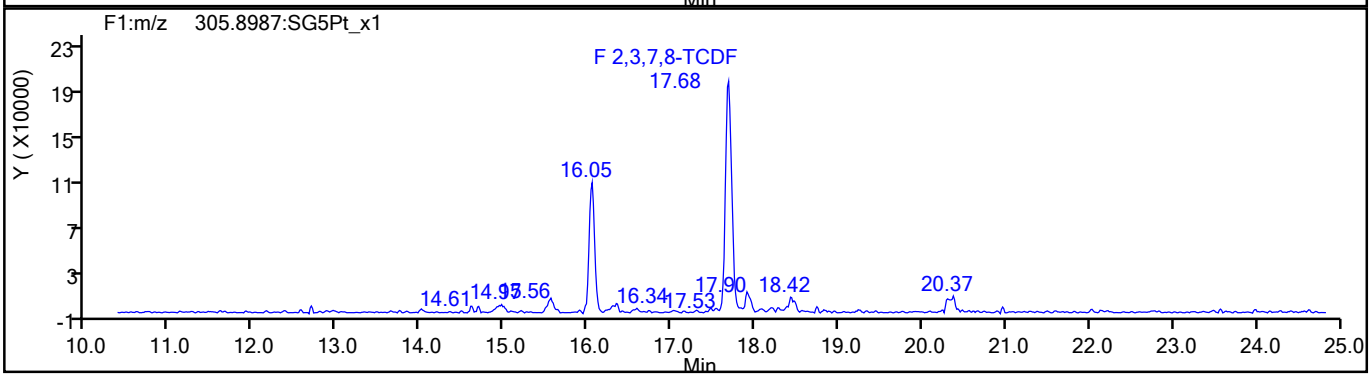

TCDF Standards

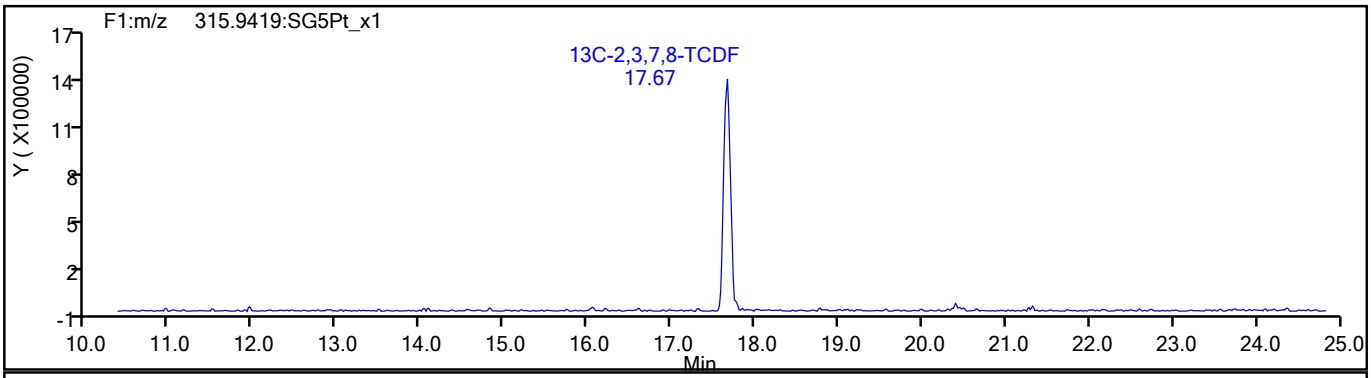

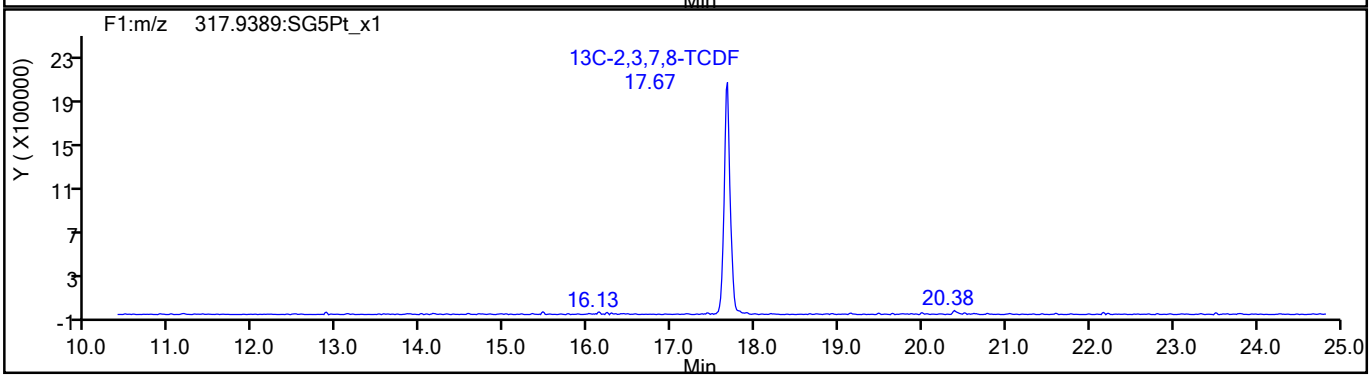

778278

Report Date: 23-Aug-2021 10:28:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_004.d		
Injection Date:	21-Aug-2021 15:49:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	518850	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

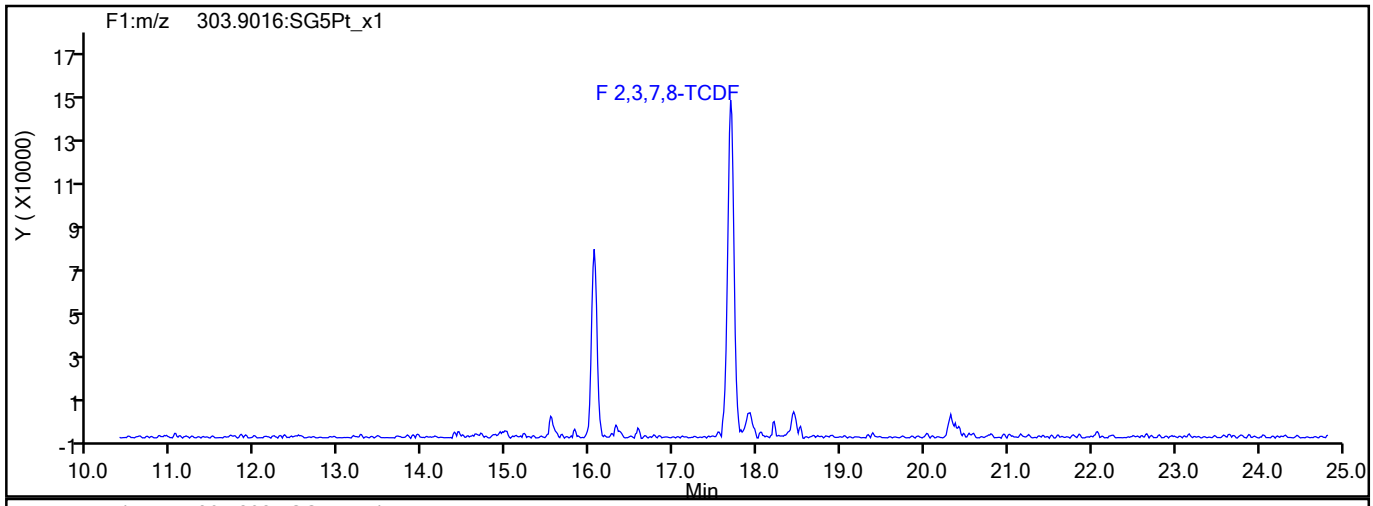

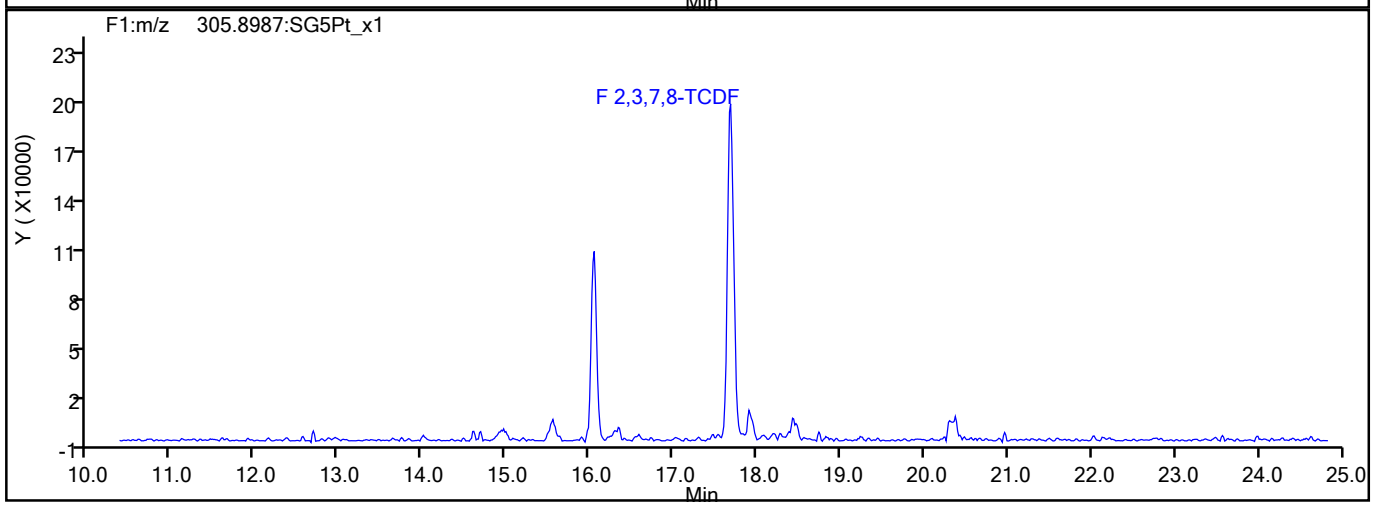

TCDF Interference Mass

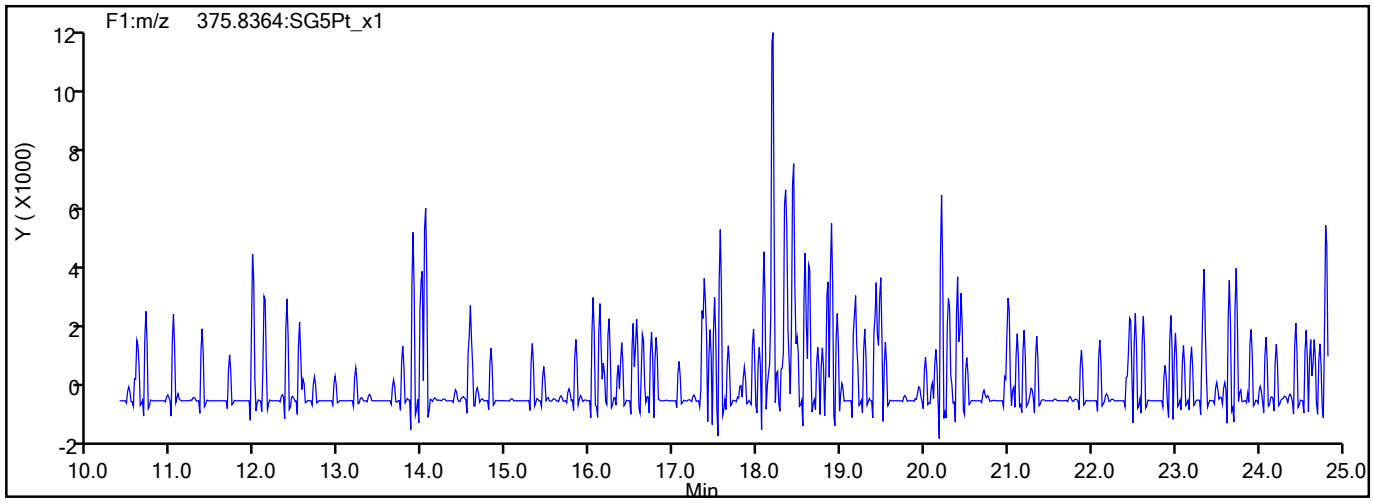

778279

Report Date: 23-Aug-2021 10:28:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_004.d		
Injection Date:	21-Aug-2021 15:49:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	518850	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

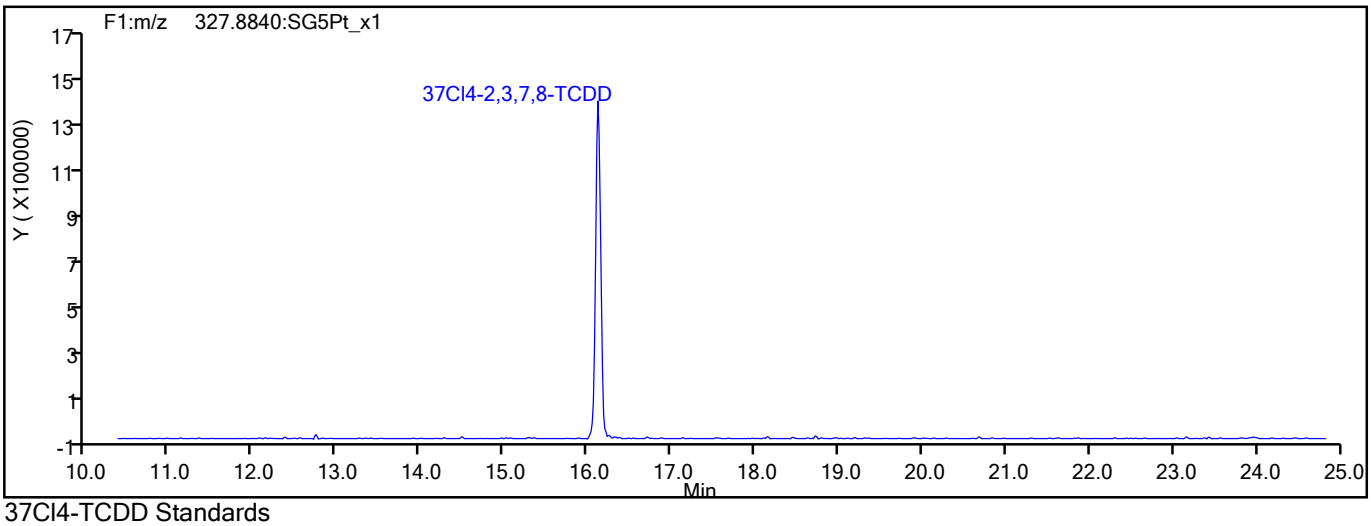

37Cl4-TCDD Standards

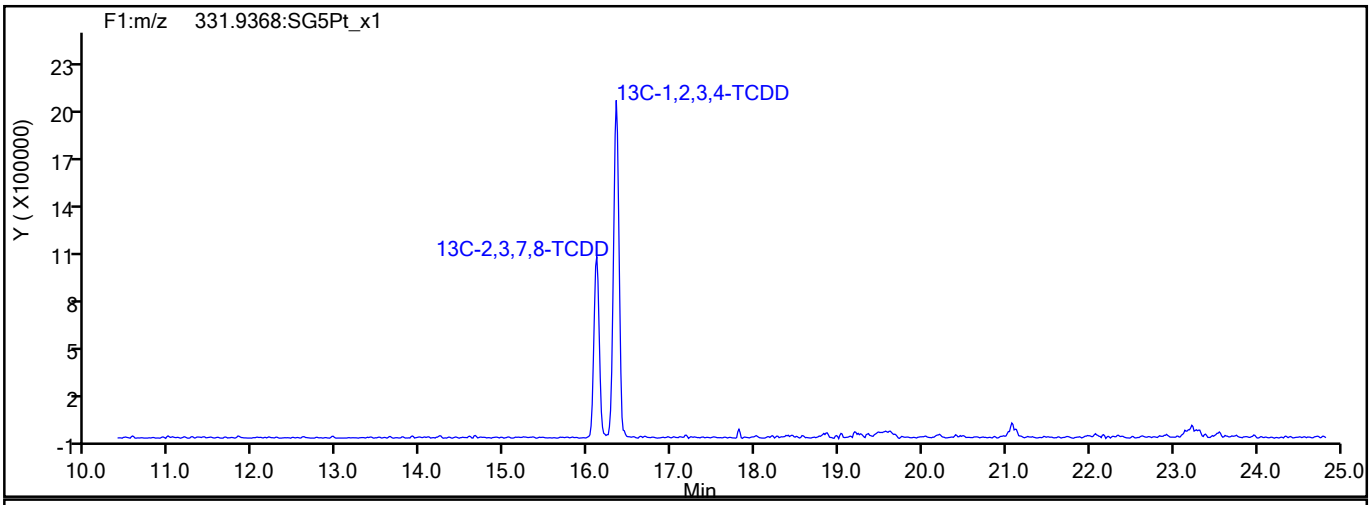

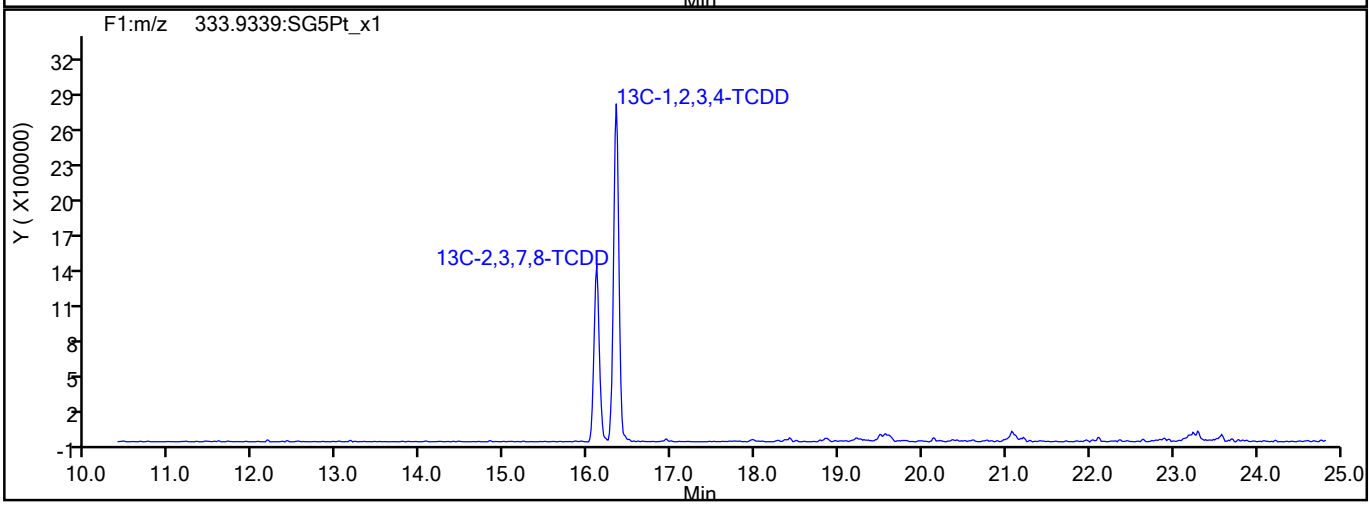

778280

Report Date: 23-Aug-2021 10:28:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_004.d		
Injection Date:	21-Aug-2021 15:49:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB080 (16-18)		
Worklist#:	518850	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

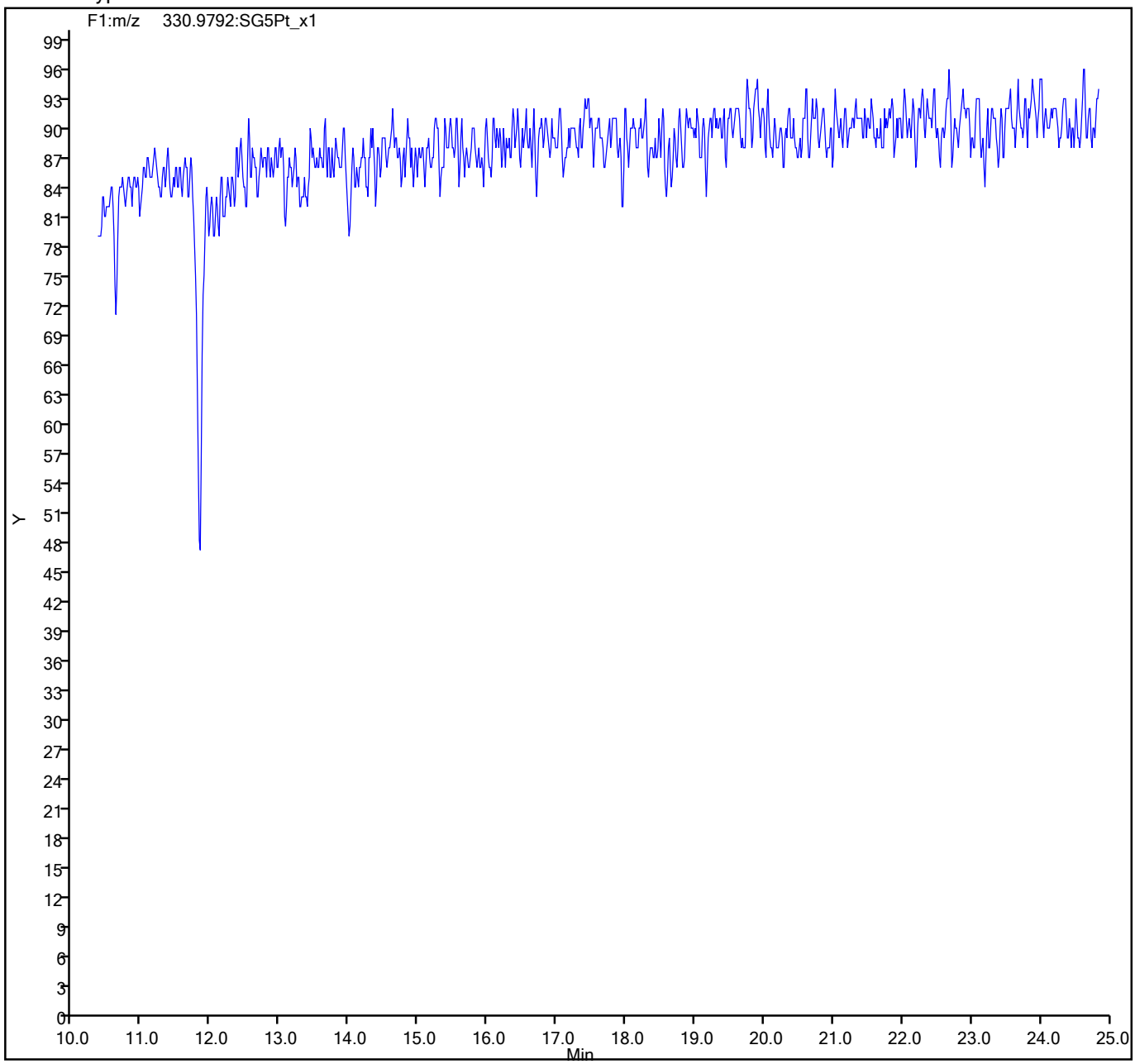

778281

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-2
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (16-18)
Lab Sample ID: 320-76769-21
Matrix: Sediment
Lab File ID: 12AU2110D5_29.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:40
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 10.37(g)
Date Analyzed: 08/13/2021 09:33
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 20.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 515770
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.38	J q	1.2	0.029
51207-31-9	2,3,7,8-TCDF	0.66	J B	1.2	0.017
40321-76-4	1,2,3,7,8-PeCDD	0.12	J q	6.1	0.049
57117-41-6	1,2,3,7,8-PeCDF	0.18	J	6.1	0.024
57117-31-4	2,3,4,7,8-PeCDF	0.056	J	6.1	0.025
39227-28-6	1,2,3,4,7,8-HxCDD	0.26	J B q	6.1	0.11
57653-85-7	1,2,3,6,7,8-HxCDD	0.27	J q	6.1	0.12
19408-74-3	1,2,3,7,8,9-HxCDD	0.67	J B	6.1	0.10
70648-26-9	1,2,3,4,7,8-HxCDF	0.067	J	6.1	0.019
57117-44-9	1,2,3,6,7,8-HxCDF	ND		6.1	0.019
72918-21-9	1,2,3,7,8,9-HxCDF	0.22	J B	6.1	0.016
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.1	0.016
35822-46-9	1,2,3,4,6,7,8-HpCDD	9.6	B	6.1	0.29
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.096	J B	6.1	0.022
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.1	0.027
3268-87-9	OCDD	200	B	12	0.25
39001-02-0	OCDF	0.12	J B q	12	0.018
41903-57-5	Total TCDD	2.0	B q	1.2	0.029
30402-14-3	Total TCDF	1.3	B q	1.2	0.017
36088-22-9	Total PeCDD	2.4	J q	6.1	0.049
30402-15-4	Total PeCDF	0.29	J q	6.1	0.024
34465-46-8	Total HxCDD	11	B q	6.1	0.11
55684-94-1	Total HxCDF	0.28	J B	6.1	0.017
37871-00-4	Total HpCDD	37	B	6.1	0.29
38998-75-3	Total HpCDF	0.096	J B	6.1	0.025

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-2
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB074 (16-18)
Lab Sample ID: 320-76769-21
Matrix: Sediment
Lab File ID: 12AU2110D5_29.d
Analysis Method: 1613B
Date Collected: 07/22/2021 13:40
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 10.37(g)
Date Analyzed: 08/13/2021 09:33
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 20.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 515770
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	56		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	59		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	55		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	61		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	64		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	55		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	60		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	54		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	62		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	59		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	66		26-138
114423-97-1	13C-OCDD	66		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	83		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d
Lims ID: 320-76769-A-21-A
Client ID: 11215702-072221-SS-SJSB074 (16-18)
Sample Type: Client
Inject. Date: 13-Aug-2021 09:33:14 ALS Bottle#: 33 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-21-a 320-76769-a-21-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 14:01:46 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: arghestanis Date: 13-Aug-2021 15:41:42

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	148018039	0.81	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.356	133502564	0.78	1.6249	55.5	55.5	0.0830	0.0830	55.51	
2,3,7,8-TCDF	17.371	373431	0.82	1.0239	0.2732	0.2732	0.007180	0.007180		M
A Non-2,3,7,8-sub-TCDF	17.069	348985	0.77	1.0239	0.2758	0.2553	0.007180	0.1053		RQM
S Total TCDF					0.5490	0.5285	0.007180	0.007180		RQ
D 13C-2,3,7,8-TCDD	18.066	79202522	0.81	0.8993	59.5	59.5	0.1235	0.1235	59.50	
2,3,7,8-TCDD	18.081	154332	0.77	1.2541	0.2101	0.1554	0.0121	0.0121		RQM
$ 37Cl4-2,3,7,8-TCDD	18.081	54424412		1.1071	33.2	33.2	0.0294	0.0294	83.03	
A Non-2,3,7,8-sub-TCDD	17.530	678193	0.77	1.2541	0.6965	0.6828	0.0121	0.2088		RQ
S Total TCDD					0.9066	0.8381	0.0121	0.0121		RQ
D 13C-1,2,3,7,8-PeCDF	22.380	98810125	1.58	1.2101	55.2	55.2	0.1318	0.1318	55.17	
1,2,3,7,8-PeCDF	22.408	76159	1.38	1.0611	0.0726	0.0726	0.009891	0.009891		M
D 13C-2,3,4,7,8-PeCDF	23.730	111062967	1.58	1.2395	60.5	60.5	0.1287	0.1287	60.54	
2,3,4,7,8-PeCDF	23.744	26101	1.64	1.0184	0.0231	0.0231	0.0102	0.0102		M
A F1 PeCDFs	20.108						0.009549	0.0187		RQU
A Non-2,3,7,8-sub-PeCDF	23.261	24835	1.55	1.0398	0.0265	0.0228	0.0100	0.0228		RQMa
S Total PeCDF					0.1222	0.1185	0.0101	0.0101		RQ
D 13C-1,2,3,7,8-PeCDD	24.453	66044704	1.60	0.7612	58.6	58.6	0.0542	0.0542	58.61	
1,2,3,7,8-PeCDD	24.467	33969	1.55	1.0484	0.0535	0.0491	0.0204	0.0204		RQ
A Non-2,3,7,8-sub-PeCDD	23.376	645849	1.55	1.0484	0.9522	0.9327	0.0204	0.3743		RQ
S Total PeCDD					1.006	0.9818	0.0204	0.0204		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	91134152	0.53	1.0837	60.1	60.1	0.2228	0.2228	60.13	
1,2,3,4,7,8-HxCDF	30.569	27344	1.21	1.0851	0.0277	0.0277	0.007789	0.007789		Ma
D 13C-1,2,3,6,7,8-HxCDF	30.702	85287026	0.51	1.1279	54.1	54.1	0.2141	0.2141	54.07	
1,2,3,6,7,8-HxCDF	30.743						0.007901	0.007901		
D 13C-2,3,4,6,7,8-HxCDF	31.514	79954683	0.52	1.0637	53.7	53.7	0.2270	0.2270	53.74	
2,3,4,6,7,8-HxCDF	31.434						0.006467	0.006467		U
D 13C-1,2,3,7,8,9-HxCDF	32.326	72214220	0.51	0.9676	53.4	53.4	0.2496	0.2496	53.37	
1,2,3,7,8,9-HxCDF	32.340	75190	1.30	1.1664	0.0893	0.0893	0.006496	0.006496		M
A Non-2,3,7,8-sub-HxCDF	30.223						0.007110	0.007110		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.1169	0.1169	0.007163	0.007163		
* 13C-1,2,3,7,8,9-HxCDD	32.140	139856538	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	65176899	1.24	0.7334	63.5	63.5	0.2537	0.2537	63.54	
1,2,3,4,7,8-HxCDD	31.727	73335	1.24	1.0640	0.1204	0.1057	0.0459	0.0459		RQM
D 13C-1,2,3,6,7,8-HxCDD	31.807	68117326	1.25	0.8802	55.3	55.3	0.2114	0.2114	55.34	
1,2,3,6,7,8-HxCDD	31.834	75064	1.24	1.0001	0.1215	0.1102	0.0479	0.0479		RQMa
1,2,3,7,8,9-HxCDD	32.153	207680	1.14	1.1325	0.2751	0.2751	0.0427	0.0427		
A Non-2,3,7,8-sub-HxCDD	30.895	2792162	1.20	1.0655	3.932	3.932	0.0454	2.999		
S Total HxCDD					4.449	4.423	0.0455	0.0455		RQ
1,2,3,4,6,7,8-HpCDF	33.778	36716	1.00	1.4413	0.0397	0.0397	0.009114	0.009114		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	64174021	0.44	0.7730	59.4	59.4	0.6756	0.6756	59.36	
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	64957882	0.44	0.7008	66.3	66.3	0.7452	0.7452	66.27	
1,2,3,4,7,8,9-HpCDF	34.872						0.0112	0.0112		
A Non-2,3,7,8-sub-HpCDF	34.325						0.0101	0.0101		
S Total HpCDF					0.0397	0.0397	0.0102	0.0102		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	56198070	0.99	0.6472	62.1	62.1	0.2871	0.2871	62.08	
1,2,3,4,6,7,8-HpCDD	34.568	2442590	1.00	1.0943	3.972	3.972	0.1182	0.1182		
A Non-2,3,7,8-sub-HpCDD	34.301	6979655	1.03	1.0943	11.3	11.3	0.1182	11.3		
S Total HpCDD					15.3	15.3	0.1182	0.1182		
D 13C-OCDD	36.914	82888065	0.88	0.4472	132.5	132.5	0.1580	0.1580	66.27	
OCDF	37.022	28460	0.89	1.4382	0.0547	0.0477	0.007590	0.007590		RQM
OCDD	36.926	37162565	0.89	1.1070	81.0	81.0	0.1026	0.1026		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d
Lims ID: 320-76769-A-21-A
Client ID: 11215702-072221-SS-SJSB074 (16-18)
Sample Type: Client
Inject. Date: 13-Aug-2021 09:33:14 ALS Bottle#: 33 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-21-a 320-76769-a-21-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 14:01:46 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: arghestanis Date: 13-Aug-2021 15:41:42

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.855	17.885	-2		66216233	15791153	7282	18205	2169		a
333.9339	17.855	17.885	-2		81801806	19527164	8413	21032	2321	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.972	58362031	14066970	10236	25590	1374		
317.9389	17.356	17.356	0	0.972	75140533	18034091	8820	22050	2045	0.78(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.371	17.386	-1	1.001	168155	35381	415	1037	85		M
305.8987	17.371	17.386	-1	1.001	205276	48579	529	1322	92	0.82(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	15.451	17.069	-97	0.890	16817	5128	415	1037	12		
305.8987	15.436	17.069	-98	0.889	23429	6158	529	1322	12	0.72(0.65-0.89)	M
303.9016	15.934	17.069	-68	0.918	9779	2202	415	1037	5		
305.8987	15.950	17.069	-67	0.919	13445	2857	529	1322	5	0.73(0.65-0.89)	
303.9016	16.237	17.069	-50	0.936	19752	4002	415	1037	10		
305.8987	16.237	17.069	-50	0.936	28458	5591	529	1322	11	0.69(0.65-0.89)	
303.9016	16.449	17.069	-37	0.948	12765	2752	415	1037	7		
305.8987	16.449	17.069	-37	0.948	16035	2813	529	1322	5	0.80(0.65-0.89)	
303.9016	16.978	17.069	-5	0.978	81108	20385	415	1037	49		
	Empc Correction				62600	14591	415	1037	35		
305.8987	16.978	17.069	-5	0.978	81300	18950	529	1322	36	1.00(0.65-0.89)	M
303.9016	17.809	17.069	44	1.026	13756	3475	415	1037	8		M
305.8987	17.794	17.069	43	1.025	22177	6121	529	1322	12	0.62(0.65-0.89)	M
	Empc Correction				17864	4512	529	1322	9		
303.9016	19.215	17.069	129	1.107	19584	3274	415	1037	8		
	Empc Correction				14349	3612	415	1037	9		
305.8987	19.200	17.069	128	1.106	18636	4692	529	1322	9	1.05(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											
331.9368	18.066	18.066	0	1.012	35505010	7905476	7282	18205	1086		
333.9339	18.066	18.066	0	1.012	43697512	9724162	8413	21032	1156	0.81(0.65-0.89)	
2,3,7,8-TCDD											RQM
319.8965	18.081	18.082	0	1.001	67139	14812	545	1362	27		M
321.8936	18.081	18.082	0	1.001	141548	33312	526	1315	63	0.47(0.65-0.89)	
	Empc Correction				87193	19236	526	1315	37		
37Cl4-2,3,7,8-TCDD											
327.8847	18.081	18.097	-1	1.013	54424412	12486022	4601	11502	2714		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	15.844	17.530	-101	0.877	17915	5841	545	1362	11		
	Empc Correction				14759	4455	545	1362	8		
321.8936	15.844	17.530	-101	0.877	19168	5787	526	1315	11	0.93(0.65-0.89)	
319.8965	16.146	17.530	-83	0.894	19848	6115	545	1362	11		
321.8936	16.146	17.530	-83	0.894	32035	7186	526	1315	14	0.62(0.65-0.89)	
	Empc Correction				25776	7941	526	1315	15		
319.8965	16.373	17.530	-69	0.906	28951	6226	545	1362	11		
	Empc Correction				24697	6966	545	1362	13		
321.8936	16.373	17.530	-69	0.906	32075	9048	526	1315	17	0.90(0.65-0.89)	
319.8965	16.933	17.530	-36	0.937	91558	20929	545	1362	38		
321.8936	16.933	17.530	-36	0.937	115845	28489	526	1315	54	0.79(0.65-0.89)	
319.8965	17.114	17.530	-25	0.947	17279	2520	545	1362	5		
321.8936	17.129	17.530	-24	0.948	22166	2791	526	1315	5	0.78(0.65-0.89)	
319.8965	17.552	17.530	1	0.972	15795	2698	545	1362	5		
321.8936	17.552	17.530	1	0.972	22728	5691	526	1315	11	0.69(0.65-0.89)	
319.8965	17.840	17.530	19	0.987	51548	10705	545	1362	20		
321.8936	17.824	17.530	18	0.987	62445	15637	526	1315	30	0.83(0.65-0.89)	
319.8965	17.961	17.530	26	0.994	59303	14897	545	1362	27		
321.8936	17.961	17.530	26	0.994	83203	17821	526	1315	34	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.380	22.408	-2	1.253	60475375	10141408	13515	33787	750		
353.8970	22.380	22.408	-2	1.253	38334750	6504354	9015	22537	722	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.408	22.435	-2	1.001	44112	7715	244	610	32		M
341.8567	22.408	22.435	-2	1.001	32047	5652	455	1137	12	1.38(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.730	23.758	-2	1.329	68094996	10285004	13515	33787	761		
353.8970	23.730	23.758	-2	1.329	42967971	6508032	9015	22537	722	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	23.744	23.785	-2	1.001	16199	3163	244	610	13		M
341.8567	23.771	23.785	-1	1.002	9902	1812	455	1137	4	1.64(1.32-1.78)	M
A F1 PeCDFs											U
339.8597	19.503	20.108	-36	0.871	12394	2333	251	627	9		
341.8567	19.488	20.108	-37	0.871	10746	2379	413	1032	6	1.15(1.32-1.78)	
	Empc Correction				7996	1505	413	1032	4		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQMa
339.8597	21.017	23.261	-134	0.939	15096	3252	244	610	13		M
341.8567	21.058	23.261	-132	0.941	13766	2571	455	1137	6	1.10(1.32-1.78)	M
	Empc Correction				9739	2098	455	1137	5		
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.481	-2	1.370	40676283	5891518	3048	7620	1933		
369.8919	24.453	24.481	-2	1.370	25368421	3660298	2781	6952	1316	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											RQ
355.8546	24.467	24.508	-2	1.001	20648	3444	537	1342	6		
357.8516	24.467	24.508	-2	1.001	16388	3114	279	697	11	1.26(1.32-1.78)	
	Empc Correction				13321	2221	279	697	8		
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.262	23.376	-127	0.870	85483	15051	537	1342	28		
357.8516	21.262	23.376	-127	0.870	61057	10386	279	697	37	1.40(1.32-1.78)	
355.8546	21.985	23.376	-83	0.899	151692	24791	537	1342	46		
357.8516	21.985	23.376	-83	0.899	107484	18471	279	697	66	1.41(1.32-1.78)	
355.8546	22.421	23.376	-57	0.917	19301	3647	537	1342	7		
	Empc Correction				5817	1636	537	1342	3		
357.8516	22.421	23.376	-57	0.917	3753	1056	279	697	4	5.14(1.32-1.78)	
355.8546	22.667	23.376	-42	0.927	17760	2804	537	1342	5		
357.8516	22.694	23.376	-41	0.928	10188	2671	279	697	10	1.74(1.32-1.78)	
355.8546	22.994	23.376	-23	0.940	15271	2476	537	1342	5		
357.8516	22.967	23.376	-25	0.939	9513	2135	279	697	8	1.61(1.32-1.78)	
355.8546	23.294	23.376	-5	0.953	26192	4570	537	1342	9		
357.8516	23.294	23.376	-5	0.953	15122	4067	279	697	15	1.73(1.32-1.78)	
355.8546	23.499	23.376	7	0.961	79935	11073	537	1342	21		
357.8516	23.485	23.376	7	0.960	56582	5898	279	697	21	1.41(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.543	-2	0.949	31729653	5892277	12532	31330	470		
385.8610	30.516	30.543	-2	0.949	59404499	11169517	23632	59080	473	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											Ma
373.8208	30.569	30.569	0	1.002	14987	2076	327	817	6		a
375.8178	30.542	30.569	-2	1.001	12357	2107	250	625	8	1.21(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.716	-1	0.955	28743535	5626459	12532	31330	449		
385.8610	30.702	30.716	-1	0.955	56543491	10582089	23632	59080	448	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.743						327	817			
375.8178	30.743						250	625			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.541	-2	0.981	27465214	6512566	12532	31330	520		
385.8610	31.514	31.541	-2	0.981	52489469	12585508	23632	59080	533	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											U
373.8208	31.554						327	817			
375.8178	31.554						250	625			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.340	-1	1.006	24527492	6531568	12532	31330	521		
385.8610	32.326	32.340	-1	1.006	47686728	12500754	23632	59080	529	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.340	32.353	-1	1.000	42447	11645	327	817	36		M
375.8178	32.340	32.353	-1	1.000	32743	9273	250	625	37	1.30(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.223						327	817			
375.8178	30.223						250	625			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.153	-1		77303528	20711699	15870	39675	1305		
403.8529	32.140	32.153	-1		62553010	16729440	11997	29992	1394	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.727	-1	0.987	36120839	9435002	15870	39675	595		
403.8529	31.701	31.727	-2	0.986	29056060	7596044	11997	29992	633	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQM
389.8157	31.727	31.741	-1	1.000	50771	13040	2008	5020	6		M
	Empc Correction				40596	11031	2008	5020	5		
391.8127	31.727	31.741	-1	1.000	32739	8896	1317	3292	7	1.55(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.834	-2	0.990	37831204	9519251	15870	39675	600		
403.8529	31.807	31.834	-2	0.990	30286122	7830100	11997	29992	653	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQMa
389.8157	31.834	31.847	-1	1.001	49277	11788	2008	5020	6		M
	Empc Correction				41553	11109	2008	5020	6		
391.8127	31.834	31.847	-1	1.001	33511	8959	1317	3292	7	1.47(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.167	-1	1.014	110406	26577	2008	5020	13		
391.8127	32.153	32.167	-1	1.014	97274	22317	1317	3292	17	1.14(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.571	30.895	-79	0.930	1170192	145137	2008	5020	72		
391.8127	29.571	30.895	-79	0.930	959710	112705	1317	3292	86	1.22(1.05-1.43)	
389.8157	30.968	30.895	4	0.974	353405	69832	2008	5020	35		
391.8127	30.968	30.895	4	0.974	308855	59746	1317	3292	45	1.14(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	18312	6217	801	2002	8		
409.7789	33.766	33.778	-1	1.000	18404	5941	305	762	19	1.00(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.778	-1	1.051	19710014	6511860	23266	58165	280		
419.8220	33.766	33.778	-1	1.051	44464007	14536574	54951	137377	265	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.860	-1	1.084	19853613	5718464	23266	58165	246		
419.8220	34.847	34.860	-1	1.084	45104269	12968552	54951	137377	236	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872						801	2002			
409.7789	34.872						305	762			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						801	2002			
409.7789	34.325						305	762			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.568	-1	1.075	28005638	8325409	14187	35467	587		
437.8140	34.556	34.568	-1	1.075	28192432	8348108	13643	34107	612	0.99(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.580	-1	1.000	1221565	365274	4568	11420	80		
425.7737	34.568	34.580	-1	1.000	1221025	365186	4058	10145	90	1.00(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.985	3545639	1106129	4568	11420	242		
425.7737	34.021	34.301	-17	0.985	3434016	1041512	4058	10145	257	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.926	-1	1.149	38737964	9698812	5670	14175	1711		
471.7750	36.914	36.926	-1	1.149	44150101	11187361	4908	12270	2279	0.88(0.76-1.02)	
OCDF											RQM
441.7428	37.022	37.034	-1	1.003	13402	4290	197	492	22		M
443.7399	37.010	37.034	-1	1.003	19217	5842	259	647	23	0.70(0.76-1.02)	M
	Empc Correction				15058	4820	259	647	19		
OCDD											
457.7377	36.926	36.938	-1	1.000	17530920	4506807	2219	5547	2031		
459.7348	36.926	36.938	-1	1.000	19631645	5093345	2525	6312	2017	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d
Lims ID: 320-76769-A-21-A
Client ID: 11215702-072221-SS-SJSB074 (16-18)
Inject. Date: 13-Aug-2021 09:33:14 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	133502564	32101061

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	133502564	32101061

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.451	16817	5128	23429	6158	0.0294	0.72	M
15.934	9779	2202	13445	2857	0.0170	0.73	
16.237	19752	4002	28458	5591	0.0353	0.69	
16.449	12765	2752	16035	2813	0.0211	0.80	
16.978	81108	20385	81300	18950	0.1188	1.00	RQM
16.978	62600	14591	81300	18950	0.1053		Empc Correction
17.809	13756	3475	22177	6121	0.0263	0.62	RQM
17.809	13756	3475	17864	4512	0.0231		Empc Correction
19.215	19584	3274	18636	4692	0.0280	1.05	RQ
19.215	14349	3612	18636	4692	0.0241		Empc Correction
Signal Totals:							
	149818	35762	199167	45573			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	377041	88400				0.85	RQM
	348985	81335					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2758 = (377041 * 100.000) / (133502564 * 1.024)
Empc Amount: 0.2553 = (348985 * 100.000) / (133502564 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d
Lims ID: 320-76769-A-21-A
Client ID: 11215702-072221-SS-SJSB074 (16-18)
Inject. Date: 13-Aug-2021 09:33:14 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	79202522	17629638

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	79202522	17629638

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.844	17915	5841	19168	5787	0.0373	0.93	RQ
15.844	14759	4455	19168	5787	0.0342		Empc Correction
16.146	19848	6115	32035	7186	0.0522	0.62	RQ
16.146	19848	6115	25776	7941	0.0459		Empc Correction
16.373	28951	6226	32075	9048	0.0614	0.90	RQ
16.373	24697	6966	32075	9048	0.0572		Empc Correction
16.933	91558	20929	115845	28489	0.2088	0.79	
17.114	17279	2520	22166	2791	0.0397	0.78	
17.552	15795	2698	22728	5691	0.0388	0.69	
17.840	51548	10705	62445	15637	0.1148	0.83	
17.961	59303	14897	83203	17821	0.1435	0.71	
Signal Totals:							
	294787	69285	383406	93205			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	691862	162381				0.78	RQ
	678193	162490					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6965 = (691862 * 100.000) / (79202522 * 1.254)
Empc Amount: 0.6828 = (678193 * 100.000) / (79202522 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Lims ID:	320-76769-A-21-A		
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Inject. Date:	13-Aug-2021 09:33:14	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	515770	Lims Sample ID:	7

F1 PeCDFs, RT: 20.108

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	98810125	16645762
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	111062967	16793036

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	104936546	16719399

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.503	12394	2333	10746	2379	0.0212	1.15	RQ
19.503	12394	2333	7996	1505	0.0187		Empc Correction

Compound is Marked ND

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Lims ID:	320-76769-A-21-A		
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Inject. Date:	13-Aug-2021 09:33:14	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	515770	Lims Sample ID:	7

Non-2,3,7,8-sub-PeCDF, RT: 23.261

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	98810125	16645762
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	111062967	16793036

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	104936546	16719399

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.017	15096	3252	13766	2571	0.0265	1.10	RQM
21.017	15096	3252	9739	2098	0.0228		Empc Correction
Signal Totals:							
	15096	3252	9739	2098			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28862	5823				1.10	RQM
	24835	5350					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0265 = (28862 * 100.000) / (104936546 * 1.040)
Empc Amount: 0.0228 = (24835 * 100.000) / (104936546 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Lims ID:	320-76769-A-21-A		
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Inject. Date:	13-Aug-2021 09:33:14	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	515770	Lims Sample ID:	7

Non-2,3,7,8-sub-PeCDD, RT: 23.376

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	66044704	9551816

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	66044704	9551816

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.262	85483	15051	61057	10386	0.2116	1.40	
21.985	151692	24791	107484	18471	0.3743	1.41	
22.421	19301	3647	3753	1056	0.0333	5.14	RQ
22.421	5817	1636	3753	1056	0.0138		Empc Correction
22.667	17760	2804	10188	2671	0.0404	1.74	
22.994	15271	2476	9513	2135	0.0358	1.61	
23.294	26192	4570	15122	4067	0.0597	1.73	
23.499	79935	11073	56582	5898	0.1972	1.41	
Signal Totals:							
	382150	62401	263699	44684			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	659333	109096				1.50	RQ
	645849	107085					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.9522 = (659333 * 100.000) / (66044704 * 1.048)

Empc Amount: 0.9327 = (645849 * 100.000) / (66044704 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Lims ID:	320-76769-A-21-A		
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Inject. Date:	13-Aug-2021 09:33:14	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	515770	Lims Sample ID:	7

Non-2,3,7,8-sub-HxCDF, RT: 30.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	91134152	17061794
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	85287026	16208548
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	79954683	19098074
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	72214220	19032322

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	82147520	17850184

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d
Lims ID: 320-76769-A-21-A
Client ID: 11215702-072221-SS-SJSB074 (16-18)
Inject. Date: 13-Aug-2021 09:33:14 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 7

Non-2,3,7,8-sub-HxCDD, RT: 30.895

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	65176899	17031046
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	68117326	17349351
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	66647112	17190198

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.571	1170192	145137	959710	112705	3.00	1.22	
30.968	353405	69832	308855	59746	0.9326	1.14	
Signal Totals:							
	1523597	214969	1268565	172451			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2792162	387420				1.20	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.932 = (2792162 * 100.000) / (66647112 * 1.066)

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d
Lims ID: 320-76769-A-21-A
Client ID: 11215702-072221-SS-SJSB074 (16-18)
Inject. Date: 13-Aug-2021 09:33:14 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 7

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	56198070	16673517

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	56198070	16673517

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	3545639	1106129	3434016	1041512	11.3	1.03	
Signal Totals:							
	3545639	1106129	3434016	1041512			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6979655	2147641				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 11.349 = (6979655 * 100.000) / (56198070 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.37
Area: 172727
Amount: 0.278951
Amount Units: pg/ul

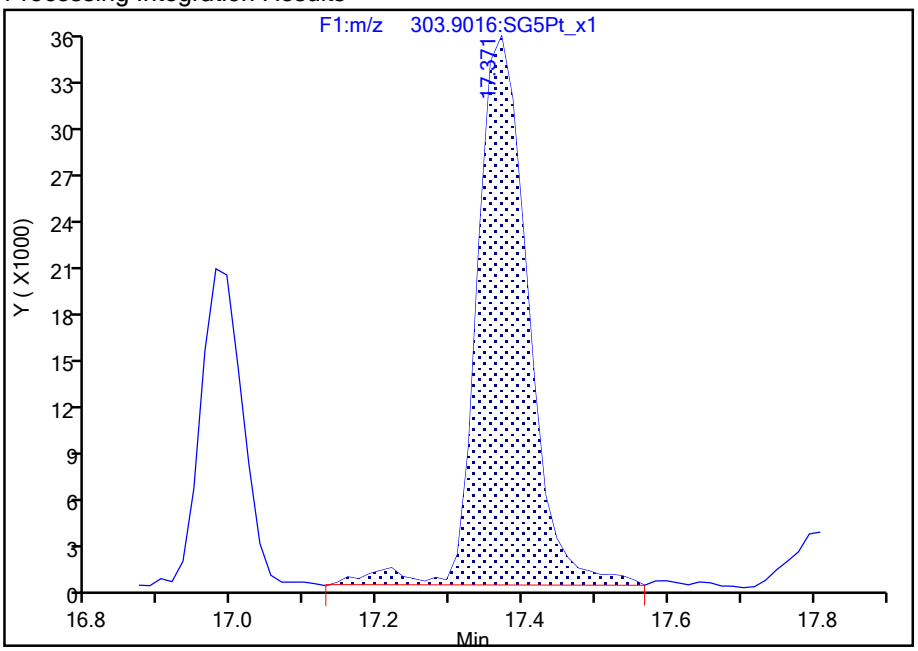

Manual Integration Results

RT: 17.37
Area: 168155
Amount: 0.273186
Amount Units: pg/ul

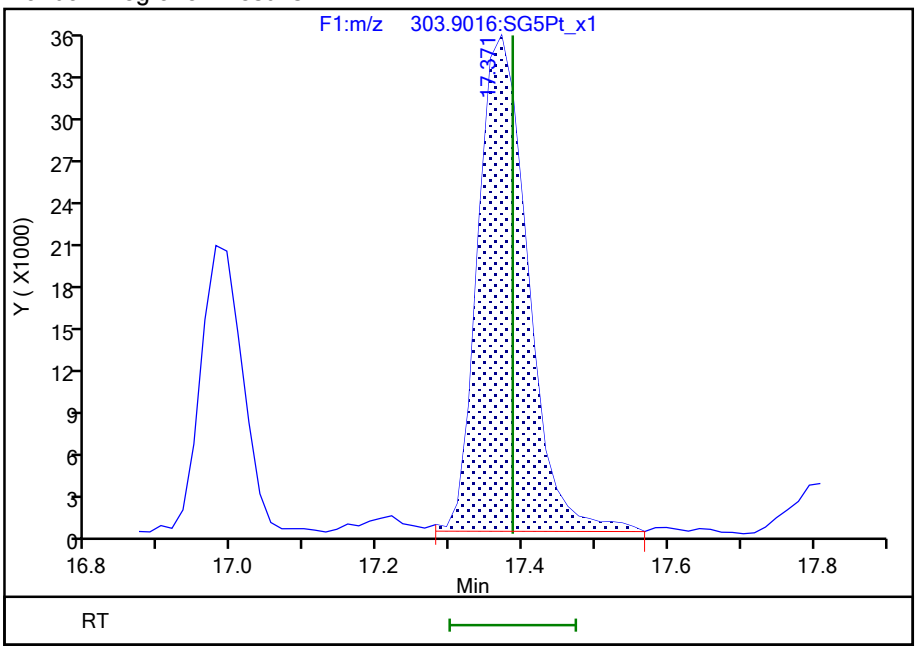

Reviewer: dadunj, 16-Aug-2021 13:57:33

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.37
Area: 208584
Amount: 0.278951
Amount Units: pg/ul

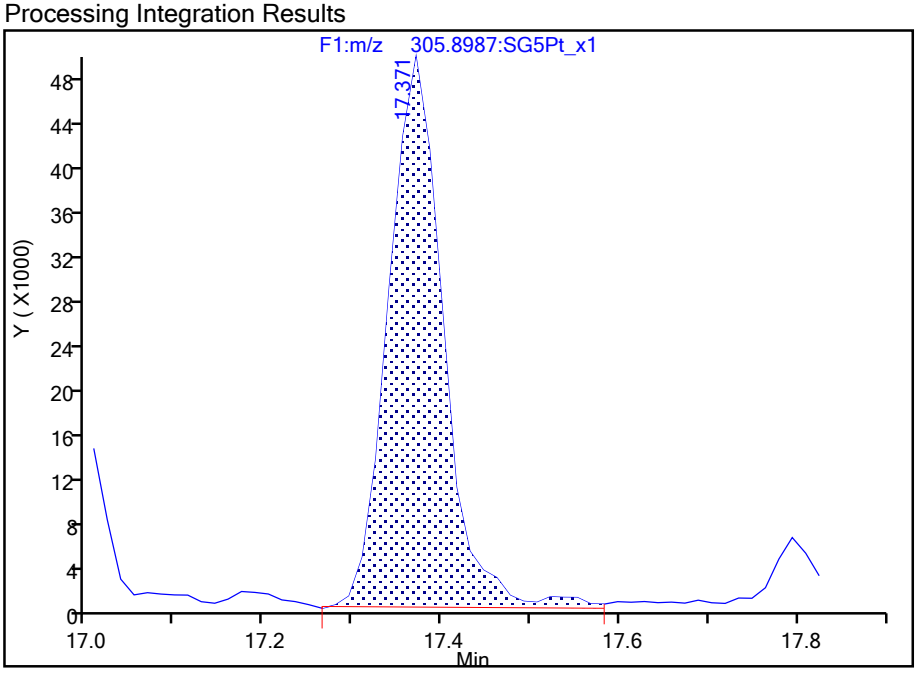

Manual Integration Results

RT: 17.37
Area: 205276
Amount: 0.273186
Amount Units: pg/ul

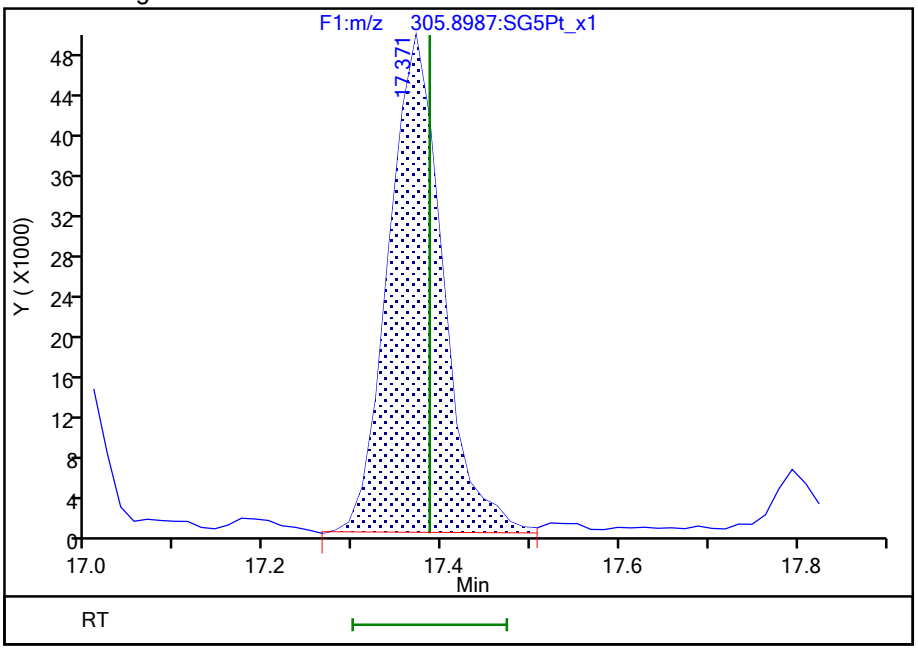

Reviewer: dadunj, 16-Aug-2021 13:57:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.91- 19.23)

Signal: 2

Processing Integration Results

RT = 15.436 Area = 30715

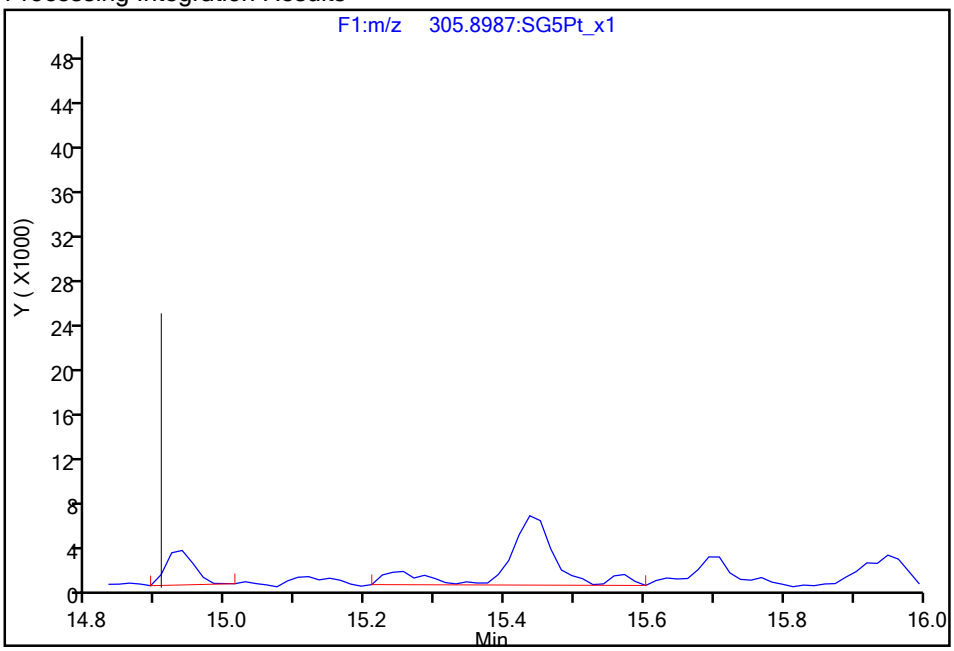

Manual Integration Results

RT = 15.436 Area = 23429 M

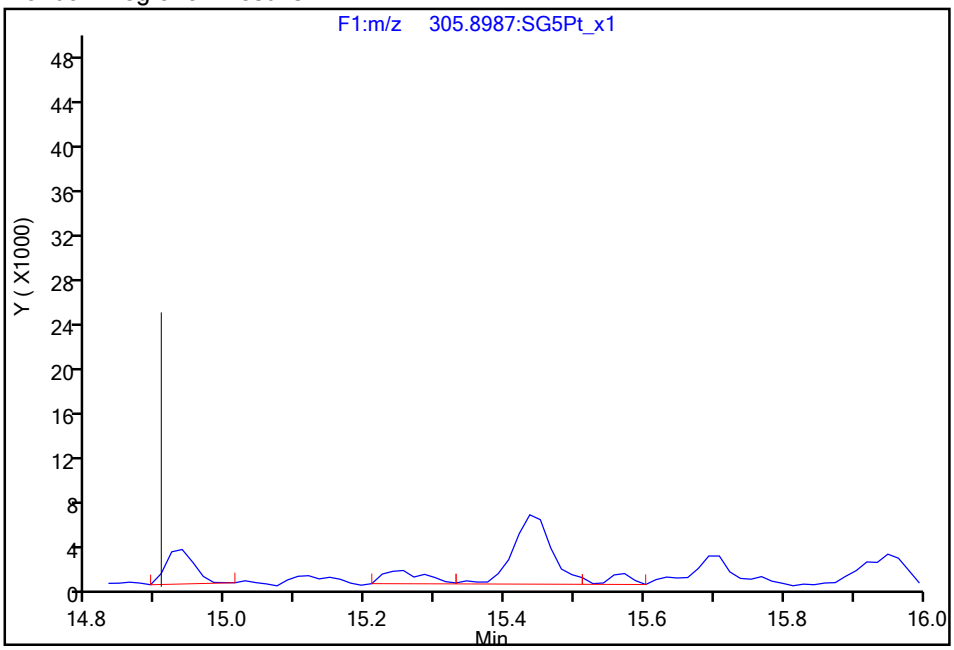

Reviewer: dadunj, 16-Aug-2021 13:57:47

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.91- 19.23)

Signal: 2

Processing Integration Results

RT = 16.978 Area = 96156

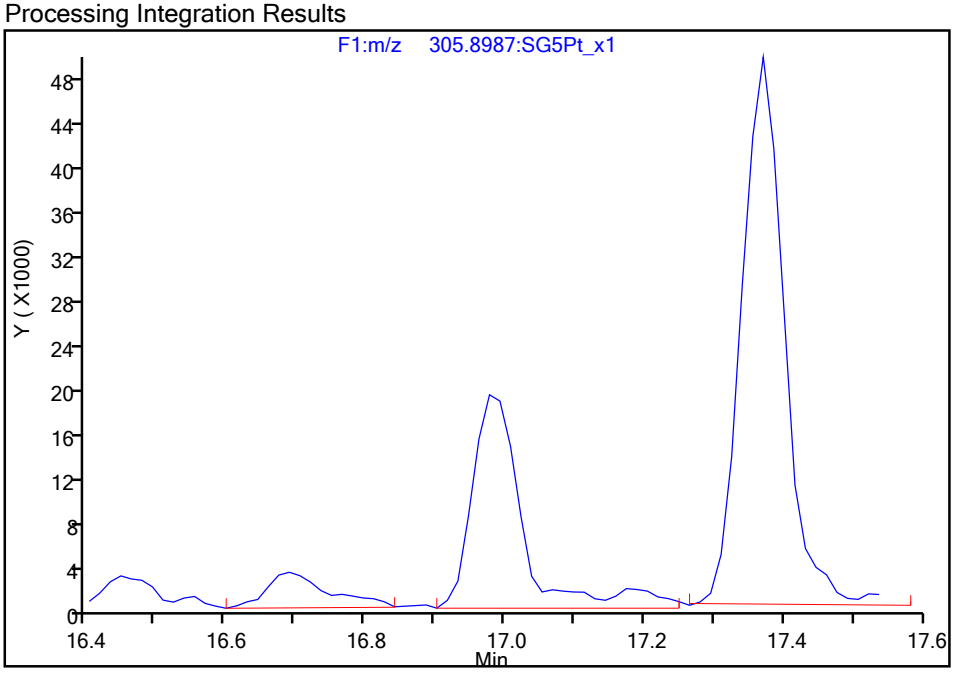

Manual Integration Results

RT = 16.978 Area = 81300 M

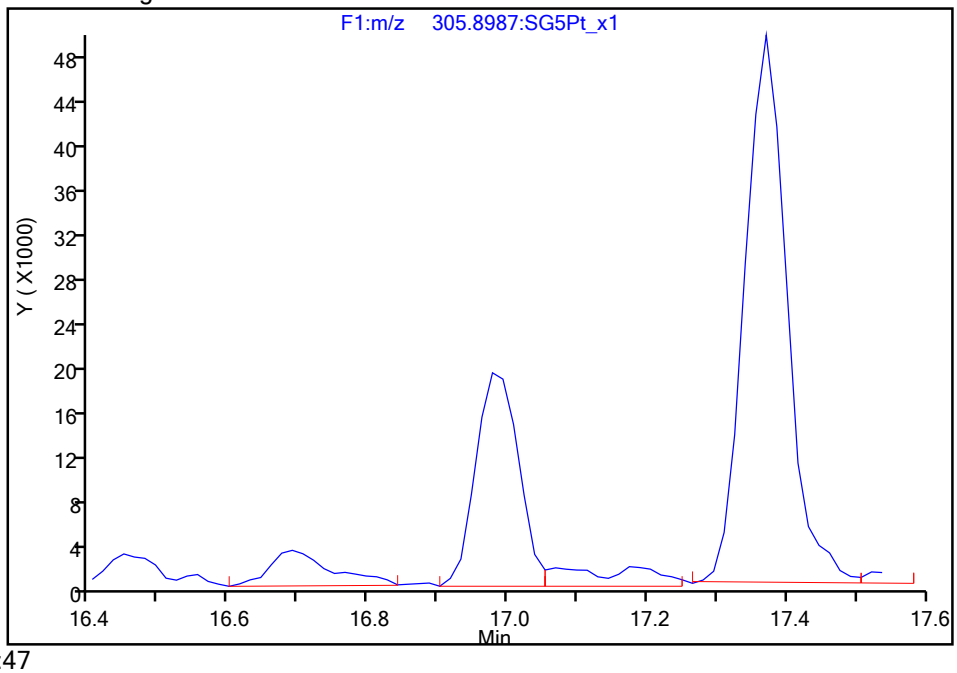

Reviewer: dadunj, 16-Aug-2021 13:57:47

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.91- 19.23)

Signal: 1

Processing Integration Results

RT = 17.809 Area = 24368

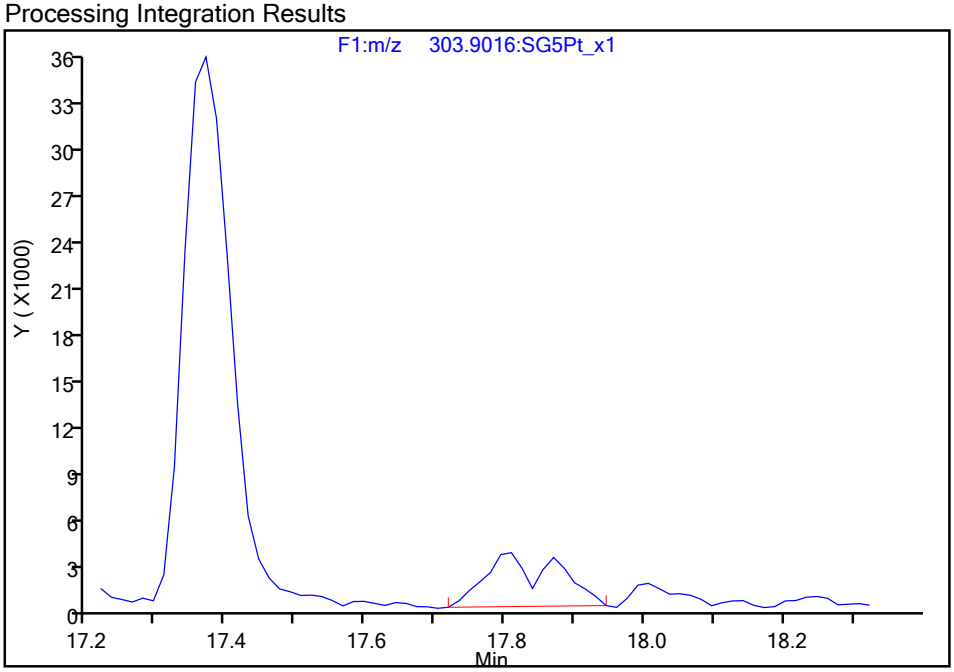

Manual Integration Results

RT = 17.809 Area = 13756 M

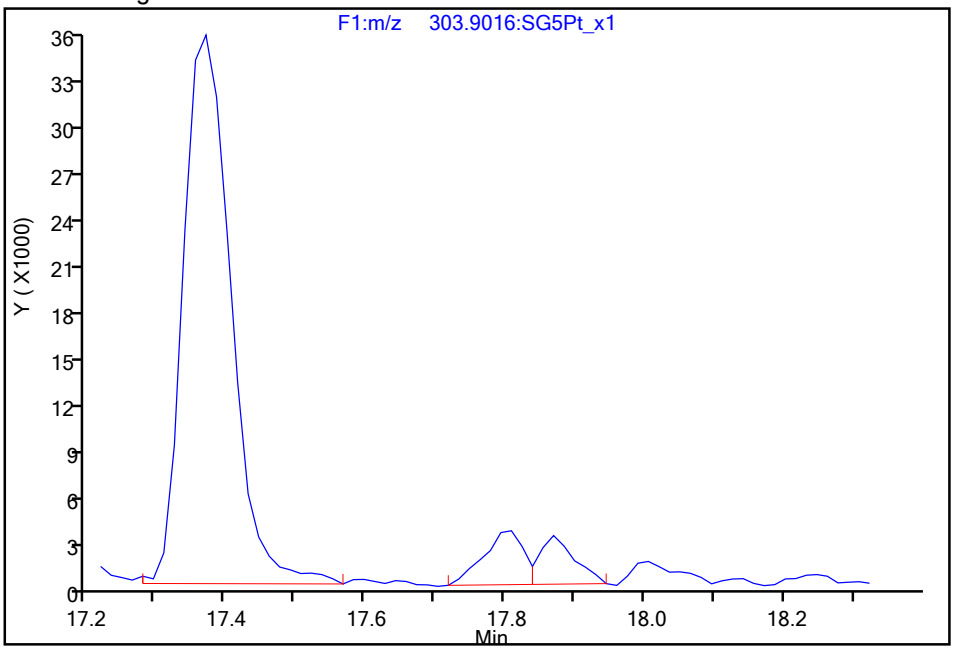

Reviewer: dadunj, 16-Aug-2021 13:57:45

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778305

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.91- 19.23)

Signal: 2

Processing Integration Results

RT = 17.794 Area = 28689

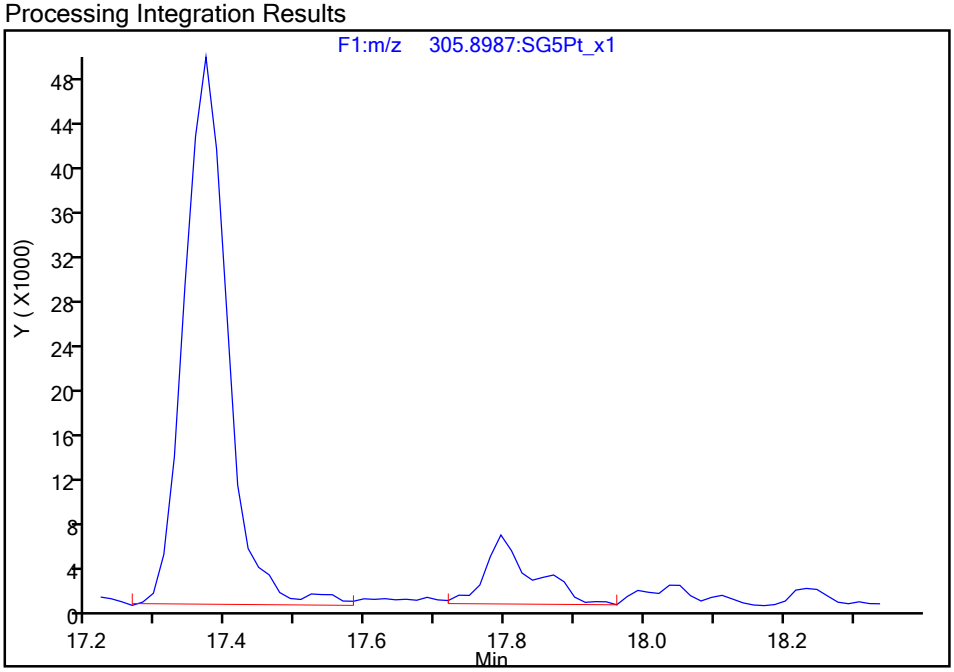

Manual Integration Results

RT = 17.794 Area = 22177 M

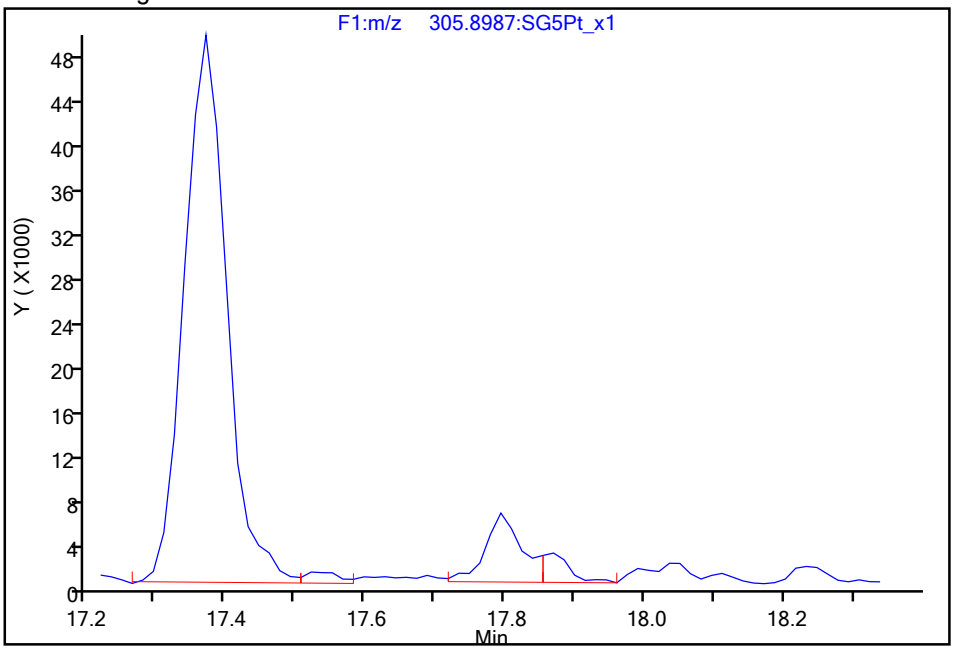

Reviewer: dadunj, 16-Aug-2021 13:57:47

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.08
Area: 72300
Amount: 0.215292
Amount Units: pg/ul

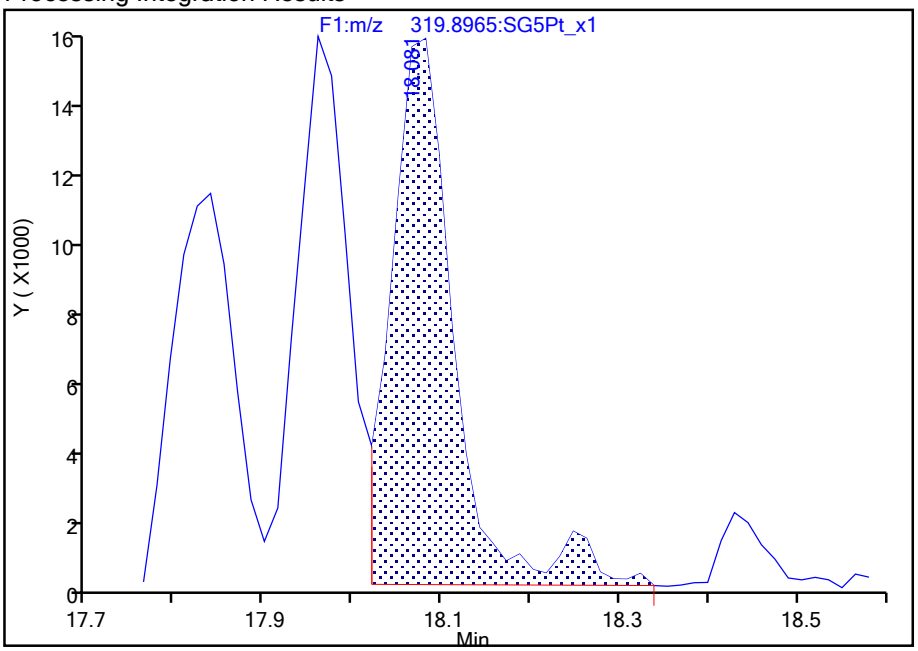

Manual Integration Results

RT: 18.08
Area: 67139
Amount: 0.210096
Amount Units: pg/ul

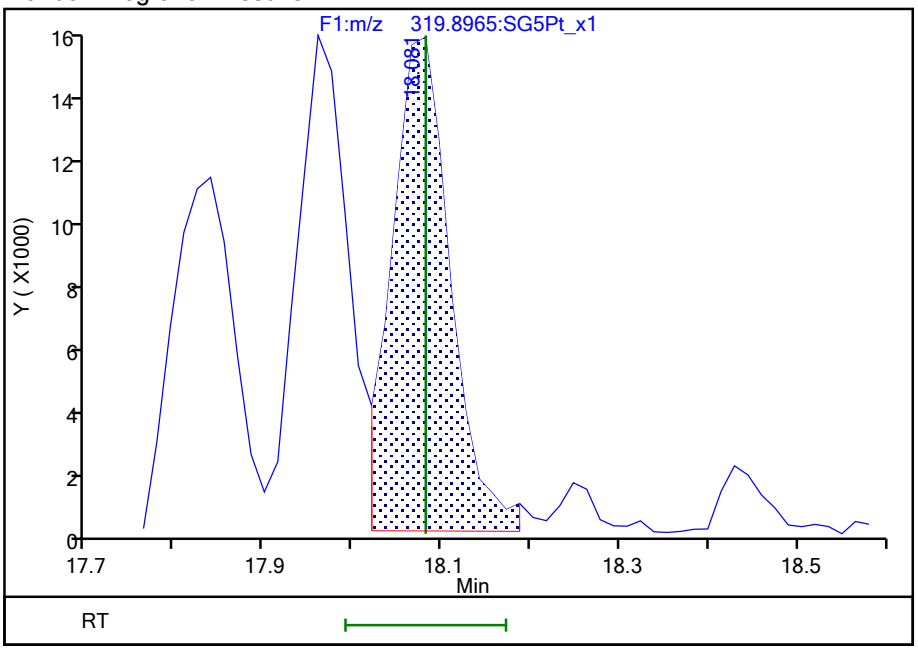

Reviewer: dadunj, 16-Aug-2021 13:57:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.41
Area: 46012
Amount: 0.073219
Amount Units: pg/ul

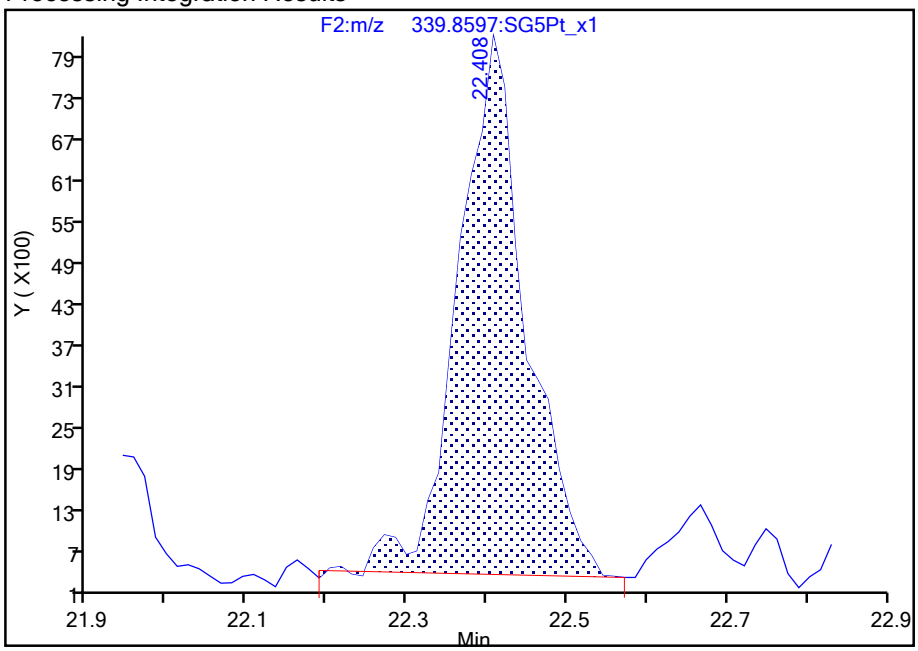

Manual Integration Results

RT: 22.41
Area: 44112
Amount: 0.072636
Amount Units: pg/ul

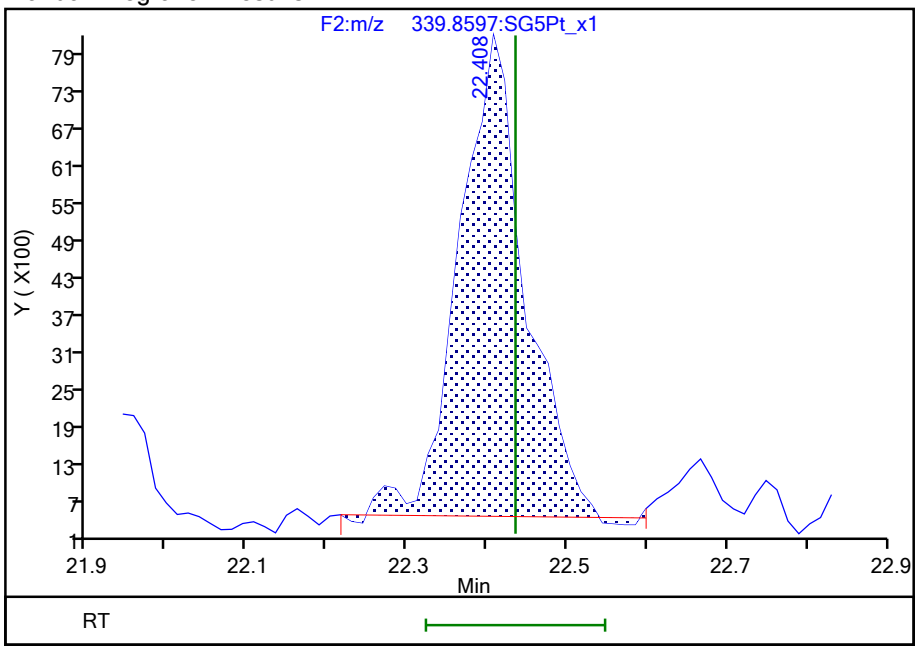

Reviewer: dadunj, 16-Aug-2021 13:58:22

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.41
Area: 30759
Amount: 0.073219
Amount Units: pg/ul

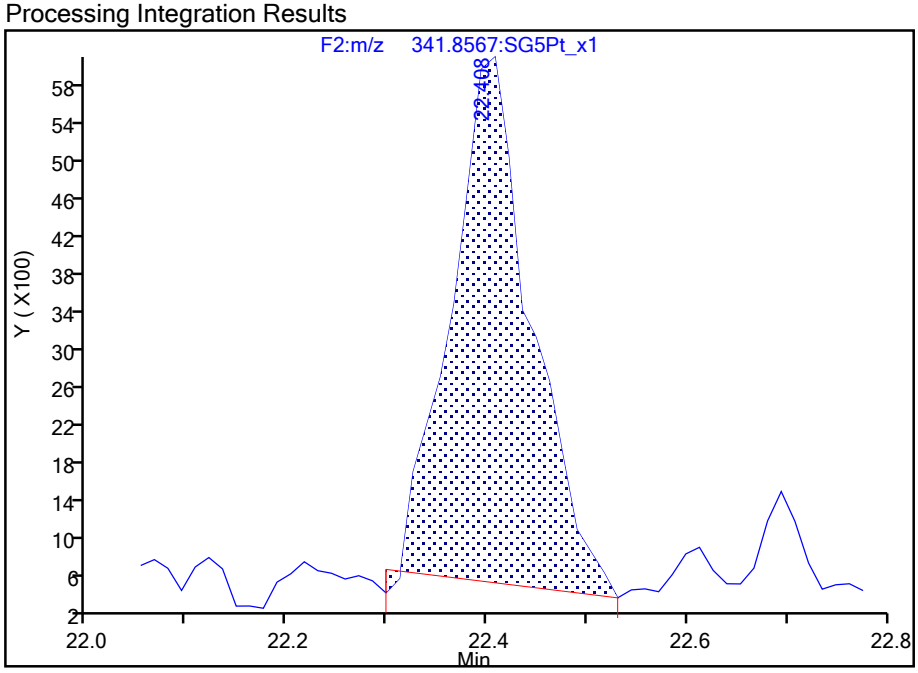

Manual Integration Results

RT: 22.41
Area: 32047
Amount: 0.072636
Amount Units: pg/ul

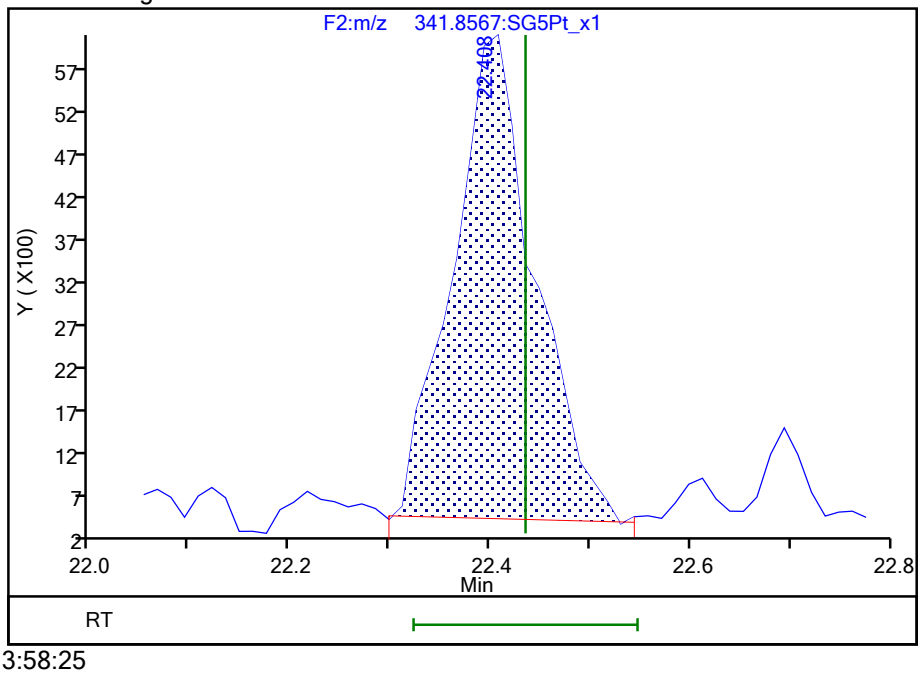

Reviewer: dadunj, 16-Aug-2021 13:58:25

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.77
Area: 8491
Amount: 0.023140
Amount Units: pg/ul

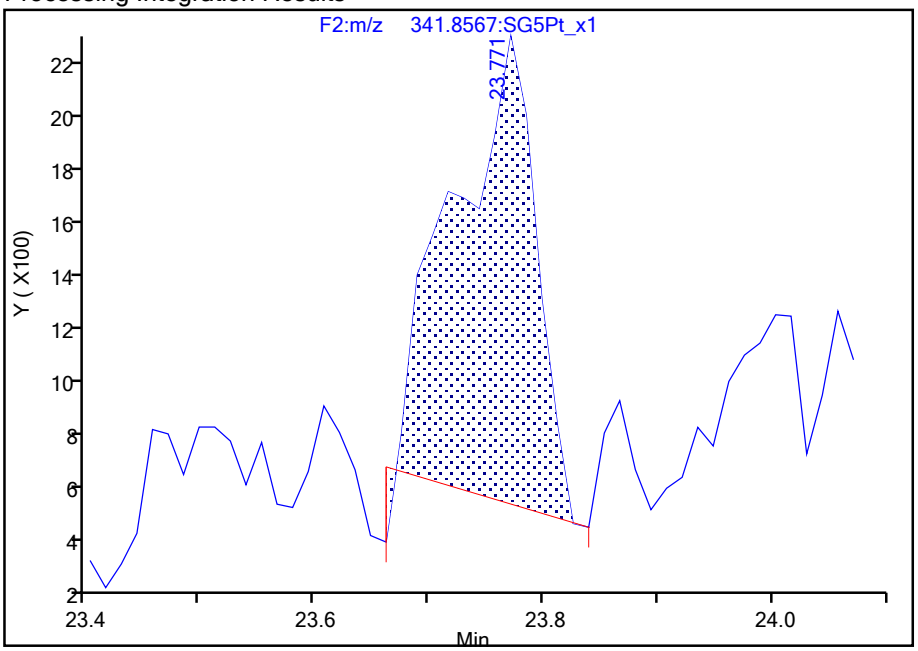

Manual Integration Results

RT: 23.77
Area: 9902
Amount: 0.023076
Amount Units: pg/ul

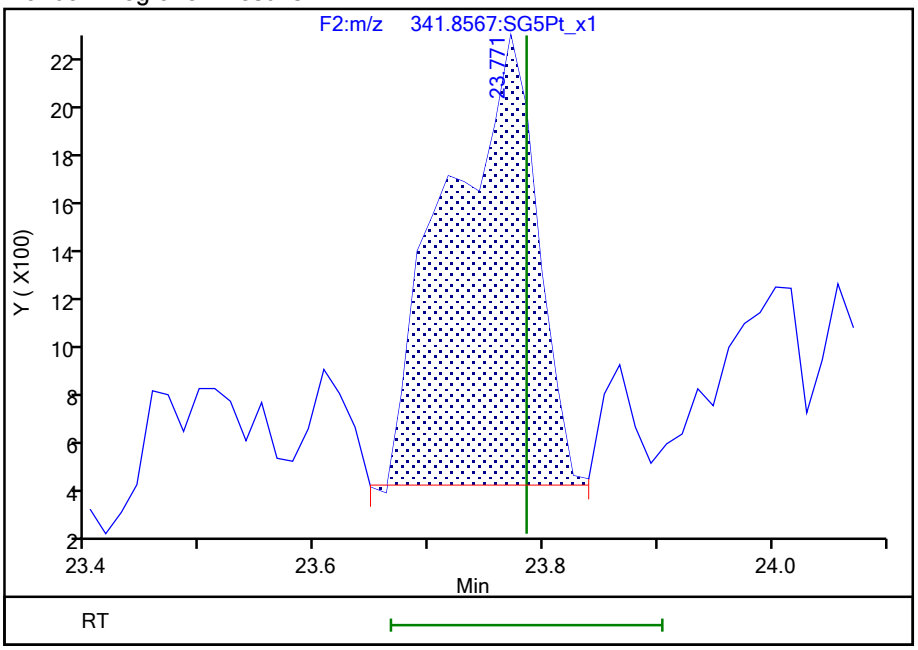

Reviewer: dadunj, 16-Aug-2021 13:58:34

Audit Action: Manually Integrated Audit Reason: Baseline

778310

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 23.74
Area: 17682
Amount: 0.023140
Amount Units: pg/ul

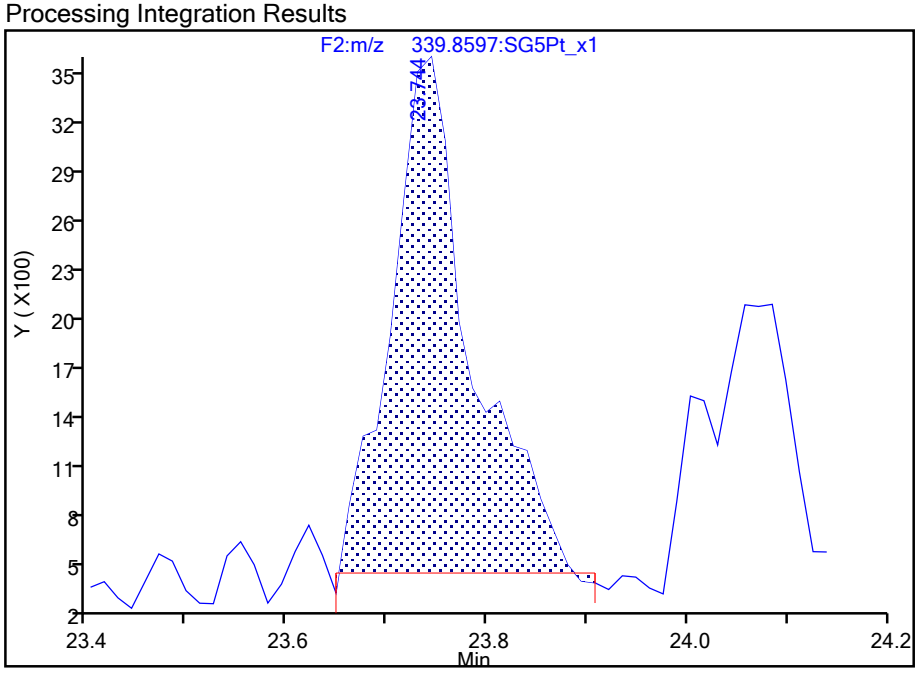

Manual Integration Results

RT: 23.74
Area: 16199
Amount: 0.023076
Amount Units: pg/ul

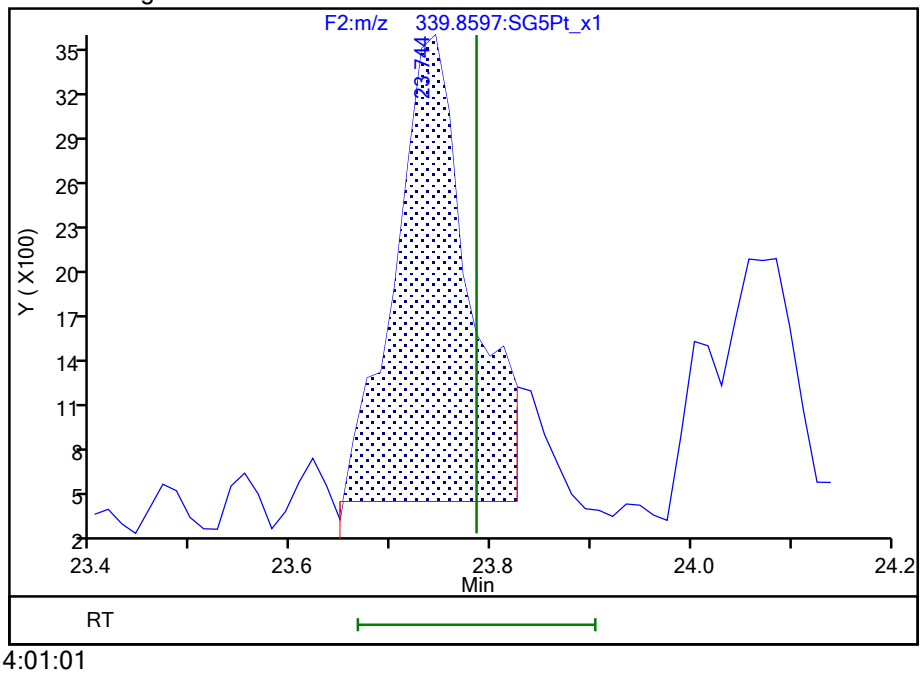

Reviewer: dadunj, 16-Aug-2021 14:01:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 25.75)

Signal: 1

Processing Integration Results

RT = 21.017 Area = 22890

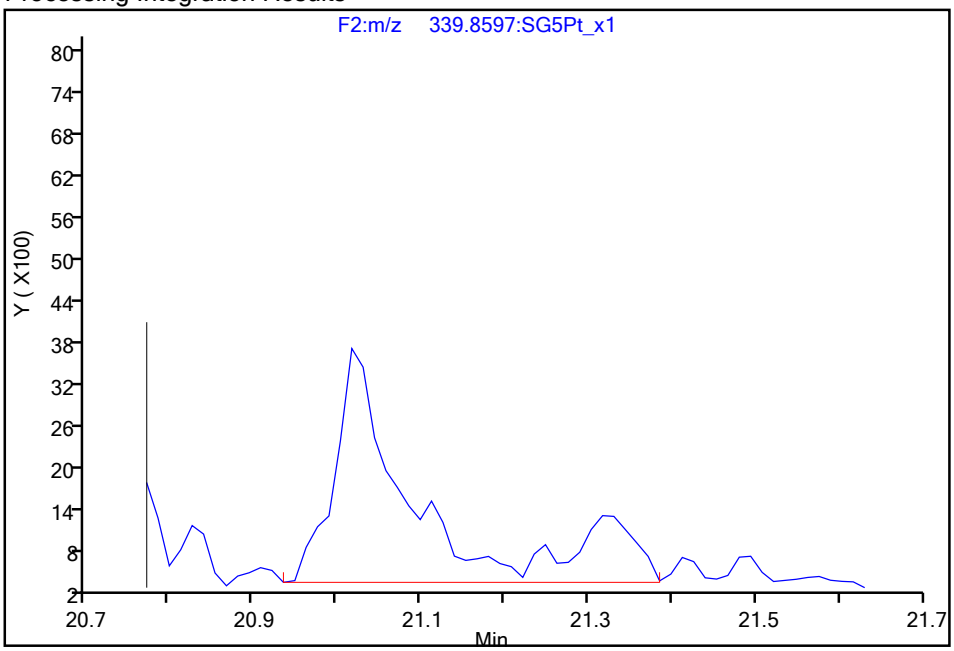

Manual Integration Results

RT = 21.017 Area = 15096 M

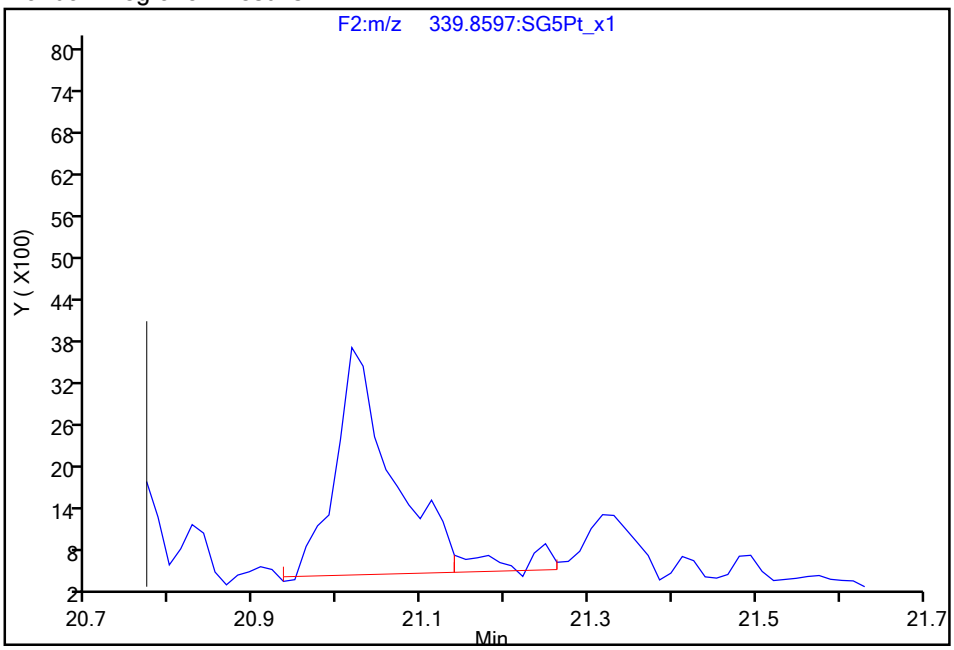

Reviewer: dadunj, 16-Aug-2021 14:01:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 2, m/z: 341.8567, RT: (20.77- 25.75)

Signal: 2

Processing Integration Results

RT = 21.058 Area = 16068

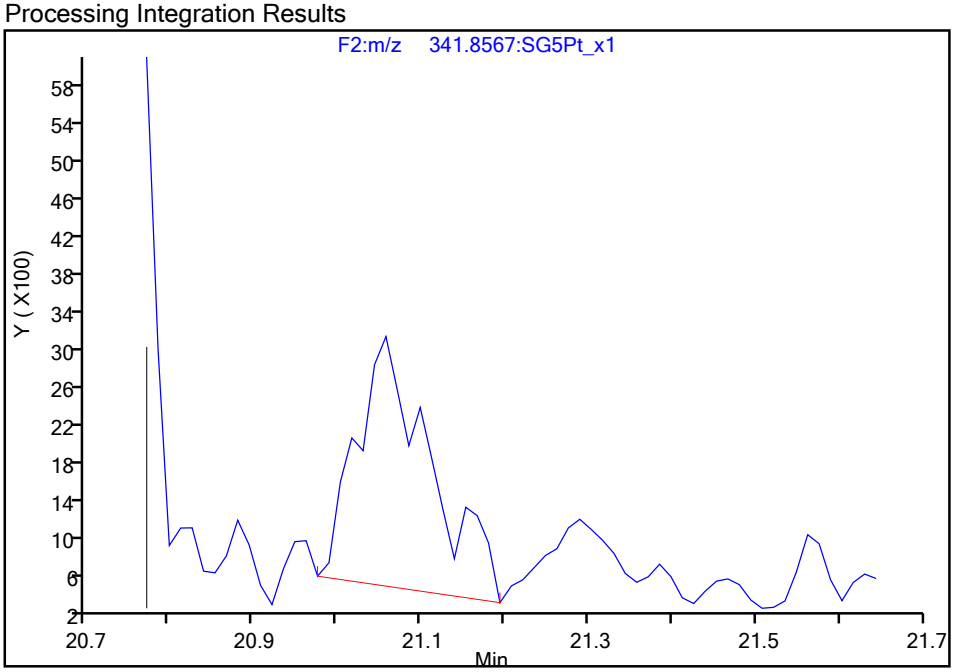

Manual Integration Results

RT = 21.058 Area = 13766 M

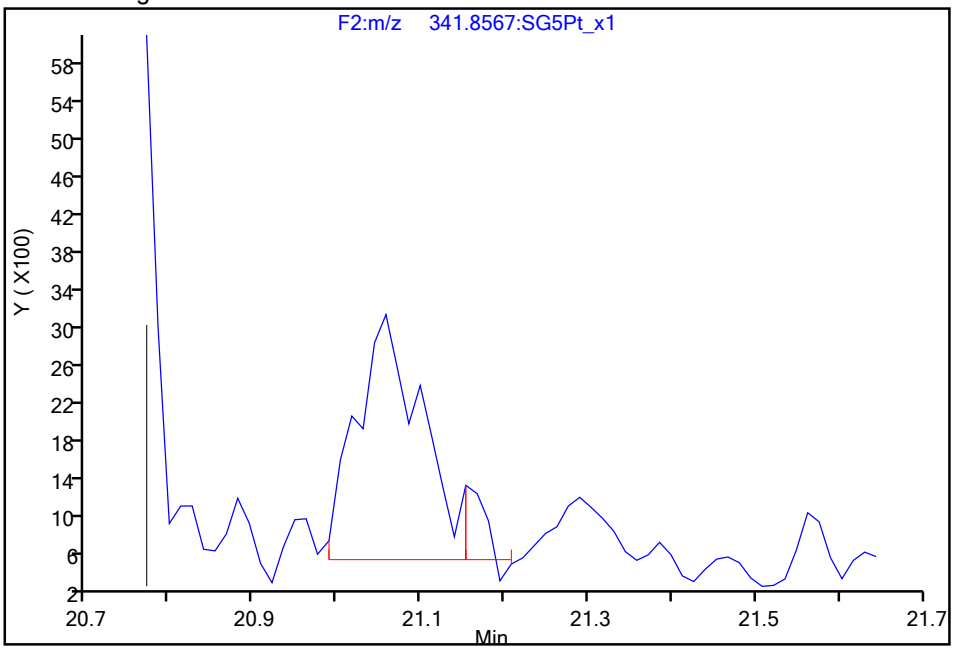

Reviewer: dadunj, 16-Aug-2021 14:01:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778313

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Not Detected
Expected RT: 30.57

Processing Integration Results

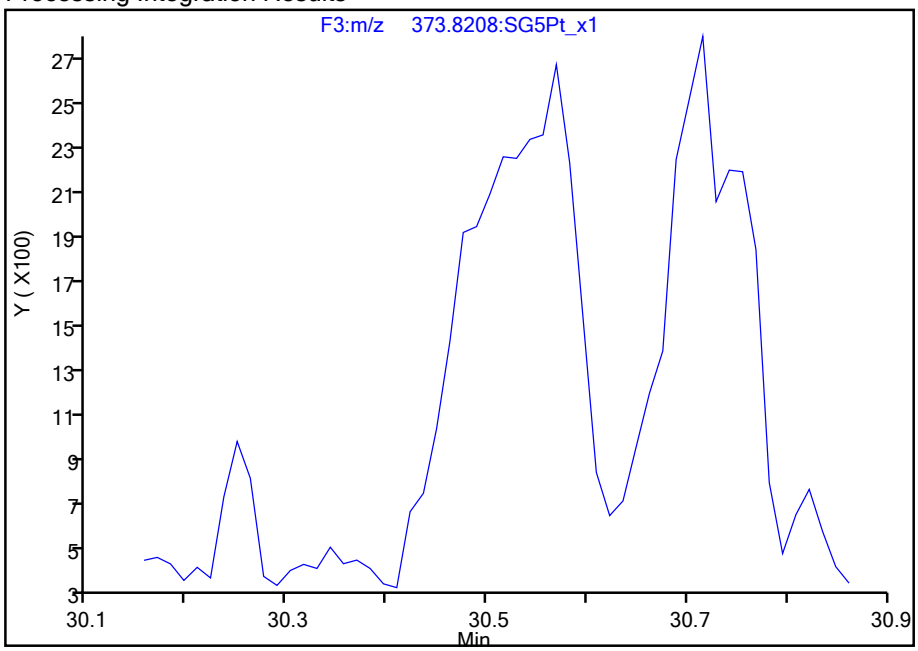

Manual Integration Results

RT: 30.57
Area: 14987
Amount: 0.027650
Amount Units: pg/ul

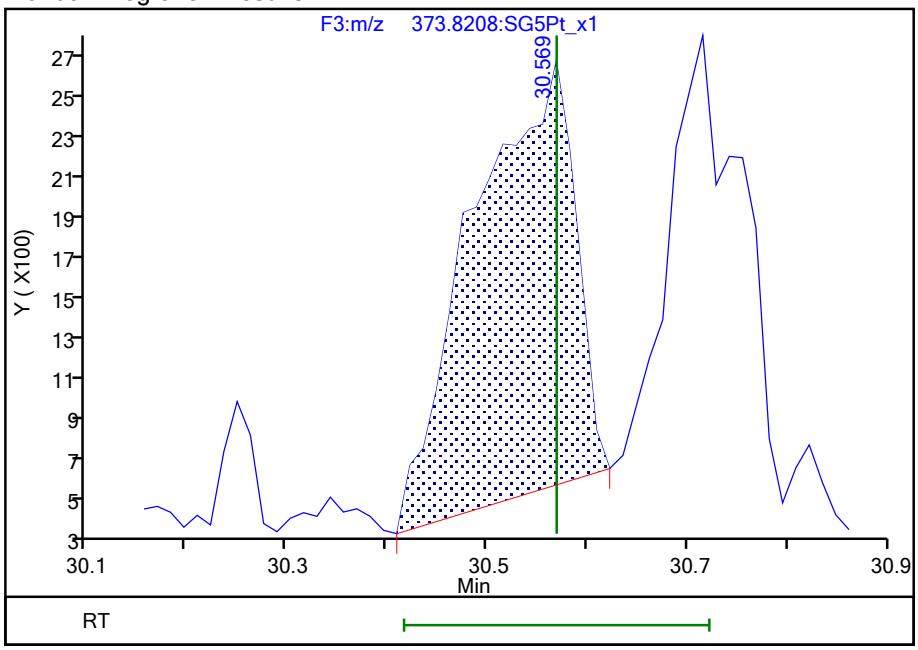

Reviewer: dadunj, 16-Aug-2021 13:59:35
Audit Action: Assigned Compound ID Audit Reason: Baseline

778314

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 2

Not Detected
Expected RT: 30.57

Processing Integration Results

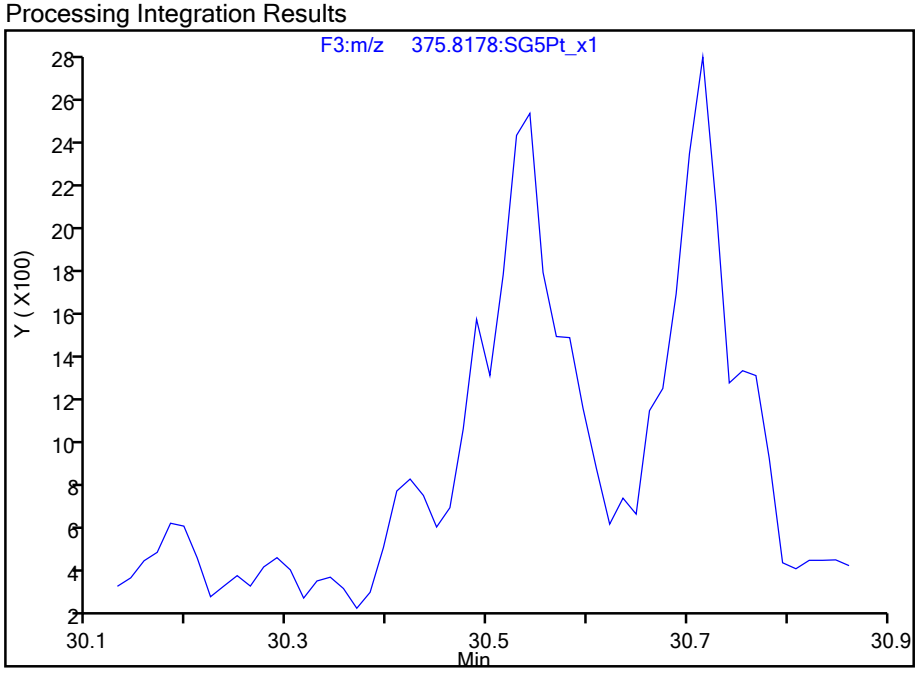

Manual Integration Results

RT: 30.54
Area: 12357
Amount: 0.027650
Amount Units: pg/ul

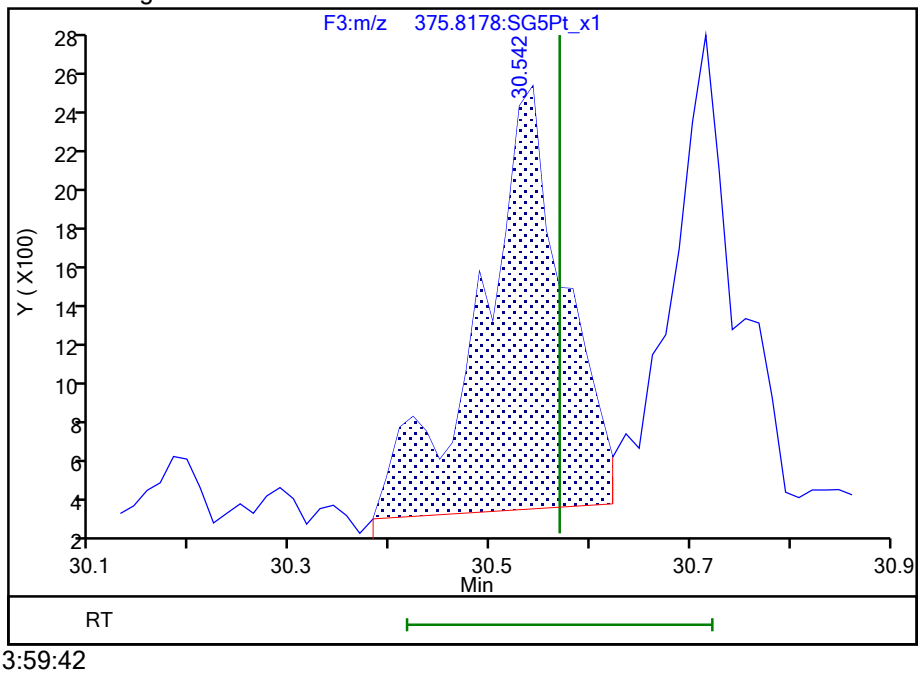

Reviewer: dadunj, 16-Aug-2021 13:59:42
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778315

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.34
Area: 44564
Amount: 0.094788
Amount Units: pg/ul

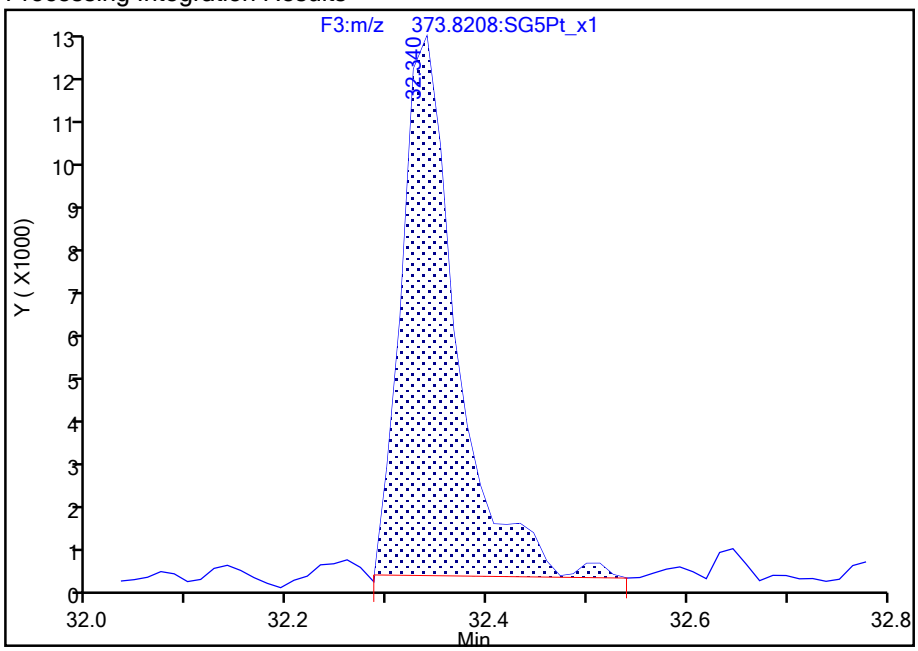

Manual Integration Results

RT: 32.34
Area: 42447
Amount: 0.089270
Amount Units: pg/ul

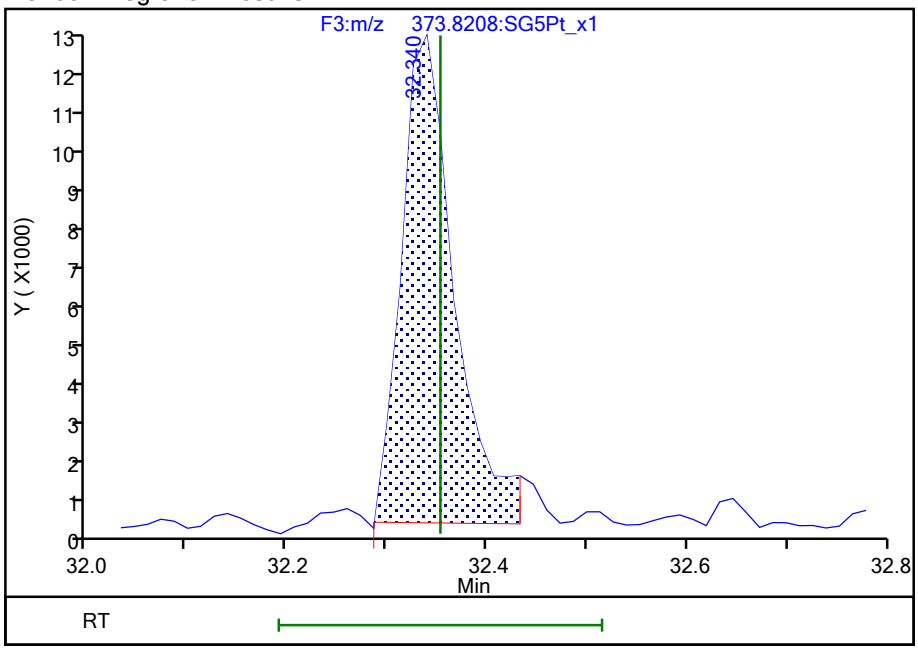

Reviewer: dadunj, 16-Aug-2021 13:59:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778316

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.34
Area: 35273
Amount: 0.094788
Amount Units: pg/ul

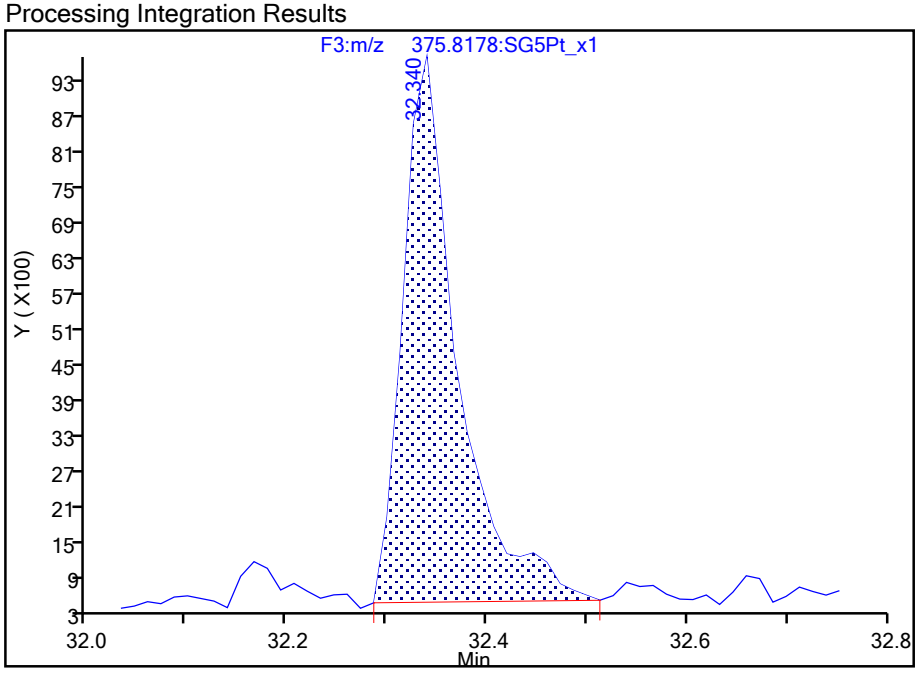

Manual Integration Results

RT: 32.34
Area: 32743
Amount: 0.089270
Amount Units: pg/ul

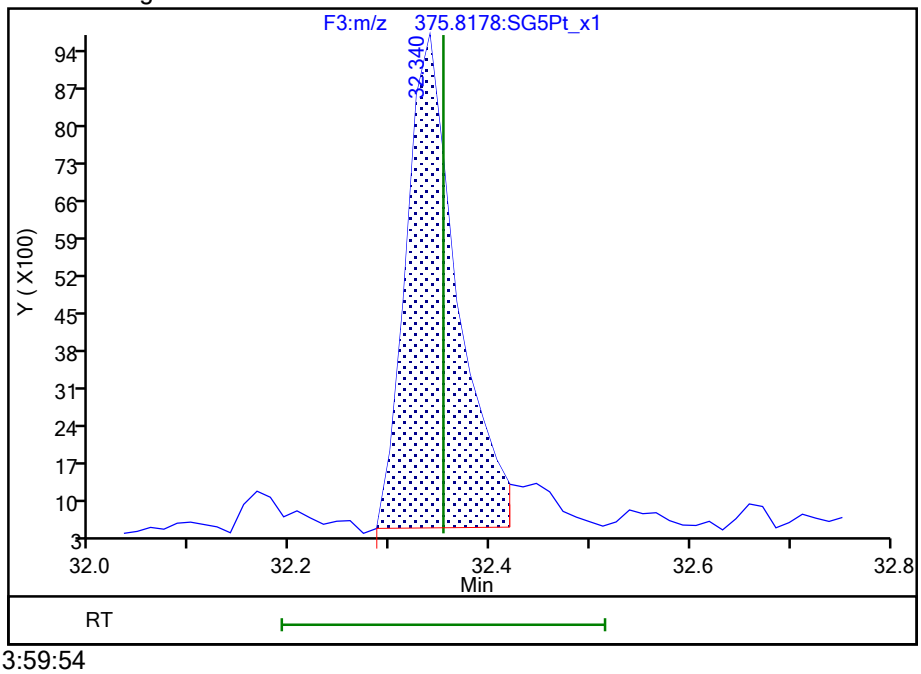

Reviewer: dadunj, 16-Aug-2021 13:59:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778317

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.73
Area: 100096
Amount: 0.191542
Amount Units: pg/ul

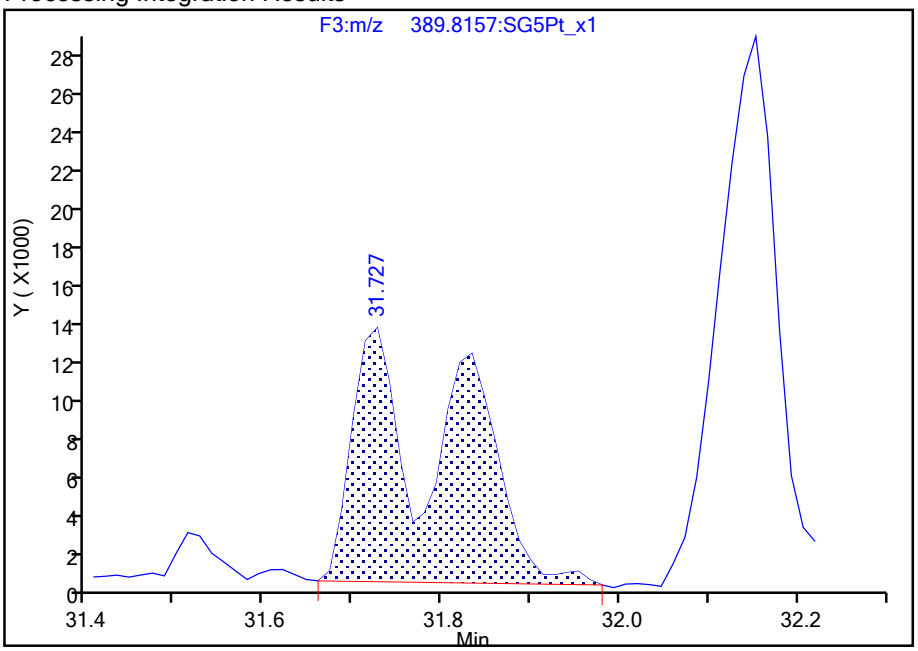

Manual Integration Results

RT: 31.73
Area: 50771
Amount: 0.120417
Amount Units: pg/ul

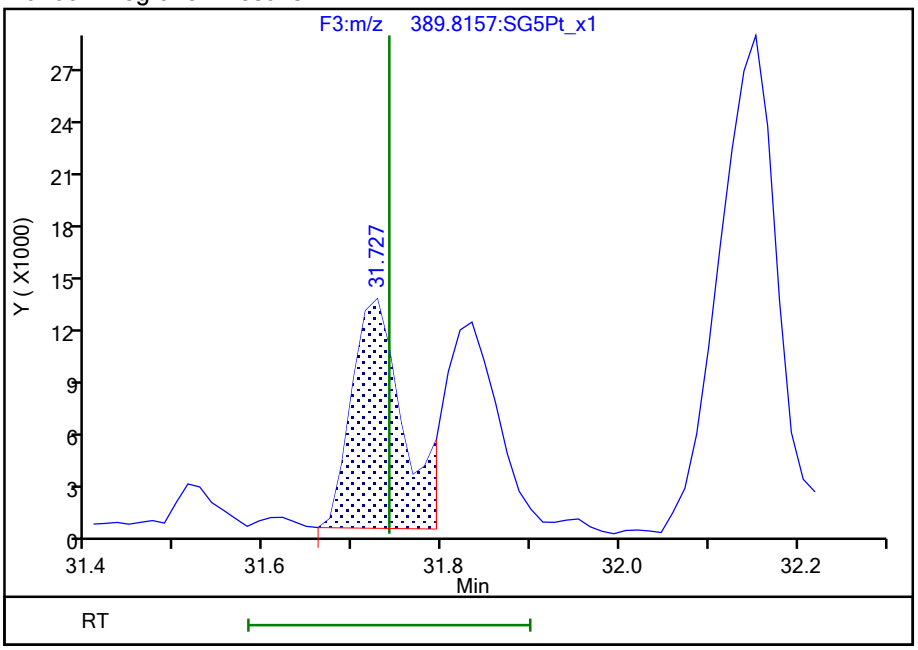

Reviewer: dadunj, 16-Aug-2021 14:00:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778318

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.73
Area: 100096
Amount: 0.194994
Amount Units: pg/ul

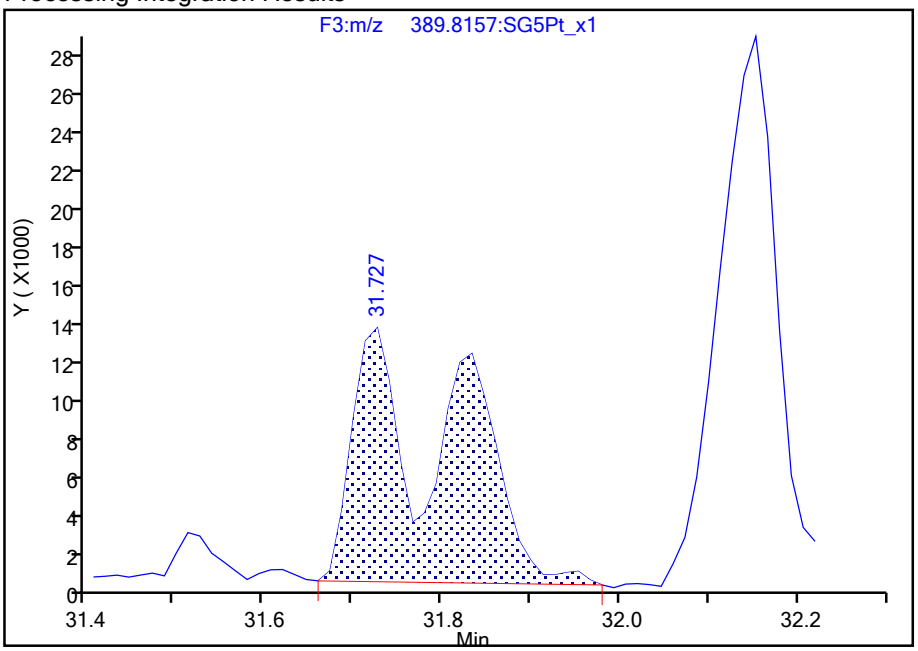

Manual Integration Results

RT: 31.83
Area: 49277
Amount: 0.121528
Amount Units: pg/ul

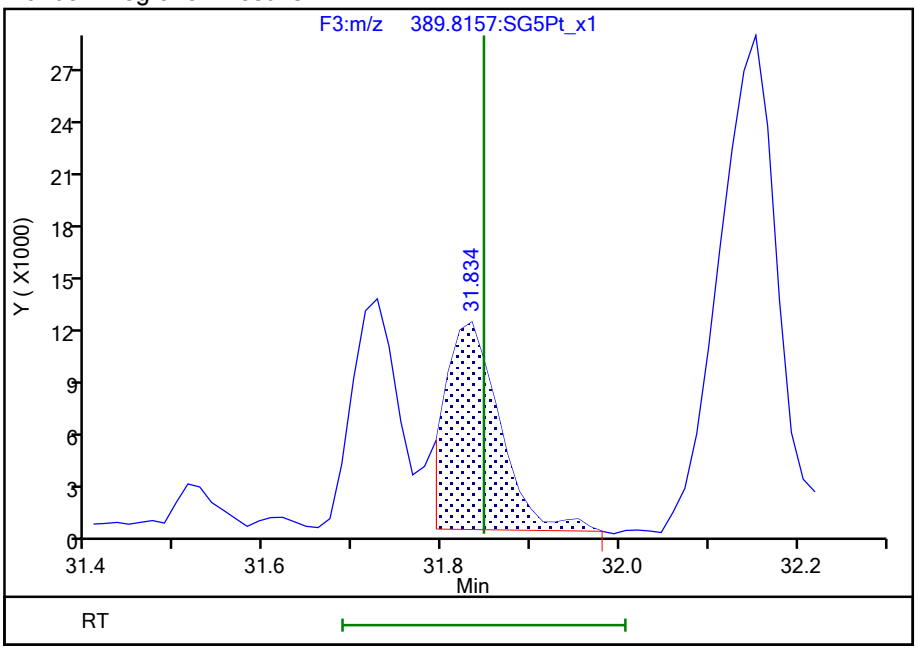

Reviewer: dadunj, 16-Aug-2021 14:00:07

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

778319

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.01
Area: 33525
Amount: 0.100183
Amount Units: pg/ul

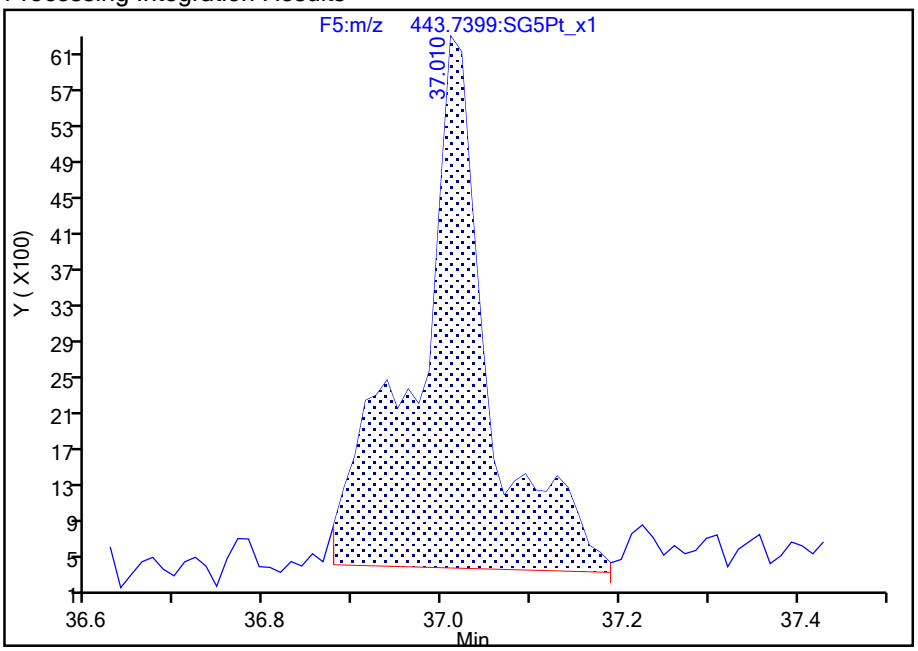

Manual Integration Results

RT: 37.01
Area: 19217
Amount: 0.054727
Amount Units: pg/ul

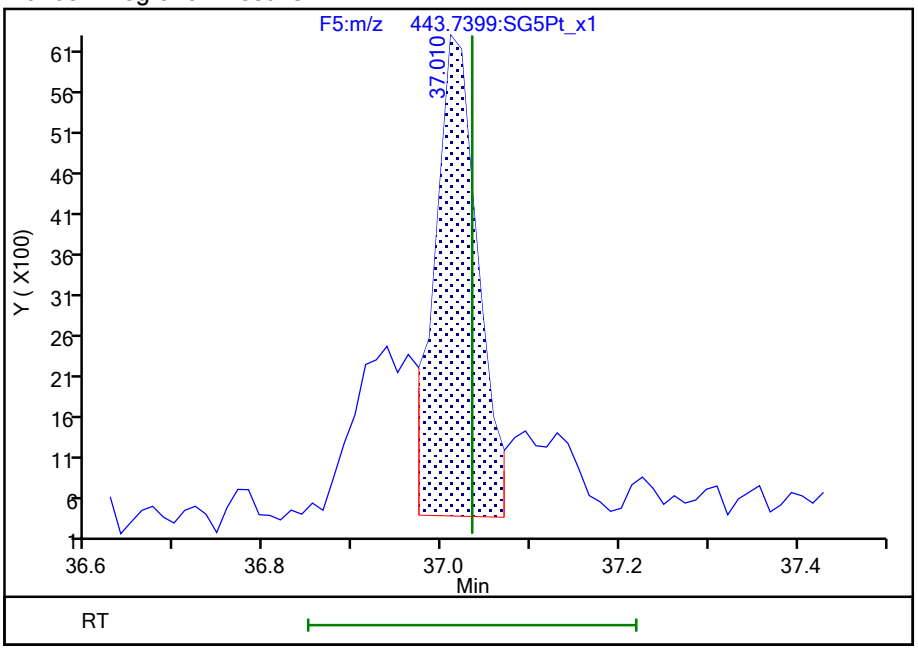

Reviewer: dadunj, 16-Aug-2021 14:00:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d				
Injection Date:	13-Aug-2021 09:33:14	Instrument ID:	10D5		
Lims ID:	320-76769-A-21-A	Lab Sample ID:	320-76769-21		
Client ID:	11215702-072221-SS-SJSB074 (16-18)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 26187
Amount: 0.100183
Amount Units: pg/ul

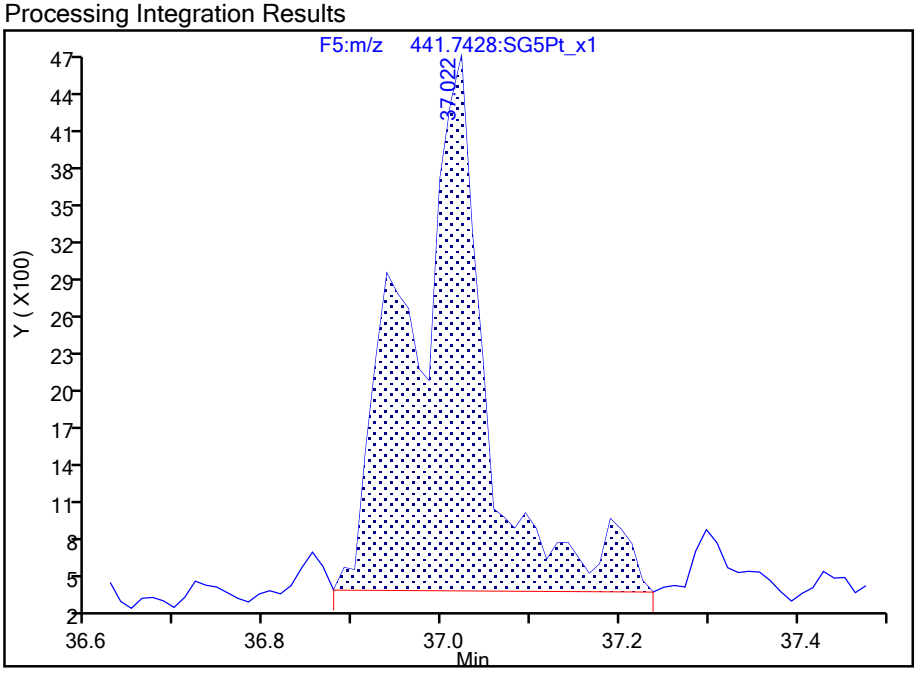

Manual Integration Results

RT: 37.02
Area: 13402
Amount: 0.054727
Amount Units: pg/ul

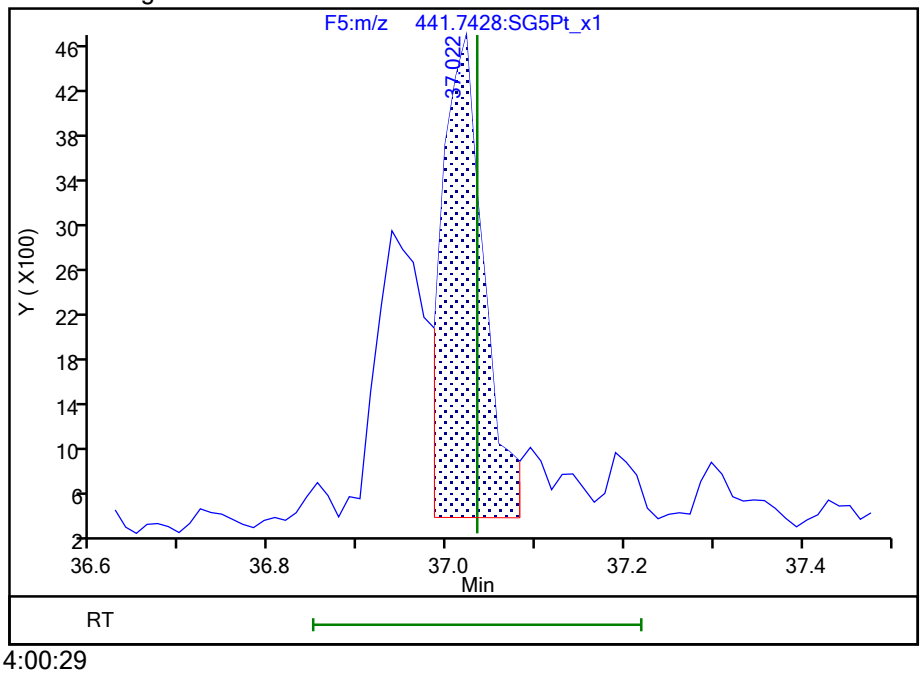

Reviewer: dadunj, 16-Aug-2021 14:00:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778321

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

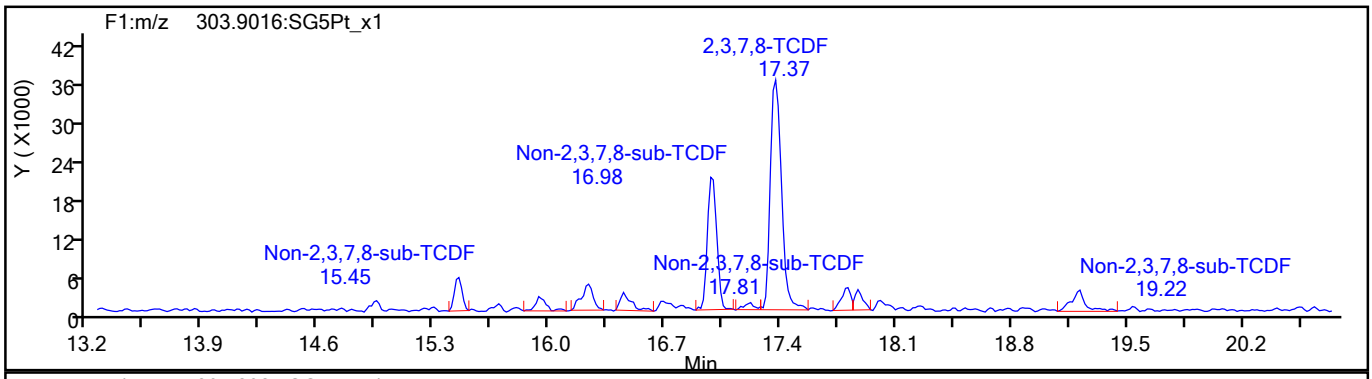

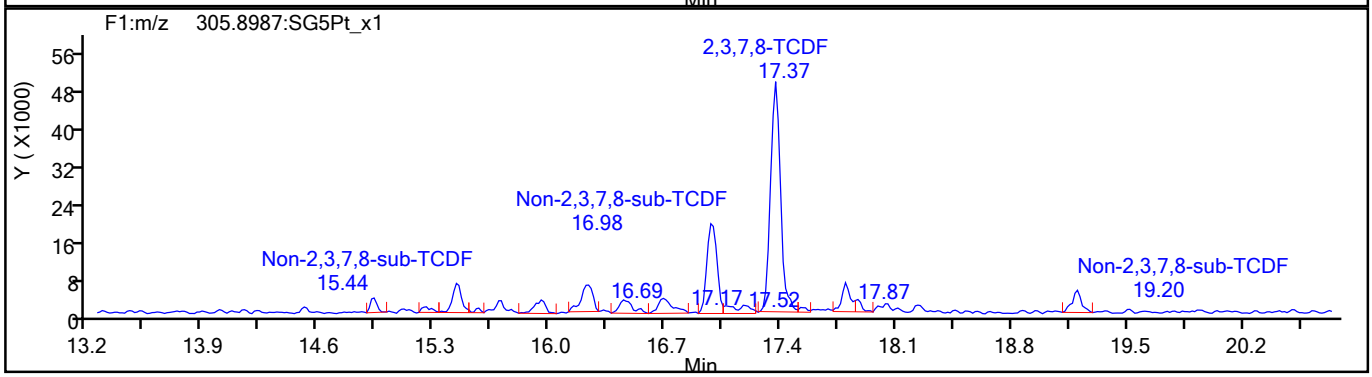

TCDF Standards

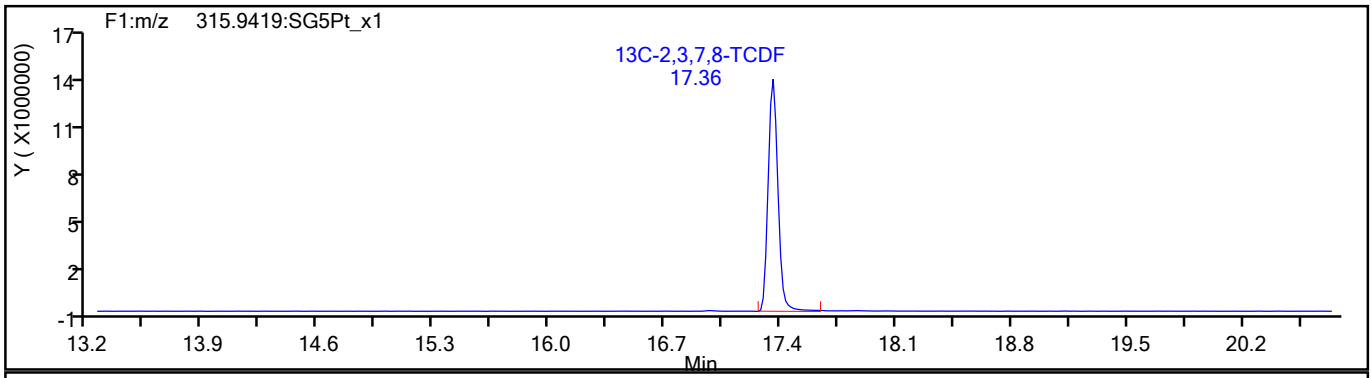

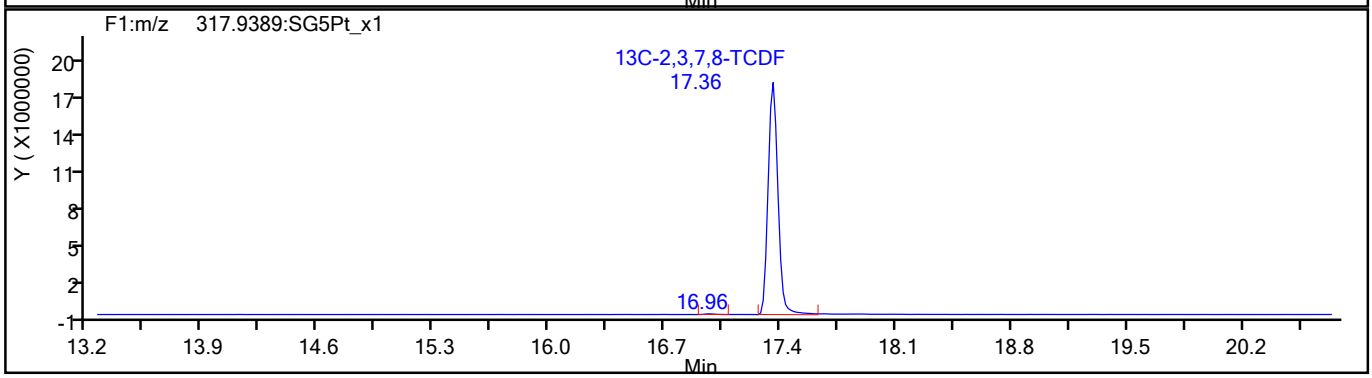

778322

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

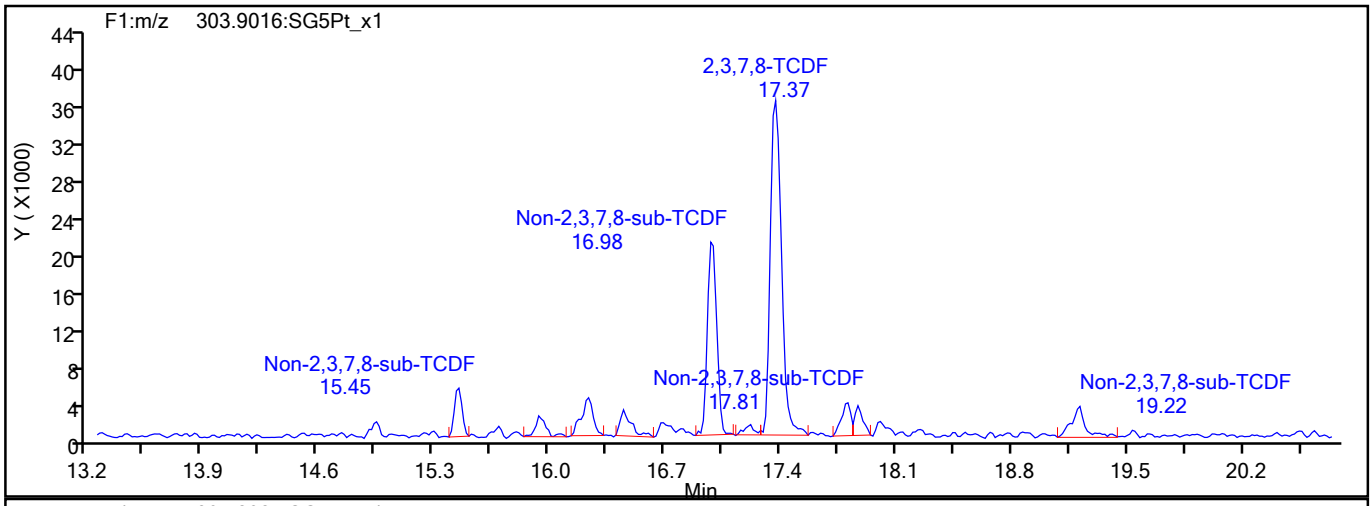

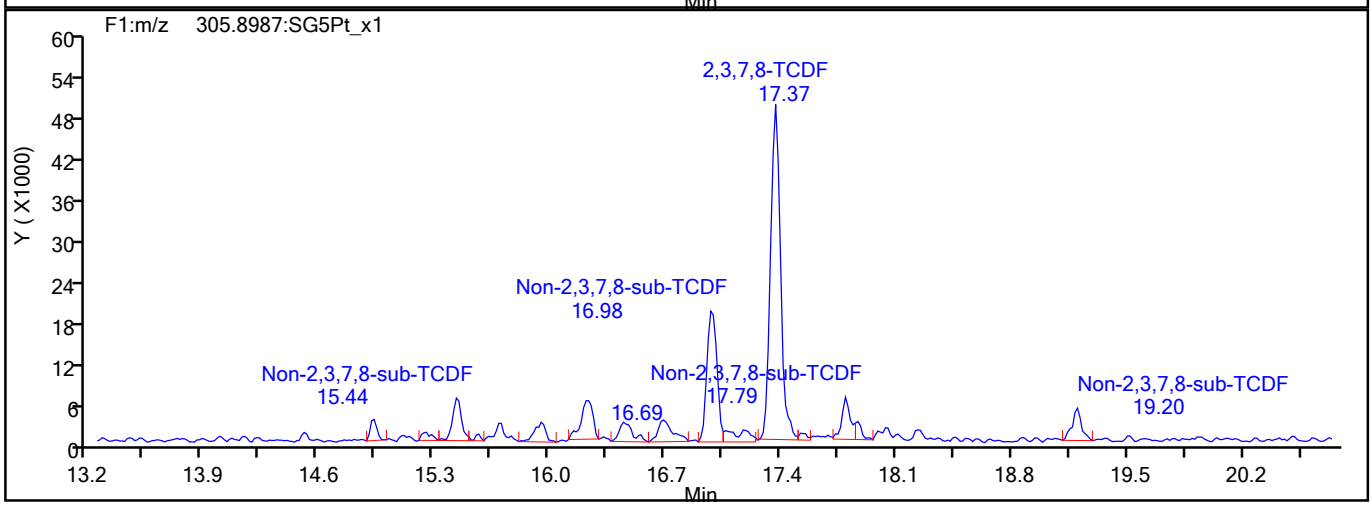

TCDF Interference Mass

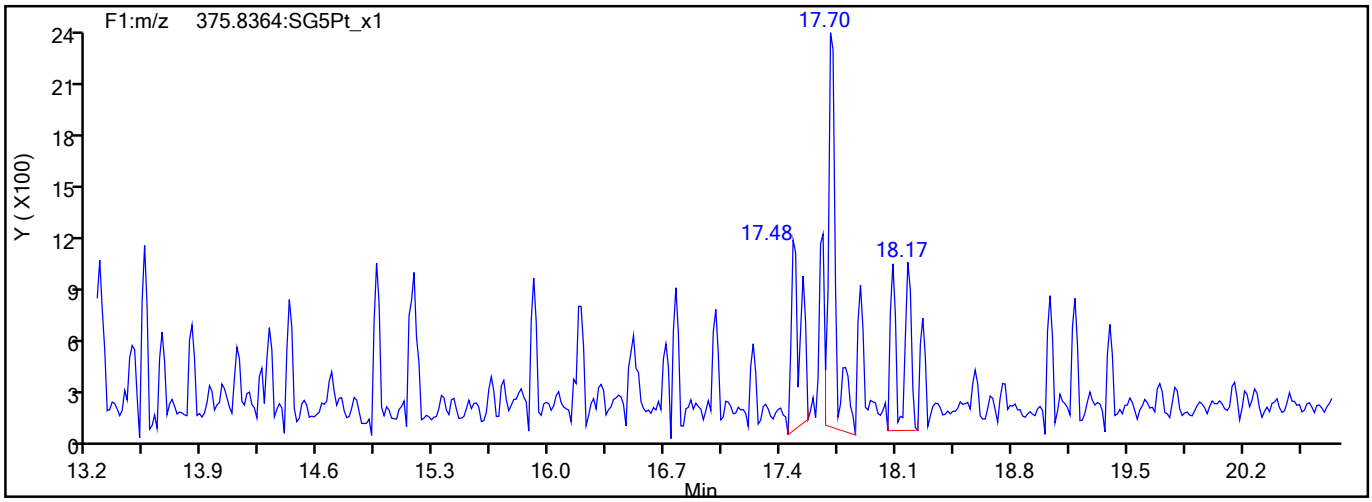

778323

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

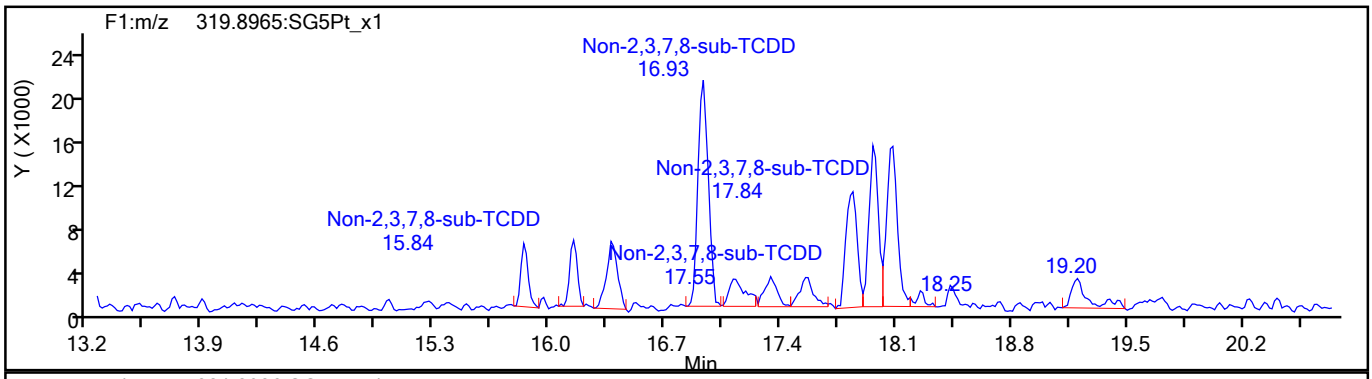

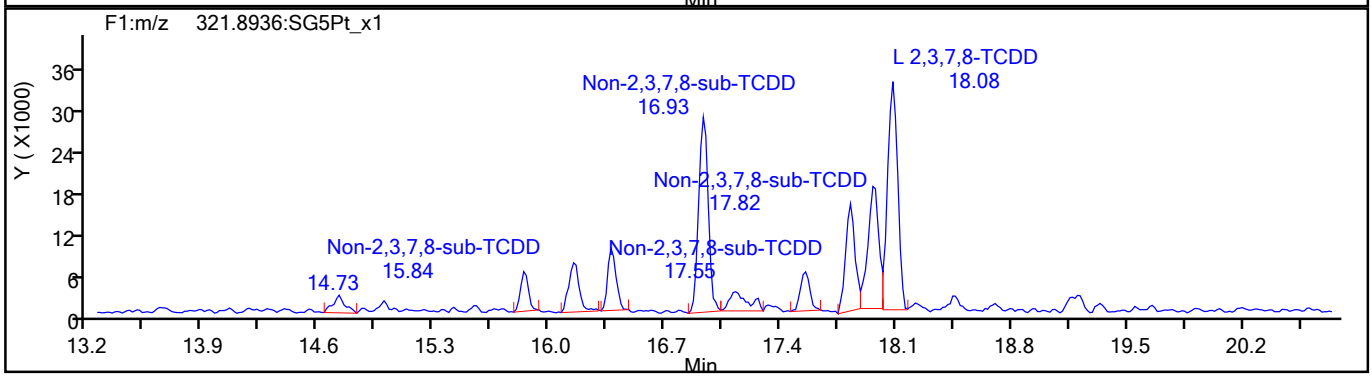

TCDD Standards

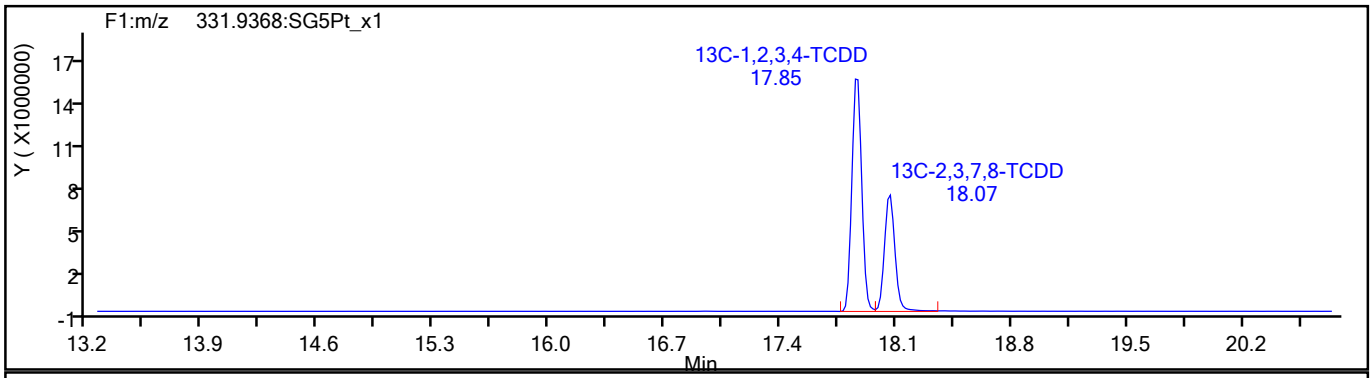

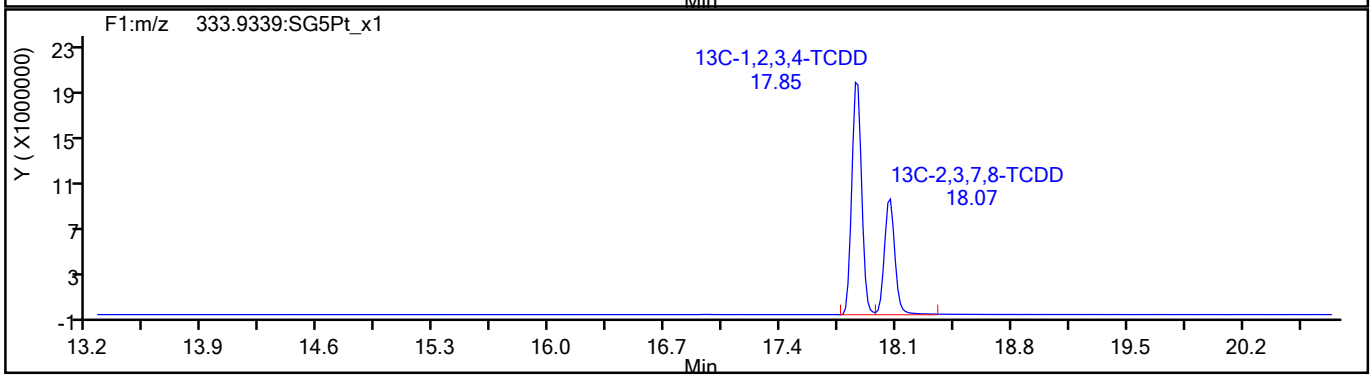

778324

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

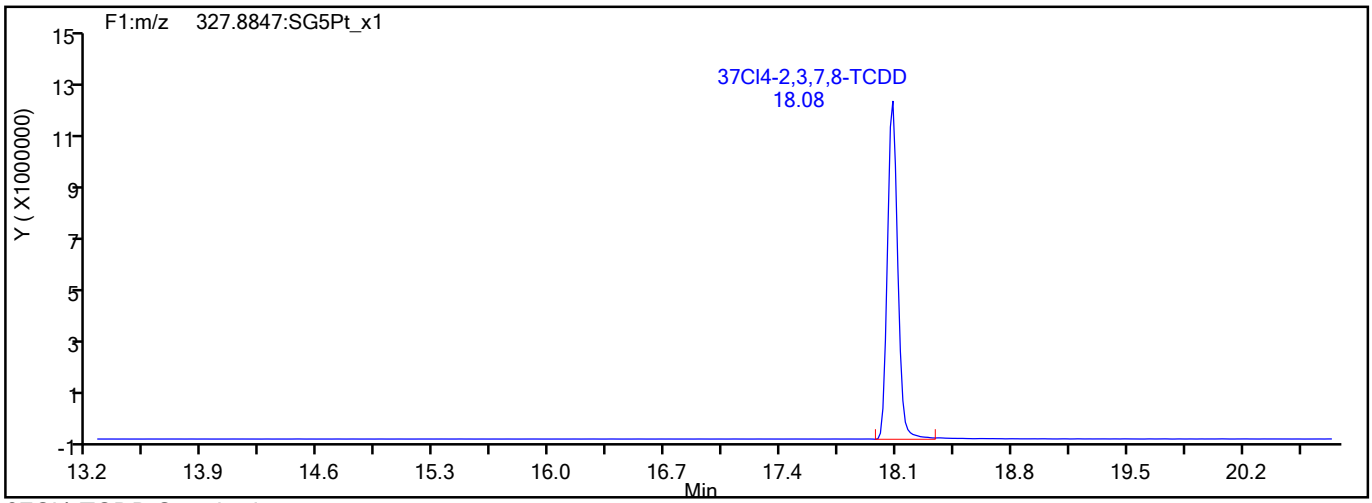

37Cl4-TCDD Standards

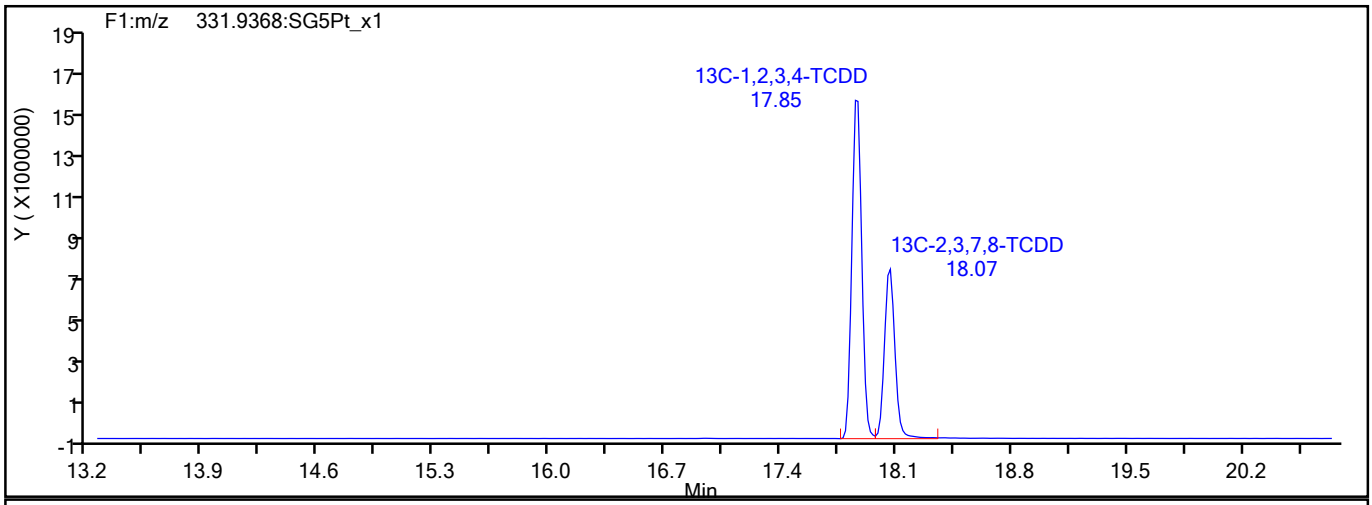

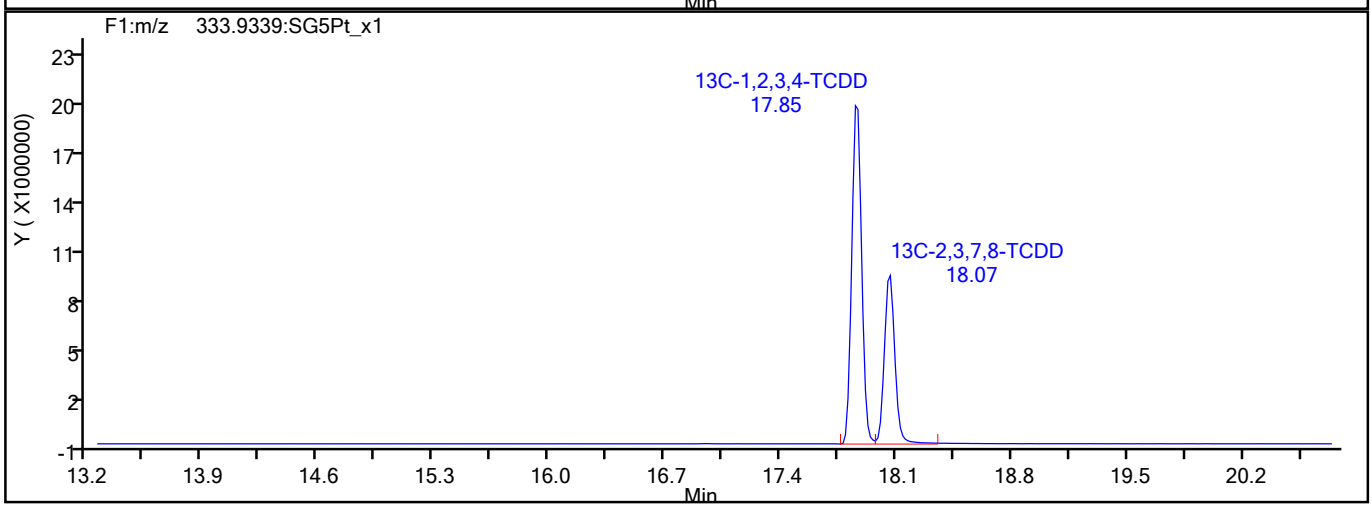

778325

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

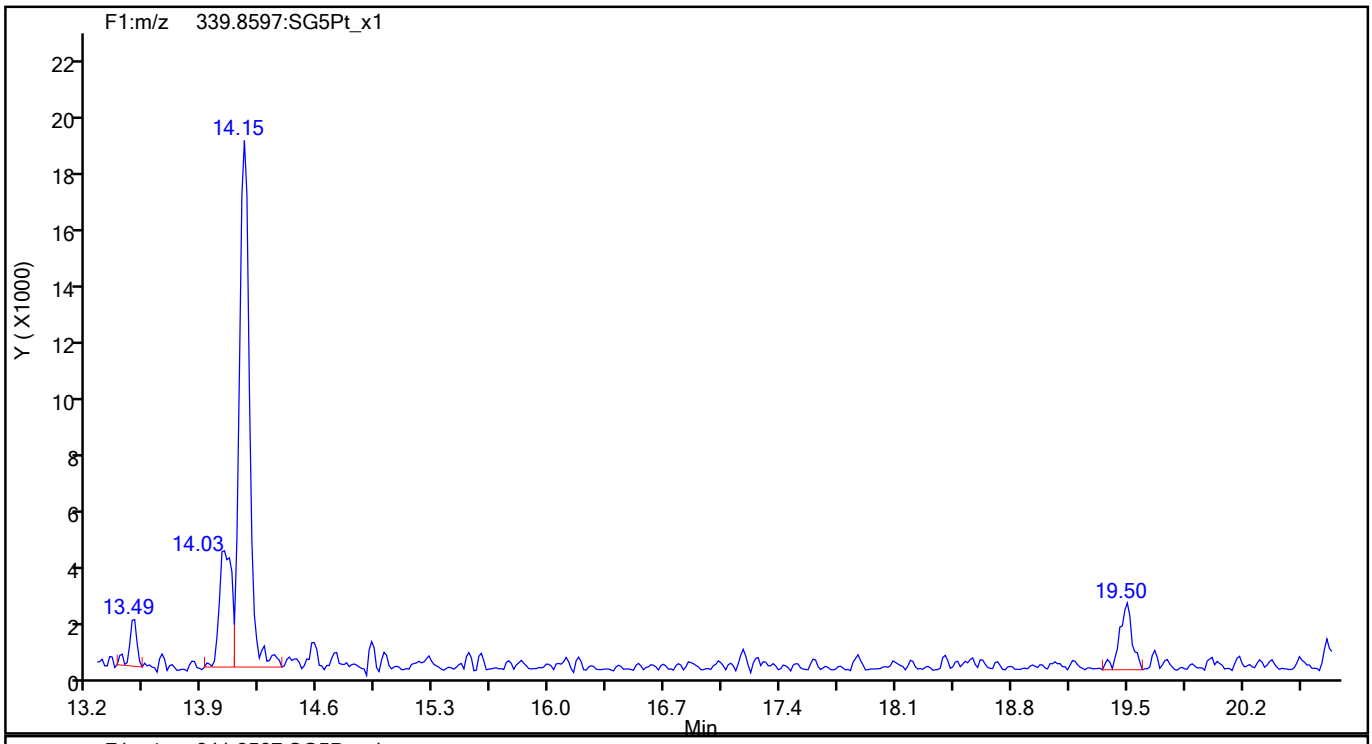

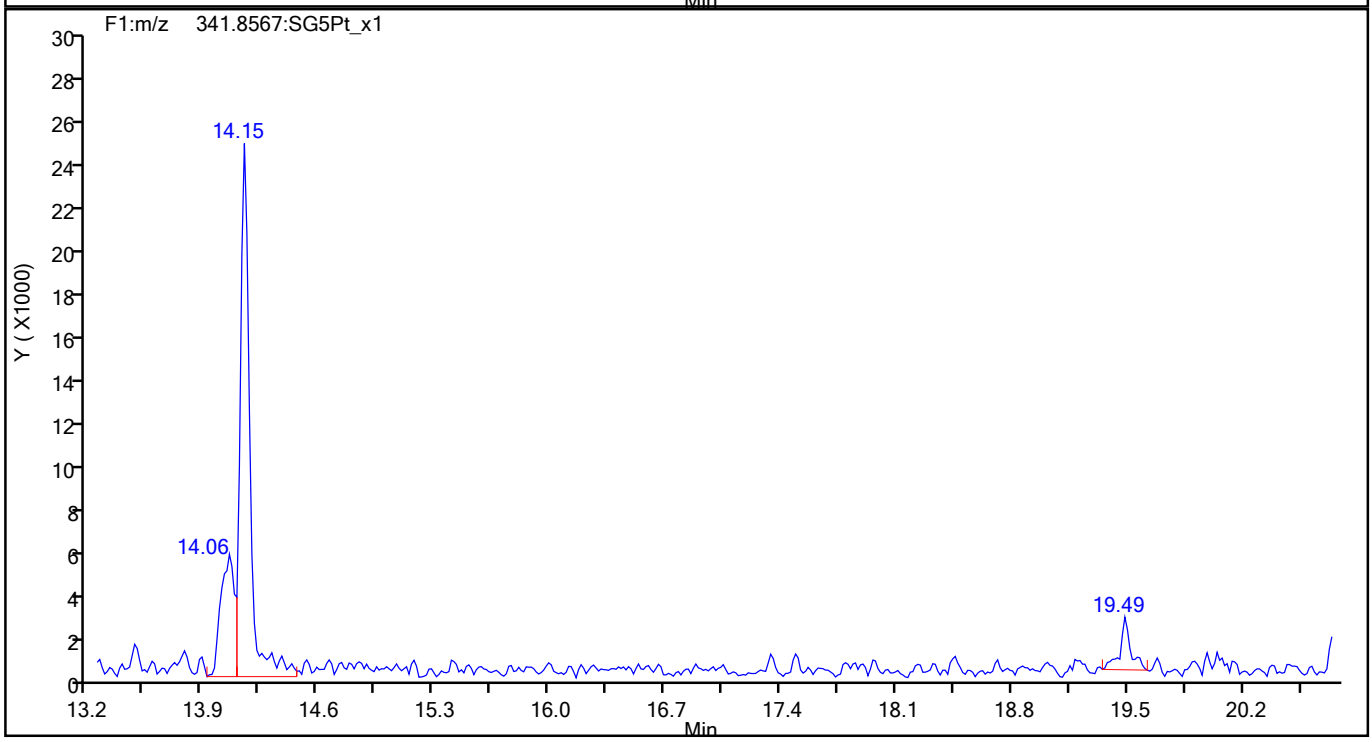

778326

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

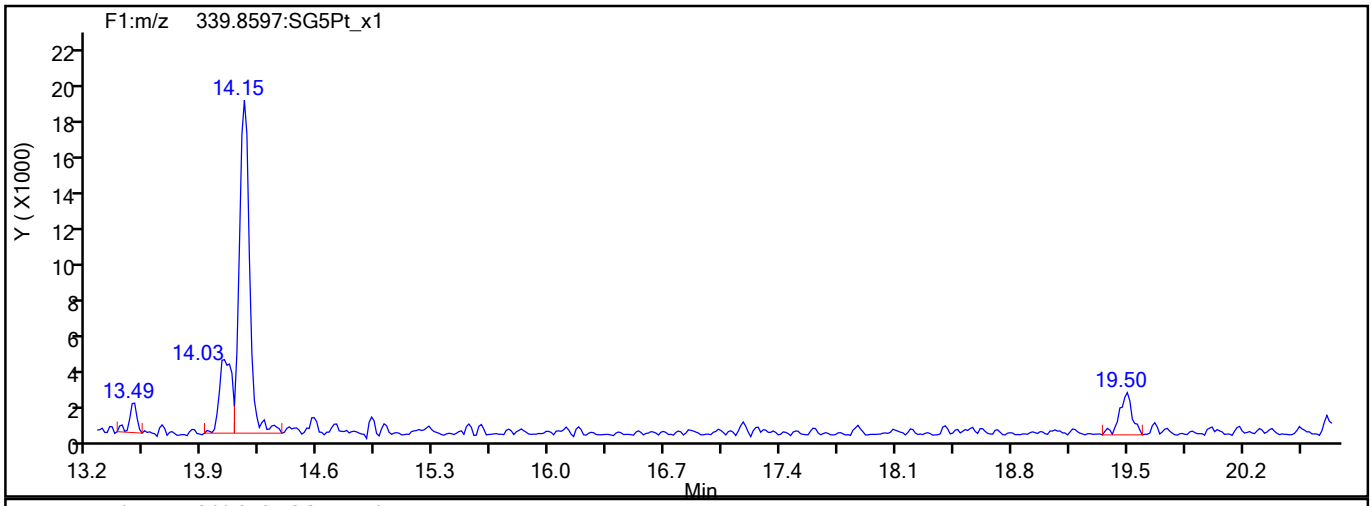

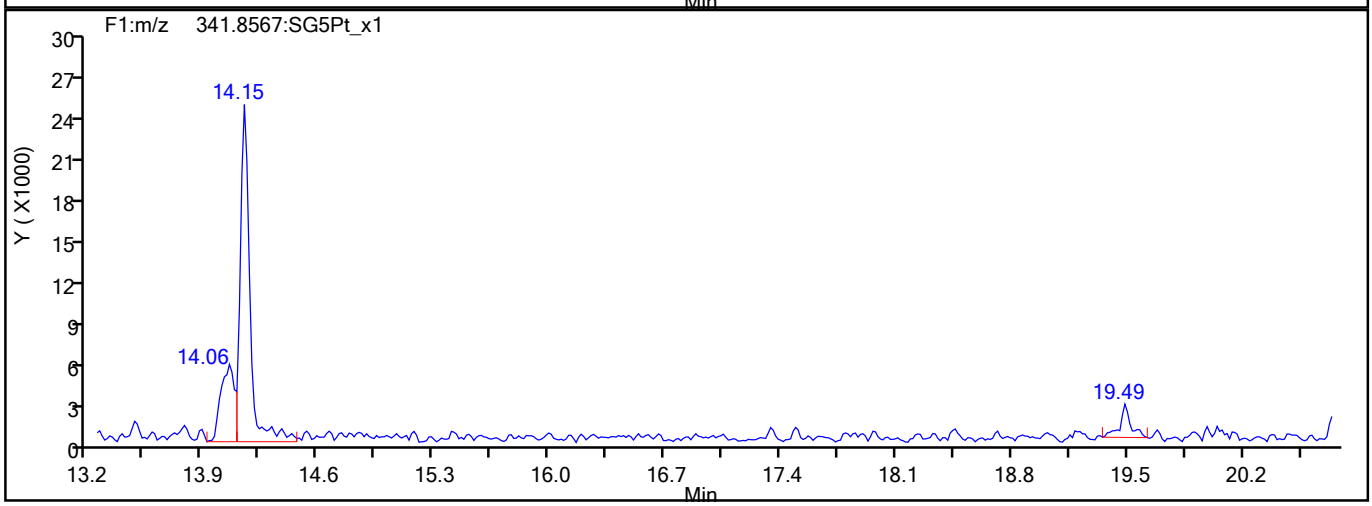

F1 PeCDFs Interference Mass

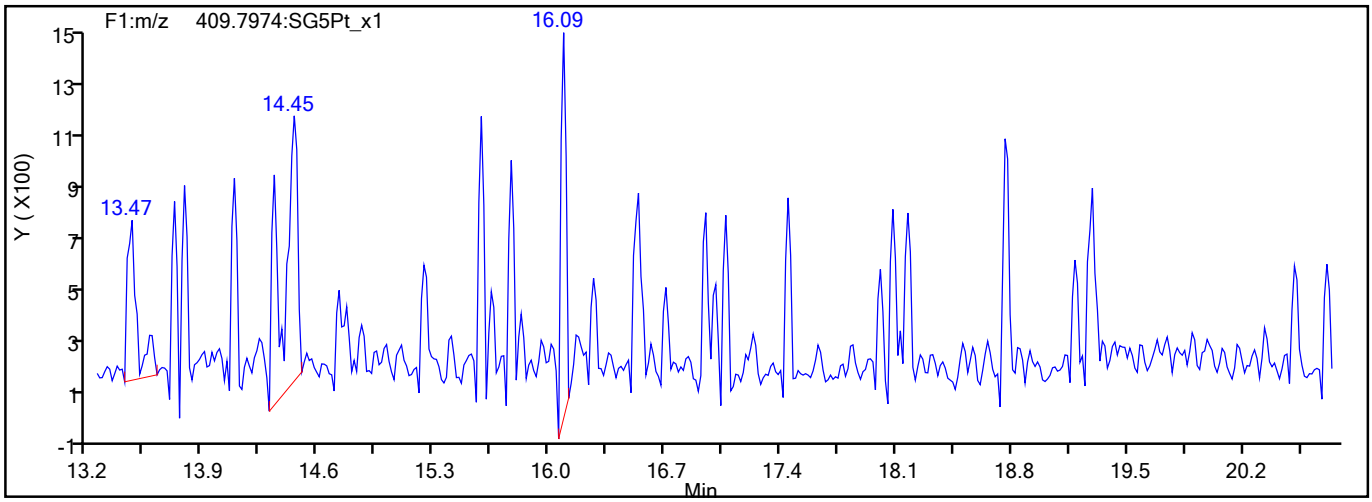

778327

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

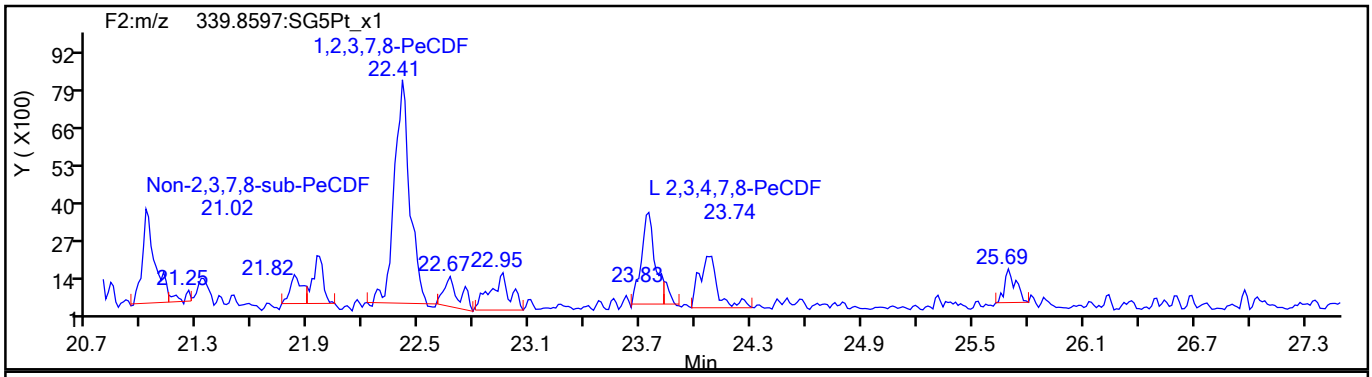

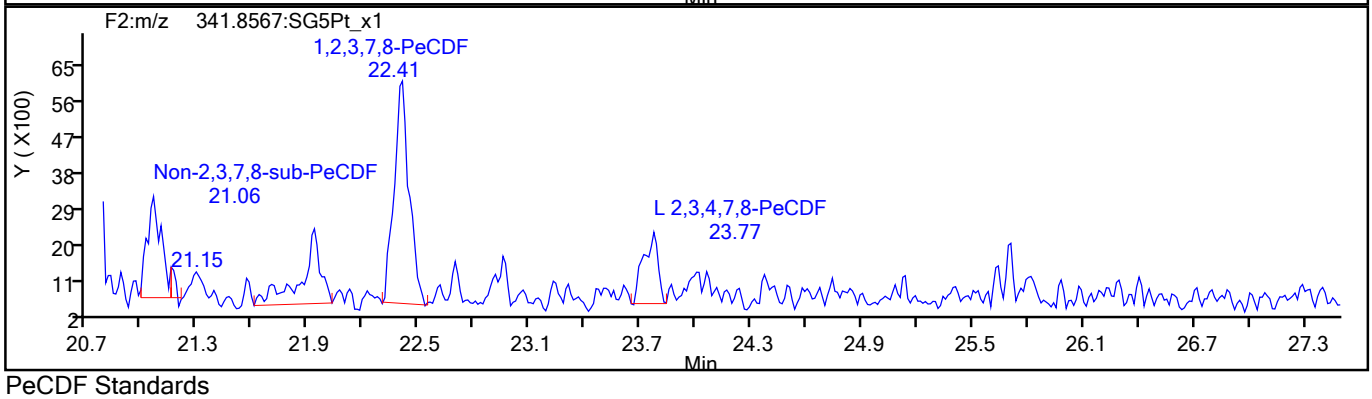

PeCDF Standards

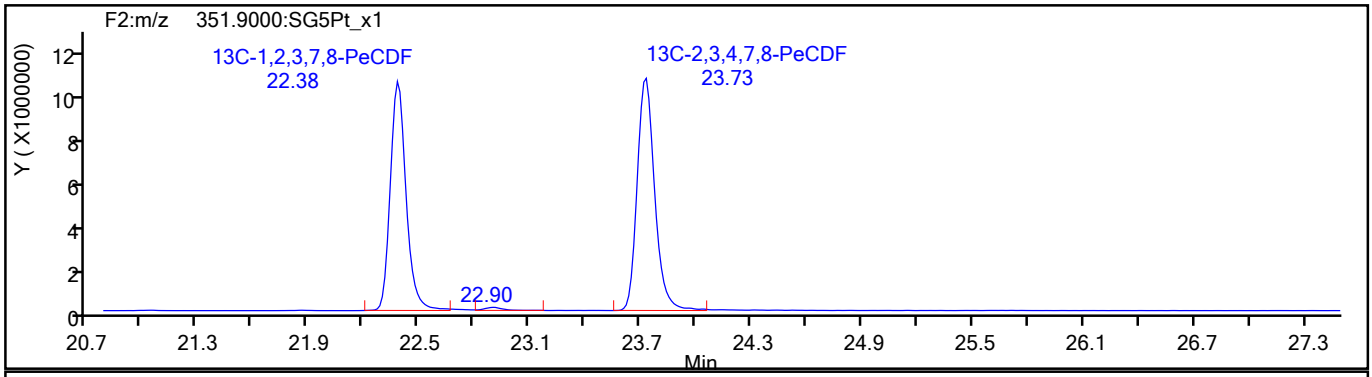

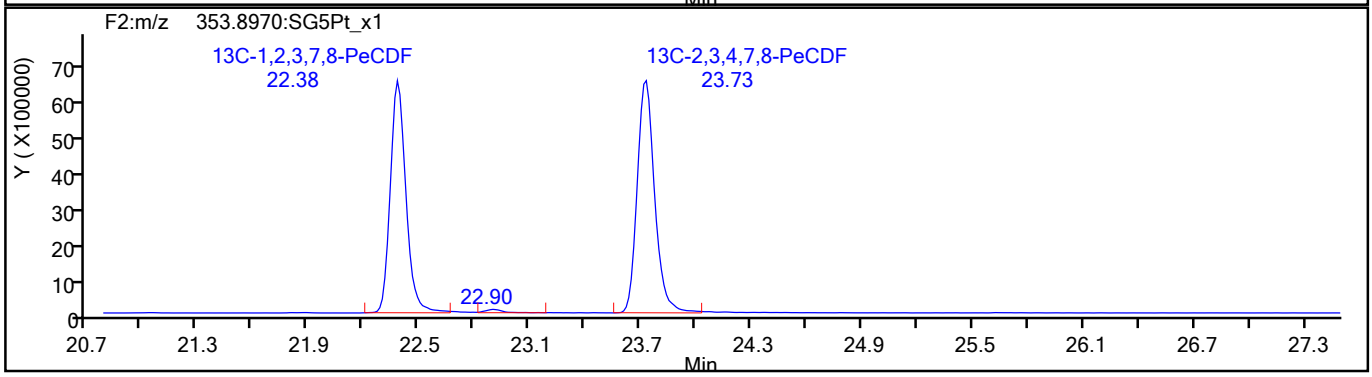

778328

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

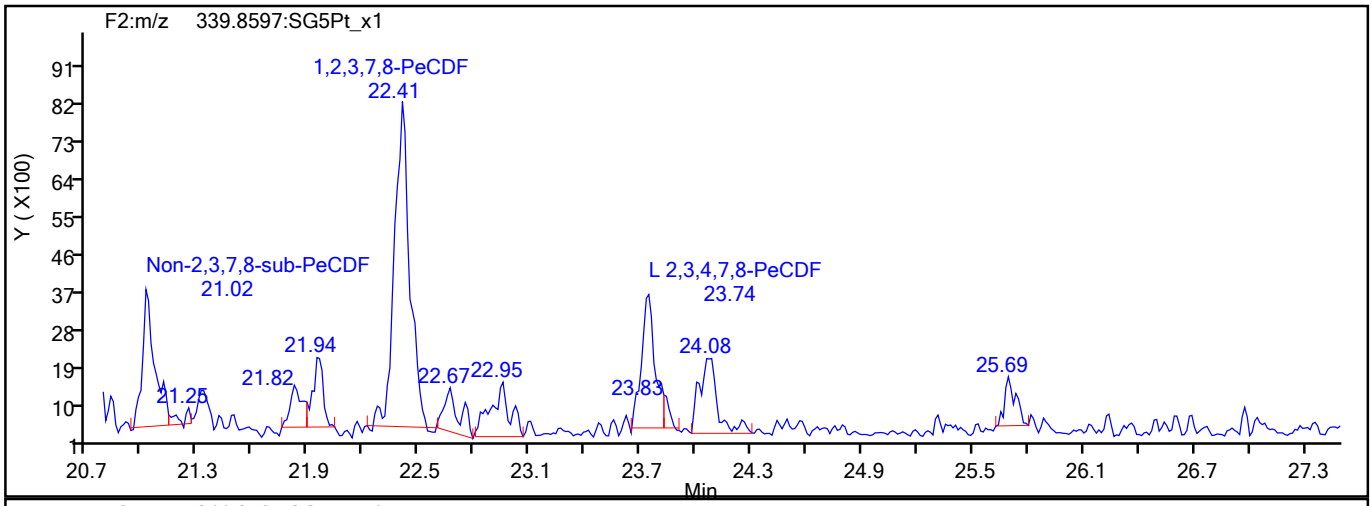

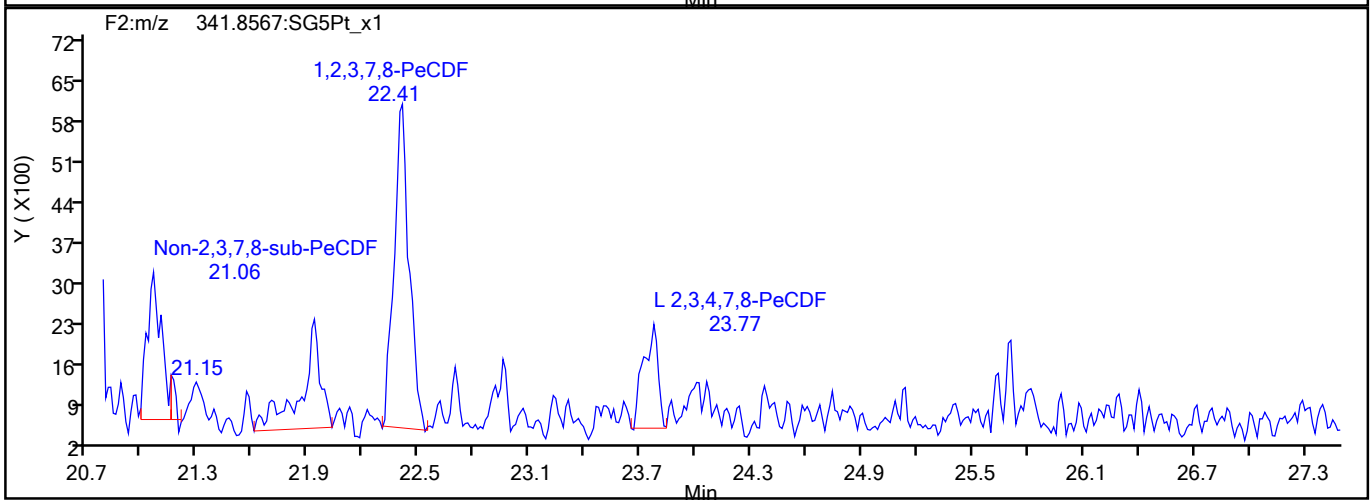

PeCDF Interference Mass

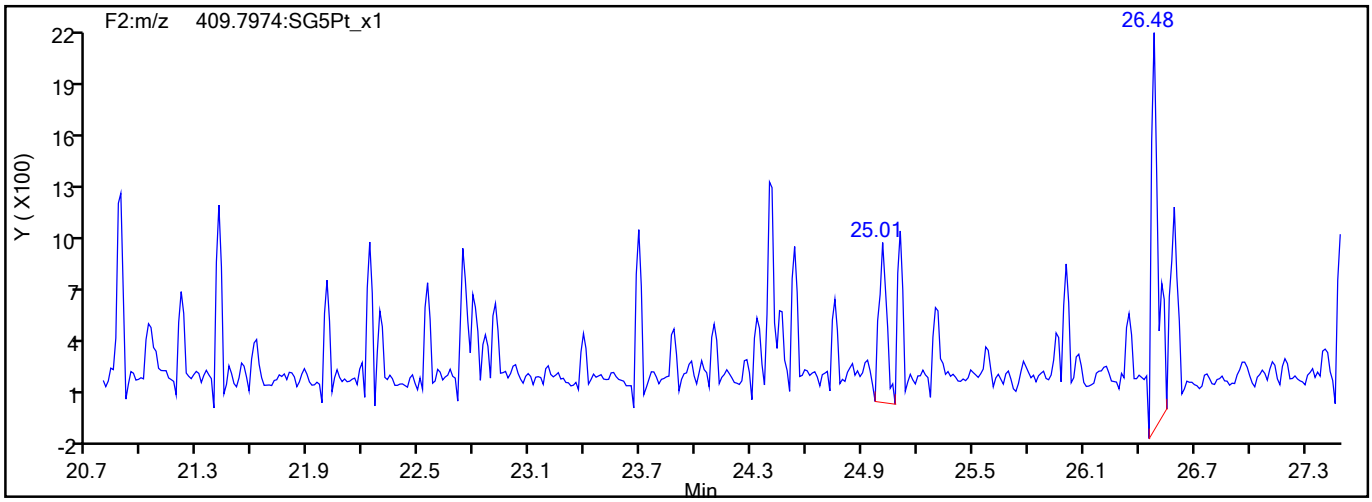

778329

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

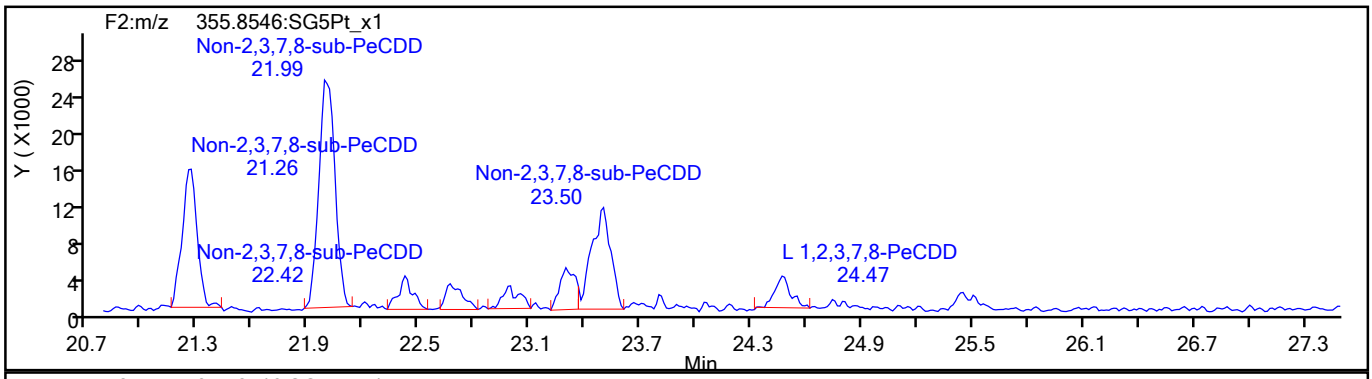

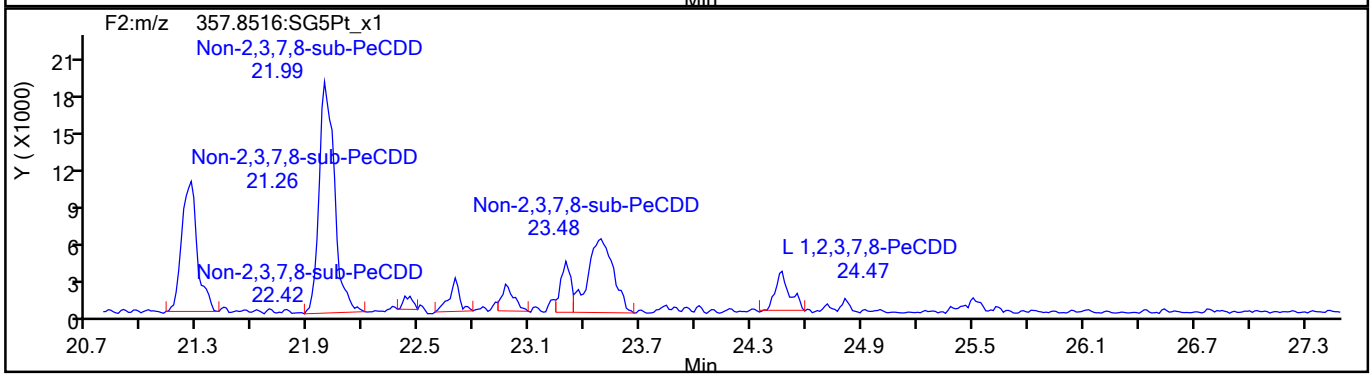

PeCDD Standards

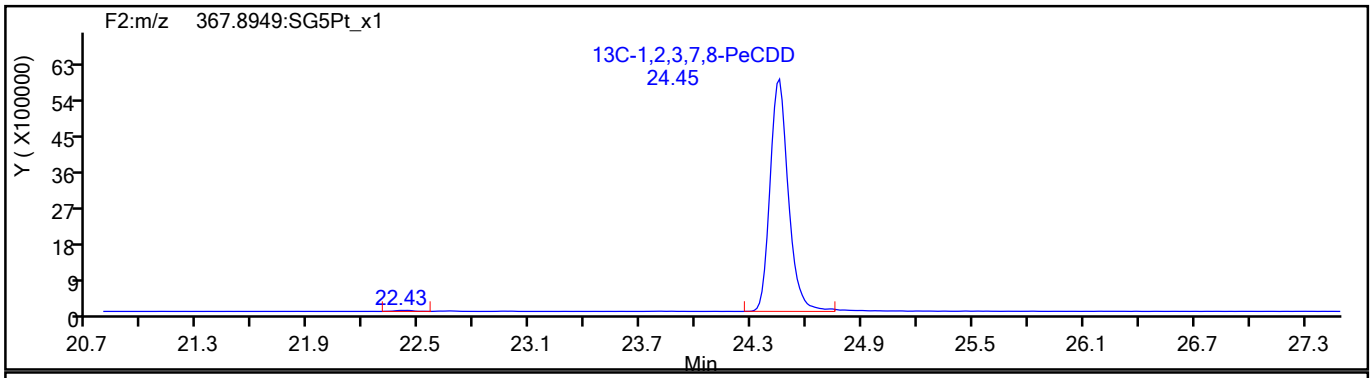

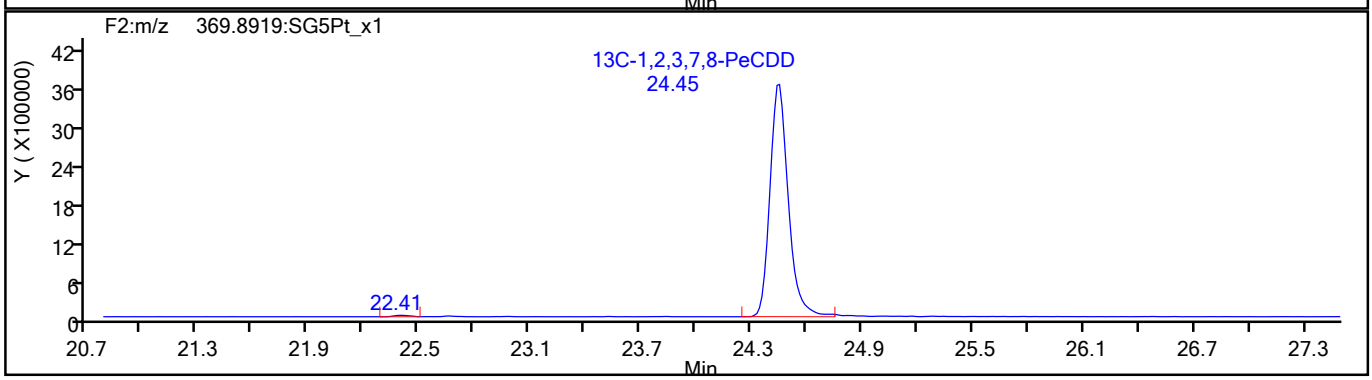

778330

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

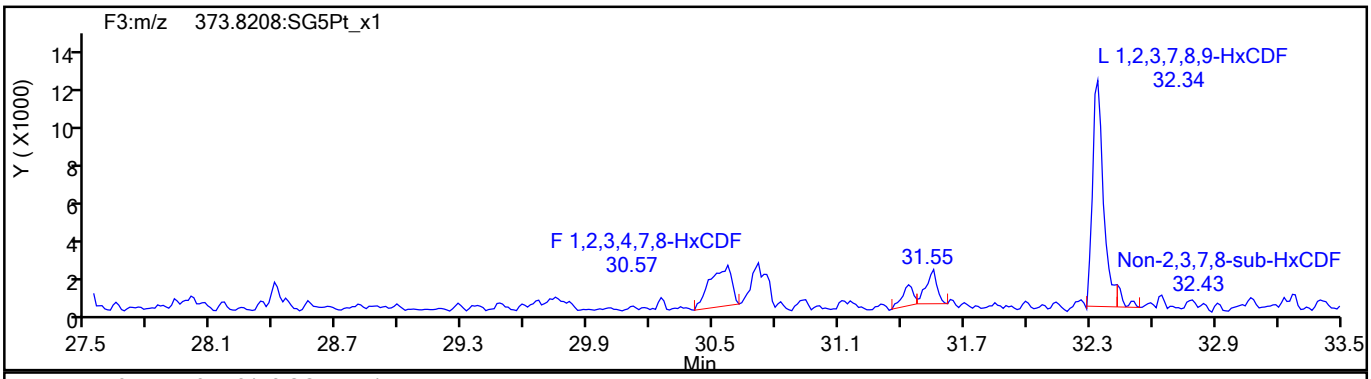

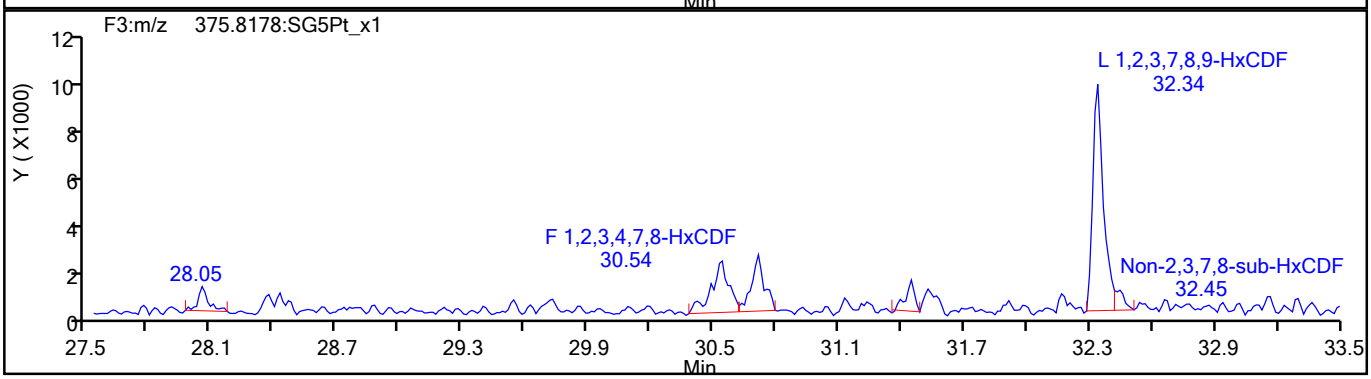

HxCDF Standards

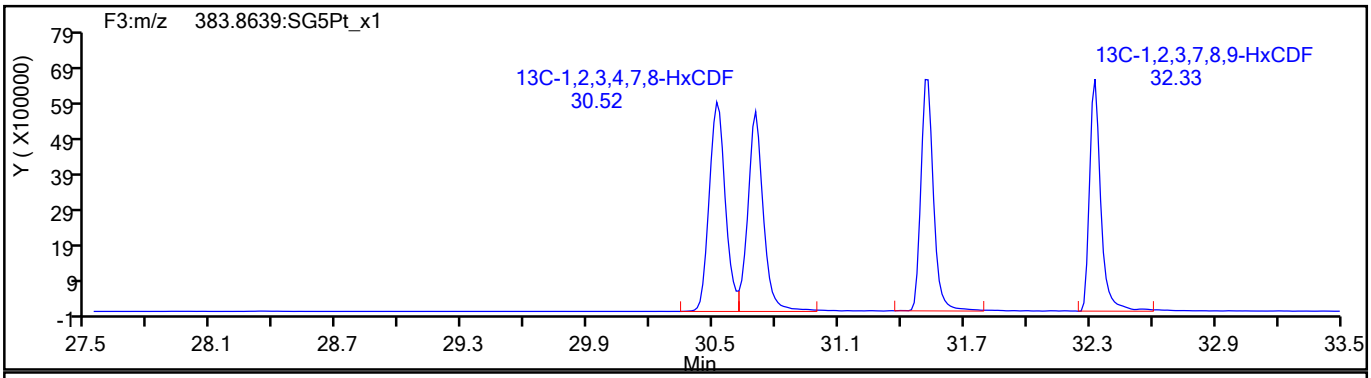

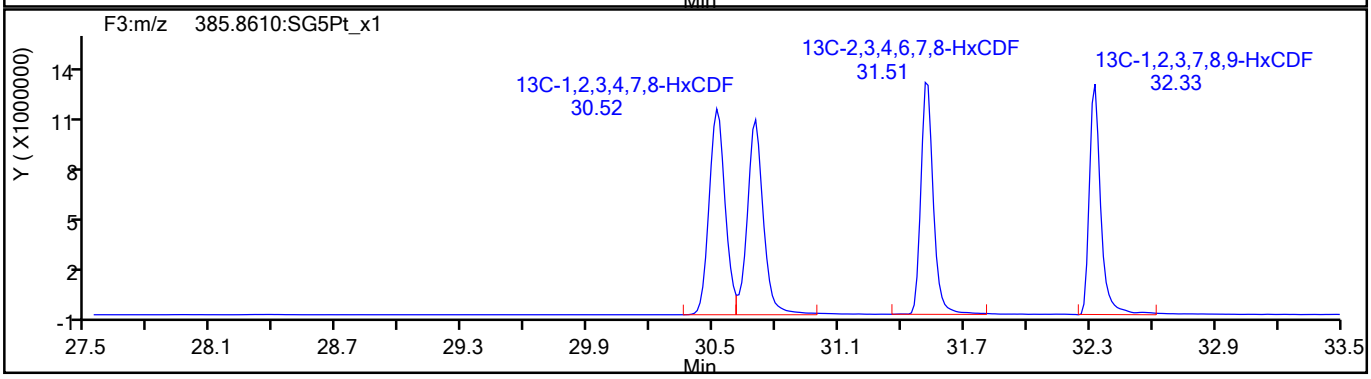

778331

Report Date: 16-Aug-2021 14:01:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

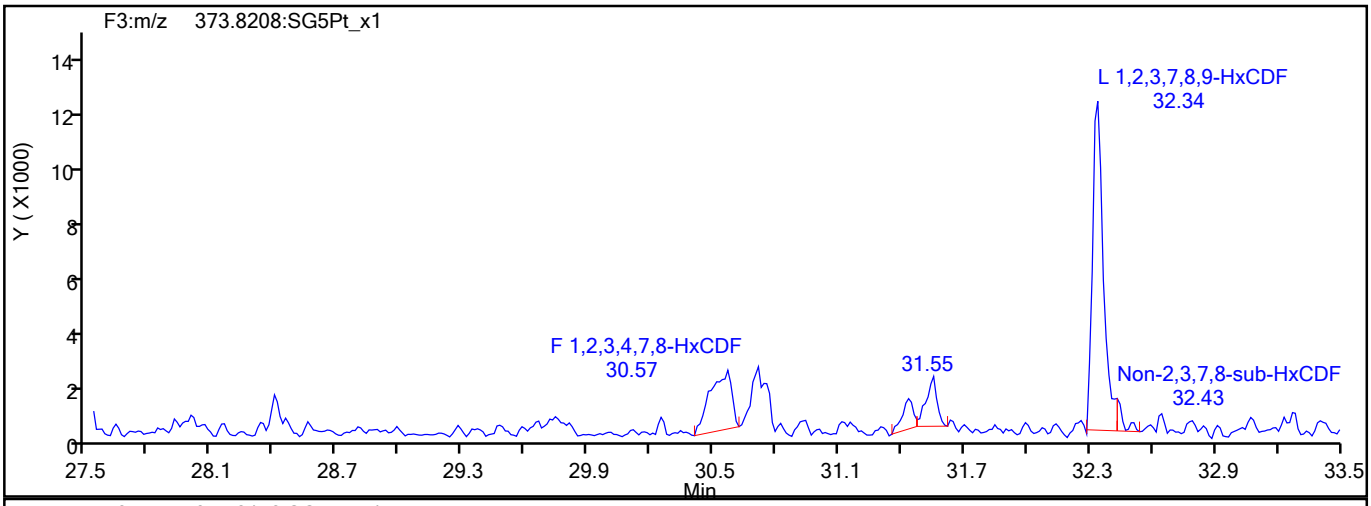

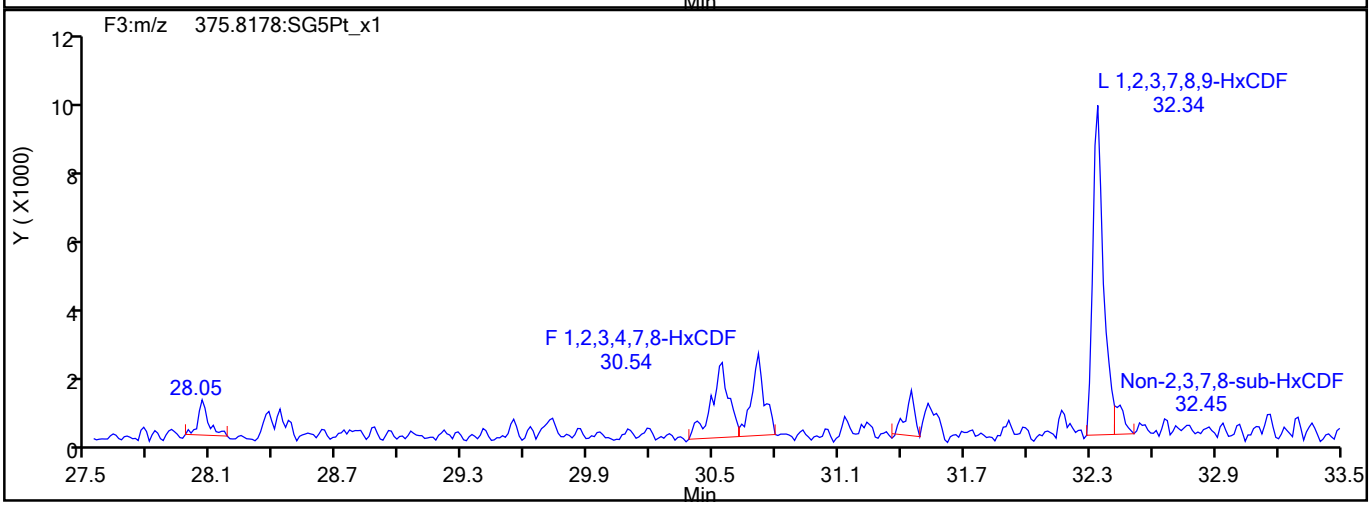

HxCDF Interference Mass

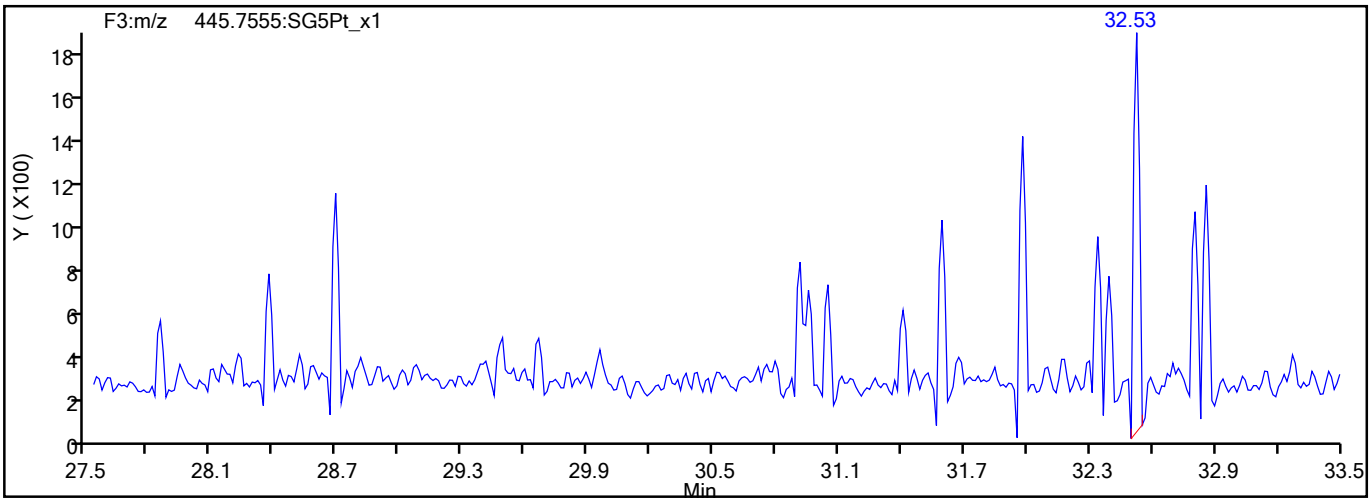

778332

Report Date: 16-Aug-2021 14:01:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

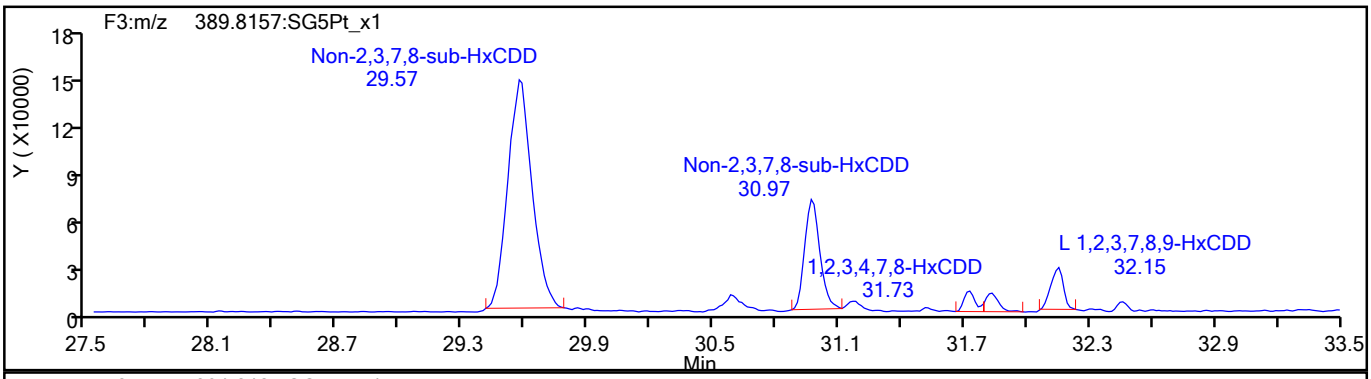

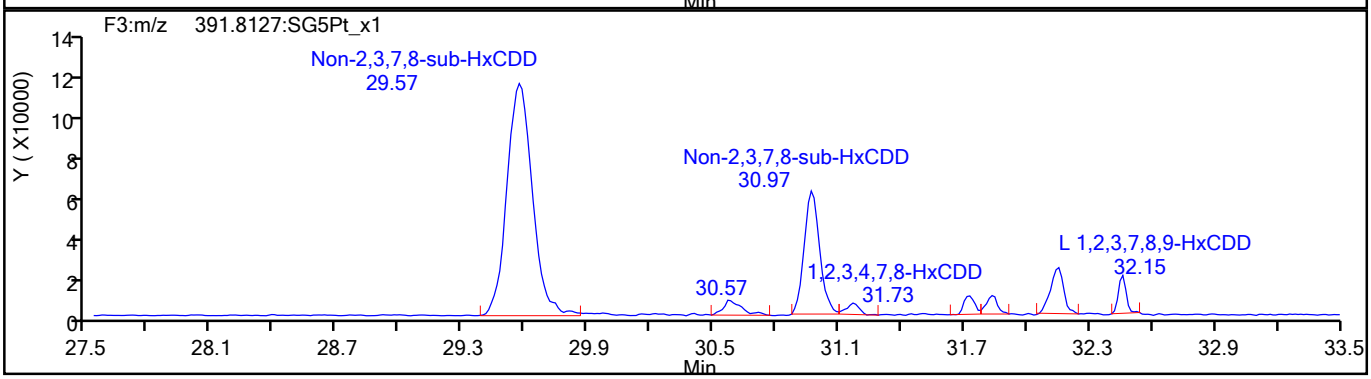

HxCDD Standards

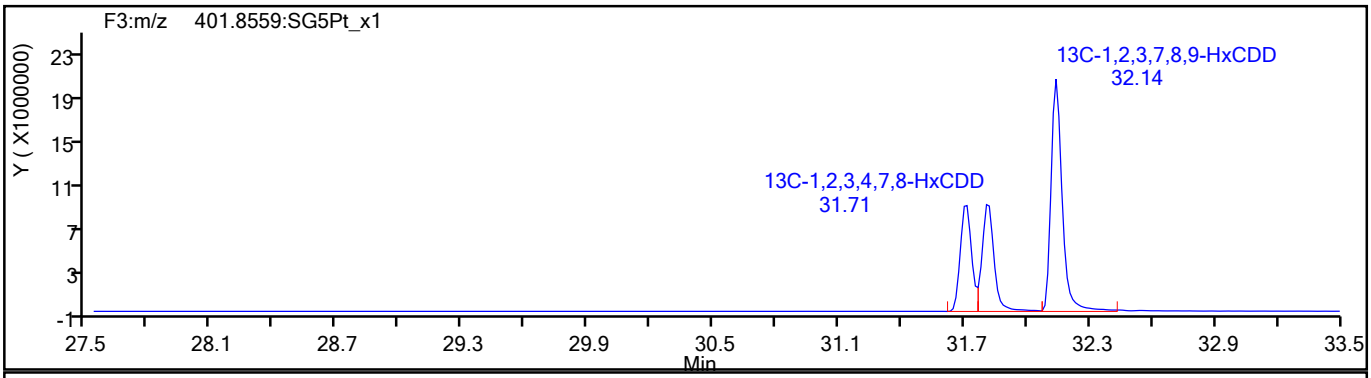

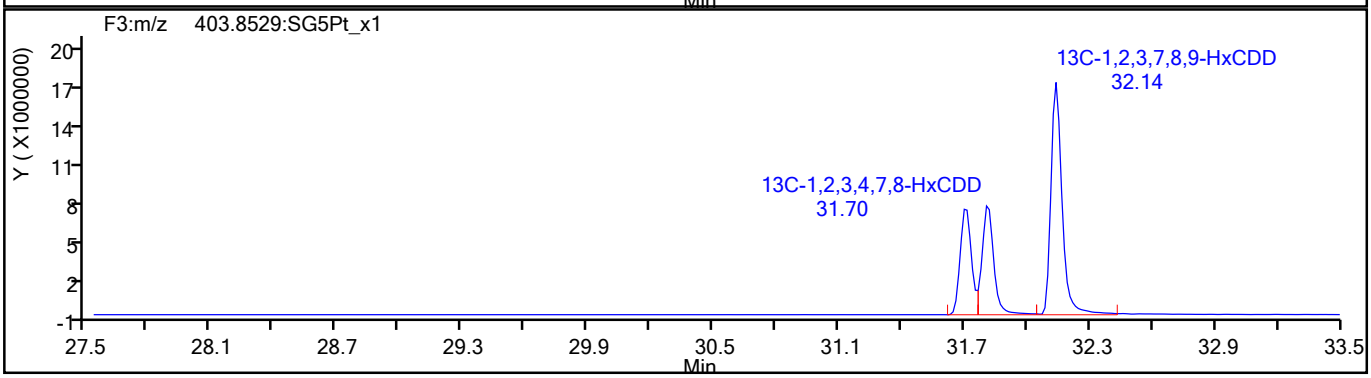

778333

Report Date: 16-Aug-2021 14:01:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

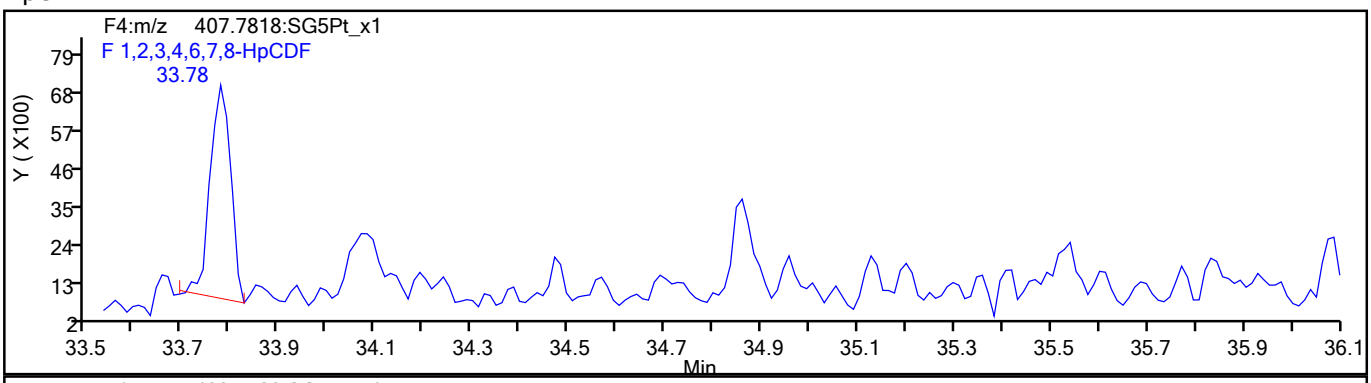

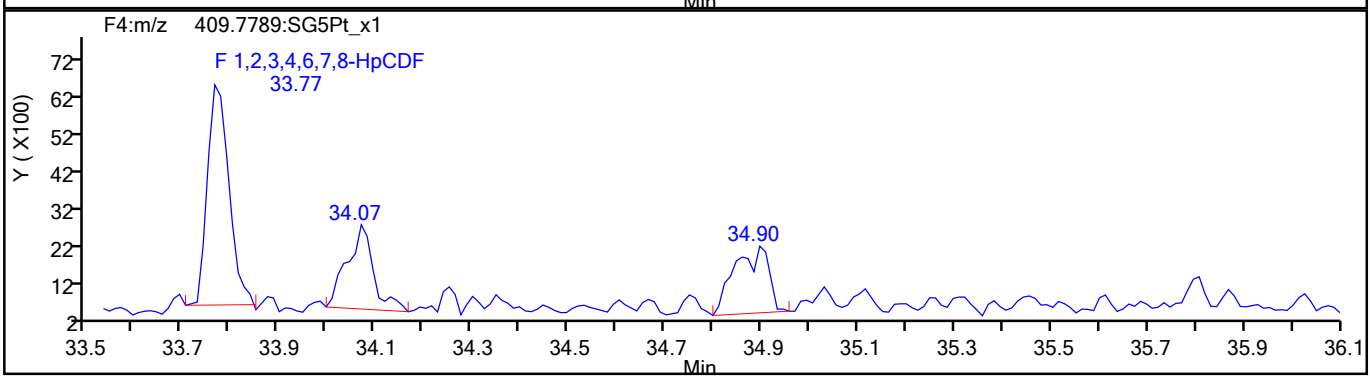

HpCDF Standards

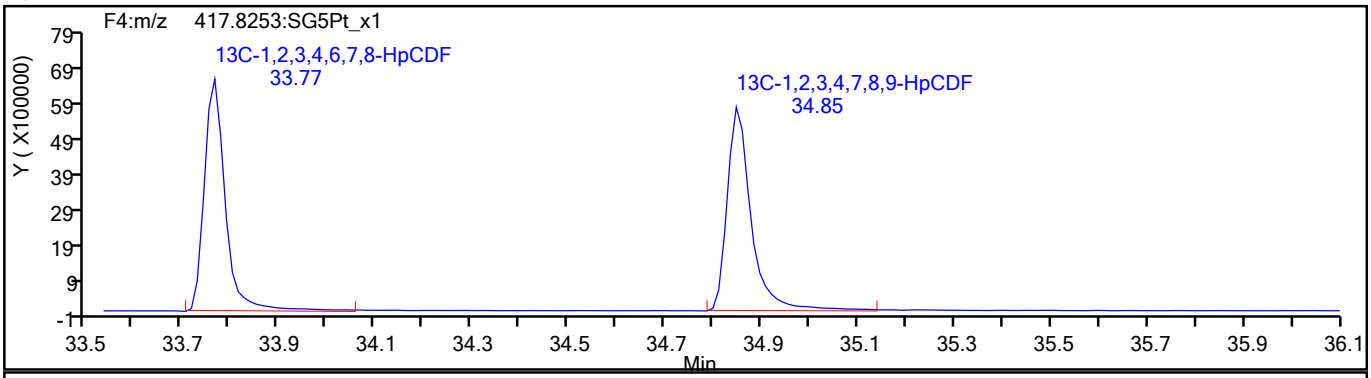

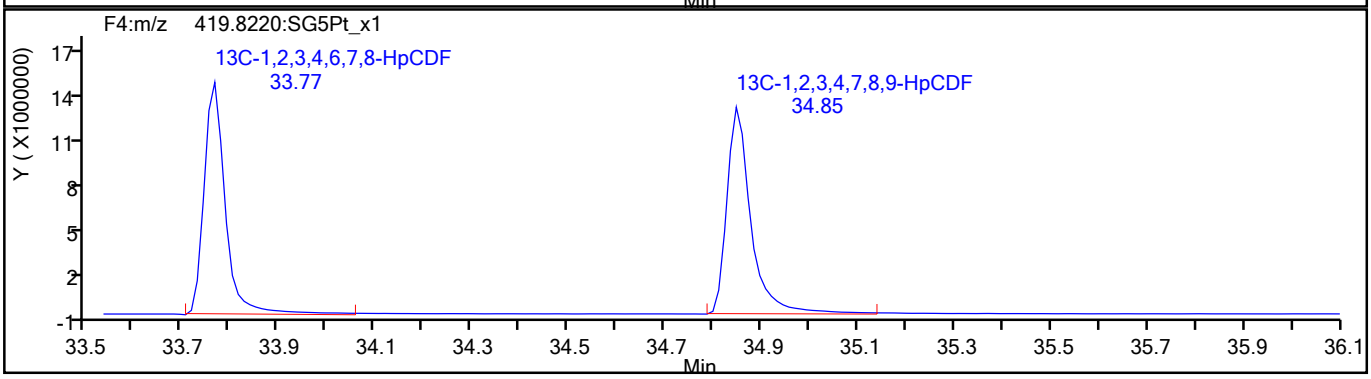

778334

Report Date: 16-Aug-2021 14:01:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

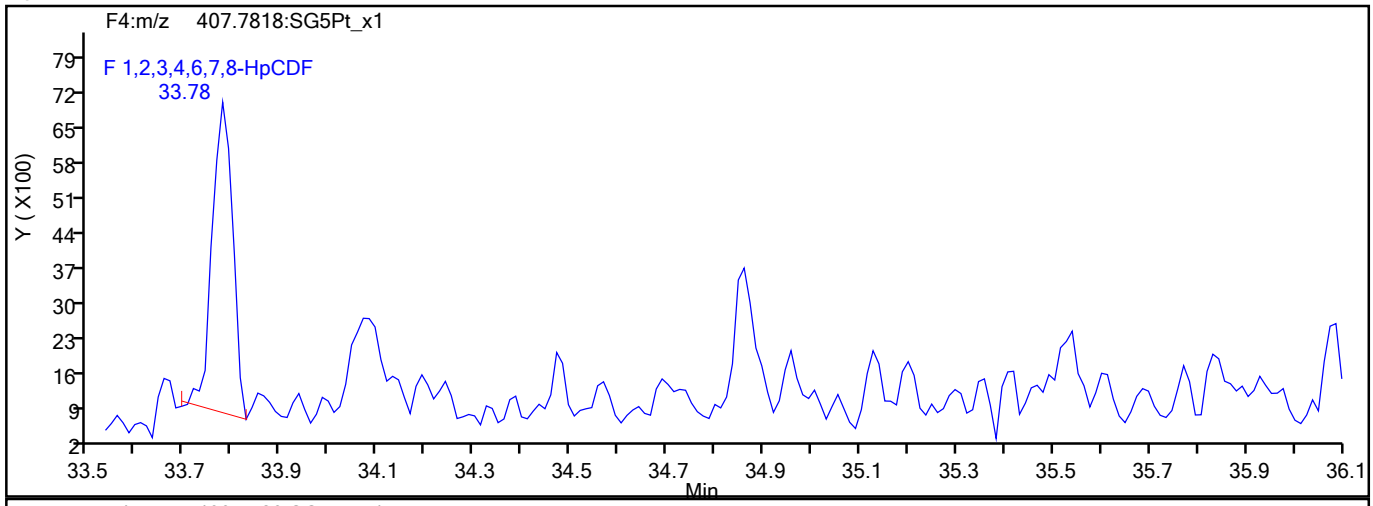

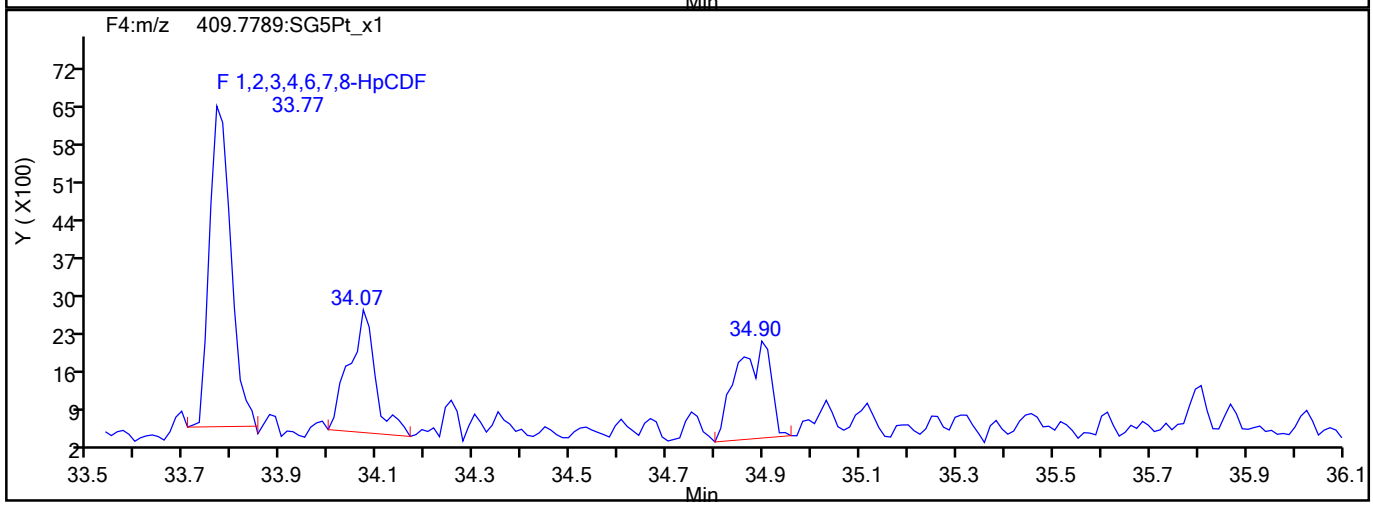

HpCDF Interference Mass

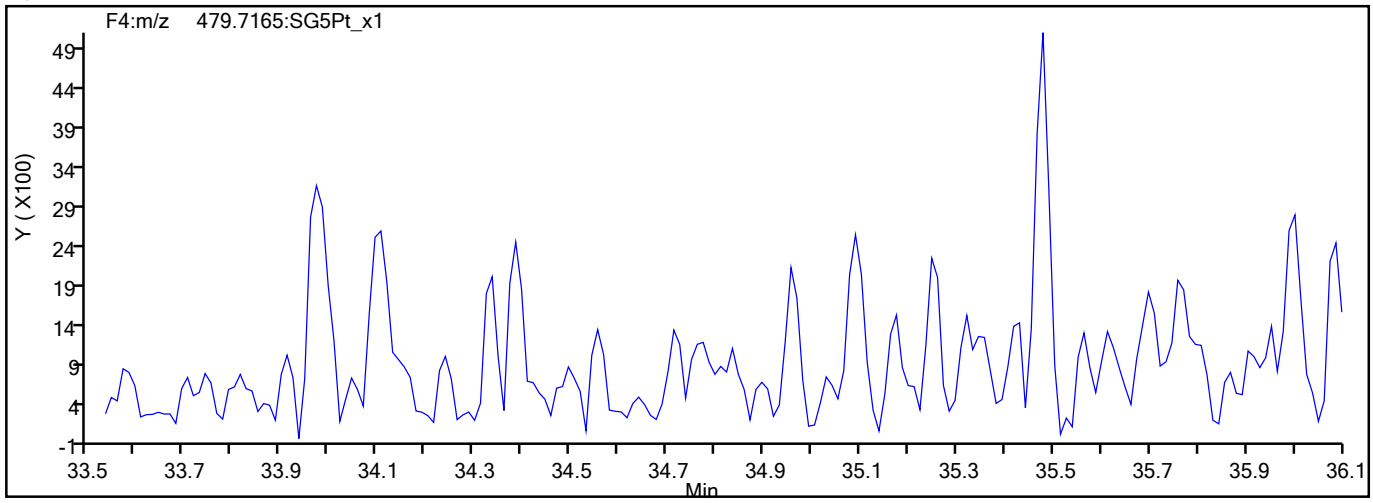

778335

Report Date: 16-Aug-2021 14:01:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

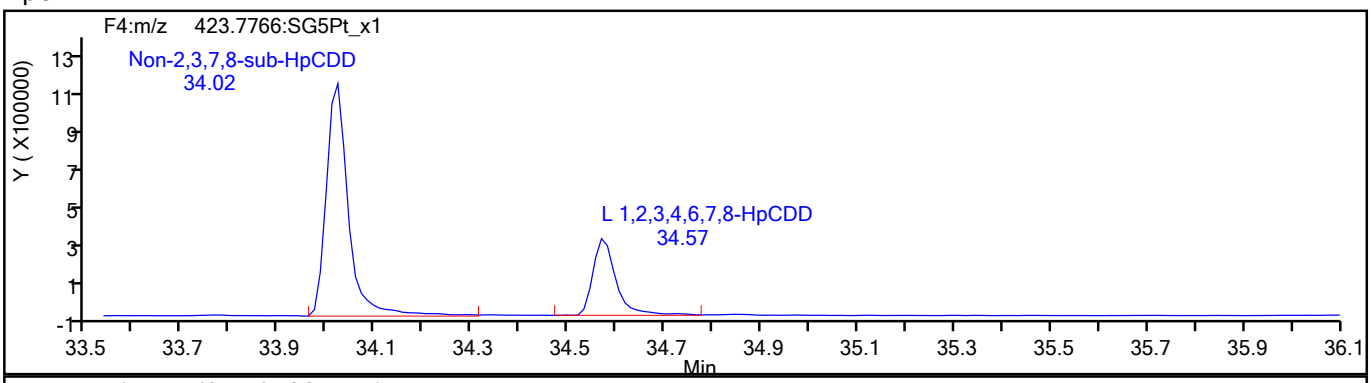

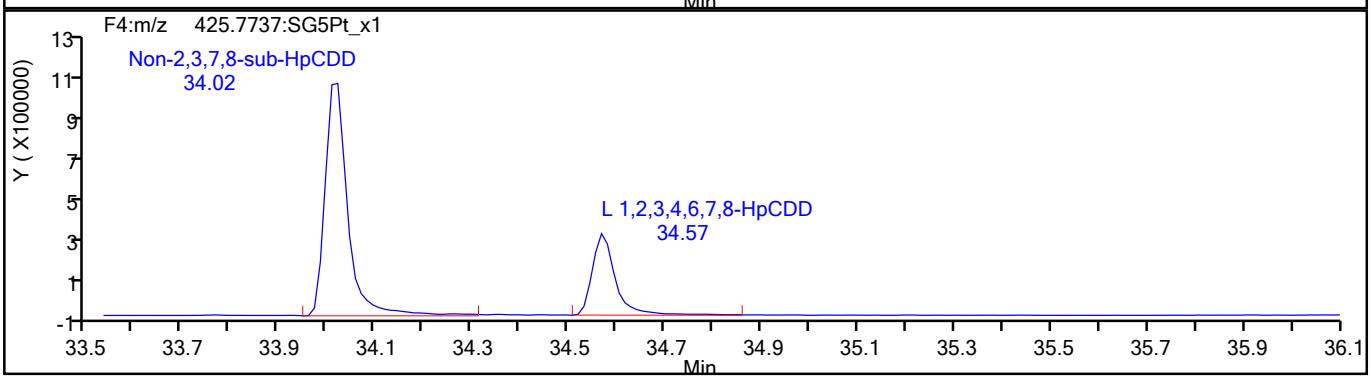

HpCDD Standards

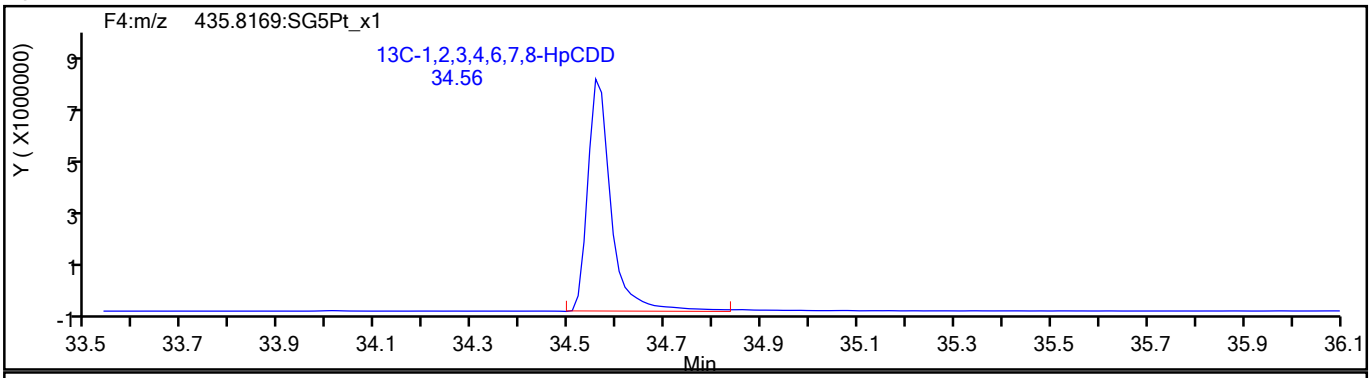

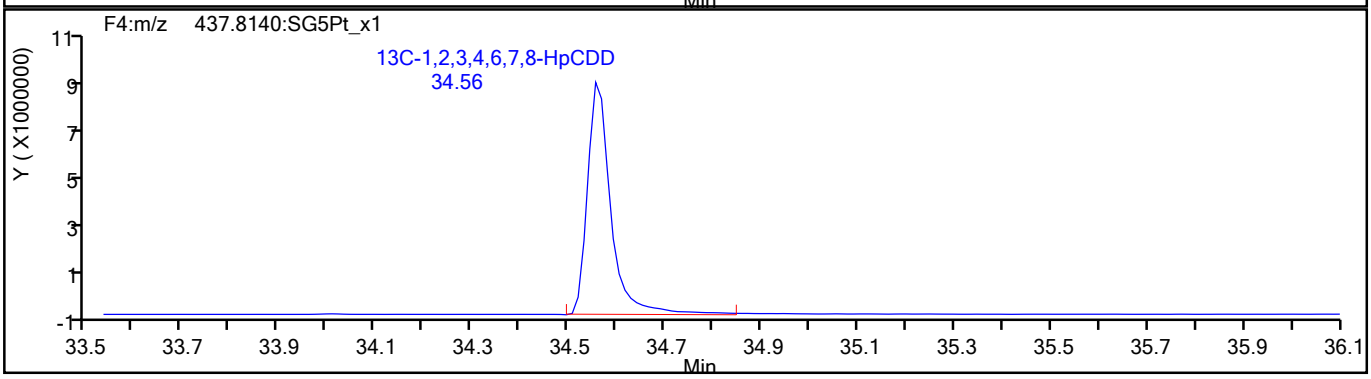

778336

Report Date: 16-Aug-2021 14:01:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

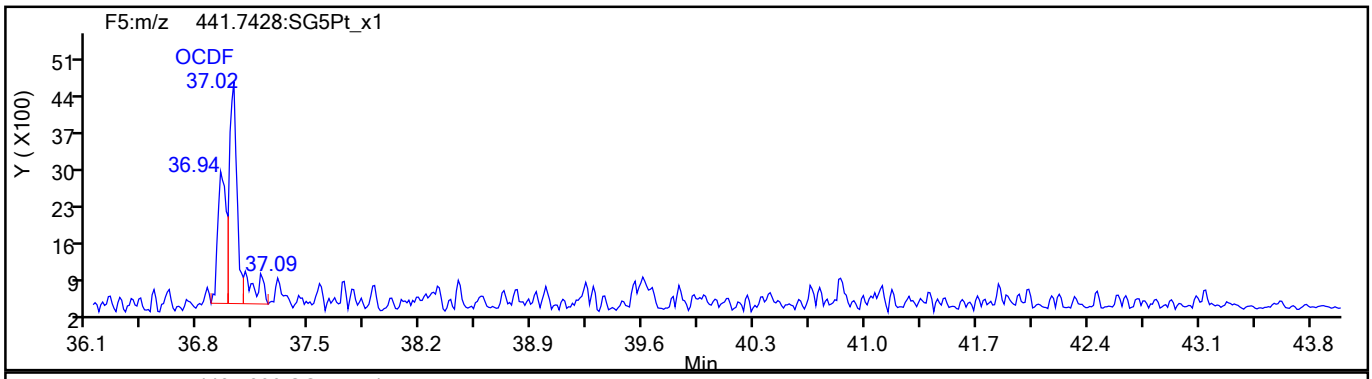

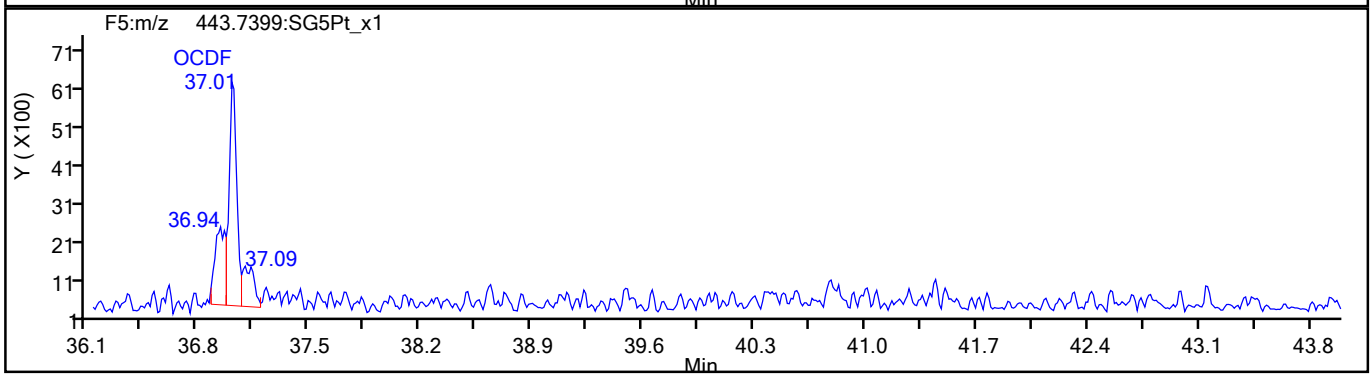

OCDF Standards

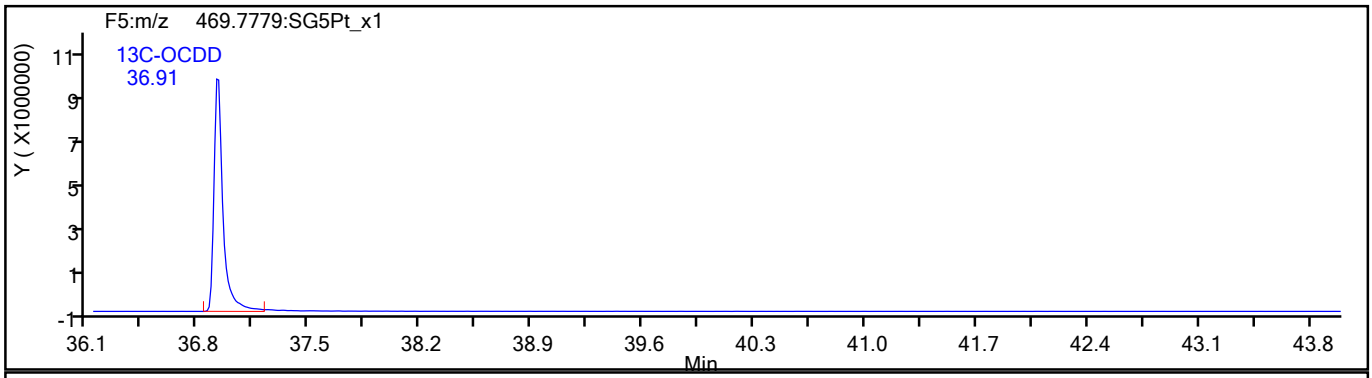

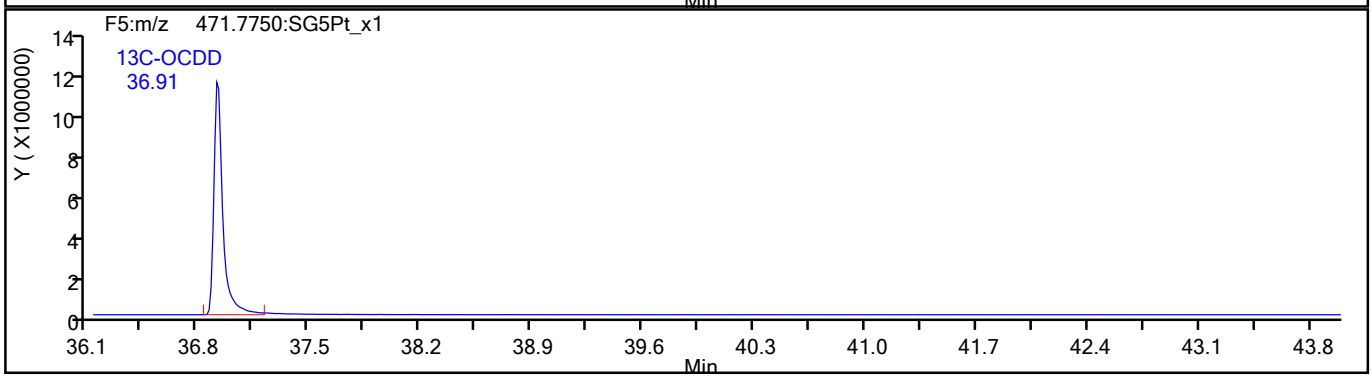

778337

Report Date: 16-Aug-2021 14:01:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

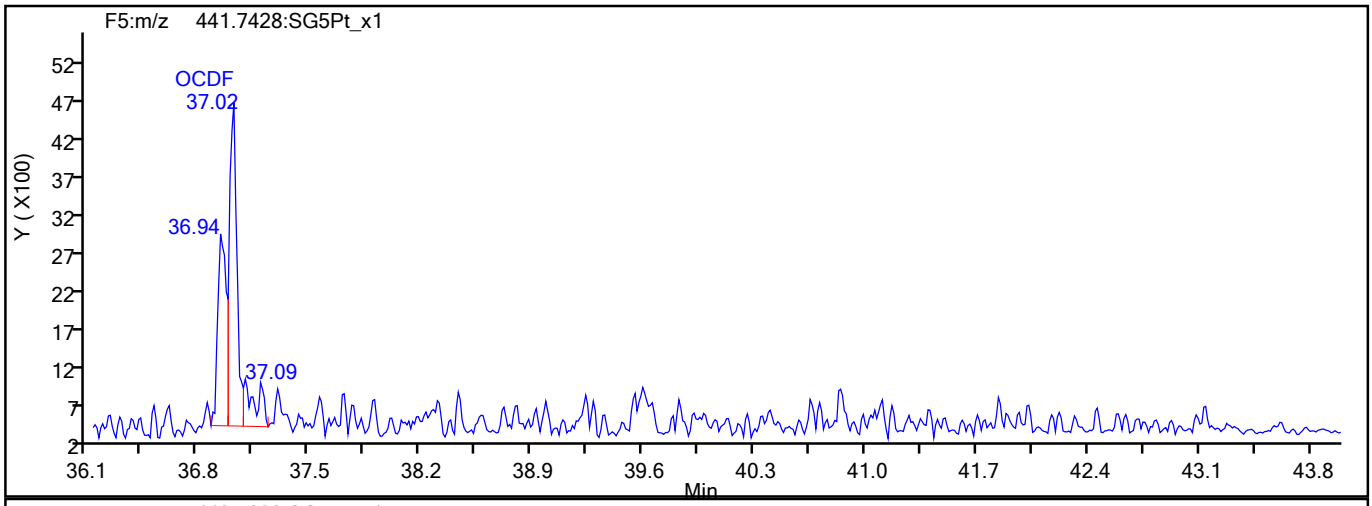

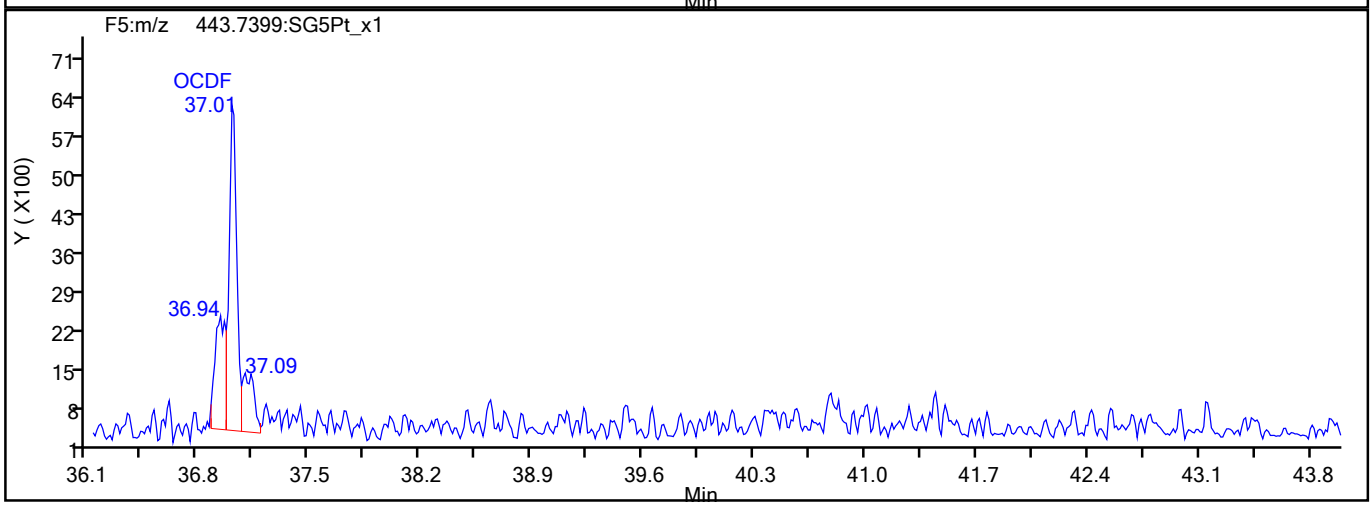

OCDF Interference Mass

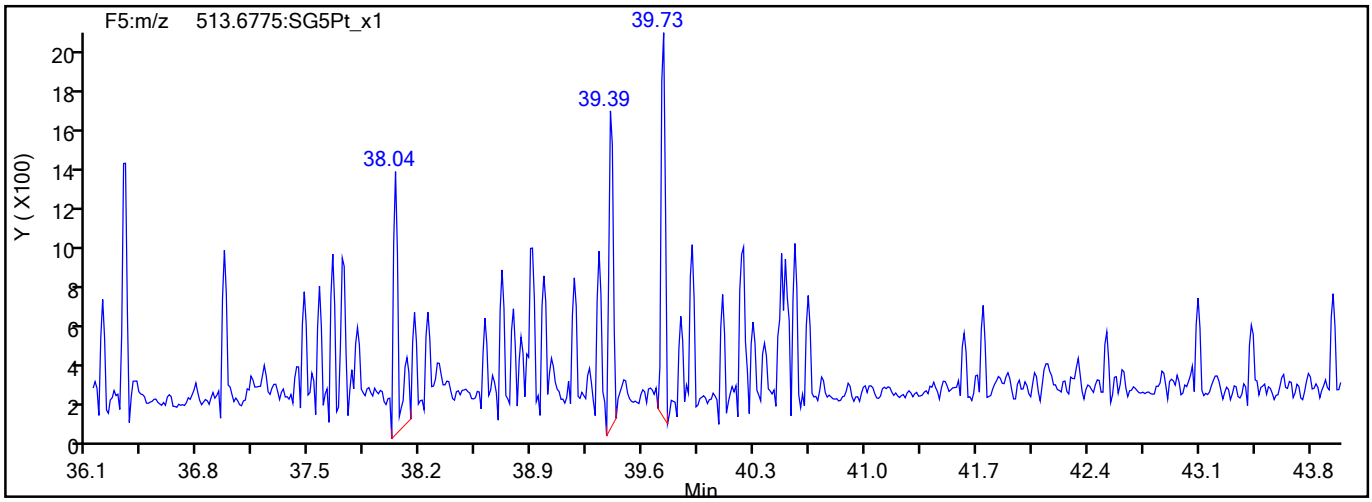

778338

Report Date: 16-Aug-2021 14:01:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

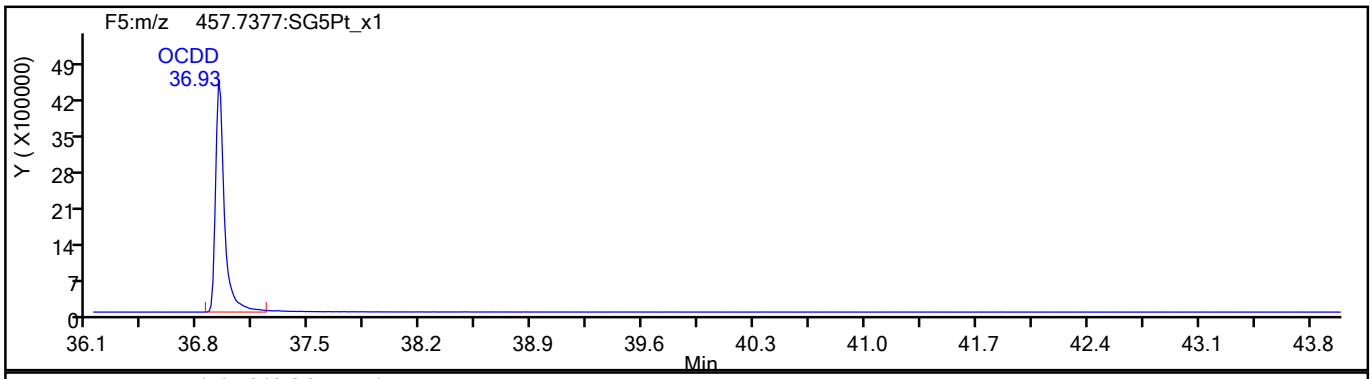

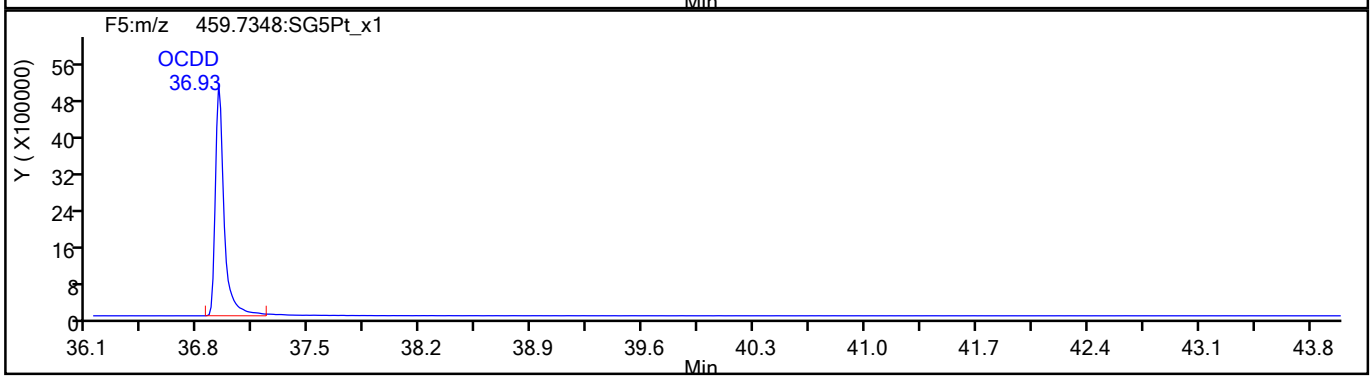

OCDD Standards

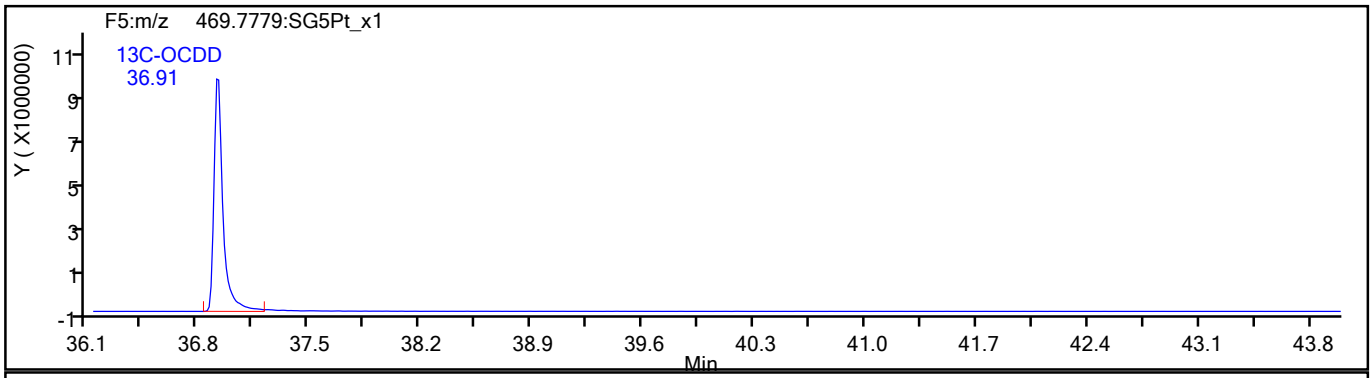

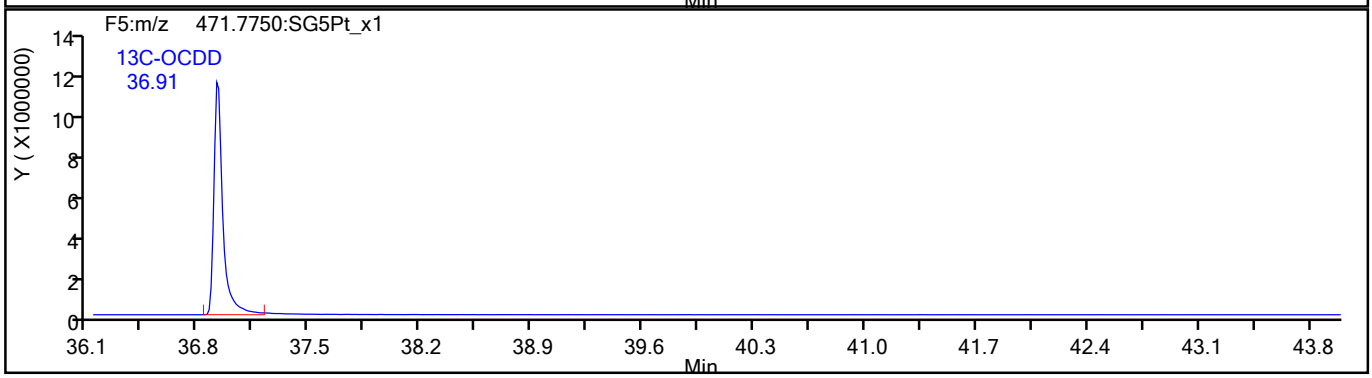

778339

Report Date: 16-Aug-2021 14:01:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

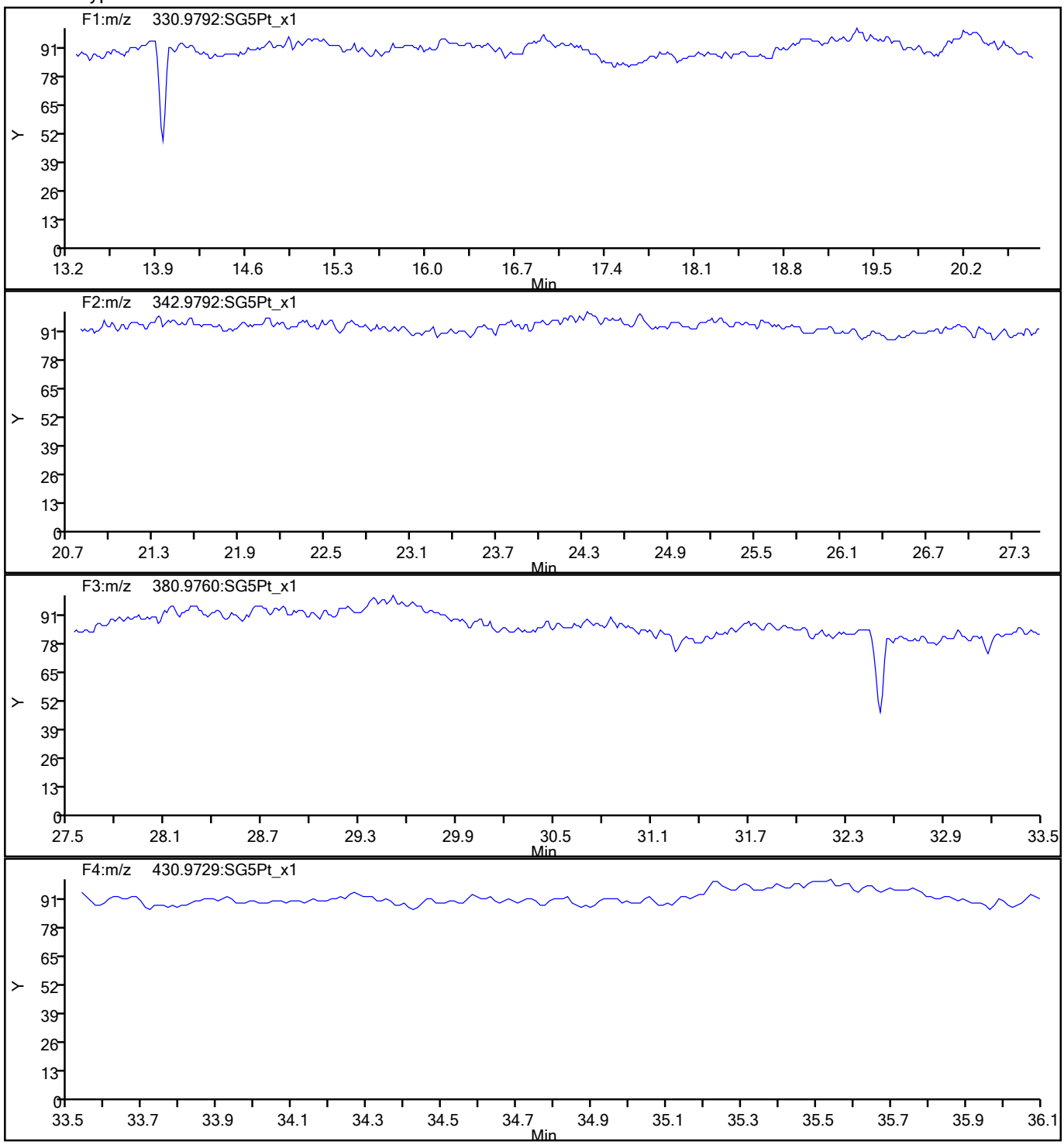

778340

Report Date: 16-Aug-2021 14:01:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_29.d		
Injection Date:	13-Aug-2021 09:33:14	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB074 (16-18)		
Worklist#:	515770	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

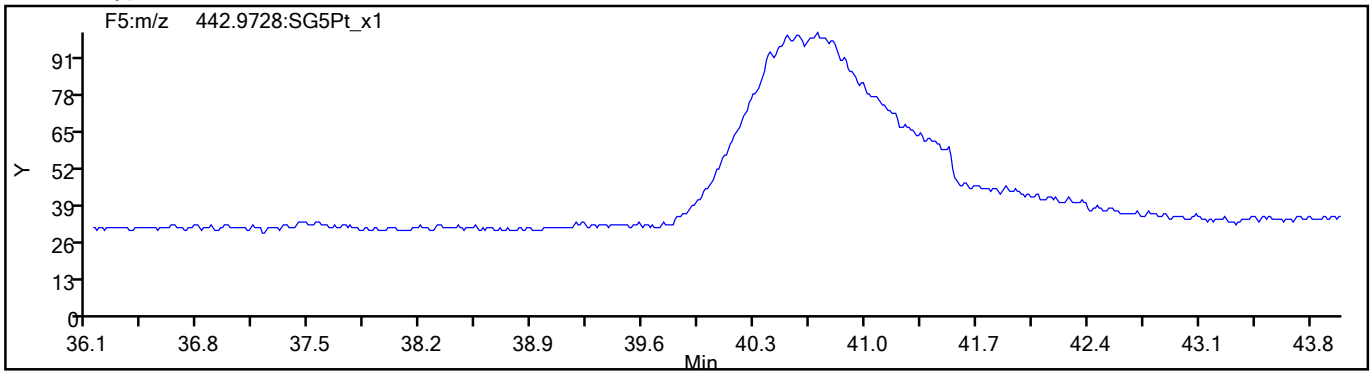

778341

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-2
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (16-18)
Lab Sample ID: 320-76769-35
Matrix: Sediment
Lab File ID: 12AU2110D5_30.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:30
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 9.90(g)
Date Analyzed: 08/13/2021 10:18
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 515770
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2.2		1.4	0.054
40321-76-4	1,2,3,7,8-PeCDD	0.22	J	7.0	0.067
57117-41-6	1,2,3,7,8-PeCDF	0.41	J	7.0	0.032
57117-31-4	2,3,4,7,8-PeCDF	0.16	J	7.0	0.032
39227-28-6	1,2,3,4,7,8-HxCDD	0.45	J B	7.0	0.16
57653-85-7	1,2,3,6,7,8-HxCDD	0.53	J	7.0	0.17
19408-74-3	1,2,3,7,8,9-HxCDD	1.4	J B	7.0	0.15
70648-26-9	1,2,3,4,7,8-HxCDF	0.39	J	7.0	0.024
57117-44-9	1,2,3,6,7,8-HxCDF	0.13	J q	7.0	0.025
72918-21-9	1,2,3,7,8,9-HxCDF	0.23	J B	7.0	0.020
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.0	0.019
35822-46-9	1,2,3,4,6,7,8-HpCDD	18	B	7.0	0.47
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.21	J B	7.0	0.022
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.0	0.027
3268-87-9	OCDD	400	B	14	0.55
39001-02-0	OCDF	0.24	J B	14	0.020
41903-57-5	Total TCDD	5.7	q B	1.4	0.054
30402-14-3	Total TCDF	11	q B	1.4	0.040
36088-22-9	Total PeCDD	4.2	J q	7.0	0.067
30402-15-4	Total PeCDF	0.81	J q	7.0	0.032
34465-46-8	Total HxCDD	21	q B	7.0	0.16
55684-94-1	Total HxCDF	0.76	J q B	7.0	0.022
37871-00-4	Total HpCDD	77	B	7.0	0.47
38998-75-3	Total HpCDF	0.32	J B	7.0	0.024

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-2
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (16-18)
Lab Sample ID: 320-76769-35
Matrix: Sediment
Lab File ID: 12AU2110D5_30.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:30
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 9.90(g)
Date Analyzed: 08/13/2021 10:18
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 515770
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	61		25-164
89059-46-1	13C-2,3,7,8-TCDF	58		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	63		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	59		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	64		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	66		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	59		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	64		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	57		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	56		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	57		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	67		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	63		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	73		26-138
114423-97-1	13C-OCDD	75		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	79		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d
Lims ID: 320-76769-A-35-A
Client ID: 11215702-072221-SS-SJSB076 (16-18)
Sample Type: Client
Inject. Date: 13-Aug-2021 10:18:15 ALS Bottle#: 34 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-35-a 320-76769-a-35-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 12:22:19 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1634

First Level Reviewer: krenns Date: 16-Aug-2021 12:22:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	141300847	0.82	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.356	134112962	0.78	1.6249	58.4	58.4	0.0848	0.0848	58.41	
2,3,7,8-TCDF	17.371	3064577	0.79	1.0239	2.232	2.232	0.0144	0.0144		
A Non-2,3,7,8-sub-TCDF	17.069	2417524	0.77	1.0239	1.782	1.761	0.0144	0.9793		RQ
S Total TCDF					4.013	3.992	0.0144	0.0144		RQ
D 13C-2,3,7,8-TCDD	18.051	77986512	0.81	0.8993	61.4	61.4	0.1272	0.1272	61.37	
2,3,7,8-TCDD	18.082	778093	0.71	1.2541	0.7956	0.7956	0.0193	0.0193		M
$ 37Cl4-2,3,7,8-TCDD	18.082	49636401		1.1071	31.7	31.7	0.0209	0.0209	79.32	
A Non-2,3,7,8-sub-TCDD	17.530	1213902	0.77	1.2541	1.254	1.241	0.0193	0.3690		RQ
S Total TCDD					2.049	2.037	0.0193	0.0193		RQ
D 13C-1,2,3,7,8-PeCDF	22.381	100142277	1.57	1.2101	58.6	58.6	0.1318	0.1318	58.57	
1,2,3,7,8-PeCDF	22.421	154739	1.42	1.0611	0.1456	0.1456	0.0113	0.0113		M
D 13C-2,3,4,7,8-PeCDF	23.730	111548268	1.56	1.2395	63.7	63.7	0.1287	0.1287	63.69	
2,3,4,7,8-PeCDF	23.771	64222	1.48	1.0184	0.0565	0.0565	0.0116	0.0116		M
A F1 PeCDFs	20.108						0.0099	0.0235		U
A Non-2,3,7,8-sub-PeCDF	23.261	95384	1.55	1.0398	0.0958	0.0867	0.0114	0.0585		RQ
S Total PeCDF					0.2980	0.2888	0.0114	0.0114		RQ
D 13C-1,2,3,7,8-PeCDD	24.453	67739325	1.62	0.7612	63.0	63.0	0.0551	0.0551	62.98	
1,2,3,7,8-PeCDD	24.467	55312	1.46	1.0484	0.0779	0.0779	0.0242	0.0242		
A Non-2,3,7,8-sub-PeCDD	23.376	1017386	1.55	1.0484	1.442	1.433	0.0242	0.5741		RQM
S Total PeCDD					1.520	1.510	0.0242	0.0242		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	93627285	0.52	1.0837	64.0	64.0	0.2286	0.2286	63.97	
1,2,3,4,7,8-HxCDF	30.529	143787	1.33	1.0851	0.1415	0.1415	0.008650	0.008650		M
D 13C-1,2,3,6,7,8-HxCDF	30.702	86879536	0.52	1.1279	57.0	57.0	0.2197	0.2197	57.03	
1,2,3,6,7,8-HxCDF	30.729	45612	1.24	1.1260	0.0518	0.0466	0.008874	0.008874		RQM
D 13C-2,3,4,6,7,8-HxCDF	31.528	81473338	0.52	1.0637	56.7	56.7	0.2329	0.2329	56.71	
2,3,4,6,7,8-HxCDF	31.541						0.006950	0.006950		RQMU
D 13C-1,2,3,7,8,9-HxCDF	32.326	73783855	0.52	0.9676	56.5	56.5	0.2561	0.2561	56.46	
1,2,3,7,8,9-HxCDF	32.340	71361	1.31	1.1664	0.0829	0.0829	0.007103	0.007103		M
A Non-2,3,7,8-sub-HxCDF	30.223						0.007813	0.007813		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.2762	0.2711	0.007894	0.007894		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.140	135053113	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	64899209	1.25	0.7334	65.5	65.5	0.2941	0.2941	65.52	
1,2,3,4,7,8-HxCDD	31.727	111119	1.09	1.0640	0.1609	0.1609	0.0573	0.0573		
D 13C-1,2,3,6,7,8-HxCDD	31.820	70238003	1.22	0.8802	59.1	59.1	0.2451	0.2451	59.09	
1,2,3,6,7,8-HxCDD	31.834	133620	1.41	1.0001	0.1902	0.1902	0.0604	0.0604		
1,2,3,7,8,9-HxCDD	32.153	389929	1.24	1.1325	0.5096	0.5096	0.0536	0.0536		
A Non-2,3,7,8-sub-HxCDD	30.895	4850124	1.24	1.0655	6.751	6.737	0.0570	5.011		RQM
S Total HxCDD					7.612	7.597	0.0571	0.0571		RQ
1,2,3,4,6,7,8-HpCDF	33.778	71862	1.11	1.4413	0.0753	0.0753	0.007783	0.007783		M
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	66251453	0.44	0.7730	63.5	63.5	0.7413	0.7413	63.46	
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	69015496	0.44	0.7008	72.9	72.9	0.8177	0.8177	72.92	
1,2,3,4,7,8,9-HpCDF	34.872						0.009636	0.009636		
A Non-2,3,7,8-sub-HpCDF	34.325	37407	1.07	1.3793	0.0401	0.0401	0.008635	0.0401		Ma
S Total HpCDF					0.1154	0.1154	0.008709	0.008709		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	58322031	1.01	0.6472	66.7	66.7	0.4987	0.4987	66.72	
1,2,3,4,6,7,8-HpCDD	34.568	4037697	1.01	1.0943	6.327	6.327	0.1669	0.1669		
A Non-2,3,7,8-sub-HpCDD	34.301	13602869	1.04	1.0943	21.3	21.3	0.1669	21.3		
S Total HpCDD					27.6	27.6	0.1669	0.1669		
D 13C-OCDD	36.926	89991539	0.87	0.4472	149.0	149.0	0.1800	0.1800	74.51	
OCDF	37.010	56782	0.84	1.4382	0.0877	0.0877	0.007255	0.007255		M
OCDD	36.938	70844447	0.89	1.1070	142.2	142.2	0.1976	0.1976		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d
Lims ID: 320-76769-A-35-A
Client ID: 11215702-072221-SS-SJSB076 (16-18)
Sample Type: Client
Inject. Date: 13-Aug-2021 10:18:15 ALS Bottle#: 34 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-a-35-a 320-76769-a-35-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 12:22:19 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1634

First Level Reviewer: krenns Date: 16-Aug-2021 12:22:19

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.855	17.885	-2		63773706	15557720	5913	14782	2631		a
333.9339	17.855	17.885	-2		77527141	18968913	9885	24712	1919	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.972	58837445	13765059	12130	30325	1135		
317.9389	17.356	17.356	0	0.972	75275517	17538724	6890	17225	2546	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.386	-1	1.001	1350233	309048	887	2217	348		
305.8987	17.371	17.386	-1	1.001	1714344	391305	959	2397	408	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	15.436	17.069	-98	0.889	29317	8601	887	2217	10		
305.8987	15.436	17.069	-98	0.889	39472	12139	959	2397	13	0.74(0.65-0.89)	
303.9016	15.935	17.069	-68	0.918	28749	6624	887	2217	7		
305.8987	15.950	17.069	-67	0.919	42480	9914	959	2397	10	0.68(0.65-0.89)	
303.9016	16.222	17.069	-51	0.935	49298	9584	887	2217	11		
305.8987	16.222	17.069	-51	0.935	83821	17937	959	2397	19	0.59(0.65-0.89)	
	Empc Correction				64023	12446	959	2397	13		
303.9016	16.449	17.069	-37	0.948	54175	12620	887	2217	14		
305.8987	16.464	17.069	-36	0.949	60967	15095	959	2397	16	0.89(0.65-0.89)	
303.9016	16.691	17.069	-23	0.962	61545	15096	887	2217	17		
305.8987	16.691	17.069	-23	0.962	72740	16915	959	2397	18	0.85(0.65-0.89)	
303.9016	16.978	17.069	-5	0.978	591248	148127	887	2217	167		
305.8987	16.978	17.069	-5	0.978	753469	178027	959	2397	186	0.78(0.65-0.89)	
303.9016	17.190	17.069	7	0.990	29699	5164	887	2217	6		
	Empc Correction				20307	4798	887	2217	5		
305.8987	17.190	17.069	7	0.990	26373	6232	959	2397	6	1.13(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.794	17.069	43	1.025	113830	23183	887	2217	26		
305.8987	17.794	17.069	43	1.025	134484	27145	959	2397	28	0.85(0.65-0.89)	
303.9016	18.021	17.069	57	1.038	22358	4948	887	2217	6		
305.8987	18.036	17.069	58	1.039	33318	6771	959	2397	7	0.67(0.65-0.89)	
303.9016	19.201	17.069	128	1.106	93551	18674	887	2217	21		
305.8987	19.185	17.069	127	1.105	125820	24779	959	2397	26	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.066	-1	1.011	34839811	7724334	5913	14782	1306		
333.9339	18.051	18.066	-1	1.011	43146701	9605342	9885	24712	972	0.81(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	18.082	18.082	0	1.002	324186	71045	957	2392	74		M
321.8936	18.082	18.082	0	1.002	453907	101616	722	1805	141	0.71(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.097	-1	1.013	49636401	11148637	3189	7972	3496		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	15.844	17.530	-101	0.878	18700	5908	957	2392	6		
321.8936	15.844	17.530	-101	0.878	23092	5878	722	1805	8	0.81(0.65-0.89)	
319.8965	16.146	17.530	-83	0.894	36247	8824	957	2392	9		
321.8936	16.146	17.530	-83	0.894	44383	10669	722	1805	15	0.82(0.65-0.89)	
319.8965	16.373	17.530	-69	0.907	34944	7395	957	2392	8		
321.8936	16.373	17.530	-69	0.907	45517	12265	722	1805	17	0.77(0.65-0.89)	
319.8965	16.933	17.530	-36	0.938	154443	40557	957	2392	42		
321.8936	16.933	17.530	-36	0.938	206469	48670	722	1805	67	0.75(0.65-0.89)	
319.8965	17.824	17.530	18	0.987	99891	23299	957	2392	24		
321.8936	17.824	17.530	18	0.987	148611	36991	722	1805	51	0.67(0.65-0.89)	
319.8965	17.961	17.530	26	0.995	151198	37520	957	2392	39		
321.8936	17.961	17.530	26	0.995	185212	47839	722	1805	66	0.82(0.65-0.89)	
319.8965	18.444	17.530	55	1.022	28362	6948	957	2392	7		
321.8936	18.429	17.530	54	1.021	48979	10302	722	1805	14	0.58(0.65-0.89)	
	Empc Correction				36833	9023	722	1805	12		
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.408	-2	1.253	61147020	9973915	13301	33252	750		
353.8970	22.394	22.408	-1	1.254	38995257	6521207	8729	21822	747	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.421	22.435	-1	1.002	90671	14711	345	862	43		M
341.8567	22.408	22.435	-2	1.001	64068	10151	447	1117	23	1.42(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.730	23.758	-2	1.329	67985042	10257346	13301	33252	771		
353.8970	23.730	23.758	-2	1.329	43563226	6555151	8729	21822	751	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	23.771	23.785	-1	1.002	38349	5511	345	862	16		M
341.8567	23.744	23.785	-2	1.001	25873	4052	447	1117	9	1.48(1.32-1.78)	M
A F1 PeCDFs											U
339.8597	19.458	20.108	-39	0.869	16311	2306	198	495	12		
341.8567	19.488	20.108	-37	0.871	9592	1473	491	1227	3	1.70(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.044	23.261	-133	0.940	39116	6523	345	862	19		
341.8567	21.058	23.261	-132	0.941	31140	4946	447	1117	11	1.26(1.32-1.78)	
	Empc Correction				25236	4208	447	1117	9		
339.8597	22.926	23.261	-20	1.024	18863	3440	345	862	10		
341.8567	22.926	23.261	-20	1.024	16338	3007	447	1117	7	1.15(1.32-1.78)	
	Empc Correction				12169	2219	447	1117	5		
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.481	-2	1.370	41875991	6015934	3506	8765	1716		
369.8919	24.453	24.481	-2	1.370	25863334	3763072	2287	5717	1645	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.467	24.508	-2	1.001	32836	4217	652	1630	6		
357.8516	24.480	24.508	-2	1.001	22476	3951	339	847	12	1.46(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	21.262	23.376	-127	0.870	98083	18349	652	1630	28		
357.8516	21.262	23.376	-127	0.870	63615	12831	339	847	38	1.54(1.32-1.78)	
355.8546	22.012	23.376	-82	0.900	250032	46580	652	1630	71		
357.8516	21.999	23.376	-82	0.900	157725	27308	339	847	81	1.59(1.32-1.78)	
355.8546	22.421	23.376	-57	0.917	17912	3236	652	1630	5		
	Empc Correction				15033	2363	652	1630	4		
357.8516	22.449	23.376	-56	0.918	9699	1525	339	847	4	1.85(1.32-1.78)	
355.8546	22.681	23.376	-42	0.928	19313	3913	652	1630	6		
357.8516	22.694	23.376	-41	0.928	13578	2145	339	847	6	1.42(1.32-1.78)	
355.8546	23.021	23.376	-21	0.941	24840	4539	652	1630	7		
357.8516	23.021	23.376	-21	0.941	19956	3168	339	847	9	1.24(1.32-1.78)	
	Empc Correction				16025	2928	339	847	9		
355.8546	23.308	23.376	-4	0.953	68397	12376	652	1630	19		
357.8516	23.294	23.376	-5	0.953	45385	8224	339	847	24	1.51(1.32-1.78)	
355.8546	23.512	23.376	8	0.962	136541	18394	652	1630	28		
357.8516	23.485	23.376	7	0.960	99120	13952	339	847	41	1.38(1.32-1.78)	M
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.543	-2	0.949	31924788	5946970	12338	30845	482		
385.8610	30.516	30.543	-2	0.949	61702497	11281066	23314	58285	484	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											M
373.8208	30.529	30.569	-2	1.000	82037	14462	353	882	41		M
375.8178	30.543	30.569	-2	1.001	61750	12408	294	735	42	1.33(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.716	-1	0.955	29804171	5546286	12338	30845	450		
385.8610	30.702	30.716	-1	0.955	57075365	10636176	23314	58285	456	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQM
373.8208	30.729	30.743	-1	1.001	25250	5635	353	882	16		M
375.8178	30.716	30.743	-2	1.000	25389	4249	294	735	14	0.99(1.05-1.43)	
	Empc Correction				20362	4544	294	735	15		
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.528	31.541	-1	0.981	27768884	6759930	12338	30845	548		
385.8610	31.528	31.541	-1	0.981	53704454	13167952	23314	58285	565	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											RQMU
373.8208	31.554						353	882			
375.8178	31.554						294	735			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.340	-1	1.006	25225314	6693163	12338	30845	542		
385.8610	32.326	32.340	-1	1.006	48558541	12826026	23314	58285	550	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.340	32.353	-1	1.000	40497	12559	353	882	36		M
375.8178	32.340	32.353	-1	1.000	30864	9961	294	735	34	1.31(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.223						353	882			
375.8178	30.223						294	735			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.153	-1		75023004	19939037	16283	40707	1225		
403.8529	32.140	32.153	-1		60030109	16036459	14755	36887	1087	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.727	-1	0.987	36052389	9816063	16283	40707	603		
403.8529	31.714	31.727	-1	0.987	28846820	7808434	14755	36887	529	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.727	31.741	-1	1.000	57847	17180	2467	6167	7		
391.8127	31.727	31.741	-1	1.000	53272	15286	1833	4582	8	1.09(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.834	-1	0.990	38616941	9765908	16283	40707	600		
403.8529	31.820	31.834	-1	0.990	31621062	8018639	14755	36887	543	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.834	31.847	-1	1.000	78278	20476	2467	6167	8		
391.8127	31.834	31.847	-1	1.000	55342	15546	1833	4582	8	1.41(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.167	-1	1.014	215862	45520	2467	6167	18		
391.8127	32.153	32.167	-1	1.014	174067	40331	1833	4582	22	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQM
389.8157	29.584	30.895	-79	0.930	2027689	241883	2467	6167	98		
391.8127	29.571	30.895	-79	0.929	1579902	191429	1833	4582	104	1.28(1.05-1.43)	
389.8157	30.596	30.895	-18	0.962	55446	11667	2467	6167	5		
391.8127	30.609	30.895	-17	0.962	55371	9781	1833	4582	5	1.00(1.05-1.43)	
	Empc Correction				44714	9408	1833	4582	5		
389.8157	30.982	30.895	5	0.974	627530	121917	2467	6167	49		
391.8127	30.969	30.895	4	0.973	514843	101295	1833	4582	55	1.22(1.05-1.43)	M
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.778	33.778	0	1.000	37757	13531	689	1722	20		M
409.7789	33.778	33.778	0	1.000	34105	12277	289	722	42	1.11(0.88-1.20)	M
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.778	-1	1.051	20295319	6683470	32519	81297	206		
419.8220	33.766	33.778	-1	1.051	45956134	15112838	49948	124870	303	0.44(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.860	-1	1.084	21047552	5862547	32519	81297	180		
419.8220	34.847	34.860	-1	1.084	47967944	13398070	49948	124870	268	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872						689	1722			
409.7789	34.872						289	722			
A Non-2,3,7,8-sub-HpCDF											Ma
407.7818	34.070	34.325	-15	1.009	19364	5535	689	1722	8		M
409.7789	34.070	34.325	-15	1.009	18043	4116	289	722	14	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.076	29267842	8527608	23336	58340	365		
437.8140	34.568	34.568	0	1.076	29054189	8353287	23113	57782	361	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.580	-1	1.000	2028534	590132	5954	14885	99		
425.7737	34.568	34.580	-1	1.000	2009163	591375	6378	15945	93	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.984	6944843	2218501	5954	14885	373		
425.7737	34.021	34.301	-17	0.984	6658026	2136625	6378	15945	335	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.926	0	1.149	41852681	10647078	5105	12762	2086		
471.7750	36.926	36.926	0	1.149	48138858	12202120	6479	16197	1883	0.87(0.76-1.02)	
OCDF											M
441.7428	37.010	37.034	-1	1.002	25892	6298	189	472	33		M
443.7399	37.022	37.034	-1	1.003	30890	7859	288	720	27	0.84(0.76-1.02)	
OCDD											
457.7377	36.938	36.938	0	1.000	33353212	8498379	4634	11585	1834		
459.7348	36.926	36.938	-1	1.000	37491235	9456694	5364	13410	1763	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 16-Aug-2021 12:22:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d
Lims ID: 320-76769-A-35-A
Client ID: 11215702-072221-SS-SJSB076 (16-18)
Inject. Date: 13-Aug-2021 10:18:15 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	134112962	31303783

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	134112962	31303783

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.436	29317	8601	39472	12139	0.0501	0.74	
15.935	28749	6624	42480	9914	0.0519	0.68	
16.222	49298	9584	83821	17937	0.0969	0.59	RQ
16.222	49298	9584	64023	12446	0.0825		Empc Correction
16.449	54175	12620	60967	15095	0.0838	0.89	
16.691	61545	15096	72740	16915	0.0978	0.85	
16.978	591248	148127	753469	178027	0.9793	0.78	
17.190	29699	5164	26373	6232	0.0408	1.13	RQ
17.190	20307	4798	26373	6232	0.0340		Empc Correction
17.794	113830	23183	134484	27145	0.1808	0.85	
18.021	22358	4948	33318	6771	0.0405	0.67	
19.201	93551	18674	125820	24779	0.1598	0.74	
Signal Totals:							
	1064378	252255	1353146	309463			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2446714	567575				0.78	RQ
	2417524	561718					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.782 = (2446714 * 100.000) / (134112962 * 1.024)
Empc Amount: 1.761 = (2417524 * 100.000) / (134112962 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 16-Aug-2021 12:22:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Lims ID:	320-76769-A-35-A		
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Inject. Date:	13-Aug-2021 10:18:15	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	515770	Lims Sample ID:	8

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	77986512	17329676

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	77986512	17329676

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.844	18700	5908	23092	5878	0.0427	0.81	
16.146	36247	8824	44383	10669	0.0824	0.82	
16.373	34944	7395	45517	12265	0.0823	0.77	
16.933	154443	40557	206469	48670	0.3690	0.75	
17.824	99891	23299	148611	36991	0.2541	0.67	
17.961	151198	37520	185212	47839	0.3440	0.82	
18.444	28362	6948	48979	10302	0.0791	0.58	RQ
18.444	28362	6948	36833	9023	0.0667		Empc Correction
Signal Totals:							
	523785	130451	690117	171335			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1226048	303065				0.75	RQ
	1213902	301786					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.254 = (1226048 * 100.000) / (77986512 * 1.254)

Empc Amount: 1.241 = (1213902 * 100.000) / (77986512 * 1.254)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 16-Aug-2021 12:22:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Lims ID:	320-76769-A-35-A		
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Inject. Date:	13-Aug-2021 10:18:15	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	515770	Lims Sample ID:	8

F1 PeCDFs, RT: 20.108

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	100142277	16495122
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	111548268	16812497

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	105845272	16653809

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.458	16311	2306	9592	1473	0.0235	1.70	

Compound is Marked ND

Report Date: 16-Aug-2021 12:22:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Lims ID:	320-76769-A-35-A		
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Inject. Date:	13-Aug-2021 10:18:15	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	515770	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDF, RT: 23.261

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	100142277	16495122
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	111548268	16812497

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	105845272	16653809

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.044	39116	6523	31140	4946	0.0638	1.26	RQ
21.044	39116	6523	25236	4208	0.0585		Empc Correction
22.926	18863	3440	16338	3007	0.0320	1.15	RQ
22.926	18863	3440	12169	2219	0.0282		Empc Correction
Signal Totals:							
	57979	9963	37405	6427			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	105457	17916				1.22	RQ
	95384	16390					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0958 = (105457 * 100.000) / (105845272 * 1.040)

Empc Amount: 0.0867 = (95384 * 100.000) / (105845272 * 1.040)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 16-Aug-2021 12:22:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Lims ID:	320-76769-A-35-A		
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Inject. Date:	13-Aug-2021 10:18:15	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	515770	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDD, RT: 23.376

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	67739325	9779006

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	67739325	9779006

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.262	98083	18349	63615	12831	0.2277	1.54	
22.012	250032	46580	157725	27308	0.5741	1.59	
22.421	17912	3236	9699	1525	0.0389	1.85	RQ
22.421	15033	2363	9699	1525	0.0348		Empc Correction
22.681	19313	3913	13578	2145	0.0463	1.42	
23.021	24840	4539	19956	3168	0.0631	1.24	RQ
23.021	24840	4539	16025	2928	0.0575		Empc Correction
23.308	68397	12376	45385	8224	0.1602	1.51	
23.512	136541	18394	99120	13952	0.3318	1.38	M
Signal Totals:							
	612239	106514	405147	68913			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1024196	176540				1.50	RQM
	1017386	175427					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.442 = (1024196 * 100.000) / (67739325 * 1.048)

Empc Amount: 1.433 = (1017386 * 100.000) / (67739325 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 16-Aug-2021 12:22:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Lims ID:	320-76769-A-35-A		
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Inject. Date:	13-Aug-2021 10:18:15	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	515770	Lims Sample ID:	8

Non-2,3,7,8-sub-HxCDF, RT: 30.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	93627285	17228036
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	86879536	16182462
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	81473338	19927882
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	73783855	19519189

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	83941003	18214392

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 16-Aug-2021 12:22:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d
Lims ID: 320-76769-A-35-A
Client ID: 11215702-072221-SS-SJSB076 (16-18)
Inject. Date: 13-Aug-2021 10:18:15 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDD, RT: 30.895

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	64899209	17624497
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	70238003	17784547
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	67568606	17704522

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.584	2027689	241883	1579902	191429	5.01	1.28	
30.596	55446	11667	55371	9781	0.1539	1.00	RQ
30.596	55446	11667	44714	9408	0.1391		Empc Correction
30.982	627530	121917	514843	101295	1.59	1.22	M
Signal Totals:							
	2710665	375467	2139459	302132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4860781	677972				1.26	RQM
	4850124	677599					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.751 = (4860781 * 100.000) / (67568606 * 1.066)
Empc Amount: 6.737 = (4850124 * 100.000) / (67568606 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d
Lims ID: 320-76769-A-35-A
Client ID: 11215702-072221-SS-SJSB076 (16-18)
Inject. Date: 13-Aug-2021 10:18:15 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDF, RT: 34.325

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	66251453	21796308
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	69015496	19260617

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	67633474	20528462

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.070	19364	5535	18043	4116	0.0401	1.07	Ma
Signal Totals:							
	19364	5535	18043	4116			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	37407	9651				1.07	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0401 = (37407 * 100.000) / (67633474 * 1.379)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 16-Aug-2021 12:22:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d
Lims ID: 320-76769-A-35-A
Client ID: 11215702-072221-SS-SJSB076 (16-18)
Inject. Date: 13-Aug-2021 10:18:15 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	58322031	16880895

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	58322031	16880895

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	6944843	2218501	6658026	2136625	21.3	1.04	
Signal Totals:							
	6944843	2218501	6658026	2136625			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13602869	4355126				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 21.314 = (13602869 * 100.000) / (58322031 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.08
Area: 332392
Amount: 0.817164
Amount Units: pg/ul

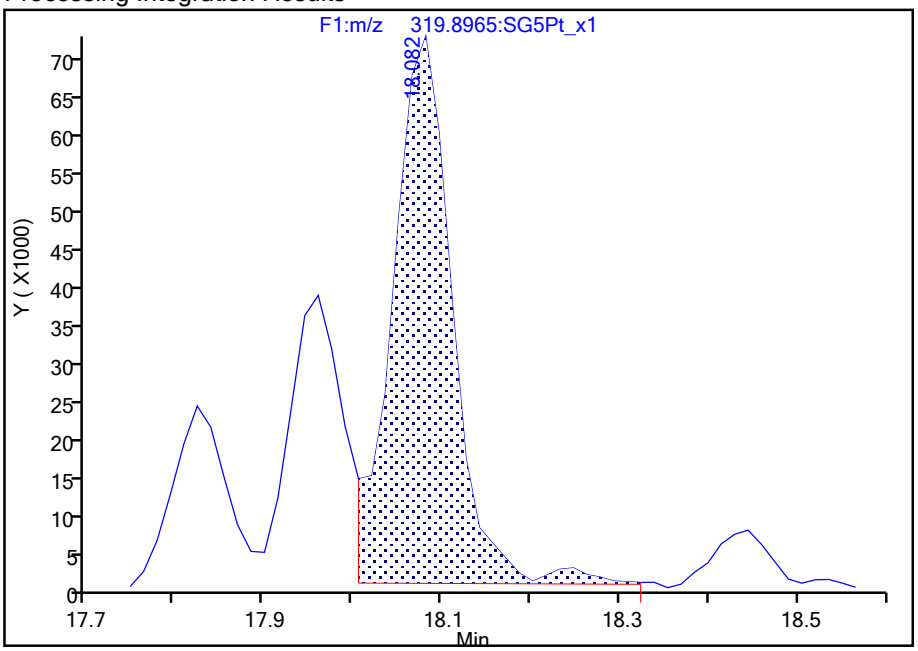

Manual Integration Results

RT: 18.08
Area: 324186
Amount: 0.795560
Amount Units: pg/ul

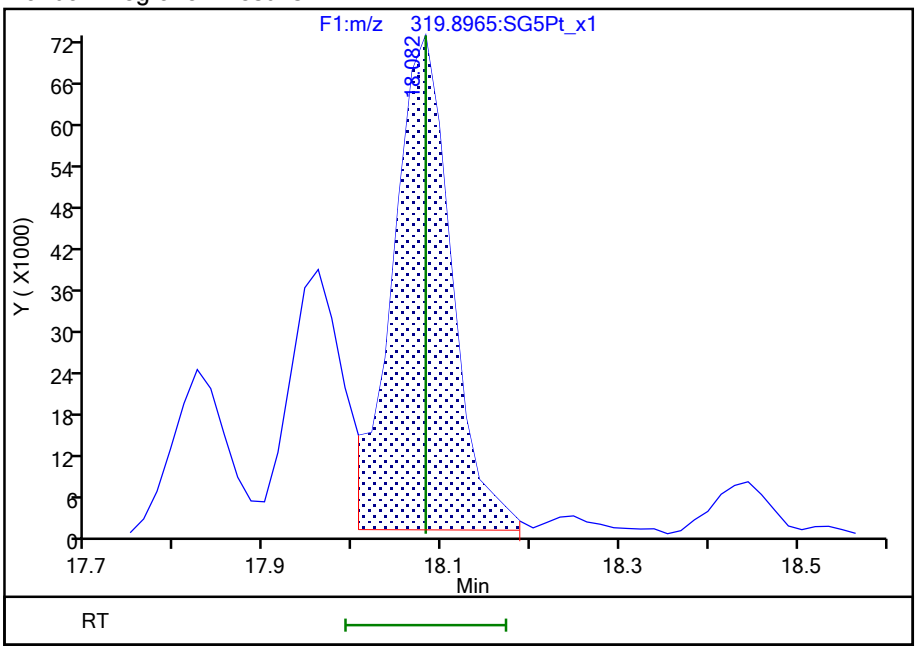

Reviewer: dadunj, 16-Aug-2021 14:02:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778363

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.08
Area: 466831
Amount: 0.817164
Amount Units: pg/ul

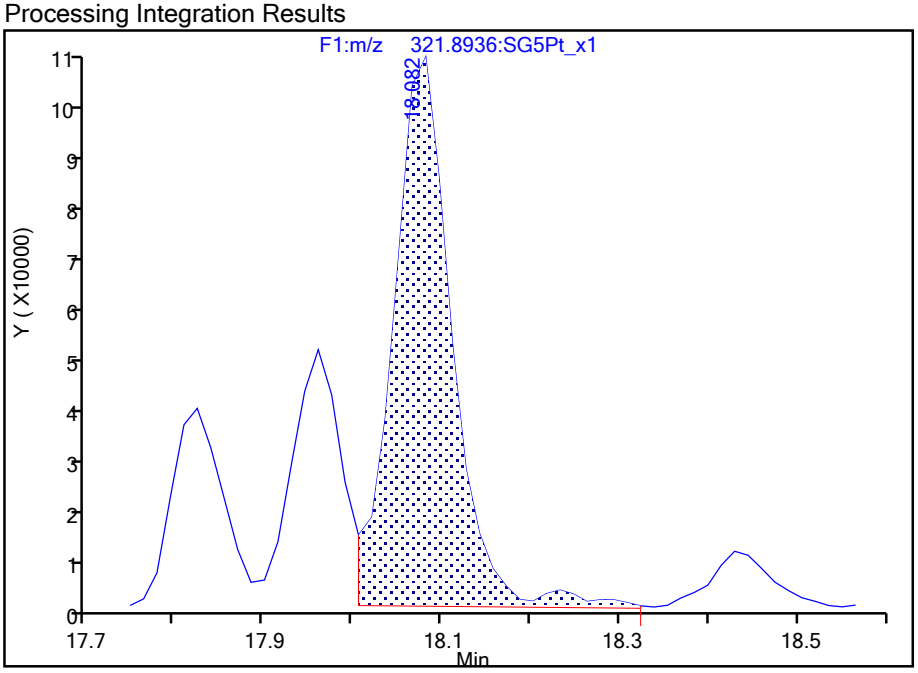

Manual Integration Results

RT: 18.08
Area: 453907
Amount: 0.795560
Amount Units: pg/ul

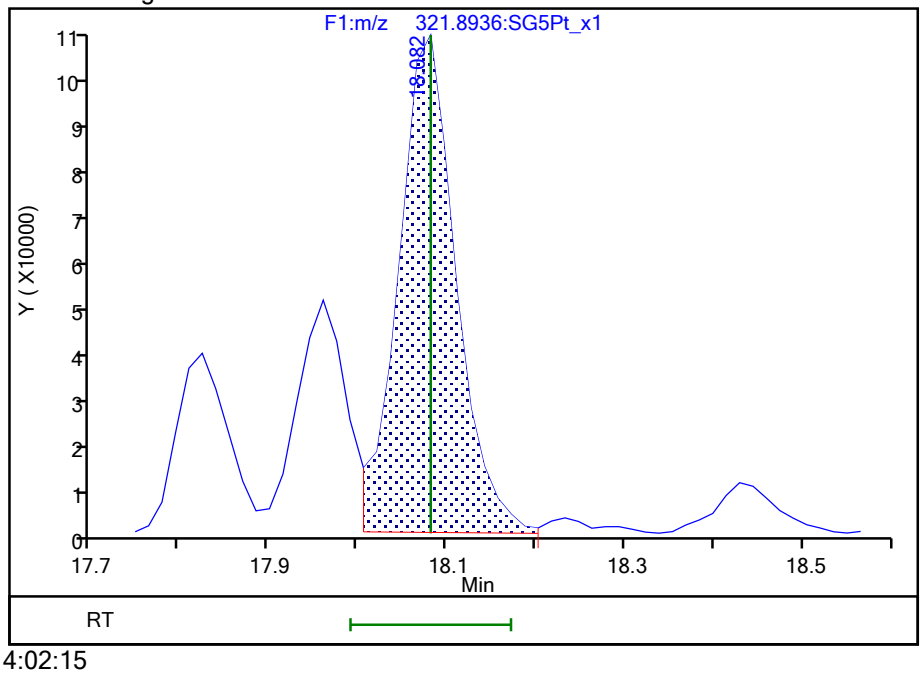

Reviewer: dadunj, 16-Aug-2021 14:02:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778364

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.42
Area: 96141
Amount: 0.150764
Amount Units: pg/ul

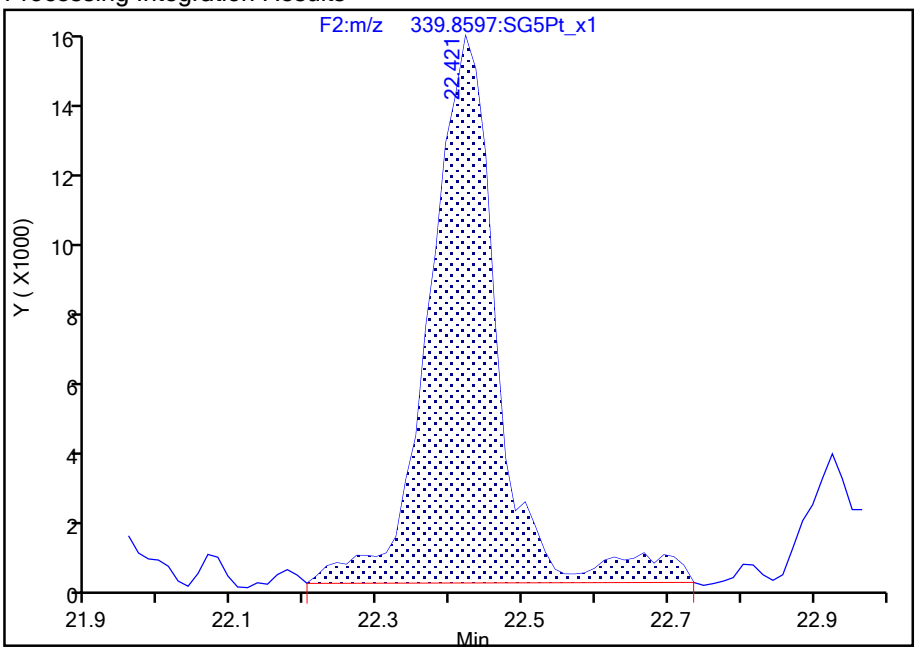

Manual Integration Results

RT: 22.42
Area: 90671
Amount: 0.145617
Amount Units: pg/ul

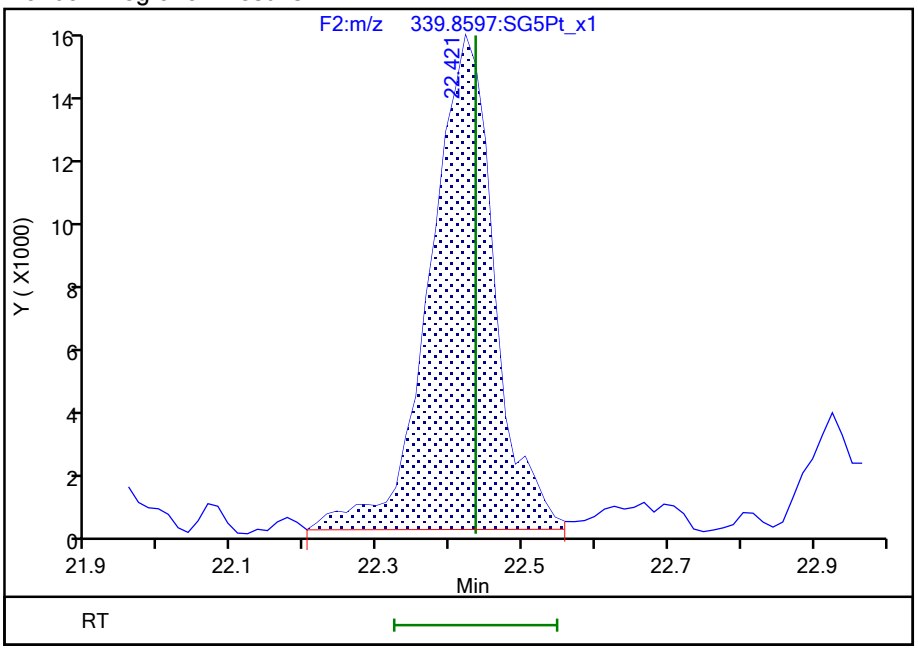

Reviewer: dadunj, 16-Aug-2021 14:02:24

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.74
Area: 28024
Amount: 0.058147
Amount Units: pg/ul

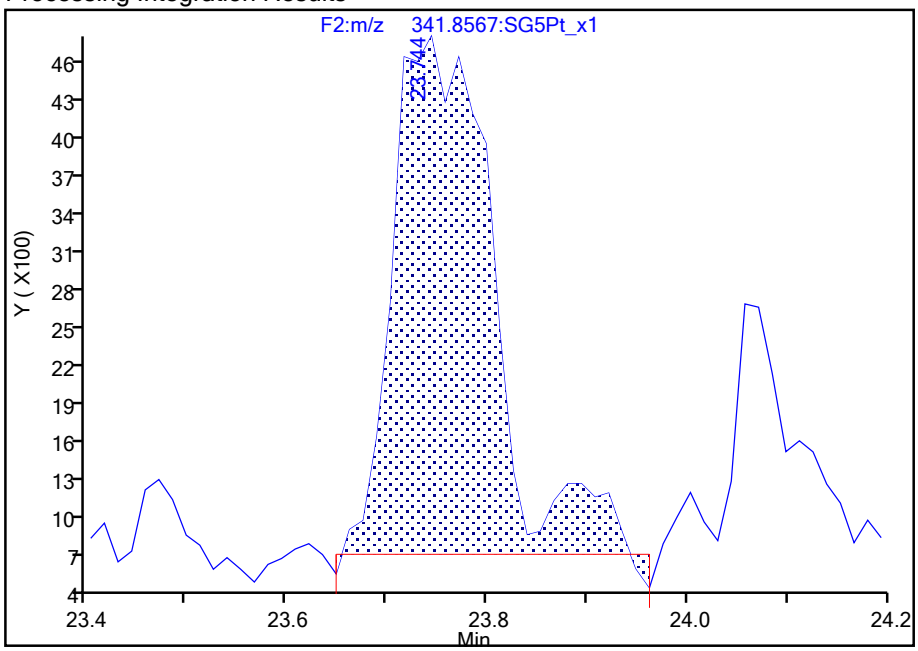

Manual Integration Results

RT: 23.74
Area: 25873
Amount: 0.056532
Amount Units: pg/ul

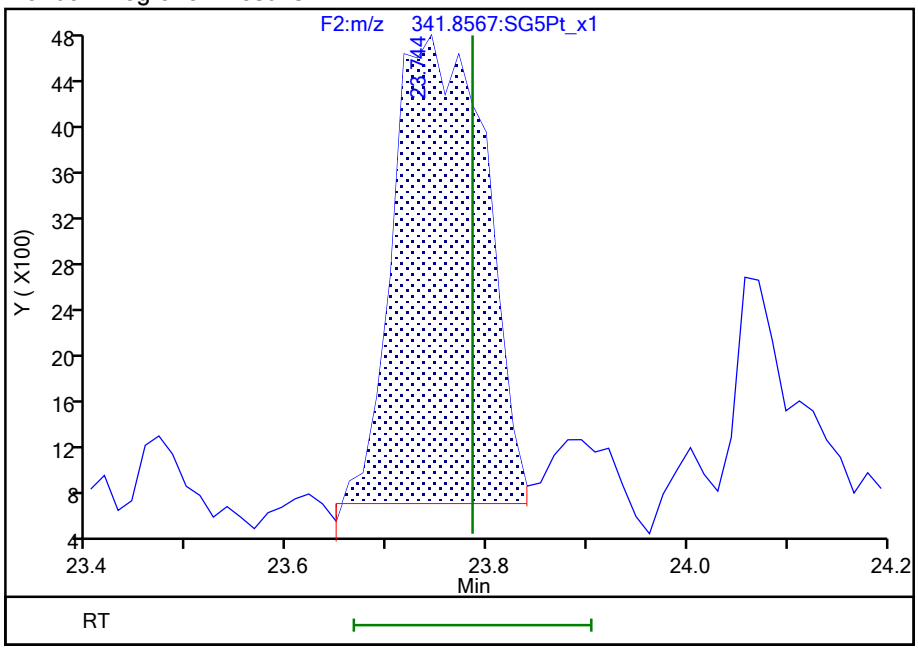

Reviewer: dadunj, 16-Aug-2021 14:02:34

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 23.77
Area: 38033
Amount: 0.058147
Amount Units: pg/ul

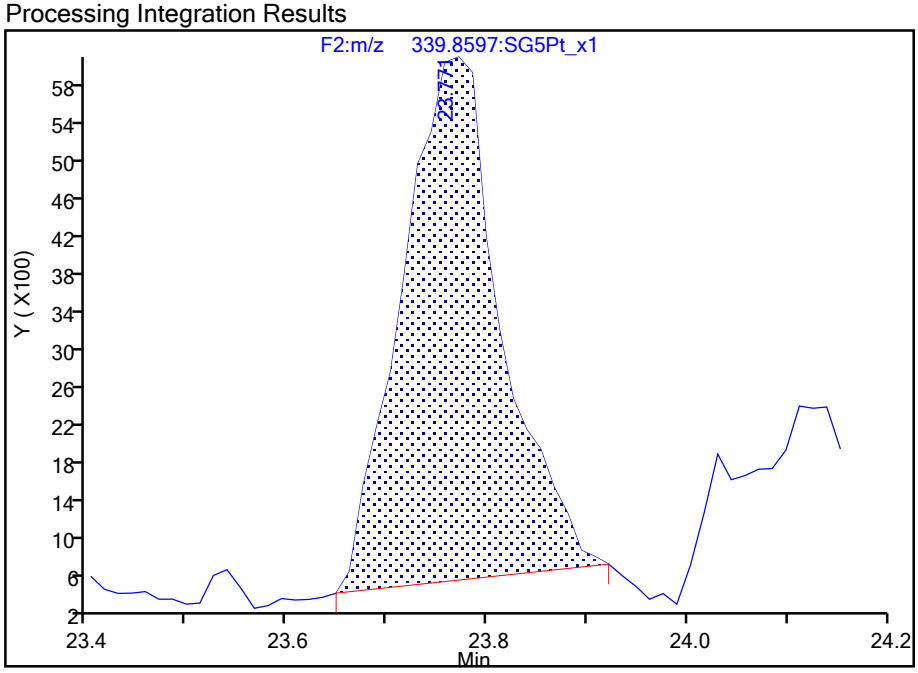

Manual Integration Results

RT: 23.77
Area: 38349
Amount: 0.056532
Amount Units: pg/ul

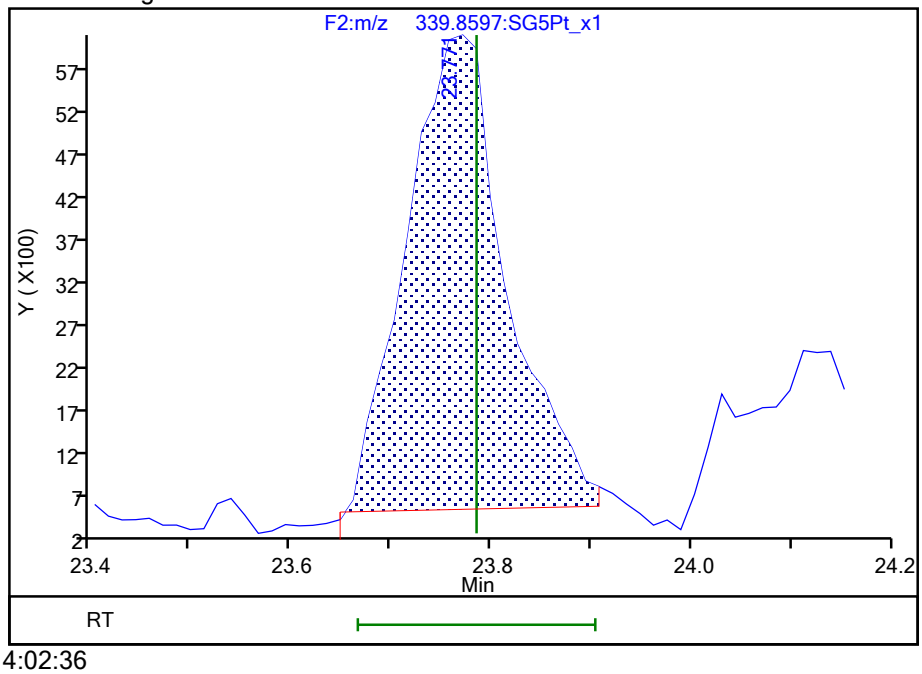

Reviewer: dadunj, 16-Aug-2021 14:02:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.23- 25.52)

Signal: 2

Processing Integration Results

RT = 23.485 Area = 102374

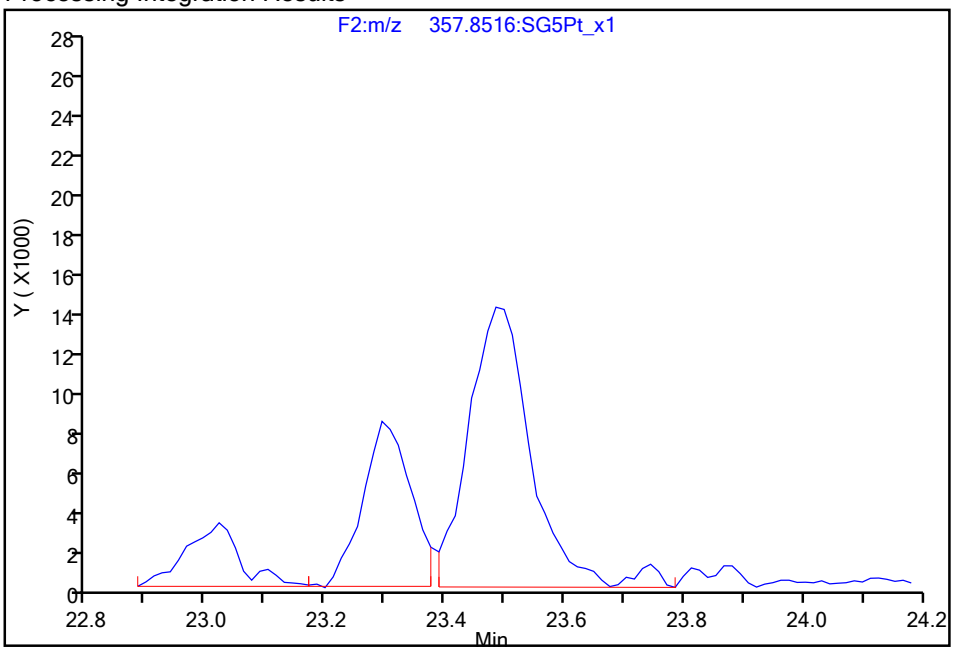

Manual Integration Results

RT = 23.485 Area = 99120 M

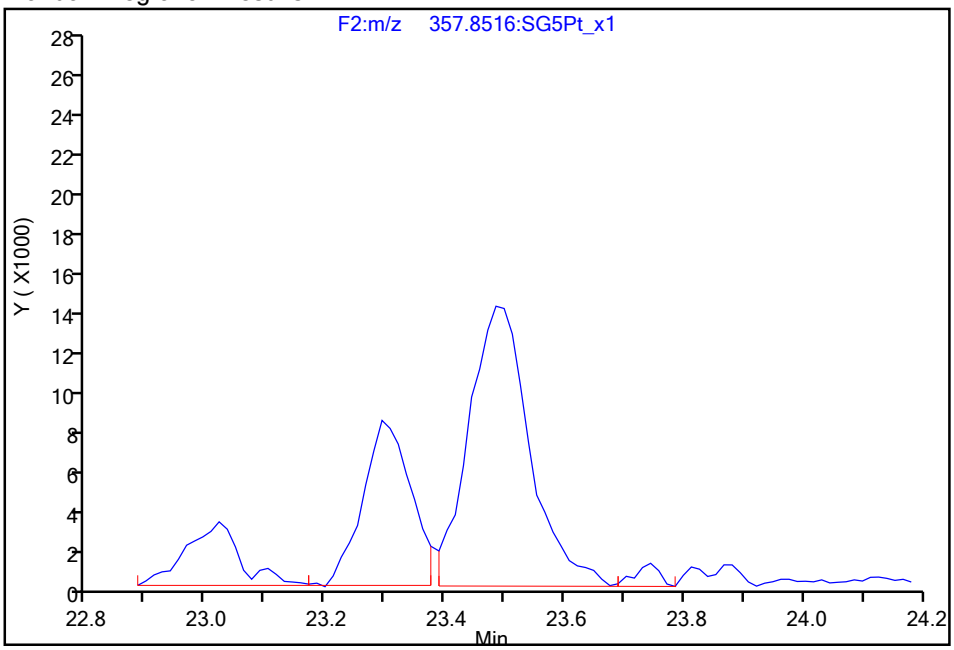

Reviewer: dadunj, 16-Aug-2021 14:02:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

RT: 30.53
Area: 85368
Amount: 0.144805
Amount Units: pg/ul

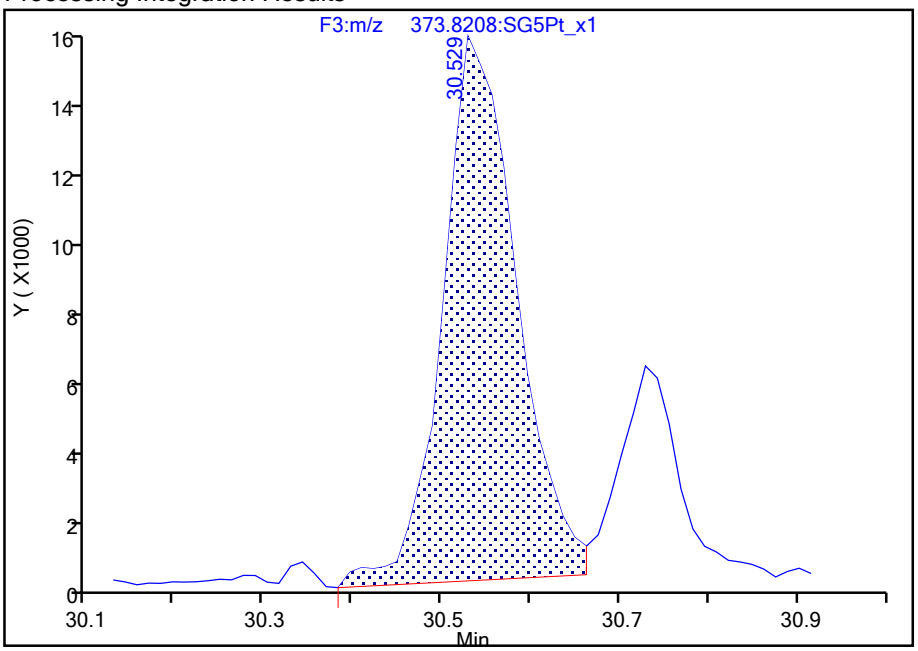

Manual Integration Results

RT: 30.53
Area: 82037
Amount: 0.141526
Amount Units: pg/ul

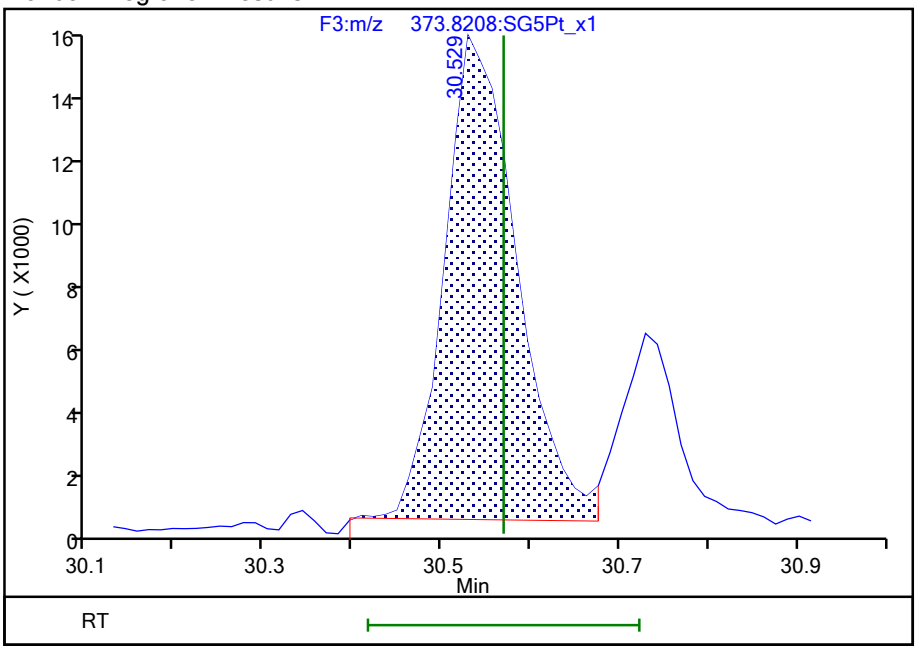

Reviewer: dadunj, 16-Aug-2021 14:03:05

Audit Action: Manually Integrated Audit Reason: Split Peak

778369

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.73
Area: 26174
Amount: 0.052708
Amount Units: pg/ul

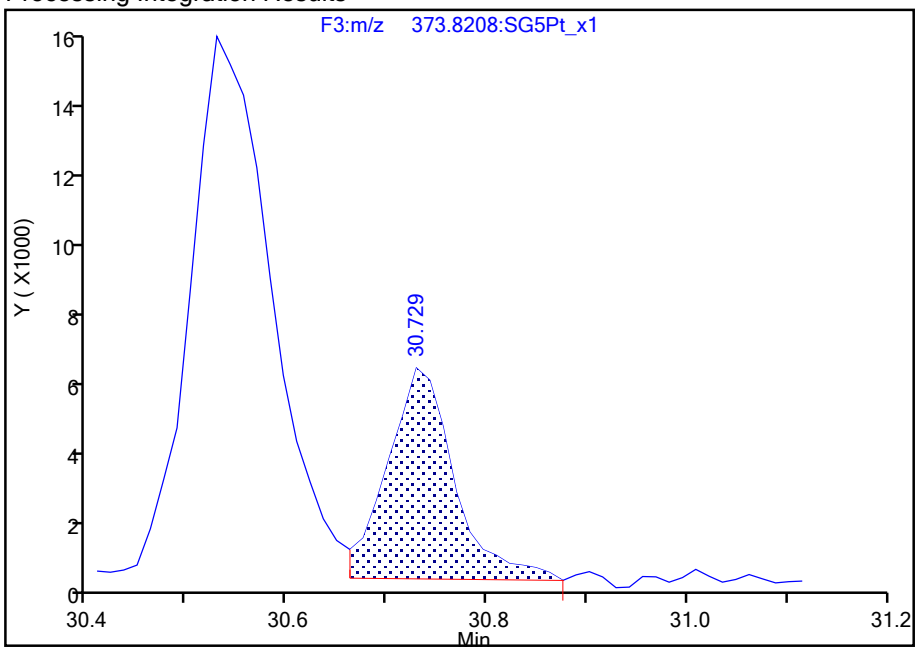

Manual Integration Results

RT: 30.73
Area: 25250
Amount: 0.051764
Amount Units: pg/ul

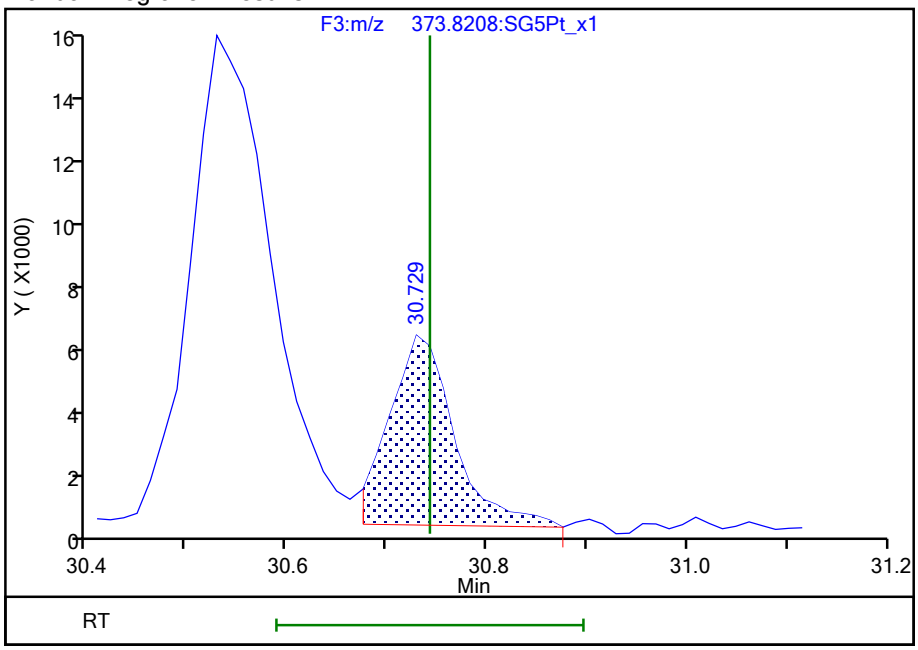

Reviewer: dadunj, 16-Aug-2021 14:03:05

Audit Action: Manually Integrated Audit Reason: Split Peak

778370

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.34
Area: 48670
Amount: 0.105961
Amount Units: pg/ul

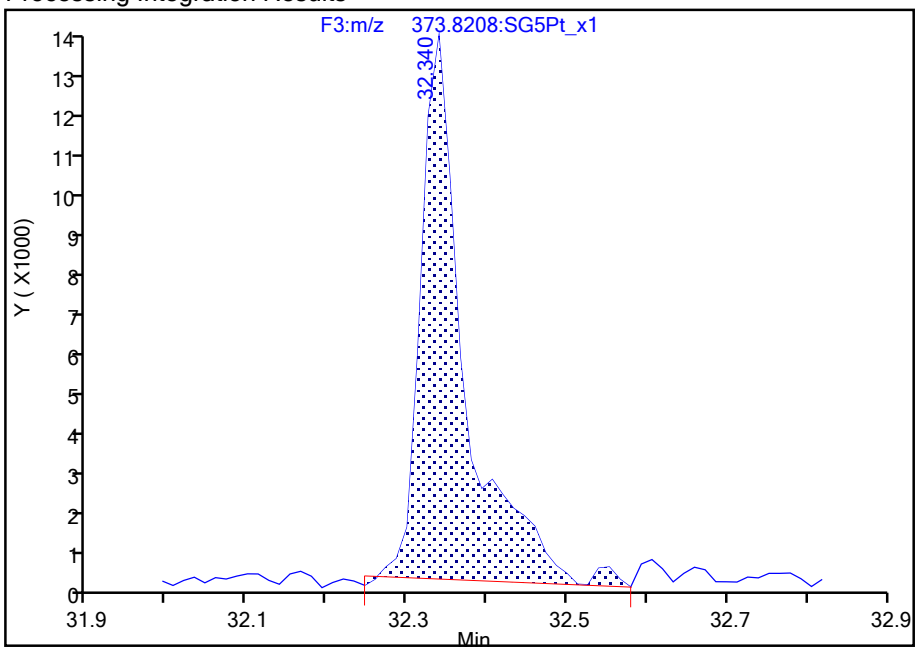

Manual Integration Results

RT: 32.34
Area: 40497
Amount: 0.082922
Amount Units: pg/ul

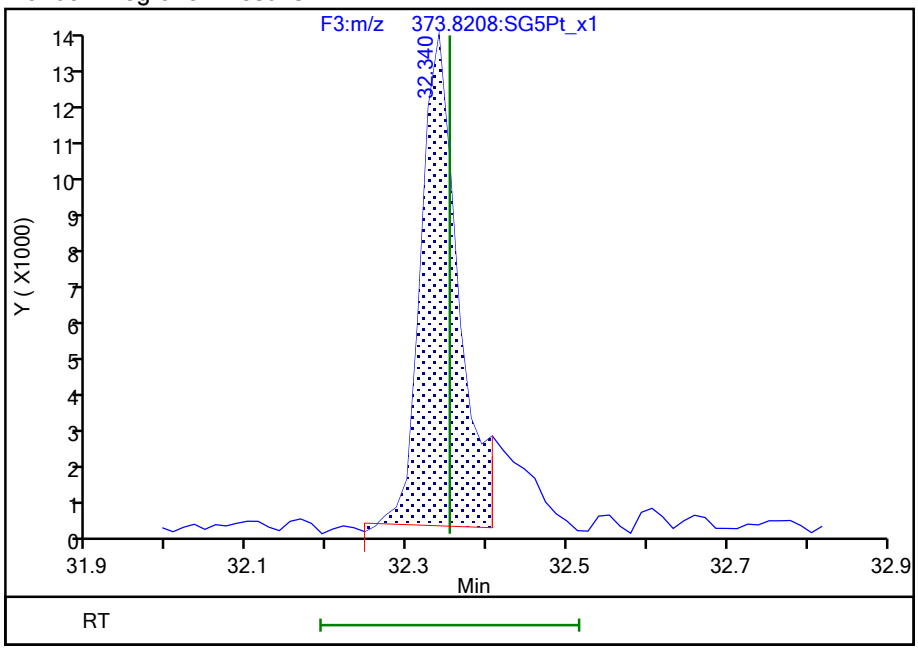

Reviewer: dadunj, 16-Aug-2021 14:03:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778371

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.34
Area: 42518
Amount: 0.105961
Amount Units: pg/ul

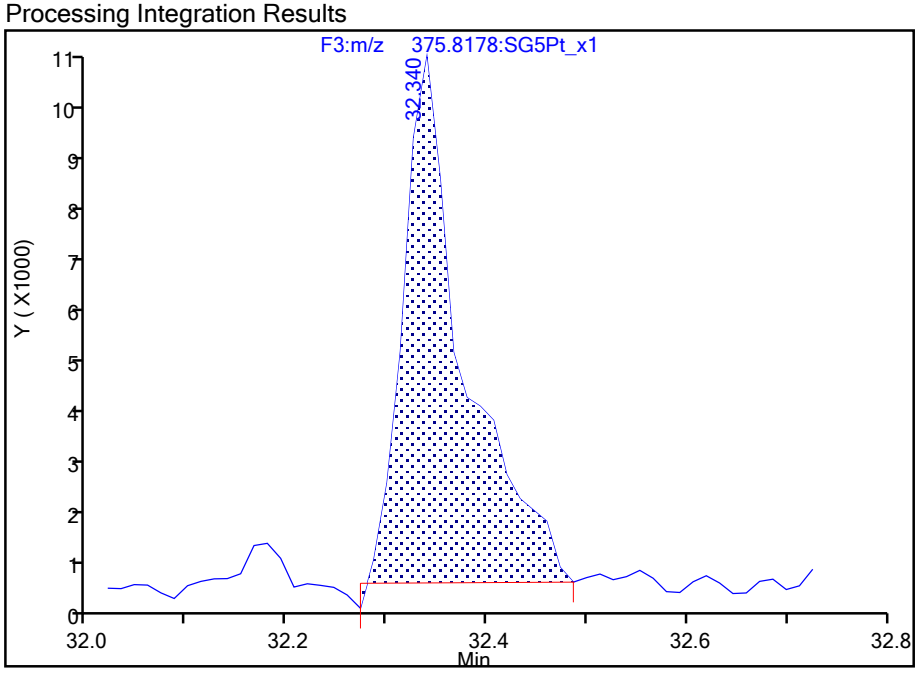

Manual Integration Results

RT: 32.34
Area: 30864
Amount: 0.082922
Amount Units: pg/ul

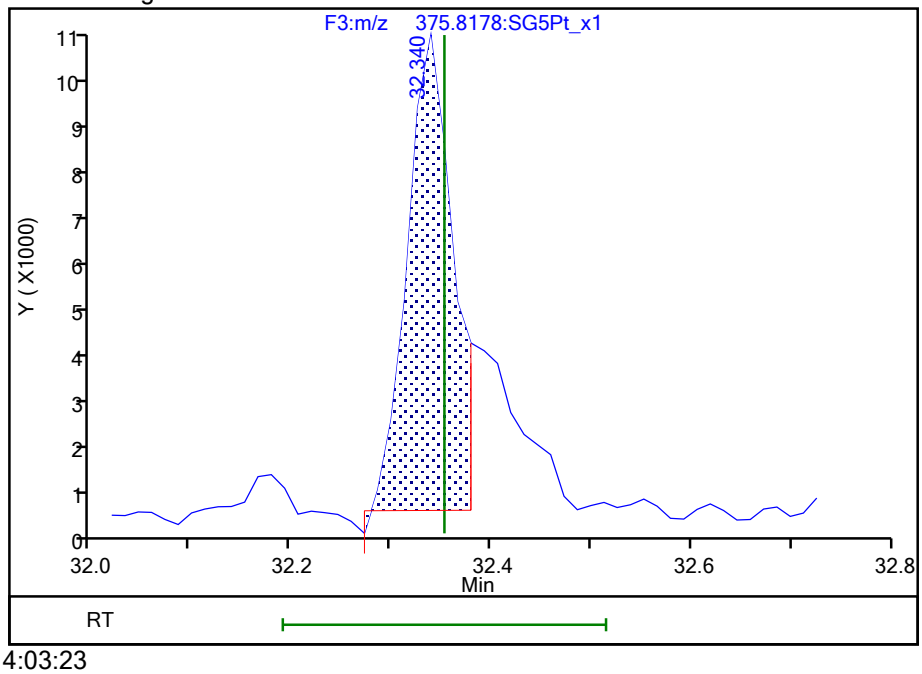

Reviewer: dadunj, 16-Aug-2021 14:03:23

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (29.37- 32.42)

Signal: 2

Processing Integration Results

RT = 30.969 Area = 583846

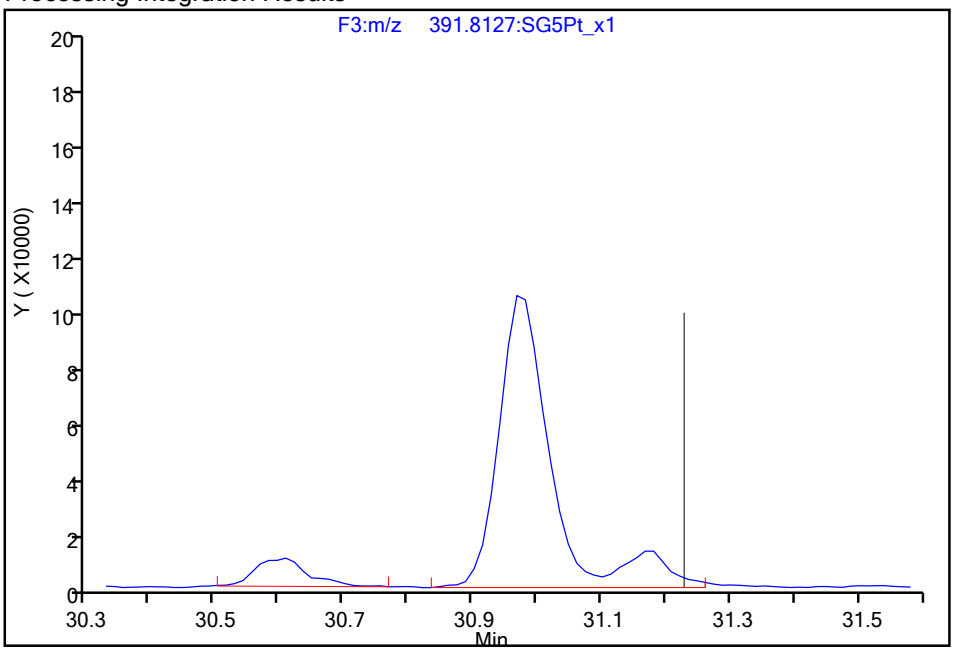

Manual Integration Results

RT = 30.969 Area = 514843 M

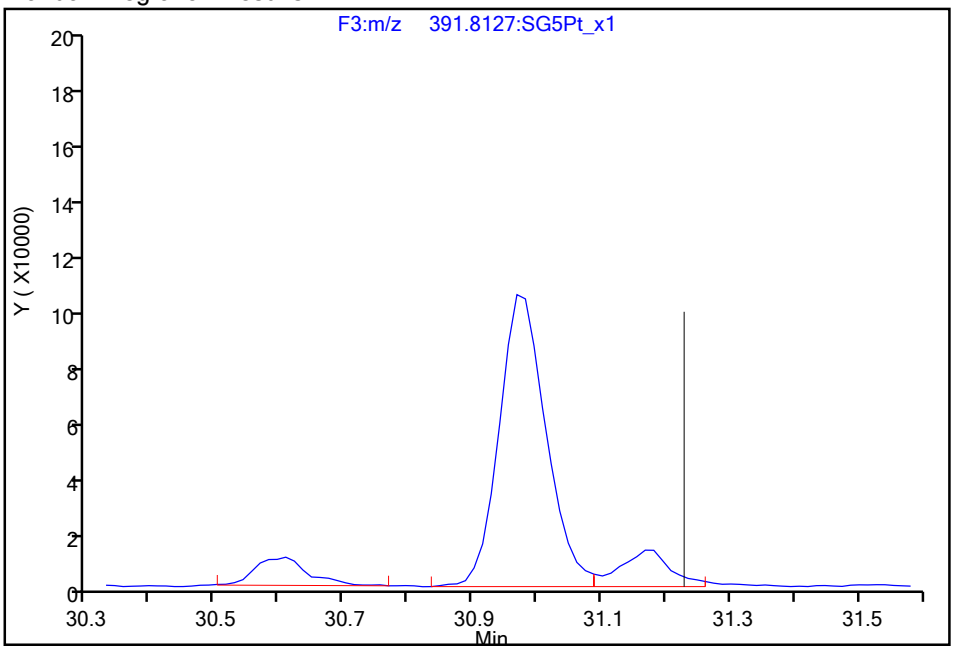

Reviewer: dadunj, 16-Aug-2021 14:03:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.78
Area: 37946
Amount: 0.086335
Amount Units: pg/ul

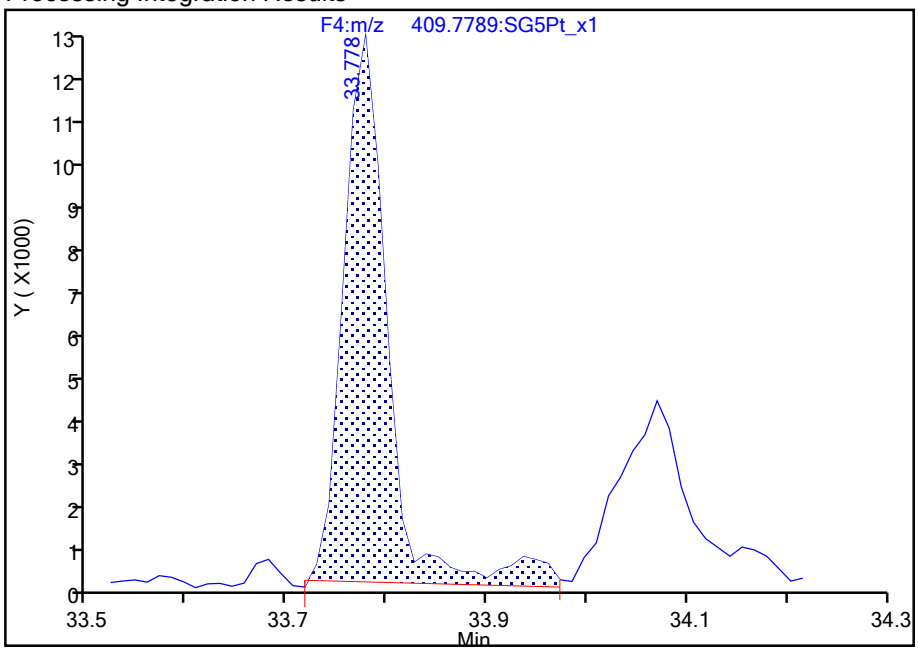

Manual Integration Results

RT: 33.78
Area: 34105
Amount: 0.075258
Amount Units: pg/ul

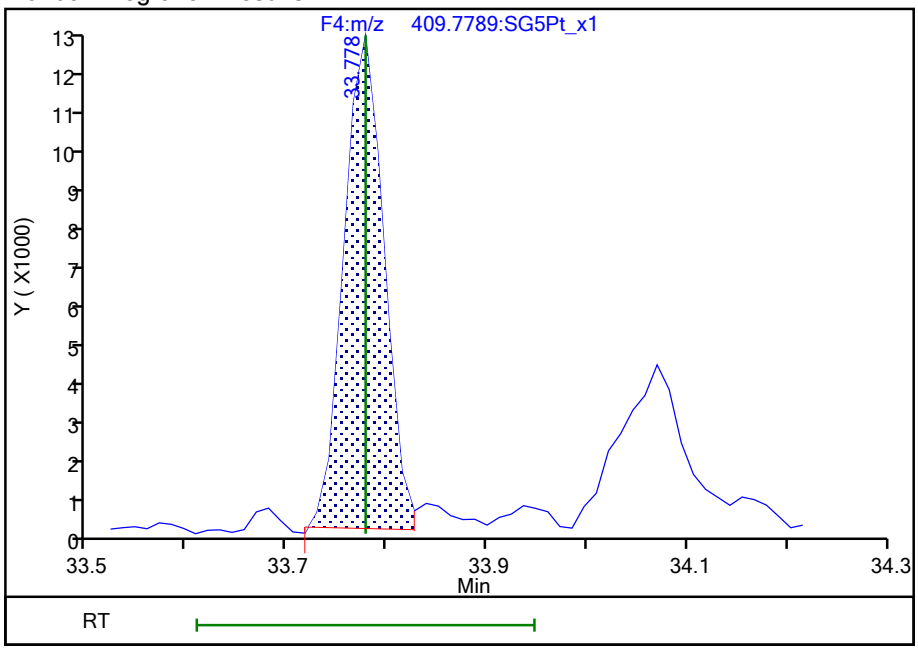

Reviewer: dadunj, 16-Aug-2021 14:03:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778374

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.78
Area: 44493
Amount: 0.086335
Amount Units: pg/ul

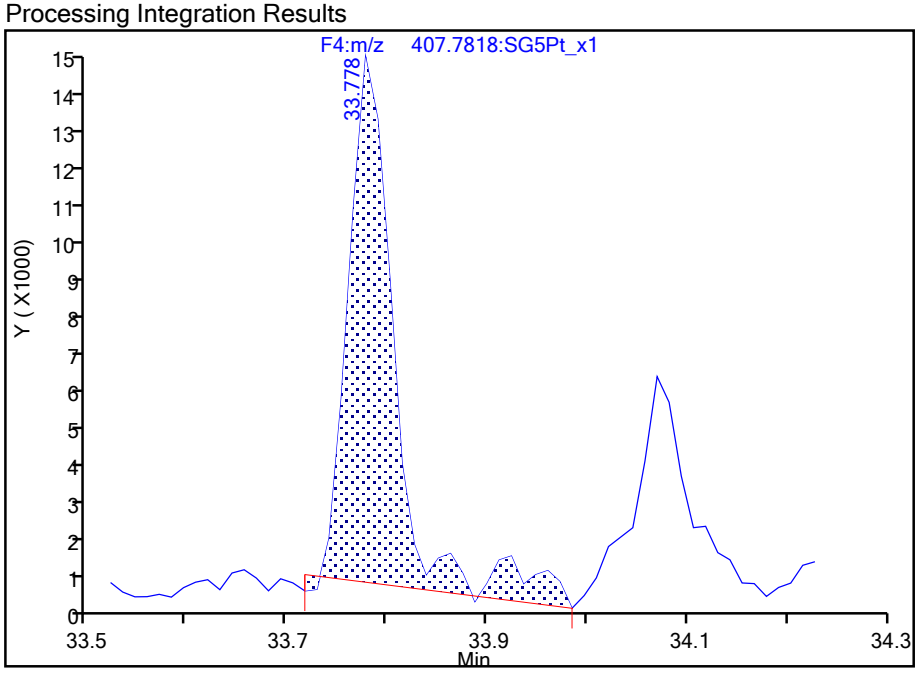

Manual Integration Results

RT: 33.78
Area: 37757
Amount: 0.075258
Amount Units: pg/ul

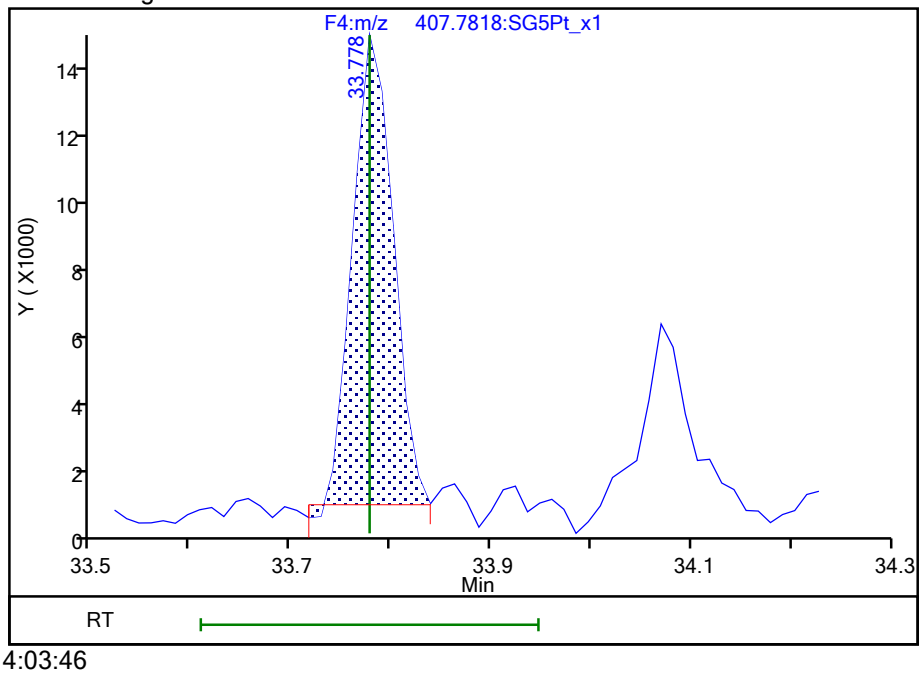

Reviewer: dadunj, 16-Aug-2021 14:03:46

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778375

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7818, RT: (33.75- 34.90)

Signal: 1

Processing Integration Results

RT = 34.070 Area = 22780

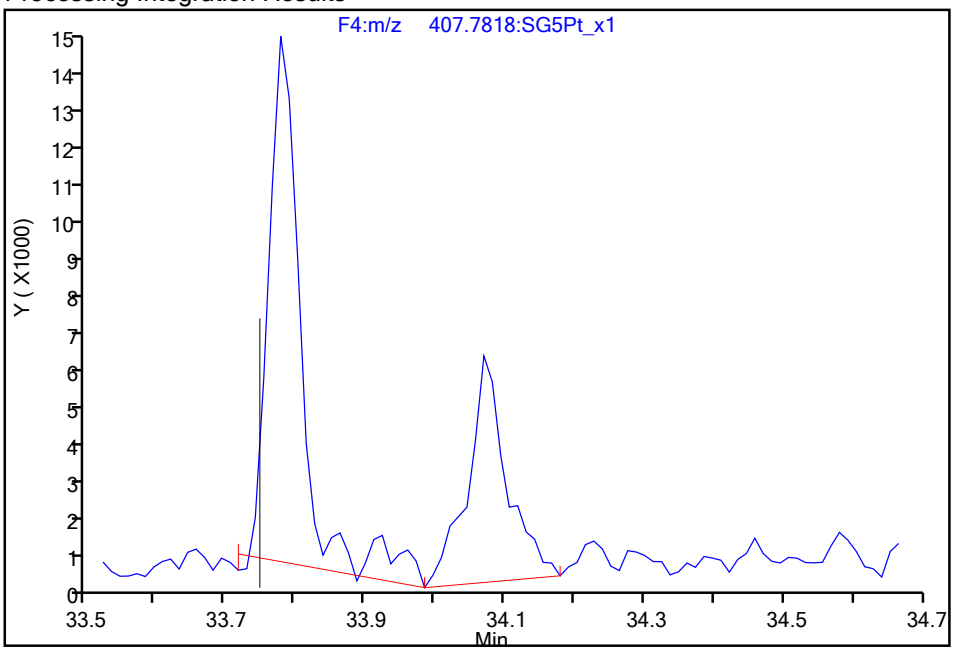

Manual Integration Results

RT = 34.070 Area = 19364 M

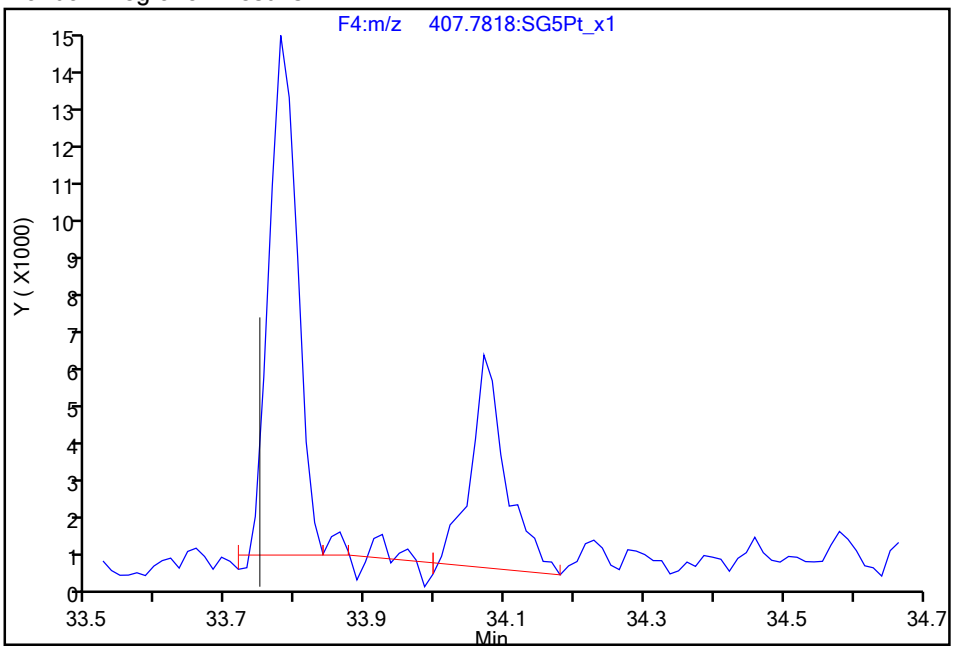

Reviewer: krenns, 16-Aug-2021 12:22:11

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d				
Injection Date:	13-Aug-2021 10:18:15	Instrument ID:	10D5		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.01
Area: 27481
Amount: 0.090202
Amount Units: pg/ul

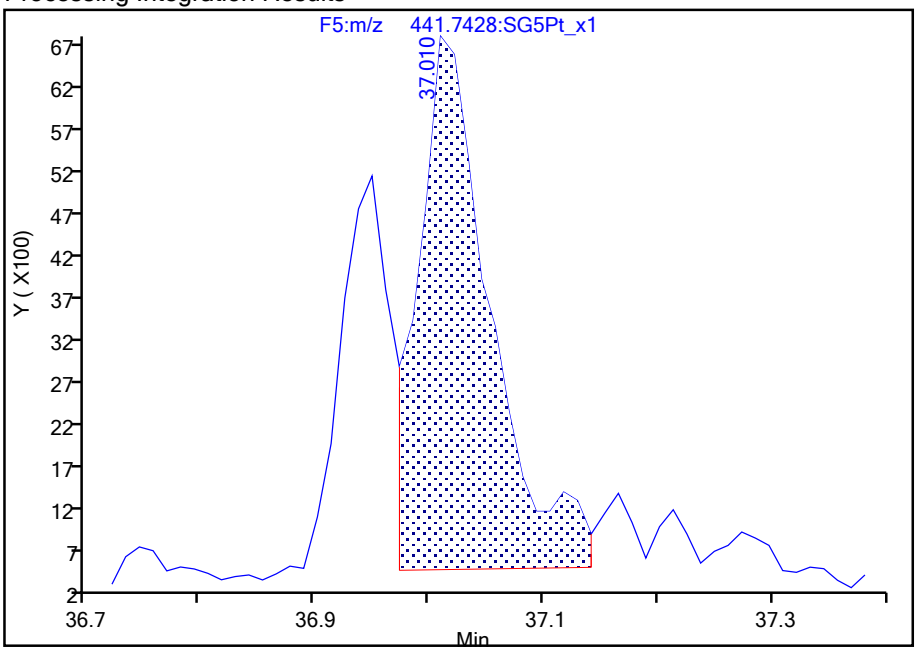

Manual Integration Results

RT: 37.01
Area: 25892
Amount: 0.087747
Amount Units: pg/ul

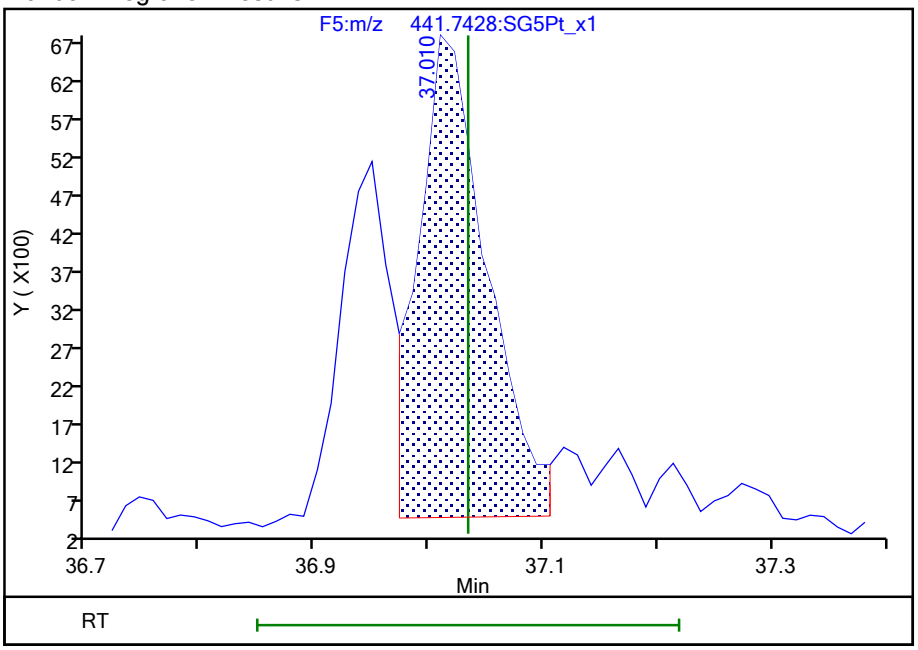

Reviewer: dadunj, 16-Aug-2021 14:04:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778377

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

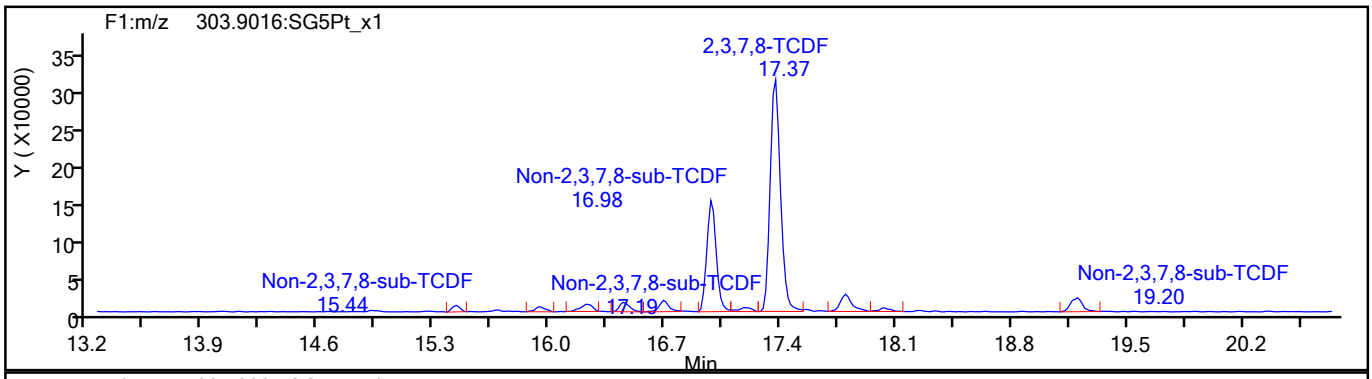

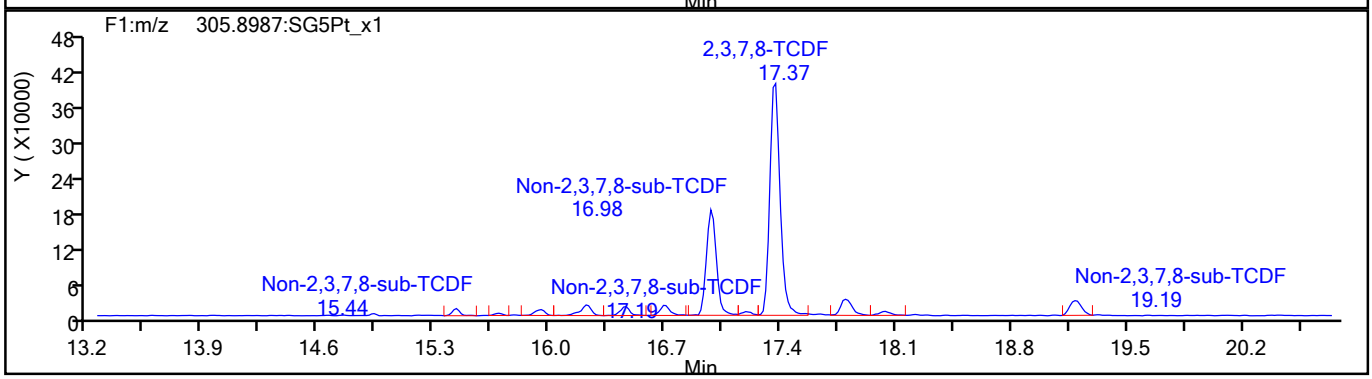

TCDF Standards

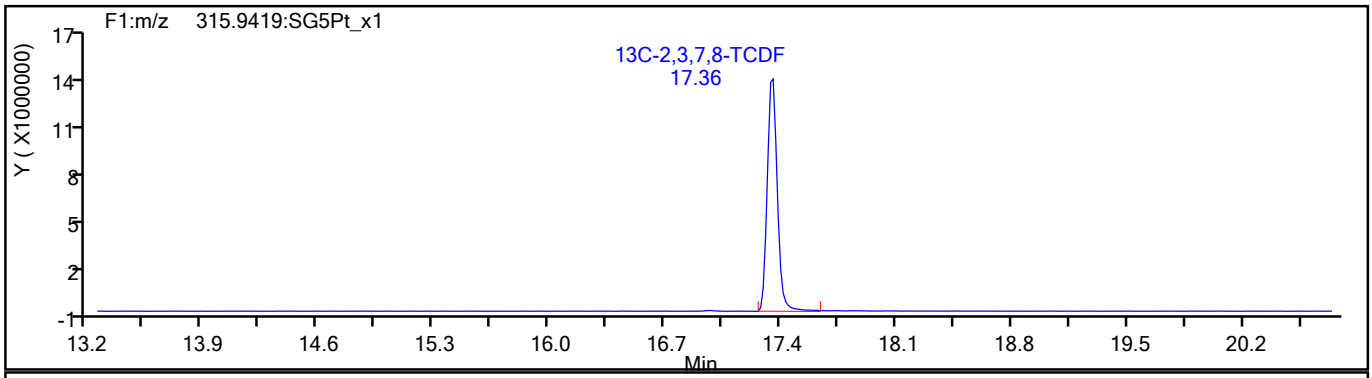

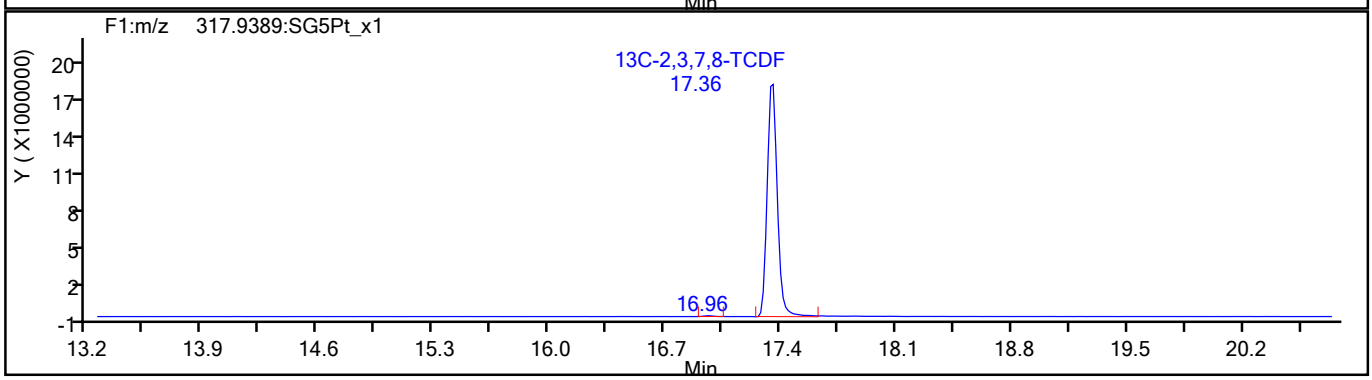

778378

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

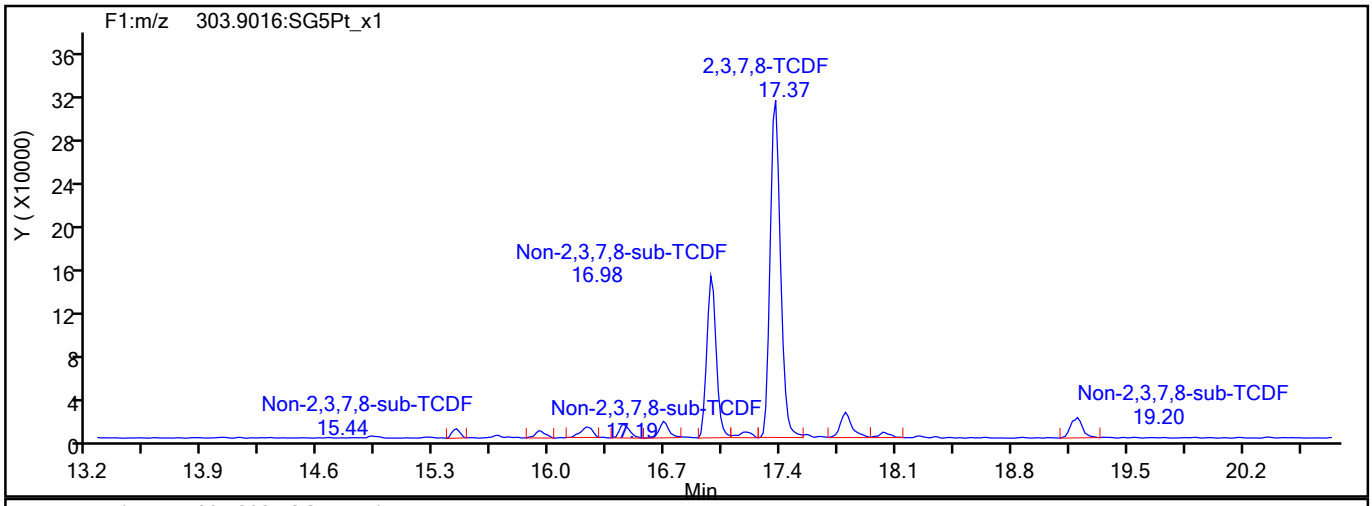

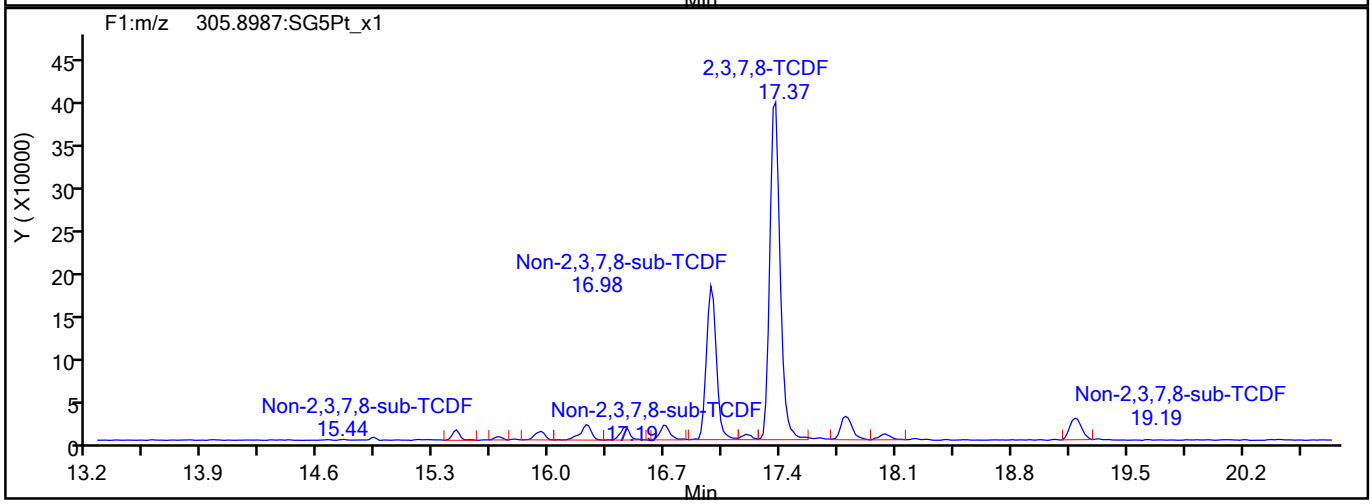

TCDF Interference Mass

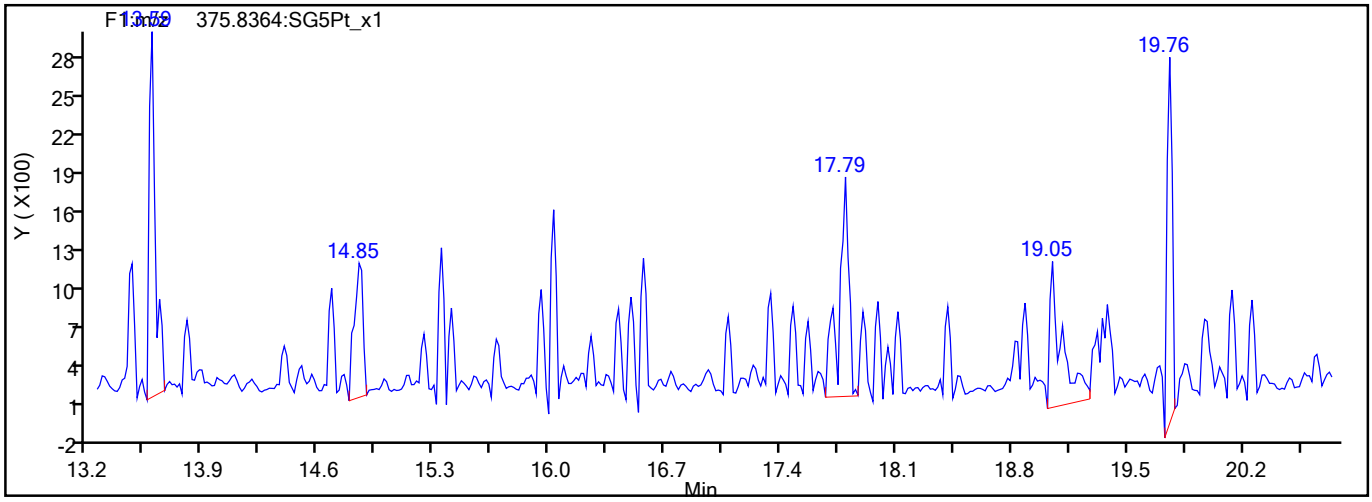

778379

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

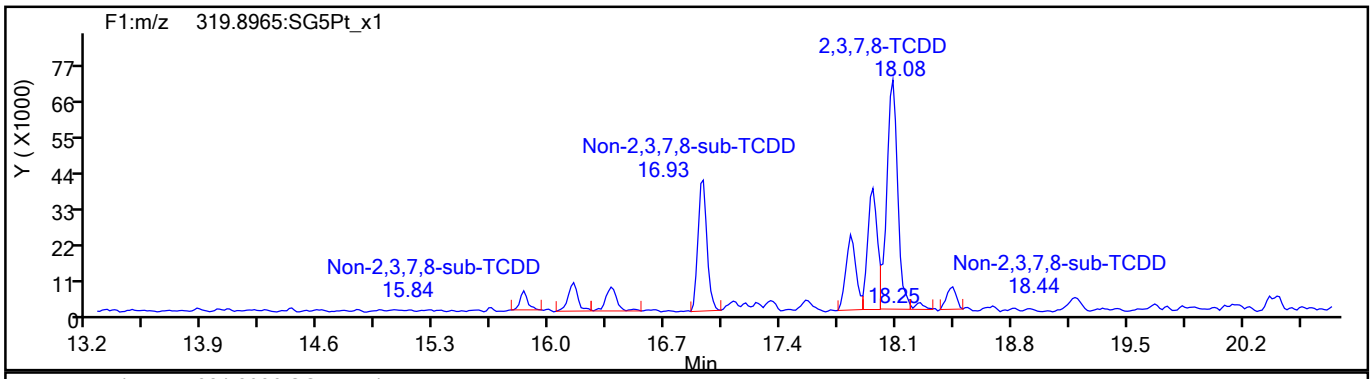

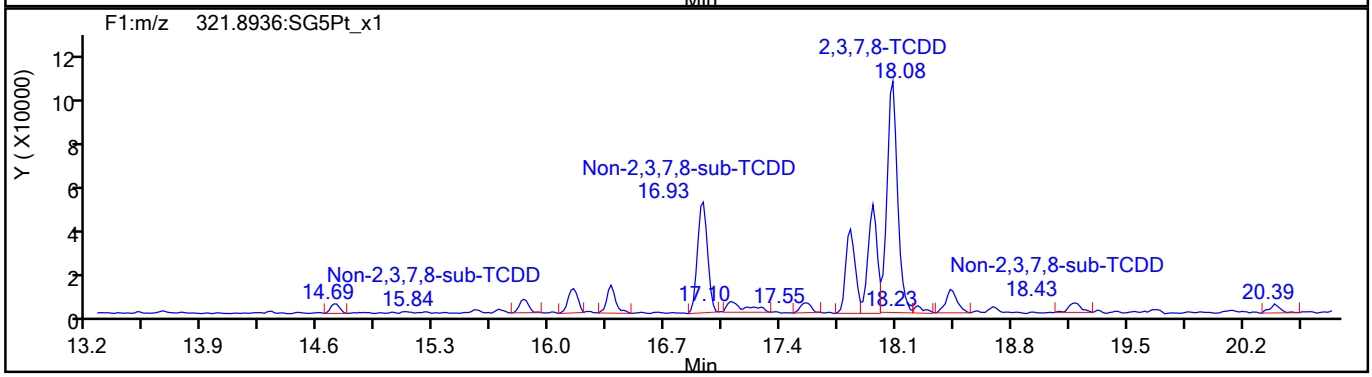

TCDD Standards

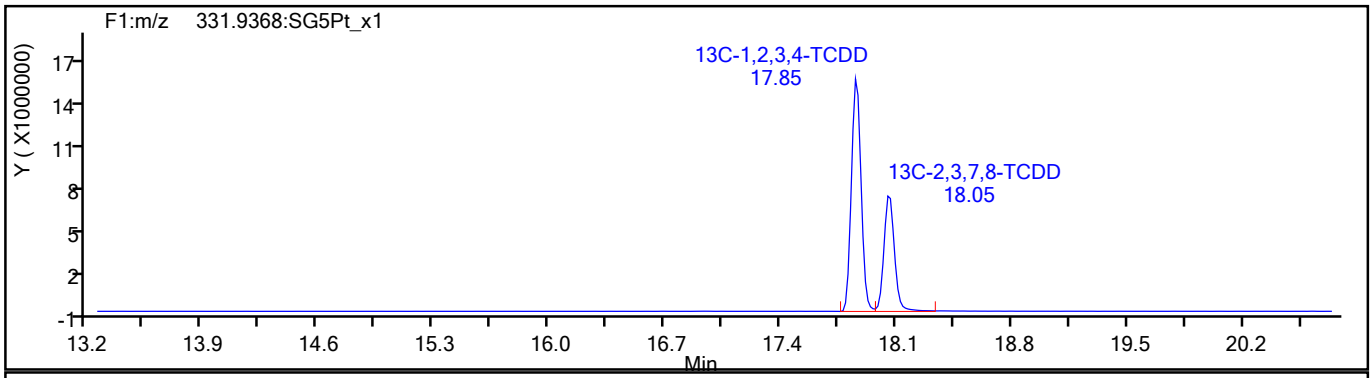

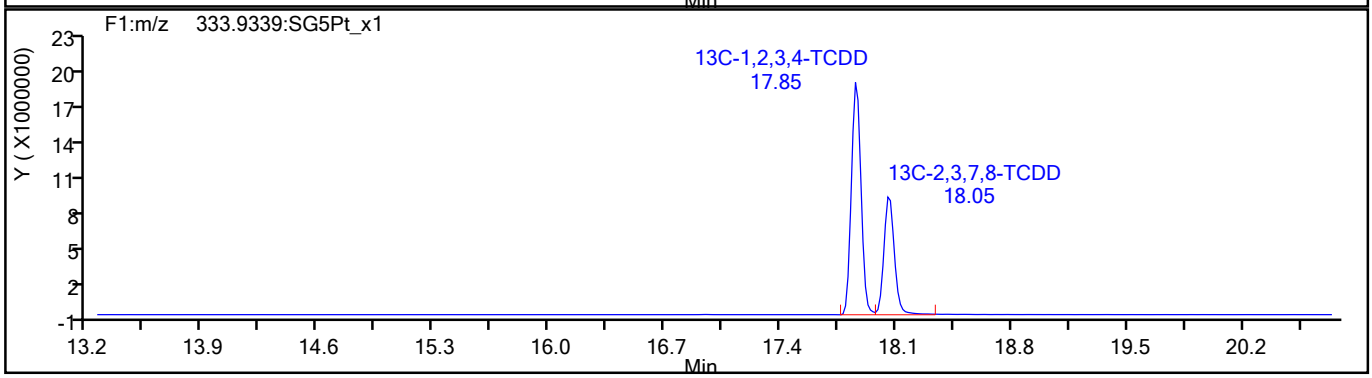

778380

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

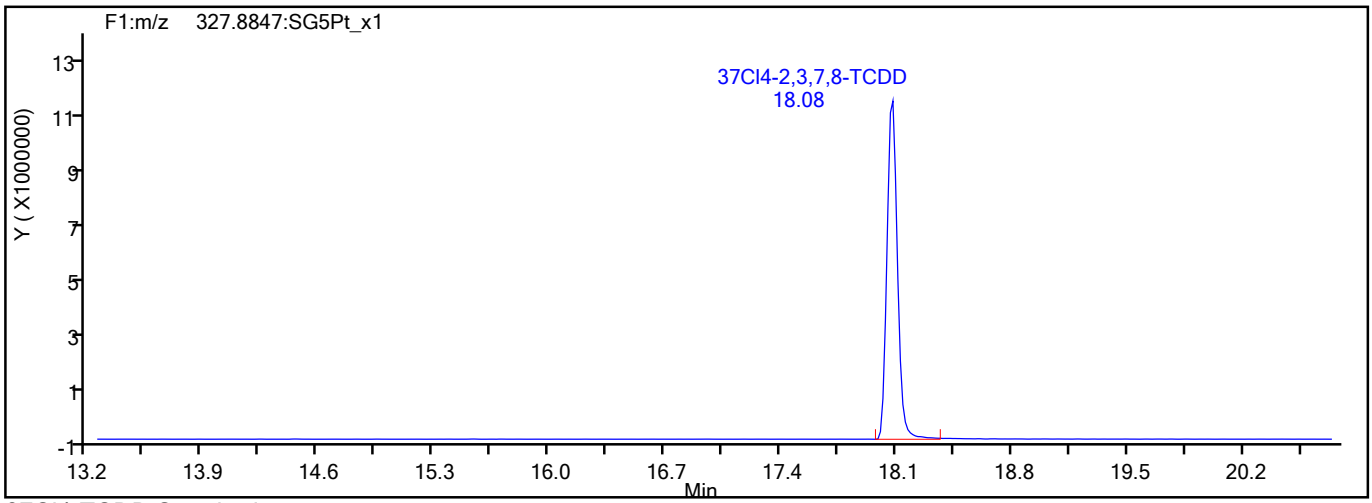

37Cl4-TCDD Standards

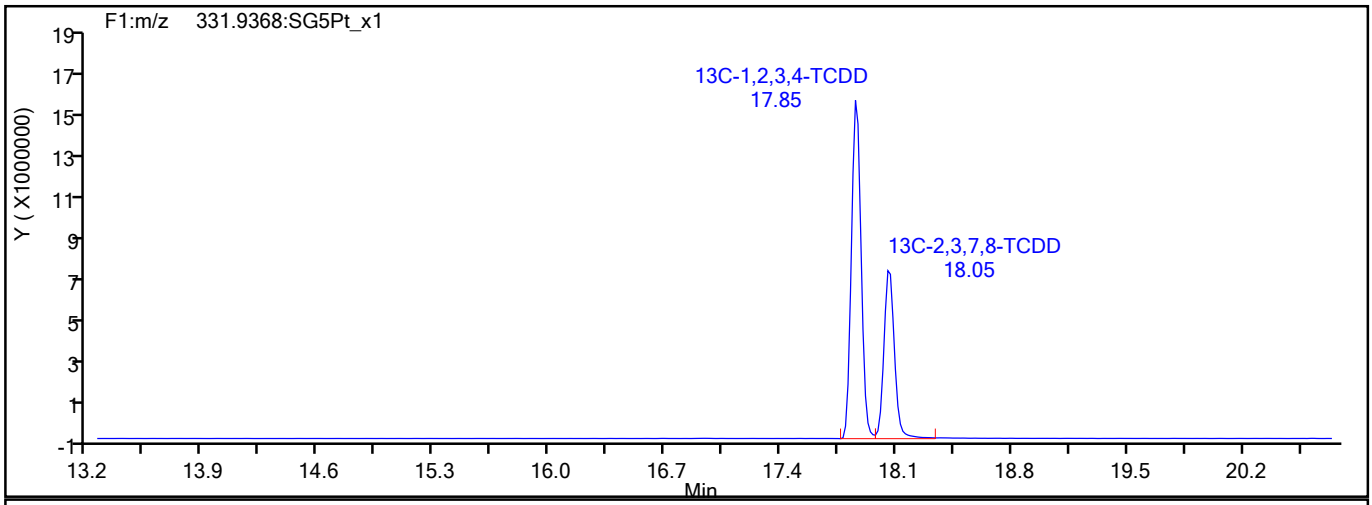

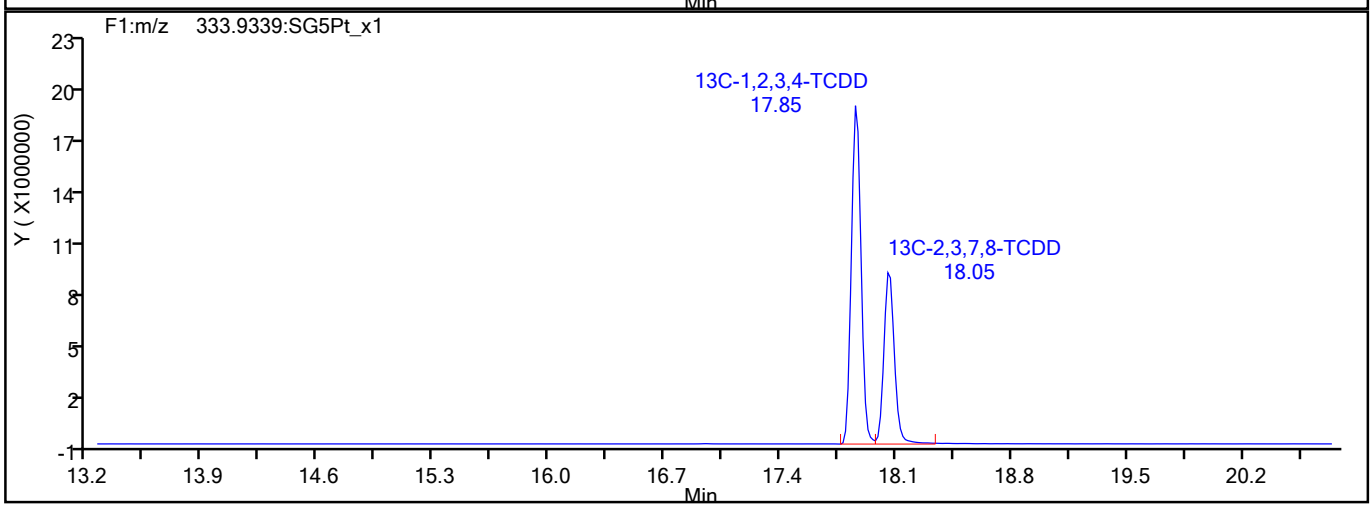

778381

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

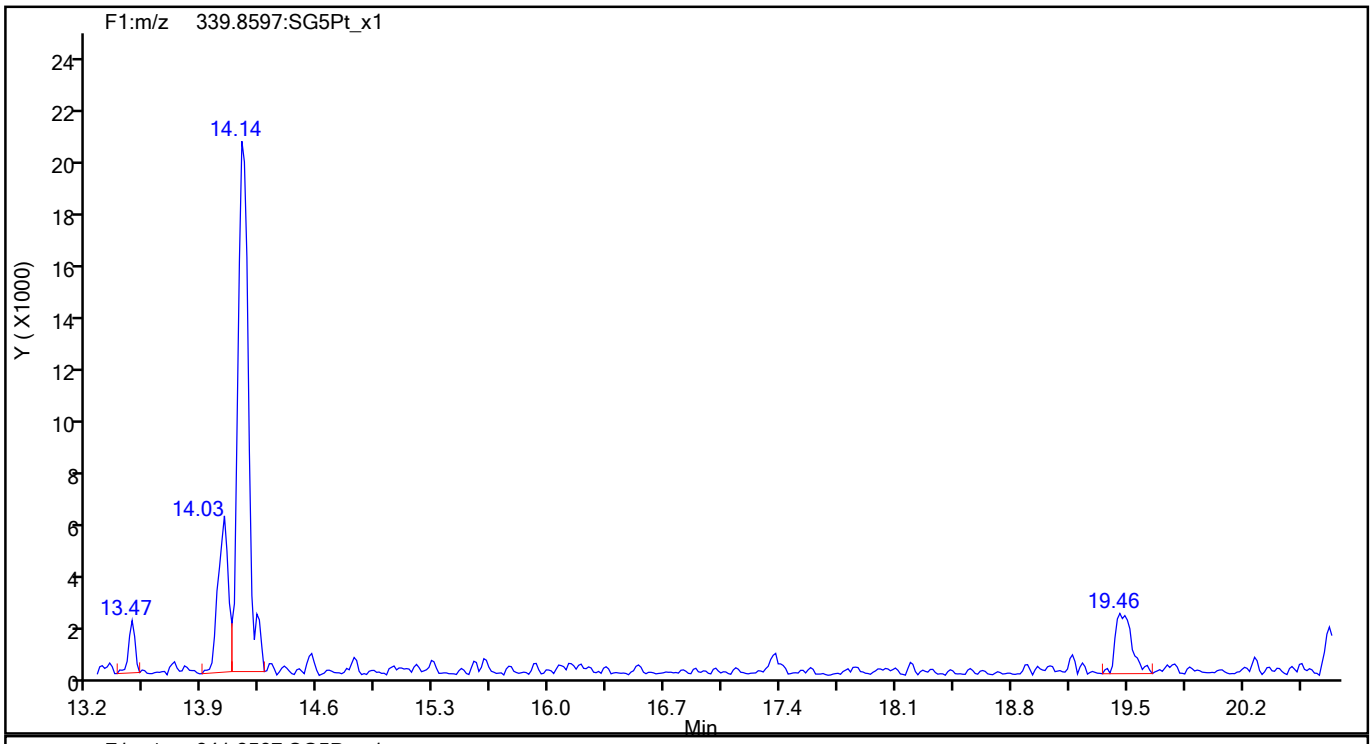

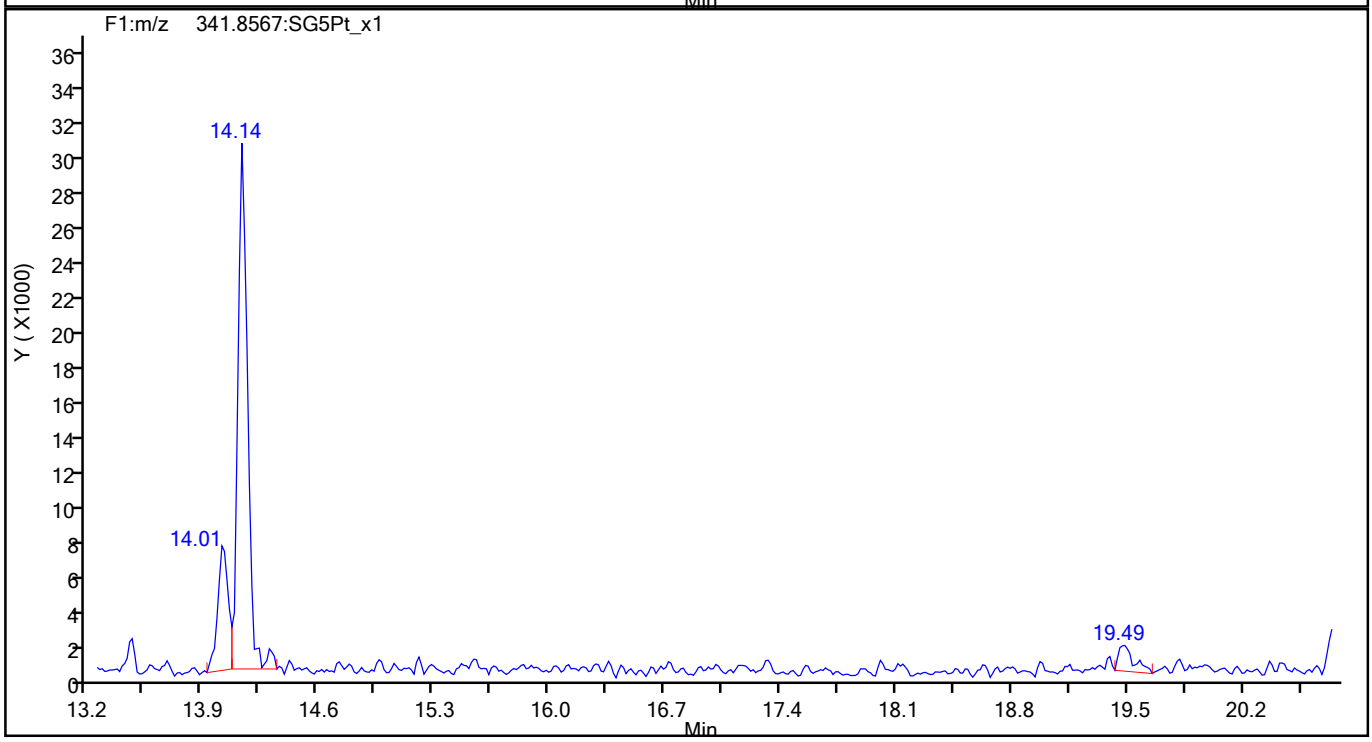

778382

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

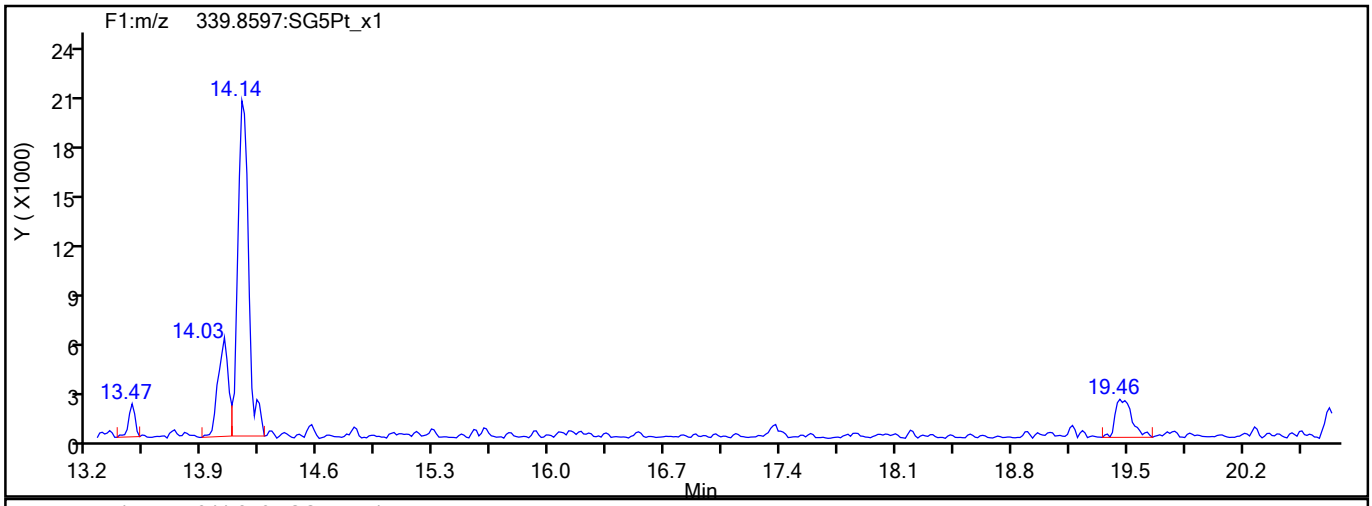

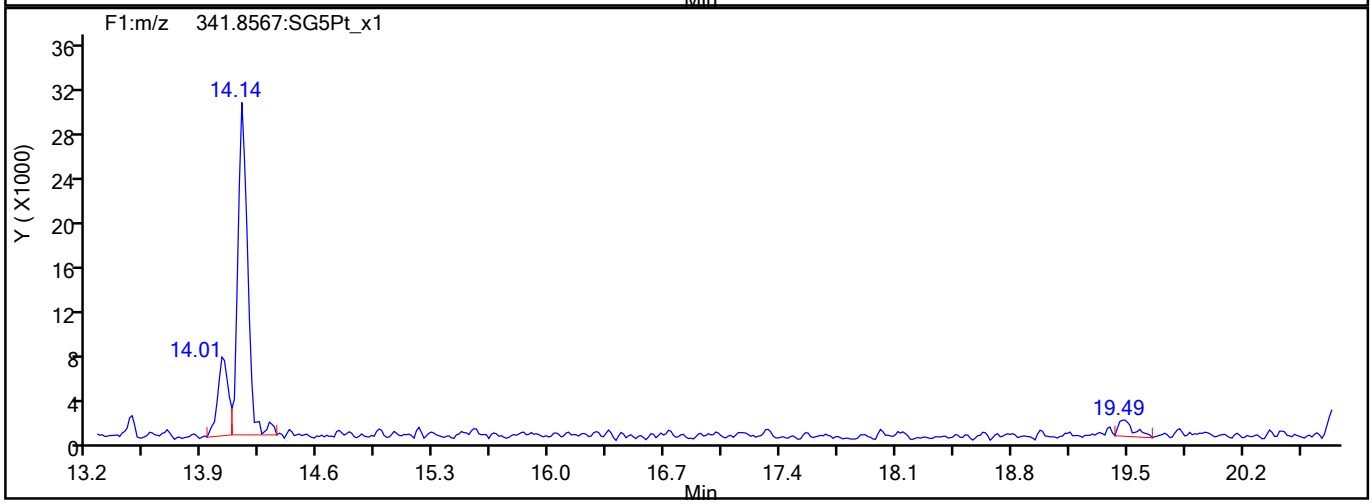

F1 PeCDFs Interference Mass

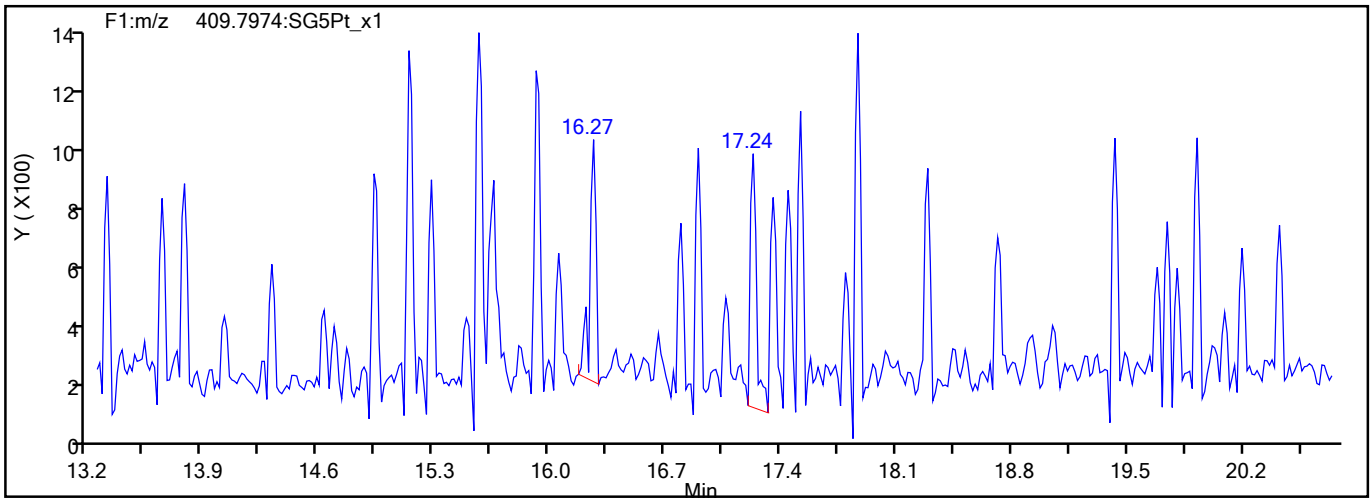

778383

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

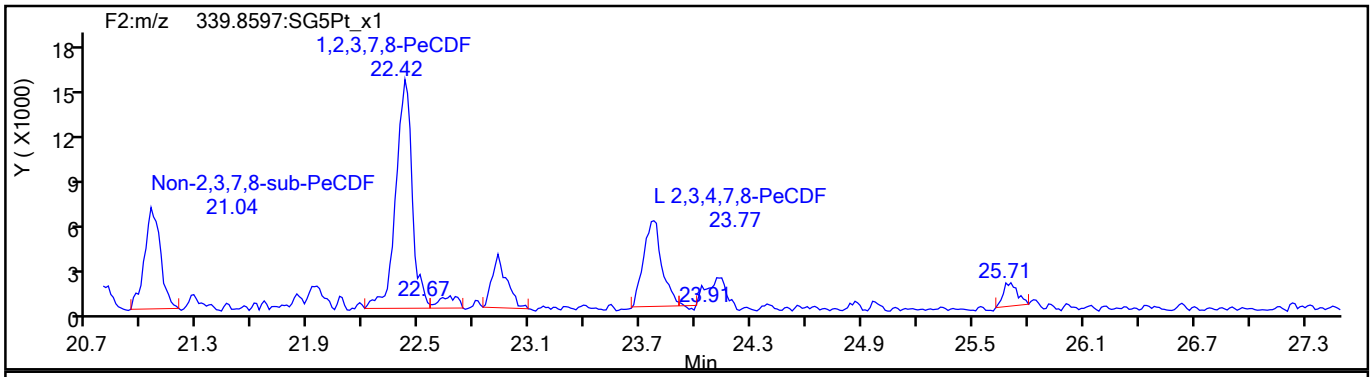

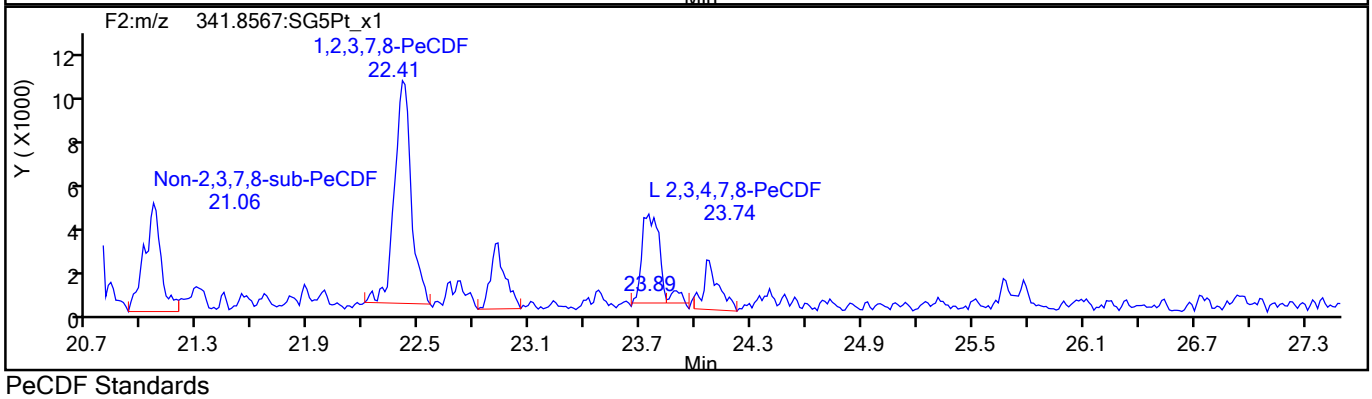

PeCDF Standards

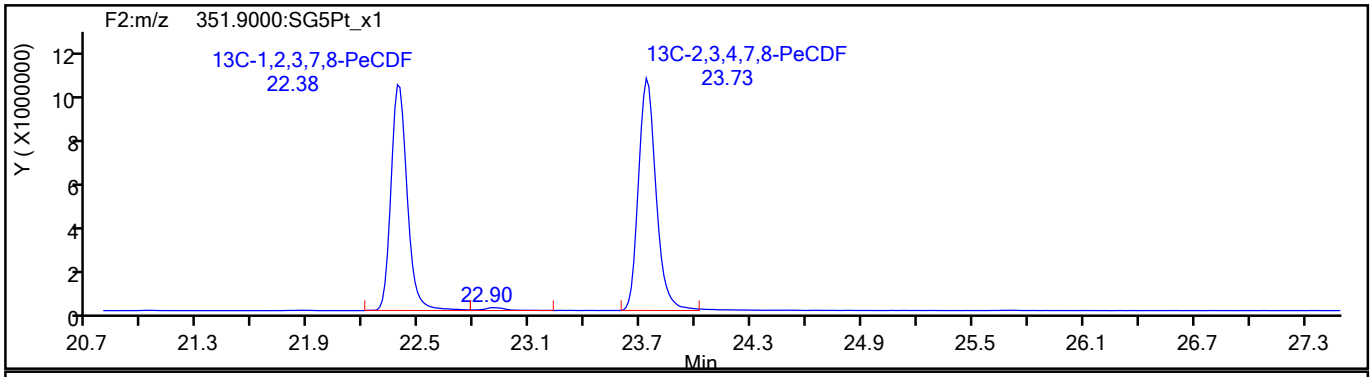

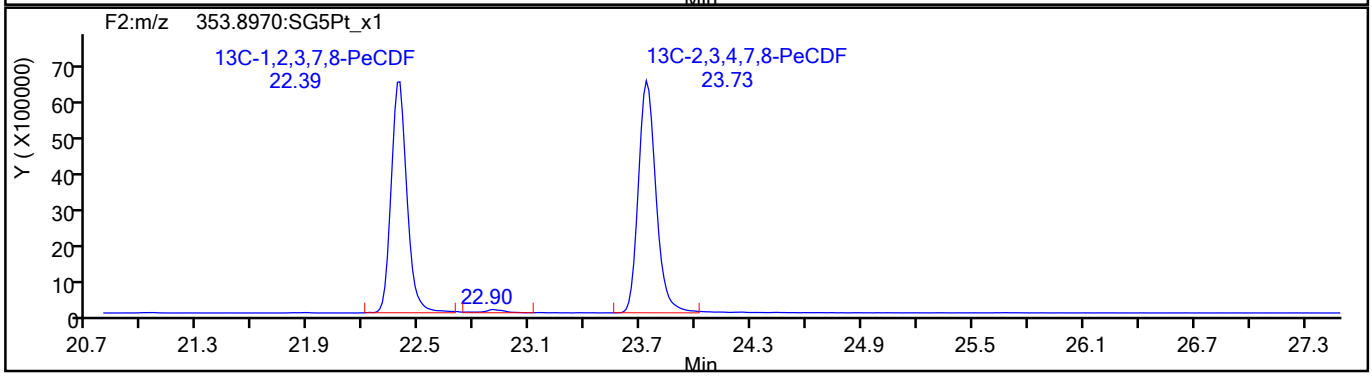

778384

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

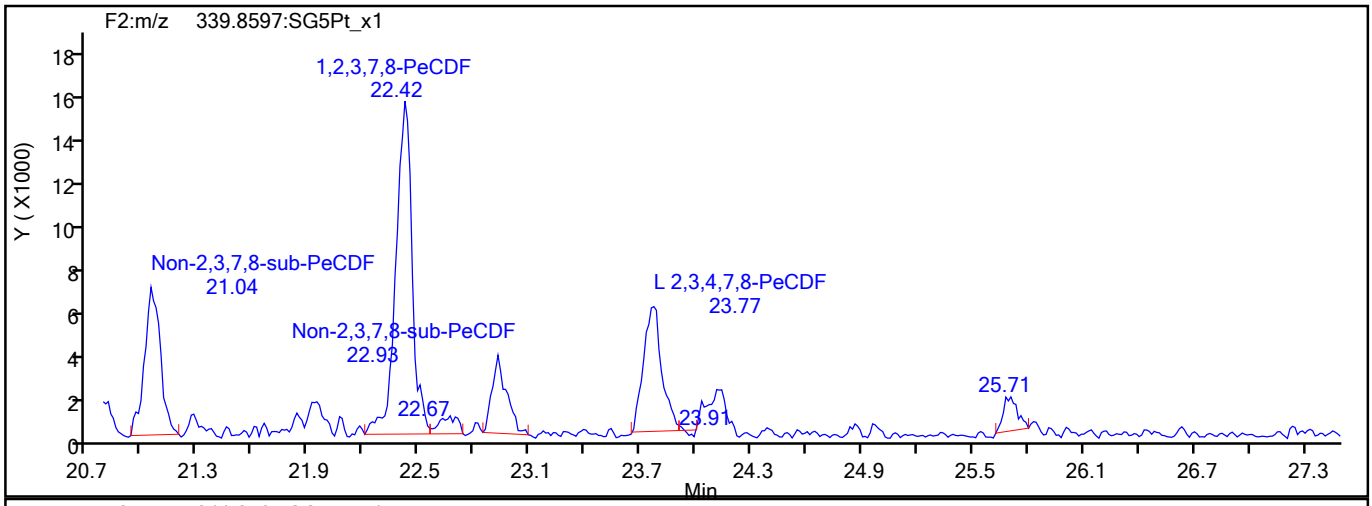

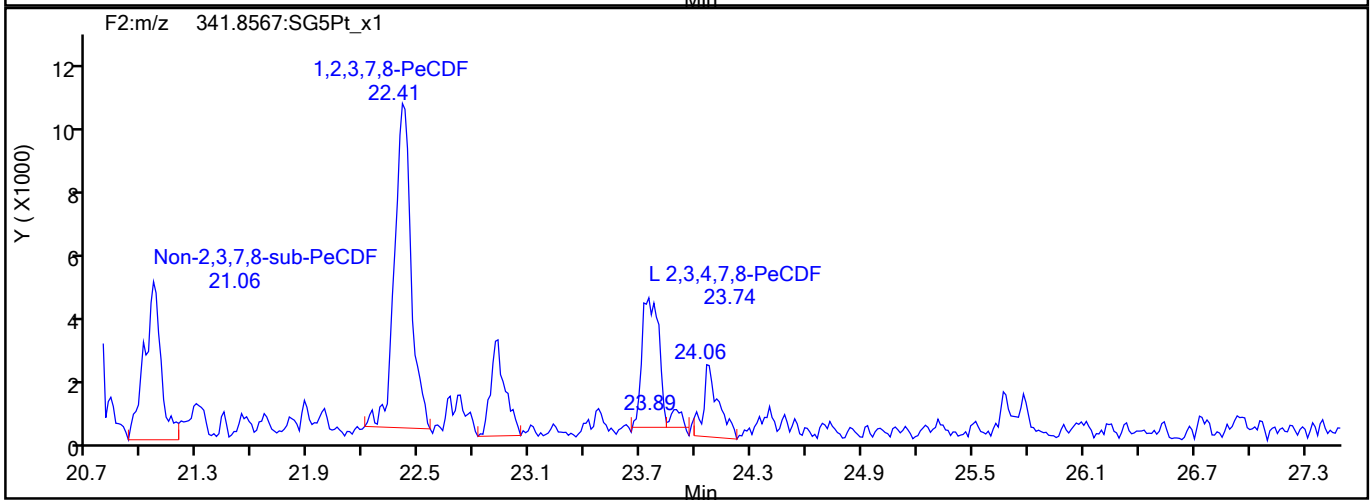

PeCDF Interference Mass

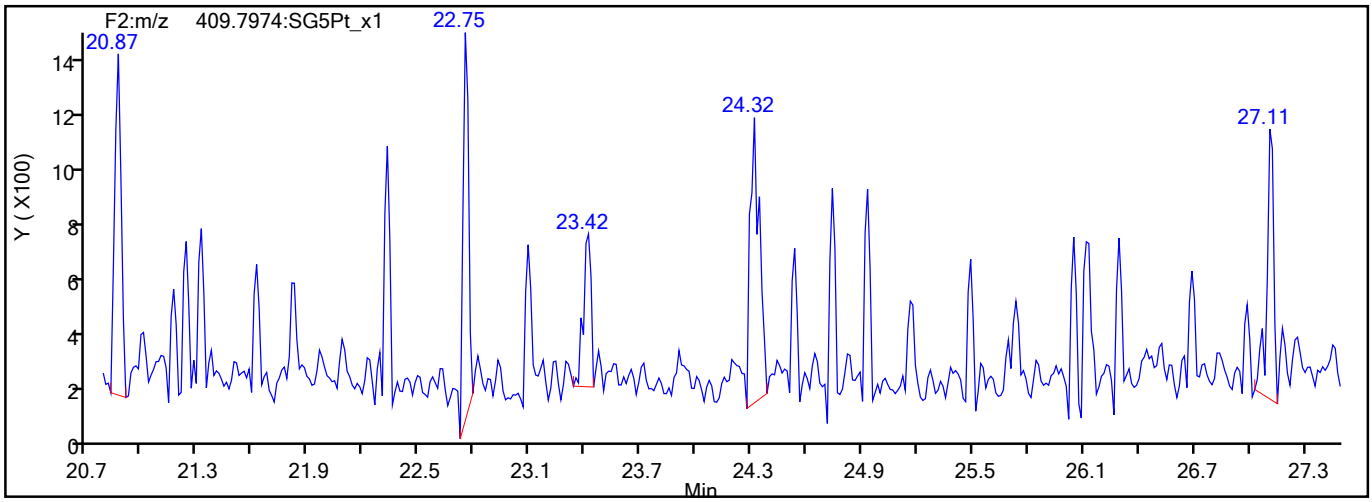

778385

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

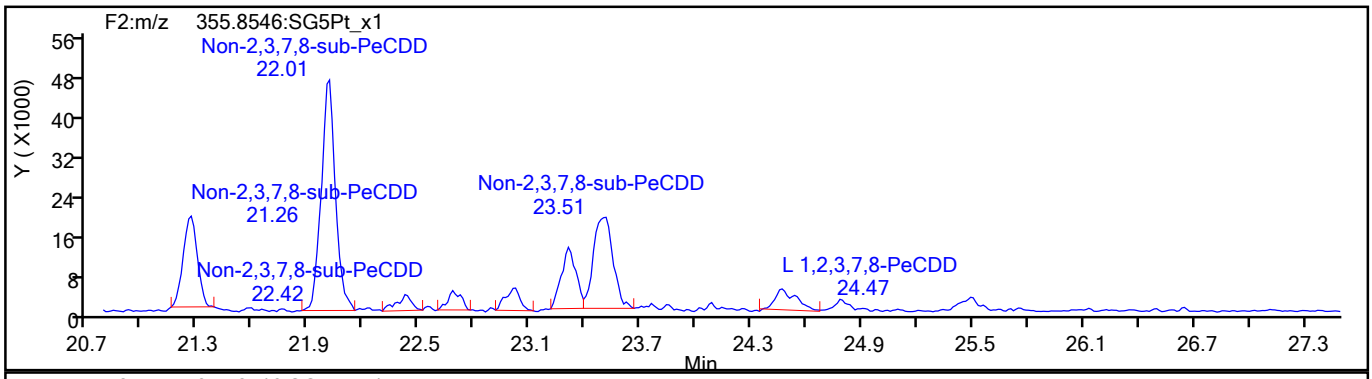

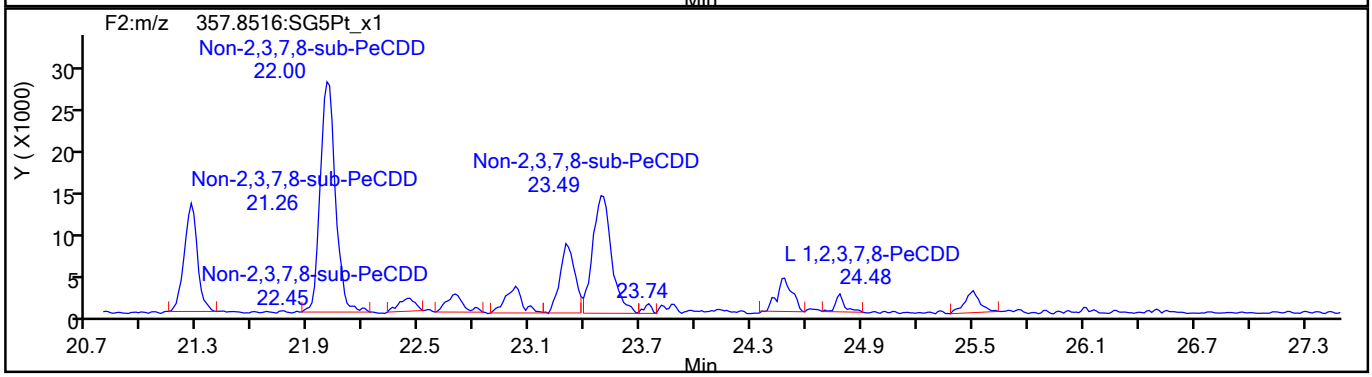

PeCDD Standards

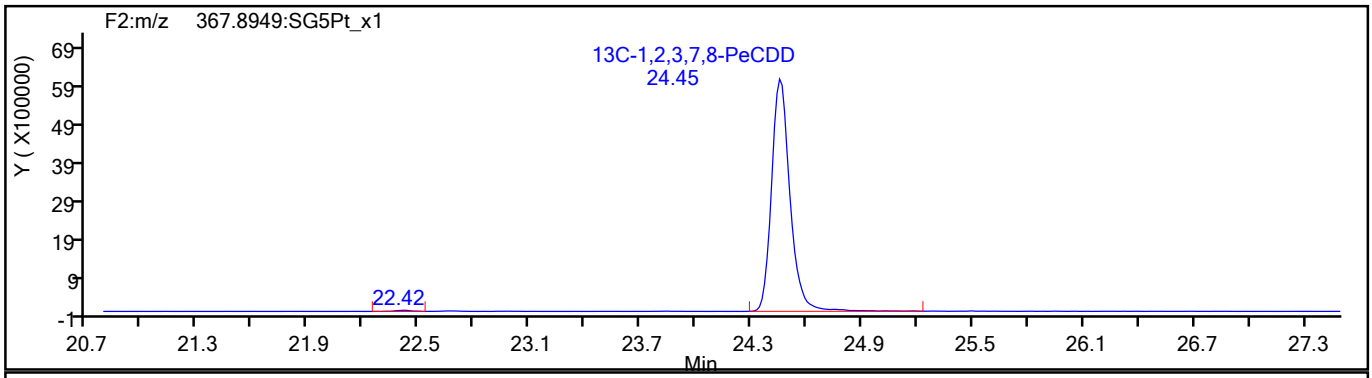

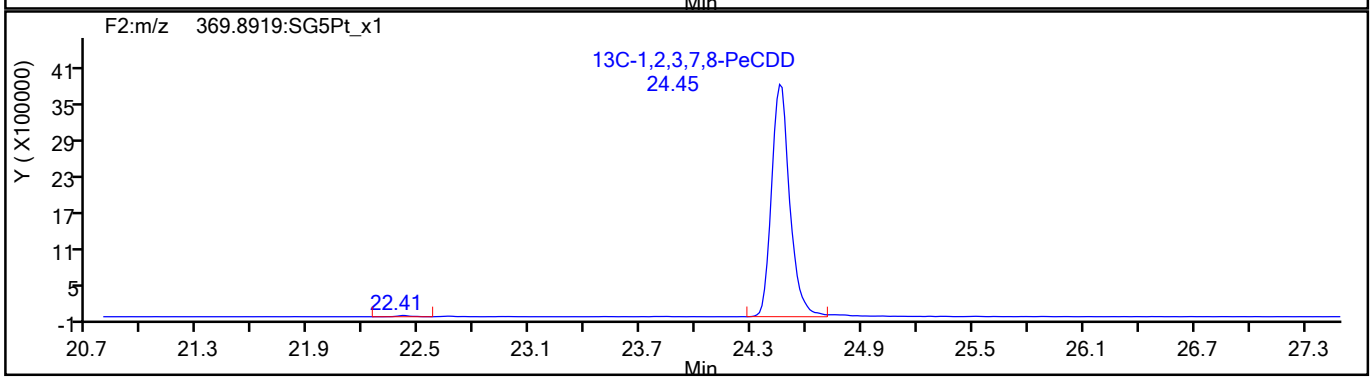

778386

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

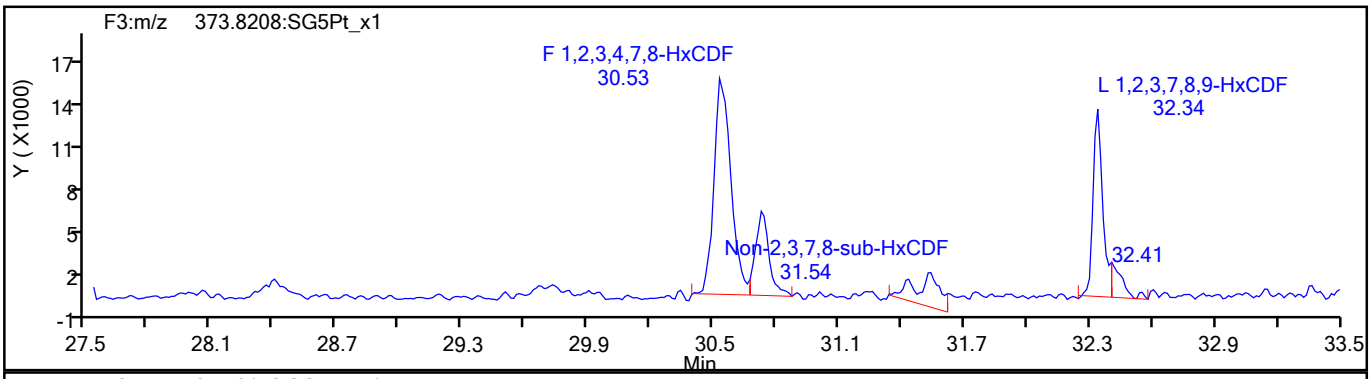

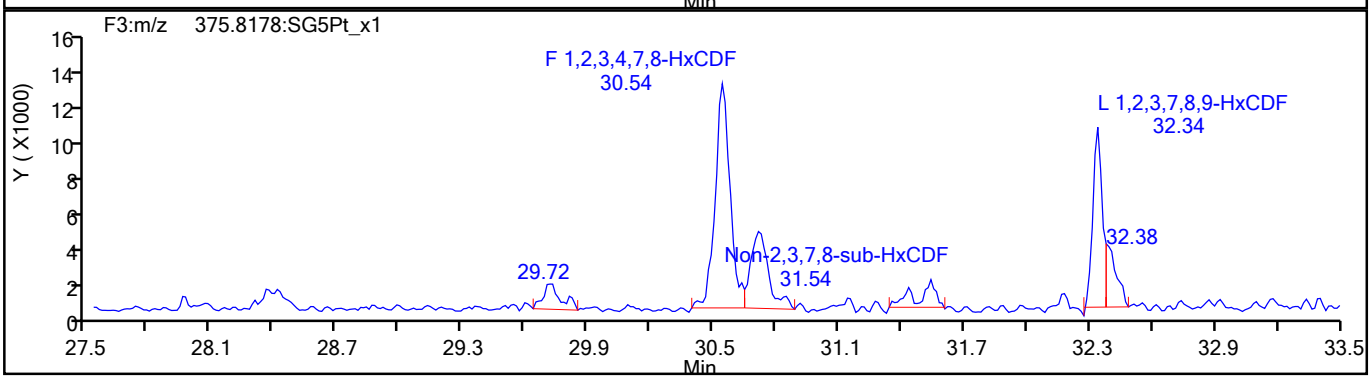

HxCDF Standards

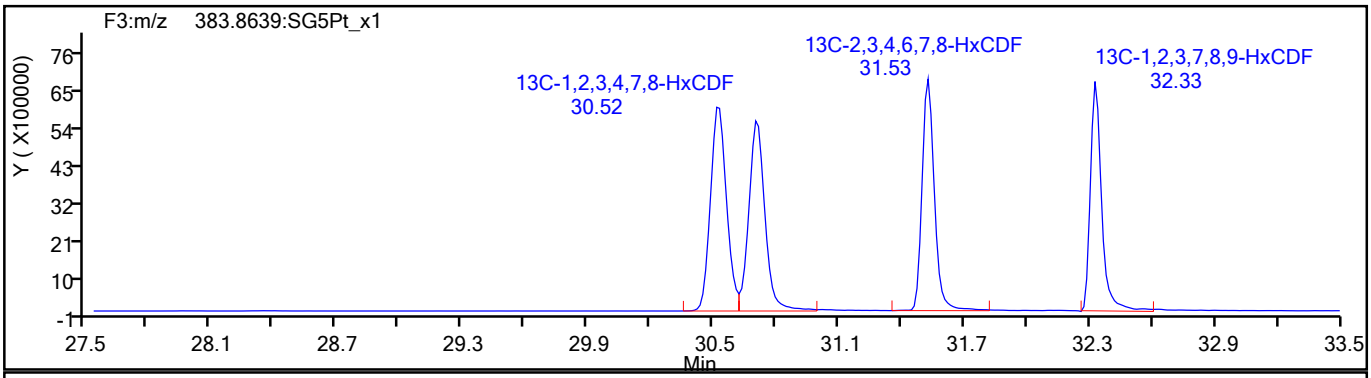

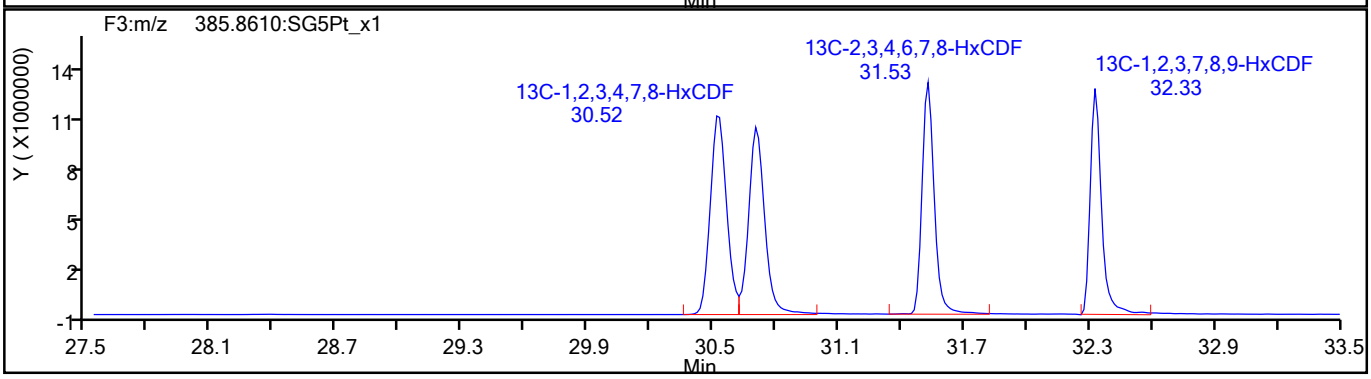

778387

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

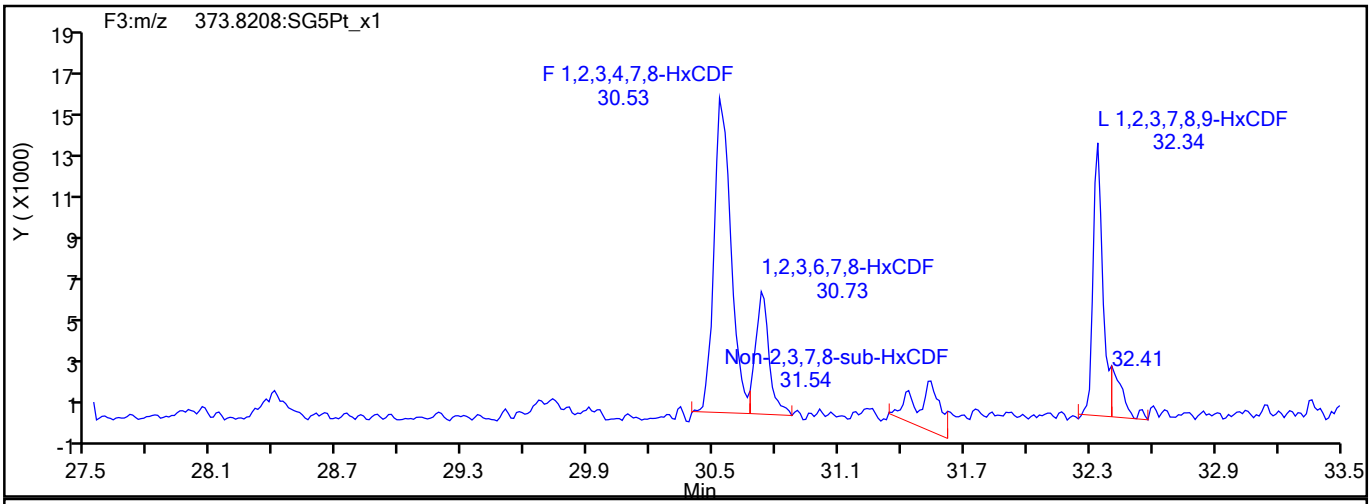

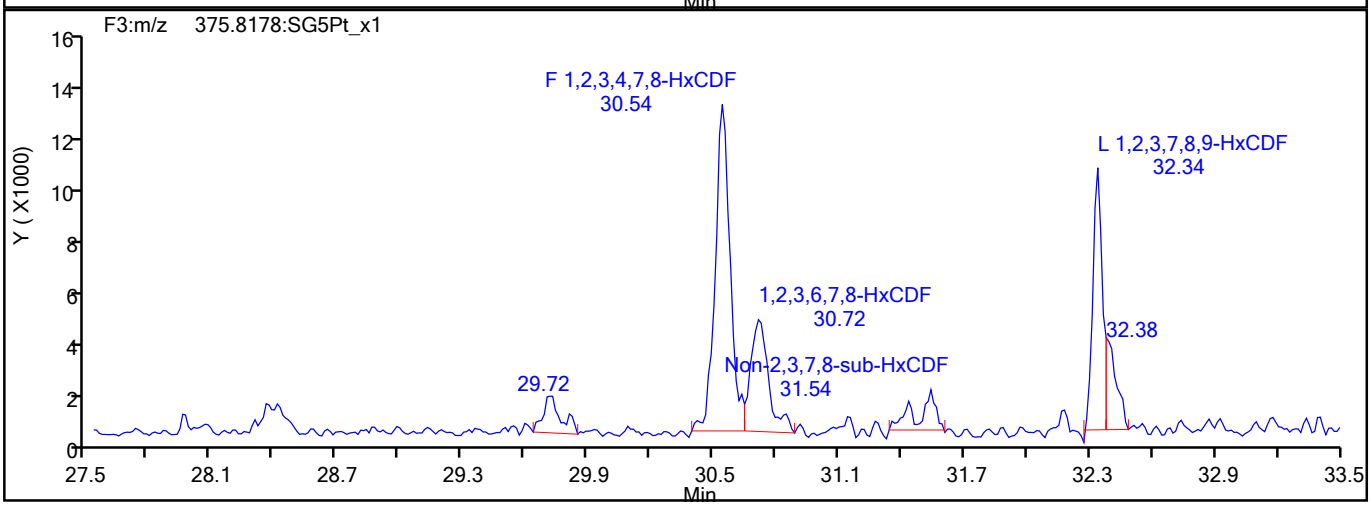

HxCDF Interference Mass

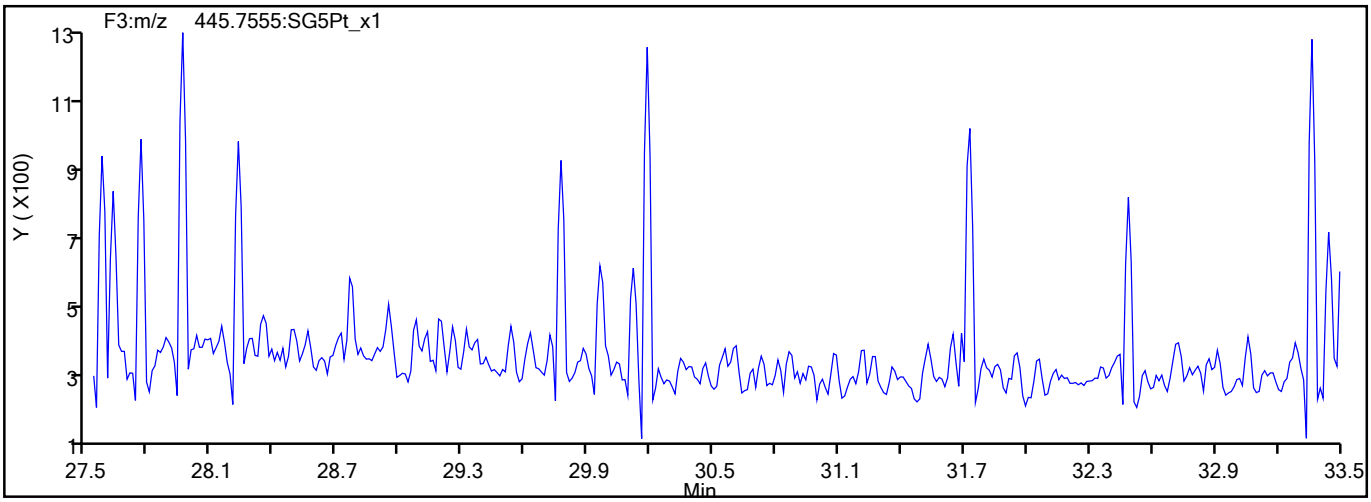

778388

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

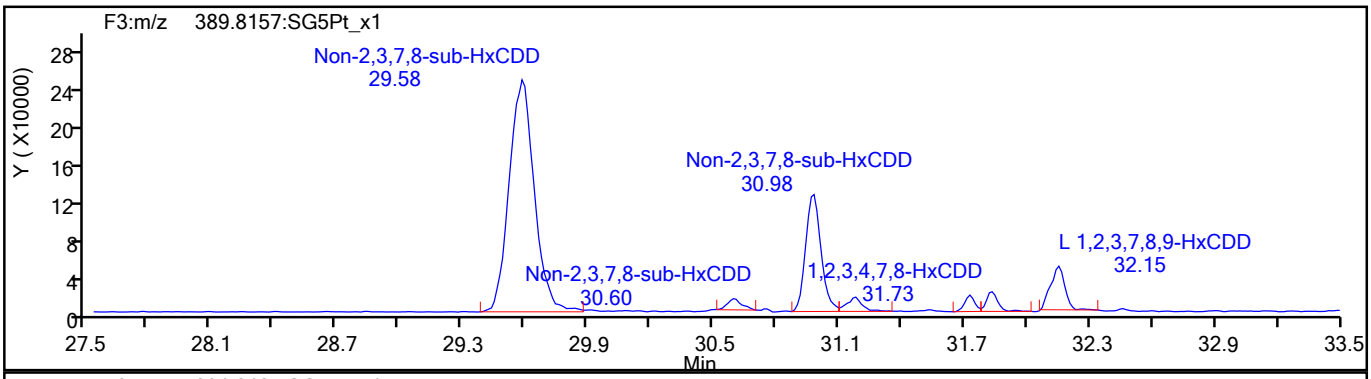

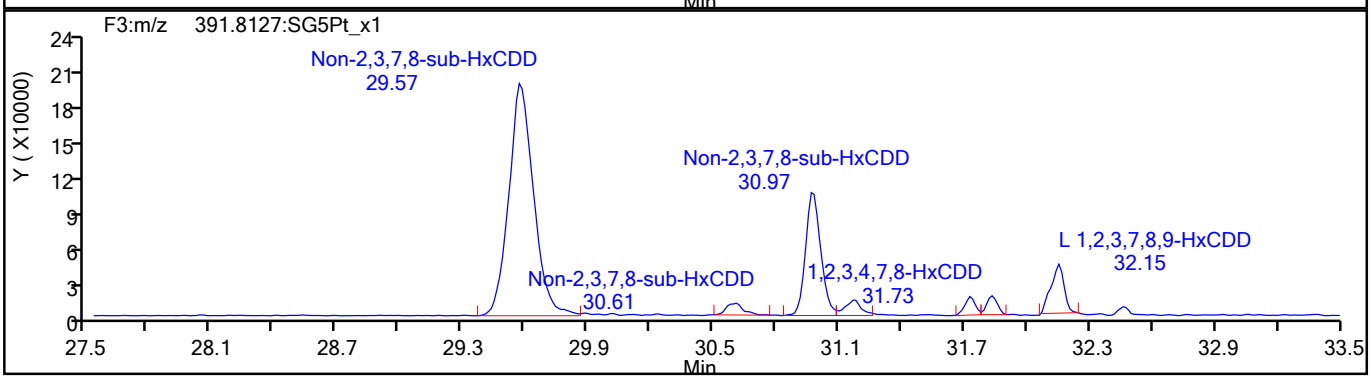

HxCDD Standards

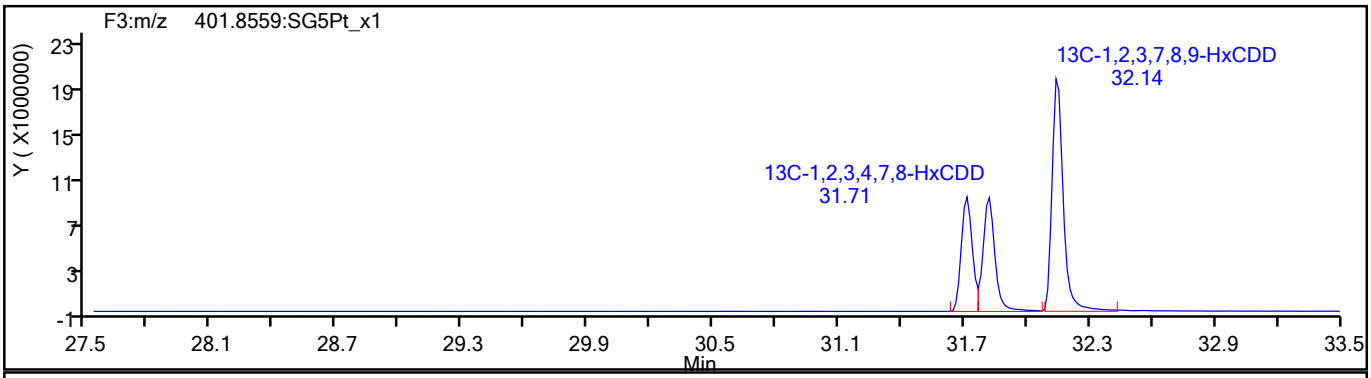

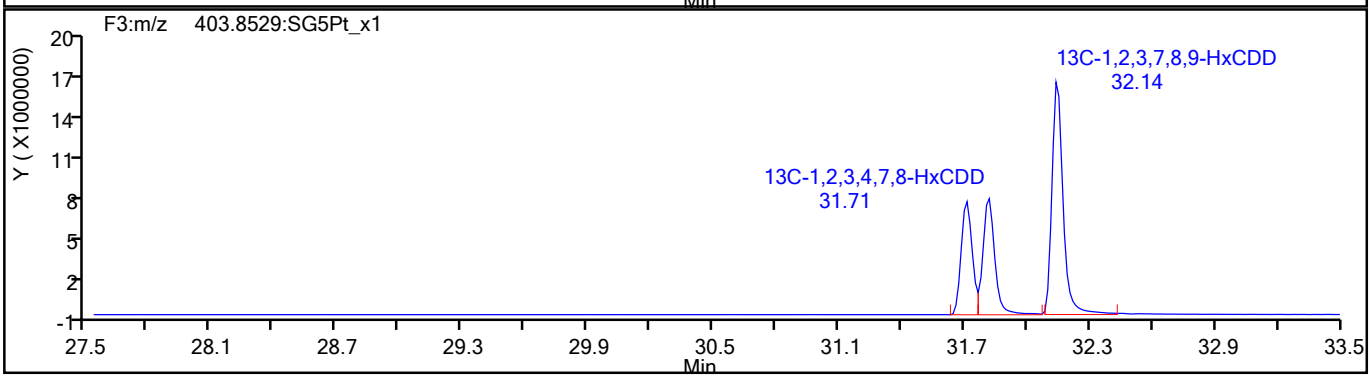

778389

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

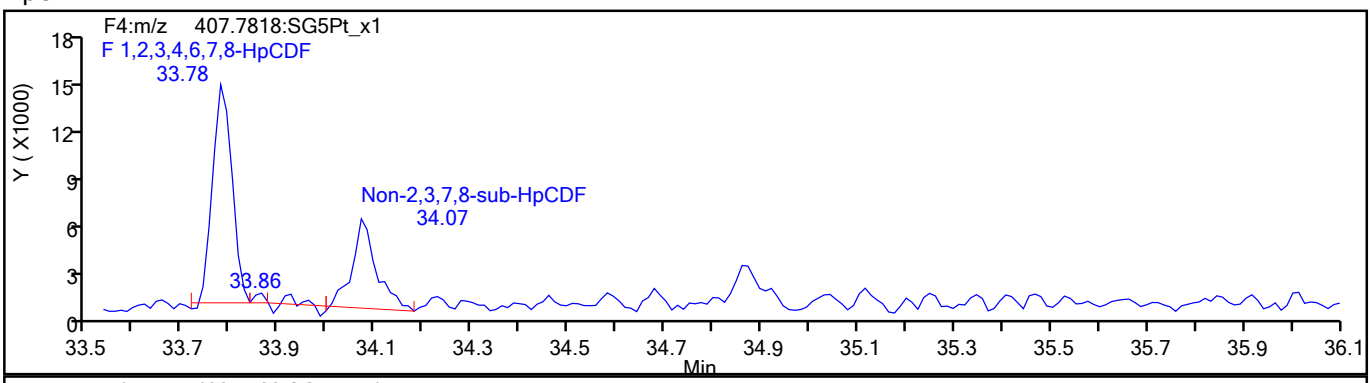

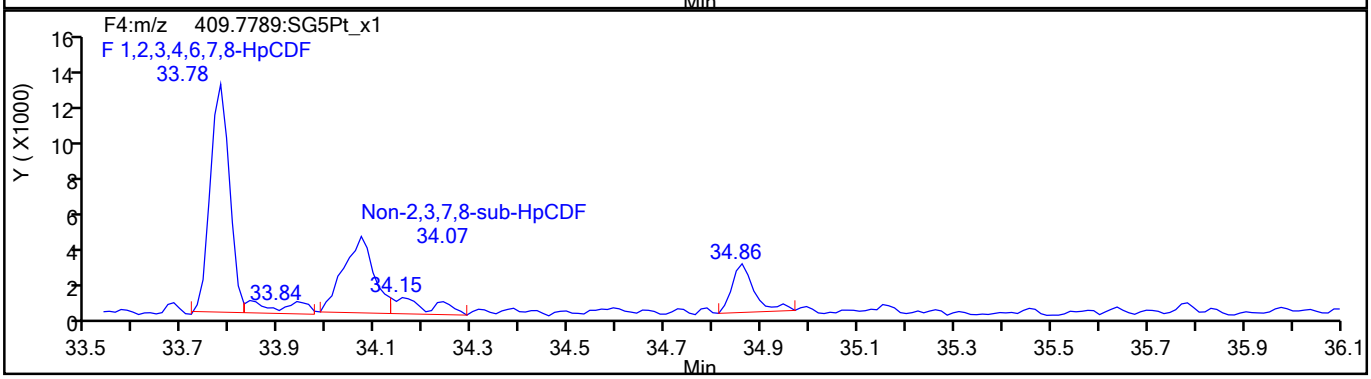

HpCDF Standards

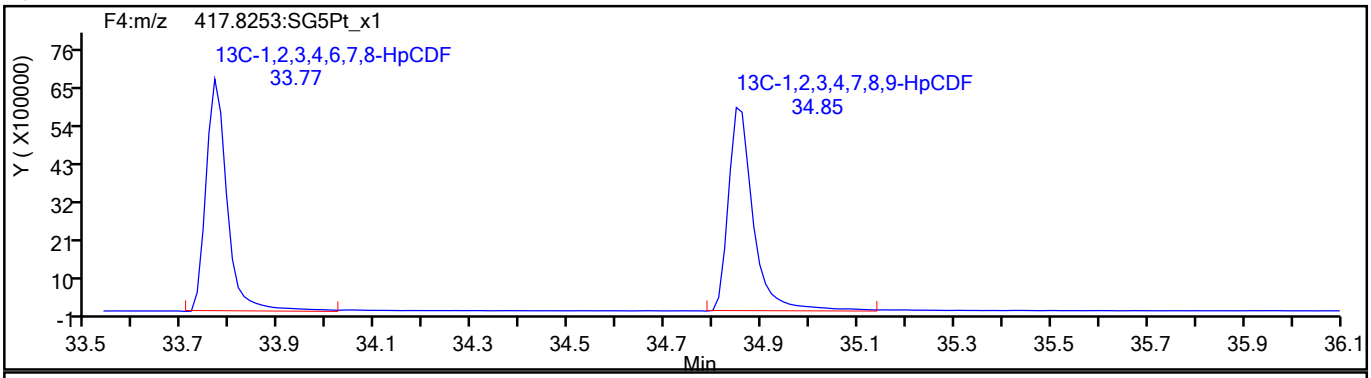

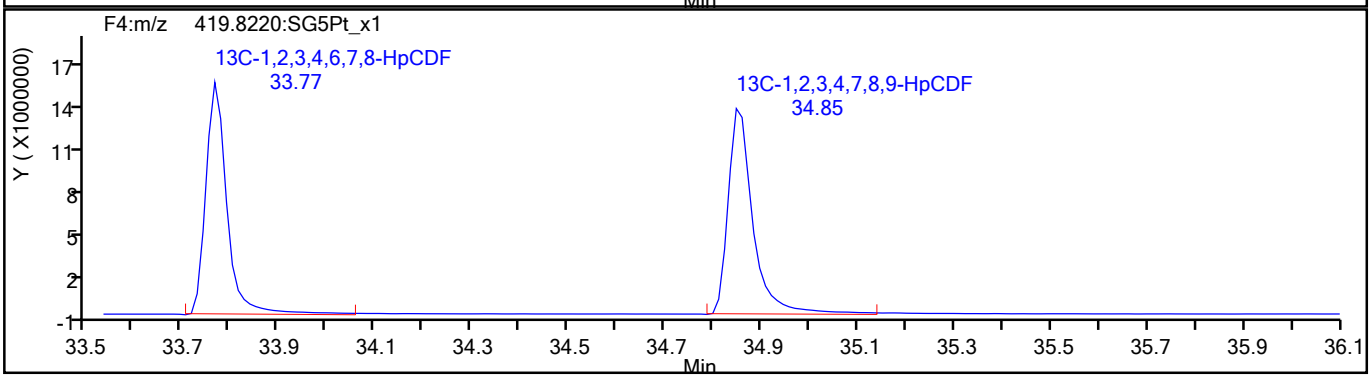

778390

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
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HpCDF

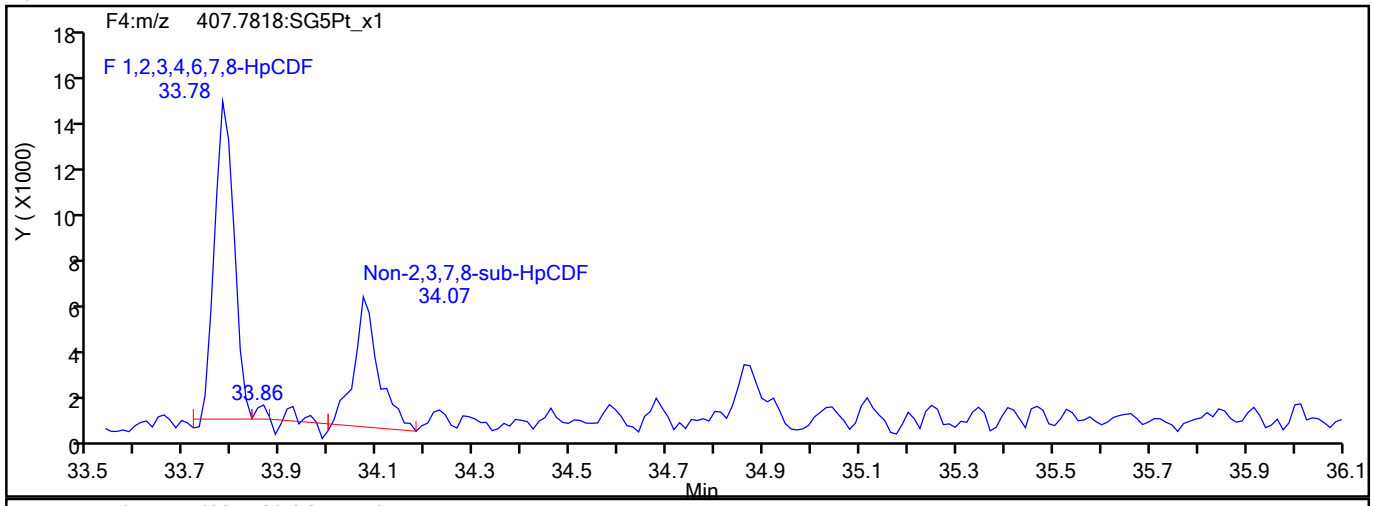

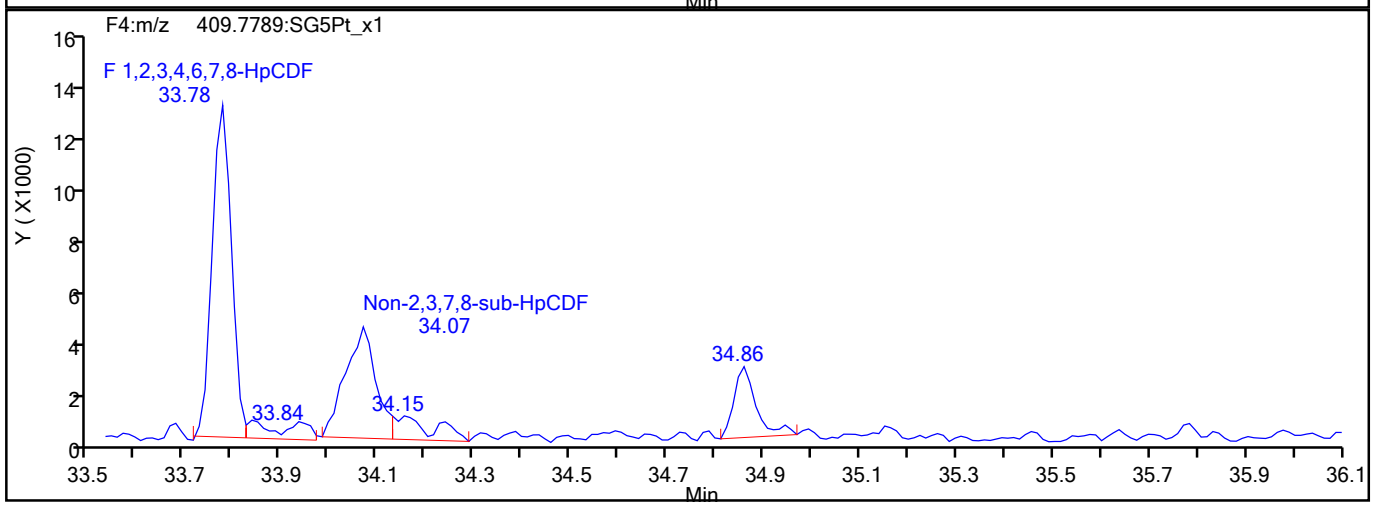

HpCDF Interference Mass

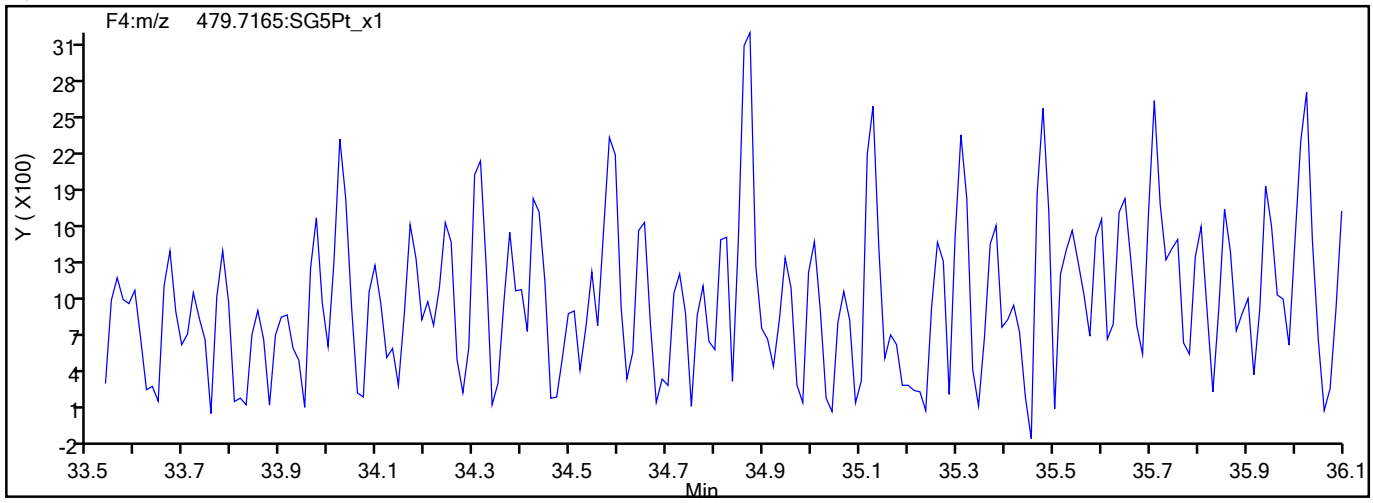

778391

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
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HpCDD

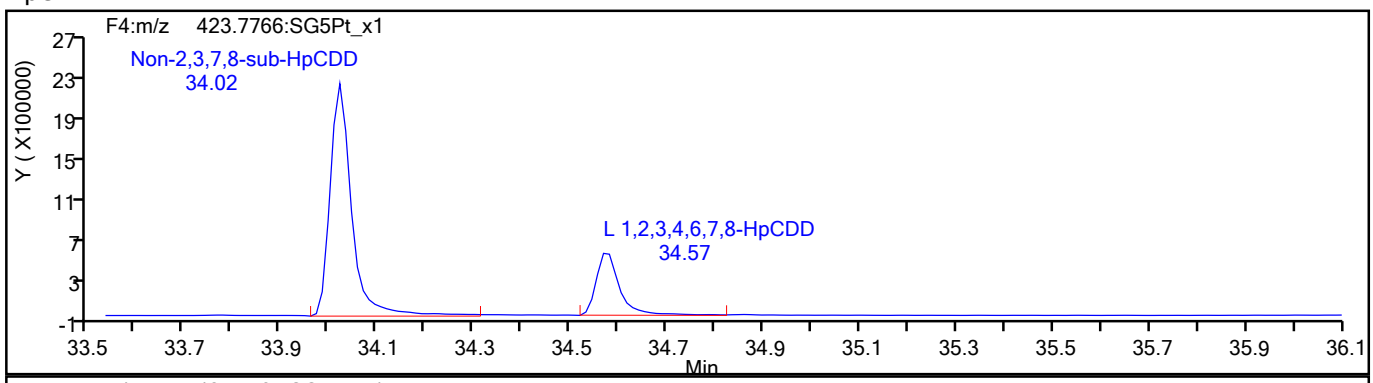

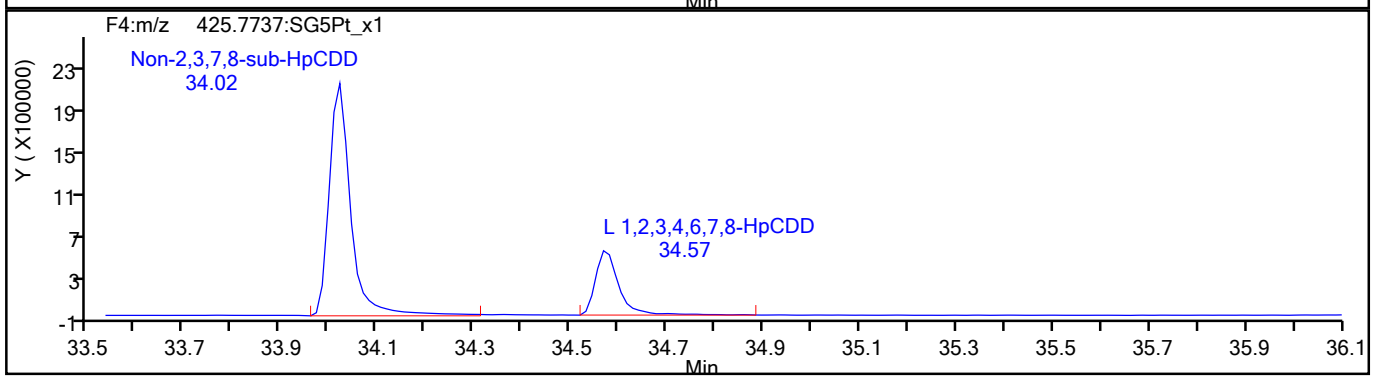

HpCDD Standards

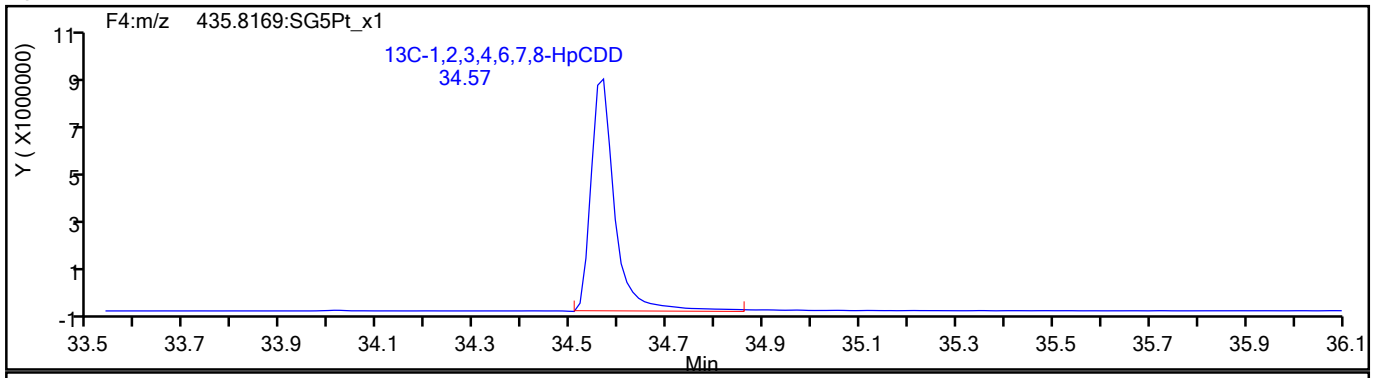

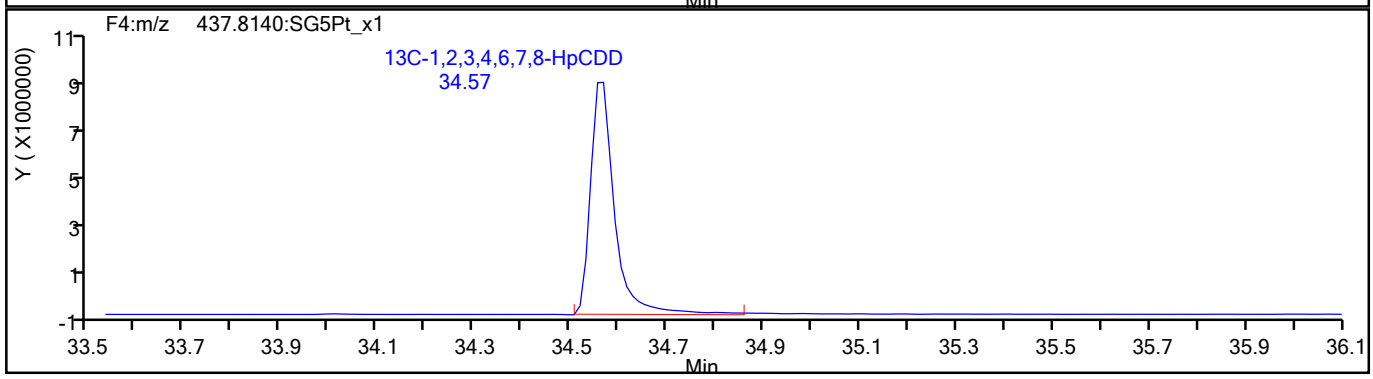

778392

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
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OCDF

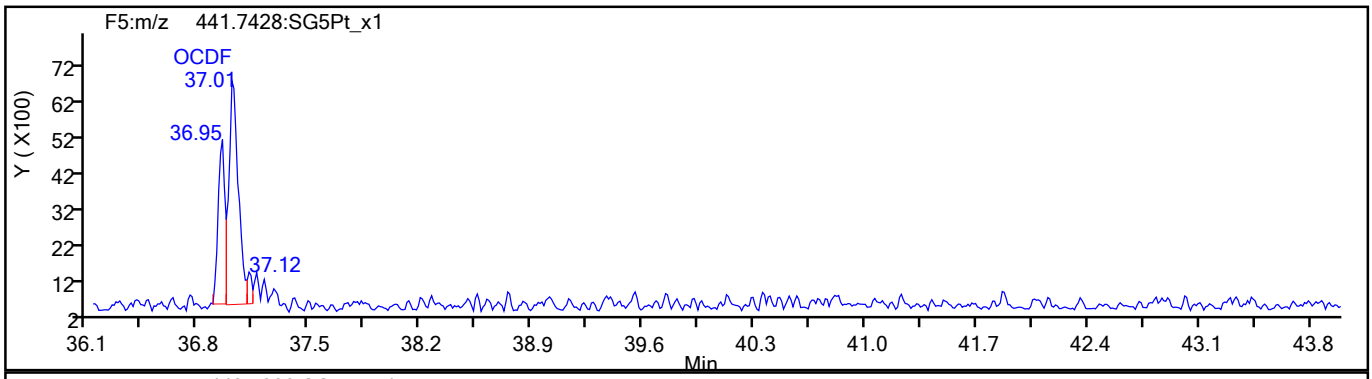

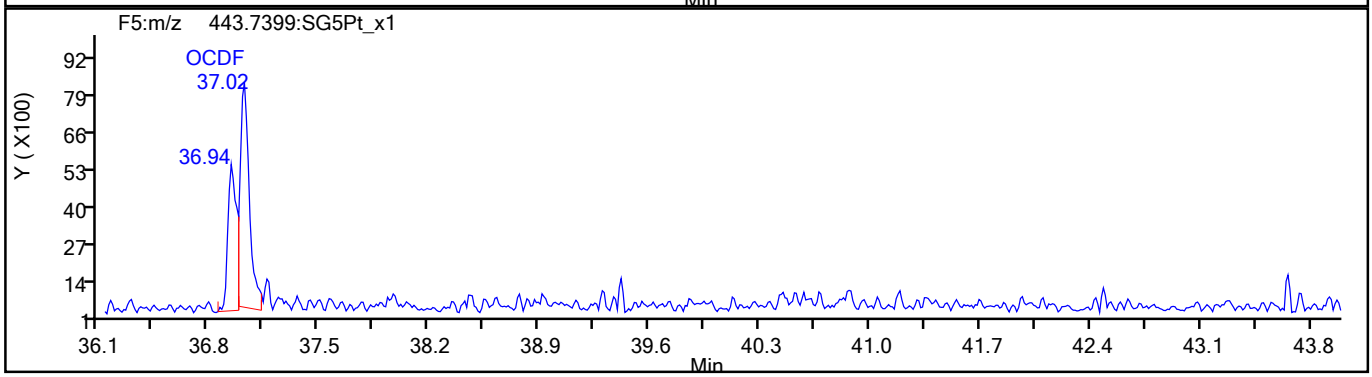

OCDF Standards

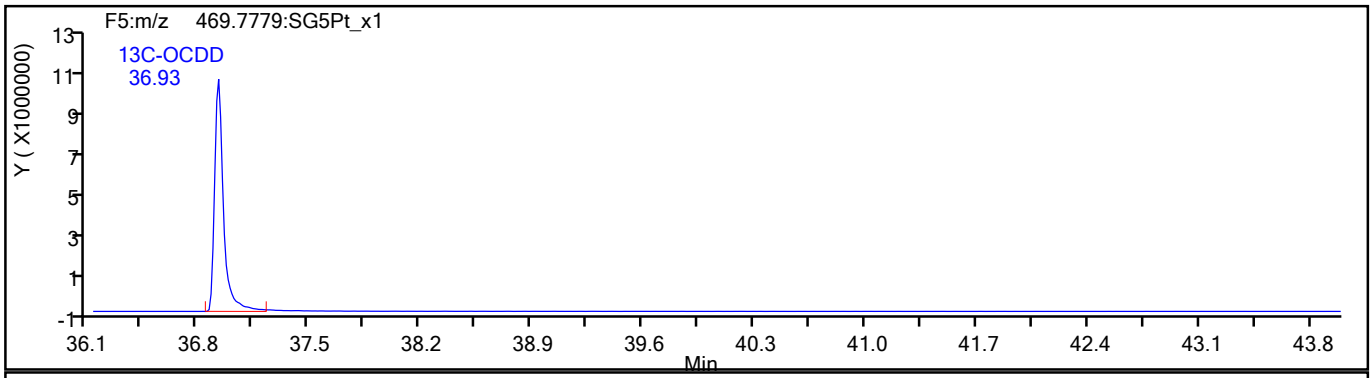

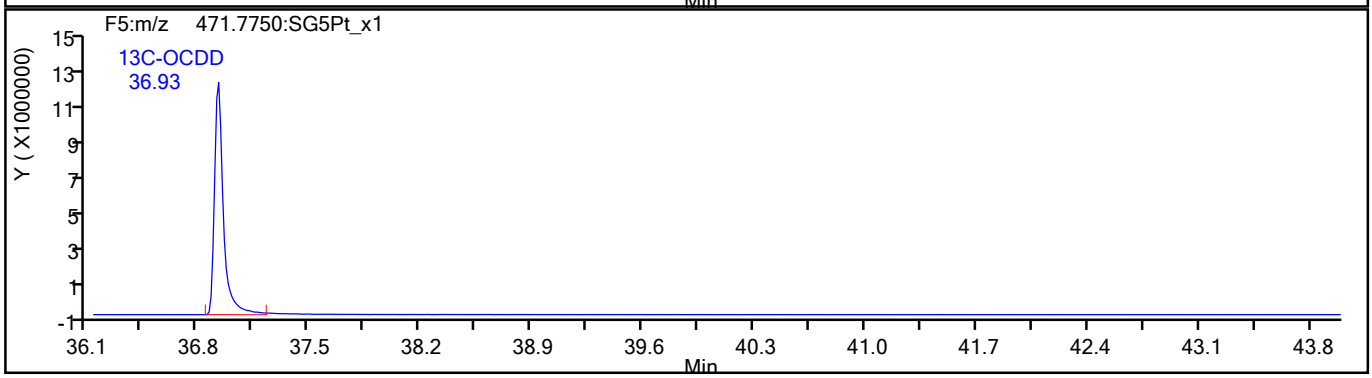

778393

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
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OCDF

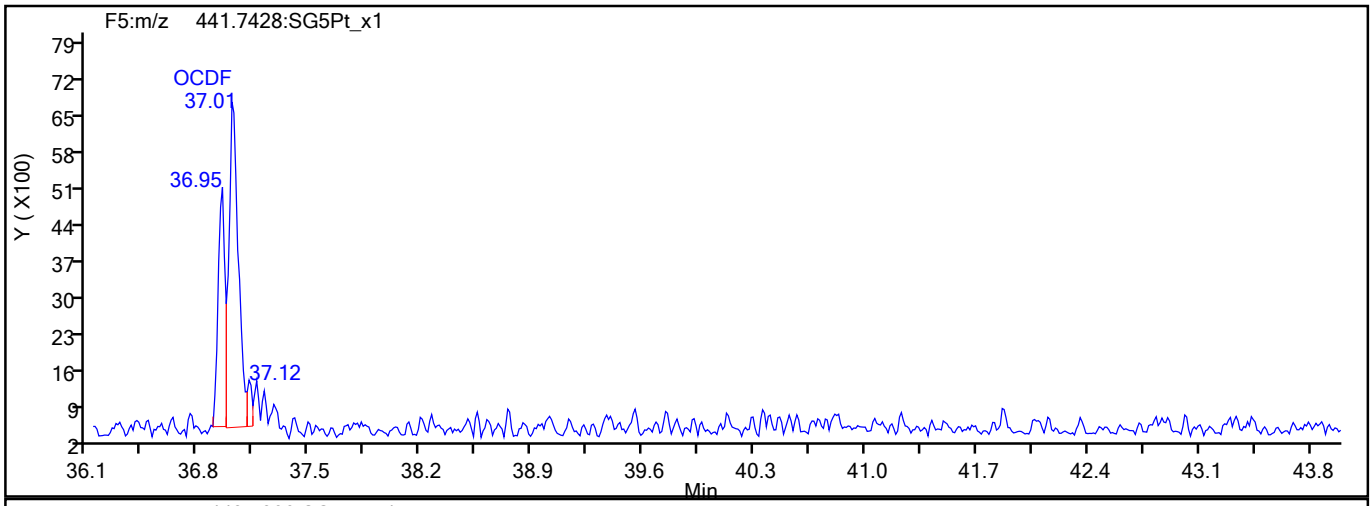

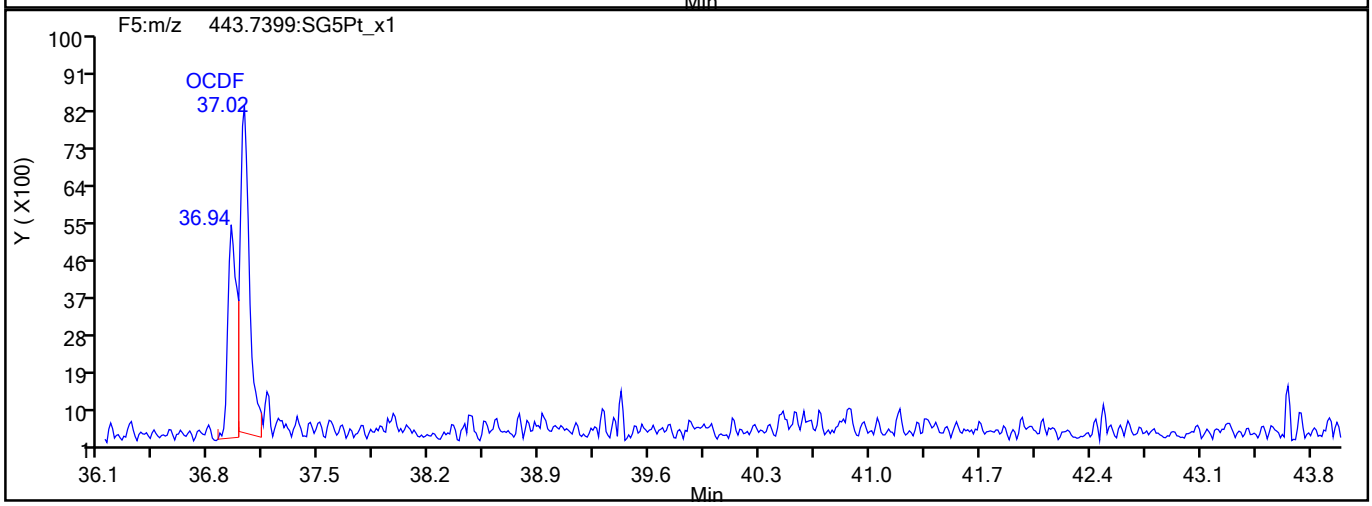

OCDF Interference Mass

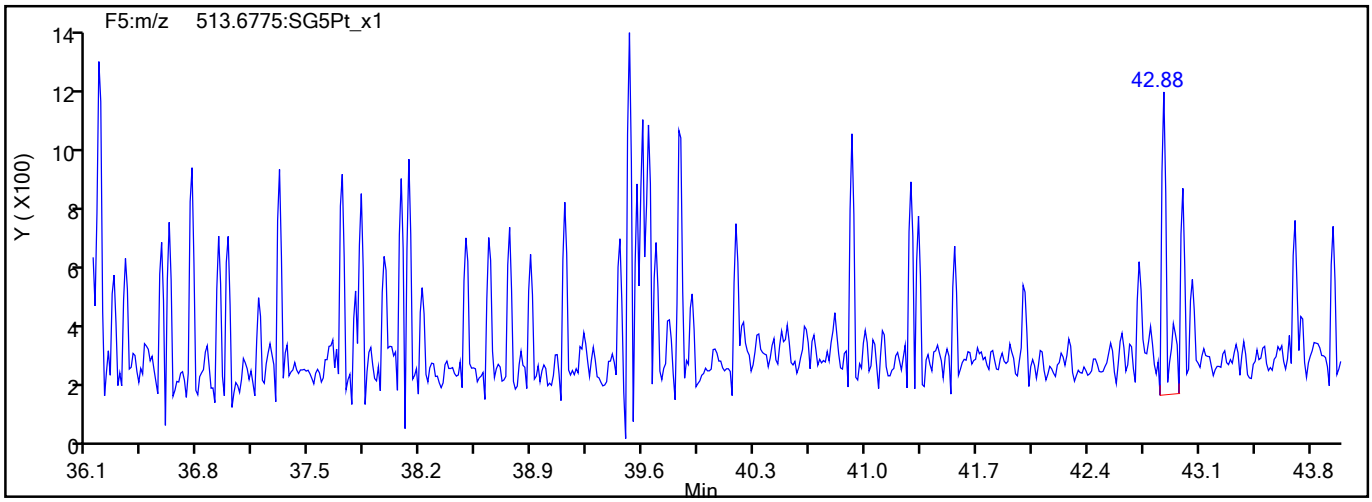

778394

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	515770	Sample Line#:	8
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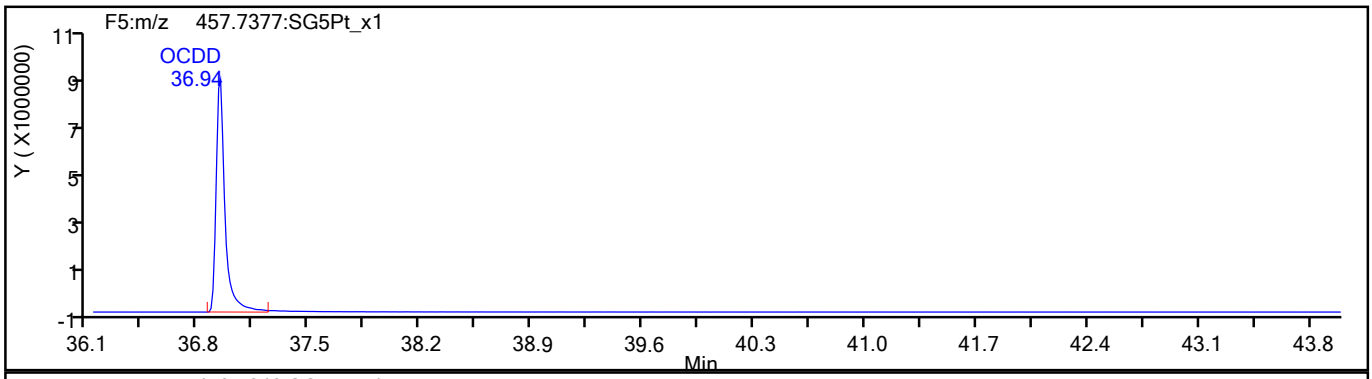

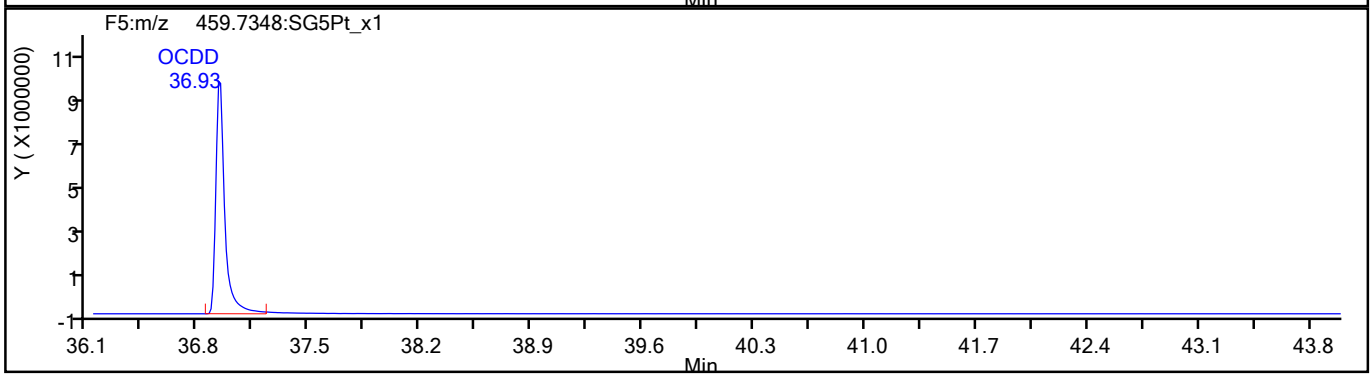

OCDD Standards

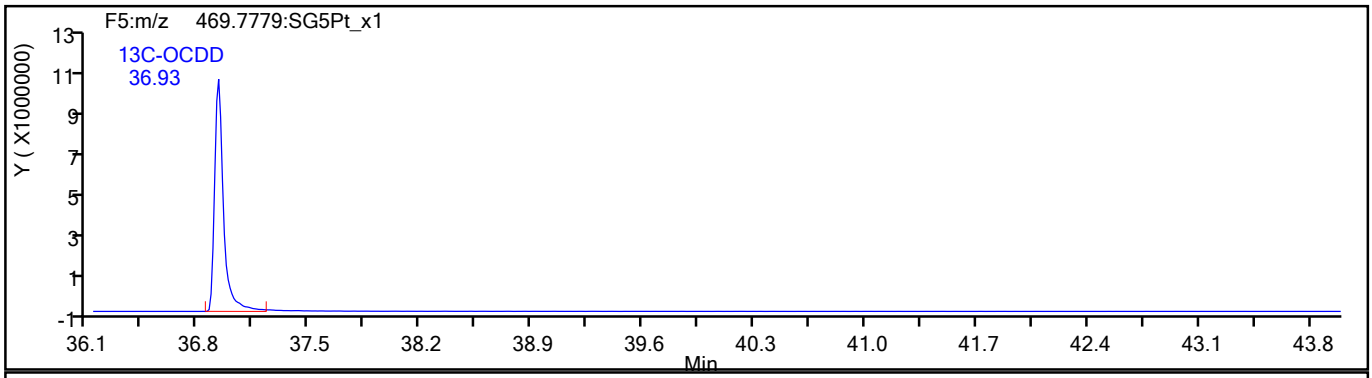

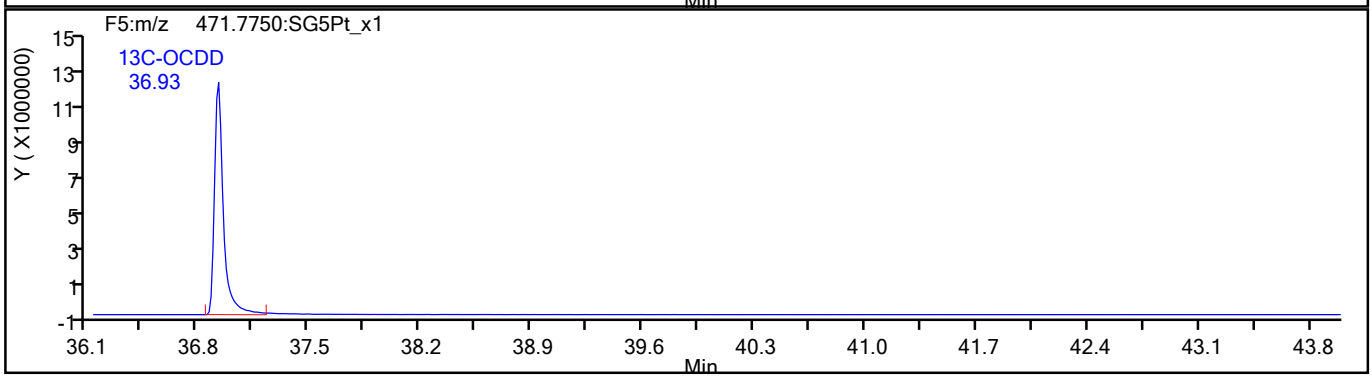

778395

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Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 10:18:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
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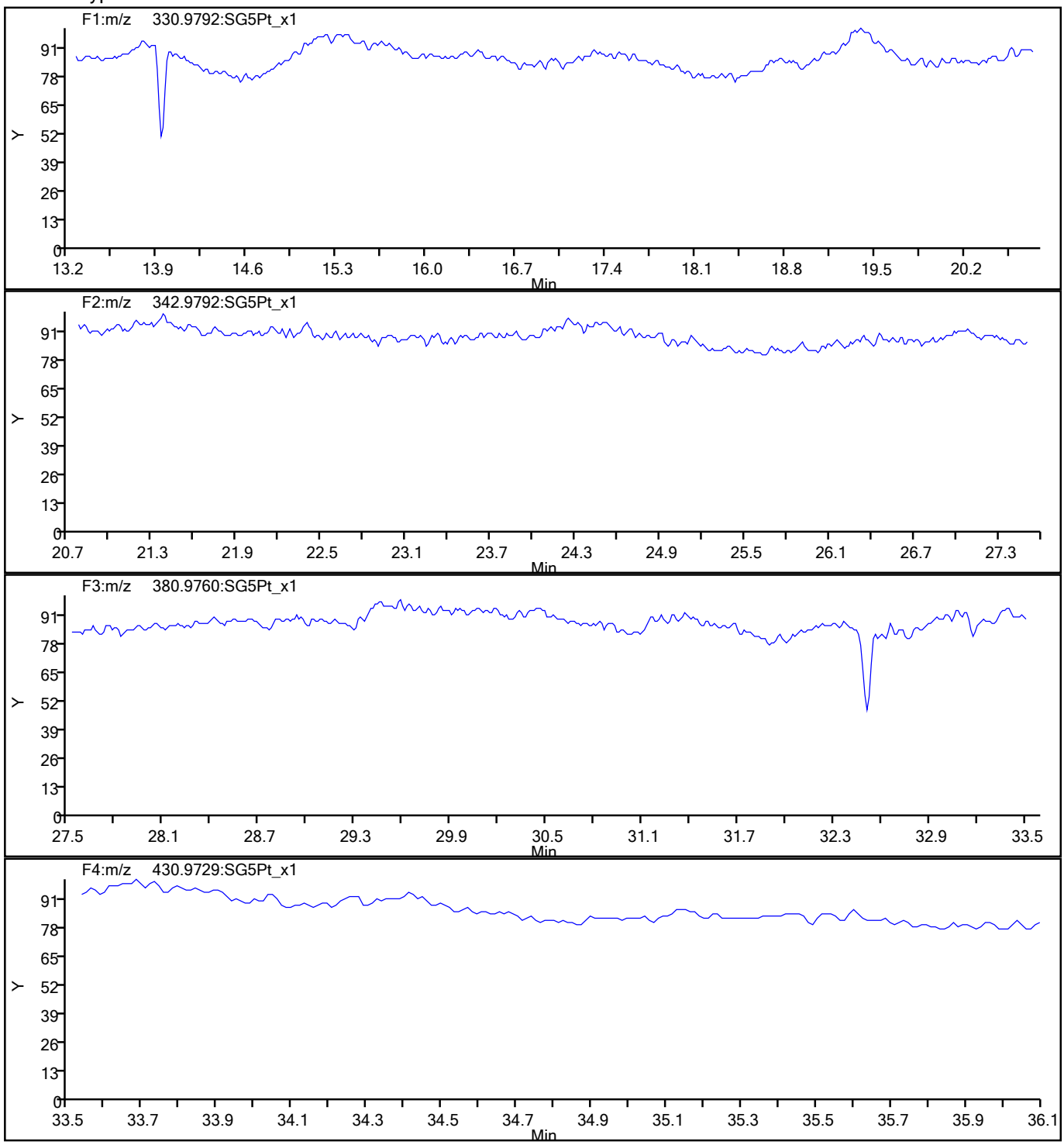

778396

Report Date: 16-Aug-2021 12:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_30.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
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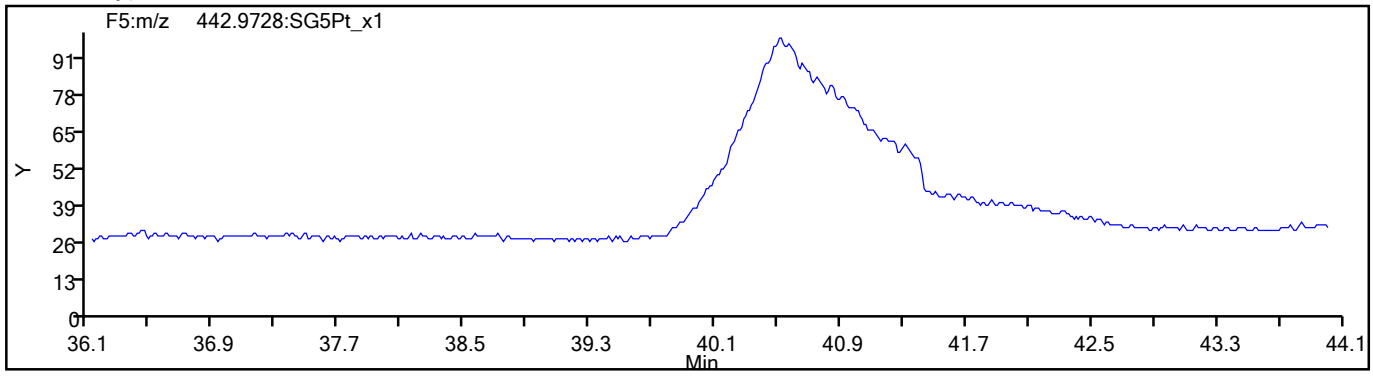

778397

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-2
SDG No.:
Client Sample ID: 11215702-072221-SS-SJSB076 (16-18) RA
Lab Sample ID: 320-76769-35 RA
Matrix: Sediment
Lab File ID: 21AU2111D2_005.d
Analysis Method: 1613B
Date Collected: 07/22/2021 16:30
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 9.90(g)
Date Analyzed: 08/21/2021 16:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518850
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	6.5	B	1.4	0.16

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	61		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	83		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_005.d
Lims ID: 320-76769-A-35-A
Client ID: 11215702-072221-SS-SJSB076 (16-18)
Sample Type: Client
Inject. Date: 21-Aug-2021 16:27:53 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-35-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:01:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.314	42102130	0.80	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.631	34355533	0.75	1.3327	61.2	61.2	0.2563	0.2563	61.23	
2,3,7,8-TCDF	17.658	804785	0.83	0.9978	2.348	2.348	0.0590	0.0590		M
D 13C-2,3,7,8-TCDD	16.081	22619173	0.80	0.8749	61.4	61.4	0.4478	0.4478	61.41	
2,3,7,8-TCDD	16.108	185868	0.77	1.0570	1.013	0.7774	0.0952	0.0952		RQ
$ 37Cl4-2,3,7,8-TCDD	16.094	12131041		0.8648	33.3	33.3	0.0738	0.0738	83.29	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_005.d
Lims ID: 320-76769-A-35-A
Client ID: 11215702-072221-SS-SJSB076 (16-18)
Sample Type: Client
Inject. Date: 21-Aug-2021 16:27:53 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-35-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:01:46

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.314	16.309	0		18684438	4001730	8085	20212	495		
333.9339	16.314	16.309	0		23417692	5197545	6333	15832	821	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.631	17.640	-1	1.081	14689247	2802996	5700	14250	492		
317.9389	17.631	17.640	-1	1.081	19666286	3878190	6869	17172	565	0.75(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.658	17.653	0	1.002	364991	69829	653	1632	107		M
305.8987	17.644	17.653	-1	1.001	439794	82188	920	2300	89	0.83(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.081	16.076	0	0.986	10022658	2207044	8085	20212	273		
333.9339	16.081	16.076	0	0.986	12596515	2837402	6333	15832	448	0.80(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.108	16.103	0	1.002	80858	18407	1030	2575	18		
321.8936	16.094	16.103	-1	1.001	161246	40302	1001	2502	40	0.50(0.65-0.89)	
	Empc Correction				105010	23905	1001	2502	24		
37Cl4-2,3,7,8-TCDD											
327.8840	16.094	16.103	-1	0.987	12131041	2650372	2348	5870	1129		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_005.d				
Injection Date:	21-Aug-2021 16:27:53	Instrument ID:	11D2		
Lims ID:	320-76769-A-35-A	Lab Sample ID:	320-76769-35		
Client ID:	11215702-072221-SS-SJSB076 (16-18)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.66
Area: 376399
Amount: 2.380947
Amount Units: pg/ul

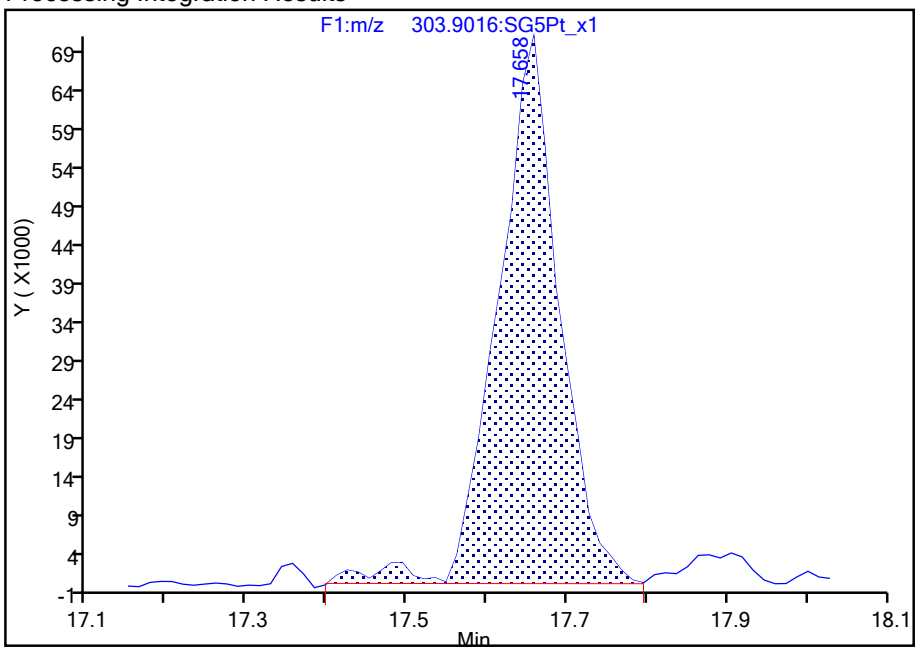

Manual Integration Results

RT: 17.66
Area: 364991
Amount: 2.347668
Amount Units: pg/ul

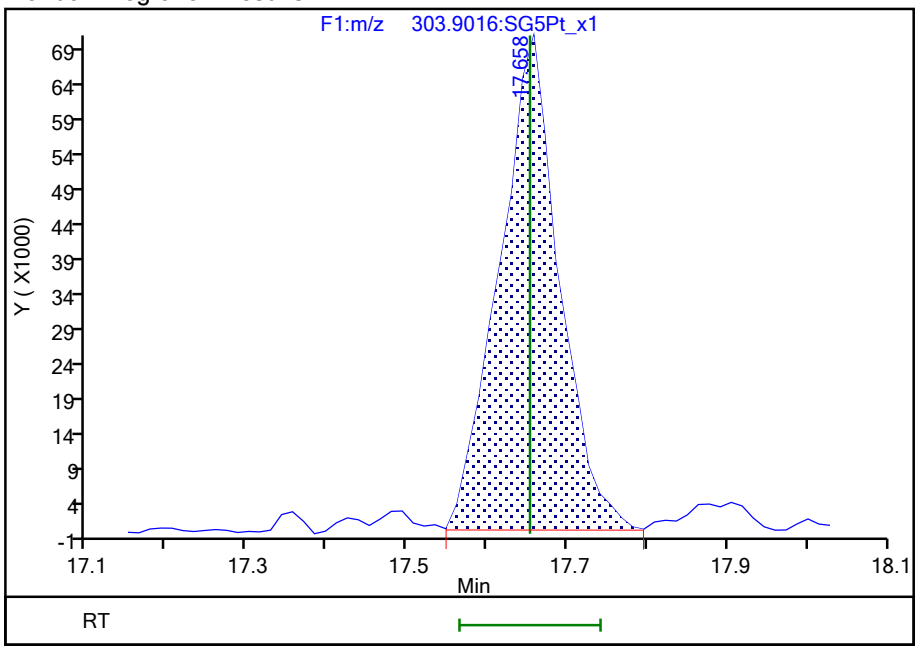

Reviewer: bennettd, 23-Aug-2021 10:01:38

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 23-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_005.d		
Injection Date:	21-Aug-2021 16:27:53	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	518850	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

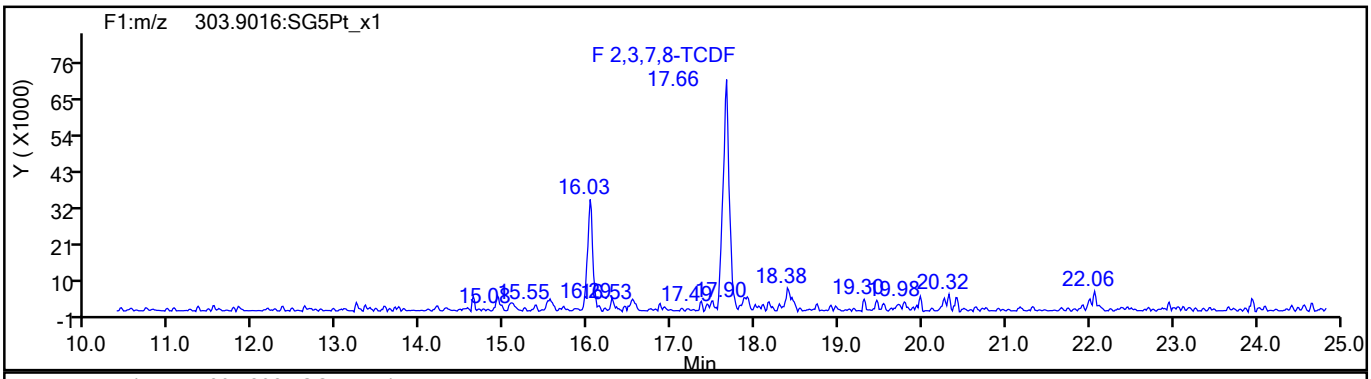

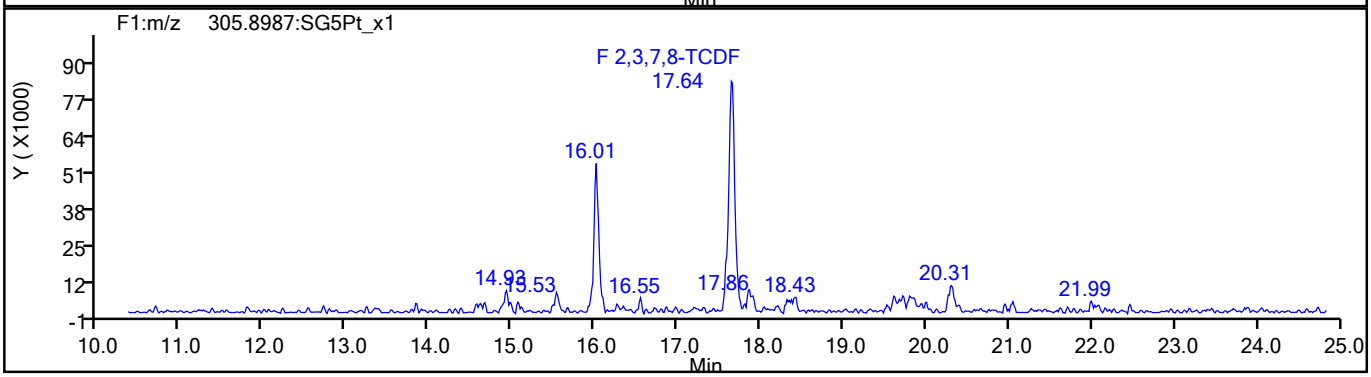

TCDF Standards

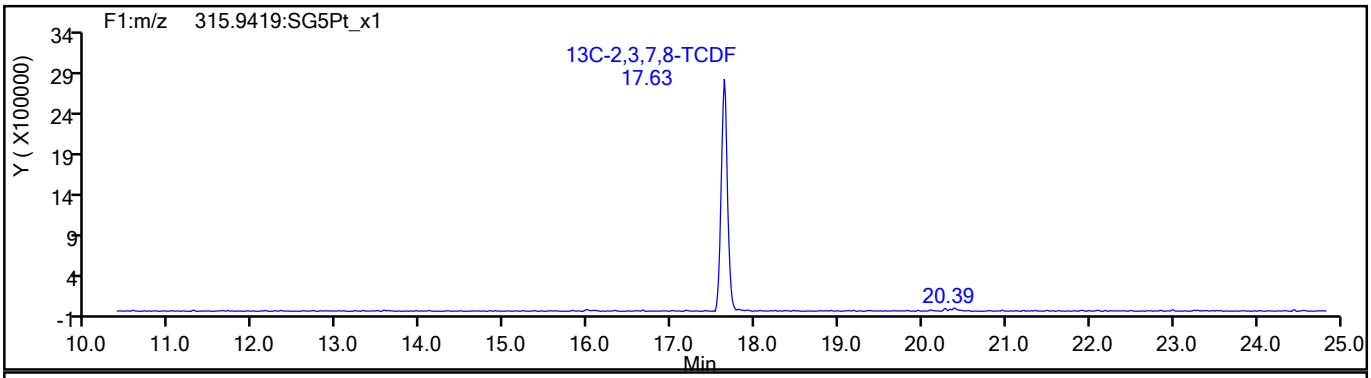

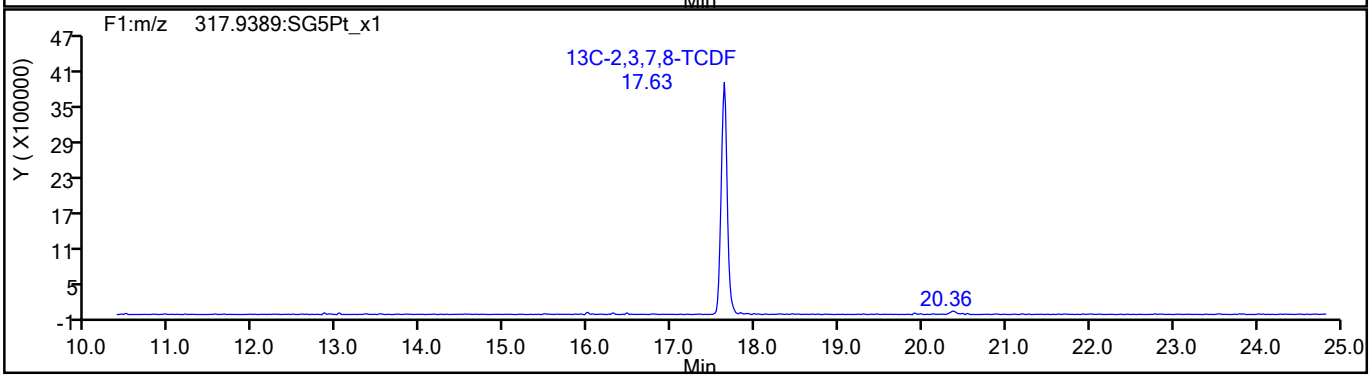

778402

Report Date: 23-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_005.d		
Injection Date:	21-Aug-2021 16:27:53	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	518850	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

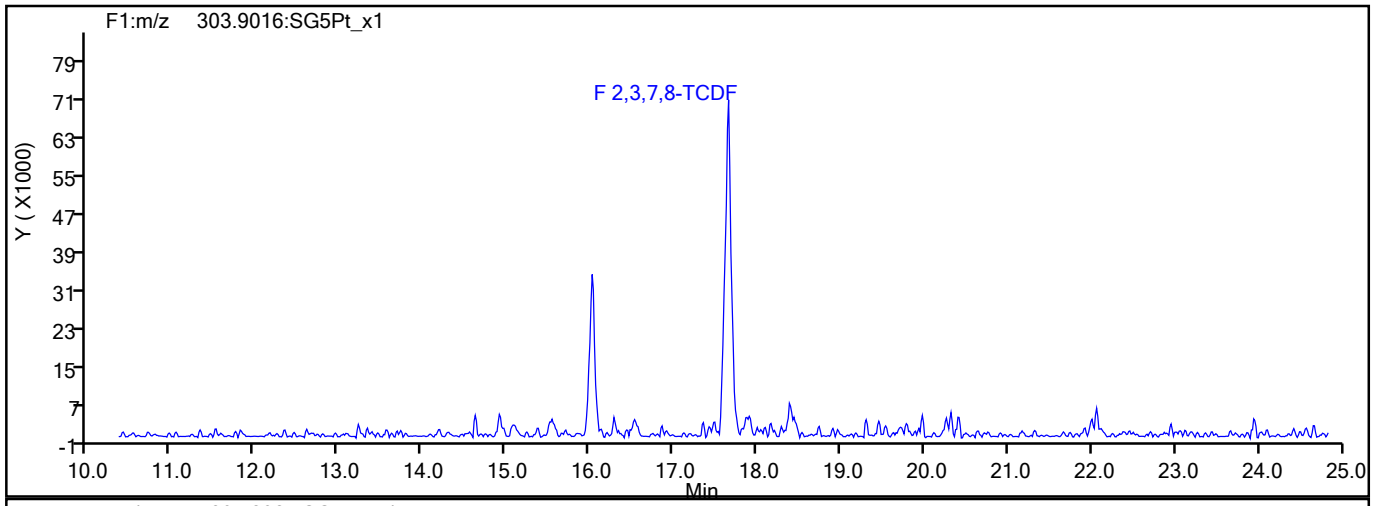

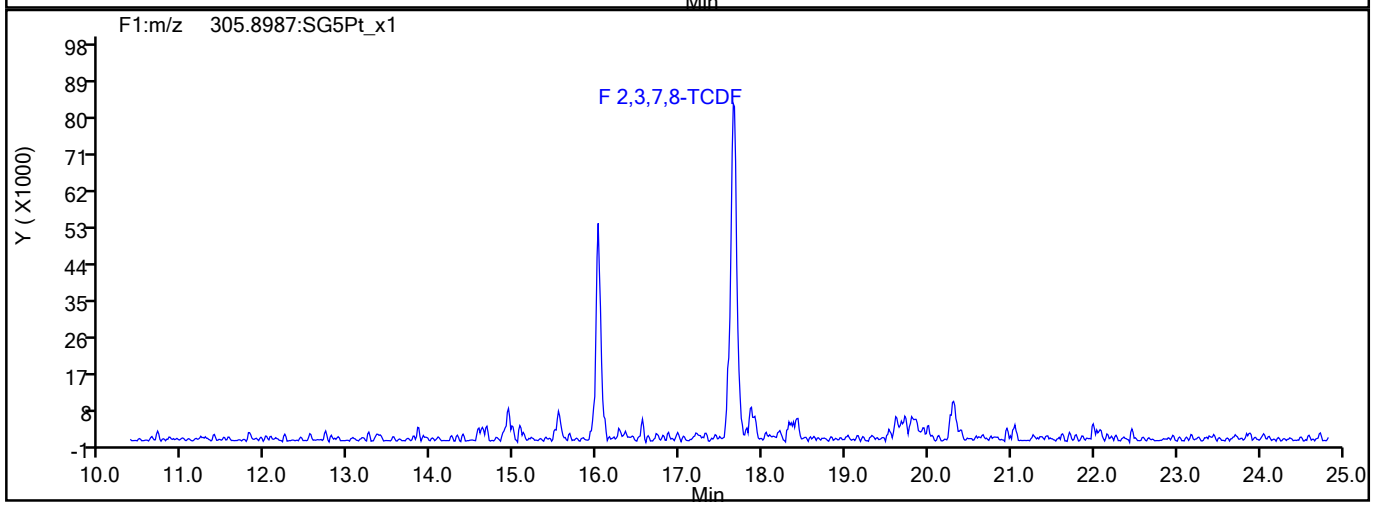

TCDF Interference Mass

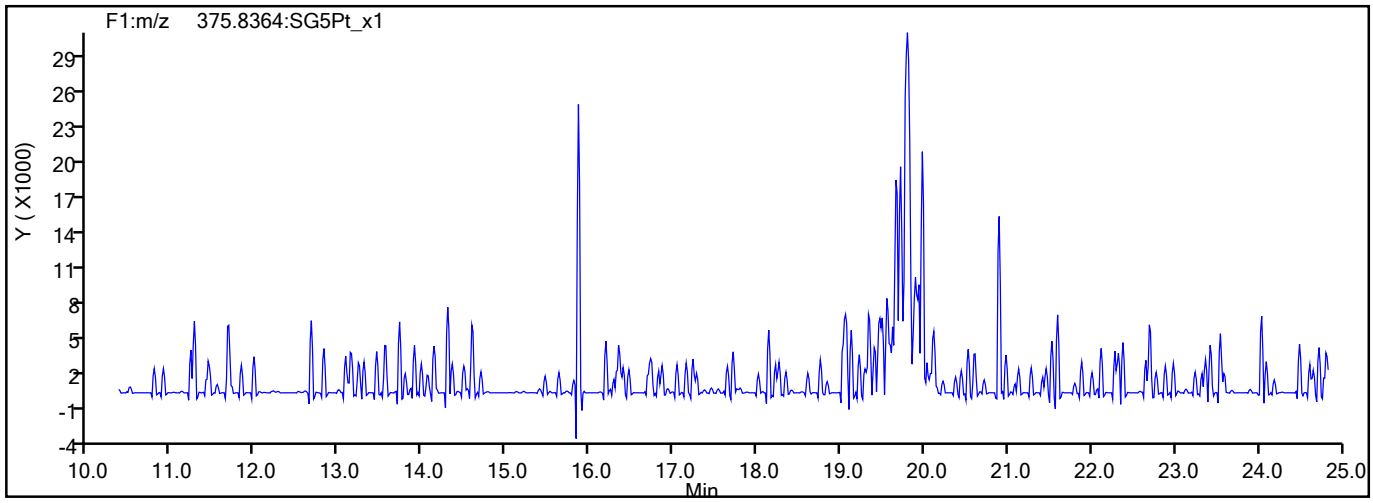

778403

Report Date: 23-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_005.d		
Injection Date:	21-Aug-2021 16:27:53	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	518850	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

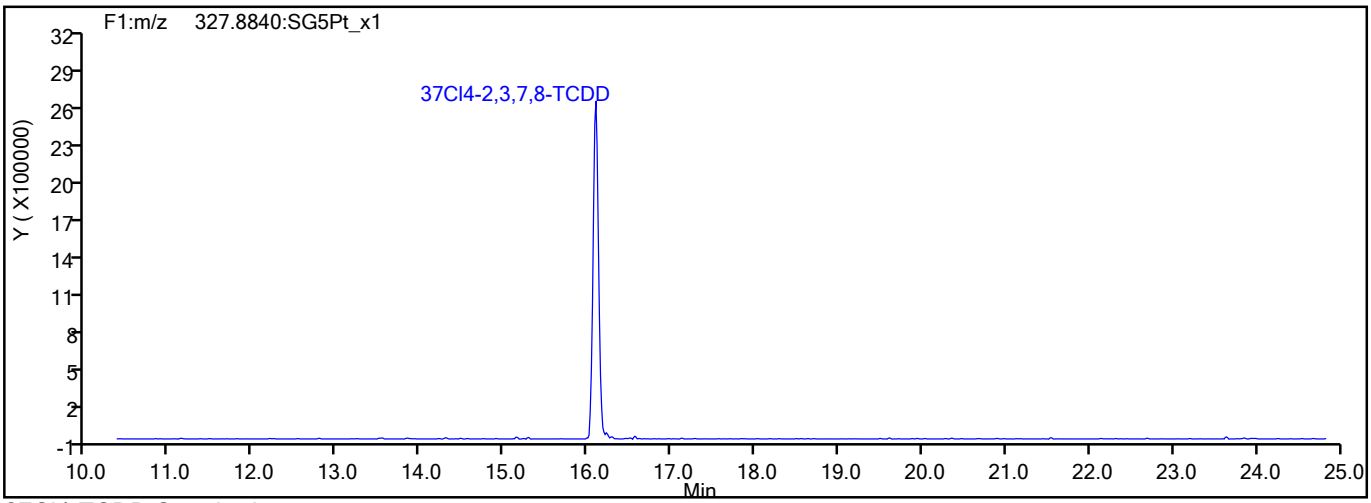

37Cl4-TCDD Standards

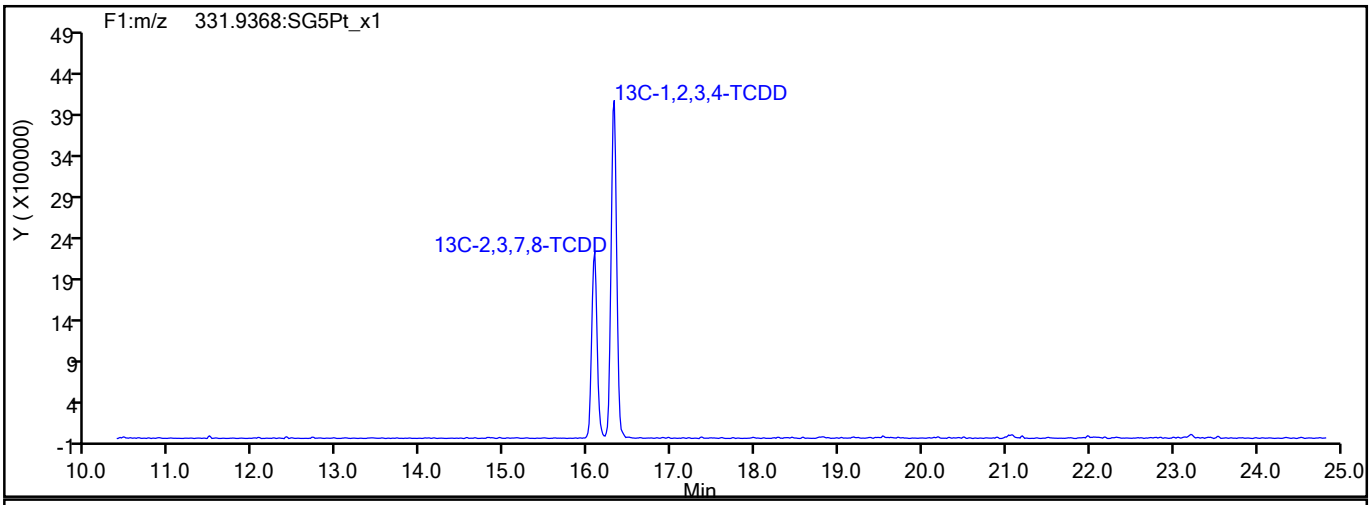

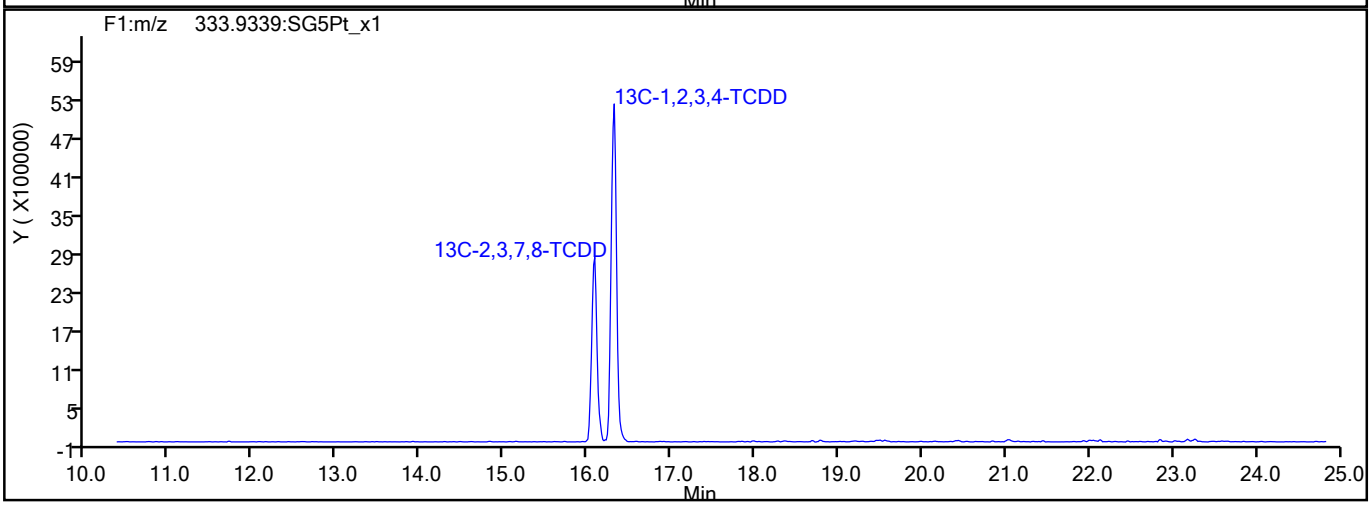

778404

Report Date: 23-Aug-2021 10:28:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_005.d		
Injection Date:	21-Aug-2021 16:27:53	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (16-18)		
Worklist#:	518850	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

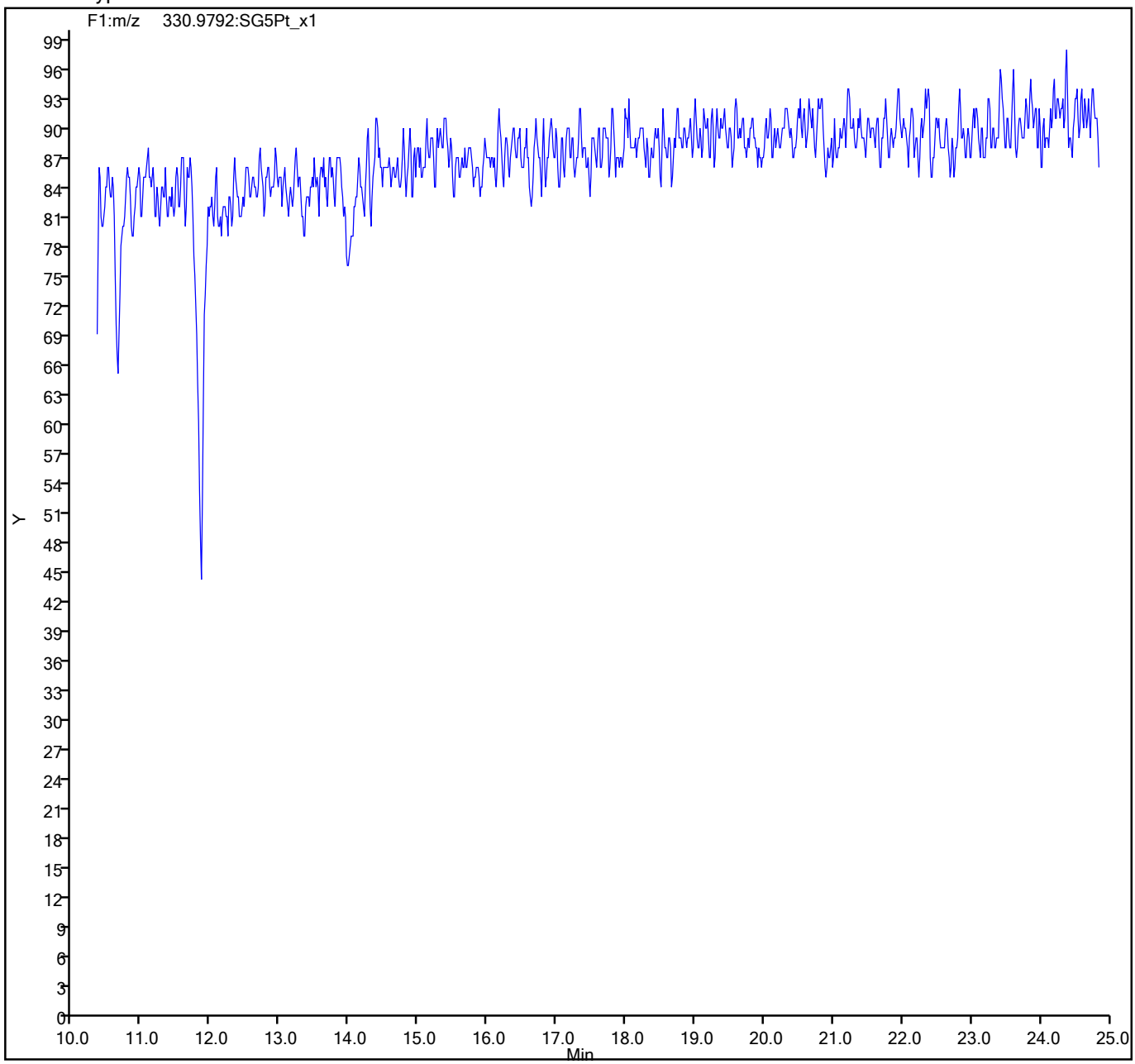

778405

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.0287	0.8698	1.0458	1.1094	1.0657	AveID		1.0239				8.9		20.0			
2,3,7,8-TCDD	1.2575	1.0971	1.2651	1.3434	1.3075	AveID		1.2541				7.5		20.0			
1,2,3,7,8-PeCDF	1.0739	0.9128	1.0891	1.1370	1.0928	AveID		1.0611				8.1		20.0			
2,3,4,7,8-PeCDF	1.0408	0.8610	1.0466	1.1082	1.0356	AveID		1.0184				9.1		20.0			
1,2,3,7,8-PeCDD	1.0578	0.9031	1.0680	1.1310	1.0823	AveID		1.0484				8.2		20.0			
1,2,3,4,7,8-HxCDF	1.1222	0.9192	1.1025	1.1936	1.0881	AveID		1.0851				9.3		20.0			
1,2,3,6,7,8-HxCDF	1.1488	0.9637	1.1546	1.1966	1.1664	AveID		1.1260				8.2		20.0			
2,3,4,6,7,8-HxCDF	1.2223	0.9863	1.1858	1.2415	1.2018	AveID		1.1675				8.9		20.0			
1,2,3,4,7,8-HxCDD	1.0979	0.8906	1.1304	1.1671	1.0341	AveID		1.0640				10.2		20.0			
1,2,3,6,7,8-HxCDD	1.0294	0.8529	1.0113	1.0930	1.0138	AveID		1.0001				8.9		20.0			
1,2,3,7,8,9-HxCDD	1.1551	0.9428	1.1999	1.2421	1.1227	AveID		1.1325				10.2		20.0			
1,2,3,7,8,9-HxCDF	1.1733	1.0136	1.1898	1.2479	1.2072	AveID		1.1664				7.7		20.0			
1,2,3,4,6,7,8-HpCDF	1.4474	1.2413	1.4986	1.5485	1.4706	AveID		1.4413				8.2		20.0			
1,2,3,4,6,7,8-HpCDD	1.1119	0.9539	1.1176	1.1675	1.1205	AveID		1.0943				7.5		20.0			
1,2,3,4,7,8,9-HpCDF	1.3136	1.1269	1.3622	1.4520	1.3321	AveID		1.3174				9.0		20.0			
OCDD	1.1009	0.9635	1.1652	1.1829	1.1226	AveID		1.1070				7.8		20.0			
OCDF	1.3863	1.1912	1.5145	1.5858	1.5129	AveID		1.4382				10.8		20.0			
13C-2,3,7,8-TCDF	1.6500	1.5631	1.6241	1.6170	1.6703	Ave		1.6249				2.5		35.0			
13C-2,3,7,8-TCDD	0.9128	0.8588	0.8965	0.8940	0.9345	Ave		0.8993				3.1		35.0			
13C-1,2,3,7,8-PeCDF	1.1977	1.1539	1.2193	1.2121	1.2674	Ave		1.2101				3.4		35.0			
13C-2,3,4,7,8-PeCDF	1.2269	1.1924	1.2487	1.2129	1.3165	Ave		1.2395				3.8		35.0			
13C-1,2,3,7,8-PeCDD	0.7558	0.7433	0.7524	0.7498	0.8049	Ave		0.7612				3.3		35.0			
13C-1,2,3,4,7,8-HxCDF	1.0875	1.1006	1.0706	1.0371	1.1225	Ave		1.0837				3.0		35.0			
13C-1,2,3,6,7,8-HxCDF	1.1466	1.1401	1.1115	1.1251	1.1163	Ave		1.1279				1.3		35.0			
13C-2,3,4,6,7,8-HxCDF	1.0781	1.0785	1.0541	1.0562	1.0518	Ave		1.0637				1.3		35.0			
13C-1,2,3,4,7,8-HxCDD	0.7413	0.7515	0.6926	0.7049	0.7769	Ave		0.7334				4.7		35.0			
13C-1,2,3,6,7,8-HxCDD	0.8884	0.8870	0.8694	0.8685	0.8876	Ave		0.8802				1.2		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9787	0.9851	0.9497	0.9522	0.9722	Ave		0.9676				1.6		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.8030	0.7818	0.7501	0.7625	0.7677	Ave		0.7730				2.6		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6554	0.6478	0.6343	0.6458	0.6528	Ave		0.6472				1.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6985	0.7093	0.6800	0.6816	0.7346	Ave		0.7008				3.2		35.0			
13C-OCDD	0.4462	0.4357	0.4273	0.4575	0.4691	Ave		0.4472				3.7		35.0			
37Cl4-2,3,7,8-TCDD	0.9705	0.9794	1.1718	1.1876	1.2264	Ave		1.1071				11.1					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	557485	1709191	10638776	44524782	204575642	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	376984	1184284	7104238	29808948	140421448	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	2112140	6620354	41588176	171023920	795873691	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	2096967	6452410	40928436	166805723	783403837	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	1312779	4219570	25165054	105236005	500555284	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	1949462	6041767	37525146	155057762	737075796	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	2104086	6561860	40802767	168618976	785709889	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	2104896	6352404	39741365	164241378	762810877	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	1300030	3996910	24891170	103044220	484857042	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	1460747	4517909	27953752	118900298	543061818	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	1503407	4612548	29794954	122394998	563888565	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	1834100	5963032	35924190	148834491	708280047	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	1856599	5795616	35740964	147892240	681312007	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	1164074	3690749	22538791	94435922	441437476	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	1465634	4773949	29450636	123968724	590555312	2.50	10.0	50.0	200	1000
OCDD		AveID	1569338	5013385	31656667	135570174	635652839	5.00	20.0	100	400	2000
OCDF		AveID	1976175	6198469	41147202	181747068	856685987	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	108384725	98246522	101724636	100332269	95980421	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	59957723	53975587	56155483	55471422	53698206	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	78674290	72525655	76368219	75205597	72829681	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	80591659	74944110	78214582	75259591	75649463	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	49643581	46721712	47124414	46524396	46251010	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	69484482	65726932	68075509	64951889	67741189	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	73262388	68089005	70677463	70459920	67363664	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	68885161	64406928	67028498	66145684	63471184	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	47363504	44877133	44039927	44144841	46886171	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	56759108	52974056	55284532	54392394	53564396	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	62528954	58828058	60389284	59636084	58669892	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	51308225	46691158	47697671	47752972	46328151	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	41876556	38689128	40333717	40442950	39395832	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	44628352	42362179	43238622	42687625	44333848	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	57018462	52034518	54338243	57303880	56623863	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	318727	1231219	7339670	29474361	140953034	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\26JL2110D5.SPL
Last Modified: Monday, July 26, 2021 16:58:03 Pacific Daylight Time
Printed: Tuesday, July 27, 2021 07:40:45 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	26JL2110D5_1	WDM HRDXNCP_00042	WDM 072621	Tray01:1	Dioxin		SMA
2	26JL2110D5_2	SB Solvent Blank C-14	SB 072621	Tray01:3			SMA
3	26JL2110D5_3	CS-2 HRDXNL2_00032	IC 072621	Tray01:4	Dioxin		SMA
4	26JL2110D5_4	CS-3 HRDXNL3_00029	IC 072621A	Tray01:5	Dioxin		SMA
5	26JL2110D5_5	CS-4 HRDXNL4_00099	IC 072621B	Tray01:2	Dioxin		SMA
6	26JL2110D5_6	CS-5 HRDXNL5_00032	IC 072621C	Tray01:6	Dioxin		SMA
7	26JL2110D5_7	CS-6 HRDXNL6_00028	IC 072621D	Tray01:7	Dioxin		SMA
8	26JL2110D5_8	SB Solvent Blank C-14	SB 072621A	Tray01:3			SMA
9	26JL2110D5_9	ICV HRDXNIC_00047	ICV 072621	Tray01:8	Dioxin		SMA
10	26JL2110D5_10	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS
11	26JL2110D5_11	WDM HRDXNCP_00042	WDM 031621C	Tray01:1	Dioxin		KSS
12	26JL2110D5_12	SB Solvent Blank C-14	SB 072621B	Tray01:3			KSS
13	26JL2110D5_13	mb 320-508015/1-a	mb 320-508015/1-a	Tray01:9	1613B/8290/Water	D255	KSS
14	26JL2110D5_14	lcs 320-508015/2-a	lcs 320-508015/2-a	Tray01:10	1613B/8290/Water		KSS
15	26JL2110D5_15	lcsd 320-508015/3-a	lcsd 320-508015/3-a	Tray01:11	1613B/8290/Water		KSS
16	26JL2110D5_16	320-76081-a-3-c	320-76081-a-3-c	Tray01:12	1613B/8290/Water		KSS
17	26JL2110D5_17	SB Solvent Blank C-14	SB 072621C	Tray01:3			KSS
18	26JL2110D5_18	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS

LOGFILE CHECKED
DB 7/27/21

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:18:21 Pacific Daylight Time

M 292.9824 R 12499

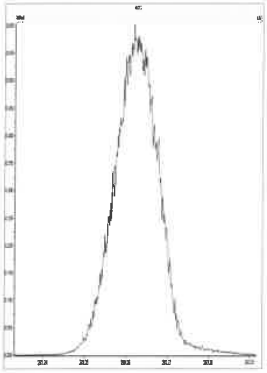

M 304.9824 R 12752

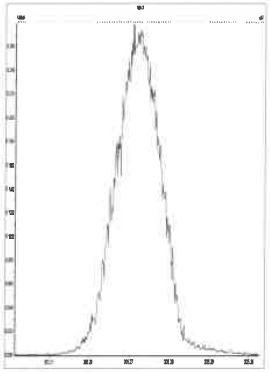

M 318.9792 R 13230

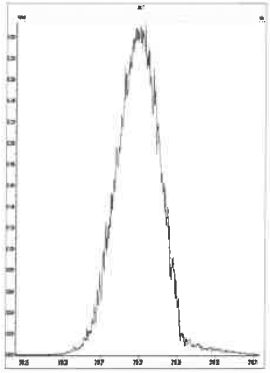

M 330.9792 R 12691

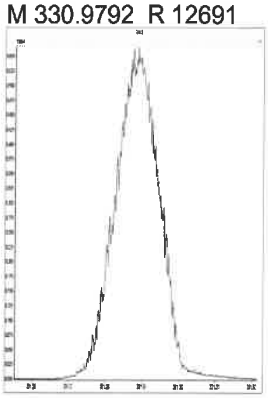

M 342.9792 R 12885

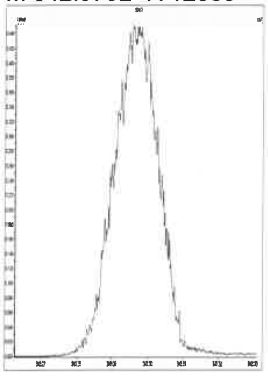

M 354.9792 R 12138

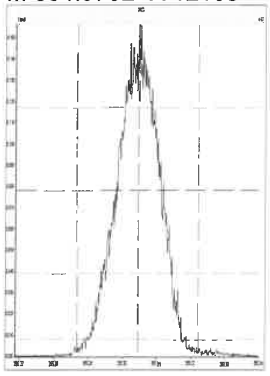

M 366.9792 R 13090

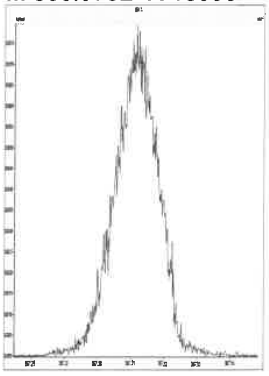

M 380.9760 R 12562

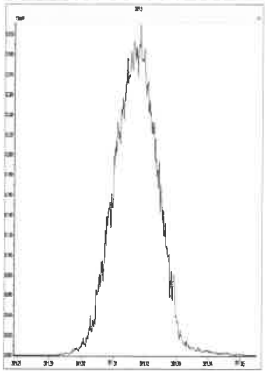

M 392.9760 R 12753

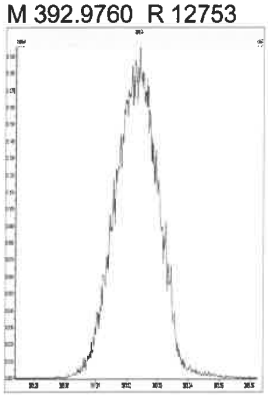

M 404.9760 R 12137

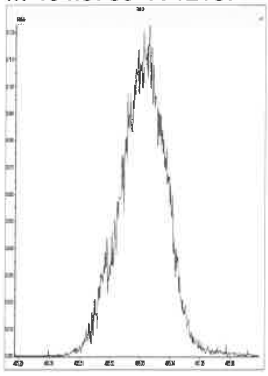

M 416.9760 R 12563

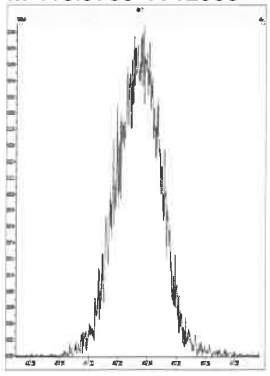

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:04 Pacific Daylight Time

M 318.9792 R 13300

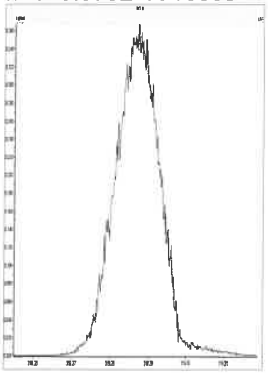

M 330.9792 R 12691

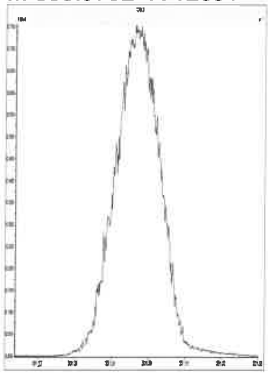

M 342.9792 R 12499

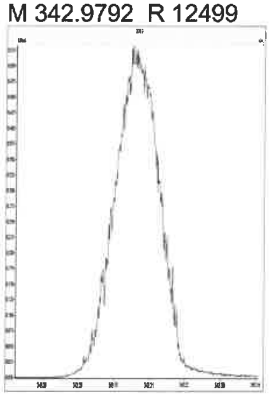

M 354.9792 R 12374

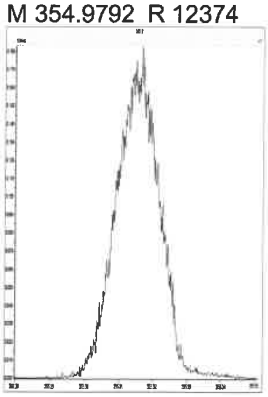

M 366.9792 R 12691

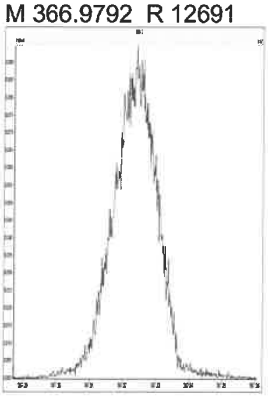

M 380.9760 R 12690

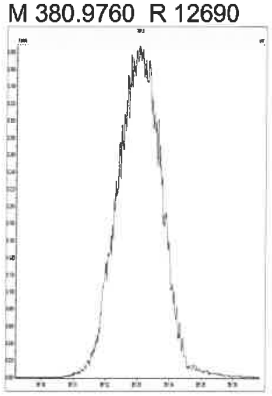

M 392.9760 R 12885

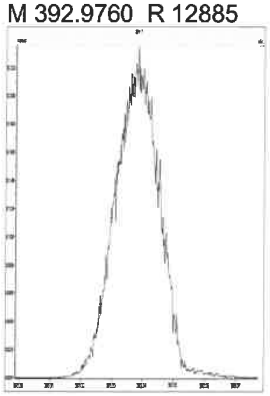

M 404.9760 R 12817

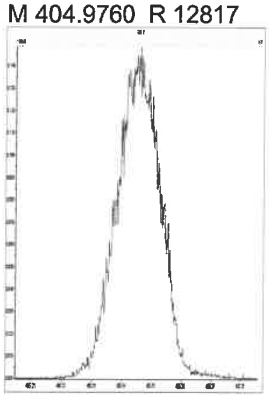

M 416.9760 R 12954

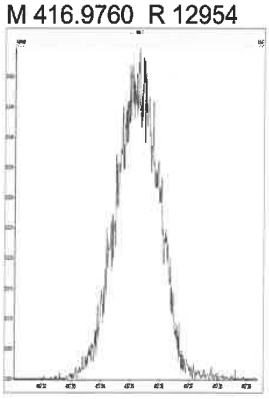

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:43 Pacific Daylight Time

M 366.9792 R 12440

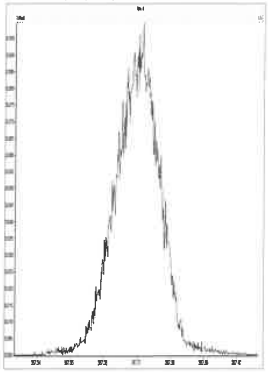

M 380.9760 R 12955

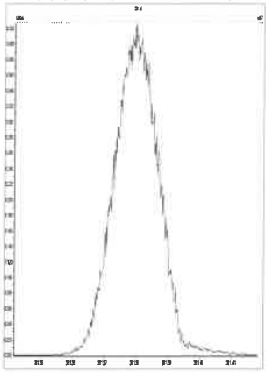

M 392.9760 R 12690

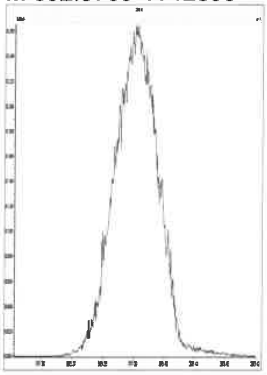

M 404.9760 R 12957

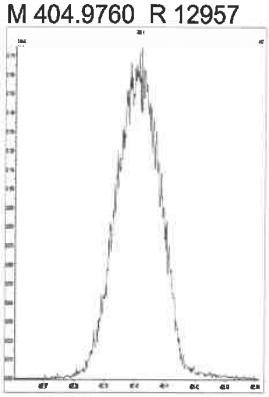

M 416.9760 R 13516

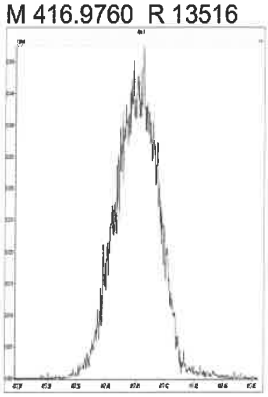

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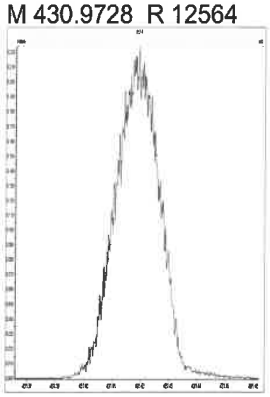

M 442.9728 R 12953

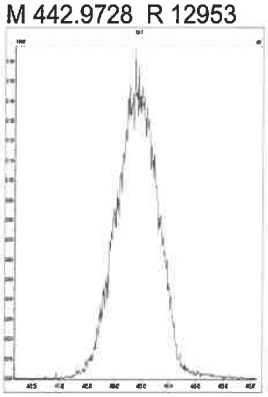

M 454.9728 R 13226

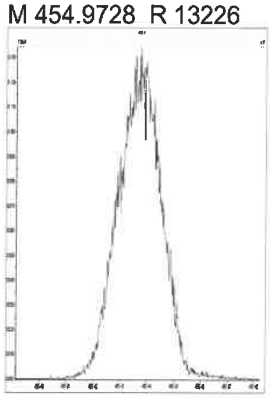

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Printed: Monday, July 26, 2021 09:20:01 Pacific Daylight Time

M 380.9760 R 12885

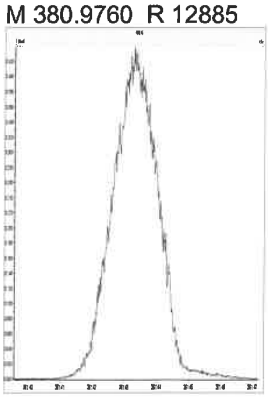

M 392.9760 R 12955

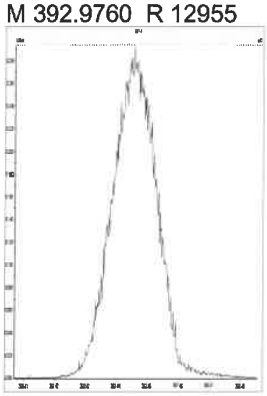

M 404.9760 R 12756

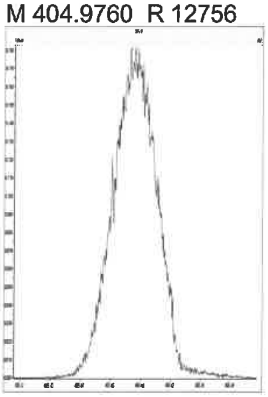

M 416.9760 R 13368

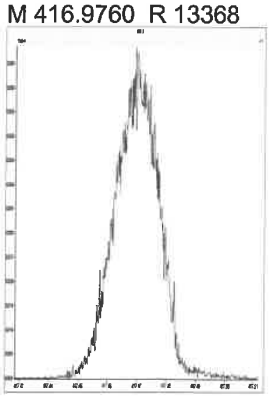

M 430.9728 R 12758

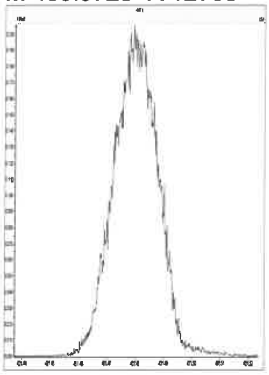

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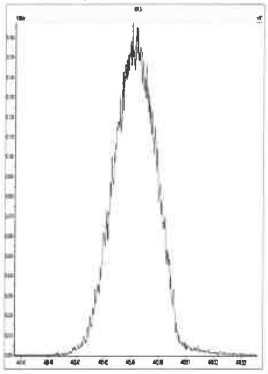

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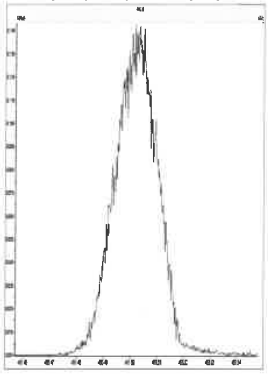

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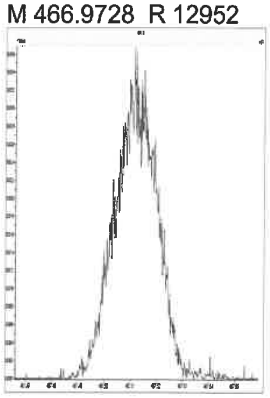

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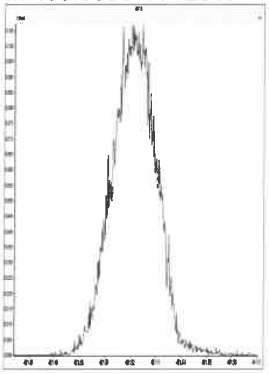

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

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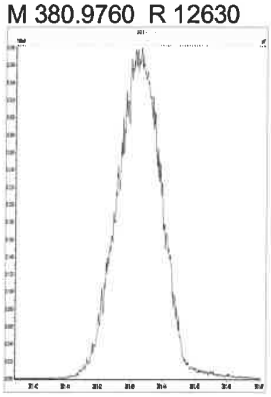

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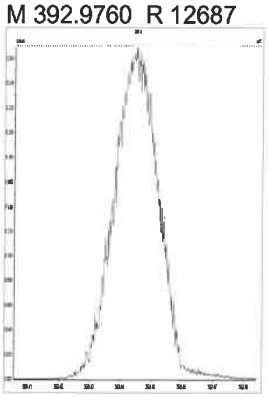

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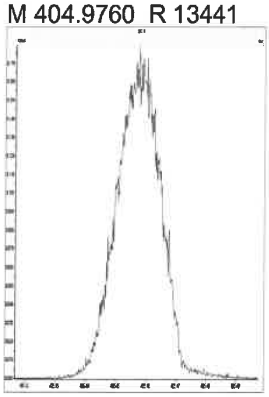

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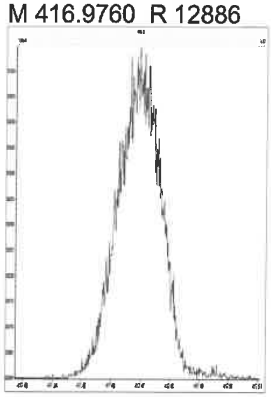

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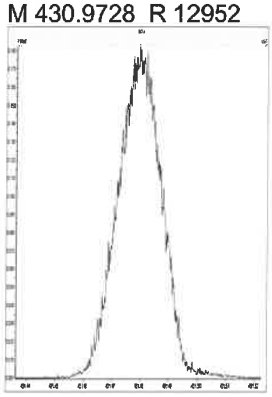

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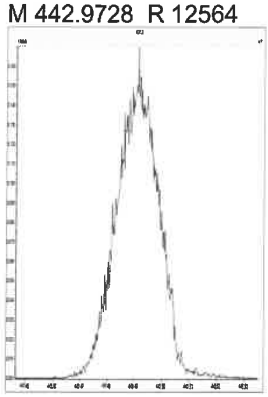

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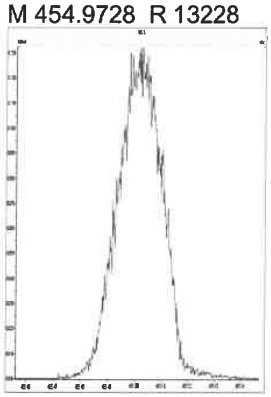

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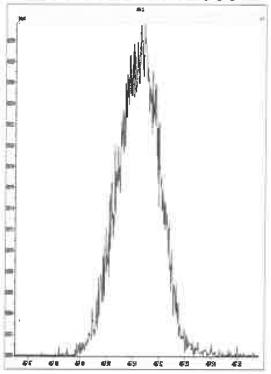

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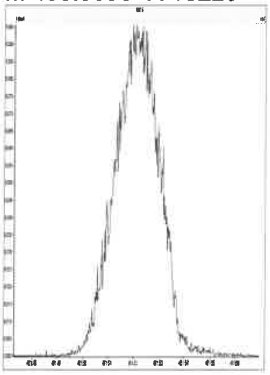

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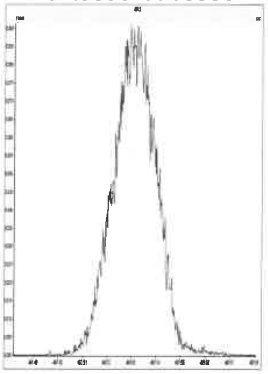

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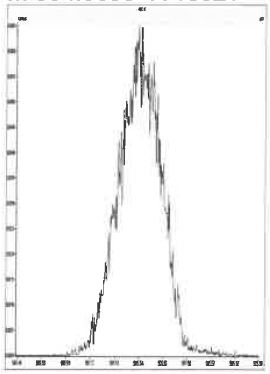

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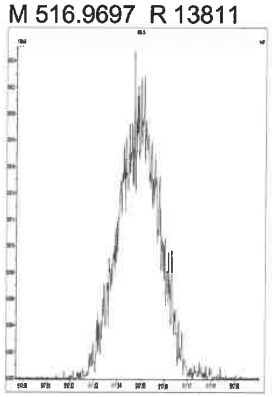

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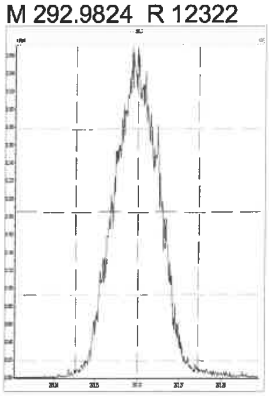

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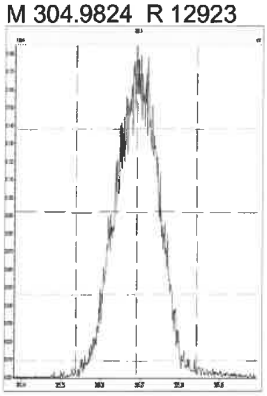

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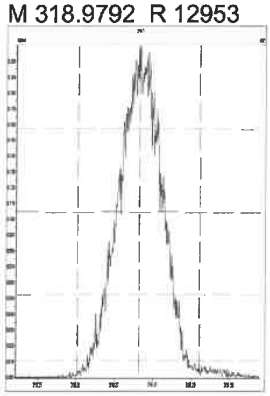

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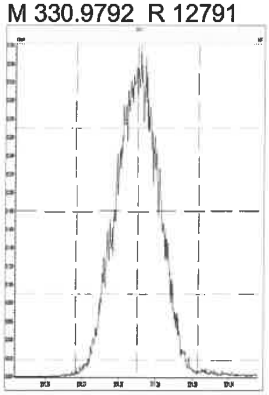

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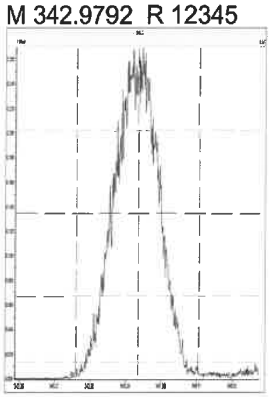

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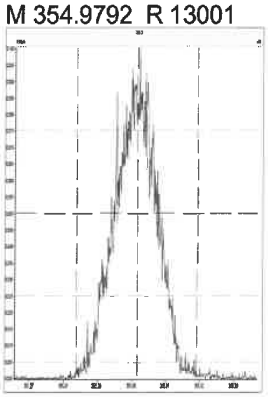

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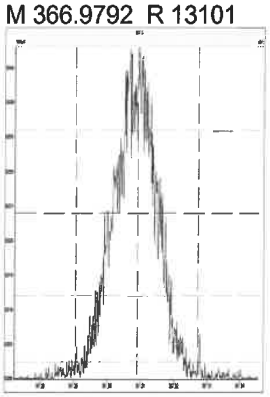

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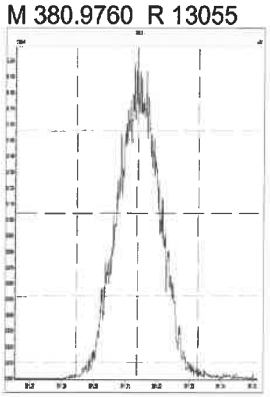

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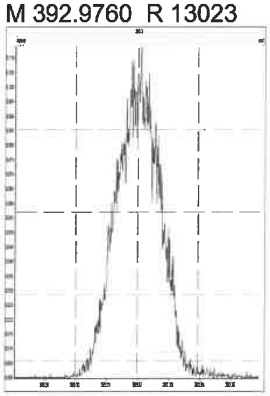

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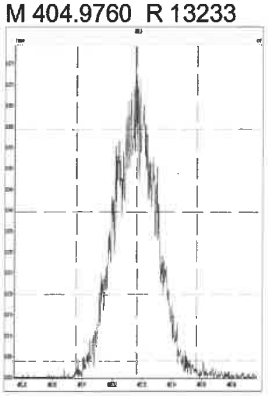

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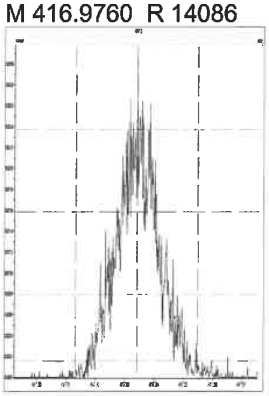

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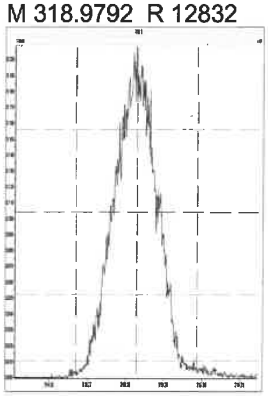

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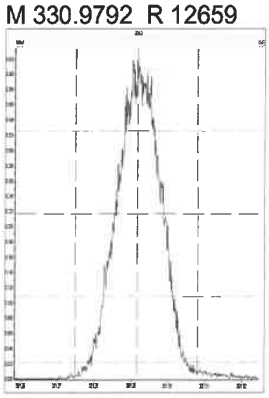

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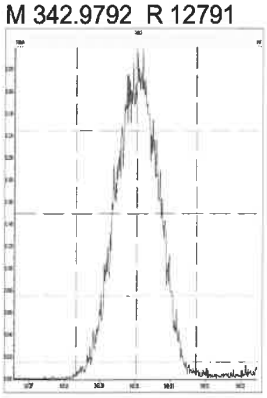

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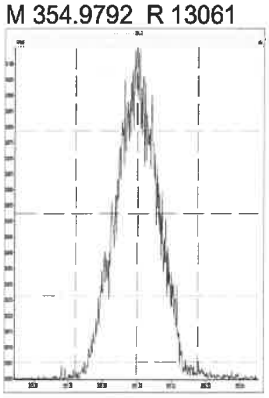

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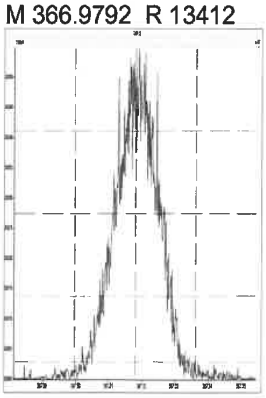

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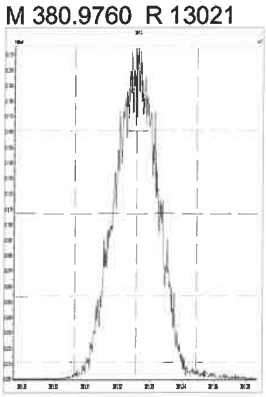

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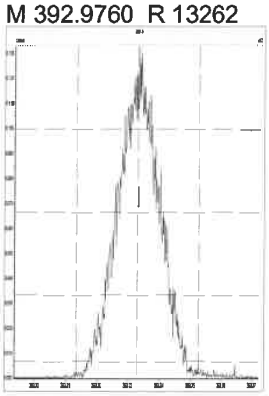

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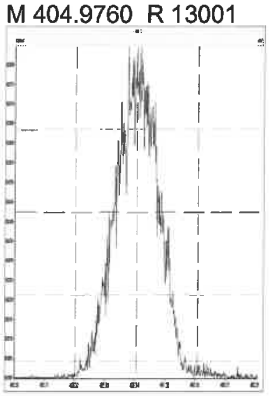

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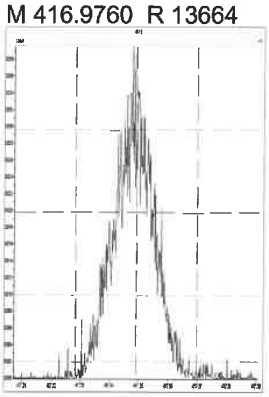

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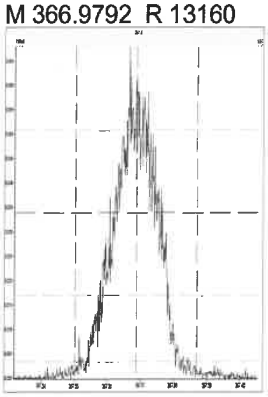

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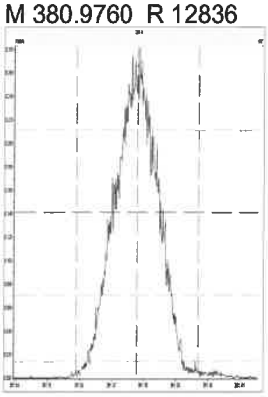

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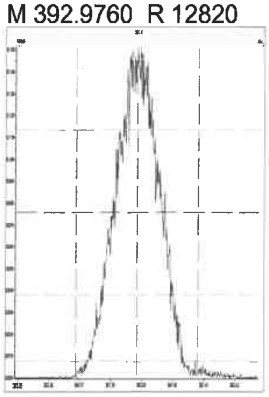

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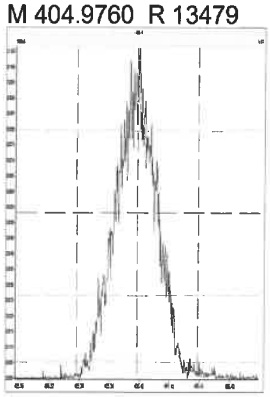

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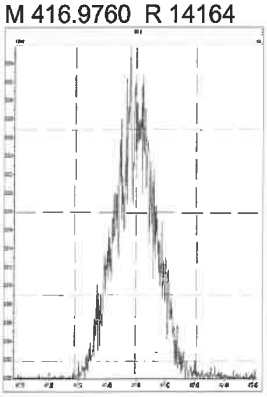

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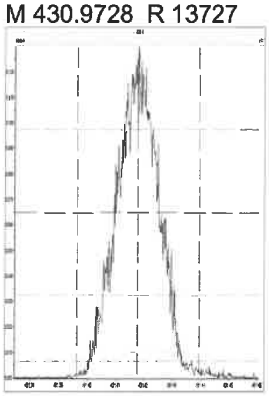

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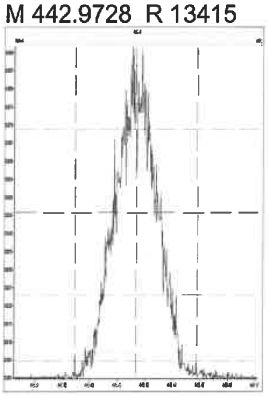

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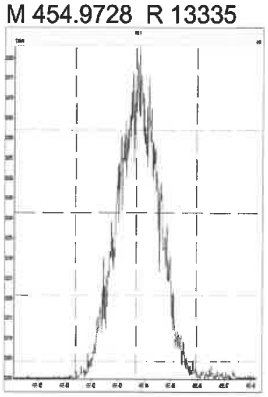

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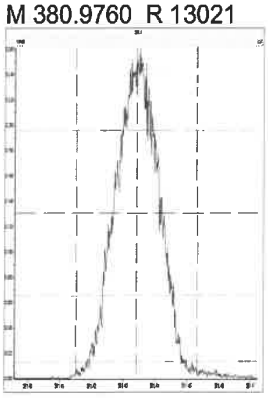

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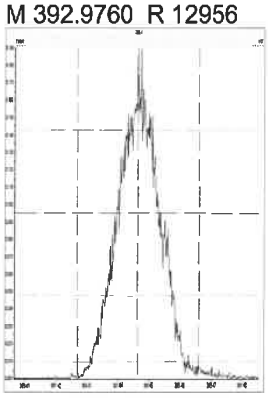

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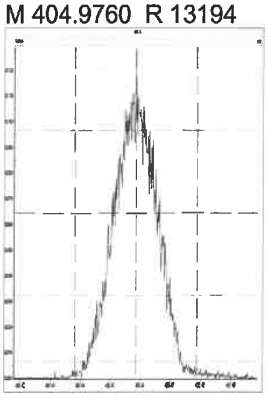

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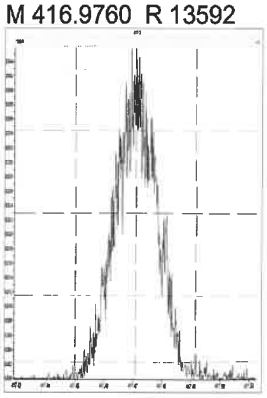

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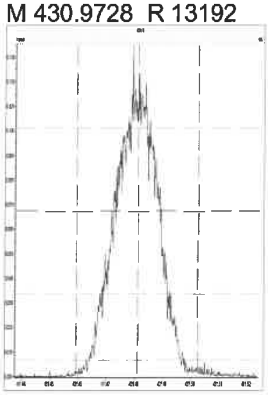

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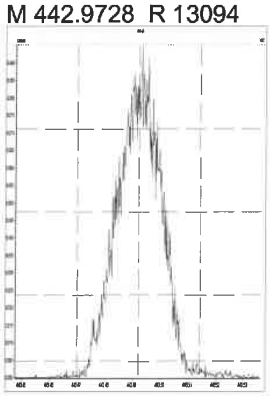

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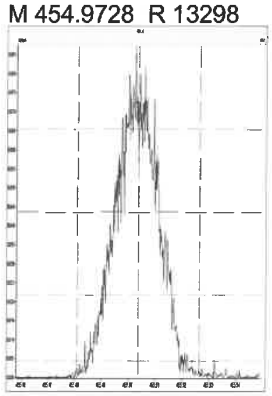

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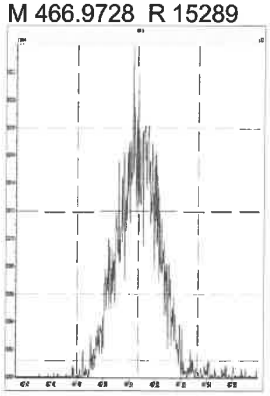

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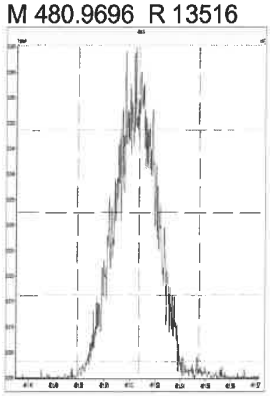

M 380.9760 R 12762

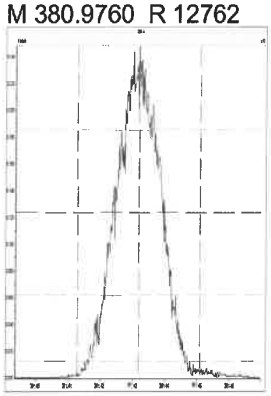

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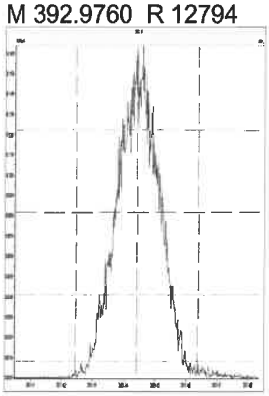

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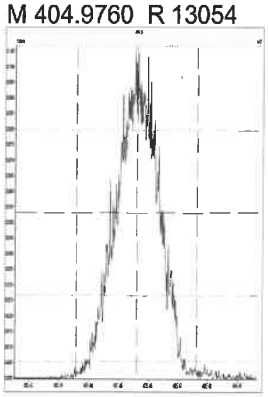

M 416.9760 R 13966

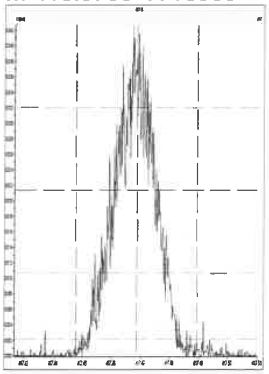

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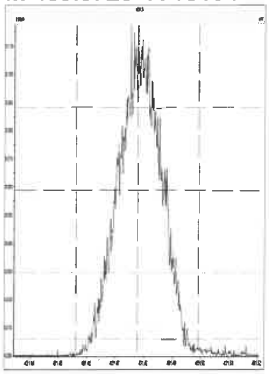

M 442.9728 R 13375

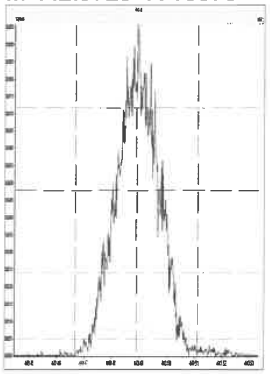

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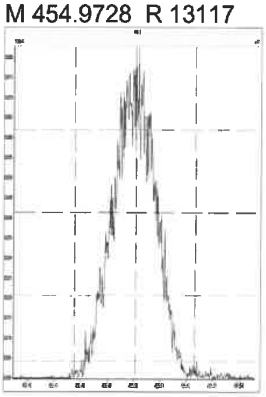

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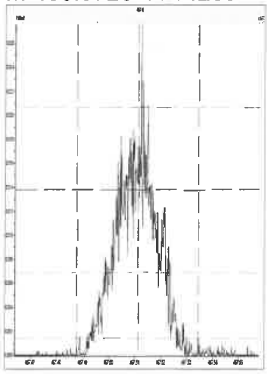

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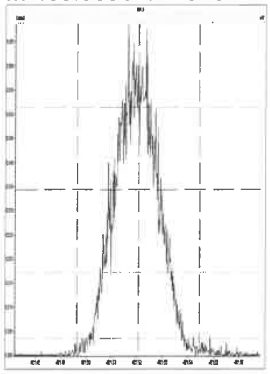

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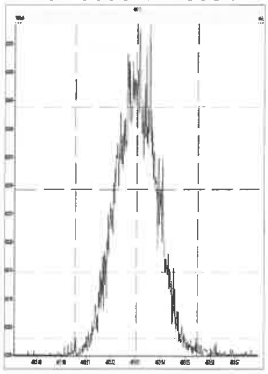

M 504.9696 R 13446

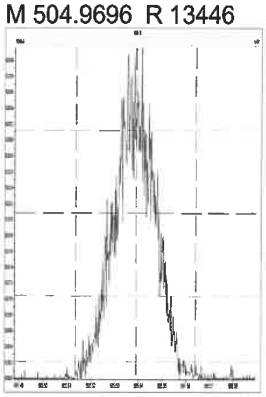

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M 516.9697_R 16567

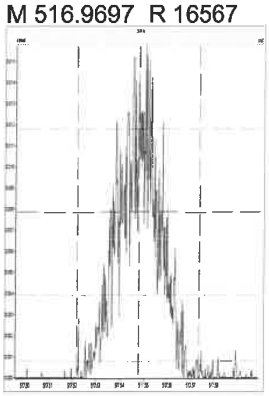

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M 292.9824 R 12376

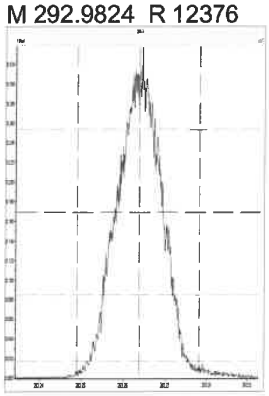

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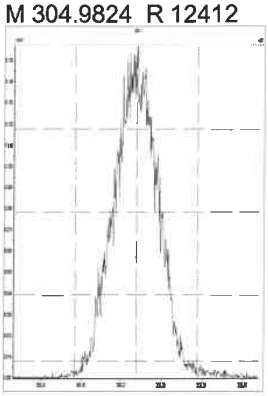

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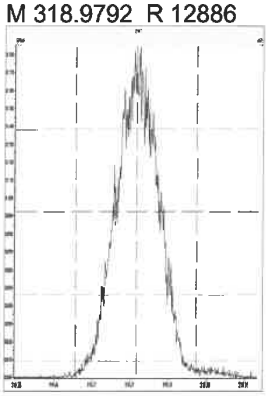

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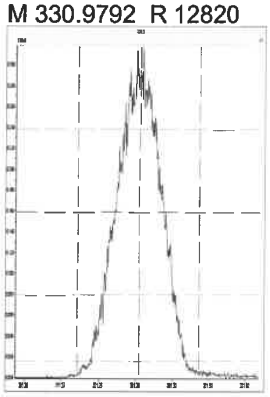

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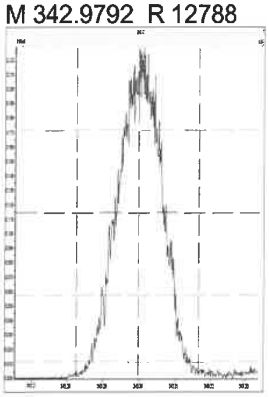

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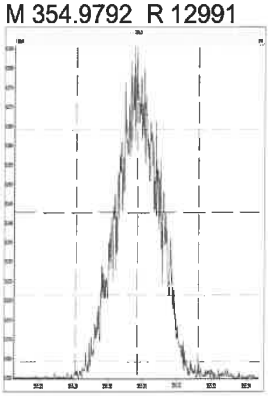

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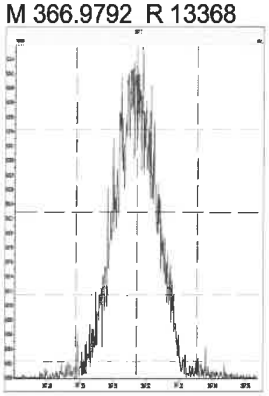

M 380.9760 R 12766

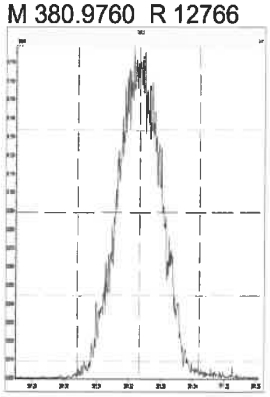

M 392.9760 R 13080

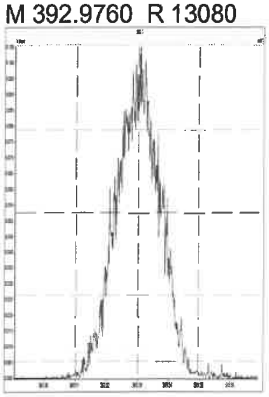

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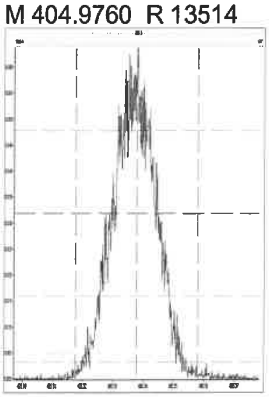

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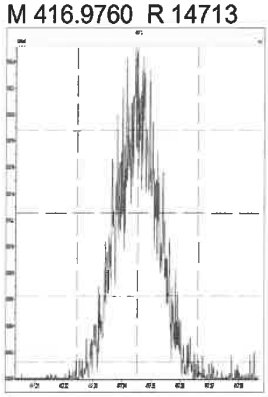

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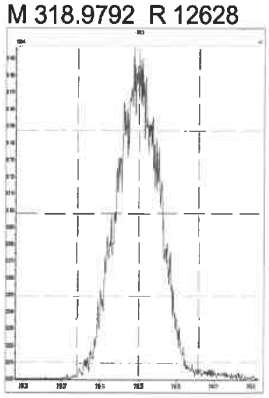

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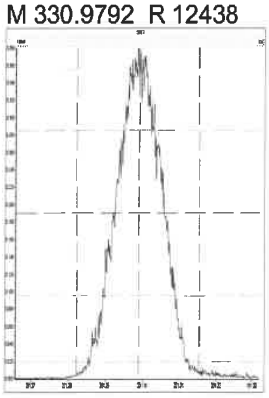

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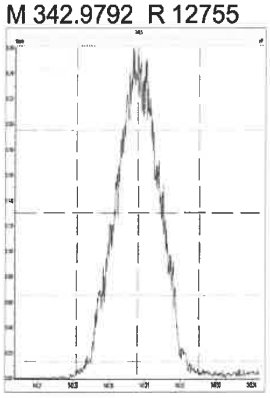

M 354.9792 R 12755

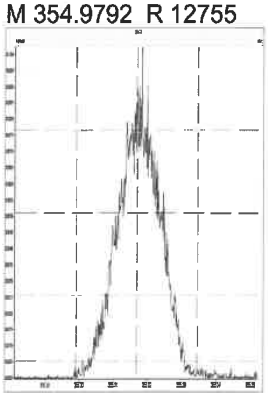

M 366.9792 R 13298

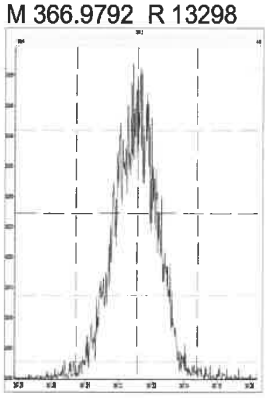

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M 380.9760 R 12791

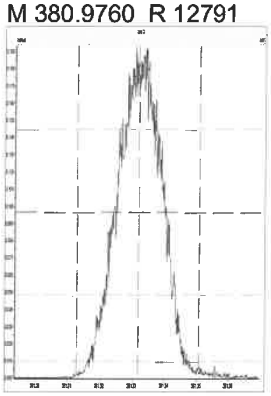

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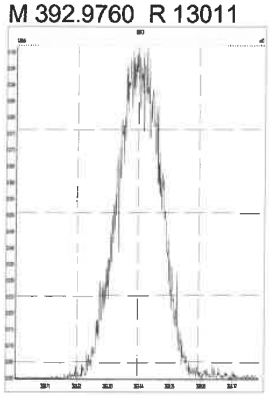

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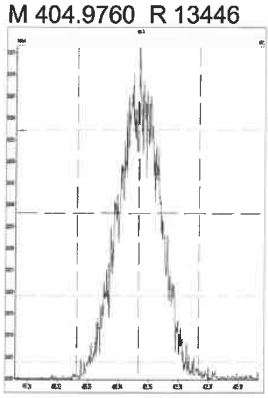

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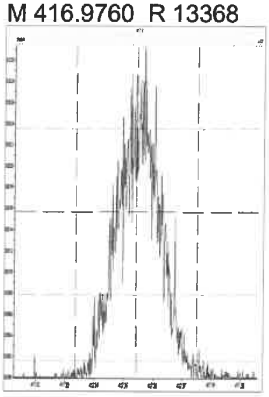

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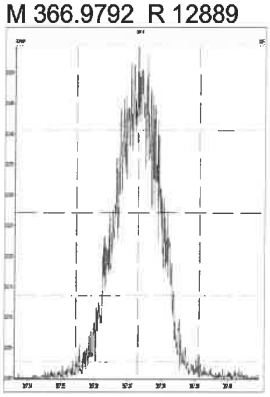

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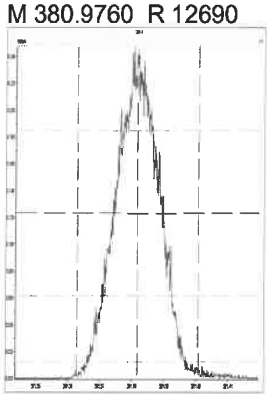

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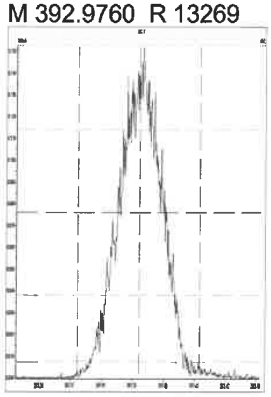

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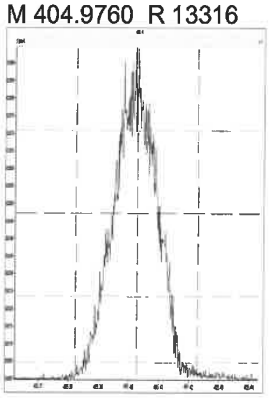

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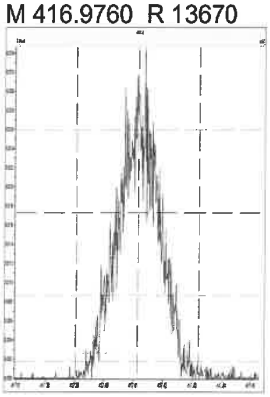

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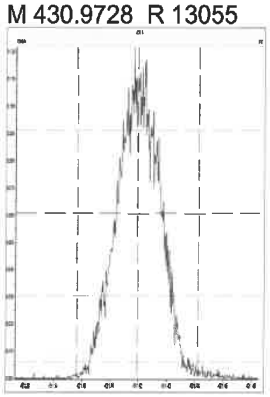

M 442.9728 R 13227

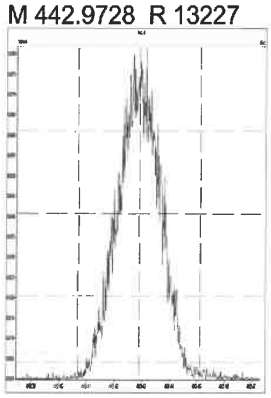

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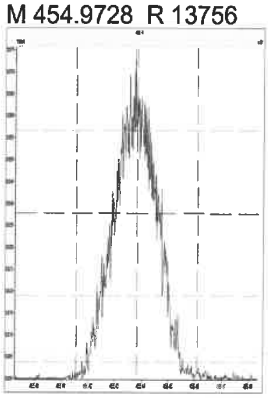

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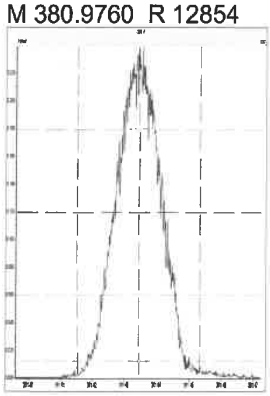

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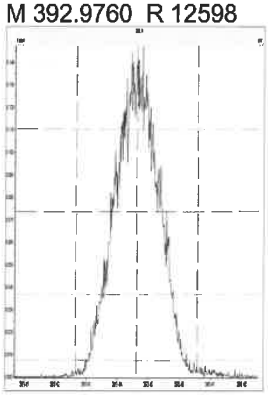

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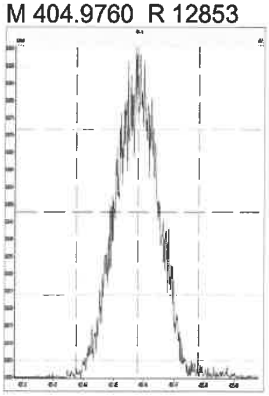

M 416.9760 R 13928

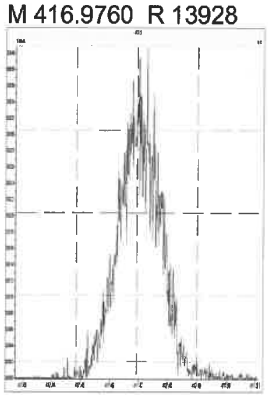

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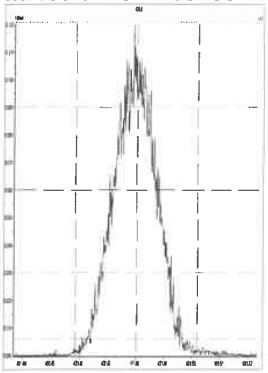

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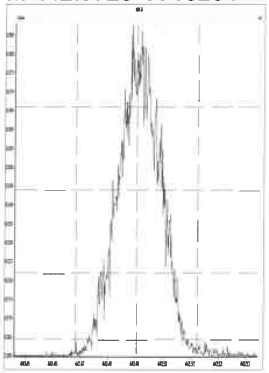

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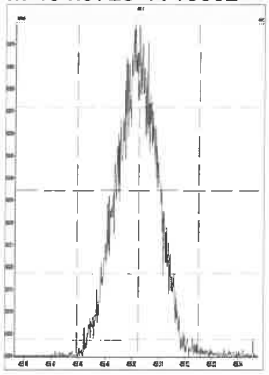

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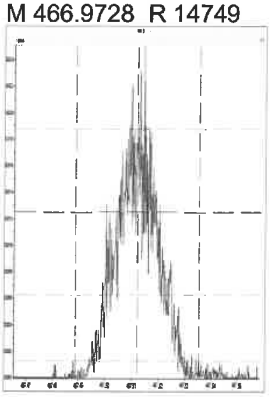

M 480.9696 R 13412

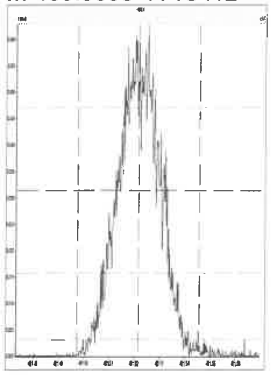

M 380.9760 R 12692

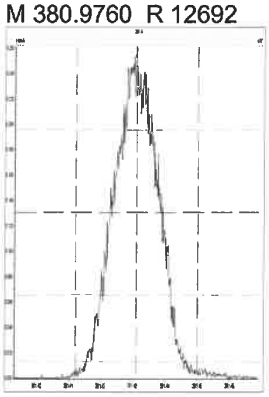

M 392.9760 R 13061

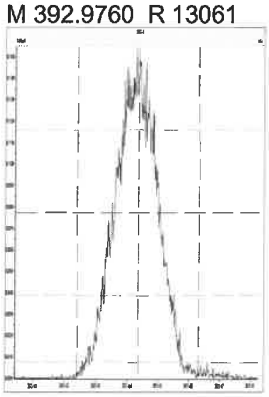

M 404.9760 R 12887

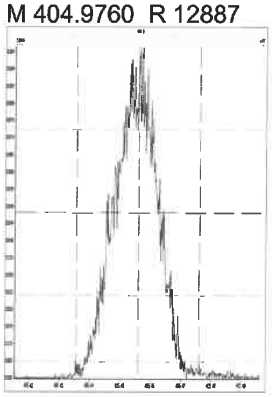

M 416.9760 R 13706

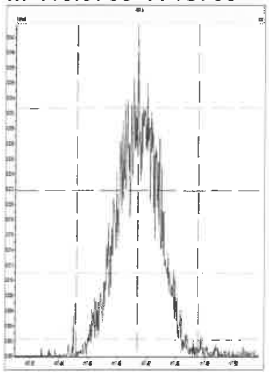

M 430.9728 R 12760

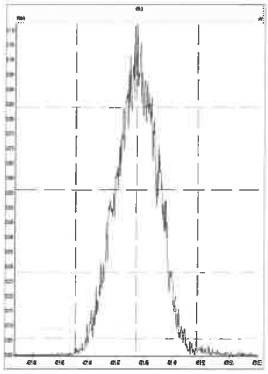

M 442.9728 R 13122

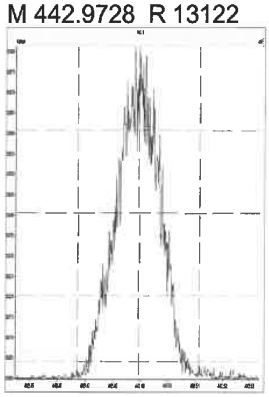

M 454.9728 R 13710

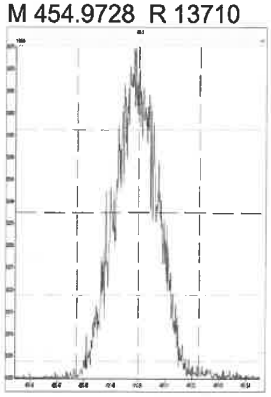

M 466.9728 R 14205

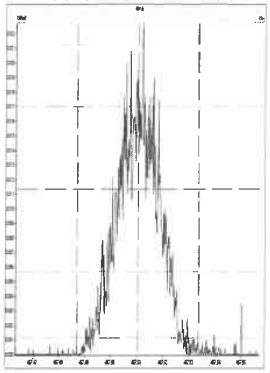

M 480.9696 R 13298

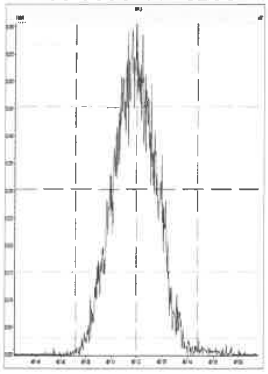

M 492.9696 R 12886

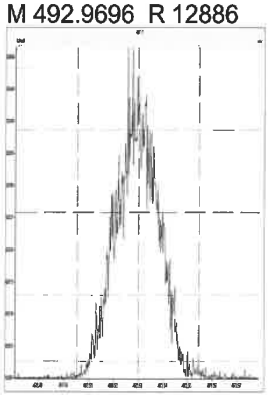

M 504.9696 R 13600

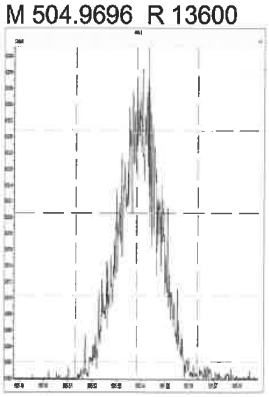

M 516.9697 R 15872

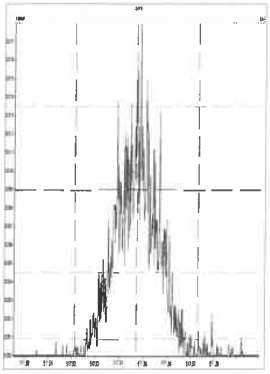

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	65685883	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	108384725	0.78	1.6249	101.5	101.5	0.1385	0.1385	102	
2,3,7,8-TCDF	17.628	557485	0.78	1.0239	0.5023	0.5023	0.009259	0.009259	100	
S Total TCDF					0.5023	0.5023	0.009259	0.009259		
D 13C-2,3,7,8-TCDD	18.338	59957723	0.80	0.8993	101.5	101.5	0.1222	0.1222	101	
$ 37Cl4-2,3,7,8-TCDD	18.338	318727		1.1071	0.4383	0.4383	0.006072	0.006072	87.65	
2,3,7,8-TCDD	18.354	376984	0.89	1.2541	0.5013	0.5013	0.0150	0.0150	100	M
S Total TCDD					0.5013	0.5013	0.0150	0.0150		
D 13C-1,2,3,7,8-PeCDF	22.749	78674290	1.60	1.2101	99.0	99.0	0.2282	0.2282	98.98	
1,2,3,7,8-PeCDF	22.776	2112140	1.63	1.0611	2.530	2.530	0.0220	0.0220	101	
D 13C-2,3,4,7,8-PeCDF	24.126	80591659	1.57	1.2395	99.0	99.0	0.2228	0.2228	98.99	
2,3,4,7,8-PeCDF	24.153	2096967	1.56	1.0184	2.555	2.555	0.0245	0.0245	102	
S Total PeCDF					5.085	5.085	0.0233	0.0233		
D 13C-1,2,3,7,8-PeCDD	24.862	49643581	1.62	0.7612	99.3	99.3	0.1197	0.1197	99.28	
1,2,3,7,8-PeCDD	24.889	1312779	1.42	1.0484	2.522	2.522	0.0218	0.0218	101	
S Total PeCDD					2.522	2.522	0.0218	0.0218		
D 13C-1,2,3,4,7,8-HxCDF	30.835	69484482	0.52	1.0837	100.4	100.4	0.5299	0.5299	100	
1,2,3,4,7,8-HxCDF	30.849	1949462	1.23	1.0851	2.586	2.586	0.0289	0.0289	103	
D 13C-1,2,3,6,7,8-HxCDF	30.995	73262388	0.52	1.1279	101.7	101.7	0.5091	0.5091	102	
1,2,3,6,7,8-HxCDF	31.022	2104086	1.18	1.1260	2.551	2.551	0.0273	0.0273	102	
D 13C-2,3,4,6,7,8-HxCDF	31.754	68885161	0.52	1.0637	101.4	101.4	0.5398	0.5398	101	
2,3,4,6,7,8-HxCDF	31.767	2104896	1.20	1.1675	2.617	2.617	0.0225	0.0225	105	
D 13C-1,2,3,7,8,9-HxCDF	32.512	62528954	0.51	0.9676	101.1	101.1	0.5935	0.5935	101	
1,2,3,7,8,9-HxCDF	32.526	1834100	1.21	1.1664	2.515	2.515	0.0244	0.0244	101	
S Total HxCDF					10.3	10.3	0.0258	0.0258		
* 13C-1,2,3,7,8,9-HxCDD	32.339	63892665	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	47363504	1.27	0.7334	101.1	101.1	0.5001	0.5001	101	
1,2,3,4,7,8-HxCDD	31.940	1300030	1.26	1.0640	2.580	2.580	0.0268	0.0268	103	
D 13C-1,2,3,6,7,8-HxCDD	32.033	56759108	1.25	0.8802	100.9	100.9	0.4167	0.4167	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	1460747	1.28	1.0001	2.573	2.573	0.0268	0.0268	103	
1,2,3,7,8,9-HxCDD	32.353	1503407	1.26	1.1325	2.550	2.550	0.0244	0.0244	102	
S Total HxCDD					7.703	7.703	0.0260	0.0260		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	51308225	0.44	0.7730	103.9	103.9	1.147	1.147	104	
1,2,3,4,6,7,8-HpCDF	33.924	1856599	1.05	1.4413	2.511	2.511	0.0321	0.0321	100	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44628352	0.44	0.7008	99.7	99.7	1.266	1.266	99.67	
1,2,3,4,7,8,9-HpCDF	35.017	1465634	1.06	1.3174	2.493	2.493	0.0442	0.0442	99.72	
S Total HpCDF					5.003	5.003	0.0381	0.0381		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	41876556	1.01	0.6472	101.3	101.3	0.6709	0.6709	101	
1,2,3,4,6,7,8-HpCDD	34.726	1164074	1.06	1.0943	2.540	2.540	0.0284	0.0284	102	
S Total HpCDD					2.540	2.540	0.0284	0.0284		
D 13C-OCDD	37.093	57018462	0.89	0.4472	199.6	199.6	0.2479	0.2479	99.79	
OCDF	37.201	1976175	0.91	1.4382	4.820	4.820	0.0196	0.0196	96.40	
OCDD	37.105	1569338	0.92	1.1070	4.973	4.973	0.0246	0.0246	99.45	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		29725607	7464659	4167	10417	1791		
333.9339	18.142	18.142	0		35960276	9003139	3074	7685	2929	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	47438761	11992473	9243	23107	1297		
317.9389	17.613	17.616	0	0.971	60945964	15328013	5578	13945	2748	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	244966	62557	418	1045	150		
305.8987	17.628	17.631	0	1.001	312519	74119	618	1545	120	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	26677109	6242710	4167	10417	1498		
333.9339	18.338	18.338	0	1.011	33280614	7789380	3074	7685	2534	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.011	318727	66577	443	1107	150		
2,3,7,8-TCDD											M
319.8965	18.354	18.357	0	1.001	177891	43427	698	1745	62		M
321.8936	18.354	18.357	0	1.001	199093	47894	356	890	135	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	48367116	8680931	10780	26950	805		
353.8970	22.749	22.754	0	1.254	30307174	5346402	7413	18532	721	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	1307686	232308	692	1730	336		
341.8567	22.762	22.779	-1	1.001	804454	137466	619	1547	222	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	49186157	7929286	10780	26950	736		
353.8970	24.126	24.129	0	1.330	31405502	5197836	7413	18532	701	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	1276283	202864	692	1730	293		
341.8567	24.153	24.156	0	1.001	820684	134634	619	1547	218	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	30684379	4744795	3870	9675	1226		
369.8919	24.862	24.865	0	1.370	18959202	2913489	2133	5332	1366	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	770345	123302	470	1175	262		
357.8516	24.889	24.892	0	1.001	542434	83964	231	577	363	1.42(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23885791	5080702	12413	31032	409		
385.8610	30.835	30.838	0	0.953	45598691	9653525	24179	60447	399	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.857	0	1.000	1073816	228005	1130	2825	202		
375.8178	30.849	30.857	0	1.000	875646	183719	720	1800	255	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	25163610	5186426	12413	31032	418		
385.8610	30.995	31.003	0	0.958	48098778	9847658	24179	60447	407	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.001	1138605	230252	1130	2825	204		
375.8178	31.008	31.022	-1	1.000	965481	194261	720	1800	270	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	23545536	6005512	12413	31032	484		
385.8610	31.754	31.756	0	0.982	45339625	11622590	24179	60447	481	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	1148495	290976	1130	2825	258		
375.8178	31.767	31.772	0	1.000	956401	245408	720	1800	341	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.512	32.523	-1	1.005	21115296	5525344	12413	31032	445		
385.8610	32.512	32.523	-1	1.005	41413658	10740911	24179	60447	444	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	1004237	260741	1130	2825	231		
375.8178	32.526	32.534	0	1.000	829863	215930	720	1800	300	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		35492157	8840472	14115	35287	626		
403.8529	32.339	32.342	0		28400508	7090007	9259	23147	766	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	26497467	7547113	14115	35287	535		
403.8529	31.927	31.929	0	0.987	20866037	5954906	9259	23147	643	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	725563	201392	885	2212	228		
391.8127	31.940	31.945	0	1.000	574467	160999	657	1642	245	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	31586686	7983088	14115	35287	566		
403.8529	32.033	32.033	0	0.991	25172422	6406461	9259	23147	692	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	819435	207367	885	2212	234		
391.8127	32.047	32.047	0	1.000	641312	163363	657	1642	249	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	837706	208716	885	2212	236		
391.8127	32.353	32.355	0	1.013	665701	168193	657	1642	256	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	15666898	4905580	16994	42485	289		
419.8220	33.912	33.914	0	1.049	35641327	11012481	39521	98802	279	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	949994	280926	1603	4007	175		
409.7789	33.924	33.926	0	1.000	906605	280503	1346	3365	208	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13532847	3927195	16994	42485	231		
419.8220	35.005	35.010	0	1.082	31095505	8744356	39521	98802	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	755406	231092	1603	4007	144		
409.7789	35.017	35.020	0	1.000	710228	201627	1346	3365	150	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	21029381	6108519	13979	34947	437		
437.8140	34.714	34.716	0	1.073	20847175	6052425	13690	34225	442	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	599401	178801	821	2052	218		
425.7737	34.726	34.726	0	1.000	564673	160703	693	1732	232	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26904388	6653832	3548	8870	1875		
471.7750	37.093	37.094	0	1.147	30114074	7334467	3515	8787	2087	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	941996	224700	300	750	749		
443.7399	37.189	37.199	-1	1.003	1034179	253612	487	1217	521	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	750544	177364	389	972	456		
459.7348	37.105	37.106	0	1.000	818794	206090	374	935	551	0.92(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.35
Area: 201476
Amount: 0.545465
Amount Units: pg/ul

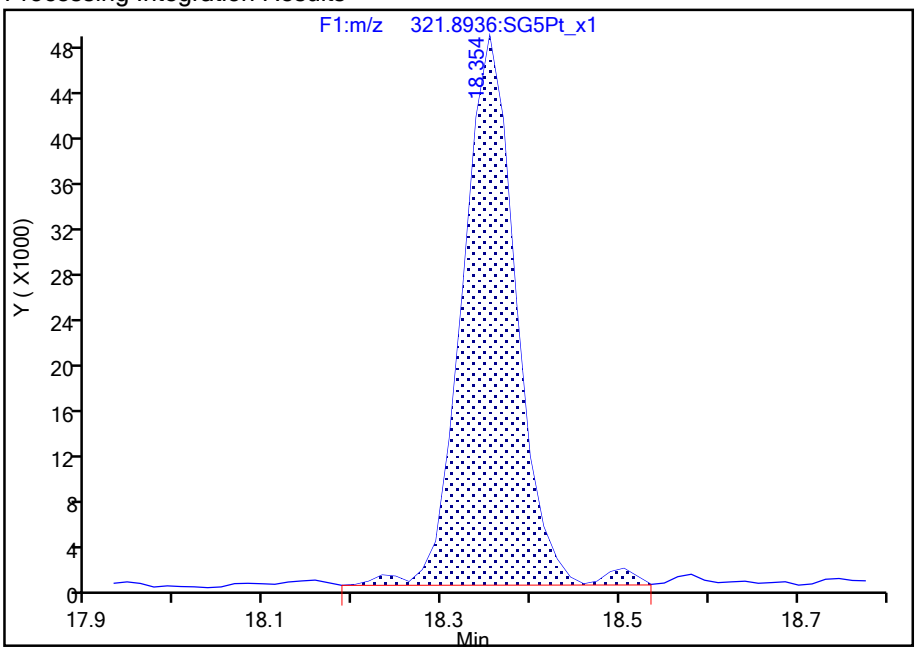

Manual Integration Results

RT: 18.35
Area: 199093
Amount: 0.501347
Amount Units: pg/ul

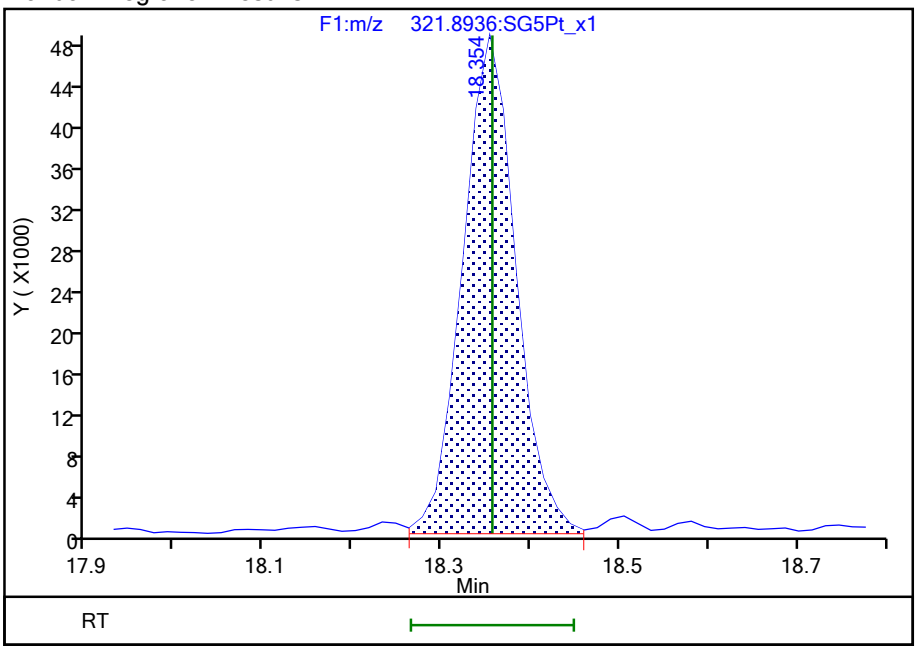

Reviewer: stephensk, 27-Jul-2021 08:15:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

778430

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

Processing Integration Results

RT: 18.35
Area: 394678
Amount: 0.545465
Amount Units: pg/ul

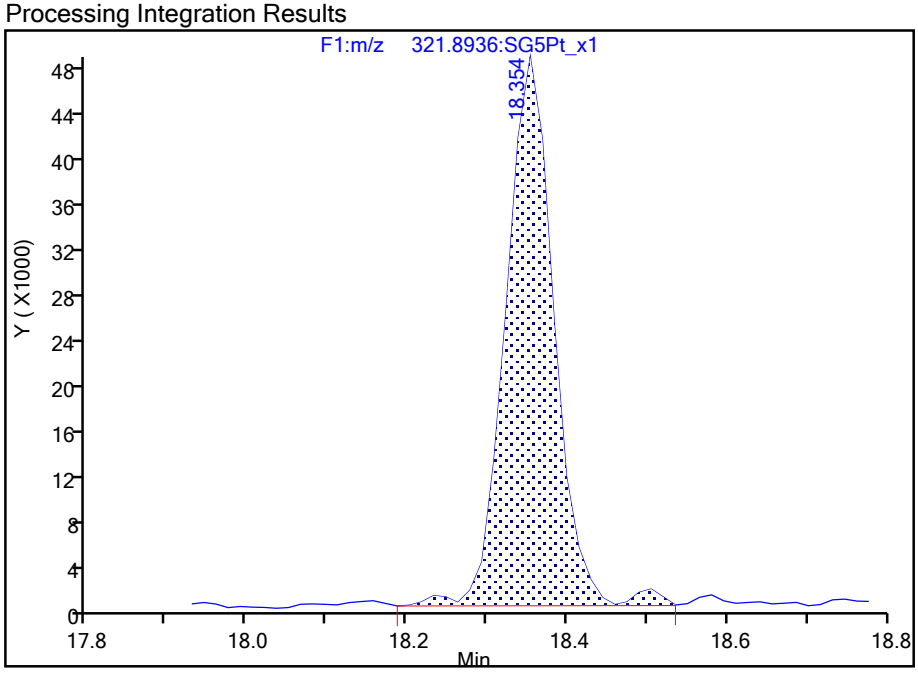

Manual Integration Results

RT: 18.35
Area: 376984
Amount: 0.501347
Amount Units: pg/ul
Reviewer: stephensk, 27-Jul-2021 08:15:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

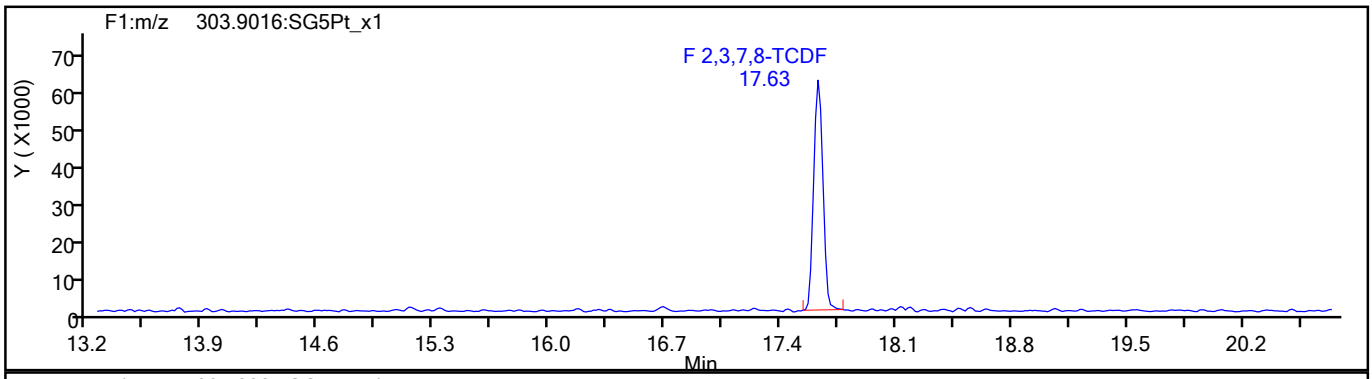

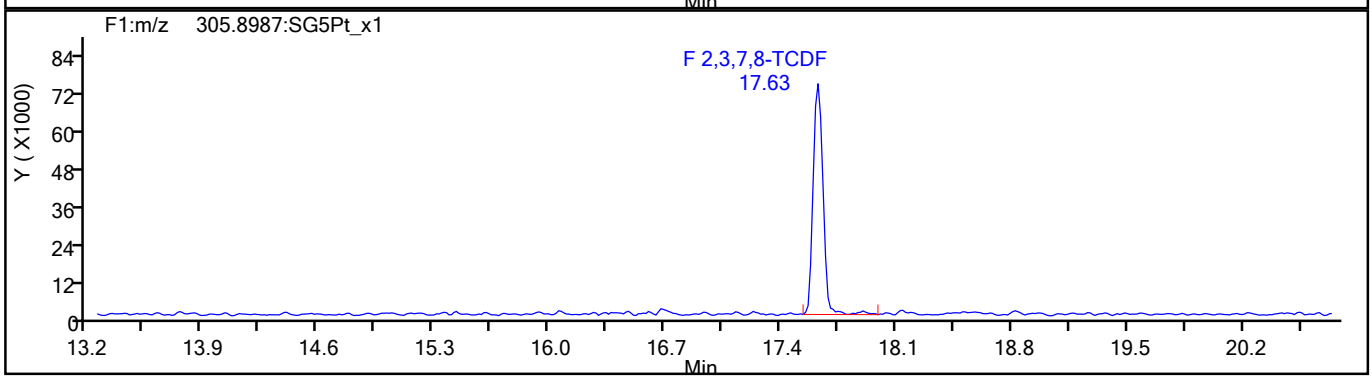

TCDF Standards

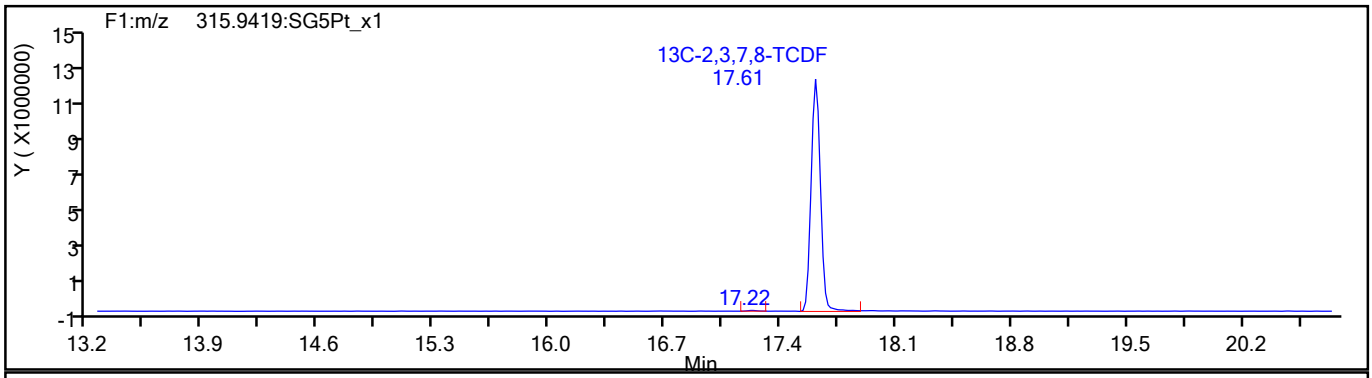

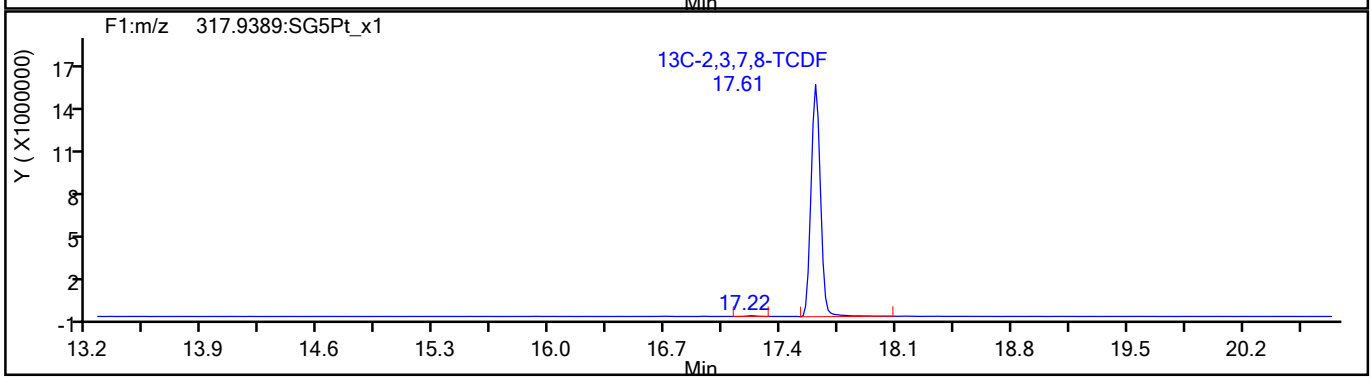

778432

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

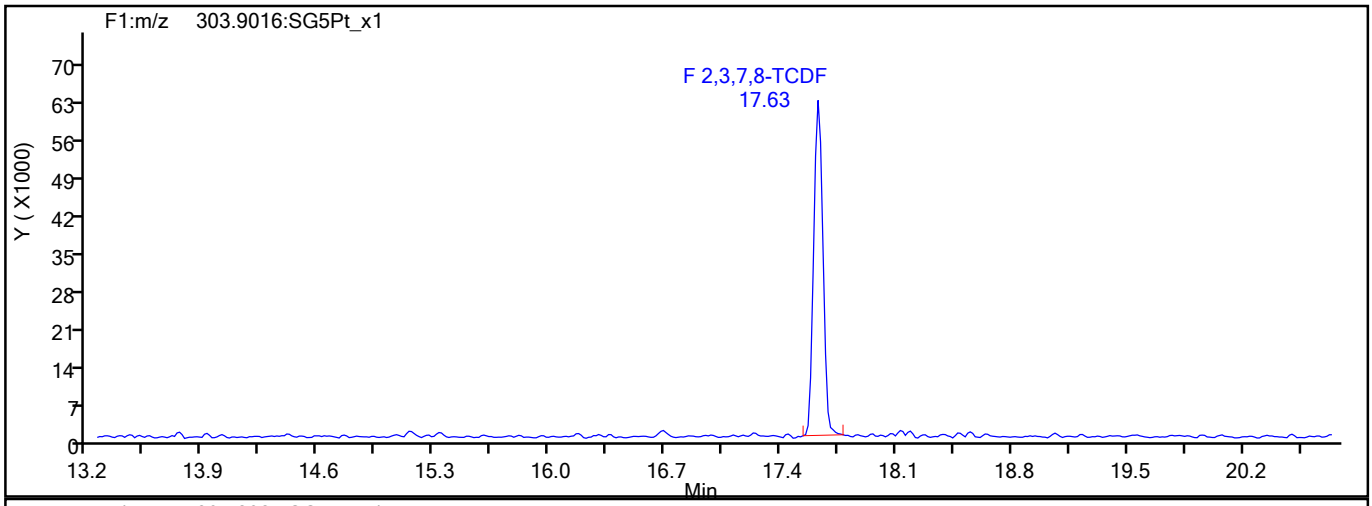

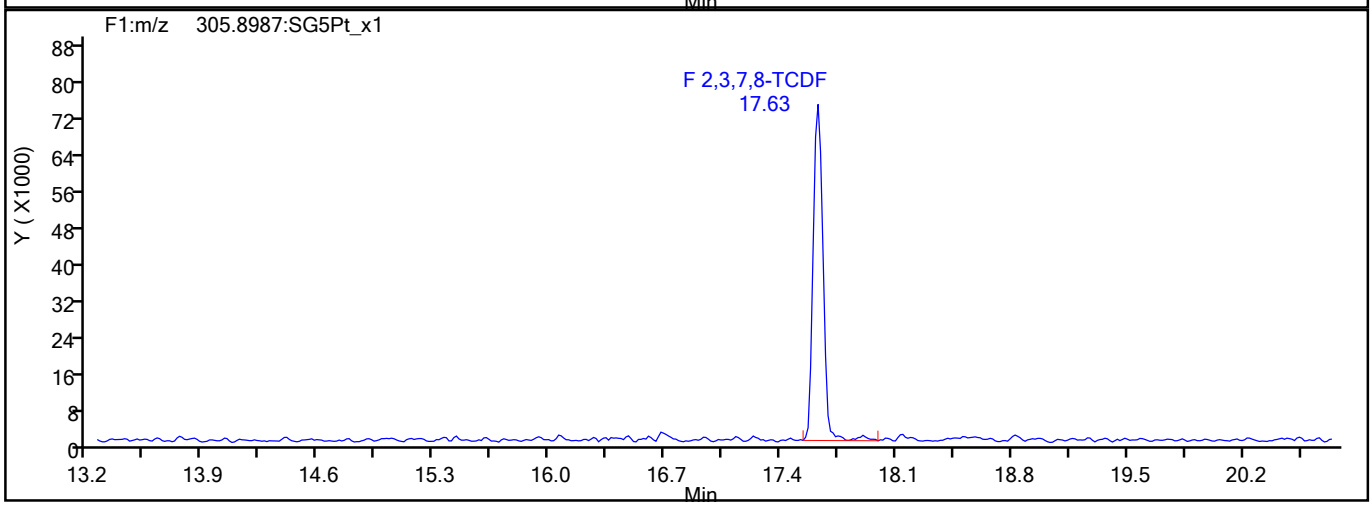

TCDF Interference Mass

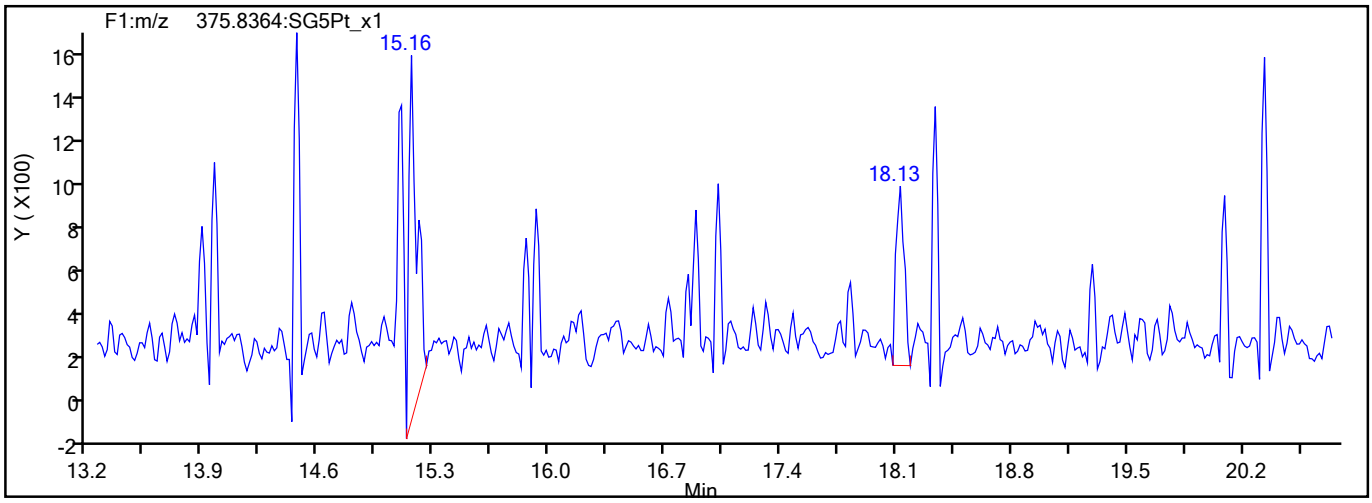

778433

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

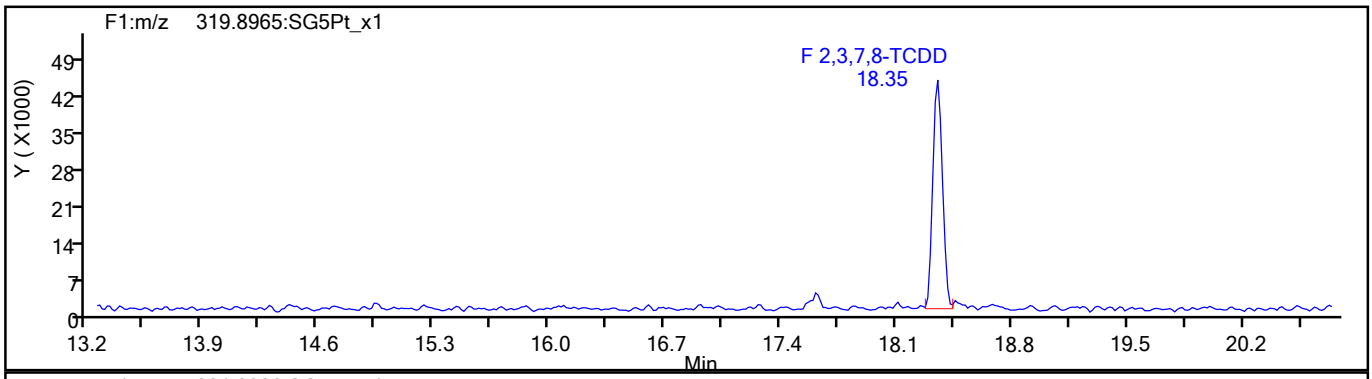

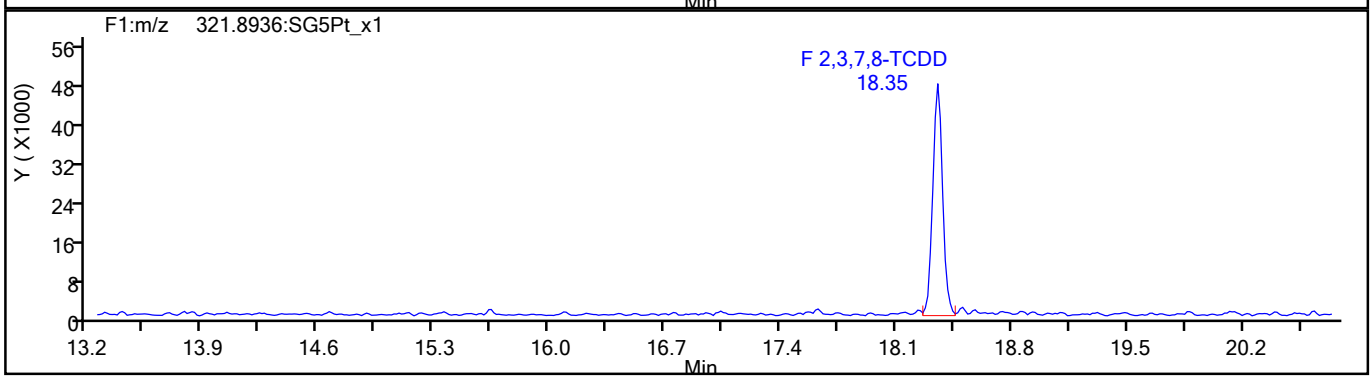

TCDD Standards

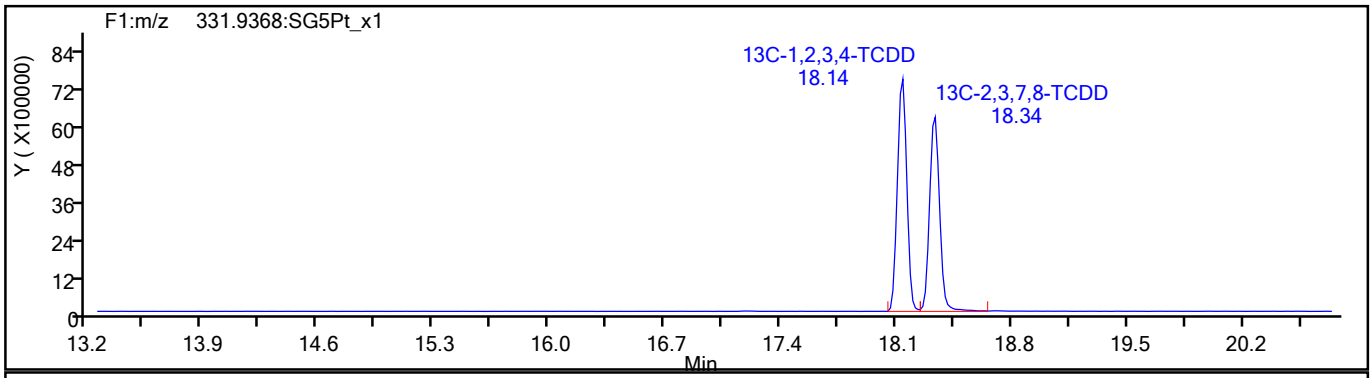

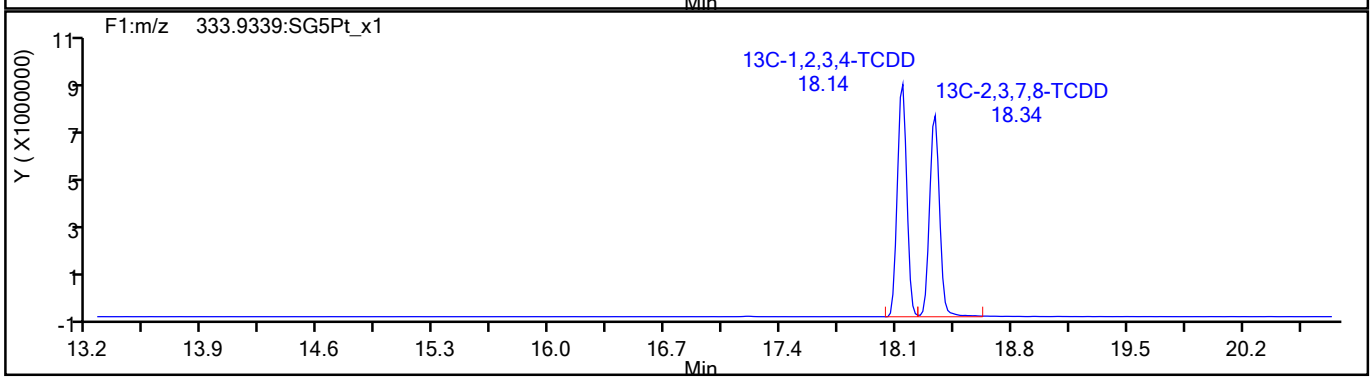

778434

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

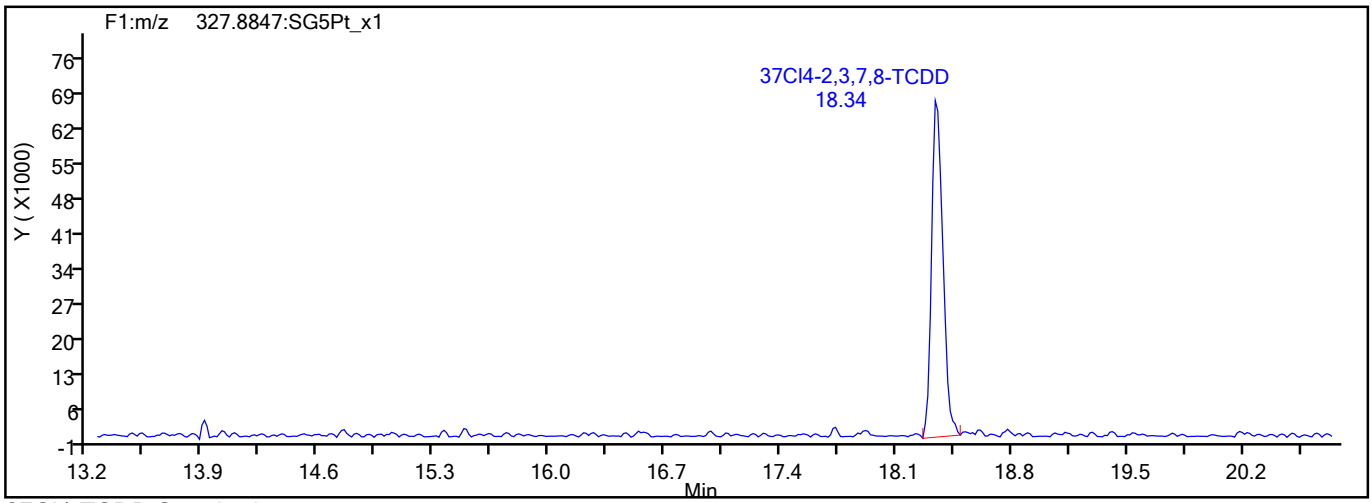

37Cl4-TCDD Standards

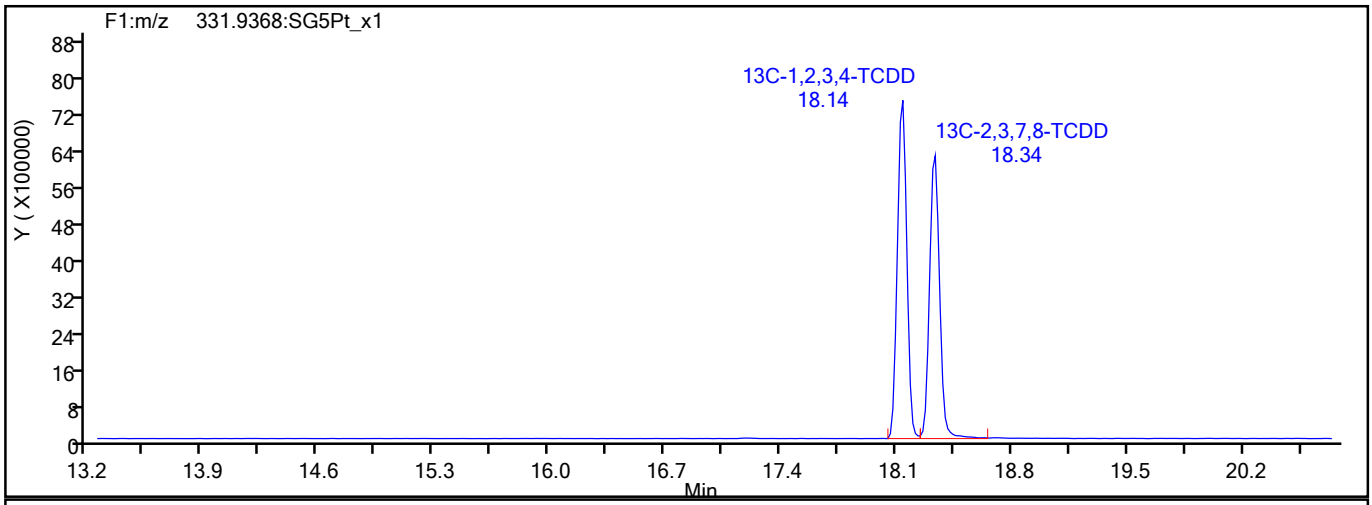

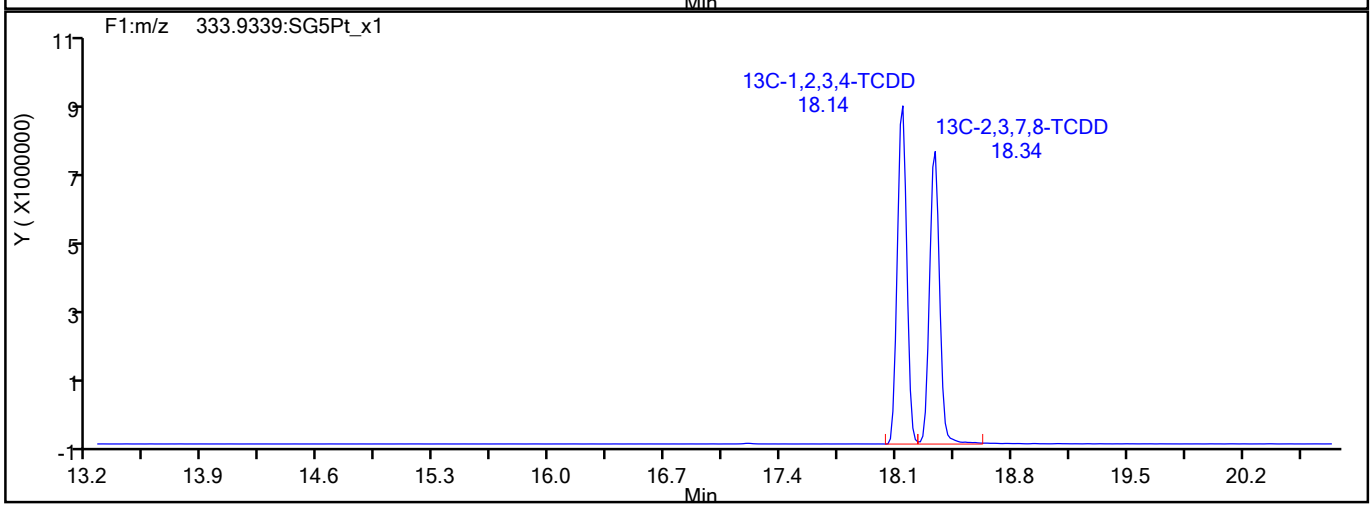

778435

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

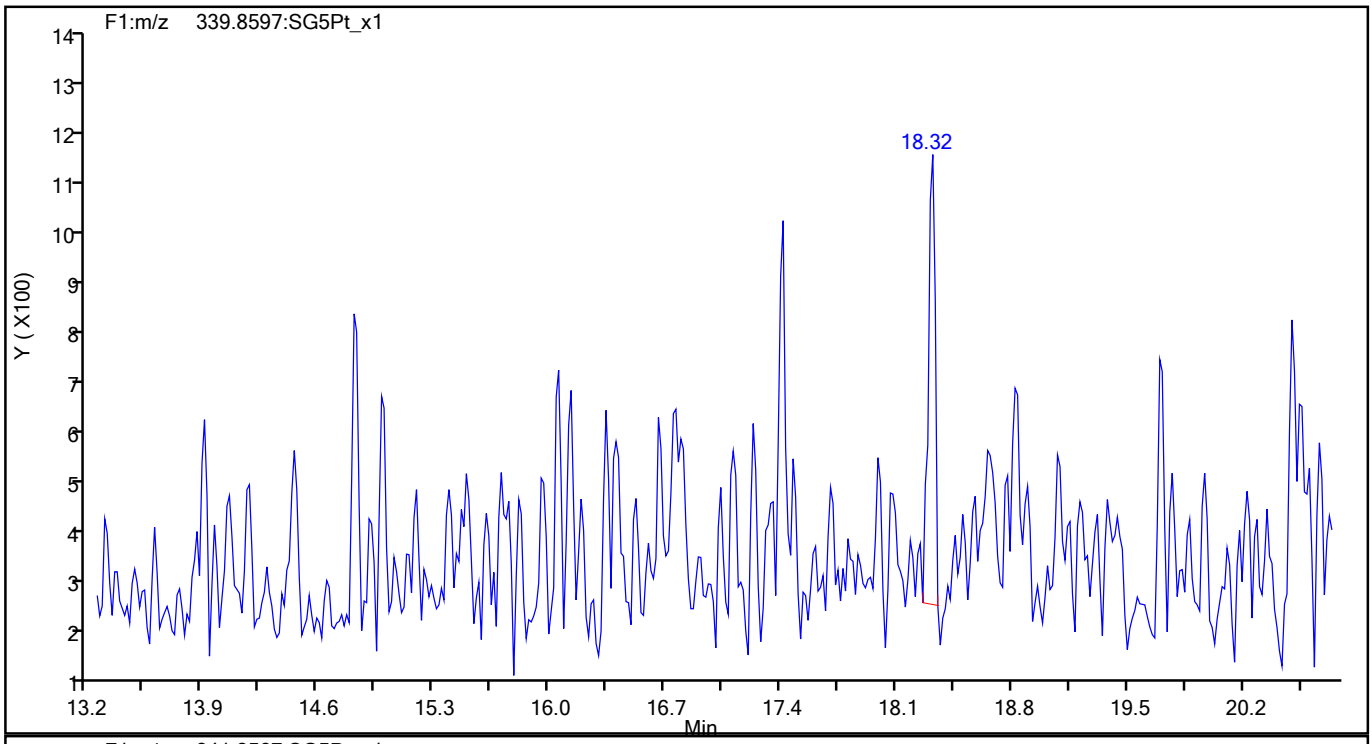

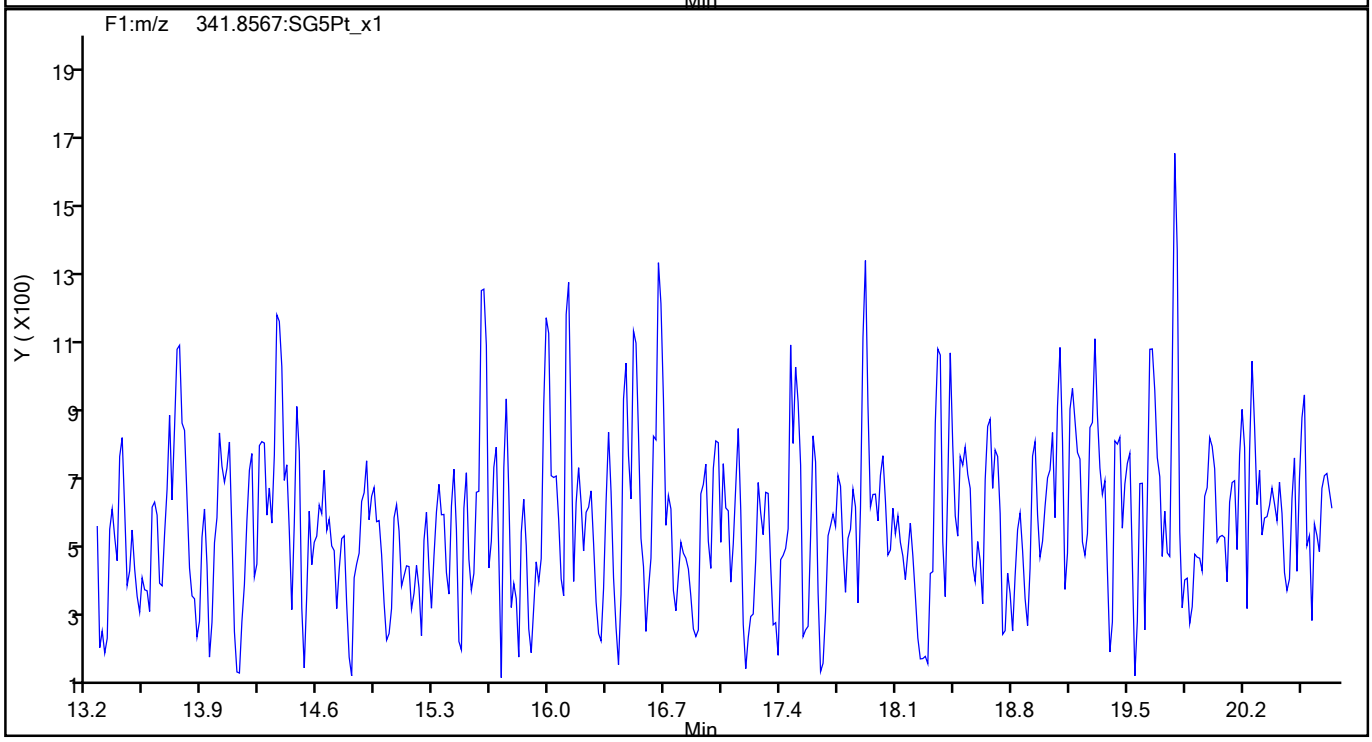

778436

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

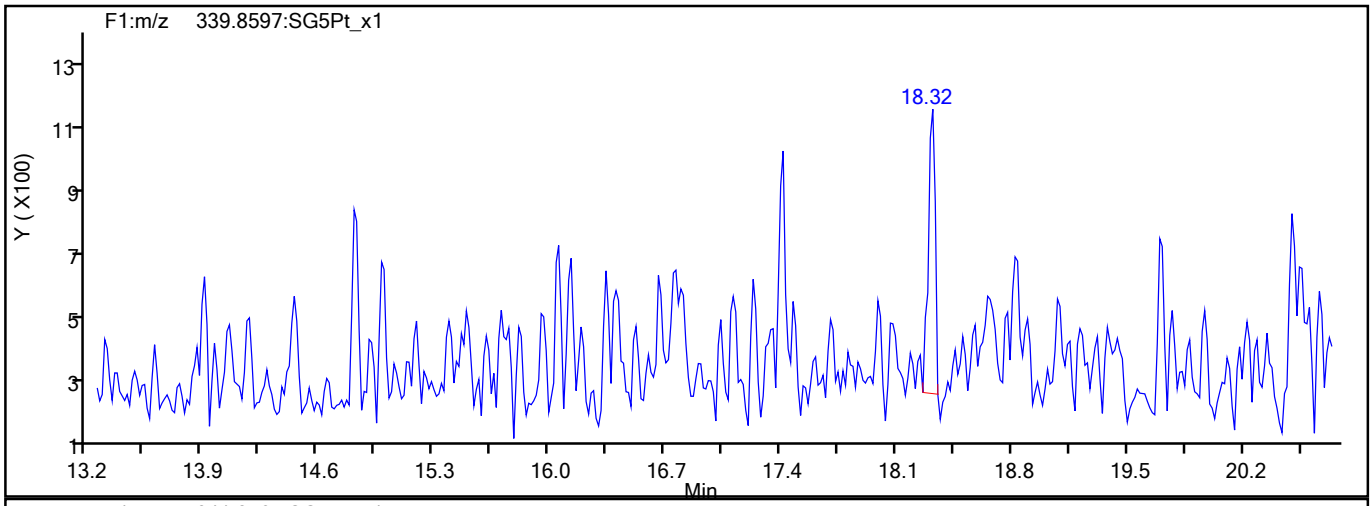

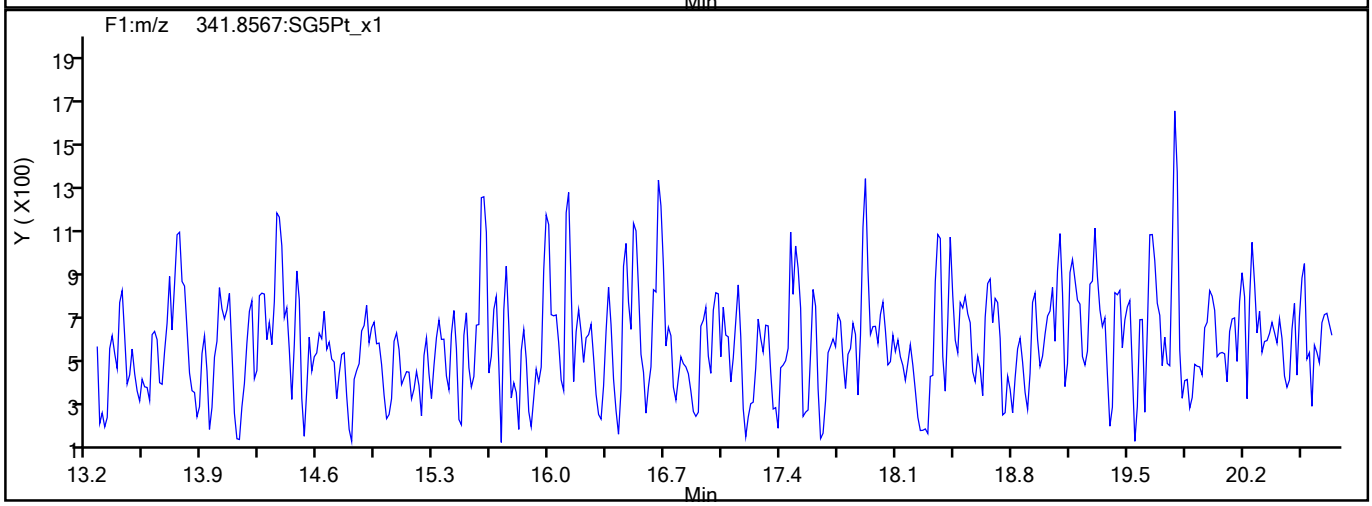

F1 PeCDFs Interference Mass

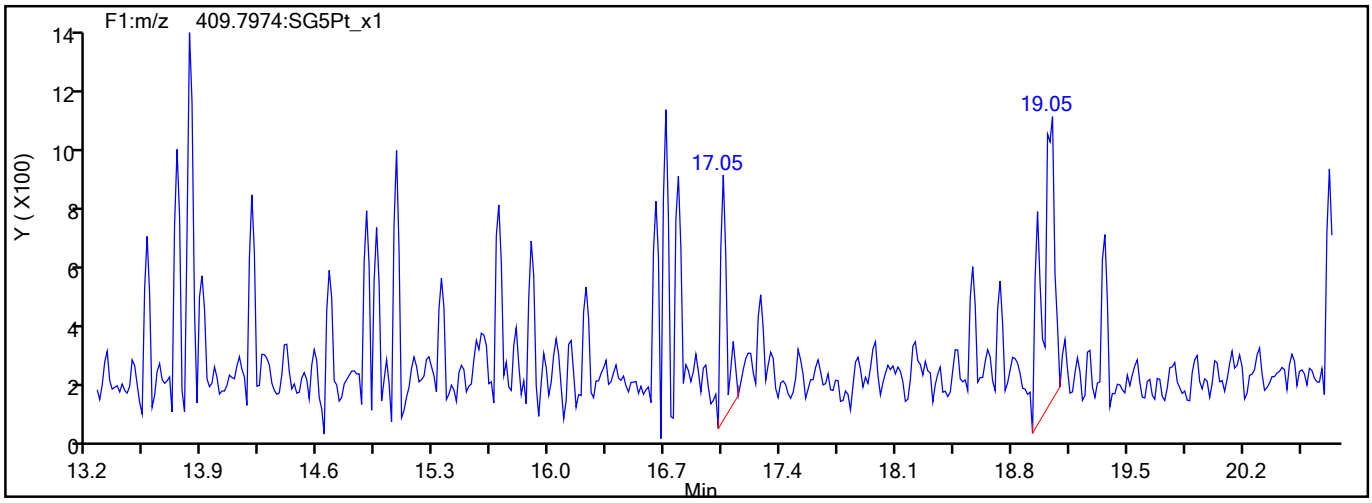

778437

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

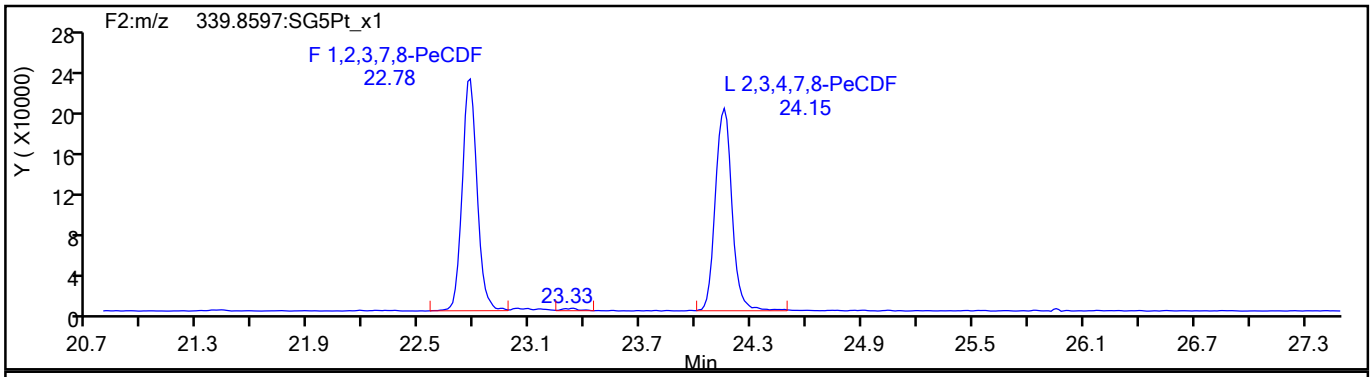

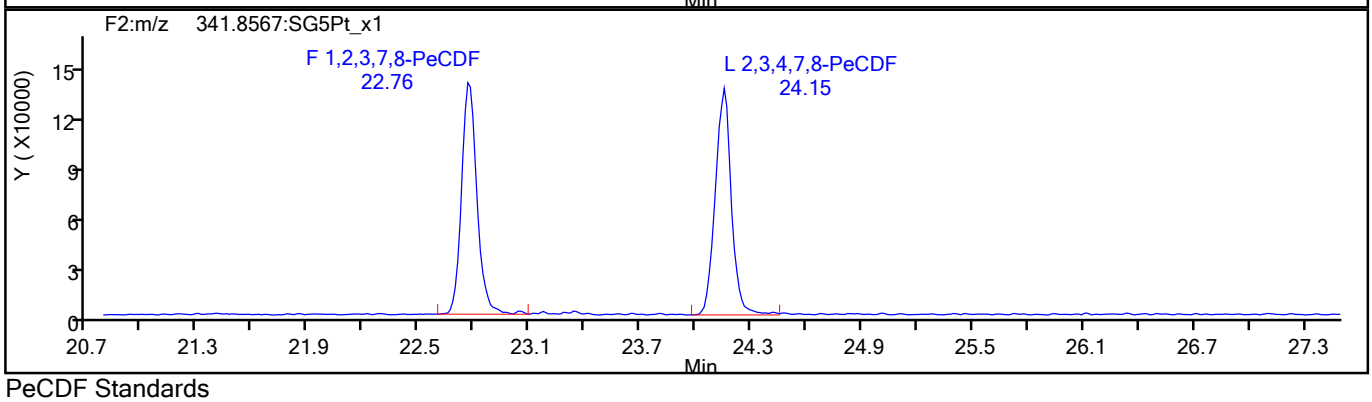

PeCDF Standards

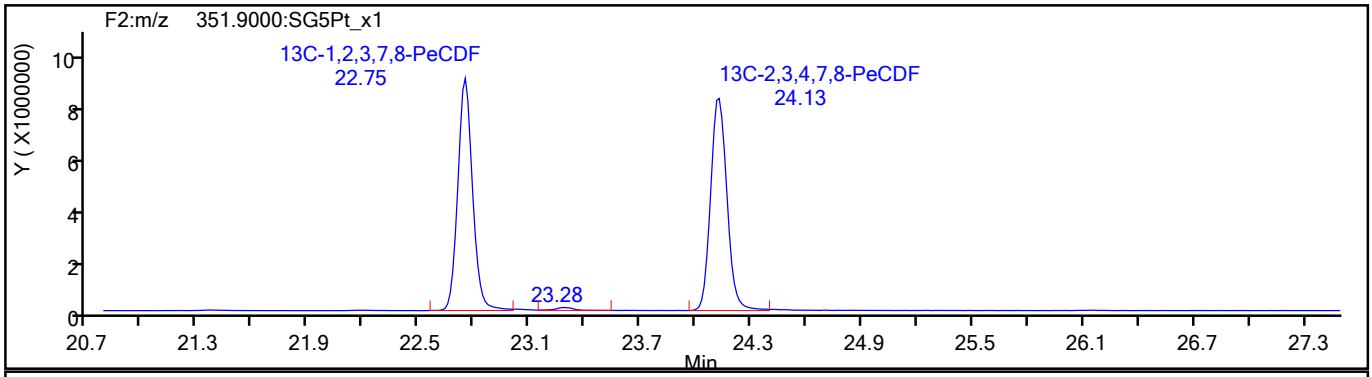

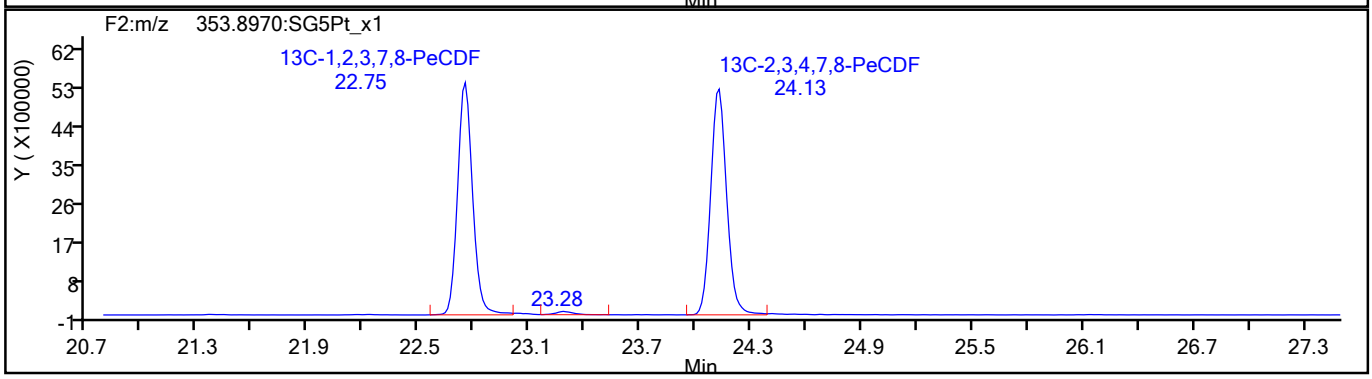

778438

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

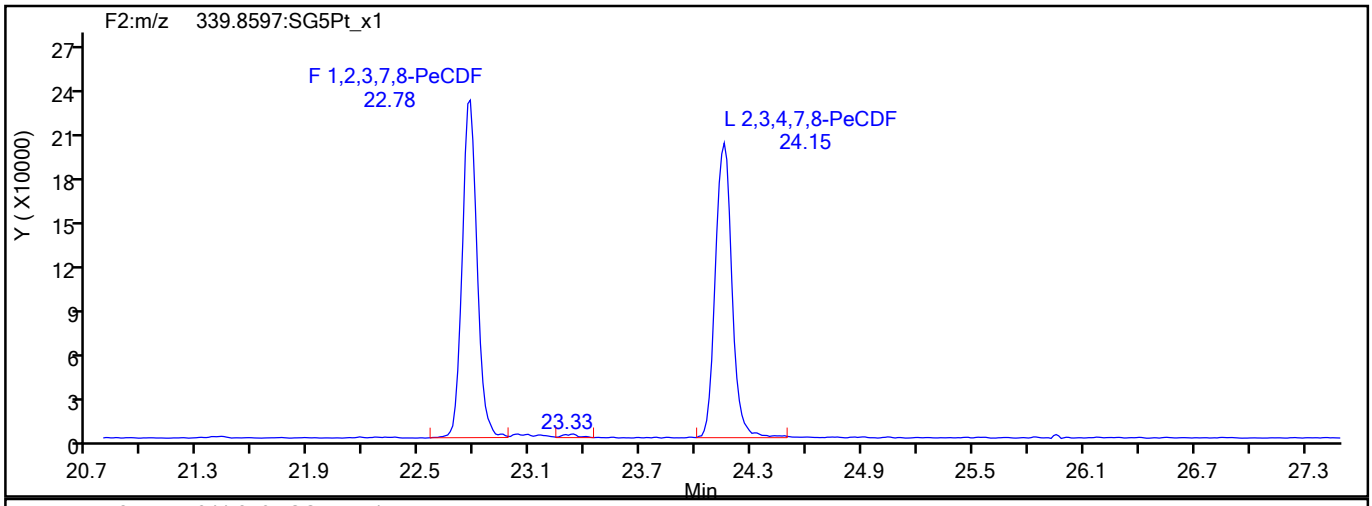

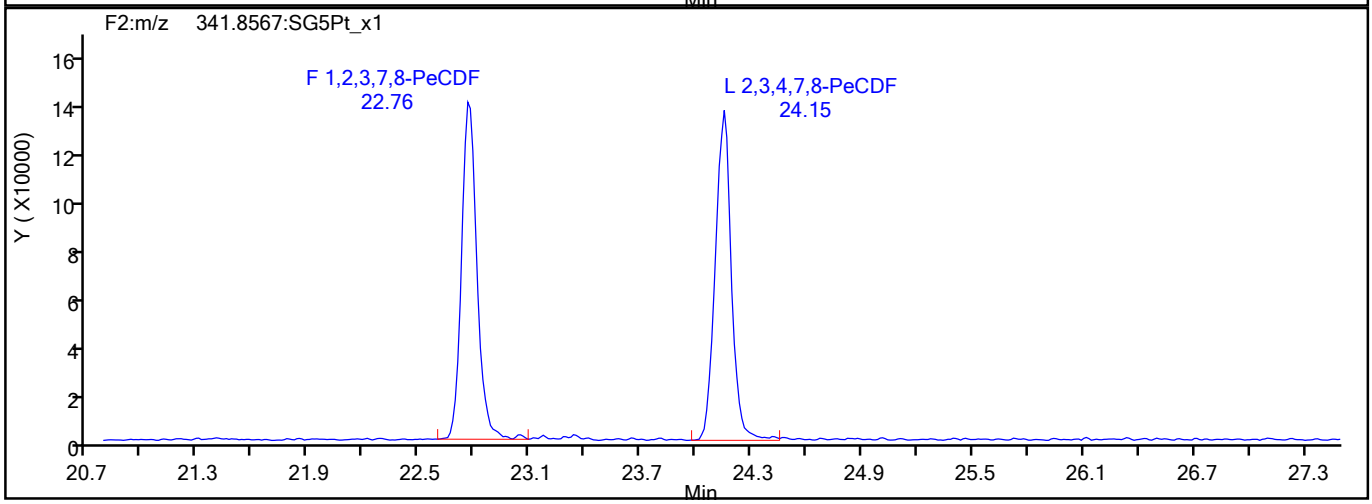

PeCDF Interference Mass

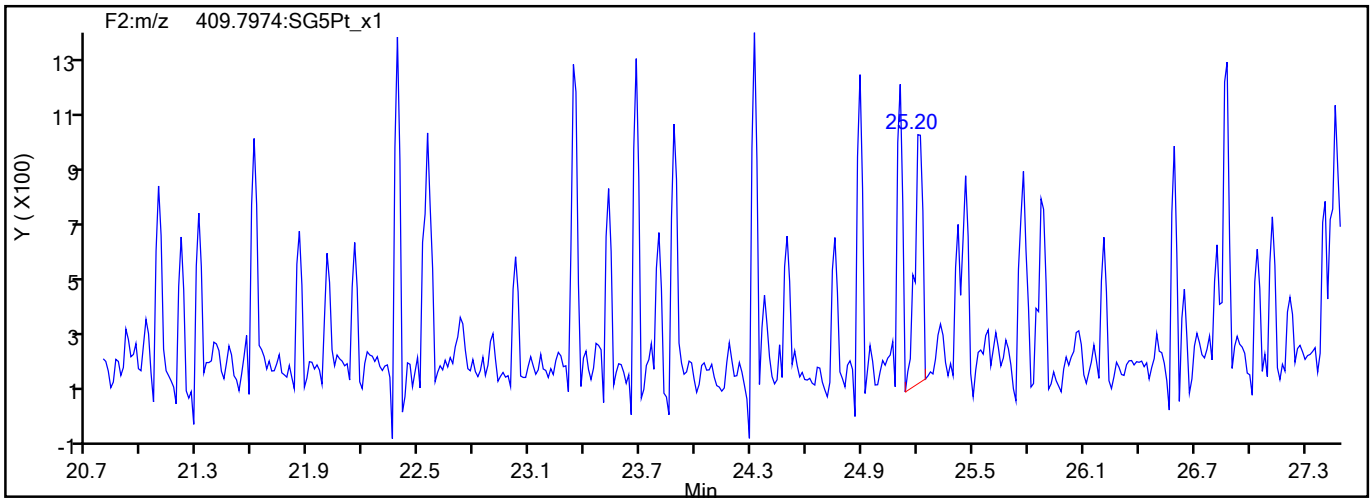

778439

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

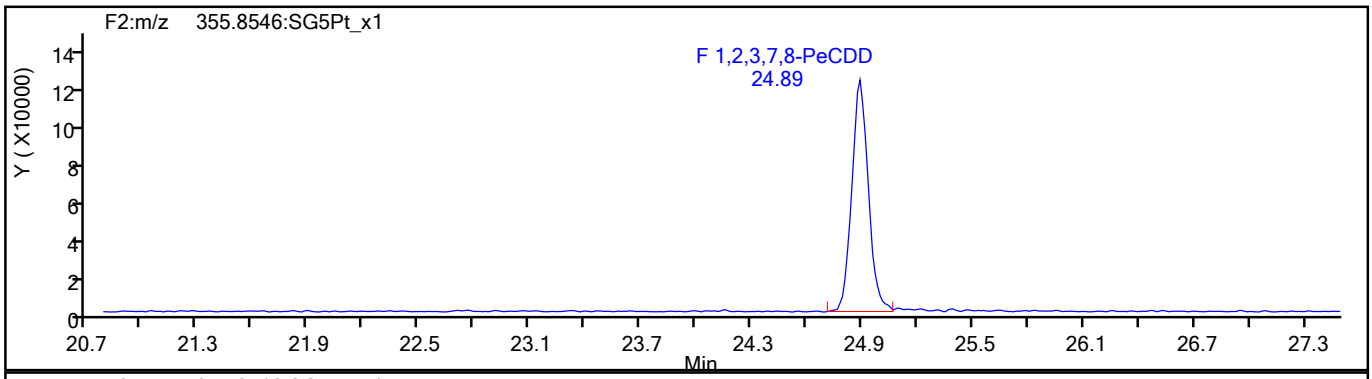

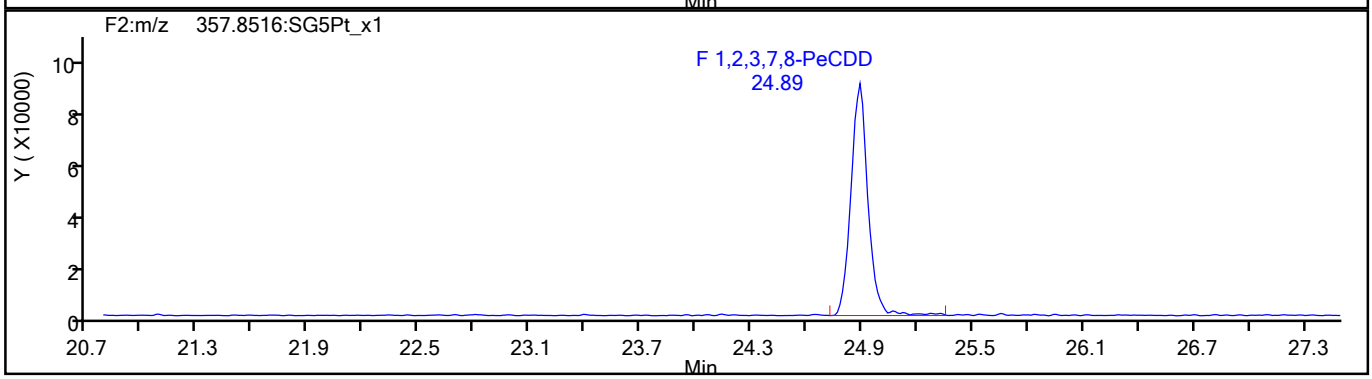

PeCDD Standards

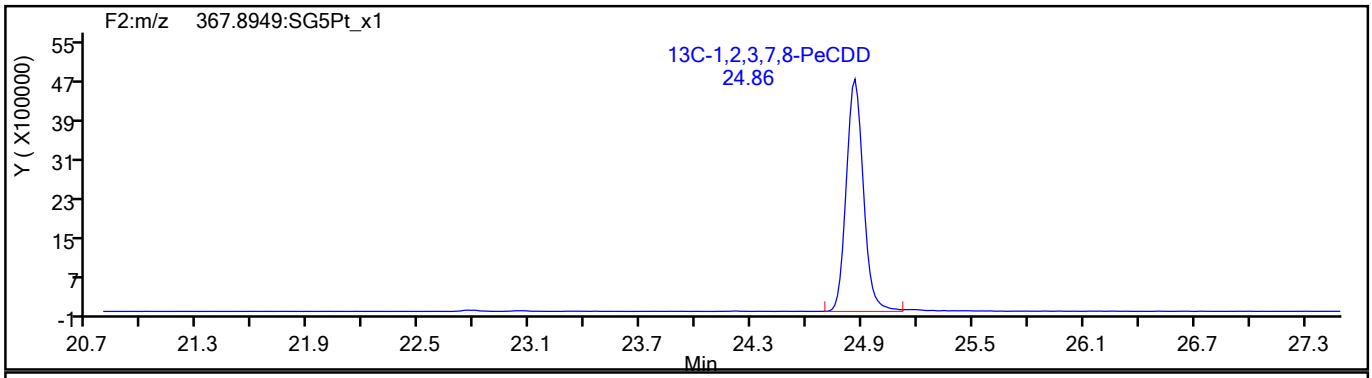

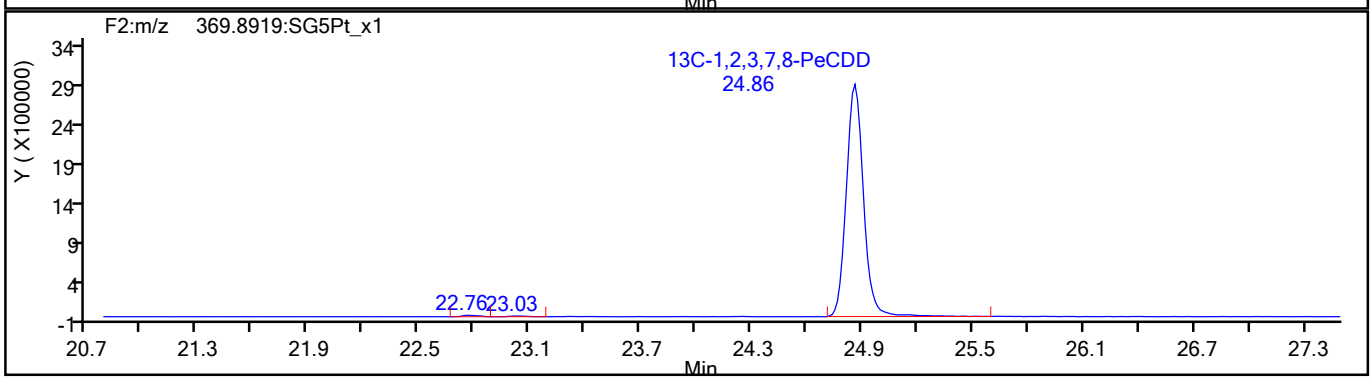

778440

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

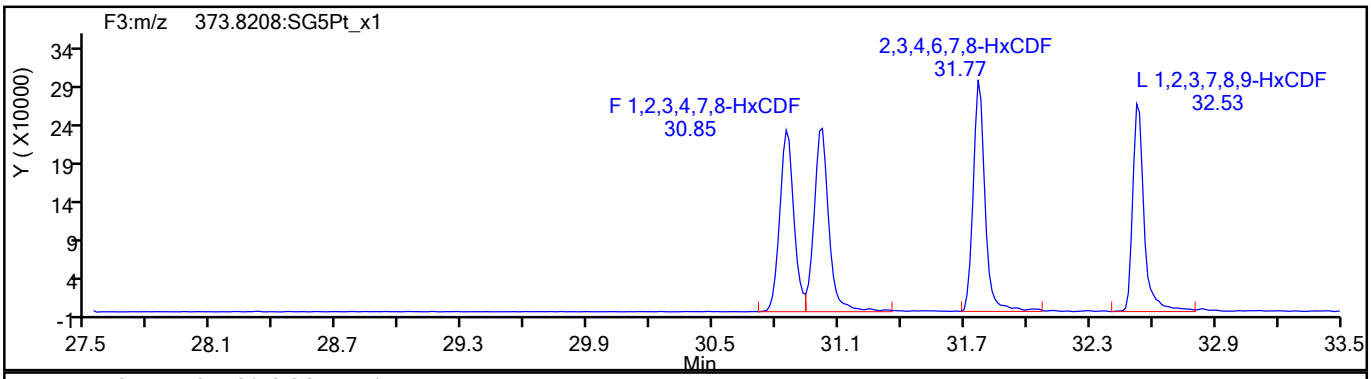

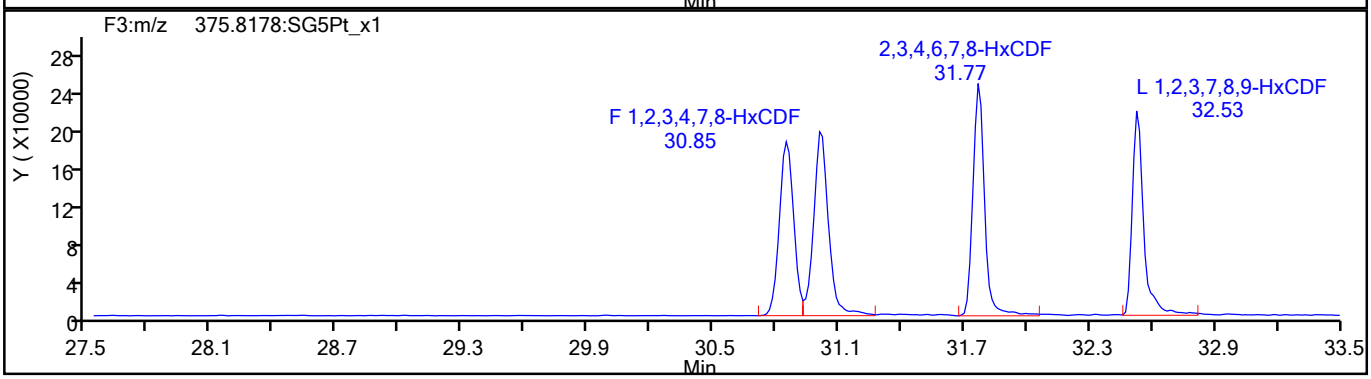

HxCDF Standards

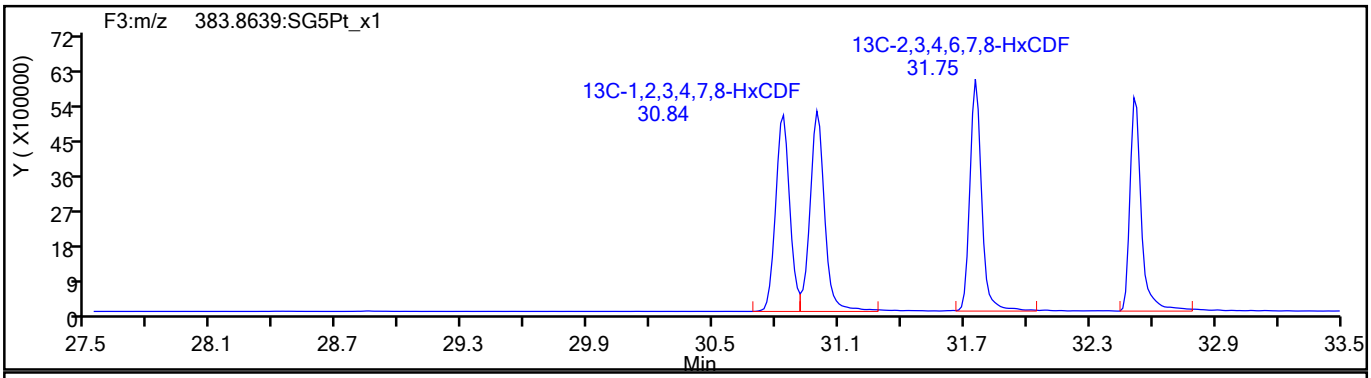

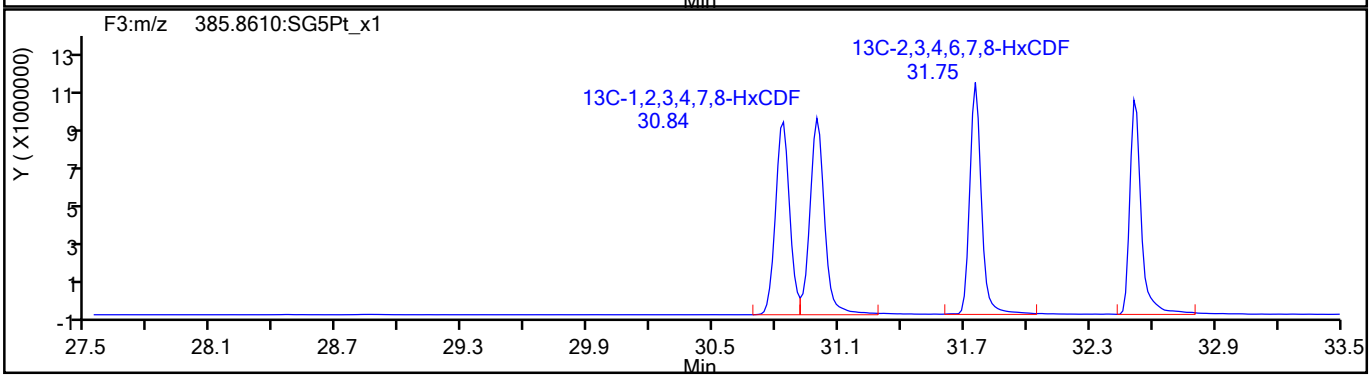

778441

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

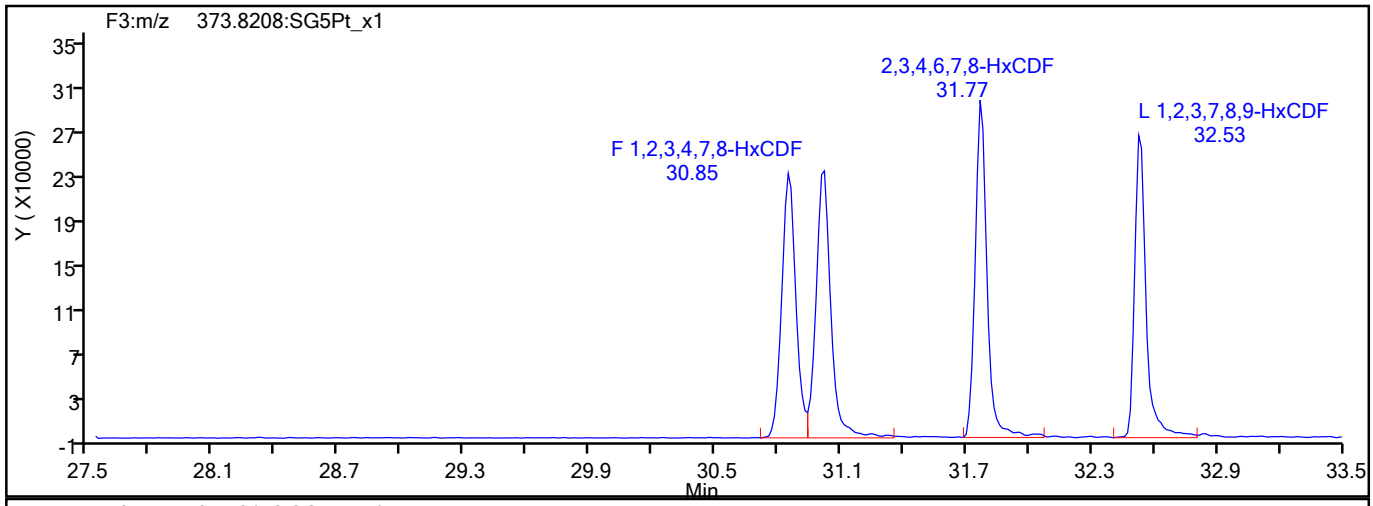

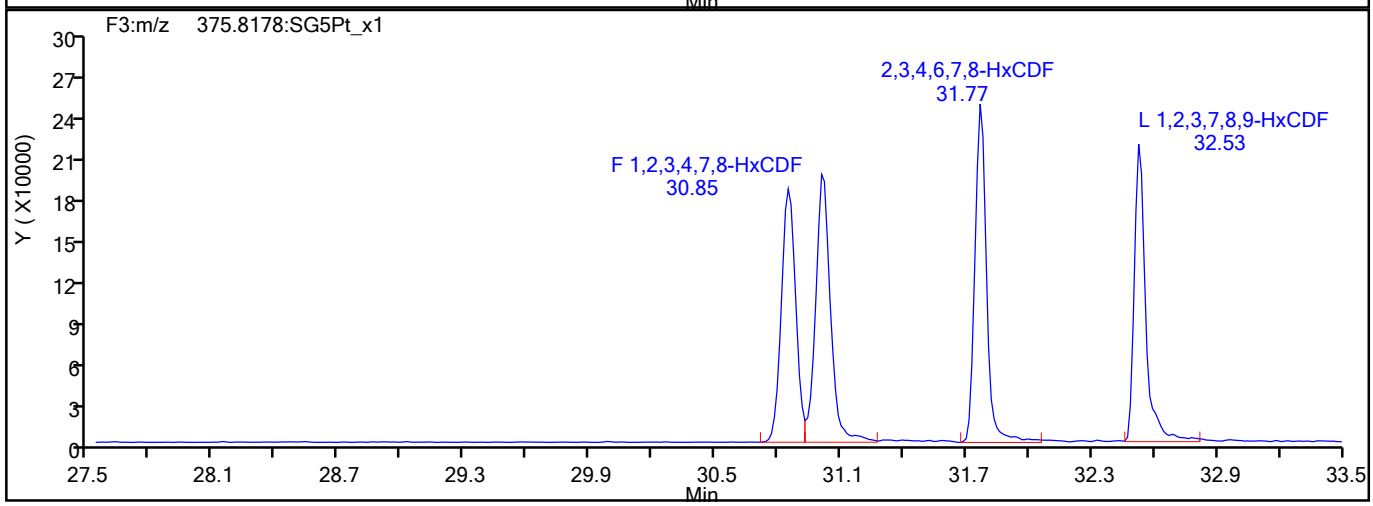

HxCDF Interference Mass

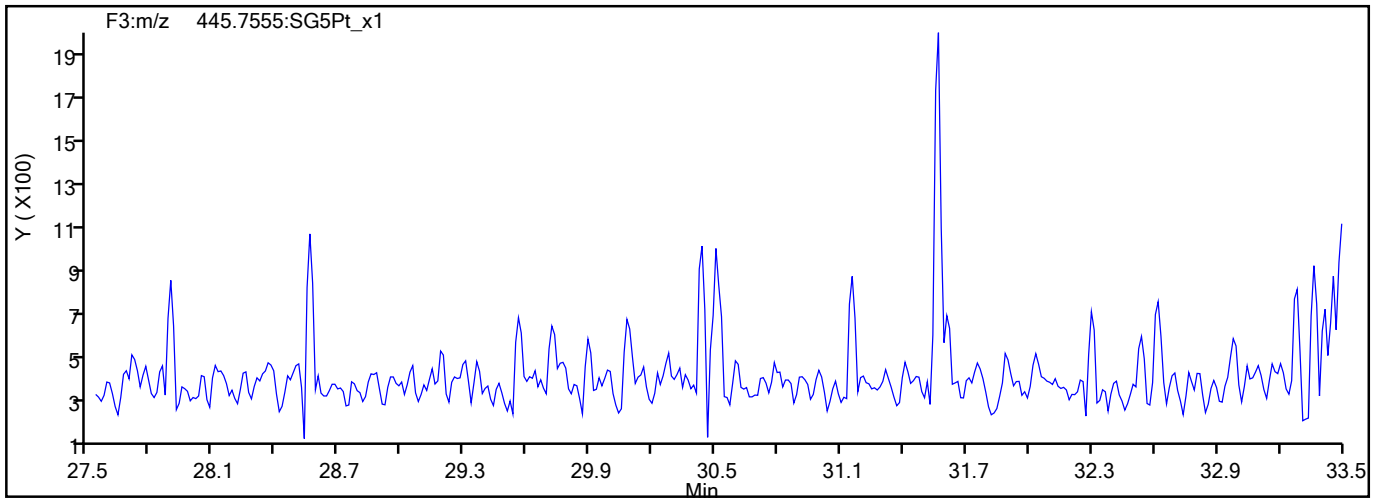

778442

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

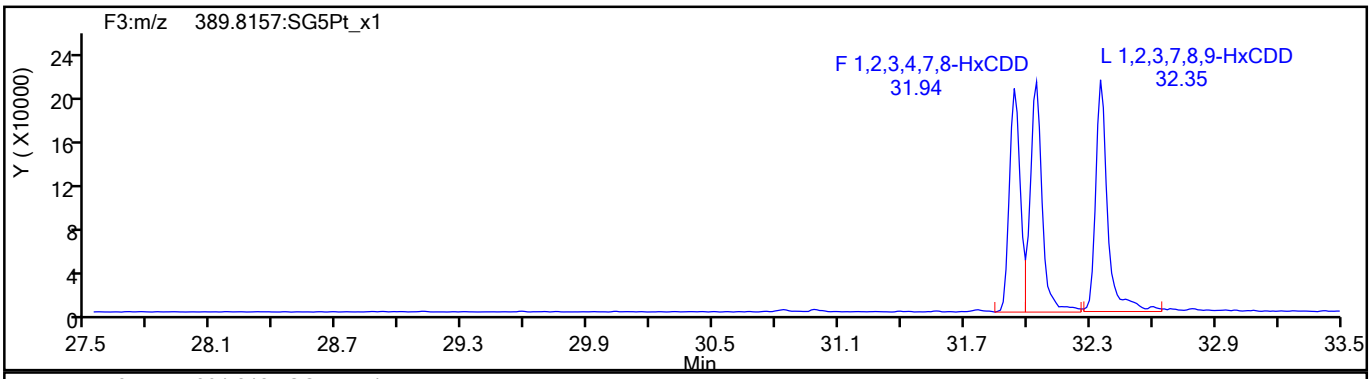

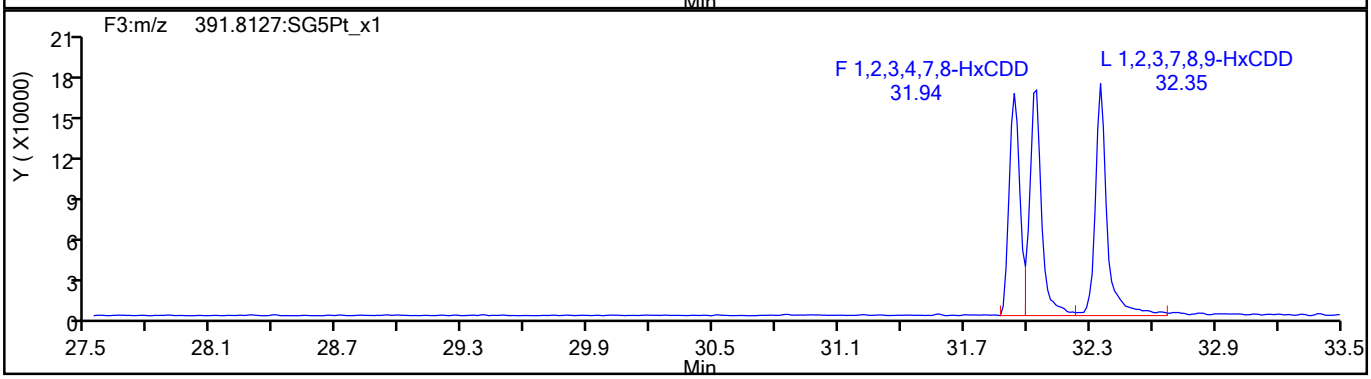

HxCDD Standards

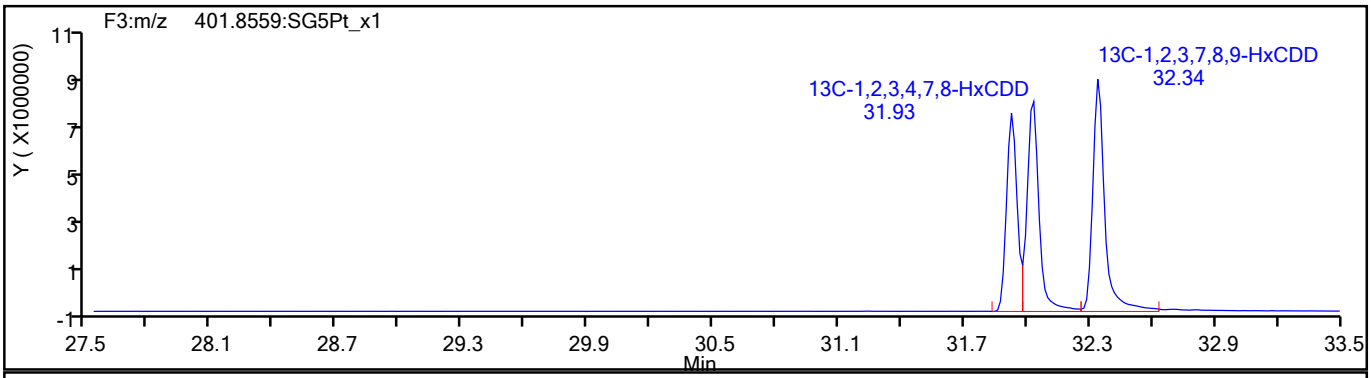

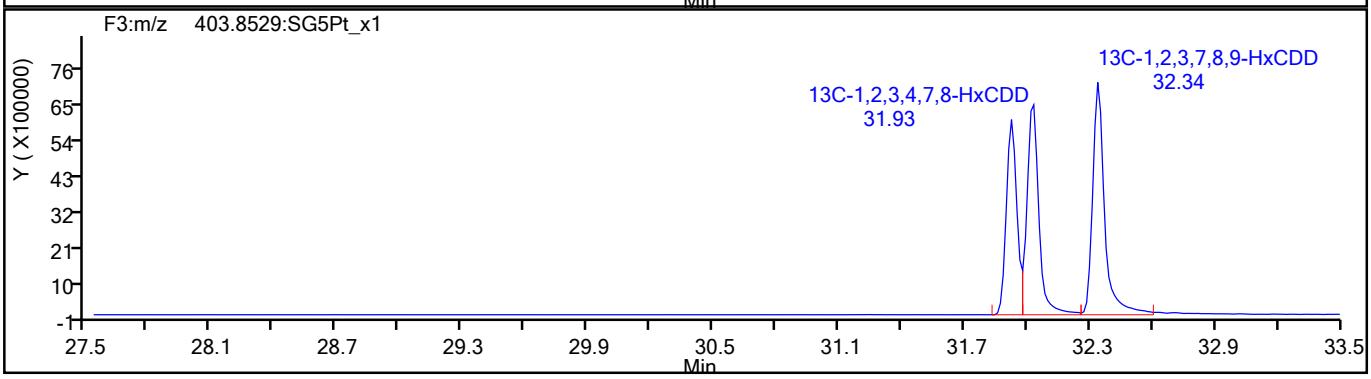

778443

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

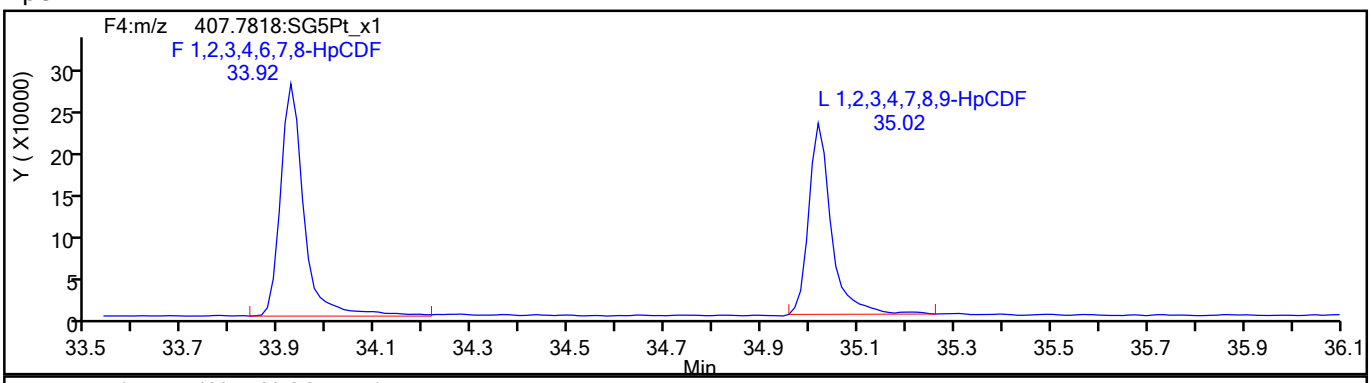

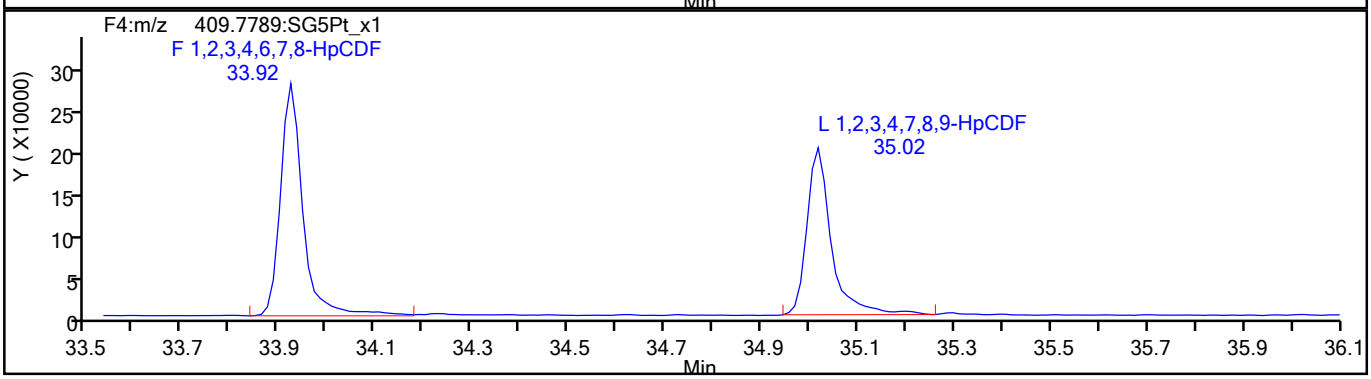

HpCDF Standards

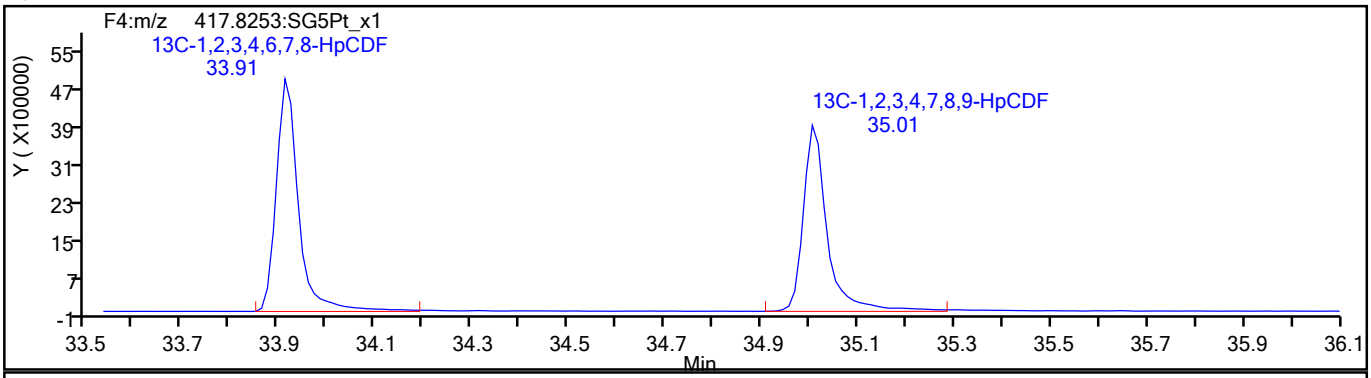

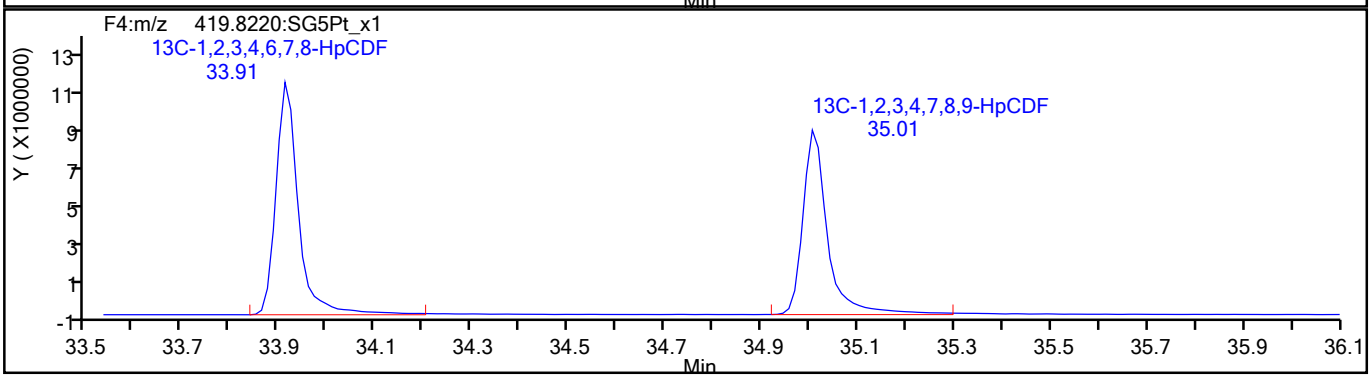

778444

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

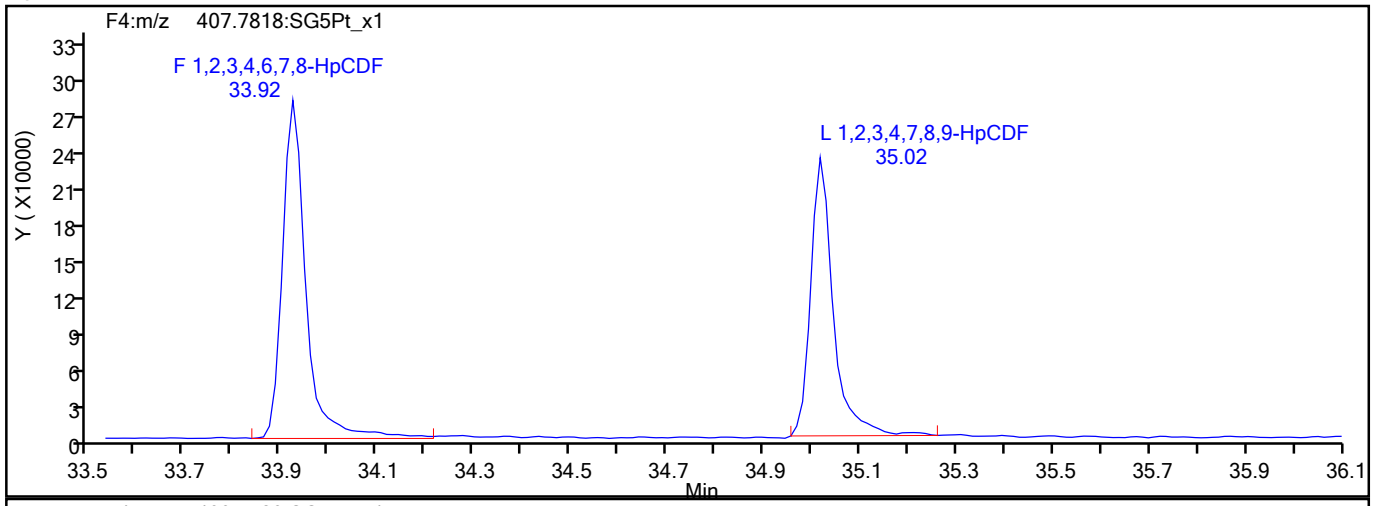

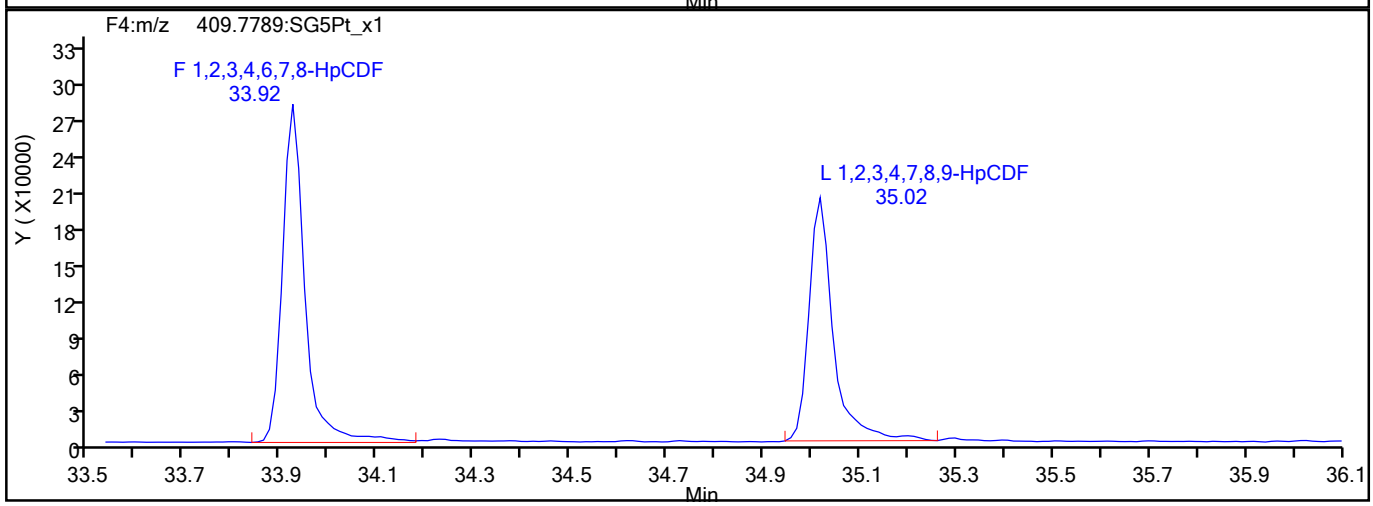

HpCDF Interference Mass

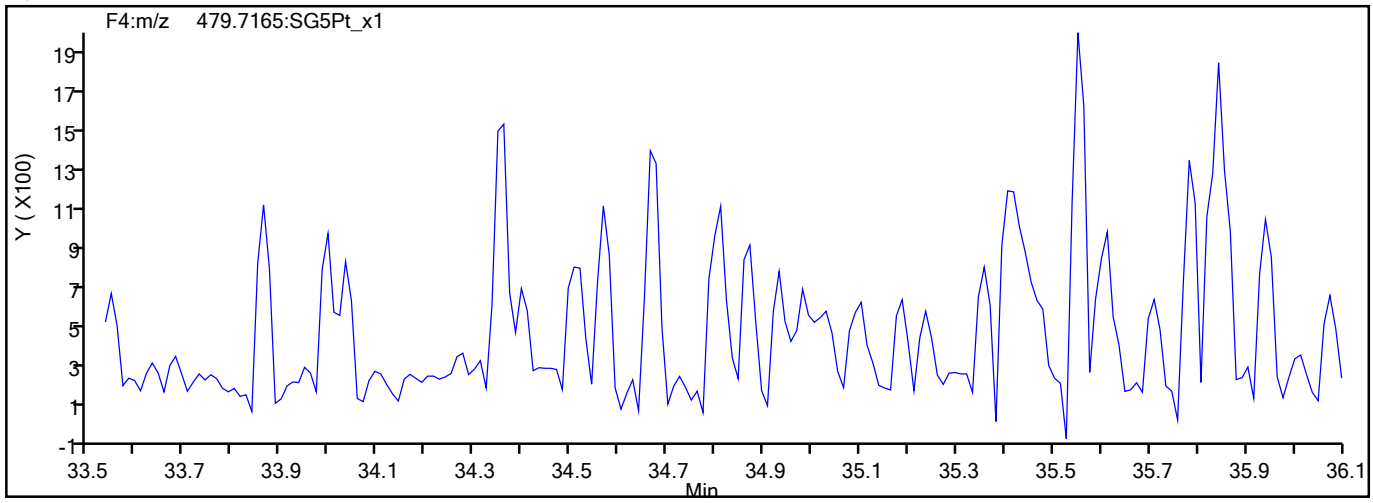

778445

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

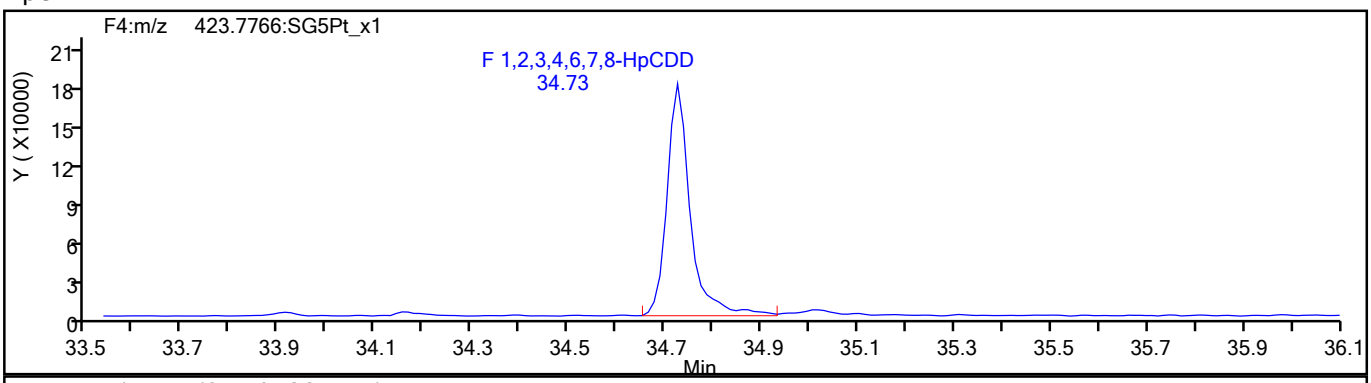

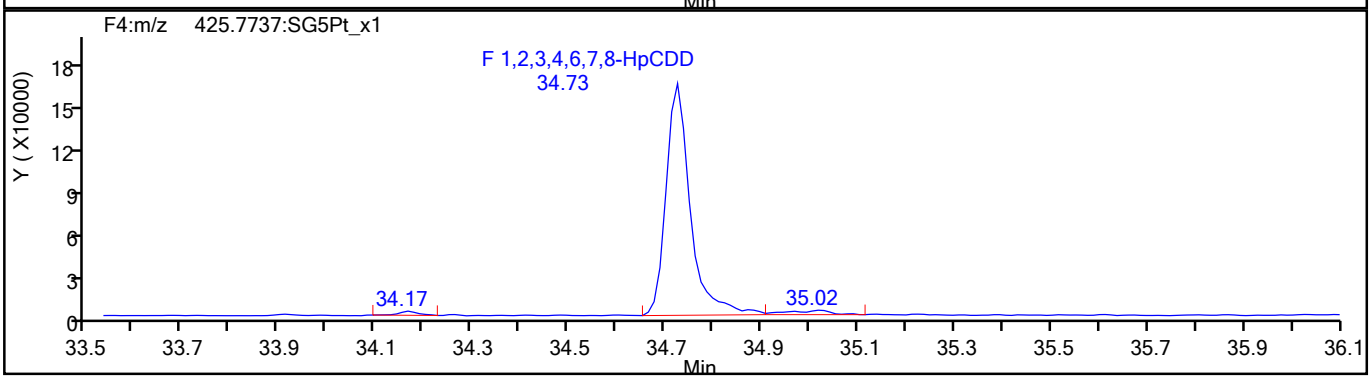

HpCDD Standards

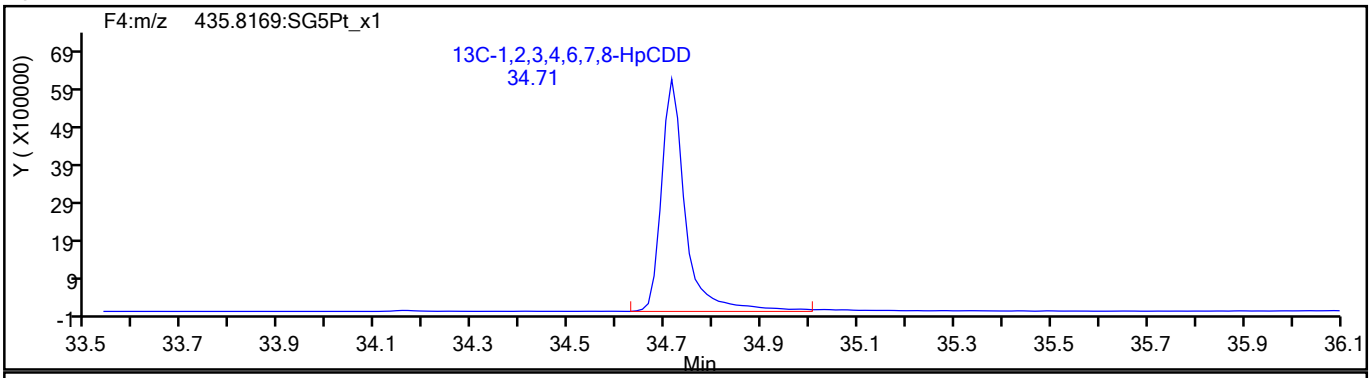

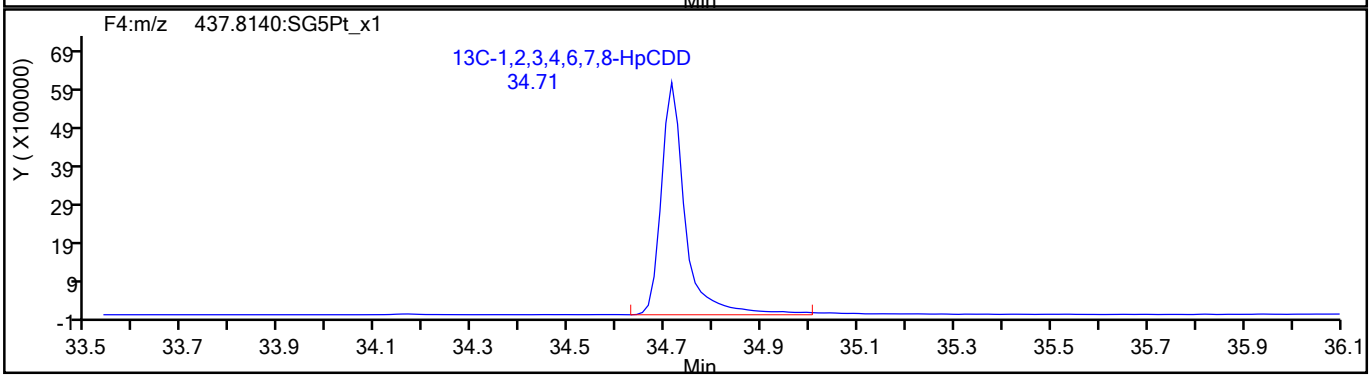

778446

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

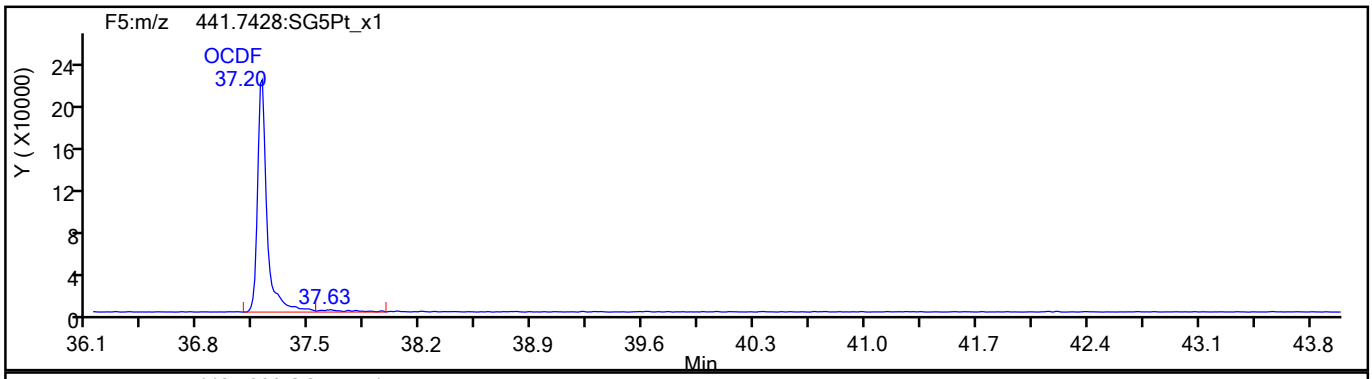

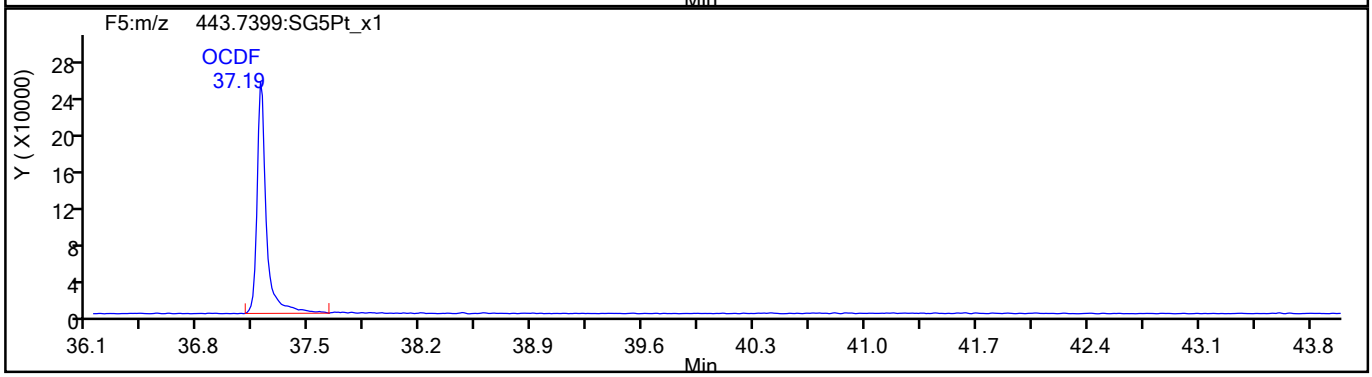

OCDF Standards

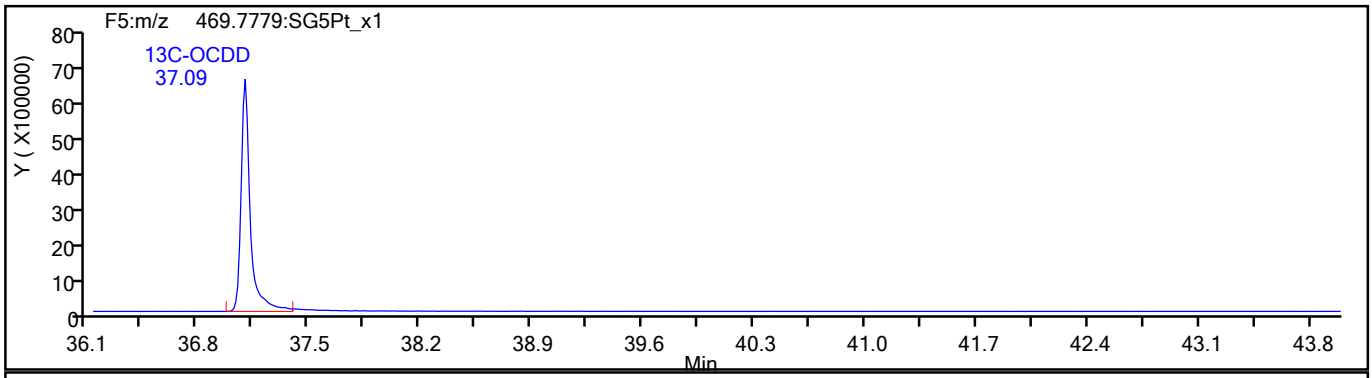

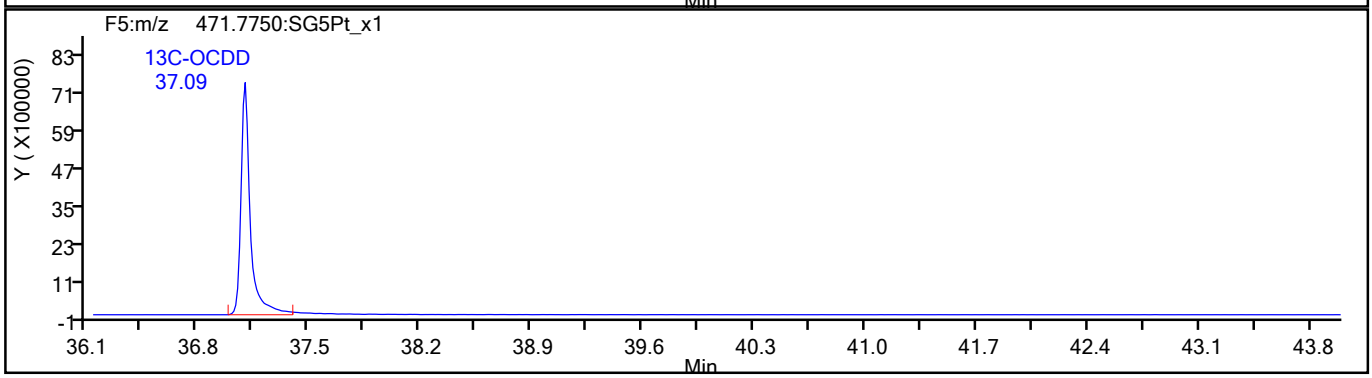

778447

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

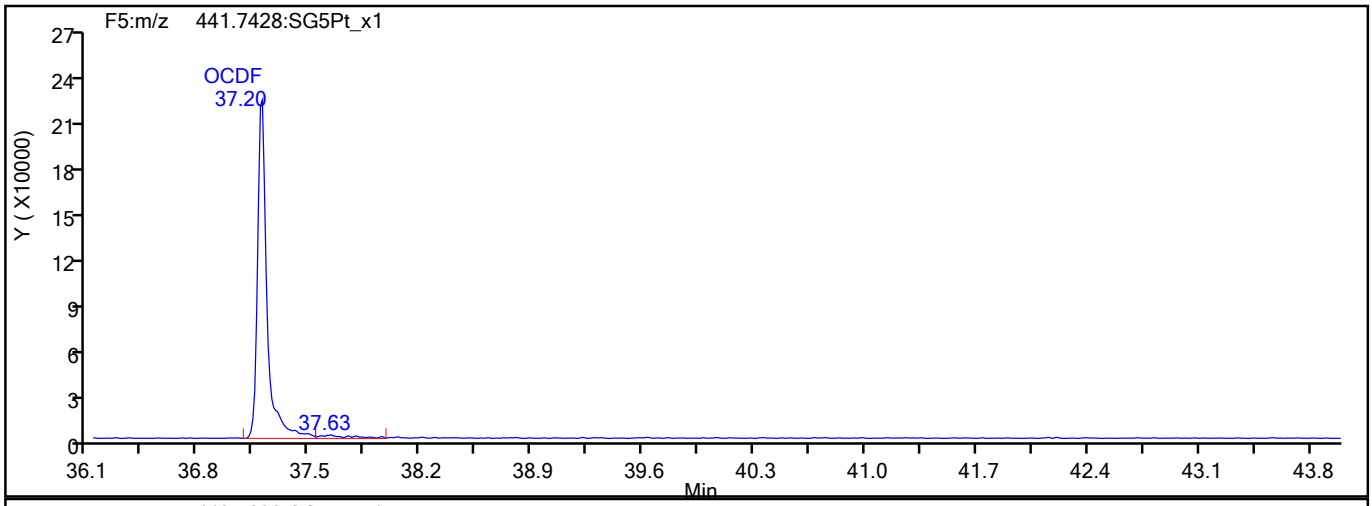

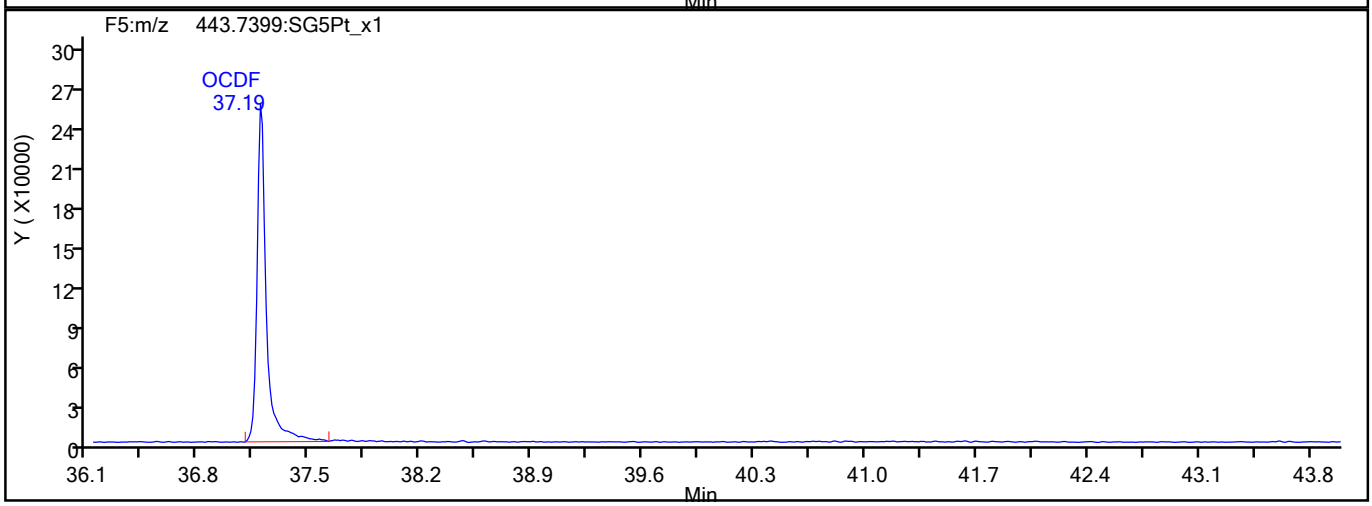

OCDF Interference Mass

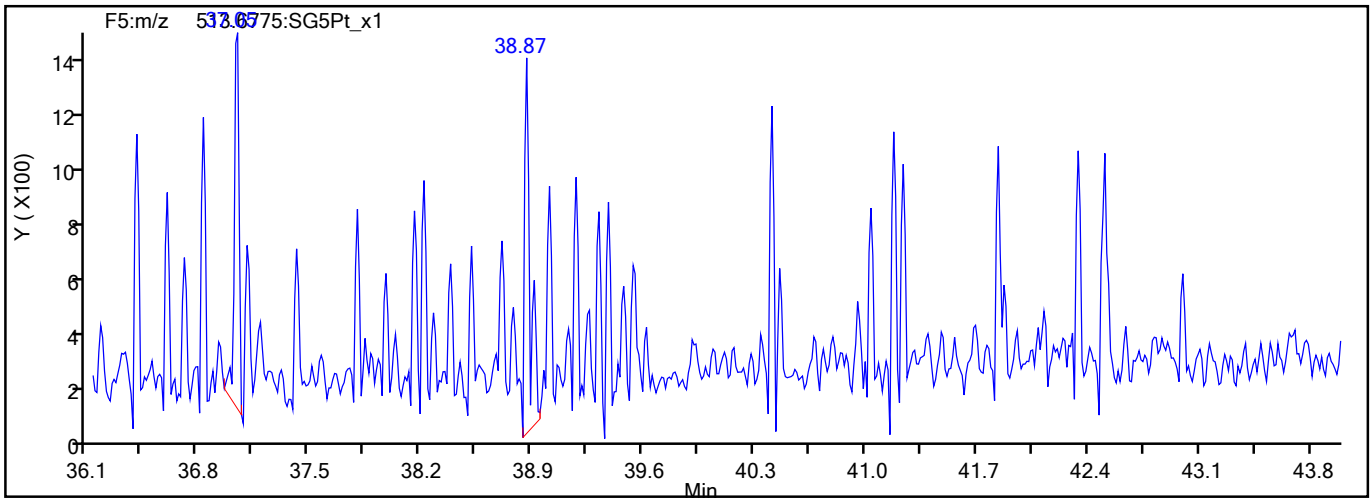

778448

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

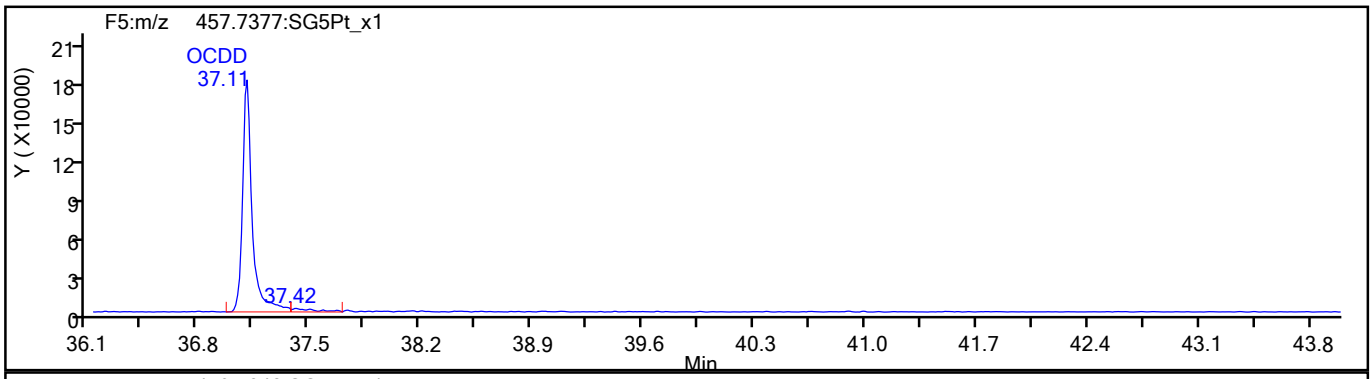

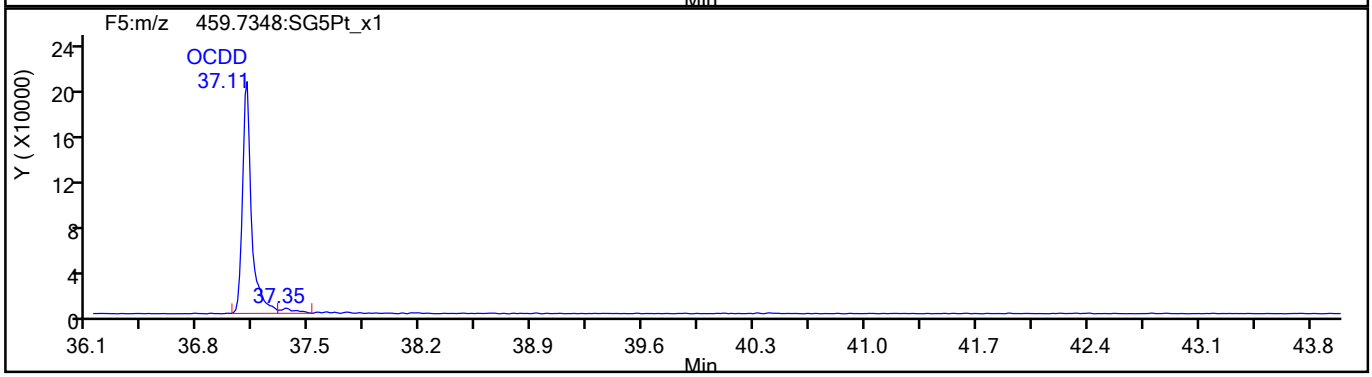

OCDD Standards

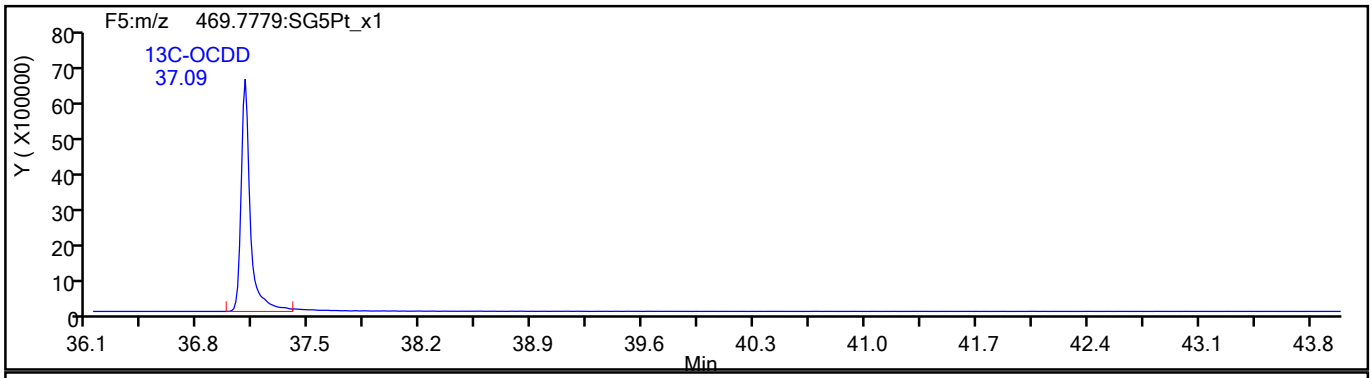

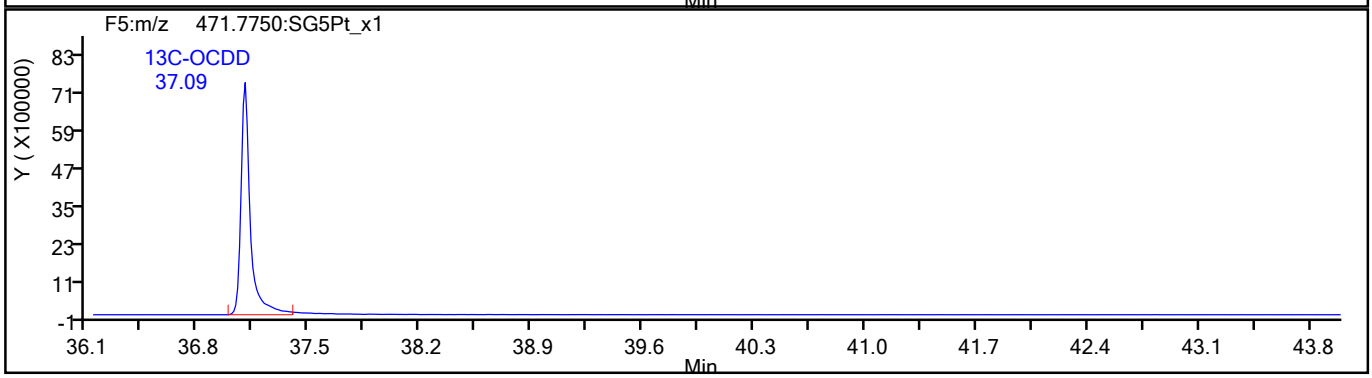

778449

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

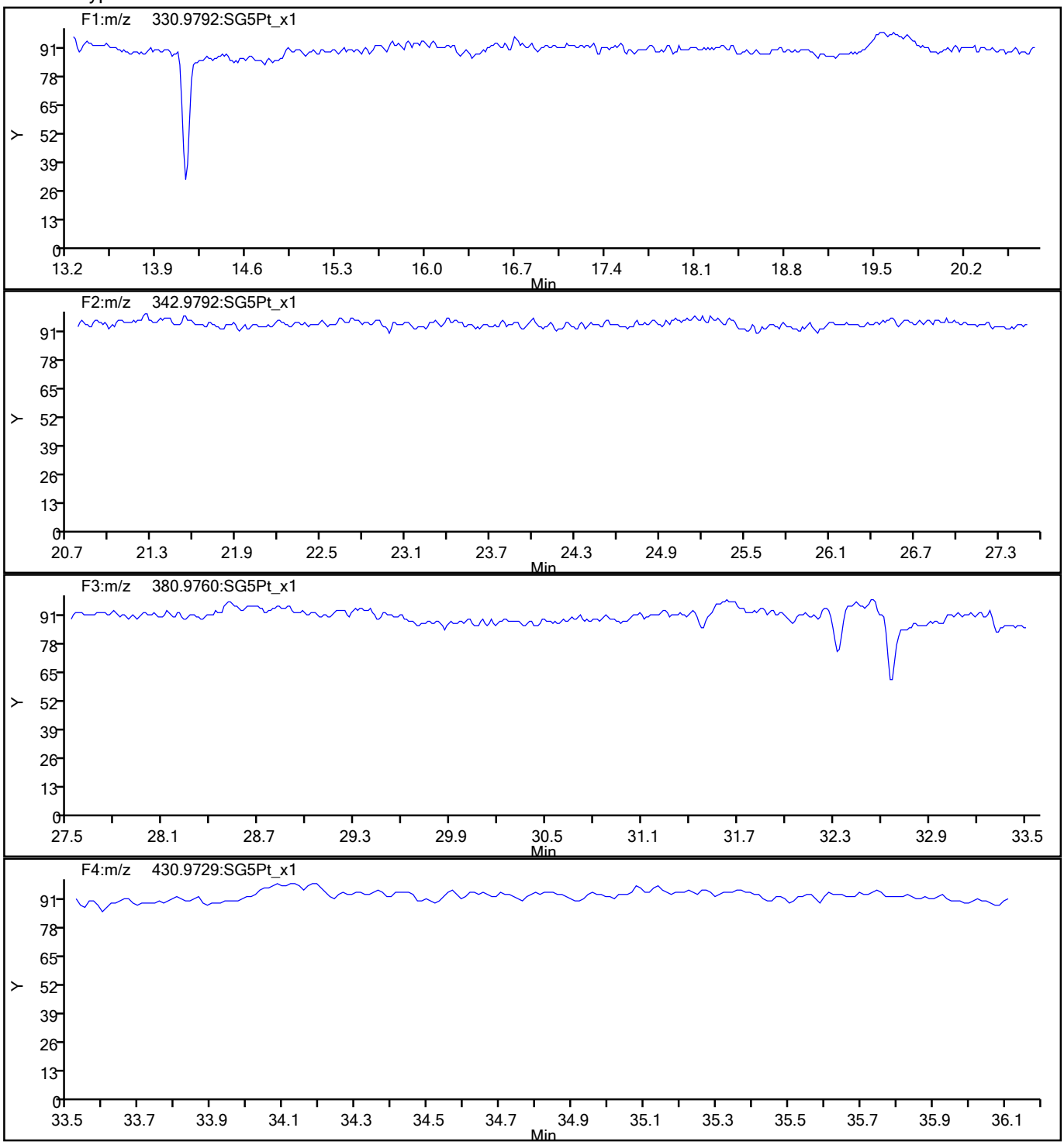

778450

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

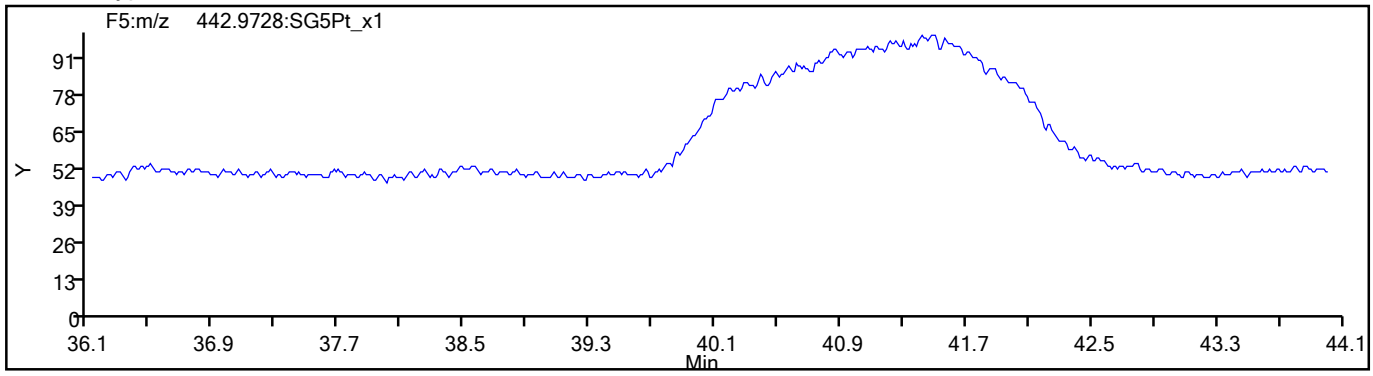

778451

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62853211	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	98246522	0.78	1.6249	96.2	96.2	0.1370	0.1370	96.20	
2,3,7,8-TCDF	17.628	1709191	0.74	1.0239	1.699	1.699	0.0115	0.0115	84.95	
S Total TCDF					1.699	1.699	0.0115	0.0115		
D 13C-2,3,7,8-TCDD	18.338	53975587	0.81	0.8993	95.5	95.5	0.1627	0.1627	95.49	
$ 37Cl4-2,3,7,8-TCDD	18.354	1231219		1.1071	1.769	1.769	0.009070	0.009070	88.47	
2,3,7,8-TCDD	18.354	1184284	0.77	1.2541	1.750	1.750	0.0187	0.0187	87.48	
S Total TCDD					1.750	1.750	0.0187	0.0187		
D 13C-1,2,3,7,8-PeCDF	22.749	72525655	1.59	1.2101	95.4	95.4	0.2163	0.2163	95.36	
1,2,3,7,8-PeCDF	22.776	6620354	1.62	1.0611	8.602	8.602	0.0369	0.0369	86.02	
D 13C-2,3,4,7,8-PeCDF	24.126	74944110	1.59	1.2395	96.2	96.2	0.2111	0.2111	96.20	a
2,3,4,7,8-PeCDF	24.153	6452410	1.61	1.0184	8.454	8.454	0.0398	0.0398	84.54	
S Total PeCDF					17.1	17.1	0.0383	0.0383		
D 13C-1,2,3,7,8-PeCDD	24.862	46721712	1.62	0.7612	97.7	97.7	0.1174	0.1174	97.65	
1,2,3,7,8-PeCDD	24.889	4219570	1.58	1.0484	8.614	8.614	0.0282	0.0282	86.14	
S Total PeCDD					8.614	8.614	0.0282	0.0282		
D 13C-1,2,3,4,7,8-HxCDF	30.835	65726932	0.51	1.0837	101.6	101.6	0.5284	0.5284	102	a
1,2,3,4,7,8-HxCDF	30.848	6041767	1.22	1.0851	8.471	8.471	0.0611	0.0611	84.71	
D 13C-1,2,3,6,7,8-HxCDF	30.995	68089005	0.53	1.1279	101.1	101.1	0.5077	0.5077	101	
1,2,3,6,7,8-HxCDF	31.021	6561860	1.24	1.1260	8.559	8.559	0.0596	0.0596	85.59	
D 13C-2,3,4,6,7,8-HxCDF	31.753	64406928	0.52	1.0637	101.4	101.4	0.5383	0.5383	101	
2,3,4,6,7,8-HxCDF	31.767	6352404	1.21	1.1675	8.448	8.448	0.0492	0.0492	84.48	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58828058	0.51	0.9676	101.8	101.8	0.5918	0.5918	102	
1,2,3,7,8,9-HxCDF	32.526	5963032	1.22	1.1664	8.691	8.691	0.0536	0.0536	86.91	
S Total HxCDF					34.2	34.2	0.0559	0.0559		
* 13C-1,2,3,7,8,9-HxCDD	32.339	59719891	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44877133	1.26	0.7334	102.5	102.5	0.4904	0.4904	102	a
1,2,3,4,7,8-HxCDD	31.940	3996910	1.25	1.0640	8.370	8.370	0.0541	0.0541	83.70	
D 13C-1,2,3,6,7,8-HxCDD	32.033	52974056	1.27	0.8802	100.8	100.8	0.4087	0.4087	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.046	4517909	1.28	1.0001	8.528	8.528	0.0541	0.0541	85.28	
1,2,3,7,8,9-HxCDD	32.353	4612548	1.27	1.1325	8.324	8.324	0.0492	0.0492	83.24	
S Total HxCDD					25.2	25.2	0.0525	0.0525		
D 13C-1,2,3,4,6,7,8-HpCDF	33.911	46691158	0.44	0.7730	101.1	101.1	1.219	1.219	101	
1,2,3,4,6,7,8-HpCDF	33.924	5795616	1.06	1.4413	8.612	8.612	0.0908	0.0908	86.12	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	42362179	0.44	0.7008	101.2	101.2	1.344	1.344	101	a
1,2,3,4,7,8,9-HpCDF	35.017	4773949	1.04	1.3174	8.554	8.554	0.1198	0.1198	85.54	
S Total HpCDF					17.2	17.2	0.1053	0.1053		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	38689128	1.01	0.6472	100.1	100.1	0.6644	0.6644	100	
1,2,3,4,6,7,8-HpCDD	34.725	3690749	1.06	1.0943	8.717	8.717	0.0588	0.0588	87.17	
S Total HpCDD					8.717	8.717	0.0588	0.0588		
D 13C-OCDD	37.093	52034518	0.88	0.4472	194.9	194.9	0.3057	0.3057	97.43	
OCDF	37.189	6198469	0.89	1.4382	16.6	16.6	0.0331	0.0331	82.83	
OCDD	37.105	5013385	0.90	1.1070	17.4	17.4	0.0477	0.0477	87.03	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28386456	7046087	6003	15007	1174		
333.9339	18.142	18.142	0		34466755	8558284	3128	7820	2736	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42972486	10763336	8679	21697	1240		
317.9389	17.613	17.616	0	0.971	55274036	13878642	5218	13045	2660	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	725190	178427	386	965	462		
305.8987	17.628	17.631	0	1.001	984001	248871	771	1927	323	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24153490	5697854	6003	15007	949		
333.9339	18.338	18.338	0	1.011	29822097	7031837	3128	7820	2248	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	1231219	295748	627	1567	472		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	516509	120344	727	1817	166		
321.8936	18.354	18.357	0	1.001	667775	162973	470	1175	347	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44514928	7853181	9659	24147	813		
353.8970	22.749	22.754	0	1.254	28010727	4960984	6675	16687	743	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	4089215	716349	1056	2640	678		
341.8567	22.776	22.779	0	1.001	2531139	446464	949	2372	470	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											a
351.9000	24.126	24.129	0	1.330	46033296	7621284	9659	24147	789		a
353.8970	24.126	24.129	0	1.330	28910814	4739818	6675	16687	710	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	3984657	653372	1056	2640	619		
341.8567	24.153	24.156	0	1.001	2467753	411895	949	2372	434	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28869986	4442492	3510	8775	1266		
369.8919	24.862	24.865	0	1.370	17851726	2719251	2068	5170	1315	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	2584600	398905	491	1227	812		
357.8516	24.889	24.892	0	1.001	1634970	246537	355	887	694	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											a
383.8639	30.835	30.838	0	0.953	22324815	4908430	11721	29302	419		a
385.8610	30.835	30.838	0	0.953	43402117	9487505	22146	55365	428	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.848	30.857	0	1.000	3322045	734549	2125	5312	346		
375.8178	30.848	30.857	0	1.000	2719722	584076	1696	4240	344	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	23443638	4852452	11721	29302	414		
385.8610	30.995	31.003	0	0.958	44645367	9390378	22146	55365	424	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.001	3628802	774738	2125	5312	365		
375.8178	31.021	31.022	0	1.001	2933058	621989	1696	4240	367	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.753	31.756	0	0.982	22116278	5724833	11721	29302	488		
385.8610	31.753	31.756	0	0.982	42290650	10891641	22146	55365	492	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	3476984	900887	2125	5312	424		
375.8178	31.767	31.772	0	1.000	2875420	748664	1696	4240	441	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	19952155	5224965	11721	29302	446		
385.8610	32.512	32.523	-1	1.005	38875903	10047992	22146	55365	454	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	3272570	870864	2125	5312	410		
375.8178	32.526	32.534	0	1.000	2690462	702575	1696	4240	414	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33208186	8207924	11753	29382	698		
403.8529	32.339	32.342	0		26511705	6578059	9521	23802	691	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	31.927	31.929	0	0.987	24991401	7247079	11753	29382	617		a
403.8529	31.927	31.929	0	0.987	19885732	5749736	9521	23802	604	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	2220855	634454	1798	4495	353		
391.8127	31.940	31.945	0	1.000	1776055	520388	1195	2987	435	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29637474	7731021	11753	29382	658		
403.8529	32.033	32.033	0	0.991	23336582	6105317	9521	23802	641	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.046	32.047	0	1.000	2539756	681391	1798	4495	379		
391.8127	32.046	32.047	0	1.000	1978153	525440	1195	2987	440	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	2578931	681238	1798	4495	379		
391.8127	32.353	32.355	0	1.013	2033617	530890	1195	2987	444	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.911	33.914	0	1.049	14324046	4548819	17096	42740	266		
419.8220	33.911	33.914	0	1.049	32367112	10373412	38619	96547	269	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	2984390	989226	3939	9847	251		
409.7789	33.924	33.926	0	1.000	2811226	912647	3871	9677	236	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											a
417.8253	35.005	35.010	0	1.082	12913204	3817815	17096	42740	223		a
419.8220	35.005	35.010	0	1.082	29448975	8551787	38619	96547	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	2430692	699814	3939	9847	178		
409.7789	35.017	35.020	0	1.000	2343257	686031	3871	9677	177	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19472945	5796031	12697	31742	456		
437.8140	34.714	34.716	0	1.073	19216183	5692167	12738	31845	447	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.725	34.726	0	1.000	1901971	557241	1605	4012	347		
425.7737	34.725	34.726	0	1.000	1788778	518346	1352	3380	383	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	24422535	6155132	2912	7280	2114		
471.7750	37.093	37.094	0	1.147	27611983	6845350	5172	12930	1324	0.88(0.76-1.02)	
OCDF											
441.7428	37.189	37.199	-1	1.003	2921445	715883	635	1587	1127		
443.7399	37.189	37.199	-1	1.003	3277024	845078	603	1507	1401	0.89(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	2373314	577341	633	1582	912		
459.7348	37.105	37.106	0	1.000	2640071	638330	739	1847	864	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.13

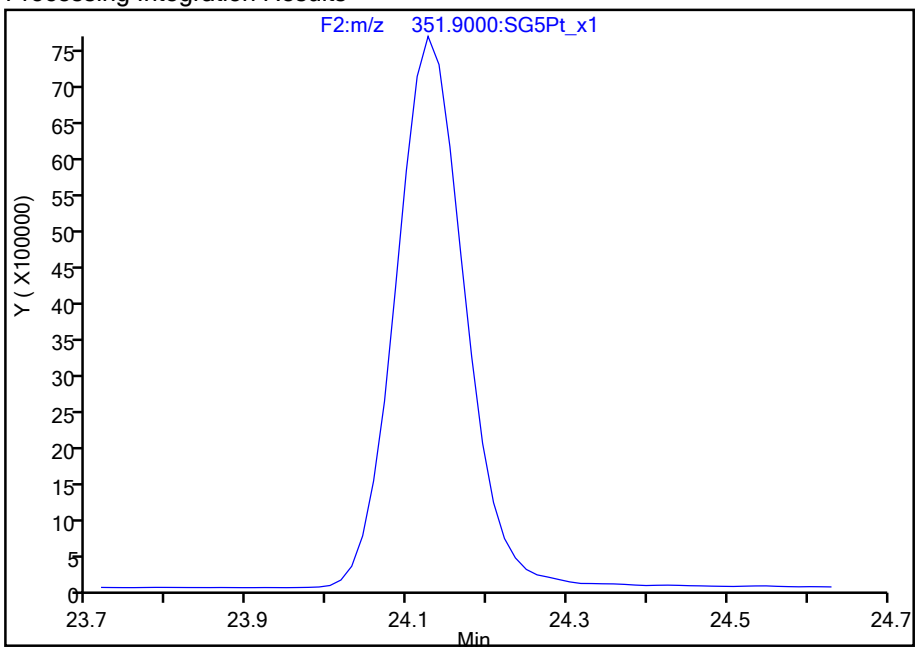

Manual Integration Results

RT: 24.13
Area: 46033296
Amount: 96.198549
Amount Units: pg/ul

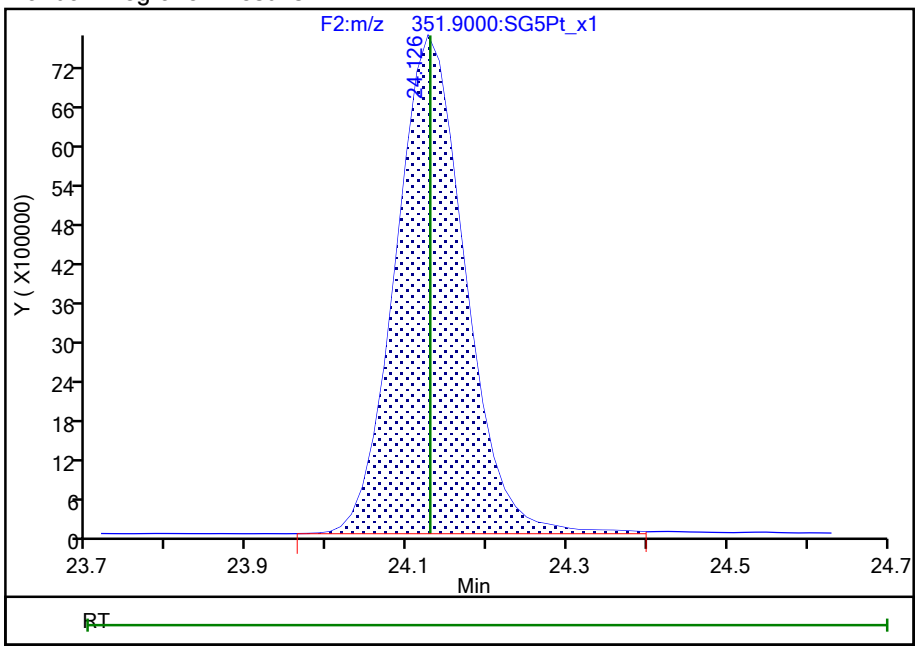

Reviewer: arghestanis, 26-Jul-2021 12:30:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

778457

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDF, CAS: 114423-98-2

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.84

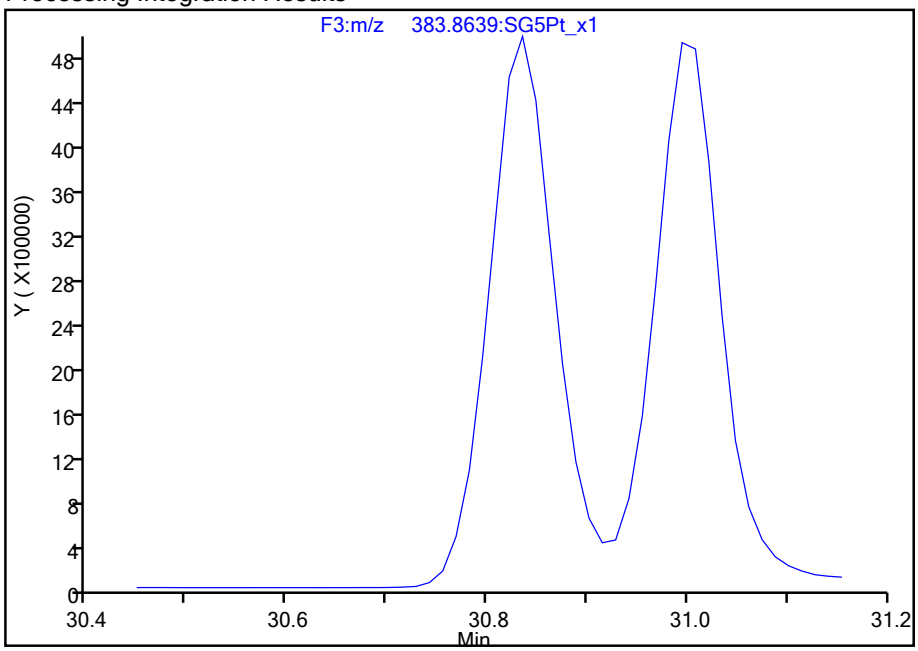

Manual Integration Results

RT: 30.84
Area: 22324815
Amount: 101.5622
Amount Units: pg/ul

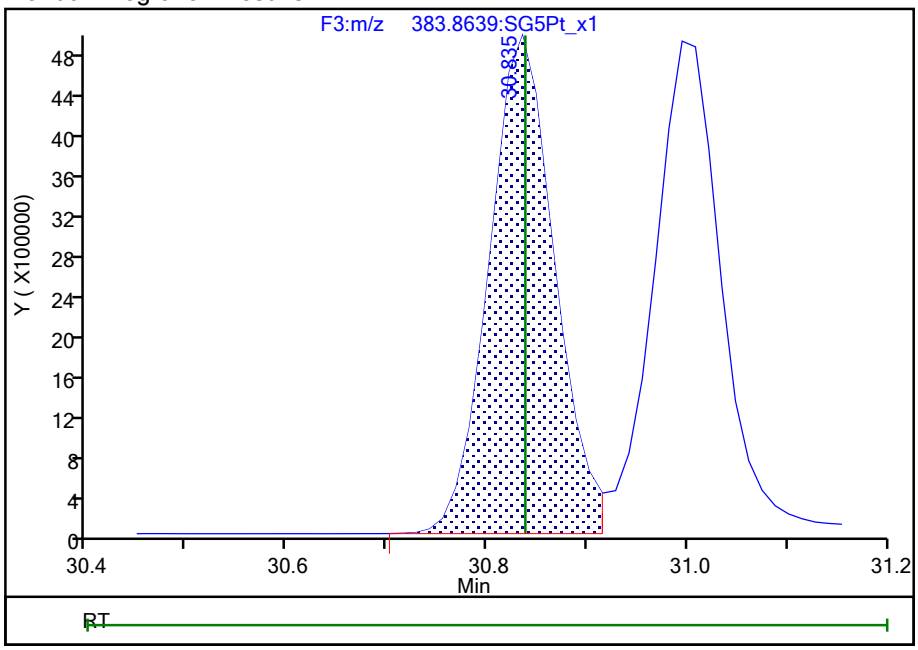

Reviewer: arghestanis, 26-Jul-2021 12:30:40
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

778458

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.93

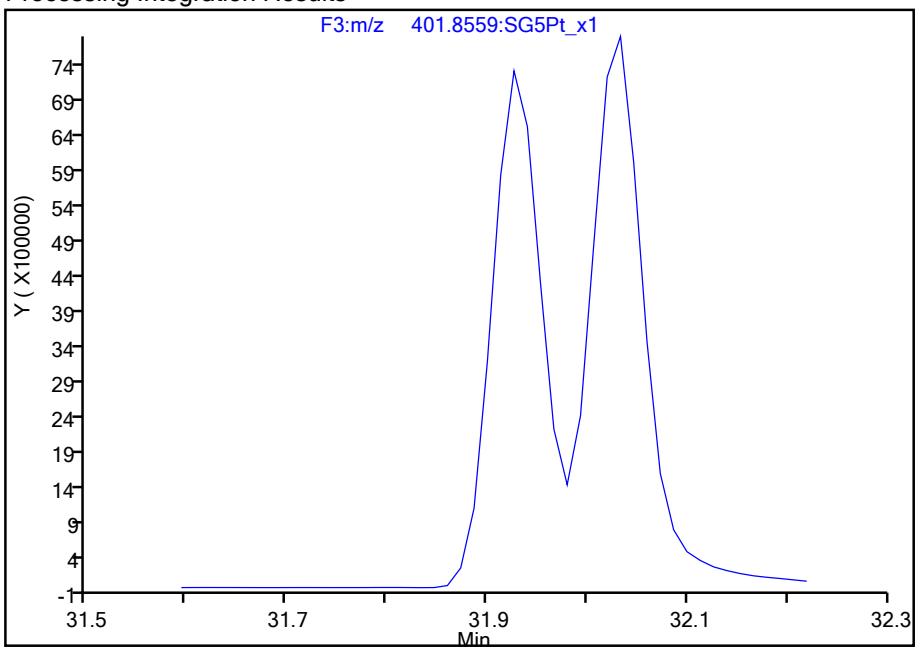

Manual Integration Results

RT: 31.93
Area: 24991401
Amount: 102.4585
Amount Units: pg/ul

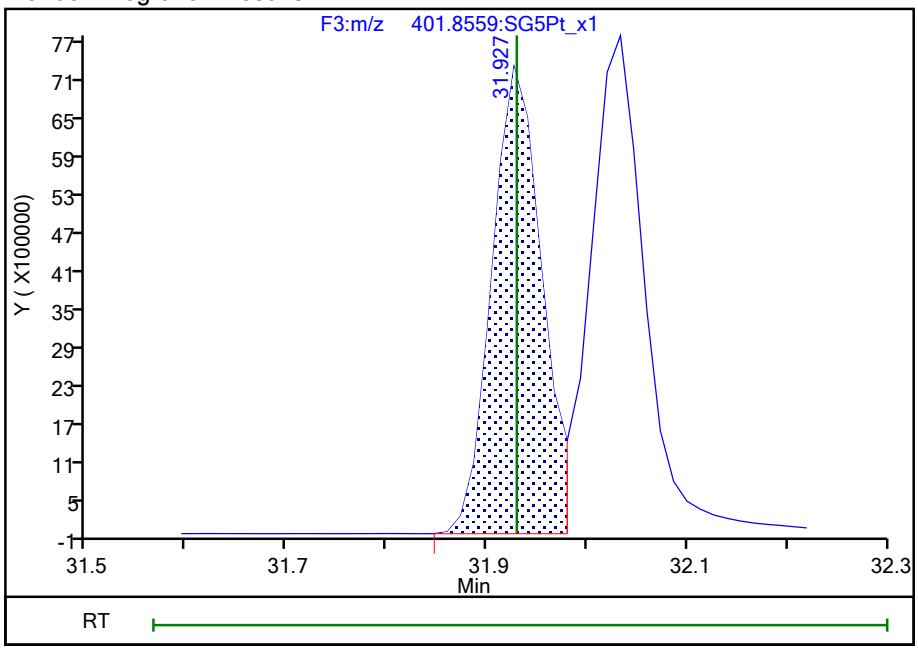

Reviewer: arghestanis, 26-Jul-2021 12:30:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

778459

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.01

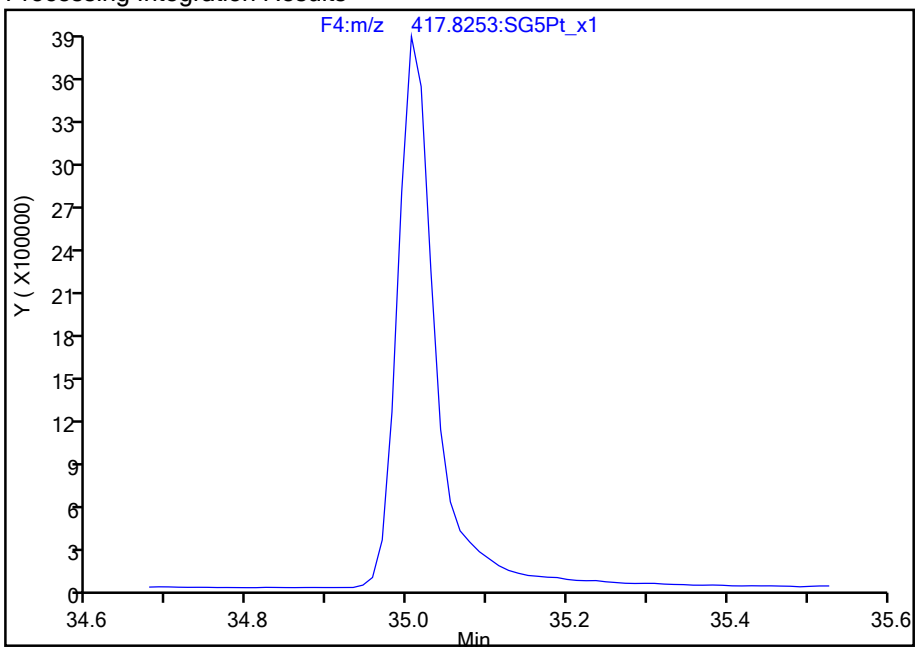

Manual Integration Results

RT: 35.01
Area: 12913204
Amount: 101.2180
Amount Units: pg/ul

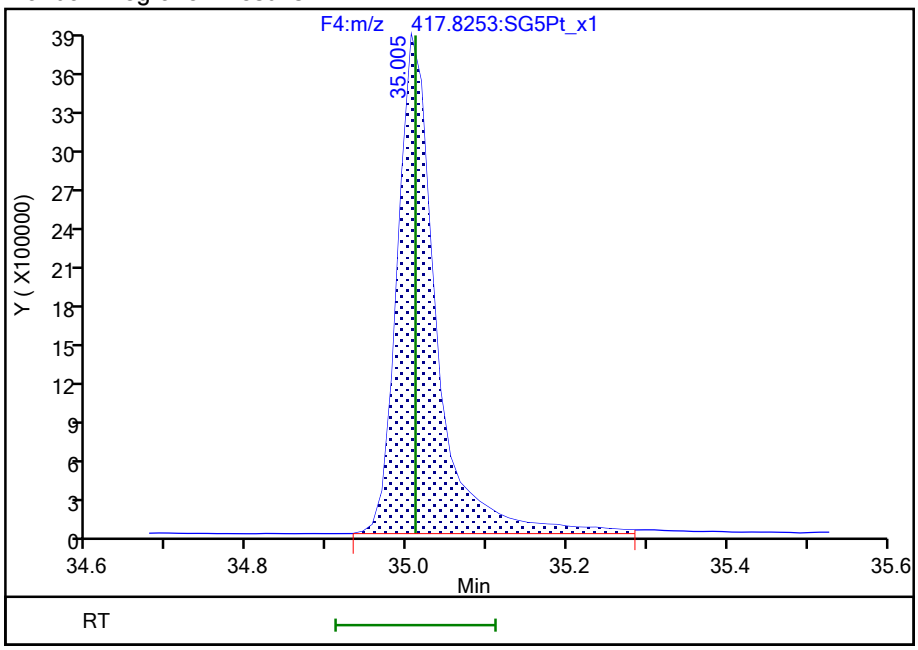

Reviewer: arghestanis, 26-Jul-2021 12:31:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

778460

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

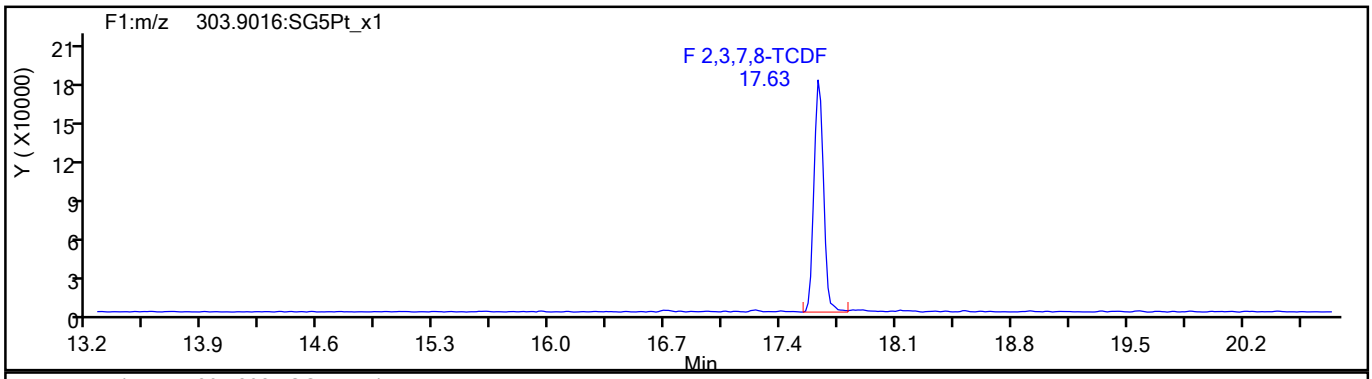

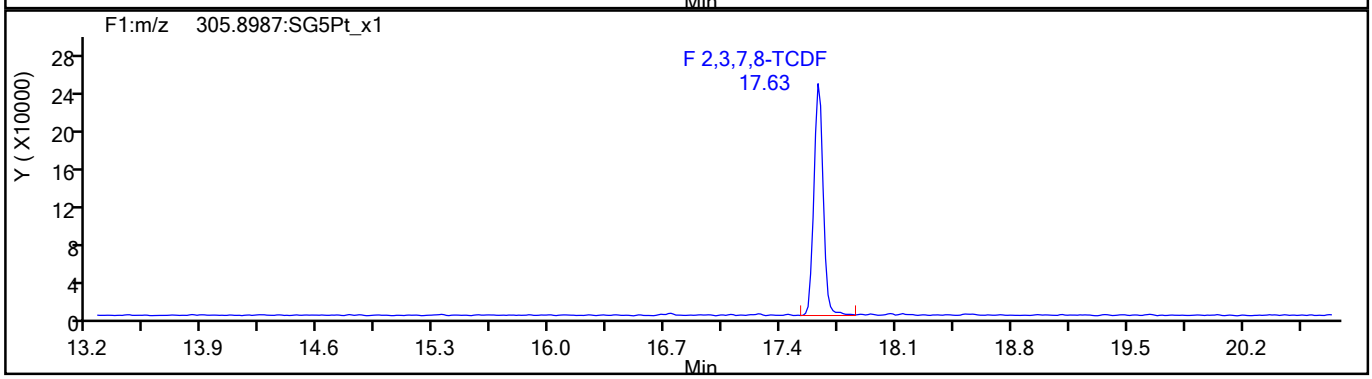

TCDF Standards

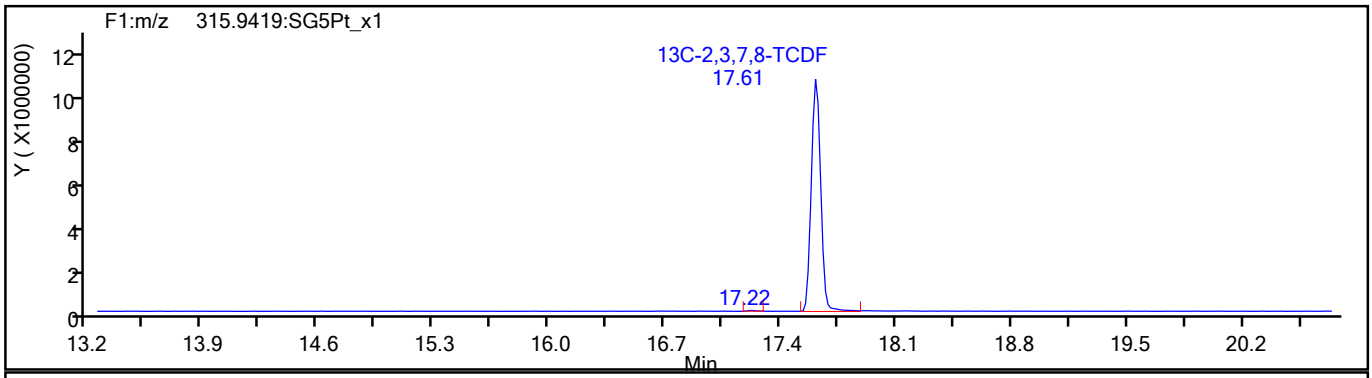

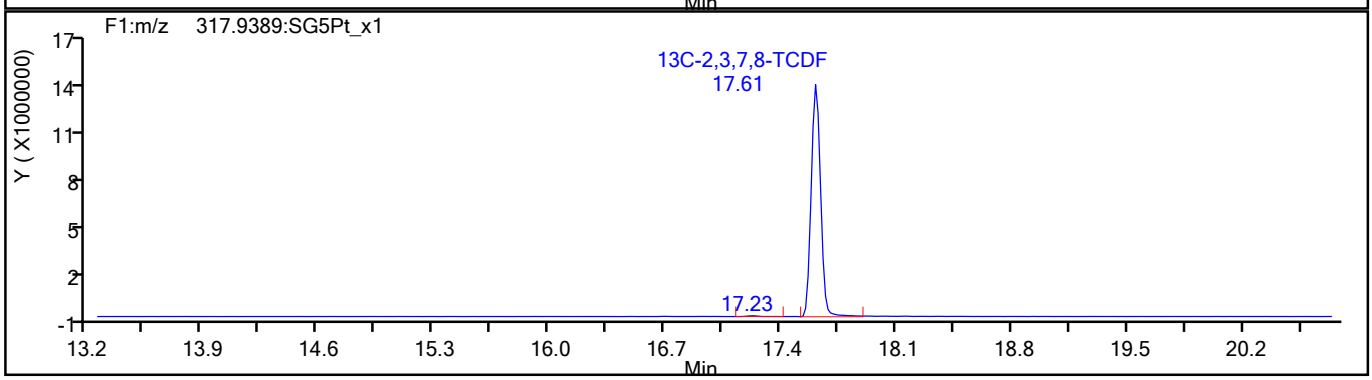

778461

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

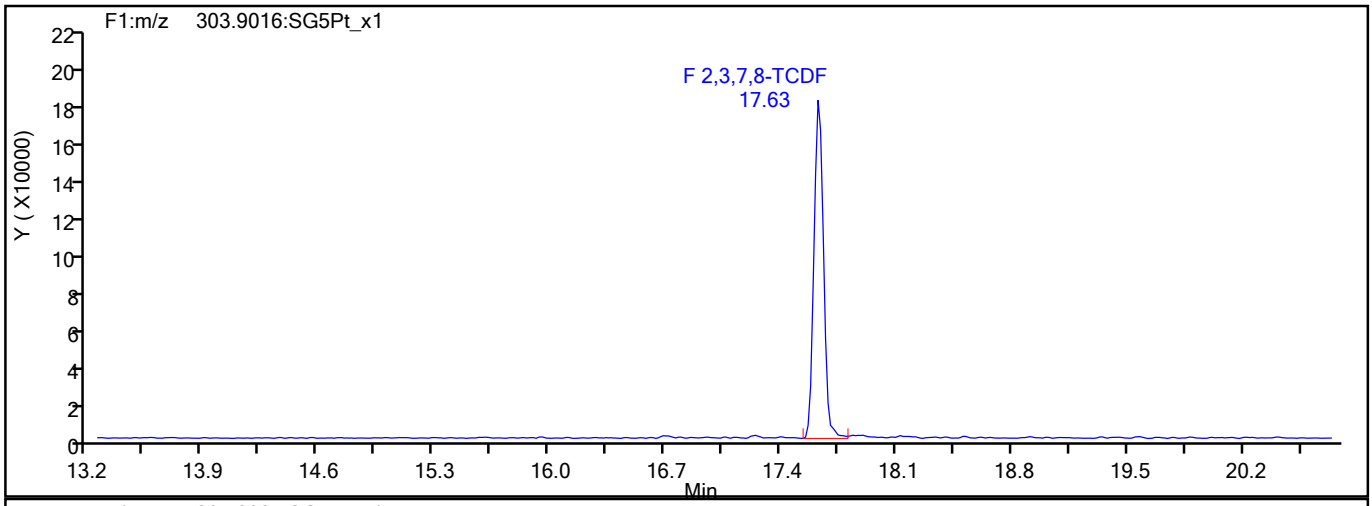

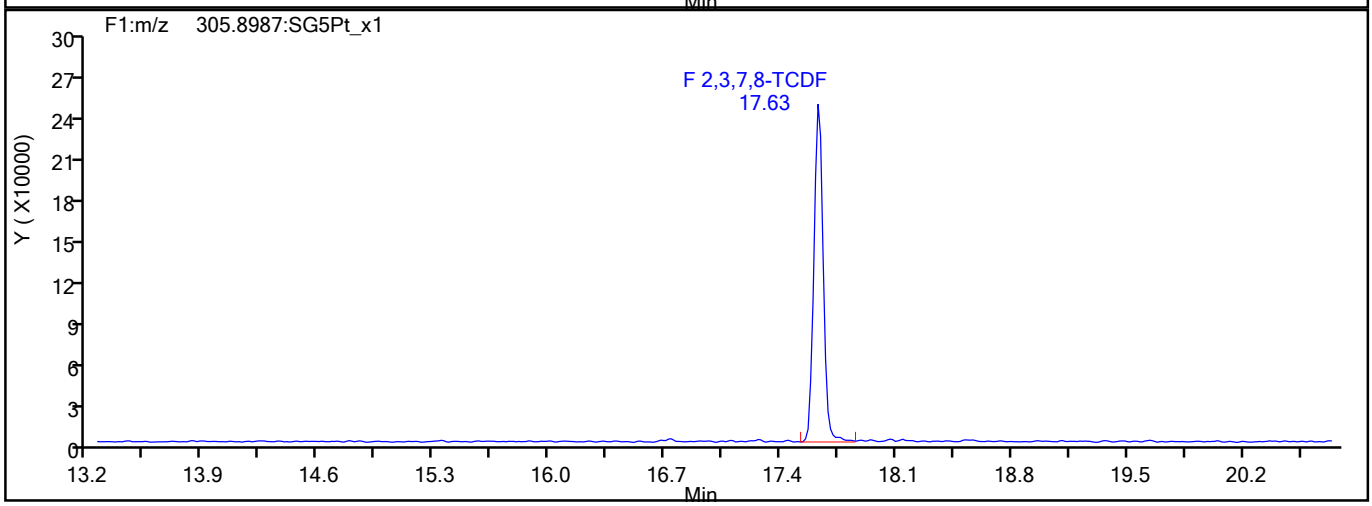

TCDF Interference Mass

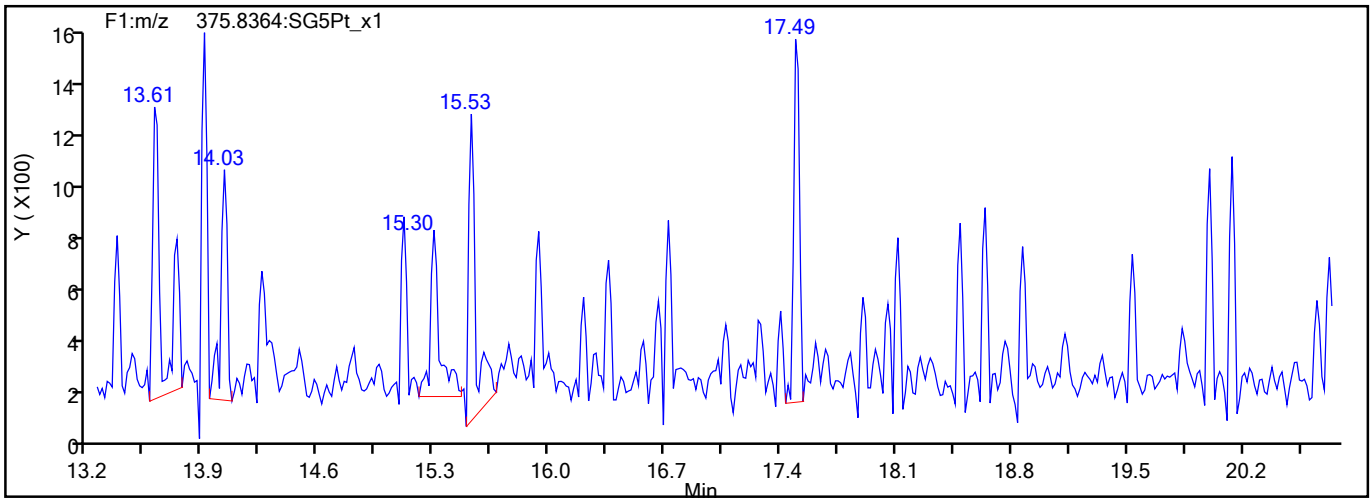

778462

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

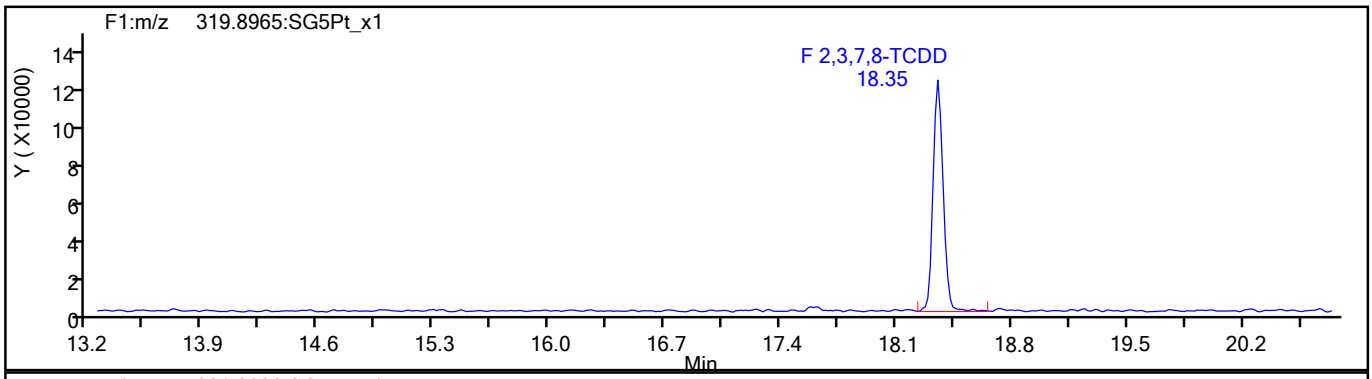

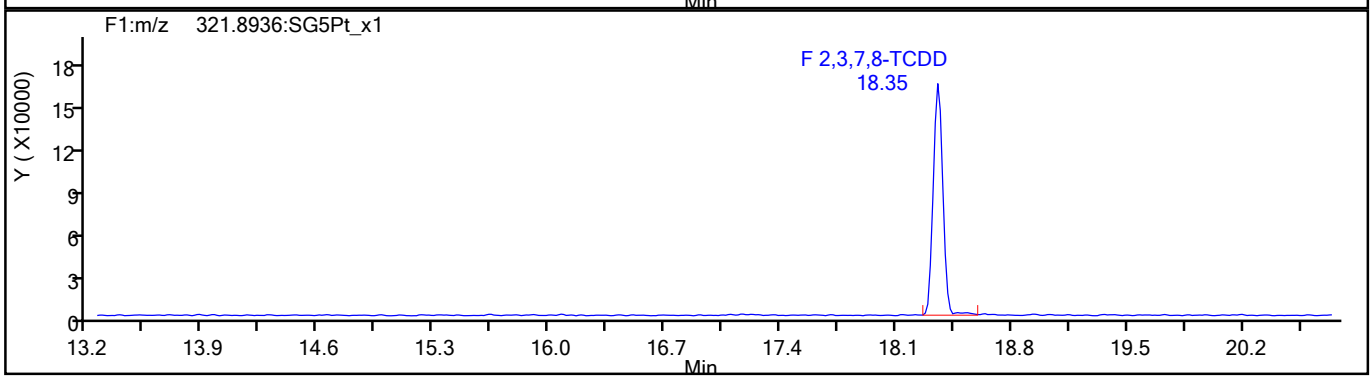

TCDD Standards

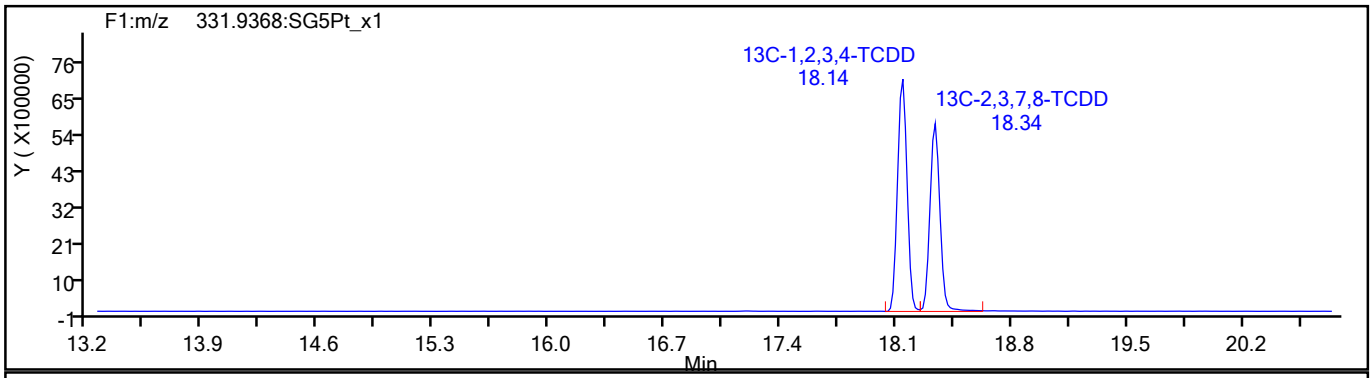

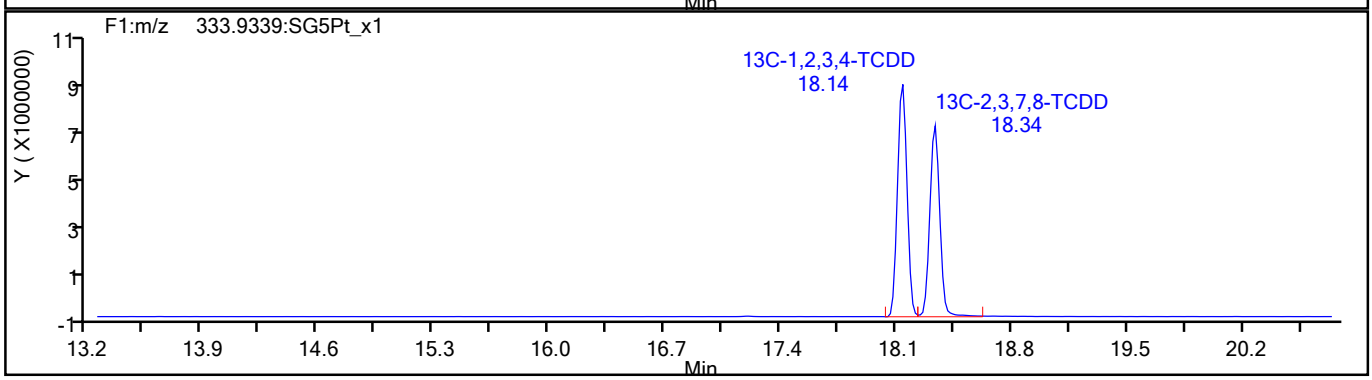

778463

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

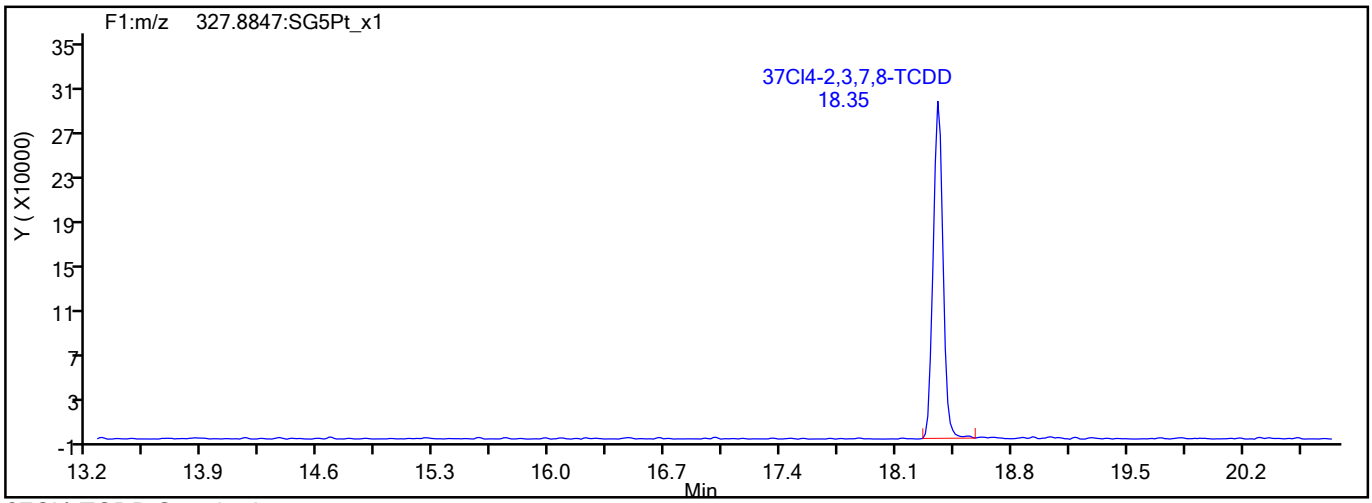

37Cl4-TCDD Standards

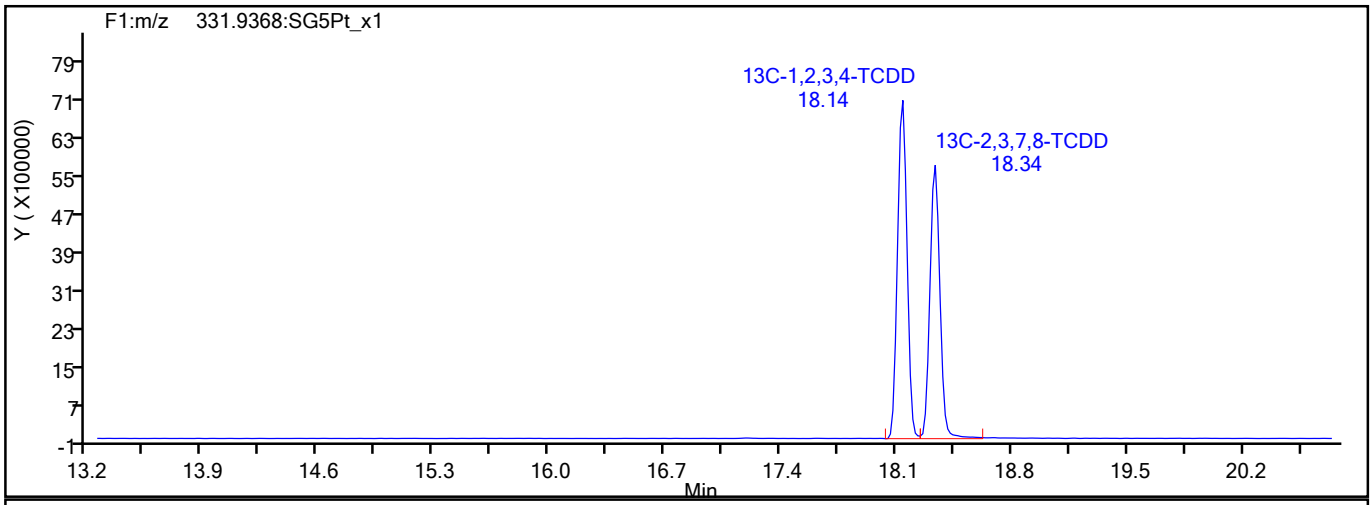

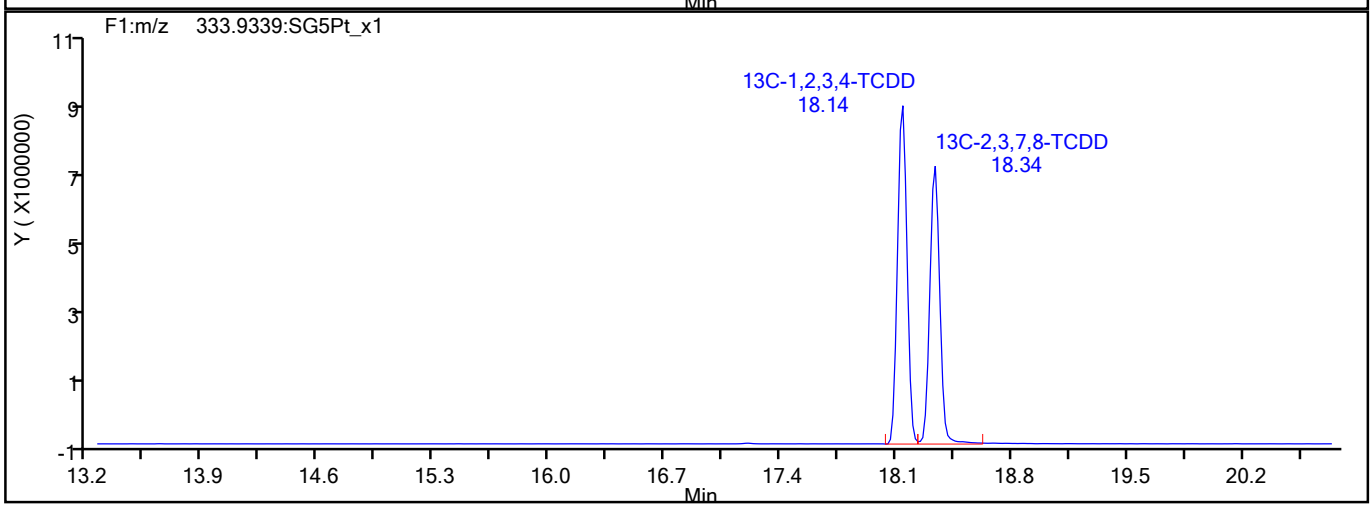

778464

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

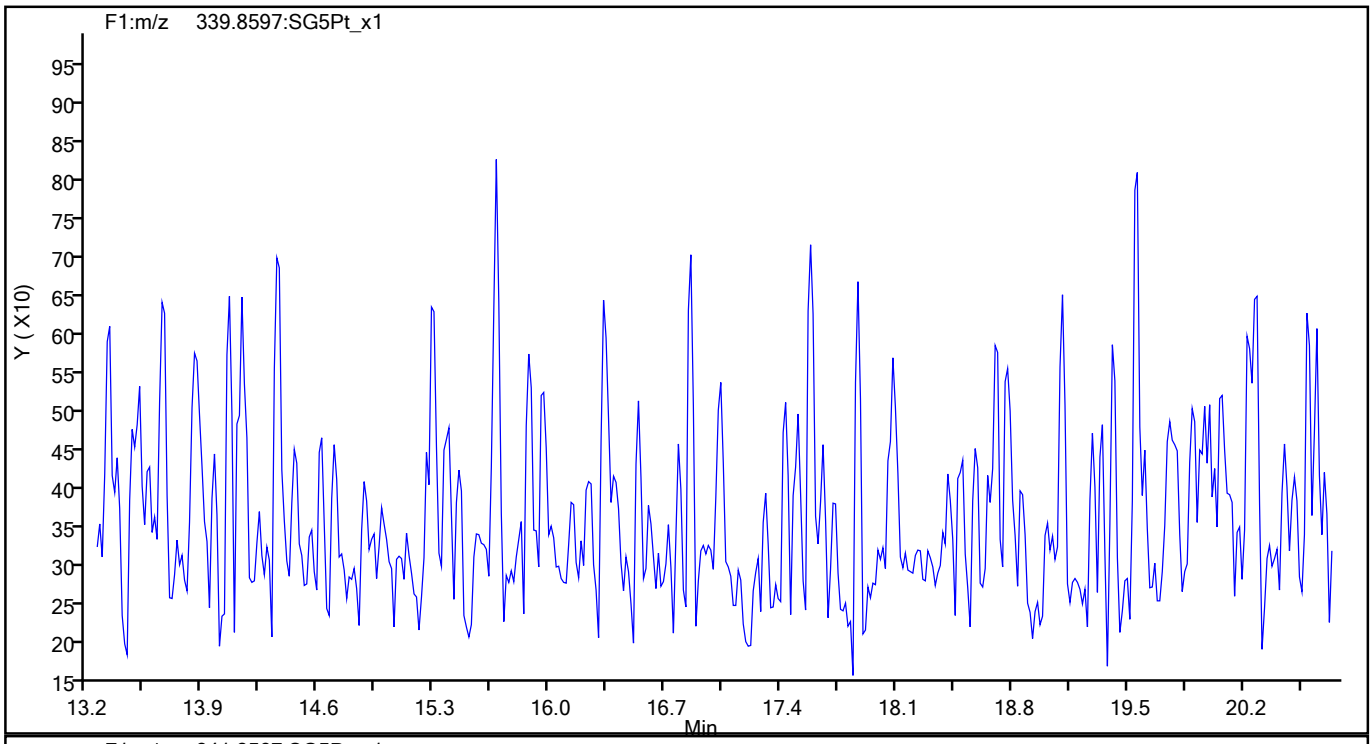

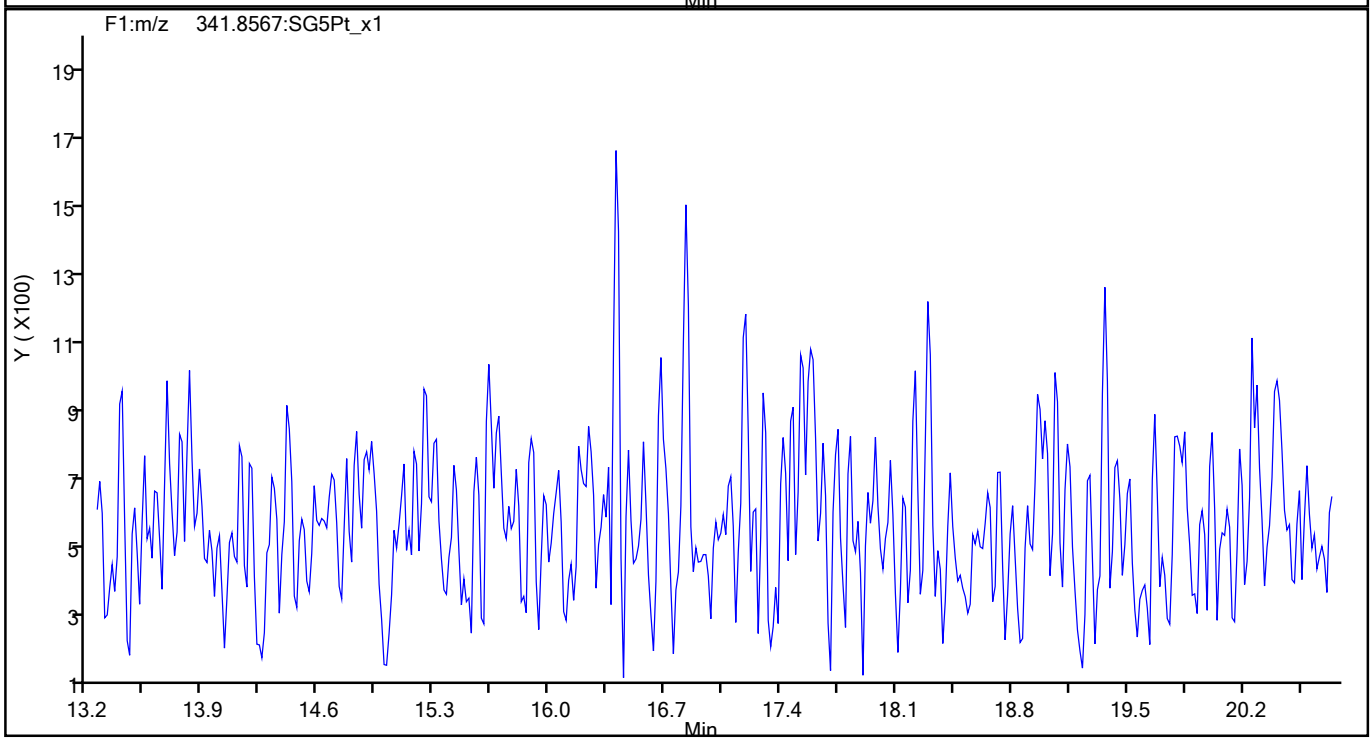

778465

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

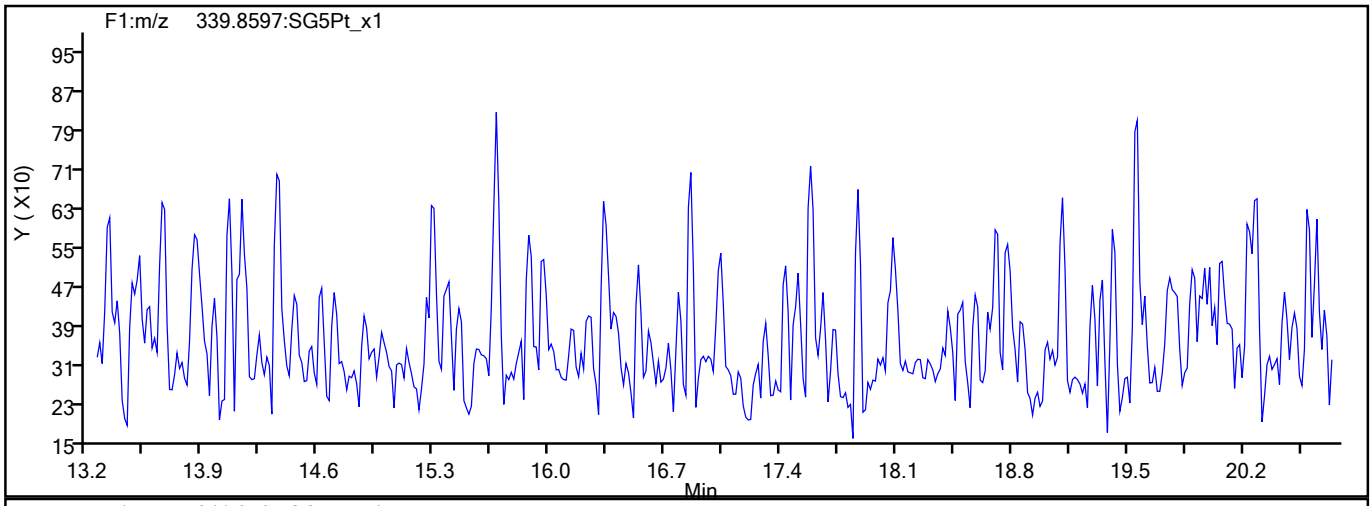

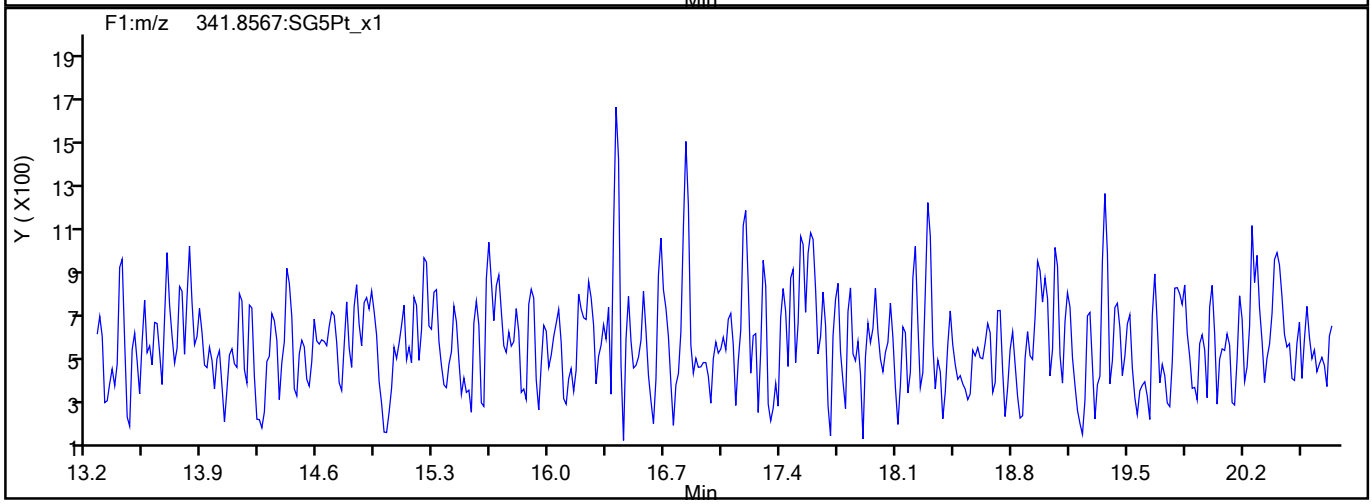

F1 PeCDFs Interference Mass

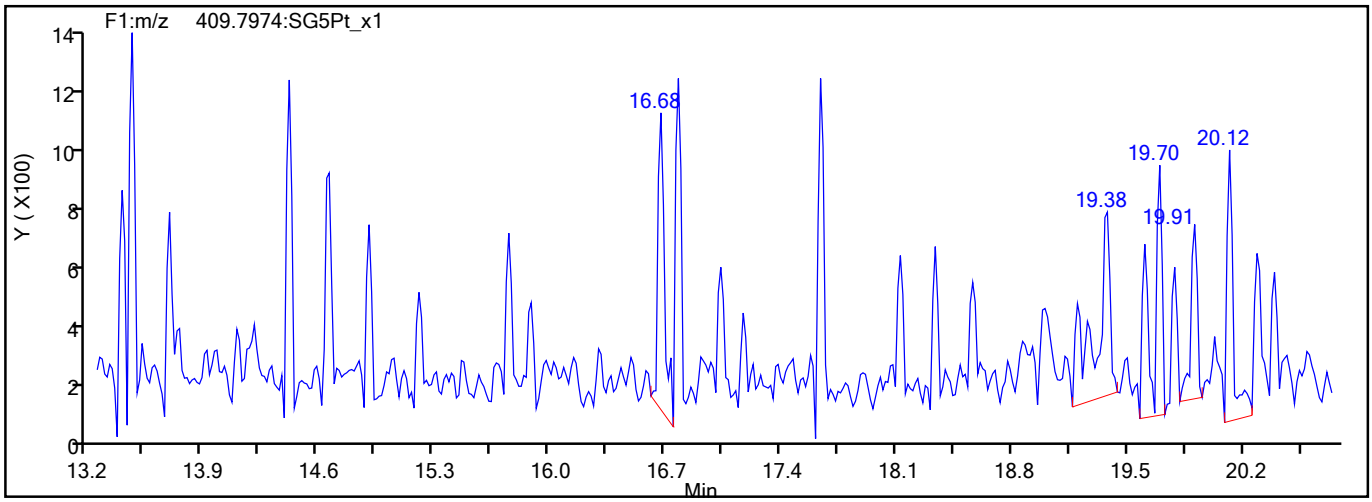

778466

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
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PeCDF

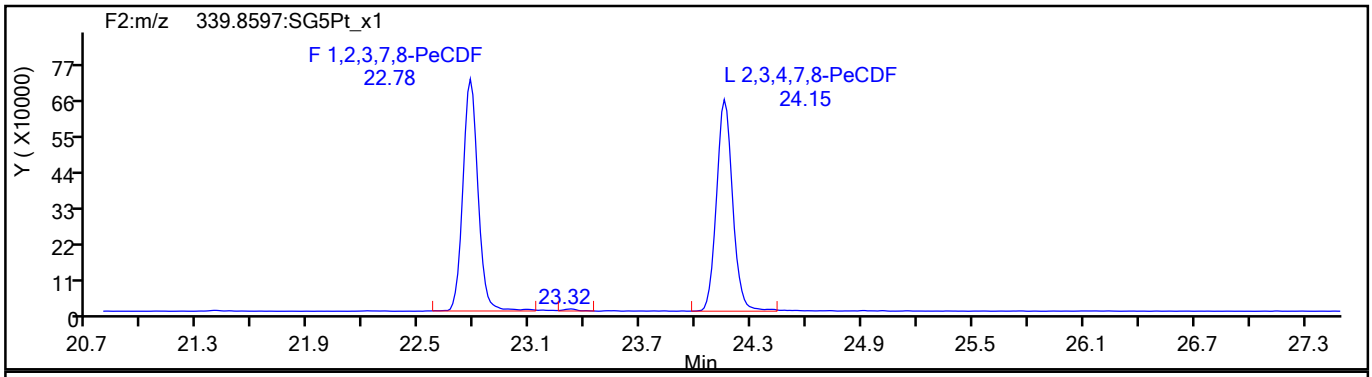

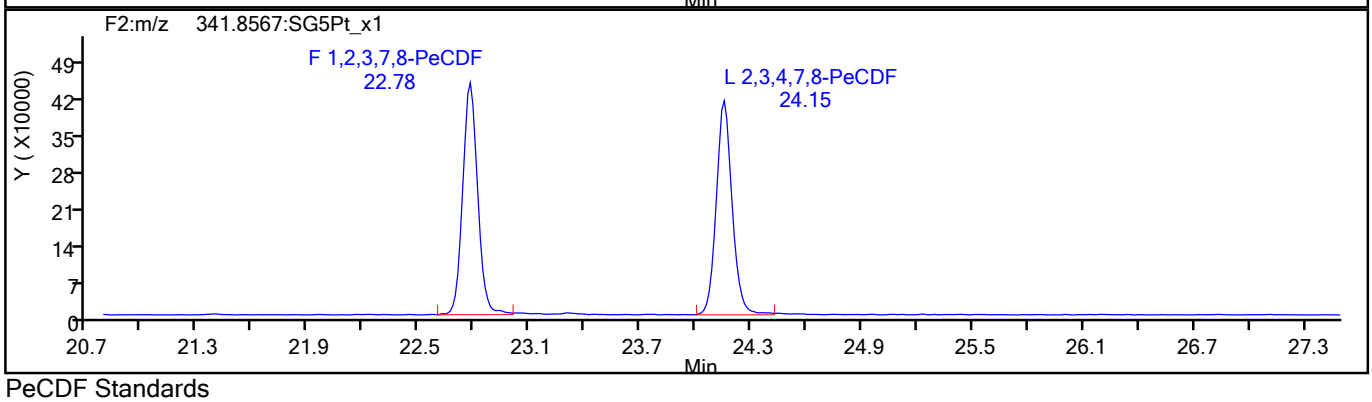

PeCDF Standards

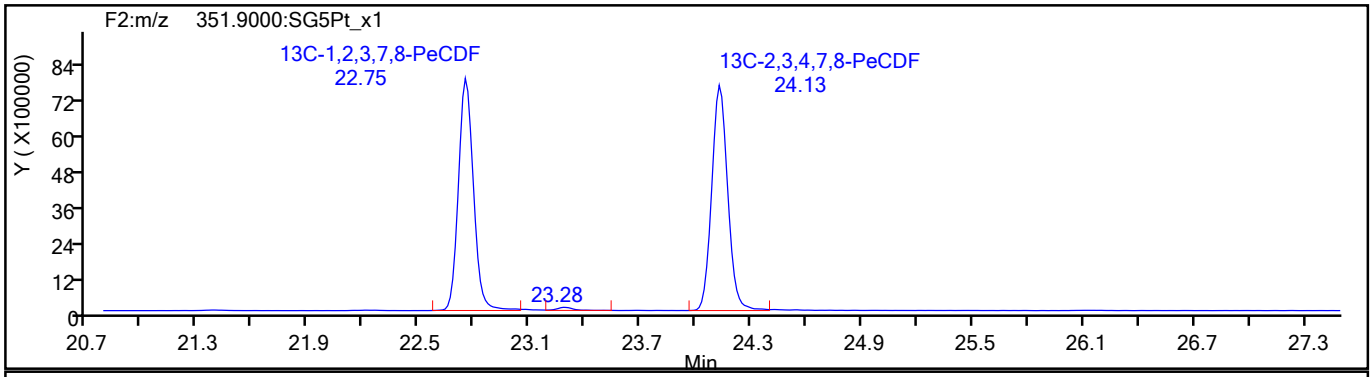

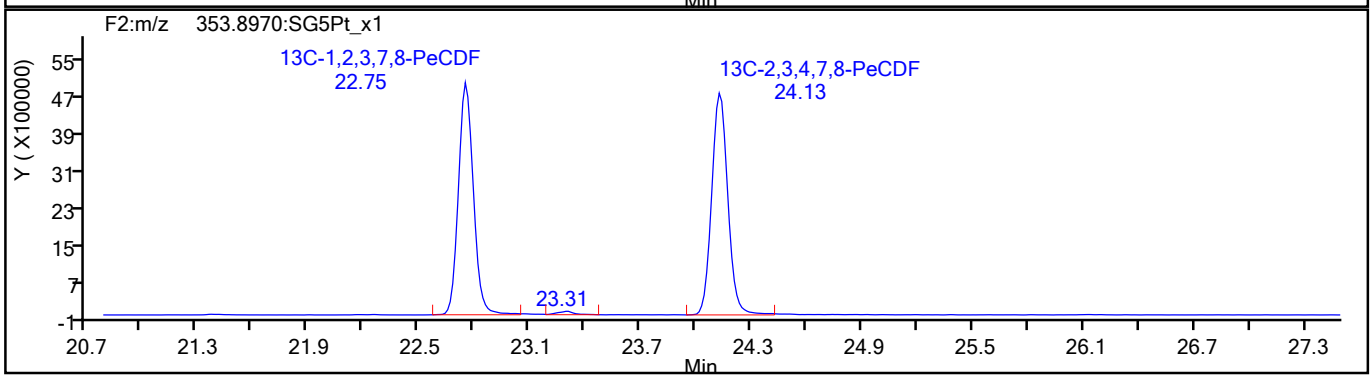

778467

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

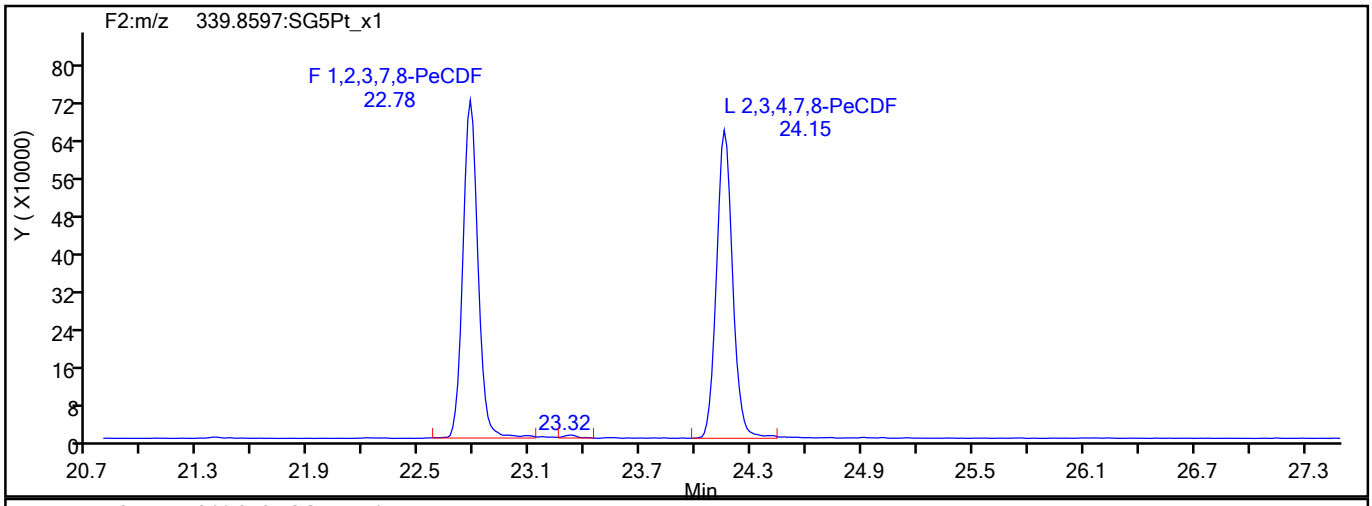

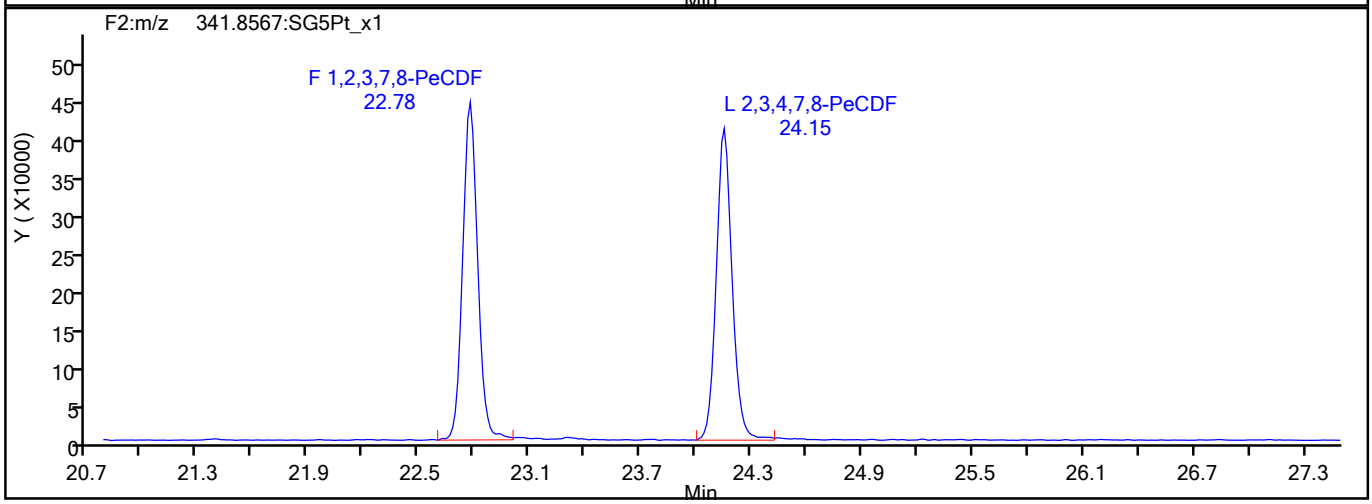

PeCDF Interference Mass

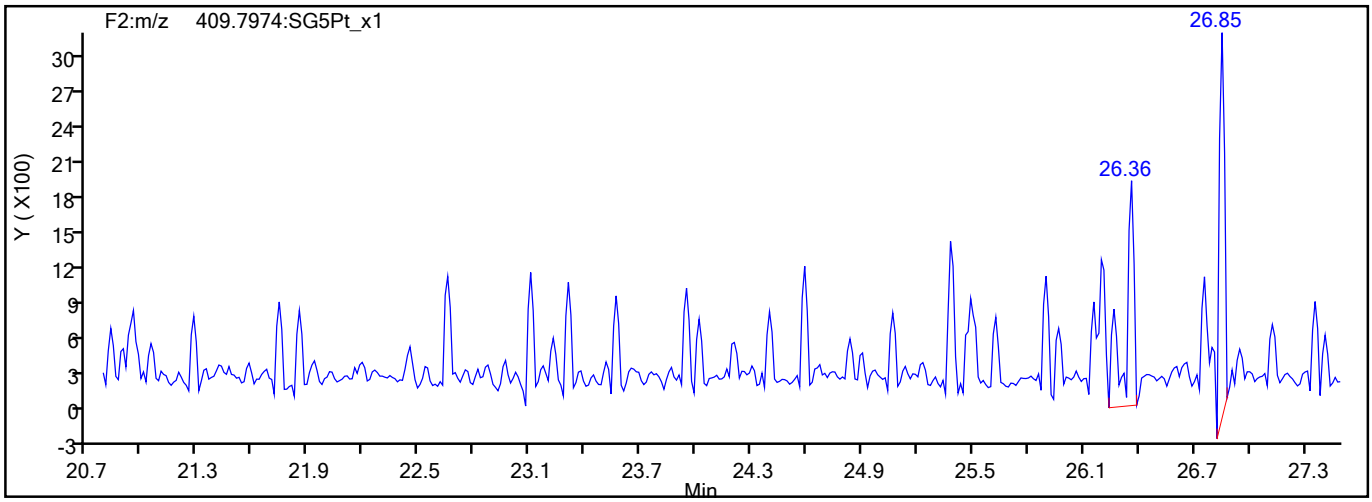

778468

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

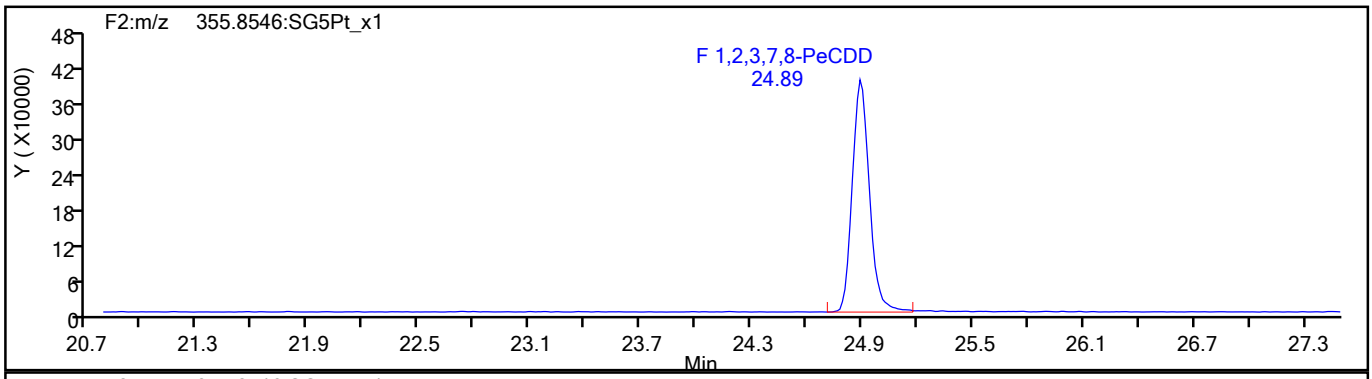

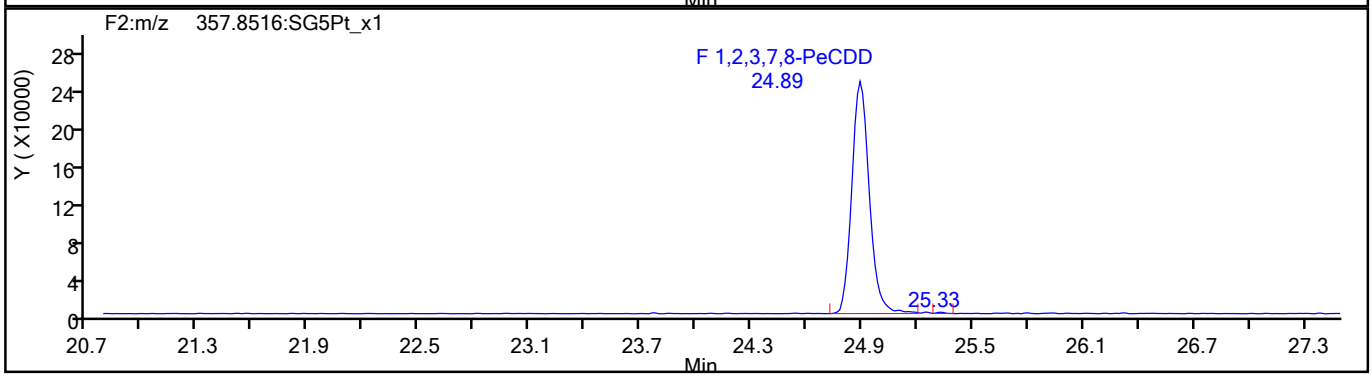

PeCDD Standards

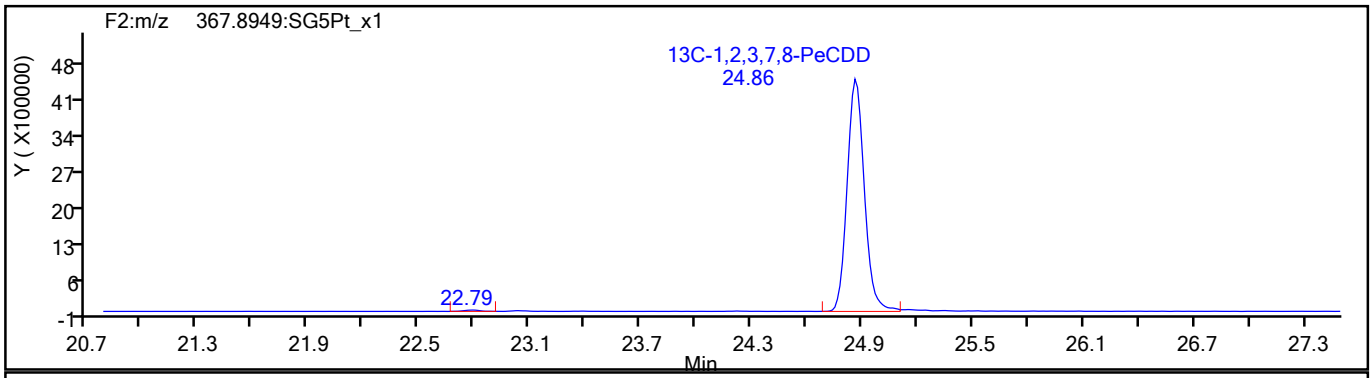

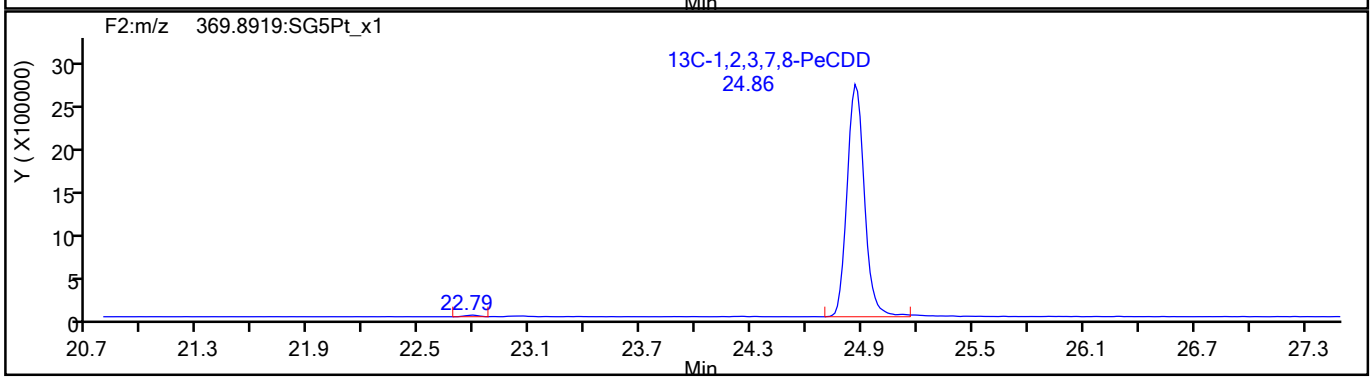

778469

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

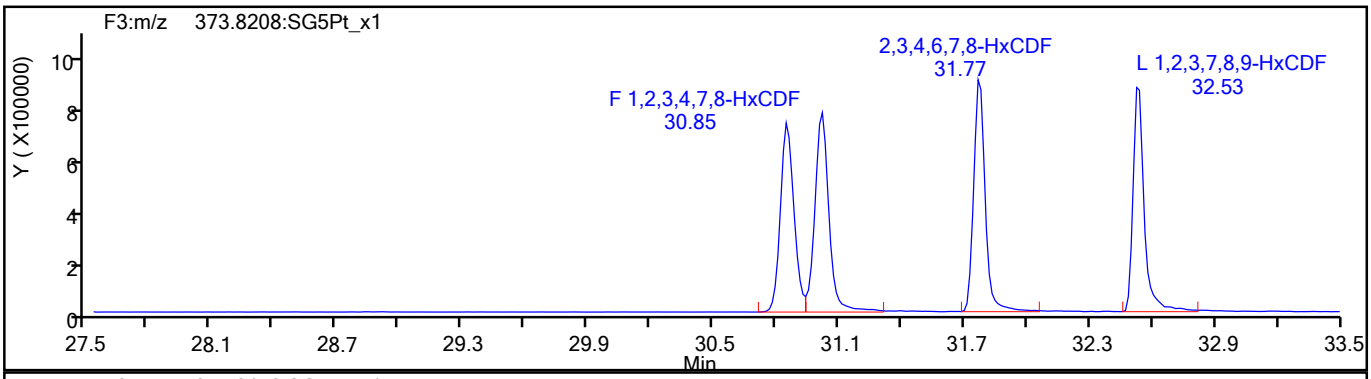

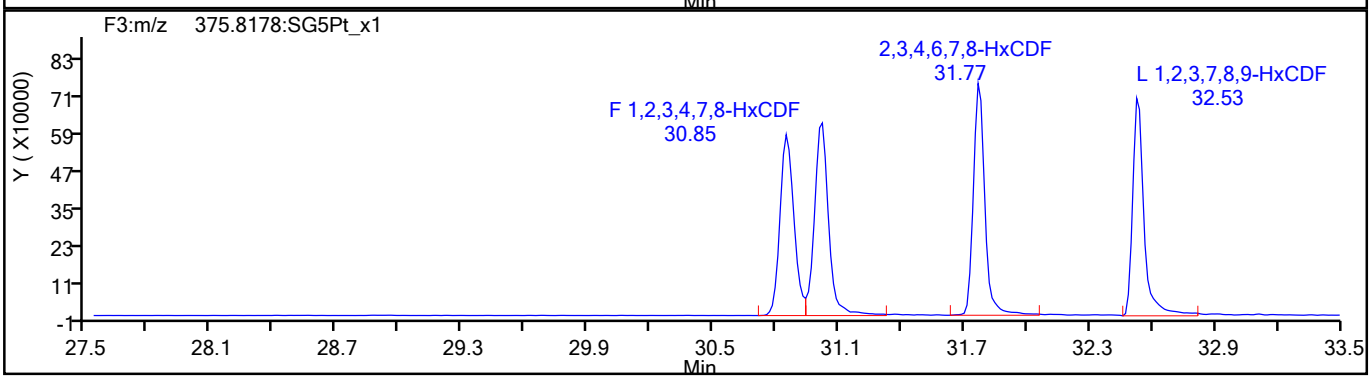

HxCDF Standards

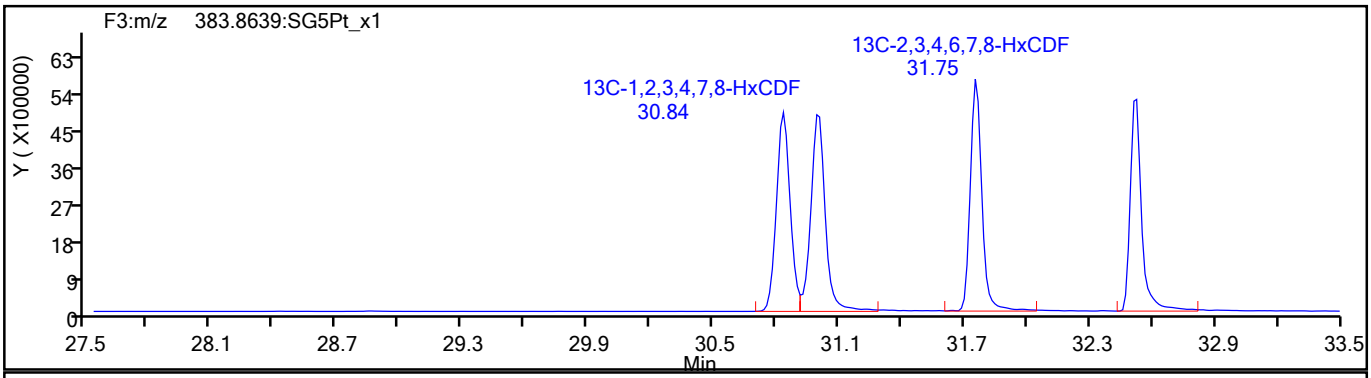

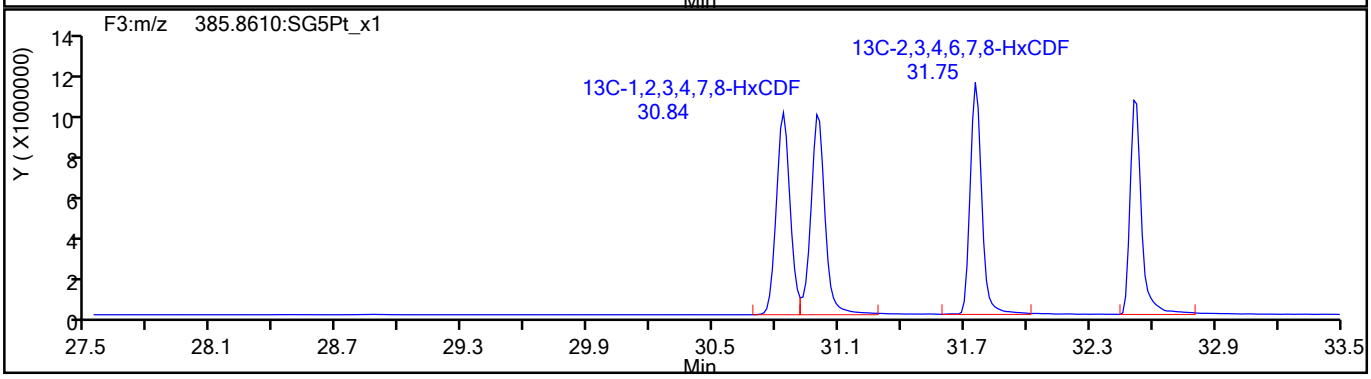

778470

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

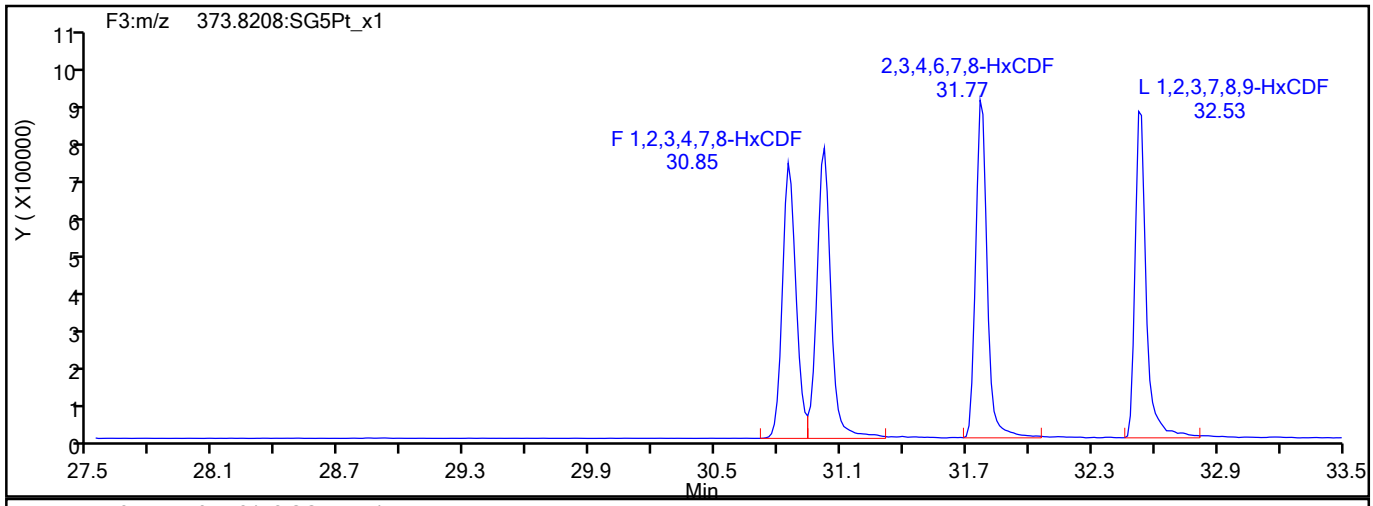

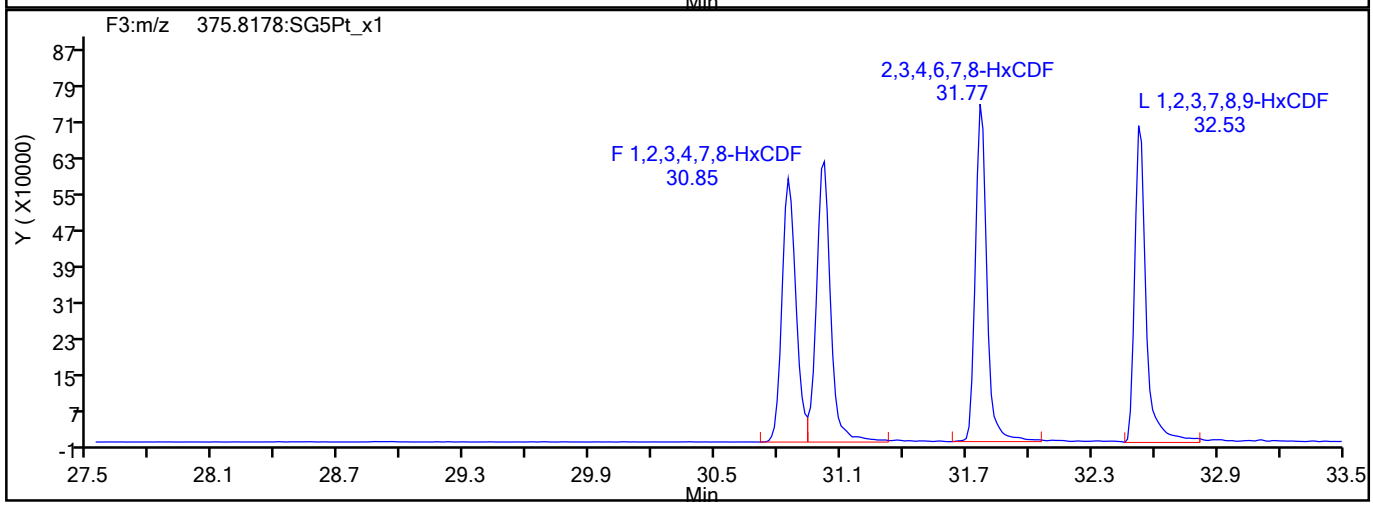

HxCDF Interference Mass

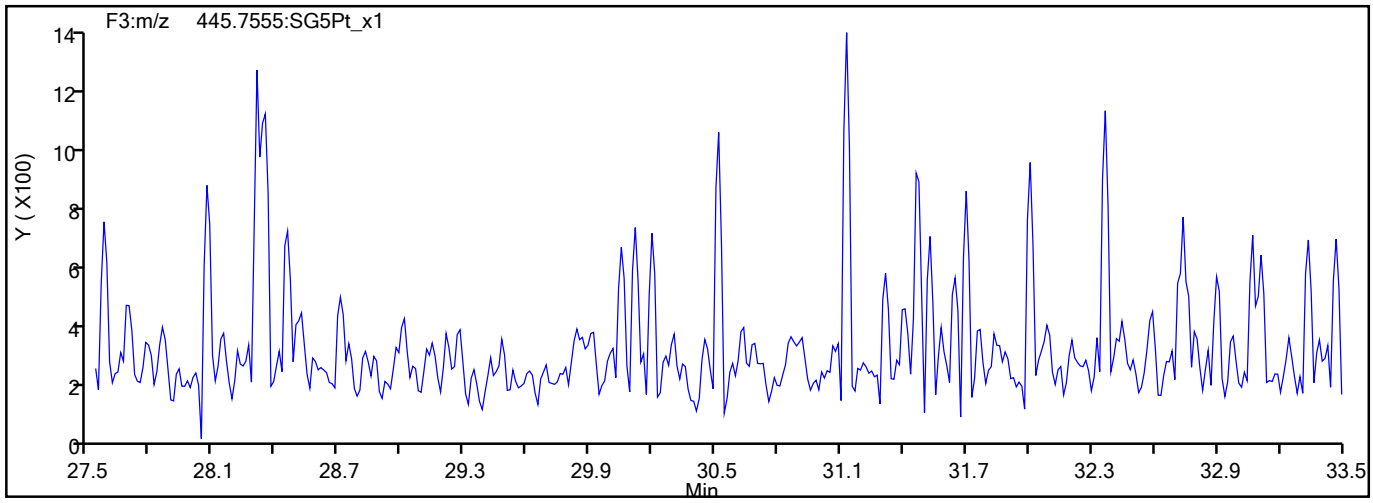

778471

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

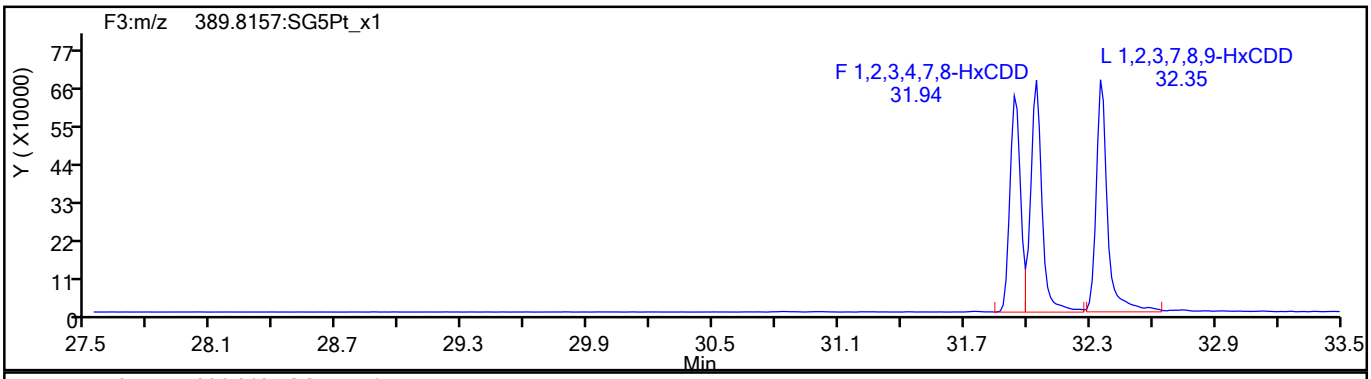

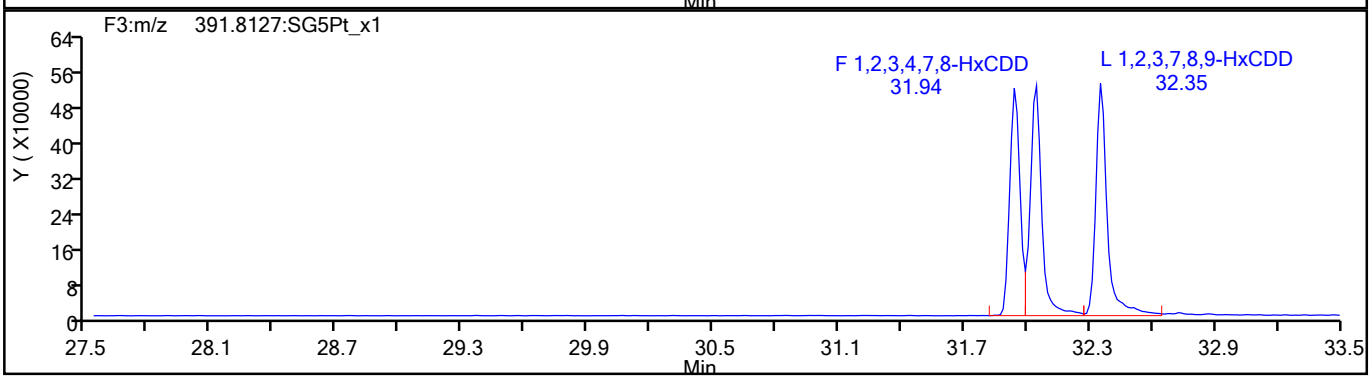

HxCDD Standards

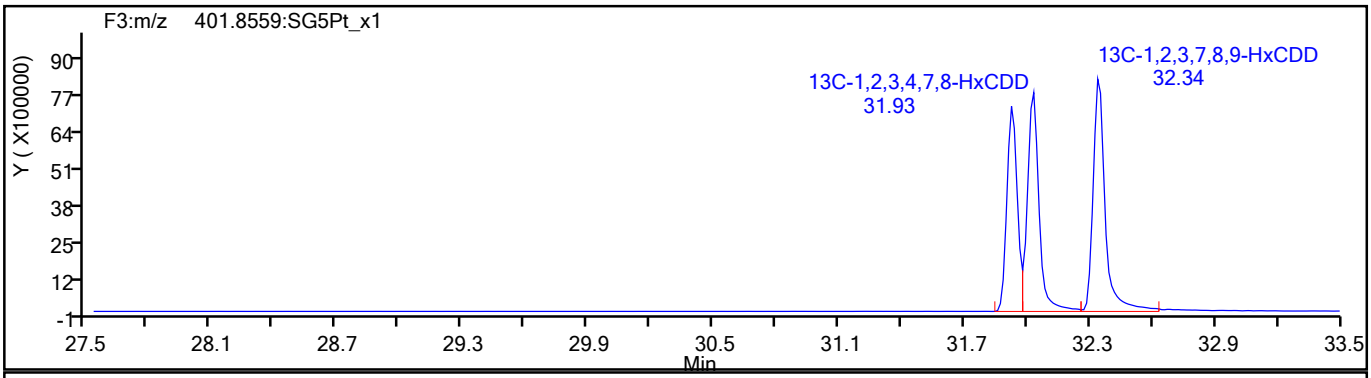

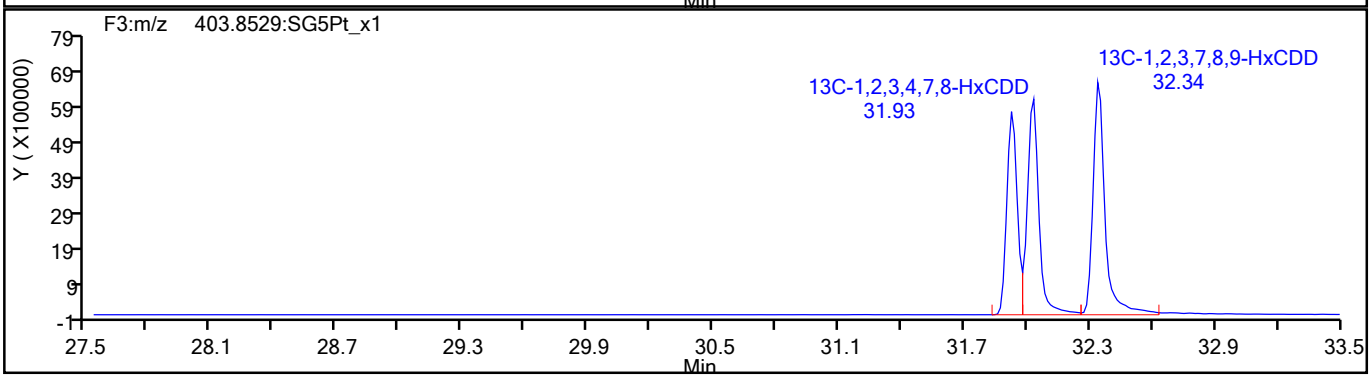

778472

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

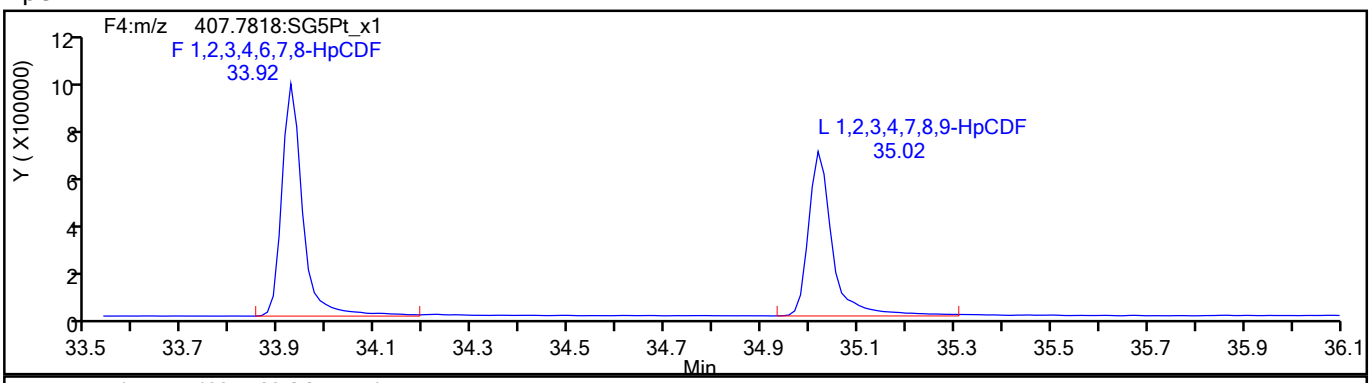

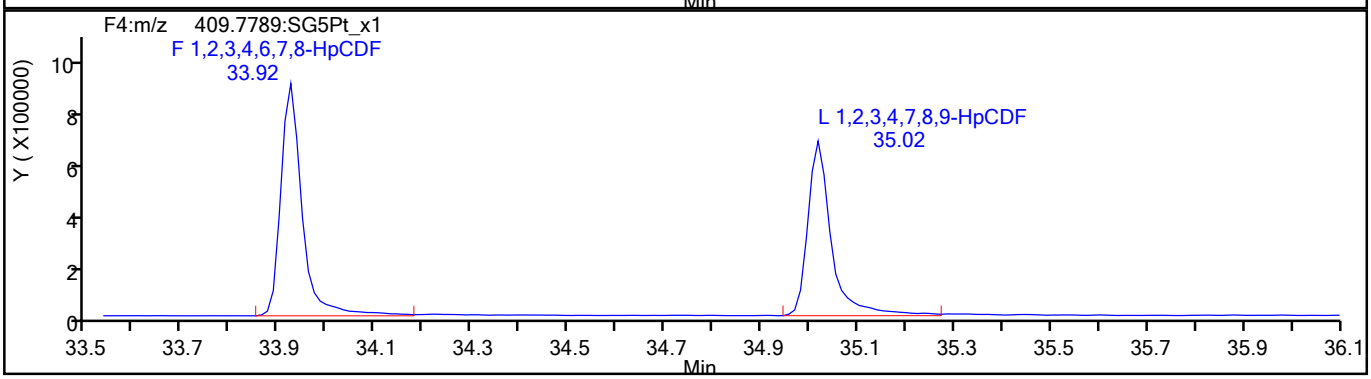

HpCDF Standards

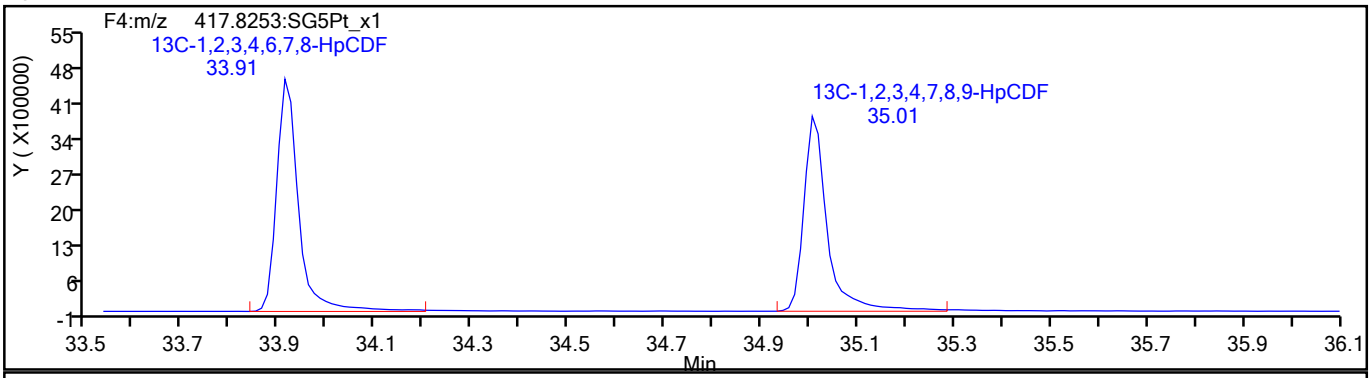

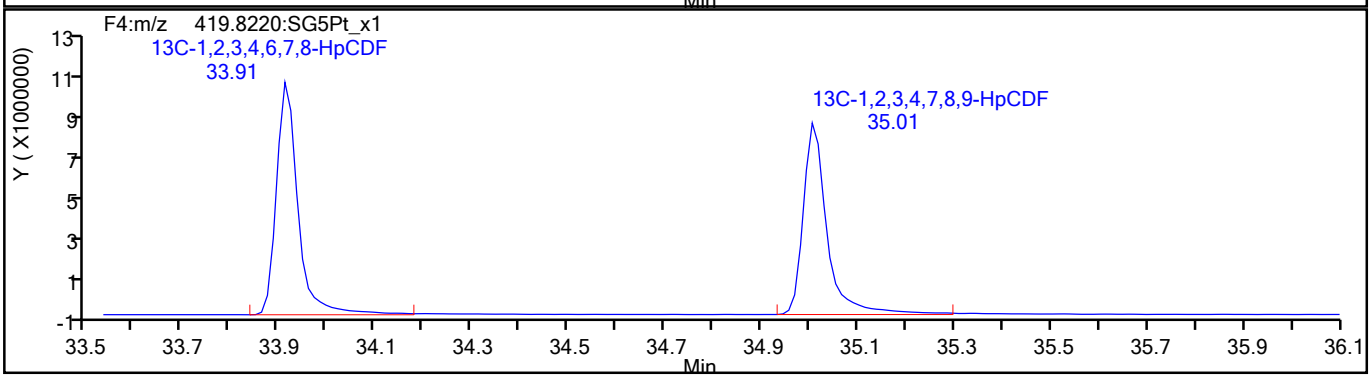

778473

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

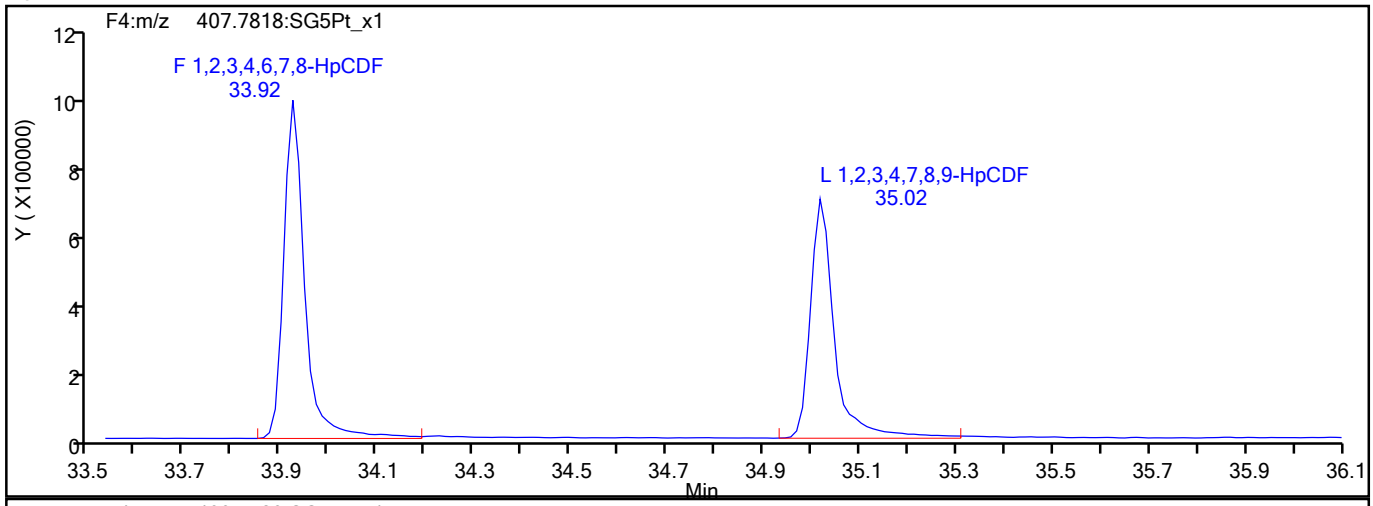

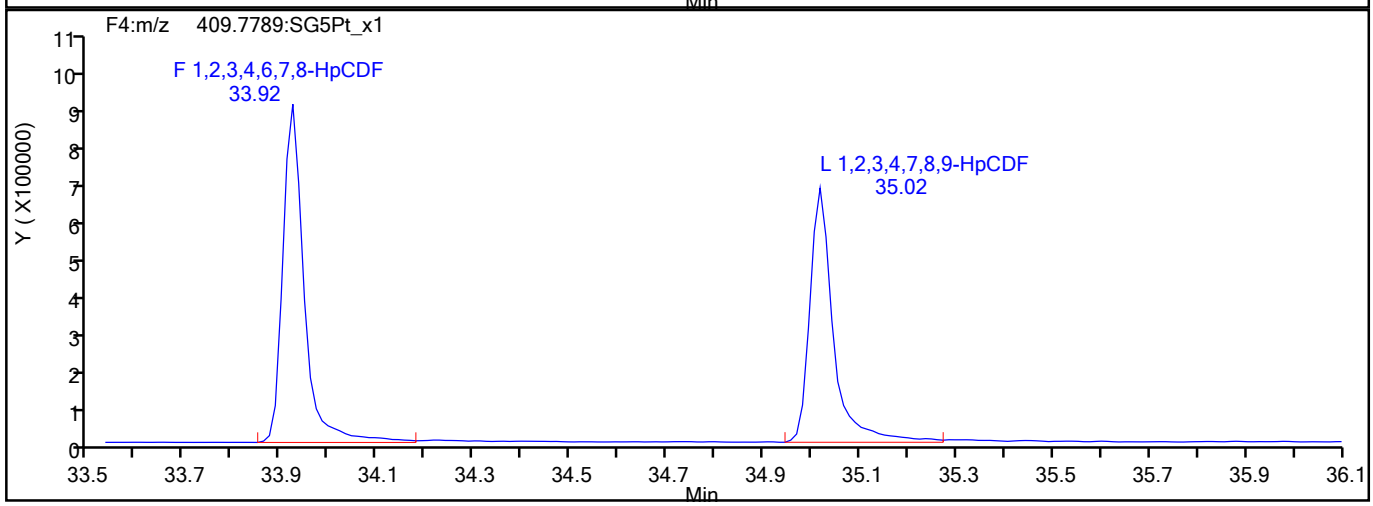

HpCDF Interference Mass

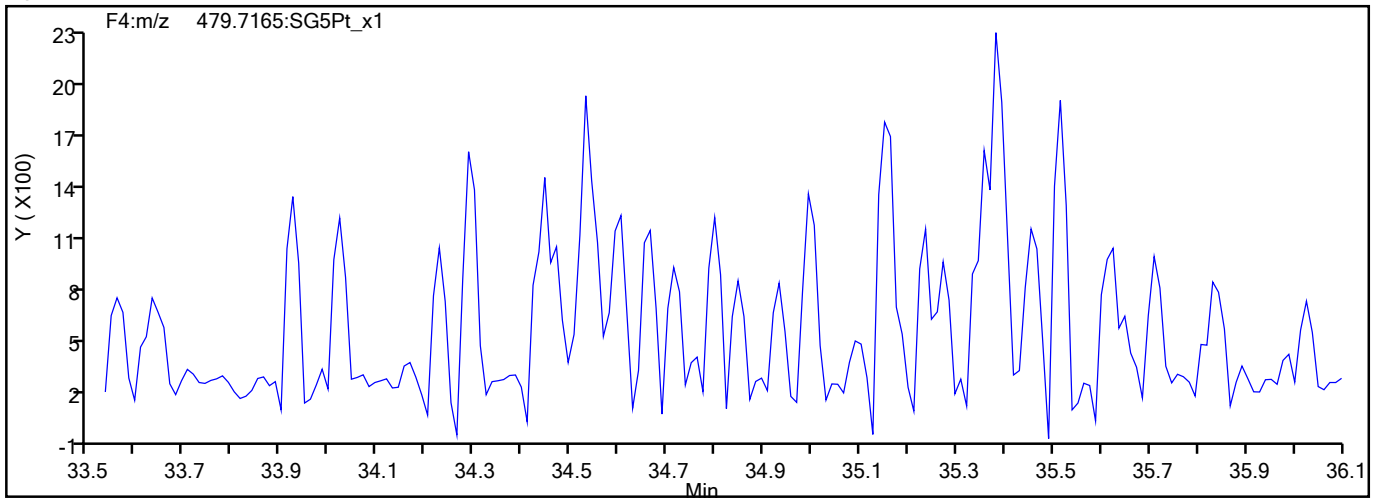

778474

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

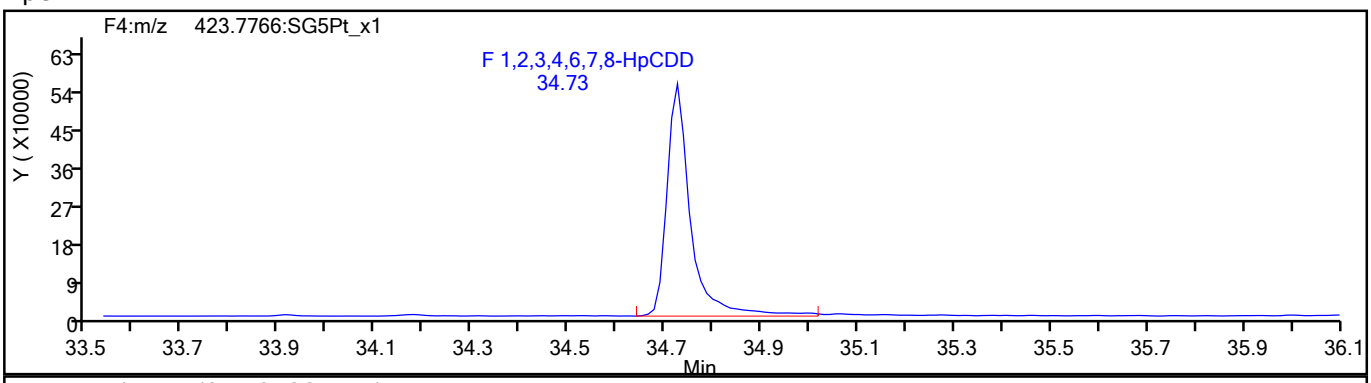

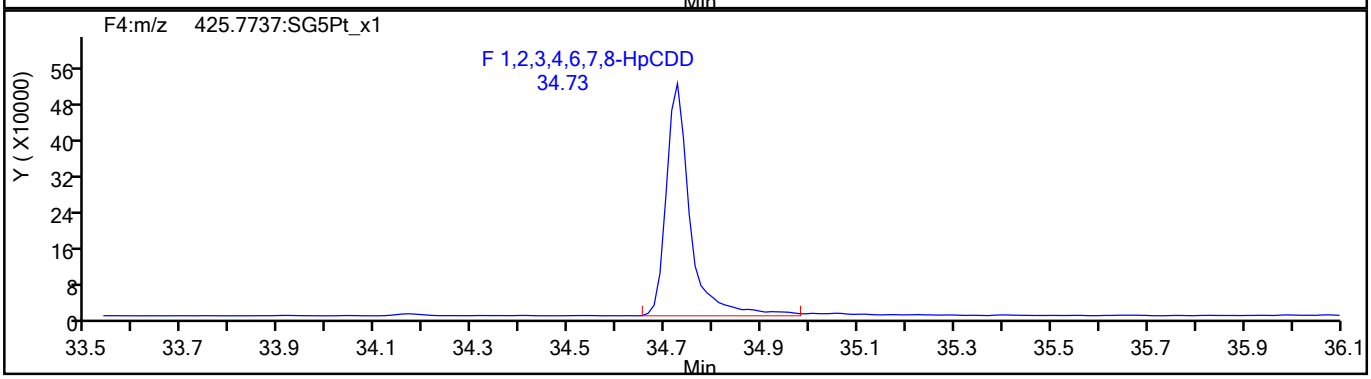

HpCDD Standards

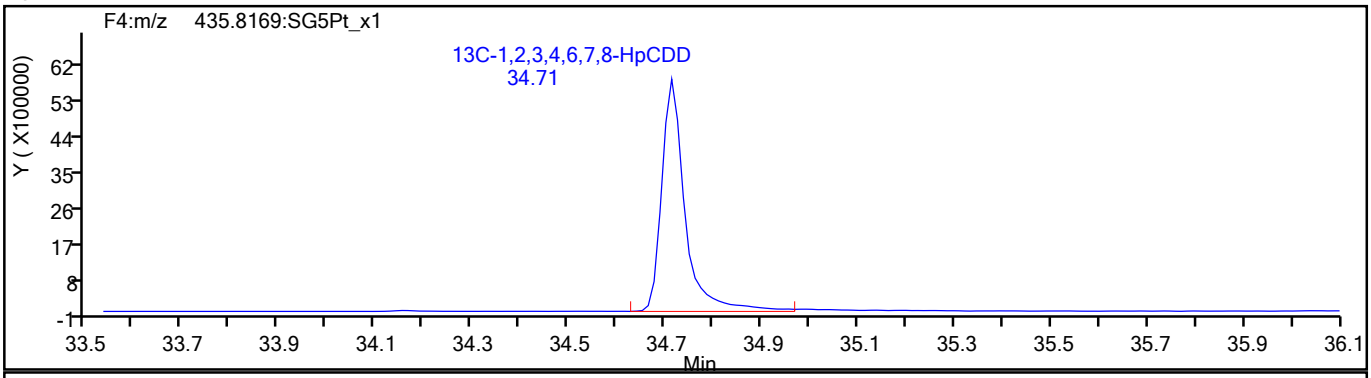

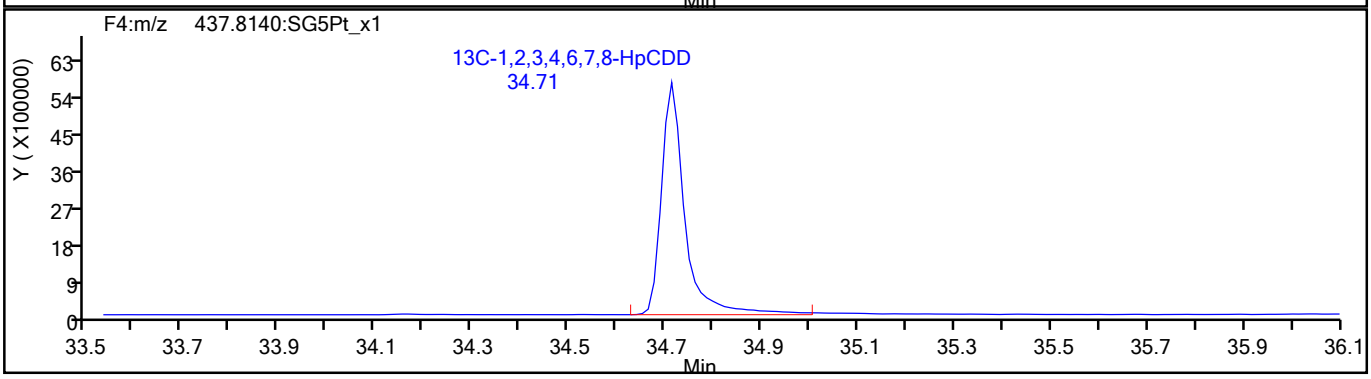

778475

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

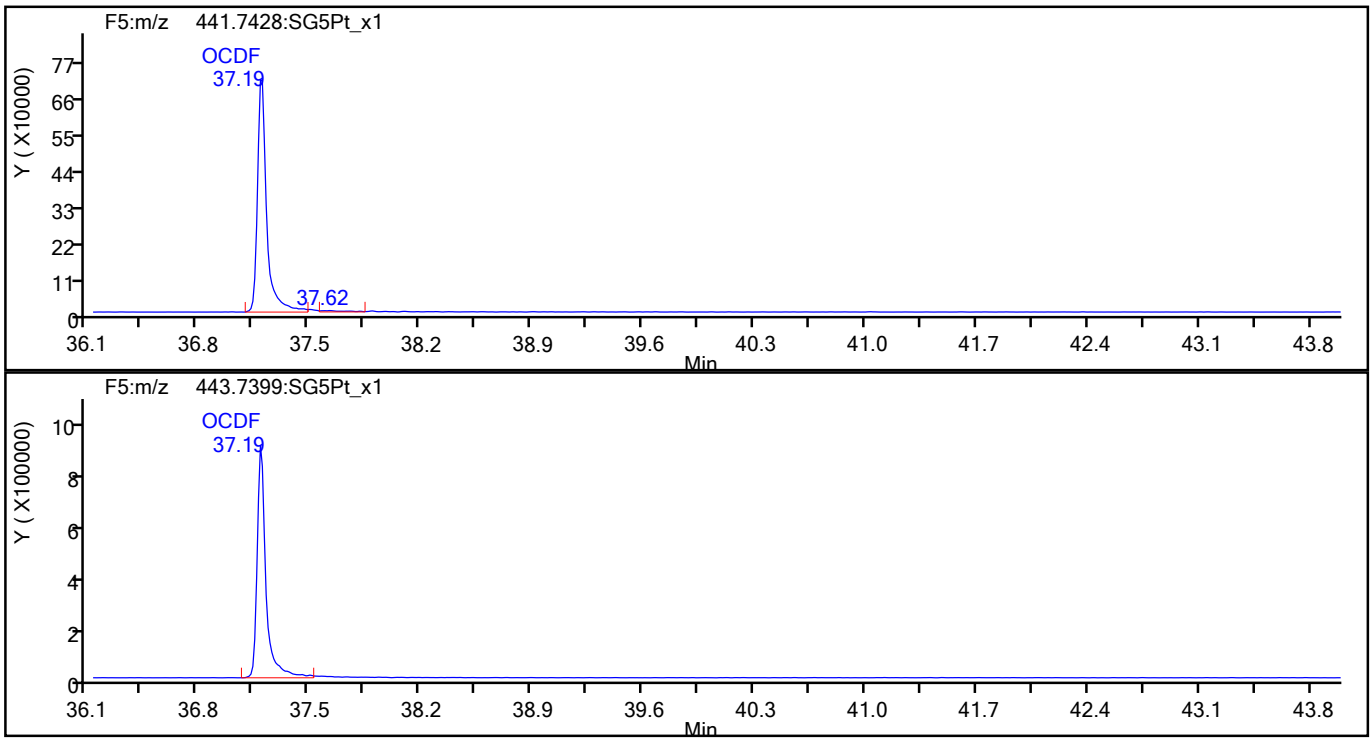

OCDF Standards

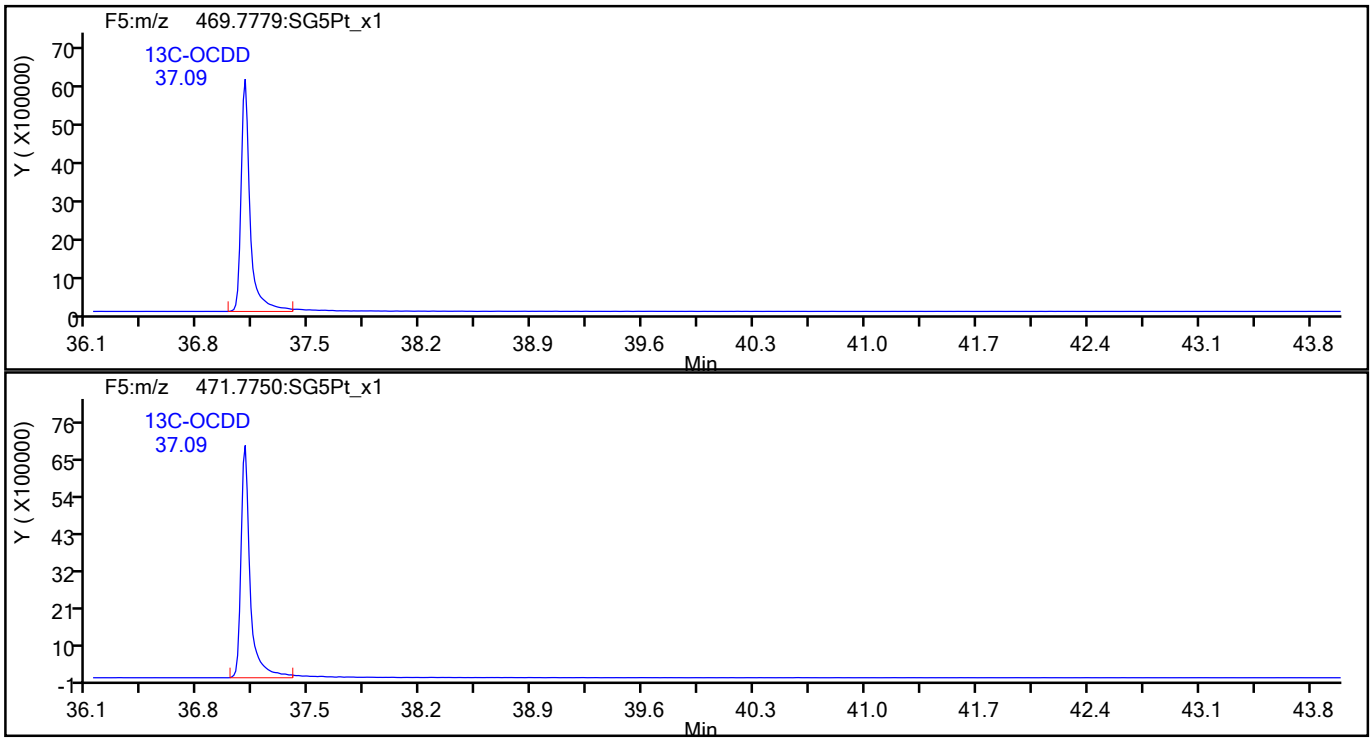

778476

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

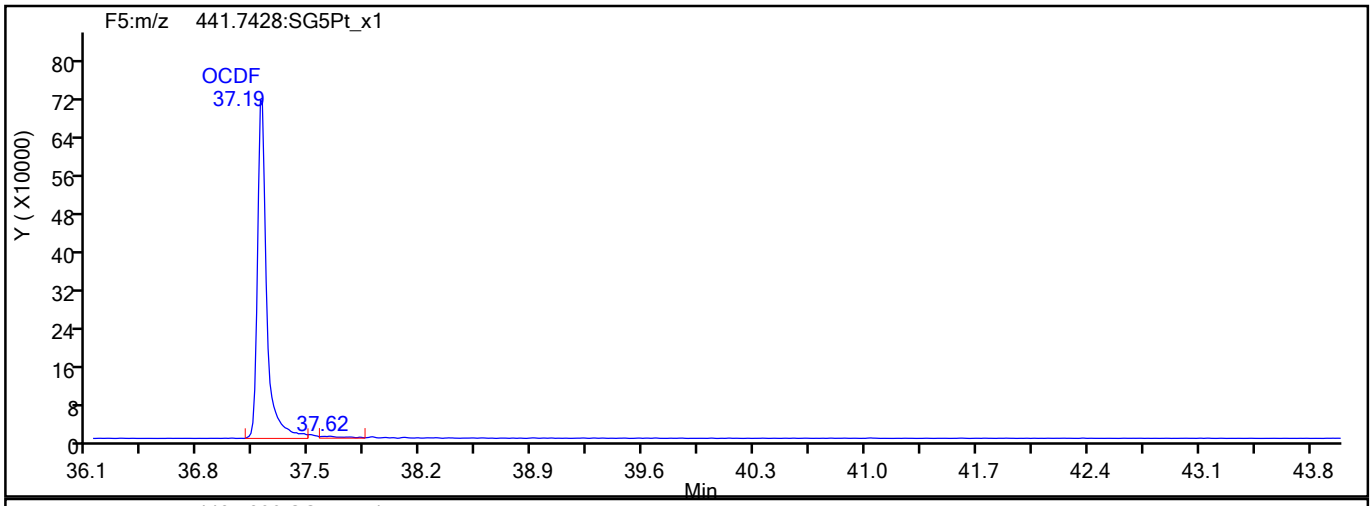

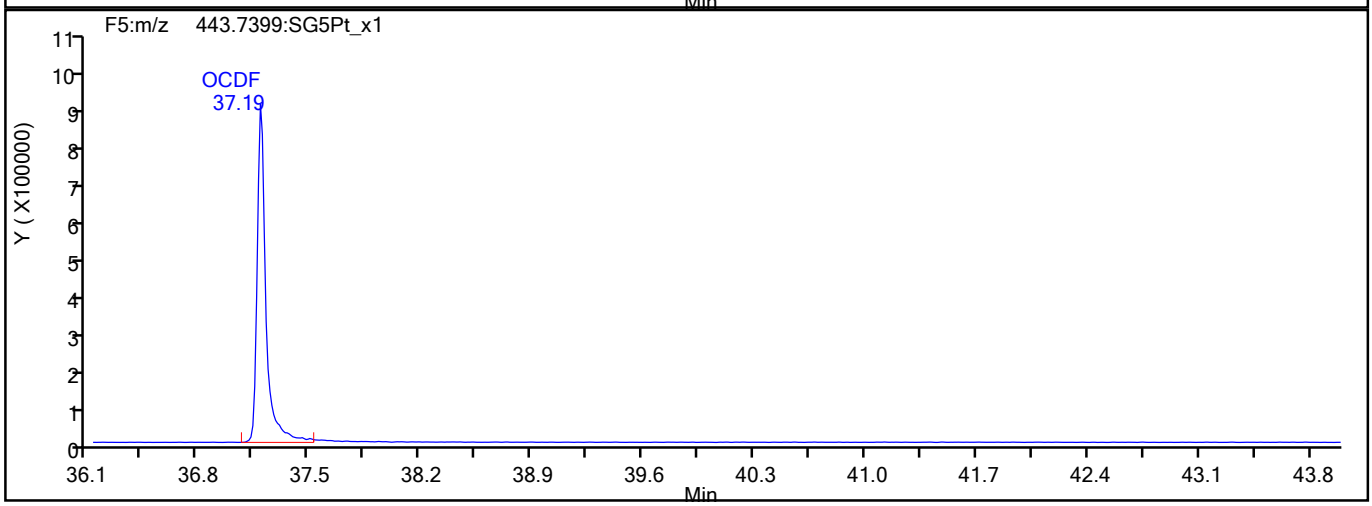

OCDF Interference Mass

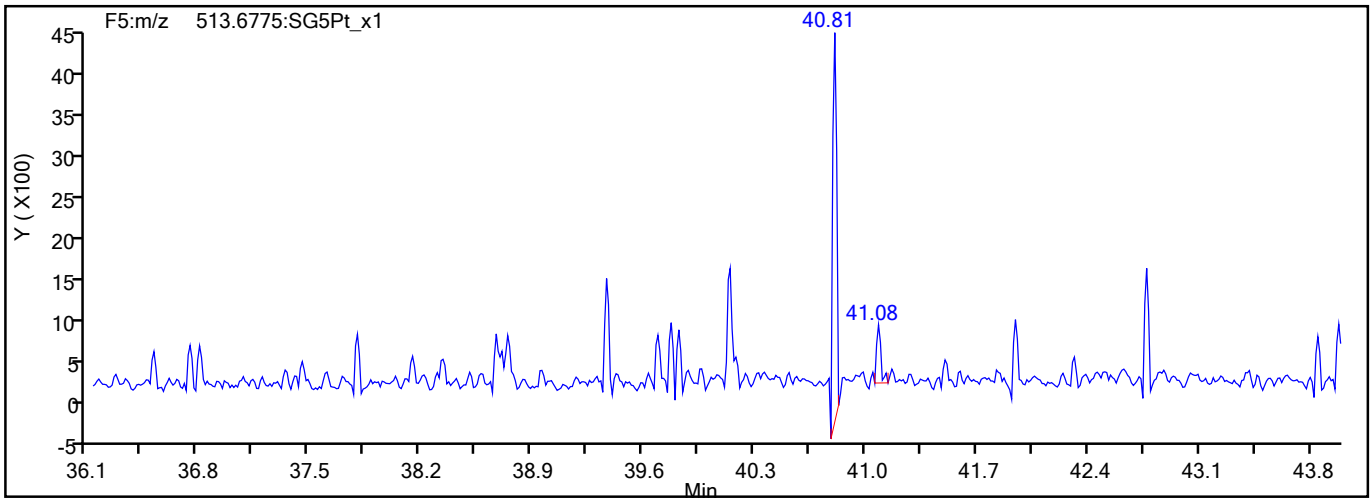

778477

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

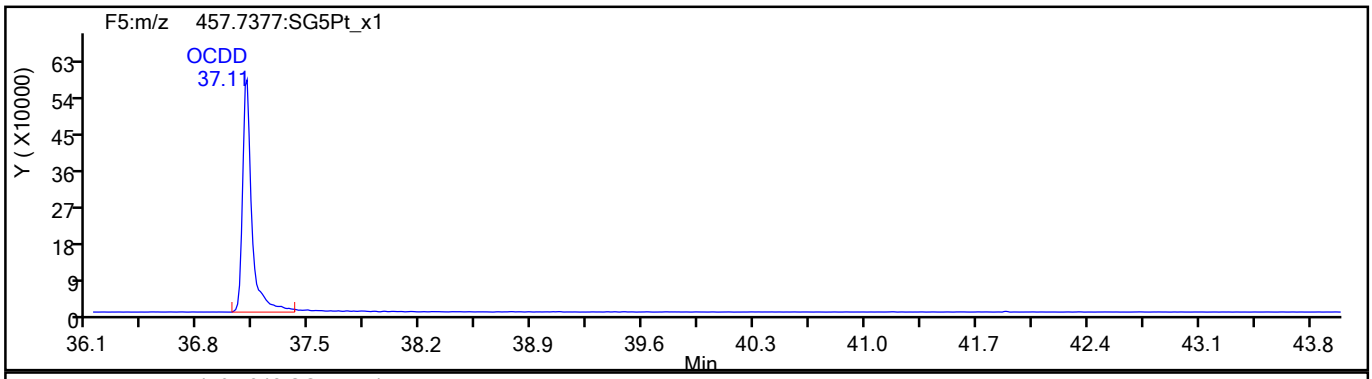

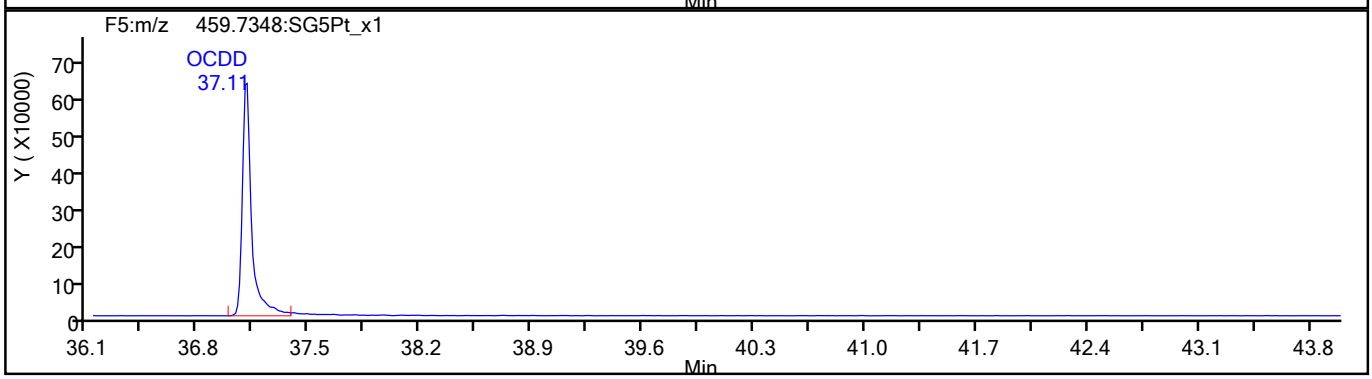

OCDD Standards

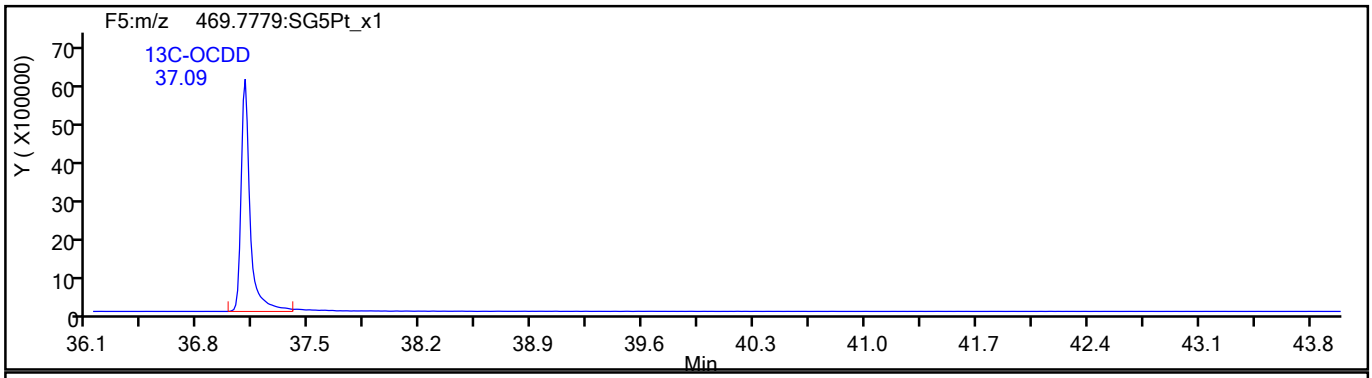

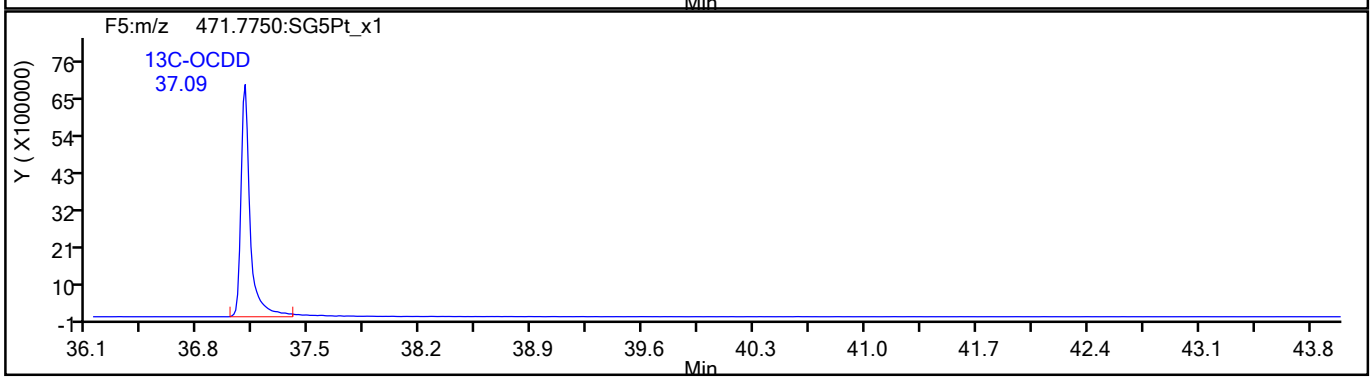

778478

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

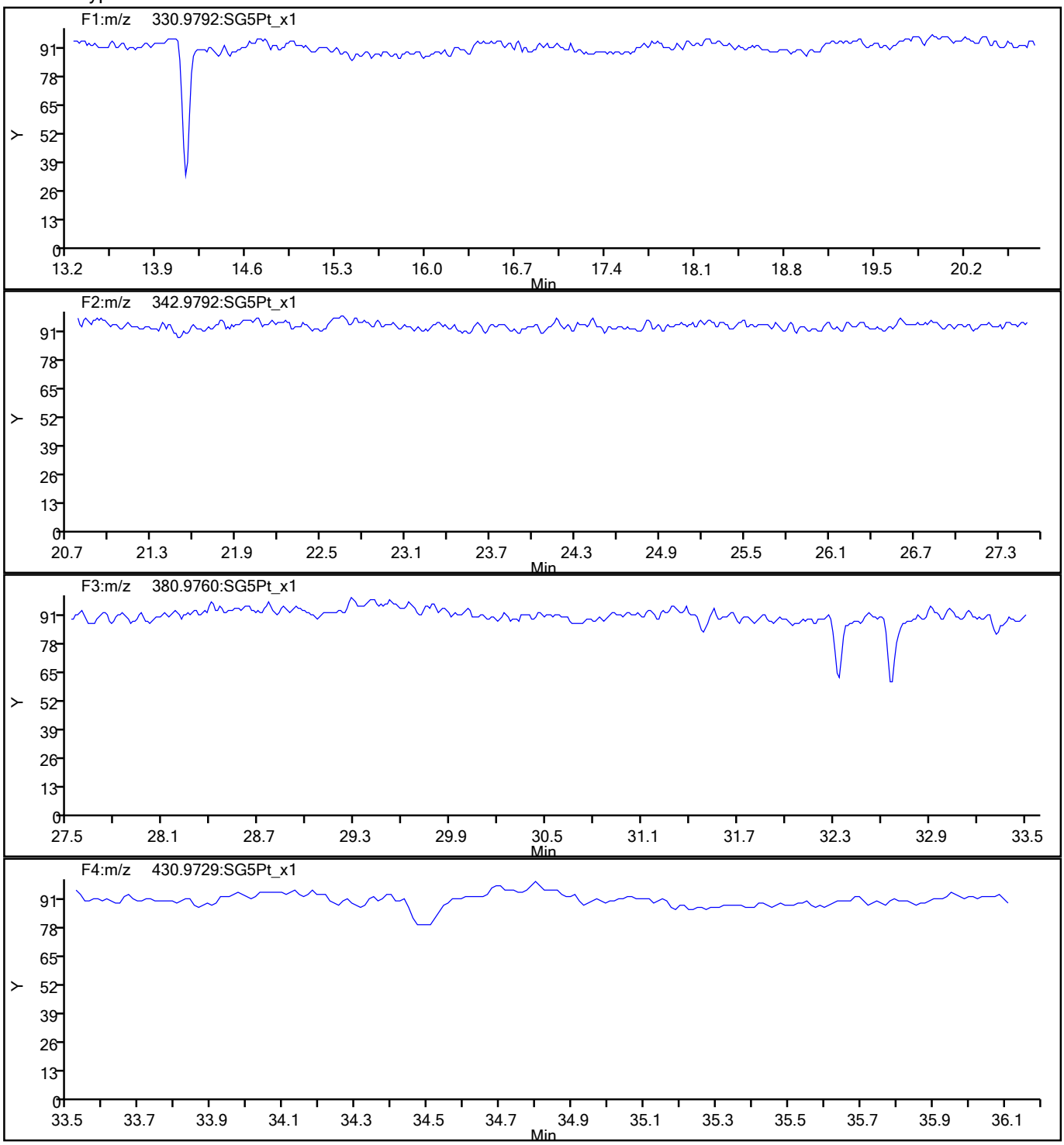

778479

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

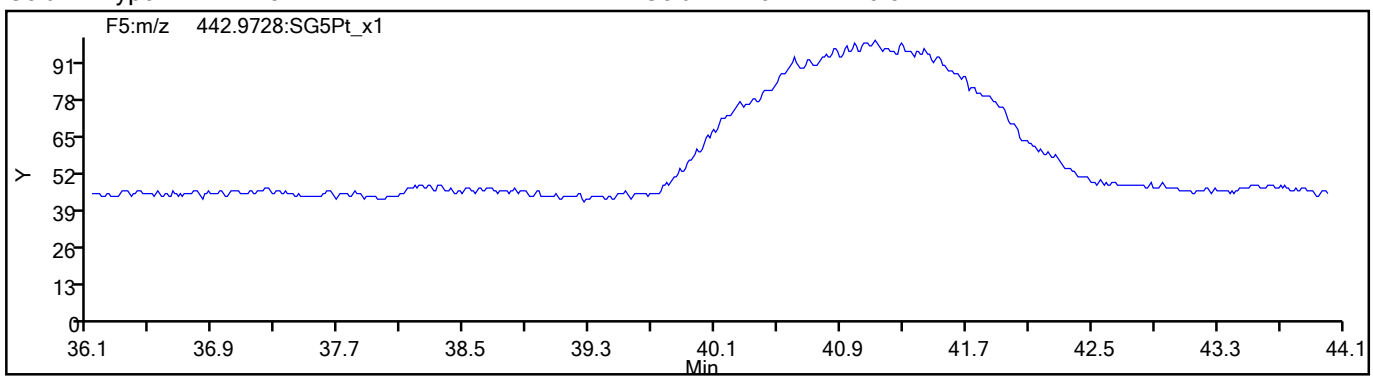

778480

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62635225	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	101724636	0.78	1.6249	99.9	99.9	0.2242	0.2242	99.95	
2,3,7,8-TCDF	17.643	10638776	0.78	1.0239	10.2	10.2	0.0283	0.0283	102	
S Total TCDF					10.2	10.2	0.0283	0.0283		
D 13C-2,3,7,8-TCDD	18.338	56155483	0.81	0.8993	99.7	99.7	0.1510	0.1510	99.69	
$ 37Cl4-2,3,7,8-TCDD	18.369	7339670		1.1071	10.6	10.6	0.0132	0.0132	106	
2,3,7,8-TCDD	18.369	7104238	0.76	1.2541	10.1	10.1	0.0224	0.0224	101	
S Total TCDD					10.1	10.1	0.0224	0.0224		
D 13C-1,2,3,7,8-PeCDF	22.762	76368219	1.58	1.2101	100.8	100.8	0.2109	0.2109	101	
1,2,3,7,8-PeCDF	22.789	41588176	1.62	1.0611	51.3	51.3	0.1508	0.1508	103	
D 13C-2,3,4,7,8-PeCDF	24.139	78214582	1.58	1.2395	100.7	100.7	0.2059	0.2059	101	
2,3,4,7,8-PeCDF	24.167	40928436	1.60	1.0184	51.4	51.4	0.1656	0.1656	103	
S Total PeCDF					102.7	102.7	0.1582	0.1582		
D 13C-1,2,3,7,8-PeCDD	24.876	47124414	1.60	0.7612	98.8	98.8	0.1214	0.1214	98.83	
1,2,3,7,8-PeCDD	24.903	25165054	1.62	1.0484	50.9	50.9	0.0669	0.0669	102	
S Total PeCDD					50.9	50.9	0.0669	0.0669		
D 13C-1,2,3,4,7,8-HxCDF	30.849	68075509	0.52	1.0837	98.8	98.8	0.4389	0.4389	98.79	
1,2,3,4,7,8-HxCDF	30.862	37525146	1.24	1.0851	50.8	50.8	0.2914	0.2914	102	
D 13C-1,2,3,6,7,8-HxCDF	31.009	70677463	0.52	1.1279	98.5	98.5	0.4217	0.4217	98.54	
1,2,3,6,7,8-HxCDF	31.022	40802767	1.21	1.1260	51.3	51.3	0.2729	0.2729	103	
D 13C-2,3,4,6,7,8-HxCDF	31.767	67028498	0.52	1.0637	99.1	99.1	0.4471	0.4471	99.10	
2,3,4,6,7,8-HxCDF	31.781	39741365	1.22	1.1675	50.8	50.8	0.2260	0.2260	102	
D 13C-1,2,3,7,8,9-HxCDF	32.526	60389284	0.52	0.9676	98.2	98.2	0.4916	0.4916	98.15	
1,2,3,7,8,9-HxCDF	32.540	35924190	1.21	1.1664	51.0	51.0	0.2363	0.2363	102	
S Total HxCDF					203.9	203.9	0.2566	0.2566		
* 13C-1,2,3,7,8,9-HxCDD	32.353	63588089	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.941	44039927	1.25	0.7334	94.4	94.4	0.3731	0.3731	94.43	
1,2,3,4,7,8-HxCDD	31.954	24891170	1.33	1.0640	53.1	53.1	0.1747	0.1747	106	
D 13C-1,2,3,6,7,8-HxCDD	32.034	55284532	1.26	0.8802	98.8	98.8	0.3109	0.3109	98.78	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	27953752	1.21	1.0001	50.6	50.6	0.1666	0.1666	101	
1,2,3,7,8,9-HxCDD	32.367	29794954	1.26	1.1325	53.0	53.0	0.1552	0.1552	106	
S Total HxCDD					156.7	156.7	0.1655	0.1655		
D 13C-1,2,3,4,6,7,8-HpCDF	33.924	47697671	0.44	0.7730	97.0	97.0	1.328	1.328	97.03	
1,2,3,4,6,7,8-HpCDF	33.937	35740964	1.05	1.4413	52.0	52.0	0.5190	0.5190	104	
D 13C-1,2,3,4,7,8,9-HpCDF	35.018	43238622	0.44	0.7008	97.0	97.0	1.465	1.465	97.03	
1,2,3,4,7,8,9-HpCDF	35.030	29450636	1.07	1.3174	51.7	51.7	0.6741	0.6741	103	
S Total HpCDF					103.7	103.7	0.5966	0.5966		
D 13C-1,2,3,4,6,7,8-HpCDD	34.726	40333717	1.03	0.6472	98.0	98.0	0.5563	0.5563	98.00	
1,2,3,4,6,7,8-HpCDD	34.726	22538791	1.03	1.0943	51.1	51.1	0.2539	0.2539	102	
S Total HpCDD					51.1	51.1	0.2539	0.2539		
D 13C-OCDD	37.094	54338243	0.87	0.4472	191.1	191.1	0.2612	0.2612	95.55	
OCDF	37.202	41147202	0.91	1.4382	105.3	105.3	0.1155	0.1155	105	
OCDD	37.106	31656667	0.89	1.1070	105.3	105.3	0.1572	0.1572	105	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28287778	7074314	3903	9757	1813		
333.9339	18.142	18.142	0		34347447	8672273	4653	11632	1864	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.616	1	0.972	44652675	10978931	8756	21890	1254		
317.9389	17.628	17.616	1	0.972	57071961	13787474	14192	35480	971	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.631	1	1.001	4665898	1145703	1759	4397	651		
305.8987	17.643	17.631	1	1.001	5972878	1458593	1111	2777	1313	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	25132336	5946858	3903	9757	1524		
333.9339	18.338	18.338	0	1.011	31023147	7337223	4653	11632	1577	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.369	18.354	1	1.012	7339670	1703834	921	2302	1850		
2,3,7,8-TCDD											
319.8965	18.369	18.357	1	1.002	3077636	720367	906	2265	795		
321.8936	18.369	18.357	1	1.002	4026602	947792	588	1470	1612	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46742521	8181774	9794	24485	835		
353.8970	22.762	22.754	0	1.255	29625698	5225925	6278	15695	832	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.789	22.779	1	1.001	25738852	4452039	5088	12720	875		
341.8567	22.789	22.779	1	1.001	15849324	2731041	3494	8735	782	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.139	24.129	1	1.331	47906018	7878060	9794	24485	804		
353.8970	24.139	24.129	1	1.331	30308564	4845446	6278	15695	772	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.167	24.156	1	1.001	25185293	4111601	5088	12720	808		
341.8567	24.167	24.156	1	1.001	15743143	2618923	3494	8735	750	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.876	24.865	1	1.371	29023498	4508866	3701	9252	1218		
369.8919	24.876	24.865	1	1.371	18100916	2812844	2121	5302	1326	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.903	24.892	1	1.001	15548746	2422000	1286	3215	1883		
357.8516	24.903	24.892	1	1.001	9616308	1489099	768	1920	1939	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.849	30.838	1	0.954	23323404	5008910	10853	27132	462		
385.8610	30.849	30.838	1	0.954	44752105	9511743	20971	52427	454	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.000	20753403	4584464	10058	25145	456		
375.8178	30.862	30.857	0	1.000	16771743	3729681	8311	20777	449	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.009	31.003	0	0.958	24213048	5206646	10853	27132	480		
385.8610	31.009	31.003	0	0.958	46464415	9739576	20971	52427	464	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	22352739	4771379	10058	25145	474		
375.8178	31.022	31.022	0	1.000	18450028	3943683	8311	20777	475	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.767	31.756	1	0.982	22835025	6015846	10853	27132	554		
385.8610	31.767	31.756	1	0.982	44193473	11391437	20971	52427	543	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.781	31.772	1	1.000	21800962	5788708	10058	25145	576		
375.8178	31.781	31.772	1	1.000	17940403	4765095	8311	20777	573	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.005	20681548	5801162	10853	27132	535		
385.8610	32.526	32.523	0	1.005	39707736	10862121	20971	52427	518	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.540	32.534	0	1.000	19691436	5514300	10058	25145	548		
375.8178	32.540	32.534	0	1.000	16232754	4594829	8311	20777	553	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.353	32.342	1		35642869	9349119	10403	26007	899		
403.8529	32.353	32.342	1		27945220	7378163	7908	19770	933	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.941	31.929	1	0.987	24473480	7240164	10403	26007	696		
403.8529	31.941	31.929	1	0.987	19566447	5775722	7908	19770	730	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.954	31.945	1	1.000	14220855	4121905	5566	13915	741		
391.8127	31.954	31.945	1	1.000	10670315	3199272	4114	10285	778	1.33(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.034	32.033	0	0.990	30876044	8117648	10403	26007	780		
403.8529	32.034	32.033	0	0.990	24408488	6404371	7908	19770	810	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	15327109	4211681	5566	13915	757		
391.8127	32.047	32.047	0	1.000	12626643	3343117	4114	10285	813	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.367	32.355	1	1.013	16583478	4368640	5566	13915	785		
391.8127	32.353	32.355	0	1.013	13211476	3519862	4114	10285	856	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.924	33.914	1	1.049	14460337	4683854	18083	45207	259		
419.8220	33.924	33.914	1	1.049	33237334	10568693	50629	126572	209	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.937	33.926	1	1.000	18301949	5790856	23497	58742	246		
409.7789	33.924	33.926	0	1.000	17439015	5585138	22139	55347	252	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.018	35.010	0	1.082	13111896	3936331	18083	45207	218		
419.8220	35.018	35.010	0	1.082	30126726	8910423	50629	126572	176	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.030	35.020	1	1.000	15206712	4448229	23497	58742	189		
409.7789	35.018	35.020	0	1.000	14243924	4117019	22139	55347	186	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.726	34.716	1	1.073	20474082	5927612	12552	31380	472		
437.8140	34.714	34.716	0	1.073	19859635	5735510	11540	28850	497	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	11412485	3410093	6511	16277	524		
425.7737	34.726	34.726	0	1.000	11126306	3358586	6451	16127	521	1.03(0.88-1.20)	
13C-OCDD											
469.7779	37.094	37.094	0	1.147	25234291	6398501	3020	7550	2119		
471.7750	37.094	37.094	0	1.147	29103952	7389026	4794	11985	1541	0.87(0.76-1.02)	
OCDF											
441.7428	37.202	37.199	0	1.003	19626693	5149784	2565	6412	2008		
443.7399	37.202	37.199	0	1.003	21520509	5563126	2015	5037	2761	0.91(0.76-1.02)	
OCDD											
457.7377	37.106	37.106	0	1.000	14916504	3846231	2276	5690	1690		
459.7348	37.106	37.106	0	1.000	16740163	4277323	2524	6310	1695	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

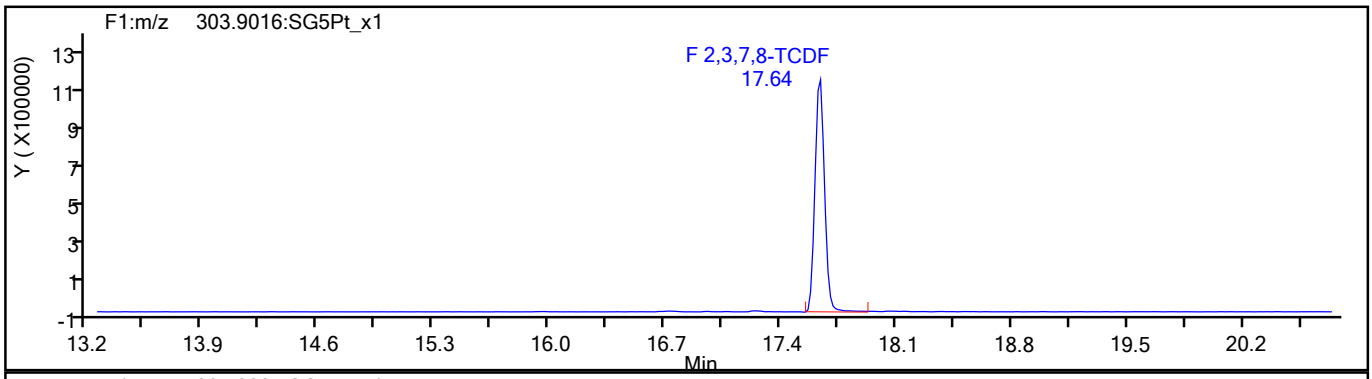

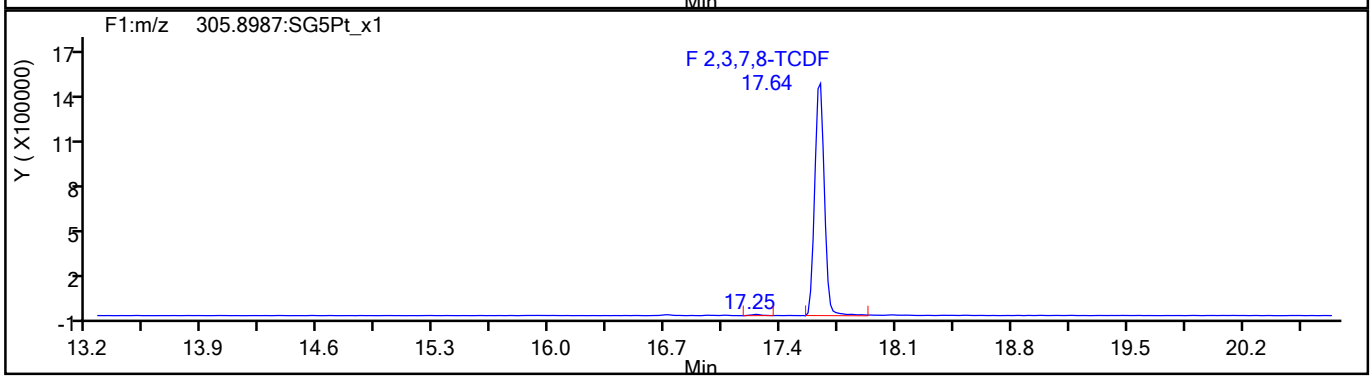

TCDF Standards

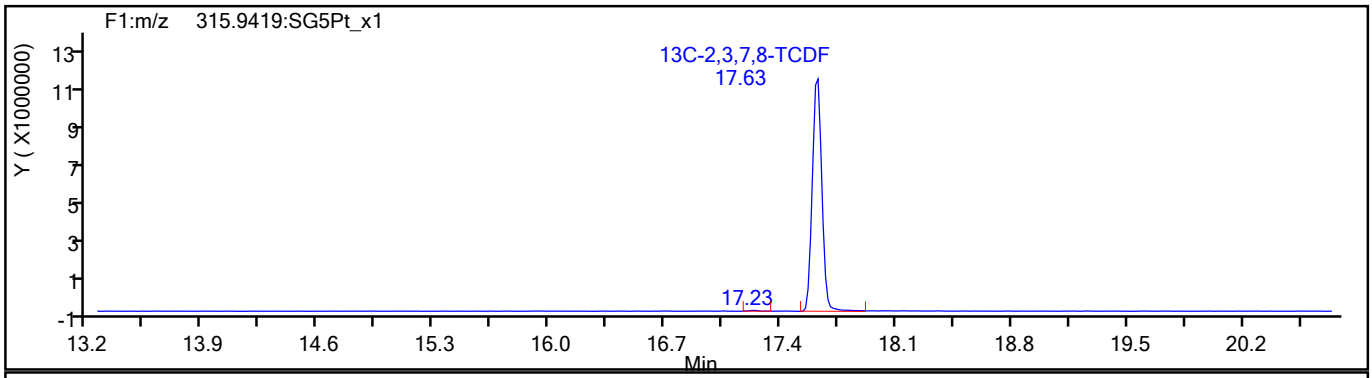

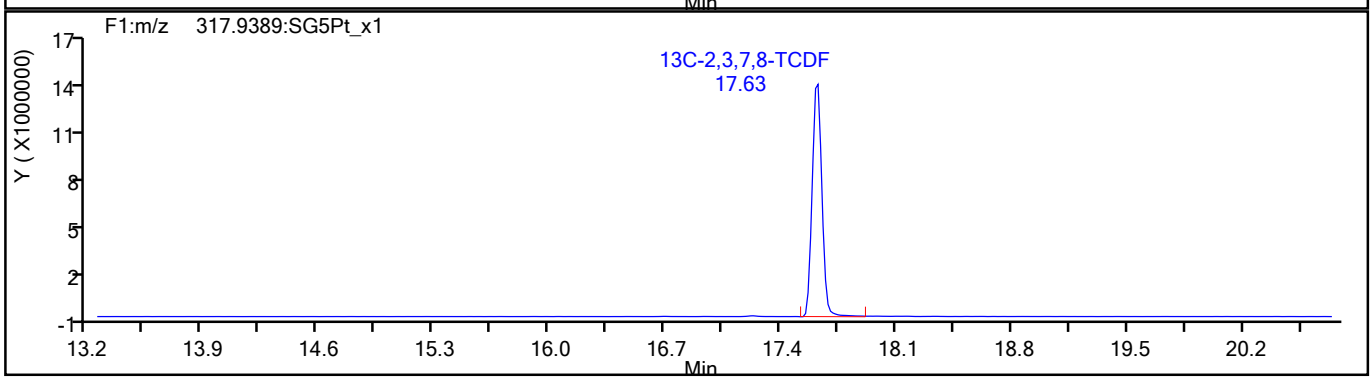

778486

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

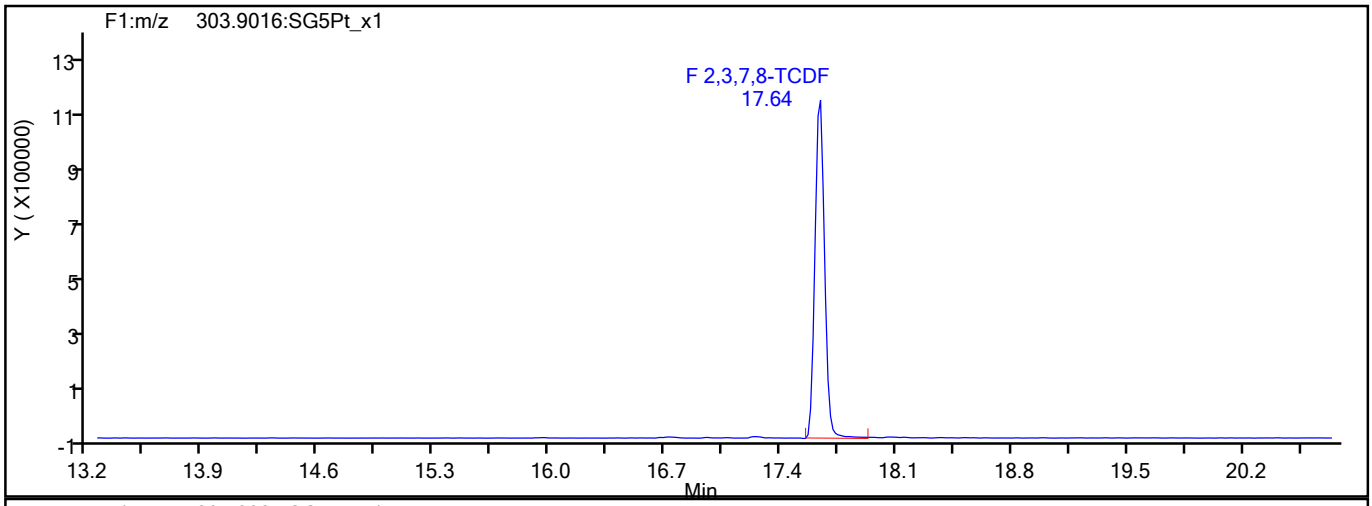

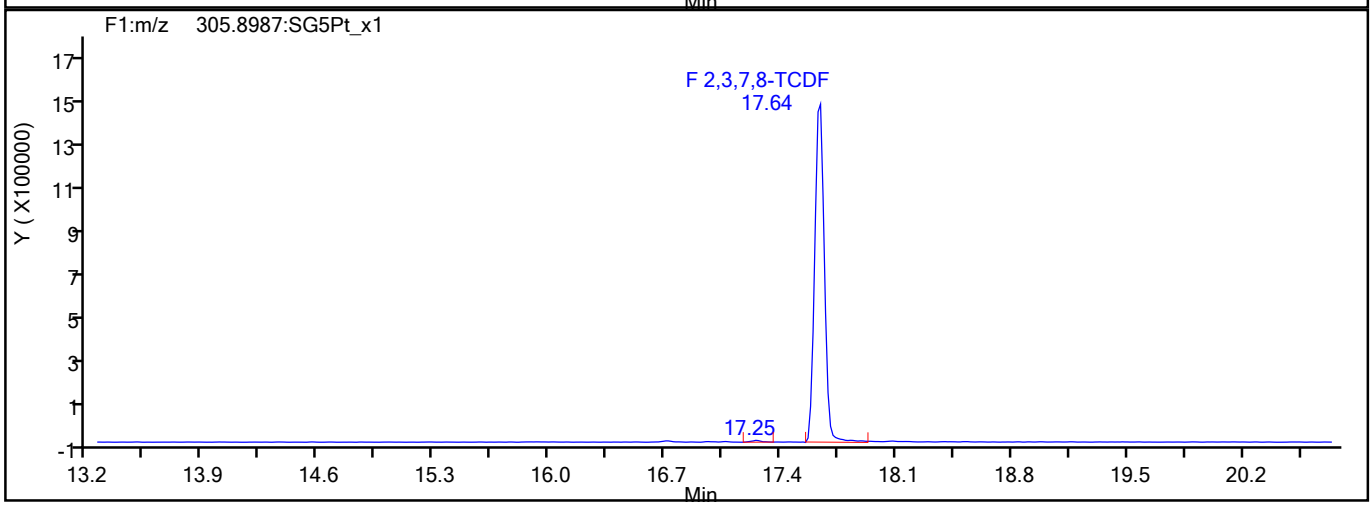

TCDF Interference Mass

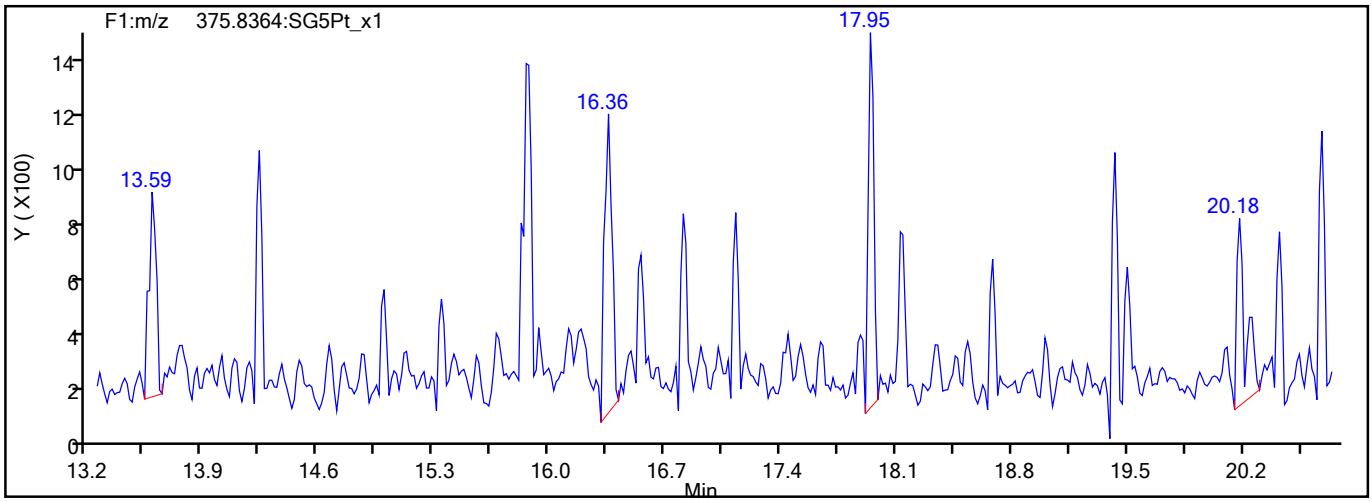

778487

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

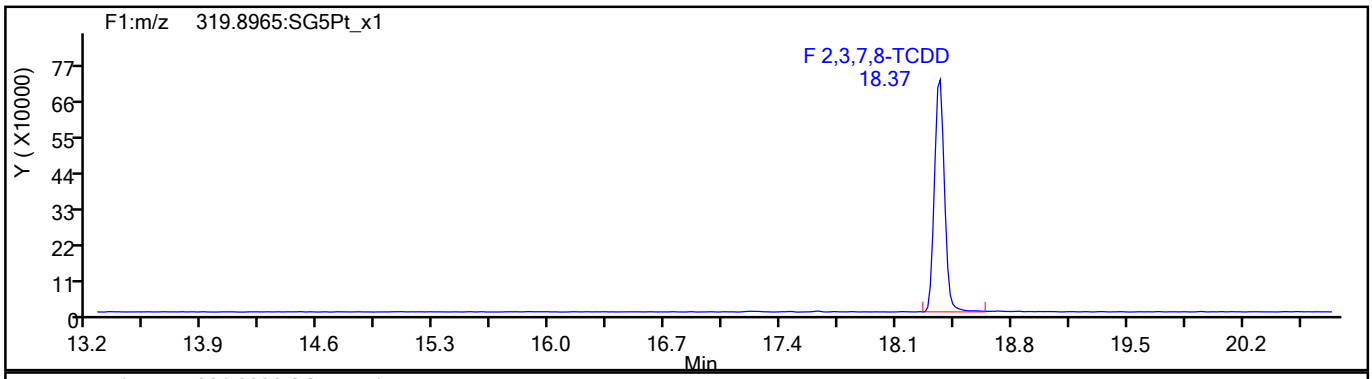

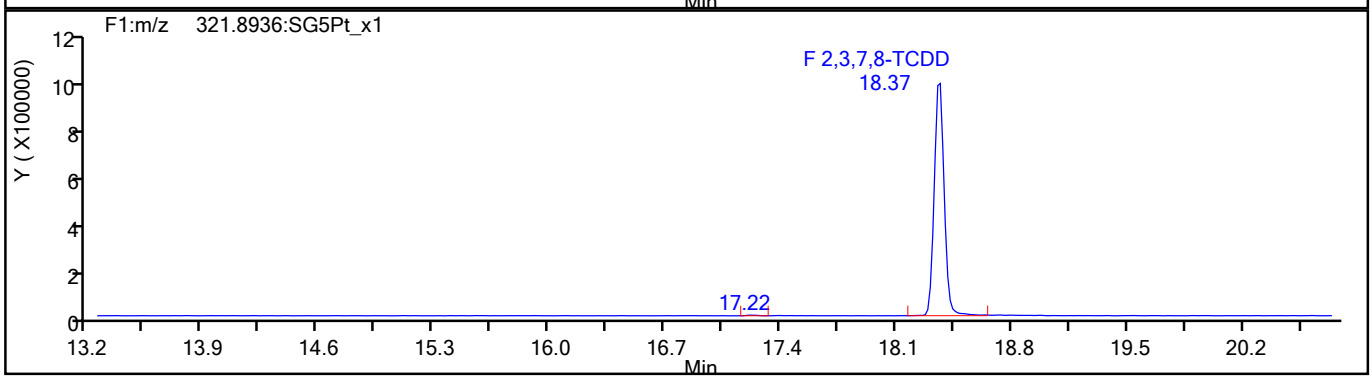

TCDD Standards

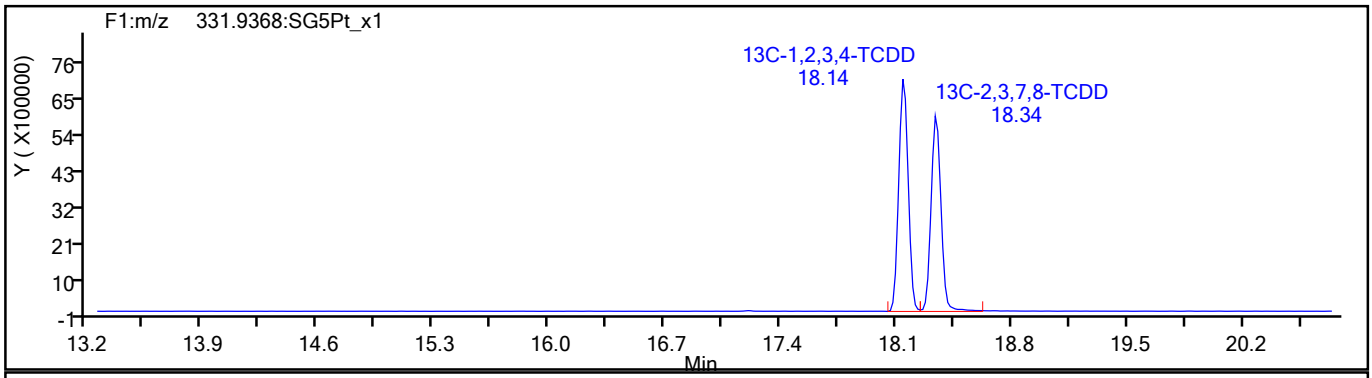

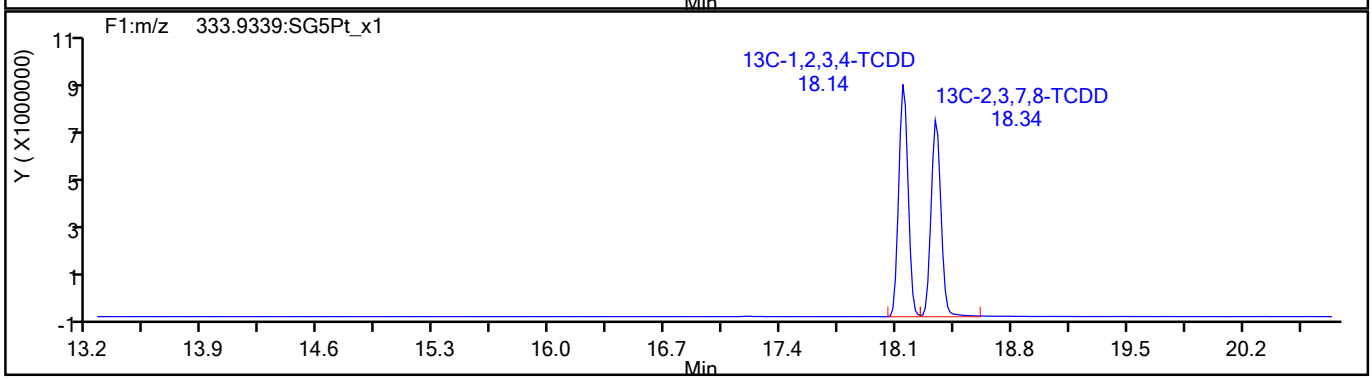

778488

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

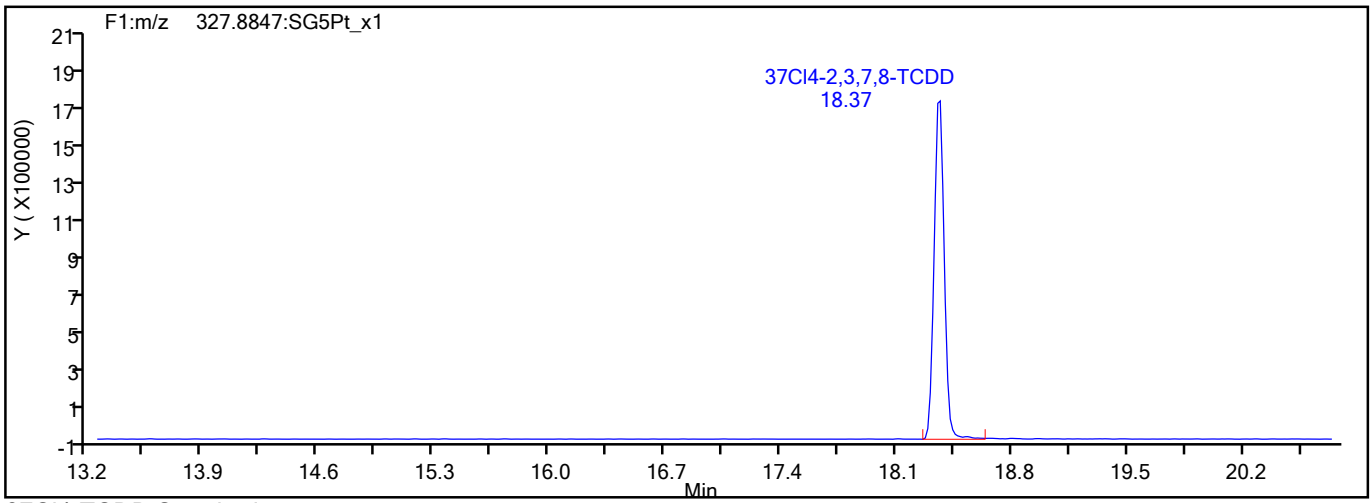

37Cl4-TCDD Standards

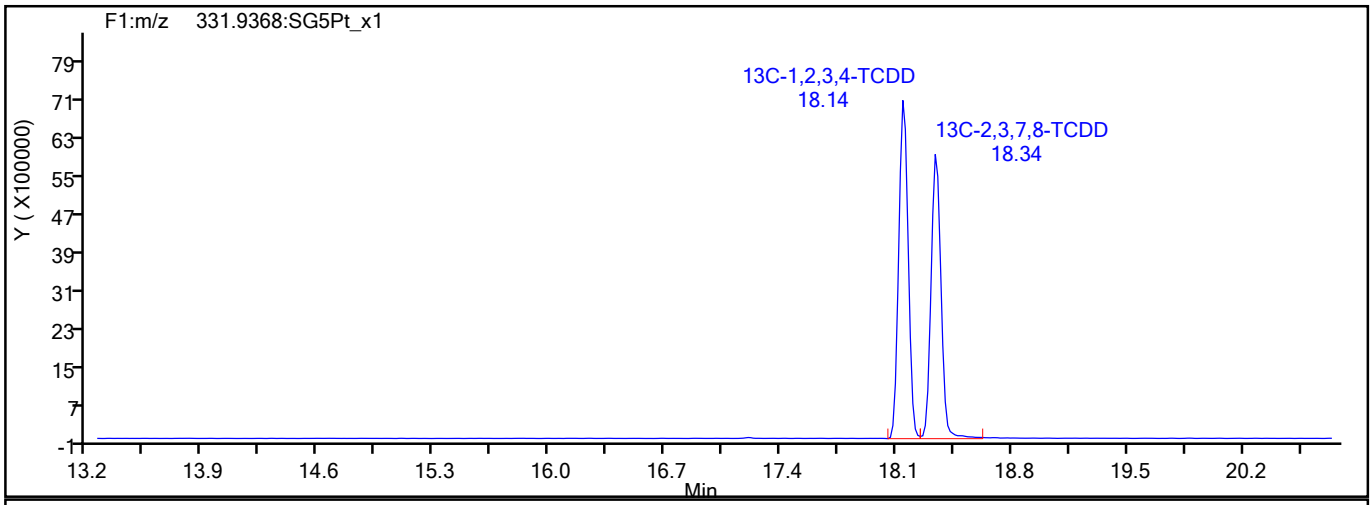

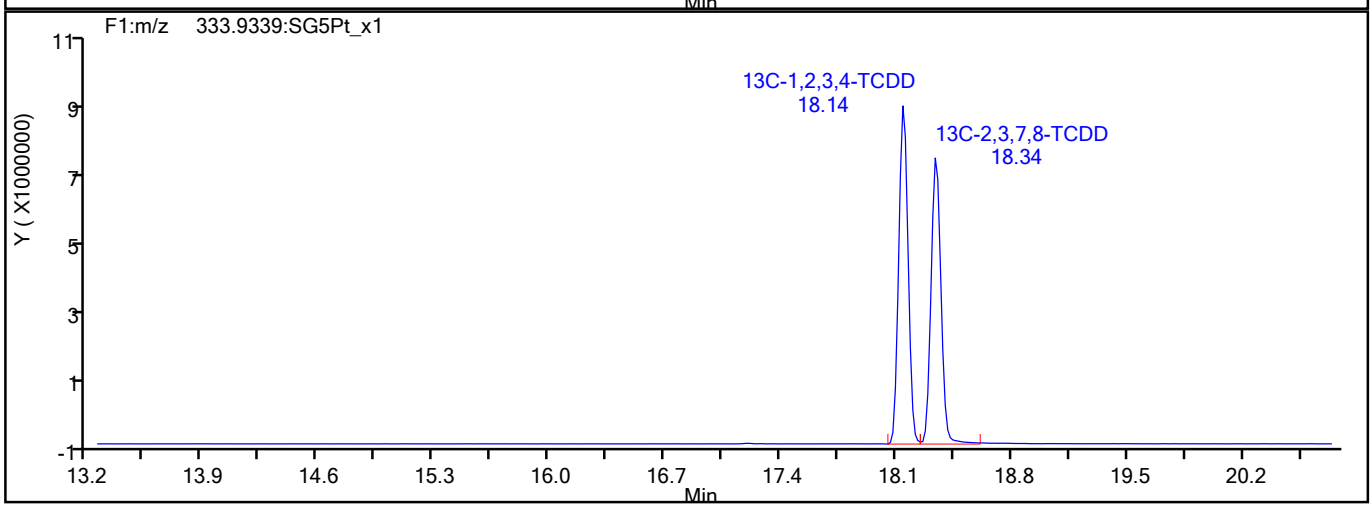

778489

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

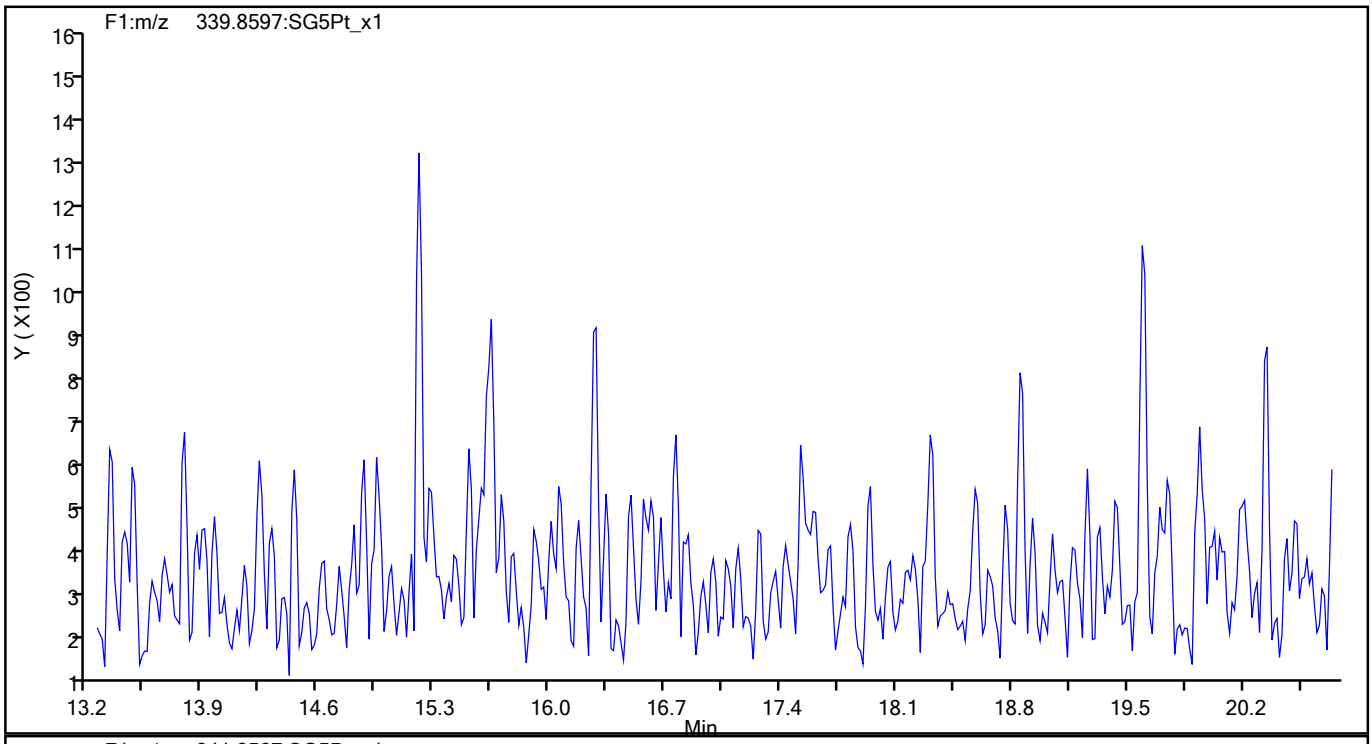

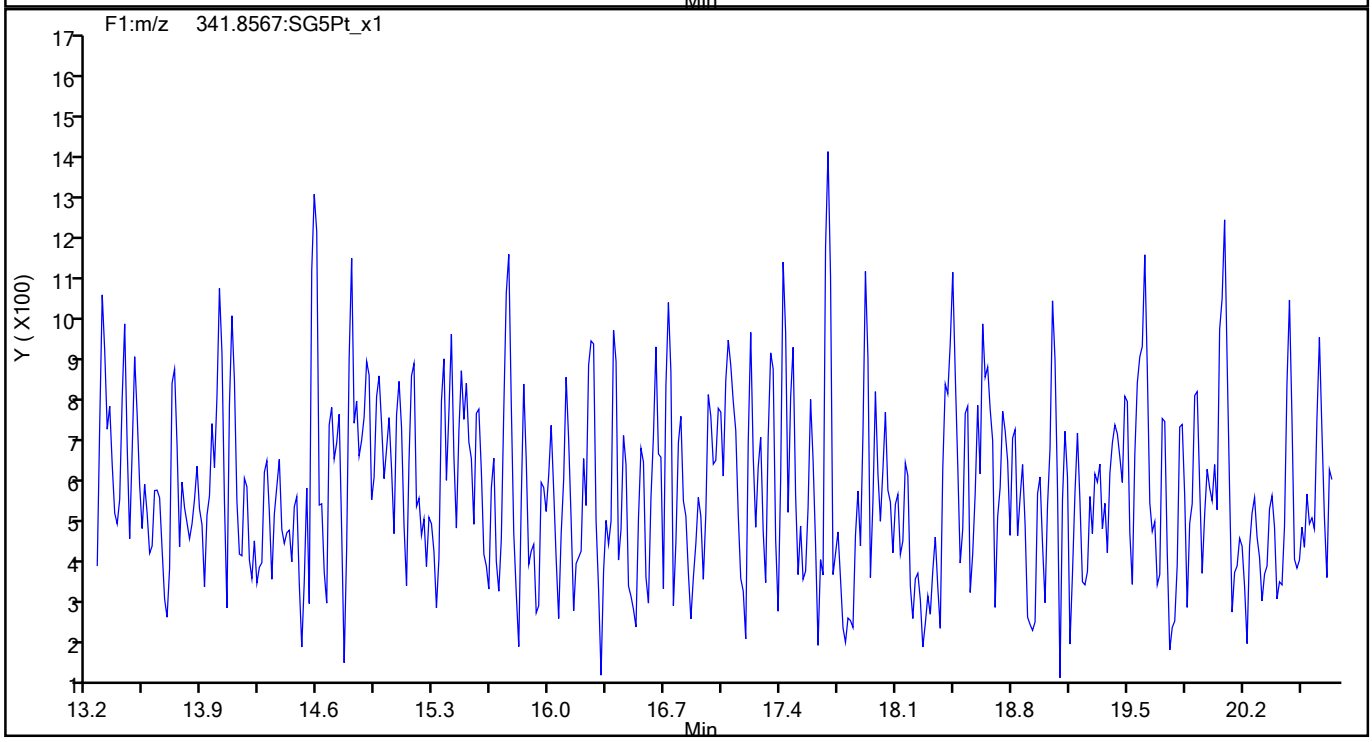

778490

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

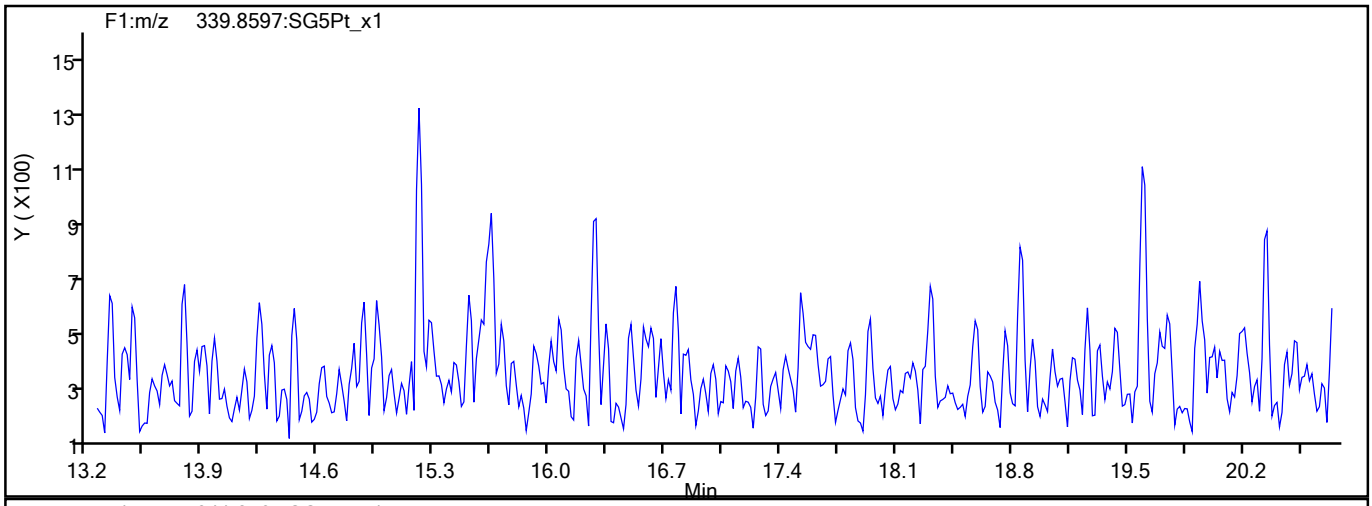

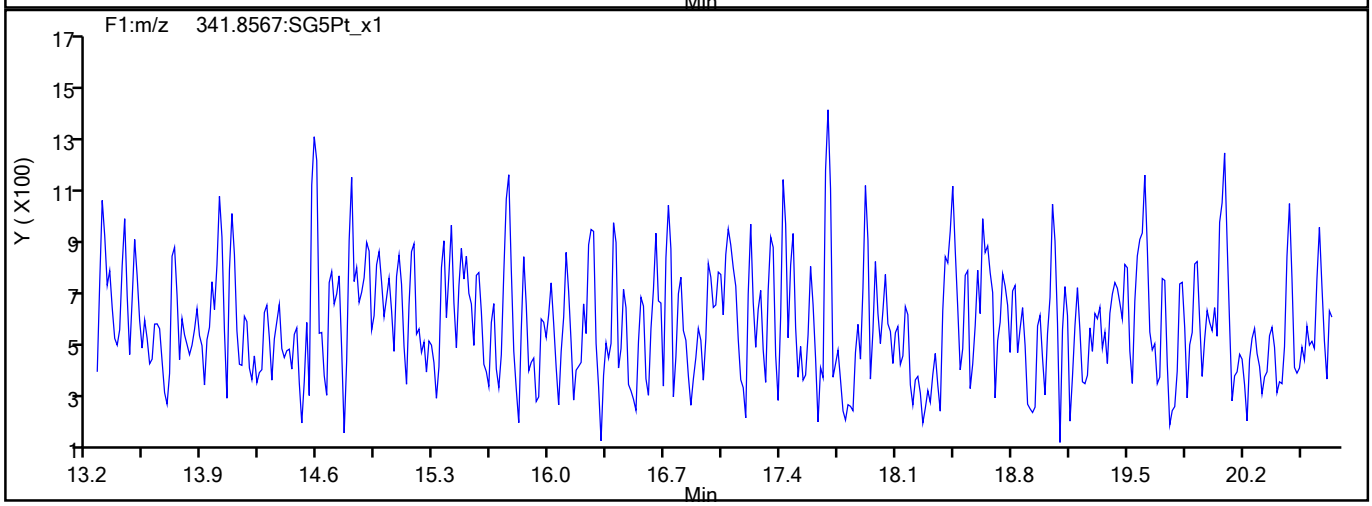

F1 PeCDFs Interference Mass

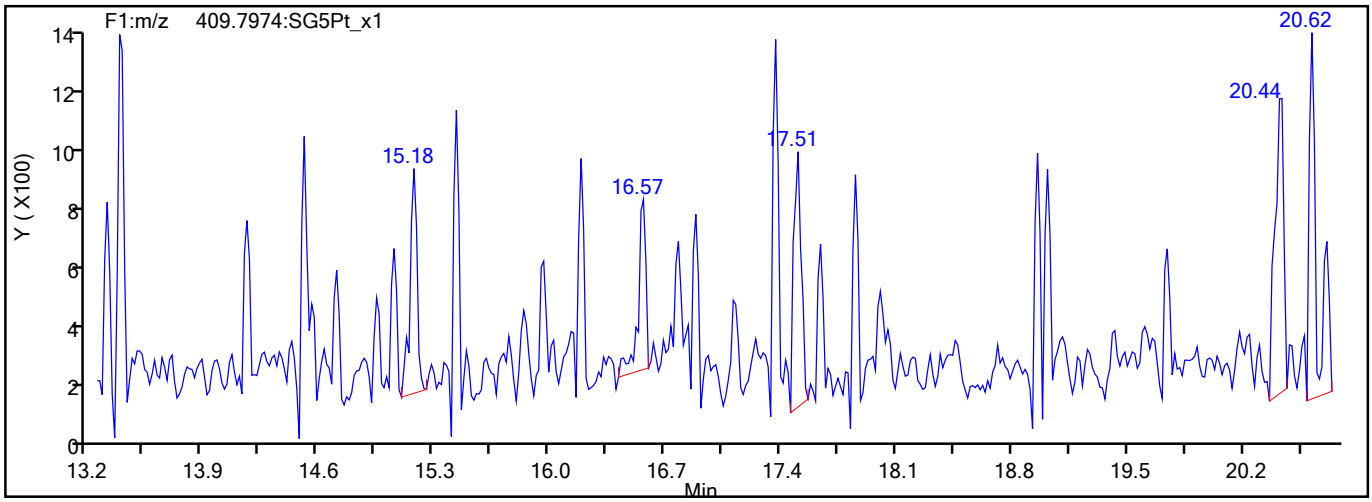

778491

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

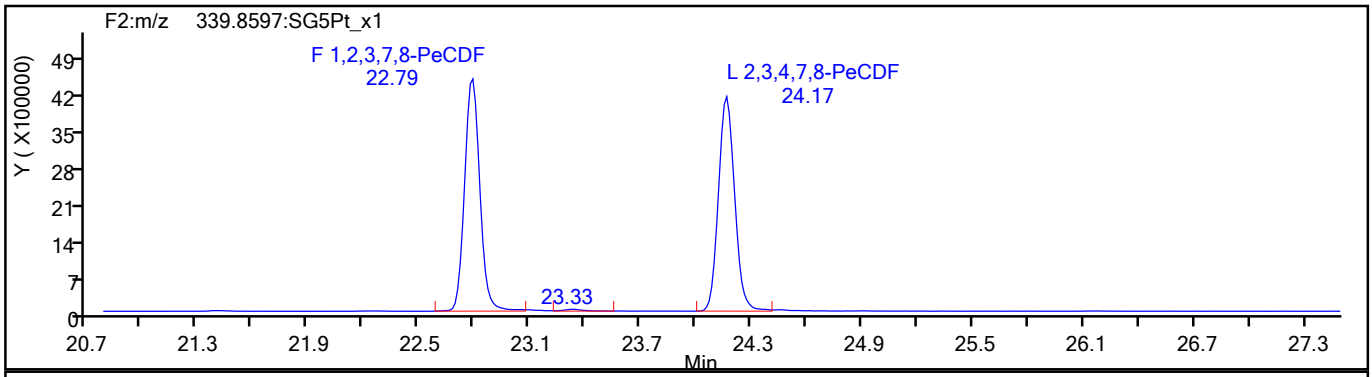

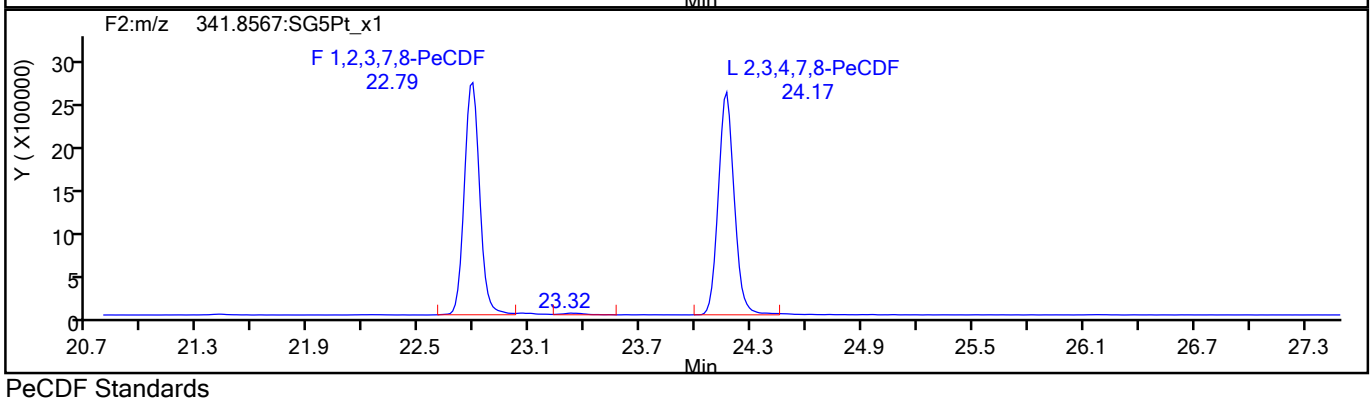

PeCDF Standards

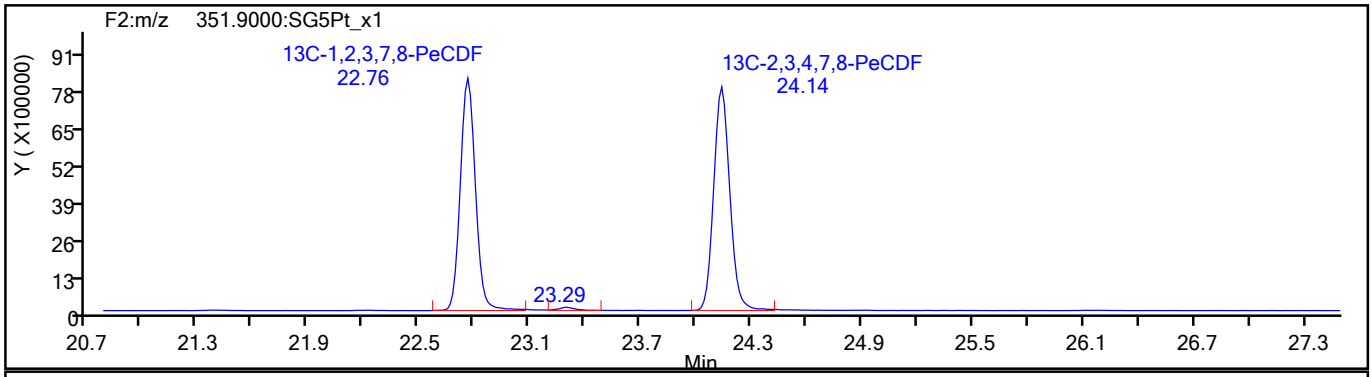

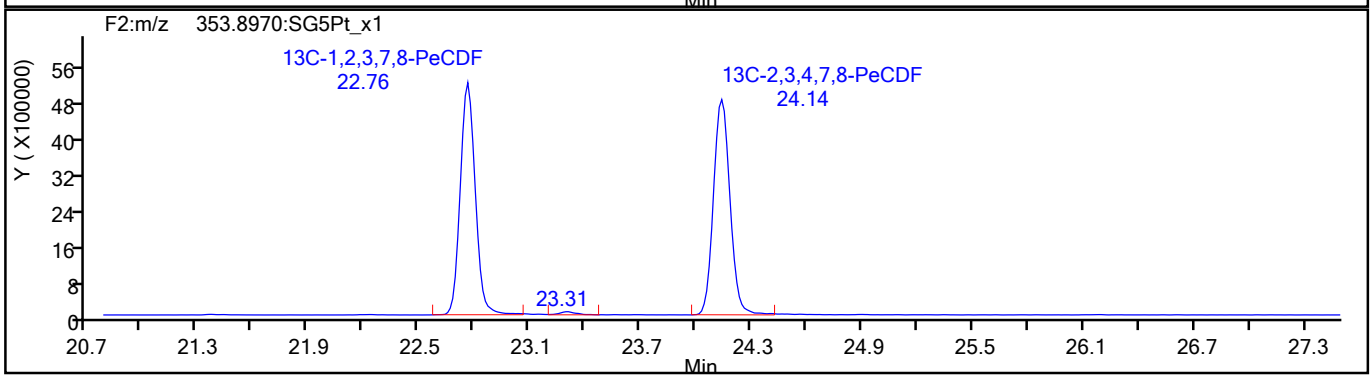

778492

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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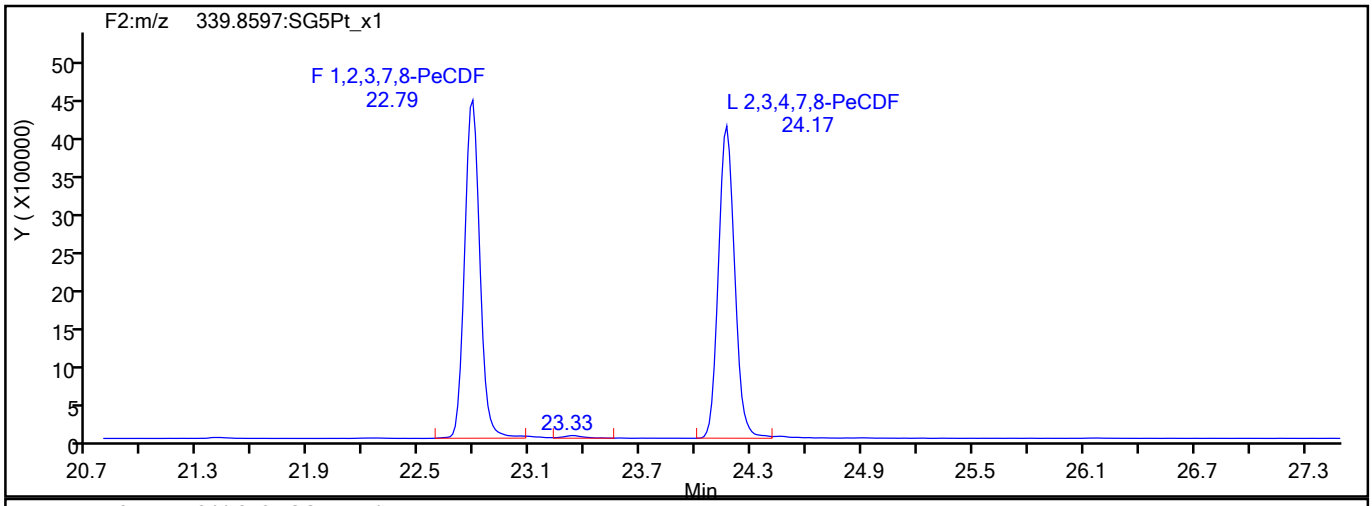

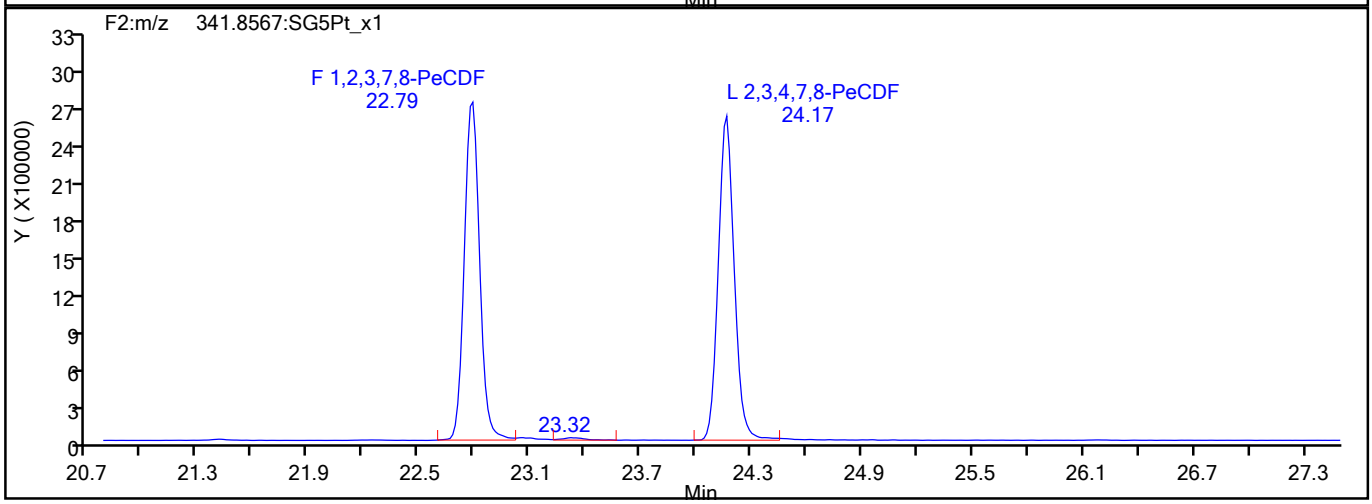

PeCDF Interference Mass

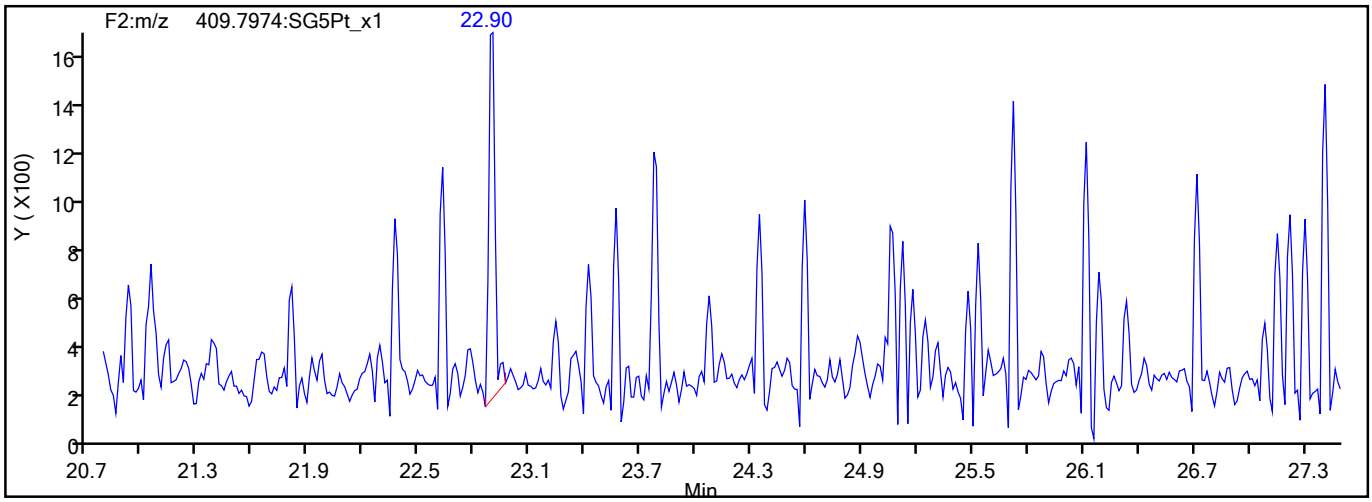

778493

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

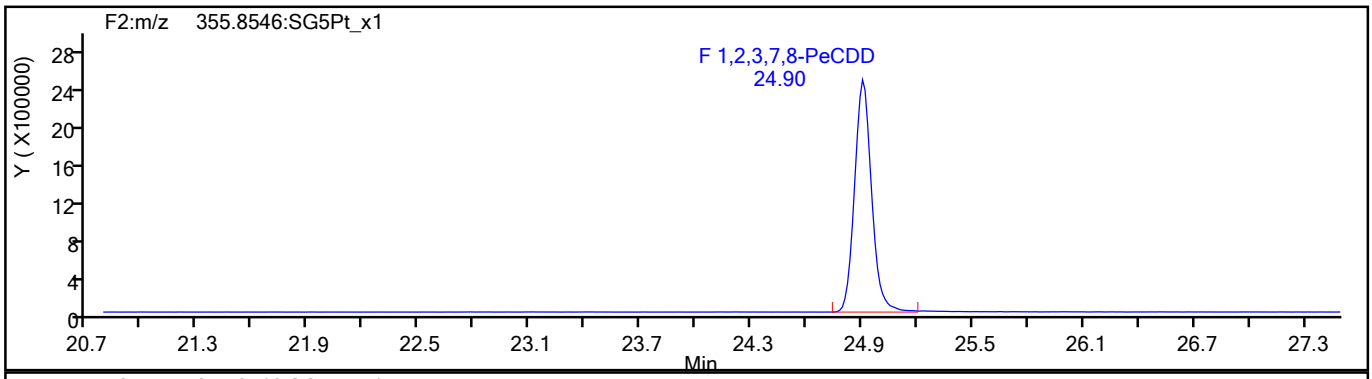

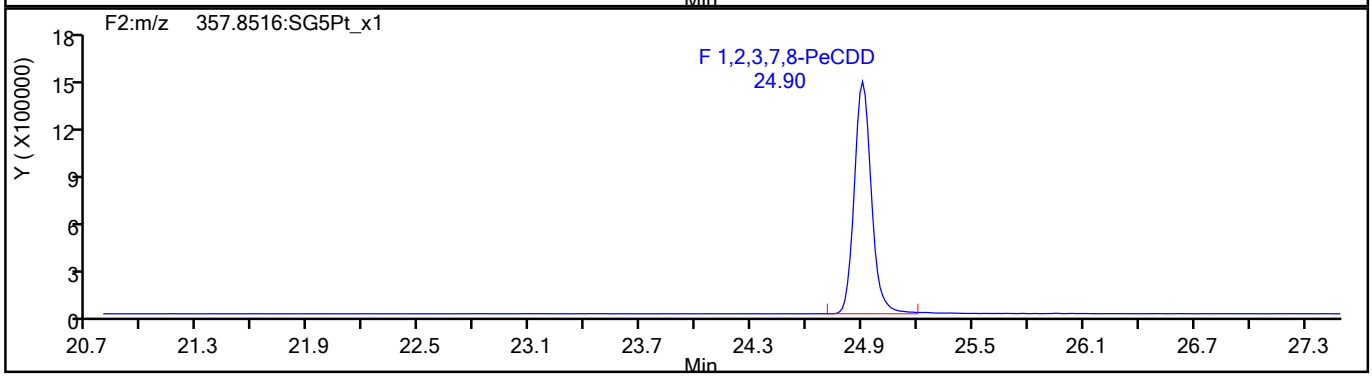

PeCDD Standards

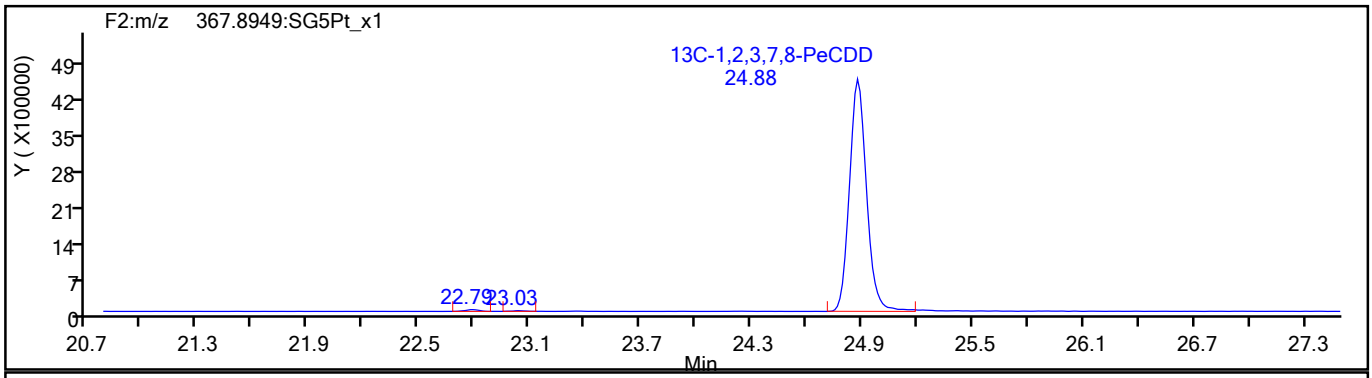

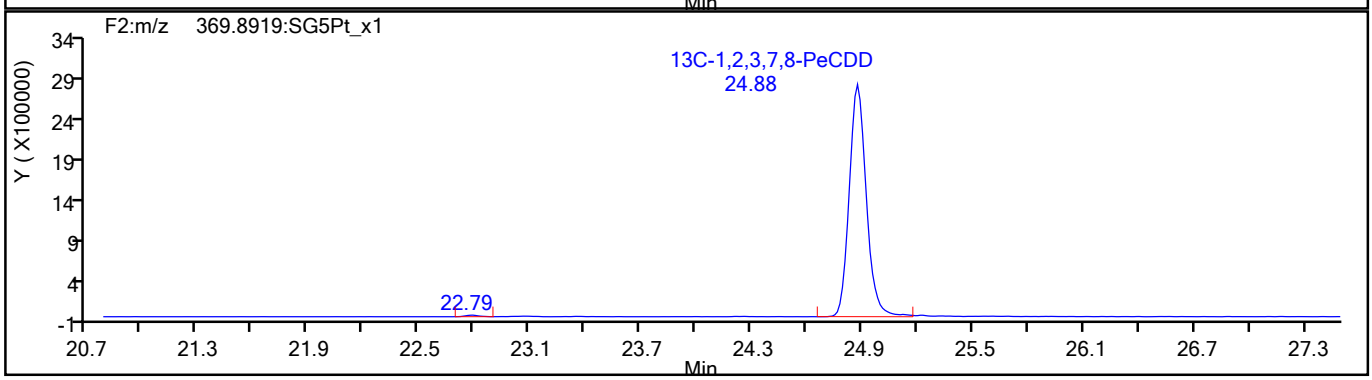

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Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

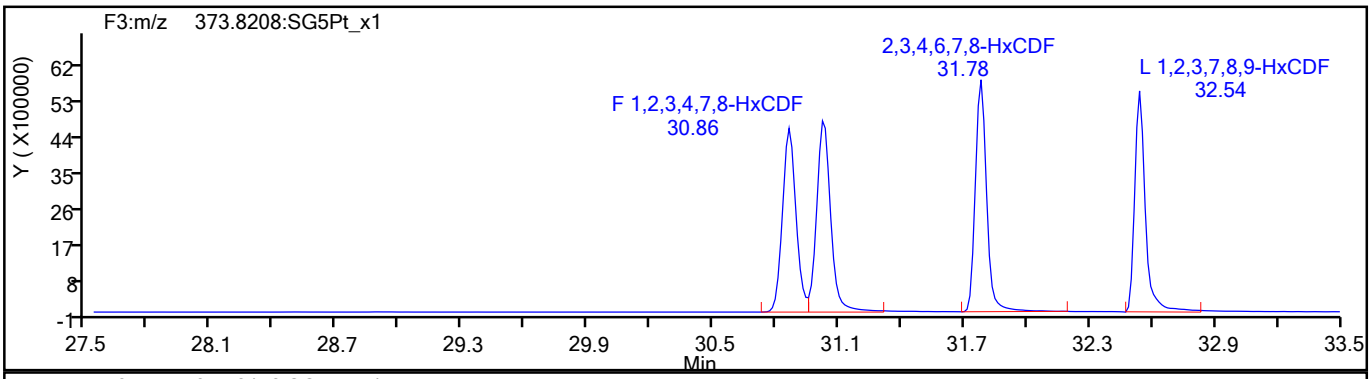

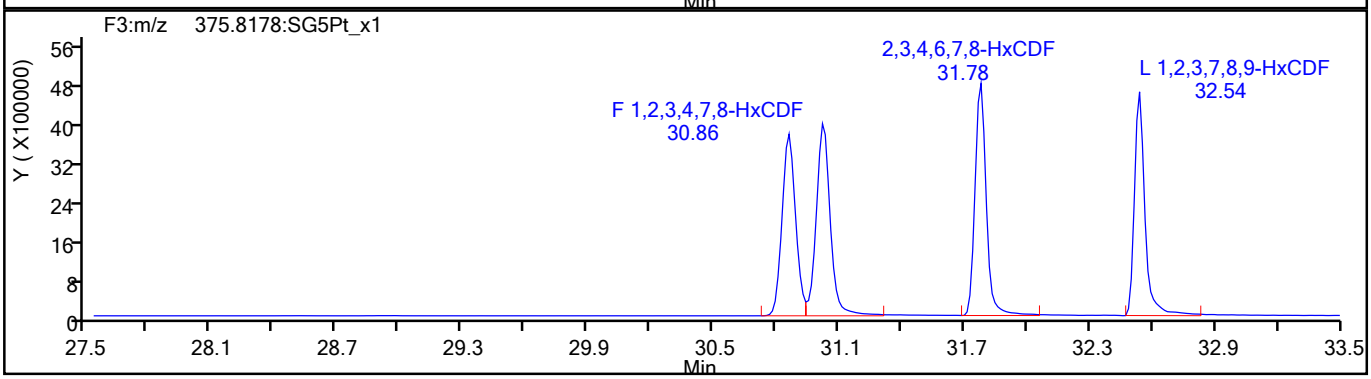

HxCDF Standards

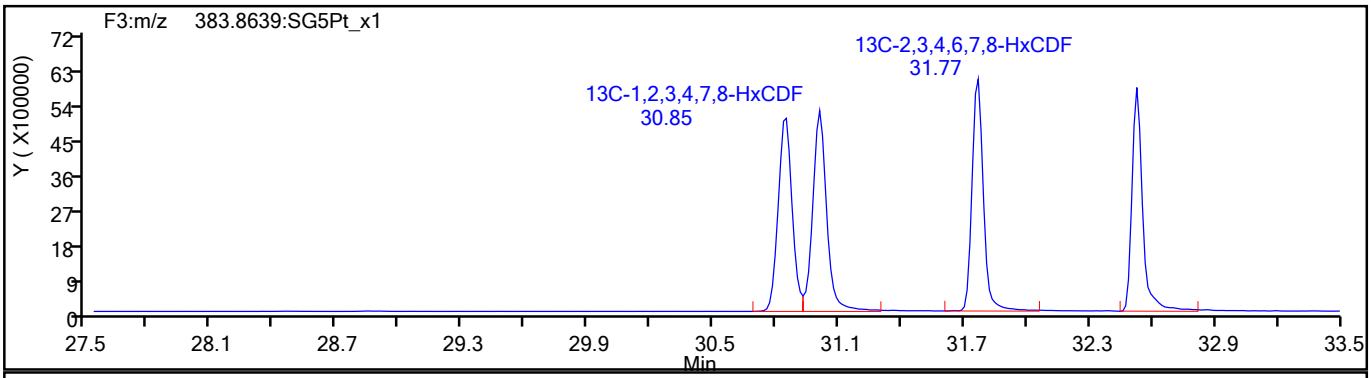

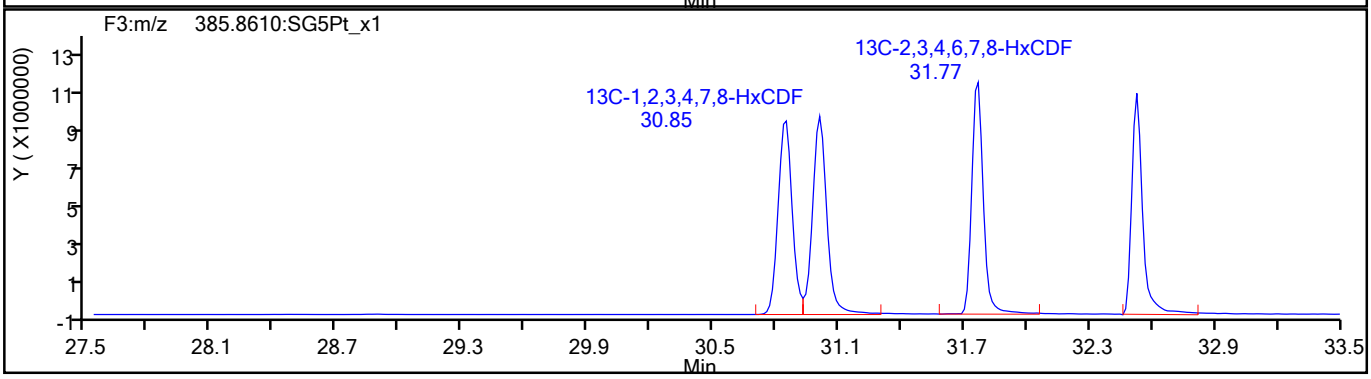

778495

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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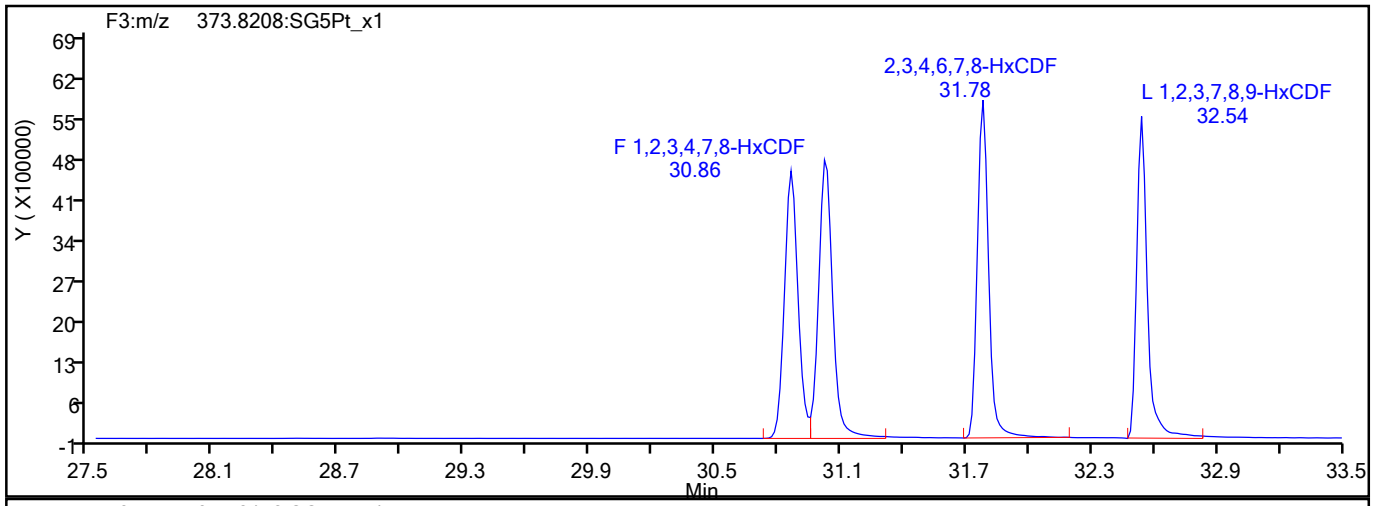

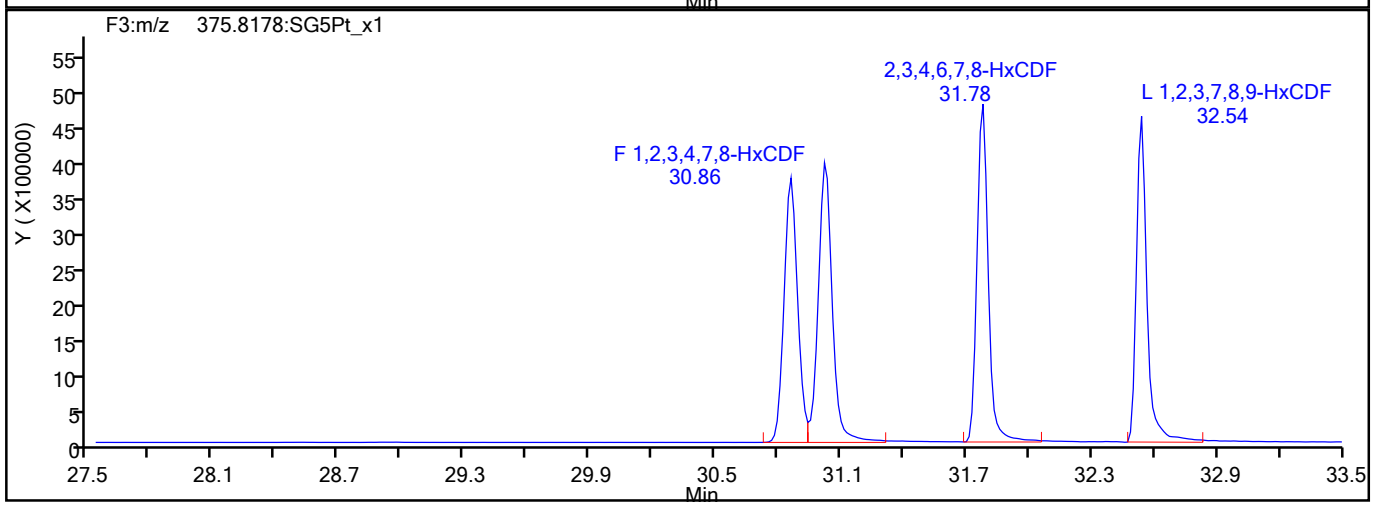

HxCDF Interference Mass

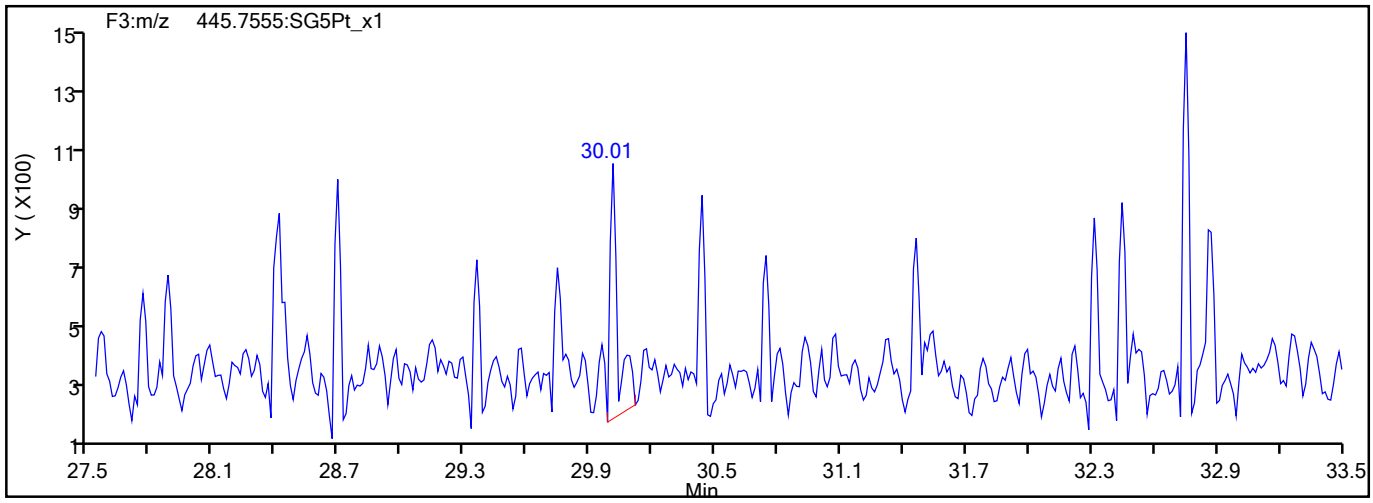

778496

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

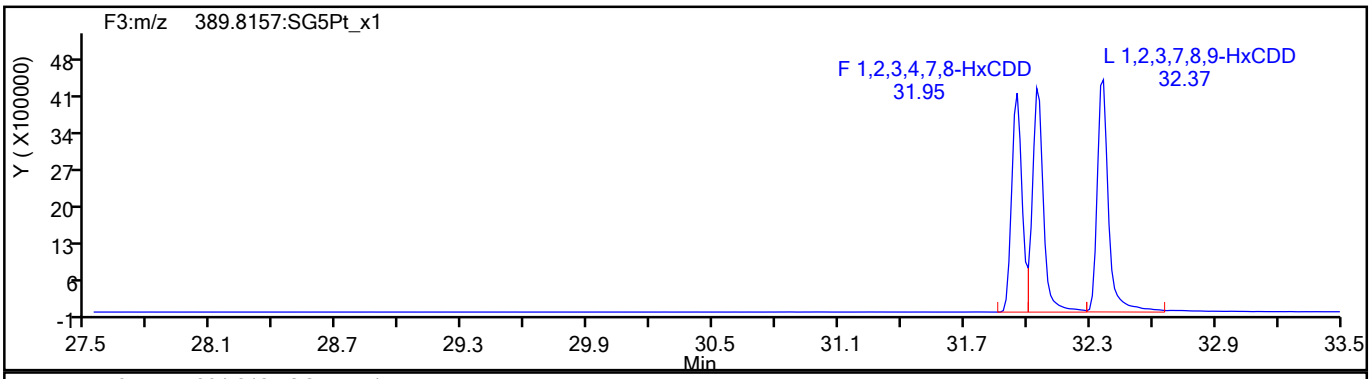

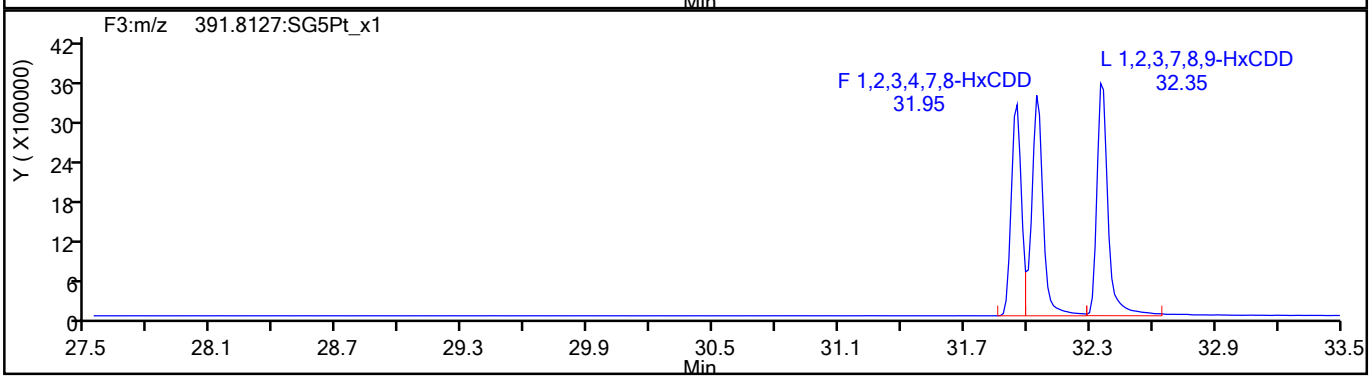

HxCDD Standards

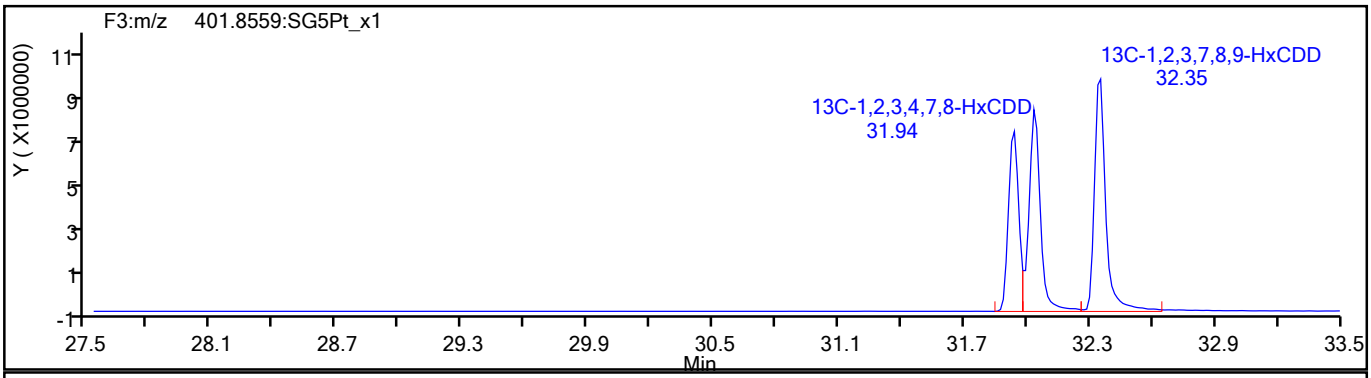

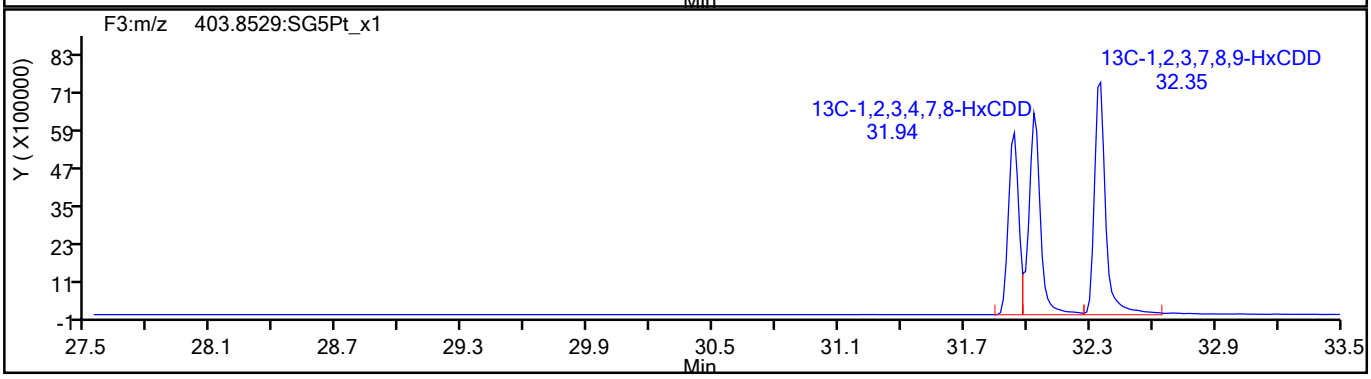

778497

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Eurofins TestAmerica, Sacramento

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HpCDF

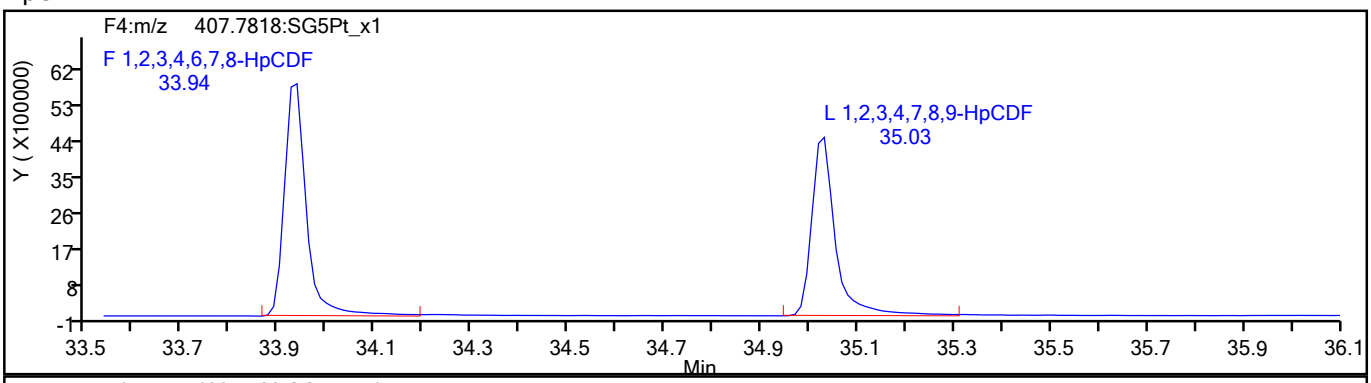

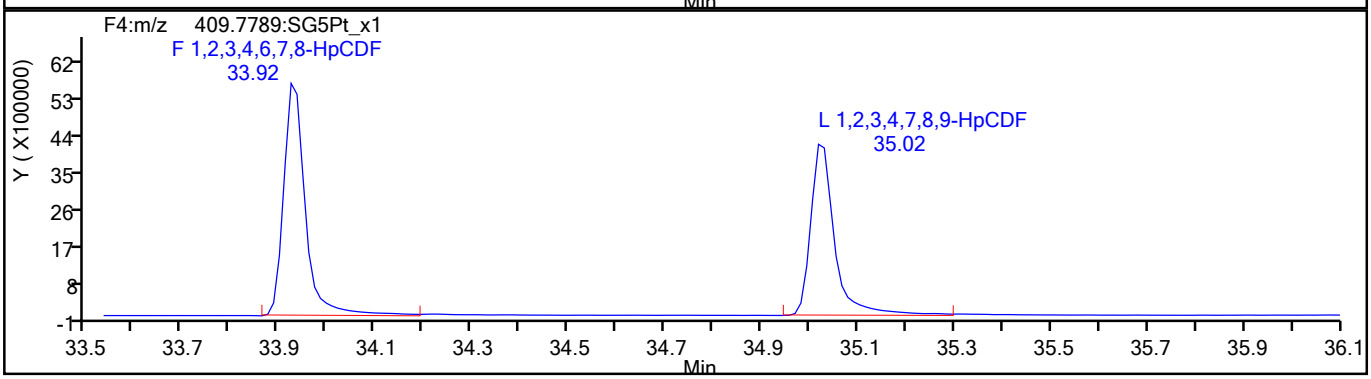

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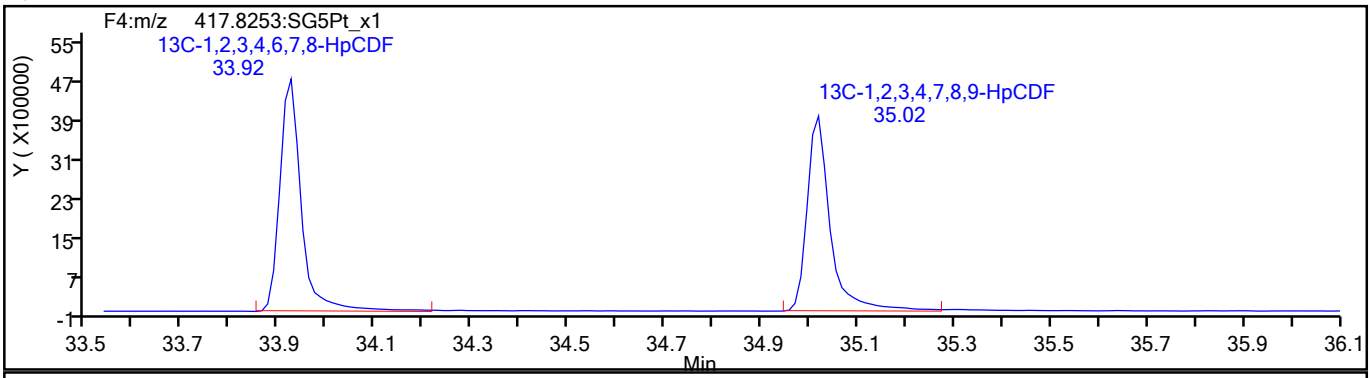

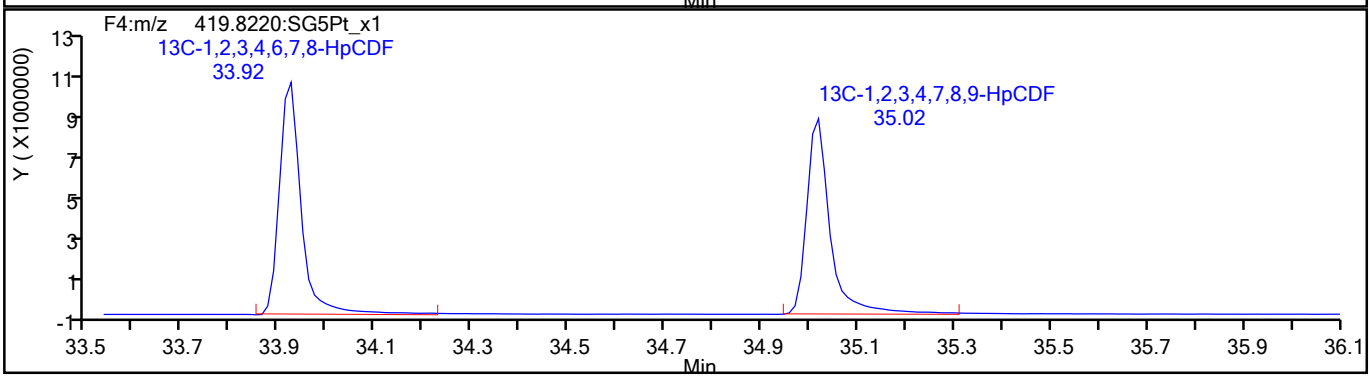

778498

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Eurofins TestAmerica, Sacramento

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HpCDF

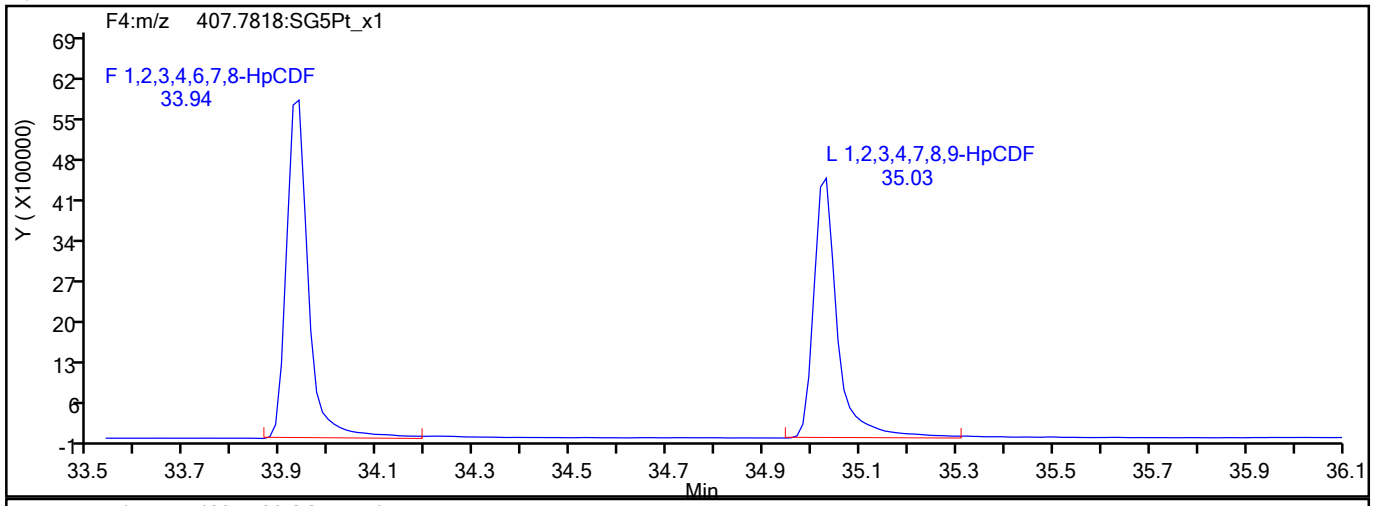

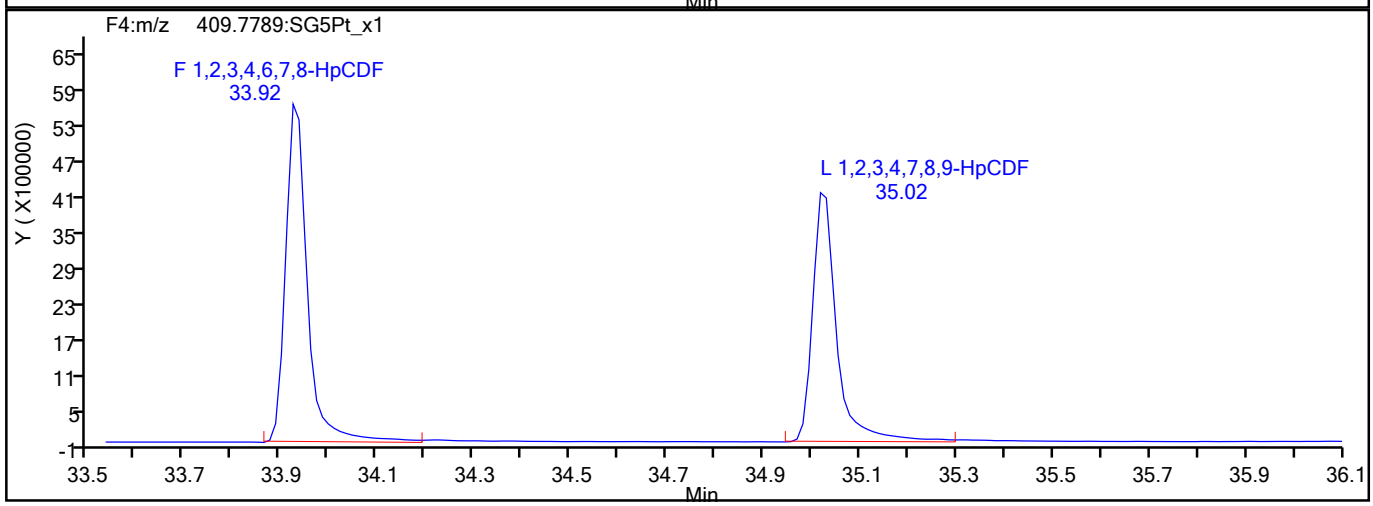

HpCDF Interference Mass

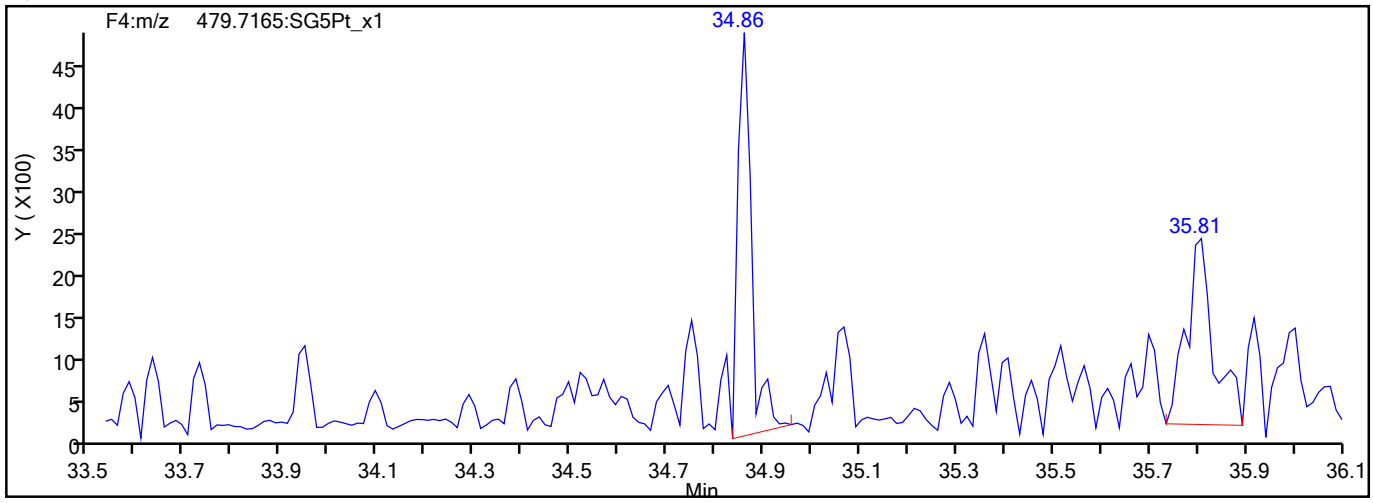

778499

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Eurofins TestAmerica, Sacramento

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HpCDD

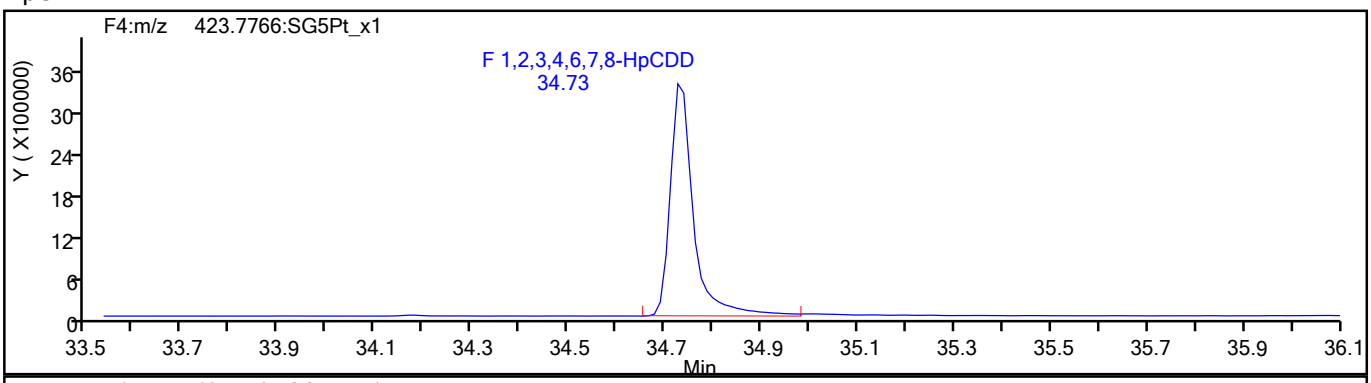

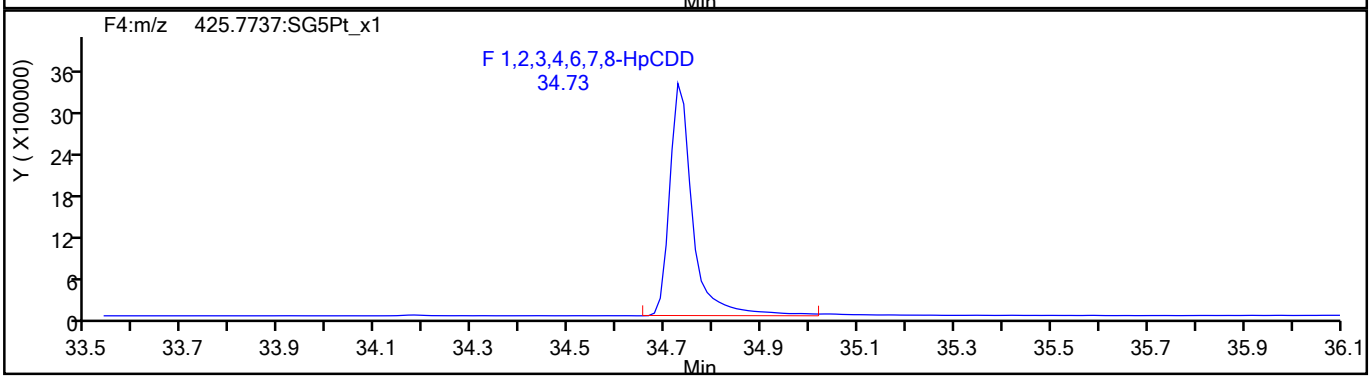

HpCDD Standards

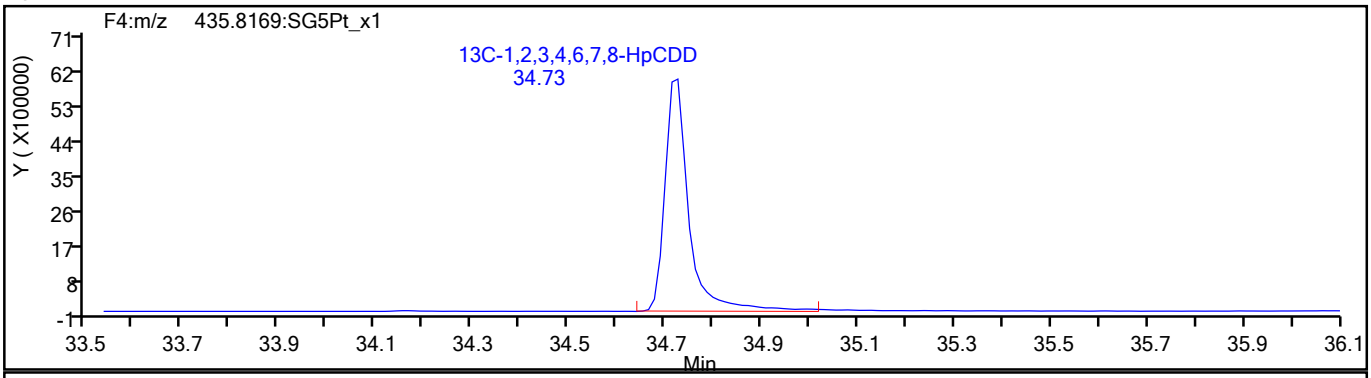

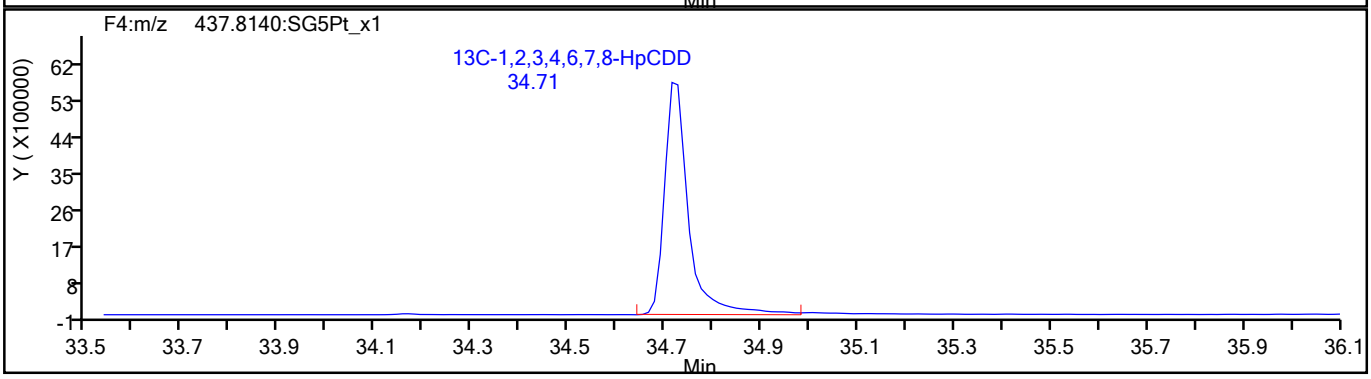

778500

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Eurofins TestAmerica, Sacramento

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OCDF

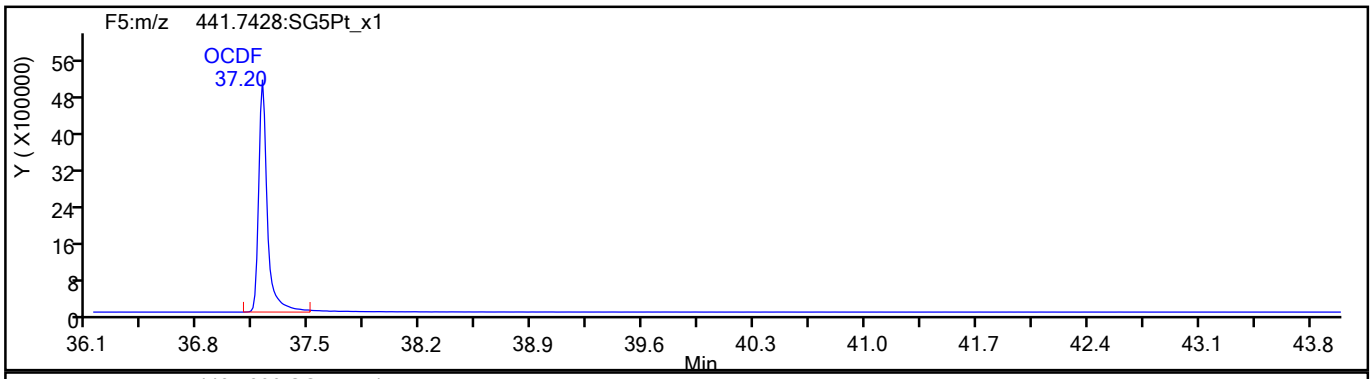

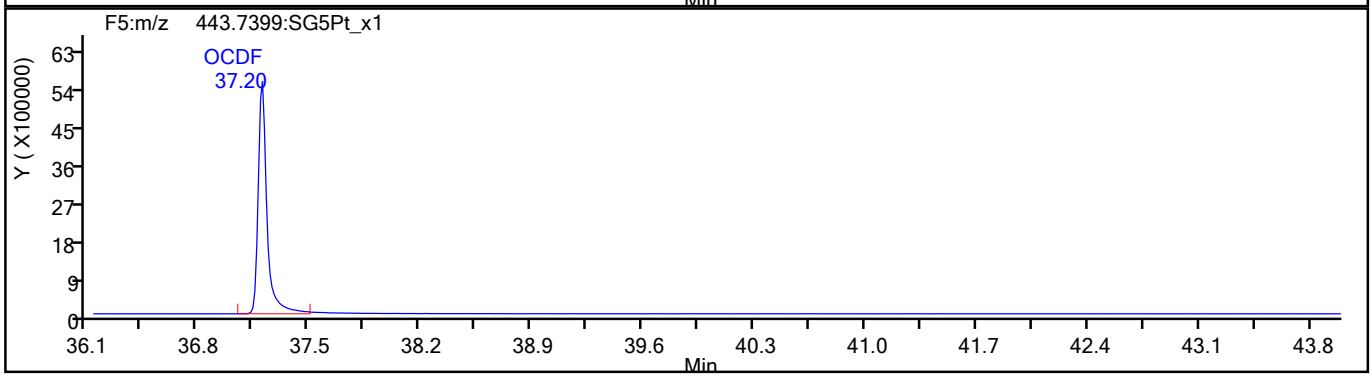

OCDF Standards

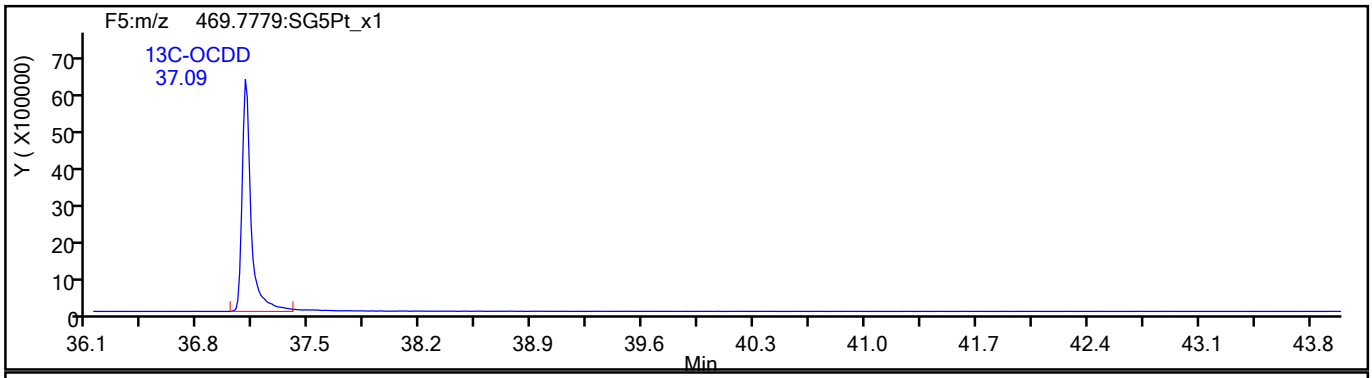

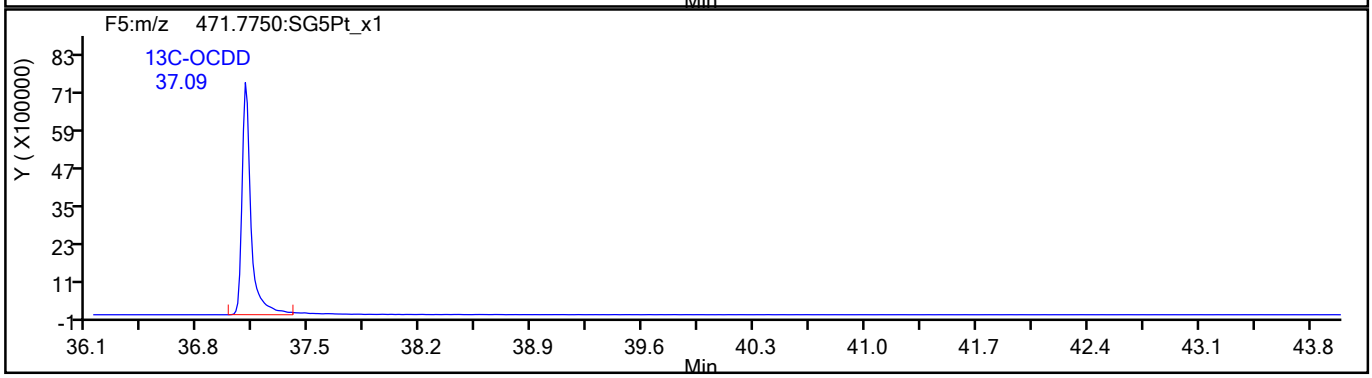

778501

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

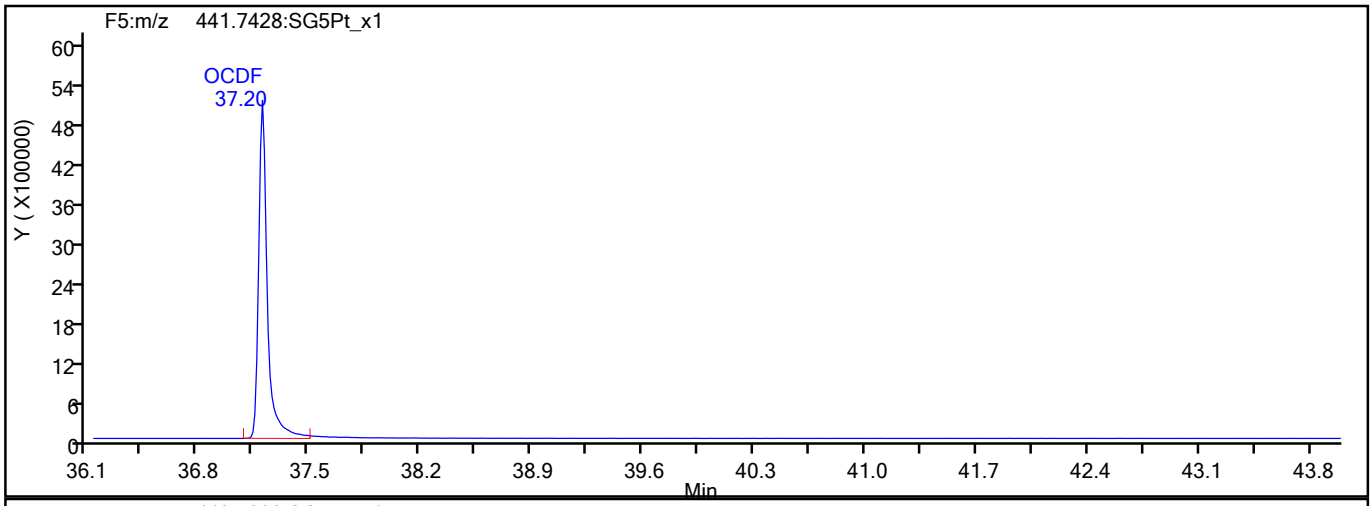

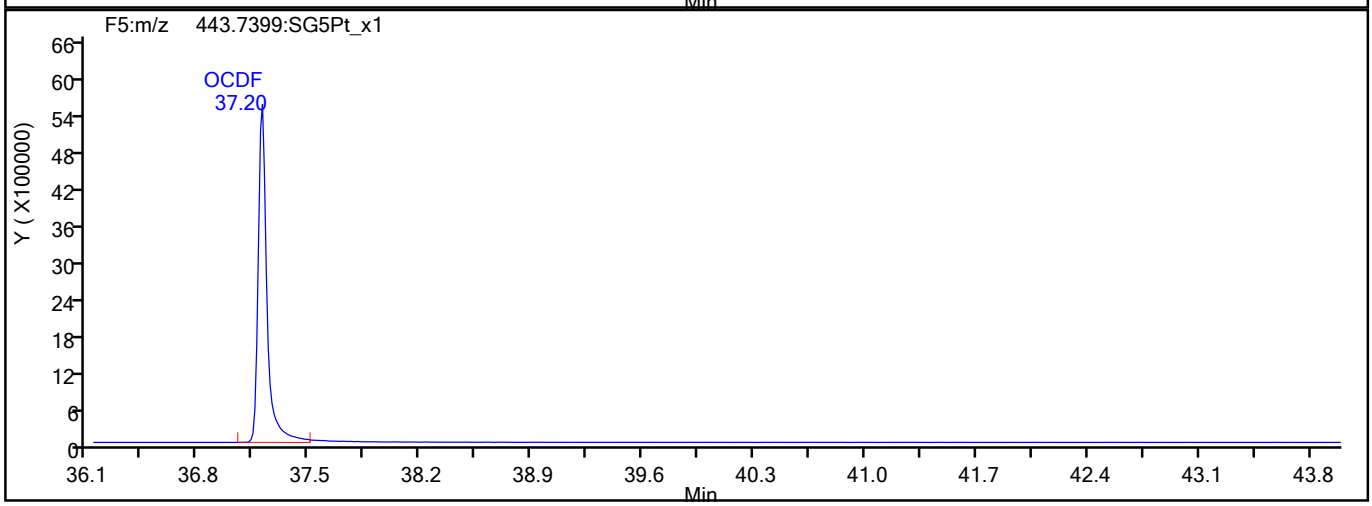

OCDF Interference Mass

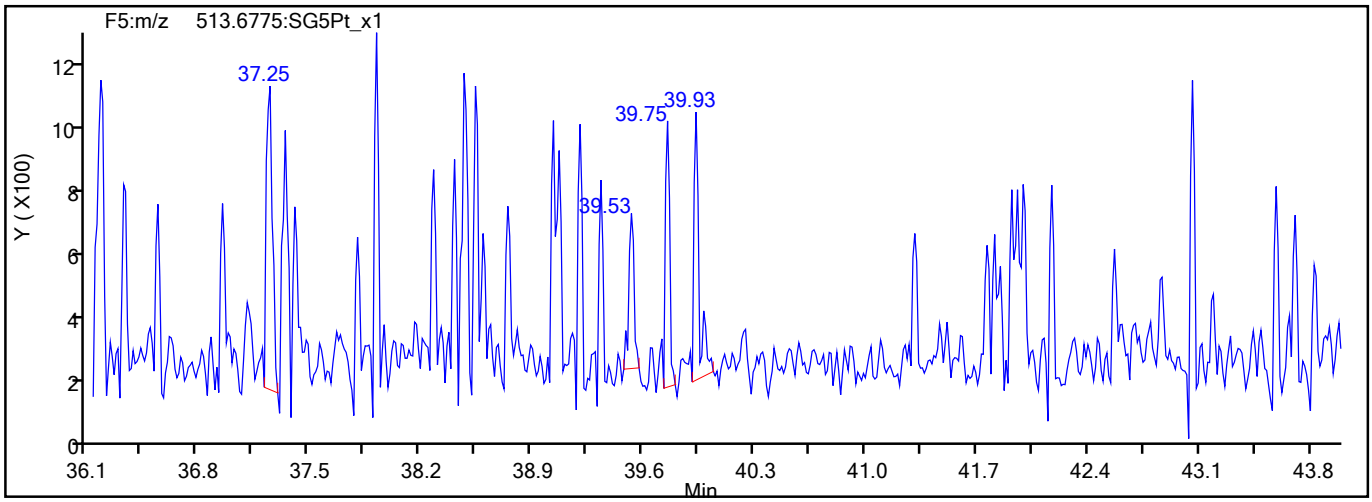

778502

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

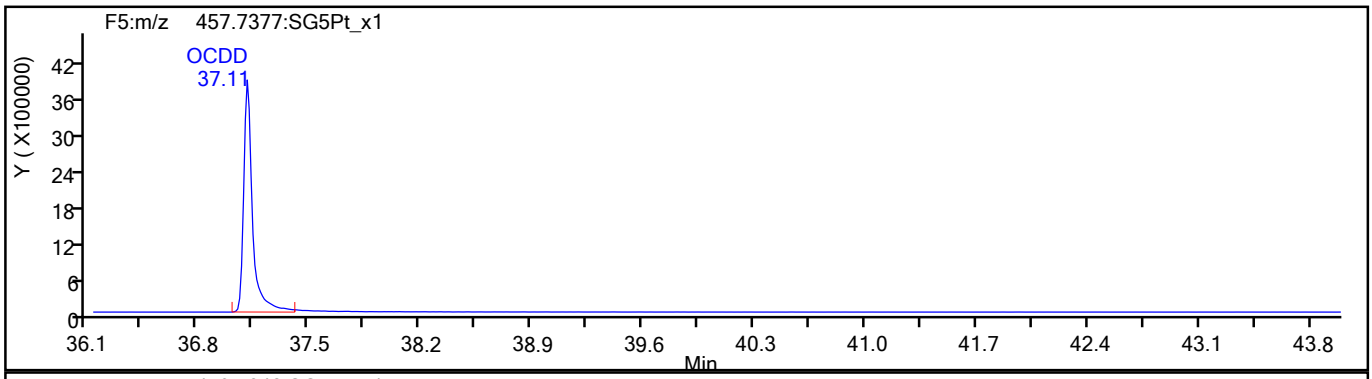

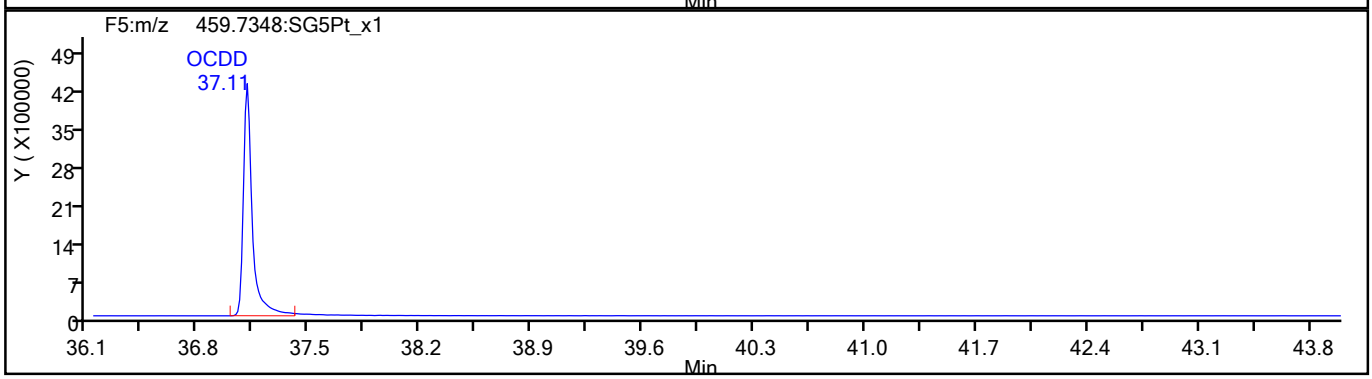

OCDD Standards

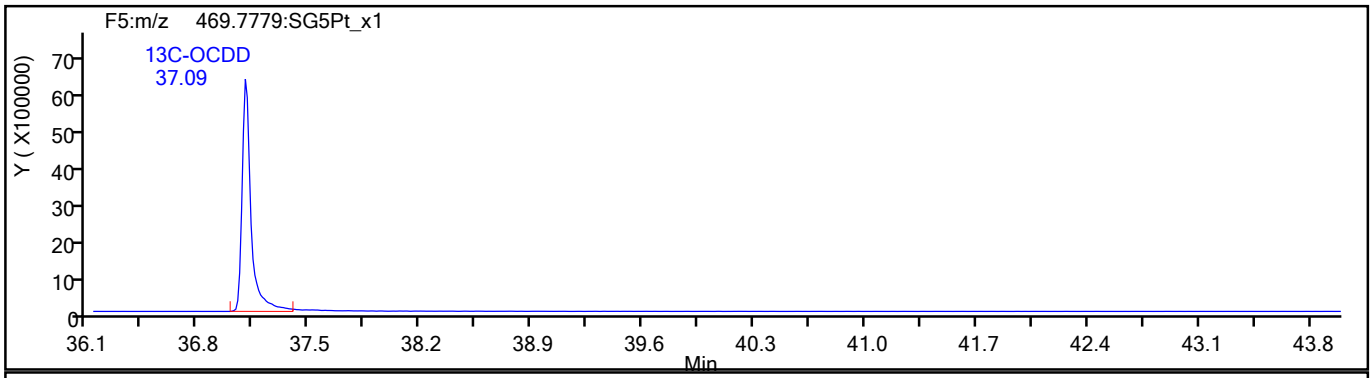

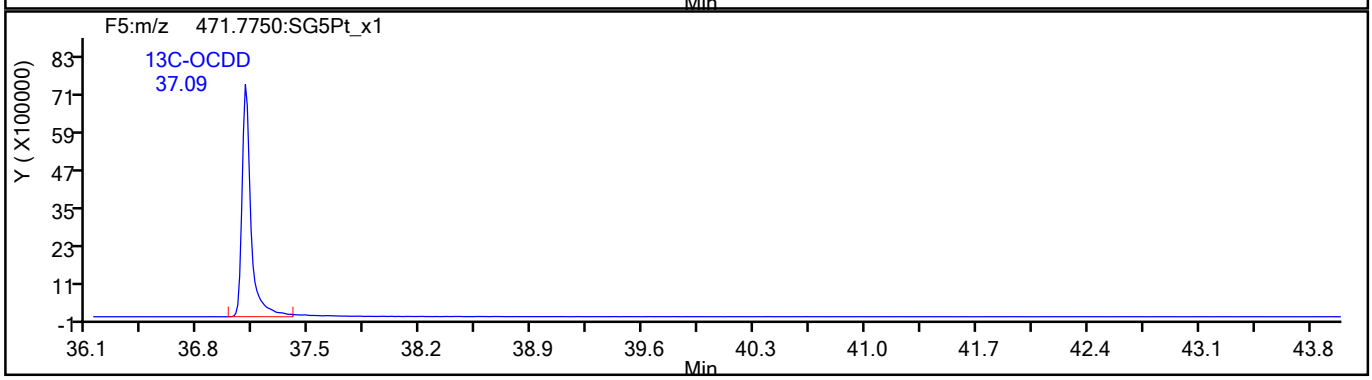

778503

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

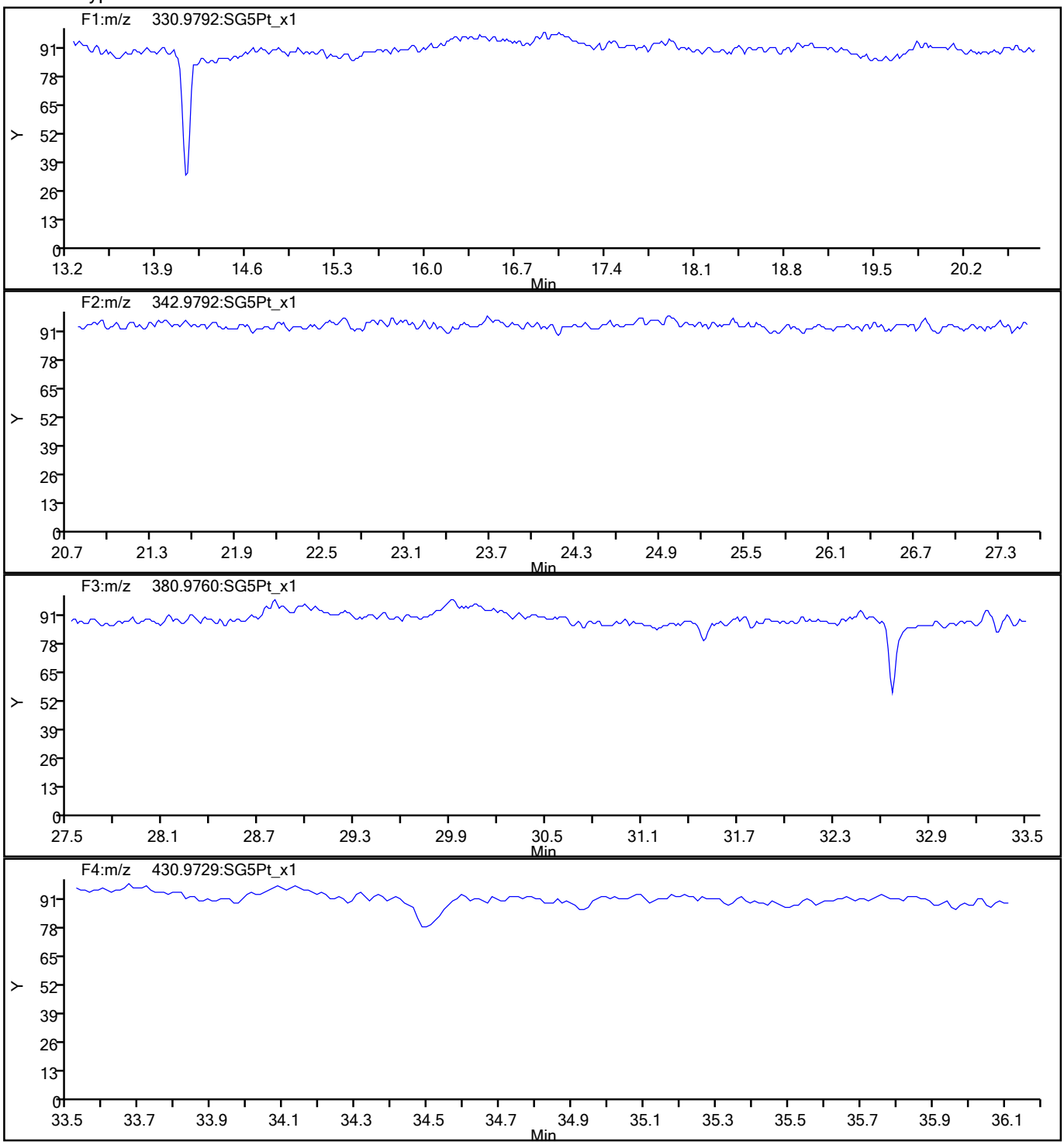

778504

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

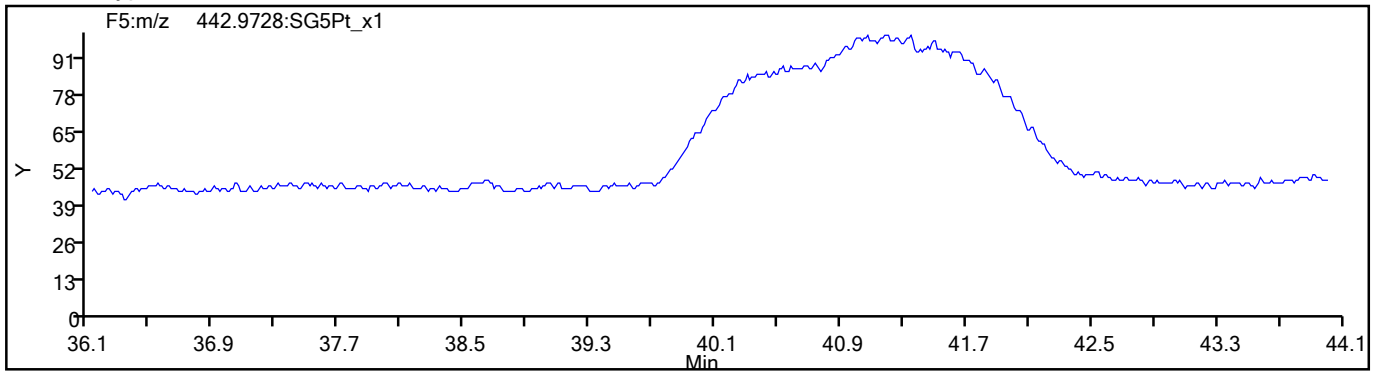

778505

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62046988	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	100332269	0.78	1.6249	99.5	99.5	0.1367	0.1367	99.52	
2,3,7,8-TCDF	17.628	44524782	0.76	1.0239	43.3	43.3	0.0503	0.0503	108	
S Total TCDF					43.3	43.3	0.0503	0.0503		
D 13C-2,3,7,8-TCDD	18.338	55471422	0.81	0.8993	99.4	99.4	0.1780	0.1780	99.41	
$ 37Cl4-2,3,7,8-TCDD	18.354	29474361		1.1071	42.9	42.9	0.0363	0.0363	107	
2,3,7,8-TCDD	18.354	29808948	0.78	1.2541	42.8	42.8	0.0471	0.0471	107	
S Total TCDD					42.8	42.8	0.0471	0.0471		
D 13C-1,2,3,7,8-PeCDF	22.762	75205597	1.60	1.2101	100.2	100.2	0.2087	0.2087	100	
1,2,3,7,8-PeCDF	22.776	171023920	1.60	1.0611	214.3	214.3	0.5904	0.5904	107	
D 13C-2,3,4,7,8-PeCDF	24.126	75259591	1.60	1.2395	97.9	97.9	0.2038	0.2038	97.86	
2,3,4,7,8-PeCDF	24.153	166805723	1.58	1.0184	217.6	217.6	0.6563	0.6563	109	
S Total PeCDF					431.9	431.9	0.6233	0.6233		
D 13C-1,2,3,7,8-PeCDD	24.862	46524396	1.64	0.7612	98.5	98.5	0.1093	0.1093	98.50	
1,2,3,7,8-PeCDD	24.889	105236005	1.57	1.0484	215.7	215.7	0.2317	0.2317	108	
S Total PeCDD					215.7	215.7	0.2317	0.2317		
D 13C-1,2,3,4,7,8-HxCDF	30.835	64951889	0.52	1.0837	95.7	95.7	0.4366	0.4366	95.70	
1,2,3,4,7,8-HxCDF	30.862	155057762	1.22	1.0851	220.0	220.0	1.165	1.165	110	
D 13C-1,2,3,6,7,8-HxCDF	31.008	70459920	0.52	1.1279	99.7	99.7	0.4194	0.4194	99.75	
1,2,3,6,7,8-HxCDF	31.022	168618976	1.23	1.1260	212.5	212.5	1.081	1.081	106	
D 13C-2,3,4,6,7,8-HxCDF	31.754	66145684	0.53	1.0637	99.3	99.3	0.4448	0.4448	99.29	
2,3,4,6,7,8-HxCDF	31.780	164241378	1.21	1.1675	212.7	212.7	0.8912	0.8912	106	
D 13C-1,2,3,7,8,9-HxCDF	32.526	59636084	0.52	0.9676	98.4	98.4	0.4890	0.4890	98.41	
1,2,3,7,8,9-HxCDF	32.539	148834491	1.23	1.1664	214.0	214.0	0.9364	0.9364	107	
S Total HxCDF					859.2	859.2	1.018	1.018		
* 13C-1,2,3,7,8,9-HxCDD	32.339	62627787	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44144841	1.25	0.7334	96.1	96.1	0.3745	0.3745	96.11	
1,2,3,4,7,8-HxCDD	31.953	103044220	1.27	1.0640	219.4	219.4	0.6488	0.6488	110	
D 13C-1,2,3,6,7,8-HxCDD	32.033	54392394	1.25	0.8802	98.7	98.7	0.3120	0.3120	98.67	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	118900298	1.28	1.0001	218.6	218.6	0.5965	0.5965	109	
1,2,3,7,8,9-HxCDD	32.353	122394998	1.26	1.1325	219.4	219.4	0.5651	0.5651	110	
S Total HxCDD					657.3	657.3	0.6034	0.6034		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	47752972	0.44	0.7730	98.6	98.6	1.001	1.001	98.64	
1,2,3,4,6,7,8-HpCDF	33.924	147892240	1.06	1.4413	214.9	214.9	2.024	2.024	107	
D 13C-1,2,3,4,7,8,9-HpCDF	35.017	42687625	0.44	0.7008	97.3	97.3	1.104	1.104	97.26	
1,2,3,4,7,8,9-HpCDF	35.017	123968724	1.06	1.3174	220.4	220.4	2.743	2.743	110	
S Total HpCDF					435.3	435.3	2.383	2.383		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	40442950	1.02	0.6472	99.8	99.8	0.5241	0.5241	99.77	
1,2,3,4,6,7,8-HpCDD	34.726	94435922	1.04	1.0943	213.4	213.4	0.9683	0.9683	107	
S Total HpCDD					213.4	213.4	0.9683	0.9683		
D 13C-OCDD	37.093	57303880	0.88	0.4472	204.6	204.6	0.2753	0.2753	102	
OCDF	37.201	181747068	0.91	1.4382	441.1	441.1	0.4159	0.4159	110	
OCDD	37.105	135570174	0.90	1.1070	427.4	427.4	0.4029	0.4029	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		27754917	7076779	4201	10502	1685		
333.9339	18.142	18.142	0		34292071	8691565	5896	14740	1474	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	43967601	10754823	8470	21175	1270		
317.9389	17.613	17.616	0	0.971	56364668	13840834	5538	13845	2499	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	19278962	4714580	2218	5545	2126		
305.8987	17.628	17.631	0	1.001	25245820	6261705	2854	7135	2194	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24807018	5848000	4201	10502	1392		
333.9339	18.338	18.338	0	1.011	30664404	7186127	5896	14740	1219	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	29474361	7040079	2537	6342	2775		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	13088265	3099418	1571	3927	1973		
321.8936	18.354	18.357	0	1.001	16720683	3961925	1508	3770	2627	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46265218	8069932	9479	23697	851		
353.8970	22.749	22.754	0	1.254	28940379	5072009	6452	16130	786	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	105236981	18677381	20013	50032	933		
341.8567	22.776	22.779	0	1.001	65786939	11693027	12919	32297	905	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46298187	7561650	9479	23697	798		
353.8970	24.126	24.129	0	1.330	28961404	4756017	6452	16130	737	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	102234081	17002363	20013	50032	850		
341.8567	24.153	24.156	0	1.001	64571642	10773383	12919	32297	834	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28884955	4397104	3175	7937	1385		
369.8919	24.862	24.865	0	1.370	17639441	2717935	2071	5177	1312	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	64347111	9837651	3945	9862	2494		
357.8516	24.889	24.892	0	1.001	40888894	6265054	2969	7422	2110	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	22237957	4900100	10775	26937	455		
385.8610	30.835	30.838	0	0.953	42713932	9213265	21190	52975	435	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	85201859	18424877	39257	98142	469		
375.8178	30.849	30.857	0	1.000	69855903	15011303	32096	80240	468	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	23996455	5001651	10775	26937	464		
385.8610	31.008	31.003	0	0.959	46463465	9659865	21190	52975	456	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	92842545	20075526	39257	98142	511		
375.8178	31.022	31.022	0	1.000	75776431	16178695	32096	80240	504	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	22792396	5861290	10775	26937	544		
385.8610	31.754	31.756	0	0.982	43353288	11282982	21190	52975	532	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.780	31.772	0	1.001	89865159	23412461	39257	98142	596		
375.8178	31.767	31.772	0	1.000	74376219	19191516	32096	80240	598	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20506438	5659225	10775	26937	525		
385.8610	32.526	32.523	0	1.006	39129646	10674002	21190	52975	504	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	82057134	22664755	39257	98142	577		
375.8178	32.539	32.534	0	1.000	66777357	17875439	32096	80240	557	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		34509982	9306847	9505	23762	979		
403.8529	32.339	32.342	0		28117805	7584182	9052	22630	838	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	24560847	6976899	9505	23762	734		
403.8529	31.927	31.929	0	0.987	19583994	5667072	9052	22630	626	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.953	31.945	0	1.001	57595942	16510469	19316	48290	855		
391.8127	31.940	31.945	0	1.000	45448278	13107381	15598	38995	840	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	30198617	8138784	9505	23762	856		
403.8529	32.033	32.033	0	0.991	24193777	6493948	9052	22630	717	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	66690137	17959920	19316	48290	930		
391.8127	32.047	32.047	0	1.000	52210161	14135061	15598	38995	906	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	68169382	18483699	19316	48290	957		
391.8127	32.353	32.355	0	1.013	54225616	14872863	15598	38995	954	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14610497	4589210	16388	40970	280		
419.8220	33.912	33.914	0	1.049	33142475	10497182	35883	89707	293	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	75936953	24520194	90693	226732	270		
409.7789	33.924	33.926	0	1.000	71955287	23549459	85368	213420	276	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.017	35.010	0	1.083	12971814	3739945	16388	40970	228		
419.8220	35.017	35.010	0	1.083	29715811	8442322	35883	89707	235	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	63647403	18553677	90693	226732	205		
409.7789	35.017	35.020	0	1.000	60321321	17850429	85368	213420	209	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	20381379	6053926	11567	28917	523		
437.8140	34.714	34.716	0	1.073	20061571	5957434	11351	28377	525	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	48165795	14539111	26079	65197	558		
425.7737	34.726	34.726	0	1.000	46270127	14041663	24831	62077	565	1.04(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26901378	6693523	3896	9740	1718		
471.7750	37.093	37.094	0	1.147	30402502	7661603	4420	11050	1733	0.88(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	86562223	22814939	9244	23110	2468		
443.7399	37.201	37.199	0	1.003	95184845	24785143	7929	19822	3126	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	64116469	16176091	6061	15152	2669		
459.7348	37.105	37.106	0	1.000	71453705	17977820	6746	16865	2665	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

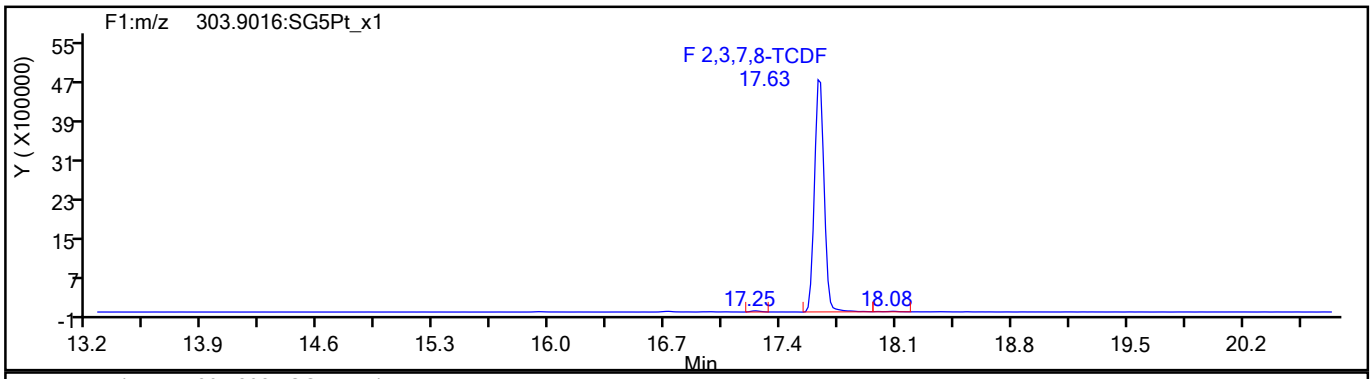

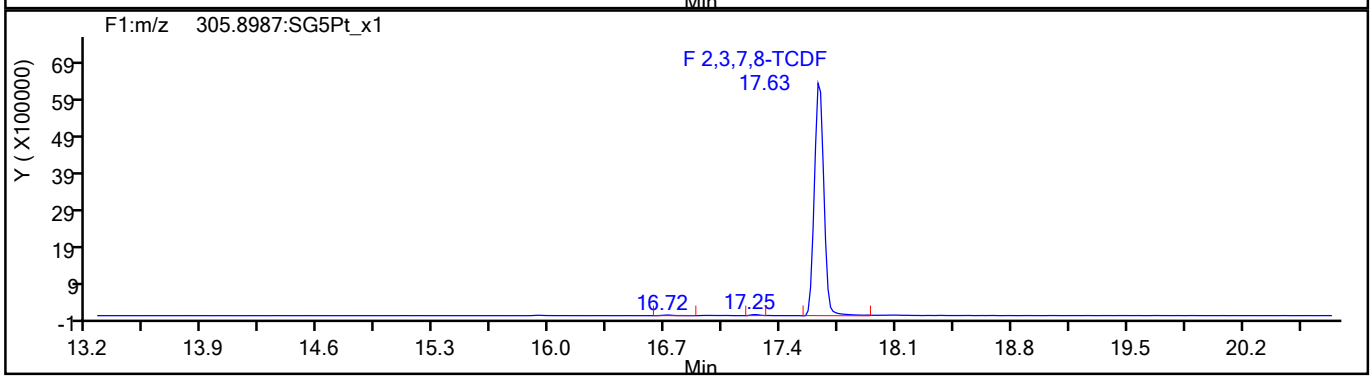

TCDF Standards

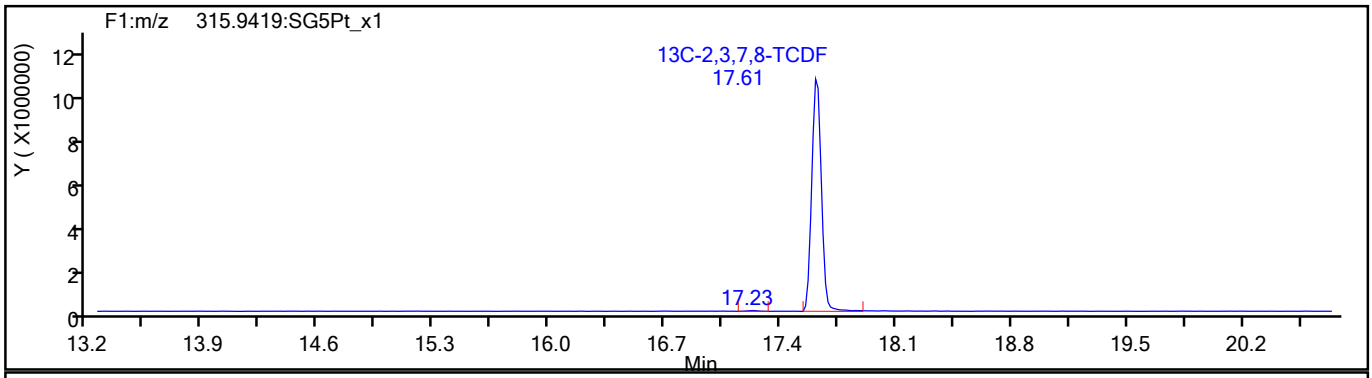

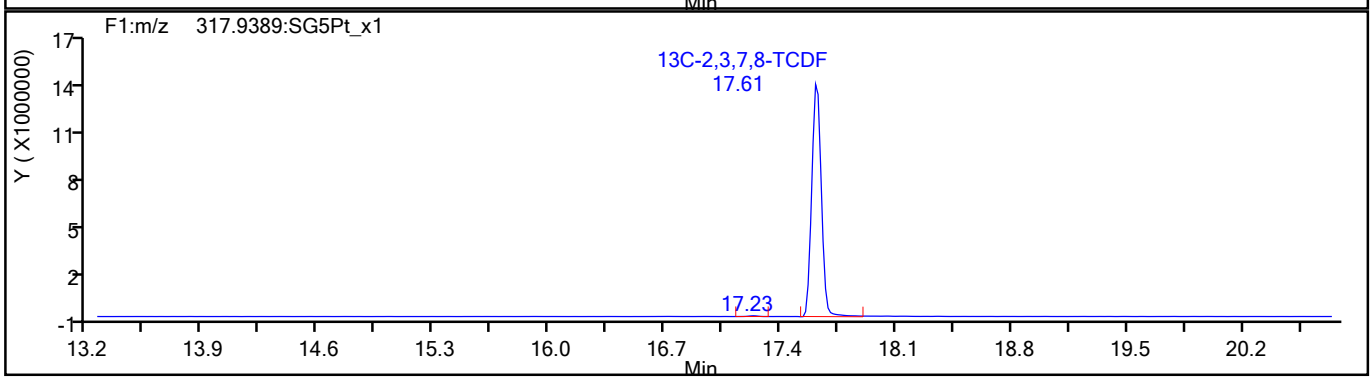

778511

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

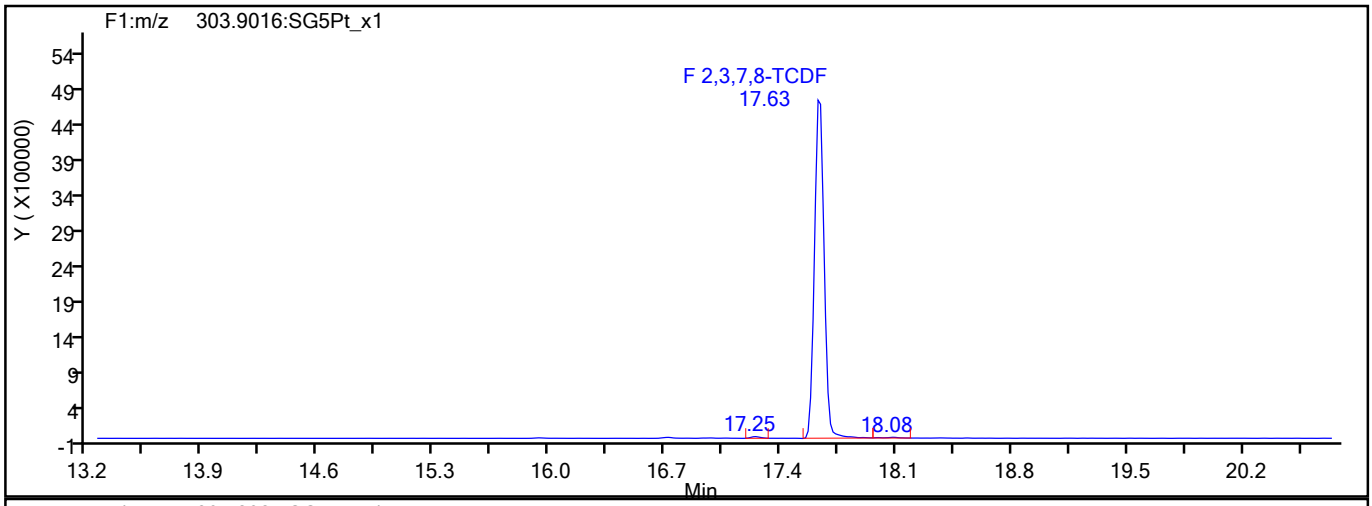

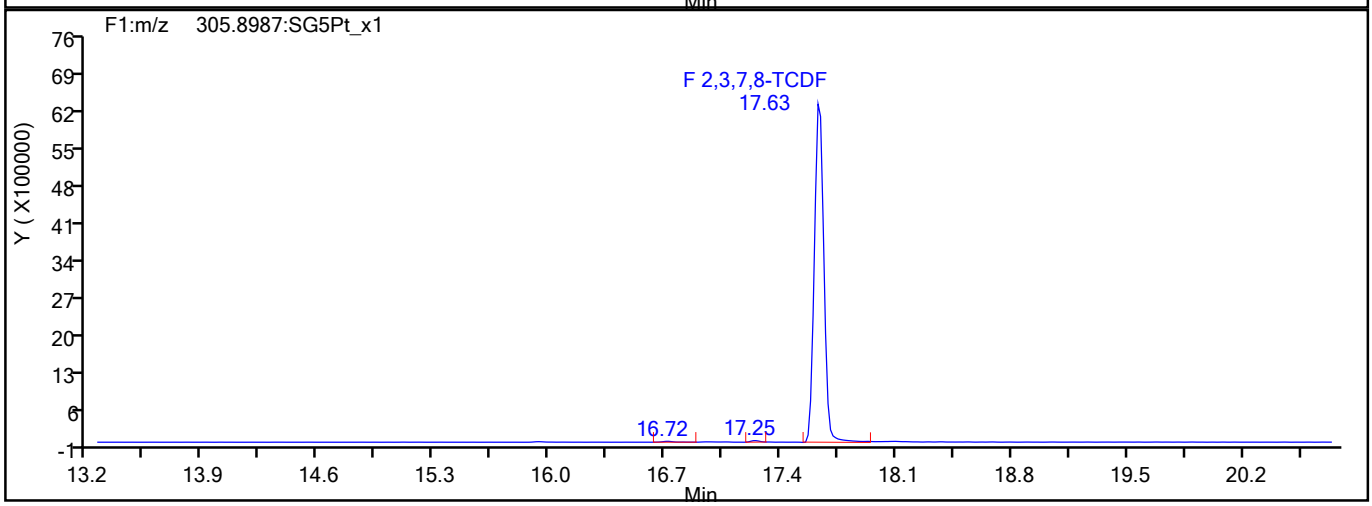

TCDF Interference Mass

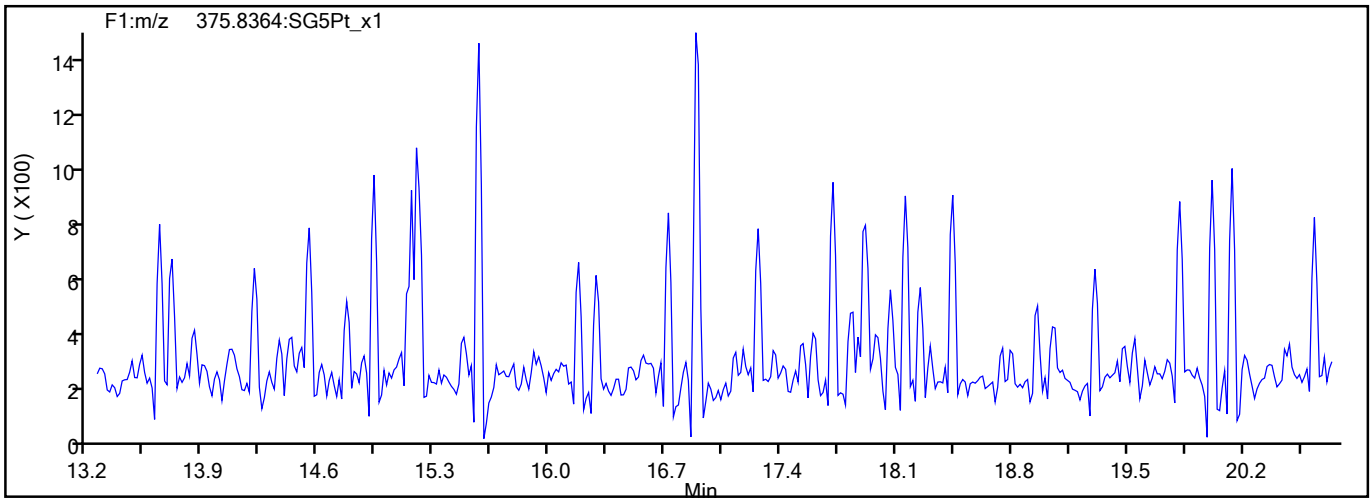

778512

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

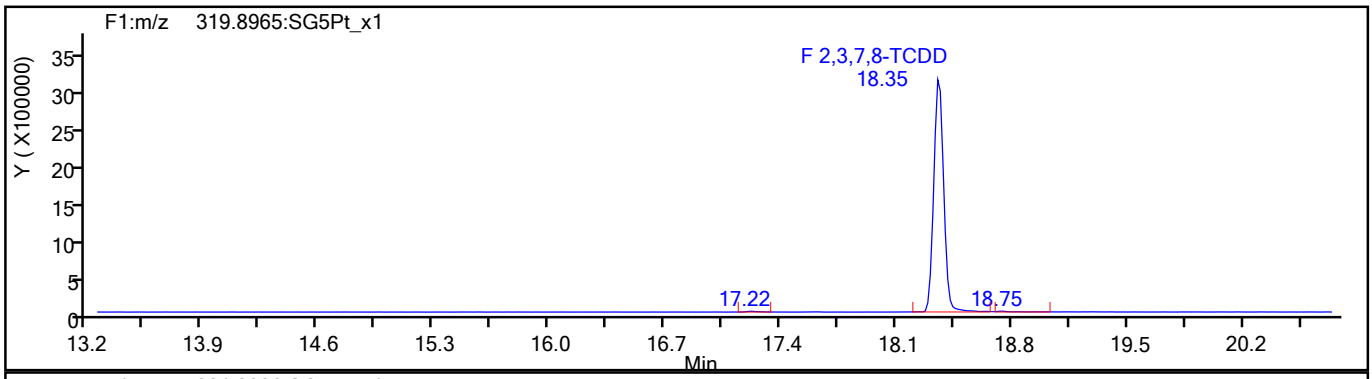

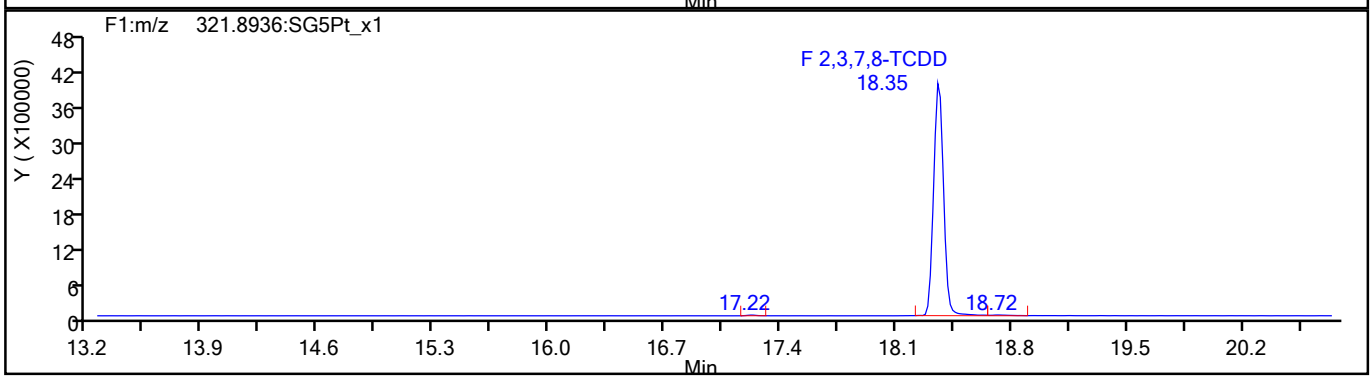

TCDD Standards

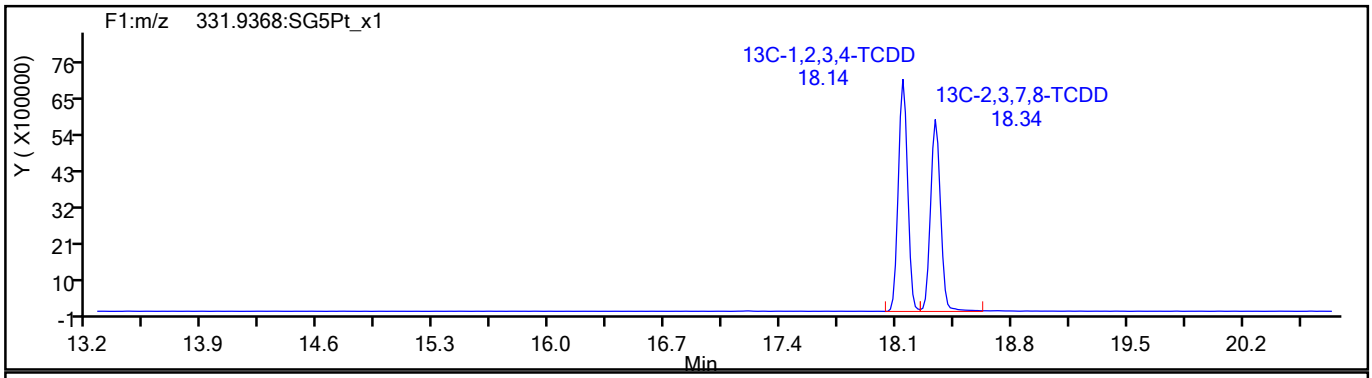

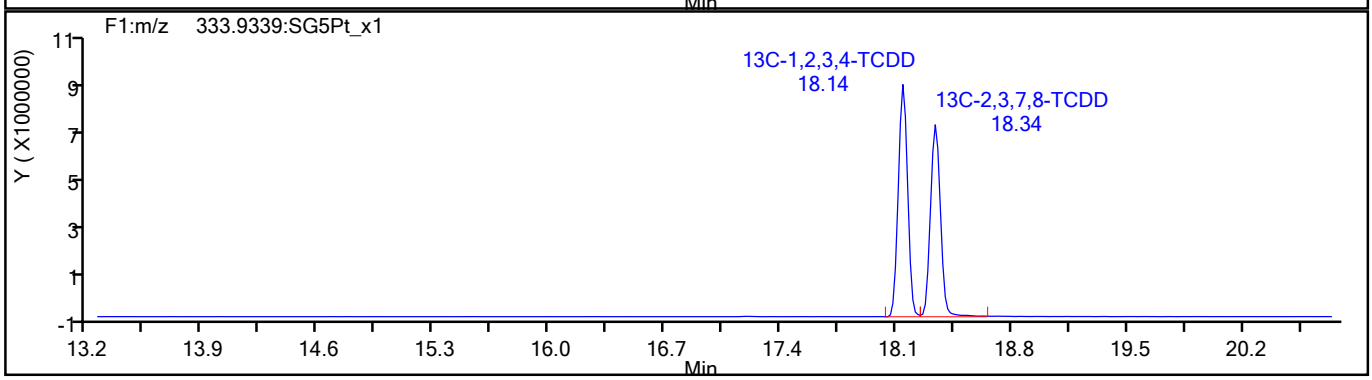

778513

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

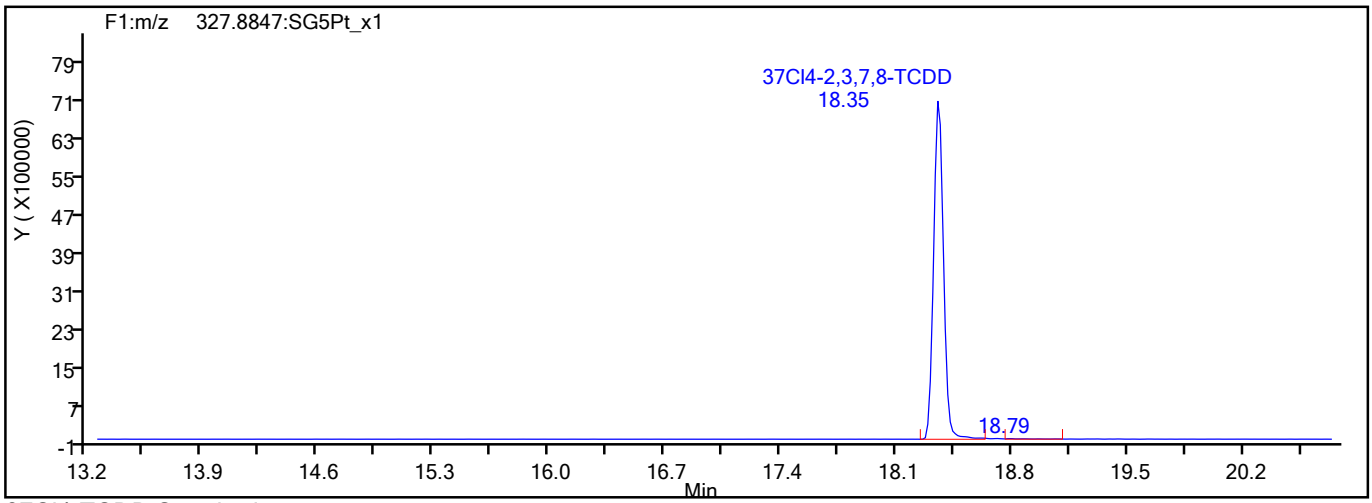

37Cl4-TCDD Standards

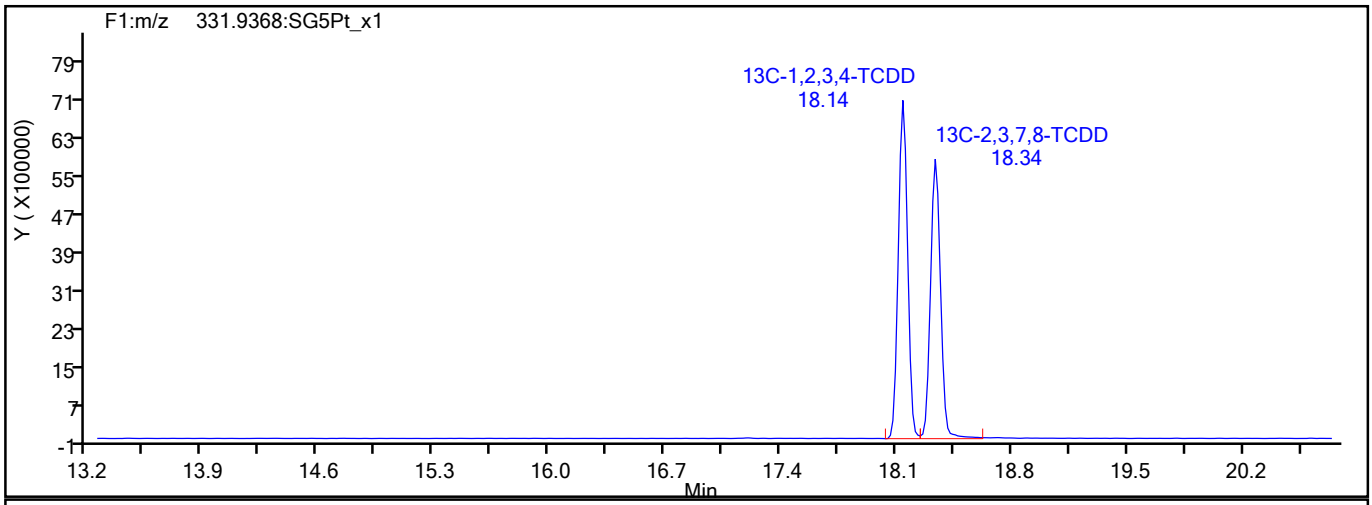

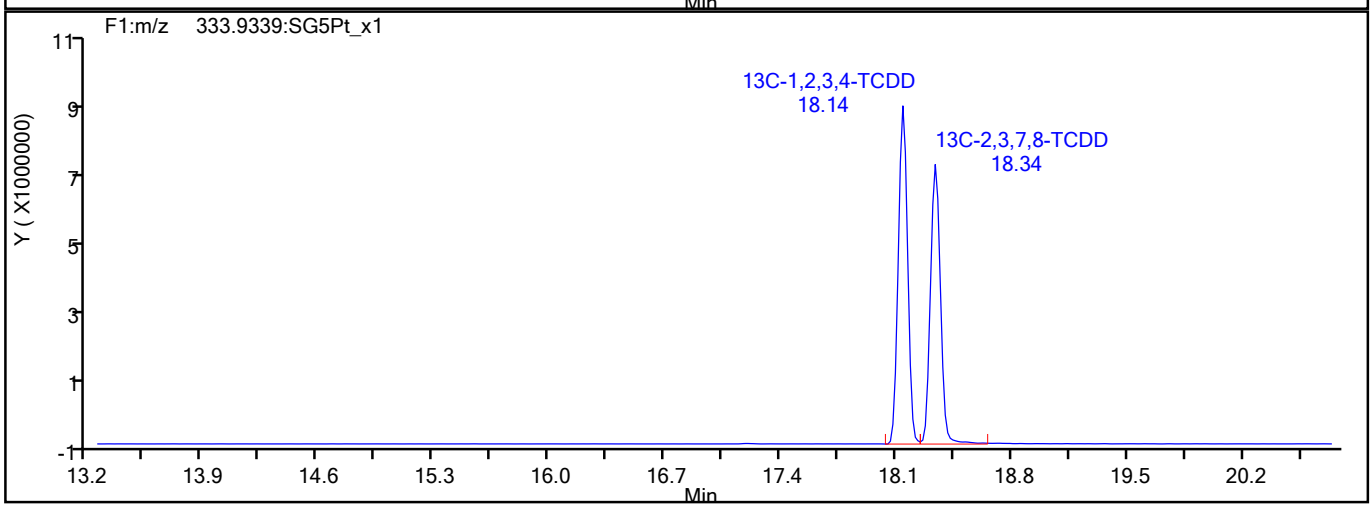

778514

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

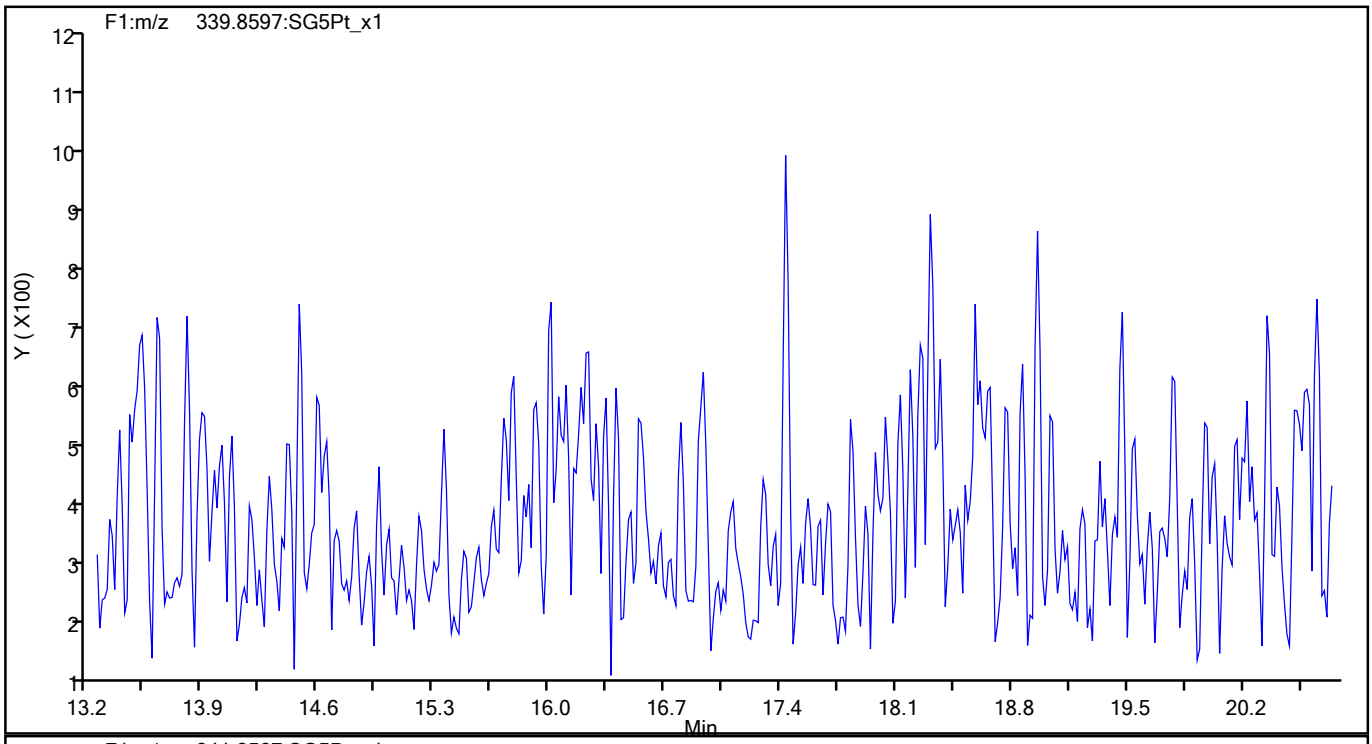

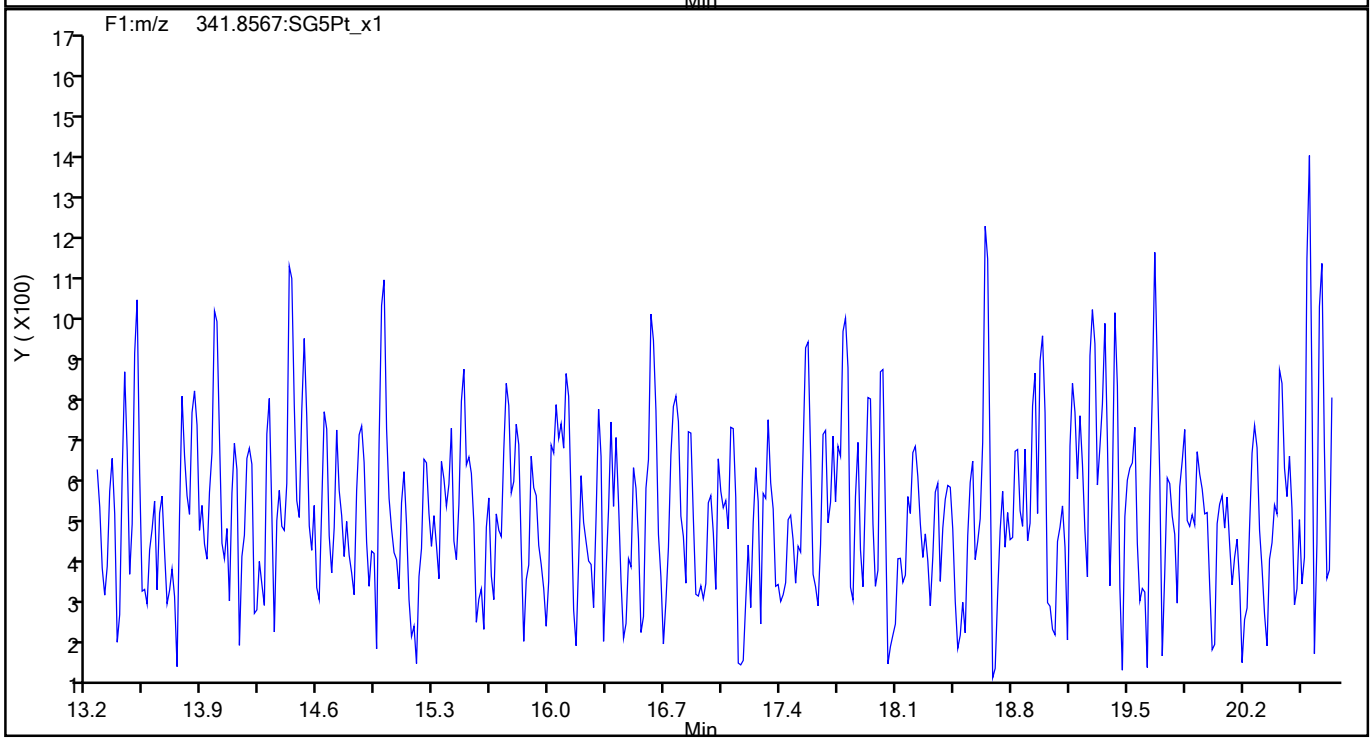

778515

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

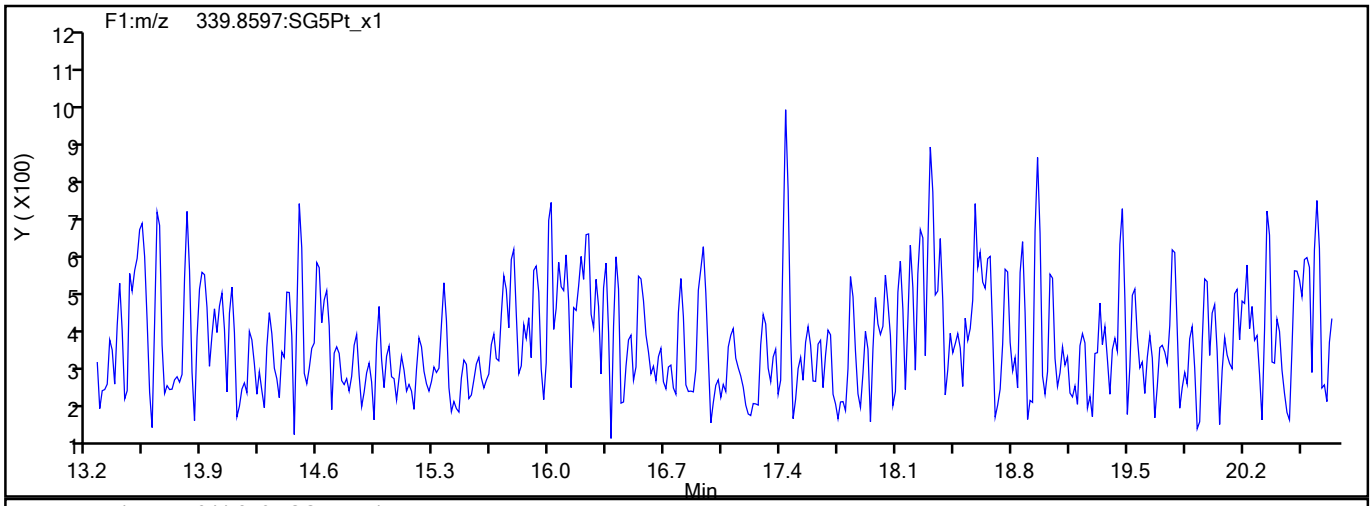

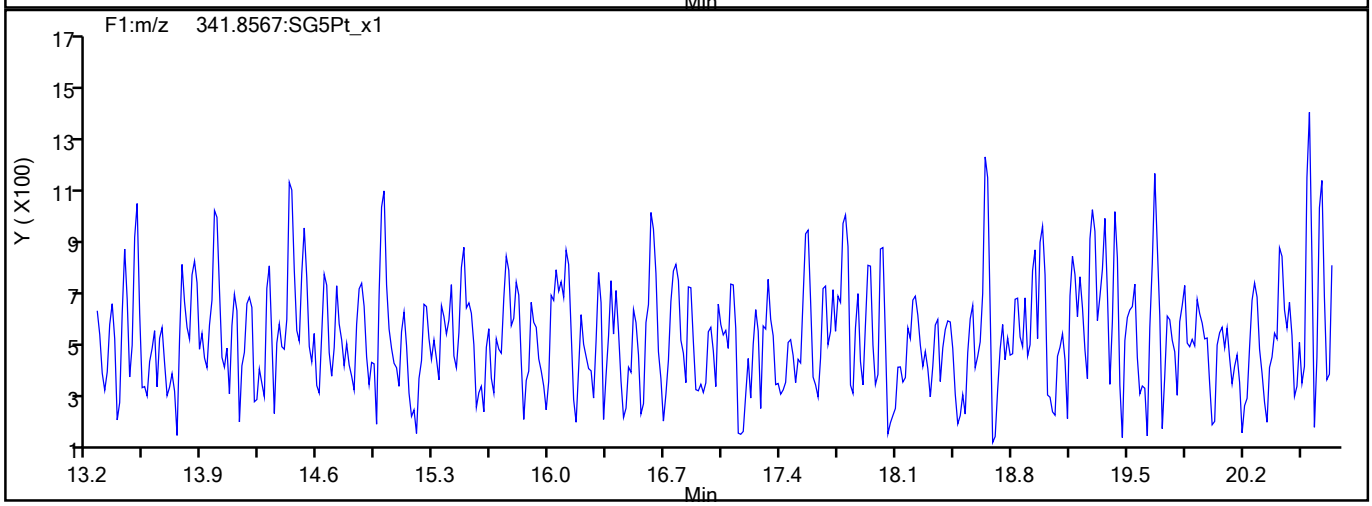

F1 PeCDFs Interference Mass

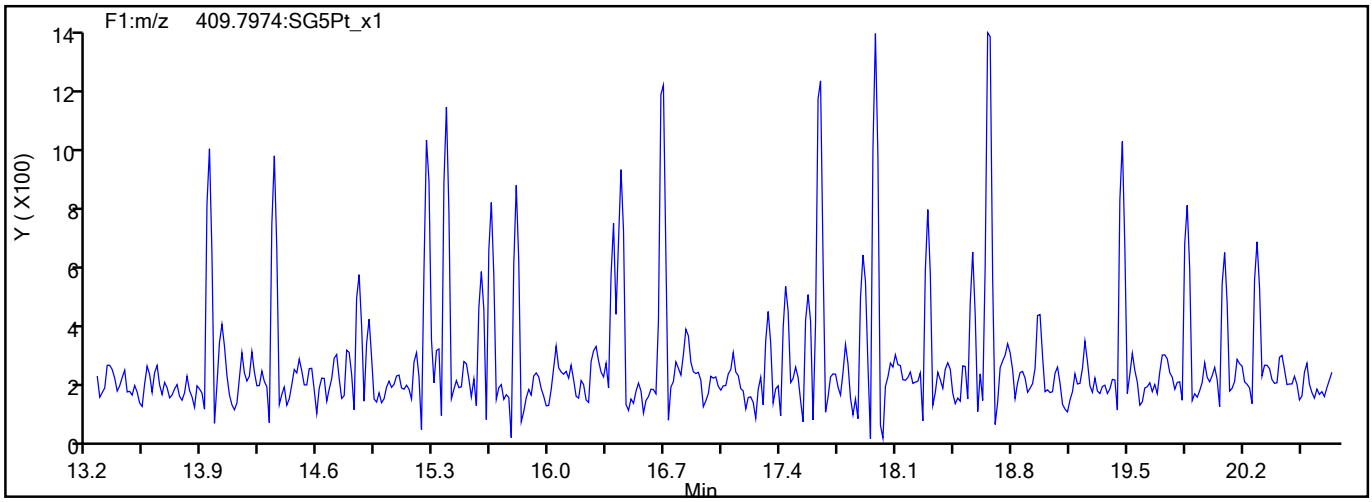

778516

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

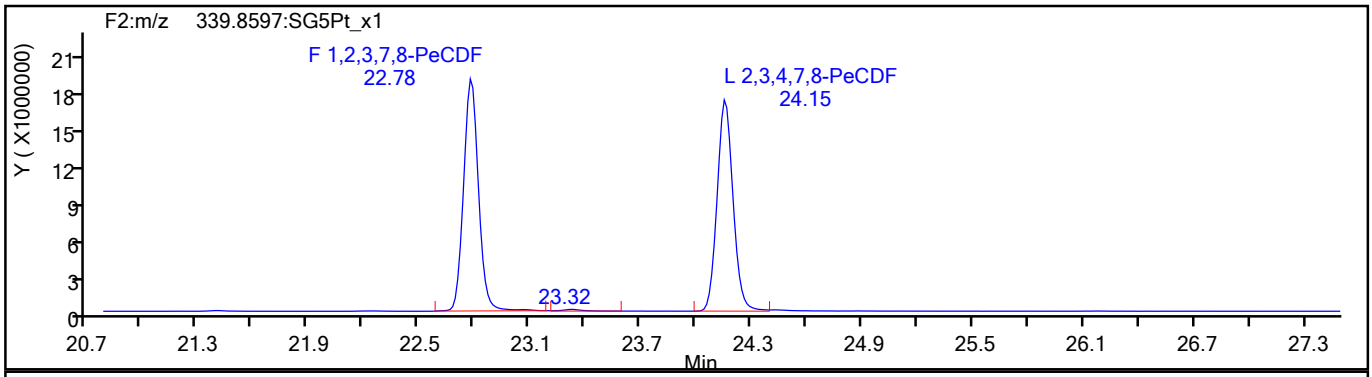

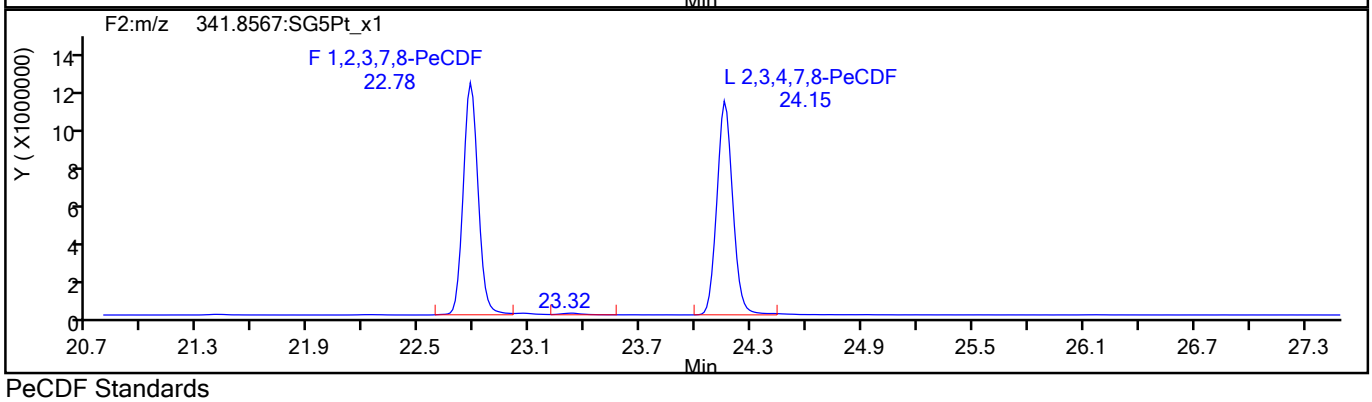

PeCDF Standards

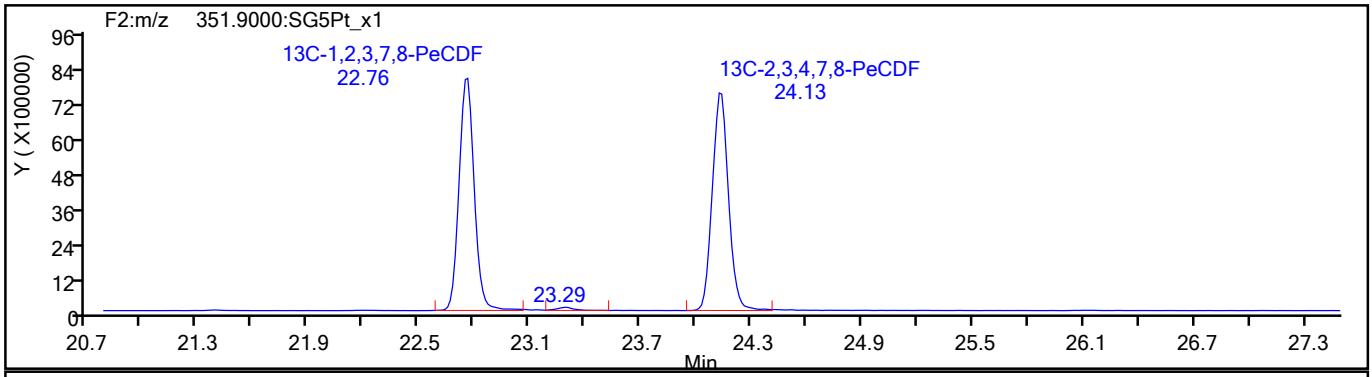

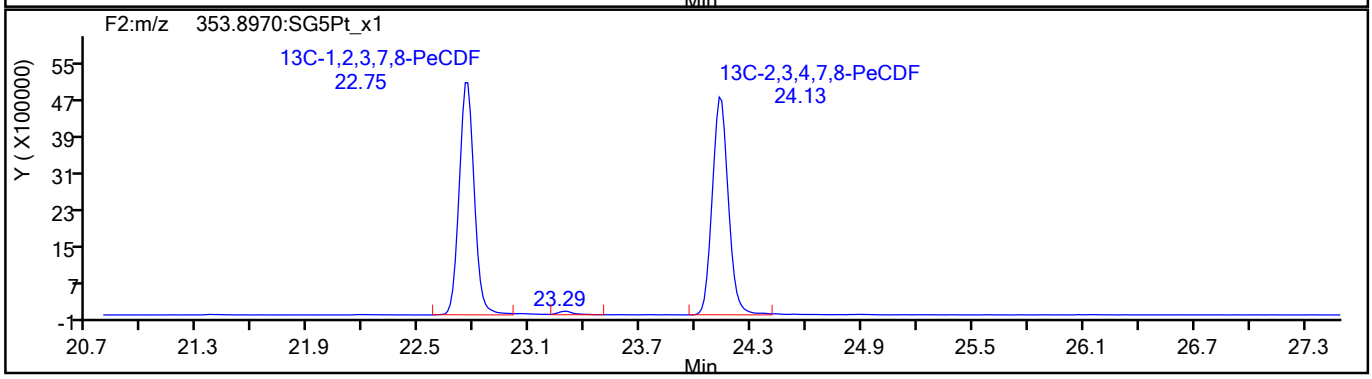

778517

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

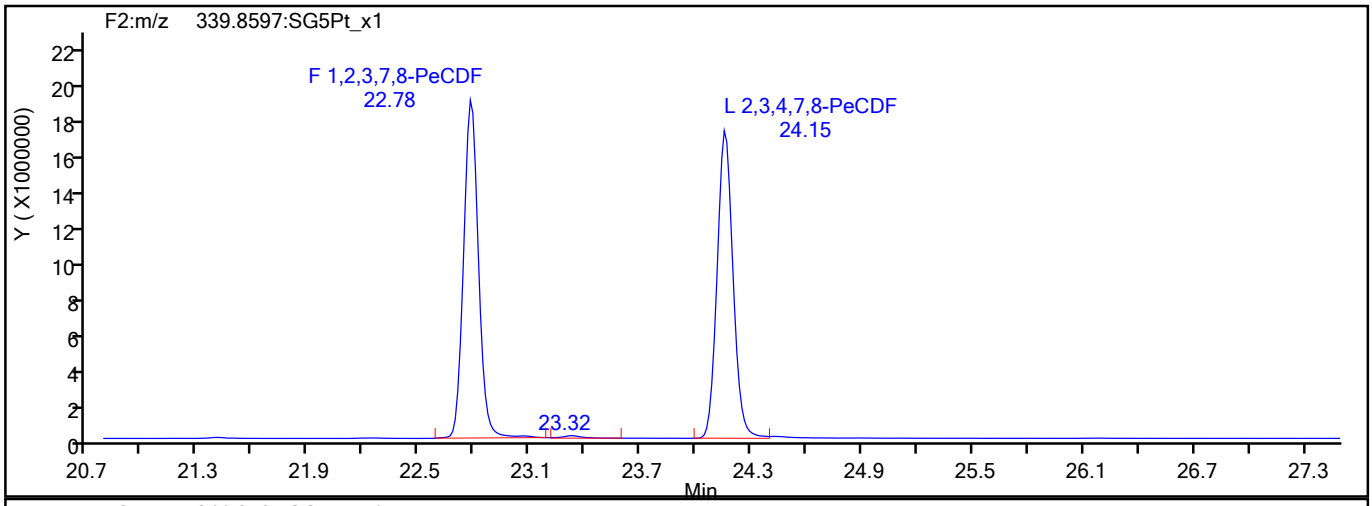

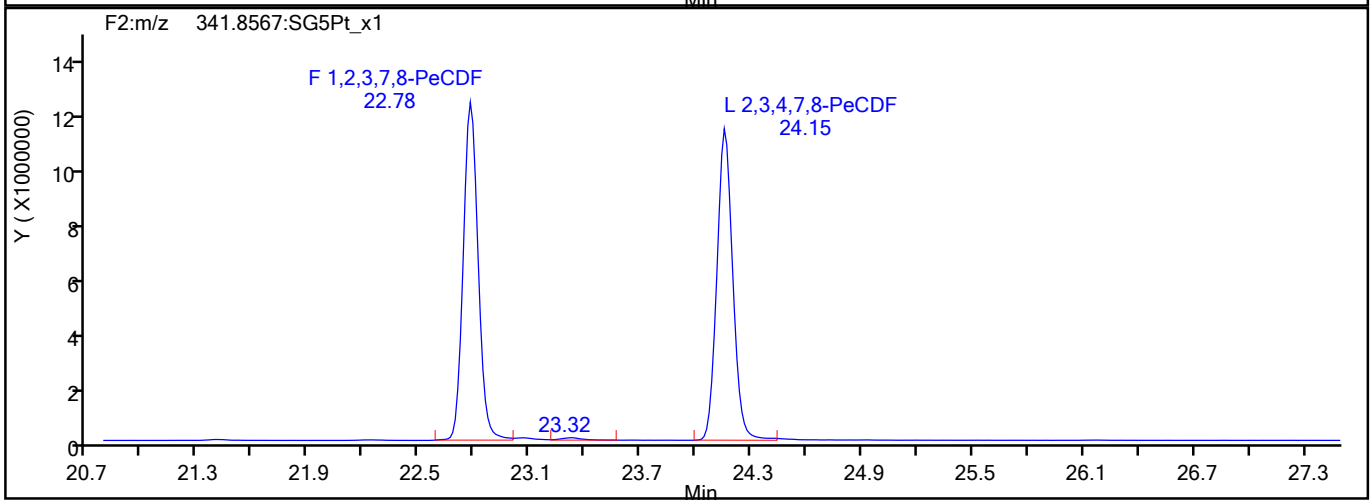

PeCDF Interference Mass

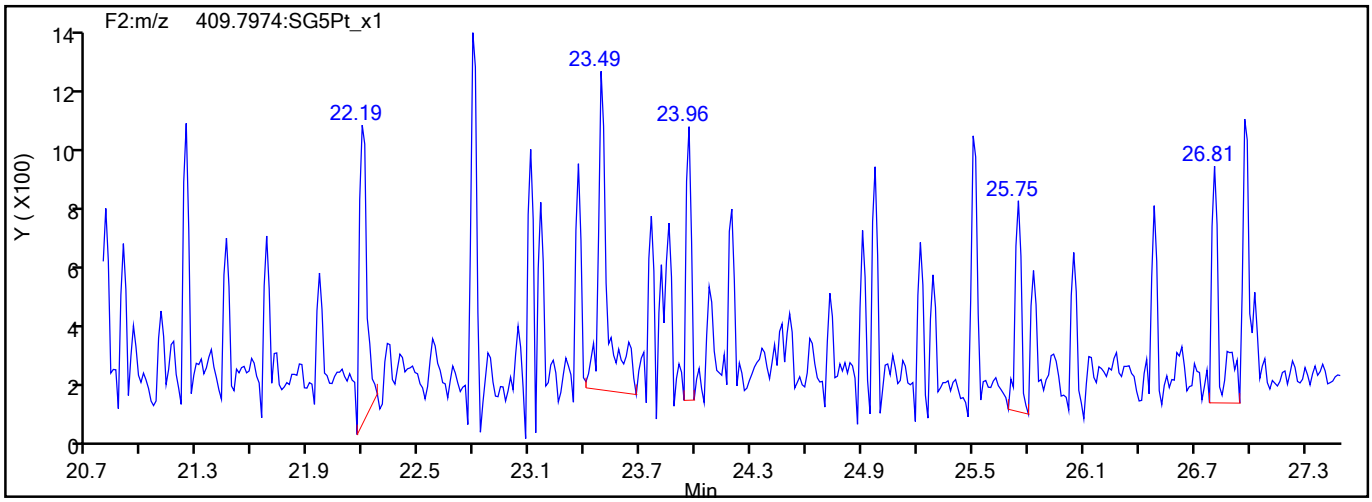

778518

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

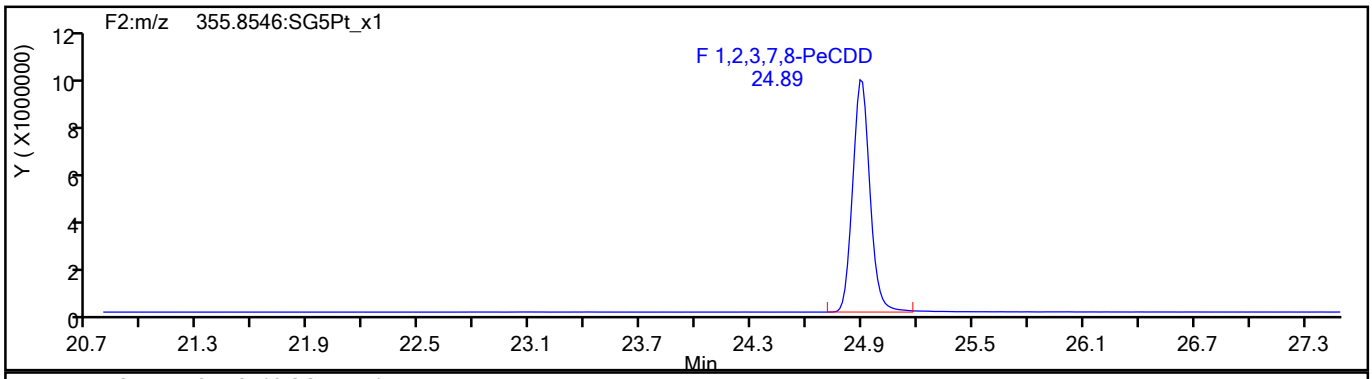

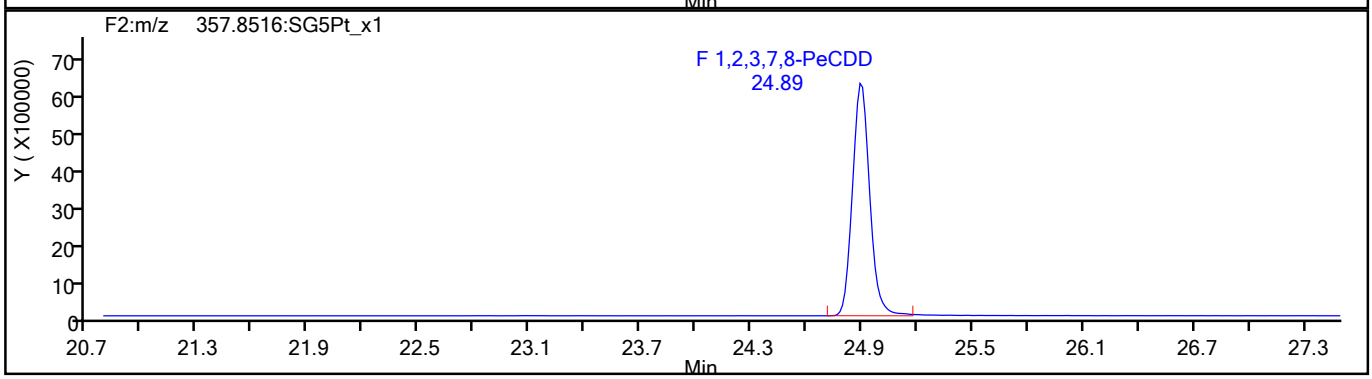

PeCDD Standards

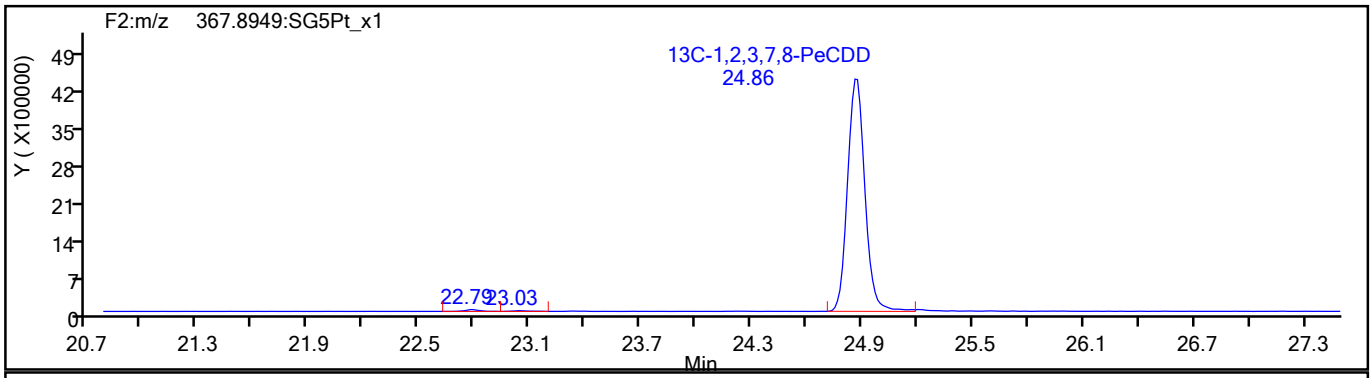

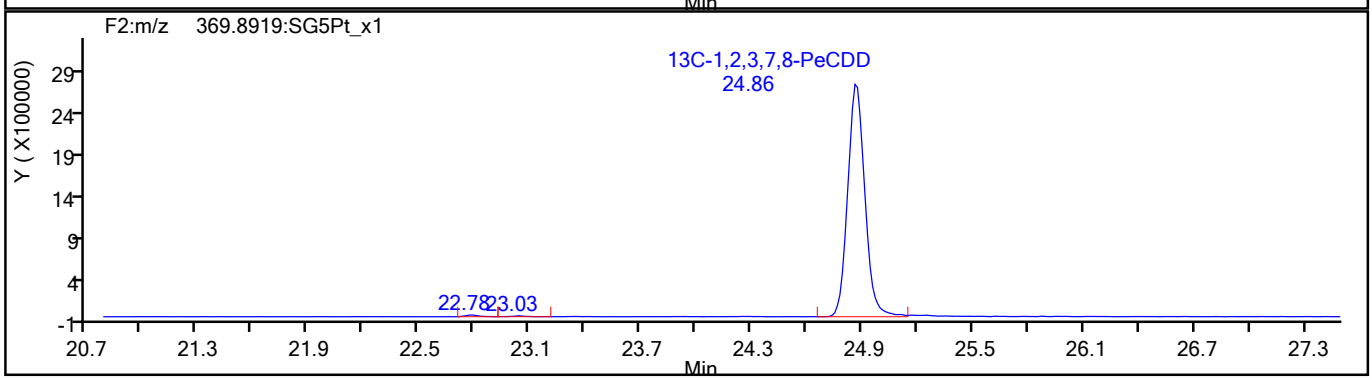

778519

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

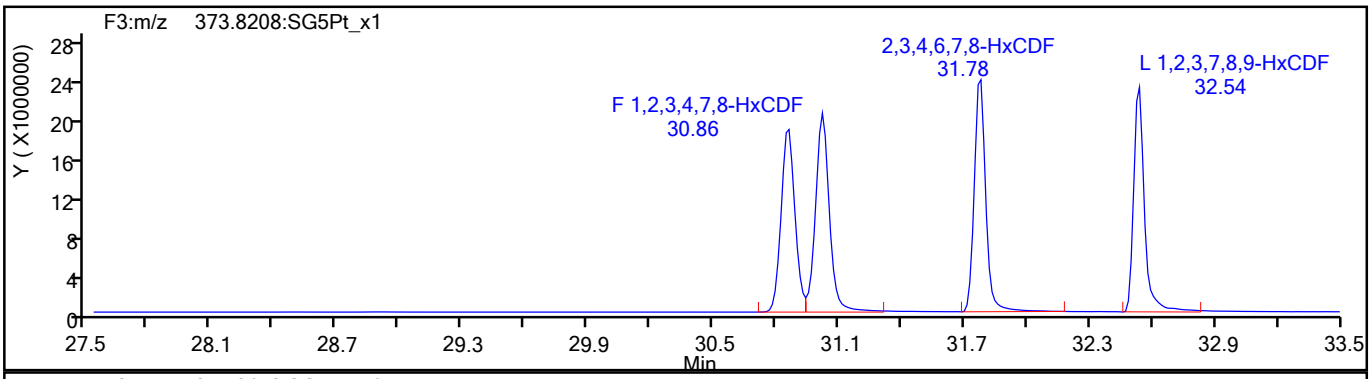

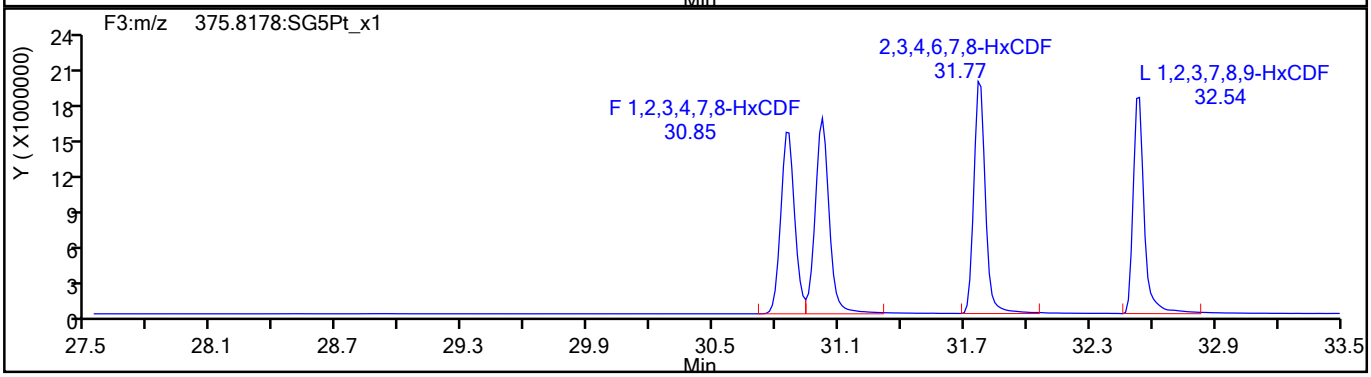

HxCDF Standards

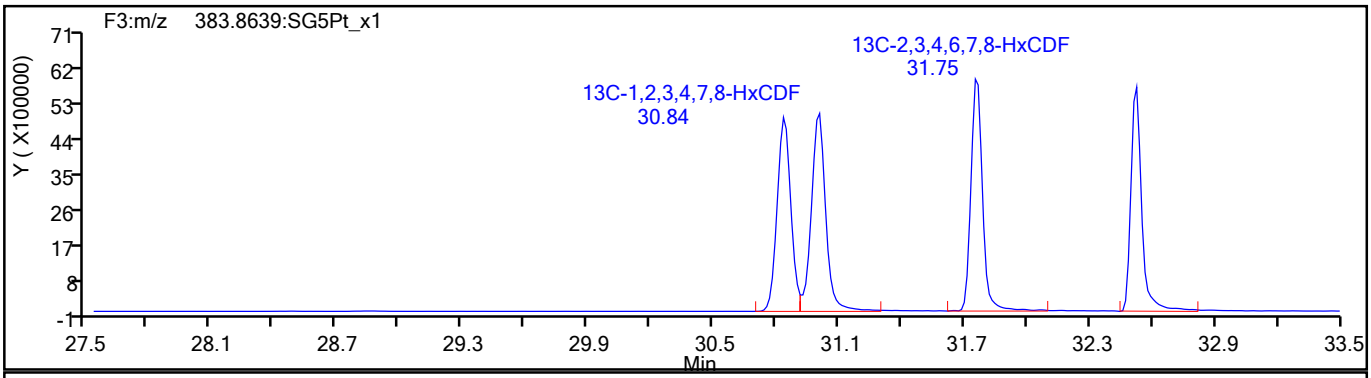

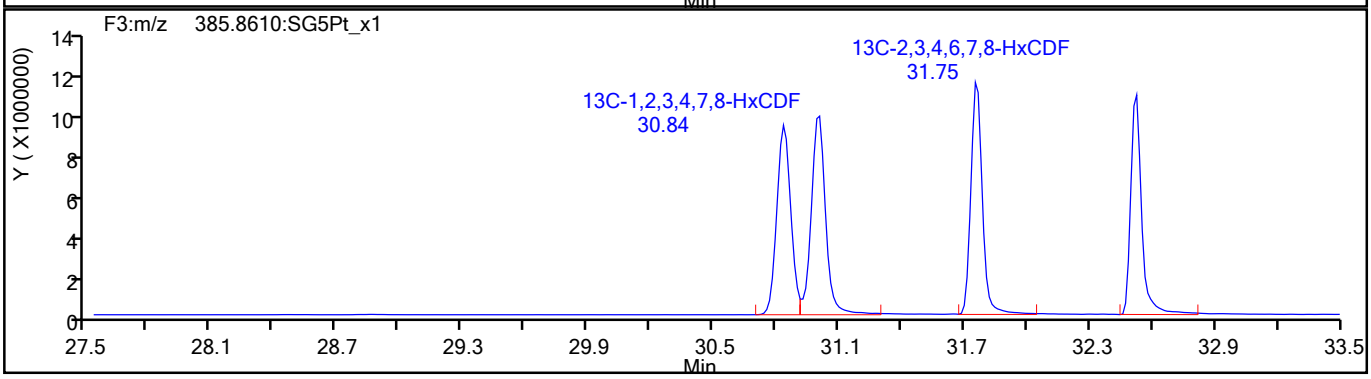

778520

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

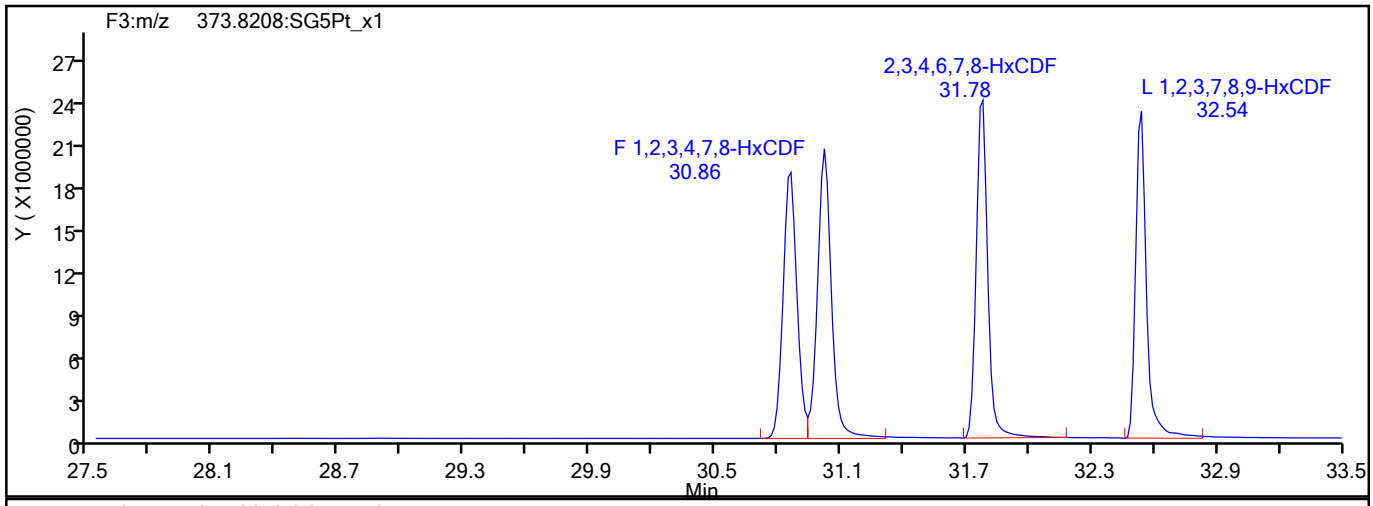

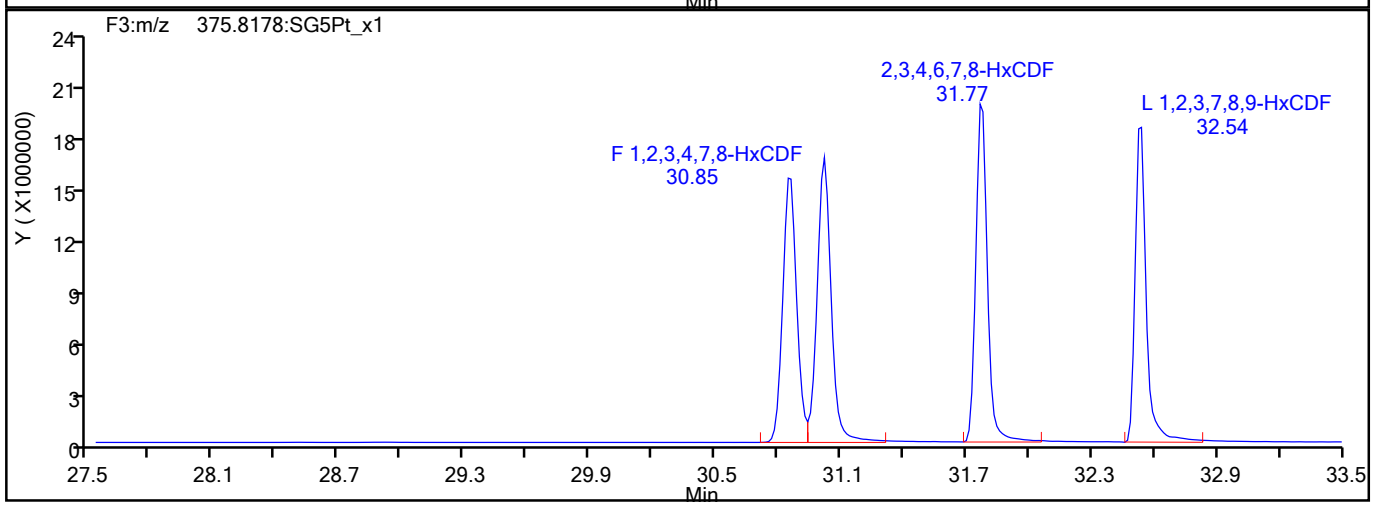

HxCDF Interference Mass

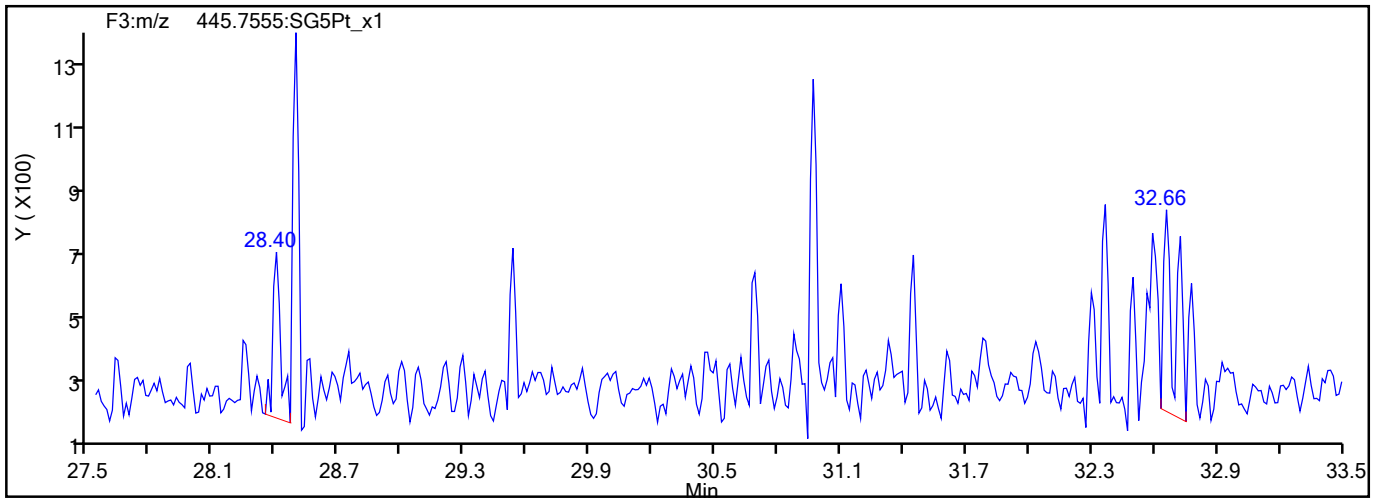

778521

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

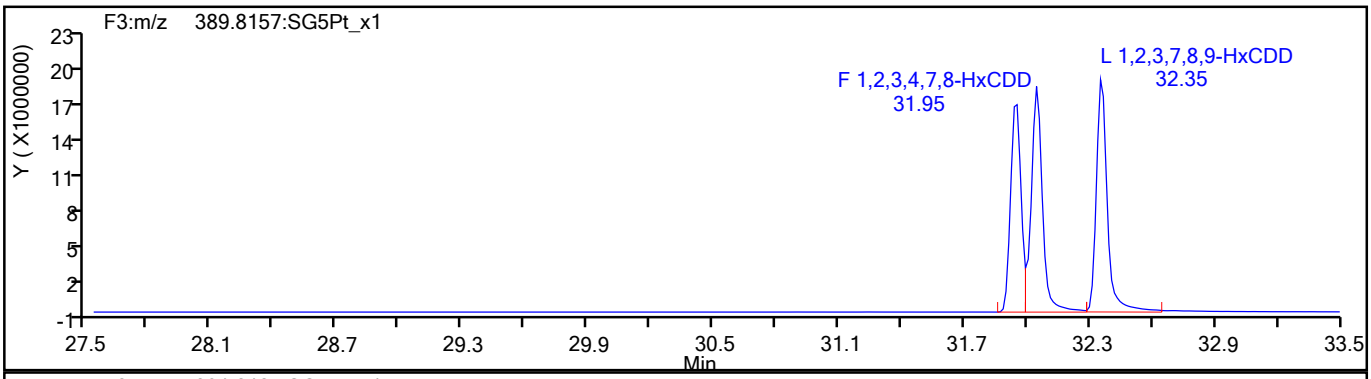

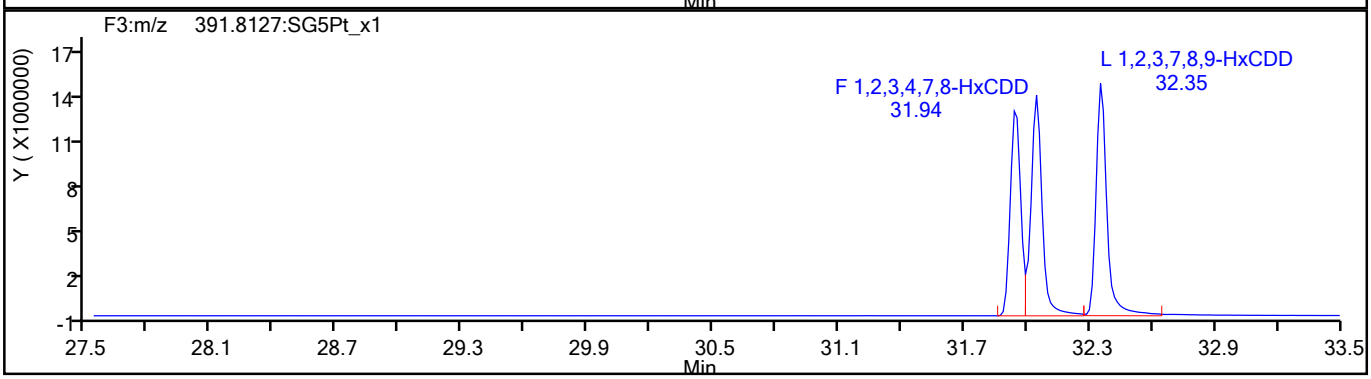

HxCDD Standards

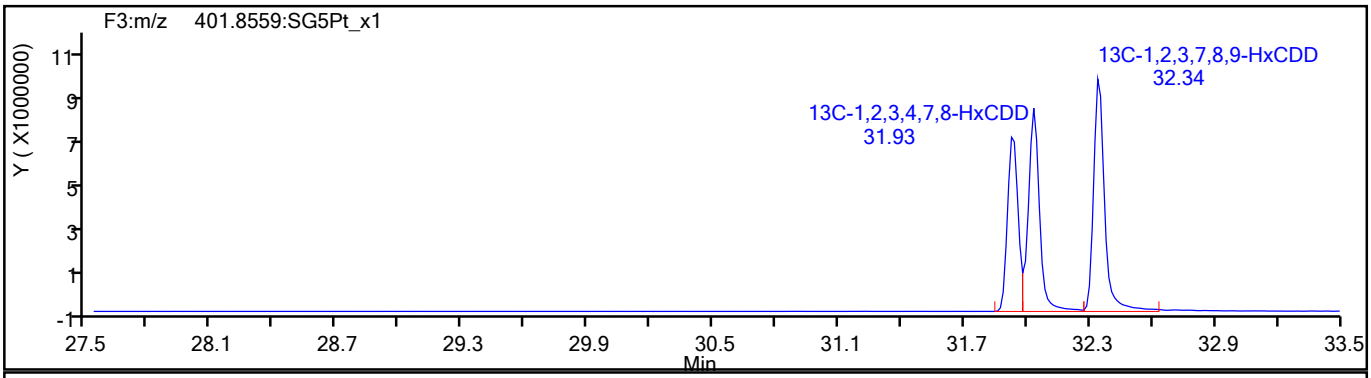

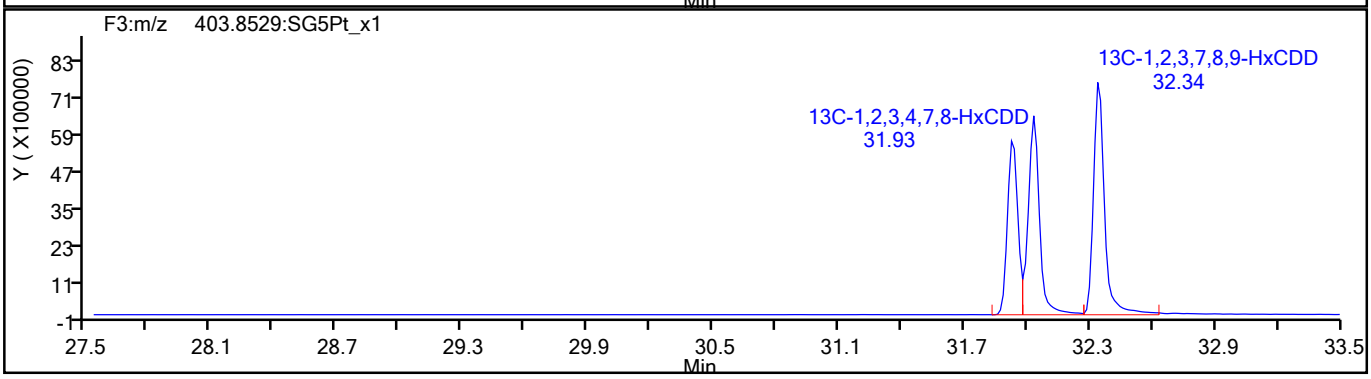

778522

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

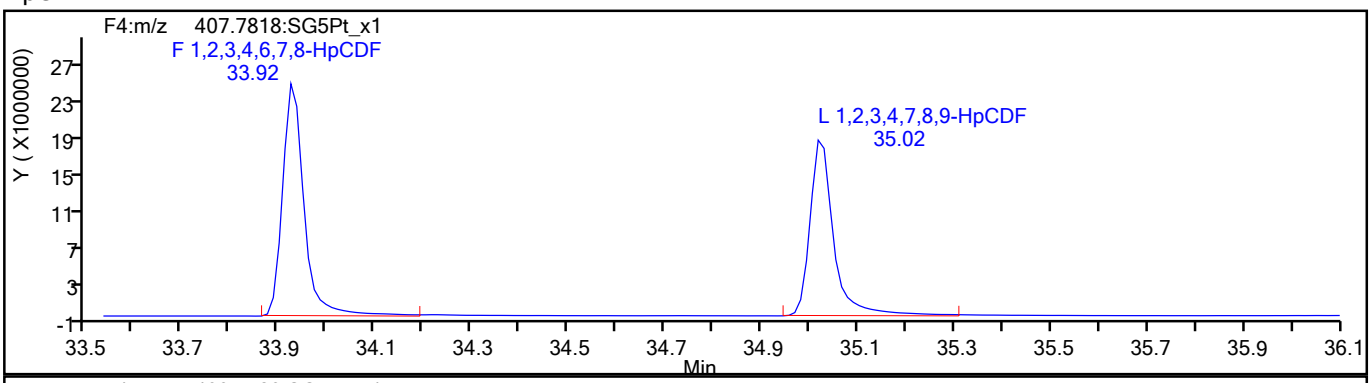

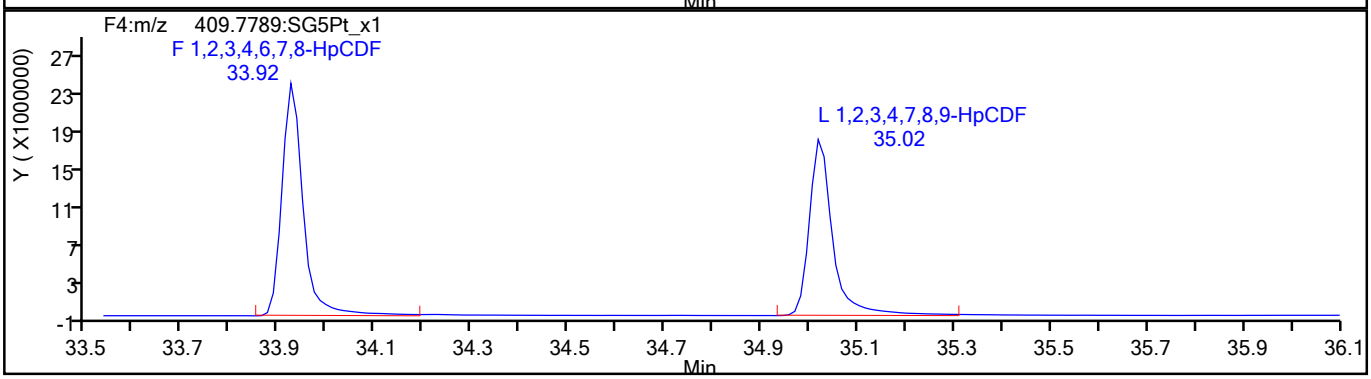

HpCDF Standards

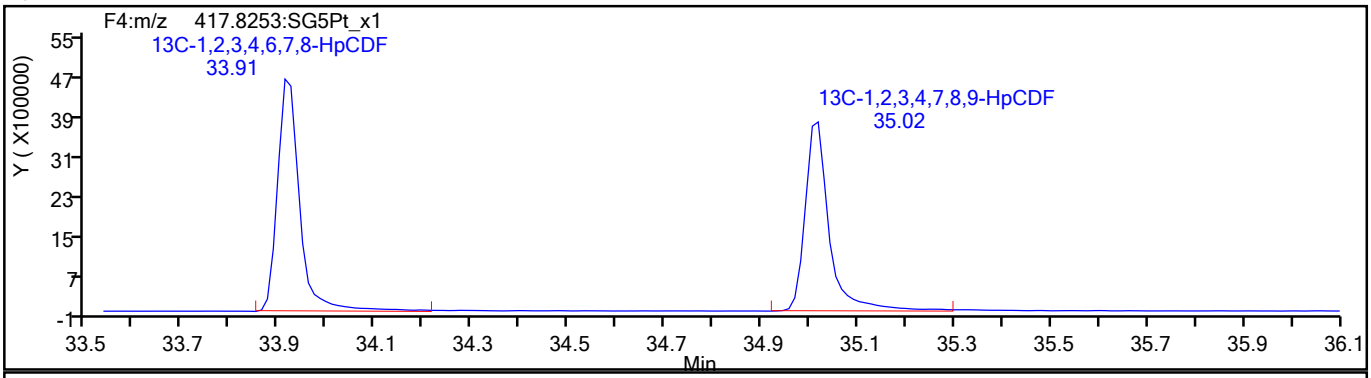

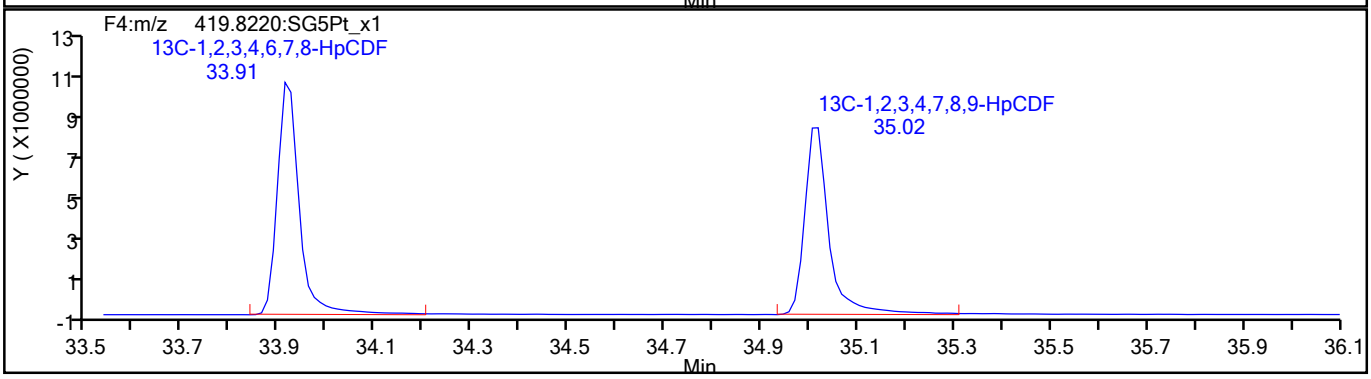

778523

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

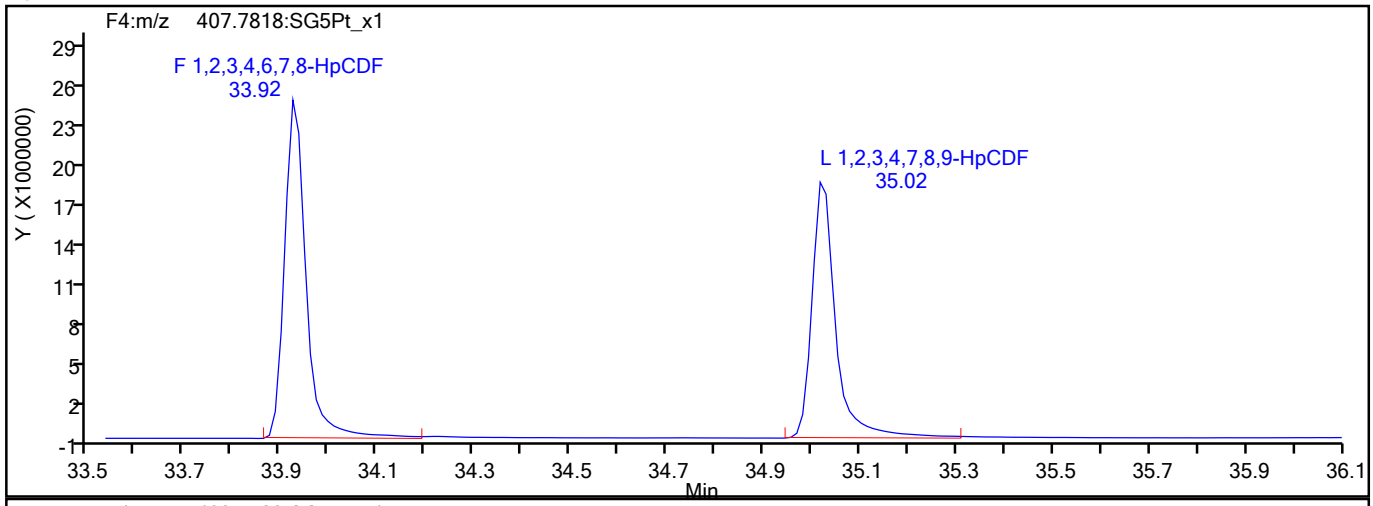

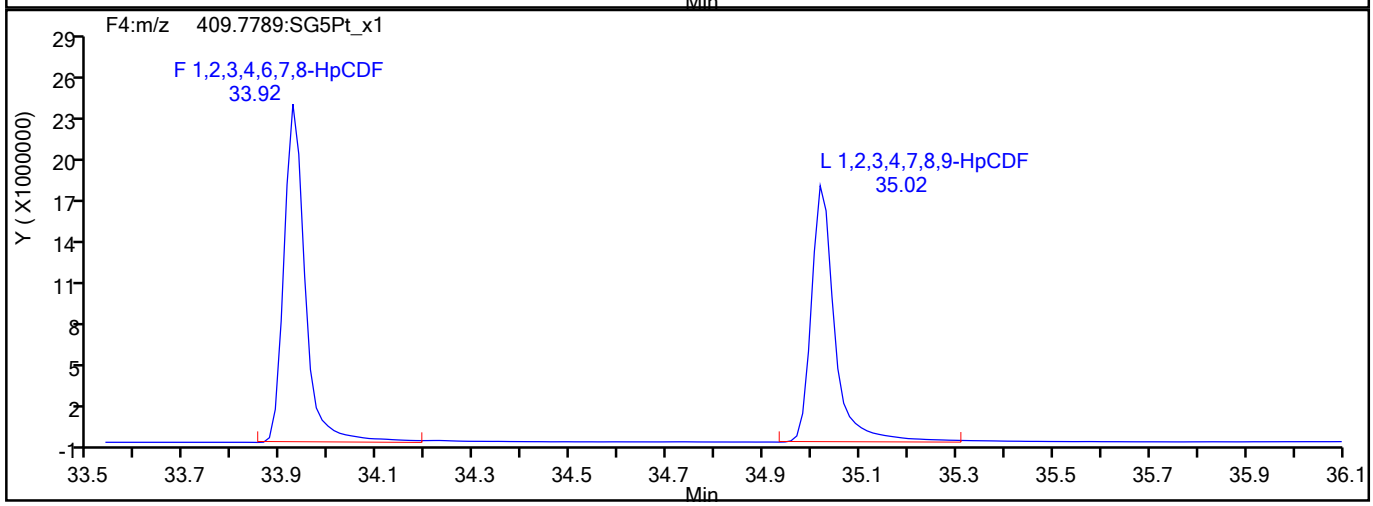

HpCDF Interference Mass

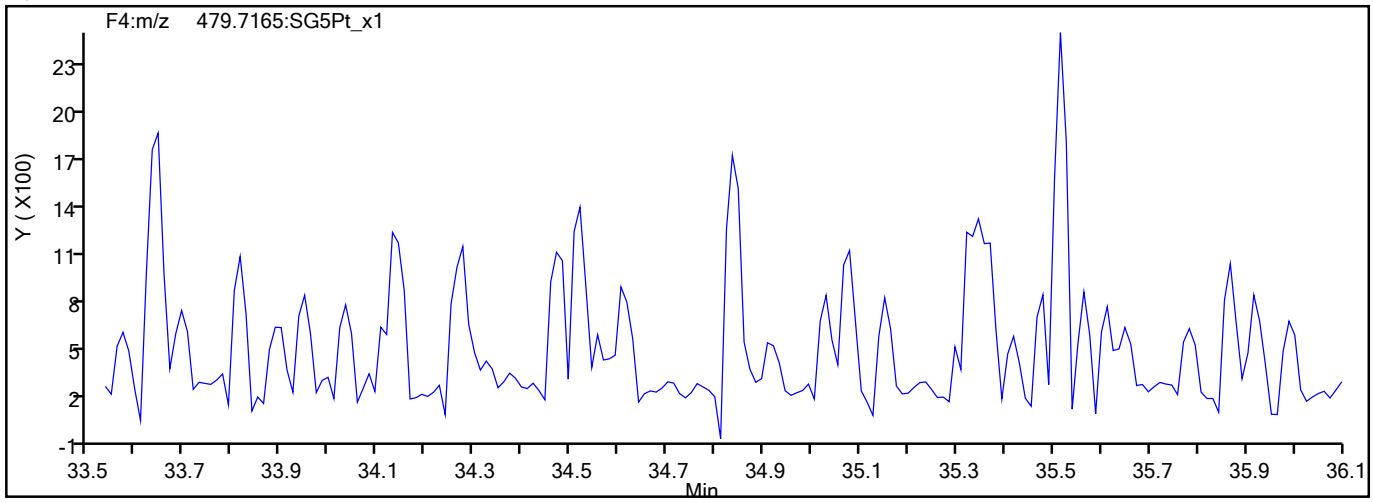

778524

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

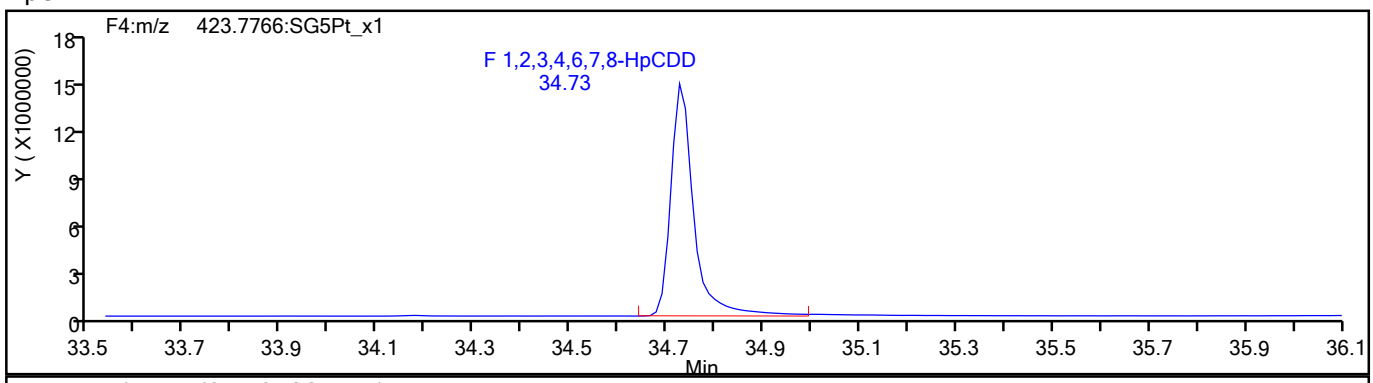

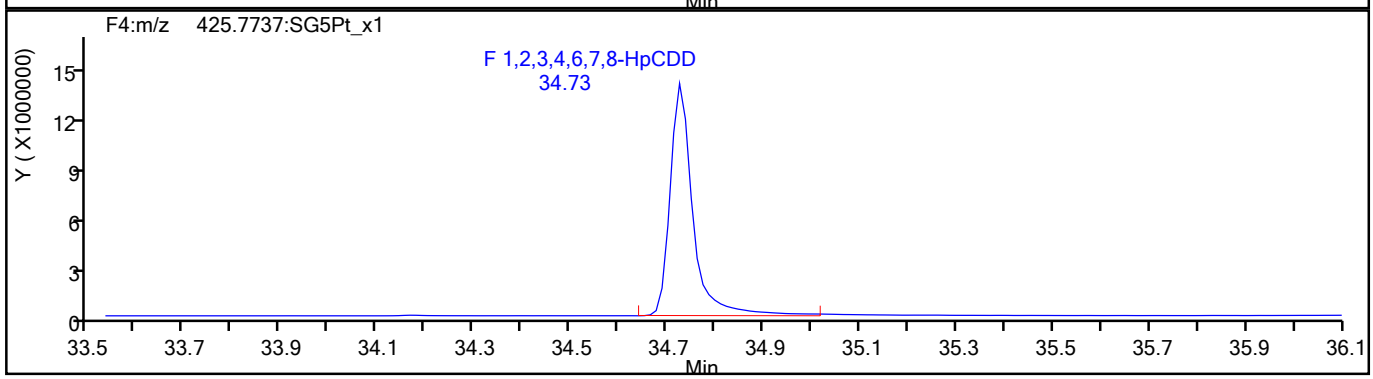

HpCDD Standards

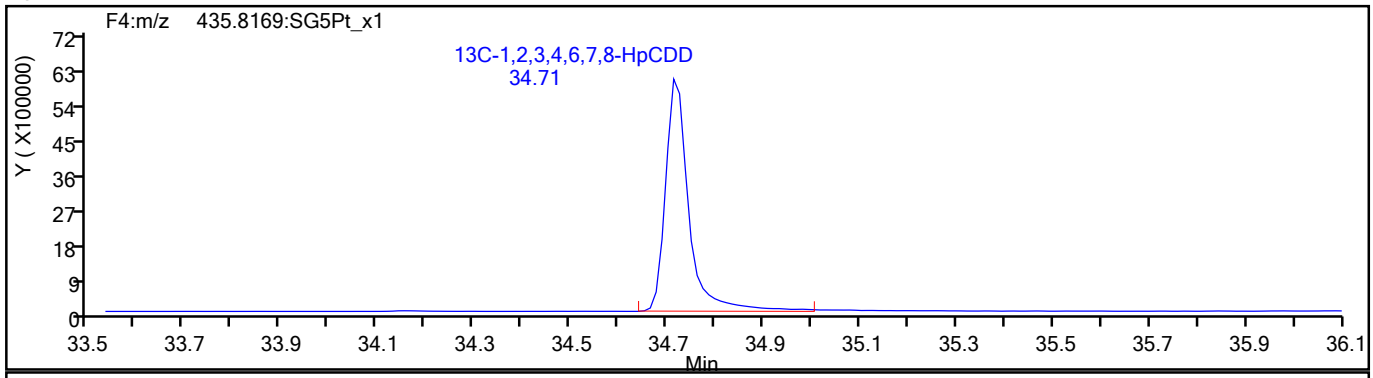

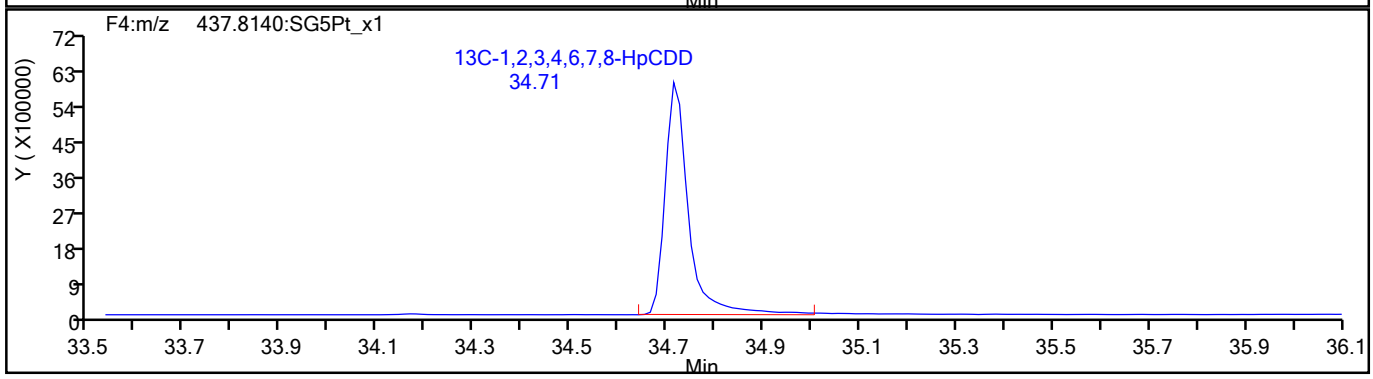

778525

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

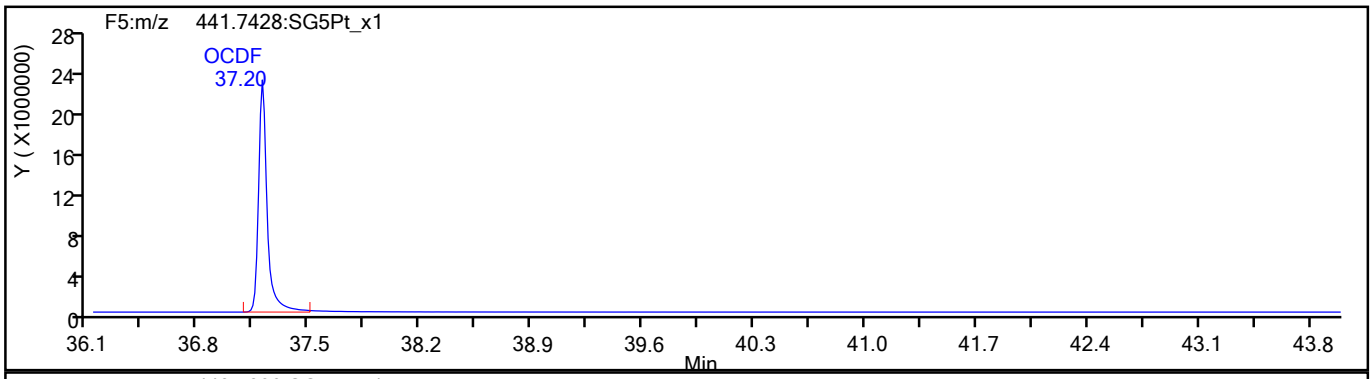

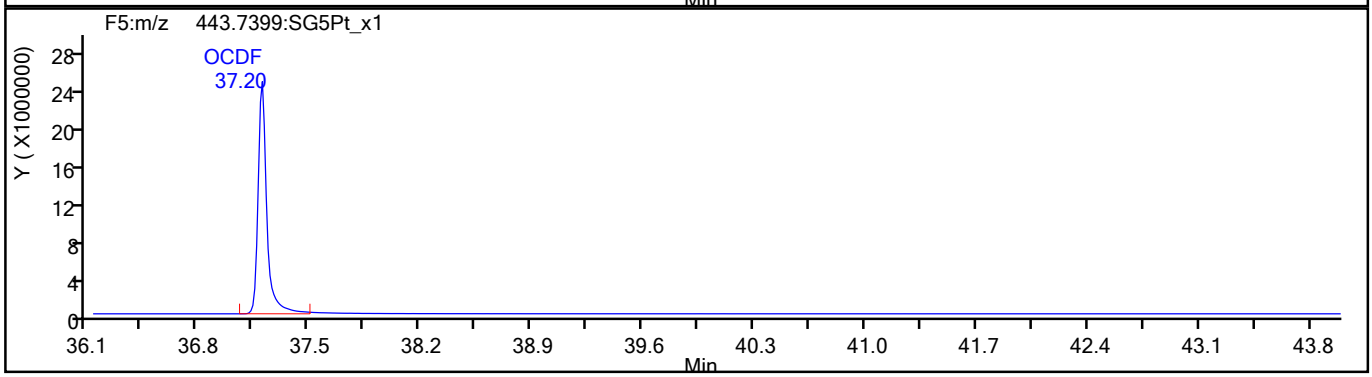

OCDF Standards

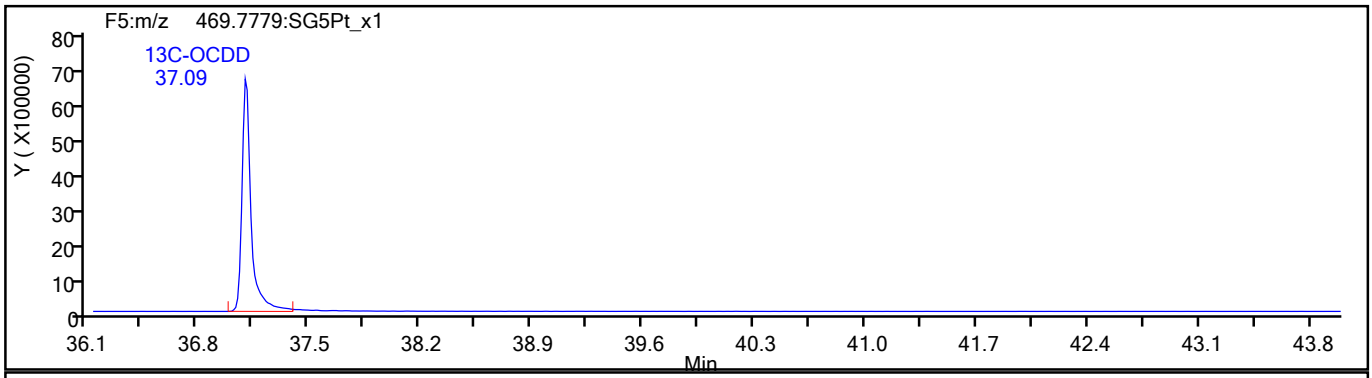

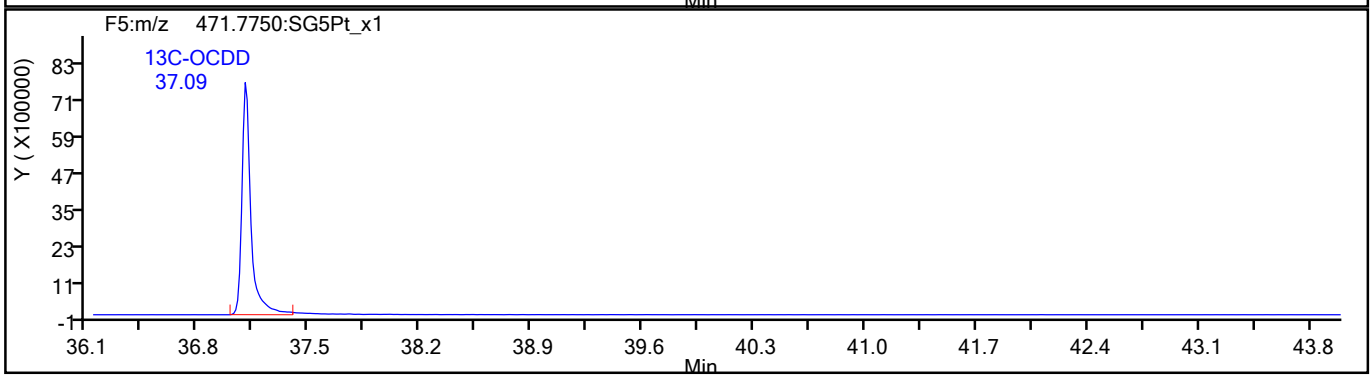

778526

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

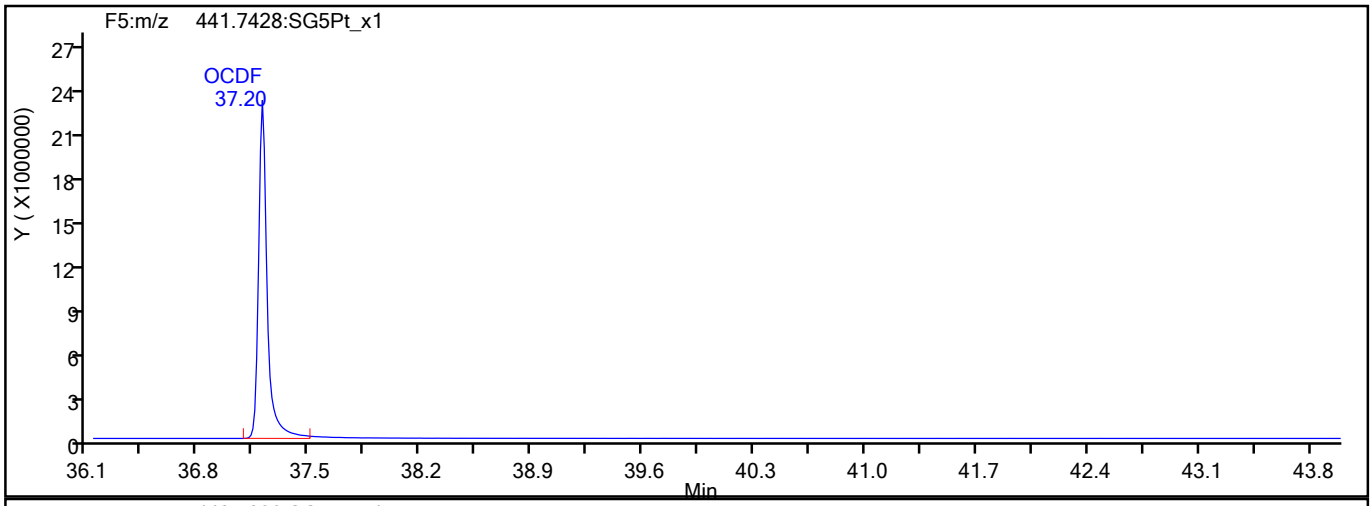

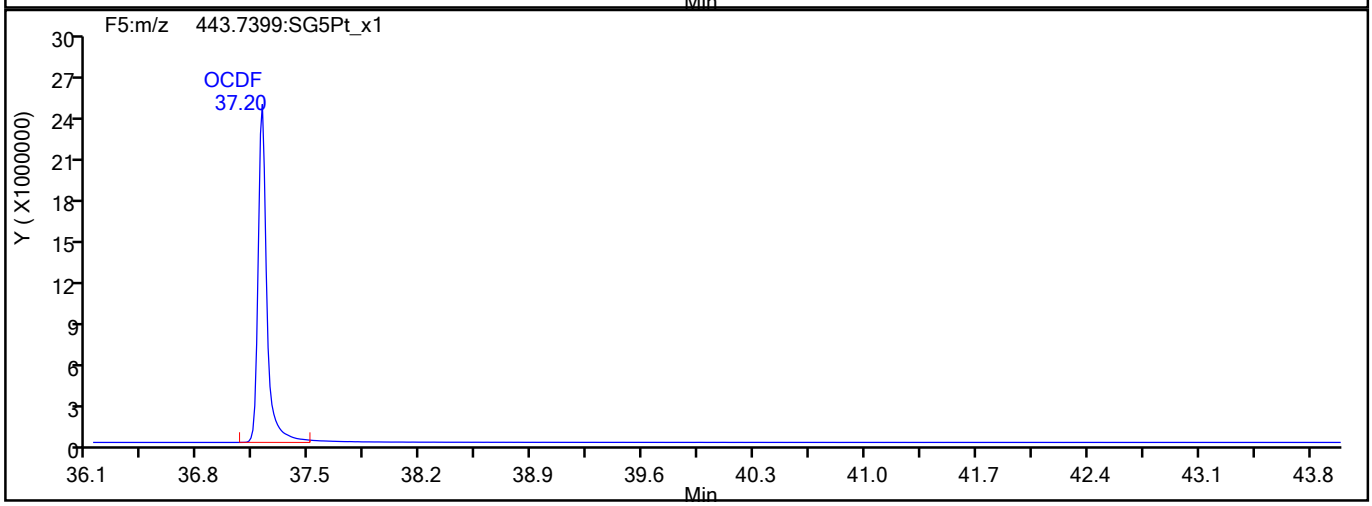

OCDF Interference Mass

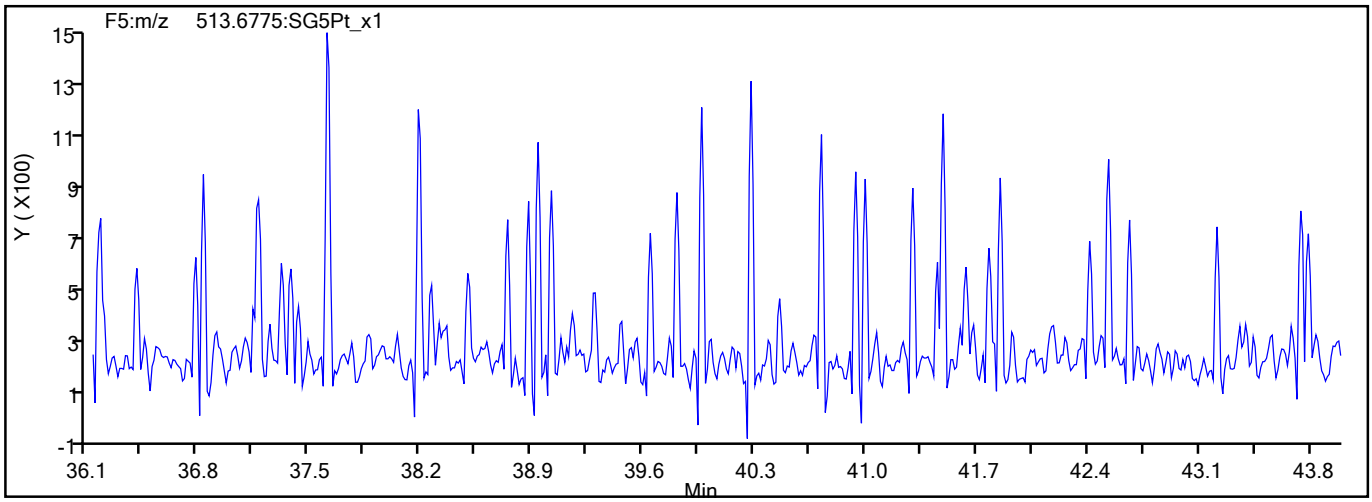

778527

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

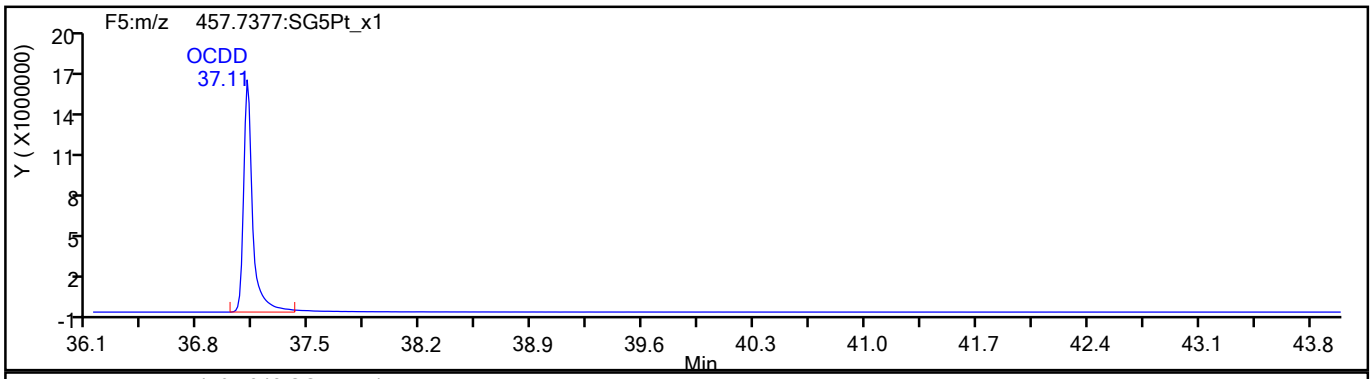

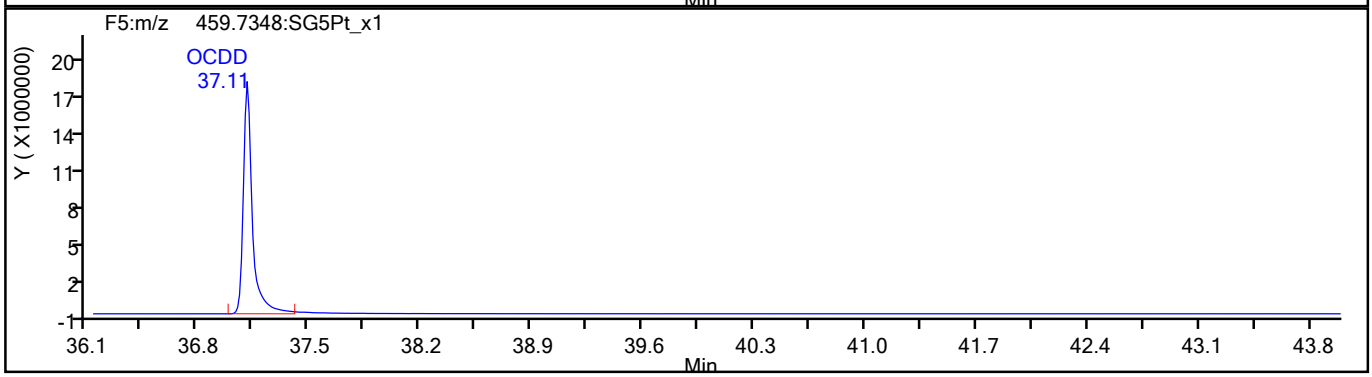

OCDD Standards

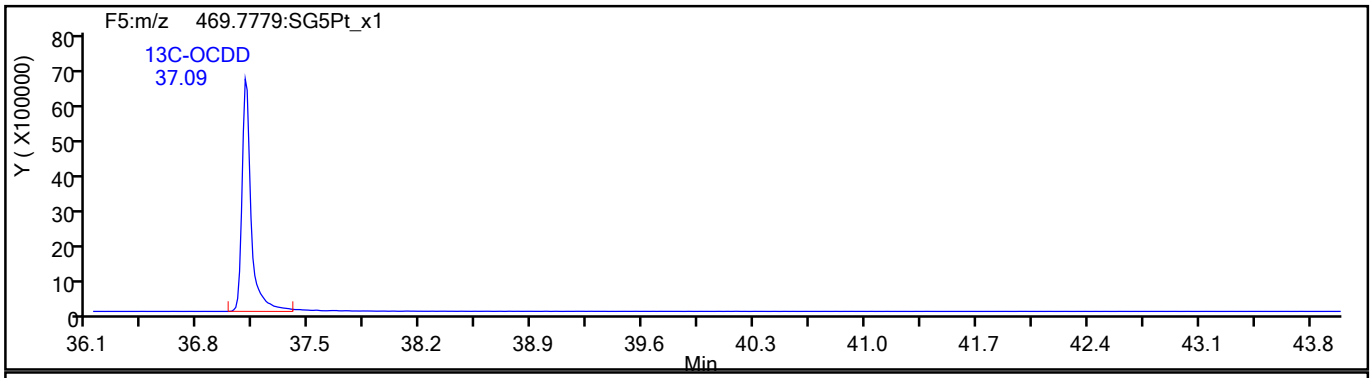

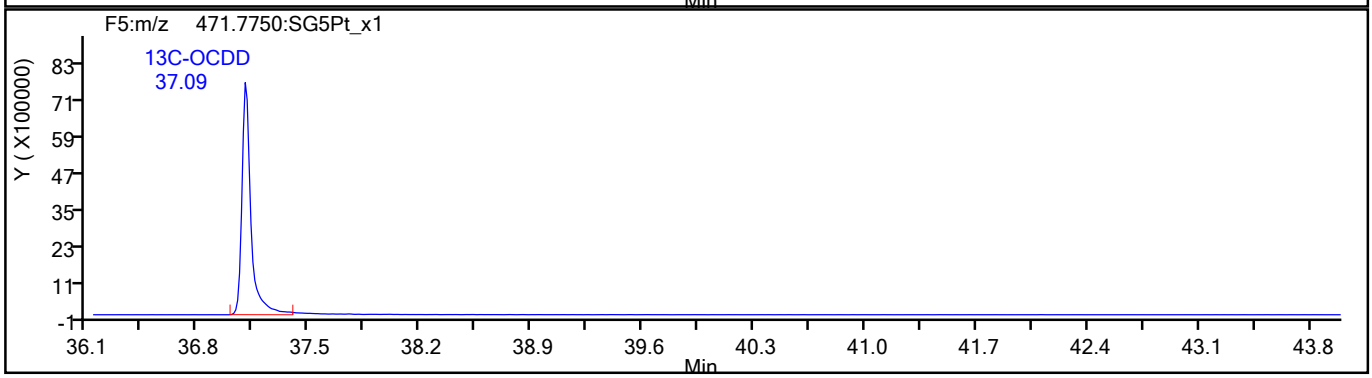

778528

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

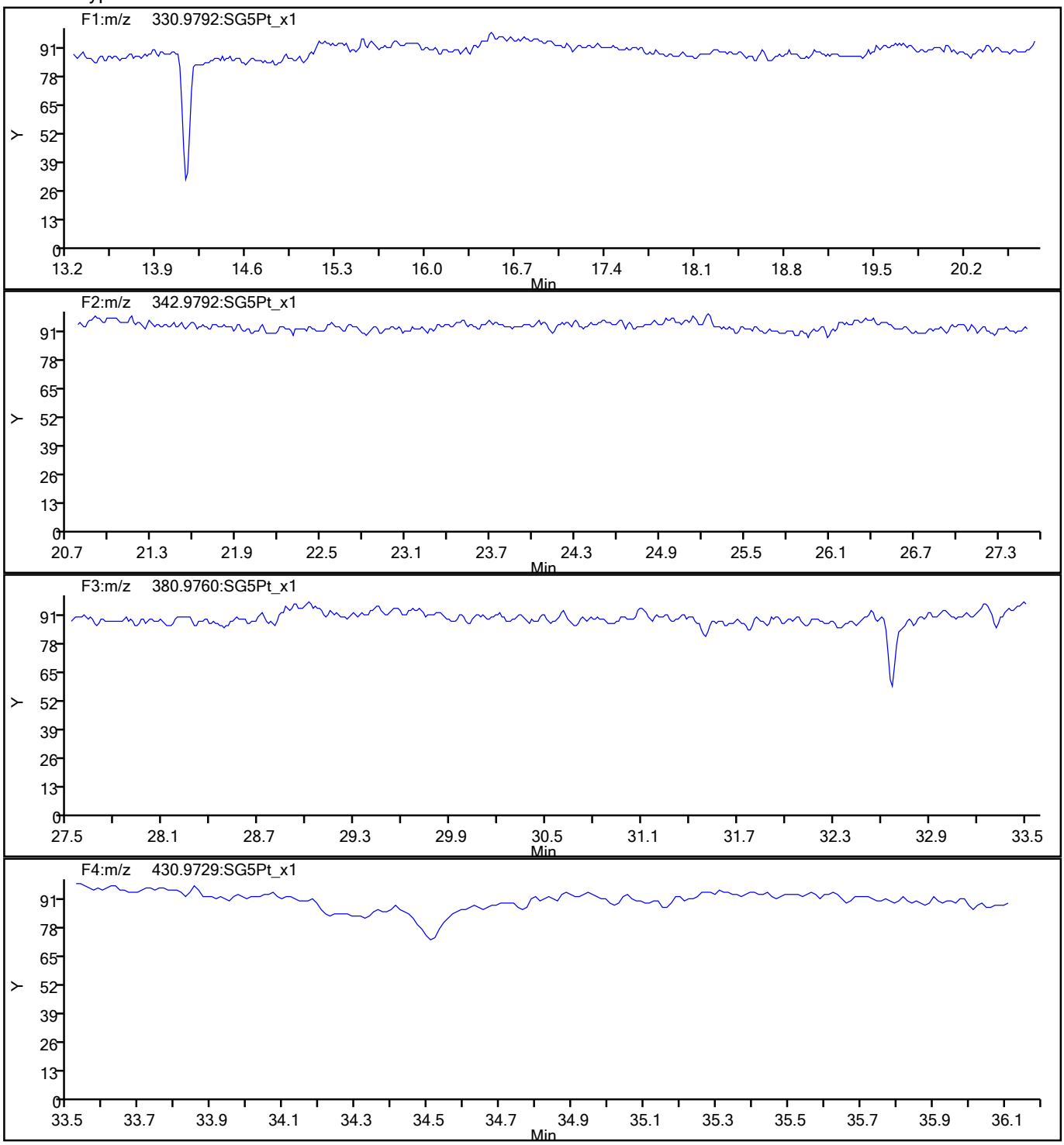

778529

Report Date: 27-Jul-2021 15:17:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

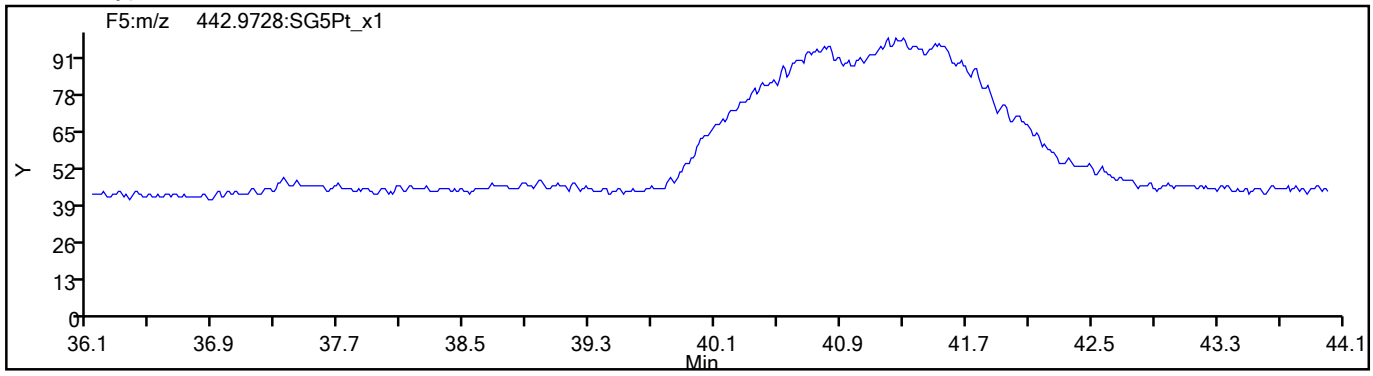

778530

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	57464333	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	95980421	0.79	1.6249	102.8	102.8	0.1660	0.1660	103	
2,3,7,8-TCDF	17.628	204575642	0.78	1.0239	208.2	208.2	0.2336	0.2336	104	
S Total TCDF					208.2	208.2	0.2336	0.2336		
D 13C-2,3,7,8-TCDD	18.338	53698206	0.83	0.8993	103.9	103.9	0.1396	0.1396	104	
$ 37Cl4-2,3,7,8-TCDD	18.354	140953034		1.1071	221.5	221.5	0.1318	0.1318	111	
2,3,7,8-TCDD	18.354	140421448	0.79	1.2541	208.5	208.5	0.1362	0.1362	104	
S Total TCDD					208.5	208.5	0.1362	0.1362		
D 13C-1,2,3,7,8-PeCDF	22.749	72829681	1.58	1.2101	104.7	104.7	0.2112	0.2112	105	
1,2,3,7,8-PeCDF	22.776	795873691	1.61	1.0611	1029.8	1029.8	2.482	2.482	103	
D 13C-2,3,4,7,8-PeCDF	24.126	75649463	1.61	1.2395	106.2	106.2	0.2062	0.2062	106	
2,3,4,7,8-PeCDF	24.153	783403837	1.59	1.0184	1016.8	1016.8	2.723	2.723	102	
S Total PeCDF					2046.7	2046.7	2.602	2.602		
D 13C-1,2,3,7,8-PeCDD	24.862	46251010	1.64	0.7612	105.7	105.7	0.1196	0.1196	106	
1,2,3,7,8-PeCDD	24.889	500555284	1.58	1.0484	1032.3	1032.3	0.8910	0.8910	103	
S Total PeCDD					1032.3	1032.3	0.8910	0.8910		
D 13C-1,2,3,4,7,8-HxCDF	30.835	67741189	0.53	1.0837	103.6	103.6	0.3784	0.3784	104	
1,2,3,4,7,8-HxCDF	30.862	737075796	1.21	1.0851	1002.7	1002.7	4.903	4.903	100	
D 13C-1,2,3,6,7,8-HxCDF	31.008	67363664	0.51	1.1279	99.0	99.0	0.3636	0.3636	98.97	
1,2,3,6,7,8-HxCDF	31.021	785709889	1.22	1.1260	1035.8	1035.8	4.873	4.873	104	
D 13C-2,3,4,6,7,8-HxCDF	31.754	63471184	0.52	1.0637	98.9	98.9	0.3855	0.3855	98.87	
2,3,4,6,7,8-HxCDF	31.767	762810877	1.21	1.1675	1029.4	1029.4	3.909	3.909	103	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58669892	0.52	0.9676	100.5	100.5	0.4238	0.4238	100	
1,2,3,7,8,9-HxCDF	32.539	708280047	1.22	1.1664	1035.0	1035.0	4.123	4.123	104	
S Total HxCDF					4103.0	4103.0	4.452	4.452		
* 13C-1,2,3,7,8,9-HxCDD	32.339	60348148	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	46886171	1.24	0.7334	105.9	105.9	0.3391	0.3391	106	
1,2,3,4,7,8-HxCDD	31.940	484857042	1.26	1.0640	971.9	971.9	2.786	2.786	97.19	
D 13C-1,2,3,6,7,8-HxCDD	32.033	53564396	1.27	0.8802	100.8	100.8	0.2826	0.2826	101	
1,2,3,6,7,8-HxCDD	32.047	543061818	1.27	1.0001	1013.8	1013.8	2.795	2.795	101	
1,2,3,7,8,9-HxCDD	32.353	563888565	1.26	1.1325	991.3	991.3	2.541	2.541	99.13	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDD					2977.0	2977.0	2.707	2.707		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	46328151	0.45	0.7730	99.3	99.3	0.9693	0.9693	99.31	
1,2,3,4,6,7,8-HpCDF	33.924	681312007	1.05	1.4413	1020.4	1020.4	8.187	8.187	102	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44333848	0.44	0.7008	104.8	104.8	1.069	1.069	105	
1,2,3,4,7,8,9-HpCDF	35.017	590555312	1.06	1.3174	1011.1	1011.1	10.5	10.5	101	
S Total HpCDF					2031.5	2031.5	9.356	9.356		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	39395832	1.02	0.6472	100.9	100.9	0.4739	0.4739	101	
1,2,3,4,6,7,8-HpCDD	34.726	441437476	1.05	1.0943	1024.0	1024.0	3.855	3.855	102	
S Total HpCDD					1024.0	1024.0	3.855	3.855		
D 13C-OCDD	37.093	56623863	0.89	0.4472	209.8	209.8	0.2327	0.2327	105	
OCDF	37.201	856685987	0.91	1.4382	2104.0	2104.0	1.905	1.905	105	
OCDD	37.105	635652839	0.90	1.1070	2028.1	2028.1	1.855	1.855	101	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		26125466	6597193	4577	11442	1441		
333.9339	18.142	18.142	0		31338867	7893522	2702	6755	2921	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42243137	10877420	7832	19580	1389		
317.9389	17.613	17.616	0	0.971	53737284	13863668	7802	19505	1777	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	89710432	22799700	10338	25845	2205		
305.8987	17.628	17.631	0	1.001	114865210	29189675	13335	33337	2189	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24360997	5757558	4577	11442	1258		
333.9339	18.338	18.338	0	1.011	29337209	6914283	2702	6755	2559	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	140953034	33738158	8459	21147	3988		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	62065087	14965631	3913	9782	3825		
321.8936	18.354	18.357	0	1.001	78356361	18744482	4747	11867	3949	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44649559	7939527	8573	21432	926		
353.8970	22.749	22.754	0	1.254	28180122	5062354	6242	15605	811	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	490871580	87021007	84135	210337	1034		
341.8567	22.776	22.779	0	1.001	305002111	54503599	52854	132135	1031	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46717935	7613965	8573	21432	888		
353.8970	24.126	24.129	0	1.330	28931528	4737188	6242	15605	759	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	480352978	79104825	84135	210337	940		
341.8567	24.153	24.156	0	1.001	303050859	50060127	52854	132135	947	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28720712	4433240	3087	7717	1436		
369.8919	24.862	24.865	0	1.370	17530298	2751802	2189	5472	1257	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	306292917	47311146	15348	38370	3083		
357.8516	24.889	24.892	0	1.001	194262367	30133208	11499	28747	2621	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23491874	5084915	9674	24185	526		
385.8610	30.835	30.838	0	0.953	44249315	9441190	17790	44475	531	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	404173144	87133654	170642	426605	511		
375.8178	30.848	30.857	0	1.000	332902652	71216591	138478	346195	514	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	22854682	4877346	9674	24185	504		
385.8610	31.008	31.003	0	0.959	44508982	9206926	17790	44475	518	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.000	431948071	93438031	170642	426605	548		
375.8178	31.021	31.022	0	1.000	353761818	76246532	138478	346195	551	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	21747421	5871662	9674	24185	607		
385.8610	31.754	31.756	0	0.982	41723763	11062051	17790	44475	622	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	417841952	110026703	170642	426605	645		
375.8178	31.767	31.772	0	1.000	344968925	92108448	138478	346195	665	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20172563	5575575	9674	24185	576		
385.8610	32.512	32.523	-1	1.005	38497329	10495423	17790	44475	590	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	388834443	107441652	170642	426605	630		
375.8178	32.526	32.534	0	1.000	319445604	89819128	138478	346195	649	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33485933	9289499	8951	22377	1038		
403.8529	32.339	32.342	0		26862215	7454274	7708	19270	967	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	25994948	7598983	8951	22377	849		
403.8529	31.927	31.929	0	0.987	20891223	6054958	7708	19270	786	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	270288224	77533273	86149	215372	900		
391.8127	31.940	31.945	0	1.000	214568818	61952830	75747	189367	818	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29946566	8106259	8951	22377	906		
403.8529	32.033	32.033	0	0.991	23617830	6373294	7708	19270	827	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	303387935	83103965	86149	215372	965		
391.8127	32.047	32.047	0	1.000	239673883	65565020	75747	189367	866	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	314172702	87971106	86149	215372	1021		
391.8127	32.353	32.355	0	1.013	249715863	70210414	75747	189367	927	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14282220	4787635	15981	39952	300		
419.8220	33.912	33.914	0	1.049	32045931	10687518	34202	85505	312	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	349397605	118035783	389676	974190	303		
409.7789	33.924	33.926	0	1.000	331914402	111658032	340706	851765	328	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13509696	4047534	15981	39952	253		
419.8220	35.005	35.010	0	1.082	30824152	9120201	34202	85505	267	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	303260617	91538482	389676	974190	235		
409.7789	35.017	35.020	0	1.000	287294695	87143866	340706	851765	256	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19890119	6131671	10444	26110	587		
437.8140	34.714	34.716	0	1.073	19505713	6051375	10100	25250	599	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	225857690	69087451	102453	256132	674		
425.7737	34.726	34.726	0	1.000	215579786	65898474	103127	257817	639	1.05(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26710485	6689918	2659	6647	2516		
471.7750	37.093	37.094	0	1.147	29913378	7452640	4311	10777	1729	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	409115360	108366645	37076	92690	2923		
443.7399	37.201	37.199	0	1.003	447570627	117808946	40434	101085	2914	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	300559615	76562352	27801	69502	2754		
459.7348	37.105	37.106	0	1.000	335093224	85854399	30277	75692	2836	0.90(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

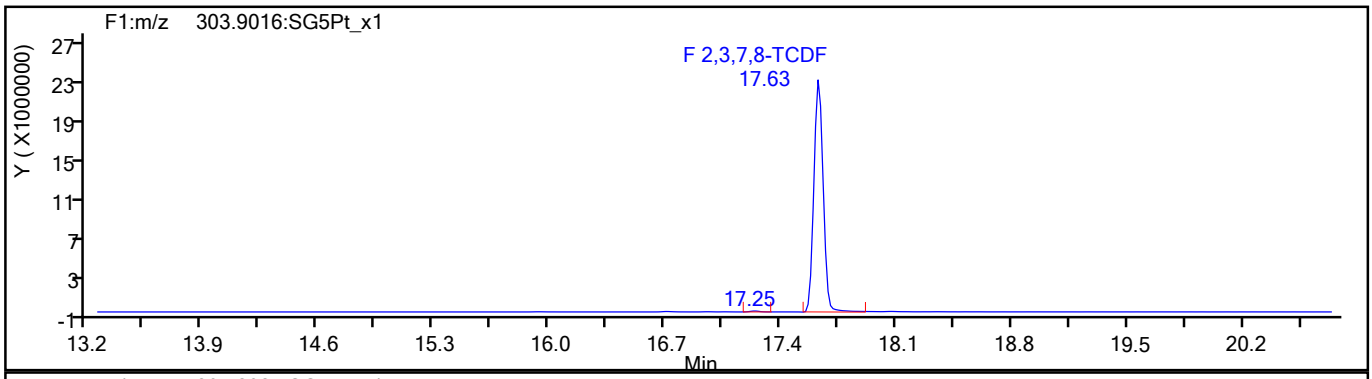

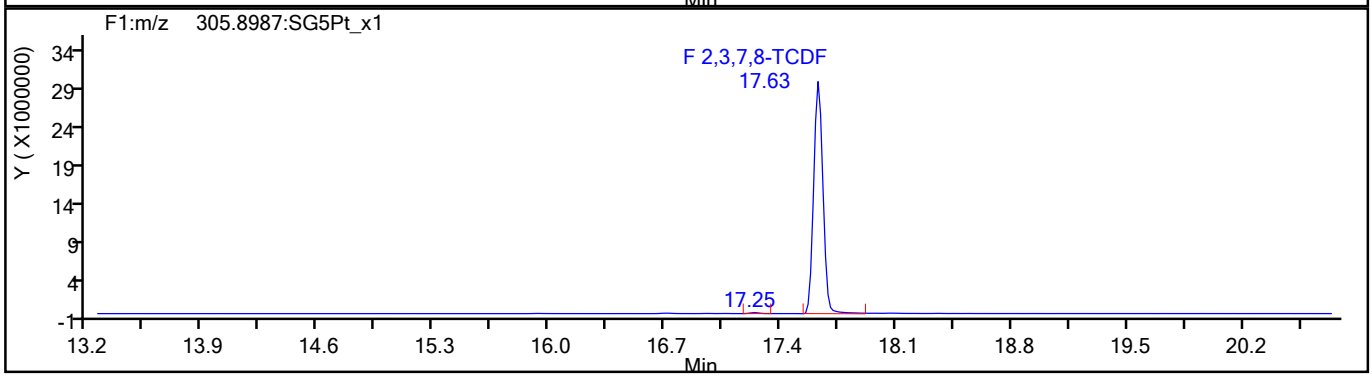

TCDF Standards

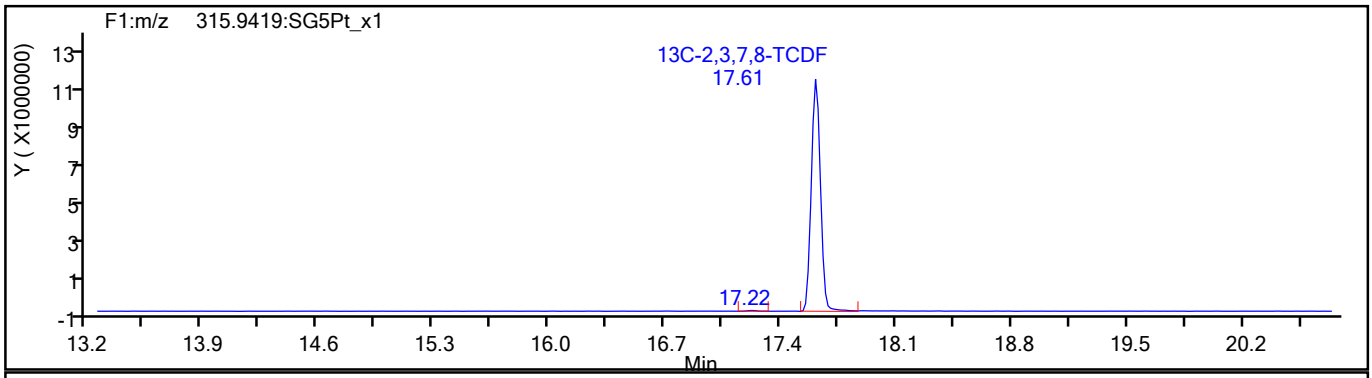

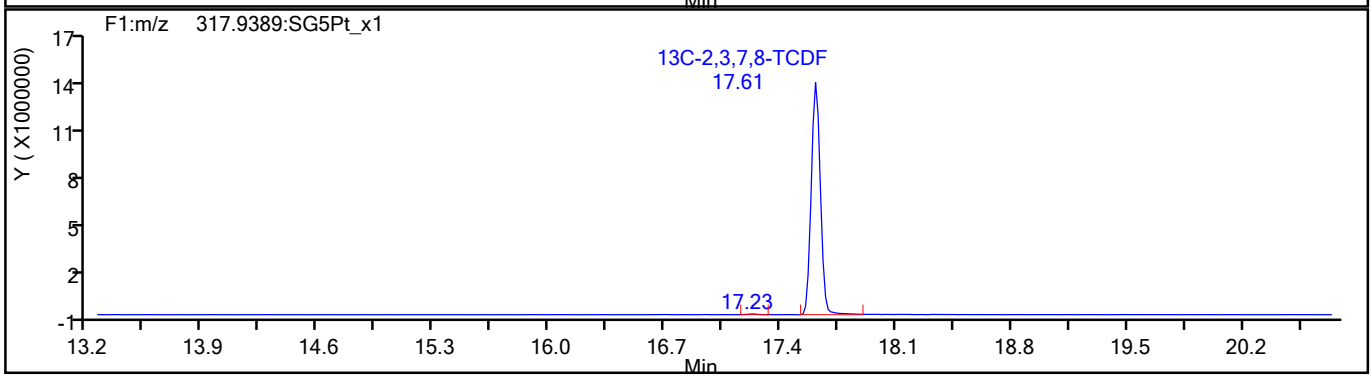

778536

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

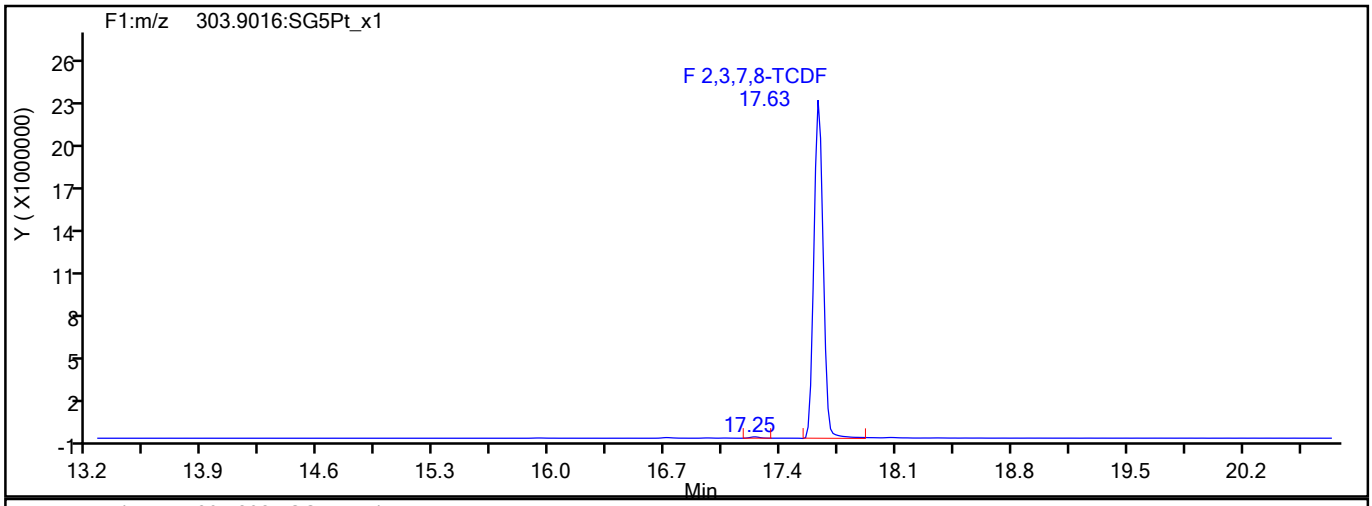

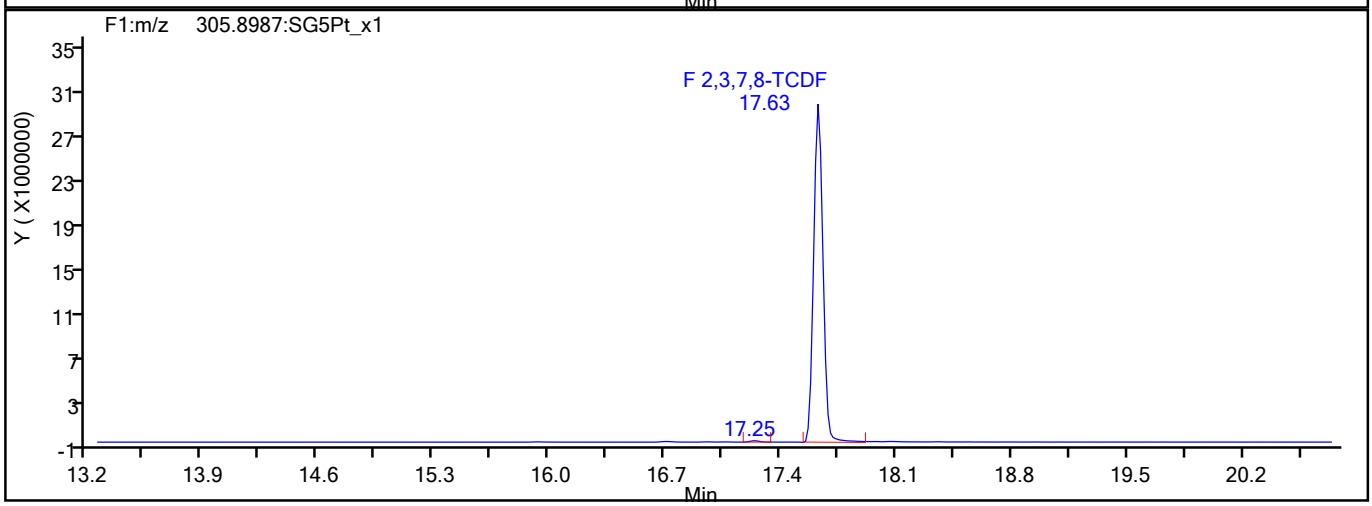

TCDF Interference Mass

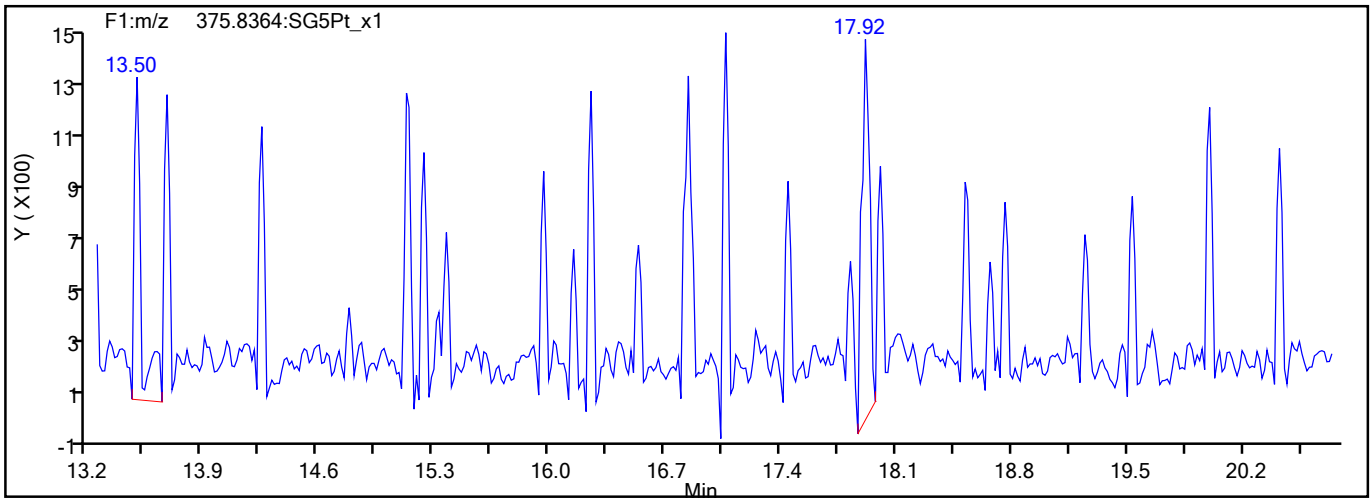

778537

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

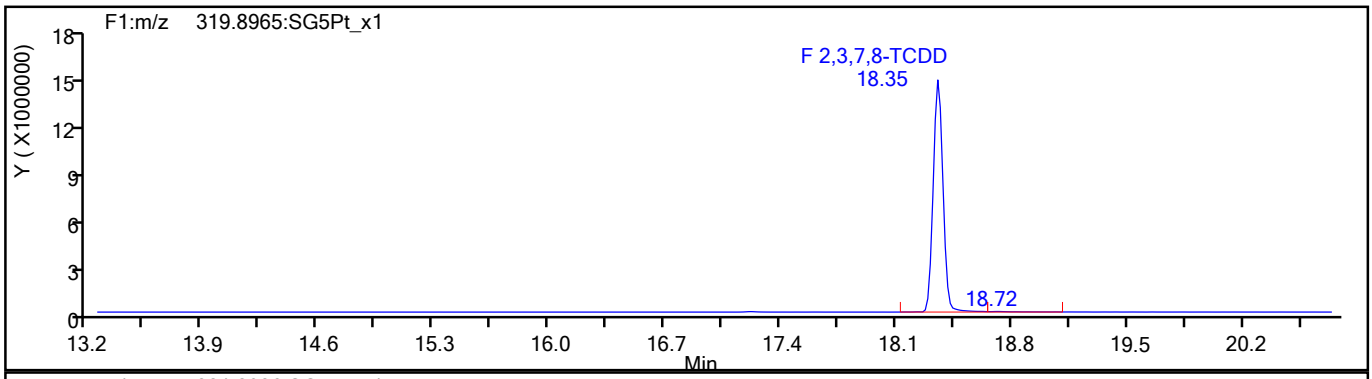

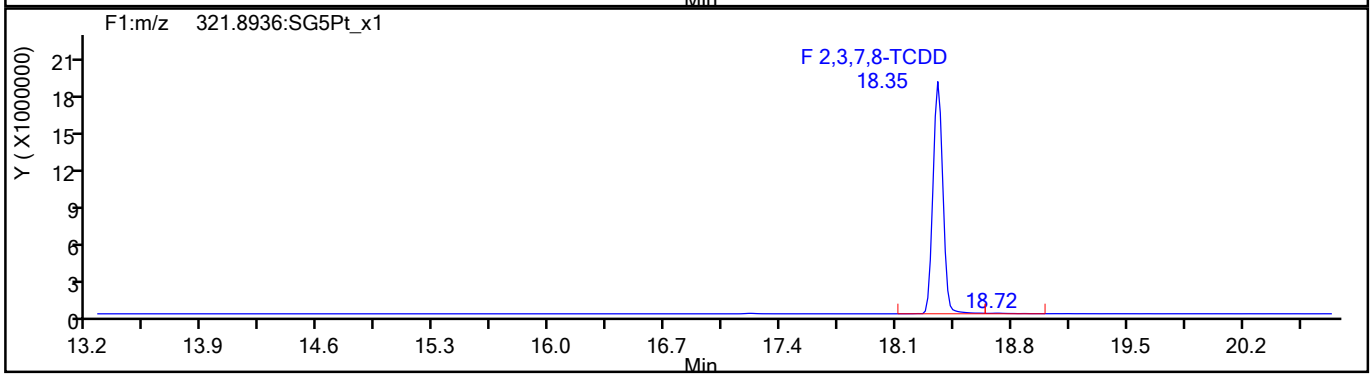

TCDD Standards

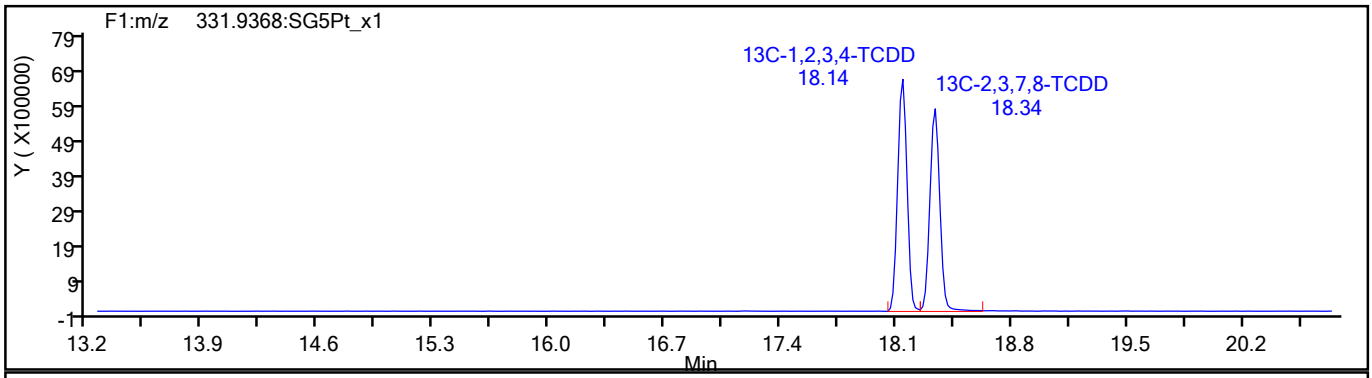

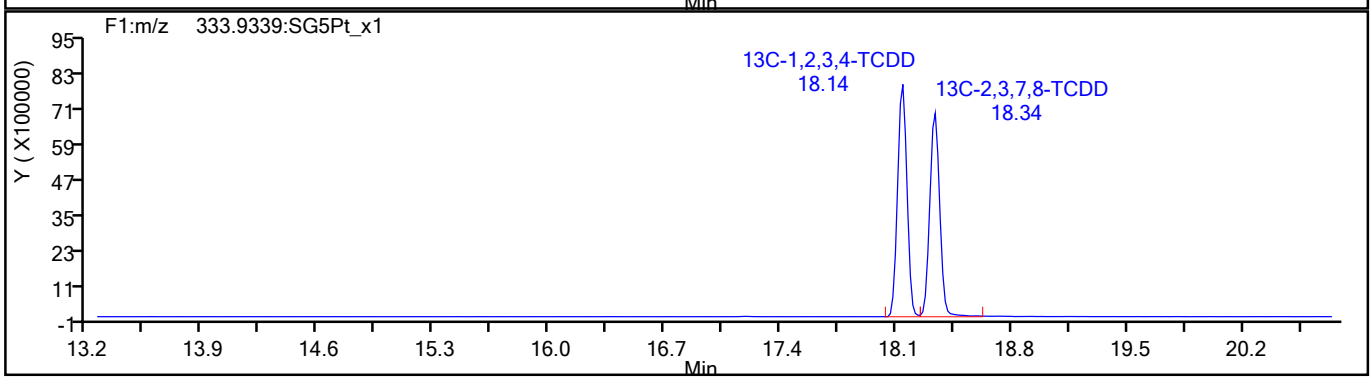

778538

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

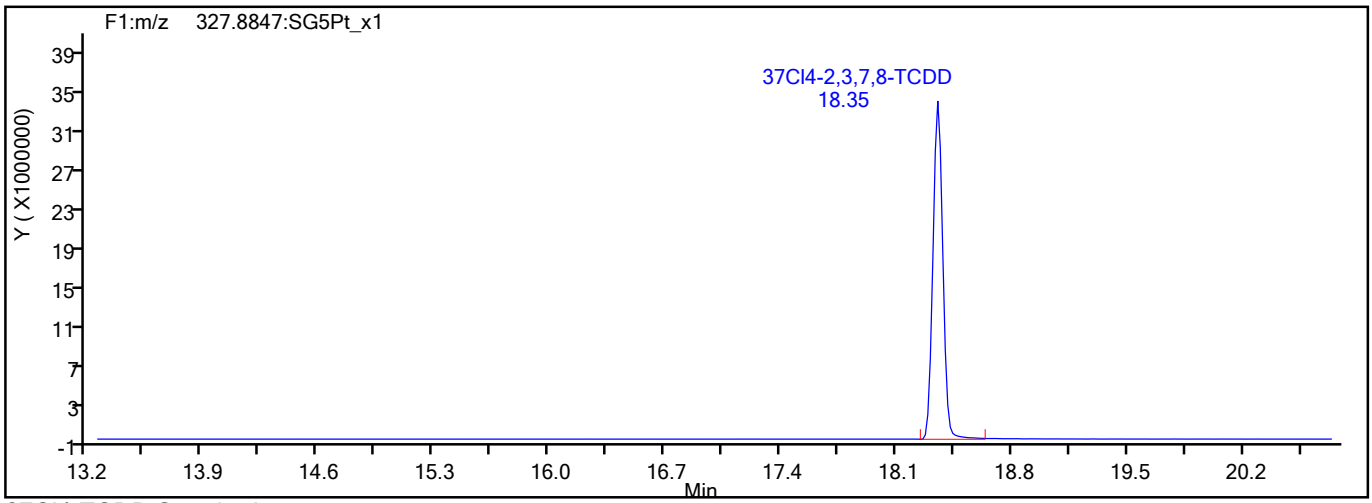

37Cl4-TCDD Standards

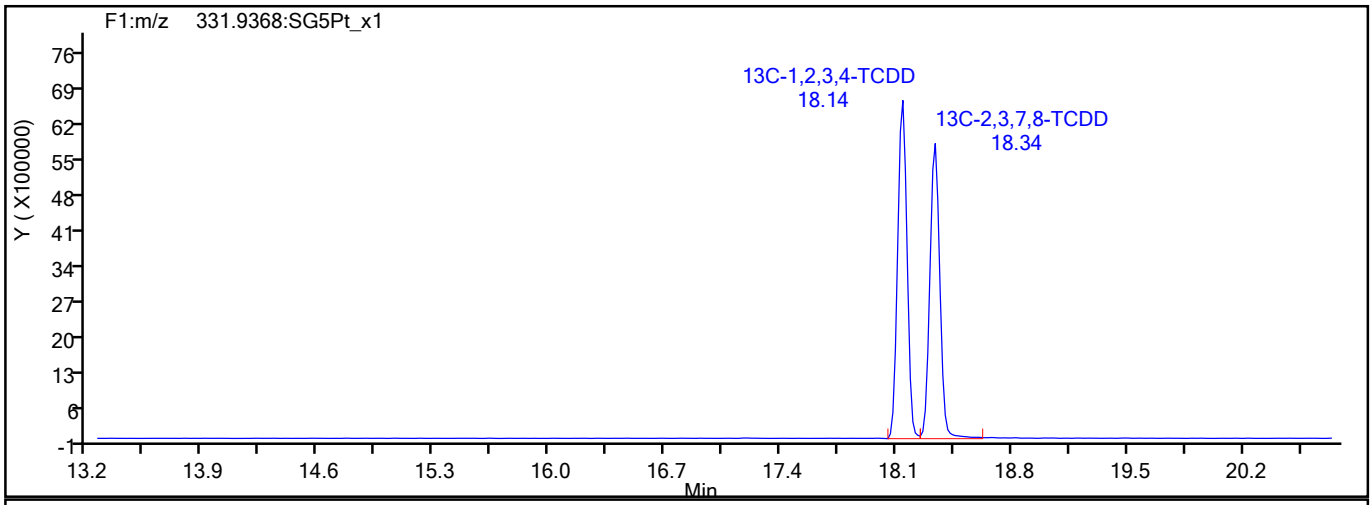

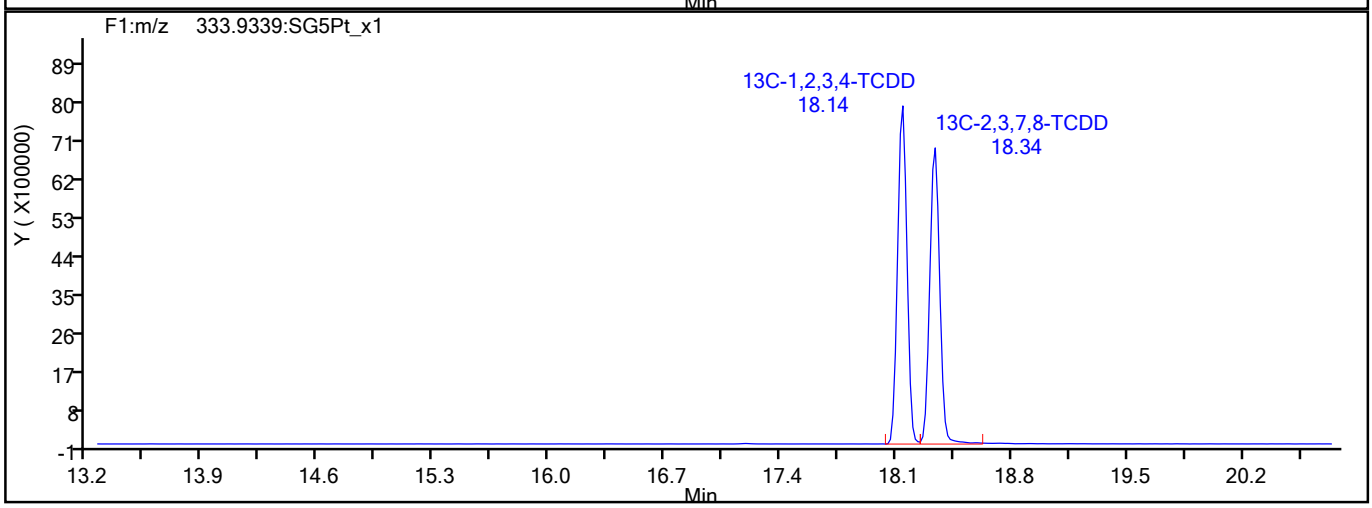

778539

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

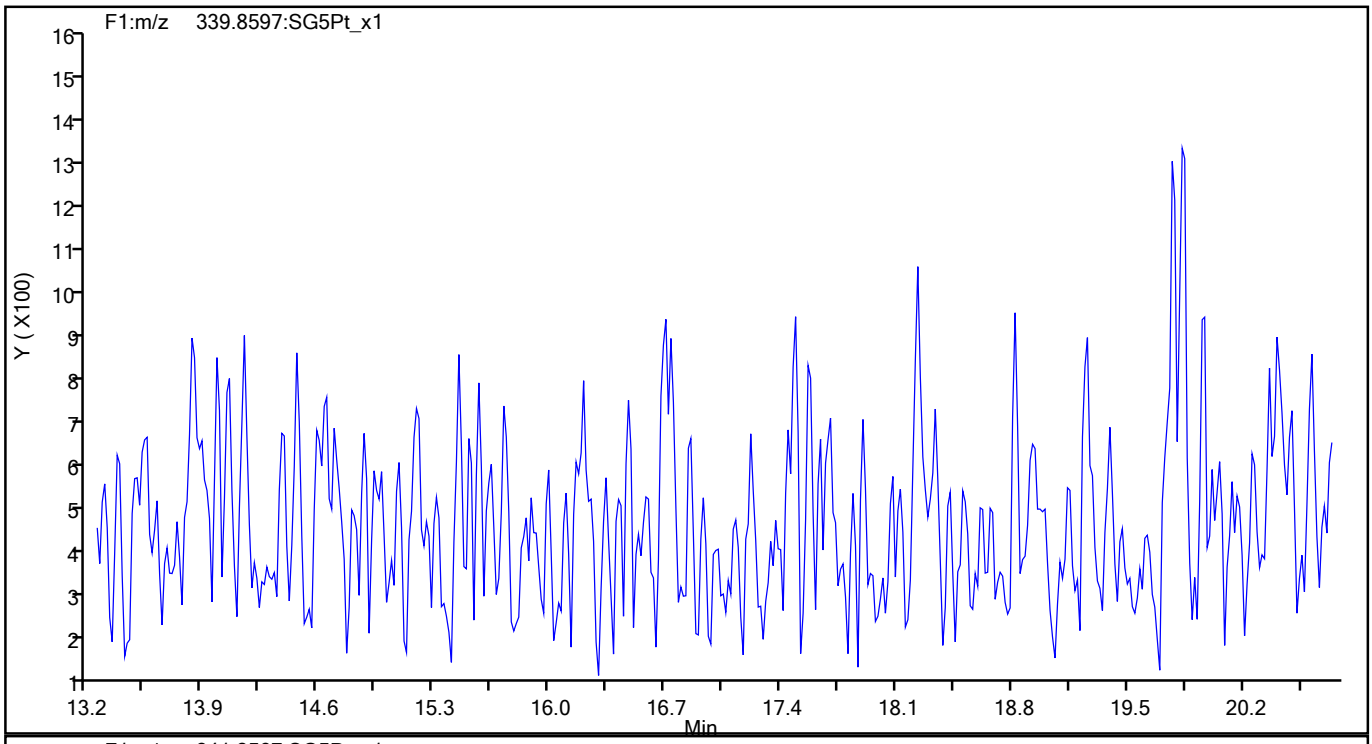

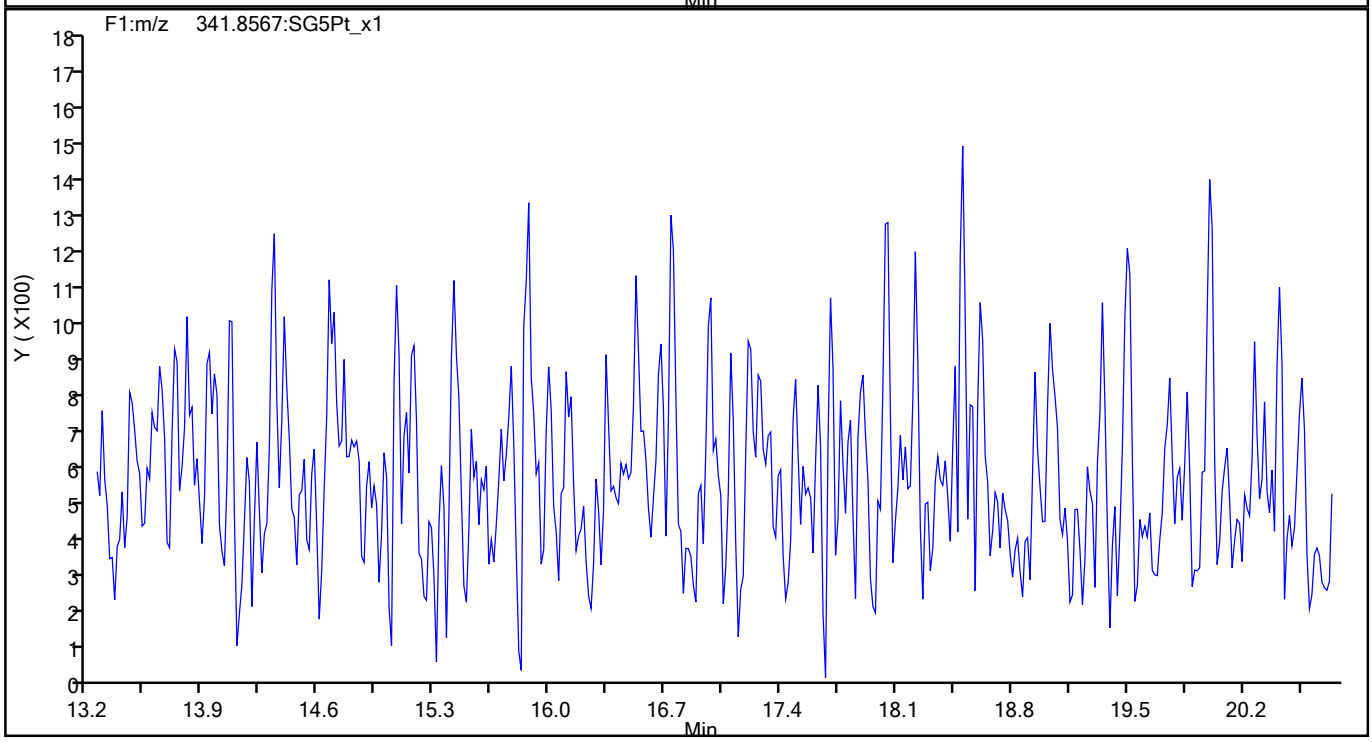

778540

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

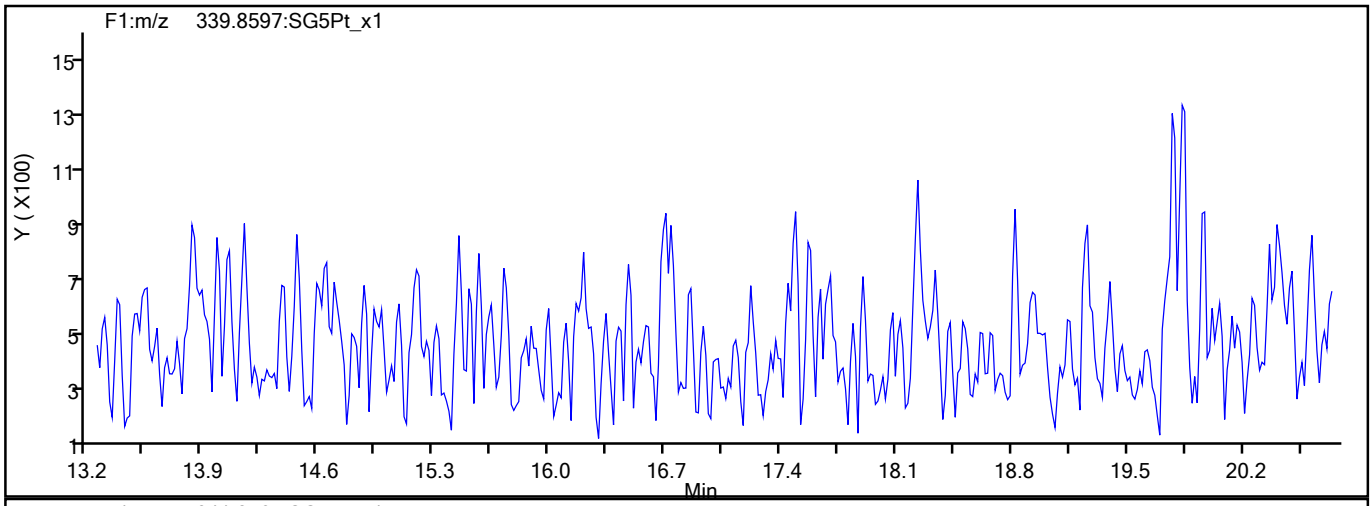

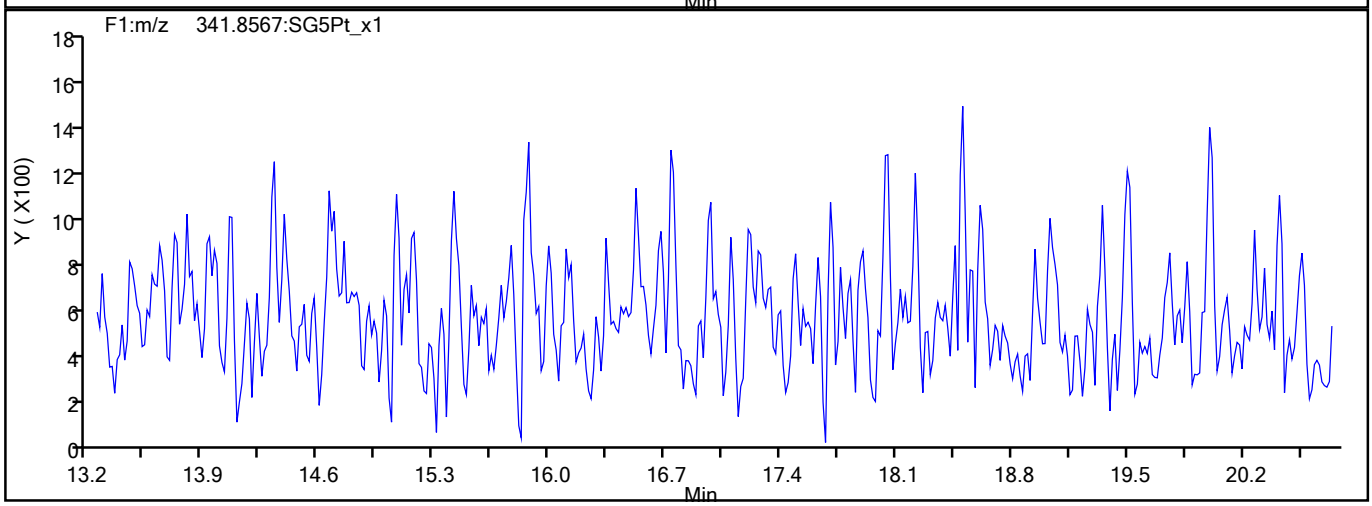

F1 PeCDFs Interference Mass

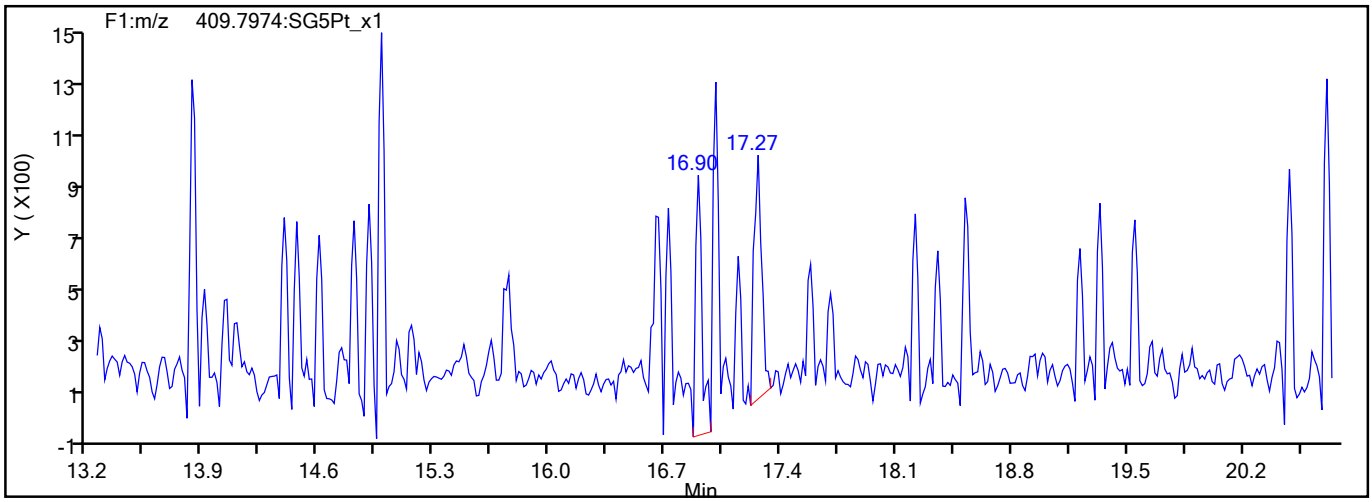

778541

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

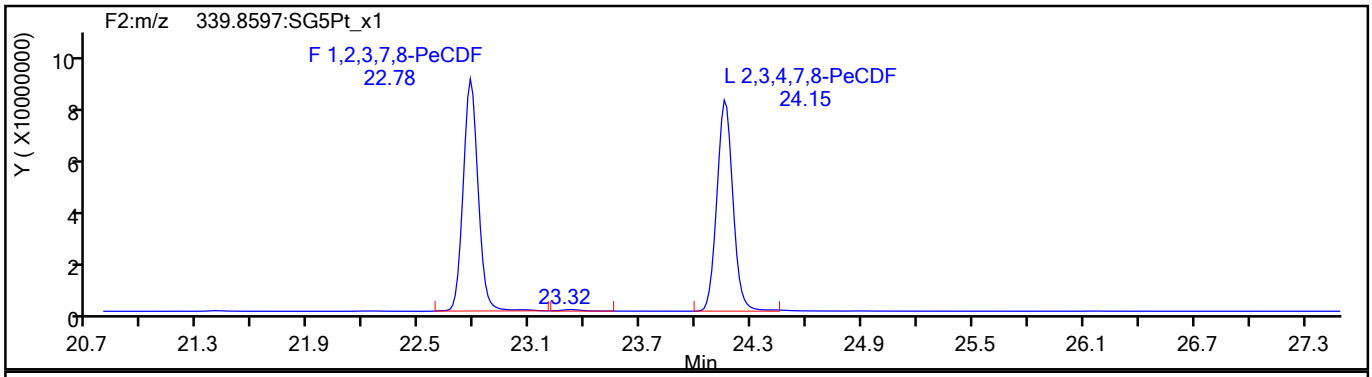

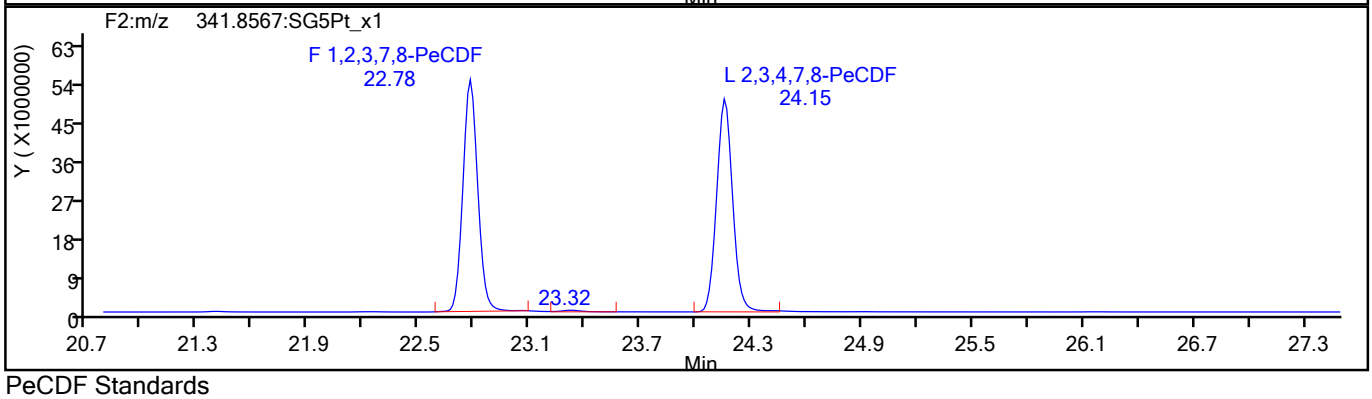

PeCDF Standards

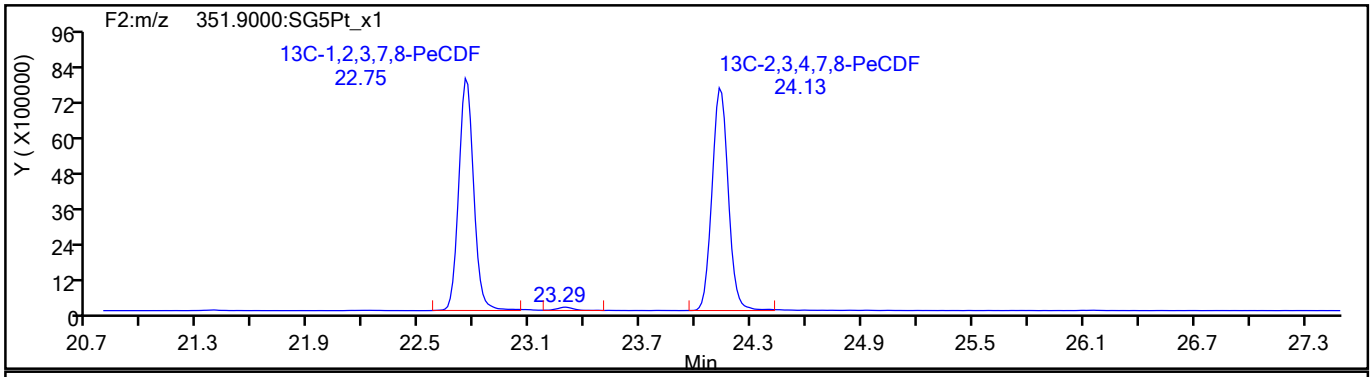

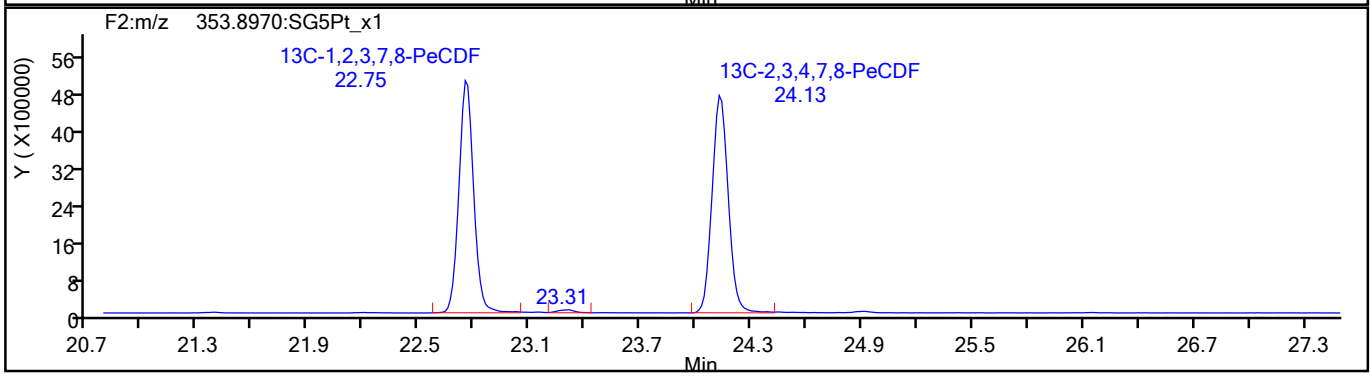

778542

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Eurofins TestAmerica, Sacramento

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PeCDF

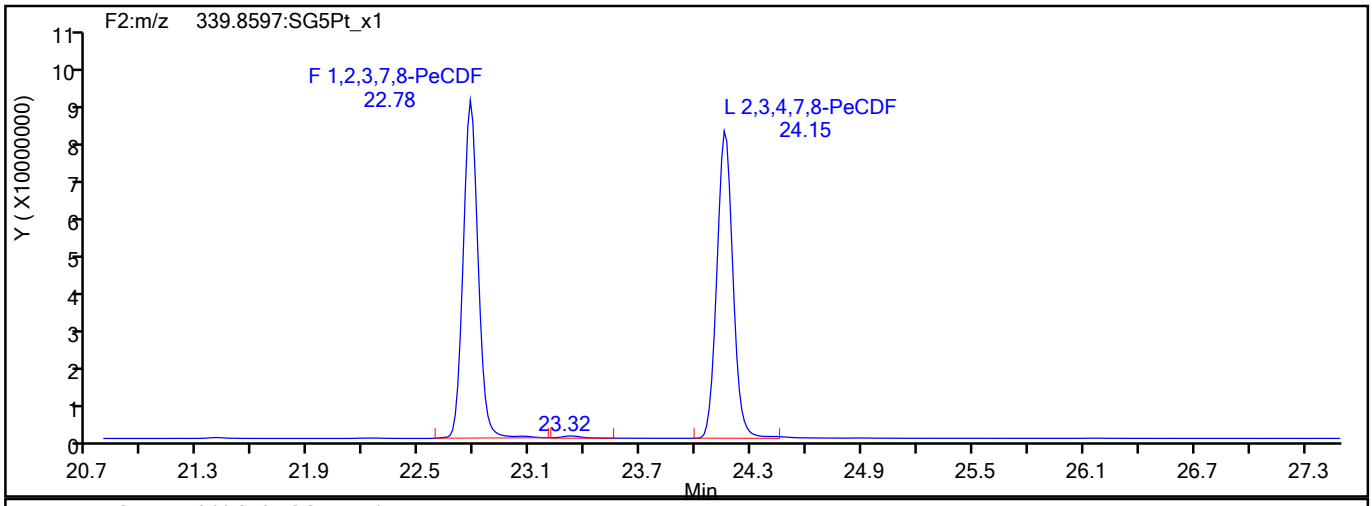

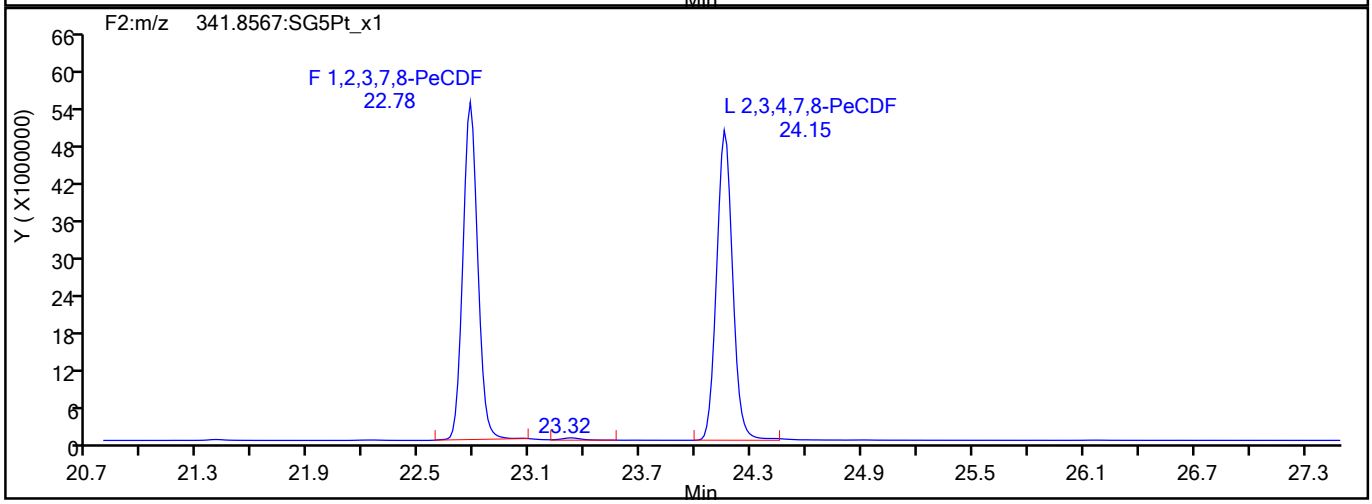

PeCDF Interference Mass

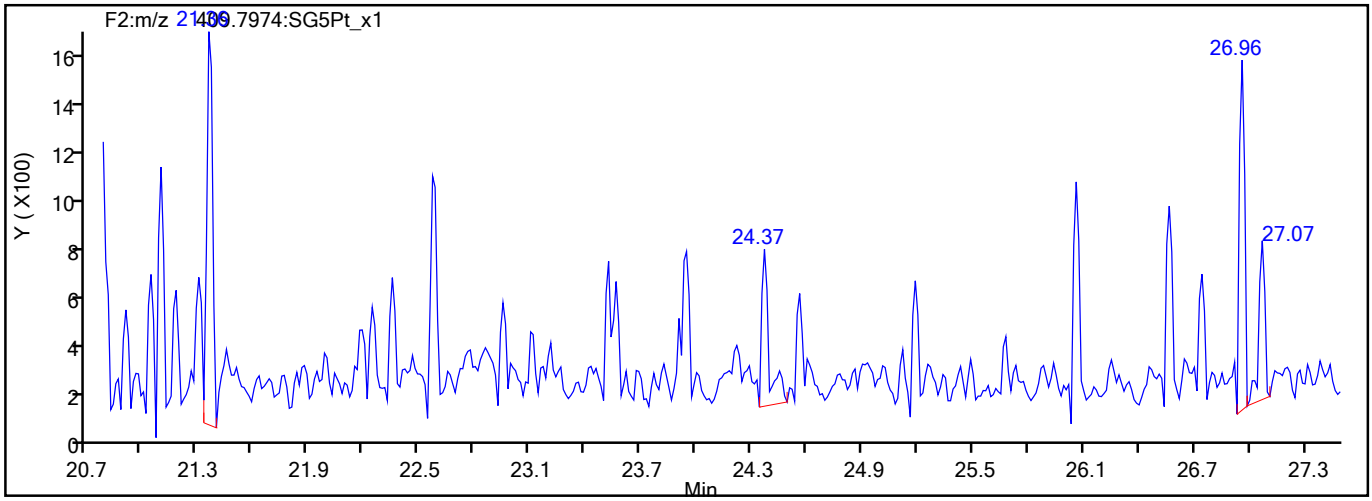

778543

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

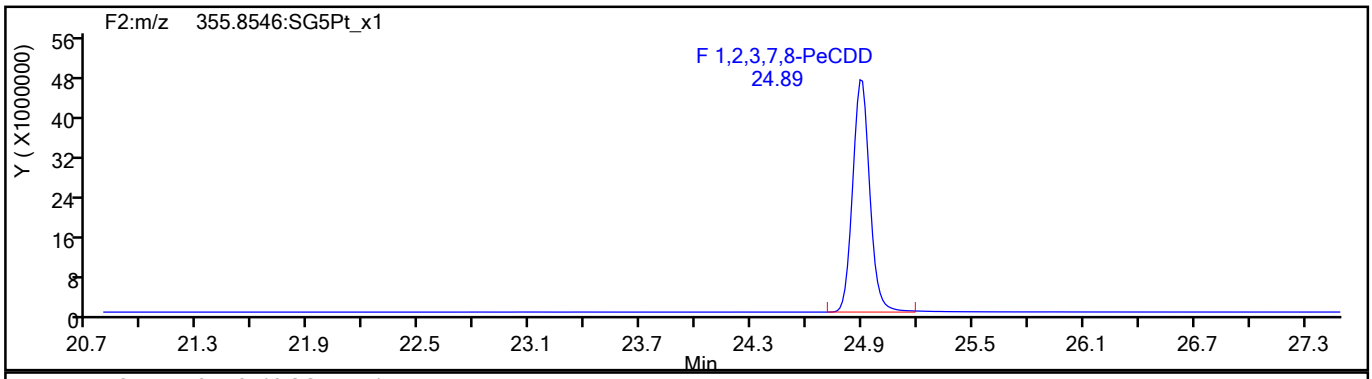

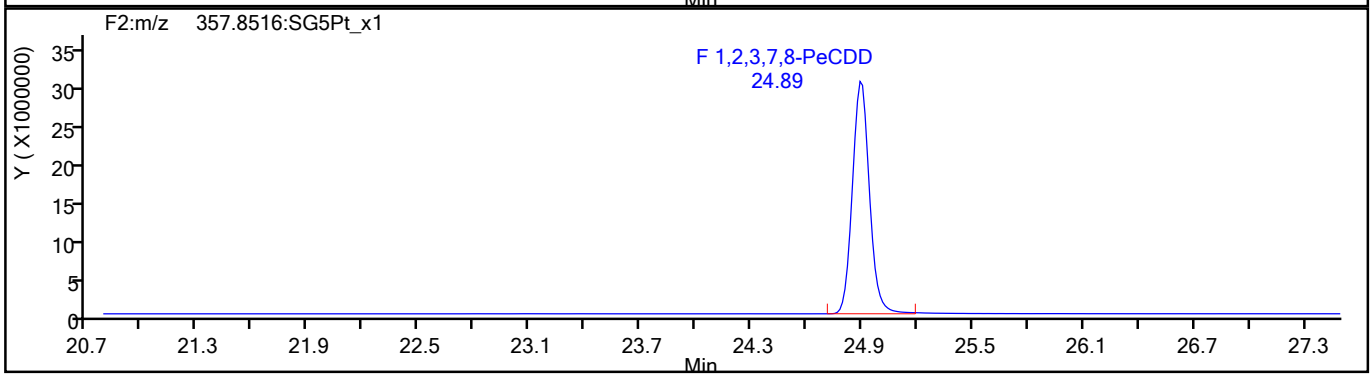

PeCDD Standards

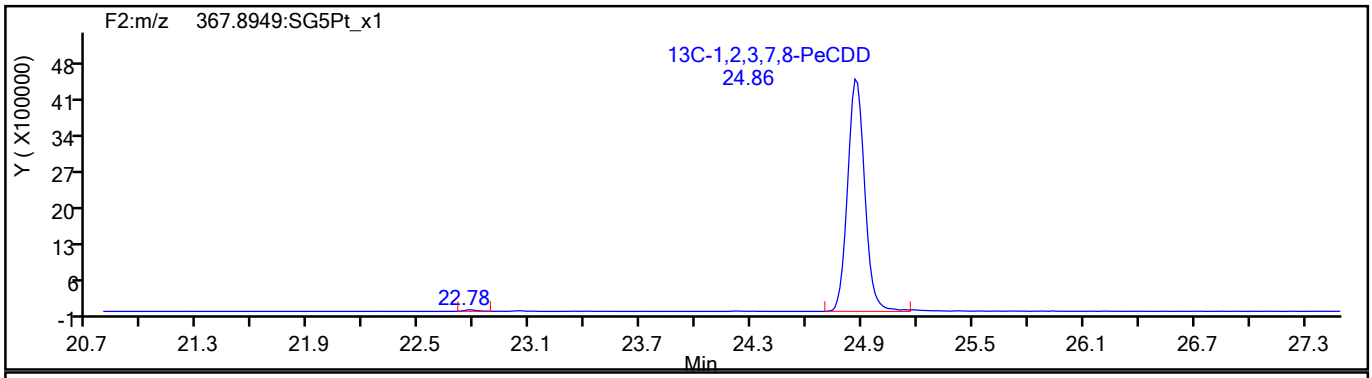

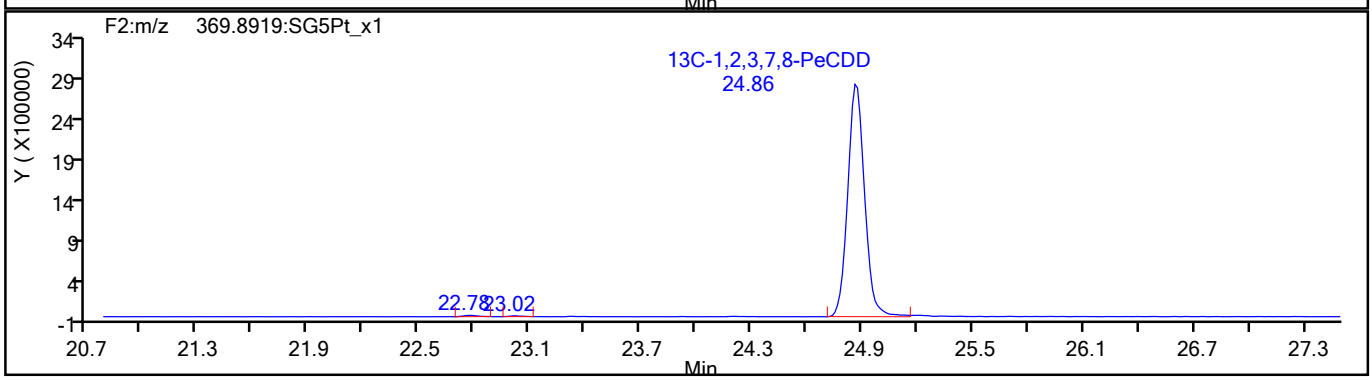

778544

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

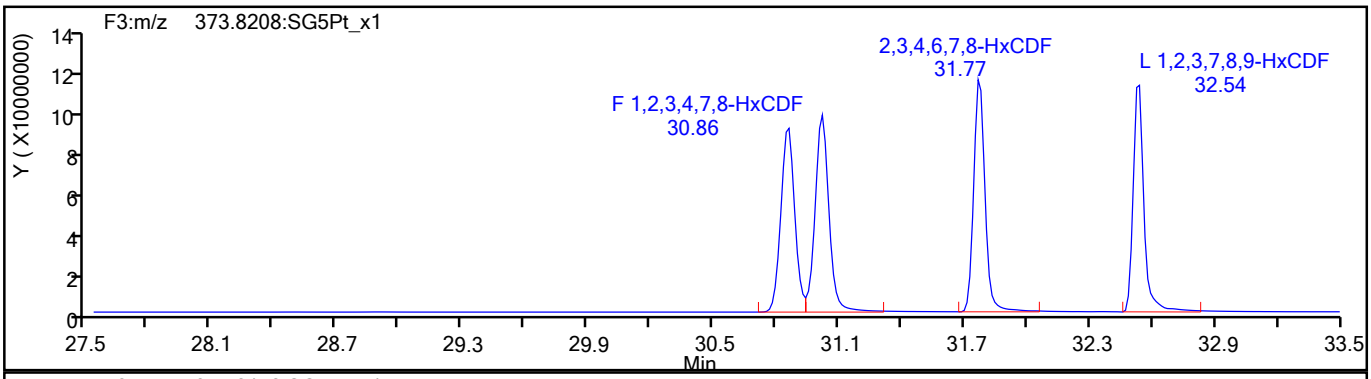

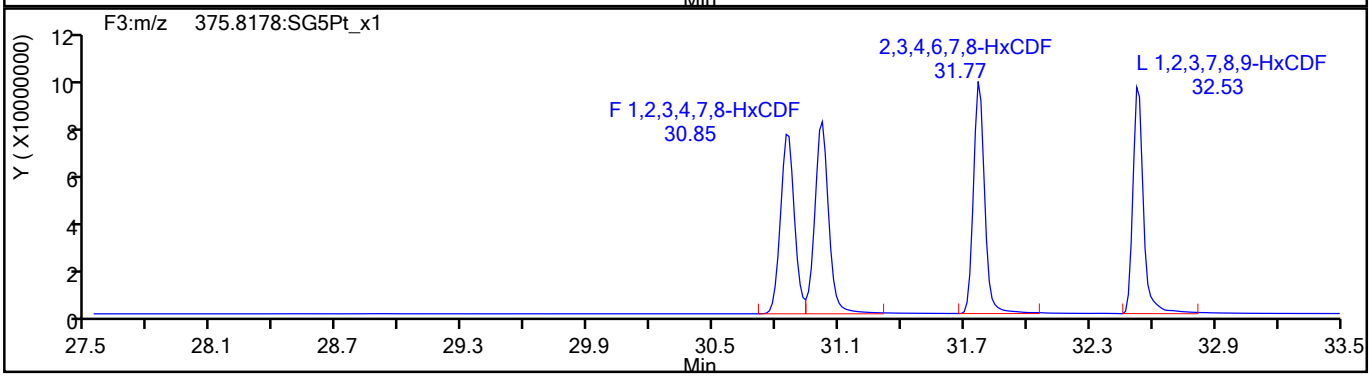

HxCDF Standards

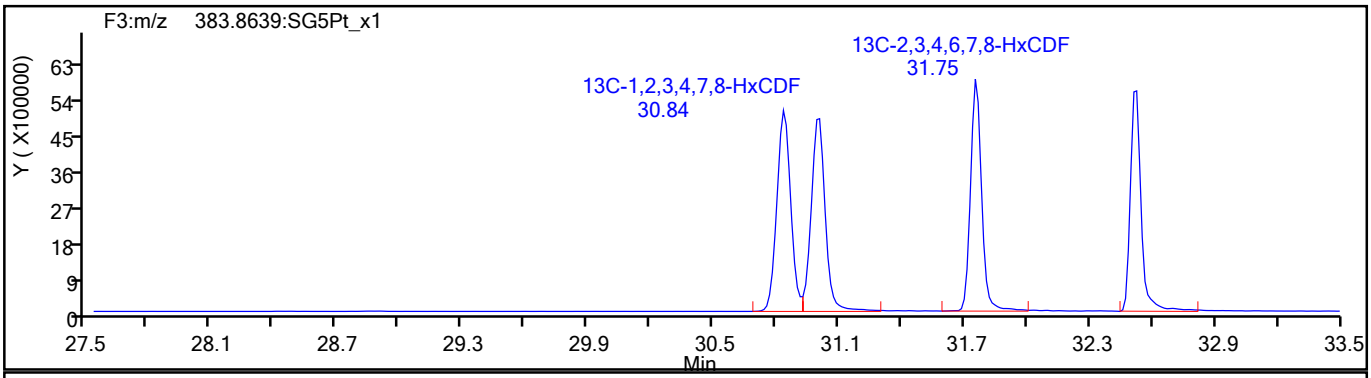

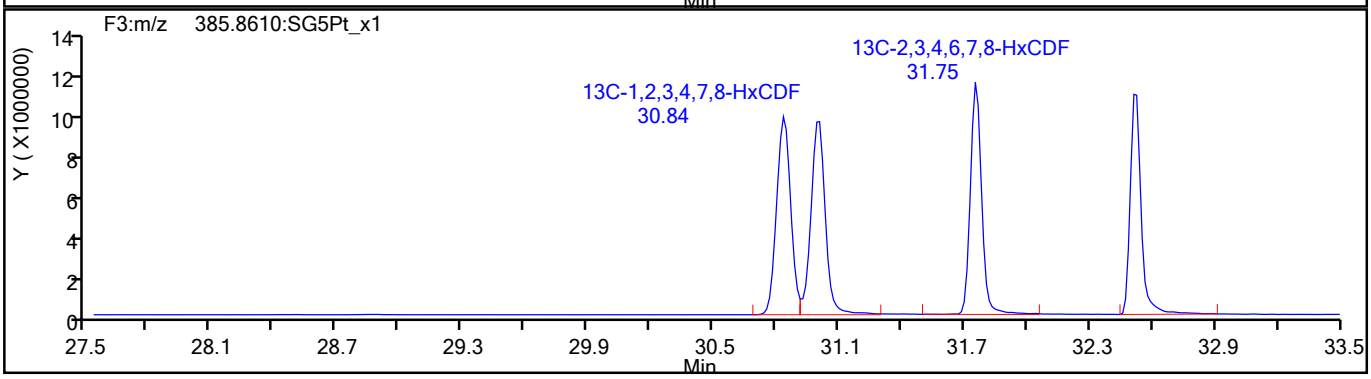

778545

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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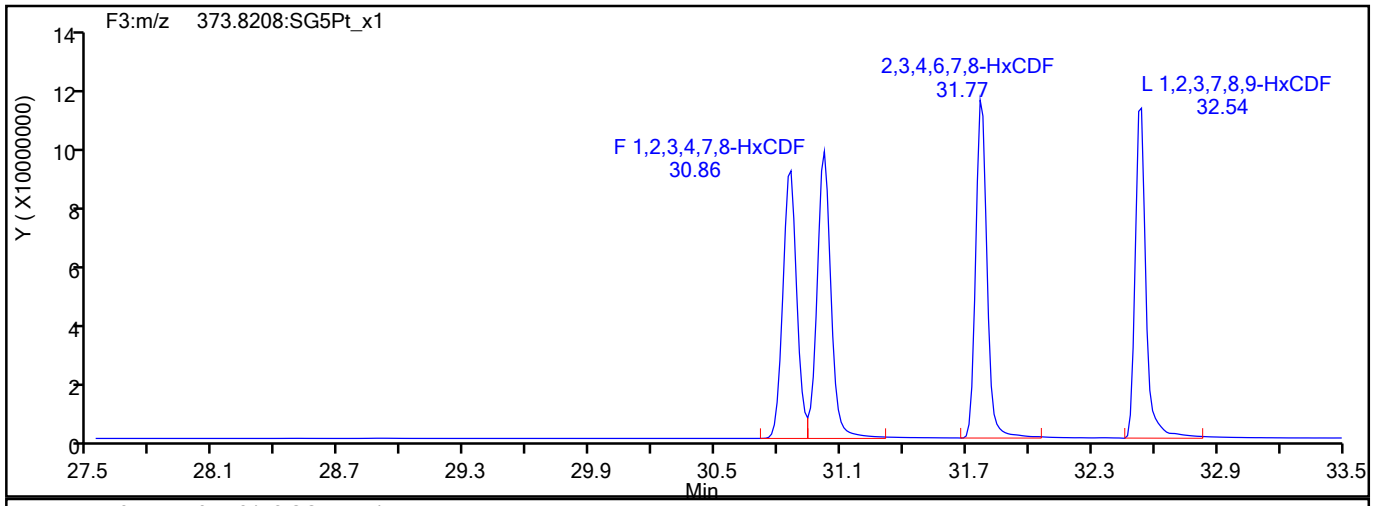

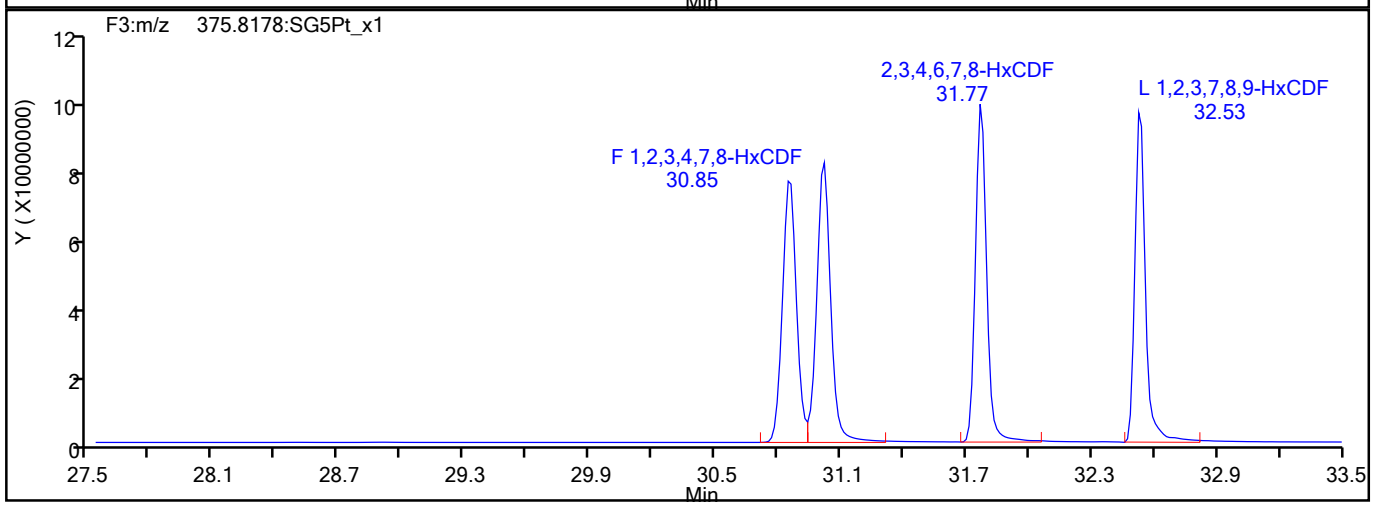

HxCDF Interference Mass

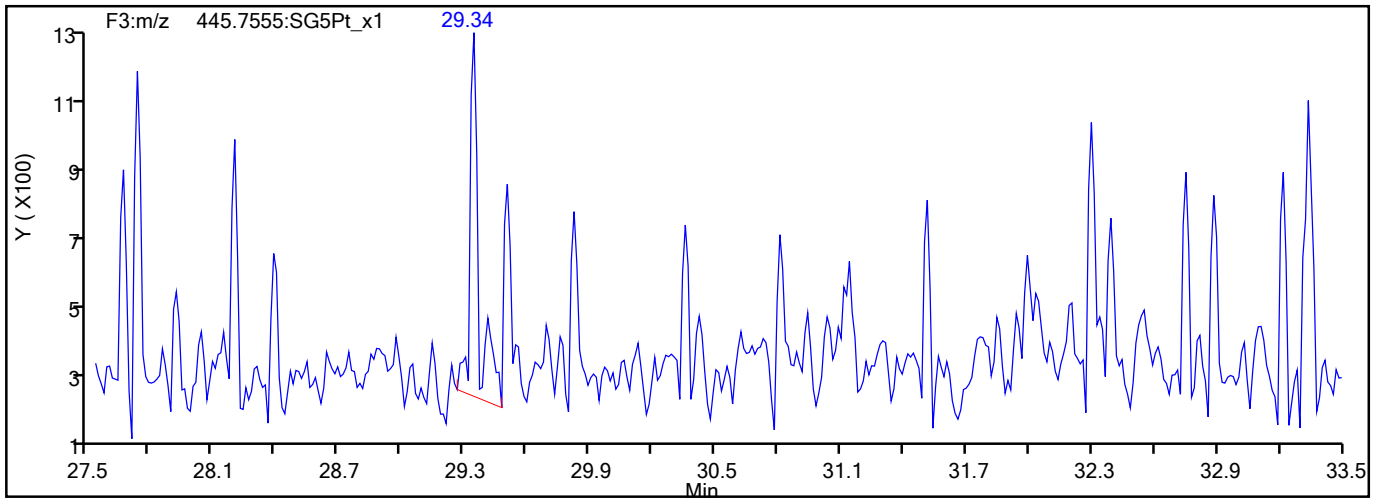

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Eurofins TestAmerica, Sacramento

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HxCDD

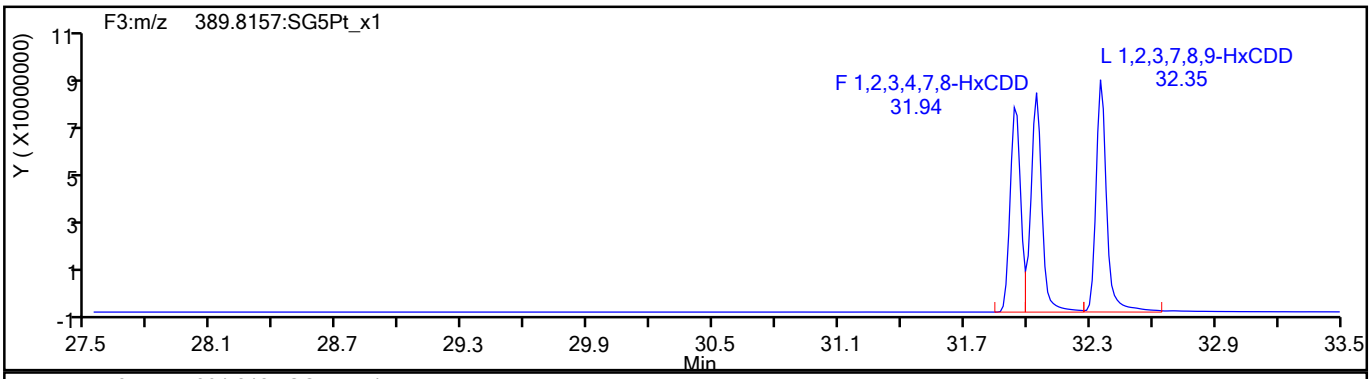

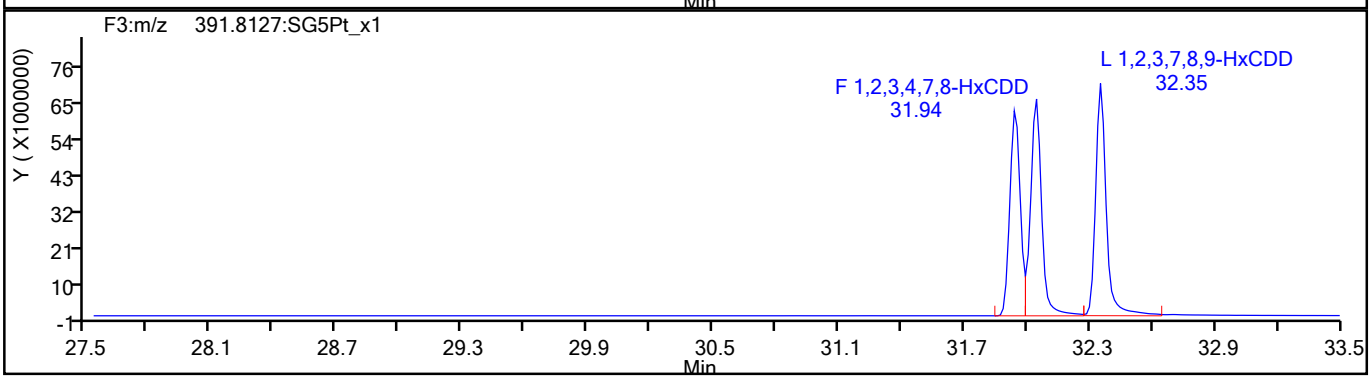

HxCDD Standards

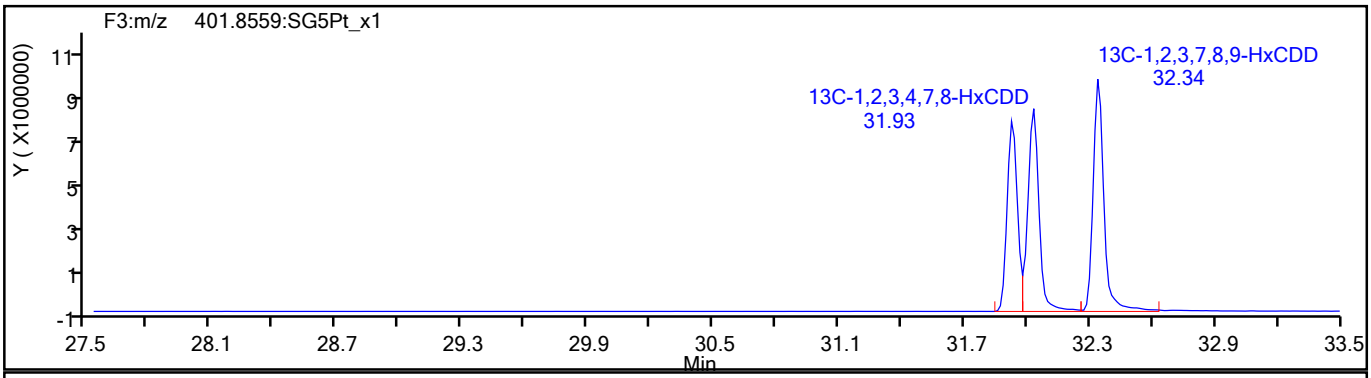

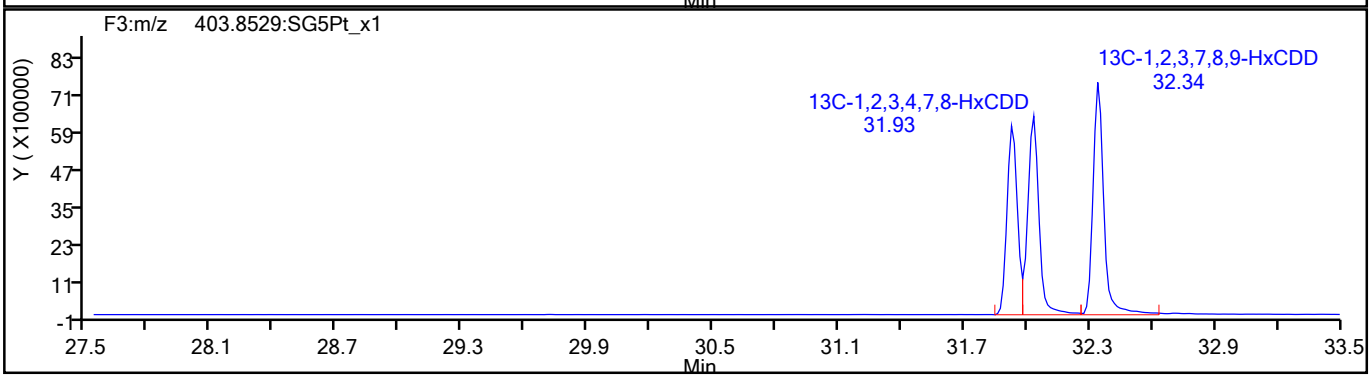

778547

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

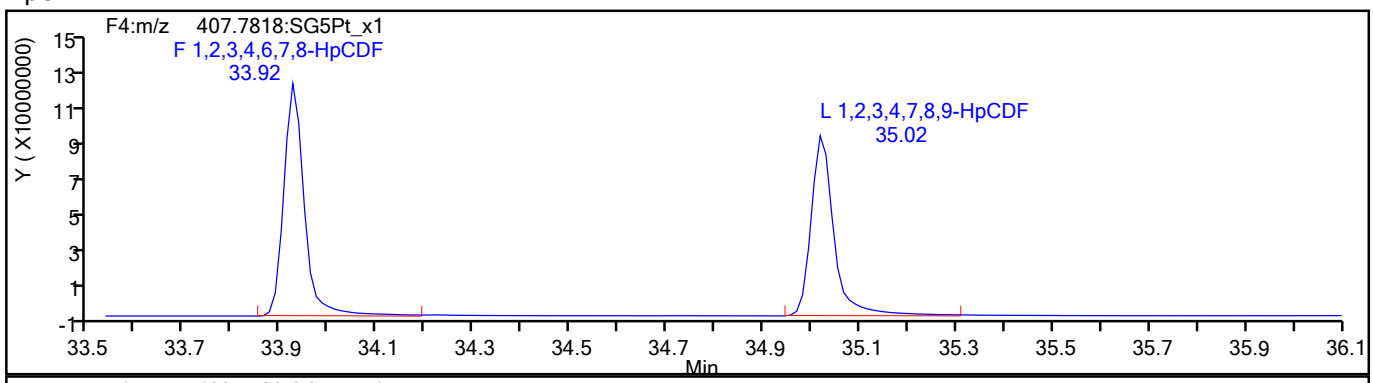

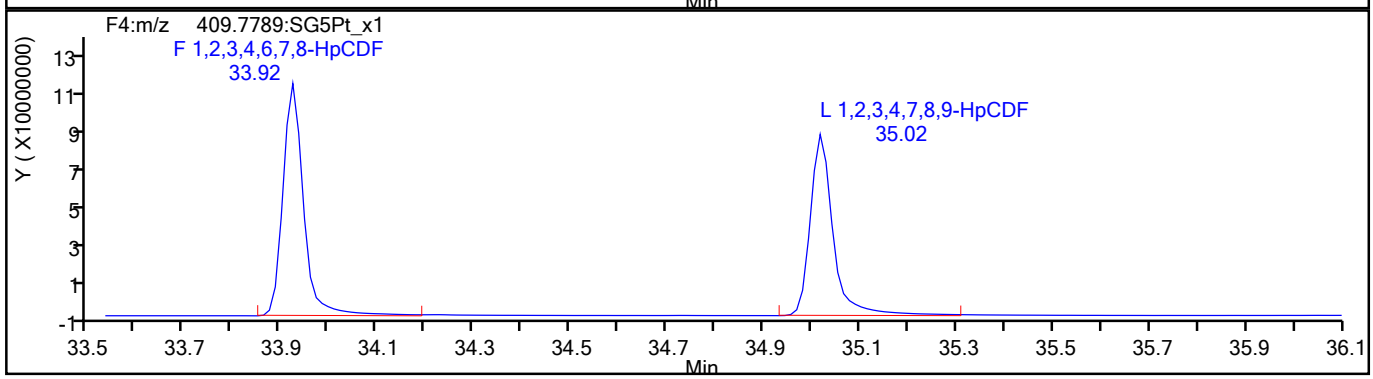

HpCDF Standards

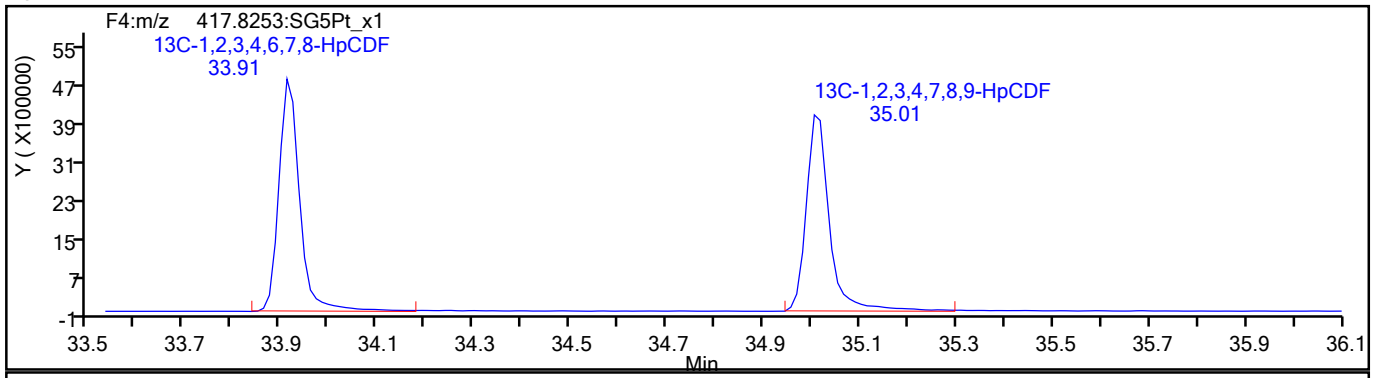

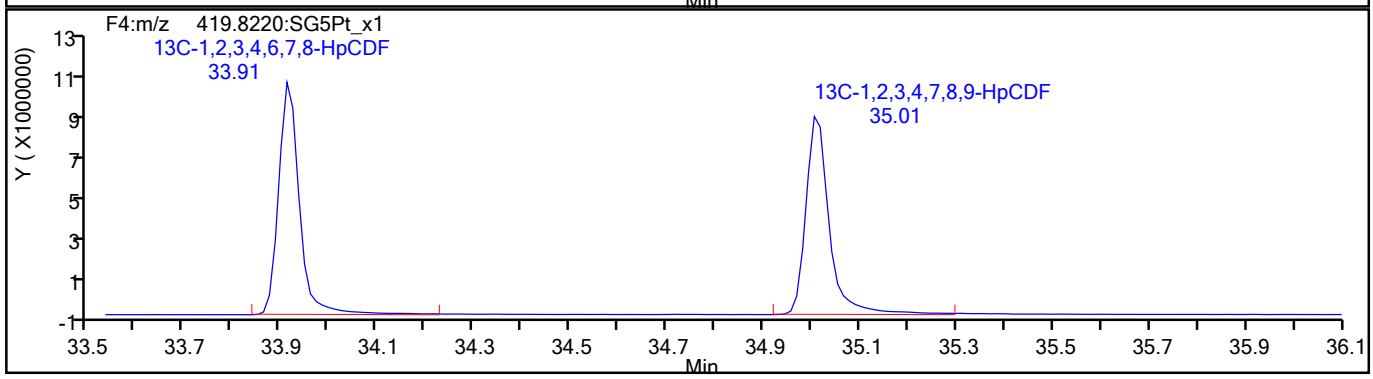

778548

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

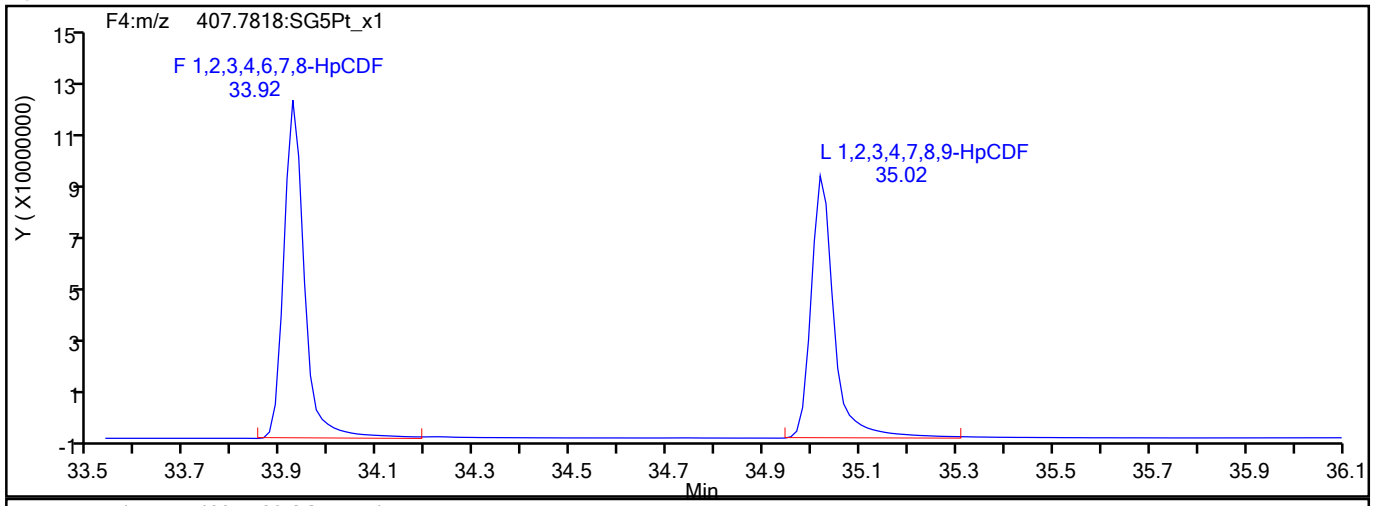

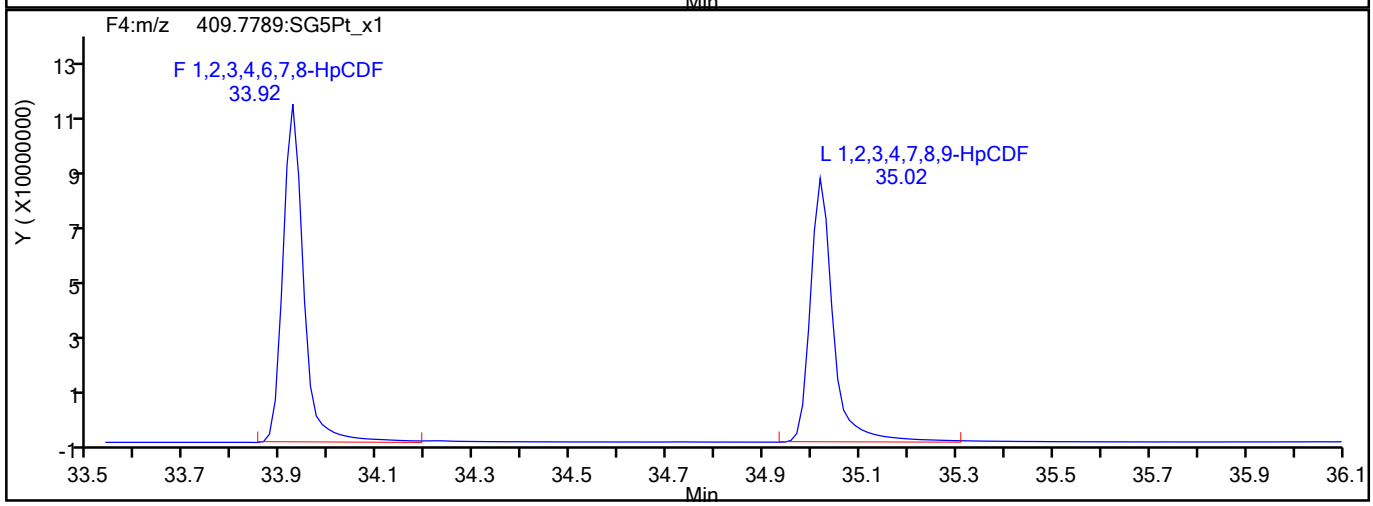

HpCDF Interference Mass

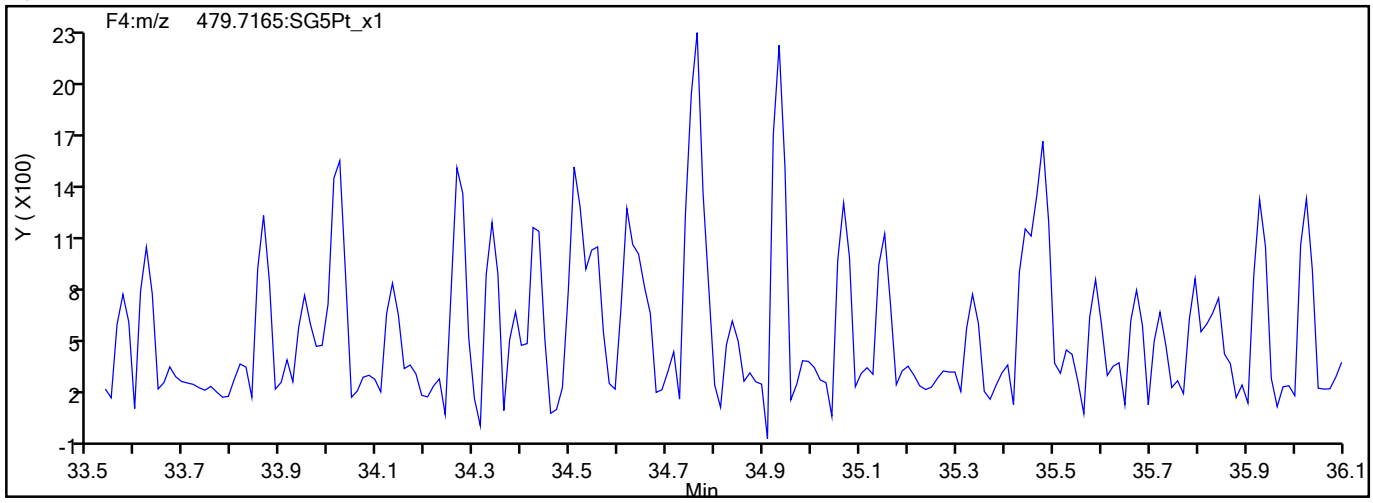

778549

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Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

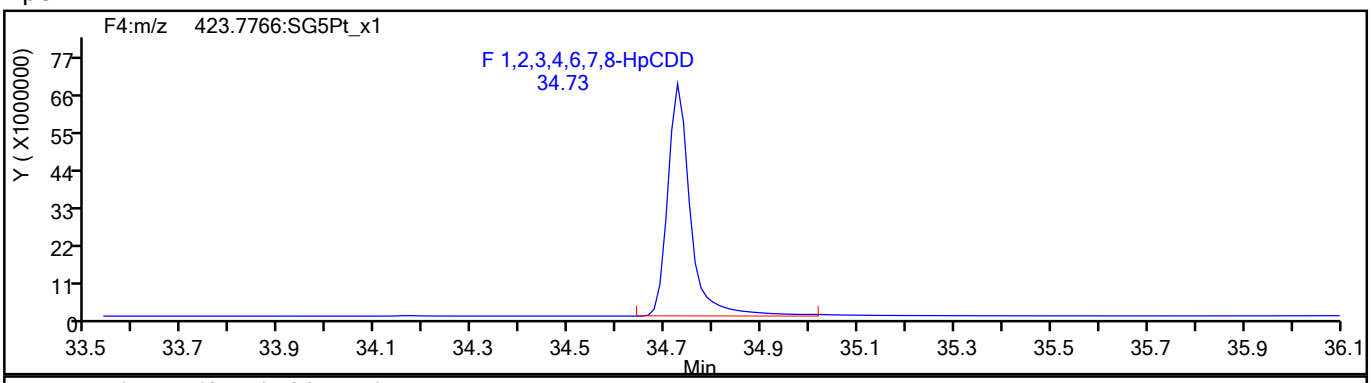

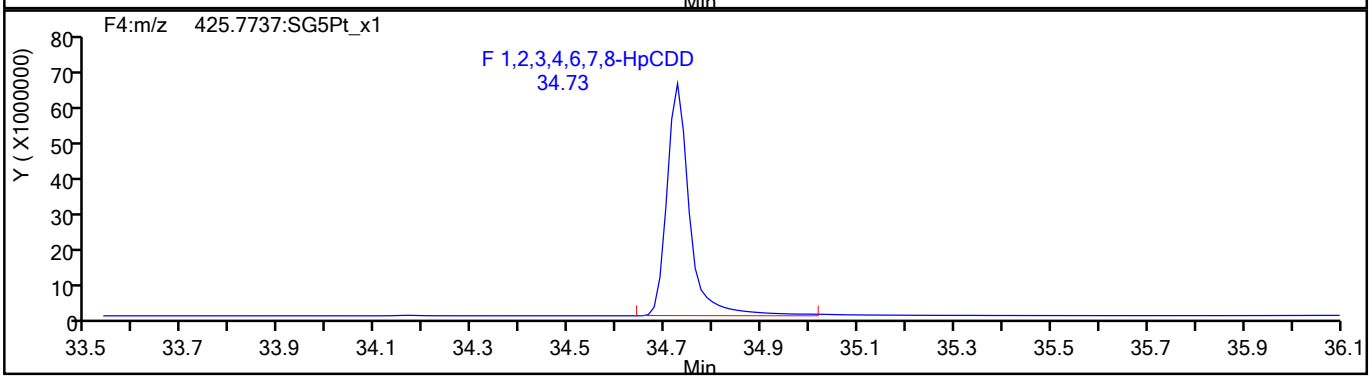

HpCDD Standards

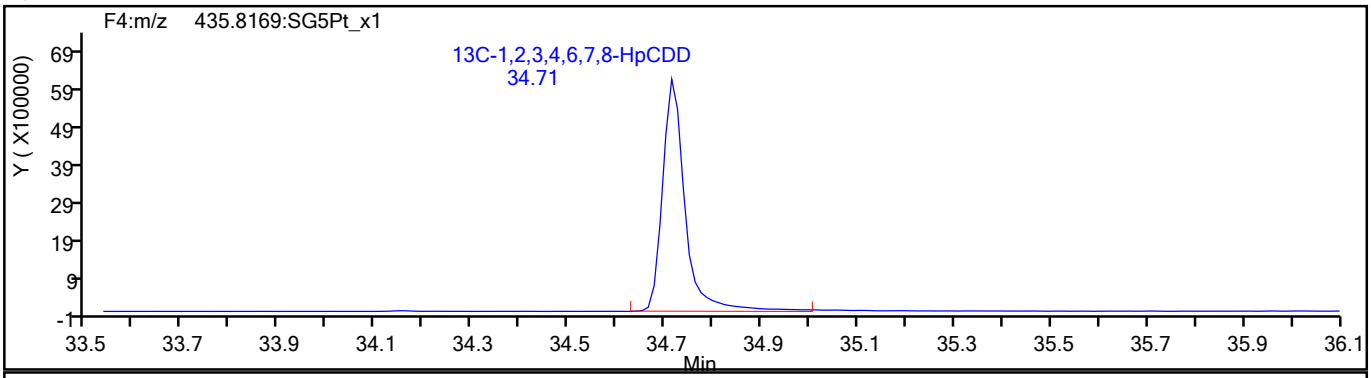

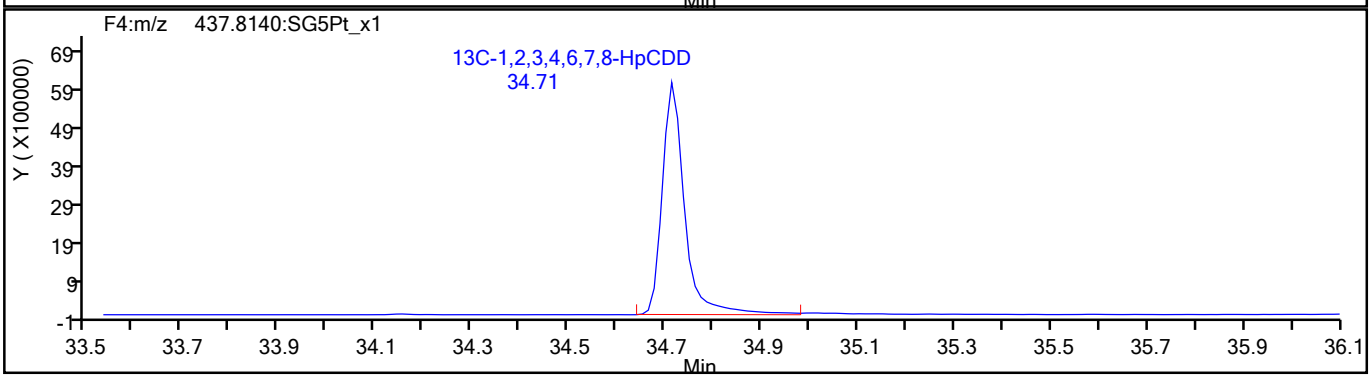

778550

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

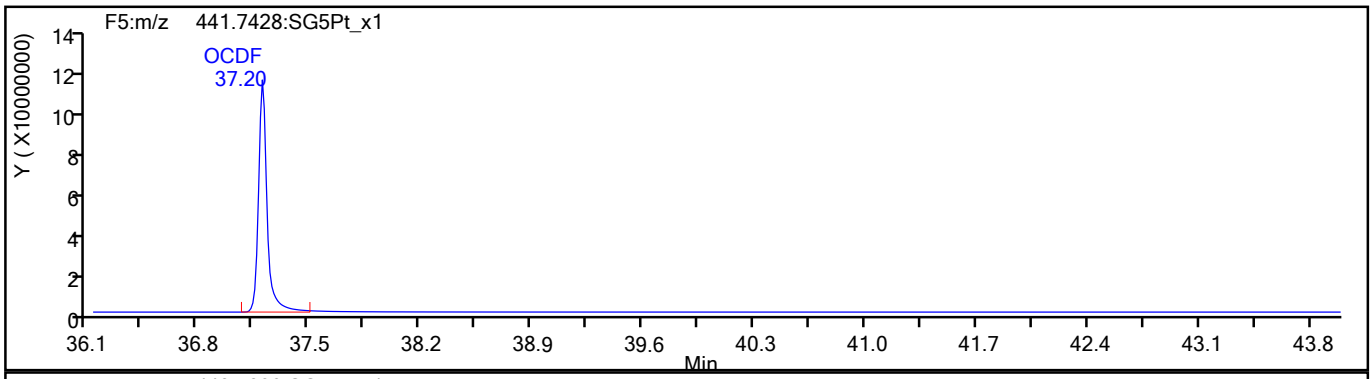

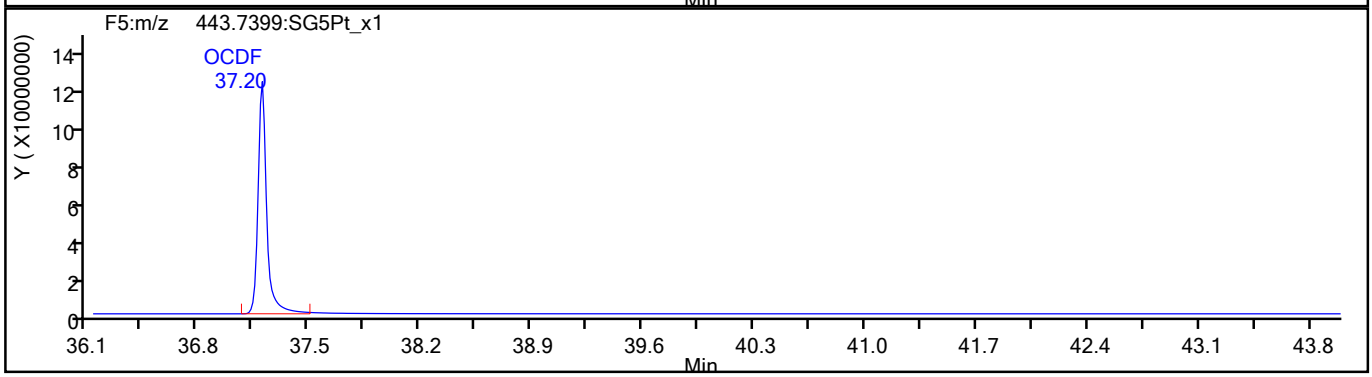

OCDF Standards

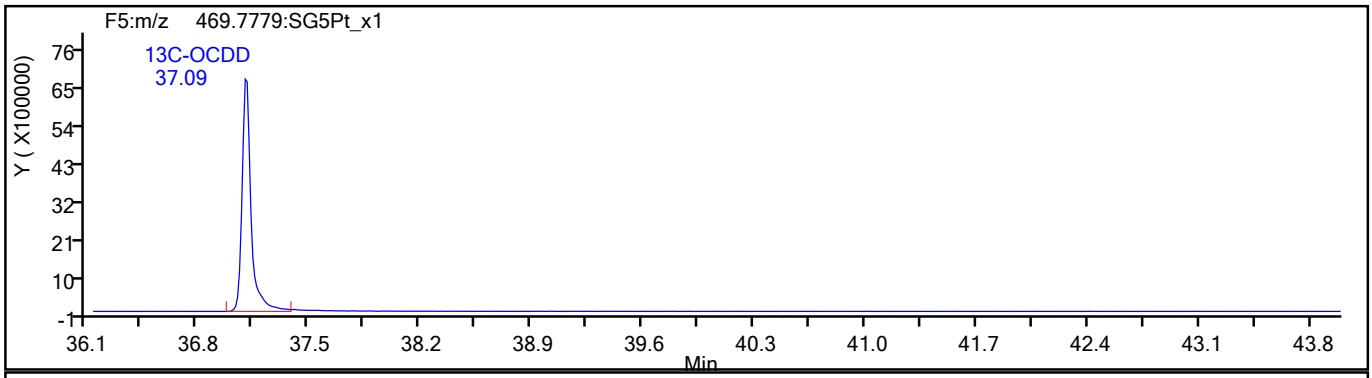

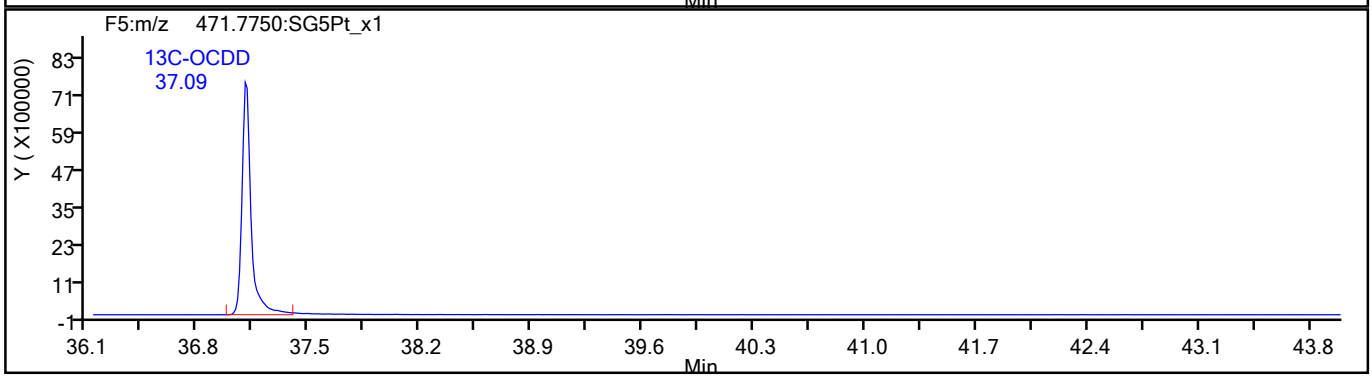

778551

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

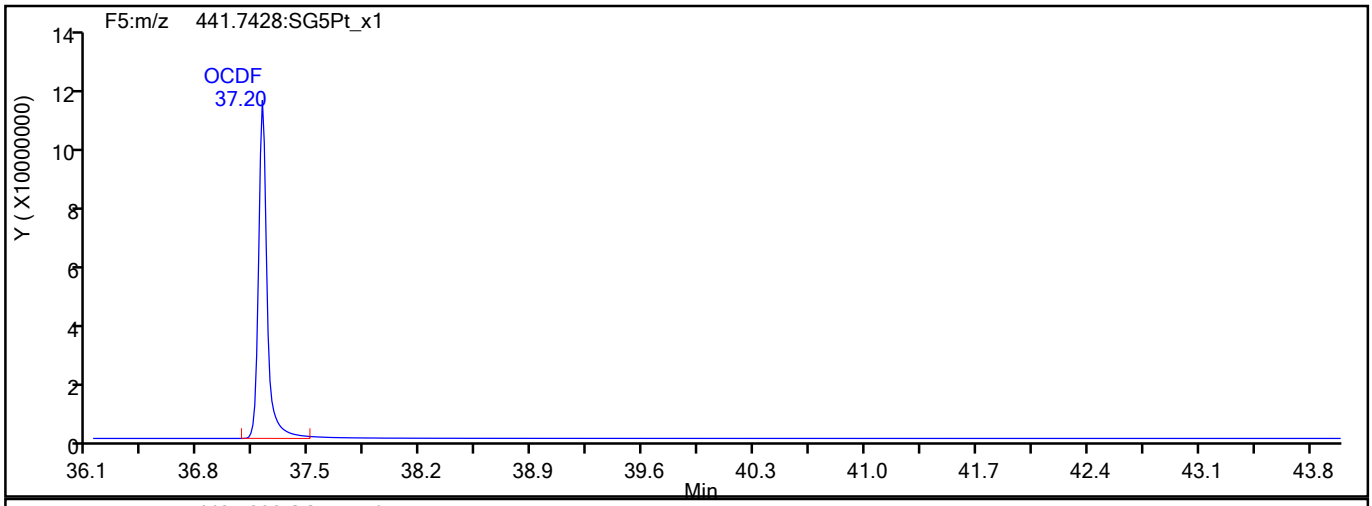

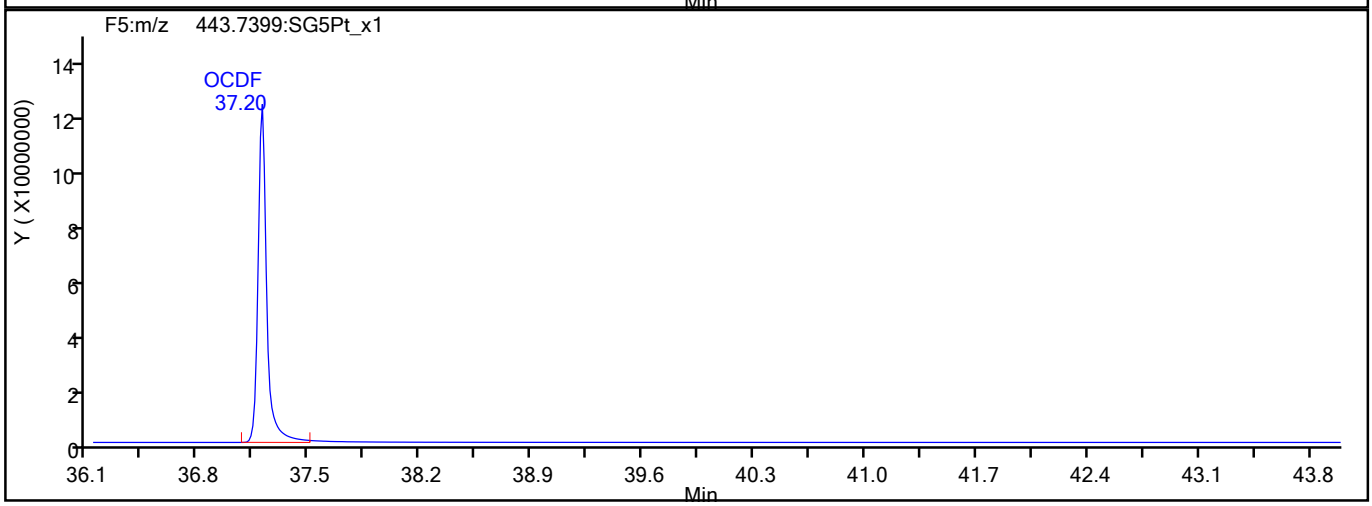

OCDF Interference Mass

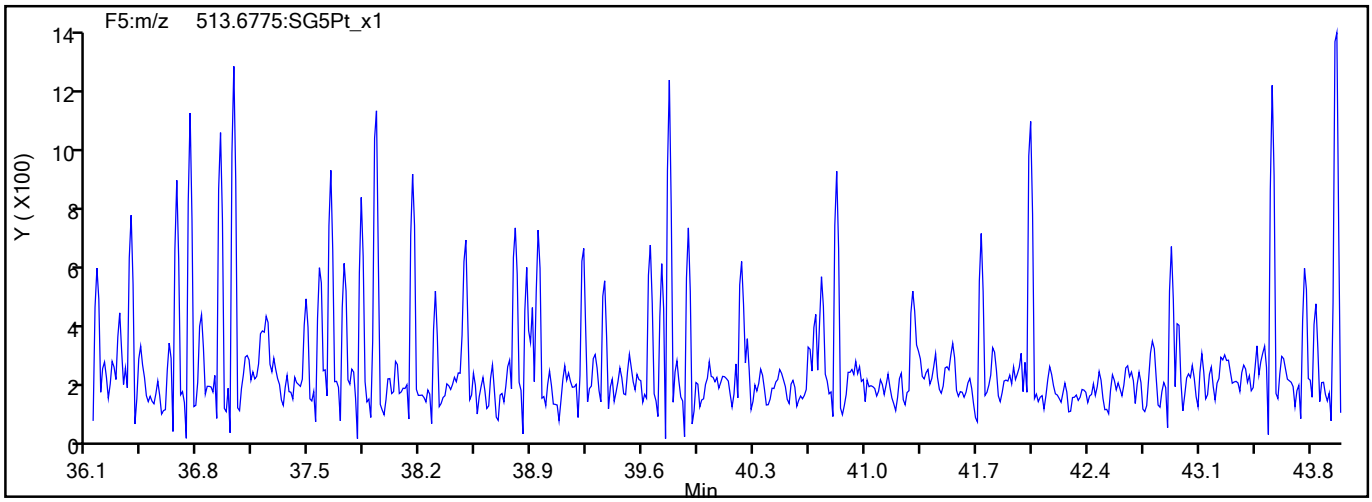

778552

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

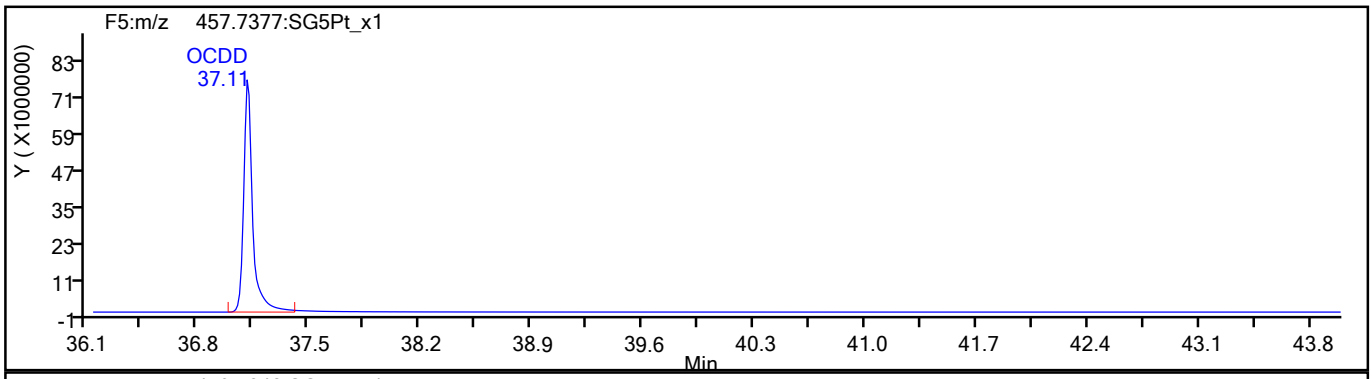

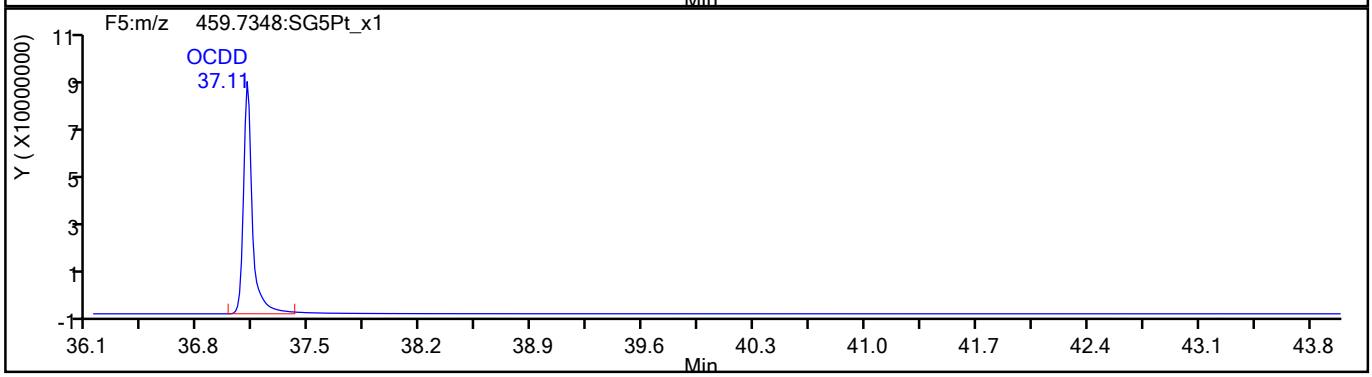

OCDD Standards

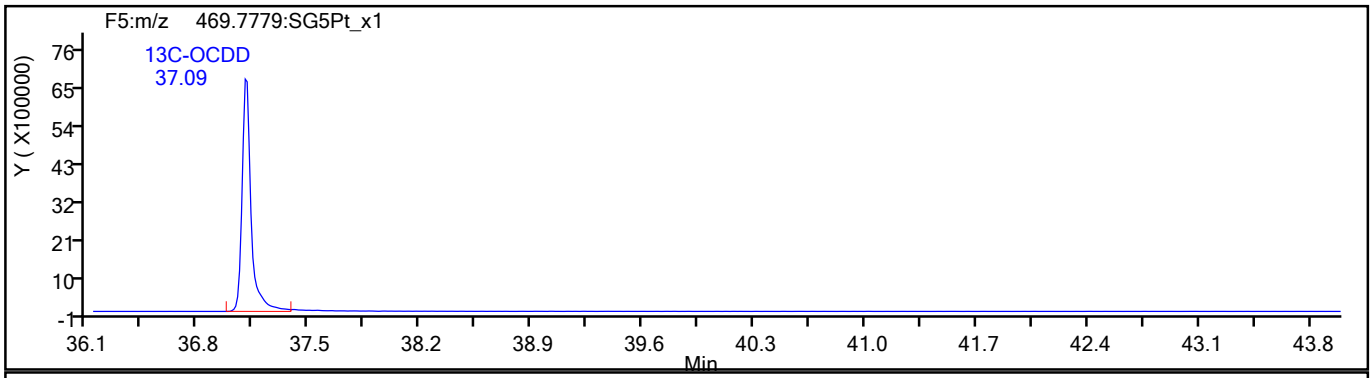

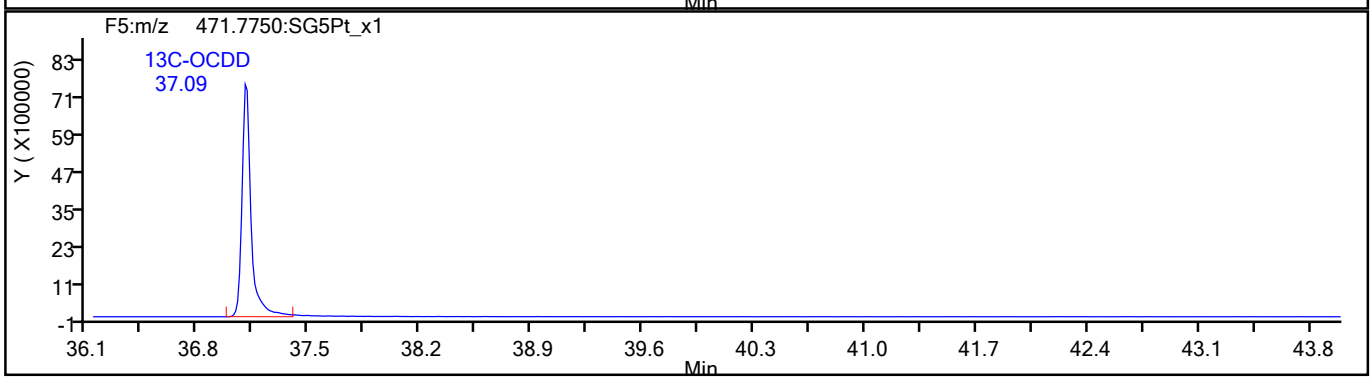

778553

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

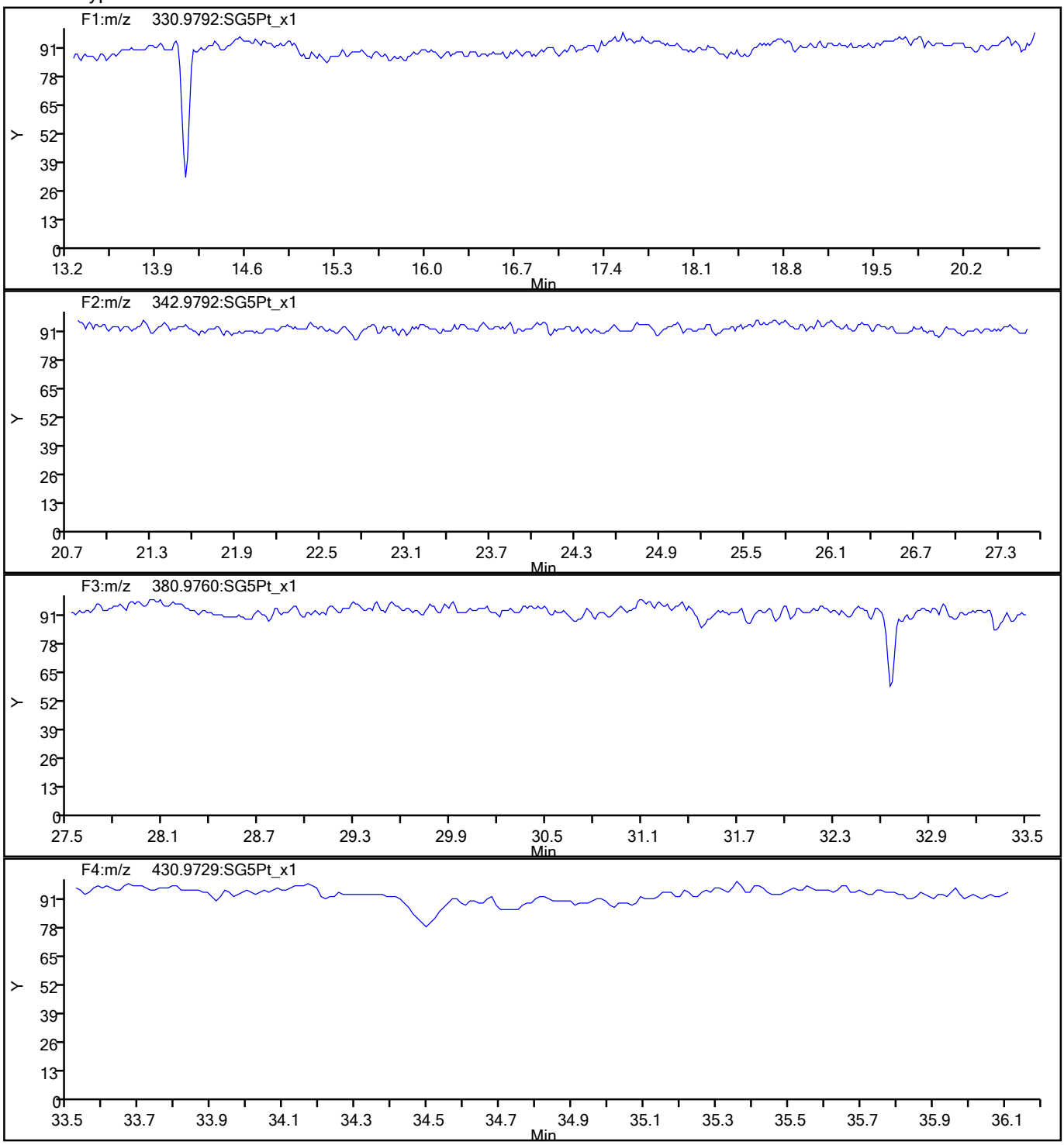

778554

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

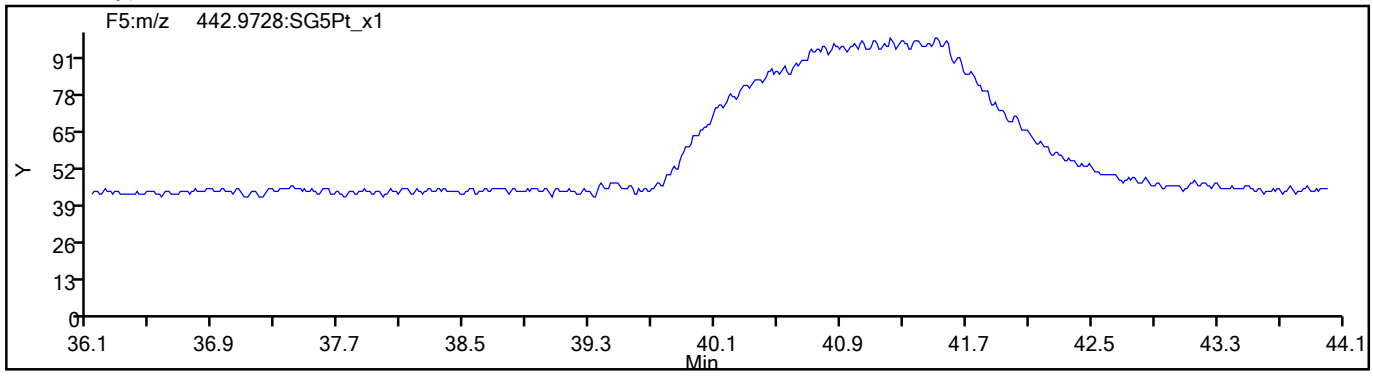

778555

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.094

Error Coefficients

Standard Error:	226000000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.779775	100.0	41876556.0	1.11191	Y
2	IC 320-510264/4	10.0	9.539499	100.0	38689128.0	0.95395	Y
3	IC 320-510264/5	50.0	55.880768	100.0	40333717.0	1.117615	Y
4	IC 320-510264/6	200.0	233.50404	100.0	40442950.0	1.16752	Y
5	IC 320-510264/7	1000.0	1120.518221	100.0	39395832.0	1.120518	Y

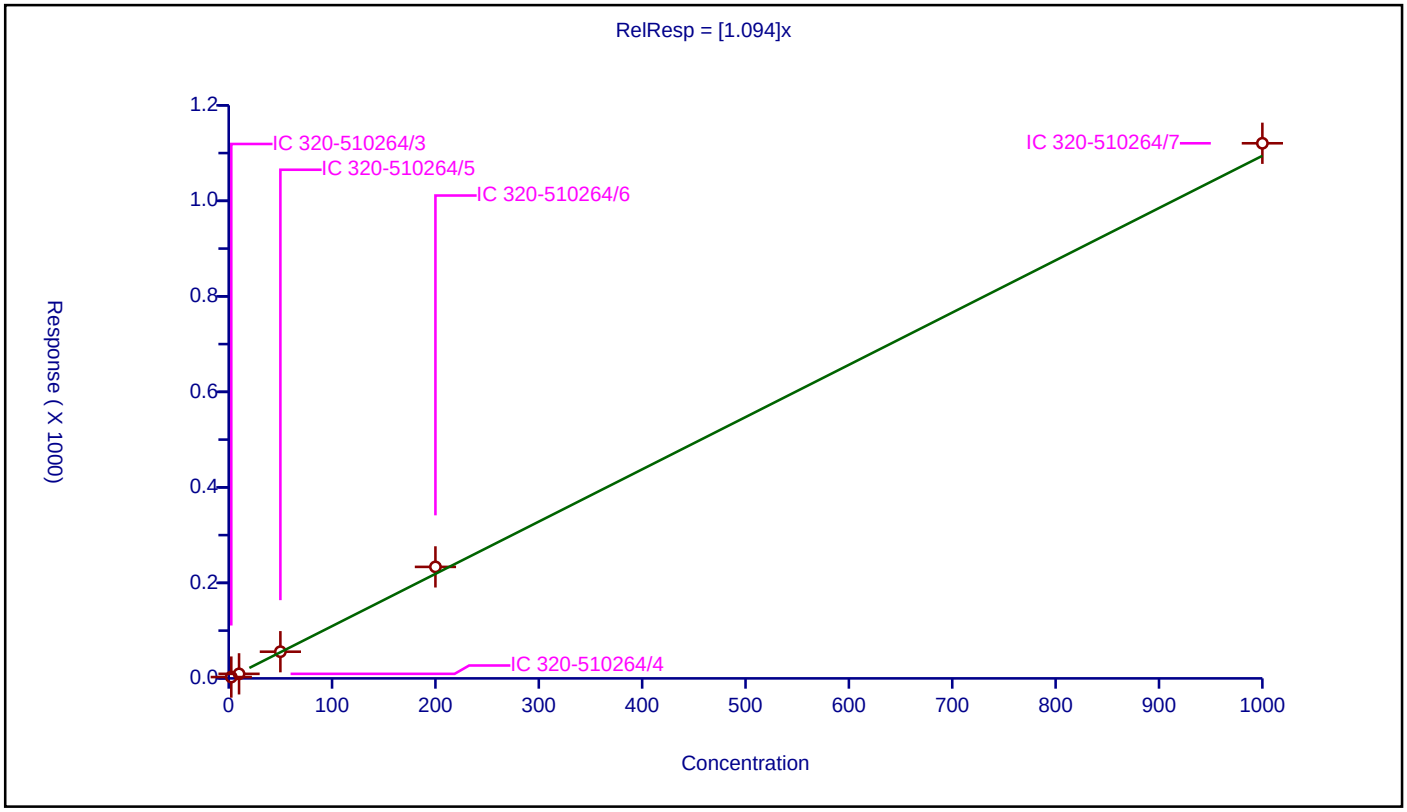

778556

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.441

Error Coefficients

Standard Error:	349000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.618521	100.0	51308225.0	1.447408	Y
2	IC 320-510264/4	10.0	12.412663	100.0	46691158.0	1.241266	Y
3	IC 320-510264/5	50.0	74.932304	100.0	47697671.0	1.498646	Y
4	IC 320-510264/6	200.0	309.702692	100.0	47752972.0	1.548513	Y
5	IC 320-510264/7	1000.0	1470.622057	100.0	46328151.0	1.470622	Y

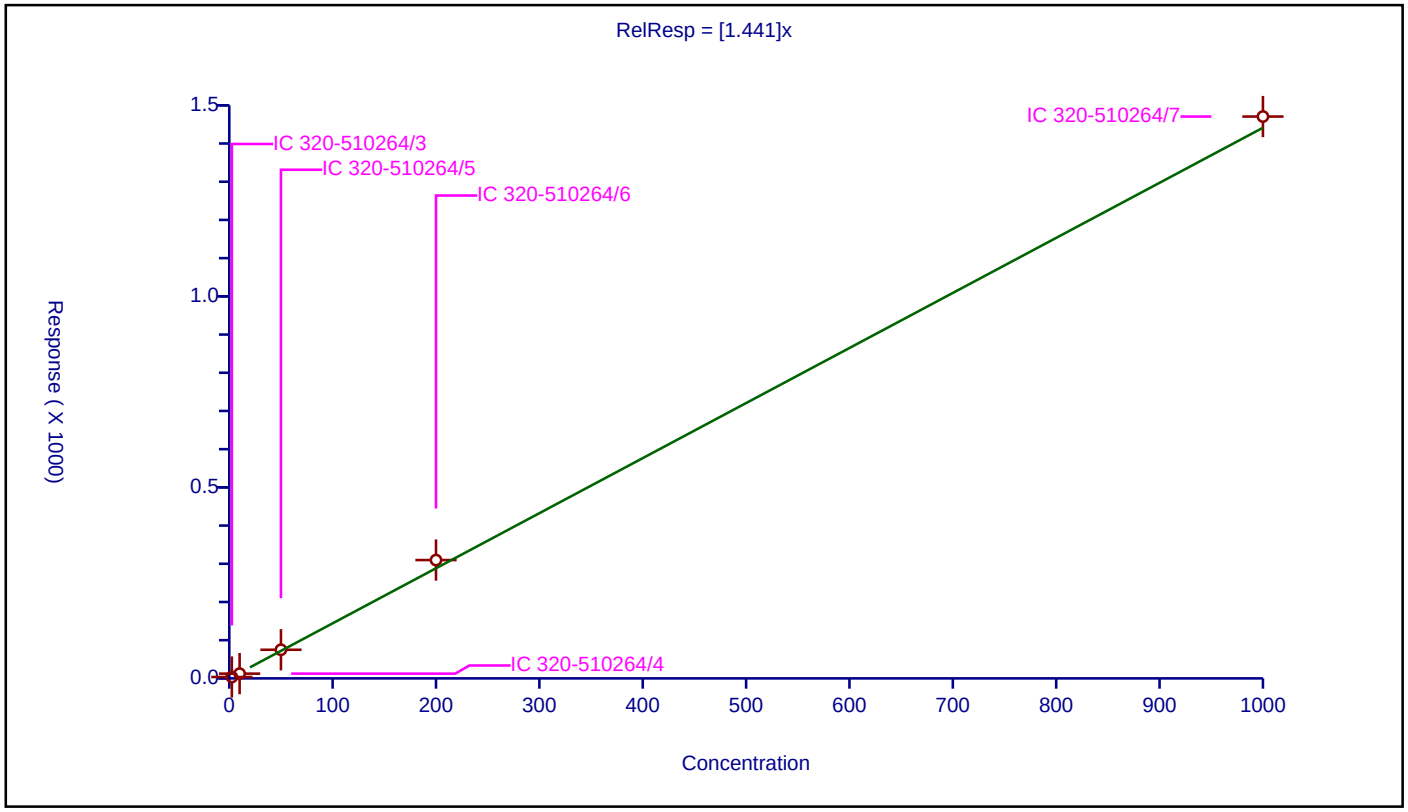

778557

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	302000000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.284087	100.0	44628352.0	1.313635	Y
2	IC 320-510264/4	10.0	11.269366	100.0	42362179.0	1.126937	Y
3	IC 320-510264/5	50.0	68.111875	100.0	43238622.0	1.362237	Y
4	IC 320-510264/6	200.0	290.409045	100.0	42687625.0	1.452045	Y
5	IC 320-510264/7	1000.0	1332.064187	100.0	44333848.0	1.332064	Y

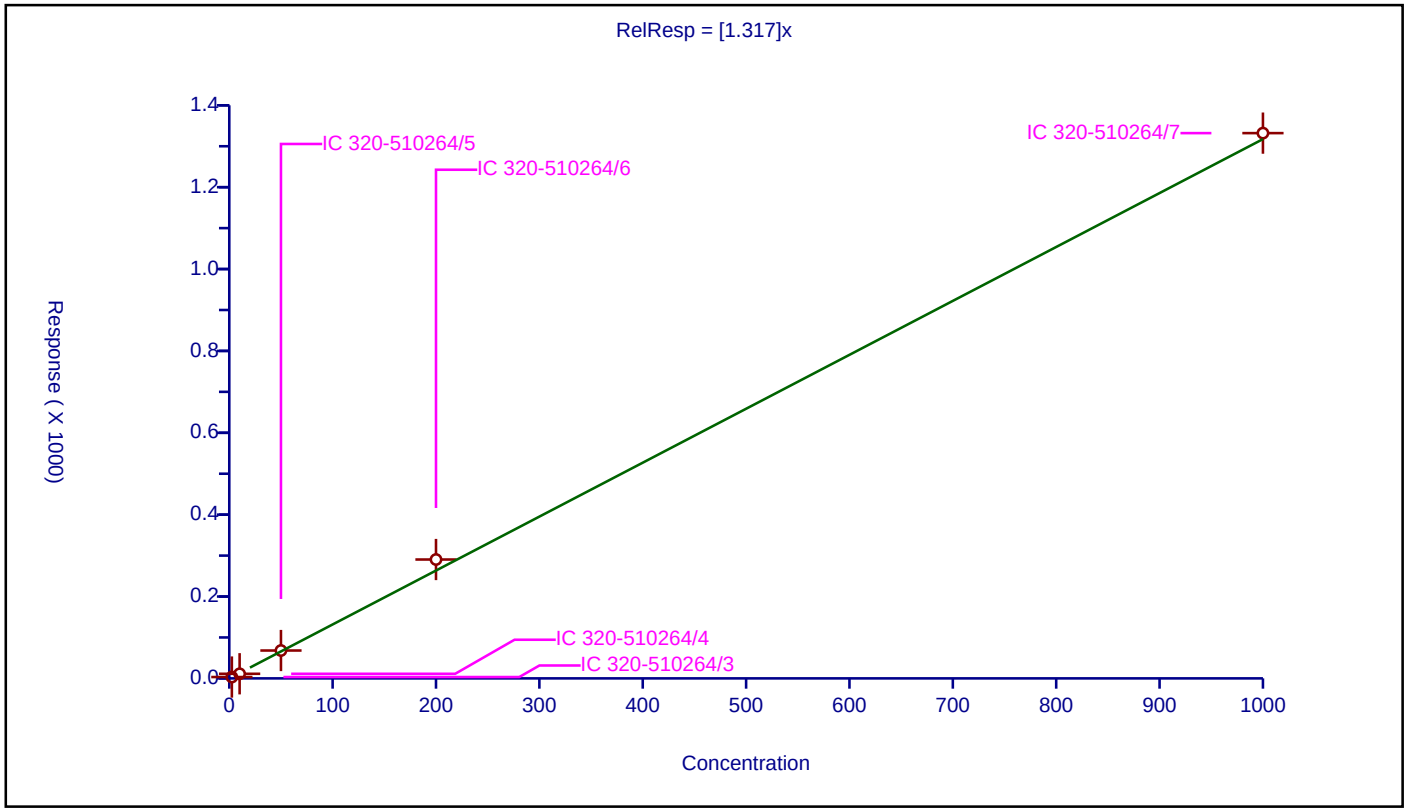

778558

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	248000000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.744793	100.0	47363504.0	1.097917	Y
2	IC 320-510264/4	10.0	8.90634	100.0	44877133.0	0.890634	Y
3	IC 320-510264/5	50.0	56.519553	100.0	44039927.0	1.130391	Y
4	IC 320-510264/6	200.0	233.423018	100.0	44144841.0	1.167115	Y
5	IC 320-510264/7	1000.0	1034.115245	100.0	46886171.0	1.034115	Y

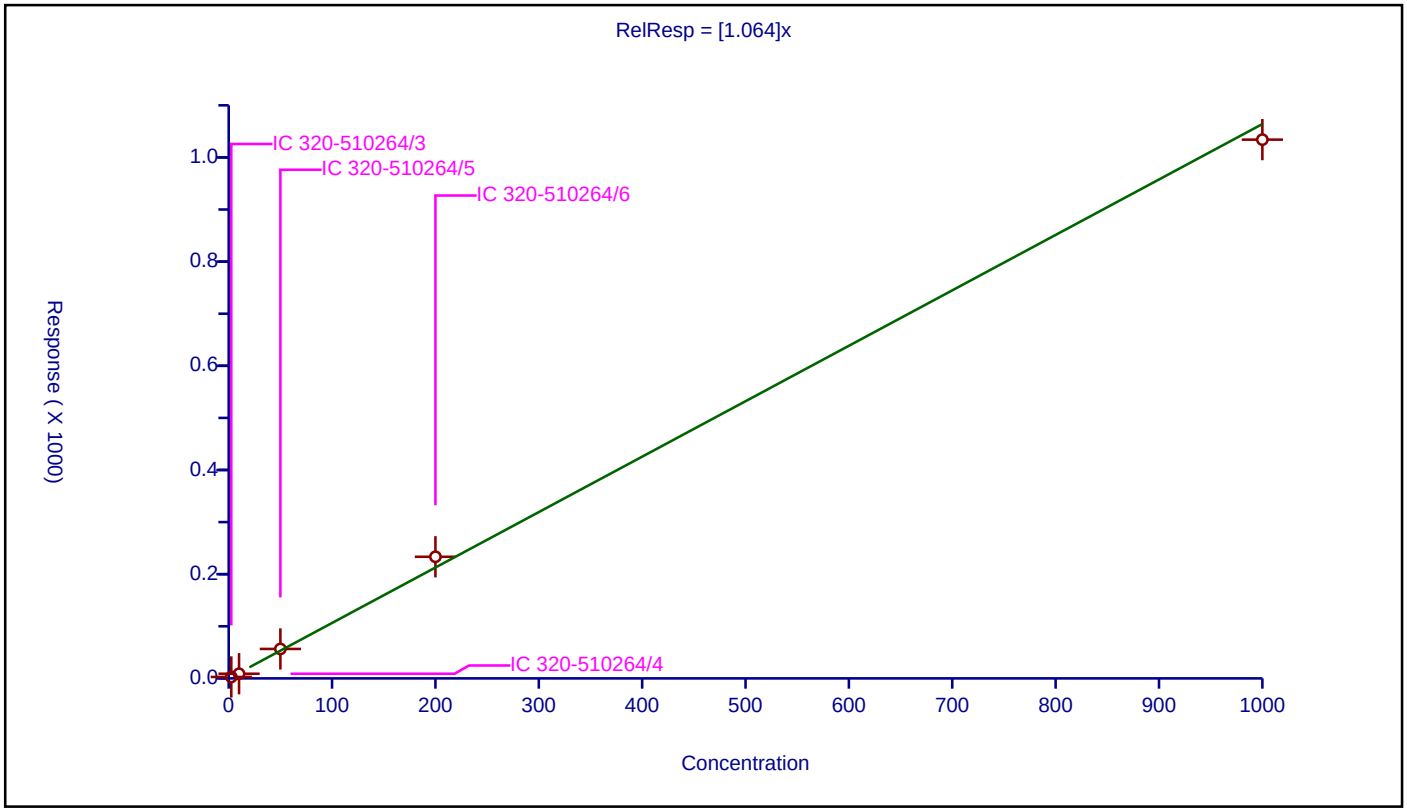

778559

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.085

Error Coefficients

Standard Error:	377000000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.805608	100.0	69484482.0	1.122243	Y
2	IC 320-510264/4	10.0	9.192224	100.0	65726932.0	0.919222	Y
3	IC 320-510264/5	50.0	55.122828	100.0	68075509.0	1.102457	Y
4	IC 320-510264/6	200.0	238.727102	100.0	64951889.0	1.193636	Y
5	IC 320-510264/7	1000.0	1088.07626	100.0	67741189.0	1.088076	Y

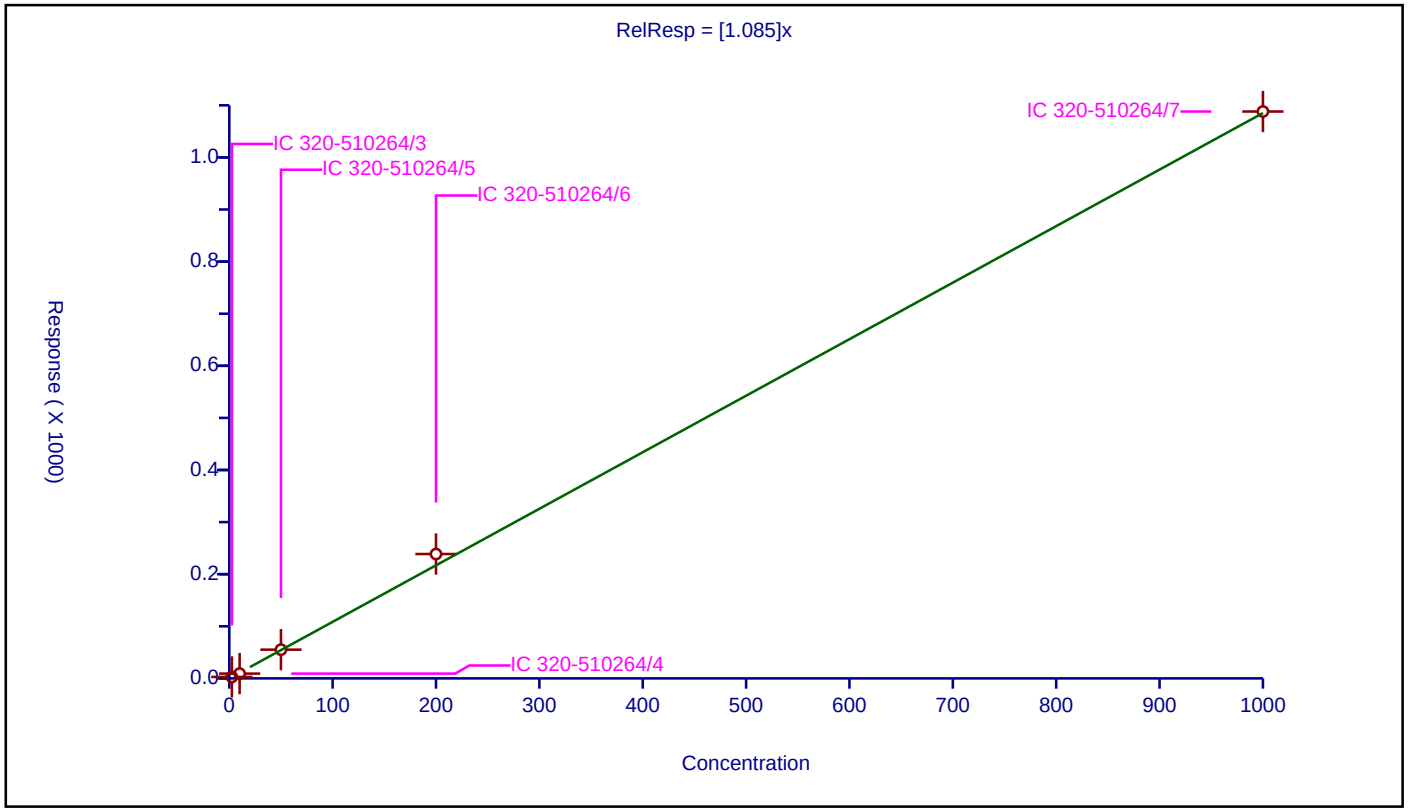

778560

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1

Error Coefficients

Standard Error:	278000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.57359	100.0	56759108.0	1.029436	Y
2	IC 320-510264/4	10.0	8.528531	100.0	52974056.0	0.852853	Y
3	IC 320-510264/5	50.0	50.563423	100.0	55284532.0	1.011268	Y
4	IC 320-510264/6	200.0	218.597288	100.0	54392394.0	1.092986	Y
5	IC 320-510264/7	1000.0	1013.848486	100.0	53564396.0	1.013848	Y

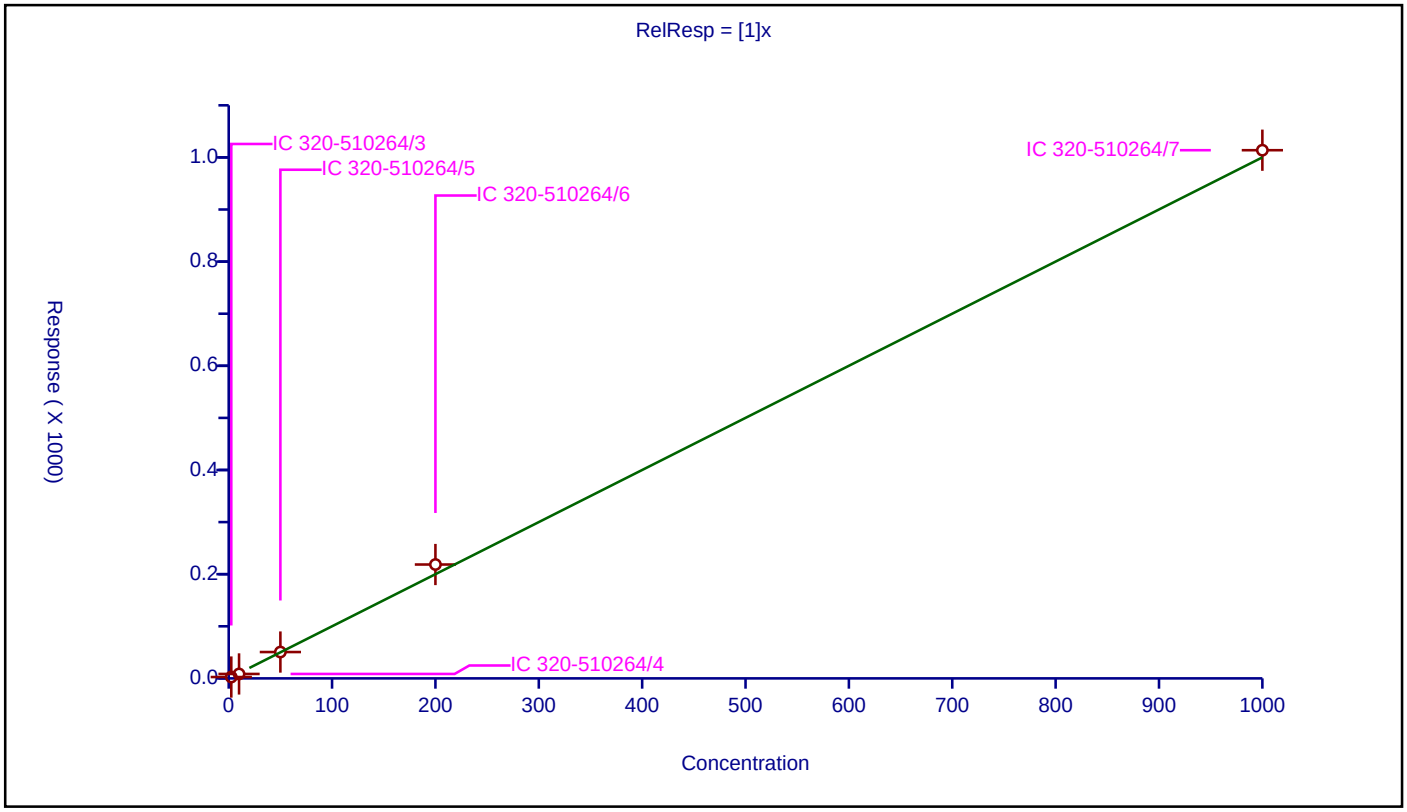

778561

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.126

Error Coefficients

Standard Error:	402000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.871987	100.0	73262388.0	1.148795	Y
2	IC 320-510264/4	10.0	9.63718	100.0	68089005.0	0.963718	Y
3	IC 320-510264/5	50.0	57.730945	100.0	70677463.0	1.154619	Y
4	IC 320-510264/6	200.0	239.311904	100.0	70459920.0	1.19656	Y
5	IC 320-510264/7	1000.0	1166.370477	100.0	67363664.0	1.16637	Y

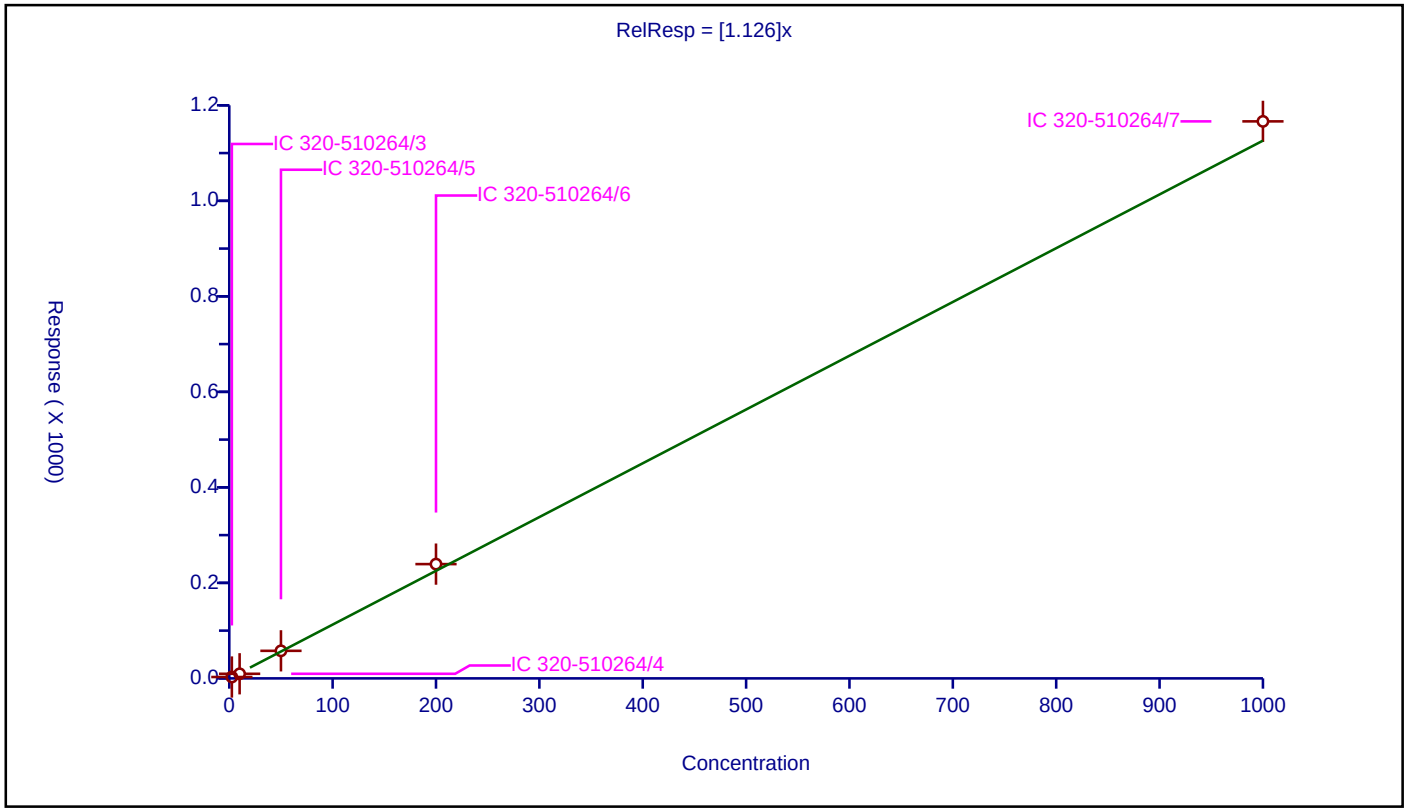

778562

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.248

Error Coefficients

Standard Error:	289000000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.174189	100.0	47363504.0	1.269675	Y
2	IC 320-510264/4	10.0	10.27817	100.0	44877133.0	1.027817	Y
3	IC 320-510264/5	50.0	67.654413	100.0	44039927.0	1.353088	Y
4	IC 320-510264/6	200.0	277.257762	100.0	44144841.0	1.386289	Y
5	IC 320-510264/7	1000.0	1202.675657	100.0	46886171.0	1.202676	Y

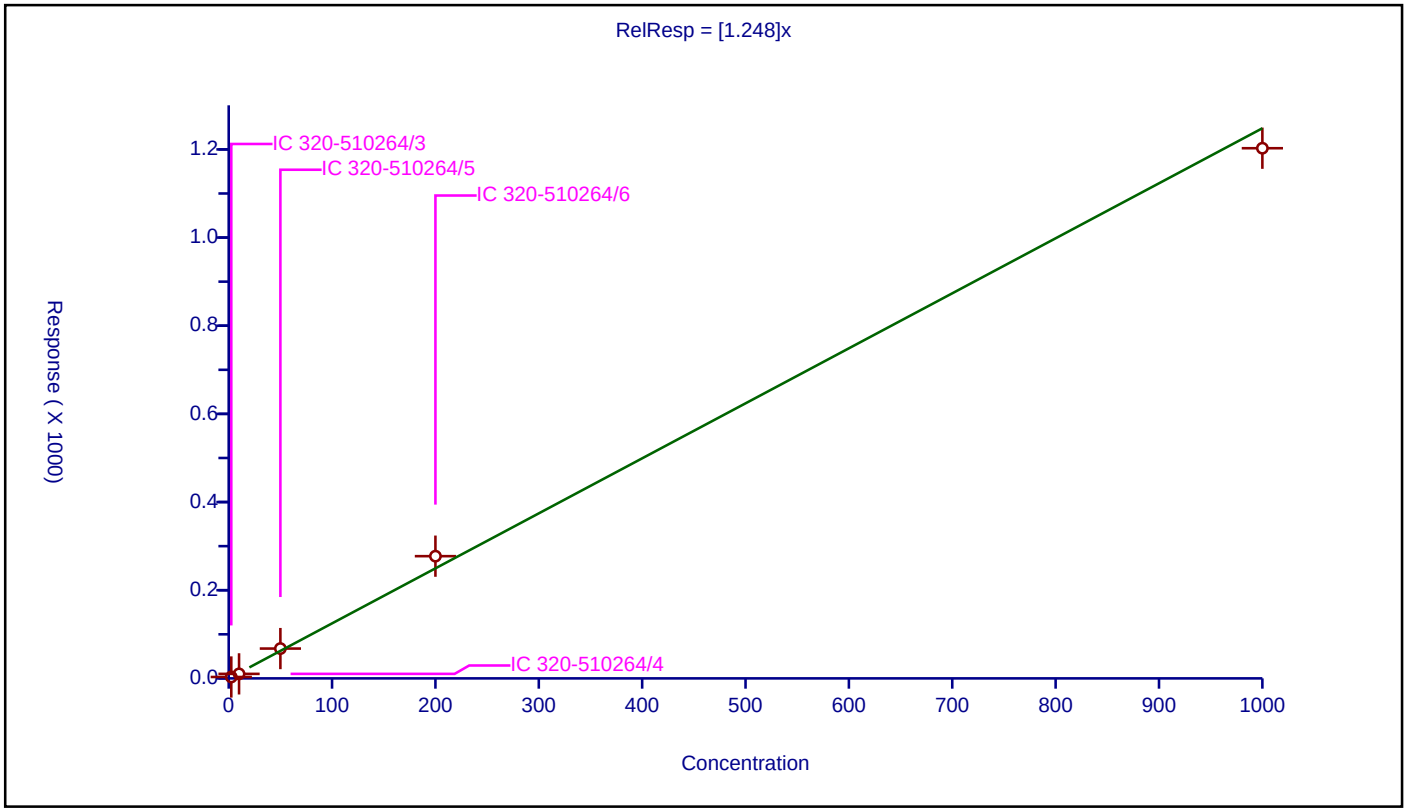

778563

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.166

Error Coefficients

Standard Error:	362000000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.933201	100.0	62528954.0	1.17328	Y
2	IC 320-510264/4	10.0	10.136374	100.0	58828058.0	1.013637	Y
3	IC 320-510264/5	50.0	59.48769	100.0	60389284.0	1.189754	Y
4	IC 320-510264/6	200.0	249.571201	100.0	59636084.0	1.247856	Y
5	IC 320-510264/7	1000.0	1207.229164	100.0	58669892.0	1.207229	Y

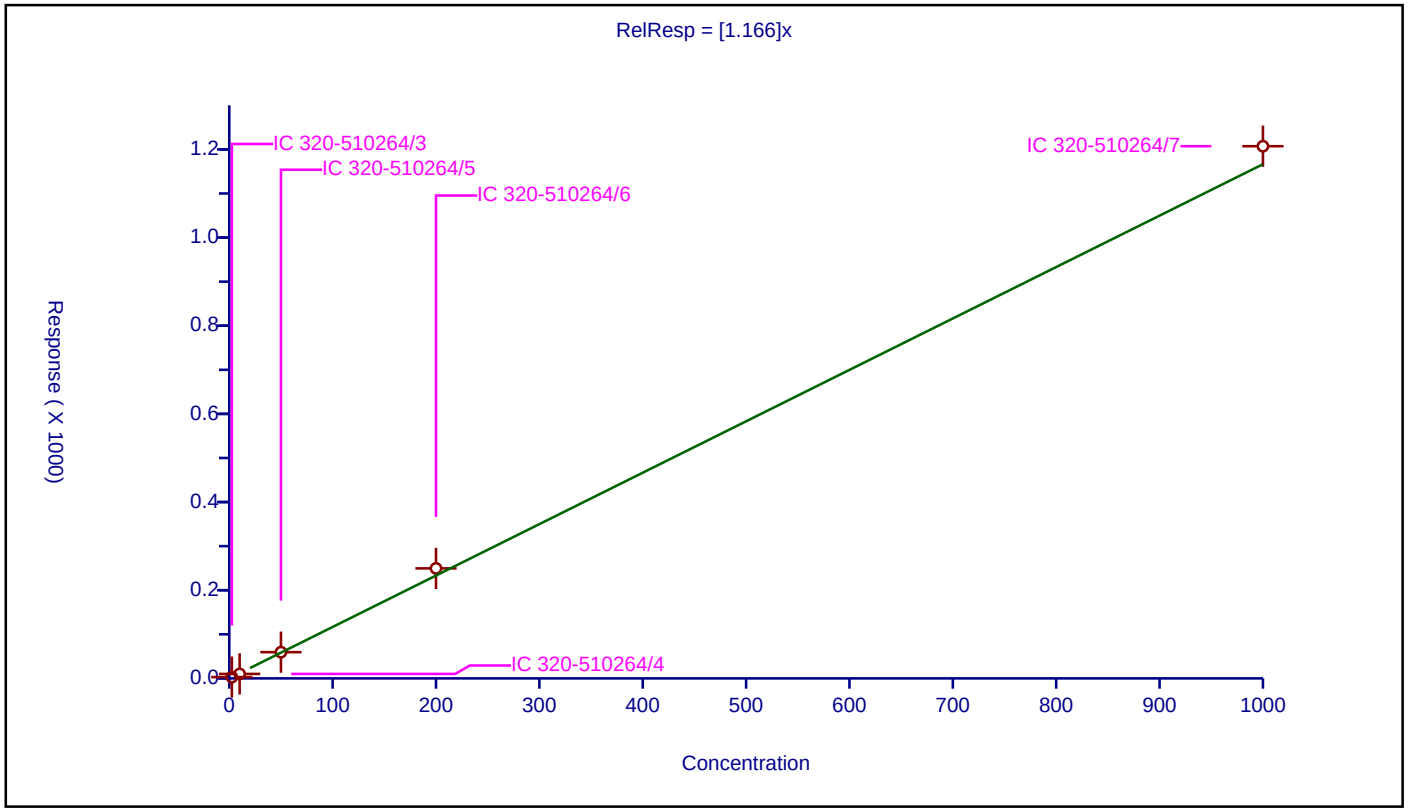

778564

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.048

Error Coefficients

Standard Error:	256000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.644408	100.0	49643581.0	1.057763	Y
2	IC 320-510264/4	10.0	9.031283	100.0	46721712.0	0.903128	Y
3	IC 320-510264/5	50.0	53.401309	100.0	47124414.0	1.068026	Y
4	IC 320-510264/6	200.0	226.195317	100.0	46524396.0	1.130977	Y
5	IC 320-510264/7	1000.0	1082.258061	100.0	46251010.0	1.082258	Y

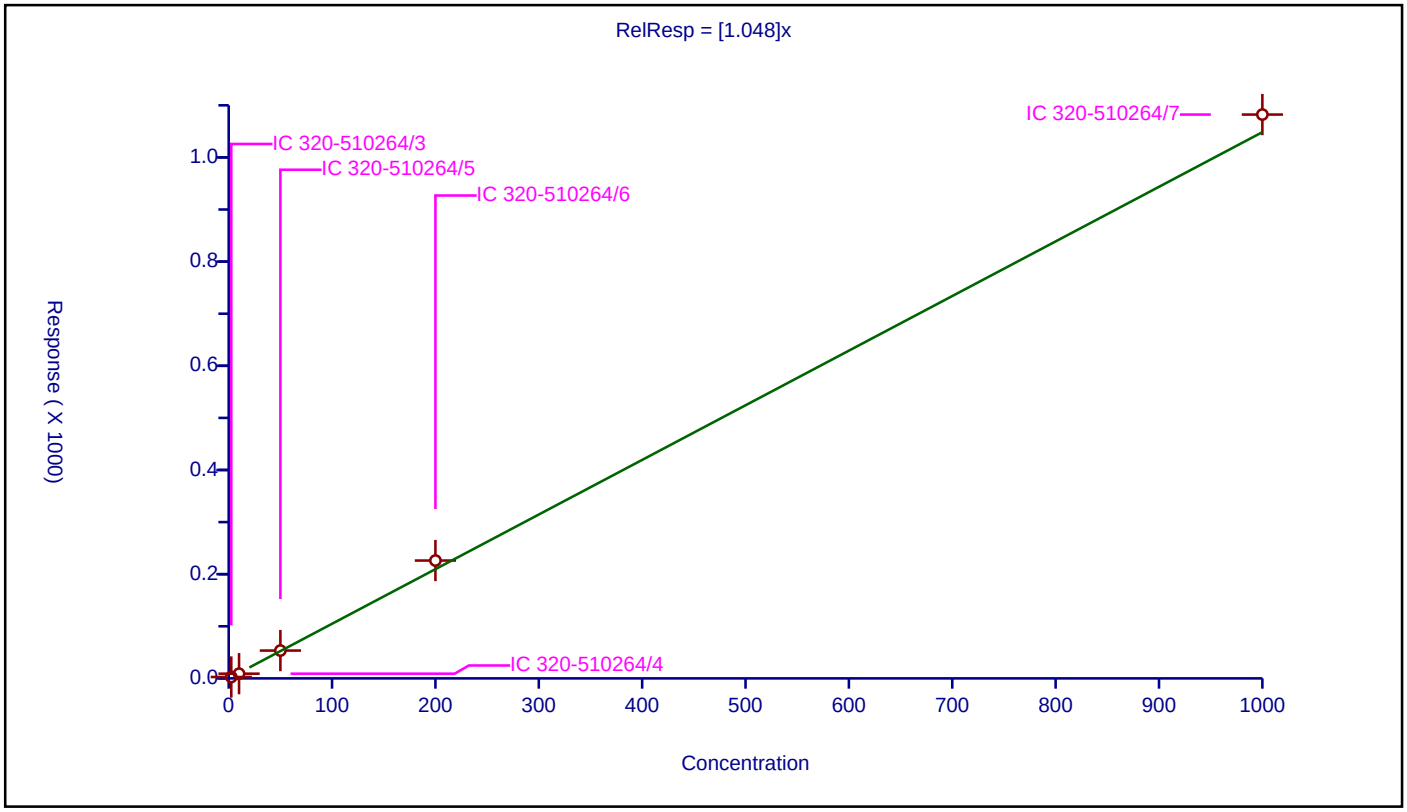

778565

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	408000000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.684664	100.0	78674290.0	1.073865	Y
2	IC 320-510264/4	10.0	9.128293	100.0	72525655.0	0.912829	Y
3	IC 320-510264/5	50.0	54.457439	100.0	76368219.0	1.089149	Y
4	IC 320-510264/6	200.0	227.4085	100.0	75205597.0	1.137042	Y
5	IC 320-510264/7	1000.0	1092.787556	100.0	72829681.0	1.092788	Y

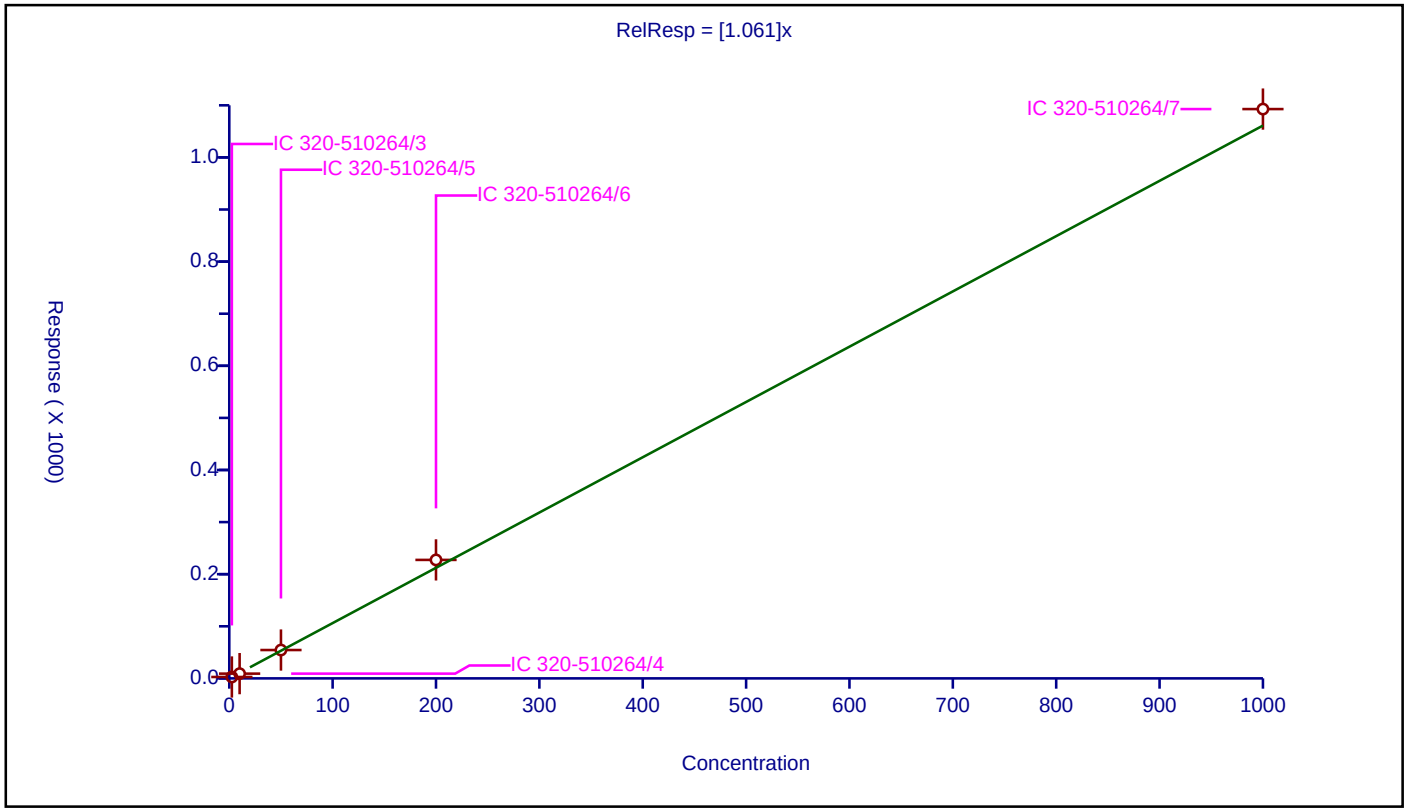

778566

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	391000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.05566	100.0	68885161.0	1.222264	Y
2	IC 320-510264/4	10.0	9.86292	100.0	64406928.0	0.986292	Y
3	IC 320-510264/5	50.0	59.290251	100.0	67028498.0	1.185805	Y
4	IC 320-510264/6	200.0	248.302486	100.0	66145684.0	1.241512	Y
5	IC 320-510264/7	1000.0	1201.822353	100.0	63471184.0	1.201822	Y

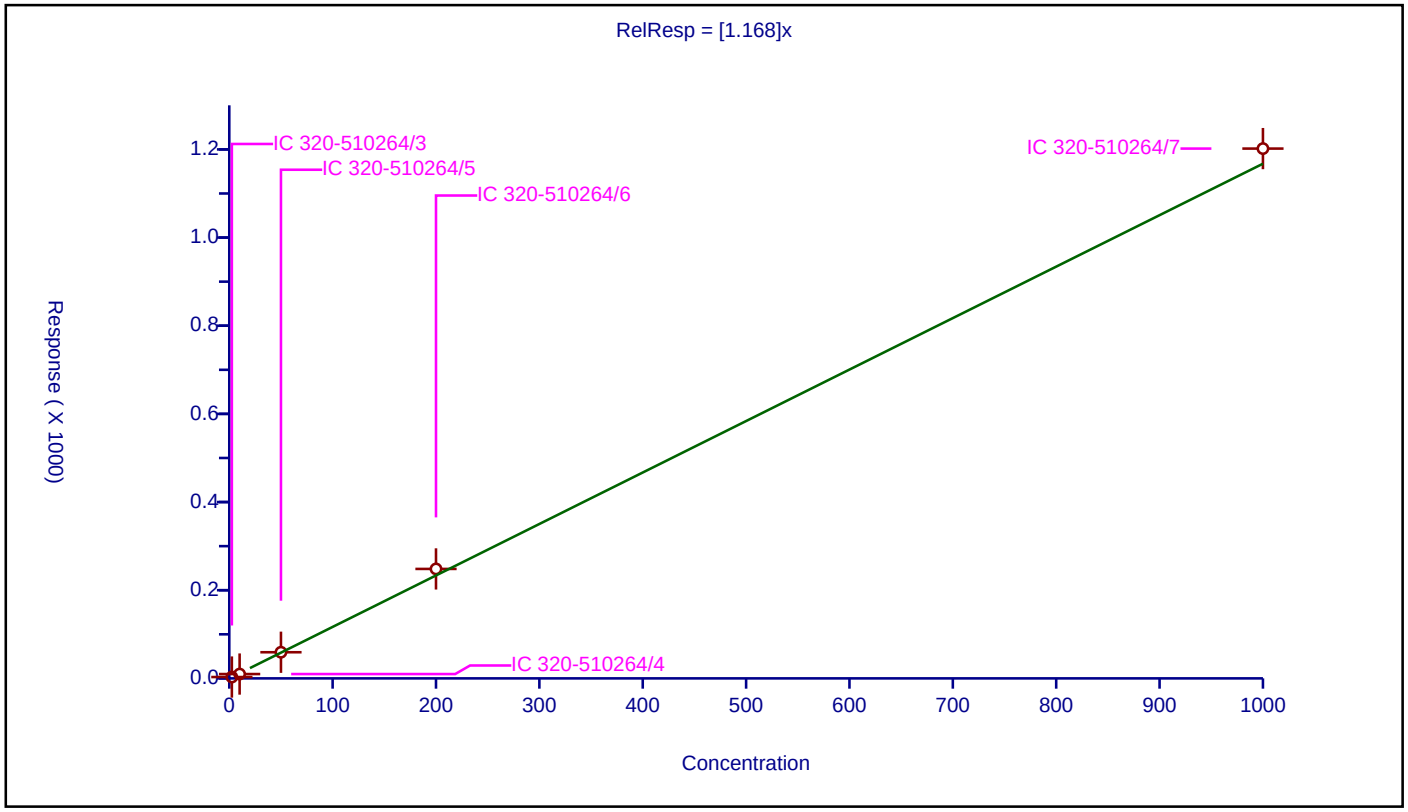

778567

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.018

Error Coefficients

Standard Error:	401000000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.601965	100.0	80591659.0	1.040786	Y
2	IC 320-510264/4	10.0	8.609629	100.0	74944110.0	0.860963	Y
3	IC 320-510264/5	50.0	52.328396	100.0	78214582.0	1.046568	Y
4	IC 320-510264/6	200.0	221.640486	100.0	75259591.0	1.108202	Y
5	IC 320-510264/7	1000.0	1035.570916	100.0	75649463.0	1.035571	Y

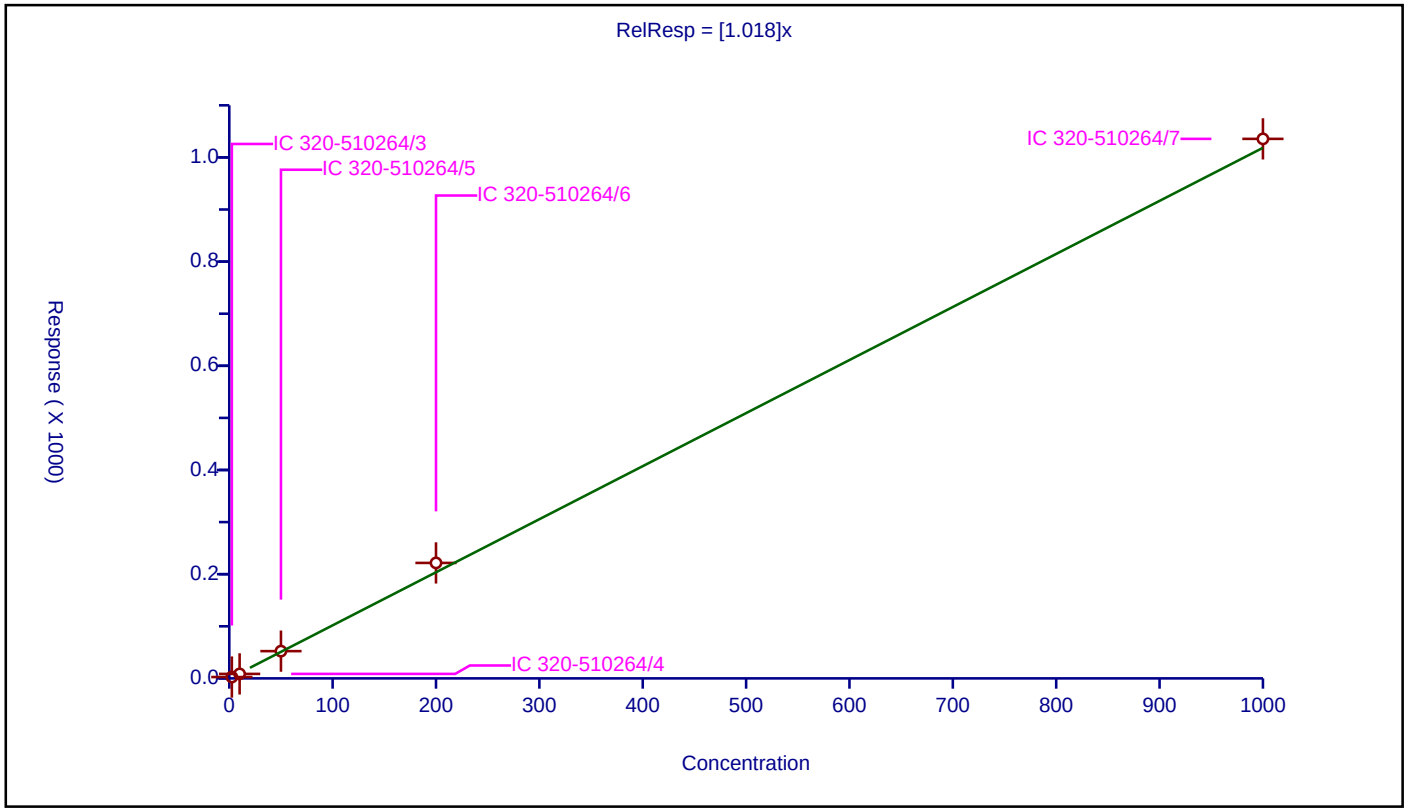

778568

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.254

Error Coefficients

Standard Error:	71900000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.62875	100.0	59957723.0	1.257499	Y
2	IC 320-510264/4	2.0	2.19411	100.0	53975587.0	1.097055	Y
3	IC 320-510264/5	10.0	12.651014	100.0	56155483.0	1.265101	Y
4	IC 320-510264/6	40.0	53.737487	100.0	55471422.0	1.343437	Y
5	IC 320-510264/7	200.0	261.501191	100.0	53698206.0	1.307506	Y

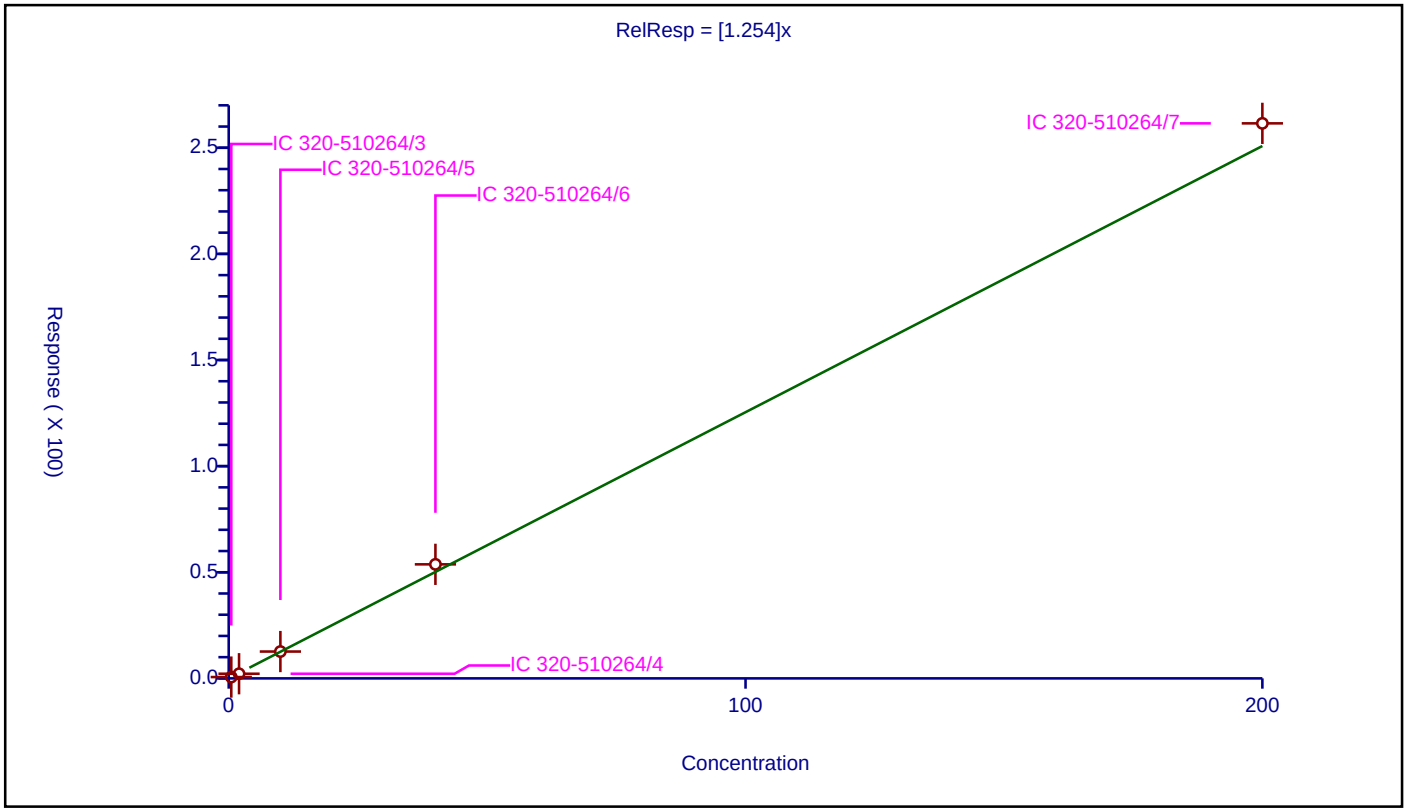

778569

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.024

Error Coefficients

Standard Error:	105000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.514358	100.0	108384725.0	1.028715	Y
2	IC 320-510264/4	2.0	1.739696	100.0	98246522.0	0.869848	Y
3	IC 320-510264/5	10.0	10.458407	100.0	101724636.0	1.045841	Y
4	IC 320-510264/6	40.0	44.37733	100.0	100332269.0	1.109433	Y
5	IC 320-510264/7	200.0	213.143097	100.0	95980421.0	1.065715	Y

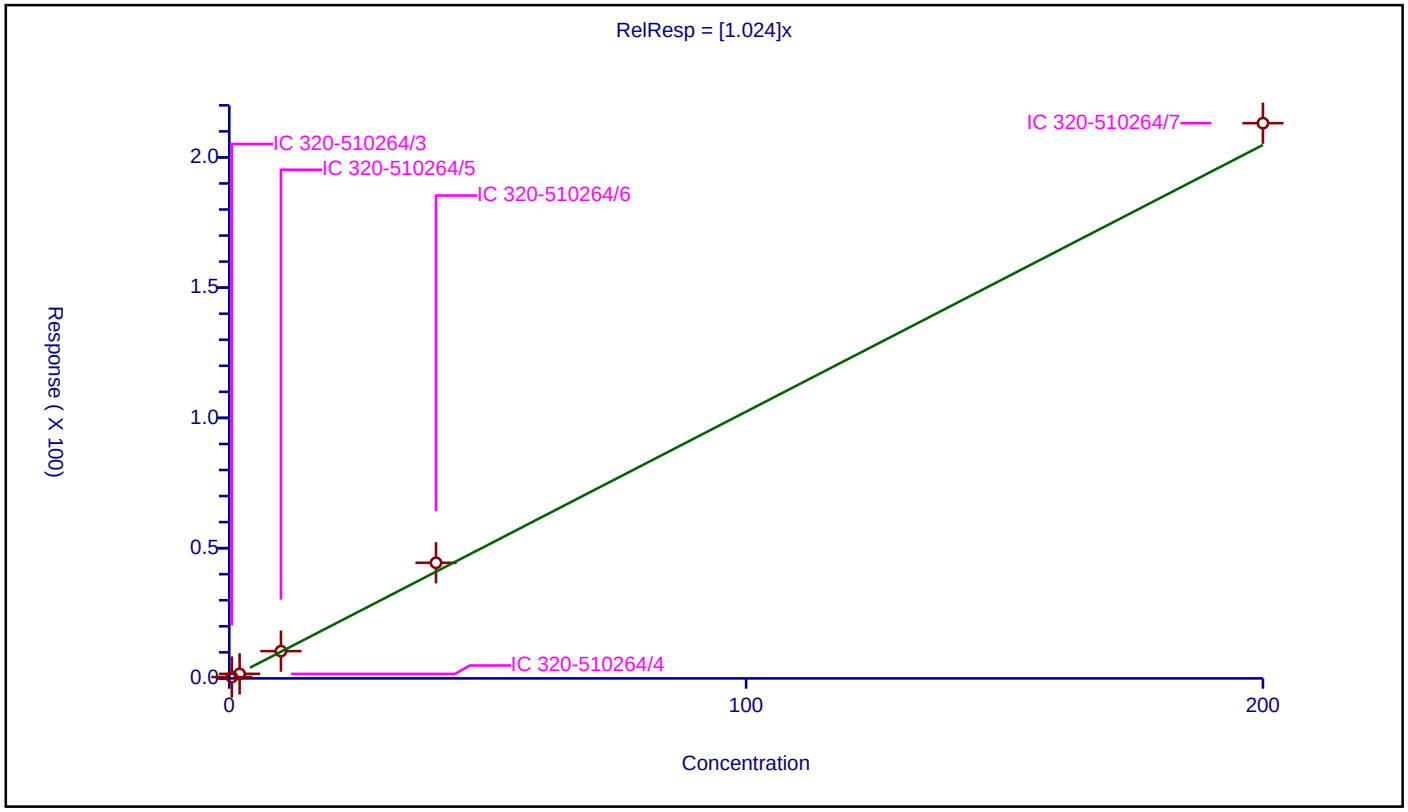

778570

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	72100000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.485229	100.0	65685883.0	0.970458	Y
2	IC 320-510264/4	2.0	1.95888	100.0	62853211.0	0.97944	Y
3	IC 320-510264/5	10.0	11.718119	100.0	62635225.0	1.171812	Y
4	IC 320-510264/6	40.0	47.503291	100.0	62046988.0	1.187582	Y
5	IC 320-510264/7	200.0	245.287862	100.0	57464333.0	1.226439	Y

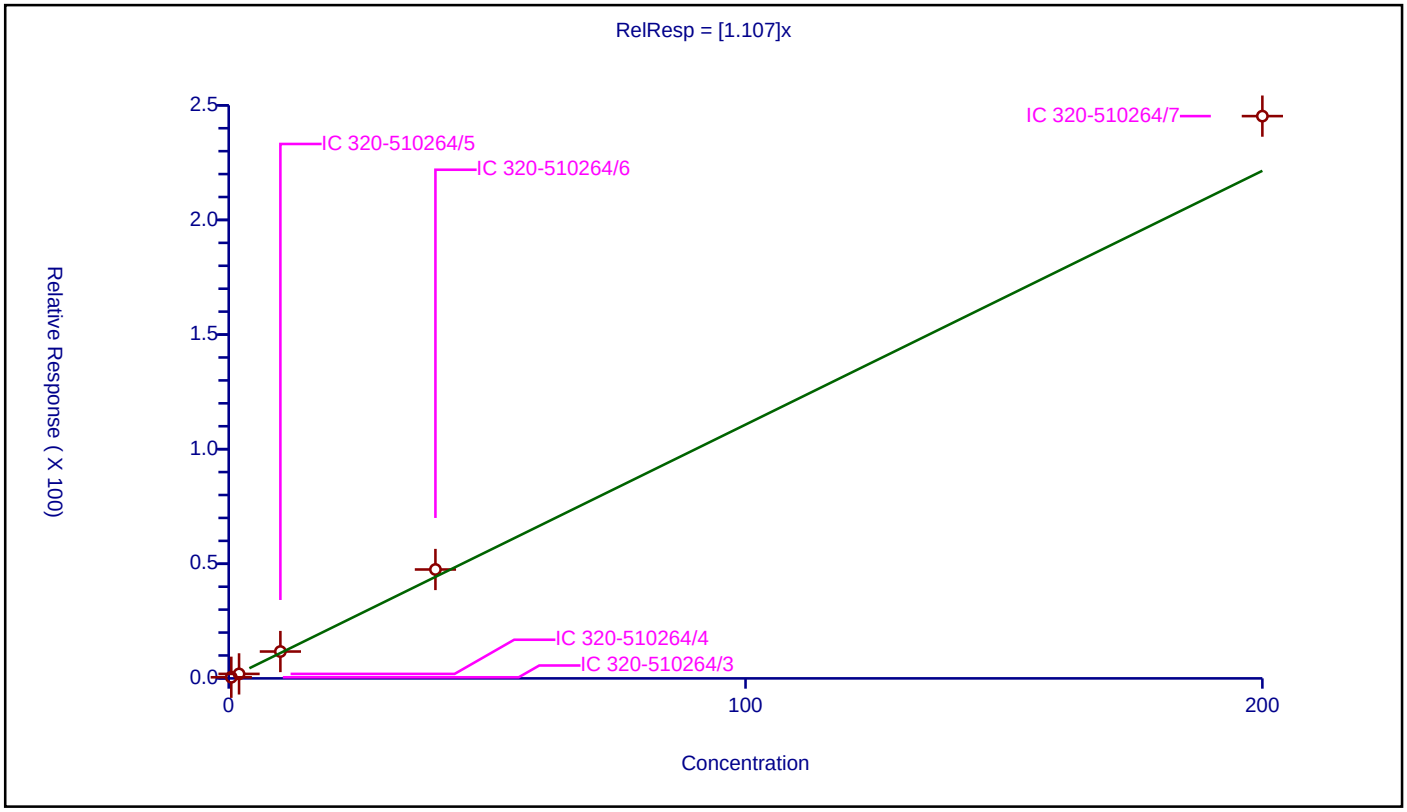

778571

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	325000000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	5.504666	200.0	57018462.0	1.100933	Y
2	IC 320-510264/4	20.0	19.269459	200.0	52034518.0	0.963473	Y
3	IC 320-510264/5	100.0	116.51708	200.0	54338243.0	1.165171	Y
4	IC 320-510264/6	400.0	473.162285	200.0	57303880.0	1.182906	Y
5	IC 320-510264/7	2000.0	2245.176522	200.0	56623863.0	1.122588	Y

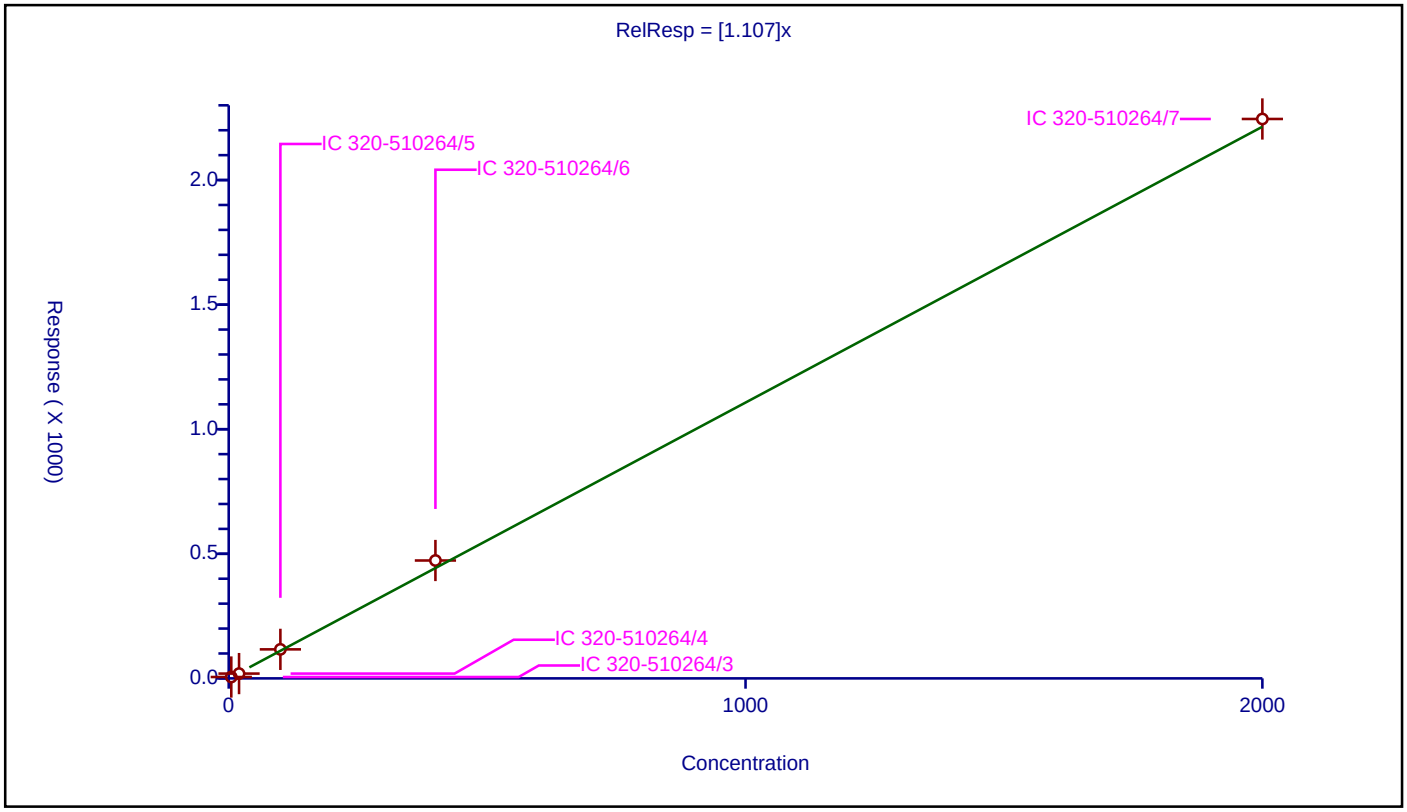

778572

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.438

Error Coefficients

Standard Error:	438000000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	6.931702	200.0	57018462.0	1.38634	Y
2	IC 320-510264/4	20.0	23.824451	200.0	52034518.0	1.191223	Y
3	IC 320-510264/5	100.0	151.448408	200.0	54338243.0	1.514484	Y
4	IC 320-510264/6	400.0	634.327267	200.0	57303880.0	1.585818	Y
5	IC 320-510264/7	2000.0	3025.883229	200.0	56623863.0	1.512942	Y

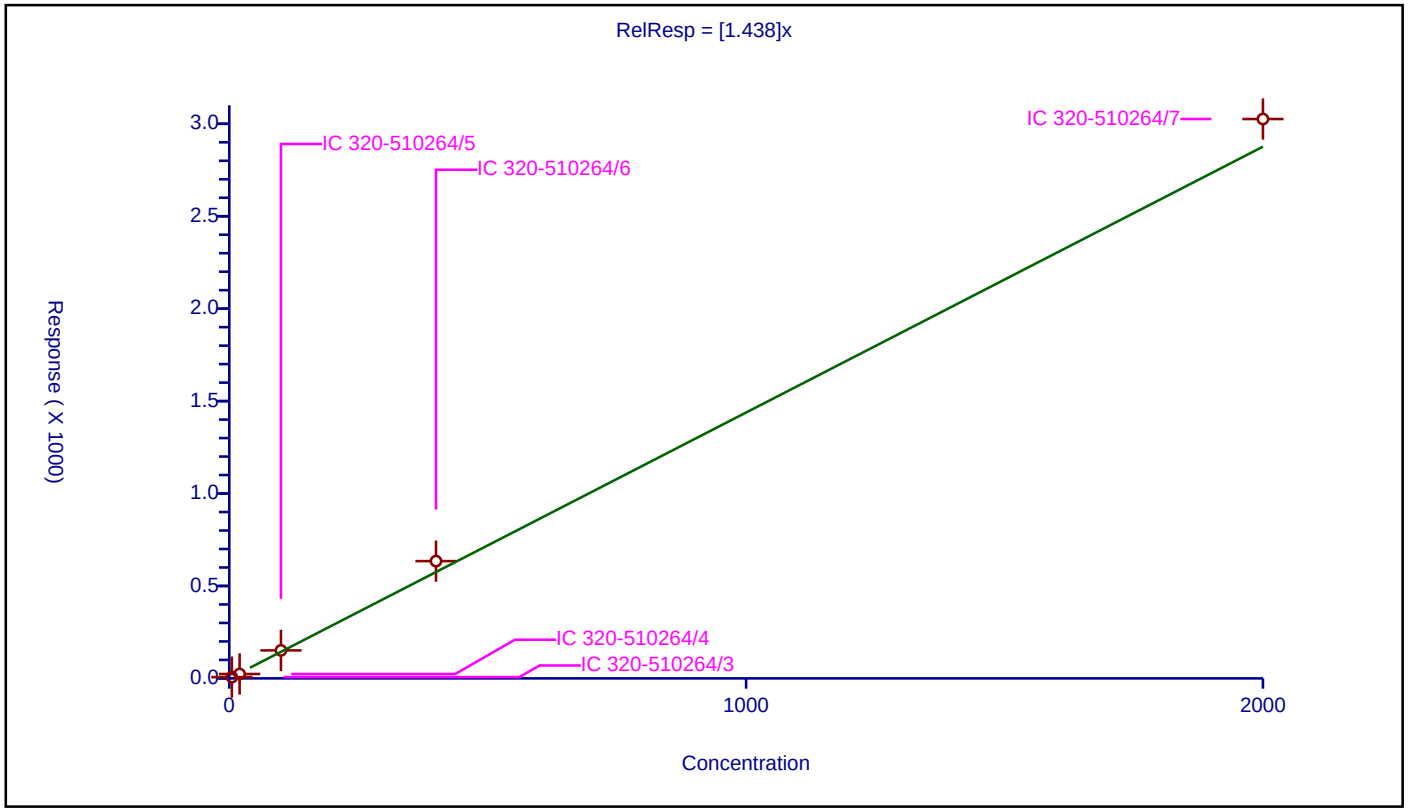

778573

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

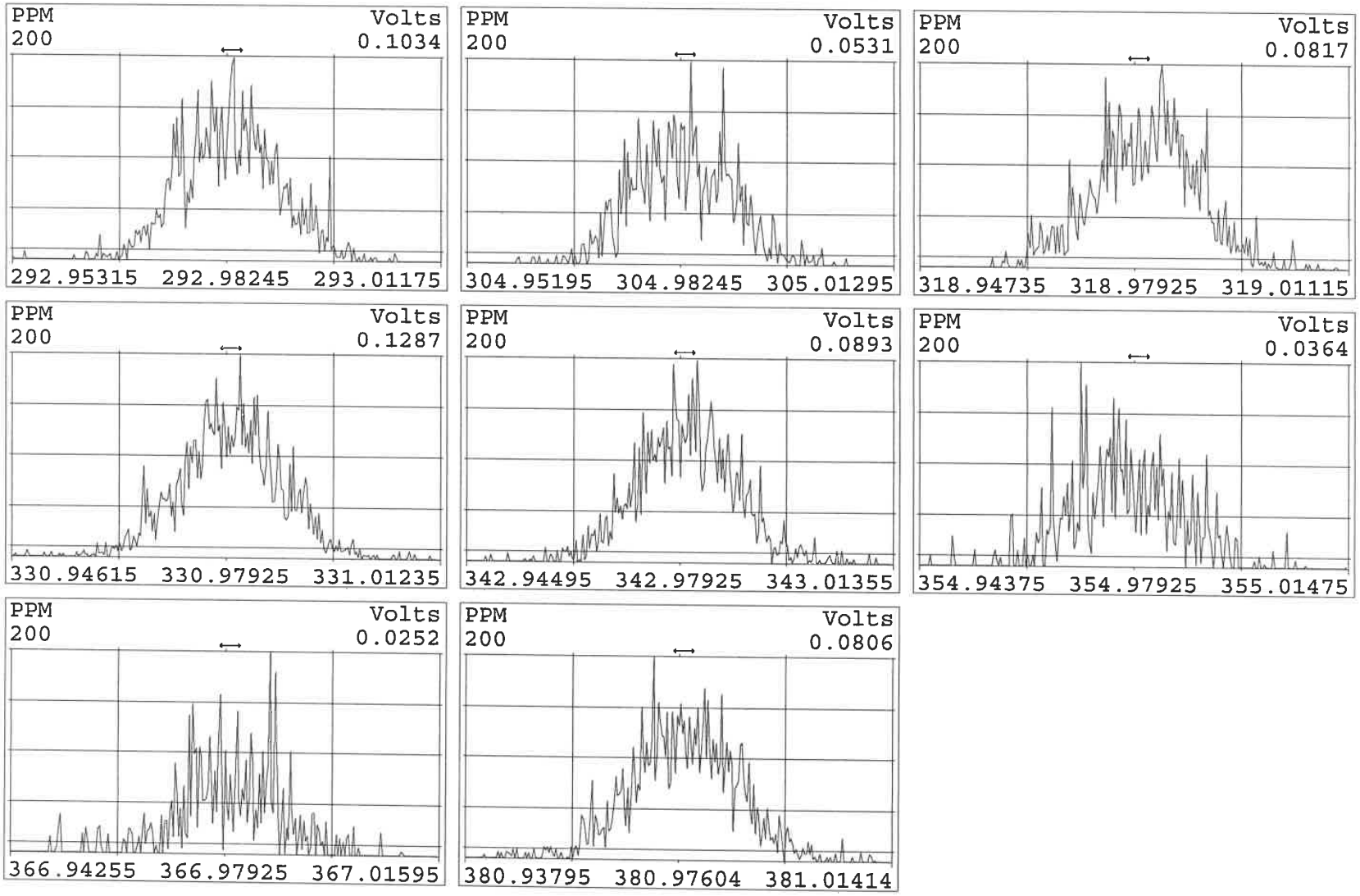

778577

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

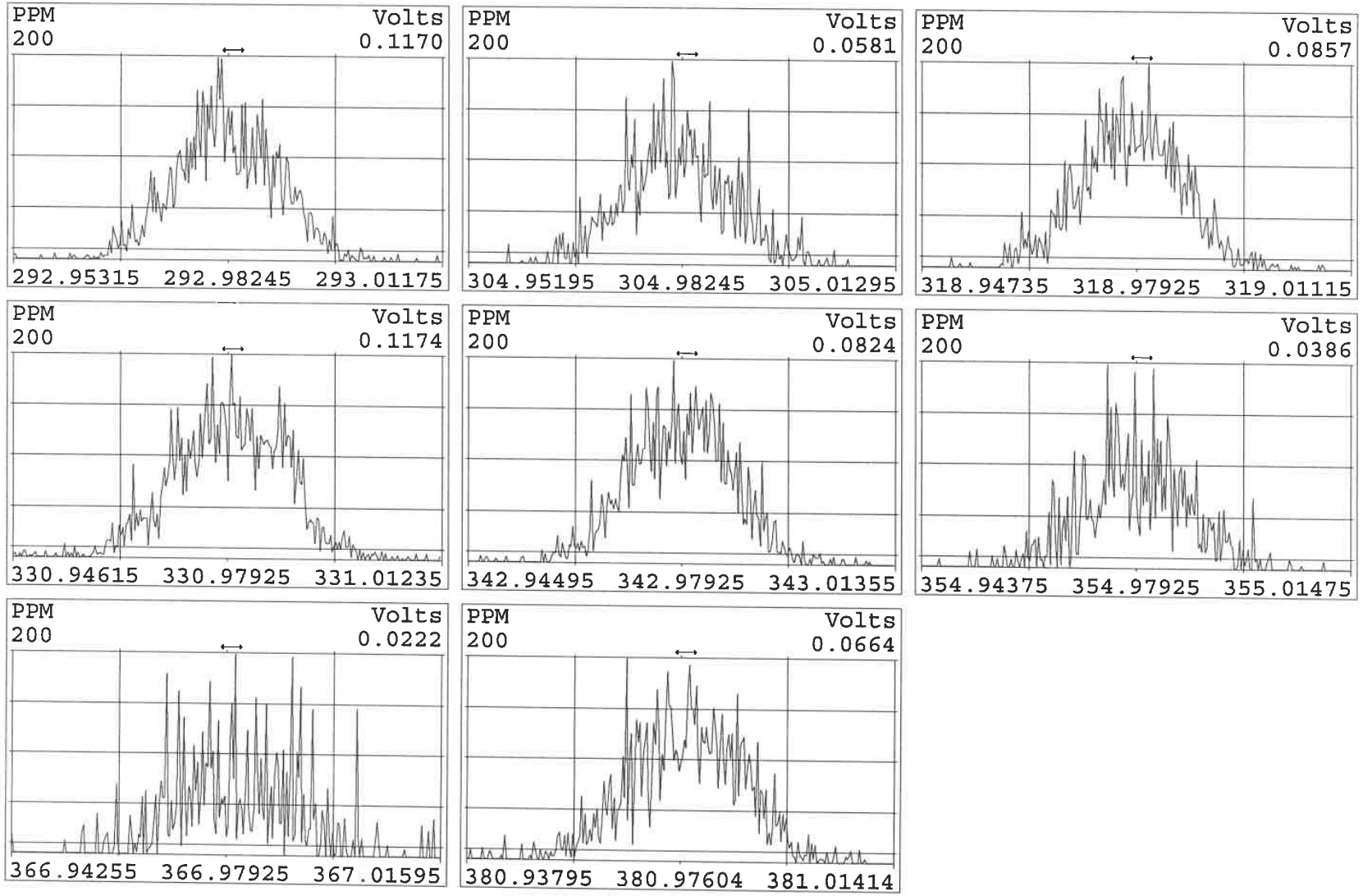

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

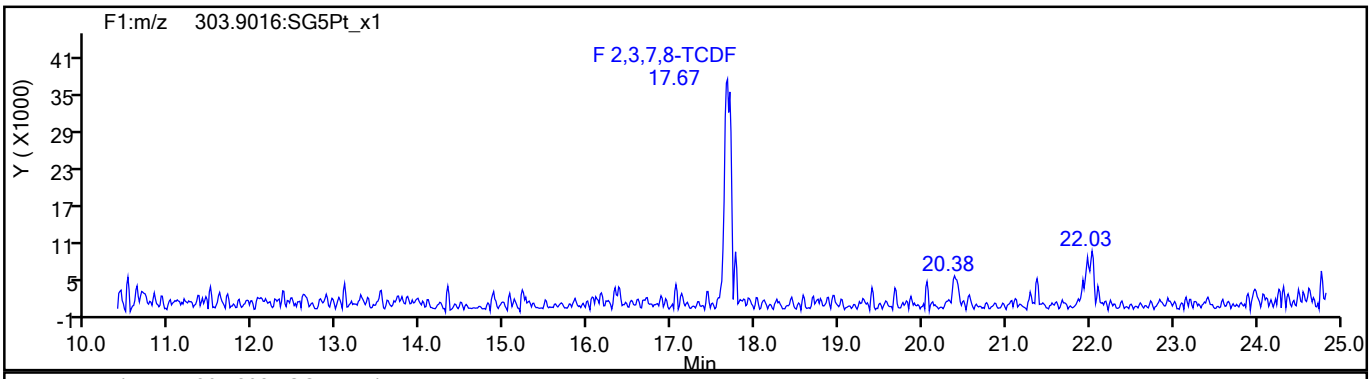

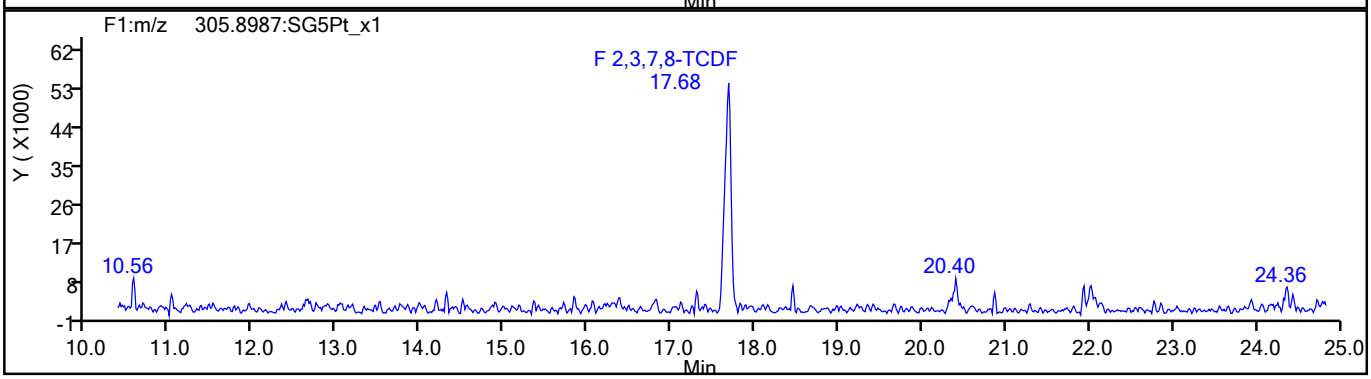

TCDF Standards

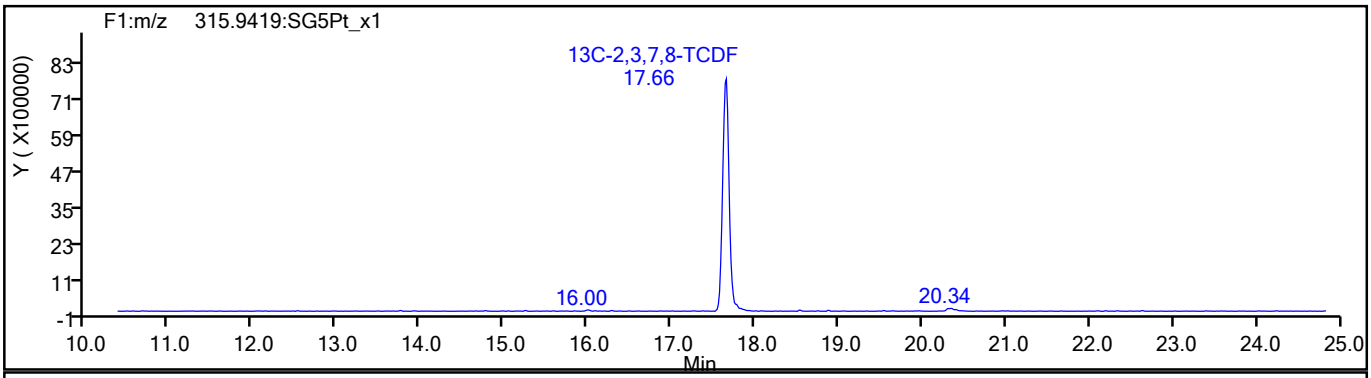

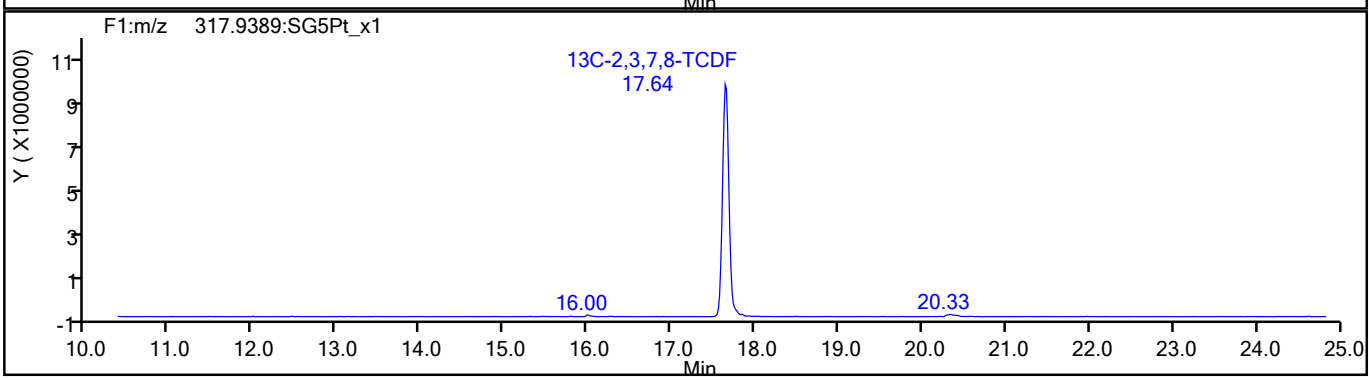

778581

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

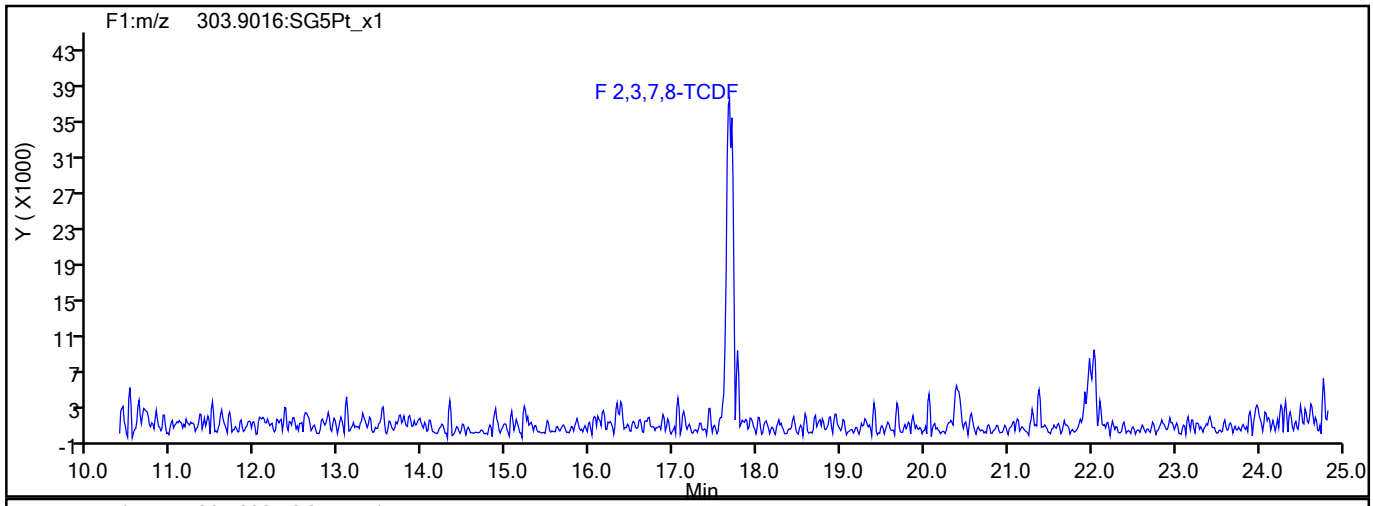

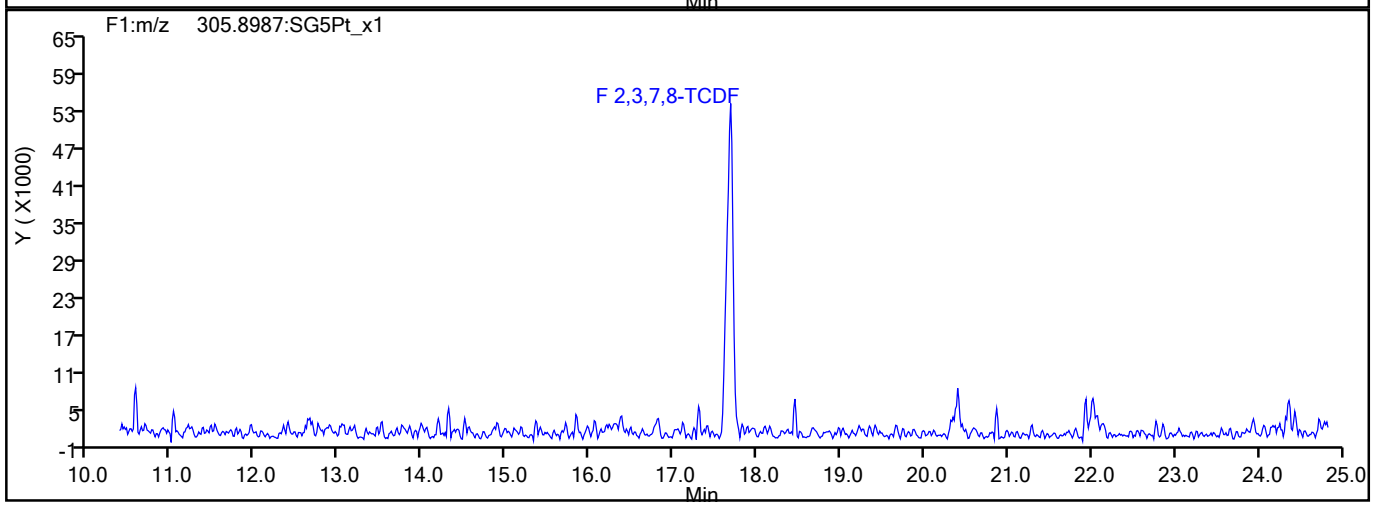

TCDF Interference Mass

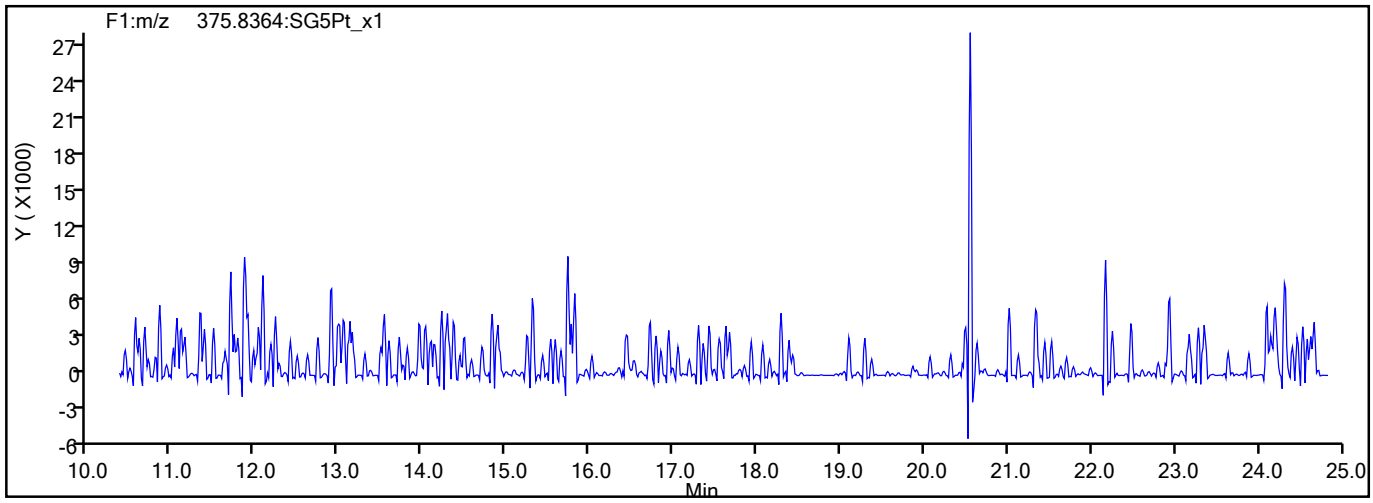

778582

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

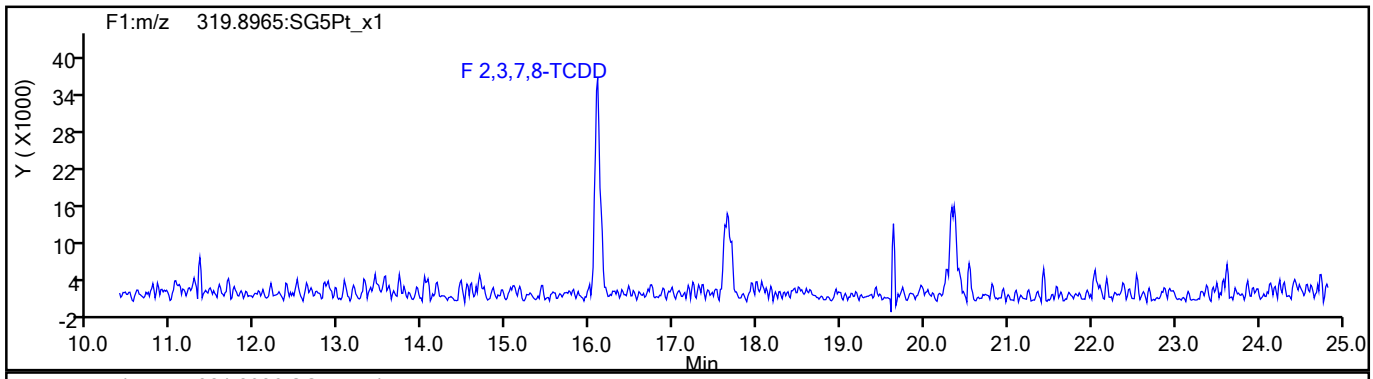

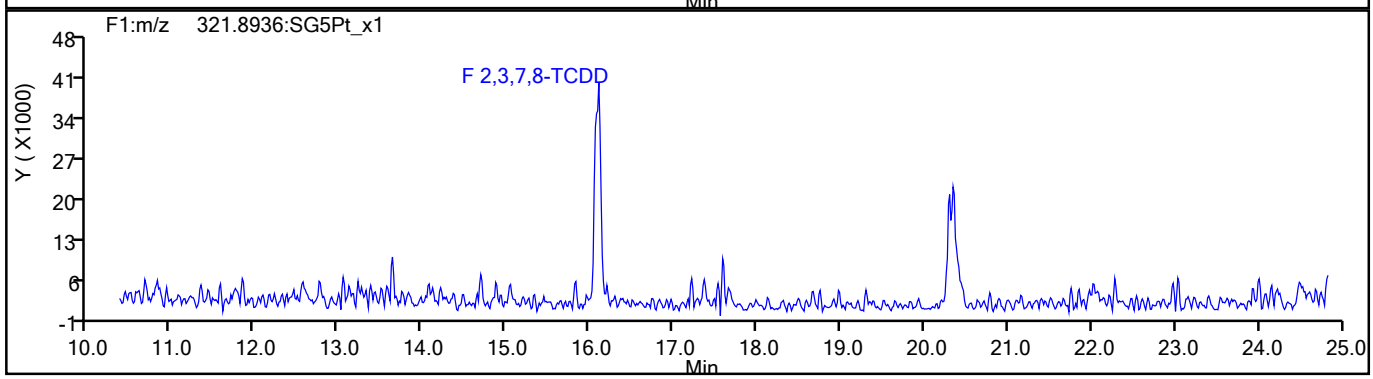

TCDD Standards

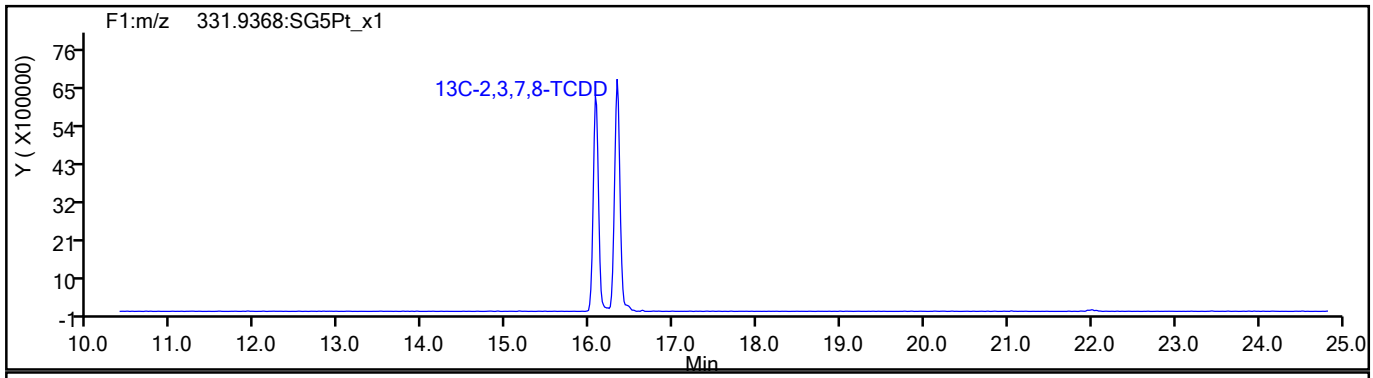

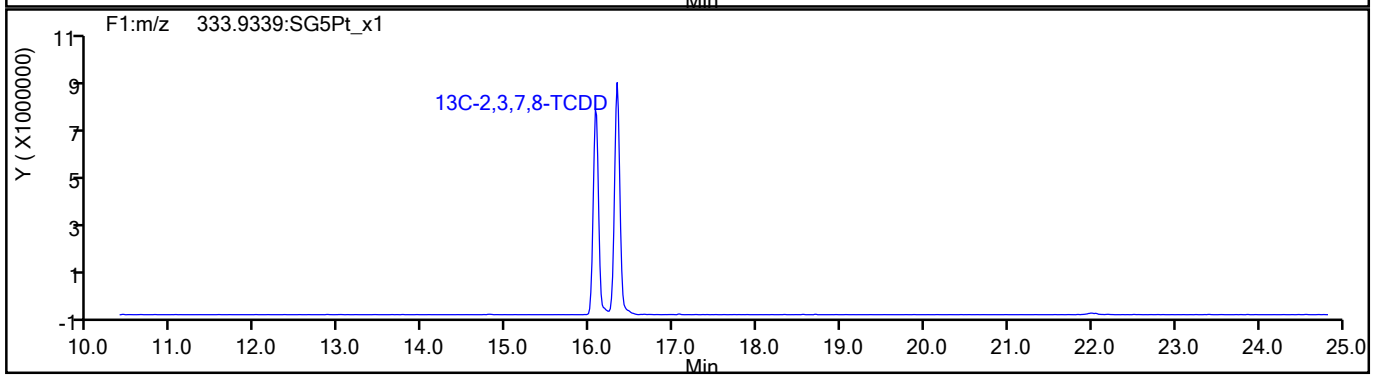

778583

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

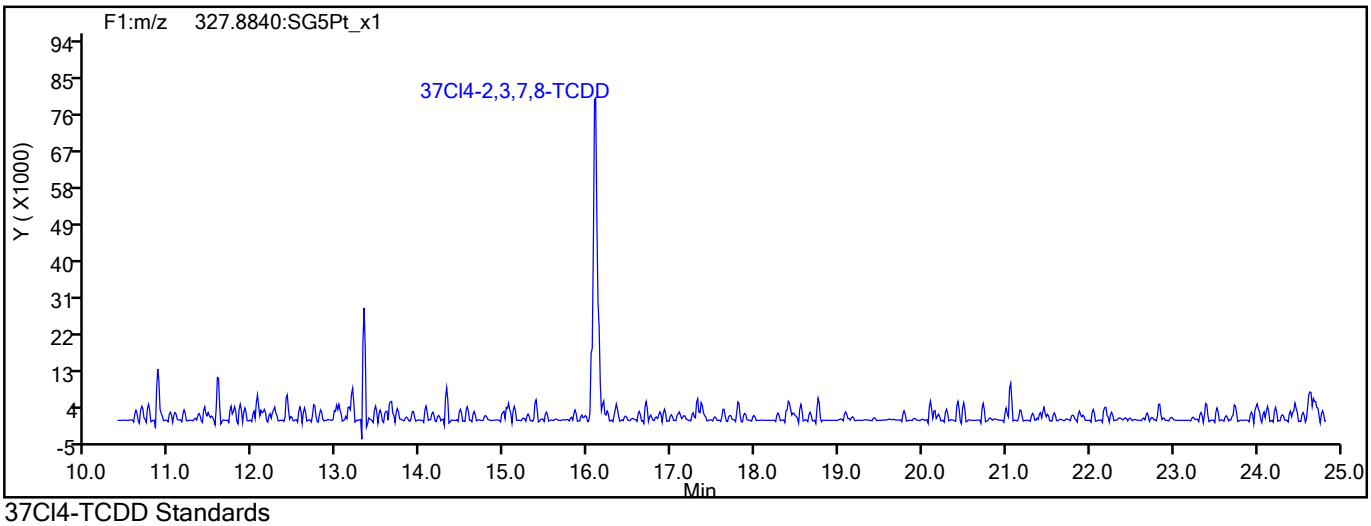

37Cl4-TCDD Standards

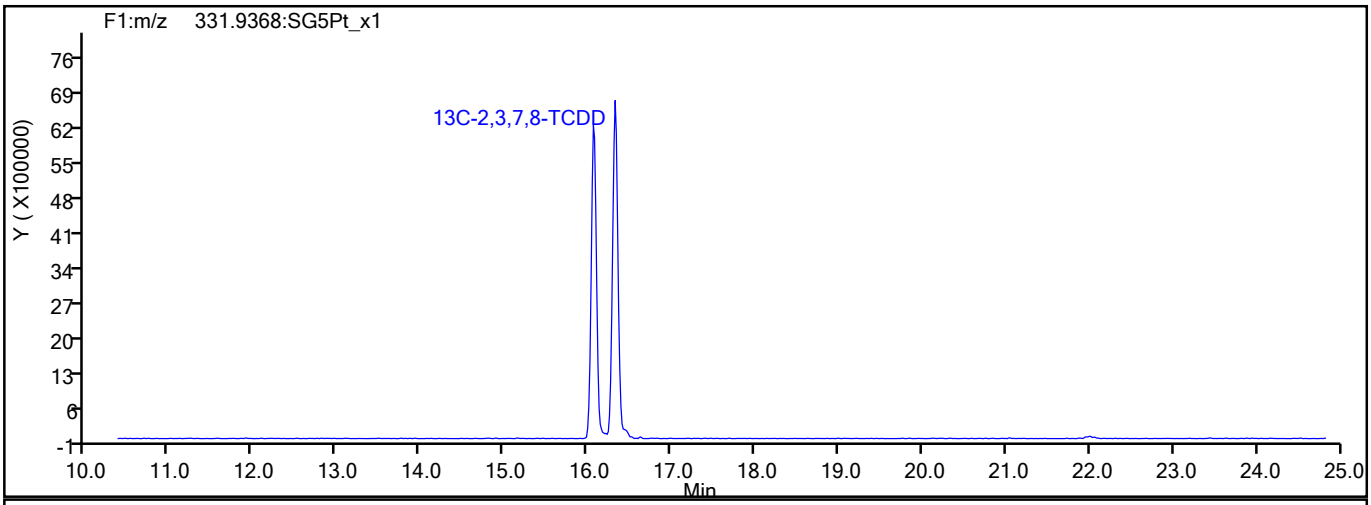

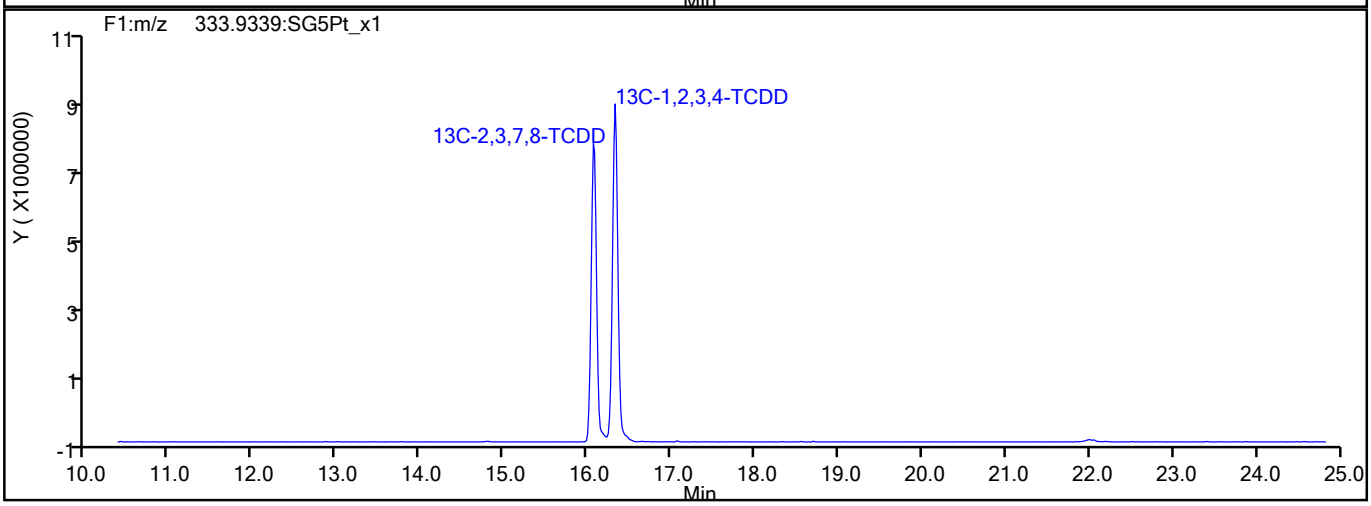

778584

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

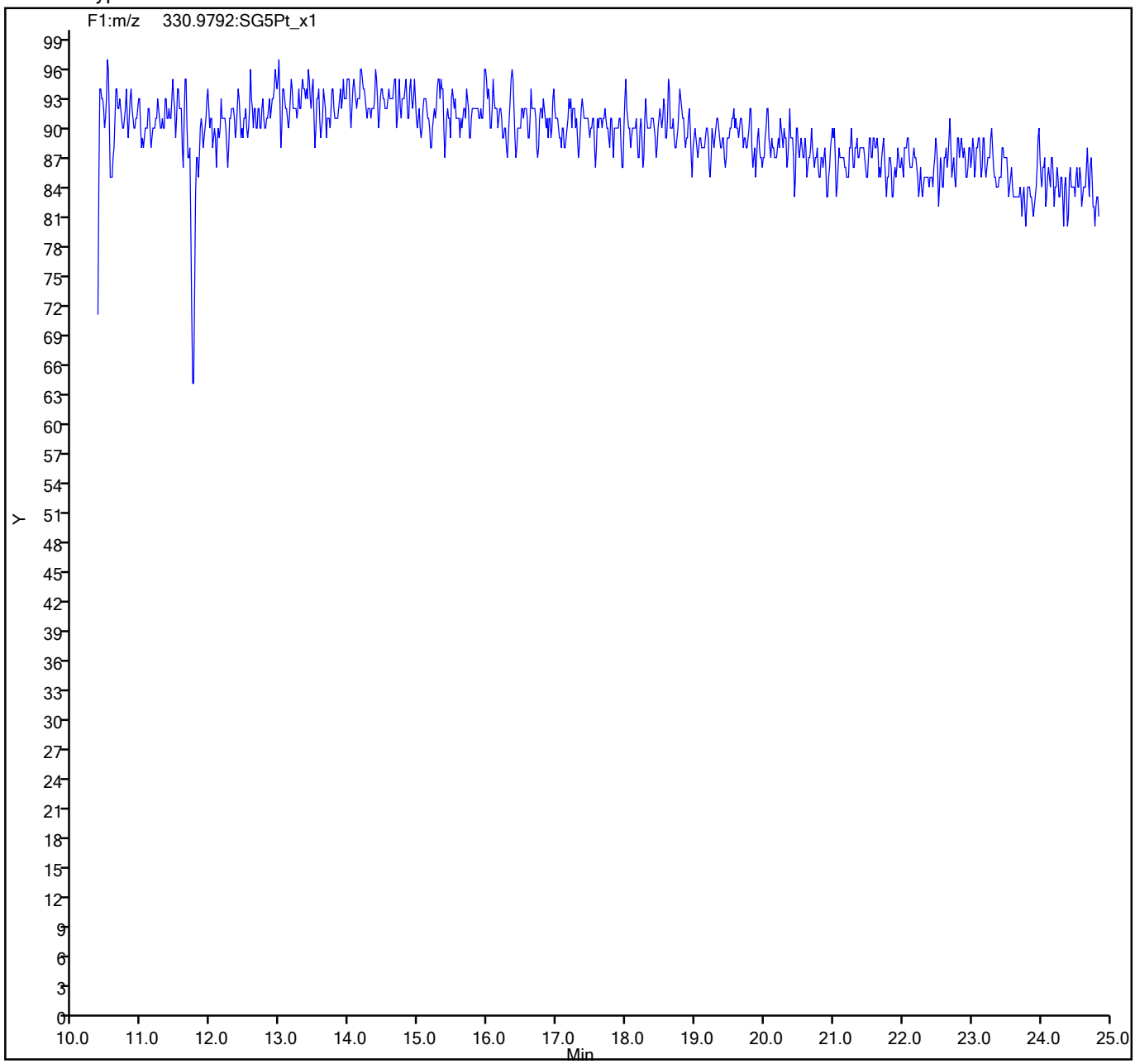

778585

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

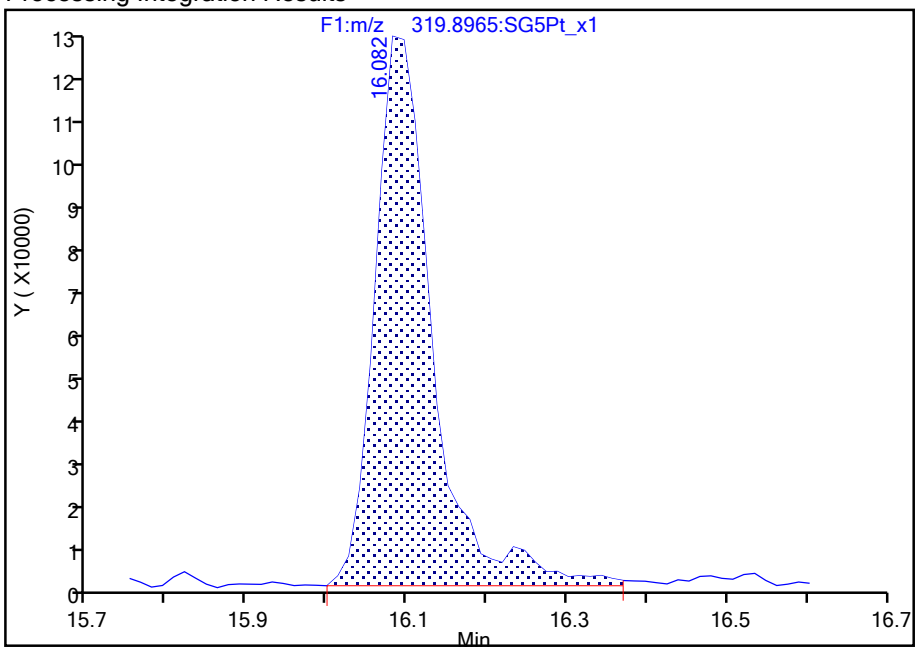

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

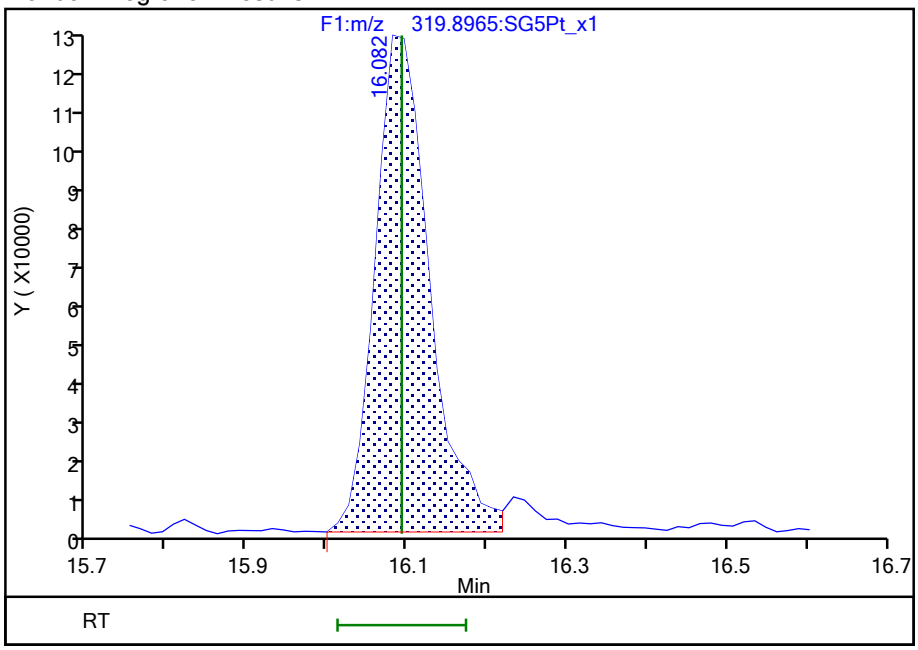

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

778588

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

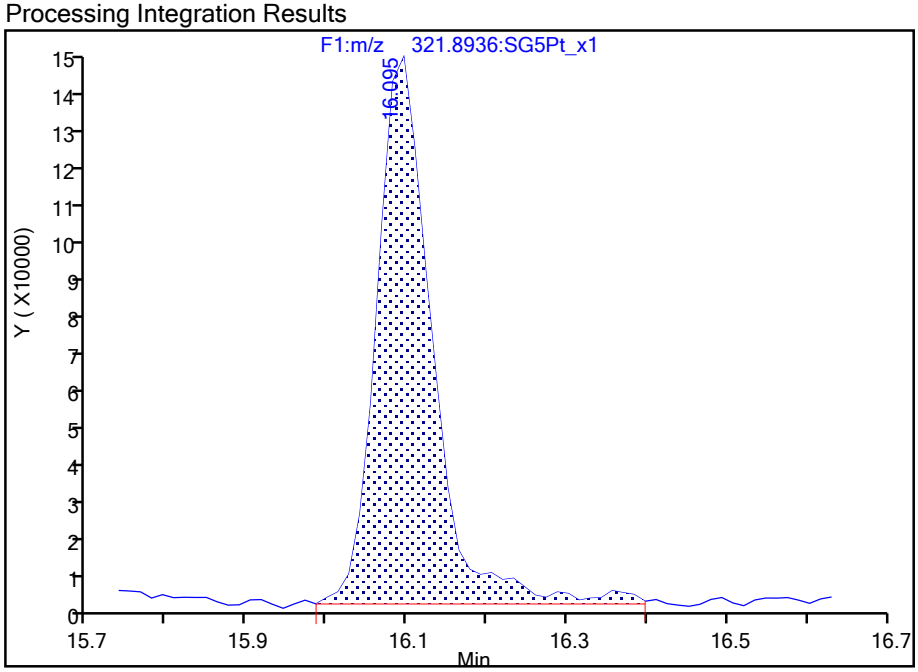

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

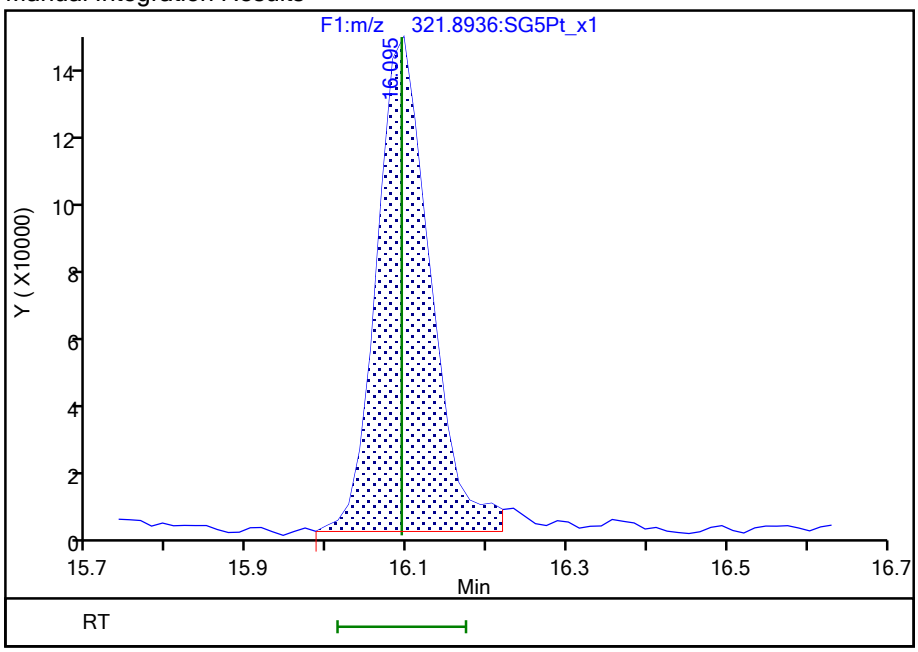

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

778589

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

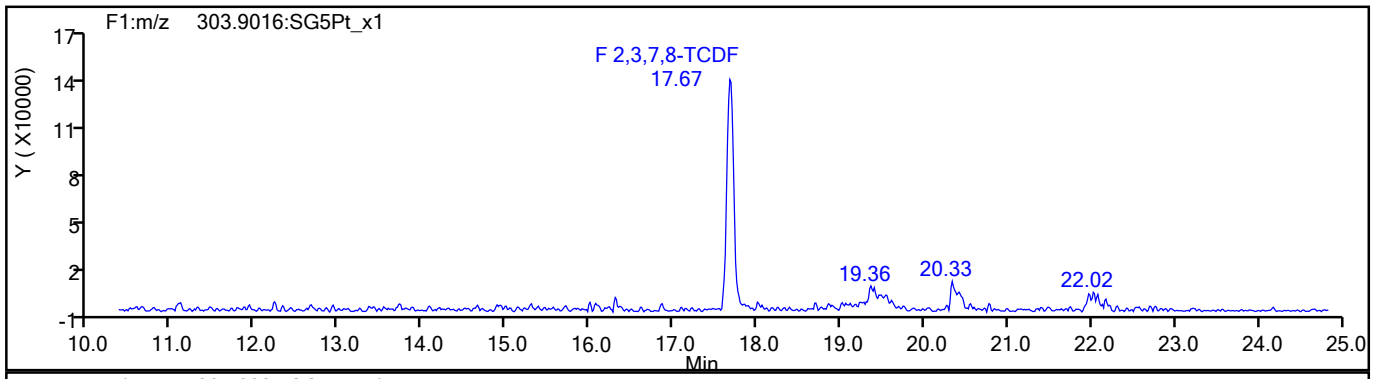

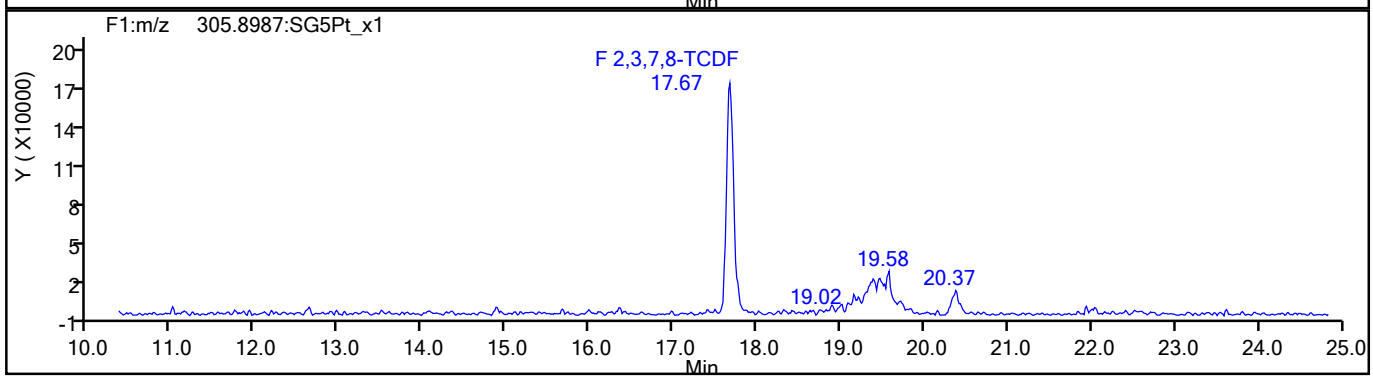

TCDF Standards

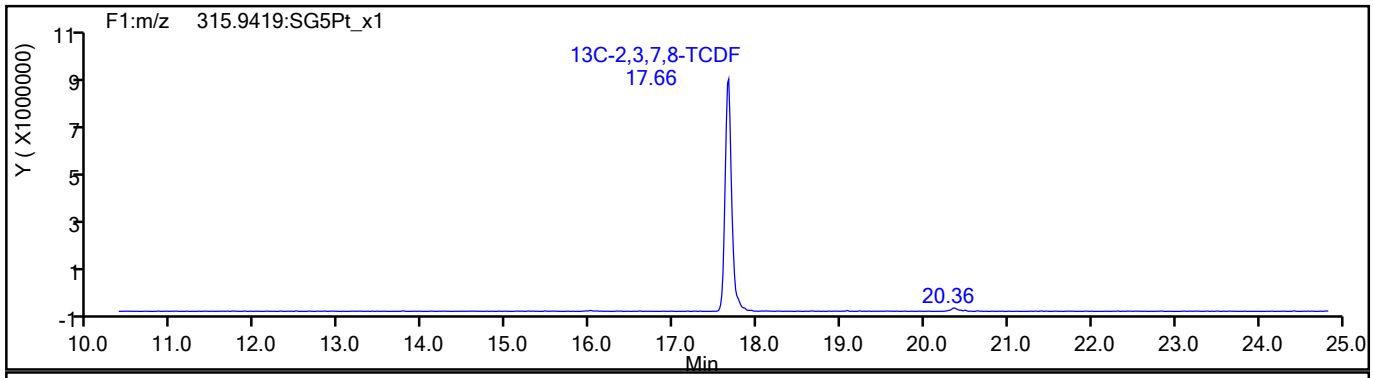

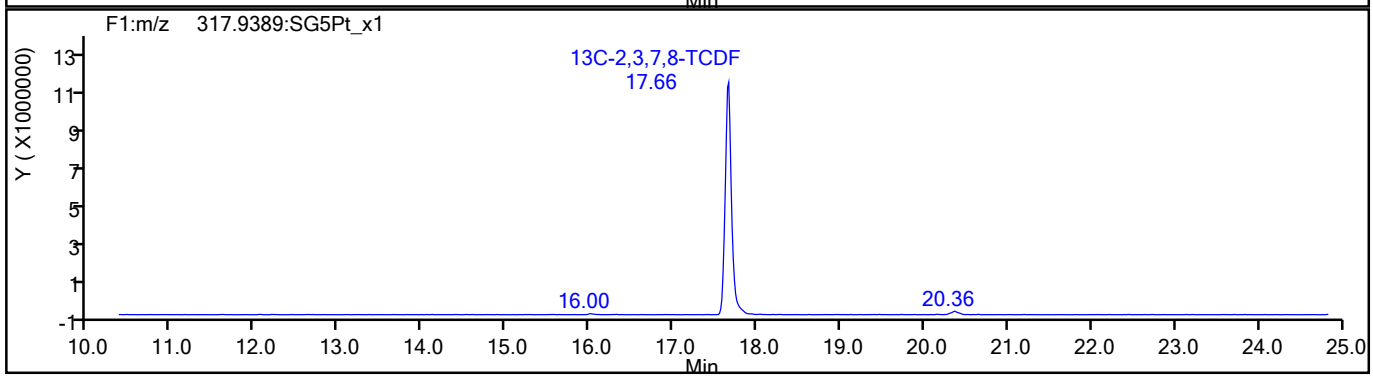

778590

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

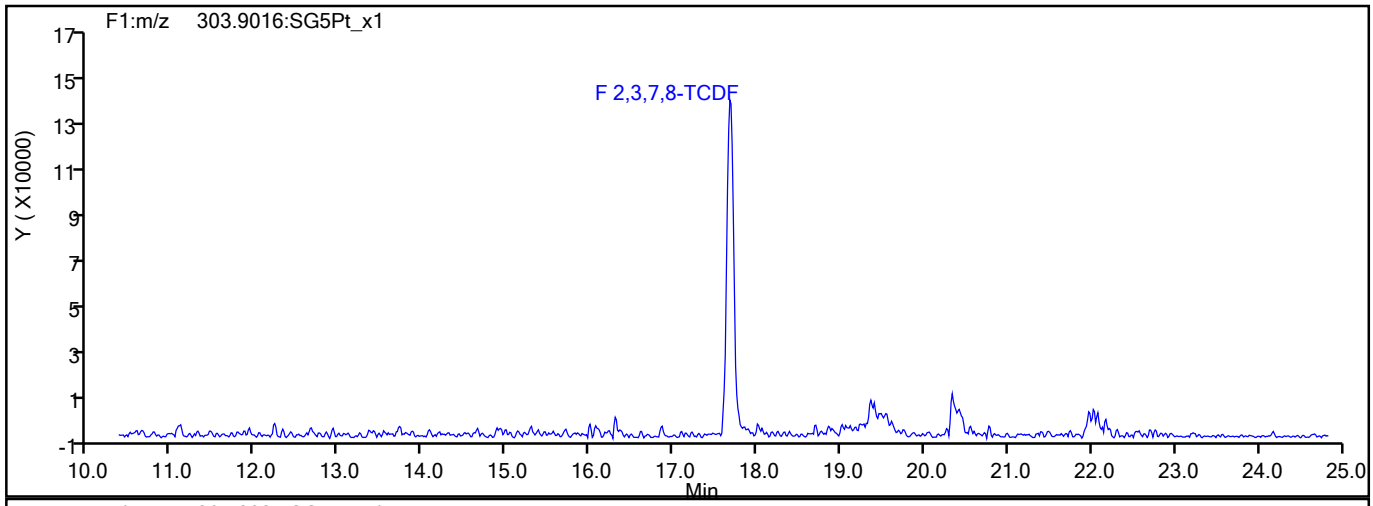

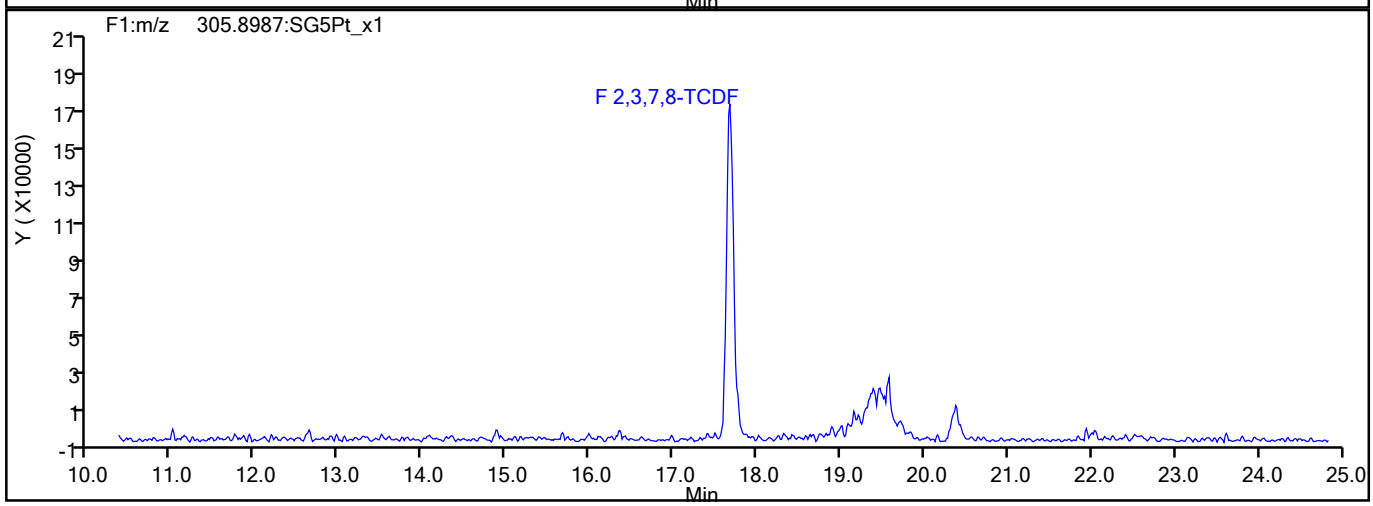

TCDF Interference Mass

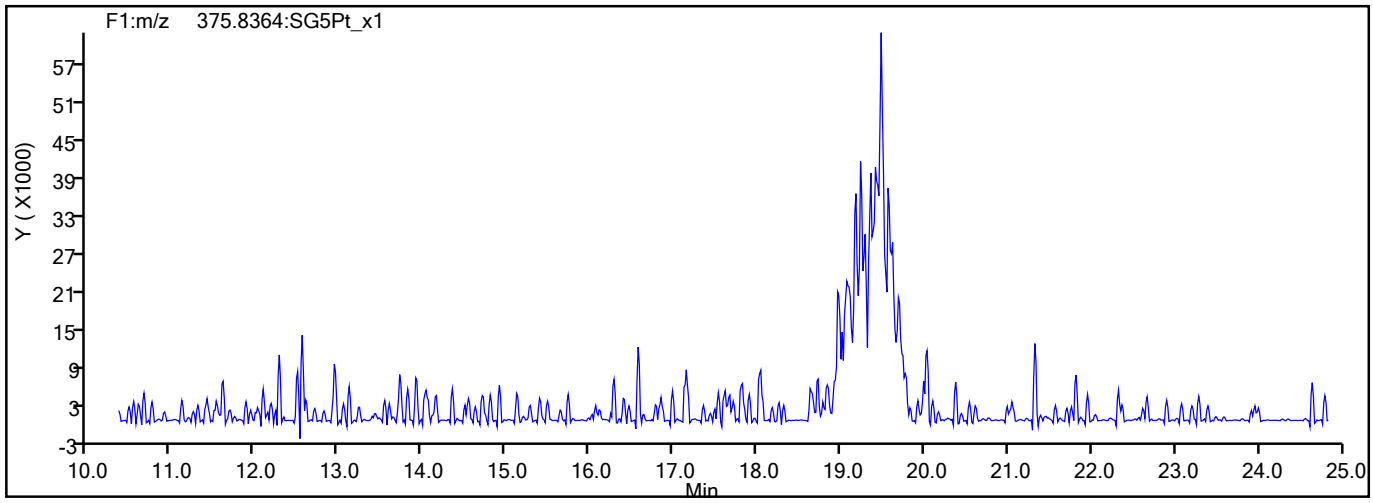

778591

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

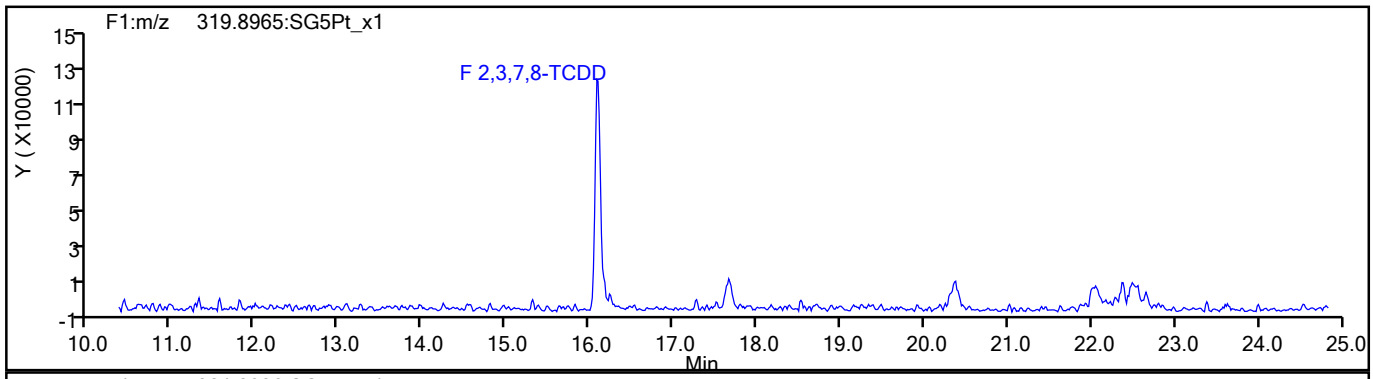

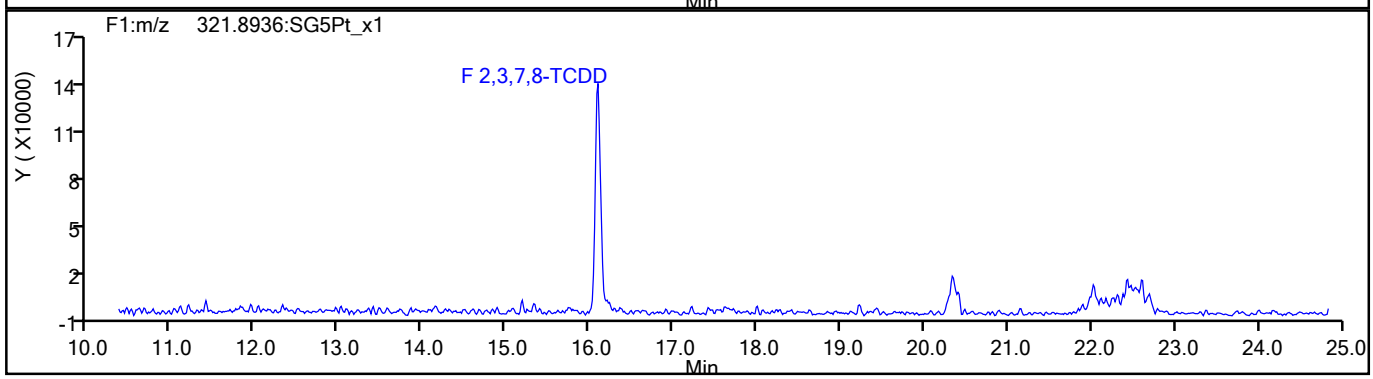

TCDD Standards

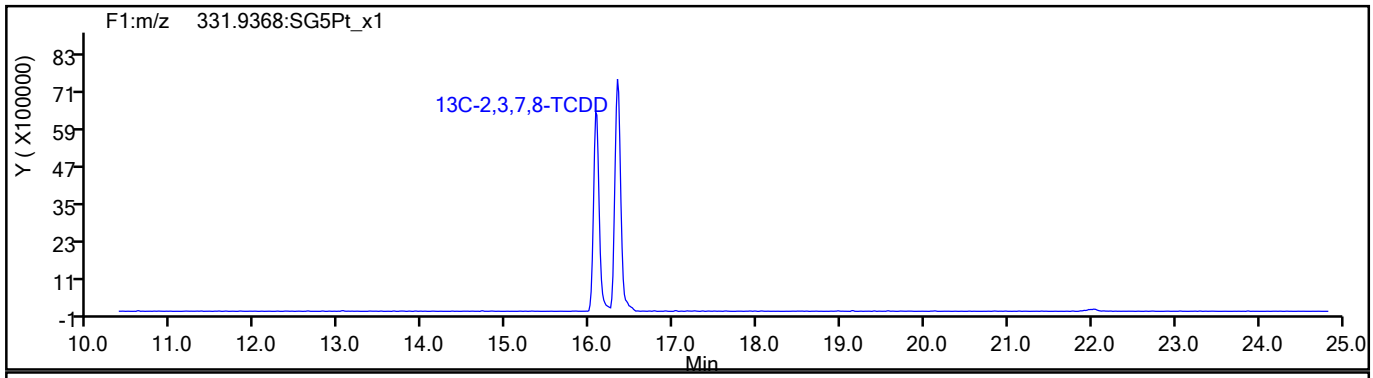

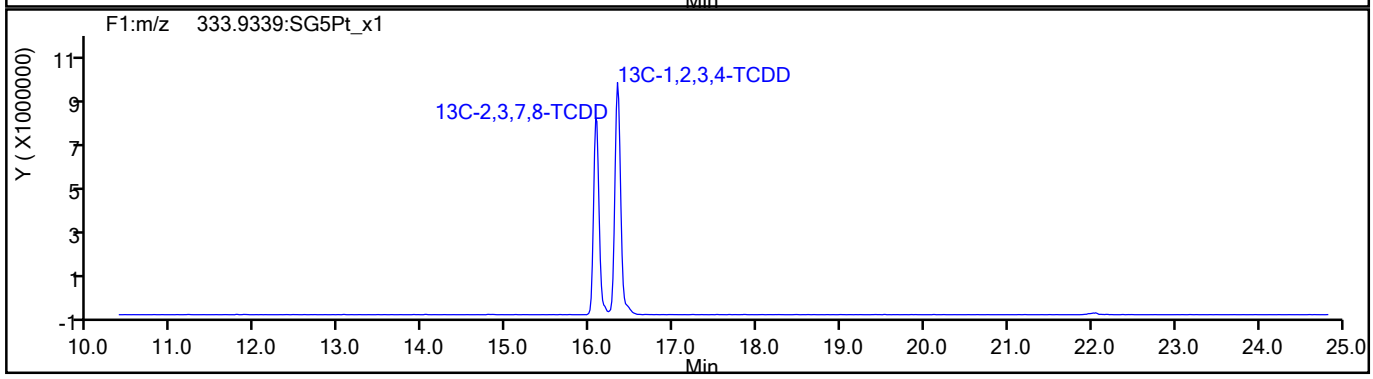

778592

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

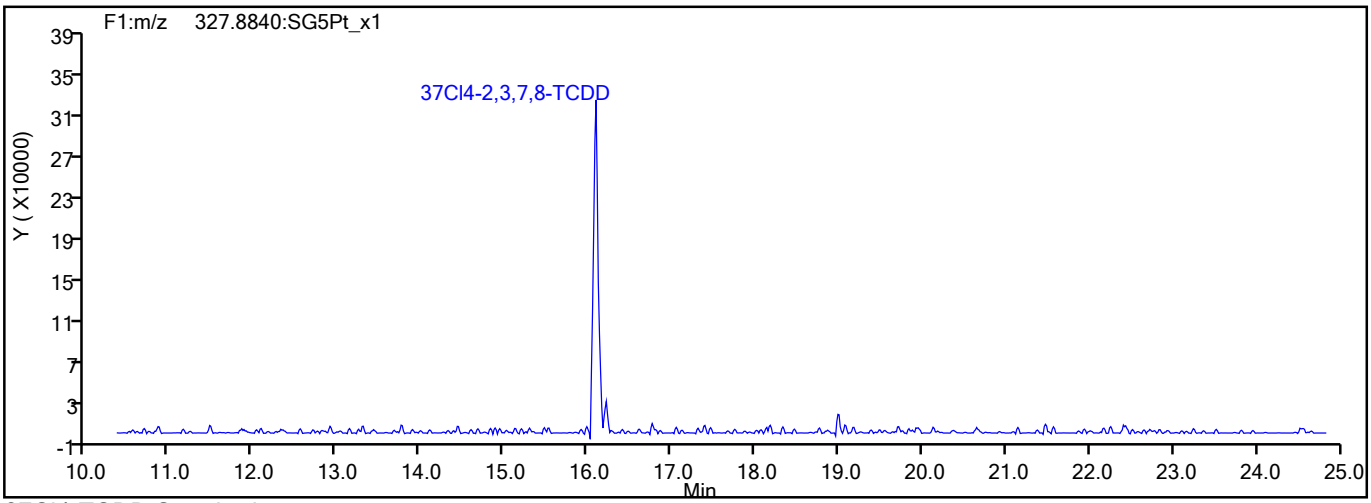

37Cl4-TCDD Standards

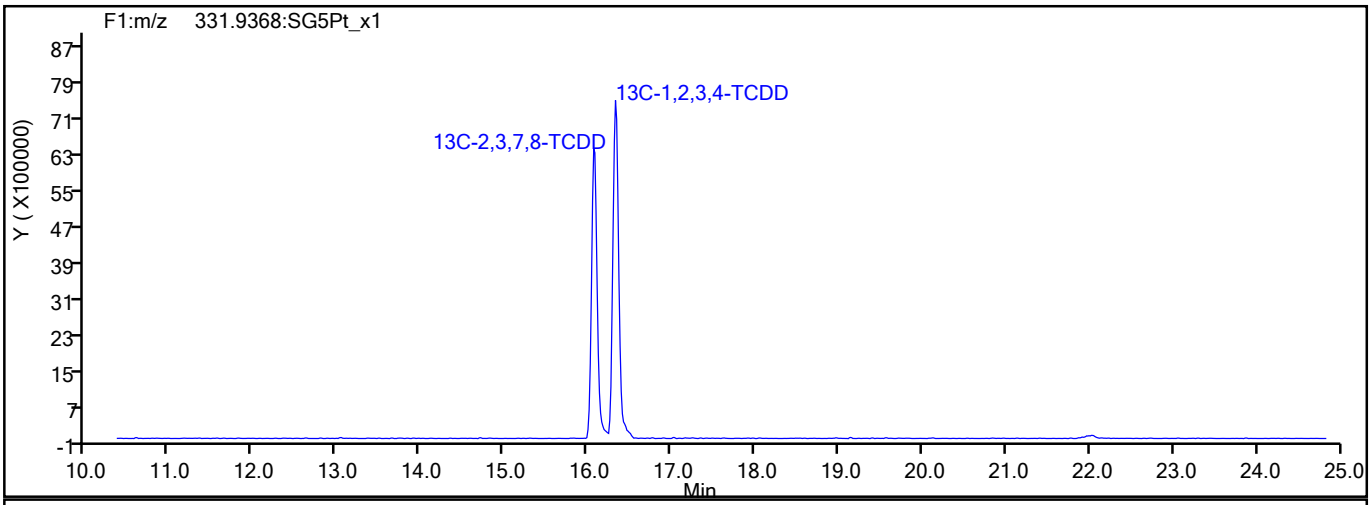

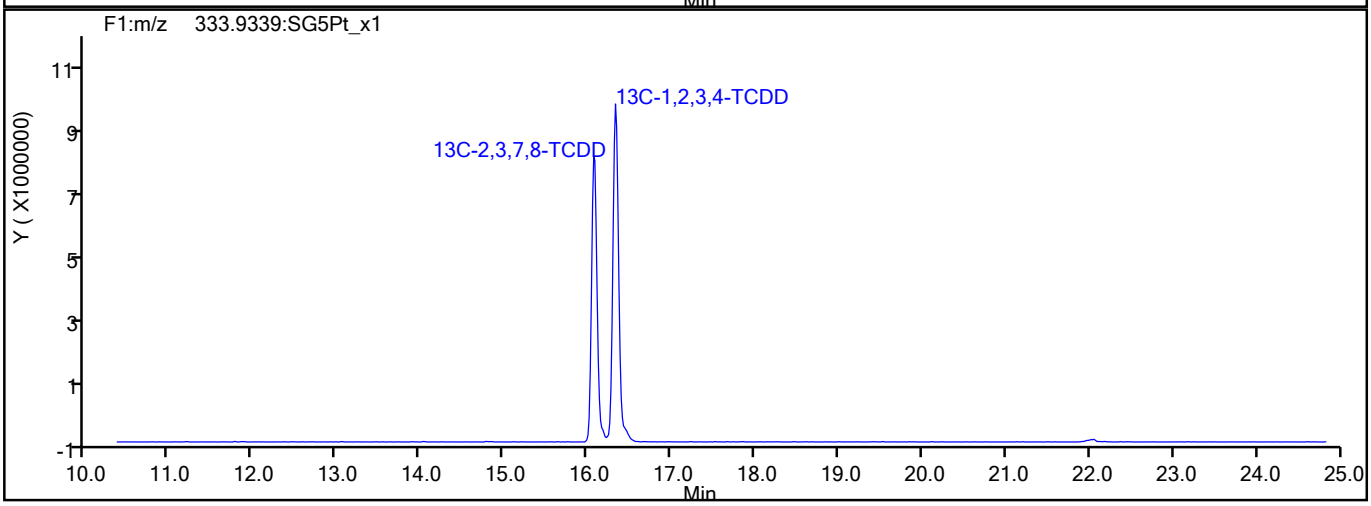

778593

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

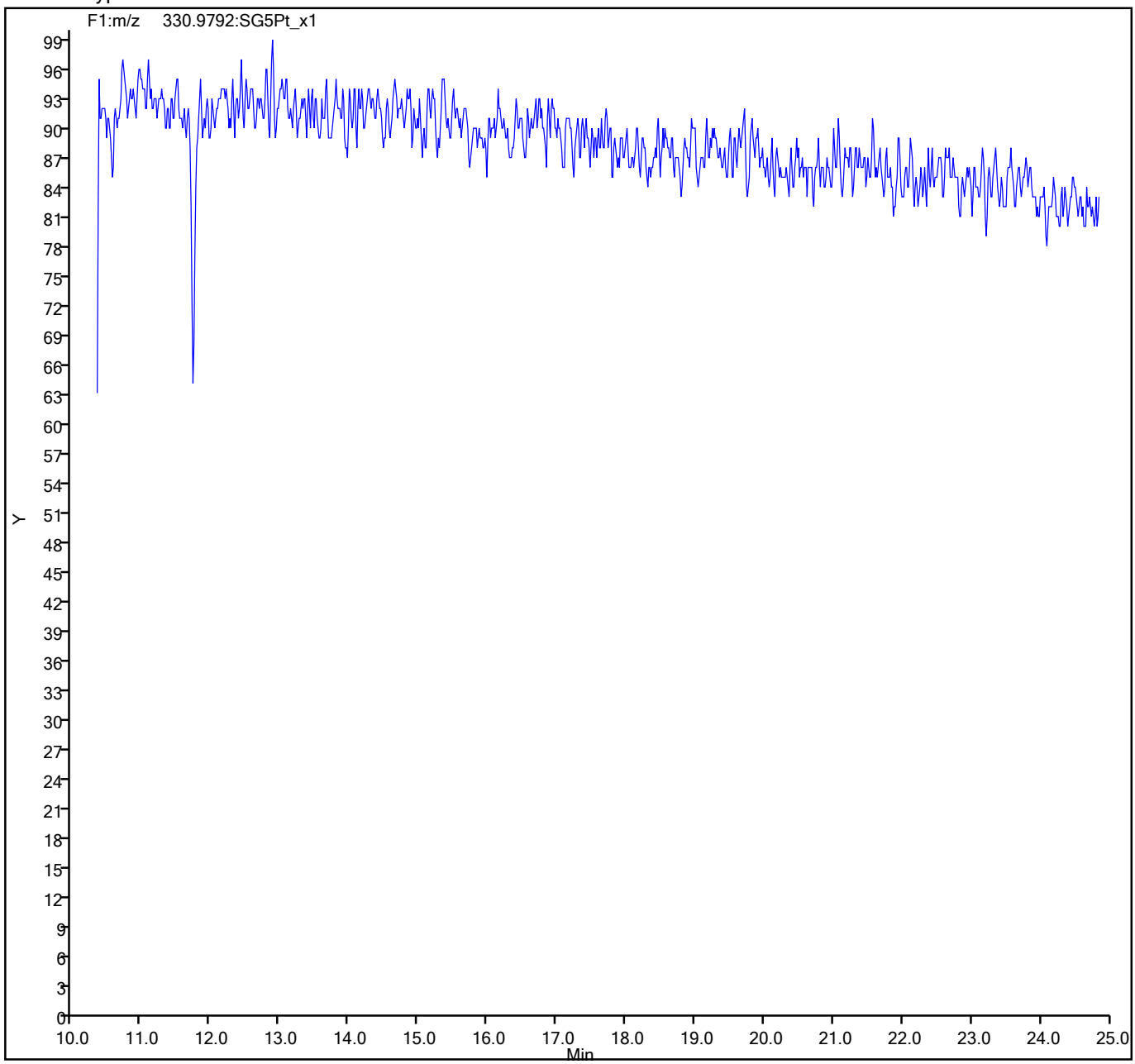

778594

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

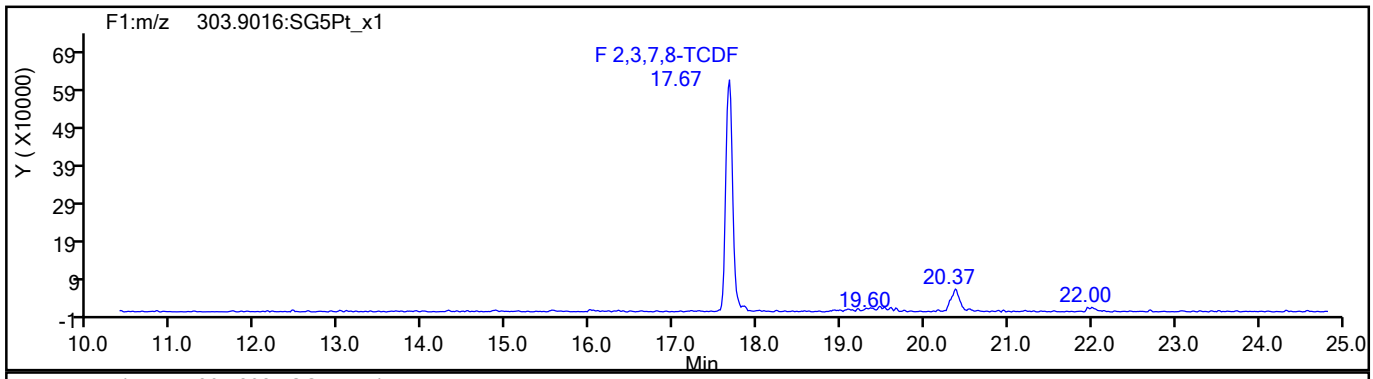

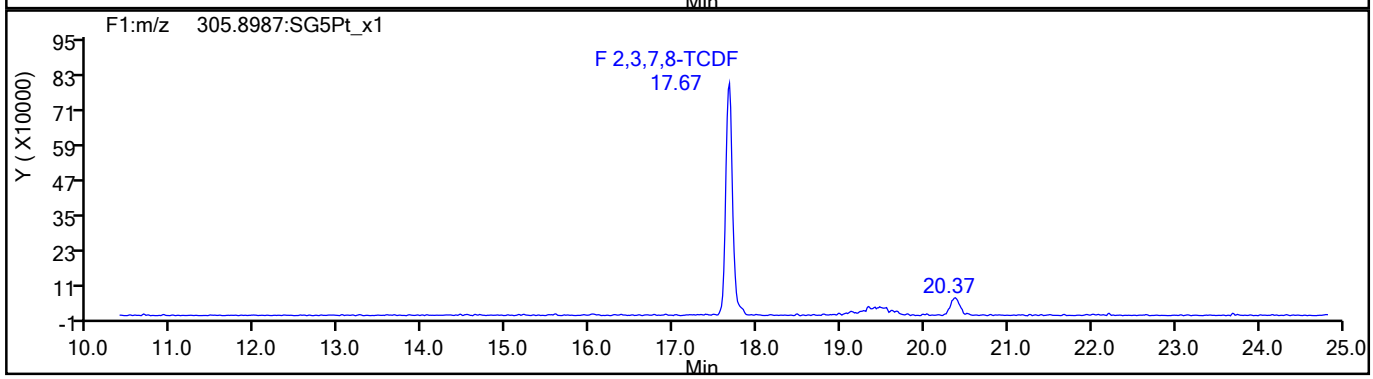

TCDF Standards

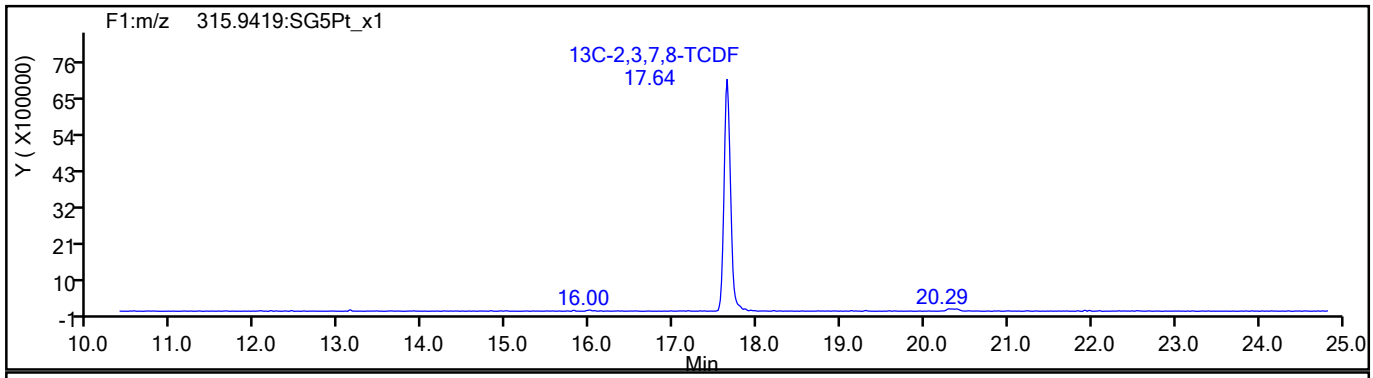

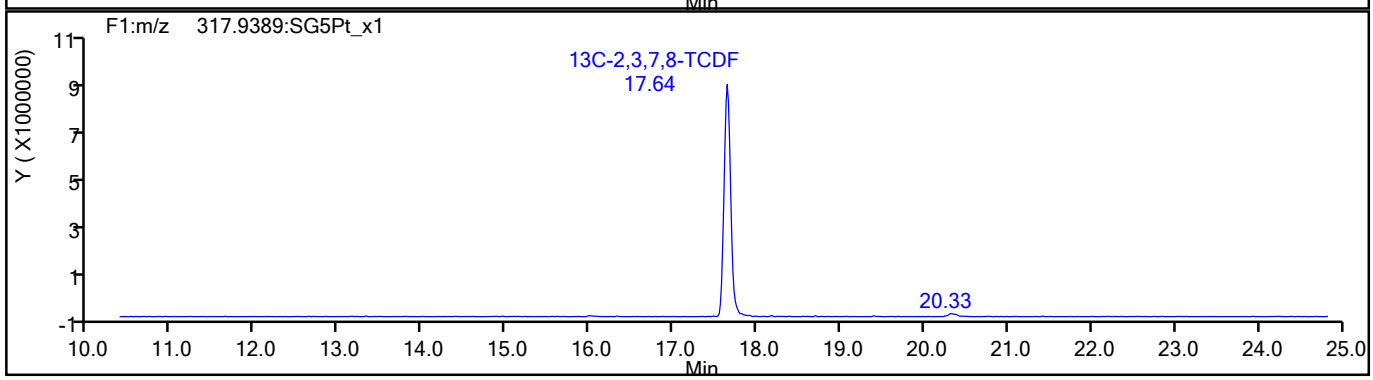

778597

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

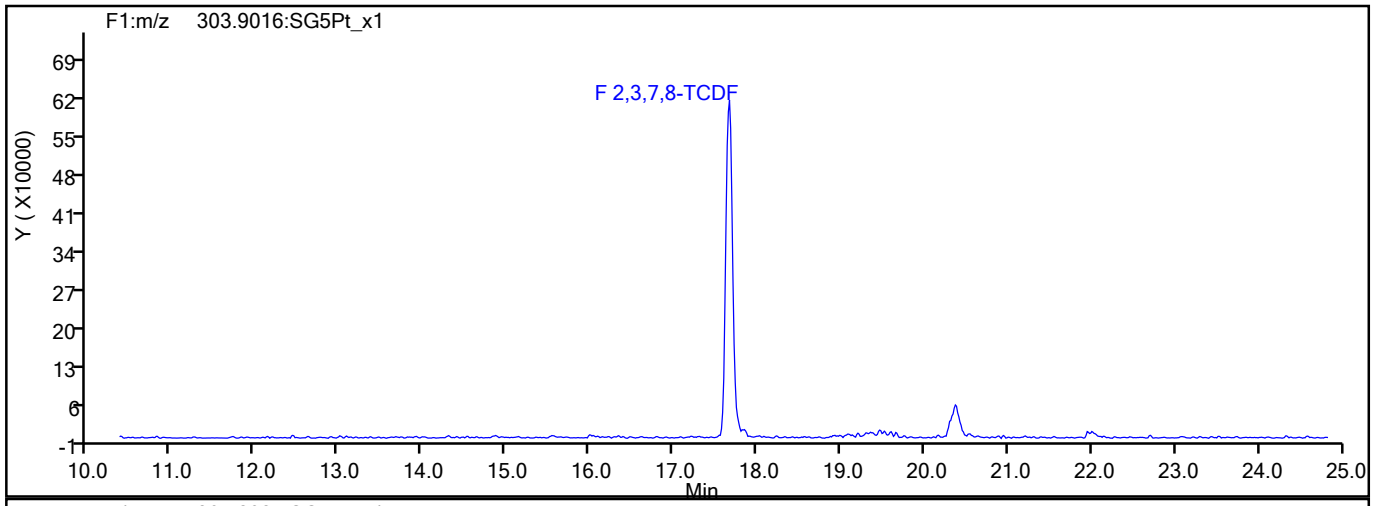

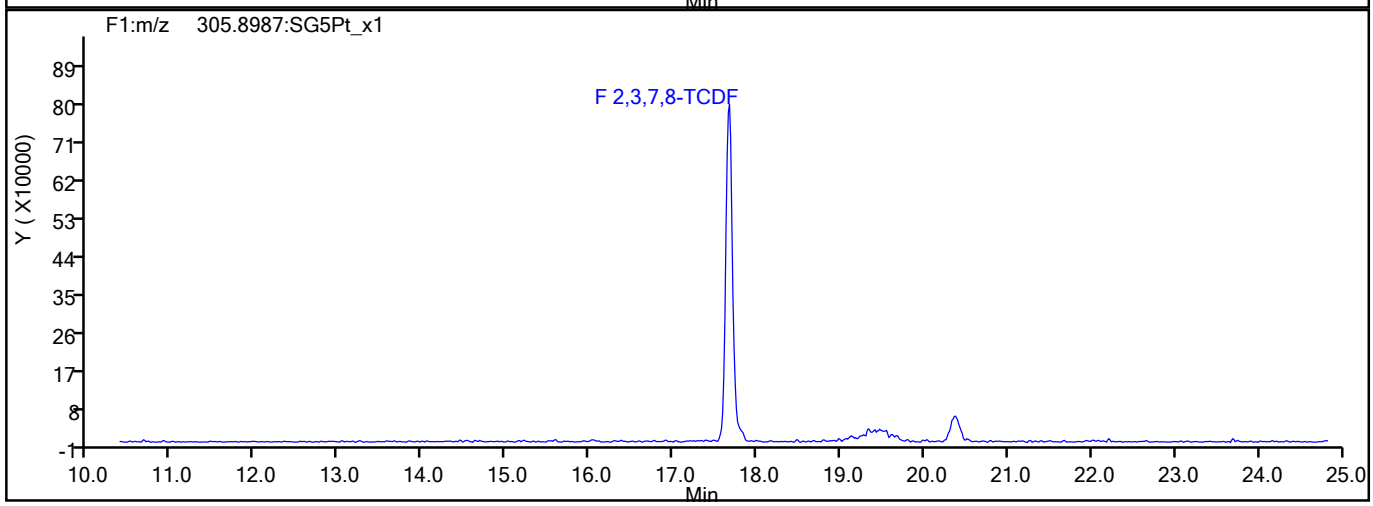

TCDF Interference Mass

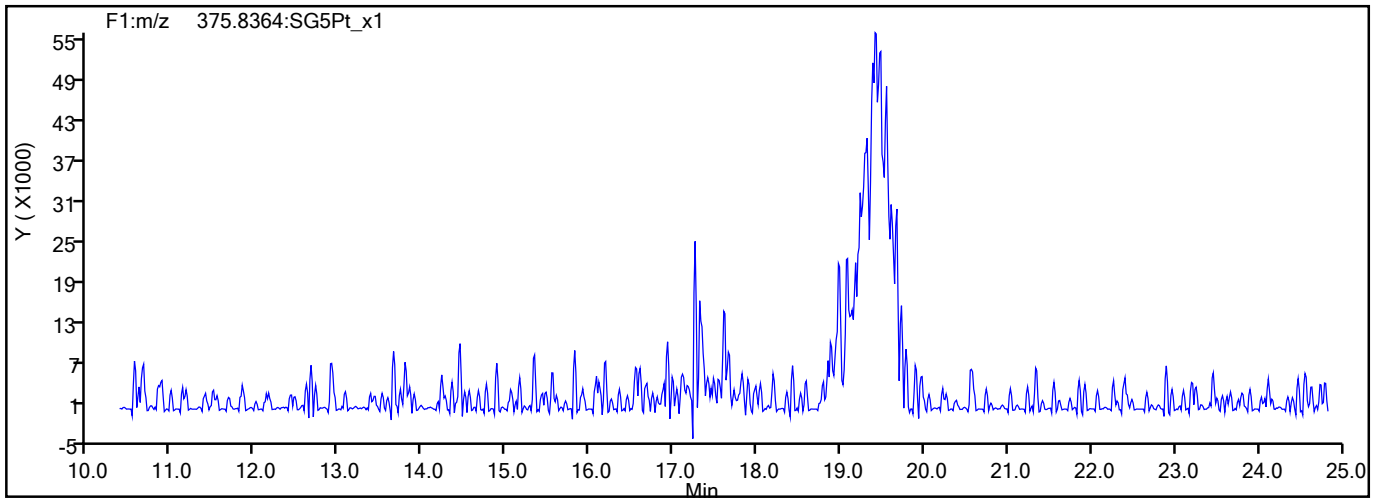

778598

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

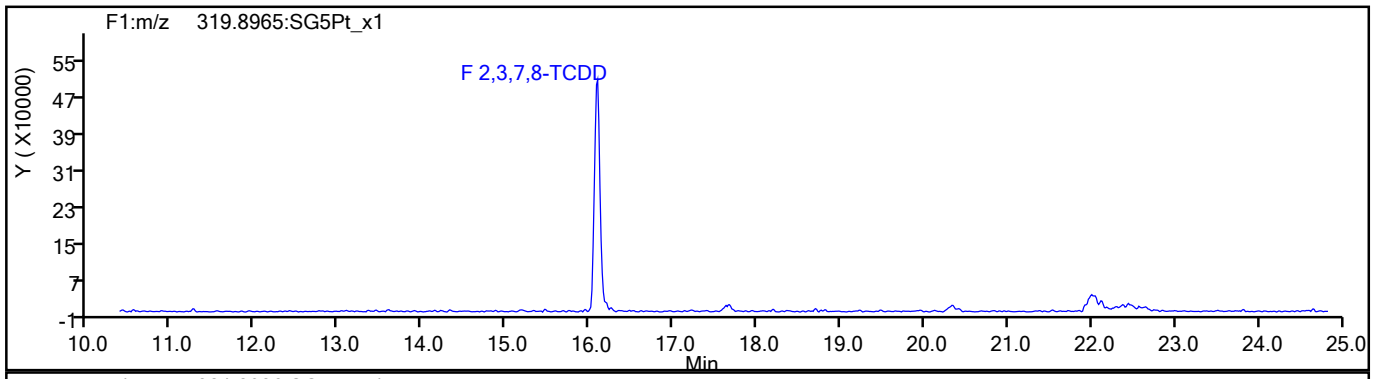

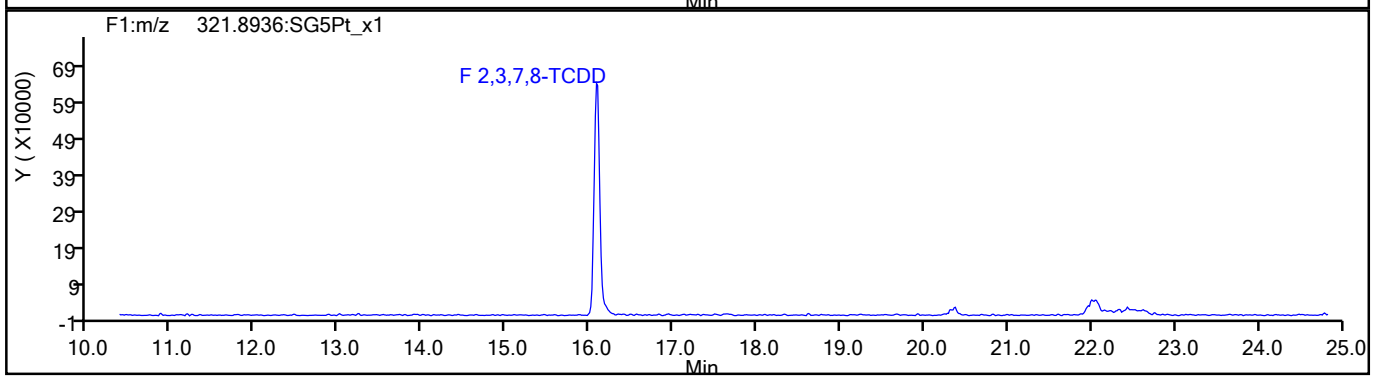

TCDD Standards

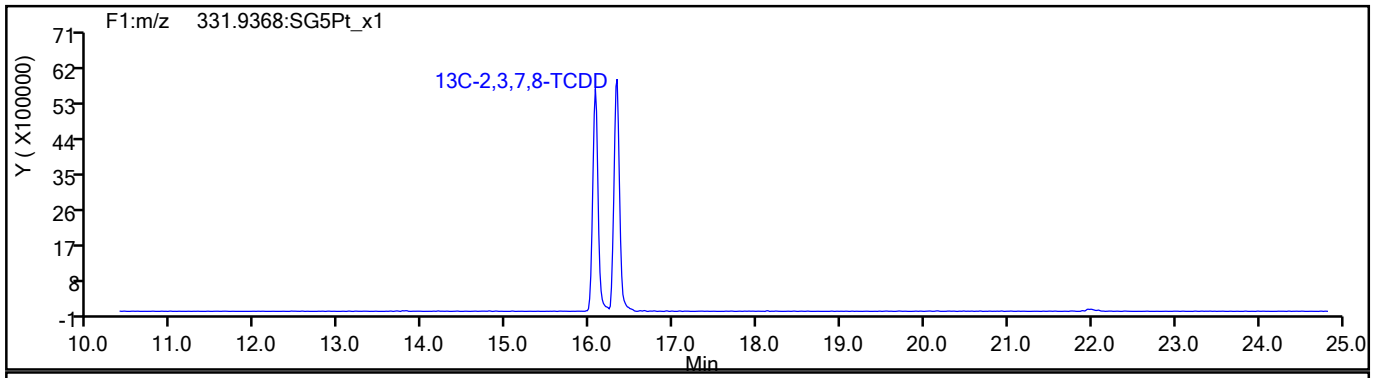

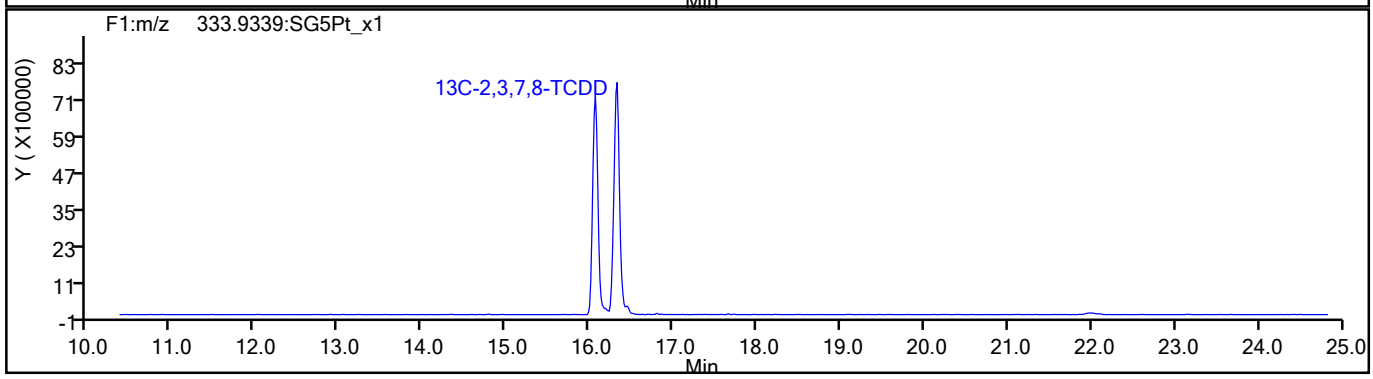

778599

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

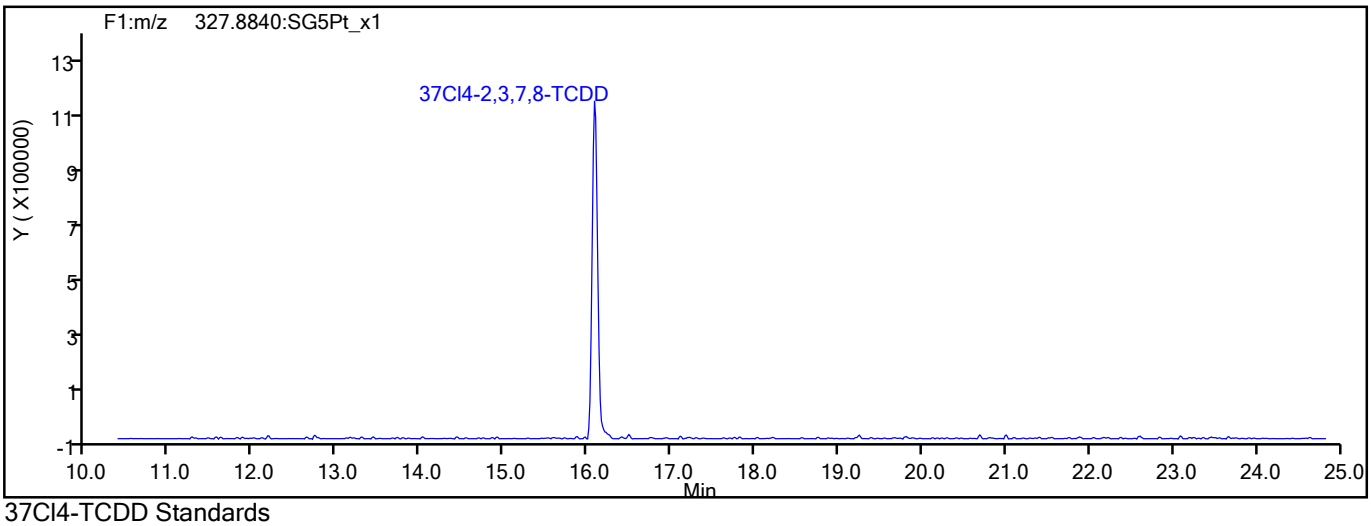

37Cl4-TCDD Standards

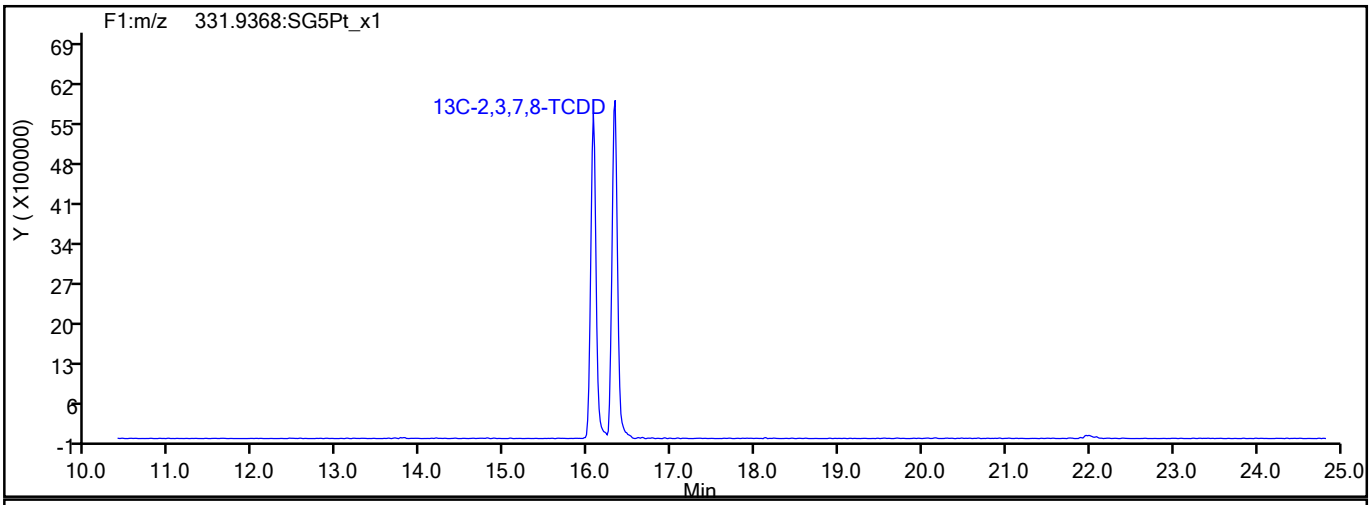

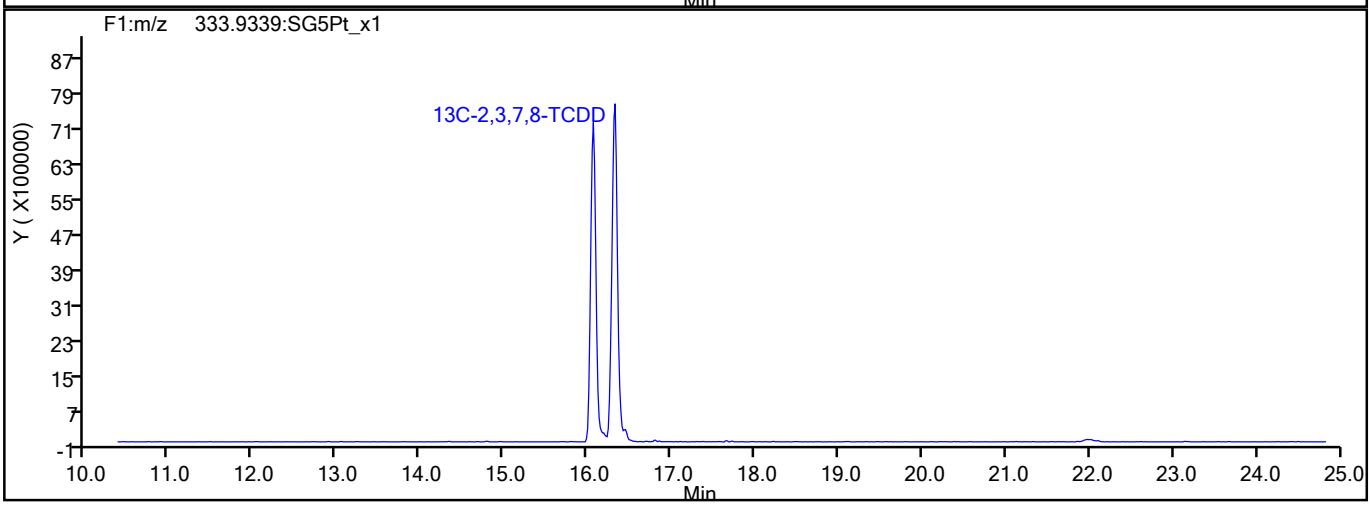

778600

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

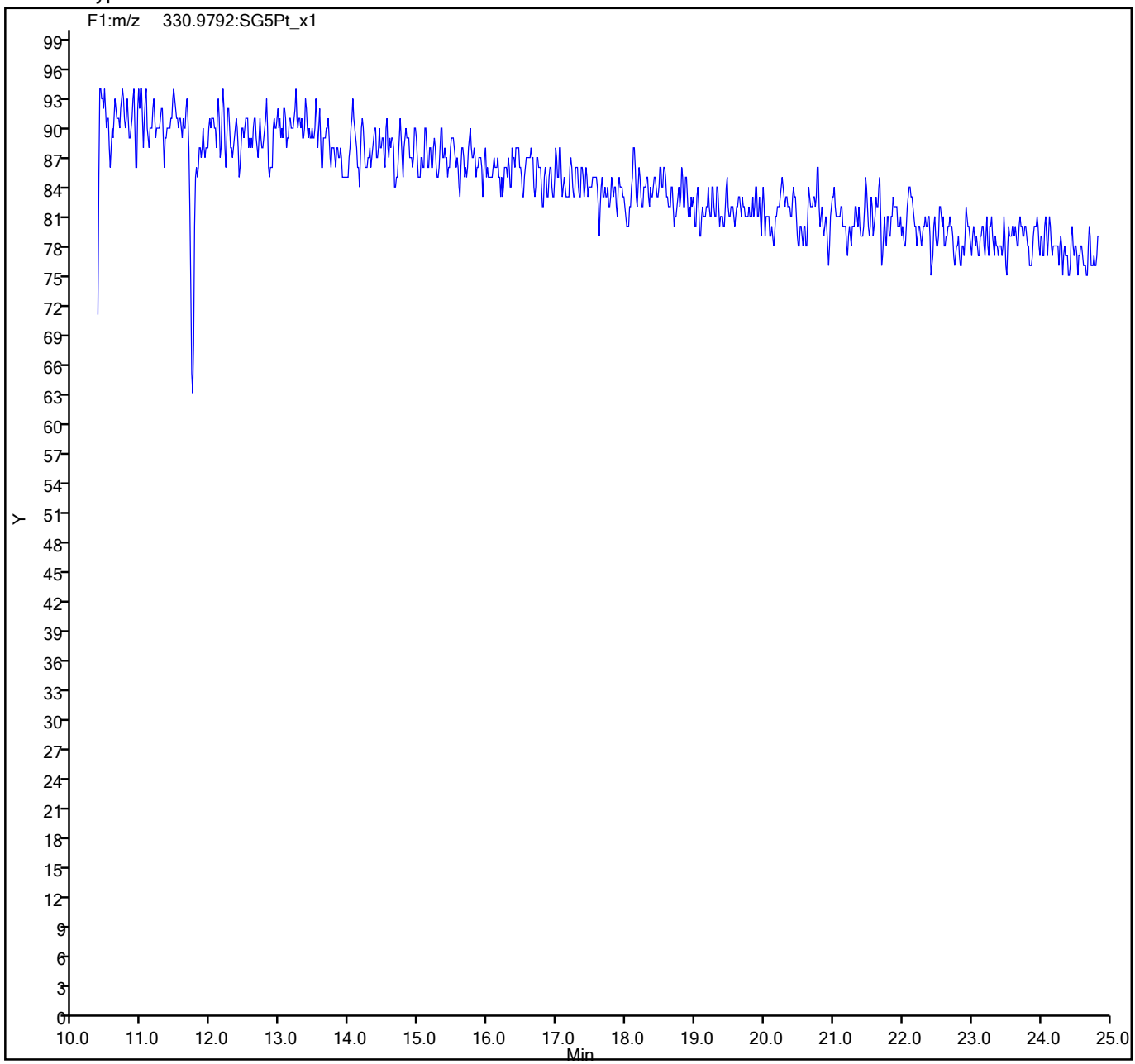

778601

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

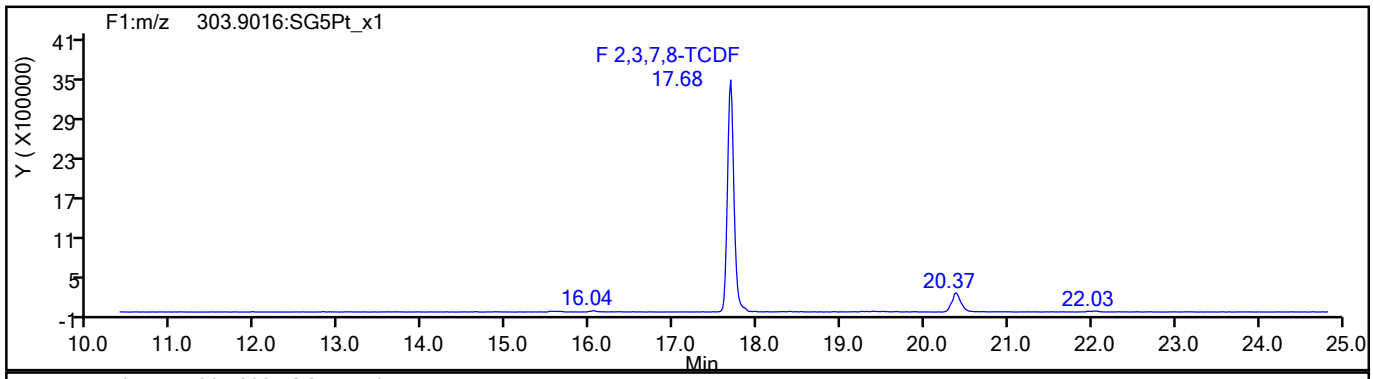

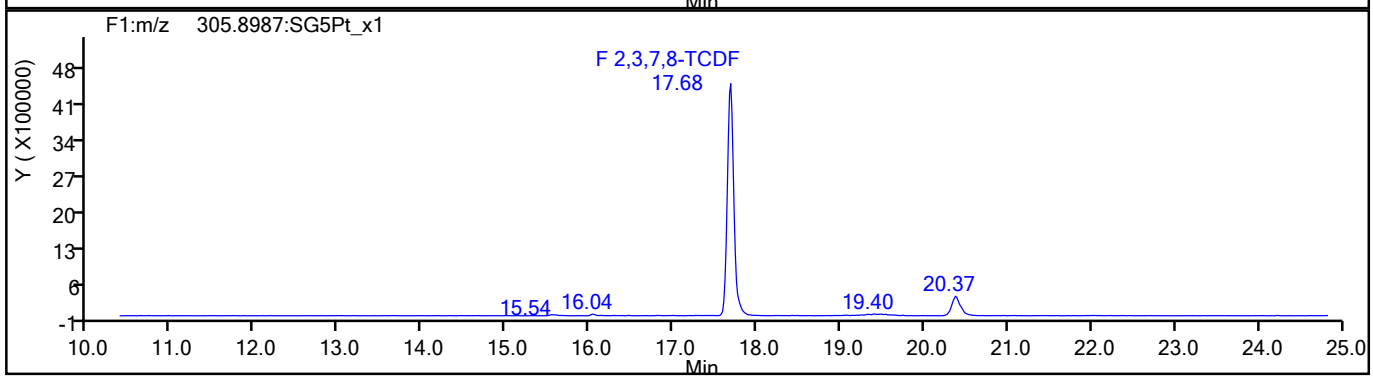

TCDF Standards

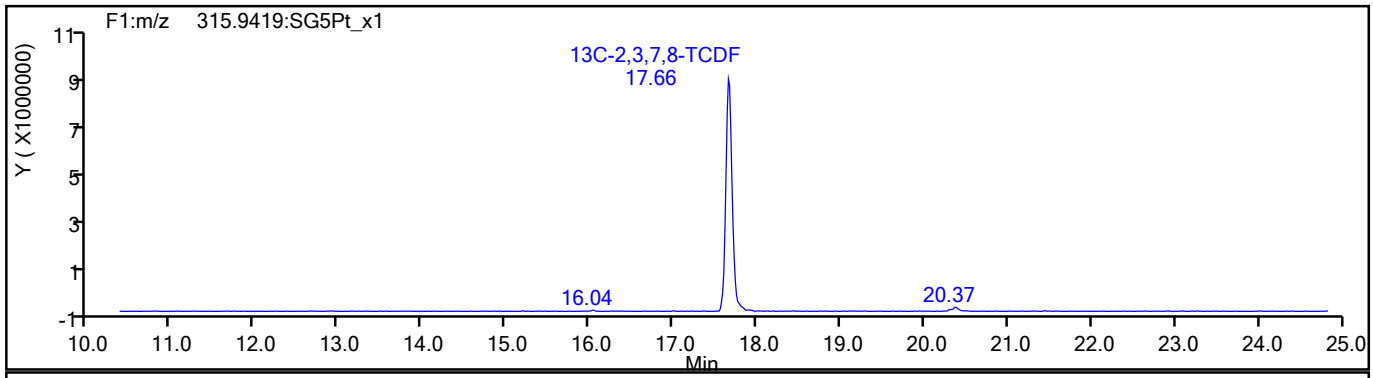

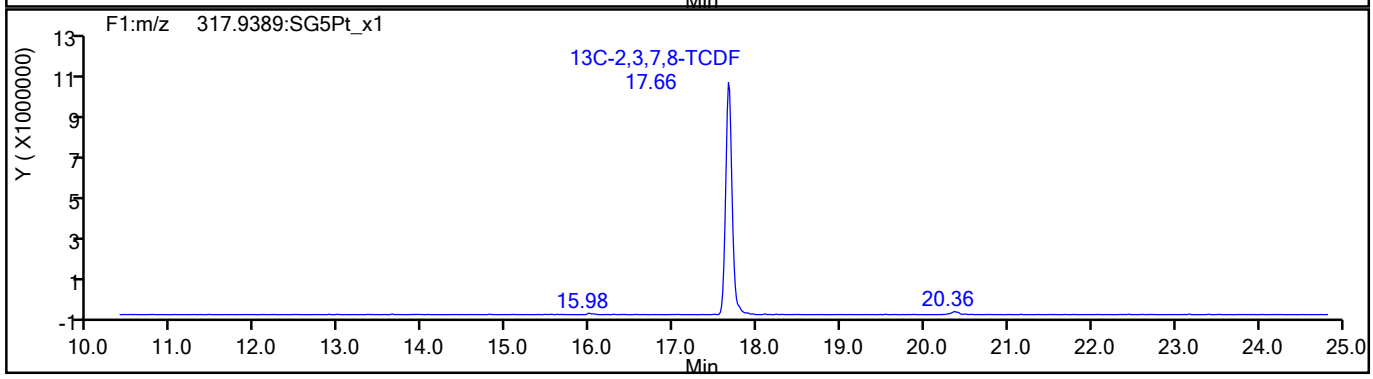

778604

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

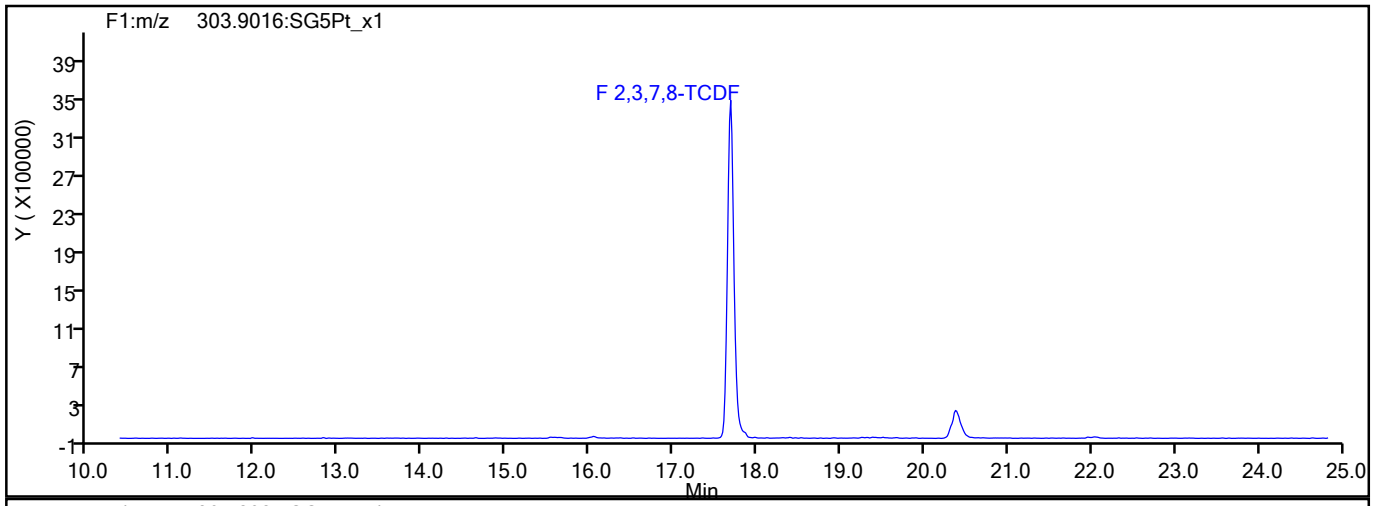

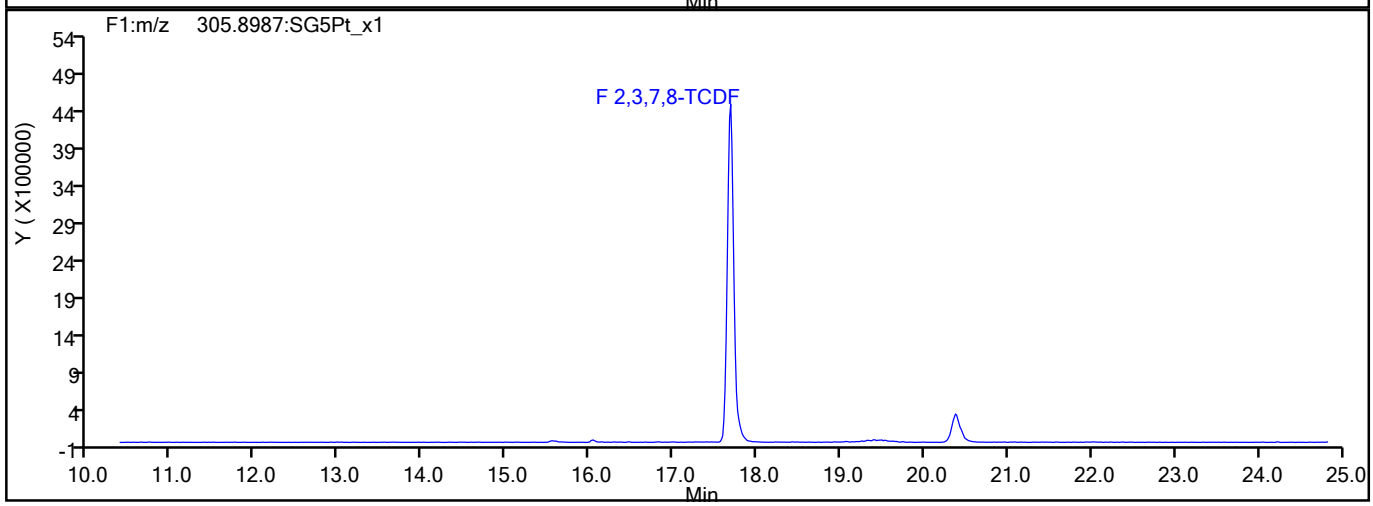

TCDF Interference Mass

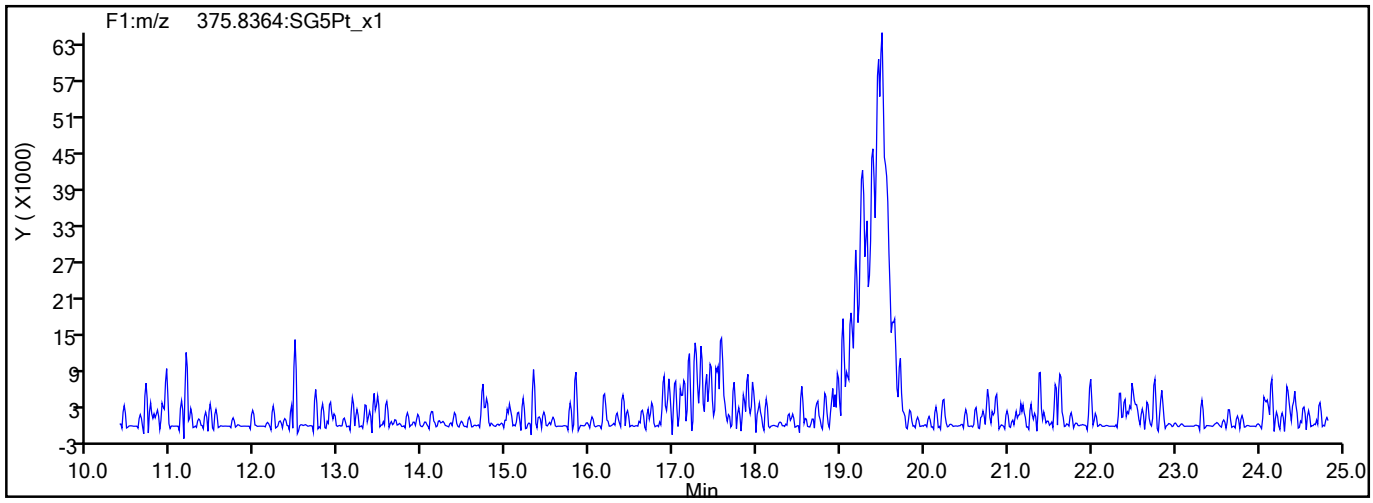

778605

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

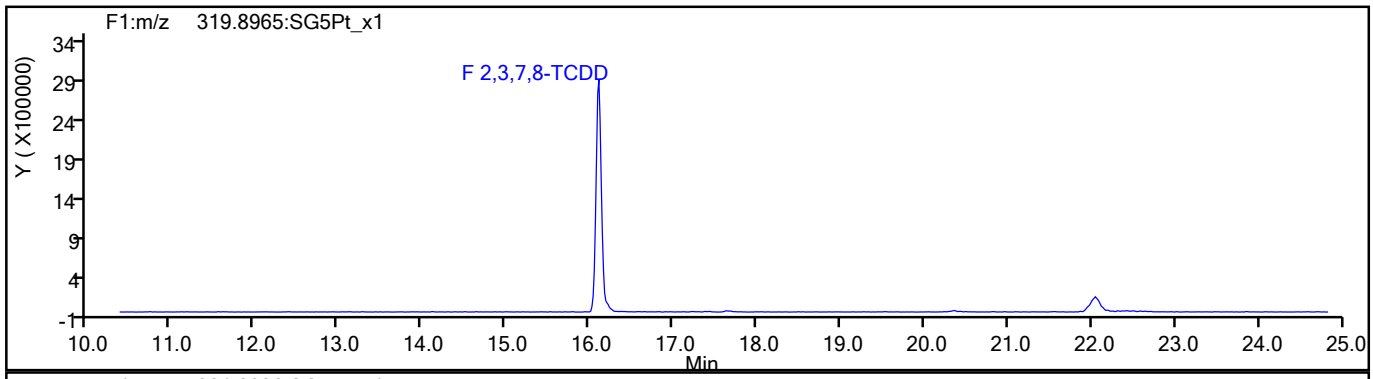

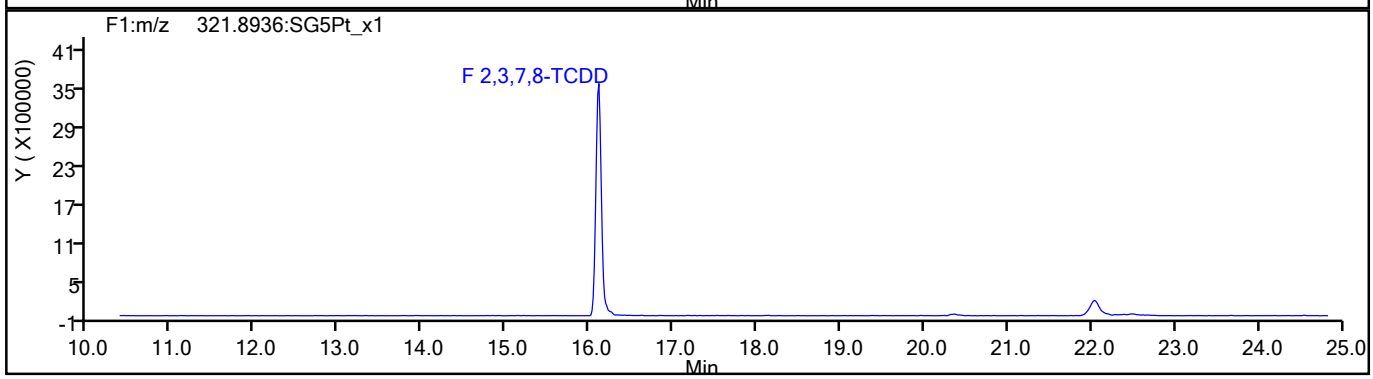

TCDD Standards

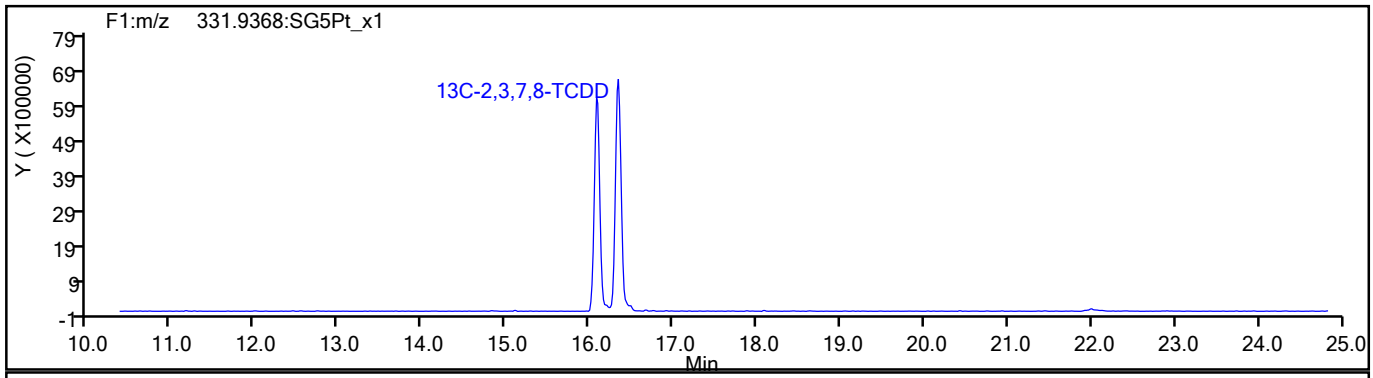

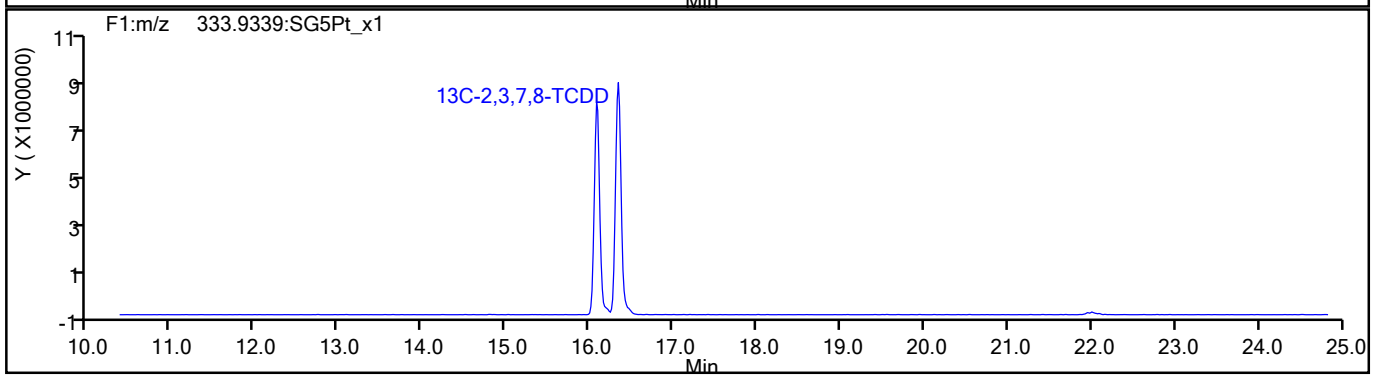

778606

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

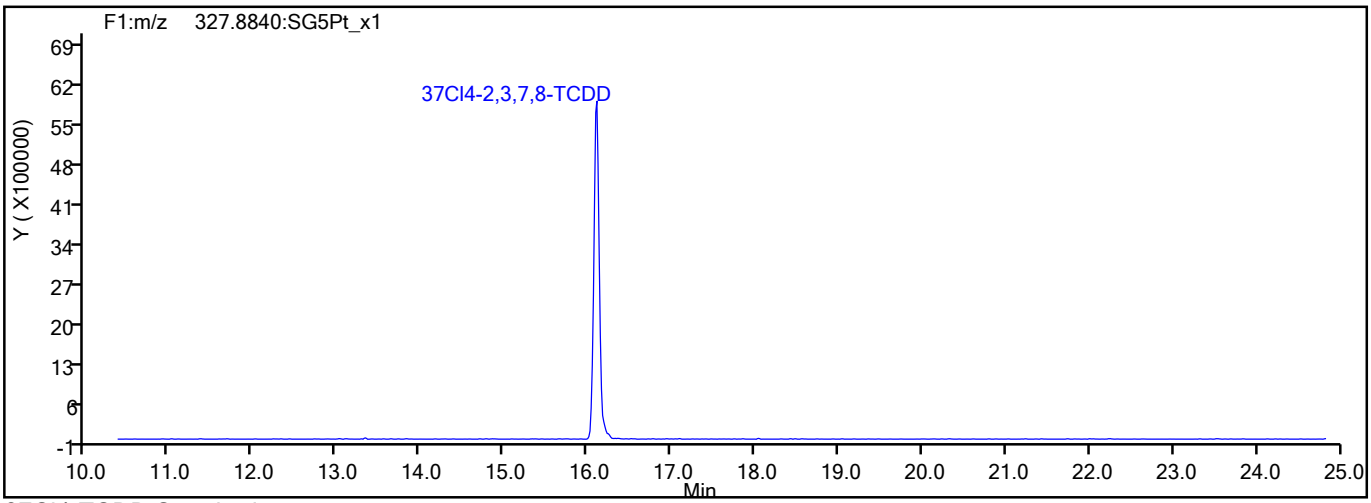

37Cl4-TCDD Standards

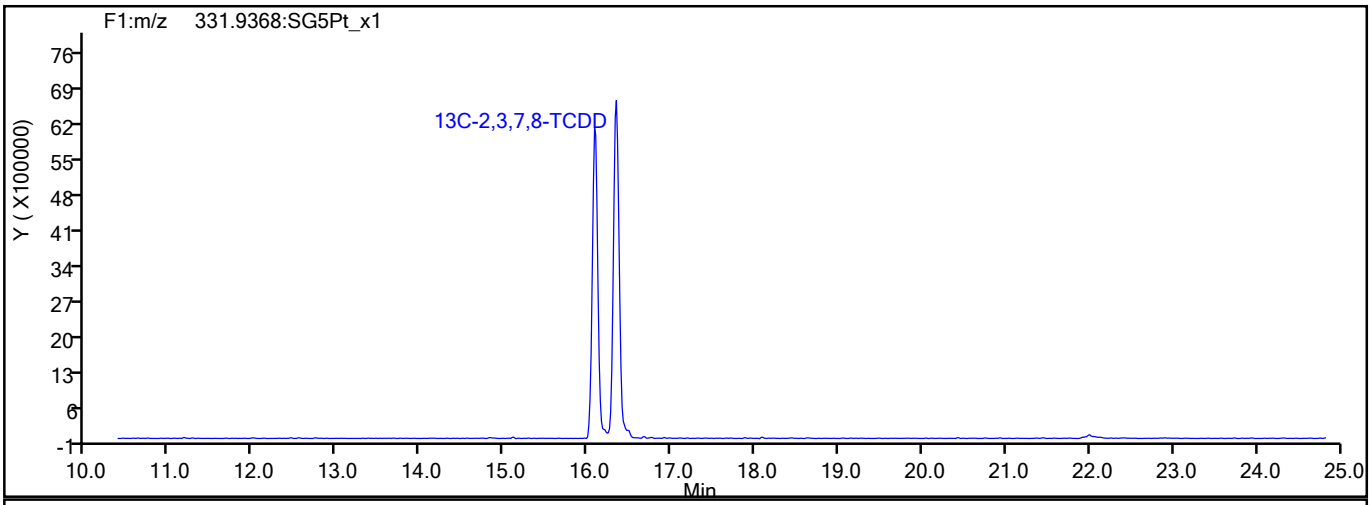

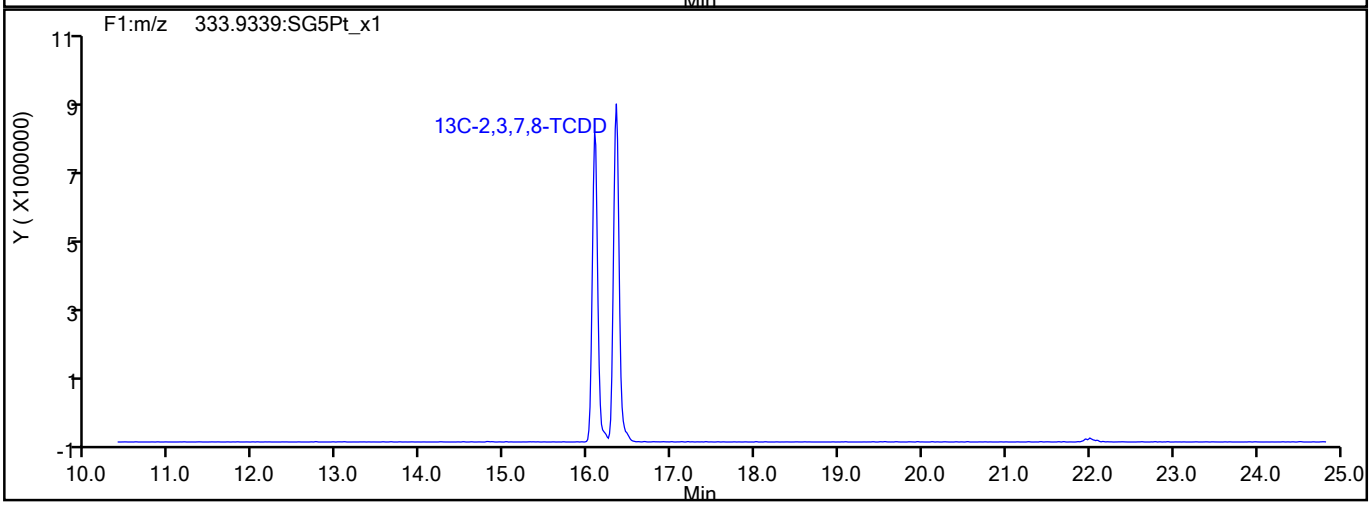

778607

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

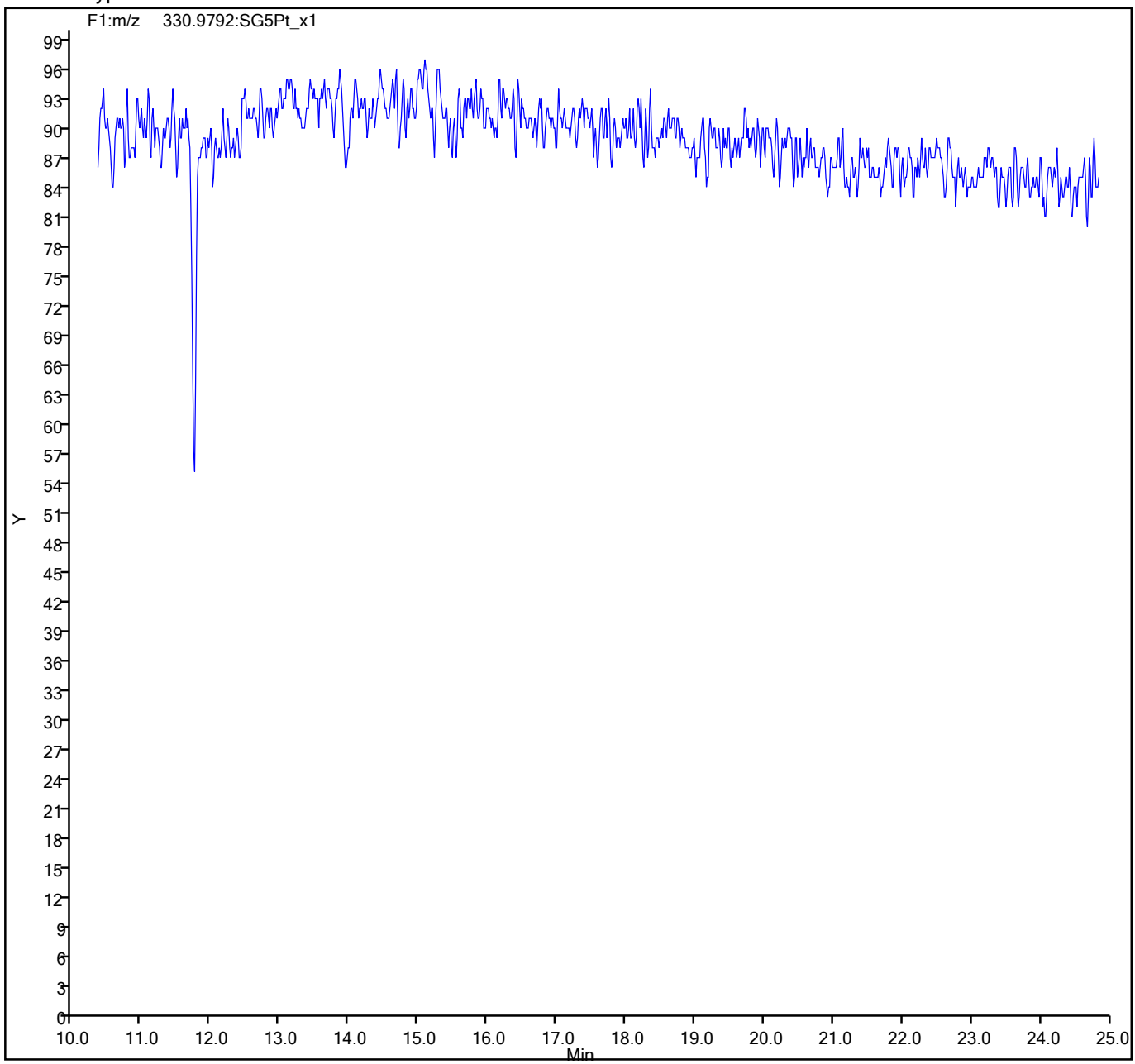

778608

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

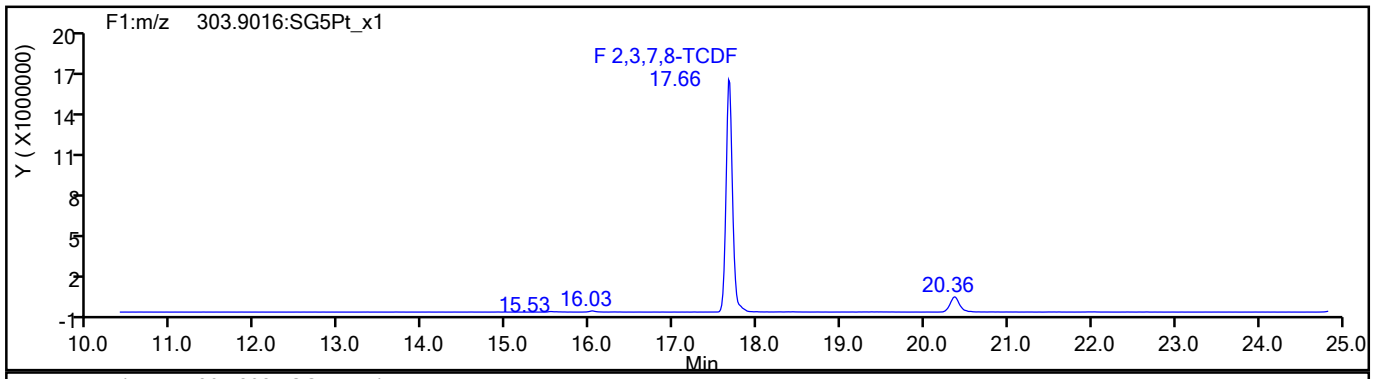

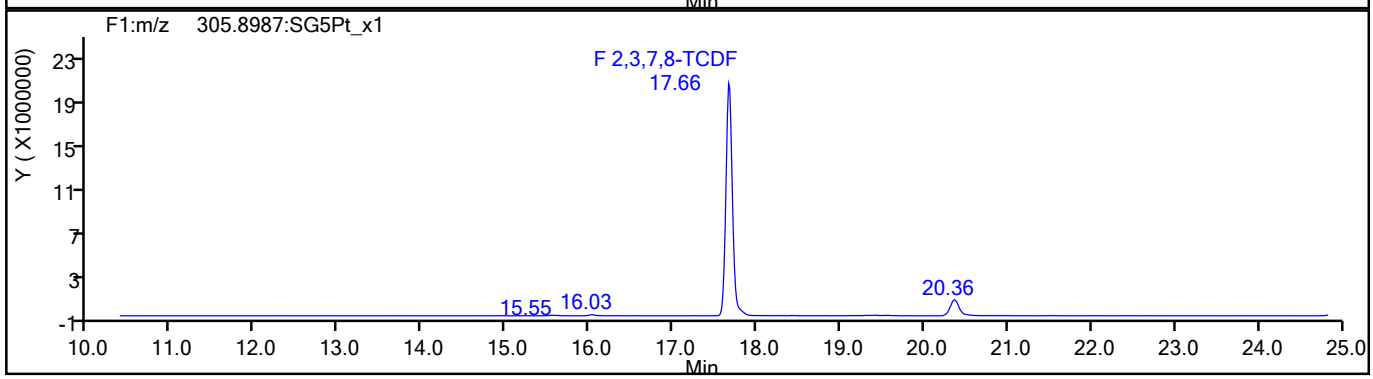

TCDF Standards

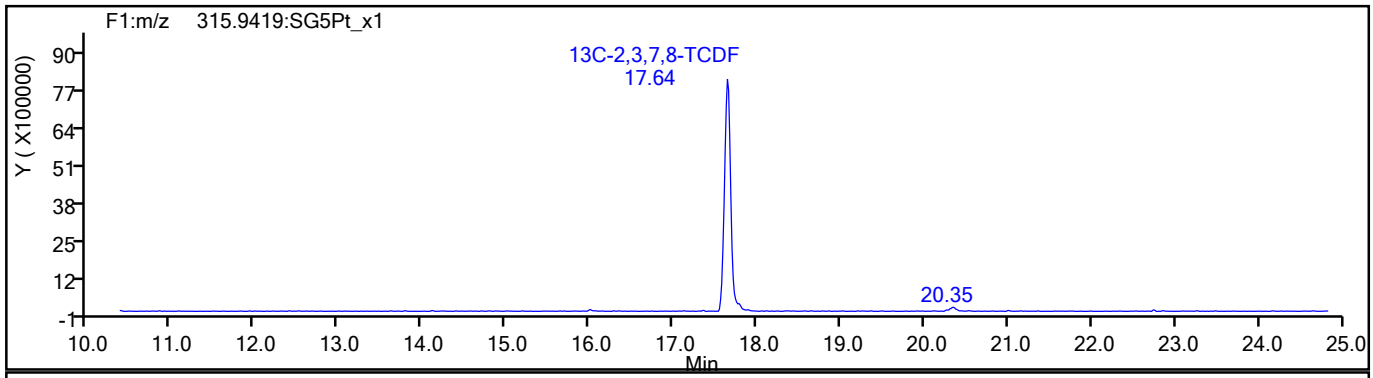

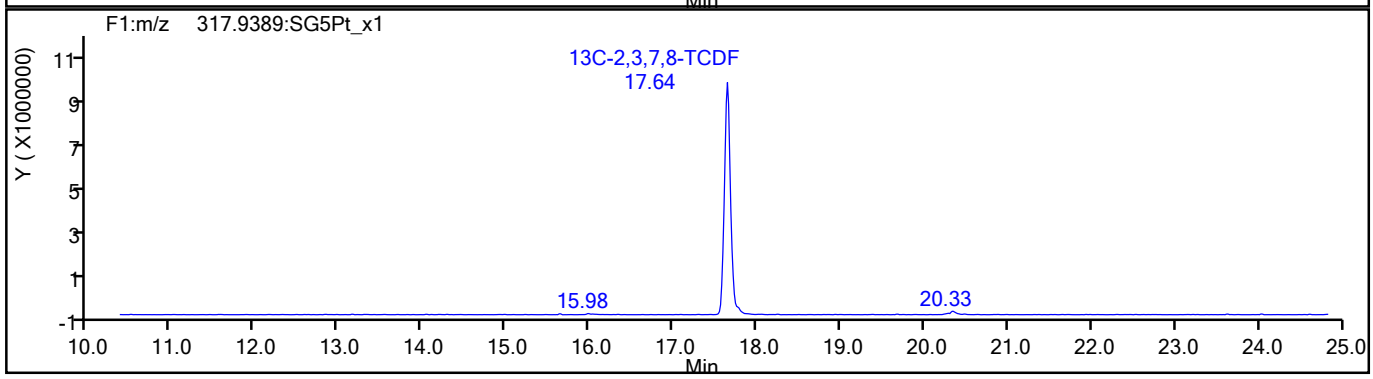

778611

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

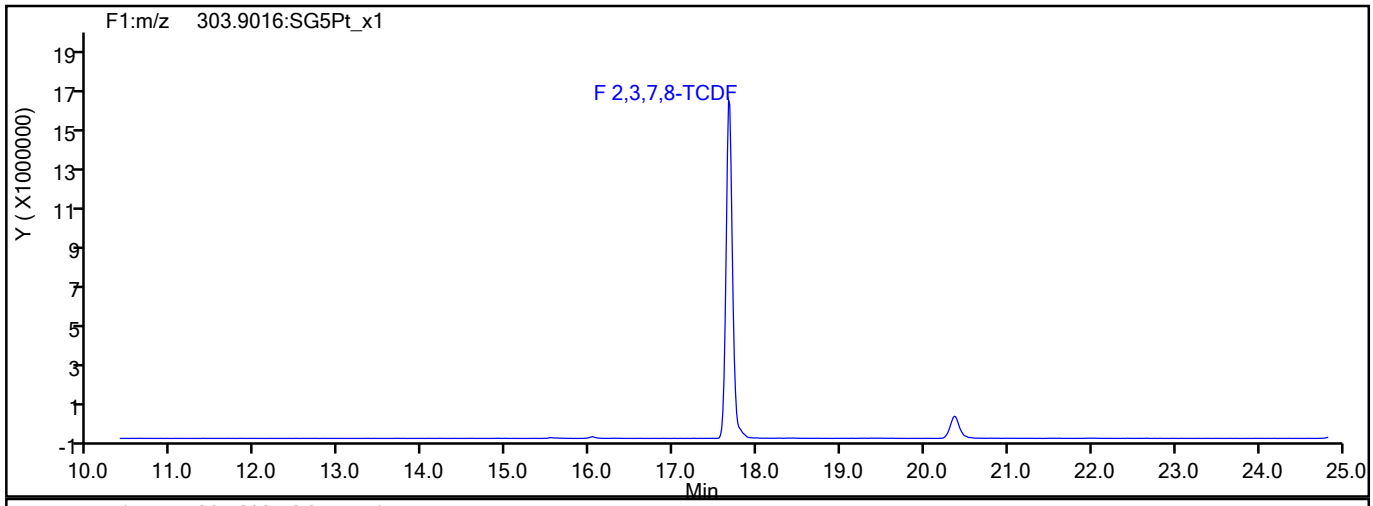

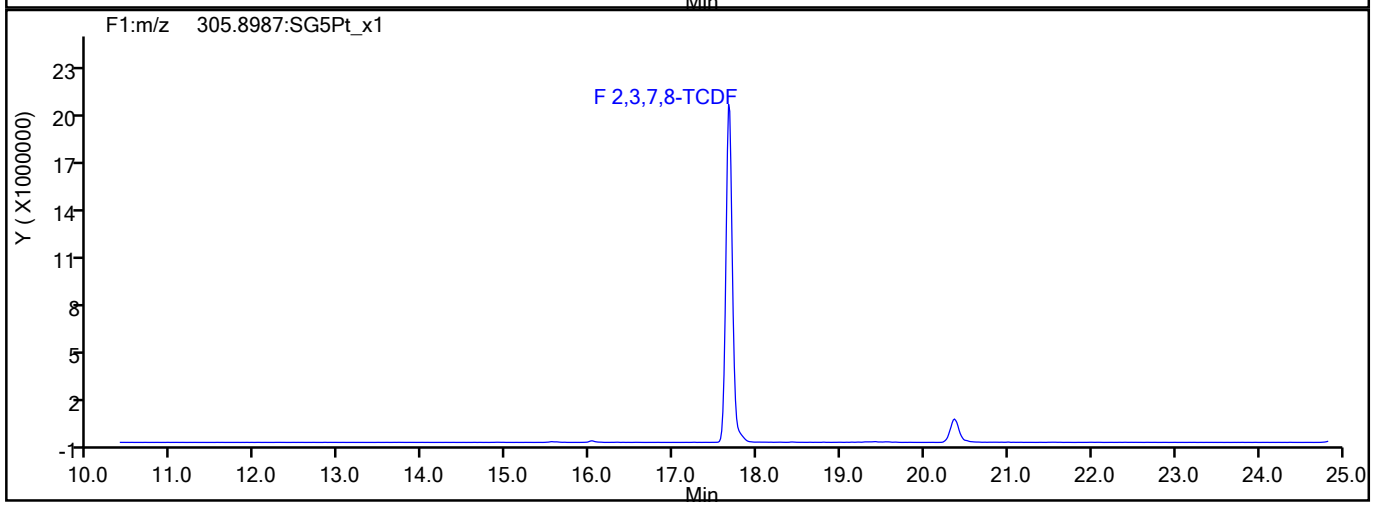

TCDF Interference Mass

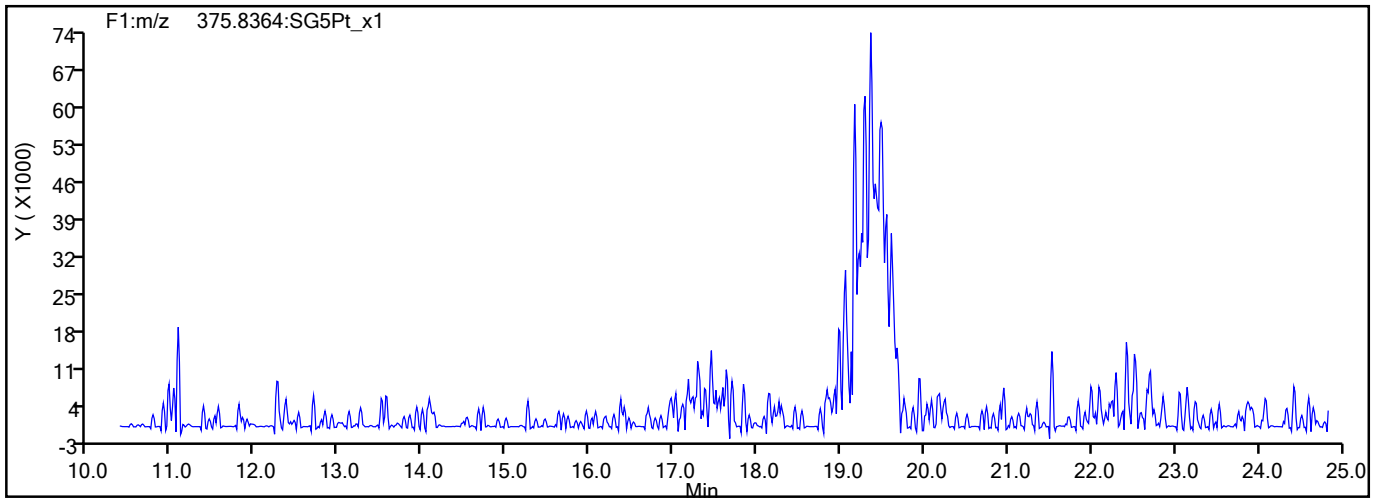

778612

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

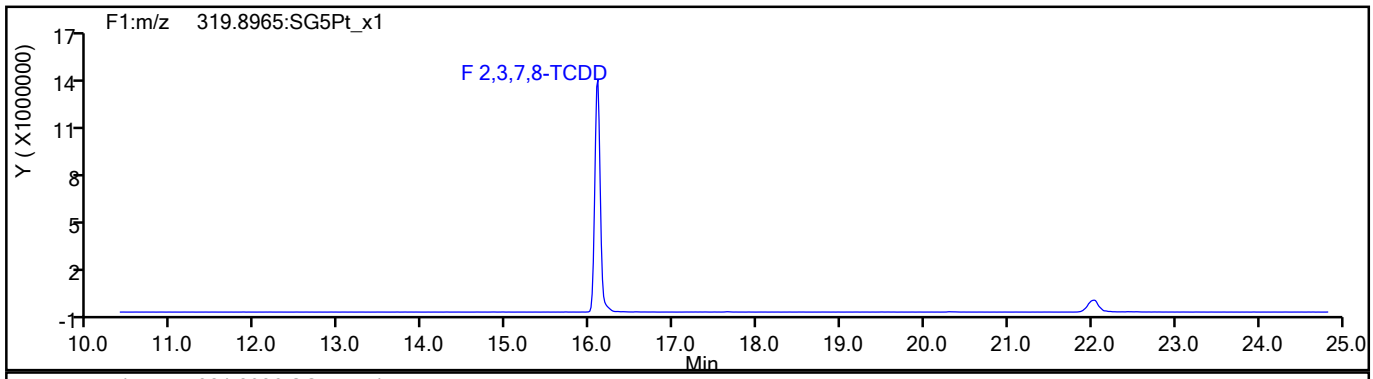

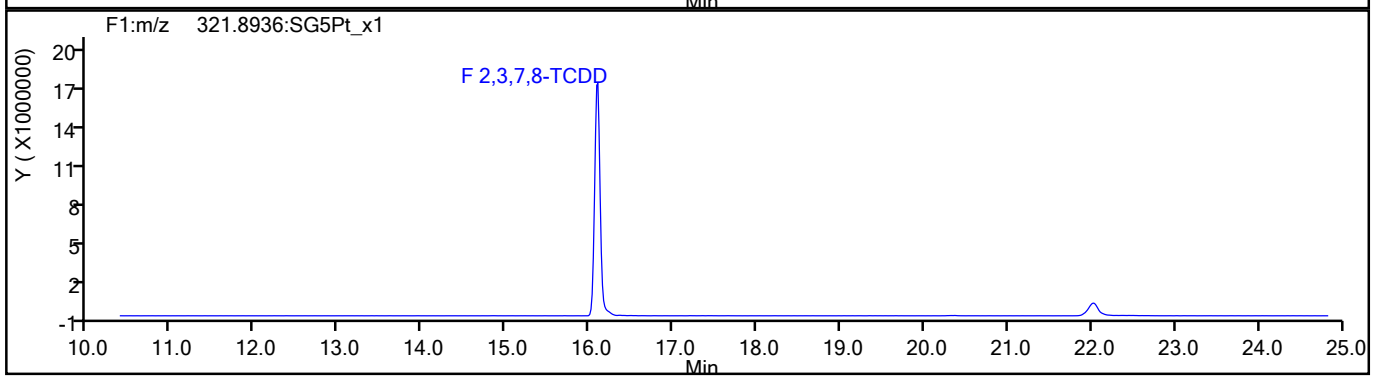

TCDD Standards

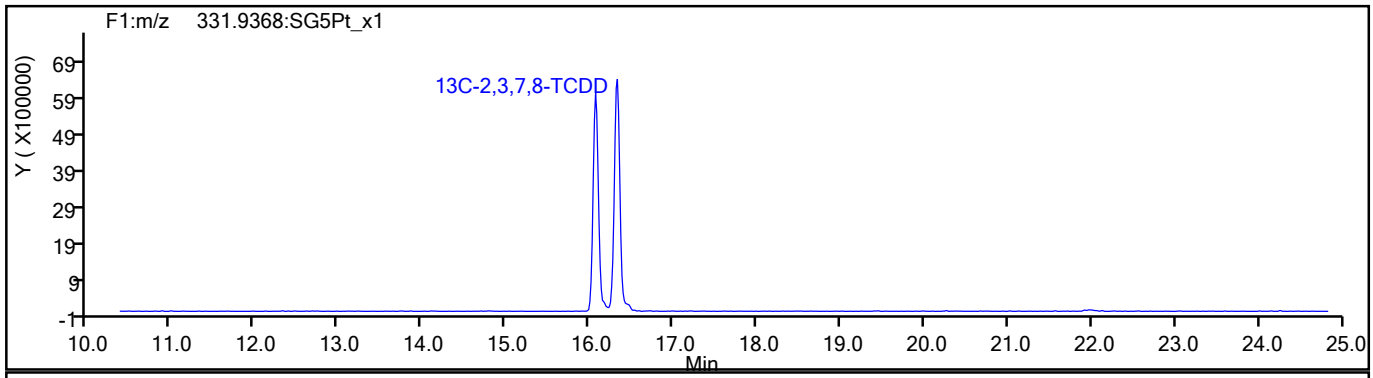

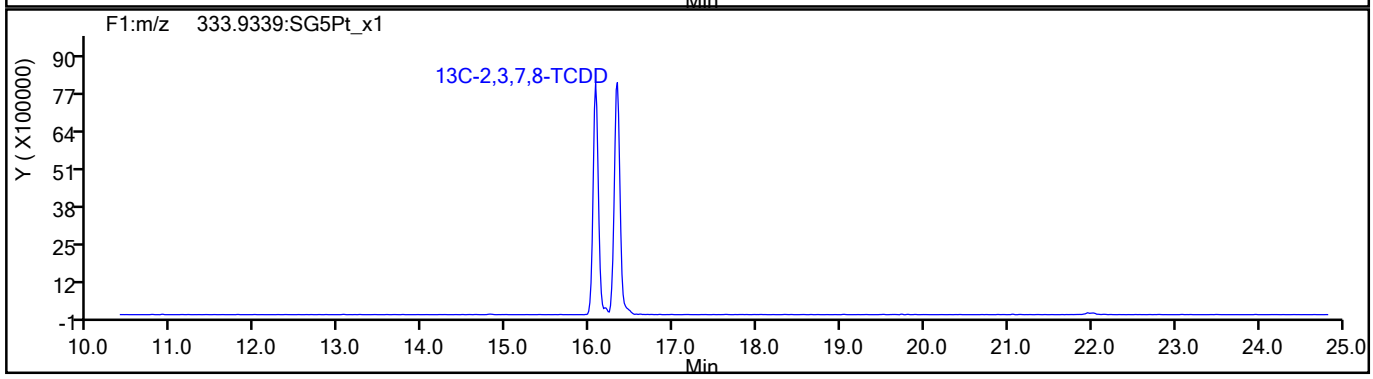

778613

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

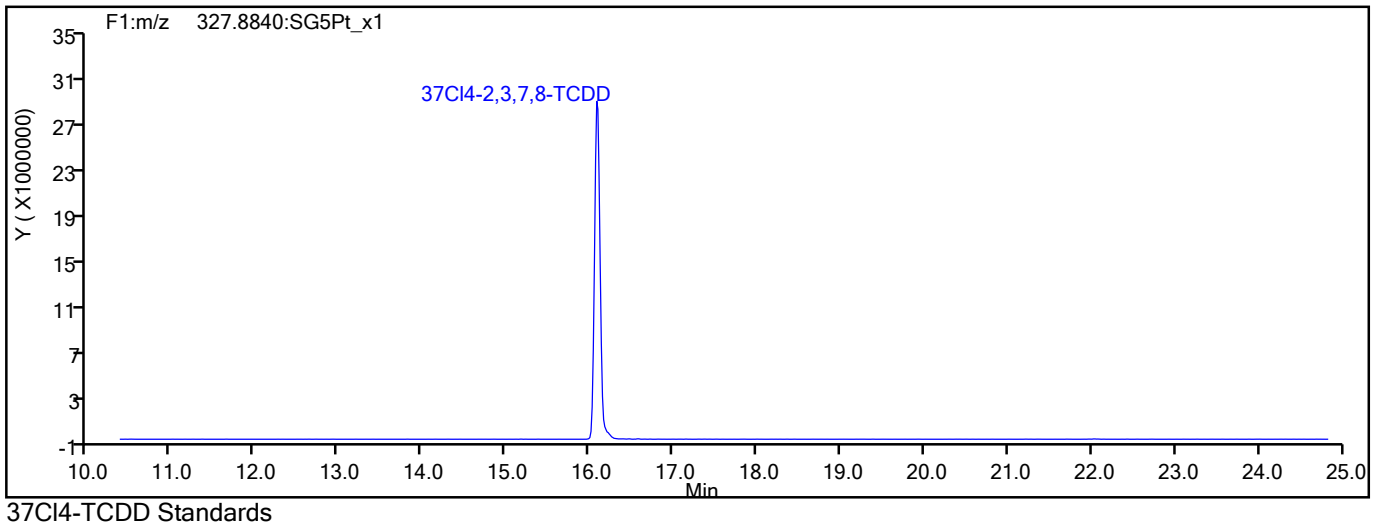

37Cl4-TCDD Standards

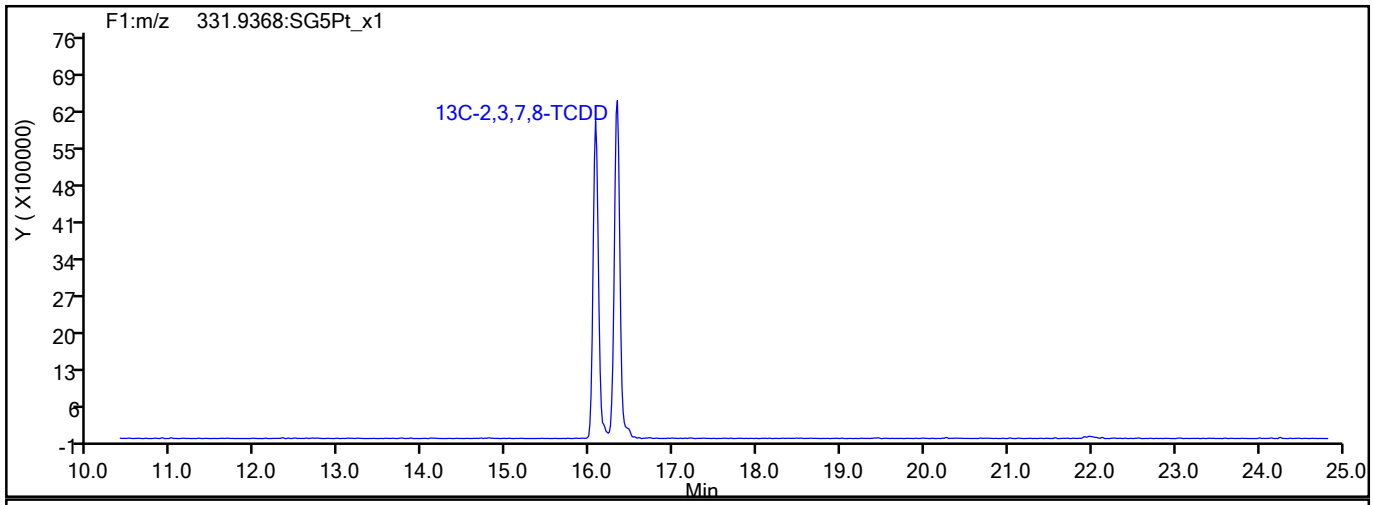

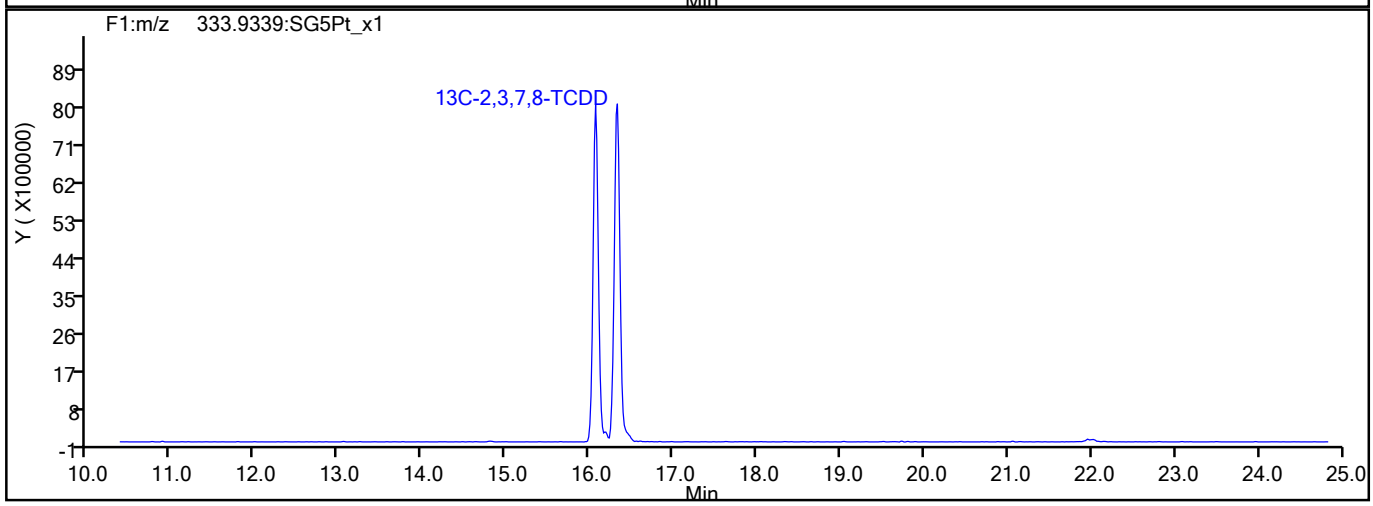

778614

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

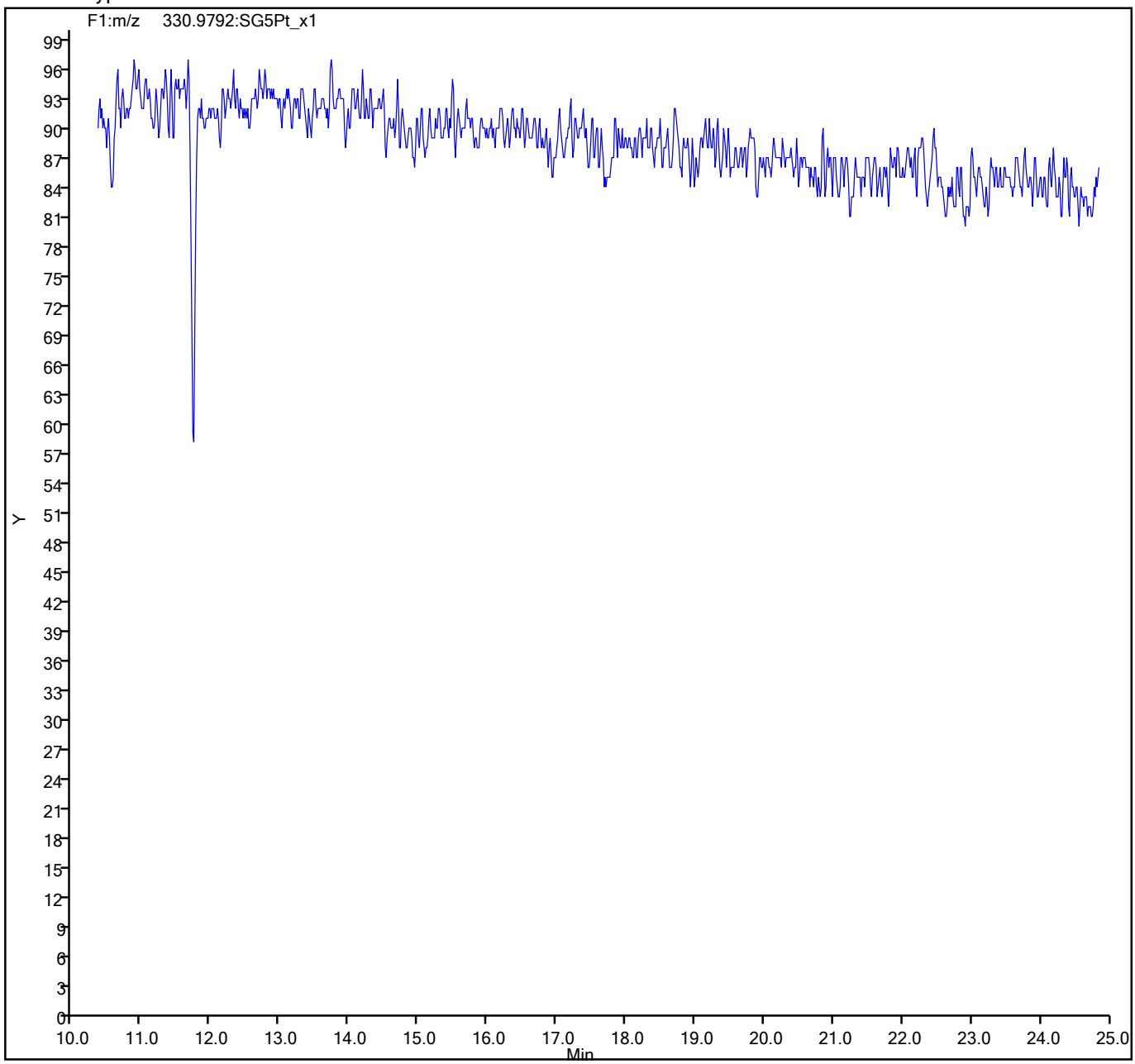

778615

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

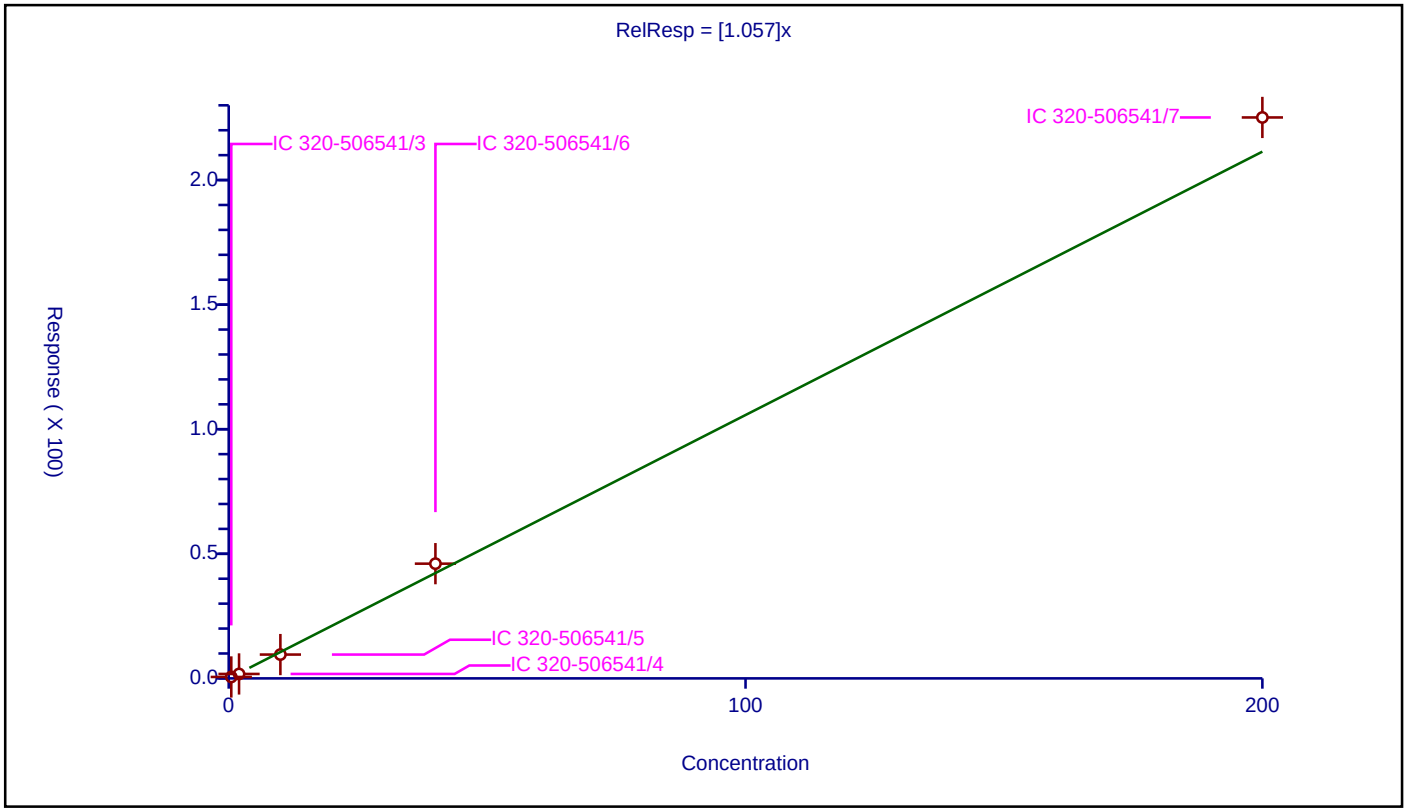

778616

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

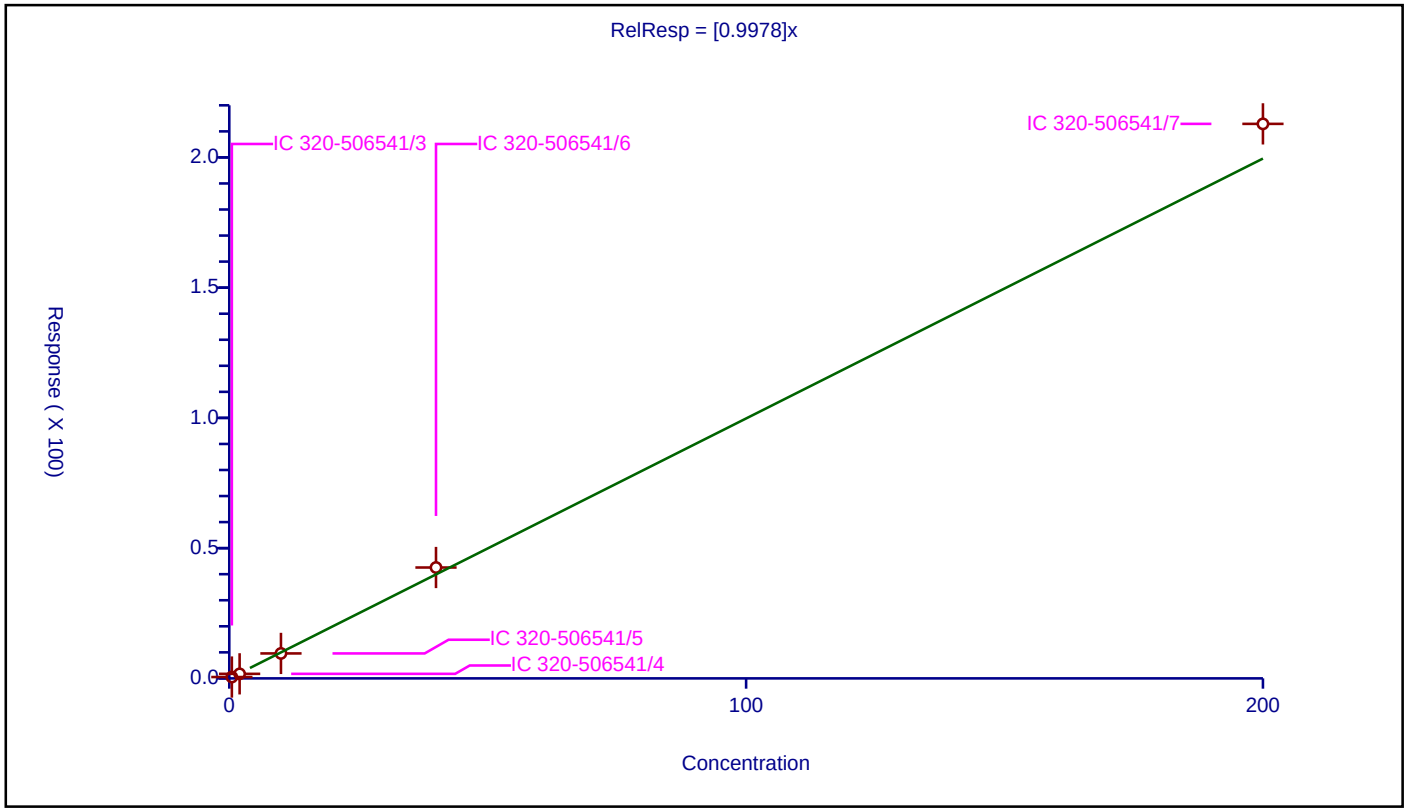

778617

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

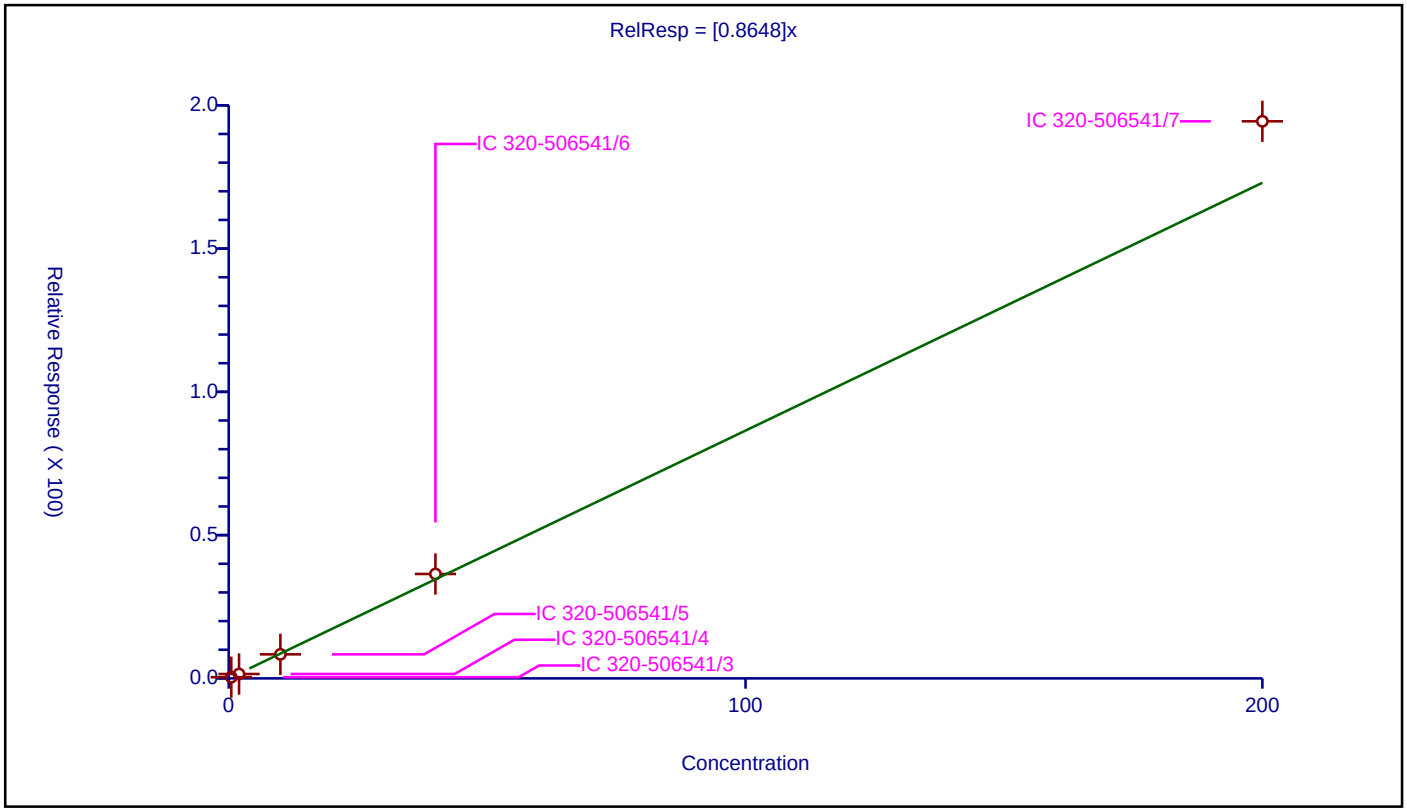

778618

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

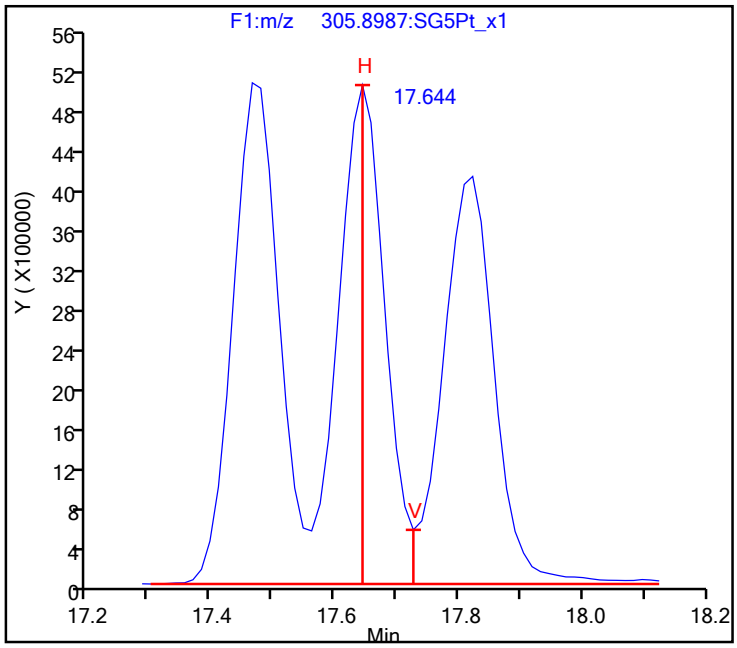

778620

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Lab Sample ID (1): WDM 320-510264/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 07/26/2021 09:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.34	18

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d				
Injection Date:	26-Jul-2021 09:21:58	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 725696
H (Peak Height) = 4136533

%R = 18 <= 25
Passed

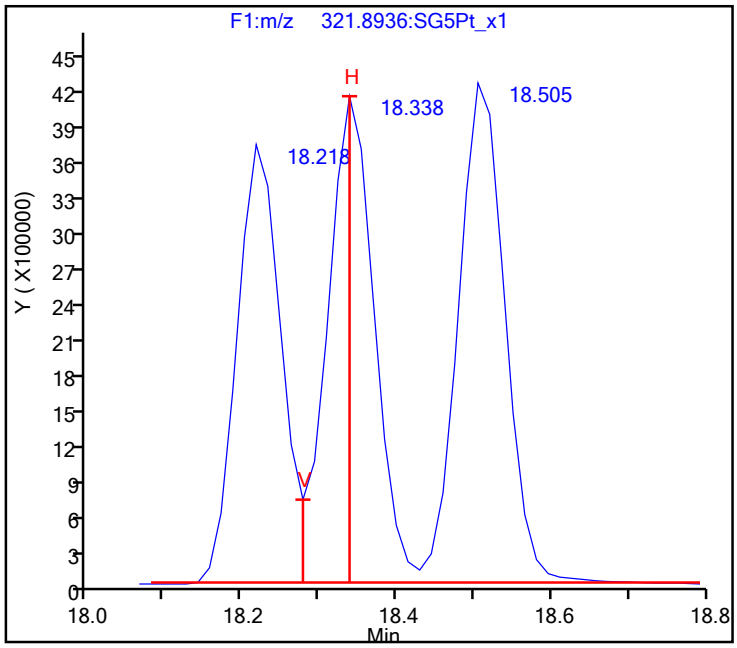

778622

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Lab Sample ID (1): WDM 320-515770/2 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/13/2021 05:48

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.08	22

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d				
Injection Date:	13-Aug-2021 05:48:08	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	DB	ALS Bottle#:	1	Worklist Smp#:	2
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1528085
H (Peak Height) = 6916562

%R = 22 <= 25
Passed

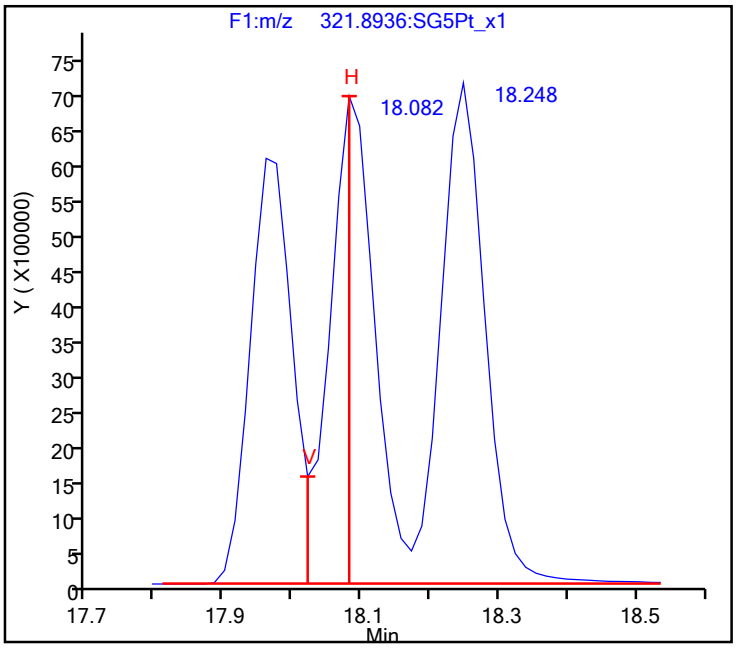

778624

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Lab Sample ID (1): CPS 320-518850/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/21/2021 13:54

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	12

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d				
Injection Date:	21-Aug-2021 13:54:29	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 280107
H (Peak Height) = 2376962

%R = 12 <= 25
Passed

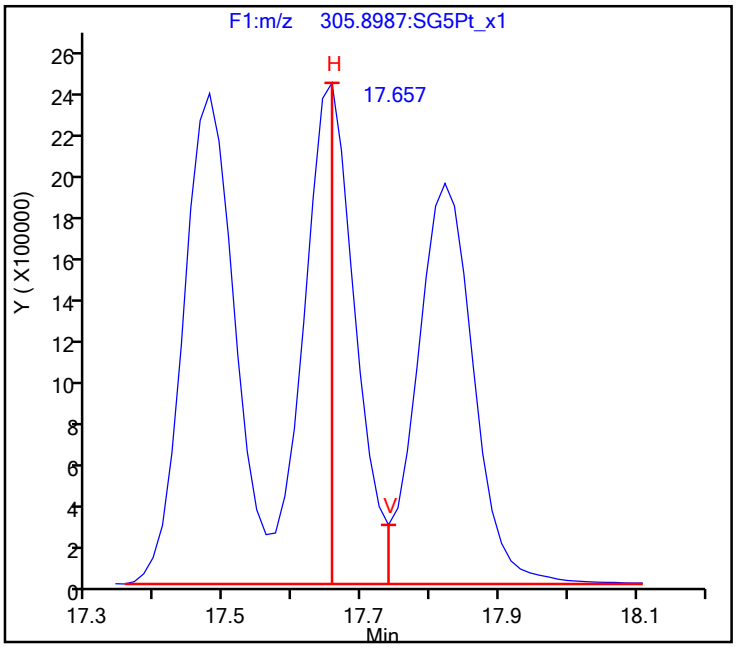

778626

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Lab Sample ID: ICV 320-510264/9 Calibration Date: 07/26/2021 15:31

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 26JL2110D5_9.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.105		43.2	40.0	108	70-130
2,3,7,8-TCDD	AveID	1.254	1.380		44.0	40.0	110	70-130
1,2,3,7,8-PeCDF	AveID	1.061	1.081		204	200	102	70-130
2,3,4,7,8-PeCDF	AveID	1.018	1.151		226	200	113	70-130
1,2,3,7,8-PeCDD	AveID	1.048	1.044		199	200	100	70-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.128		208	200	104	70-130
1,2,3,6,7,8-HxCDF	AveID	1.126	1.227		218	200	109	70-130
2,3,4,6,7,8-HxCDF	AveID	1.168	1.283		220	200	110	70-130
1,2,3,4,7,8-HxCDD	AveID	1.064	1.151		216	200	108	70-130
1,2,3,6,7,8-HxCDD	AveID	1.000	1.082		216	200	108	70-130
1,2,3,7,8,9-HxCDD	AveID	1.133	1.182		209	200	104	70-130
1,2,3,7,8,9-HxCDF	AveID	1.166	1.200		206	200	103	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.576		219	200	109	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.167		213	200	107	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.373		209	200	104	70-130
OCDD	AveID	1.107	1.211		438	400	109	70-130
OCDF	AveID	1.438	1.574		438	400	109	70-130
13C-2,3,7,8-TCDF	Ave	1.625	1.611		99.2	100	99	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9123		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.236		102	100	102	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.300		105	100	105	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7764		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.089		101	100	101	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.093		96.9	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.036		97.4	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7216		98.4	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8697		98.8	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9447		97.6	100	98	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7492		96.9	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6354		98.2	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7065		101	100	101	77-129
13C-OCDD	Ave	0.4472	0.4464		200	200	100	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.177		42.5	40.0	106	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	55225241	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.598	88976883	0.79	1.6249	99.2	99.2	0.1479	0.1479	99.15	
2,3,7,8-TCDF	17.613	39324874	0.78	1.0239	43.2	43.2	0.0666	0.0666	108	
A Non-2,3,7,8-sub-TCDF	17.311	524958	0.77	1.0239	0.6411	0.5762	0.0666	0.3057		RQ
S Total TCDF					43.8	43.7	0.0666	0.0666		RQ
D 13C-2,3,7,8-TCDD	18.323	50383801	0.80	0.8993	101.4	101.4	0.1314	0.1314	101	
2,3,7,8-TCDD	18.338	27801852	0.78	1.2541	44.0	44.0	0.0443	0.0443	110	
$ 37Cl4-2,3,7,8-TCDD	18.338	26006351		1.1071	42.5	42.5	0.0388	0.0388	106	
A Non-2,3,7,8-sub-TCDD	17.772	551726	0.77	1.2541	0.8732	0.8732	0.0443	0.8732		
S Total TCDD					44.9	44.9	0.0443	0.0443		
D 13C-1,2,3,7,8-PeCDF	22.749	68252478	1.57	1.2101	102.1	102.1	0.2097	0.2097	102	
1,2,3,7,8-PeCDF	22.762	147560573	1.57	1.0611	203.7	203.7	0.7454	0.7454	102	
D 13C-2,3,4,7,8-PeCDF	24.126	71797373	1.60	1.2395	104.9	104.9	0.2047	0.2047	105	
2,3,4,7,8-PeCDF	24.153	165293469	1.59	1.0184	226.1	226.1	0.7930	0.7930	113	
A F1 PeCDFs	20.244						0.0162	0.0162		
A Non-2,3,7,8-sub-PeCDF	23.473	3443801	1.55	1.0398	4.730	4.730	0.7686	4.730		
S Total PeCDF					434.5	434.5	0.7692	0.7692		
D 13C-1,2,3,7,8-PeCDD	24.862	42878117	1.62	0.7612	102.0	102.0	0.1090	0.1090	102	
1,2,3,7,8-PeCDD	24.889	89555111	1.58	1.0484	199.2	199.2	0.2271	0.2271	99.61	
A Non-2,3,7,8-sub-PeCDD	23.744						0.2271	0.2271		
S Total PeCDD					199.2	199.2	0.2271	0.2271		
D 13C-1,2,3,4,7,8-HxCDF	30.836	62488487	0.52	1.0837	100.5	100.5	0.4386	0.4386	101	
1,2,3,4,7,8-HxCDF	30.849	141029922	1.22	1.0851	208.0	208.0	1.073	1.073	104	
D 13C-1,2,3,6,7,8-HxCDF	30.995	62719524	0.52	1.1279	96.9	96.9	0.4214	0.4214	96.91	
1,2,3,6,7,8-HxCDF	31.008	153925065	1.22	1.1260	218.0	218.0	1.035	1.035	109	
D 13C-2,3,4,6,7,8-HxCDF	31.754	59440166	0.52	1.0637	97.4	97.4	0.4468	0.4468	97.39	
2,3,4,6,7,8-HxCDF	31.767	152499923	1.22	1.1675	219.7	219.7	0.8510	0.8510	110	
D 13C-1,2,3,7,8,9-HxCDF	32.513	54205090	0.51	0.9676	97.6	97.6	0.4912	0.4912	97.64	
1,2,3,7,8,9-HxCDF	32.526	130040433	1.23	1.1664	205.7	205.7	0.8755	0.8755	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
A Non-2,3,7,8-sub-HxCDF	30.542						0.9509	0.9509		
S Total HxCDF					851.4	851.4	0.9587	0.9587		
* 13C-1,2,3,7,8,9-HxCDD	32.340	57376962	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	41405543	1.26	0.7334	98.4	98.4	0.3599	0.3599	98.39	
1,2,3,4,7,8-HxCDD	31.940	95311816	1.31	1.0640	216.3	216.3	0.7396	0.7396	108	
D 13C-1,2,3,6,7,8-HxCDD	32.020	49899921	1.25	0.8802	98.8	98.8	0.2999	0.2999	98.81	
1,2,3,6,7,8-HxCDD	32.034	107959577	1.21	1.0001	216.3	216.3	0.7456	0.7456	108	
1,2,3,7,8,9-HxCDD	32.340	107964188	1.26	1.1325	208.8	208.8	0.6762	0.6762	104	
A Non-2,3,7,8-sub-HxCDD	31.215						0.7187	0.7187		
S Total HxCDD					641.5	641.5	0.7205	0.7205		
1,2,3,4,6,7,8-HpCDF	33.912	135529943	1.05	1.4413	218.8	218.8	2.088	2.088	109	
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	42985413	0.44	0.7730	96.9	96.9	0.9749	0.9749	96.91	
D 13C-1,2,3,4,7,8,9-HpCDF	35.006	40537577	0.44	0.7008	100.8	100.8	1.075	1.075	101	
1,2,3,4,7,8,9-HpCDF	35.018	111348980	1.06	1.3174	208.5	208.5	2.580	2.580	104	
A Non-2,3,7,8-sub-HpCDF	34.458						2.314	2.314		
S Total HpCDF					427.3	427.3	2.334	2.334		
D 13C-1,2,3,4,6,7,8-HpCDD	34.702	36455330	1.02	0.6472	98.2	98.2	0.5132	0.5132	98.17	
1,2,3,4,6,7,8-HpCDD	34.714	85115851	1.05	1.0943	213.4	213.4	1.044	1.044	107	
A Non-2,3,7,8-sub-HpCDD	33.504						1.044	1.044		
S Total HpCDD					213.4	213.4	1.044	1.044		
D 13C-OCDD	37.082	51228940	0.89	0.4472	199.7	199.7	0.2232	0.2232	99.84	
OCDF	37.189	161294219	0.91	1.4382	437.9	437.9	0.4409	0.4409	109	
OCDD	37.094	124067491	0.90	1.1070	437.5	437.5	0.5859	0.5859	109	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.127	18.142	-1		24811260	6334063	3297	8242	1921		
333.9339	18.127	18.142	-1		30413981	7612051	3296	8240	2309	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	0.971	39276583	9941961	7868	19670	1264		
317.9389	17.598	17.598	0	0.971	49700300	12596795	5536	13840	2275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.613	17.628	-1	1.001	17265923	4373947	2358	5895	1855		
305.8987	17.613	17.628	-1	1.001	22058951	5573170	3788	9470	1471	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.933	17.311	-23	0.962	161517	37808	2358	5895	16		
	Empc Correction				121157	34090	2358	5895	14		
305.8987	16.933	17.311	-23	0.962	157347	44274	3788	9470	12	1.03(0.65-0.89)	
303.9016	17.235	17.311	-5	0.979	125955	28258	2358	5895	12		
	Empc Correction				107214	28155	2358	5895	12		
305.8987	17.220	17.311	-5	0.979	139240	36566	3788	9470	10	0.90(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.011	22418240	5434734	3297	8242	1648		
333.9339	18.323	18.323	0	1.011	27965561	6697610	3296	8240	2032	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.338	0	1.001	12170563	2933733	1303	3257	2252		
321.8936	18.338	18.338	0	1.001	15631289	3775919	1394	3485	2709	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.012	26006351	6295077	2398	5995	2625		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											
319.8965	18.233	17.772	28	0.995	239239	60004	1303	3257	46		
321.8936	18.233	17.772	28	0.995	312487	80578	1394	3485	58	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.749	0	1.255	41668599	7333690	8485	21212	864		
353.8970	22.749	22.749	0	1.255	26583879	4652625	5670	14175	821	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.762	22.776	-1	1.001	90206138	15696498	23147	57867	678		
341.8567	22.762	22.776	-1	1.001	57354435	10012296	14777	36942	678	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.126	0	1.331	44217600	7271382	8485	21212	857		
353.8970	24.126	24.126	0	1.331	27579773	4468756	5670	14175	788	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.153	0	1.001	101392394	16526277	23147	57867	714		
341.8567	24.153	24.153	0	1.001	63901075	10428415	14777	36942	706	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.244						338	845			
341.8567	20.244						462	1155			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.308	23.473	-10	1.025	2092429	352488	23147	57867	15		
341.8567	23.308	23.473	-10	1.025	1351372	223195	14777	36942	15	1.55(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.862	0	1.372	26514155	4045355	2631	6577	1538		
369.8919	24.862	24.862	0	1.372	16363962	2537743	2000	5000	1269	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.889	0	1.001	54803563	8416527	3860	9650	2180		
357.8516	24.889	24.889	0	1.001	34751548	5423049	2410	6025	2250	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.744						3860	9650			
357.8516	23.744						2410	6025			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.836	30.835	0	0.953	21423741	4602993	10138	25345	454		
385.8610	30.836	30.835	0	0.953	41064746	8805011	18904	47260	466	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.862	-1	1.000	77446041	17056861	34028	85070	501		
375.8178	30.849	30.862	-1	1.000	63583881	14029731	28421	71052	494	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.008	-1	0.958	21527343	4645676	10138	25345	458		
385.8610	30.995	31.008	-1	0.958	41192181	8744916	18904	47260	463	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.008	31.021	-1	1.000	84458486	18178004	34028	85070	534		
375.8178	31.008	31.021	-1	1.000	69466579	15063201	28421	71052	530	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.754	0	0.982	20418672	5425134	10138	25345	535		
385.8610	31.754	31.754	0	0.982	39021494	10287607	18904	47260	544	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.767	0	1.000	83657687	22340712	34028	85070	657		
375.8178	31.767	31.767	0	1.000	68842236	18269489	28421	71052	643	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.513	32.526	-1	1.005	18351639	5227320	10138	25345	516		
385.8610	32.513	32.526	-1	1.005	35853451	10061715	18904	47260	532	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.539	-1	1.000	71665418	20282625	34028	85070	596		
375.8178	32.526	32.539	-1	1.000	58375015	16239209	28421	71052	571	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.542						34028	85070			
375.8178	30.542						28421	71052			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.340	32.339	0		32156760	8544429	8352	20880	1023		
403.8529	32.326	32.339	-1		25220202	6731682	7778	19445	865	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.927	0	0.987	23052563	6987052	8352	20880	837		
403.8529	31.927	31.927	0	0.987	18352980	5468630	7778	19445	703	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.940	0	1.000	54057818	15589077	22398	55995	696		
391.8127	31.940	31.940	0	1.000	41253998	12285721	16811	42027	731	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.020	32.033	-1	0.990	27736555	7273068	8352	20880	871		
403.8529	32.020	32.033	-1	0.990	22163366	5871752	7778	19445	755	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.034	32.047	-1	1.000	59116629	16185483	22398	55995	723		
391.8127	32.034	32.047	-1	1.000	48842948	13061351	16811	42027	777	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.340	32.353	-1	1.013	60106510	15800454	22398	55995	705		
391.8127	32.340	32.353	-1	1.013	47857678	12979231	16811	42027	772	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	31.215						22398	55995			
391.8127	31.215						16811	42027			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.912	33.911	0	1.000	69518297	21985720	82461	206152	267		
409.7789	33.912	33.911	0	1.000	66011646	21358881	78734	196835	271	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.912	0	1.049	13138473	4149229	14216	35540	292		
419.8220	33.900	33.912	-1	1.048	29846940	9243997	31835	79587	290	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.006	35.005	0	1.082	12375038	3705586	14216	35540	261		
419.8220	35.006	35.005	0	1.082	28162539	8151296	31835	79587	256	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.018	35.005	1	1.000	57298984	16523888	82461	206152	200		
409.7789	35.006	35.005	0	1.000	54049996	15559126	78734	196835	198	1.06(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						82461	206152			
409.7789	34.458						78734	196835			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.702	34.714	-1	1.073	18400619	5331850	10315	25787	517		
437.8140	34.702	34.714	-1	1.073	18054711	5313047	9982	24955	532	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.714	0	1.000	43603241	12970820	24860	62150	522		
425.7737	34.714	34.714	0	1.000	41512610	12528364	23796	59490	526	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						24860	62150			
425.7737	33.504						23796	59490			
13C-OCDD											
469.7779	37.082	37.093	-1	1.147	24118371	6015882	2552	6380	2357		
471.7750	37.082	37.093	-1	1.147	27110569	6692443	3547	8867	1887	0.89(0.76-1.02)	
OCDF											
441.7428	37.189	37.201	-1	1.003	76746145	20468133	7616	19040	2688		
443.7399	37.189	37.201	-1	1.003	84548074	22394214	8501	21252	2634	0.91(0.76-1.02)	
OCDD											
457.7377	37.094	37.105	-1	1.000	58682484	14688537	7599	18997	1933		
459.7348	37.094	37.105	-1	1.000	65385007	16510536	8885	22212	1858	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	88976883	22538756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	88976883	22538756

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.933	161517	37808	157347	44274	0.3500	1.03	RQ
16.933	121157	34090	157347	44274	0.3057		Empc Correction
17.235	125955	28258	139240	36566	0.2911	0.90	RnQ
17.235	107214	28155	139240	36566	0.2705		Empc Correction
Signal Totals:							
	228371	62245	296587	80840			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	584059	146906				0.97	RQ
	524958	143085					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6411 = (584059 * 100.000) / (88976883 * 1.024)
Empc Amount: 0.5762 = (524958 * 100.000) / (88976883 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50383801	12132344

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50383801	12132344

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.233	239239	60004	312487	80578	0.8732	0.77	
Signal Totals:							
	239239	60004	312487	80578			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	551726	140582				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8732 = (551726 * 100.000) / (50383801 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68252478	11986315
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71797373	11740138

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70024925	11863226

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
23.308	2092429	352488	1351372	223195	4.73	1.55	
Signal Totals:							
	2092429	352488	1351372	223195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3443801	575683				1.55	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.730 = (3443801 * 100.000) / (70024925 * 1.040)

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

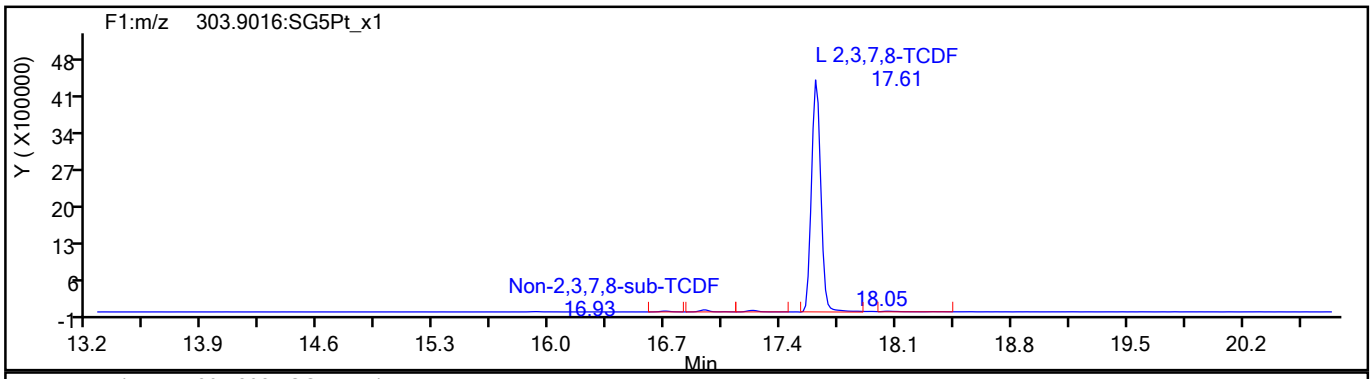

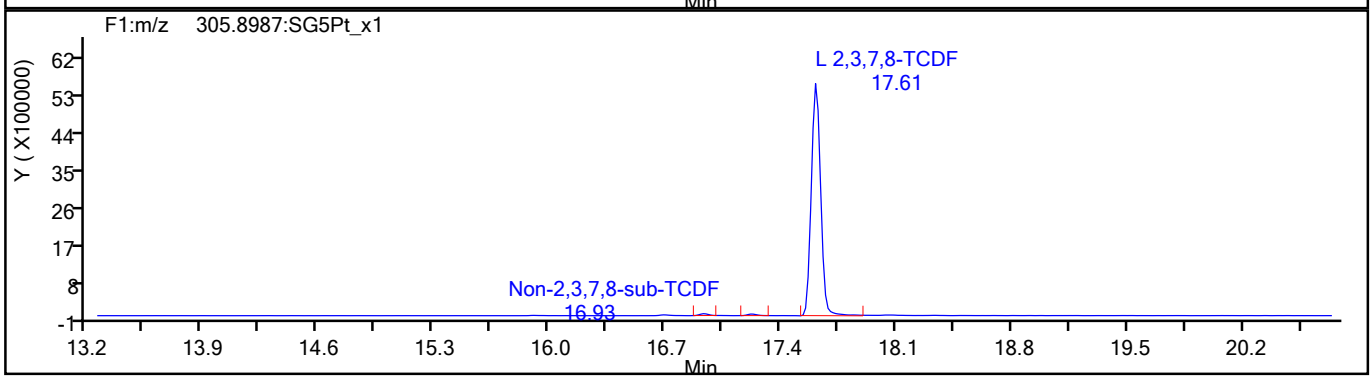

TCDF Standards

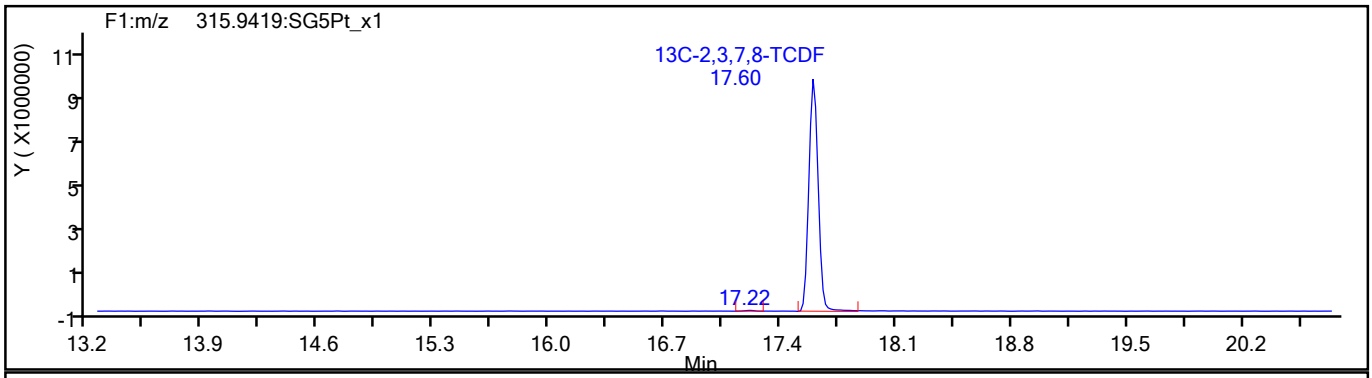

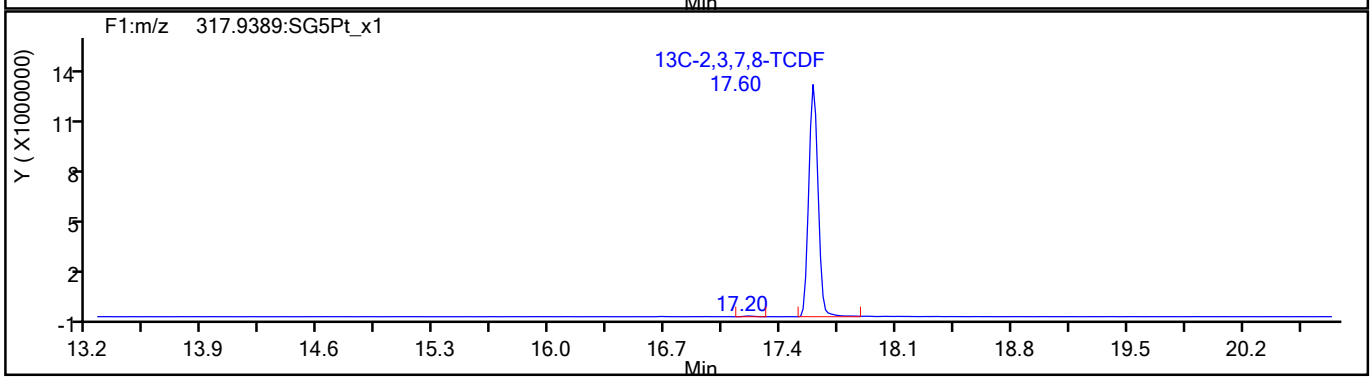

778637

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

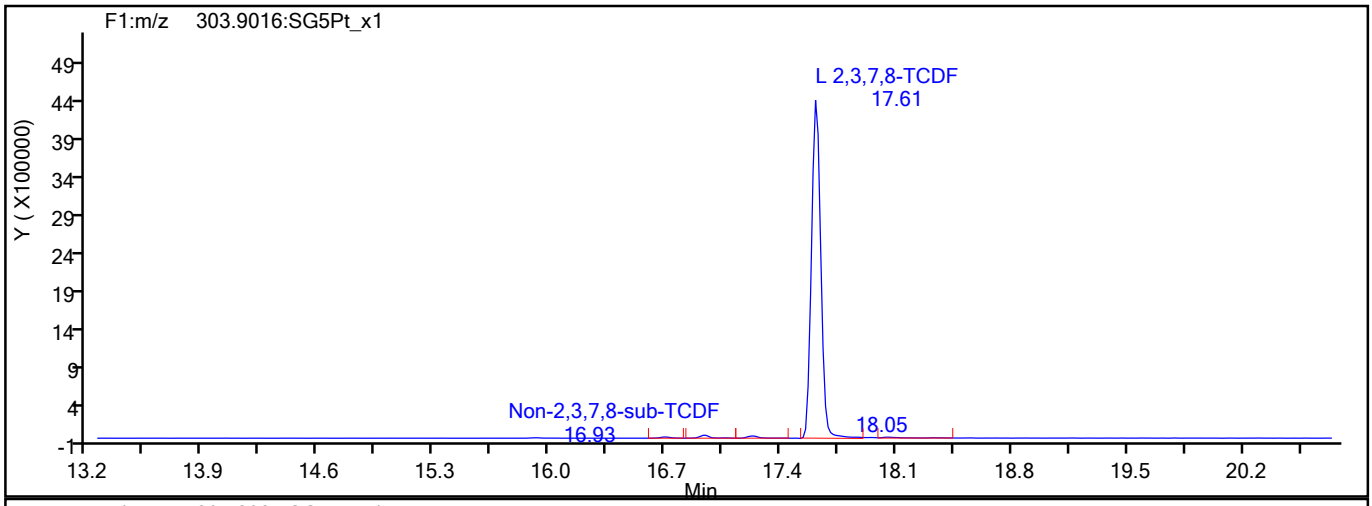

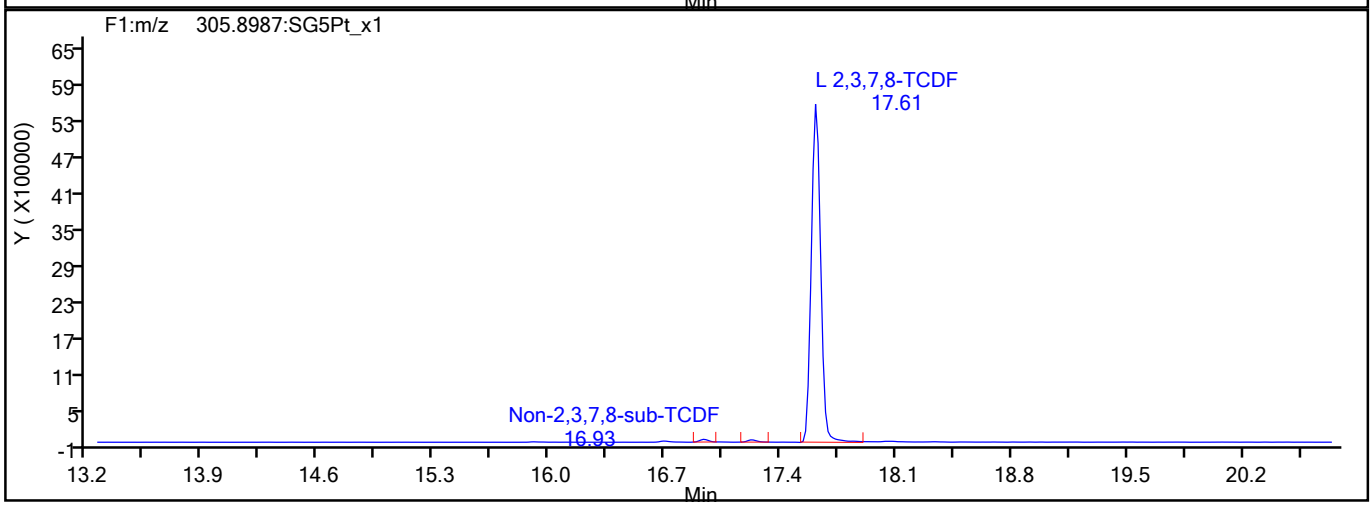

TCDF Interference Mass

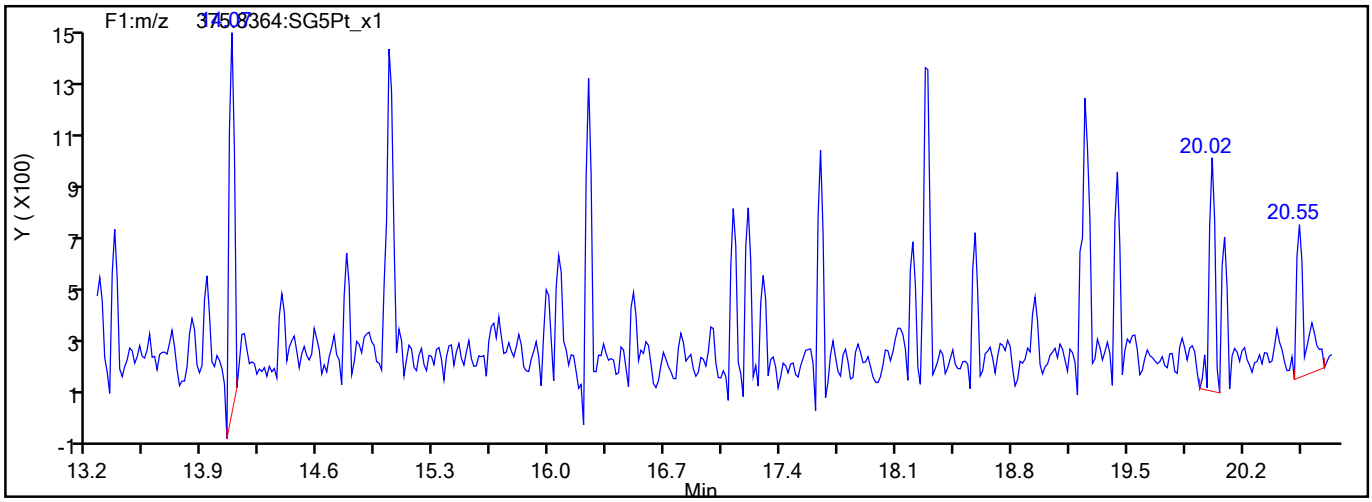

778638

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

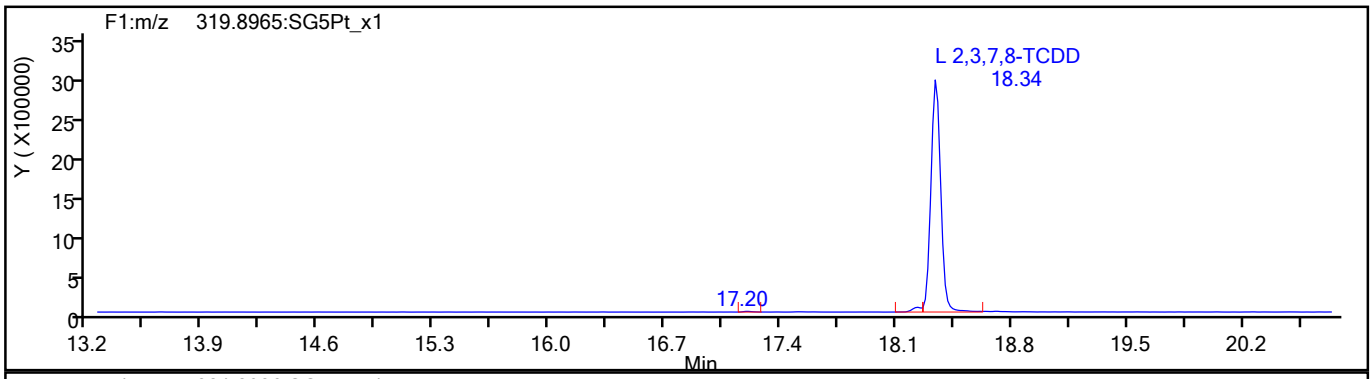

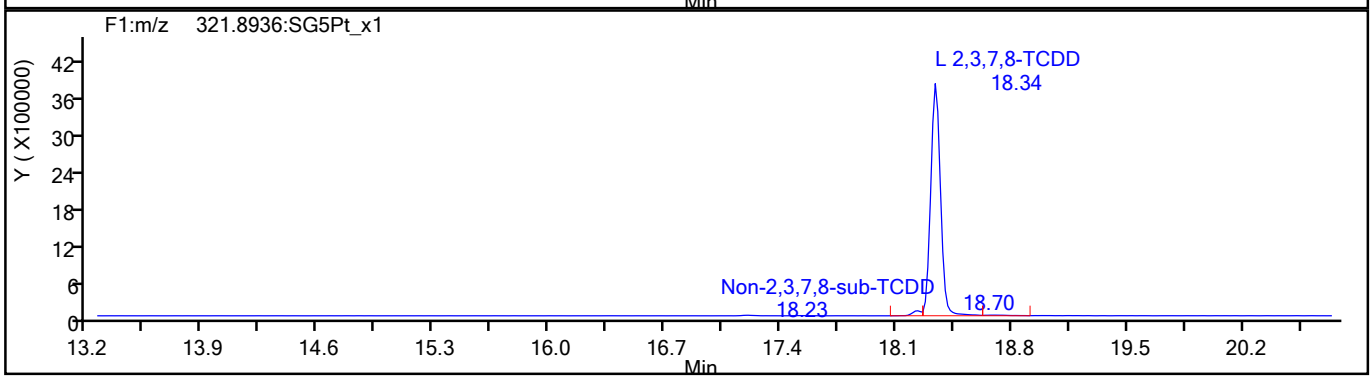

TCDD Standards

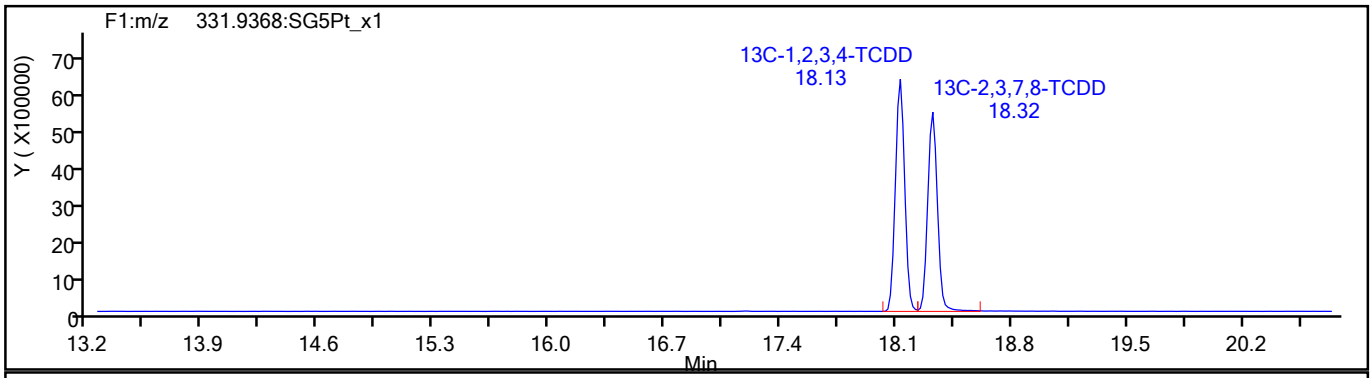

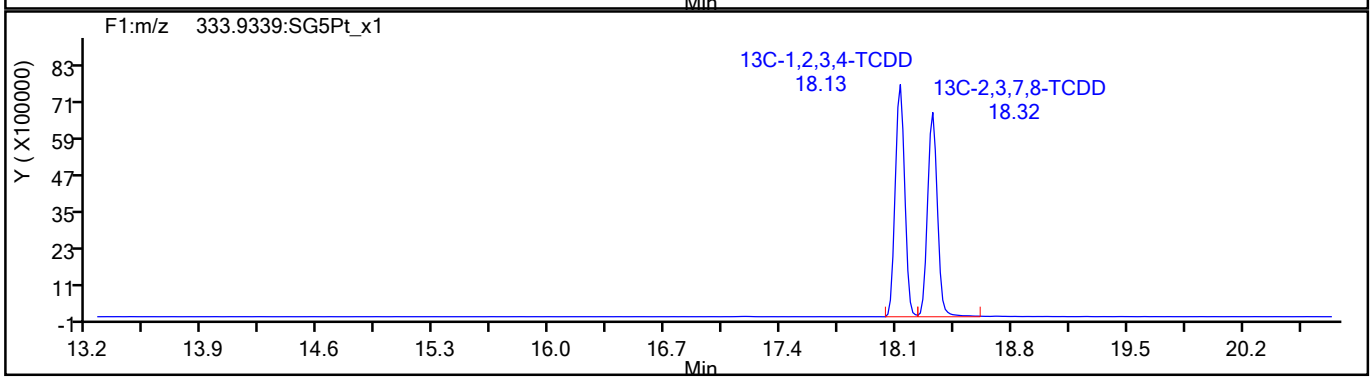

778639

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

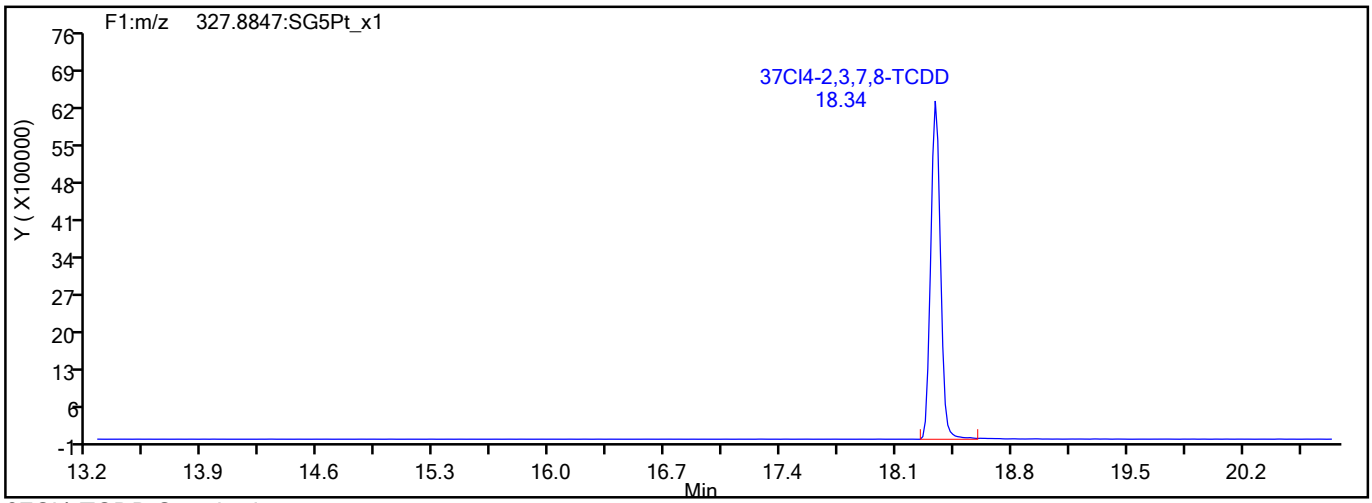

37Cl4-TCDD Standards

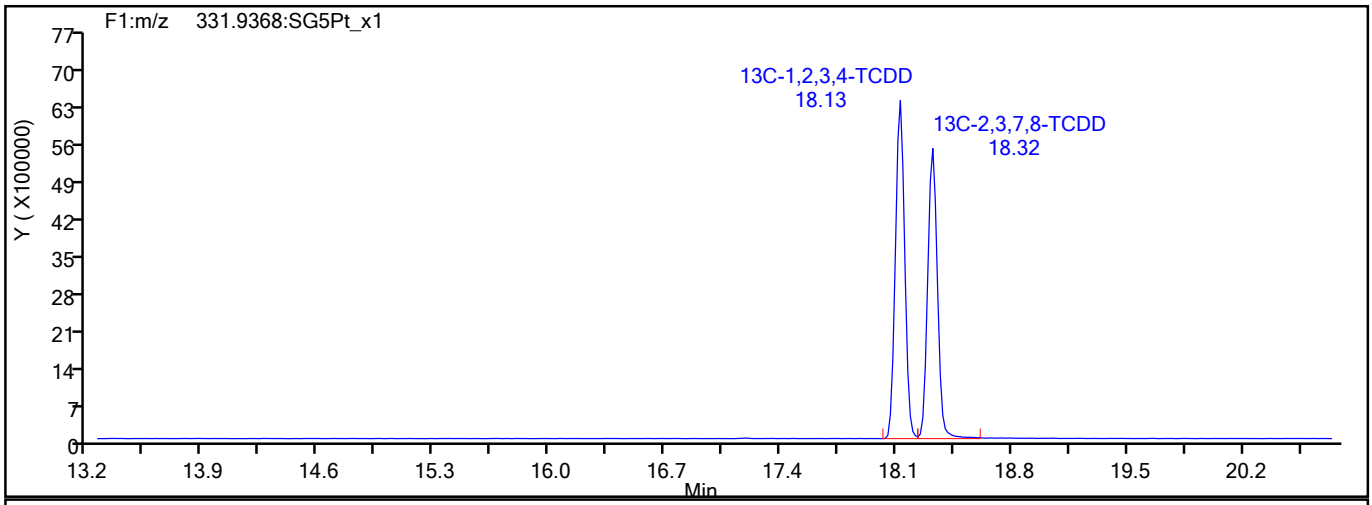

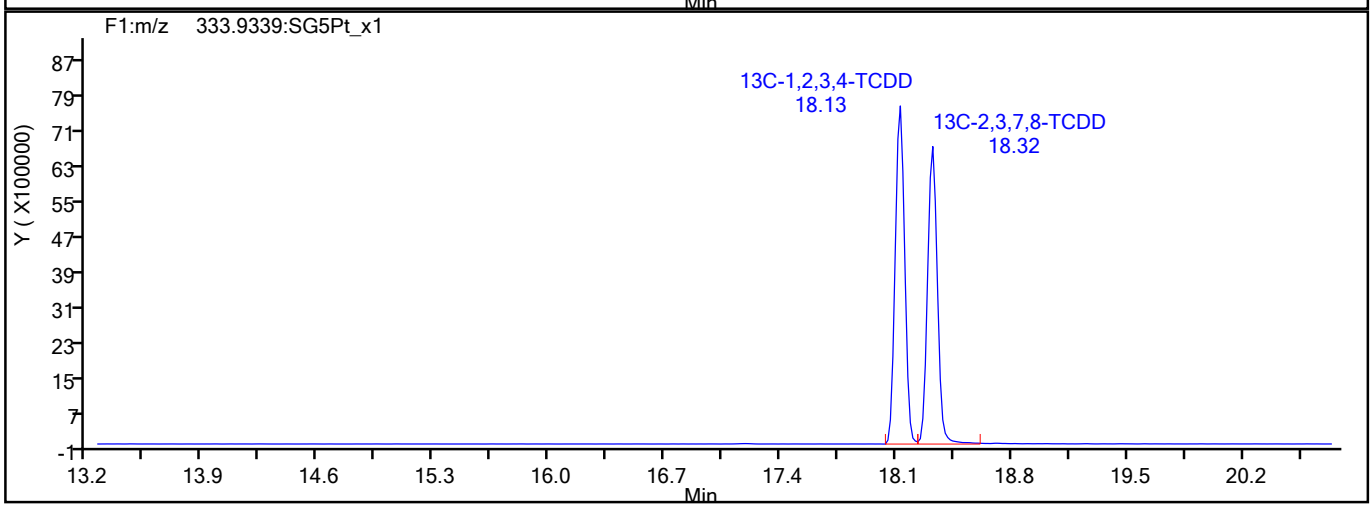

778640

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

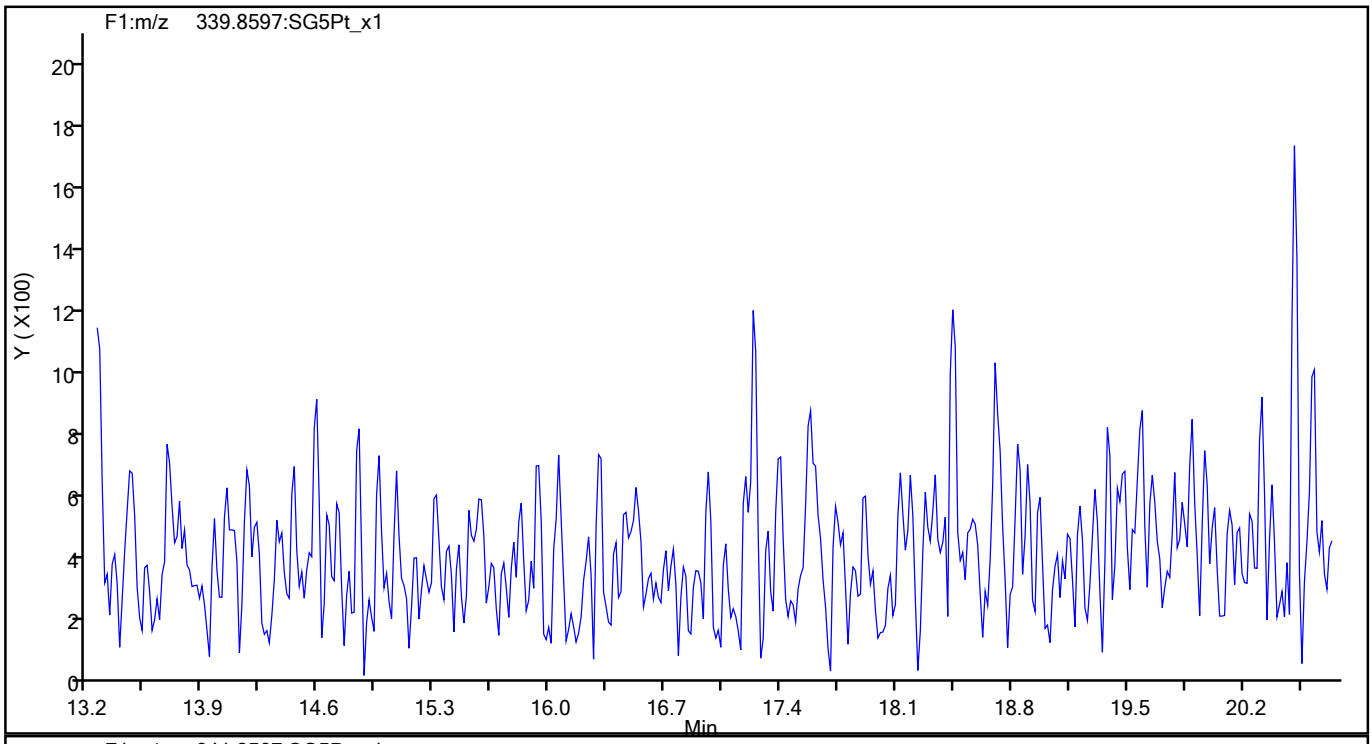

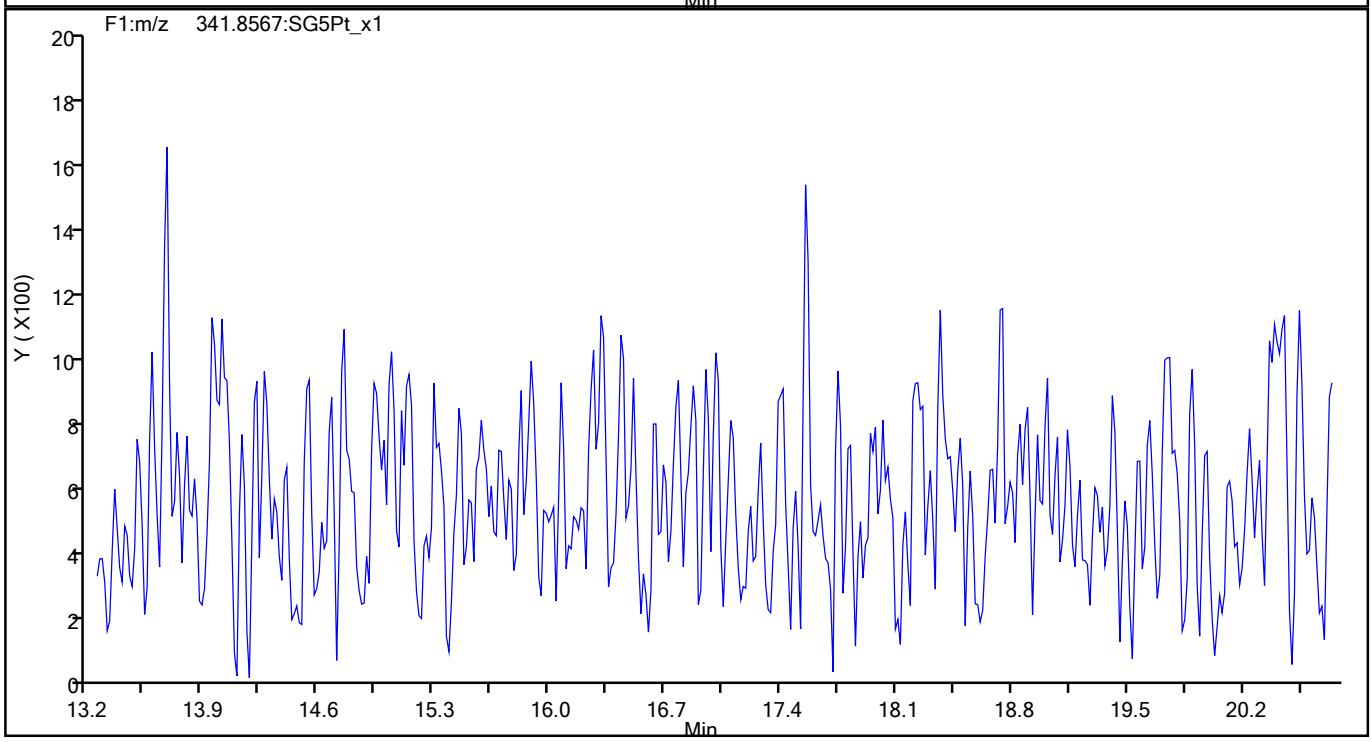

778641

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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F1 PeCDFs

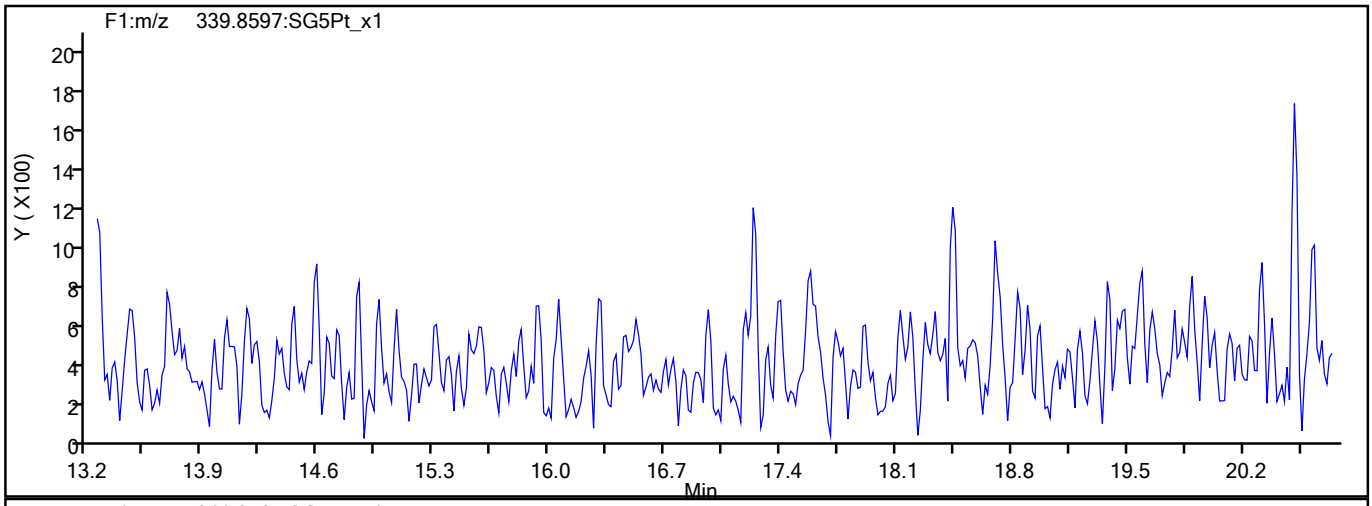

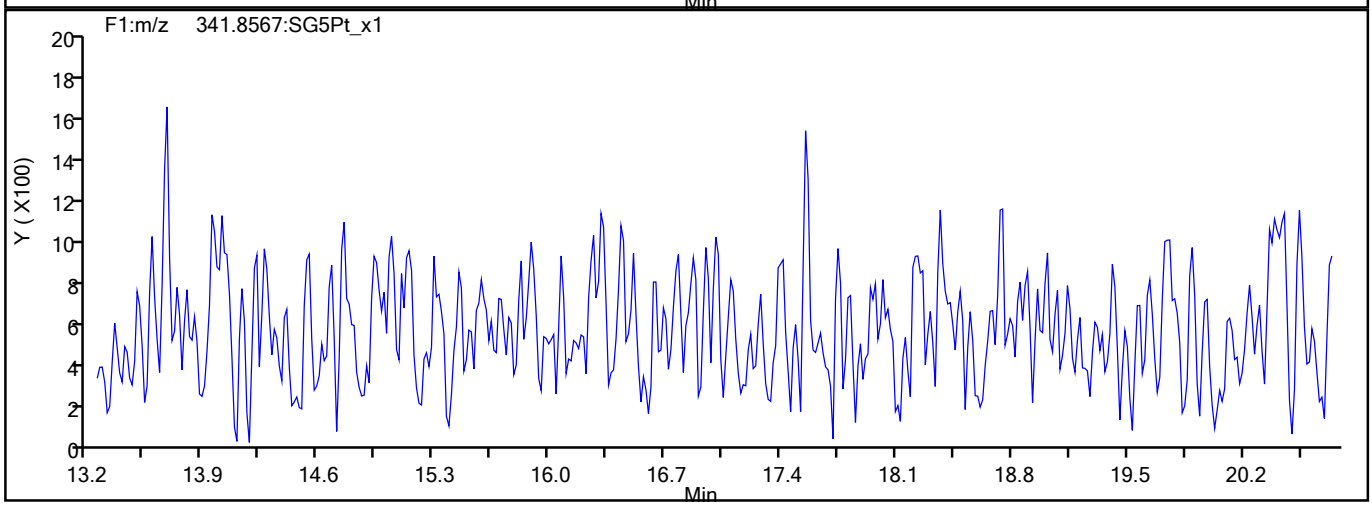

F1 PeCDFs Interference Mass

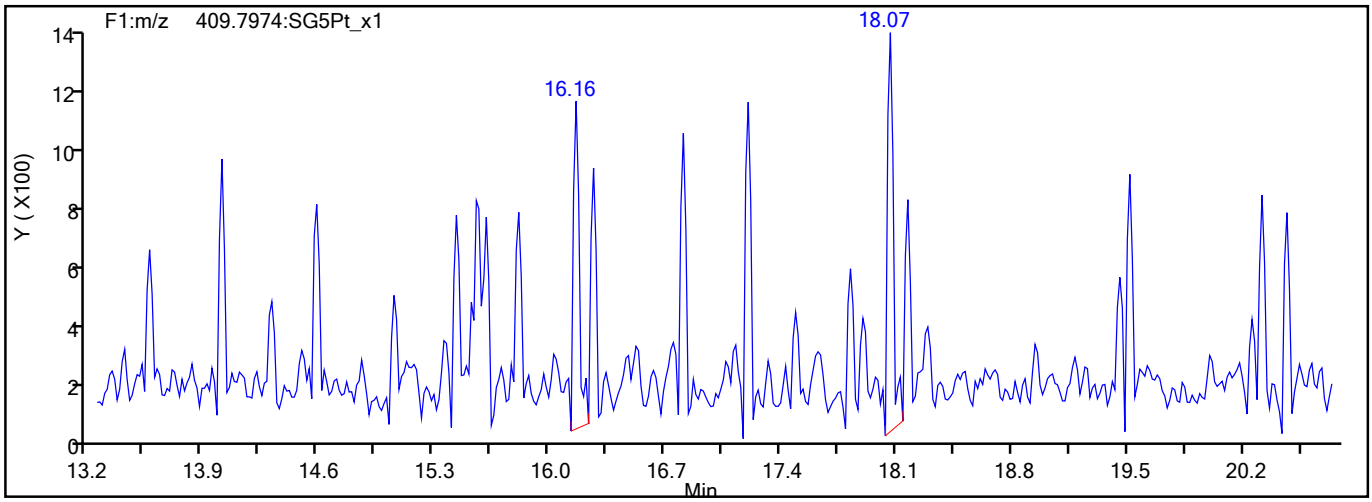

778642

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

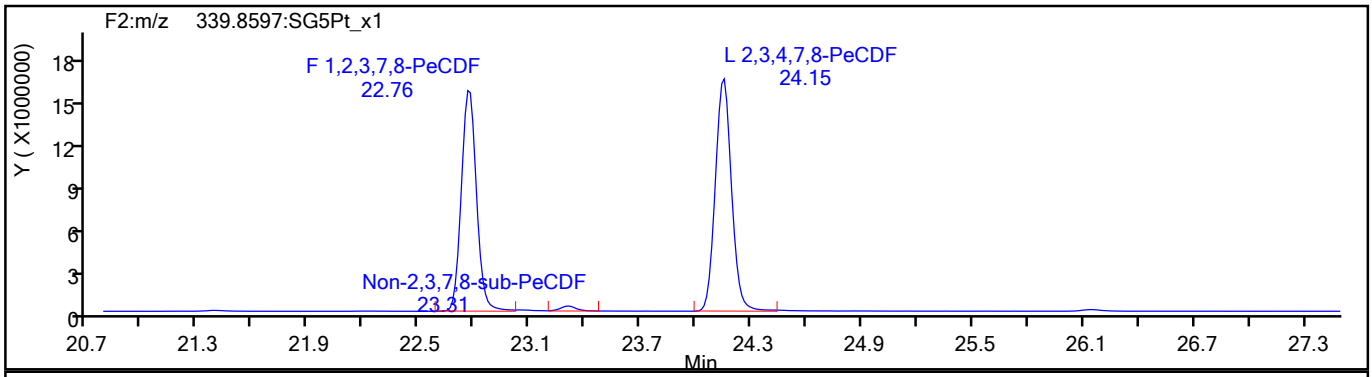

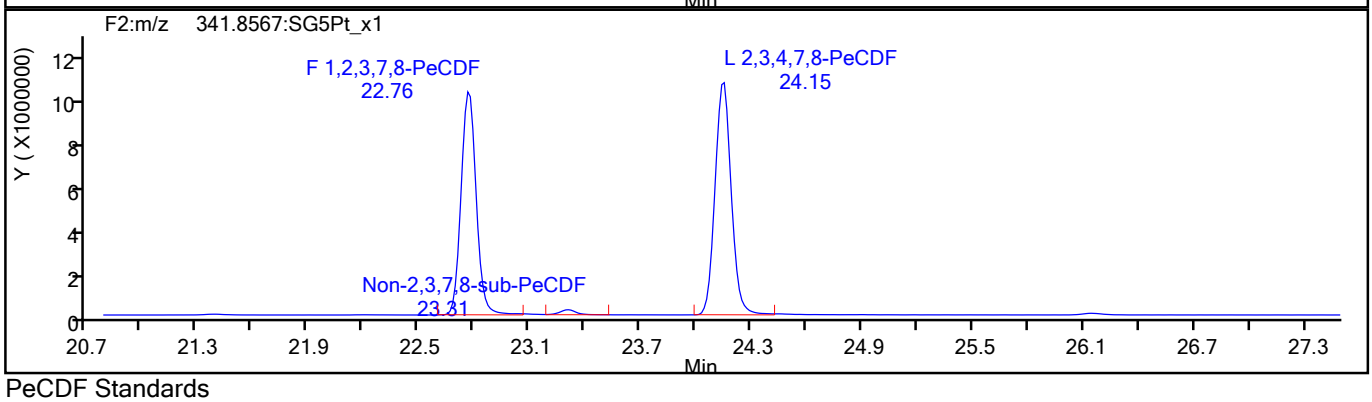

PeCDF Standards

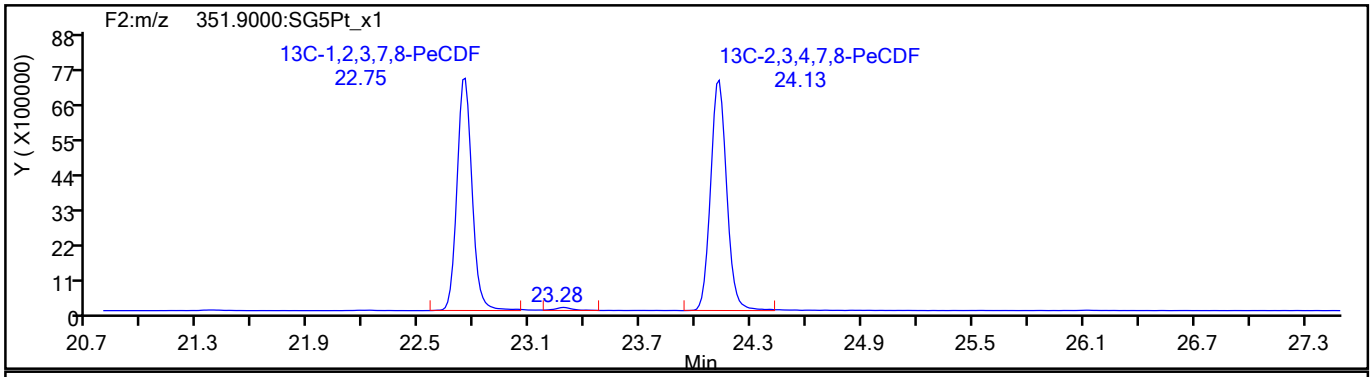

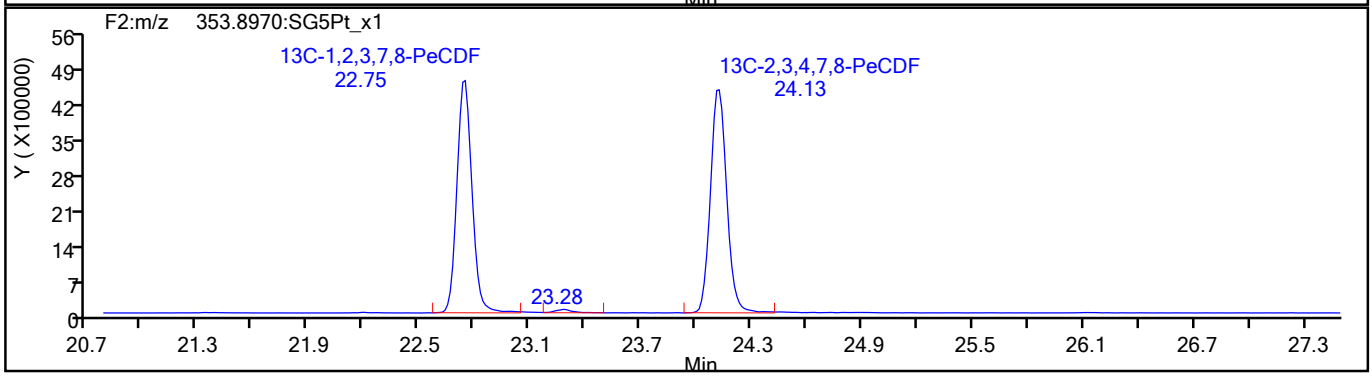

778643

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

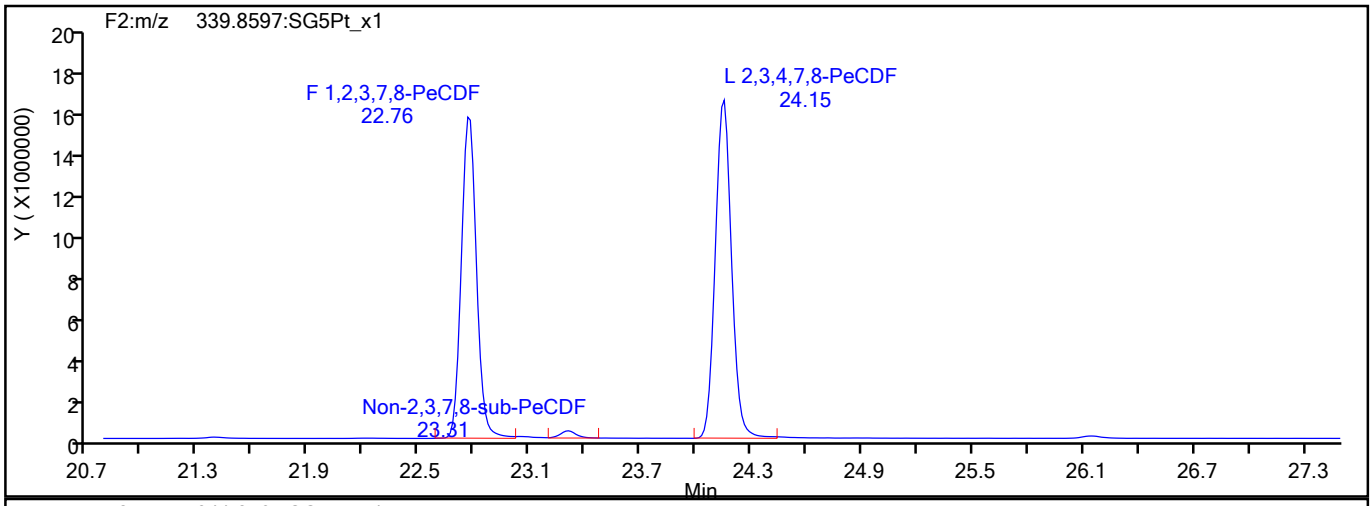

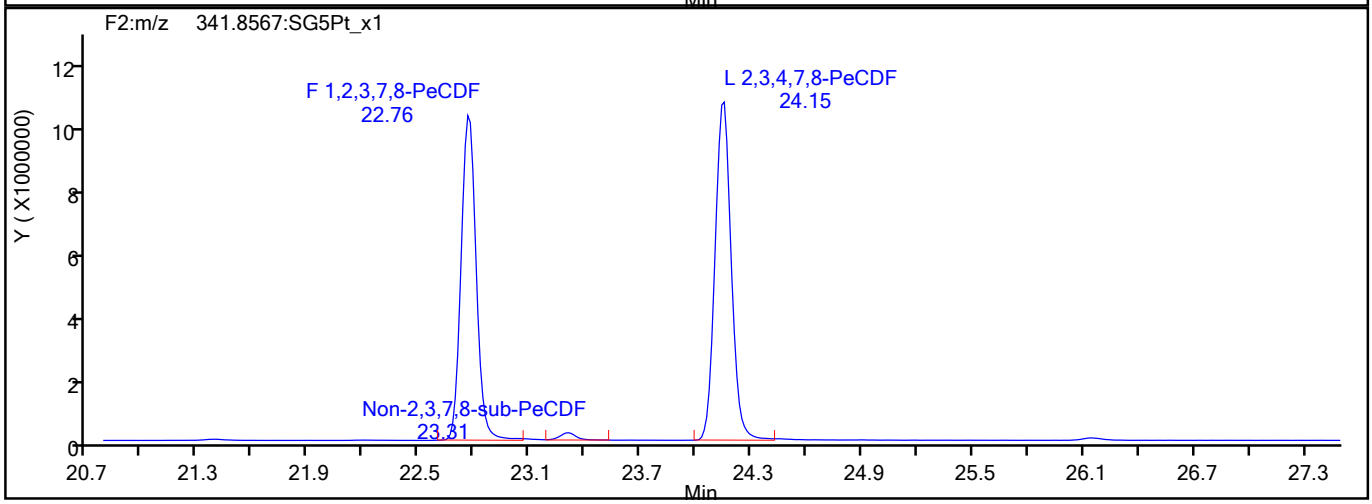

PeCDF Interference Mass

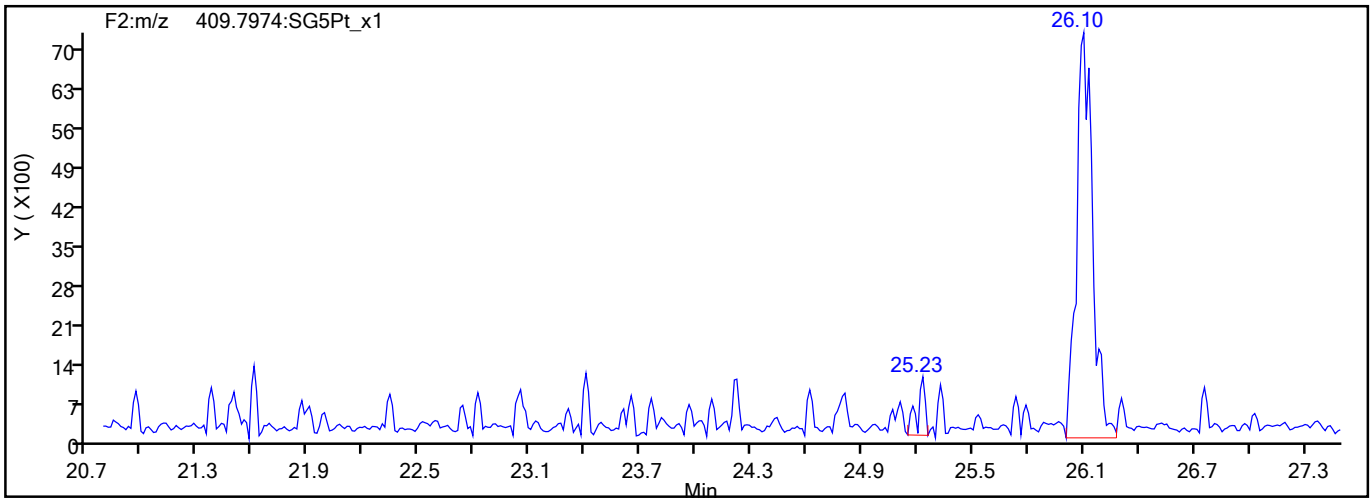

778644

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

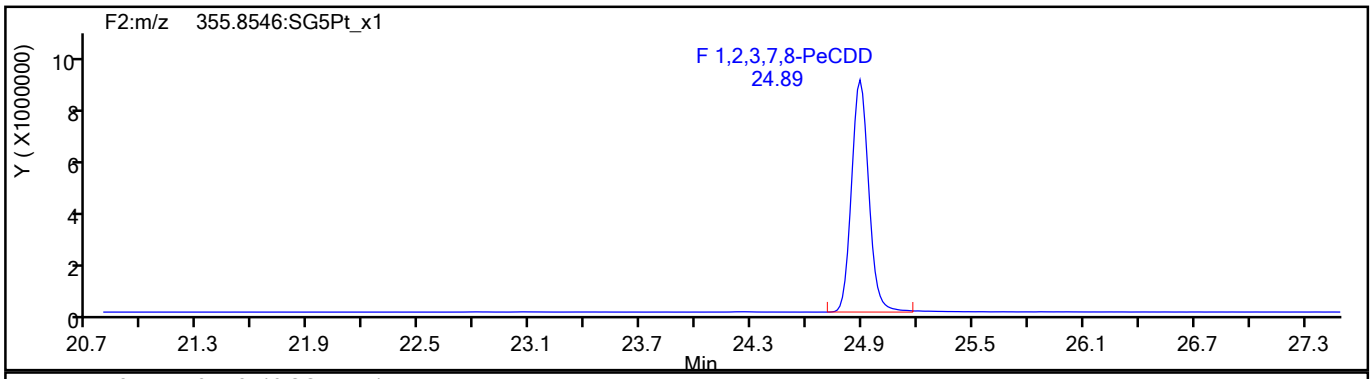

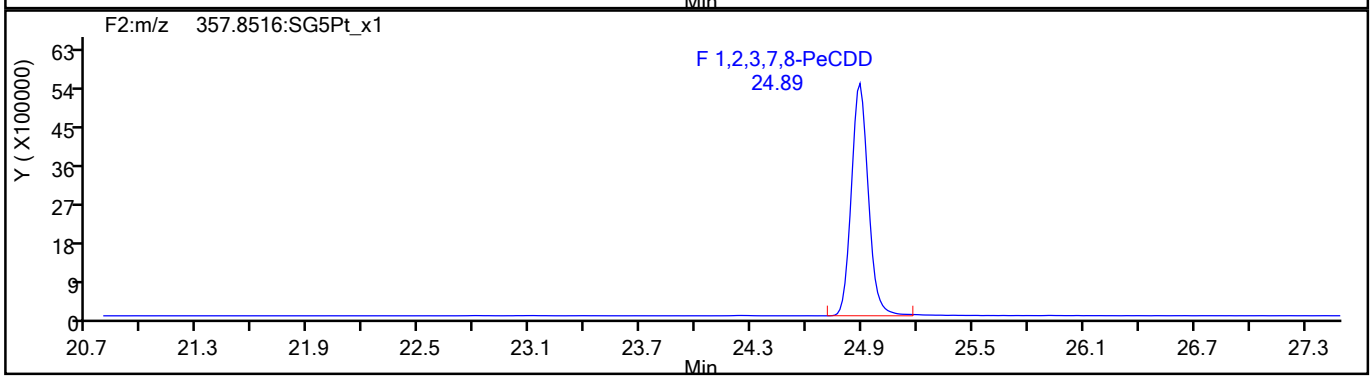

PeCDD Standards

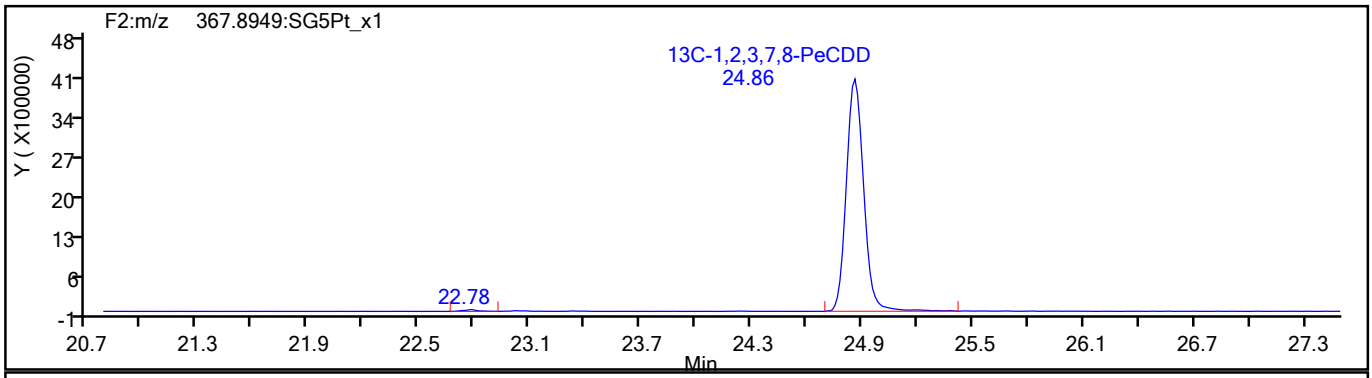

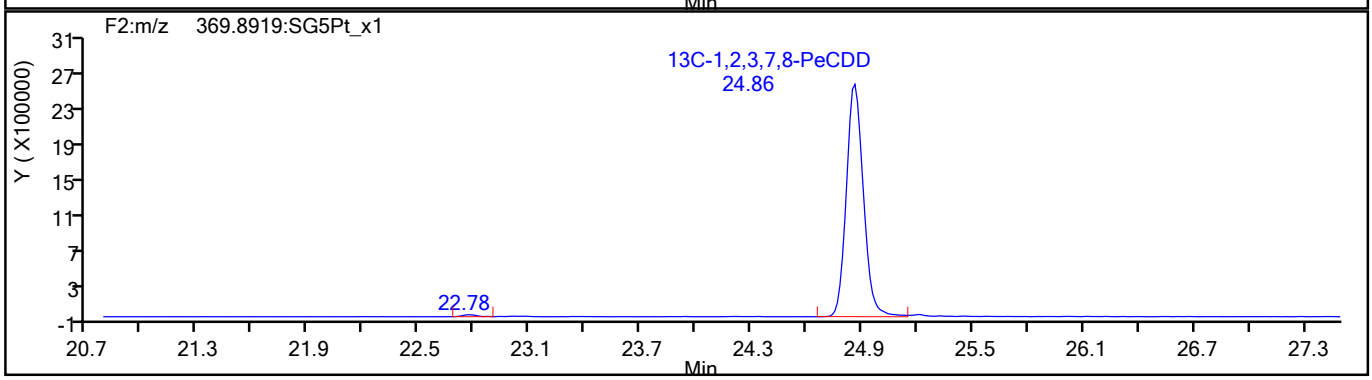

778645

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

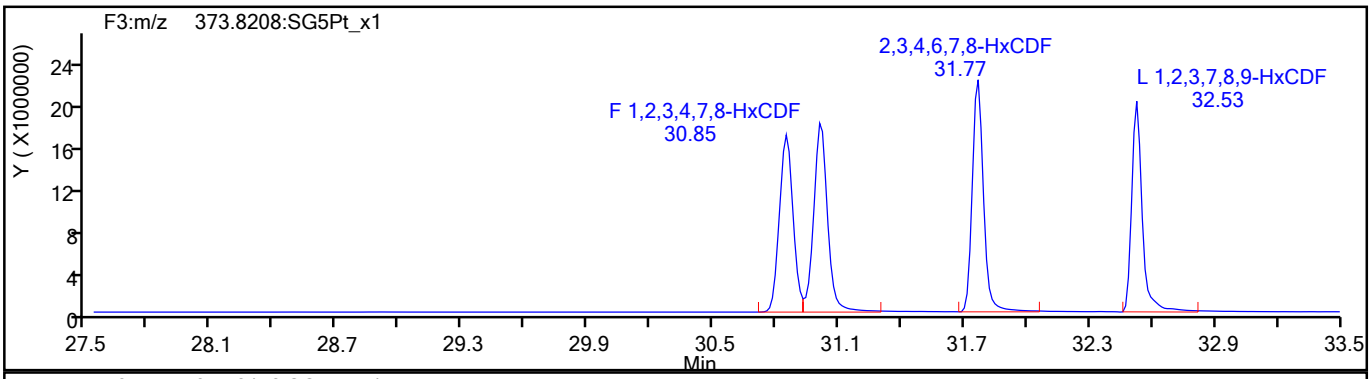

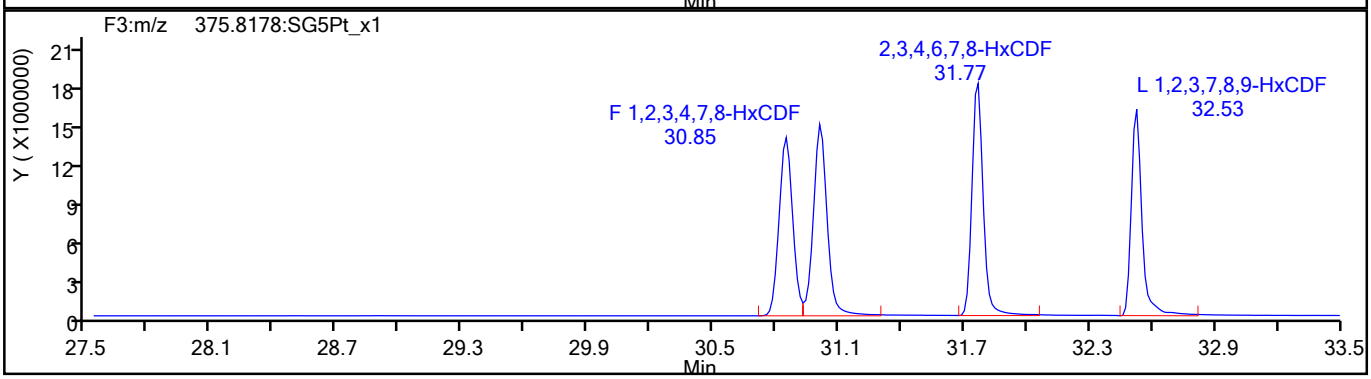

HxCDF Standards

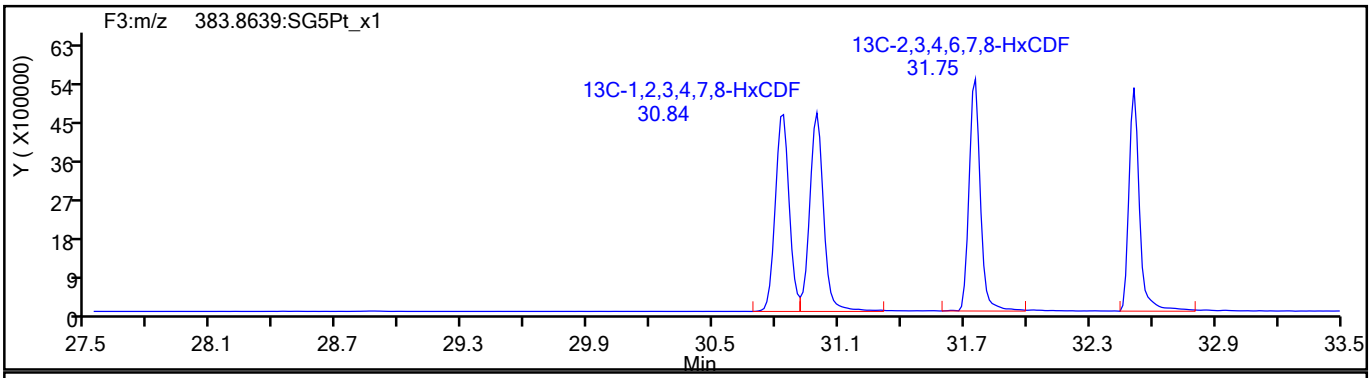

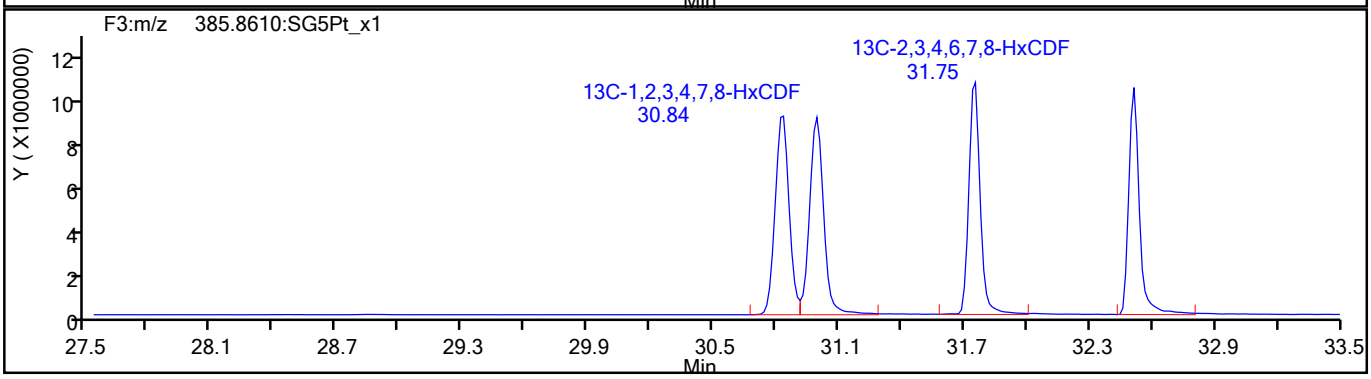

778646

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Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

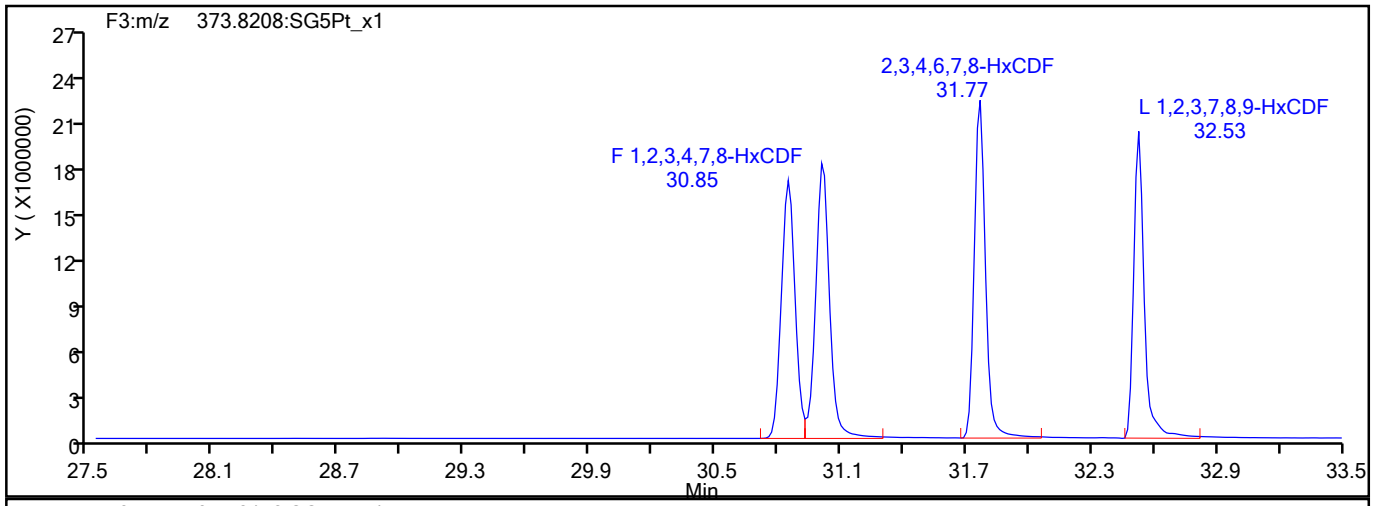

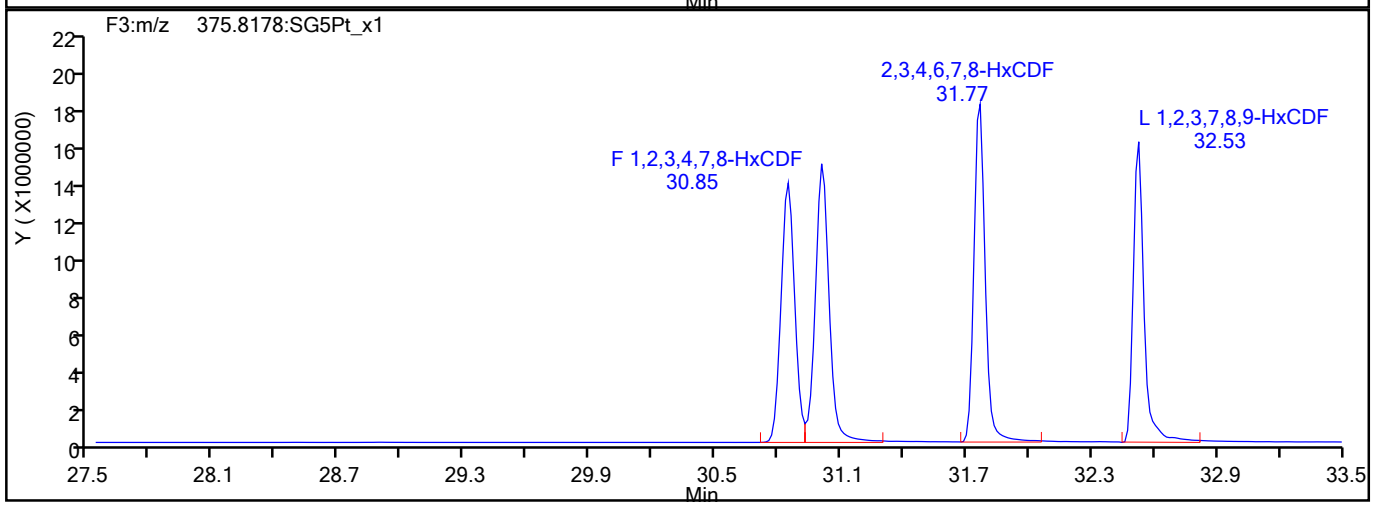

HxCDF Interference Mass

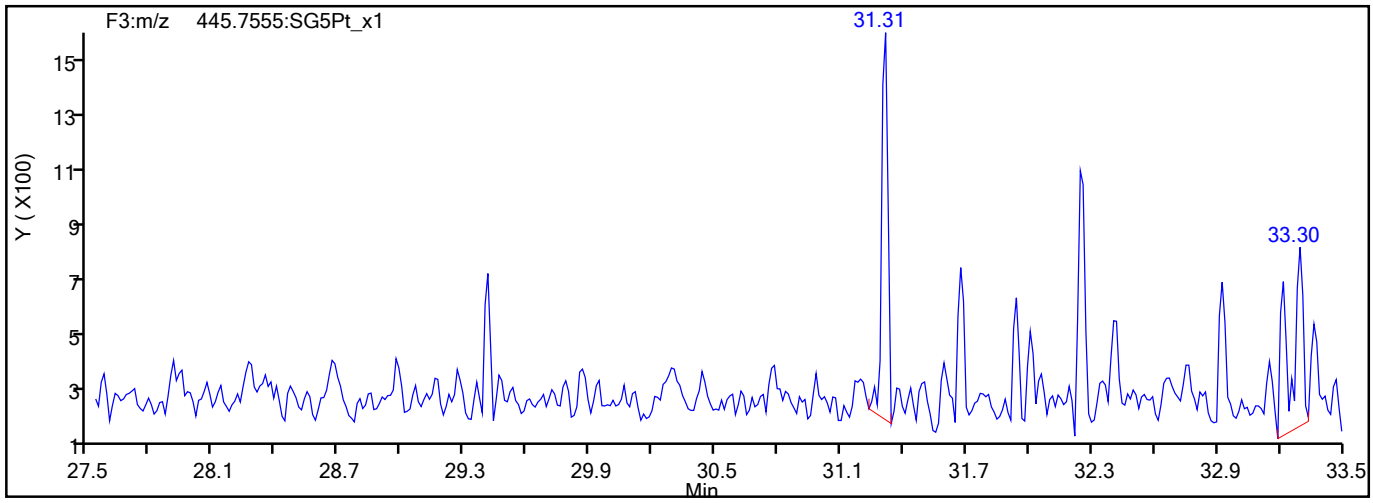

778647

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

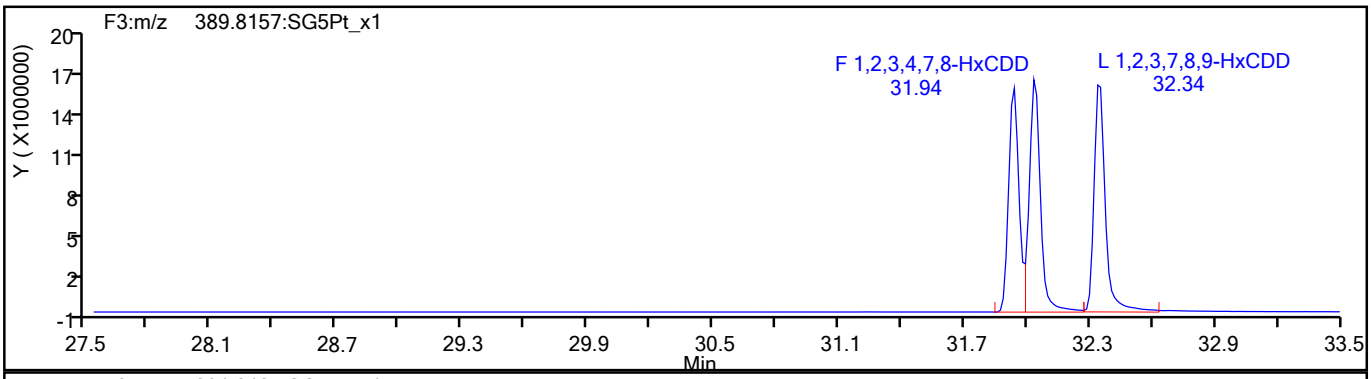

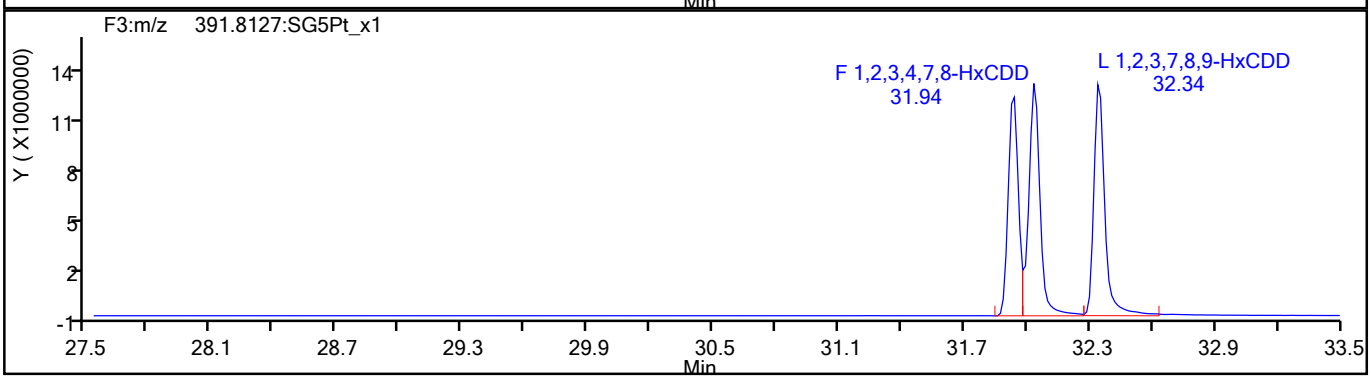

HxCDD Standards

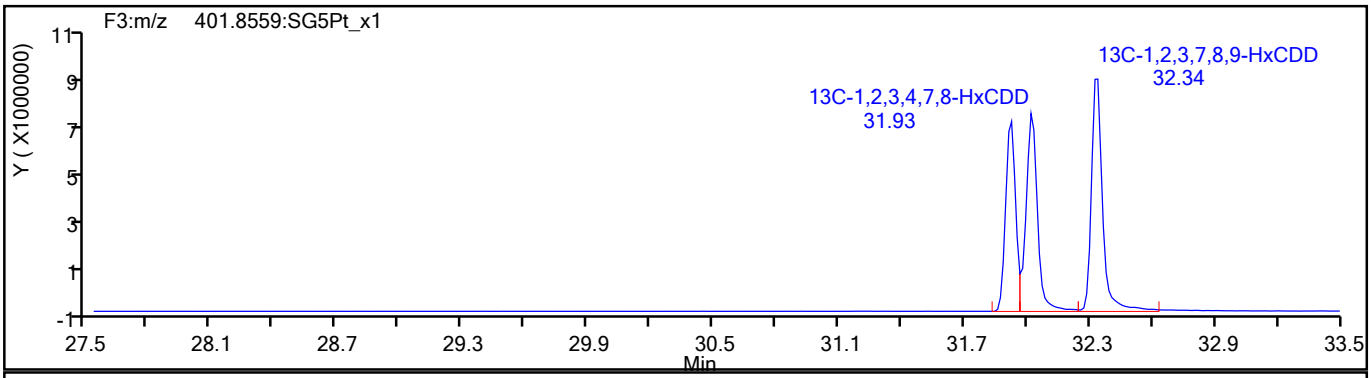

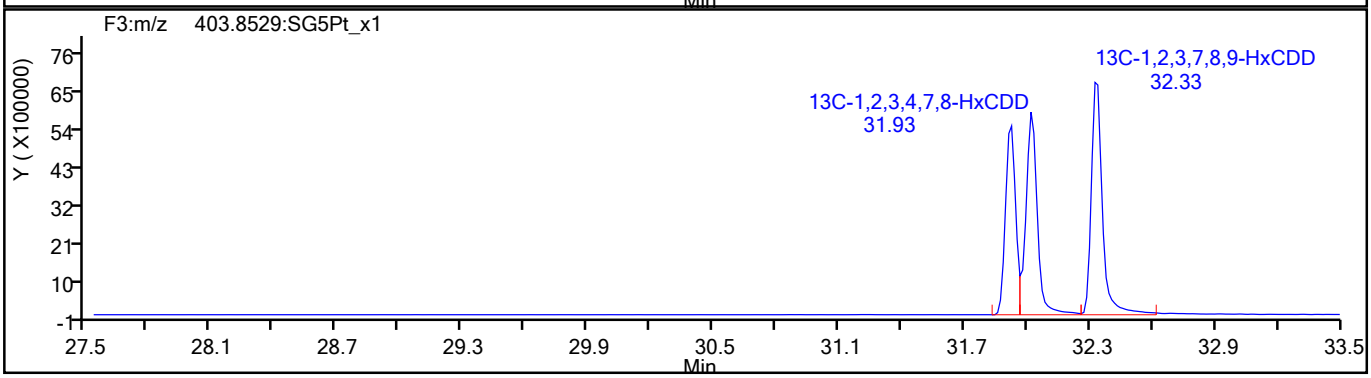

778648

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

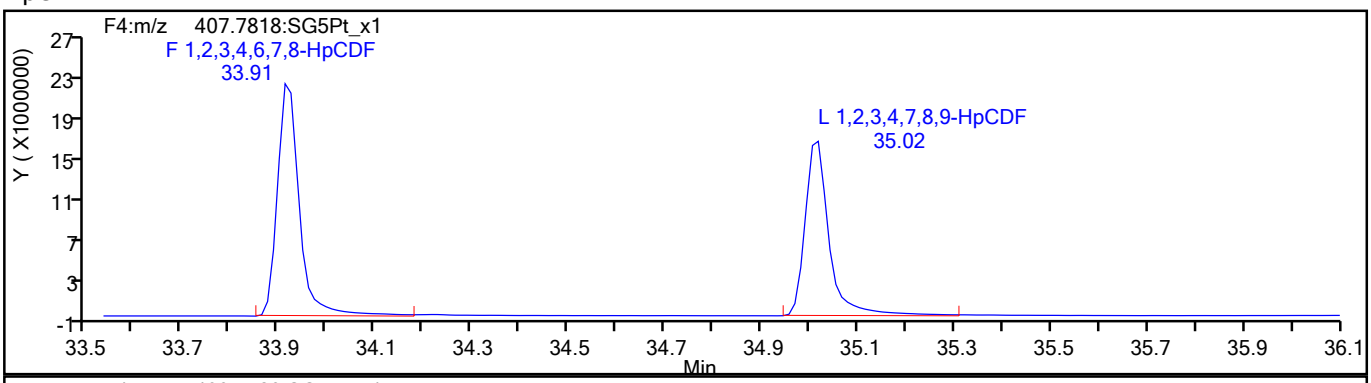

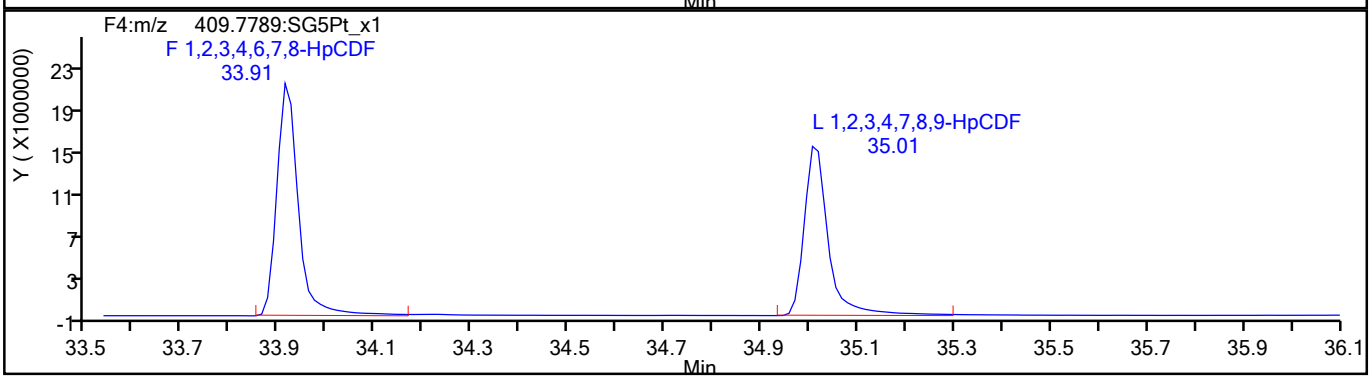

HpCDF Standards

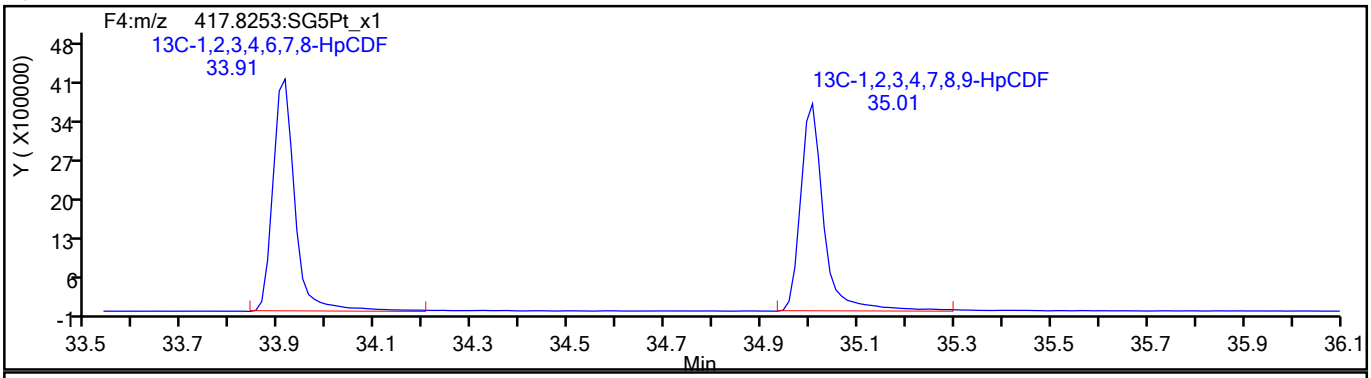

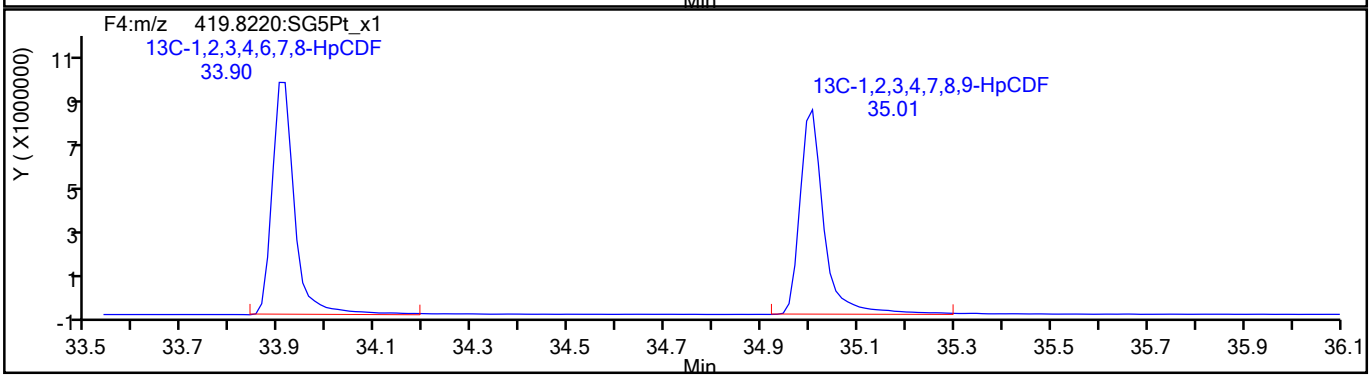

778649

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

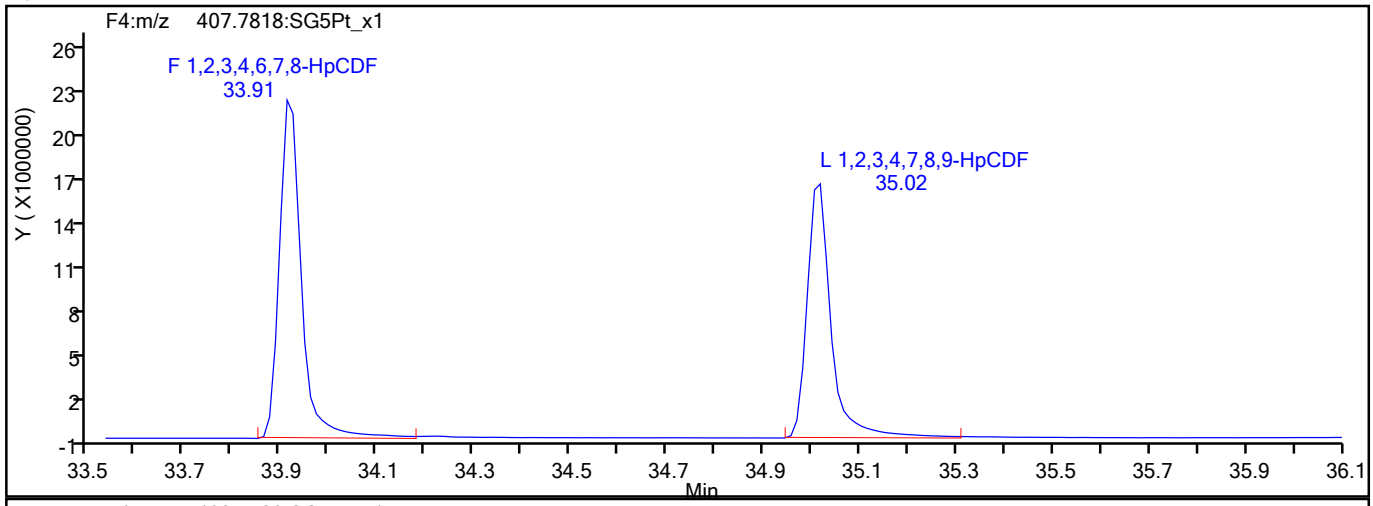

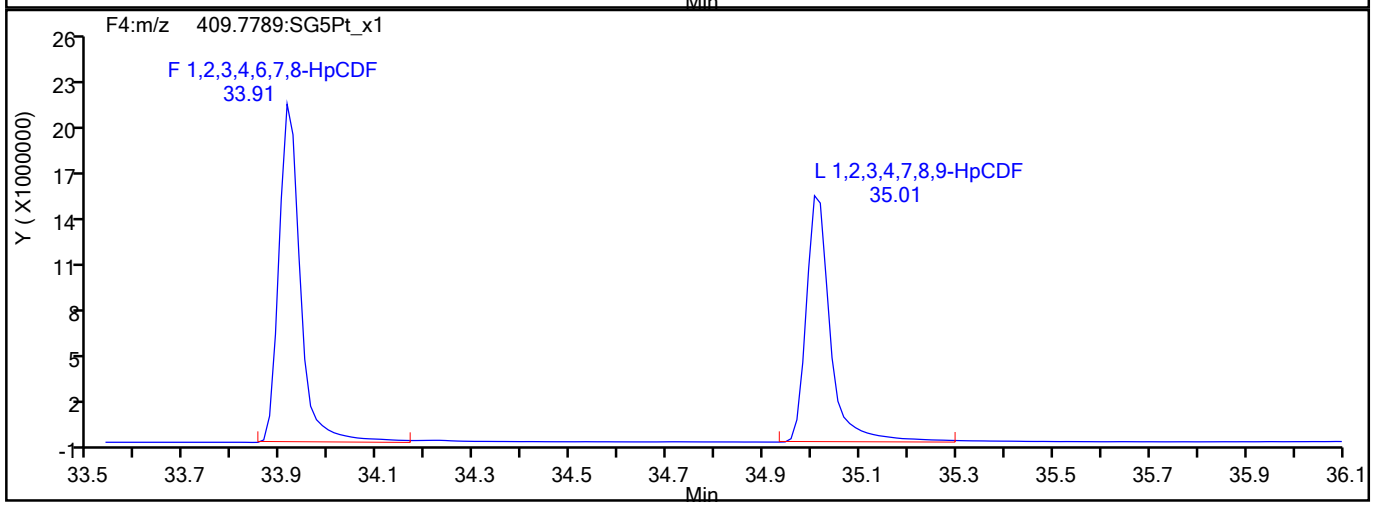

HpCDF Interference Mass

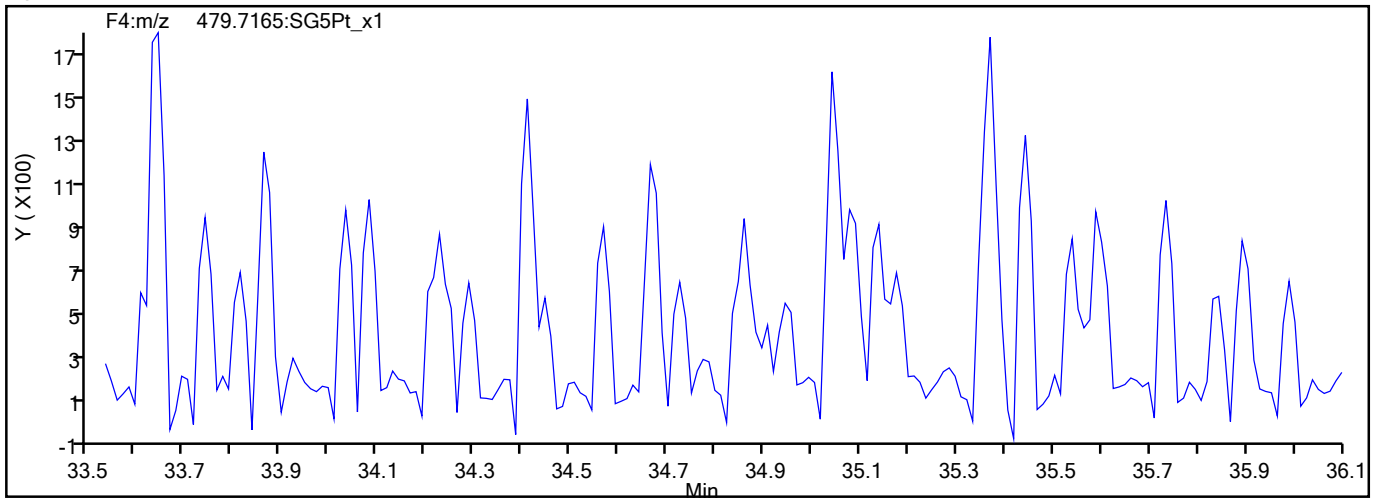

778650

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

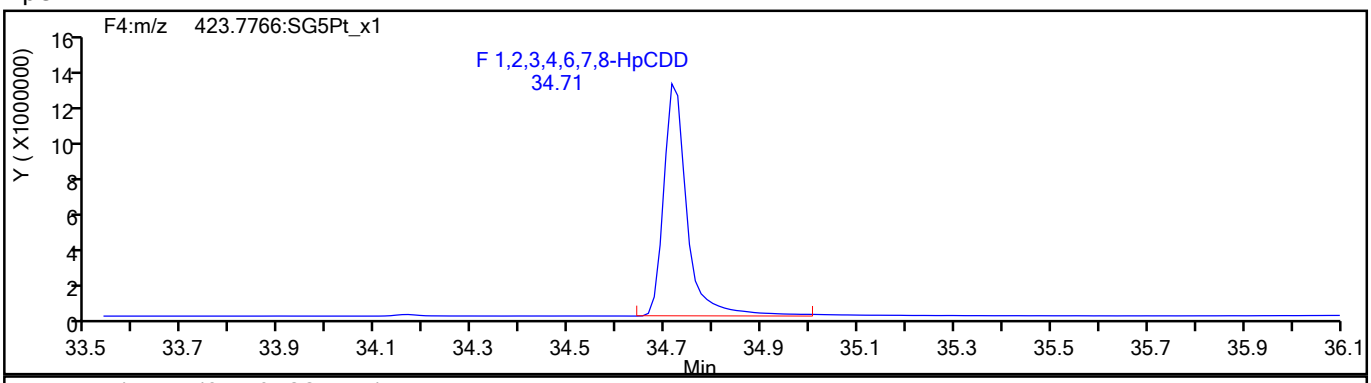

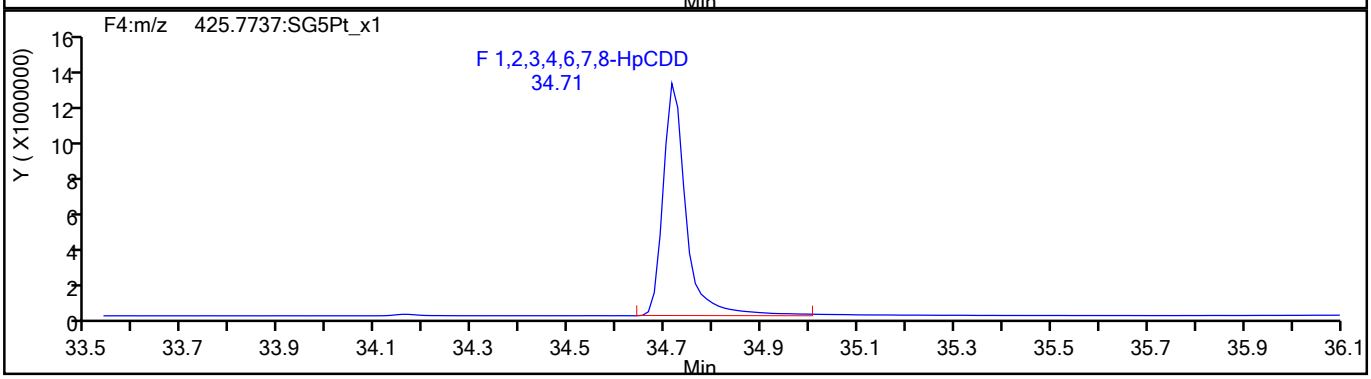

HpCDD Standards

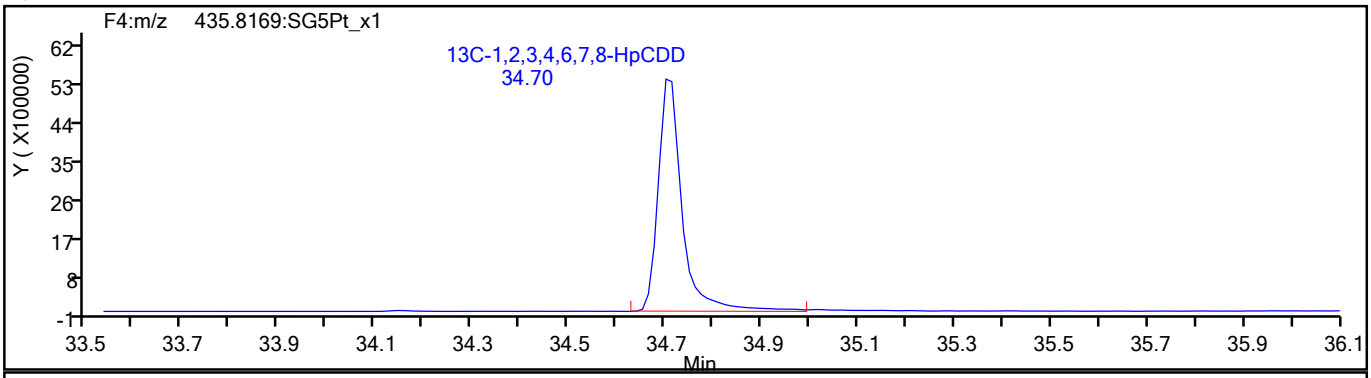

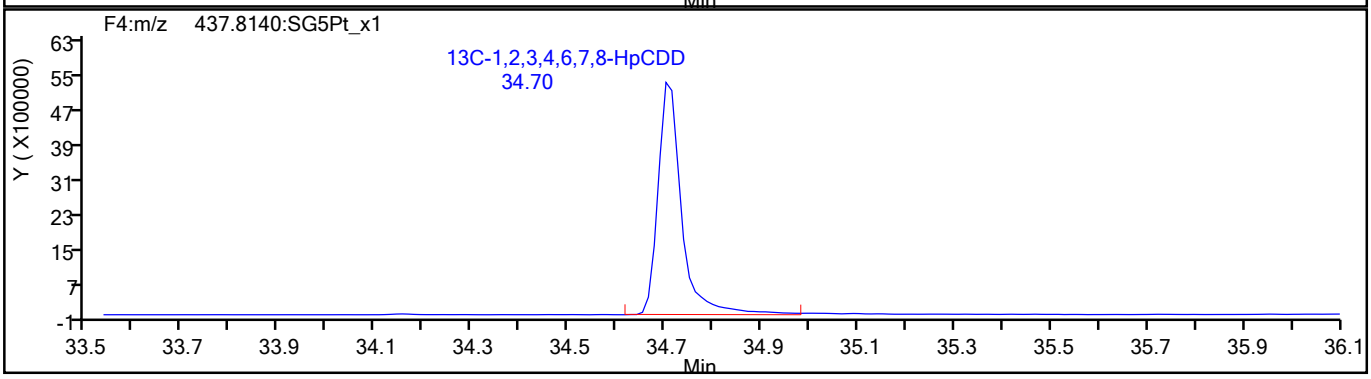

778651

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

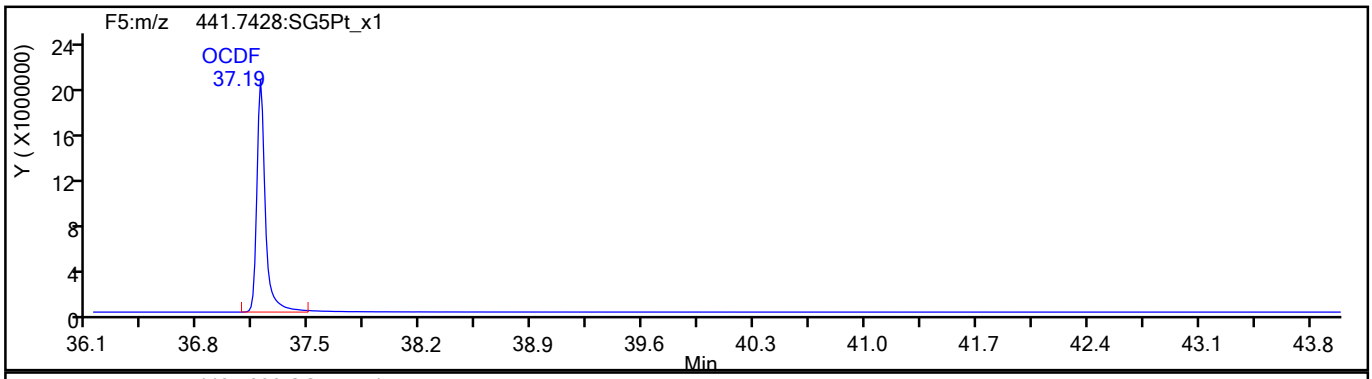

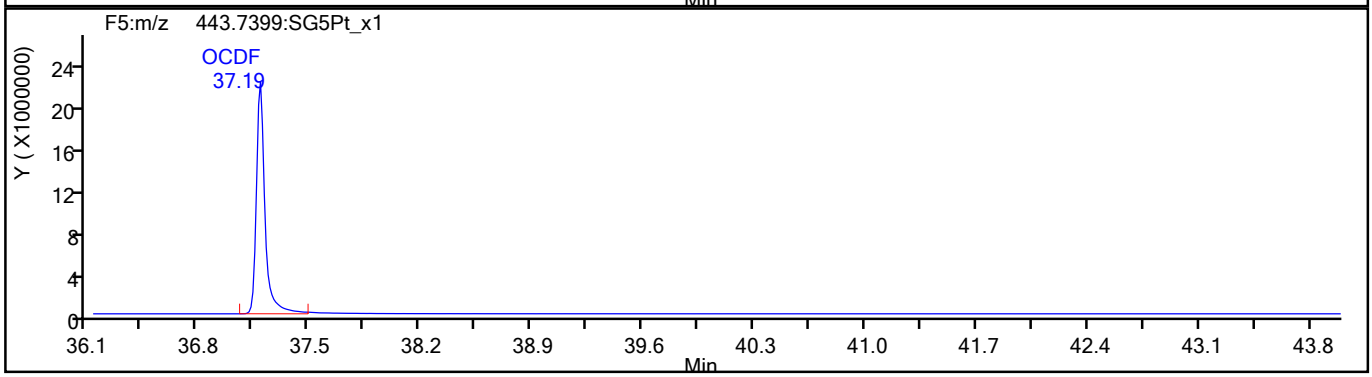

OCDF Standards

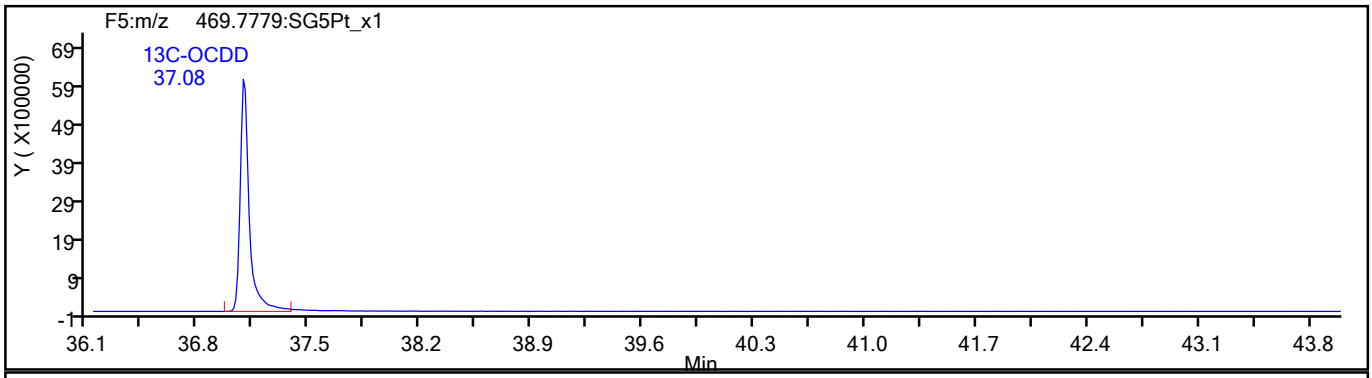

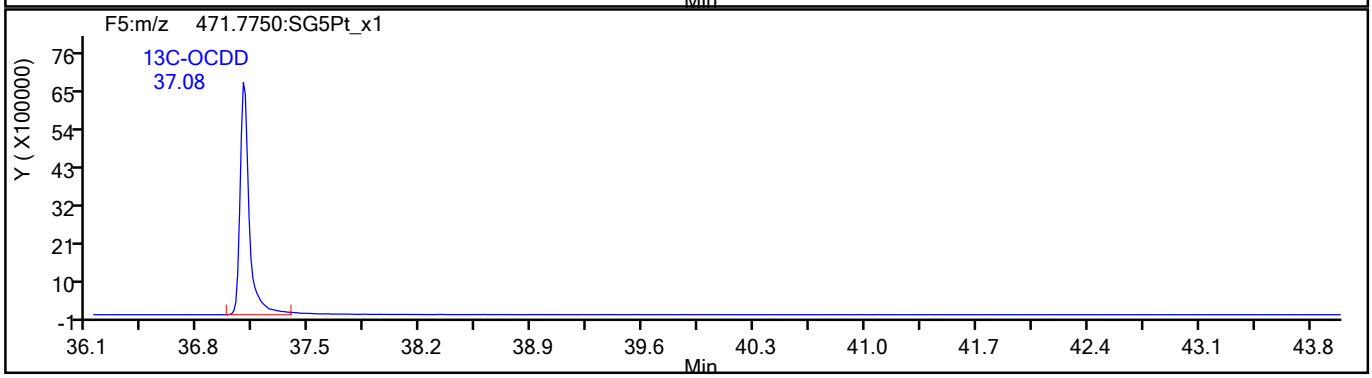

778652

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

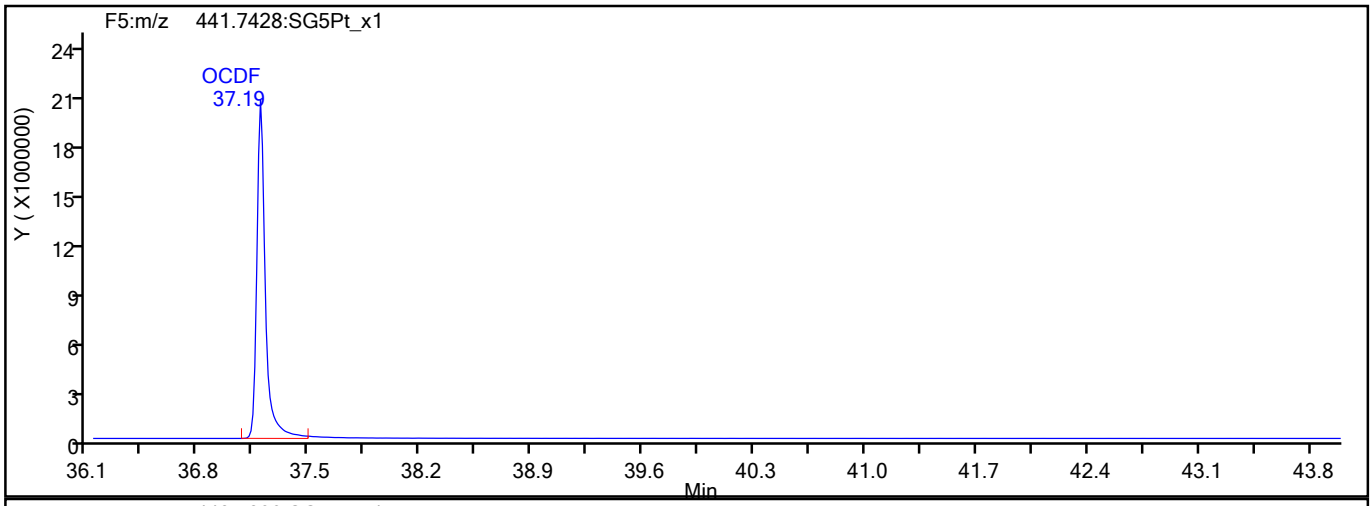

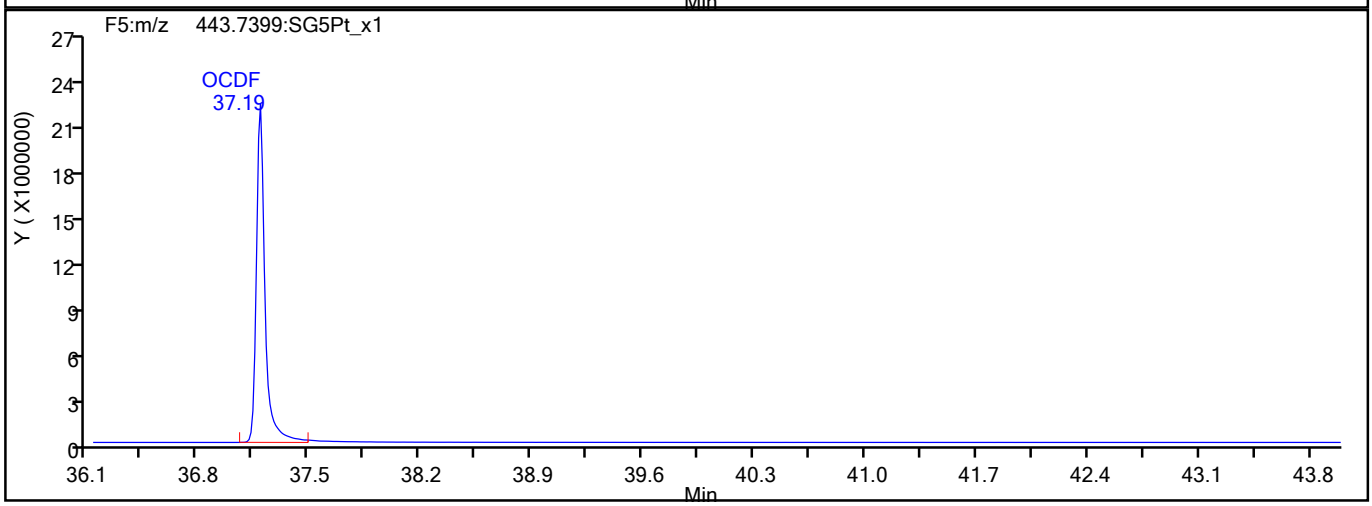

OCDF Interference Mass

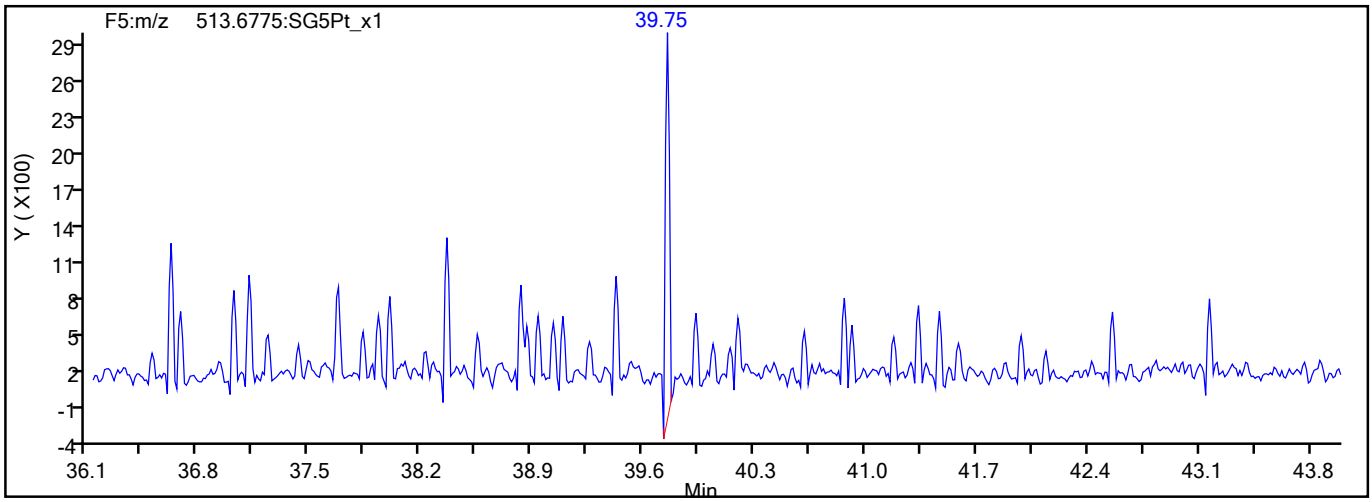

778653

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

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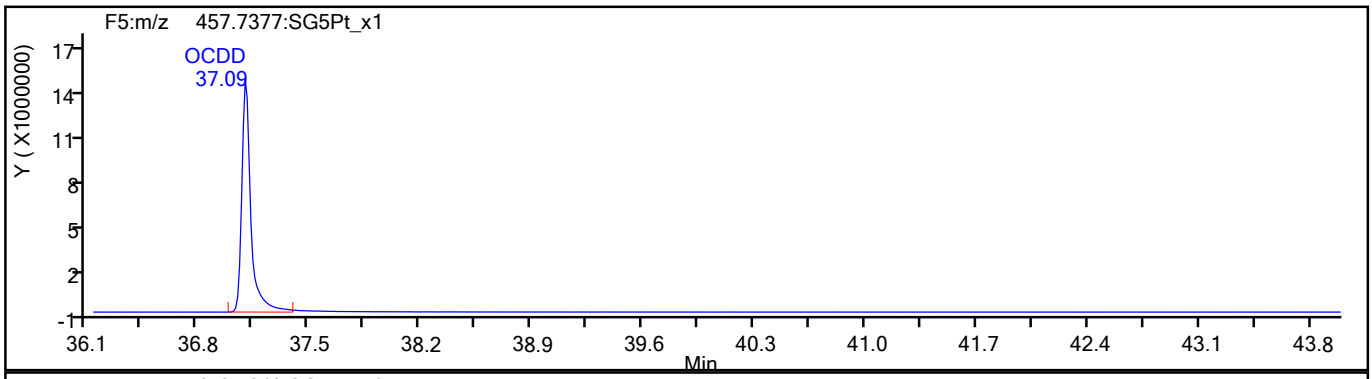

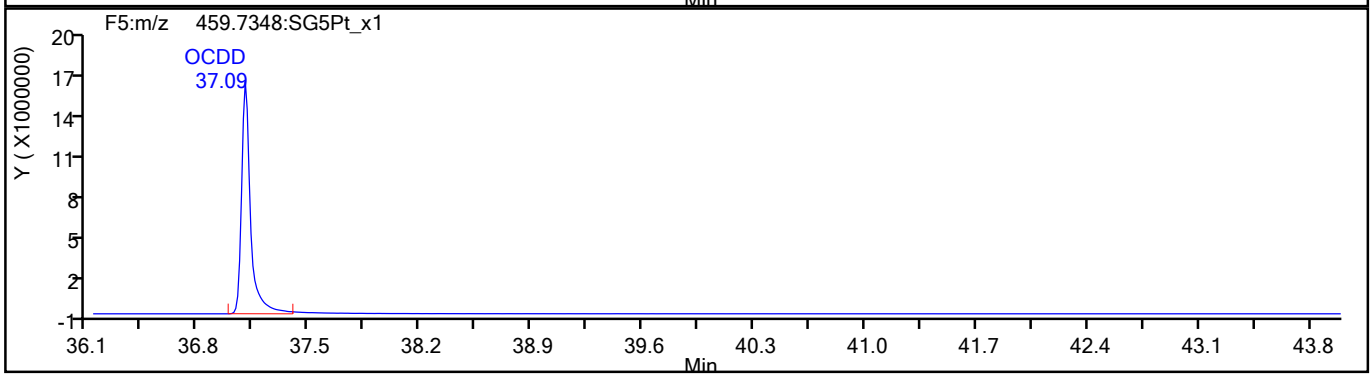

OCDD Standards

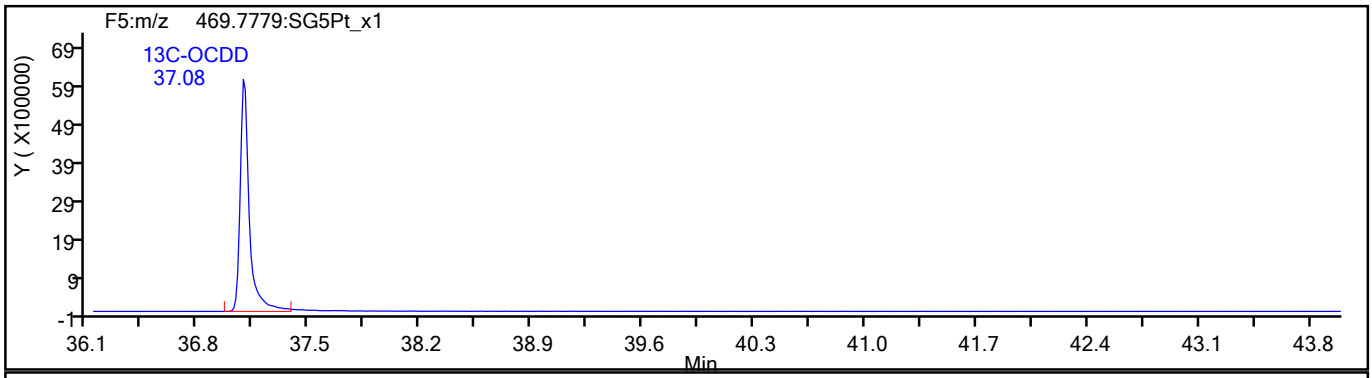

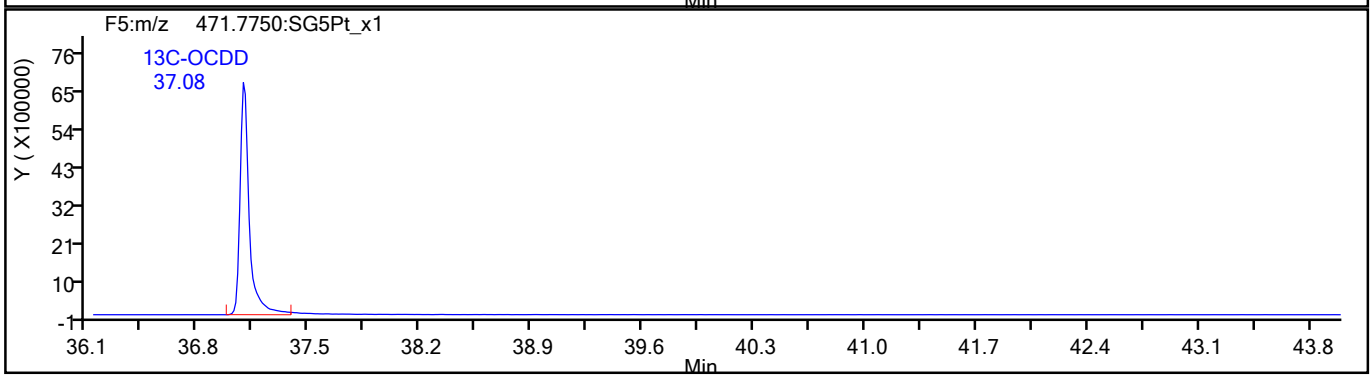

778654

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

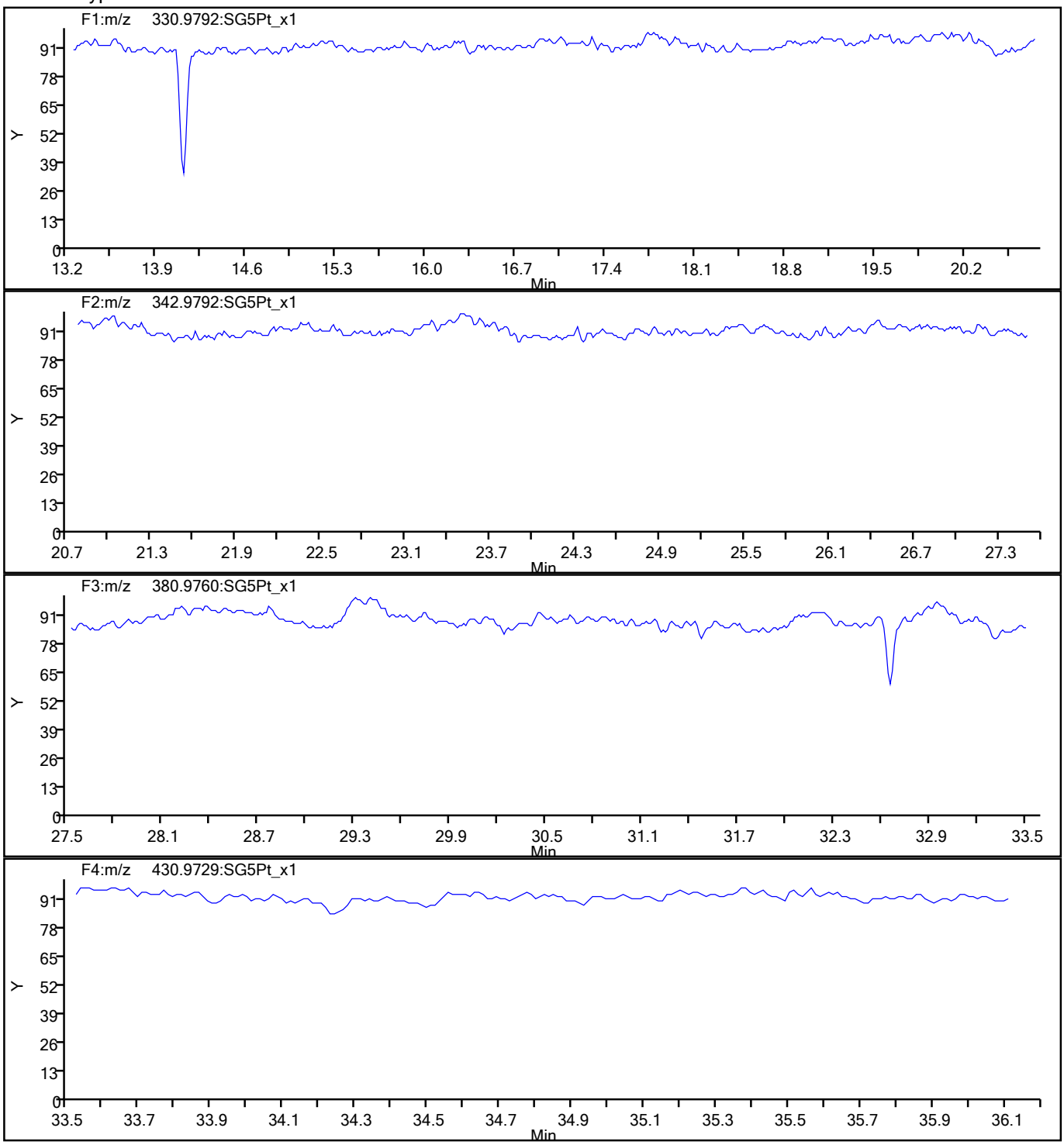

778655

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

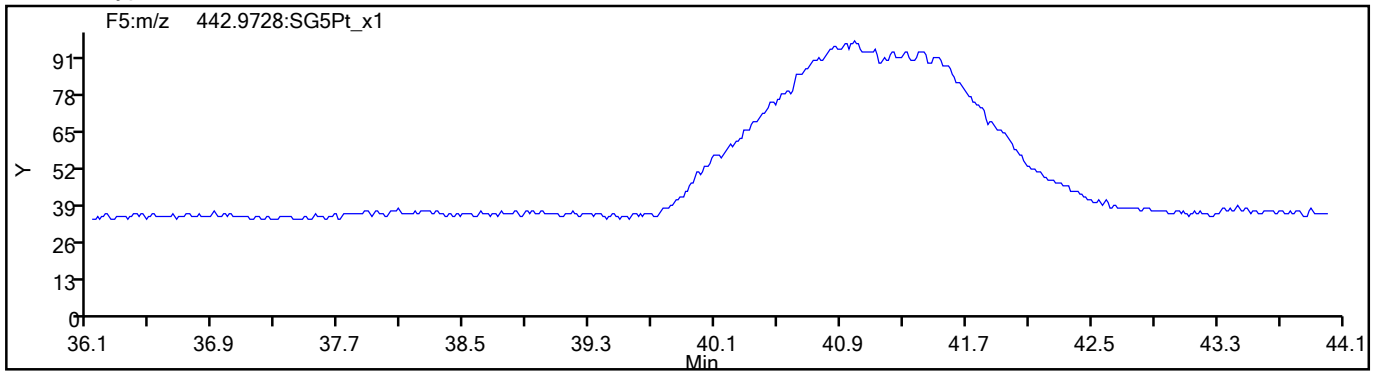

778656

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Lab Sample ID: CCV 320-515770/1 Calibration Date: 08/13/2021 04:53

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 12AU2110D5_23.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.030		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.276		10.2	10.0	102	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.063		50.1	50.0	100	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.025		50.3	50.0	101	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.045		49.8	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.087		50.1	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.117		49.6	50.0	99	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.163		49.8	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.067		50.1	50.0	100	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.023		51.1	50.0	102	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.190		52.5	50.0	105	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.167		50.0	50.0	100	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.465		50.8	50.0	102	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.130		51.6	50.0	103	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.331		50.5	50.0	101	86-116
OCDD	AveID	1.107	1.143		103	100	103	79-126
OCDF	AveID	1.438	1.423		98.9	100	99	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.588		97.7	100	98	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9177		102	100	102	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.201		99.2	100	99	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.237		99.8	100	100	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8084		106	100	106	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	0.9921		91.6	100	92	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.013		89.8	100	90	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	0.9653		90.7	100	91	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7254		98.9	100	99	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8021		91.1	100	91	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.8978		92.8	100	93	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7724		99.9	100	100	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6963		108	100	108	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7329		105	100	105	77-129
13C-OCDD	Ave	0.4472	0.5166		231	200	116	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.232		11.1	10.0	111	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\12AU2110D5.SPL
Last Modified: Friday, August 13, 2021 13:56:47 Pacific Daylight Time
Printed: Friday, August 13, 2021 13:57:00 Pacific Daylight Time

Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #
1	12AU2110D5_1	WDM HRDXNCP_00044	WDM 081221	Tray01:1	Dioxin	
2	12AU2110D5_2	CS-4 HRDXNL4_00099	CCV 081221	Tray01:2	Dioxin	
3	12AU2110D5_3	SB Solvent Blank C-14	SB 081221	Tray01:3		
4	12AU2110D5_4	320-76576-A-28-B 50x	320-76576-A-28-B 50x	Tray01:4	1613B/Solid	D264
5	12AU2110D5_5	320-76576-A-29-D 50x	320-76576-A-29-D 50x	Tray01:5	1613B/Solid	
6	12AU2110D5_6	320-76576-A-29-E MS 50x	320-76576-A-29-E MS 50x	Tray01:6	1613B/Solid	
7	12AU2110D5_7	320-76576-A-29-F MSD 50x	320-76576-A-29-F MSD 50x	Tray01:7	1613B/Solid	
8	12AU2110D5_8	320-76576-a-37-a 100X	320-76576-a-37-a 100X	Tray01:8	1613B/Solid	D258
9	12AU2110D5_9	SB Solvent Blank C-14	SB 081221A	Tray01:3		
10	12AU2110D5_10	WDM HRDXNCP_00044	WDM 081221A	Tray01:1	Dioxin	
11	12AU2110D5_11	CS-4 HRDXNL4_00099	CCV 081221A	Tray01:2	Dioxin	
12	12AU2110D5_12	SB Solvent Blank C-14	SB 081221B	Tray01:3		
13	12AU2110D5_13	240-153593-b-1-a	240-153593-b-1-a	Tray01:15	8290A/Solid	D260
14	12AU2110D5_14	240-153593-b-3-a	240-153593-b-3-a	Tray01:16	8290A/Solid	
15	12AU2110D5_15	240-153593-b-5-a	240-153593-b-5-a	Tray01:17	8290A/Solid	
16	12AU2110D5_16	240-153593-b-7-a	240-153593-b-7-a	Tray01:18	8290A/Solid	
17	12AU2110D5_17	240-153593-b-9-a	240-153593-b-9-a	Tray01:19	8290A/Solid	
18	12AU2110D5_18	240-153593-b-11-a	240-153593-b-11-a	Tray01:20	8290A/Solid	
19	12AU2110D5_19	280-150979-b-1-a 5X	280-150979-b-1-a 5X	Tray01:21	8290A_D5/Solid	D258
20	12AU2110D5_20	280-150979-b-3-a 5X	280-150979-b-3-a 5X	Tray01:22	8290A_D5/Solid	
21	12AU2110D5_21	280-150979-b-5-a 5X	280-150979-b-5-a 5X	Tray01:23	8290A_D5/Solid	
22	12AU2110D5_22	SB Solvent Blank C-14	SB 081221C	Tray01:3		
23	12AU2110D5_23	CS-4 HRDXNL4_00099	CCV 081221B	Tray01:2	Dioxin	
24	12AU2110D5_24	WDM HRDXNCP_00044	WDM 081221B	Tray01:1	Dioxin	
25	12AU2110D5_25	mb 320-513227/1-a	mb 320-513227/1-a	Tray01:29	1613B/Solid	D264
26	12AU2110D5_26	lcs 320-513227/2-a	lcs 320-513227/2-a	Tray01:30	1613B/Solid	
27	12AU2110D5_27	lcsd 320-513227/3-a	lcsd 320-513227/3-a	Tray01:31	1613B/Solid	
28	12AU2110D5_28	320-76769-a-9-a	320-76769-a-9-a	Tray01:32	1613B/Solid	
29	12AU2110D5_29	320-76769-a-21-a	320-76769-a-21-a	Tray01:33	1613B/Solid	
30	12AU2110D5_30	320-76769-a-35-a	320-76769-a-35-a	Tray01:34	1613B/Solid	
31	12AU2110D5_31	320-76765-a-1-a	320-76765-a-1-a	Tray01:35	1613B/Solid	
32	12AU2110D5_32	320-76765-a-2-a	320-76765-a-2-a	Tray01:36	1613B/Solid	
33	12AU2110D5_33	320-76765-a-3-a	320-76765-a-3-a	Tray01:37	1613B/Solid	
34	12AU2110D5_34	320-76765-a-4-a	320-76765-a-4-a	Tray01:38	1613B/Solid	
35	12AU2110D5_35	320-76765-a-5-a	320-76765-a-5-a	Tray01:39	1613B/Solid	
36	12AU2110D5_36	SB Solvent Blank C-14	SB 081221D	Tray01:3		

Log file checked
08/13/21 SMA

User	Sample Size	Units	MS File	Inlet File	Inject Volume	Process
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---

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M 292.9824 R 11580

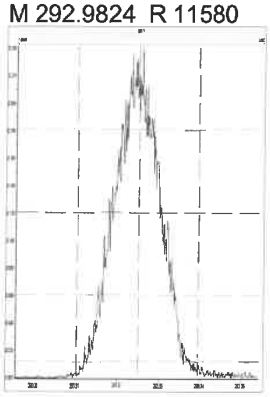

M 304.9824 R 12136

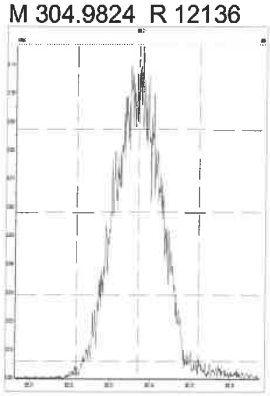

M 318.9792 R 12114

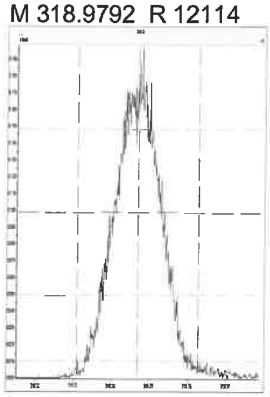

M 330.9792 R 11753

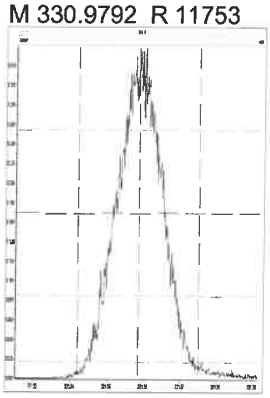

M 342.9792 R 11312

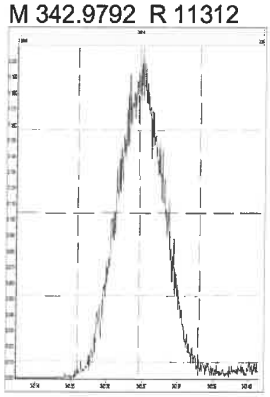

M 354.9792 R 11600

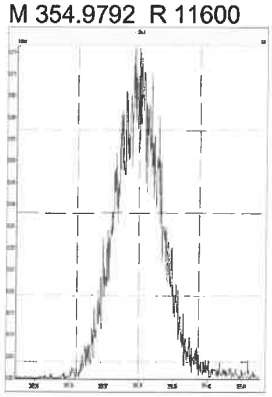

M 366.9792 R 12224

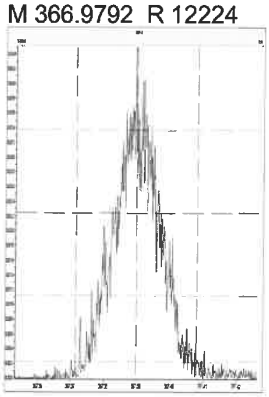

M 380.9760 R 10690

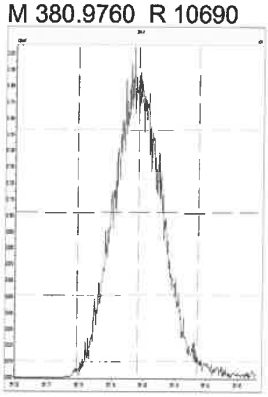

M 392.9760 R 10946

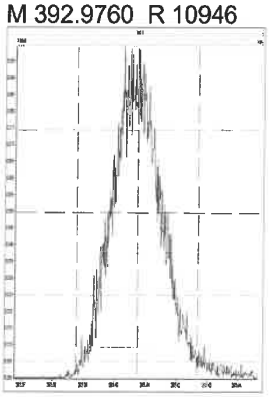

M 404.9760 R 10682

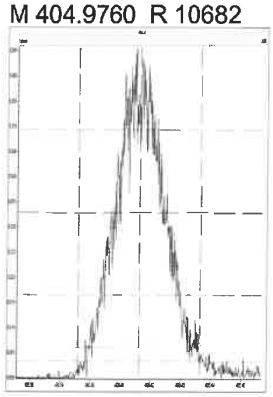

M 416.9760 R 12107

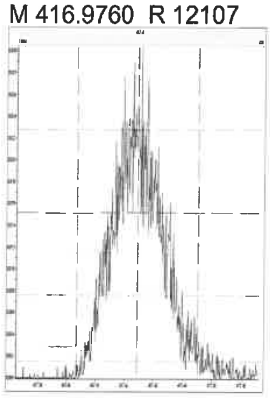

M 318.9792 R 12165

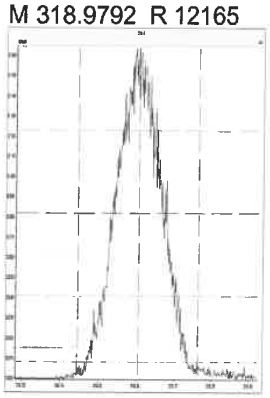

M 330.9792 R 11547

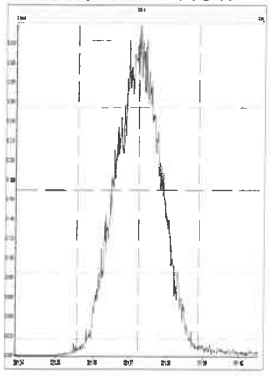

M 342.9792 R 12210

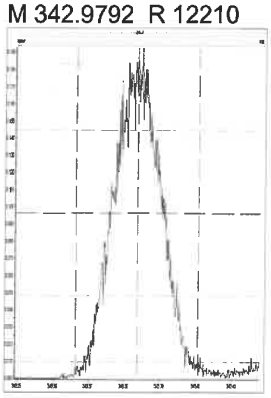

M 354.9792 R 12167

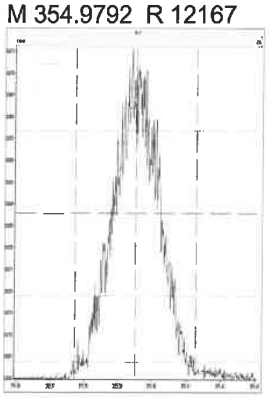

M 366.9792 R 12209

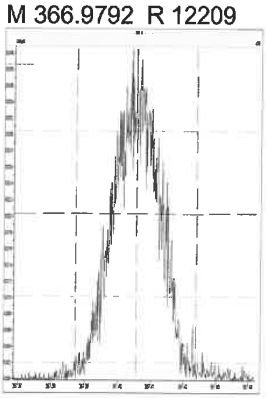

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M 380.9760 R 11848

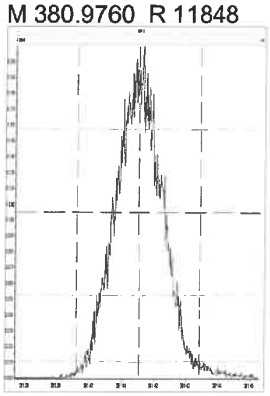

M 392.9760 R 11594

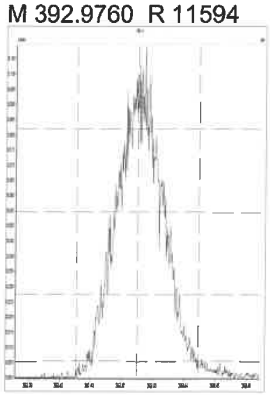

M 404.9760 R 11684

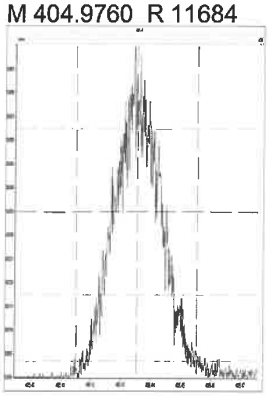

M 416.9760 R 12660

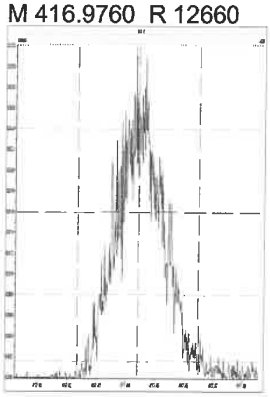

M 366.9792 R 12595

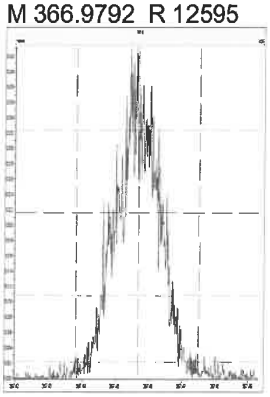

M 380.9760 R 12126

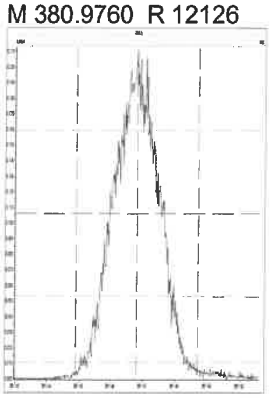

M 392.9760 R 12319

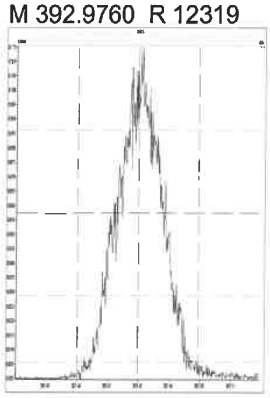

M 404.9760 R 12565

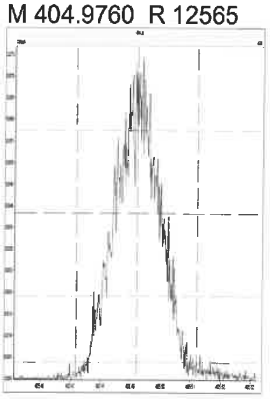

M 416.9760 R 12988

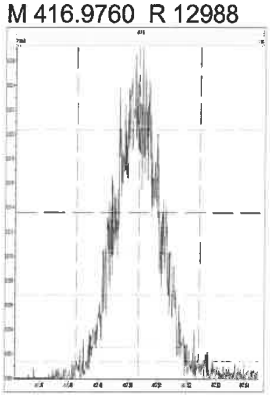

M 430.9728 R 11211

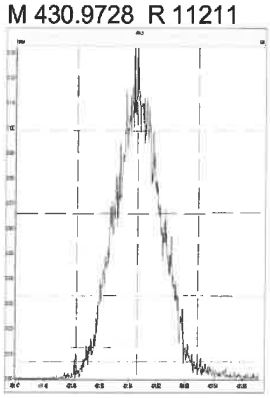

M 442.9728 R 12165

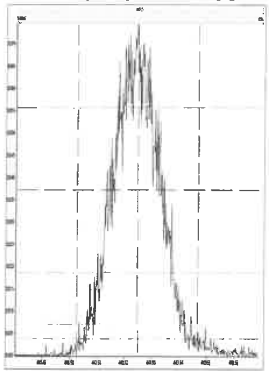

M 454.9728 R 11932

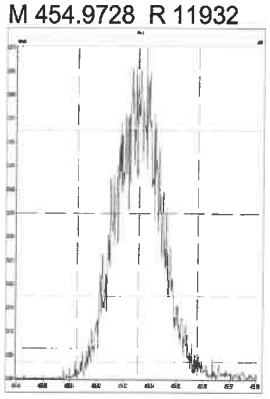

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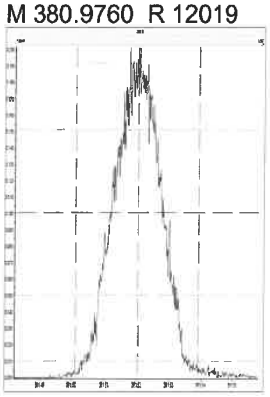

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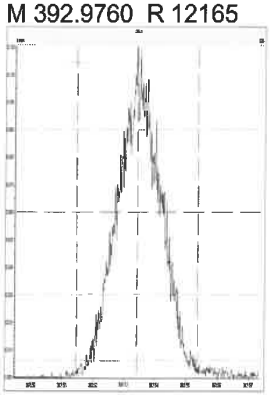

M 404.9760 R 12661

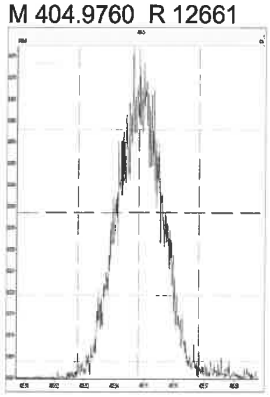

M 416.9760 R 11940

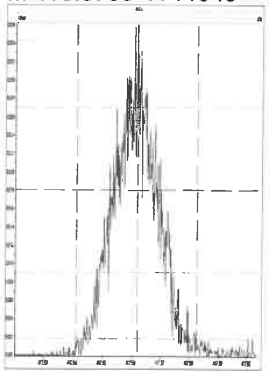

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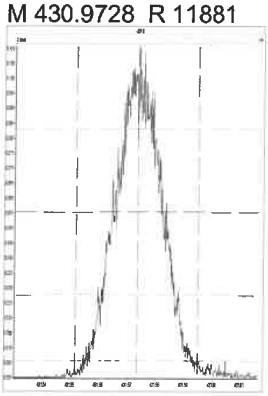

M 442.9728 R 12145

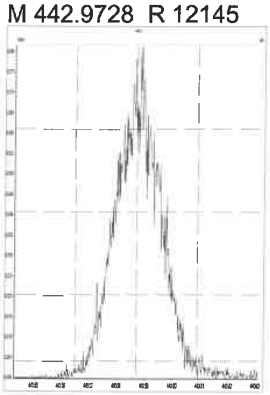

M 454.9728 R 12197

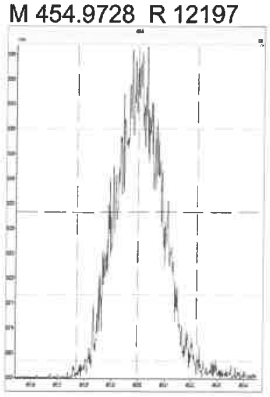

M 466.9728 R 12667

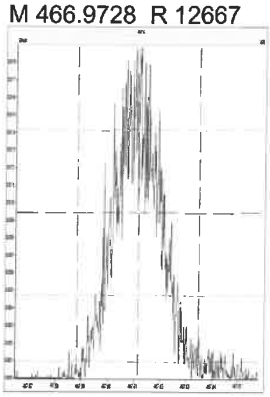

M 480.9696 R 11631

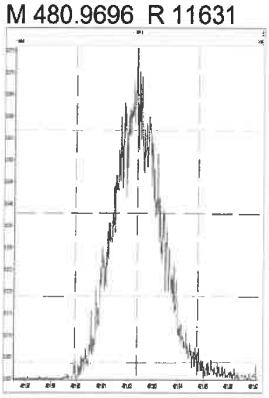

M 380.9760 R 12316

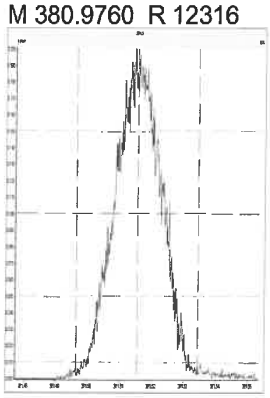

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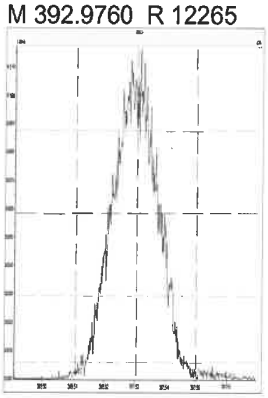

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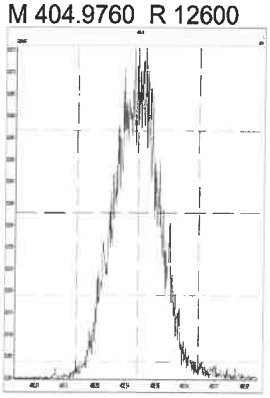

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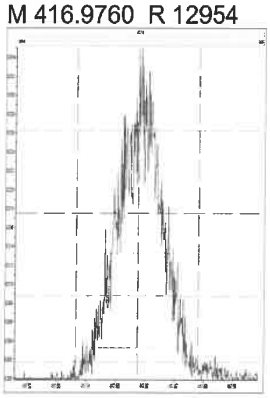

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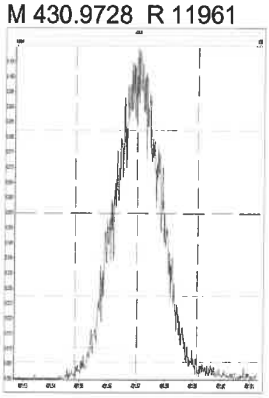

M 442.9728 R 12246

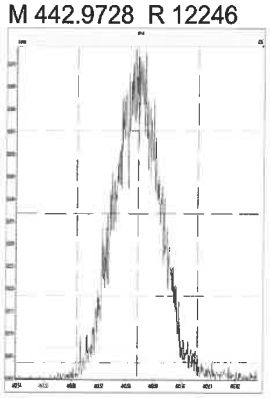

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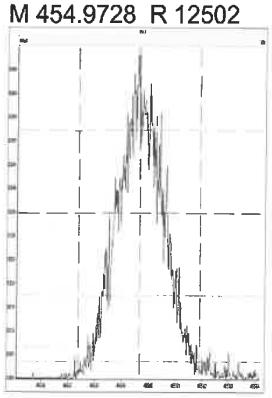

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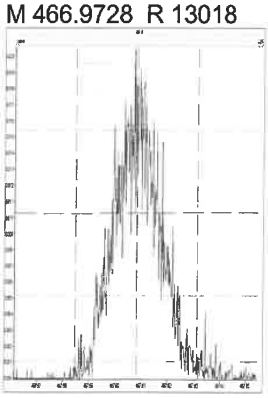

M 480.9696 R 11709

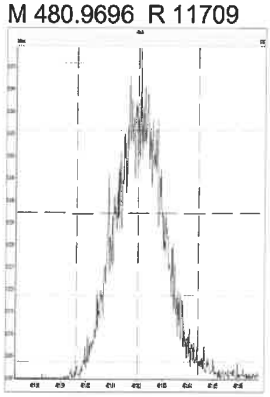

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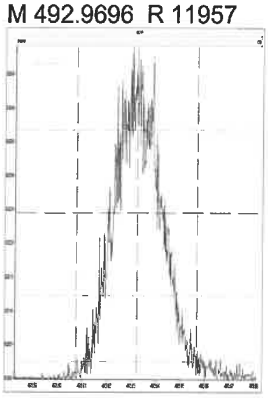

M 504.9696 R 12020

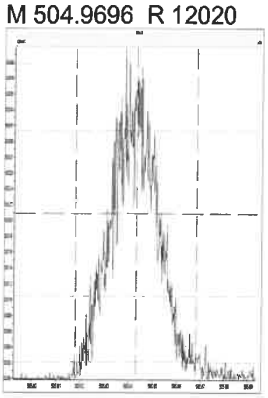

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M 516.9697 R 12794

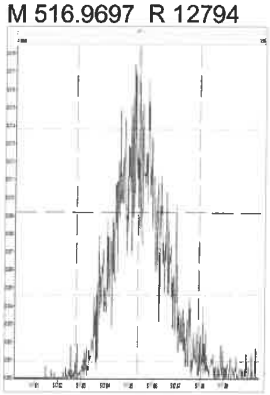

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M 292.9824 R 11796

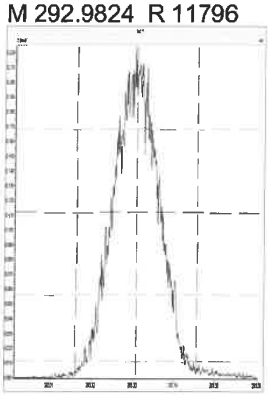

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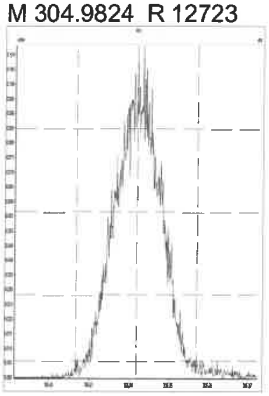

M 318.9792 R 12194

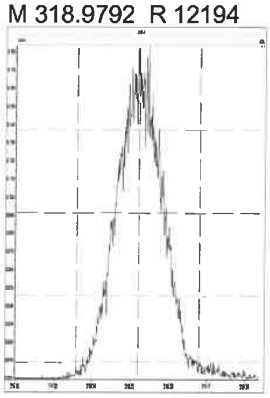

M 330.9792 R 11792

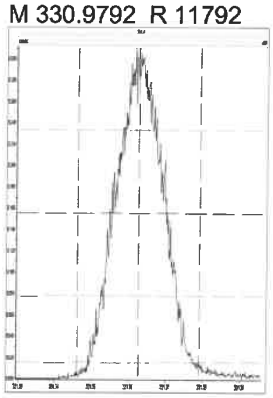

M 342.9792 R 11647

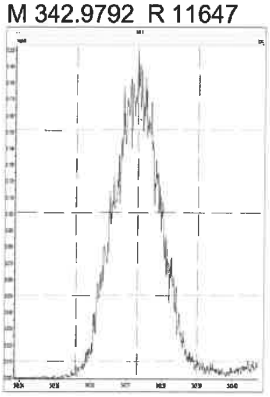

M 354.9792 R 11627

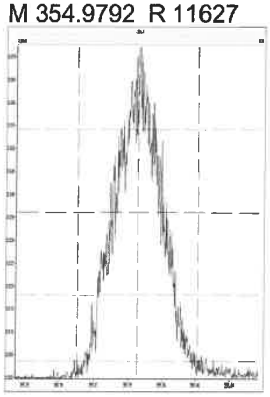

M 366.9792 R 12407

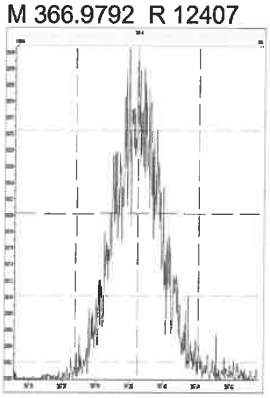

M 380.9760 R 10526

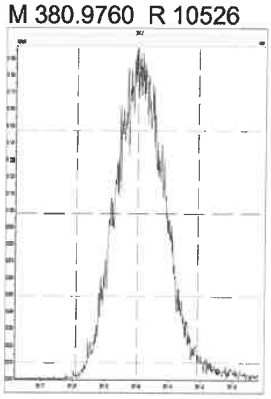

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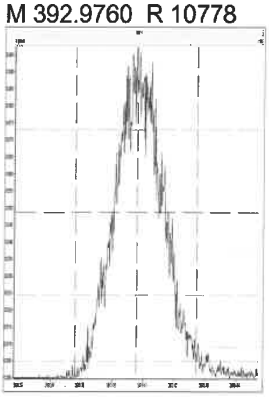

M 404.9760 R 11236

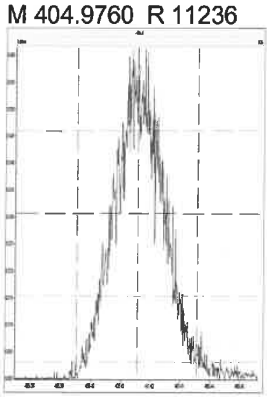

M 416.9760 R 11065

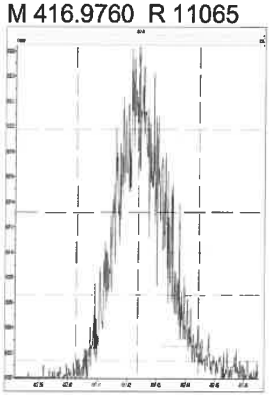

M 318.9792 R 12224

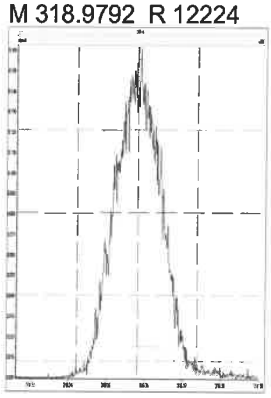

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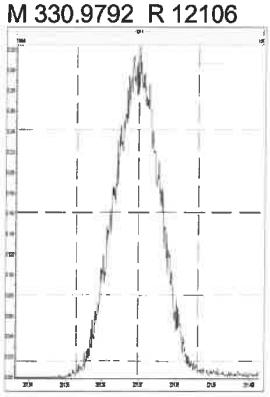

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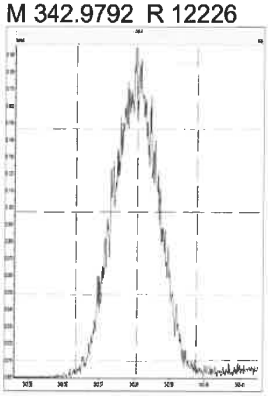

M 354.9792 R 12297

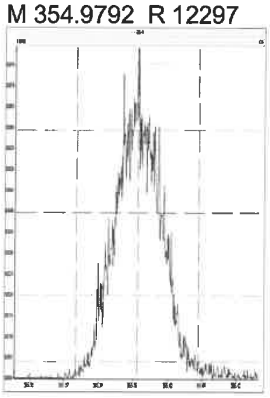

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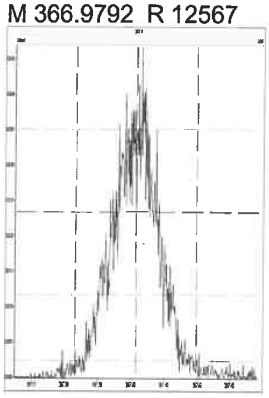

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M 380.9760 R 11317

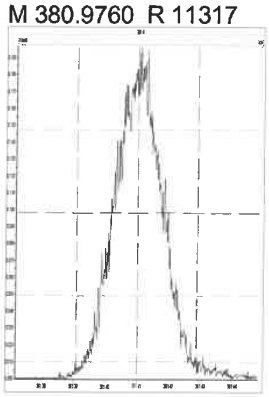

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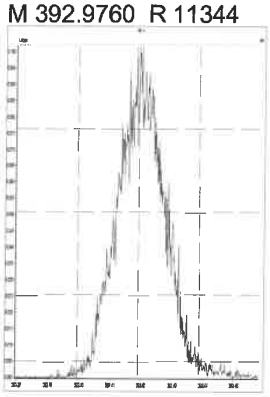

M 404.9760 R 11908

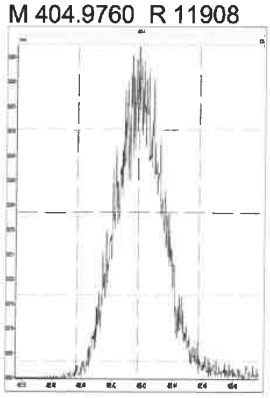

M 416.9760 R 12317

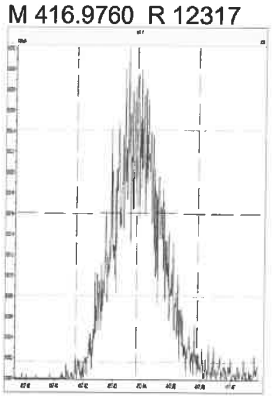

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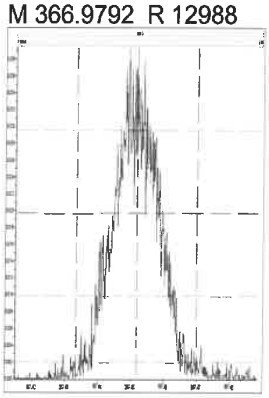

M 380.9760 R 12078

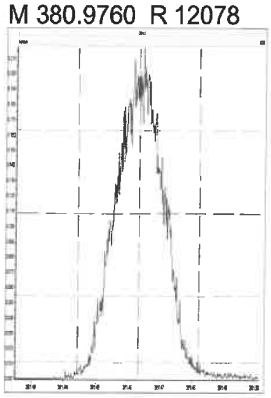

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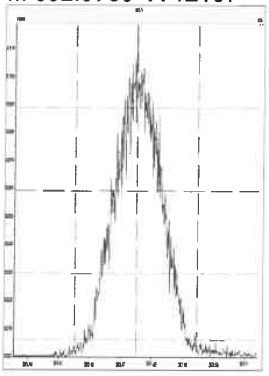

M 404.9760 R 12407

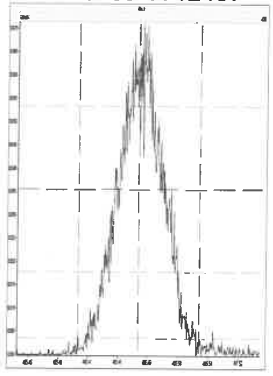

M 416.9760 R 13181

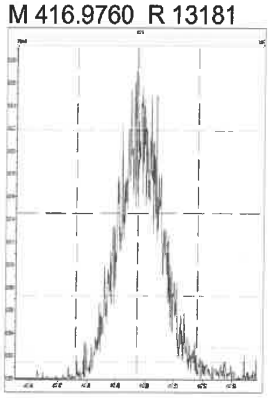

M 430.9728 R 11765

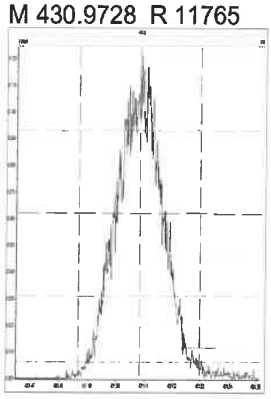

M 442.9728 R 11936

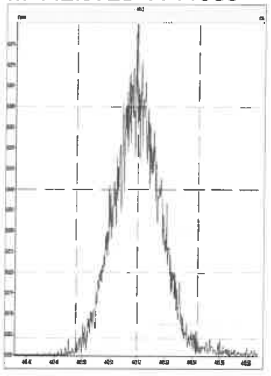

M 454.9728 R 12109

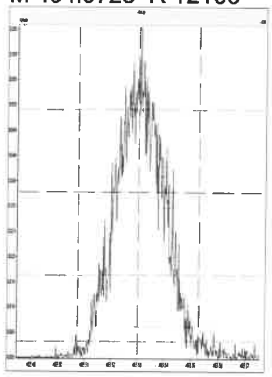

M 380.9760 R 12078

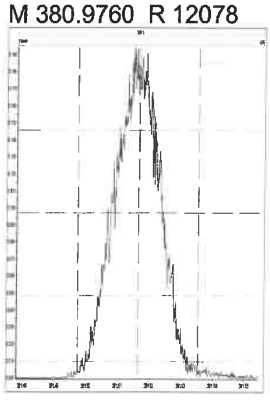

M 392.9760 R 12469

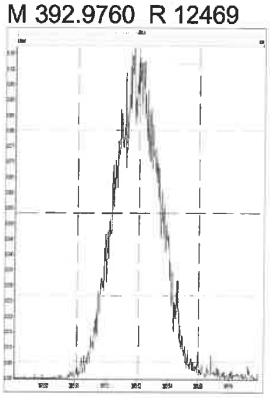

M 404.9760 R 12533

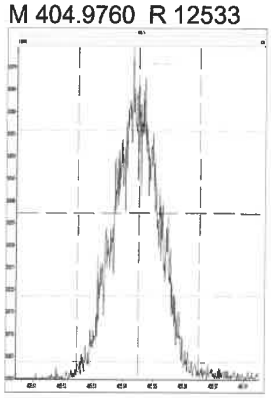

M 416.9760 R 12919

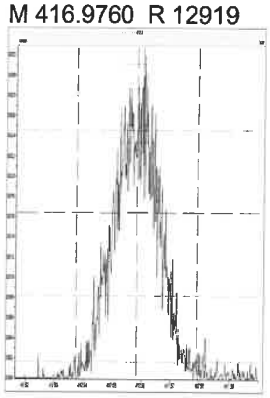

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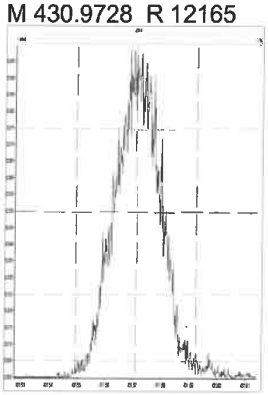

M 442.9728 R 12533

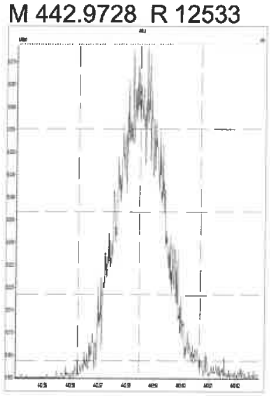

M 454.9728 R 12676

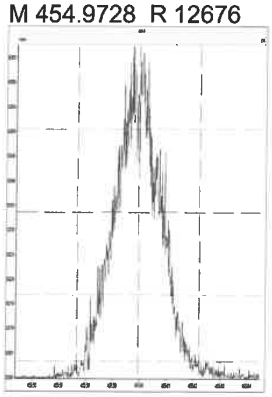

M 466.9728 R 12470

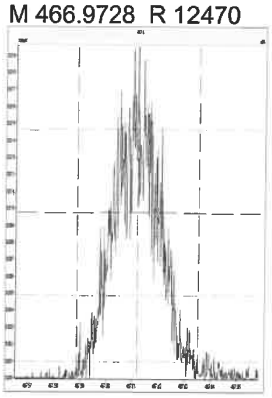

M 480.9696 R 11039

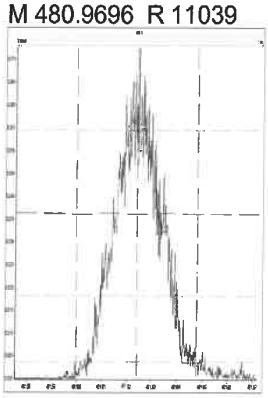

M 380.9760 R 12136

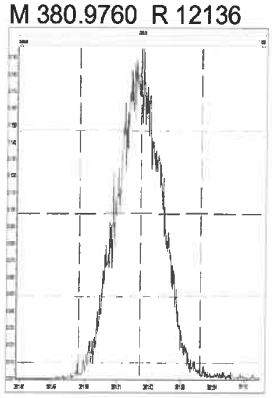

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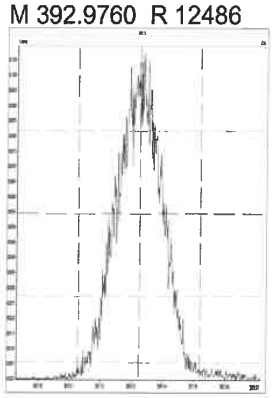

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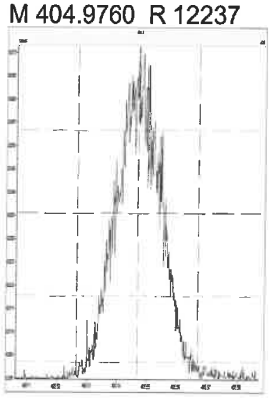

M 416.9760 R 13405

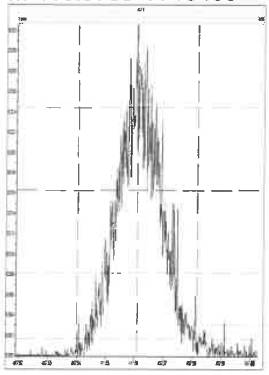

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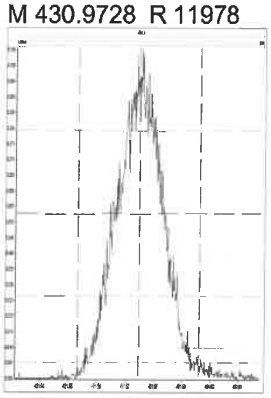

M 442.9728 R 12828

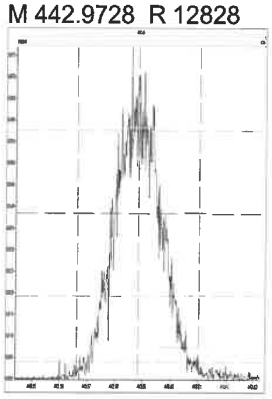

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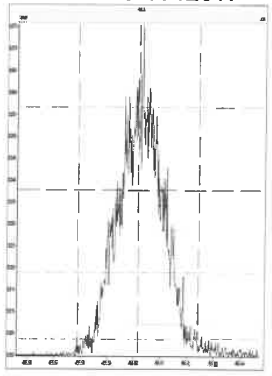

M 466.9728 R 12565

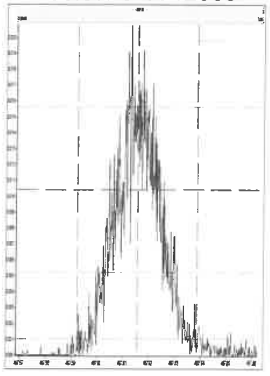

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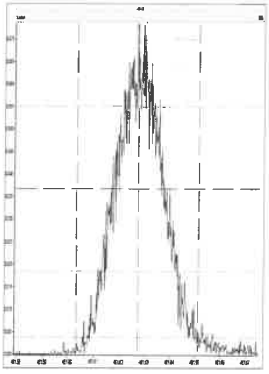

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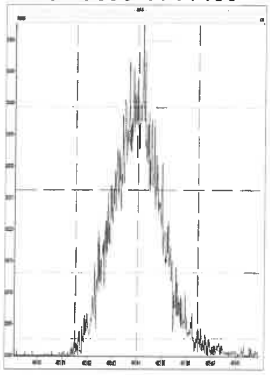

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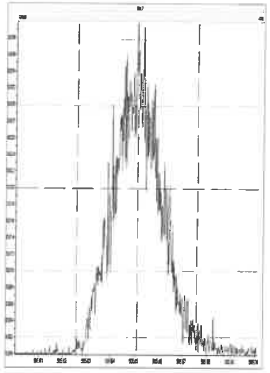

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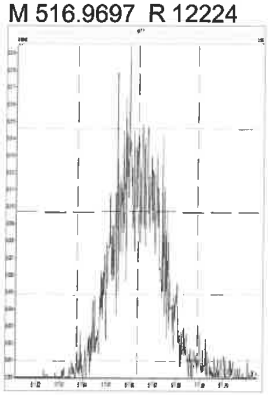

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M 292.9824 R 12378

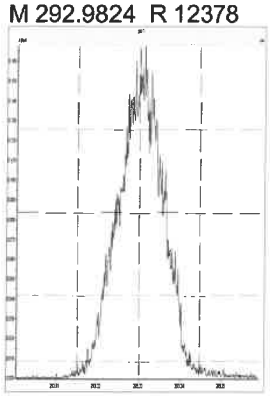

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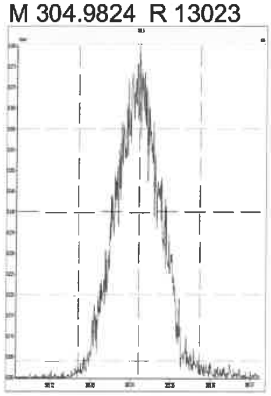

M 318.9792 R 12595

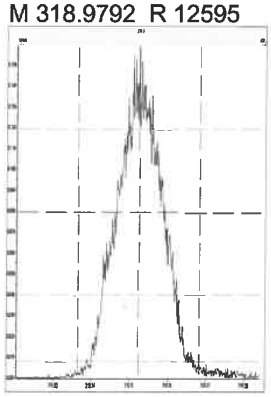

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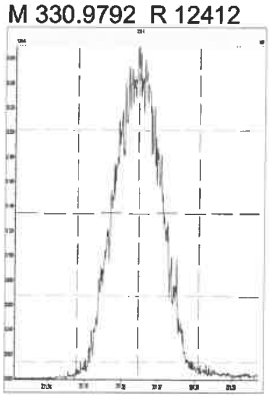

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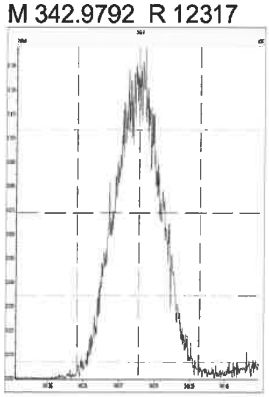

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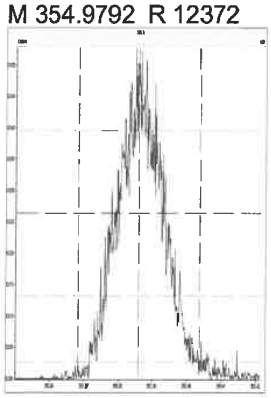

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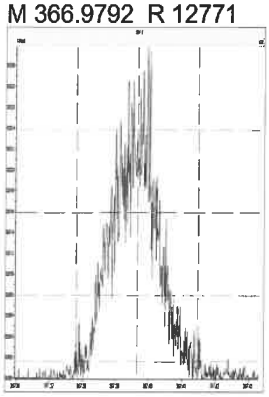

M 380.9760 R 11065

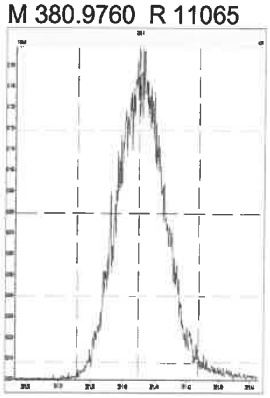

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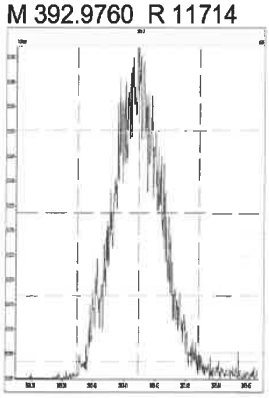

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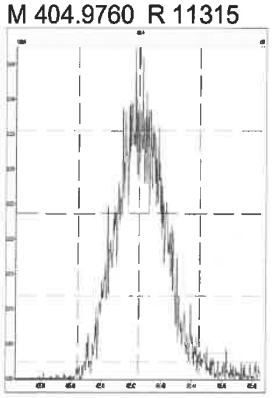

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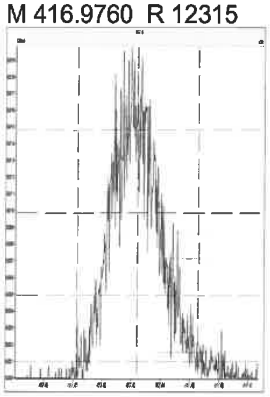

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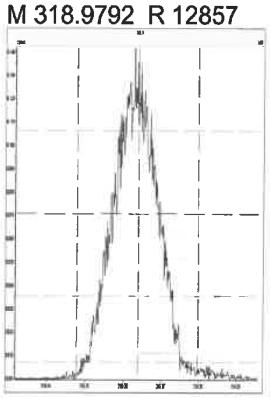

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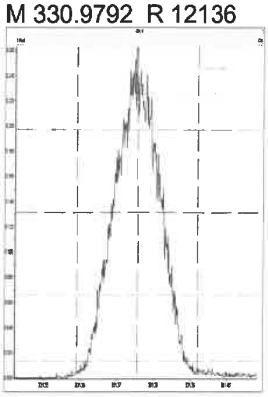

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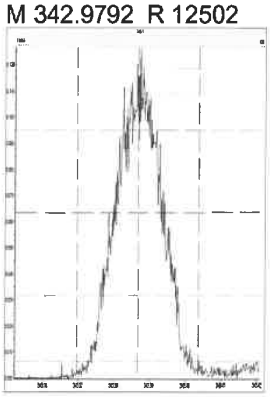

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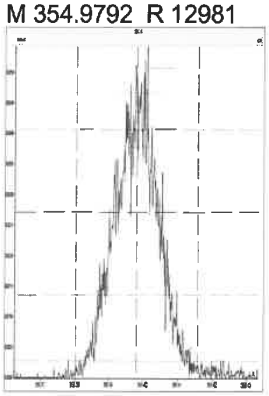

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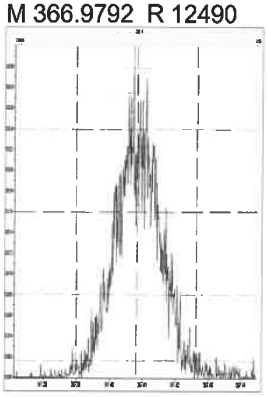

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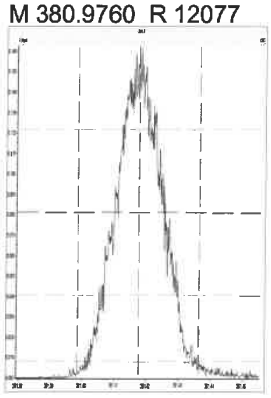

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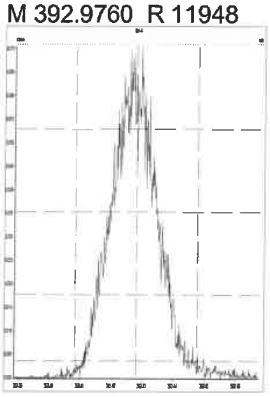

M 404.9760_R 12628

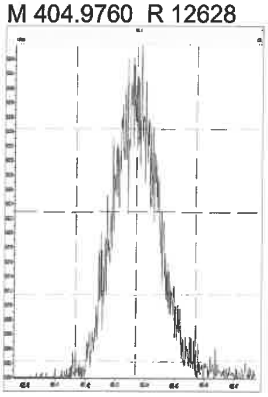

M 416.9760_R 13021

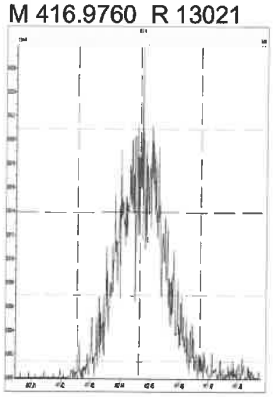

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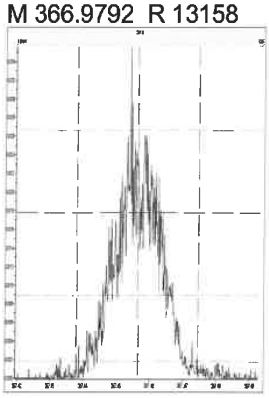

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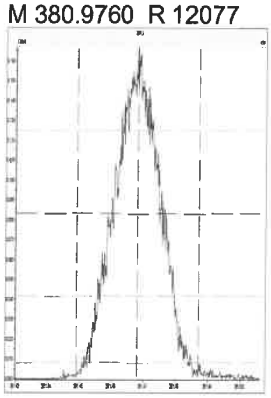

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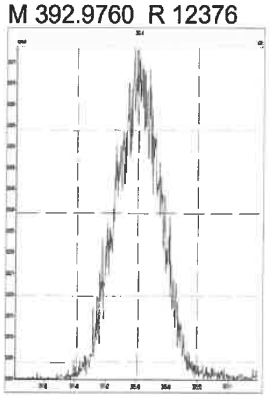

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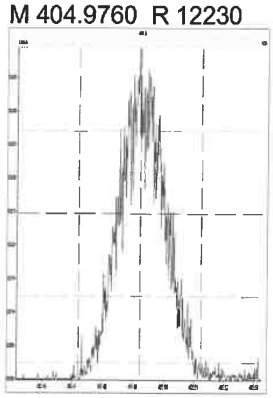

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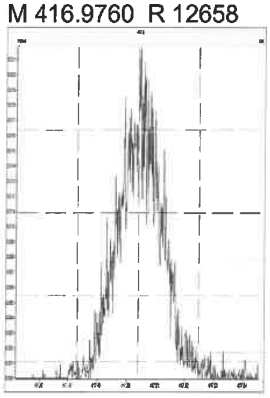

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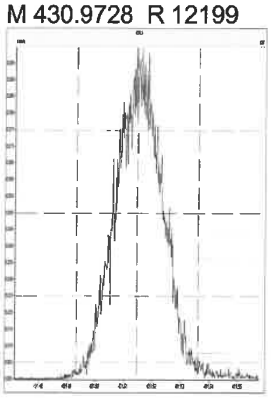

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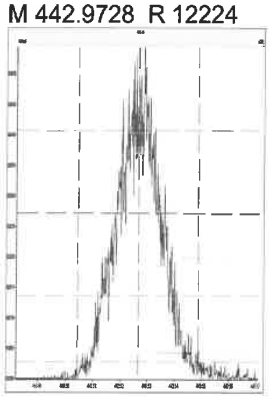

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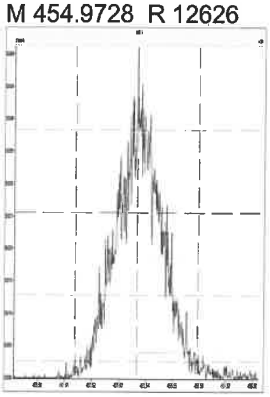

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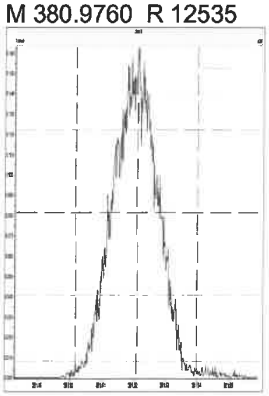

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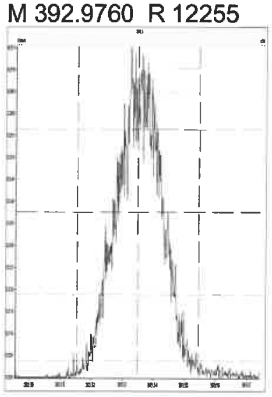

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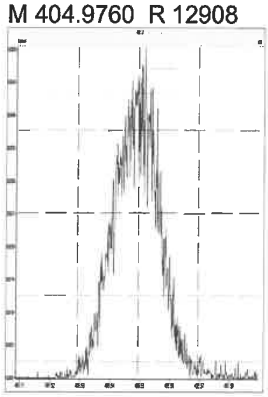

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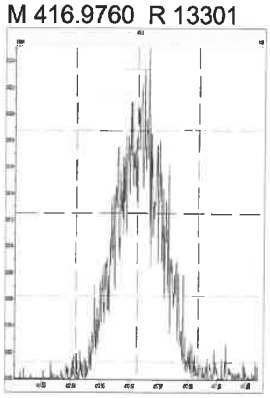

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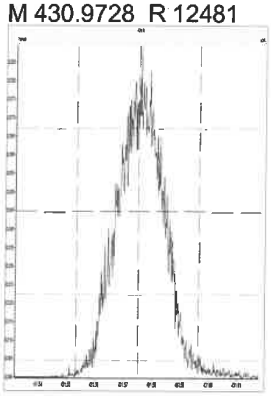

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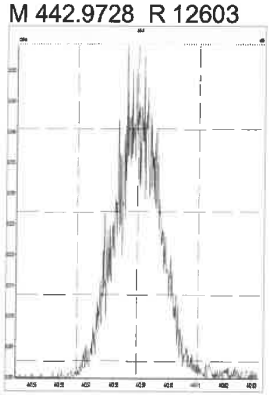

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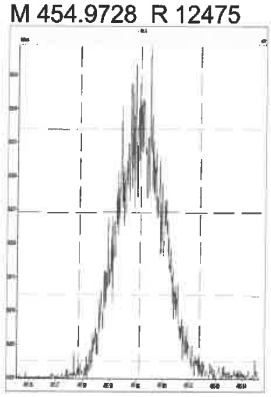

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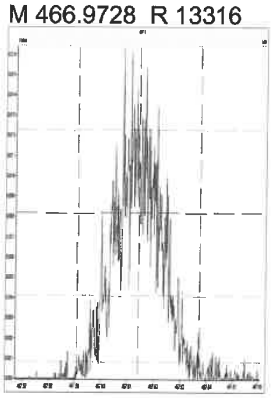

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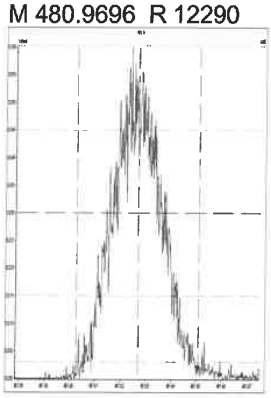

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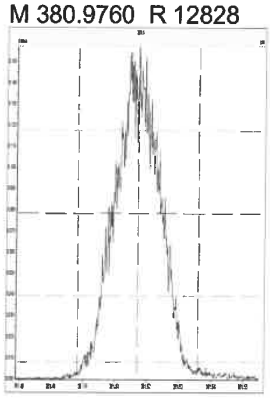

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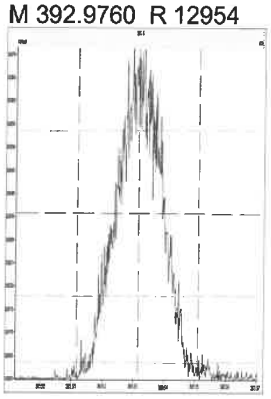

M 404.9760_R 12659

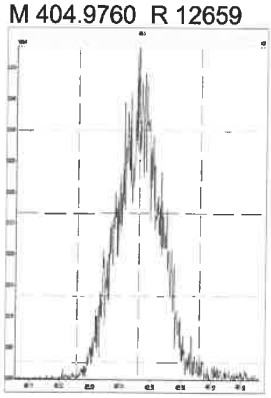

M 416.9760_R 14052

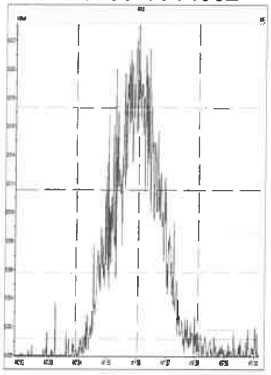

M 430.9728_R 12407

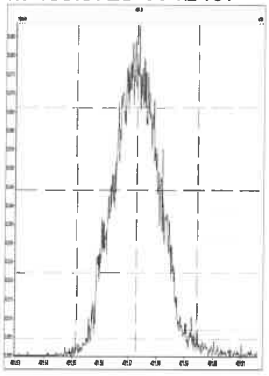

M 442.9728_R 12228

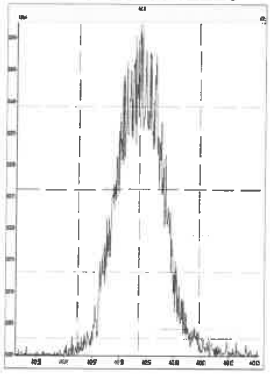

M 454.9728_R 12563

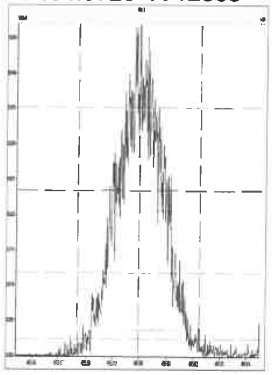

M 466.9728_R 13839

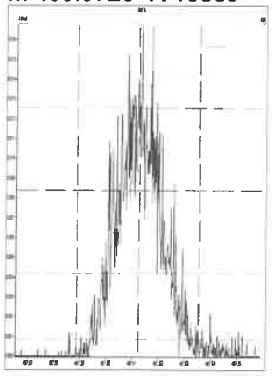

M 480.9696_R 11110

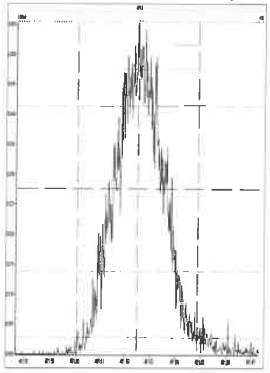

M 492.9696_R 12345

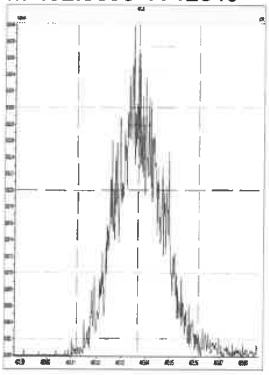

M 504.9696_R 11844

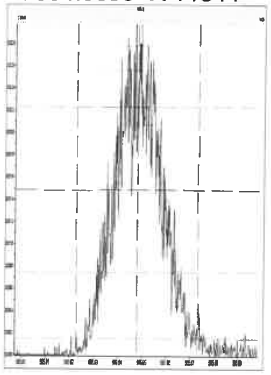

M 516.9697 R 13171

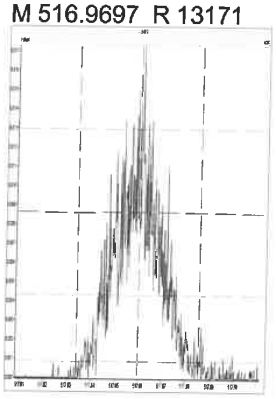

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 13-Aug-2021 04:53:01 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081221B CS-4 HRDXNL4_00099
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 13-Aug-2021 15:47:54 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1625

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.885	120823080	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.371	191807766	0.78	1.6249	97.7	97.7	0.1444	0.1444	97.70	
2,3,7,8-TCDF	17.386	19758137	0.76	1.0239	10.1	10.1	0.0122	0.0122	101	
A Non-2,3,7,8-sub-TCDF	17.076						0.0122	0.0122		Rn
S Total TCDF					10.1	10.1	0.0122	0.0122		
D 13C-2,3,7,8-TCDD	18.082	110882880	0.82	0.8993	102.0	102.0	0.1488	0.1488	102	
2,3,7,8-TCDD	18.097	14148941	0.78	1.2541	10.2	10.2	0.0164	0.0164	102	
$ 37Cl4-2,3,7,8-TCDD	18.097	14882170		1.1071	11.1	11.1	0.0198	0.0198	111	
A Non-2,3,7,8-sub-TCDD	17.530						0.0164	0.0164		
S Total TCDD					10.2	10.2	0.0164	0.0164		
D 13C-1,2,3,7,8-PeCDF	22.408	145077088	1.54	1.2101	99.2	99.2	0.2151	0.2151	99.23	
1,2,3,7,8-PeCDF	22.435	77076800	1.61	1.0611	50.1	50.1	0.1452	0.1452	100	
D 13C-2,3,4,7,8-PeCDF	23.758	149459427	1.57	1.2395	99.8	99.8	0.2100	0.2100	99.80	
2,3,4,7,8-PeCDF	23.785	76612617	1.57	1.0184	50.3	50.3	0.1565	0.1565	101	
A F1 PeCDFs	20.108						0.006702	0.006702		
A Non-2,3,7,8-sub-PeCDF	23.282						0.1507	0.1507		n
S Total PeCDF					100.4	100.4	0.1509	0.1509		
D 13C-1,2,3,7,8-PeCDD	24.481	97674279	1.60	0.7612	106.2	106.2	0.0875	0.0875	106	
1,2,3,7,8-PeCDD	24.508	51028954	1.60	1.0484	49.8	49.8	0.0467	0.0467	99.66	
A Non-2,3,7,8-sub-PeCDD	23.376						0.0467	0.0467		
S Total PeCDD					49.8	49.8	0.0467	0.0467		
D 13C-1,2,3,4,7,8-HxCDF	30.543	123407878	0.52	1.0837	91.6	91.6	0.3219	0.3219	91.55	
1,2,3,4,7,8-HxCDF	30.569	67054395	1.22	1.0851	50.1	50.1	0.3373	0.3373	100	
D 13C-1,2,3,6,7,8-HxCDF	30.716	125968167	0.52	1.1279	89.8	89.8	0.3093	0.3093	89.79	
1,2,3,6,7,8-HxCDF	30.743	70367219	1.21	1.1260	49.6	49.6	0.3155	0.3155	99.22	
D 13C-2,3,4,6,7,8-HxCDF	31.541	120065431	0.52	1.0637	90.7	90.7	0.3280	0.3280	90.74	
2,3,4,6,7,8-HxCDF	31.554	69816459	1.21	1.1675	49.8	49.8	0.2497	0.2497	99.61	
D 13C-1,2,3,7,8,9-HxCDF	32.340	111670370	0.52	0.9676	92.8	92.8	0.3605	0.3605	92.79	
1,2,3,7,8,9-HxCDF	32.353	65137917	1.22	1.1664	50.0	50.0	0.2452	0.2452	100	
A Non-2,3,7,8-sub-HxCDF	30.223						0.2822	0.2822		
S Total HxCDF					199.5	199.5	0.2869	0.2869		

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.153	124385583	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.727	90232648	1.25	0.7334	98.9	98.9	0.2663	0.2663	98.91	
1,2,3,4,7,8-HxCDD	31.741	48130592	1.26	1.0640	50.1	50.1	0.1747	0.1747	100	
D 13C-1,2,3,6,7,8-HxCDD	31.834	99764737	1.24	0.8802	91.1	91.1	0.2219	0.2219	91.12	
1,2,3,6,7,8-HxCDD	31.847	51012002	1.27	1.0001	51.1	51.1	0.1735	0.1735	102	
1,2,3,7,8,9-HxCDD	32.167	56517282	1.27	1.1325	52.5	52.5	0.1585	0.1585	105	
A Non-2,3,7,8-sub-HxCDD	30.895						0.1685	0.1685		
S Total HxCDD					153.8	153.8	0.1689	0.1689		
D 13C-1,2,3,4,6,7,8-HpCDF	33.778	96075007	0.44	0.7730	99.9	99.9	1.175	1.175	99.92	
1,2,3,4,6,7,8-HpCDF	33.778	70375103	1.06	1.4413	50.8	50.8	0.5576	0.5576	102	
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	91163008	0.45	0.7008	104.6	104.6	1.296	1.296	105	
1,2,3,4,7,8,9-HpCDF	34.872	60670603	1.04	1.3174	50.5	50.5	0.6867	0.6867	101	
A Non-2,3,7,8-sub-HpCDF	34.325						0.6171	0.6171		
S Total HpCDF					101.3	101.3	0.6222	0.6222		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	86615276	1.00	0.6472	107.6	107.6	0.5013	0.5013	108	
1,2,3,4,6,7,8-HpCDD	34.580	48919191	1.06	1.0943	51.6	51.6	0.3648	0.3648	103	
A Non-2,3,7,8-sub-HpCDD	34.301						0.3648	0.3648		
S Total HpCDD					51.6	51.6	0.3648	0.3648		
D 13C-OCDD	36.926	128524659	0.89	0.4472	231.1	231.1	0.2552	0.2552	116	
OCDF	37.034	91420397	0.91	1.4382	98.9	98.9	0.0984	0.0984	98.92	
OCDD	36.938	73424281	0.89	1.1070	103.2	103.2	0.1311	0.1311	103	

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 13-Aug-2021 04:53:01 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081221B CS-4 HRDXNL4_00099
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 13-Aug-2021 15:47:54 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1625

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.885	17.885	0		54686806	12897206	6870	17175	1877		
333.9339	17.885	17.885	0		66136274	15544069	8355	20887	1860	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.371	17.371	0	0.971	83900850	20122737	10170	25425	1979		
317.9389	17.371	17.371	0	0.971	107906916	25667779	16527	41317	1553	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.386	17.386	0	1.001	8506234	2069593	996	2490	2078		
305.8987	17.386	17.386	0	1.001	11251903	2708293	1299	3247	2085	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.008	17.069	-4	0.979	32777	7988	996	2490	8		
305.8987	17.008	17.069	-4	0.979	36206	8566	1299	3247	7	0.91(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.082	18.082	0	1.011	49983142	11176956	6870	17175	1627		
333.9339	18.082	18.082	0	1.011	60899738	13724882	8355	20887	1643	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.097	18.097	0	1.001	6209560	1443993	1032	2580	1399		
321.8936	18.097	18.097	0	1.001	7939381	1769626	1014	2535	1745	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.097	18.097	0	1.012	14882170	3415139	2495	6237	1369		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.530						1032	2580			
321.8936	17.530						1014	2535			
13C-1,2,3,7,8-PeCDF											
351.9000	22.408	22.408	0	1.253	88015615	14866618	18082	45205	822		
353.8970	22.408	22.408	0	1.253	57061473	9684838	11528	28820	840	1.54(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.435	22.435	0	1.001	47503999	8029165	9099	22747	882		
341.8567	22.435	22.435	0	1.001	29572801	5043685	6028	15070	837	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.758	23.758	0	1.328	91330484	14492670	18082	45205	801		
353.8970	23.758	23.758	0	1.328	58128943	9227332	11528	28820	800	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.785	23.785	0	1.001	46804975	7290852	9099	22747	801		
341.8567	23.785	23.785	0	1.001	29807642	4633424	6028	15070	769	1.57(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.108						293	732			
341.8567	20.108						380	950			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.953	23.261	-18	1.024	445520	51770	9099	22747	6		
341.8567	22.967	23.261	-18	1.025	303687	40130	6028	15070	7	1.47(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.481	24.481	0	1.369	60134840	9024707	4348	10870	2076		
369.8919	24.481	24.481	0	1.369	37539439	5739550	3230	8075	1777	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.508	24.508	0	1.001	31373727	4724152	1887	4717	2504		
357.8516	24.508	24.508	0	1.001	19655227	2975792	1004	2510	2964	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.376						1887	4717			
357.8516	23.376						1004	2510			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.543	30.543	0	0.950	42443323	8222274	16863	42157	488		
385.8610	30.543	30.543	0	0.950	80964555	15611387	31396	78490	497	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.569	30.569	0	1.001	36858720	7045492	17736	44340	397		
375.8178	30.556	30.569	-1	1.000	30195675	5775040	17161	42902	337	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.716	30.716	0	0.955	42986227	8377426	16863	42157	497		
385.8610	30.716	30.716	0	0.955	82981940	16181278	31396	78490	515	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.743	30.743	0	1.001	38540297	7596282	17736	44340	428		
375.8178	30.743	30.743	0	1.001	31826922	6267425	17161	42902	365	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.541	31.541	0	0.981	41217000	10265979	16863	42157	609		
385.8610	31.541	31.541	0	0.981	78848431	19661655	31396	78490	626	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.554	31.554	0	1.000	38296321	9720741	17736	44340	548		
375.8178	31.554	31.554	0	1.000	31520138	8001693	17161	42902	466	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.340	32.340	0	1.006	38048544	10568134	16863	42157	627		
385.8610	32.340	32.340	0	1.006	73621826	19936024	31396	78490	635	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.353	32.353	0	1.000	35817543	9816189	17736	44340	553		
375.8178	32.353	32.353	0	1.000	29320374	8019511	17161	42902	467	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.223						17736	44340			
375.8178	30.223						17161	42902			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.153	0		69092333	19302303	15554	38885	1241		
403.8529	32.153	32.153	0		55293250	15281718	11469	28672	1332	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.727	31.727	0	0.987	50124335	13390510	15554	38885	861		
403.8529	31.727	31.727	0	0.987	40108313	10750642	11469	28672	937	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.741	31.741	0	1.000	26841113	7441919	8942	22355	832		
391.8127	31.741	31.741	0	1.000	21289479	5899564	9012	22530	655	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.834	31.834	0	0.990	55214396	14257616	15554	38885	917		
403.8529	31.820	31.834	-1	0.990	44550341	11608320	11469	28672	1012	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.847	31.847	0	1.000	28532222	7492220	8942	22355	838		
391.8127	31.847	31.847	0	1.000	22479780	5803550	9012	22530	644	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.167	32.167	0	1.014	31631163	8659553	8942	22355	968		
391.8127	32.167	32.167	0	1.014	24886119	6887391	9012	22530	764	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.895						8942	22355			
391.8127	30.895						9012	22530			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.778	33.778	0	1.051	29360736	9502846	36428	91070	261		
419.8220	33.778	33.778	0	1.051	66714271	21238861	89188	222970	238	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	36146038	11741817	47121	117802	249		
409.7789	33.778	33.778	0	1.000	34229065	11422730	51701	129252	221	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.860	0	1.084	28141326	8534393	36428	91070	234		
419.8220	34.860	34.860	0	1.084	63021682	18774346	89188	222970	211	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.872	0	1.000	30956677	9218562	47121	117802	196		
409.7789	34.872	34.872	0	1.000	29713926	8762276	51701	129252	169	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						47121	117802			
409.7789	34.325						51701	129252			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.075	43264839	13587353	19752	49380	688		
437.8140	34.568	34.568	0	1.075	43350437	13578932	25134	62835	540	1.00(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	25153860	7699978	23089	57722	333		
425.7737	34.580	34.580	0	1.000	23765331	7342031	20289	50722	362	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						23089	57722			
425.7737	34.301						20289	50722			
13C-OCDD											
469.7779	36.926	36.926	0	1.148	60345859	15339076	7091	17727	2163		
471.7750	36.926	36.926	0	1.148	68178800	17301990	8693	21732	1990	0.89(0.76-1.02)	
OCDF											
441.7428	37.034	37.034	0	1.003	43464132	11290082	4445	11112	2540		
443.7399	37.022	37.034	-1	1.003	47956265	12196264	4790	11975	2546	0.91(0.76-1.02)	
OCDD											
457.7377	36.938	36.938	0	1.000	34651085	8945453	4659	11647	1920		
459.7348	36.938	36.938	0	1.000	38773196	10079357	4818	12045	2092	0.89(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

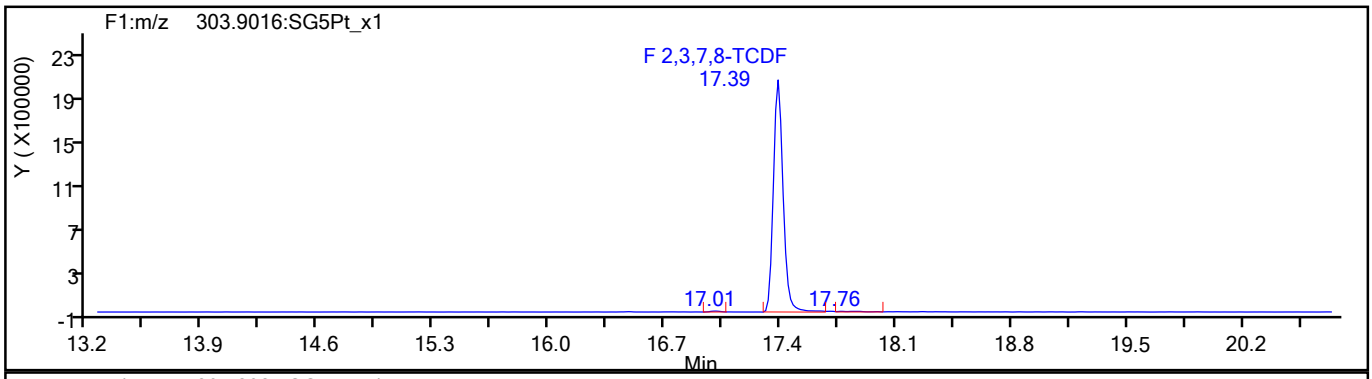

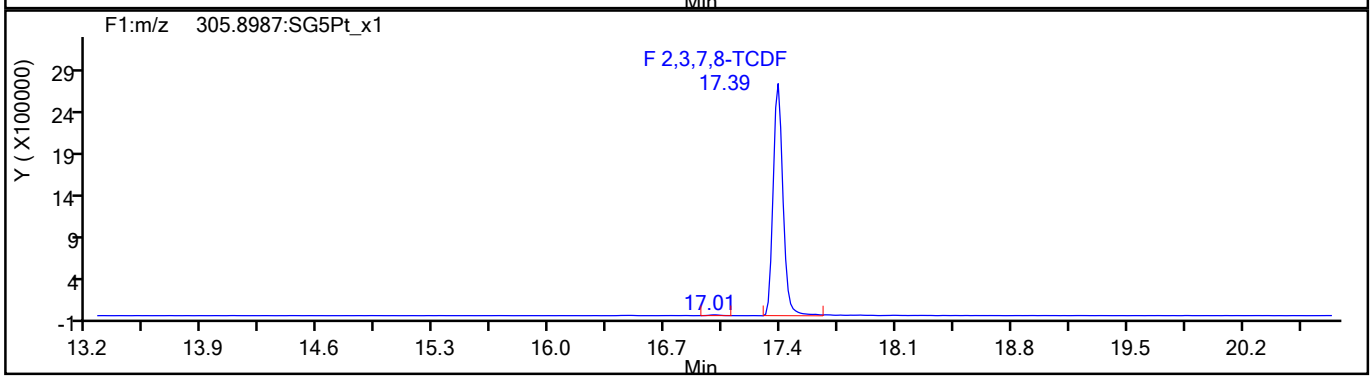

TCDF Standards

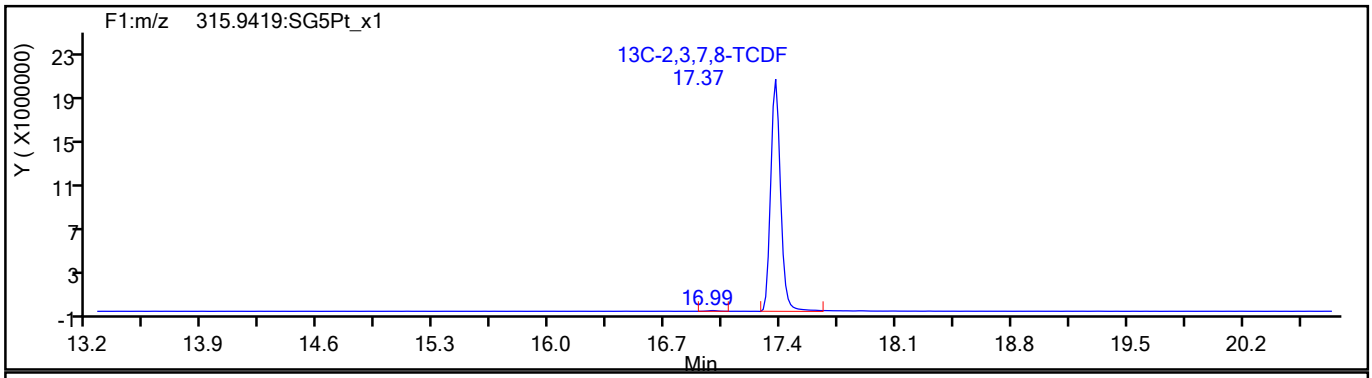

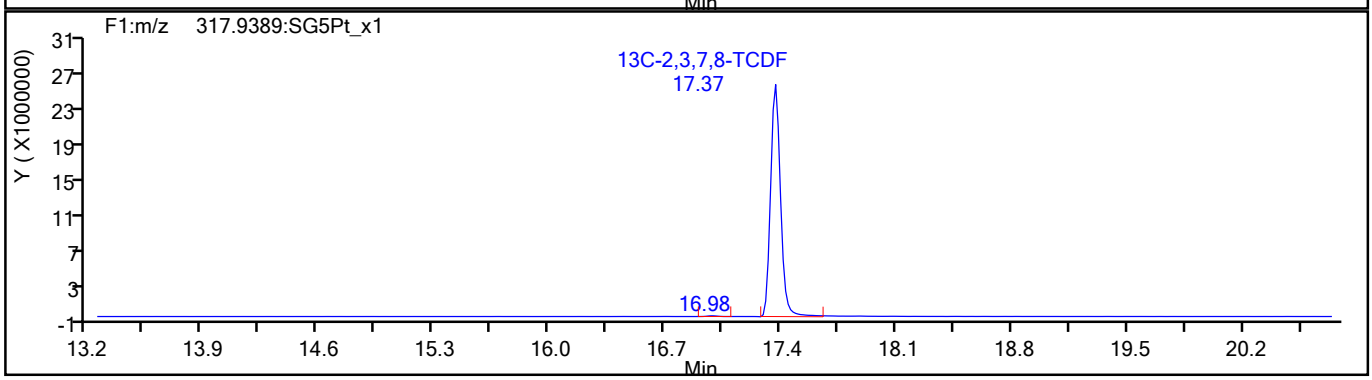

778679

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

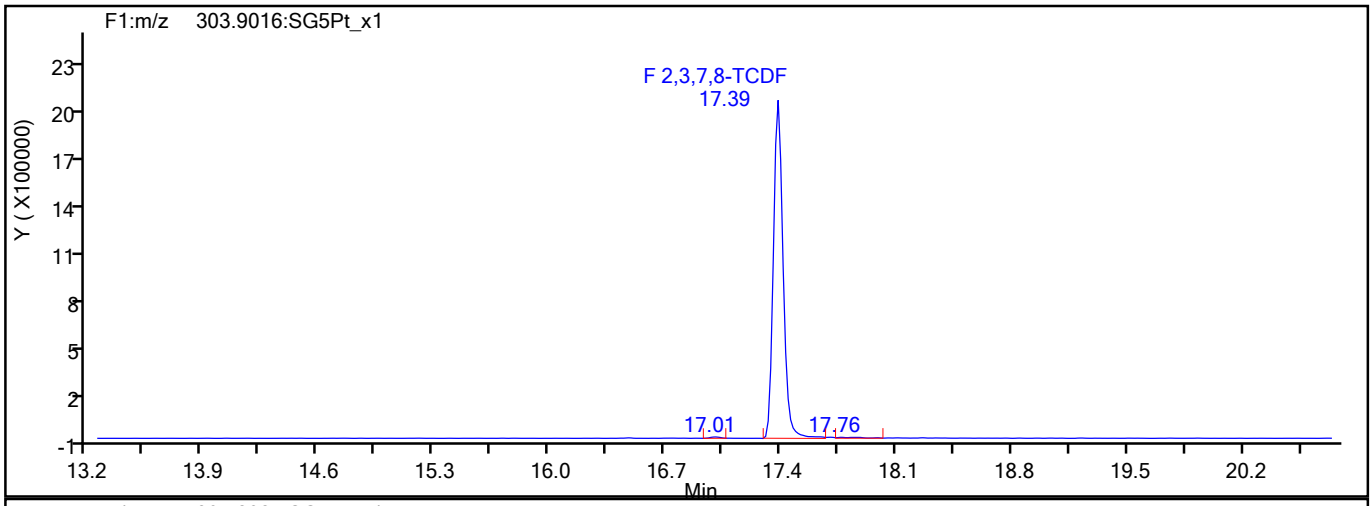

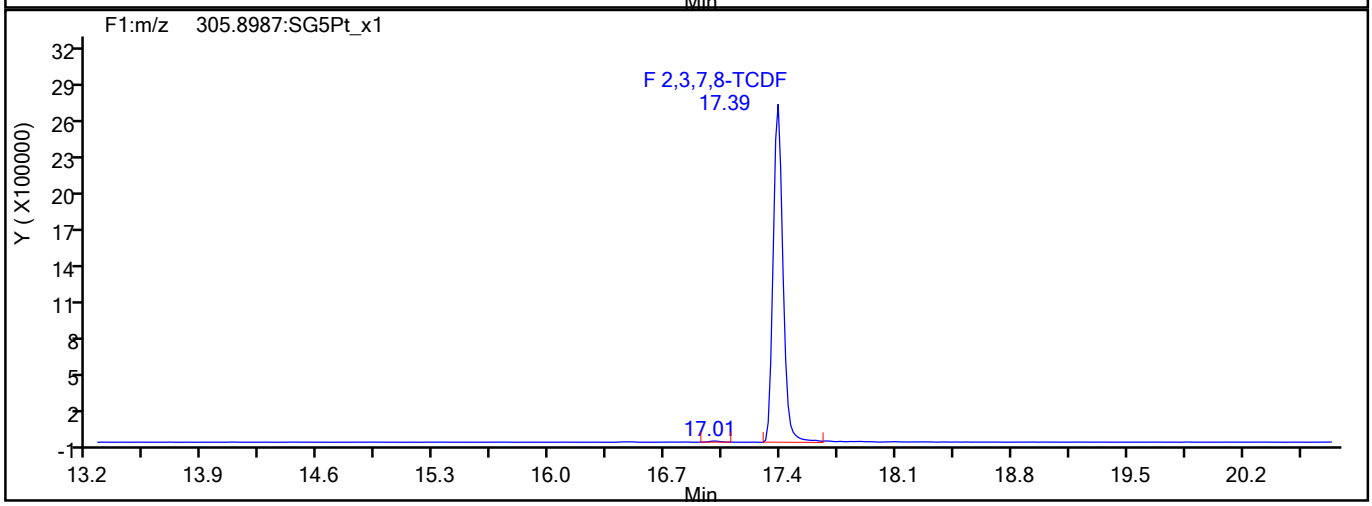

TCDF Interference Mass

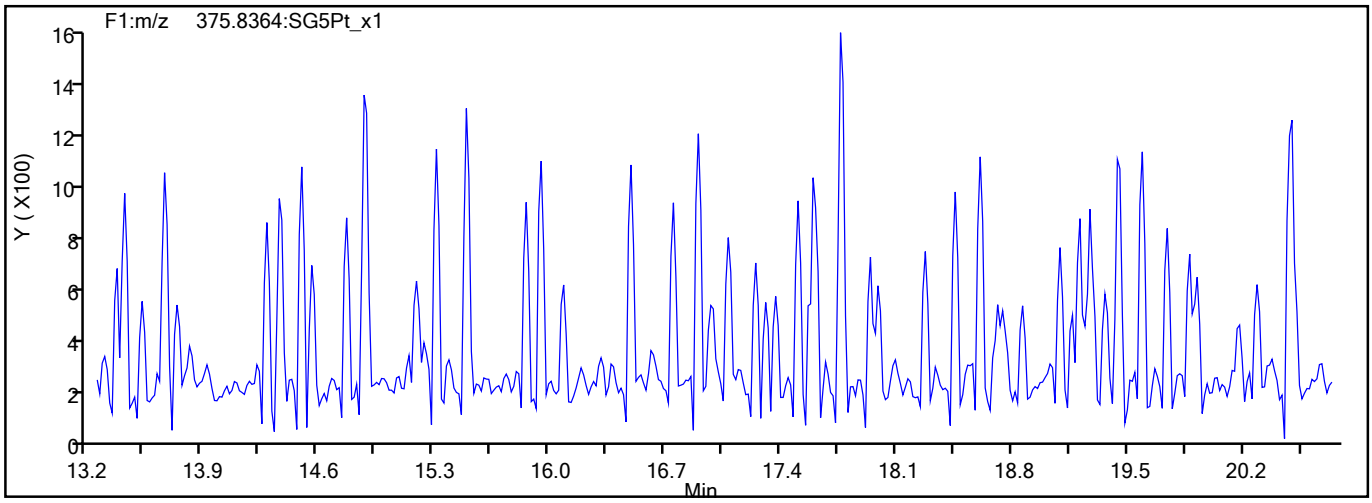

778680

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

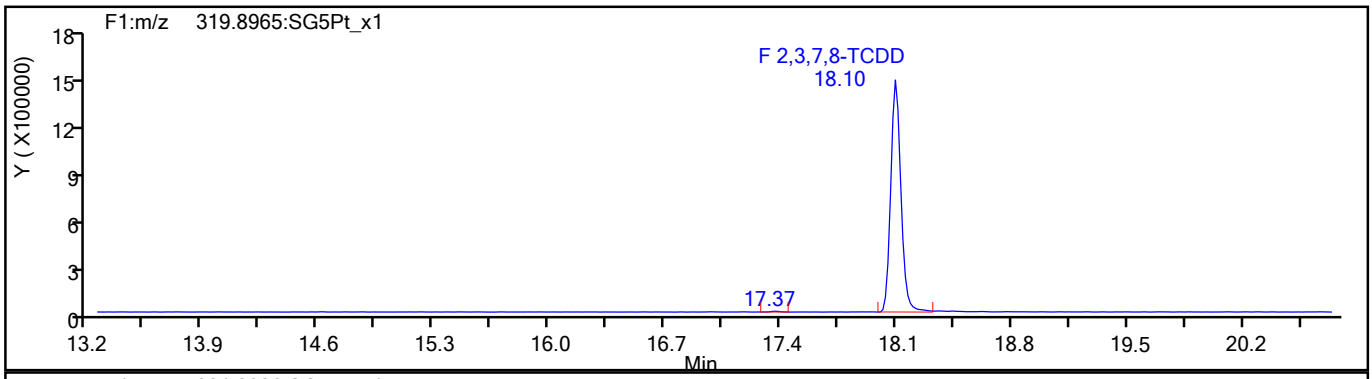

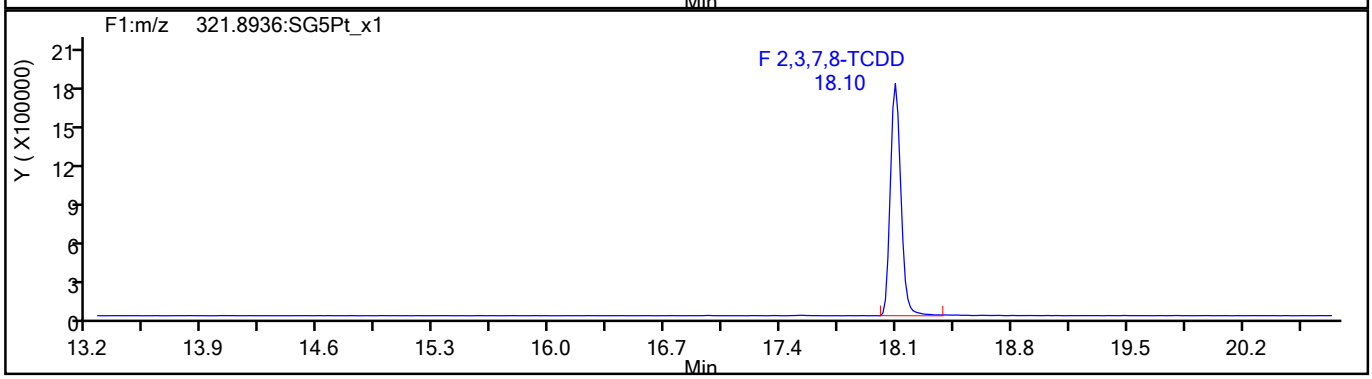

TCDD Standards

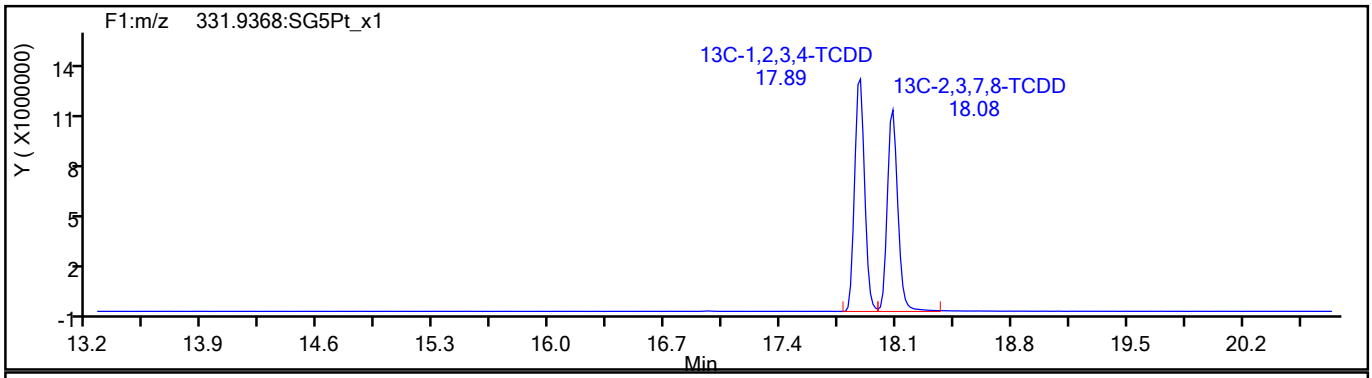

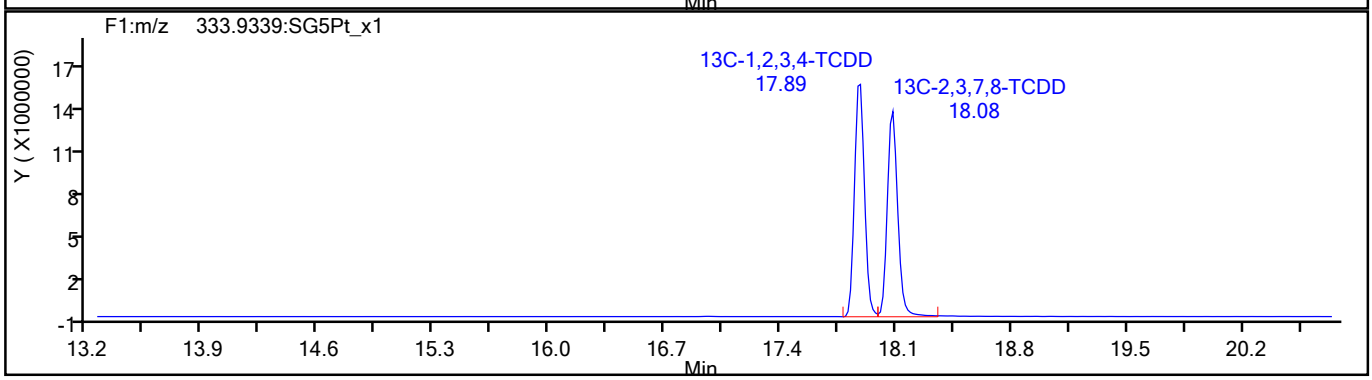

778681

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

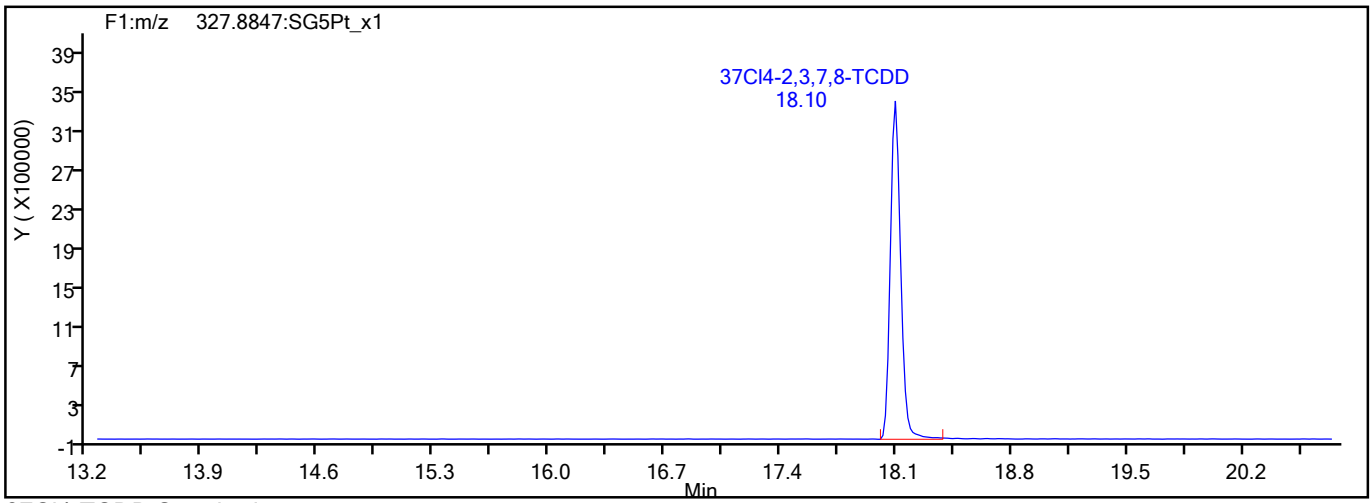

37Cl4-TCDD Standards

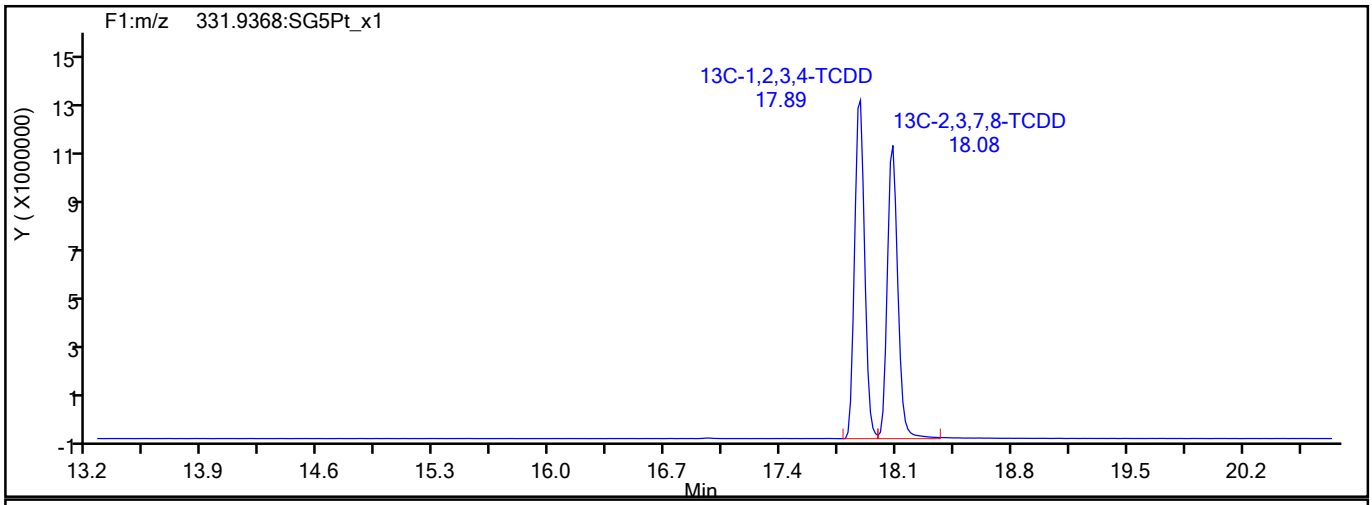

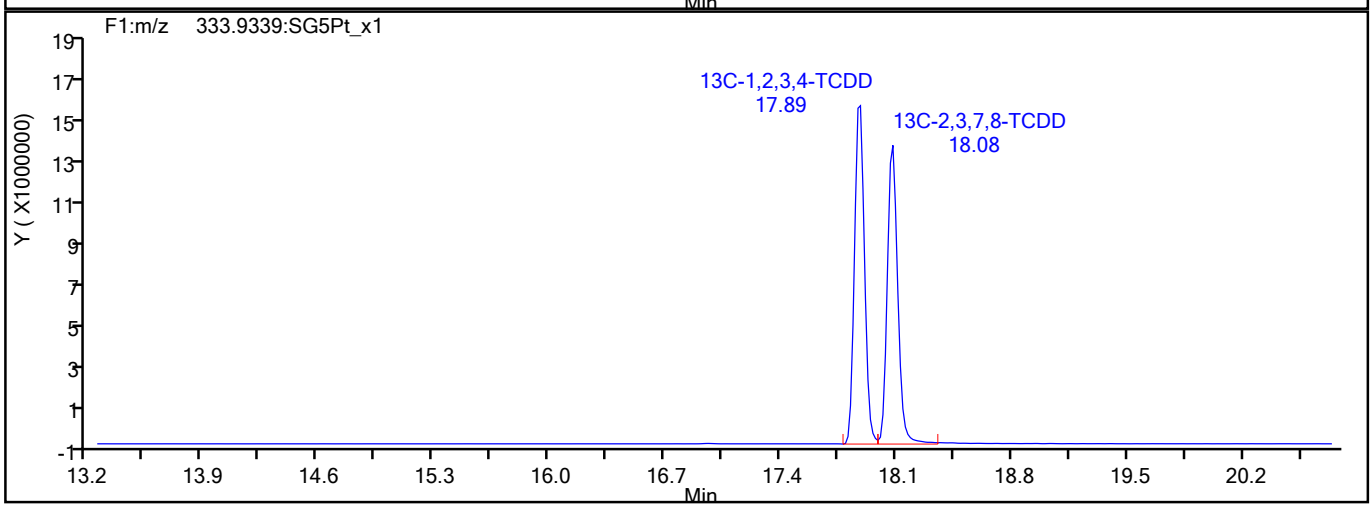

778682

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

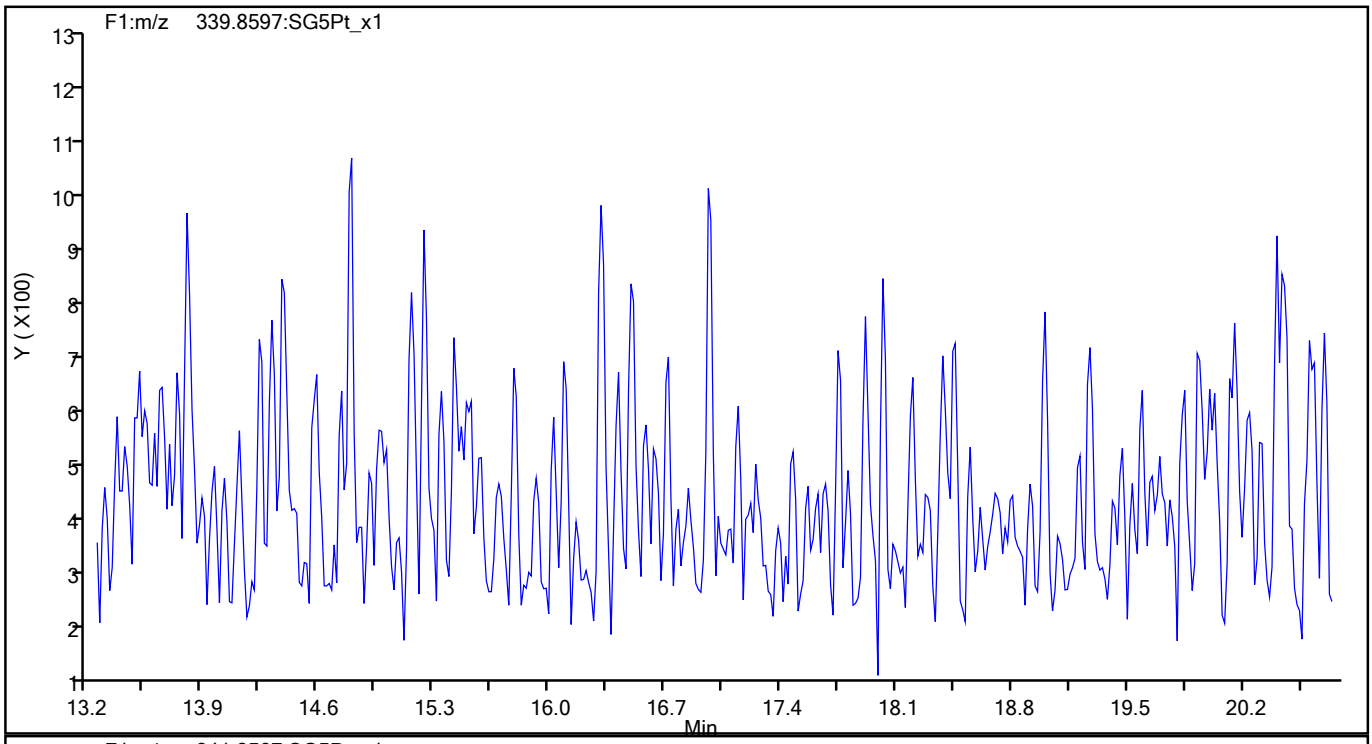

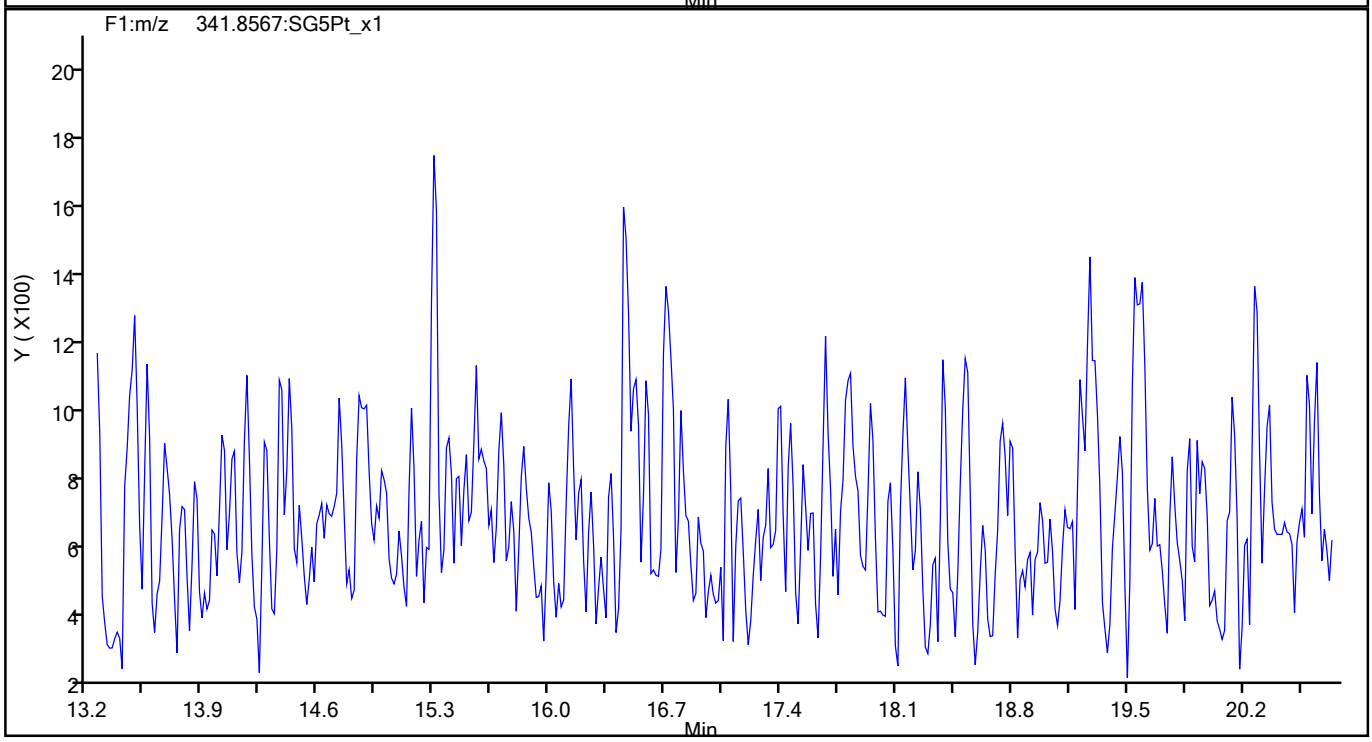

778683

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

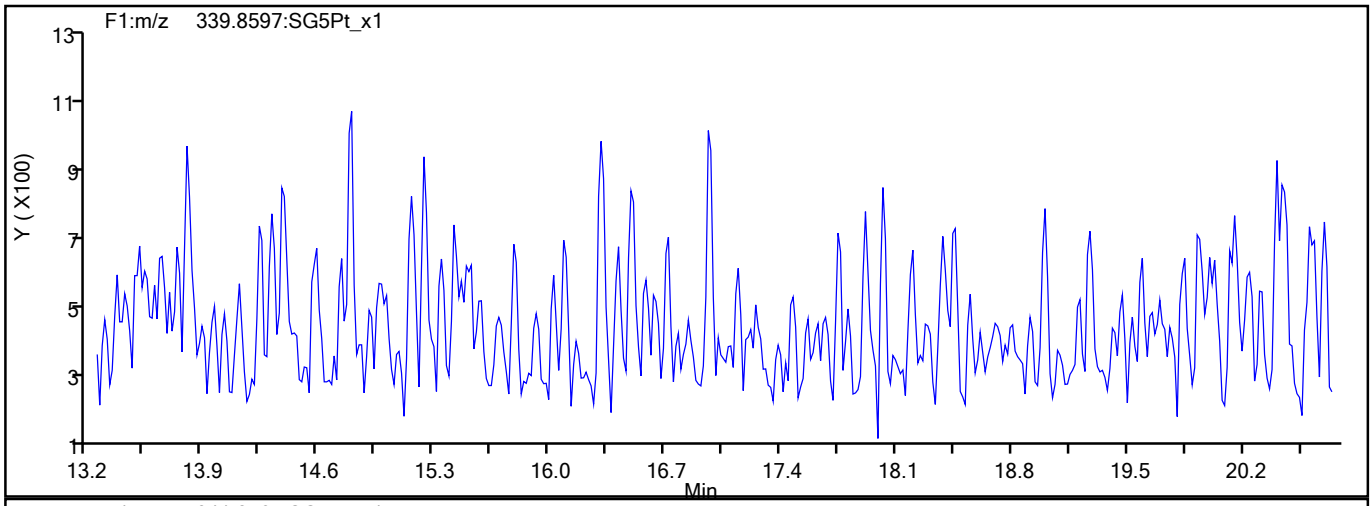

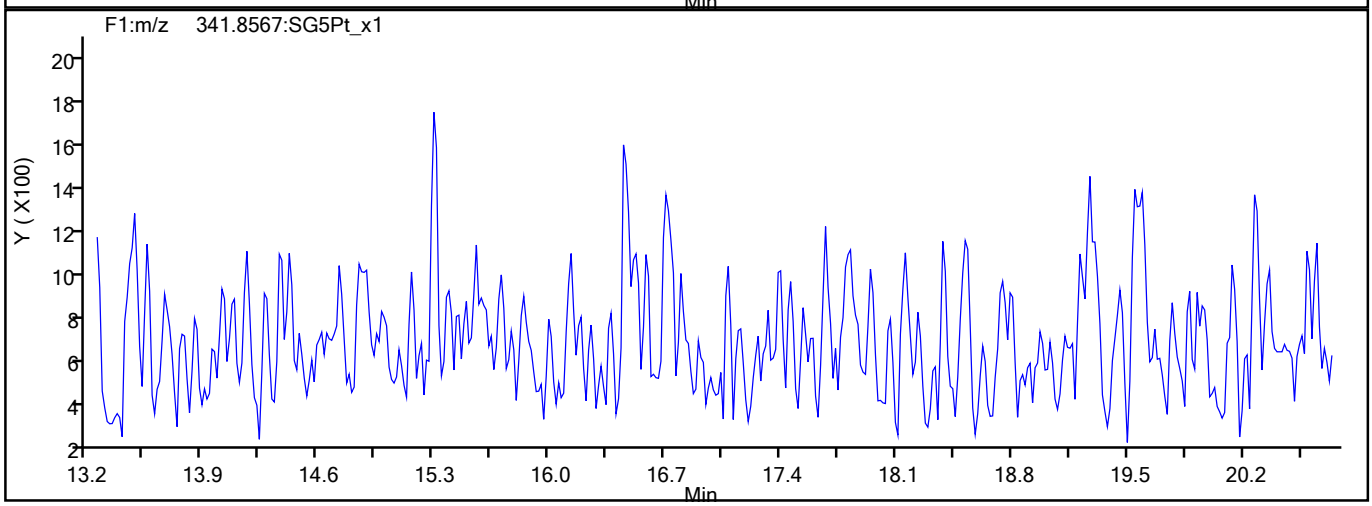

F1 PeCDFs Interference Mass

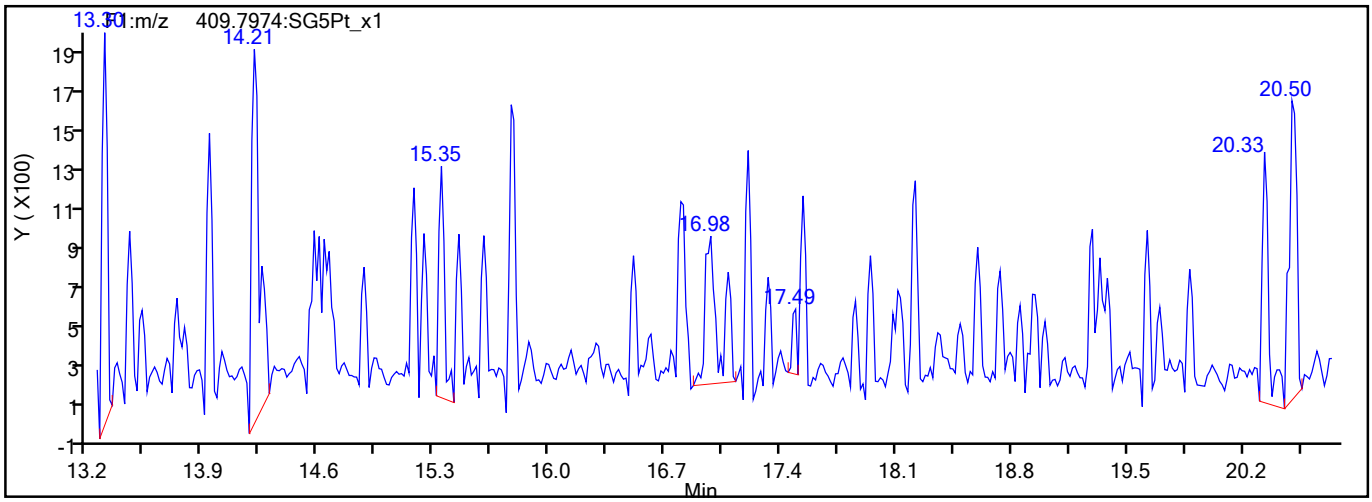

778684

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

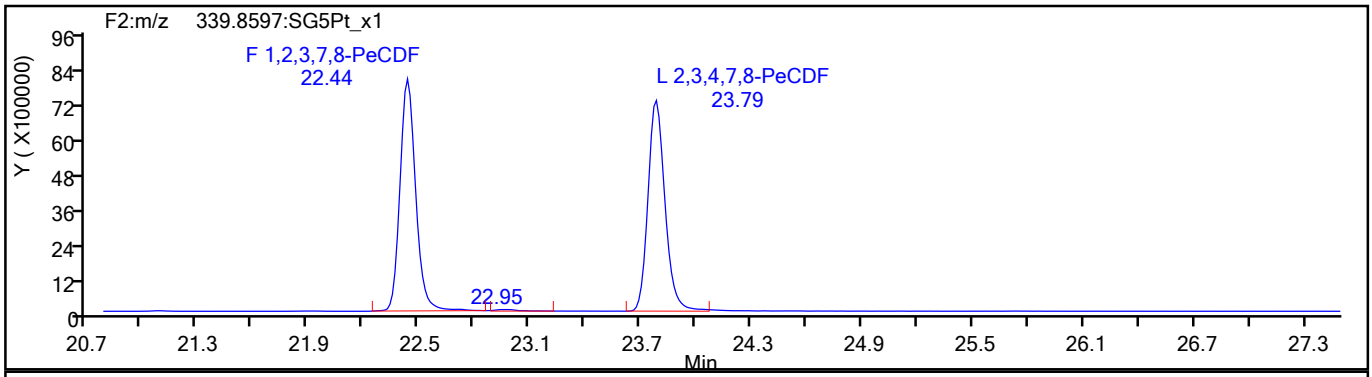

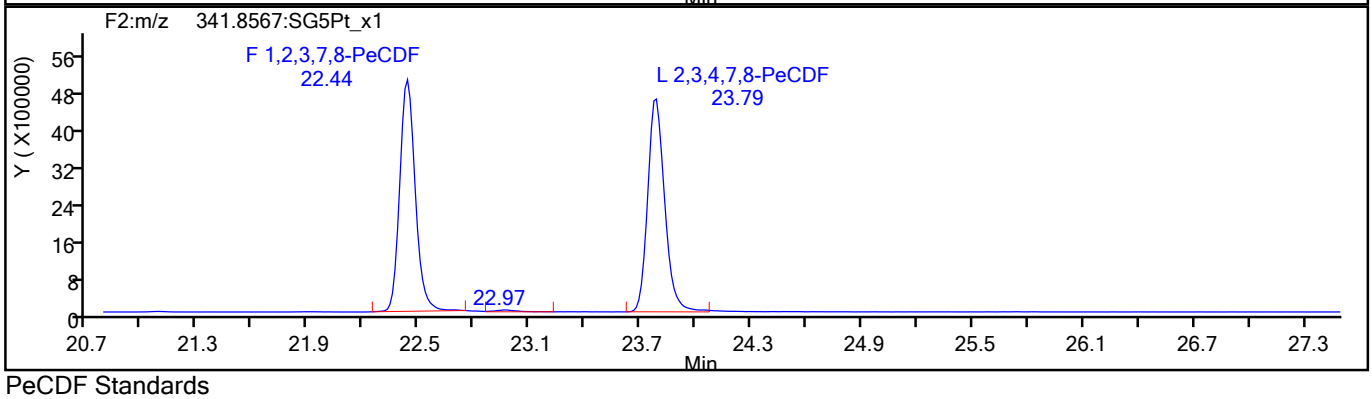

PeCDF Standards

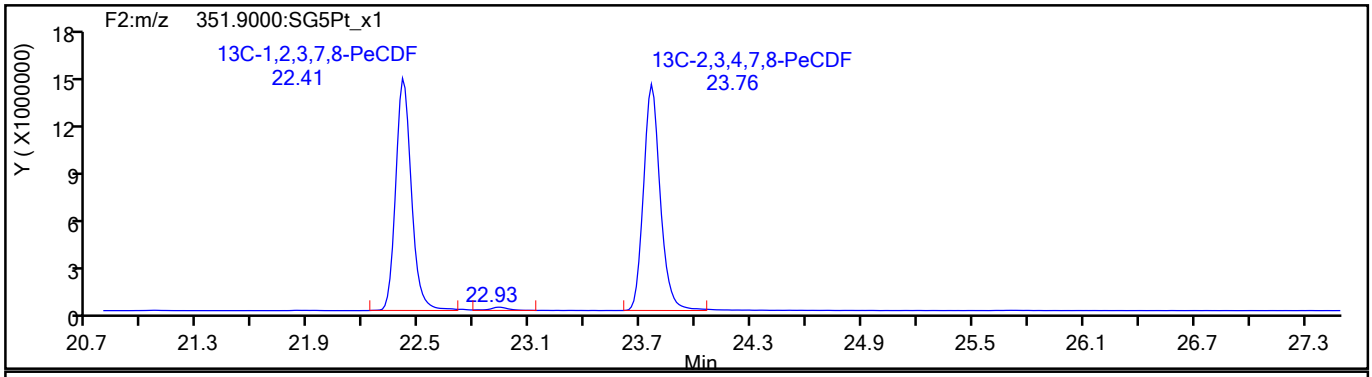

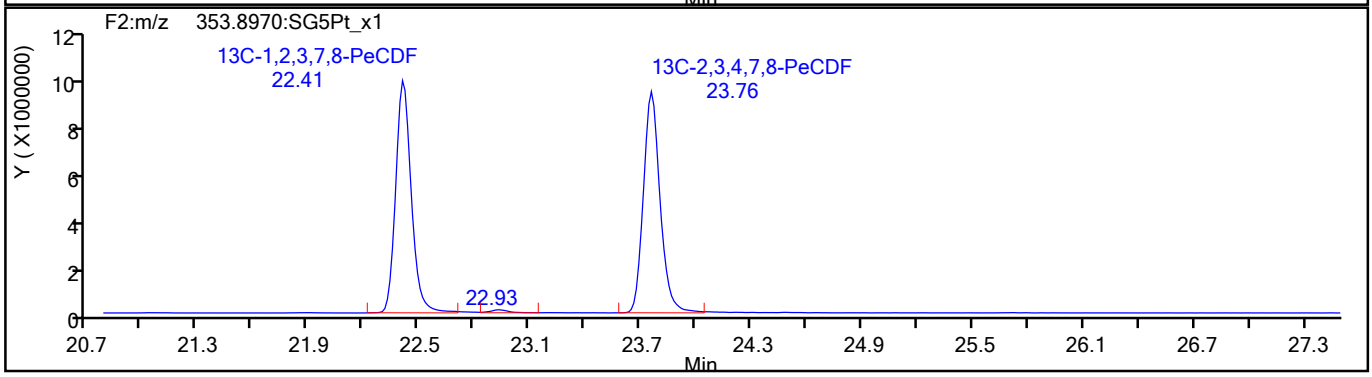

778685

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
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PeCDF

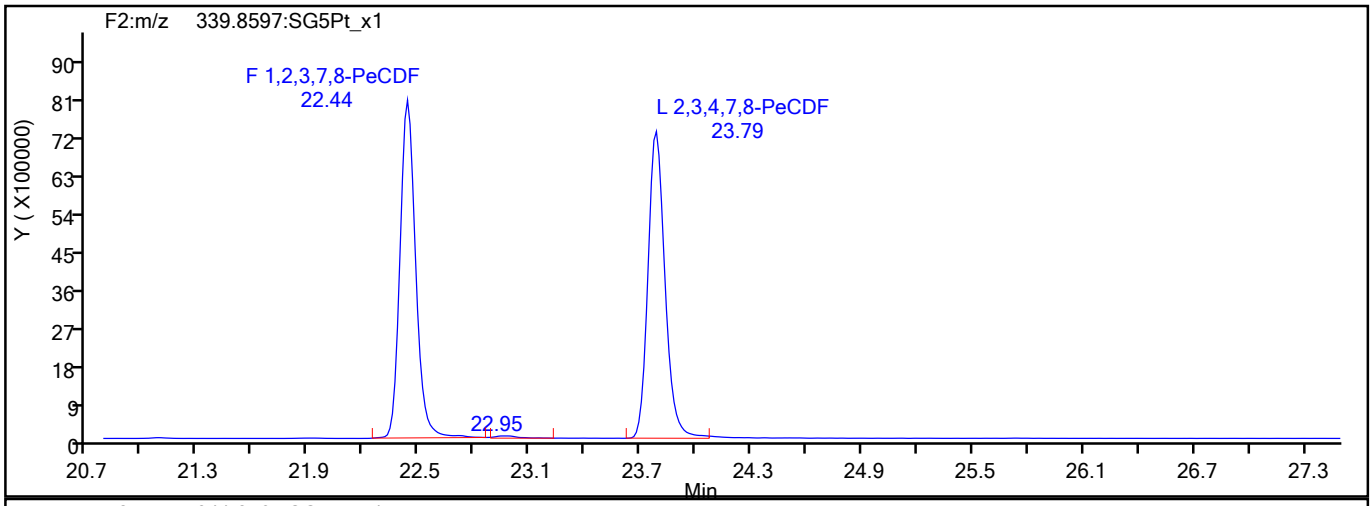

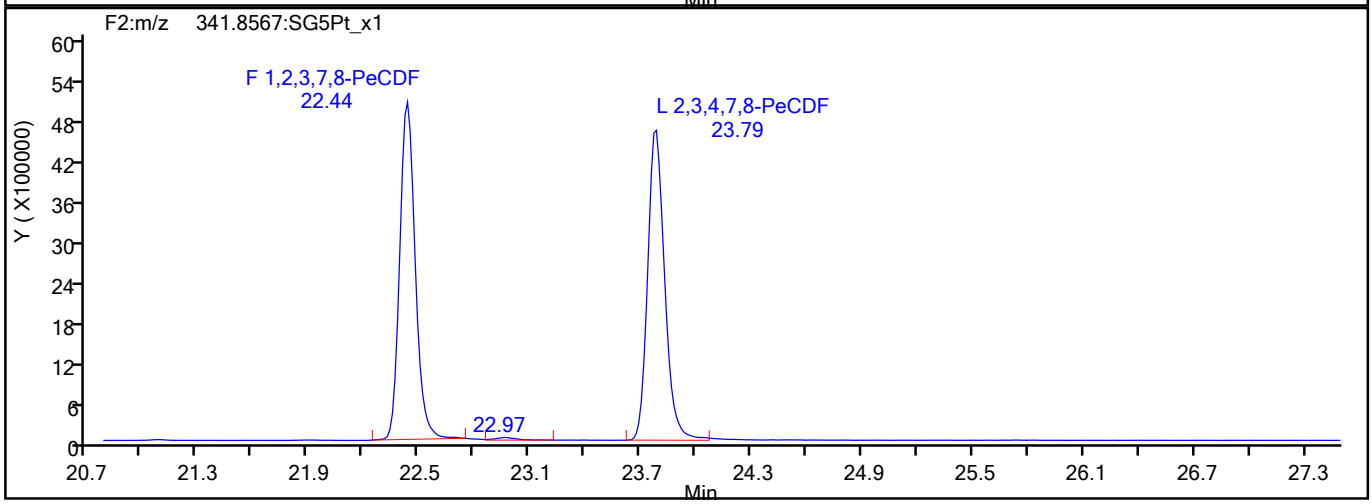

PeCDF Interference Mass

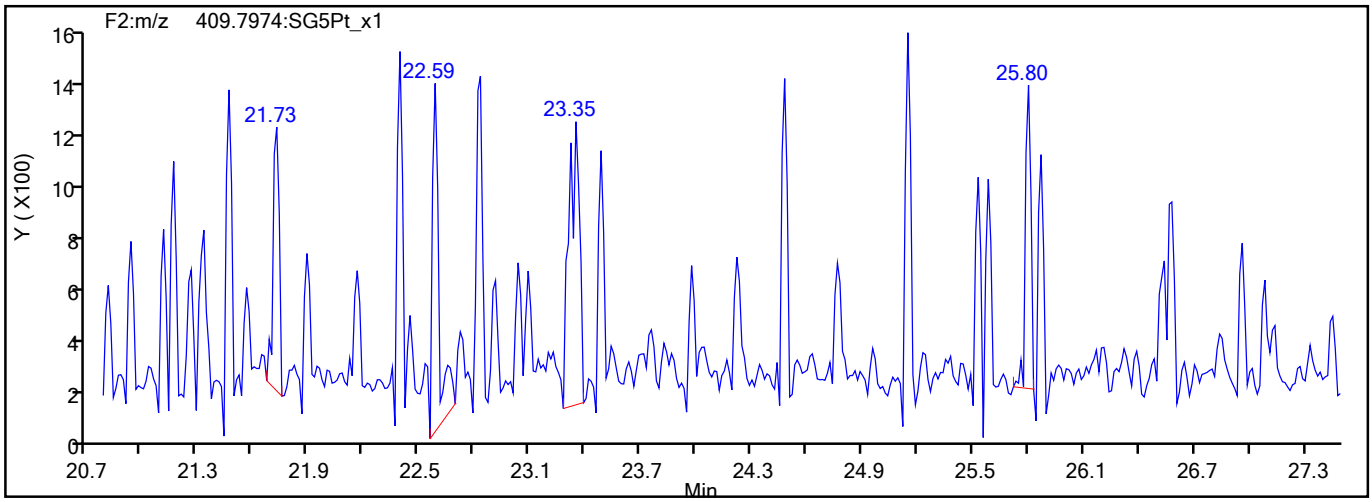

778686

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

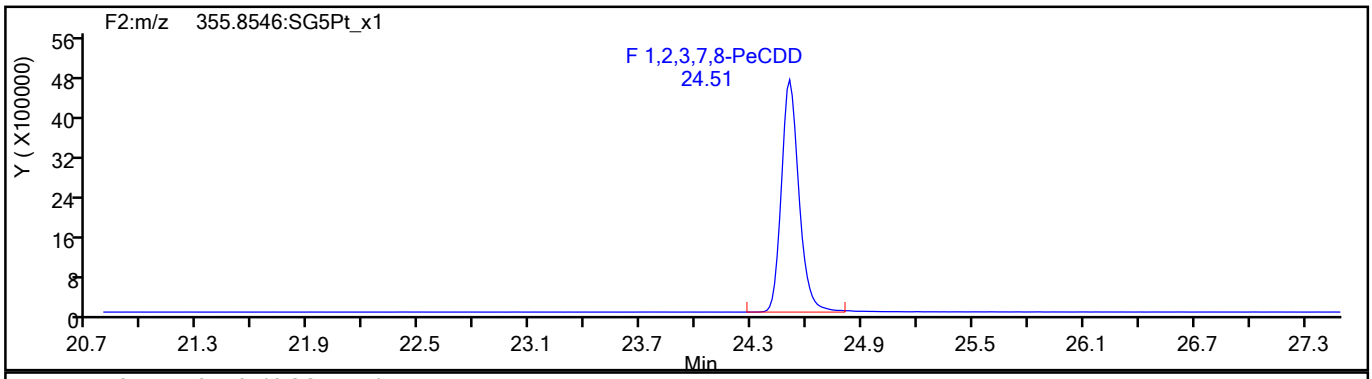

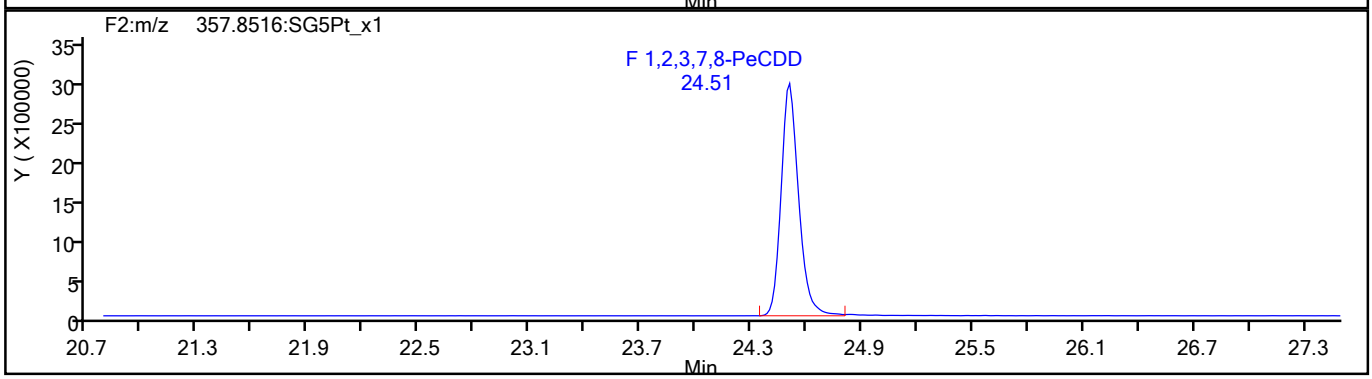

PeCDD Standards

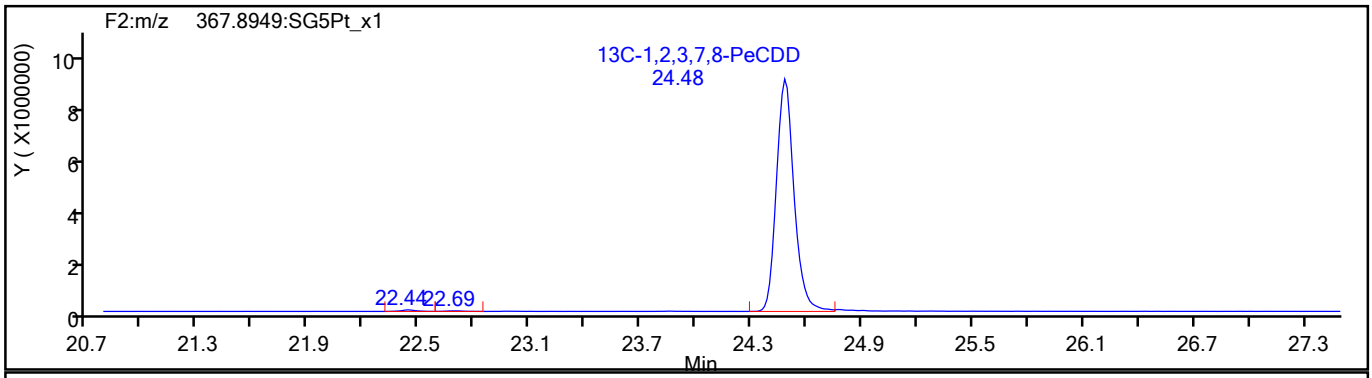

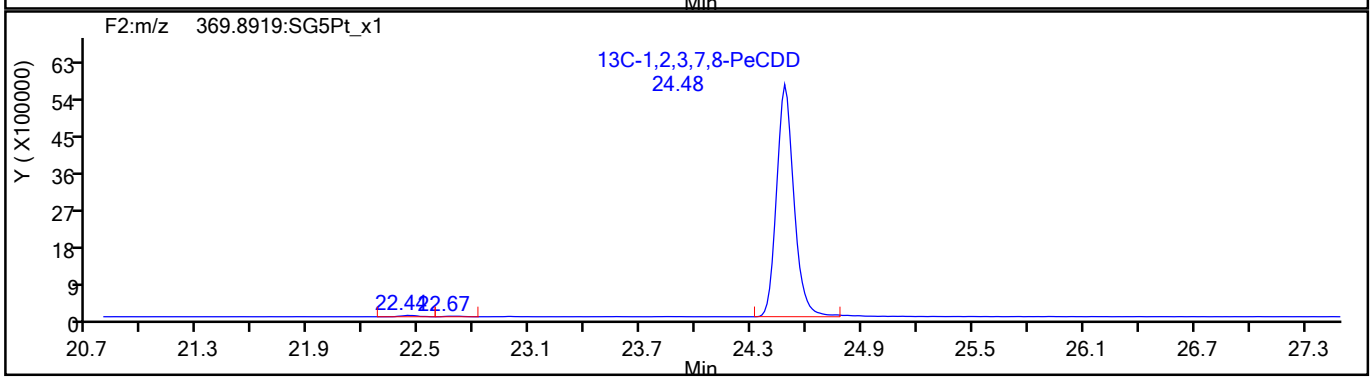

778687

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

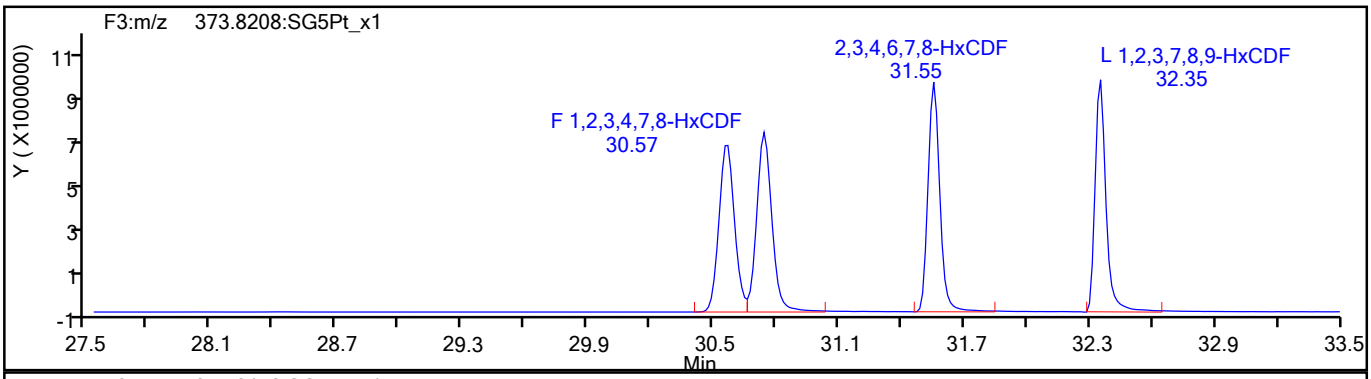

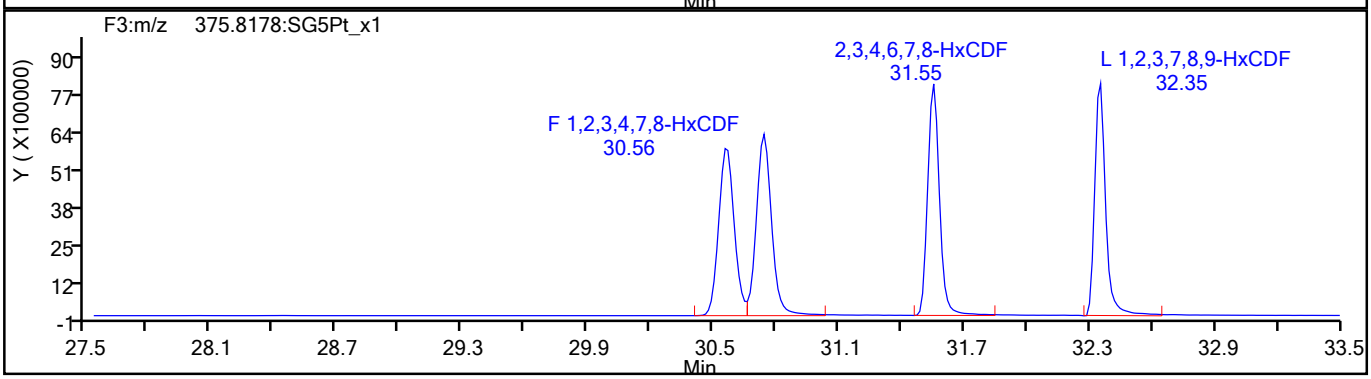

HxCDF Standards

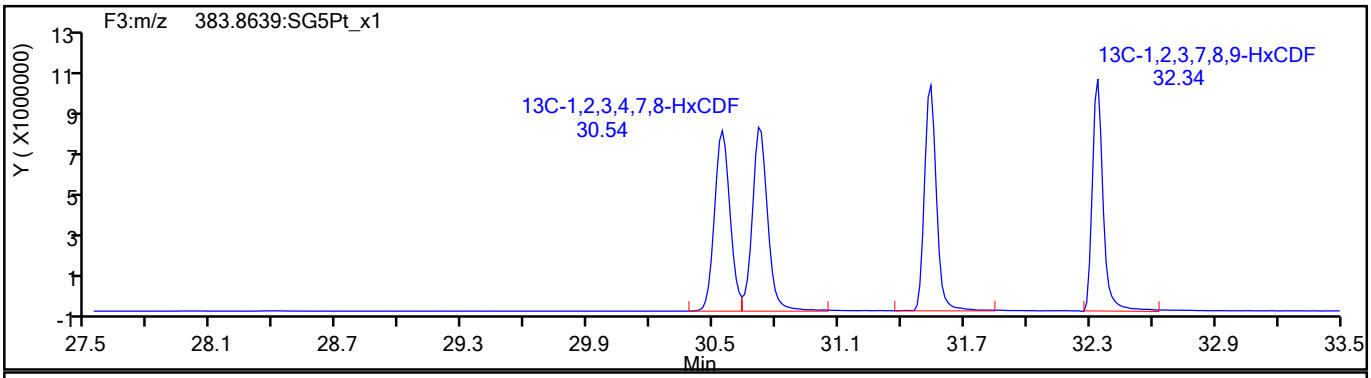

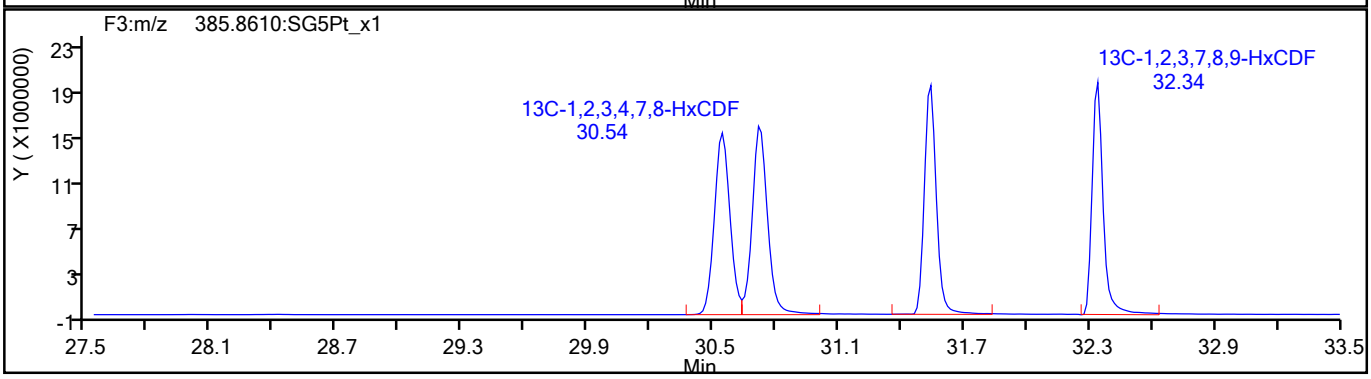

778688

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

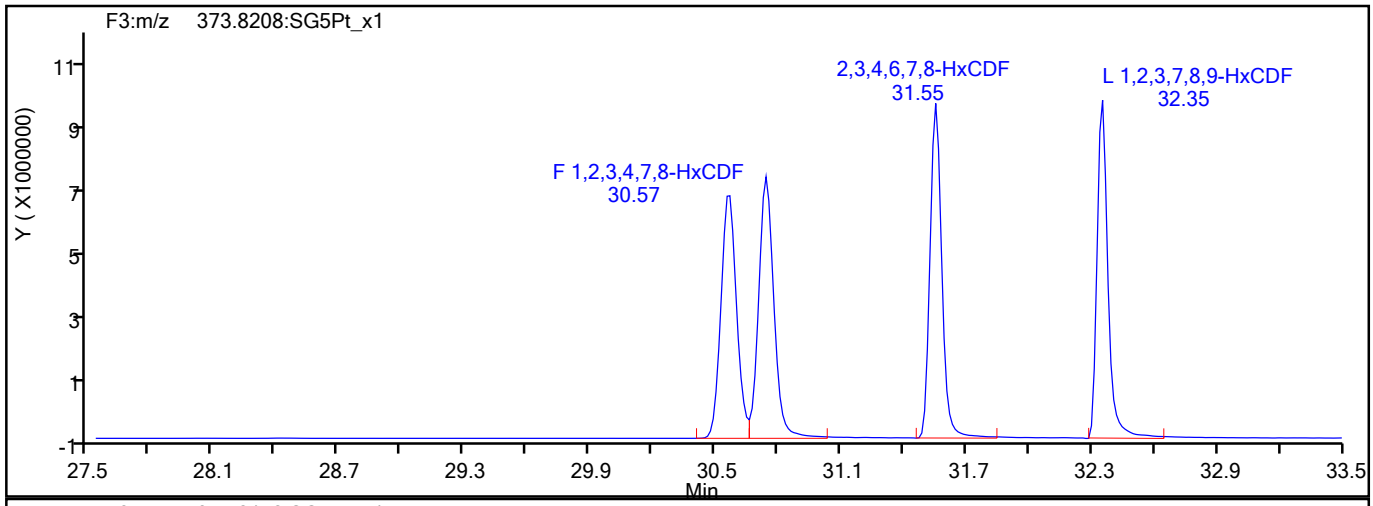

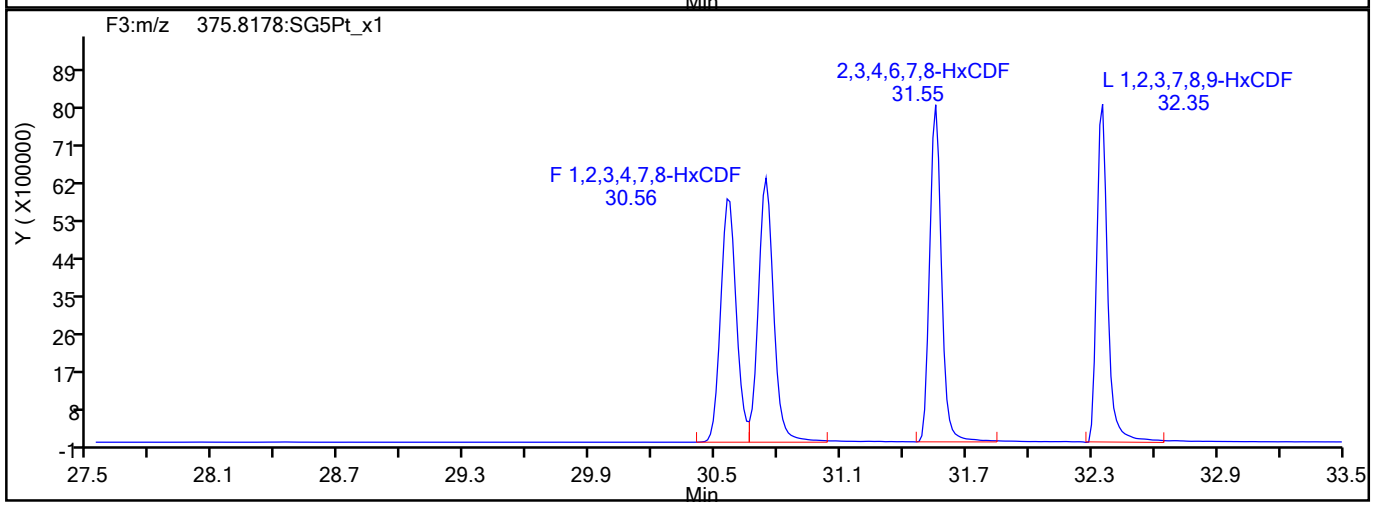

HxCDF Interference Mass

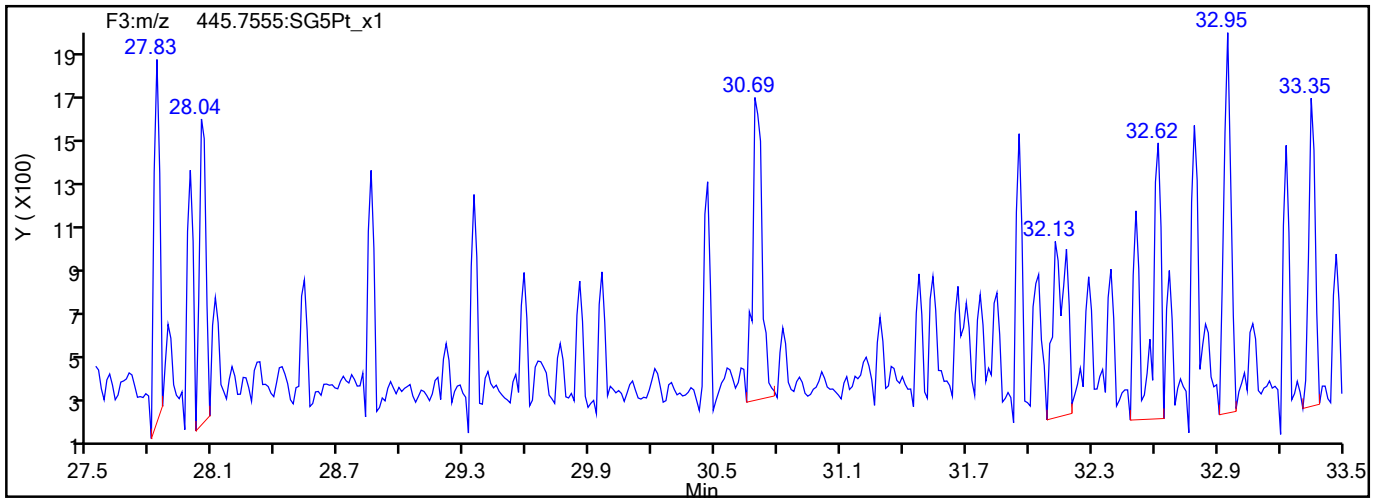

778689

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

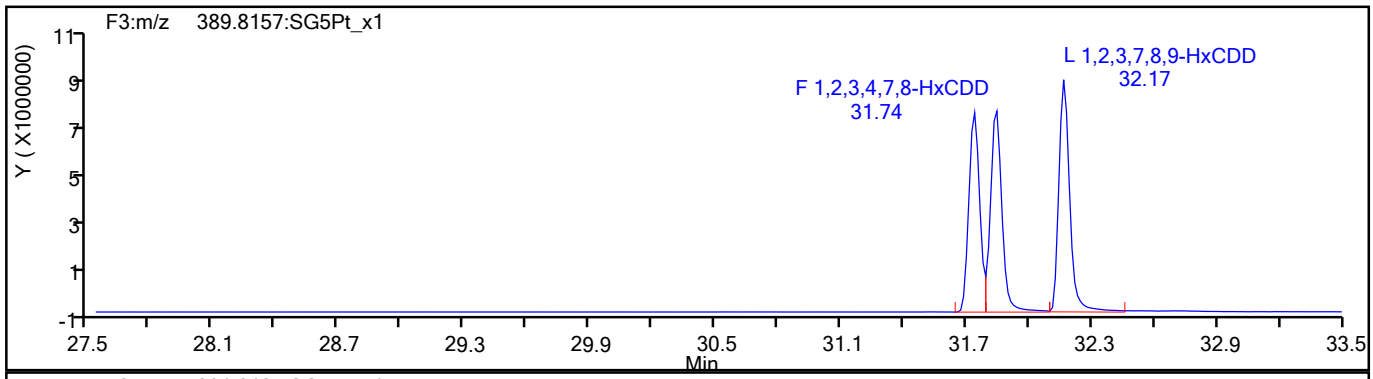

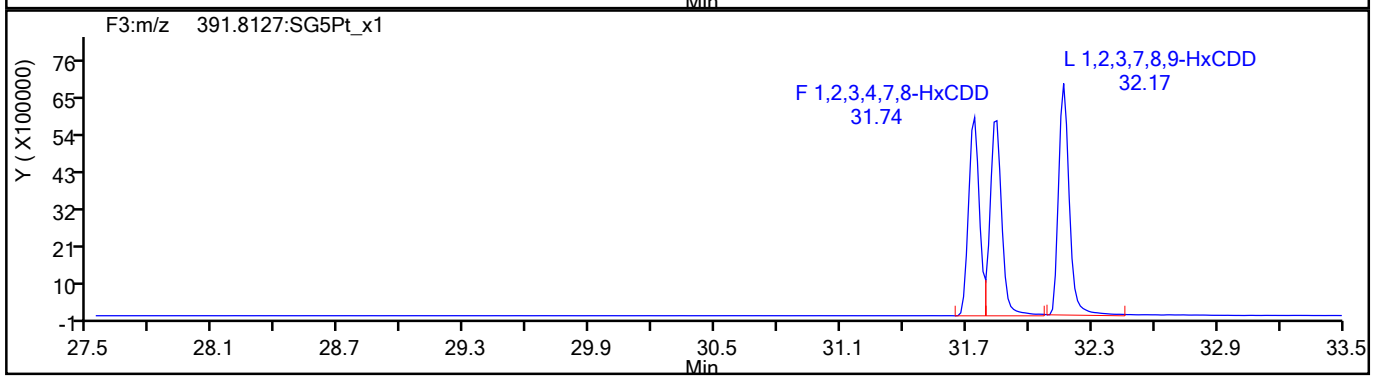

HxCDD Standards

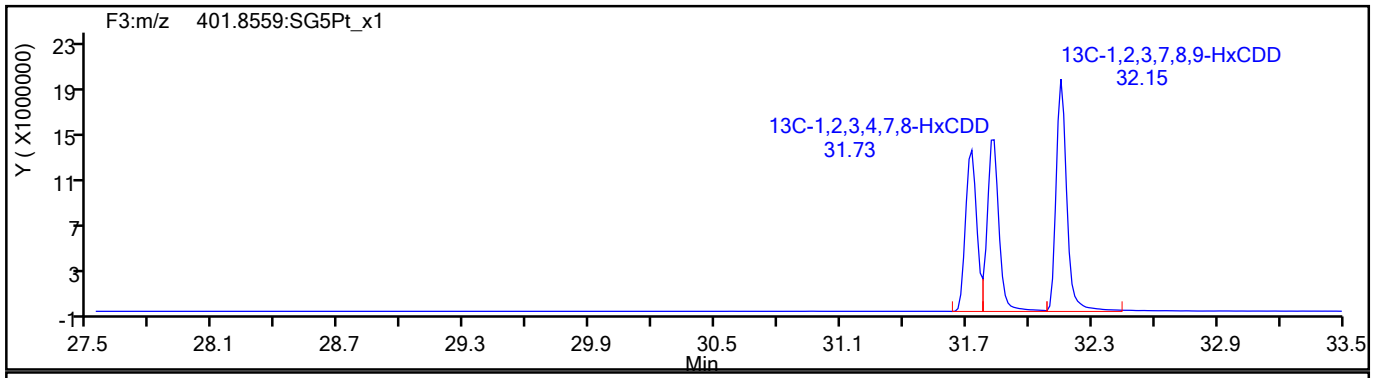

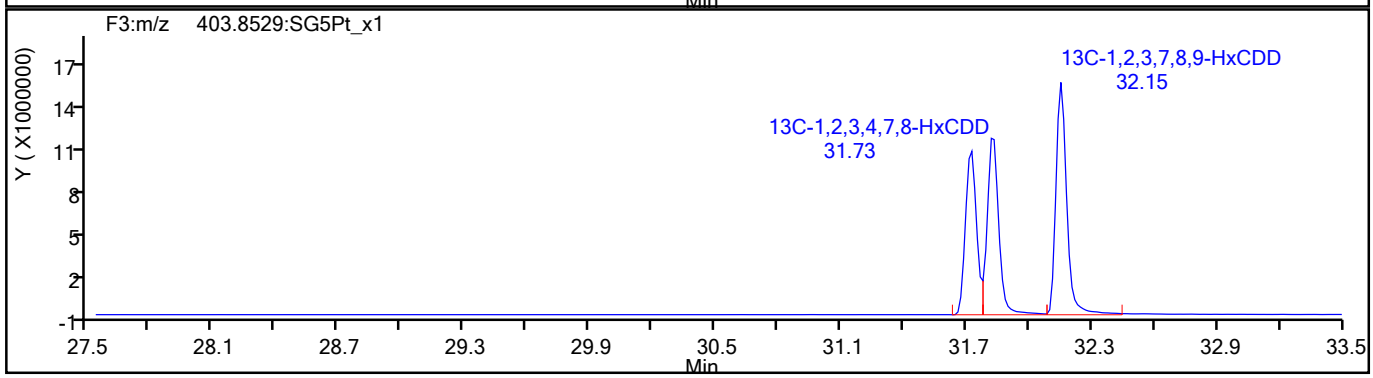

778690

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
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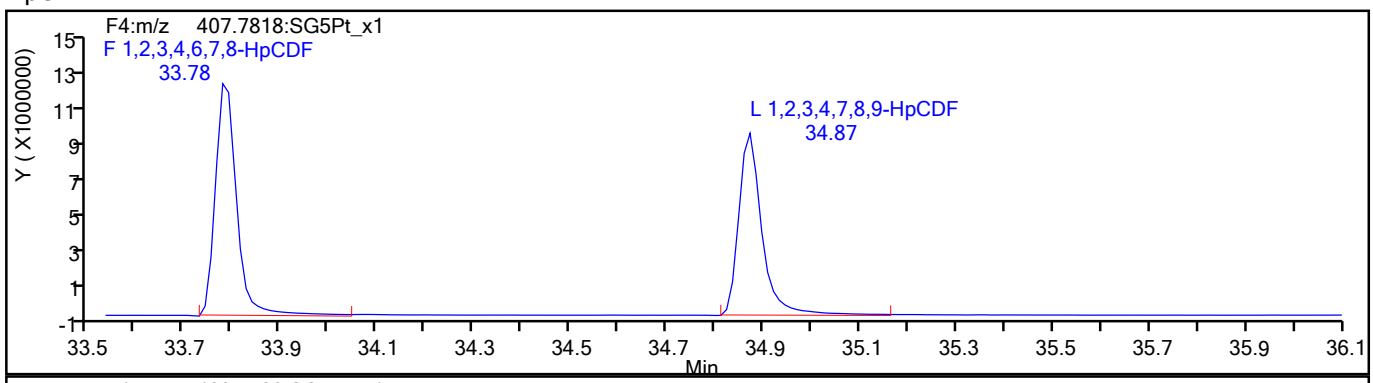

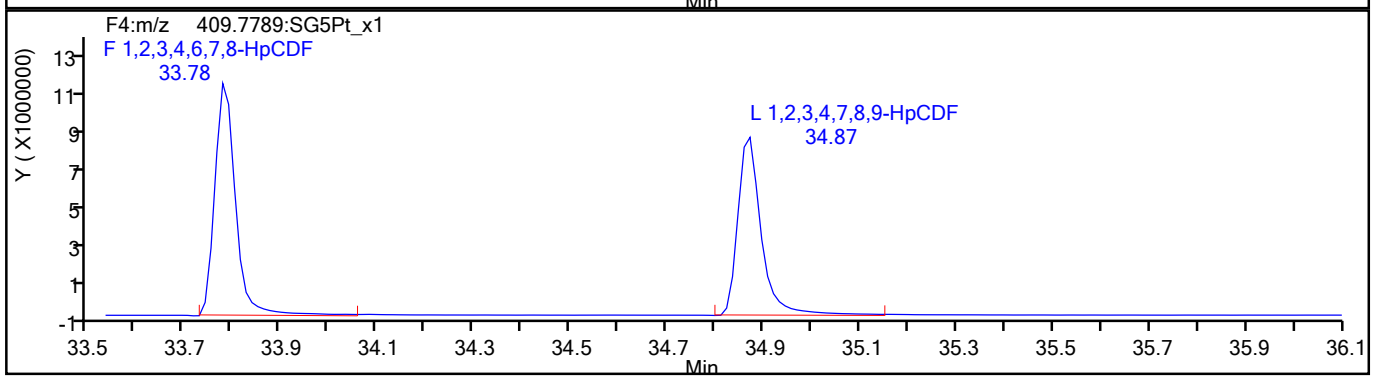

HpCDF Standards

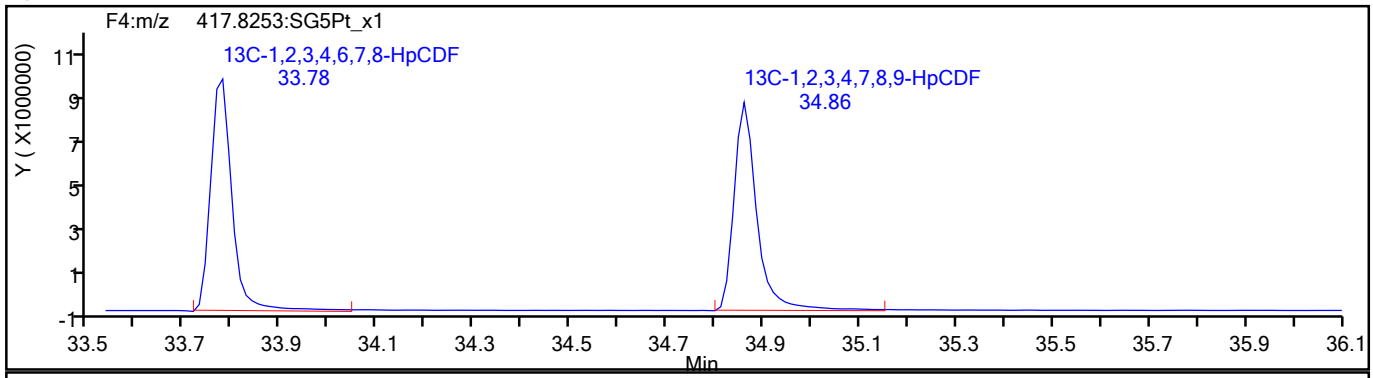

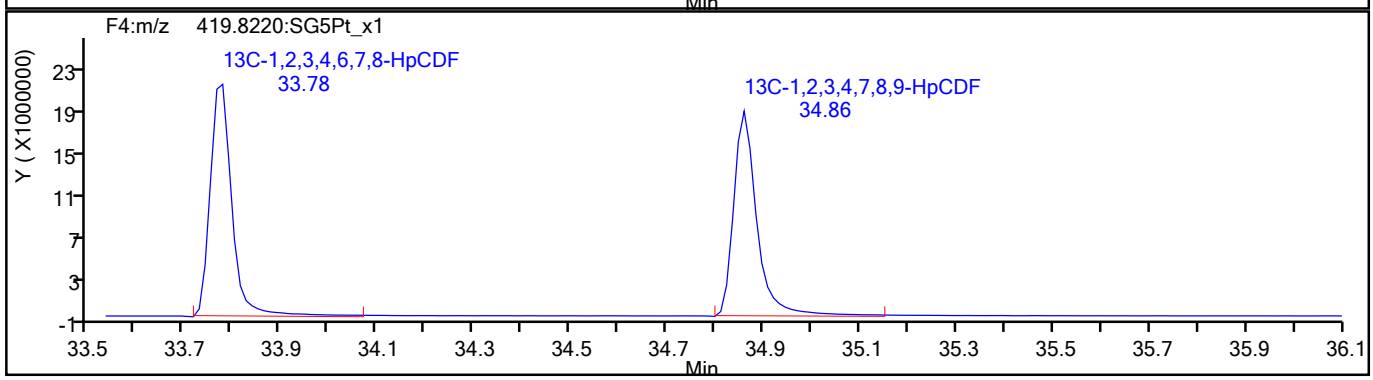

778691

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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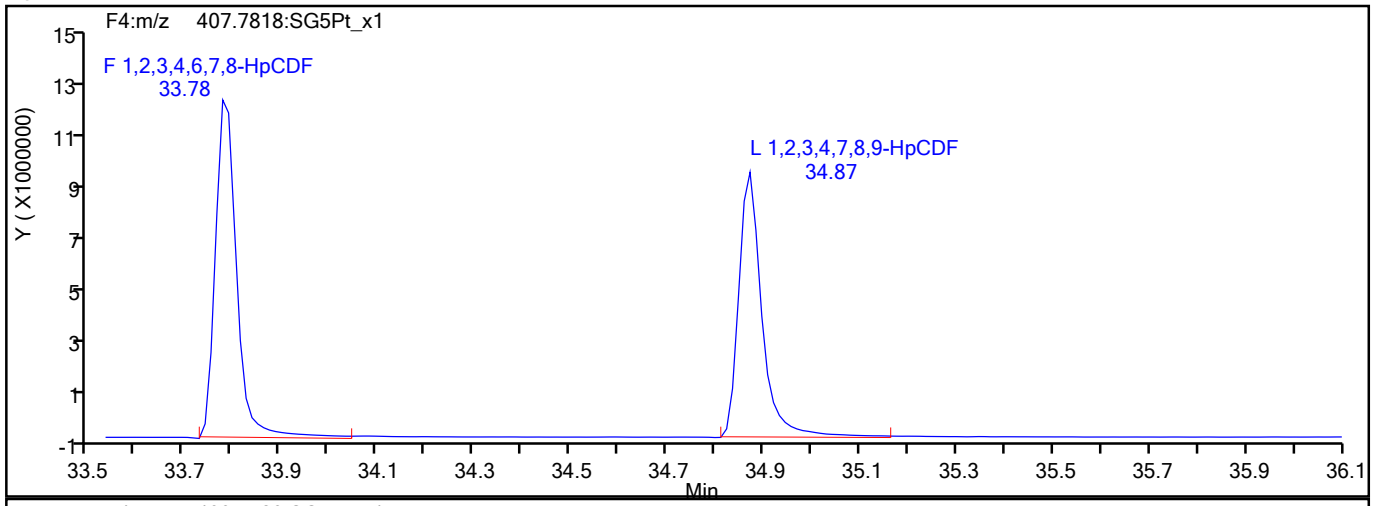

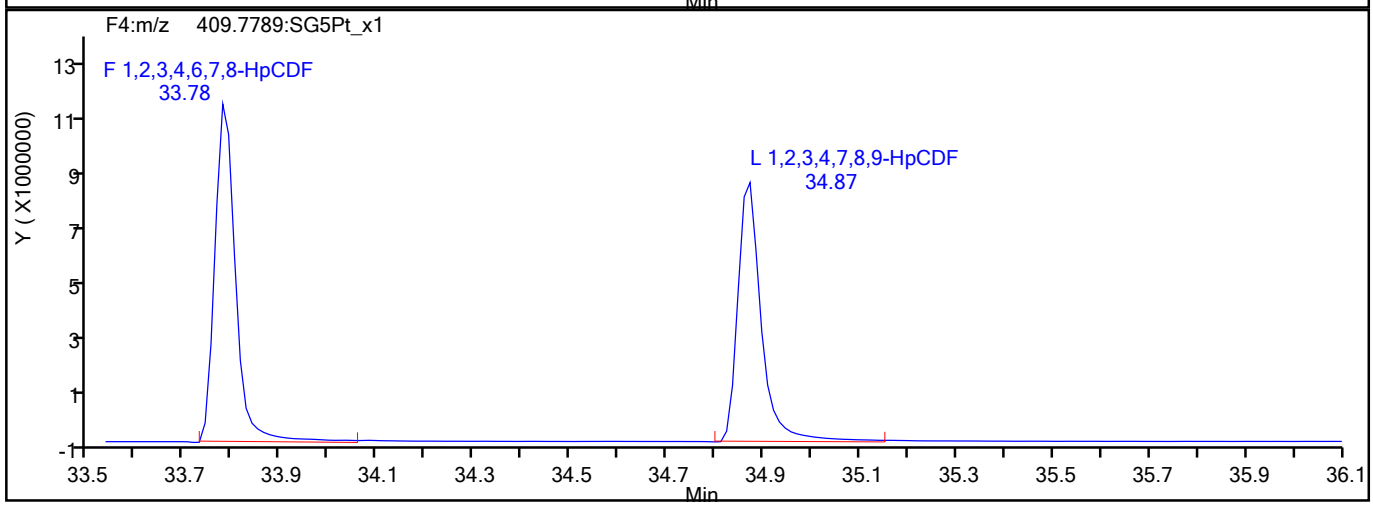

HpCDF Interference Mass

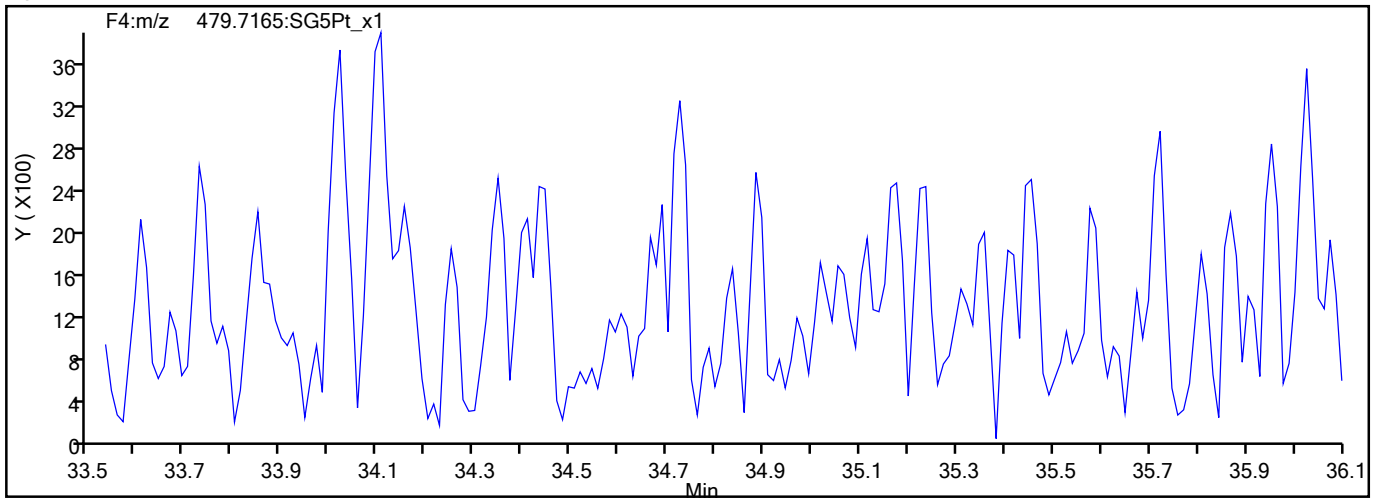

778692

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

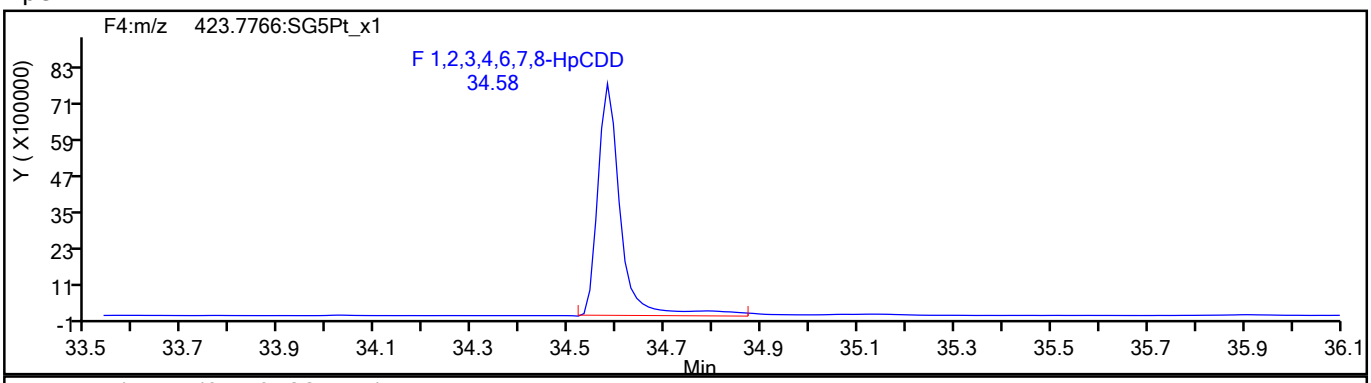

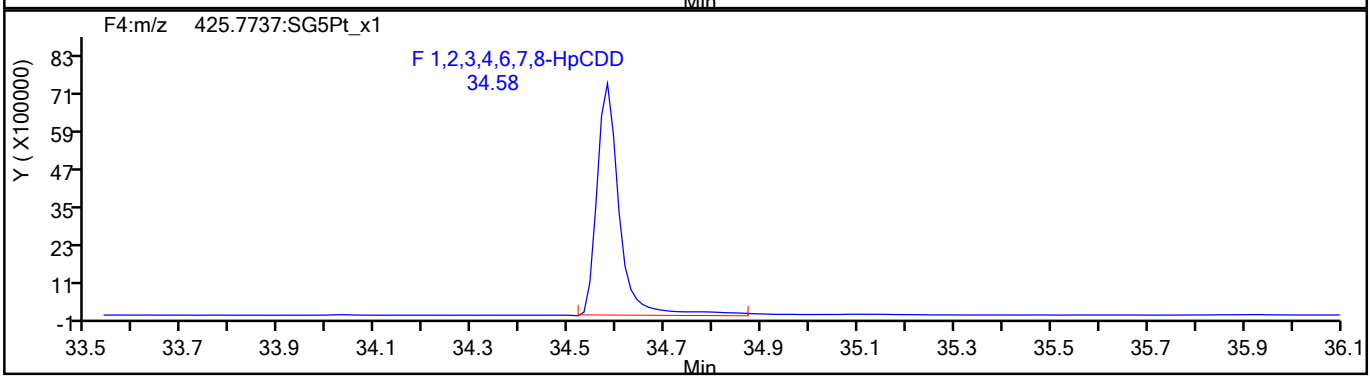

HpCDD Standards

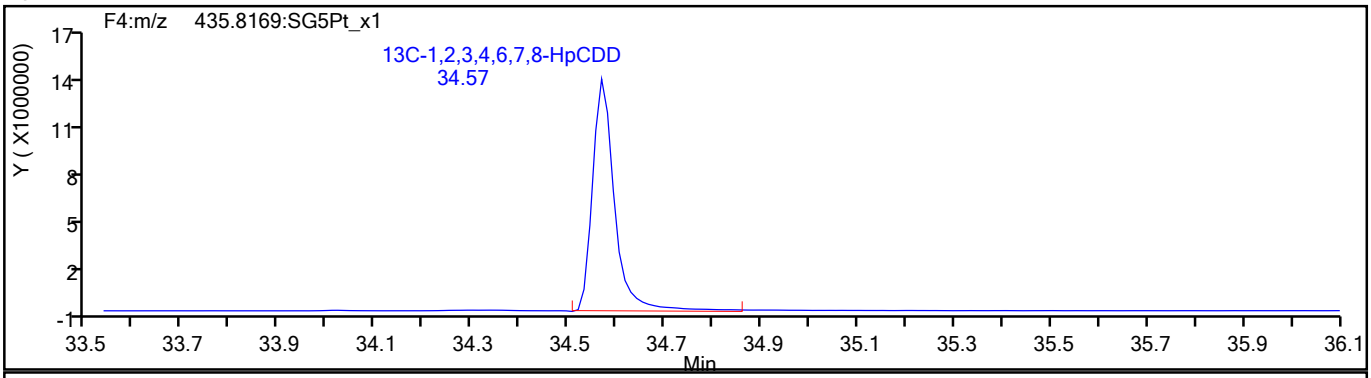

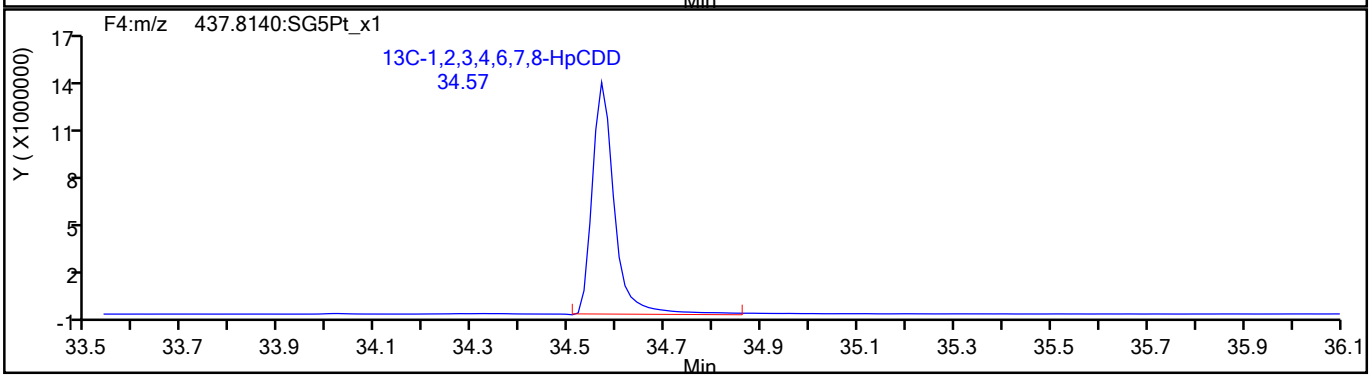

778693

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
Worklist#:	515770	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

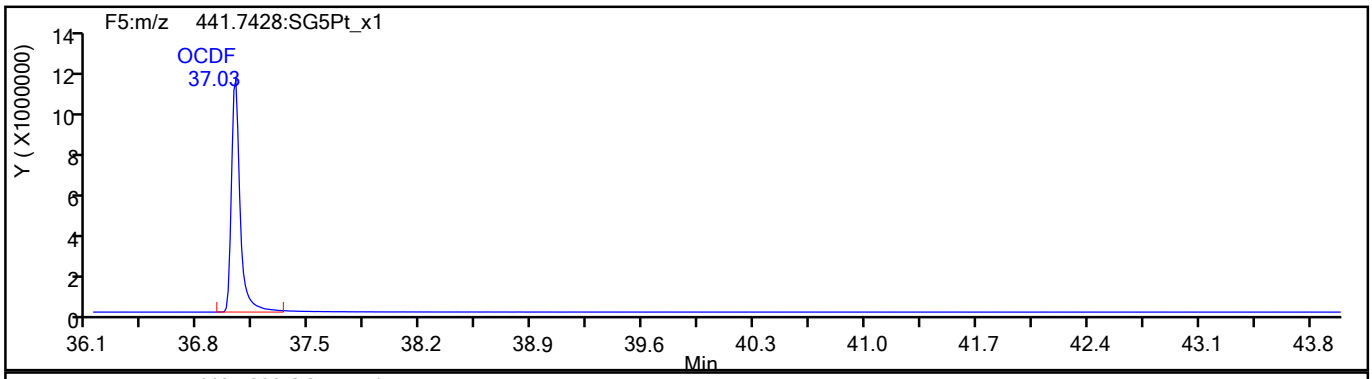

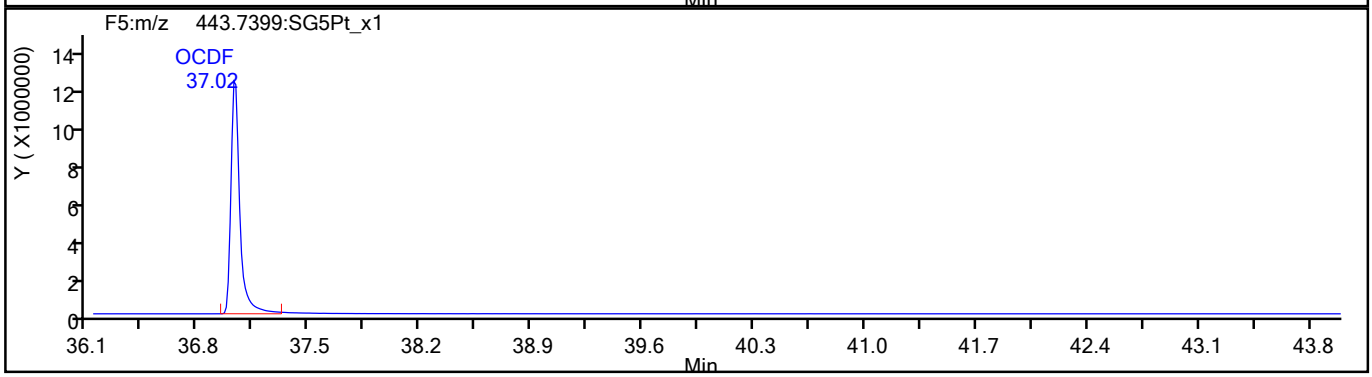

OCDF Standards

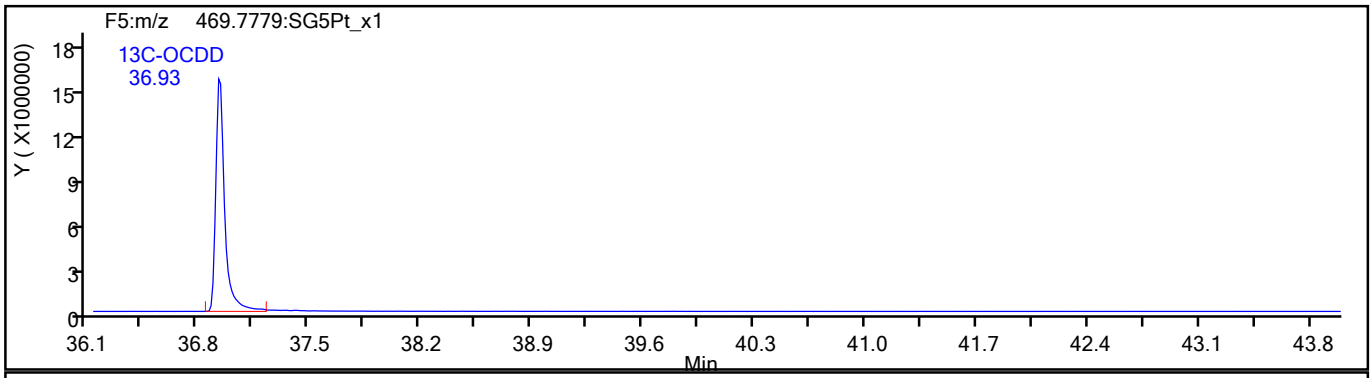

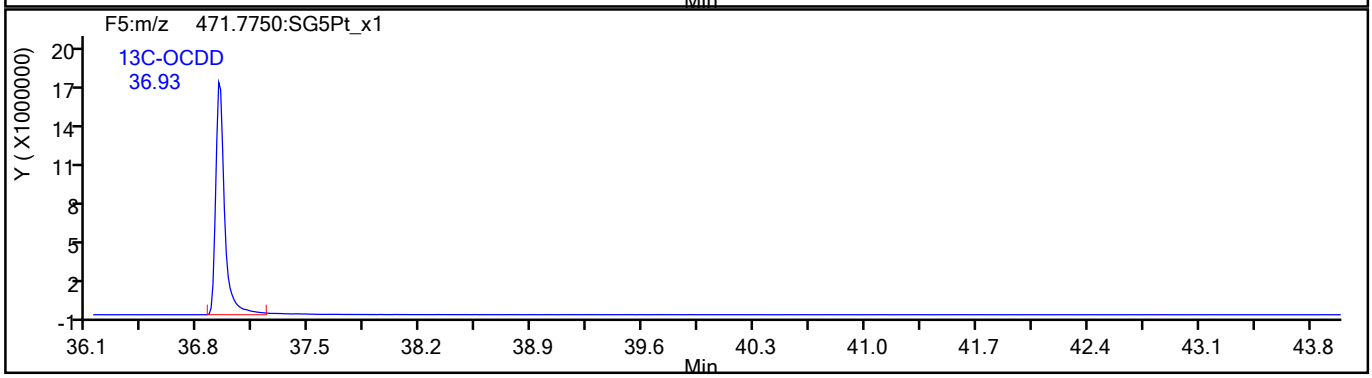

778694

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

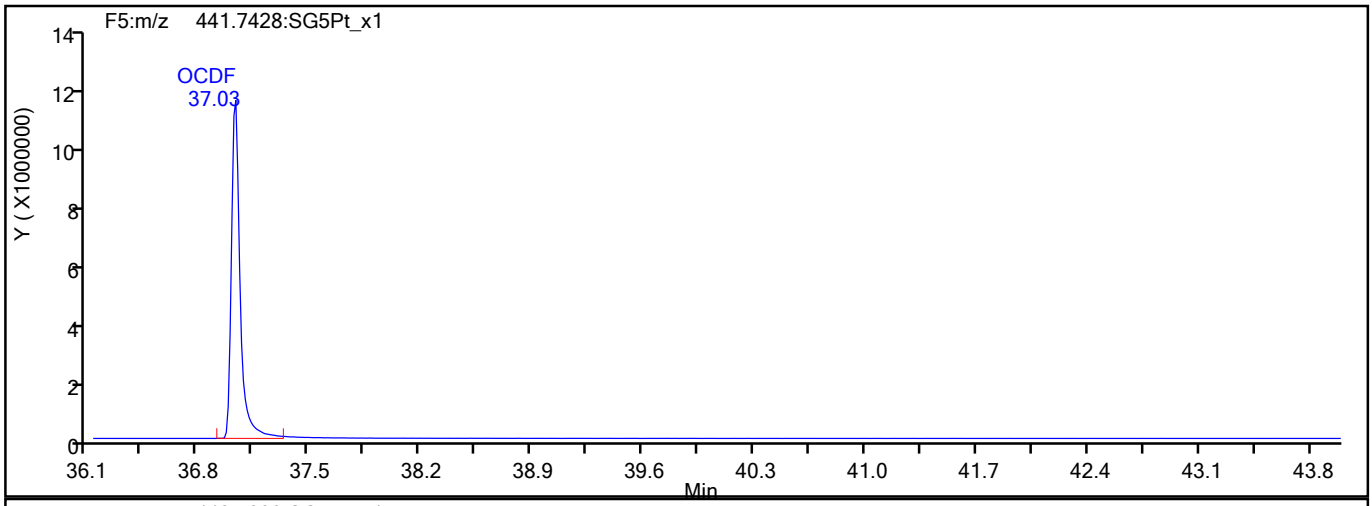

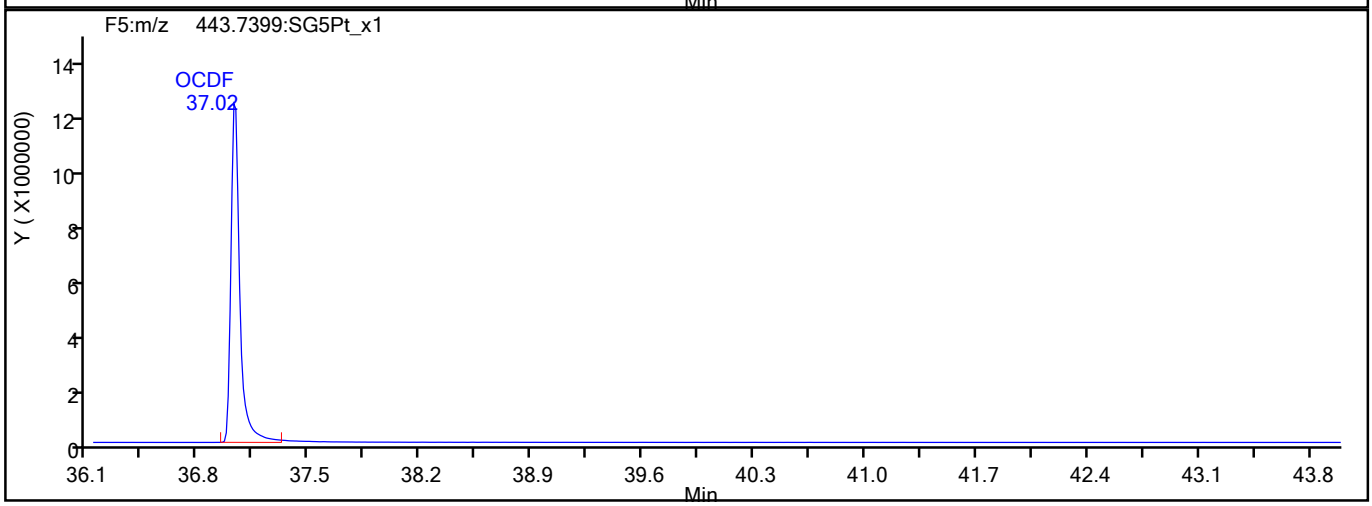

OCDF Interference Mass

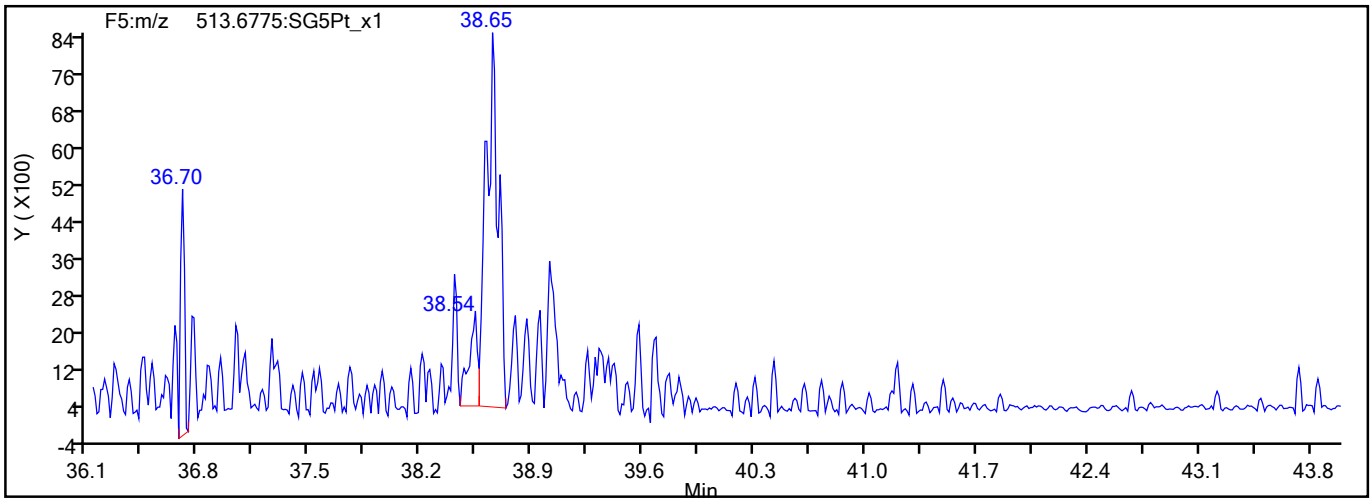

778695

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

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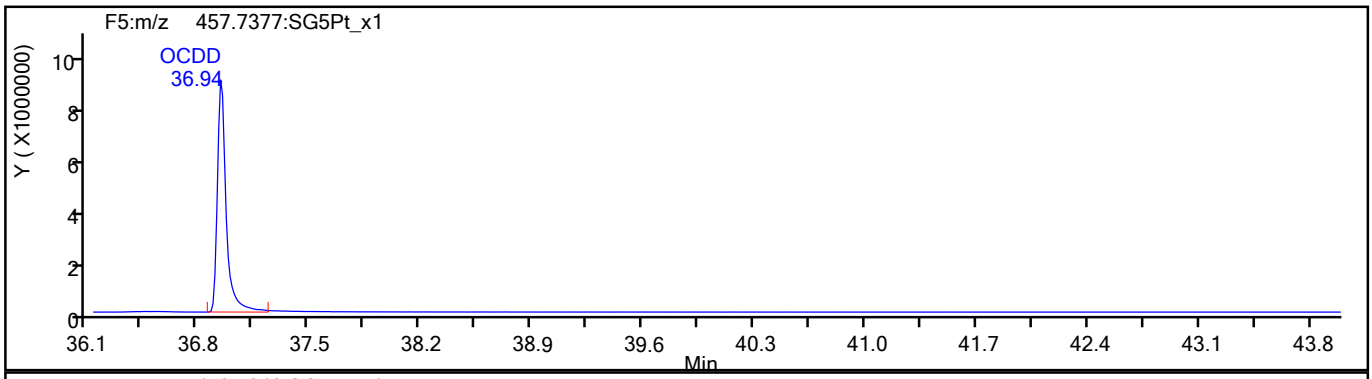

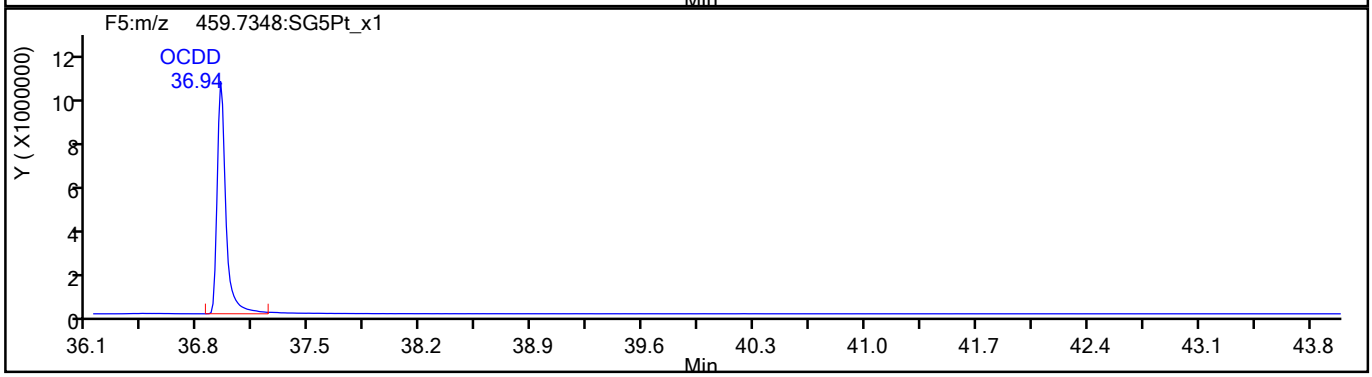

OCDD Standards

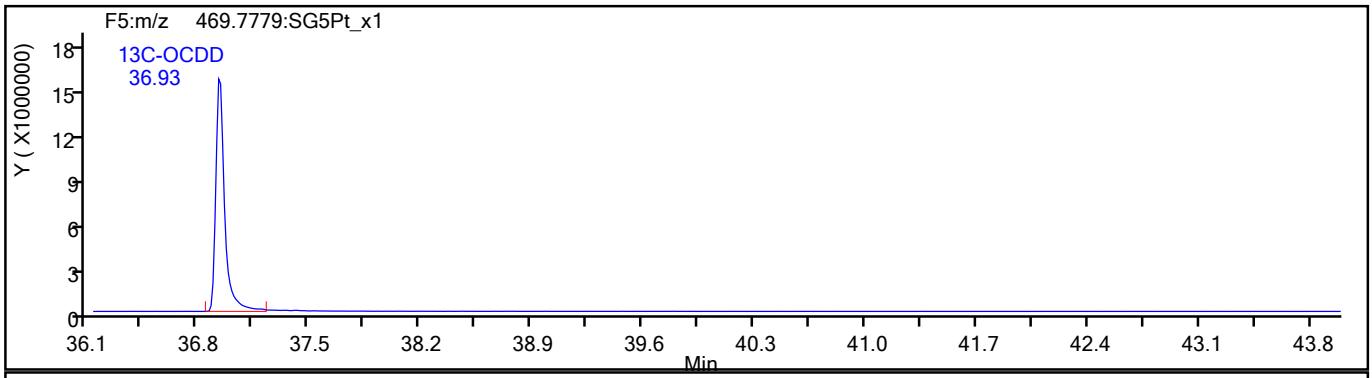

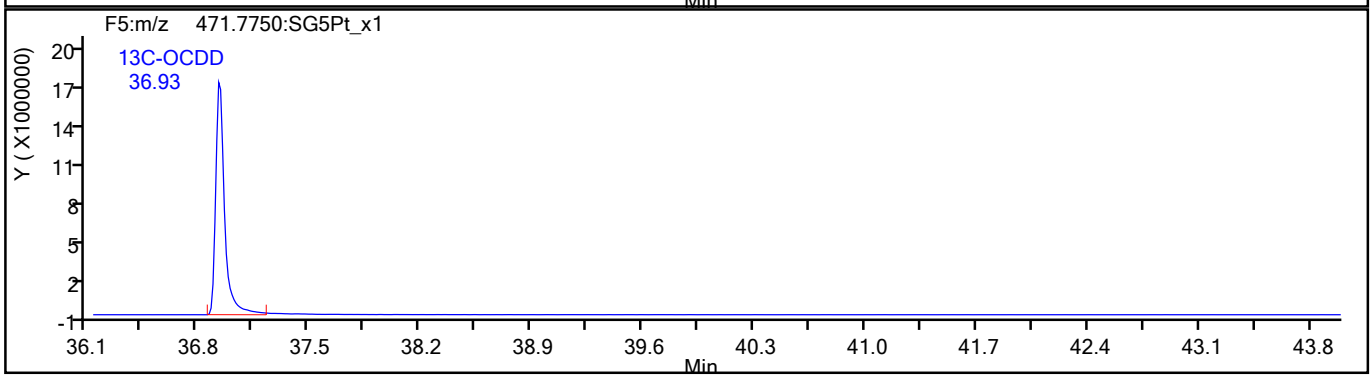

778696

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_23.d		
Injection Date:	13-Aug-2021 04:53:01	Injection Vol:	2.0 ul
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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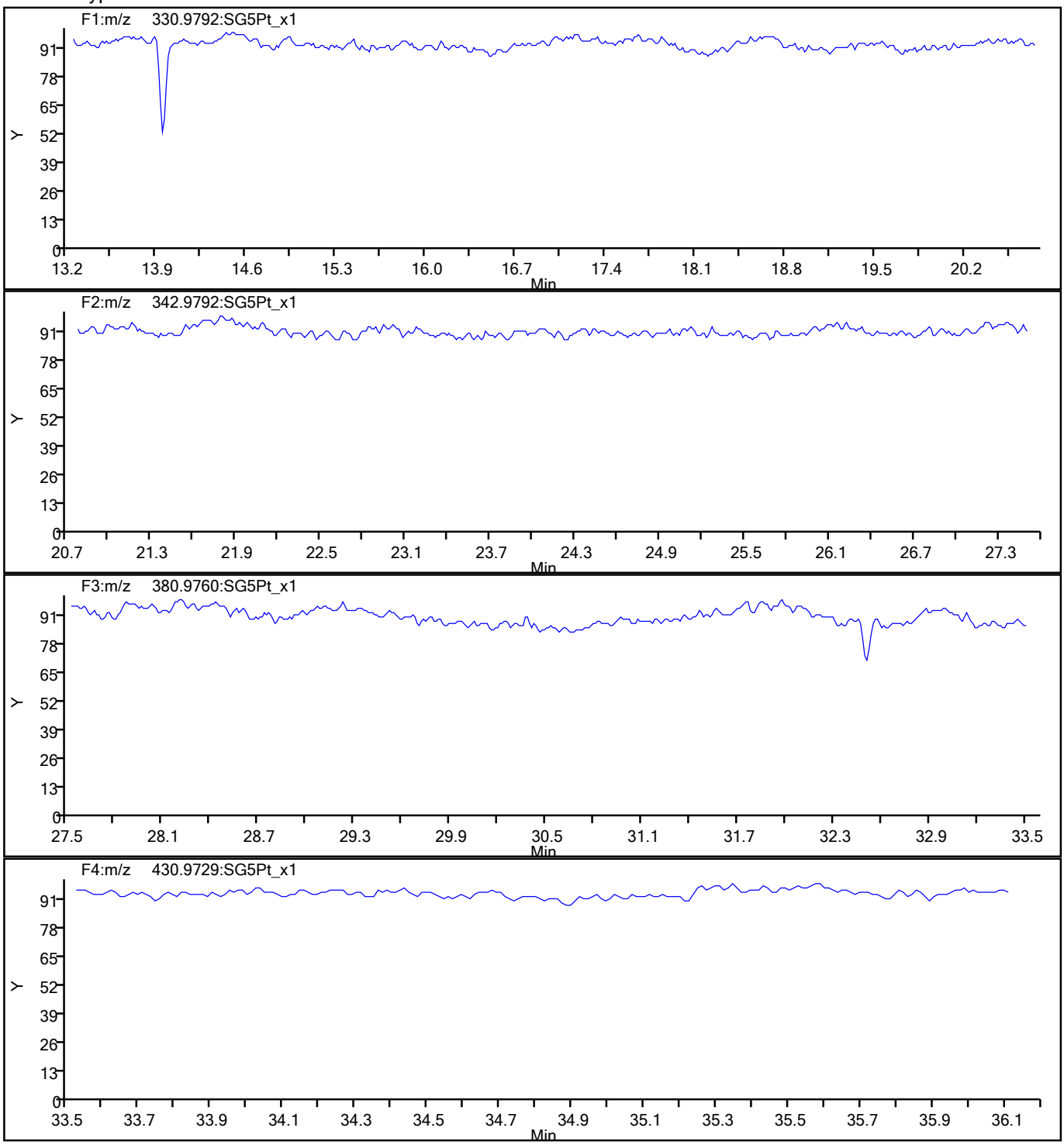

778697

Report Date: 13-Aug-2021 15:47:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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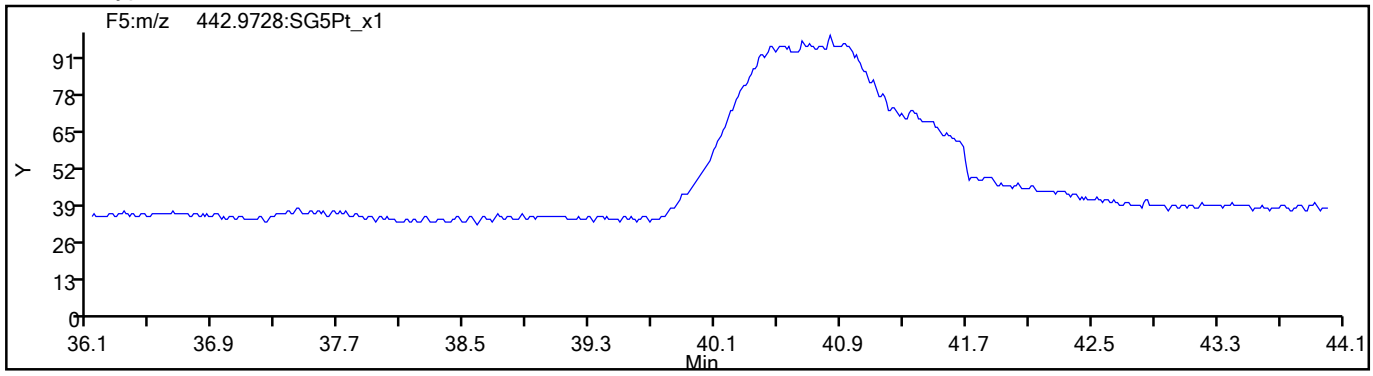

778698

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

778700

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

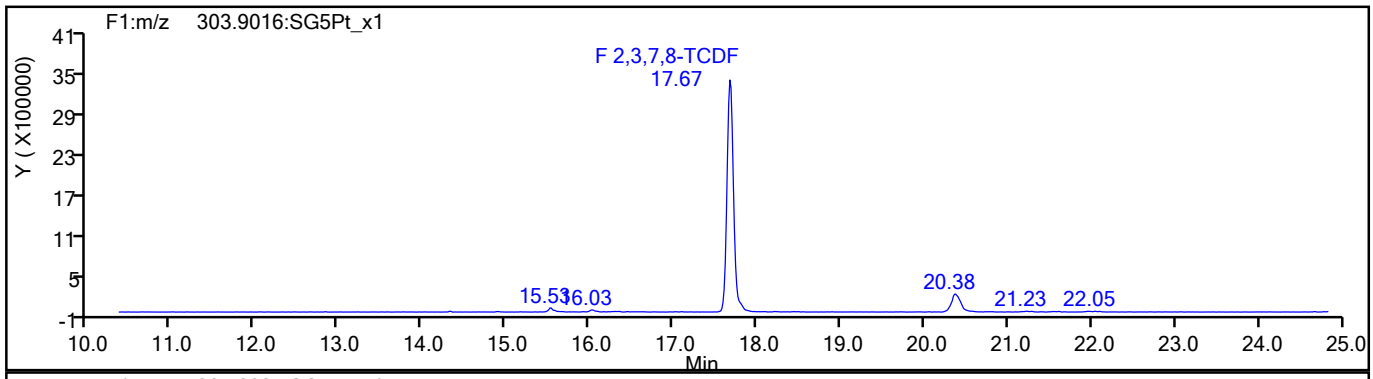

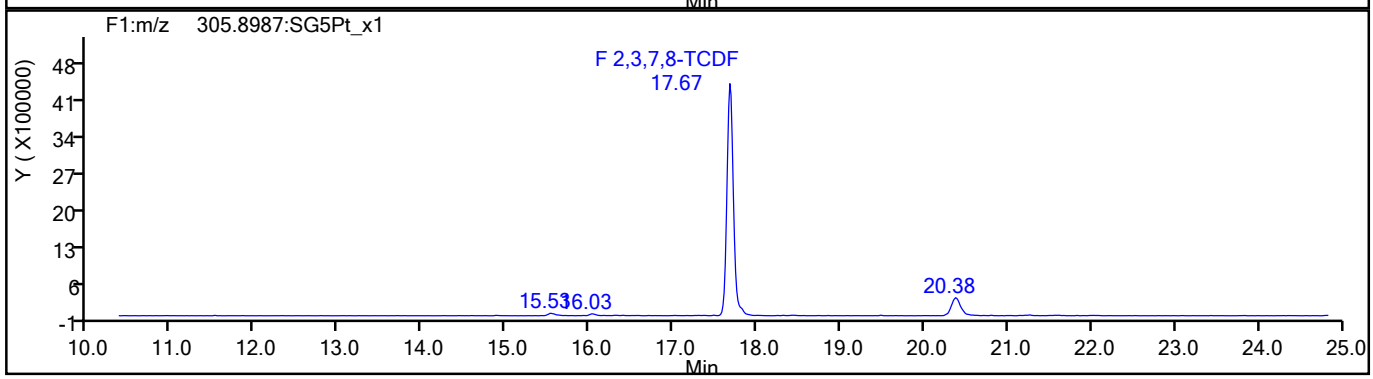

TCDF Standards

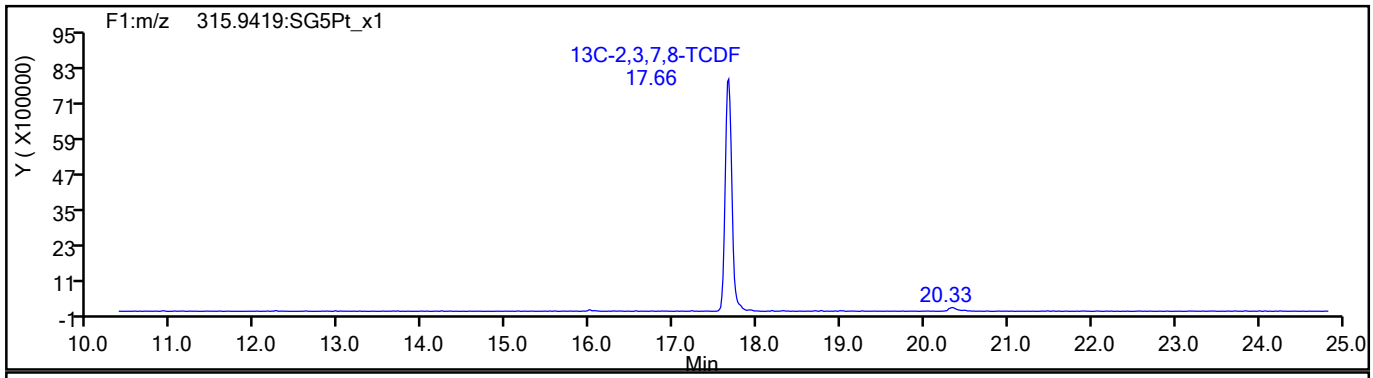

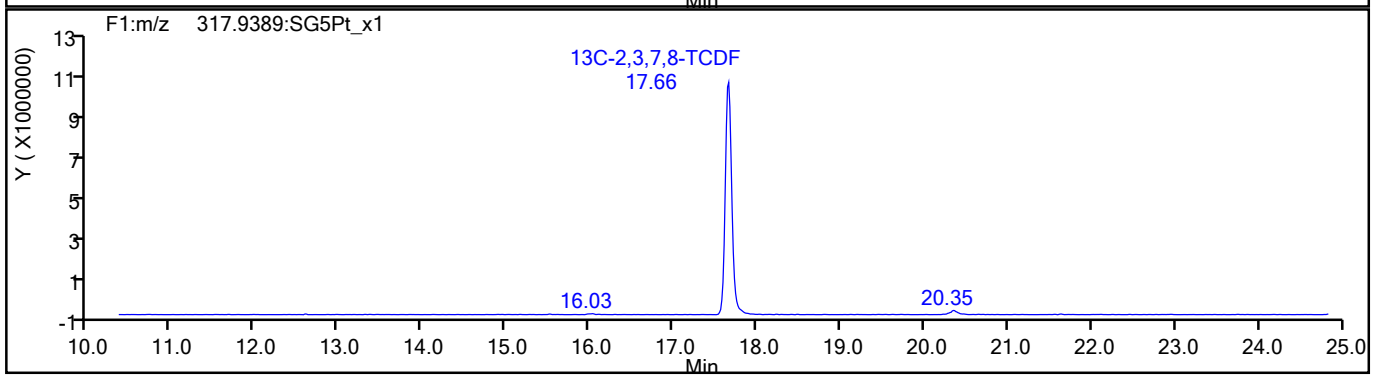

778702

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

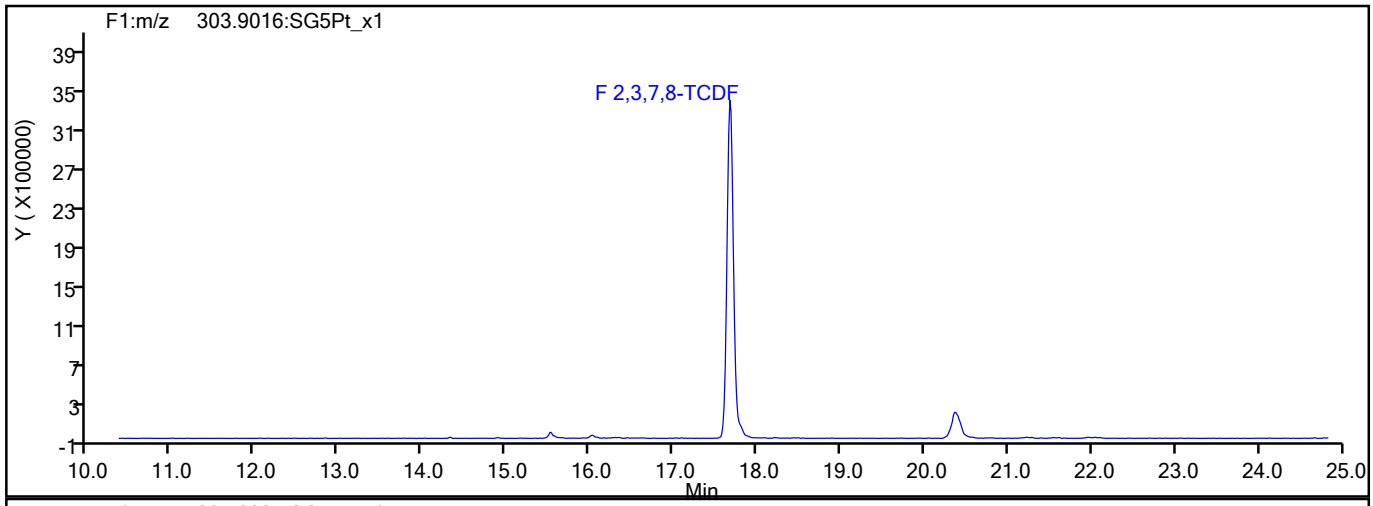

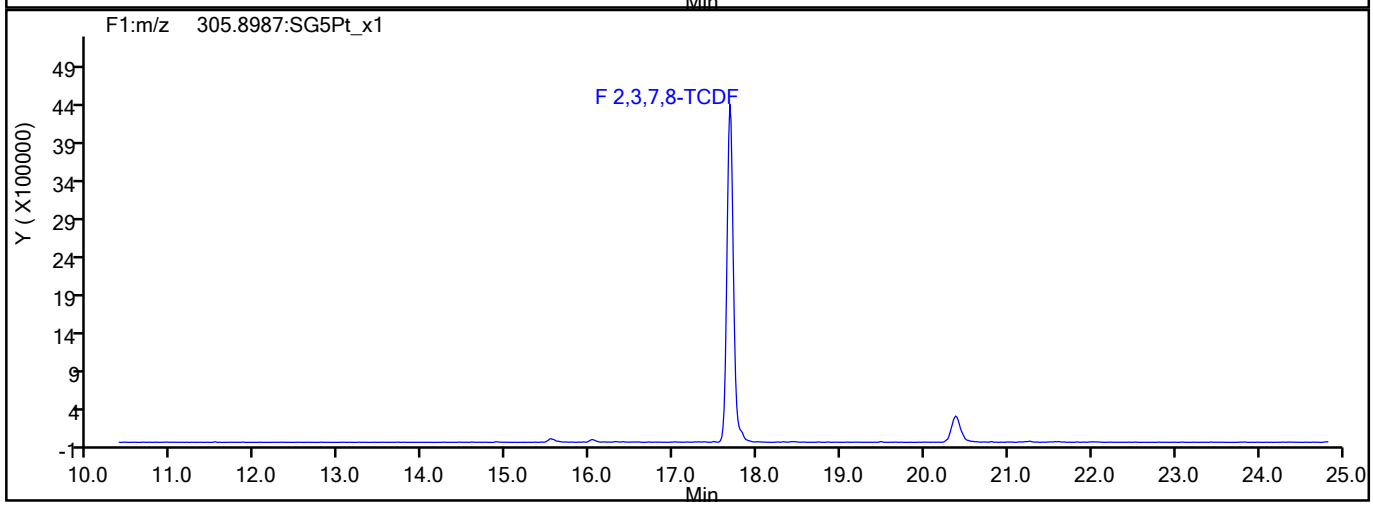

TCDF Interference Mass

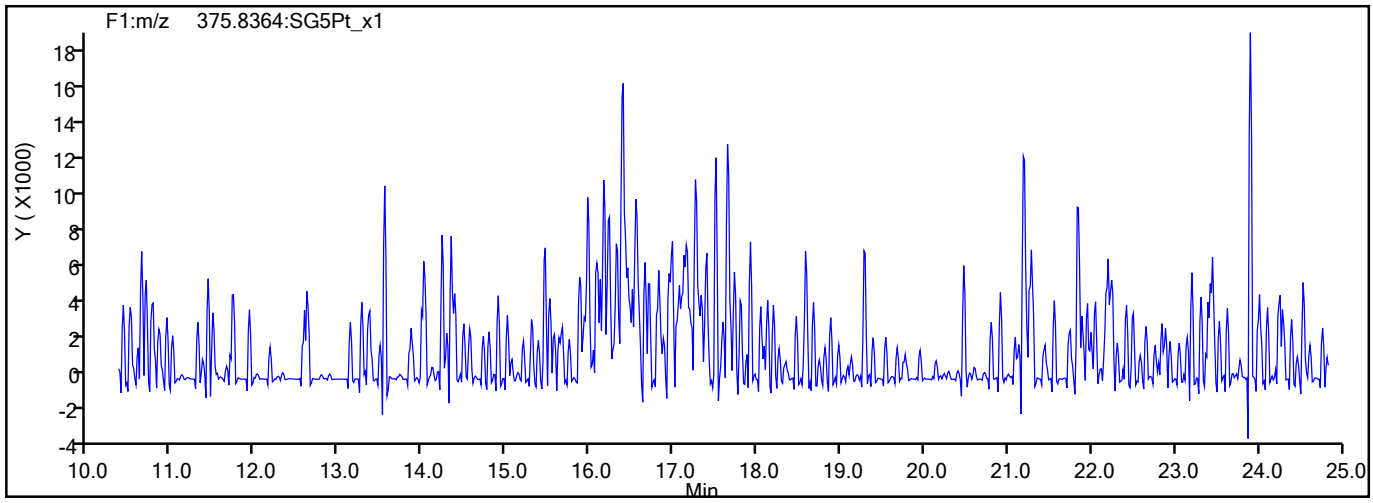

778703

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

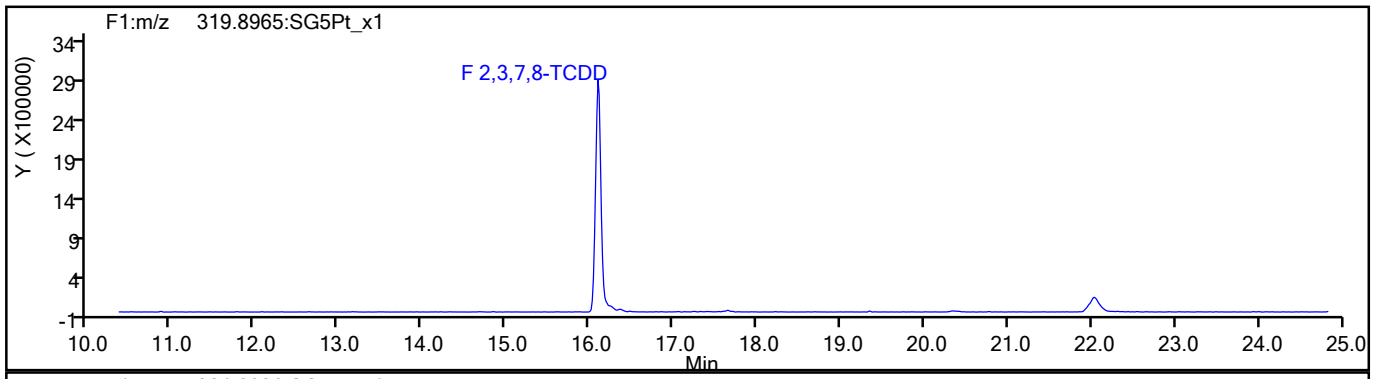

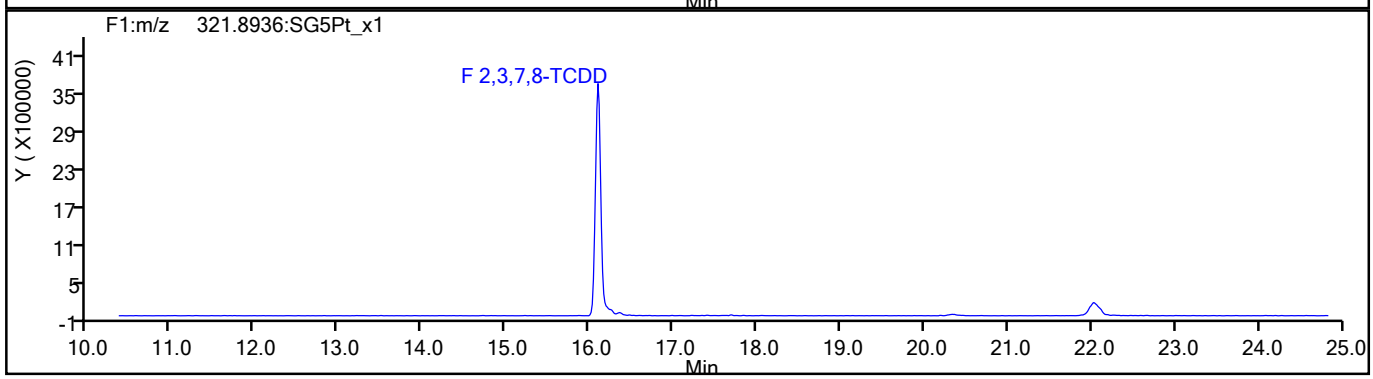

TCDD Standards

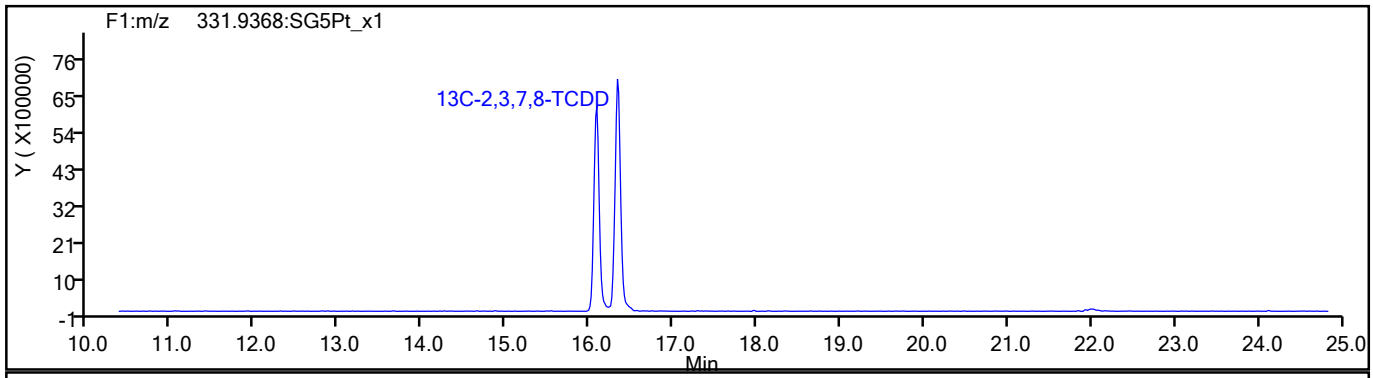

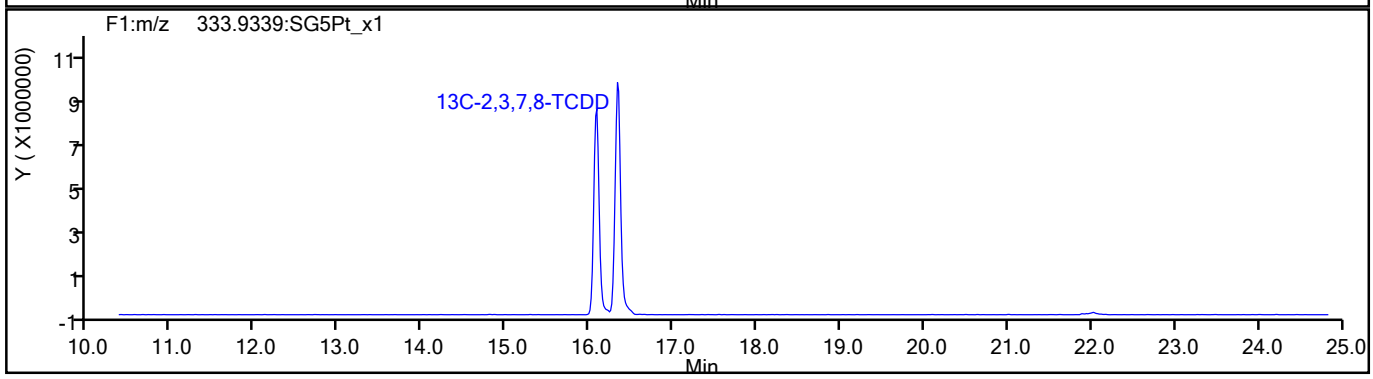

778704

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

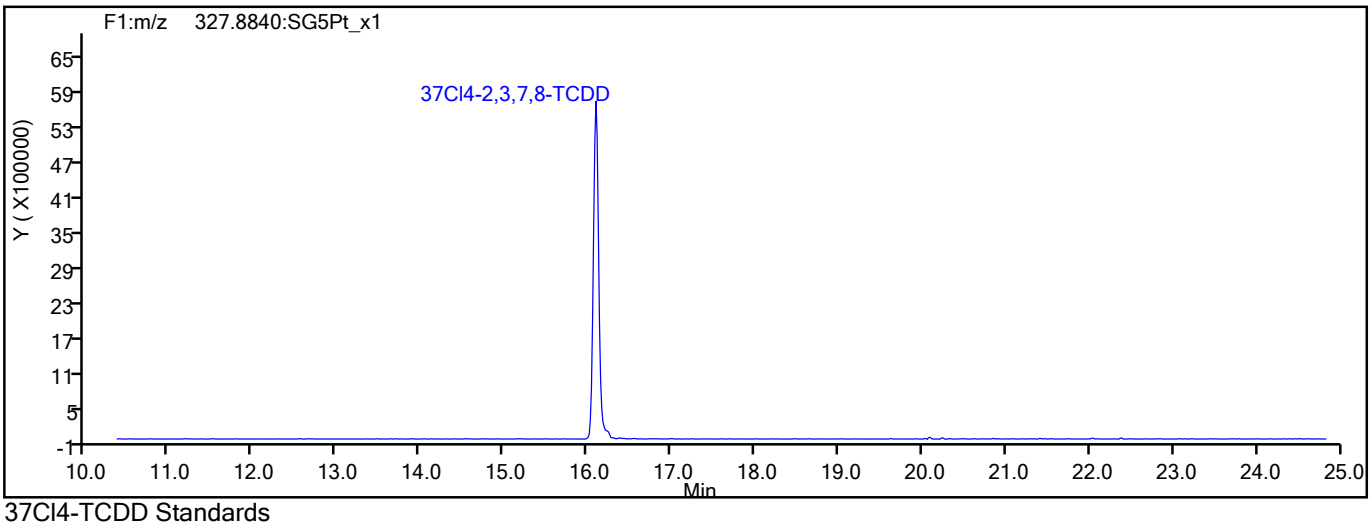

37Cl4-TCDD Standards

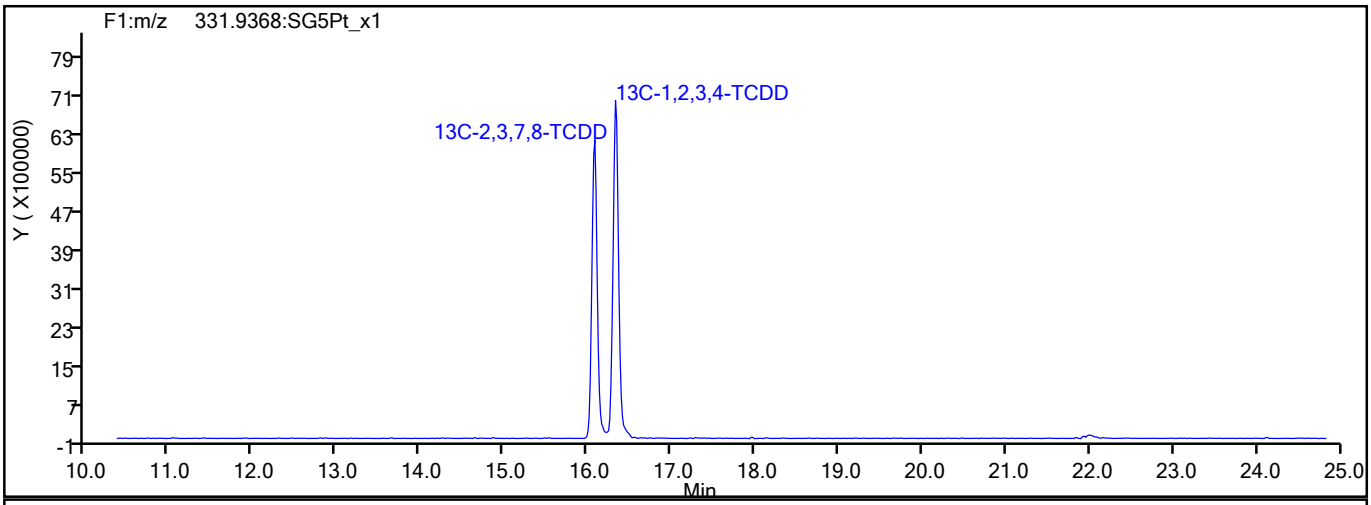

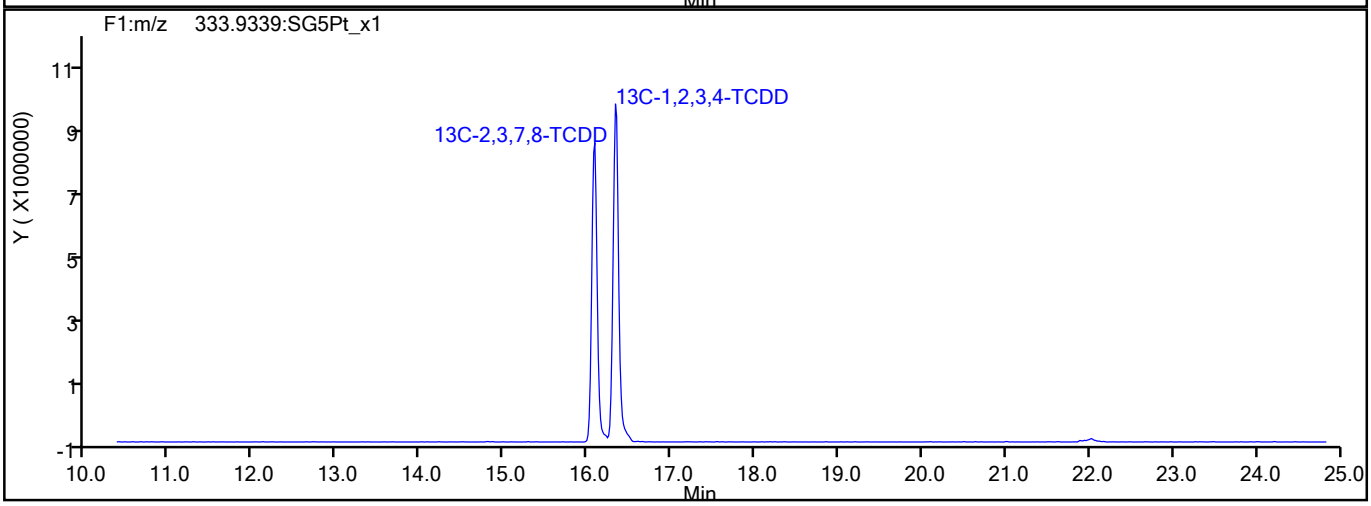

778705

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

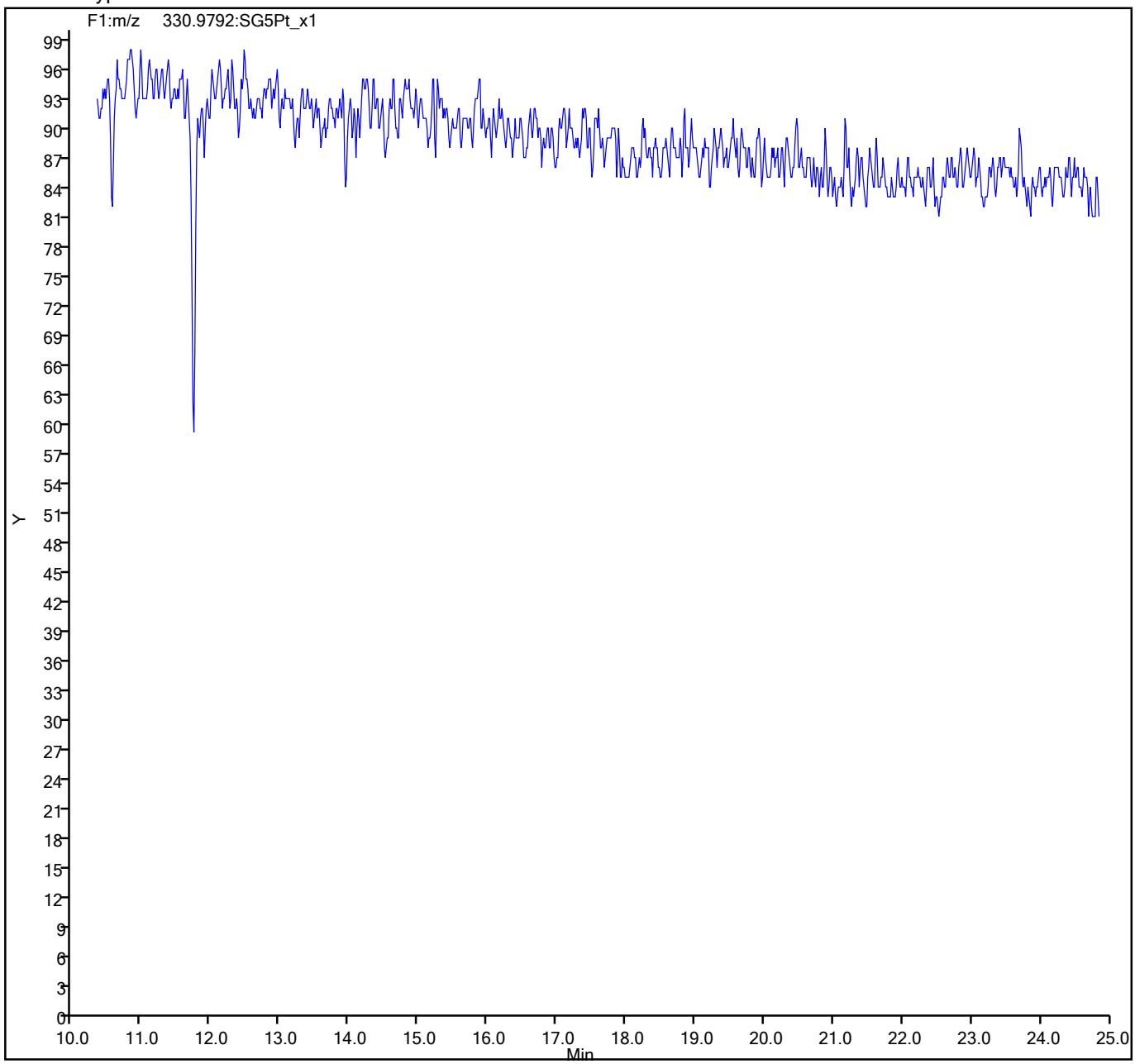

778706

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Lab Sample ID: CCV 320-518850/2 Calibration Date: 08/21/2021 14:32

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 21AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	0.996		9.42	10.0	94	78-129
2,3,7,8-TCDF	AveID	0.998	0.9211		9.23	10.0	92	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9393		107	100	107	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.446		109	100	109	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8798		10.2	10.0	102	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
21AU2111D2	1	CPS 082121	CPS HRDXNCP_00044				1.00000	
21AU2111D2	2	CCV 082121	CCV CS-4 HRDXNL4_00100				1.00000	
21AU2111D2	3	SB 082121	Solvent Blank C-14				1.00000	
21AU2111D2	4	320-513227	320-76769-A-9-A	20	1613B/Solid	D264	10.00000	g
21AU2111D2	5	320-513227	320-76769-A-35-A	20	1613B/Solid		10.00000	g
21AU2111D2	6	320-513585	320-76765-A-18-A RI	20	1613B/Solid	D265	10.00000	g
21AU2111D2	7	320-513227	320-76765-A-14-A RI	20	1613B/Solid	D264	10.00000	g
21AU2111D2	8	320-513227	320-76765-A-19-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	9	320-513227	320-76765-A-15-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	10	320-513227	320-76765-A-16-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	11	320-513227	320-76765-A-13-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	12	320-513585	320-76769-A-5-A RI	20	1613B/Solid	D265	10.00000	g
21AU2111D2	13	320-513585	320-76769-A-3-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	14	320-513585	320-76769-A-13-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	15	320-513585	320-76769-A-15-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	16	320-513227	320-76765-A-17-A RI	20	1613B/Solid	D264	10.00000	g
21AU2111D2	17	320-513227	320-76765-A-11-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	18	320-513227	320-76765-A-12-A RI	20	1613B/Solid		10.00000	g
21AU2111D2	19						1.00000	
21AU2111D2	20						1.00000	
21AU2111D2	21						1.00000	
21AU2111D2	22						1.00000	
21AU2111D2	23						1.00000	
21AU2111D2	24		KSS 08-21-21				1.00000	
21AU2111D2	25						1.00000	

Logfile checked
08/23/21 SMA

Peak Locate Examination:21-AUG-2021:13:53 File:21AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

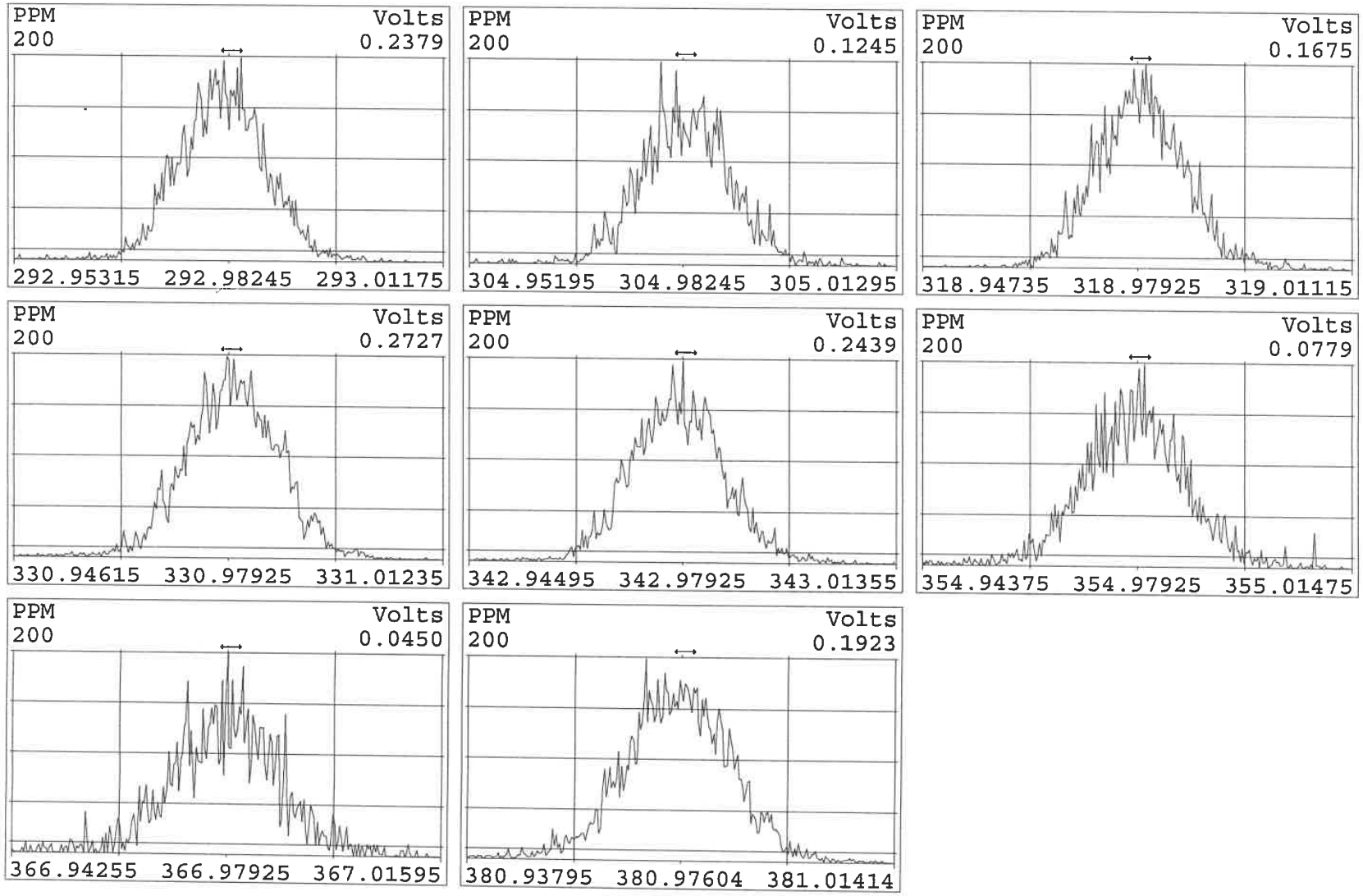

Peak Locate Examination:22-AUG-2021:01:45 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

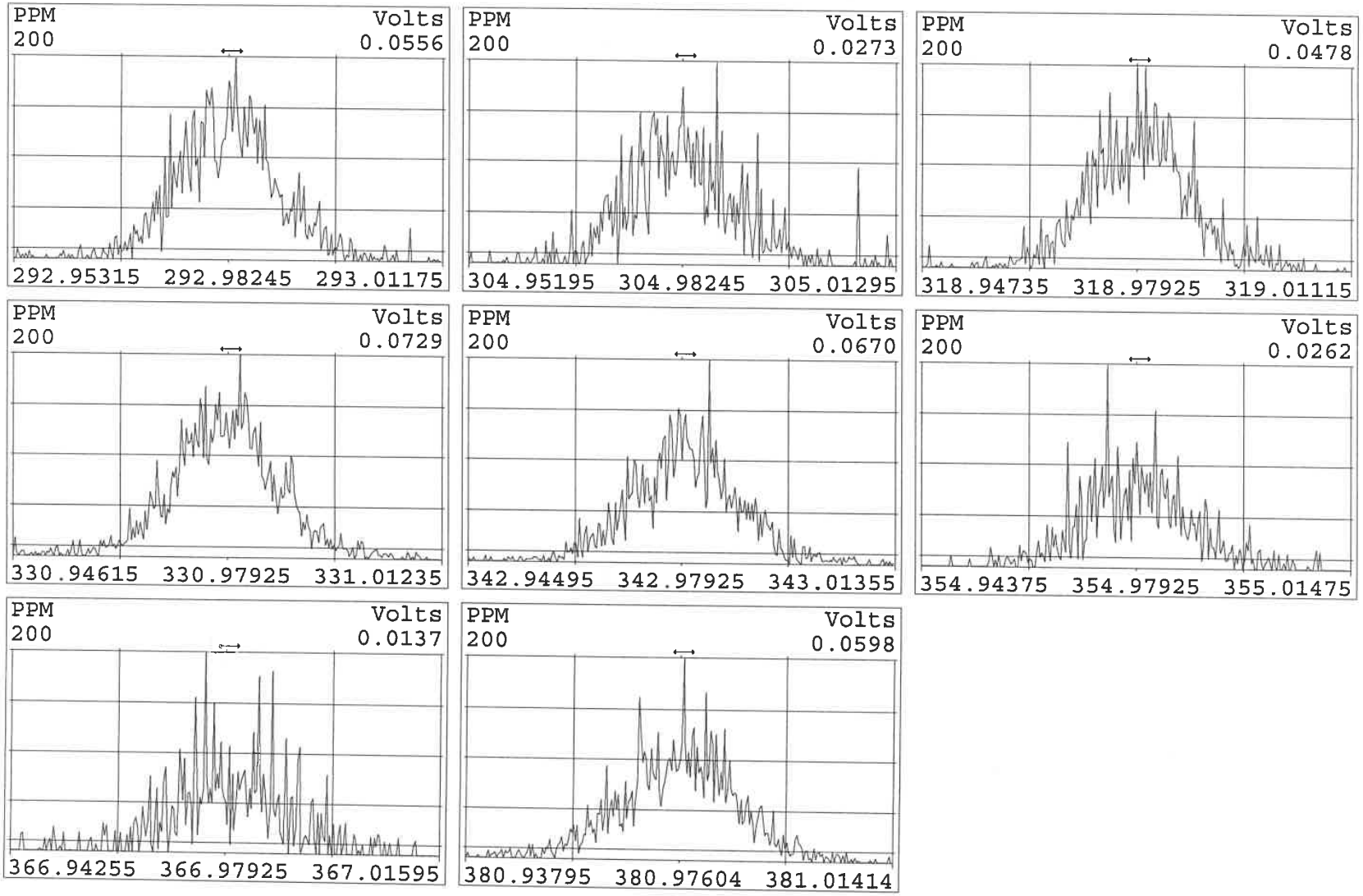

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 21-Aug-2021 14:32:47 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:00:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.309	35877129	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.640	51880975	0.80	1.3327	108.5	108.5	0.3223	0.3223	109	
2,3,7,8-TCDF	17.653	4778531	0.78	0.9978	9.231	9.231	0.0574	0.0574	92.31	
D 13C-2,3,7,8-TCDD	16.076	33700268	0.78	0.8749	107.4	107.4	0.5104	0.5104	107	
2,3,7,8-TCDD	16.103	3356985	0.75	1.0570	9.424	9.424	0.0671	0.0671	94.24	
$ 37Cl4-2,3,7,8-TCDD	16.103	3156320		0.8648	10.2	10.2	0.0484	0.0484	102	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 21-Aug-2021 14:32:47 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:21 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:00:31

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.309	16.309	0		15319895	3302032	8200	20500	403		
333.9339	16.323	16.309	1		20557234	4490659	5721	14302	785	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.640	17.640	0	1.082	23088836	4268597	6976	17440	612		
317.9389	17.640	17.640	0	1.082	28792139	5365670	6414	16035	837	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.653	17.653	0	1.001	2100550	398770	942	2355	423		
305.8987	17.653	17.653	0	1.001	2677981	509298	1267	3167	402	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.076	16.076	0	0.986	14763429	3298250	8200	20500	402		
333.9339	16.076	16.076	0	0.986	18936839	4307338	5721	14302	753	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.103	16.103	0	1.002	1436306	299691	1100	2750	272		
321.8936	16.103	16.103	0	1.002	1920679	388921	1059	2647	367	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.103	16.103	0	0.987	3156320	679381	1304	3260	521		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

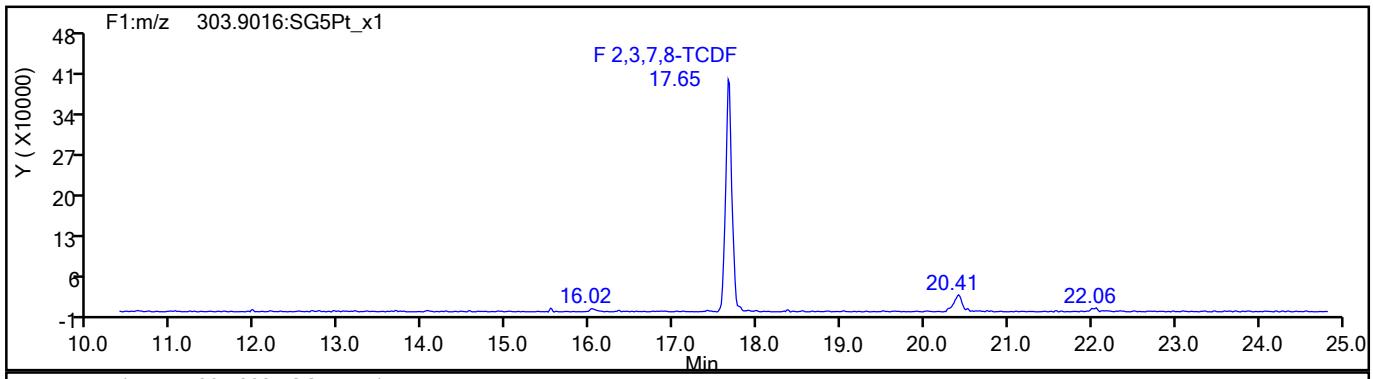

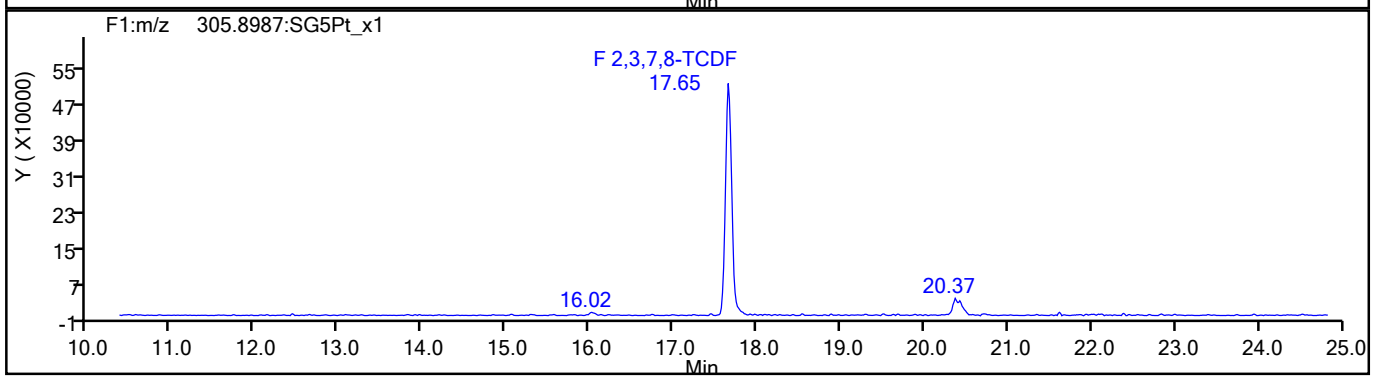

TCDF Standards

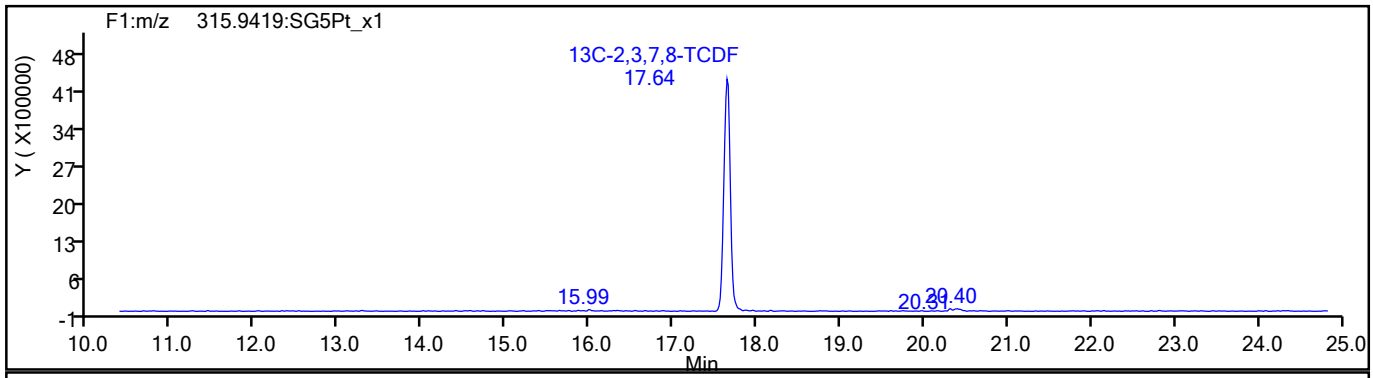

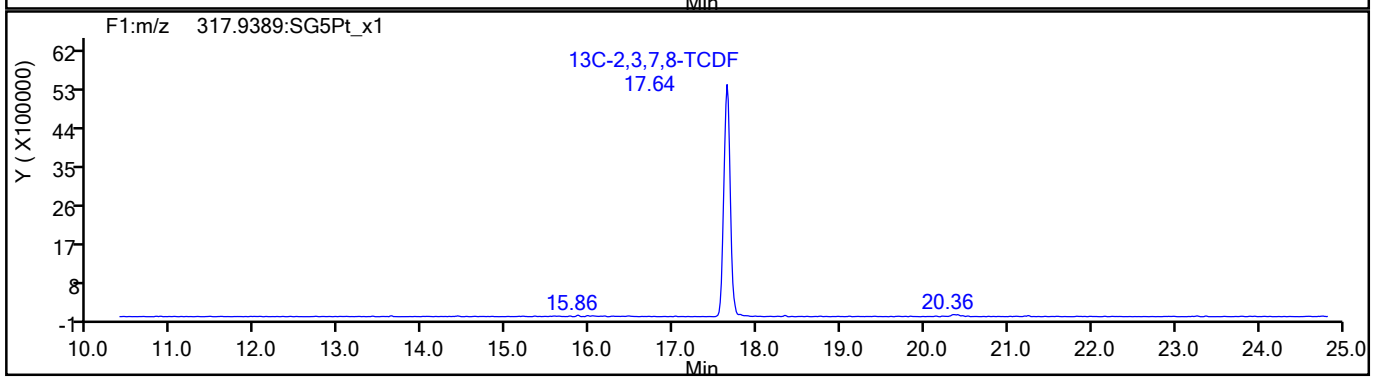

778713

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

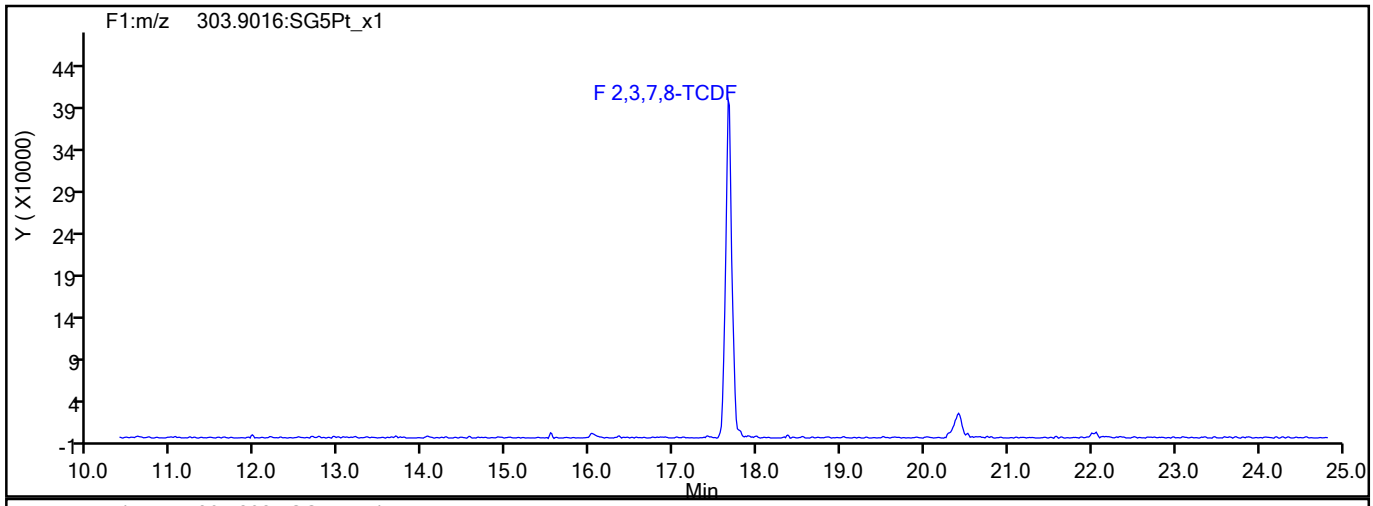

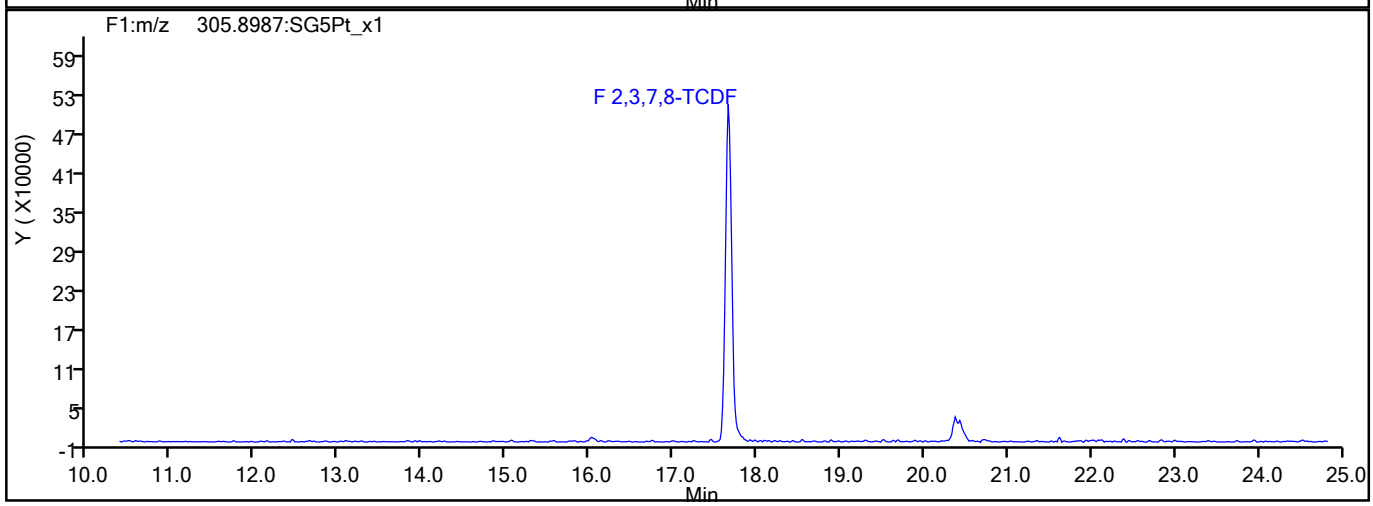

TCDF Interference Mass

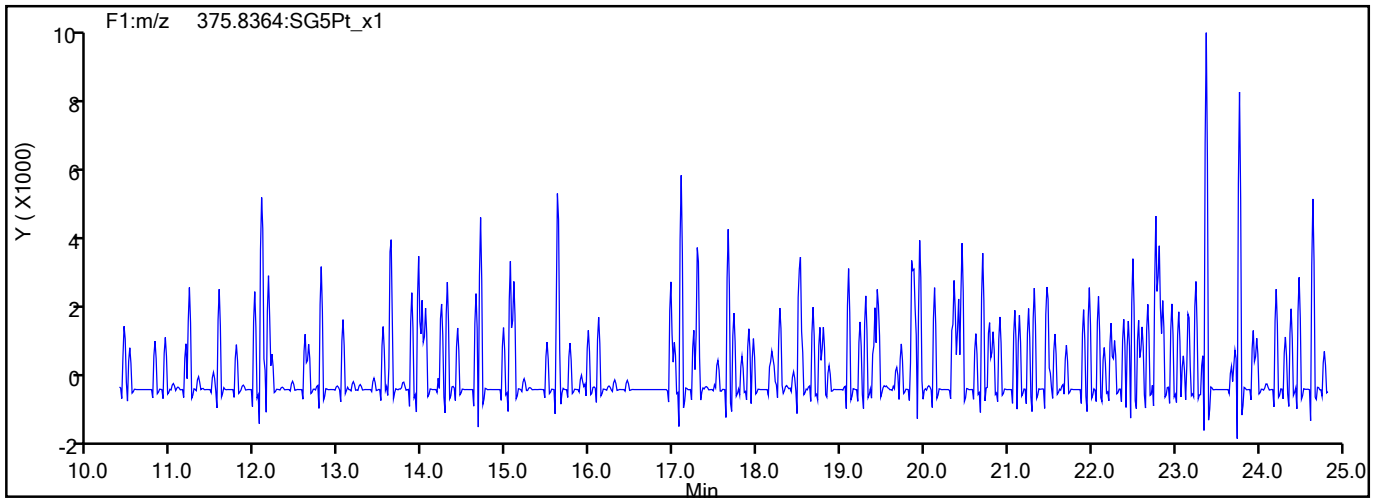

778714

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

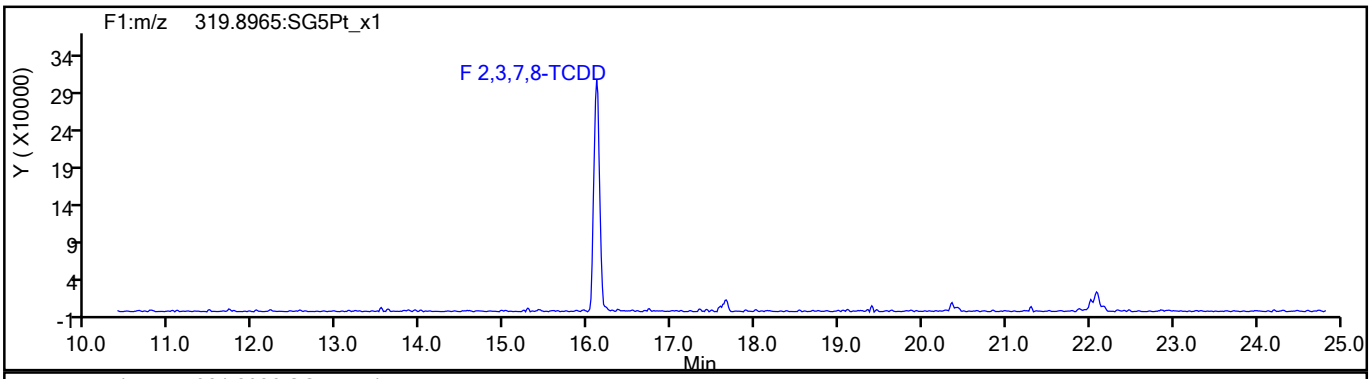

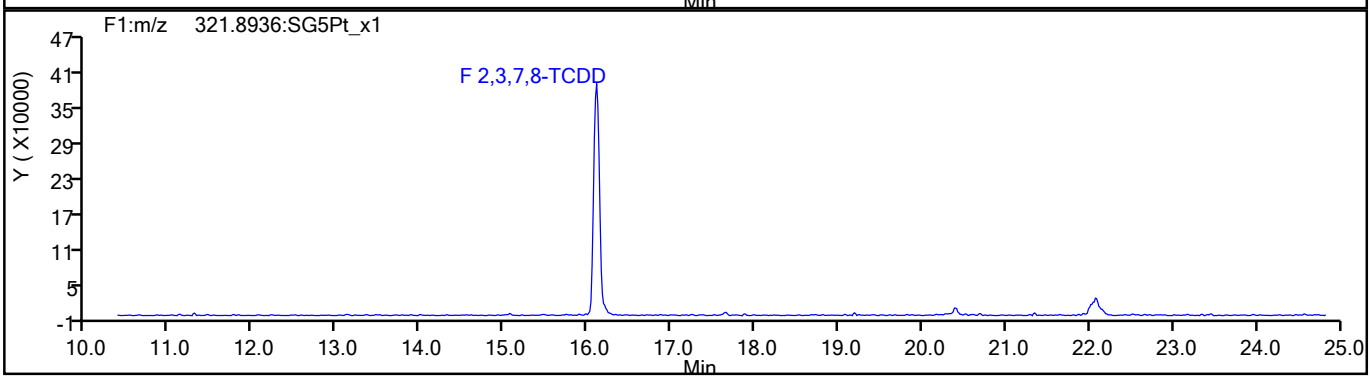

TCDD Standards

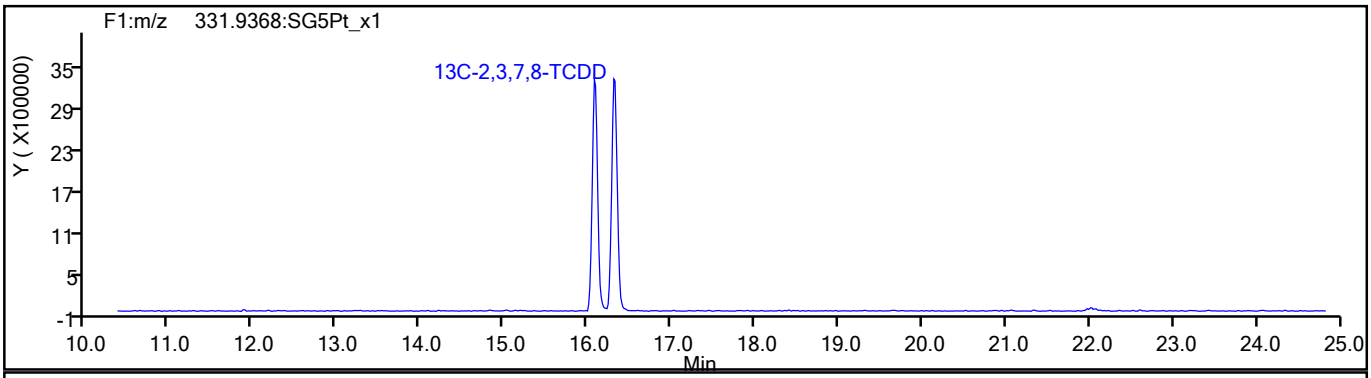

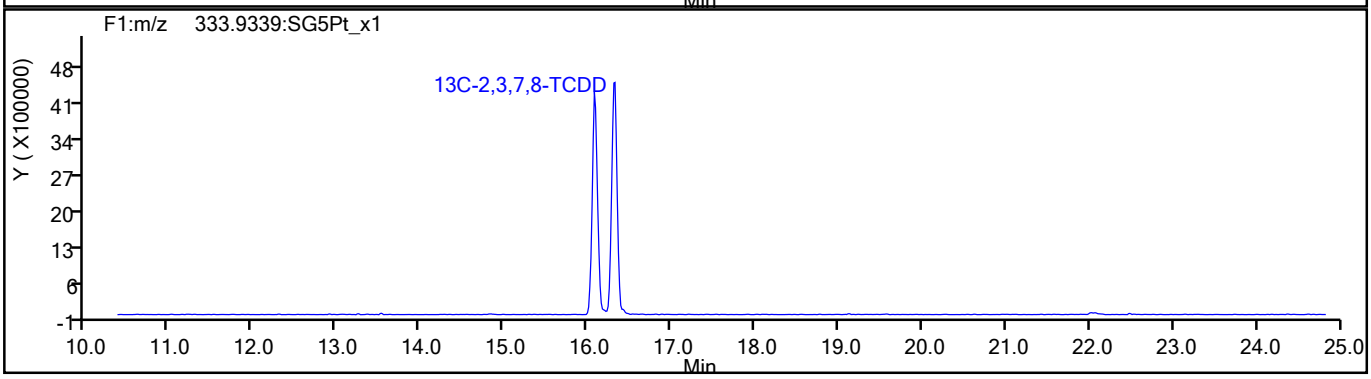

778715

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

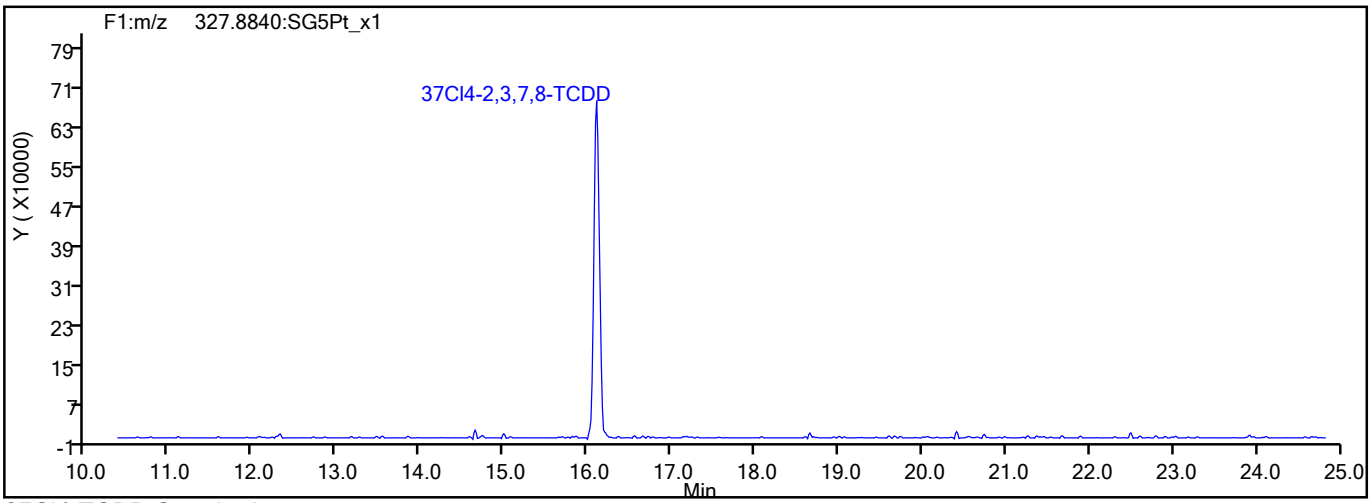

37Cl4-TCDD Standards

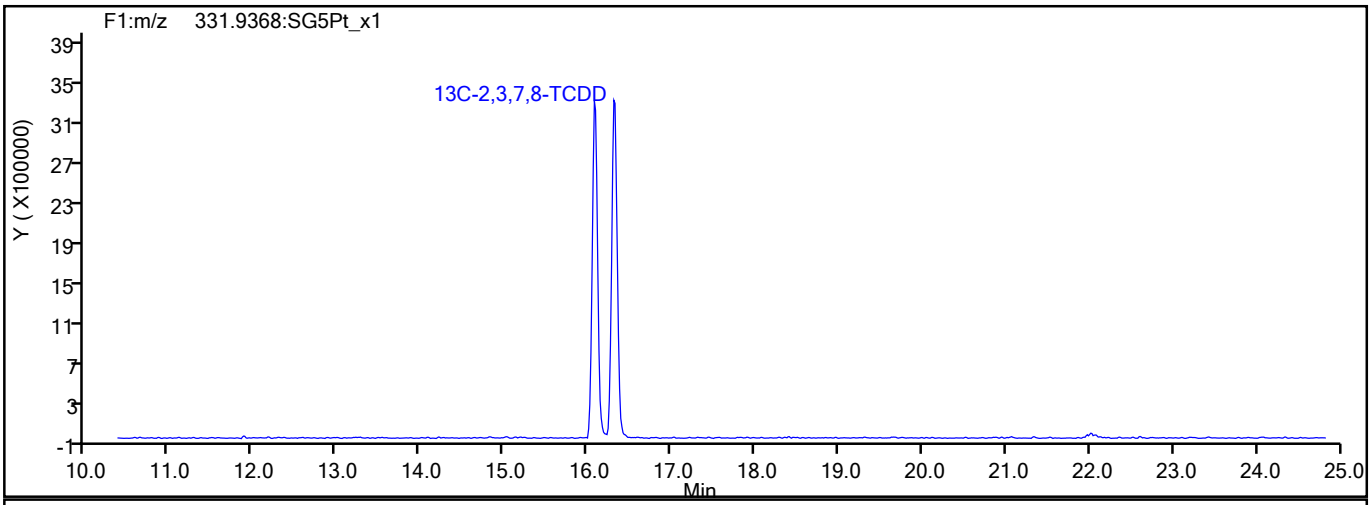

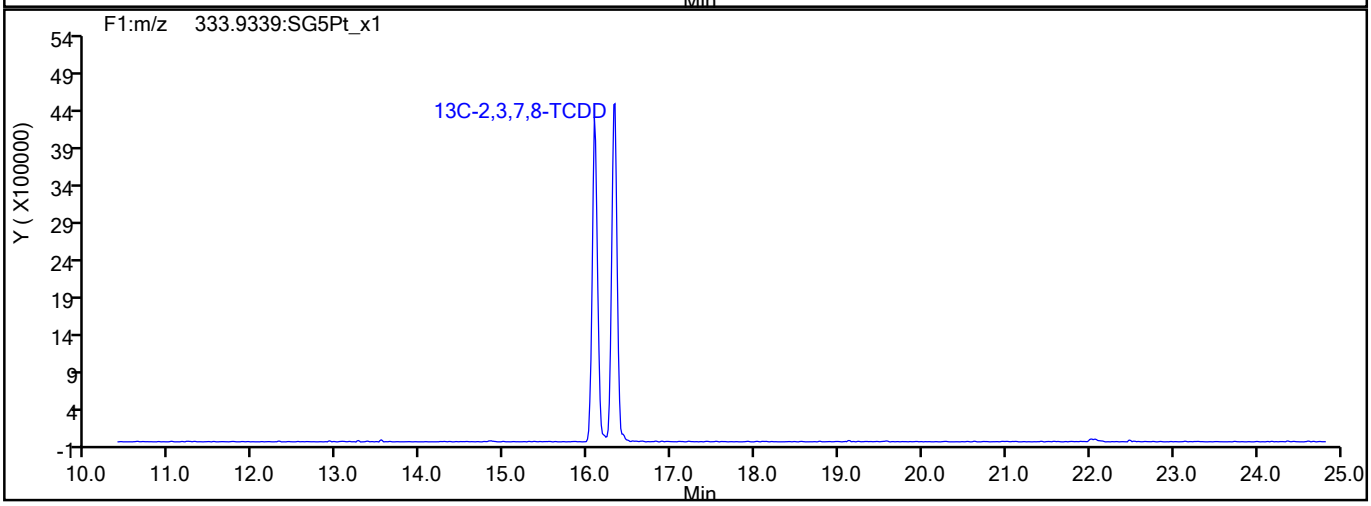

778716

Report Date: 23-Aug-2021 10:28:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_002.d		
Injection Date:	21-Aug-2021 14:32:47	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

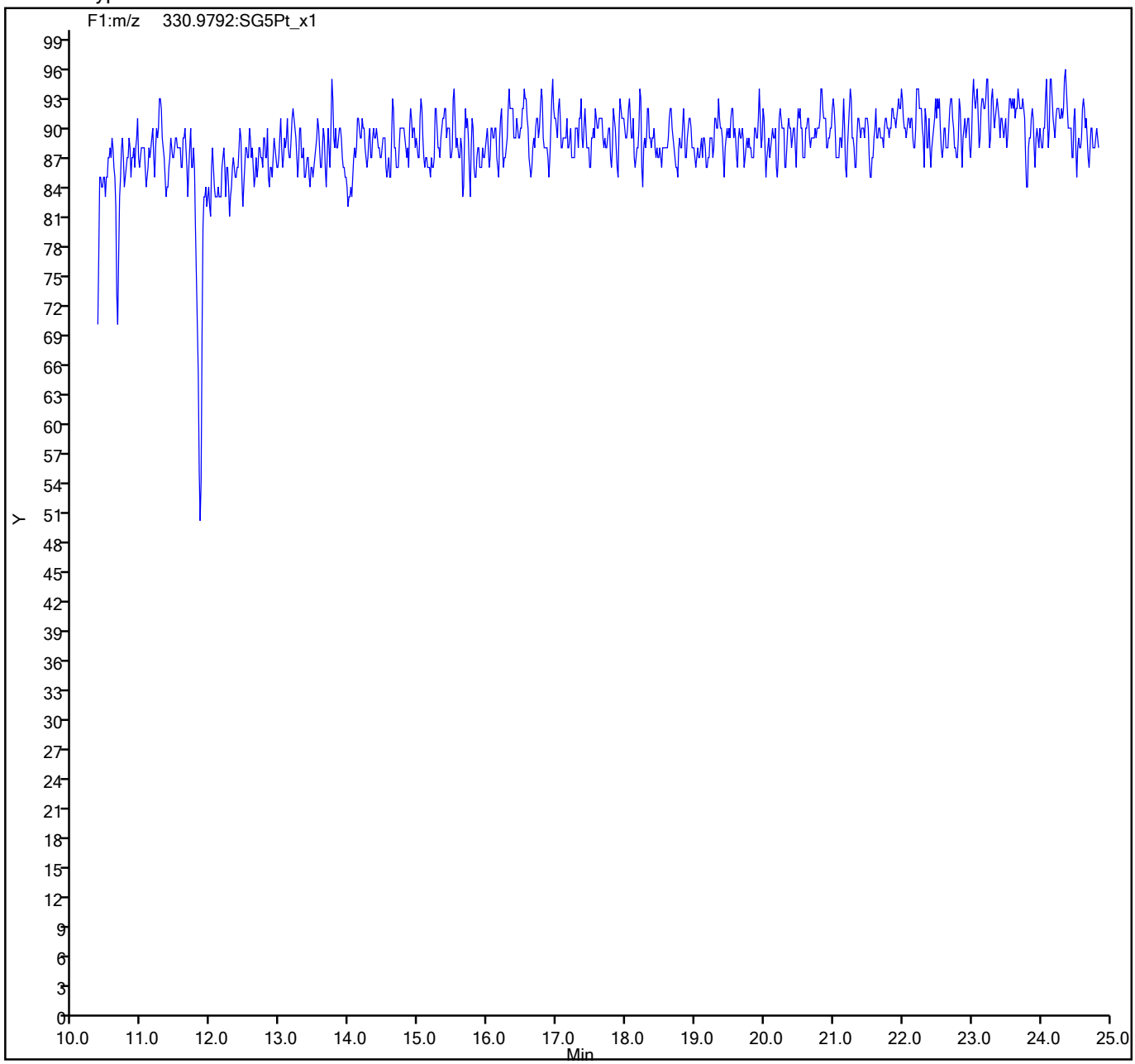

778717

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.598	43192451	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.628	95812265	0.77	1.0239	86.7	86.7	0.4368	0.4368		
A Non-2,3,7,8-sub-TCDF	17.311	141340622	0.77	1.0239	127.8	127.8	0.4368	50.4		
S Total TCDF					214.5	214.5	0.4368	0.4368		
D 13C-2,3,7,8-TCDD	18.323	22643725	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.338	31002300	0.78	1.2541	43.7	43.7	0.2199	0.2199		
A Non-2,3,7,8-sub-TCDD	17.772	120319254	0.78	1.2541	169.5	169.5	0.2199	46.0		
S Total TCDD					213.1	213.1	0.2199	0.2199		
A F1 PeCDFs	20.244	36548211	1.59	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.473	28699153	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.744	44367204	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.542	988216341	1.23	0.0000						
A Non-2,3,7,8-sub-HxCDF	30.542	1016402527	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	31.215	43254937	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.911	28490431	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	35.005	21744380	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.458						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.714	17168827	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.133	55744963	0.78							a
1,3,6,8-TCDD	16.071	32157911	0.78							a
2,3,4,7-TCDF	17.628	95812265	0.77							a
1,2,3,7-TCDD	18.218	26254918	0.77							a
1,2,3,9-TCDF	18.505	41465019	0.77							a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,9-TCDD	18.505	32677146	0.79							a
1,2,8,9-TCDD	19.472	12707183								a
1,2,8,9-TCDF	19.488	41982512	0.76							a
1,3,4,6,8-PeCDF	19.760	36548211	1.59							a
1,2,4,7,9-PeCDD	21.576	23369968	1.58							a
1,2,3,8,9-PeCDD	25.912	20997236	1.59							a
1,2,3,8,9-PeCDF	26.144	28026312	1.61							a
1,2,3,4,6,8-HxCDF	28.479	29886017	1.22							a
1,2,4,6,7,9-HxCDD	30.023	21768457	1.27							a
1,2,3,4,6,7-HxCDD	32.299	21486480	1.24							a
1,2,3,4,8,9-HxCDF	32.605	28186186	1.23							a
1,2,3,4,6,7,9-HpCDD	34.154						0.0	0.0		U

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	1.000	18796968	4666881	8168	20420	571		
317.9389	17.598	17.598	0	1.000	24395483	6066397	3473	8682	1747	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.002	41629702	9682578	19585	48962	494		
305.8987	17.628	17.631	0	1.002	54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.133	17.311	-130	0.860	24509538	7569037	19585	48962	386		
305.8987	15.133	17.311	-130	0.860	31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
303.9016	18.505	17.311	72	1.052	18061189	4195885	19585	48962	214		
305.8987	18.505	17.311	72	1.052	23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
303.9016	19.488	17.311	130	1.107	18098944	4035450	19585	48962	206		
305.8987	19.488	17.311	130	1.107	23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
303.9016	19.775	17.311	148	1.124	944774	152570	19585	48962	8		
305.8987	19.775	17.311	148	1.124	1203354	204203	28414	71035	7	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.000	10063481	2396990	3086	7715	777		
333.9339	18.323	18.323	0	1.000	12580244	3018588	1527	3817	1977	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.357	-1	1.001	13597515	3193209	6116	15290	522		
321.8936	18.338	18.357	-1	1.001	17404785	4135946	8817	22042	469	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	16.071	17.772	-102	0.877	14103074	4061475	6116	15290	664		
321.8936	16.071	17.772	-102	0.877	18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
319.8965	18.218	17.772	27	0.994	11446127	2829889	6116	15290	463		
321.8936	18.218	17.772	27	0.994	14808791	3726958	8817	22042	423	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	18.505	17.772	44	1.010	14439496	3301963	6116	15290	540		
321.8936	18.505	17.772	44	1.010	18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
319.8965	19.472	17.772	102	1.063	12707183	2751784	6116	15290	450		
321.8936	19.472	17.772	102	1.063	16522096	3661962	8817	22042	415	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.760	20.244	-29	1.000	22414023	4920048	649	1622	7581		
341.8567	19.760	20.244	-29	1.000	14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.344	23.473	-127	1.000	84191	14080	2633	6582	5		
341.8567	21.344	23.473	-127	1.000	53909	7615	1950	4875	4	1.56(1.32-1.78)	
339.8597	22.176	23.473	-78	1.000	88076	13805	2633	6582	5		
341.8567	22.190	23.473	-77	1.000	48170	9635	1950	4875	5	1.83(1.32-1.78)	
339.8597	22.749	23.473	-43	1.000	168309	20506	2633	6582	8		
341.8567	22.762	23.473	-43	1.000	82177	12827	1950	4875	7	2.05(1.32-1.78)	
339.8597	23.321	23.473	-9	1.000	142716	22963	2633	6582	9		
341.8567	23.321	23.473	-9	1.000	79356	11480	1950	4875	6	1.80(1.32-1.78)	
339.8597	26.144	23.473	160	1.000	17301746	2425915	2633	6582	921		
341.8567	26.144	23.473	160	1.000	10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.576	23.744	-130	1.000	14314296	2552271	2414	6035	1057		
357.8516	21.576	23.744	-130	1.000	9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
355.8546	25.912	23.744	130	1.000	12881489	1801570	2414	6035	746		
357.8516	25.912	23.744	130	1.000	8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	32.605	30.542	124	1.000	15534015	4607321	4603	11507	1001		
375.8178	32.605	30.542	124	1.000	12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.023	31.215	-71	1.000	12175655	1922535	6506	16265	296		
391.8127	30.023	31.215	-71	1.000	9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
389.8157	32.299	31.215	65	1.000	11903453	3254284	6506	16265	500		
391.8127	32.299	31.215	65	1.000	9583027	2649988	5715	14287	464	1.24(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.911	33.926	-1	1.000	14581587	4505694	20273	50682	222		
409.7789	33.911	33.926	-1	1.000	13908844	4348275	17441	43602	249	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.005	35.020	-1	1.000	11106344	3153936	20273	50682	156		
409.7789	35.005	35.020	-1	1.000	10638036	3040493	17441	43602	174	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						20273	50682			
409.7789	34.458						17441	43602			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.726	-1	1.000	8809155	2526480	13831	34577	183		
425.7737	34.714	34.726	-1	1.000	8359672	2427581	13744	34360	177	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						13831	34577			
425.7737	33.504						13744	34360			
1,3,6,8-TCDF											a
303.9016	15.133	15.133	0		24509538	7569037	19585	48962	386		a
305.8987	15.133	15.133	0		31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
1,3,6,8-TCDD											a
319.8965	16.071	16.071	0		14103074	4061475	6116	15290	664		a
321.8936	16.071	16.071	0		18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
2,3,4,7-TCDF											a
303.9016	17.628	17.628	0		41629702	9682578	19585	48962	494		a
305.8987	17.628	17.628	0		54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
1,2,3,7-TCDD											a
319.8965	18.218	18.218	0		11446127	2829889	6116	15290	463		a
321.8936	18.218	18.218	0		14808791	3726958	8817	22042	423	0.77(0.65-0.89)	
1,2,3,9-TCDF											a
303.9016	18.505	18.505	0		18061189	4195885	19585	48962	214		a
305.8987	18.505	18.505	0		23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
1,2,3,9-TCDD											a
319.8965	18.505	18.505	0		14439496	3301963	6116	15290	540		a
321.8936	18.505	18.505	0		18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
1,2,8,9-TCDD											a
319.8965	19.472	19.472	0		12707183	2751784	6116	15290	450		a
1,2,8,9-TCDF											a
303.9016	19.488	19.488	0		18098944	4035450	19585	48962	206		a
305.8987	19.488	19.488	0		23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
1,3,4,6,8-PeCDF											a
339.8597	19.760	19.760	0		22414023	4920048	649	1622	7581		a
341.8567	19.760	19.760	0		14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	21.576	21.576	0		14314296	2552271	2414	6035	1057		a
357.8516	21.576	21.576	0		9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											a
355.8546	25.912	25.912	0		12881489	1801570	2414	6035	746		a
357.8516	25.912	25.912	0		8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	26.144	26.144	0		17301746	2425915	2633	6582	921		a
341.8567	26.144	26.144	0		10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											a
373.8208	28.479	28.479	0		16406487	2121744	4603	11507	461		a
375.8178	28.479	28.479	0		13479530	1752621	3729	9322	470	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											a
389.8157	30.023	30.023	0		12175655	1922535	6506	16265	296		a
391.8127	30.023	30.023	0		9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											a
389.8157	32.299	32.299	0		11903453	3254284	6506	16265	500		a
391.8127	32.299	32.299	0		9583027	2649988	5715	14287	464	1.24(1.05-1.43)	

Report Date: 27-Jul-2021 15:09:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,8,9-HxCDF											a
373.8208	32.605	32.605	0		15534015	4607321	4603	11507	1001		a
375.8178	32.605	32.605	0		12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.154						13831	34577			
425.7737	34.154						13744	34360			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	43192451	10733278

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	43192451	10733278

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.133	24509538	7569037	31235425	9722736	50.4	0.78	
18.505	18061189	4195885	23403830	5509968	37.5	0.77	
19.488	18098944	4035450	23883568	5304928	38.0	0.76	
19.775	944774	152570	1203354	204203	1.94	0.79	
Signal Totals:	61614445	15952942	79726177	20741835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141340622	36694777				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 127.837 = (141340622 * 40.000) / (43192451 * 1.024)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	22643725	5415578

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	22643725	5415578

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.071	14103074	4061475	18054837	5166402	45.3	0.78	
18.218	11446127	2829889	14808791	3726958	37.0	0.77	
18.505	14439496	3301963	18237650	4248308	46.0	0.79	
19.472	12707183	2751784	16522096	3661962	41.2	0.77	
Signal Totals:							
	52695880	12945111	67623374	16803630			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	120319254	29748741				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 169.476 = (120319254 * 40.000) / (22643725 * 1.254)

778725

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

F1 PeCDFs, RT: 20.244

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.760	22414023	4920048	14134188	3116108		1.59	
Signal Totals:							
	22414023	4920048	14134188	3116108			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	36548211	8036156				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (36548211 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.344	84191	14080	53909	7615		1.56	
22.176	88076	13805	48170	9635		1.83	R
22.749	168309	20506	82177	12827		2.05	R
23.321	142716	22963	79356	11480		1.80	R
26.144	17301746	2425915	10724566	1530575		1.61	
Signal Totals:							
	17785038	2497269	10988178	1572132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28773216	4069401				1.62	RQ
	28699153	4064735					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (28773216 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (28699153 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.744

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.576	14314296	2552271	9055672	1599456		1.58	
25.912	12881489	1801570	8115747	1169053		1.59	
Signal Totals:							
	27195785	4353841	17171419	2768509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	44367204	7122350				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (44367204 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.542

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
32.605	15534015	4607321	12652171	3734547		1.23	
Signal Totals:	15534015	4607321	12652171	3734547			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	988216341	287497877				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (988216341 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 31.215

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.023	12175655	1922535	9592802	1497827		1.27	
32.299	11903453	3254284	9583027	2649988		1.24	
Signal Totals:							
	24079108	5176819	19175829	4147815			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43254937	9324634				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43254937 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

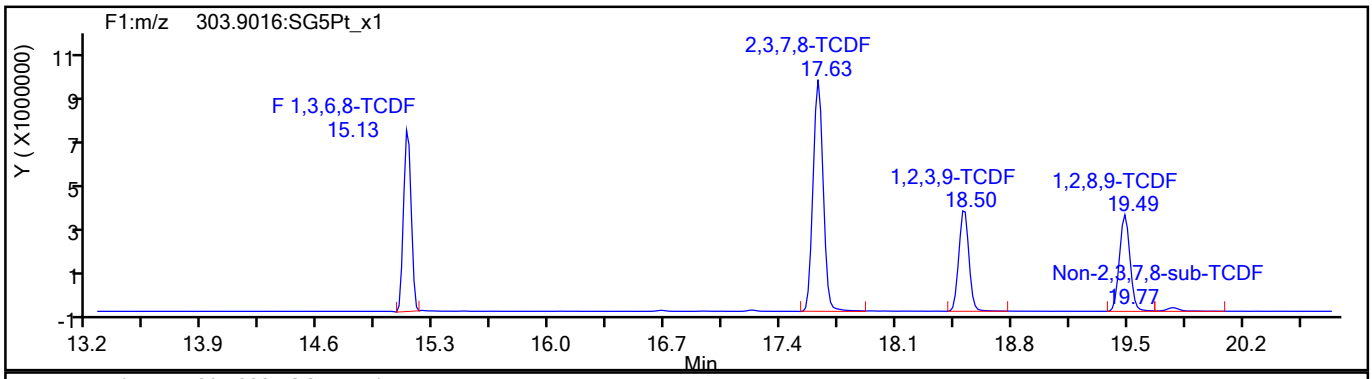

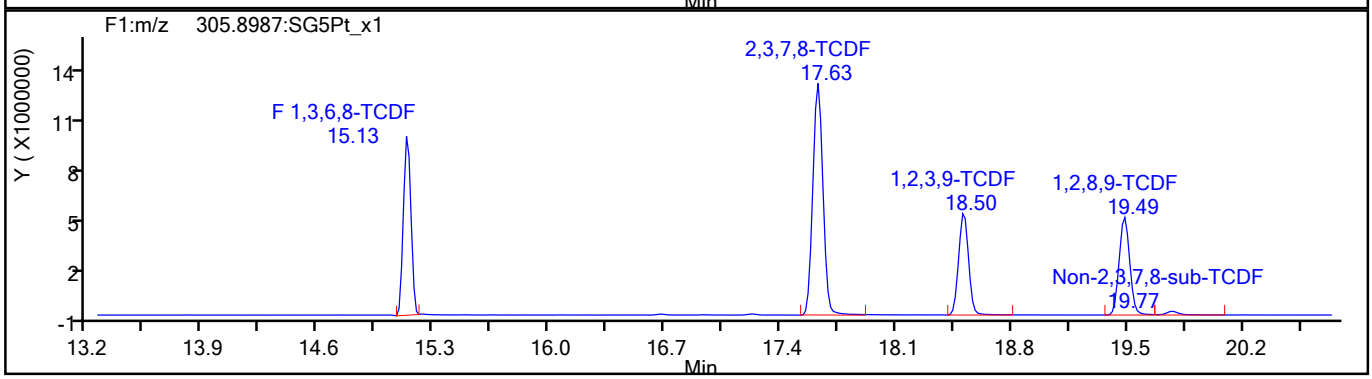

TCDF Standards

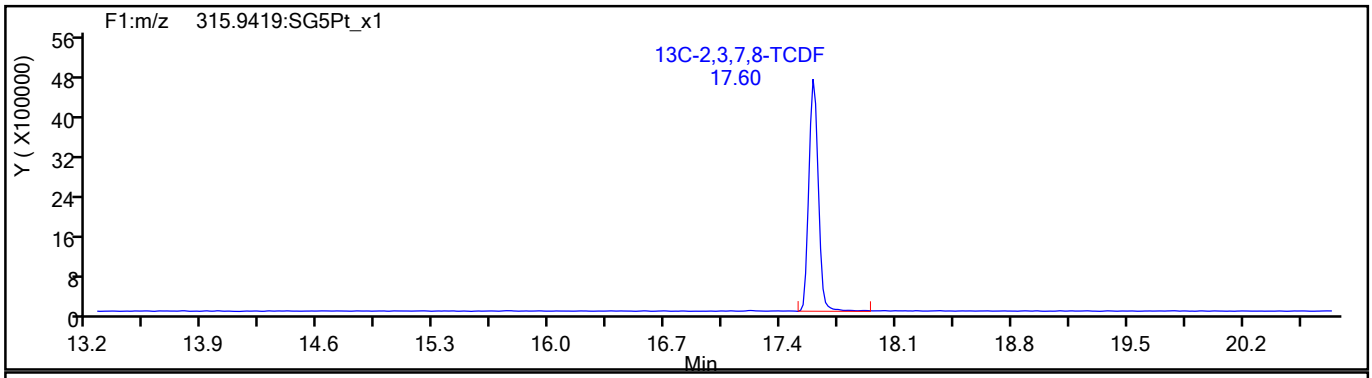

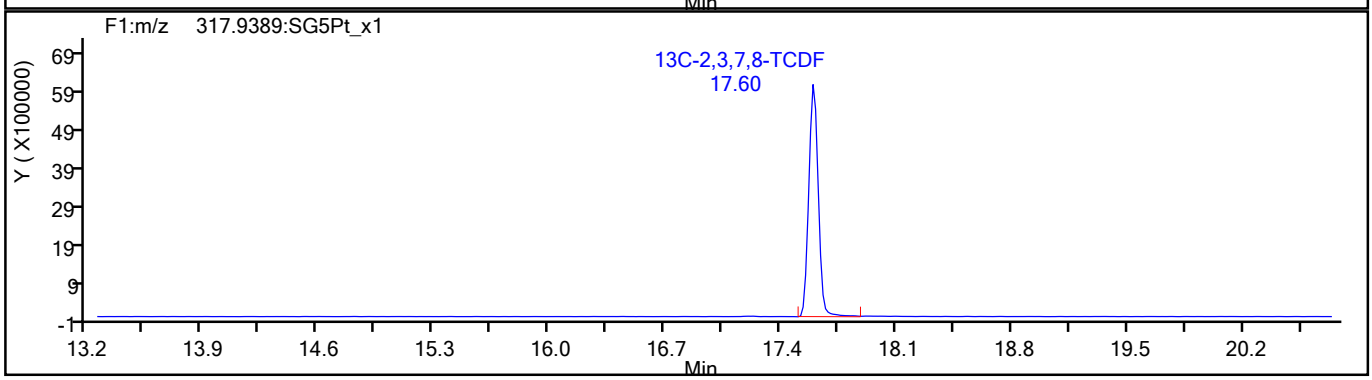

778732

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

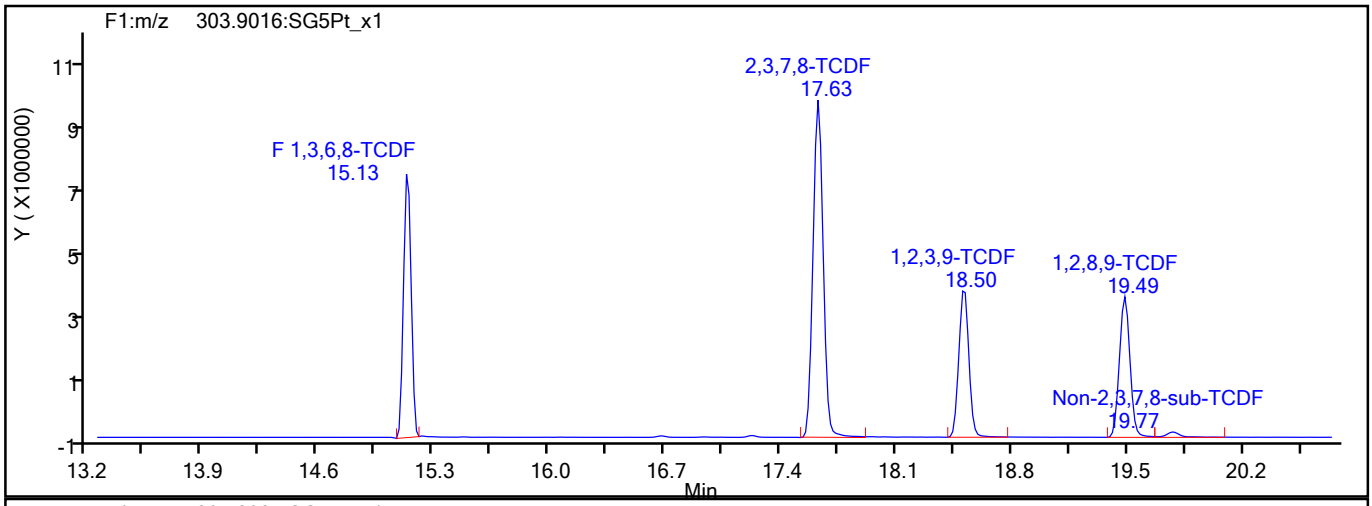

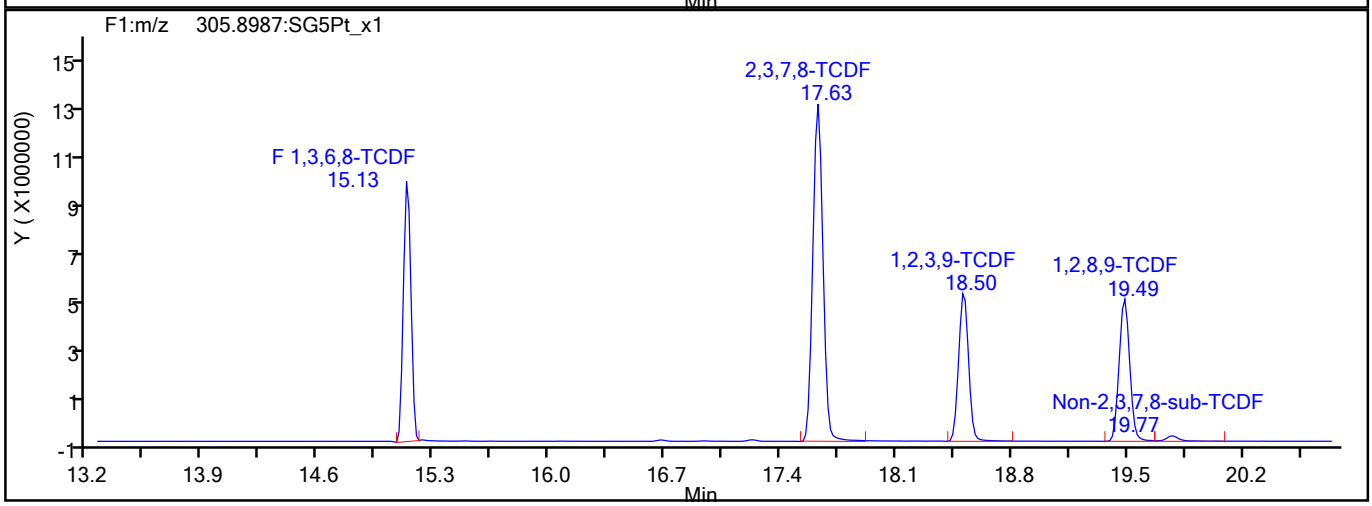

TCDF Interference Mass

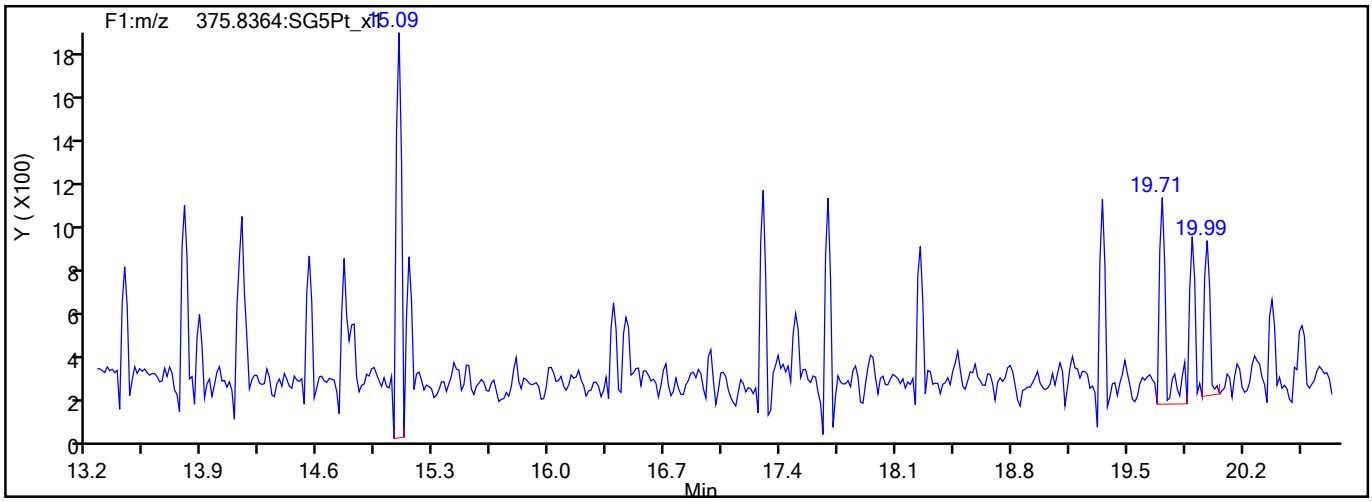

778733

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

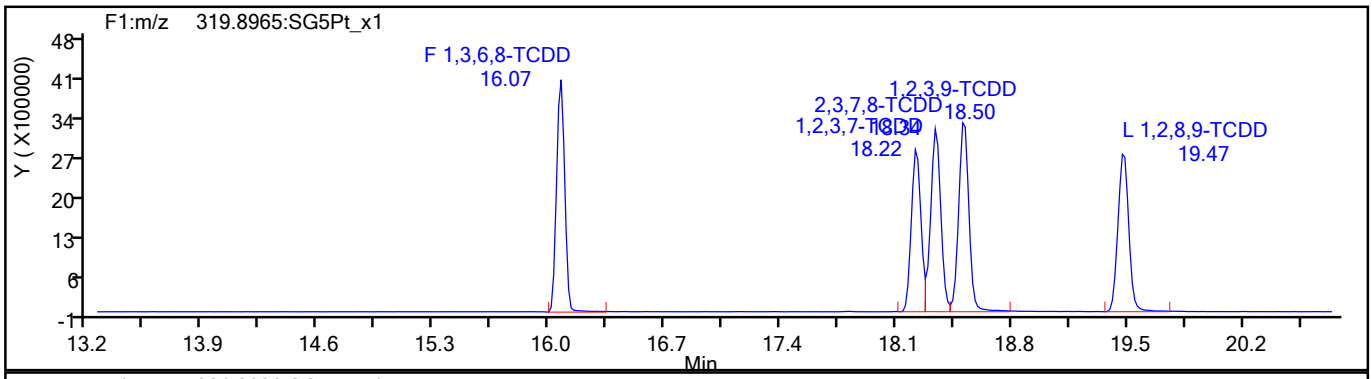

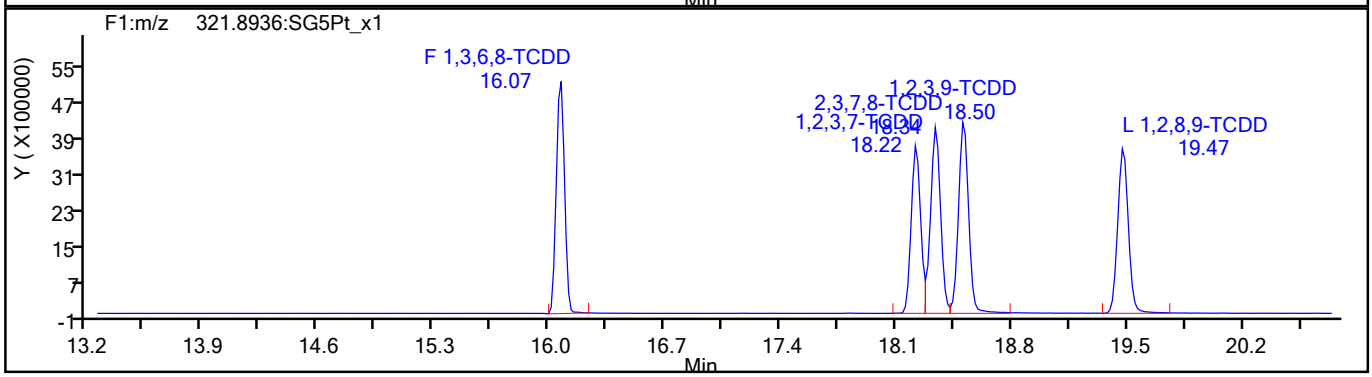

TCDD Standards

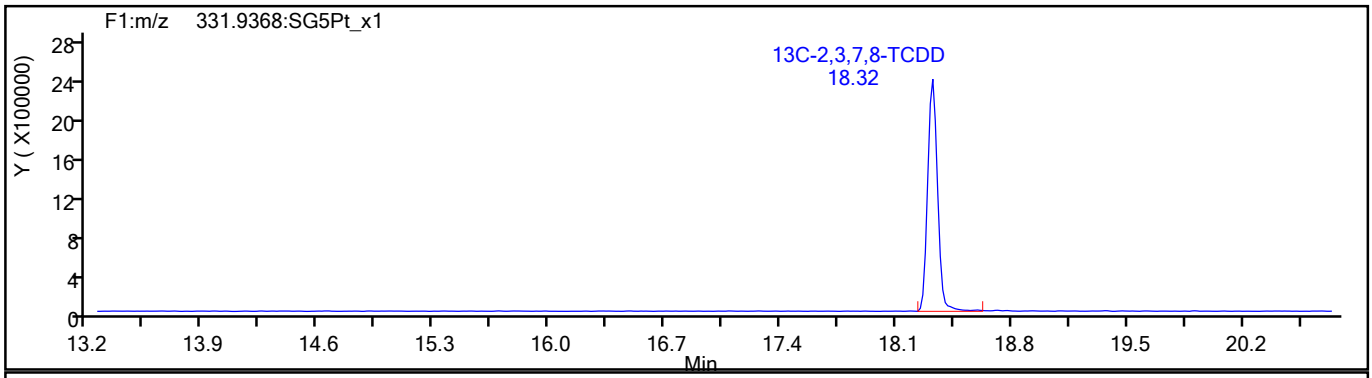

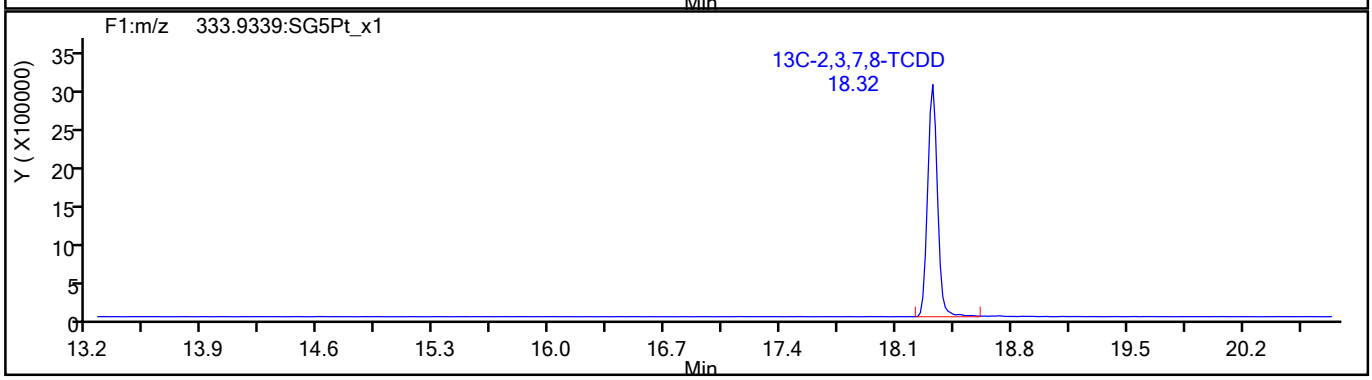

778734

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

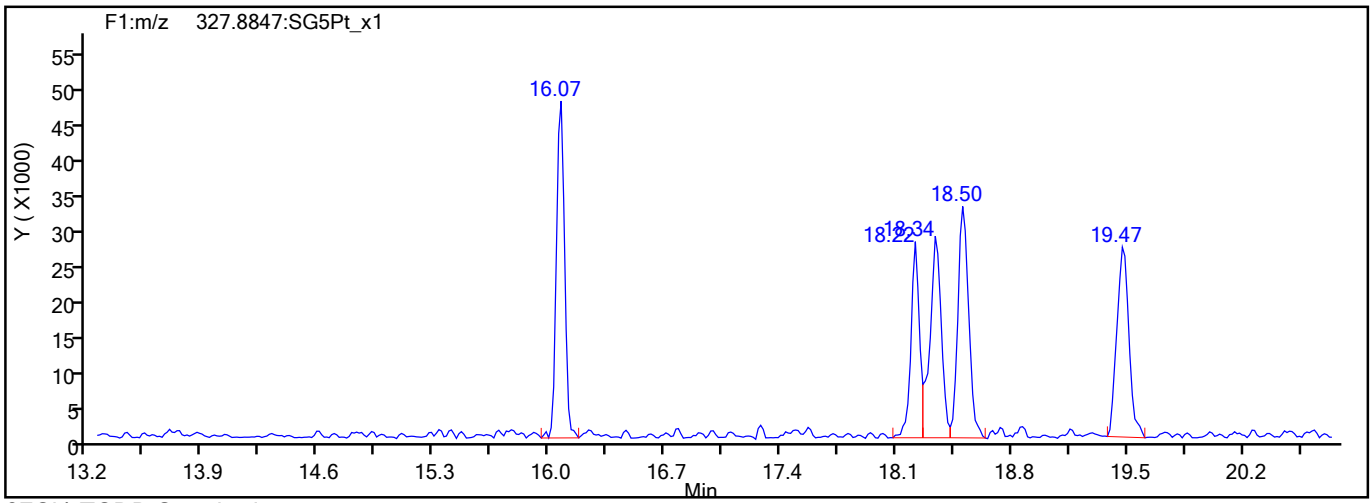

37Cl4-TCDD Standards

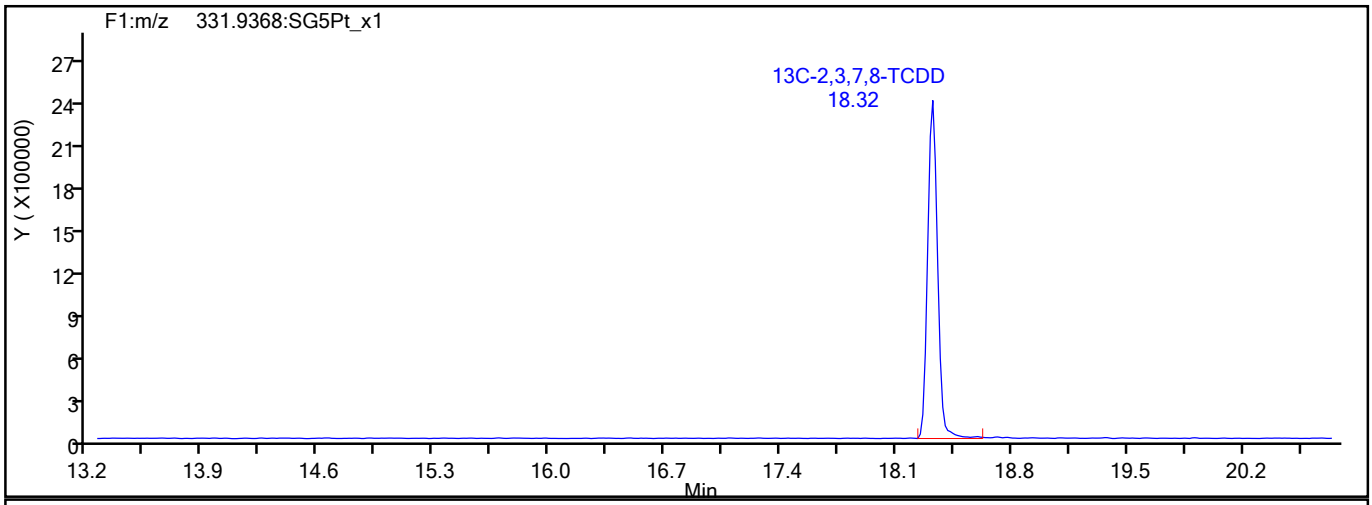

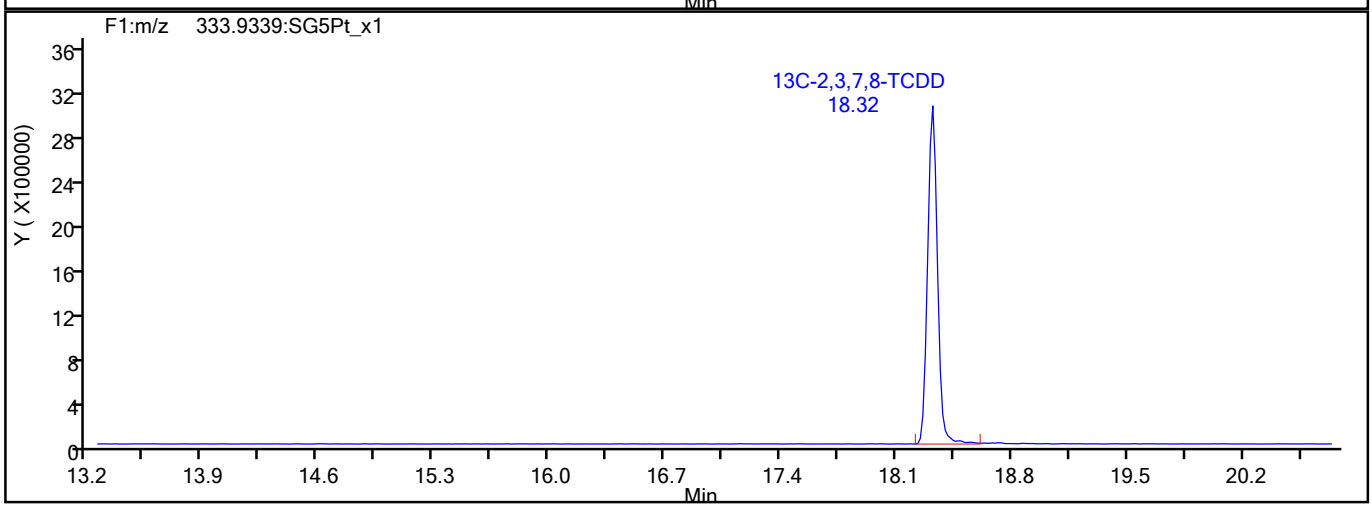

778735

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

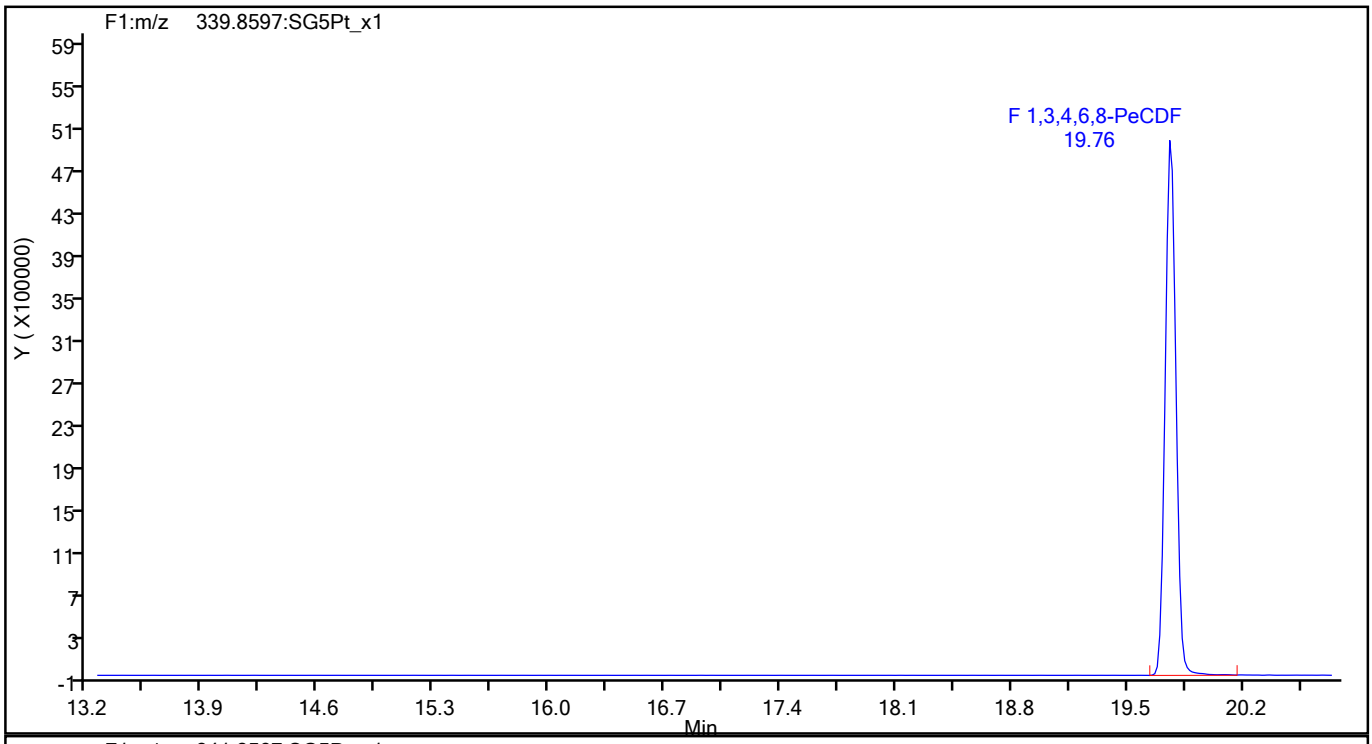

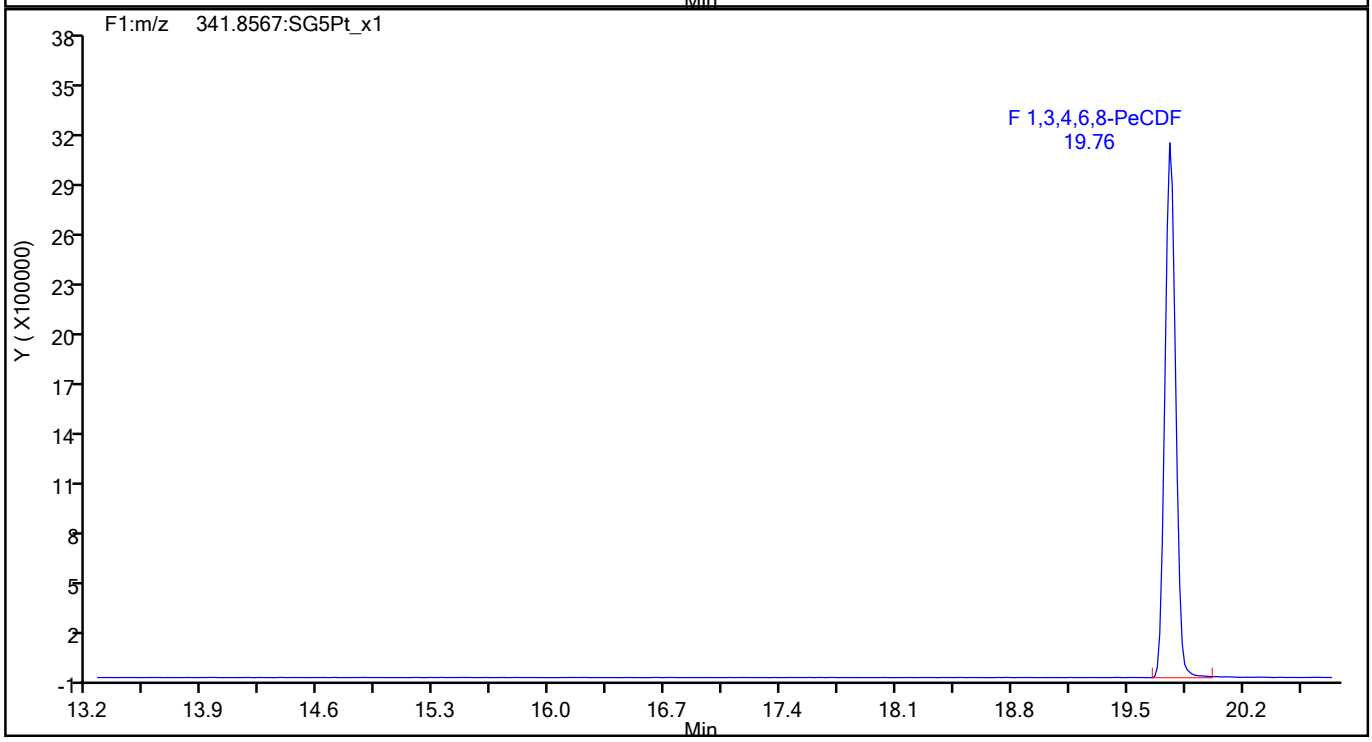

778736

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

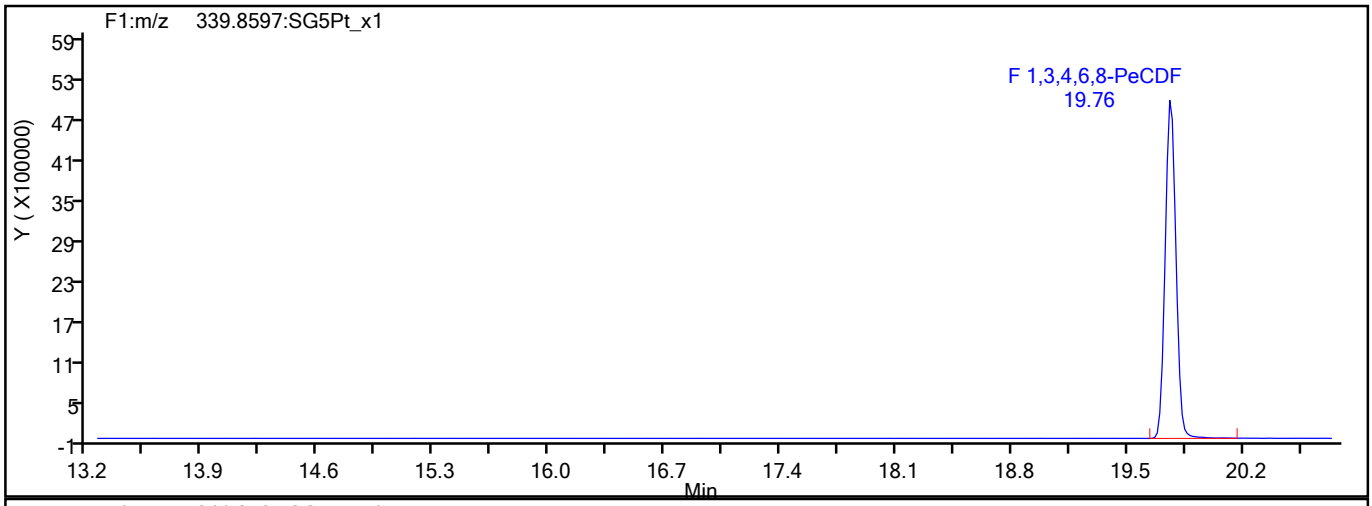

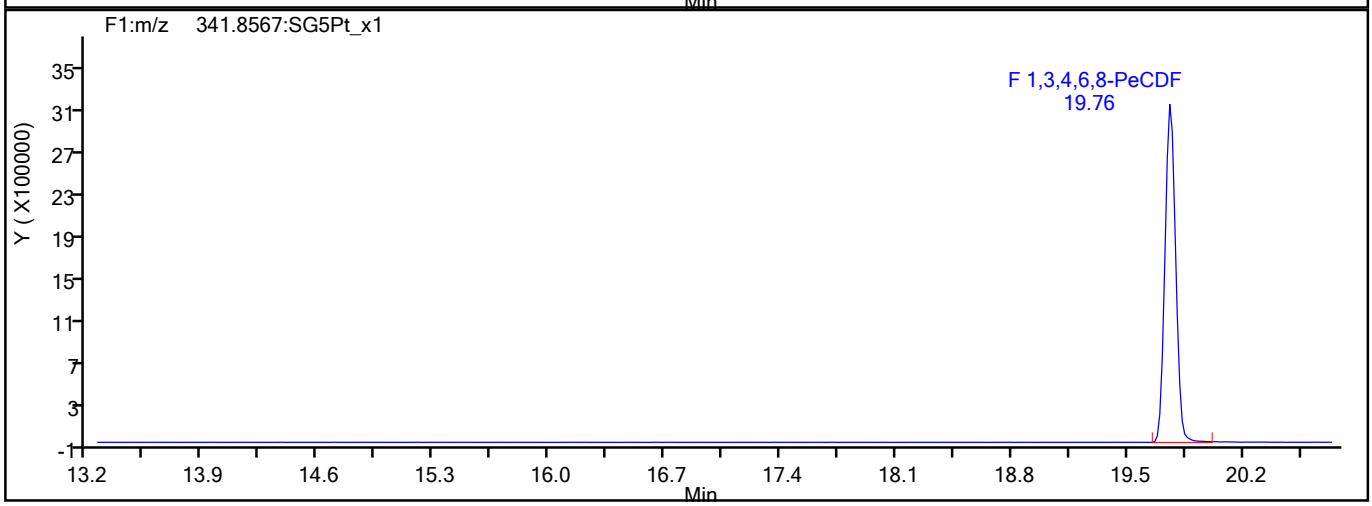

F1 PeCDFs Interference Mass

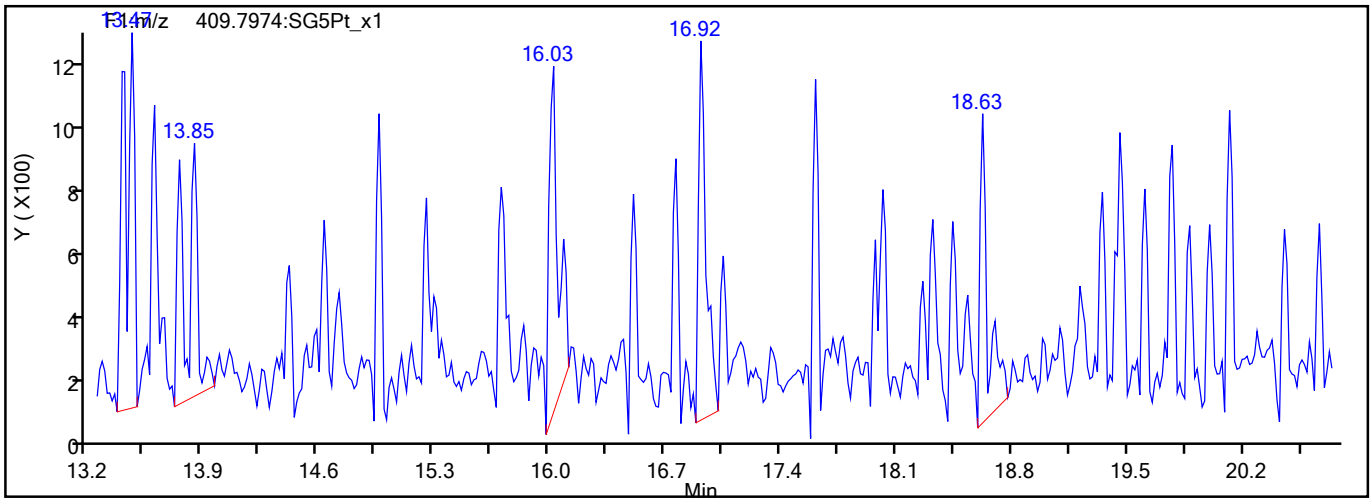

778737

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

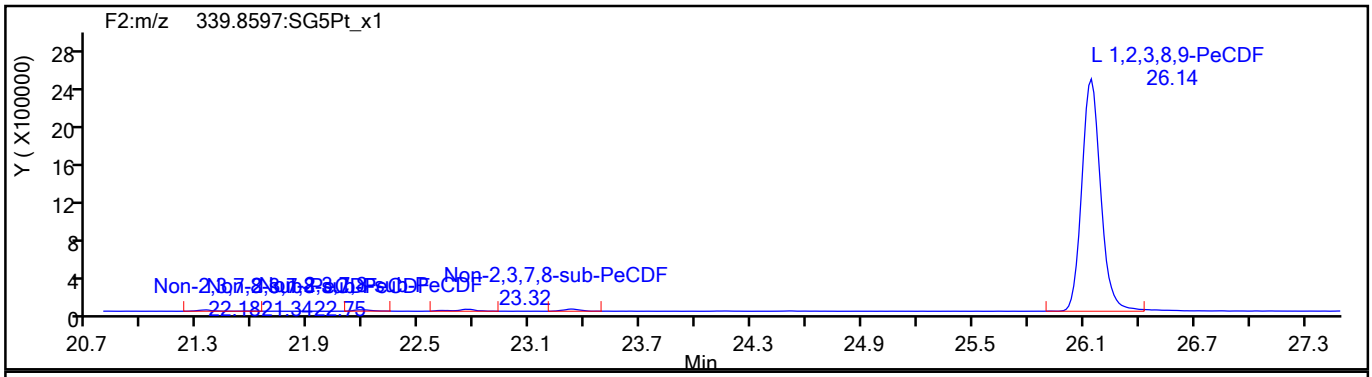

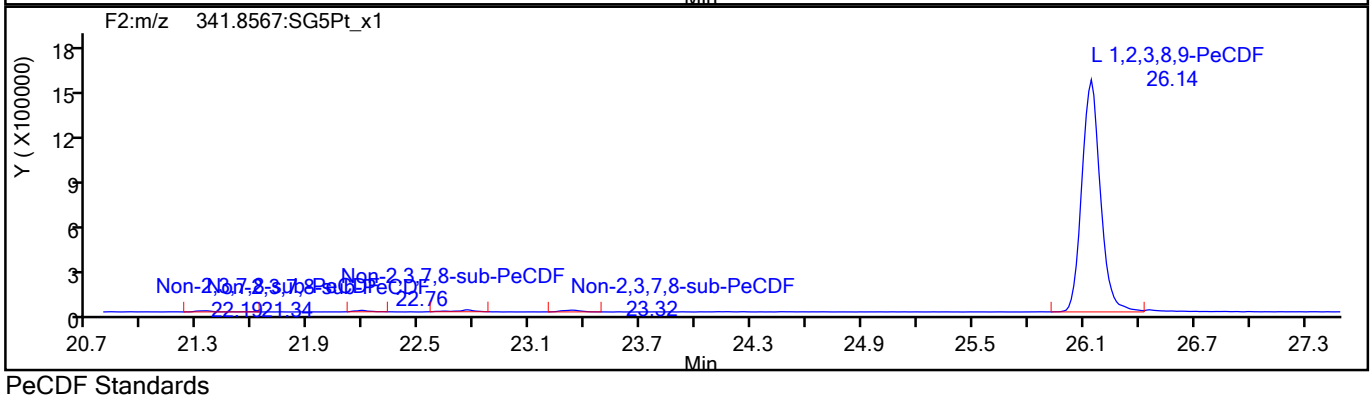

PeCDF Standards

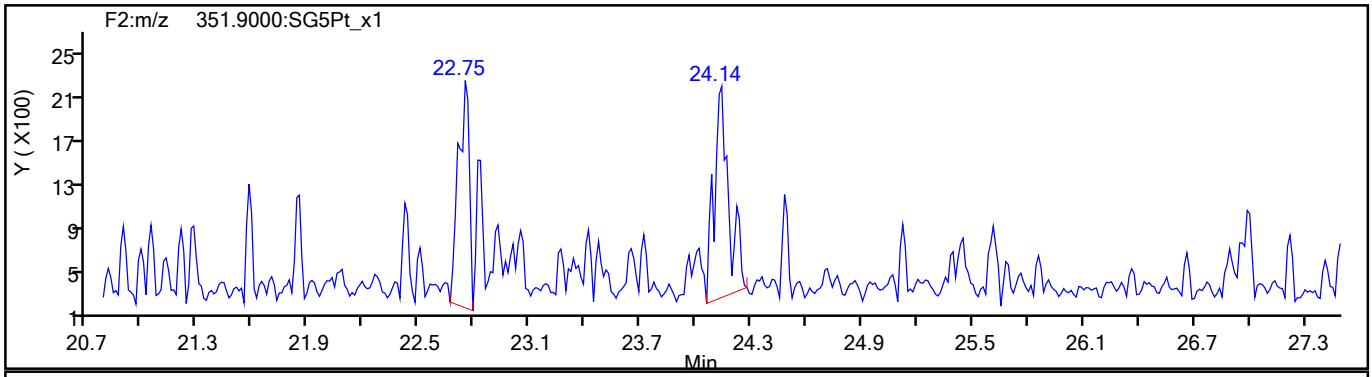

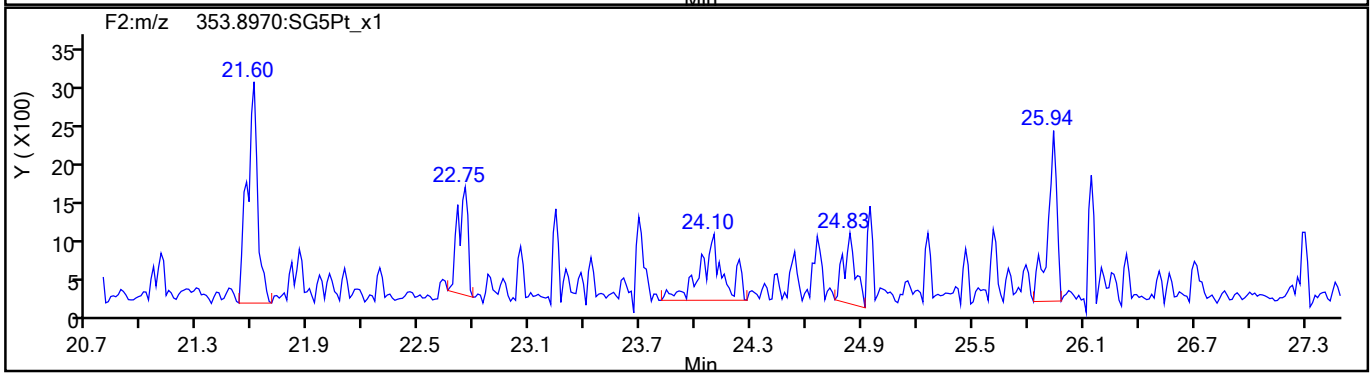

778738

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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PeCDF

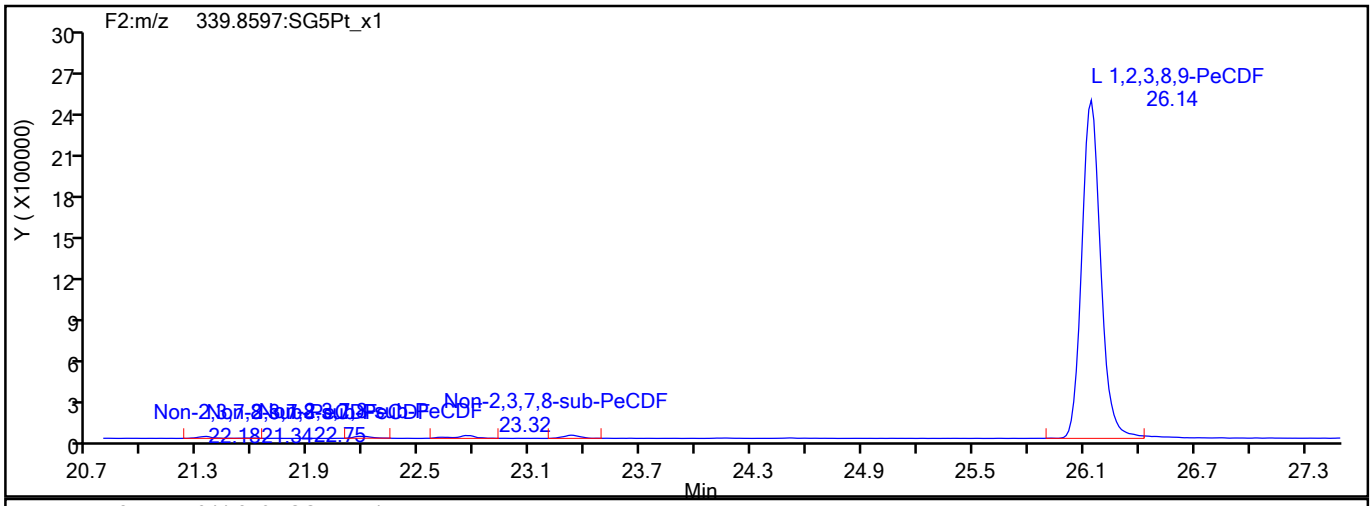

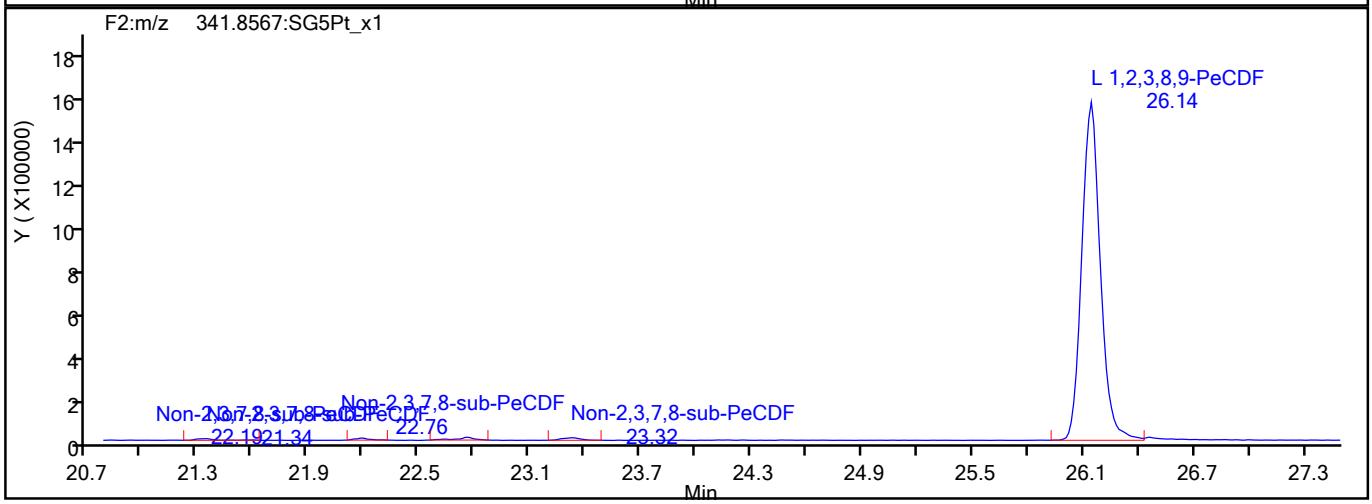

PeCDF Interference Mass

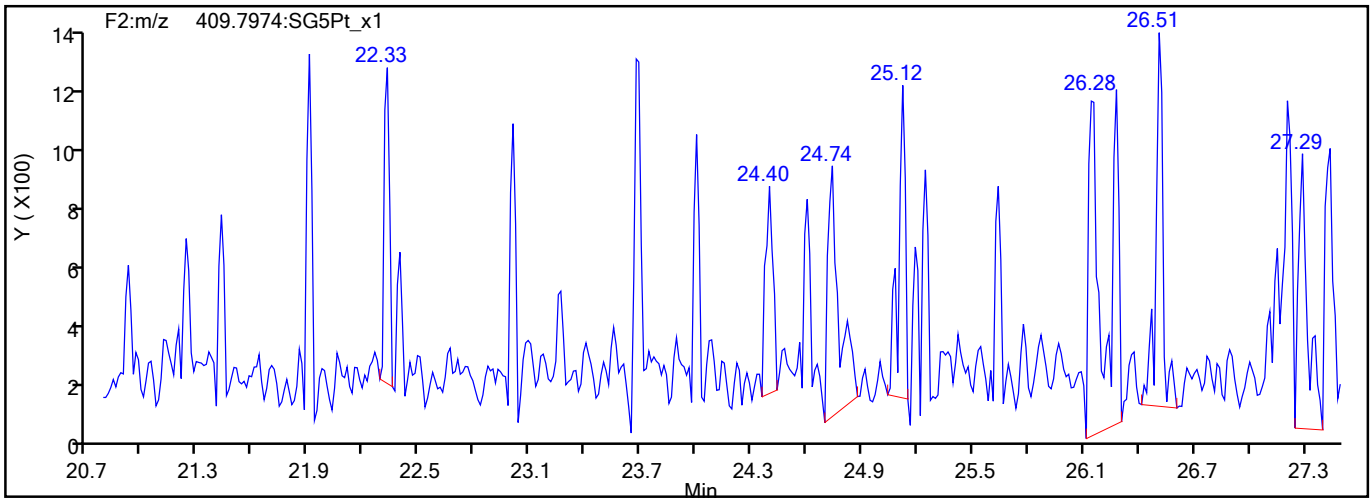

778739

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

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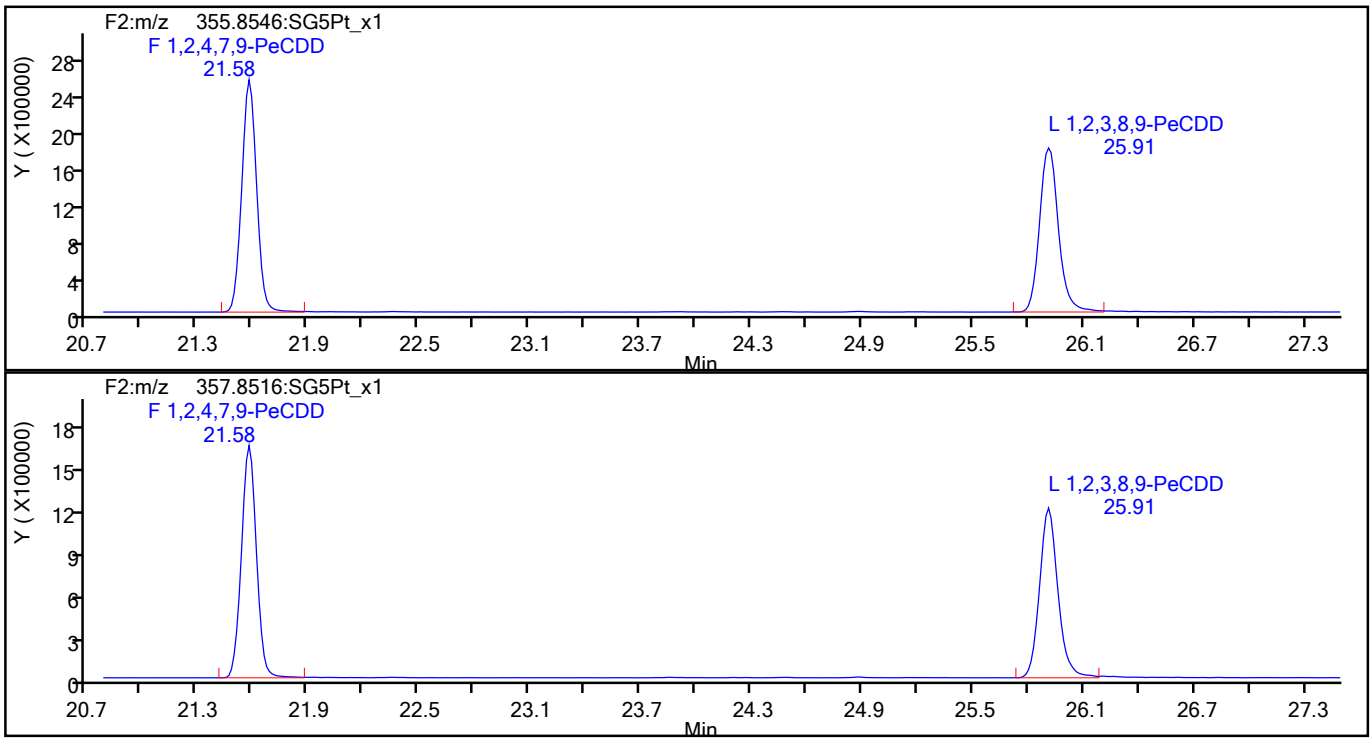

PeCDD Standards

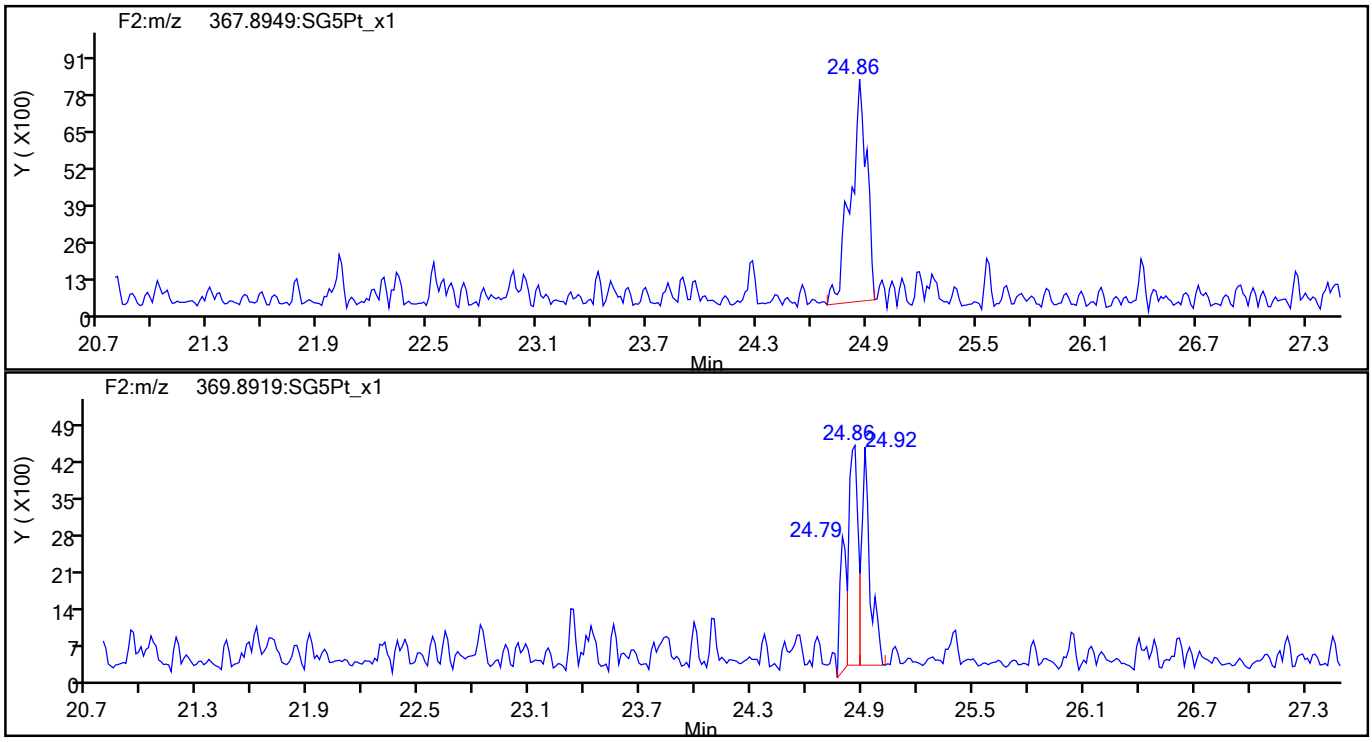

778740

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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HxCDF

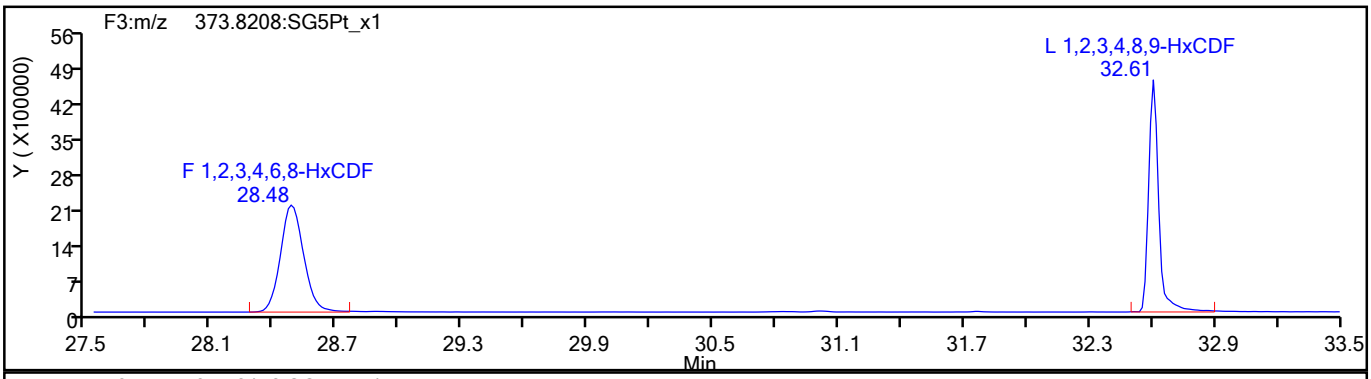

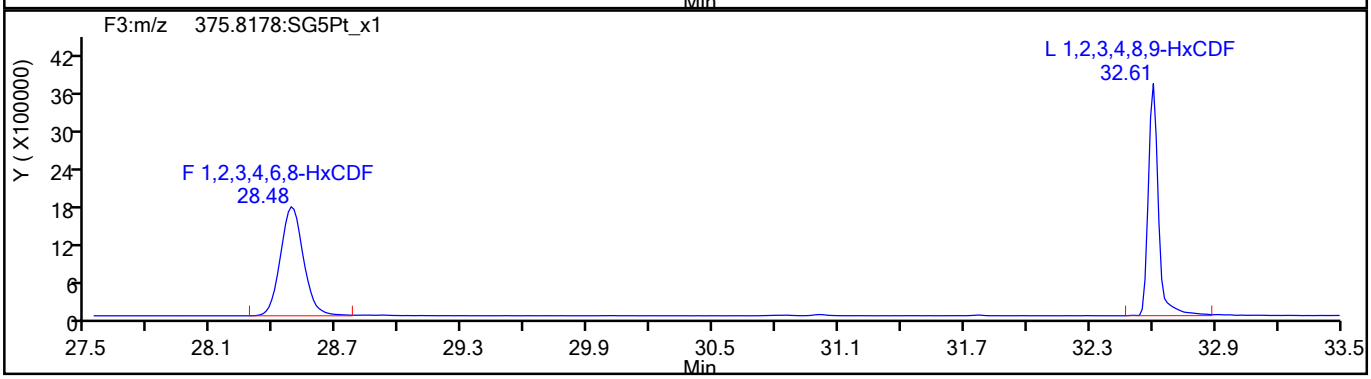

HxCDF Standards

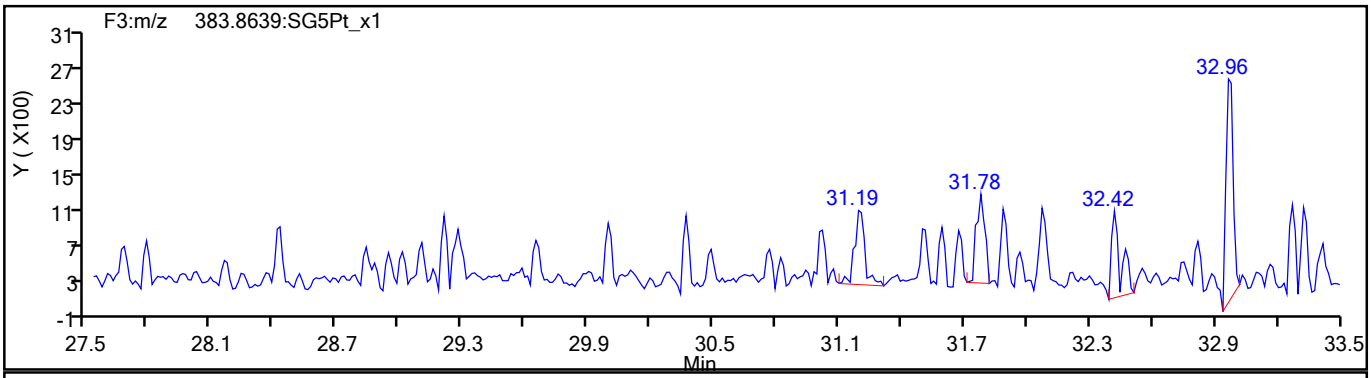

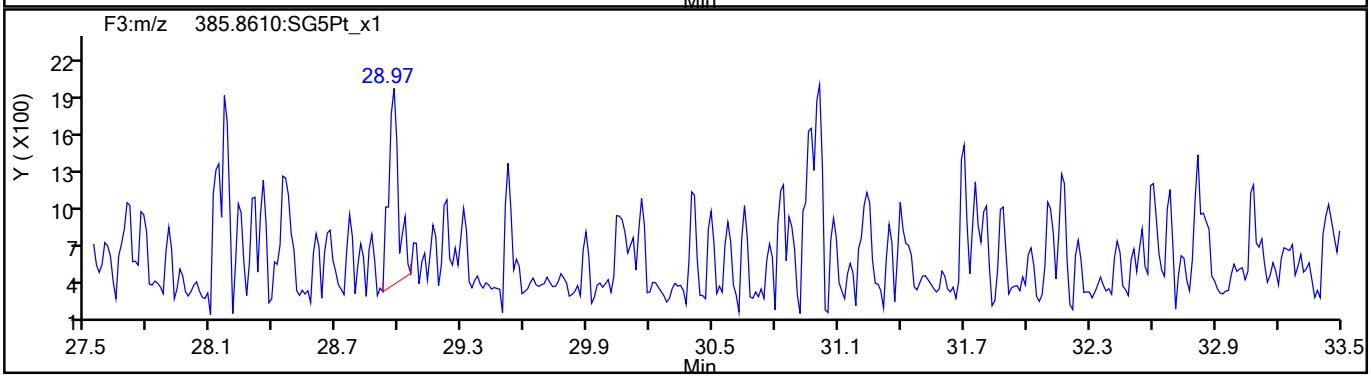

778741

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

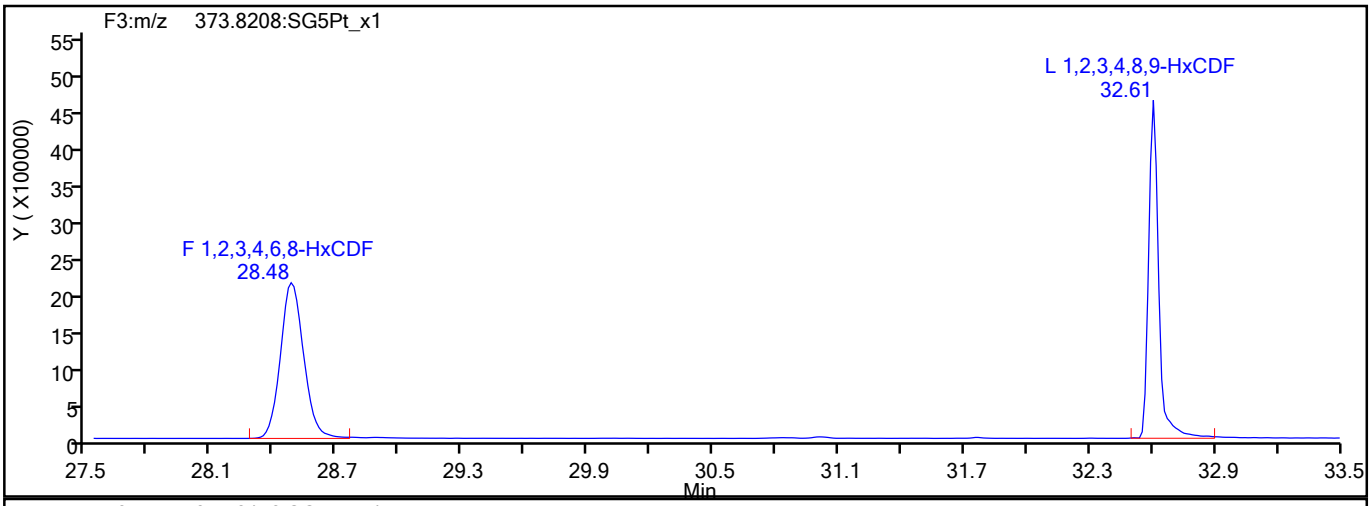

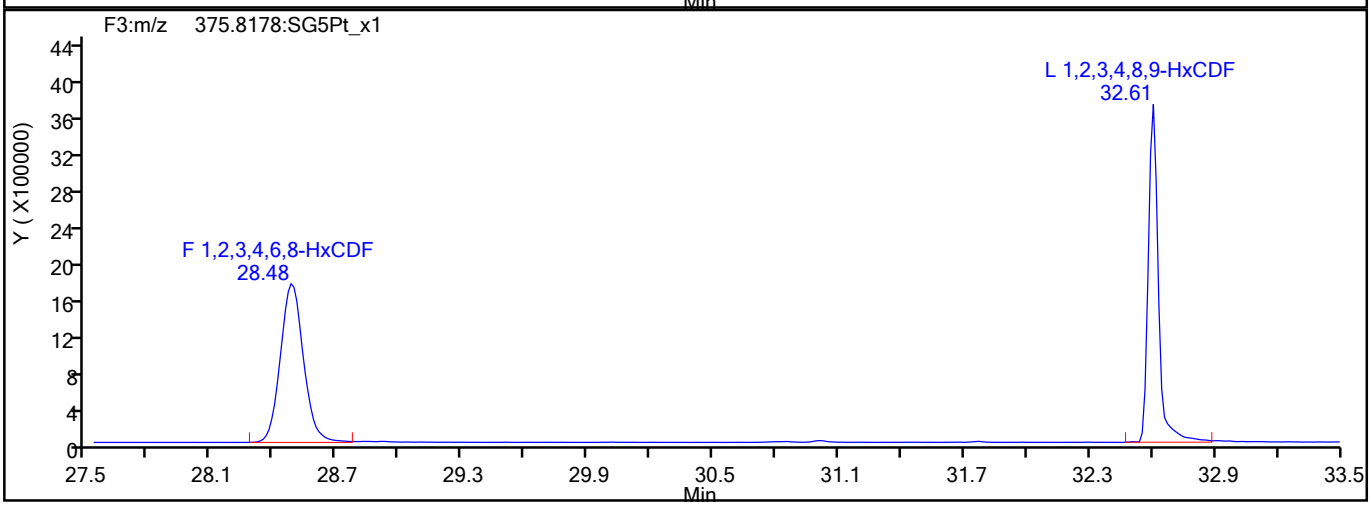

HxCDF Interference Mass

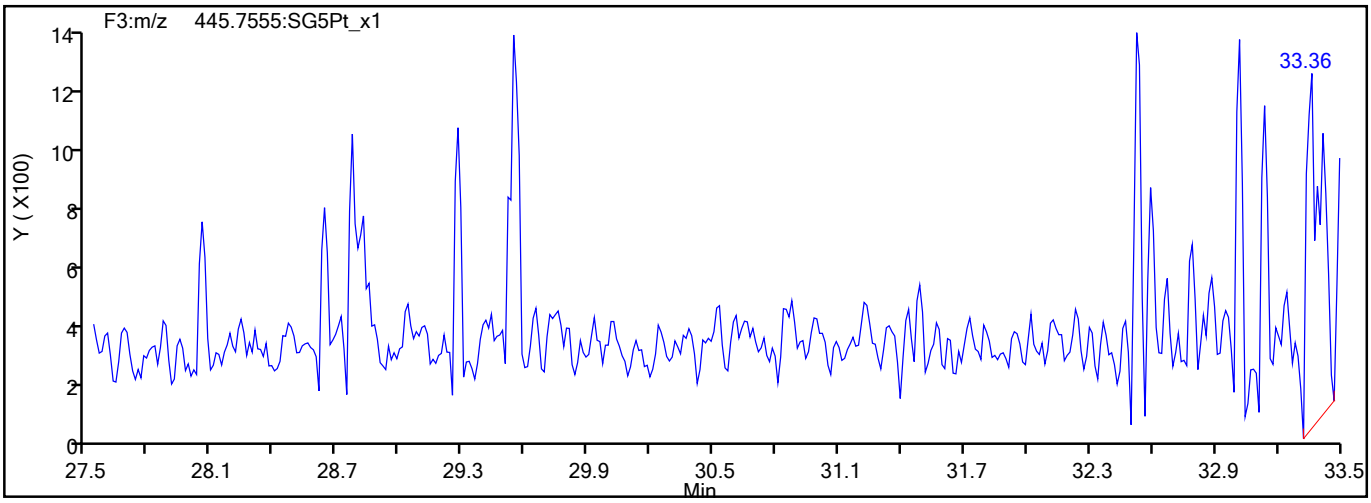

778742

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Eurofins TestAmerica, Sacramento

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HpCDF

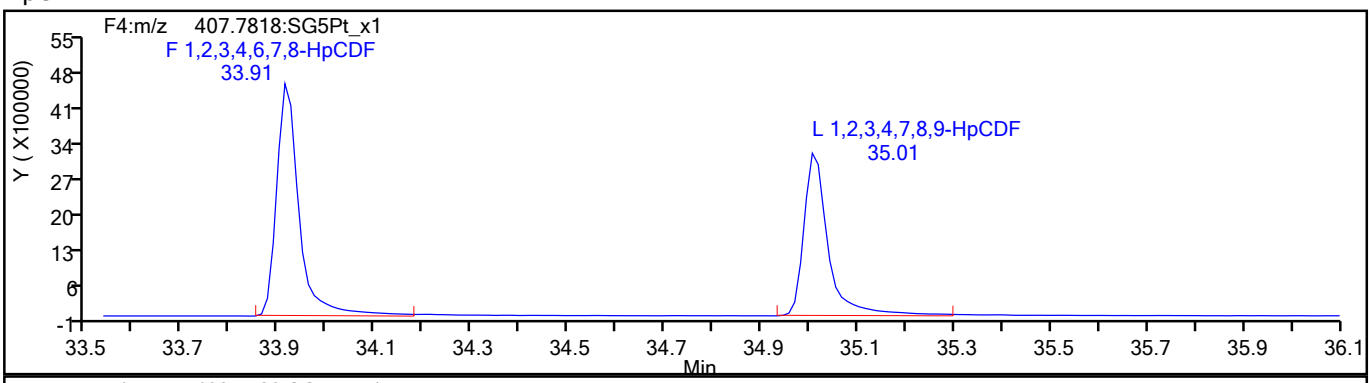

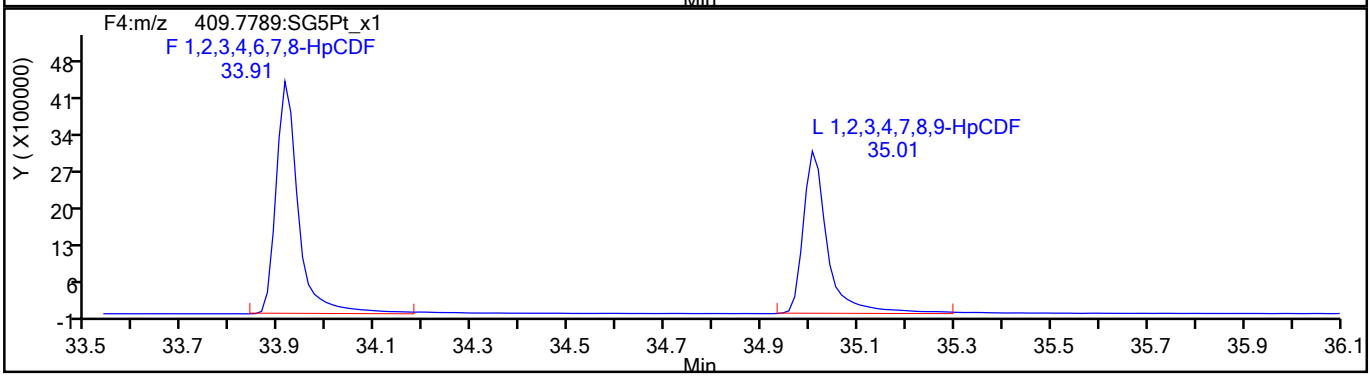

HpCDF Standards

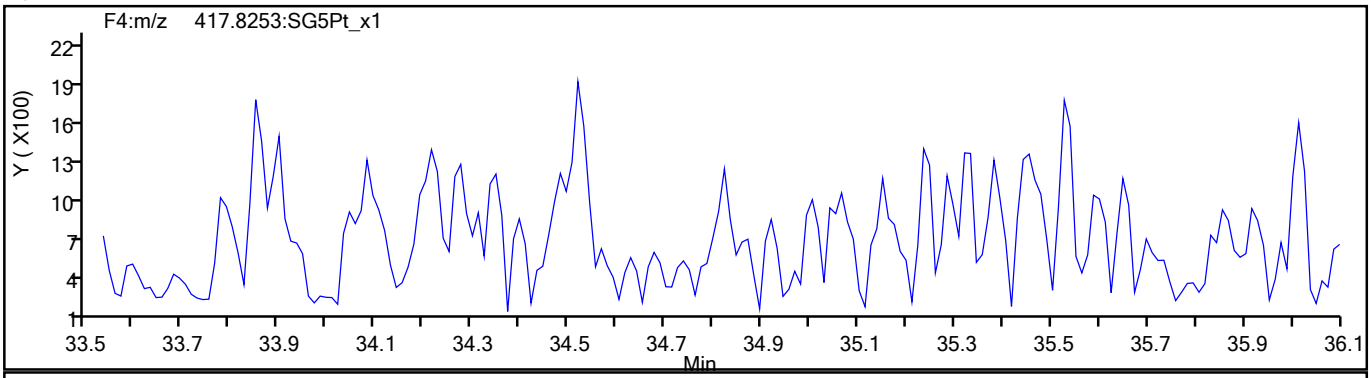

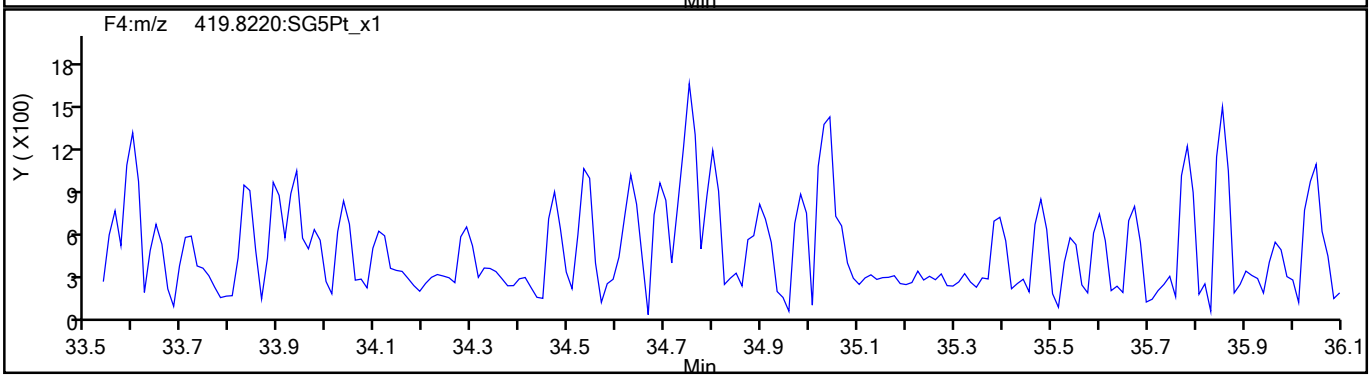

778743

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

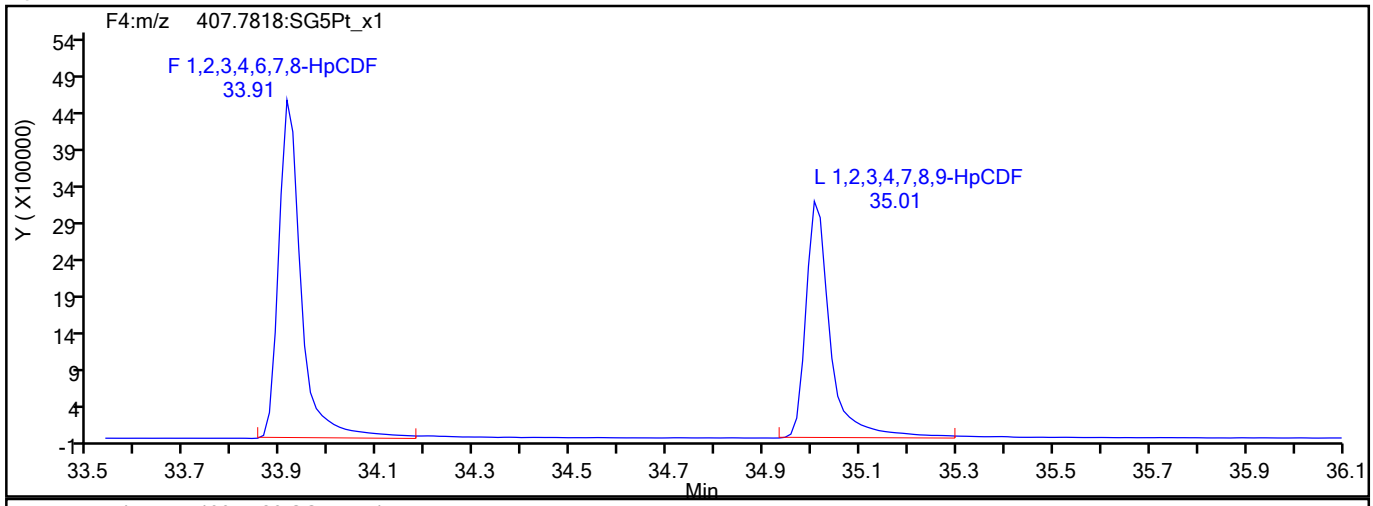

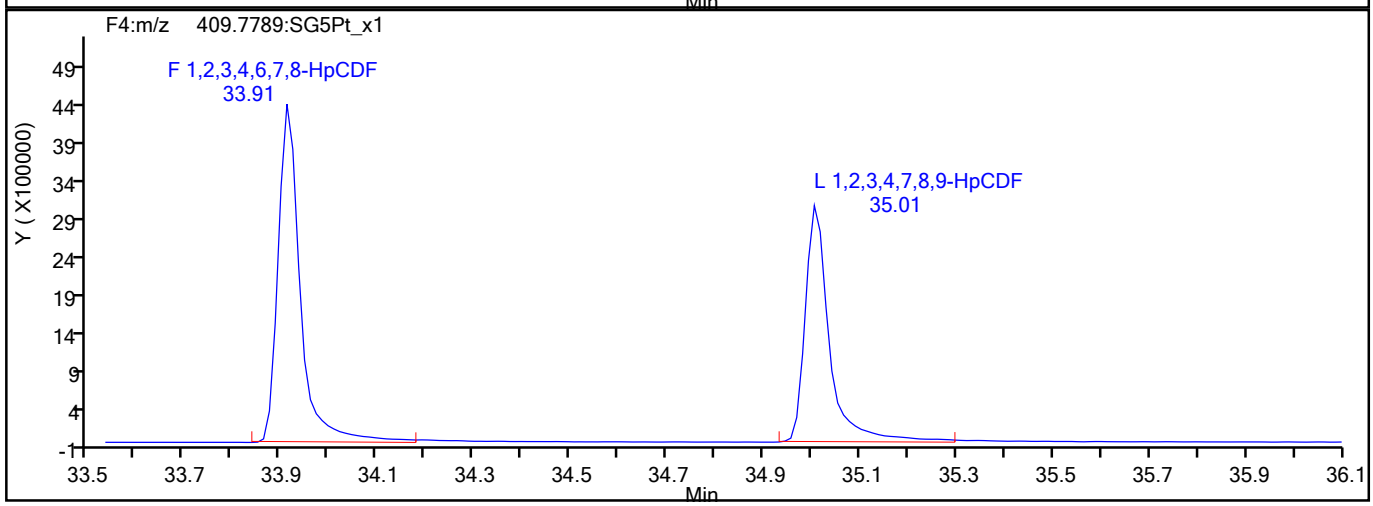

HpCDF Interference Mass

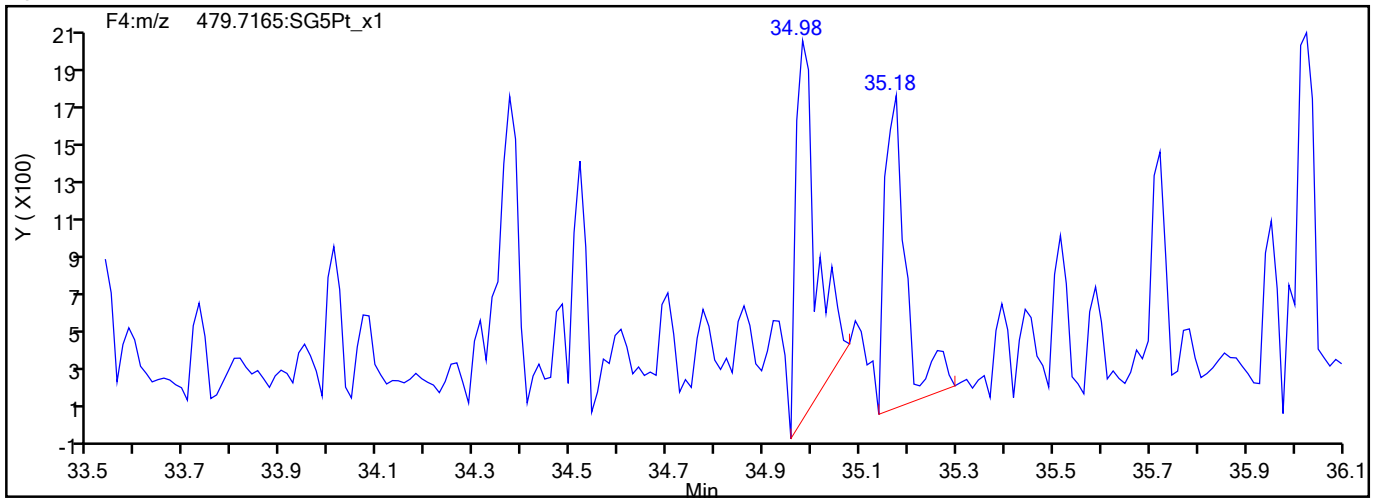

778744

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

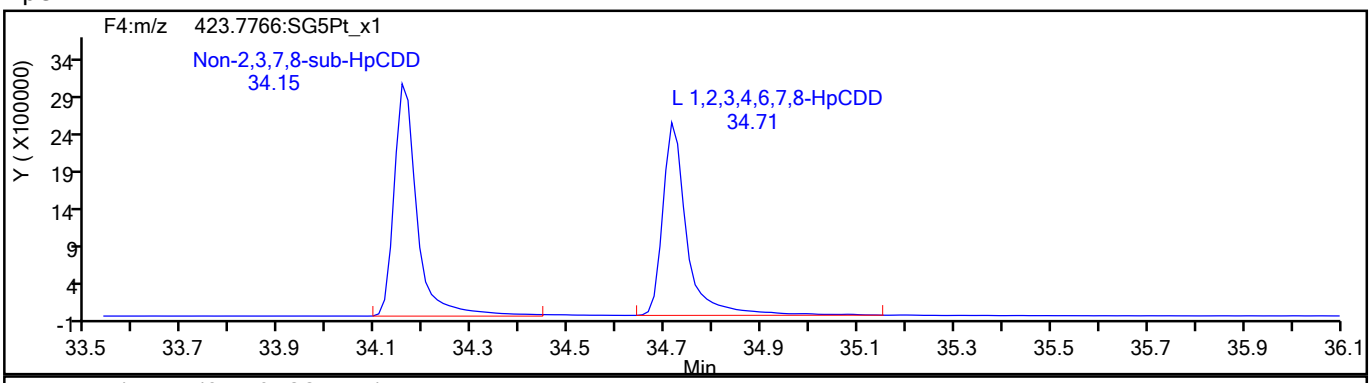

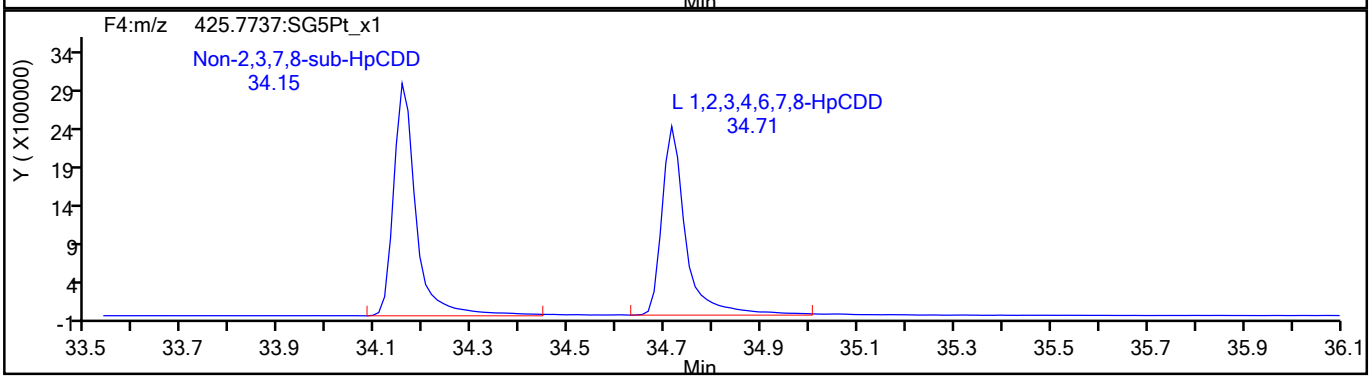

HpCDD Standards

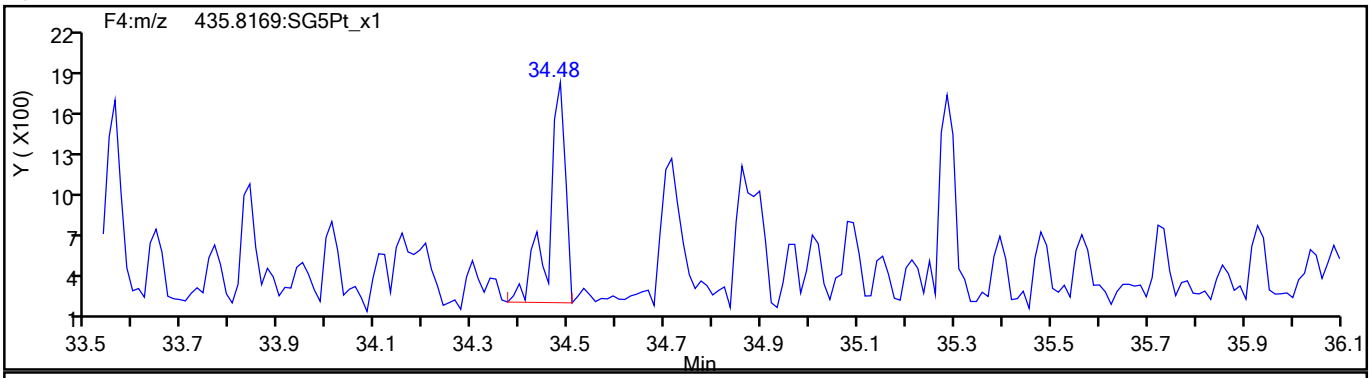

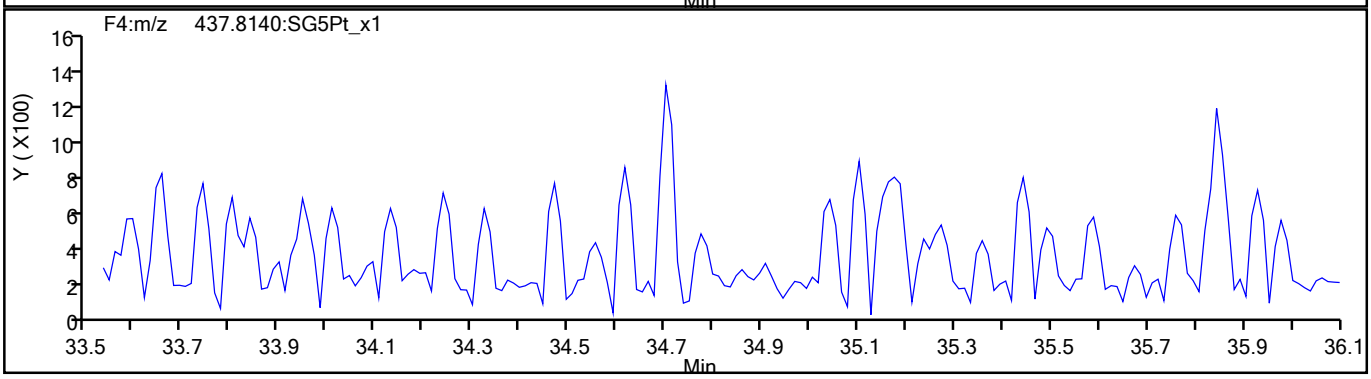

778745

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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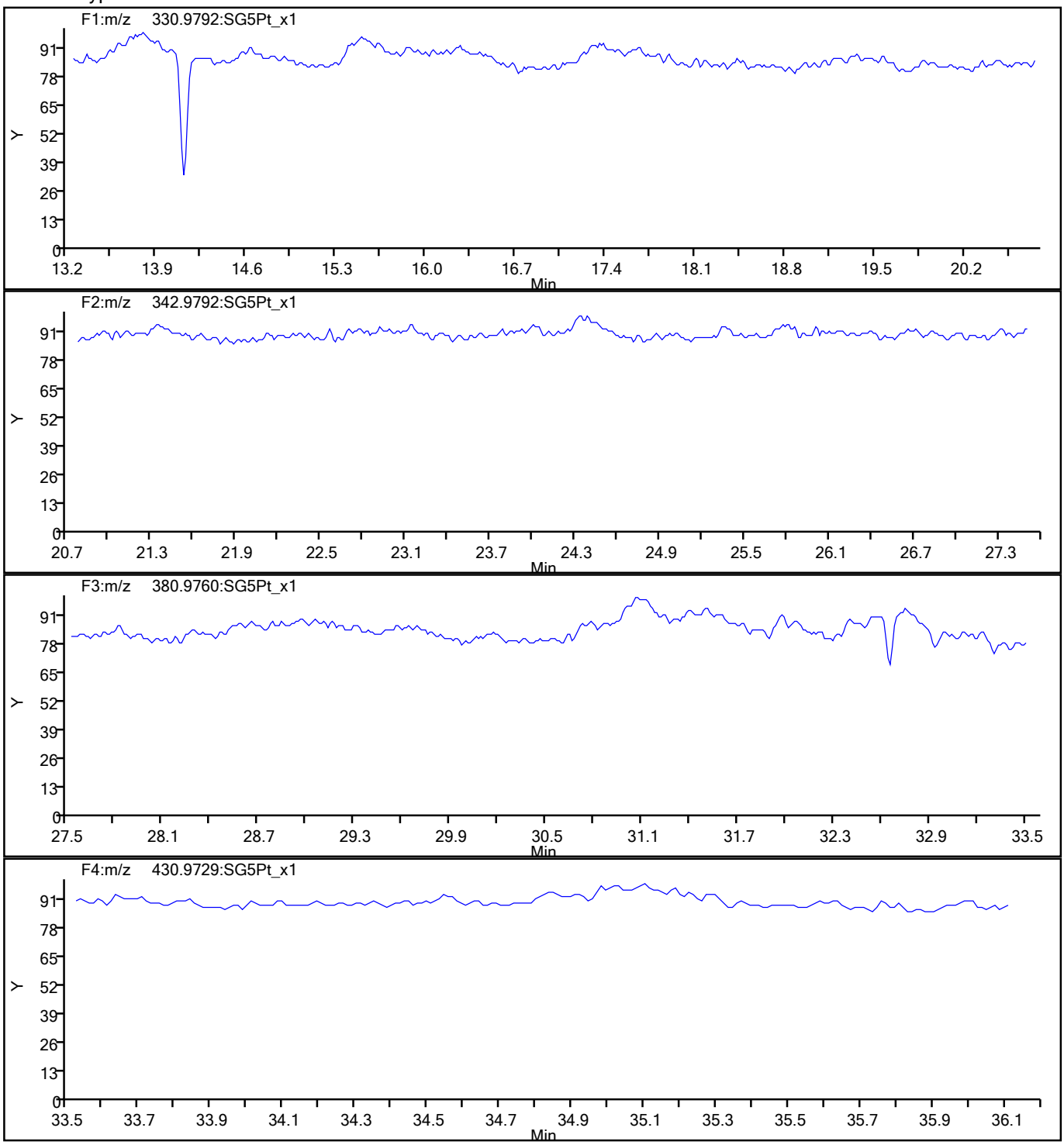

778746

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

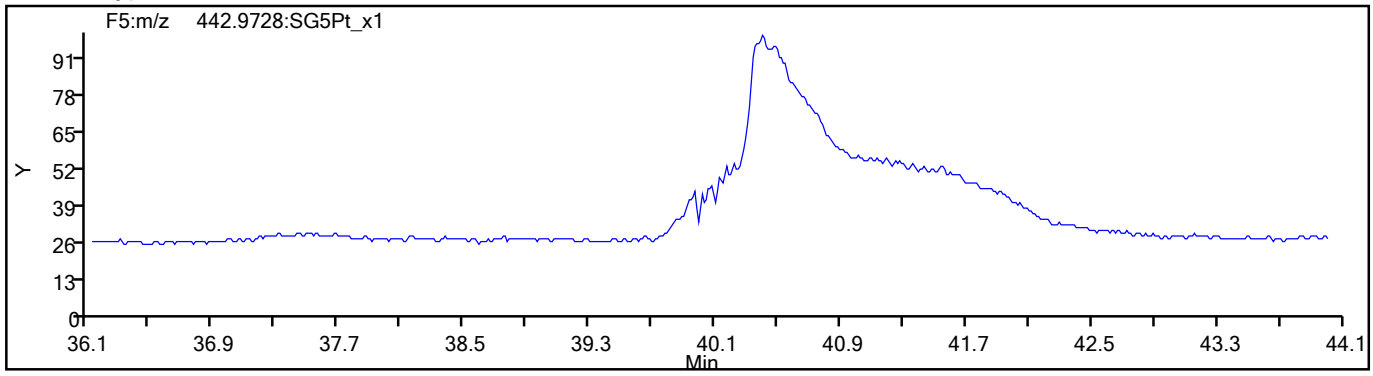

778747

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 13-Aug-2021 05:48:08 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081221B WDM HRDXNCP_00044
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 13-Aug-2021 15:47:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1625

First Level Reviewer: arghestanis Date: 13-Aug-2021 15:38:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.356	72818839	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.386	157301205	0.78	1.0239	84.4	84.4	0.2703	0.2703		
A Non-2,3,7,8-sub-TCDF	17.069	2244849	0.78	1.0239	1.204	1.204	0.2703	1.204		
S Total TCDF					85.6	85.6	0.2703	0.2703		
D 13C-2,3,7,8-TCDD	18.066	38743011	0.81	0.8993					0.00	
2,3,7,8-TCDD	18.082	55302037	0.78	1.2541	45.5	45.5	0.2065	0.2065		
A Non-2,3,7,8-sub-TCDD	17.530	45023464	0.78	1.2541	37.1	37.1	0.2065	37.1		
S Total TCDD					82.6	82.6	0.2065	0.2065		
A F1 PeCDFs	20.108						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	23.261	815836	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.376						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.223						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.895						0.0	0.0		
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.778	49722365	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	34.872	42114641	1.05	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.325						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.580	33412792	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.301						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.937	88948153	0.77							
1,3,6,8-TCDD	15.859	55255187	0.79							
2,3,4,7-TCDF	17.386	157301205	0.78							
1,2,3,7-TCDD	18.082	55313982	0.78							
1,2,3,9-TCDF	18.248	68358014	0.77							
1,2,3,9-TCDD	18.248	56992167	0.78							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.201	22626788								
1,2,8,9-TCDF	19.201	70710814	0.77							
1,3,4,6,8-PeCDF	19.488	63602968	1.56							
1,2,4,7,9-PeCDD	21.262	41208080	1.58							
1,2,3,8,9-PeCDD	25.490	38113948	1.60							
1,2,3,8,9-PeCDF	25.721	49409531	1.60							
1,2,3,4,6,8-HxCDF	28.014	49570766	1.22							
1,2,4,6,7,9-HxCDD	29.598	37861672	1.26							
1,2,3,4,6,7-HxCDD	32.127	38360034	1.25							
1,2,3,4,8,9-HxCDF	32.433	46856048	1.22							
1,2,3,4,6,7,9-HpCDD	34.021	37207105	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 13-Aug-2021 05:48:08 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081221B WDM HRDXNCP_00044
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 13-Aug-2021 15:47:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1625

First Level Reviewer: arghestanis Date: 13-Aug-2021 15:38:11

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	1.000	31746941	7628051	6362	15905	1199		
317.9389	17.356	17.356	0	1.000	41071898	9886722	4506	11265	2194	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.386	17.386	0	1.002	68794393	15448889	21370	53425	723		
305.8987	17.386	17.386	0	1.002	88506812	19705686	27106	67765	727	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	19.488	17.069	145	1.123	984329	148365	21370	53425	7		
305.8987	19.488	17.069	145	1.123	1260520	193374	27106	67765	7	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.066	0	1.000	17364424	3919192	2695	6737	1454		
333.9339	18.066	18.066	0	1.000	21378587	4821701	2170	5425	2222	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.082	18.082	0	1.001	24254173	5317405	13610	34025	391		
321.8936	18.082	18.082	0	1.001	31047864	6915010	9031	22577	766	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.976	17.530	27	0.995	19670217	4712360	13610	34025	346		
321.8936	17.961	17.530	26	0.994	25353247	6035371	9031	22577	668	0.78(0.65-0.89)	
A F1 PeCDFs											
339.8597	20.108						1453	3632			
341.8567	20.108						1188	2970			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.849	23.261	-85	1.000	91224	17008	3990	9975	4		
341.8567	21.849	23.261	-85	1.000	79740	11893	2798	6995	4	1.14(1.32-1.78)	
339.8597	22.421	23.261	-50	1.000	251888	31370	3990	9975	8		
341.8567	22.435	23.261	-49	1.000	147687	21362	2798	6995	8	1.71(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	23.008	23.261	-15	1.000	158604	19771	3990	9975	5		
341.8567	22.994	23.261	-16	1.000	107579	15835	2798	6995	6	1.47(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.376						4531	11327			
357.8516	23.376						2940	7350			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.223						6916	17290			
375.8178	30.223						5920	14800			
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.895						11681	29202			
391.8127	30.895						7880	19700			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	25523585	7968730	35492	88730	225		
409.7789	33.778	33.778	0	1.000	24198780	7694470	25695	64237	299	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.872	0	1.000	21554877	5862804	35492	88730	165		
409.7789	34.872	34.872	0	1.000	20559764	5602169	25695	64237	218	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						35492	88730			
409.7789	34.325						25695	64237			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	17057279	4965315	19809	49522	251		
425.7737	34.580	34.580	0	1.000	16355513	4794426	18601	46502	258	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						19809	49522			
425.7737	34.301						18601	46502			
1,3,6,8-TCDF											
303.9016	14.937	14.937	0		38708737	11814348	21370	53425	553		
305.8987	14.937	14.937	0		50239416	15154655	27106	67765	559	0.77(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.859	15.859	0		24360195	6692305	13610	34025	492		
321.8936	15.859	15.859	0		30894992	8451352	9031	22577	936	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.386	17.386	0		68794393	15448889	21370	53425	723		
305.8987	17.386	17.386	0		88506812	19705686	27106	67765	727	0.78(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.082	18.082	0		24254382	5317432	13610	34025	391		
321.8936	18.082	18.082	0		31059600	6916562	9031	22577	766	0.78(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	18.248	18.248	0		29819511	6821347	21370	53425	319		
305.8987	18.248	18.248	0		38538503	8726469	27106	67765	322	0.77(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.248	18.248	0		25011575	5577949	13610	34025	410		
321.8936	18.248	18.248	0		31980592	7103780	9031	22577	787	0.78(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.201	19.201	0		22626788	4636809	13610	34025	341		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	19.201	19.201	0		30809170	6428779	21370	53425	301		
305.8987	19.201	19.201	0		39901644	8265899	27106	67765	305	0.77(0.65-0.89)	
1,3,4,6,8-PeCDF											
339.8597	19.488	19.488	0		38803422	8186085	1453	3632	5634		
341.8567	19.488	19.488	0		24799546	5231196	1188	2970	4403	1.56(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	21.262	21.262	0		25214724	4228101	4531	11327	933		
357.8516	21.262	21.262	0		15993356	2663160	2940	7350	906	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	25.490	25.490	0		23463915	3053488	4531	11327	674		
357.8516	25.490	25.490	0		14650033	1925494	2940	7350	655	1.60(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	25.721	25.721	0		30369449	3926613	3990	9975	984		
341.8567	25.721	25.721	0		19040082	2465521	2798	6995	881	1.60(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	28.014	28.014	0		27229091	3256202	6916	17290	471		
375.8178	28.014	28.014	0		22341675	2687993	5920	14800	454	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.598	29.598	0		21108766	2497963	11681	29202	214		
391.8127	29.598	29.598	0		16752906	1991488	7880	19700	253	1.26(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8157	32.127	32.127	0		21346180	5731722	11681	29202	491		
391.8127	32.127	32.127	0		17013854	4496434	7880	19700	571	1.25(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.433	32.433	0		25741793	7011741	6916	17290	1014		
375.8178	32.433	32.433	0		21114255	5694024	5920	14800	962	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	34.021	34.021	0		18936097	5759245	19809	49522	291		
425.7737	34.021	34.021	0		18271008	5658552	18601	46502	304	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d
Lims ID: WDM
Client ID:
Inject. Date: 13-Aug-2021 05:48:08 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	72818839	17514773

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	72818839	17514773

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.488	984329	148365	1260520	193374	1.20	0.78	
Signal Totals:							
	984329	148365	1260520	193374			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2244849	341739				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.204 = (2244849 * 40.000) / (72818839 * 1.024)

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d
Lims ID: WDM
Client ID:
Inject. Date: 13-Aug-2021 05:48:08 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	38743011	8740893

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	38743011	8740893

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.976	19670217	4712360	25353247	6035371	37.1	0.78	
Signal Totals:							
	19670217	4712360	25353247	6035371			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	45023464	10747731				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 37.065 = (45023464 * 40.000) / (38743011 * 1.254)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d
Lims ID: WDM
Client ID:
Inject. Date: 13-Aug-2021 05:48:08 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDF, RT: 23.261

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.849	91224	17008	79740	11893		1.14	R
22.421	251888	31370	147687	21362		1.71	
23.008	158604	19771	107579	15835		1.47	
Signal Totals:							
	501716	68149	335006	49090			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	836722	117239				1.50	RQ
	815836	116318					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (836722 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (815836 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

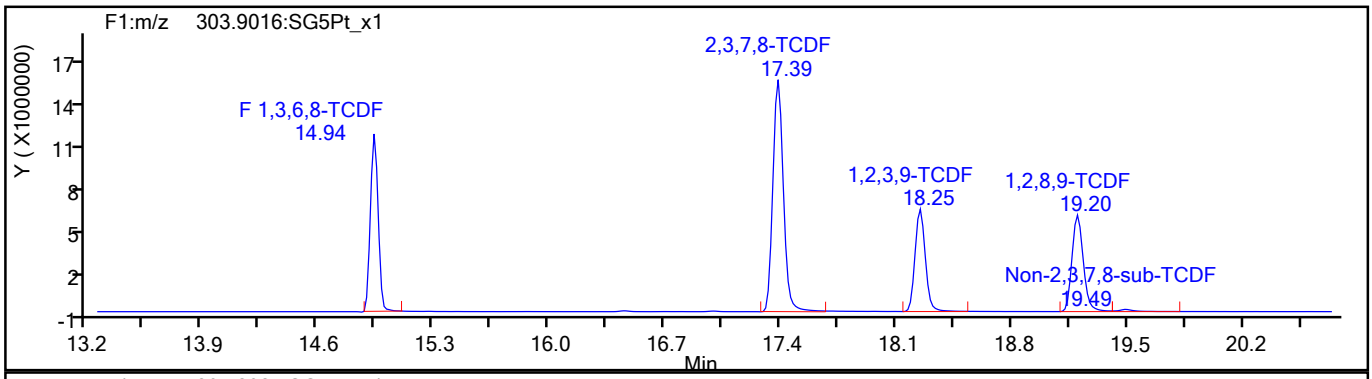

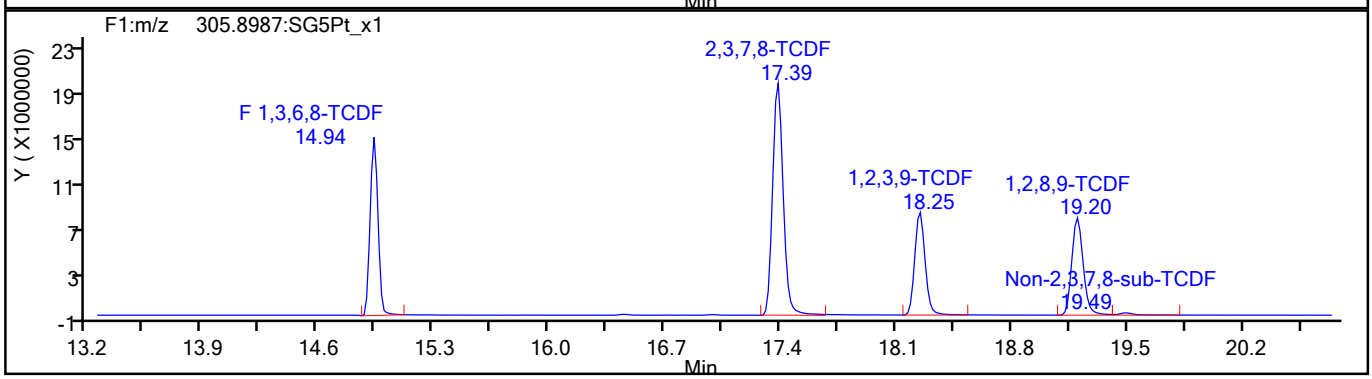

TCDF Standards

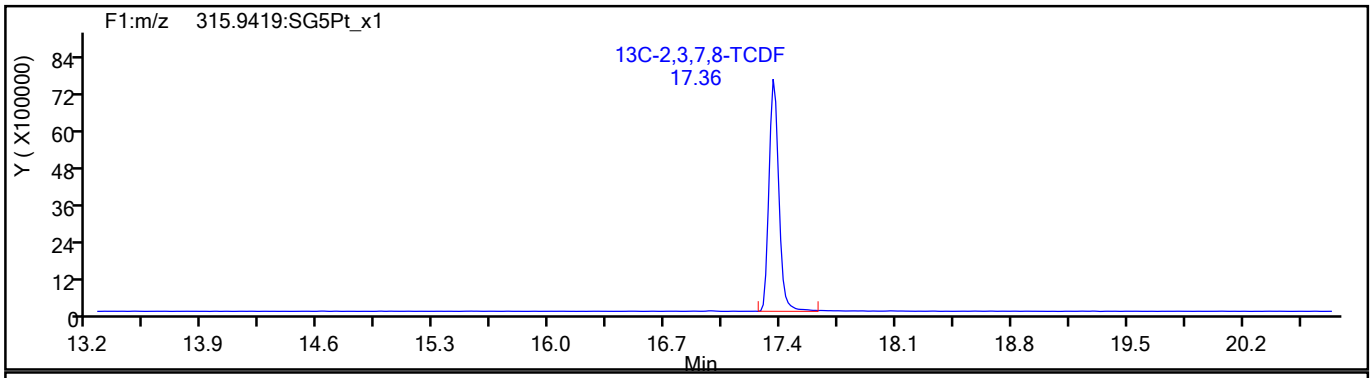

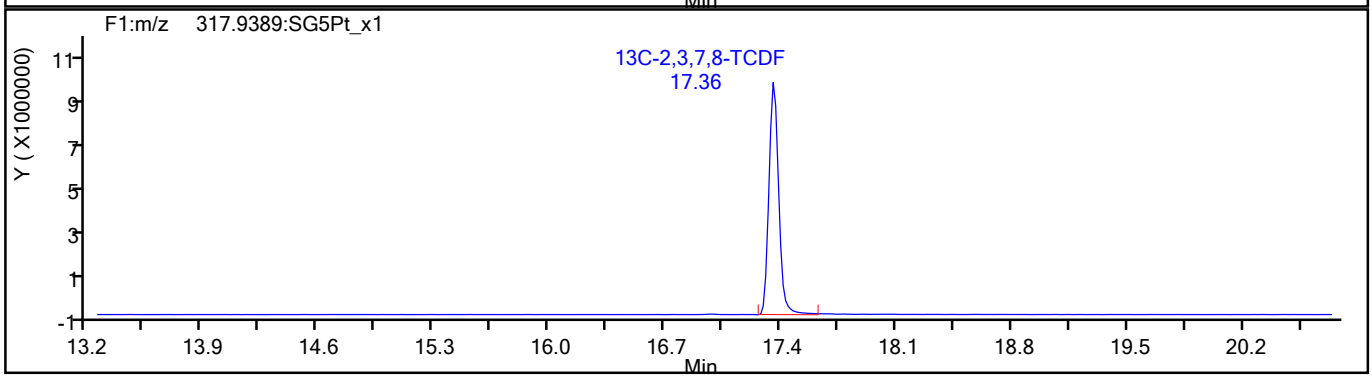

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Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

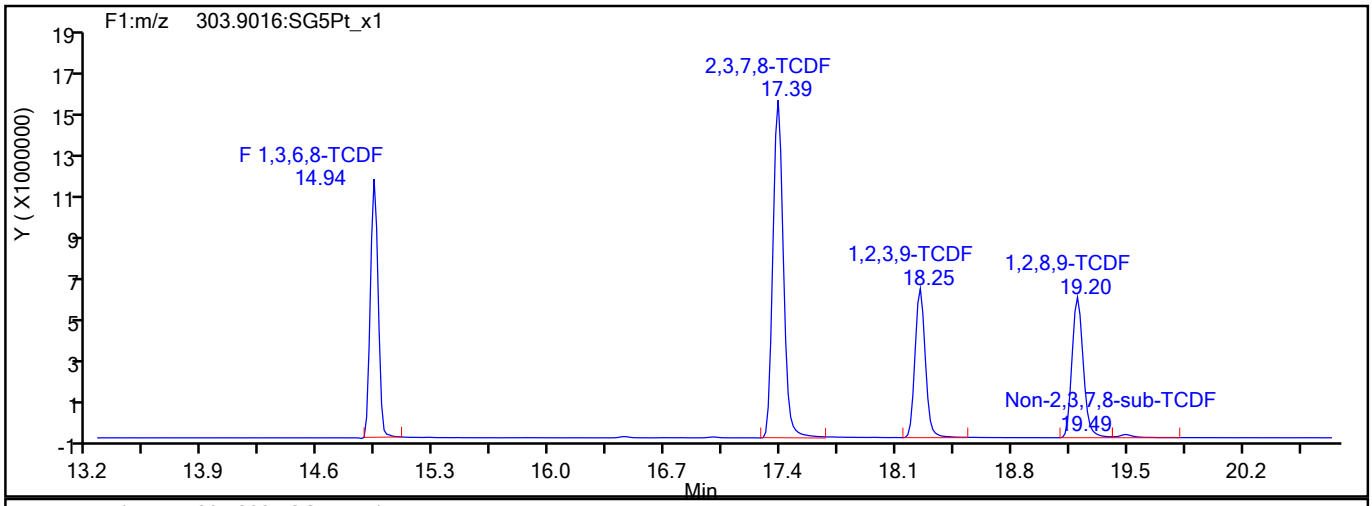

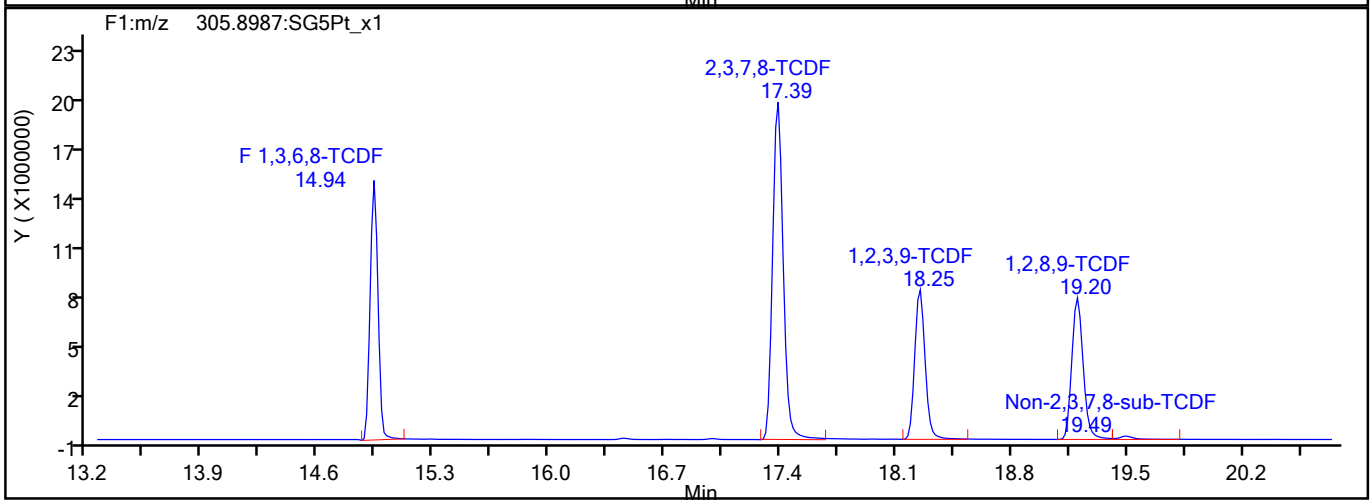

TCDF Interference Mass

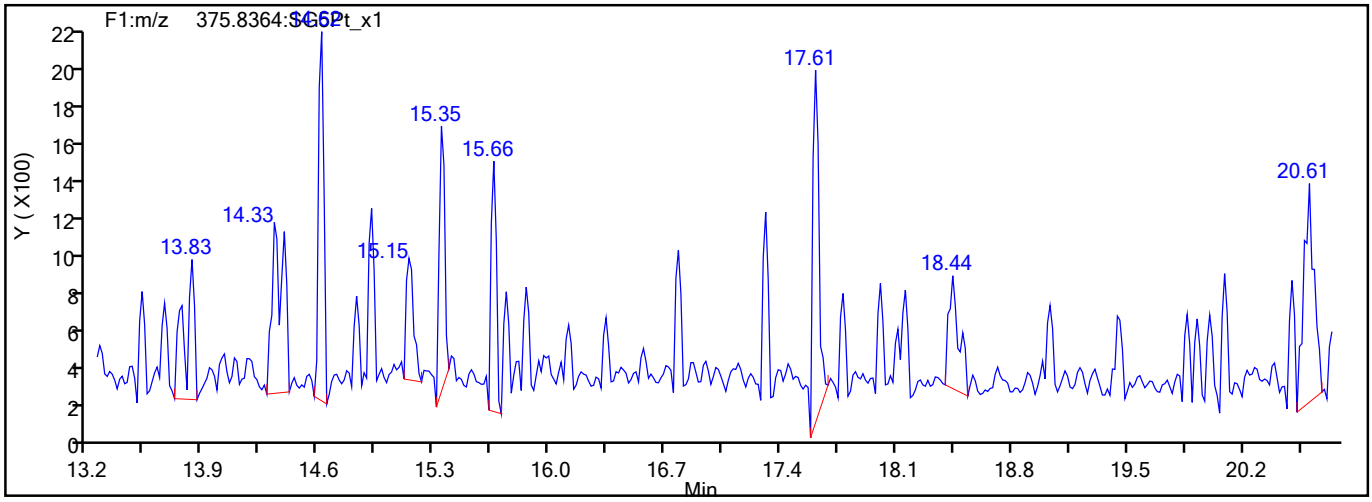

778757

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

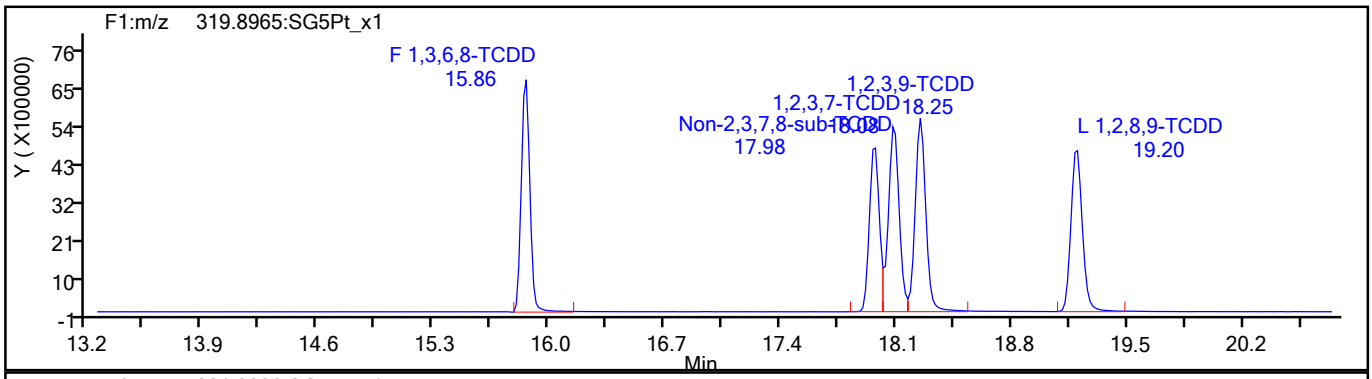

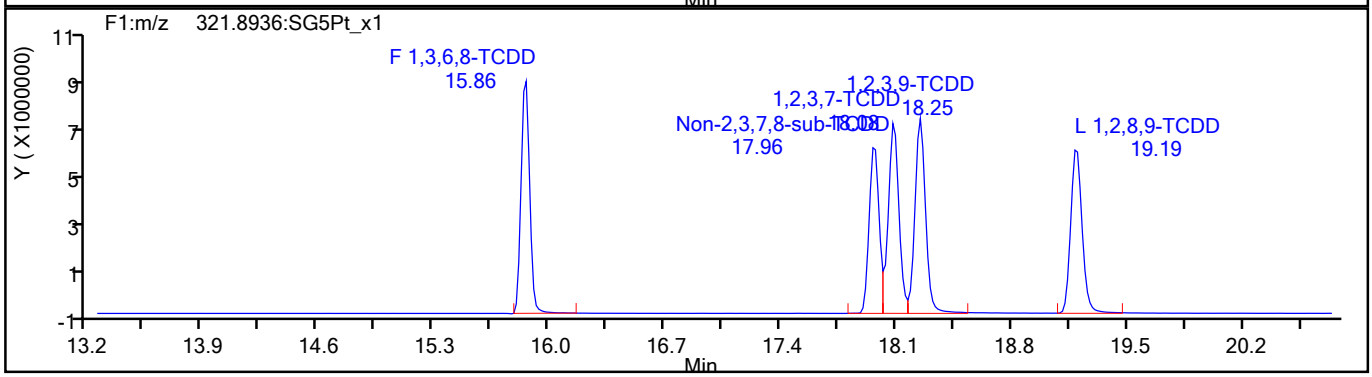

TCDD Standards

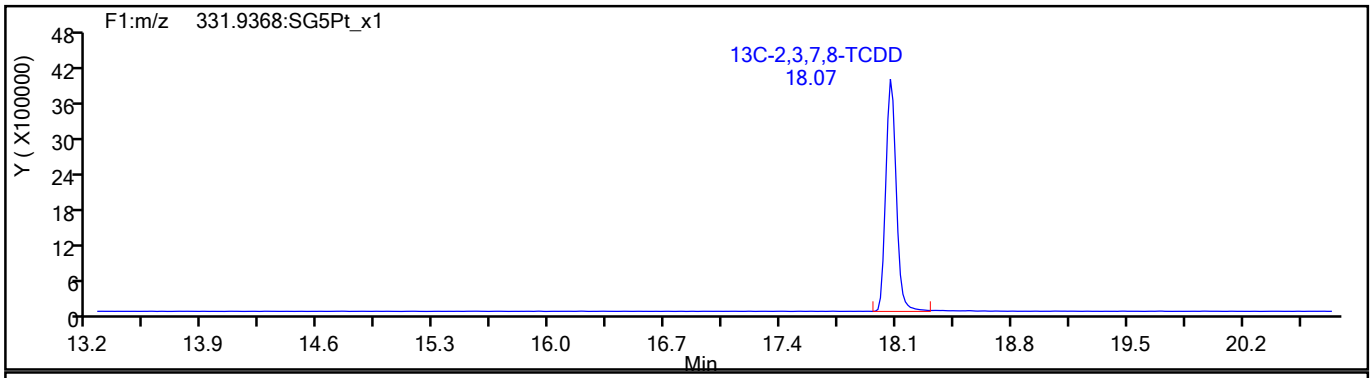

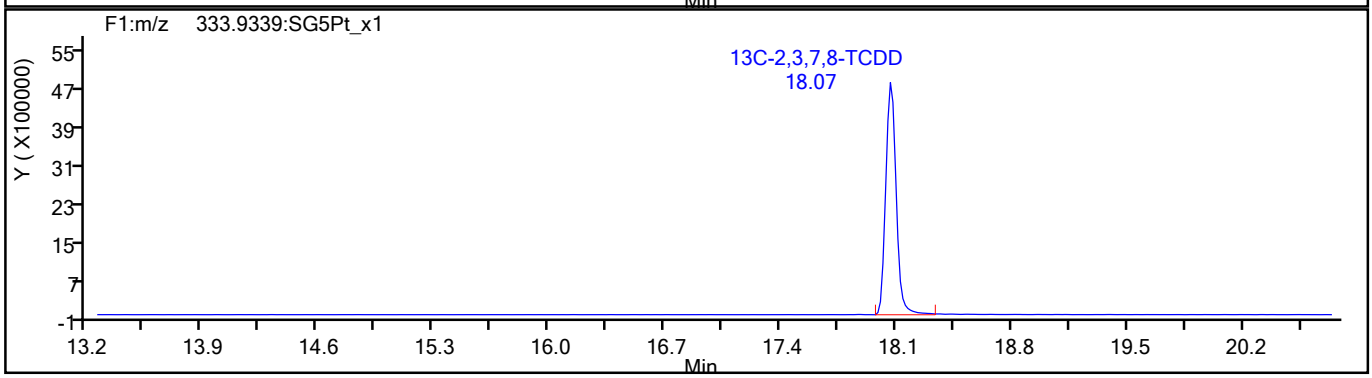

778758

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

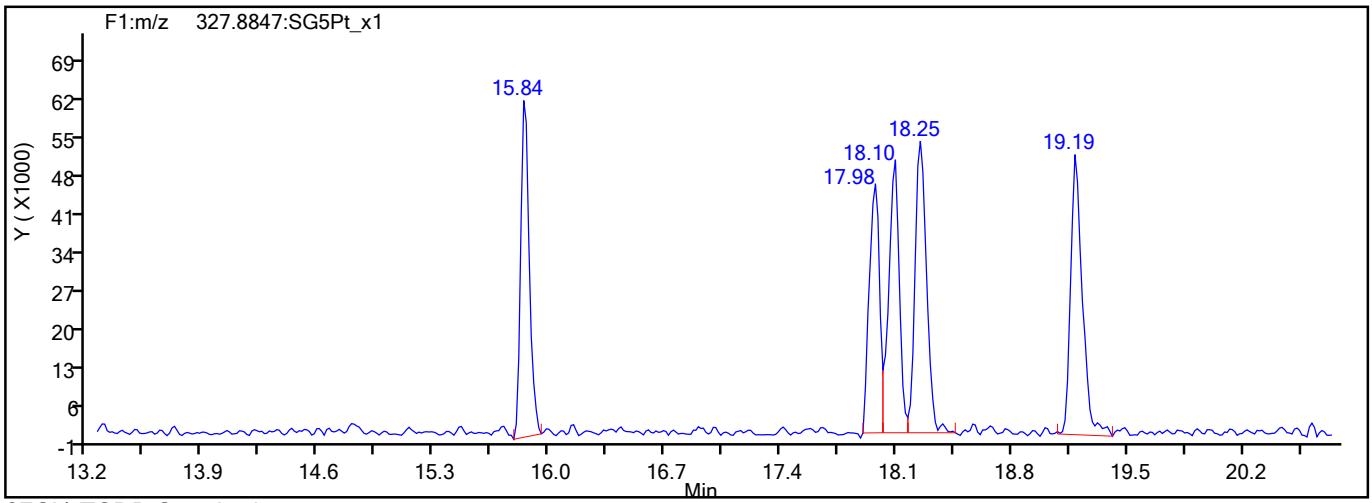

37Cl4-TCDD Standards

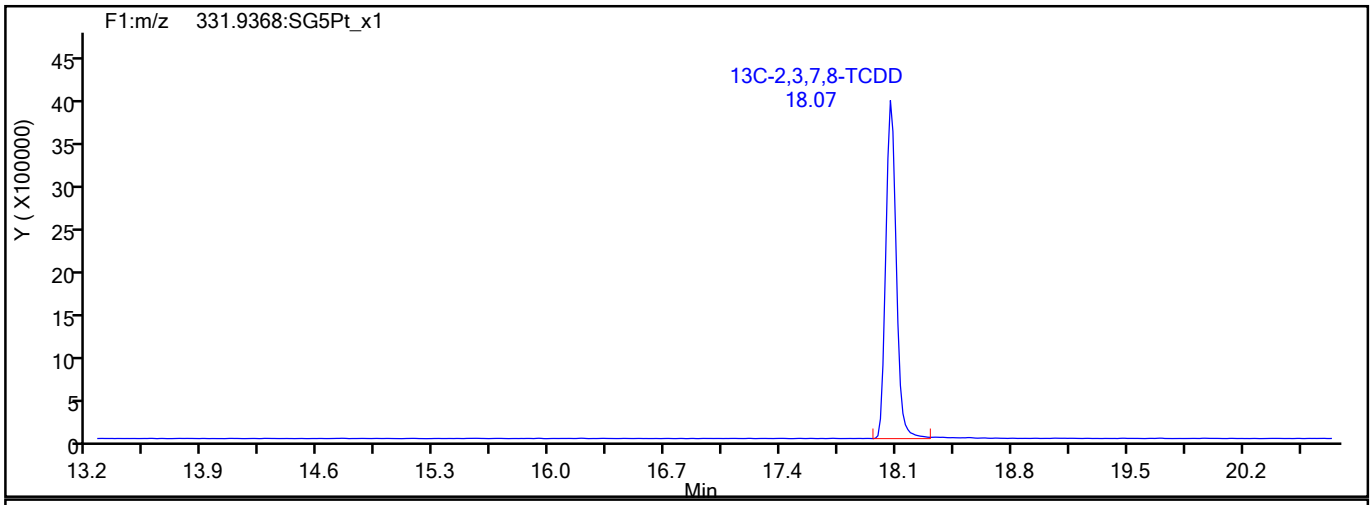

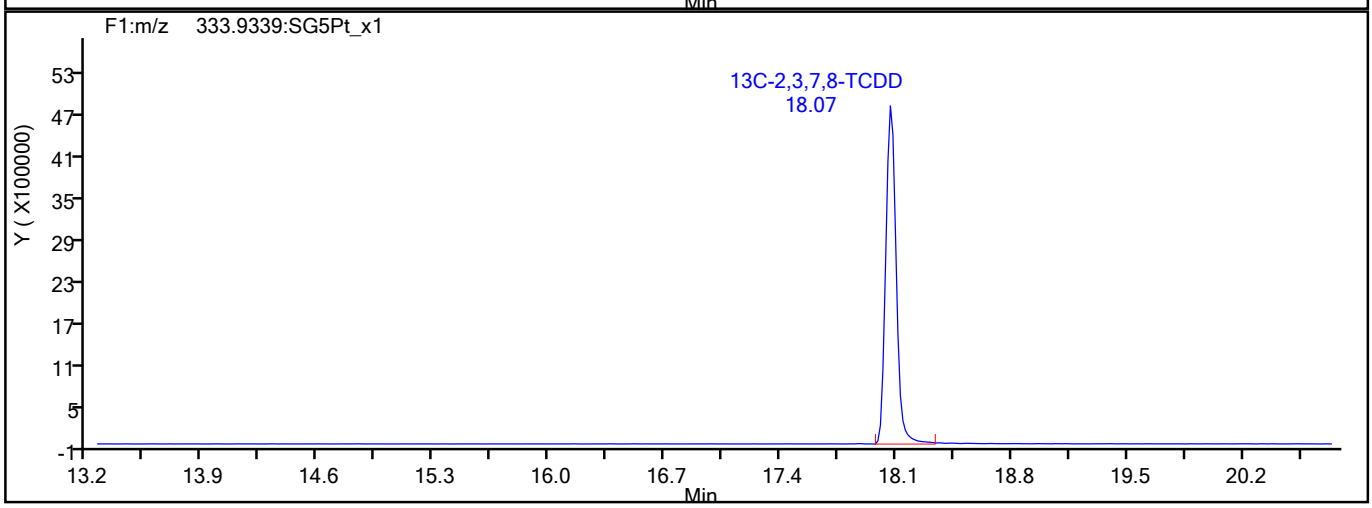

778759

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

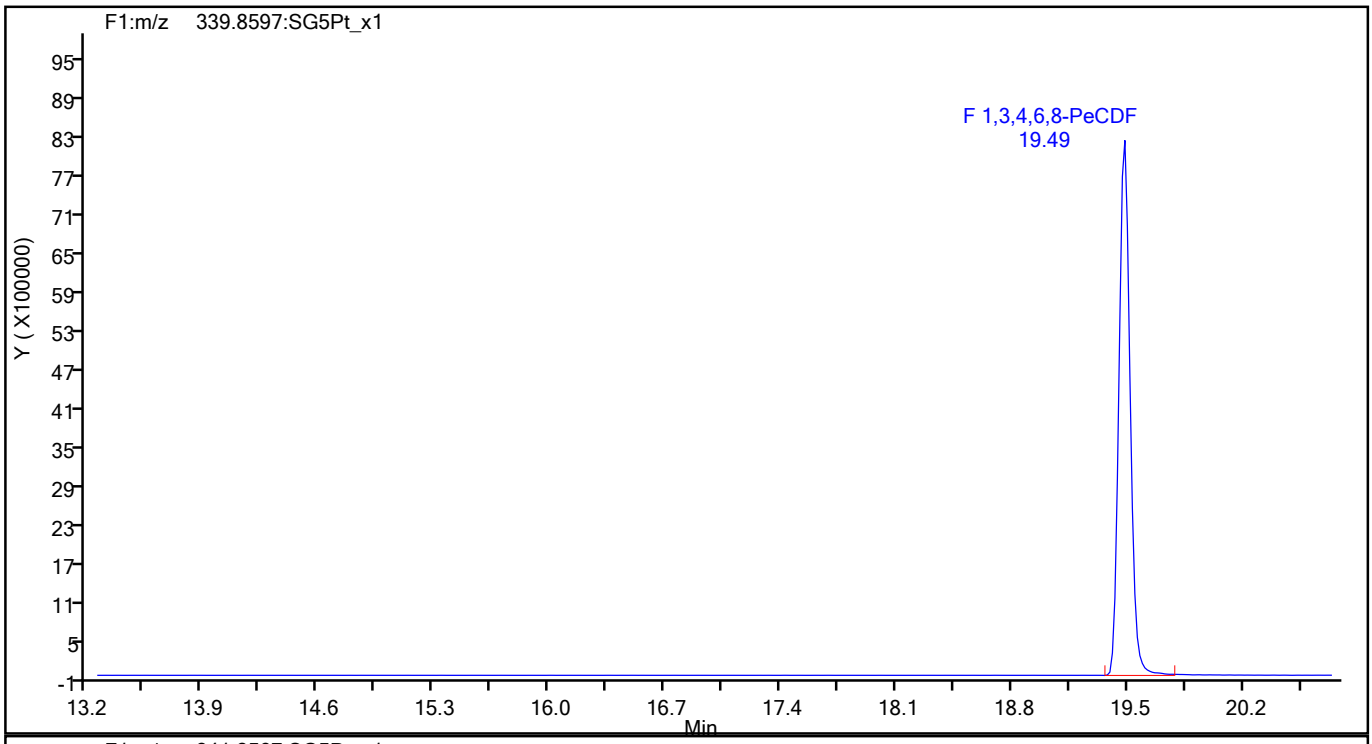

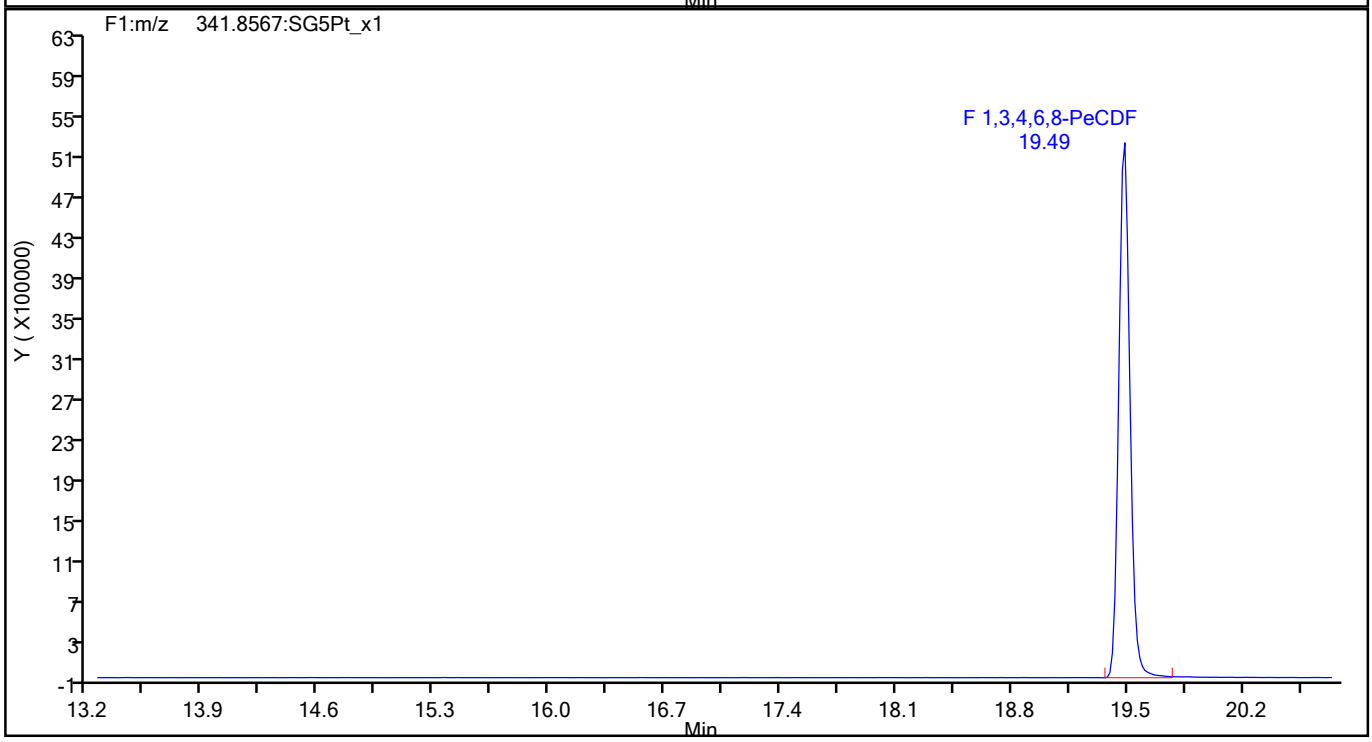

778760

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

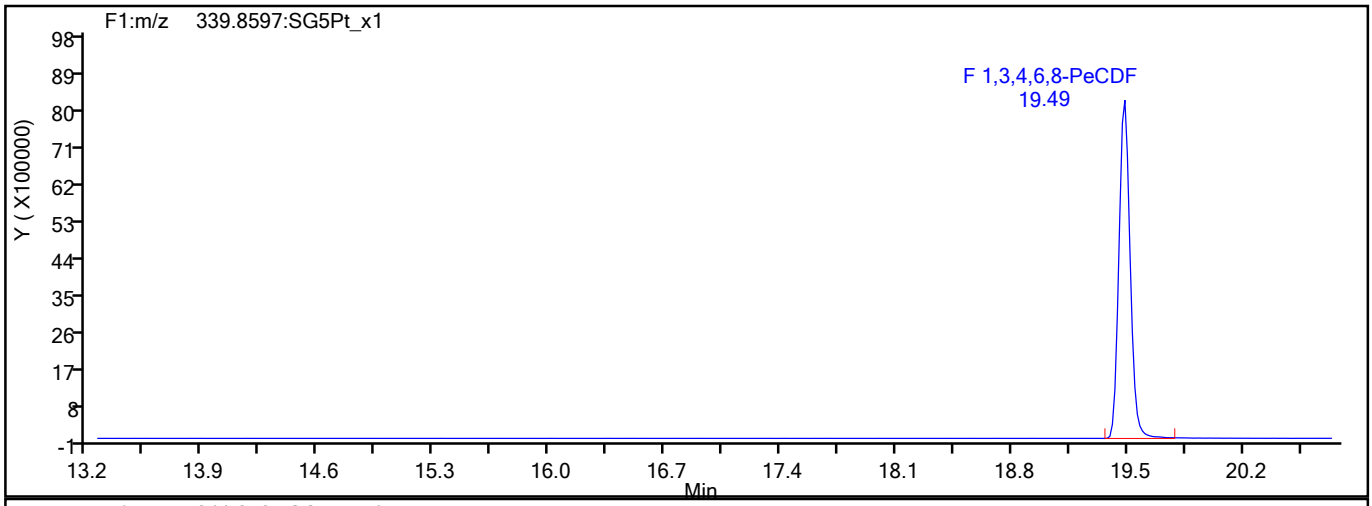

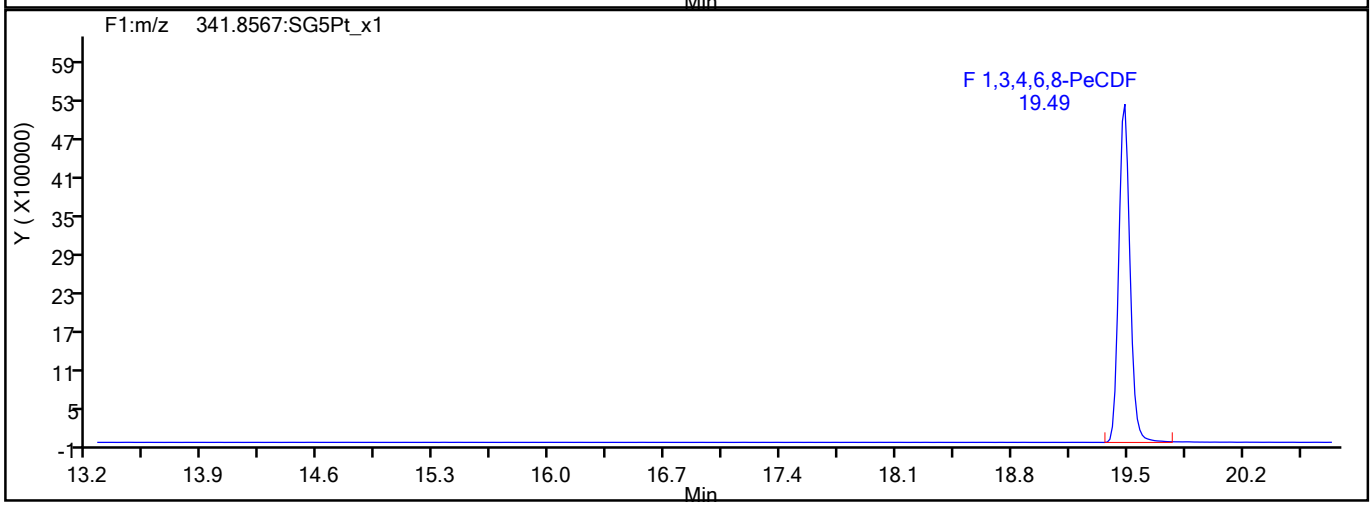

F1 PeCDFs Interference Mass

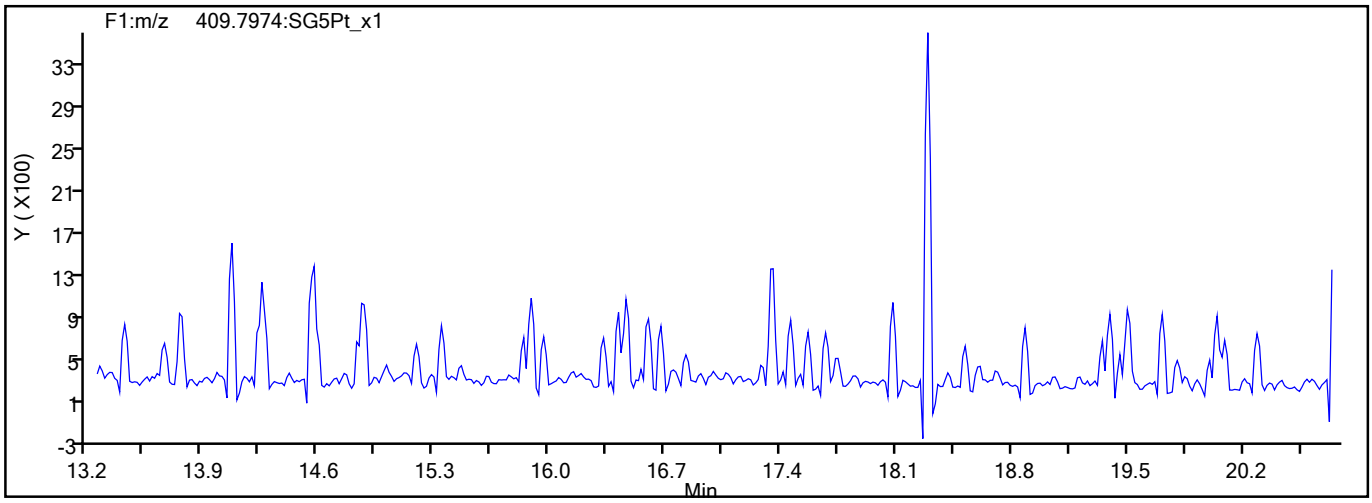

778761

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

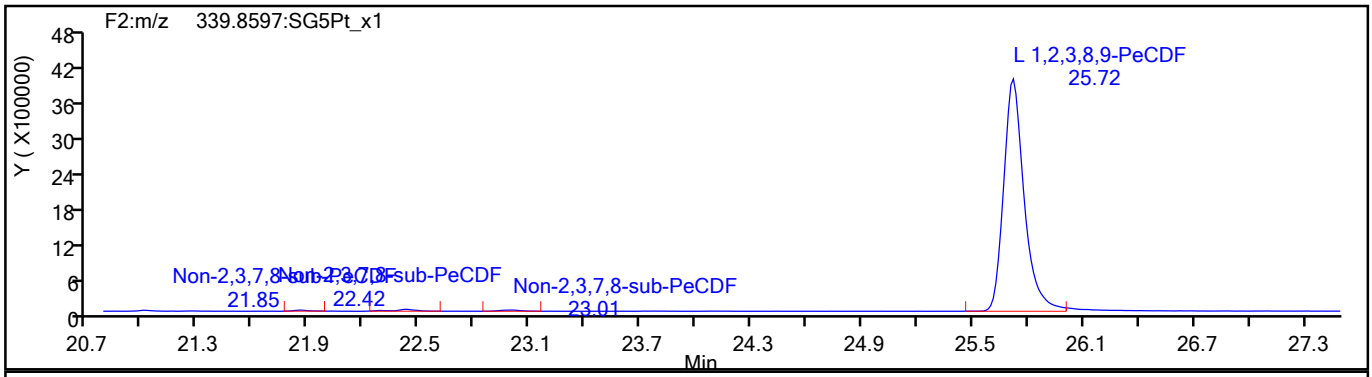

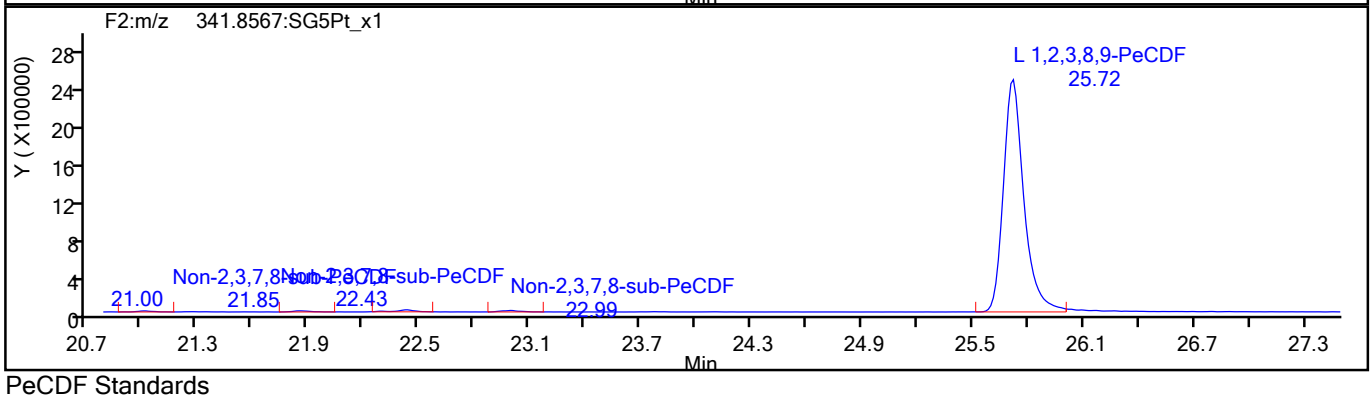

PeCDF Standards

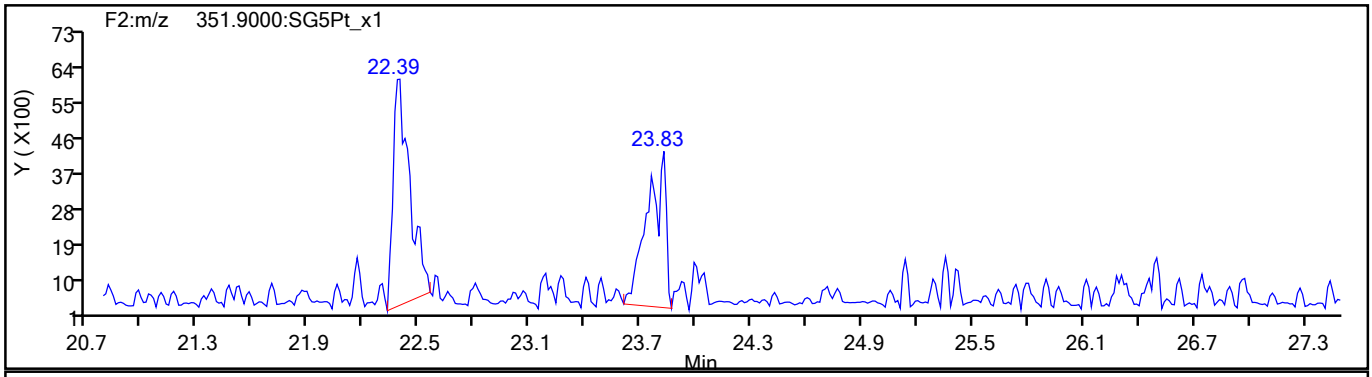

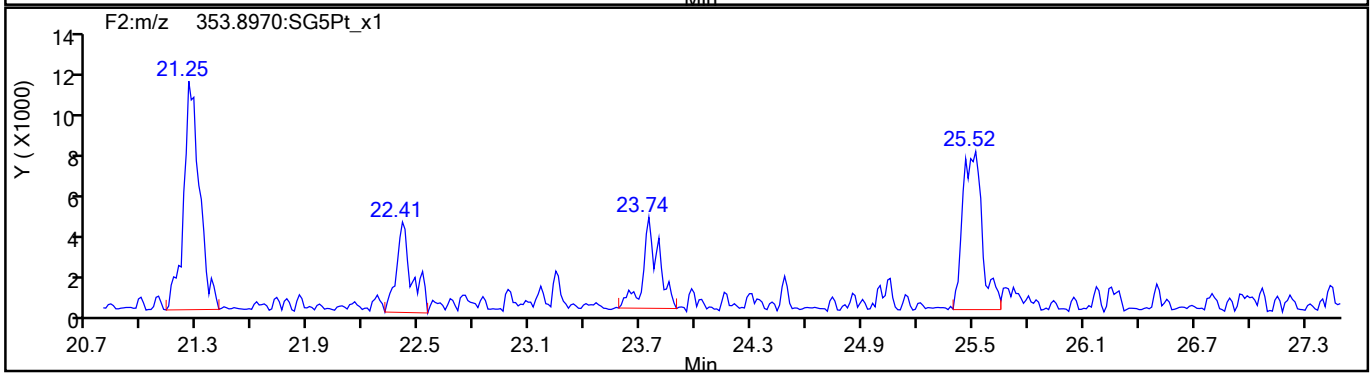

778762

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

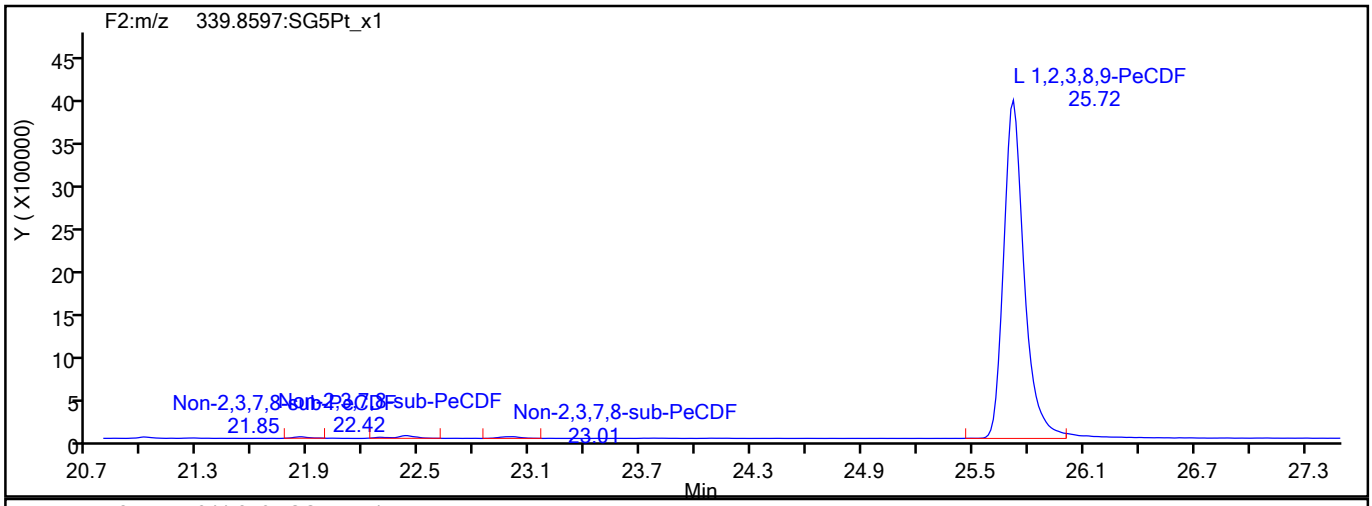

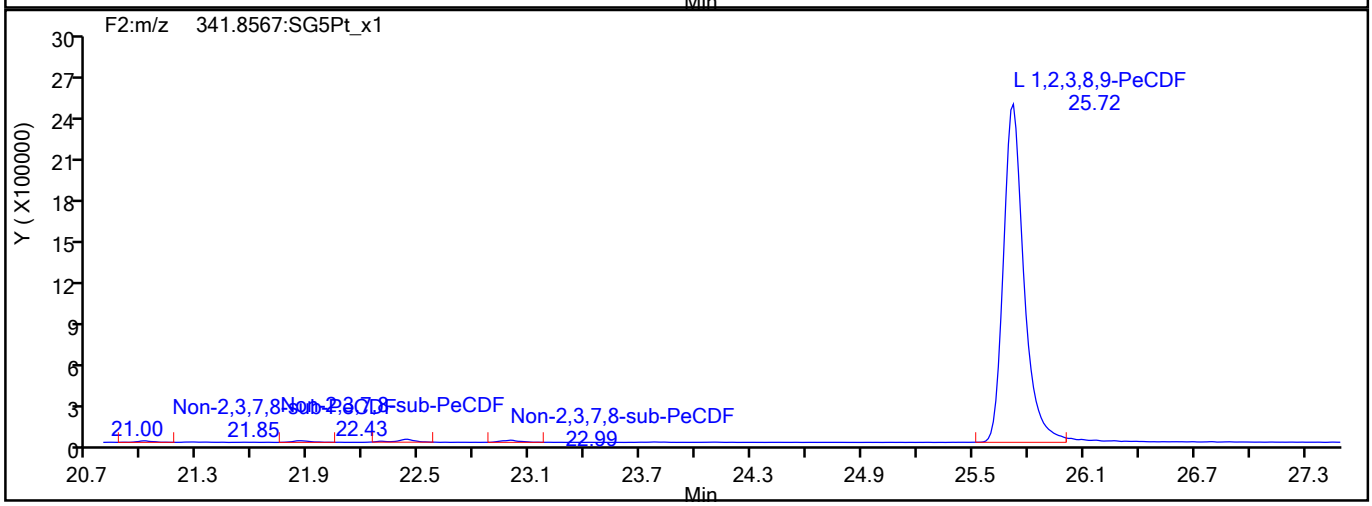

PeCDF Interference Mass

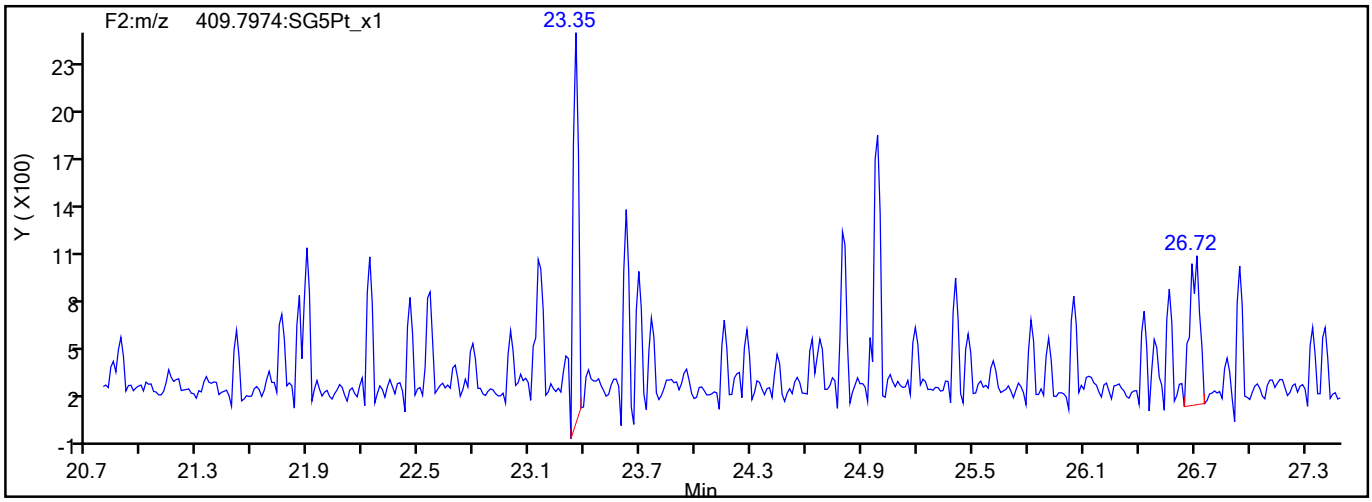

778763

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

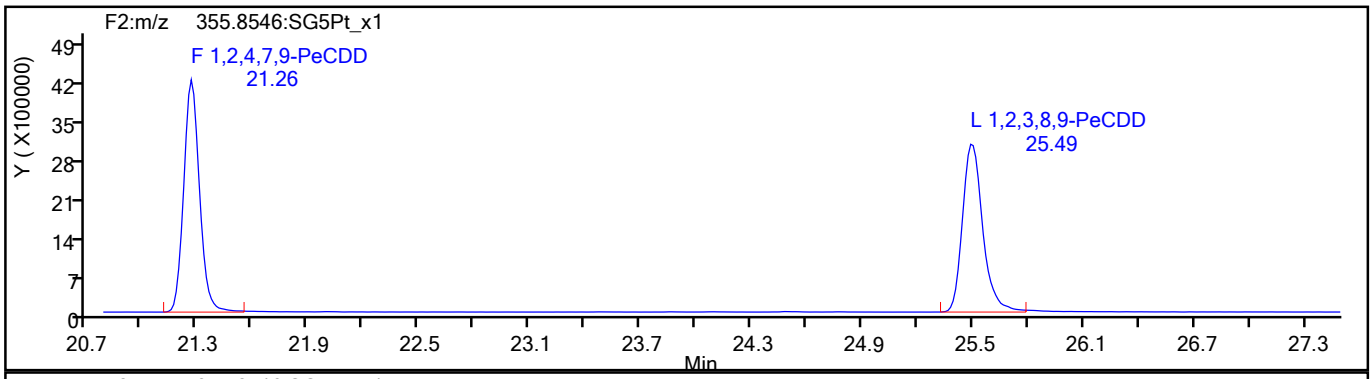

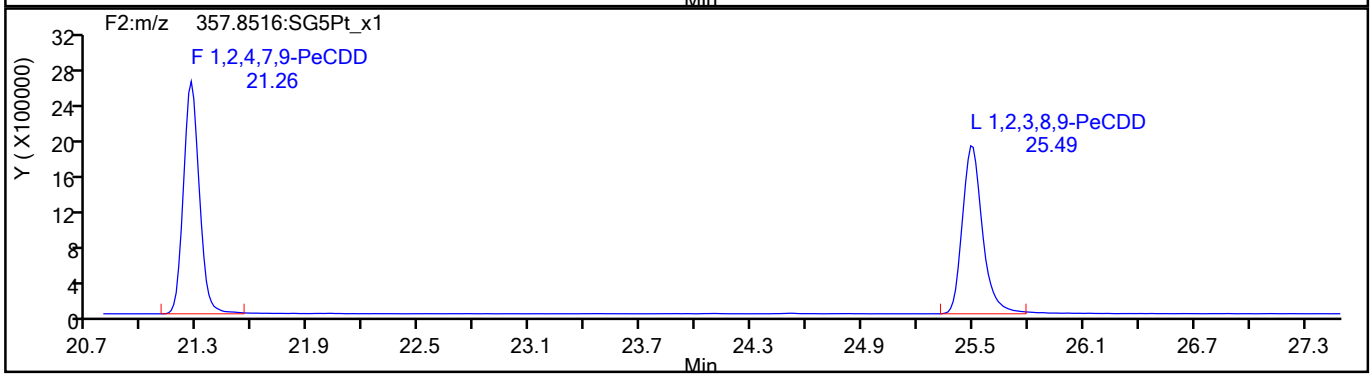

PeCDD Standards

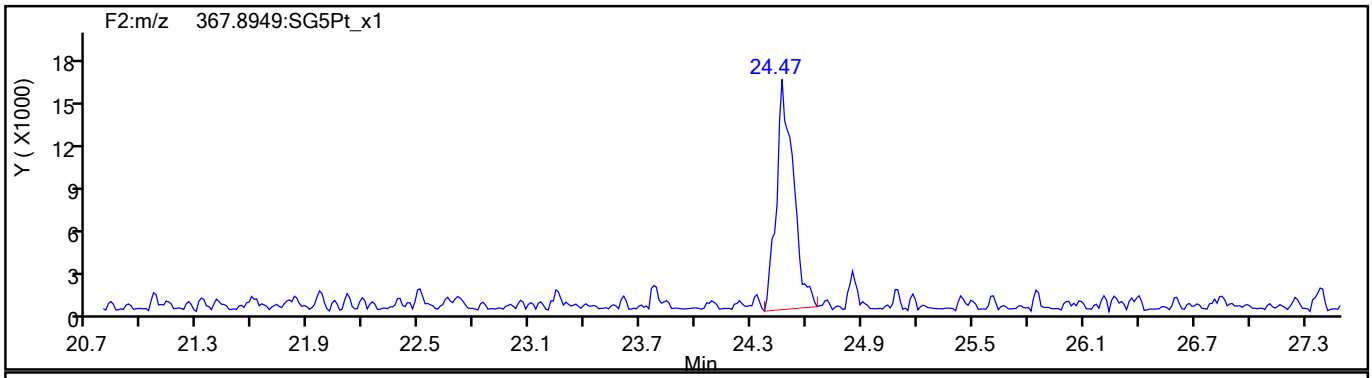

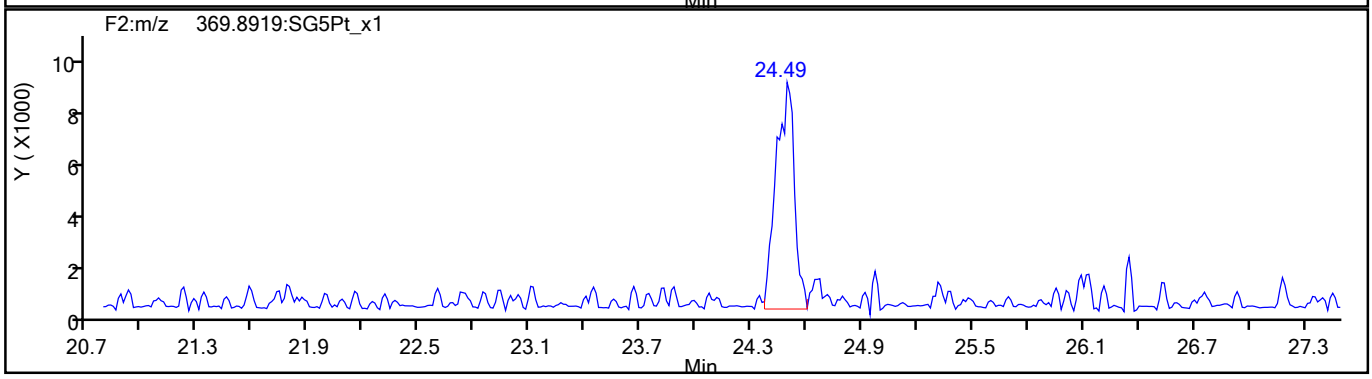

778764

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

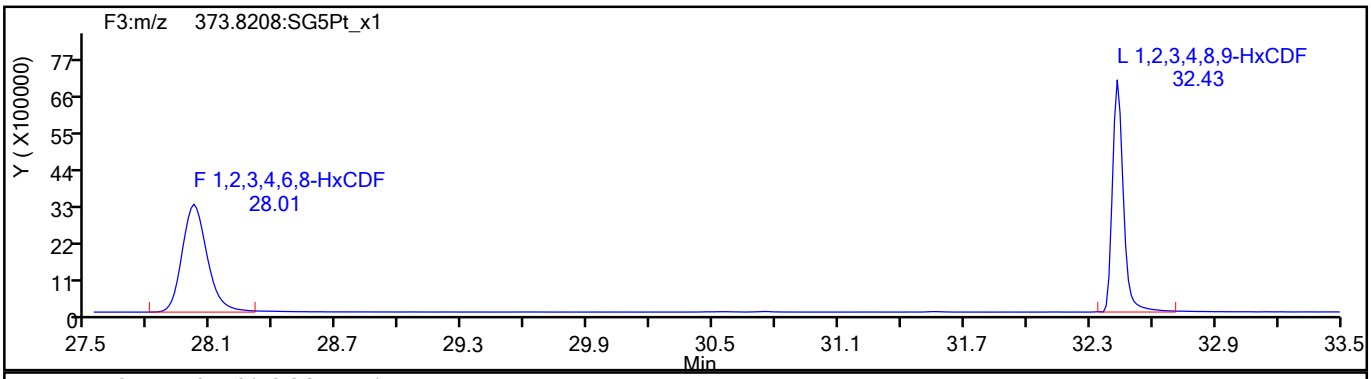

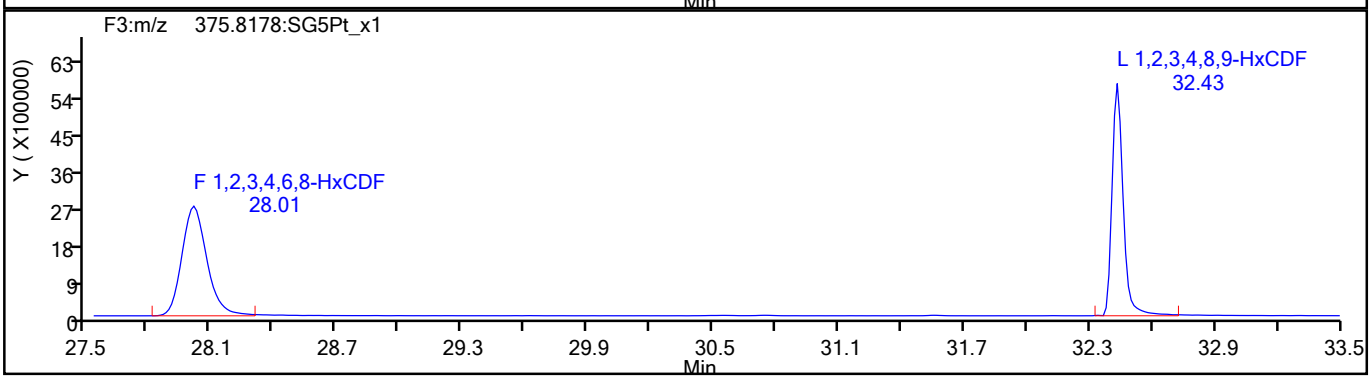

HxCDF Standards

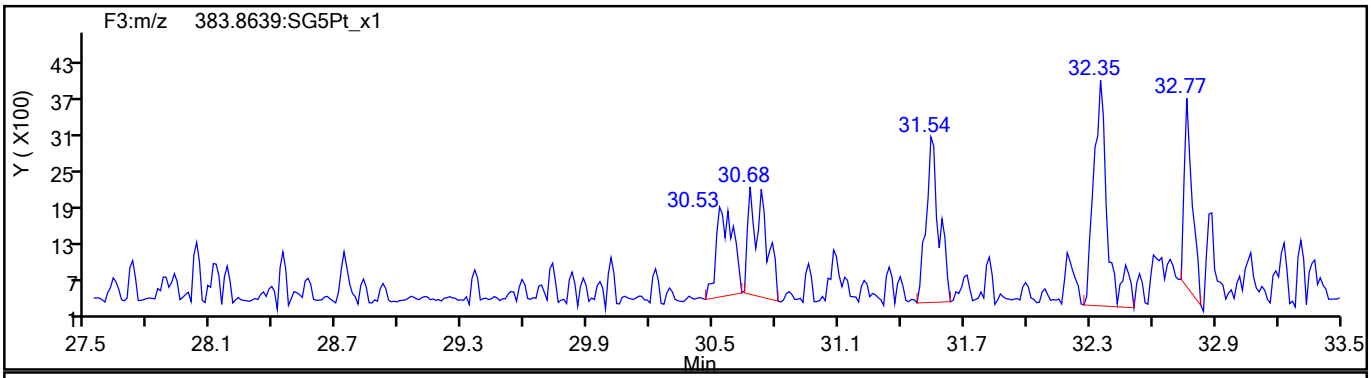

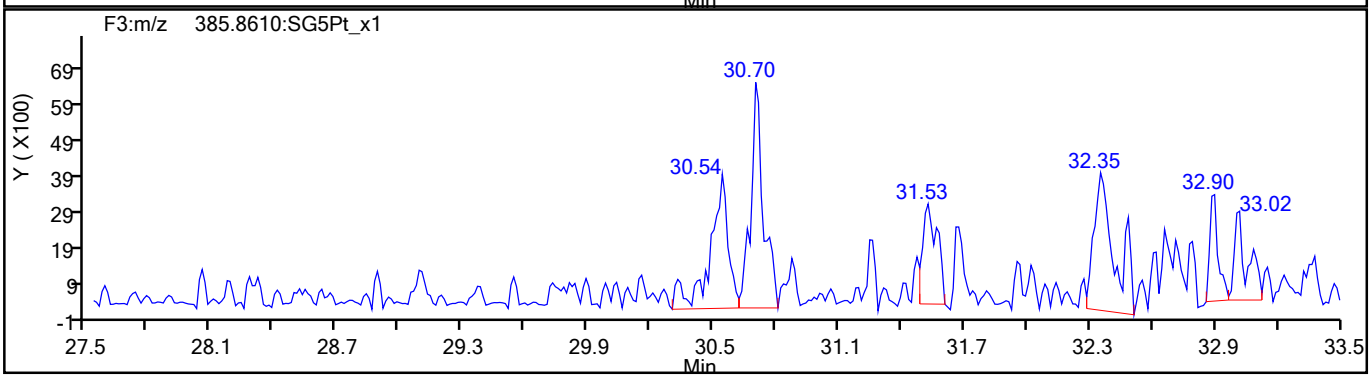

778765

Report Date: 13-Aug-2021 15:47:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

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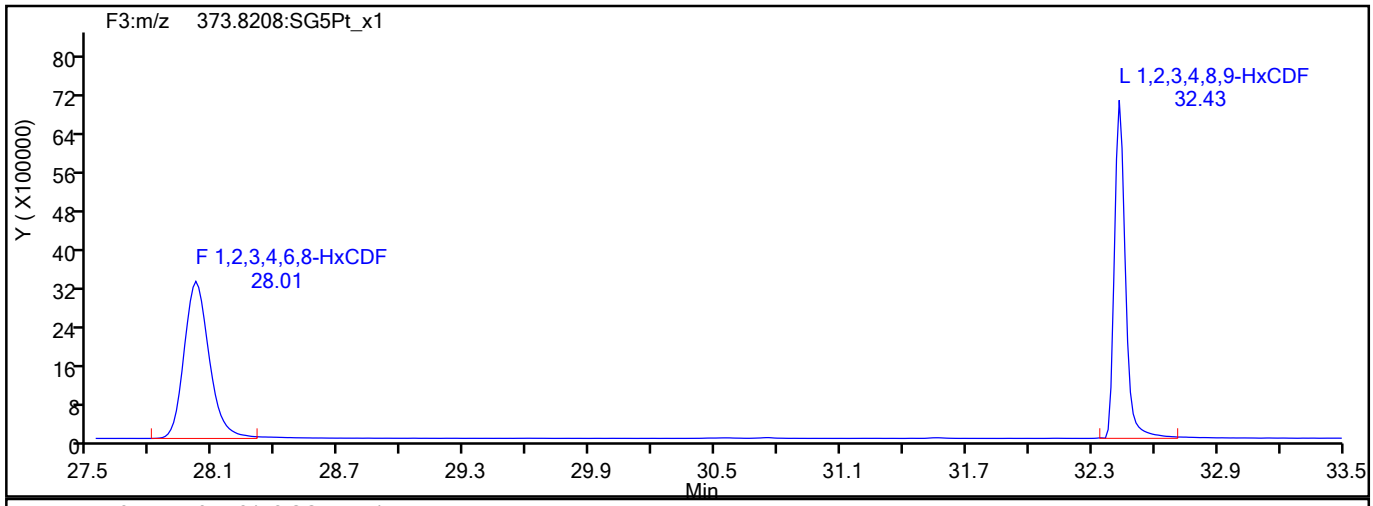

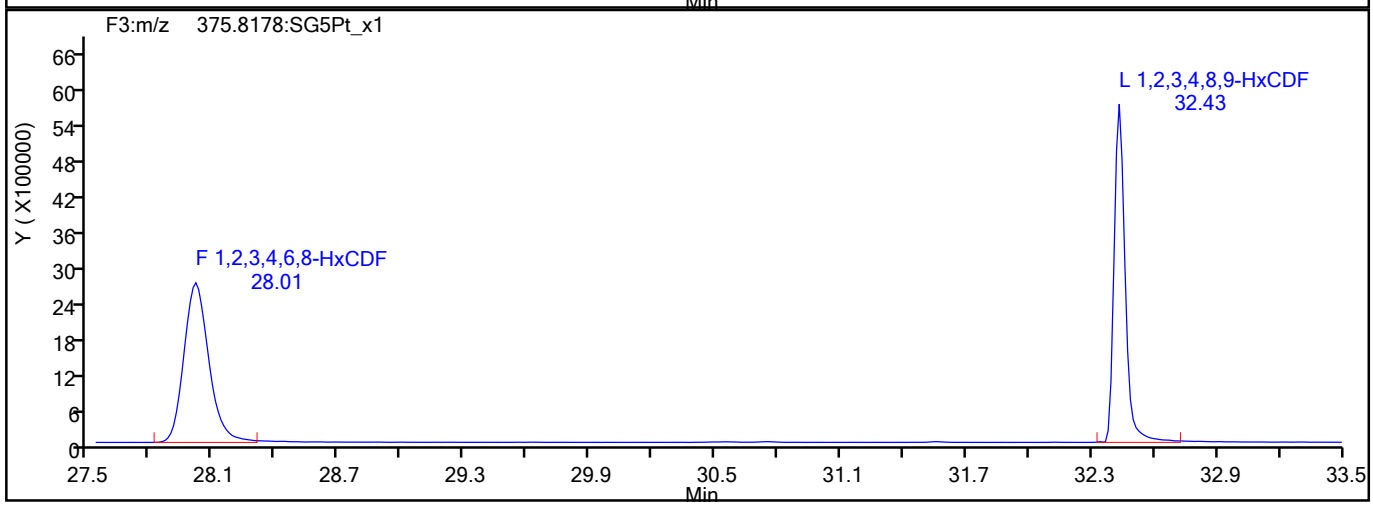

HxCDF Interference Mass

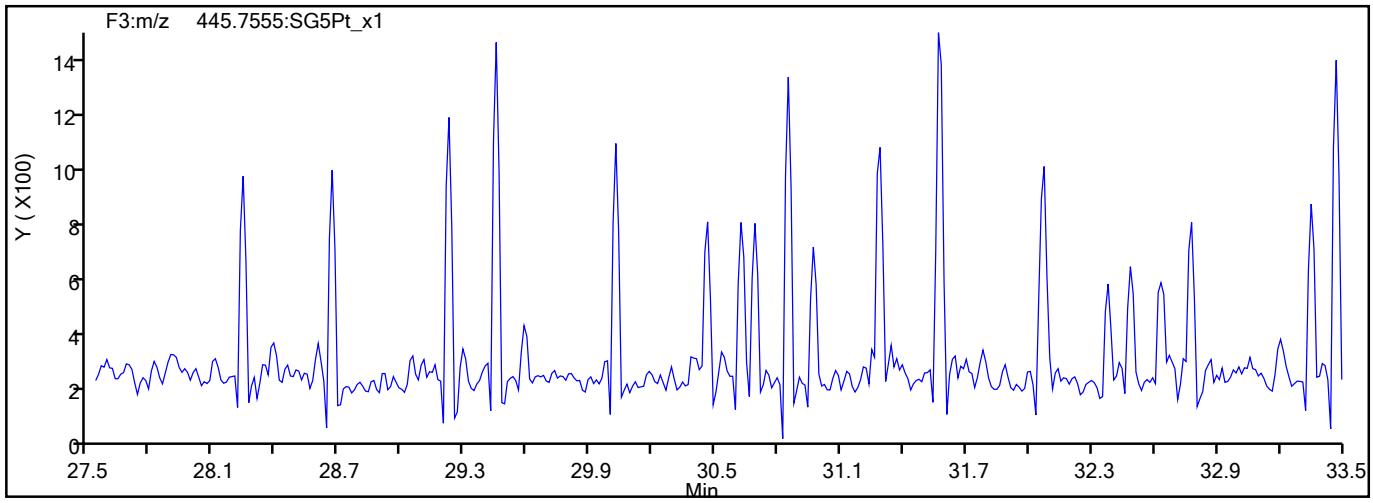

778766

Report Date: 13-Aug-2021 15:47:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

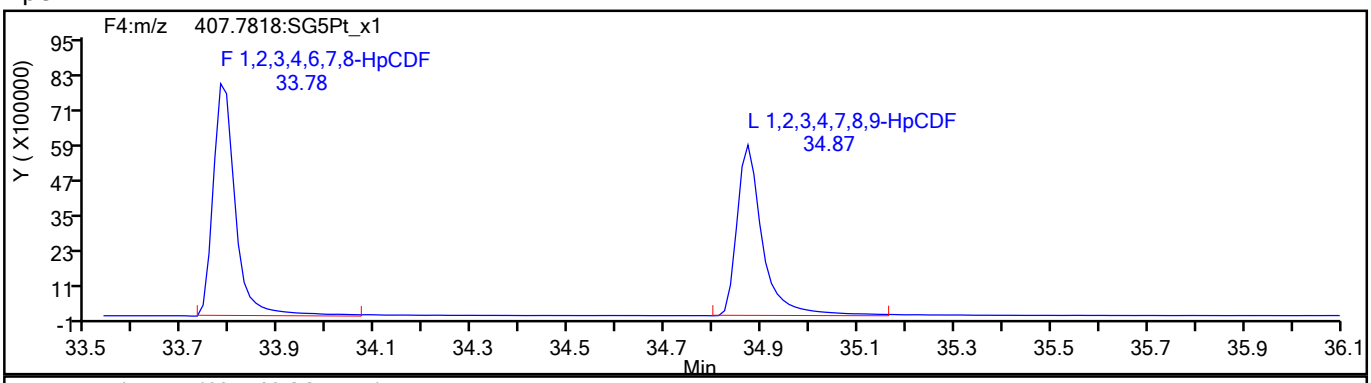

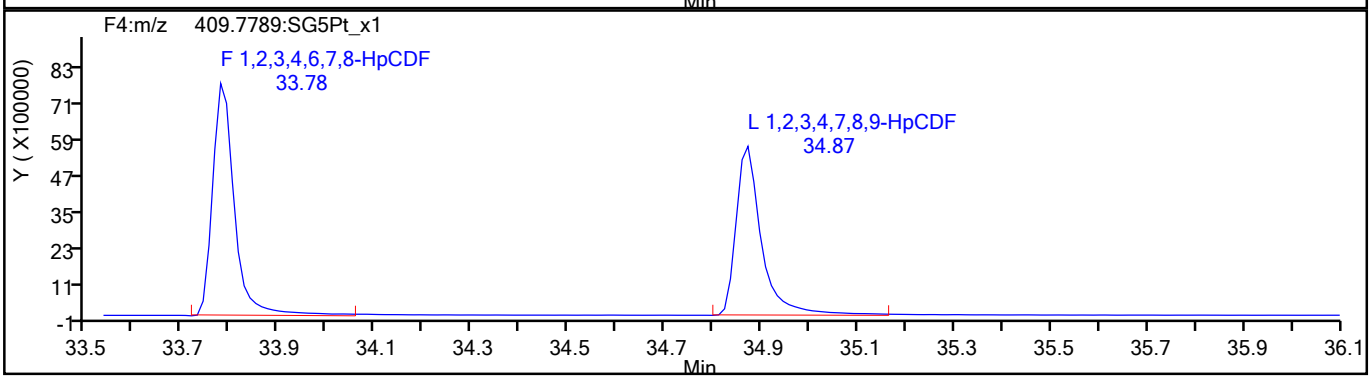

HpCDF Standards

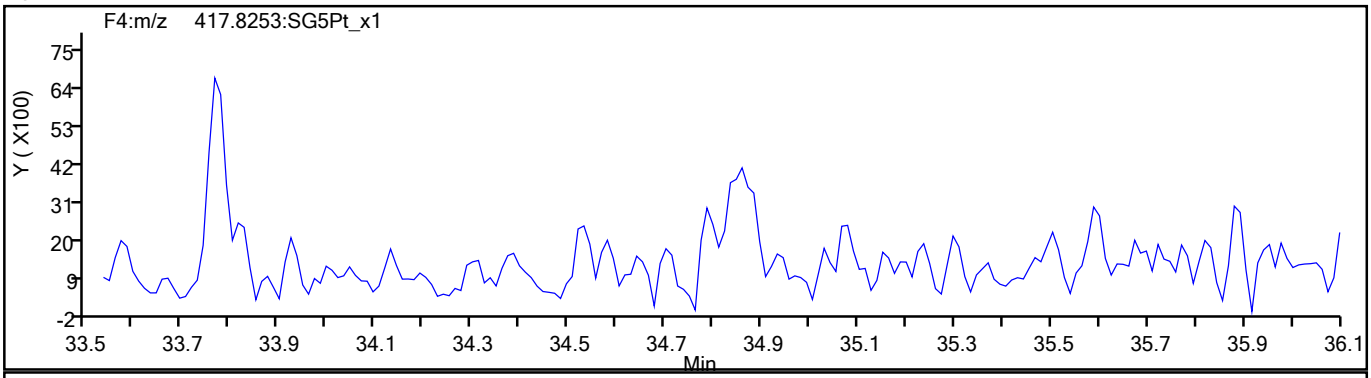

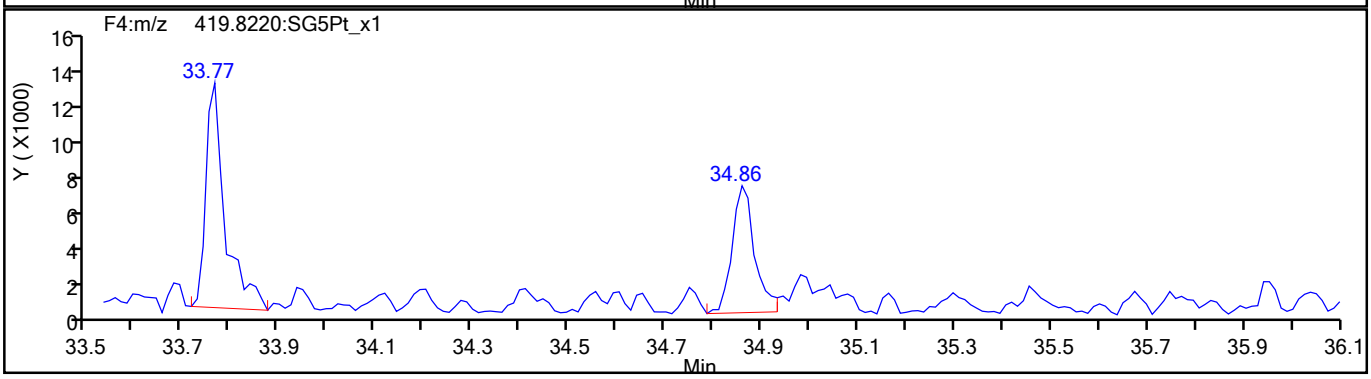

778767

Report Date: 13-Aug-2021 15:47:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

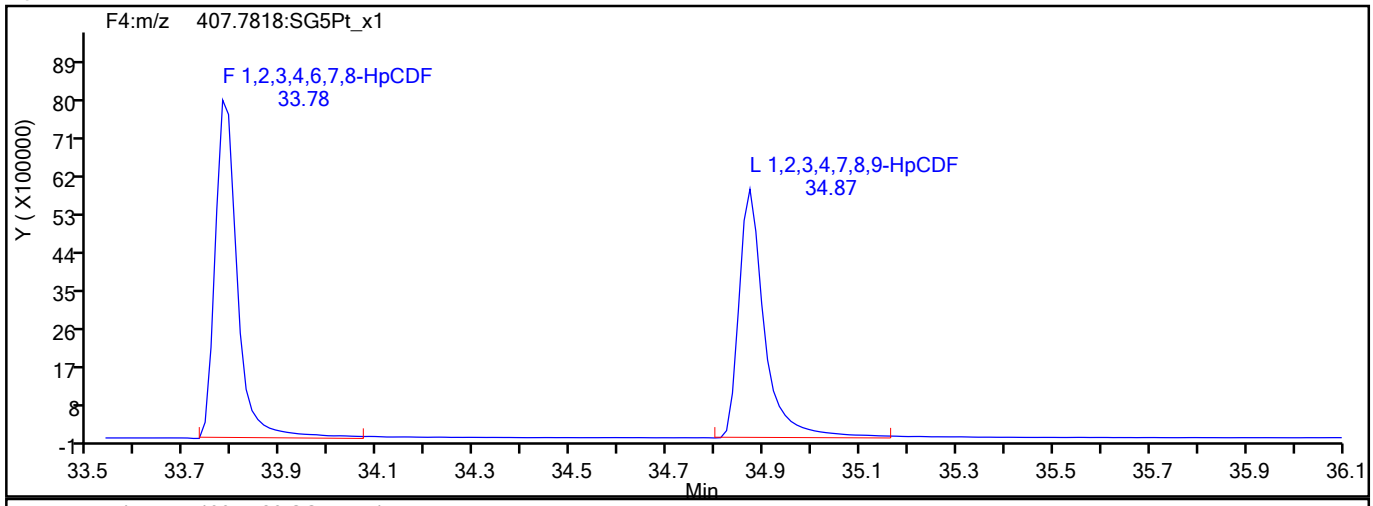

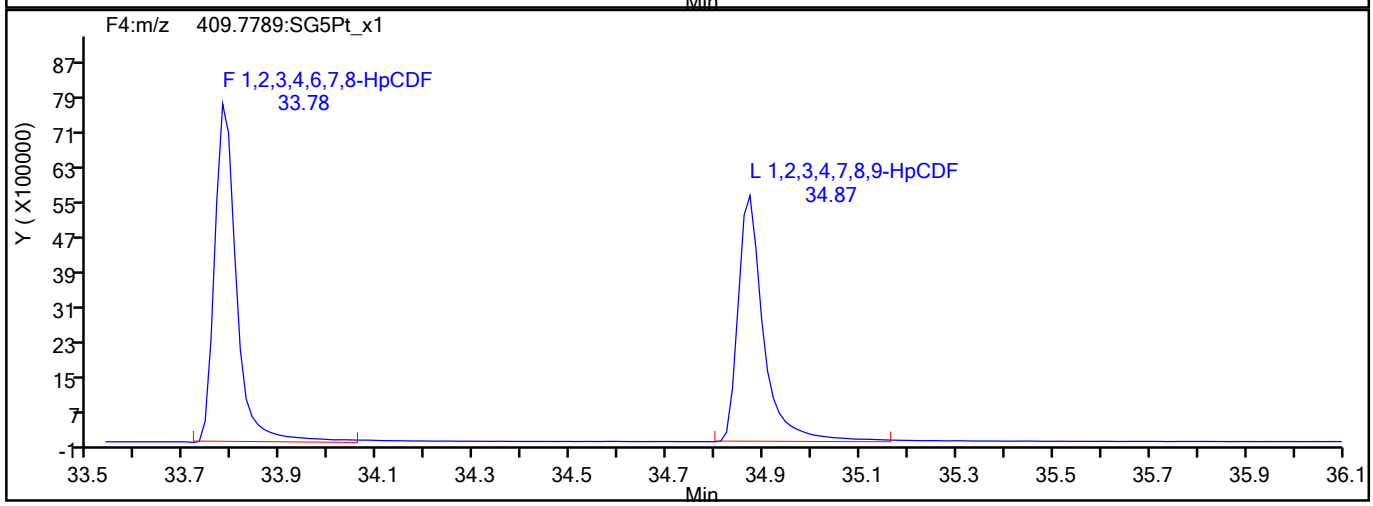

HpCDF Interference Mass

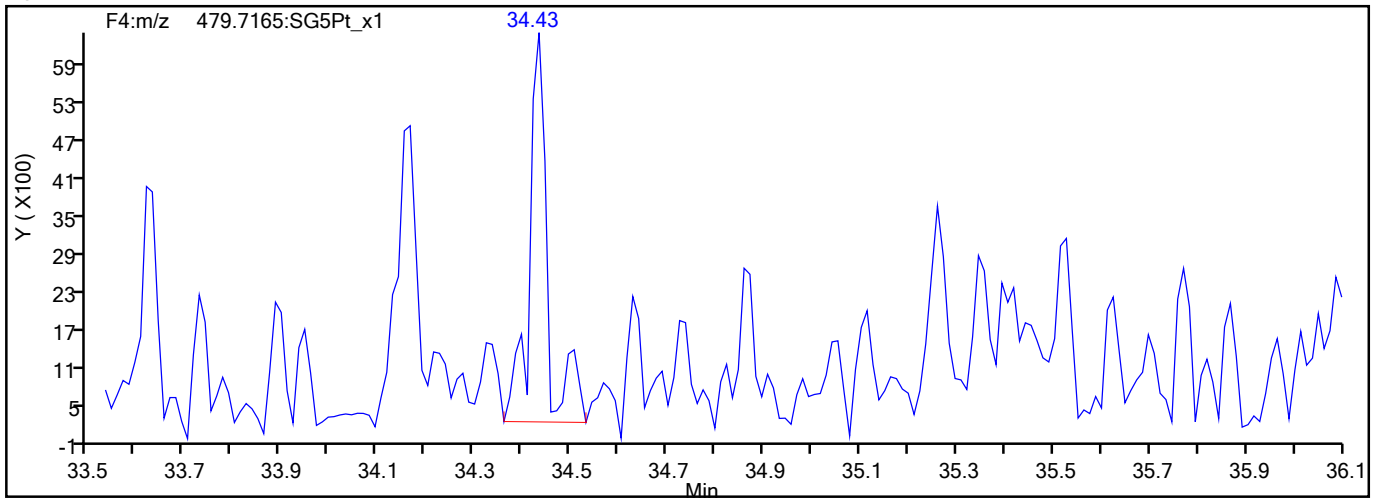

778768

Report Date: 13-Aug-2021 15:47:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

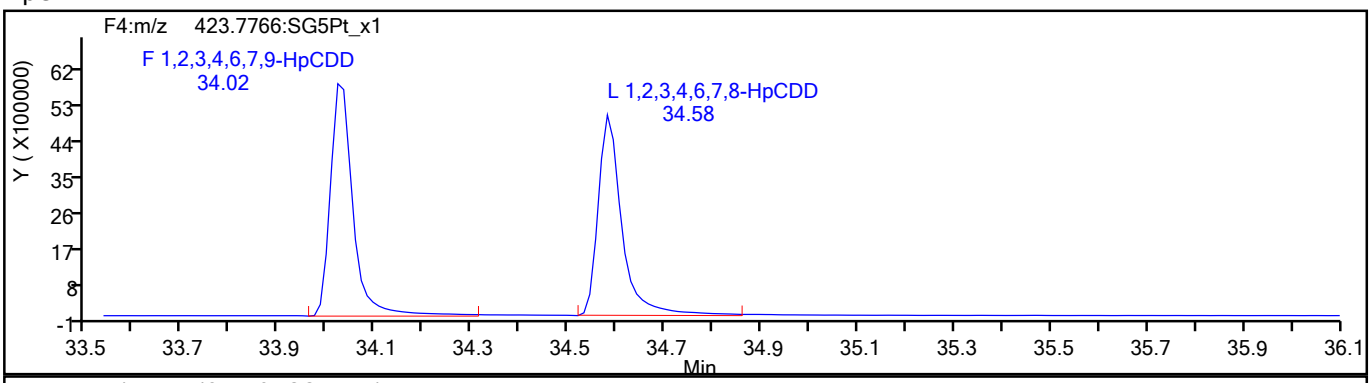

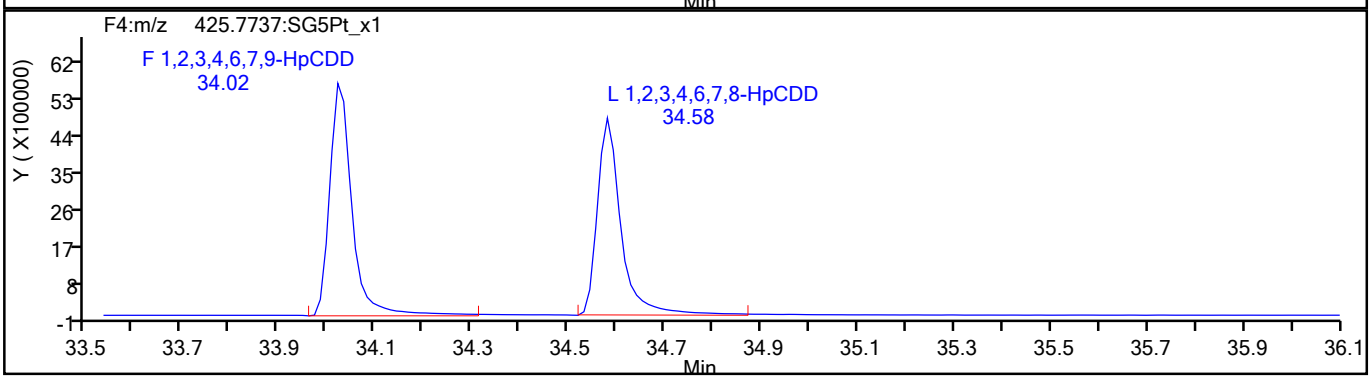

HpCDD Standards

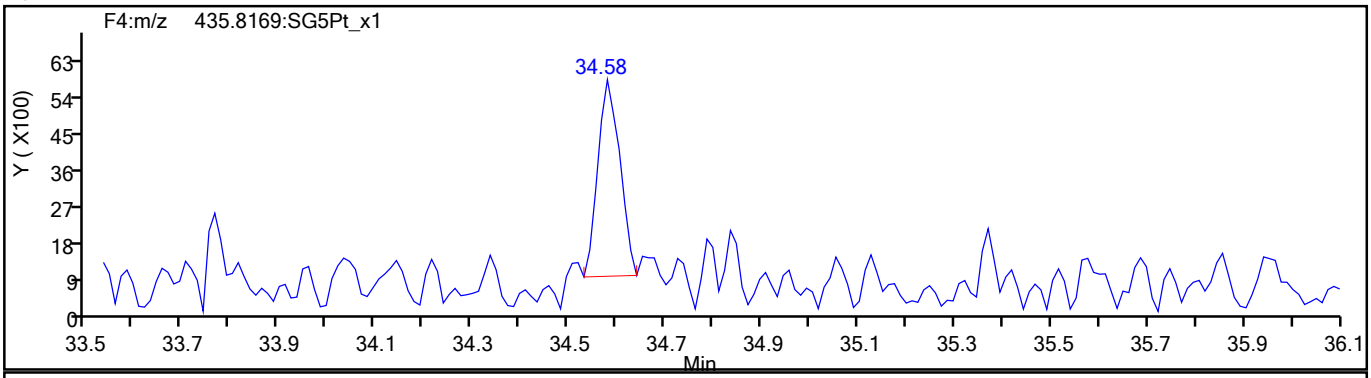

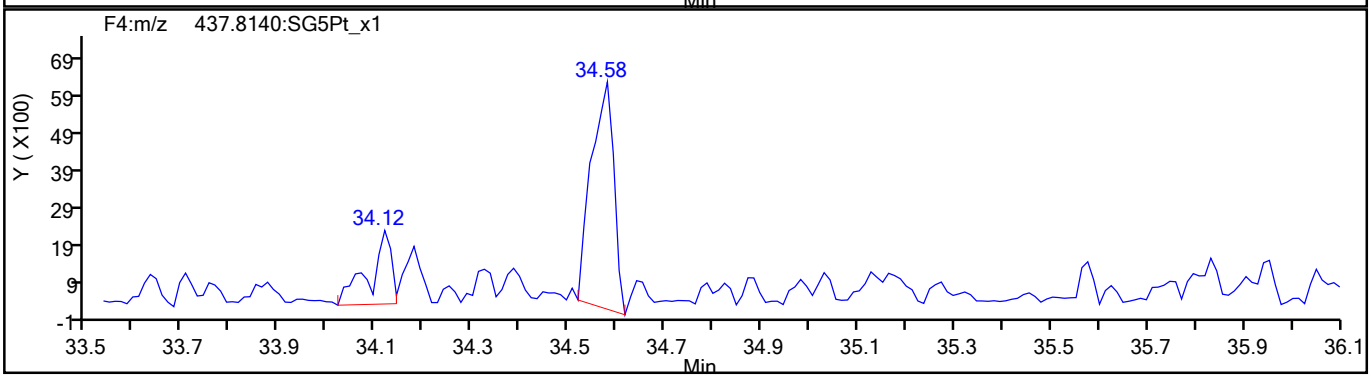

778769

Report Date: 13-Aug-2021 15:47:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

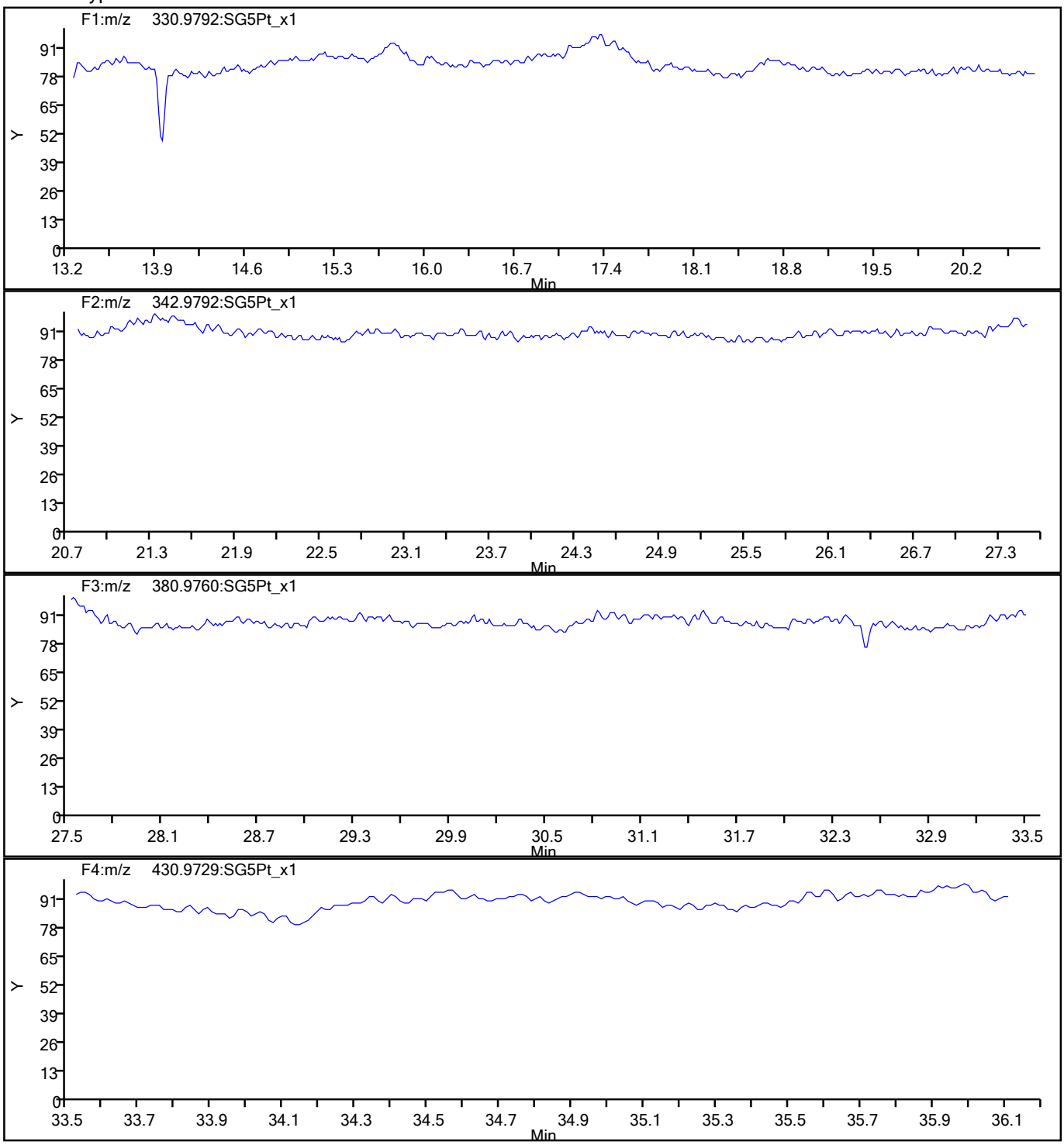

778770

Report Date: 13-Aug-2021 15:47:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_24.d		
Injection Date:	13-Aug-2021 05:48:08	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

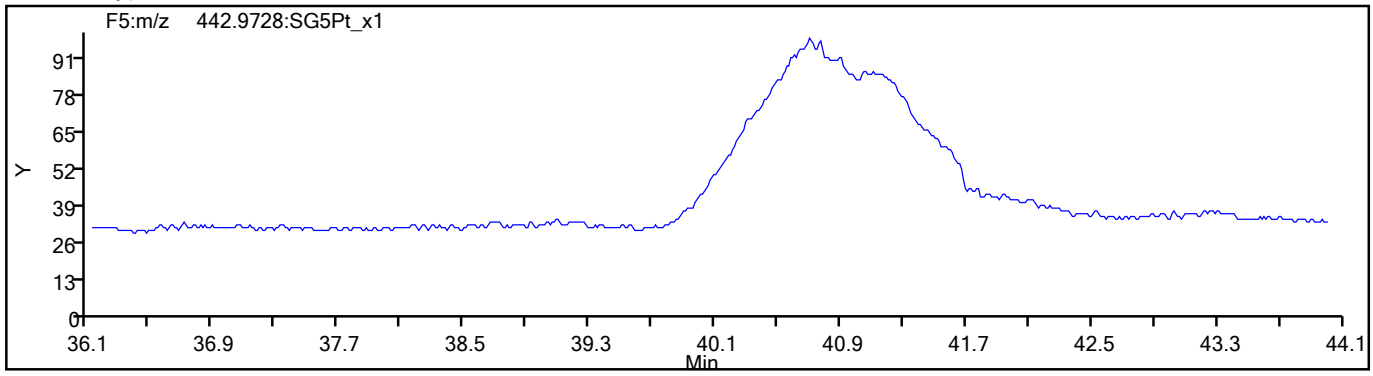

778771

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

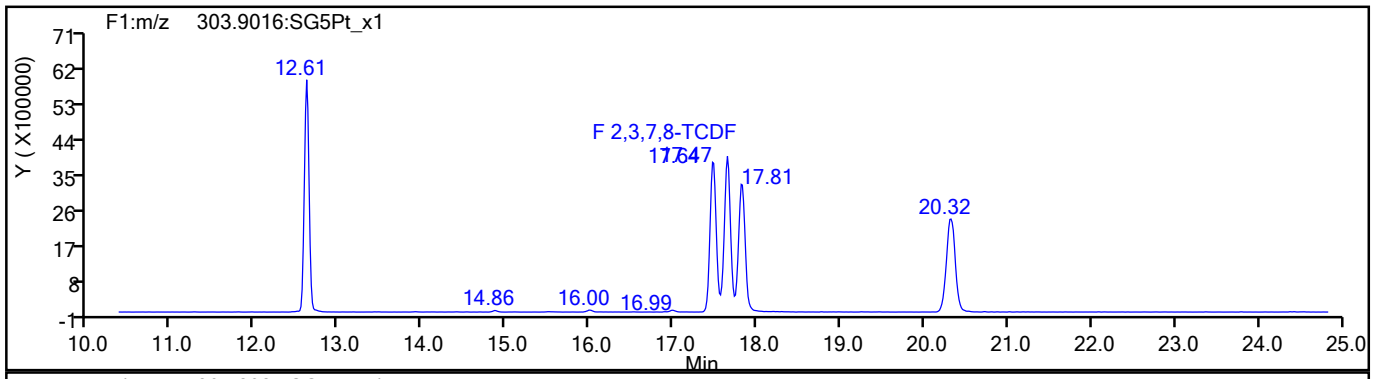

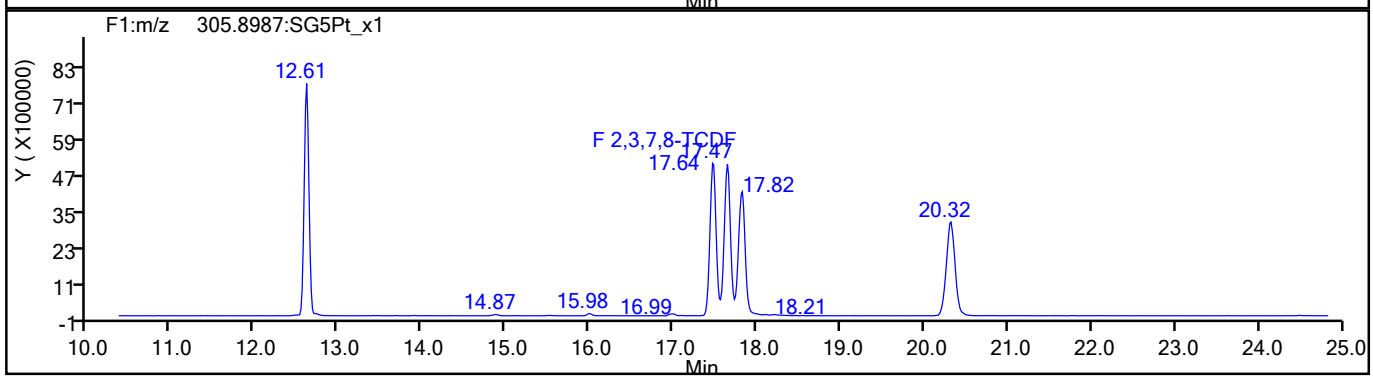

TCDF Standards

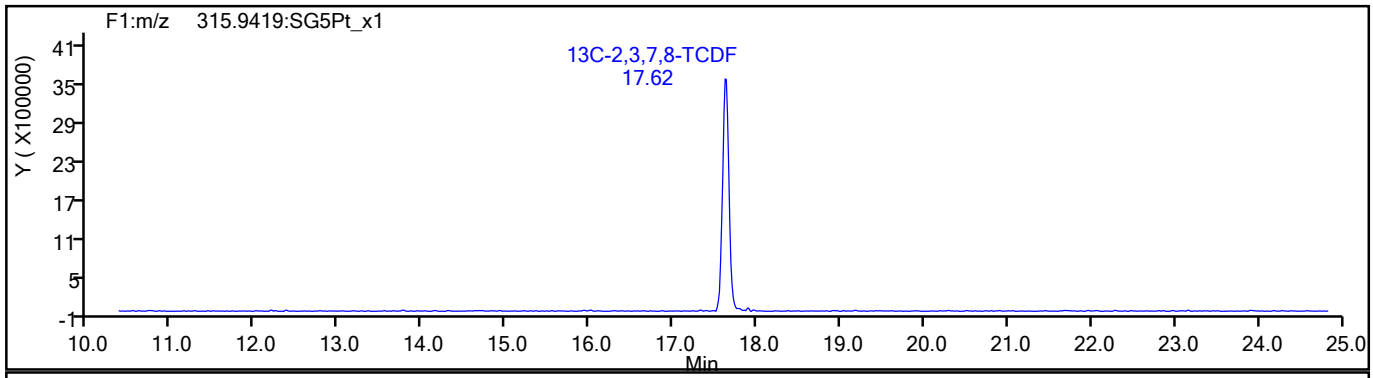

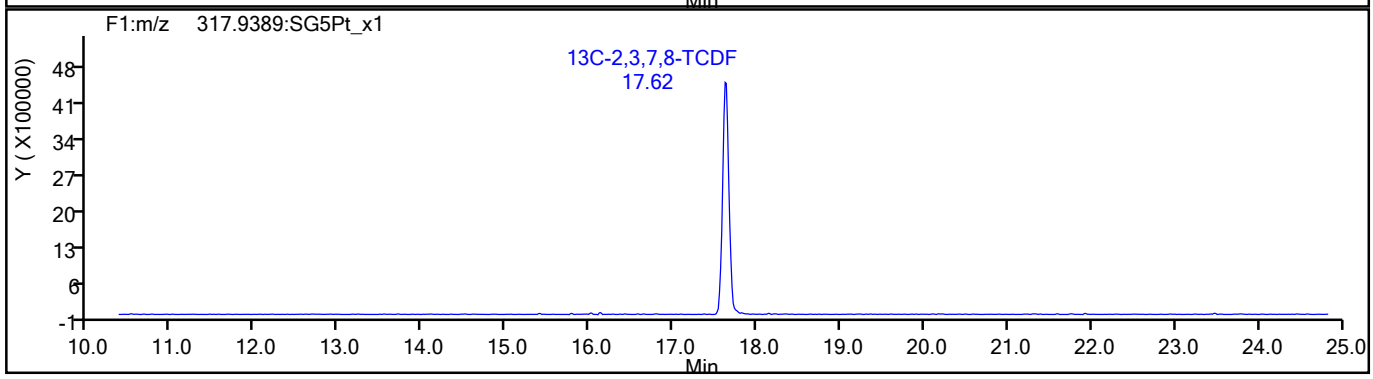

778774

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

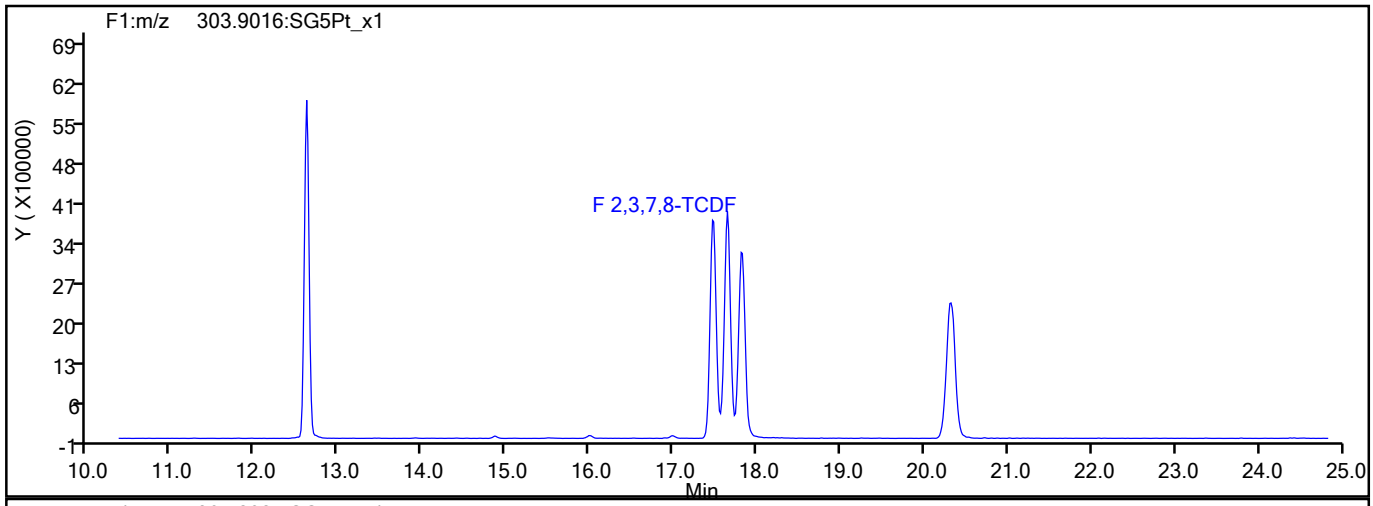

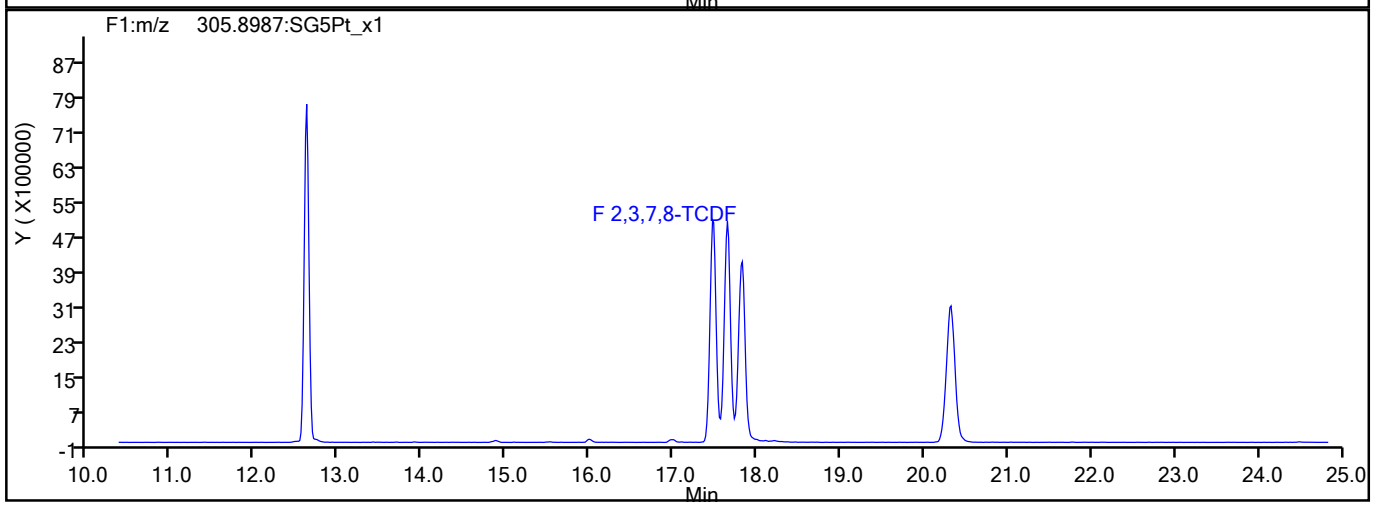

TCDF Interference Mass

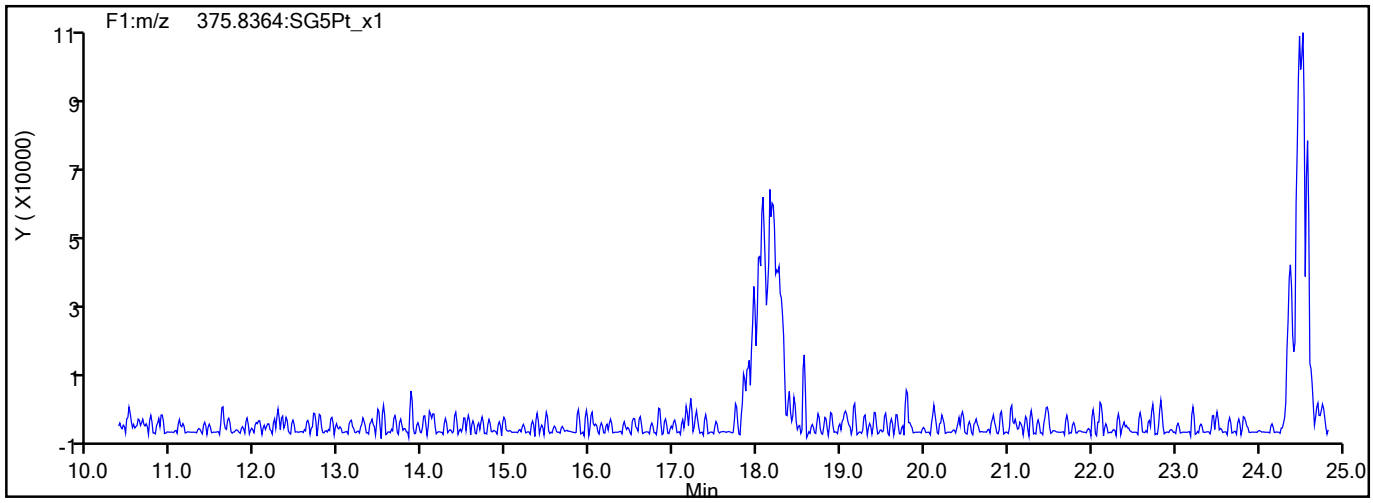

778775

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

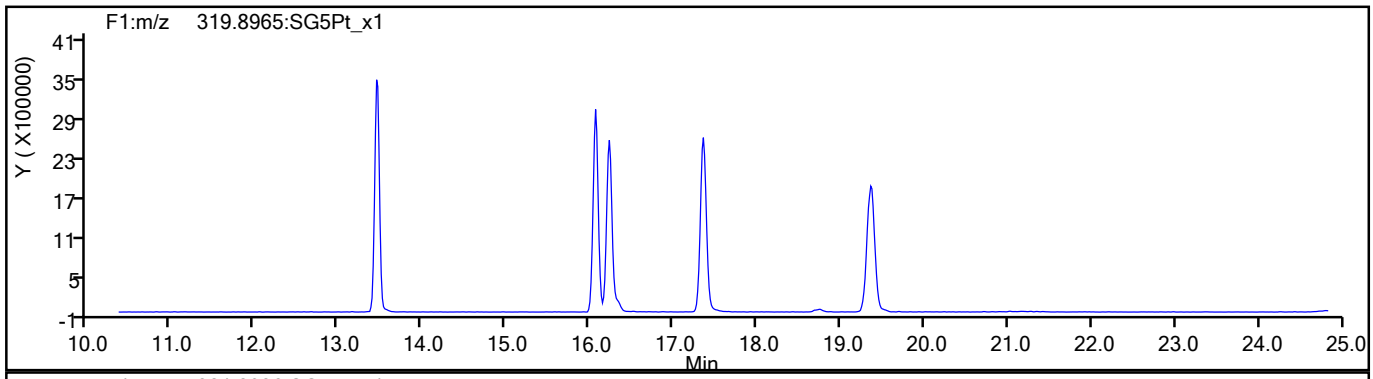

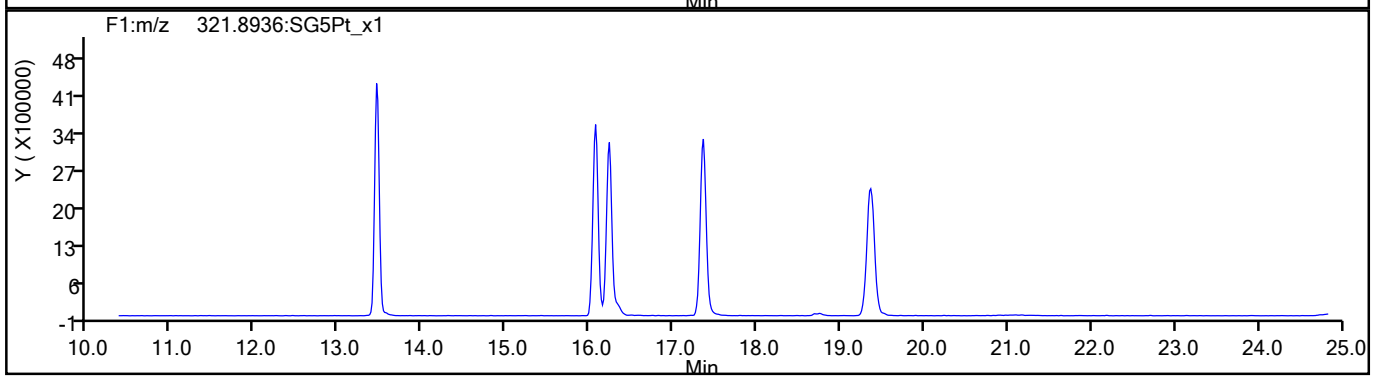

TCDD Standards

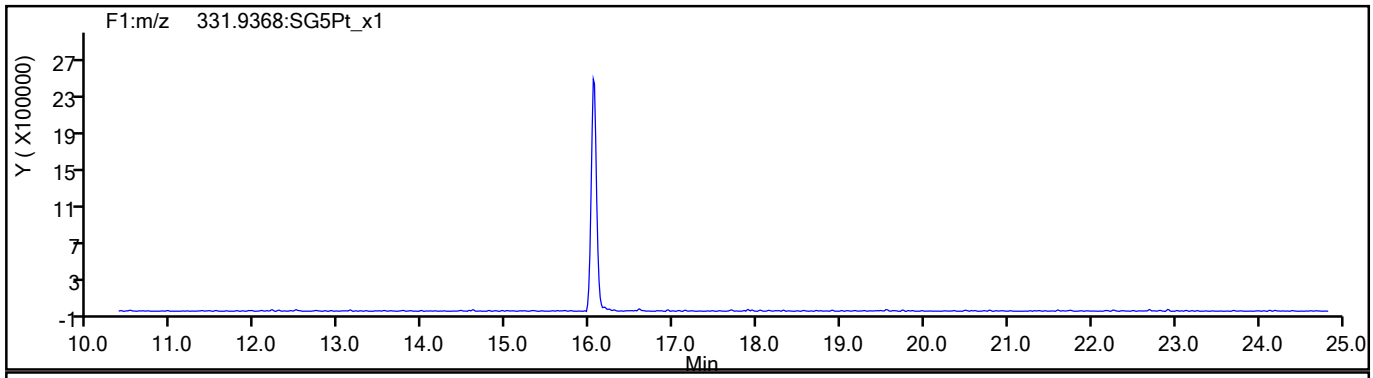

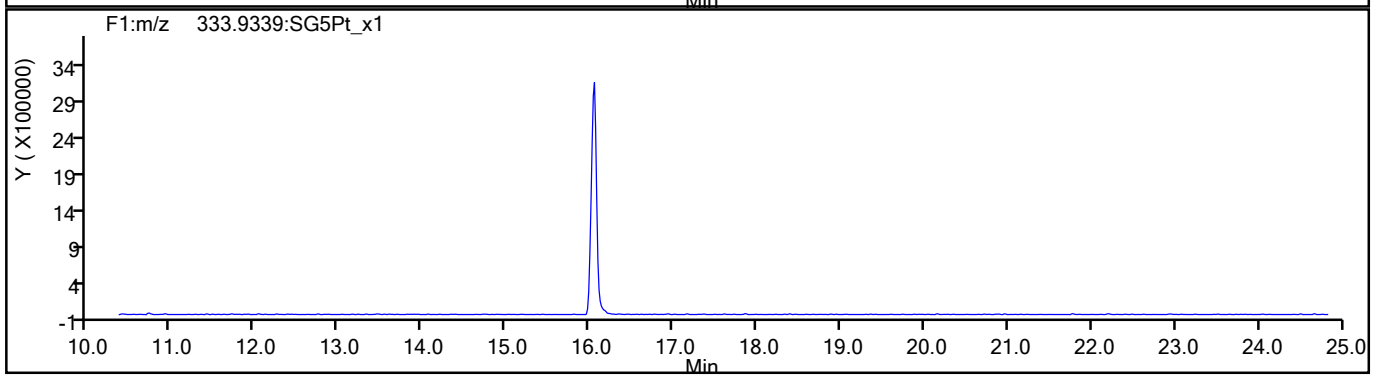

778776

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

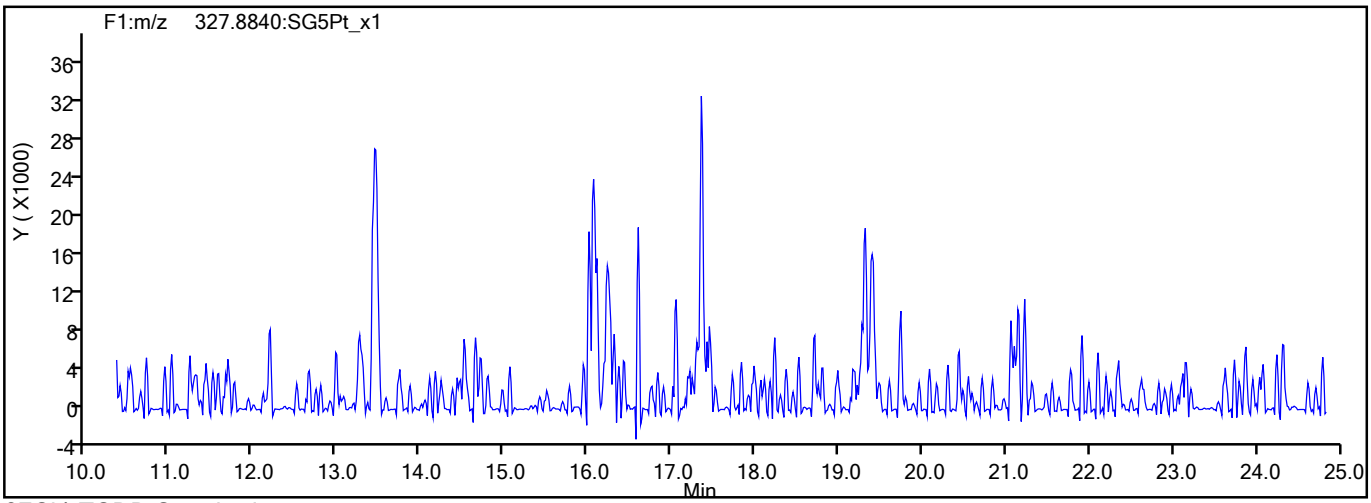

37Cl4-TCDD Standards

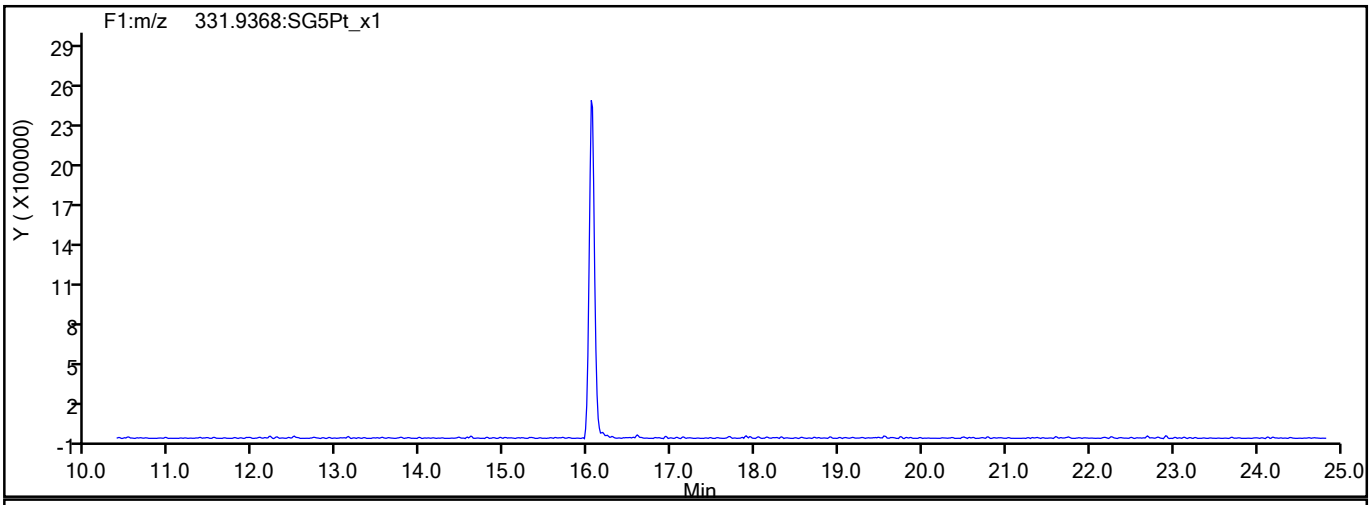

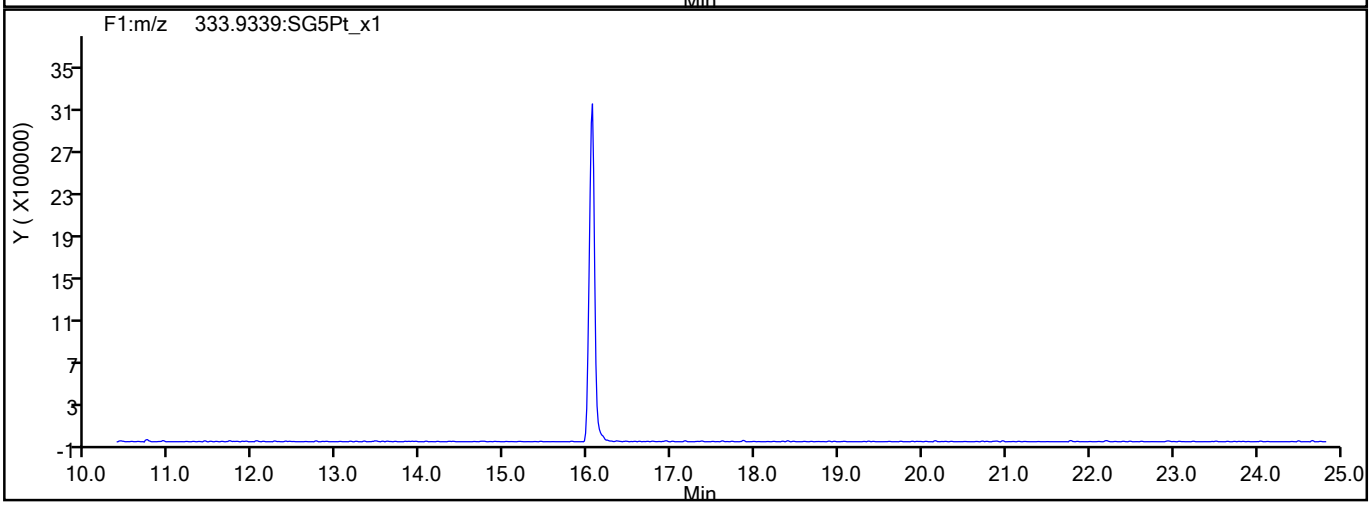

778777

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

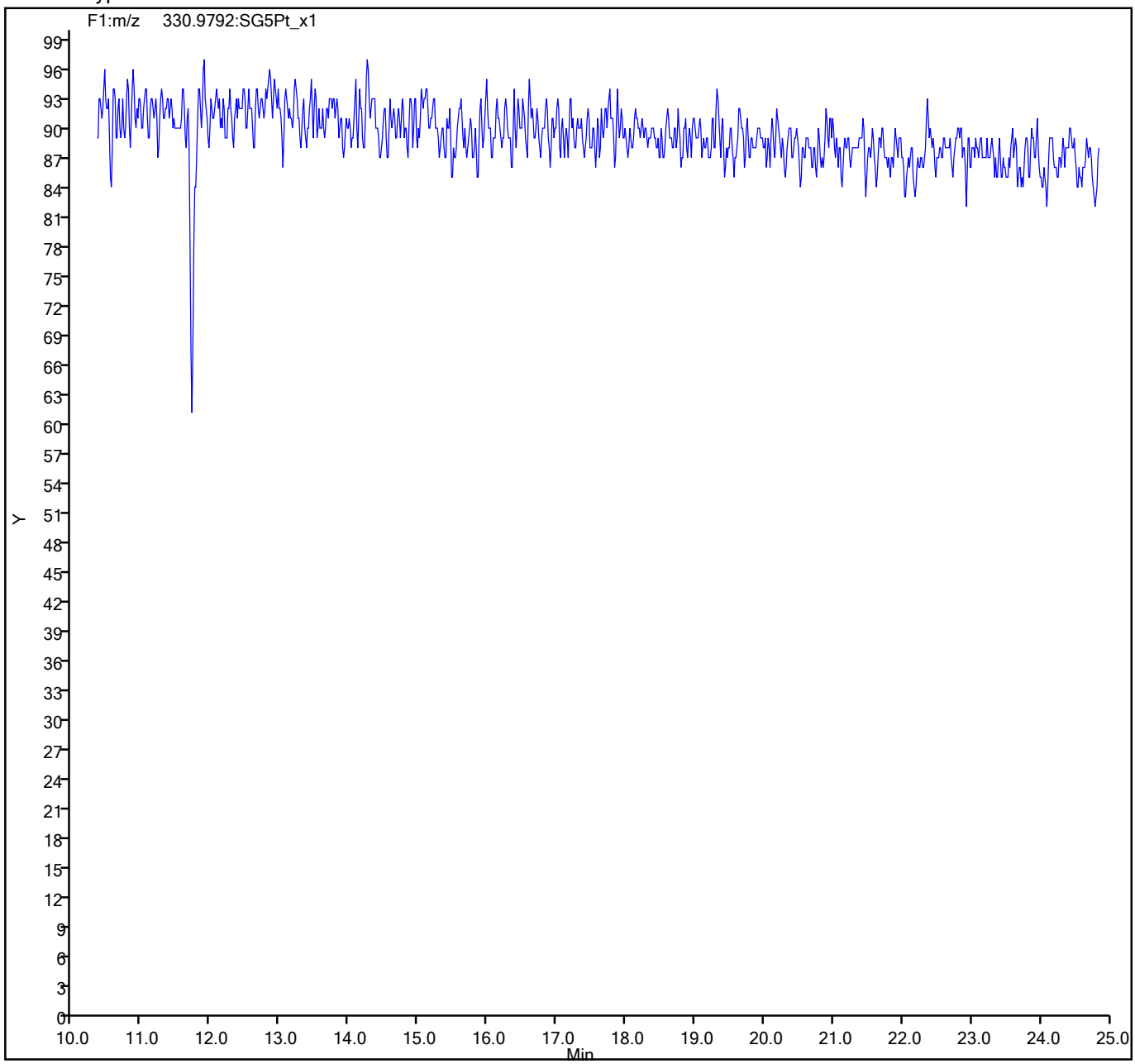

778778

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 21-Aug-2021 13:54:29 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:20 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:00:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.643	21183677	0.78	1.3327					0.00	
2,3,7,8-TCDF	17.657	21670362	0.76	0.9978	41.0	41.0	0.1237	0.1237		
D 13C-2,3,7,8-TCDD	16.079	12627140	0.77	0.8749					0.00	
2,3,7,8-TCDD	16.093	12110737	0.77	1.0570	40.5	36.3	0.1198	0.1198		RQ
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 21-Aug-2021 13:54:29 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:28:20 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 10:00:10

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.643	17.643	0	1.000	9282695	1757658	6824	17060	258		
317.9389	17.629	17.643	-1	1.000	11900982	2236315	6448	16120	347	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.657	17.657	0	1.001	9366824	1823436	1677	4192	1087		
305.8987	17.657	17.657	0	1.001	12303538	2377115	3254	8135	731	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.079	16.079	0	1.000	5487617	1115956	6201	15502	180		
333.9339	16.079	16.079	0	1.000	7139523	1649666	3914	9785	421	0.77(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.093	16.093	0	1.001	5268513	1295383	1820	4550	712		
321.8936	16.093	16.093	0	1.001	8236540	1869801	1682	4205	1112	0.64(0.65-0.89)	
	Empc Correction				6842224	1682315	1682	4205	1000		

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d		
Injection Date:	21-Aug-2021 13:54:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

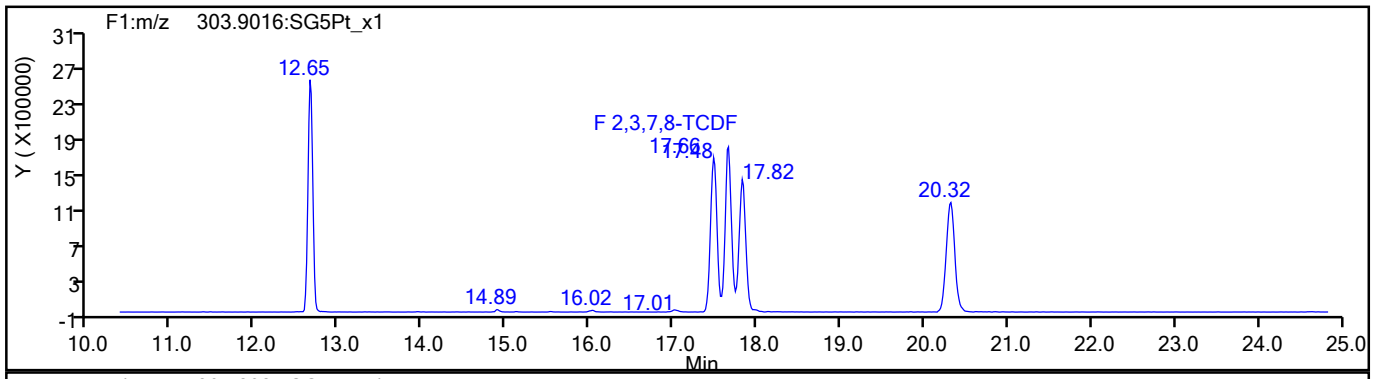

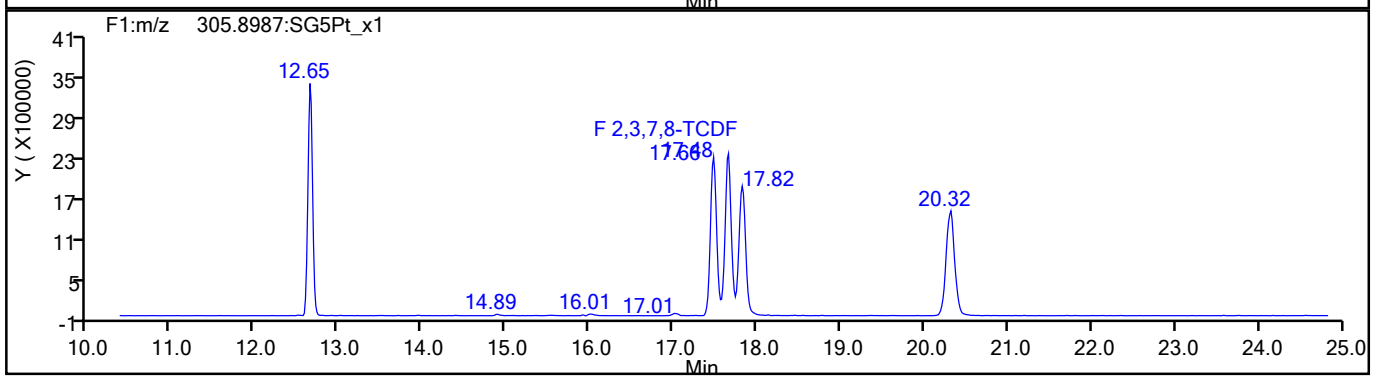

TCDF Standards

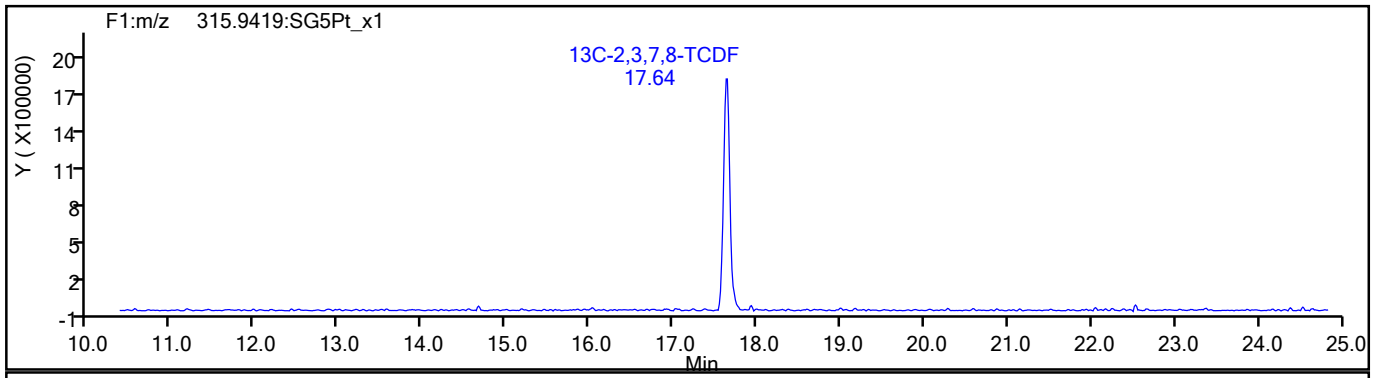

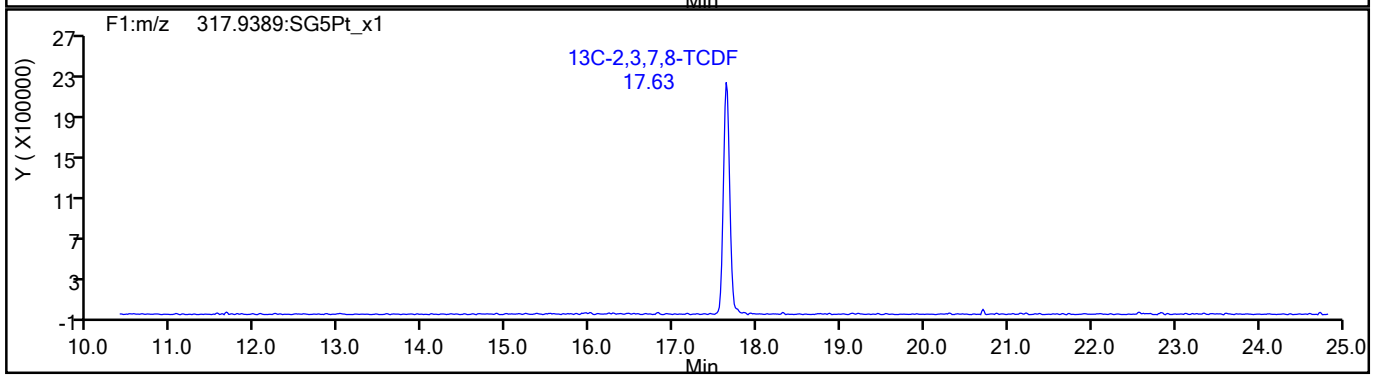

778781

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d		
Injection Date:	21-Aug-2021 13:54:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

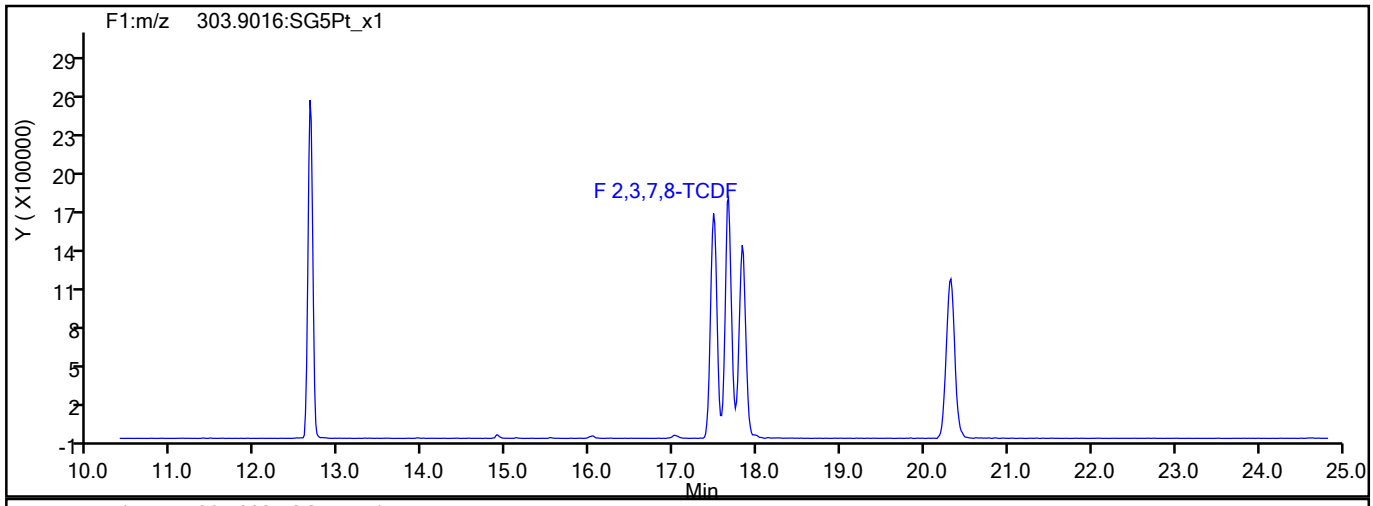

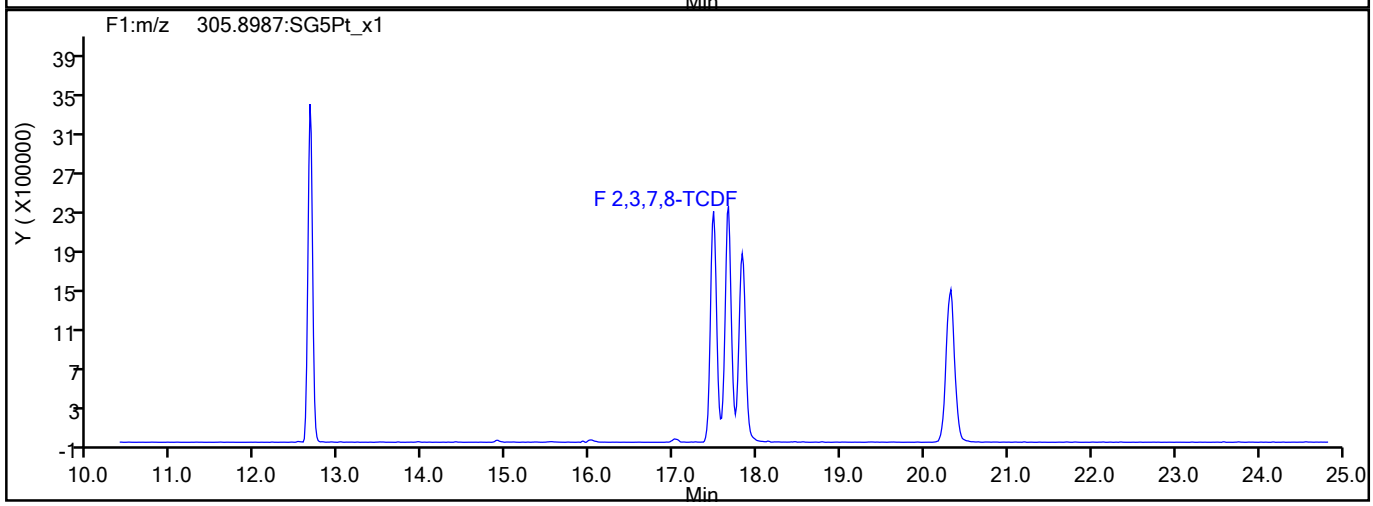

TCDF Interference Mass

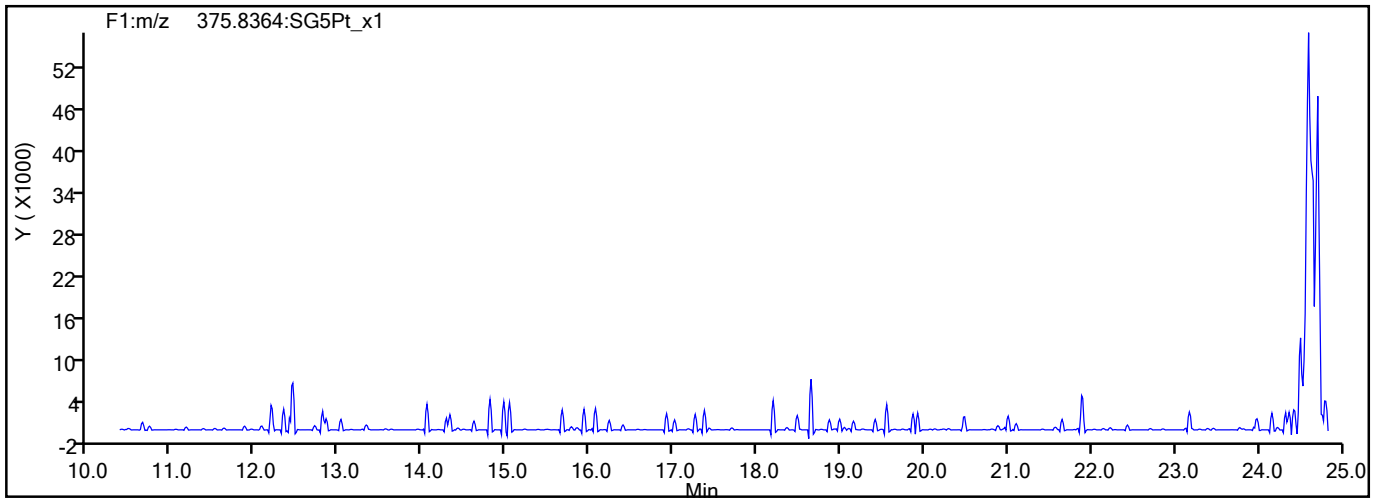

778782

Report Date: 23-Aug-2021 10:28:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125526.b\21AU2111D2_001.d		
Injection Date:	21-Aug-2021 13:54:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518850	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

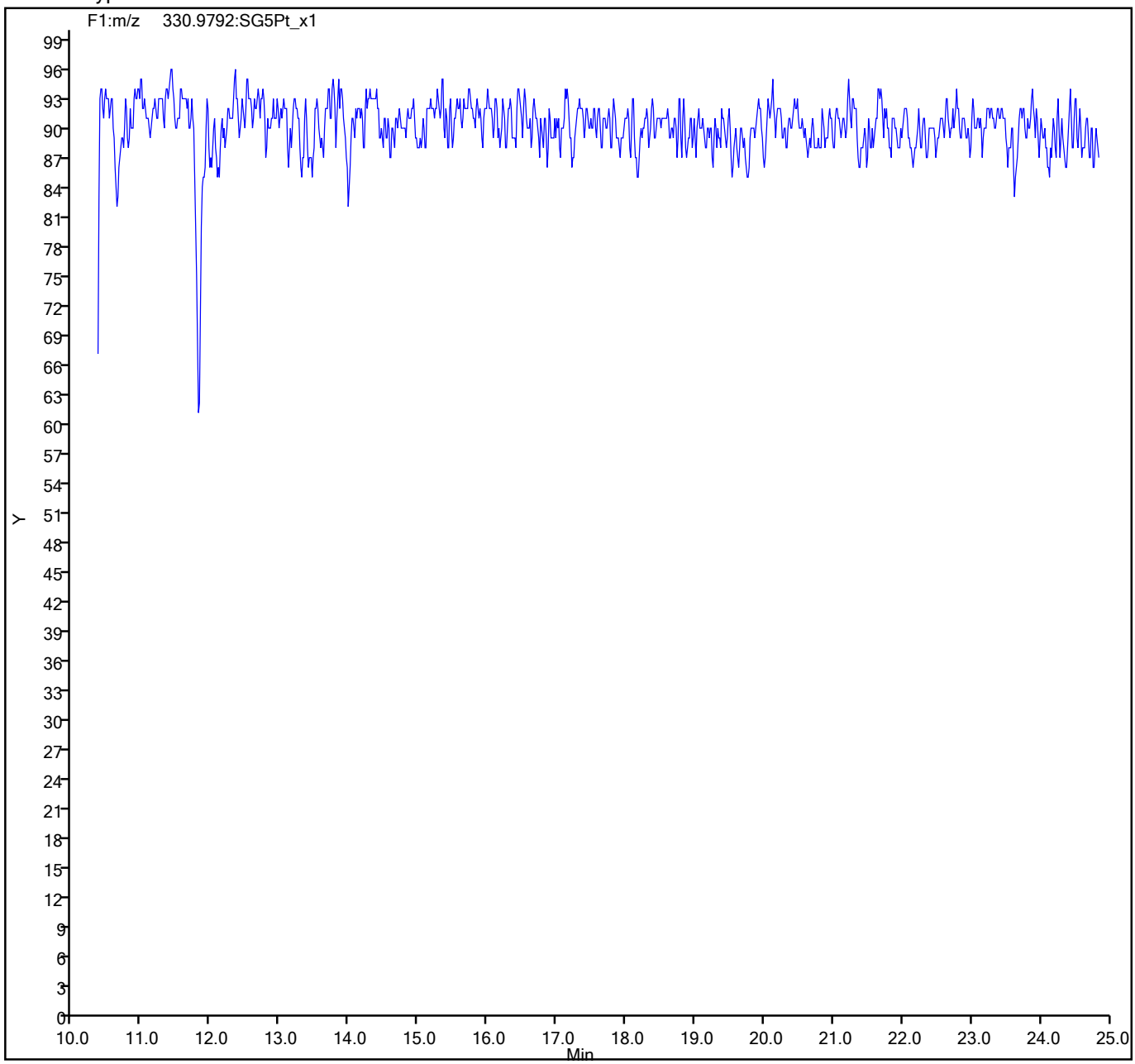

778783

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513227/1-A

Matrix: Sediment Lab File ID: 12AU2110D5_25.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/05/2021 06:41

Sample wt/vol: 10(g) Date Analyzed: 08/13/2021 06:33

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 515770 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.038
51207-31-9	2,3,7,8-TCDF	0.113	J	1.0	0.021
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.051
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.035
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.035
39227-28-6	1,2,3,4,7,8-HxCDD	0.175	J	5.0	0.030
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.032
19408-74-3	1,2,3,7,8,9-HxCDD	0.0808	J	5.0	0.028
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.026
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.026
72918-21-9	1,2,3,7,8,9-HxCDF	0.150	J	5.0	0.021
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.021
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.227	J	5.0	0.044
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.143	J	5.0	0.029
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.036
3268-87-9	OCDD	0.685	J	10	0.042
39001-02-0	OCDF	0.144	J	10	0.023
41903-57-5	Total TCDD	0.0948	J	1.0	0.038
30402-14-3	Total TCDF	0.210	J	1.0	0.021
36088-22-9	Total PeCDD	ND		5.0	0.051
30402-15-4	Total PeCDF	ND		5.0	0.035
34465-46-8	Total HxCDD	0.451	J	5.0	0.030
55684-94-1	Total HxCDF	0.150	J	5.0	0.023
37871-00-4	Total HpCDD	0.472	J	5.0	0.044
38998-75-3	Total HpCDF	0.143	J	5.0	0.032

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513227/1-A

Matrix: Sediment Lab File ID: 12AU2110D5_25.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/05/2021 06:41

Sample wt/vol: 10(g) Date Analyzed: 08/13/2021 06:33

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 515770 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	62		25-164
89059-46-1	13C-2,3,7,8-TCDF	58		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	63		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	59		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	64		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	64		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	58		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	61		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	56		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	57		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	56		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	69		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	65		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	73		26-138
114423-97-1	13C-OCDD	79		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	80		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Sample Type: MB
Inject. Date: 13-Aug-2021 06:33:12 ALS Bottle#: 29 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513227/1-a mb 320-513227/1-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:38:33 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: arghestanis Date: 13-Aug-2021 15:39:03

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	90453078	0.81	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.341	85218486	0.78	1.6249	58.0	58.0	0.0748	0.0748	57.98	
2,3,7,8-TCDF	17.356	49197	0.77	1.0239	0.0635	0.0564	0.0106	0.0106		RQM
A Non-2,3,7,8-sub-TCDF	17.069	42477	0.77	1.0239	0.0527	0.0487	0.0106	0.0280		RQM
S Total TCDF					0.1162	0.1051	0.0106	0.0106		RQ
D 13C-2,3,7,8-TCDD	18.051	50509663	0.80	0.8993	62.1	62.1	0.1061	0.1061	62.09	
2,3,7,8-TCDD	18.082						0.0192	0.0192		
$ 37Cl4-2,3,7,8-TCDD	18.082	31903597		1.1071	31.9	31.9	0.0398	0.0398	79.64	
A Non-2,3,7,8-sub-TCDD	17.530	30012	0.77	1.2541	0.0562	0.0474	0.0192	0.0474		RQM
S Total TCDD					0.0562	0.0474	0.0192	0.0192		RQ
D 13C-1,2,3,7,8-PeCDF	22.394	65069343	1.58	1.2101	59.4	59.4	0.1631	0.1631	59.45	
1,2,3,7,8-PeCDF	22.435						0.0174	0.0174		
D 13C-2,3,4,7,8-PeCDF	23.744	71308997	1.55	1.2395	63.6	63.6	0.1592	0.1592	63.60	
2,3,4,7,8-PeCDF	23.785						0.0177	0.0177		
A F1 PeCDFs	20.108						0.0151	0.0151		
A Non-2,3,7,8-sub-PeCDF	23.261						0.0176	0.0176		
S Total PeCDF							0.0177	0.0177		
D 13C-1,2,3,7,8-PeCDD	24.467	43274763	1.62	0.7612	62.8	62.8	0.0728	0.0728	62.85	
1,2,3,7,8-PeCDD	24.508						0.0255	0.0255		
A Non-2,3,7,8-sub-PeCDD	23.376						0.0255	0.0255		
S Total PeCDD							0.0255	0.0255		
D 13C-1,2,3,4,7,8-HxCDF	30.543	60441115	0.52	1.0837	61.2	61.2	0.2454	0.2454	61.18	
1,2,3,4,7,8-HxCDF	30.569						0.0129	0.0129		
D 13C-1,2,3,6,7,8-HxCDF	30.716	57997430	0.52	1.1279	56.4	56.4	0.2357	0.2357	56.40	
1,2,3,6,7,8-HxCDF	30.743						0.0132	0.0132		
D 13C-2,3,4,6,7,8-HxCDF	31.541	54230740	0.52	1.0637	55.9	55.9	0.2500	0.2500	55.92	
2,3,4,6,7,8-HxCDF	31.554						0.0105	0.0105		
D 13C-1,2,3,7,8,9-HxCDF	32.340	50175822	0.51	0.9676	56.9	56.9	0.2748	0.2748	56.88	
1,2,3,7,8,9-HxCDF	32.353	43785	1.22	1.1664	0.0748	0.0748	0.0103	0.0103		M
A Non-2,3,7,8-sub-HxCDF	30.223						0.0116	0.0116		U
S Total HxCDF					0.0748	0.0748	0.0117	0.0117		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.153	91169991	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.727	43060275	1.25	0.7334	64.4	64.4	0.3022	0.3022	64.40	
1,2,3,4,7,8-HxCDD	31.727	40086	1.15	1.0640	0.0875	0.0875	0.0149	0.0149		M
D 13C-1,2,3,6,7,8-HxCDD	31.834	46827760	1.25	0.8802	58.4	58.4	0.2518	0.2518	58.36	
1,2,3,6,7,8-HxCDD	31.727						0.0158	0.0158		MU
1,2,3,7,8,9-HxCDD	32.153	20562	1.30	1.1325	0.0404	0.0404	0.0140	0.0140		M
A Non-2,3,7,8-sub-HxCDD	30.895	46691	1.35	1.0655	0.0975	0.0975	0.0149	0.0975		
S Total HxCDD					0.2254	0.2254	0.0149	0.0149		
1,2,3,4,6,7,8-HpCDF	33.790	47374	1.04	1.4413	0.0785	0.0714	0.0144	0.0144		RQM
D 13C-1,2,3,4,6,7,8-HpCDF	33.778	46022090	0.44	0.7730	65.3	65.3	0.6494	0.6494	65.30	
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	46899704	0.43	0.7008	73.4	73.4	0.7164	0.7164	73.40	
1,2,3,4,7,8,9-HpCDF	34.872						0.0178	0.0178		
A Non-2,3,7,8-sub-HpCDF	34.325						0.0160	0.0160		
S Total HpCDF					0.0785	0.0714	0.0161	0.0161		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	40478510	1.01	0.6472	68.6	68.6	0.5696	0.5696	68.60	
1,2,3,4,6,7,8-HpCDD	34.580	50331	0.91	1.0943	0.1136	0.1136	0.0221	0.0221		M
A Non-2,3,7,8-sub-HpCDD	34.301	54127	1.17	1.0943	0.1222	0.1222	0.0221	0.1222		M
S Total HpCDD					0.2358	0.2358	0.0221	0.0221		
D 13C-OCDD	36.938	64195397	0.88	0.4472	157.5	157.5	0.2117	0.2117	78.73	
OCDF	37.022	33267	0.80	1.4382	0.0721	0.0721	0.0114	0.0114		M
OCDD	36.950	121729	0.94	1.1070	0.3426	0.3426	0.0208	0.0208		M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Sample Type: MB
Inject. Date: 13-Aug-2021 06:33:12 ALS Bottle#: 29 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513227/1-a mb 320-513227/1-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:38:33 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: arghestanis Date: 13-Aug-2021 15:39:03

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.855	17.885	-2		40541582	9681927	4212	10530	2299		a
333.9339	17.855	17.885	-2		49911496	11983288	4057	10142	2954	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.356	-1	0.971	37272505	8496775	6038	15095	1407		
317.9389	17.341	17.356	-1	0.971	47945981	10892393	4500	11250	2421	0.78(0.65-0.89)	
2,3,7,8-TCDF											RQM
303.9016	17.356	17.386	-2	1.001	27656	4988	322	805	15		
	Empc Correction				21402	4063	322	805	13		
305.8987	17.356	17.386	-2	1.001	27795	5277	520	1300	10	0.99(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	16.207	17.069	-52	0.935	10281	2816	322	805	9		
305.8987	16.222	17.069	-51	0.935	14124	3469	520	1300	7	0.73(0.65-0.89)	M
303.9016	16.978	17.069	-5	0.979	7862	1620	322	805	5		
305.8987	16.993	17.069	-5	0.980	13686	2377	520	1300	5	0.57(0.65-0.89)	
	Empc Correction				10210	2103	520	1300	4		
13C-2,3,7,8-TCDD											
331.9368	18.051	18.066	-1	1.011	22485679	4832185	4212	10530	1147		
333.9339	18.051	18.066	-1	1.011	28023984	5971223	4057	10142	1472	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.082						554	1385			
321.8936	18.082						489	1222			
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.097	-1	1.013	31903597	7091102	3822	9555	1855		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											RQM
319.8965	15.829	17.530	-102	0.877	18623	4626	554	1385	8		M
	Empc Correction				13056	4135	554	1385	7		
321.8936	15.844	17.530	-101	0.878	16956	5371	489	1222	11	1.10(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.394	22.408	-1	1.254	39822424	6340893	10015	25037	633		
353.8970	22.408	22.408	0	1.255	25246919	4018427	7088	17720	567	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.435						274	685			
341.8567	22.435						493	1232			
13C-2,3,4,7,8-PeCDF											
351.9000	23.744	23.758	-1	1.330	43396772	6394267	10015	25037	638		
353.8970	23.744	23.758	-1	1.330	27912225	4224405	7088	17720	596	1.55(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.785						274	685			
341.8567	23.785						493	1232			
A F1 PeCDFs											
339.8597	20.108						197	492			
341.8567	20.108						464	1160			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.261						274	685			
341.8567	23.261						493	1232			
13C-1,2,3,7,8-PeCDD											
367.8949	24.467	24.481	-1	1.370	26741295	3836678	2698	6745	1422		
369.8919	24.480	24.481	0	1.371	16533468	2381262	2102	5255	1133	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.508						470	1175			
357.8516	24.508						194	485			
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.376						470	1175			
357.8516	23.376						194	485			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.543	30.543	0	0.950	20620868	3857780	8836	22090	437		
385.8610	30.543	30.543	0	0.950	39820247	7441660	17081	42702	436	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.569						376	940			
375.8178	30.569						258	645			
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.716	30.716	0	0.955	19839438	3609360	8836	22090	408		
385.8610	30.716	30.716	0	0.955	38157992	7031345	17081	42702	412	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.743						376	940			
375.8178	30.743						258	645			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.541	31.541	0	0.981	18609402	4518056	8836	22090	511		
385.8610	31.541	31.541	0	0.981	35621338	8420974	17081	42702	493	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.554						376	940			
375.8178	31.554						258	645			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.340	32.340	0	1.006	16937650	4420201	8836	22090	500		
385.8610	32.340	32.340	0	1.006	33238172	8710845	17081	42702	510	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.353	32.353	0	1.000	24026	6689	376	940	18		M
375.8178	32.353	32.353	0	1.000	19759	5147	258	645	20	1.22(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.223						376	940			
375.8178	30.223						258	645			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.153	0		50710568	13477079	12948	32370	1041		
403.8529	32.153	32.153	0		40459423	10891510	8658	21645	1258	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.727	31.727	0	0.987	23908974	6551480	12948	32370	506		
403.8529	31.727	31.727	0	0.987	19151301	5249812	8658	21645	606	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.727	31.741	-1	1.000	21452	6596	461	1152	14		M
391.8127	31.740	31.741	0	1.000	18634	5168	288	720	18	1.15(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.834	31.834	0	0.990	25991842	6590940	12948	32370	509		
403.8529	31.834	31.834	0	0.990	20835918	5225164	8658	21645	604	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											MU
389.8157	31.847						461	1152			
391.8127	31.847						288	720			
1,2,3,7,8,9-HxCDD											M
389.8157	32.153	32.167	-1	1.013	11606	2791	461	1152	6		M
391.8127	32.140	32.167	-2	1.013	8956	1774	288	720	6	1.30(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.609	30.895	-17	0.962	26839	3964	461	1152	9		
391.8127	30.609	30.895	-17	0.962	19852	2733	288	720	9	1.35(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7818	33.790	33.778	1	1.000	28845	11180	877	2192	13		M
	Empc Correction				24151	7325	877	2192	8		
409.7789	33.790	33.778	1	1.000	23223	7044	358	895	20	1.24(0.88-1.20)	M
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.778	33.778	0	1.051	14093307	4611356	16510	41275	279		
419.8220	33.778	33.778	0	1.051	31928783	10278091	32426	81065	317	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.860	0	1.084	14011456	3934673	16510	41275	238		
419.8220	34.860	34.860	0	1.084	32888248	9213516	32426	81065	284	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872						877	2192			
409.7789	34.872						358	895			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						877	2192			
409.7789	34.325						358	895			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.075	20356779	6160846	16762	41905	368		
437.8140	34.568	34.568	0	1.075	20121731	6036944	19173	47932	315	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											M
423.7766	34.580	34.580	0	1.000	23972	6891	638	1595	11		M
425.7737	34.580	34.580	0	1.000	26359	7174	541	1352	13	0.91(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											M
423.7766	34.033	34.301	-16	0.985	29228	8957	638	1595	14		M
425.7737	34.021	34.301	-17	0.984	24899	9095	541	1352	17	1.17(0.88-1.20)	
13C-OCDD											
469.7779	36.938	36.926	1	1.149	29967782	7349230	3754	9385	1958		
471.7750	36.938	36.926	1	1.149	34227615	8271888	5473	13682	1511	0.88(0.76-1.02)	
OCDF											M
441.7428	37.022	37.034	-1	1.002	14811	3420	233	582	15		M
443.7399	37.034	37.034	0	1.003	18456	4674	278	695	17	0.80(0.76-1.02)	M
OCDD											M
457.7377	36.950	36.938	1	1.000	59137	14677	345	862	43		M
459.7348	36.938	36.938	0	1.000	62592	14992	376	940	40	0.94(0.76-1.02)	M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Inject. Date: 13-Aug-2021 06:33:12 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 3

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	85218486	19389168

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	85218486	19389168

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.207	10281	2816	14124	3469	0.0280	0.73	M
16.978	7862	1620	13686	2377	0.0247	0.57	RQ
16.978	7862	1620	10210	2103	0.0207		Empc Correction
Signal Totals:							
	18143	4436	24334	5572			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	45953	10282				0.65	RQM
	42477	10008					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0527 = (45953 * 100.000) / (85218486 * 1.024)
Empc Amount: 0.0487 = (42477 * 100.000) / (85218486 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Inject. Date: 13-Aug-2021 06:33:12 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 3

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50509663	10803408

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50509663	10803408

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.829	18623	4626	16956	5371	0.0562	1.10	RQM
15.829	13056	4135	16956	5371	0.0474		Empc Correction
Signal Totals:							
	13056	4135	16956	5371			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	35579	9997				1.10	RQM
	30012	9506					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0562 = (35579 * 100.000) / (50509663 * 1.254)
Empc Amount: 0.0474 = (30012 * 100.000) / (50509663 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Inject. Date: 13-Aug-2021 06:33:12 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDF, RT: 30.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	60441115	11299440
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	57997430	10640705
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	54230740	12939030
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	50175822	13131046

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	55711276	12002555

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Inject. Date: 13-Aug-2021 06:33:12 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDD, RT: 30.895

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	43060275	11801292
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	46827760	11816104
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	44944017	11808698

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.609	26839	3964	19852	2733	0.0975	1.35	
Signal Totals:							
	26839	3964	19852	2733			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	46691	6697				1.35	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0975 = (46691 * 100.000) / (44944017 * 1.066)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d
Lims ID: MB 320-513227/1-A
Client ID:
Inject. Date: 13-Aug-2021 06:33:12 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 3

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	40478510	12197790

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	40478510	12197790

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.033	29228	8957	24899	9095	0.1222	1.17	M
Signal Totals:							
	29228	8957	24899	9095			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	54127	18052				1.17	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1222 = (54127 * 100.000) / (40478510 * 1.094)

QC Flag Legend

Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.36
Area: 26224
Amount: 0.061749
Amount Units: pg/ul

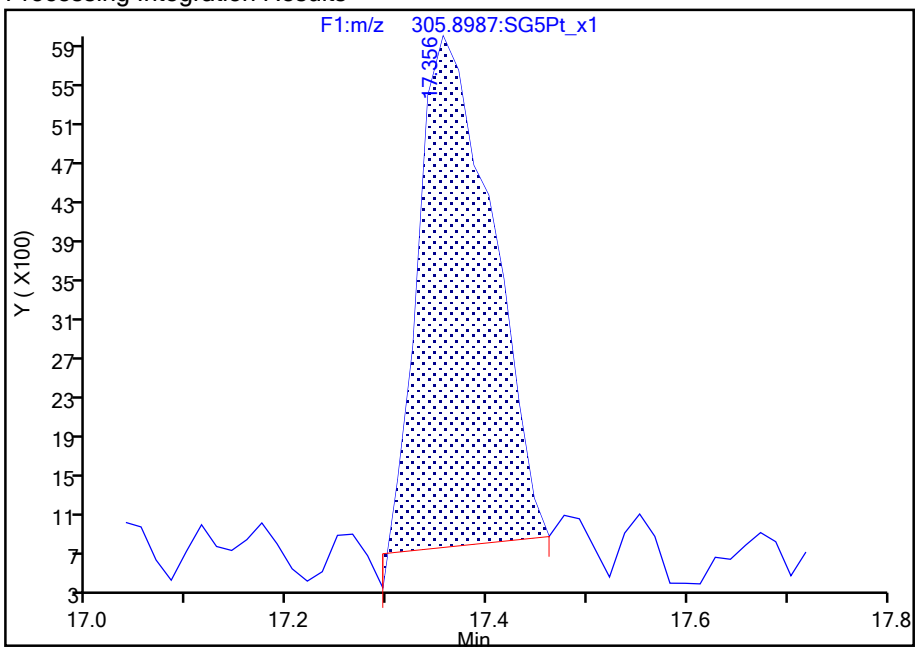

Manual Integration Results

RT: 17.36
Area: 27795
Amount: 0.063550
Amount Units: pg/ul

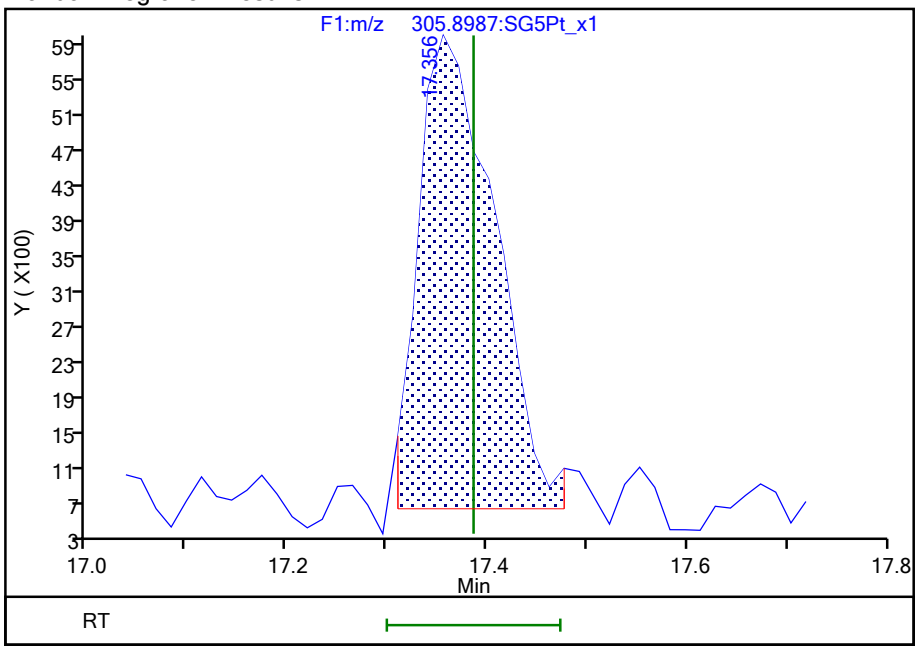

Reviewer: dadunj, 16-Aug-2021 13:35:47

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.91- 19.23)

Signal: 2

Processing Integration Results

RT = 16.222 Area = 16995

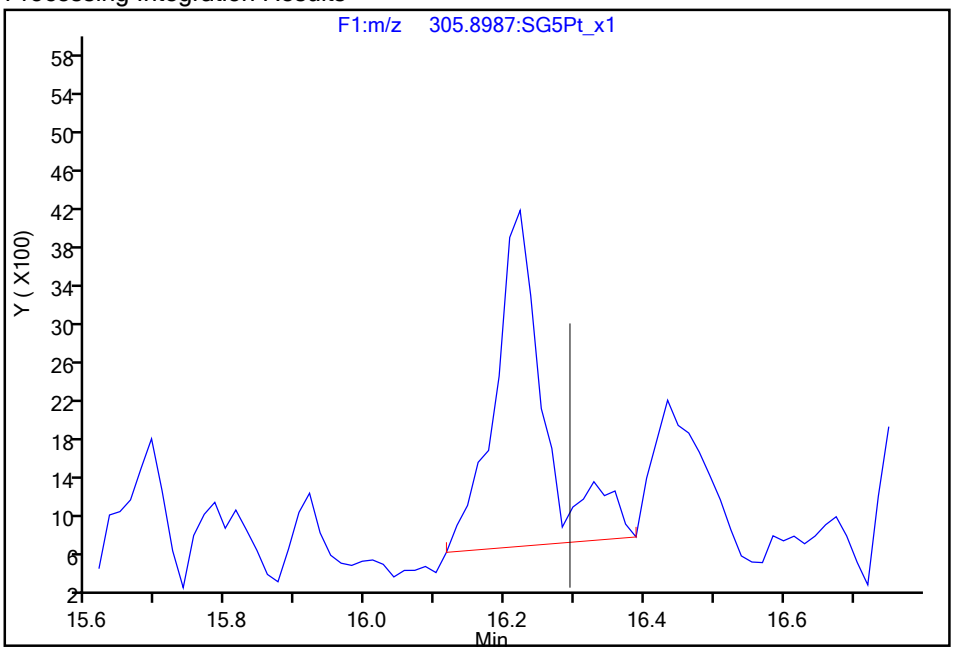

Manual Integration Results

RT = 16.222 Area = 14124 M

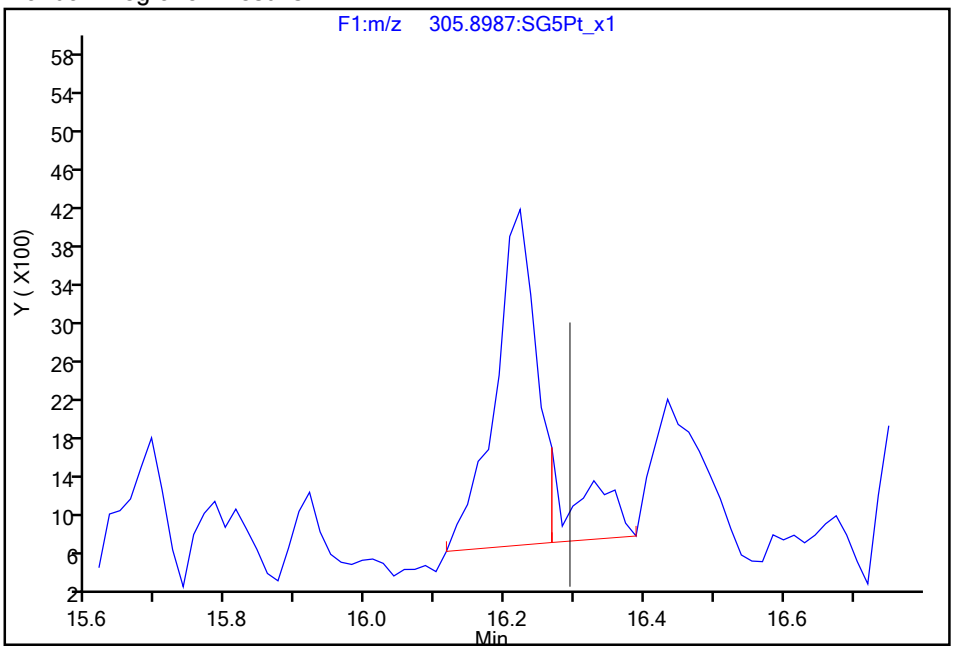

Reviewer: dadunj, 16-Aug-2021 13:35:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.83- 19.23)

Signal: 1

Processing Integration Results

RT = 15.829 Area = 35927

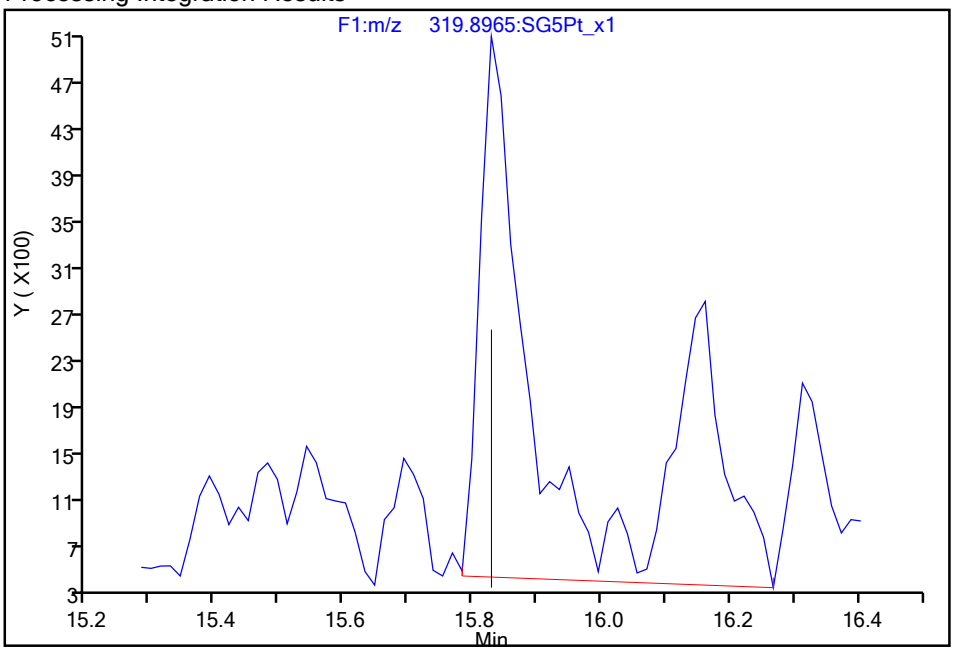

Manual Integration Results

RT = 15.829 Area = 18623 M

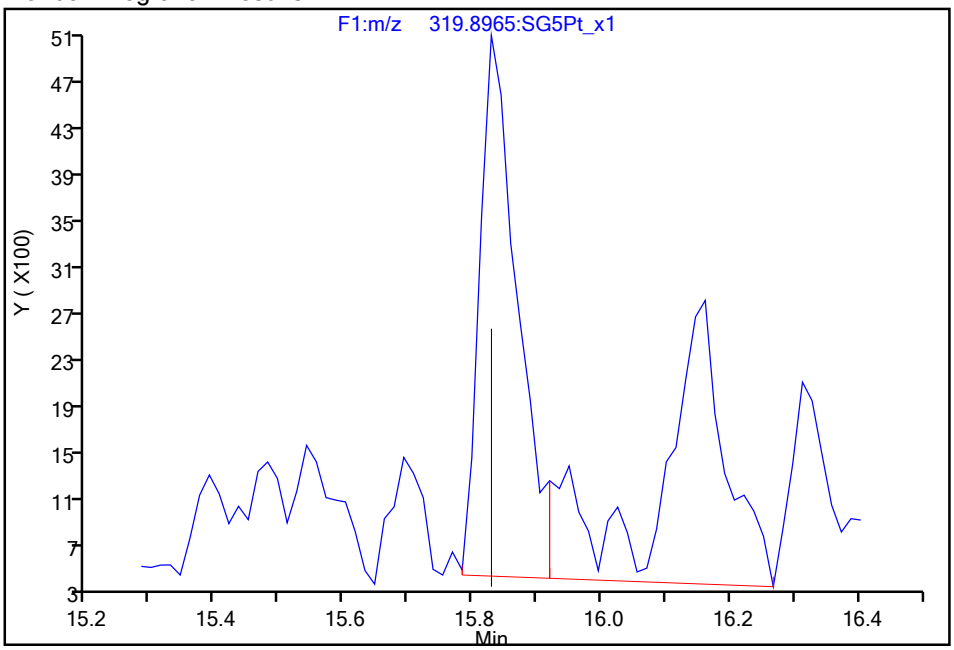

Reviewer: dadunj, 16-Aug-2021 13:36:05

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.35
Area: 34695
Amount: 0.104148
Amount Units: pg/ul

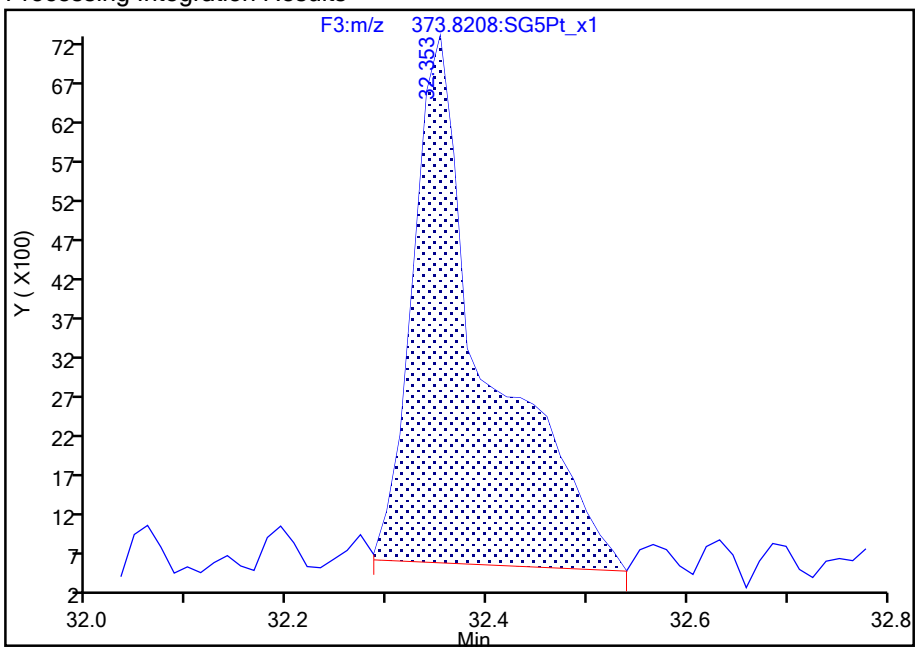

Manual Integration Results

RT: 32.35
Area: 24026
Amount: 0.074817
Amount Units: pg/ul

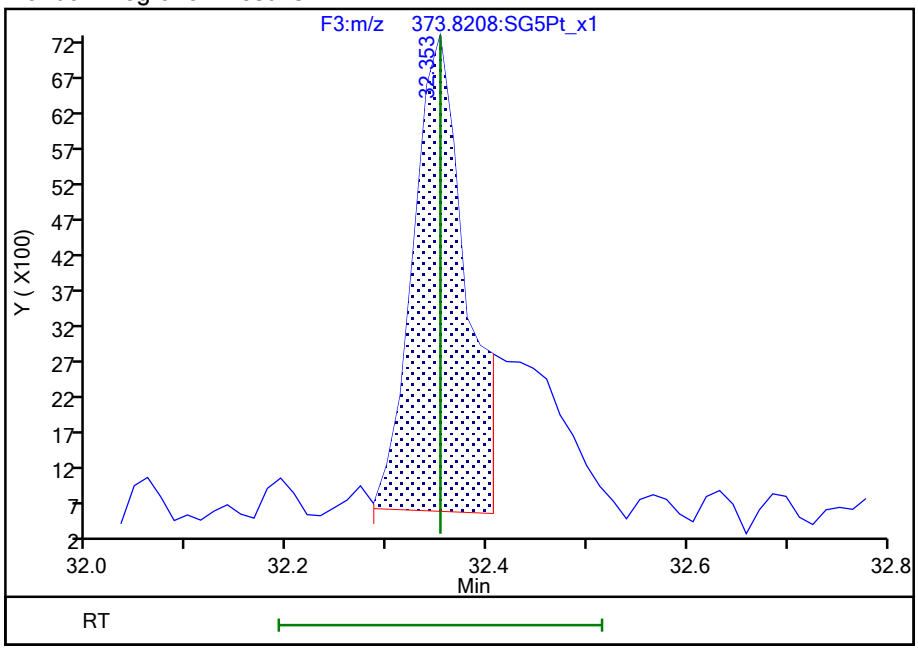

Reviewer: dadunj, 16-Aug-2021 13:36:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.35
Area: 26255
Amount: 0.104148
Amount Units: pg/ul

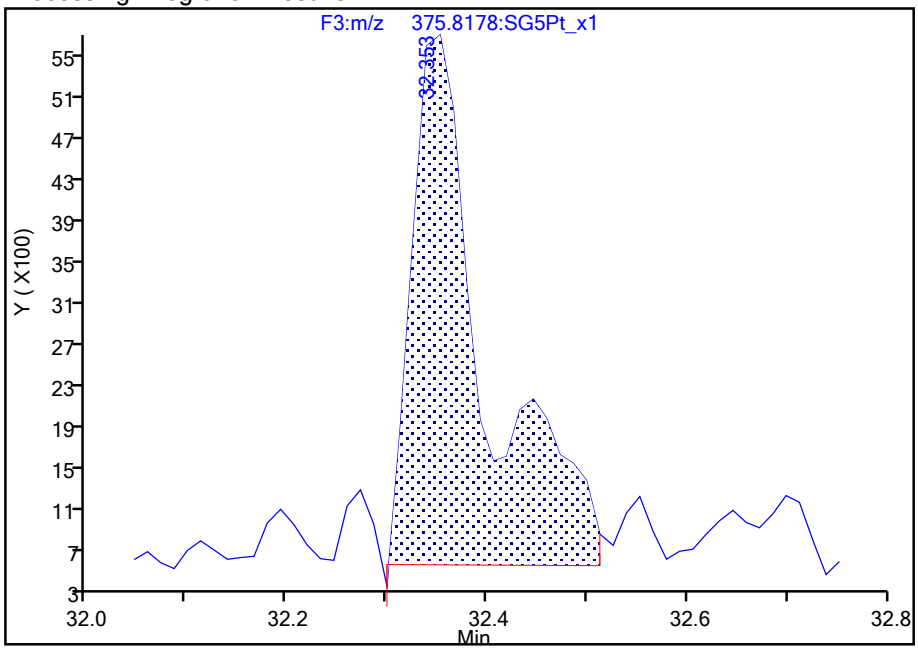

Manual Integration Results

RT: 32.35
Area: 19759
Amount: 0.074817
Amount Units: pg/ul

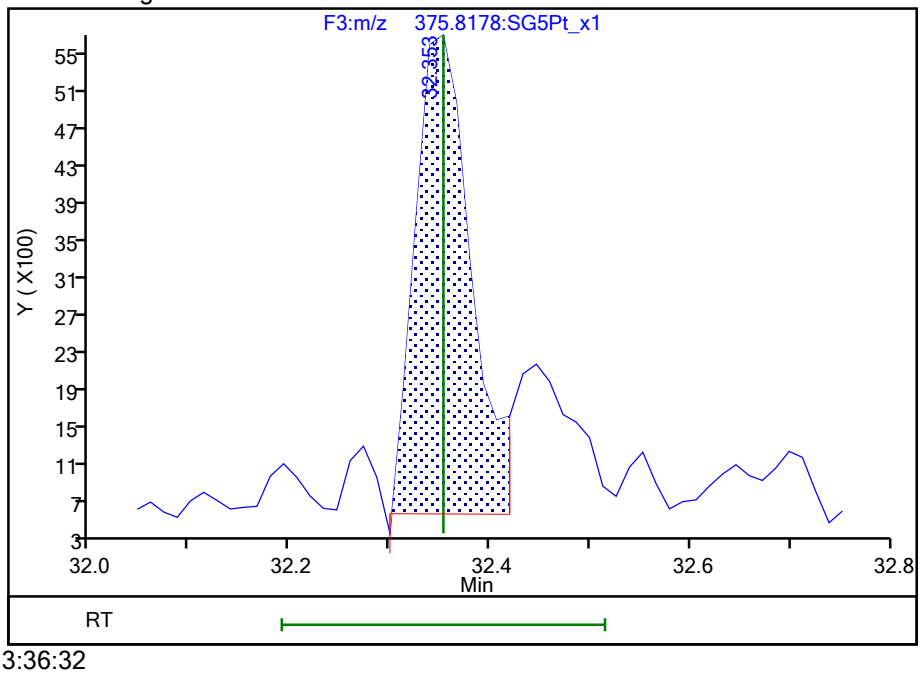

Reviewer: dadunj, 16-Aug-2021 13:36:32

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.74
Area: 23011
Amount: 0.099780
Amount Units: pg/ul

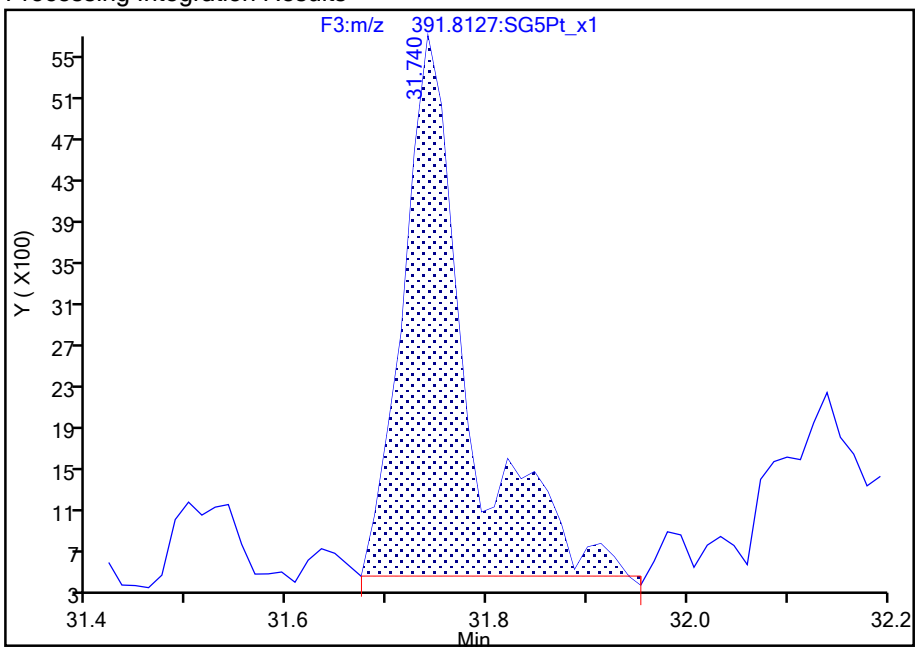

Manual Integration Results

RT: 31.74
Area: 18634
Amount: 0.087490
Amount Units: pg/ul

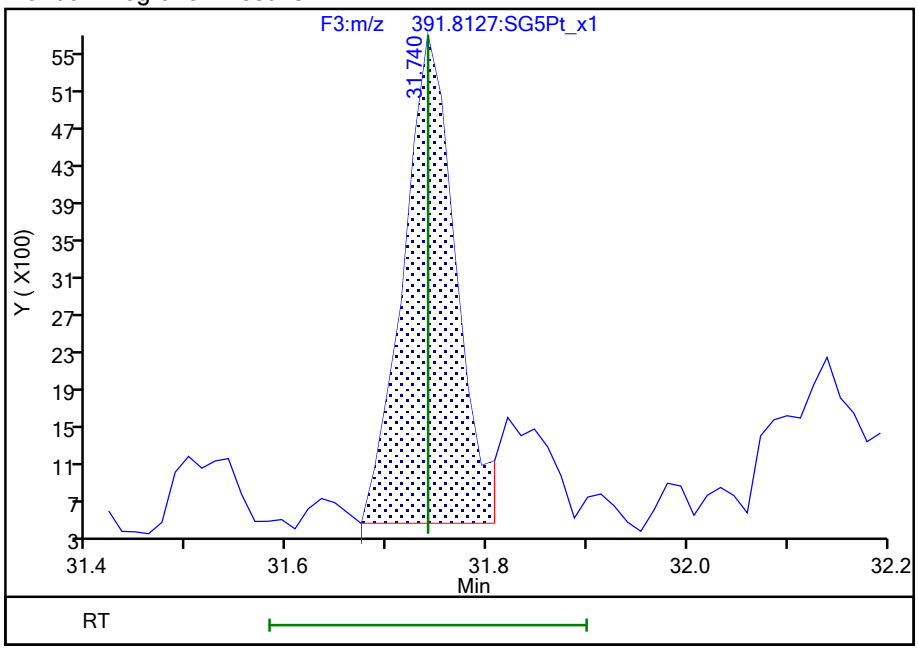

Reviewer: dadunj, 16-Aug-2021 13:36:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.73
Area: 22706
Amount: 0.099780
Amount Units: pg/ul

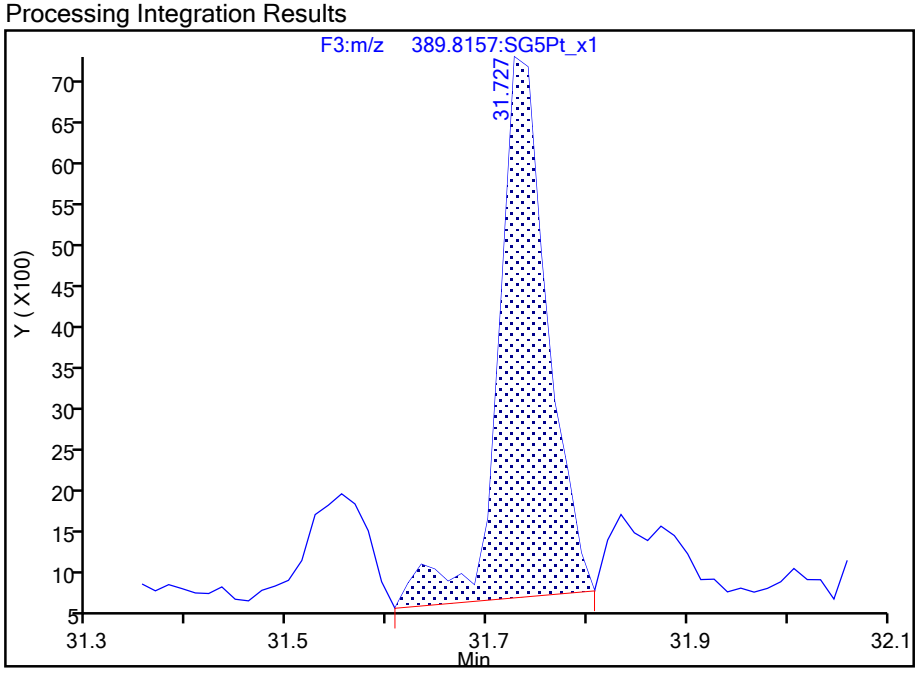

Manual Integration Results

RT: 31.73
Area: 21452
Amount: 0.087490
Amount Units: pg/ul

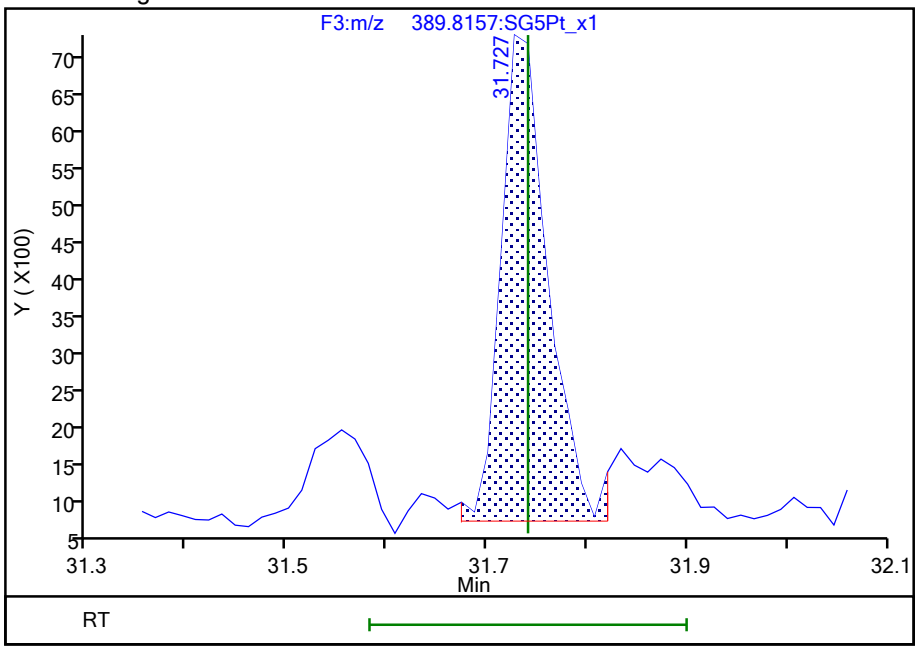

Reviewer: dadunj, 16-Aug-2021 13:36:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 32.15
Area: 15022
Amount: 0.051650
Amount Units: pg/ul

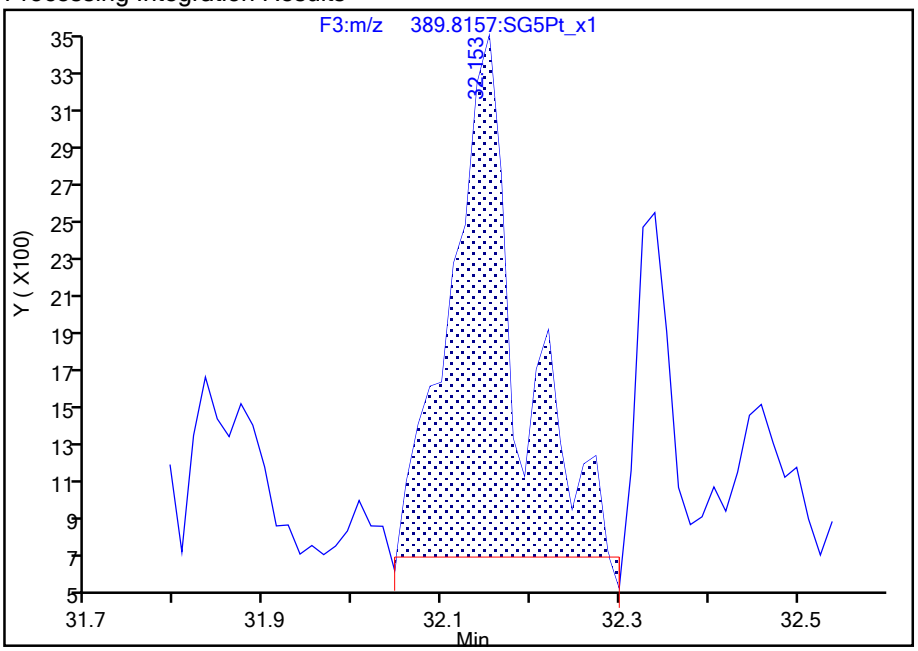

Manual Integration Results

RT: 32.15
Area: 11606
Amount: 0.040397
Amount Units: pg/ul

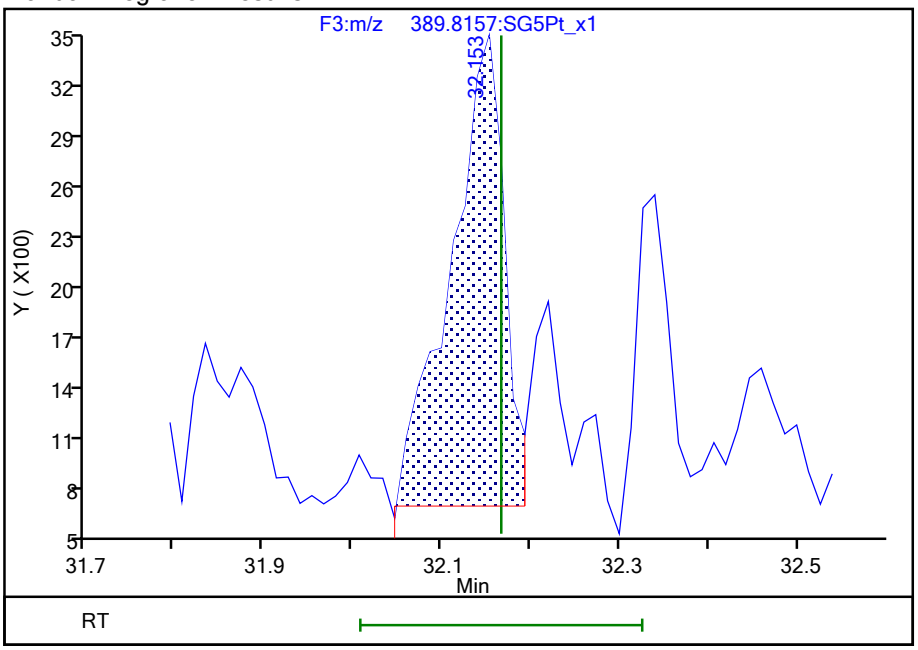

Reviewer: dadunj, 16-Aug-2021 13:37:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 32.14
Area: 11268
Amount: 0.051650
Amount Units: pg/ul

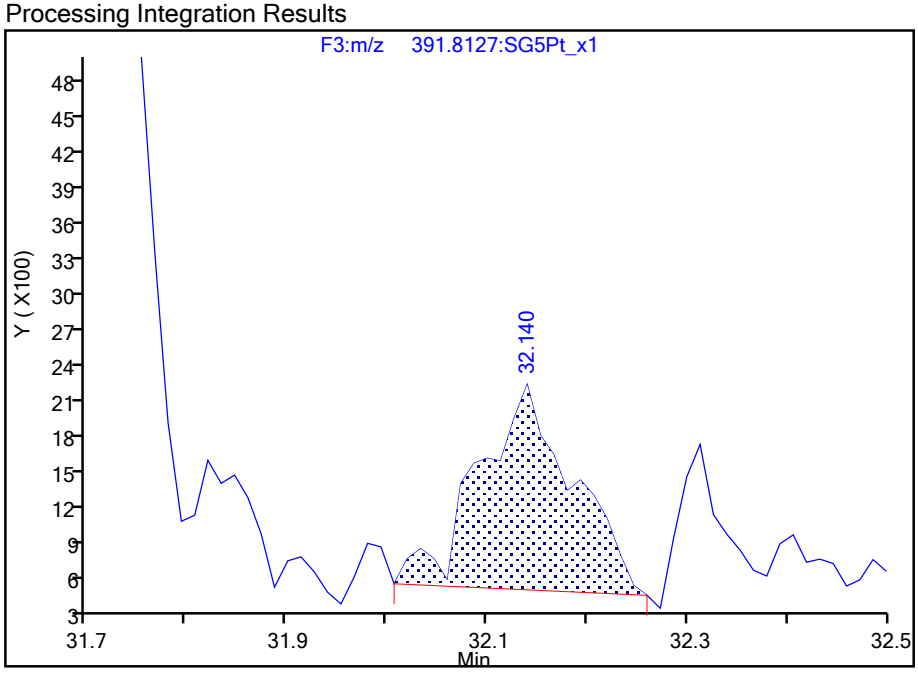

Manual Integration Results

RT: 32.14
Area: 8956
Amount: 0.040397
Amount Units: pg/ul

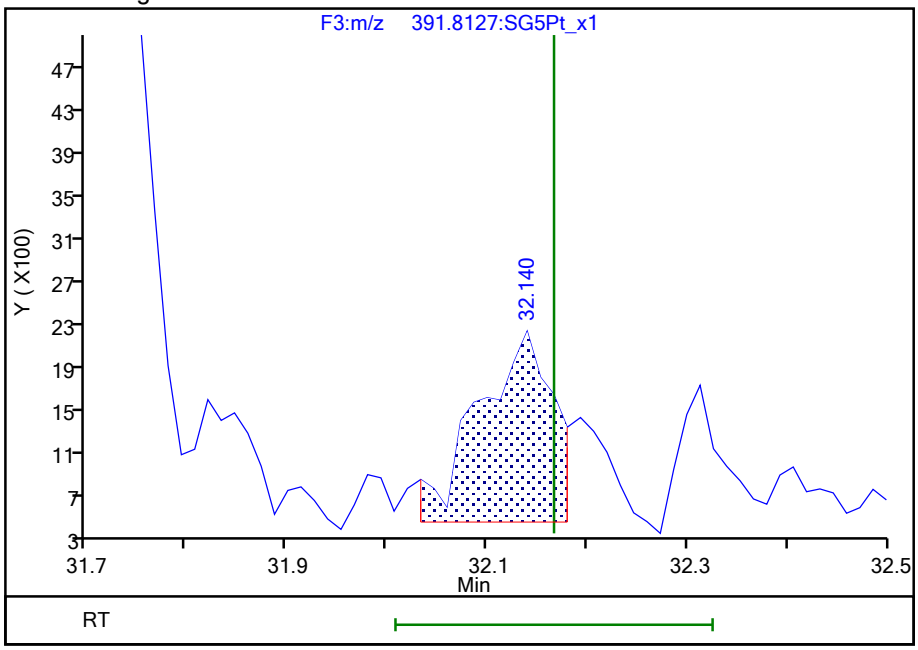

Reviewer: dadunj, 16-Aug-2021 13:37:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.79
Area: 35383
Amount: 0.090402
Amount Units: pg/ul

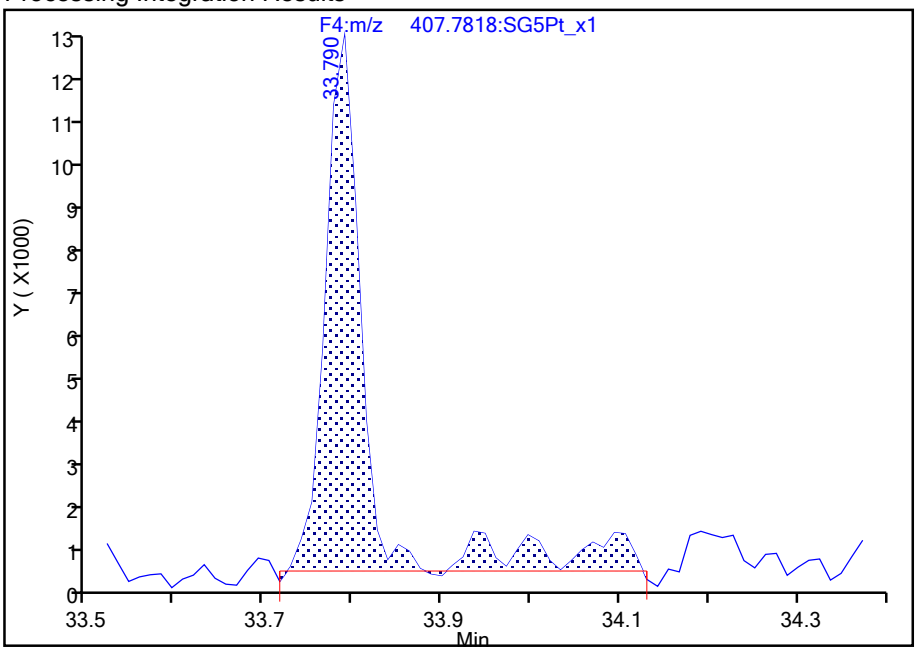

Manual Integration Results

RT: 33.79
Area: 28845
Amount: 0.078497
Amount Units: pg/ul

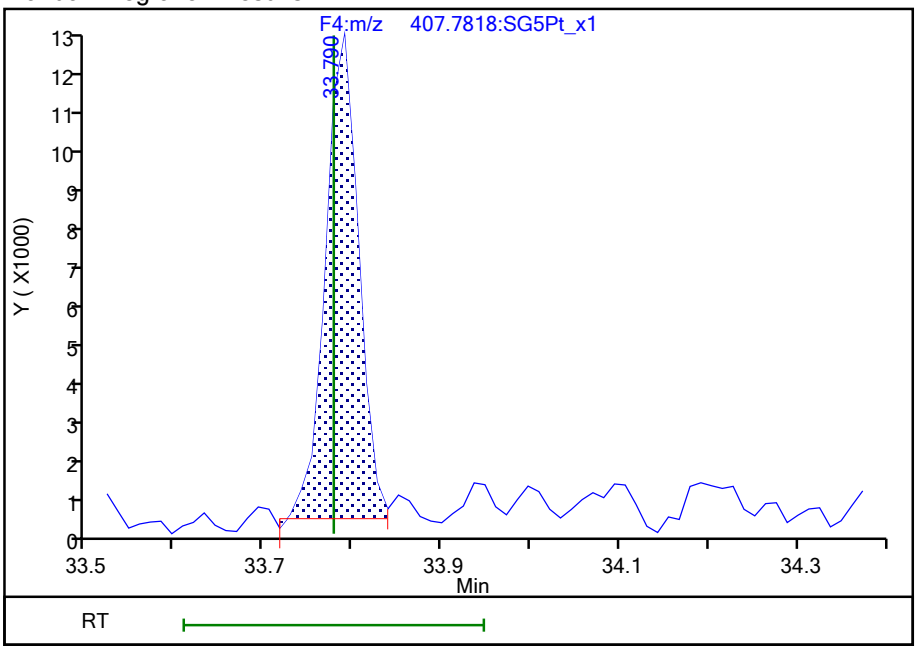

Reviewer: dadunj, 16-Aug-2021 13:37:25

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.79
Area: 24582
Amount: 0.090402
Amount Units: pg/ul

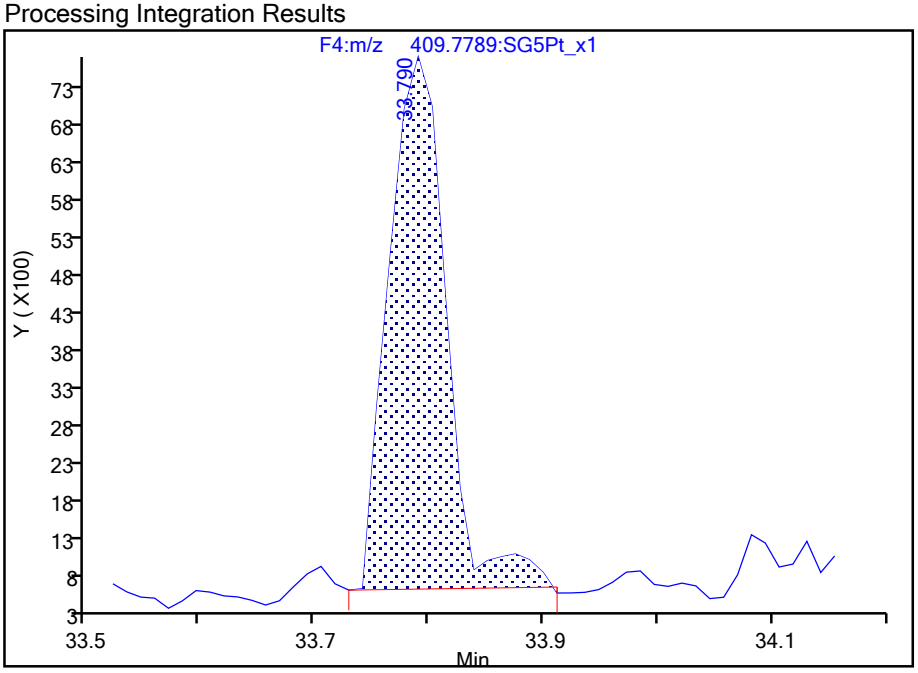

Manual Integration Results

RT: 33.79
Area: 23223
Amount: 0.078497
Amount Units: pg/ul

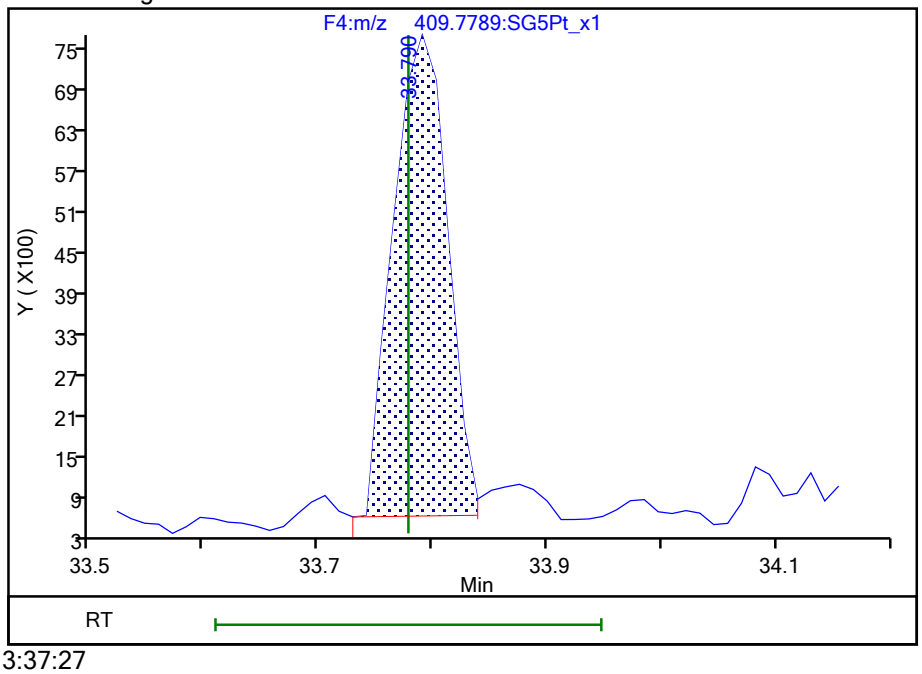

Reviewer: dadunj, 16-Aug-2021 13:37:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 34.58
Area: 27707
Amount: 0.125184
Amount Units: pg/ul

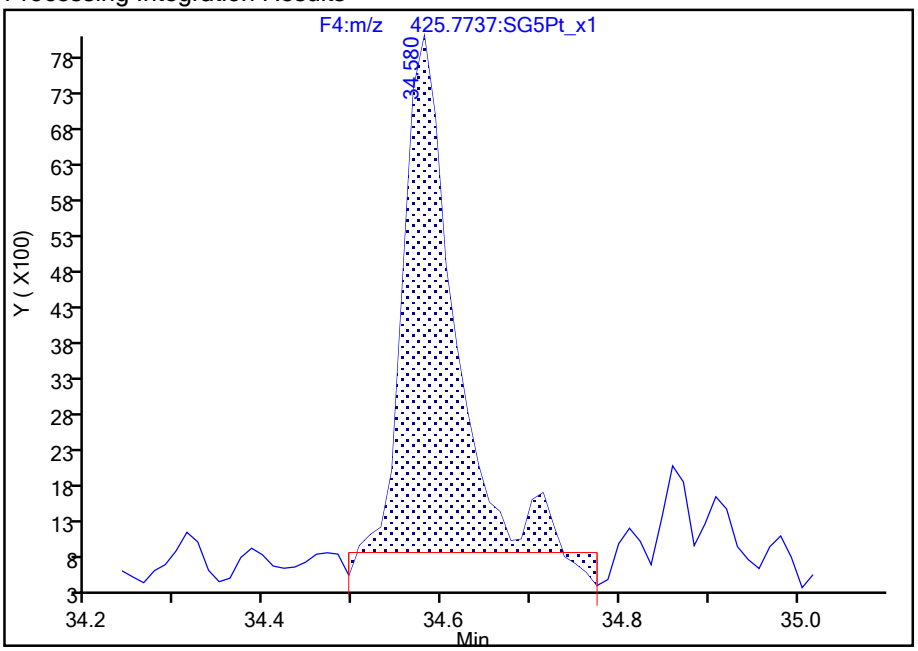

Manual Integration Results

RT: 34.58
Area: 26359
Amount: 0.113625
Amount Units: pg/ul

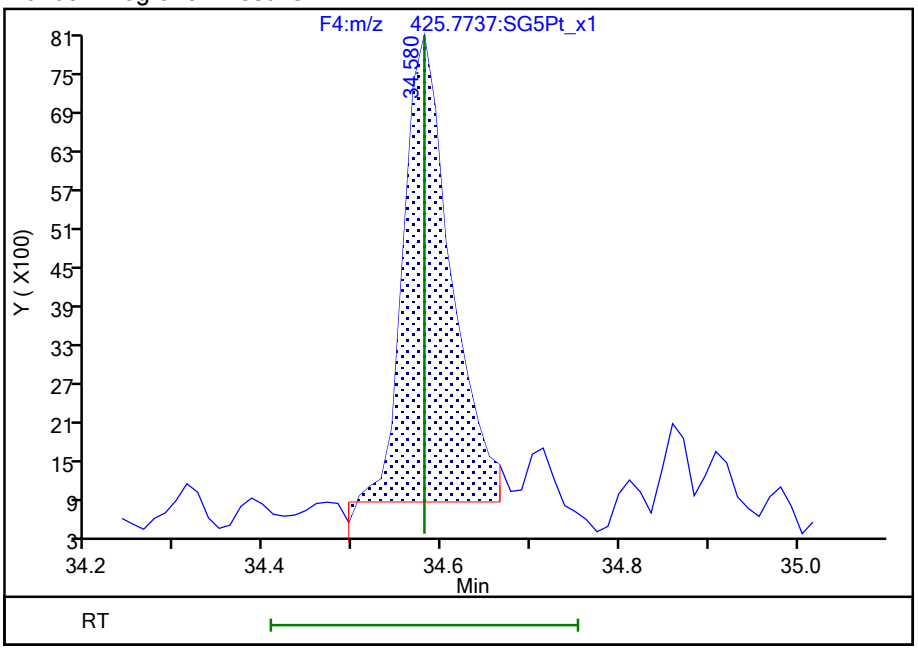

Reviewer: dadunj, 16-Aug-2021 13:37:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 34.58
Area: 27744
Amount: 0.125184
Amount Units: pg/ul

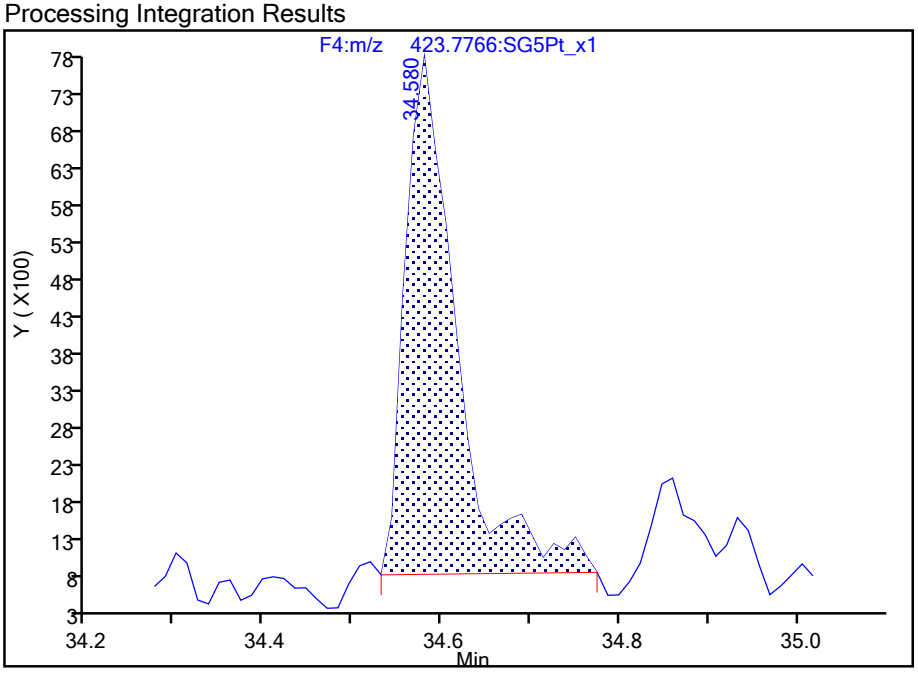

Manual Integration Results

RT: 34.58
Area: 23972
Amount: 0.113625
Amount Units: pg/ul

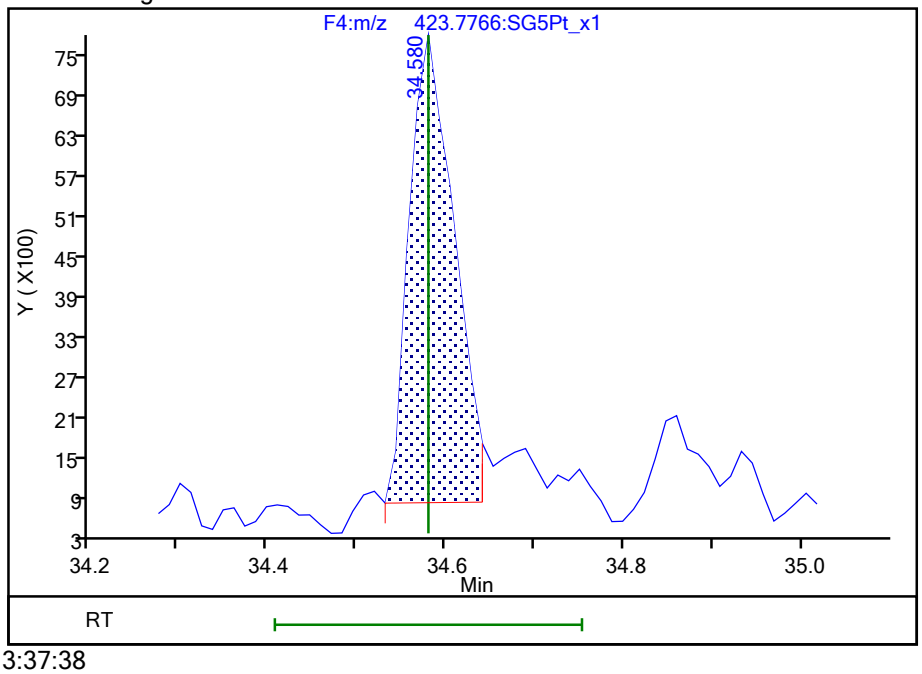

Reviewer: dadunj, 16-Aug-2021 13:37:38

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 1, m/z: 423.7766, RT: (33.99- 34.61)

Signal: 1

Processing Integration Results

RT = 34.033 Area = 35409

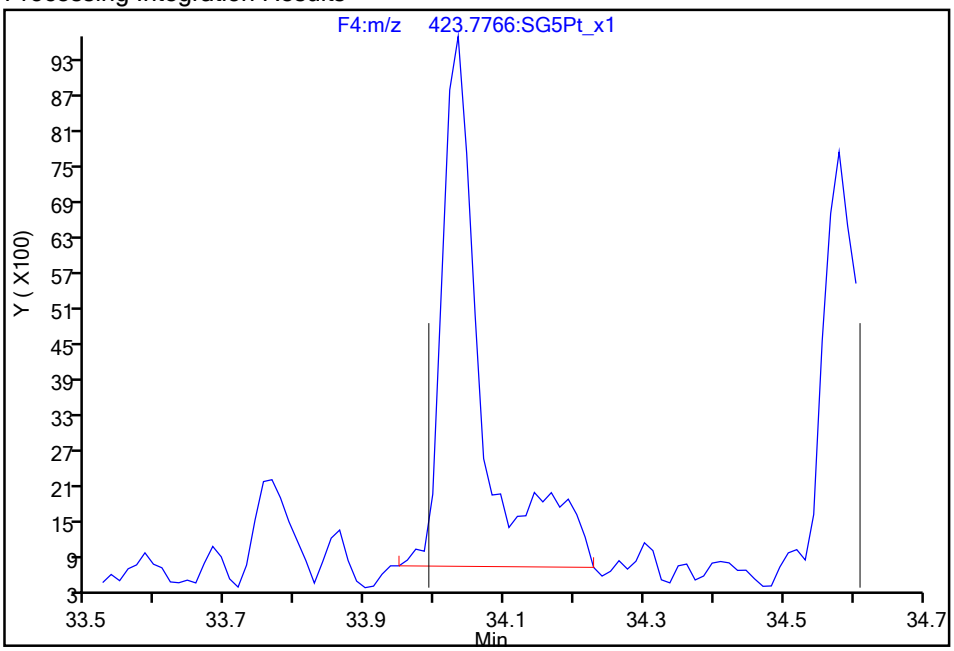

Manual Integration Results

RT = 34.033 Area = 29228 M

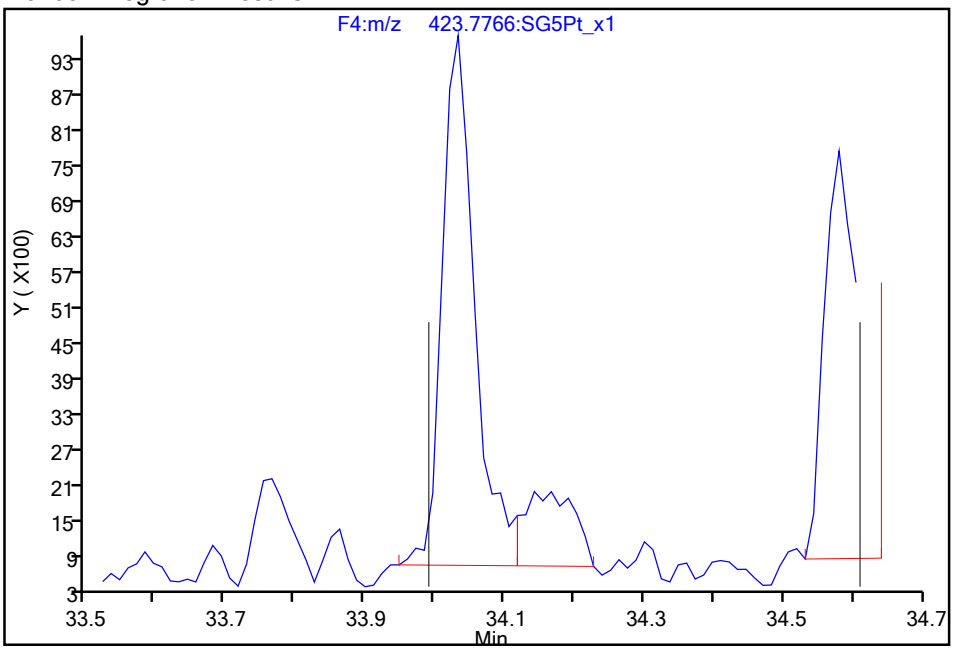

Reviewer: dadunj, 16-Aug-2021 13:37:40

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 18492
Amount: 0.086487
Amount Units: pg/ul

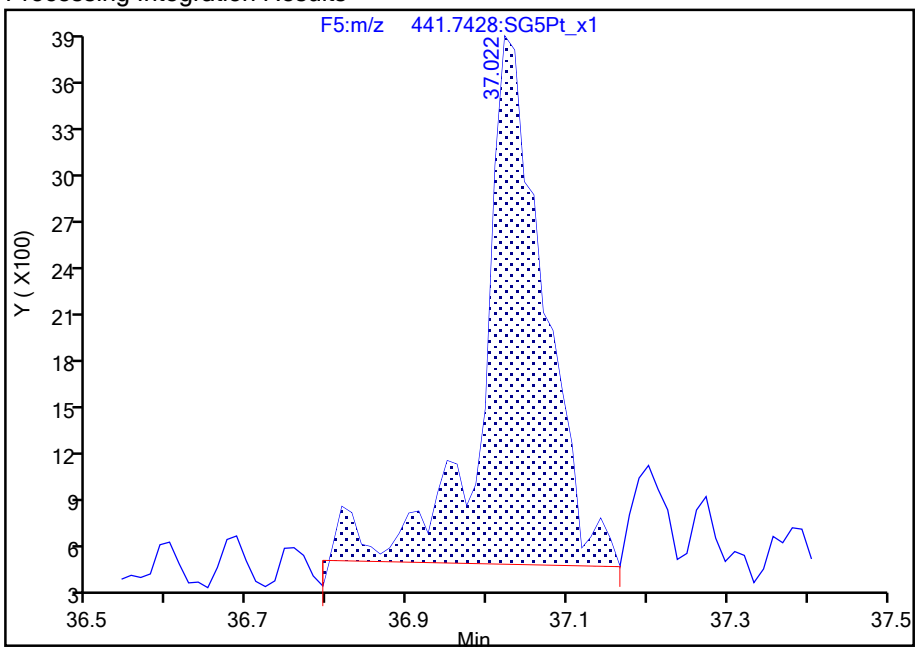

Manual Integration Results

RT: 37.02
Area: 14811
Amount: 0.072066
Amount Units: pg/ul

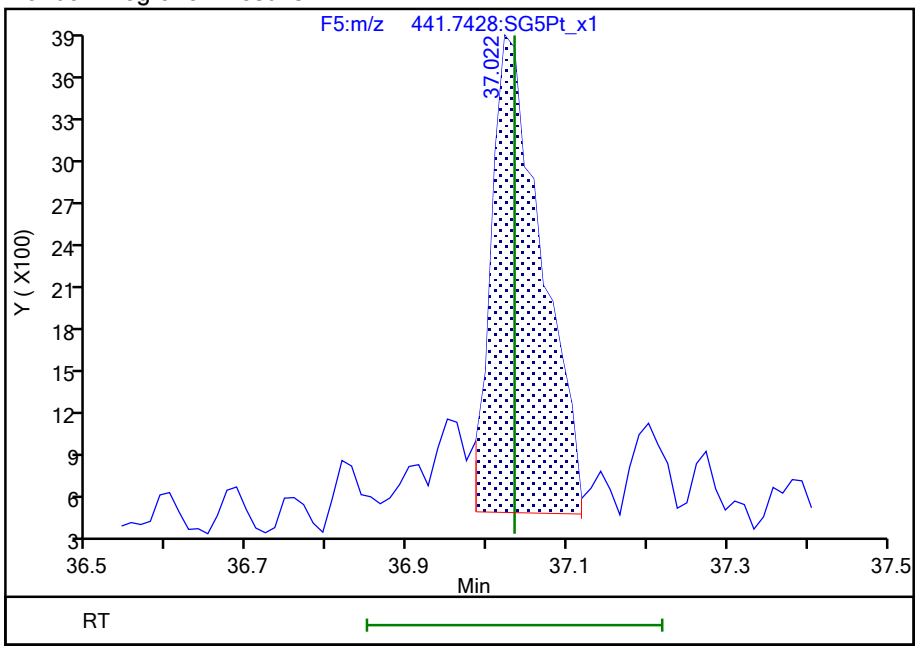

Reviewer: dadunj, 16-Aug-2021 13:37:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778811

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.03
Area: 21432
Amount: 0.086487
Amount Units: pg/ul

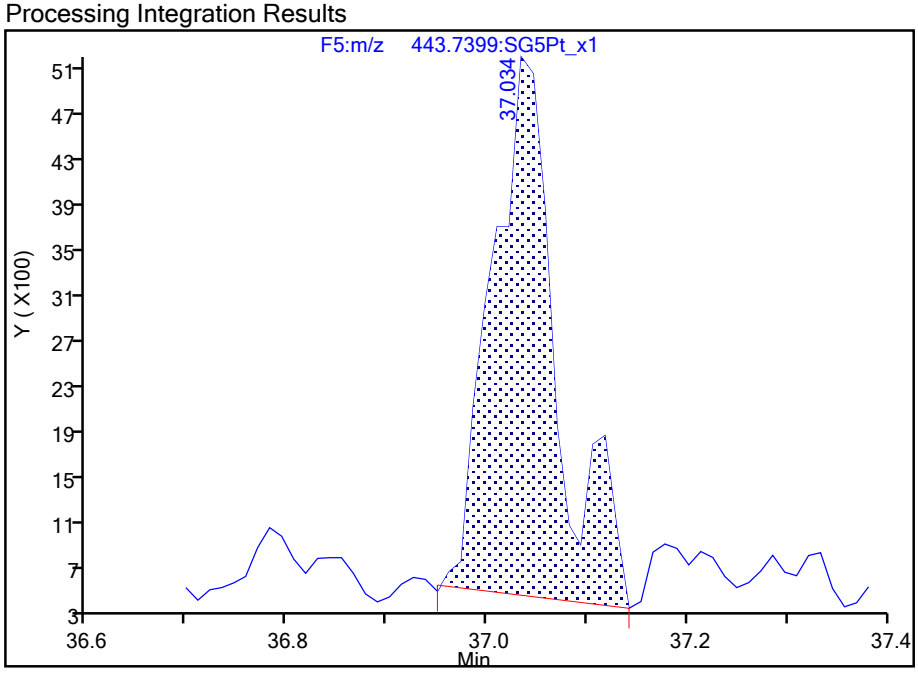

Manual Integration Results

RT: 37.03
Area: 18456
Amount: 0.072066
Amount Units: pg/ul

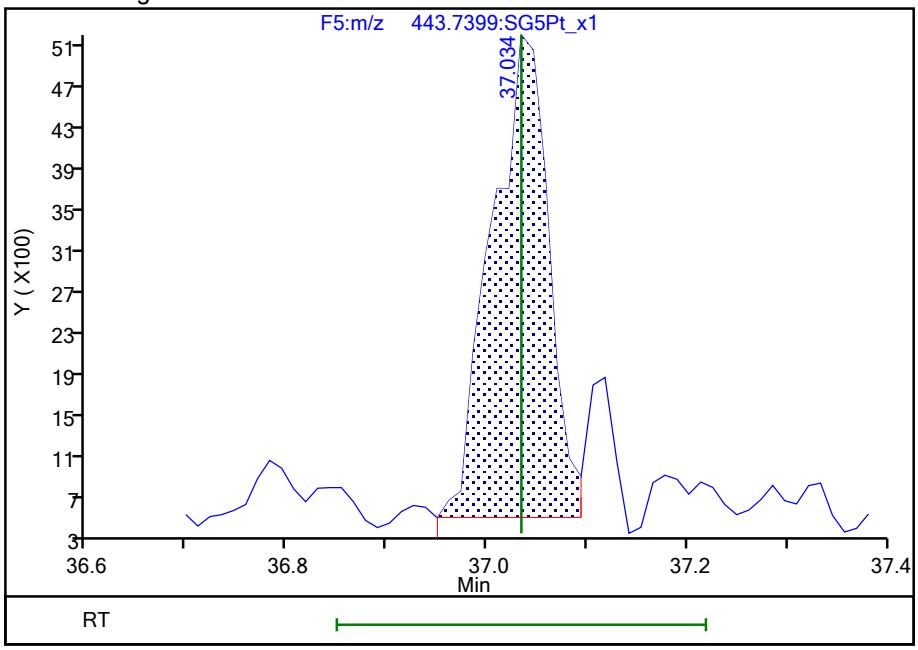

Reviewer: dadunj, 16-Aug-2021 13:37:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778812

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 36.95
Area: 67392
Amount: 0.377631
Amount Units: pg/ul

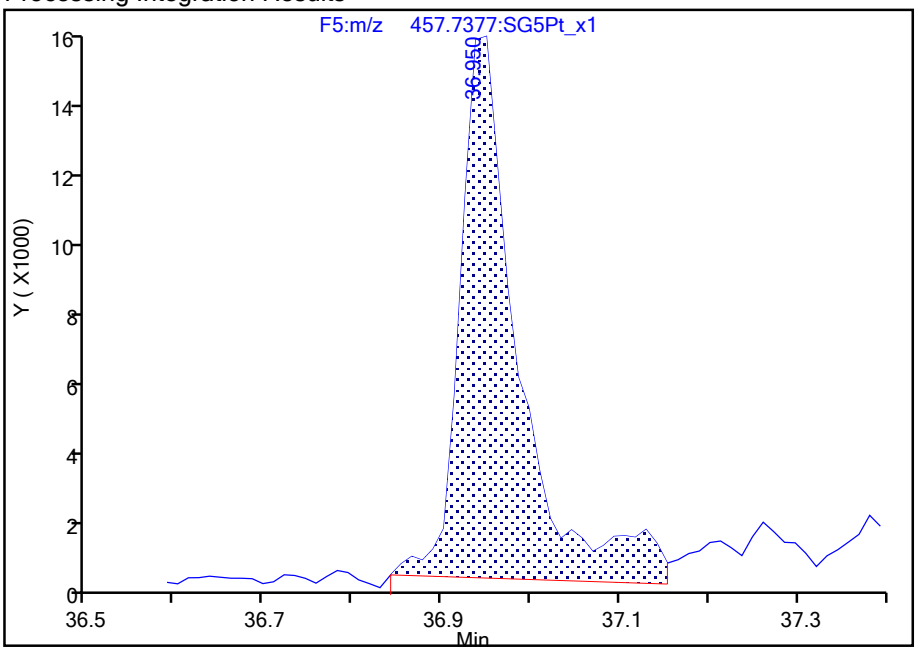

Manual Integration Results

RT: 36.95
Area: 59137
Amount: 0.342584
Amount Units: pg/ul

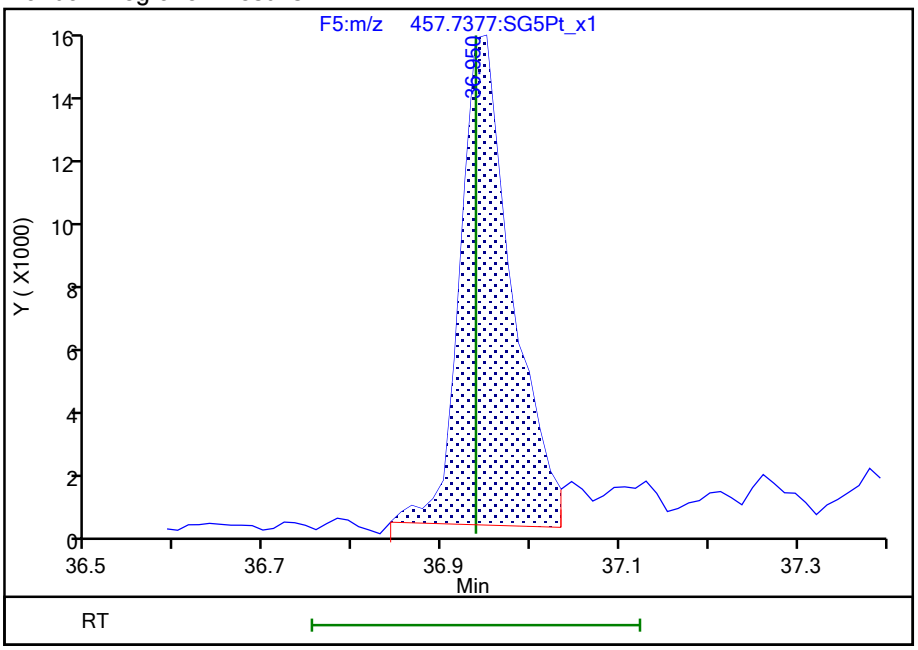

Reviewer: dadunj, 16-Aug-2021 13:38:00

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d				
Injection Date:	13-Aug-2021 06:33:12	Instrument ID:	10D5		
Lims ID:	MB 320-513227/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 2

Processing Integration Results

RT: 36.94
Area: 66790
Amount: 0.377631
Amount Units: pg/ul

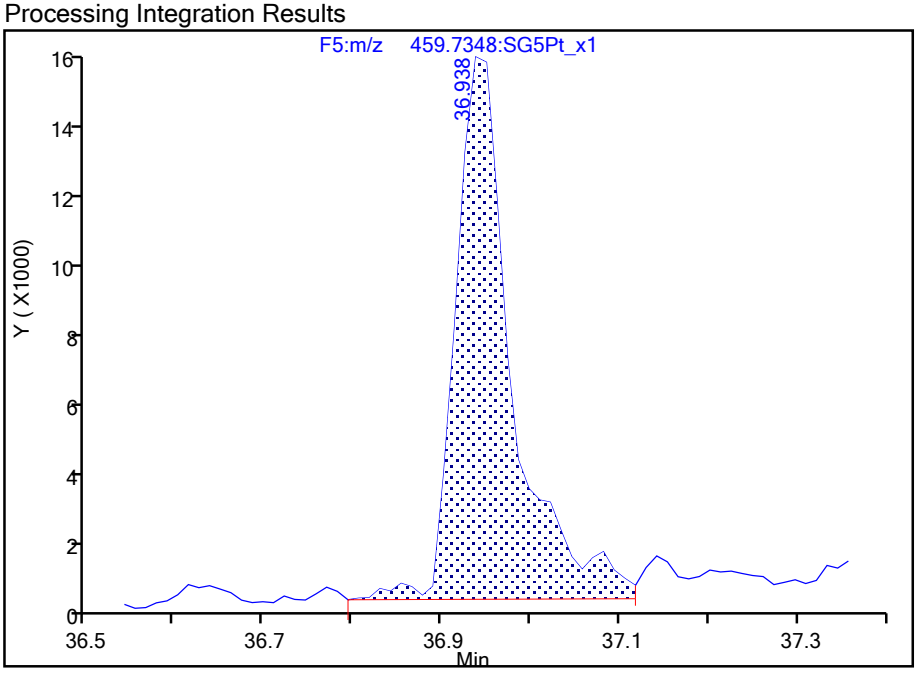

Manual Integration Results

RT: 36.94
Area: 62592
Amount: 0.342584
Amount Units: pg/ul

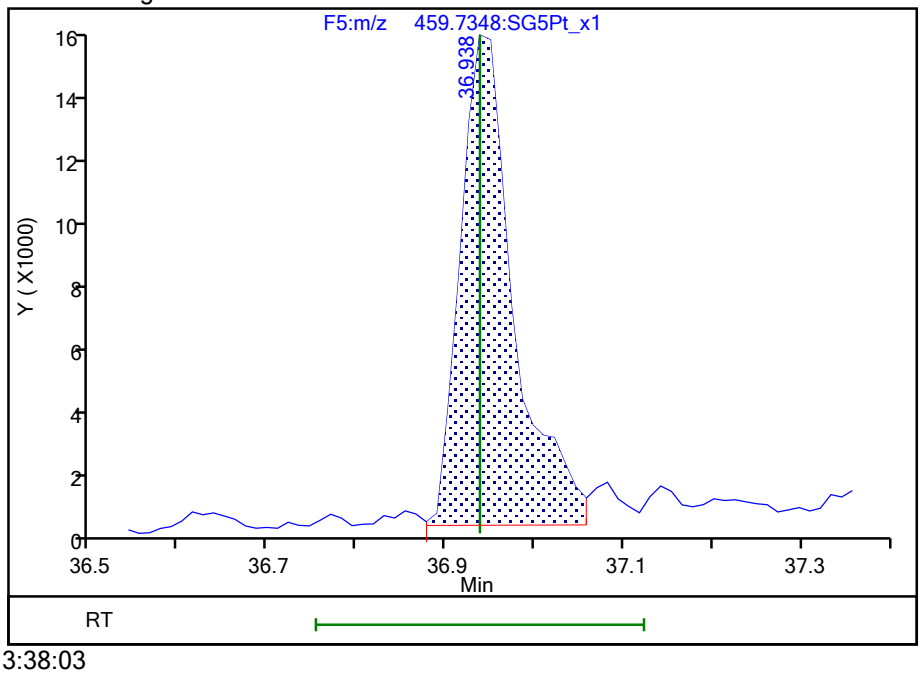

Reviewer: dadunj, 16-Aug-2021 13:38:03
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778814

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

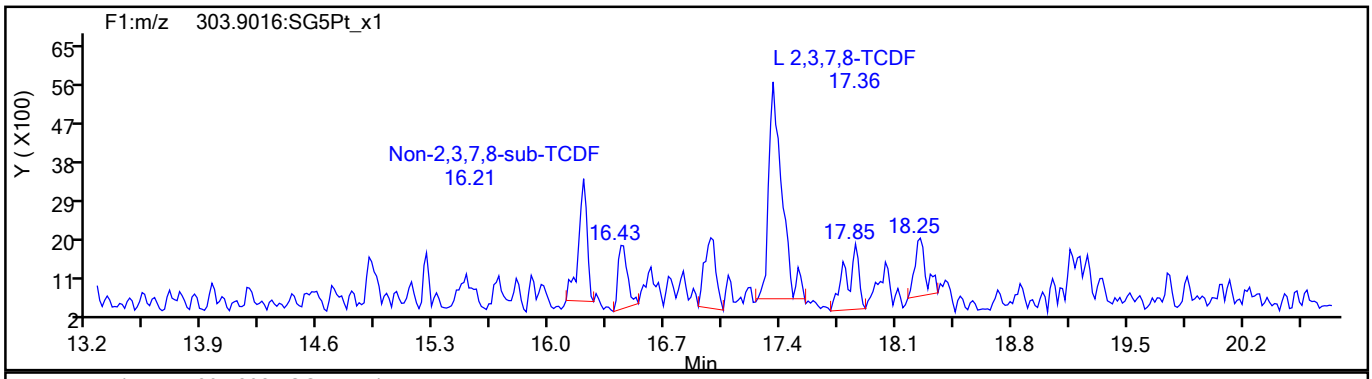

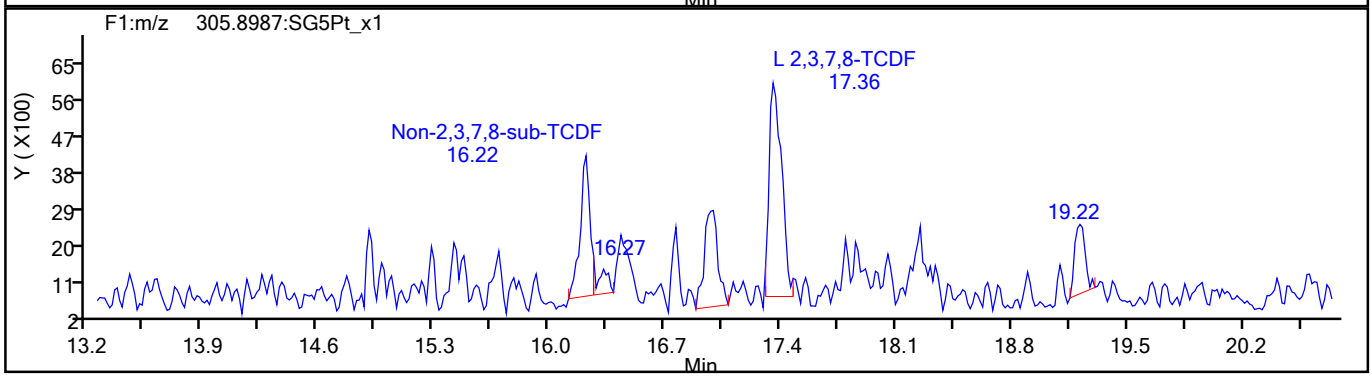

TCDF Standards

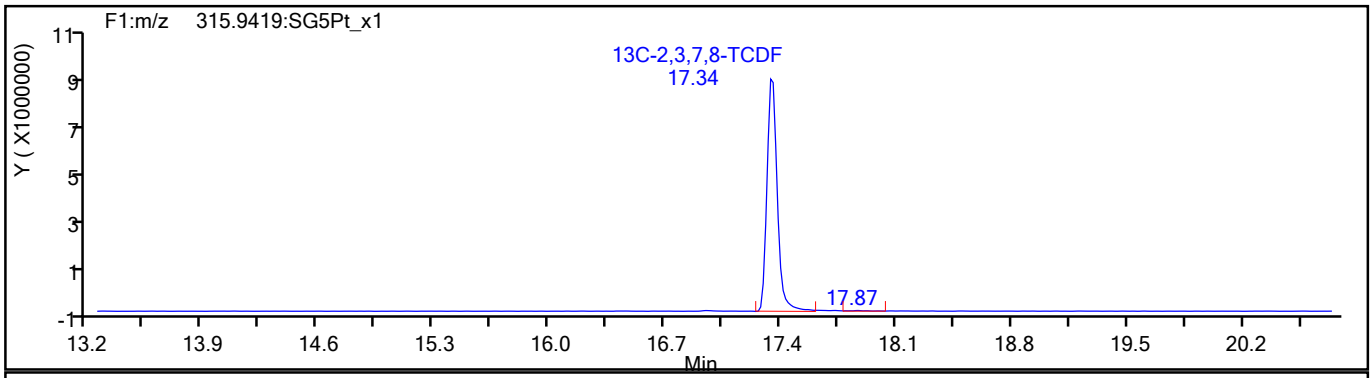

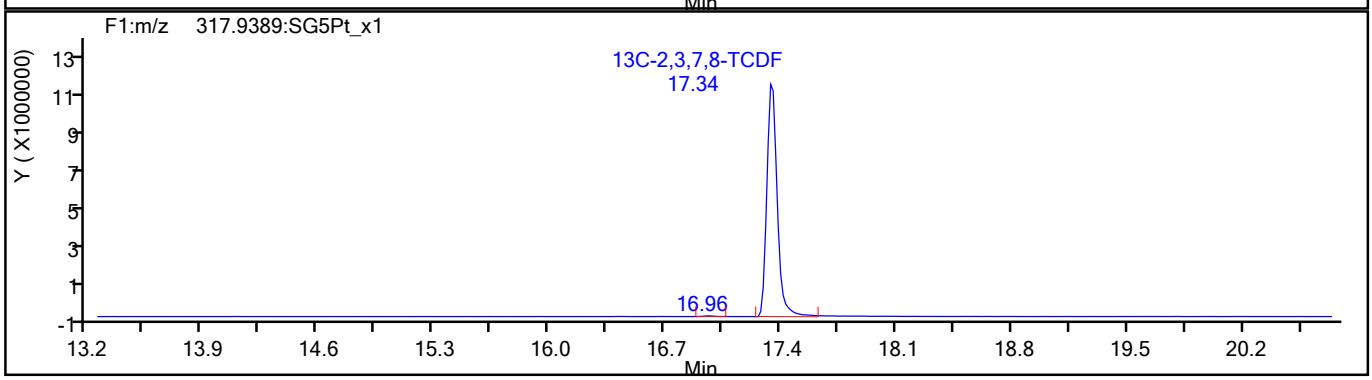

778815

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

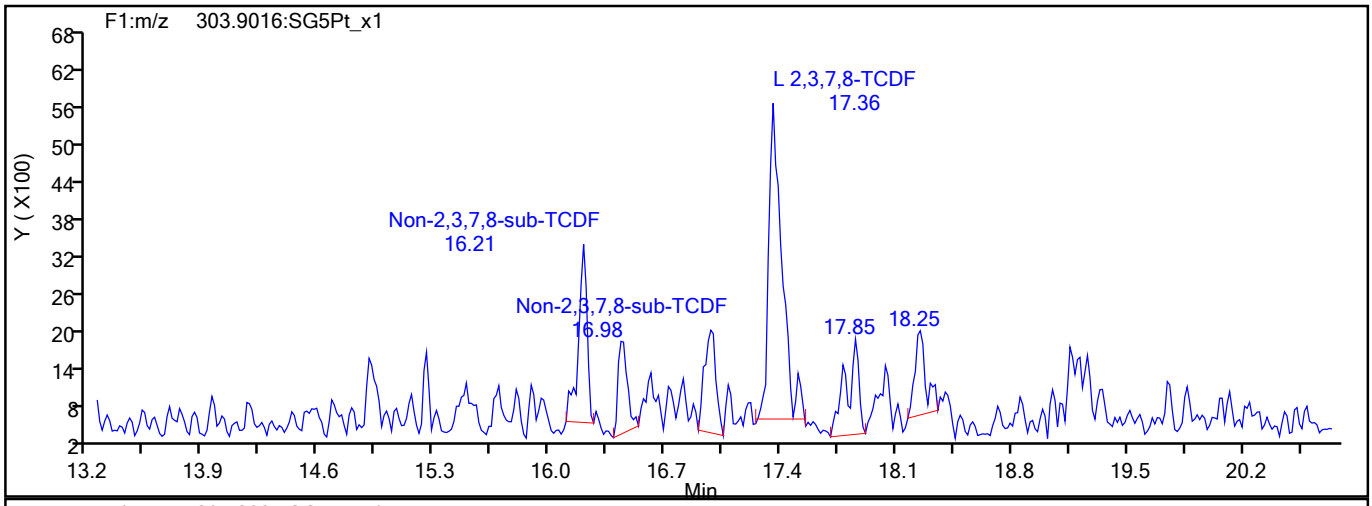

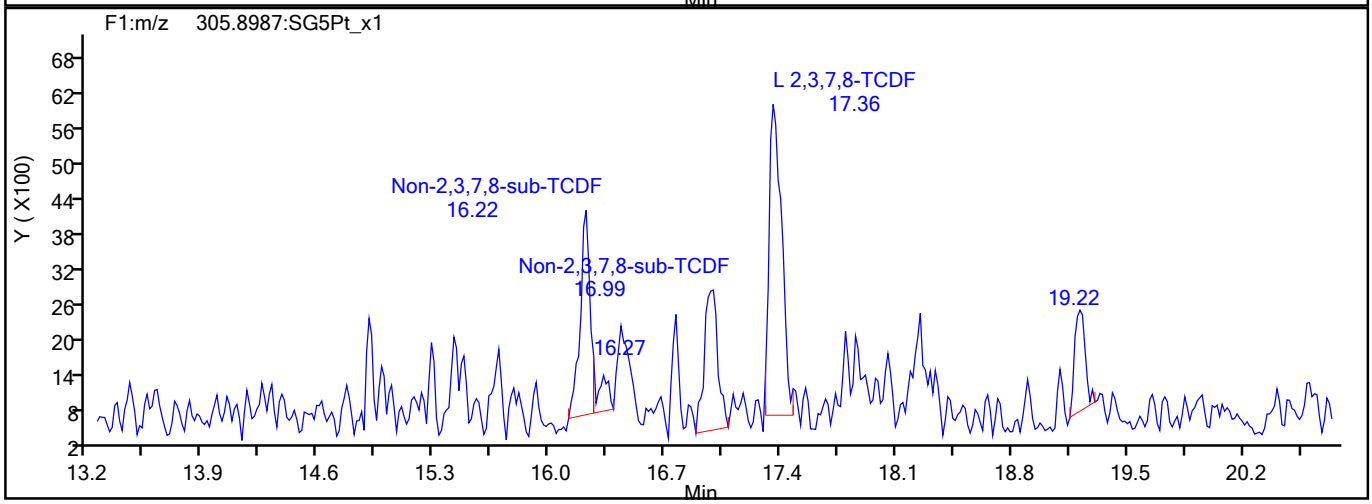

TCDF Interference Mass

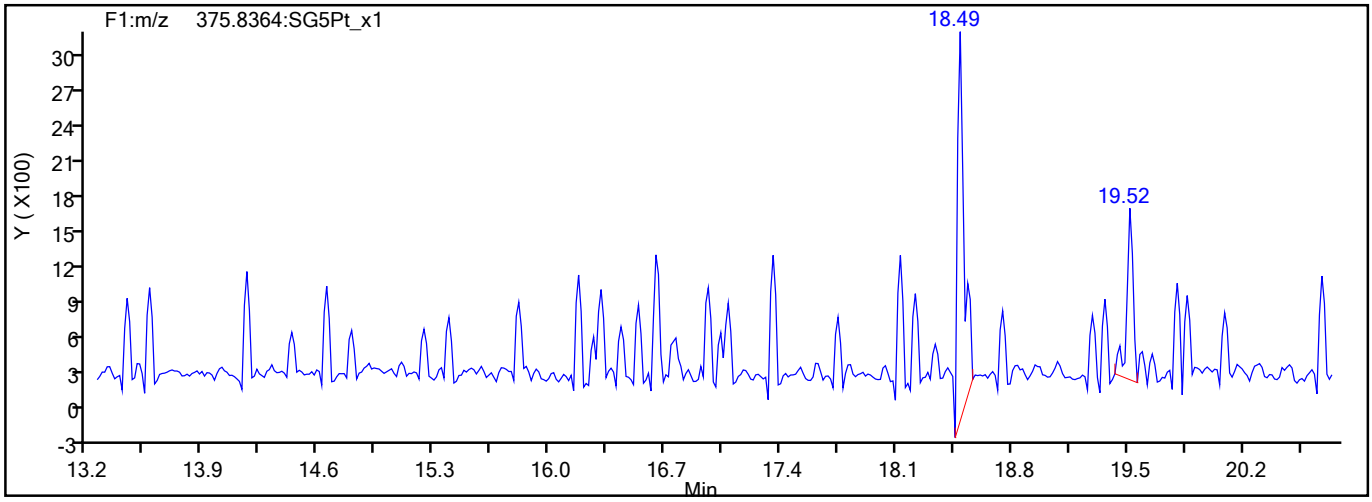

778816

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

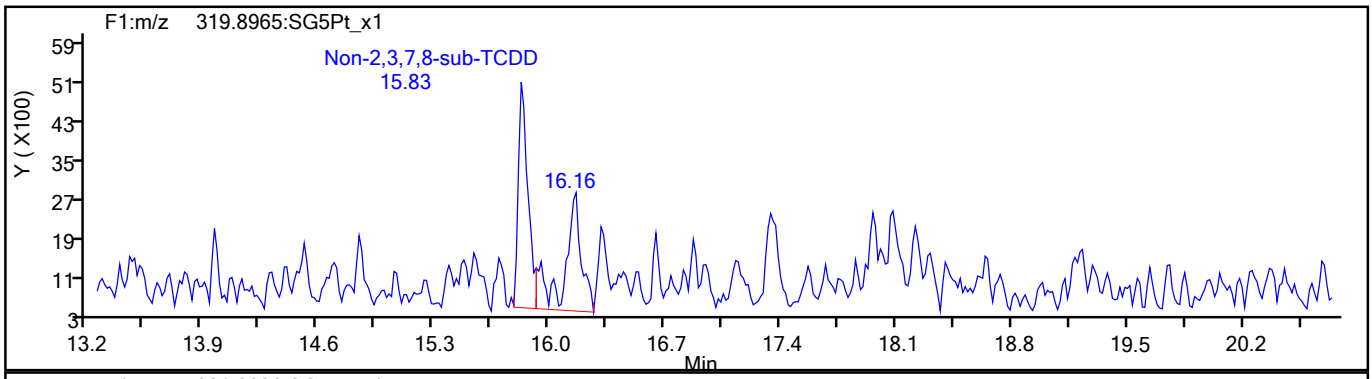

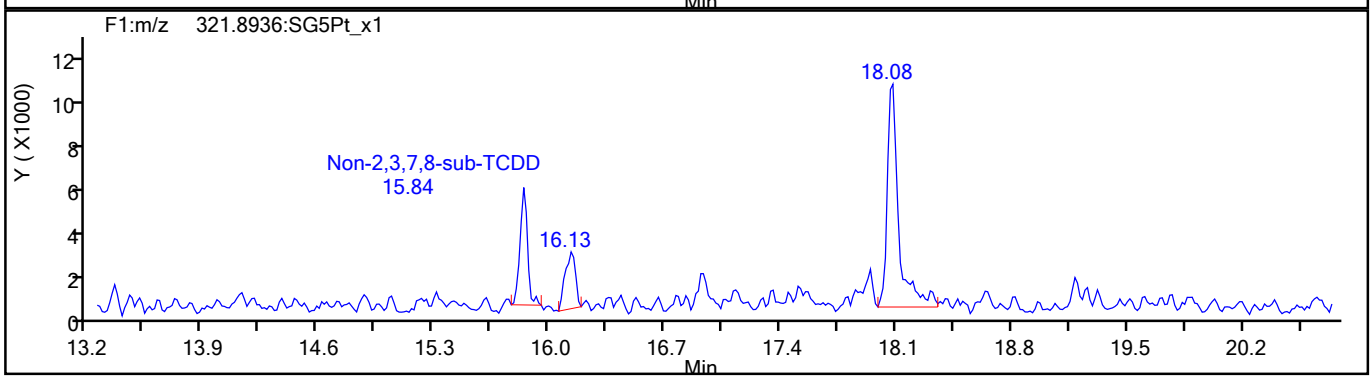

TCDD Standards

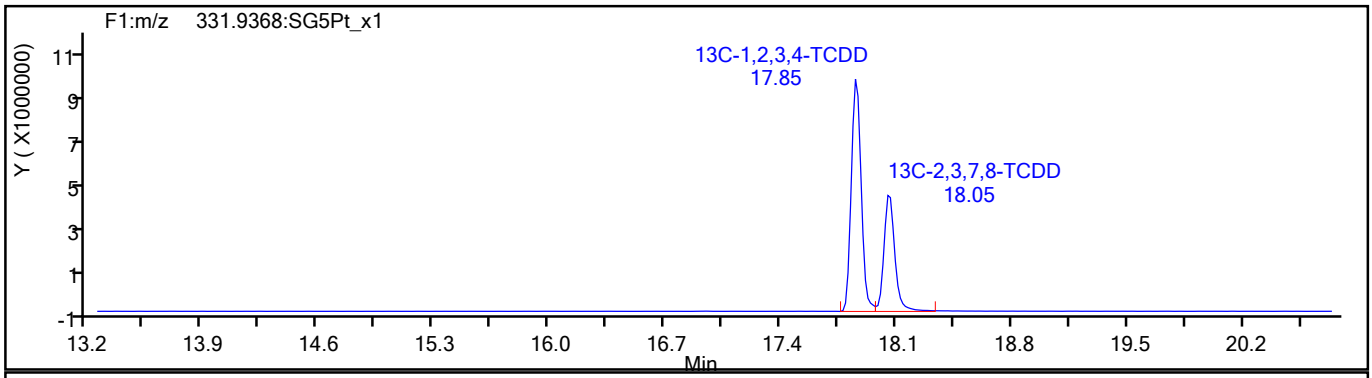

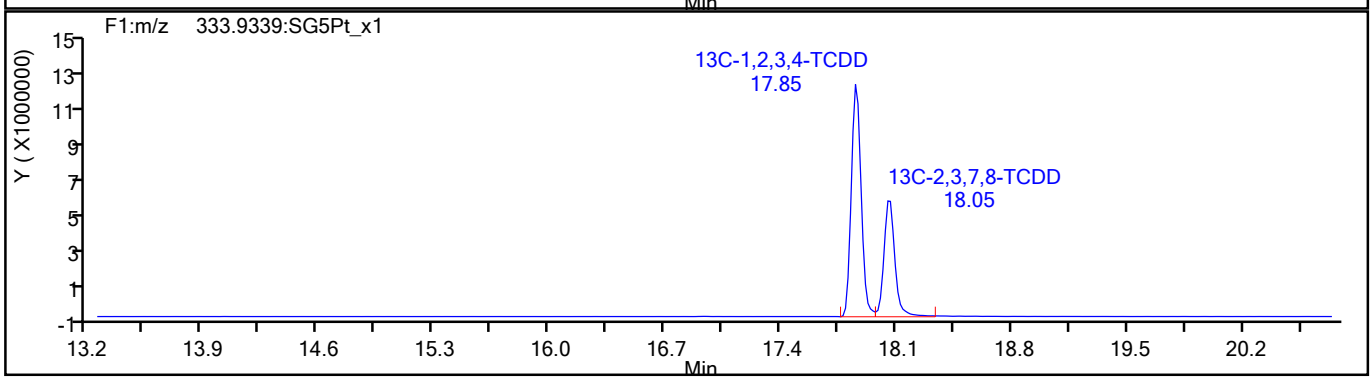

778817

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

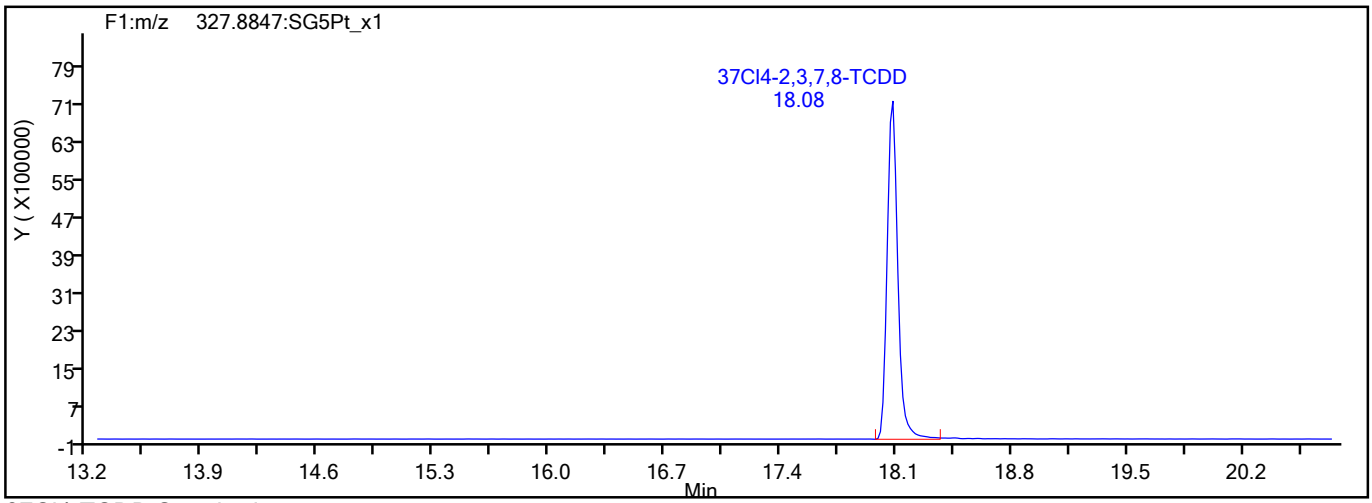

37Cl4-TCDD Standards

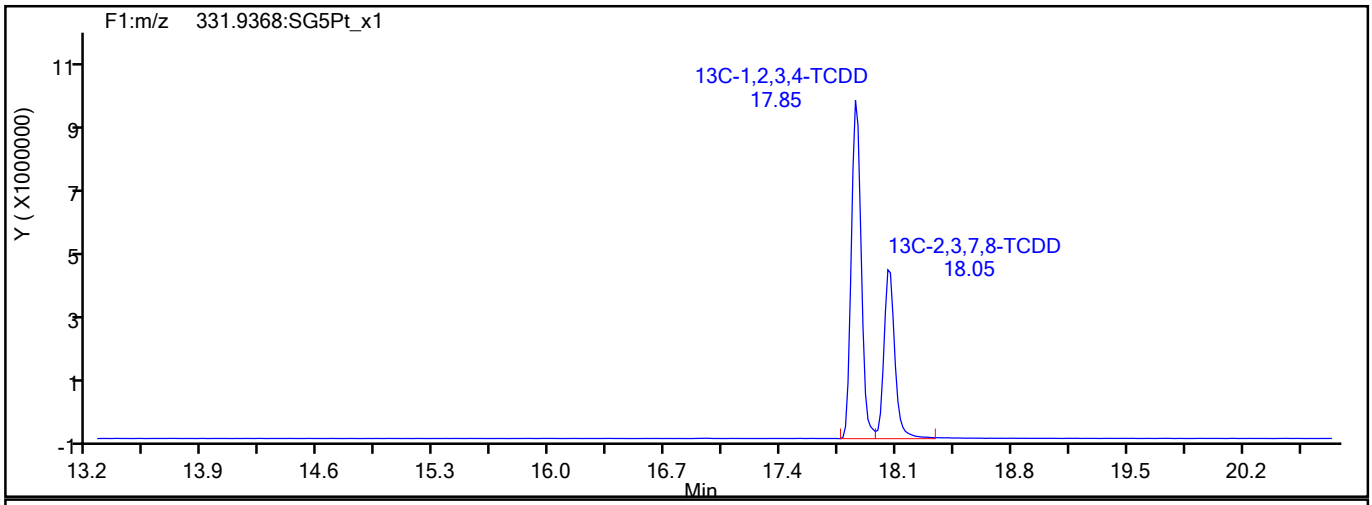

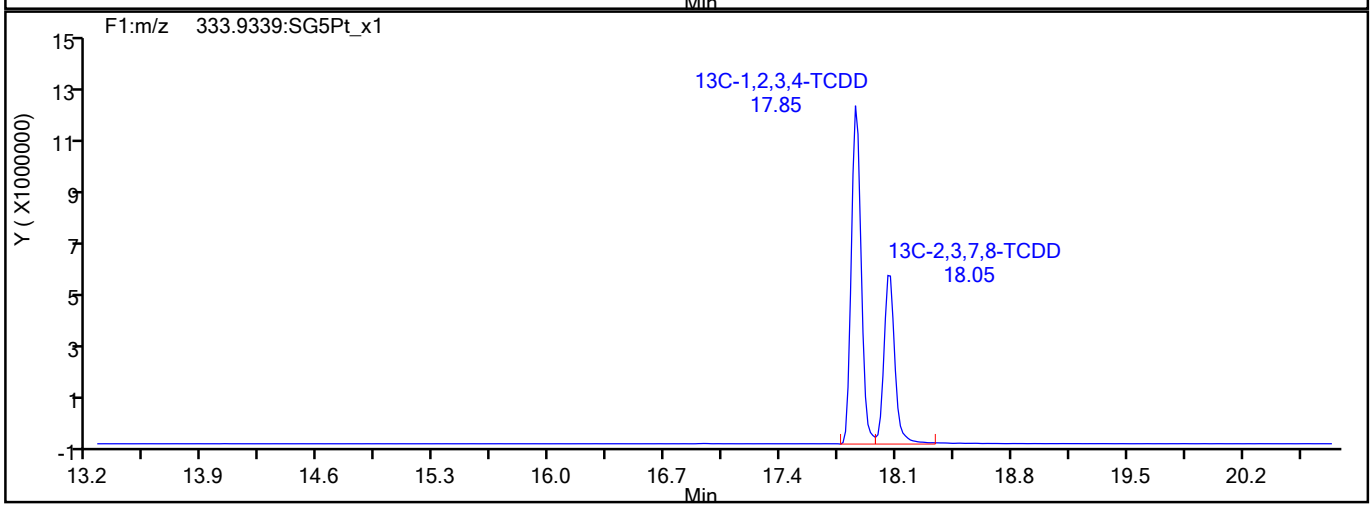

778818

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

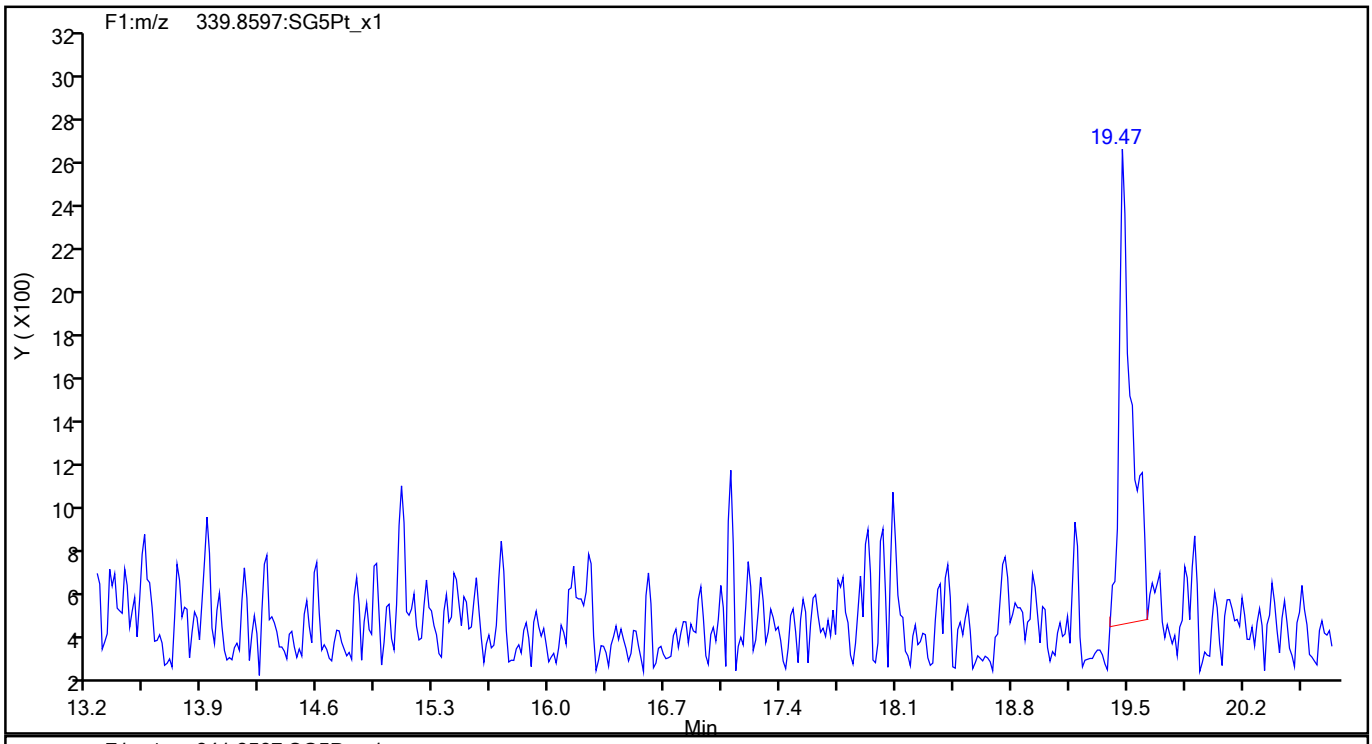

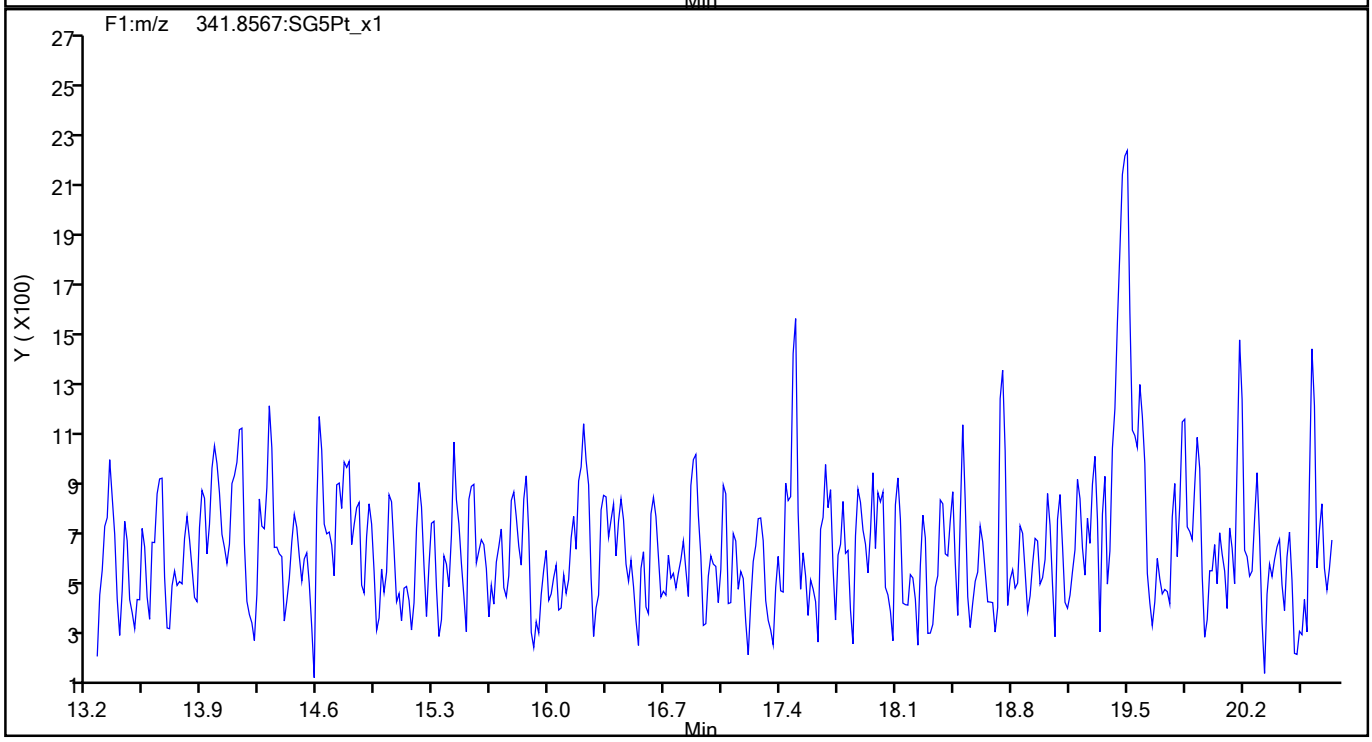

778819

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

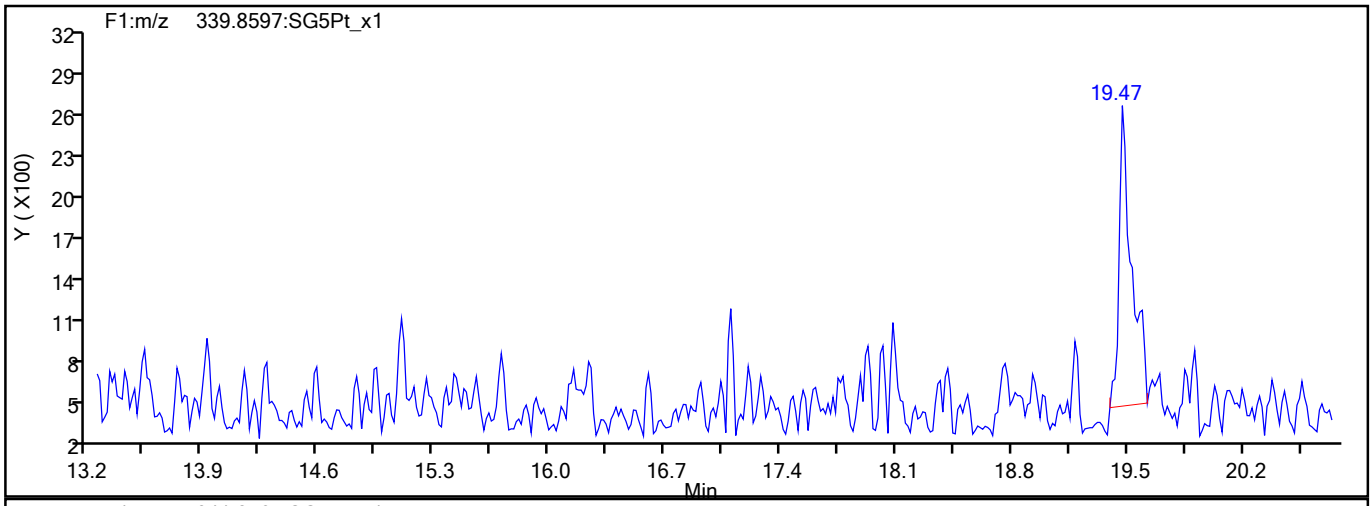

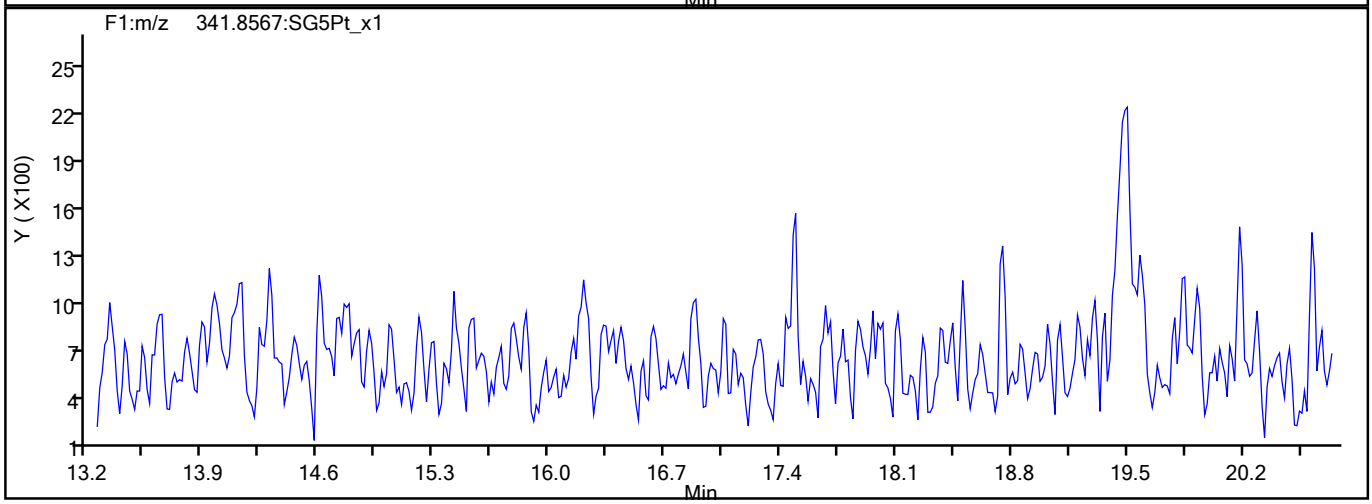

F1 PeCDFs Interference Mass

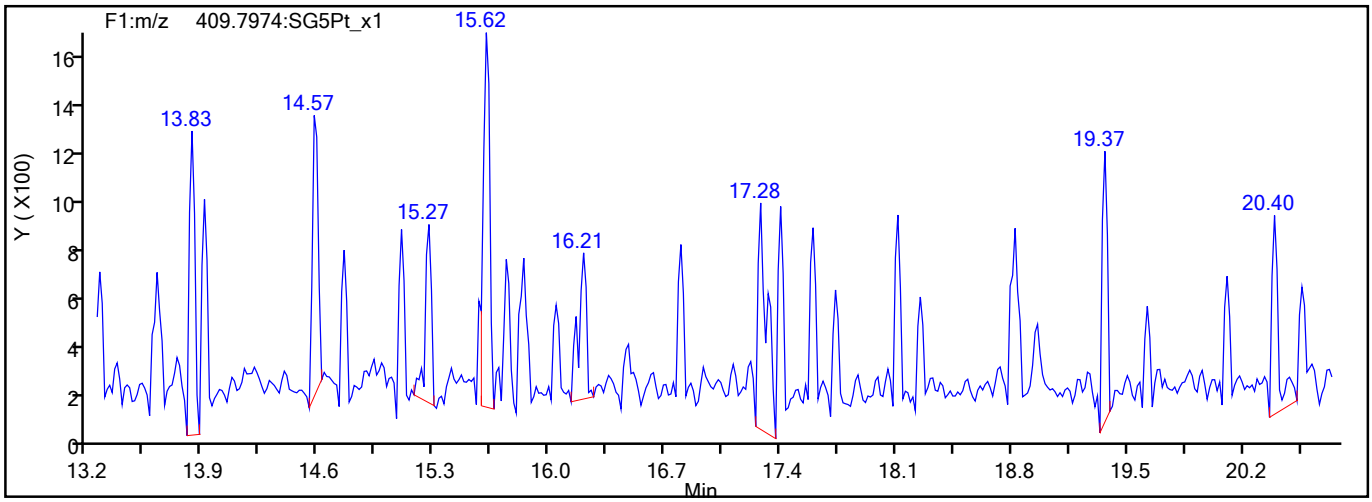

778820

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

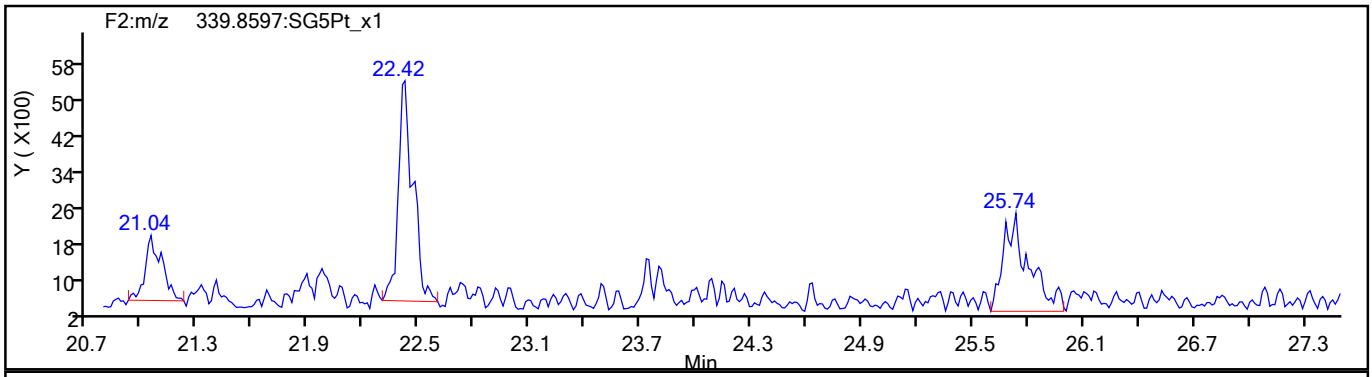

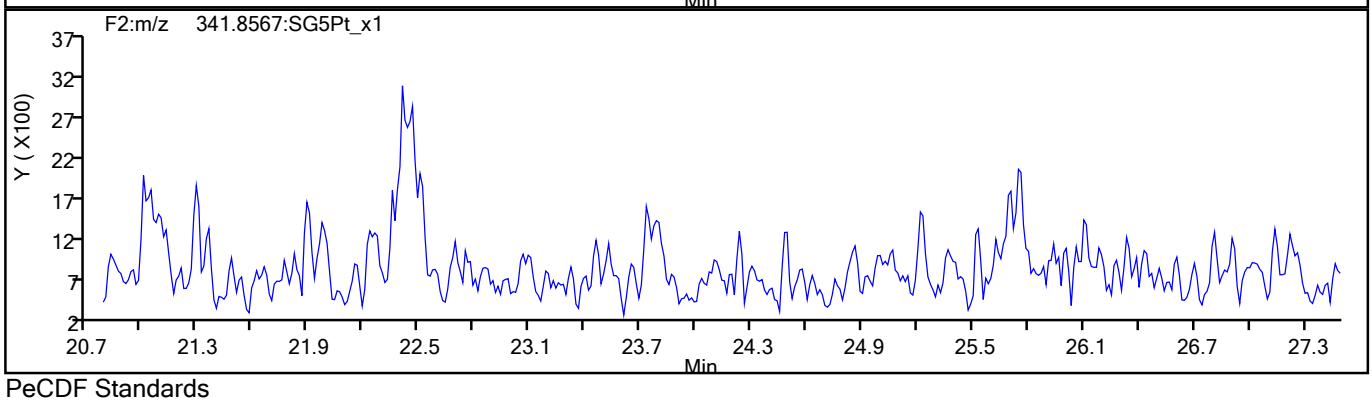

PeCDF Standards

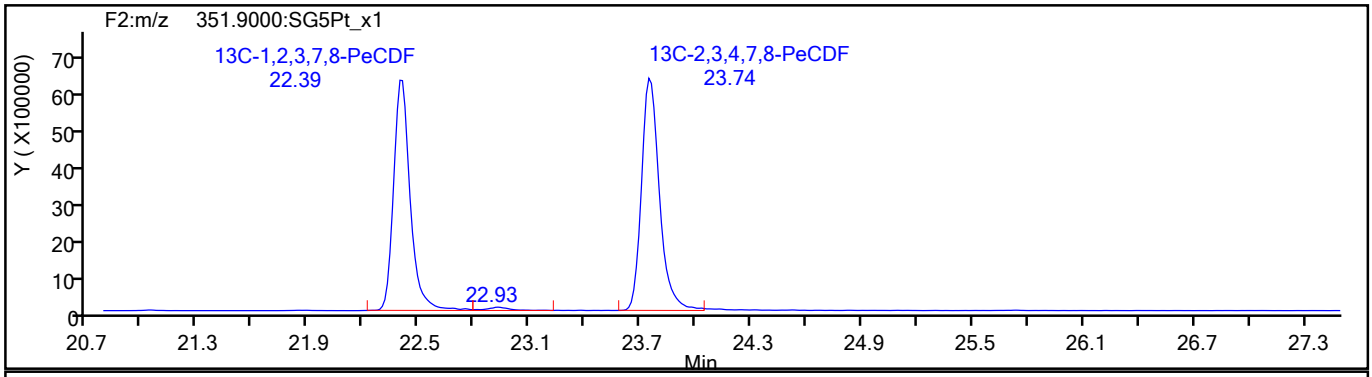

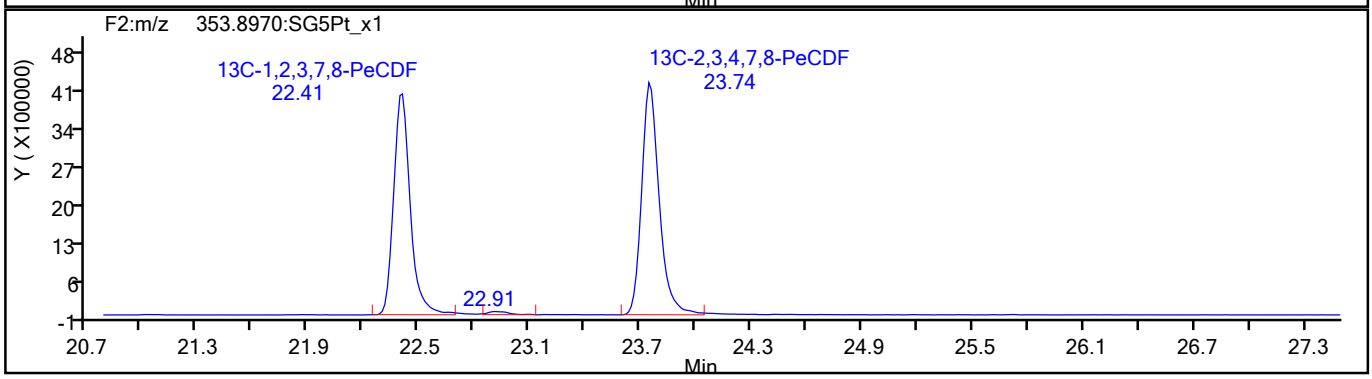

778821

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

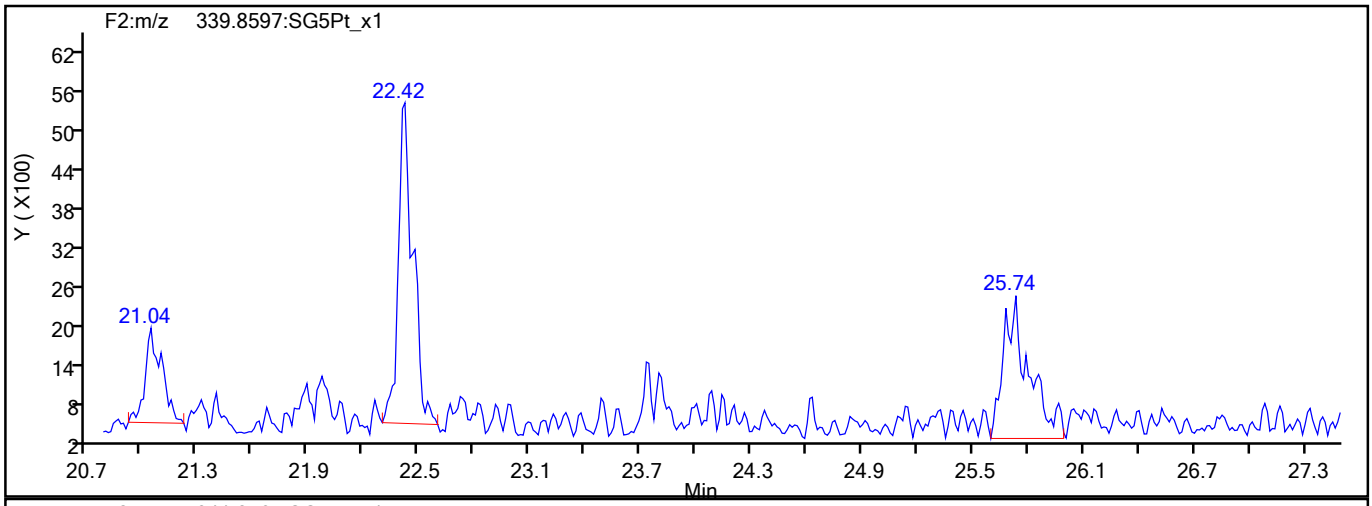

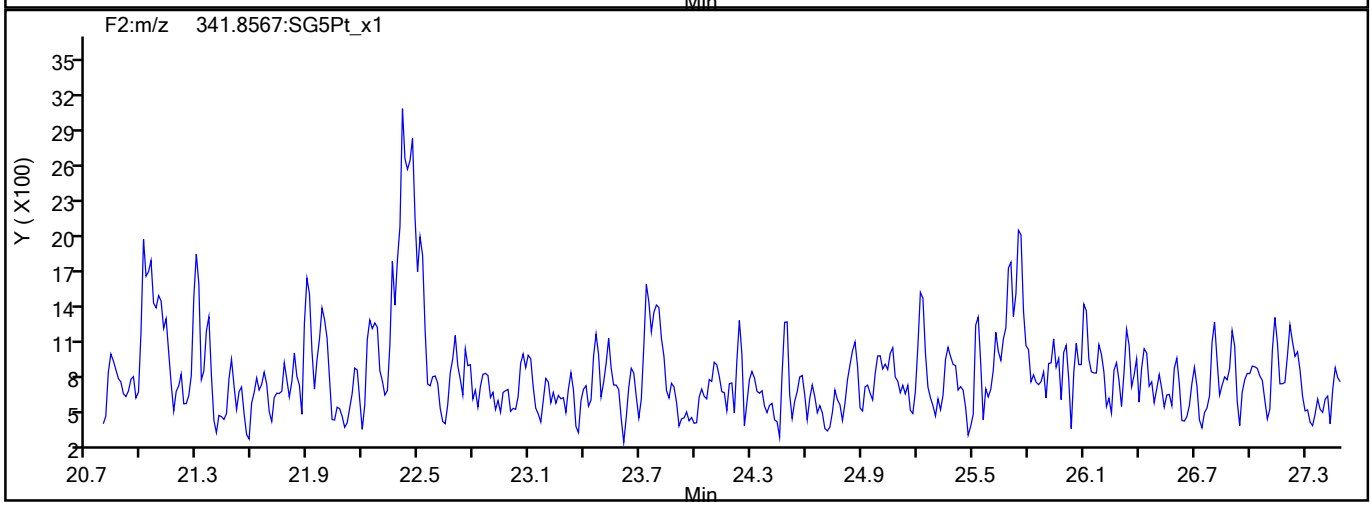

PeCDF Interference Mass

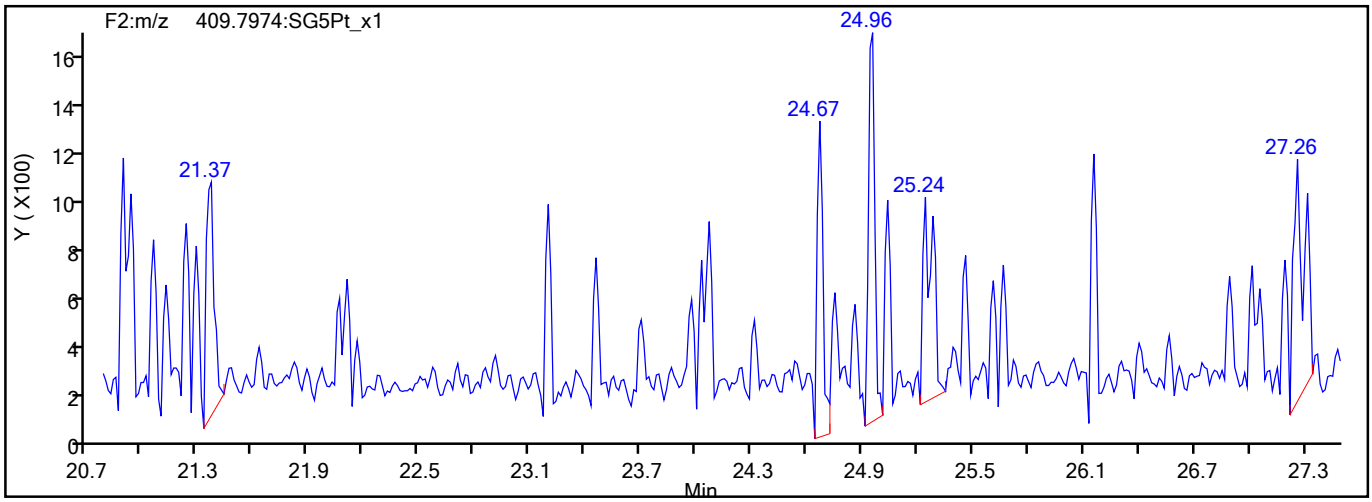

778822

Report Date: 16-Aug-2021 13:38:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

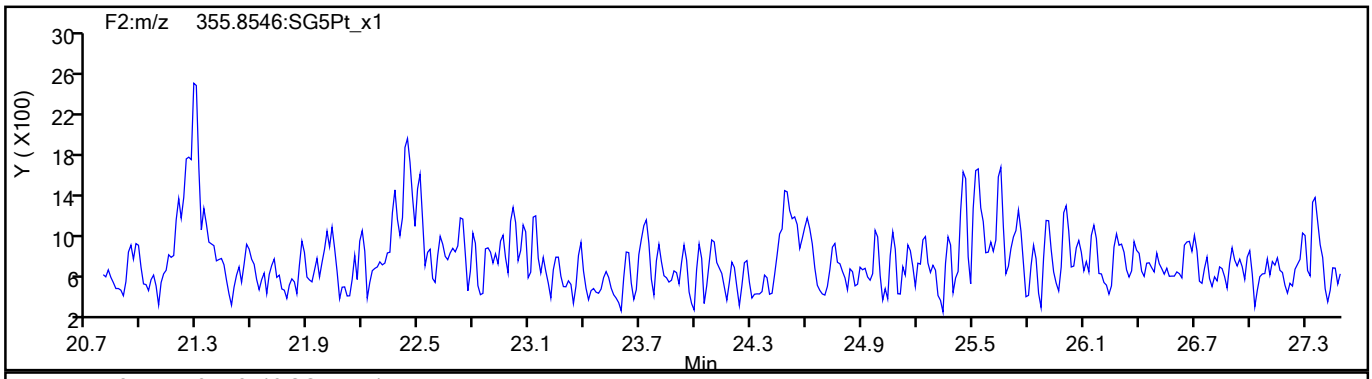

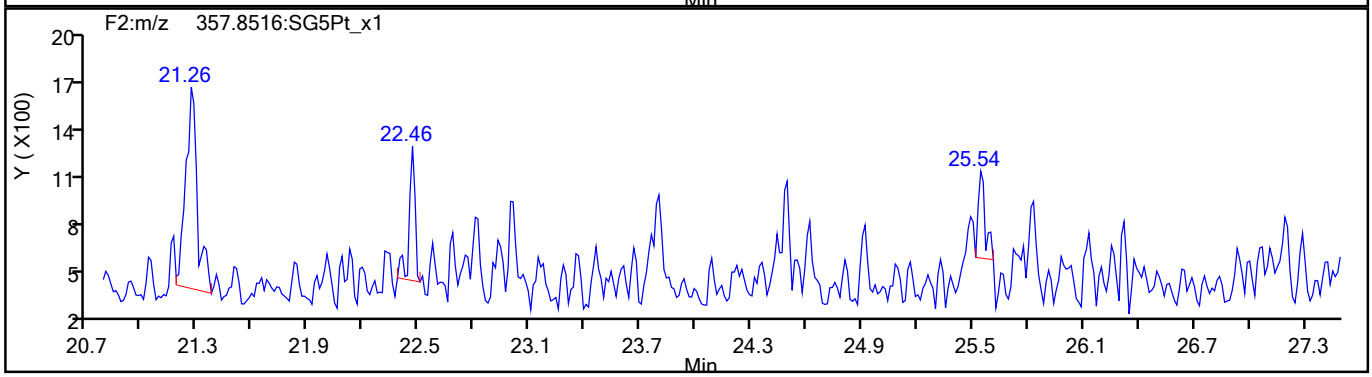

PeCDD Standards

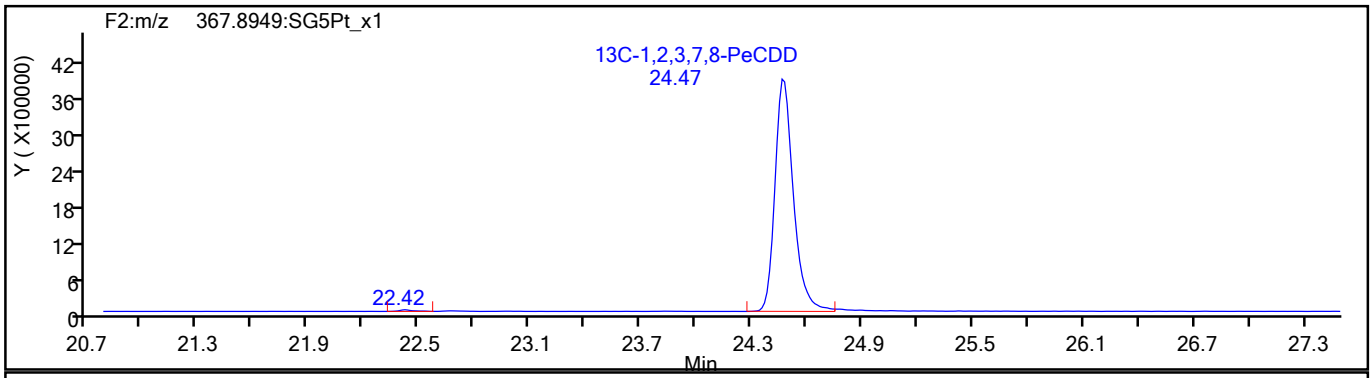

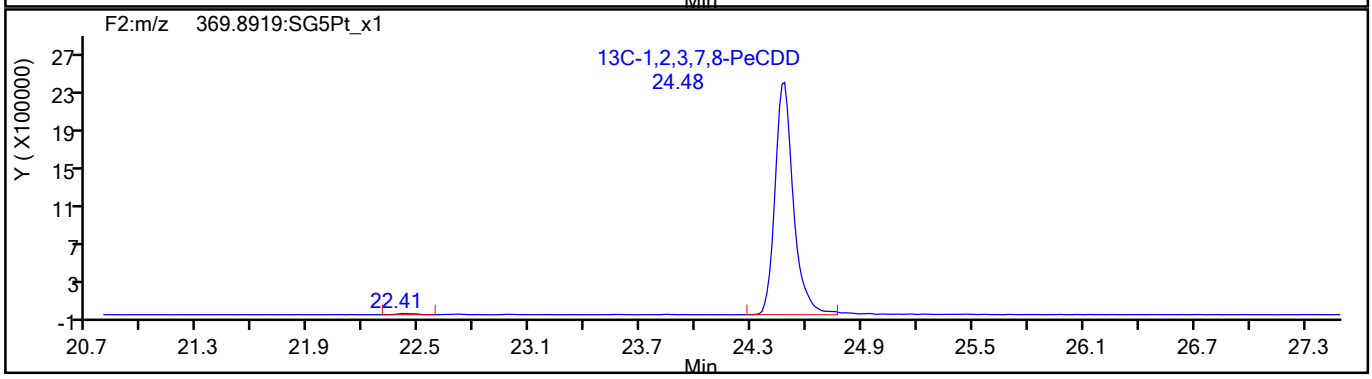

778823

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

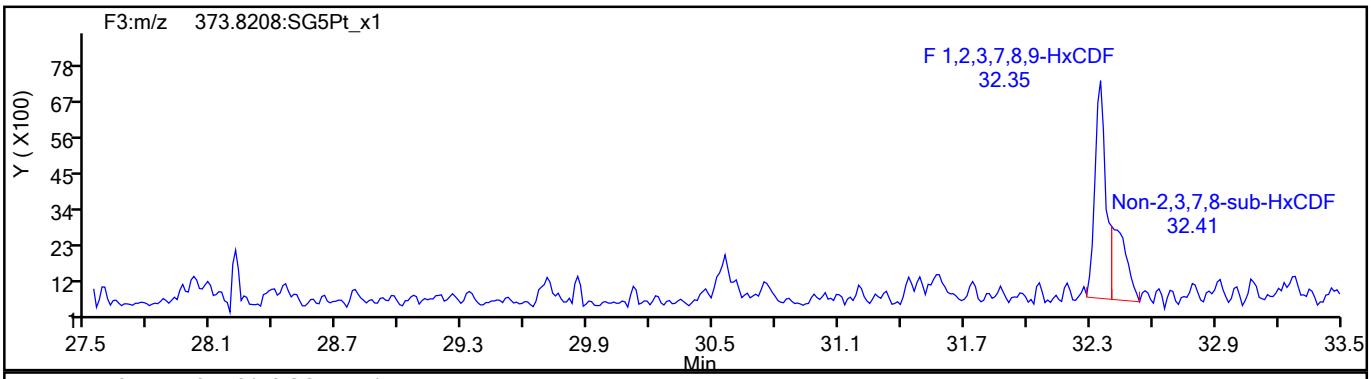

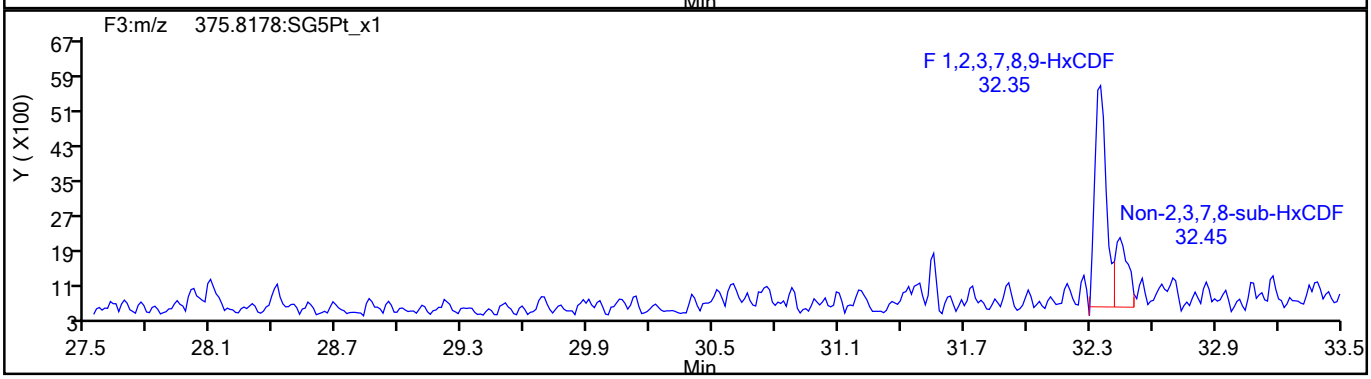

HxCDF Standards

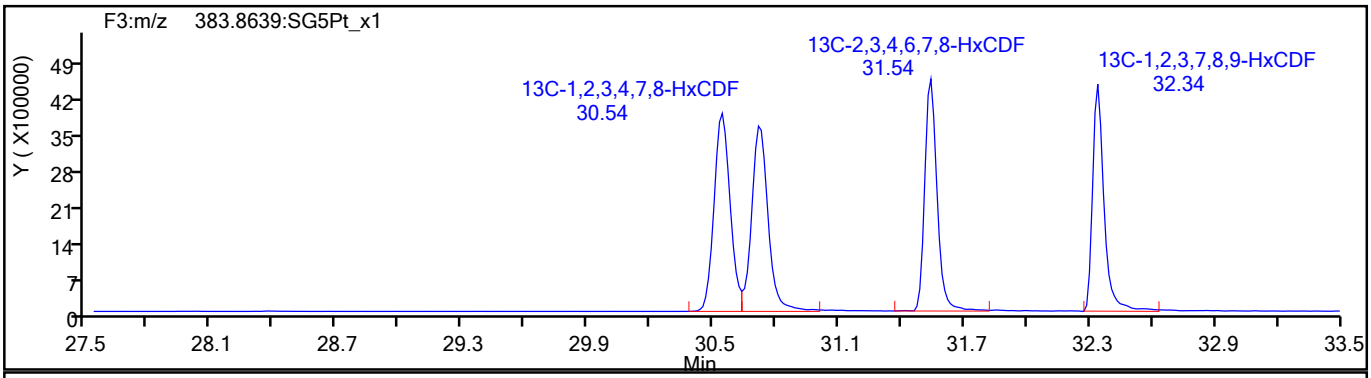

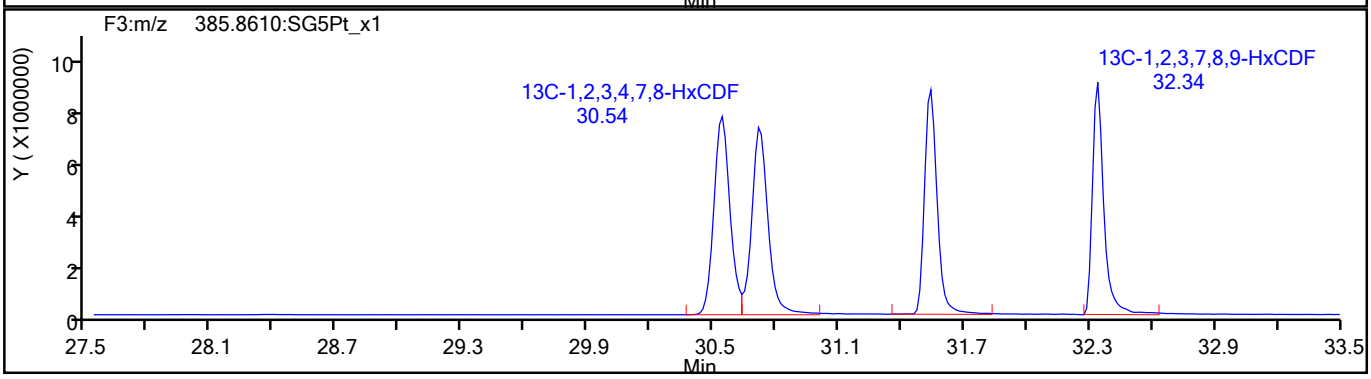

778824

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

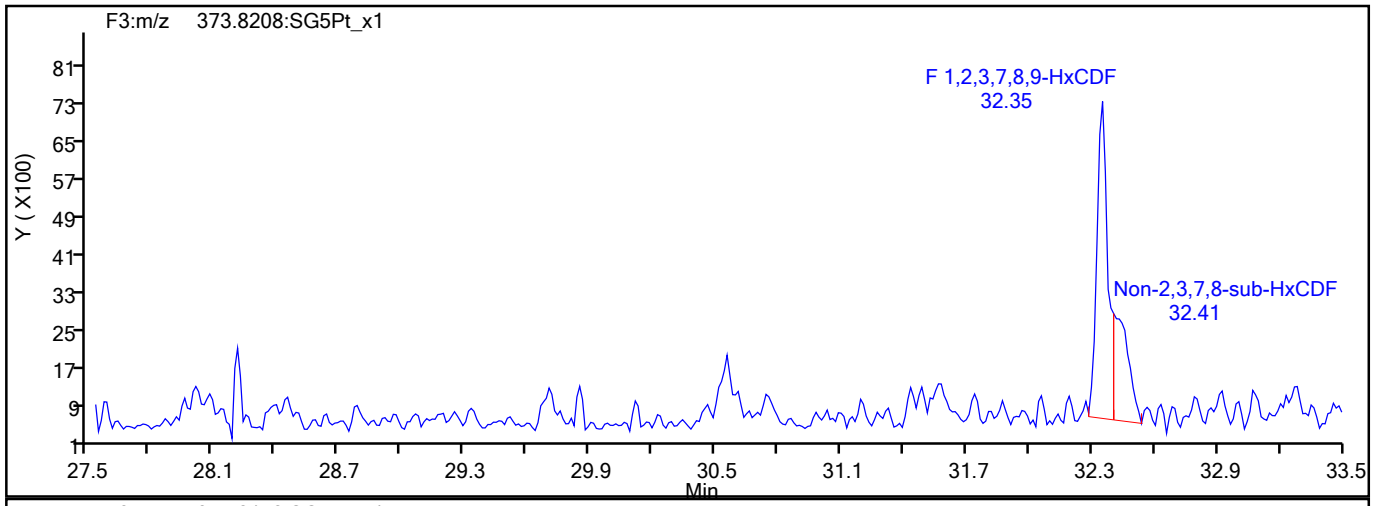

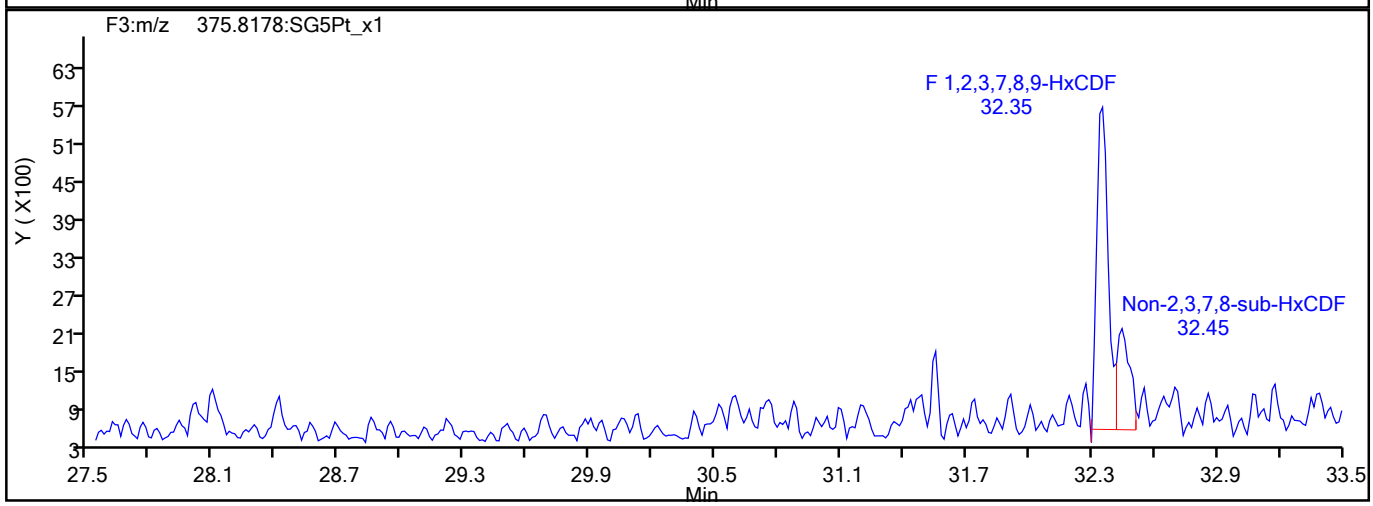

HxCDF Interference Mass

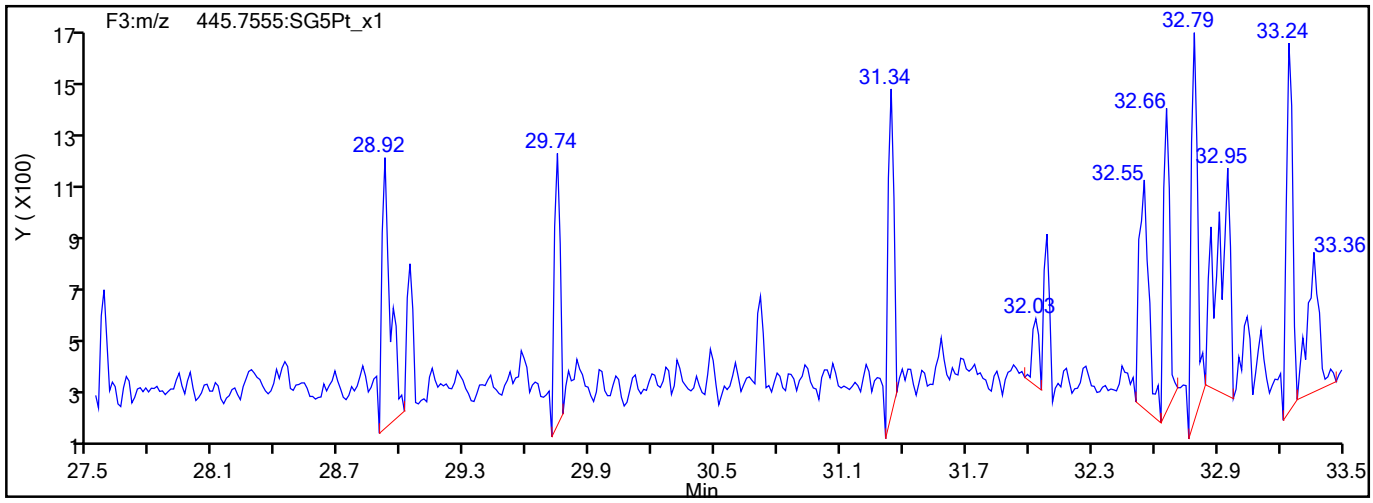

778825

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

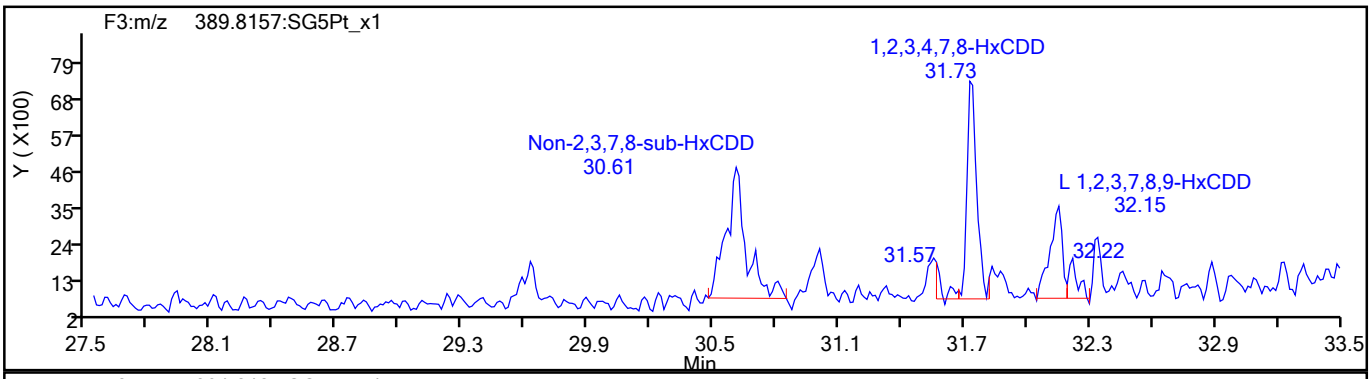

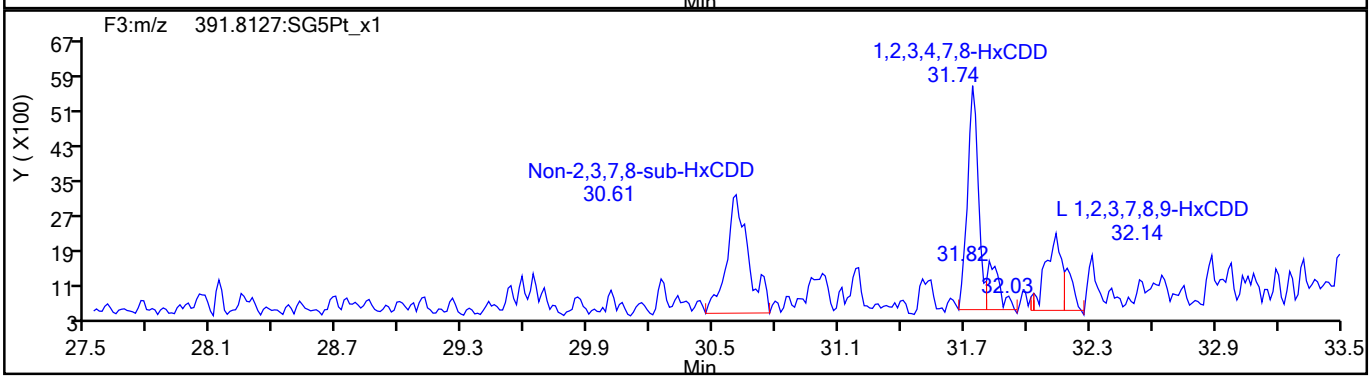

HxCDD Standards

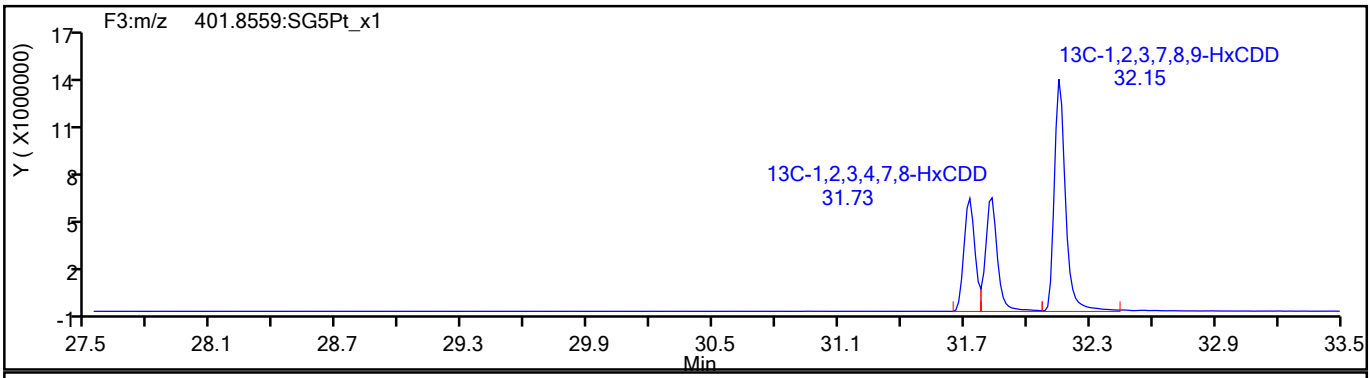

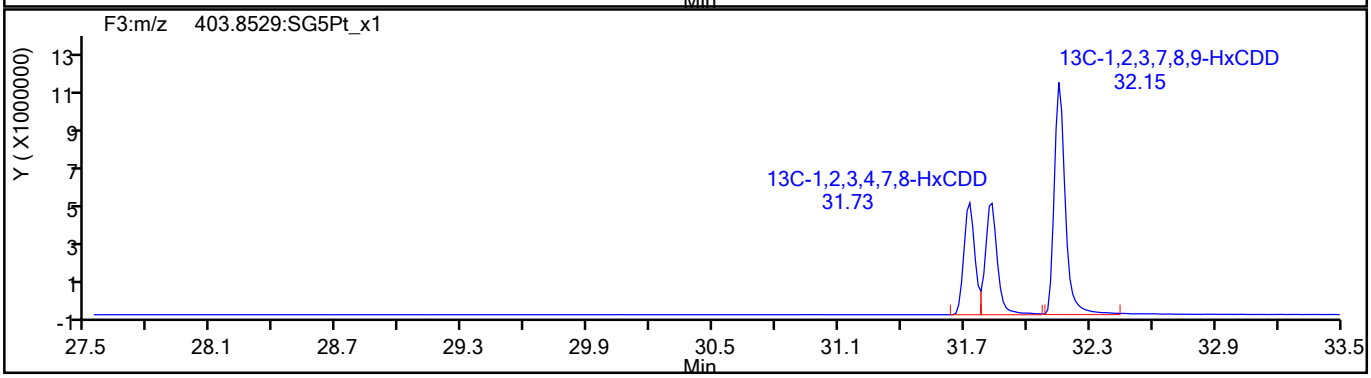

778826

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

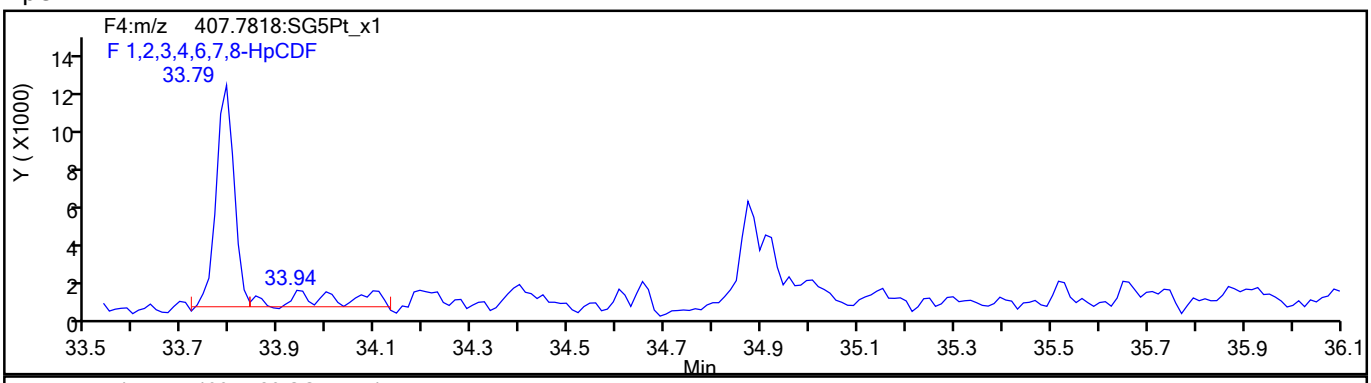

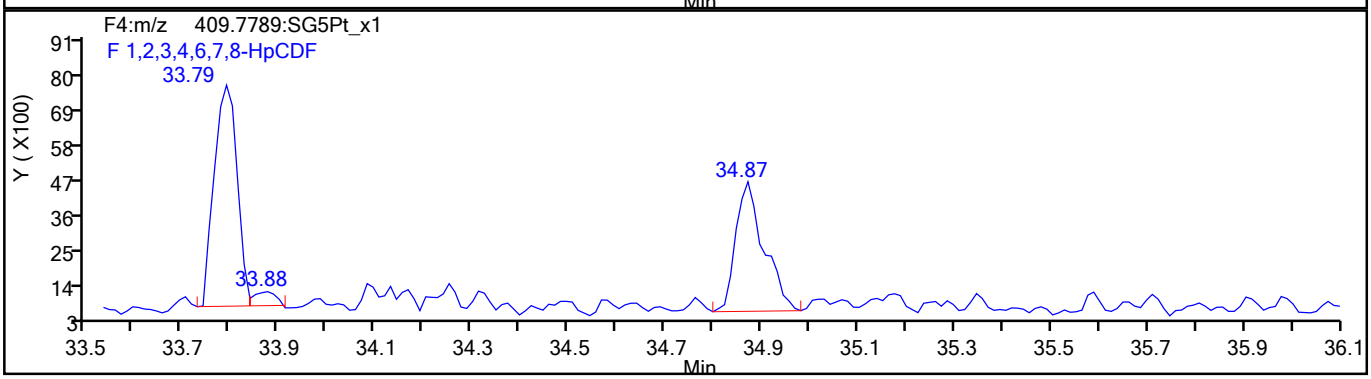

HpCDF Standards

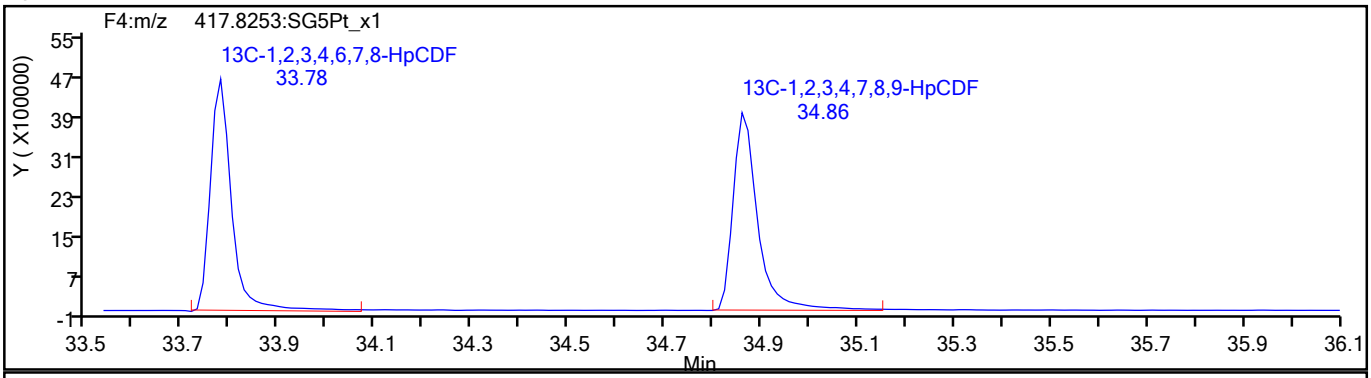

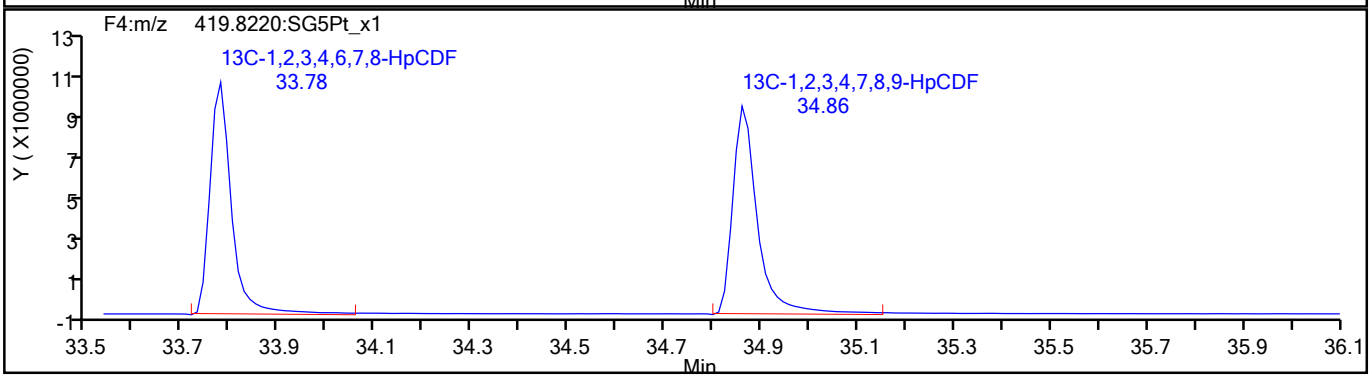

778827

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

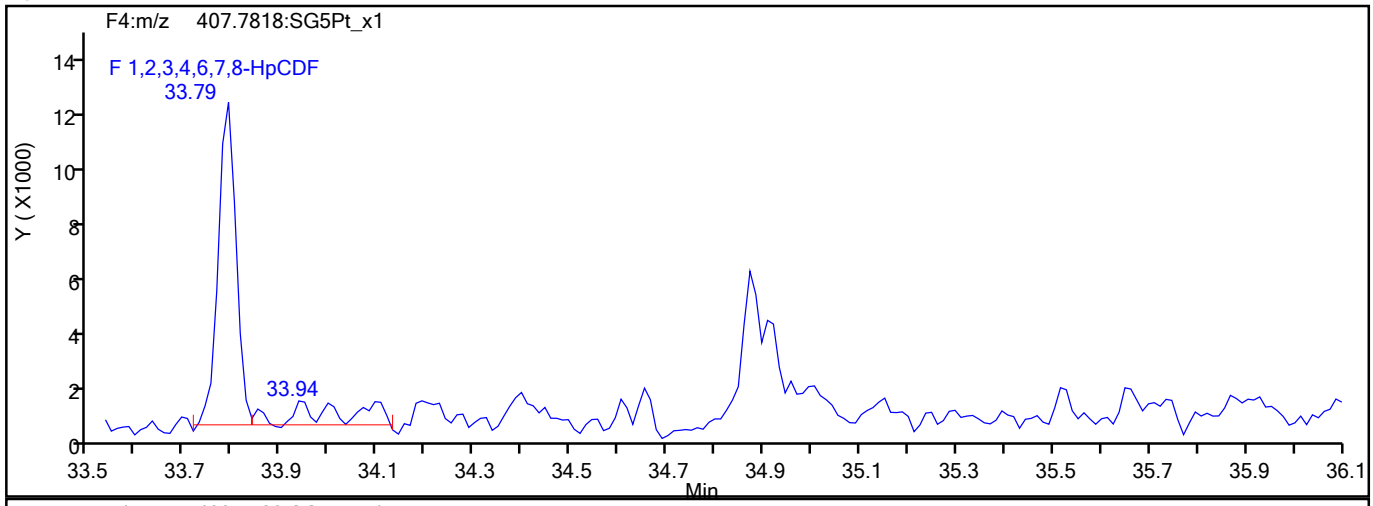

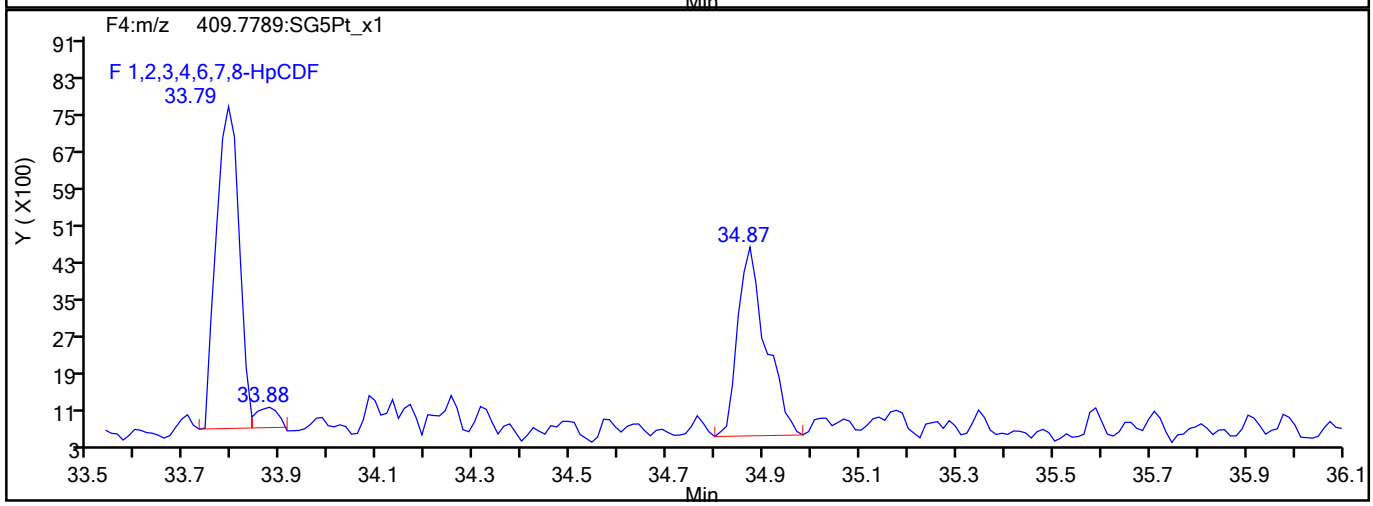

HpCDF Interference Mass

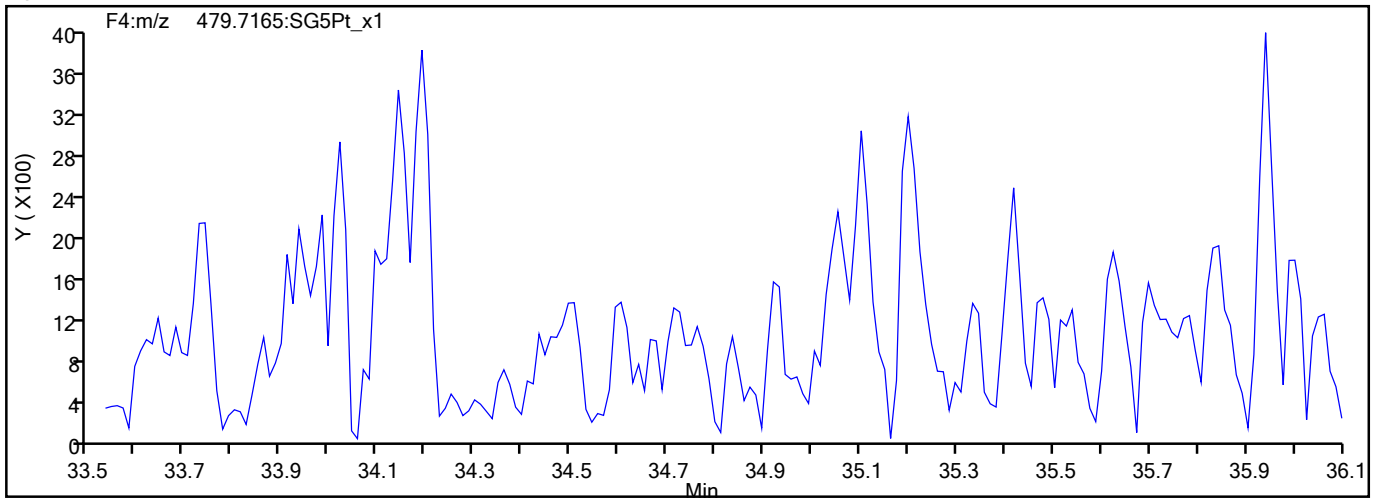

778828

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

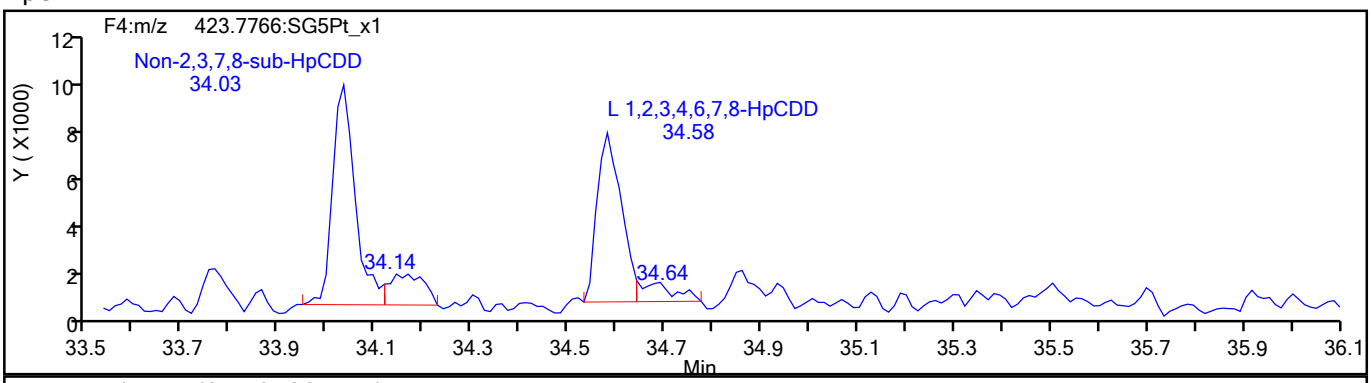

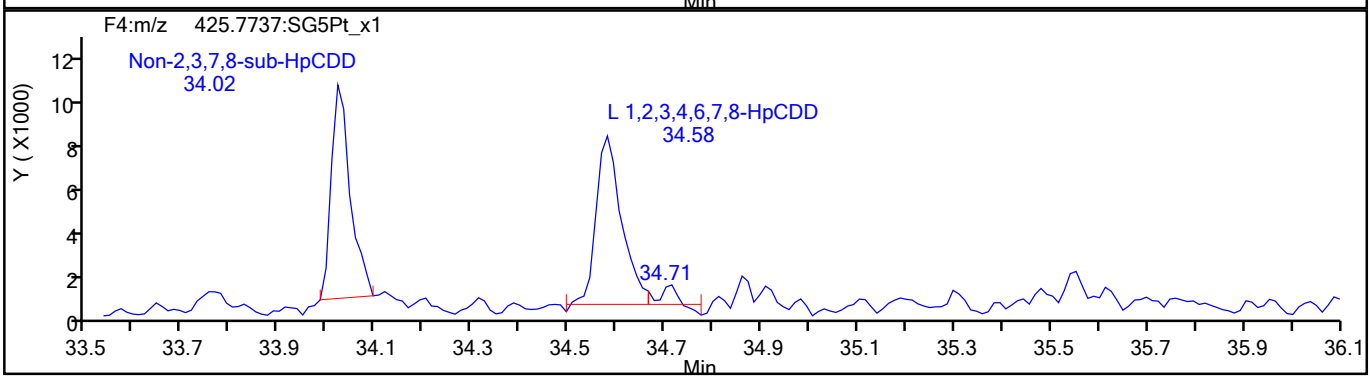

HpCDD Standards

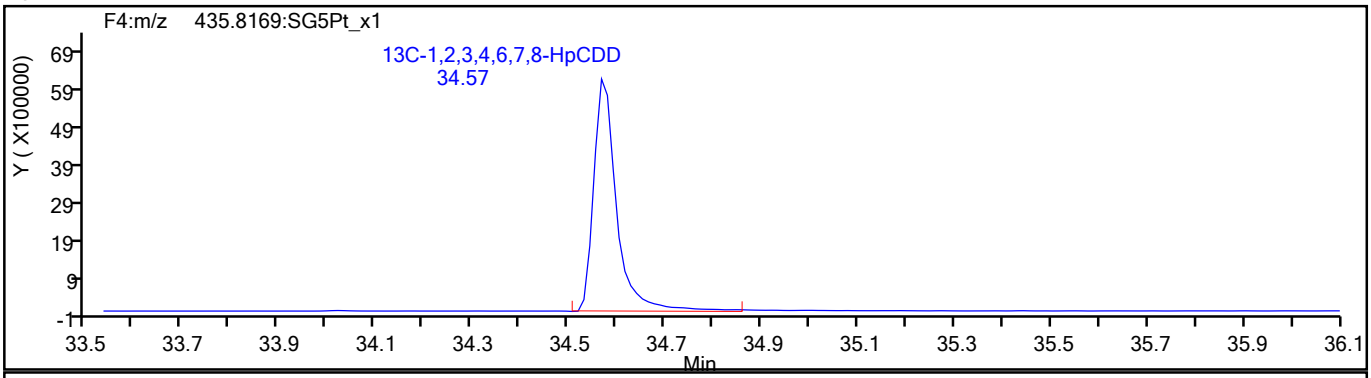

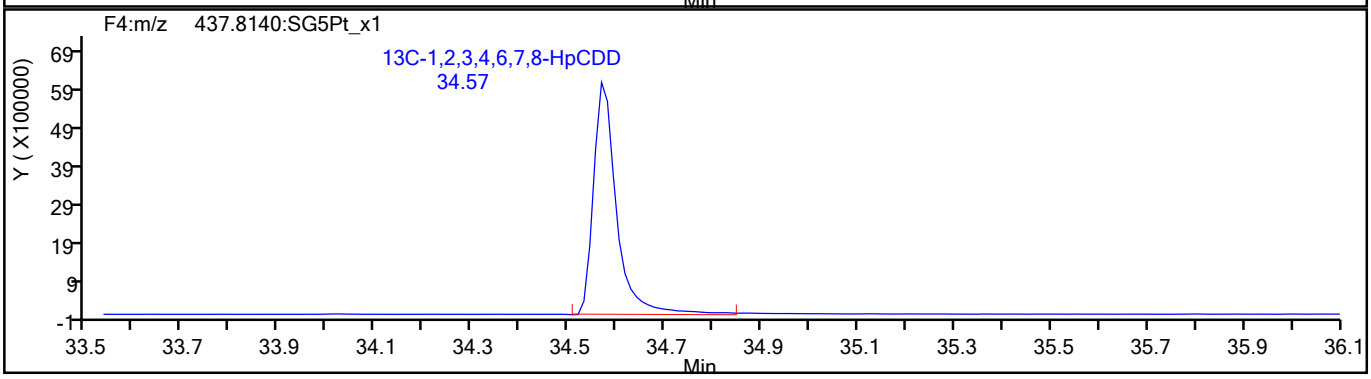

778829

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

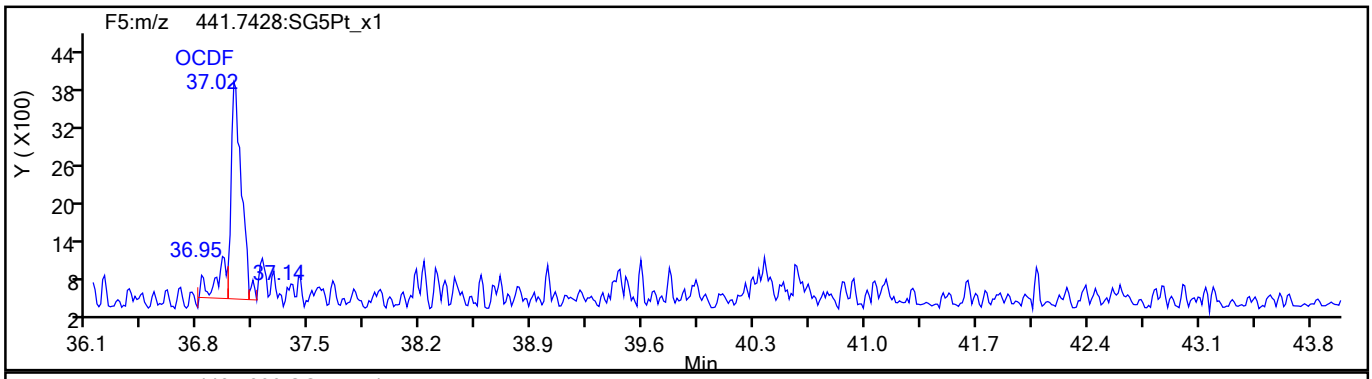

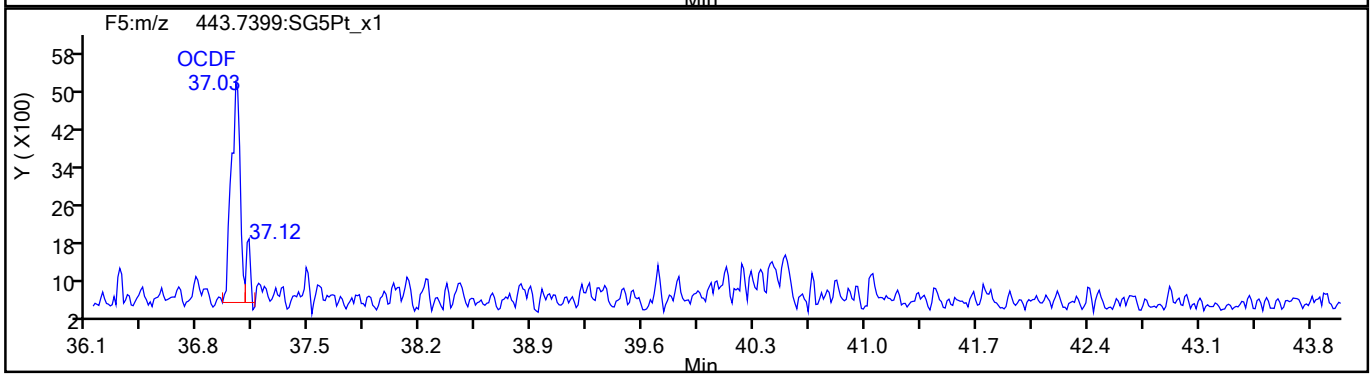

OCDF Standards

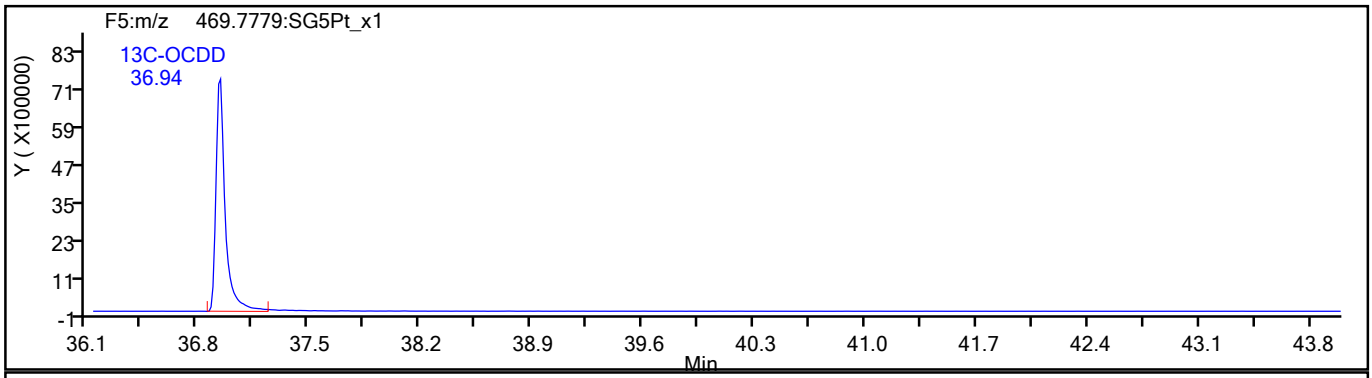

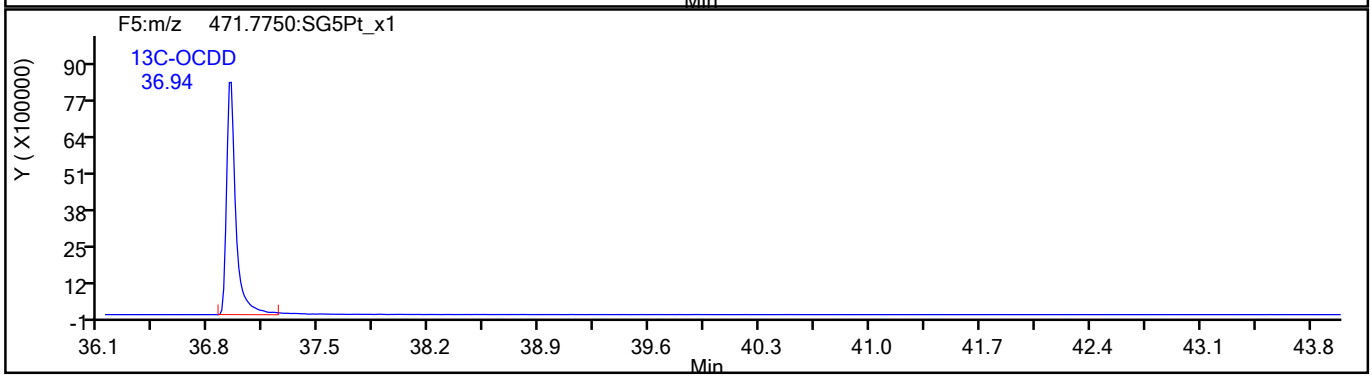

778830

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

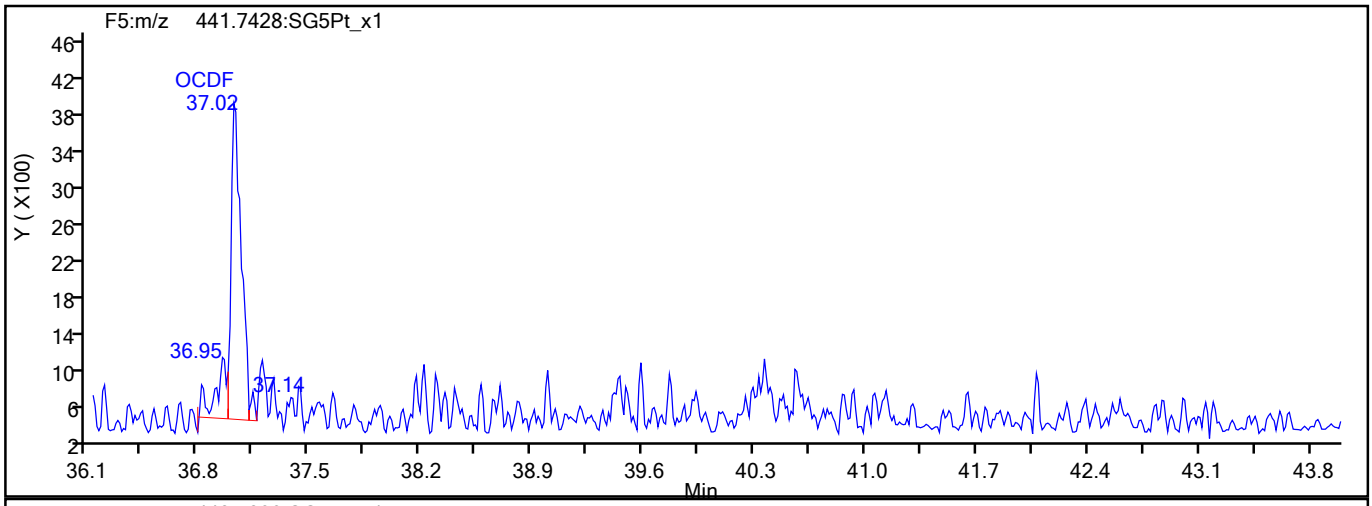

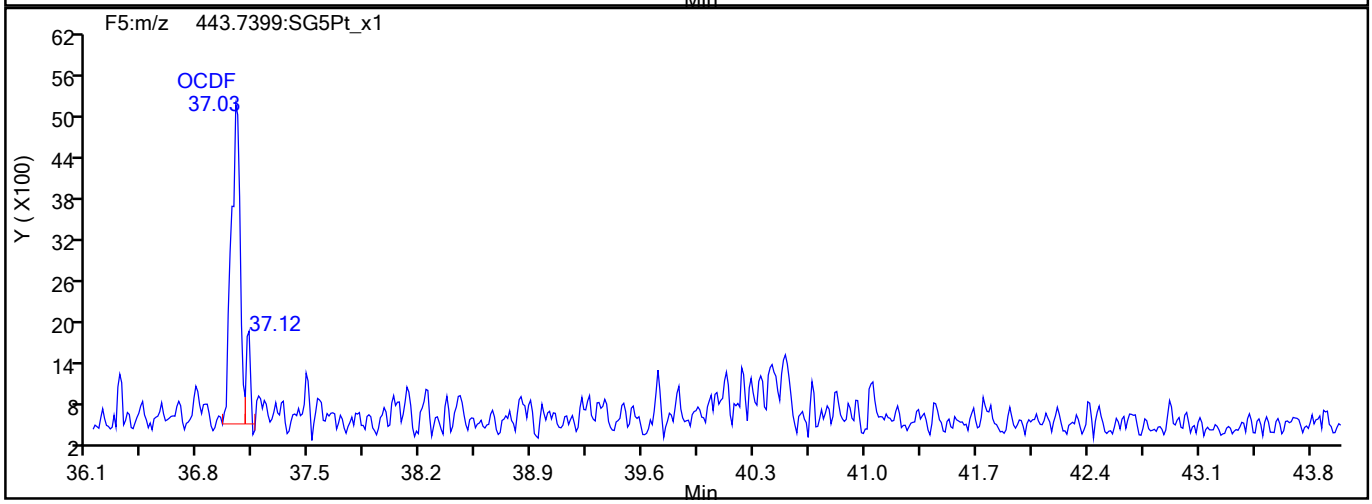

OCDF Interference Mass

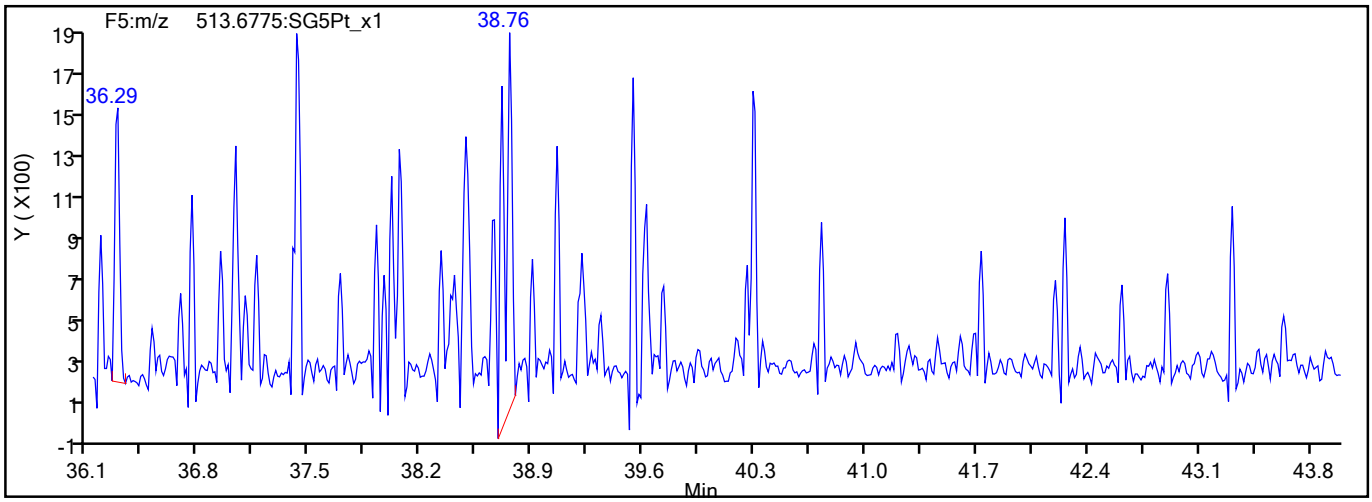

778831

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

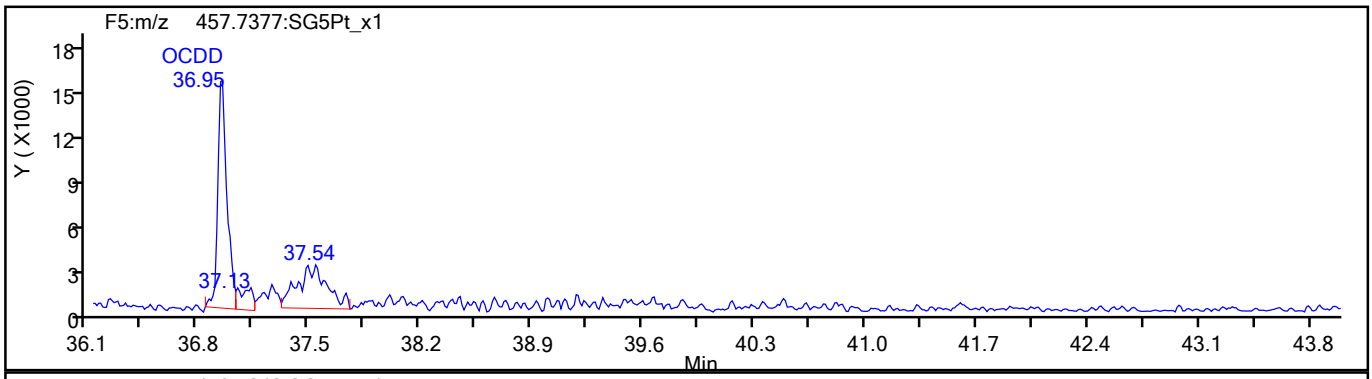

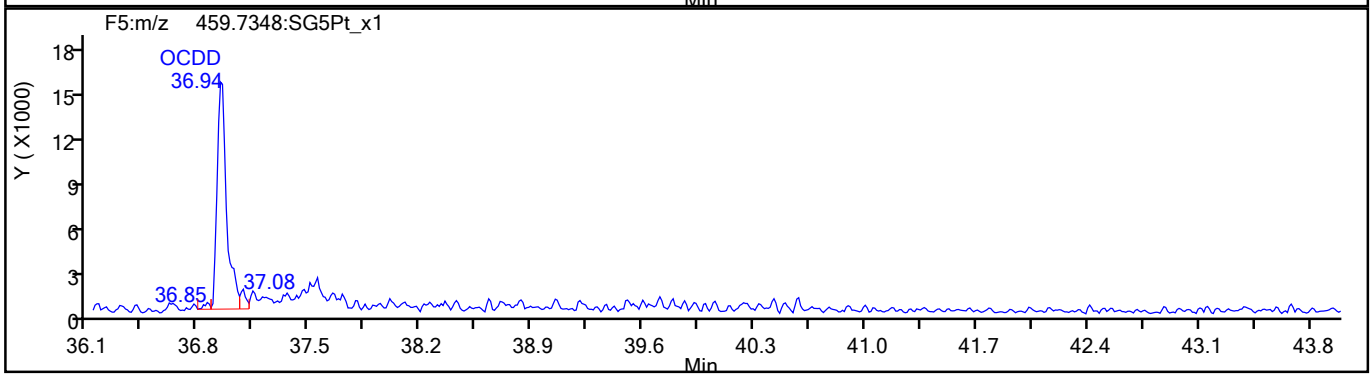

OCDD Standards

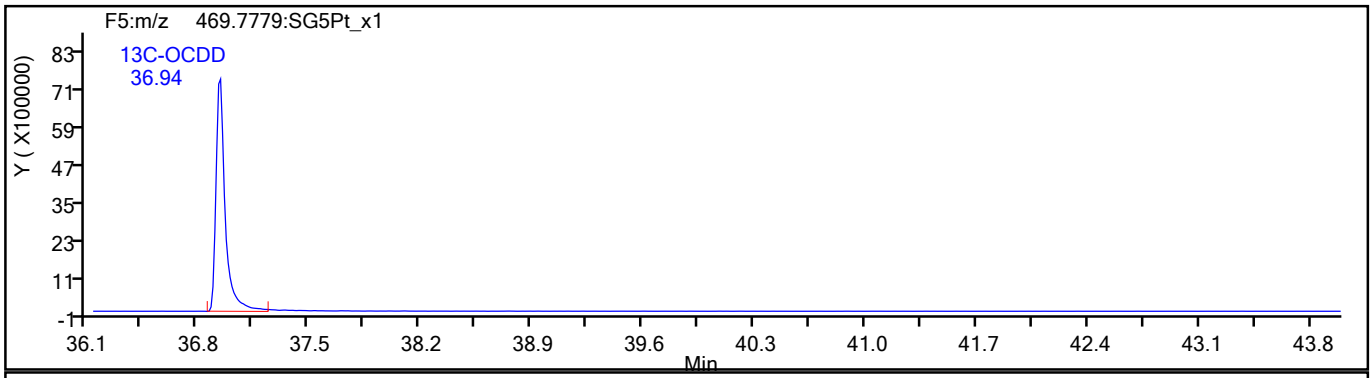

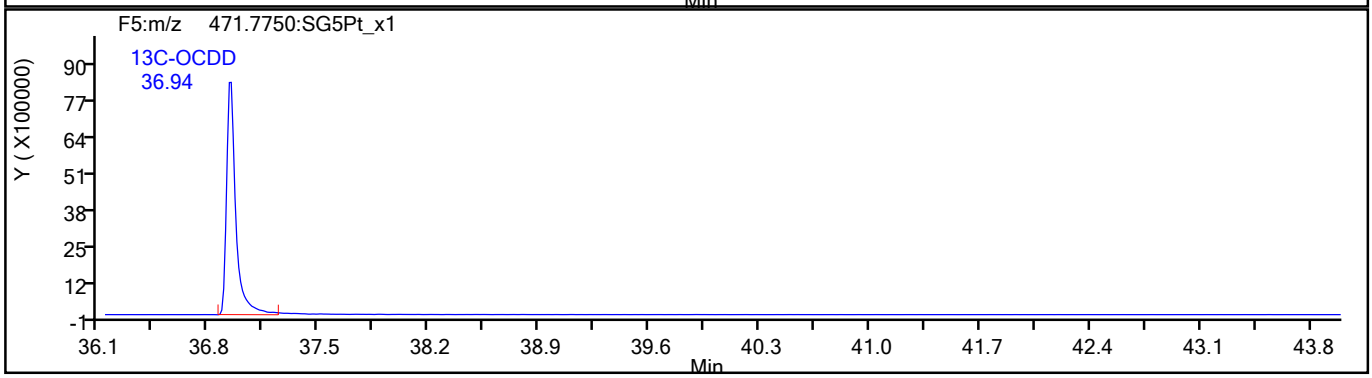

778832

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

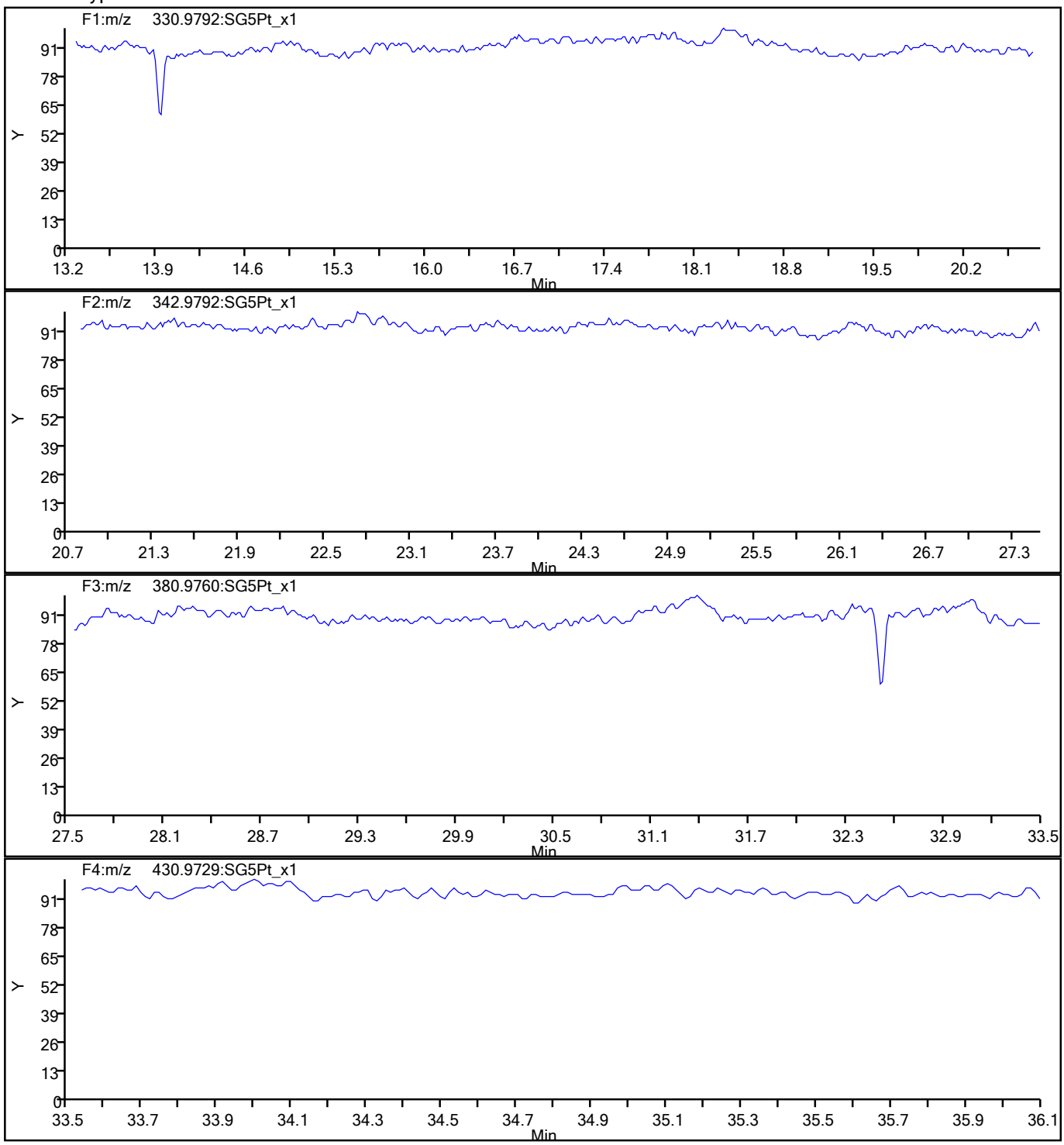

778833

Report Date: 16-Aug-2021 13:38:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_25.d		
Injection Date:	13-Aug-2021 06:33:12	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

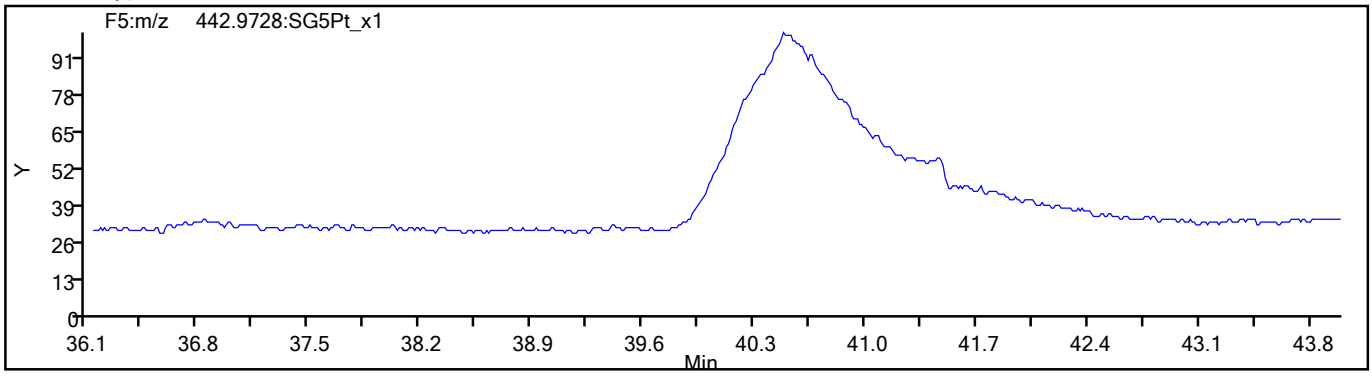

778834

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-2
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-513227/2-A
Matrix: Sediment
Lab File ID: 12AU2110D5_26.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 10(g)
Date Analyzed: 08/13/2021 07:18
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 515770
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	20.2		1.0	0.043
51207-31-9	2,3,7,8-TCDF	20.9		1.0	0.062
40321-76-4	1,2,3,7,8-PeCDD	107		5.0	0.14
57117-41-6	1,2,3,7,8-PeCDF	108		5.0	0.35
57117-31-4	2,3,4,7,8-PeCDF	97.4		5.0	0.35
39227-28-6	1,2,3,4,7,8-HxCDD	97.1		5.0	0.35
57653-85-7	1,2,3,6,7,8-HxCDD	106		5.0	0.36
19408-74-3	1,2,3,7,8,9-HxCDD	105		5.0	0.32
70648-26-9	1,2,3,4,7,8-HxCDF	96.7		5.0	0.52
57117-44-9	1,2,3,6,7,8-HxCDF	107		5.0	0.55
72918-21-9	1,2,3,7,8,9-HxCDF	106		5.0	0.44
60851-34-5	2,3,4,6,7,8-HxCDF	105		5.0	0.42
35822-46-9	1,2,3,4,6,7,8-HpCDD	107		5.0	0.59
67562-39-4	1,2,3,4,6,7,8-HpCDF	106		5.0	1.0
55673-89-7	1,2,3,4,7,8,9-HpCDF	98.8		5.0	1.2
3268-87-9	OCDD	214		10	0.25
39001-02-0	OCDF	205		10	0.19
41903-57-5	Total TCDD	20.2		1.0	0.043
30402-14-3	Total TCDF	21.0		1.0	0.062
36088-22-9	Total PeCDD	107		5.0	0.14
30402-15-4	Total PeCDF	207		5.0	0.35
34465-46-8	Total HxCDD	309		5.0	0.34
55684-94-1	Total HxCDF	415		5.0	0.48
37871-00-4	Total HpCDD	107		5.0	0.59
38998-75-3	Total HpCDF	205		5.0	1.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513227/2-A

Matrix: Sediment Lab File ID: 12AU2110D5_26.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/05/2021 06:41

Sample wt/vol: 10(g) Date Analyzed: 08/13/2021 07:18

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 515770 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		20-175
89059-46-1	13C-2,3,7,8-TCDF	54		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	58		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	55		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	61		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	61		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	59		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	53		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	52		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	53		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	62		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	67		20-186
114423-97-1	13C-OCDD	69		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	79		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d
Lims ID: LCS 320-513227/2-A
Client ID:
Sample Type: LCS
Inject. Date: 13-Aug-2021 07:18:13 ALS Bottle#: 30 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513227/2-a lcs 320-513227/2-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:39:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: dadunj Date: 16-Aug-2021 13:39:50

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	140949085	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	124668118	0.77	1.6249	54.4	54.4	0.0747	0.0747	54.43	
2,3,7,8-TCDF	17.371	13308465	0.77	1.0239	10.4	10.4	0.0308	0.0308	104	
A Non-2,3,7,8-sub-TCDF	17.069	107618	0.88	1.0239	0.0843	0.0843	0.0308	0.0843	0.00	
S Total TCDF					10.5	10.5	0.0308	0.0308		
D 13C-2,3,7,8-TCDD	18.066	72851242	0.81	0.8993	57.5	57.5	0.1134	0.1134	57.47	
2,3,7,8-TCDD	18.097	9224854	0.77	1.2541	10.1	10.1	0.0213	0.0213	101	
$ 37Cl4-2,3,7,8-TCDD	18.082	49175155		1.1071	31.5	31.5	0.0344	0.0344	78.78	
A Non-2,3,7,8-sub-TCDD	17.530						0.0213	0.0213		
S Total TCDD					10.1	10.1	0.0213	0.0213		
D 13C-1,2,3,7,8-PeCDF	22.394	94111889	1.56	1.2101	55.2	55.2	0.1250	0.1250	55.18	
1,2,3,7,8-PeCDF	22.421	53928677	1.63	1.0611	54.0	54.0	0.1729	0.1729	108	
D 13C-2,3,4,7,8-PeCDF	23.744	105762248	1.57	1.2395	60.5	60.5	0.1220	0.1220	60.54	
2,3,4,7,8-PeCDF	23.758	52464762	1.59	1.0184	48.7	48.7	0.1742	0.1742	97.42	
A F1 PeCDFs	20.108	33025	1.57	1.0398	0.0318	0.0318	0.008940	0.0318	0.00	M
A Non-2,3,7,8-sub-PeCDF	23.261	598488	1.44	1.0398	0.5760	0.5760	0.1735	0.5760	0.00	
S Total PeCDF					103.3	103.3	0.1735	0.1735		
D 13C-1,2,3,7,8-PeCDD	24.467	62759962	1.61	0.7612	58.5	58.5	0.0595	0.0595	58.49	
1,2,3,7,8-PeCDD	24.494	35329499	1.59	1.0484	53.7	53.7	0.0710	0.0710	107	
A Non-2,3,7,8-sub-PeCDD	23.376						0.0710	0.0710		
S Total PeCDD					53.7	53.7	0.0710	0.0710		
D 13C-1,2,3,4,7,8-HxCDF	30.529	88472053	0.52	1.0837	59.2	59.2	0.2070	0.2070	59.19	
1,2,3,4,7,8-HxCDF	30.543	46438177	1.21	1.0851	48.4	48.4	0.2609	0.2609	96.74	
D 13C-1,2,3,6,7,8-HxCDF	30.716	82695933	0.52	1.1279	53.2	53.2	0.1989	0.1989	53.15	
1,2,3,6,7,8-HxCDF	30.729	49797457	1.21	1.1260	53.5	53.5	0.2759	0.2759	107	
D 13C-2,3,4,6,7,8-HxCDF	31.528	77238969	0.52	1.0637	52.6	52.6	0.2109	0.2109	52.64	
2,3,4,6,7,8-HxCDF	31.541	47394036	1.21	1.1675	52.6	52.6	0.2112	0.2112	105	
D 13C-1,2,3,7,8,9-HxCDF	32.326	69935872	0.53	0.9676	52.4	52.4	0.2318	0.2318	52.40	
1,2,3,7,8,9-HxCDF	32.340	43281782	1.21	1.1664	53.1	53.1	0.2185	0.2185	106	
A Non-2,3,7,8-sub-HxCDF	30.223						0.2390	0.2390		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					207.5	207.5	0.2416	0.2416		
* 13C-1,2,3,7,8,9-HxCDD	32.153	137940362	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	61560528	1.24	0.7334	60.8	60.8	0.2432	0.2432	60.85	
1,2,3,4,7,8-HxCDD	31.728	31785175	1.27	1.0640	48.5	48.5	0.1750	0.1750	97.05	
D 13C-1,2,3,6,7,8-HxCDD	31.821	68261127	1.24	0.8802	56.2	56.2	0.2026	0.2026	56.22	
1,2,3,6,7,8-HxCDD	31.834	36313008	1.26	1.0001	53.2	53.2	0.1795	0.1795	106	
1,2,3,7,8,9-HxCDD	32.167	38618454	1.26	1.1325	52.5	52.5	0.1614	0.1614	105	
A Non-2,3,7,8-sub-HxCDD	30.895						0.1715	0.1715		
S Total HxCDD					154.3	154.3	0.1720	0.1720		
1,2,3,4,6,7,8-HpCDF	33.778	48750055	1.05	1.4413	53.2	53.2	0.4994	0.4994	106	
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	63595666	0.44	0.7730	59.6	59.6	0.6988	0.6988	59.64	
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	65003176	0.44	0.7008	67.2	67.2	0.7708	0.7708	67.24	
1,2,3,4,7,8,9-HpCDF	34.872	42282543	1.05	1.3174	49.4	49.4	0.5884	0.5884	98.75	
A Non-2,3,7,8-sub-HpCDF	34.325						0.5411	0.5411		
S Total HpCDF					102.6	102.6	0.5439	0.5439		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	55638701	0.99	0.6472	62.3	62.3	0.3728	0.3728	62.32	
1,2,3,4,6,7,8-HpCDD	34.580	32446978	1.04	1.0943	53.3	53.3	0.2926	0.2926	107	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2926	0.2926		
S Total HpCDD					53.3	53.3	0.2926	0.2926		
D 13C-OCDD	36.926	85262558	0.88	0.4472	138.2	138.2	0.1605	0.1605	69.12	
OCDF	37.022	62891604	0.90	1.4382	102.6	102.6	0.0936	0.0936	103	
OCDD	36.938	50414041	0.89	1.1070	106.8	106.8	0.1273	0.1273	107	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d
Lims ID: LCS 320-513227/2-A
Client ID:
Sample Type: LCS
Inject. Date: 13-Aug-2021 07:18:13 ALS Bottle#: 30 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513227/2-a lcs 320-513227/2-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:39:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: dadunj Date: 16-Aug-2021 13:39:50

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.885	-1		63059376	15387887	9916	24790	1552		
333.9339	17.870	17.885	-1		77889709	19358117	4263	10657	4541	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.356	0	0.971	54399394	12761646	7892	19730	1617		
317.9389	17.356	17.356	0	0.971	70268724	16517794	8975	22437	1840	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.386	-1	1.001	5797744	1375685	1270	3175	1083		
305.8987	17.371	17.386	-1	1.001	7510721	1756194	2428	6070	723	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.993	17.069	-5	0.979	50443	13132	1270	3175	10		
305.8987	16.993	17.069	-5	0.979	57175	15129	2428	6070	6	0.88(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.066	0	1.011	32651048	7363606	9916	24790	743		
333.9339	18.066	18.066	0	1.011	40200194	9082480	4263	10657	2131	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.097	18.082	1	1.002	4014028	902255	881	2202	1024		
321.8936	18.082	18.082	0	1.001	5210826	1177842	879	2197	1340	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.097	-1	1.012	49175155	10917312	5292	13230	2063		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.530						881	2202			
321.8936	17.530						879	2197			
13C-1,2,3,7,8-PeCDF											
351.9000	22.394	22.408	-1	1.253	57314120	9683486	12591	31477	769		
353.8970	22.394	22.408	-1	1.253	36797769	6237027	8432	21080	740	1.56(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.421	22.435	-1	1.001	33385509	5512924	7056	17640	781		
341.8567	22.421	22.435	-1	1.001	20543168	3416885	4625	11562	739	1.63(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.744	23.758	-1	1.329	64688511	10076177	12591	31477	800		
353.8970	23.744	23.758	-1	1.329	41073737	6383113	8432	21080	757	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.758	23.785	-2	1.001	32218516	4958688	7056	17640	703		
341.8567	23.758	23.785	-2	1.001	20246246	3157135	4625	11562	683	1.59(1.32-1.78)	
A F1 PeCDFs											M
339.8597	19.488	20.108	-37	0.870	20171	4126	206	515	20		M
341.8567	19.533	20.108	-34	0.872	12854	2213	396	990	6	1.57(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.940	23.261	-19	1.024	353277	44510	7056	17640	6		
341.8567	22.926	23.261	-20	1.024	245211	34985	4625	11562	8	1.44(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.467	24.481	-1	1.369	38737495	5745805	3409	8522	1685		
369.8919	24.467	24.481	-1	1.369	24022467	3571775	2883	7207	1239	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.494	24.508	-1	1.001	21689374	3141255	1848	4620	1700		
357.8516	24.480	24.508	-2	1.001	13640125	2012888	925	2312	2176	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.376						1848	4620			
357.8516	23.376						925	2312			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.529	30.543	-1	0.949	30279313	5719317	11720	29300	488		
385.8610	30.529	30.543	-1	0.949	58192740	11084755	21387	53467	518	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.543	30.569	-2	1.000	25450691	4731048	10412	26030	454		
375.8178	30.543	30.569	-2	1.000	20987486	3943446	8614	21535	458	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.716	30.716	0	0.955	28294647	5268876	11720	29300	450		
385.8610	30.716	30.716	0	0.955	54401286	10041370	21387	53467	470	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.729	30.743	-1	1.000	27283767	5207812	10412	26030	500		
375.8178	30.729	30.743	-1	1.000	22513690	4298023	8614	21535	499	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.528	31.541	-1	0.981	26545069	6662033	11720	29300	568		
385.8610	31.528	31.541	-1	0.981	50693900	12629870	21387	53467	591	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.541	31.554	-1	1.000	25961350	6302985	10412	26030	605		
375.8178	31.541	31.554	-1	1.000	21432686	5320666	8614	21535	618	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.340	-1	1.005	24130264	6475820	11720	29300	553		
385.8610	32.326	32.340	-1	1.005	45805608	12190236	21387	53467	570	0.53(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.340	32.353	-1	1.000	23730481	6286195	10412	26030	604		
375.8178	32.340	32.353	-1	1.000	19551301	5245600	8614	21535	609	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.223						10412	26030			
375.8178	30.223						8614	21535			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.153	0		76367266	20432665	14215	35537	1437		
403.8529	32.153	32.153	0		61573096	16463729	12107	30267	1360	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.727	-1	0.986	34138718	9451236	14215	35537	665		
403.8529	31.714	31.727	-1	0.986	27421810	7568518	12107	30267	625	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.728	31.741	-1	1.000	17792811	4964511	7117	17792	698		
391.8127	31.728	31.741	-1	1.000	13992364	3992679	5557	13892	718	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.821	31.834	-1	0.990	37735292	9792882	14215	35537	689		
403.8529	31.821	31.834	-1	0.990	30525835	7856191	12107	30267	649	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.834	31.847	-1	1.000	20229036	5173646	7117	17792	727		
391.8127	31.834	31.847	-1	1.000	16083972	4185690	5557	13892	753	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.167	32.167	0	1.014	21523113	5717698	7117	17792	803		
391.8127	32.167	32.167	0	1.014	17095341	4522648	5557	13892	814	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.895						7117	17792			
391.8127	30.895						5557	13892			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	24930987	8128708	34589	86472	235		
409.7789	33.778	33.778	0	1.000	23819068	7872766	24369	60922	323	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.778	-1	1.050	19373131	6256436	21860	54650	286		
419.8220	33.766	33.778	-1	1.050	44222535	14222420	57864	144660	246	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.860	0	1.084	20001267	5910031	21860	54650	270		
419.8220	34.860	34.860	0	1.084	45001909	13105742	57864	144660	226	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.872	0	1.000	21628117	6178130	34589	86472	179		
409.7789	34.860	34.872	-1	1.000	20654426	5962943	24369	60922	245	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						34589	86472			
409.7789	34.325						24369	60922			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.075	27696820	8478572	19269	48172	440		
437.8140	34.568	34.568	0	1.075	27941881	8478160	16337	40842	519	0.99(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	16539575	5040946	11124	27810	453		
425.7737	34.580	34.580	0	1.000	15907403	4786754	10596	26490	452	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						11124	27810			
425.7737	34.301						10596	26490			
13C-OCDD											
469.7779	36.926	36.926	0	1.148	39825065	10536809	4705	11762	2239		
471.7750	36.926	36.926	0	1.148	45437493	11978167	5887	14717	2035	0.88(0.76-1.02)	
OCDF											
441.7428	37.022	37.034	-1	1.003	29786502	7702633	2862	7155	2691		
443.7399	37.022	37.034	-1	1.003	33105102	8614280	3197	7992	2694	0.90(0.76-1.02)	
OCDD											
457.7377	36.938	36.938	0	1.000	23738835	6266839	2927	7317	2141		
459.7348	36.938	36.938	0	1.000	26675206	7003482	3417	8542	2050	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d
Lims ID: LCS 320-513227/2-A
Client ID:
Inject. Date: 13-Aug-2021 07:18:13 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	124668118	29279440

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	124668118	29279440

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.993	50443	13132	57175	15129	0.0843	0.88	
Signal Totals:							
	50443	13132	57175	15129			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	107618	28261				0.88	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0843 = (107618 * 100.000) / (124668118 * 1.024)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d
Lims ID: LCS 320-513227/2-A
Client ID:
Inject. Date: 13-Aug-2021 07:18:13 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 4

F1 PeCDFs, RT: 20.108

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	94111889	15920513
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	105762248	16459290

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	99937068	16189901

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.488	20171	4126	12854	2213	0.0318	1.57	M
Signal Totals:							
	20171	4126	12854	2213			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	33025	6339				1.57	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0318 = (33025 * 100.000) / (99937068 * 1.040)

QC Flag Legend

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d
Lims ID: LCS 320-513227/2-A
Client ID:
Inject. Date: 13-Aug-2021 07:18:13 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 4

Non-2,3,7,8-sub-PeCDF, RT: 23.261

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	94111889	15920513
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	105762248	16459290

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	99937068	16189901

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.940	353277	44510	245211	34985	0.5760	1.44	
Signal Totals:							
	353277	44510	245211	34985			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	598488	79495				1.44	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5760 = (598488 * 100.000) / (99937068 * 1.040)

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d				
Injection Date:	13-Aug-2021 07:18:13	Instrument ID:	10D5		
Lims ID:	LCS 320-513227/2-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

F1 PeCDFs, Signal: 1, m/z: 339.8597, RT: (19.46- 20.76)

Signal: 1

Processing Integration Results

RT = 19.488 Area = 20627

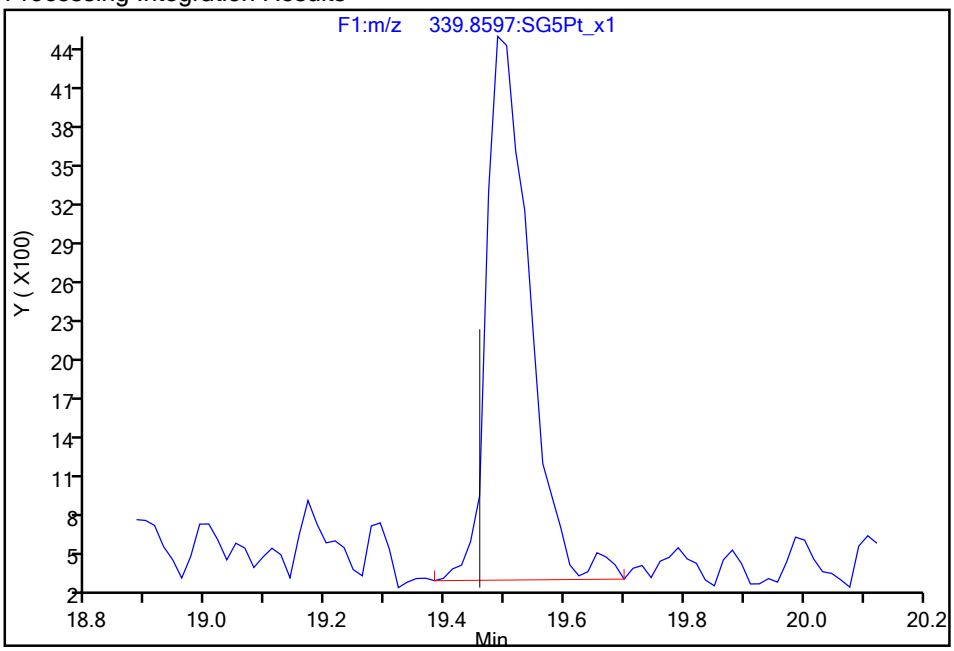

Manual Integration Results

RT = 19.488 Area = 20171 M

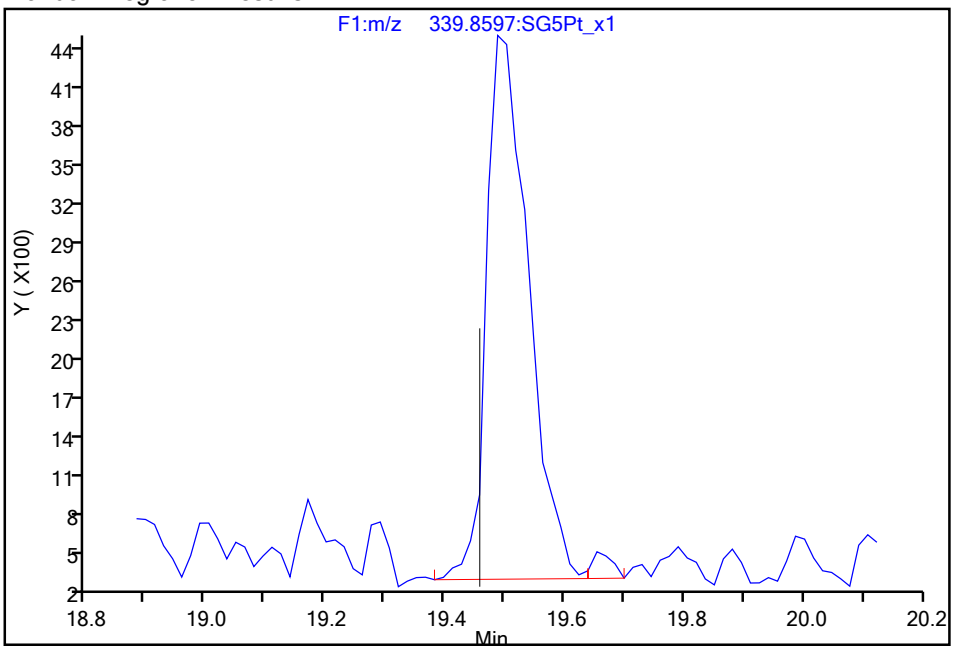

Reviewer: dadunj, 16-Aug-2021 13:39:28

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d				
Injection Date:	13-Aug-2021 07:18:13	Instrument ID:	10D5		
Lims ID:	LCS 320-513227/2-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

F1 PeCDFs, Signal: 2, m/z: 341.8567, RT: (19.46- 20.76)

Signal: 2

Processing Integration Results

RT = 19.533 Area = 11811

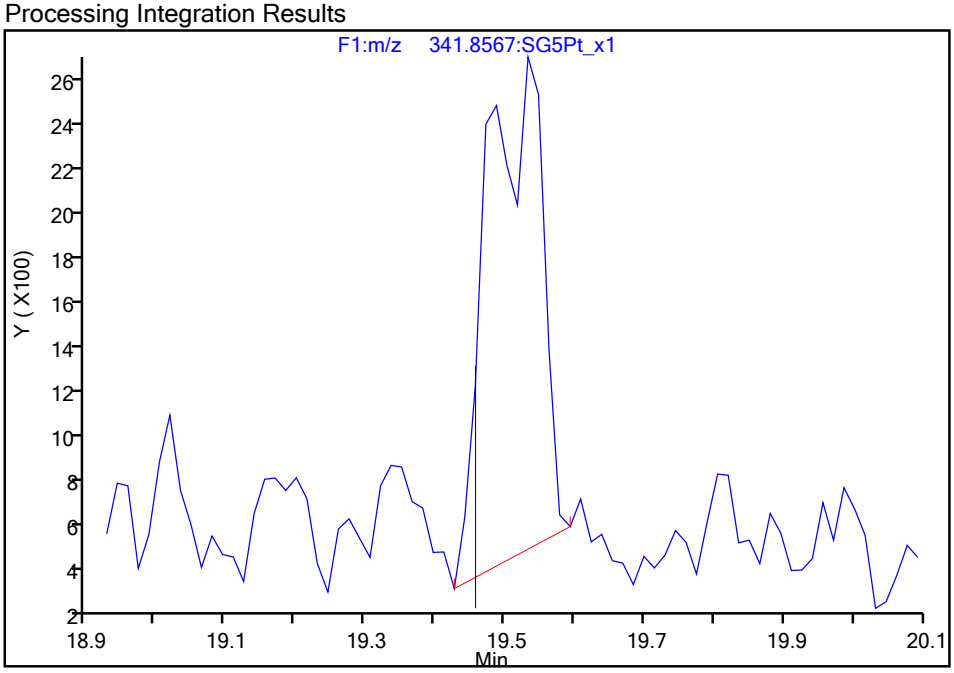

Manual Integration Results

RT = 19.533 Area = 12854 M

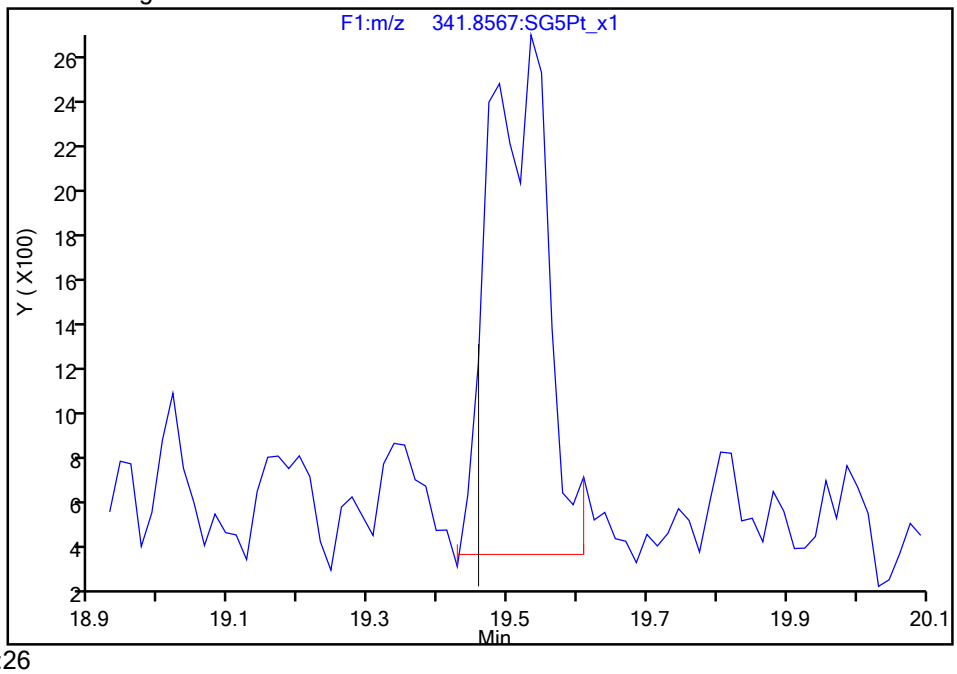

Reviewer: dadunj, 16-Aug-2021 13:39:26

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

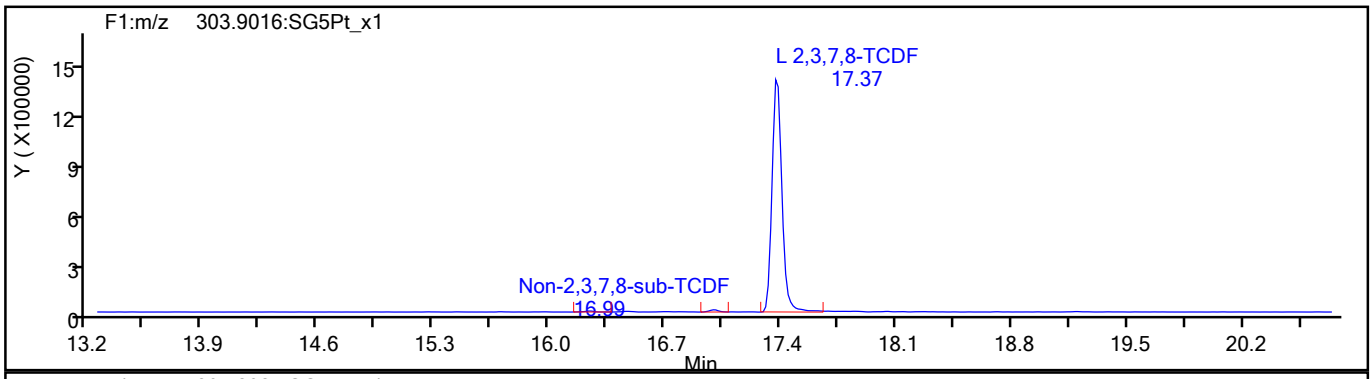

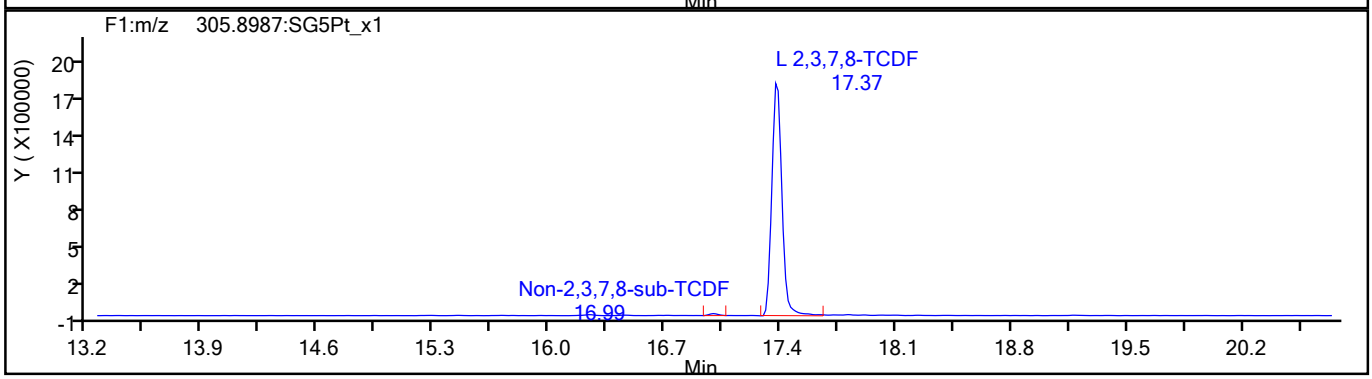

TCDF Standards

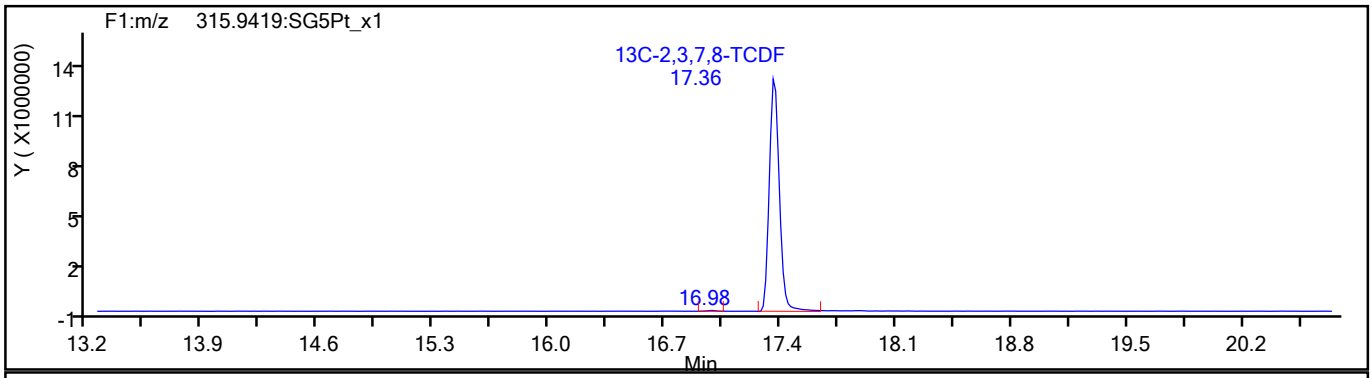

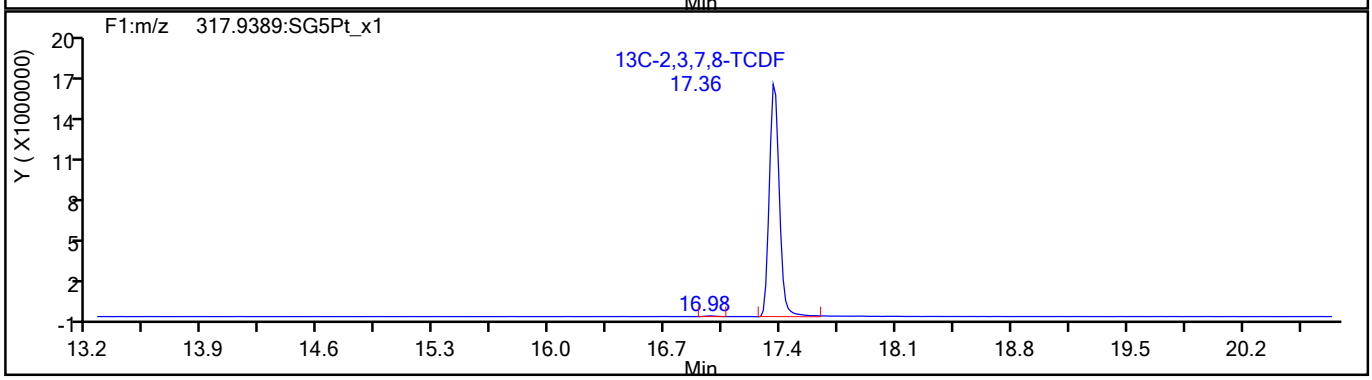

778848

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

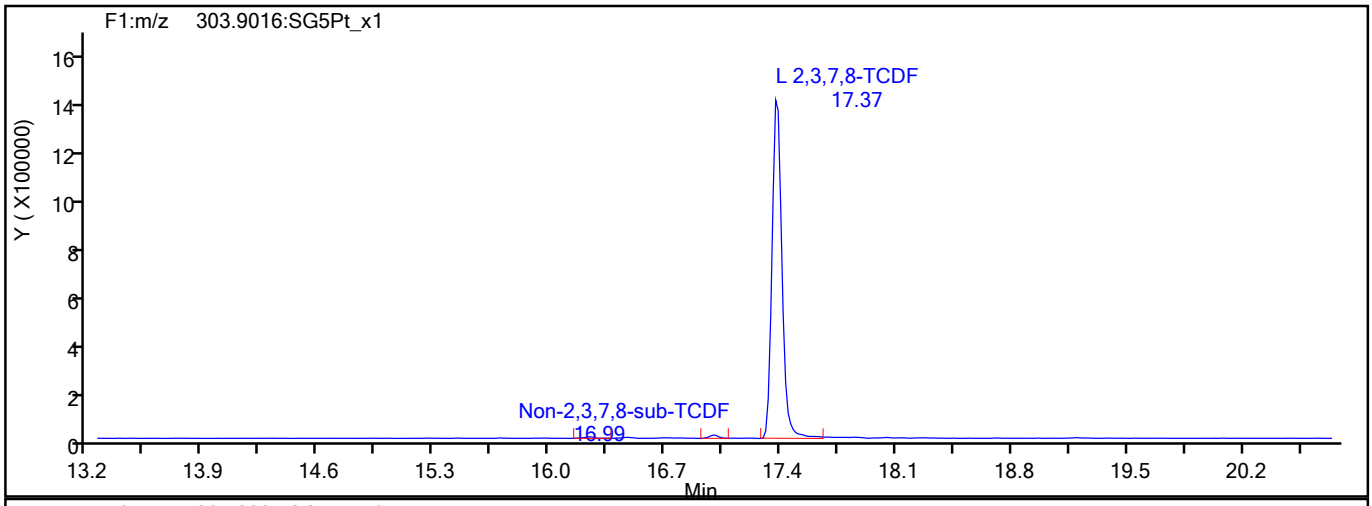

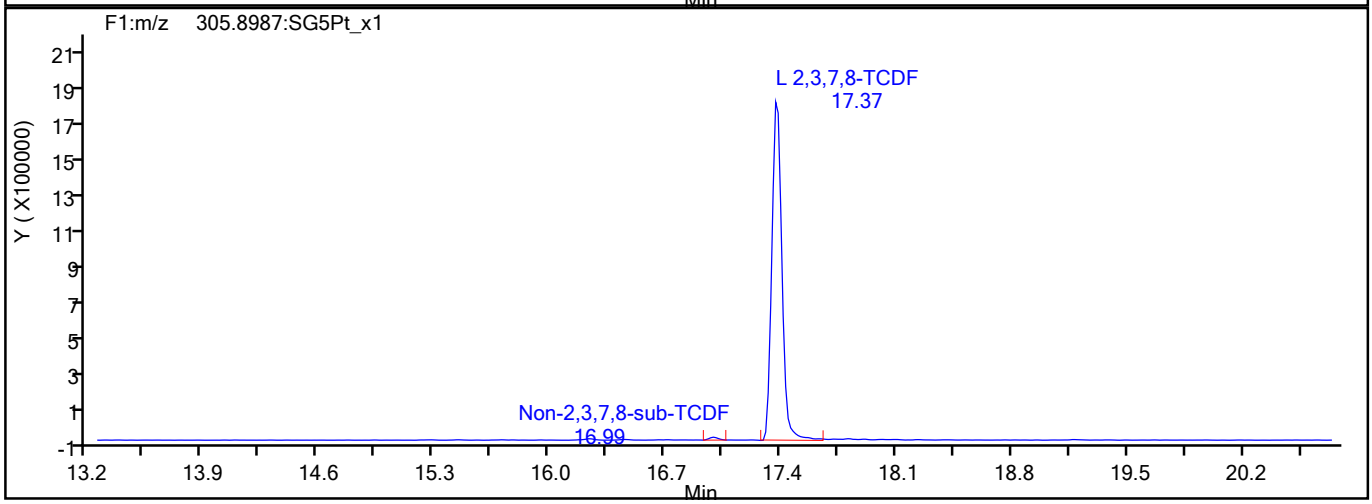

TCDF Interference Mass

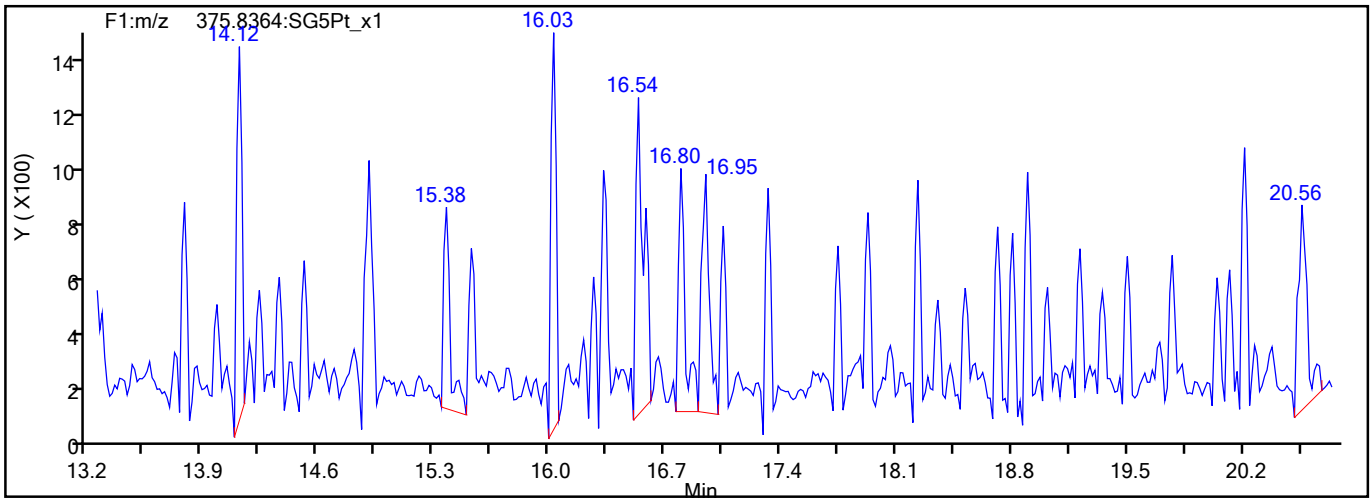

778849

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

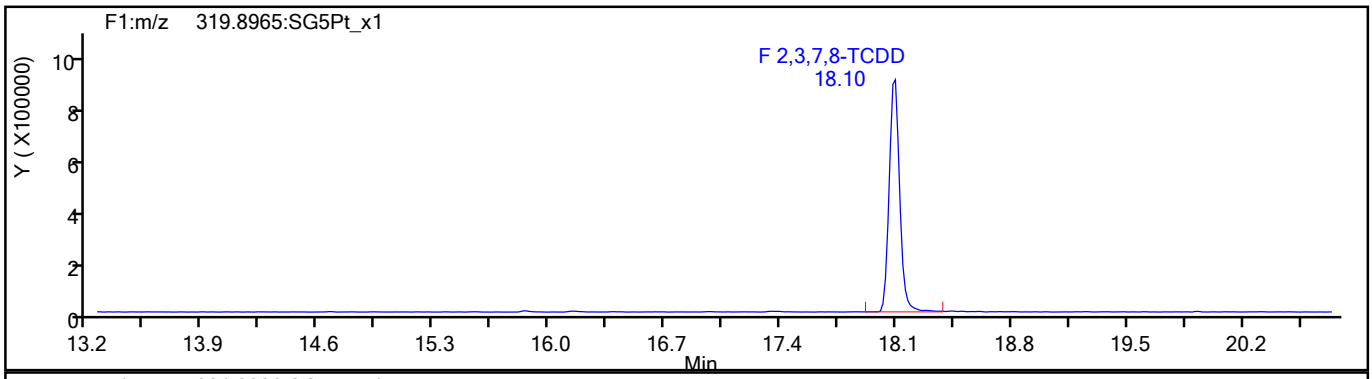

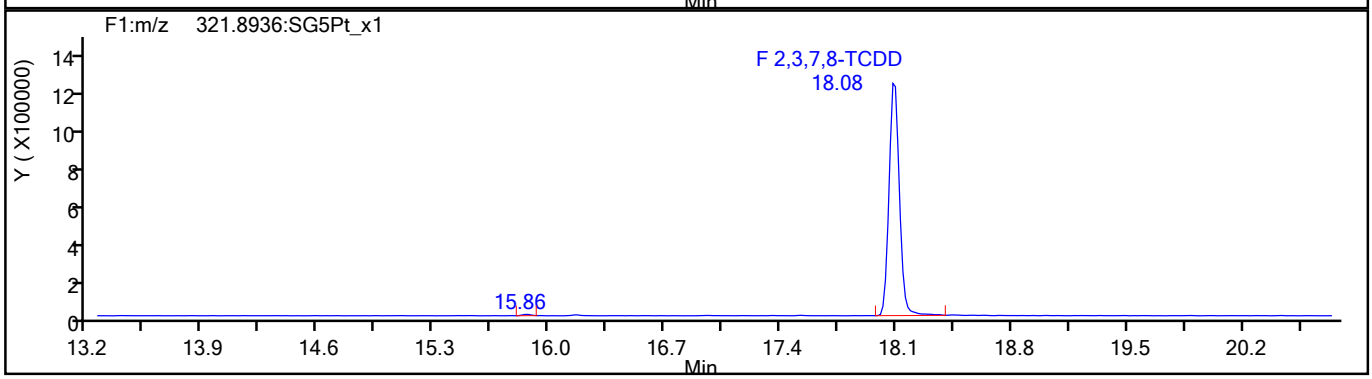

TCDD Standards

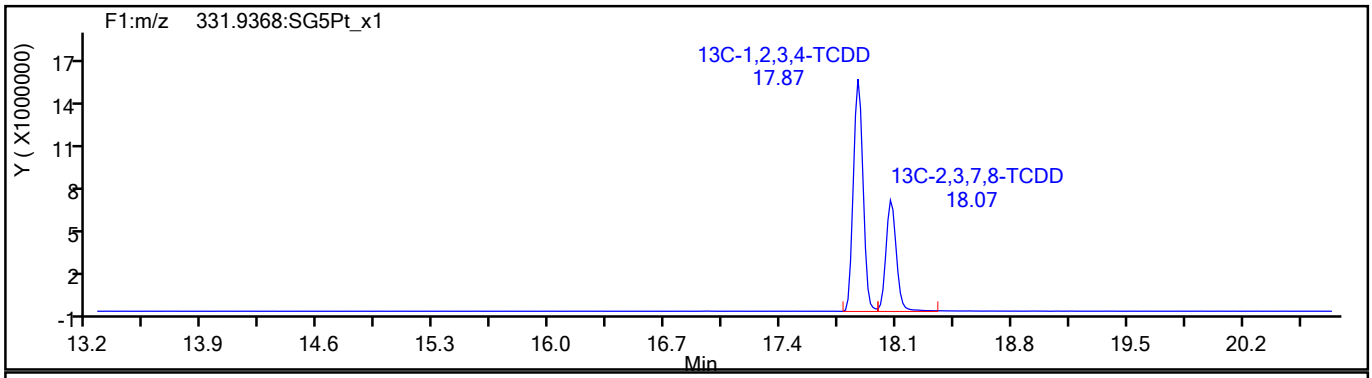

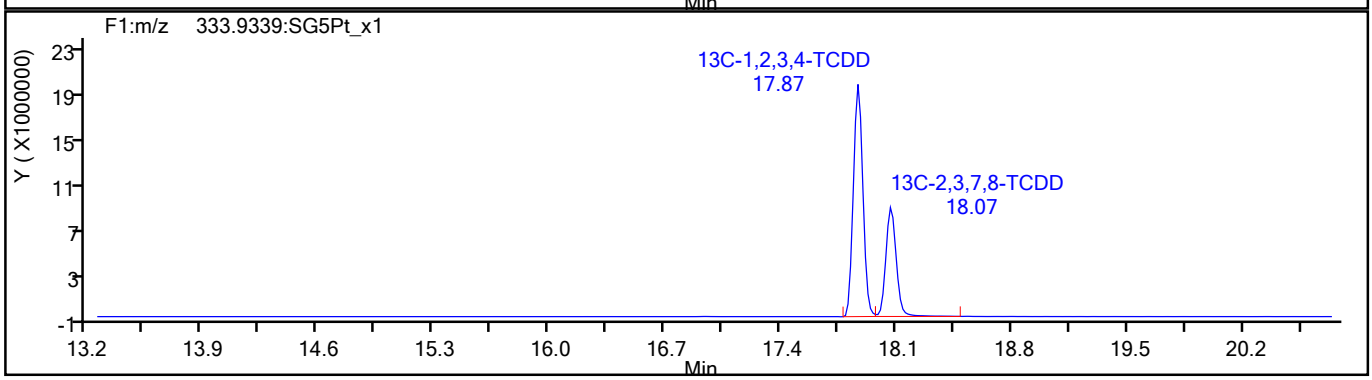

778850

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

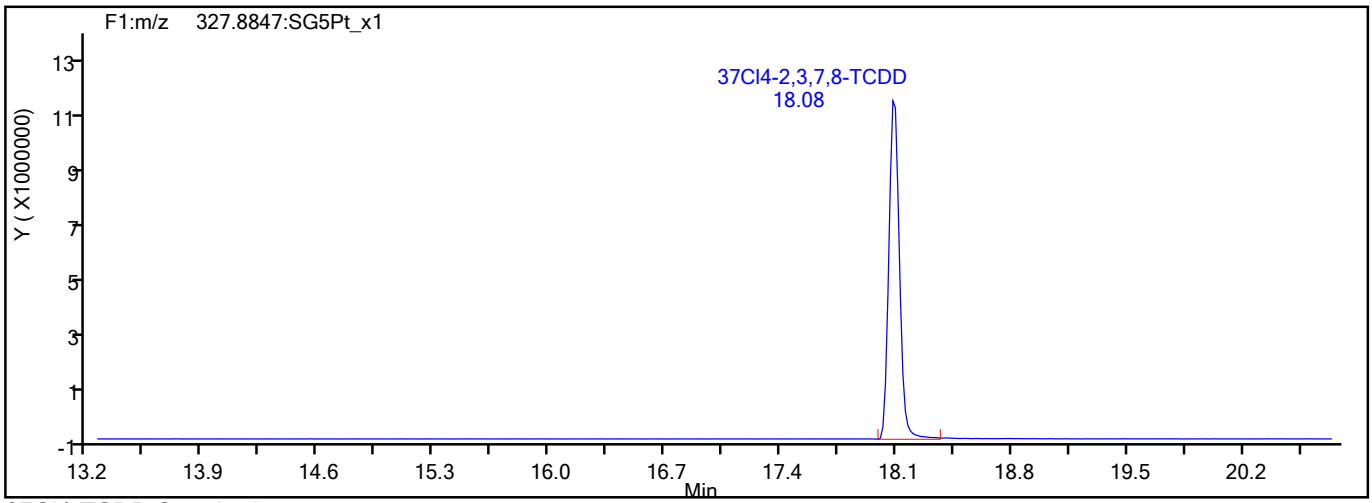

37Cl4-TCDD Standards

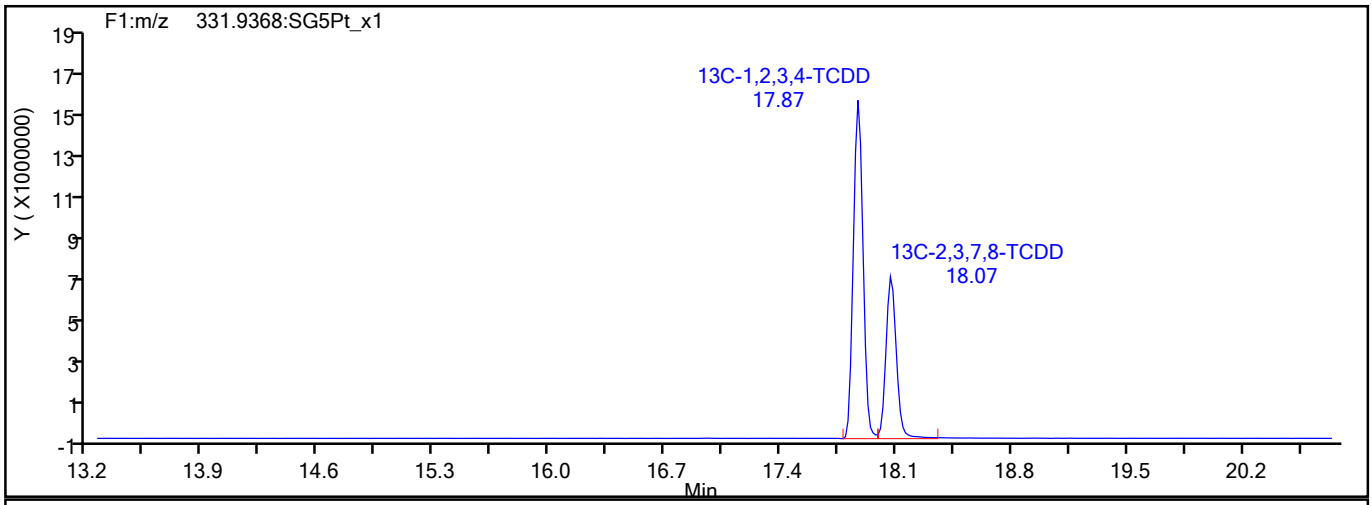

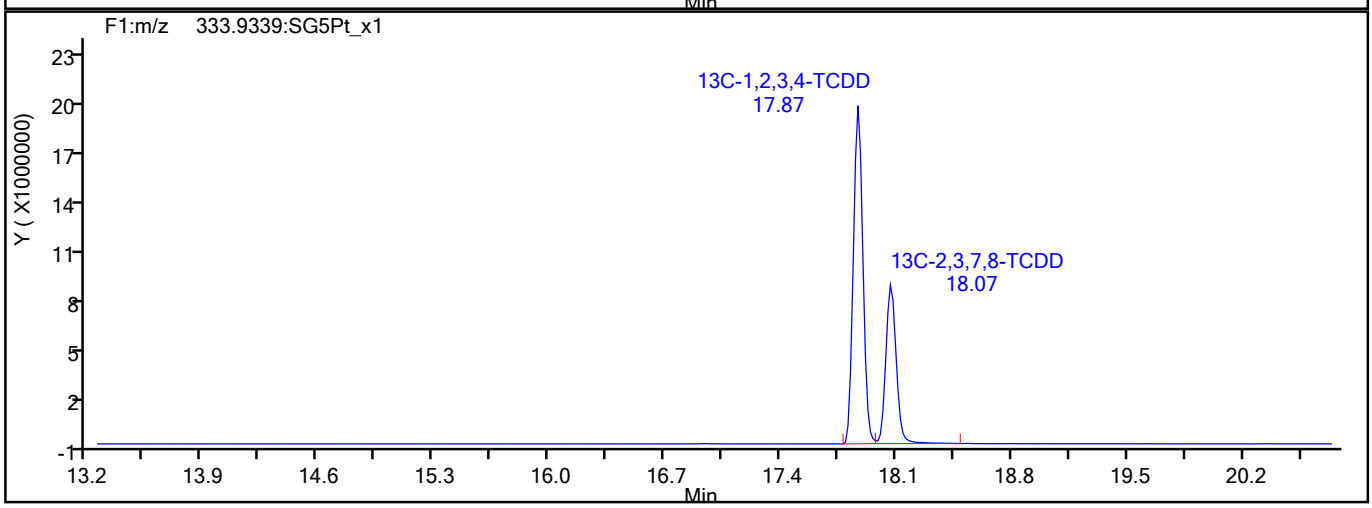

778851

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

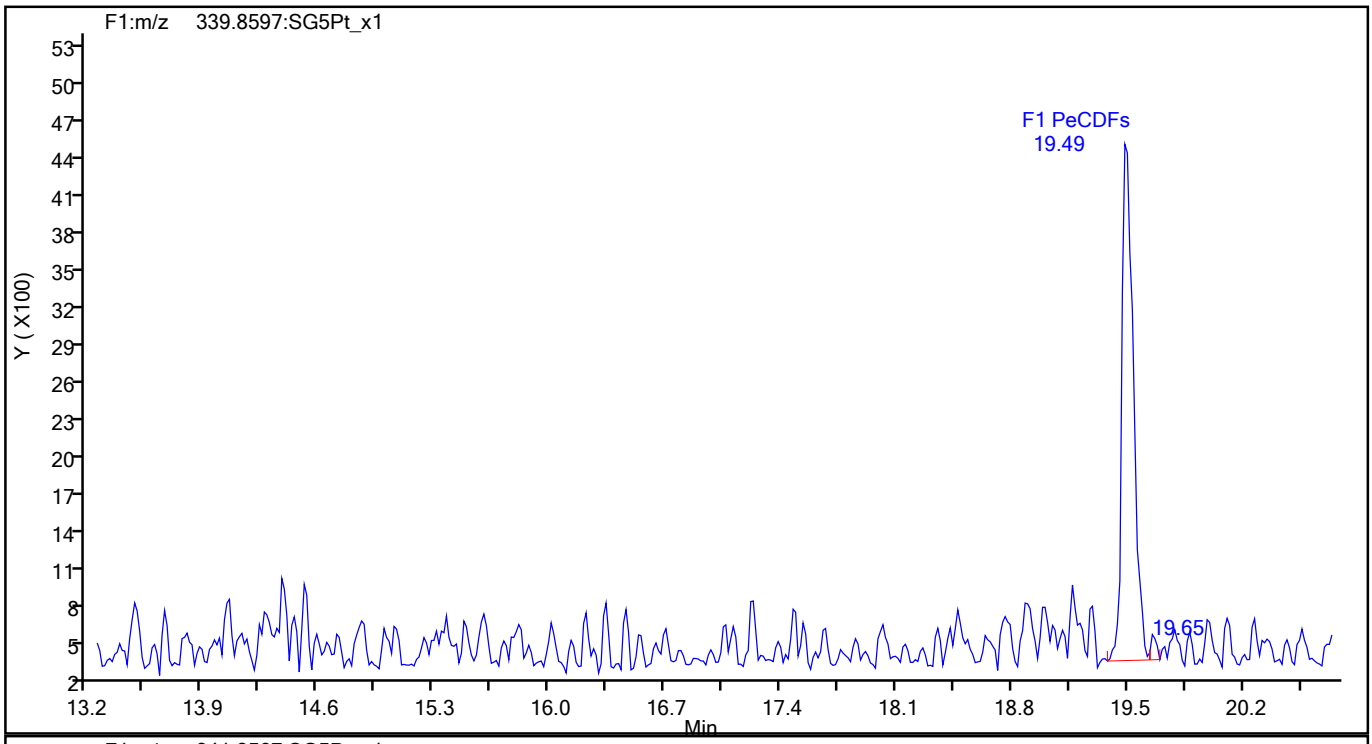

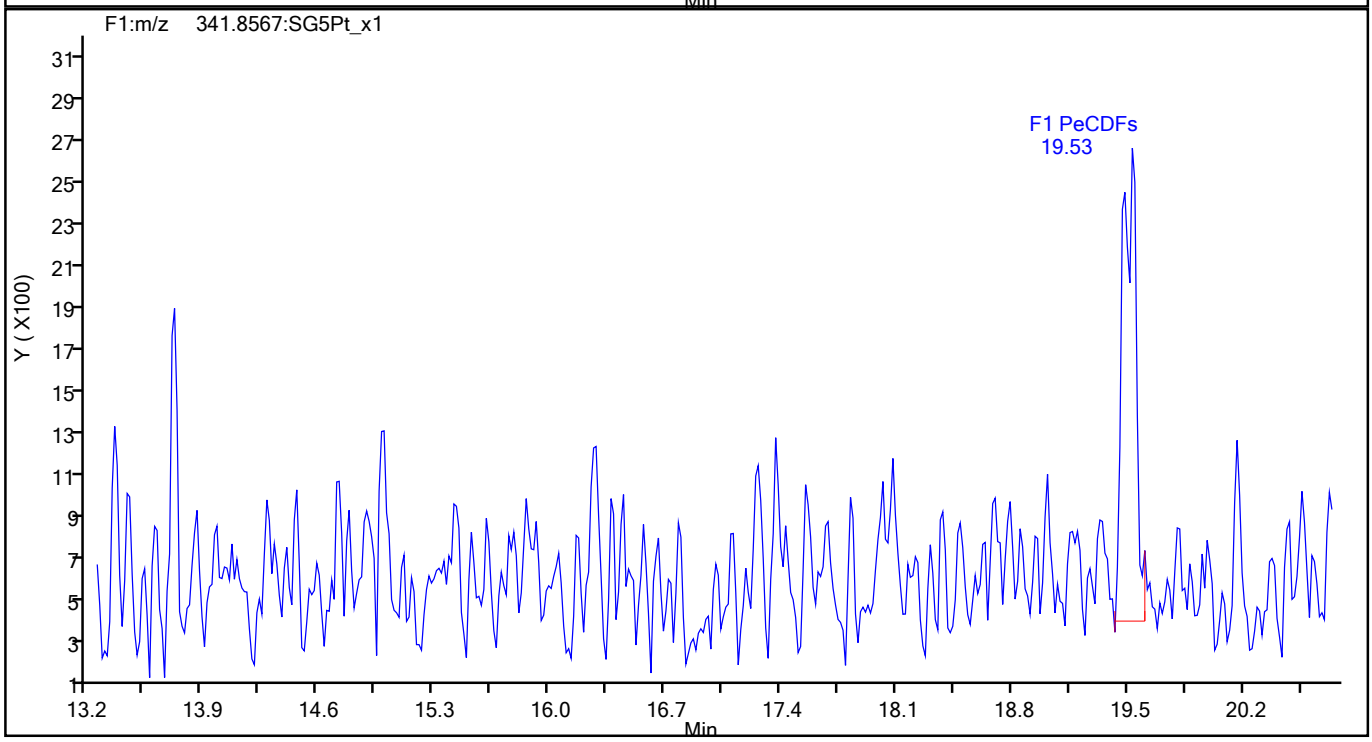

778852

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

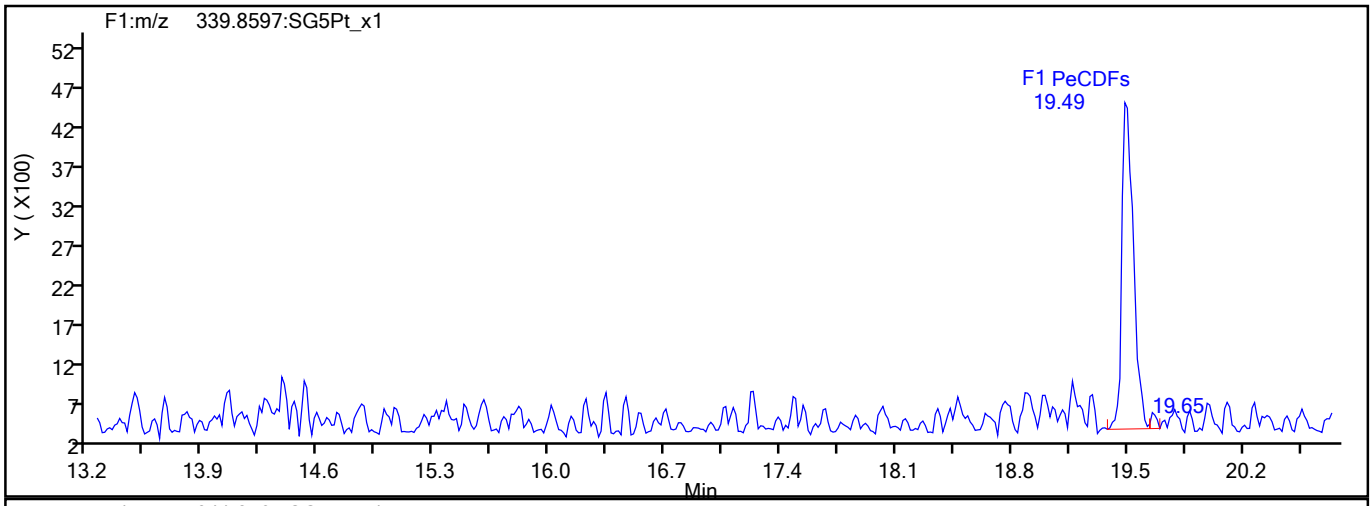

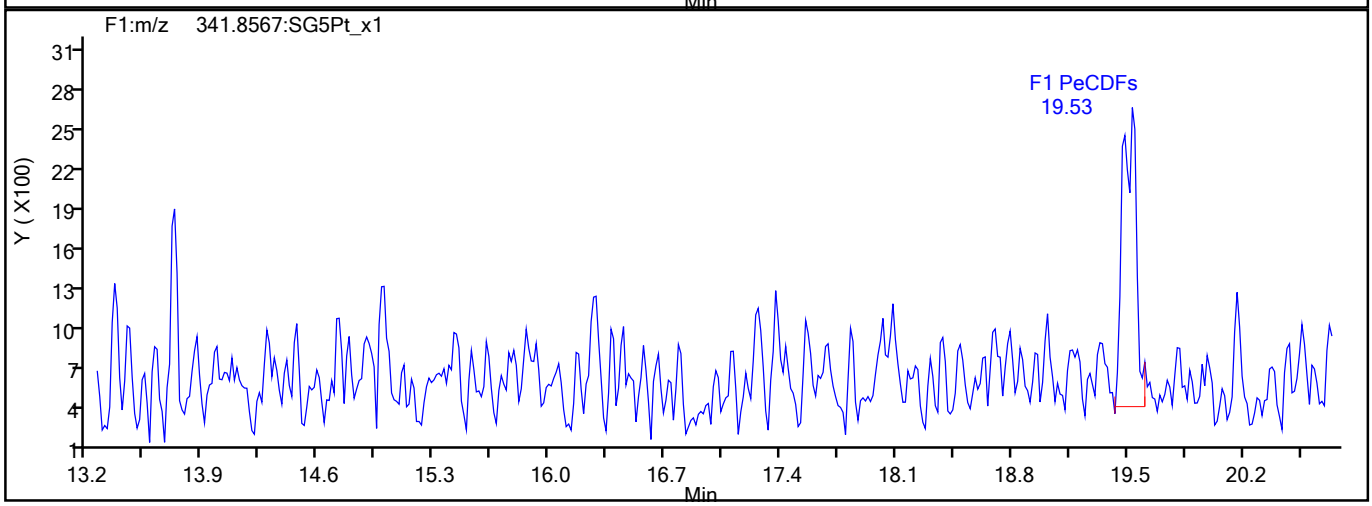

F1 PeCDFs Interference Mass

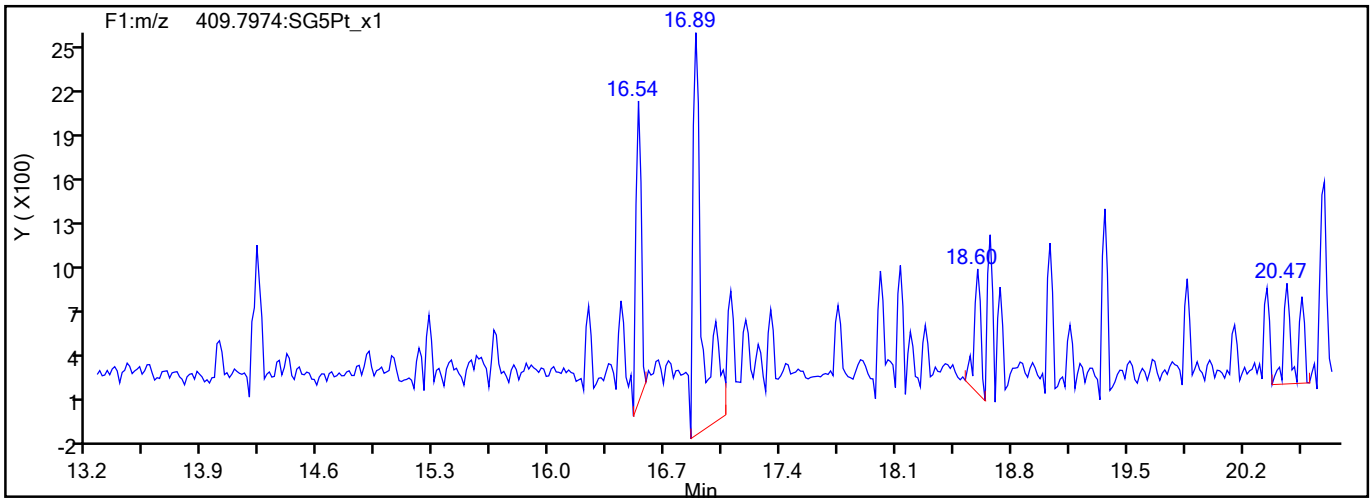

778853

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

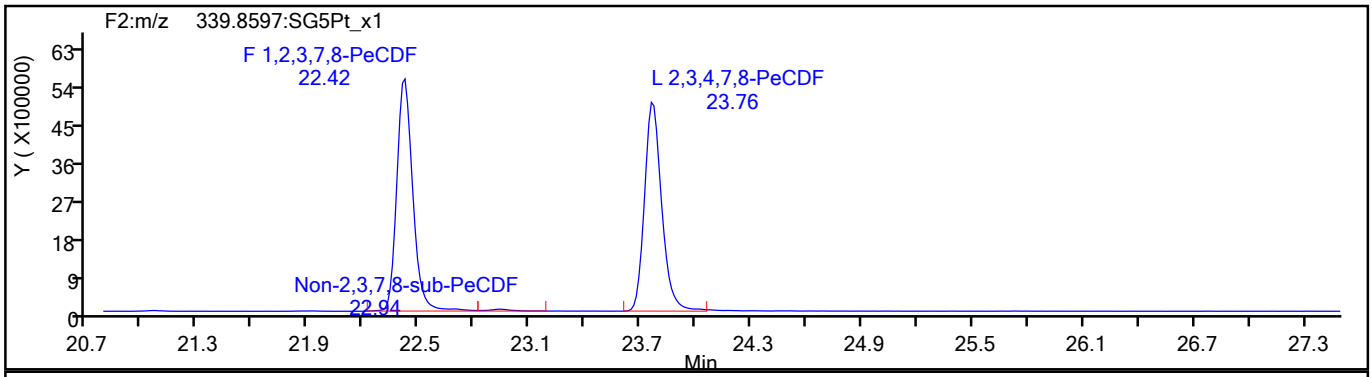

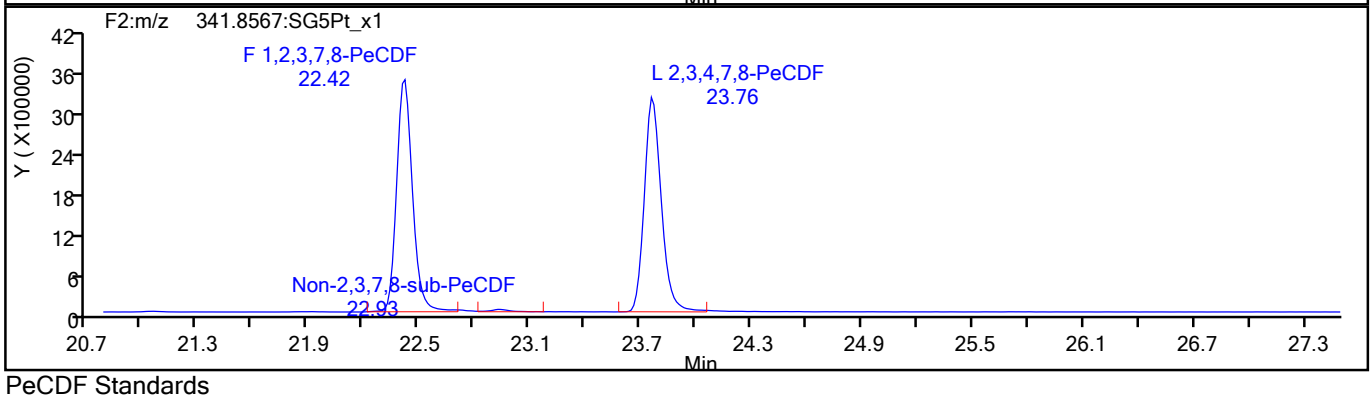

PeCDF Standards

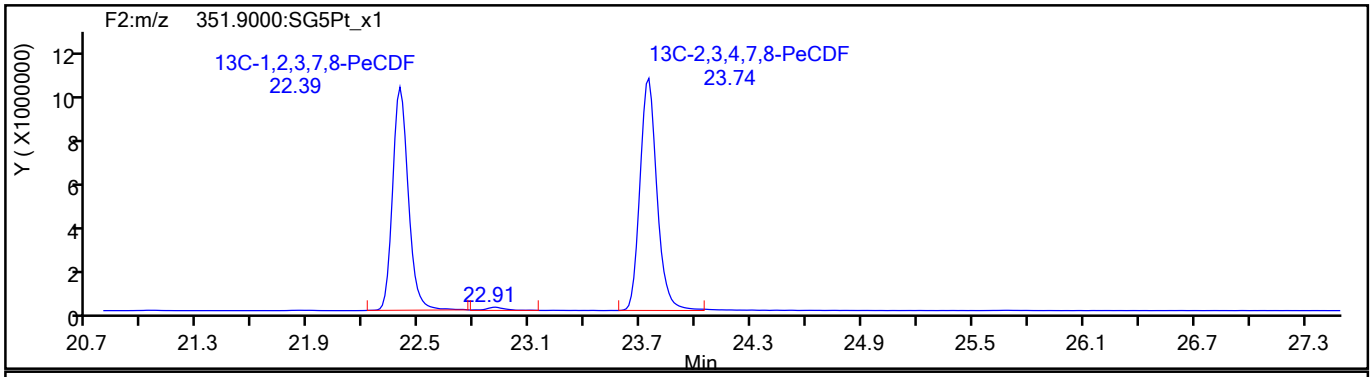

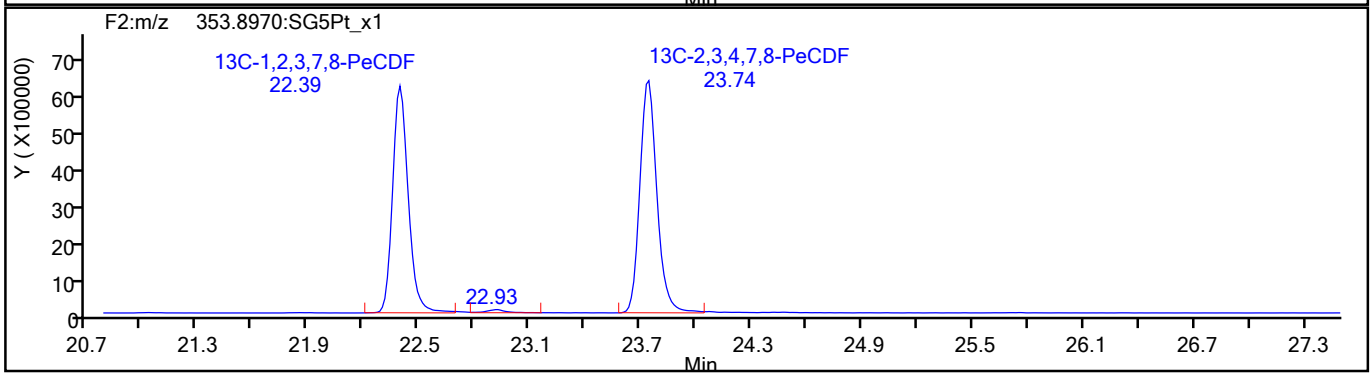

778854

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

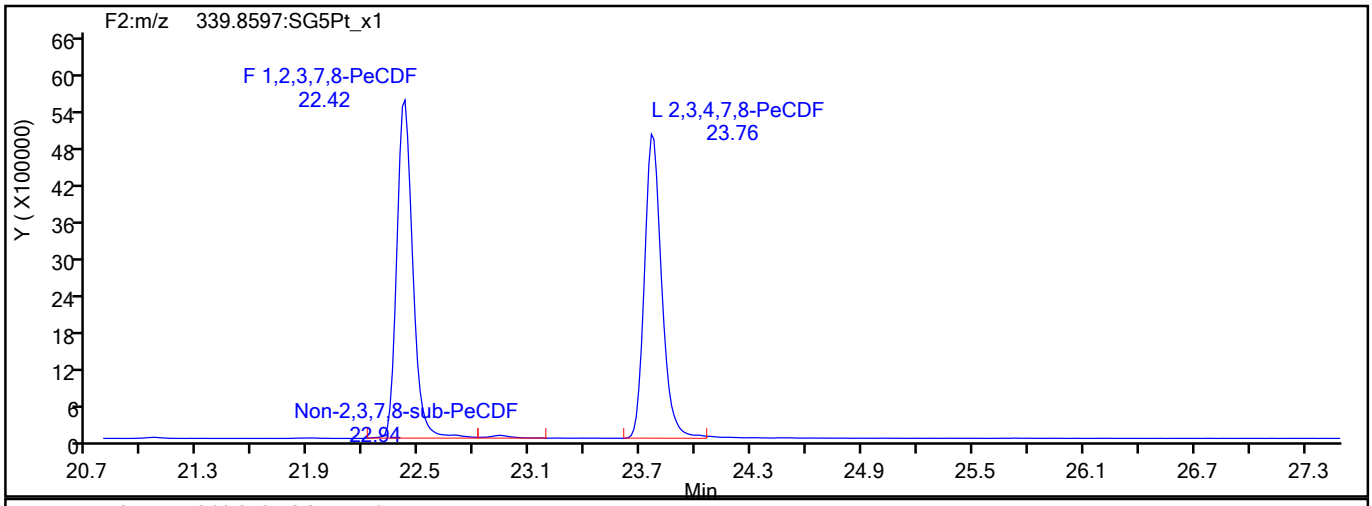

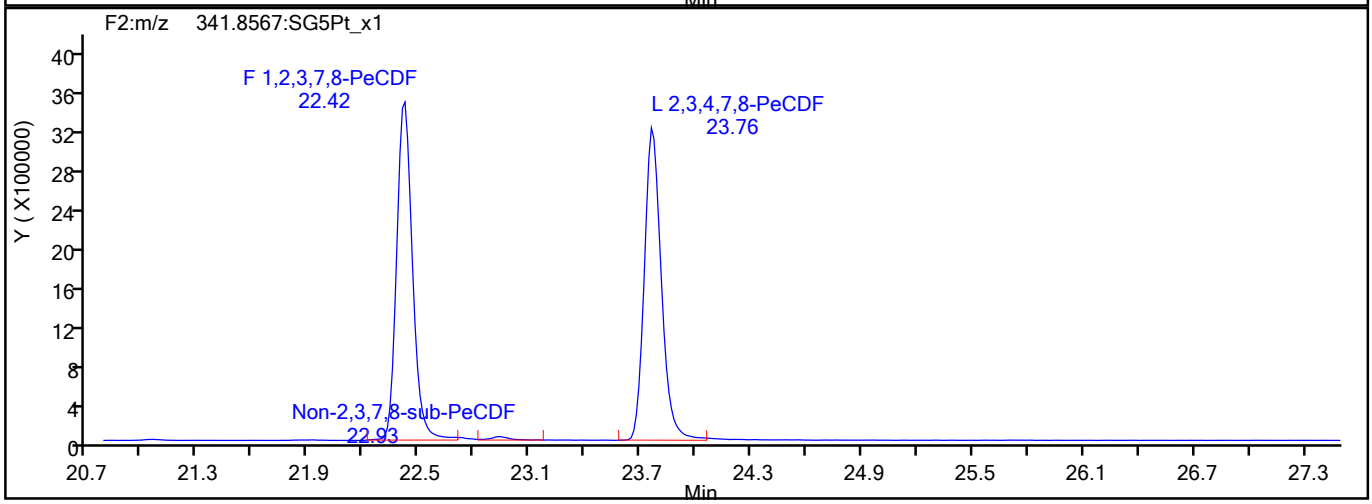

PeCDF Interference Mass

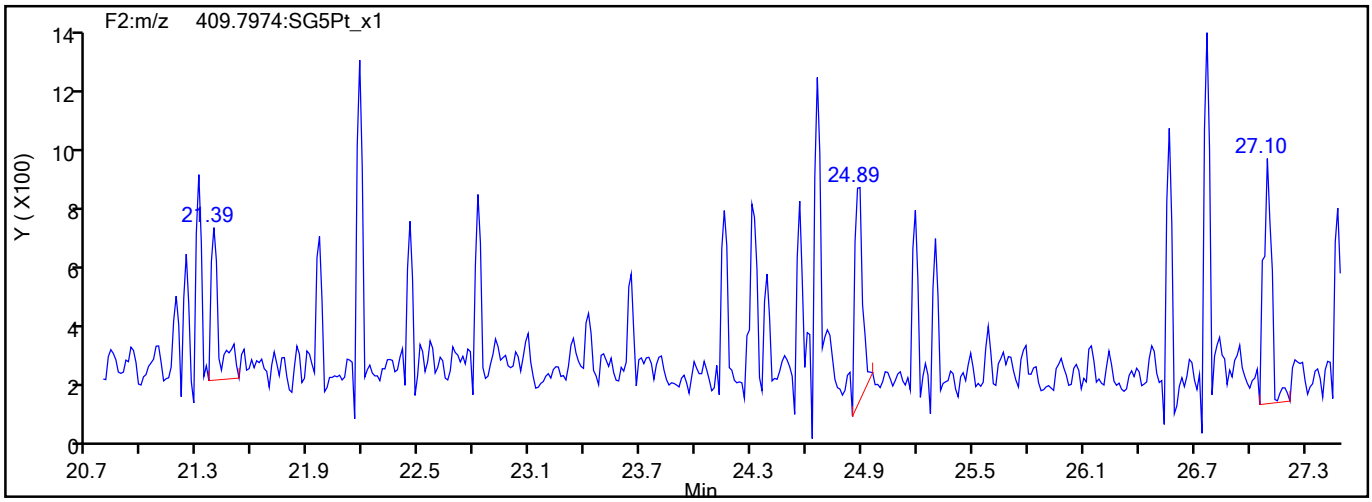

778855

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

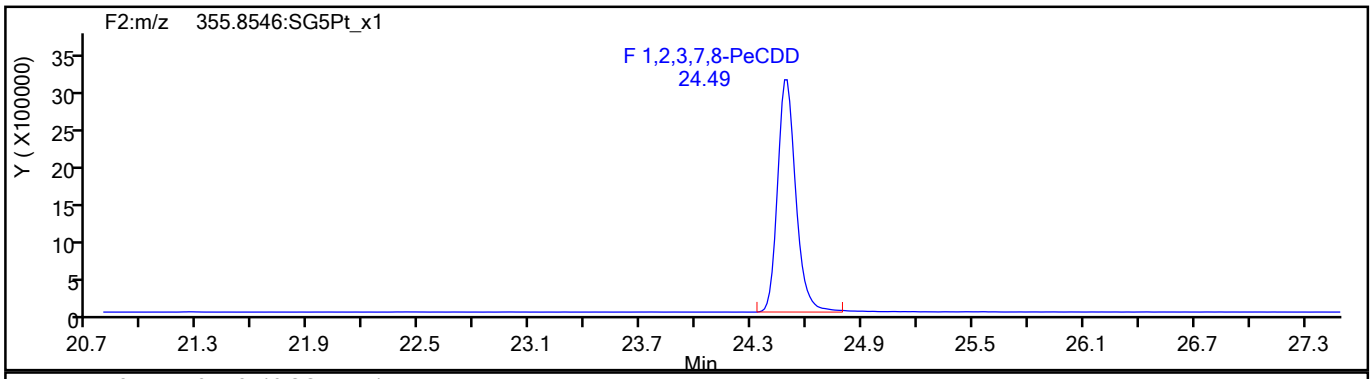

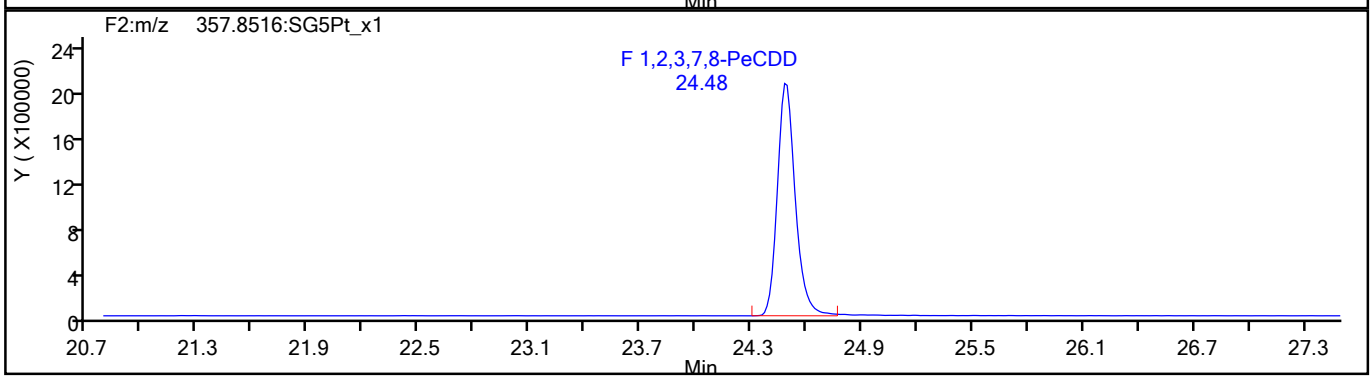

PeCDD Standards

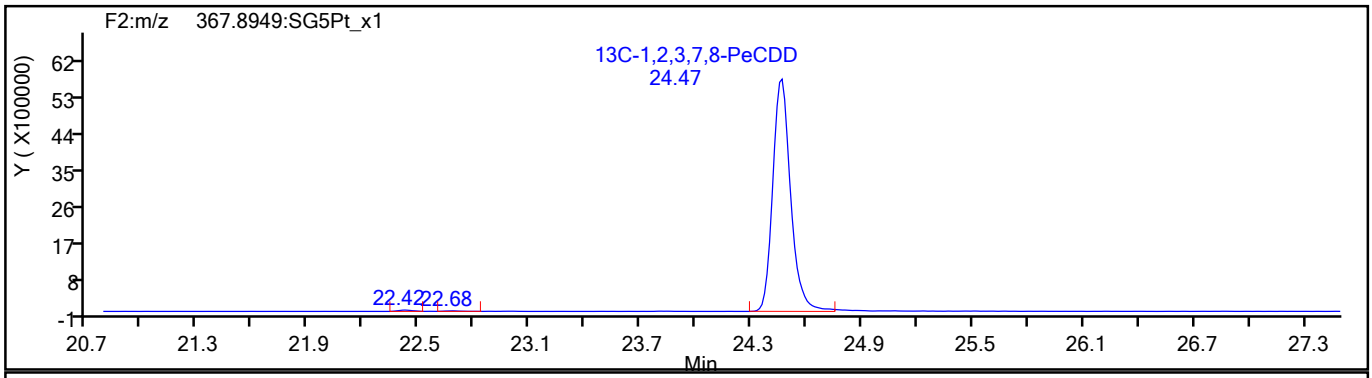

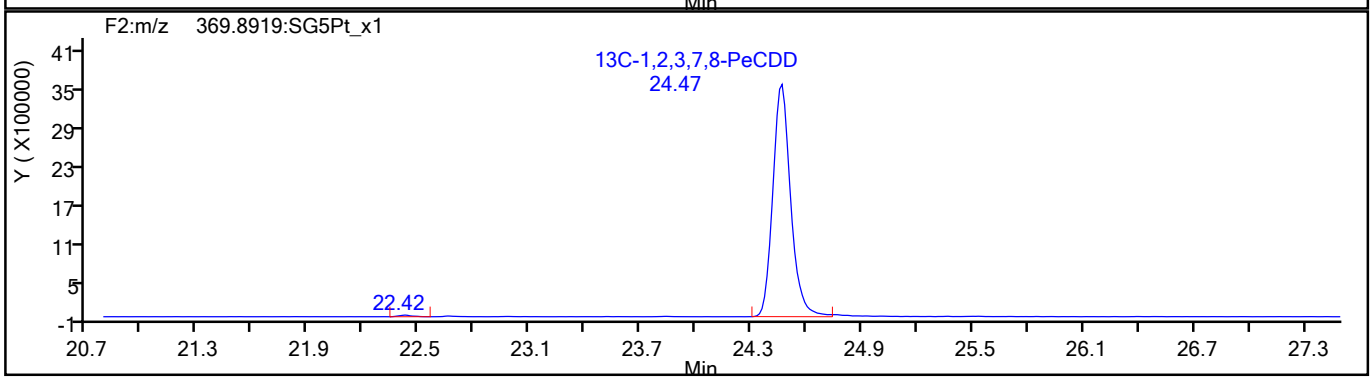

778856

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_26.d		
Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

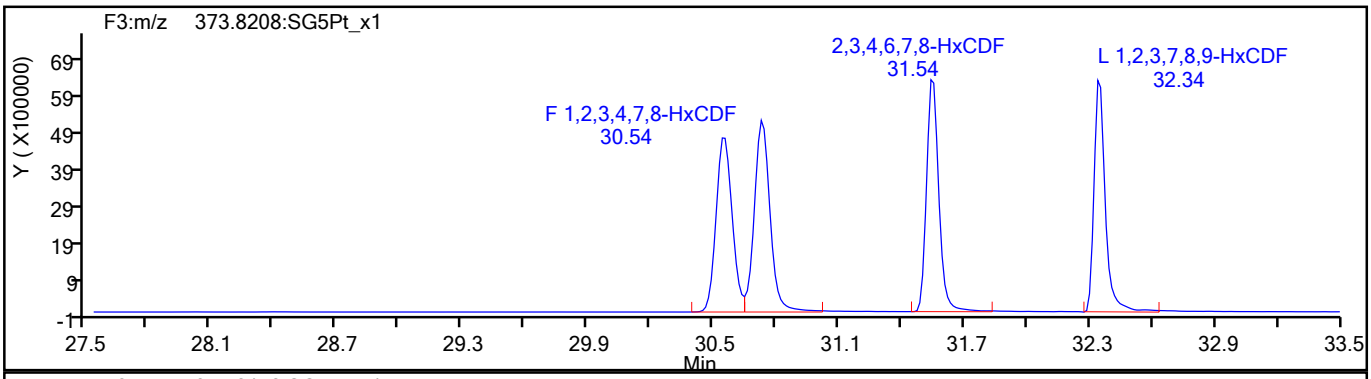

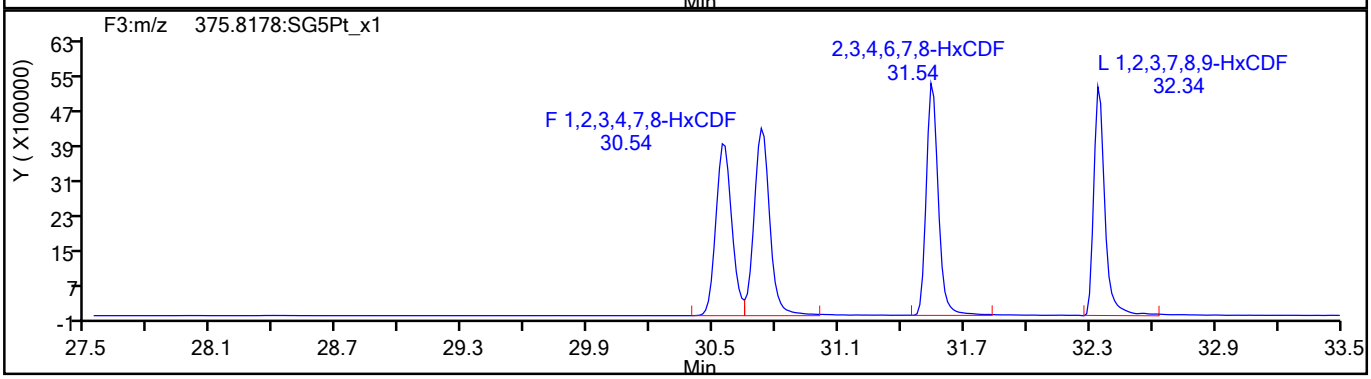

HxCDF Standards

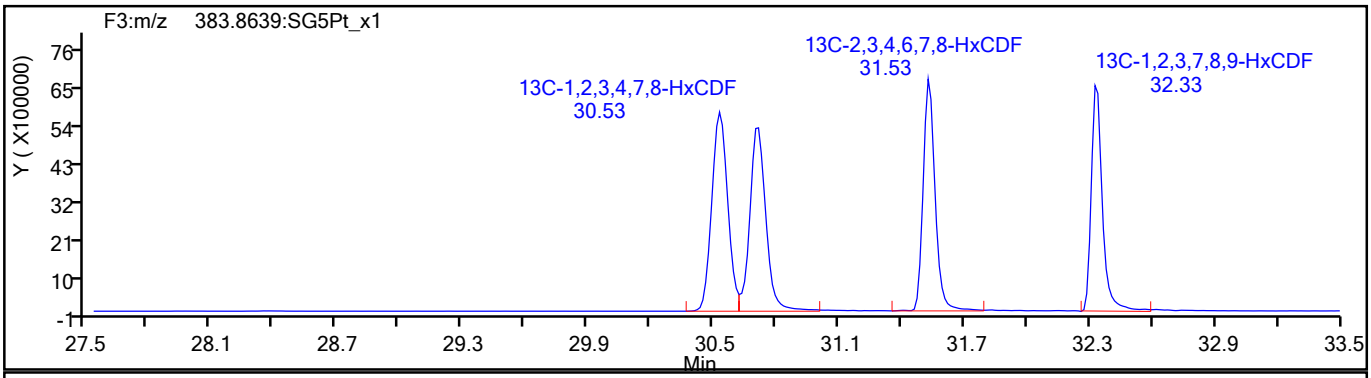

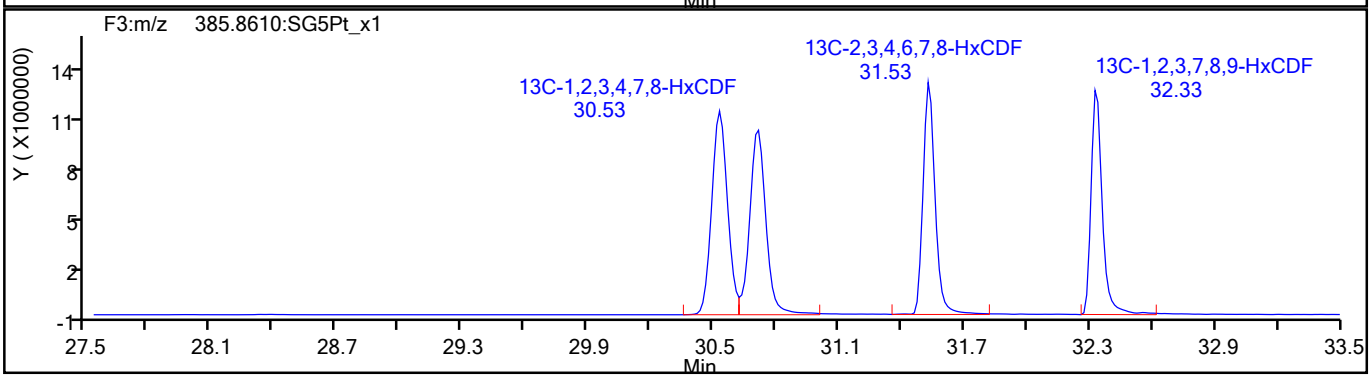

778857

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

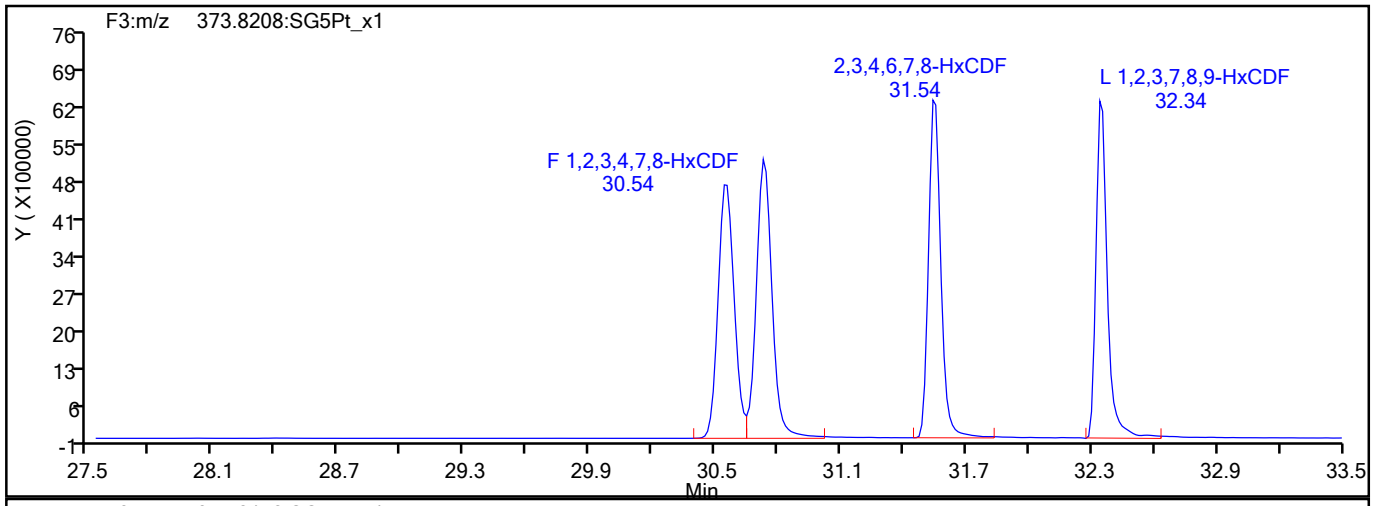

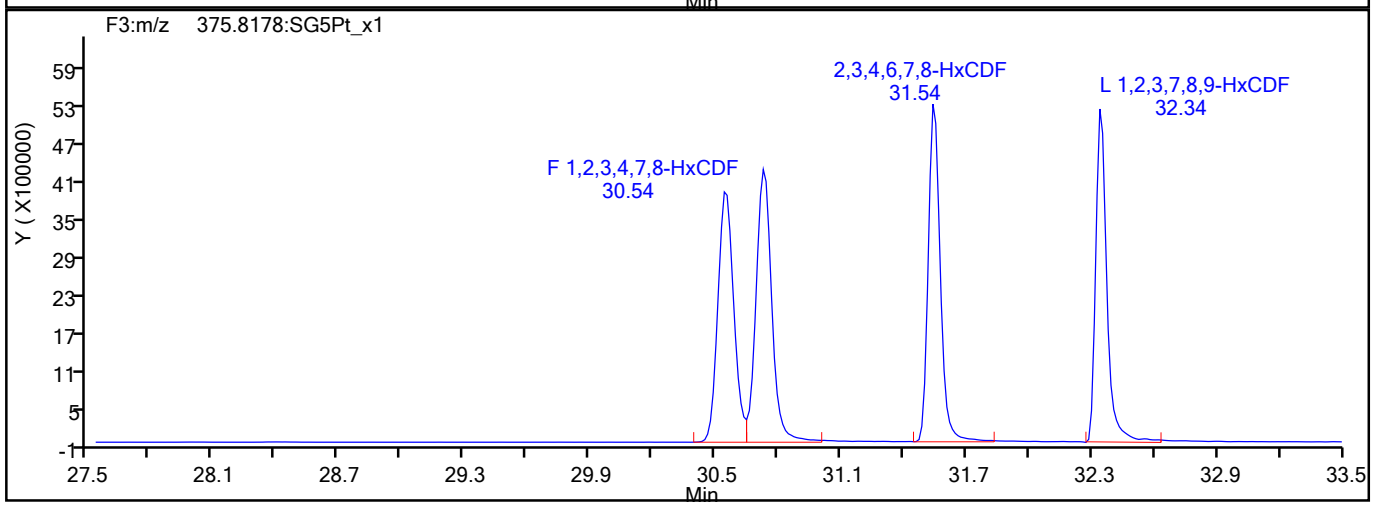

HxCDF Interference Mass

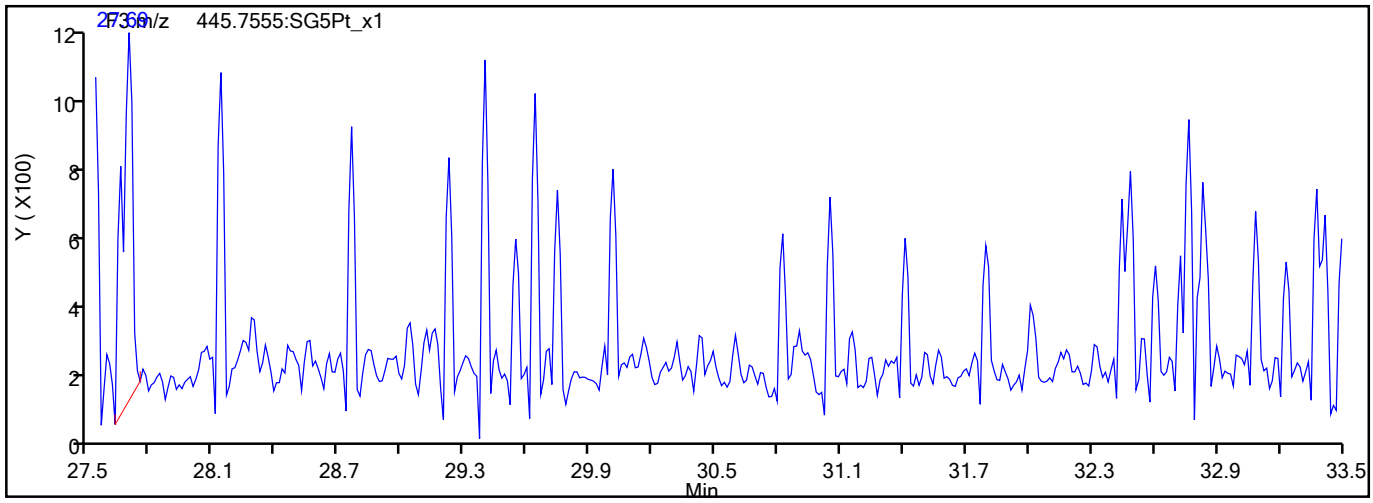

778858

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

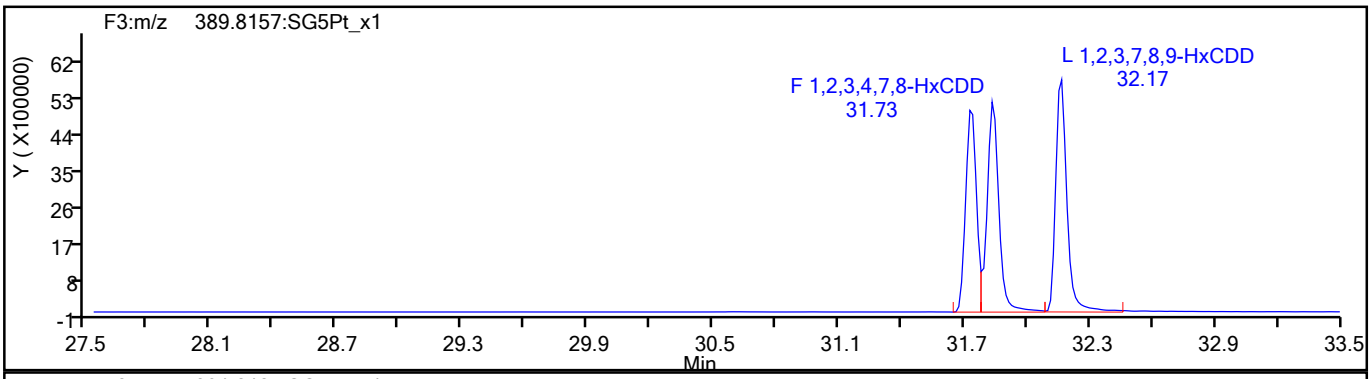

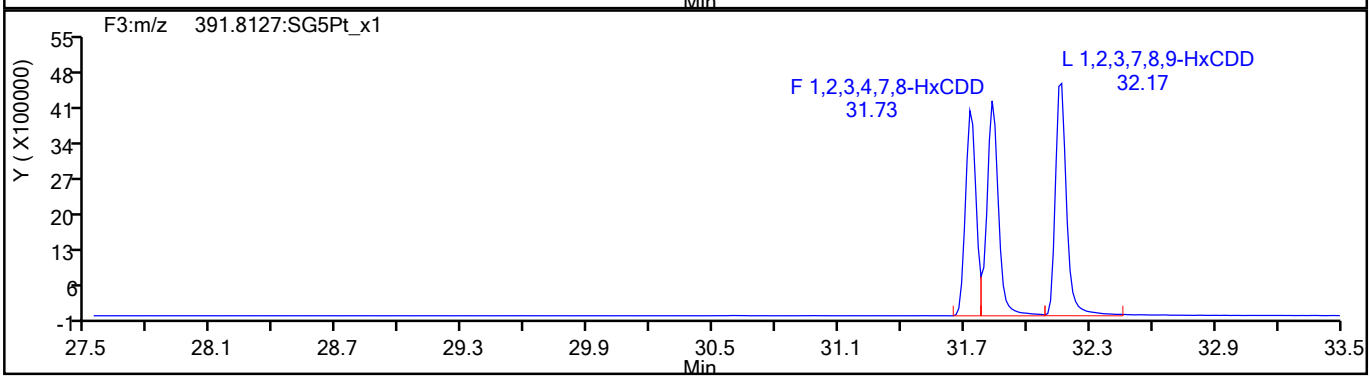

HxCDD Standards

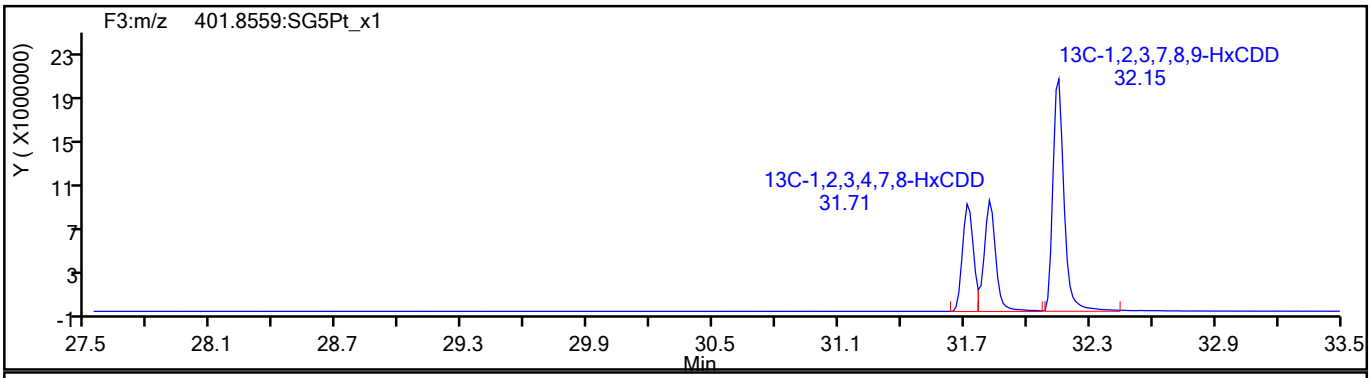

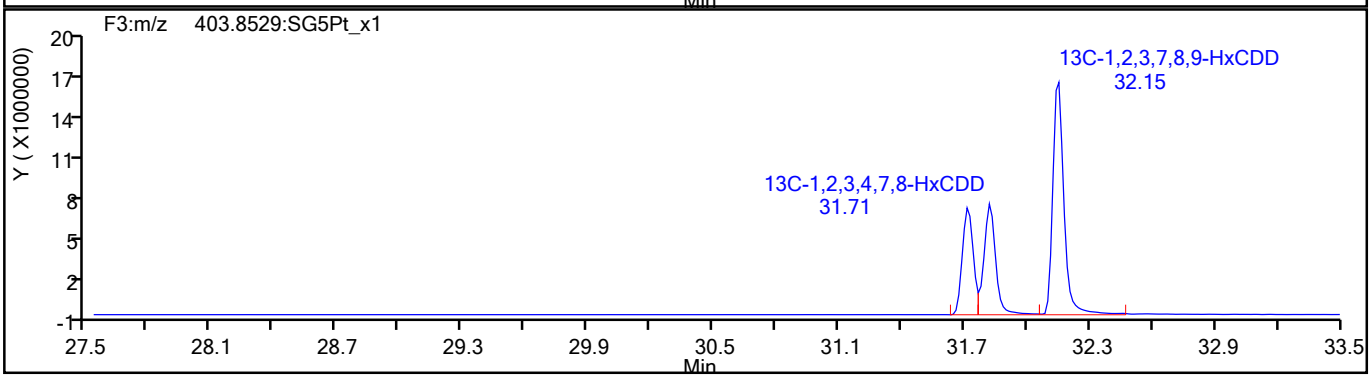

778859

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

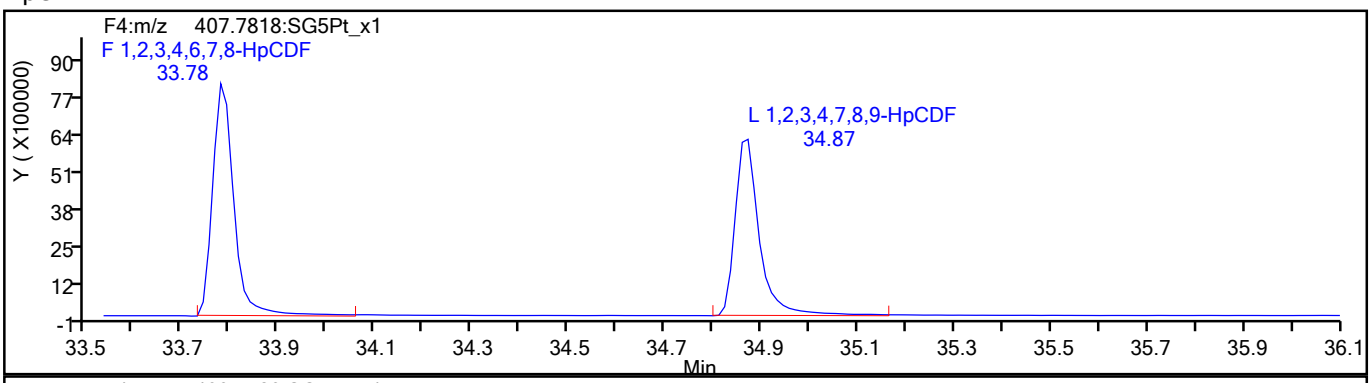

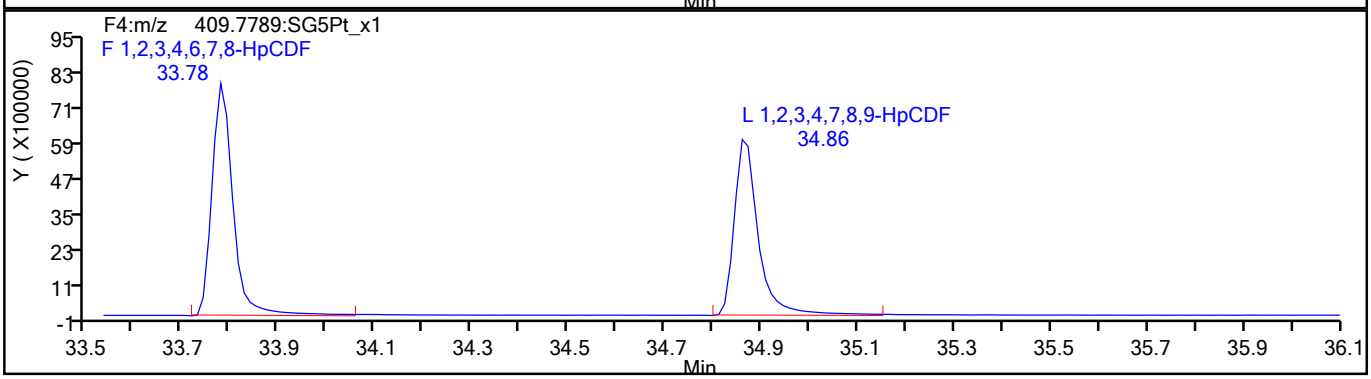

HpCDF Standards

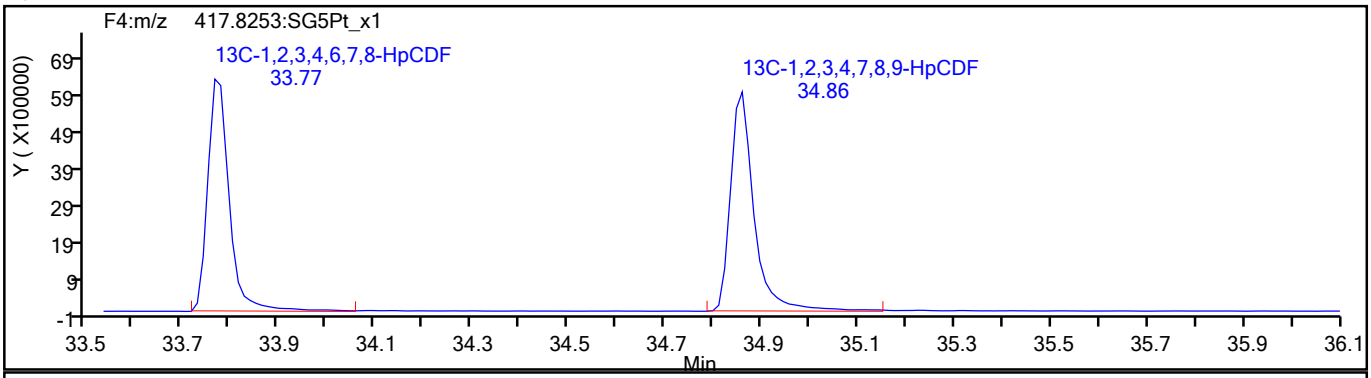

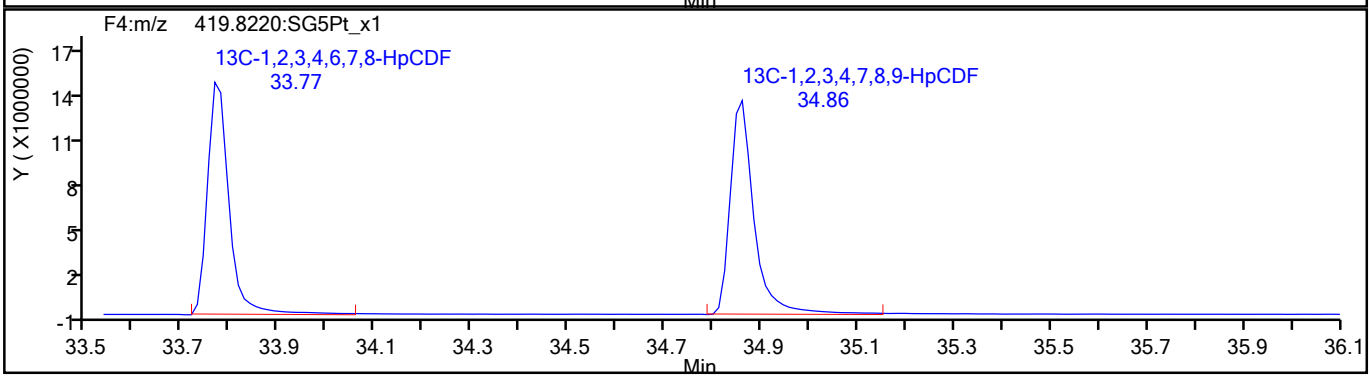

778860

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

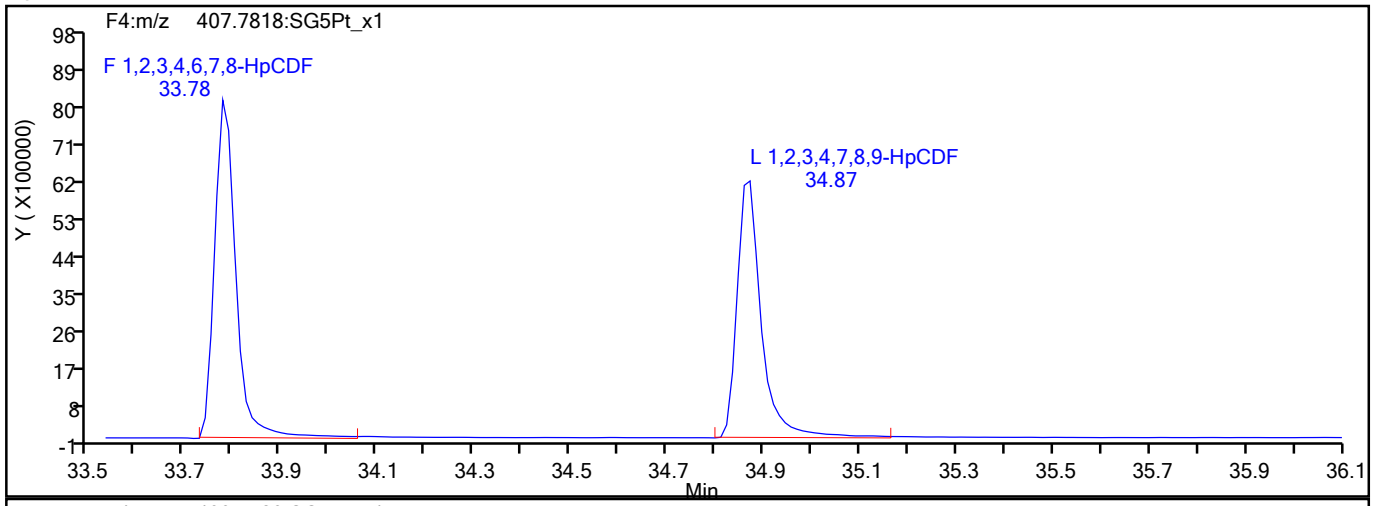

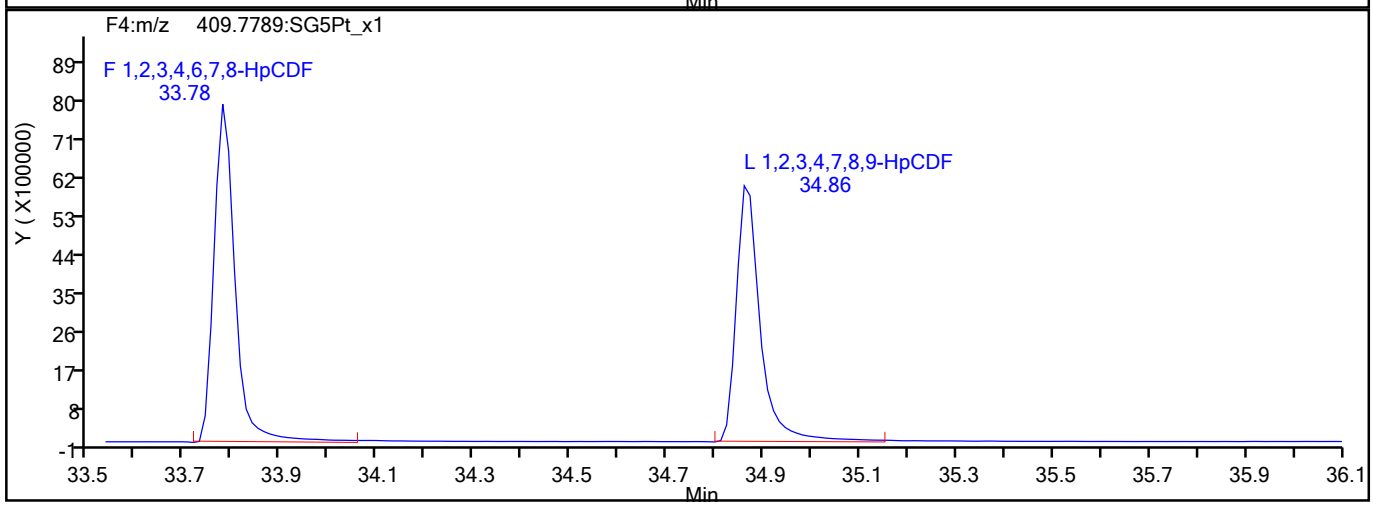

HpCDF Interference Mass

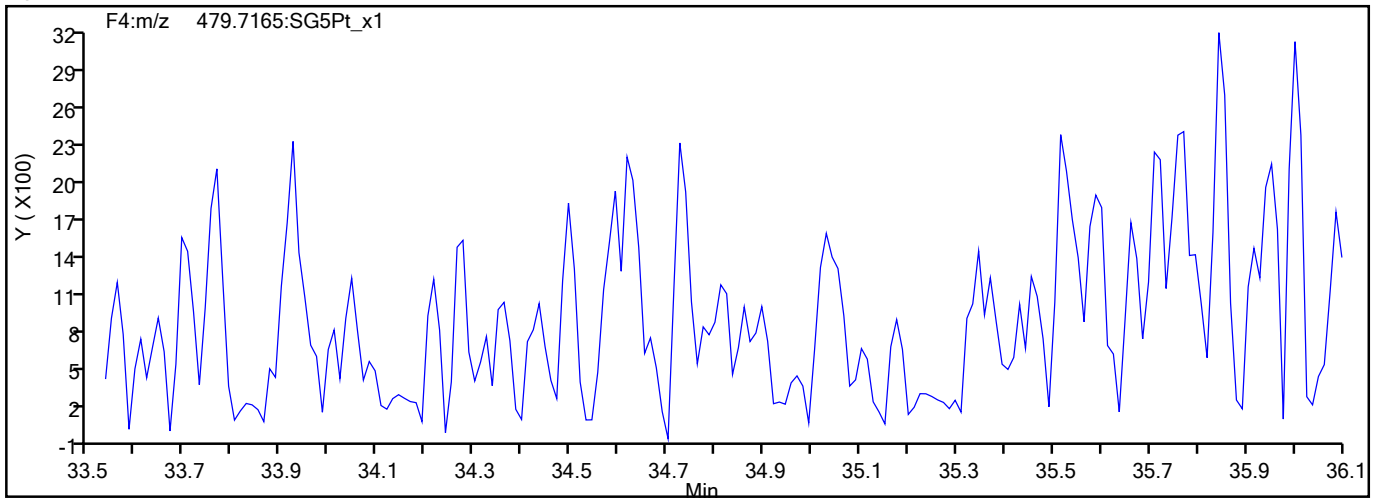

778861

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

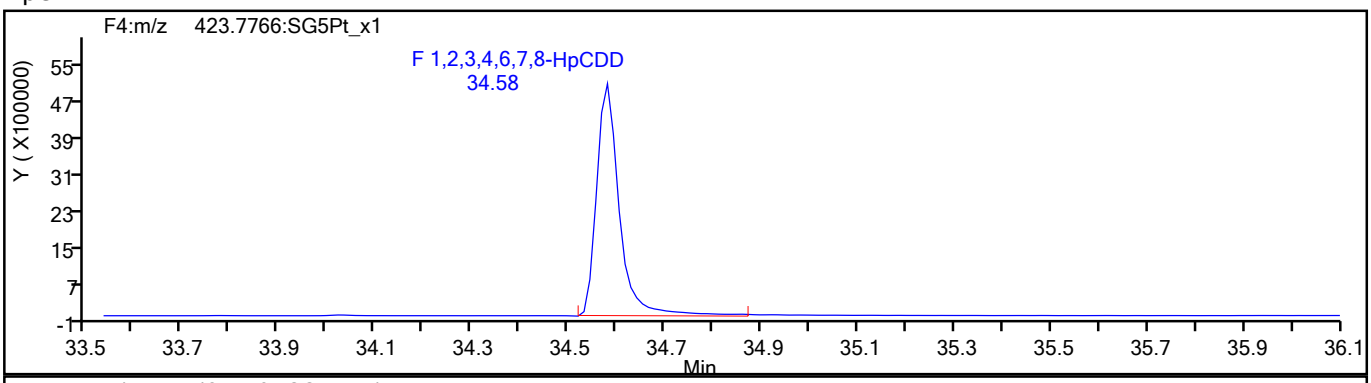

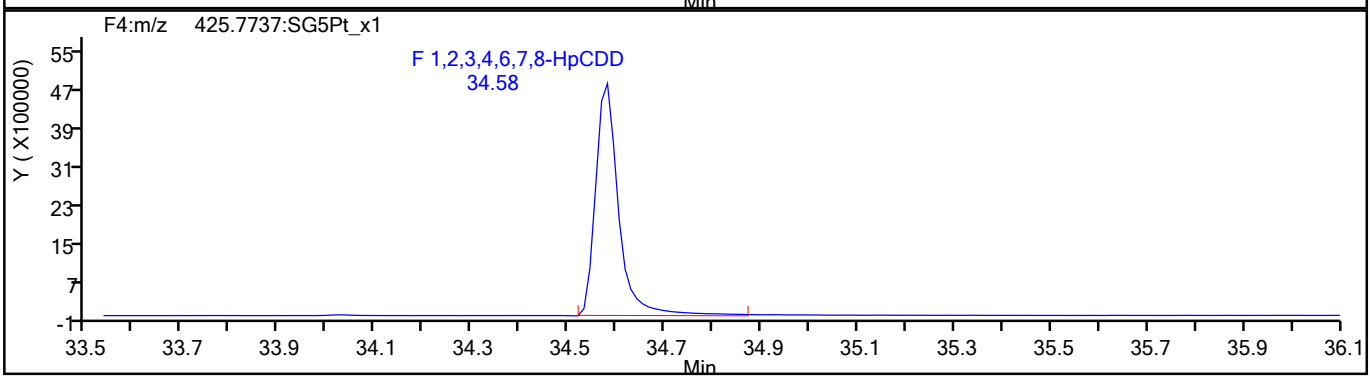

HpCDD Standards

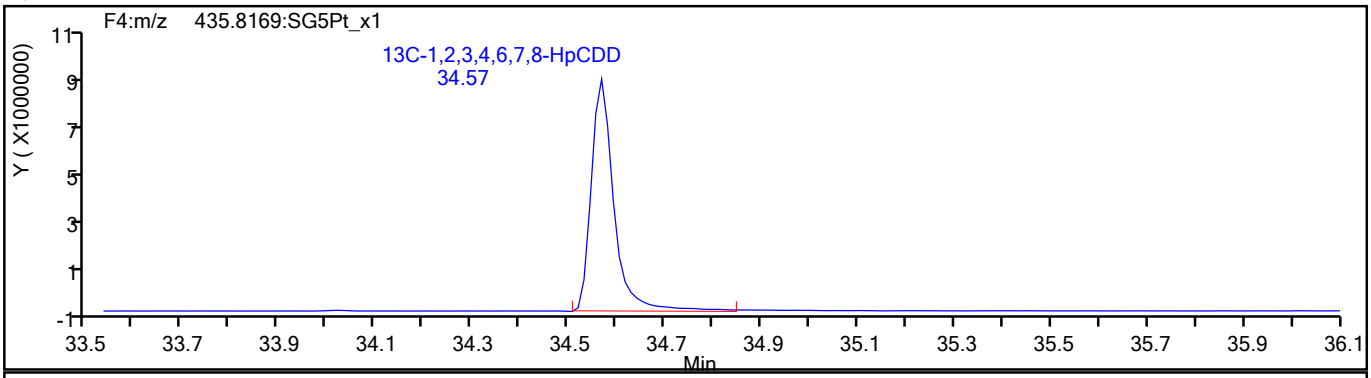

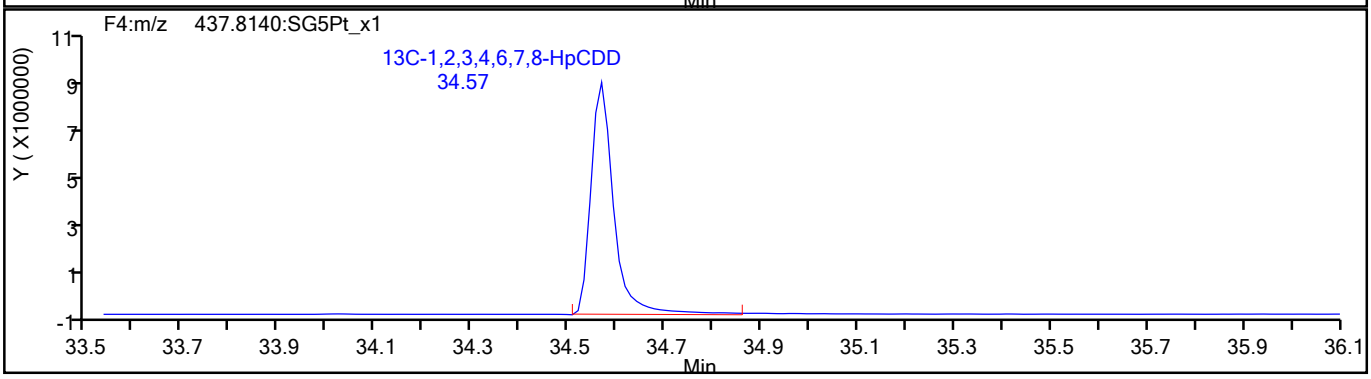

778862

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

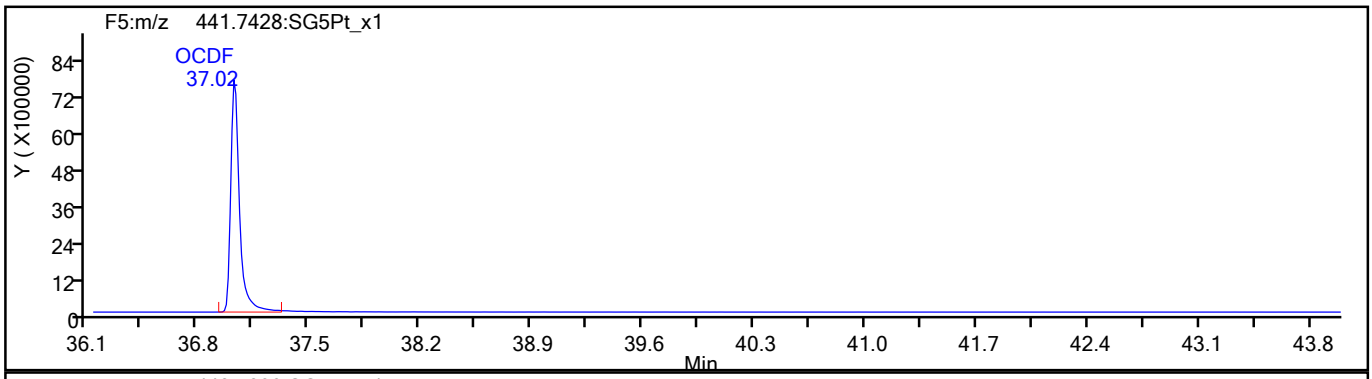

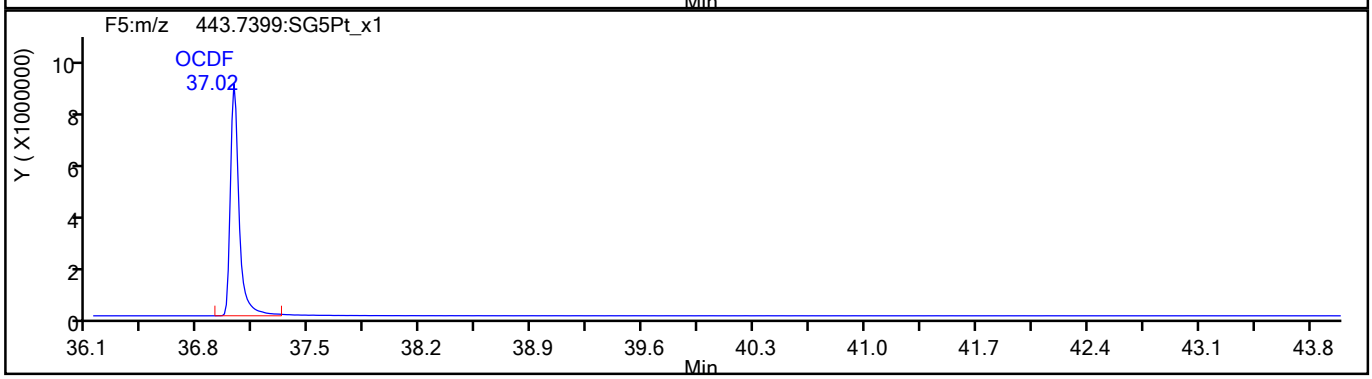

OCDF Standards

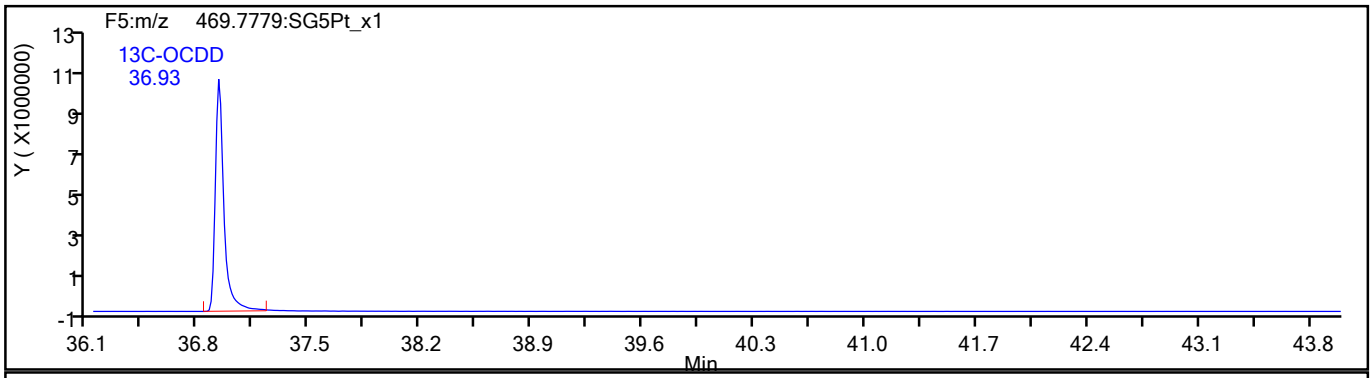

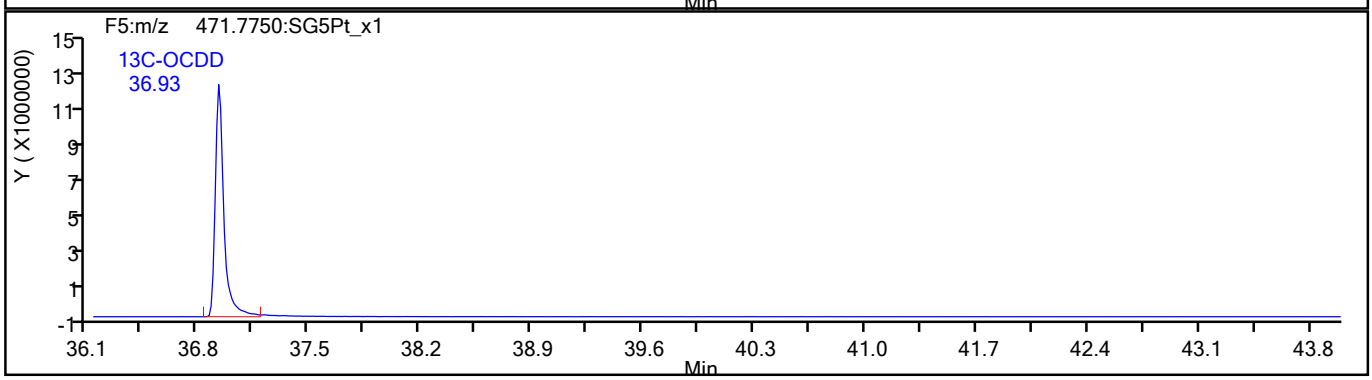

778863

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

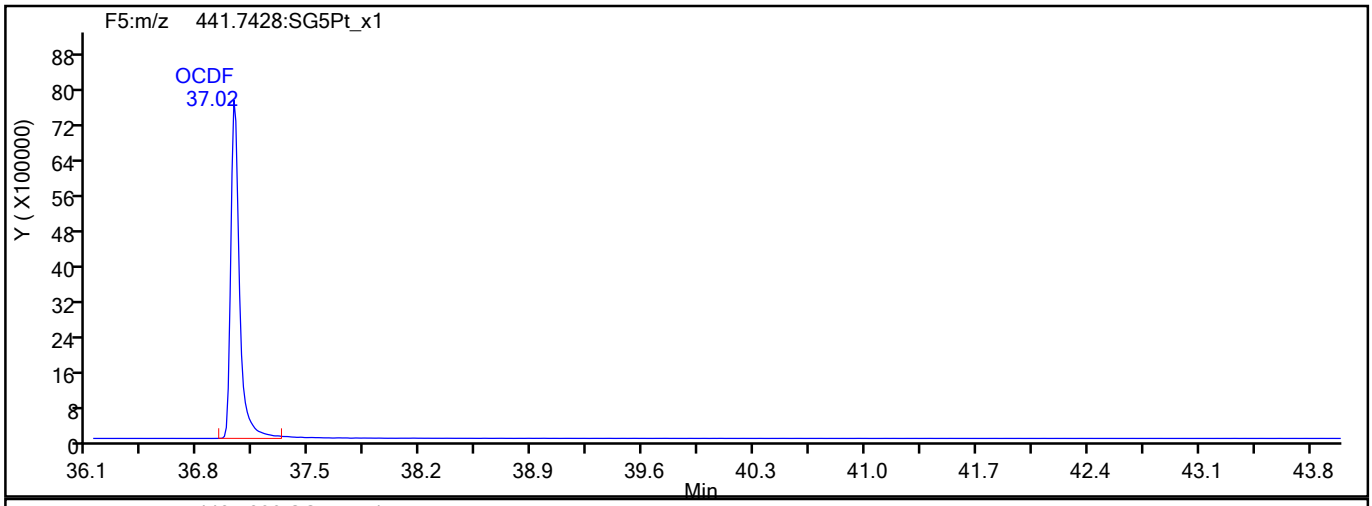

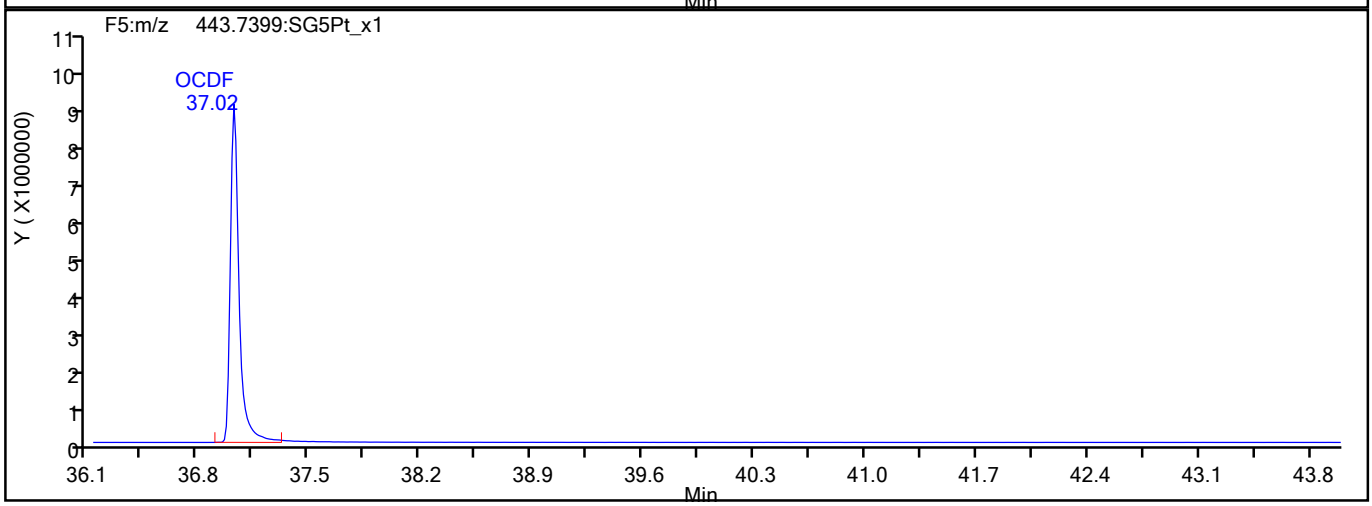

OCDF Interference Mass

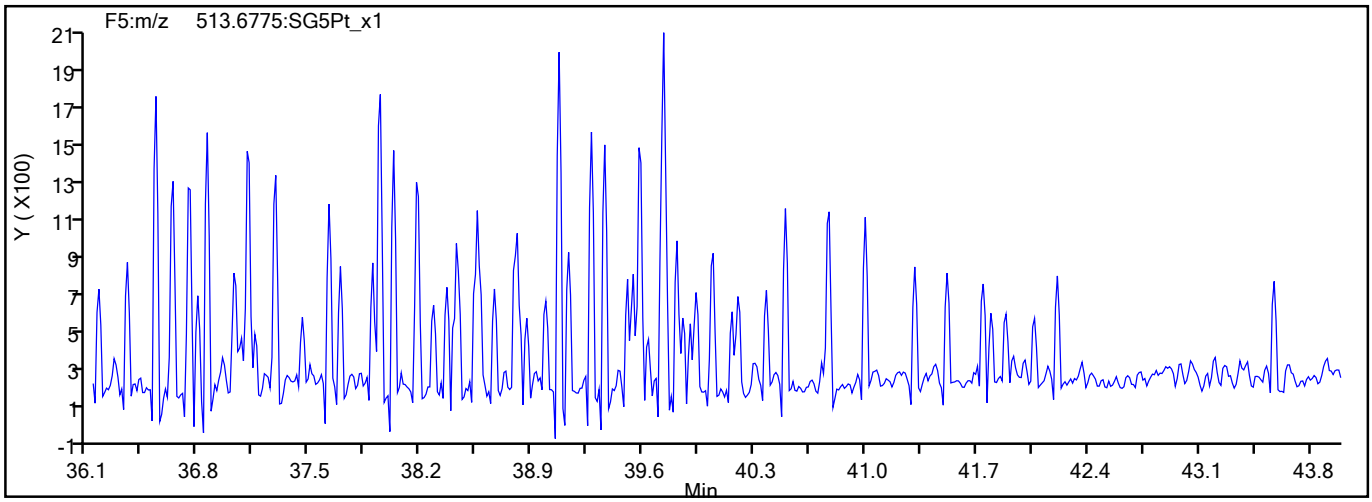

778864

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 07:18:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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OCDD

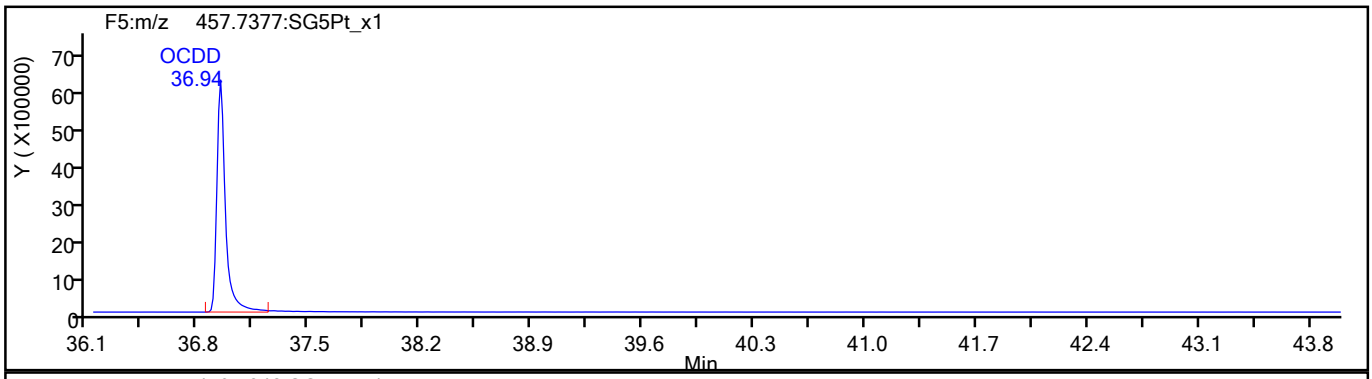

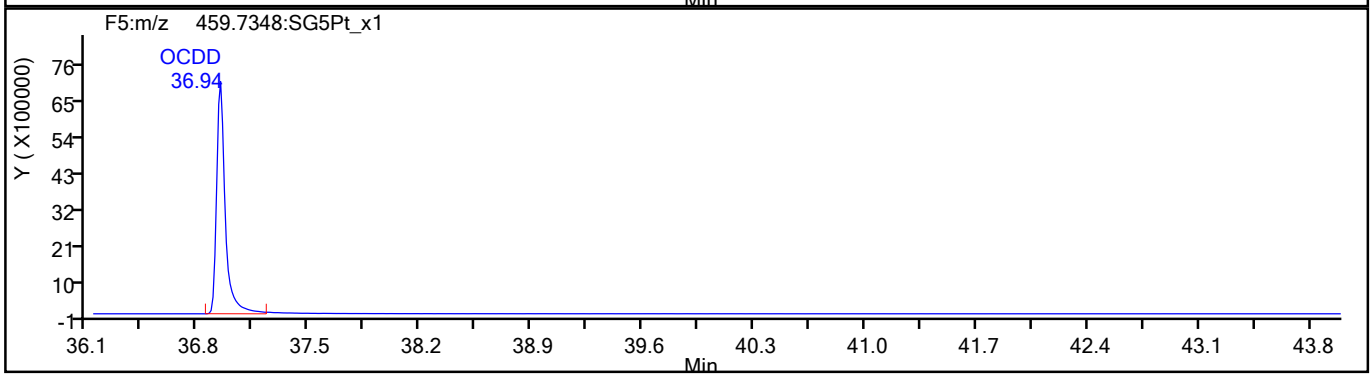

OCDD Standards

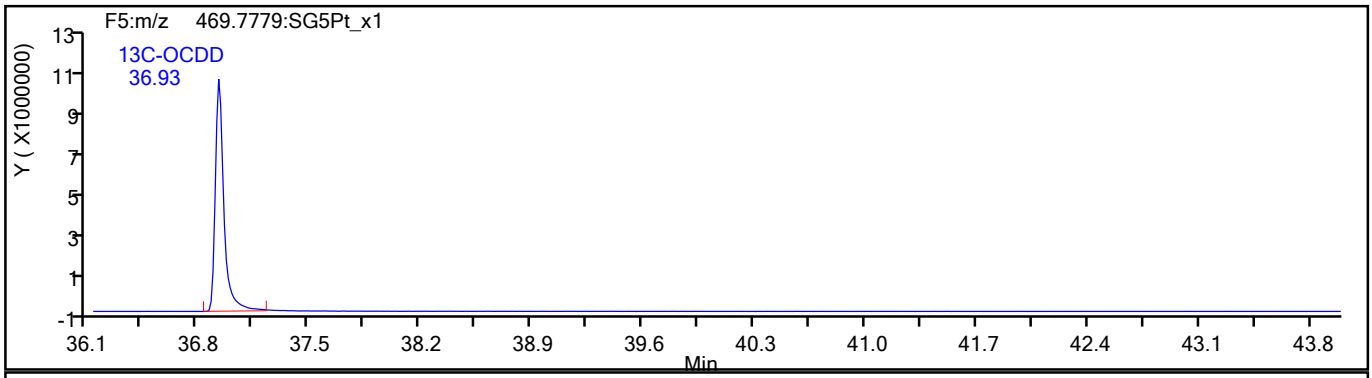

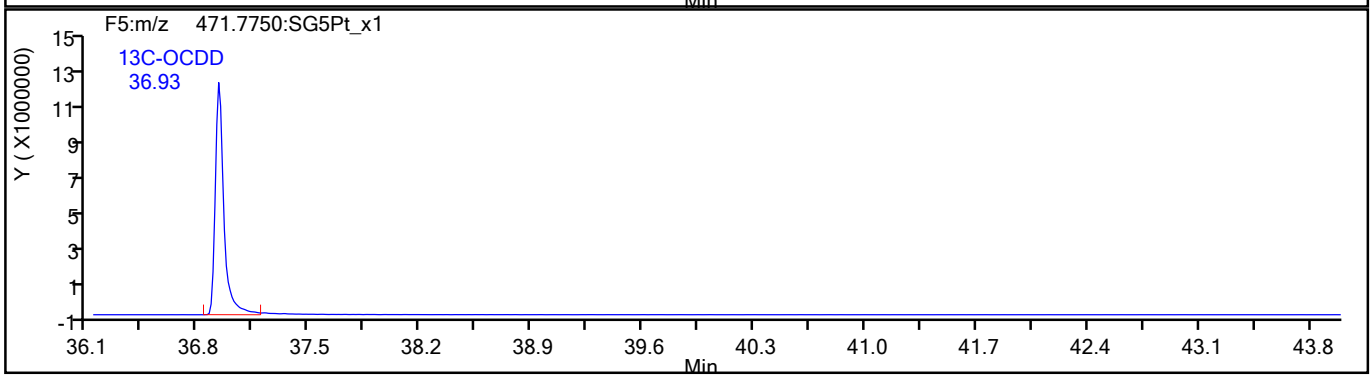

778865

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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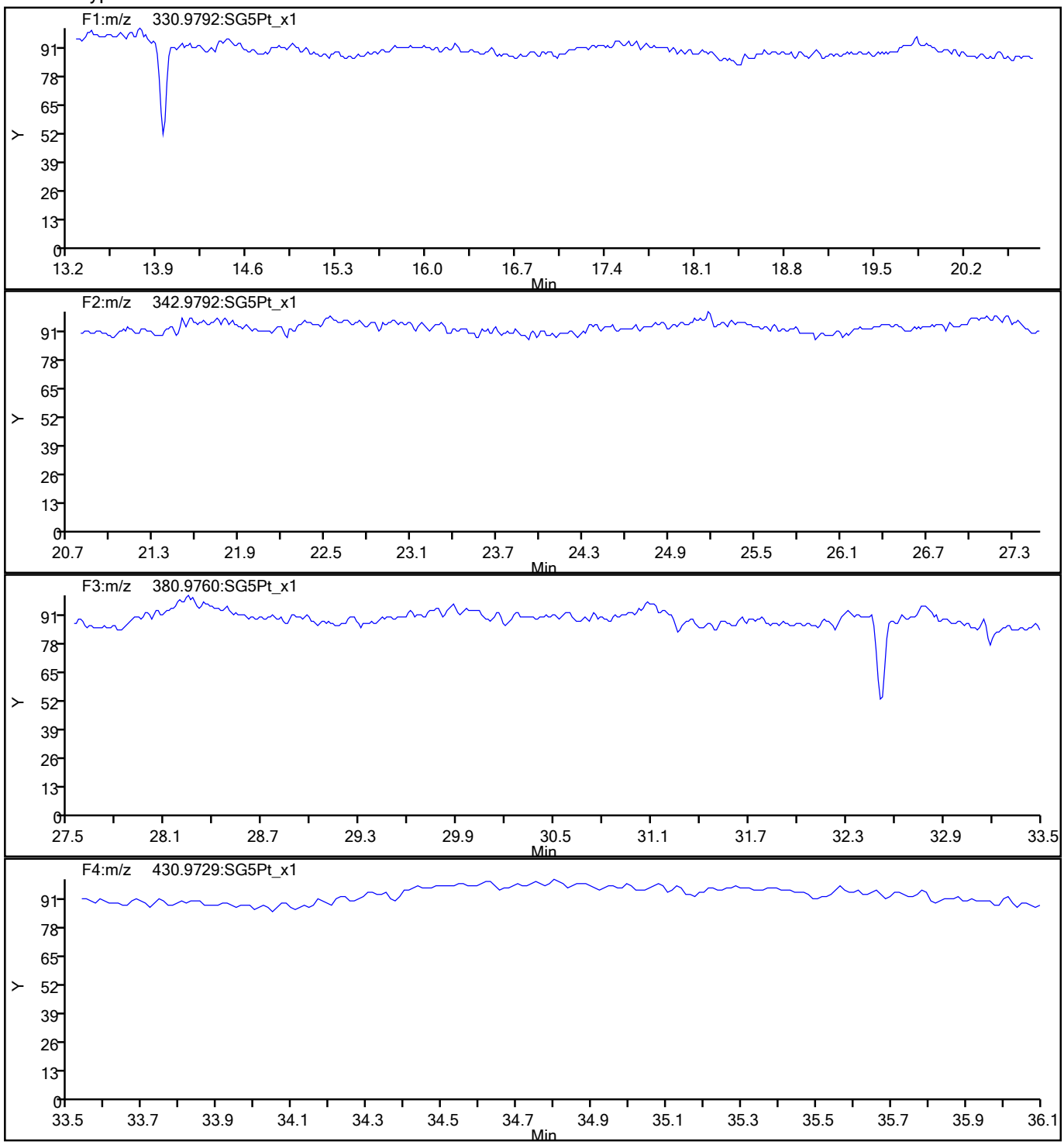

778866

Report Date: 16-Aug-2021 13:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

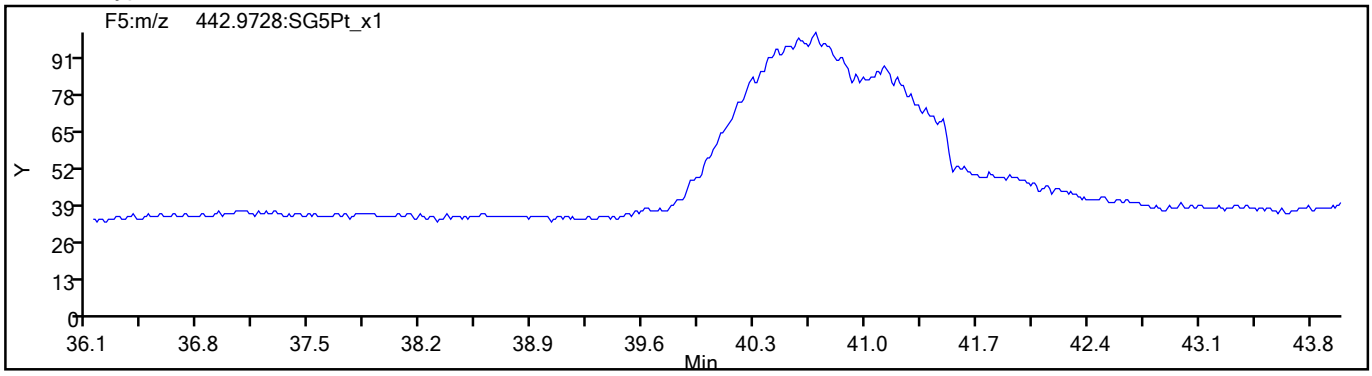

778867

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76769-2
SDG No.:
Client Sample ID:
Lab Sample ID: LCSD 320-513227/3-A
Matrix: Sediment
Lab File ID: 12AU2110D5_27.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/05/2021 06:41
Sample wt/vol: 10(g)
Date Analyzed: 08/13/2021 08:03
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 515770
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	20.2		1.0	0.040
51207-31-9	2,3,7,8-TCDF	20.9		1.0	0.039
40321-76-4	1,2,3,7,8-PeCDD	107		5.0	0.12
57117-41-6	1,2,3,7,8-PeCDF	107		5.0	0.35
57117-31-4	2,3,4,7,8-PeCDF	97.4		5.0	0.36
39227-28-6	1,2,3,4,7,8-HxCDD	98.2		5.0	0.31
57653-85-7	1,2,3,6,7,8-HxCDD	104		5.0	0.32
19408-74-3	1,2,3,7,8,9-HxCDD	103		5.0	0.29
70648-26-9	1,2,3,4,7,8-HxCDF	96.6		5.0	0.54
57117-44-9	1,2,3,6,7,8-HxCDF	105		5.0	0.56
72918-21-9	1,2,3,7,8,9-HxCDF	104		5.0	0.44
60851-34-5	2,3,4,6,7,8-HxCDF	106		5.0	0.45
35822-46-9	1,2,3,4,6,7,8-HpCDD	108		5.0	0.44
67562-39-4	1,2,3,4,6,7,8-HpCDF	107		5.0	0.93
55673-89-7	1,2,3,4,7,8,9-HpCDF	98.1		5.0	1.1
3268-87-9	OCDD	212		10	0.24
39001-02-0	OCDF	204		10	0.18
41903-57-5	Total TCDD	20.2		1.0	0.040
30402-14-3	Total TCDF	21.1		1.0	0.039
36088-22-9	Total PeCDD	107		5.0	0.12
30402-15-4	Total PeCDF	206		5.0	0.35
34465-46-8	Total HxCDD	305		5.0	0.31
55684-94-1	Total HxCDF	412		5.0	0.50
37871-00-4	Total HpCDD	108		5.0	0.44
38998-75-3	Total HpCDF	205		5.0	1.0

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 320-513227/3-A

Matrix: Sediment Lab File ID: 12AU2110D5_27.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/05/2021 06:41

Sample wt/vol: 10(g) Date Analyzed: 08/13/2021 08:03

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 515770 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		20-175
89059-46-1	13C-2,3,7,8-TCDF	54		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	57		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	54		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	59		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	62		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	60		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	54		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	54		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	53		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	62		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	68		20-186
114423-97-1	13C-OCDD	69		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	81		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d
Lims ID: LCSD 320-513227/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 13-Aug-2021 08:03:13 ALS Bottle#: 31 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-513227/3-a lcsd 320-513227/3-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:40:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: dadunj Date: 16-Aug-2021 13:40:34

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	145963949	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.371	127613770	0.78	1.6249	53.8	53.8	0.1078	0.1078	53.81	
2,3,7,8-TCDF	17.386	13682429	0.76	1.0239	10.5	10.5	0.0193	0.0193	105	
A Non-2,3,7,8-sub-TCDF	17.069	116223	0.68	1.0239	0.0889	0.0889	0.0193	0.0889	0.00	
S Total TCDF					10.6	10.6	0.0193	0.0193		
D 13C-2,3,7,8-TCDD	18.081	74822203	0.81	0.8993	57.0	57.0	0.0857	0.0857	57.00	
2,3,7,8-TCDD	18.097	9461478	0.80	1.2541	10.1	10.1	0.0200	0.0200	101	
$ 37Cl4-2,3,7,8-TCDD	18.097	52138035		1.1071	32.3	32.3	0.0275	0.0275	80.66	
A Non-2,3,7,8-sub-TCDD	17.530	37813	0.72	1.2541	0.0403	0.0403	0.0200	0.0403	0.00	
S Total TCDD					10.1	10.1	0.0200	0.0200		
D 13C-1,2,3,7,8-PeCDF	22.394	96016186	1.57	1.2101	54.4	54.4	0.1271	0.1271	54.36	
1,2,3,7,8-PeCDF	22.421	54475962	1.59	1.0611	53.5	53.5	0.1730	0.1730	107	
D 13C-2,3,4,7,8-PeCDF	23.730	106902427	1.60	1.2395	59.1	59.1	0.1241	0.1241	59.09	
2,3,4,7,8-PeCDF	23.758	53019538	1.60	1.0184	48.7	48.7	0.1811	0.1811	97.40	
A F1 PeCDFs	20.108	30331	1.52	1.0398	0.0288	0.0288	0.009396	0.0288	0.00	M
A Non-2,3,7,8-sub-PeCDF	23.261	593606	1.64	1.0398	0.5627	0.5627	0.1769	0.5627	0.00	
S Total PeCDF					102.8	102.8	0.1770	0.1770		
D 13C-1,2,3,7,8-PeCDD	24.453	63494450	1.61	0.7612	57.1	57.1	0.0578	0.0578	57.14	
1,2,3,7,8-PeCDD	24.480	35512861	1.59	1.0484	53.3	53.3	0.0613	0.0613	107	
A Non-2,3,7,8-sub-PeCDD	23.376						0.0613	0.0613		
S Total PeCDD					53.3	53.3	0.0613	0.0613		
D 13C-1,2,3,4,7,8-HxCDF	30.529	87627530	0.52	1.0837	59.5	59.5	0.2062	0.2062	59.50	
1,2,3,4,7,8-HxCDF	30.556	45931412	1.22	1.0851	48.3	48.3	0.2688	0.2688	96.61	
D 13C-1,2,3,6,7,8-HxCDF	30.715	82928683	0.52	1.1279	54.1	54.1	0.1981	0.1981	54.10	
1,2,3,6,7,8-HxCDF	30.729	49000474	1.22	1.1260	52.5	52.5	0.2811	0.2811	105	
D 13C-2,3,4,6,7,8-HxCDF	31.527	76887599	0.52	1.0637	53.2	53.2	0.2101	0.2101	53.19	
2,3,4,6,7,8-HxCDF	31.554	47693558	1.20	1.1675	53.1	53.1	0.2259	0.2259	106	
D 13C-1,2,3,7,8,9-HxCDF	32.339	70930637	0.52	0.9676	53.9	53.9	0.2309	0.2309	53.94	
1,2,3,7,8,9-HxCDF	32.353	43223884	1.21	1.1664	52.2	52.2	0.2216	0.2216	104	
A Non-2,3,7,8-sub-HxCDF	30.223						0.2471	0.2471		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					206.2	206.2	0.2494	0.2494		
* 13C-1,2,3,7,8,9-HxCDD	32.153	135895297	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	62032232	1.32	0.7334	62.2	62.2	0.2376	0.2376	62.24	
1,2,3,4,7,8-HxCDD	31.740	32392302	1.26	1.0640	49.1	49.1	0.1552	0.1552	98.15	
D 13C-1,2,3,6,7,8-HxCDD	31.820	67089580	1.18	0.8802	56.1	56.1	0.1980	0.1980	56.09	
1,2,3,6,7,8-HxCDD	31.833	34751436	1.27	1.0001	51.8	51.8	0.1619	0.1619	104	
1,2,3,7,8,9-HxCDD	32.166	37789661	1.27	1.1325	51.7	51.7	0.1444	0.1444	103	
A Non-2,3,7,8-sub-HxCDD	30.895						0.1535	0.1535		
S Total HxCDD					152.6	152.6	0.1538	0.1538		
1,2,3,4,6,7,8-HpCDF	33.790	48625955	1.05	1.4413	53.5	53.5	0.4647	0.4647	107	
D 13C-1,2,3,4,6,7,8-HpCDF	33.778	63075335	0.44	0.7730	60.0	60.0	0.6106	0.6106	60.04	
D 13C-1,2,3,4,7,8,9-HpCDF	34.859	64670628	0.44	0.7008	67.9	67.9	0.6735	0.6735	67.90	
1,2,3,4,7,8,9-HpCDF	34.871	41784276	1.05	1.3174	49.0	49.0	0.5742	0.5742	98.09	
A Non-2,3,7,8-sub-HpCDF	34.325						0.5151	0.5151		
S Total HpCDF					102.5	102.5	0.5194	0.5194		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	54336261	1.01	0.6472	61.8	61.8	0.3360	0.3360	61.78	
1,2,3,4,6,7,8-HpCDD	34.580	31981224	1.05	1.0943	53.8	53.8	0.2215	0.2215	108	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2215	0.2215		
S Total HpCDD					53.8	53.8	0.2215	0.2215		
D 13C-OCDD	36.938	83662133	0.87	0.4472	137.7	137.7	0.1218	0.1218	68.84	
OCDF	37.034	61369727	0.89	1.4382	102.0	102.0	0.0904	0.0904	102	
OCDD	36.950	49024379	0.90	1.1070	105.9	105.9	0.1187	0.1187	106	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d
Lims ID: LCSD 320-513227/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 13-Aug-2021 08:03:13 ALS Bottle#: 31 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-513227/3-a lcsd 320-513227/3-a
Misc. Info.: 12AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 16-Aug-2021 13:40:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1607

First Level Reviewer: dadunj Date: 16-Aug-2021 13:40:34

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.885	-1		65462077	15745820	6362	15905	2475		
333.9339	17.870	17.885	-1		80501872	19256940	4424	11060	4353	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.371	17.356	1	0.972	55834469	13335035	9744	24360	1369		
317.9389	17.371	17.356	1	0.972	71779301	17202622	14776	36940	1164	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.386	17.386	0	1.001	5923418	1425751	1075	2687	1326		
305.8987	17.386	17.386	0	1.001	7759011	1887590	1341	3352	1408	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.993	17.069	-5	0.978	46982	13921	1075	2687	13		
305.8987	17.008	17.069	-4	0.979	69241	16438	1341	3352	12	0.68(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.081	18.066	1	1.012	33377822	7455805	6362	15905	1172		
333.9339	18.081	18.066	1	1.012	41444381	9237177	4424	11060	2088	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.097	18.082	1	1.001	4190694	994713	818	2045	1216		
321.8936	18.097	18.082	1	1.001	5270784	1215085	861	2152	1411	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.097	18.097	0	1.013	52138035	12016909	4264	10660	2818		
A Non-2,3,7,8-sub-TCDD											
319.8965	15.859	17.530	-100	0.877	15834	5460	818	2045	7		
321.8936	15.859	17.530	-100	0.877	21979	6955	861	2152	8	0.72(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.394	22.408	-1	1.253	58587306	10138181	13103	32757	774		
353.8970	22.394	22.408	-1	1.253	37428880	6400889	8426	21065	760	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.421	22.435	-1	1.001	33423005	5636249	7217	18042	781		
341.8567	22.421	22.435	-1	1.001	21052957	3575061	4925	12312	726	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.730	23.758	-2	1.328	65792148	10123696	13103	32757	773		
353.8970	23.730	23.758	-2	1.328	41110279	6337647	8426	21065	752	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.758	23.785	-2	1.001	32607652	4961592	7217	18042	687		
341.8567	23.758	23.785	-2	1.001	20411886	3120318	4925	12312	634	1.60(1.32-1.78)	
A F1 PeCDFs											M
339.8597	19.518	20.108	-35	0.872	18296	5066	201	502	25		M
341.8567	19.518	20.108	-35	0.872	12035	2678	444	1110	6	1.52(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.940	23.261	-19	1.024	368715	49270	7217	18042	7		
341.8567	22.940	23.261	-19	1.024	224891	30339	4925	12312	6	1.64(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.481	-2	1.368	39182644	5710170	3316	8290	1722		
369.8919	24.467	24.481	-1	1.369	24311806	3551012	2848	7120	1247	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.480	24.508	-2	1.001	21789196	3156617	1465	3662	2155		
357.8516	24.480	24.508	-2	1.001	13723665	1980064	916	2290	2162	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.376						1465	3662			
357.8516	23.376						916	2290			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.529	30.543	-1	0.949	30078983	5820719	11179	27947	521		
385.8610	30.529	30.543	-1	0.949	57548547	10971412	22112	55280	496	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.556	30.569	-1	1.001	25206338	4779684	10711	26777	446		
375.8178	30.556	30.569	-1	1.001	20725074	3937772	8884	22210	443	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.715	30.716	0	0.955	28380026	5310831	11179	27947	475		
385.8610	30.715	30.716	0	0.955	54548657	10163106	22112	55280	460	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.729	30.743	-1	1.000	26974366	5171231	10711	26777	483		
375.8178	30.729	30.743	-1	1.000	22026108	4262642	8884	22210	480	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.527	31.541	-1	0.981	26306841	6311959	11179	27947	565		
385.8610	31.527	31.541	-1	0.981	50580758	12260348	22112	55280	554	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.554	31.554	0	1.001	25986466	6398667	10711	26777	597		
375.8178	31.554	31.554	0	1.001	21707092	5314261	8884	22210	598	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.339	32.340	0	1.006	24294453	6581850	11179	27947	589		
385.8610	32.339	32.340	0	1.006	46636184	12368778	22112	55280	559	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.353	32.353	0	1.000	23669547	6347926	10711	26777	593		
375.8178	32.353	32.353	0	1.000	19554337	5222254	8884	22210	588	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.223						10711	26777			
375.8178	30.223						8884	22210			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.153	0		75030110	20512174	14985	37462	1369		
403.8529	32.153	32.153	0		60865187	16736014	10980	27450	1524	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.727	-1	0.986	35243916	9366960	14985	37462	625		
403.8529	31.714	31.727	-1	0.986	26788316	7510016	10980	27450	684	1.32(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.740	31.741	0	1.001	18090631	4917169	6672	16680	737		
391.8127	31.740	31.741	0	1.001	14301671	3800438	4476	11190	849	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.834	-1	0.990	36287543	9488925	14985	37462	633		
403.8529	31.820	31.834	-1	0.990	30802037	7723126	10980	27450	703	1.18(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.833	31.847	-1	1.000	19473381	4990513	6672	16680	748		
391.8127	31.833	31.847	-1	1.000	15278055	4001669	4476	11190	894	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.166	32.167	0	1.014	21160586	5815769	6672	16680	872		
391.8127	32.166	32.167	0	1.014	16629075	4597155	4476	11190	1027	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.895						6672	16680			
391.8127	30.895						4476	11190			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.790	33.778	1	1.000	24894362	8235895	28805	72012	286		
409.7789	33.790	33.778	1	1.000	23731593	7697000	27552	68880	279	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.778	33.778	0	1.051	19362976	6464439	21107	52767	306		
419.8220	33.778	33.778	0	1.051	43712359	14572078	49217	123042	296	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.859	34.860	0	1.084	19665379	5654721	21107	52767	268		
419.8220	34.859	34.860	0	1.084	45005249	12971158	49217	123042	264	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.871	34.872	0	1.000	21405085	6235468	28805	72012	216		
409.7789	34.871	34.872	0	1.000	20379191	5927929	27552	68880	215	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						28805	72012			
409.7789	34.325						27552	68880			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.568	0	1.075	27316561	8216164	12277	30692	669		
437.8140	34.568	34.568	0	1.075	27019700	8164210	20121	50302	406	1.01(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	16376459	4948271	8162	20405	606		
425.7737	34.580	34.580	0	1.000	15604765	4807854	7721	19302	623	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						8162	20405			
425.7737	34.301						7721	19302			
13C-OCDD											
469.7779	36.938	36.926	1	1.149	38997905	10196432	3304	8260	3086		
471.7750	36.938	36.926	1	1.149	44664228	11550584	4812	12030	2400	0.87(0.76-1.02)	
OCDF											
441.7428	37.034	37.034	0	1.003	28938332	7605166	2725	6812	2791		
443.7399	37.034	37.034	0	1.003	32431395	8415021	2928	7320	2874	0.89(0.76-1.02)	
OCDD											
457.7377	36.950	36.938	1	1.000	23184776	5867790	2504	6260	2343		
459.7348	36.938	36.938	0	1.000	25839603	6587798	3213	8032	2050	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d
Lims ID: LCSD 320-513227/3-A
Client ID:
Inject. Date: 13-Aug-2021 08:03:13 Dil. Factor: 1.0000
Sample Type: LCSD, LCS Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	127613770	30537657

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	127613770	30537657

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.993	46982	13921	69241	16438	0.0889	0.68	
Signal Totals:							
	46982	13921	69241	16438			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	116223	30359				0.68	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0889 = (116223 * 100.000) / (127613770 * 1.024)

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d
Lims ID: LCSD 320-513227/3-A
Client ID:
Inject. Date: 13-Aug-2021 08:03:13 Dil. Factor: 1.0000
Sample Type: LCSD, LCS Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	74822203	16692982

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	74822203	16692982

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.859	15834	5460	21979	6955	0.0403	0.72	
Signal Totals:							
	15834	5460	21979	6955			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	37813	12415				0.72	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0403 = (37813 * 100.000) / (74822203 * 1.254)

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d
Lims ID: LCSD 320-513227/3-A
Client ID:
Inject. Date: 13-Aug-2021 08:03:13 Dil. Factor: 1.0000
Sample Type: LCSD, LCS Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 5

F1 PeCDFs, RT: 20.108

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	96016186	16539070
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	106902427	16461343

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	101459306	16500206

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.518	18296	5066	12035	2678	0.0288	1.52	M
Signal Totals:							
	18296	5066	12035	2678			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	30331	7744				1.52	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0288 = (30331 * 100.000) / (101459306 * 1.040)

QC Flag Legend

Review Flags
M - Manually Integrated

778878

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d
Lims ID: LCSD 320-513227/3-A
Client ID:
Inject. Date: 13-Aug-2021 08:03:13 Dil. Factor: 1.0000
Sample Type: LCSD, LCS Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 515770 Lims Sample ID: 5

Non-2,3,7,8-sub-PeCDF, RT: 23.261

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	96016186	16539070
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	106902427	16461343

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	101459306	16500206

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.940	368715	49270	224891	30339	0.5627	1.64	
Signal Totals:							
	368715	49270	224891	30339			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	593606	79609				1.64	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5627 = (593606 * 100.000) / (101459306 * 1.040)

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d				
Injection Date:	13-Aug-2021 08:03:13	Instrument ID:	10D5		
Lims ID:	LCSD 320-513227/3-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

F1 PeCDFs, Signal: 1, m/z: 339.8597, RT: (19.46- 20.76)

Signal: 1

Processing Integration Results

RT = 19.518 Area = 19868

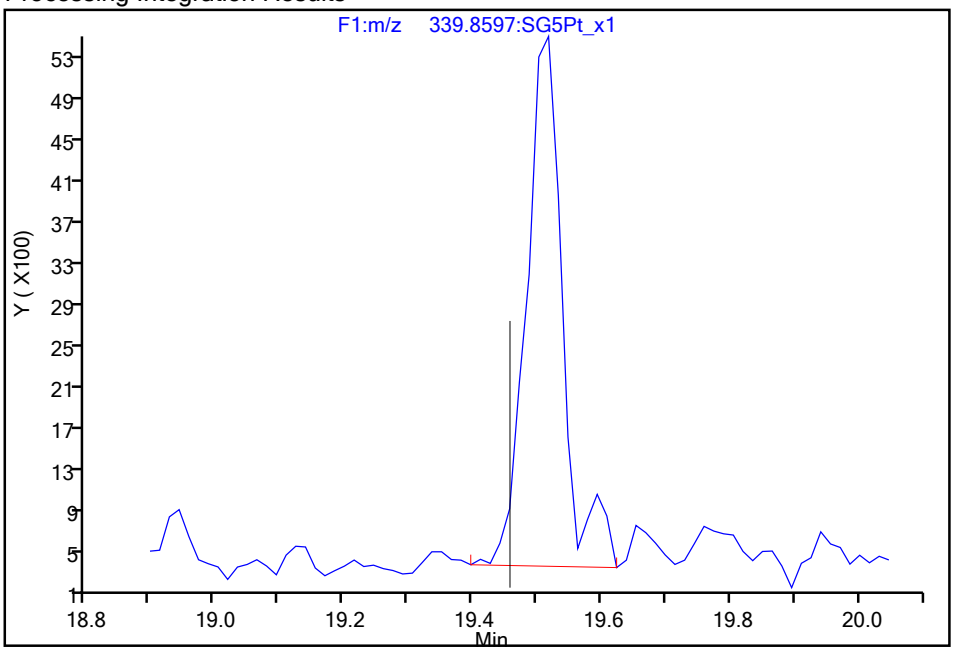

Manual Integration Results

RT = 19.518 Area = 18296 M

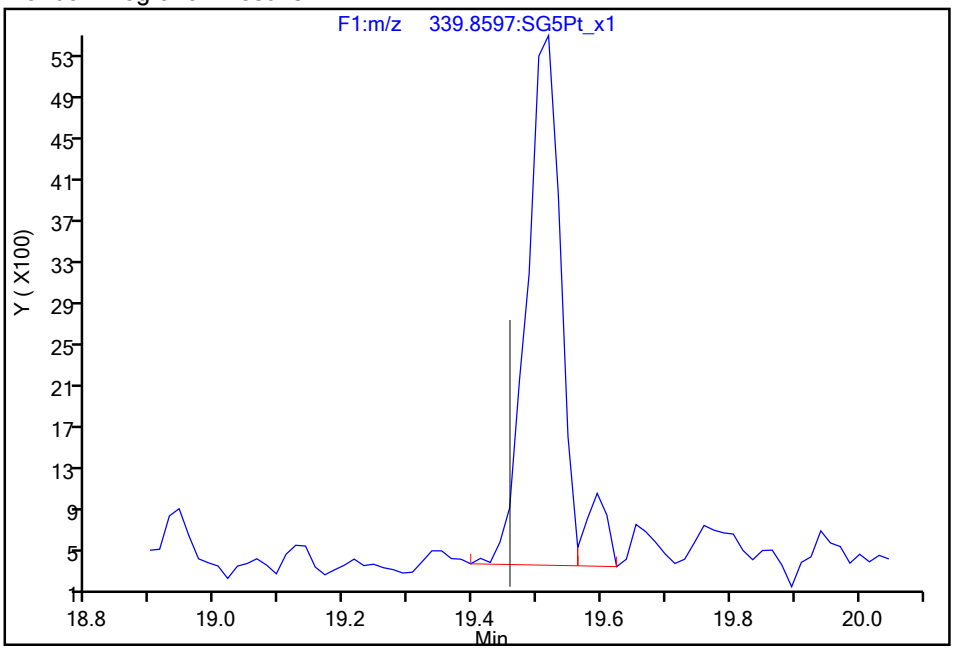

Reviewer: dadunj, 16-Aug-2021 13:40:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

778880

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d				
Injection Date:	13-Aug-2021 08:03:13	Instrument ID:	10D5		
Lims ID:	LCSD 320-513227/3-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

F1 PeCDFs, Signal: 2, m/z: 341.8567, RT: (19.46- 20.76)

Signal: 2

Processing Integration Results

RT = 19.518 Area = 15691

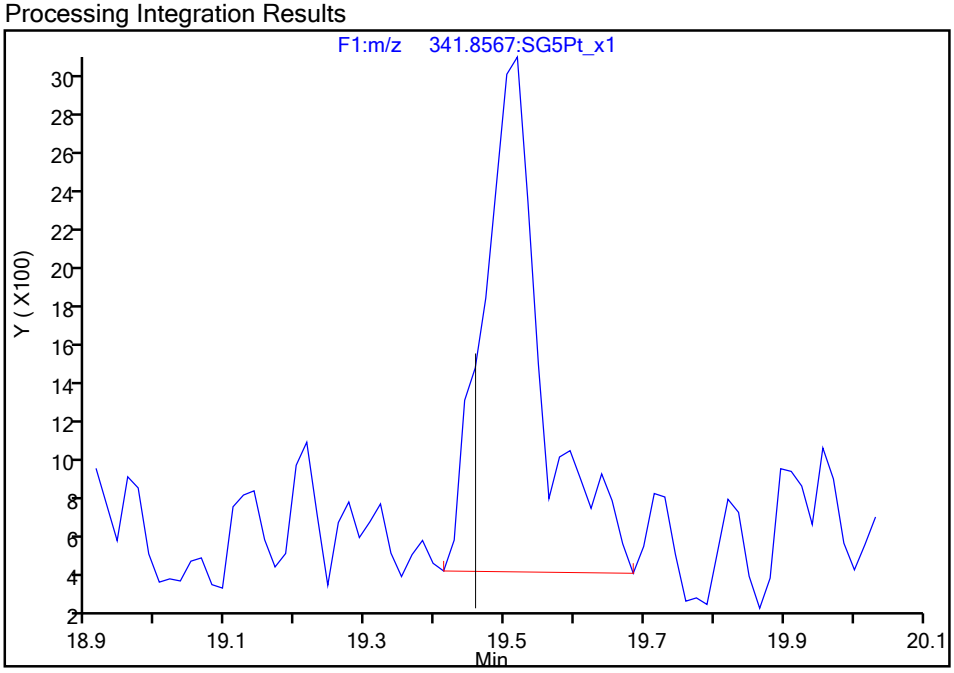

Manual Integration Results

RT = 19.518 Area = 12035 M

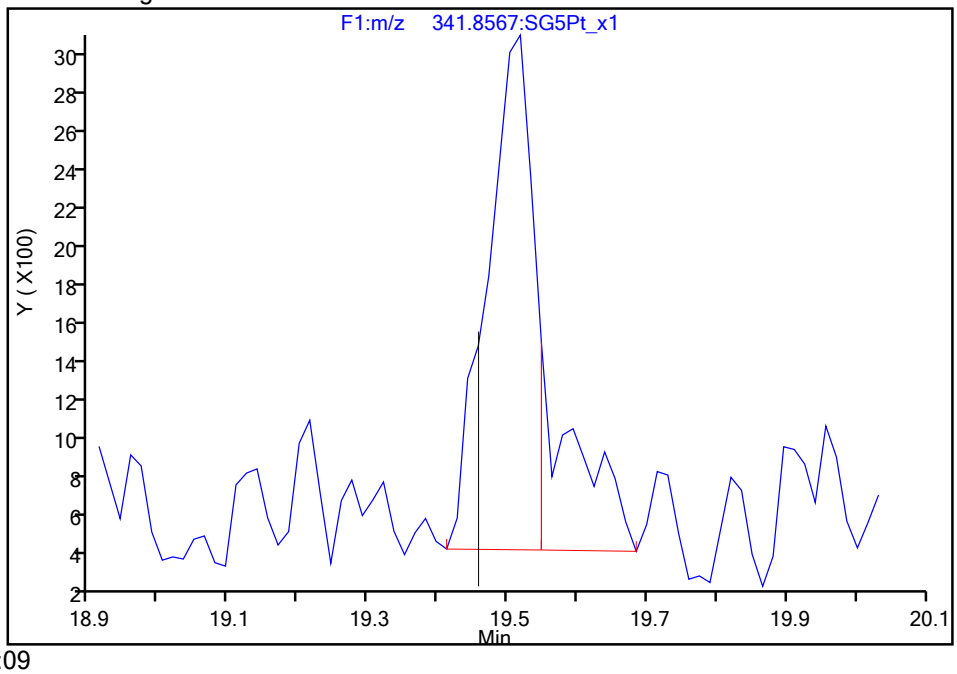

Reviewer: dadunj, 16-Aug-2021 13:40:09

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

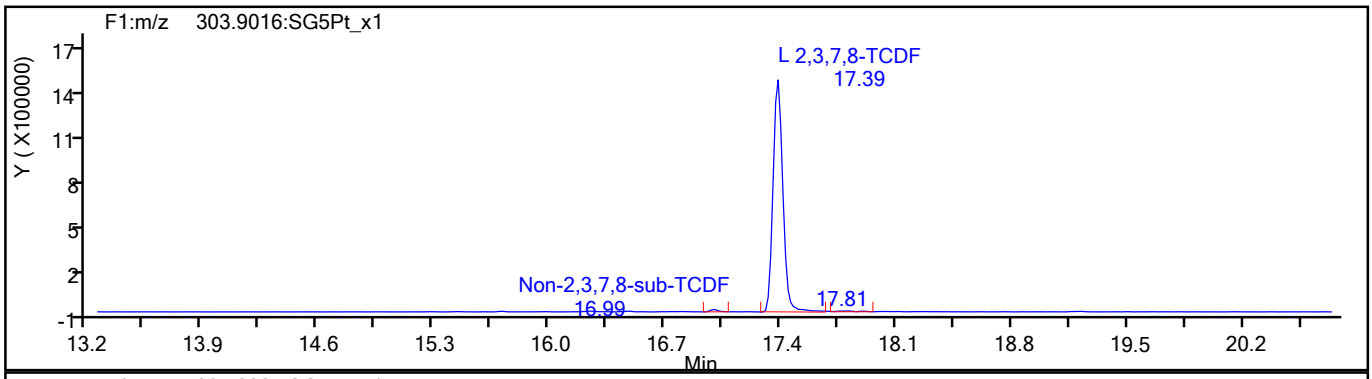

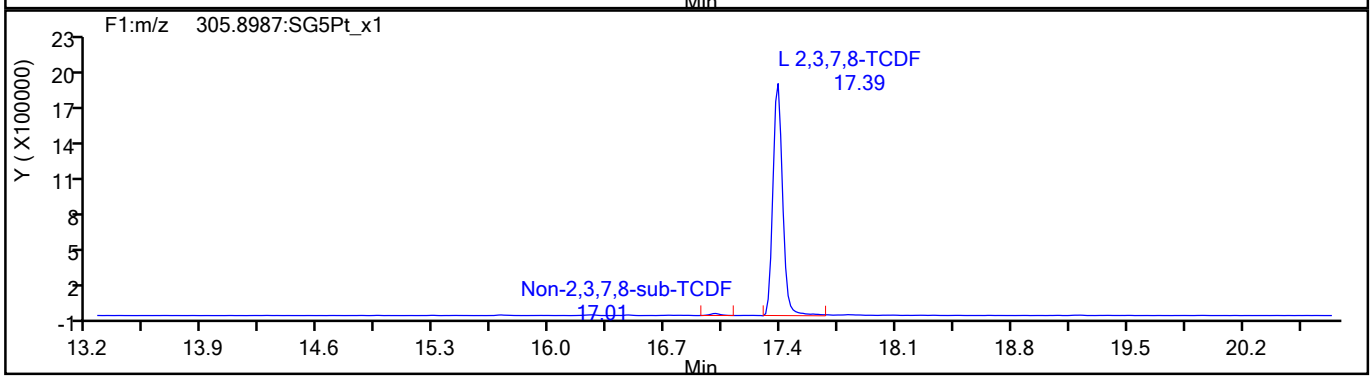

TCDF Standards

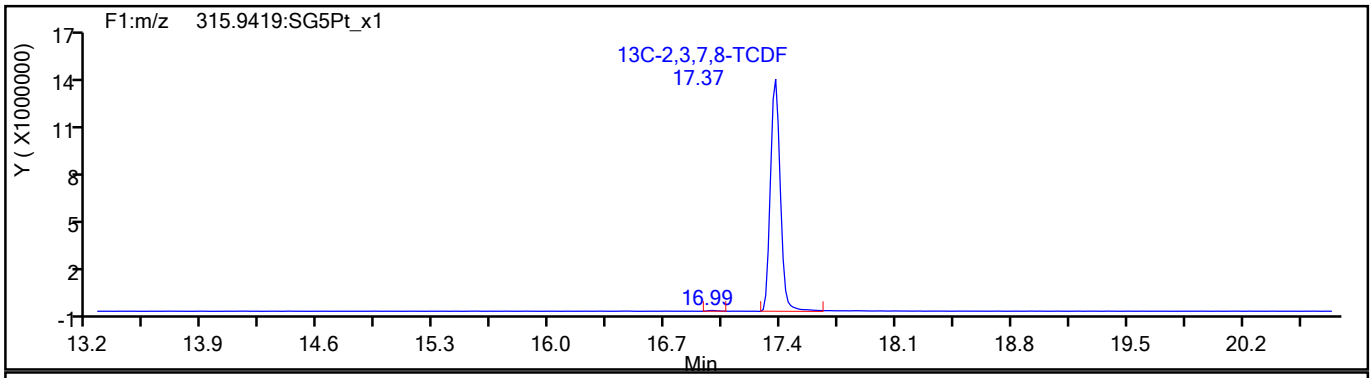

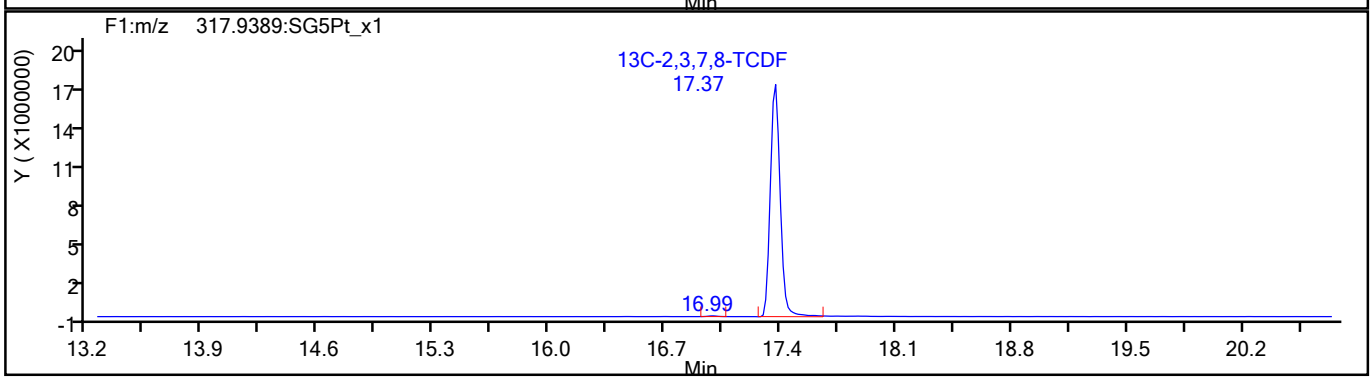

778882

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

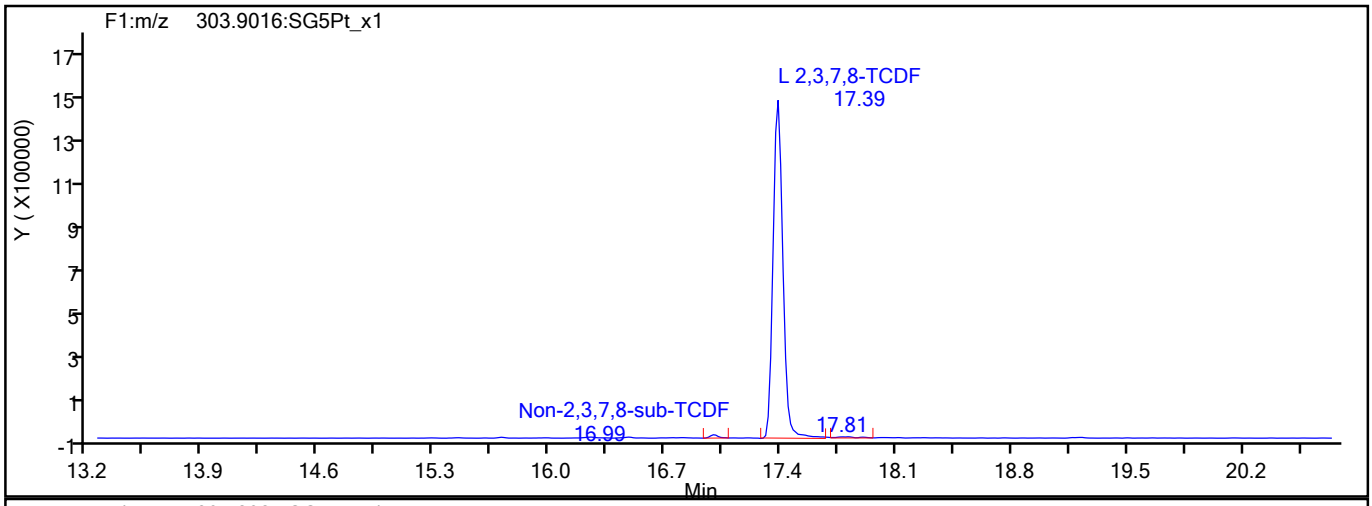

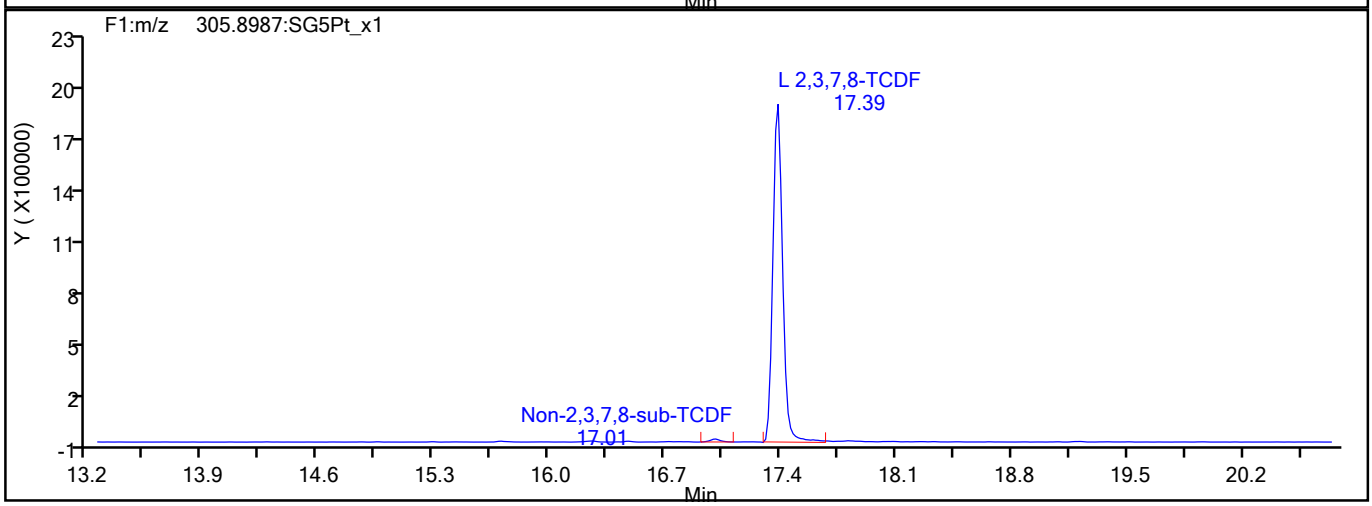

TCDF Interference Mass

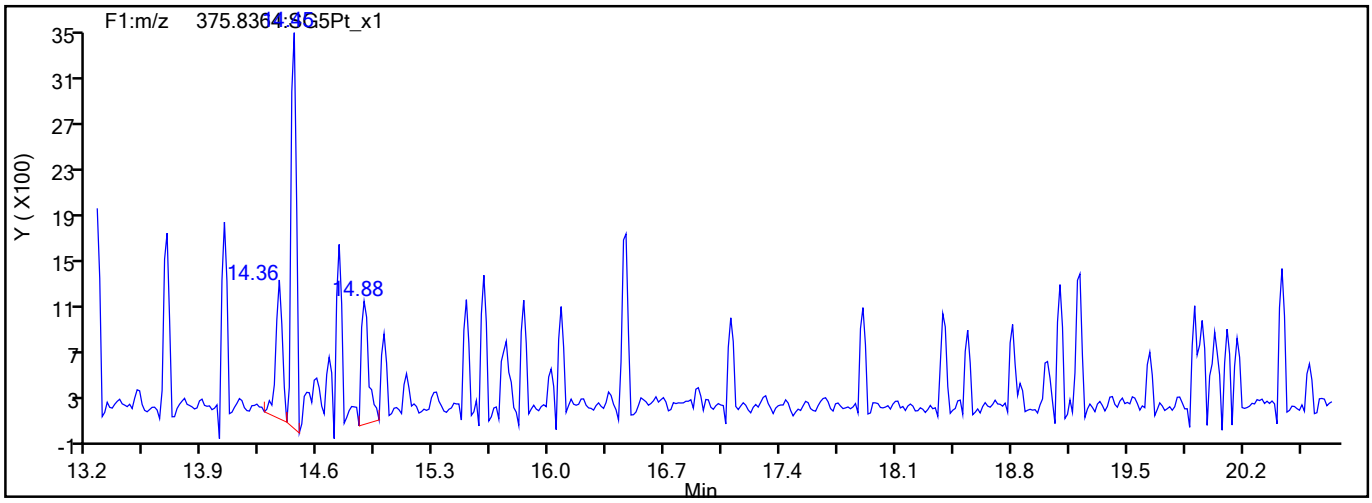

778883

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

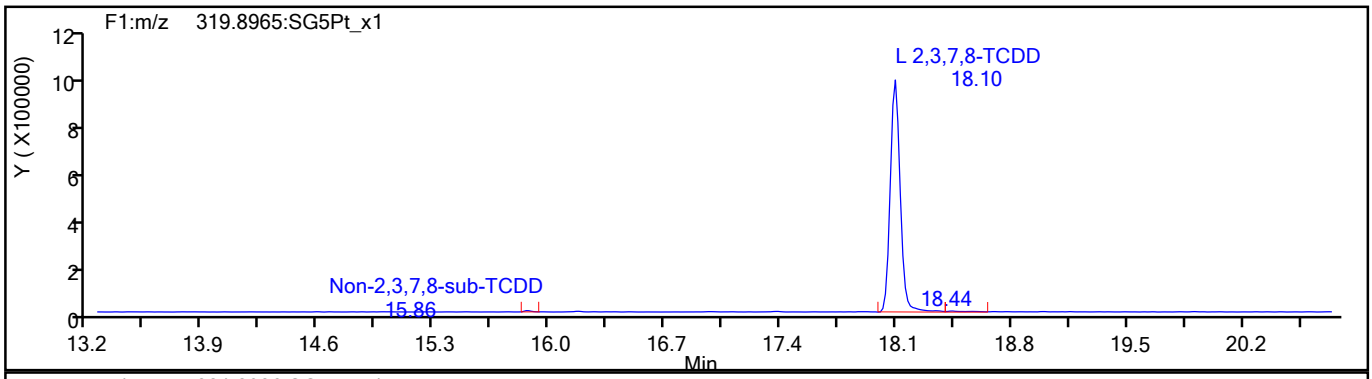

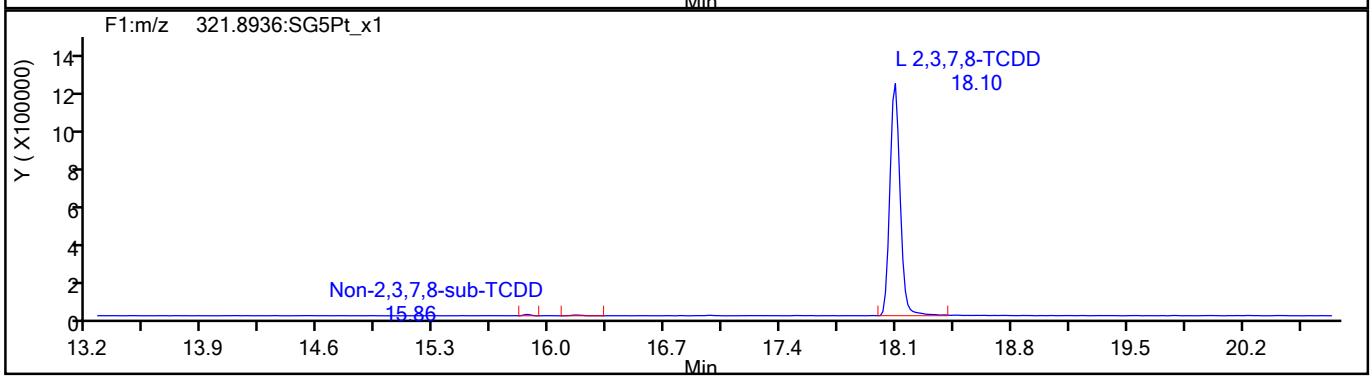

TCDD Standards

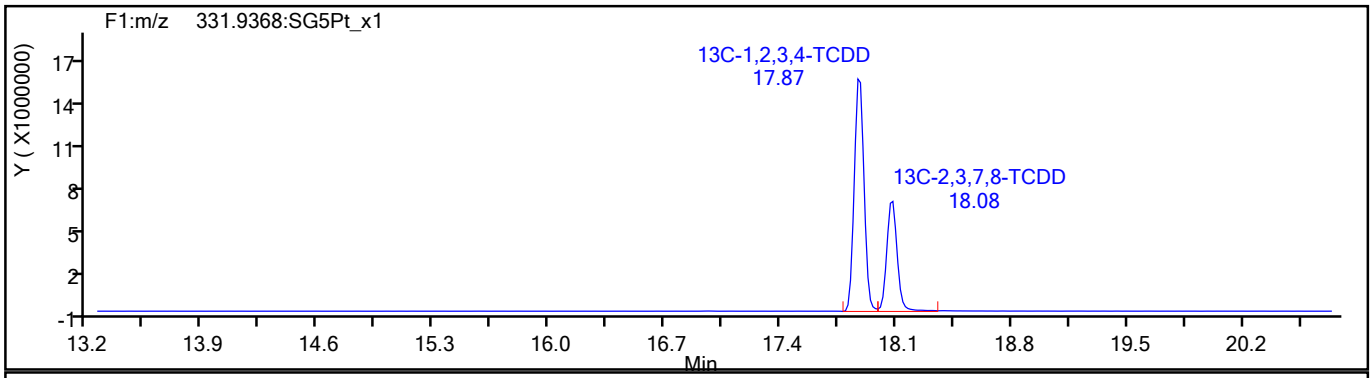

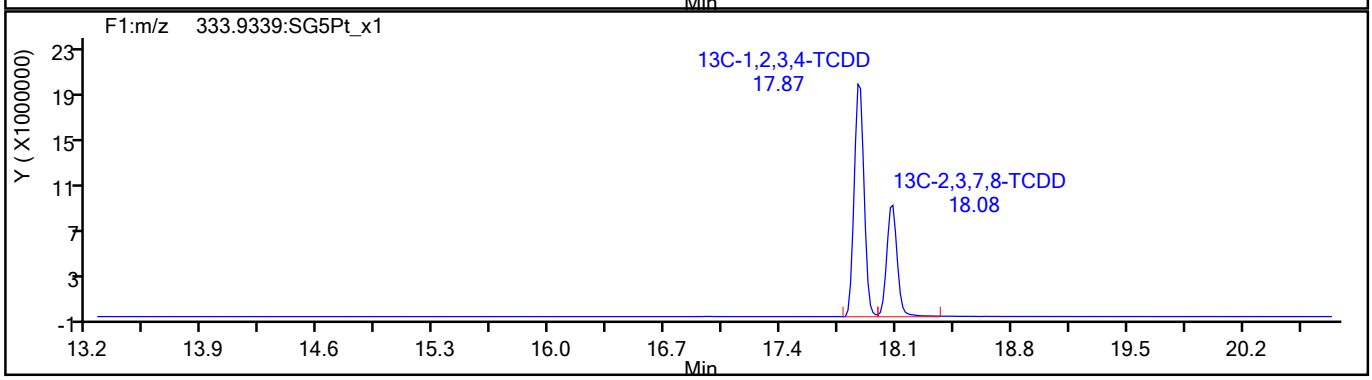

778884

Report Date: 16-Aug-2021 13:40:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

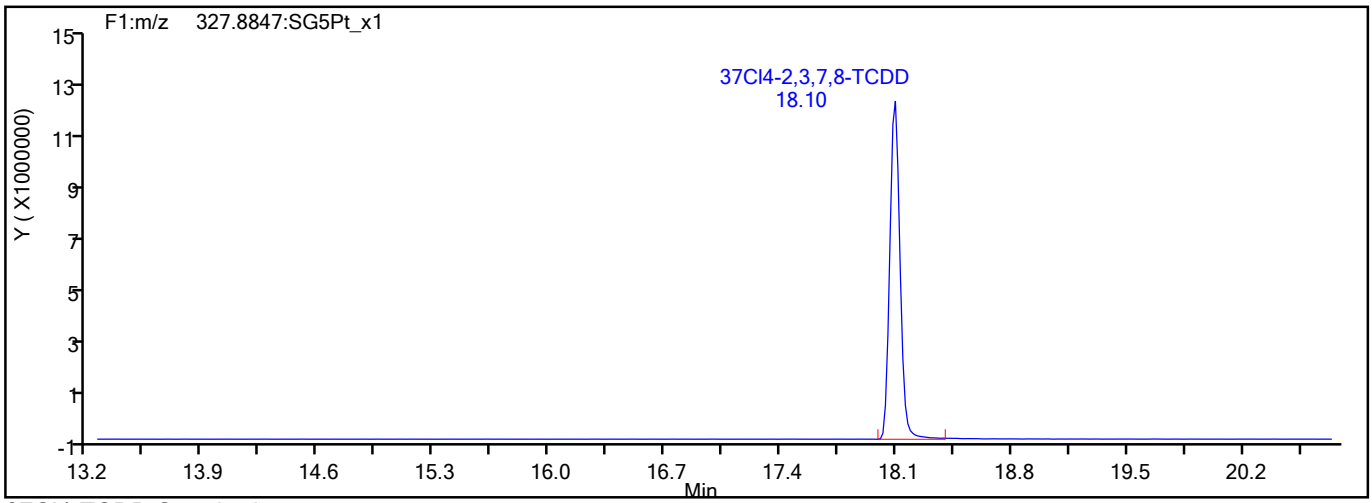

37Cl4-TCDD Standards

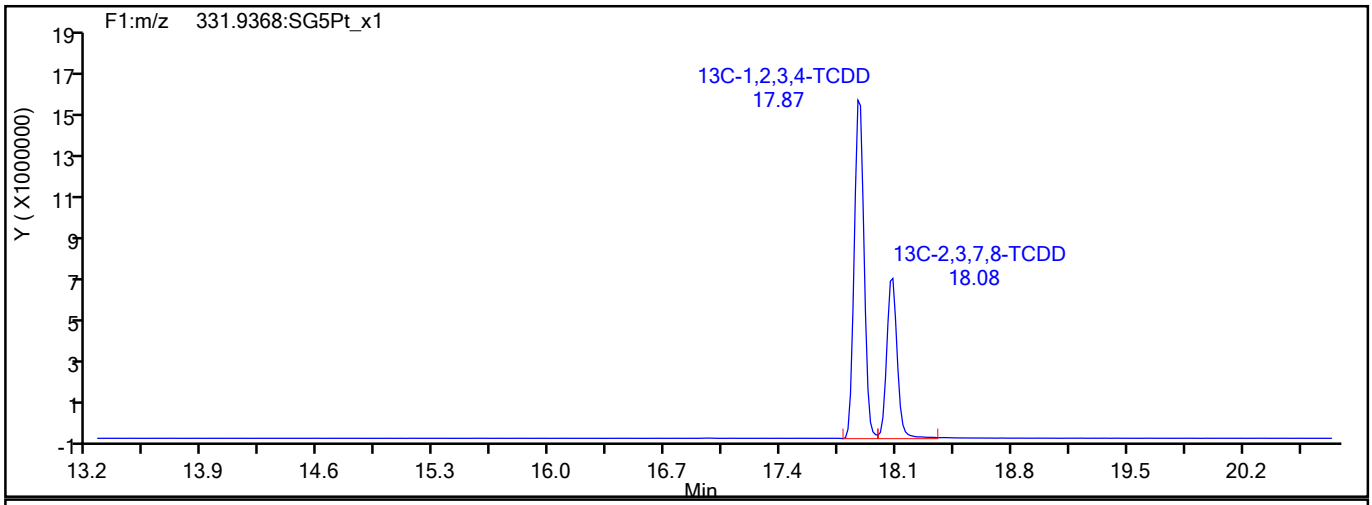

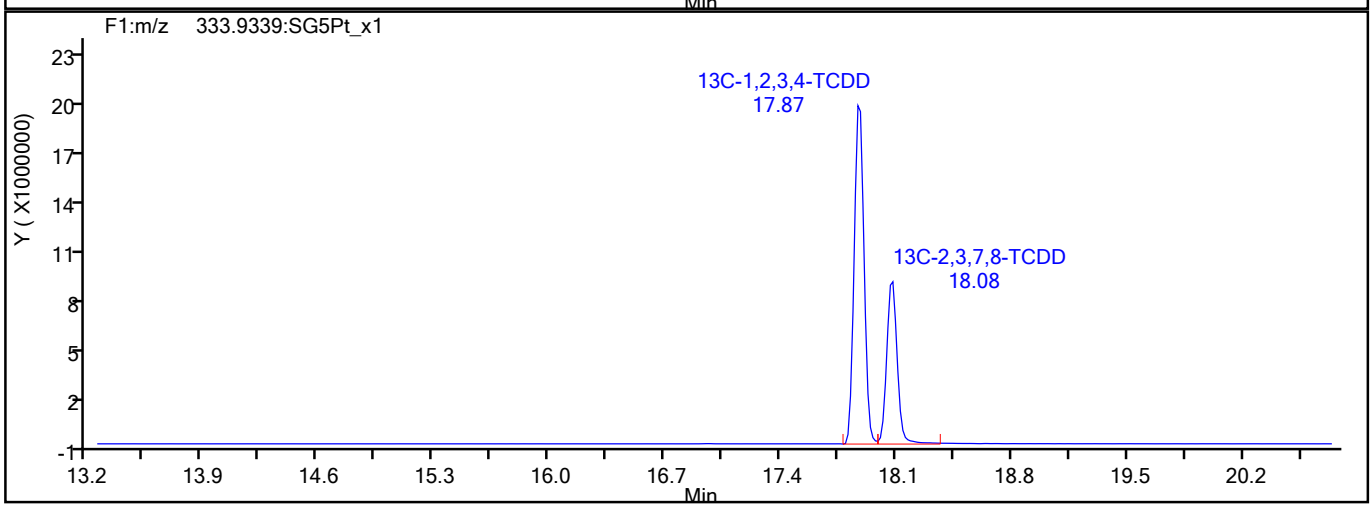

778885

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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F1 PeCDFs

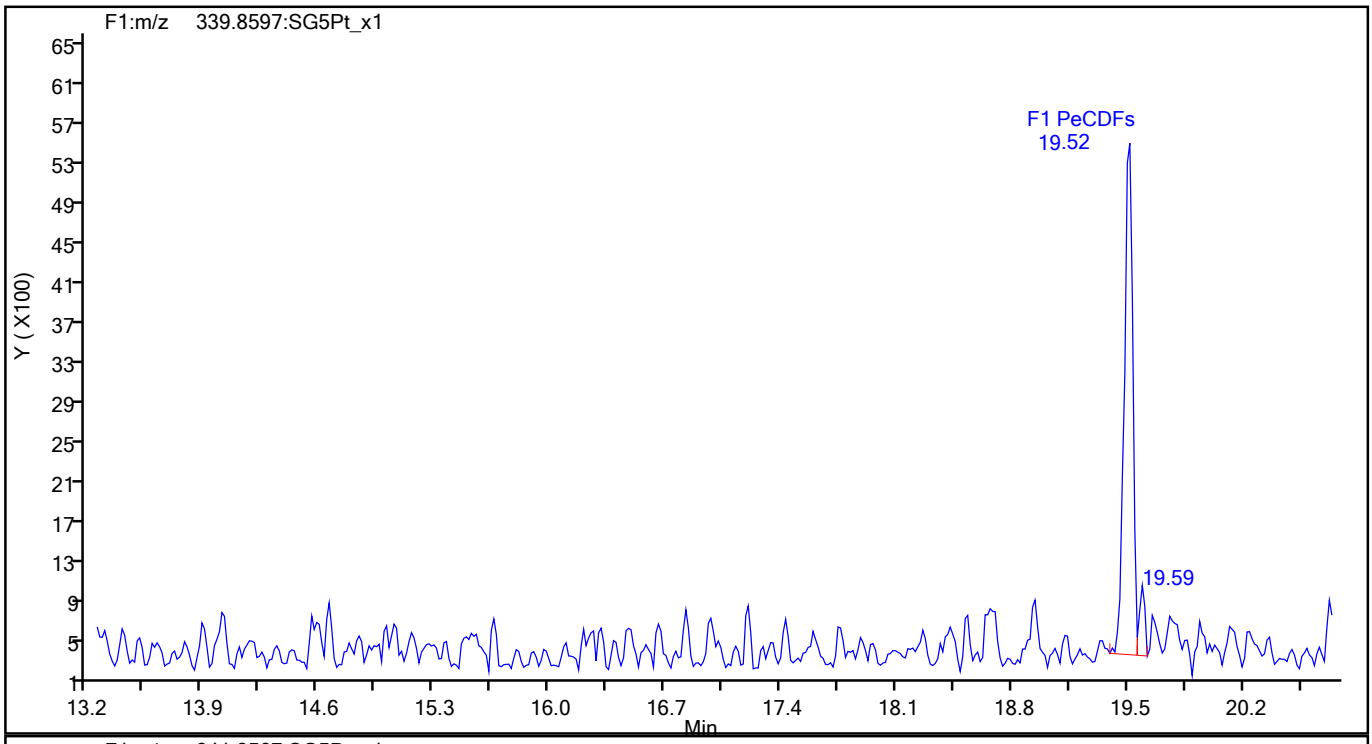

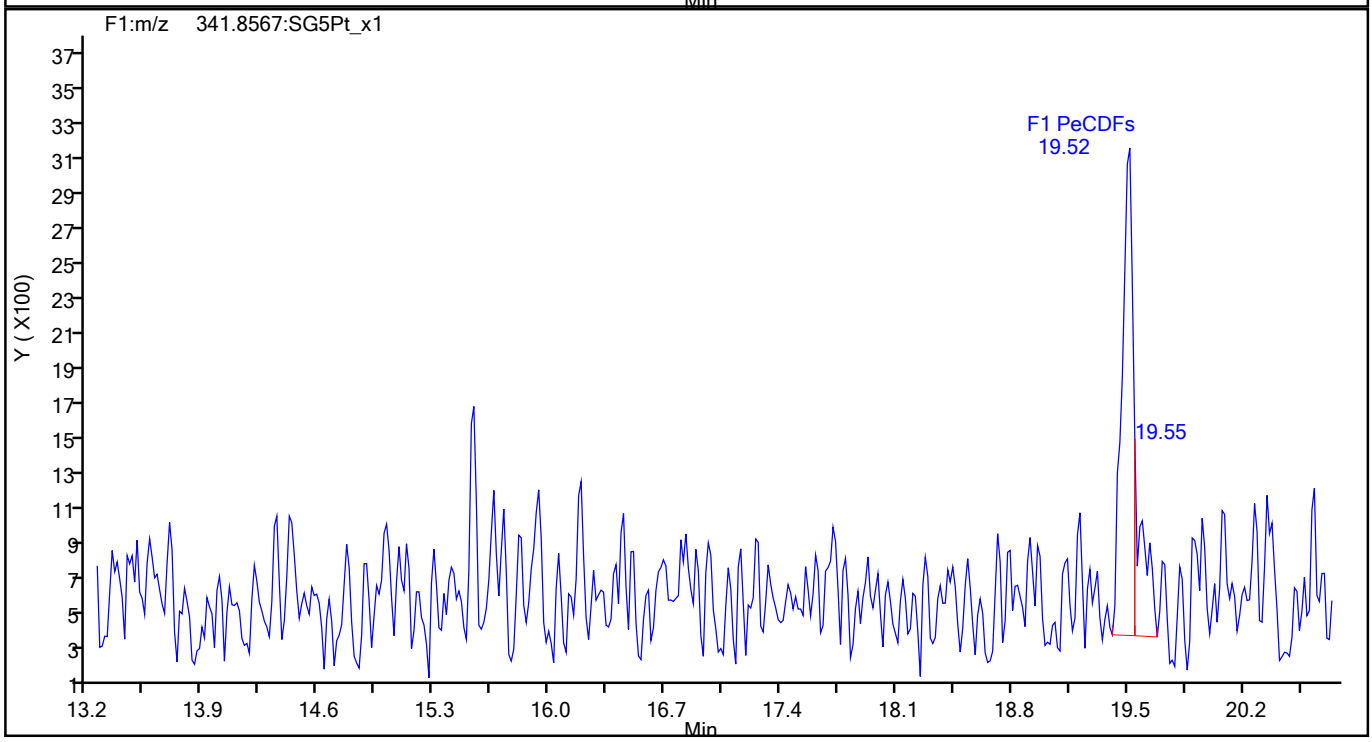

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Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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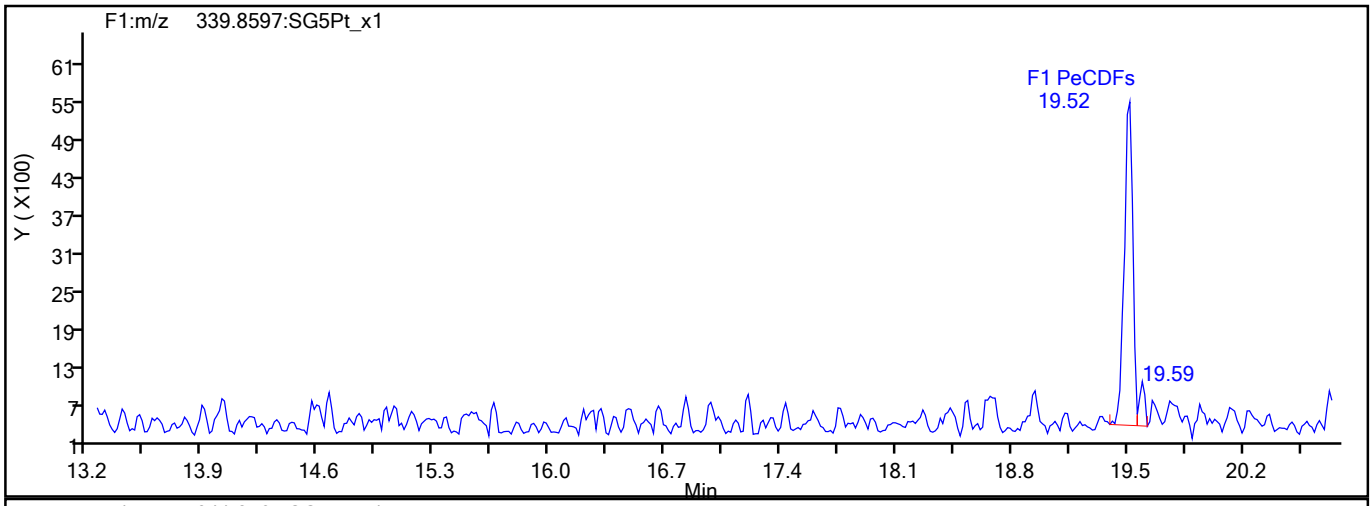

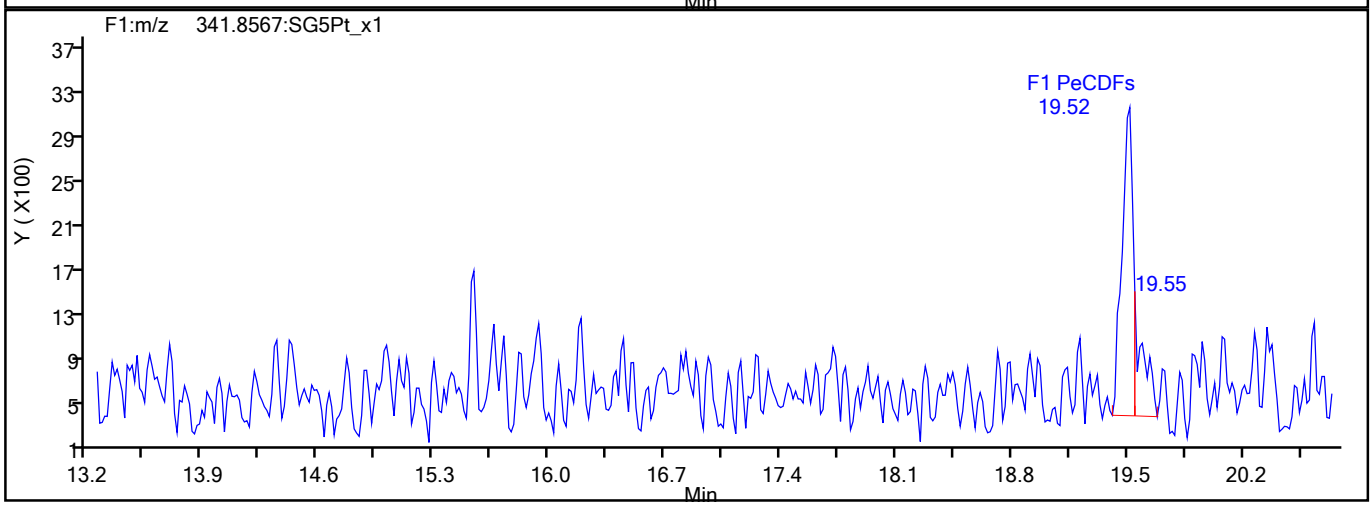

F1 PeCDFs Interference Mass

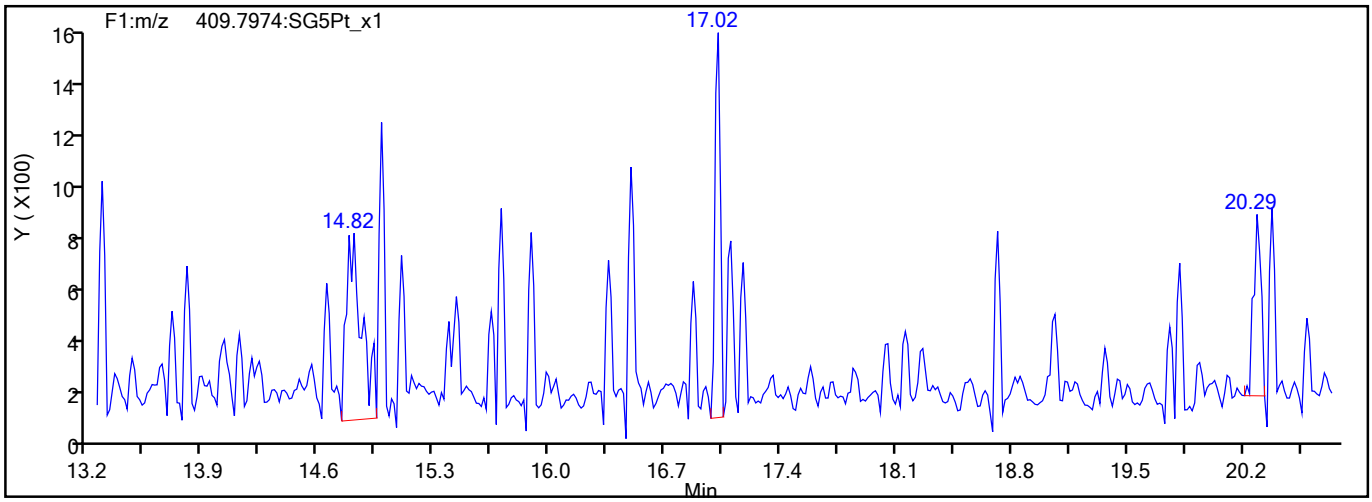

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Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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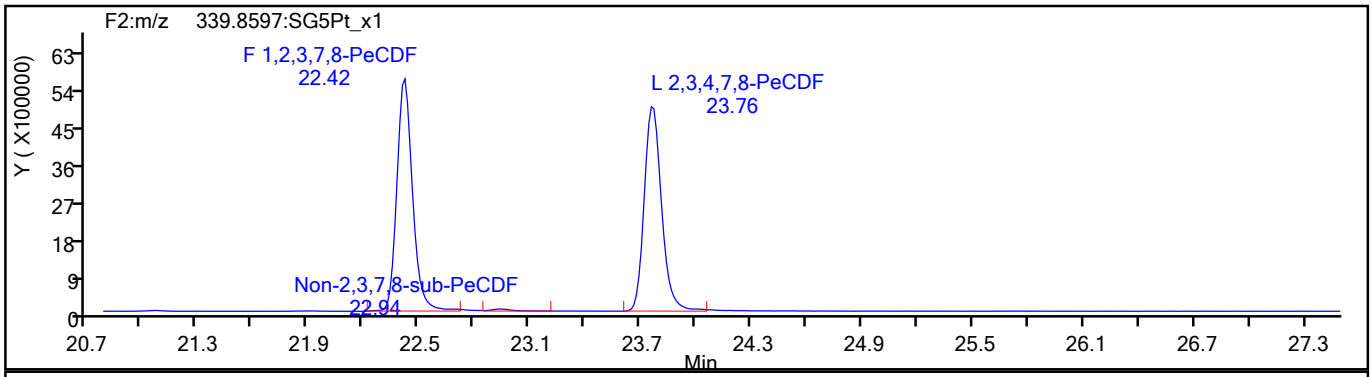

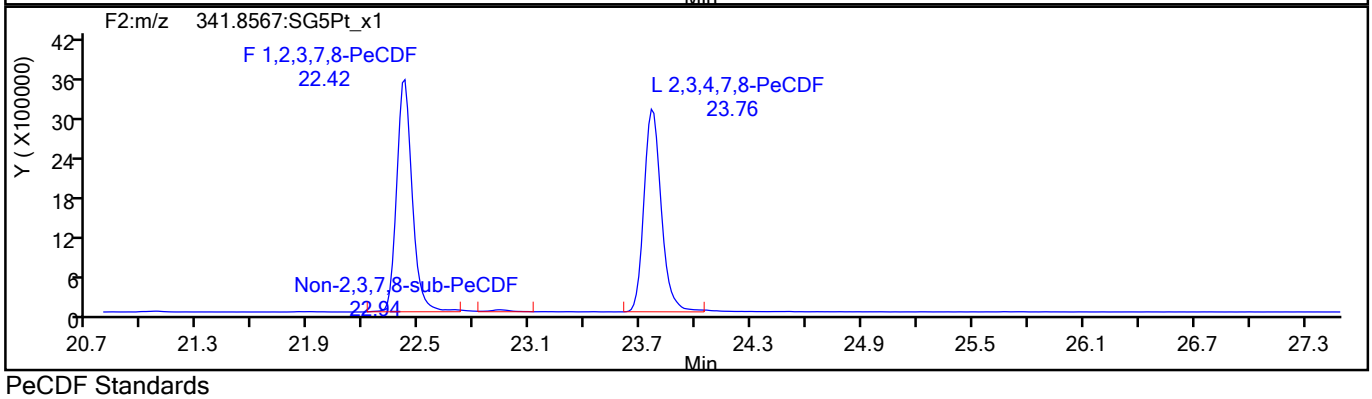

PeCDF Standards

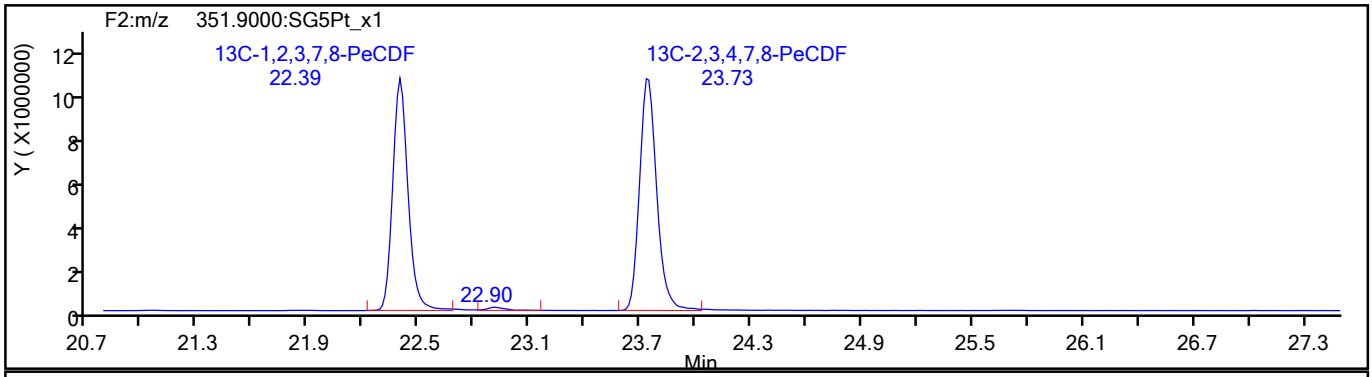

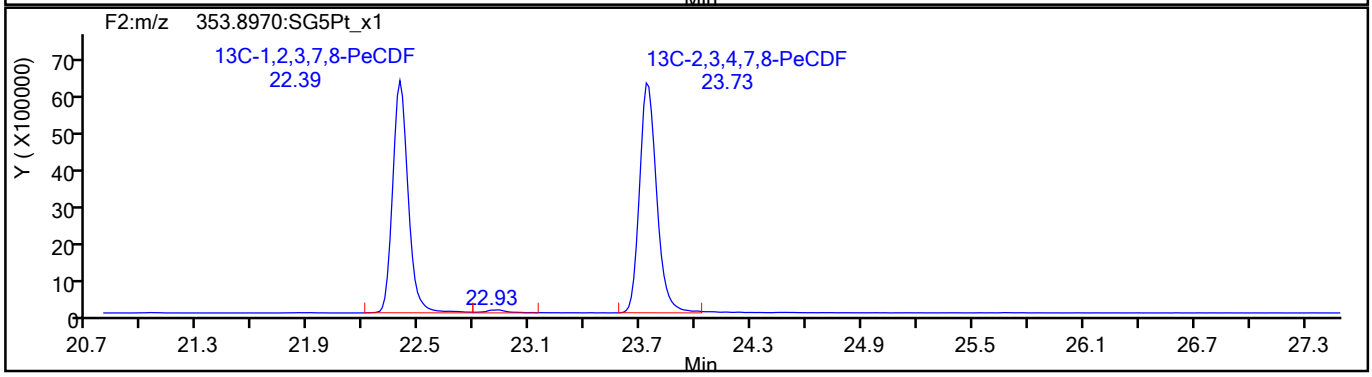

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Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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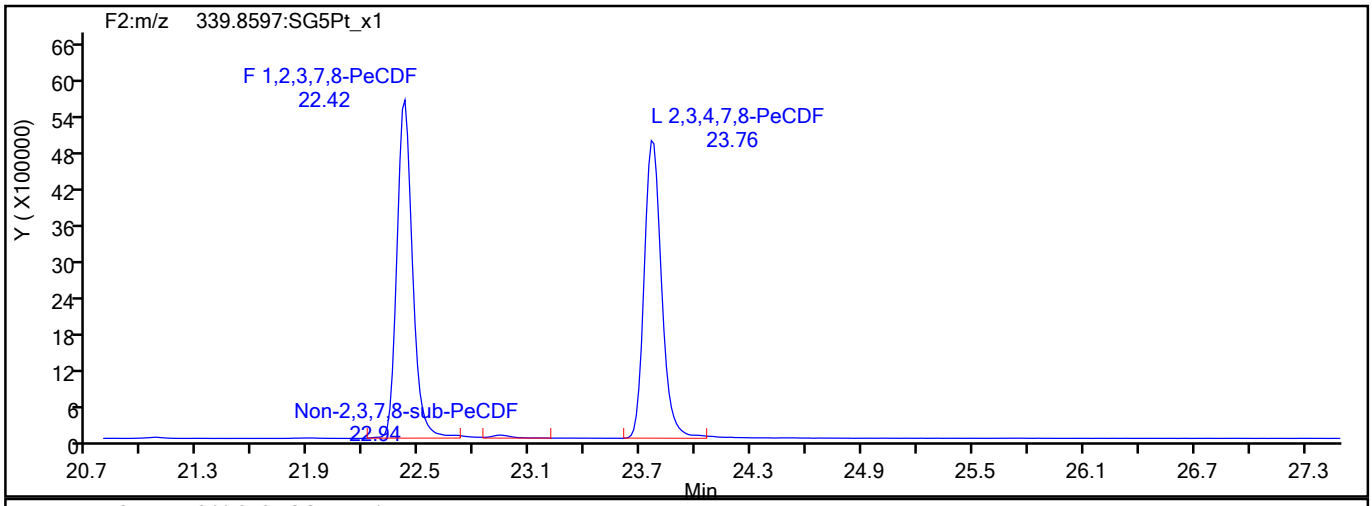

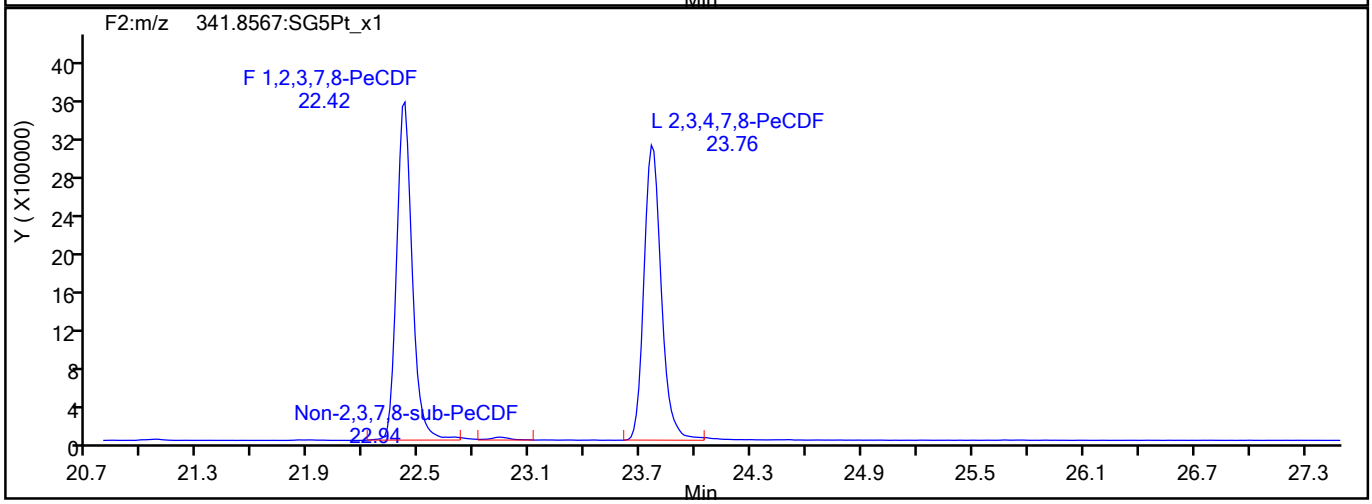

PeCDF Interference Mass

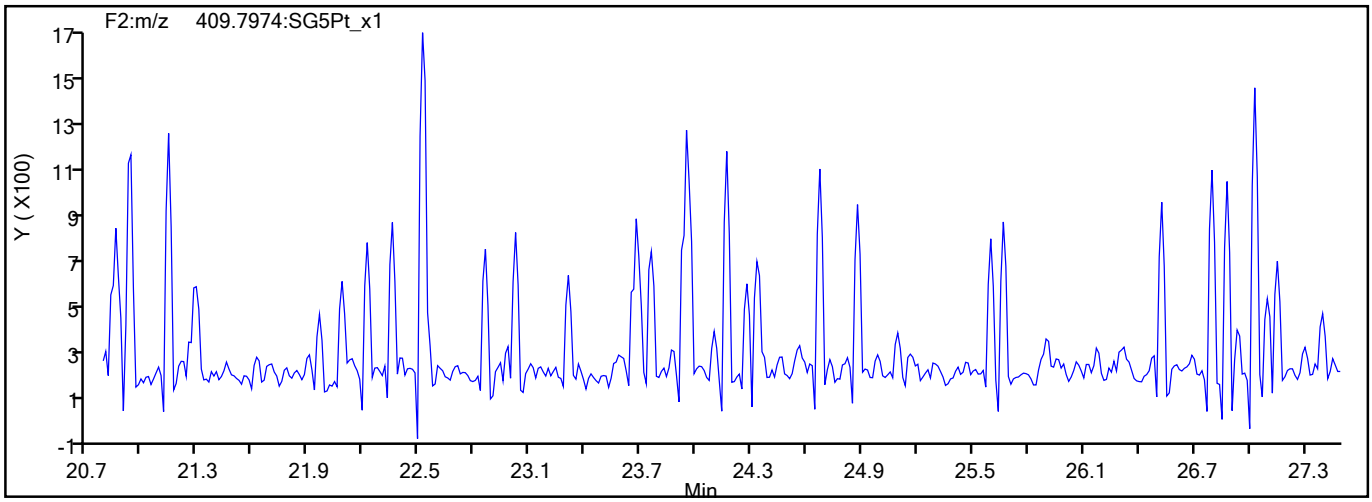

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Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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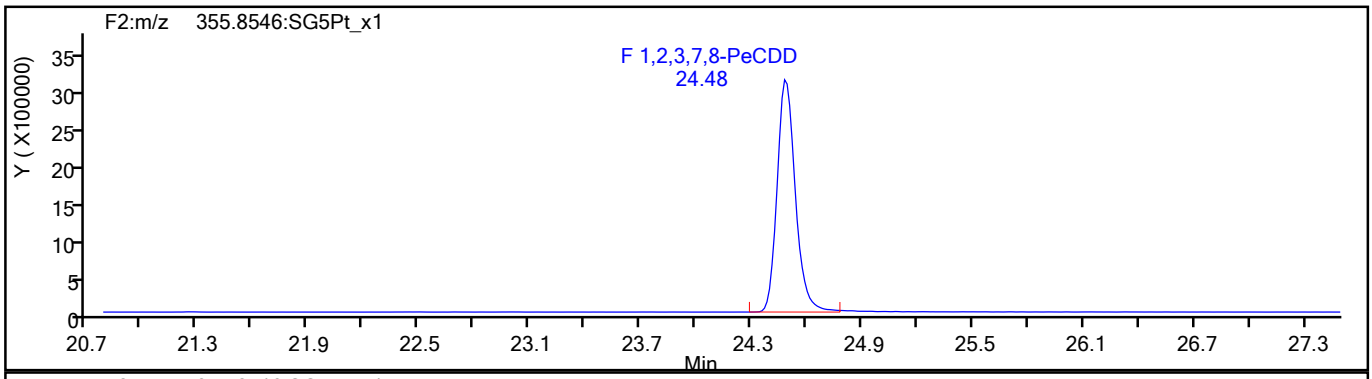

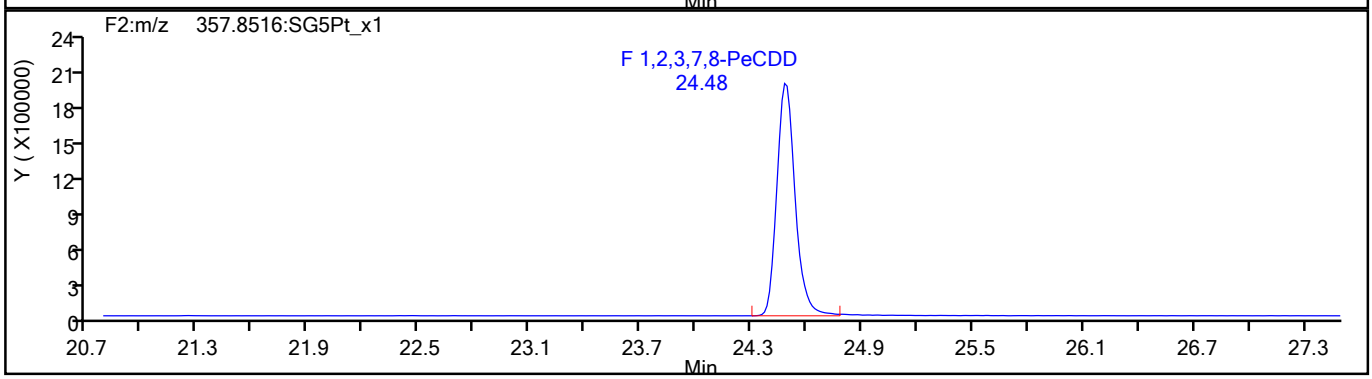

PeCDD Standards

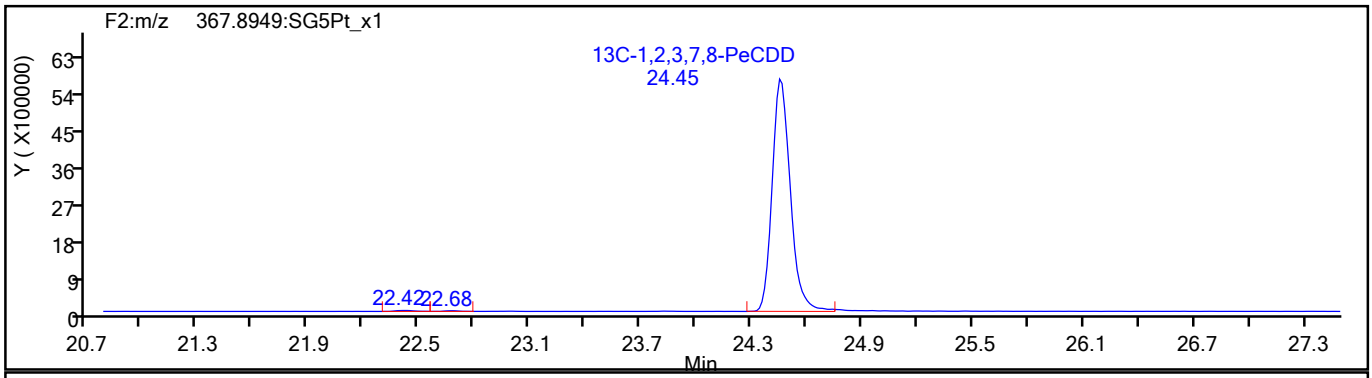

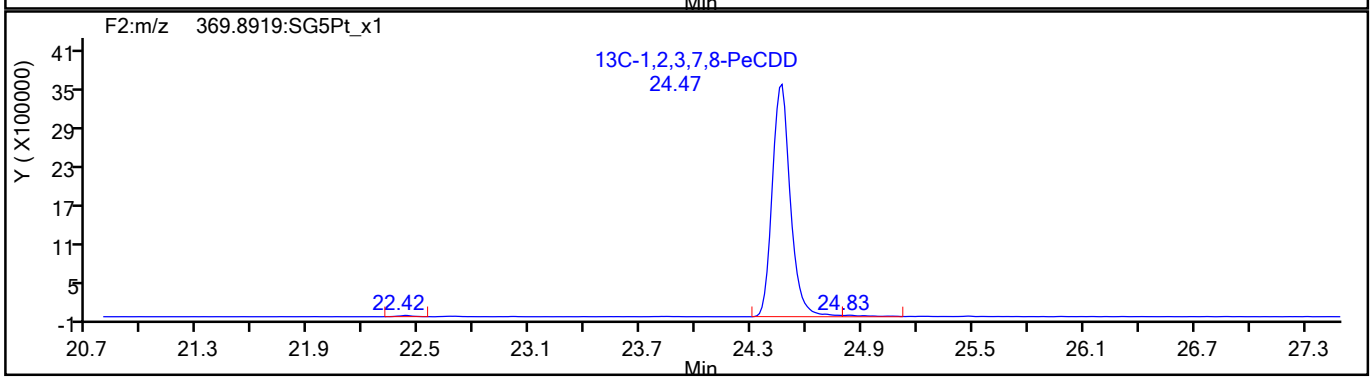

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Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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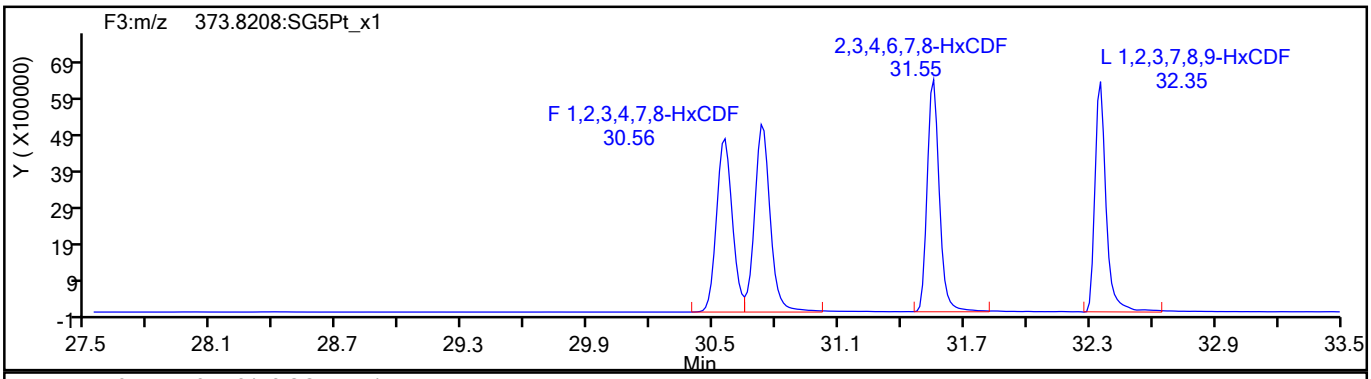

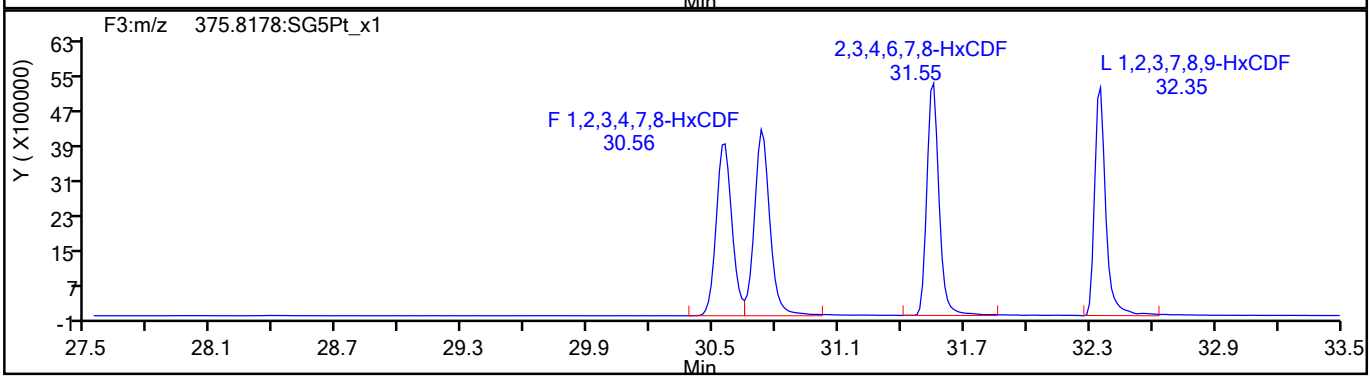

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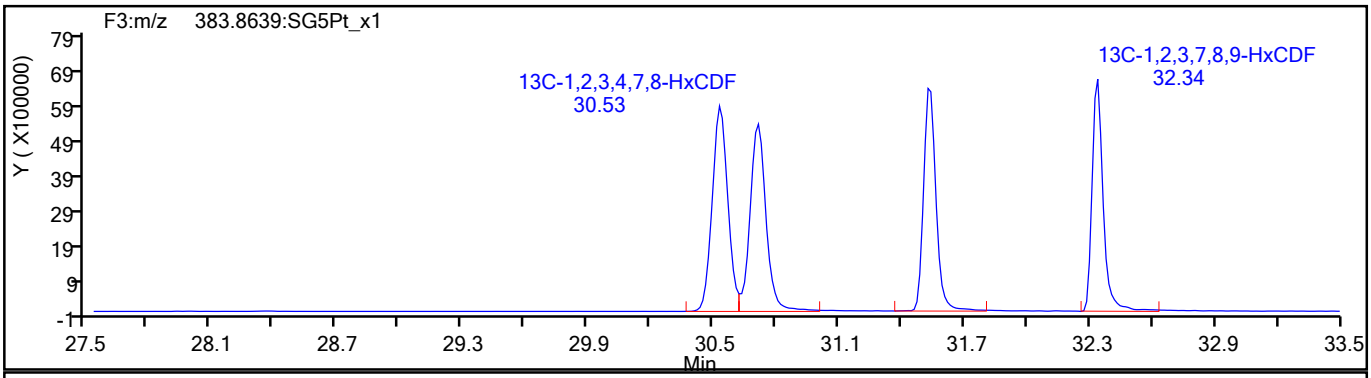

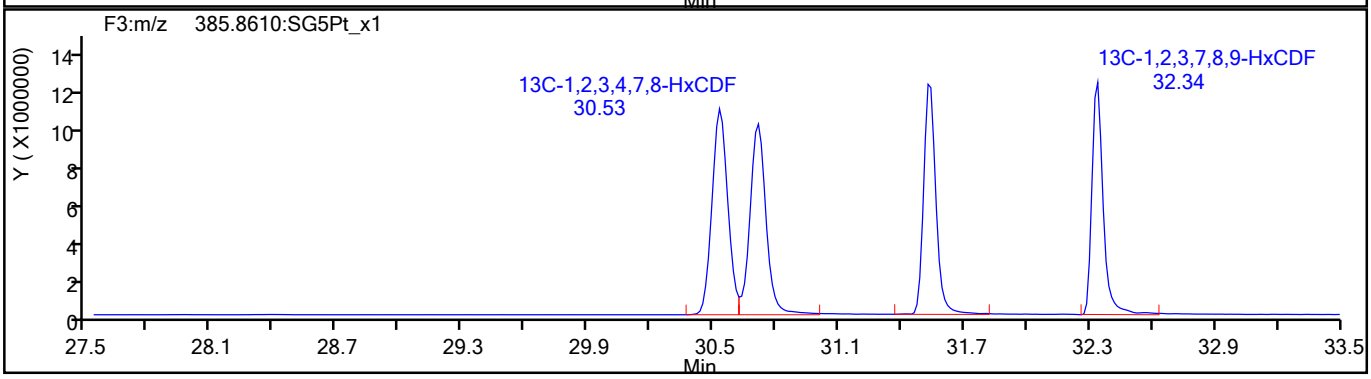

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Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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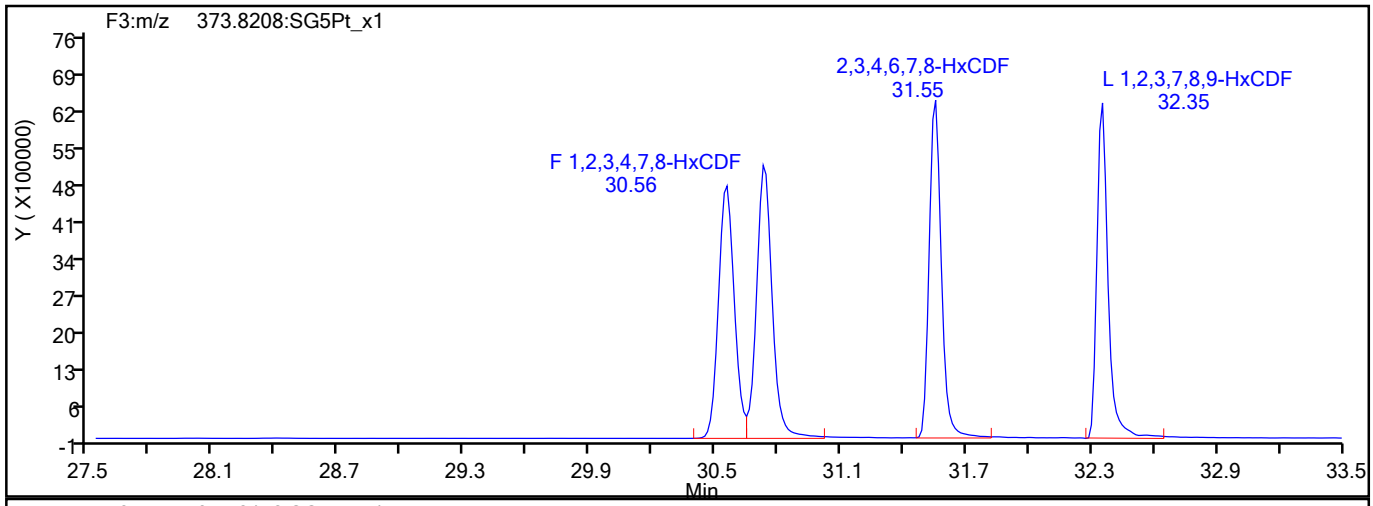

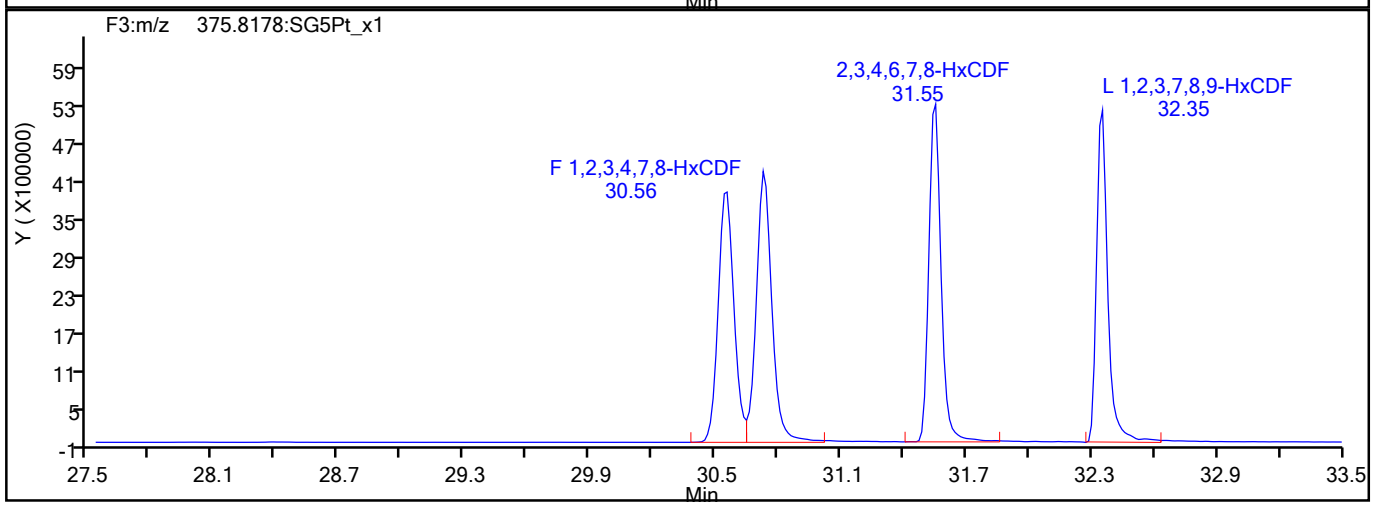

HxCDF Interference Mass

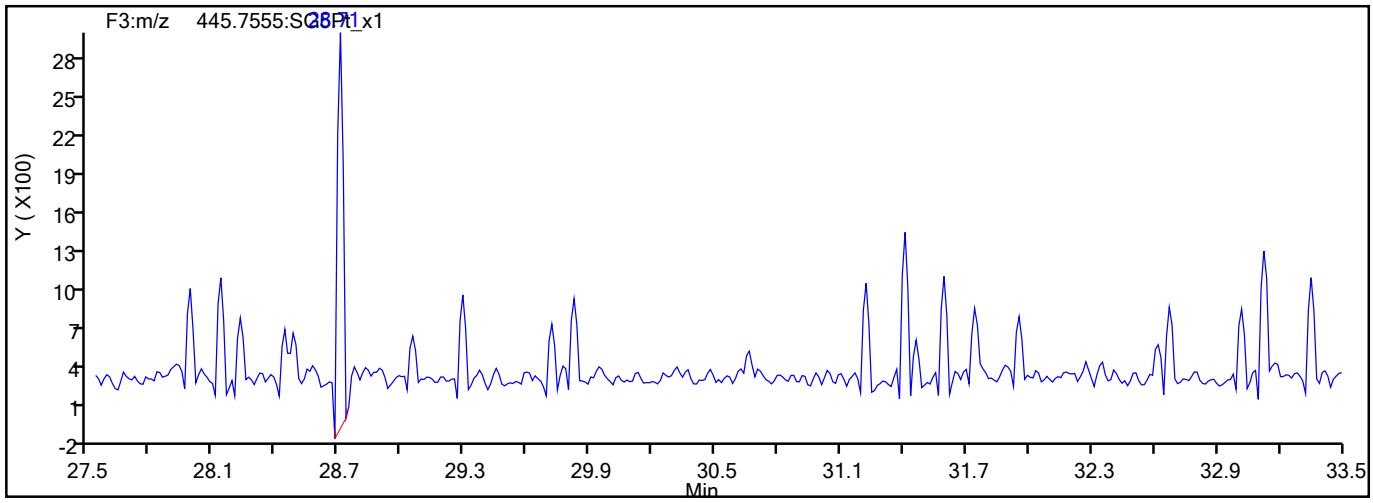

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Eurofins TestAmerica, Sacramento

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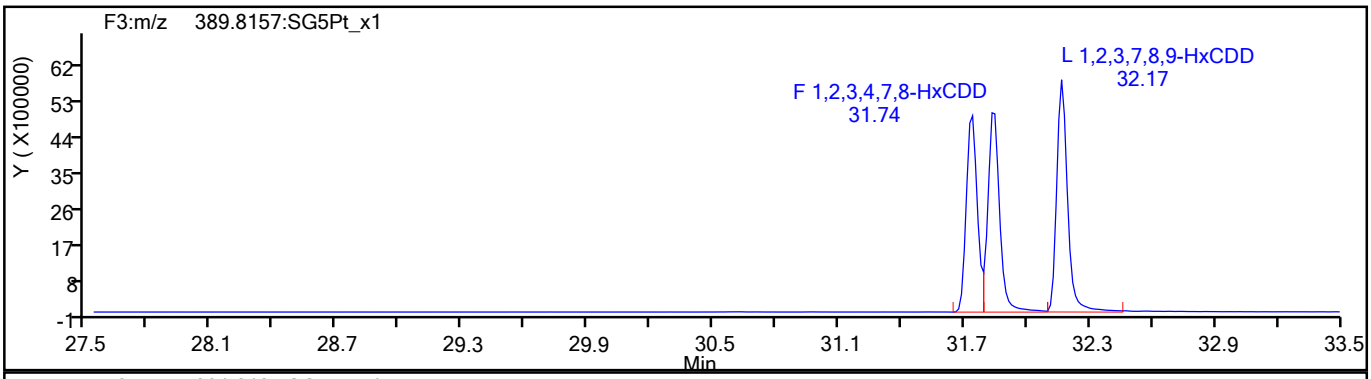

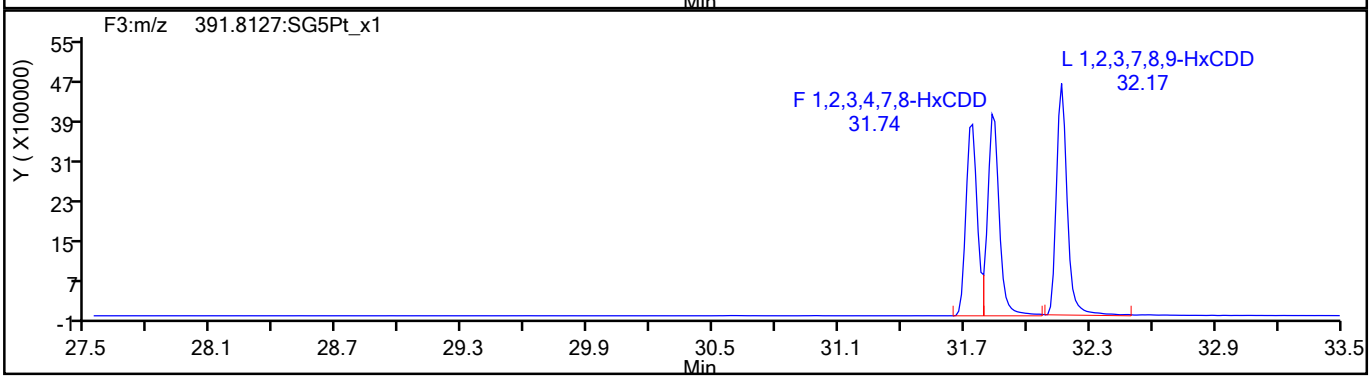

HxCDD Standards

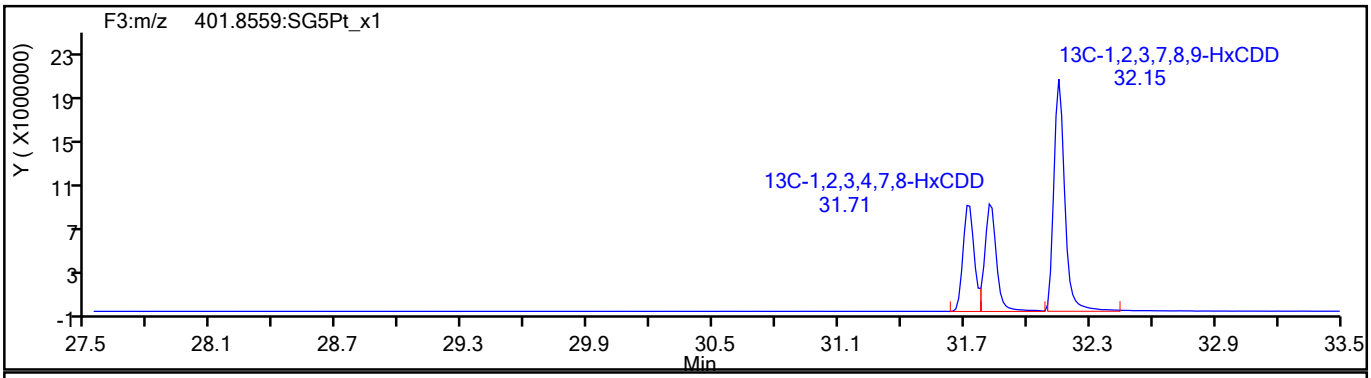

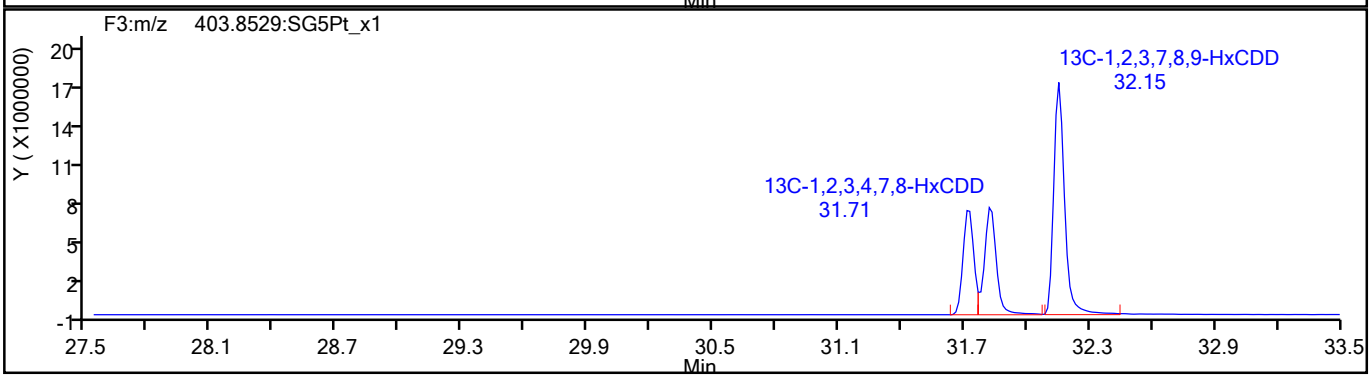

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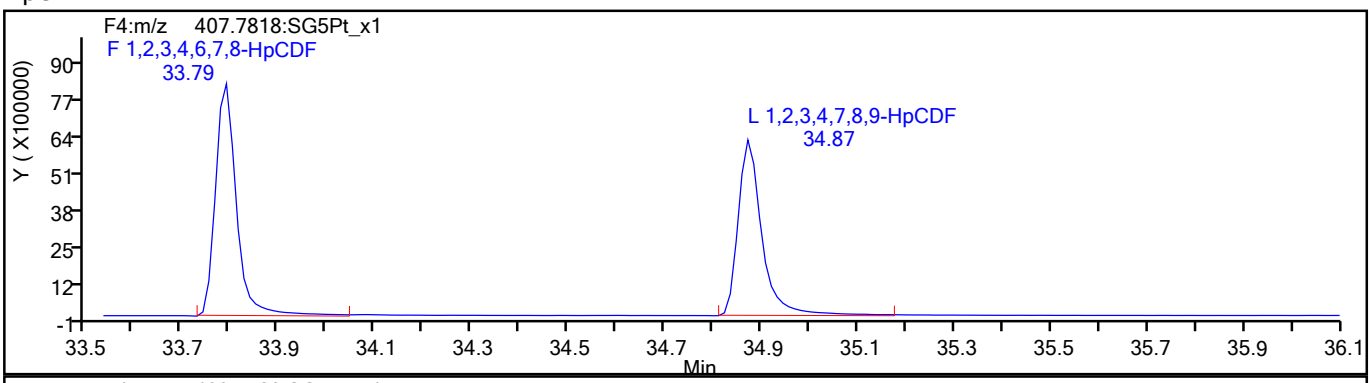

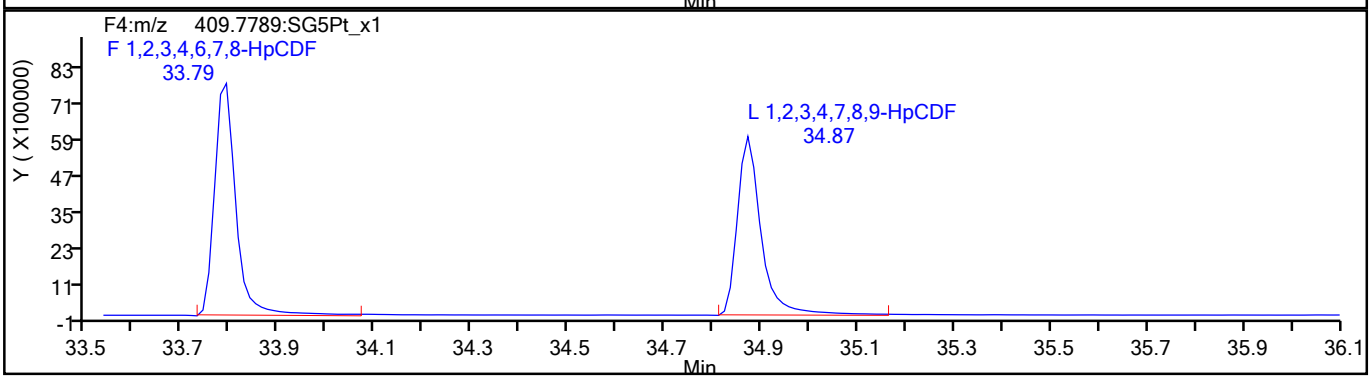

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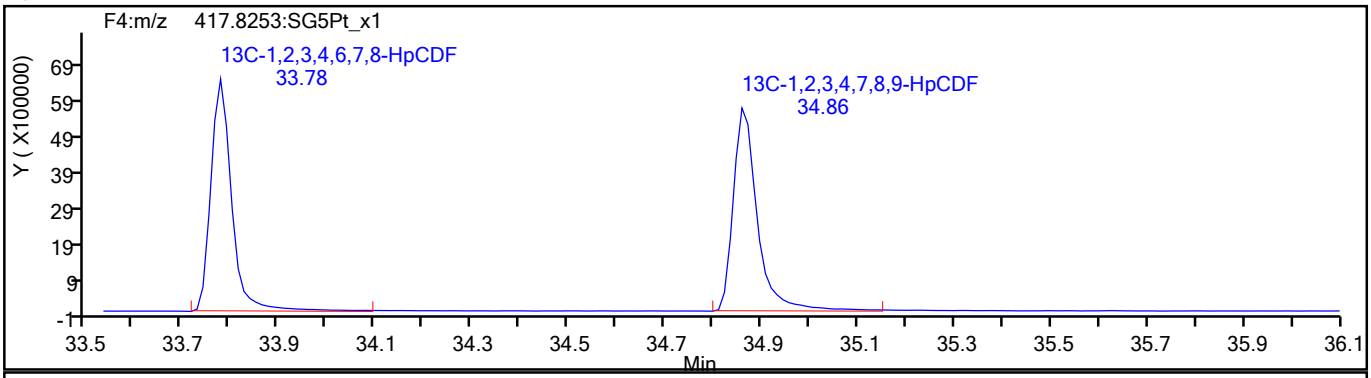

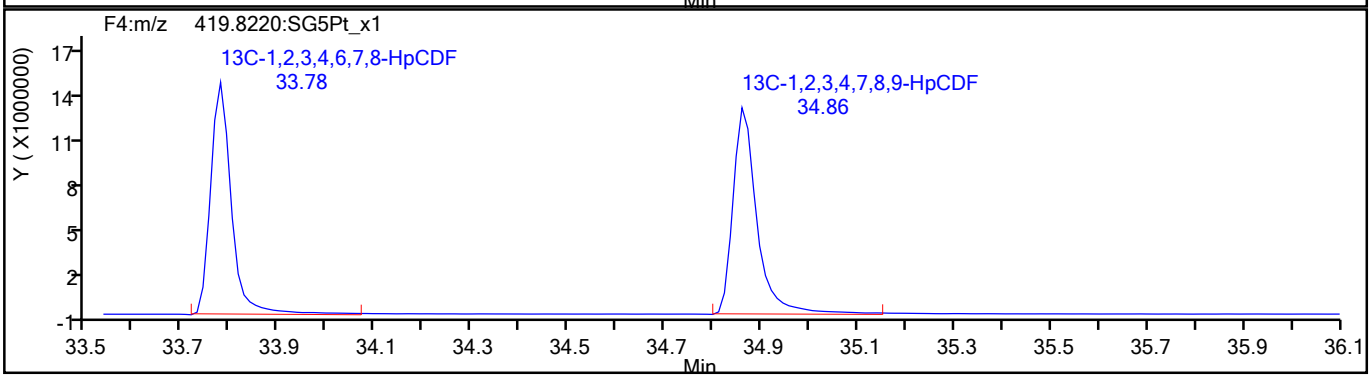

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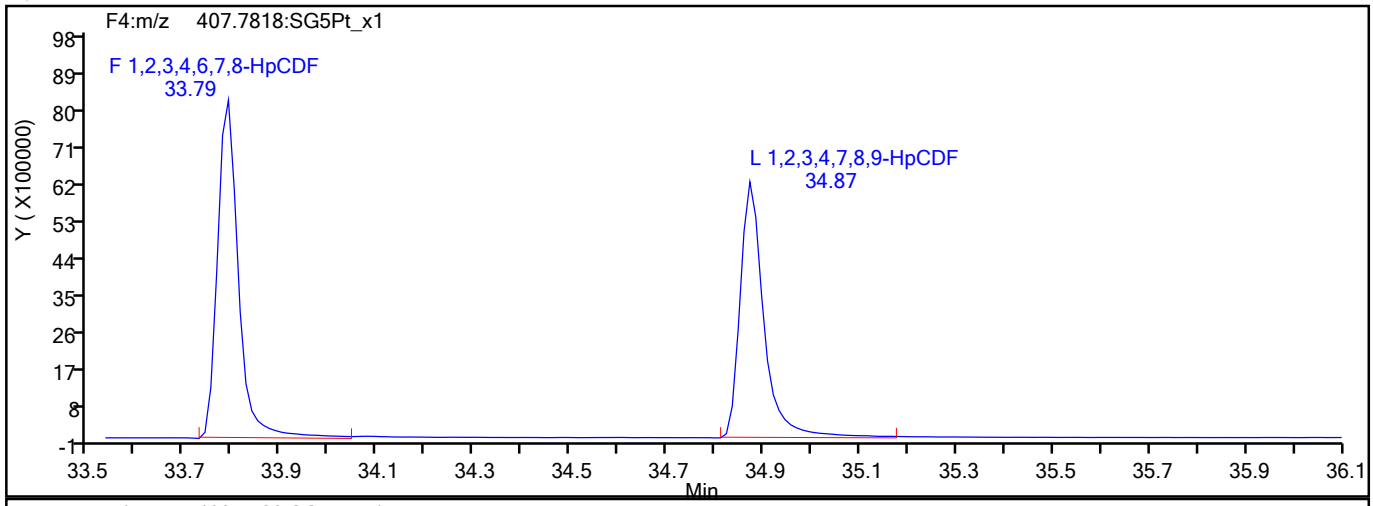

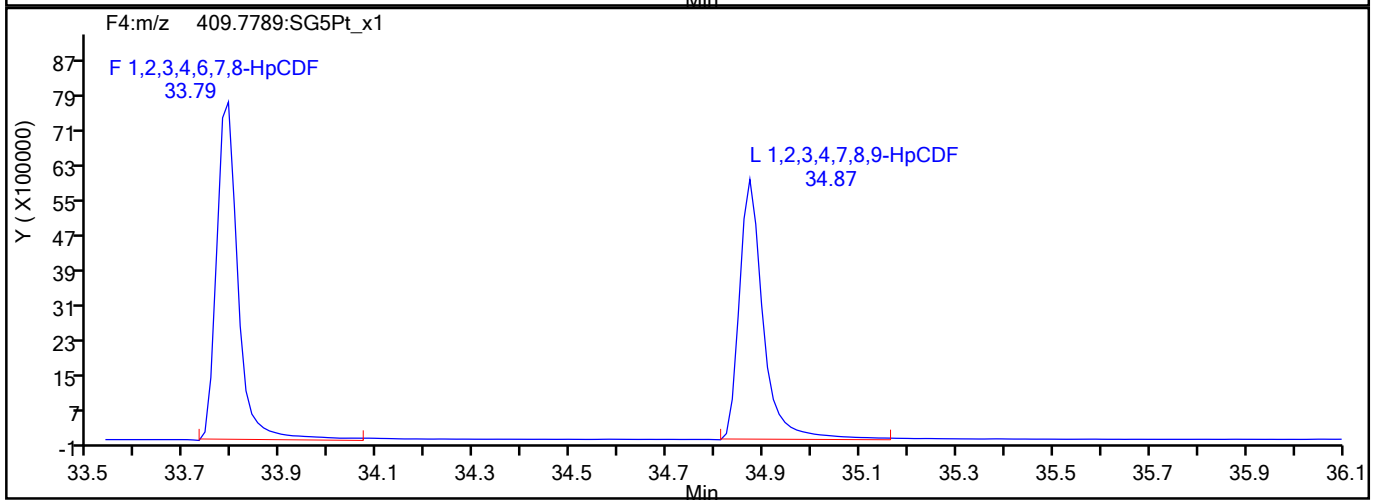

HpCDF Interference Mass

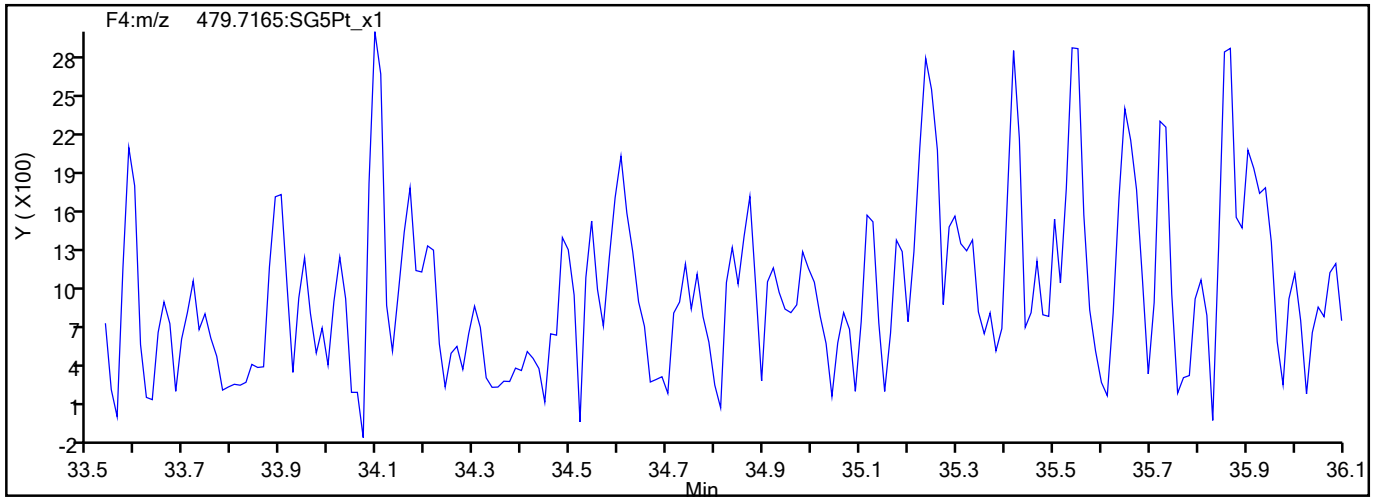

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Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

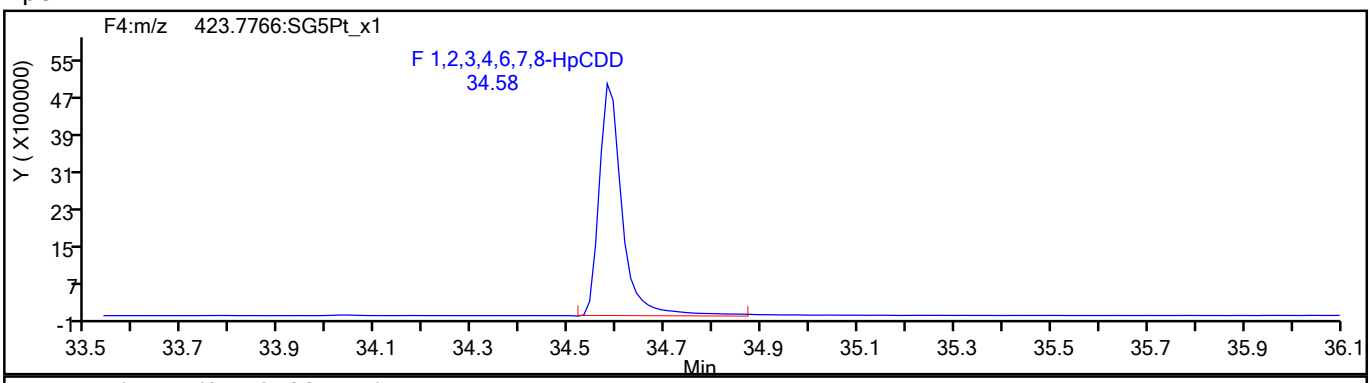

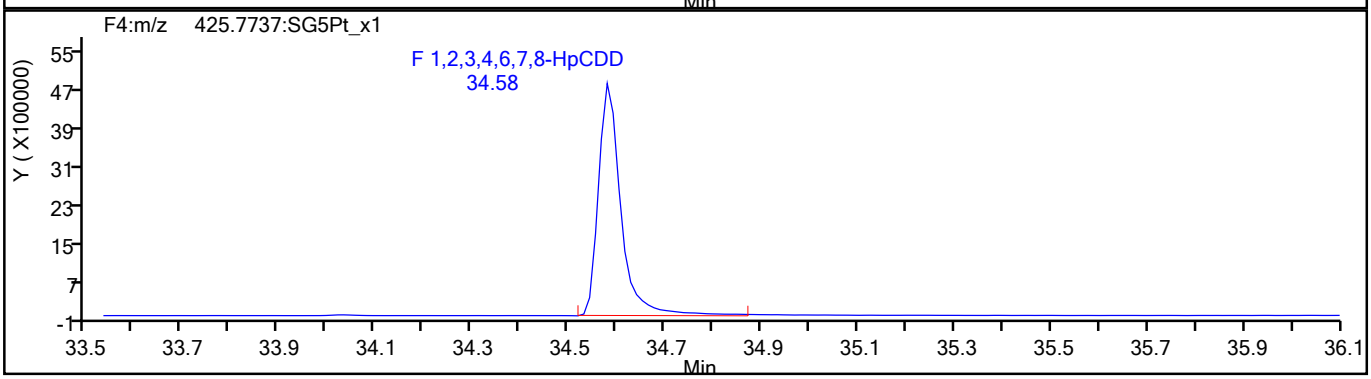

HpCDD Standards

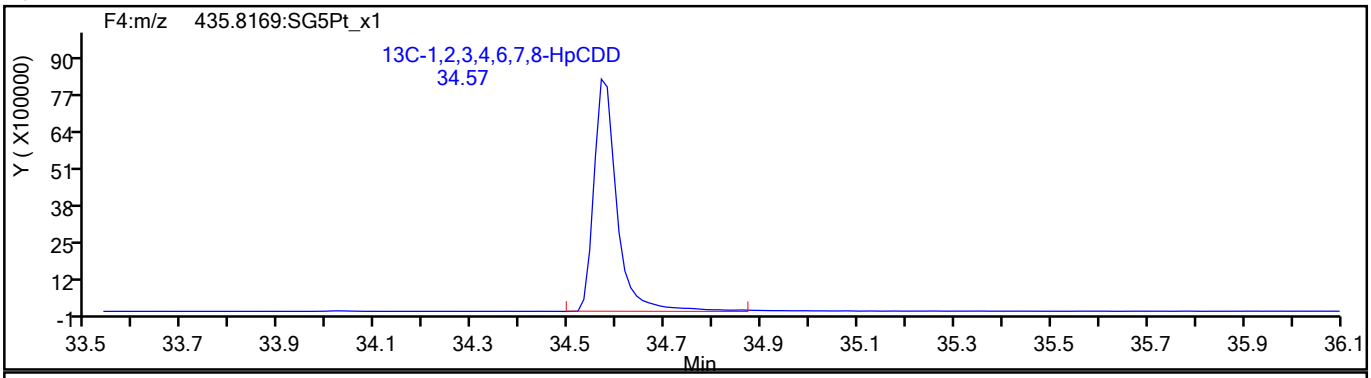

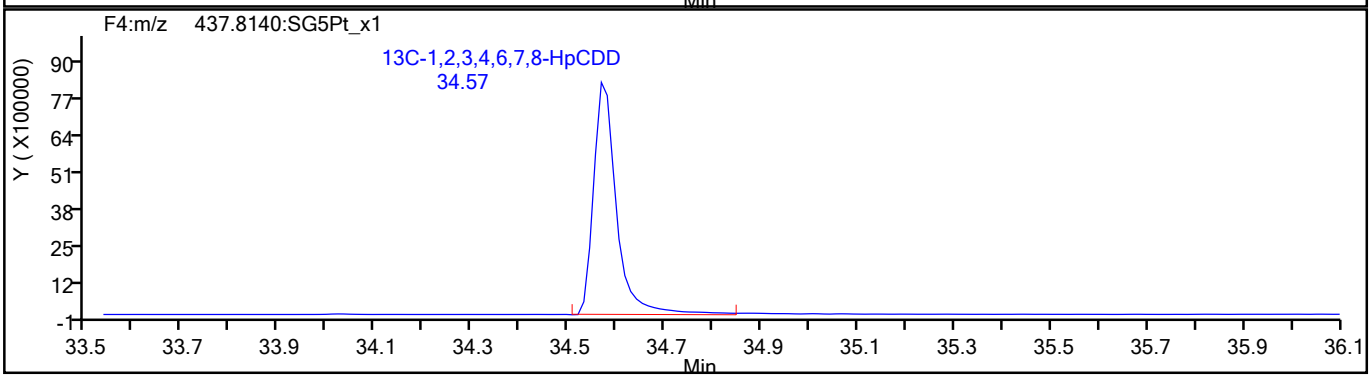

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Eurofins TestAmerica, Sacramento

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Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

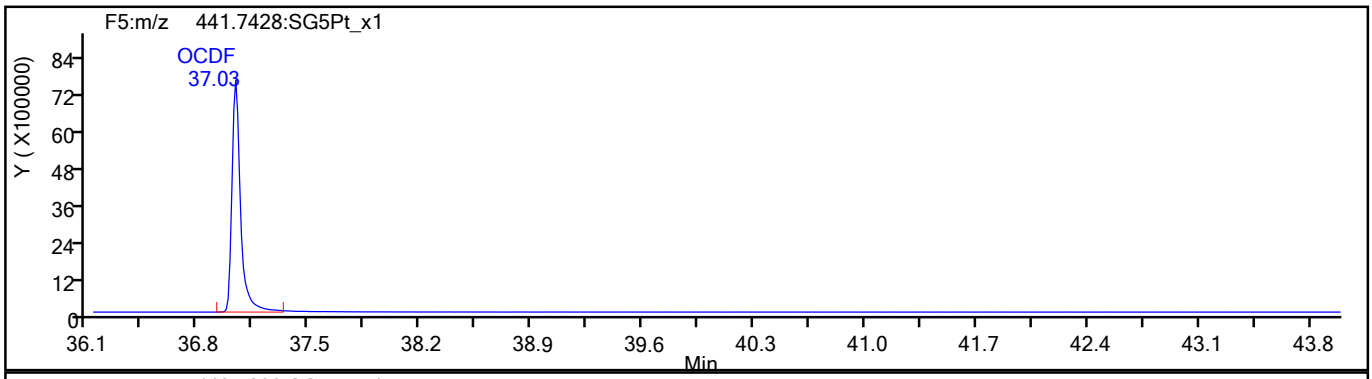

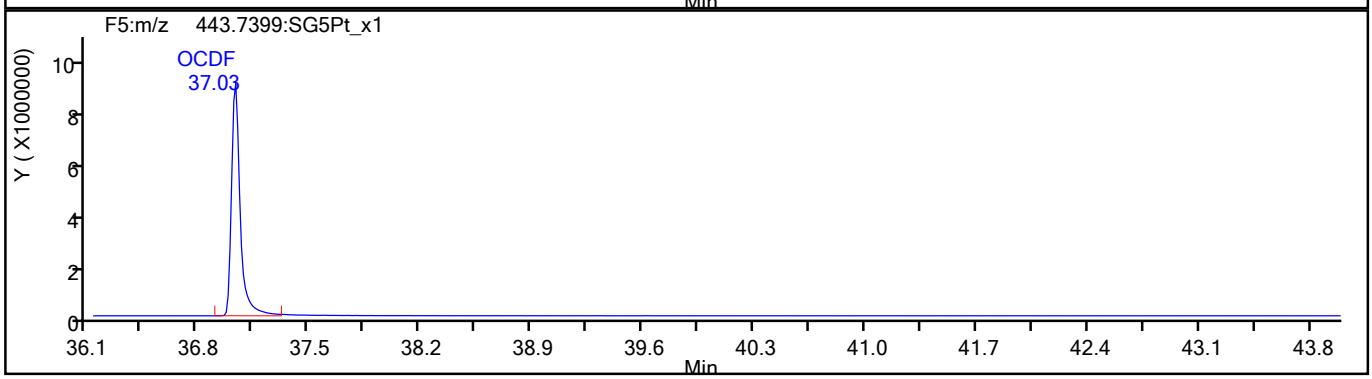

OCDF Standards

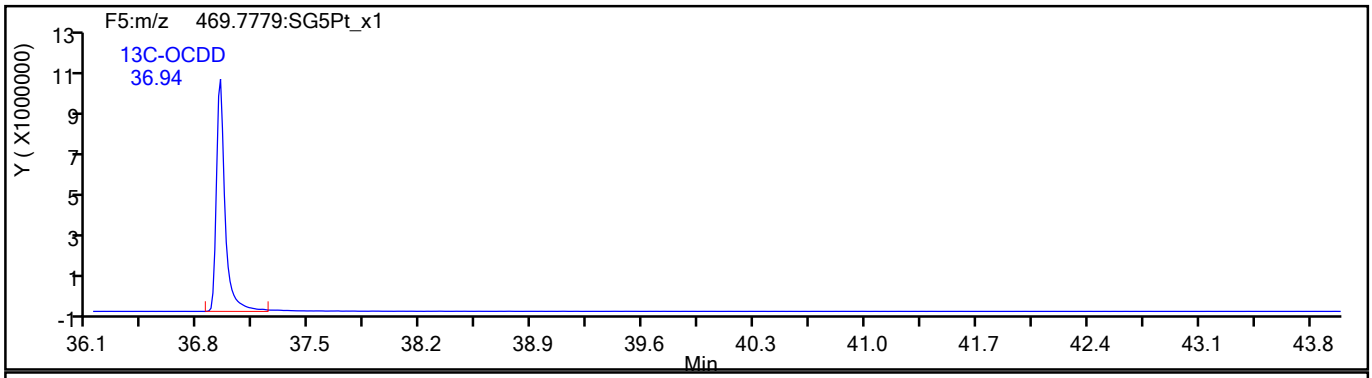

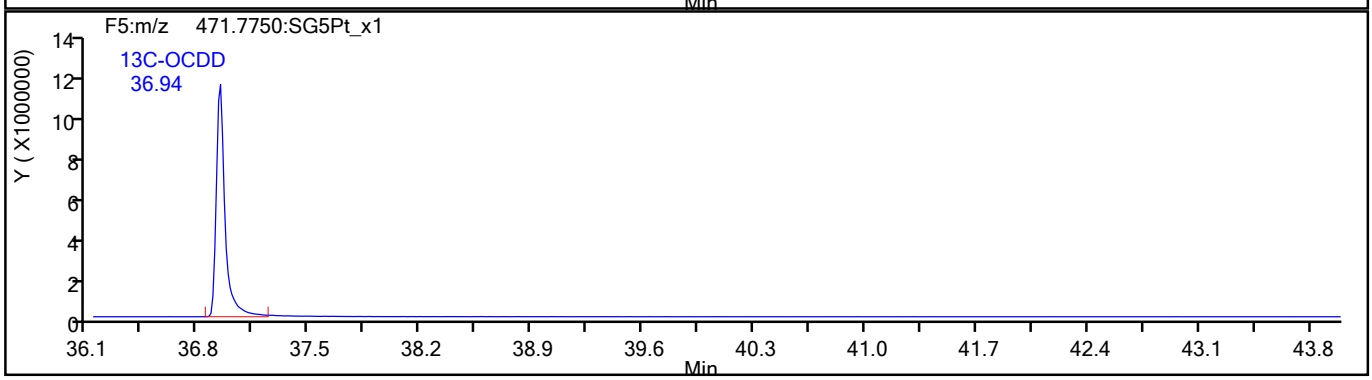

778897

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

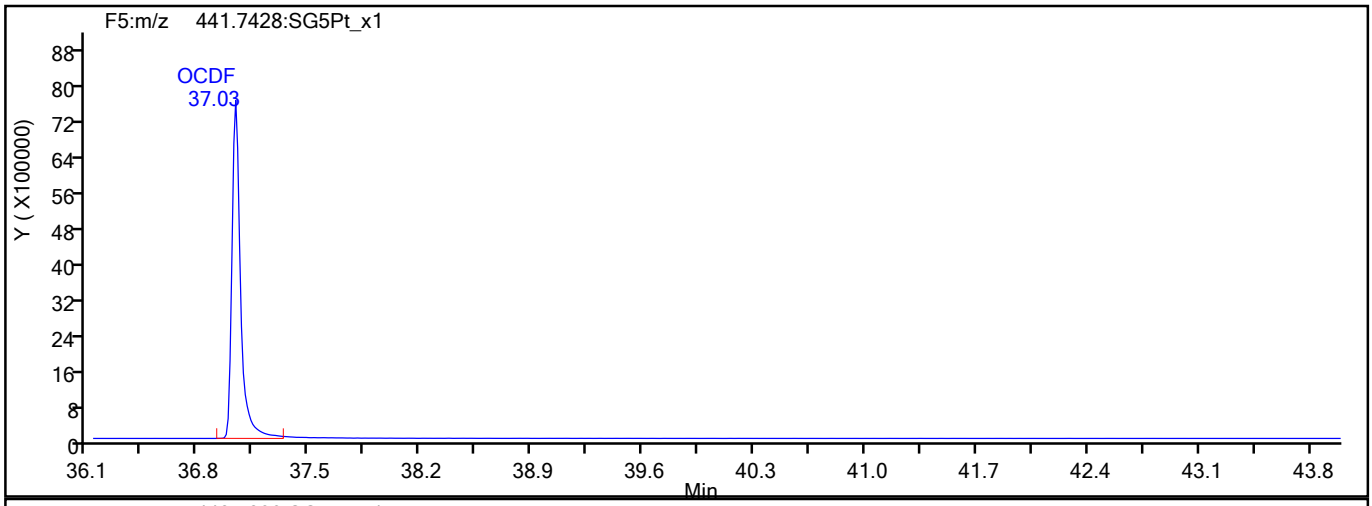

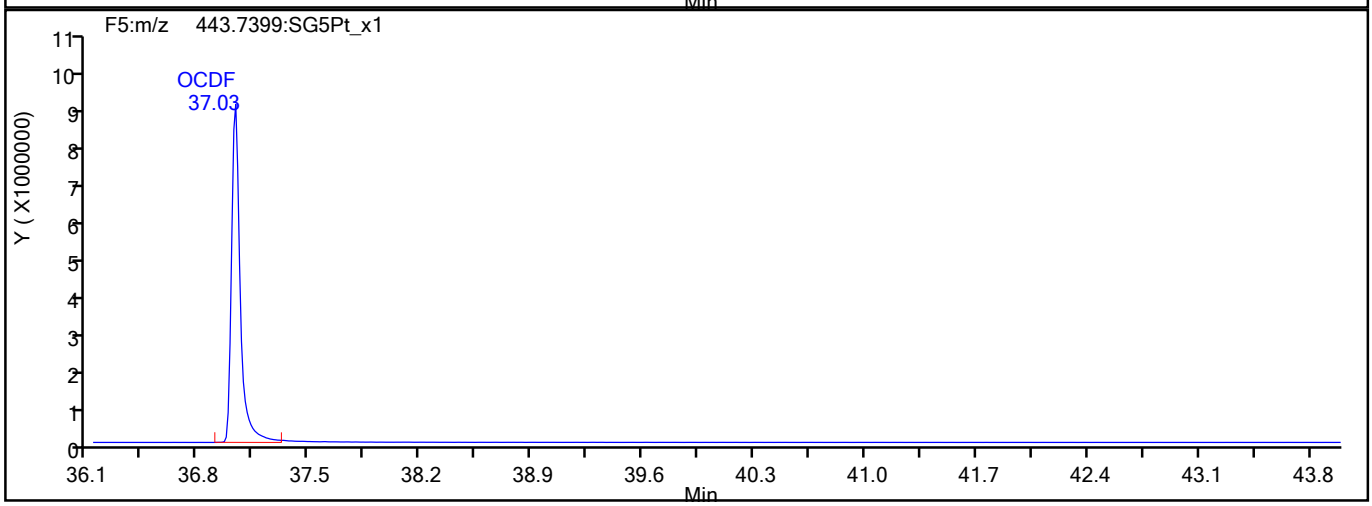

OCDF Interference Mass

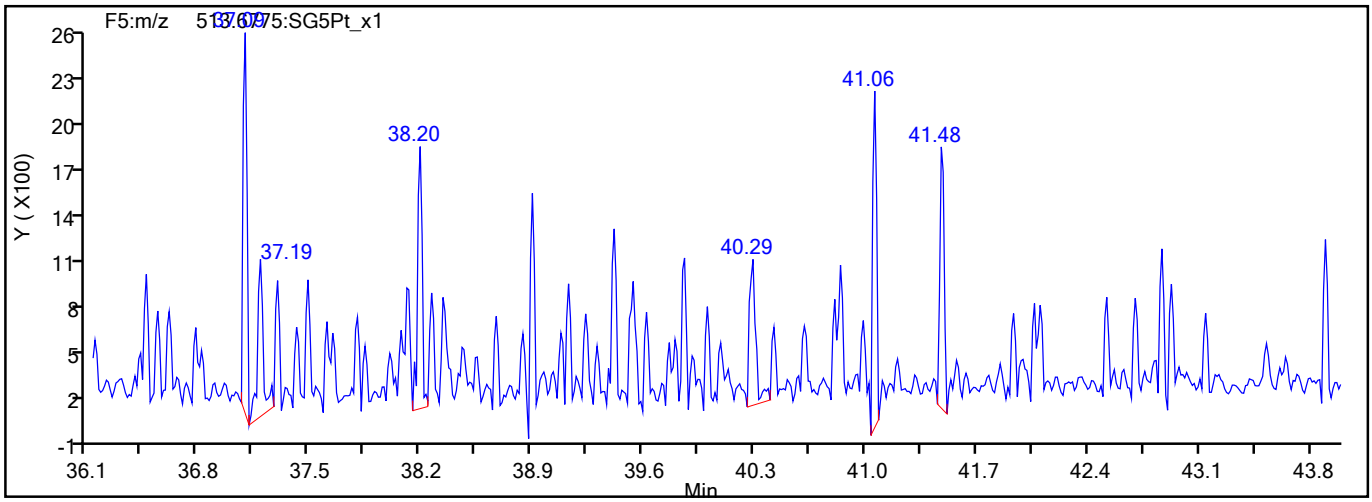

778898

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

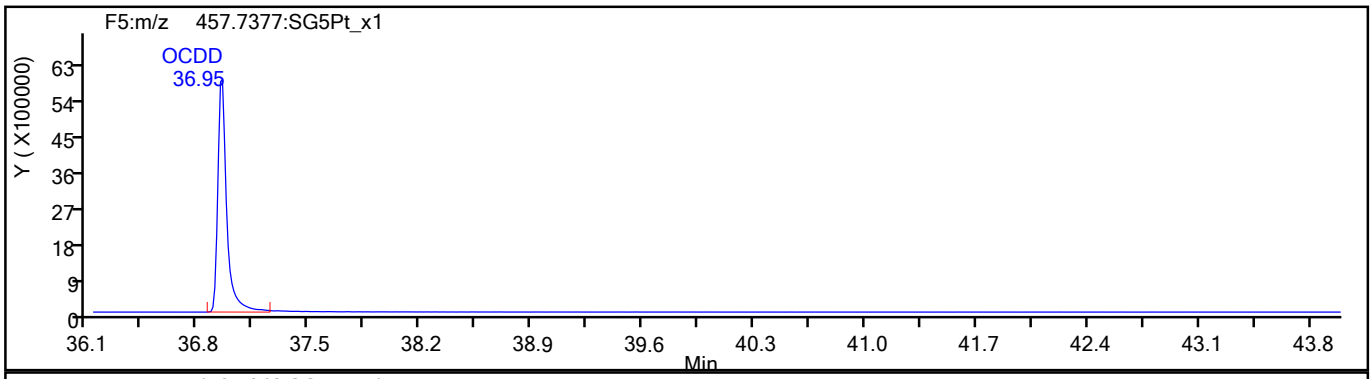

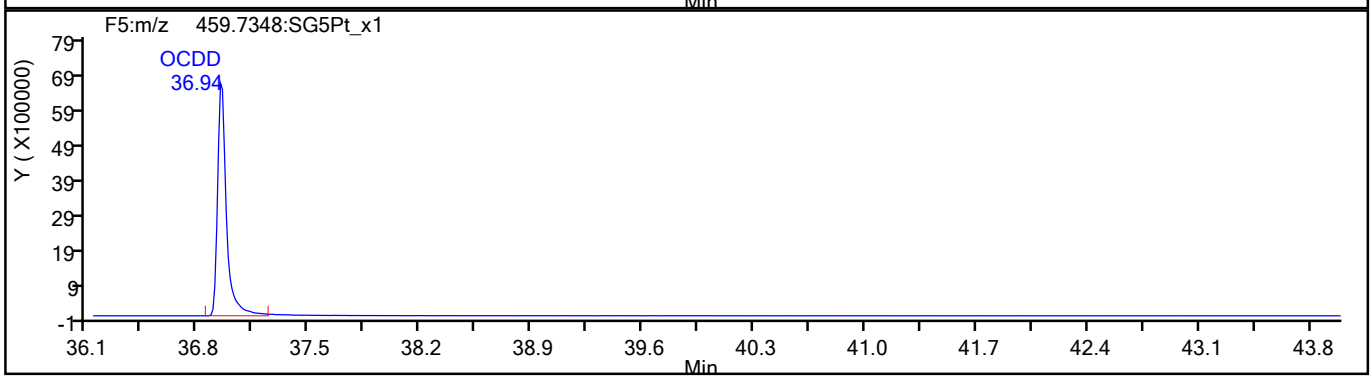

OCDD Standards

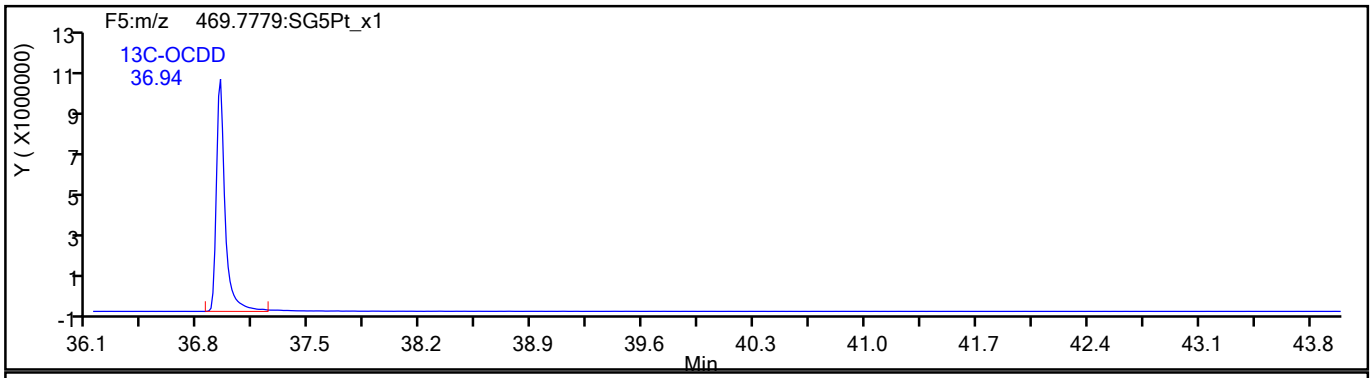

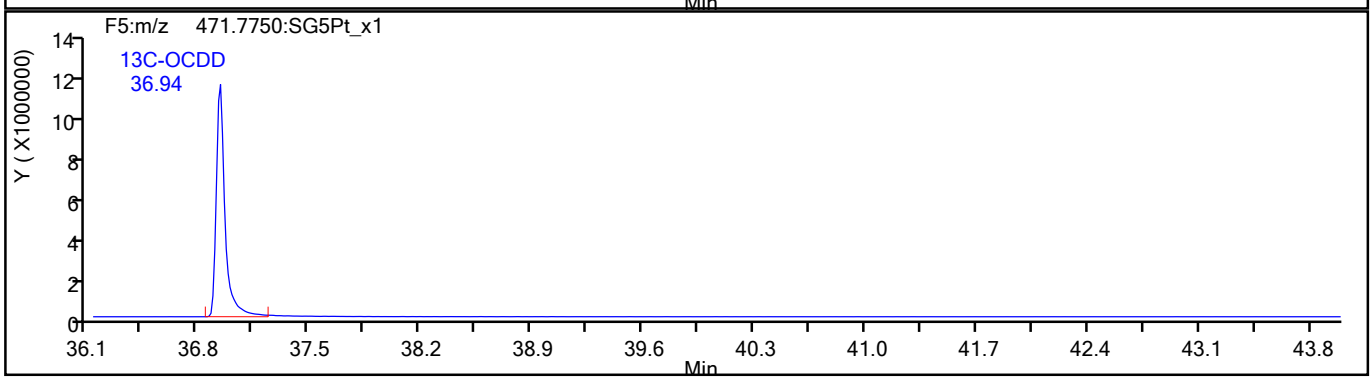

778899

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

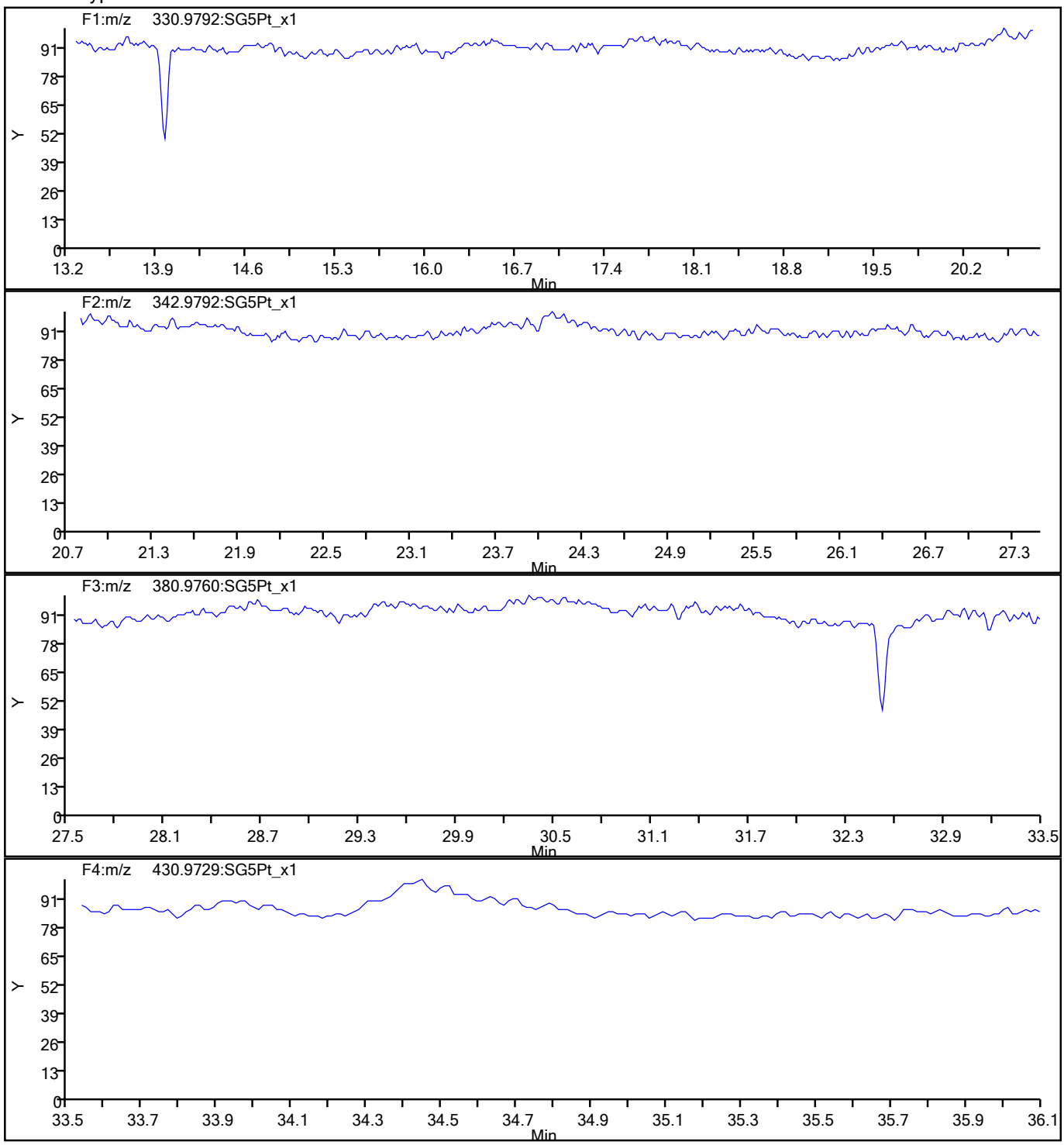

778900

Report Date: 16-Aug-2021 13:40:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210812-124816.b\12AU2110D5_27.d		
Injection Date:	13-Aug-2021 08:03:13	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	515770	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

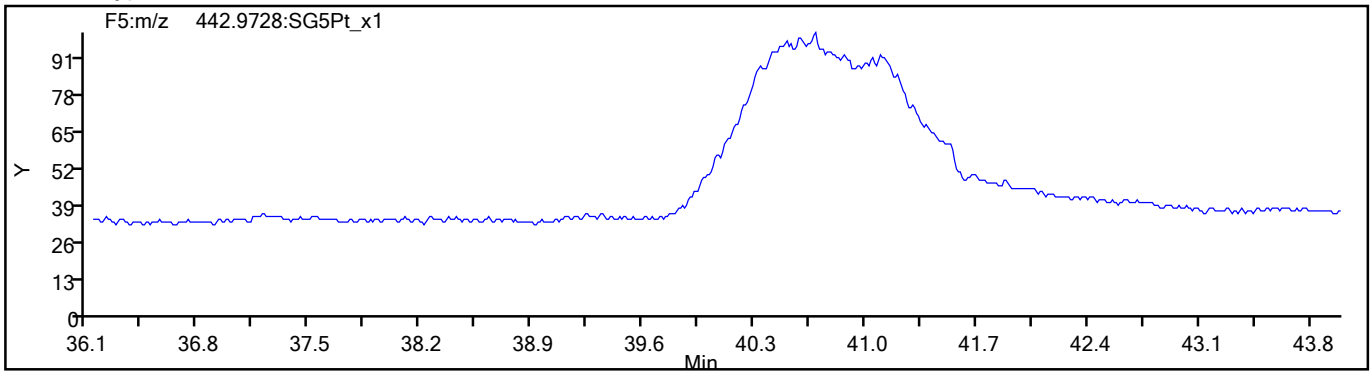

778901

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Instrument ID: 10D5 Start Date: 07/26/2021 09:21

Analysis Batch Number: 510264 End Date: 07/26/2021 15:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-510264/1		07/26/2021 09:21	1	26JL2110D5_1.d	DB-5 0.32(mm)
IC 320-510264/3		07/26/2021 10:51	1	26JL2110D5_3.d	DB-5 0.32(mm)
IC 320-510264/4		07/26/2021 11:36	1	26JL2110D5_4.d	DB-5 0.32(mm)
IC 320-510264/5		07/26/2021 12:21	1	26JL2110D5_5.d	DB-5 0.32(mm)
IC 320-510264/6		07/26/2021 13:06	1	26JL2110D5_6.d	DB-5 0.32(mm)
IC 320-510264/7		07/26/2021 13:51	1	26JL2110D5_7.d	DB-5 0.32(mm)
ICV 320-510264/9		07/26/2021 15:31	1	26JL2110D5_9.d	DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Instrument ID: 10D5 Start Date: 08/13/2021 04:53

Analysis Batch Number: 515770 End Date: 08/13/2021 14:48

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-515770/1		08/13/2021 04:53	1	12AU2110D5_23.d	DB-5 0.32(mm)
WDM 320-515770/2		08/13/2021 05:48	1	12AU2110D5_24.d	DB-5 0.32(mm)
MB 320-513227/1-A		08/13/2021 06:33	1	12AU2110D5_25.d	DB-5 0.32(mm)
LCS 320-513227/2-A		08/13/2021 07:18	1	12AU2110D5_26.d	DB-5 0.32(mm)
LCSD 320-513227/3-A		08/13/2021 08:03	1	12AU2110D5_27.d	DB-5 0.32(mm)
320-76769-9	11215702-072221-SS-SJ SB080 (16-18)	08/13/2021 08:48	1	12AU2110D5_28.d	DB-5 0.32(mm)
320-76769-21	11215702-072221-SS-SJ SB074 (16-18)	08/13/2021 09:33	1	12AU2110D5_29.d	DB-5 0.32(mm)
320-76769-35	11215702-072221-SS-SJ SB076 (16-18)	08/13/2021 10:18	1	12AU2110D5_30.d	DB-5 0.32(mm)
ZZZZZ		08/13/2021 11:03	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 11:48	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 12:33	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 13:18	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 14:03	1		DB-5 0.32(mm)
ZZZZZ		08/13/2021 14:48	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/21/2021 13:54

Analysis Batch Number: 518850 End Date: 08/22/2021 00:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-518850/1		08/21/2021 13:54	1	21AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-518850/2		08/21/2021 14:32	1	21AU2111D2_002.d	DB-225 0.32(mm)
320-76769-9 RA	11215702-072221-SS-SJSB080 (16-18) RA	08/21/2021 15:49	1	21AU2111D2_004.d	DB-225 0.32(mm)
320-76769-35 RA	11215702-072221-SS-SJSB076 (16-18) RA	08/21/2021 16:27	1	21AU2111D2_005.d	DB-225 0.32(mm)
ZZZZZ		08/21/2021 17:06	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 17:44	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 18:23	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 19:01	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 19:39	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 20:18	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 20:56	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 21:34	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 22:13	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 22:51	1		DB-225 0.32(mm)
ZZZZZ		08/21/2021 23:30	1		DB-225 0.32(mm)
ZZZZZ		08/22/2021 00:08	1		DB-225 0.32(mm)
ZZZZZ		08/22/2021 00:46	1		DB-225 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-2

SDG No.:

Batch Number: 513227 Batch Start Date: 08/05/21 06:40 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/09/21 18:55

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-513227/1		HRMS-Sox, 1613B		10 g	20.0 uL	G1	100	1	1 mL
LCS 320-513227/2		HRMS-Sox, 1613B		10 g	20.0 uL	G2	103	3	1 mL
LCSD 320-513227/3		HRMS-Sox, 1613B		10 g	20.0 uL	G3	70	1	1 mL
320-76769-A-9	11215702-072221-SS-SJSB080 (16-18)	HRMS-Sox, 1613B	T	9.66 g	20.0 uL	G4	93	3	1 mL
320-76769-A-21	11215702-072221-SS-SJSB074 (16-18)	HRMS-Sox, 1613B	T	10.37 g	20.0 uL	G5	1	1	1 mL
320-76769-A-35	11215702-072221-SS-SJSB076 (16-18)	HRMS-Sox, 1613B	T	9.90 g	20.0 uL	G6	36	3	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-513227/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-513227/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
LCSD 320-513227/3		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76769-A-9	11215702-072221-SS-SJSB080 (16-18)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76769-A-21	11215702-072221-SS-SJSB074 (16-18)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76769-A-35	11215702-072221-SS-SJSB076 (16-18)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-2

SDG No.:

Batch Number: 513227 Batch Start Date: 08/05/21 06:40 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/09/21 18:55

Batch Notes	
20% DCM:Hexane ID	DH28_00192 mL
65% DCM:Hexane ID	DH6535_00545
Acid Silica Gel ID	SA5644_00730
Acid Alumina ID	Acid_Alumina_00018
Balance ID	QA-074
Hexane ID	Hexane_00287
IFB Clean Up	SR 08/09/2021
Na2SO4 ID	SodiumSulfate_00165
Analyst ID - IDA Reagent Drop	FC 8/5/21 HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	CB 08/05/21
Analyst ID - IS Reagent Drop	SR 08/09/21 DB15270 HRDXNIS_00137 B-1/4 20.0 uL
Analyst ID - IS Reagent Drop Witness	CB 08/09/21
Analyst ID - SU Reagent Drop	SR 08/09/21 HD05018 HRDXNSU_00255 B-2/5 1.0 mL
Analyst ID - SU Reagent Drop Witness	RCR 08/09/21
Analyst ID - TA Reagent Drop	FC 8/5/21 DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	CB 08/05/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/5/21 11:30
Soxhlet/Soxtherm Start	8/5/21 8:30
Storage Box ID	DXN - 264
Toluene ID	Toluene_00110

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-76769-2

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-072221-SS-SJSB080 (16-18)	320-76769-9
11215702-072221-SS-SJSB074 (16-18)	320-76769-21
11215702-072221-SS-SJSB076 (16-18)	320-76769-35

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76769-2

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76769-2

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/29/2021 14:17 End Date: 07/29/2021 14:17

Lab Sample Id	D/F	Type	Time	Analytes	
				% Sol	Moist
ZZZZZZ			14:17		
320-76864-A-1 DU	1	T	14:17	X	X
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
ZZZZZZ			14:17		
320-76769-35	1	T	14:17	X	X

Prep Types:
T = Total/NA

FORM XIII-IN

778912

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76769-2

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/29/2021 14:17 End Date: 07/29/2021 14:17

Lab Sample Id	D/F	Type	Time	Analytes																							
				% Sol	Moist																						
ZZZZZZ			14:17																								
320-76769-A-1 DU	1	T	14:17	X	X																						
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
320-76769-9	1	T	14:17	X	X																						
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
ZZZZZZ			14:17																								
320-76769-21	1	T	14:17	X	X																						

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-2

SDG No.:

Batch Number: 511355 Batch Start Date: 07/29/21 14:17 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 07/30/21 08:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76864-A-1 DU		D 2216	T	2	1.05 g	7.84 g	7.51 g	4.860088365243 %	95.139911634757 %
320-76769-A-35	11215702-072221-SS-SJSB076 (16-18)	D 2216	T	19	1.02 g	8.54 g	6.47 g	27.5265957446808 %	72.4734042553192 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	07/30/2021 08:00
Date and Time Samples out of Desiccator	07/30/2021 08:47
Date samples were placed in the oven	07/29/2021
Oven Temp In	110 Degrees C
Time samples were place in the oven	14:17
Date samples were removed from oven	07/30/2021
Oven Temp Out	108 Degrees C
Time Samples were removed from oven	08:00
Oven ID	Soil Prep #3
Thermometer ID	200416337

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76769-2

SDG No.:

Batch Number: 511356 Batch Start Date: 07/29/21 14:17 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 07/30/21 08:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76769-A-1 DU		D 2216	T	2	1.00 g	6.02 g	3.98 g	40.6374501992032 %	59.3625498007968 %
320-76769-A-9	11215702-072221-SS-SJSB080 (16-18)	D 2216	T	10	1.02 g	7.13 g	5.62 g	24.7135842880524 %	75.2864157119476 %
320-76769-A-21	11215702-072221-SS-SJSB074 (16-18)	D 2216	T	19	1.02 g	7.61 g	6.26 g	20.4855842185129 %	79.5144157814871 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	07/30/2021 08:00
Date and Time Samples out of Desiccator	07/30/2021 08:47
Date samples were placed in the oven	07/29/2021
Oven Temp In	110 Degrees C
Time samples were place in the oven	14:17
Date samples were removed from oven	07/30/2021
Oven Temp Out	108 Degrees C
Time Samples were removed from oven	08:00
Oven ID	Soil Prep #3
Thermometer ID	200416337

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-76769-2

Batch: 511355
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76864-A-1 DU **Analysis Date: Jul 29, 2021 14:17**

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	4.860088365243	%
Percent Solids	None	1	95.139911634757	%

Lab Sample ID: 320-76769-A-35 **Analysis Date: Jul 29, 2021 14:17**

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	27.5265957446808	%
Percent Solids	None	1	72.4734042553192	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

General Chemistry Raw Data Report

Job ID: 320-76769-2

Batch: 511356
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76769-A-1 DU

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	40.6374501992032	%
Percent Solids	None	1	59.3625498007968	%

Lab Sample ID: 320-76769-A-9

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	24.7135842880524	%
Percent Solids	None	1	75.2864157119476	%

Lab Sample ID: 320-76769-A-21

Analysis Date: Jul 29, 2021 14:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	20.4855842185129	%
Percent Solids	None	1	79.5144157814871	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins Environment Testing TestAmerica

778921

Client Information				
Sampler: Stephen Sellers	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:	
Client Contact: Janie Smith	Phone: 832 228 1568	E-Mail:	Page: 1 of 4	
Company: GHD Services Inc.			Job #: 11215702	
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702 - 2021-001			

Analysis Requested

320-76769 Chain of Custody

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Ignitability	TCLP 8260D	TCLP 8270D	TCLP 8081B	TCLP 8151A	TCLP 6010C/7470A	9014	paint filter	pH	8082A	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
11215702-072221-SS-SJSB080 (0-2)	7/22/21	840	G	S	N	Y	X	X	X												MS/MSD
11215702-072221-SS-SJSB080 (2-4)		845				N	X	X	X												
11215702-072221-SS-SJSB080 (4-6)		850				N	X	X	X												
11215702-072221-SS-SJSB080 (6-8)		855				N	X	X	X												
11215702-072221-SS-SJSB080 (8-10)		900				N	X	X	X												
11215702-072221-SS-SJSB080 (10-12)		905				N	X	X	X												
11215702-072221-SS-SJSB080 (12-14)		910				N	X	X	X												
11215702-072221-SS-SJSB080 (14-16)		915				N	X	X	X												
11215702-072221-SS-SJSB080 (16-18)		920				N	X	X	X												Primary
11215702-072221-SS-SJSB080 (18-20)		925				N	~~X~~	~~X~~	~~X~~	HOLD											HOLD
11215702-072221-SS-SJSB080 (20-22)	↓	930	↓	↓	↓	N	~~X~~	~~X~~	~~X~~	HOLD											HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 7/22/21 1100	Company: GHD	Received by:	Date/Time: 7/22/21 945	Company: EAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 3.1

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information				
Sampler: Stephen Sthw	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:	
Client Contact: Janie Smith	Phone: 832 228 5608	E-Mail:	Page: 2 of 4	
Company: GHD Services Inc.			Job #: 11215702	
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Wate Ritg	SSOW#: 11215702-2021-001			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Ignitability	TCLP 8260D	TCLP 8270D	TCLP 8081B	TCLP 8151A	TCLP 6010C/7470A	9014	paint filter	pH	8082A	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
11215702-072221-SS-SJSB080 (22-24)	7/22/21	935	G	S	N	N	X	X	X	HOLD											HOLD
11215702-072221-SS-SJSB074 (0-2)		1300					X	X	X												
11215702-072221-SS-SJSB074 (2-4)		1305					X	X	X												
11215702-072221-SS-SJSB074 (4-6)		1310					X	X	X												
11215702-072221-SS-SJSB074 (6-8)		1315					X	X	X												
11215702-072221-SS-SJSB074 (8-10)		1320					X	X	X												
11215702-072221-SS-SJSB074 (10-12)		1325					X	X	X												
11215702-072221-SS-SJSB074 (12-14)		1330					X	X	X												
11215702-072221-SS-SJSB074 (14-16)		1335					X	X	X												
11215702-072221-SS-SJSB074 (16-18)		1340					X	X	X												Priority
11215702-072221-SS-SJSB074 (18-20)		1345					X	X	X	HOLD											HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 7/26/21 1100	Company: GHD	Received by:	Date/Time: 7/27/21 945	Company: ETAsac
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins Environment Testing TestAmerica

778923

Client Information				
Sampler: Stephen Stilwell	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:	
Client Contact: Janie Smith	Phone: 832 228 1568	E-Mail:	Page: 3 of 4	
Company: GHD Services Inc.			Job #: 11215702	
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Joaquin Wash P.1.5	SSOW#: 11215702 - 2021-001			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Ignitability	TCLP 8260D	TCLP 8270D	TCLP 8081B	TCLP 8151A	TCLP 6010C/7470A	9014	paint filter	pH	8082A	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
11215702-072221-SS-STSB074(20-22)	7/22/21	1350	G	S	N	N	~~X~~	~~X~~	~~X~~	HOLD											HOLD
11215702-072221-SS-STSB074(22-24)	↓	1355	↓	↓	N	N	~~X~~	~~X~~	~~X~~	HOLD											HOLD
11215702-072221-DUP-4	↓	—	↓	↓	N	N	X	X	X												
11215702-072221-DUP-5	↓	—	↓	↓	N	N	X	X	X												
11215702-072221-SS-STSB076(0-2)	↓	1550	↓	↓	Y	Y	X	X	X												MS/MSD
11215702-072221-SS-STSB076(2-4)	↓	1555	↓	↓	N	N	X	X	X												
11215702-072221-SS-STSB076(4-6)	↓	1600	↓	↓	N	N	X	X	X												
11215702-072221-SS-STSB076(6-8)	↓	1605	↓	↓	N	N	X	X	X												
11215702-072221-SS-STSB076(8-10)	↓	1610	↓	↓	N	N	X	X	X												
11215702-072221-SS-STSB076(10-12)	↓	1615	↓	↓	N	N	X	X	X												
11215702-072221-SS-STSB076(12-14)	↓	1620	↓	↓	N	N	X	X	X												

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 7/22/21 1100	Company: GHD	Received by:	Date/Time: 7/27/21 - 945	Company: EASAc
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins Environment Testing TestAmerica

778924

Client Information					
Sampler: Stefan Sikl	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:		
Client Contact: Janie Smith	Phone: 832 228 1568	E-Mail:	Page: 4 of 4		
Company: GHD Services Inc.			Job #: 11215702		
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:				
City: Baton Rouge	TAT Requested (days): 15 business days				
State, Zip: LA, 70808					
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested				
Email: janie.smith@ghd.com	WO #:				
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702				
Site: San Jacinto Wtr P.15	SSOW#: 11215702 - 2021 - 001				

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Ignitability	TCLP 8260D	TCLP 8270D	TCLP 8081B	TCLP 8151A	TCLP 6010C/7470A	9014	paint filter	pH	8082A	Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
11215702-07221-SS-SJSB076 (14-16)	7/22/21	1625	G	S	N	N	X	X	X												
11215702-07221-SS-SJSB076 (16-18)	↓	1630	↓	↓	↓	↓	X	X	X												Prior
11215702-07221-SS-SJSB076 (18-20)		1635					X	X	X		HOLD										HOLD
11215702-07221-SS-SJSB076 (20-22)		1640					X	X	X		HOLD										HOLD
11215702-07221-SS-SJSB076 (22-24)	↓	1645	↓	↓	↓	↓	X	X	X		HOLD										HOLD

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 7/26/21 1100	Company: GHD	Received by:	Date/Time: 7/27/21-945	Company: ETASN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-76769-2

Login Number: 76769
List Number: 1
Creator: Guzman, Juan

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1519270
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Job Number: 320-76788-1

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
8/27/2021 8:16 AM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
08/27/2021

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 320-76788-1
Project/Site: SJRWP Supplemental Design Investigation

Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
320-76788-1

Comments
No additional comments.

Receipt
The samples were received on 7/27/2021 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.7º C.

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

Method 1613B: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the estimated detection limit (EDL): 11215702-072321-BN-SJSB085 (0-2) (320-76788-1), 11215702-072321-BN-SJSB085 (2-4) (320-76788-2), 11215702-072321-BN-SJSB105 (0-2) (320-76788-13), 11215702-072321-BN-SJSB105 (2-4) (320-76788-14), 11215702-072321-BN-SJSB105 (4-6) (320-76788-15) and 11215702-072321-BN-SJSB105 (12-14) (320-76788-19) . The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method 1613B: The concentration of one or more analytes associated with the following samples exceeded the instrument calibration range: 11215702-072321-BN-SJSB085 (0-2) (320-76788-1), 11215702-072321-BN-SJSB085 (2-4) (320-76788-2), 11215702-072321-BN-SJSB105 (0-2) (320-76788-13), 11215702-072321-BN-SJSB105 (2-4) (320-76788-14), & 11215702-072321-BN-SJSB105 (4-6) (320-76788-15) and 11215702-072321-BN-SJSB105 (12-14) (320-76788-19). These analytes have been qualified with an 'E' flag; however, the peak did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Method 1613B: The following samples were diluted to mitigate matrix interference and to bring the concentration of target analytes to be under the saturation level of the instrument detector: 11215702-072321-BN-SJSB085 (0-2) (320-76788-1), 11215702-072321-BN-SJSB105 (0-2) (320-76788-13) and 11215702-072321-BN-SJSB105 (2-4) (320-76788-14). Elevated reporting limits (RLs) are provided.

Method 1613B: The ion abundance ratios are outside criteria for the Isotope Dilution Analyte (IDA) associated with the following sample: 11215702-072321-BN-SJSB105 (2-4) (320-76788-14) DL. The theoretical area for the IDA was used to quantitate recovery and target concentration.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (0-2) — Lab Sample ID: 320-76788-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDD	240		13	3.7	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	2400	G	20	20	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	1600	G	15	15	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	4.5	J B	13	0.60	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	16		13	0.59	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	9.4	J	13	0.54	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	3600	B	13	12	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	960	B	13	11	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	49	B	13	9.8	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	100		13	11	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	300	B	13	5.2	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1200	B	13	8.0	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	380	B	13	8.4	pg/g	1	☼	1613B	Total/NA
OCDD	5300	B	25	6.8	pg/g	1	☼	1613B	Total/NA
OCDF	770	B	25	0.72	pg/g	1	☼	1613B	Total/NA
Total PeCDD	260	q	13	3.7	pg/g	1	☼	1613B	Total/NA
Total PeCDF	6200	G	17	17	pg/g	1	☼	1613B	Total/NA
Total HxCDD	130	q B	13	0.58	pg/g	1	☼	1613B	Total/NA
Total HxCDF	5300	B	13	11	pg/g	1	☼	1613B	Total/NA
Total HpCDD	710	B	13	5.2	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1900	B	13	8.2	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDD - DL	31000	G E B	74	74	pg/g	5	☼	1613B	Total/NA
Total TCDD - DL	34000	G B	74	74	pg/g	5	☼	1613B	Total/NA
Total TCDF - DL	170000	G B	250	250	pg/g	5	☼	1613B	Total/NA
2,3,7,8-TCDF - RADL	98000	E B G	89	89	pg/g	5	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB085 (2-4) — Lab Sample ID: 320-76788-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	530	G B	1.9	1.9	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	4.4	J	8.3	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	45		8.3	0.33	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	26		8.3	0.33	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.82	J B	8.3	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.7	J	8.3	0.16	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.8	J	8.3	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	54	B	8.3	0.27	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	14	B	8.3	0.28	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	1.1	J B	8.3	0.21	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	1.8	J	8.3	0.22	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	59	B	8.3	0.83	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	16	B	8.3	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	5.4	J B	8.3	0.18	pg/g	1	☼	1613B	Total/NA
OCDD	1600	B	17	1.9	pg/g	1	☼	1613B	Total/NA
OCDF	13	J B	17	0.040	pg/g	1	☼	1613B	Total/NA
Total TCDD	580	G B	1.9	1.9	pg/g	1	☼	1613B	Total/NA
Total TCDF	2900	G B	4.0	4.0	pg/g	1	☼	1613B	Total/NA
Total PeCDD	9.1	q	8.3	0.15	pg/g	1	☼	1613B	Total/NA
Total PeCDF	110	q	8.3	0.33	pg/g	1	☼	1613B	Total/NA
Total HxCDD	27	q B	8.3	0.15	pg/g	1	☼	1613B	Total/NA
Total HxCDF	82	B	8.3	0.25	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (2-4) (Continued) — Lab Sample ID: 320-76788-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HpCDD	150	B	8.3	0.83	pg/g	1	☼	1613B	Total/NA
Total HpCDF	27	B	8.3	0.17	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	1700	G E B	2.2	2.2	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB085 (4-6) — Lab Sample ID: 320-76788-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	19	B	1.2	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.21	J q	5.9	0.081	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	1.5	J	5.9	0.044	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.97	J	5.9	0.045	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.44	J B	5.9	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.68	J	5.9	0.16	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.5	J	5.9	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	2.0	J B	5.9	0.032	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.59	J B	5.9	0.033	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.12	J B	5.9	0.026	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.092	J	5.9	0.025	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	34	B	5.9	0.74	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.64	J B q	5.9	0.031	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.20	J B	5.9	0.038	pg/g	1	☼	1613B	Total/NA
OCDD	1000	B	12	1.1	pg/g	1	☼	1613B	Total/NA
OCDF	0.88	J B	12	0.025	pg/g	1	☼	1613B	Total/NA
Total TCDD	24	B q	1.2	0.12	pg/g	1	☼	1613B	Total/NA
Total TCDF	120	B	1.2	0.23	pg/g	1	☼	1613B	Total/NA
Total PeCDD	6.0	q	5.9	0.081	pg/g	1	☼	1613B	Total/NA
Total PeCDF	3.7	J q	5.9	0.045	pg/g	1	☼	1613B	Total/NA
Total HxCDD	28	B q	5.9	0.15	pg/g	1	☼	1613B	Total/NA
Total HxCDF	3.1	J B q	5.9	0.029	pg/g	1	☼	1613B	Total/NA
Total HpCDD	110	B	5.9	0.74	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1.0	J B q	5.9	0.034	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	65	B	1.2	0.26	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB085 (6-8) — Lab Sample ID: 320-76788-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	31	B	1.4	0.20	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.49	J	7.1	0.10	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	2.5	J	7.1	0.056	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	1.6	J	7.1	0.056	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.68	J B	7.1	0.22	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.5	J	7.1	0.23	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.1	J	7.1	0.20	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	3.5	J B	7.1	0.054	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	1.0	J B	7.1	0.056	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.12	J q	7.1	0.044	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	72	B	7.1	1.3	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1.3	J B	7.1	0.039	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.40	J B q	7.1	0.048	pg/g	1	☼	1613B	Total/NA
OCDD	2500	B	14	2.6	pg/g	1	☼	1613B	Total/NA
OCDF	2.5	J B	14	0.034	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072321-BN-SJSB085 (6-8) (Continued) Lab Sample ID: 320-76788-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total TCDD	38	B	1.4	0.20	pg/g	1	☼	1613B	Total/NA
Total TCDF	180	B q	1.4	0.35	pg/g	1	☼	1613B	Total/NA
Total PeCDD	8.7	q	7.1	0.10	pg/g	1	☼	1613B	Total/NA
Total PeCDF	6.4	J	7.1	0.056	pg/g	1	☼	1613B	Total/NA
Total HxCDD	45	B q	7.1	0.22	pg/g	1	☼	1613B	Total/NA
Total HxCDF	5.2	J B q	7.1	0.050	pg/g	1	☼	1613B	Total/NA
Total HpCDD	200	B	7.1	1.3	pg/g	1	☼	1613B	Total/NA
Total HpCDF	2.2	J B q	7.1	0.044	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	97	B	1.4	0.33	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB085 (8-10) Lab Sample ID: 320-76788-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	18	B	1.4	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.27	J	6.8	0.060	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	1.7	J	6.8	0.034	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.95	J	6.8	0.036	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.42	J B	6.8	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.53	J	6.8	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.98	J q	6.8	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	2.5	J B	6.8	0.030	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.77	J B	6.8	0.031	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.12	J B	6.8	0.024	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.090	J	6.8	0.025	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	24	B	6.8	0.53	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1.0	J B	6.8	0.028	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.26	J B	6.8	0.035	pg/g	1	☼	1613B	Total/NA
OCDD	750	B	14	0.89	pg/g	1	☼	1613B	Total/NA
OCDF	1.1	J B	14	0.022	pg/g	1	☼	1613B	Total/NA
Total TCDD	23	B q	1.4	0.13	pg/g	1	☼	1613B	Total/NA
Total TCDF	100	B	1.4	0.19	pg/g	1	☼	1613B	Total/NA
Total PeCDD	4.1	J q	6.8	0.060	pg/g	1	☼	1613B	Total/NA
Total PeCDF	4.1	J q	6.8	0.035	pg/g	1	☼	1613B	Total/NA
Total HxCDD	19	B q	6.8	0.11	pg/g	1	☼	1613B	Total/NA
Total HxCDF	3.9	J B q	6.8	0.028	pg/g	1	☼	1613B	Total/NA
Total HpCDD	79	B	6.8	0.53	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1.5	J B	6.8	0.031	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	55	B	1.4	0.19	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB085 (10-12) Lab Sample ID: 320-76788-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1.5	J B	1.7	0.078	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.35	J	8.6	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.17	J	8.6	0.044	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.083	J q	8.6	0.045	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	1.1	J B	8.6	0.38	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.7	J	8.6	0.39	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.8	J	8.6	0.35	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.28	J B	8.6	0.041	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.11	J B	8.6	0.042	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072321-BN-SJSB085 (10-12) (Continued) Lab Sample ID: 320-76788-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8,9-HxCDF	0.20	J B	8.6	0.034	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	82	B	8.6	1.4	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.24	J B	8.6	0.041	pg/g	1	☼	1613B	Total/NA
OCDD	2100	B	17	2.3	pg/g	1	☼	1613B	Total/NA
OCDF	0.66	J B	17	0.036	pg/g	1	☼	1613B	Total/NA
Total TCDD	7.0	B q	1.7	0.078	pg/g	1	☼	1613B	Total/NA
Total TCDF	5.4	B q	1.7	0.036	pg/g	1	☼	1613B	Total/NA
Total PeCDD	11	q	8.6	0.14	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.35	J q	8.6	0.045	pg/g	1	☼	1613B	Total/NA
Total HxCDD	57	B	8.6	0.38	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.59	J B	8.6	0.037	pg/g	1	☼	1613B	Total/NA
Total HpCDD	240	B	8.6	1.4	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.24	J B	8.6	0.044	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	3.4	B	1.7	0.20	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB085 (12-14) Lab Sample ID: 320-76788-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	3.6	B	1.6	0.093	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.29	J	7.8	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.30	J q	7.8	0.038	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.14	J q	7.8	0.038	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.87	J B	7.8	0.21	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.9	J	7.8	0.22	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.6	J	7.8	0.20	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.37	J B	7.8	0.033	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.12	J B q	7.8	0.034	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.12	J B	7.8	0.026	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	73	B	7.8	1.3	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.20	J B	7.8	0.032	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.078	J B	7.8	0.040	pg/g	1	☼	1613B	Total/NA
OCDD	1700	B	16	1.8	pg/g	1	☼	1613B	Total/NA
OCDF	0.64	J B	16	0.029	pg/g	1	☼	1613B	Total/NA
Total TCDD	9.8	B q	1.6	0.093	pg/g	1	☼	1613B	Total/NA
Total TCDF	21	B	1.6	0.062	pg/g	1	☼	1613B	Total/NA
Total PeCDD	9.7	q	7.8	0.13	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.69	J q	7.8	0.038	pg/g	1	☼	1613B	Total/NA
Total HxCDD	47	B q	7.8	0.21	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.62	J B q	7.8	0.030	pg/g	1	☼	1613B	Total/NA
Total HpCDD	200	B	7.8	1.3	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.27	J B	7.8	0.036	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	12	B	1.6	0.22	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB085 (14-16) Lab Sample ID: 320-76788-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	6.3	B	1.7	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.37	J	8.4	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.70	J	8.4	0.048	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.33	J q	8.4	0.049	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.73	J B	8.4	0.30	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (14-16) (Continued)

Lab Sample ID: 320-76788-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,6,7,8-HxCDD	1.6	J q	8.4	0.30	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.6	J	8.4	0.27	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.86	J B	8.4	0.047	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.26	J B	8.4	0.047	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.16	J B	8.4	0.040	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.10	J	8.4	0.039	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	66	B	8.4	1.5	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.85	J B	8.4	0.053	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.20	J B q	8.4	0.067	pg/g	1	☼	1613B	Total/NA
OCDD	1600	B	17	2.1	pg/g	1	☼	1613B	Total/NA
OCDF	1.8	J B	17	0.032	pg/g	1	☼	1613B	Total/NA
Total TCDD	13	B q	1.7	0.11	pg/g	1	☼	1613B	Total/NA
Total TCDF	38	B	1.7	0.12	pg/g	1	☼	1613B	Total/NA
Total PeCDD	9.3	q	8.4	0.13	pg/g	1	☼	1613B	Total/NA
Total PeCDF	1.5	J q	8.4	0.048	pg/g	1	☼	1613B	Total/NA
Total HxCDD	46	B q	8.4	0.29	pg/g	1	☼	1613B	Total/NA
Total HxCDF	1.4	J B	8.4	0.043	pg/g	1	☼	1613B	Total/NA
Total HpCDD	190	B	8.4	1.5	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1.1	J B q	8.4	0.060	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	21	B	1.7	0.25	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB105 (0-2)

Lab Sample ID: 320-76788-13

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDD	240		9.8	3.3	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	2000	G	17	17	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	1400	G	14	14	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	3.0	J B q	9.8	0.39	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	11		9.8	0.39	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	6.7	J q	9.8	0.36	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	2500	B	9.8	8.5	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	710	B	9.8	7.9	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	40	B	9.8	7.9	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	80		9.8	8.0	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	180	B	9.8	2.4	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	800	B	9.8	6.8	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	240	B	9.8	7.5	pg/g	1	☼	1613B	Total/NA
OCDD	3200	B	20	6.3	pg/g	1	☼	1613B	Total/NA
OCDF	470	B	20	0.69	pg/g	1	☼	1613B	Total/NA
Total PeCDD	260	q	9.8	3.3	pg/g	1	☼	1613B	Total/NA
Total PeCDF	5400	G	16	16	pg/g	1	☼	1613B	Total/NA
Total HxCDD	110	B q	9.8	0.38	pg/g	1	☼	1613B	Total/NA
Total HxCDF	3700	B	9.8	8.1	pg/g	1	☼	1613B	Total/NA
Total HpCDD	420	B	9.8	2.4	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1200	B	9.8	7.2	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDD - DL	27000	G E B	67	67	pg/g	5	☼	1613B	Total/NA
Total TCDD - DL	30000	G B	67	67	pg/g	5	☼	1613B	Total/NA
Total TCDF - DL	160000	G B	230	230	pg/g	5	☼	1613B	Total/NA
2,3,7,8-TCDF - RADL	83000	E B G	73	73	pg/g	5	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (2-4) — Lab Sample ID: 320-76788-14

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDD	300		9.5	3.8	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	2600	G	24	24	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	1900	G	17	17	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	3.4	J B	9.5	0.24	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	8.4	J	9.5	0.23	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	5.1	J	9.5	0.22	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	1100	G B	11	11	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	54	G q B	10	10	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	110	G	11	11	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	110	B	9.5	1.0	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1200	B	9.5	4.8	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	440	B	9.5	4.9	pg/g	1	☼	1613B	Total/NA
OCDD	1600	B	19	1.4	pg/g	1	☼	1613B	Total/NA
OCDF	480	B	19	0.41	pg/g	1	☼	1613B	Total/NA
Total PeCDD	320	q	9.5	3.8	pg/g	1	☼	1613B	Total/NA
Total PeCDF	6800	G q	21	21	pg/g	1	☼	1613B	Total/NA
Total HxCDD	59	B	9.5	0.23	pg/g	1	☼	1613B	Total/NA
Total HxCDF	6000	G q B	11	11	pg/g	1	☼	1613B	Total/NA
Total HpCDD	230	B	9.5	1.0	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1900	B	9.5	4.9	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDD - DL	33000	G E B	69	69	pg/g	5	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF - DL	4200	B	47	23	pg/g	5	☼	1613B	Total/NA
Total TCDD - DL	37000	G B	69	69	pg/g	5	☼	1613B	Total/NA
Total TCDF - DL	210000	G B	320	320	pg/g	5	☼	1613B	Total/NA
2,3,7,8-TCDF - RADL	130000	E B G	88	88	pg/g	5	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB105 (4-6) — Lab Sample ID: 320-76788-15

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	170	B	1.4	0.74	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	1.9	J	7.0	0.16	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	12		7.0	0.20	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	9.2		7.0	0.20	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.54	J B q	7.0	0.27	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.90	J	7.0	0.27	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.1	J	7.0	0.25	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	17	B	7.0	0.18	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	5.2	J B	7.0	0.18	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.38	J B	7.0	0.14	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.53	J q	7.0	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	49	B	7.0	1.3	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	5.0	J B	7.0	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	1.6	J B	7.0	0.16	pg/g	1	☼	1613B	Total/NA
OCDD	1500	B	14	2.0	pg/g	1	☼	1613B	Total/NA
OCDF	3.9	J B	14	0.093	pg/g	1	☼	1613B	Total/NA
Total TCDD	190	B	1.4	0.74	pg/g	1	☼	1613B	Total/NA
Total TCDF	1100	B q G	1.9	1.9	pg/g	1	☼	1613B	Total/NA
Total PeCDD	7.7	q	7.0	0.16	pg/g	1	☼	1613B	Total/NA
Total PeCDF	34	q	7.0	0.20	pg/g	1	☼	1613B	Total/NA
Total HxCDD	33	B q	7.0	0.26	pg/g	1	☼	1613B	Total/NA
Total HxCDF	24	B q	7.0	0.16	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (4-6) (Continued) — Lab Sample ID: 320-76788-15

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HpCDD	170	B	7.0	1.3	pg/g	1	☼	1613B	Total/NA
Total HpCDF	8.0	B	7.0	0.15	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	610	E B	1.4	0.66	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB105 (6-8) — Lab Sample ID: 320-76788-16

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	20	B	1.4	0.21	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	1.2	J q	7.0	0.078	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	1.0	J	7.0	0.086	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.50	J B q	7.0	0.35	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.9	J	7.0	0.35	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.2	J	7.0	0.32	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	1.8	J B	7.0	0.062	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.53	J B	7.0	0.065	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	68	B	7.0	1.3	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.52	J B q	7.0	0.072	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.18	J B	7.0	0.088	pg/g	1	☼	1613B	Total/NA
OCDD	1800	B	14	2.7	pg/g	1	☼	1613B	Total/NA
OCDF	0.47	J B q	14	0.055	pg/g	1	☼	1613B	Total/NA
Total TCDD	26	B q	1.4	0.21	pg/g	1	☼	1613B	Total/NA
Total TCDF	120	B q	1.4	0.32	pg/g	1	☼	1613B	Total/NA
Total PeCDD	8.3	q	7.0	0.15	pg/g	1	☼	1613B	Total/NA
Total PeCDF	3.4	J q	7.0	0.082	pg/g	1	☼	1613B	Total/NA
Total HxCDD	40	B q	7.0	0.34	pg/g	1	☼	1613B	Total/NA
Total HxCDF	2.3	J B	7.0	0.058	pg/g	1	☼	1613B	Total/NA
Total HpCDD	190	B	7.0	1.3	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.70	J B q	7.0	0.080	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	71	B	1.4	0.44	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB105 (8-10) — Lab Sample ID: 320-76788-17

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	8.1	B	1.5	0.17	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.44	J q	7.6	0.075	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.39	J	7.6	0.078	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.92	J B	7.6	0.39	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.4	J	7.6	0.41	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.1	J	7.6	0.36	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.55	J B	7.6	0.055	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.22	J B	7.6	0.055	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	64	B	7.6	1.5	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.15	J B q	7.6	0.069	pg/g	1	☼	1613B	Total/NA
OCDD	1600	B	15	1.7	pg/g	1	☼	1613B	Total/NA
OCDF	0.49	J B q	15	0.059	pg/g	1	☼	1613B	Total/NA
Total TCDD	16	B q	1.5	0.17	pg/g	1	☼	1613B	Total/NA
Total TCDF	57	B q	1.5	0.20	pg/g	1	☼	1613B	Total/NA
Total PeCDD	13		7.6	0.16	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.83	J q	7.6	0.076	pg/g	1	☼	1613B	Total/NA
Total HxCDD	51	B	7.6	0.39	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.78	J B	7.6	0.050	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072321-BN-SJSB105 (8-10) (Continued) Lab Sample ID: 320-76788-17

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HpCDD	200	B	7.6	1.5	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.15	J B q	7.6	0.074	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	33	B	1.5	0.80	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB105 (10-12) Lab Sample ID: 320-76788-18

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	11	B	1.7	0.17	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.27	J q	8.3	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.86	J	8.3	0.065	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.54	J	8.3	0.067	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.63	J B	8.3	0.27	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.89	J	8.3	0.28	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.8	J	8.3	0.25	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	1.0	J B	8.3	0.047	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.29	J B	8.3	0.048	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	37	B	8.3	0.89	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.32	J B	8.3	0.056	pg/g	1	☼	1613B	Total/NA
OCDD	1100	B	17	1.5	pg/g	1	☼	1613B	Total/NA
OCDF	0.39	J B	17	0.054	pg/g	1	☼	1613B	Total/NA
Total TCDD	18	B q	1.7	0.17	pg/g	1	☼	1613B	Total/NA
Total TCDF	70	B q	1.7	0.20	pg/g	1	☼	1613B	Total/NA
Total PeCDD	6.0	J q	8.3	0.14	pg/g	1	☼	1613B	Total/NA
Total PeCDF	1.7	J q	8.3	0.066	pg/g	1	☼	1613B	Total/NA
Total HxCDD	26	B	8.3	0.27	pg/g	1	☼	1613B	Total/NA
Total HxCDF	1.3	J B	8.3	0.044	pg/g	1	☼	1613B	Total/NA
Total HpCDD	110	B	8.3	0.89	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.32	J B	8.3	0.059	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	39	B	1.7	0.22	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB105 (12-14) Lab Sample ID: 320-76788-19

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	250	B	1.5	1.2	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	2.6	J	7.5	0.19	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	18		7.5	0.22	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	13		7.5	0.22	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.58	J B q	7.5	0.26	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.2	J	7.5	0.28	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.8	J	7.5	0.25	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	24	B	7.5	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	6.8	J B	7.5	0.16	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.41	J B q	7.5	0.13	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.79	J	7.5	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	64	B	7.5	1.5	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	7.0	J B	7.5	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	2.1	J B q	7.5	0.13	pg/g	1	☼	1613B	Total/NA
OCDD	1600	B	15	1.9	pg/g	1	☼	1613B	Total/NA
OCDF	4.3	J B	15	0.066	pg/g	1	☼	1613B	Total/NA
Total TCDD	270	B	1.5	1.2	pg/g	1	☼	1613B	Total/NA
Total TCDF	1600	B G	2.9	2.9	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072321-BN-SJSB105 (12-14) (Continued) Lab Sample ID: 320-76788-19

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total PeCDD	12	q	7.5	0.19	pg/g	1	☼	1613B	Total/NA
Total PeCDF	48		7.5	0.22	pg/g	1	☼	1613B	Total/NA
Total HxCDD	45	B q	7.5	0.26	pg/g	1	☼	1613B	Total/NA
Total HxCDF	36	B q	7.5	0.14	pg/g	1	☼	1613B	Total/NA
Total HpCDD	200	B	7.5	1.5	pg/g	1	☼	1613B	Total/NA
Total HpCDF	11	B q	7.5	0.12	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	900	E B	1.5	0.97	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB105 (14-16) Lab Sample ID: 320-76788-20

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	41	B	1.6	0.27	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.59	J	7.8	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	2.9	J	7.8	0.067	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	2.1	J	7.8	0.071	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.62	J B q	7.8	0.24	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.2	J	7.8	0.25	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.6	J	7.8	0.23	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	3.3	J B	7.8	0.045	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	1.0	J B	7.8	0.045	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.21	J B	7.8	0.037	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.12	J q	7.8	0.037	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	57	B	7.8	1.0	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1.3	J B	7.8	0.046	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.68	J B	7.8	0.059	pg/g	1	☼	1613B	Total/NA
OCDD	1400	B	16	1.2	pg/g	1	☼	1613B	Total/NA
OCDF	2.9	J B	16	0.044	pg/g	1	☼	1613B	Total/NA
Total TCDD	50	B q	1.6	0.27	pg/g	1	☼	1613B	Total/NA
Total TCDF	290	B	1.6	0.51	pg/g	1	☼	1613B	Total/NA
Total PeCDD	8.6	q	7.8	0.12	pg/g	1	☼	1613B	Total/NA
Total PeCDF	7.9	q	7.8	0.069	pg/g	1	☼	1613B	Total/NA
Total HxCDD	42	B q	7.8	0.24	pg/g	1	☼	1613B	Total/NA
Total HxCDF	5.3	J B q	7.8	0.041	pg/g	1	☼	1613B	Total/NA
Total HpCDD	180	B	7.8	1.0	pg/g	1	☼	1613B	Total/NA
Total HpCDF	2.2	J B	7.8	0.053	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	160	B	1.6	0.32	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (0-2)

Lab Sample ID: 320-76788-1

Date Collected: 07/23/21 11:00
Date Received: 07/27/21 09:45

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	59.1		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	40.9		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB085 (0-2)

Lab Sample ID: 320-76788-1

Date Collected: 07/23/21 11:00
Date Received: 07/27/21 09:45

Matrix: Solid
Percent Solids: 40.9

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8-PeCDD	240		13	3.7	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
1,2,3,7,8-PeCDF	2400	G	20	20	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
2,3,4,7,8-PeCDF	1600	G	15	15	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
1,2,3,4,7,8-HxCDD	4.5	J B	13	0.60	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
1,2,3,6,7,8-HxCDD	16		13	0.59	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
1,2,3,7,8,9-HxCDD	9.4	J	13	0.54	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
1,2,3,4,7,8-HxCDF	3600	B	13	12	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
1,2,3,6,7,8-HxCDF	960	B	13	11	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
1,2,3,7,8,9-HxCDF	49	B	13	9.8	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
2,3,4,6,7,8-HxCDF	100		13	11	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
1,2,3,4,6,7,8-HpCDD	300	B	13	5.2	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
1,2,3,4,6,7,8-HpCDF	1200	B	13	8.0	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
1,2,3,4,7,8,9-HpCDF	380	B	13	8.4	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
OCDD	5300	B	25	6.8	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
OCDF	770	B	25	0.72	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
Total PeCDD	260	q	13	3.7	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
Total PeCDF	6200	G	17	17	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
Total HxCDD	130	q B	13	0.58	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
Total HxCDF	5300	B	13	11	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
Total HpCDD	710	B	13	5.2	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1
Total HpCDF	1900	B	13	8.2	pg/g	☼	08/04/21 07:15	08/14/21 22:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,7,8-PeCDD	*100*		*25 - 181*	*08/04/21 07:15*	*08/14/21 22:01*	*1*
13C-1,2,3,7,8-PeCDF	*84*		*24 - 185*	*08/04/21 07:15*	*08/14/21 22:01*	*1*
13C-2,3,4,7,8-PeCDF	*96*		*21 - 178*	*08/04/21 07:15*	*08/14/21 22:01*	*1*
13C-1,2,3,4,7,8-HxCDD	*66*		*32 - 141*	*08/04/21 07:15*	*08/14/21 22:01*	*1*
13C-1,2,3,6,7,8-HxCDD	*63*		*28 - 130*	*08/04/21 07:15*	*08/14/21 22:01*	*1*
13C-1,2,3,4,7,8-HxCDF	*72*		*26 - 152*	*08/04/21 07:15*	*08/14/21 22:01*	*1*
13C-1,2,3,6,7,8-HxCDF	*63*		*26 - 123*	*08/04/21 07:15*	*08/14/21 22:01*	*1*
13C-1,2,3,7,8,9-HxCDF	*63*		*29 - 147*	*08/04/21 07:15*	*08/14/21 22:01*	*1*
13C-2,3,4,6,7,8-HxCDF	*63*		*28 - 136*	*08/04/21 07:15*	*08/14/21 22:01*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*70*		*23 - 140*	*08/04/21 07:15*	*08/14/21 22:01*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*64*		*28 - 143*	*08/04/21 07:15*	*08/14/21 22:01*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*77*		*26 - 138*	*08/04/21 07:15*	*08/14/21 22:01*	*1*
13C-OCDD	*82*		*17 - 157*	*08/04/21 07:15*	*08/14/21 22:01*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*75*		*35 - 197*	*08/04/21 07:15*	*08/14/21 22:01*	*1*

Client Sample ID: 11215702-072321-BN-SJSB085 (0-2) Lab Sample ID: 320-76788-1

Date Collected: 07/23/21 11:00 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 40.9**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	31000	G E B	74	74	pg/g	☼	08/04/21 07:15	08/18/21 05:14	5
Total TCDD	34000	G B	74	74	pg/g	☼	08/04/21 07:15	08/18/21 05:14	5
Total TCDF	170000	G B	250	250	pg/g	☼	08/04/21 07:15	08/18/21 05:14	5

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*60*		*25 - 164*	*08/04/21 07:15*	*08/18/21 05:14*	*5*
13C-2,3,7,8-TCDF	*66*		*24 - 169*	*08/04/21 07:15*	*08/18/21 05:14*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*119*		*35 - 197*	*08/04/21 07:15*	*08/18/21 05:14*	*5*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RADL

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	98000	E B G	89	89	pg/g	☼	08/04/21 07:15	08/25/21 20:00	5

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*50*		*24 - 169*	*08/04/21 07:15*	*08/25/21 20:00*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*91*		*35 - 197*	*08/04/21 07:15*	*08/25/21 20:00*	*5*

Client Sample ID: 11215702-072321-BN-SJSB085 (2-4) Lab Sample ID: 320-76788-2

Date Collected: 07/23/21 11:05 **Matrix: Solid**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	38.7		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	61.3		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB085 (2-4) Lab Sample ID: 320-76788-2

Date Collected: 07/23/21 11:05 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 61.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	530	G B	1.9	1.9	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
1,2,3,7,8-PeCDD	4.4	J	8.3	0.15	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
1,2,3,7,8-PeCDF	45		8.3	0.33	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
2,3,4,7,8-PeCDF	26		8.3	0.33	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
1,2,3,4,7,8-HxCDD	0.82	J B	8.3	0.15	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
1,2,3,6,7,8-HxCDD	1.7	J	8.3	0.16	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
1,2,3,7,8,9-HxCDD	2.8	J	8.3	0.14	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
1,2,3,4,7,8-HxCDF	54	B	8.3	0.27	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
1,2,3,6,7,8-HxCDF	14	B	8.3	0.28	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
1,2,3,7,8,9-HxCDF	1.1	J B	8.3	0.21	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
2,3,4,6,7,8-HxCDF	1.8	J	8.3	0.22	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
1,2,3,4,6,7,8-HpCDD	59	B	8.3	0.83	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
1,2,3,4,6,7,8-HpCDF	16	B	8.3	0.15	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
1,2,3,4,7,8,9-HpCDF	5.4	J B	8.3	0.18	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
OCDD	1600	B	17	1.9	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
OCDF	13	J B	17	0.040	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
Total TCDD	580	G B	1.9	1.9	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1

Client Sample ID: 11215702-072321-BN-SJSB085 (2-4) Lab Sample ID: 320-76788-2

Date Collected: 07/23/21 11:05 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 61.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	2900	G B	4.0	4.0	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
Total PeCDD	9.1	q	8.3	0.15	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
Total PeCDF	110	q	8.3	0.33	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
Total HxCDD	27	q B	8.3	0.15	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
Total HxCDF	82	B	8.3	0.25	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
Total HpCDD	150	B	8.3	0.83	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1
Total HpCDF	27	B	8.3	0.17	pg/g	☼	08/04/21 07:15	08/14/21 05:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*64*		*25 - 164*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-2,3,7,8-TCDF	*62*		*24 - 169*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-1,2,3,7,8-PeCDD	*62*		*25 - 181*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-1,2,3,7,8-PeCDF	*61*		*24 - 185*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-2,3,4,7,8-PeCDF	*66*		*21 - 178*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-1,2,3,4,7,8-HxCDD	*68*		*32 - 141*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-1,2,3,6,7,8-HxCDD	*59*		*28 - 130*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-1,2,3,4,7,8-HxCDF	*66*		*26 - 152*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-1,2,3,6,7,8-HxCDF	*57*		*26 - 123*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-1,2,3,7,8,9-HxCDF	*60*		*29 - 147*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-2,3,4,6,7,8-HxCDF	*58*		*28 - 136*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*63*		*23 - 140*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*61*		*28 - 143*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*71*		*26 - 138*	*08/04/21 07:15*	*08/14/21 05:11*	*1*
13C-OCDD	*70*		*17 - 157*	*08/04/21 07:15*	*08/14/21 05:11*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*82*		*35 - 197*	*08/04/21 07:15*	*08/14/21 05:11*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	1700	G E B	2.2	2.2	pg/g	☼	08/04/21 07:15	08/25/21 02:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*67*		*24 - 169*	*08/04/21 07:15*	*08/25/21 02:12*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*80*		*35 - 197*	*08/04/21 07:15*	*08/25/21 02:12*	*1*

Client Sample ID: 11215702-072321-BN-SJSB085 (4-6) Lab Sample ID: 320-76788-3

Date Collected: 07/23/21 11:10 **Matrix: Solid**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20.2		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	79.8		0.1	0.1	%			07/29/21 12:04	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (4-6)

Date Collected: 07/23/21 11:10
Date Received: 07/27/21 09:45

Lab Sample ID: 320-76788-3

Matrix: Solid
Percent Solids: 79.8

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	19	B	1.2	0.12	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
1,2,3,7,8-PeCDD	0.21	J q	5.9	0.081	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
1,2,3,7,8-PeCDF	1.5	J	5.9	0.044	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
2,3,4,7,8-PeCDF	0.97	J	5.9	0.045	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
1,2,3,4,7,8-HxCDD	0.44	J B	5.9	0.15	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
1,2,3,6,7,8-HxCDD	0.68	J	5.9	0.16	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
1,2,3,7,8,9-HxCDD	1.5	J	5.9	0.14	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
1,2,3,4,7,8-HxCDF	2.0	J B	5.9	0.032	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
1,2,3,6,7,8-HxCDF	0.59	J B	5.9	0.033	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
1,2,3,7,8,9-HxCDF	0.12	J B	5.9	0.026	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
2,3,4,6,7,8-HxCDF	0.092	J	5.9	0.025	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
1,2,3,4,6,7,8-HpCDD	34	B	5.9	0.74	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
1,2,3,4,6,7,8-HpCDF	0.64	J B q	5.9	0.031	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
1,2,3,4,7,8,9-HpCDF	0.20	J B	5.9	0.038	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
OCDD	1000	B	12	1.1	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
OCDF	0.88	J B	12	0.025	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
Total TCDD	24	B q	1.2	0.12	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
Total TCDF	120	B	1.2	0.23	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
Total PeCDD	6.0	q	5.9	0.081	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
Total PeCDF	3.7	J q	5.9	0.045	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
Total HxCDD	28	B q	5.9	0.15	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
Total HxCDF	3.1	J B q	5.9	0.029	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
Total HpCDD	110	B	5.9	0.74	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1
Total HpCDF	1.0	J B q	5.9	0.034	pg/g	☼	08/04/21 07:15	08/14/21 05:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*68*		*25 - 164*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-2,3,7,8-TCDF	*67*		*24 - 169*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-1,2,3,7,8-PeCDD	*66*		*25 - 181*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-1,2,3,7,8-PeCDF	*64*		*24 - 185*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-2,3,4,7,8-PeCDF	*69*		*21 - 178*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-1,2,3,4,7,8-HxCDD	*68*		*32 - 141*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*64*		*28 - 130*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*69*		*26 - 152*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-1,2,3,6,7,8-HxCDF	*62*		*26 - 123*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-1,2,3,7,8,9-HxCDF	*64*		*29 - 147*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-2,3,4,6,7,8-HxCDF	*63*		*28 - 136*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*70*		*23 - 140*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*68*		*28 - 143*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*78*		*26 - 138*	*08/04/21 07:15*	*08/14/21 05:56*	*1*
13C-OCDD	*77*		*17 - 157*	*08/04/21 07:15*	*08/14/21 05:56*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*83*		*35 - 197*	*08/04/21 07:15*	*08/14/21 05:56*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	65	B	1.2	0.26	pg/g	☼	08/04/21 07:15	08/24/21 21:43	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*73*		*24 - 169*	*08/04/21 07:15*	*08/24/21 21:43*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (4-6)

Lab Sample ID: 320-76788-3
Date Collected: 07/23/21 11:10
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 79.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	85		35 - 197	08/04/21 07:15	08/24/21 21:43	1

Client Sample ID: 11215702-072321-BN-SJSB085 (6-8)

Lab Sample ID: 320-76788-4
Date Collected: 07/23/21 11:15
Matrix: Solid
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	29.9		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	70.1		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB085 (6-8)

Lab Sample ID: 320-76788-4
Date Collected: 07/23/21 11:15
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 70.1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	31	B	1.4	0.20	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
1,2,3,7,8-PeCDD	0.49	J	7.1	0.10	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
1,2,3,7,8-PeCDF	2.5	J	7.1	0.056	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
2,3,4,7,8-PeCDF	1.6	J	7.1	0.056	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
1,2,3,4,7,8-HxCDD	0.68	J B	7.1	0.22	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
1,2,3,6,7,8-HxCDD	1.5	J	7.1	0.23	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
1,2,3,7,8,9-HxCDD	3.1	J	7.1	0.20	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
1,2,3,4,7,8-HxCDF	3.5	J B	7.1	0.054	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
1,2,3,6,7,8-HxCDF	1.0	J B	7.1	0.056	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
1,2,3,7,8,9-HxCDF	ND		7.1	0.044	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
2,3,4,6,7,8-HxCDF	0.12	J q	7.1	0.044	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
1,2,3,4,6,7,8-HpCDD	72	B	7.1	1.3	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
1,2,3,4,6,7,8-HpCDF	1.3	J B	7.1	0.039	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
1,2,3,4,7,8,9-HpCDF	0.40	J B q	7.1	0.048	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
OCDD	2500	B	14	2.6	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
OCDF	2.5	J B	14	0.034	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
Total TCDD	38	B	1.4	0.20	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
Total TCDF	180	B q	1.4	0.35	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
Total PeCDD	8.7	q	7.1	0.10	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
Total PeCDF	6.4	J	7.1	0.056	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
Total HxCDD	45	B q	7.1	0.22	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
Total HxCDF	5.2	J B q	7.1	0.050	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
Total HpCDD	200	B	7.1	1.3	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1
Total HpCDF	2.2	J B q	7.1	0.044	pg/g	☼	08/04/21 07:15	08/14/21 06:41	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	60		25 - 164	08/04/21 07:15	08/14/21 06:41	1
13C-2,3,7,8-TCDF	59		24 - 169	08/04/21 07:15	08/14/21 06:41	1
13C-1,2,3,7,8-PeCDD	58		25 - 181	08/04/21 07:15	08/14/21 06:41	1
13C-1,2,3,7,8-PeCDF	56		24 - 185	08/04/21 07:15	08/14/21 06:41	1
13C-2,3,4,7,8-PeCDF	61		21 - 178	08/04/21 07:15	08/14/21 06:41	1
13C-1,2,3,4,7,8-HxCDD	61		32 - 141	08/04/21 07:15	08/14/21 06:41	1
13C-1,2,3,6,7,8-HxCDD	54		28 - 130	08/04/21 07:15	08/14/21 06:41	1
13C-1,2,3,4,7,8-HxCDF	60		26 - 152	08/04/21 07:15	08/14/21 06:41	1
13C-1,2,3,6,7,8-HxCDF	54		26 - 123	08/04/21 07:15	08/14/21 06:41	1

Client Sample ID: 11215702-072321-BN-SJSB085 (6-8) Lab Sample ID: 320-76788-4

Date Collected: 07/23/21 11:15 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 70.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	55		29 - 147	08/04/21 07:15	08/14/21 06:41	1
13C-2,3,4,6,7,8-HxCDF	54		28 - 136	08/04/21 07:15	08/14/21 06:41	1
13C-1,2,3,4,6,7,8-HpCDD	60		23 - 140	08/04/21 07:15	08/14/21 06:41	1
13C-1,2,3,4,6,7,8-HpCDF	57		28 - 143	08/04/21 07:15	08/14/21 06:41	1
13C-1,2,3,4,7,8,9-HpCDF	67		26 - 138	08/04/21 07:15	08/14/21 06:41	1
13C-OCDD	64		17 - 157	08/04/21 07:15	08/14/21 06:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	74		35 - 197	08/04/21 07:15	08/14/21 06:41	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	97	B	1.4	0.33	pg/g	☼	08/04/21 07:15	08/24/21 22:22	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	63		24 - 169	08/04/21 07:15	08/24/21 22:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	73		35 - 197	08/04/21 07:15	08/24/21 22:22	1

Client Sample ID: 11215702-072321-BN-SJSB085 (8-10) Lab Sample ID: 320-76788-5

Date Collected: 07/23/21 11:20 **Matrix: Solid**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24.3		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	75.7		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB085 (8-10) Lab Sample ID: 320-76788-5

Date Collected: 07/23/21 11:20 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 75.7**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	18	B	1.4	0.13	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
1,2,3,7,8-PeCDD	0.27	J	6.8	0.060	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
1,2,3,7,8-PeCDF	1.7	J	6.8	0.034	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
2,3,4,7,8-PeCDF	0.95	J	6.8	0.036	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
1,2,3,4,7,8-HxCDD	0.42	J B	6.8	0.11	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
1,2,3,6,7,8-HxCDD	0.53	J	6.8	0.12	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
1,2,3,7,8,9-HxCDD	0.98	J q	6.8	0.11	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
1,2,3,4,7,8-HxCDF	2.5	J B	6.8	0.030	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
1,2,3,6,7,8-HxCDF	0.77	J B	6.8	0.031	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
1,2,3,7,8,9-HxCDF	0.12	J B	6.8	0.024	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
2,3,4,6,7,8-HxCDF	0.090	J	6.8	0.025	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
1,2,3,4,6,7,8-HpCDD	24	B	6.8	0.53	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
1,2,3,4,6,7,8-HpCDF	1.0	J B	6.8	0.028	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
1,2,3,4,7,8,9-HpCDF	0.26	J B	6.8	0.035	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
OCDD	750	B	14	0.89	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
OCDF	1.1	J B	14	0.022	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
Total TCDD	23	B q	1.4	0.13	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1

Client Sample ID: 11215702-072321-BN-SJSB085 (8-10) Lab Sample ID: 320-76788-5

Date Collected: 07/23/21 11:20 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 75.7**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	100	B	1.4	0.19	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
Total PeCDD	4.1	J q	6.8	0.060	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
Total PeCDF	4.1	J q	6.8	0.035	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
Total HxCDD	19	B q	6.8	0.11	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
Total HxCDF	3.9	J B q	6.8	0.028	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
Total HpCDD	79	B	6.8	0.53	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1
Total HpCDF	1.5	J B	6.8	0.031	pg/g	☼	08/04/21 07:15	08/14/21 07:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*78*		*25 - 164*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-2,3,7,8-TCDF	*75*		*24 - 169*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-1,2,3,7,8-PeCDD	*76*		*25 - 181*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-1,2,3,7,8-PeCDF	*73*		*24 - 185*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-2,3,4,7,8-PeCDF	*79*		*21 - 178*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-1,2,3,4,7,8-HxCDD	*80*		*32 - 141*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-1,2,3,6,7,8-HxCDD	*71*		*28 - 130*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-1,2,3,4,7,8-HxCDF	*79*		*26 - 152*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-1,2,3,6,7,8-HxCDF	*70*		*26 - 123*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-1,2,3,7,8,9-HxCDF	*72*		*29 - 147*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-2,3,4,6,7,8-HxCDF	*71*		*28 - 136*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*80*		*23 - 140*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*79*		*28 - 143*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*90*		*26 - 138*	*08/04/21 07:15*	*08/14/21 07:26*	*1*
13C-OCDD	*88*		*17 - 157*	*08/04/21 07:15*	*08/14/21 07:26*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*81*		*35 - 197*	*08/04/21 07:15*	*08/14/21 07:26*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	55	B	1.4	0.19	pg/g	☼	08/04/21 07:15	08/24/21 23:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*83*		*24 - 169*	*08/04/21 07:15*	*08/24/21 23:00*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*80*		*35 - 197*	*08/04/21 07:15*	*08/24/21 23:00*	*1*

Client Sample ID: 11215702-072321-BN-SJSB085 (10-12) Lab Sample ID: 320-76788-6

Date Collected: 07/23/21 11:25 **Matrix: Solid**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	41.6		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	58.4		0.1	0.1	%			07/29/21 12:04	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (10-12)

Lab Sample ID: 320-76788-6

Date Collected: 07/23/21 11:25
Date Received: 07/27/21 09:45

Matrix: Solid
Percent Solids: 58.4

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	1.5	J B	1.7	0.078	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
1,2,3,7,8-PeCDD	0.35	J	8.6	0.14	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
1,2,3,7,8-PeCDF	0.17	J	8.6	0.044	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
2,3,4,7,8-PeCDF	0.083	J q	8.6	0.045	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
1,2,3,4,7,8-HxCDD	1.1	J B	8.6	0.38	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
1,2,3,6,7,8-HxCDD	1.7	J	8.6	0.39	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
1,2,3,7,8,9-HxCDD	3.8	J	8.6	0.35	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
1,2,3,4,7,8-HxCDF	0.28	J B	8.6	0.041	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
1,2,3,6,7,8-HxCDF	0.11	J B	8.6	0.042	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
1,2,3,7,8,9-HxCDF	0.20	J B	8.6	0.034	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
2,3,4,6,7,8-HxCDF	ND		8.6	0.033	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
1,2,3,4,6,7,8-HpCDD	82	B	8.6	1.4	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
1,2,3,4,6,7,8-HpCDF	0.24	J B	8.6	0.041	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
1,2,3,4,7,8,9-HpCDF	ND		8.6	0.048	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
OCDD	2100	B	17	2.3	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
OCDF	0.66	J B	17	0.036	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
Total TCDD	7.0	B q	1.7	0.078	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
Total TCDF	5.4	B q	1.7	0.036	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
Total PeCDD	11	q	8.6	0.14	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
Total PeCDF	0.35	J q	8.6	0.045	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
Total HxCDD	57	B	8.6	0.38	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
Total HxCDF	0.59	J B	8.6	0.037	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
Total HpCDD	240	B	8.6	1.4	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1
Total HpCDF	0.24	J B	8.6	0.044	pg/g	☼	08/04/21 07:15	08/14/21 08:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*57*		*25 - 164*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-2,3,7,8-TCDF	*55*		*24 - 169*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-1,2,3,7,8-PeCDD	*55*		*25 - 181*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-1,2,3,7,8-PeCDF	*53*		*24 - 185*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-2,3,4,7,8-PeCDF	*57*		*21 - 178*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-1,2,3,4,7,8-HxCDD	*57*		*32 - 141*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-1,2,3,6,7,8-HxCDD	*53*		*28 - 130*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-1,2,3,4,7,8-HxCDF	*56*		*26 - 152*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-1,2,3,6,7,8-HxCDF	*52*		*26 - 123*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-1,2,3,7,8,9-HxCDF	*51*		*29 - 147*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-2,3,4,6,7,8-HxCDF	*52*		*28 - 136*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*58*		*23 - 140*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*56*		*28 - 143*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*64*		*26 - 138*	*08/04/21 07:15*	*08/14/21 08:11*	*1*
13C-OCDD	*62*		*17 - 157*	*08/04/21 07:15*	*08/14/21 08:11*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*78*		*35 - 197*	*08/04/21 07:15*	*08/14/21 08:11*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	3.4	B	1.7	0.20	pg/g	☼	08/04/21 07:15	08/24/21 18:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*60*		*24 - 169*	*08/04/21 07:15*	*08/24/21 18:32*	*1*

Client Sample ID: 11215702-072321-BN-SJSB085 (10-12) Lab Sample ID: 320-76788-6

Date Collected: 07/23/21 11:25 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 58.4**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	78		35 - 197	08/04/21 07:15	08/24/21 18:32	1

Client Sample ID: 11215702-072321-BN-SJSB085 (12-14) Lab Sample ID: 320-76788-7

Date Collected: 07/23/21 11:30 **Matrix: Solid**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	35.2		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	64.8		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB085 (12-14) Lab Sample ID: 320-76788-7

Date Collected: 07/23/21 11:30 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 64.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	3.6	B	1.6	0.093	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
1,2,3,7,8-PeCDD	0.29	J	7.8	0.13	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
1,2,3,7,8-PeCDF	0.30	J q	7.8	0.038	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
2,3,4,7,8-PeCDF	0.14	J q	7.8	0.038	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
1,2,3,4,7,8-HxCDD	0.87	J B	7.8	0.21	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
1,2,3,6,7,8-HxCDD	1.9	J	7.8	0.22	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
1,2,3,7,8,9-HxCDD	3.6	J	7.8	0.20	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
1,2,3,4,7,8-HxCDF	0.37	J B	7.8	0.033	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
1,2,3,6,7,8-HxCDF	0.12	J B q	7.8	0.034	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
1,2,3,7,8,9-HxCDF	0.12	J B	7.8	0.026	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
2,3,4,6,7,8-HxCDF	ND		7.8	0.026	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
1,2,3,4,6,7,8-HpCDD	73	B	7.8	1.3	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
1,2,3,4,6,7,8-HpCDF	0.20	J B	7.8	0.032	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
1,2,3,4,7,8,9-HpCDF	0.078	J B	7.8	0.040	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
OCDD	1700	B	16	1.8	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
OCDF	0.64	J B	16	0.029	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
Total TCDD	9.8	B q	1.6	0.093	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
Total TCDF	21	B	1.6	0.062	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
Total PeCDD	9.7	q	7.8	0.13	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
Total PeCDF	0.69	J q	7.8	0.038	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
Total HxCDD	47	B q	7.8	0.21	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
Total HxCDF	0.62	J B q	7.8	0.030	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
Total HpCDD	200	B	7.8	1.3	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1
Total HpCDF	0.27	J B	7.8	0.036	pg/g	☼	08/04/21 07:15	08/14/21 08:56	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	59		25 - 164	08/04/21 07:15	08/14/21 08:56	1
13C-2,3,7,8-TCDF	58		24 - 169	08/04/21 07:15	08/14/21 08:56	1
13C-1,2,3,7,8-PeCDD	58		25 - 181	08/04/21 07:15	08/14/21 08:56	1
13C-1,2,3,7,8-PeCDF	56		24 - 185	08/04/21 07:15	08/14/21 08:56	1
13C-2,3,4,7,8-PeCDF	61		21 - 178	08/04/21 07:15	08/14/21 08:56	1
13C-1,2,3,4,7,8-HxCDD	62		32 - 141	08/04/21 07:15	08/14/21 08:56	1
13C-1,2,3,6,7,8-HxCDD	55		28 - 130	08/04/21 07:15	08/14/21 08:56	1
13C-1,2,3,4,7,8-HxCDF	60		26 - 152	08/04/21 07:15	08/14/21 08:56	1
13C-1,2,3,6,7,8-HxCDF	54		26 - 123	08/04/21 07:15	08/14/21 08:56	1

Client Sample ID: 11215702-072321-BN-SJSB085 (12-14) Lab Sample ID: 320-76788-7

Date Collected: 07/23/21 11:30 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 64.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	55		29 - 147	08/04/21 07:15	08/14/21 08:56	1
13C-2,3,4,6,7,8-HxCDF	55		28 - 136	08/04/21 07:15	08/14/21 08:56	1
13C-1,2,3,4,6,7,8-HpCDD	61		23 - 140	08/04/21 07:15	08/14/21 08:56	1
13C-1,2,3,4,6,7,8-HpCDF	59		28 - 143	08/04/21 07:15	08/14/21 08:56	1
13C-1,2,3,4,7,8,9-HpCDF	69		26 - 138	08/04/21 07:15	08/14/21 08:56	1
13C-OCDD	66		17 - 157	08/04/21 07:15	08/14/21 08:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	78		35 - 197	08/04/21 07:15	08/14/21 08:56	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	12	B	1.6	0.22	pg/g	☼	08/04/21 07:15	08/24/21 19:10	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	61		24 - 169	08/04/21 07:15	08/24/21 19:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	78		35 - 197	08/04/21 07:15	08/24/21 19:10	1

Client Sample ID: 11215702-072321-BN-SJSB085 (14-16) Lab Sample ID: 320-76788-8

Date Collected: 07/23/21 11:35 **Matrix: Solid**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	39.2		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	60.8		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB085 (14-16) Lab Sample ID: 320-76788-8

Date Collected: 07/23/21 11:35 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 60.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	6.3	B	1.7	0.11	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
1,2,3,7,8-PeCDD	0.37	J	8.4	0.13	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
1,2,3,7,8-PeCDF	0.70	J	8.4	0.048	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
2,3,4,7,8-PeCDF	0.33	J q	8.4	0.049	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
1,2,3,4,7,8-HxCDD	0.73	J B	8.4	0.30	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
1,2,3,6,7,8-HxCDD	1.6	J q	8.4	0.30	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
1,2,3,7,8,9-HxCDD	3.6	J	8.4	0.27	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
1,2,3,4,7,8-HxCDF	0.86	J B	8.4	0.047	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
1,2,3,6,7,8-HxCDF	0.26	J B	8.4	0.047	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
1,2,3,7,8,9-HxCDF	0.16	J B	8.4	0.040	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
2,3,4,6,7,8-HxCDF	0.10	J	8.4	0.039	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
1,2,3,4,6,7,8-HpCDD	66	B	8.4	1.5	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
1,2,3,4,6,7,8-HpCDF	0.85	J B	8.4	0.053	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
1,2,3,4,7,8,9-HpCDF	0.20	J B q	8.4	0.067	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
OCDD	1600	B	17	2.1	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
OCDF	1.8	J B	17	0.032	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
Total TCDD	13	B q	1.7	0.11	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1

Client Sample ID: 11215702-072321-BN-SJSB085 (14-16) Lab Sample ID: 320-76788-8

Date Collected: 07/23/21 11:35 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 60.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	38	B	1.7	0.12	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
Total PeCDD	9.3	q	8.4	0.13	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
Total PeCDF	1.5	J q	8.4	0.048	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
Total HxCDD	46	B q	8.4	0.29	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
Total HxCDF	1.4	J B	8.4	0.043	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
Total HpCDD	190	B	8.4	1.5	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1
Total HpCDF	1.1	J B q	8.4	0.060	pg/g	☼	08/04/21 07:15	08/14/21 14:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*63*		*25 - 164*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-2,3,7,8-TCDF	*61*		*24 - 169*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-1,2,3,7,8-PeCDD	*62*		*25 - 181*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-1,2,3,7,8-PeCDF	*59*		*24 - 185*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-2,3,4,7,8-PeCDF	*64*		*21 - 178*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-1,2,3,4,7,8-HxCDD	*63*		*32 - 141*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-1,2,3,6,7,8-HxCDD	*62*		*28 - 130*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-1,2,3,4,7,8-HxCDF	*64*		*26 - 152*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-1,2,3,6,7,8-HxCDF	*59*		*26 - 123*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-1,2,3,7,8,9-HxCDF	*58*		*29 - 147*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-2,3,4,6,7,8-HxCDF	*58*		*28 - 136*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*70*		*23 - 140*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*70*		*28 - 143*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*76*		*26 - 138*	*08/04/21 07:15*	*08/14/21 14:31*	*1*
13C-OCDD	*79*		*17 - 157*	*08/04/21 07:15*	*08/14/21 14:31*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*78*		*35 - 197*	*08/04/21 07:15*	*08/14/21 14:31*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	21	B	1.7	0.25	pg/g	☼	08/04/21 07:15	08/24/21 19:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*69*		*24 - 169*	*08/04/21 07:15*	*08/24/21 19:48*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*85*		*35 - 197*	*08/04/21 07:15*	*08/24/21 19:48*	*1*

Client Sample ID: 11215702-072321-BN-SJSB105 (0-2) Lab Sample ID: 320-76788-13

Date Collected: 07/23/21 15:30 **Matrix: Solid**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	49.8		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	50.2		0.1	0.1	%			07/29/21 12:04	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (0-2)

Date Collected: 07/23/21 15:30
Date Received: 07/27/21 09:45

Lab Sample ID: 320-76788-13

Matrix: Solid
Percent Solids: 50.2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8-PeCDD	240		9.8	3.3	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
1,2,3,7,8-PeCDF	2000	G	17	17	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
2,3,4,7,8-PeCDF	1400	G	14	14	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
1,2,3,4,7,8-HxCDD	3.0	J B q	9.8	0.39	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
1,2,3,6,7,8-HxCDD	11		9.8	0.39	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
1,2,3,7,8,9-HxCDD	6.7	J q	9.8	0.36	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
1,2,3,4,7,8-HxCDF	2500	B	9.8	8.5	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
1,2,3,6,7,8-HxCDF	710	B	9.8	7.9	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
1,2,3,7,8,9-HxCDF	40	B	9.8	7.9	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
2,3,4,6,7,8-HxCDF	80		9.8	8.0	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
1,2,3,4,6,7,8-HpCDD	180	B	9.8	2.4	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
1,2,3,4,6,7,8-HpCDF	800	B	9.8	6.8	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
1,2,3,4,7,8,9-HpCDF	240	B	9.8	7.5	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
OCDD	3200	B	20	6.3	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
OCDF	470	B	20	0.69	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
Total PeCDD	260	q	9.8	3.3	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
Total PeCDF	5400	G	16	16	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
Total HxCDD	110	B q	9.8	0.38	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
Total HxCDF	3700	B	9.8	8.1	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
Total HpCDD	420	B	9.8	2.4	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1
Total HpCDF	1200	B	9.8	7.2	pg/g	☼	08/04/21 07:15	08/14/21 16:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,7,8-PeCDD	*79*		*25 - 181*	*08/04/21 07:15*	*08/14/21 16:01*	*1*
13C-1,2,3,7,8-PeCDF	*70*		*24 - 185*	*08/04/21 07:15*	*08/14/21 16:01*	*1*
13C-2,3,4,7,8-PeCDF	*74*		*21 - 178*	*08/04/21 07:15*	*08/14/21 16:01*	*1*
13C-1,2,3,4,7,8-HxCDD	*58*		*32 - 141*	*08/04/21 07:15*	*08/14/21 16:01*	*1*
13C-1,2,3,6,7,8-HxCDD	*57*		*28 - 130*	*08/04/21 07:15*	*08/14/21 16:01*	*1*
13C-1,2,3,4,7,8-HxCDF	*70*		*26 - 152*	*08/04/21 07:15*	*08/14/21 16:01*	*1*
13C-1,2,3,6,7,8-HxCDF	*63*		*26 - 123*	*08/04/21 07:15*	*08/14/21 16:01*	*1*
13C-1,2,3,7,8,9-HxCDF	*52*		*29 - 147*	*08/04/21 07:15*	*08/14/21 16:01*	*1*
13C-2,3,4,6,7,8-HxCDF	*56*		*28 - 136*	*08/04/21 07:15*	*08/14/21 16:01*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*61*		*23 - 140*	*08/04/21 07:15*	*08/14/21 16:01*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*52*		*28 - 143*	*08/04/21 07:15*	*08/14/21 16:01*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*63*		*26 - 138*	*08/04/21 07:15*	*08/14/21 16:01*	*1*
13C-OCDD	*75*		*17 - 157*	*08/04/21 07:15*	*08/14/21 16:01*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*116*		*35 - 197*	*08/04/21 07:15*	*08/14/21 16:01*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	27000	G E B	67	67	pg/g	☼	08/04/21 07:15	08/18/21 05:59	5
Total TCDD	30000	G B	67	67	pg/g	☼	08/04/21 07:15	08/18/21 05:59	5
Total TCDF	160000	G B	230	230	pg/g	☼	08/04/21 07:15	08/18/21 05:59	5

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*54*		*25 - 164*	*08/04/21 07:15*	*08/18/21 05:59*	*5*
13C-2,3,7,8-TCDF	*60*		*24 - 169*	*08/04/21 07:15*	*08/18/21 05:59*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*110*		*35 - 197*	*08/04/21 07:15*	*08/18/21 05:59*	*5*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (0-2)

Lab Sample ID: 320-76788-13
Date Collected: 07/23/21 15:30
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 50.2

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RADL

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	83000	E B G	73	73	pg/g	☼	08/04/21 07:15	08/25/21 20:38	5

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*33*		*24 - 169*	*08/04/21 07:15*	*08/25/21 20:38*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*49*		*35 - 197*	*08/04/21 07:15*	*08/25/21 20:38*	*5*

Client Sample ID: 11215702-072321-BN-SJSB105 (2-4)

Lab Sample ID: 320-76788-14
Date Collected: 07/23/21 15:35
Matrix: Solid
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	48.0		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	52.0		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB105 (2-4)

Lab Sample ID: 320-76788-14
Date Collected: 07/23/21 15:35
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 52.0

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8-PeCDD	300		9.5	3.8	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
1,2,3,7,8-PeCDF	2600	G	24	24	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
2,3,4,7,8-PeCDF	1900	G	17	17	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
1,2,3,4,7,8-HxCDD	3.4	J B	9.5	0.24	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
1,2,3,6,7,8-HxCDD	8.4	J	9.5	0.23	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
1,2,3,7,8,9-HxCDD	5.1	J	9.5	0.22	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
1,2,3,6,7,8-HxCDF	1100	G B	11	11	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
1,2,3,7,8,9-HxCDF	54	G q B	10	10	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
2,3,4,6,7,8-HxCDF	110	G	11	11	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
1,2,3,4,6,7,8-HpCDD	110	B	9.5	1.0	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
1,2,3,4,6,7,8-HpCDF	1200	B	9.5	4.8	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
1,2,3,4,7,8,9-HpCDF	440	B	9.5	4.9	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
OCDD	1600	B	19	1.4	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
OCDF	480	B	19	0.41	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
Total PeCDD	320	q	9.5	3.8	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
Total PeCDF	6800	G q	21	21	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
Total HxCDD	59	B	9.5	0.23	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
Total HxCDF	6000	G q B	11	11	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
Total HpCDD	230	B	9.5	1.0	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1
Total HpCDF	1900	B	9.5	4.9	pg/g	☼	08/04/21 07:15	08/14/21 22:46	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,7,8-PeCDD	*97*		*25 - 181*	*08/04/21 07:15*	*08/14/21 22:46*	*1*
13C-1,2,3,7,8-PeCDF	*77*		*24 - 185*	*08/04/21 07:15*	*08/14/21 22:46*	*1*
13C-2,3,4,7,8-PeCDF	*87*		*21 - 178*	*08/04/21 07:15*	*08/14/21 22:46*	*1*
13C-1,2,3,4,7,8-HxCDD	*58*		*32 - 141*	*08/04/21 07:15*	*08/14/21 22:46*	*1*
13C-1,2,3,6,7,8-HxCDD	*55*		*28 - 130*	*08/04/21 07:15*	*08/14/21 22:46*	*1*
13C-1,2,3,4,7,8-HxCDF	*66*		*26 - 152*	*08/04/21 07:15*	*08/14/21 22:46*	*1*
13C-1,2,3,6,7,8-HxCDF	*59*		*26 - 123*	*08/04/21 07:15*	*08/14/21 22:46*	*1*

Client Sample ID: 11215702-072321-BN-SJSB105 (2-4) Lab Sample ID: 320-76788-14

Date Collected: 07/23/21 15:35 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 52.0**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	55		29 - 147	08/04/21 07:15	08/14/21 22:46	1
13C-2,3,4,6,7,8-HxCDF	59		28 - 136	08/04/21 07:15	08/14/21 22:46	1
13C-1,2,3,4,6,7,8-HpCDD	65		23 - 140	08/04/21 07:15	08/14/21 22:46	1
13C-1,2,3,4,6,7,8-HpCDF	58		28 - 143	08/04/21 07:15	08/14/21 22:46	1
13C-1,2,3,4,7,8,9-HpCDF	70		26 - 138	08/04/21 07:15	08/14/21 22:46	1
13C-OCDD	76		17 - 157	08/04/21 07:15	08/14/21 22:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	71		35 - 197	08/04/21 07:15	08/14/21 22:46	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	33000	G E B	69	69	pg/g	☼	08/04/21 07:15	08/18/21 06:44	5
1,2,3,4,7,8-HxCDF	4200	B	47	23	pg/g	☼	08/04/21 07:15	08/18/21 06:44	5
Total TCDD	37000	G B	69	69	pg/g	☼	08/04/21 07:15	08/18/21 06:44	5
Total TCDF	210000	G B	320	320	pg/g	☼	08/04/21 07:15	08/18/21 06:44	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	49	q	25 - 164	08/04/21 07:15	08/18/21 06:44	5
13C-2,3,7,8-TCDF	61		24 - 169	08/04/21 07:15	08/18/21 06:44	5
13C-1,2,3,4,7,8-HxCDF	66		26 - 152	08/04/21 07:15	08/18/21 06:44	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	125		35 - 197	08/04/21 07:15	08/18/21 06:44	5

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RADL

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	130000	E B G	88	88	pg/g	☼	08/04/21 07:15	08/25/21 21:17	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	45		24 - 169	08/04/21 07:15	08/25/21 21:17	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	96		35 - 197	08/04/21 07:15	08/25/21 21:17	5

Client Sample ID: 11215702-072321-BN-SJSB105 (4-6) Lab Sample ID: 320-76788-15

Date Collected: 07/23/21 15:40 **Matrix: Solid**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	30.6		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	69.4		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB105 (4-6) Lab Sample ID: 320-76788-15

Date Collected: 07/23/21 15:40 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 69.4**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	170	B	1.4	0.74	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
1,2,3,7,8-PeCDD	1.9	J	7.0	0.16	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
1,2,3,7,8-PeCDF	12		7.0	0.20	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1

Client Sample ID: 11215702-072321-BN-SJSB105 (4-6) Lab Sample ID: 320-76788-15

Date Collected: 07/23/21 15:40 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 69.4**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,7,8-PeCDF	9.2		7.0	0.20	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
1,2,3,4,7,8-HxCDD	0.54	J B q	7.0	0.27	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
1,2,3,6,7,8-HxCDD	0.90	J	7.0	0.27	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
1,2,3,7,8,9-HxCDD	2.1	J	7.0	0.25	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
1,2,3,4,7,8-HxCDF	17	B	7.0	0.18	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
1,2,3,6,7,8-HxCDF	5.2	J B	7.0	0.18	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
1,2,3,7,8,9-HxCDF	0.38	J B	7.0	0.14	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
2,3,4,6,7,8-HxCDF	0.53	J q	7.0	0.14	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
1,2,3,4,6,7,8-HpCDD	49	B	7.0	1.3	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
1,2,3,4,6,7,8-HpCDF	5.0	J B	7.0	0.13	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
1,2,3,4,7,8,9-HpCDF	1.6	J B	7.0	0.16	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
OCDD	1500	B	14	2.0	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
OCDF	3.9	J B	14	0.093	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
Total TCDD	190	B	1.4	0.74	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
Total TCDF	1100	B q G	1.9	1.9	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
Total PeCDD	7.7	q	7.0	0.16	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
Total PeCDF	34	q	7.0	0.20	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
Total HxCDD	33	B q	7.0	0.26	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
Total HxCDF	24	B q	7.0	0.16	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
Total HpCDD	170	B	7.0	1.3	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1
Total HpCDF	8.0	B	7.0	0.15	pg/g	☼	08/04/21 07:15	08/14/21 16:46	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*73*		*25 - 164*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-2,3,7,8-TCDF	*69*		*24 - 169*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-1,2,3,7,8-PeCDD	*74*		*25 - 181*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-1,2,3,7,8-PeCDF	*68*		*24 - 185*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-2,3,4,7,8-PeCDF	*71*		*21 - 178*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-1,2,3,4,7,8-HxCDD	*81*		*32 - 141*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-1,2,3,6,7,8-HxCDD	*76*		*28 - 130*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-1,2,3,4,7,8-HxCDF	*73*		*26 - 152*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-1,2,3,6,7,8-HxCDF	*66*		*26 - 123*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-1,2,3,7,8,9-HxCDF	*69*		*29 - 147*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-2,3,4,6,7,8-HxCDF	*67*		*28 - 136*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*79*		*23 - 140*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*70*		*28 - 143*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*82*		*26 - 138*	*08/04/21 07:15*	*08/14/21 16:46*	*1*
13C-OCDD	*86*		*17 - 157*	*08/04/21 07:15*	*08/14/21 16:46*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*85*		*35 - 197*	*08/04/21 07:15*	*08/14/21 16:46*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	610	E B	1.4	0.66	pg/g	☼	08/04/21 07:15	08/25/21 00:55	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*83*		*24 - 169*	*08/04/21 07:15*	*08/25/21 00:55*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*87*		*35 - 197*	*08/04/21 07:15*	*08/25/21 00:55*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (6-8)

Lab Sample ID: 320-76788-16
Date Collected: 07/23/21 15:45
Matrix: Solid
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	30.3		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	69.7		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB105 (6-8)

Lab Sample ID: 320-76788-16
Date Collected: 07/23/21 15:45
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 69.7

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	20	B	1.4	0.21	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
1,2,3,7,8-PeCDD	ND		7.0	0.15	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
1,2,3,7,8-PeCDF	1.2	J q	7.0	0.078	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
2,3,4,7,8-PeCDF	1.0	J	7.0	0.086	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
1,2,3,4,7,8-HxCDD	0.50	J B q	7.0	0.35	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
1,2,3,6,7,8-HxCDD	1.9	J	7.0	0.35	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
1,2,3,7,8,9-HxCDD	3.2	J	7.0	0.32	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
1,2,3,4,7,8-HxCDF	1.8	J B	7.0	0.062	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
1,2,3,6,7,8-HxCDF	0.53	J B	7.0	0.065	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
1,2,3,7,8,9-HxCDF	ND		7.0	0.053	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
2,3,4,6,7,8-HxCDF	ND		7.0	0.051	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
1,2,3,4,6,7,8-HpCDD	68	B	7.0	1.3	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
1,2,3,4,6,7,8-HpCDF	0.52	J B q	7.0	0.072	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
1,2,3,4,7,8,9-HpCDF	0.18	J B	7.0	0.088	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
OCDD	1800	B	14	2.7	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
OCDF	0.47	J B q	14	0.055	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
Total TCDD	26	B q	1.4	0.21	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
Total TCDF	120	B q	1.4	0.32	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
Total PeCDD	8.3	q	7.0	0.15	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
Total PeCDF	3.4	J q	7.0	0.082	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
Total HxCDD	40	B q	7.0	0.34	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
Total HxCDF	2.3	J B	7.0	0.058	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
Total HpCDD	190	B	7.0	1.3	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1
Total HpCDF	0.70	J B q	7.0	0.080	pg/g	☼	08/04/21 07:15	08/14/21 17:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*59*		*25 - 164*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-2,3,7,8-TCDF	*55*		*24 - 169*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-1,2,3,7,8-PeCDD	*58*		*25 - 181*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-1,2,3,7,8-PeCDF	*53*		*24 - 185*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-2,3,4,7,8-PeCDF	*55*		*21 - 178*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-1,2,3,4,7,8-HxCDD	*60*		*32 - 141*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-1,2,3,6,7,8-HxCDD	*62*		*28 - 130*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-1,2,3,4,7,8-HxCDF	*56*		*26 - 152*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-1,2,3,6,7,8-HxCDF	*52*		*26 - 123*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-1,2,3,7,8,9-HxCDF	*53*		*29 - 147*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-2,3,4,6,7,8-HxCDF	*52*		*28 - 136*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*64*		*23 - 140*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*28 - 143*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*68*		*26 - 138*	*08/04/21 07:15*	*08/14/21 17:31*	*1*
13C-OCDD	*70*		*17 - 157*	*08/04/21 07:15*	*08/14/21 17:31*	*1*

Client Sample ID: 11215702-072321-BN-SJSB105 (6-8) Lab Sample ID: 320-76788-16

Date Collected: 07/23/21 15:45 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 69.7**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	79		35 - 197	08/04/21 07:15	08/14/21 17:31	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	71	B	1.4	0.44	pg/g	☼	08/04/21 07:15	08/24/21 23:38	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	67		24 - 169	08/04/21 07:15	08/24/21 23:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	83		35 - 197	08/04/21 07:15	08/24/21 23:38	1

Client Sample ID: 11215702-072321-BN-SJSB105 (8-10) Lab Sample ID: 320-76788-17

Date Collected: 07/23/21 15:50 **Matrix: Solid**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	39.9		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	60.1		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB105 (8-10) Lab Sample ID: 320-76788-17

Date Collected: 07/23/21 15:50 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 60.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	8.1	B	1.5	0.17	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
1,2,3,7,8-PeCDD	ND		7.6	0.16	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
1,2,3,7,8-PeCDF	0.44	J q	7.6	0.075	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
2,3,4,7,8-PeCDF	0.39	J	7.6	0.078	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
1,2,3,4,7,8-HxCDD	0.92	J B	7.6	0.39	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
1,2,3,6,7,8-HxCDD	1.4	J	7.6	0.41	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
1,2,3,7,8,9-HxCDD	3.1	J	7.6	0.36	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
1,2,3,4,7,8-HxCDF	0.55	J B	7.6	0.055	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
1,2,3,6,7,8-HxCDF	0.22	J B	7.6	0.055	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
1,2,3,7,8,9-HxCDF	ND		7.6	0.046	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
2,3,4,6,7,8-HxCDF	ND		7.6	0.044	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
1,2,3,4,6,7,8-HpCDD	64	B	7.6	1.5	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
1,2,3,4,6,7,8-HpCDF	0.15	J B q	7.6	0.069	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
1,2,3,4,7,8,9-HpCDF	ND		7.6	0.080	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
OCDD	1600	B	15	1.7	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
OCDF	0.49	J B q	15	0.059	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
Total TCDD	16	B q	1.5	0.17	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
Total TCDF	57	B q	1.5	0.20	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
Total PeCDD	13		7.6	0.16	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
Total PeCDF	0.83	J q	7.6	0.076	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
Total HxCDD	51	B	7.6	0.39	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
Total HxCDF	0.78	J B	7.6	0.050	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
Total HpCDD	200	B	7.6	1.5	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1
Total HpCDF	0.15	J B q	7.6	0.074	pg/g	☼	08/04/21 07:15	08/14/21 18:16	1

Client Sample ID: 11215702-072321-BN-SJSB105 (8-10) Lab Sample ID: 320-76788-17

Date Collected: 07/23/21 15:50 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 60.1**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	57		25 - 164	08/04/21 07:15	08/14/21 18:16	1
13C-2,3,7,8-TCDF	53		24 - 169	08/04/21 07:15	08/14/21 18:16	1
13C-1,2,3,7,8-PeCDD	55		25 - 181	08/04/21 07:15	08/14/21 18:16	1
13C-1,2,3,7,8-PeCDF	51		24 - 185	08/04/21 07:15	08/14/21 18:16	1
13C-2,3,4,7,8-PeCDF	55		21 - 178	08/04/21 07:15	08/14/21 18:16	1
13C-1,2,3,4,7,8-HxCDD	60		32 - 141	08/04/21 07:15	08/14/21 18:16	1
13C-1,2,3,6,7,8-HxCDD	59		28 - 130	08/04/21 07:15	08/14/21 18:16	1
13C-1,2,3,4,7,8-HxCDF	55		26 - 152	08/04/21 07:15	08/14/21 18:16	1
13C-1,2,3,6,7,8-HxCDF	51		26 - 123	08/04/21 07:15	08/14/21 18:16	1
13C-1,2,3,7,8,9-HxCDF	51		29 - 147	08/04/21 07:15	08/14/21 18:16	1
13C-2,3,4,6,7,8-HxCDF	51		28 - 136	08/04/21 07:15	08/14/21 18:16	1
13C-1,2,3,4,6,7,8-HpCDD	61		23 - 140	08/04/21 07:15	08/14/21 18:16	1
13C-1,2,3,4,6,7,8-HpCDF	57		28 - 143	08/04/21 07:15	08/14/21 18:16	1
13C-1,2,3,4,7,8,9-HpCDF	65		26 - 138	08/04/21 07:15	08/14/21 18:16	1
13C-OCDD	73		17 - 157	08/04/21 07:15	08/14/21 18:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	78		35 - 197	08/04/21 07:15	08/14/21 18:16	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	33	B	1.5	0.80	pg/g	☼	08/04/21 07:15	08/24/21 20:27	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	64		24 - 169	08/04/21 07:15	08/24/21 20:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	85		35 - 197	08/04/21 07:15	08/24/21 20:27	1

Client Sample ID: 11215702-072321-BN-SJSB105 (10-12) Lab Sample ID: 320-76788-18

Date Collected: 07/23/21 15:55 **Matrix: Solid**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	39.2		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	60.8		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB105 (10-12) Lab Sample ID: 320-76788-18

Date Collected: 07/23/21 15:55 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 60.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	11	B	1.7	0.17	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
1,2,3,7,8-PeCDD	0.27	J q	8.3	0.14	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
1,2,3,7,8-PeCDF	0.86	J	8.3	0.065	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
2,3,4,7,8-PeCDF	0.54	J	8.3	0.067	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
1,2,3,4,7,8-HxCDD	0.63	J B	8.3	0.27	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
1,2,3,6,7,8-HxCDD	0.89	J	8.3	0.28	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
1,2,3,7,8,9-HxCDD	1.8	J	8.3	0.25	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
1,2,3,4,7,8-HxCDF	1.0	J B	8.3	0.047	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
1,2,3,6,7,8-HxCDF	0.29	J B	8.3	0.048	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1

Client Sample Results

Client: GHD Services Inc. Job ID: 320-76788-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072321-BN-SJSB105 (10-12) Lab Sample ID: 320-76788-18

Date Collected: 07/23/21 15:55 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 60.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	ND		8.3	0.040	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
2,3,4,6,7,8-HxCDF	ND		8.3	0.039	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
1,2,3,4,6,7,8-HpCDD	**37**	**B**	8.3	0.89	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
1,2,3,4,6,7,8-HpCDF	**0.32**	**J B**	8.3	0.056	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
1,2,3,4,7,8,9-HpCDF	ND		8.3	0.062	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
OCDD	**1100**	**B**	17	1.5	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
OCDF	**0.39**	**J B**	17	0.054	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
Total TCDD	**18**	**B q**	1.7	0.17	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
Total TCDF	**70**	**B q**	1.7	0.20	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
Total PeCDD	**6.0**	**J q**	8.3	0.14	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
Total PeCDF	**1.7**	**J q**	8.3	0.066	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
Total HxCDD	**26**	**B**	8.3	0.27	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
Total HxCDF	**1.3**	**J B**	8.3	0.044	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
Total HpCDD	**110**	**B**	8.3	0.89	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1
Total HpCDF	**0.32**	**J B**	8.3	0.059	pg/g	☼	08/04/21 07:15	08/14/21 19:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*73*		*25 - 164*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-2,3,7,8-TCDF	*67*		*24 - 169*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-1,2,3,7,8-PeCDD	*67*		*25 - 181*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-1,2,3,7,8-PeCDF	*63*		*24 - 185*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-2,3,4,7,8-PeCDF	*65*		*21 - 178*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-1,2,3,4,7,8-HxCDD	*74*		*32 - 141*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-1,2,3,6,7,8-HxCDD	*74*		*28 - 130*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-1,2,3,4,7,8-HxCDF	*69*		*26 - 152*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-1,2,3,6,7,8-HxCDF	*63*		*26 - 123*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-1,2,3,7,8,9-HxCDF	*64*		*29 - 147*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-2,3,4,6,7,8-HxCDF	*62*		*28 - 136*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*79*		*23 - 140*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*68*		*28 - 143*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*86*		*26 - 138*	*08/04/21 07:15*	*08/14/21 19:01*	*1*
13C-OCDD	*93*		*17 - 157*	*08/04/21 07:15*	*08/14/21 19:01*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*78*		*35 - 197*	*08/04/21 07:15*	*08/14/21 19:01*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**39**	**B**	1.7	0.22	pg/g	☼	08/04/21 07:15	08/24/21 21:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*84*		*24 - 169*	*08/04/21 07:15*	*08/24/21 21:05*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*84*		*35 - 197*	*08/04/21 07:15*	*08/24/21 21:05*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (12-14)

Lab Sample ID: 320-76788-19

Date Collected: 07/23/21 16:00
Matrix: Solid
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	33.4		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	66.6		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB105 (12-14)

Lab Sample ID: 320-76788-19

Date Collected: 07/23/21 16:00
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 66.6

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	250	B	1.5	1.2	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
1,2,3,7,8-PeCDD	2.6	J	7.5	0.19	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
1,2,3,7,8-PeCDF	18		7.5	0.22	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
2,3,4,7,8-PeCDF	13		7.5	0.22	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
1,2,3,4,7,8-HxCDD	0.58	J B q	7.5	0.26	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
1,2,3,6,7,8-HxCDD	1.2	J	7.5	0.28	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
1,2,3,7,8,9-HxCDD	2.8	J	7.5	0.25	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
1,2,3,4,7,8-HxCDF	24	B	7.5	0.15	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
1,2,3,6,7,8-HxCDF	6.8	J B	7.5	0.16	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
1,2,3,7,8,9-HxCDF	0.41	J B q	7.5	0.13	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
2,3,4,6,7,8-HxCDF	0.79	J	7.5	0.12	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
1,2,3,4,6,7,8-HpCDD	64	B	7.5	1.5	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
1,2,3,4,6,7,8-HpCDF	7.0	J B	7.5	0.11	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
1,2,3,4,7,8,9-HpCDF	2.1	J B q	7.5	0.13	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
OCDD	1600	B	15	1.9	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
OCDF	4.3	J B	15	0.066	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
Total TCDD	270	B	1.5	1.2	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
Total TCDF	1600	B G	2.9	2.9	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
Total PeCDD	12	q	7.5	0.19	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
Total PeCDF	48		7.5	0.22	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
Total HxCDD	45	B q	7.5	0.26	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
Total HxCDF	36	B q	7.5	0.14	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
Total HpCDD	200	B	7.5	1.5	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1
Total HpCDF	11	B q	7.5	0.12	pg/g	☼	08/04/21 07:15	08/14/21 19:46	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*58*		*25 - 164*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-2,3,7,8-TCDF	*55*		*24 - 169*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-1,2,3,7,8-PeCDD	*60*		*25 - 181*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-1,2,3,7,8-PeCDF	*56*		*24 - 185*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-2,3,4,7,8-PeCDF	*60*		*21 - 178*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-1,2,3,4,7,8-HxCDD	*63*		*32 - 141*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-1,2,3,6,7,8-HxCDD	*61*		*28 - 130*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-1,2,3,4,7,8-HxCDF	*58*		*26 - 152*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-1,2,3,6,7,8-HxCDF	*52*		*26 - 123*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-1,2,3,7,8,9-HxCDF	*53*		*29 - 147*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-2,3,4,6,7,8-HxCDF	*53*		*28 - 136*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*57*		*23 - 140*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*51*		*28 - 143*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*61*		*26 - 138*	*08/04/21 07:15*	*08/14/21 19:46*	*1*
13C-OCDD	*61*		*17 - 157*	*08/04/21 07:15*	*08/14/21 19:46*	*1*

Client Sample ID: 11215702-072321-BN-SJSB105 (12-14) Lab Sample ID: 320-76788-19

Date Collected: 07/23/21 16:00 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 66.6**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	78		35 - 197	08/04/21 07:15	08/14/21 19:46	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	900	E B	1.5	0.97	pg/g	☼	08/04/21 07:15	08/25/21 01:34	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	62		24 - 169	08/04/21 07:15	08/25/21 01:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	79		35 - 197	08/04/21 07:15	08/25/21 01:34	1

Client Sample ID: 11215702-072321-BN-SJSB105 (14-16) Lab Sample ID: 320-76788-20

Date Collected: 07/23/21 16:05 **Matrix: Solid**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	34.4		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	65.6		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB105 (14-16) Lab Sample ID: 320-76788-20

Date Collected: 07/23/21 16:05 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 65.6**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	41	B	1.6	0.27	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
1,2,3,7,8-PeCDD	0.59	J	7.8	0.12	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
1,2,3,7,8-PeCDF	2.9	J	7.8	0.067	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
2,3,4,7,8-PeCDF	2.1	J	7.8	0.071	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
1,2,3,4,7,8-HxCDD	0.62	J B q	7.8	0.24	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
1,2,3,6,7,8-HxCDD	1.2	J	7.8	0.25	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
1,2,3,7,8,9-HxCDD	2.6	J	7.8	0.23	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
1,2,3,4,7,8-HxCDF	3.3	J B	7.8	0.045	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
1,2,3,6,7,8-HxCDF	1.0	J B	7.8	0.045	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
1,2,3,7,8,9-HxCDF	0.21	J B	7.8	0.037	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
2,3,4,6,7,8-HxCDF	0.12	J q	7.8	0.037	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
1,2,3,4,6,7,8-HpCDD	57	B	7.8	1.0	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
1,2,3,4,6,7,8-HpCDF	1.3	J B	7.8	0.046	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
1,2,3,4,7,8,9-HpCDF	0.68	J B	7.8	0.059	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
OCDD	1400	B	16	1.2	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
OCDF	2.9	J B	16	0.044	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
Total TCDD	50	B q	1.6	0.27	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
Total TCDF	290	B	1.6	0.51	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
Total PeCDD	8.6	q	7.8	0.12	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
Total PeCDF	7.9	q	7.8	0.069	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
Total HxCDD	42	B q	7.8	0.24	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
Total HxCDF	5.3	J B q	7.8	0.041	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
Total HpCDD	180	B	7.8	1.0	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1
Total HpCDF	2.2	J B	7.8	0.053	pg/g	☼	08/04/21 07:15	08/14/21 20:31	1

Client Sample Results

Client: GHD Services Inc. Job ID: 320-76788-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072321-BN-SJSB105 (14-16) Lab Sample ID: 320-76788-20

Date Collected: 07/23/21 16:05 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 65.6**

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*65*		*25 - 164*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-2,3,7,8-TCDF	*60*		*24 - 169*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-1,2,3,7,8-PeCDD	*68*		*25 - 181*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-1,2,3,7,8-PeCDF	*62*		*24 - 185*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-2,3,4,7,8-PeCDF	*68*		*21 - 178*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-1,2,3,4,7,8-HxCDD	*66*		*32 - 141*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-1,2,3,6,7,8-HxCDD	*64*		*28 - 130*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-1,2,3,4,7,8-HxCDF	*66*		*26 - 152*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-1,2,3,6,7,8-HxCDF	*59*		*26 - 123*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-1,2,3,7,8,9-HxCDF	*59*		*29 - 147*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-2,3,4,6,7,8-HxCDF	*59*		*28 - 136*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*67*		*23 - 140*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*66*		*28 - 143*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*73*		*26 - 138*	*08/04/21 07:15*	*08/14/21 20:31*	*1*
13C-OCDD	*79*		*17 - 157*	*08/04/21 07:15*	*08/14/21 20:31*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*80*		*35 - 197*	*08/04/21 07:15*	*08/14/21 20:31*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**160**	**B**	1.6	0.32	pg/g	☼	08/04/21 07:15	08/25/21 00:17	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*68*		*24 - 169*	*08/04/21 07:15*	*08/25/21 00:17*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*83*		*35 - 197*	*08/04/21 07:15*	*08/25/21 00:17*	*1*

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (0-2) — Lab Sample ID: 320-76788-1

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDD	240		13	3.7	pg/g	1	240	1613B
1,2,3,7,8-PeCDF	2400	G	20	20	pg/g	0.03	72	1613B
2,3,4,7,8-PeCDF	1600	G	15	15	pg/g	0.3	480	1613B
1,2,3,4,7,8-HxCDD	4.5	J B	13	0.60	pg/g	0.1	0.45	1613B
1,2,3,6,7,8-HxCDD	16		13	0.59	pg/g	0.1	1.6	1613B
1,2,3,7,8,9-HxCDD	9.4	J	13	0.54	pg/g	0.1	0.94	1613B
1,2,3,4,7,8-HxCDF	3600	B	13	12	pg/g	0.1	360	1613B
1,2,3,6,7,8-HxCDF	960	B	13	11	pg/g	0.1	96	1613B
1,2,3,7,8,9-HxCDF	49	B	13	9.8	pg/g	0.1	4.9	1613B
2,3,4,6,7,8-HxCDF	100		13	11	pg/g	0.1	10	1613B
1,2,3,4,6,7,8-HpCDD	300	B	13	5.2	pg/g	0.01	3.0	1613B
1,2,3,4,6,7,8-HpCDF	1200	B	13	8.0	pg/g	0.01	12	1613B
1,2,3,4,7,8,9-HpCDF	380	B	13	8.4	pg/g	0.01	3.8	1613B
OCDD	5300	B	25	6.8	pg/g	0.0003	1.6	1613B
OCDF	770	B	25	0.72	pg/g	0.0003	0.23	1613B
2,3,7,8-TCDD - DL	31000	G E B	74	74	pg/g	1	31000	1613B
2,3,7,8-TCDF - RADL	98000	E B G	89	89	pg/g	0.1	9800	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		42000	TEQ

Client Sample ID: 11215702-072321-BN-SJSB085 (2-4) — Lab Sample ID: 320-76788-2

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	530	G B	1.9	1.9	pg/g	1	530	1613B
1,2,3,7,8-PeCDD	4.4	J	8.3	0.15	pg/g	1	4.4	1613B
1,2,3,7,8-PeCDF	45		8.3	0.33	pg/g	0.03	1.4	1613B
2,3,4,7,8-PeCDF	26		8.3	0.33	pg/g	0.3	7.8	1613B
1,2,3,4,7,8-HxCDD	0.82	J B	8.3	0.15	pg/g	0.1	0.082	1613B
1,2,3,6,7,8-HxCDD	1.7	J	8.3	0.16	pg/g	0.1	0.17	1613B
1,2,3,7,8,9-HxCDD	2.8	J	8.3	0.14	pg/g	0.1	0.28	1613B
1,2,3,4,7,8-HxCDF	54	B	8.3	0.27	pg/g	0.1	5.4	1613B
1,2,3,6,7,8-HxCDF	14	B	8.3	0.28	pg/g	0.1	1.4	1613B
1,2,3,7,8,9-HxCDF	1.1	J B	8.3	0.21	pg/g	0.1	0.11	1613B
2,3,4,6,7,8-HxCDF	1.8	J	8.3	0.22	pg/g	0.1	0.18	1613B
1,2,3,4,6,7,8-HpCDD	59	B	8.3	0.83	pg/g	0.01	0.59	1613B
1,2,3,4,6,7,8-HpCDF	16	B	8.3	0.15	pg/g	0.01	0.16	1613B
1,2,3,4,7,8,9-HpCDF	5.4	J B	8.3	0.18	pg/g	0.01	0.054	1613B
OCDD	1600	B	17	1.9	pg/g	0.0003	0.48	1613B
OCDF	13	J B	17	0.040	pg/g	0.0003	0.0039	1613B
2,3,7,8-TCDF - RA	1700	G E B	2.2	2.2	pg/g	0.1	170	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (2-4) (Continued) — Lab Sample ID: 320-76788-2

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		710	TEQ

Client Sample ID: 11215702-072321-BN-SJSB085 (4-6) — Lab Sample ID: 320-76788-3

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	19	B	1.2	0.12	pg/g	1	19	1613B
1,2,3,7,8-PeCDD	0.21	J q	5.9	0.081	pg/g	1	0.21	1613B
1,2,3,7,8-PeCDF	1.5	J	5.9	0.044	pg/g	0.03	0.045	1613B
2,3,4,7,8-PeCDF	0.97	J	5.9	0.045	pg/g	0.3	0.29	1613B
1,2,3,4,7,8-HxCDD	0.44	J B	5.9	0.15	pg/g	0.1	0.044	1613B
1,2,3,6,7,8-HxCDD	0.68	J	5.9	0.16	pg/g	0.1	0.068	1613B
1,2,3,7,8,9-HxCDD	1.5	J	5.9	0.14	pg/g	0.1	0.15	1613B
1,2,3,4,7,8-HxCDF	2.0	J B	5.9	0.032	pg/g	0.1	0.20	1613B
1,2,3,6,7,8-HxCDF	0.59	J B	5.9	0.033	pg/g	0.1	0.059	1613B
1,2,3,7,8,9-HxCDF	0.12	J B	5.9	0.026	pg/g	0.1	0.012	1613B
2,3,4,6,7,8-HxCDF	0.092	J	5.9	0.025	pg/g	0.1	0.0092	1613B
1,2,3,4,6,7,8-HpCDD	34	B	5.9	0.74	pg/g	0.01	0.34	1613B
1,2,3,4,6,7,8-HpCDF	0.64	J B q	5.9	0.031	pg/g	0.01	0.0064	1613B
1,2,3,4,7,8,9-HpCDF	0.20	J B	5.9	0.038	pg/g	0.01	0.0020	1613B
OCDD	1000	B	12	1.1	pg/g	0.0003	0.30	1613B
OCDF	0.88	J B	12	0.025	pg/g	0.0003	0.00026	1613B
2,3,7,8-TCDF - RA	65	B	1.2	0.26	pg/g	0.1	6.5	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		27	TEQ

Client Sample ID: 11215702-072321-BN-SJSB085 (6-8) — Lab Sample ID: 320-76788-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	31	B	1.4	0.20	pg/g	1	31	1613B
1,2,3,7,8-PeCDD	0.49	J	7.1	0.10	pg/g	1	0.49	1613B
1,2,3,7,8-PeCDF	2.5	J	7.1	0.056	pg/g	0.03	0.075	1613B
2,3,4,7,8-PeCDF	1.6	J	7.1	0.056	pg/g	0.3	0.48	1613B
1,2,3,4,7,8-HxCDD	0.68	J B	7.1	0.22	pg/g	0.1	0.068	1613B
1,2,3,6,7,8-HxCDD	1.5	J	7.1	0.23	pg/g	0.1	0.15	1613B
1,2,3,7,8,9-HxCDD	3.1	J	7.1	0.20	pg/g	0.1	0.31	1613B
1,2,3,4,7,8-HxCDF	3.5	J B	7.1	0.054	pg/g	0.1	0.35	1613B
1,2,3,6,7,8-HxCDF	1.0	J B	7.1	0.056	pg/g	0.1	0.10	1613B
1,2,3,7,8,9-HxCDF	ND		7.1	0.044	pg/g	0.1	0.0022	1613B
2,3,4,6,7,8-HxCDF	0.12	J q	7.1	0.044	pg/g	0.1	0.012	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (6-8) (Continued) — Lab Sample ID: 320-76788-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDD	72	B	7.1	1.3	pg/g	0.01	0.72	1613B
1,2,3,4,6,7,8-HpCDF	1.3	J B	7.1	0.039	pg/g	0.01	0.013	1613B
1,2,3,4,7,8,9-HpCDF	0.40	J B q	7.1	0.048	pg/g	0.01	0.0040	1613B
OCDD	2500	B	14	2.6	pg/g	0.0003	0.75	1613B
OCDF	2.5	J B	14	0.034	pg/g	0.0003	0.00075	1613B
2,3,7,8-TCDF - RA	97	B	1.4	0.33	pg/g	0.1	9.7	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		44	TEQ

Client Sample ID: 11215702-072321-BN-SJSB085 (8-10) — Lab Sample ID: 320-76788-5

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	18	B	1.4	0.13	pg/g	1	18	1613B
1,2,3,7,8-PeCDD	0.27	J	6.8	0.060	pg/g	1	0.27	1613B
1,2,3,7,8-PeCDF	1.7	J	6.8	0.034	pg/g	0.03	0.051	1613B
2,3,4,7,8-PeCDF	0.95	J	6.8	0.036	pg/g	0.3	0.29	1613B
1,2,3,4,7,8-HxCDD	0.42	J B	6.8	0.11	pg/g	0.1	0.042	1613B
1,2,3,6,7,8-HxCDD	0.53	J	6.8	0.12	pg/g	0.1	0.053	1613B
1,2,3,7,8,9-HxCDD	0.98	J q	6.8	0.11	pg/g	0.1	0.098	1613B
1,2,3,4,7,8-HxCDF	2.5	J B	6.8	0.030	pg/g	0.1	0.25	1613B
1,2,3,6,7,8-HxCDF	0.77	J B	6.8	0.031	pg/g	0.1	0.077	1613B
1,2,3,7,8,9-HxCDF	0.12	J B	6.8	0.024	pg/g	0.1	0.012	1613B
2,3,4,6,7,8-HxCDF	0.090	J	6.8	0.025	pg/g	0.1	0.0090	1613B
1,2,3,4,6,7,8-HpCDD	24	B	6.8	0.53	pg/g	0.01	0.24	1613B
1,2,3,4,6,7,8-HpCDF	1.0	J B	6.8	0.028	pg/g	0.01	0.010	1613B
1,2,3,4,7,8,9-HpCDF	0.26	J B	6.8	0.035	pg/g	0.01	0.0026	1613B
OCDD	750	B	14	0.89	pg/g	0.0003	0.23	1613B
OCDF	1.1	J B	14	0.022	pg/g	0.0003	0.00033	1613B
2,3,7,8-TCDF - RA	55	B	1.4	0.19	pg/g	0.1	5.5	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		25	TEQ

Client Sample ID: 11215702-072321-BN-SJSB085 (10-12) — Lab Sample ID: 320-76788-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	1.5	J B	1.7	0.078	pg/g	1	1.5	1613B
1,2,3,7,8-PeCDD	0.35	J	8.6	0.14	pg/g	1	0.35	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (10-12) (Continued)

Lab Sample ID: 320-76788-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDF	0.17	J	8.6	0.044	pg/g	0.03	0.0051	1613B
2,3,4,7,8-PeCDF	0.083	J q	8.6	0.045	pg/g	0.3	0.025	1613B
1,2,3,4,7,8-HxCDD	1.1	J B	8.6	0.38	pg/g	0.1	0.11	1613B
1,2,3,6,7,8-HxCDD	1.7	J	8.6	0.39	pg/g	0.1	0.17	1613B
1,2,3,7,8,9-HxCDD	3.8	J	8.6	0.35	pg/g	0.1	0.38	1613B
1,2,3,4,7,8-HxCDF	0.28	J B	8.6	0.041	pg/g	0.1	0.028	1613B
1,2,3,6,7,8-HxCDF	0.11	J B	8.6	0.042	pg/g	0.1	0.011	1613B
1,2,3,7,8,9-HxCDF	0.20	J B	8.6	0.034	pg/g	0.1	0.020	1613B
2,3,4,6,7,8-HxCDF	ND		8.6	0.033	pg/g	0.1	0.0017	1613B
1,2,3,4,6,7,8-HpCDD	82	B	8.6	1.4	pg/g	0.01	0.82	1613B
1,2,3,4,6,7,8-HpCDF	0.24	J B	8.6	0.041	pg/g	0.01	0.0024	1613B
1,2,3,4,7,8,9-HpCDF	ND		8.6	0.048	pg/g	0.01	0.00024	1613B
OCDD	2100	B	17	2.3	pg/g	0.0003	0.63	1613B
OCDF	0.66	J B	17	0.036	pg/g	0.0003	0.00020	1613B
2,3,7,8-TCDF - RA	3.4	B	1.7	0.20	pg/g	0.1	0.34	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		4.6	TEQ

Client Sample ID: 11215702-072321-BN-SJSB085 (12-14)

Lab Sample ID: 320-76788-7

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	3.6	B	1.6	0.093	pg/g	1	3.6	1613B
1,2,3,7,8-PeCDD	0.29	J	7.8	0.13	pg/g	1	0.29	1613B
1,2,3,7,8-PeCDF	0.30	J q	7.8	0.038	pg/g	0.03	0.0090	1613B
2,3,4,7,8-PeCDF	0.14	J q	7.8	0.038	pg/g	0.3	0.042	1613B
1,2,3,4,7,8-HxCDD	0.87	J B	7.8	0.21	pg/g	0.1	0.087	1613B
1,2,3,6,7,8-HxCDD	1.9	J	7.8	0.22	pg/g	0.1	0.19	1613B
1,2,3,7,8,9-HxCDD	3.6	J	7.8	0.20	pg/g	0.1	0.36	1613B
1,2,3,4,7,8-HxCDF	0.37	J B	7.8	0.033	pg/g	0.1	0.037	1613B
1,2,3,6,7,8-HxCDF	0.12	J B q	7.8	0.034	pg/g	0.1	0.012	1613B
1,2,3,7,8,9-HxCDF	0.12	J B	7.8	0.026	pg/g	0.1	0.012	1613B
2,3,4,6,7,8-HxCDF	ND		7.8	0.026	pg/g	0.1	0.0013	1613B
1,2,3,4,6,7,8-HpCDD	73	B	7.8	1.3	pg/g	0.01	0.73	1613B
1,2,3,4,6,7,8-HpCDF	0.20	J B	7.8	0.032	pg/g	0.01	0.0020	1613B
1,2,3,4,7,8,9-HpCDF	0.078	J B	7.8	0.040	pg/g	0.01	0.00078	1613B
OCDD	1700	B	16	1.8	pg/g	0.0003	0.51	1613B
OCDF	0.64	J B	16	0.029	pg/g	0.0003	0.00019	1613B
2,3,7,8-TCDF - RA	12	B	1.6	0.22	pg/g	0.1	1.2	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (12-14) (Continued) — Lab Sample ID: 320-76788-7

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		7.2	TEQ

Client Sample ID: 11215702-072321-BN-SJSB085 (14-16) — Lab Sample ID: 320-76788-8

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	6.3	B	1.7	0.11	pg/g	1	6.3	1613B
1,2,3,7,8-PeCDD	0.37	J	8.4	0.13	pg/g	1	0.37	1613B
1,2,3,7,8-PeCDF	0.70	J	8.4	0.048	pg/g	0.03	0.021	1613B
2,3,4,7,8-PeCDF	0.33	J q	8.4	0.049	pg/g	0.3	0.099	1613B
1,2,3,4,7,8-HxCDD	0.73	J B	8.4	0.30	pg/g	0.1	0.073	1613B
1,2,3,6,7,8-HxCDD	1.6	J q	8.4	0.30	pg/g	0.1	0.16	1613B
1,2,3,7,8,9-HxCDD	3.6	J	8.4	0.27	pg/g	0.1	0.36	1613B
1,2,3,4,7,8-HxCDF	0.86	J B	8.4	0.047	pg/g	0.1	0.086	1613B
1,2,3,6,7,8-HxCDF	0.26	J B	8.4	0.047	pg/g	0.1	0.026	1613B
1,2,3,7,8,9-HxCDF	0.16	J B	8.4	0.040	pg/g	0.1	0.016	1613B
2,3,4,6,7,8-HxCDF	0.10	J	8.4	0.039	pg/g	0.1	0.010	1613B
1,2,3,4,6,7,8-HpCDD	66	B	8.4	1.5	pg/g	0.01	0.66	1613B
1,2,3,4,6,7,8-HpCDF	0.85	J B	8.4	0.053	pg/g	0.01	0.0085	1613B
1,2,3,4,7,8,9-HpCDF	0.20	J B q	8.4	0.067	pg/g	0.01	0.0020	1613B
OCDD	1600	B	17	2.1	pg/g	0.0003	0.48	1613B
OCDF	1.8	J B	17	0.032	pg/g	0.0003	0.00054	1613B
2,3,7,8-TCDF - RA	21	B	1.7	0.25	pg/g	0.1	2.1	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		11	TEQ

Client Sample ID: 11215702-072321-BN-SJSB105 (0-2) — Lab Sample ID: 320-76788-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDD	240		9.8	3.3	pg/g	1	240	1613B
1,2,3,7,8-PeCDF	2000	G	17	17	pg/g	0.03	60	1613B
2,3,4,7,8-PeCDF	1400	G	14	14	pg/g	0.3	420	1613B
1,2,3,4,7,8-HxCDD	3.0	J B q	9.8	0.39	pg/g	0.1	0.30	1613B
1,2,3,6,7,8-HxCDD	11		9.8	0.39	pg/g	0.1	1.1	1613B
1,2,3,7,8,9-HxCDD	6.7	J q	9.8	0.36	pg/g	0.1	0.67	1613B
1,2,3,4,7,8-HxCDF	2500	B	9.8	8.5	pg/g	0.1	250	1613B
1,2,3,6,7,8-HxCDF	710	B	9.8	7.9	pg/g	0.1	71	1613B
1,2,3,7,8,9-HxCDF	40	B	9.8	7.9	pg/g	0.1	4.0	1613B
2,3,4,6,7,8-HxCDF	80		9.8	8.0	pg/g	0.1	8.0	1613B
1,2,3,4,6,7,8-HpCDD	180	B	9.8	2.4	pg/g	0.01	1.8	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (0-2) (Continued) — Lab Sample ID: 320-76788-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDF	800	B	9.8	6.8	pg/g	0.01	8.0	1613B
1,2,3,4,7,8,9-HpCDF	240	B	9.8	7.5	pg/g	0.01	2.4	1613B
OCDD	3200	B	20	6.3	pg/g	0.0003	0.96	1613B
OCDF	470	B	20	0.69	pg/g	0.0003	0.14	1613B
2,3,7,8-TCDD - DL	27000	G E B	67	67	pg/g	1	27000	1613B
2,3,7,8-TCDF - RADL	83000	E B G	73	73	pg/g	0.1	8300	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		36000	TEQ

Client Sample ID: 11215702-072321-BN-SJSB105 (2-4) — Lab Sample ID: 320-76788-14

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDD	300		9.5	3.8	pg/g	1	300	1613B
1,2,3,7,8-PeCDF	2600	G	24	24	pg/g	0.03	78	1613B
2,3,4,7,8-PeCDF	1900	G	17	17	pg/g	0.3	570	1613B
1,2,3,4,7,8-HxCDD	3.4	J B	9.5	0.24	pg/g	0.1	0.34	1613B
1,2,3,6,7,8-HxCDD	8.4	J	9.5	0.23	pg/g	0.1	0.84	1613B
1,2,3,7,8,9-HxCDD	5.1	J	9.5	0.22	pg/g	0.1	0.51	1613B
1,2,3,6,7,8-HxCDF	1100	G B	11	11	pg/g	0.1	110	1613B
1,2,3,7,8,9-HxCDF	54	G q B	10	10	pg/g	0.1	5.4	1613B
2,3,4,6,7,8-HxCDF	110	G	11	11	pg/g	0.1	11	1613B
1,2,3,4,6,7,8-HpCDD	110	B	9.5	1.0	pg/g	0.01	1.1	1613B
1,2,3,4,6,7,8-HpCDF	1200	B	9.5	4.8	pg/g	0.01	12	1613B
1,2,3,4,7,8,9-HpCDF	440	B	9.5	4.9	pg/g	0.01	4.4	1613B
OCDD	1600	B	19	1.4	pg/g	0.0003	0.48	1613B
OCDF	480	B	19	0.41	pg/g	0.0003	0.14	1613B
2,3,7,8-TCDD - DL	33000	G E B	69	69	pg/g	1	33000	1613B
1,2,3,4,7,8-HxCDF - DL	4200	B	47	23	pg/g	0.1	420	1613B
2,3,7,8-TCDF - RADL	130000	E B G	88	88	pg/g	0.1	13000	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		48000	TEQ

Client Sample ID: 11215702-072321-BN-SJSB105 (4-6) — Lab Sample ID: 320-76788-15

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	170	B	1.4	0.74	pg/g	1	170	1613B
1,2,3,7,8-PeCDD	1.9	J	7.0	0.16	pg/g	1	1.9	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (4-6) (Continued)

Lab Sample ID: 320-76788-15

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDF	12		7.0	0.20	pg/g	0.03	0.36	1613B
2,3,4,7,8-PeCDF	9.2		7.0	0.20	pg/g	0.3	2.8	1613B
1,2,3,4,7,8-HxCDD	0.54	J B q	7.0	0.27	pg/g	0.1	0.054	1613B
1,2,3,6,7,8-HxCDD	0.90	J	7.0	0.27	pg/g	0.1	0.090	1613B
1,2,3,7,8,9-HxCDD	2.1	J	7.0	0.25	pg/g	0.1	0.21	1613B
1,2,3,4,7,8-HxCDF	17	B	7.0	0.18	pg/g	0.1	1.7	1613B
1,2,3,6,7,8-HxCDF	5.2	J B	7.0	0.18	pg/g	0.1	0.52	1613B
1,2,3,7,8,9-HxCDF	0.38	J B	7.0	0.14	pg/g	0.1	0.038	1613B
2,3,4,6,7,8-HxCDF	0.53	J q	7.0	0.14	pg/g	0.1	0.053	1613B
1,2,3,4,6,7,8-HpCDD	49	B	7.0	1.3	pg/g	0.01	0.49	1613B
1,2,3,4,6,7,8-HpCDF	5.0	J B	7.0	0.13	pg/g	0.01	0.050	1613B
1,2,3,4,7,8,9-HpCDF	1.6	J B	7.0	0.16	pg/g	0.01	0.016	1613B
OCDD	1500	B	14	2.0	pg/g	0.0003	0.45	1613B
OCDF	3.9	J B	14	0.093	pg/g	0.0003	0.0012	1613B
2,3,7,8-TCDF - RA	610	E B	1.4	0.66	pg/g	0.1	61	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		240	TEQ

Client Sample ID: 11215702-072321-BN-SJSB105 (6-8)

Lab Sample ID: 320-76788-16

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	20	B	1.4	0.21	pg/g	1	20	1613B
1,2,3,7,8-PeCDD	ND		7.0	0.15	pg/g	1	0.075	1613B
1,2,3,7,8-PeCDF	1.2	J q	7.0	0.078	pg/g	0.03	0.036	1613B
2,3,4,7,8-PeCDF	1.0	J	7.0	0.086	pg/g	0.3	0.30	1613B
1,2,3,4,7,8-HxCDD	0.50	J B q	7.0	0.35	pg/g	0.1	0.050	1613B
1,2,3,6,7,8-HxCDD	1.9	J	7.0	0.35	pg/g	0.1	0.19	1613B
1,2,3,7,8,9-HxCDD	3.2	J	7.0	0.32	pg/g	0.1	0.32	1613B
1,2,3,4,7,8-HxCDF	1.8	J B	7.0	0.062	pg/g	0.1	0.18	1613B
1,2,3,6,7,8-HxCDF	0.53	J B	7.0	0.065	pg/g	0.1	0.053	1613B
1,2,3,7,8,9-HxCDF	ND		7.0	0.053	pg/g	0.1	0.0027	1613B
2,3,4,6,7,8-HxCDF	ND		7.0	0.051	pg/g	0.1	0.0026	1613B
1,2,3,4,6,7,8-HpCDD	68	B	7.0	1.3	pg/g	0.01	0.68	1613B
1,2,3,4,6,7,8-HpCDF	0.52	J B q	7.0	0.072	pg/g	0.01	0.0052	1613B
1,2,3,4,7,8,9-HpCDF	0.18	J B	7.0	0.088	pg/g	0.01	0.0018	1613B
OCDD	1800	B	14	2.7	pg/g	0.0003	0.54	1613B
OCDF	0.47	J B q	14	0.055	pg/g	0.0003	0.00014	1613B
2,3,7,8-TCDF - RA	71	B	1.4	0.44	pg/g	0.1	7.1	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (6-8) (Continued) — Lab Sample ID: 320-76788-16

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		30	TEQ

Client Sample ID: 11215702-072321-BN-SJSB105 (8-10) — Lab Sample ID: 320-76788-17

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**8.1**	**B**	1.5	0.17	pg/g	1	**8.1**	1613B
1,2,3,7,8-PeCDD	ND		7.6	0.16	pg/g	1	0.080	1613B
1,2,3,7,8-PeCDF	**0.44**	**J q**	7.6	0.075	pg/g	0.03	**0.013**	1613B
2,3,4,7,8-PeCDF	**0.39**	**J**	7.6	0.078	pg/g	0.3	**0.12**	1613B
1,2,3,4,7,8-HxCDD	**0.92**	**J B**	7.6	0.39	pg/g	0.1	**0.092**	1613B
1,2,3,6,7,8-HxCDD	**1.4**	**J**	7.6	0.41	pg/g	0.1	**0.14**	1613B
1,2,3,7,8,9-HxCDD	**3.1**	**J**	7.6	0.36	pg/g	0.1	**0.31**	1613B
1,2,3,4,7,8-HxCDF	**0.55**	**J B**	7.6	0.055	pg/g	0.1	**0.055**	1613B
1,2,3,6,7,8-HxCDF	**0.22**	**J B**	7.6	0.055	pg/g	0.1	**0.022**	1613B
1,2,3,7,8,9-HxCDF	ND		7.6	0.046	pg/g	0.1	0.0023	1613B
2,3,4,6,7,8-HxCDF	ND		7.6	0.044	pg/g	0.1	0.0022	1613B
1,2,3,4,6,7,8-HpCDD	**64**	**B**	7.6	1.5	pg/g	0.01	**0.64**	1613B
1,2,3,4,6,7,8-HpCDF	**0.15**	**J B q**	7.6	0.069	pg/g	0.01	**0.0015**	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.6	0.080	pg/g	0.01	0.00040	1613B
OCDD	**1600**	**B**	15	1.7	pg/g	0.0003	**0.48**	1613B
OCDF	**0.49**	**J B q**	15	0.059	pg/g	0.0003	**0.00015**	1613B
2,3,7,8-TCDF - RA	**33**	**B**	1.5	0.80	pg/g	0.1	**3.3**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		13	TEQ

Client Sample ID: 11215702-072321-BN-SJSB105 (10-12) — Lab Sample ID: 320-76788-18

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**11**	**B**	1.7	0.17	pg/g	1	**11**	1613B
1,2,3,7,8-PeCDD	**0.27**	**J q**	8.3	0.14	pg/g	1	**0.27**	1613B
1,2,3,7,8-PeCDF	**0.86**	**J**	8.3	0.065	pg/g	0.03	**0.026**	1613B
2,3,4,7,8-PeCDF	**0.54**	**J**	8.3	0.067	pg/g	0.3	**0.16**	1613B
1,2,3,4,7,8-HxCDD	**0.63**	**J B**	8.3	0.27	pg/g	0.1	**0.063**	1613B
1,2,3,6,7,8-HxCDD	**0.89**	**J**	8.3	0.28	pg/g	0.1	**0.089**	1613B
1,2,3,7,8,9-HxCDD	**1.8**	**J**	8.3	0.25	pg/g	0.1	**0.18**	1613B
1,2,3,4,7,8-HxCDF	**1.0**	**J B**	8.3	0.047	pg/g	0.1	**0.10**	1613B
1,2,3,6,7,8-HxCDF	**0.29**	**J B**	8.3	0.048	pg/g	0.1	**0.029**	1613B
1,2,3,7,8,9-HxCDF	ND		8.3	0.040	pg/g	0.1	0.0020	1613B
2,3,4,6,7,8-HxCDF	ND		8.3	0.039	pg/g	0.1	0.0020	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (10-12) (Continued) — Lab Sample ID: 320-76788-18

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDD	37	B	8.3	0.89	pg/g	0.01	0.37	1613B
1,2,3,4,6,7,8-HpCDF	0.32	J B	8.3	0.056	pg/g	0.01	0.0032	1613B
1,2,3,4,7,8,9-HpCDF	ND		8.3	0.062	pg/g	0.01	0.00031	1613B
OCDD	1100	B	17	1.5	pg/g	0.0003	0.33	1613B
OCDF	0.39	J B	17	0.054	pg/g	0.0003	0.00012	1613B
2,3,7,8-TCDF - RA	39	B	1.7	0.22	pg/g	0.1	3.9	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		17	TEQ

Client Sample ID: 11215702-072321-BN-SJSB105 (12-14) — Lab Sample ID: 320-76788-19

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	250	B	1.5	1.2	pg/g	1	250	1613B
1,2,3,7,8-PeCDD	2.6	J	7.5	0.19	pg/g	1	2.6	1613B
1,2,3,7,8-PeCDF	18		7.5	0.22	pg/g	0.03	0.54	1613B
2,3,4,7,8-PeCDF	13		7.5	0.22	pg/g	0.3	3.9	1613B
1,2,3,4,7,8-HxCDD	0.58	J B q	7.5	0.26	pg/g	0.1	0.058	1613B
1,2,3,6,7,8-HxCDD	1.2	J	7.5	0.28	pg/g	0.1	0.12	1613B
1,2,3,7,8,9-HxCDD	2.8	J	7.5	0.25	pg/g	0.1	0.28	1613B
1,2,3,4,7,8-HxCDF	24	B	7.5	0.15	pg/g	0.1	2.4	1613B
1,2,3,6,7,8-HxCDF	6.8	J B	7.5	0.16	pg/g	0.1	0.68	1613B
1,2,3,7,8,9-HxCDF	0.41	J B q	7.5	0.13	pg/g	0.1	0.041	1613B
2,3,4,6,7,8-HxCDF	0.79	J	7.5	0.12	pg/g	0.1	0.079	1613B
1,2,3,4,6,7,8-HpCDD	64	B	7.5	1.5	pg/g	0.01	0.64	1613B
1,2,3,4,6,7,8-HpCDF	7.0	J B	7.5	0.11	pg/g	0.01	0.070	1613B
1,2,3,4,7,8,9-HpCDF	2.1	J B q	7.5	0.13	pg/g	0.01	0.021	1613B
OCDD	1600	B	15	1.9	pg/g	0.0003	0.48	1613B
OCDF	4.3	J B	15	0.066	pg/g	0.0003	0.0013	1613B
2,3,7,8-TCDF - RA	900	E B	1.5	0.97	pg/g	0.1	90	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		350	TEQ

Client Sample ID: 11215702-072321-BN-SJSB105 (14-16) — Lab Sample ID: 320-76788-20

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	41	B	1.6	0.27	pg/g	1	41	1613B
1,2,3,7,8-PeCDD	0.59	J	7.8	0.12	pg/g	1	0.59	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (14-16) (Continued)

Lab Sample ID: 320-76788-20

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDF	2.9	J	7.8	0.067	pg/g	0.03	0.087	1613B
2,3,4,7,8-PeCDF	2.1	J	7.8	0.071	pg/g	0.3	0.63	1613B
1,2,3,4,7,8-HxCDD	0.62	J B q	7.8	0.24	pg/g	0.1	0.062	1613B
1,2,3,6,7,8-HxCDD	1.2	J	7.8	0.25	pg/g	0.1	0.12	1613B
1,2,3,7,8,9-HxCDD	2.6	J	7.8	0.23	pg/g	0.1	0.26	1613B
1,2,3,4,7,8-HxCDF	3.3	J B	7.8	0.045	pg/g	0.1	0.33	1613B
1,2,3,6,7,8-HxCDF	1.0	J B	7.8	0.045	pg/g	0.1	0.10	1613B
1,2,3,7,8,9-HxCDF	0.21	J B	7.8	0.037	pg/g	0.1	0.021	1613B
2,3,4,6,7,8-HxCDF	0.12	J q	7.8	0.037	pg/g	0.1	0.012	1613B
1,2,3,4,6,7,8-HpCDD	57	B	7.8	1.0	pg/g	0.01	0.57	1613B
1,2,3,4,6,7,8-HpCDF	1.3	J B	7.8	0.046	pg/g	0.01	0.013	1613B
1,2,3,4,7,8,9-HpCDF	0.68	J B	7.8	0.059	pg/g	0.01	0.0068	1613B
OCDD	1400	B	16	1.2	pg/g	0.0003	0.42	1613B
OCDF	2.9	J B	16	0.044	pg/g	0.0003	0.00087	1613B
2,3,7,8-TCDF - RA	160	B	1.6	0.32	pg/g	0.1	16	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		60	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-76788-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-76788-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (35-197)							
320-76788-1	11215702-072321-BN-SJSB085	75							
320-76788-1 - DL	11215702-072321-BN-SJSB085 (0-2)	119							
320-76788-1 - RADL	11215702-072321-BN-SJSB085 (0-2)	91							
320-76788-2	11215702-072321-BN-SJSB085 (2-4)	82							
320-76788-2 - RA	11215702-072321-BN-SJSB085 (2-4)	80							
320-76788-3	11215702-072321-BN-SJSB085 (4-6)	83							
320-76788-3 - RA	11215702-072321-BN-SJSB085 (4-6)	85							
320-76788-4	11215702-072321-BN-SJSB085 (6-8)	74							
320-76788-4 - RA	11215702-072321-BN-SJSB085 (6-8)	73							
320-76788-5	11215702-072321-BN-SJSB085 (8-10)	81							
320-76788-5 - RA	11215702-072321-BN-SJSB085 (8-10)	80							
320-76788-6	11215702-072321-BN-SJSB085 (10-12)	78							
320-76788-6 - RA	11215702-072321-BN-SJSB085 (10-12)	78							
320-76788-7	11215702-072321-BN-SJSB085 (12-14)	78							
320-76788-7 - RA	11215702-072321-BN-SJSB085 (12-14)	78							
320-76788-8	11215702-072321-BN-SJSB085 (14-16)	78							
320-76788-8 - RA	11215702-072321-BN-SJSB085 (14-16)	85							
320-76788-13	11215702-072321-BN-SJSB105 (0-2)	116							
320-76788-13 - DL	11215702-072321-BN-SJSB105 (0-2)	110							
320-76788-13 - RADL	11215702-072321-BN-SJSB105 (0-2)	49							
320-76788-14	11215702-072321-BN-SJSB105 (2-4)	71							
320-76788-14 - DL	11215702-072321-BN-SJSB105 (2-4)	125							
320-76788-14 - RADL	11215702-072321-BN-SJSB105 (2-4)	96							
320-76788-15	11215702-072321-BN-SJSB105 (4-6)	85							
320-76788-15 - RA	11215702-072321-BN-SJSB105 (4-6)	87							
320-76788-16	11215702-072321-BN-SJSB105 (6-8)	79							
320-76788-16 - RA	11215702-072321-BN-SJSB105 (6-8)	83							
320-76788-17	11215702-072321-BN-SJSB105 (8-10)	78							

Surrogate Summary

Client: GHD Services Inc. Job ID: 320-76788-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (35-197)							
320-76788-17 - RA	11215702-072321-BN-SJSB105	85							
320-76788-18	11215702-072321-BN-SJSB105 (10-12)	78							
320-76788-18 - RA	11215702-072321-BN-SJSB105 (10-12)	84							
320-76788-19	11215702-072321-BN-SJSB105 (12-14)	78							
320-76788-19 - RA	11215702-072321-BN-SJSB105 (12-14)	79							
320-76788-20	11215702-072321-BN-SJSB105 (14-16)	80							
320-76788-20 - RA	11215702-072321-BN-SJSB105 (14-16)	83							
MB 320-512871/1-A	Method Blank	81							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (31-191)							
LCS 320-512871/2-A	Lab Control Sample	81							
LCSD 320-512871/3-A	Lab Control Sample Dup	78							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76788-1	11215702-072321-BN-SJSB085			100	84	96	66	63	72
320-76788-1 - DL	11215702-072321-BN-SJSB085 (0-2)	60	66						
320-76788-1 - RADL	11215702-072321-BN-SJSB085 (0-2)		50						
320-76788-2	11215702-072321-BN-SJSB085 (2-4)	64	62	62	61	66	68	59	66
320-76788-2 - RA	11215702-072321-BN-SJSB085 (2-4)		67						
320-76788-3	11215702-072321-BN-SJSB085 (4-6)	68	67	66	64	69	68	64	69
320-76788-3 - RA	11215702-072321-BN-SJSB085 (4-6)		73						
320-76788-4	11215702-072321-BN-SJSB085 (6-8)	60	59	58	56	61	61	54	60
320-76788-4 - RA	11215702-072321-BN-SJSB085 (6-8)		63						
320-76788-5	11215702-072321-BN-SJSB085 (8-10)	78	75	76	73	79	80	71	79
320-76788-5 - RA	11215702-072321-BN-SJSB085 (8-10)		83						
320-76788-6	11215702-072321-BN-SJSB085 (10-12)	57	55	55	53	57	57	53	56
320-76788-6 - RA	11215702-072321-BN-SJSB085 (10-12)		60						
320-76788-7	11215702-072321-BN-SJSB085 (12-14)	59	58	58	56	61	62	55	60
320-76788-7 - RA	11215702-072321-BN-SJSB085 (12-14)		61						
320-76788-8	11215702-072321-BN-SJSB085 (14-16)	63	61	62	59	64	63	62	64
320-76788-8 - RA	11215702-072321-BN-SJSB085 (14-16)		69						
320-76788-13	11215702-072321-BN-SJSB105 (0-2)			79	70	74	58	57	70
320-76788-13 - DL	11215702-072321-BN-SJSB105 (0-2)	54	60						
320-76788-13 - RADL	11215702-072321-BN-SJSB105 (0-2)		33						
320-76788-14	11215702-072321-BN-SJSB105 (2-4)			97	77	87	58	55	66
320-76788-14 - DL	11215702-072321-BN-SJSB105 (2-4)	49 q	61						66
320-76788-14 - RADL	11215702-072321-BN-SJSB105 (2-4)		45						
320-76788-15	11215702-072321-BN-SJSB105 (4-6)	73	69	74	68	71	81	76	73
320-76788-15 - RA	11215702-072321-BN-SJSB105 (4-6)		83						
320-76788-16	11215702-072321-BN-SJSB105 (6-8)	59	55	58	53	55	60	62	56
320-76788-16 - RA	11215702-072321-BN-SJSB105 (6-8)		67						
320-76788-17	11215702-072321-BN-SJSB105 (8-10)	57	53	55	51	55	60	59	55

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76788-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76788-17 - RA	11215702-072321-BN-SJSB105		64						
320-76788-18	11215702-072321-BN-SJSB105 (10-12)	73	67	67	63	65	74	74	69
320-76788-18 - RA	11215702-072321-BN-SJSB105 (10-12)		84						
320-76788-19	11215702-072321-BN-SJSB105 (12-14)	58	55	60	56	60	63	61	58
320-76788-19 - RA	11215702-072321-BN-SJSB105 (12-14)		62						
320-76788-20	11215702-072321-BN-SJSB105 (14-16)	65	60	68	62	68	66	64	66
320-76788-20 - RA	11215702-072321-BN-SJSB105 (14-16)		68						
MB 320-512871/1-A	Method Blank	57	55	56	54	59	58	52	58

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76788-1	11215702-072321-BN-SJSB085	63	63	63	70	64	77	82
320-76788-1 - DL	11215702-072321-BN-SJSB085 (0-2)							
320-76788-1 - RADL	11215702-072321-BN-SJSB085 (0-2)							
320-76788-2	11215702-072321-BN-SJSB085 (2-4)	57	60	58	63	61	71	70
320-76788-2 - RA	11215702-072321-BN-SJSB085 (2-4)							
320-76788-3	11215702-072321-BN-SJSB085 (4-6)	62	64	63	70	68	78	77
320-76788-3 - RA	11215702-072321-BN-SJSB085 (4-6)							
320-76788-4	11215702-072321-BN-SJSB085 (6-8)	54	55	54	60	57	67	64
320-76788-4 - RA	11215702-072321-BN-SJSB085 (6-8)							
320-76788-5	11215702-072321-BN-SJSB085 (8-10)	70	72	71	80	79	90	88
320-76788-5 - RA	11215702-072321-BN-SJSB085 (8-10)							
320-76788-6	11215702-072321-BN-SJSB085 (10-12)	52	51	52	58	56	64	62
320-76788-6 - RA	11215702-072321-BN-SJSB085 (10-12)							
320-76788-7	11215702-072321-BN-SJSB085 (12-14)	54	55	55	61	59	69	66
320-76788-7 - RA	11215702-072321-BN-SJSB085 (12-14)							
320-76788-8	11215702-072321-BN-SJSB085 (14-16)	59	58	58	70	70	76	79
320-76788-8 - RA	11215702-072321-BN-SJSB085 (14-16)							
320-76788-13	11215702-072321-BN-SJSB105 (0-2)	63	52	56	61	52	63	75
320-76788-13 - DL	11215702-072321-BN-SJSB105 (0-2)							
320-76788-13 - RADL	11215702-072321-BN-SJSB105 (0-2)							

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76788-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76788-14	11215702-072321-BN-SJSB105	59	55	59	65	58	70	76
320-76788-14 - DL	11215702-072321-BN-SJSB105 (2-4)							
320-76788-14 - RADL	11215702-072321-BN-SJSB105 (2-4)							
320-76788-15	11215702-072321-BN-SJSB105 (4-6)	66	69	67	79	70	82	86
320-76788-15 - RA	11215702-072321-BN-SJSB105 (4-6)							
320-76788-16	11215702-072321-BN-SJSB105 (6-8)	52	53	52	64	60	68	70
320-76788-16 - RA	11215702-072321-BN-SJSB105 (6-8)							
320-76788-17	11215702-072321-BN-SJSB105 (8-10)	51	51	51	61	57	65	73
320-76788-17 - RA	11215702-072321-BN-SJSB105 (8-10)							
320-76788-18	11215702-072321-BN-SJSB105 (10-12)	63	64	62	79	68	86	93
320-76788-18 - RA	11215702-072321-BN-SJSB105 (10-12)							
320-76788-19	11215702-072321-BN-SJSB105 (12-14)	52	53	53	57	51	61	61
320-76788-19 - RA	11215702-072321-BN-SJSB105 (12-14)							
320-76788-20	11215702-072321-BN-SJSB105 (14-16)	59	59	59	67	66	73	79
320-76788-20 - RA	11215702-072321-BN-SJSB105 (14-16)							
MB 320-512871/1-A	Method Blank	52	51	52	58	57	62	60

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76788-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-512871/2-A	Lab Control Sample	59	56	57	56	59	58	53	59
LCSD 320-512871/3-A	Lab Control Sample Dup	60	57	58	56	62	61	56	60

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-512871/2-A	Lab Control Sample	53	53	53	60	58	66	64
LCSD 320-512871/3-A	Lab Control Sample Dup	55	54	55	60	59	65	63

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-512871/1-A
Matrix: Solid
Analysis Batch: 516836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 512871

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.0906	J q	1.0	0.028	pg/g		08/04/21 07:15	08/14/21 02:56	1
2,3,7,8-TCDF	0.0905	J q	1.0	0.017	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,7,8-PeCDD	ND		5.0	0.035	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,7,8-PeCDF	ND		5.0	0.028	pg/g		08/04/21 07:15	08/14/21 02:56	1
2,3,4,7,8-PeCDF	ND		5.0	0.029	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,4,7,8-HxCDD	0.161	J	5.0	0.030	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.031	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.028	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,4,7,8-HxCDF	0.0330	J	5.0	0.019	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,6,7,8-HxCDF	0.0264	J q	5.0	0.019	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,7,8,9-HxCDF	0.0556	J	5.0	0.016	pg/g		08/04/21 07:15	08/14/21 02:56	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.016	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,4,6,7,8-HpCDD	0.181	J	5.0	0.020	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,4,6,7,8-HpCDF	0.126	J q	5.0	0.026	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,4,7,8,9-HpCDF	0.102	J	5.0	0.036	pg/g		08/04/21 07:15	08/14/21 02:56	1
OCDD	0.467	J	10	0.032	pg/g		08/04/21 07:15	08/14/21 02:56	1
OCDF	0.112	J	10	0.021	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total TCDD	0.0906	J q	1.0	0.028	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total TCDF	0.183	J q	1.0	0.017	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total PeCDD	ND		5.0	0.039	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total PeCDF	ND		5.0	0.029	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total HxCDD	0.161	J	5.0	0.029	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total HxCDF	0.115	J q	5.0	0.017	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total HpCDD	0.386	J	5.0	0.020	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total HpCDF	0.228	J q	5.0	0.031	pg/g		08/04/21 07:15	08/14/21 02:56	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*57*		*25 - 164*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-2,3,7,8-TCDF	*55*		*24 - 169*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,7,8-PeCDD	*56*		*25 - 181*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,7,8-PeCDF	*54*		*24 - 185*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-2,3,4,7,8-PeCDF	*59*		*21 - 178*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,4,7,8-HxCDD	*58*		*32 - 141*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*52*		*28 - 130*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*58*		*26 - 152*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,6,7,8-HxCDF	*52*		*26 - 123*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,7,8,9-HxCDF	*51*		*29 - 147*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-2,3,4,6,7,8-HxCDF	*52*		*28 - 136*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*58*		*23 - 140*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*57*		*28 - 143*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*62*		*26 - 138*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-OCDD	*60*		*17 - 157*	*08/04/21 07:15*	*08/14/21 02:56*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*81*		*35 - 197*	*08/04/21 07:15*	*08/14/21 02:56*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-512871/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 516836 **Prep Batch: 512871**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	19.5		pg/g		97	67 - 158
2,3,7,8-TCDF	20.0	20.7		pg/g		104	75 - 158
1,2,3,7,8-PeCDD	100	105		pg/g		105	70 - 142
1,2,3,7,8-PeCDF	100	105		pg/g		105	80 - 134
2,3,4,7,8-PeCDF	100	96.3		pg/g		96	68 - 160
1,2,3,4,7,8-HxCDD	100	95.0		pg/g		95	70 - 164
1,2,3,6,7,8-HxCDD	100	106		pg/g		106	76 - 134
1,2,3,7,8,9-HxCDD	100	107		pg/g		107	64 - 162
1,2,3,4,7,8-HxCDF	100	93.4		pg/g		93	72 - 134
1,2,3,6,7,8-HxCDF	100	105		pg/g		105	84 - 130
1,2,3,7,8,9-HxCDF	100	103		pg/g		103	78 - 130
2,3,4,6,7,8-HxCDF	100	104		pg/g		104	70 - 156
1,2,3,4,6,7,8-HpCDD	100	104		pg/g		104	70 - 140
1,2,3,4,6,7,8-HpCDF	100	106		pg/g		106	82 - 122
1,2,3,4,7,8,9-HpCDF	100	96.5		pg/g		97	78 - 138
OCDD	200	206		pg/g		103	78 - 144
OCDF	200	202		pg/g		101	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*59*		*20 - 175*
13C-2,3,7,8-TCDF	*56*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*57*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*56*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*59*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*58*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*53*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*59*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*53*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*53*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*53*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*60*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*58*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*66*		*20 - 186*
13C-OCDD	*64*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*81*		*31 - 191*

Lab Sample ID: LCSD 320-512871/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 516836 **Prep Batch: 512871**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	20.0	19.8		pg/g		99	67 - 158	2	50
2,3,7,8-TCDF	20.0	20.7		pg/g		104	75 - 158	0	50
1,2,3,7,8-PeCDD	100	105		pg/g		105	70 - 142	1	50
1,2,3,7,8-PeCDF	100	106		pg/g		106	80 - 134	1	50
2,3,4,7,8-PeCDF	100	97.0		pg/g		97	68 - 160	1	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-512871/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 516836 **Prep Batch: 512871**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,7,8-HxCDD			100	94.9		pg/g		95	70 - 164	0	50
1,2,3,6,7,8-HxCDD			100	105		pg/g		105	76 - 134	1	50
1,2,3,7,8,9-HxCDD			100	105		pg/g		105	64 - 162	2	50
1,2,3,4,7,8-HxCDF			100	95.3		pg/g		95	72 - 134	2	50
1,2,3,6,7,8-HxCDF			100	104		pg/g		104	84 - 130	1	50
1,2,3,7,8,9-HxCDF			100	103		pg/g		103	78 - 130	0	50
2,3,4,6,7,8-HxCDF			100	104		pg/g		104	70 - 156	0	50
1,2,3,4,6,7,8-HpCDD			100	106		pg/g		106	70 - 140	2	50
1,2,3,4,6,7,8-HpCDF			100	106		pg/g		106	82 - 122	0	50
1,2,3,4,7,8,9-HpCDF			100	97.7		pg/g		98	78 - 138	1	50
OCDD			200	207		pg/g		104	78 - 144	1	50
OCDF			200	205		pg/g		102	63 - 170	1	50

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*60*		*20 - 175*
13C-2,3,7,8-TCDF	*57*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*58*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*56*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*62*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*61*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*56*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*60*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*55*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*54*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*55*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*60*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*59*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*65*		*20 - 186*
13C-OCDD	*63*		*13 - 199*

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*78*		*31 - 191*

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-76788-1 DU **Client Sample ID: 11215702-072321-BN-SJSB085 (0-2)**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 511309

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	59.1			57.1		%				3	20
Percent Solids	40.9			42.9		%				5	20

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-76788-1
Project/Site: SJRWP Supplemental Design Investigation

Specialty Organics

Prep Batch: 512871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-1 - DL	11215702-072321-BN-SJSB085 (0-2)	Total/NA	Solid	HRMS-Sox	
320-76788-1	11215702-072321-BN-SJSB085 (0-2)	Total/NA	Solid	HRMS-Sox	
320-76788-1 - RADL	11215702-072321-BN-SJSB085 (0-2)	Total/NA	Solid	HRMS-Sox	
320-76788-2	11215702-072321-BN-SJSB085 (2-4)	Total/NA	Solid	HRMS-Sox	
320-76788-2 - RA	11215702-072321-BN-SJSB085 (2-4)	Total/NA	Solid	HRMS-Sox	
320-76788-3	11215702-072321-BN-SJSB085 (4-6)	Total/NA	Solid	HRMS-Sox	
320-76788-3 - RA	11215702-072321-BN-SJSB085 (4-6)	Total/NA	Solid	HRMS-Sox	
320-76788-4	11215702-072321-BN-SJSB085 (6-8)	Total/NA	Solid	HRMS-Sox	
320-76788-4 - RA	11215702-072321-BN-SJSB085 (6-8)	Total/NA	Solid	HRMS-Sox	
320-76788-5	11215702-072321-BN-SJSB085 (8-10)	Total/NA	Solid	HRMS-Sox	
320-76788-5 - RA	11215702-072321-BN-SJSB085 (8-10)	Total/NA	Solid	HRMS-Sox	
320-76788-6	11215702-072321-BN-SJSB085 (10-12)	Total/NA	Solid	HRMS-Sox	
320-76788-6 - RA	11215702-072321-BN-SJSB085 (10-12)	Total/NA	Solid	HRMS-Sox	
320-76788-7	11215702-072321-BN-SJSB085 (12-14)	Total/NA	Solid	HRMS-Sox	
320-76788-7 - RA	11215702-072321-BN-SJSB085 (12-14)	Total/NA	Solid	HRMS-Sox	
320-76788-8	11215702-072321-BN-SJSB085 (14-16)	Total/NA	Solid	HRMS-Sox	
320-76788-8 - RA	11215702-072321-BN-SJSB085 (14-16)	Total/NA	Solid	HRMS-Sox	
320-76788-13	11215702-072321-BN-SJSB105 (0-2)	Total/NA	Solid	HRMS-Sox	
320-76788-13 - DL	11215702-072321-BN-SJSB105 (0-2)	Total/NA	Solid	HRMS-Sox	
320-76788-13 - RADL	11215702-072321-BN-SJSB105 (0-2)	Total/NA	Solid	HRMS-Sox	
320-76788-14 - DL	11215702-072321-BN-SJSB105 (2-4)	Total/NA	Solid	HRMS-Sox	
320-76788-14	11215702-072321-BN-SJSB105 (2-4)	Total/NA	Solid	HRMS-Sox	
320-76788-14 - RADL	11215702-072321-BN-SJSB105 (2-4)	Total/NA	Solid	HRMS-Sox	
320-76788-15	11215702-072321-BN-SJSB105 (4-6)	Total/NA	Solid	HRMS-Sox	
320-76788-15 - RA	11215702-072321-BN-SJSB105 (4-6)	Total/NA	Solid	HRMS-Sox	
320-76788-16	11215702-072321-BN-SJSB105 (6-8)	Total/NA	Solid	HRMS-Sox	
320-76788-16 - RA	11215702-072321-BN-SJSB105 (6-8)	Total/NA	Solid	HRMS-Sox	
320-76788-17	11215702-072321-BN-SJSB105 (8-10)	Total/NA	Solid	HRMS-Sox	
320-76788-17 - RA	11215702-072321-BN-SJSB105 (8-10)	Total/NA	Solid	HRMS-Sox	
320-76788-18	11215702-072321-BN-SJSB105 (10-12)	Total/NA	Solid	HRMS-Sox	
320-76788-18 - RA	11215702-072321-BN-SJSB105 (10-12)	Total/NA	Solid	HRMS-Sox	
320-76788-19	11215702-072321-BN-SJSB105 (12-14)	Total/NA	Solid	HRMS-Sox	
320-76788-19 - RA	11215702-072321-BN-SJSB105 (12-14)	Total/NA	Solid	HRMS-Sox	
320-76788-20	11215702-072321-BN-SJSB105 (14-16)	Total/NA	Solid	HRMS-Sox	
320-76788-20 - RA	11215702-072321-BN-SJSB105 (14-16)	Total/NA	Solid	HRMS-Sox	
MB 320-512871/1-A	Method Blank	Total/NA	Solid	HRMS-Sox	
LCS 320-512871/2-A	Lab Control Sample	Total/NA	Solid	HRMS-Sox	
LCSD 320-512871/3-A	Lab Control Sample Dup	Total/NA	Solid	HRMS-Sox	

Analysis Batch: 516836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-2	11215702-072321-BN-SJSB085 (2-4)	Total/NA	Solid	1613B	512871
320-76788-3	11215702-072321-BN-SJSB085 (4-6)	Total/NA	Solid	1613B	512871
320-76788-4	11215702-072321-BN-SJSB085 (6-8)	Total/NA	Solid	1613B	512871
320-76788-5	11215702-072321-BN-SJSB085 (8-10)	Total/NA	Solid	1613B	512871
320-76788-6	11215702-072321-BN-SJSB085 (10-12)	Total/NA	Solid	1613B	512871
320-76788-7	11215702-072321-BN-SJSB085 (12-14)	Total/NA	Solid	1613B	512871
MB 320-512871/1-A	Method Blank	Total/NA	Solid	1613B	512871
LCS 320-512871/2-A	Lab Control Sample	Total/NA	Solid	1613B	512871
LCSD 320-512871/3-A	Lab Control Sample Dup	Total/NA	Solid	1613B	512871

QC Association Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Specialty Organics

Analysis Batch: 516846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-1	11215702-072321-BN-SJSB085 (0-2)	Total/NA	Solid	1613B	512871
320-76788-8	11215702-072321-BN-SJSB085 (14-16)	Total/NA	Solid	1613B	512871
320-76788-13	11215702-072321-BN-SJSB105 (0-2)	Total/NA	Solid	1613B	512871
320-76788-14	11215702-072321-BN-SJSB105 (2-4)	Total/NA	Solid	1613B	512871
320-76788-15	11215702-072321-BN-SJSB105 (4-6)	Total/NA	Solid	1613B	512871
320-76788-16	11215702-072321-BN-SJSB105 (6-8)	Total/NA	Solid	1613B	512871
320-76788-17	11215702-072321-BN-SJSB105 (8-10)	Total/NA	Solid	1613B	512871
320-76788-18	11215702-072321-BN-SJSB105 (10-12)	Total/NA	Solid	1613B	512871
320-76788-19	11215702-072321-BN-SJSB105 (12-14)	Total/NA	Solid	1613B	512871
320-76788-20	11215702-072321-BN-SJSB105 (14-16)	Total/NA	Solid	1613B	512871

Analysis Batch: 517241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-1 - DL	11215702-072321-BN-SJSB085 (0-2)	Total/NA	Solid	1613B	512871
320-76788-13 - DL	11215702-072321-BN-SJSB105 (0-2)	Total/NA	Solid	1613B	512871
320-76788-14 - DL	11215702-072321-BN-SJSB105 (2-4)	Total/NA	Solid	1613B	512871

Analysis Batch: 519540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-2 - RA	11215702-072321-BN-SJSB085 (2-4)	Total/NA	Solid	1613B	512871
320-76788-3 - RA	11215702-072321-BN-SJSB085 (4-6)	Total/NA	Solid	1613B	512871
320-76788-4 - RA	11215702-072321-BN-SJSB085 (6-8)	Total/NA	Solid	1613B	512871
320-76788-5 - RA	11215702-072321-BN-SJSB085 (8-10)	Total/NA	Solid	1613B	512871
320-76788-6 - RA	11215702-072321-BN-SJSB085 (10-12)	Total/NA	Solid	1613B	512871
320-76788-7 - RA	11215702-072321-BN-SJSB085 (12-14)	Total/NA	Solid	1613B	512871
320-76788-8 - RA	11215702-072321-BN-SJSB085 (14-16)	Total/NA	Solid	1613B	512871
320-76788-15 - RA	11215702-072321-BN-SJSB105 (4-6)	Total/NA	Solid	1613B	512871
320-76788-16 - RA	11215702-072321-BN-SJSB105 (6-8)	Total/NA	Solid	1613B	512871
320-76788-17 - RA	11215702-072321-BN-SJSB105 (8-10)	Total/NA	Solid	1613B	512871
320-76788-18 - RA	11215702-072321-BN-SJSB105 (10-12)	Total/NA	Solid	1613B	512871
320-76788-19 - RA	11215702-072321-BN-SJSB105 (12-14)	Total/NA	Solid	1613B	512871
320-76788-20 - RA	11215702-072321-BN-SJSB105 (14-16)	Total/NA	Solid	1613B	512871

Analysis Batch: 519744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-1 - RADL	11215702-072321-BN-SJSB085 (0-2)	Total/NA	Solid	1613B	512871
320-76788-13 - RADL	11215702-072321-BN-SJSB105 (0-2)	Total/NA	Solid	1613B	512871
320-76788-14 - RADL	11215702-072321-BN-SJSB105 (2-4)	Total/NA	Solid	1613B	512871

General Chemistry

Analysis Batch: 511309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-1	11215702-072321-BN-SJSB085 (0-2)	Total/NA	Solid	D 2216	
320-76788-2	11215702-072321-BN-SJSB085 (2-4)	Total/NA	Solid	D 2216	
320-76788-3	11215702-072321-BN-SJSB085 (4-6)	Total/NA	Solid	D 2216	
320-76788-4	11215702-072321-BN-SJSB085 (6-8)	Total/NA	Solid	D 2216	
320-76788-5	11215702-072321-BN-SJSB085 (8-10)	Total/NA	Solid	D 2216	
320-76788-6	11215702-072321-BN-SJSB085 (10-12)	Total/NA	Solid	D 2216	
320-76788-7	11215702-072321-BN-SJSB085 (12-14)	Total/NA	Solid	D 2216	
320-76788-8	11215702-072321-BN-SJSB085 (14-16)	Total/NA	Solid	D 2216	

General Chemistry (Continued)

Analysis Batch: 511309 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-13	11215702-072321-BN-SJSB105 (0-2)	Total/NA	Solid	D 2216	
320-76788-14	11215702-072321-BN-SJSB105 (2-4)	Total/NA	Solid	D 2216	
320-76788-15	11215702-072321-BN-SJSB105 (4-6)	Total/NA	Solid	D 2216	
320-76788-16	11215702-072321-BN-SJSB105 (6-8)	Total/NA	Solid	D 2216	
320-76788-17	11215702-072321-BN-SJSB105 (8-10)	Total/NA	Solid	D 2216	
320-76788-18	11215702-072321-BN-SJSB105 (10-12)	Total/NA	Solid	D 2216	
320-76788-19	11215702-072321-BN-SJSB105 (12-14)	Total/NA	Solid	D 2216	
320-76788-20	11215702-072321-BN-SJSB105 (14-16)	Total/NA	Solid	D 2216	
320-76788-1 DU	11215702-072321-BN-SJSB085 (0-2)	Total/NA	Solid	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (0-2)
Lab Sample ID: 320-76788-1
Date Collected: 07/23/21 11:00
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (0-2)
Lab Sample ID: 320-76788-1
Date Collected: 07/23/21 11:00
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 40.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516846	08/14/21 22:01	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	DL		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	DL	5	517241	08/18/21 05:14	SMA	TAL SAC
Total/NA	Prep	HRMS-Sox	RADL		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RADL	5	519744	08/25/21 20:00	KSS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (2-4)
Lab Sample ID: 320-76788-2
Date Collected: 07/23/21 11:05
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (2-4)
Lab Sample ID: 320-76788-2
Date Collected: 07/23/21 11:05
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 61.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516836	08/14/21 05:11	SMA	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/25/21 02:12	DB	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (4-6)
Lab Sample ID: 320-76788-3
Date Collected: 07/23/21 11:10
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (4-6)
Lab Sample ID: 320-76788-3
Date Collected: 07/23/21 11:10
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 79.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516836	08/14/21 05:56	SMA	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Job ID: 320-76788-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072321-BN-SJSB085 (4-6)
Lab Sample ID: 320-76788-3

Date Collected: 07/23/21 11:10
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 79.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/24/21 21:43	DB	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (6-8)
Lab Sample ID: 320-76788-4

Date Collected: 07/23/21 11:15
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (6-8)
Lab Sample ID: 320-76788-4

Date Collected: 07/23/21 11:15
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 70.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516836	08/14/21 06:41	SMA	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/24/21 22:22	DB	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (8-10)
Lab Sample ID: 320-76788-5

Date Collected: 07/23/21 11:20
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (8-10)
Lab Sample ID: 320-76788-5

Date Collected: 07/23/21 11:20
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 75.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516836	08/14/21 07:26	SMA	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/24/21 23:00	DB	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (10-12)
Lab Sample ID: 320-76788-6

Date Collected: 07/23/21 11:25
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB085 (10-12) — Lab Sample ID: 320-76788-6

Date Collected: 07/23/21 11:25 — **Matrix: Solid**
Date Received: 07/27/21 09:45 — **Percent Solids: 58.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516836	08/14/21 08:11	SMA	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/24/21 18:32	DB	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (12-14) — Lab Sample ID: 320-76788-7

Date Collected: 07/23/21 11:30 — **Matrix: Solid**
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (12-14) — Lab Sample ID: 320-76788-7

Date Collected: 07/23/21 11:30 — **Matrix: Solid**
Date Received: 07/27/21 09:45 — **Percent Solids: 64.8**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516836	08/14/21 08:56	SMA	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/24/21 19:10	DB	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (14-16) — Lab Sample ID: 320-76788-8

Date Collected: 07/23/21 11:35 — **Matrix: Solid**
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (14-16) — Lab Sample ID: 320-76788-8

Date Collected: 07/23/21 11:35 — **Matrix: Solid**
Date Received: 07/27/21 09:45 — **Percent Solids: 60.8**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516846	08/14/21 14:31	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/24/21 19:48	DB	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (0-2) — Lab Sample ID: 320-76788-13

Date Collected: 07/23/21 15:30 — **Matrix: Solid**
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (0-2)

Lab Sample ID: 320-76788-13
Date Collected: 07/23/21 15:30
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 50.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516846	08/14/21 16:01	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	DL		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	DL	5	517241	08/18/21 05:59	SMA	TAL SAC
Total/NA	Prep	HRMS-Sox	RADL		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RADL	5	519744	08/25/21 20:38	KSS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (2-4)

Lab Sample ID: 320-76788-14
Date Collected: 07/23/21 15:35
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (2-4)

Lab Sample ID: 320-76788-14
Date Collected: 07/23/21 15:35
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 52.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516846	08/14/21 22:46	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	DL		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	DL	5	517241	08/18/21 06:44	SMA	TAL SAC
Total/NA	Prep	HRMS-Sox	RADL		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RADL	5	519744	08/25/21 21:17	KSS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (4-6)

Lab Sample ID: 320-76788-15
Date Collected: 07/23/21 15:40
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (4-6)

Lab Sample ID: 320-76788-15
Date Collected: 07/23/21 15:40
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 69.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516846	08/14/21 16:46	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/25/21 00:55	DB	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (6-8)
Lab Sample ID: 320-76788-16
Date Collected: 07/23/21 15:45
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (6-8)
Lab Sample ID: 320-76788-16
Date Collected: 07/23/21 15:45
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 69.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516846	08/14/21 17:31	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/24/21 23:38	DB	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (8-10)
Lab Sample ID: 320-76788-17
Date Collected: 07/23/21 15:50
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (8-10)
Lab Sample ID: 320-76788-17
Date Collected: 07/23/21 15:50
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 60.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516846	08/14/21 18:16	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/24/21 20:27	DB	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (10-12)
Lab Sample ID: 320-76788-18
Date Collected: 07/23/21 15:55
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (10-12)
Lab Sample ID: 320-76788-18
Date Collected: 07/23/21 15:55
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 60.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516846	08/14/21 19:01	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/24/21 21:05	DB	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Client Sample ID: 11215702-072321-BN-SJSB105 (12-14)
Lab Sample ID: 320-76788-19

Date Collected: 07/23/21 16:00
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (12-14)
Lab Sample ID: 320-76788-19

Date Collected: 07/23/21 16:00
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 66.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516846	08/14/21 19:46	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/25/21 01:34	DB	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (14-16)
Lab Sample ID: 320-76788-20

Date Collected: 07/23/21 16:05
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (14-16)
Lab Sample ID: 320-76788-20

Date Collected: 07/23/21 16:05
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 65.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516846	08/14/21 20:31	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519540	08/25/21 00:17	DB	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-76788-1
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Solid	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Solid	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Solid	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Solid	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Solid	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Solid	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Solid	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Solid	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Solid	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Solid	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Solid	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Solid	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Solid	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Solid	2,3,7,8-TCDD
1613B	HRMS-Sox	Solid	2,3,7,8-TCDF
1613B	HRMS-Sox	Solid	OCDD
1613B	HRMS-Sox	Solid	OCDF
1613B	HRMS-Sox	Solid	Total HpCDD
1613B	HRMS-Sox	Solid	Total HpCDF
1613B	HRMS-Sox	Solid	Total HxCDD
1613B	HRMS-Sox	Solid	Total HxCDF
1613B	HRMS-Sox	Solid	Total PeCDD
1613B	HRMS-Sox	Solid	Total PeCDF
1613B	HRMS-Sox	Solid	Total TCDD
1613B	HRMS-Sox	Solid	Total TCDF
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids
TEQ		Solid	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76788-1	11215702-072321-BN-SJSB085 (0-2)	Solid	07/23/21 11:00	07/27/21 09:45
320-76788-2	11215702-072321-BN-SJSB085 (2-4)	Solid	07/23/21 11:05	07/27/21 09:45
320-76788-3	11215702-072321-BN-SJSB085 (4-6)	Solid	07/23/21 11:10	07/27/21 09:45
320-76788-4	11215702-072321-BN-SJSB085 (6-8)	Solid	07/23/21 11:15	07/27/21 09:45
320-76788-5	11215702-072321-BN-SJSB085 (8-10)	Solid	07/23/21 11:20	07/27/21 09:45
320-76788-6	11215702-072321-BN-SJSB085 (10-12)	Solid	07/23/21 11:25	07/27/21 09:45
320-76788-7	11215702-072321-BN-SJSB085 (12-14)	Solid	07/23/21 11:30	07/27/21 09:45
320-76788-8	11215702-072321-BN-SJSB085 (14-16)	Solid	07/23/21 11:35	07/27/21 09:45
320-76788-13	11215702-072321-BN-SJSB105 (0-2)	Solid	07/23/21 15:30	07/27/21 09:45
320-76788-14	11215702-072321-BN-SJSB105 (2-4)	Solid	07/23/21 15:35	07/27/21 09:45
320-76788-15	11215702-072321-BN-SJSB105 (4-6)	Solid	07/23/21 15:40	07/27/21 09:45
320-76788-16	11215702-072321-BN-SJSB105 (6-8)	Solid	07/23/21 15:45	07/27/21 09:45
320-76788-17	11215702-072321-BN-SJSB105 (8-10)	Solid	07/23/21 15:50	07/27/21 09:45
320-76788-18	11215702-072321-BN-SJSB105 (10-12)	Solid	07/23/21 15:55	07/27/21 09:45
320-76788-19	11215702-072321-BN-SJSB105 (12-14)	Solid	07/23/21 16:00	07/27/21 09:45
320-76788-20	11215702-072321-BN-SJSB105 (14-16)	Solid	07/23/21 16:05	07/27/21 09:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: WDM 320-510264/1 Client Sample ID:

Date Analyzed: 07/26/21 09:21 Lab File ID: 26JL2110D5_1.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,6,8-TCDF	15.13	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,6,8-TCDD	16.07	Peak assignment corrected	arghestanis	07/26/21 12:21
2,3,4,7-TCDF	17.63	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,7-TCDD	18.22	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDD	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDF	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,8,9-TCDD	19.47	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,8,9-TCDF	19.49	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,4,6,8-PeCDF	19.76	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,4,7,9-PeCDD	21.58	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDD	25.91	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDF	26.14	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,8-HxCDF	28.48	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,4,6,7,9-HxCDD	30.02	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,7-HxCDD	32.30	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,3,4,8,9-HxCDF	32.61	Peak assignment corrected	arghestanis	07/26/21 12:23

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: IC 320-510264/3 Client Sample ID:

Date Analyzed: 07/26/21 10:51 Lab File ID: 26JL2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.35	Invalid Compound ID	stephensk	07/27/21 08:15

Lab Sample ID: IC 320-510264/4 Client Sample ID:

Date Analyzed: 07/26/21 11:36 Lab File ID: 26JL2110D5_4.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,4,7,8-PeCDF	24.13	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDF	30.84	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDD	31.93	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8,9-HpCDF	35.01	Peak assignment corrected	arghestanis	07/26/21 12:31

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516836

Lab Sample ID: MB 320-512871/1-A Client Sample ID:

Date Analyzed: 08/14/21 02:56 Lab File ID: 13AU2110D5_14.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/18/21 08:50
2,3,7,8-TCDD	18.07	Split Peak	dadunj	08/18/21 08:49
1,2,3,4,7,8-HxCDF	30.54	Baseline	dadunj	08/18/21 08:49
1,2,3,6,7,8-HxCDF	30.73	Baseline	dadunj	08/18/21 08:49
1,2,3,4,7,8-HxCDD	31.73	Split Peak	dadunj	08/18/21 08:50
1,2,3,7,8,9-HxCDF	32.35	Split Peak	dadunj	08/18/21 08:50
1,2,3,4,6,7,8-HpCDD	34.58	Split Peak	dadunj	08/18/21 08:50
1,2,3,4,7,8,9-HpCDF	34.87	Split Peak	dadunj	08/18/21 08:50
OCDD	36.94	Split Peak	dadunj	08/18/21 08:50
OCDF	37.02	Split Peak	dadunj	08/18/21 08:50

Lab Sample ID: 320-76788-2 Client Sample ID: 11215702-072321-BN-SJSB085 (2-4)

Date Analyzed: 08/14/21 05:11 Lab File ID: 13AU2110D5_17.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDD	24.48	Split Peak	dadunj	08/18/21 08:55
1,2,3,7,8,9-HxCDD	32.15	Split Peak	dadunj	08/18/21 08:56
1,2,3,4,6,7,8-HpCDF	33.78	Split Peak	dadunj	08/18/21 08:56

Lab Sample ID: 320-76788-3 Client Sample ID: 11215702-072321-BN-SJSB085 (4-6)

Date Analyzed: 08/14/21 05:56 Lab File ID: 13AU2110D5_18.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.39	Split Peak	dadunj	08/18/21 08:58
1,2,3,4,7,8,9-HpCDF	34.86	Split Peak	dadunj	08/18/21 08:59
OCDF	37.02	Split Peak	dadunj	08/18/21 09:00

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516836

Lab Sample ID: 320-76788-4 Client Sample ID: 11215702-072321-BN-SJSB085 (6-8)

Date Analyzed: 08/14/21 06:41 Lab File ID: 13AU2110D5_19.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/18/21 09:02
1,2,3,7,8-PeCDF	22.39	Split Peak	dadunj	08/18/21 09:01
2,3,4,6,7,8-HxCDF	31.53	Split Peak	dadunj	08/18/21 09:01
1,2,3,4,6,7,8-HpCDF	33.77	Split Peak	dadunj	08/18/21 09:02
OCDF	37.01	Split Peak	dadunj	08/18/21 09:02

Lab Sample ID: 320-76788-5 Client Sample ID: 11215702-072321-BN-SJSB085 (8-10)

Date Analyzed: 08/14/21 07:26 Lab File ID: 13AU2110D5_20.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.08	Baseline	dadunj	08/18/21 09:04
1,2,3,7,8-PeCDF	22.39	Split Peak	dadunj	08/18/21 09:04
2,3,4,7,8-PeCDF	23.74	Split Peak	dadunj	08/18/21 09:04
2,3,4,6,7,8-HxCDF	31.54	Split Peak	dadunj	08/18/21 09:05
1,2,3,7,8,9-HxCDF	32.34	Invalid Compound ID	dadunj	08/18/21 09:05
1,2,3,4,6,7,8-HpCDF	33.78	Split Peak	dadunj	08/18/21 09:05
1,2,3,4,7,8,9-HpCDF	34.86	Split Peak	dadunj	08/18/21 09:06
OCDF	37.02	Split Peak	dadunj	08/18/21 09:06

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516836

Lab Sample ID: 320-76788-6 Client Sample ID: 11215702-072321-BN-SJSB085 (10-12)

Date Analyzed: 08/14/21 08:11 Lab File ID: 13AU2110D5_21.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.36	Split Peak	dadunj	08/18/21 09:09
2,3,7,8-TCDD	18.07	Split Peak	dadunj	08/18/21 09:15
1,2,3,7,8-PeCDF	22.39	Split Peak	dadunj	08/18/21 09:15
2,3,4,7,8-PeCDF	23.72	Split Peak	dadunj	08/18/21 09:17
1,2,3,4,7,8-HxCDF	30.50	Split Peak	dadunj	08/18/21 09:16
1,2,3,7,8,9-HxCDF	32.33	Split Peak	dadunj	08/18/21 09:16
1,2,3,4,6,7,8-HpCDF	33.78	Split Peak	dadunj	08/18/21 09:17
OCDF	37.01	Split Peak	dadunj	08/18/21 09:17

Lab Sample ID: 320-76788-7 Client Sample ID: 11215702-072321-BN-SJSB085 (12-14)

Date Analyzed: 08/14/21 08:56 Lab File ID: 13AU2110D5_22.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.38	Split Peak	dadunj	08/18/21 09:19
2,3,4,7,8-PeCDF	23.72	Split Peak	dadunj	08/18/21 09:19
1,2,3,6,7,8-HxCDF	30.72	Split Peak	dadunj	08/18/21 09:19
1,2,3,7,8,9-HxCDF	32.33	Split Peak	dadunj	08/18/21 09:20
1,2,3,4,7,8,9-HpCDF	34.85	Split Peak	dadunj	08/18/21 09:20
OCDF	37.01	Invalid Compound ID	dadunj	08/18/21 09:20

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516846

Lab Sample ID: 320-76788-8 Client Sample ID: 11215702-072321-BN-SJSB085 (14-16)

Date Analyzed: 08/14/21 14:31 Lab File ID: 13AU2110D5_29.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.41	Split Peak	dadunj	08/18/21 09:35
1,2,3,6,7,8-HxCDF	30.70	Split Peak	dadunj	08/18/21 09:35
2,3,4,6,7,8-HxCDF	31.53	Split Peak	dadunj	08/18/21 09:35
1,2,3,7,8,9-HxCDF	32.33	Split Peak	dadunj	08/18/21 09:35
1,2,3,4,7,8,9-HpCDF	34.86	Split Peak	dadunj	08/18/21 09:35
OCDF	37.01	Split Peak	dadunj	08/18/21 09:36

Lab Sample ID: 320-76788-13 Client Sample ID: 11215702-072321-BN-SJSB105 (0-2)

Date Analyzed: 08/14/21 16:01 Lab File ID: 13AU2110D5_31.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.80	Split Peak	dadunj	08/18/21 09:41
2,3,4,7,8-PeCDF	24.11	Split Peak	dadunj	08/18/21 09:41
1,2,3,7,8-PeCDD	24.81	Split Peak	dadunj	08/18/21 09:42
1,2,3,4,7,8-HxCDF	30.73	Split Peak	dadunj	08/18/21 09:42
1,2,3,6,7,8-HxCDF	30.89	Split Peak	dadunj	08/18/21 09:42
13C-2,3,4,6,7,8-HxCDF	31.65	Split Peak	dadunj	08/18/21 09:42
2,3,4,6,7,8-HxCDF	31.66	Split Peak	dadunj	08/18/21 09:42
13C-1,2,3,7,8,9-HxCDF	32.42	Split Peak	dadunj	08/18/21 09:42
1,2,3,7,8,9-HxCDF	32.43	Split Peak	dadunj	08/18/21 09:43
1,2,3,4,6,7,8-HpCDF	33.83	Split Peak	dadunj	08/18/21 09:43

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516846

Lab Sample ID: 320-76788-15 Client Sample ID: 11215702-072321-BN-SJSB105 (4-6)

Date Analyzed: 08/14/21 16:46 Lab File ID: 13AU2110D5_32.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.41	Split Peak	dadunj	08/18/21 09:47
2,3,4,6,7,8-HxCDF	31.53	Split Peak	dadunj	08/18/21 09:47
1,2,3,4,6,7,8-HpCDF	33.78	Split Peak	dadunj	08/18/21 09:48
1,2,3,4,7,8,9-HpCDF	34.87	Split Peak	dadunj	08/18/21 09:48

Lab Sample ID: 320-76788-16 Client Sample ID: 11215702-072321-BN-SJSB105 (6-8)

Date Analyzed: 08/14/21 17:31 Lab File ID: 13AU2110D5_33.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/18/21 09:50
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/18/21 09:50
1,2,3,7,8-PeCDF	22.39	Split Peak	dadunj	08/18/21 09:50
1,2,3,6,7,8-HxCDF	30.72	Split Peak	dadunj	08/18/21 09:50
1,2,3,4,7,8-HxCDD	31.74	Invalid Compound ID	dadunj	08/18/21 09:50
1,2,3,6,7,8-HxCDD	31.83	Split Peak	dadunj	08/18/21 09:50
1,2,3,4,6,7,8-HpCDF	33.79	Split Peak	dadunj	08/18/21 09:51
OCDF	37.02	Invalid Compound ID	dadunj	08/18/21 09:51

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516846

Lab Sample ID: 320-76788-17 Client Sample ID: 11215702-072321-BN-SJSB105 (8-10)

Date Analyzed: 08/14/21 18:16 Lab File ID: 13AU2110D5_34.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.10	Split Peak	dadunj	08/18/21 09:53
1,2,3,7,8-PeCDF	22.41	Split Peak	dadunj	08/18/21 09:53
2,3,4,7,8-PeCDF	23.74	Split Peak	dadunj	08/18/21 09:53
1,2,3,4,7,8-HxCDF	30.56	Poor chromatography	bennettd	08/17/21 14:05
1,2,3,6,7,8-HxCDF	30.74	Poor chromatography	bennettd	08/17/21 14:05
1,2,3,4,7,8-HxCDD	31.73	Wrong peak	bennettd	08/17/21 14:05
1,2,3,6,7,8-HxCDD	31.83	Wrong peak	bennettd	08/17/21 14:05
1,2,3,4,6,7,8-HpCDF	33.79	Split Peak	dadunj	08/18/21 09:54
OCDF	36.97	Split Peak	dadunj	08/18/21 09:54

Lab Sample ID: 320-76788-18 Client Sample ID: 11215702-072321-BN-SJSB105 (10-12)

Date Analyzed: 08/14/21 19:01 Lab File ID: 13AU2110D5_35.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.41	Split Peak	dadunj	08/18/21 09:56
2,3,4,7,8-PeCDF	23.73	Baseline	dadunj	08/18/21 09:57
1,2,3,7,8-PeCDD	24.49	Invalid Compound ID	dadunj	08/18/21 09:58
1,2,3,4,6,7,8-HpCDF	33.77	Split Peak	dadunj	08/18/21 09:57
OCDF	37.03	Split Peak	dadunj	08/18/21 09:57

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516846

Lab Sample ID: 320-76788-19 Client Sample ID: 11215702-072321-BN-SJSB105 (12-14)

Date Analyzed: 08/14/21 19:46 Lab File ID: 13AU2110D5_36.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.41	Split Peak	dadunj	08/18/21 09:59
2,3,4,6,7,8-HxCDF	31.54	Split Peak	dadunj	08/18/21 09:59
1,2,3,7,8,9-HxCDF	32.35	Split Peak	dadunj	08/18/21 10:00
1,2,3,4,6,7,8-HpCDF	33.78	Split Peak	dadunj	08/18/21 10:00
OCDF	37.02	Split Peak	dadunj	08/18/21 10:00

Lab Sample ID: 320-76788-20 Client Sample ID: 11215702-072321-BN-SJSB105 (14-16)

Date Analyzed: 08/14/21 20:31 Lab File ID: 13AU2110D5_37.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.08	Split Peak	dadunj	08/18/21 10:01
1,2,3,7,8-PeCDF	22.39	Split Peak	dadunj	08/18/21 10:01
2,3,4,6,7,8-HxCDF	31.54	Split Peak	dadunj	08/18/21 10:02
1,2,3,4,7,8-HxCDD	31.73	Invalid Compound ID	dadunj	08/18/21 10:02
1,2,3,6,7,8-HxCDD	31.82	Split Peak	dadunj	08/18/21 10:02
1,2,3,7,8,9-HxCDF	32.34	Invalid Compound ID	dadunj	08/18/21 10:02
1,2,3,4,7,8,9-HpCDF	34.86	Split Peak	dadunj	08/18/21 10:03
OCDF	37.02	Split Peak	dadunj	08/18/21 10:03

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516846

Lab Sample ID: 320-76788-1 Client Sample ID: 11215702-072321-BN-SJSB085 (0-2)

Date Analyzed: 08/14/21 22:01 Lab File ID: 13AU2110D5_39.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.69	Split Peak	dadunj	08/18/21 10:08
2,3,4,7,8-PeCDF	24.00	Split Peak	dadunj	08/18/21 10:08
1,2,3,7,8-PeCDD	24.71	Split Peak	dadunj	08/18/21 10:08
2,3,4,6,7,8-HxCDF	31.62	Split Peak	dadunj	08/18/21 10:09
1,2,3,4,7,8-HxCDD	31.79	Split Peak	dadunj	08/18/21 10:09
1,2,3,6,7,8-HxCDD	31.90	Split Peak	dadunj	08/18/21 10:09
13C-1,2,3,7,8,9-HxCDF	32.38	Split Peak	dadunj	08/18/21 10:09
1,2,3,7,8,9-HxCDF	32.39	Split Peak	dadunj	08/18/21 10:09
1,2,3,4,6,7,8-HpCDF	33.81	Split Peak	dadunj	08/18/21 10:10

Lab Sample ID: 320-76788-14 Client Sample ID: 11215702-072321-BN-SJSB105 (2-4)

Date Analyzed: 08/14/21 22:46 Lab File ID: 13AU2110D5_40.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.91	Invalid Compound ID	dadunj	08/18/21 10:17
2,3,4,7,8-PeCDF	24.18	Split Peak	dadunj	08/18/21 10:17
1,2,3,7,8-PeCDD	24.88	Split Peak	dadunj	08/18/21 10:17
1,2,3,4,7,8-HxCDF	30.76	Split Peak	dadunj	08/18/21 10:17
1,2,3,6,7,8-HxCDF	30.90	Split Peak	dadunj	08/18/21 10:18
13C-2,3,4,6,7,8-HxCDF	31.66	Split Peak	dadunj	08/18/21 10:18
2,3,4,6,7,8-HxCDF	31.67	Split Peak	dadunj	08/18/21 10:18
1,2,3,7,8,9-HxCDF	32.43	Split Peak	dadunj	08/18/21 10:18
13C-1,2,3,7,8,9-HxCDF	32.43	Split Peak	dadunj	08/18/21 10:18
1,2,3,4,6,7,8-HpCDF	33.83	Split Peak	dadunj	08/18/21 10:19

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 517241

Lab Sample ID: 320-76788-1 DL Client Sample ID: 11215702-072321-BN-SJSB085 (0-2) DL

Date Analyzed: 08/18/21 05:14 Lab File ID: 17AU21A10D5_19.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDD	18.14	Peak assignment corrected	arghestanis	08/18/21 09:51
2,3,7,8-TCDD	18.16	Peak assignment corrected	arghestanis	08/18/21 09:52

Lab Sample ID: 320-76788-13 DL Client Sample ID: 11215702-072321-BN-SJSB105 (0-2) DL

Date Analyzed: 08/18/21 05:59 Lab File ID: 17AU21A10D5_20.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDD	18.14	Peak assignment corrected	arghestanis	08/18/21 09:52
2,3,7,8-TCDD	18.16	Peak assignment corrected	arghestanis	08/18/21 09:52

Lab Sample ID: 320-76788-14 DL Client Sample ID: 11215702-072321-BN-SJSB105 (2-4) DL

Date Analyzed: 08/18/21 06:44 Lab File ID: 17AU21A10D5_21.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.43	Peak assignment corrected	arghestanis	08/18/21 11:34
13C-2,3,7,8-TCDD	18.17	Peak assignment corrected	arghestanis	08/18/21 09:53
2,3,7,8-TCDD	18.19	Peak assignment corrected	arghestanis	08/18/21 09:53

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

1613B

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 519744

Lab Sample ID: 320-76788-1 RADL Client Sample ID: 11215702-072321-BN-SJSB085 (0-2) RADL

Date Analyzed: 08/25/21 20:00 Lab File ID: 25AU21A11D2_012.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.14	Retention Time Shift	stephensk	08/26/21 09:10
13C-2,3,7,8-TCDF	17.69	Retention Time Shift	stephensk	08/26/21 09:09
2,3,7,8-TCDF	17.72	Retention Time Shift	stephensk	08/26/21 09:09

Lab Sample ID: 320-76788-13 RADL Client Sample ID: 11215702-072321-BN-SJSB105 (0-2) RADL

Date Analyzed: 08/25/21 20:38 Lab File ID: 25AU21A11D2_013.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.14	Retention Time Shift	stephensk	08/26/21 09:13
13C-2,3,7,8-TCDF	17.67	Poor chromatography	stephensk	08/26/21 09:12

Lab Sample ID: 320-76788-14 RADL Client Sample ID: 11215702-072321-BN-SJSB105 (2-4) RADL

Date Analyzed: 08/25/21 21:17 Lab File ID: 25AU21A11D2_014.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.14	Retention Time Shift	stephensk	08/26/21 09:14
13C-2,3,7,8-TCDF	17.70	Poor chromatography	stephensk	08/26/21 09:15

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
...HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30	CIL, Lot ER09031903			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

779026

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

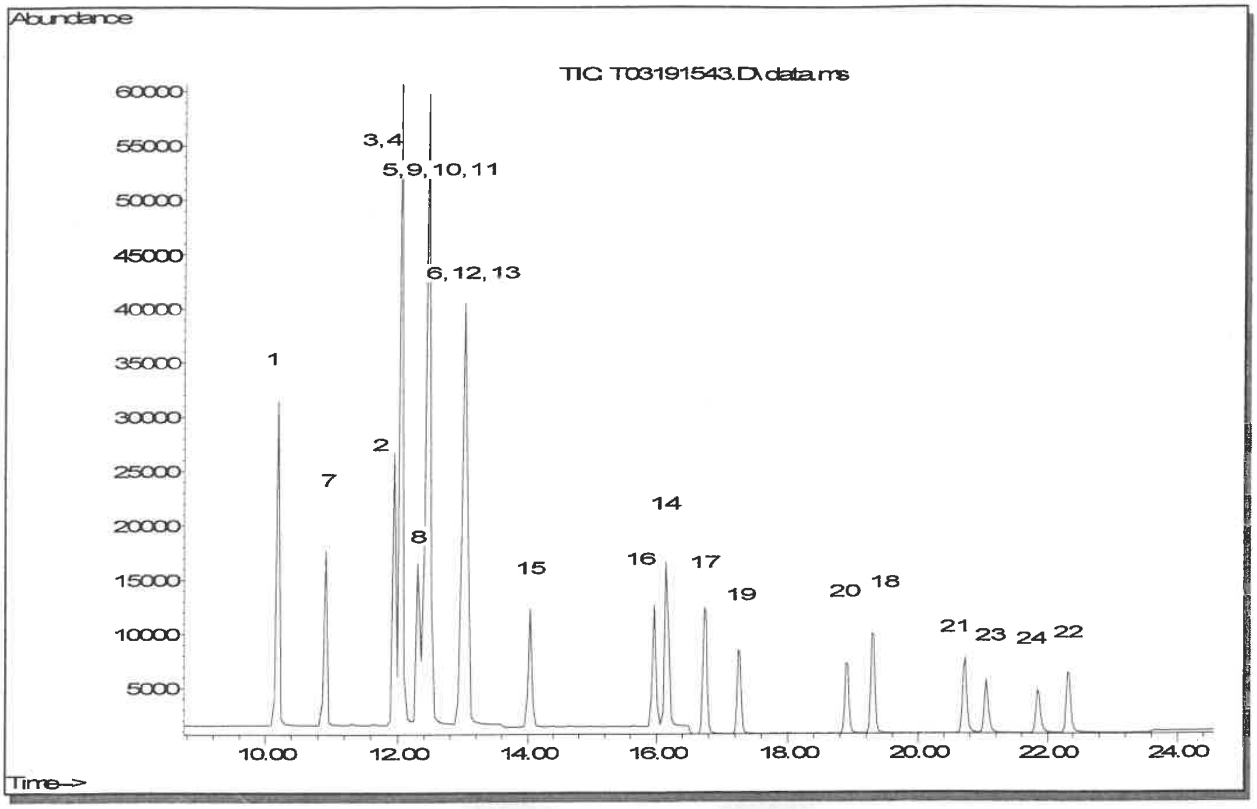

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

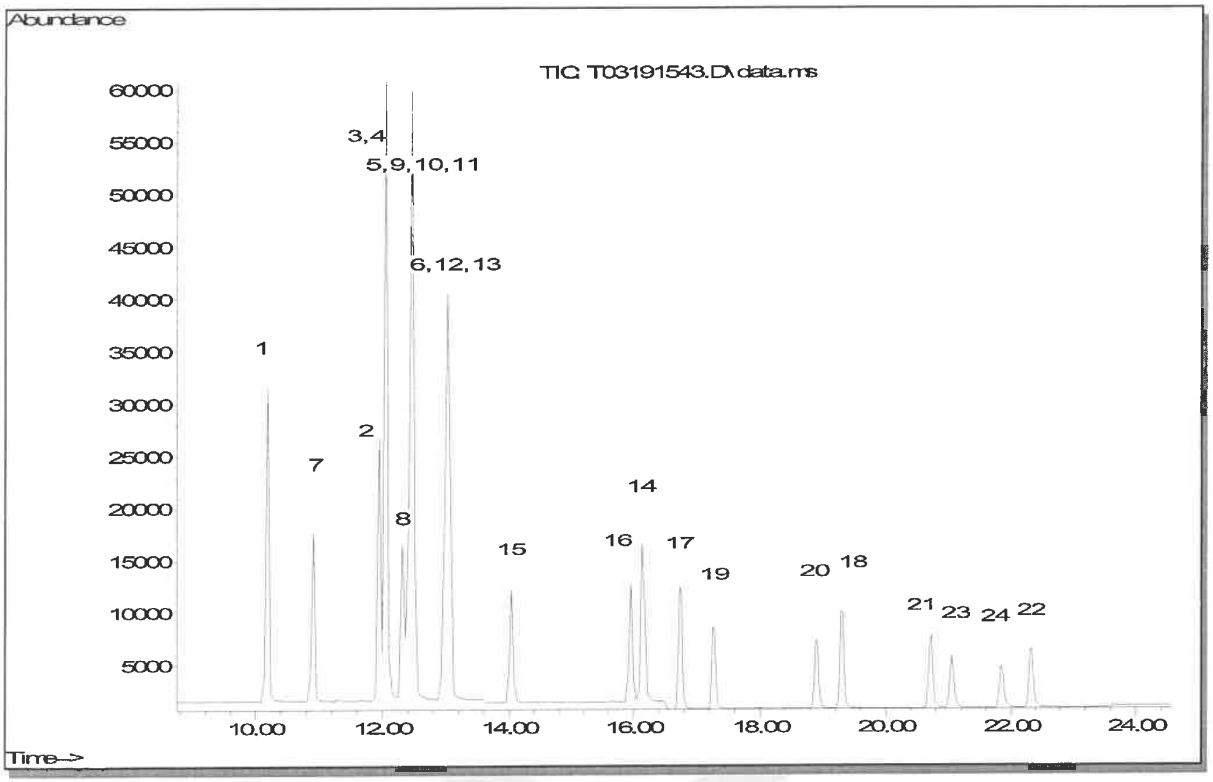

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r. 3/30/20

Cerilliant®
Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

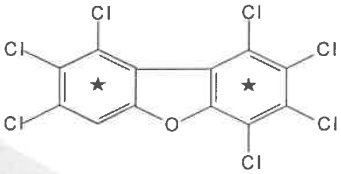

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

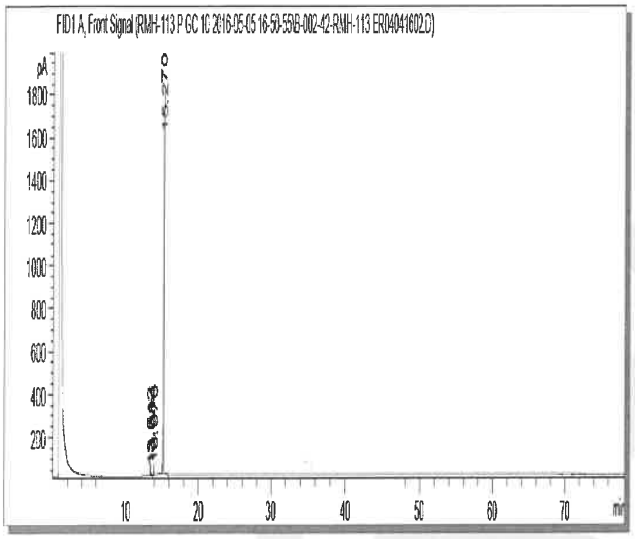

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

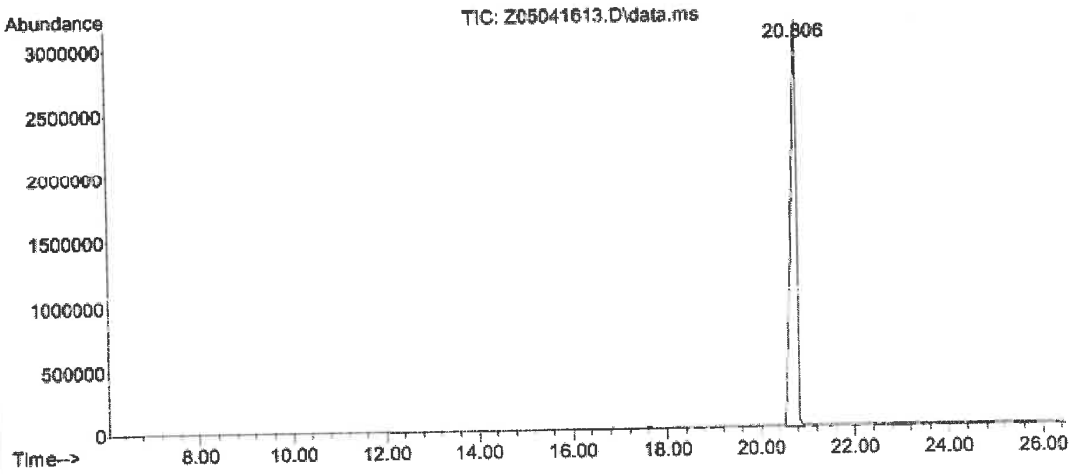

Mass Spectrum

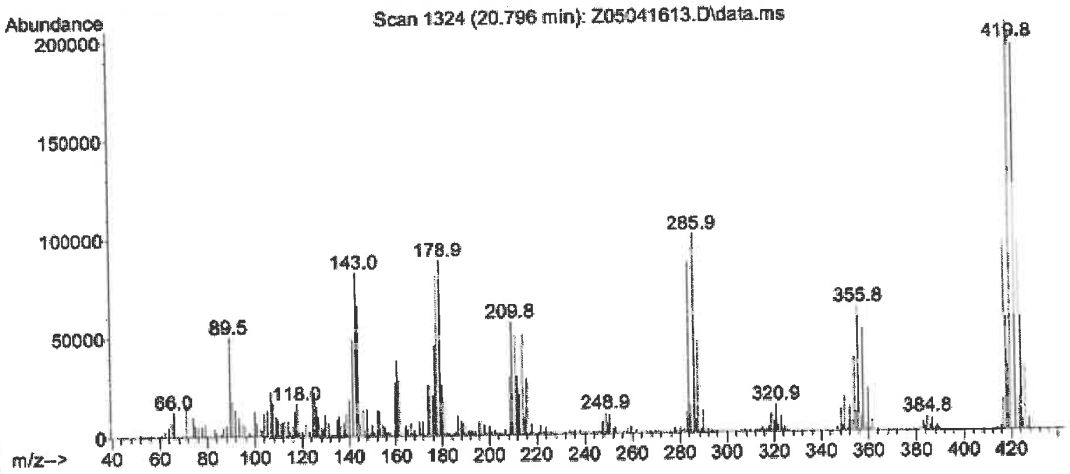

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 SAL

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

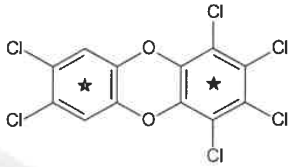

Catalog Number: ED-946
Solution Lot: ER04211601
Expiration Date: June 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

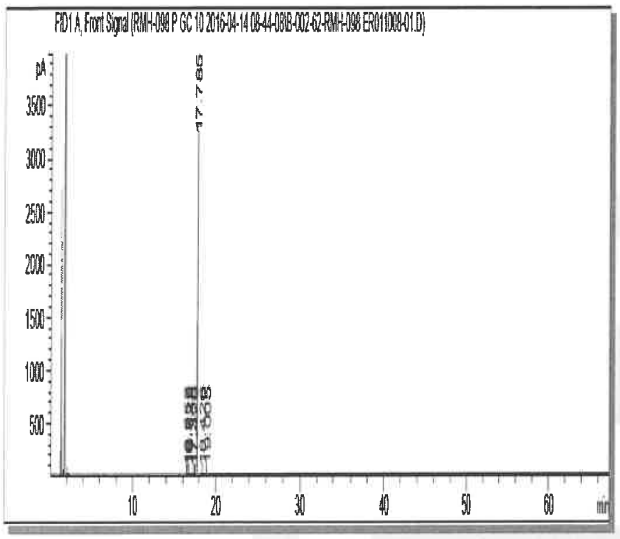

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument:	GC#10
Sample Name:	ER011008-01
Acquired:	April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

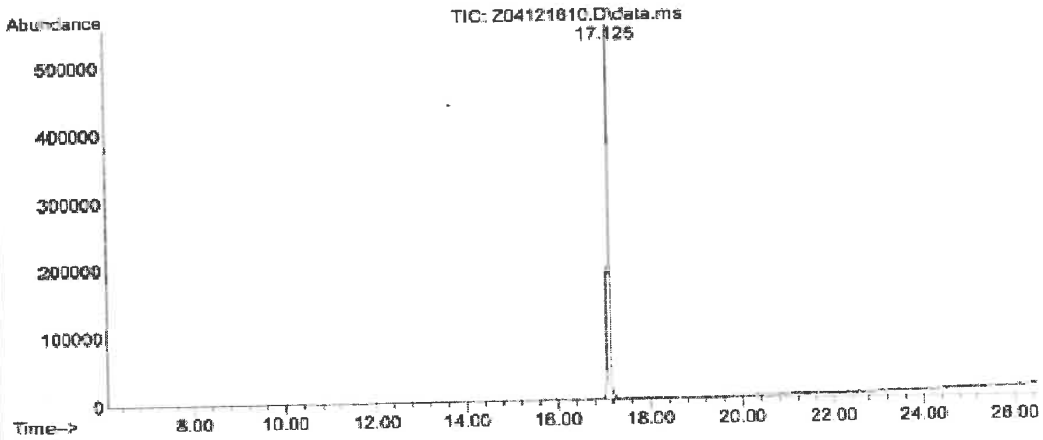

Mass Spectrum

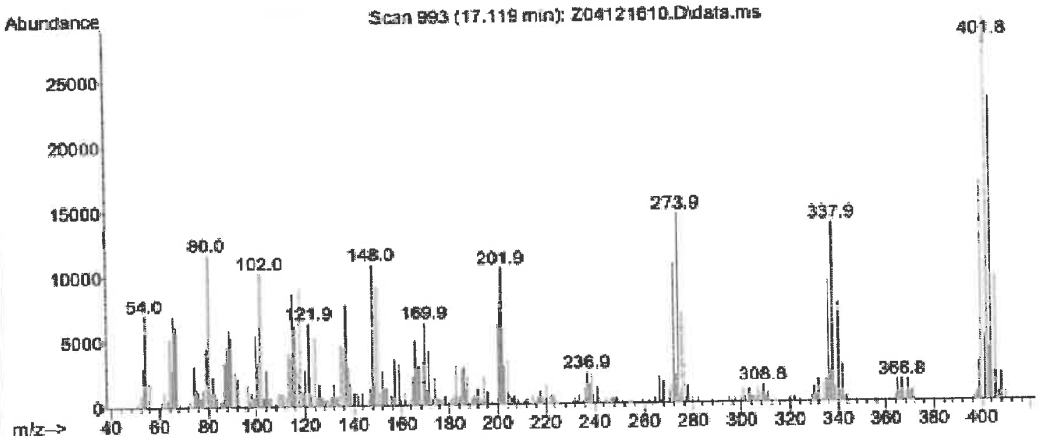

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

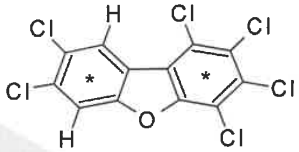

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}Cl_6H_2O$
Compound Lot:	ER11281601	**CAS Number:**	114423-98-2
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

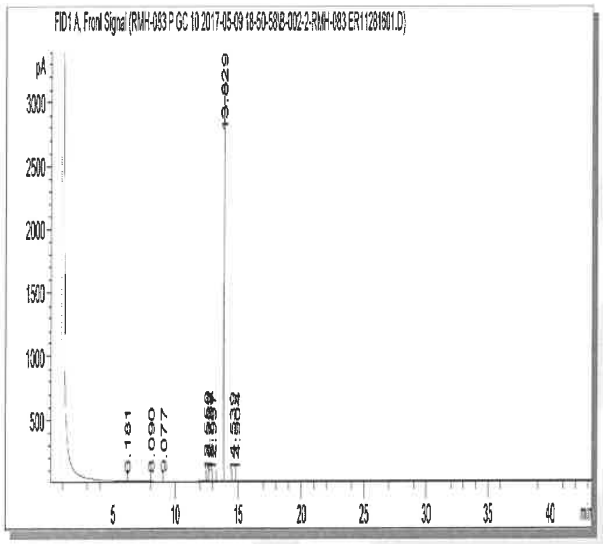

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

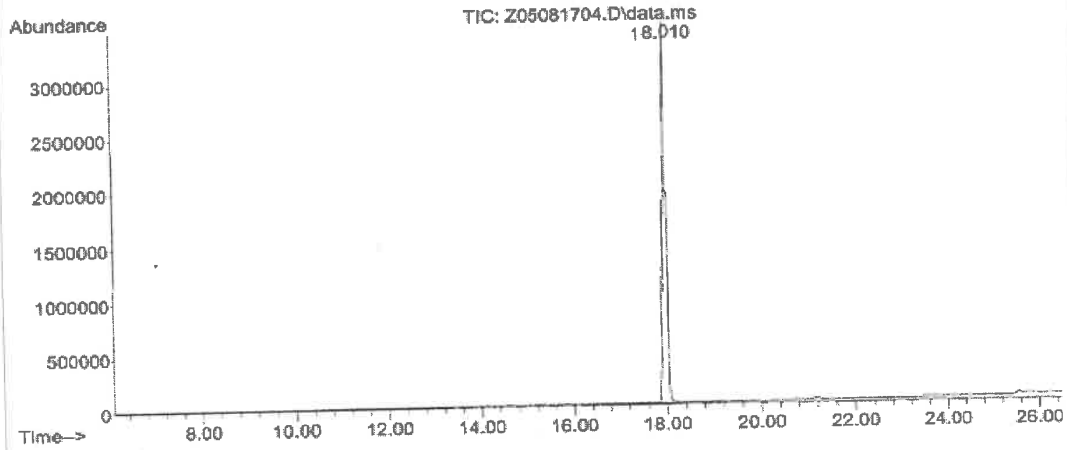

Mass Spectrum

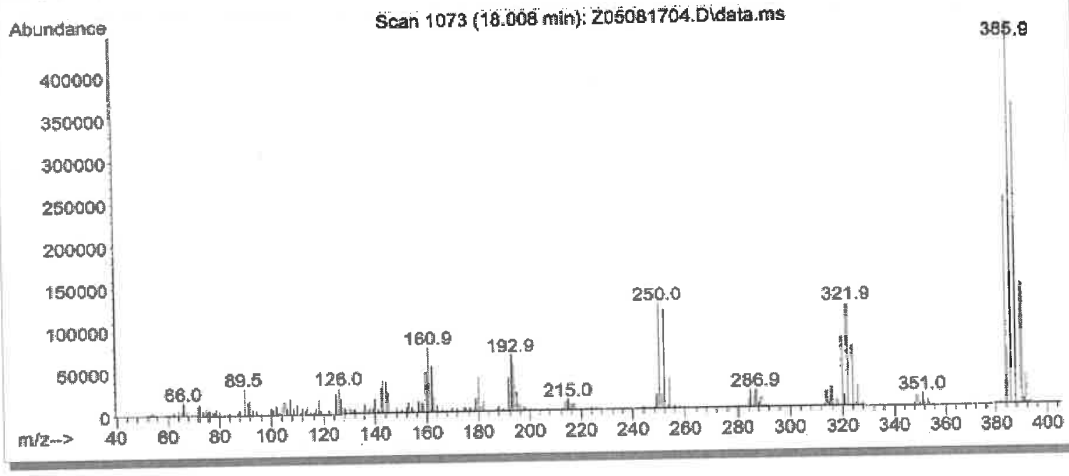

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

Cerilliant
Analytical Reference Standards
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CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

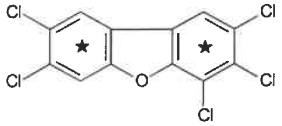

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

779057

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

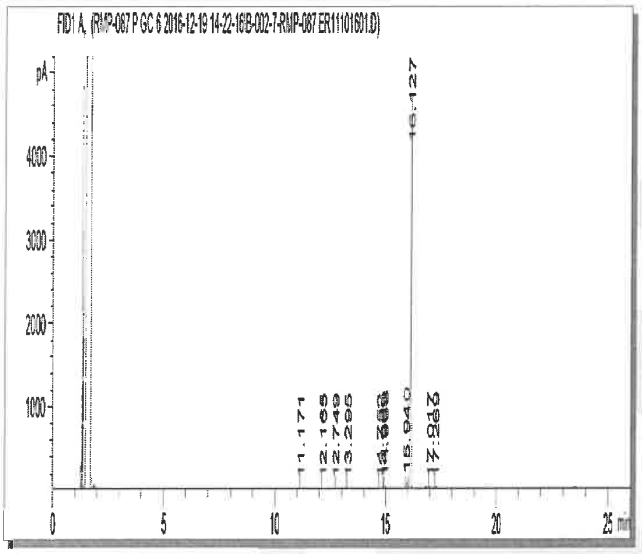

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

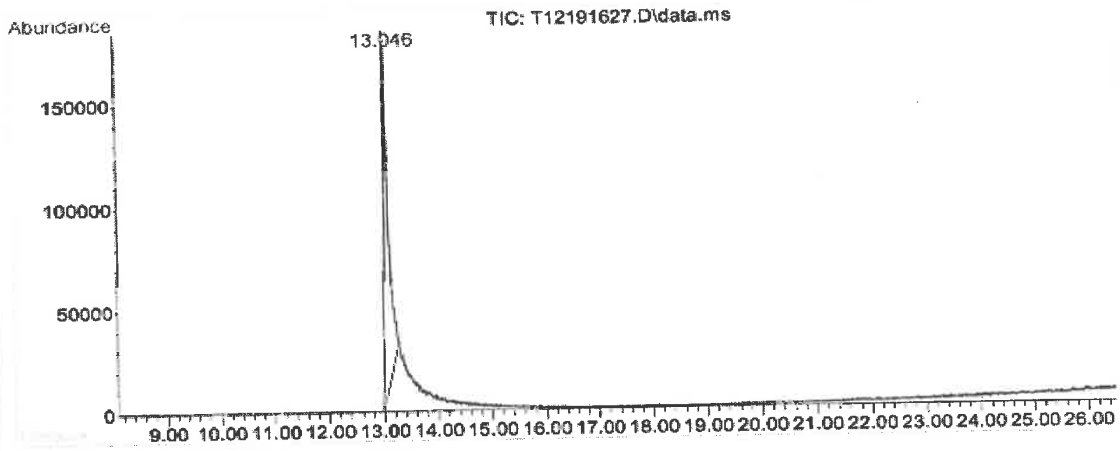

Mass Spectrum

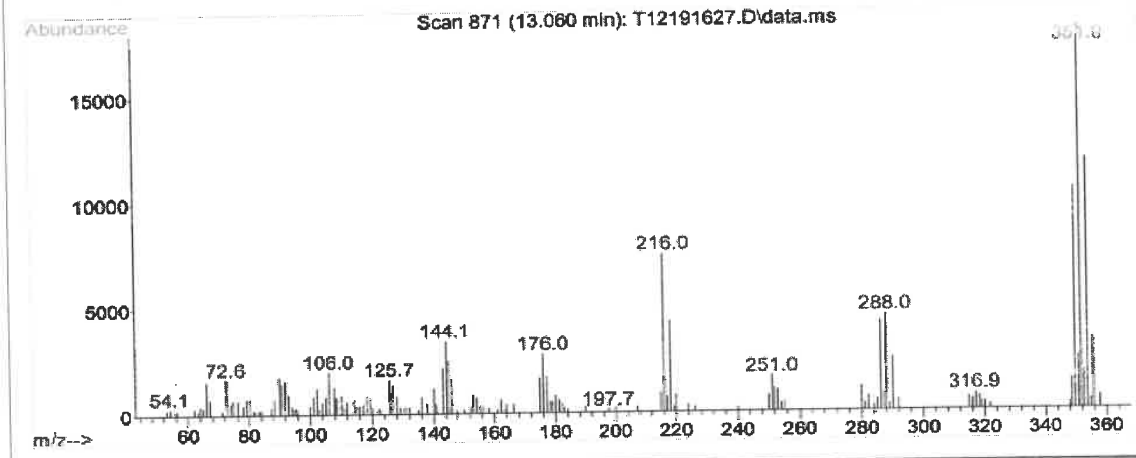

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

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Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

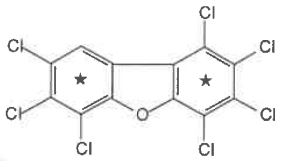

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

779062

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER020507-02

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-84-8
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

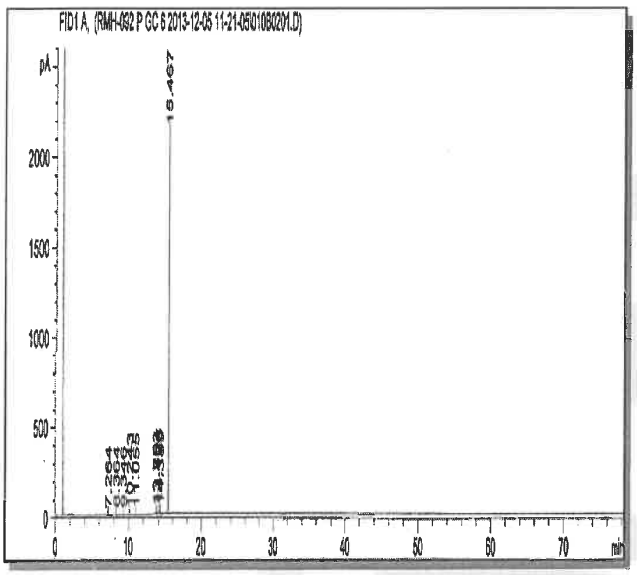

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument:	GC#6
Sample Name:	ER020507-02
Acquired:	December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

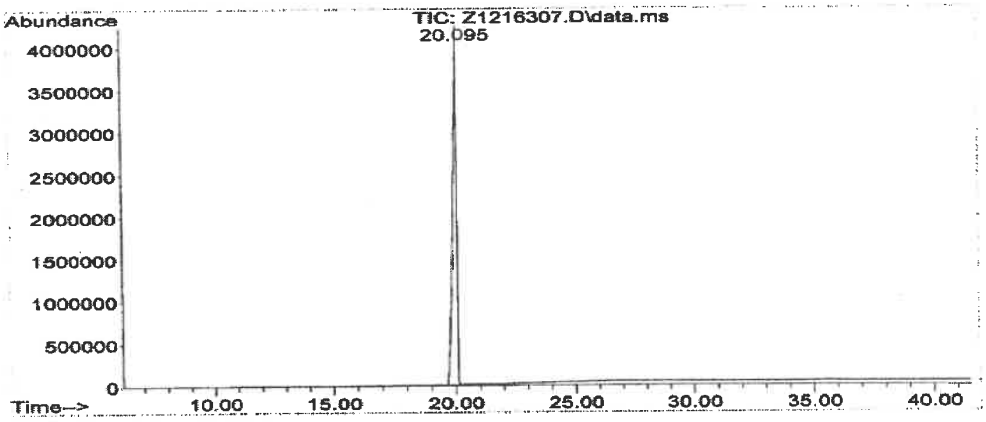

Mass Spectrum

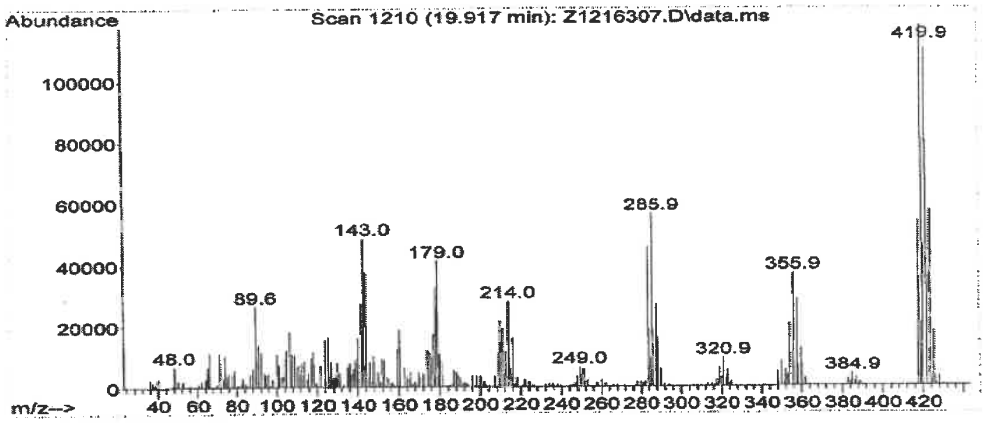

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

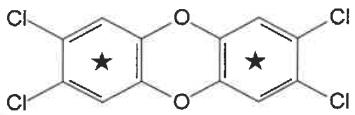

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

779069

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

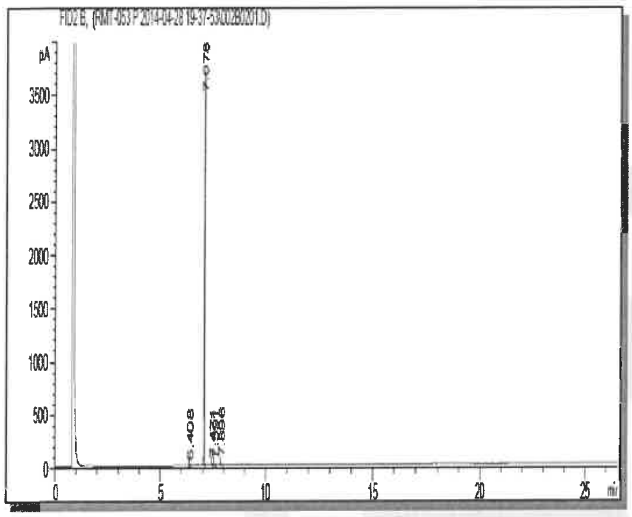

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

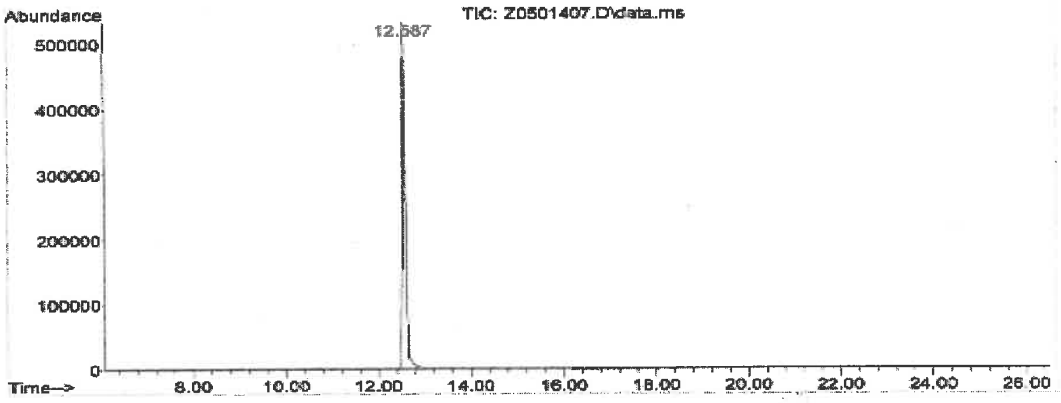

Mass Spectrum

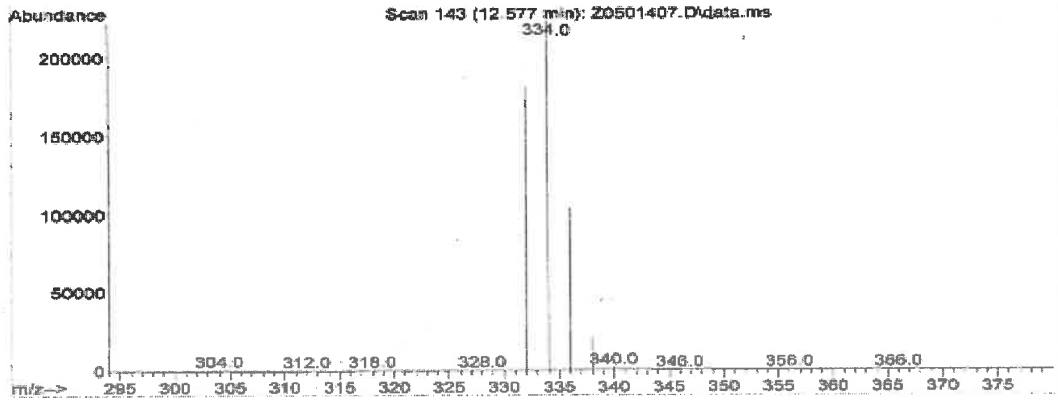

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

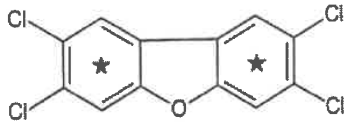

Catalog Number: EF-904
Solution Lot: ER09131601
Expiration Date: September 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

779074

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/FID

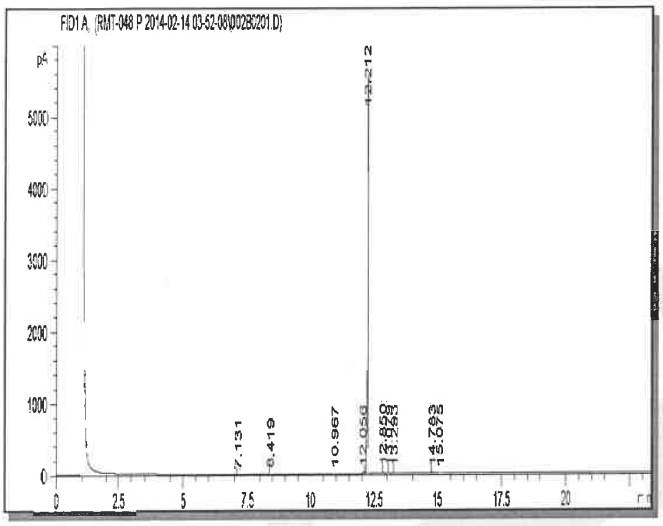

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

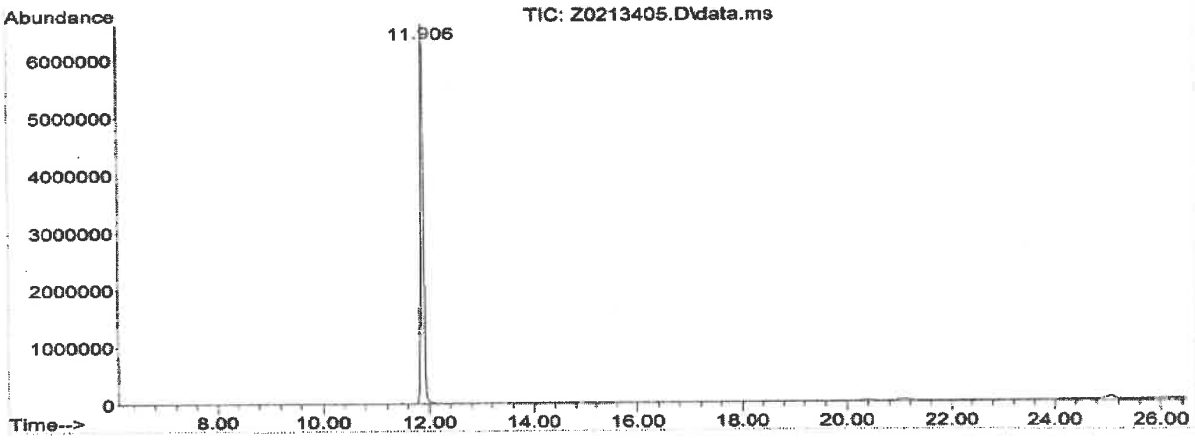

Mass Spectrum

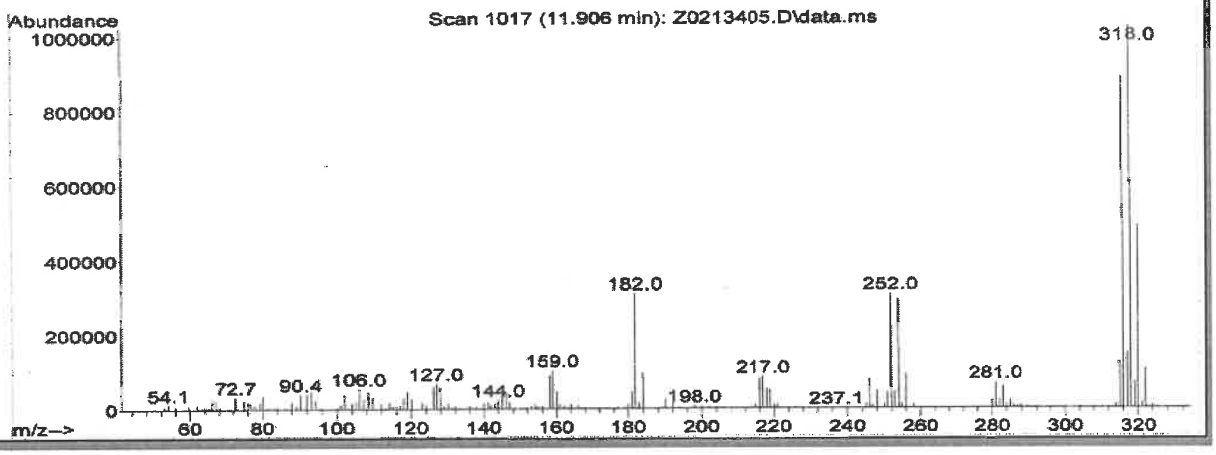

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

Reagent

HRDXNIDA_00443

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

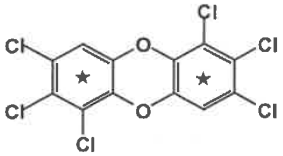

Catalog Number: ED-966
Solution Lot: ER03151801
Expiration Date: March 2028
Solvent: n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

779079

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

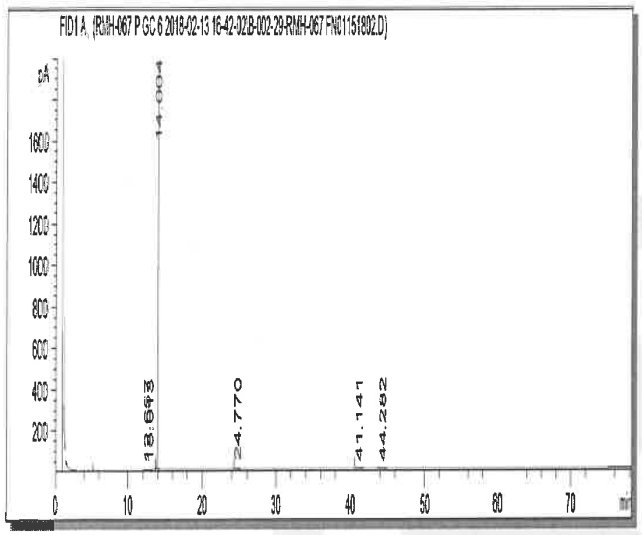

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

```
Compound Name          : 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number             : FN01151802
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Mon Mar 05 10:17:33 2018
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

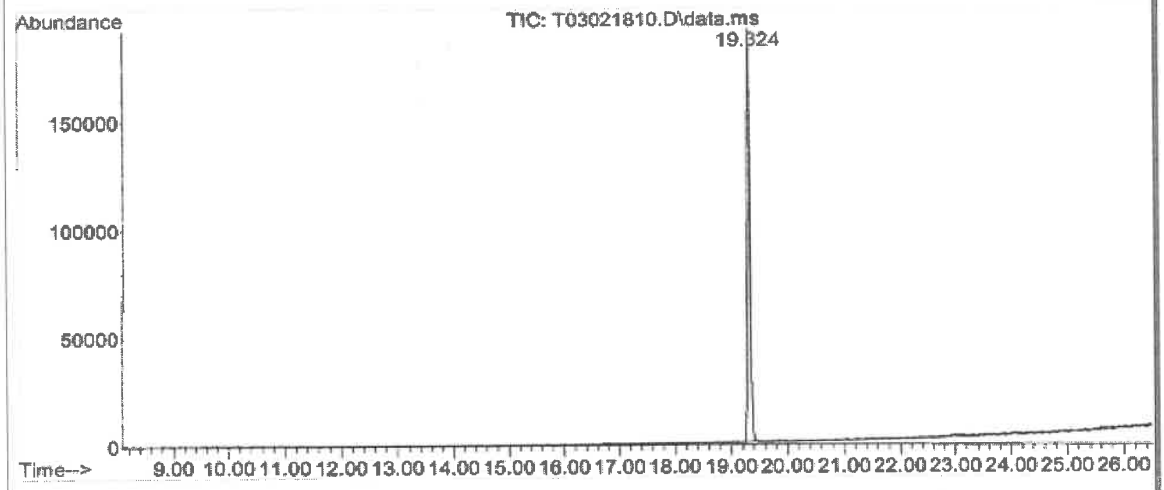

Mass Spectrum

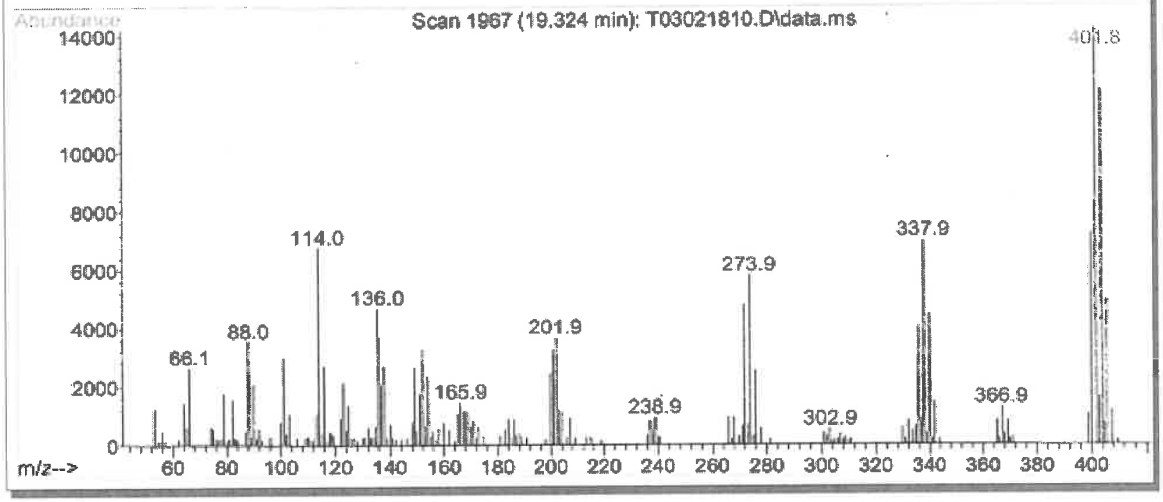

Reagent

HRDXNIDA_00457

r: 1/18/21 SW

Cerilliant® Analytical Reference Standards
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CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

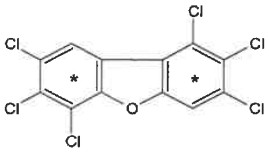

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

779084

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

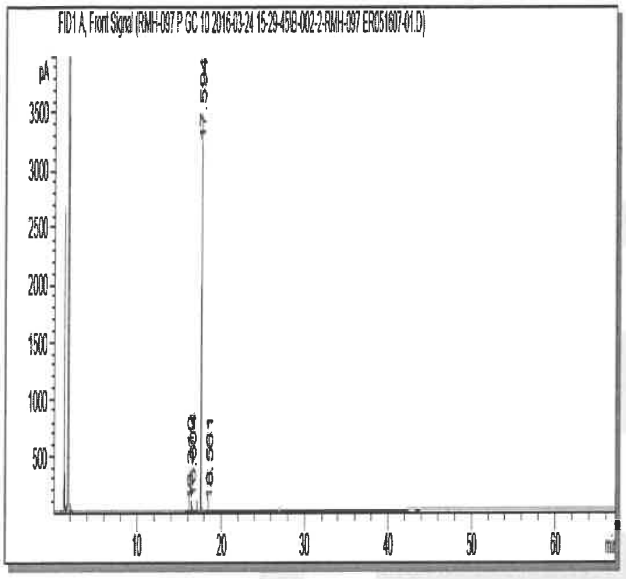

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

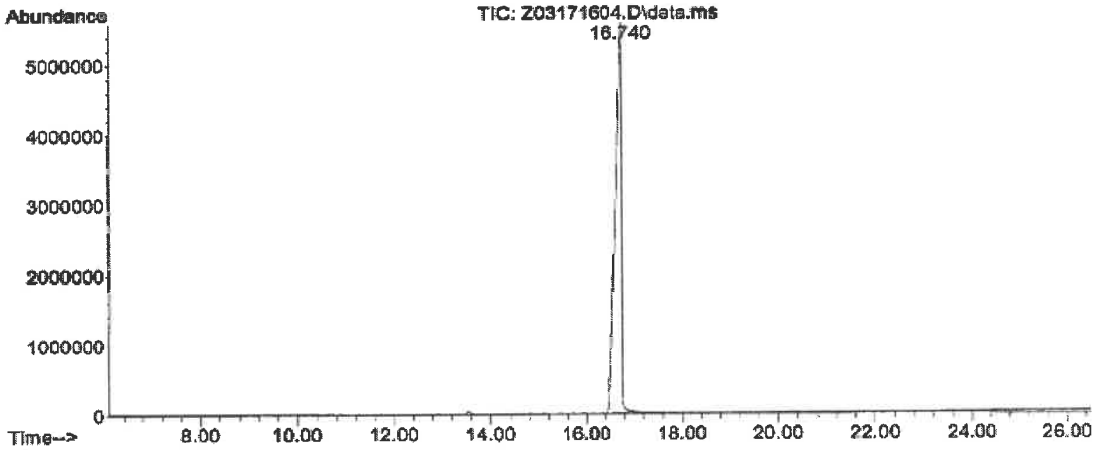

Mass Spectrum

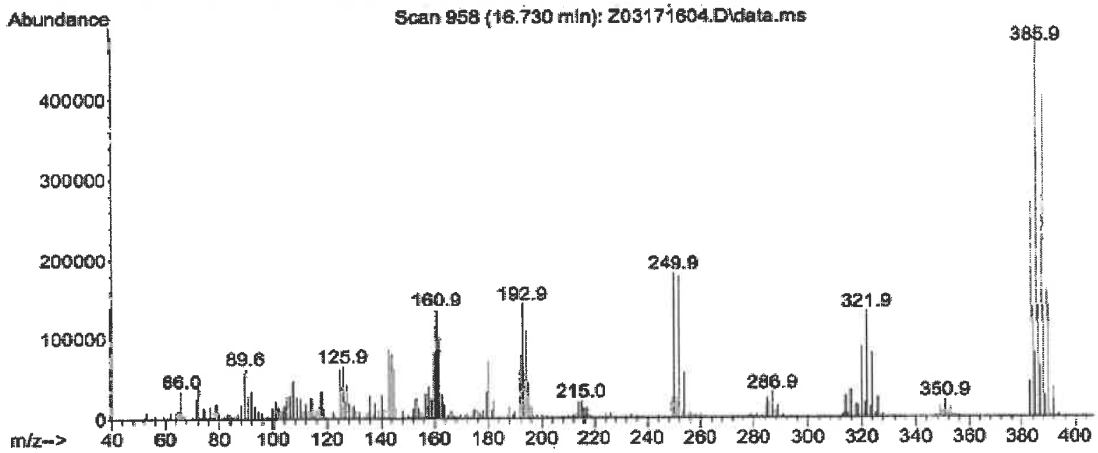

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

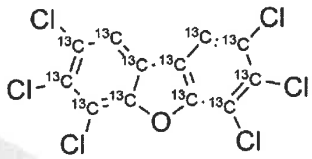

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

779091

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER09051801

Chemical Formula: $^{13}C_{12}H_2Cl_6O$
CAS Number: 116843-05-1
Molecular Weight: 386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

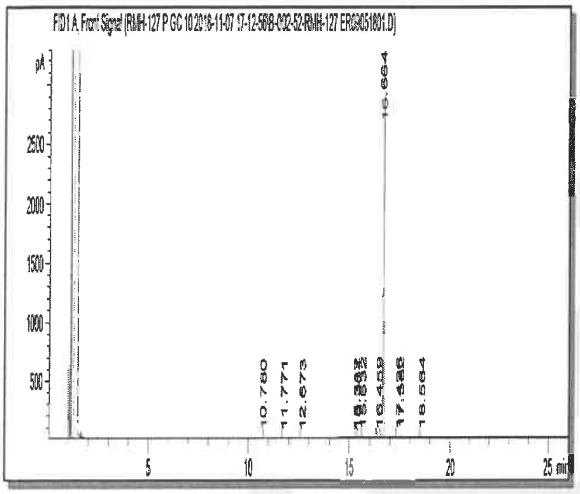

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

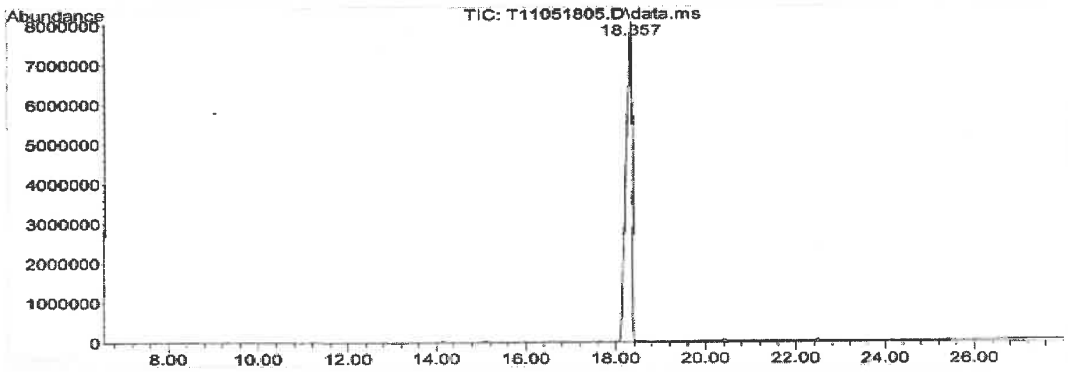

Mass Spectrum

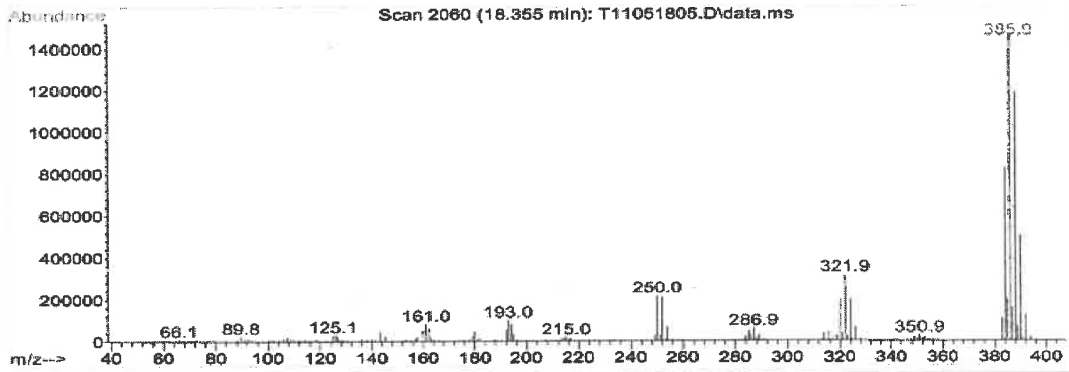

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

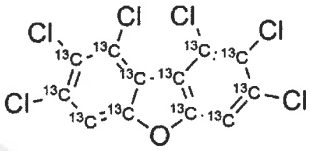

Catalog Number: EF-986
Solution Lot: ER01062016
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

779098

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

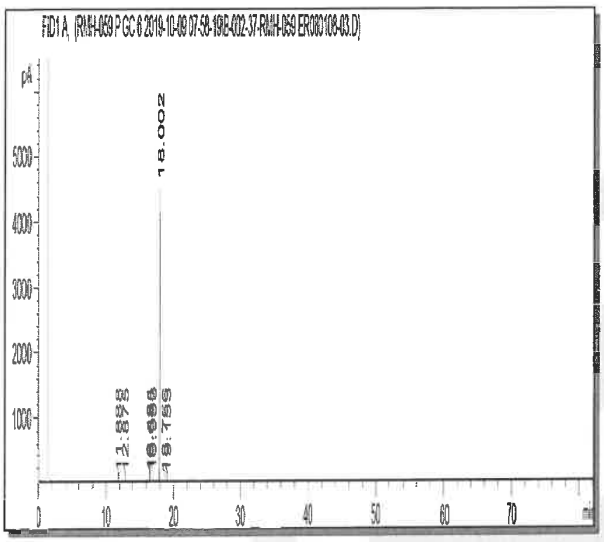

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

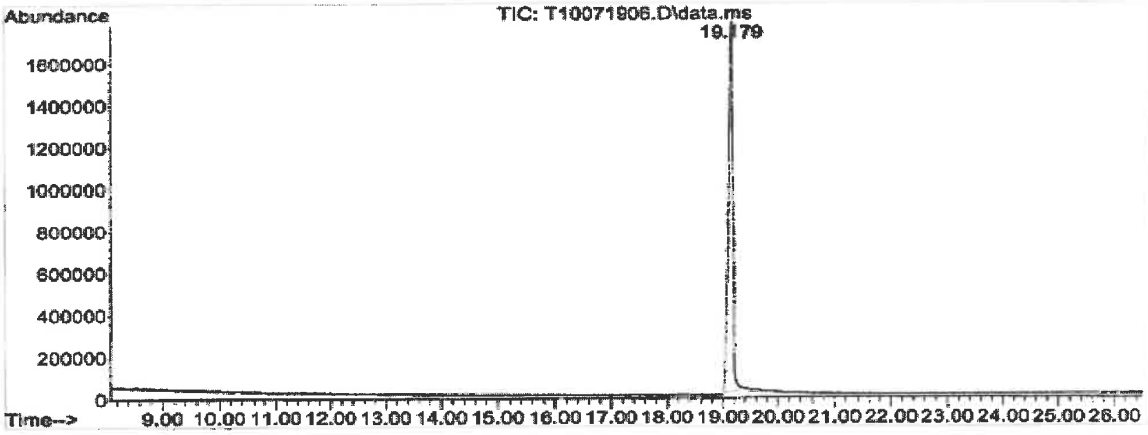

Mass Spectrum

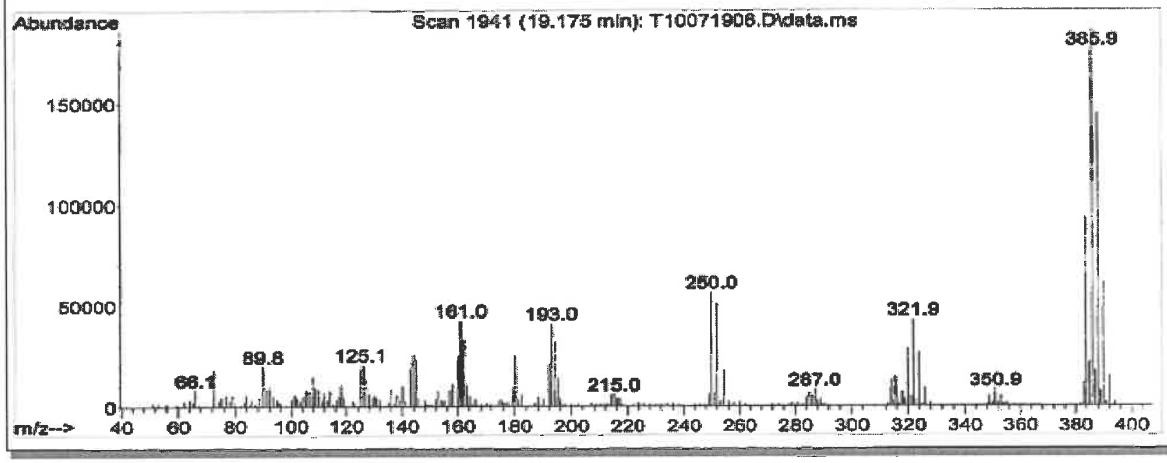

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

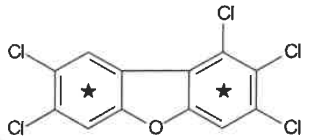

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER090110-01

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 109719-77-9
Molecular Weight: 352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

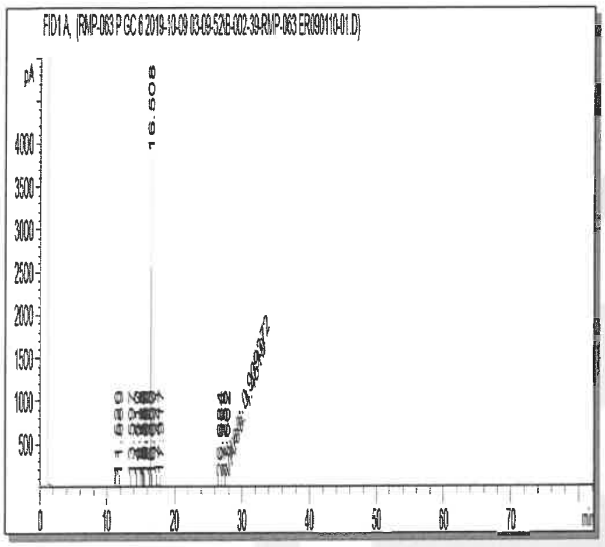

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Sample Name: ER090110-01
Acquired: October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

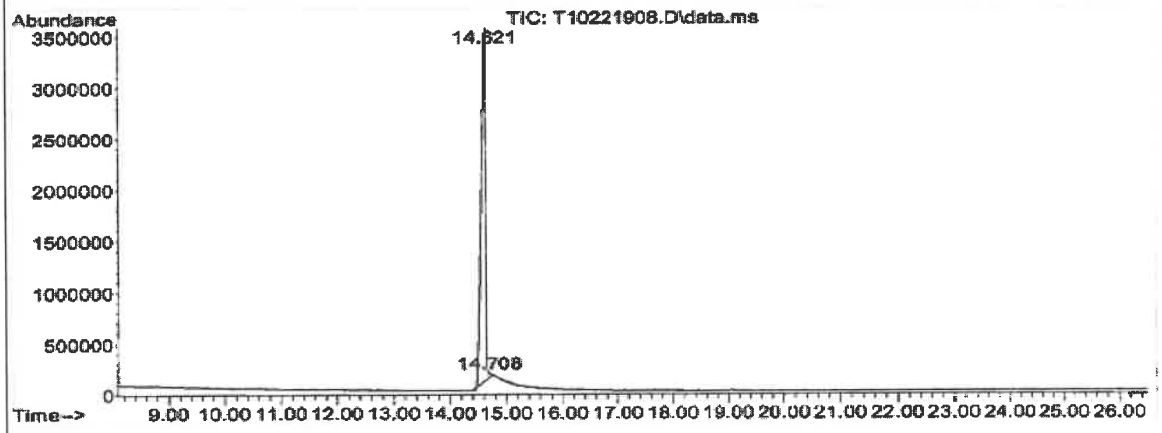

Mass Spectrum

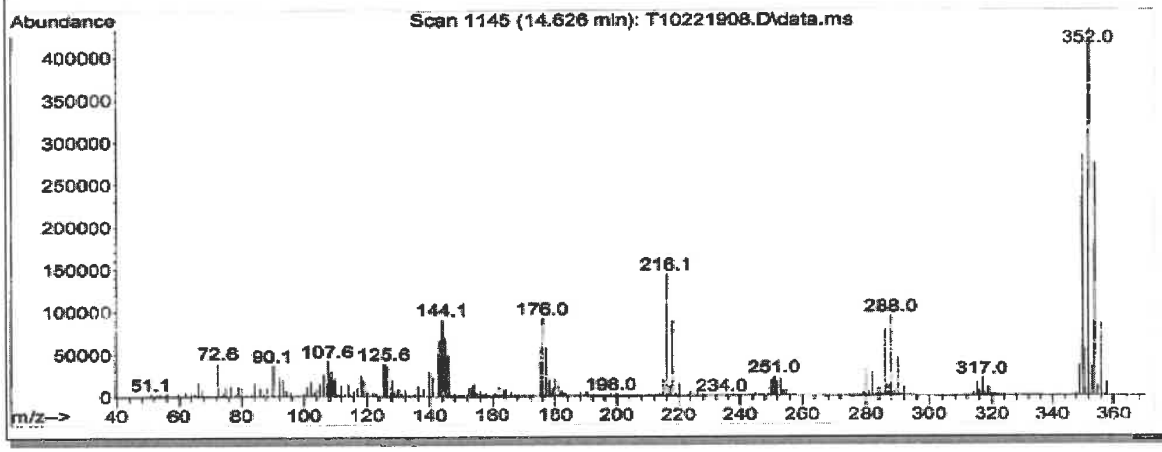

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

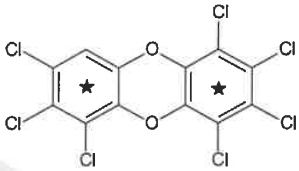

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 0.999

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER100110-01

Chemical Formula: $^{13}C_{12}HCl_7O_2$
CAS Number: 109719-83-7
Molecular Weight: 437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

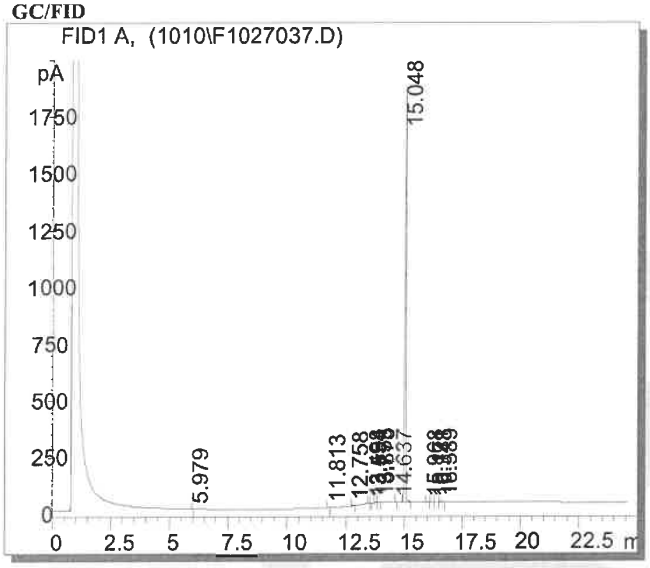

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

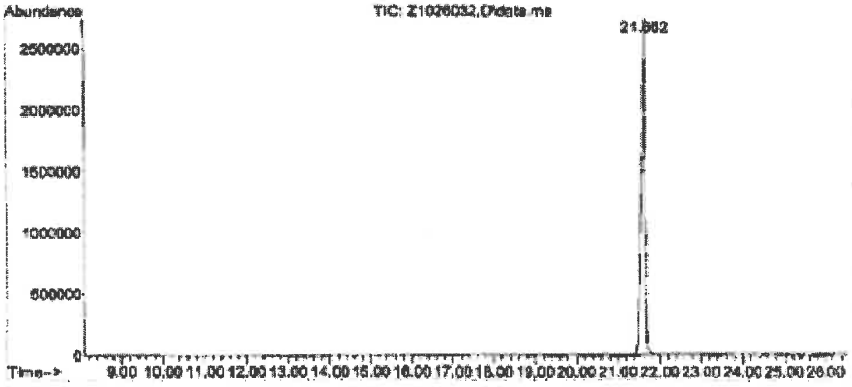

Mass Spectrum

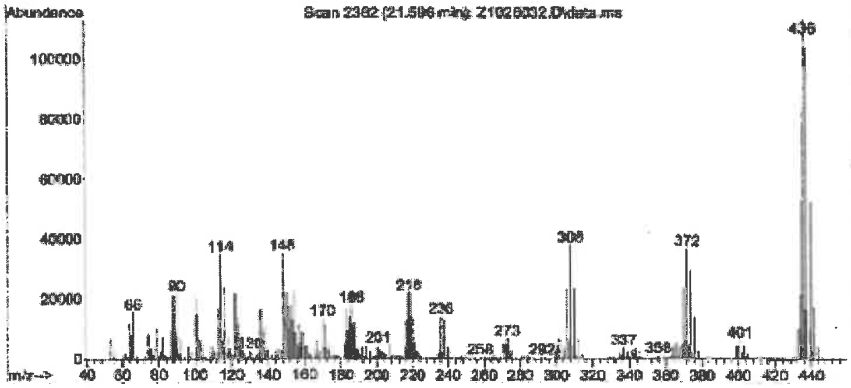

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
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CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

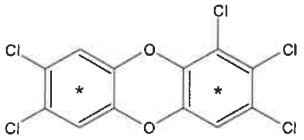

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

779117

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER06241403

Chemical Formula: $^{13}C_{12}H_3Cl_5O_2$
CAS Number: 109719-79-1
Molecular Weight: 368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

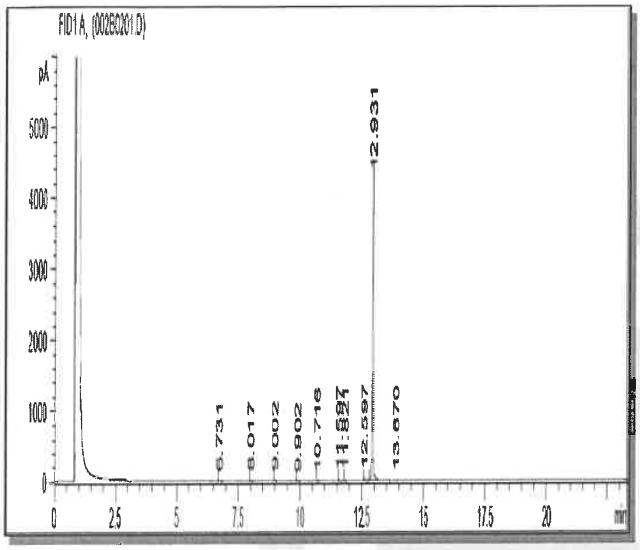

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

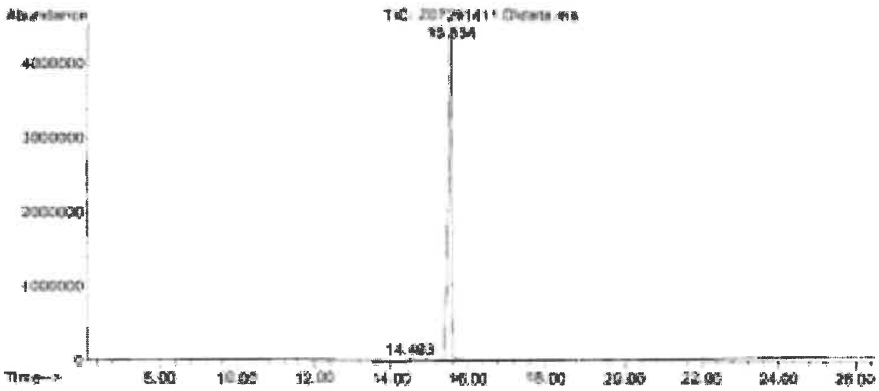

Mass Spectrum

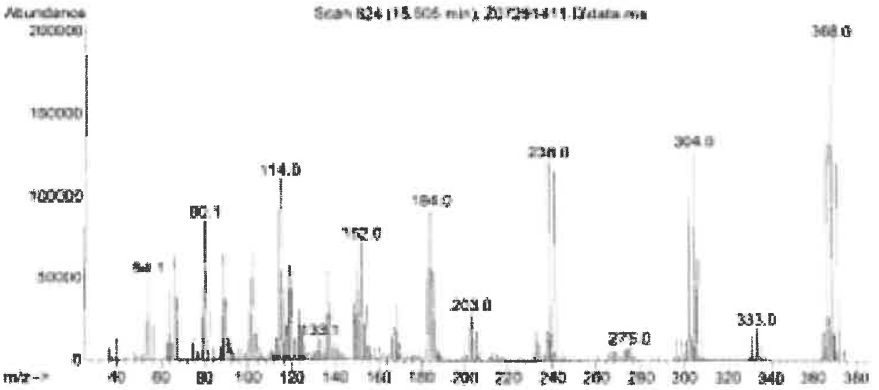

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

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Certificate of Analysis

ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

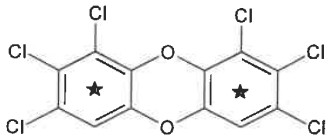

Catalog Number: ED-996
Solution Lot: ER08221601
Expiration Date: September 2026
Solvent: n-Nonane:Toluene (80:20)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

779124

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

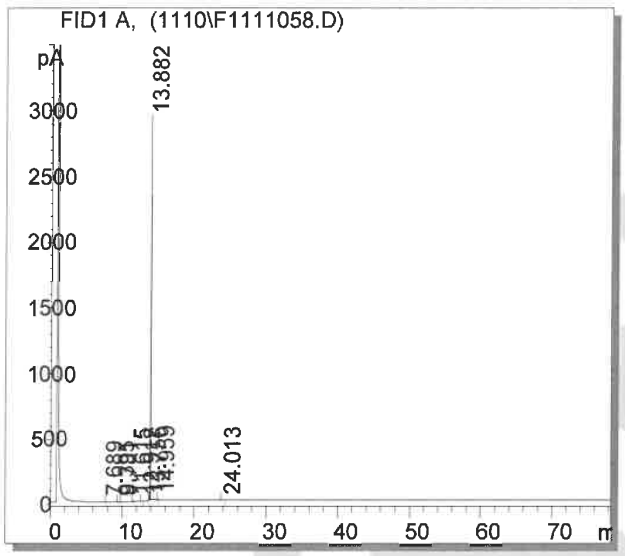

Column:	DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1110\F1111058.D
Instrument:	GC#6
Sample Name:	ER110510-01
Acquired:	November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

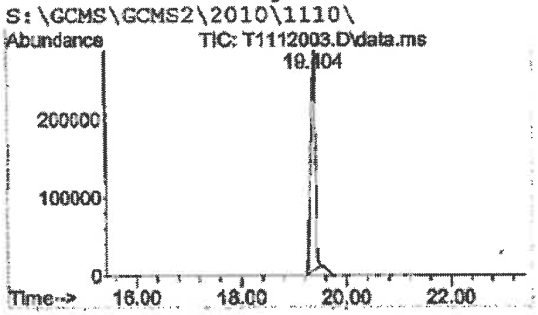

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

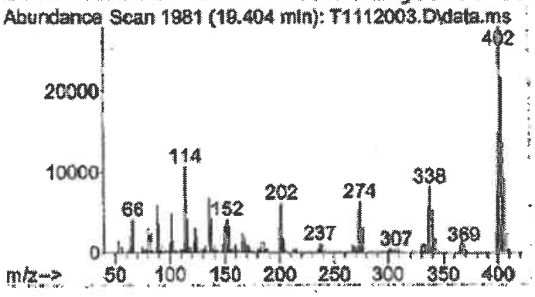

SIM Ion Chromatogram 1

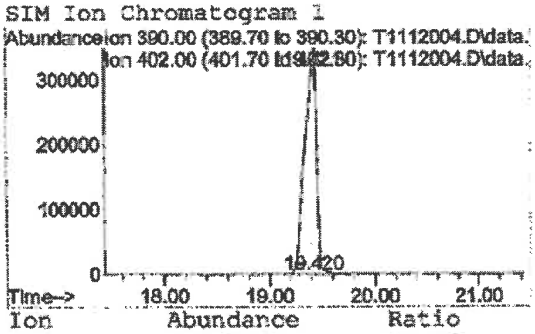

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

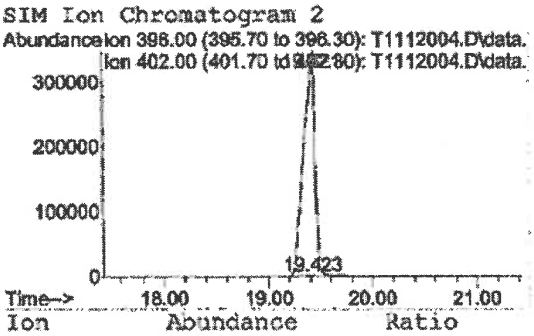

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

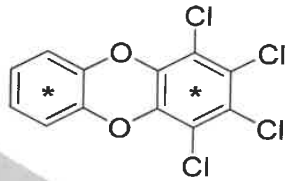

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 13194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

779131

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

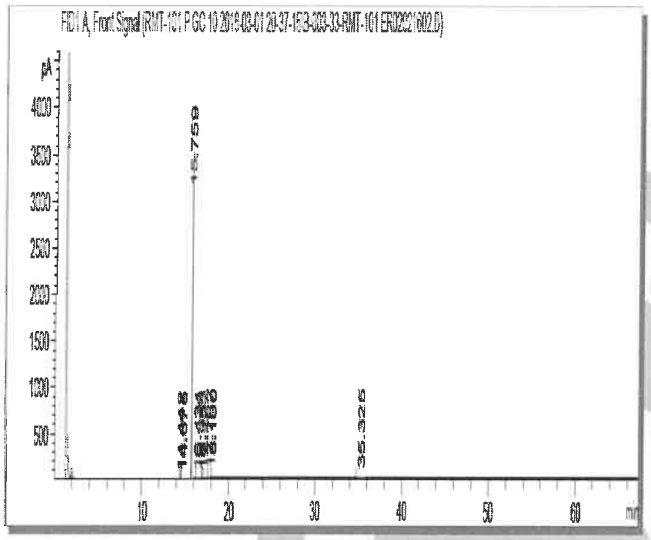

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

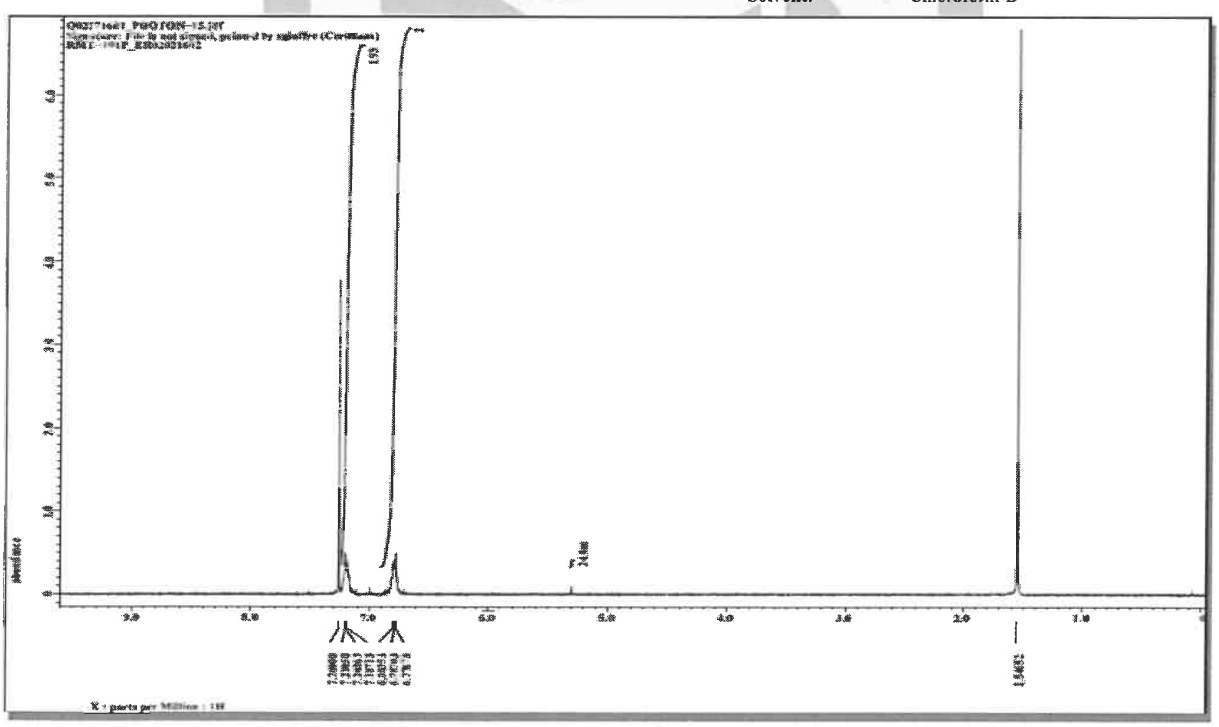

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER02021602
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Fri Feb 19 12:55:12 2016
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

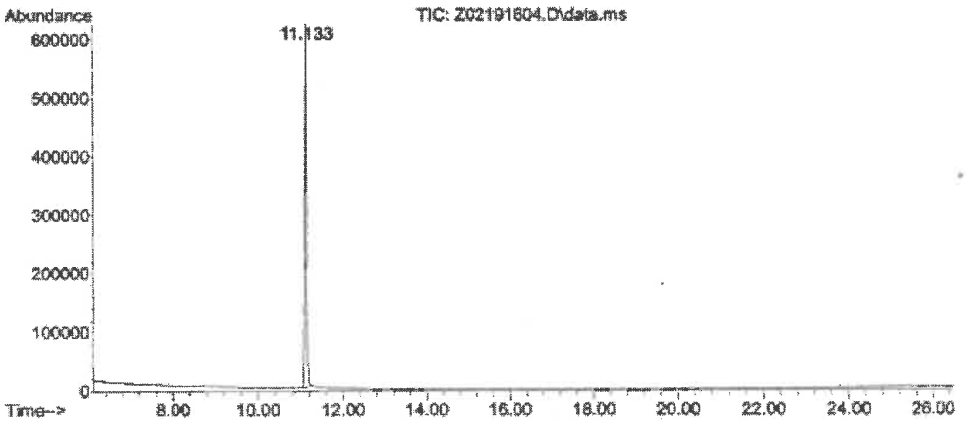

Mass Spectrum

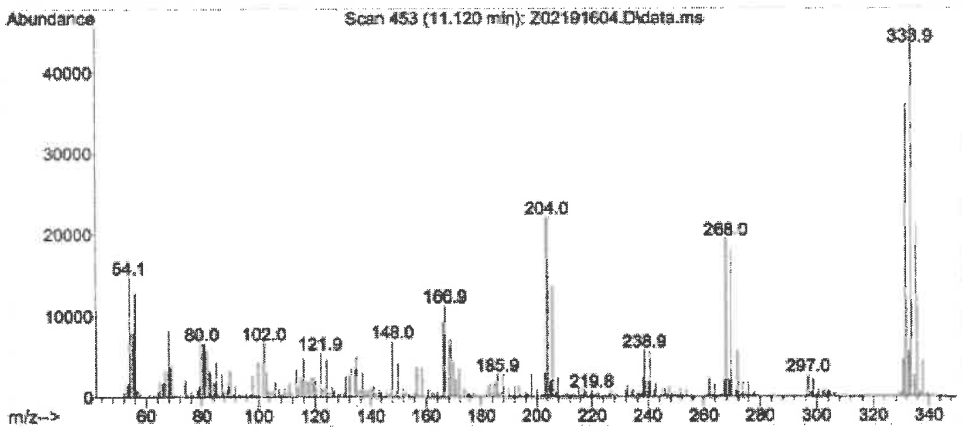

Reagent

HRDXNTA_00108

(2)

P: 4ba/19 SKJ

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

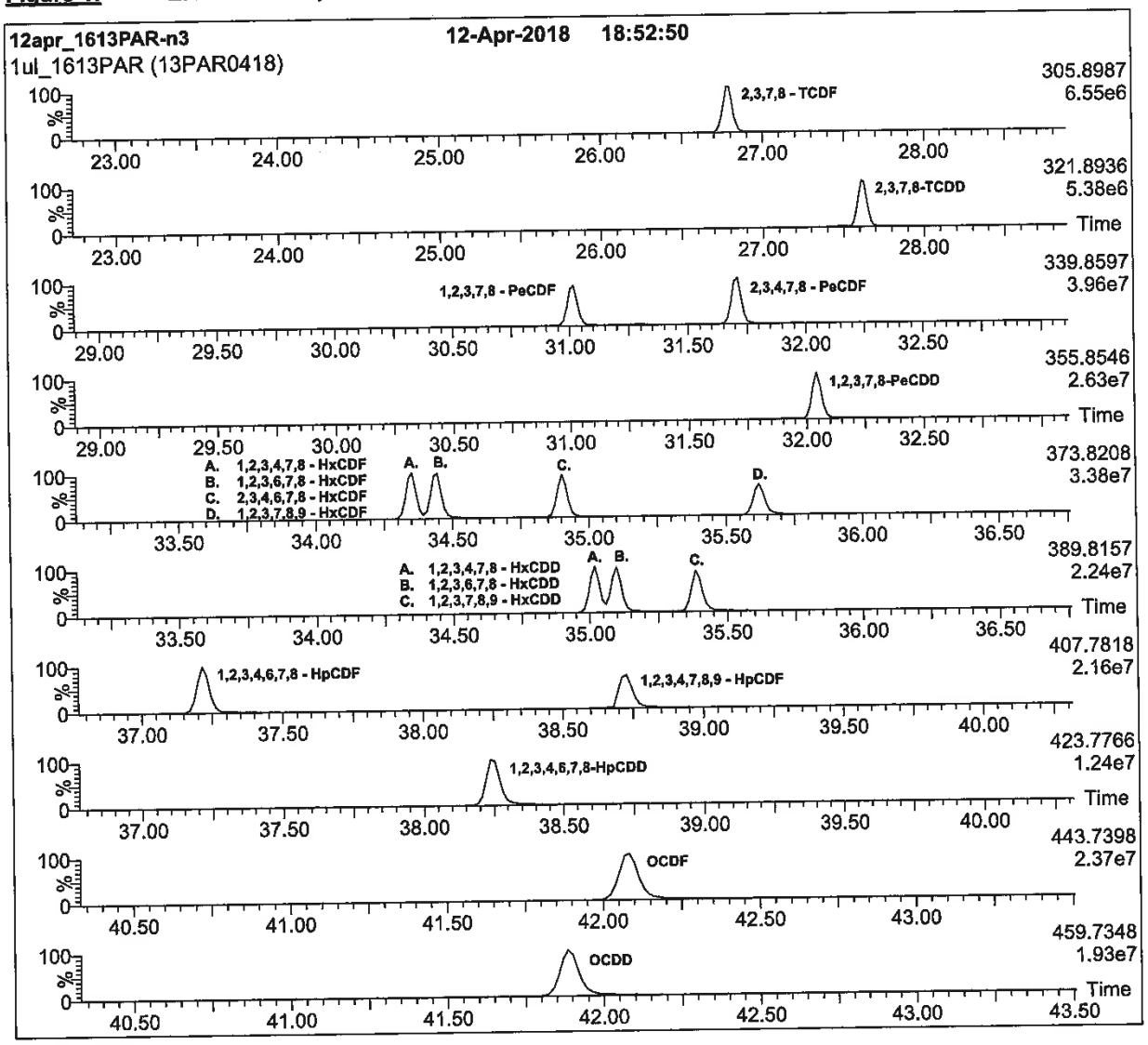

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

(3)

P: 4/3dic SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-7999-10X
Solution Lot:	ER02241602
Expiration Date:	April 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

779141

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/ECD
Column:	DB-5ms, 30 m x 0.25 mm ID, 0 25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min hold 3 min
Injector Temp:	Cool on-column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397 1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386 6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0 8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0 7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

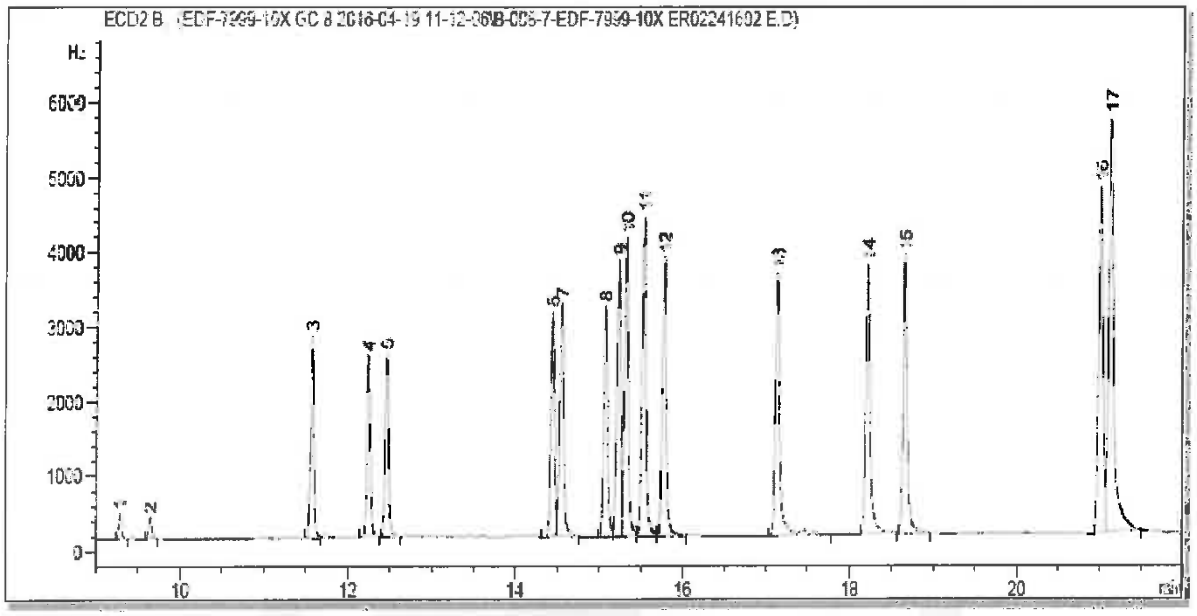

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Method 1613 PAR Stock Solution

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

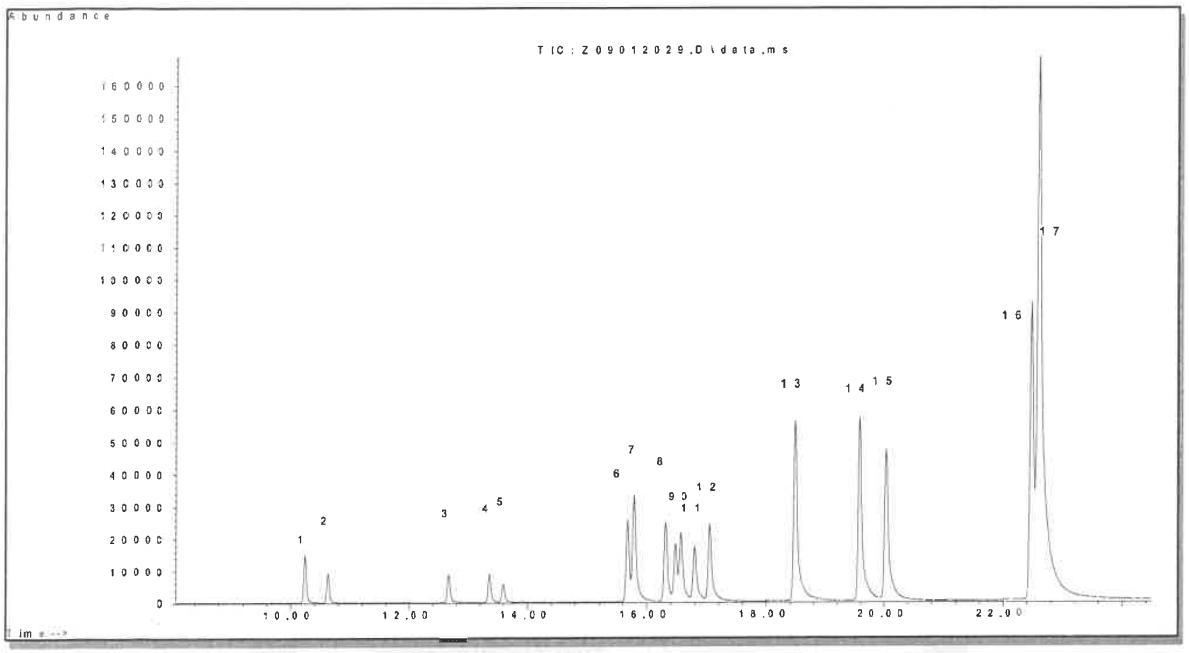

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #	13CHxCF #	HxCDD #
11215702-072321-BN -SJSB085 (0-2)	320-76788-1	75	84	96	100	72	63	63	66
11215702-072321-BN -SJSB105 (0-2)	320-76788-13	116	70	74	79	70	63	56	58
11215702-072321-BN -SJSB105 (2-4)	320-76788-14	71	77	87	97	66	59	59	58

	QC LIMITS
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072321-BN -SJSB085 (0-2)	320-76788-1	63	63	64	70	77	82
11215702-072321-BN -SJSB105 (0-2)	320-76788-13	57	52	52	61	63	75
11215702-072321-BN -SJSB105 (2-4)	320-76788-14	55	55	58	65	70	76

	QC LIMITS
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-512871/2-A	56	59	81	56	59	57	59	53
	LCSD 320-512871/3-A	57	60	78	56	62	58	60	55

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-512871/2-A	53	58	53	53	58	60	66	64
	LCSD 320-512871/3-A	55	61	56	54	59	60	65	63

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-072321-BN -SJSB085 (0-2) RADL	320-76788-1 RADL	50	91
11215702-072321-BN -SJSB085 (2-4) RA	320-76788-2 RA	67	80
11215702-072321-BN -SJSB085 (4-6) RA	320-76788-3 RA	73	85
11215702-072321-BN -SJSB085 (6-8) RA	320-76788-4 RA	63	73
11215702-072321-BN -SJSB085 (8-10) RA	320-76788-5 RA	83	80
11215702-072321-BN -SJSB085 (10-12) RA	320-76788-6 RA	60	78
11215702-072321-BN -SJSB085 (12-14) RA	320-76788-7 RA	61	78
11215702-072321-BN -SJSB085 (14-16) RA	320-76788-8 RA	69	85
11215702-072321-BN -SJSB105 (0-2) RADL	320-76788-13 RADL	33	49
11215702-072321-BN -SJSB105 (2-4) RADL	320-76788-14 RADL	45	96
11215702-072321-BN -SJSB105 (4-6) RA	320-76788-15 RA	83	87
11215702-072321-BN -SJSB105 (6-8) RA	320-76788-16 RA	67	83
11215702-072321-BN -SJSB105 (8-10) RA	320-76788-17 RA	64	85
11215702-072321-BN -SJSB105 (10-12) RA	320-76788-18 RA	84	84
11215702-072321-BN -SJSB105 (12-14) RA	320-76788-19 RA	62	79
11215702-072321-BN -SJSB105 (14-16) RA	320-76788-20 RA	68	83

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #
11215702-072321-BN -SJSB085 (0-2) DL	320-76788-1 DL	66	60	119
11215702-072321-BN -SJSB105 (0-2) DL	320-76788-13 DL	60	54	110

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	HxCDF #
11215702-072321-BN -SJSB105 (2-4) DL	320-76788-14 DL	61	49 q	125	66

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-072321-BN -SJSB085 (2-4)	320-76788-2	62	64	82	61	66	62	66	57
11215702-072321-BN -SJSB085 (4-6)	320-76788-3	67	68	83	64	69	66	69	62
11215702-072321-BN -SJSB085 (6-8)	320-76788-4	59	60	74	56	61	58	60	54
11215702-072321-BN -SJSB085 (8-10)	320-76788-5	75	78	81	73	79	76	79	70
11215702-072321-BN -SJSB085 (10-12)	320-76788-6	55	57	78	53	57	55	56	52
11215702-072321-BN -SJSB085 (12-14)	320-76788-7	58	59	78	56	61	58	60	54
11215702-072321-BN -SJSB085 (14-16)	320-76788-8	61	63	78	59	64	62	64	59
11215702-072321-BN -SJSB105 (4-6)	320-76788-15	69	73	85	68	71	74	73	66
11215702-072321-BN -SJSB105 (6-8)	320-76788-16	55	59	79	53	55	58	56	52
11215702-072321-BN -SJSB105 (8-10)	320-76788-17	53	57	78	51	55	55	55	51
11215702-072321-BN -SJSB105 (10-12)	320-76788-18	67	73	78	63	65	67	69	63
11215702-072321-BN -SJSB105 (12-14)	320-76788-19	55	58	78	56	60	60	58	52
11215702-072321-BN -SJSB105 (14-16)	320-76788-20	60	65	80	62	68	68	66	59
	MB 320-512871/1-A	55	57	81	54	59	56	58	52

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072321-BN -SJSB085 (2-4)	320-76788-2	58	68	59	60	61	63	71	70
11215702-072321-BN -SJSB085 (4-6)	320-76788-3	63	68	64	64	68	70	78	77
11215702-072321-BN -SJSB085 (6-8)	320-76788-4	54	61	54	55	57	60	67	64
11215702-072321-BN -SJSB085 (8-10)	320-76788-5	71	80	71	72	79	80	90	88
11215702-072321-BN -SJSB085 (10-12)	320-76788-6	52	57	53	51	56	58	64	62
11215702-072321-BN -SJSB085 (12-14)	320-76788-7	55	62	55	55	59	61	69	66
11215702-072321-BN -SJSB085 (14-16)	320-76788-8	58	63	62	58	70	70	76	79
11215702-072321-BN -SJSB105 (4-6)	320-76788-15	67	81	76	69	70	79	82	86
11215702-072321-BN -SJSB105 (6-8)	320-76788-16	52	60	62	53	60	64	68	70
11215702-072321-BN -SJSB105 (8-10)	320-76788-17	51	60	59	51	57	61	65	73
11215702-072321-BN -SJSB105 (10-12)	320-76788-18	62	74	74	64	68	79	86	93
11215702-072321-BN -SJSB105 (12-14)	320-76788-19	53	63	61	53	51	57	61	61
11215702-072321-BN -SJSB105 (14-16)	320-76788-20	59	66	64	59	66	67	73	79
	MB 320-512871/1-A	52	58	52	51	57	58	62	60

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 13AU2110D5_15.d

Lab ID: LCS 320-512871/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	19.5	97	67-158	
2,3,7,8-TCDF	20.0	20.7	104	75-158	
1,2,3,7,8-PeCDD	100	105	105	70-142	
1,2,3,7,8-PeCDF	100	105	105	80-134	
2,3,4,7,8-PeCDF	100	96.3	96	68-160	
1,2,3,4,7,8-HxCDD	100	95.0	95	70-164	
1,2,3,6,7,8-HxCDD	100	106	106	76-134	
1,2,3,7,8,9-HxCDD	100	107	107	64-162	
1,2,3,4,7,8-HxCDF	100	93.4	93	72-134	
1,2,3,6,7,8-HxCDF	100	105	105	84-130	
1,2,3,7,8,9-HxCDF	100	103	103	78-130	
2,3,4,6,7,8-HxCDF	100	104	104	70-156	
1,2,3,4,6,7,8-HpCDD	100	104	104	70-140	
1,2,3,4,6,7,8-HpCDF	100	106	106	82-122	
1,2,3,4,7,8,9-HpCDF	100	96.5	97	78-138	
OCDD	200	206	103	78-144	
OCDF	200	202	101	63-170	
13C-2,3,7,8-TCDD	200	118	59	20-175	
13C-2,3,7,8-TCDF	200	113	56	22-152	
13C-1,2,3,7,8-PeCDD	200	113	57	21-227	
13C-1,2,3,7,8-PeCDF	200	111	56	21-192	
13C-2,3,4,7,8-PeCDF	200	118	59	13-328	
13C-1,2,3,4,7,8-HxCDD	200	116	58	21-193	
13C-1,2,3,6,7,8-HxCDD	200	107	53	25-163	
13C-1,2,3,4,7,8-HxCDF	200	118	59	19-202	
13C-1,2,3,6,7,8-HxCDF	200	106	53	21-159	
13C-1,2,3,7,8,9-HxCDF	200	106	53	17-205	
13C-2,3,4,6,7,8-HxCDF	200	106	53	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	120	60	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	117	58	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	132	66	20-186	
13C-OCDD	400	257	64	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 13AU2110D5_16.d

Lab ID: LCSD 320-512871/3-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCSD CONCENTRATION (pg/g)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	19.8	99	2	50	67-158	
2,3,7,8-TCDF	20.0	20.7	104	0	50	75-158	
1,2,3,7,8-PeCDD	100	105	105	1	50	70-142	
1,2,3,7,8-PeCDF	100	106	106	1	50	80-134	
2,3,4,7,8-PeCDF	100	97.0	97	1	50	68-160	
1,2,3,4,7,8-HxCDD	100	94.9	95	0	50	70-164	
1,2,3,6,7,8-HxCDD	100	105	105	1	50	76-134	
1,2,3,7,8,9-HxCDD	100	105	105	2	50	64-162	
1,2,3,4,7,8-HxCDF	100	95.3	95	2	50	72-134	
1,2,3,6,7,8-HxCDF	100	104	104	1	50	84-130	
1,2,3,7,8,9-HxCDF	100	103	103	0	50	78-130	
2,3,4,6,7,8-HxCDF	100	104	104	0	50	70-156	
1,2,3,4,6,7,8-HpCDD	100	106	106	2	50	70-140	
1,2,3,4,6,7,8-HpCDF	100	106	106	0	50	82-122	
1,2,3,4,7,8,9-HpCDF	100	97.7	98	1	50	78-138	
OCDD	200	207	104	1	50	78-144	
OCDF	200	205	102	1	50	63-170	
13C-2,3,7,8-TCDD	200	120	60			20-175	
13C-2,3,7,8-TCDF	200	114	57			22-152	
13C-1,2,3,7,8-PeCDD	200	116	58			21-227	
13C-1,2,3,7,8-PeCDF	200	112	56			21-192	
13C-2,3,4,7,8-PeCDF	200	123	62			13-328	
13C-1,2,3,4,7,8-HxCDD	200	122	61			21-193	
13C-1,2,3,6,7,8-HxCDD	200	111	56			25-163	
13C-1,2,3,4,7,8-HxCDF	200	119	60			19-202	
13C-1,2,3,6,7,8-HxCDF	200	110	55			21-159	
13C-1,2,3,7,8,9-HxCDF	200	108	54			17-205	
13C-2,3,4,6,7,8-HxCDF	200	109	55			22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	119	60			26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	119	59			21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	130	65			20-186	
13C-OCDD	400	253	63			13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab File ID: 13AU2110D5_14.d Lab Sample ID: MB 320-512871/1-A

Matrix: Solid Date Extracted: 08/04/2021 07:15

Instrument ID: 10D5 Date Analyzed: 08/14/2021 02:56

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-512871/2-A	13AU2110D5_15.d	08/14/2021 03:41
	LCSD 320-512871/3-A	13AU2110D5_16.d	08/14/2021 04:26
11215702-072321-BN-SJSB085 (2-4)	320-76788-2	13AU2110D5_17.d	08/14/2021 05:11
11215702-072321-BN-SJSB085 (4-6)	320-76788-3	13AU2110D5_18.d	08/14/2021 05:56
11215702-072321-BN-SJSB085 (6-8)	320-76788-4	13AU2110D5_19.d	08/14/2021 06:41
11215702-072321-BN-SJSB085 (8-10)	320-76788-5	13AU2110D5_20.d	08/14/2021 07:26
11215702-072321-BN-SJSB085 (10-12)	320-76788-6	13AU2110D5_21.d	08/14/2021 08:11
11215702-072321-BN-SJSB085 (12-14)	320-76788-7	13AU2110D5_22.d	08/14/2021 08:56
11215702-072321-BN-SJSB085 (14-16)	320-76788-8	13AU2110D5_29.d	08/14/2021 14:31
11215702-072321-BN-SJSB105 (0-2)	320-76788-13	13AU2110D5_31.d	08/14/2021 16:01
11215702-072321-BN-SJSB105 (4-6)	320-76788-15	13AU2110D5_32.d	08/14/2021 16:46
11215702-072321-BN-SJSB105 (6-8)	320-76788-16	13AU2110D5_33.d	08/14/2021 17:31
11215702-072321-BN-SJSB105 (8-10)	320-76788-17	13AU2110D5_34.d	08/14/2021 18:16
11215702-072321-BN-SJSB105 (10-12)	320-76788-18	13AU2110D5_35.d	08/14/2021 19:01
11215702-072321-BN-SJSB105 (12-14)	320-76788-19	13AU2110D5_36.d	08/14/2021 19:46
11215702-072321-BN-SJSB105 (14-16)	320-76788-20	13AU2110D5_37.d	08/14/2021 20:31
11215702-072321-BN-SJSB085 (0-2)	320-76788-1	13AU2110D5_39.d	08/14/2021 22:01
11215702-072321-BN-SJSB105 (2-4)	320-76788-14	13AU2110D5_40.d	08/14/2021 22:46
11215702-072321-BN-SJSB085 (0-2) DL	320-76788-1 DL	17AU21A10D5_19.d	08/18/2021 05:14
11215702-072321-BN-SJSB105 (0-2) DL	320-76788-13 DL	17AU21A10D5_20.d	08/18/2021 05:59
11215702-072321-BN-SJSB105 (2-4) DL	320-76788-14 DL	17AU21A10D5_21.d	08/18/2021 06:44
11215702-072321-BN-SJSB085 (10-12) RA	320-76788-6 RA	24AU21A11D2_004.d	08/24/2021 18:32

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab File ID: 13AU2110D5_14.d Lab Sample ID: MB 320-512871/1-A

Matrix: Solid Date Extracted: 08/04/2021 07:15

Instrument ID: 10D5 Date Analyzed: 08/14/2021 02:56

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
11215702-072321-BN-SJSB085 (12-14) RA	320-76788-7 RA	24AU21A11D2 005.d	08/24/2021 19:10
11215702-072321-BN-SJSB085 (14-16) RA	320-76788-8 RA	24AU21A11D2 006.d	08/24/2021 19:48
11215702-072321-BN-SJSB105 (8-10) RA	320-76788-17 RA	24AU21A11D2 007.d	08/24/2021 20:27
11215702-072321-BN-SJSB105 (10-12) RA	320-76788-18 RA	24AU21A11D2 008.d	08/24/2021 21:05
11215702-072321-BN-SJSB085 (4-6) RA	320-76788-3 RA	24AU21A11D2 009.d	08/24/2021 21:43
11215702-072321-BN-SJSB085 (6-8) RA	320-76788-4 RA	24AU21A11D2 010.d	08/24/2021 22:22
11215702-072321-BN-SJSB085 (8-10) RA	320-76788-5 RA	24AU21A11D2 011.d	08/24/2021 23:00
11215702-072321-BN-SJSB105 (6-8) RA	320-76788-16 RA	24AU21A11D2 012.d	08/24/2021 23:38
11215702-072321-BN-SJSB105 (14-16) RA	320-76788-20 RA	24AU21A11D2 013.d	08/25/2021 00:17
11215702-072321-BN-SJSB105 (4-6) RA	320-76788-15 RA	24AU21A11D2 014.d	08/25/2021 00:55
11215702-072321-BN-SJSB105 (12-14) RA	320-76788-19 RA	24AU21A11D2 015.d	08/25/2021 01:34
11215702-072321-BN-SJSB085 (2-4) RA	320-76788-2 RA	24AU21A11D2 016.d	08/25/2021 02:12
11215702-072321-BN-SJSB085 (0-2) RADL	320-76788-1 RADL	25AU21A11D2 012.d	08/25/2021 20:00
11215702-072321-BN-SJSB105 (0-2) RADL	320-76788-13 RADL	25AU21A11D2 013.d	08/25/2021 20:38
11215702-072321-BN-SJSB105 (2-4) RADL	320-76788-14 RADL	25AU21A11D2 014.d	08/25/2021 21:17

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (0-2)
Lab Sample ID: 320-76788-1
Matrix: Solid
Lab File ID: 13AU2110D5_39.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:00
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.73(g)
Date Analyzed: 08/14/2021 22:01
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 59.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
40321-76-4	1,2,3,7,8-PeCDD	240		13	3.7
57117-41-6	1,2,3,7,8-PeCDF	2400	G	20	20
57117-31-4	2,3,4,7,8-PeCDF	1600	G	15	15
39227-28-6	1,2,3,4,7,8-HxCDD	4.5	J B	13	0.60
57653-85-7	1,2,3,6,7,8-HxCDD	16		13	0.59
19408-74-3	1,2,3,7,8,9-HxCDD	9.4	J	13	0.54
70648-26-9	1,2,3,4,7,8-HxCDF	3600	B	13	12
57117-44-9	1,2,3,6,7,8-HxCDF	960	B	13	11
72918-21-9	1,2,3,7,8,9-HxCDF	49	B	13	9.8
60851-34-5	2,3,4,6,7,8-HxCDF	100		13	11
35822-46-9	1,2,3,4,6,7,8-HpCDD	300	B	13	5.2
67562-39-4	1,2,3,4,6,7,8-HpCDF	1200	B	13	8.0
55673-89-7	1,2,3,4,7,8,9-HpCDF	380	B	13	8.4
3268-87-9	OCDD	5300	B	25	6.8
39001-02-0	OCDF	770	B	25	0.72
36088-22-9	Total PeCDD	260	q	13	3.7
30402-15-4	Total PeCDF	6200	G	17	17
34465-46-8	Total HxCDD	130	q B	13	0.58
55684-94-1	Total HxCDF	5300	B	13	11
37871-00-4	Total HpCDD	710	B	13	5.2
38998-75-3	Total HpCDF	1900	B	13	8.2

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (0-2)
Lab Sample ID: 320-76788-1
Matrix: Solid
Lab File ID: 13AU2110D5_39.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:00
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.73(g)
Date Analyzed: 08/14/2021 22:01
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 59.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
109719-79-1	13C-1,2,3,7,8-PeCDD	100		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	84		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	96		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	66		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	63		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	72		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	63		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	63		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	63		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	70		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	64		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	77		26-138
114423-97-1	13C-OCDD	82		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	75		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Sample Type: Client
Inject. Date: 14-Aug-2021 22:01:33 ALS Bottle#: 39 Worklist Smp#: 28
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-1-a 320-76788-a-1-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 07:49:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: krenns Date: 18-Aug-2021 07:49:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.051	55101669	0.78	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.537	51483892	0.78	1.6249	57.5	57.5	1.577	1.577	57.50	
2,3,7,8-TCDF	17.552	8851471356	0.87	1.0239	16791	16791	43.7	43.7		Ea
A Non-2,3,7,8-sub-TCDF	17.046	7426706161	0.78	1.0239	14088	14088	43.7	10500		a
S Total TCDF					30880	30880	43.7	43.7		
D 13C-2,3,7,8-TCDD	18.354	19971796	0.81	0.8993	40.3	40.3	3.991	3.991	40.30	Ma
2,3,7,8-TCDD	18.369	1472175468	0.79	1.2541	5877.6	5877.6	44.0	44.0		Ea
$ 37Cl4-2,3,7,8-TCDD	18.369	18262921		1.1071	29.9	29.9	0.7470	0.7470	74.84	
A Non-2,3,7,8-sub-TCDD	17.499	247967008	0.80	1.2541	990.0	990.0	44.0	990.0		
S Total TCDD					6867.7	6867.7	44.0	44.0		
D 13C-1,2,3,7,8-PeCDF	22.667	55709543	1.61	1.2101	83.6	83.6	0.8625	0.8625	83.55	
1,2,3,7,8-PeCDF	22.694	286170137	1.58	1.0611	484.1	484.1	3.902	3.902		a
D 13C-2,3,4,7,8-PeCDF	23.976	65241720	1.59	1.2395	95.5	95.5	0.8420	0.8420	95.53	
2,3,4,7,8-PeCDF	24.003	206853316	1.59	1.0184	311.3	311.3	3.047	3.047		a
A F1 PeCDFs	20.093	1608778	1.58	1.0398	2.558	2.558	0.0329	2.558		
A Non-2,3,7,8-sub-PeCDF	23.241	273021884	1.58	1.0398	434.2	434.2	3.412	176.1		
S Total PeCDF					1232.2	1232.2	3.475	3.475		
D 13C-1,2,3,7,8-PeCDD	24.685	42088180	1.61	0.7612	100.3	100.3	0.3126	0.3126	100	
1,2,3,7,8-PeCDD	24.712	21209081	1.62	1.0484	48.1	48.1	0.7362	0.7362		a
A Non-2,3,7,8-sub-PeCDD	23.349	1730124	1.55	1.0484	10.2	3.921	0.7362	1.551		RQM
S Total PeCDD					58.3	52.0	0.7362	0.7362		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.649	60887150	0.52	1.0837	71.6	71.6	0.2936	0.2936	71.56	
1,2,3,4,7,8-HxCDF	30.662	472960821	1.21	1.0851	715.8	715.8	2.475	2.475		
D 13C-1,2,3,6,7,8-HxCDF	30.809	56072995	0.51	1.1279	63.3	63.3	0.2821	0.2821	63.32	
1,2,3,6,7,8-HxCDF	30.822	121037946	1.22	1.1260	191.7	191.7	2.255	2.255		
D 13C-2,3,4,6,7,8-HxCDF	31.607	52990735	0.52	1.0637	63.4	63.4	0.2991	0.2991	63.45	
2,3,4,6,7,8-HxCDF	31.621	12631583	1.22	1.1675	20.4	20.4	2.107	2.107		M
D 13C-1,2,3,7,8,9-HxCDF	32.379	48102025	0.52	0.9676	63.3	63.3	0.3288	0.3288	63.32	a
1,2,3,7,8,9-HxCDF	32.393	5411882	1.17	1.1664	9.646	9.646	1.958	1.958		M
A Non-2,3,7,8-sub-HxCDF	30.197	75816548	1.22	1.1363	122.4	122.4	2.186	43.9		Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					1060.0	1060.0	2.199	2.199		
* 13C-1,2,3,7,8,9-HxCDD	32.206	78516920	1.24	6.2E+05	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	31.780	38173326	1.24	0.7334	66.3	66.3	0.2894	0.2894	66.29	
1,2,3,4,7,8-HxCDD	31.794	365493	1.19	1.0640	0.8998	0.8998	0.1187	0.1187		M
D 13C-1,2,3,6,7,8-HxCDD	31.887	43684237	1.24	0.8802	63.2	63.2	0.2412	0.2412	63.21	
1,2,3,6,7,8-HxCDD	31.900	1430107	1.20	1.0001	3.273	3.273	0.1182	0.1182		M
1,2,3,7,8,9-HxCDD	32.220	865503	1.30	1.1325	1.867	1.867	0.1079	0.1079		
A Non-2,3,7,8-sub-HxCDD	30.882	8819064	1.24	1.0655	20.3	20.2	0.1147	10.2		RQ
S Total HxCDD					26.3	26.3	0.1150	0.1150		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.803	38885057	0.45	0.7730	64.1	64.1	0.6819	0.6819	64.07	
1,2,3,4,6,7,8-HpCDF	33.814	133518262	1.05	1.4413	238.2	238.2	1.582	1.582		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.872	42186370	0.43	0.7008	76.7	76.7	0.7522	0.7522	76.67	
1,2,3,4,7,8,9-HpCDF	34.884	42279248	1.05	1.3174	76.1	76.1	1.678	1.678		
A Non-2,3,7,8-sub-HpCDF	34.319	35645913	1.05	1.3793	63.8	63.8	1.628	63.8		
S Total HpCDF					378.1	378.1	1.630	1.630		
D 13C-1,2,3,4,6,7,8-HpCDD	34.580	35336086	0.97	0.6472	69.5	69.5	0.3787	0.3787	69.53	
1,2,3,4,6,7,8-HpCDD	34.592	23379972	1.02	1.0943	60.5	60.5	1.040	1.040		
A Non-2,3,7,8-sub-HpCDD	34.301	30960525	1.05	1.0943	80.1	80.1	1.040	80.1		
S Total HpCDD					140.5	140.5	1.040	1.040		
D 13C-OCDD	36.938	57576730	0.87	0.4472	164.0	164.0	0.2067	0.2067	82.00	
OCDF	37.034	63240369	0.88	1.4382	152.7	152.7	0.1422	0.1422		
OCDD	36.950	333111125	0.90	1.1070	1045.2	1045.2	1.345	1.345		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Sample Type: Client
Inject. Date: 14-Aug-2021 22:01:33 ALS Bottle#: 39 Worklist Smp#: 28
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-1-a 320-76788-a-1-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 07:49:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: krenns Date: 18-Aug-2021 07:49:09

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	18.051	17.855	12		24087362	4120140	53874	134685	76		a
333.9339	18.051	17.855	12		31014307	5260924	80804	202010	65	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.537	17.341	12	0.972	22620975	6332512	49541	123852	128		
317.9389	17.537	17.341	12	0.972	28862917	7838732	46630	116575	168	0.78(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.552	17.356	12	1.001	4110969897	1053693182	11367102841775		927		ae
305.8987	17.552	17.356	12	1.001	4740501459	1113592063	13995993498997		796	0.87(0.65-0.89)	e
A Non-2,3,7,8-sub-TCDF											a
303.9016	15.859	17.046	-71	0.904	23549111	5911449	11367102841775		5		
305.8987	15.859	17.046	-71	0.904	30410781	7485956	13995993498997		5	0.77(0.65-0.89)	
303.9016	16.116	17.046	-56	0.919	68607578	17652536	11367102841775		16		
305.8987	16.116	17.046	-56	0.919	88208629	22780204	13995993498997		16	0.78(0.65-0.89)	
303.9016	16.419	17.046	-38	0.936	104396711	20480164	11367102841775		18		
305.8987	16.419	17.046	-38	0.936	135426939	26567645	13995993498997		19	0.77(0.65-0.89)	
303.9016	16.645	17.046	-24	0.949	110954924	30073375	11367102841775		26		
305.8987	16.645	17.046	-24	0.949	144273466	39411089	13995993498997		28	0.77(0.65-0.89)	
303.9016	16.872	17.046	-10	0.962	199832855	58568998	11367102841775		52		
305.8987	16.872	17.046	-10	0.962	258276226	75379833	13995993498997		54	0.77(0.65-0.89)	
303.9016	17.144	17.046	6	0.978	2432094294	508725560	11367102841775		448		
305.8987	17.144	17.046	6	0.978	3103187084	644758754	13995993498997		461	0.78(0.65-0.89)	
303.9016	17.976	17.046	56	1.025	317667218	82750556	11367102841775		73		
305.8987	17.976	17.046	56	1.025	409820345	105847019	13995993498997		76	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											Ma
331.9368	18.354	18.051	18	1.017	8958323	1549179	53874	134685	29		M
333.9339	18.354	18.051	18	1.017	11013473	1893000	80804	202010	23	0.81(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	18.369	18.066	18	1.001	650753749	134808788	381312	953280	354		a
321.8936	18.369	18.066	18	1.001	821421719	171776951	378486	946215	454	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.369	18.066	18	1.018	18262921	4068719	31036	77590	131		
A Non-2,3,7,8-sub-TCDD											
319.8965	18.611	17.499	67	1.014	110113457	24358466	381312	953280	64		
321.8936	18.611	17.499	67	1.014	137853551	31176523	378486	946215	82	0.80(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.667	22.367	18	1.256	34393103	5183191	23931	59827	217		
353.8970	22.667	22.367	18	1.256	21316440	3265112	15232	38080	214	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.694	22.380	19	1.001	175336517	26278064	86338	215845	304		a
341.8567	22.694	22.380	19	1.001	110833620	16679220	53595	133987	311	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.976	23.703	16	1.328	40020008	6950642	23931	59827	290		
353.8970	23.990	23.703	17	1.329	25221712	4323340	15232	38080	284	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	24.003	23.730	16	1.001	126853905	21775572	86338	215845	252		a
341.8567	24.003	23.730	16	1.001	79999411	13723683	53595	133987	256	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.760	20.093	-20	0.872	984582	194545	631	1577	308		
341.8567	19.775	20.093	-19	0.872	624196	124811	718	1795	174	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.317	23.241	-115	0.940	67939518	13127743	86338	215845	152		
341.8567	21.317	23.241	-115	0.940	42806315	8232940	53595	133987	154	1.59(1.32-1.78)	
339.8597	22.149	23.241	-65	0.977	6172144	703094	86338	215845	8		
341.8567	22.135	23.241	-66	0.977	3987187	436006	53595	133987	8	1.55(1.32-1.78)	
339.8597	22.544	23.241	-42	0.995	13102187	2851909	86338	215845	33		
341.8567	22.544	23.241	-42	0.995	8296624	1797794	53595	133987	34	1.58(1.32-1.78)	
339.8597	22.980	23.241	-16	1.014	2245096	617327	86338	215845	7		
341.8567	22.980	23.241	-16	1.014	1418574	382846	53595	133987	7	1.58(1.32-1.78)	
339.8597	23.185	23.241	-3	1.023	47288226	9481229	86338	215845	110		
341.8567	23.185	23.241	-3	1.023	29969474	6080456	53595	133987	113	1.58(1.32-1.78)	
339.8597	24.330	23.241	65	1.073	30590446	4432130	86338	215845	51		
341.8567	24.330	23.241	65	1.073	19206093	2759672	53595	133987	51	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.685	24.426	16	1.367	25972112	4063189	6418	16045	633		
369.8919	24.671	24.426	15	1.367	16116068	2555718	2512	6280	1017	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											a
355.8546	24.712	24.453	16	1.001	13112694	2098364	11032	27580	190		a
357.8516	24.712	24.453	16	1.001	8096387	1284038	9402	23505	137	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	21.494	23.349	-111	0.871	237467	46326	11032	27580	4		
357.8516	21.399	23.349	-117	0.867	2610224	533323	9402	23505	57	0.09(1.32-1.78)	
	Empc Correction				153204	29887	9402	23505	3		
355.8546	22.953	23.349	-24	0.930	393616	114366	11032	27580	10		
357.8516	22.940	23.349	-25	0.929	261305	75623	9402	23505	8	1.51(1.32-1.78)	
355.8546	25.203	23.349	111	1.021	724823	112841	11032	27580	10		M
	Empc Correction				416088	60938	11032	27580	6		
357.8516	25.190	23.349	110	1.020	268444	39315	9402	23505	4	2.70(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.649	30.503	9	0.952	20759675	4413664	12114	30285	364		
385.8610	30.649	30.503	9	0.952	40127475	8422421	15222	38055	553	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.662	30.529	8	1.000	258992235	54201668	76346	190865	710		
375.8178	30.662	30.529	8	1.000	213968586	44895473	61560	153900	729	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.809	30.689	7	0.957	19008958	4618241	12114	30285	381		
385.8610	30.809	30.689	7	0.957	37064037	8960436	15222	38055	589	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.822	30.702	7	1.000	66589409	15556390	76346	190865	204		
375.8178	30.822	30.702	7	1.000	54448537	12995402	61560	153900	211	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.607	31.514	6	0.981	18151554	4792098	12114	30285	396		
385.8610	31.607	31.514	6	0.981	34839181	9225319	15222	38055	606	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.621	31.528	6	1.000	6950515	2009448	76346	190865	26		M
375.8178	31.621	31.528	6	1.000	5681068	1623898	61560	153900	26	1.22(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											a
383.8639	32.379	32.313	4	1.005	16481154	5171774	12114	30285	427		a
385.8610	32.379	32.313	4	1.005	31620871	9927471	15222	38055	652	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.393	32.326	4	1.000	2915317	1186398	76346	190865	16		M
375.8178	32.393	32.326	4	1.000	2496565	1014481	61560	153900	16	1.17(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	28.706	30.197	-89	0.937	14954253	2707091	76346	190865	35		
375.8178	28.706	30.197	-89	0.937	12263972	2209460	61560	153900	36	1.22(1.05-1.43)	
373.8208	29.917	30.197	-17	0.976	7885218	1418597	76346	190865	19		
375.8178	29.917	30.197	-17	0.976	6466920	1157900	61560	153900	19	1.22(1.05-1.43)	
373.8208	31.501	30.197	78	1.028	4456317	1179715	76346	190865	15		M
375.8178	31.501	30.197	78	1.028	3701822	973970	61560	153900	16	1.20(1.05-1.43)	
373.8208	32.472	30.197	136	1.059	14350793	4941447	76346	190865	65		M
375.8178	32.472	30.197	136	1.059	11737253	4026198	61560	153900	65	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	32.206	32.127	5		43531455	11846567	10147	25367	1167		a
403.8529	32.206	32.127	5		34985465	9634395	8092	20230	1191	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.780	31.701	5	0.987	21121658	6372936	10147	25367	628		
403.8529	31.780	31.701	5	0.987	17051668	5095134	8092	20230	630	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.794	31.714	5	1.000	198546	59413	2899	7247	20		
391.8127	31.794	31.714	5	1.000	166947	53099	2897	7242	18	1.19(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.887	31.807	5	0.990	24146215	6763346	10147	25367	667		
403.8529	31.887	31.807	5	0.990	19538022	5490335	8092	20230	678	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.900	31.820	5	1.000	779158	230393	2899	7247	79		
391.8127	31.900	31.820	5	1.000	650949	181378	2897	7242	63	1.20(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											
389.8157	32.220	32.140	5	1.014	489879	110956	2899	7247	38		
391.8127	32.220	32.140	5	1.014	375624	85508	2897	7242	30	1.30(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.771	30.882	-67	0.934	1960427	277655	2899	7247	96		
391.8127	29.784	30.882	-66	0.934	1624936	225088	2897	7242	78	1.21(1.05-1.43)	
389.8157	30.716	30.882	-10	0.963	335062	78119	2899	7247	27		
391.8127	30.716	30.882	-10	0.963	238862	59592	2897	7242	21	1.40(1.05-1.43)	
389.8157	31.062	30.882	11	0.974	2458403	528846	2899	7247	182		
391.8127	31.062	30.882	11	0.974	1970450	431326	2897	7242	149	1.25(1.05-1.43)	
389.8157	31.275	30.882	24	0.981	127833	28972	2899	7247	10		
391.8127	31.261	30.882	23	0.980	138578	27907	2897	7242	10	0.92(1.05-1.43)	
	Empc Correction				103091	23364	2897	7242	8		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.803	33.754	3	1.050	11991110	4119523	13934	34835	296		
419.8220	33.803	33.754	3	1.050	26893947	9253746	31361	78402	295	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.814	33.766	3	1.000	68267340	23590179	62163	155407	379		M
409.7789	33.814	33.766	3	1.000	65250922	22049232	59814	149535	369	1.05(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.872	34.847	1	1.083	12674558	4164059	13934	34835	299		
419.8220	34.872	34.847	1	1.083	29511812	9626842	31361	78402	307	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.884	34.860	1	1.000	21616697	6993749	62163	155407	113		
409.7789	34.884	34.860	1	1.000	20662551	6577860	59814	149535	110	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.106	34.319	-13	1.009	18270725	6633025	62163	155407	107		
409.7789	34.094	34.319	-13	1.009	17375188	6184683	59814	149535	103	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.580	34.556	1	1.074	17385340	5577746	14059	35147	397		
437.8140	34.580	34.556	1	1.074	17950746	5755100	7004	17510	822	0.97(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.592	34.568	1	1.000	11834019	3833797	23819	59547	161		
425.7737	34.592	34.568	1	1.000	11545953	3755909	27791	69477	135	1.02(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.046	34.301	-15	0.985	15852733	5818444	23819	59547	244		
425.7737	34.046	34.301	-15	0.985	15107792	5571595	27791	69477	200	1.05(0.88-1.20)	
13C-OCDD											
469.7779	36.938	36.914	1	1.147	26750772	7517795	3616	9040	2079		
471.7750	36.938	36.914	1	1.147	30825958	8605039	4325	10812	1990	0.87(0.76-1.02)	
OCDF											
441.7428	37.034	37.010	1	1.003	29580192	8217892	2985	7462	2753		
443.7399	37.034	37.010	1	1.003	33660177	9393202	3609	9022	2603	0.88(0.76-1.02)	
OCDD											
457.7377	36.950	36.926	1	1.000	157570877	43488279	21058	52645	2065		
459.7348	36.950	36.926	1	1.000	175540248	48109804	26963	67407	1784	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Inject. Date: 14-Aug-2021 22:01:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 28

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	51483892	14171244

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	51483892	14171244

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.859	23549111	5911449	30410781	7485956	102.4	0.77	
16.116	68607578	17652536	88208629	22780204	297.5	0.78	
16.419	104396711	20480164	135426939	26567645	454.9	0.77	
16.645	110954924	30073375	144273466	39411089	484.2	0.77	
16.872	199832855	58568998	258276226	75379833	869.0	0.77	
17.144	2432094294	508725560	3103187084	644758754	10500	0.78	
17.976	317667218	82750556	409820345	105847019	1380.0	0.78	
Signal Totals:							
	3257102691	724162638	4169603470	922230500			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7426706161	1646393138				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 14088 = (7426706161 * 100.000) / (51483892 * 1.024)

Report Date: 18-Aug-2021 07:49:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Inject. Date: 14-Aug-2021 22:01:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 28

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	19971796	3442179

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	19971796	3442179

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.611	110113457	24358466	137853551	31176523	990.0	0.80	
Signal Totals:							
	110113457	24358466	137853551	31176523			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	247967008	55534989				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 990.006 = (247967008 * 100.000) / (19971796 * 1.254)

Report Date: 18-Aug-2021 07:49:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Inject. Date: 14-Aug-2021 22:01:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 28

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	55709543	8448303
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	65241720	11273982

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	60475631	9861142

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.760	984582	194545	624196	124811	2.56	1.58	
Signal Totals:							
	984582	194545	624196	124811			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1608778	319356				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.558 = (1608778 * 100.000) / (60475631 * 1.040)

Report Date: 18-Aug-2021 07:49:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Inject. Date: 14-Aug-2021 22:01:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 28

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	55709543	8448303
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	65241720	11273982

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	60475631	9861142

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.317	67939518	13127743	42806315	8232940	176.1	1.59	
22.149	6172144	703094	3987187	436006	16.2	1.55	
22.544	13102187	2851909	8296624	1797794	34.0	1.58	
22.980	2245096	617327	1418574	382846	5.83	1.58	
23.185	47288226	9481229	29969474	6080456	122.9	1.58	
24.330	30590446	4432130	19206093	2759672	79.2	1.59	
Signal Totals:							
	167337617	31213432	105684267	19689714			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	273021884	50903146				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 434.187 = (273021884 * 100.000) / (60475631 * 1.040)

Report Date: 18-Aug-2021 07:49:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Lims ID:	320-76788-A-1-A		
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Inject. Date:	14-Aug-2021 22:01:33	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	28

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	42088180	6618907

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	42088180	6618907

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.494	237467	46326	2610224	533323	6.45	0.09	RQ
21.494	237467	46326	153204	29887	0.8853		Empc Correction
22.953	393616	114366	261305	75623	1.48	1.51	
25.203	724823	112841	268444	39315	2.25	2.70	RQM
25.203	416088	60938	268444	39315	1.55		Empc Correction
Signal Totals:							
	1047171	221630	682953	144825			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4495879	921794				0.43	RQM
	1730124	366455					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 10.189 = (4495879 * 100.000) / (42088180 * 1.048)

Empc Amount: 3.921 = (1730124 * 100.000) / (42088180 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 07:49:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Inject. Date: 14-Aug-2021 22:01:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 28

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	60887150	12836085
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	56072995	13578677
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	52990735	14017417
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	48102025	15099245

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	54513226	13882856

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.706	14954253	2707091	12263972	2209460	43.9	1.22	
29.917	7885218	1418597	6466920	1157900	23.2	1.22	
31.501	4456317	1179715	3701822	973970	13.2	1.20	Ma
32.472	14350793	4941447	11737253	4026198	42.1	1.22	Ma
Signal Totals:							
	41646581	10246850	34169967	8367528			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	75816548	18614378				1.22	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 122.401 = (75816548 * 100.000) / (54513226 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Inject. Date: 14-Aug-2021 22:01:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 28

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	38173326	11468070
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	43684237	12253681
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	40928781	11860875

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.771	1960427	277655	1624936	225088	8.22	1.21	
30.716	335062	78119	238862	59592	1.32	1.40	
31.062	2458403	528846	1970450	431326	10.2	1.25	
31.275	127833	28972	138578	27907	0.6109	0.92	RQ
31.275	127833	28972	103091	23364	0.5295		Empc Correction
Signal Totals:							
	4881725	913592	3937339	739370			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8854551	1657505				1.23	RQ
	8819064	1652962					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 20.303 = (8854551 * 100.000) / (40928781 * 1.066)
Empc Amount: 20.222 = (8819064 * 100.000) / (40928781 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 07:49:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Inject. Date: 14-Aug-2021 22:01:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 28

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	38885057	13373269
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	42186370	13790901

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	40535713	13582085

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.106	18270725	6633025	17375188	6184683	63.8	1.05	
Signal Totals:							
	18270725	6633025	17375188	6184683			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	35645913	12817708				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 63.753 = (35645913 * 100.000) / (40535713 * 1.379)

Report Date: 18-Aug-2021 07:49:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Inject. Date: 14-Aug-2021 22:01:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 28

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	35336086	11332846

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	35336086	11332846

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.046	15852733	5818444	15107792	5571595	80.1	1.05	
Signal Totals:							
	15852733	5818444	15107792	5571595			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	30960525	11390039				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 80.067 = (30960525 * 100.000) / (35336086 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Not Detected
Expected RT: 22.38

Processing Integration Results

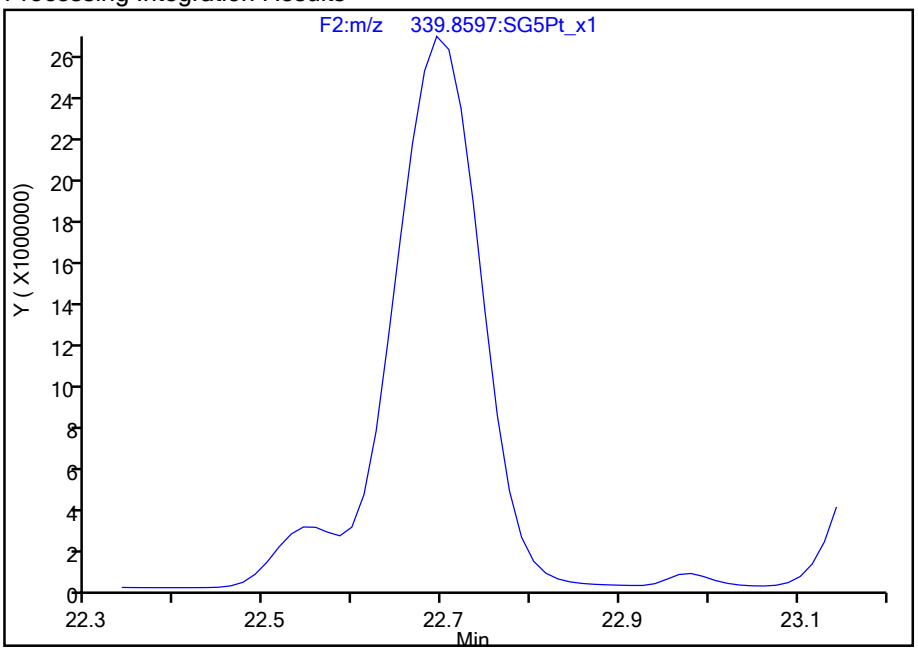

Manual Integration Results

RT: 22.69
Area: 175336517
Amount: 484.0879
Amount Units: pg/ul

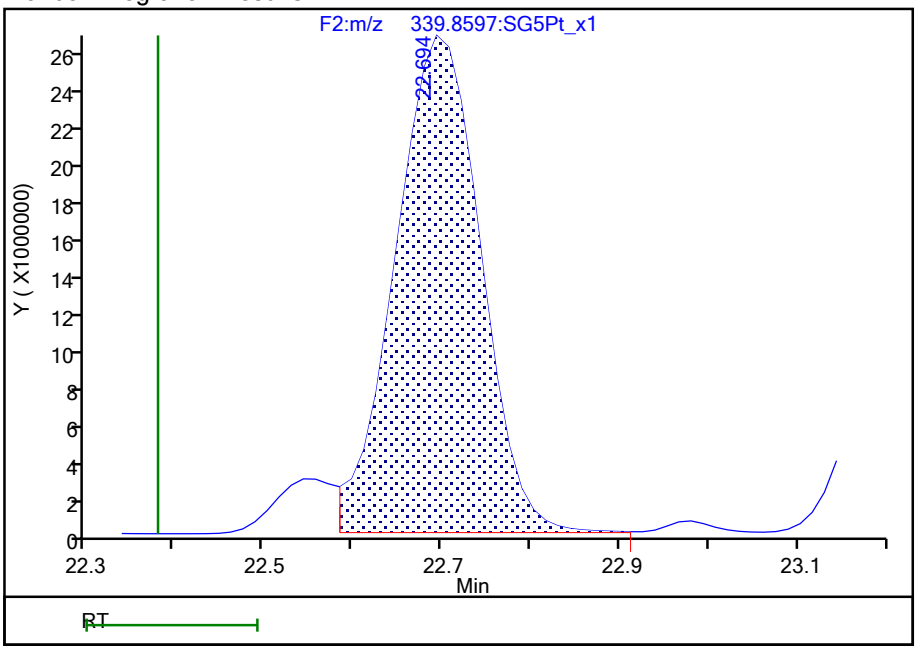

Reviewer: dadunj, 18-Aug-2021 10:08:24
Audit Action: Assigned Compound ID Audit Reason: Split Peak

779183

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Not Detected
Expected RT: 23.73

Processing Integration Results

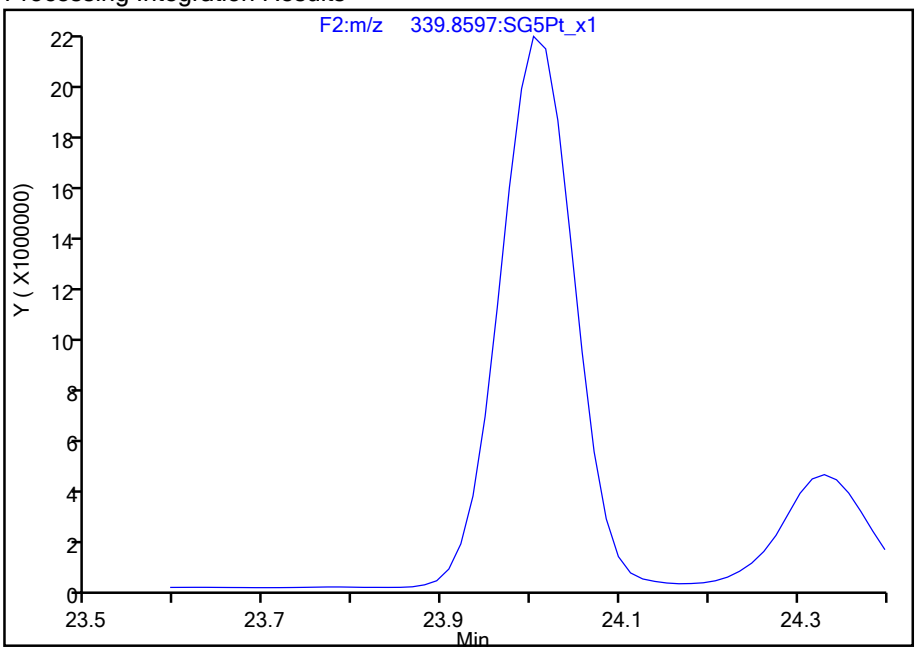

Manual Integration Results

RT: 24.00
Area: 126853905
Amount: 311.3228
Amount Units: pg/ul

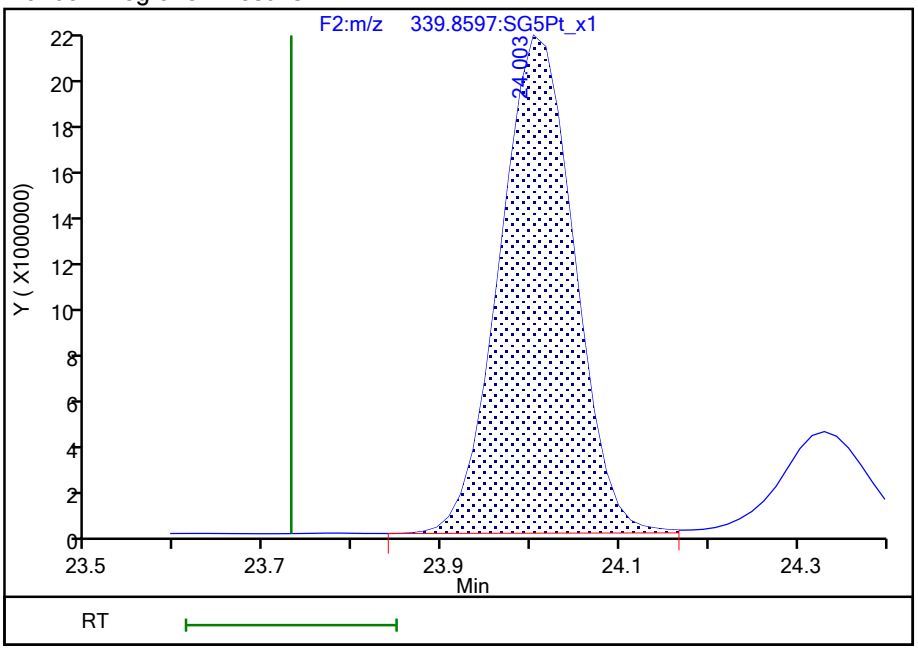

Reviewer: dadunj, 18-Aug-2021 10:08:29
Audit Action: Assigned Compound ID Audit Reason: Split Peak

779184

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.45

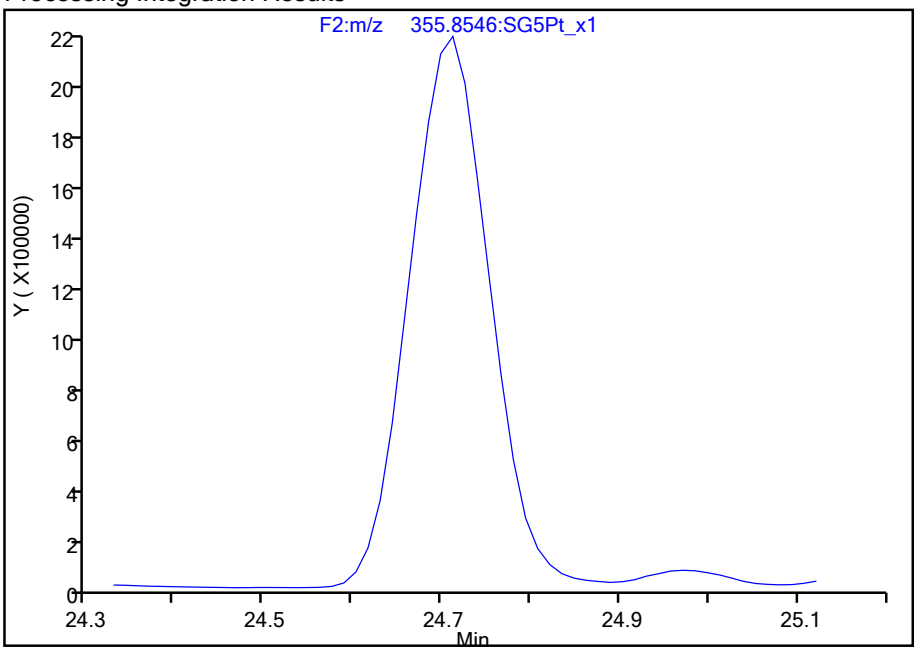

Manual Integration Results

RT: 24.71
Area: 13112694
Amount: 48.064238
Amount Units: pg/ul

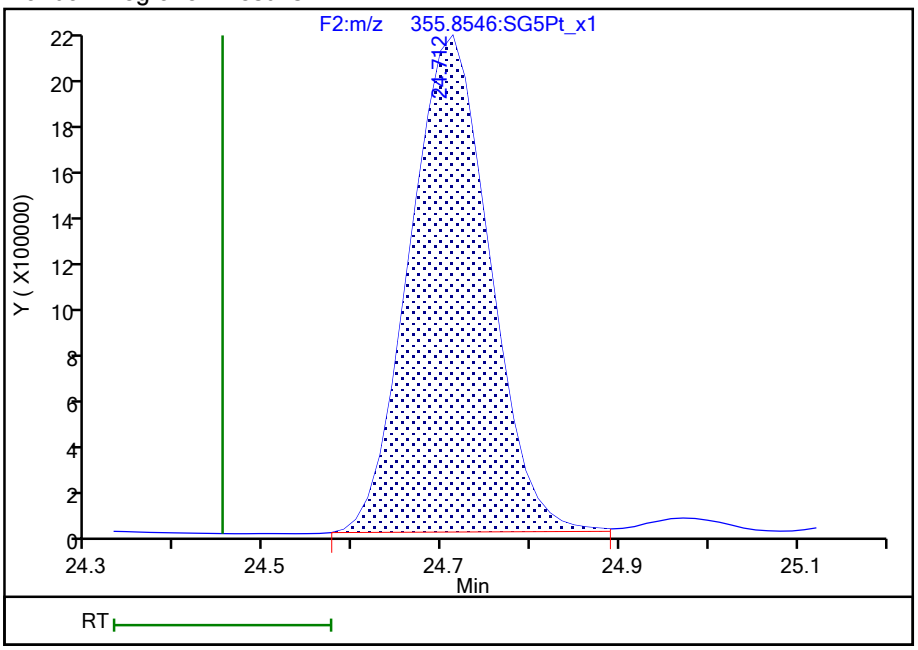

Reviewer: dadunj, 18-Aug-2021 10:08:40
Audit Action: Assigned Compound ID Audit Reason: Split Peak

779185

Report Date: 18-Aug-2021 07:49:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.21- 25.49)

Signal: 1

Processing Integration Results

RT = 25.203 Area = 1075294

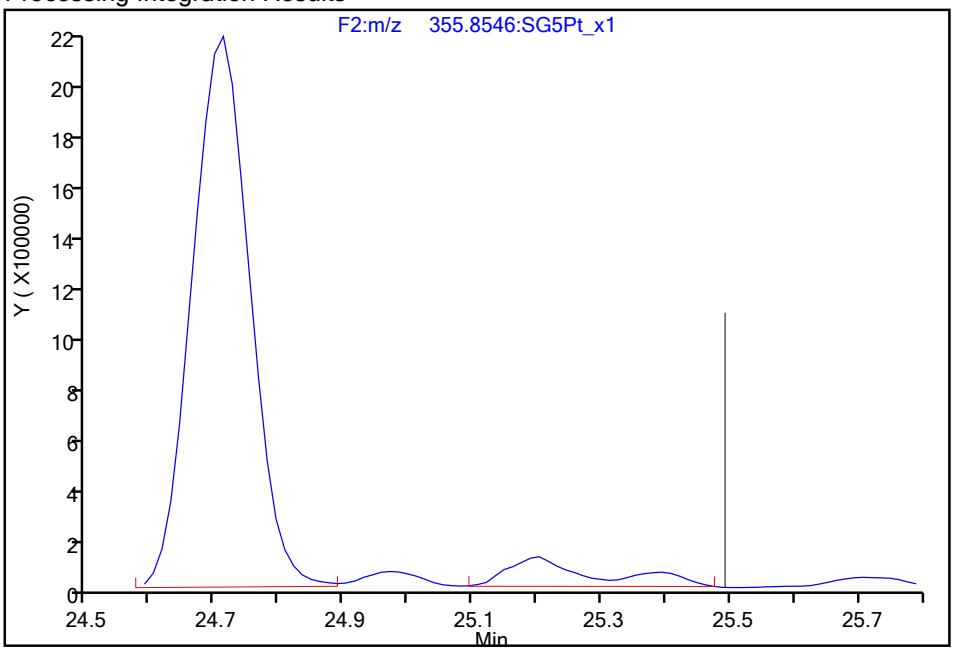

Manual Integration Results

RT = 25.203 Area = 724823 M

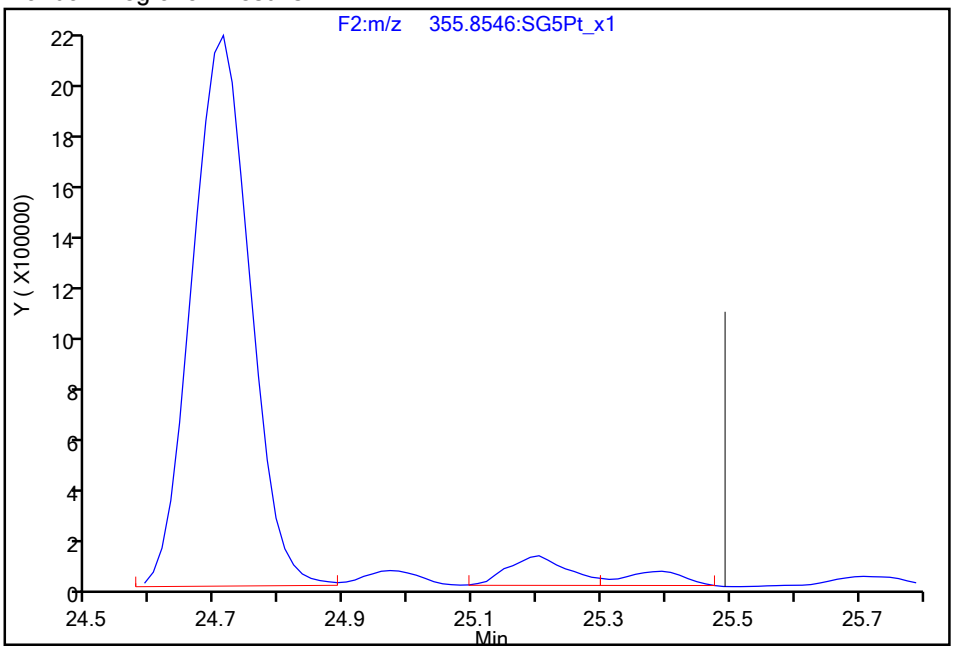

Reviewer: dadunj, 18-Aug-2021 10:08:51

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779186

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.62
Area: 11407206
Amount: 33.603602
Amount Units: pg/ul

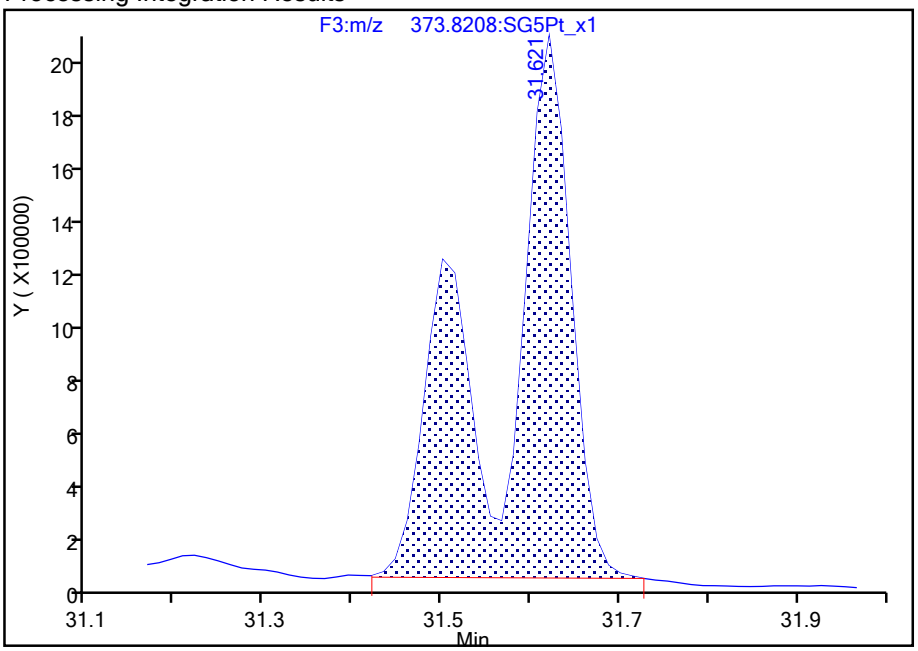

Manual Integration Results

RT: 31.62
Area: 6950515
Amount: 20.416740
Amount Units: pg/ul

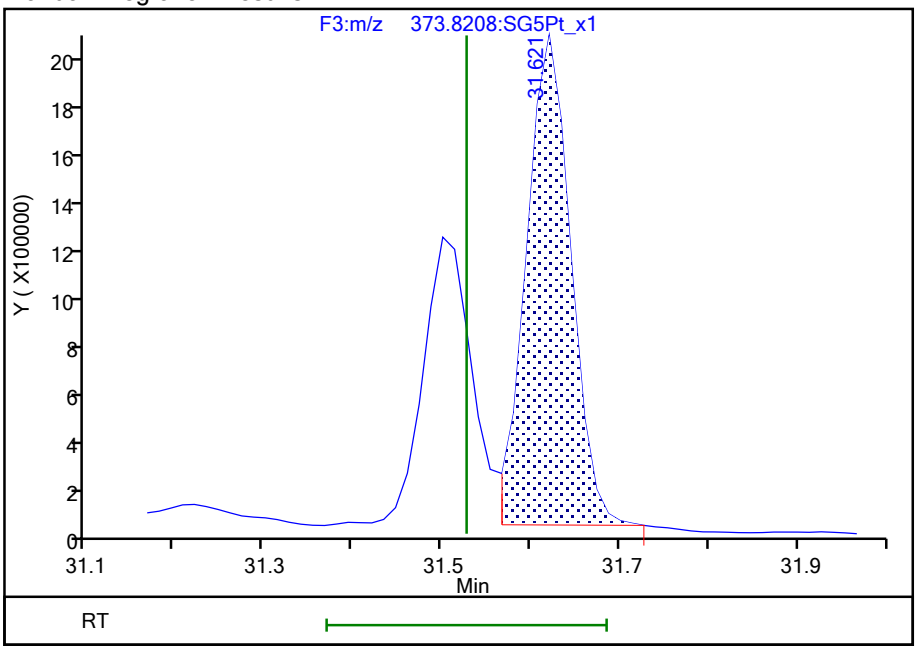

Reviewer: dadunj, 18-Aug-2021 10:09:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.62
Area: 9382925
Amount: 33.603602
Amount Units: pg/ul

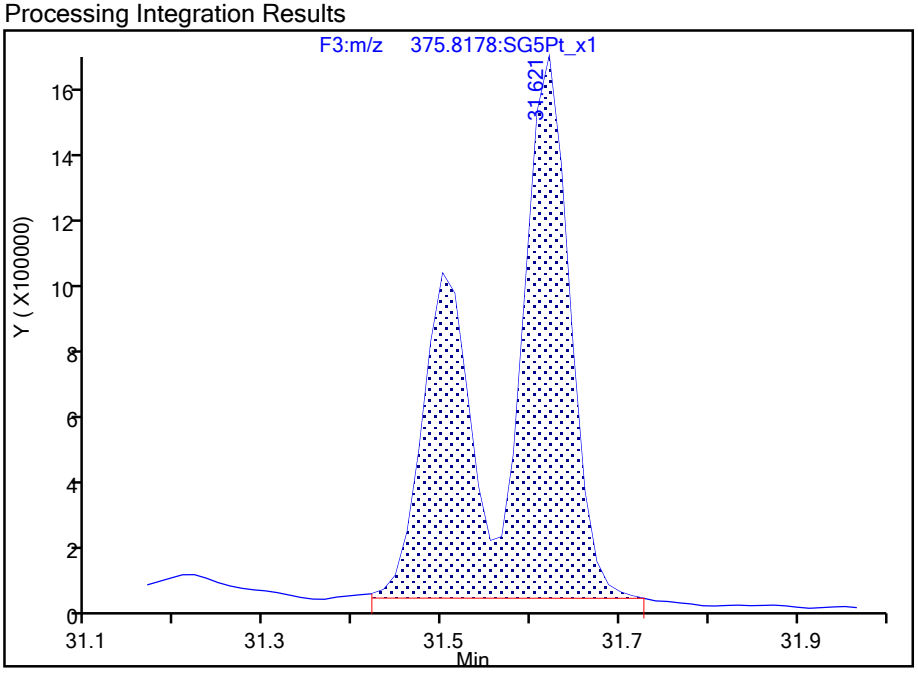

Manual Integration Results

RT: 31.62
Area: 5681068
Amount: 20.416740
Amount Units: pg/ul

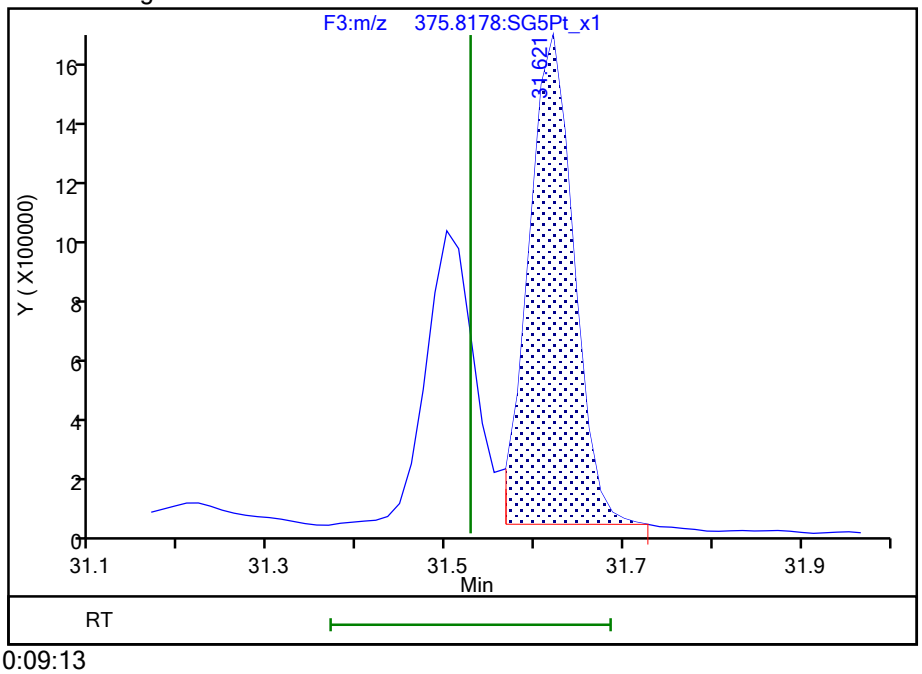

Reviewer: dadunj, 18-Aug-2021 10:09:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779188

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,7,8,9-HxCDF, CAS: 116843-04-0

Signal: 1

Processing Integration Results

RT: 31.61
Area: 18151554
Amount: 0
Amount Units: pg/ul

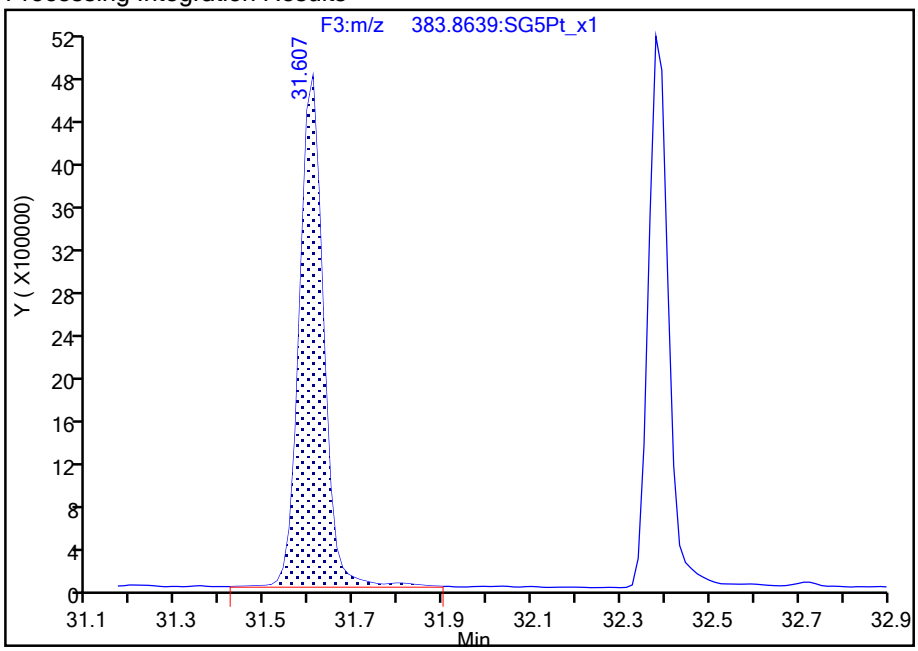

Manual Integration Results

RT: 32.38
Area: 16481154
Amount: 63.316770
Amount Units: pg/ul

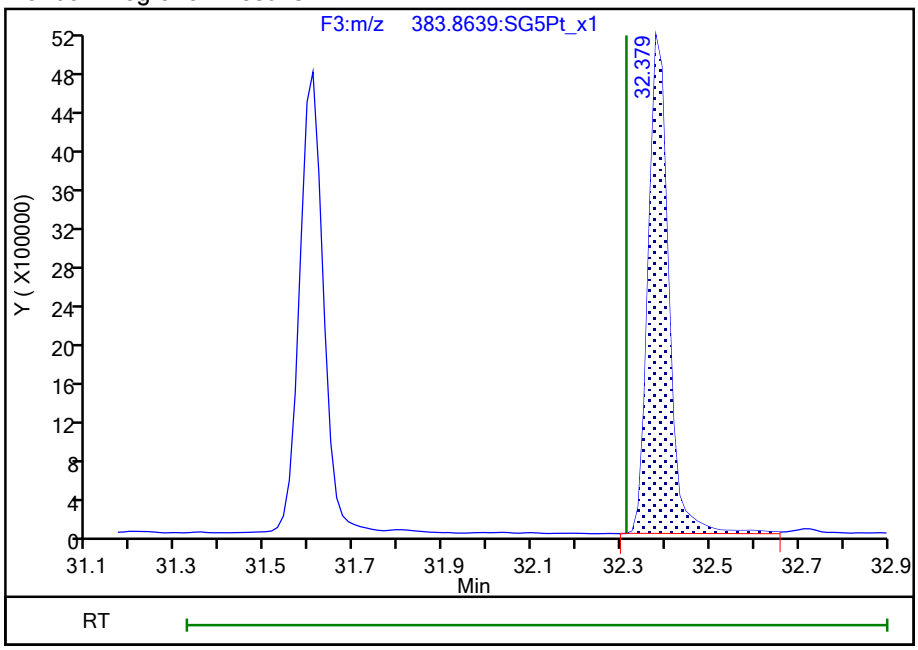

Reviewer: dadunj, 18-Aug-2021 10:09:17

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.47
Area: 17265971
Amount: 56.145116
Amount Units: pg/ul

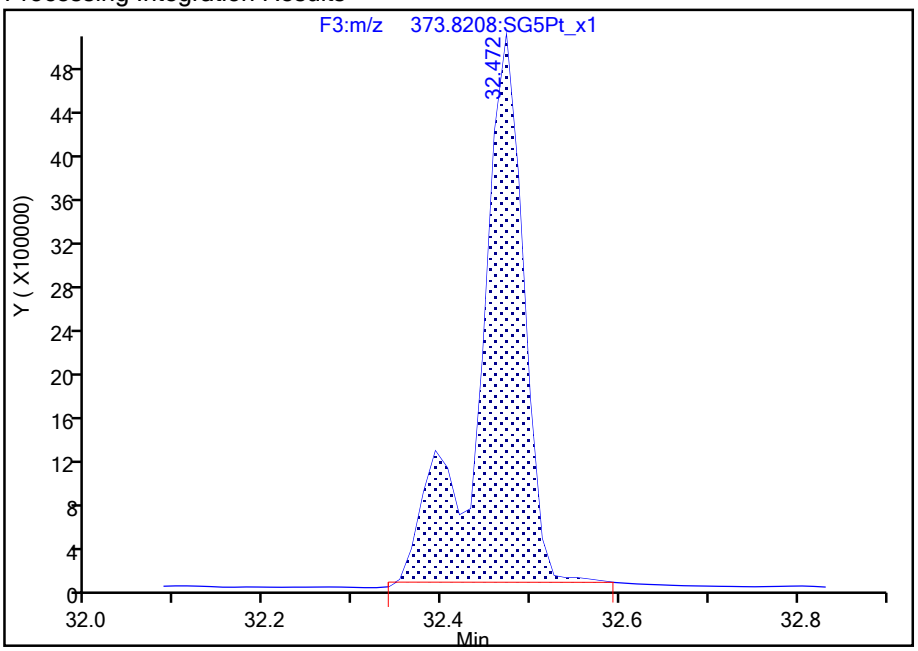

Manual Integration Results

RT: 32.39
Area: 2915317
Amount: 9.646184
Amount Units: pg/ul

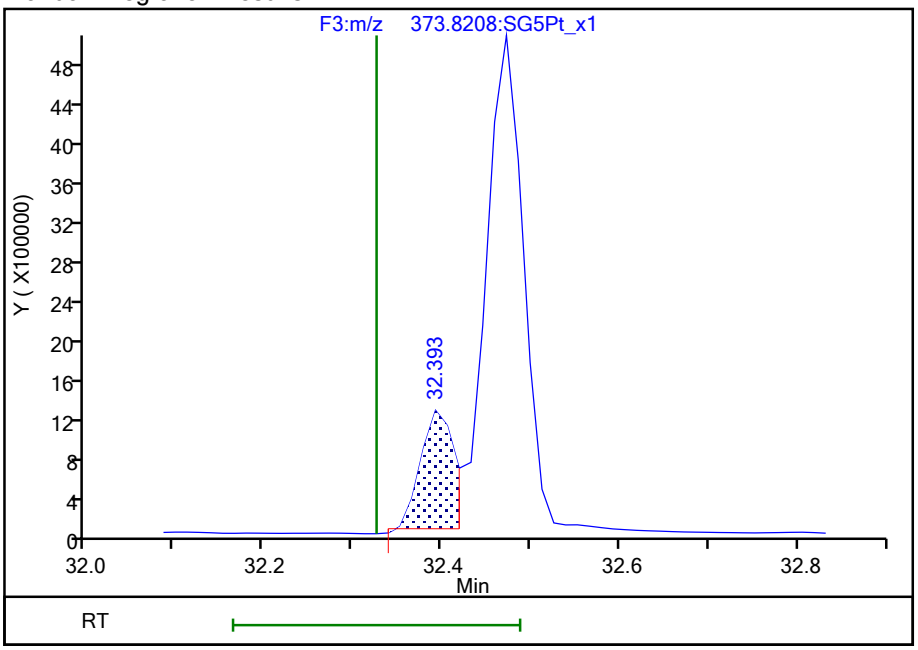

Reviewer: dadunj, 18-Aug-2021 10:09:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779190

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.47
Area: 14233608
Amount: 56.145116
Amount Units: pg/ul

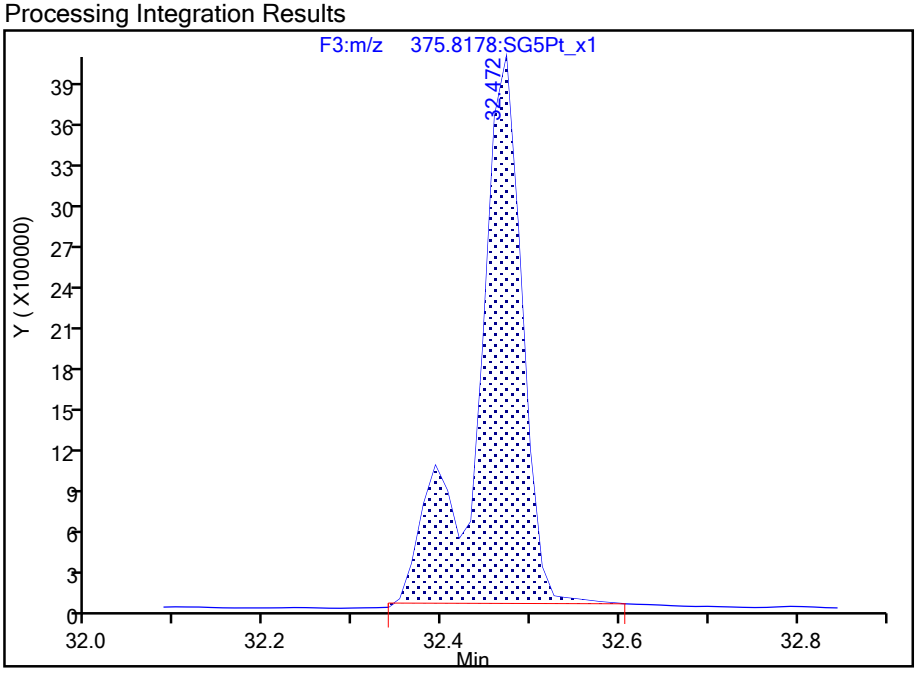

Manual Integration Results

RT: 32.39
Area: 2496565
Amount: 9.646184
Amount Units: pg/ul

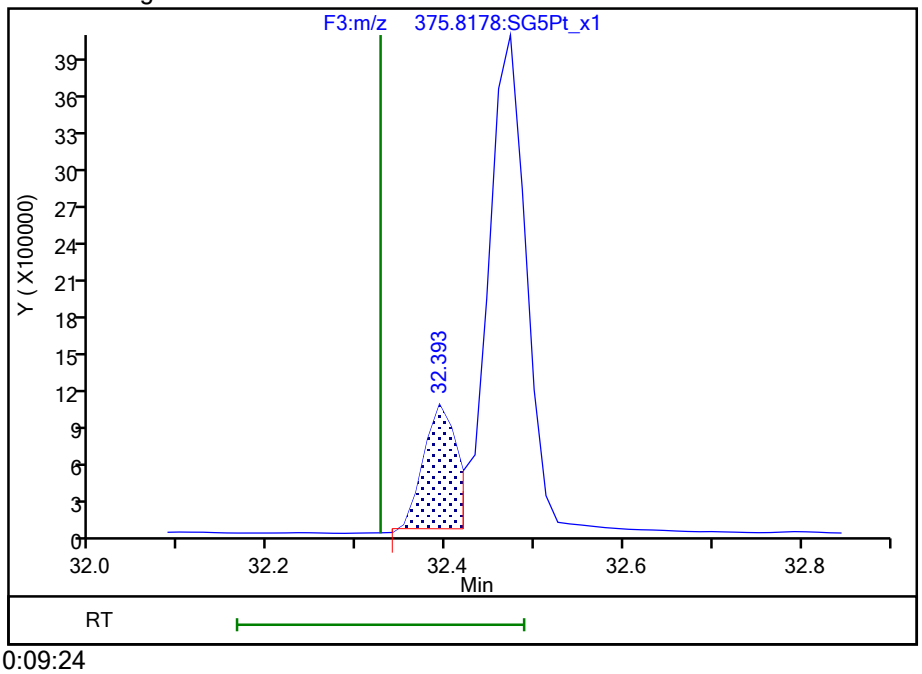

Reviewer: dadunj, 18-Aug-2021 10:09:24
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779191

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Not Detected
RT: 27.94- 32.45

Processing Integration Results

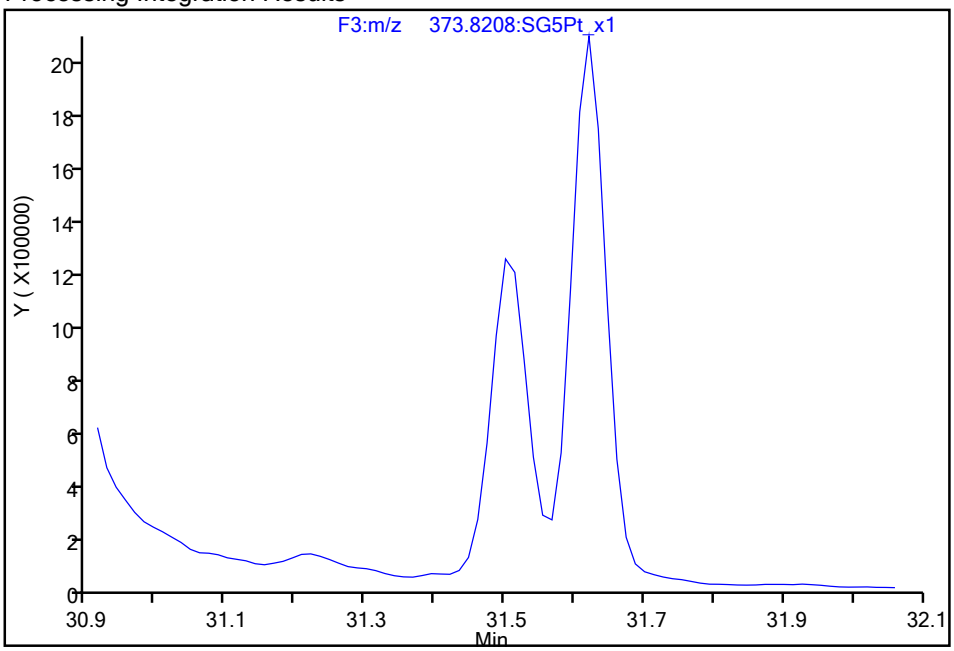

RT = 31.501 Area = 4456317 M

Manual Integration Results

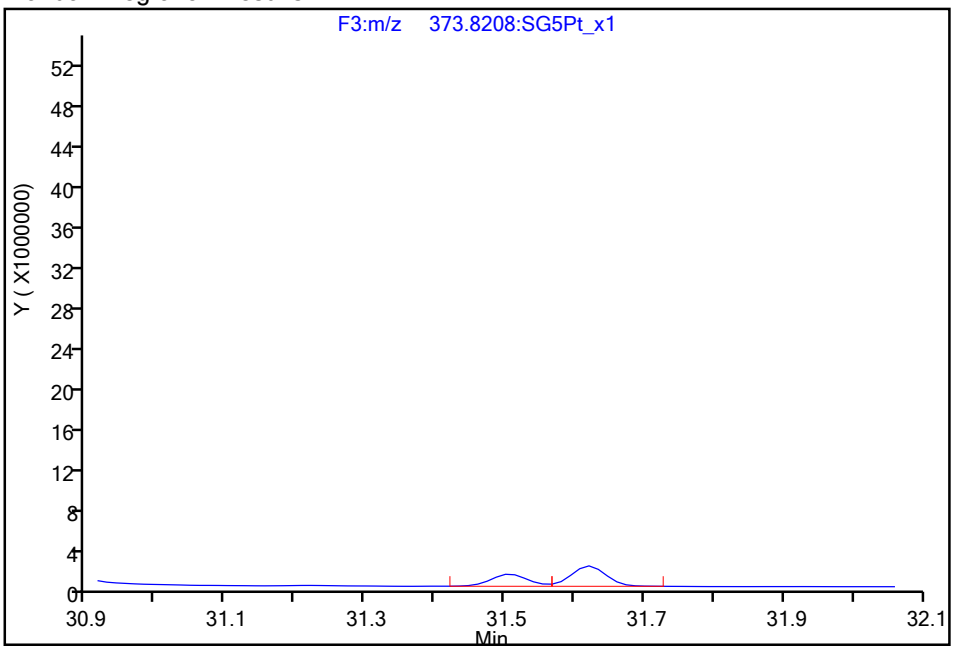

Reviewer: dadunj, 18-Aug-2021 10:09:40

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.472 Area = 17265971

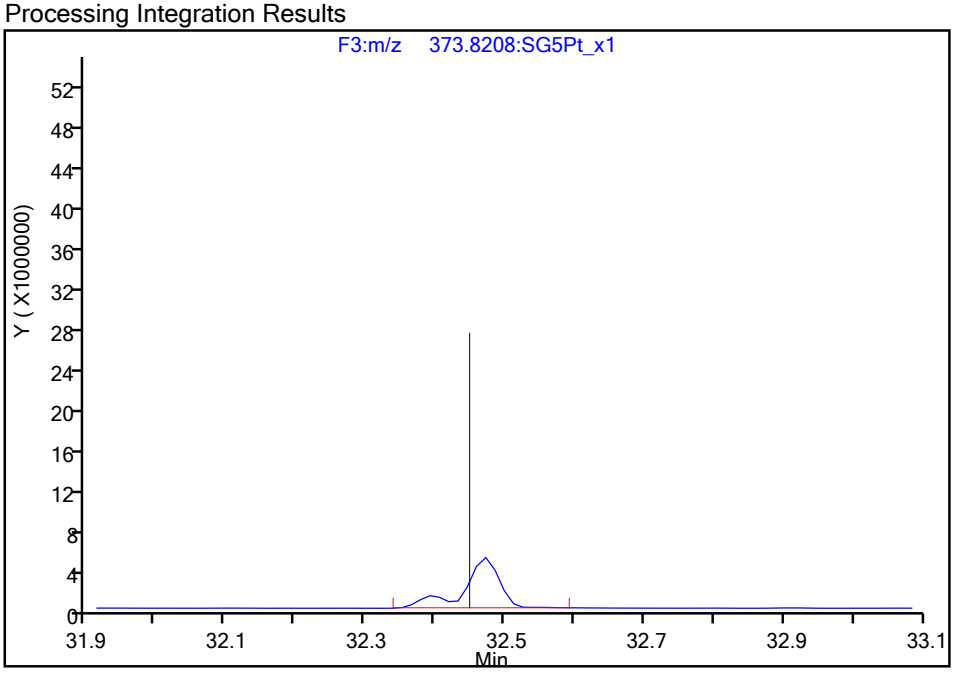

Manual Integration Results

RT = 32.472 Area = 14350793 M

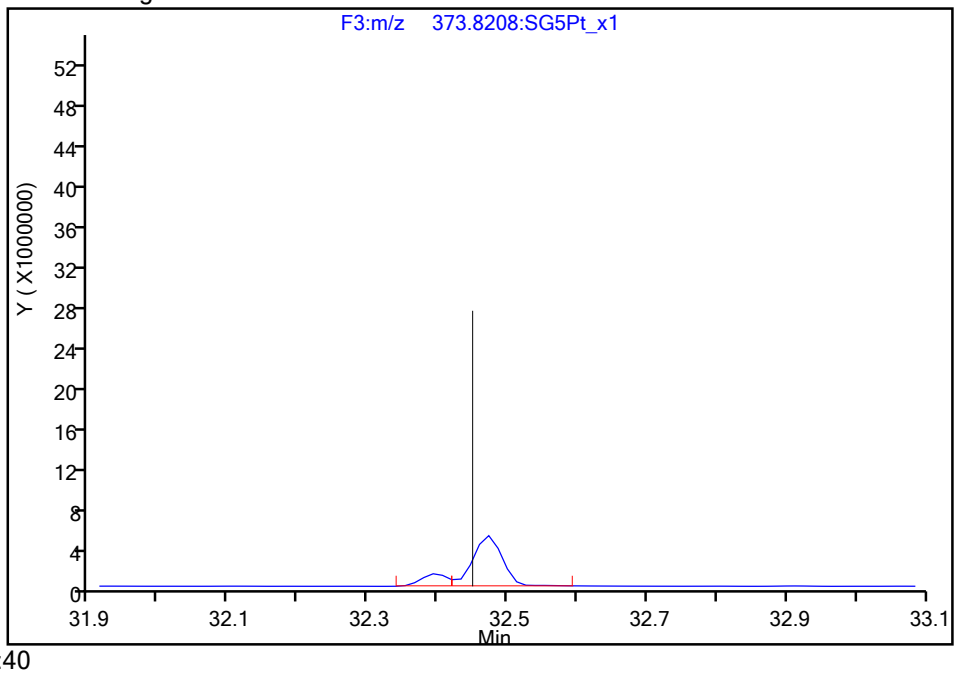

Reviewer: dadunj, 18-Aug-2021 10:09:40

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

Not Detected
Expected RT: 31.71

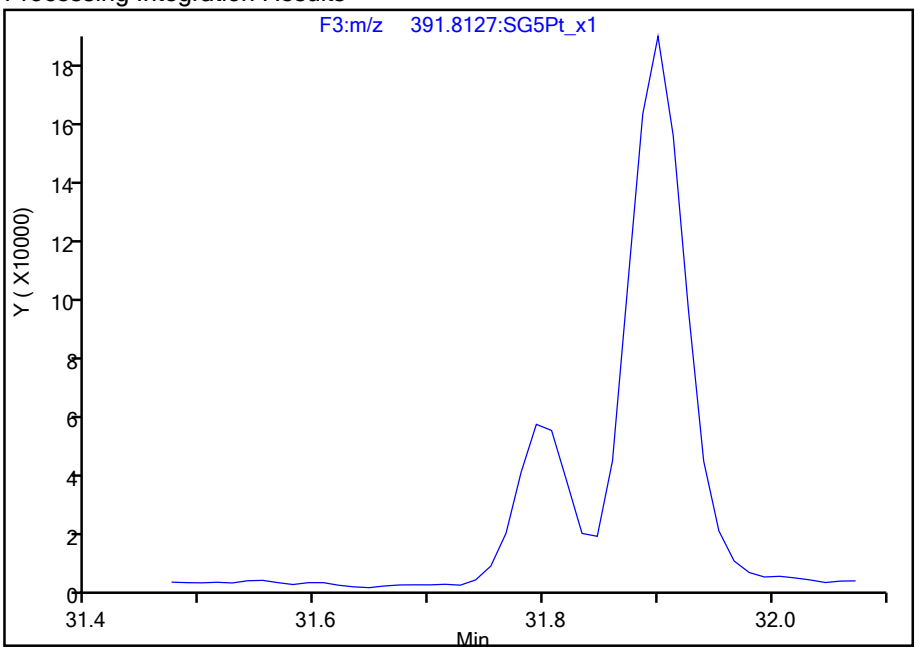

Manual Integration Results

RT: 31.79
Area: 166947
Amount: 0.899836
Amount Units: pg/ul

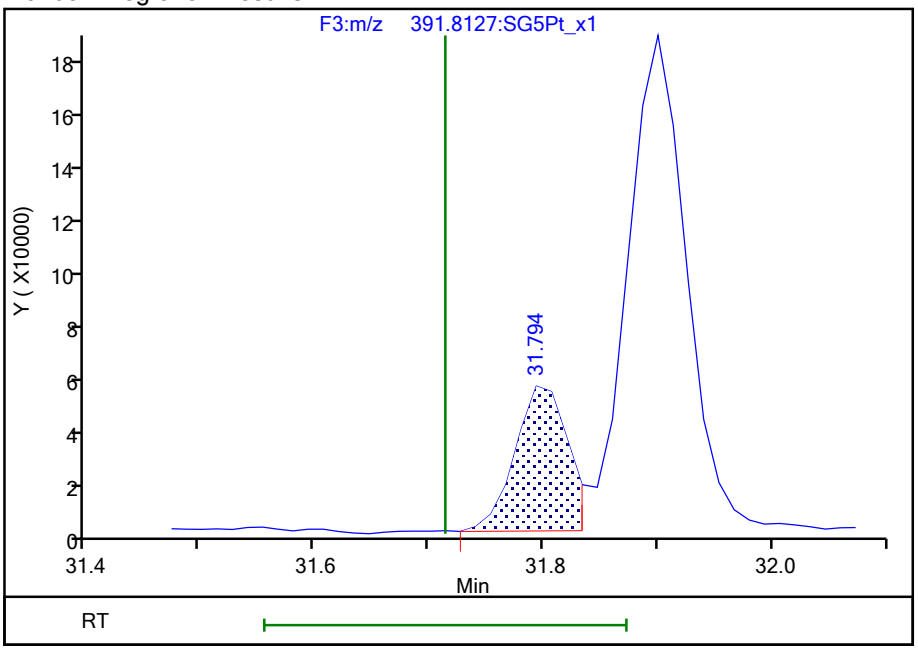

Reviewer: dadunj, 18-Aug-2021 10:09:51
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779194

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.90
Area: 817935
Amount: 3.655707
Amount Units: pg/ul

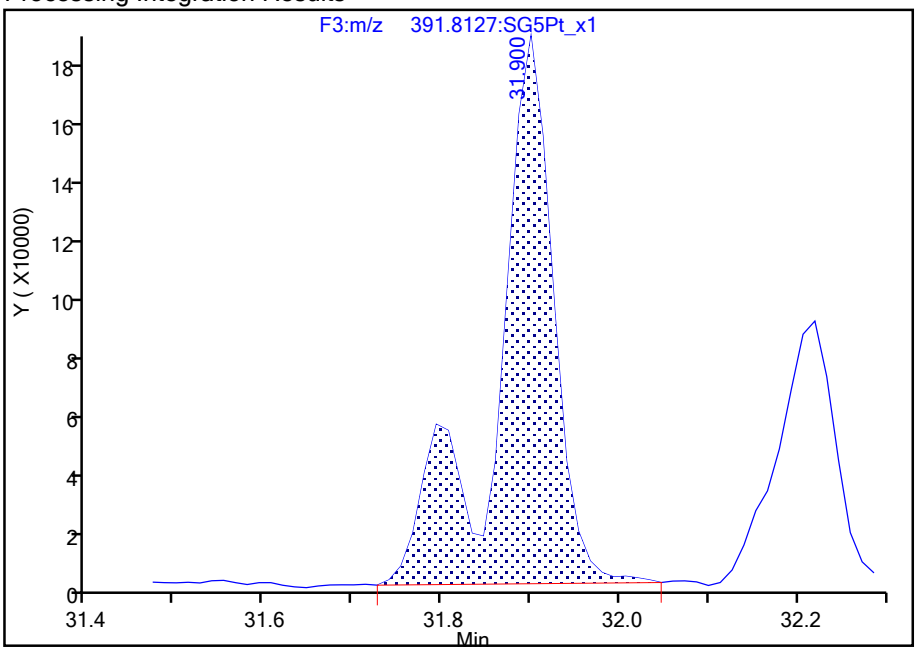

Manual Integration Results

RT: 31.90
Area: 650949
Amount: 3.273480
Amount Units: pg/ul

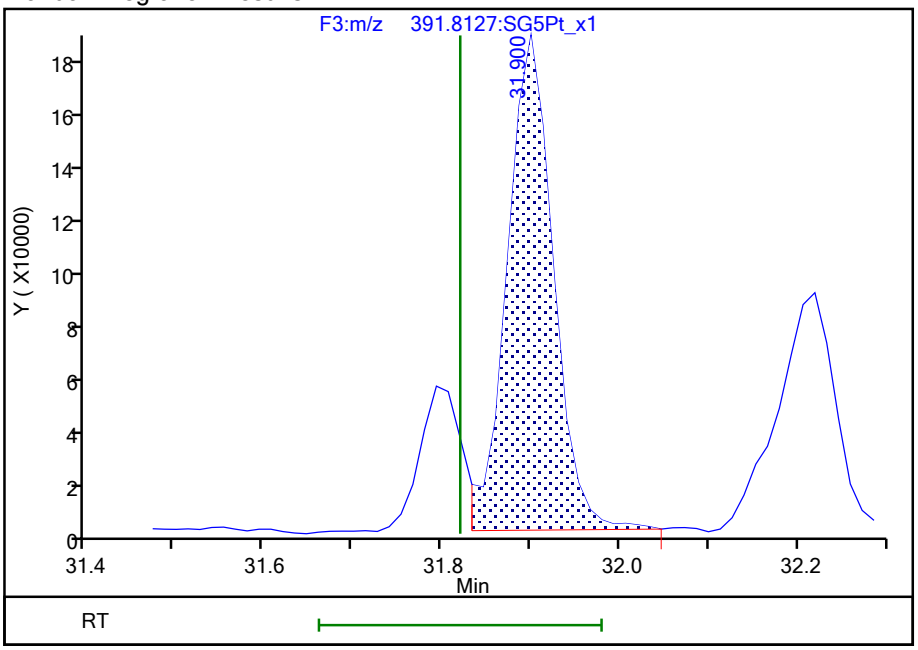

Reviewer: dadunj, 18-Aug-2021 10:09:51

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.81
Area: 69548855
Amount: 242.6999
Amount Units: pg/ul

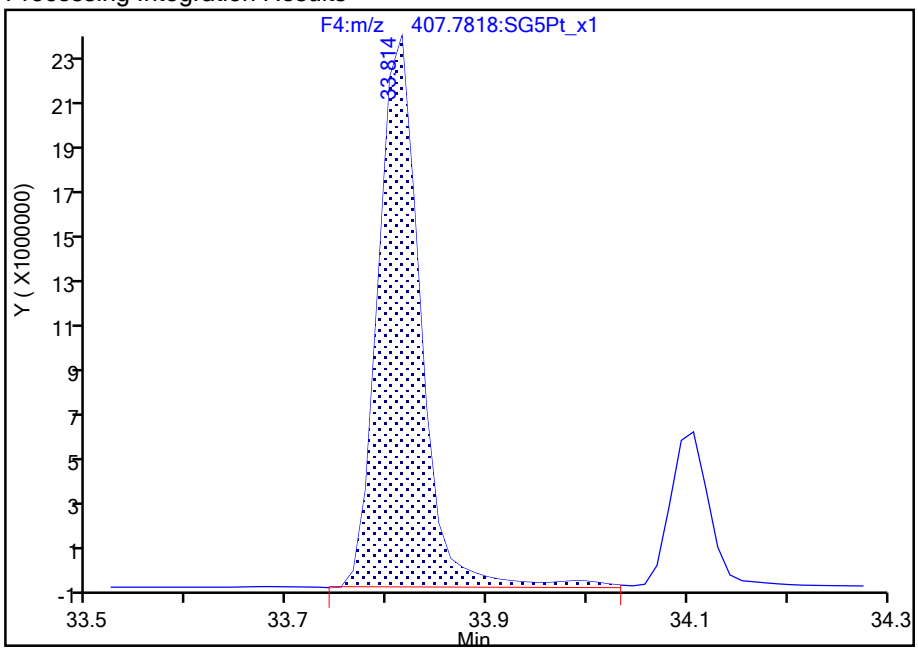

Manual Integration Results

RT: 33.81
Area: 68267340
Amount: 238.2353
Amount Units: pg/ul

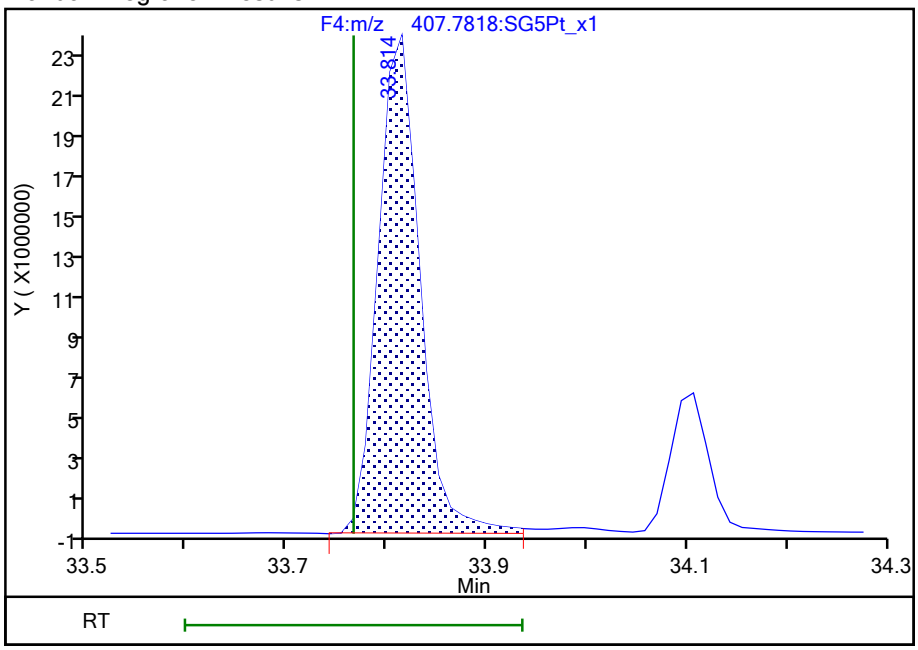

Reviewer: dadunj, 18-Aug-2021 10:10:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d				
Injection Date:	14-Aug-2021 22:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	39	Worklist Smp#:	28
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.81
Area: 66471551
Amount: 242.6999
Amount Units: pg/ul

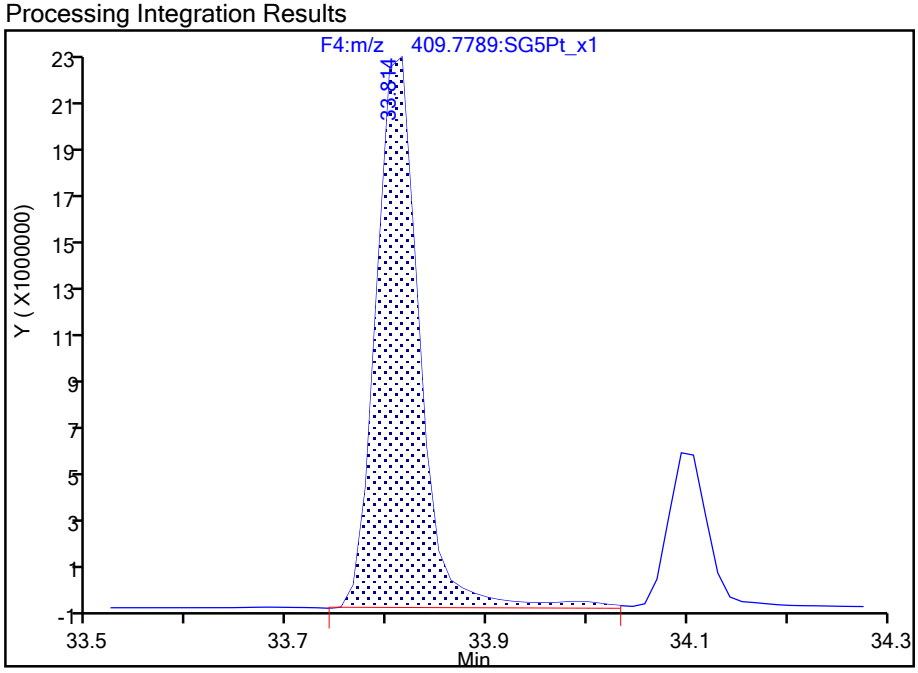

Manual Integration Results

RT: 33.81
Area: 65250922
Amount: 238.2353
Amount Units: pg/ul

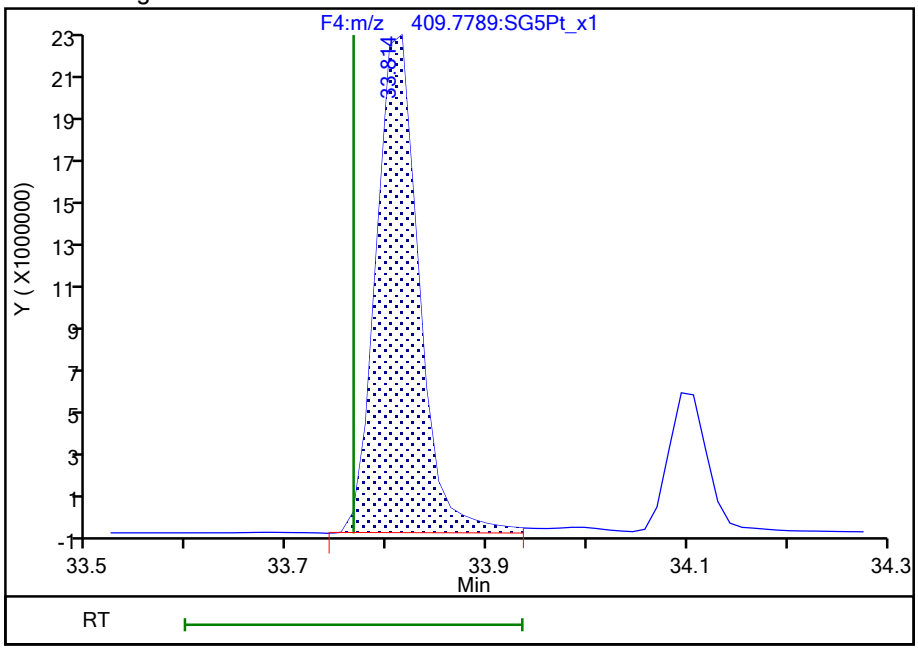

Reviewer: dadunj, 18-Aug-2021 10:10:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

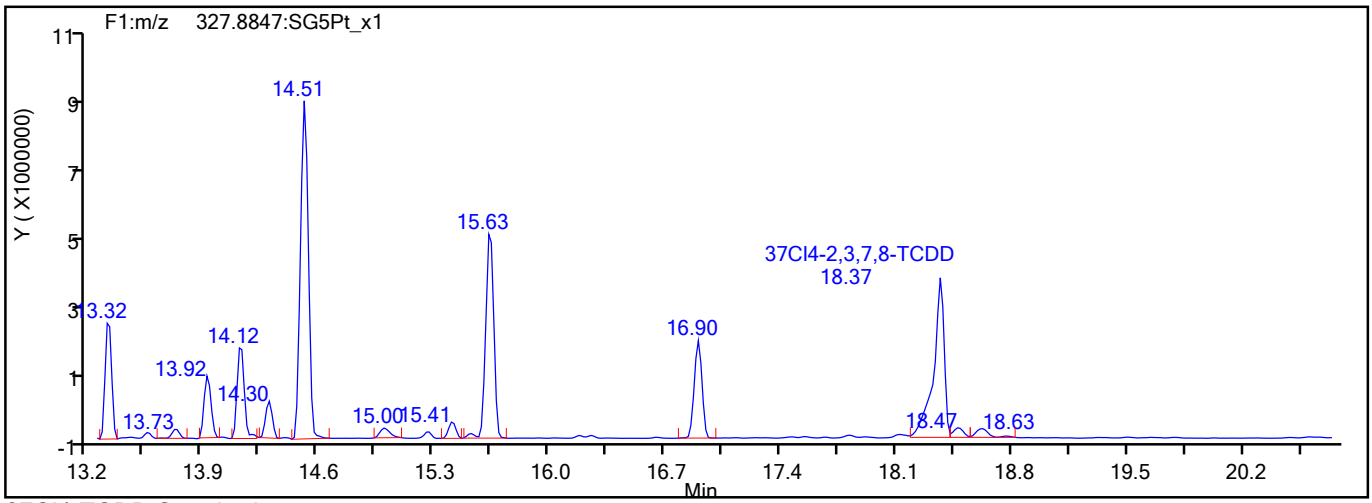

37Cl4-TCDD Standards

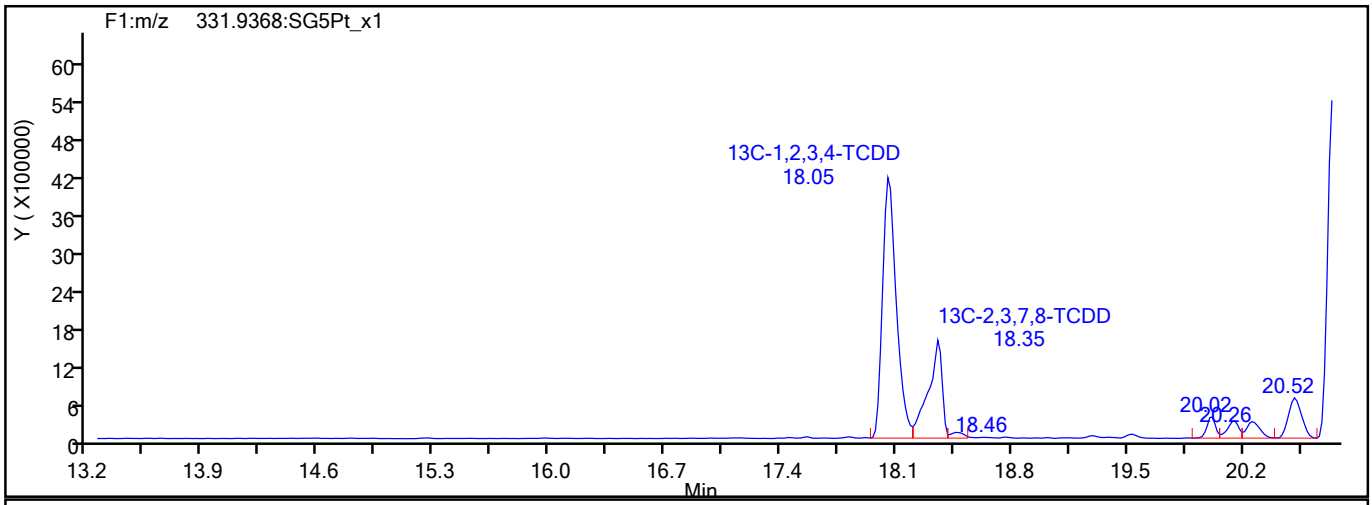

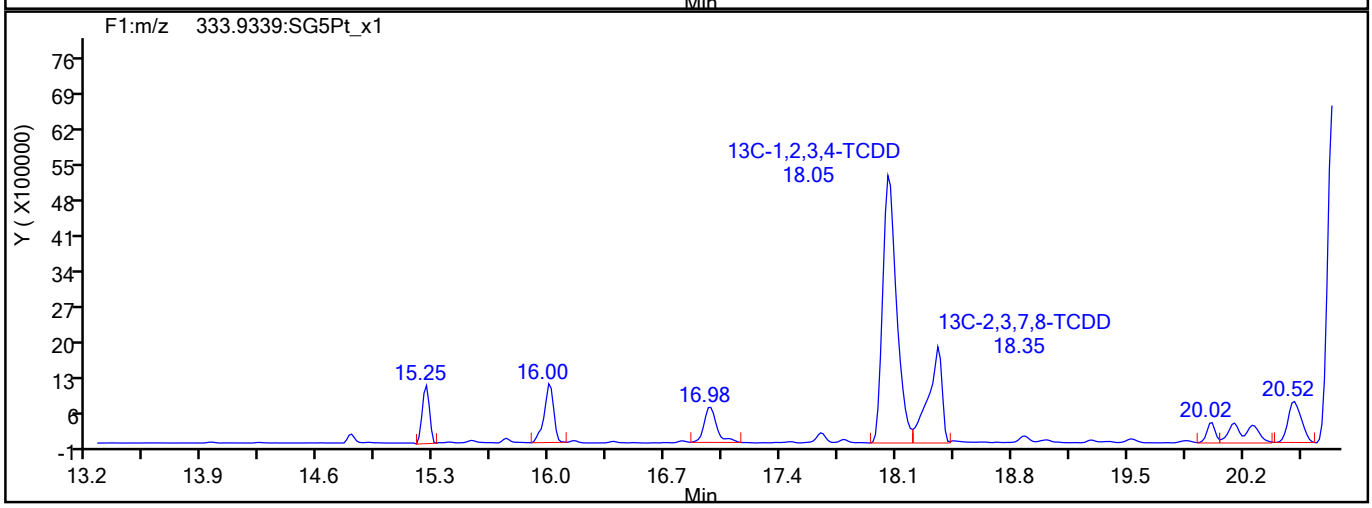

779198

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

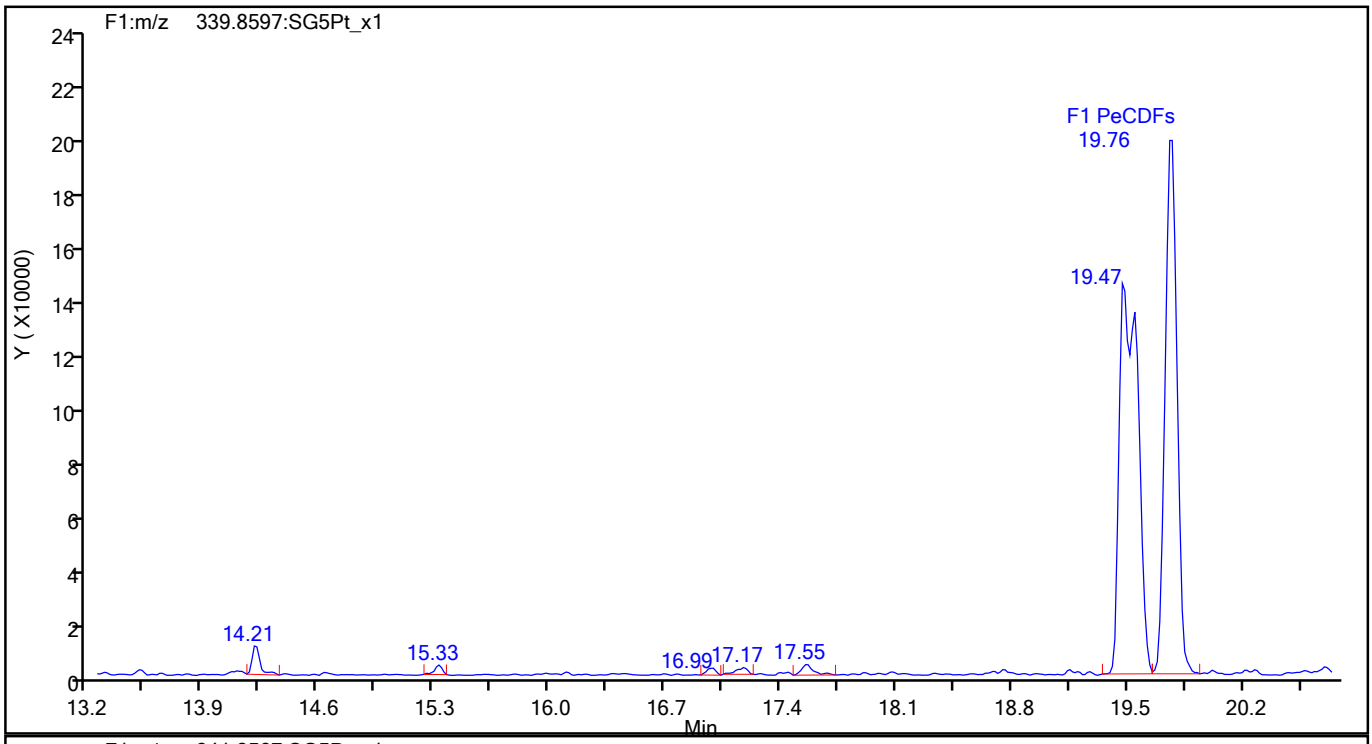

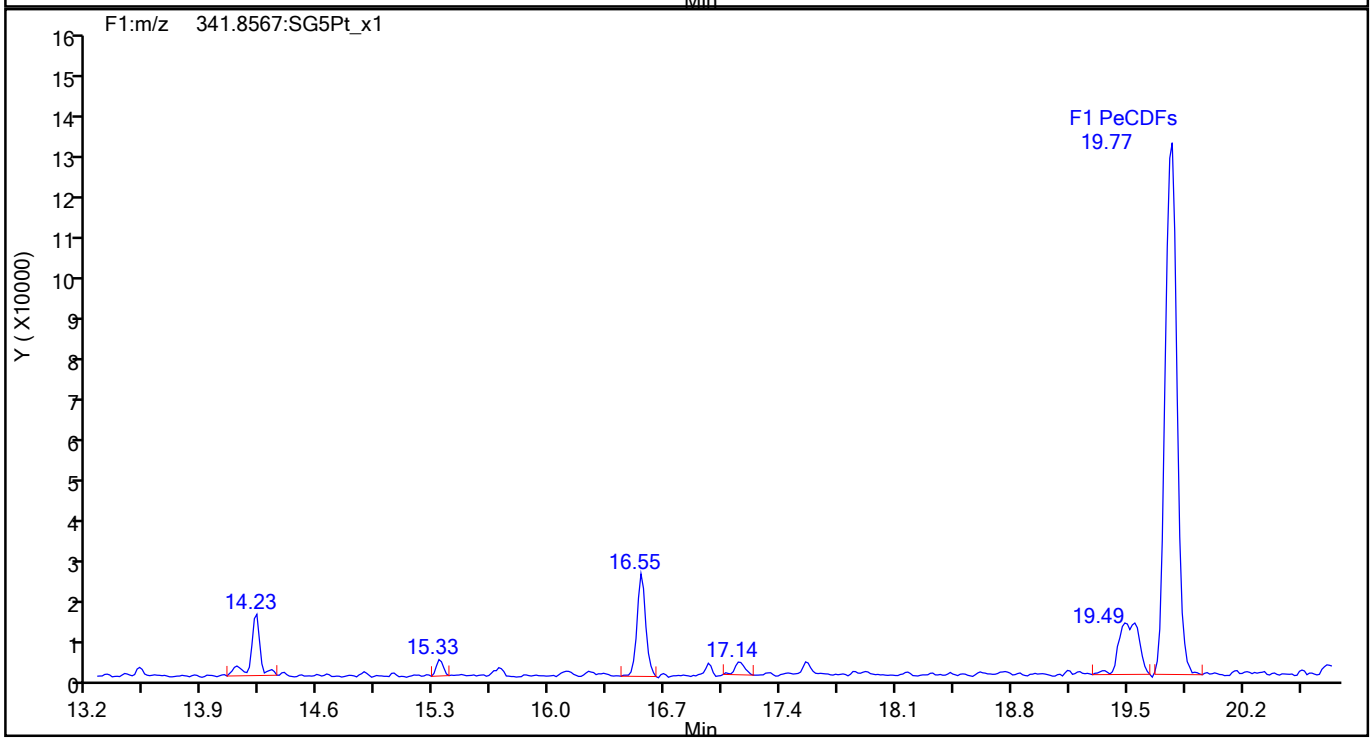

779199

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

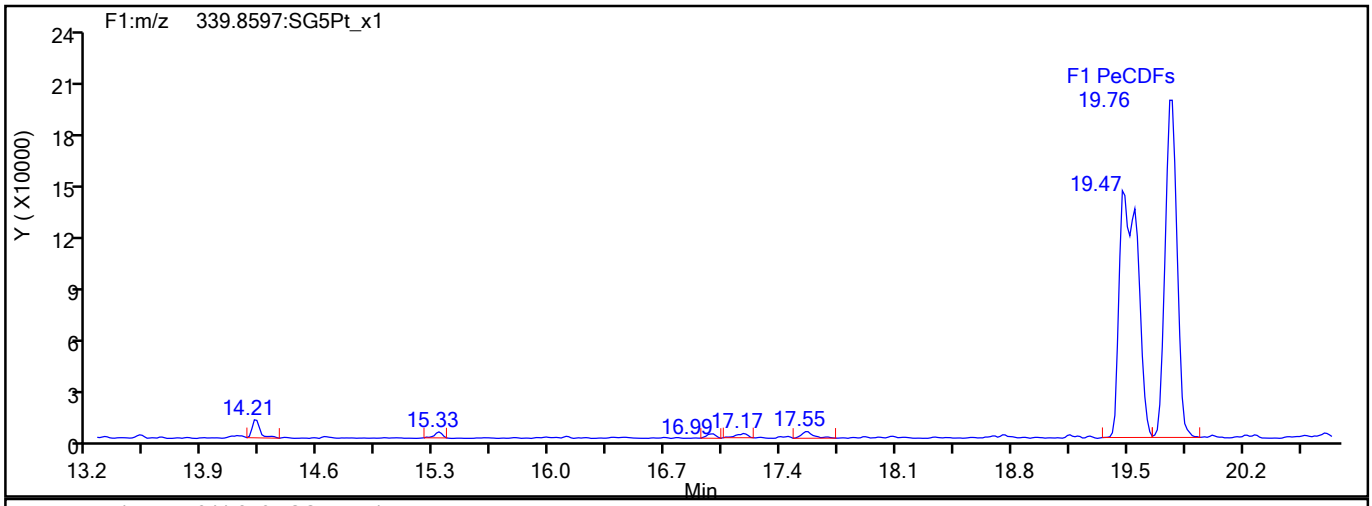

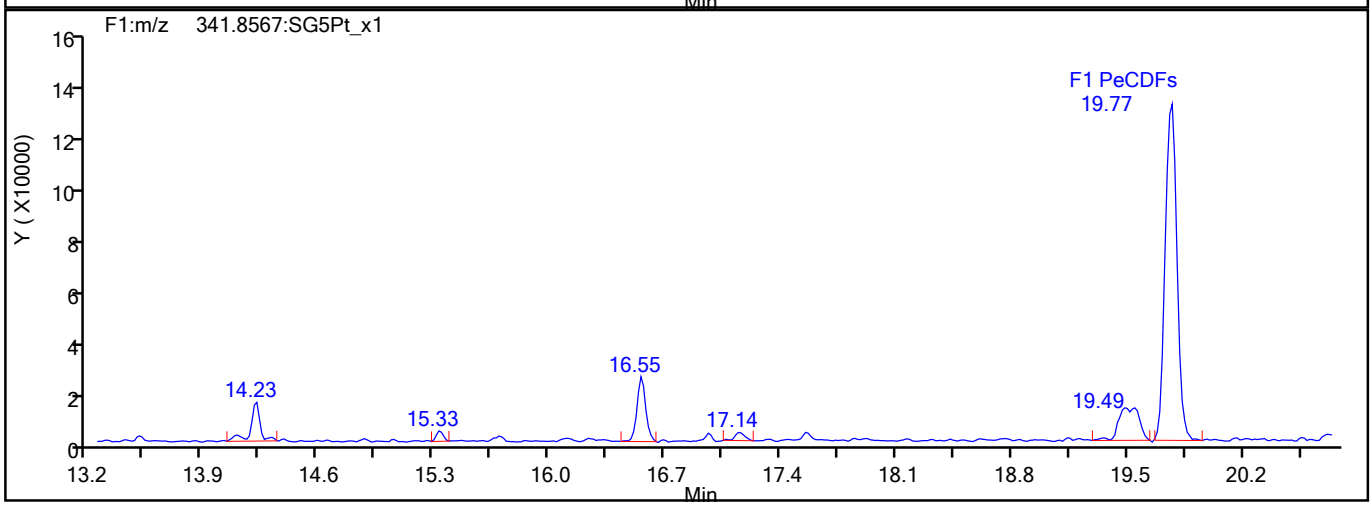

F1 PeCDFs Interference Mass

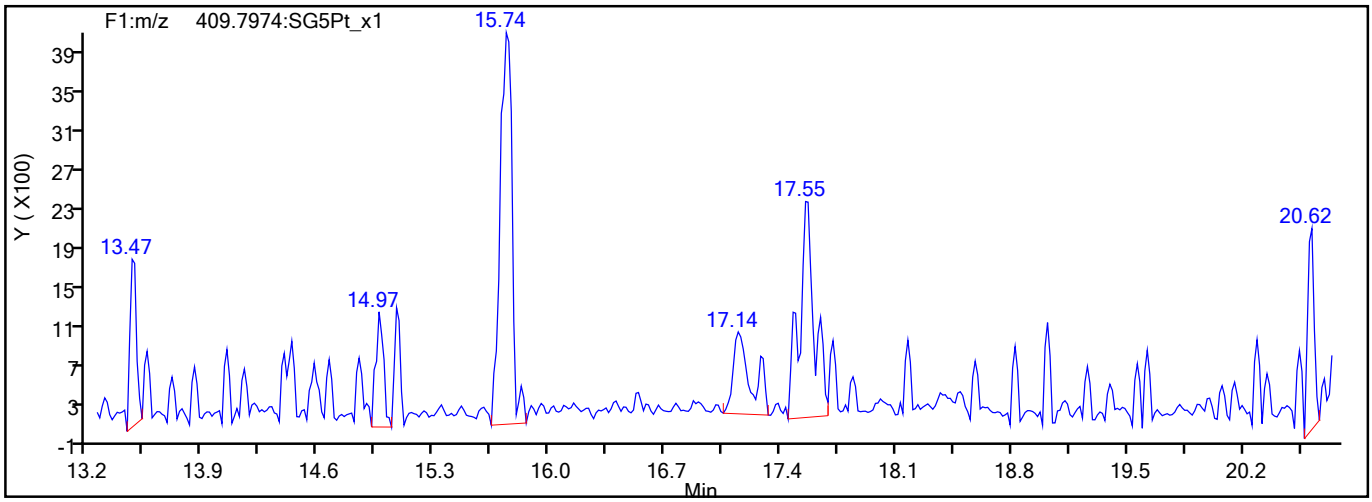

779200

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

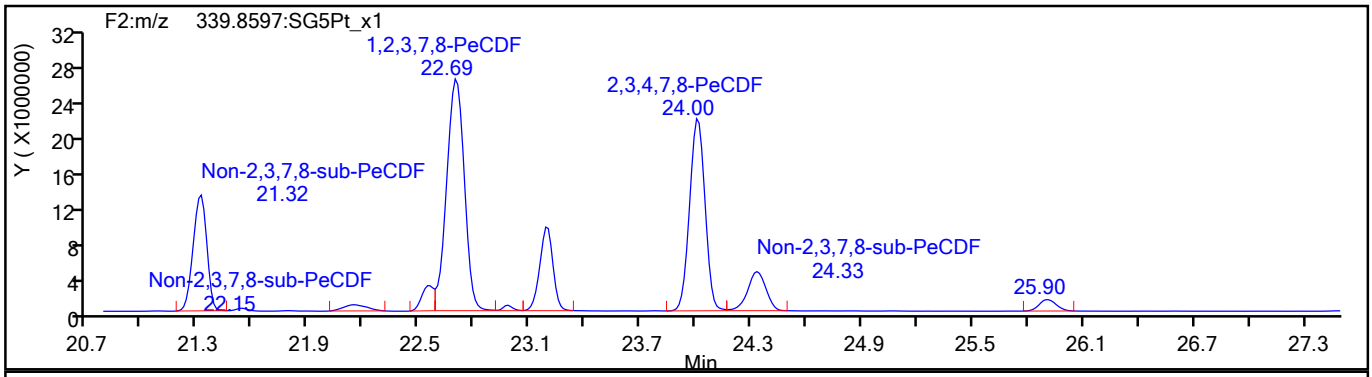

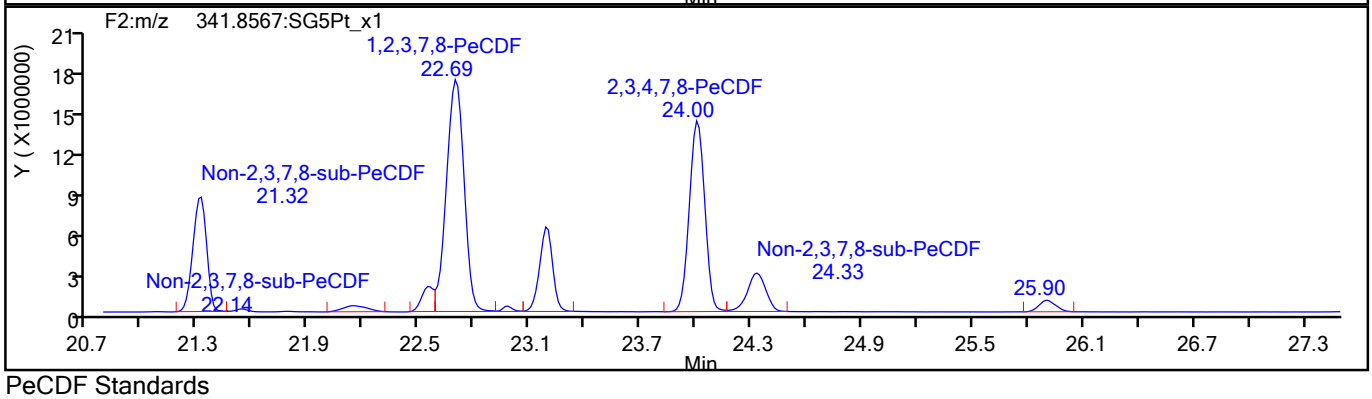

PeCDF Standards

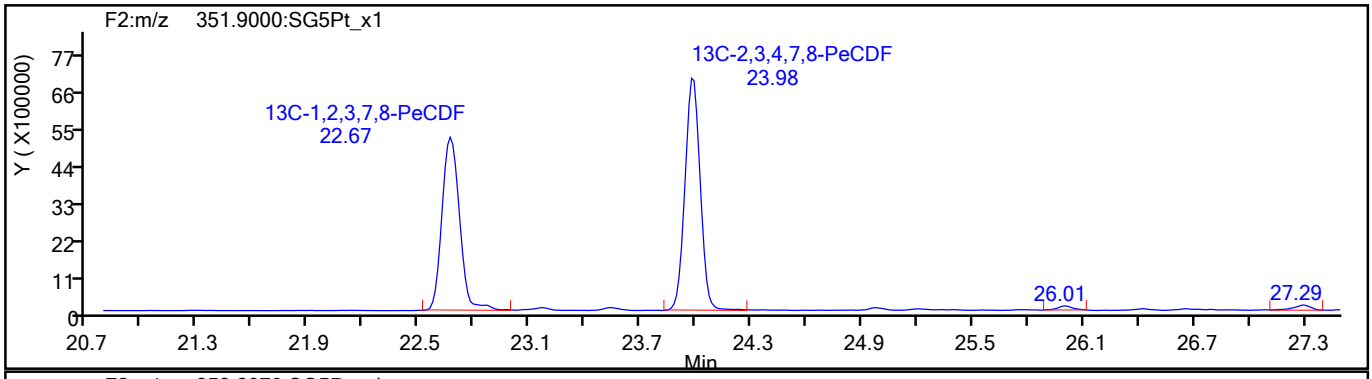

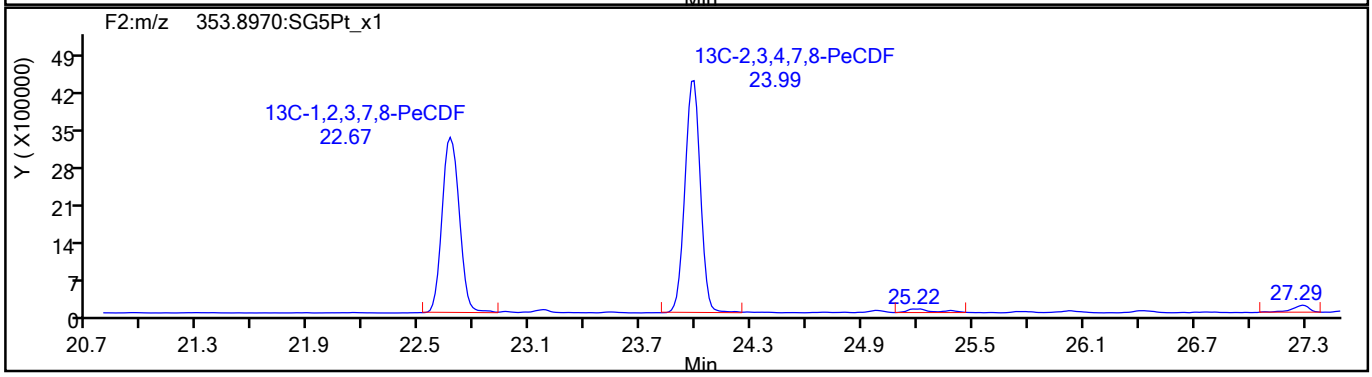

779201

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

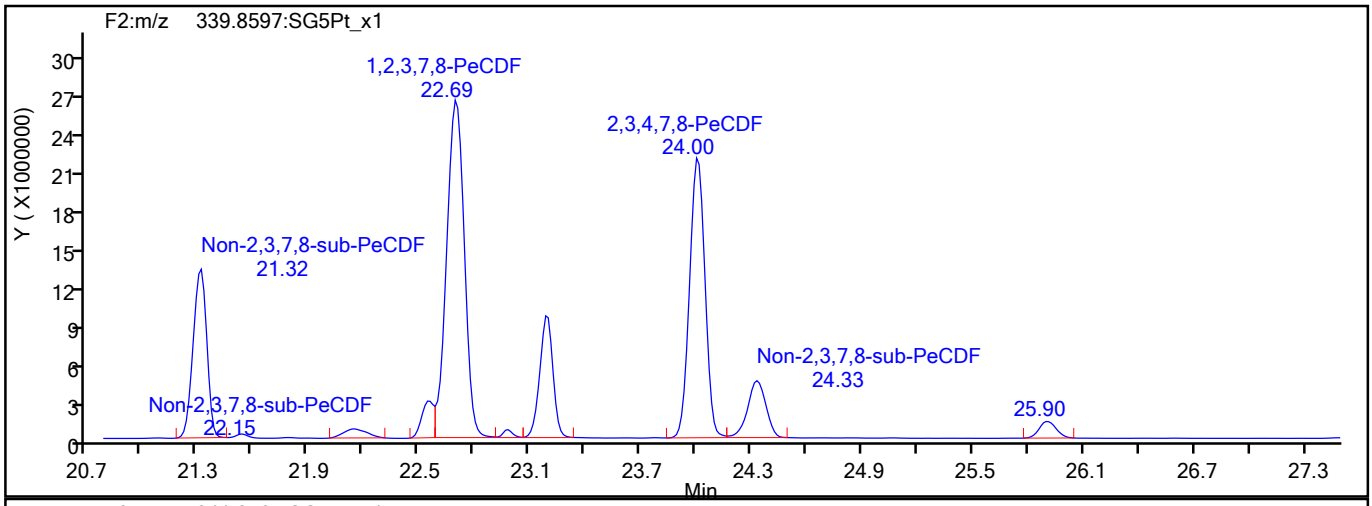

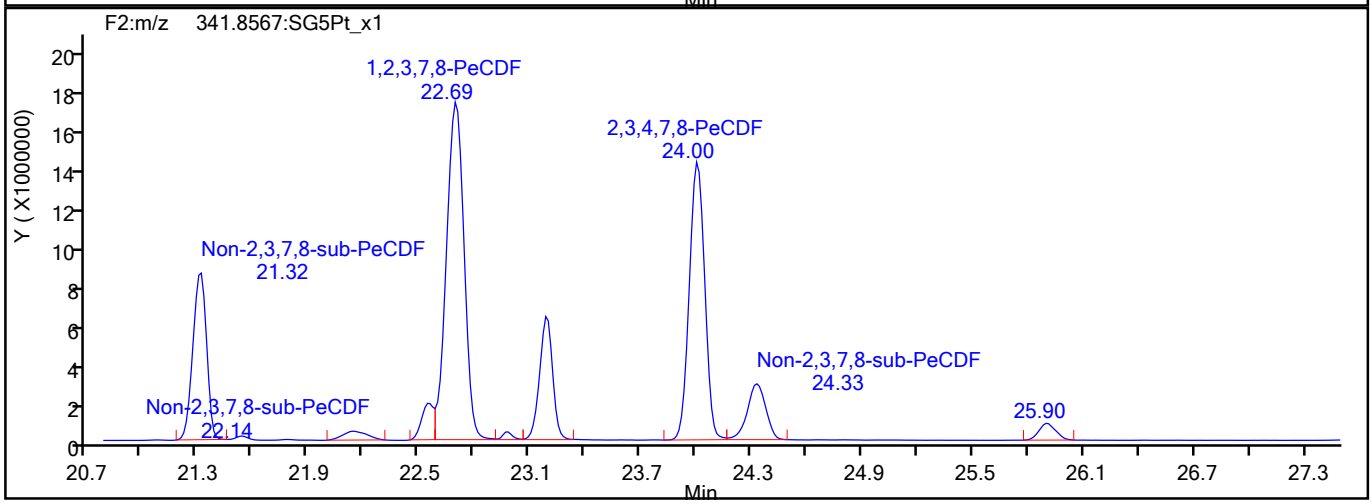

PeCDF Interference Mass

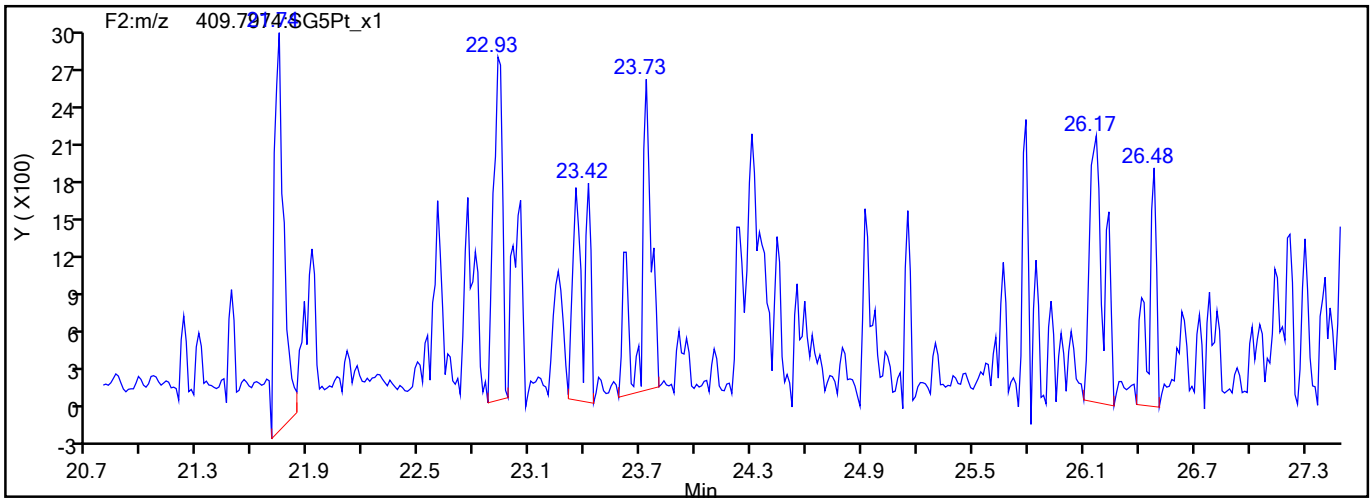

779202

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

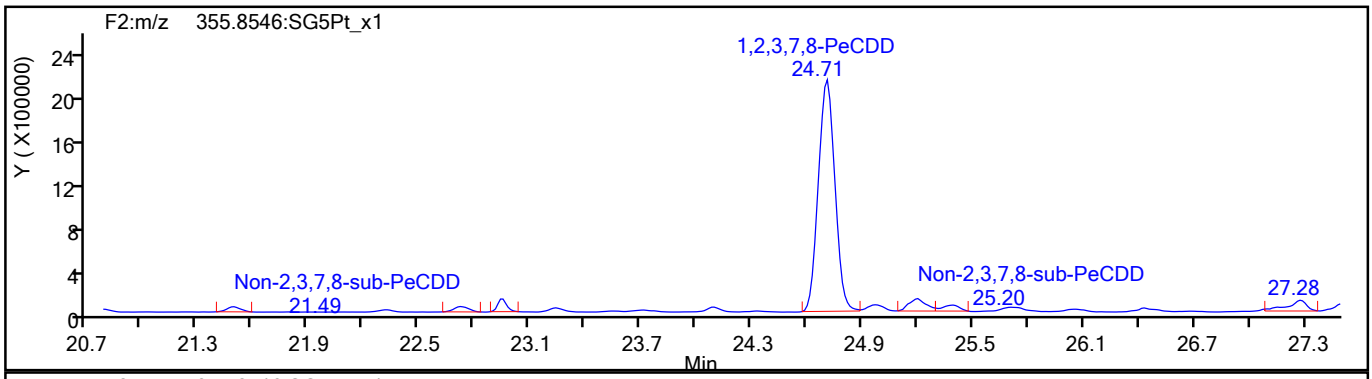

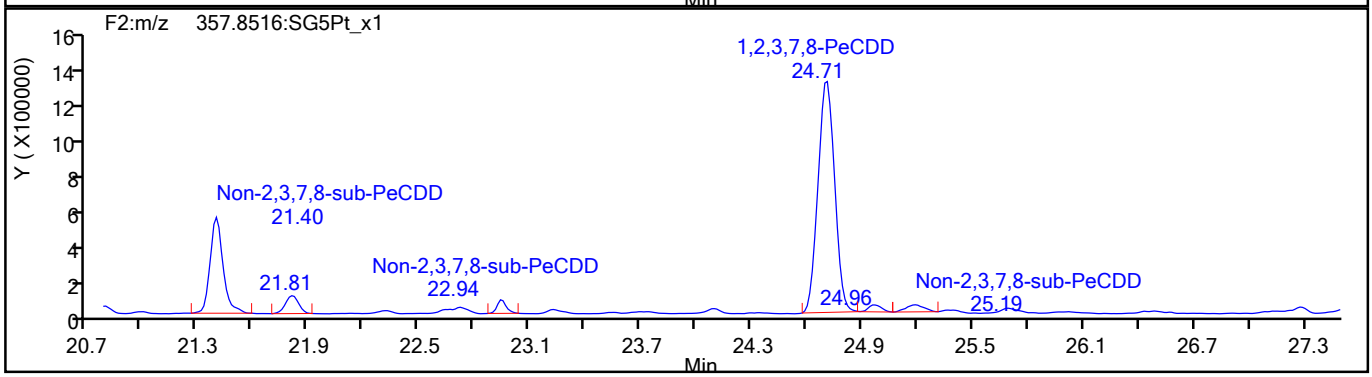

PeCDD Standards

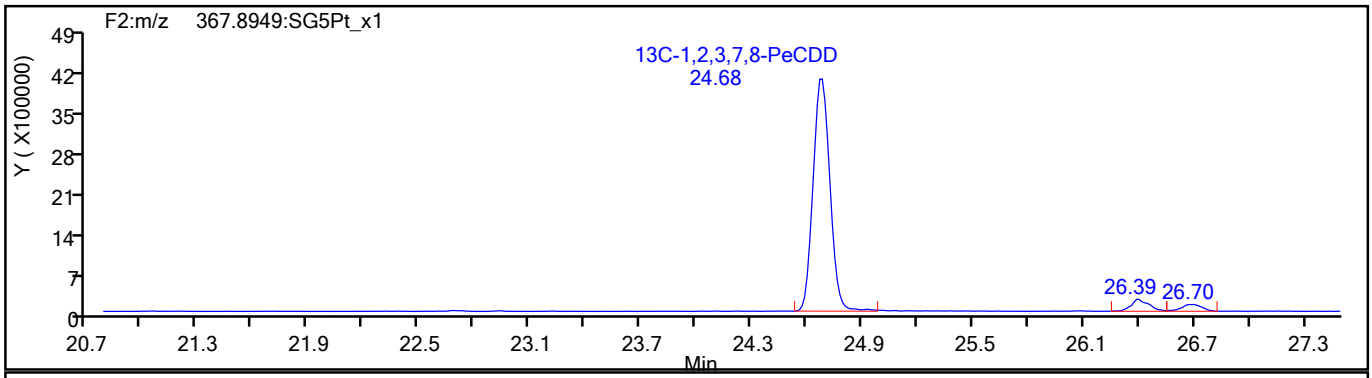

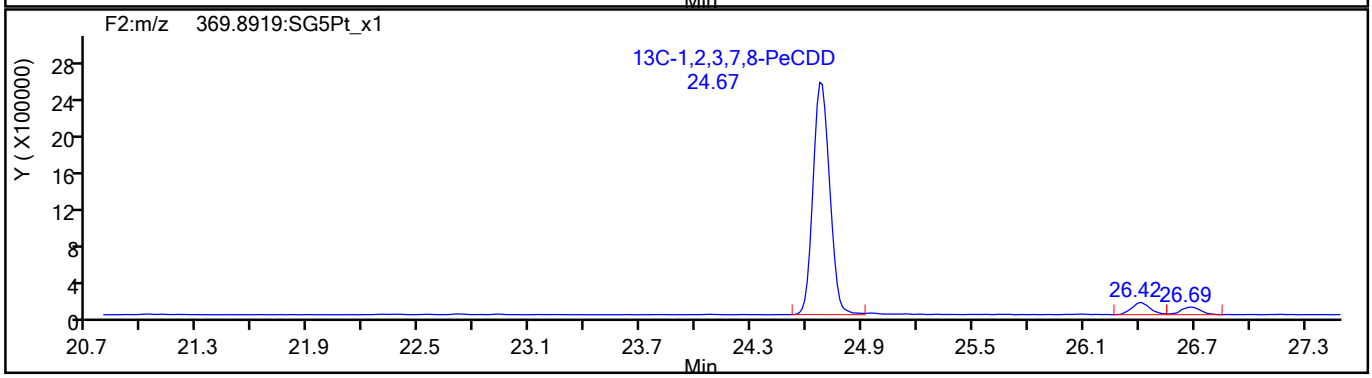

779203

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

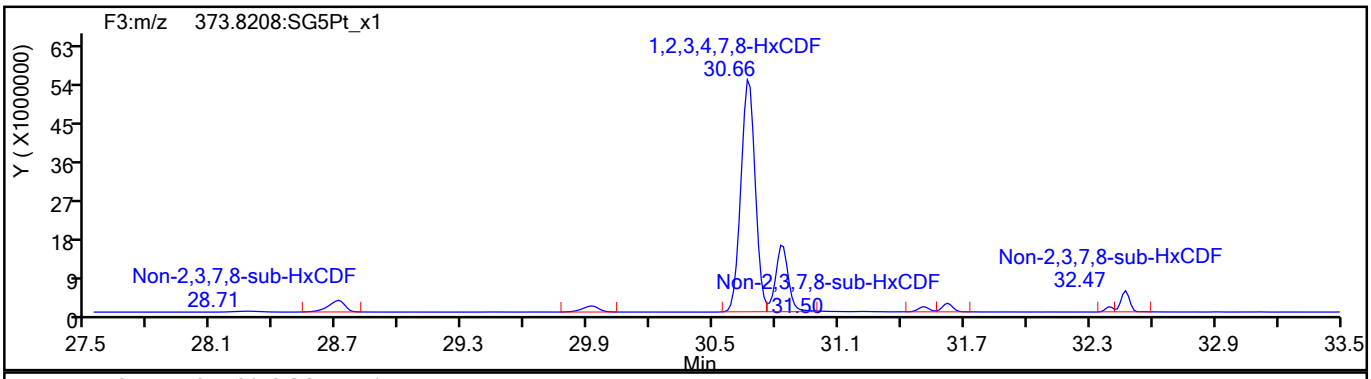

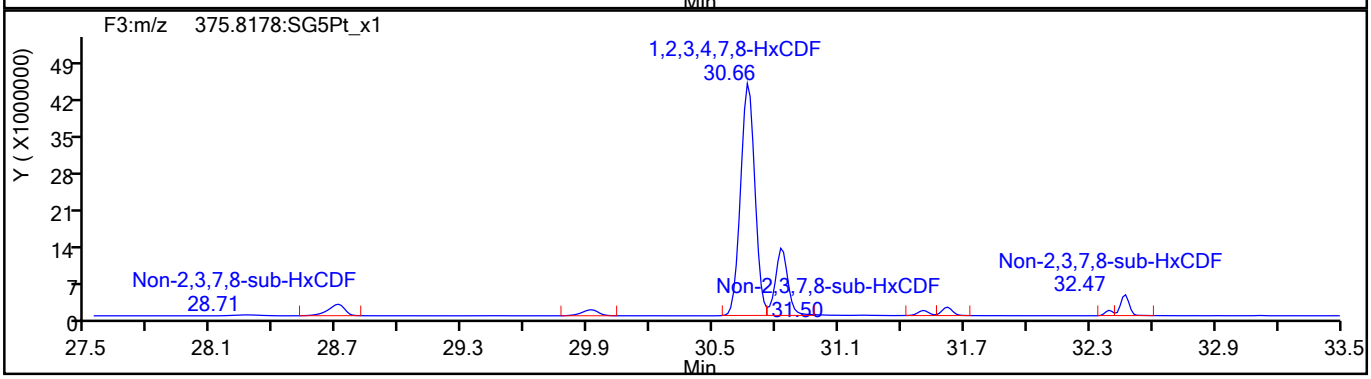

HxCDF Standards

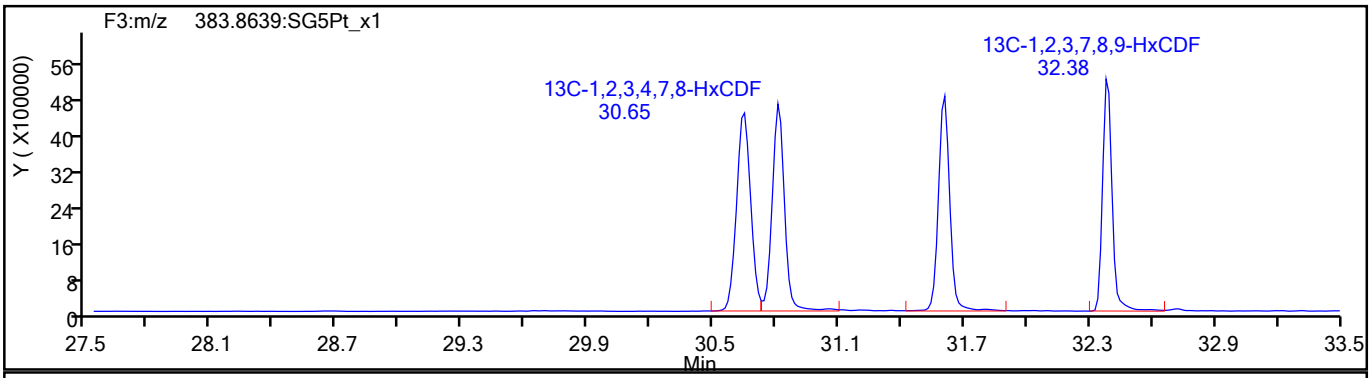

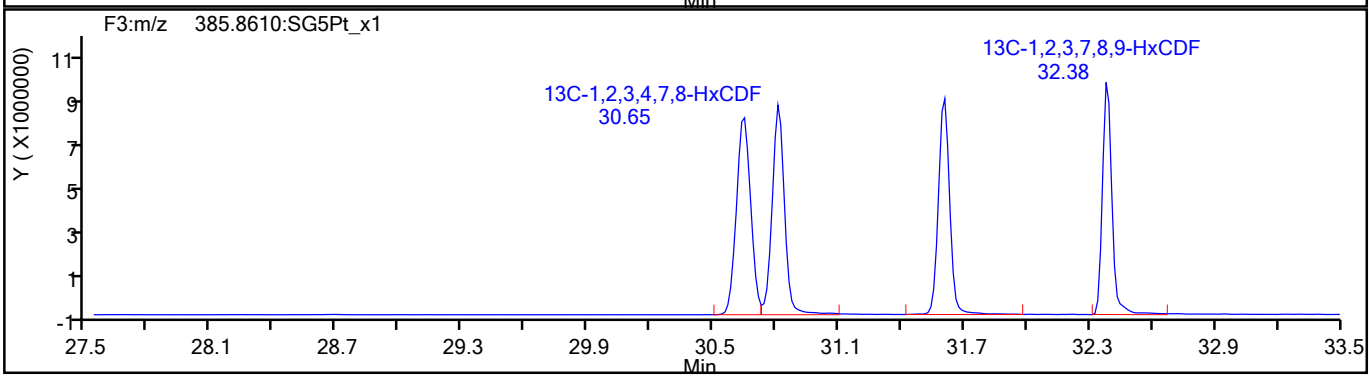

779204

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

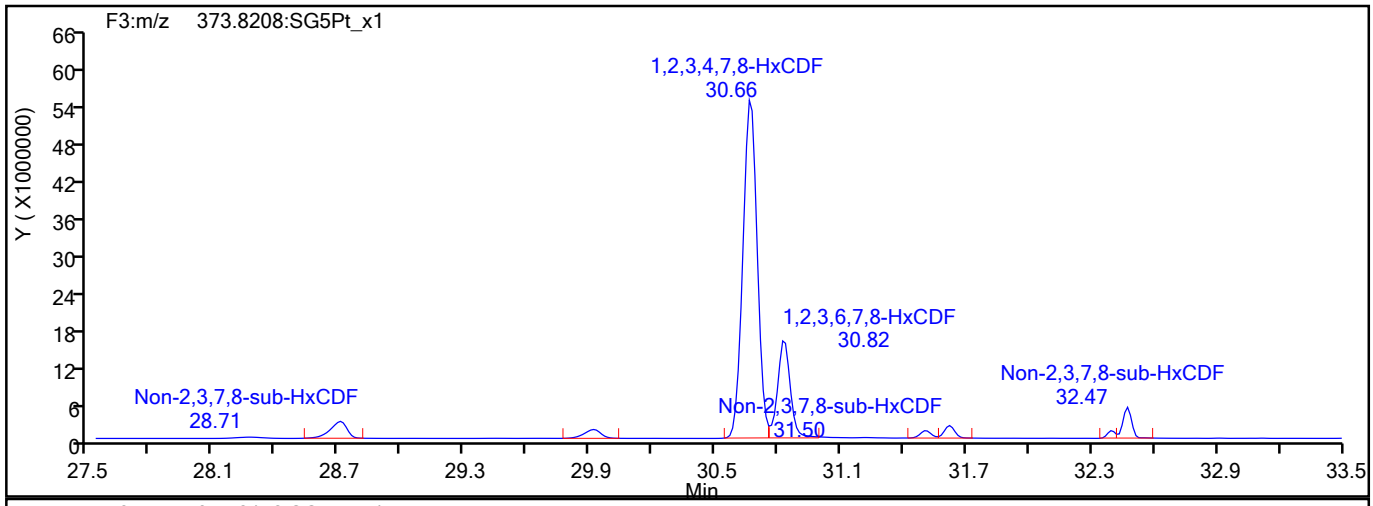

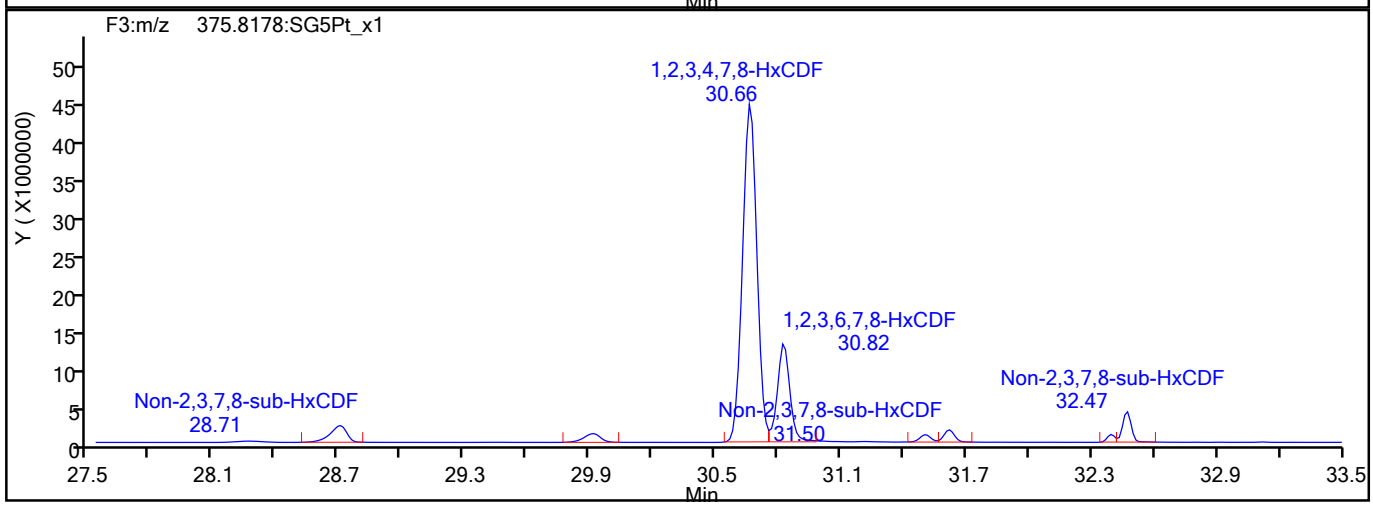

HxCDF Interference Mass

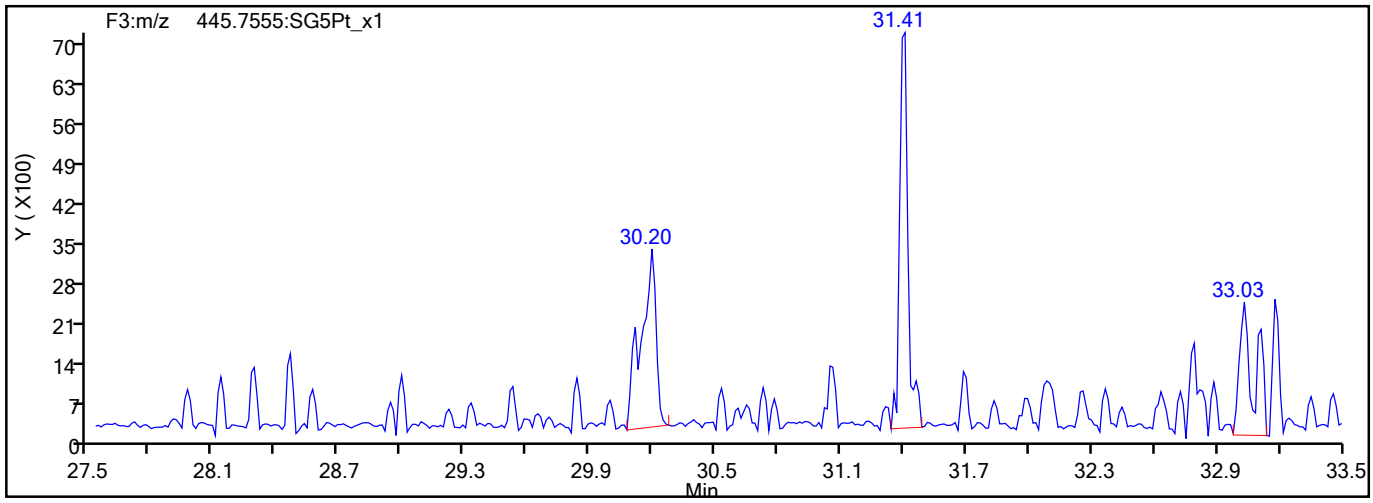

779205

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

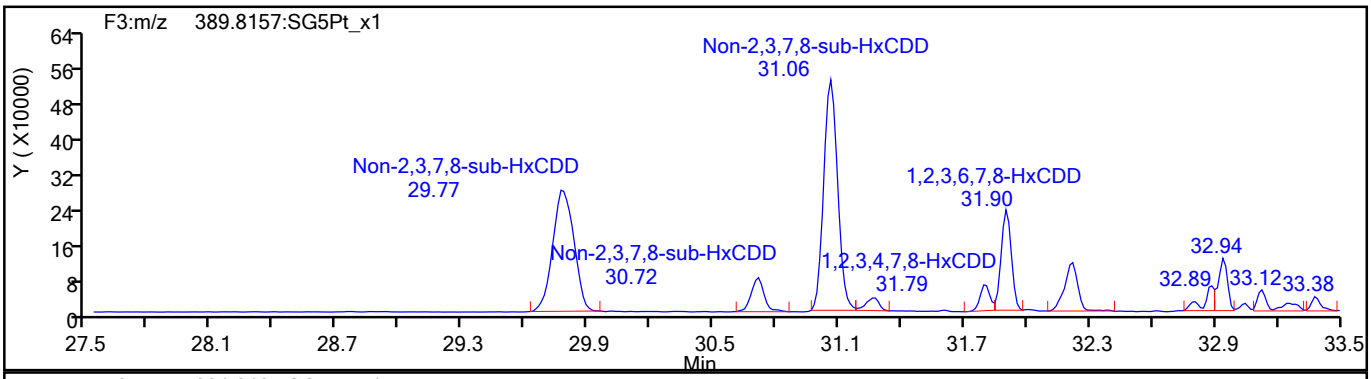

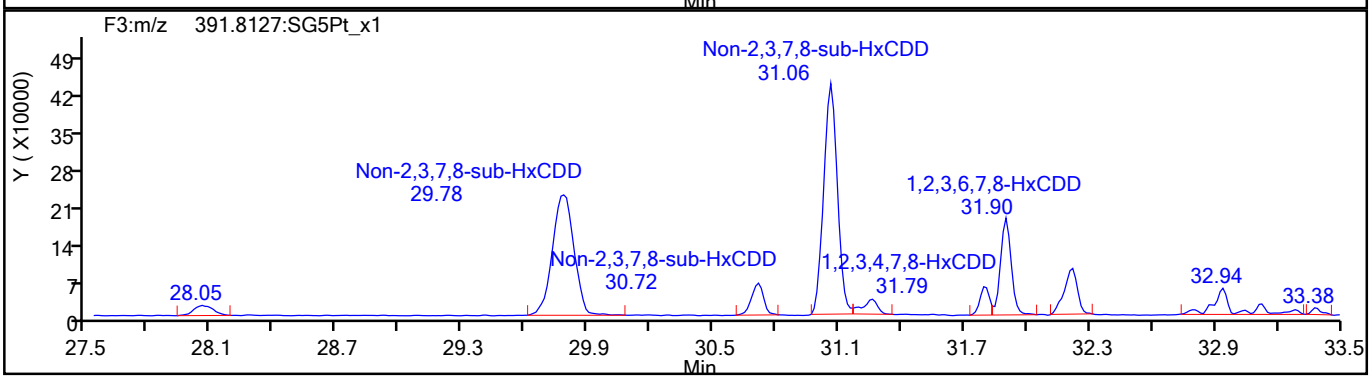

HxCDD Standards

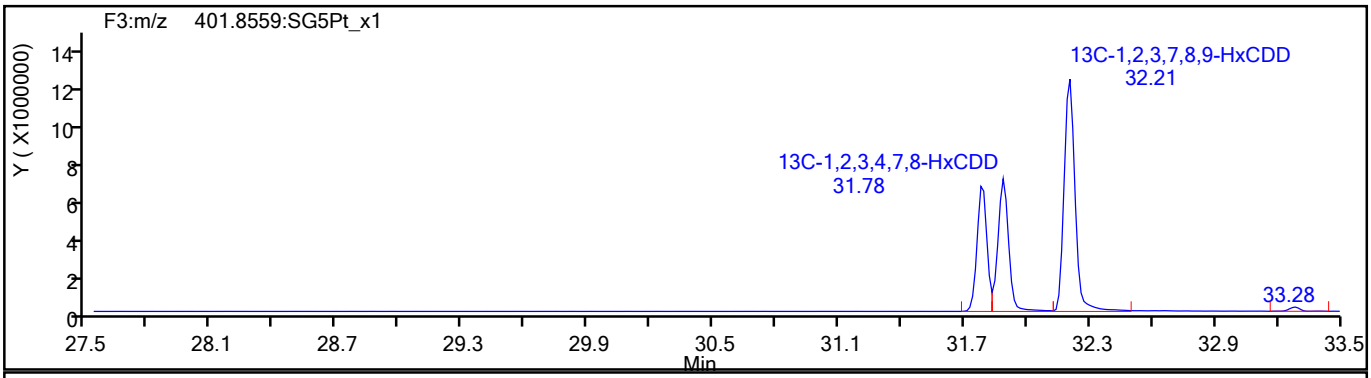

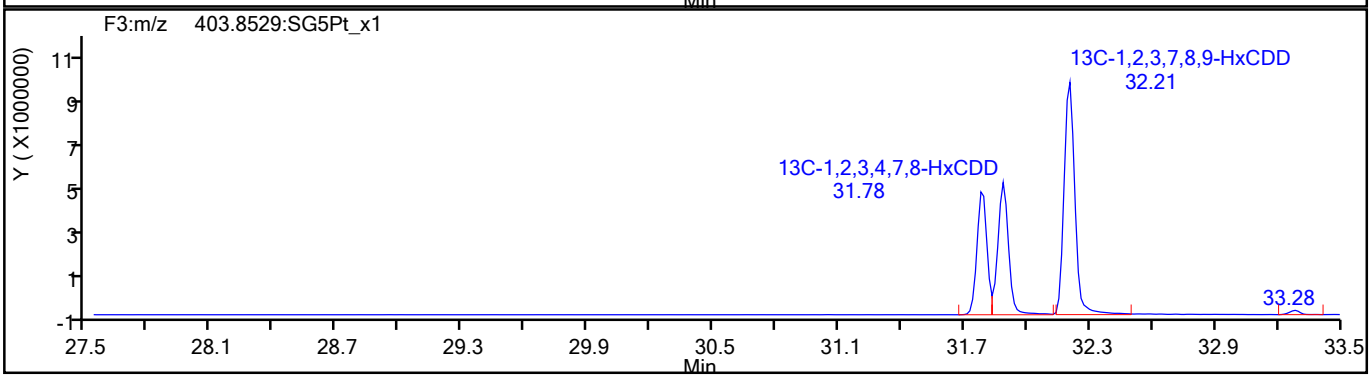

779206

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

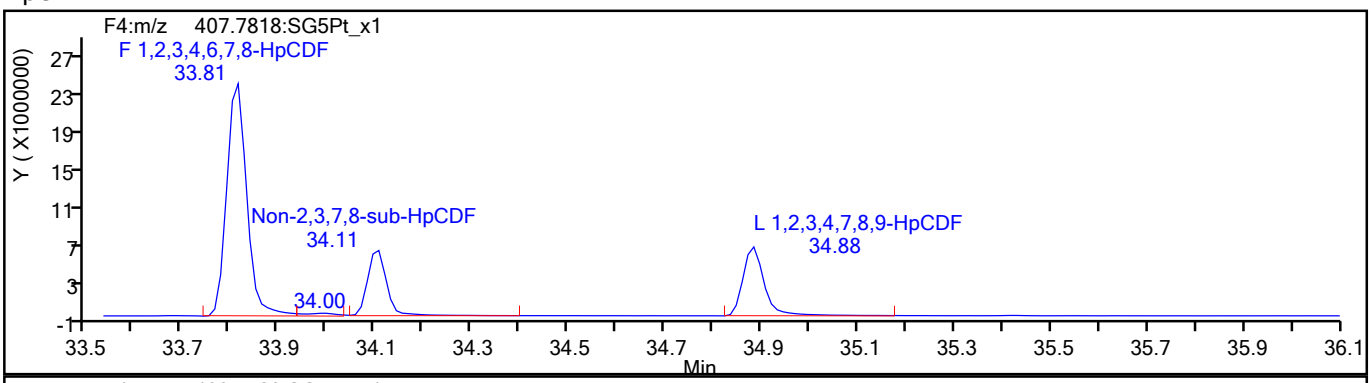

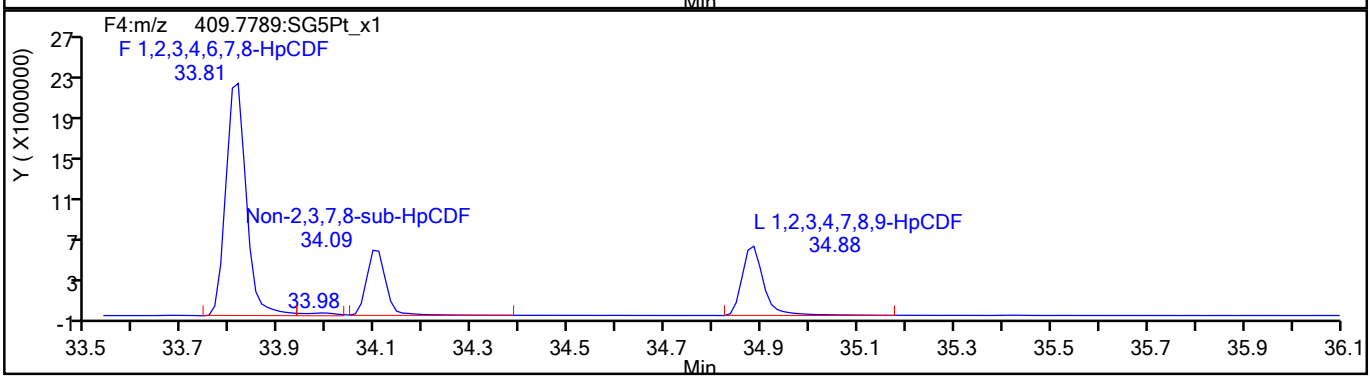

HpCDF Standards

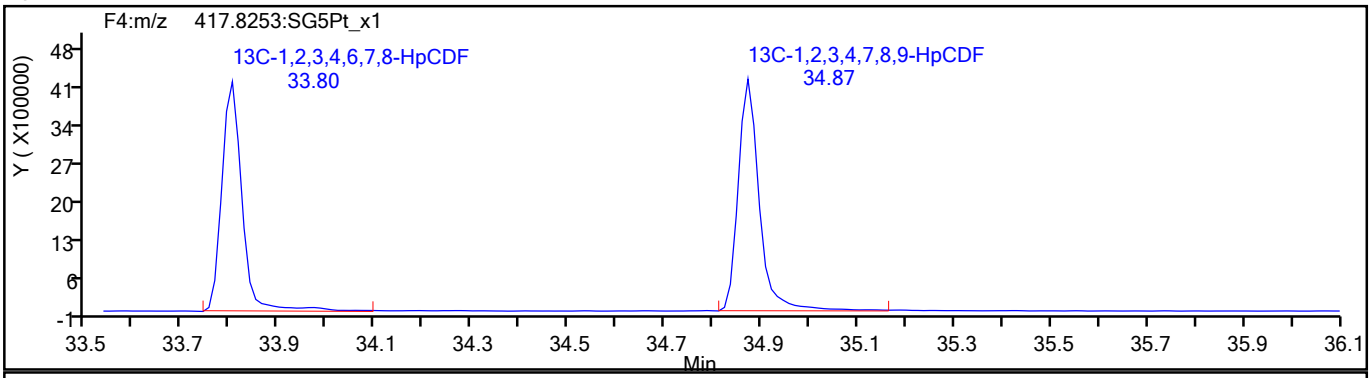

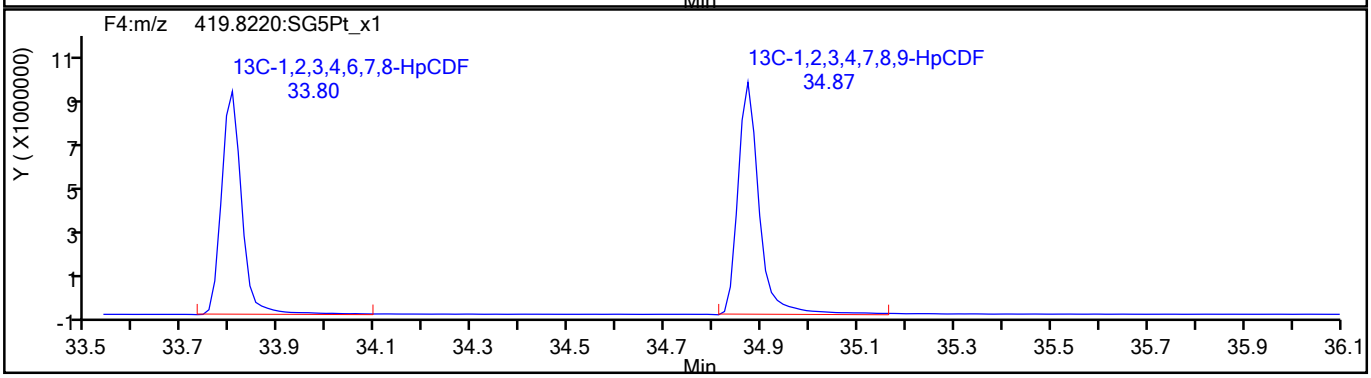

779207

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

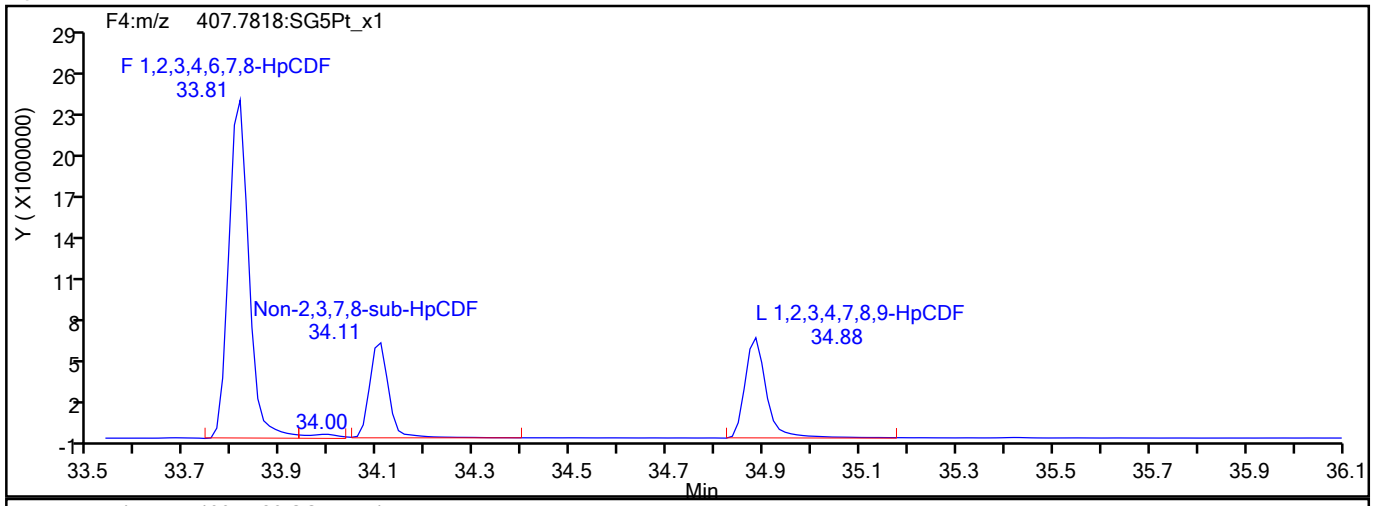

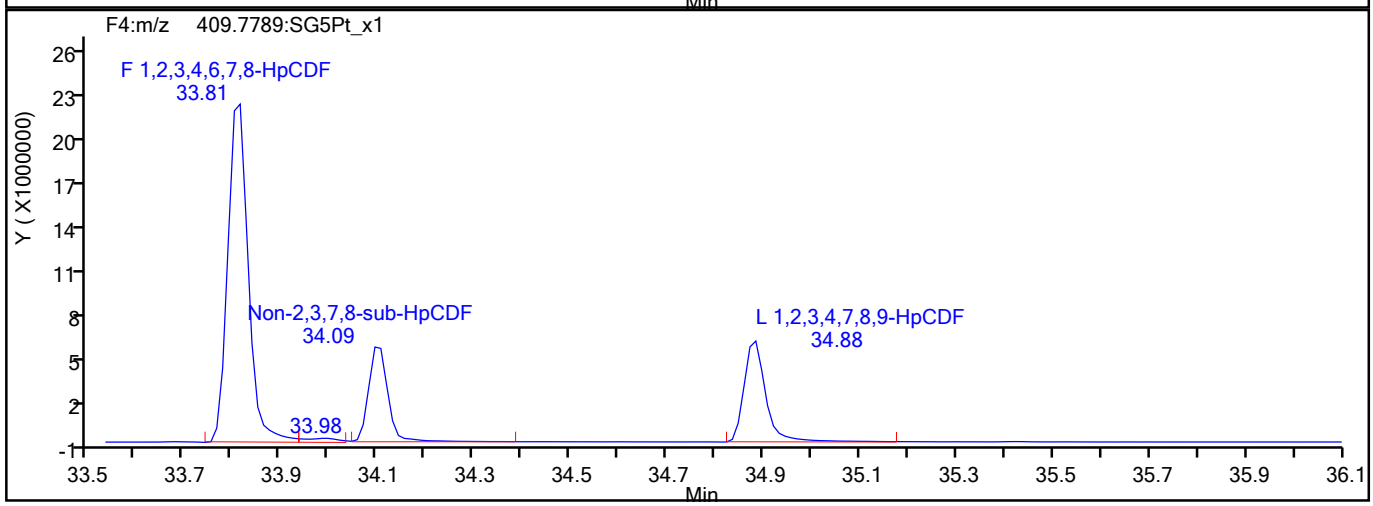

HpCDF Interference Mass

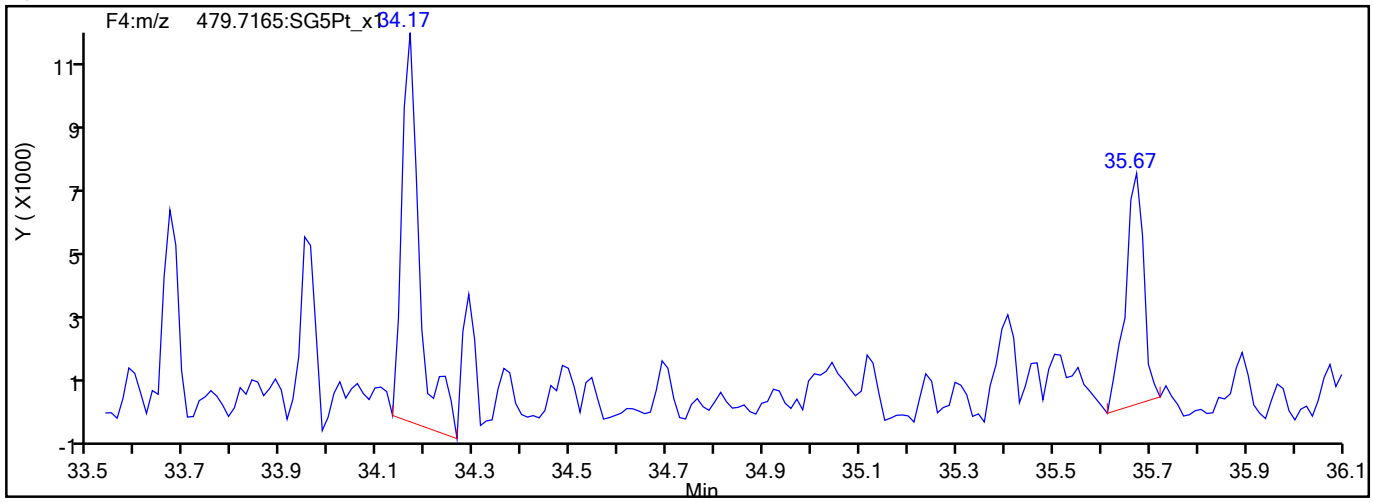

779208

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

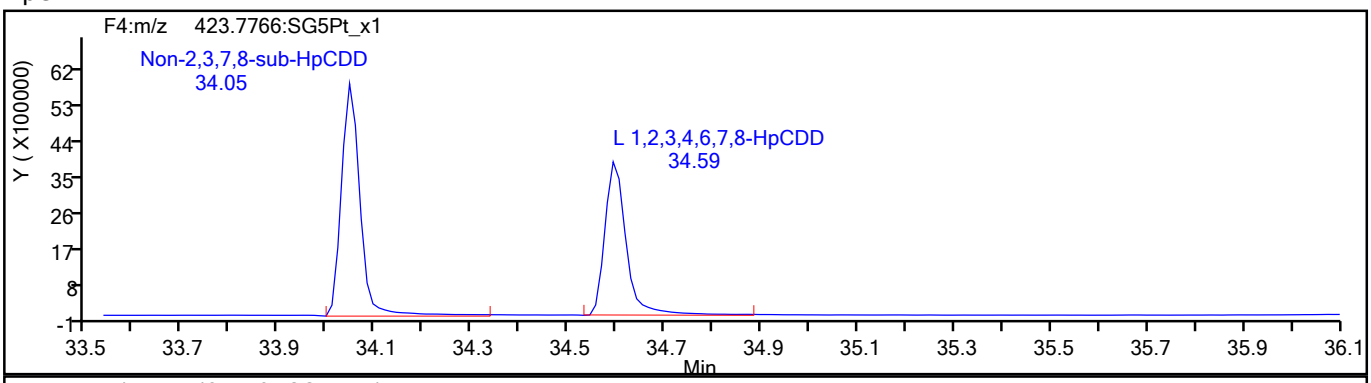

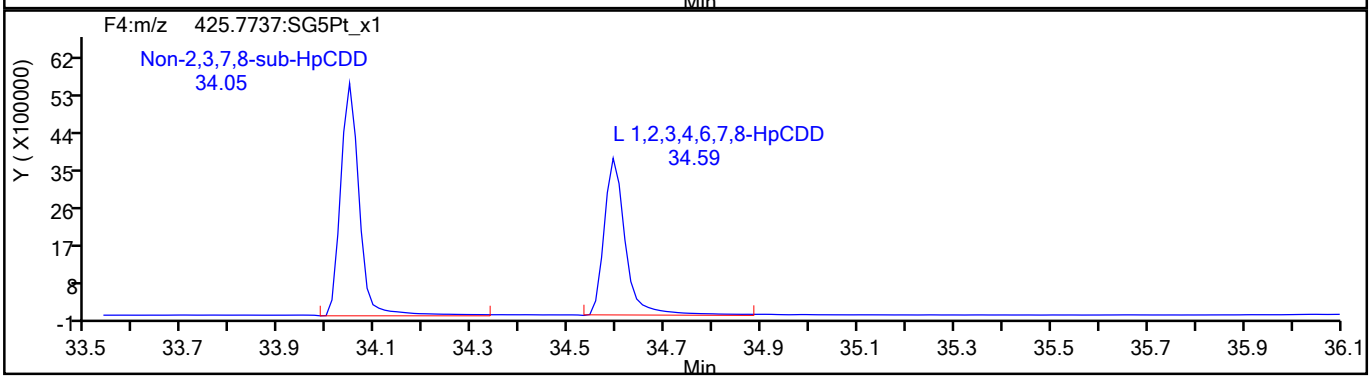

HpCDD Standards

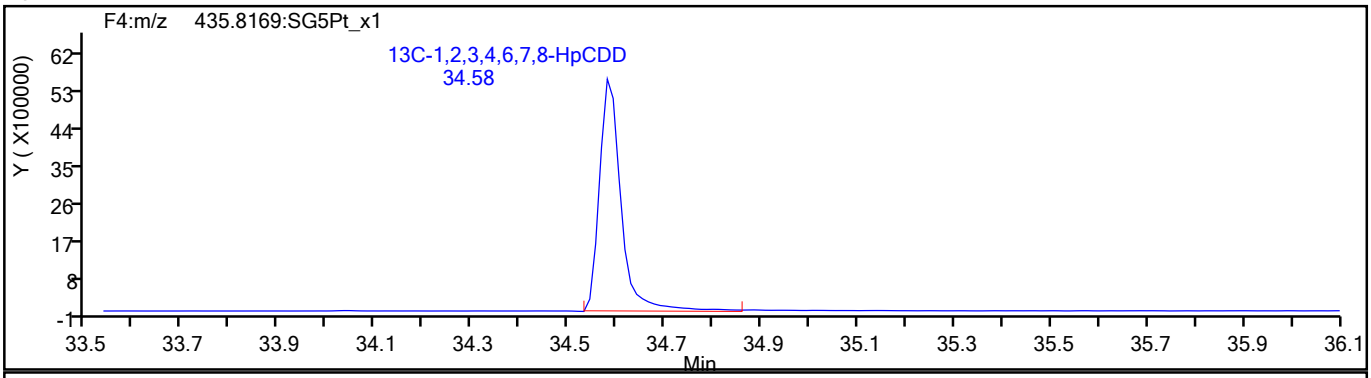

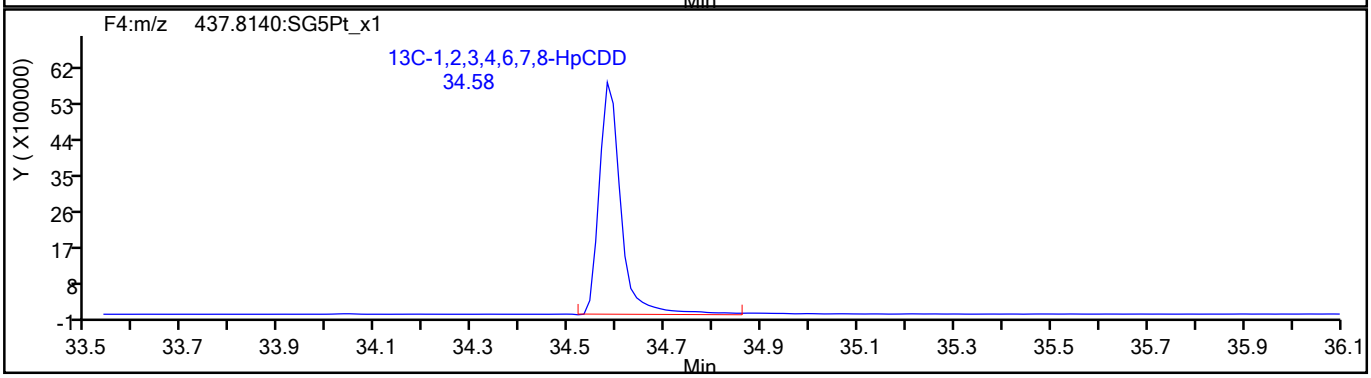

779209

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

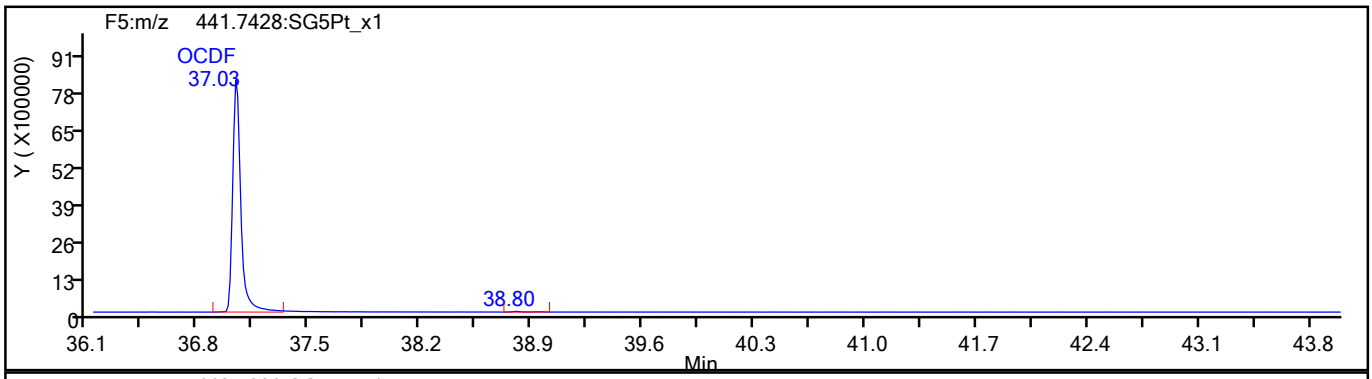

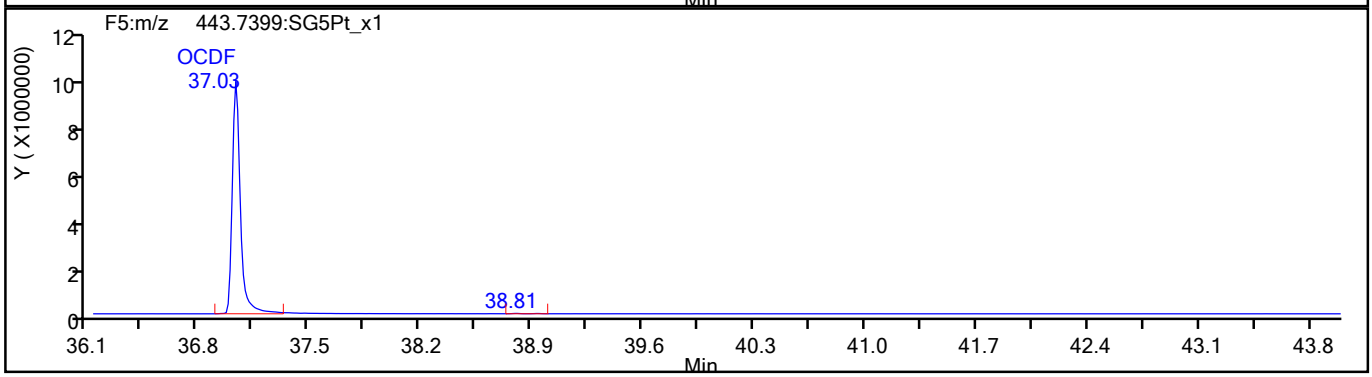

OCDF Standards

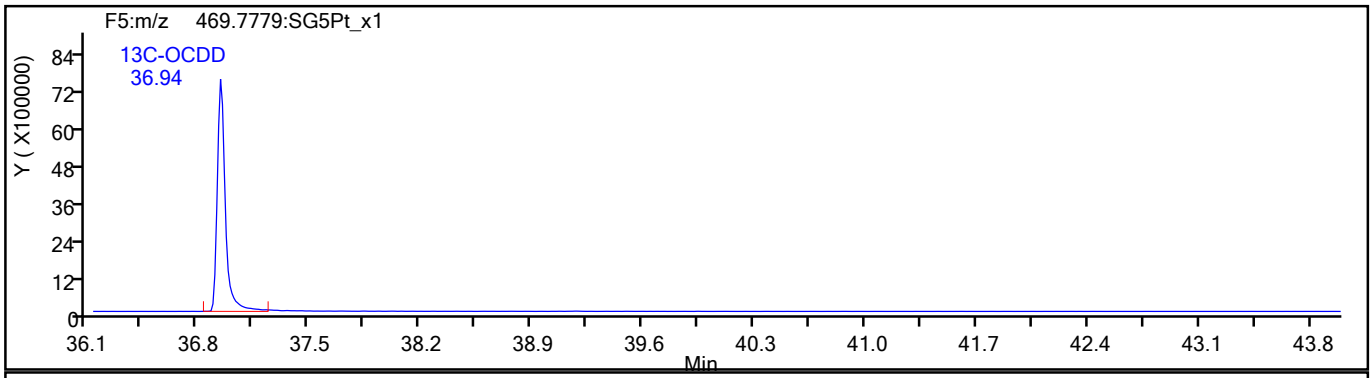

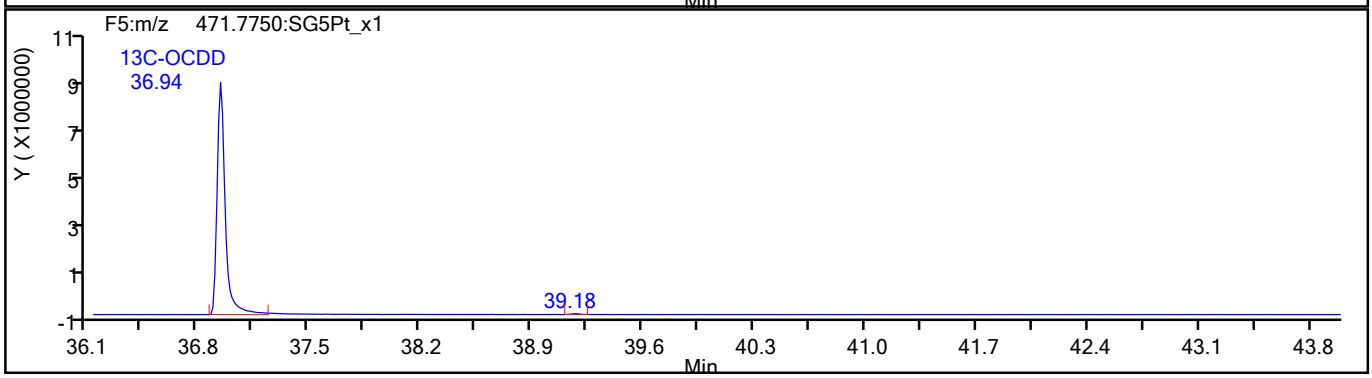

779210

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

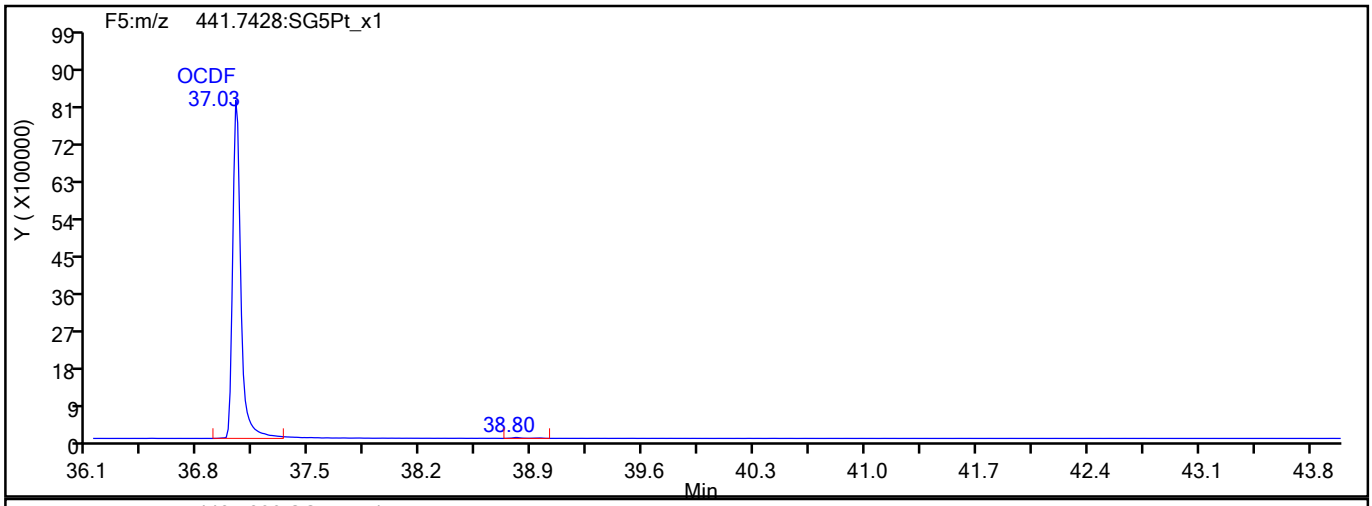

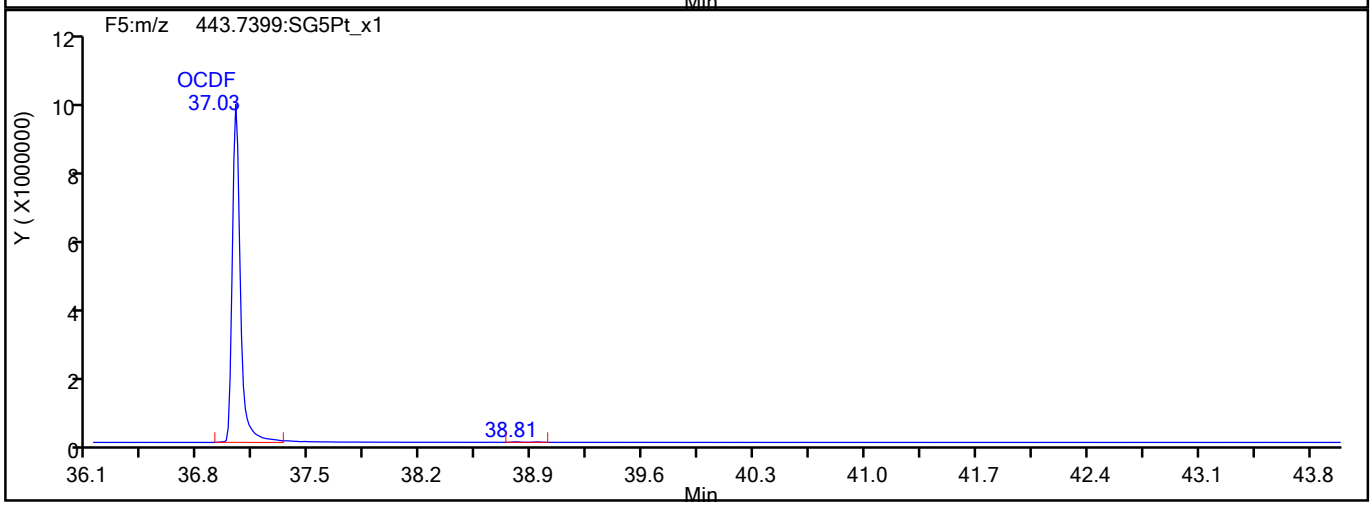

OCDF Interference Mass

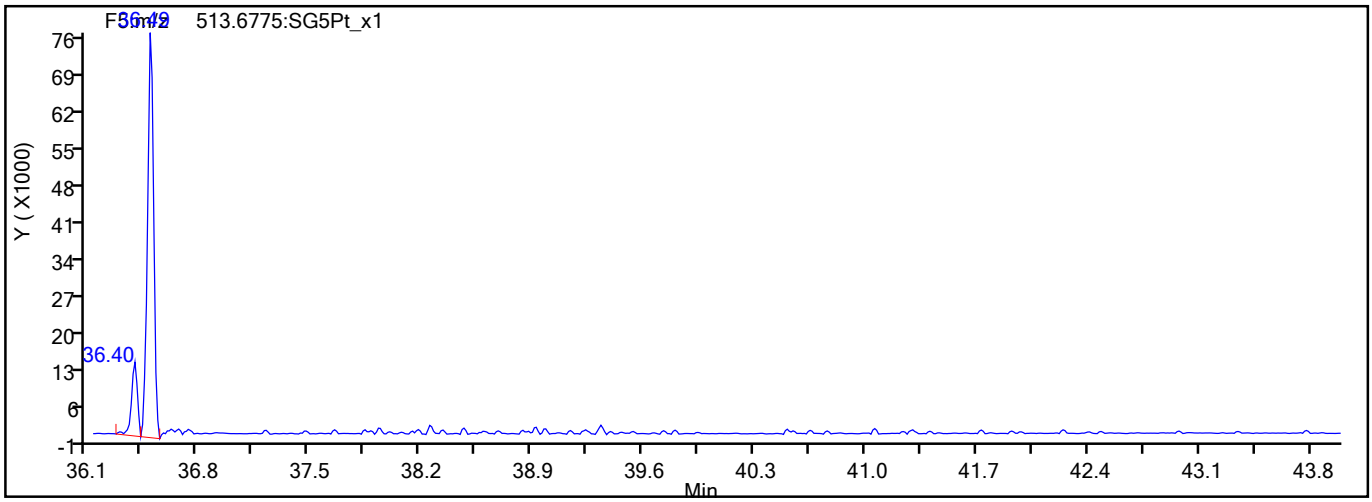

779211

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

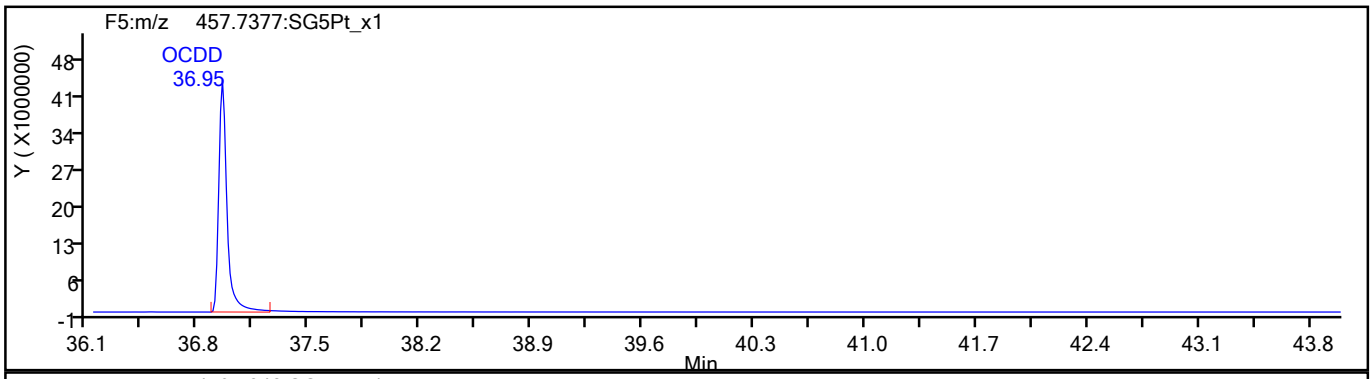

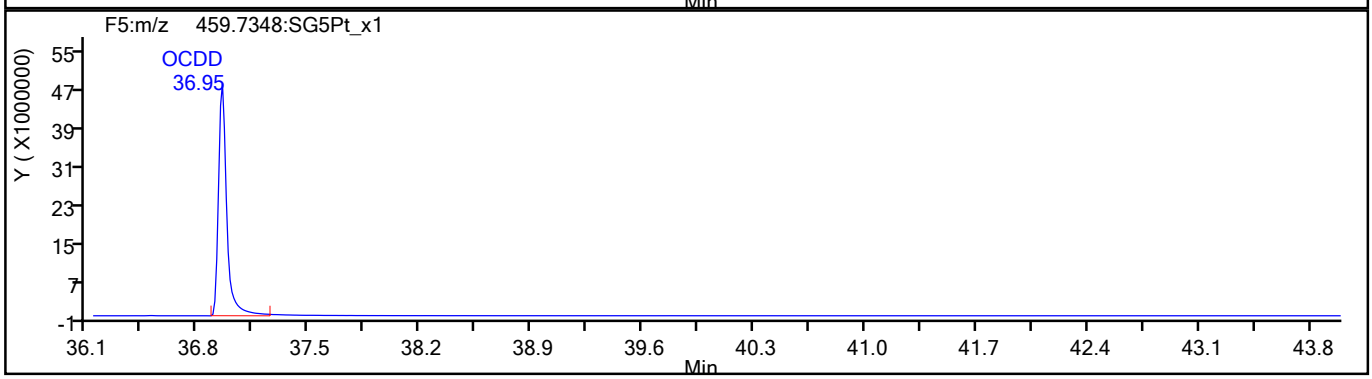

OCDD Standards

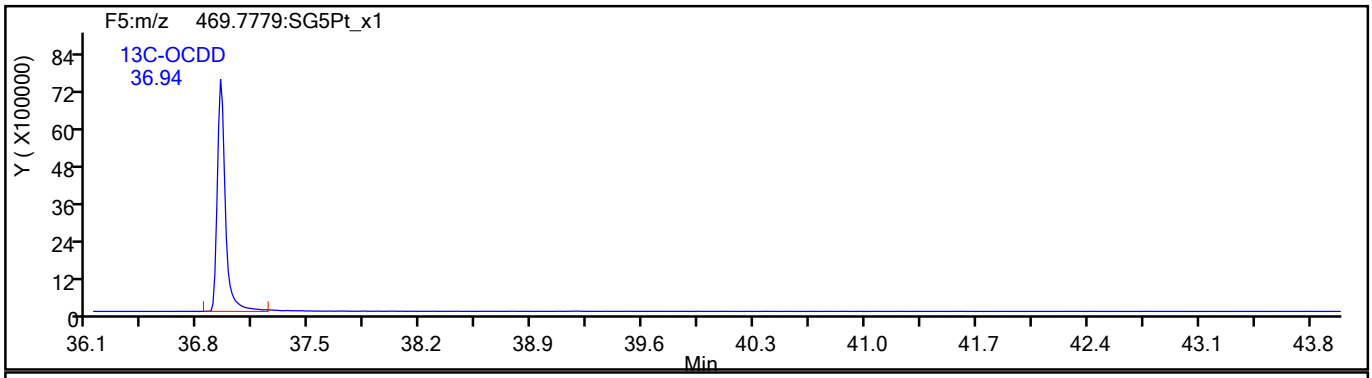

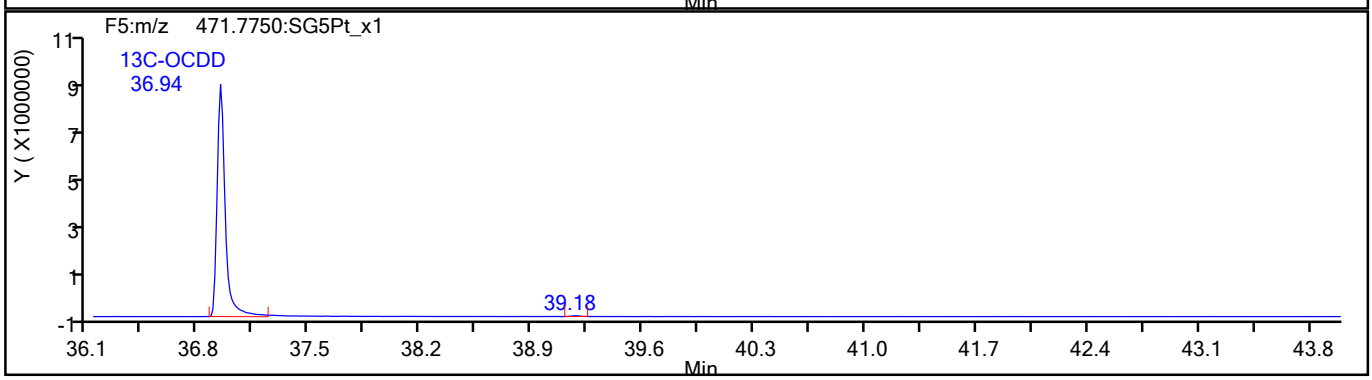

779212

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

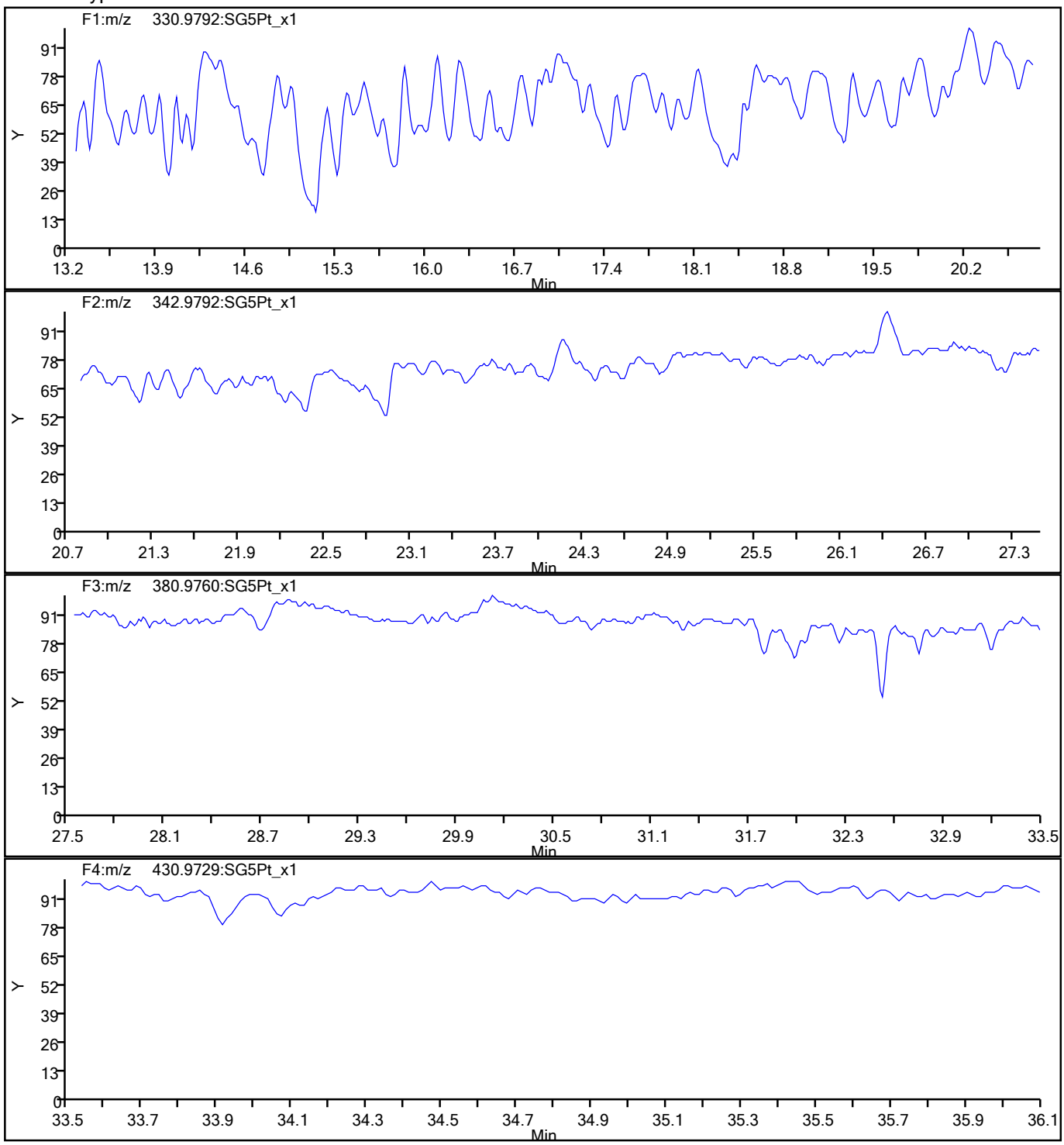

779213

Report Date: 18-Aug-2021 07:49:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_39.d		
Injection Date:	14-Aug-2021 22:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	516846	Sample Line#:	28
Column Type:	DB-5	Column Dia:	0.32 mm

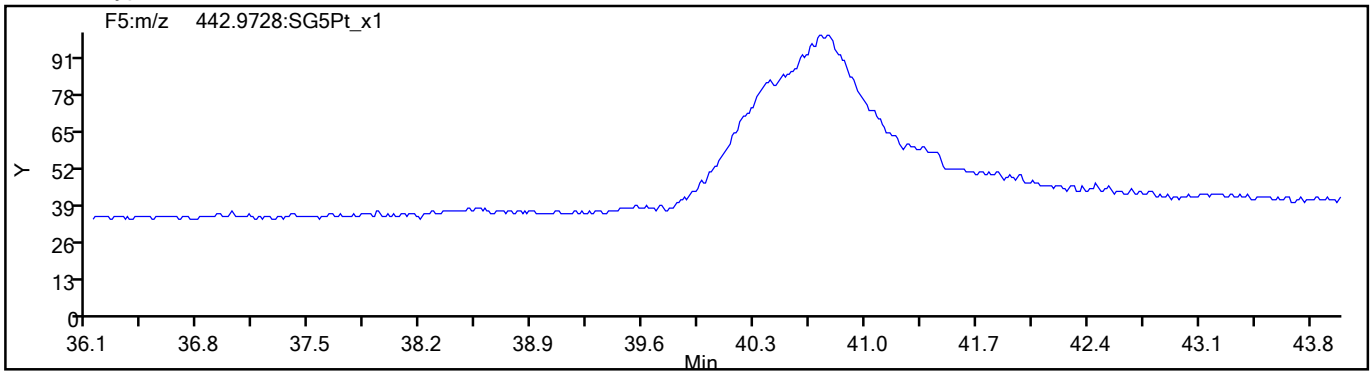

779214

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (0-2) DL
Lab Sample ID: 320-76788-1 DL
Matrix: Solid
Lab File ID: 17AU21A10D5_19.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:00
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.73(g)
Date Analyzed: 08/18/2021 05:14
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 59.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517241
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	31000	G E B	74	74
41903-57-5	Total TCDD	34000	G B	74	74
30402-14-3	Total TCDF	170000	G B	250	250

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	60		25-164
89059-46-1	13C-2,3,7,8-TCDF	66		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	119		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Sample Type: Client
Inject. Date: 18-Aug-2021 05:14:42 ALS Bottle#: 20 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76788-A-1-A X5 320-76788-A-1-A X5
Misc. Info.: 17AU21A10D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:57:19 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1606

First Level Reviewer: krenns Date: 26-Aug-2021 10:57:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.915	12335828	0.81	6.2E+05	20.0	20.0				a
D 13C-2,3,7,8-TCDF	17.401	13204148	0.81	1.6249	13.2	13.2	0.3292	0.3292	65.87	
2,3,7,8-TCDF	17.416	2562585400	0.79	1.0239	3790.8	3790.8	9.752	9.752		E
A Non-2,3,7,8-sub-TCDF	17.031	1954613713	0.79	1.0239	2891.5	2891.5	9.752	1804.2		a
S Total TCDF					6682.3	6682.3	9.752	9.752		
D 13C-2,3,7,8-TCDD	18.142	6616040	0.83	0.8993	11.9	11.9	0.2462	0.2462	59.64	a
2,3,7,8-TCDD	18.157	510424413	0.79	1.2541	1230.3	1230.3	2.953	2.953		Ea
$ 37Cl4-2,3,7,8-TCDD	18.157	6483429		1.1071	9.494	9.494	0.1631	0.1631	119	
A Non-2,3,7,8-sub-TCDD	17.477	53398951	0.71	1.2541	128.7	128.7	2.953	128.7		
S Total TCDD					1359.1	1359.1	2.953	2.953		
D 13C-1,2,3,7,8-PeCDF	22.435	11077829	1.58	1.2101	14.8	14.8	0.1489	0.1489	74.21	
1,2,3,7,8-PeCDF	22.462	58936980	1.58	1.0611	100.3	100.3	0.7633	0.7633		a
D 13C-2,3,4,7,8-PeCDF	23.758	12666265	1.59	1.2395	16.6	16.6	0.1454	0.1454	82.84	
2,3,4,7,8-PeCDF	23.785	40685173	1.59	1.0184	63.1	63.1	0.6683	0.6683		
A F1 PeCDFs	20.077	430898	1.55	1.0398	1.009	0.6981	0.0124	0.6052		RQ
A Non-2,3,7,8-sub-PeCDF	23.221	54760266	1.58	1.0398	88.7	88.7	0.7114	37.2		a
S Total PeCDF					253.1	252.8	0.7158	0.7158		RQ
D 13C-1,2,3,7,8-PeCDD	24.453	8251223	1.58	0.7612	17.6	17.6	0.0912	0.0912	87.87	
1,2,3,7,8-PeCDD	24.494	4109176	1.59	1.0484	9.500	9.500	0.1454	0.1454		
A Non-2,3,7,8-sub-PeCDD	23.301	399560	1.55	1.0484	1.073	0.9237	0.1454	0.3611		RQ
S Total PeCDD					10.6	10.4	0.1454	0.1454		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.503	11134617	0.51	1.0837	14.3	14.3	0.0762	0.0762	71.36	
1,2,3,4,7,8-HxCDF	30.529	87811453	1.20	1.0851	145.4	145.4	0.6245	0.6245		
D 13C-1,2,3,6,7,8-HxCDF	30.689	10334753	0.53	1.1279	12.7	12.7	0.0732	0.0732	63.63	
1,2,3,6,7,8-HxCDF	30.702	23075611	1.21	1.1260	39.7	39.7	0.6382	0.6382		
D 13C-2,3,4,6,7,8-HxCDF	31.501	9738587	0.52	1.0637	12.7	12.7	0.0776	0.0776	63.58	
2,3,4,6,7,8-HxCDF	31.528	3825754	1.21	1.1675	6.729	6.729	0.5230	0.5230		
D 13C-1,2,3,7,8,9-HxCDF	32.300	8811886	0.51	0.9676	12.6	12.6	0.0853	0.0853	63.25	
1,2,3,7,8,9-HxCDF	32.393	5747309	1.21	1.1664	11.2	11.2	0.5127	0.5127		
A Non-2,3,7,8-sub-HxCDF	30.163	7789175	1.17	1.1363	13.7	13.7	0.5699	9.148		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					216.6	216.6	0.5746	0.5746		
* 13C-1,2,3,7,8,9-HxCDD	32.127	14399810	1.25	6.2E+05	20.0	20.0				
D 13C-1,2,3,4,7,8-HxCDD	31.688	7187310	1.24	0.7334	13.6	13.6	0.0923	0.0923	68.05	
1,2,3,4,7,8-HxCDD	31.701	80846	1.26	1.0640	0.2114	0.2114	0.0503	0.0503		
D 13C-1,2,3,6,7,8-HxCDD	31.794	8219663	1.29	0.8802	13.0	13.0	0.0769	0.0769	64.85	
1,2,3,6,7,8-HxCDD	31.807	291549	1.15	1.0001	0.7093	0.7093	0.0511	0.0511		
1,2,3,7,8,9-HxCDD	32.140	181324	1.20	1.1325	0.4157	0.4157	0.0462	0.0462		
A Non-2,3,7,8-sub-HxCDD	30.836	1709105	1.18	1.0655	4.164	4.164	0.0491	2.143		
S Total HxCDD					5.501	5.501	0.0492	0.0492		
D 13C-1,2,3,4,6,7,8-HpCDF	33.742	6658725	0.45	0.7730	12.0	12.0	0.1408	0.1408	59.82	
1,2,3,4,6,7,8-HpCDF	33.754	23605214	1.04	1.4413	49.2	49.2	0.3264	0.3264		
D 13C-1,2,3,4,7,8,9-HpCDF	34.823	6922639	0.45	0.7008	13.7	13.7	0.1553	0.1553	68.60	
1,2,3,4,7,8,9-HpCDF	34.823	6915216	1.04	1.3174	15.2	15.2	0.4079	0.4079		
A Non-2,3,7,8-sub-HpCDF	34.295	6366117	1.05	1.3793	13.6	13.6	0.3637	13.6		
S Total HpCDF					78.0	78.0	0.3671	0.3671		
D 13C-1,2,3,4,6,7,8-HpCDD	34.532	5842421	1.02	0.6472	12.5	12.5	0.0744	0.0744	62.69	
1,2,3,4,6,7,8-HpCDD	34.544	3788390	1.03	1.0943	11.9	11.9	0.1740	0.1740		
A Non-2,3,7,8-sub-HpCDD	34.271	5269467	1.03	1.0943	16.5	16.5	0.1740	16.5		
S Total HpCDD					28.3	28.3	0.1740	0.1740		
D 13C-OCDD	36.878	8759803	0.86	0.4472	27.2	27.2	0.0572	0.0572	68.02	
OCDF	36.974	9724174	0.89	1.4382	30.9	30.9	0.0485	0.0485		
OCDD	36.890	51176872	0.89	1.1070	211.1	211.1	0.2568	0.2568		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Sample Type: Client
Inject. Date: 18-Aug-2021 05:14:42 ALS Bottle#: 20 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76788-A-1-A X5 320-76788-A-1-A X5
Misc. Info.: 17AU21A10D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:57:19 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1606

First Level Reviewer: krenns Date: 26-Aug-2021 10:57:19

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.915	17.809	6		5503436	1006691	4138	10345	243		a
333.9339	17.915	17.809	6		6832392	1205415	5659	14147	213	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.401	17.310	5	0.971	5894538	1573931	9353	23382	168		
317.9389	17.401	17.310	5	0.971	7309610	1882706	14313	35782	132	0.81(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.416	17.326	5	1.001	1130365027	285534378	304070	760175	939		
305.8987	17.416	17.326	5	1.001	1432220373	357196377	386234	965585	925	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	15.995	17.031	-62	0.919	17058531	4657748	304070	760175	15		
305.8987	15.995	17.031	-62	0.919	21745478	6039406	386234	965585	16	0.78(0.65-0.89)	
303.9016	16.282	17.031	-45	0.936	30987427	5821686	304070	760175	19		
305.8987	16.282	17.031	-45	0.936	39507430	7411519	386234	965585	19	0.78(0.65-0.89)	
303.9016	16.509	17.031	-31	0.949	32346906	8677341	304070	760175	29		
305.8987	16.509	17.031	-31	0.949	41092739	11108346	386234	965585	29	0.79(0.65-0.89)	
303.9016	16.751	17.031	-17	0.963	49454705	12485309	304070	760175	41		
305.8987	16.736	17.031	-18	0.962	61737469	15709582	386234	965585	41	0.80(0.65-0.89)	
303.9016	17.008	17.031	-1	0.977	536790082	125704460	304070	760175	413		
305.8987	17.008	17.031	-1	0.977	682856180	161986803	386234	965585	419	0.79(0.65-0.89)	
303.9016	17.250	17.031	13	0.991	17852138	3956551	304070	760175	13		
305.8987	17.250	17.031	13	0.991	22917568	5054332	386234	965585	13	0.78(0.65-0.89)	
303.9016	17.840	17.031	48	1.025	80673788	18667704	304070	760175	61		
305.8987	17.824	17.031	48	1.024	103049617	23821431	386234	965585	62	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.142	17.031	67	1.043	13792167	1973251	304070	760175	6		
305.8987	18.142	17.031	67	1.043	17612999	2482624	386234	965585	6	0.78(0.65-0.89)	
303.9016	19.246	17.031	133	1.106	81363943	19499346	304070	760175	64		a
305.8987	19.246	17.031	133	1.106	103774546	24703081	386234	965585	64	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	18.142	18.006	8	1.013	2994896	816291	4138	10345	197		a
333.9339	18.142	18.006	8	1.013	3621144	954232	5659	14147	169	0.83(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	18.157	18.021	8	1.001	224637729	60270318	75754	189385	796		a
321.8936	18.157	18.021	8	1.001	285786684	76794062	55372	138430	1387	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.157	18.021	8	1.013	6483429	1768819	7991	19977	221		
A Non-2,3,7,8-sub-TCDD											
319.8965	18.475	17.477	60	1.018	22090553	5060257	75754	189385	67		
321.8936	18.459	17.477	59	1.018	31308398	6628633	55372	138430	120	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.435	22.299	8	1.252	6792019	1133481	4529	11322	250		
353.8970	22.435	22.299	8	1.252	4285810	734997	3442	8605	214	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.462	22.326	8	1.001	36110079	6051550	18342	45855	330		a
341.8567	22.462	22.326	8	1.001	22826901	3830411	11927	29817	321	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.758	23.635	7	1.326	7777318	1354748	4529	11322	299		
353.8970	23.758	23.635	7	1.326	4888947	868966	3442	8605	252	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.785	23.662	7	1.001	24964351	4359170	18342	45855	238		
341.8567	23.785	23.662	7	1.001	15720822	2727051	11927	29817	229	1.59(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	19.352	20.077	-43	0.863	226830	29378	256	640	115		
	Empc Correction				34859	4257	256	640	17		
341.8567	19.367	20.077	-43	0.863	22490	2747	271	677	10	10.09(1.32-1.78)	
339.8597	19.563	20.077	-31	0.872	235955	51552	256	640	201		
341.8567	19.563	20.077	-31	0.872	137594	28201	271	677	104	1.71(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											a
339.8597	21.099	23.221	-127	0.940	14067840	2829685	18342	45855	154		
341.8567	21.099	23.221	-127	0.940	8890199	1782535	11927	29817	149	1.58(1.32-1.78)	
339.8597	21.958	23.221	-76	0.979	1403782	150077	18342	45855	8		
341.8567	21.917	23.221	-78	0.977	955825	100677	11927	29817	8	1.47(1.32-1.78)	
339.8597	22.326	23.221	-54	0.995	2373434	536521	18342	45855	29		a
341.8567	22.326	23.221	-54	0.995	1564477	350286	11927	29817	29	1.52(1.32-1.78)	
339.8597	22.735	23.221	-29	1.013	489428	100019	18342	45855	5		
341.8567	22.735	23.221	-29	1.013	303505	62657	11927	29817	5	1.61(1.32-1.78)	
339.8597	22.967	23.221	-15	1.024	9357022	1745621	18342	45855	95		
341.8567	22.967	23.221	-15	1.024	5894162	1111207	11927	29817	93	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	24.112	23.221	53	1.075	5822270	881302	18342	45855	48		
341.8567	24.112	23.221	53	1.075	3638322	549194	11927	29817	46	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.358	6	1.365	5052838	825441	1892	4730	436		
369.8919	24.453	24.358	6	1.365	3198385	537786	1178	2945	457	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.494	24.385	7	1.002	2519866	395156	2088	5220	189		
357.8516	24.494	24.385	7	1.002	1589310	255801	2069	5172	124	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	22.490	23.301	-49	0.920	65078	13196	2088	5220	6		
357.8516	22.490	23.301	-49	0.920	73030	15218	2069	5172	7	0.89(1.32-1.78)	
	Empc Correction				41985	8513	2069	5172	4		
355.8546	22.708	23.301	-36	0.929	96710	19396	2088	5220	9		
357.8516	22.708	23.301	-36	0.929	59490	13263	2069	5172	6	1.63(1.32-1.78)	
355.8546	24.999	23.301	102	1.022	116203	16961	2088	5220	8		
	Empc Correction				82847	12421	2088	5220	6		
357.8516	25.012	23.301	102	1.023	53450	8014	2069	5172	4	2.17(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.449	3	0.949	3773381	722575	2759	6897	262		
385.8610	30.503	30.449	3	0.949	7361236	1470655	3588	8970	410	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.463	4	1.001	47874710	9456429	15508	38770	610		
375.8178	30.529	30.463	4	1.001	39936743	7824161	14217	35542	550	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.636	3	0.955	3573563	713762	2759	6897	259		
385.8610	30.676	30.636	2	0.955	6761190	1354382	3588	8970	377	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.702	30.649	3	1.000	12626552	2539783	15508	38770	164		
375.8178	30.702	30.649	3	1.000	10449059	2137631	14217	35542	150	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.501	31.475	2	0.981	3339202	817876	2759	6897	296		
385.8610	31.501	31.475	2	0.981	6399385	1615918	3588	8970	450	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528	31.488	2	1.001	2091980	323896	15508	38770	21		
375.8178	31.528	31.488	2	1.001	1733774	264842	14217	35542	19	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.300	32.286	1	1.005	2992752	834580	2759	6897	302		
385.8610	32.300	32.286	1	1.005	5819134	1651031	3588	8970	460	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.393	32.300	6	1.003	3141826	767089	15508	38770	49		
375.8178	32.393	32.300	6	1.003	2605483	647306	14217	35542	46	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	28.413	30.163	-105	0.931	2781202	420146	15508	38770	27		
375.8178	28.413	30.163	-105	0.931	2418512	366610	14217	35542	26	1.15(1.05-1.43)	
373.8208	29.704	30.163	-28	0.974	1426662	213278	15508	38770	14		
375.8178	29.704	30.163	-28	0.974	1162799	180465	14217	35542	13	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.127	32.100	2		7990469	2149707	2928	7320	734		
403.8529	32.127	32.100	2		6409341	1694168	2275	5687	745	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.688	31.661	2	0.986	3979955	1126145	2928	7320	385		
403.8529	31.701	31.661	2	0.987	3207355	887321	2275	5687	390	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.701	31.674	2	1.000	45020	12147	827	2067	15		
391.8127	31.701	31.674	2	1.000	35826	10597	1329	3322	8	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.794	31.767	2	0.990	4636314	1179021	2928	7320	403		
403.8529	31.794	31.767	2	0.990	3583349	929526	2275	5687	409	1.29(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.807	31.781	2	1.000	155747	38814	827	2067	47		
391.8127	31.807	31.781	2	1.000	135802	36404	1329	3322	27	1.15(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.113	2	1.014	98913	20759	827	2067	25		
391.8127	32.140	32.113	2	1.014	82411	15966	1329	3322	12	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.571	30.836	-76	0.930	390790	49112	827	2067	59		
391.8127	29.545	30.836	-77	0.929	330371	38543	1329	3322	29	1.18(1.05-1.43)	
389.8157	30.583	30.836	-15	0.962	59646	13517	827	2067	16		
391.8127	30.583	30.836	-15	0.962	48743	10361	1329	3322	8	1.22(1.05-1.43)	
389.8157	30.955	30.836	7	0.974	474544	94617	827	2067	114		
391.8127	30.942	30.836	6	0.973	405011	74888	1329	3322	56	1.17(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.742	33.730	1	1.050	2055031	678009	2773	6932	245		
419.8220	33.742	33.730	1	1.050	4603694	1552061	5596	13990	277	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.754	33.742	1	1.000	12045567	4067295	10540	26350	386		
409.7789	33.754	33.742	1	1.000	11559647	3824416	10441	26102	366	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.823	34.811	1	1.084	2148420	606463	2773	6932	219		
419.8220	34.823	34.811	1	1.084	4774219	1345939	5596	13990	241	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.823	34.823	0	1.000	3526778	1019266	10540	26350	97		
409.7789	34.823	34.823	0	1.000	3388438	994463	10441	26102	95	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.046	34.295	-15	1.009	3257333	1058705	10540	26350	100		
409.7789	34.046	34.295	-15	1.009	3108784	999185	10441	26102	96	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.532	34.520	1	1.075	2947598	897283	1860	4650	482		
437.8140	34.532	34.520	1	1.075	2894823	870810	1842	4605	473	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.544	34.532	1	1.000	1917749	579955	3139	7847	185		
425.7737	34.544	34.532	1	1.000	1870641	556728	3594	8985	155	1.03(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.985	34.271	-17	0.984	2679284	878205	3139	7847	280		
425.7737	33.985	34.271	-17	0.984	2590183	858058	3594	8985	239	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.878	36.866	1	1.148	4062141	1016877	802	2005	1268		
471.7750	36.878	36.866	1	1.148	4697662	1191426	1165	2912	1023	0.86(0.76-1.02)	
OCDF											
441.7428	36.974	36.974	0	1.003	4565901	1171269	938	2345	1249		
443.7399	36.974	36.974	0	1.003	5158273	1329395	602	1505	2208	0.89(0.76-1.02)	
OCDD											
457.7377	36.890	36.878	1	1.000	24069798	6113951	3454	8635	1770		
459.7348	36.890	36.878	1	1.000	27107074	6862609	2824	7060	2430	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Inject. Date: 18-Aug-2021 05:14:42 Dil. Factor: 5.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 517241 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDF, RT: 17.031

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	13204148	3456637

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		20.000	13204148	3456637

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.995	17058531	4657748	21745478	6039406	57.4	0.78	
16.282	30987427	5821686	39507430	7411519	104.3	0.78	
16.509	32346906	8677341	41092739	11108346	108.6	0.79	
16.751	49454705	12485309	61737469	15709582	164.5	0.80	
17.008	536790082	125704460	682856180	161986803	1804.2	0.79	
17.250	17852138	3956551	22917568	5054332	60.3	0.78	
17.840	80673788	18667704	103049617	23821431	271.8	0.78	
18.142	13792167	1973251	17612999	2482624	46.5	0.78	
19.246	81363943	19499346	103774546	24703081	273.9	0.78	a
Signal Totals:							
	860319687	201443396	1094294026	258317124			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1954613713	459760520				0.79	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2891.5 = (1954613713 * 20.000) / (13204148 * 1.024)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d		
Lims ID:	320-76788-A-1-A		
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Inject. Date:	18-Aug-2021 05:14:42	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	8

Non-2,3,7,8-sub-TCDD, RT: 17.477

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	6616040	1770523

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		20.000	6616040	1770523

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.475	22090553	5060257	31308398	6628633	128.7	0.71	
Signal Totals:							
	22090553	5060257	31308398	6628633			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	53398951	11688890				0.71	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 128.714 = (53398951 * 20.000) / (6616040 * 1.254)

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d		
Lims ID:	320-76788-A-1-A		
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Inject. Date:	18-Aug-2021 05:14:42	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	8

F1 PeCDFs, RT: 20.077

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	11077829	1868478
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	12666265	2223714

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		20.000	11872047	2046096

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.352	226830	29378	22490	2747	0.4039	10.09	RQ
19.352	34859	4257	22490	2747	0.0929		Empc Correction
19.563	235955	51552	137594	28201	0.6052	1.71	
Signal Totals:							
	270814	55809	160084	30948			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	622869	111878				2.89	RQ
	430898	86757					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.009 = (622869 * 20.000) / (11872047 * 1.040)

Empc Amount: 0.6981 = (430898 * 20.000) / (11872047 * 1.040)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d		
Lims ID:	320-76788-A-1-A		
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Inject. Date:	18-Aug-2021 05:14:42	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDF, RT: 23.221

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	11077829	1868478
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	12666265	2223714

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		20.000	11872047	2046096

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.099	14067840	2829685	8890199	1782535	37.2	1.58	
21.958	1403782	150077	955825	100677	3.82	1.47	
22.326	2373434	536521	1564477	350286	6.38	1.52	a
22.735	489428	100019	303505	62657	1.28	1.61	
22.967	9357022	1745621	5894162	1111207	24.7	1.59	
24.112	5822270	881302	3638322	549194	15.3	1.60	
Signal Totals:							
	33513776	6243225	21246490	3956556			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	54760266	10199781				1.58	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 88.722 = (54760266 * 20.000) / (11872047 * 1.040)

QC Flag Legend

Review Flags

a - User Assigned ID

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d		
Lims ID:	320-76788-A-1-A		
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Inject. Date:	18-Aug-2021 05:14:42	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDD, RT: 23.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	8251223	1363227

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		20.000	8251223	1363227

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.490	65078	13196	73030	15218	0.3193	0.89	RQ
22.490	65078	13196	41985	8513	0.2475		Empc Correction
22.708	96710	19396	59490	13263	0.3611	1.63	
24.999	116203	16961	53450	8014	0.3922	2.17	RQ
24.999	82847	12421	53450	8014	0.3151		Empc Correction
Signal Totals:							
	244635	45013	154925	29790			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	463961	86048				1.49	RQ
	399560	74803					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.073 = (463961 * 20.000) / (8251223 * 1.048)

Empc Amount: 0.9237 = (399560 * 20.000) / (8251223 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Inject. Date: 18-Aug-2021 05:14:42 Dil. Factor: 5.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 517241 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDF, RT: 30.163

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	11134617	2193230
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	10334753	2068144
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	9738587	2433794
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	8811886	2485611

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		20.000	10004960	2295194

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.413	2781202	420146	2418512	366610	9.15	1.15	
29.704	1426662	213278	1162799	180465	4.56	1.23	
Signal Totals:							
	4207864	633424	3581311	547075			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7789175	1180499				1.17	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 13.703 = (7789175 * 20.000) / (10004960 * 1.136)

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Inject. Date: 18-Aug-2021 05:14:42 Dil. Factor: 5.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 517241 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDD, RT: 30.836

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	7187310	2013466
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	8219663	2108547
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		20.000	7703486	2061006

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.571	390790	49112	330371	38543	1.76	1.18	
30.583	59646	13517	48743	10361	0.2641	1.22	
30.955	474544	94617	405011	74888	2.14	1.17	
Signal Totals:							
	924980	157246	784125	123792			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1709105	281038				1.18	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.164 = (1709105 * 20.000) / (7703486 * 1.066)

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d		
Lims ID:	320-76788-A-1-A		
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Inject. Date:	18-Aug-2021 05:14:42	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	8

Non-2,3,7,8-sub-HpCDF, RT: 34.295

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	6658725	2230070
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	6922639	1952402

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		20.000	6790682	2091236

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.046	3257333	1058705	3108784	999185	13.6	1.05	
Signal Totals:							
	3257333	1058705	3108784	999185			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6366117	2057890				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.593 = (6366117 * 20.000) / (6790682 * 1.379)

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Inject. Date: 18-Aug-2021 05:14:42 Dil. Factor: 5.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 517241 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDD, RT: 34.271

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	5842421	1768093

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		20.000	5842421	1768093

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.985	2679284	878205	2590183	858058	16.5	1.03	
Signal Totals:							
	2679284	878205	2590183	858058			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5269467	1736263				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 16.484 = (5269467 * 20.000) / (5842421 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d				
Injection Date:	18-Aug-2021 05:14:42	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	20	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 17.92
Area: 5503436
Amount: 22.239108
Amount Units: pg/ul

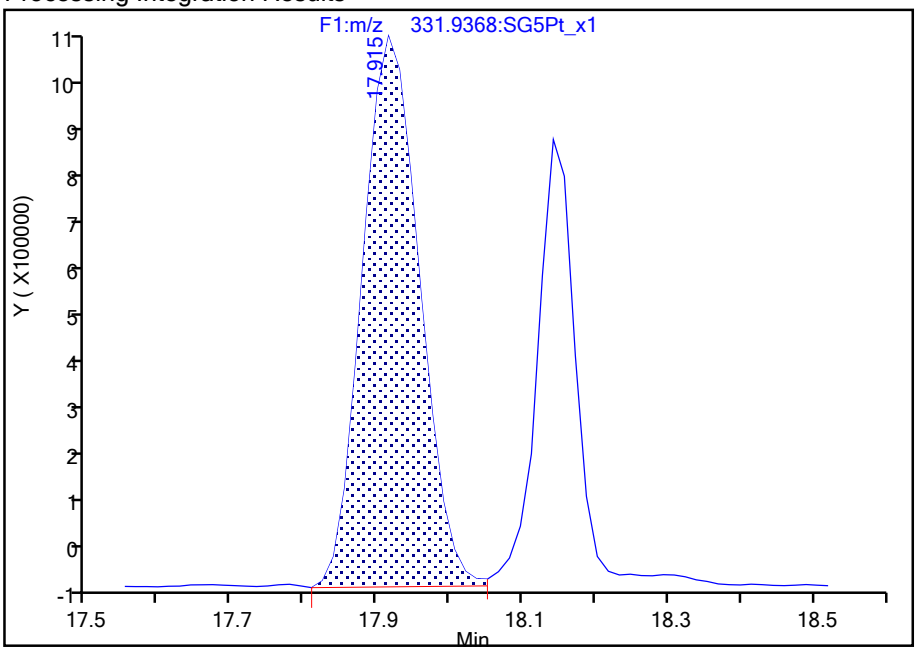

Manual Integration Results

RT: 18.14
Area: 2994896
Amount: 11.927439
Amount Units: pg/ul

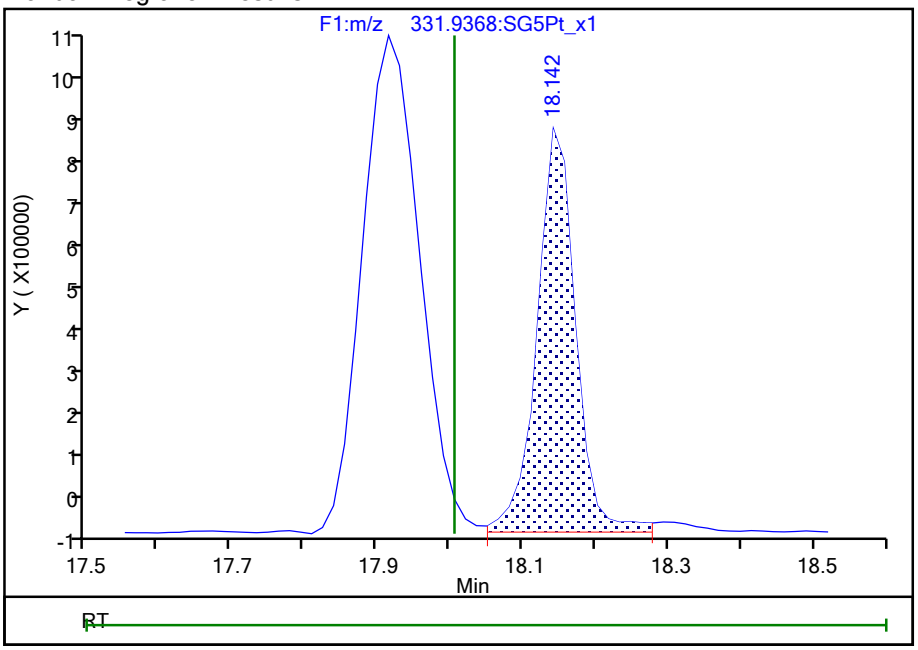

Reviewer: arghestanis, 18-Aug-2021 09:51:58

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d				
Injection Date:	18-Aug-2021 05:14:42	Instrument ID:	10D5		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:	DB	ALS Bottle#:	20	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 18.02

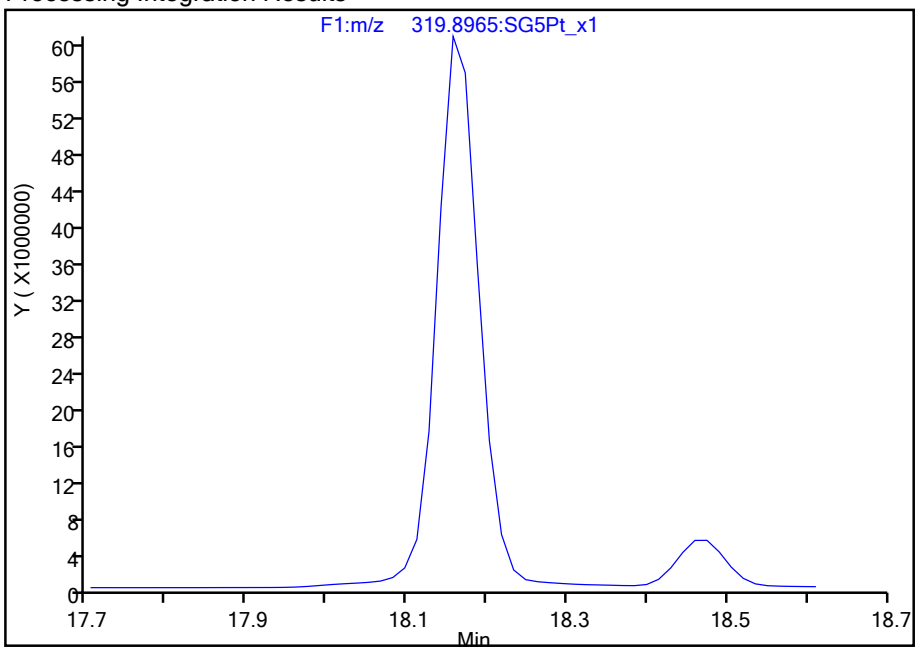

Manual Integration Results

RT: 18.16
Area: 224637729
Amount: 1230.3375
Amount Units: pg/ul

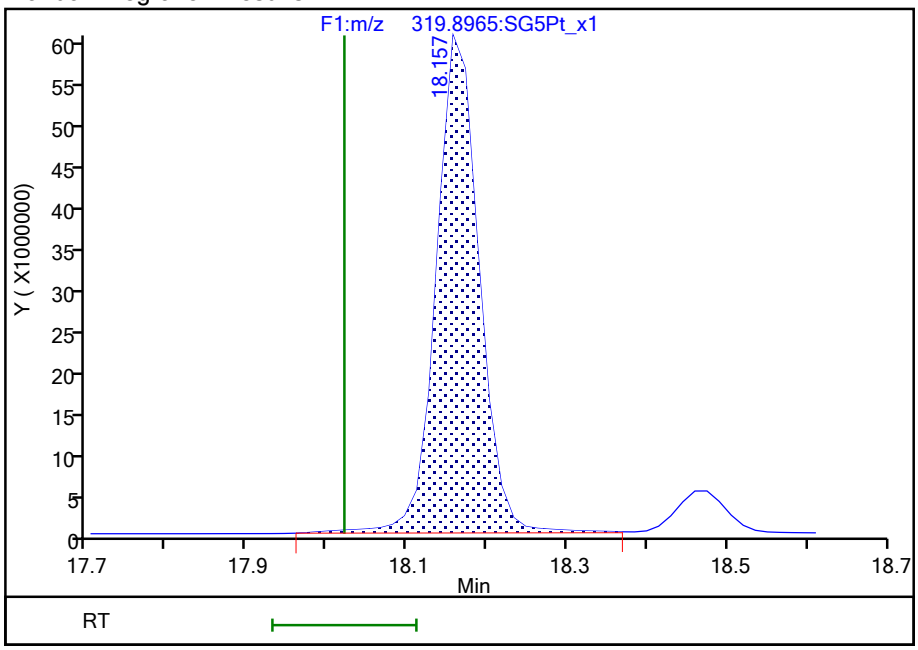

Reviewer: arghestanis, 18-Aug-2021 09:52:09
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d		
Injection Date:	18-Aug-2021 05:14:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	517241	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

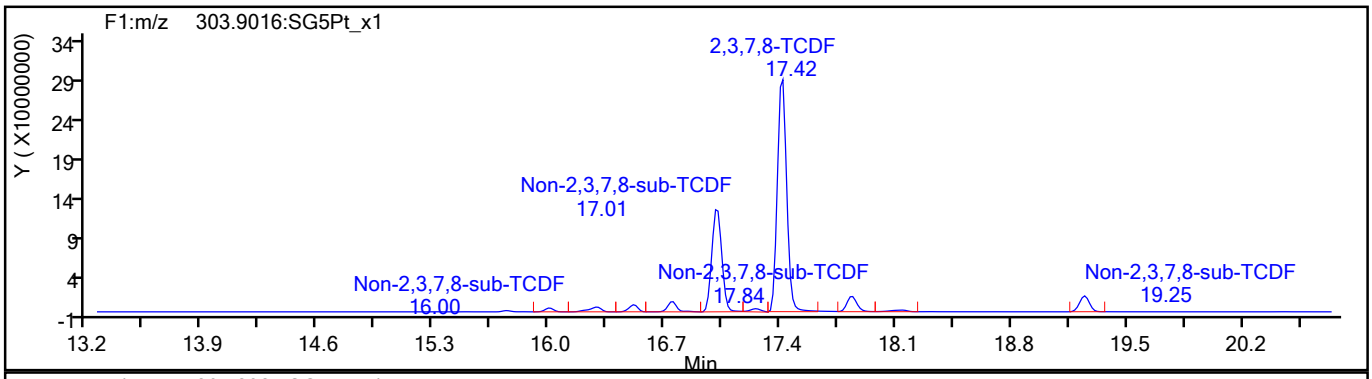

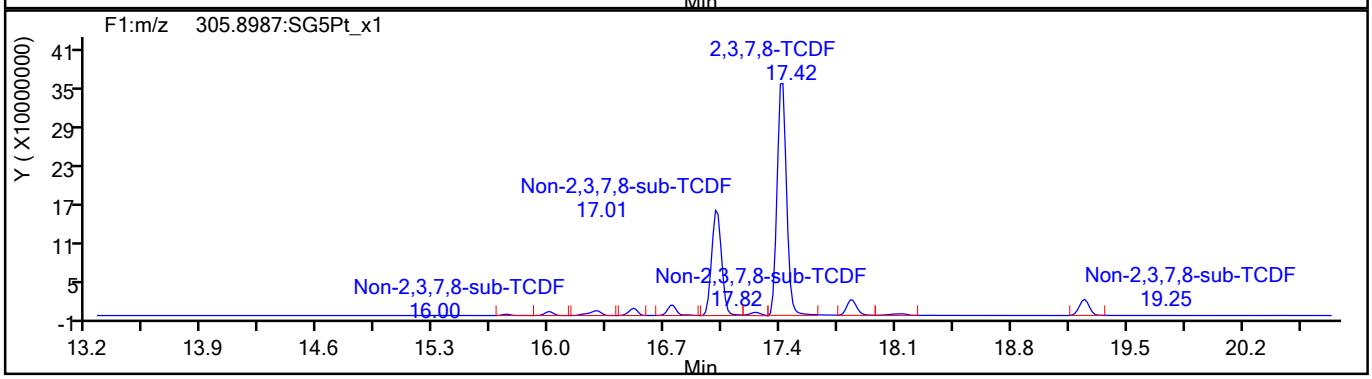

TCDF Standards

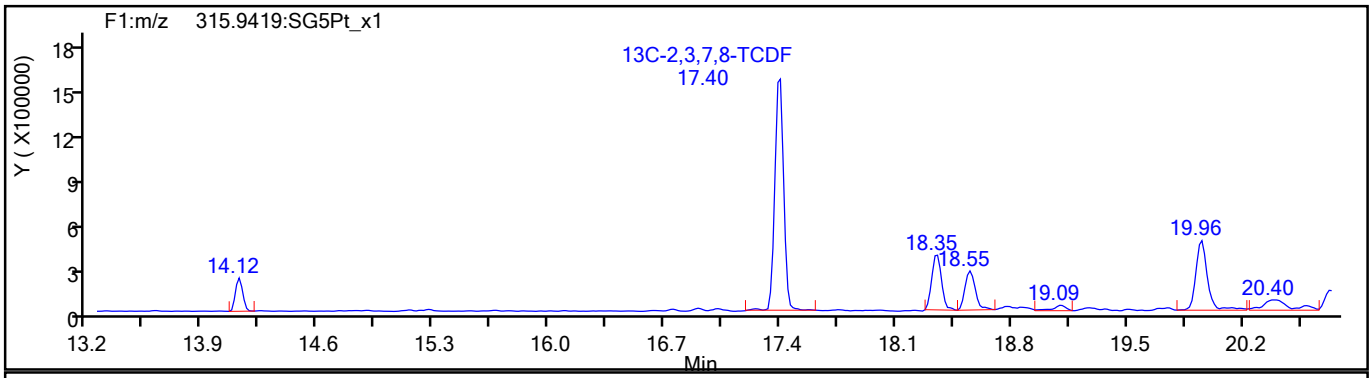

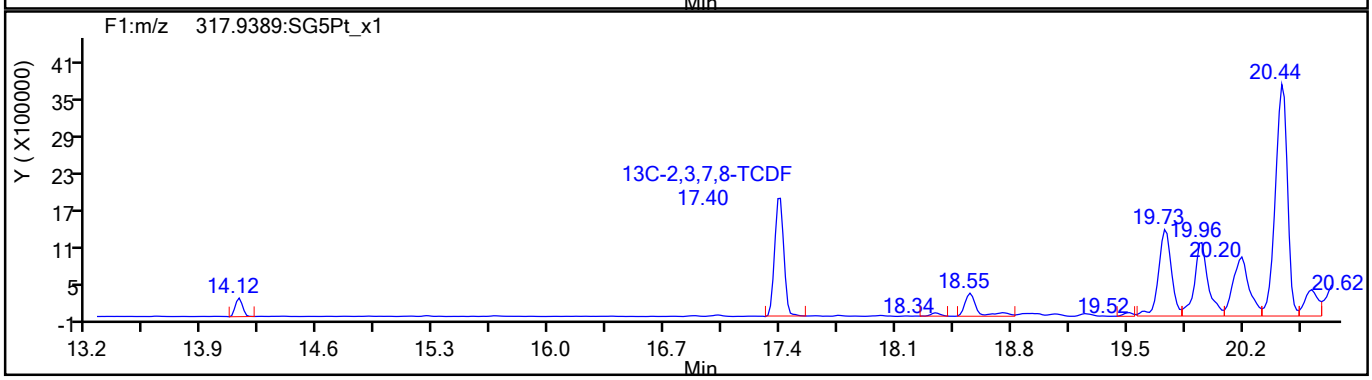

779234

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d		
Injection Date:	18-Aug-2021 05:14:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	517241	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

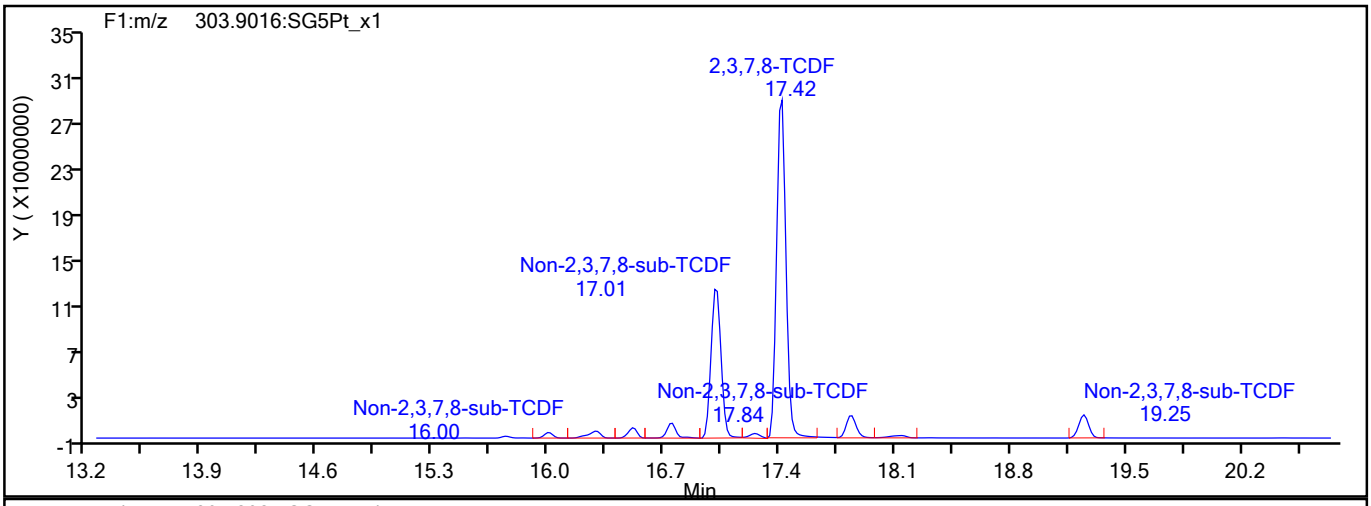

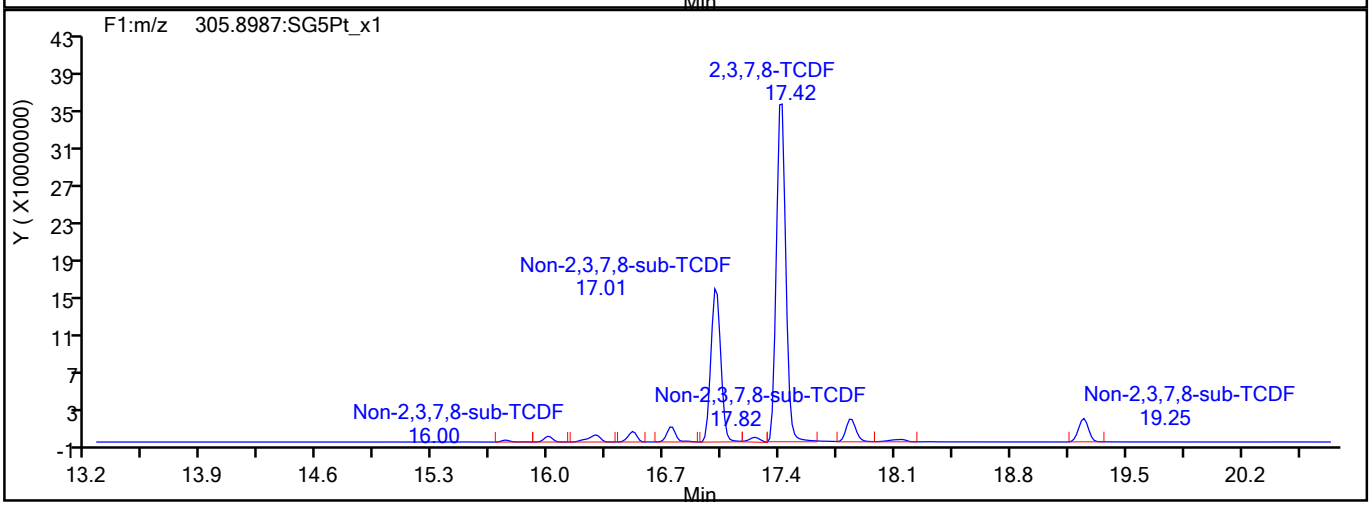

TCDF Interference Mass

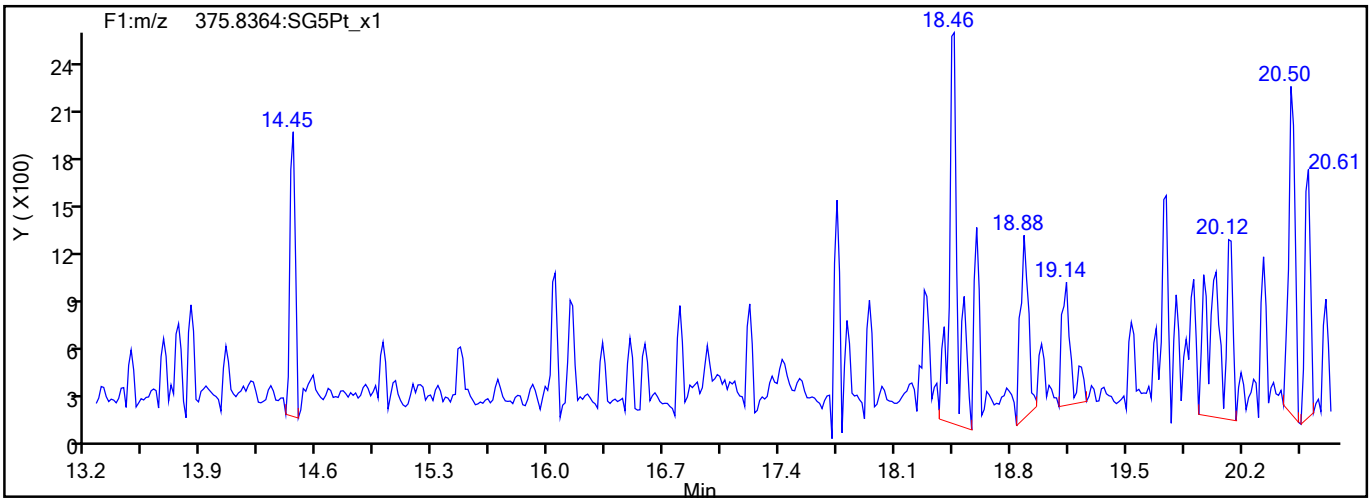

779235

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d		
Injection Date:	18-Aug-2021 05:14:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	517241	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

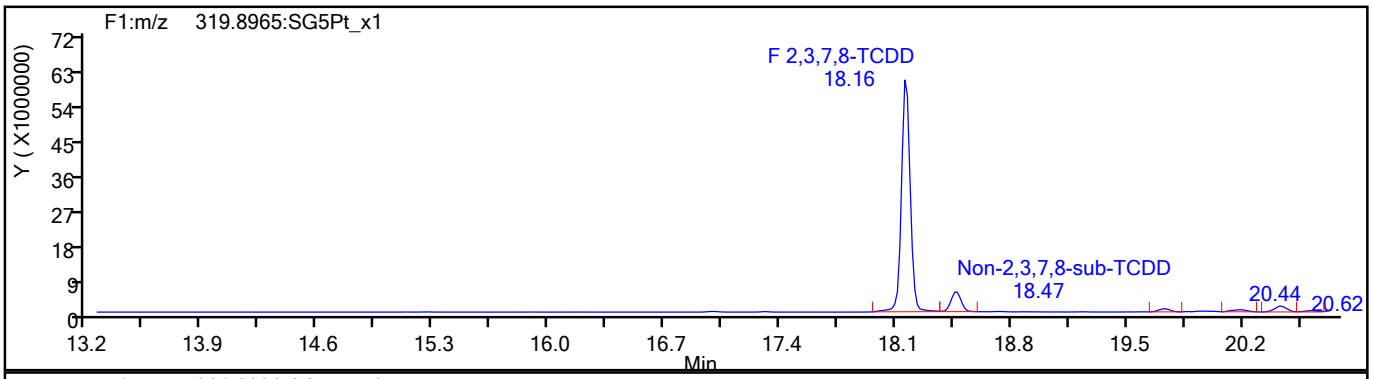

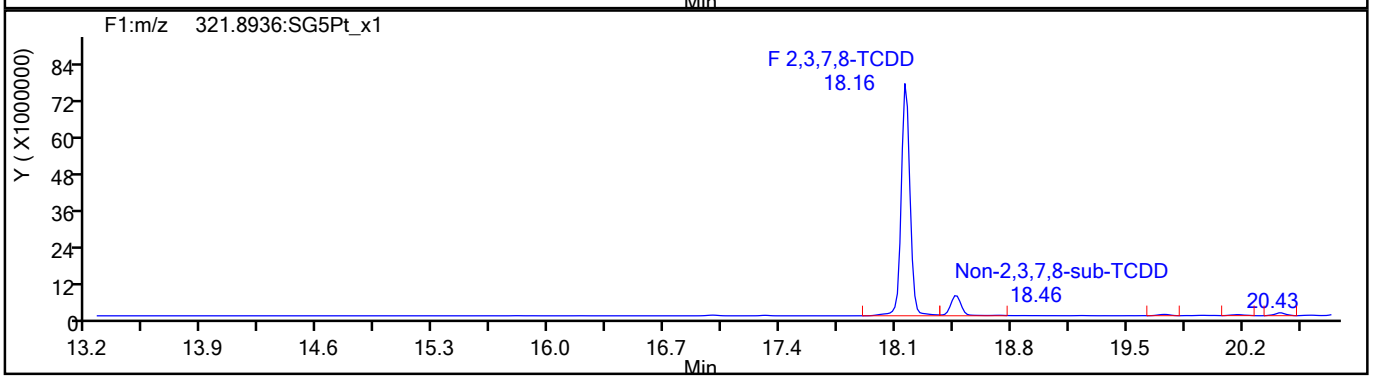

TCDD Standards

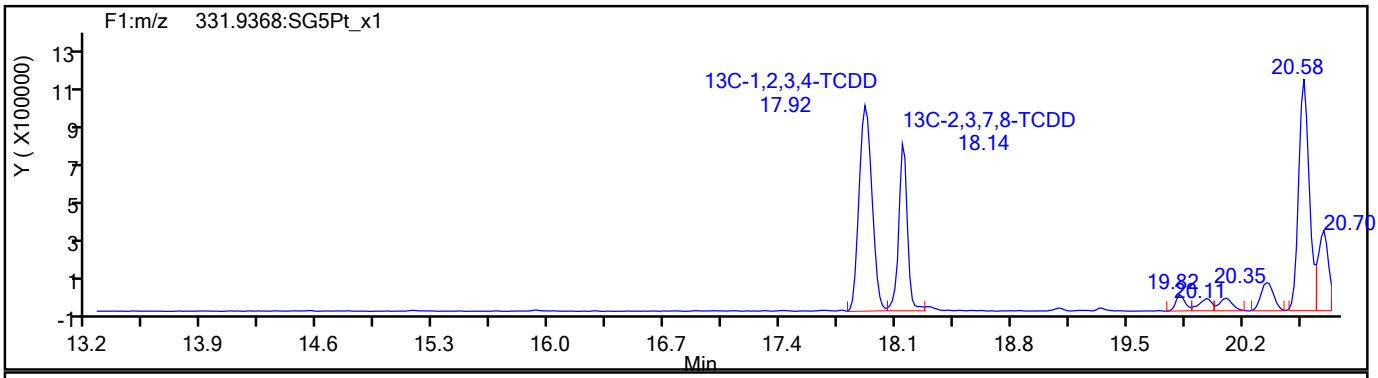

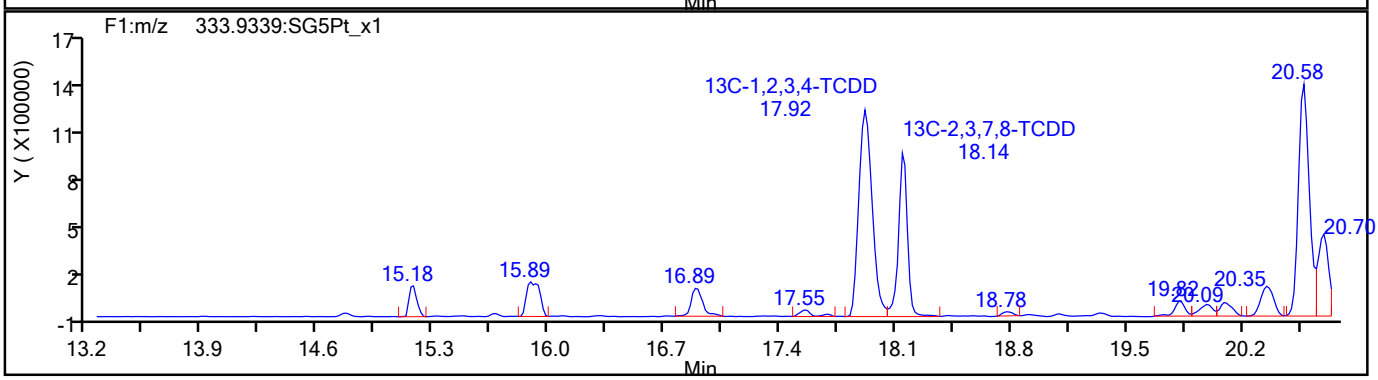

779236

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d		
Injection Date:	18-Aug-2021 05:14:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	517241	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

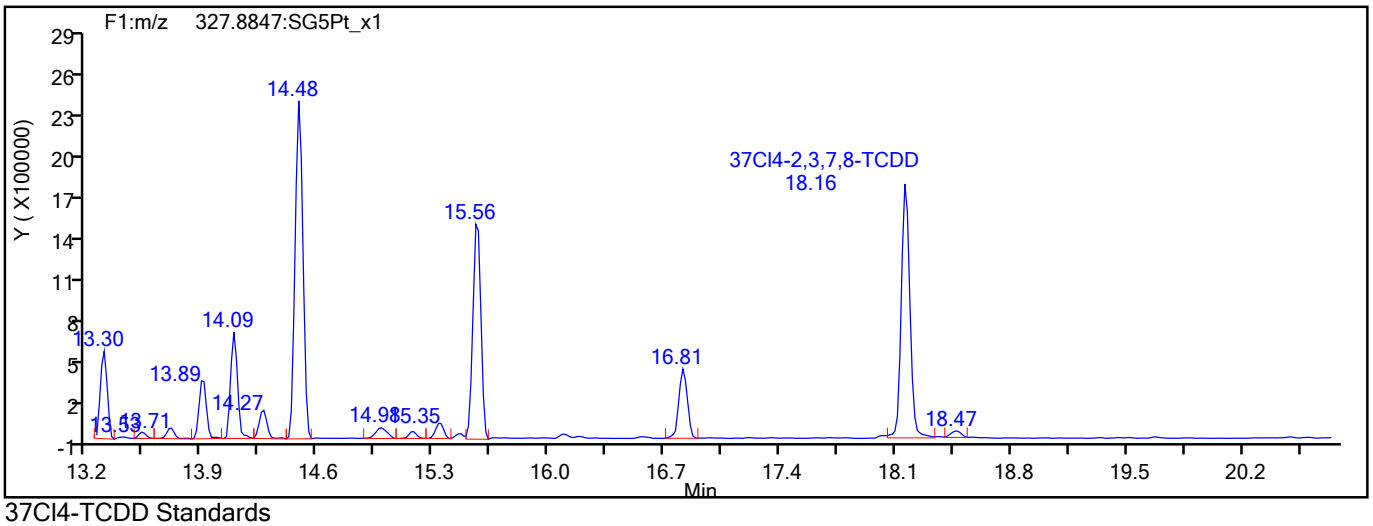

37Cl4-TCDD Standards

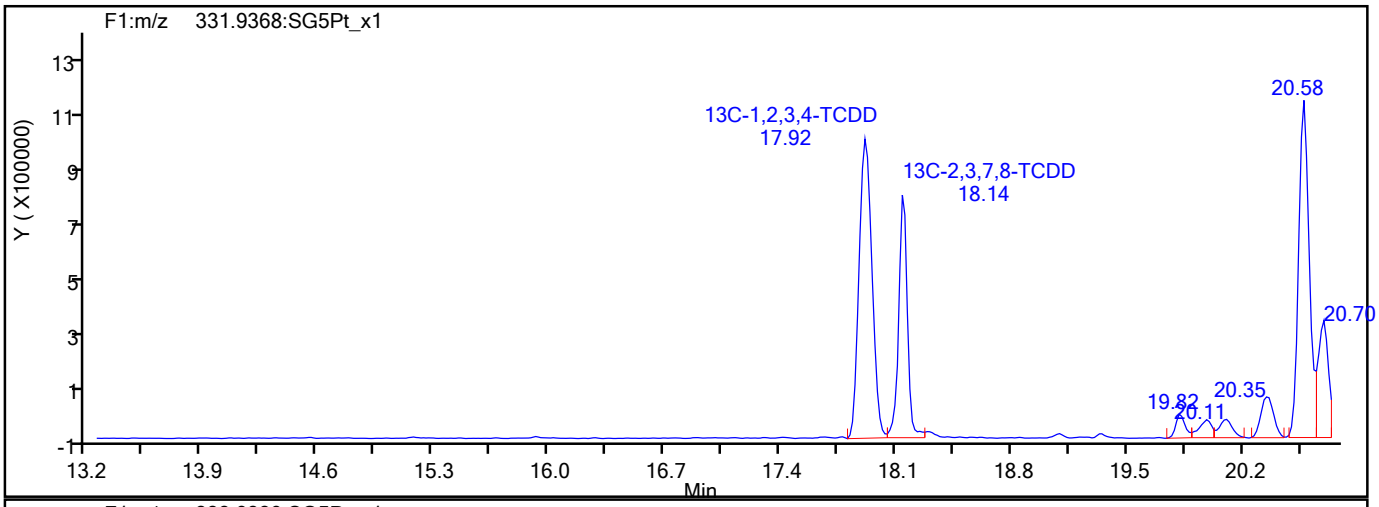

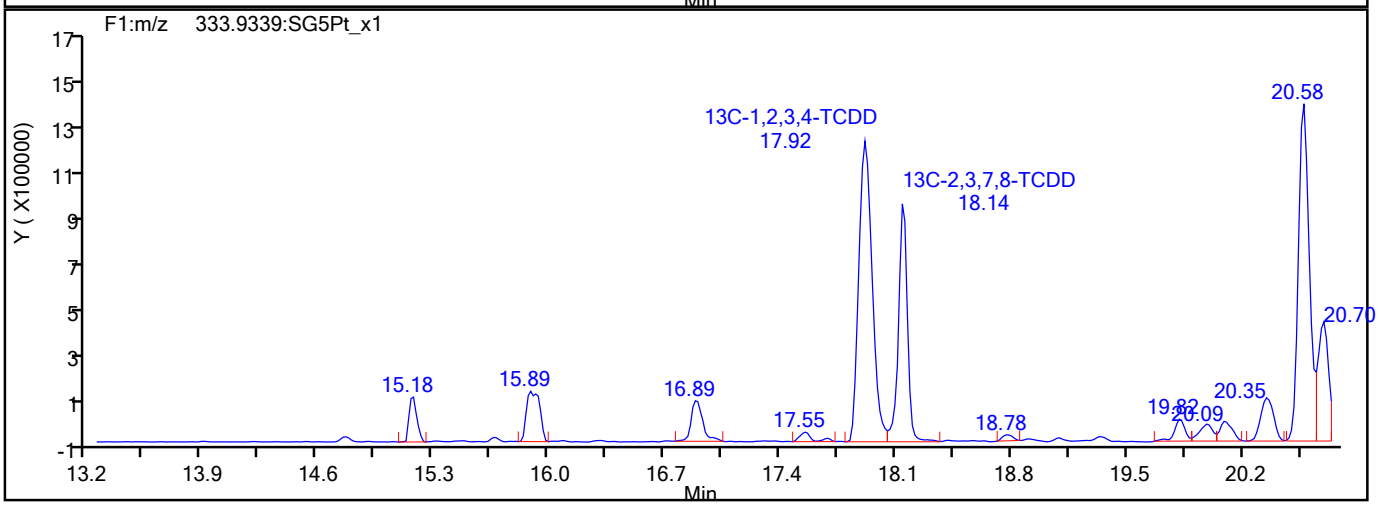

779237

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d		
Injection Date:	18-Aug-2021 05:14:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	517241	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

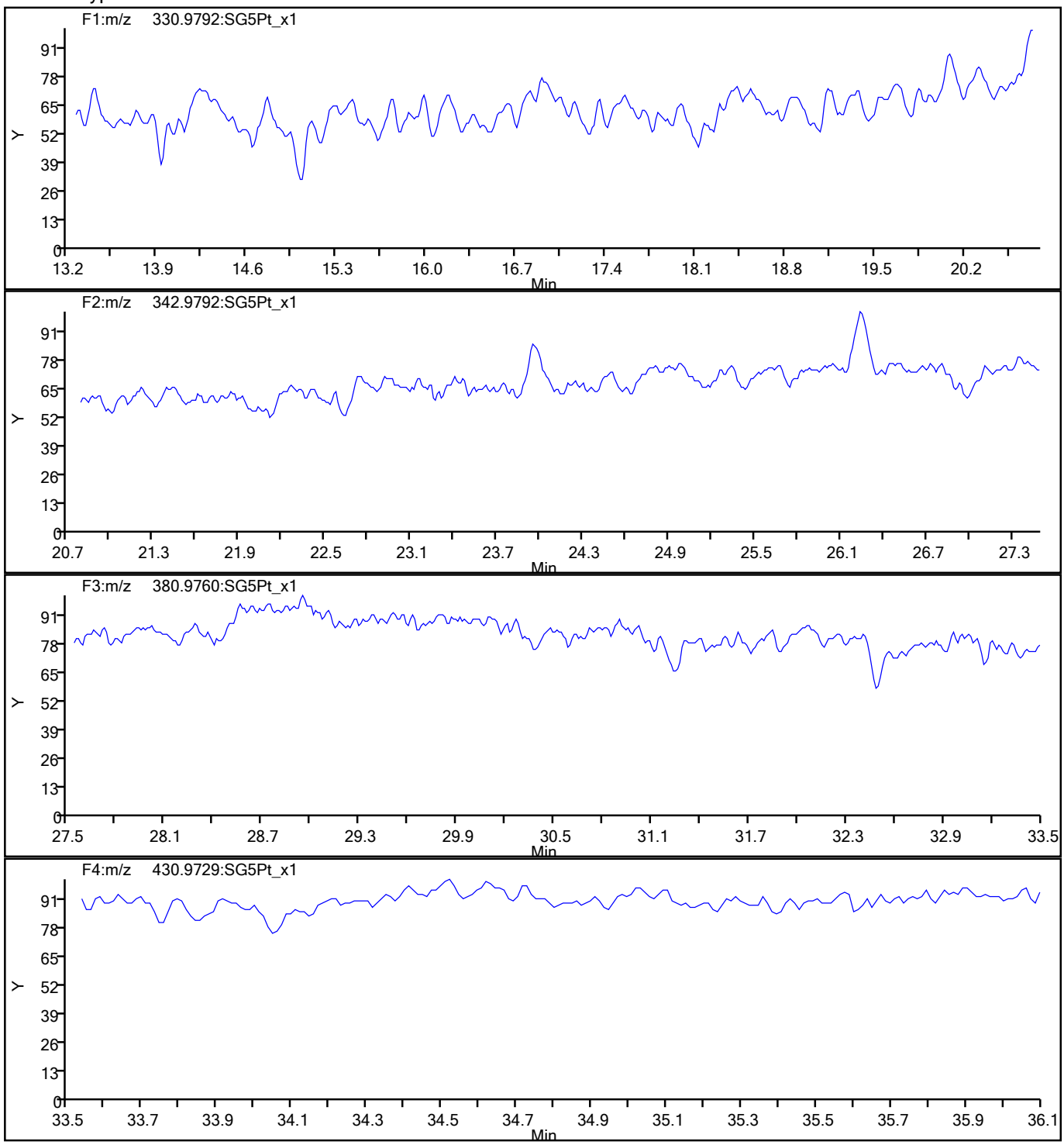

779238

Report Date: 26-Aug-2021 10:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_19.d		
Injection Date:	18-Aug-2021 05:14:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	517241	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

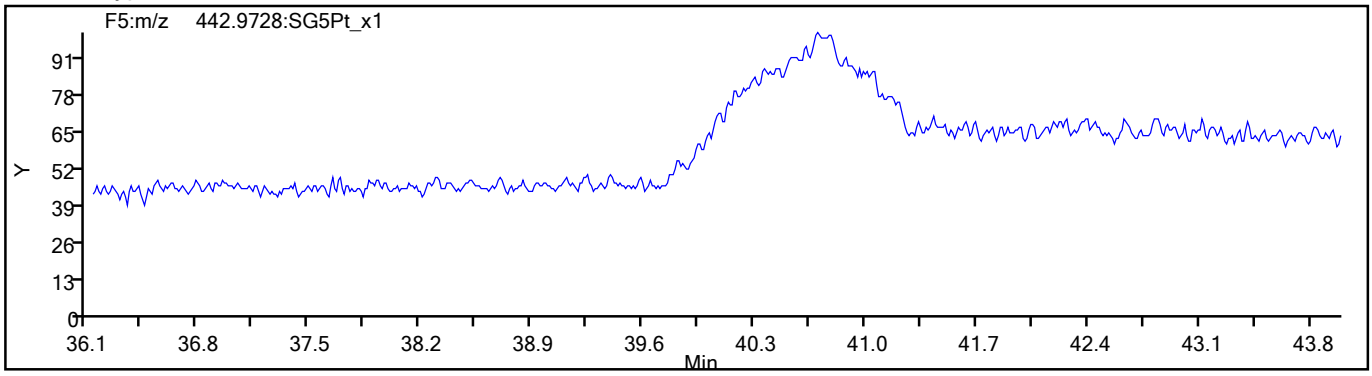

779239

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (0-2) RADL
Lab Sample ID: 320-76788-1 RADL
Matrix: Solid
Lab File ID: 25AU21A11D2_012.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:00
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.73(g)
Date Analyzed: 08/25/2021 20:00
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 59.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	98000	E B G	89	89

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	50		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	91		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_012.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Sample Type: Client
Inject. Date: 25-Aug-2021 20:00:25 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76788-A-1-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:10:51

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.357	11897347	0.86	7.2E+05	20.0	20.0				M
D 13C-2,3,7,8-TCDF	17.687	7992937	0.81	1.3327	10.1	10.1	2.306	2.306	50.41	M
2,3,7,8-TCDF	17.715	1547646056	0.79	0.9978	3881.0	3881.0	3.544	3.544		Ea
D 13C-2,3,7,8-TCDD	16.124	5503945	0.67	0.8749	10.6	10.6	19.2	19.2	52.88	nM
2,3,7,8-TCDD	16.137	341569143	0.80	1.0570	1174.3	1174.3	5.694	5.694		Ea
$ 37Cl4-2,3,7,8-TCDD	16.137	3732076		0.8648	7.254	7.254	0.2448	0.2448	90.68	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_012.d
Lims ID: 320-76788-A-1-A
Client ID: 11215702-072321-BN-SJSB085 (0-2)
Sample Type: Client
Inject. Date: 25-Aug-2021 20:00:25 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76788-A-1-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:10:51

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.357	16.298	4		5495914	1105958	351816	879540	3		M
333.9339	16.343	16.298	3		6401433	1257437	440398	1100995	3	0.86(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.687	17.615	4	1.081	3576637	651865	73228	183070	9		M
317.9389	17.687	17.615	4	1.081	4416300	635484	72022	180055	9	0.81(0.65-0.89)	M
2,3,7,8-TCDF											Ea
303.9016	17.715	17.628	5	1.002	682582332	113376974	42042	105105	2697		a
305.8987	17.701	17.628	4	1.001	865063724	142743561	49000	122500	2913	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.124	16.065	4	0.986	2214287	496863	351816	879540	1		M
333.9339	16.124	16.065	4	0.986	3289658	601458	440398	1100995	1	0.67(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.137	16.078	4	1.001	151818000	34875031	80559	201397	433		a
321.8936	16.137	16.078	4	1.001	189751143	43101033	51643	129107	835	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.137	16.078	4	0.987	3732076	902102	10009	25022	90		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_012.d				
Injection Date:	25-Aug-2021 20:00:25	Instrument ID:	11D2		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 18.62
Area: 3058220
Amount: 6.117002
Amount Units: pg/ul

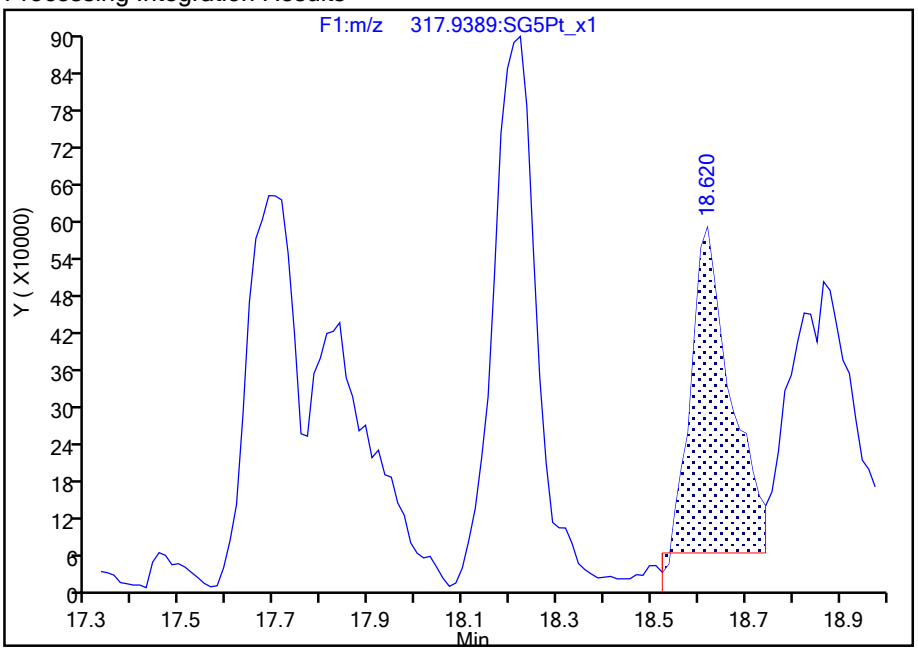

Manual Integration Results

RT: 17.69
Area: 4416300
Amount: 10.082272
Amount Units: pg/ul

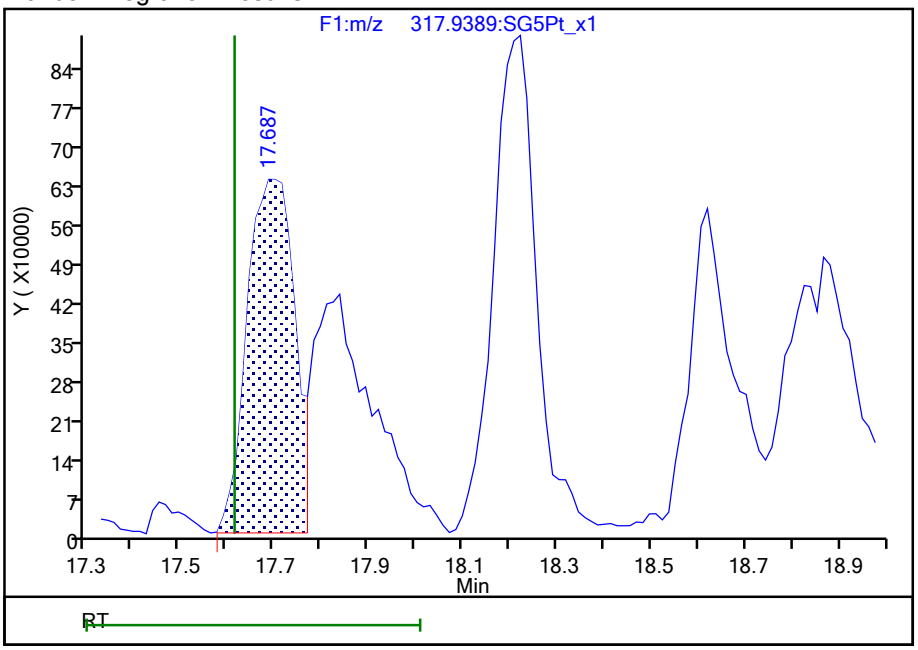

Reviewer: stephensk, 26-Aug-2021 09:09:24

Audit Action: Split an Integrated Peak Audit Reason: Retention Time Shift

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_012.d				
Injection Date:	25-Aug-2021 20:00:25	Instrument ID:	11D2		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 18.61
Area: 1791164
Amount: 6.117002
Amount Units: pg/ul

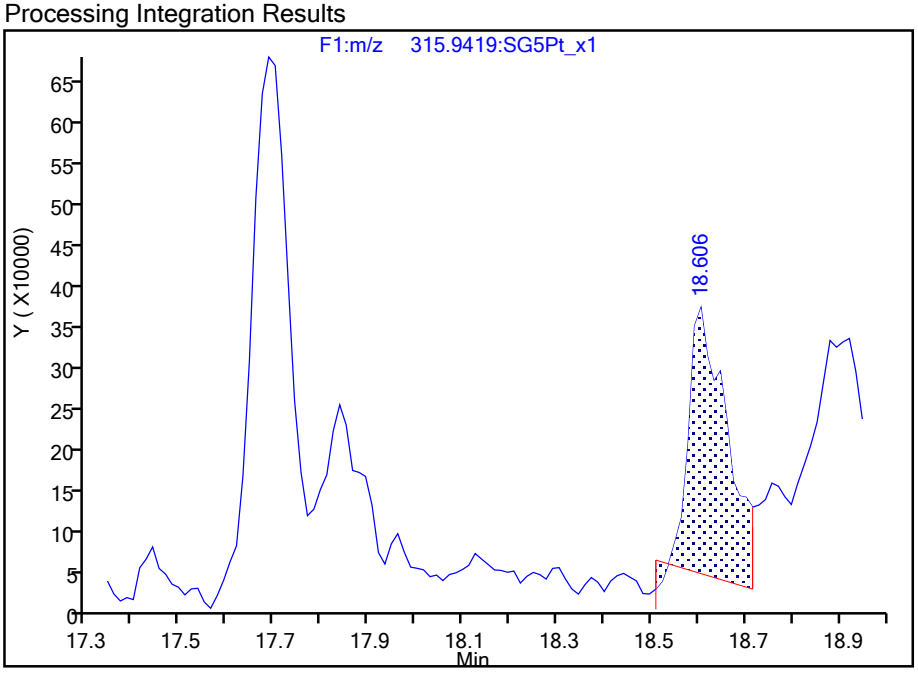

Manual Integration Results

RT: 17.69
Area: 3576637
Amount: 10.082272
Amount Units: pg/ul

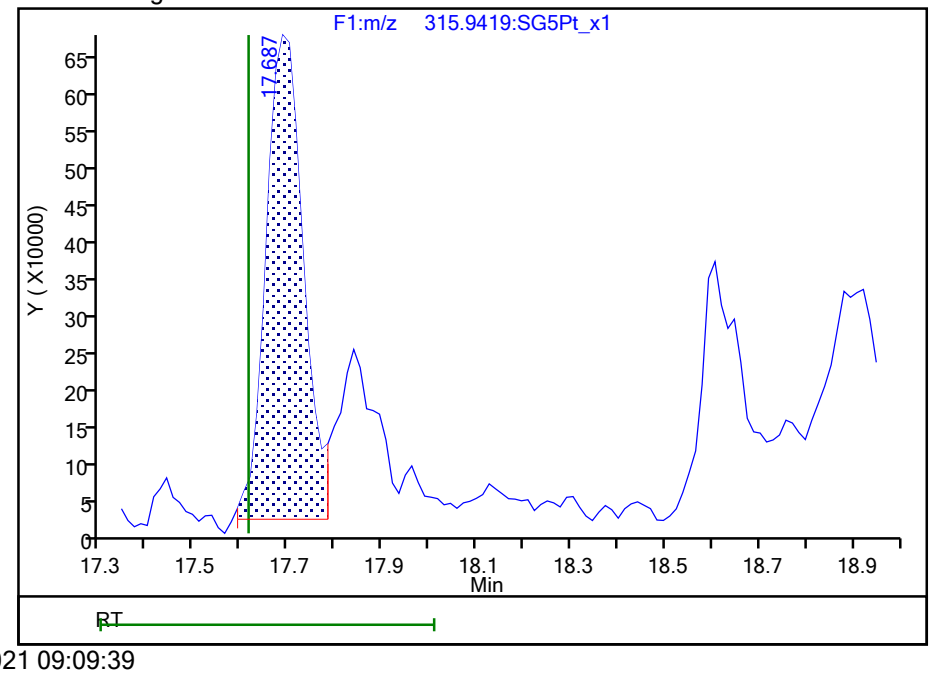

Reviewer: stephensk, 26-Aug-2021 09:09:39

Audit Action: Manually Integrated Audit Reason: Retention Time Shift

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_012.d				
Injection Date:	25-Aug-2021 20:00:25	Instrument ID:	11D2		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Not Detected
Expected RT: 17.63

Processing Integration Results

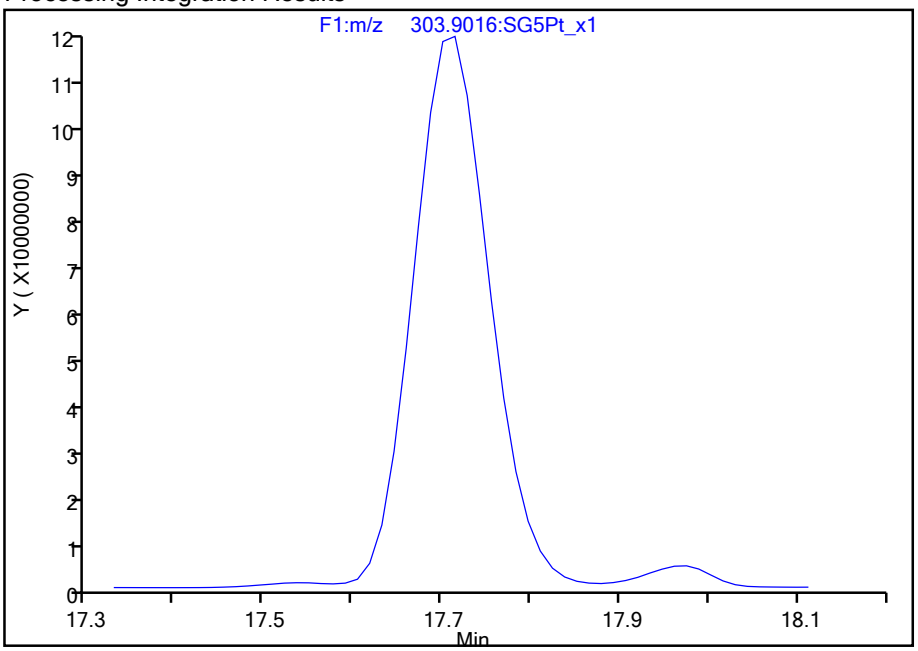

Manual Integration Results

RT: 17.71
Area: 682582332
Amount: 3881.0461
Amount Units: pg/ul

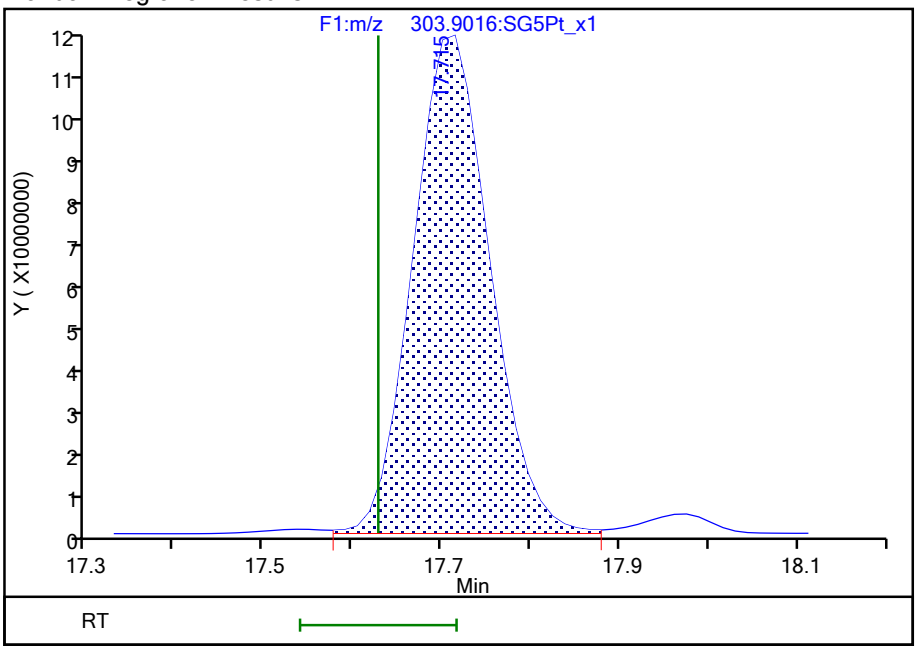

Reviewer: stephensk, 26-Aug-2021 09:09:49
Audit Action: Assigned Compound ID Audit Reason: Retention Time Shift

779245

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_012.d				
Injection Date:	25-Aug-2021 20:00:25	Instrument ID:	11D2		
Lims ID:	320-76788-A-1-A	Lab Sample ID:	320-76788-1		
Client ID:	11215702-072321-BN-SJSB085 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

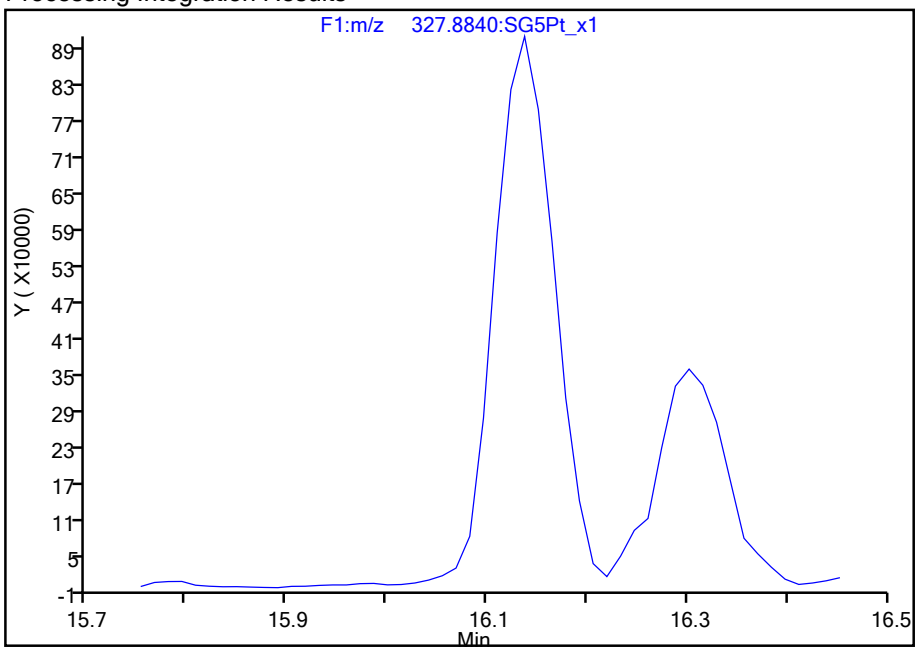

Manual Integration Results

RT: 16.14
Area: 3732076
Amount: 7.254484
Amount Units: pg/ul

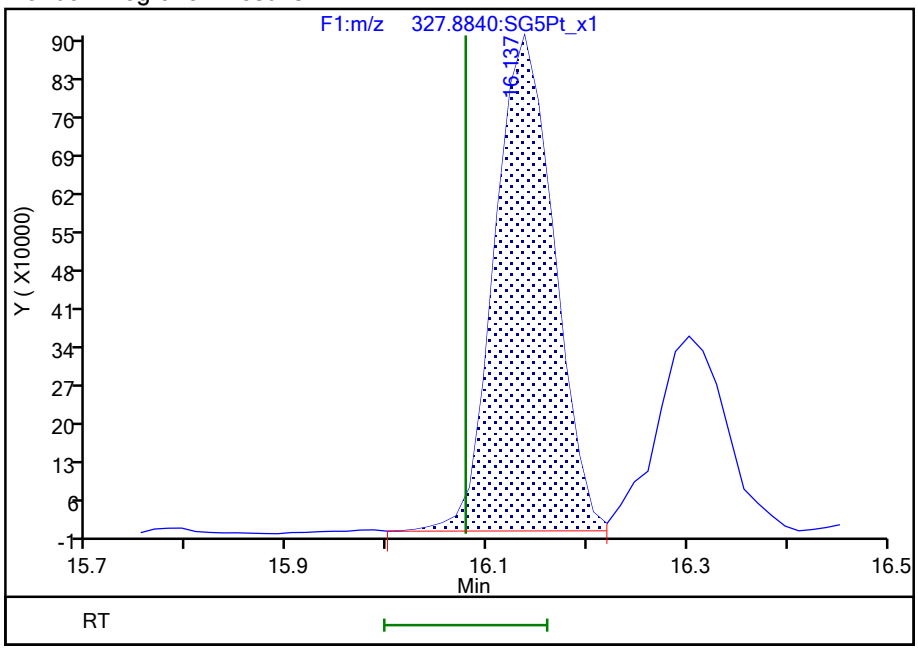

Reviewer: stephensk, 26-Aug-2021 09:10:43
Audit Action: Assigned Compound ID Audit Reason: Retention Time Shift

779246

Report Date: 26-Aug-2021 09:30:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_012.d		
Injection Date:	25-Aug-2021 20:00:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	519744	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

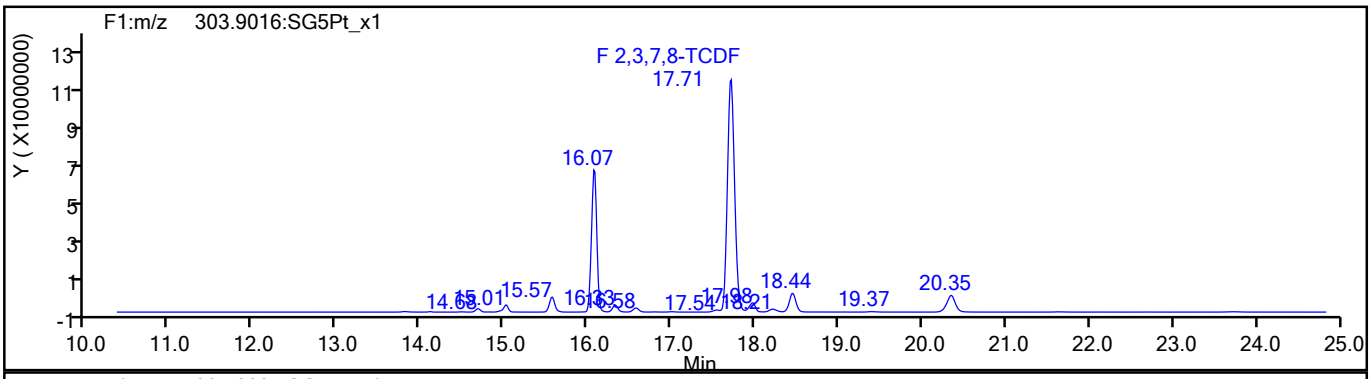

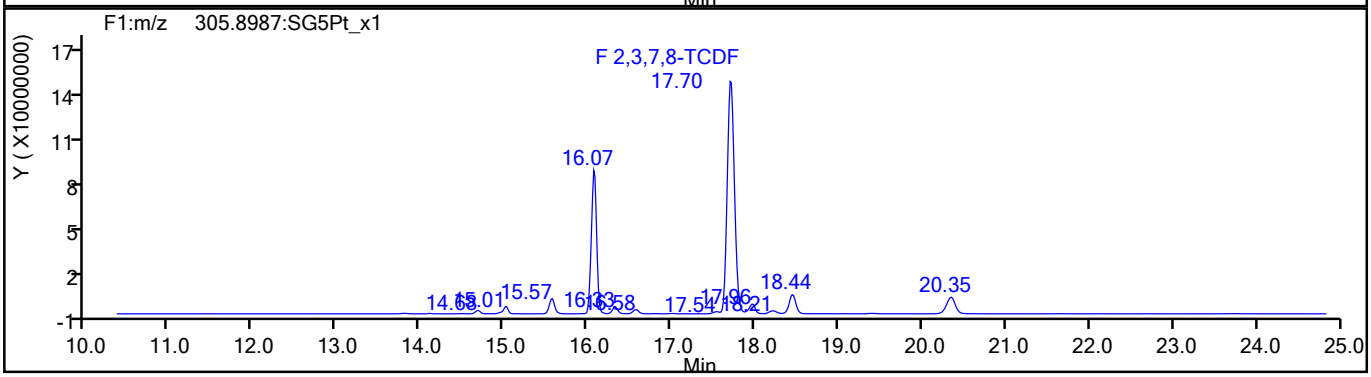

TCDF Standards

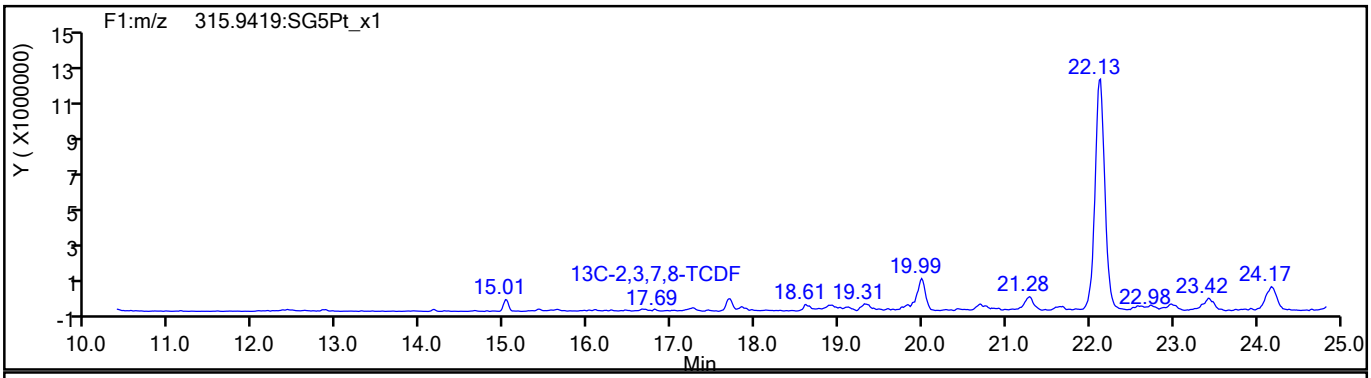

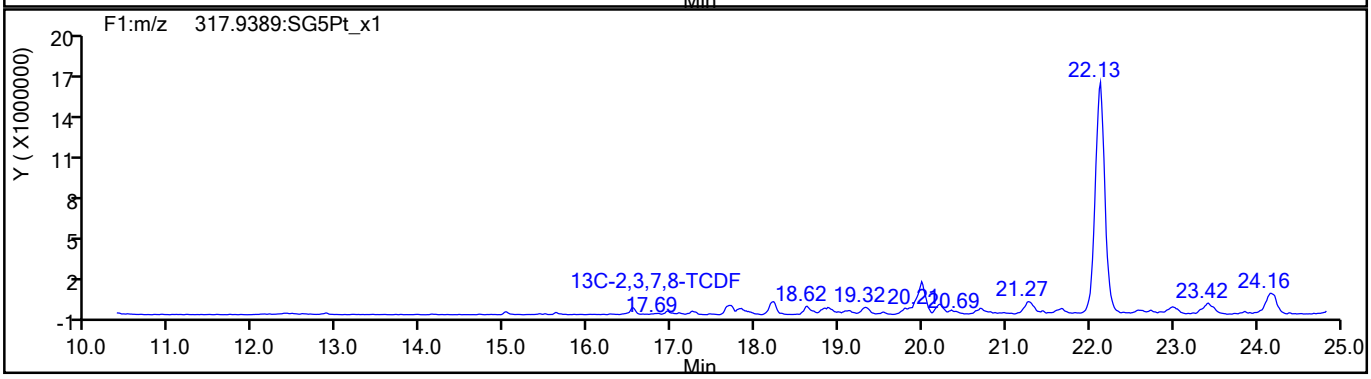

779247

Report Date: 26-Aug-2021 09:30:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_012.d		
Injection Date:	25-Aug-2021 20:00:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	519744	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

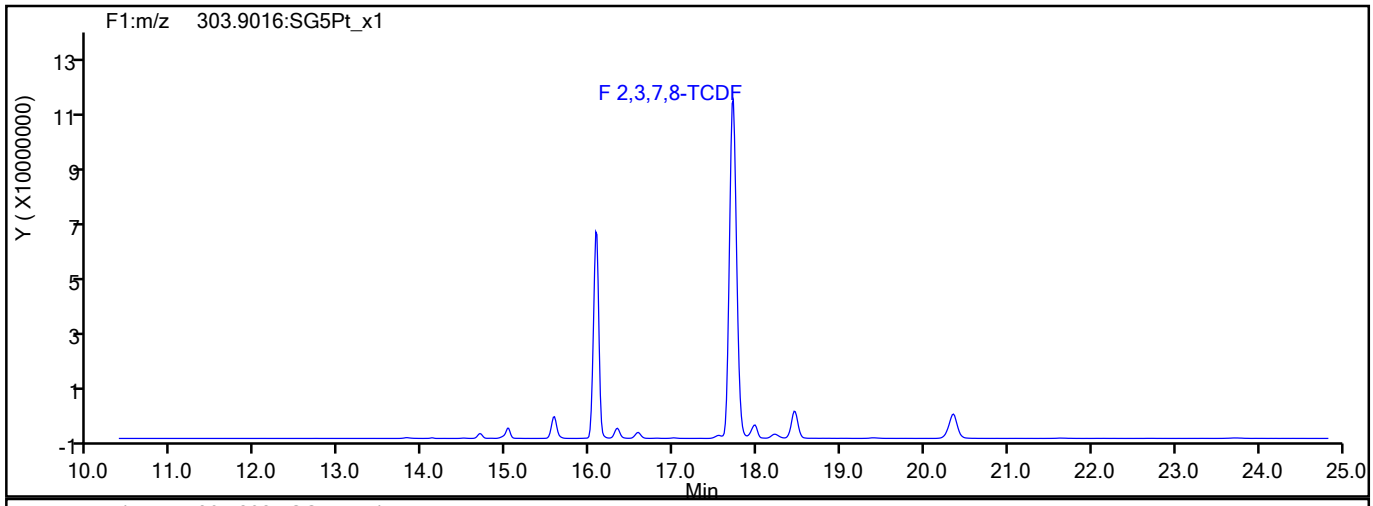

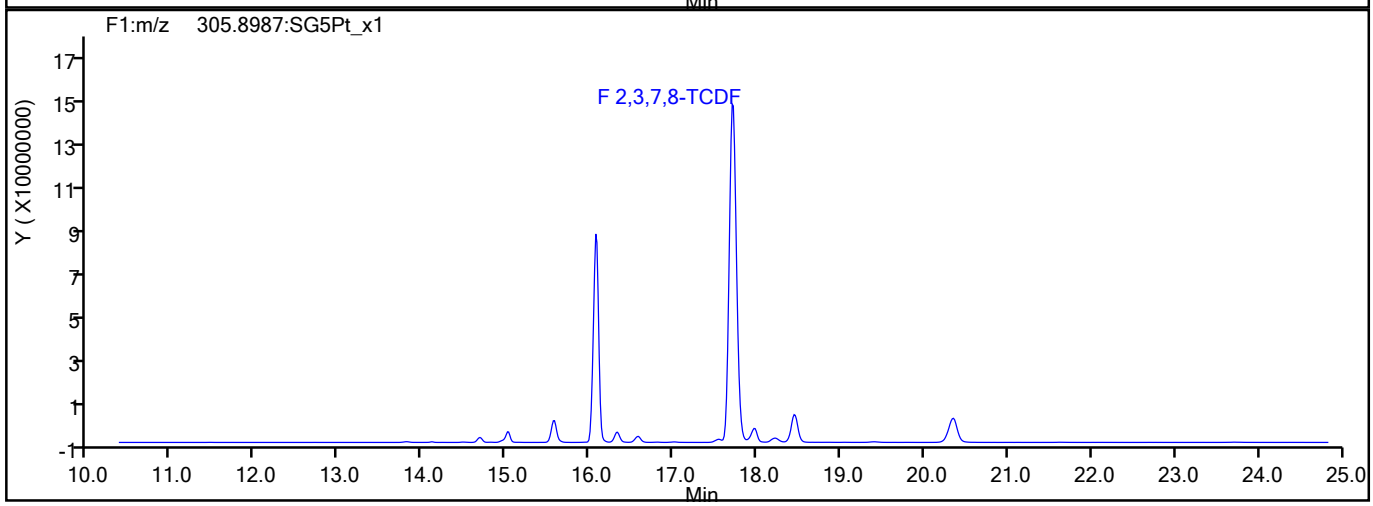

TCDF Interference Mass

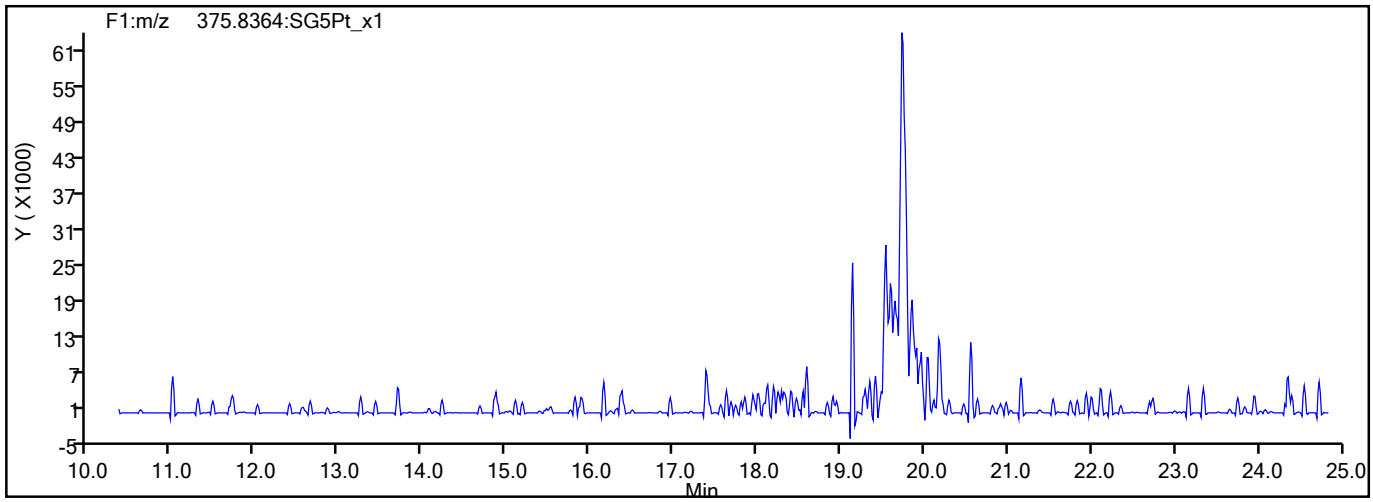

779248

Report Date: 26-Aug-2021 09:30:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_012.d		
Injection Date:	25-Aug-2021 20:00:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	519744	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

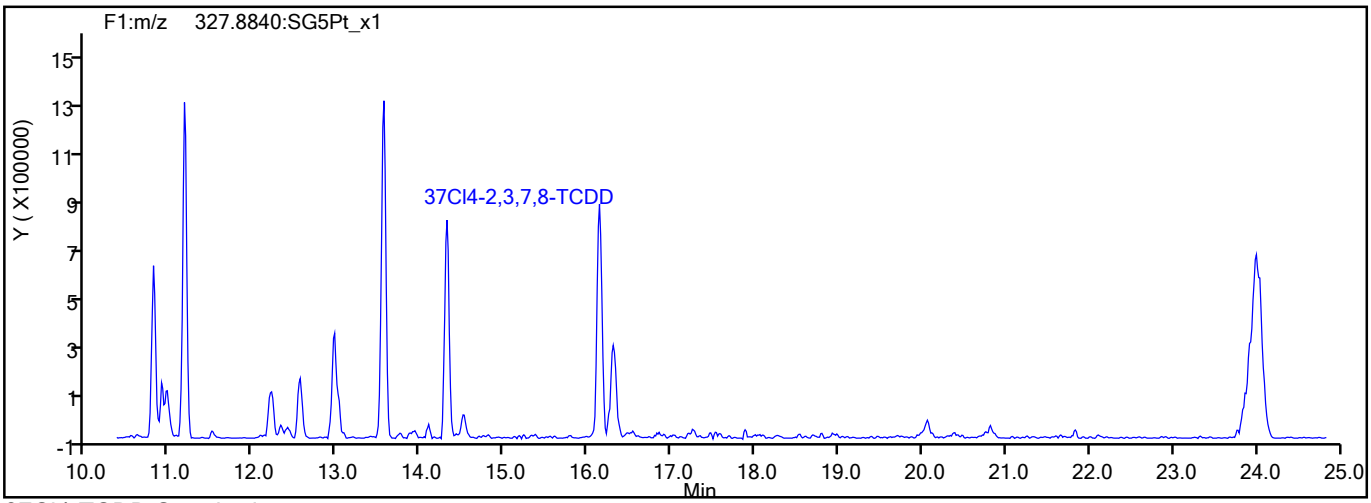

37Cl4-TCDD Standards

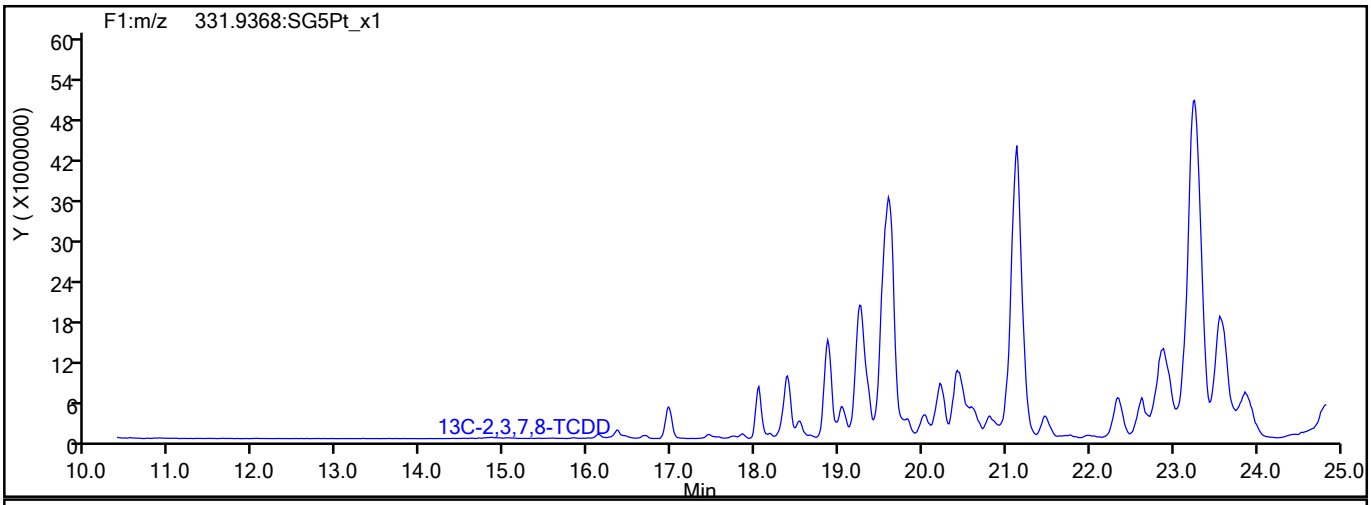

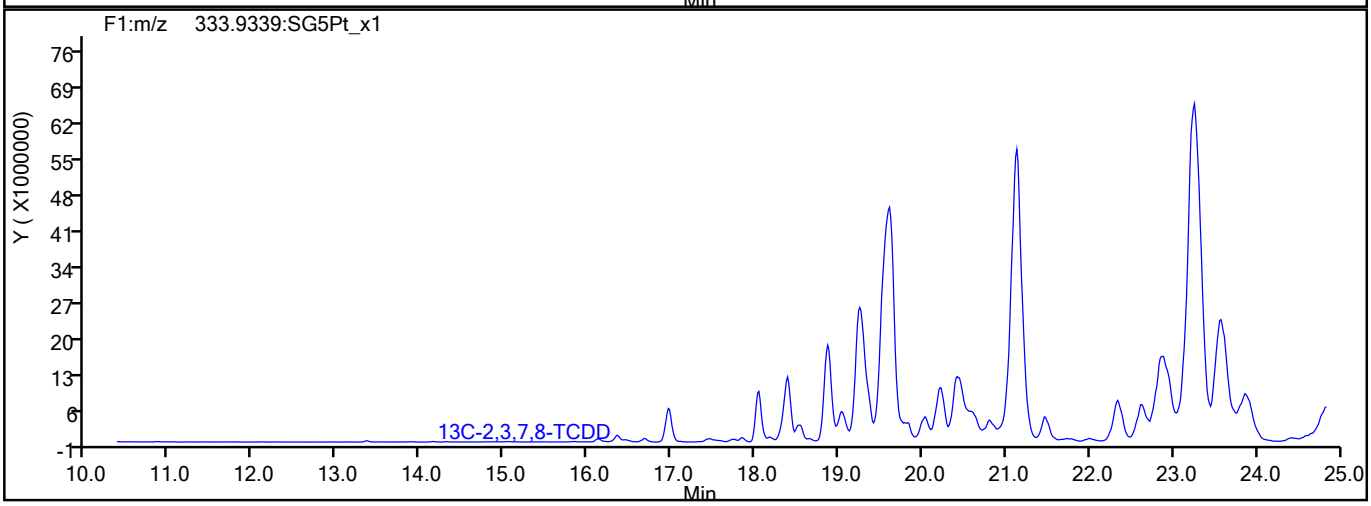

779249

Report Date: 26-Aug-2021 09:30:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_012.d		
Injection Date:	25-Aug-2021 20:00:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (0-2)		
Worklist#:	519744	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

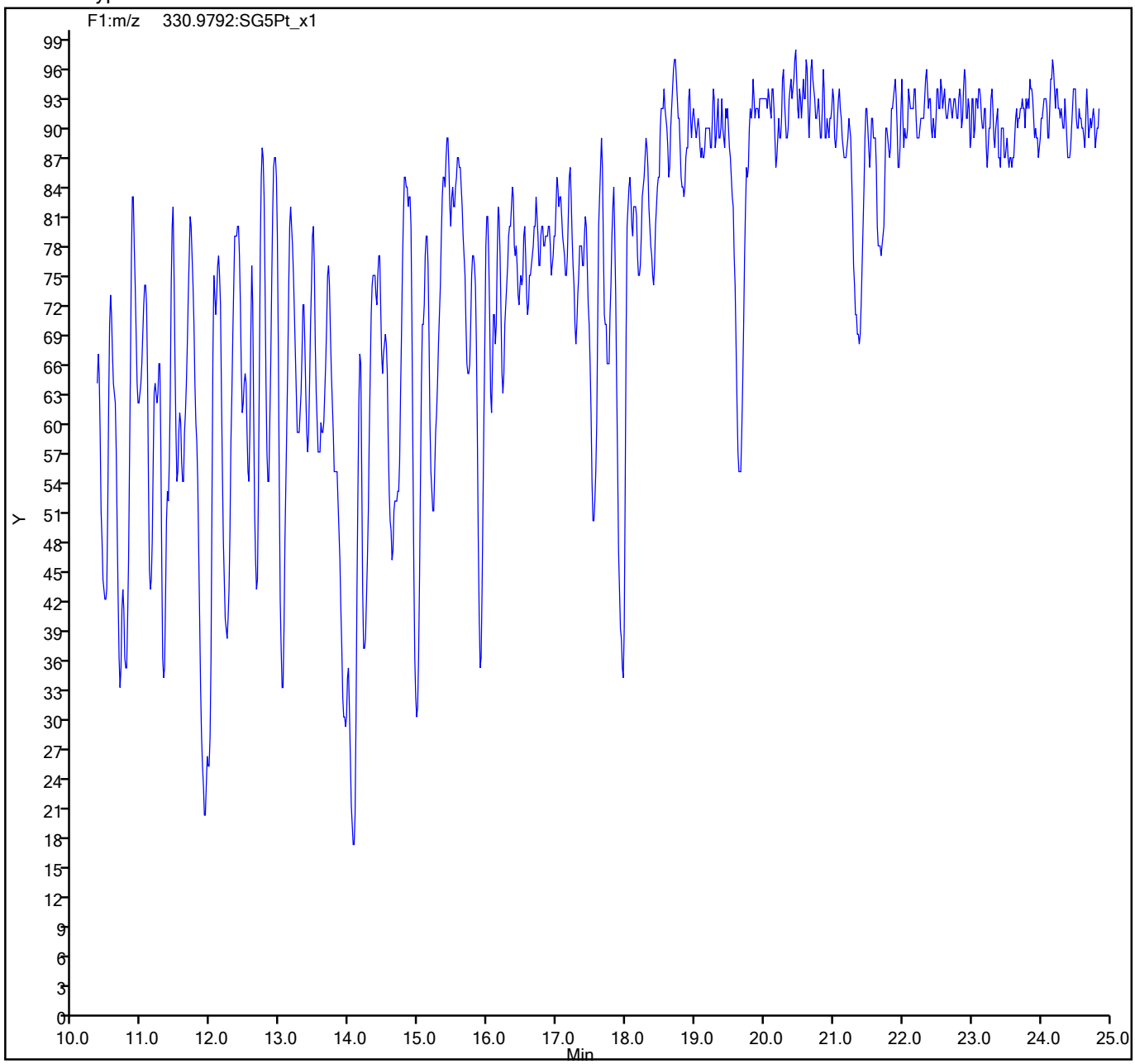

779250

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (2-4)
Lab Sample ID: 320-76788-2
Matrix: Solid
Lab File ID: 13AU2110D5_17.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:05
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.86(g)
Date Analyzed: 08/14/2021 05:11
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	530	G B	1.9	1.9
40321-76-4	1,2,3,7,8-PeCDD	4.4	J	8.3	0.15
57117-41-6	1,2,3,7,8-PeCDF	45		8.3	0.33
57117-31-4	2,3,4,7,8-PeCDF	26		8.3	0.33
39227-28-6	1,2,3,4,7,8-HxCDD	0.82	J B	8.3	0.15
57653-85-7	1,2,3,6,7,8-HxCDD	1.7	J	8.3	0.16
19408-74-3	1,2,3,7,8,9-HxCDD	2.8	J	8.3	0.14
70648-26-9	1,2,3,4,7,8-HxCDF	54	B	8.3	0.27
57117-44-9	1,2,3,6,7,8-HxCDF	14	B	8.3	0.28
72918-21-9	1,2,3,7,8,9-HxCDF	1.1	J B	8.3	0.21
60851-34-5	2,3,4,6,7,8-HxCDF	1.8	J	8.3	0.22
35822-46-9	1,2,3,4,6,7,8-HpCDD	59	B	8.3	0.83
67562-39-4	1,2,3,4,6,7,8-HpCDF	16	B	8.3	0.15
55673-89-7	1,2,3,4,7,8,9-HpCDF	5.4	J B	8.3	0.18
3268-87-9	OCDD	1600	B	17	1.9
39001-02-0	OCDF	13	J B	17	0.040
41903-57-5	Total TCDD	580	G B	1.9	1.9
30402-14-3	Total TCDF	2900	G B	4.0	4.0
36088-22-9	Total PeCDD	9.1	q	8.3	0.15
30402-15-4	Total PeCDF	110	q	8.3	0.33
34465-46-8	Total HxCDD	27	q B	8.3	0.15
55684-94-1	Total HxCDF	82	B	8.3	0.25
37871-00-4	Total HpCDD	150	B	8.3	0.83
38998-75-3	Total HpCDF	27	B	8.3	0.17

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (2-4)
Lab Sample ID: 320-76788-2
Matrix: Solid
Lab File ID: 13AU2110D5_17.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:05
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.86(g)
Date Analyzed: 08/14/2021 05:11
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	64		25-164
89059-46-1	13C-2,3,7,8-TCDF	62		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	62		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	61		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	66		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	68		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	59		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	66		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	57		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	60		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	58		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	63		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	61		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	71		26-138
114423-97-1	13C-OCDD	70		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	82		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Sample Type: Client
Inject. Date: 14-Aug-2021 05:11:23 ALS Bottle#: 18 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-2-a 320-76788-a-2-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 07:26:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:37:47

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.885	151135441	0.82	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.371	151373859	0.77	1.6249	61.6	61.6	0.1979	0.1979	61.64	
2,3,7,8-TCDF	17.386	781001838	0.77	1.0239	503.9	503.9	1.222	1.222		E
A Non-2,3,7,8-sub-TCDF	17.046	559755347	0.78	1.0239	361.1	361.1	1.222	223.2		a
S Total TCDF					865.0	865.0	1.222	1.222		
D 13C-2,3,7,8-TCDD	18.081	86722359	0.80	0.8993	63.8	63.8	0.1868	0.1868	63.80	
2,3,7,8-TCDD	18.097	175437005	0.78	1.2541	161.3	161.3	0.5655	0.5655		
$ 37Cl4-2,3,7,8-TCDD	18.097	54588084		1.1071	32.6	32.6	0.0595	0.0595	81.56	
A Non-2,3,7,8-sub-TCDD	17.499	16609829	0.80	1.2541	15.3	15.3	0.5655	13.5		
S Total TCDD					176.6	176.6	0.5655	0.5655		
D 13C-1,2,3,7,8-PeCDF	22.394	111856222	1.58	1.2101	61.2	61.2	0.1210	0.1210	61.16	
1,2,3,7,8-PeCDF	22.421	16159985	1.58	1.0611	13.6	13.6	0.0996	0.0996		
D 13C-2,3,4,7,8-PeCDF	23.730	122888811	1.58	1.2395	65.6	65.6	0.1181	0.1181	65.60	
2,3,4,7,8-PeCDF	23.758	9749234	1.59	1.0184	7.790	7.790	0.1013	0.1013		
A F1 PeCDFs	20.093	111636	1.70	1.0398	0.0915	0.0915	0.0128	0.0915		
A Non-2,3,7,8-sub-PeCDF	23.241	15100168	1.55	1.0398	12.4	12.4	0.1004	5.294		RQ
S Total PeCDF					33.9	33.9	0.1004	0.1004		RQ
D 13C-1,2,3,7,8-PeCDD	24.453	70936280	1.60	0.7612	61.7	61.7	0.0605	0.0605	61.66	
1,2,3,7,8-PeCDD	24.480	981643	1.57	1.0484	1.320	1.320	0.0460	0.0460		M
A Non-2,3,7,8-sub-PeCDD	23.349	1056640	1.55	1.0484	1.653	1.421	0.0460	0.4975		RQ
S Total PeCDD					2.972	2.741	0.0460	0.0460		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	99678382	0.52	1.0837	65.6	65.6	0.2224	0.2224	65.56	
1,2,3,4,7,8-HxCDF	30.542	17711572	1.23	1.0851	16.4	16.4	0.0827	0.0827		
D 13C-1,2,3,6,7,8-HxCDF	30.702	90313923	0.53	1.1279	57.1	57.1	0.2137	0.2137	57.07	
1,2,3,6,7,8-HxCDF	30.715	4414048	1.19	1.1260	4.340	4.340	0.0846	0.0846		
D 13C-2,3,4,6,7,8-HxCDF	31.527	86689287	0.52	1.0637	58.1	58.1	0.2266	0.2266	58.09	
2,3,4,6,7,8-HxCDF	31.541	556053	1.15	1.1675	0.5494	0.5494	0.0669	0.0669		
D 13C-1,2,3,7,8,9-HxCDF	32.326	81342357	0.51	0.9676	59.9	59.9	0.2491	0.2491	59.92	
1,2,3,7,8,9-HxCDF	32.339	310036	1.15	1.1664	0.3268	0.3268	0.0644	0.0644		
A Non-2,3,7,8-sub-HxCDF	30.197	3167138	1.19	1.1363	3.114	3.114	0.0737	1.174		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					24.7	24.7	0.0746	0.0746		
* 13C-1,2,3,7,8,9-HxCDD	32.140	140294116	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	69881212	1.25	0.7334	67.9	67.9	0.2512	0.2512	67.91	
1,2,3,4,7,8-HxCDD	31.727	184756	1.42	1.0640	0.2485	0.2485	0.0446	0.0446		
D 13C-1,2,3,6,7,8-HxCDD	31.820	73383771	1.25	0.8802	59.4	59.4	0.2093	0.2093	59.43	
1,2,3,6,7,8-HxCDD	31.833	381112	1.20	1.0001	0.5193	0.5193	0.0487	0.0487		
1,2,3,7,8,9-HxCDD	32.153	696365	1.20	1.1325	0.8584	0.8584	0.0425	0.0425		M
A Non-2,3,7,8-sub-HxCDD	30.882	5011140	1.24	1.0655	6.619	6.565	0.0451	3.983		RQ
S Total HxCDD					8.245	8.191	0.0453	0.0453		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	66035581	0.44	0.7730	60.9	60.9	0.7498	0.7498	60.89	
1,2,3,4,6,7,8-HpCDF	33.778	4654487	1.07	1.4413	4.890	4.890	0.0465	0.0465		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.859	70173046	0.44	0.7008	71.4	71.4	0.8271	0.8271	71.37	
1,2,3,4,7,8,9-HpCDF	34.871	1504392	1.04	1.3174	1.627	1.627	0.0547	0.0547		
A Non-2,3,7,8-sub-HpCDF	34.319	1605939	1.13	1.3793	1.710	1.710	0.0503	1.710		
S Total HpCDF					8.227	8.227	0.0506	0.0506		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	57585171	1.01	0.6472	63.4	63.4	0.2876	0.2876	63.42	
1,2,3,4,6,7,8-HpCDD	34.580	11249516	1.05	1.0943	17.9	17.9	0.2515	0.2515		
A Non-2,3,7,8-sub-HpCDD	34.301	16854849	1.02	1.0943	26.7	26.7	0.2515	26.7		
S Total HpCDD					44.6	44.6	0.2515	0.2515		
D 13C-OCDD	36.926	87353671	0.88	0.4472	139.2	139.2	0.1632	0.1632	69.62	
OCDF	37.021	2437520	0.84	1.4382	3.881	3.881	0.0122	0.0122		
OCDD	36.938	238046536	0.89	1.1070	492.3	492.3	0.5845	0.5845		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Sample Type: Client
Inject. Date: 14-Aug-2021 05:11:23 ALS Bottle#: 18 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-2-a 320-76788-a-2-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 07:26:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:37:47

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.885	17.855	2		68213098	16445525	9324	23310	1764		a
333.9339	17.885	17.855	2		82922343	19934386	15126	37815	1318	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.371	17.341	2	0.971	65716476	16740277	16712	41780	1002		
317.9389	17.371	17.341	2	0.971	85657383	21848606	30079	75197	726	0.77(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.386	17.356	2	1.001	340724497	84298932	84290	210725	1000		
305.8987	17.386	17.356	2	1.001	440277341	108225558	108867	272167	994	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	15.965	17.046	-65	0.919	3820920	1097564	84290	210725	13		
305.8987	15.965	17.046	-65	0.919	5139575	1456401	108867	272167	13	0.74(0.65-0.89)	
303.9016	16.252	17.046	-48	0.936	8597402	1901975	84290	210725	23		
305.8987	16.252	17.046	-48	0.936	11318916	2500574	108867	272167	23	0.76(0.65-0.89)	
303.9016	16.479	17.046	-34	0.949	10113156	2690747	84290	210725	32		
305.8987	16.479	17.046	-34	0.949	12992171	3429770	108867	272167	32	0.78(0.65-0.89)	
303.9016	16.721	17.046	-19	0.963	14263513	3586003	84290	210725	43		
305.8987	16.721	17.046	-19	0.963	18333018	4560659	108867	272167	42	0.78(0.65-0.89)	
303.9016	16.993	17.046	-3	0.978	151446118	39839107	84290	210725	473		
305.8987	16.993	17.046	-3	0.978	194555667	51367521	108867	272167	472	0.78(0.65-0.89)	
303.9016	17.220	17.046	10	0.991	4790105	1182682	84290	210725	14		
305.8987	17.220	17.046	10	0.991	6232443	1562341	108867	272167	14	0.77(0.65-0.89)	
303.9016	17.809	17.046	46	1.025	22903968	5477873	84290	210725	65		
305.8987	17.809	17.046	46	1.025	29567500	7101687	108867	272167	65	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.066	17.046	61	1.040	4114470	957679	84290	210725	11		
305.8987	18.066	17.046	61	1.040	5582414	1246166	108867	272167	11	0.74(0.65-0.89)	
303.9016	19.200	17.046	129	1.105	24424736	5670403	84290	210725	67		a
305.8987	19.200	17.046	129	1.105	31559255	7231472	108867	272167	66	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.081	18.051	2	1.011	38462336	9818854	9324	23310	1053		
333.9339	18.081	18.051	2	1.011	48260023	12253824	15126	37815	810	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.097	18.066	2	1.001	77146176	19265551	31222	78055	617		
321.8936	18.097	18.066	2	1.001	98290829	24693216	31398	78495	786	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.097	18.066	2	1.012	54588084	13758323	9585	23962	1435		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.991	17.499	29	0.995	846966	234851	31222	78055	8		
321.8936	17.991	17.499	29	0.995	1107207	305330	31398	78495	10	0.76(0.65-0.89)	
319.8965	18.444	17.499	57	1.020	6532373	1498440	31222	78055	48		
321.8936	18.444	17.499	57	1.020	8123283	1900687	31398	78495	61	0.80(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.394	22.367	2	1.252	68431080	12338943	13045	32612	946		
353.8970	22.394	22.367	2	1.252	43425142	7679861	8255	20637	930	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.421	22.380	2	1.001	9897270	1779532	5040	12600	353		
341.8567	22.421	22.380	2	1.001	6262715	1106180	3421	8552	323	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.730	23.703	2	1.327	75194214	12480589	13045	32612	957		
353.8970	23.730	23.703	2	1.327	47694597	8026857	8255	20637	972	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.758	23.730	2	1.001	5985562	1019124	5040	12600	202		
341.8567	23.758	23.730	2	1.001	3763672	650119	3421	8552	190	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.518	20.093	-34	0.872	70310	16261	371	927	44		
341.8567	19.503	20.093	-35	0.871	41326	10044	705	1762	14	1.70(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.071	23.241	-130	0.941	4012206	773562	5040	12600	153		
341.8567	21.071	23.241	-130	0.941	2449120	487605	3421	8552	143	1.64(1.32-1.78)	
339.8597	21.903	23.241	-80	0.978	337908	41369	5040	12600	8		
341.8567	21.876	23.241	-82	0.977	257972	29689	3421	8552	9	1.31(1.32-1.78)	
	Empc Correction				218005	26689	3421	8552	8		
339.8597	22.285	23.241	-57	0.995	603864	138235	5040	12600	27		
341.8567	22.285	23.241	-57	0.995	391758	90488	3421	8552	26	1.54(1.32-1.78)	
339.8597	22.940	23.241	-18	1.024	2497937	456232	5040	12600	91		
341.8567	22.940	23.241	-18	1.024	1539462	272520	3421	8552	80	1.62(1.32-1.78)	
339.8597	24.099	23.241	51	1.076	1506683	237208	5040	12600	47		
341.8567	24.099	23.241	51	1.076	1003378	153697	3421	8552	45	1.50(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	25.694	23.241	147	1.147	329348	56271	5040	12600	11		
341.8567	25.694	23.241	147	1.147	210499	36404	3421	8552	11	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.426	2	1.367	43647710	6913051	3860	9650	1791		
369.8919	24.453	24.426	2	1.367	27288570	4269528	2841	7102	1503	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											M
355.8546	24.480	24.453	2	1.001	599800	92133	1242	3105	74		
357.8516	24.480	24.453	2	1.001	381843	63537	915	2287	69	1.57(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.249	23.349	-126	0.869	124646	22025	1242	3105	18		
357.8516	21.262	23.349	-125	0.870	223617	42275	915	2287	46	0.56(1.32-1.78)	
	Empc Correction				80416	14209	915	2287	16		
355.8546	22.026	23.349	-79	0.901	218485	43523	1242	3105	35		
357.8516	22.026	23.349	-79	0.901	151547	28185	915	2287	31	1.44(1.32-1.78)	
355.8546	22.462	23.349	-53	0.919	30478	5402	1242	3105	4		
357.8516	22.449	23.349	-54	0.918	26913	4736	915	2287	5	1.13(1.32-1.78)	
	Empc Correction				19663	3485	915	2287	4		
355.8546	22.694	23.349	-39	0.928	50857	9300	1242	3105	7		
357.8516	22.694	23.349	-39	0.928	32766	5899	915	2287	6	1.55(1.32-1.78)	
355.8546	22.994	23.349	-21	0.940	74831	15260	1242	3105	12		
	Empc Correction				52924	10984	1242	3105	9		
357.8516	22.980	23.349	-22	0.940	34145	7087	915	2287	8	2.19(1.32-1.78)	
355.8546	23.321	23.349	-2	0.954	31960	6730	1242	3105	5		
357.8516	23.308	23.349	-2	0.953	21867	4112	915	2287	4	1.46(1.32-1.78)	
355.8546	23.485	23.349	8	0.960	126828	16524	1242	3105	13		
357.8516	23.485	23.349	8	0.960	80058	11966	915	2287	13	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	34218675	6572374	12600	31500	522		
385.8610	30.516	30.503	1	0.949	65459707	12493967	24122	60305	518	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.542	30.529	1	1.001	9752099	1886790	3748	9370	503		
375.8178	30.542	30.529	1	1.001	7959473	1529104	3094	7735	494	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	31140388	6239312	12600	31500	495		
385.8610	30.702	30.689	1	0.955	59173535	11714975	24122	60305	486	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.715	30.702	1	1.000	2402589	464095	3748	9370	124		
375.8178	30.715	30.702	1	1.000	2011459	377170	3094	7735	122	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.527	31.514	1	0.981	29715025	7512064	12600	31500	596		
385.8610	31.527	31.514	1	0.981	56974262	14398947	24122	60305	597	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.541	31.528	1	1.000	297459	76665	3748	9370	20		
375.8178	31.541	31.528	1	1.000	258594	63137	3094	7735	20	1.15(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	27413002	7751258	12600	31500	615		
385.8610	32.326	32.313	1	1.006	53929355	15027512	24122	60305	623	0.51(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.339	32.326	1	1.000	165667	55693	3748	9370	15		
375.8178	32.339	32.326	1	1.000	144369	46214	3094	7735	15	1.15(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	28.386	30.197	-108	0.930	646569	89928	3748	9370	24		
375.8178	28.373	30.197	-109	0.930	547654	72788	3094	7735	24	1.18(1.05-1.43)	
373.8208	29.704	30.197	-30	0.973	294392	46050	3748	9370	12		
375.8178	29.704	30.197	-30	0.973	264194	38765	3094	7735	13	1.11(1.05-1.43)	
373.8208	31.434	30.197	74	1.030	200970	47036	3748	9370	13		
375.8178	31.421	30.197	73	1.030	147369	36459	3094	7735	12	1.36(1.05-1.43)	
373.8208	32.419	30.197	133	1.062	577358	159576	3748	9370	43		
375.8178	32.419	30.197	133	1.062	488632	149598	3094	7735	48	1.18(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		77340434	20976017	15341	38352	1367		
403.8529	32.140	32.127	1		62953682	17114895	12725	31812	1345	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.987	38835548	10957777	15341	38352	714		
403.8529	31.714	31.701	1	0.987	31045664	8688158	12725	31812	683	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.727	31.714	1	1.000	108460	33883	2745	6862	12		
391.8127	31.727	31.714	1	1.000	76296	21648	987	2467	22	1.42(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.807	1	0.990	40747566	10633874	15341	38352	693		
403.8529	31.820	31.807	1	0.990	32636205	8511646	12725	31812	669	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.833	31.820	1	1.000	208093	58746	2745	6862	21		
391.8127	31.833	31.820	1	1.000	173019	41790	987	2467	42	1.20(1.05-1.43)	
1,2,3,7,8,9-HxCDD											M
389.8157	32.153	32.140	1	1.014	380500	92789	2745	6862	34		
391.8127	32.153	32.140	1	1.014	315865	77560	987	2467	79	1.20(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.558	30.882	-79	0.929	1632376	211989	2745	6862	77		
391.8127	29.558	30.882	-79	0.929	1407645	171876	987	2467	174	1.16(1.05-1.43)	
389.8157	30.596	30.882	-17	0.962	74859	17665	2745	6862	6		
391.8127	30.596	30.882	-17	0.962	78634	18043	987	2467	18	0.95(1.05-1.43)	
	Empc Correction				60370	14245	987	2467	14		
389.8157	30.968	30.882	5	0.973	948877	197955	2745	6862	72		
391.8127	30.968	30.882	5	0.973	757047	150973	987	2467	153	1.25(1.05-1.43)	
389.8157	31.181	30.882	18	0.980	71946	17582	2745	6862	6		
391.8127	31.168	30.882	17	0.980	80721	17485	987	2467	18	0.89(1.05-1.43)	
	Empc Correction				58020	14179	987	2467	14		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	20230562	6718890	25113	62782	268		
419.8220	33.766	33.754	1	1.051	45805019	15088622	63202	158005	239	0.44(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.778	33.766	1	1.000	2400888	836648	2970	7425	282		M
409.7789	33.778	33.766	1	1.000	2253599	786284	2878	7195	273	1.07(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.859	34.847	1	1.085	21321682	6214700	25113	62782	247		
419.8220	34.859	34.847	1	1.085	48851364	14088821	63202	158005	223	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.871	34.860	1	1.000	765452	212878	2970	7425	72		
409.7789	34.859	34.860	0	1.000	738940	208884	2878	7195	73	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.082	34.319	-14	1.009	850477	256089	2970	7425	86		
409.7789	34.082	34.319	-14	1.009	755462	237947	2878	7195	83	1.13(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.556	1	1.076	28897917	8904550	15184	37960	586		
437.8140	34.568	34.556	1	1.076	28687254	8759527	13174	32935	665	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.568	1	1.000	5760828	1777088	10011	25027	178		
425.7737	34.580	34.568	1	1.000	5488688	1672935	9431	23577	177	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.984	8521725	2830453	10011	25027	283		
425.7737	34.021	34.301	-17	0.984	8333124	2776691	9431	23577	294	1.02(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.914	1	1.149	40994957	10687856	5357	13392	1995		
471.7750	36.926	36.914	1	1.149	46358714	12013582	5760	14400	2086	0.88(0.76-1.02)	
OCDF											
441.7428	37.021	37.010	1	1.003	1115046	281488	328	820	858		
443.7399	37.021	37.010	1	1.003	1322474	327902	470	1175	698	0.84(0.76-1.02)	
OCDD											
457.7377	36.938	36.926	1	1.000	112277422	29101986	14519	36297	2004		
459.7348	36.938	36.926	1	1.000	125769114	32153616	14859	37147	2164	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Inject. Date: 14-Aug-2021 05:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	151373859	38588883

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	151373859	38588883

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.965	3820920	1097564	5139575	1456401	5.78	0.74	
16.252	8597402	1901975	11318916	2500574	12.8	0.76	
16.479	10113156	2690747	12992171	3429770	14.9	0.78	
16.721	14263513	3586003	18333018	4560659	21.0	0.78	
16.993	151446118	39839107	194555667	51367521	223.2	0.78	
17.220	4790105	1182682	6232443	1562341	7.11	0.77	
17.809	22903968	5477873	29567500	7101687	33.9	0.77	
18.066	4114470	957679	5582414	1246166	6.26	0.74	
19.200	24424736	5670403	31559255	7231472	36.1	0.77	a
Signal Totals:	244474388	62404033	315280959	80456591			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	559755347	142860624				0.78	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 361.148 = (559755347 * 100.000) / (151373859 * 1.024)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 07:26:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Inject. Date: 14-Aug-2021 05:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	86722359	22072678

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	86722359	22072678

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.991	846966	234851	1107207	305330	1.80	0.76	
18.444	6532373	1498440	8123283	1900687	13.5	0.80	
Signal Totals:							
	7379339	1733291	9230490	2206017			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	16609829	3939308				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 15.272 = (16609829 * 100.000) / (86722359 * 1.254)

Report Date: 18-Aug-2021 07:26:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Inject. Date: 14-Aug-2021 05:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 6

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	111856222	20018804
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	122888811	20507446

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	117372516	20263125

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.518	70310	16261	41326	10044	0.0915	1.70	
Signal Totals:							
	70310	16261	41326	10044			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	111636	26305				1.70	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0915 = (111636 * 100.000) / (117372516 * 1.040)

Report Date: 18-Aug-2021 07:26:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Inject. Date: 14-Aug-2021 05:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 6

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	111856222	20018804
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	122888811	20507446

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	117372516	20263125

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.071	4012206	773562	2449120	487605	5.29	1.64	
21.903	337908	41369	257972	29689	0.4883	1.31	RQ
21.903	337908	41369	218005	26689	0.4555		Empc Correction
22.285	603864	138235	391758	90488	0.8158	1.54	
22.940	2497937	456232	1539462	272520	3.31	1.62	
24.099	1506683	237208	1003378	153697	2.06	1.50	
25.694	329348	56271	210499	36404	0.4423	1.56	
Signal Totals:							
	9287946	1702877	5812222	1067403			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15140135	2773280				1.59	RQ
	15100168	2770280					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 12.406 = (15140135 * 100.000) / (117372516 * 1.040)
Empc Amount: 12.373 = (15100168 * 100.000) / (117372516 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 07:26:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Inject. Date: 14-Aug-2021 05:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 6

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	70936280	11182579

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	70936280	11182579

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	124646	22025	223617	42275	0.4683	0.56	RQ
21.249	124646	22025	80416	14209	0.2757		Empc Correction
22.026	218485	43523	151547	28185	0.4975	1.44	
22.462	30478	5402	26913	4736	0.0772	1.13	RQ
22.462	30478	5402	19663	3485	0.0674		Empc Correction
22.694	50857	9300	32766	5899	0.1124	1.55	
22.994	74831	15260	34145	7087	0.1465	2.19	RQ
22.994	52924	10984	34145	7087	0.1171		Empc Correction
23.321	31960	6730	21867	4112	0.0724	1.46	
23.485	126828	16524	80058	11966	0.2782	1.58	
Signal Totals:							
	636178	114488	420462	74943			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1228998	223024				1.15	RQ
	1056640	189431					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.653 = (1228998 * 100.000) / (70936280 * 1.048)
Empc Amount: 1.421 = (1056640 * 100.000) / (70936280 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 07:26:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Inject. Date: 14-Aug-2021 05:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 6

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	99678382	19066341
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	90313923	17954287
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	86689287	21911011
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	81342357	22778770

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	89505987	20427602

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.386	646569	89928	547654	72788	1.17	1.18	
29.704	294392	46050	264194	38765	0.5492	1.11	
31.434	200970	47036	147369	36459	0.3425	1.36	
32.419	577358	159576	488632	149598	1.05	1.18	
Signal Totals:							
	1719289	342590	1447849	297610			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3167138	640200				1.19	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.114 = (3167138 * 100.000) / (89505987 * 1.136)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Inject. Date: 14-Aug-2021 05:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 6

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	69881212	19645935
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	73383771	19145520
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	71632491	19395727

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.558	1632376	211989	1407645	171876	3.98	1.16	
30.596	74859	17665	78634	18043	0.2011	0.95	RQ
30.596	74859	17665	60370	14245	0.1772		Empc Correction
30.968	948877	197955	757047	150973	2.24	1.25	
31.181	71946	17582	80721	17485	0.2000	0.89	RQ
31.181	71946	17582	58020	14179	0.1703		Empc Correction
Signal Totals:							
	2728058	445191	2283082	351273			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5052105	803568				1.17	RQ
	5011140	796464					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.619 = (5052105 * 100.000) / (71632491 * 1.066)
Empc Amount: 6.565 = (5011140 * 100.000) / (71632491 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 07:26:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Inject. Date: 14-Aug-2021 05:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 6

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	66035581	21807512
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	70173046	20303521

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	68104313	21055516

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.082	850477	256089	755462	237947	1.71	1.13	
Signal Totals:							
	850477	256089	755462	237947			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1605939	494036				1.13	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.710 = (1605939 * 100.000) / (68104313 * 1.379)

Report Date: 18-Aug-2021 07:26:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Inject. Date: 14-Aug-2021 05:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 6

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	57585171	17664077

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	57585171	17664077

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	8521725	2830453	8333124	2776691	26.7	1.02	
Signal Totals:							
	8521725	2830453	8333124	2776691			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	16854849	5607144				1.02	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 26.747 = (16854849 * 100.000) / (57585171 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d				
Injection Date:	14-Aug-2021 05:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-2-A	Lab Sample ID:	320-76788-2		
Client ID:	11215702-072321-BN-SJSB085 (2-4)				
Operator ID:	DB	ALS Bottle#:	18	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 2

Processing Integration Results

RT: 24.48
Area: 397749
Amount: 1.341301
Amount Units: pg/ul

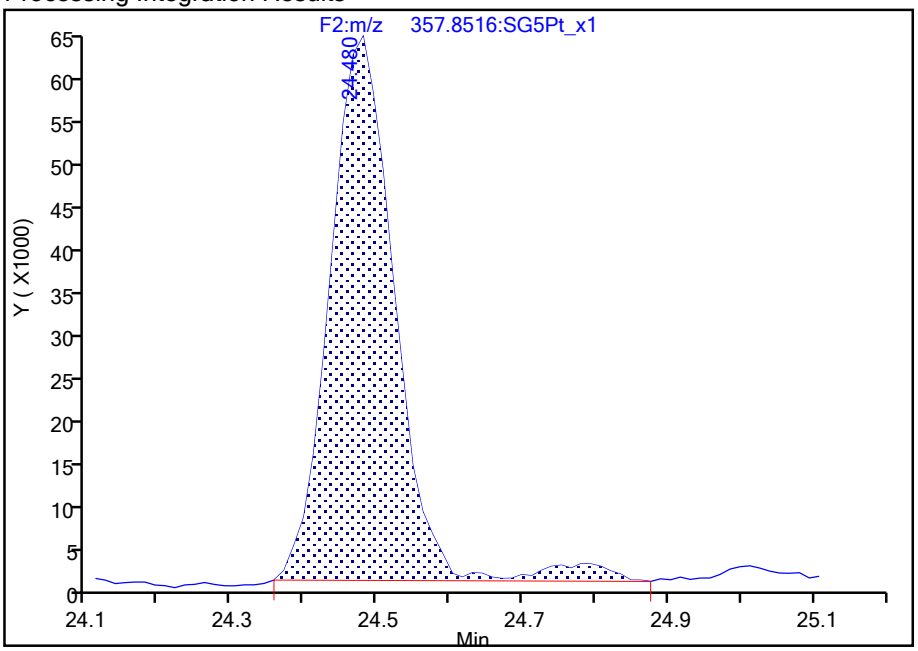

Manual Integration Results

RT: 24.48
Area: 381843
Amount: 1.319914
Amount Units: pg/ul

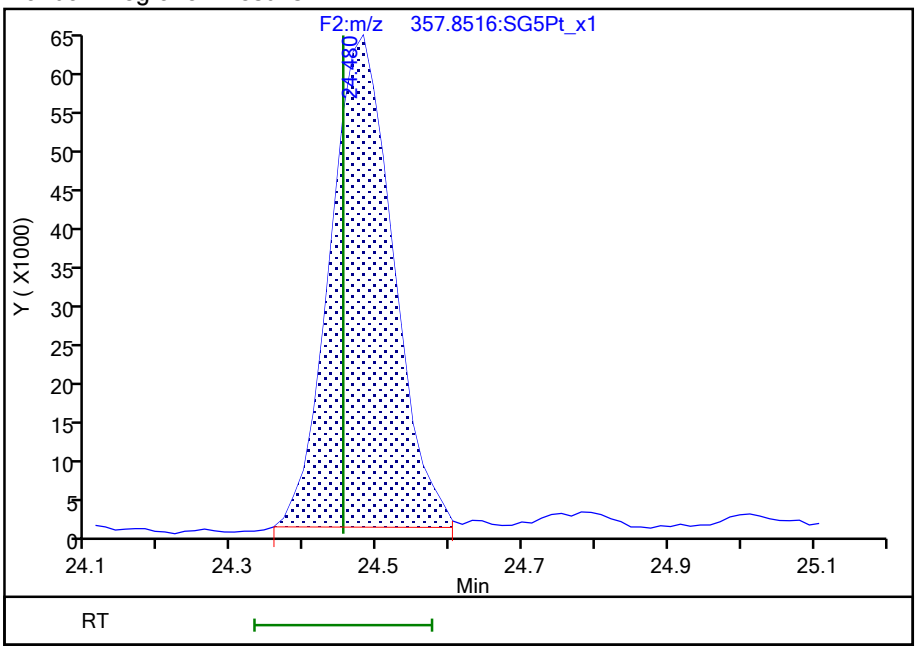

Reviewer: dadunj, 18-Aug-2021 08:55:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d				
Injection Date:	14-Aug-2021 05:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-2-A	Lab Sample ID:	320-76788-2		
Client ID:	11215702-072321-BN-SJSB085 (2-4)				
Operator ID:	DB	ALS Bottle#:	18	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 32.15
Area: 324596
Amount: 0.869143
Amount Units: pg/ul

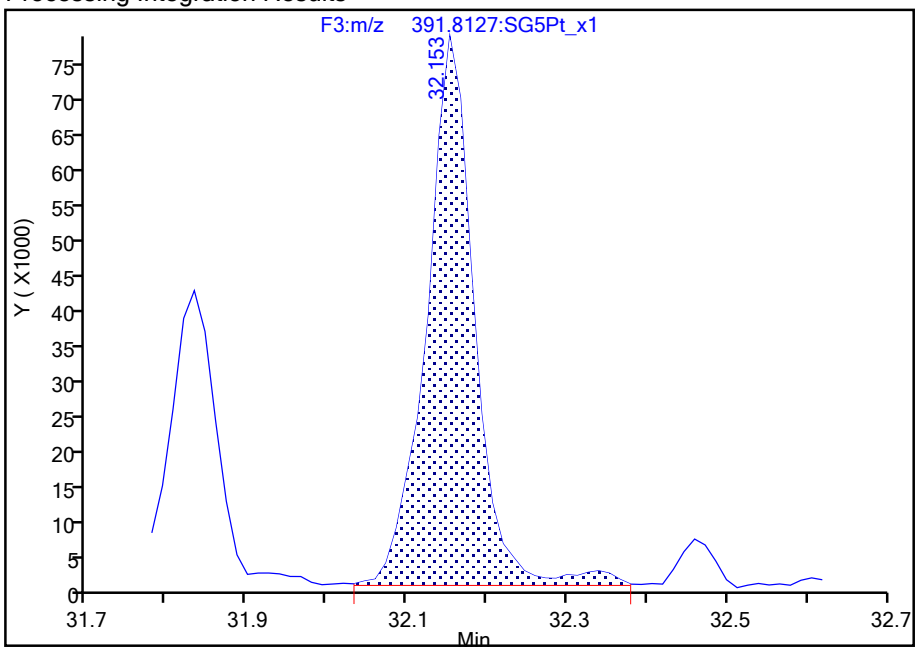

Manual Integration Results

RT: 32.15
Area: 315865
Amount: 0.858381
Amount Units: pg/ul

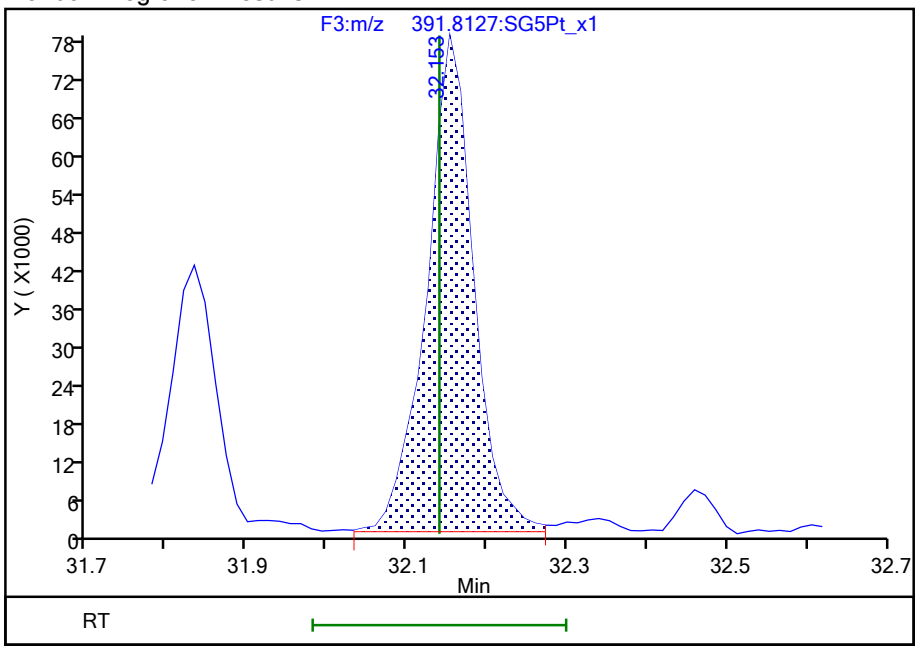

Reviewer: dadunj, 18-Aug-2021 08:56:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d				
Injection Date:	14-Aug-2021 05:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-2-A	Lab Sample ID:	320-76788-2		
Client ID:	11215702-072321-BN-SJSB085 (2-4)				
Operator ID:	DB	ALS Bottle#:	18	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.78
Area: 2470640
Amount: 5.034976
Amount Units: pg/ul

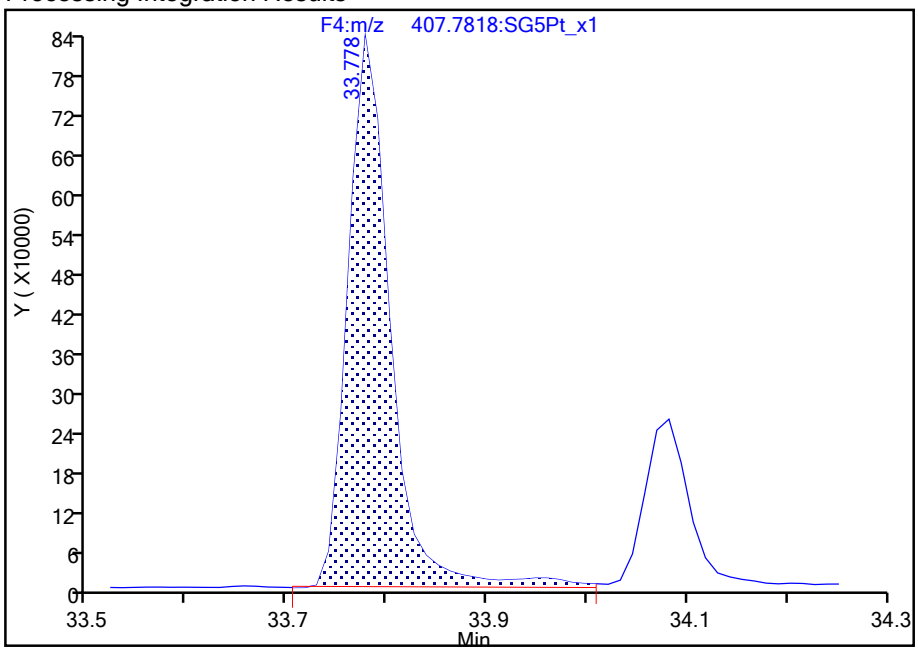

Manual Integration Results

RT: 33.78
Area: 2400888
Amount: 4.890374
Amount Units: pg/ul

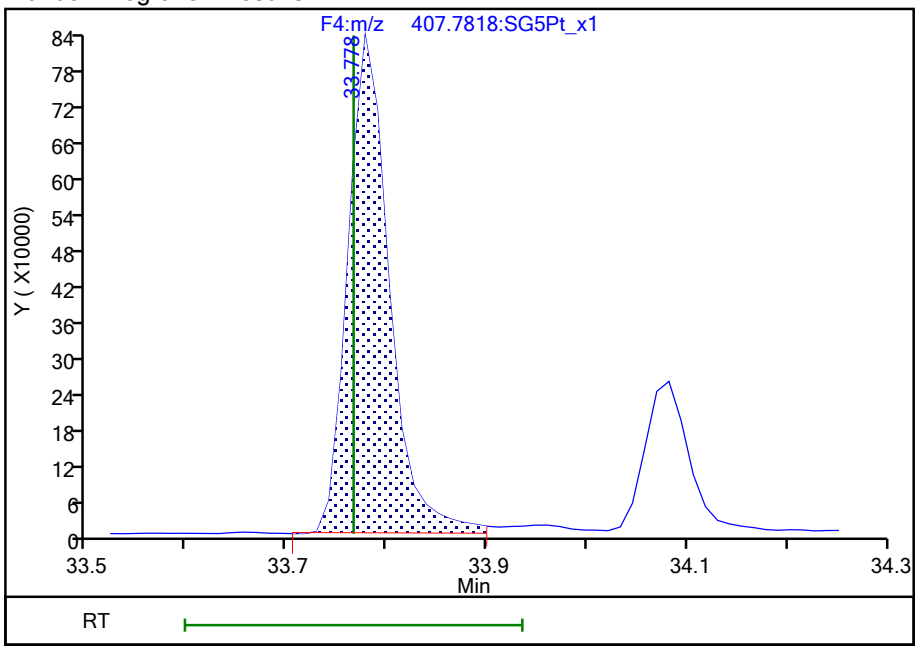

Reviewer: dadunj, 18-Aug-2021 08:56:33

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779272

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d				
Injection Date:	14-Aug-2021 05:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-2-A	Lab Sample ID:	320-76788-2		
Client ID:	11215702-072321-BN-SJSB085 (2-4)				
Operator ID:	DB	ALS Bottle#:	18	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.78
Area: 2321474
Amount: 5.034976
Amount Units: pg/ul

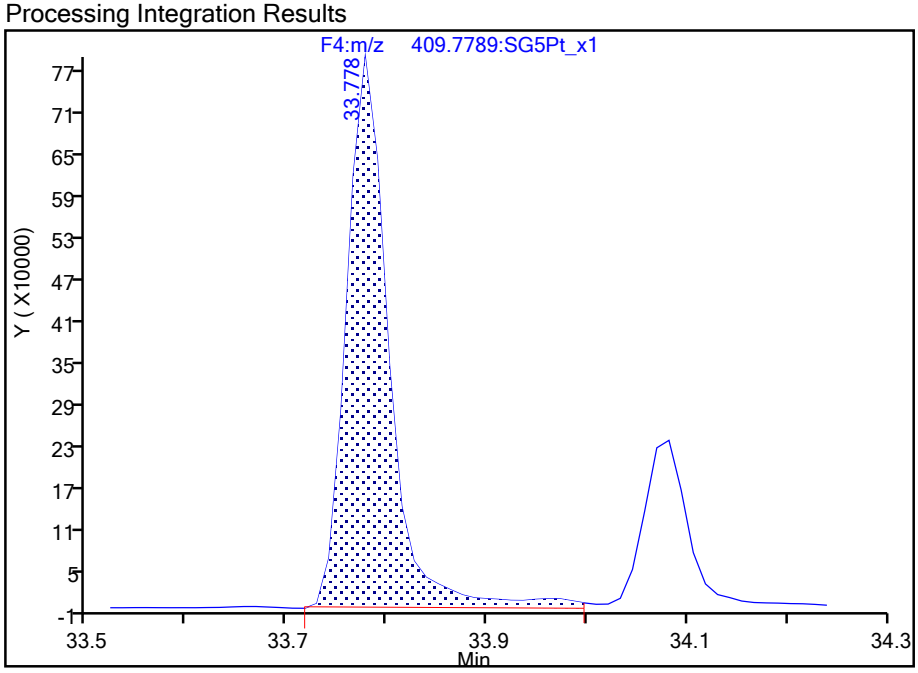

Manual Integration Results

RT: 33.78
Area: 2253599
Amount: 4.890374
Amount Units: pg/ul

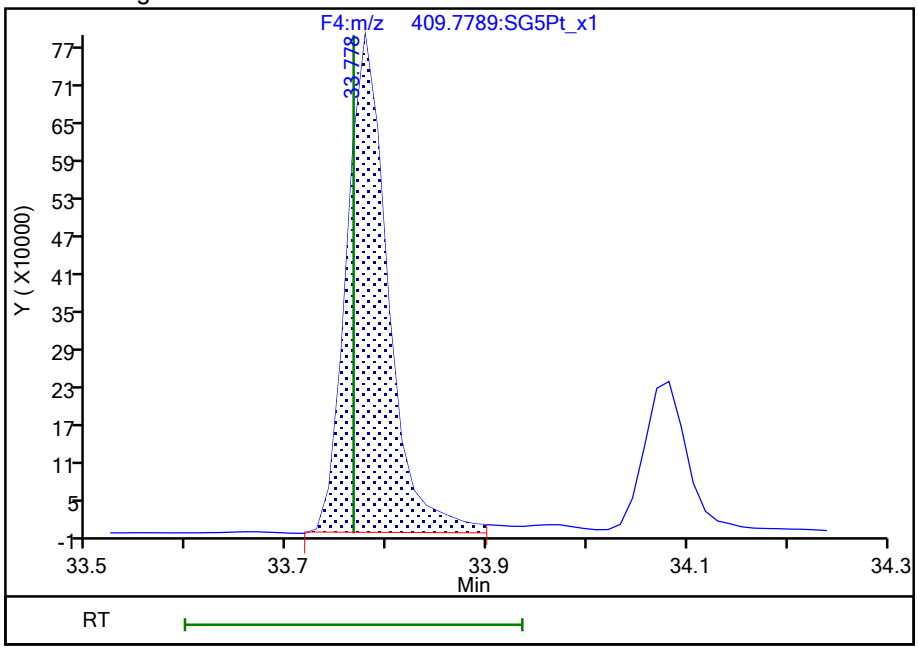

Reviewer: dadunj, 18-Aug-2021 08:56:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

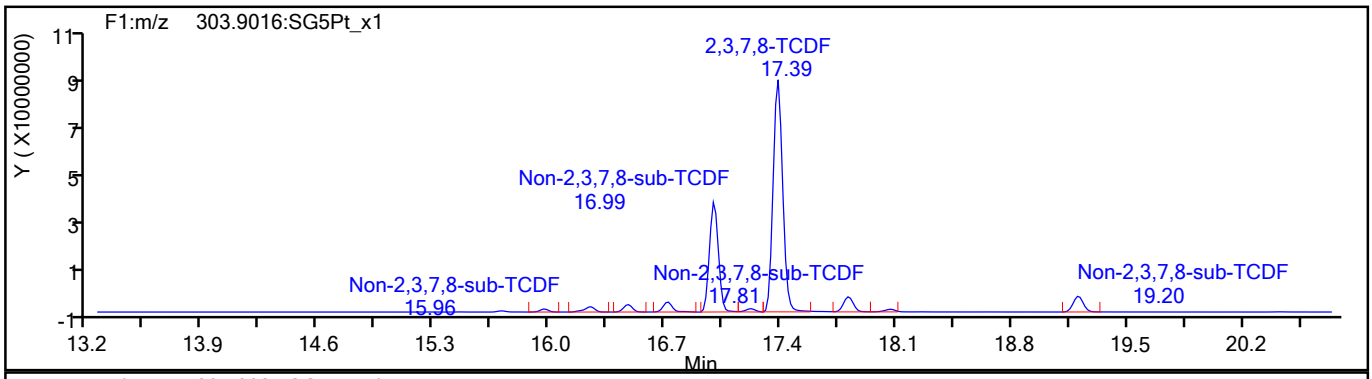

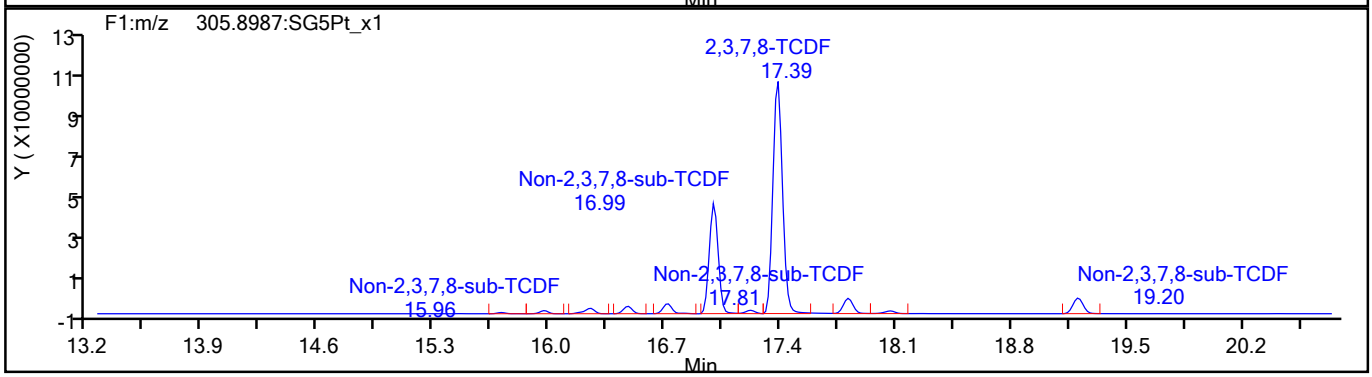

TCDF Standards

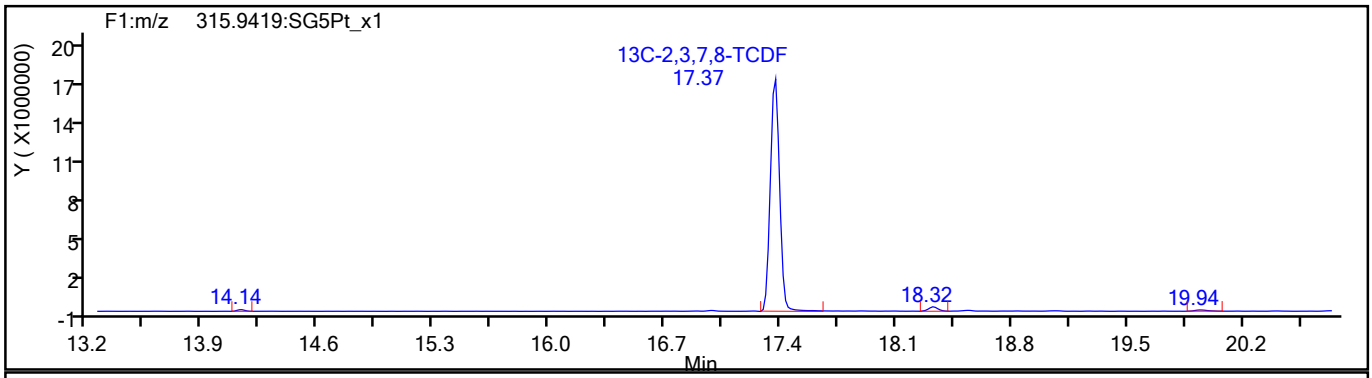

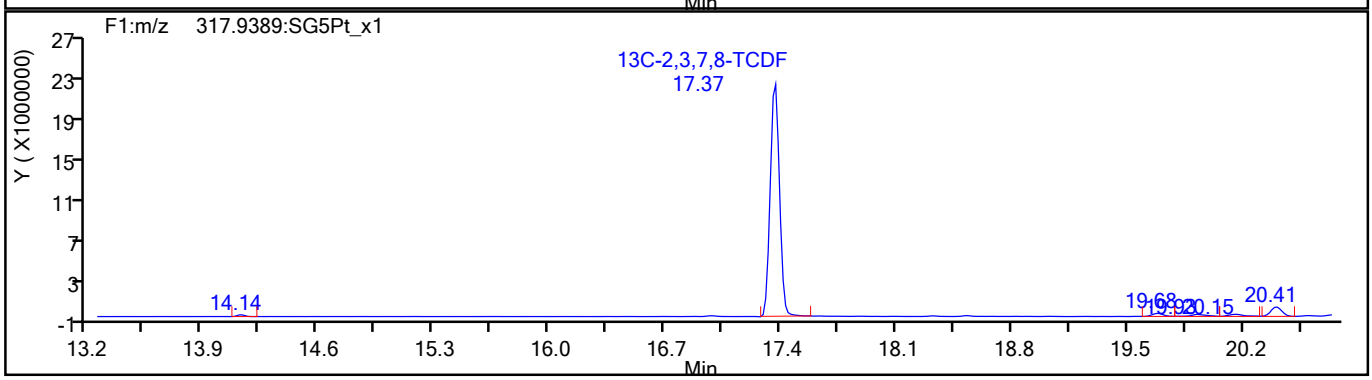

779274

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

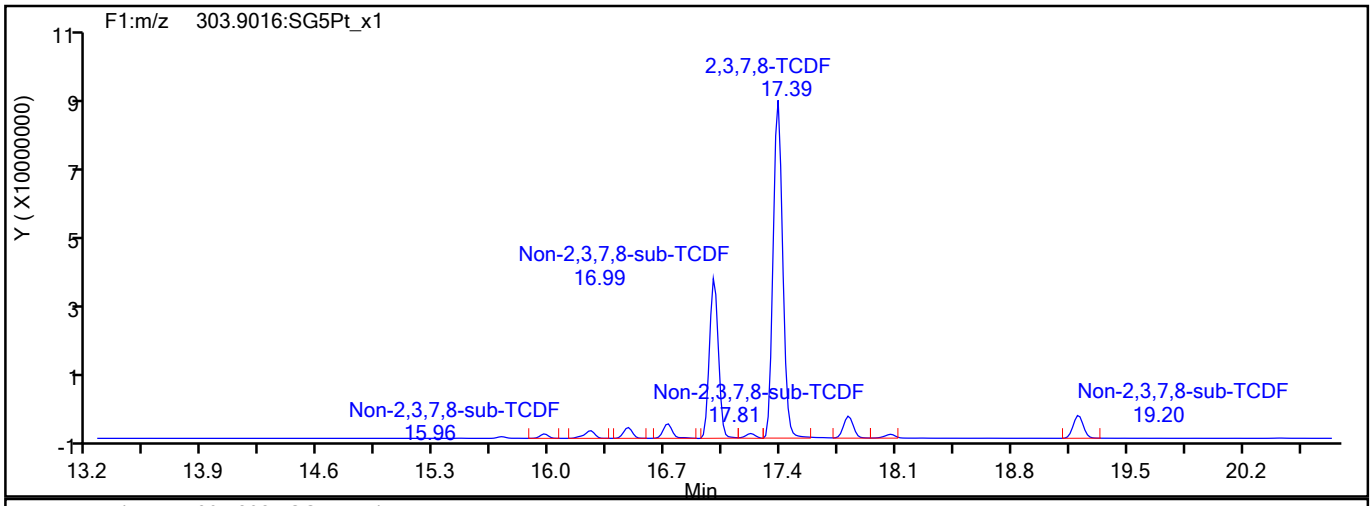

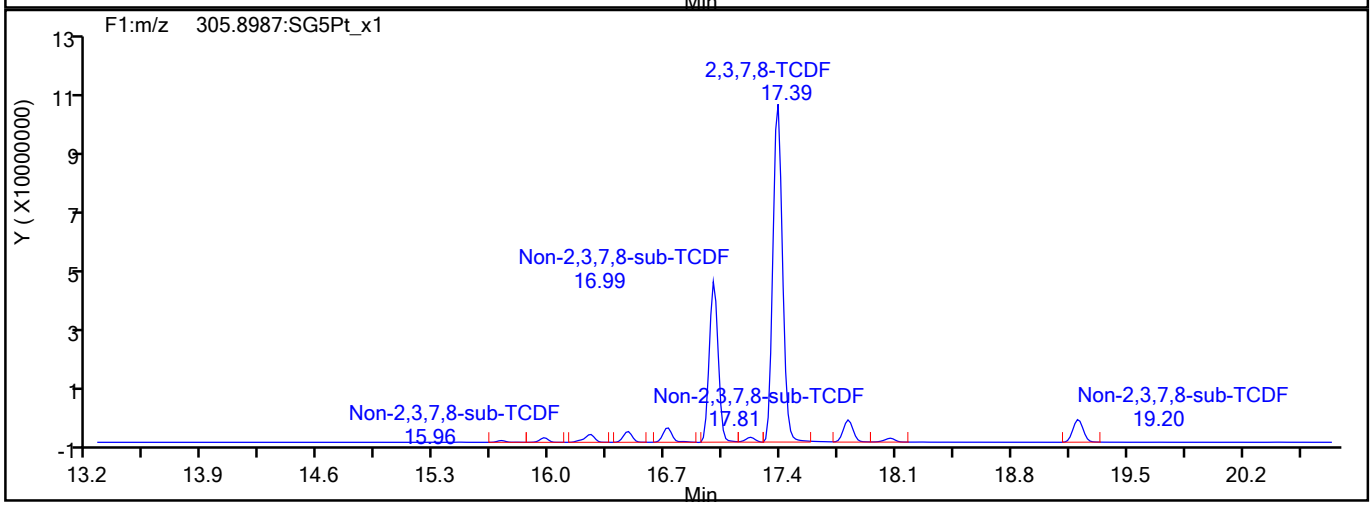

TCDF Interference Mass

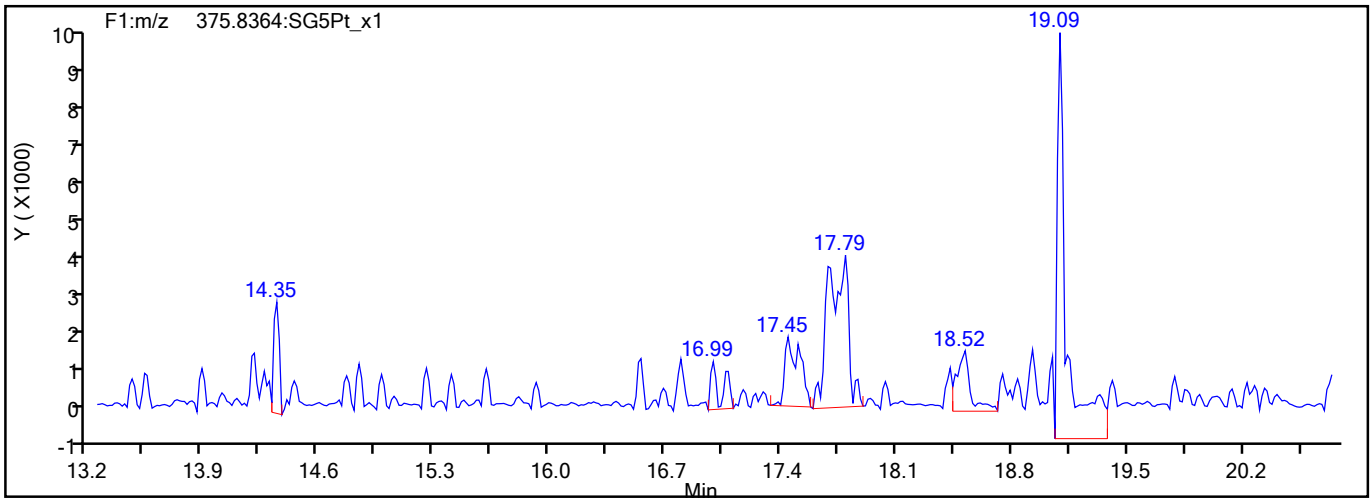

779275

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

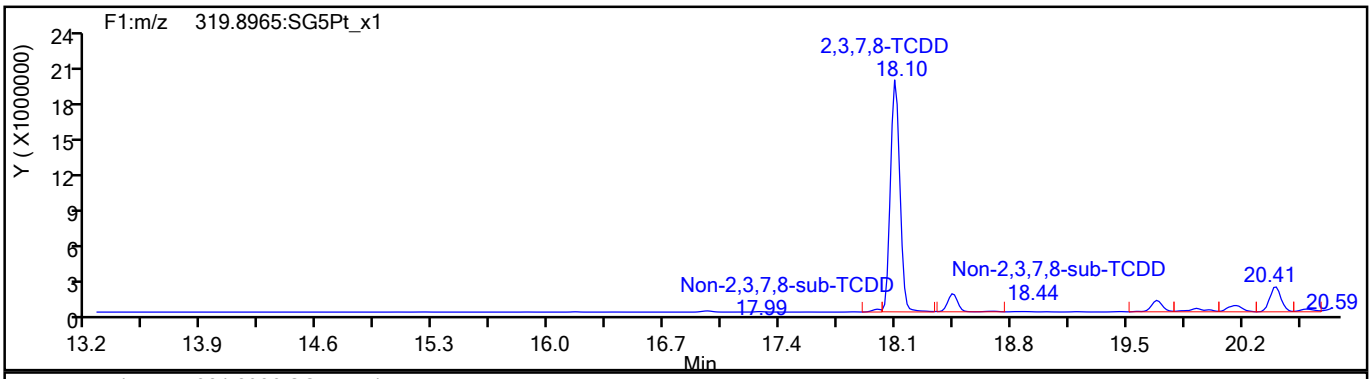

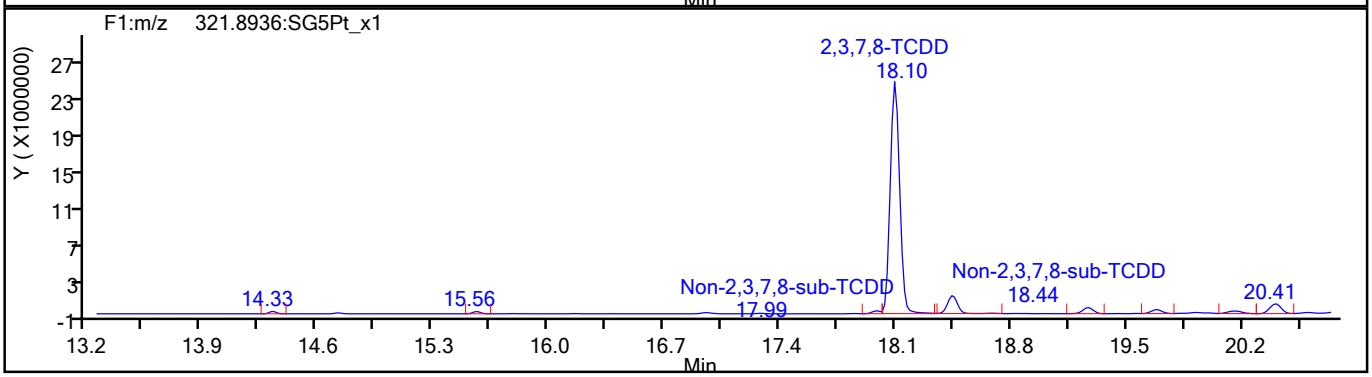

TCDD Standards

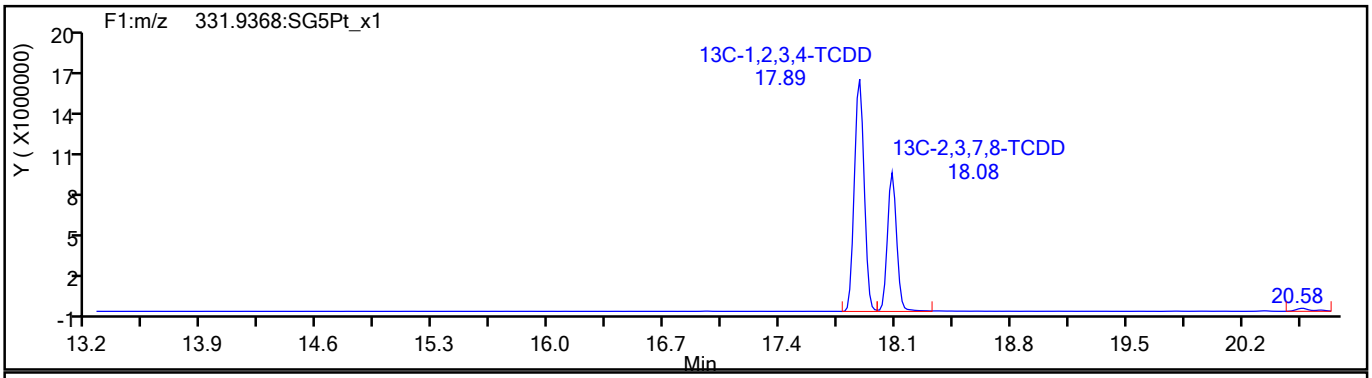

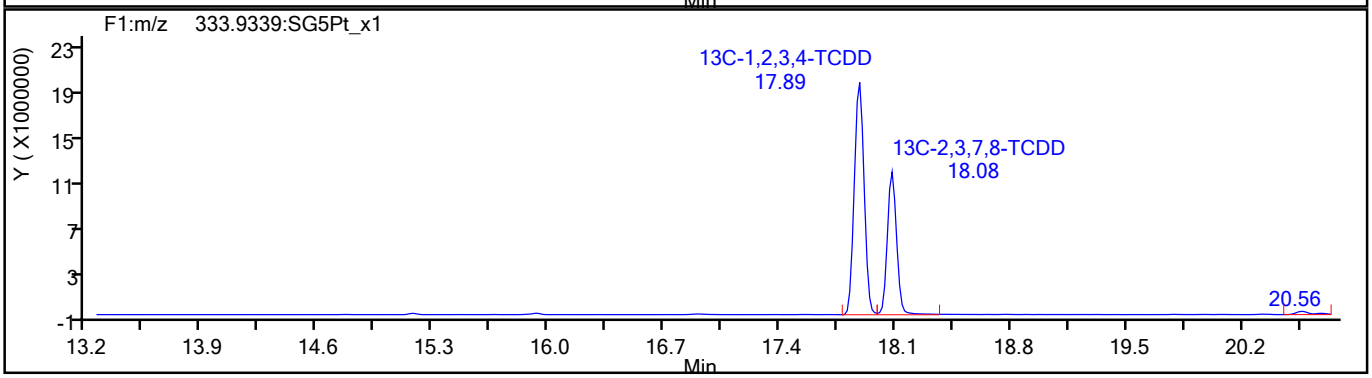

779276

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

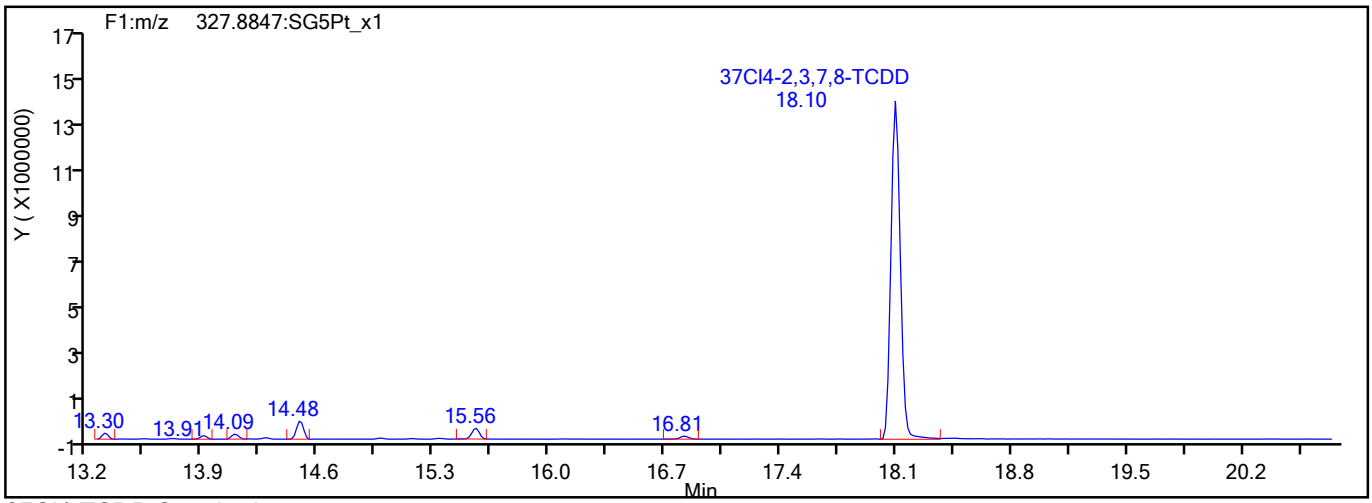

37Cl4-TCDD Standards

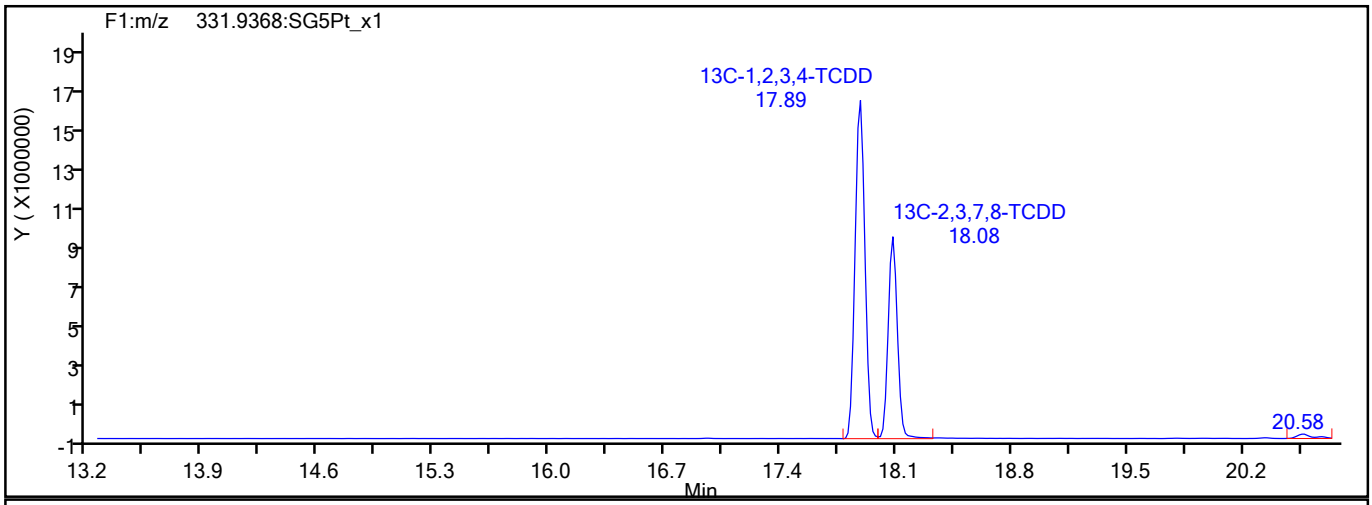

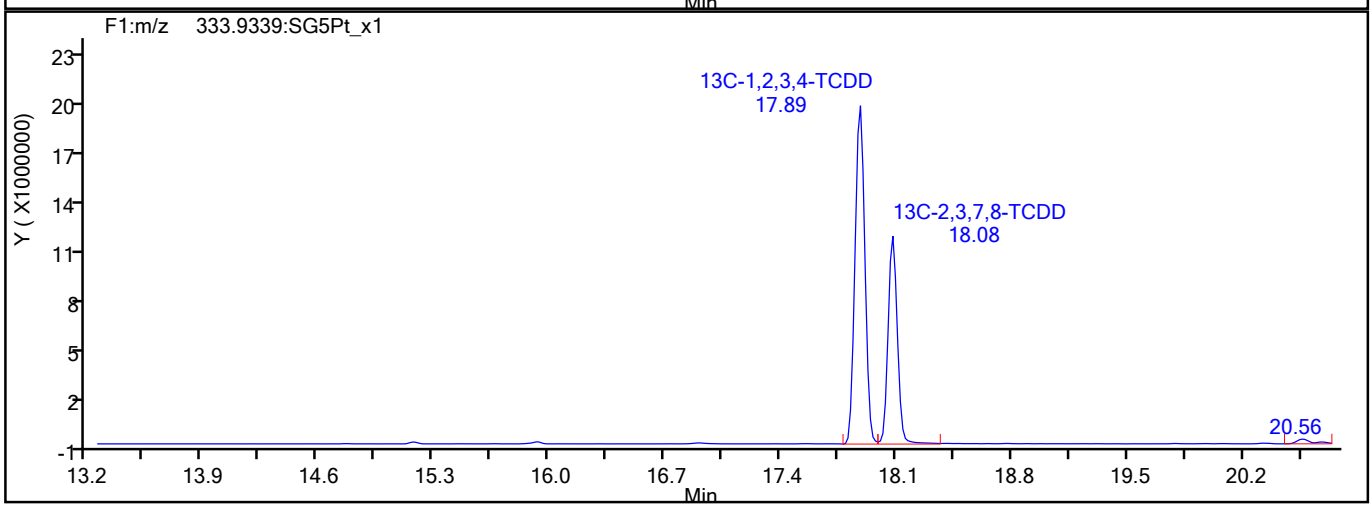

779277

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

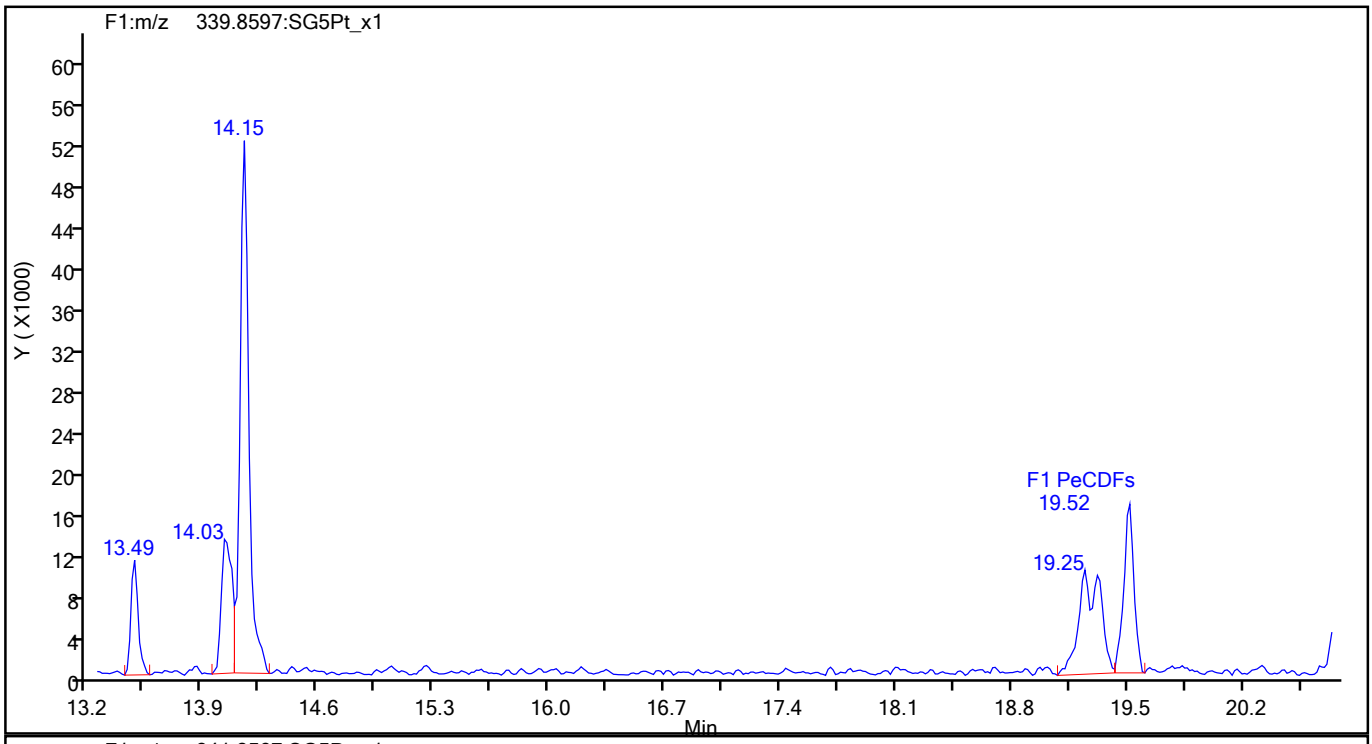

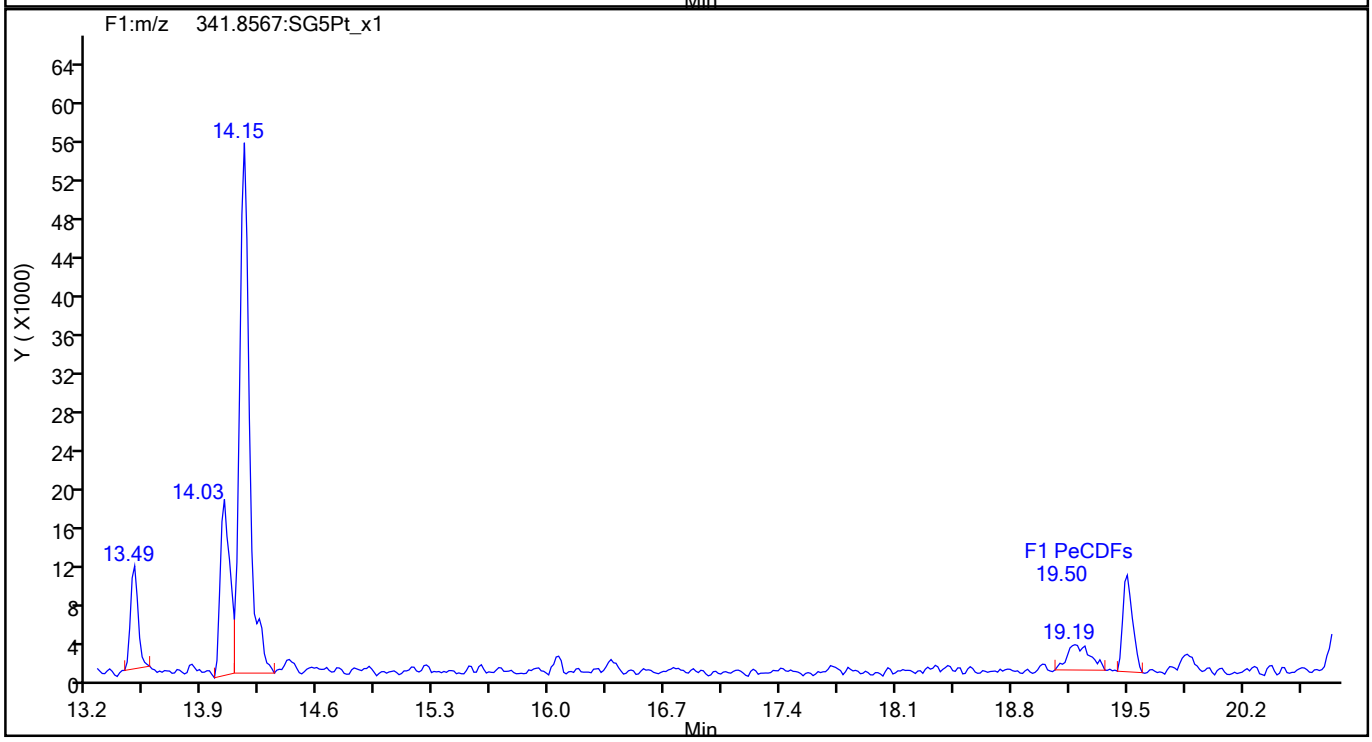

779278

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
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F1 PeCDFs

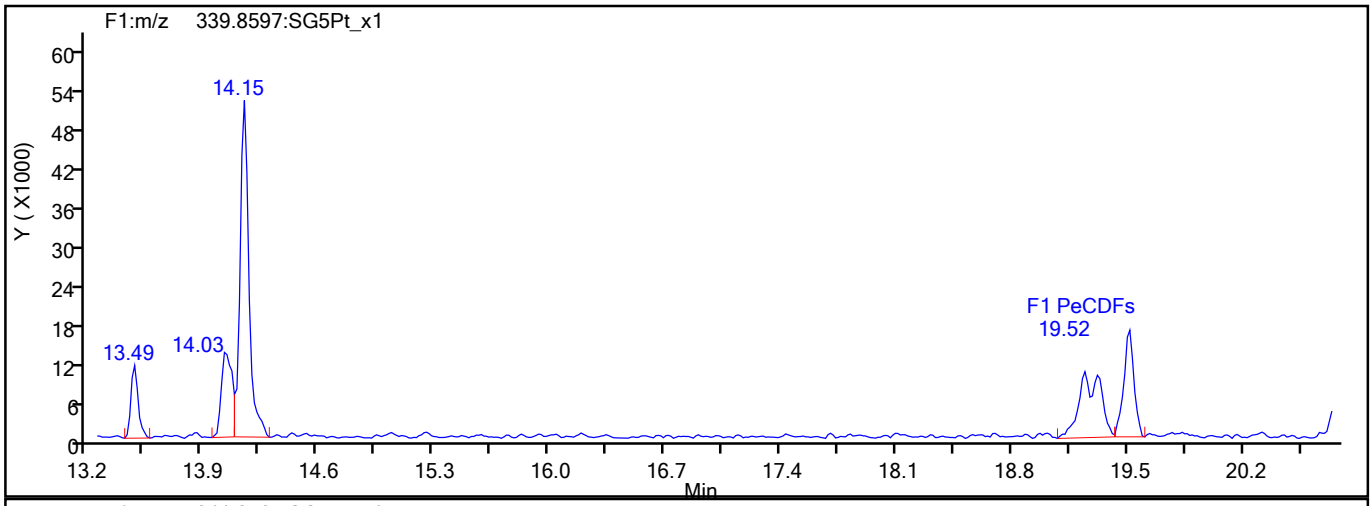

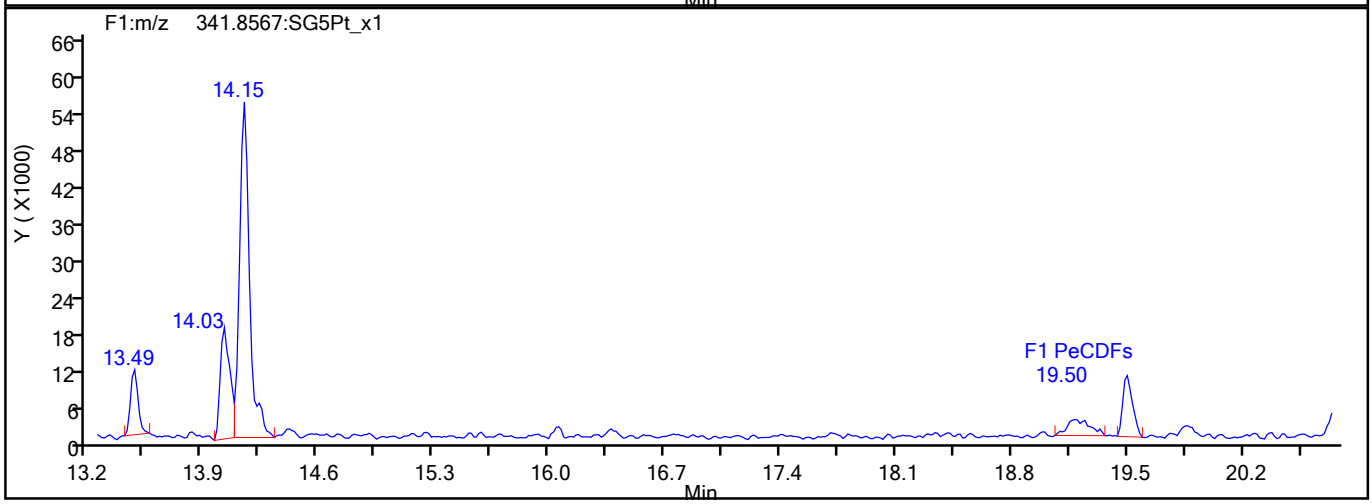

F1 PeCDFs Interference Mass

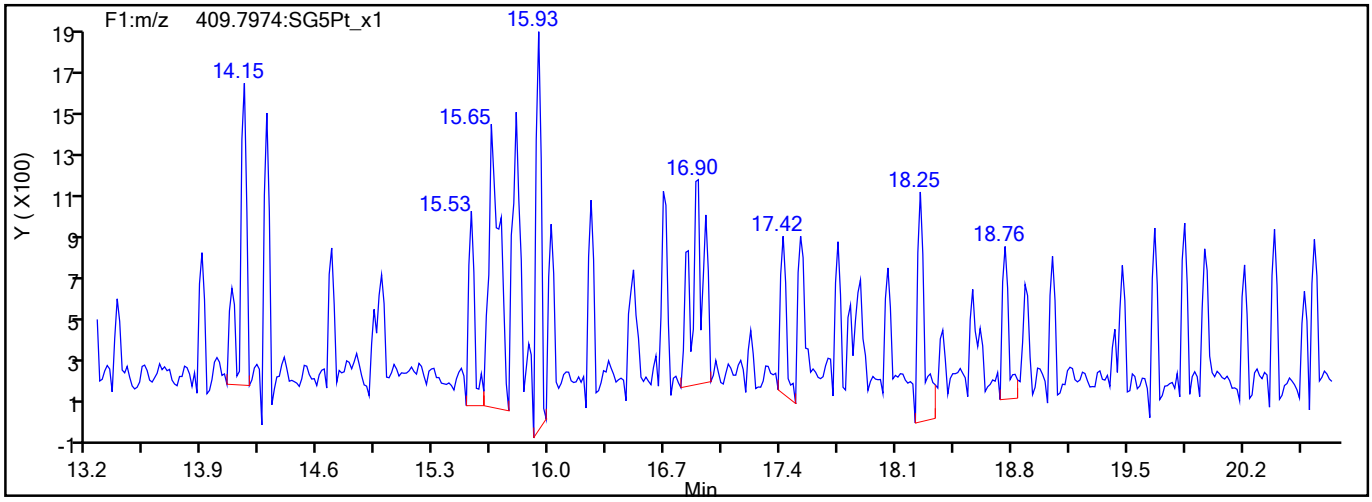

779279

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

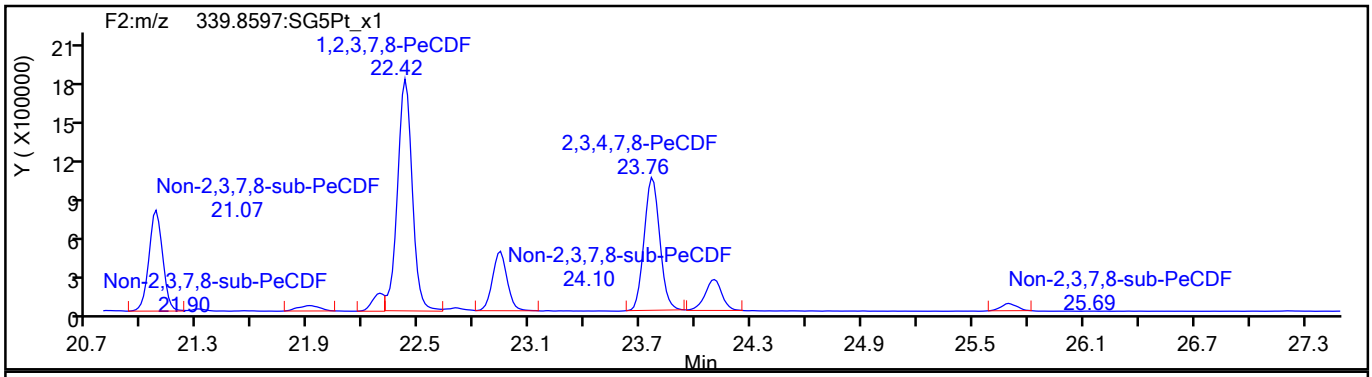

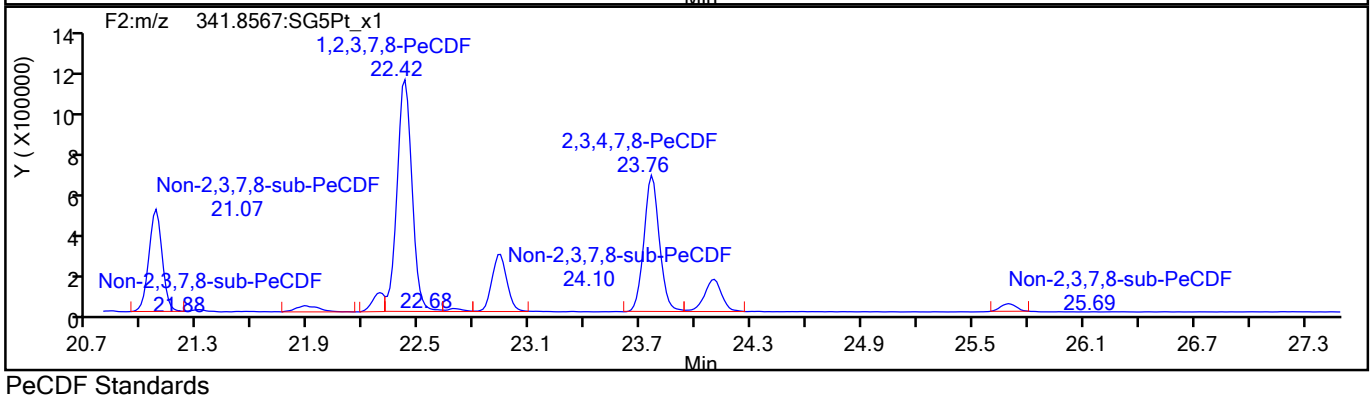

PeCDF Standards

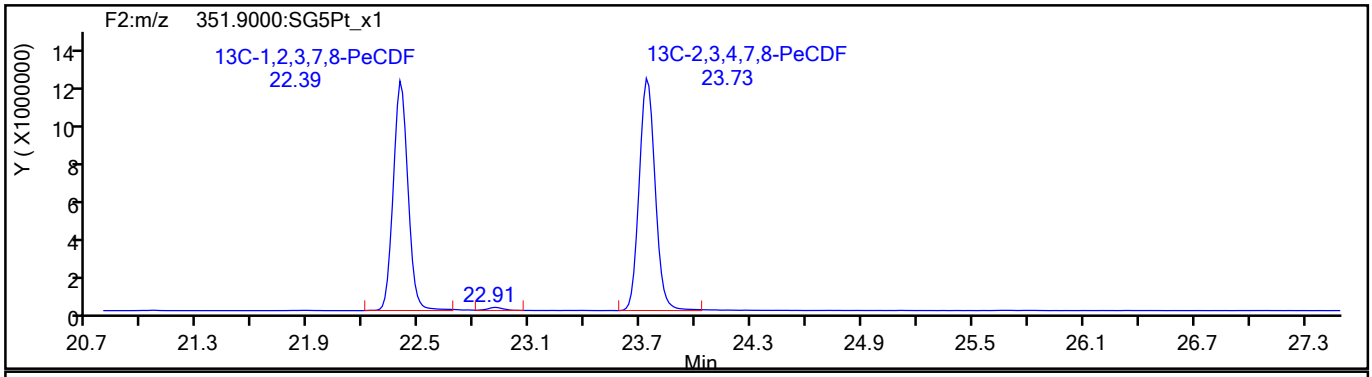

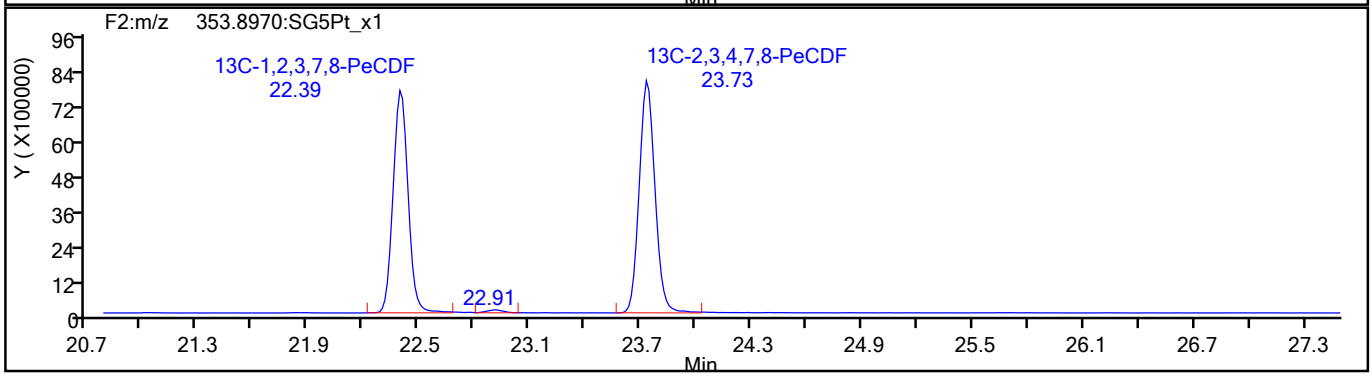

779280

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
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PeCDF

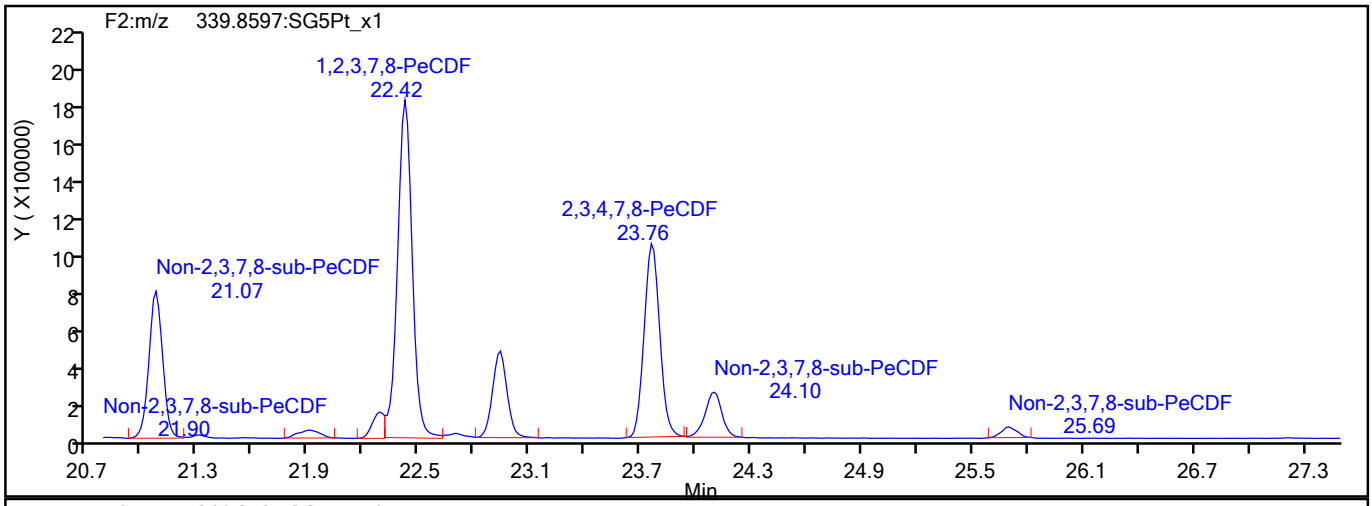

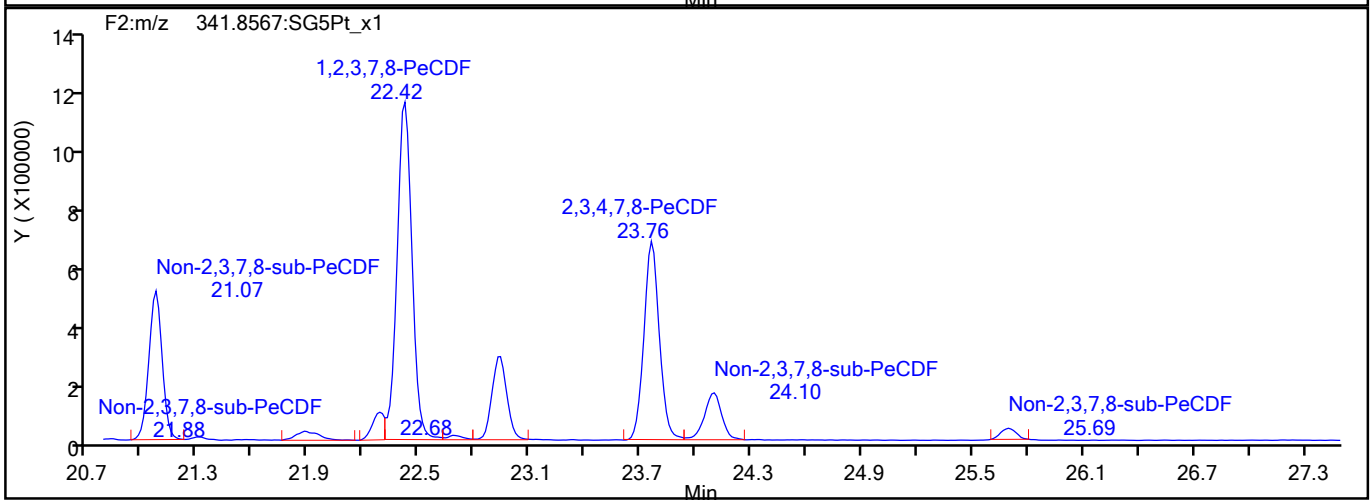

PeCDF Interference Mass

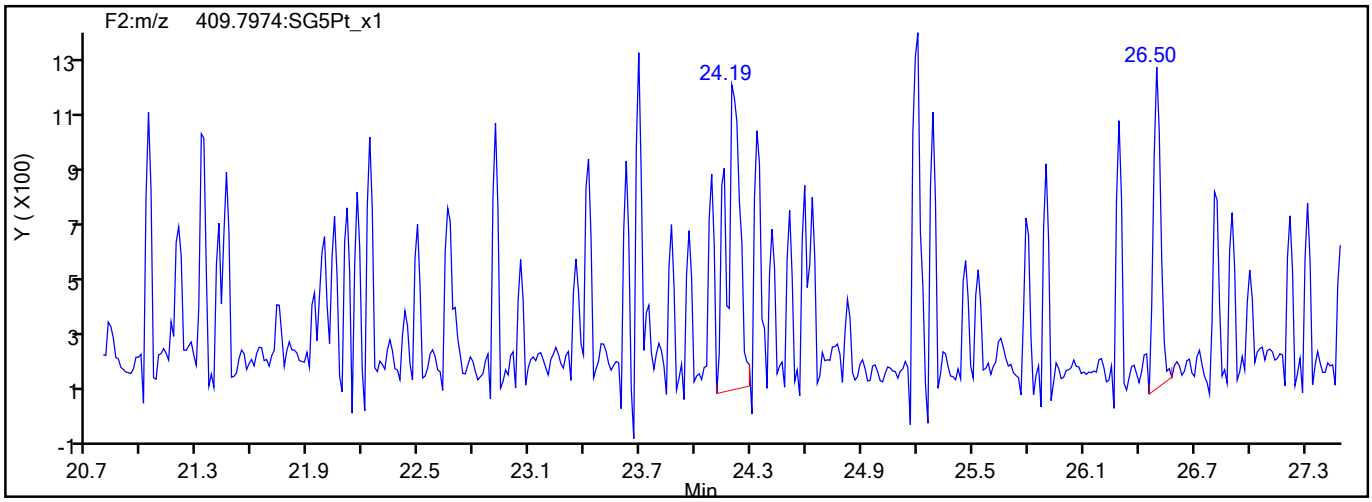

779281

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

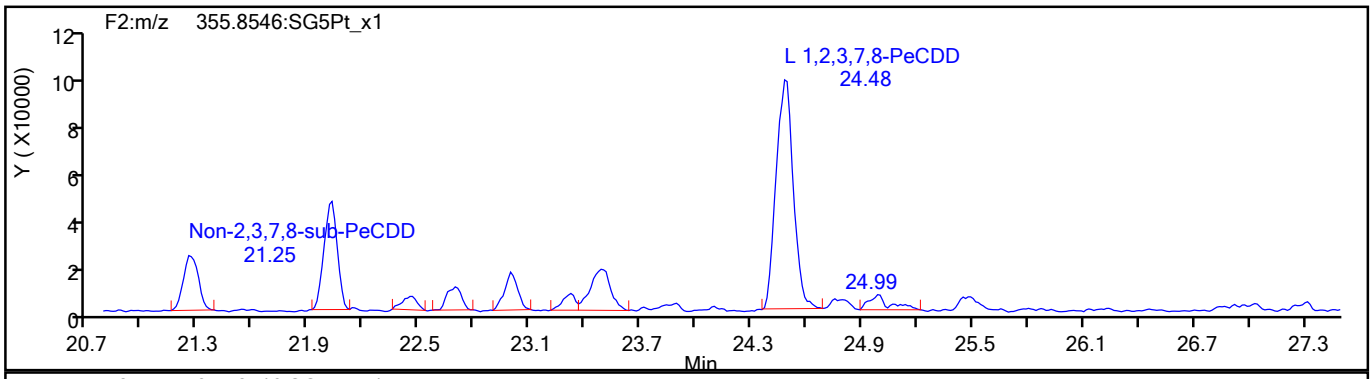

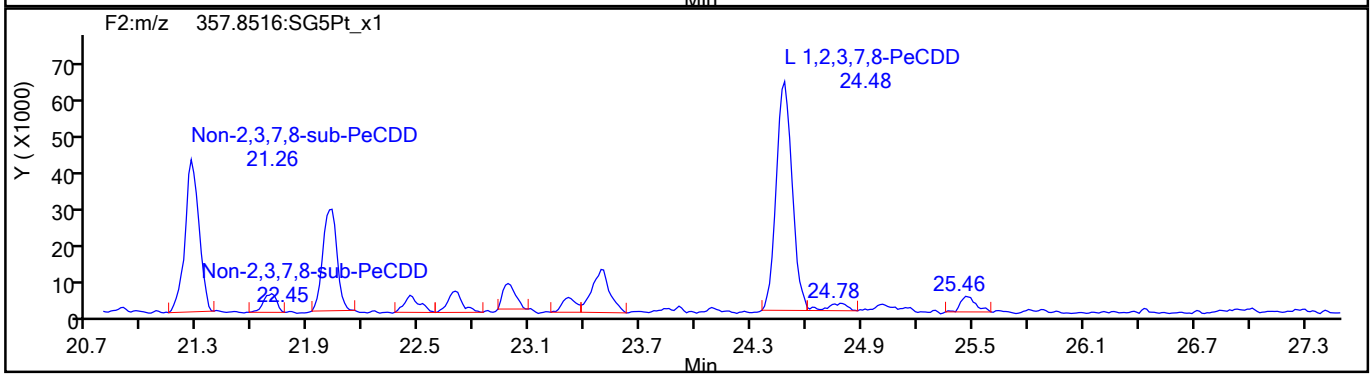

PeCDD Standards

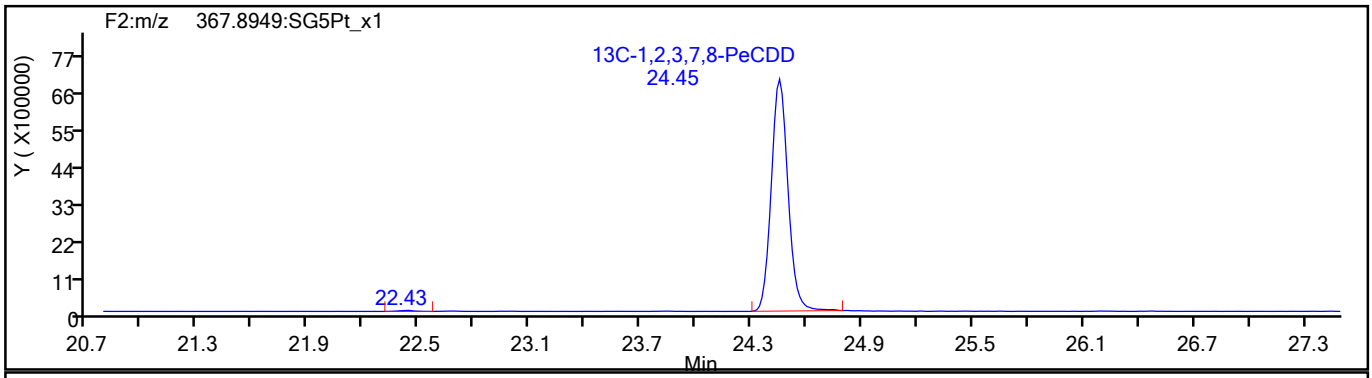

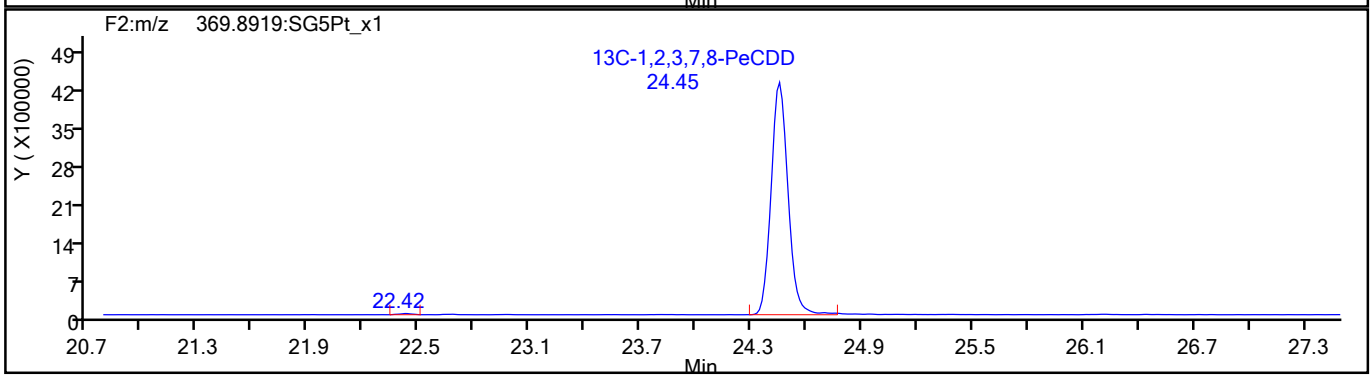

779282

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

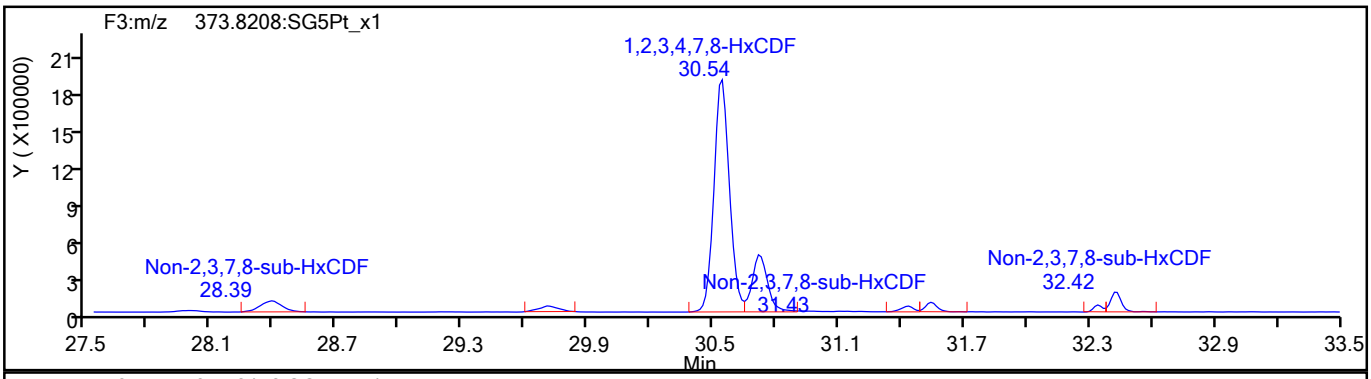

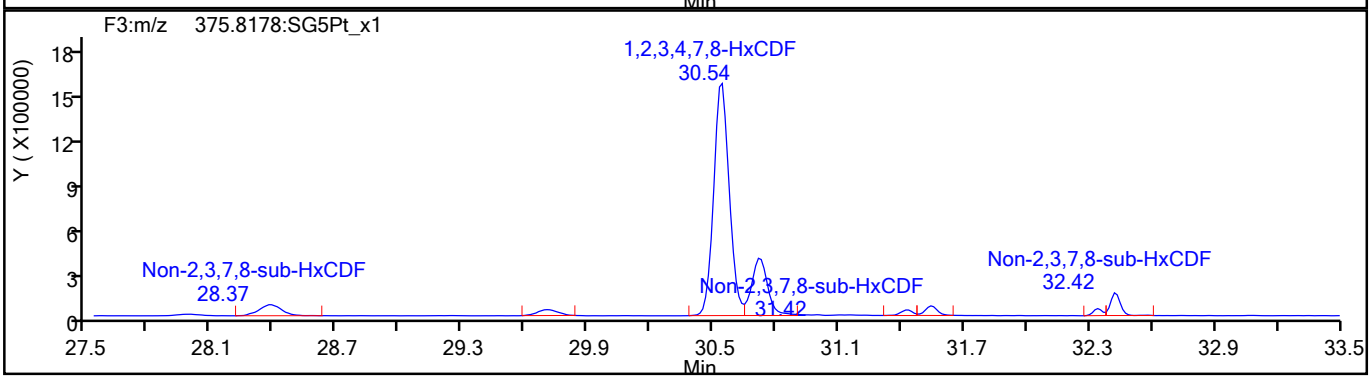

HxCDF Standards

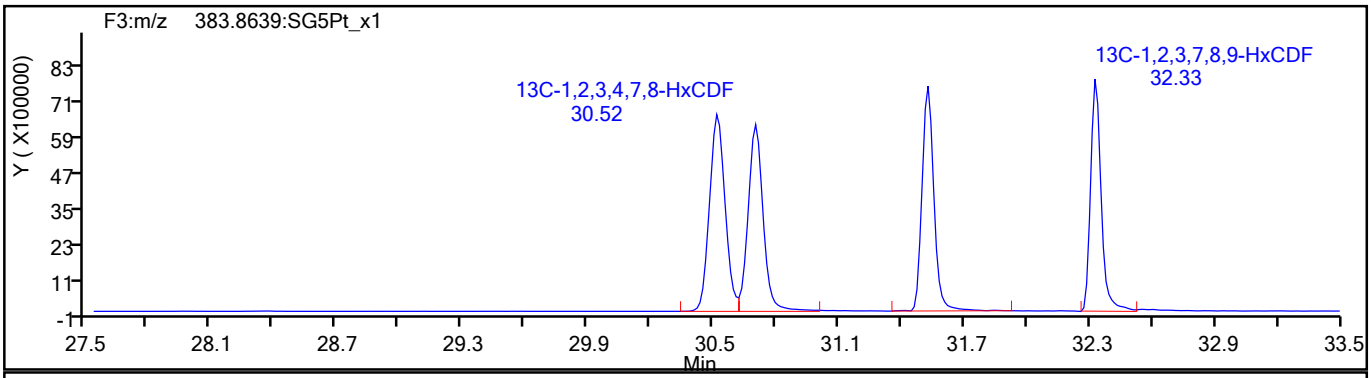

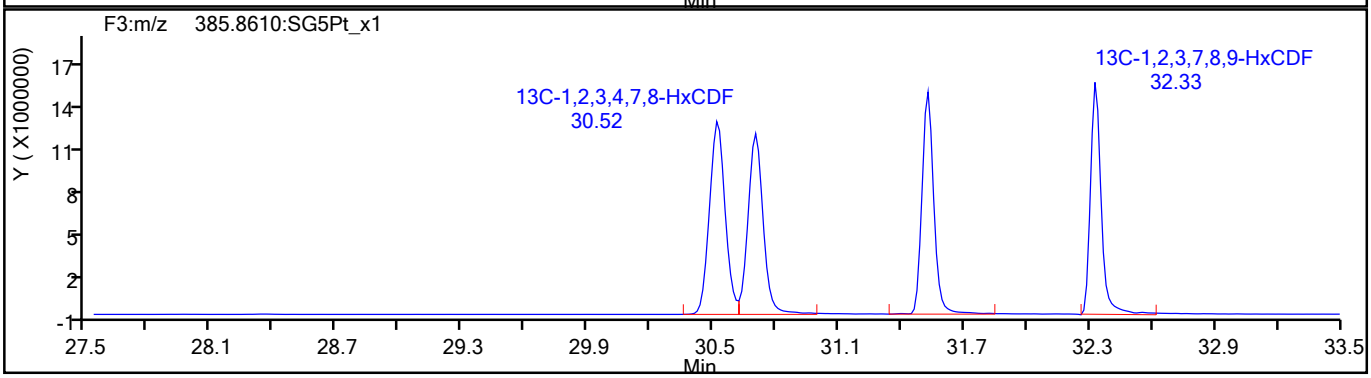

779283

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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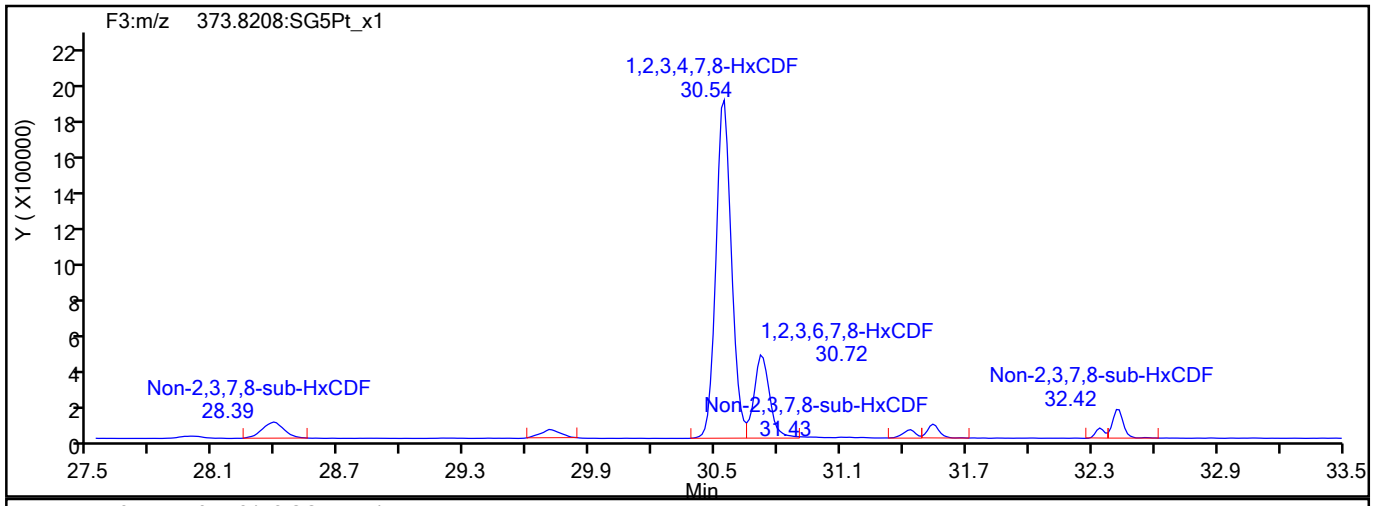

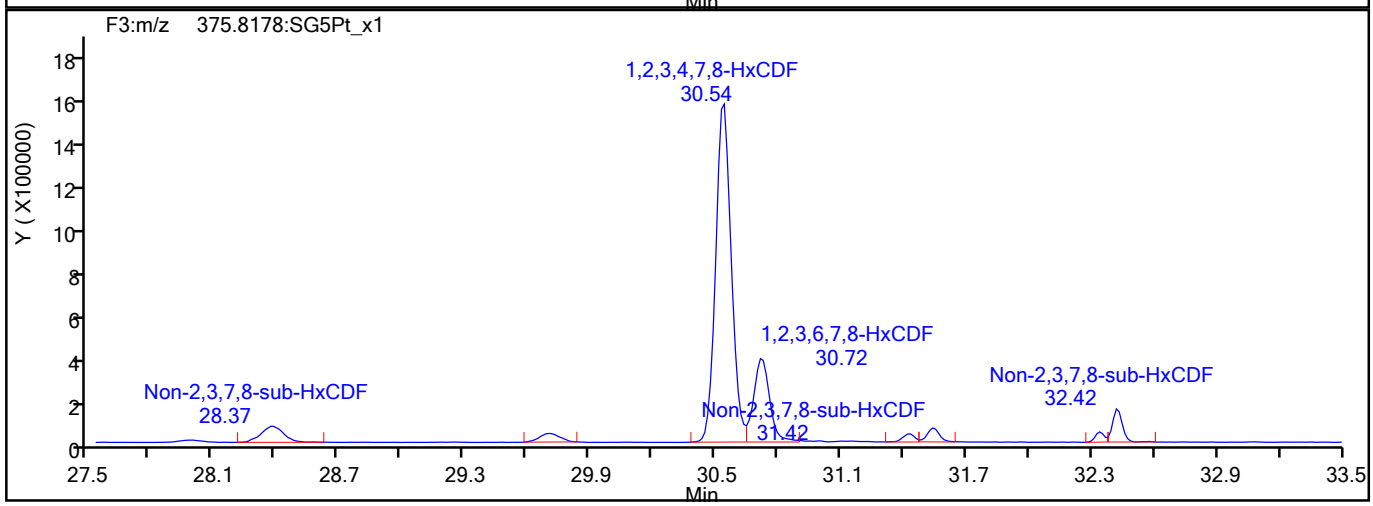

HxCDF Interference Mass

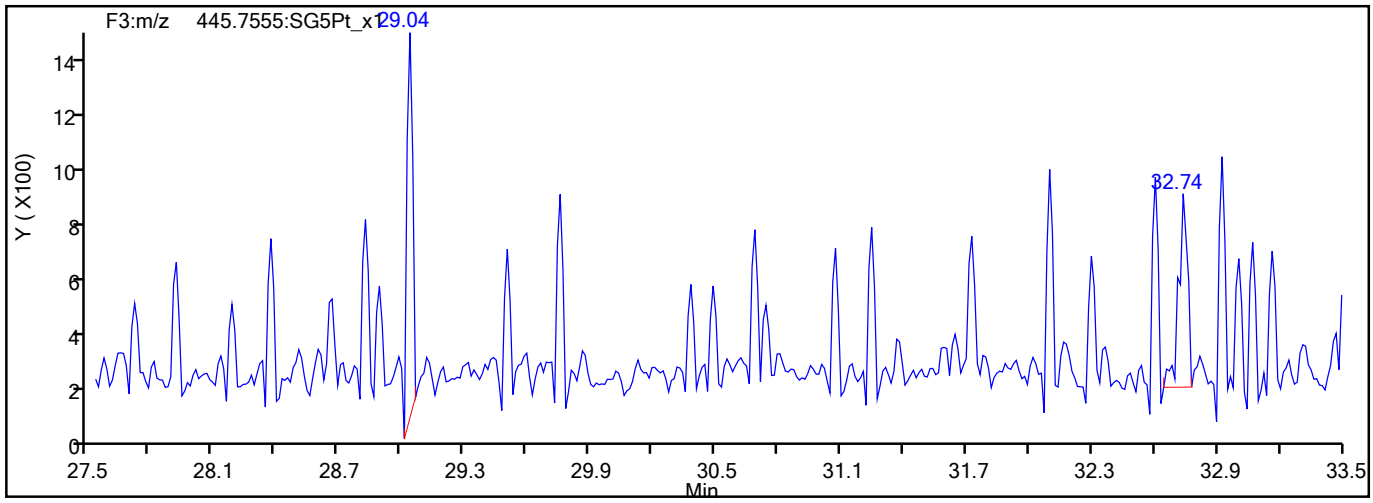

779284

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

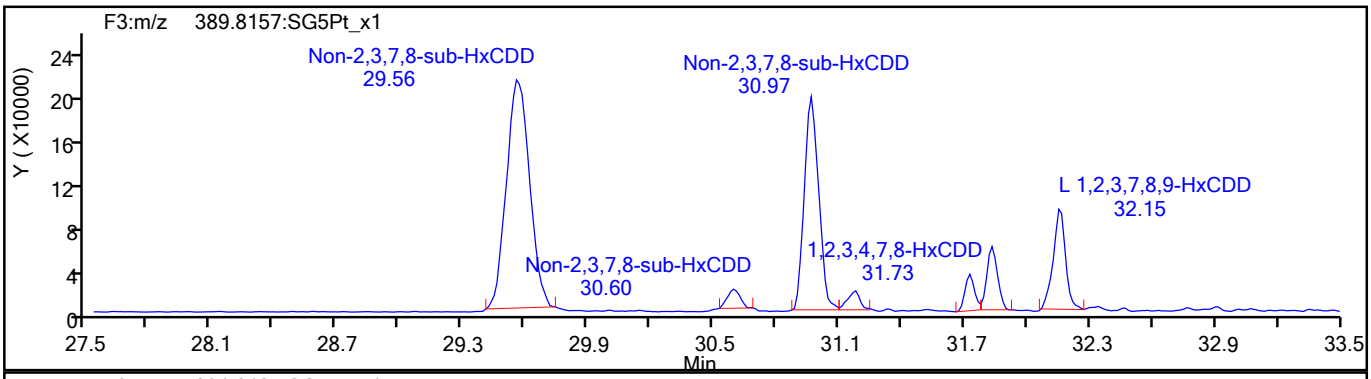

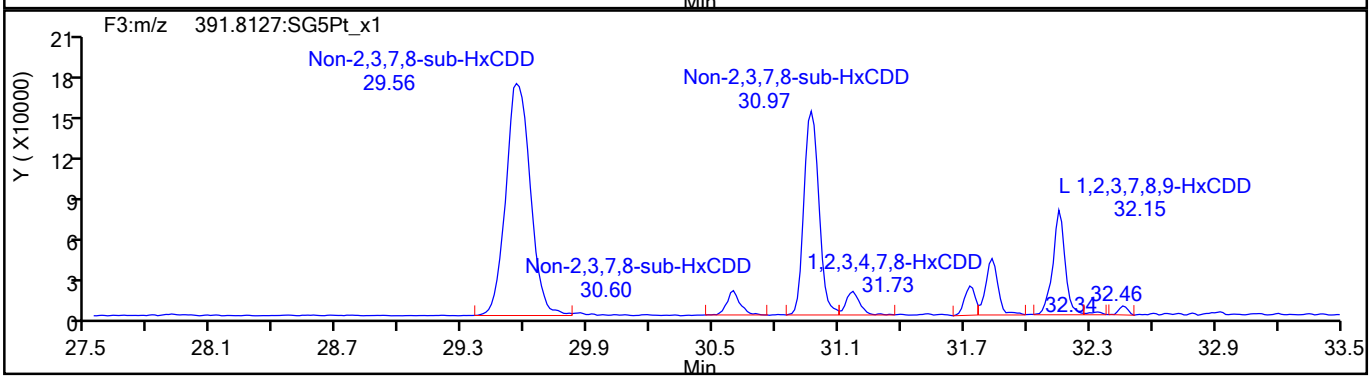

HxCDD Standards

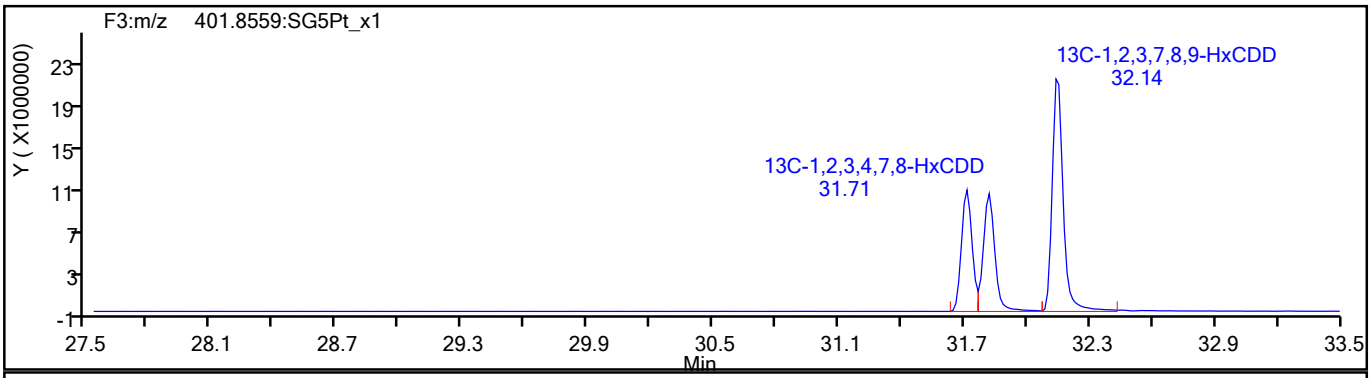

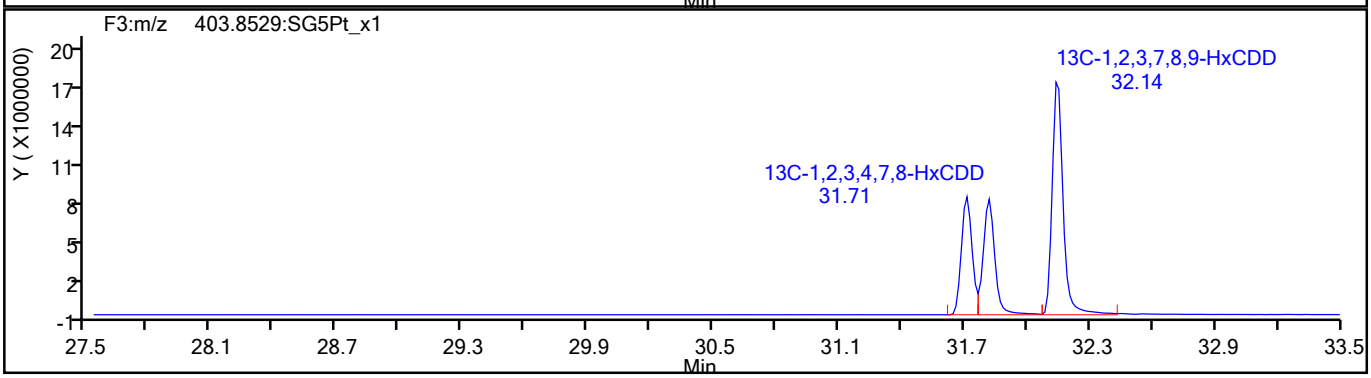

779285

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

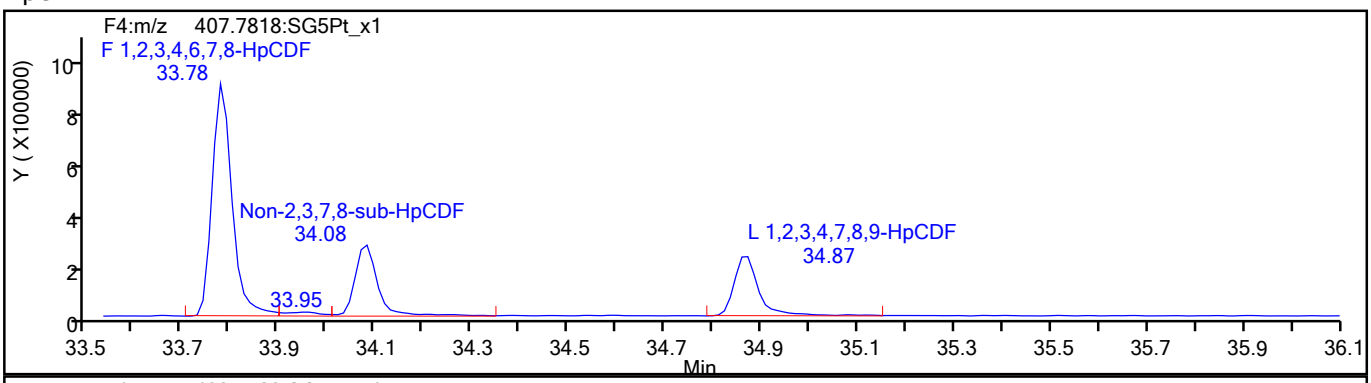

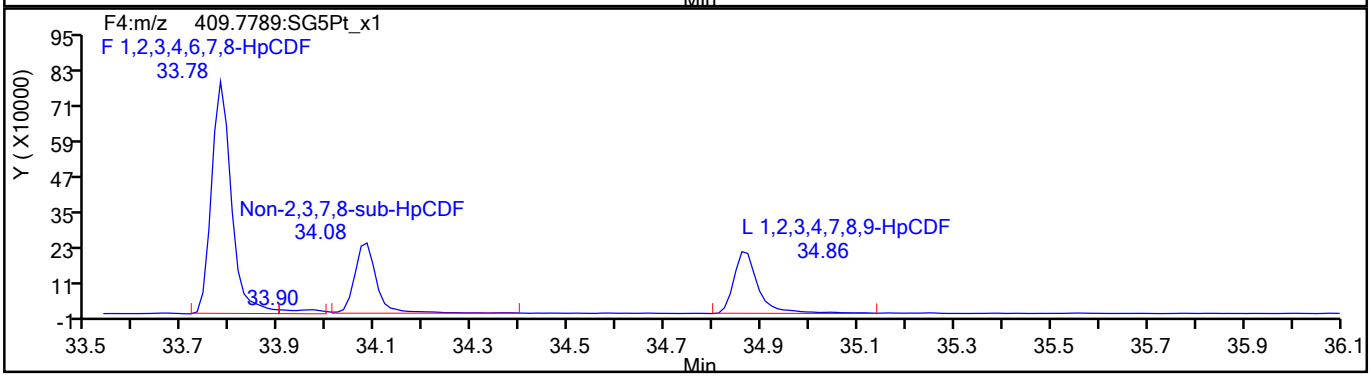

HpCDF Standards

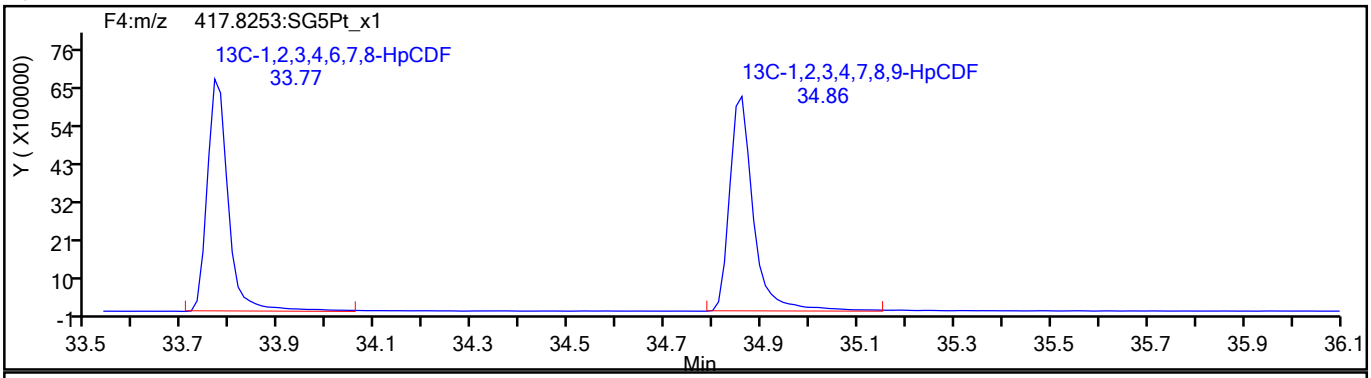

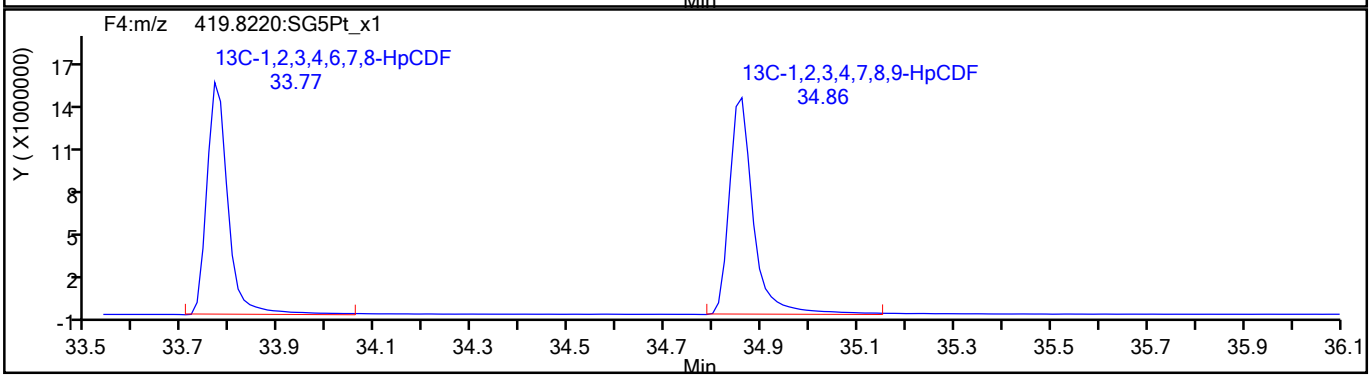

779286

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

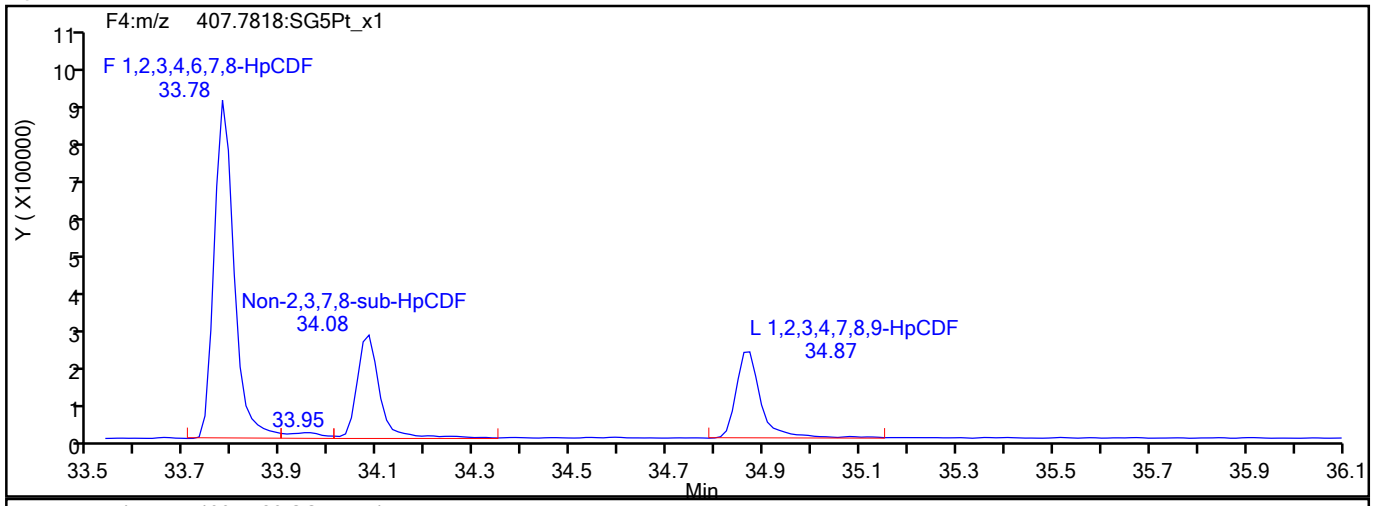

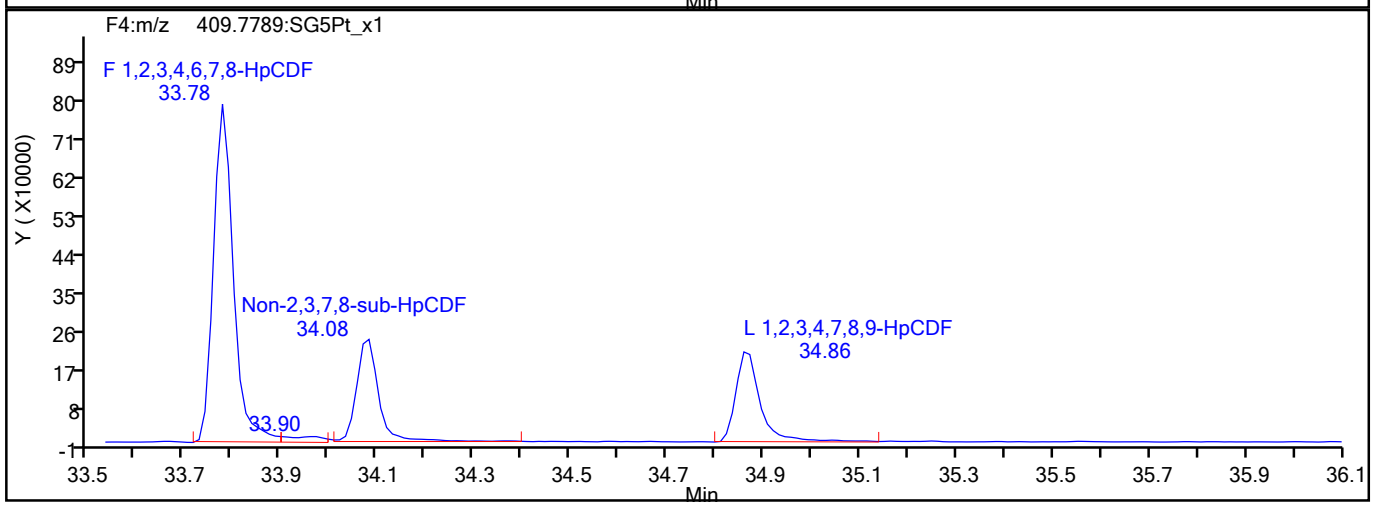

HpCDF Interference Mass

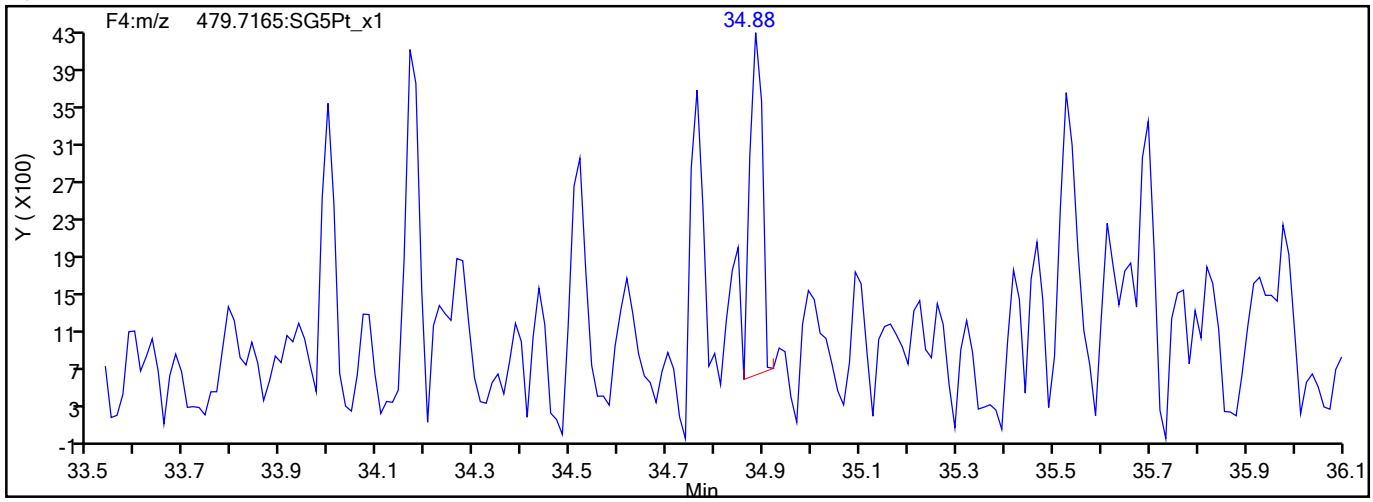

779287

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

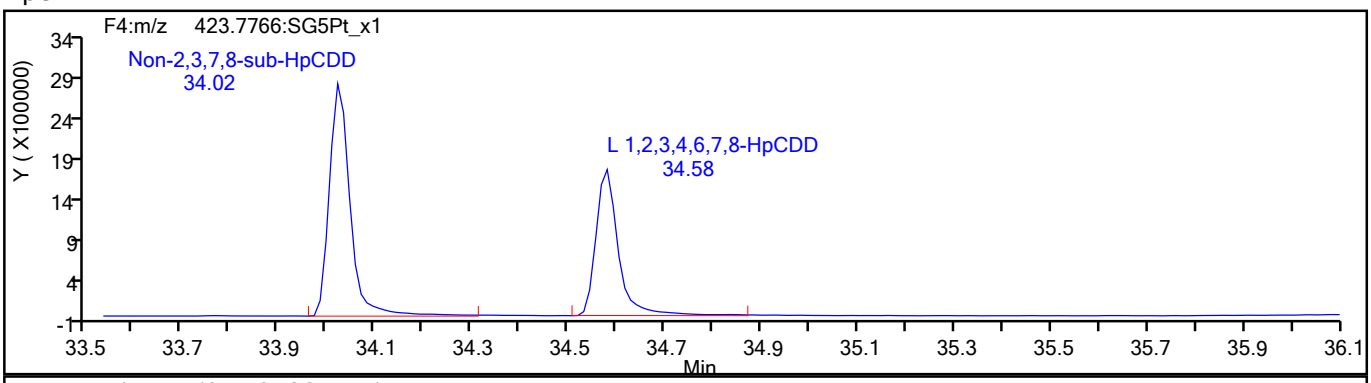

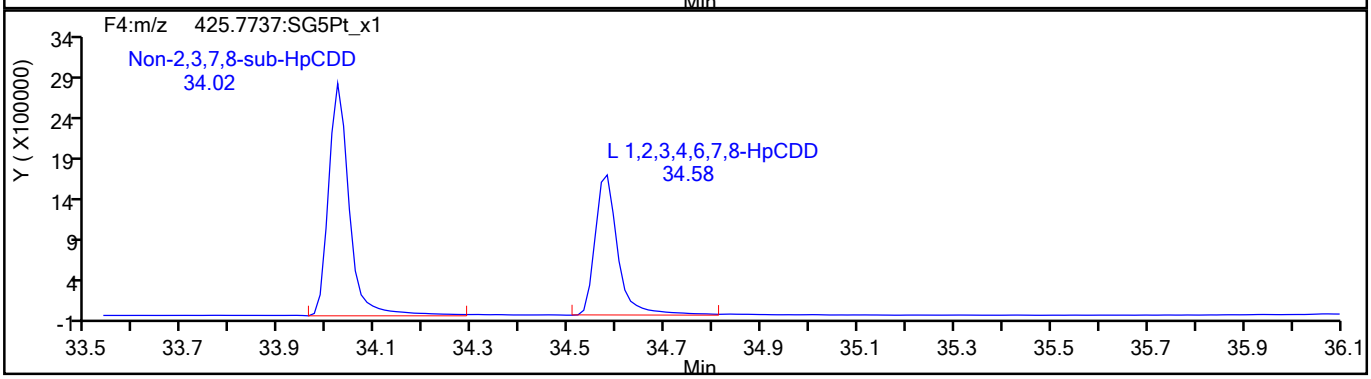

HpCDD Standards

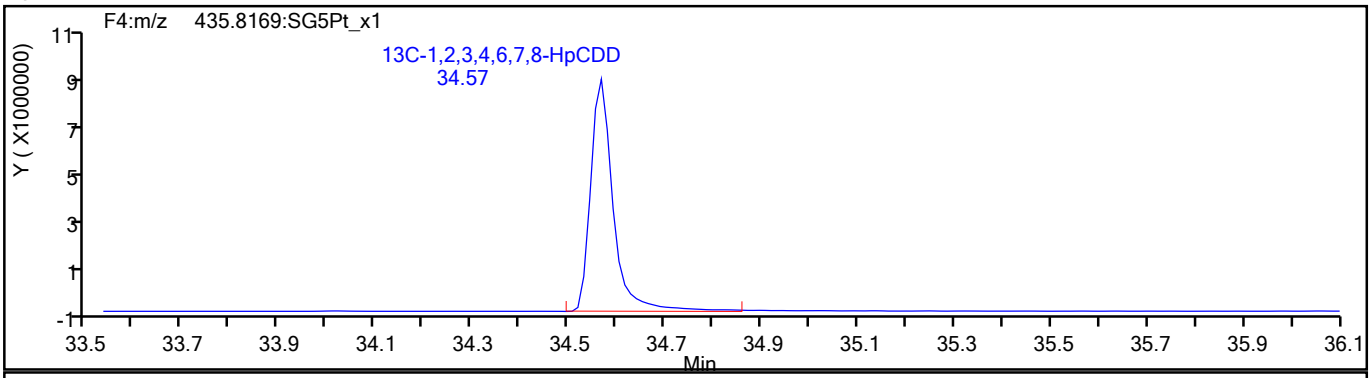

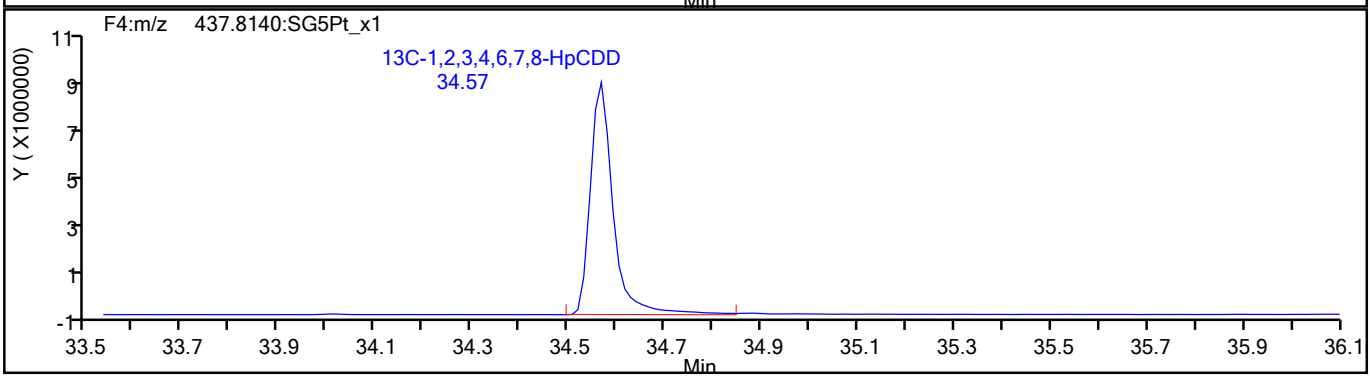

779288

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

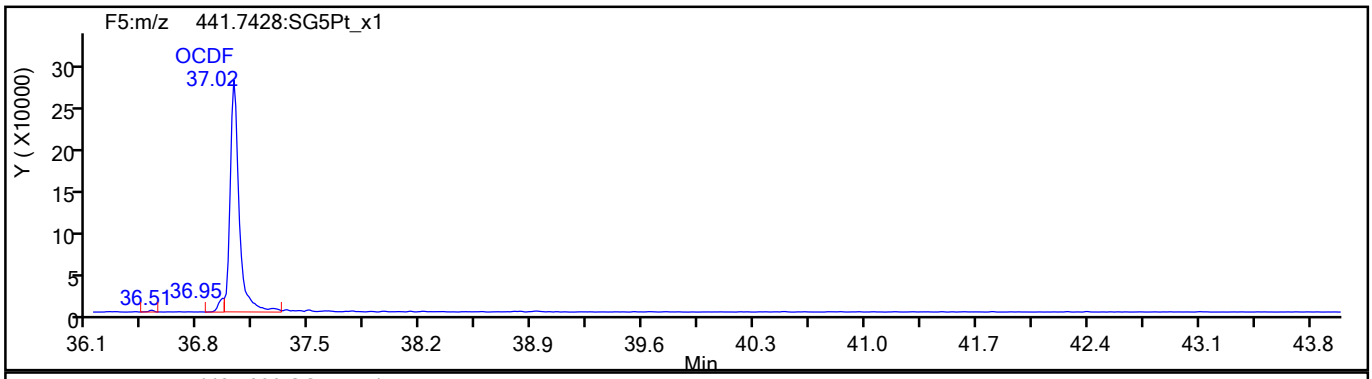

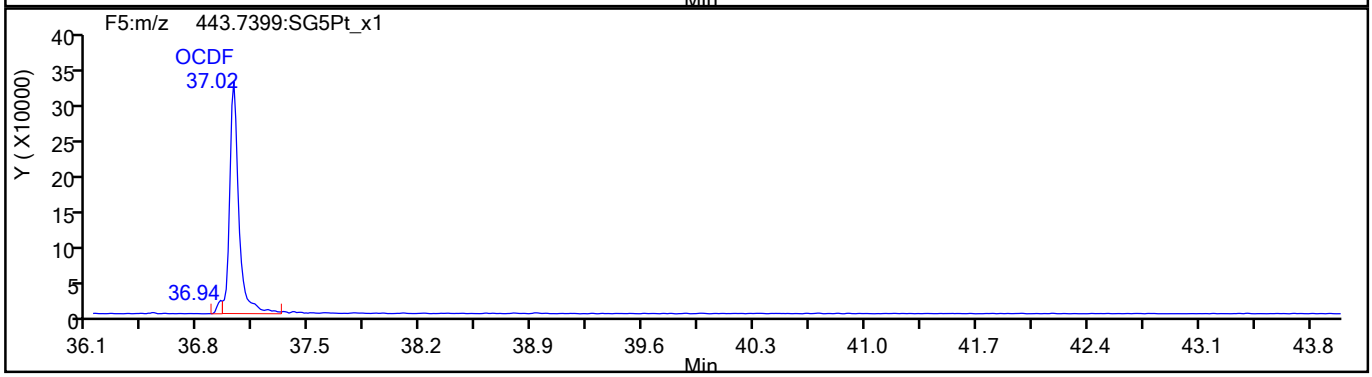

OCDF Standards

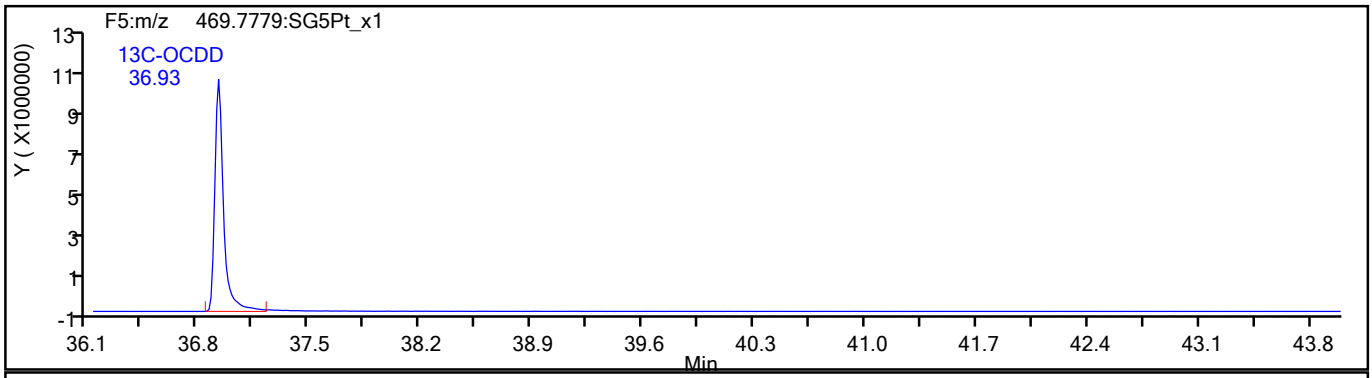

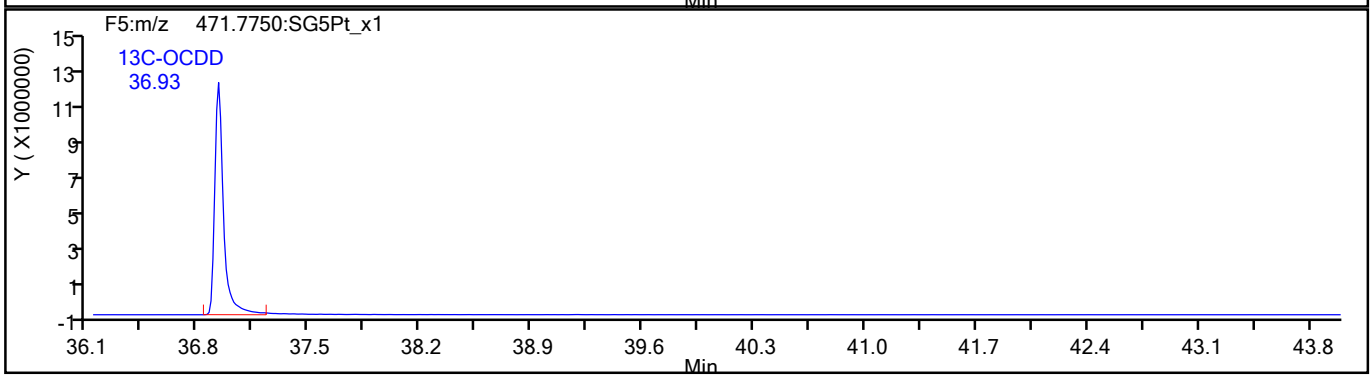

779289

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

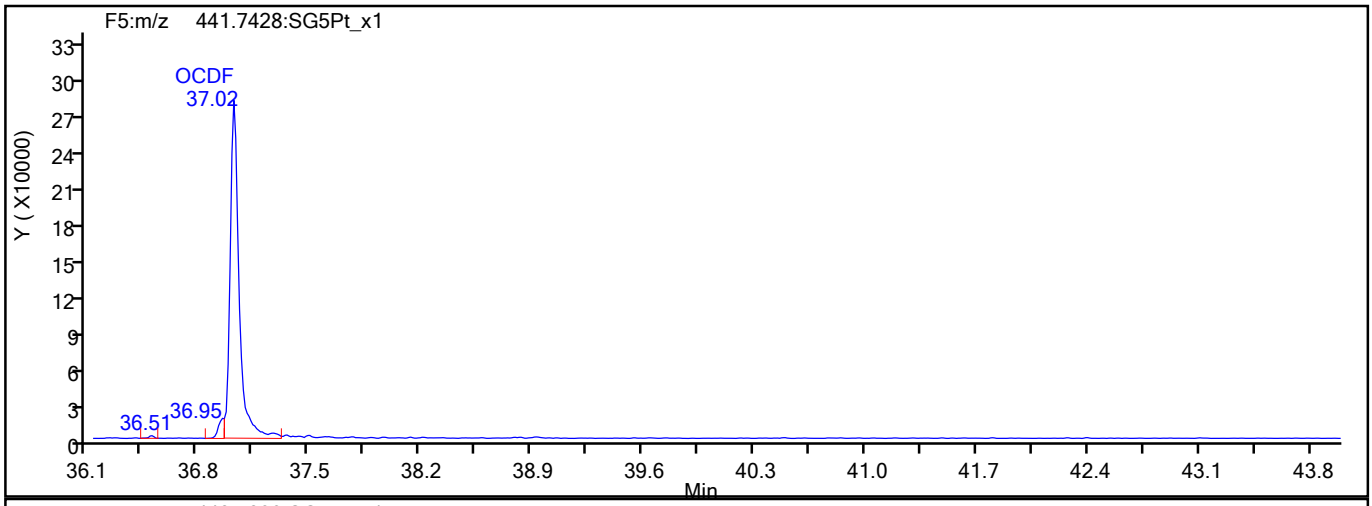

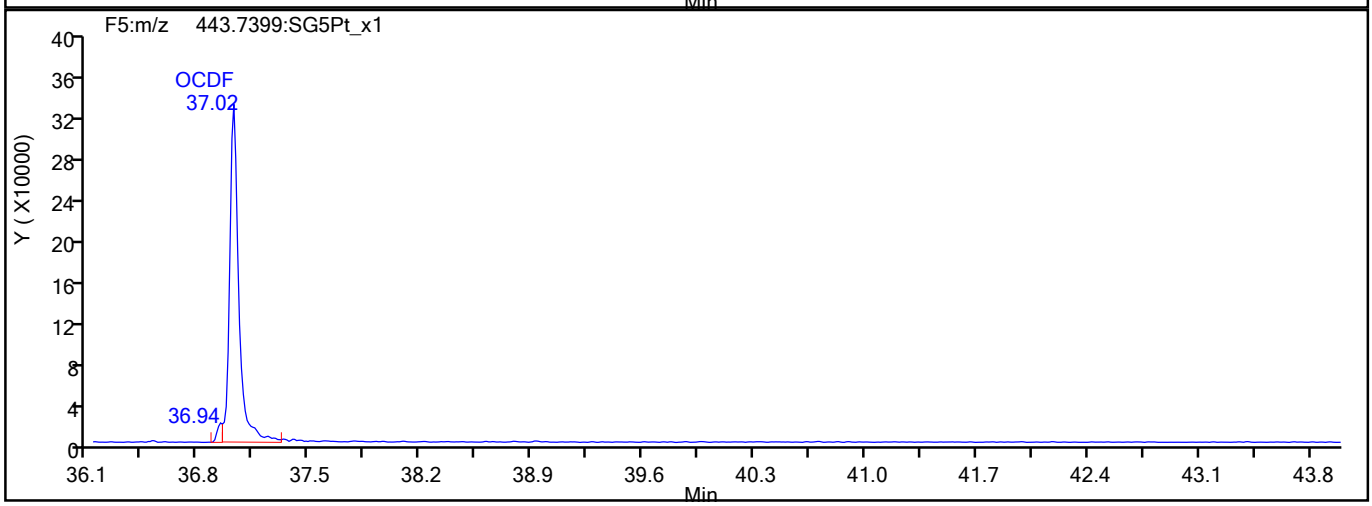

OCDF Interference Mass

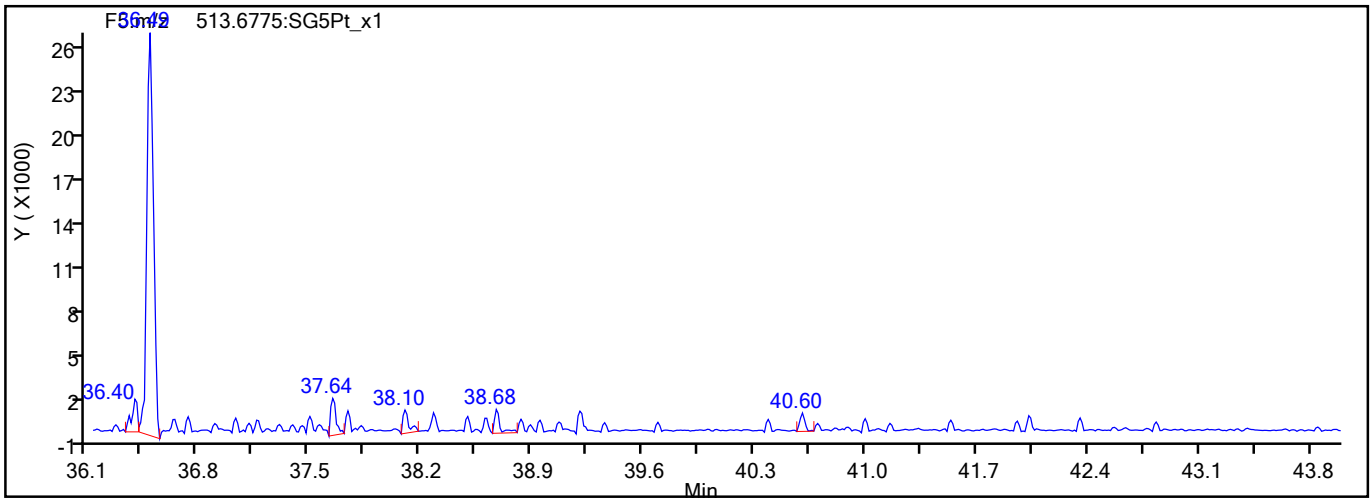

779290

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

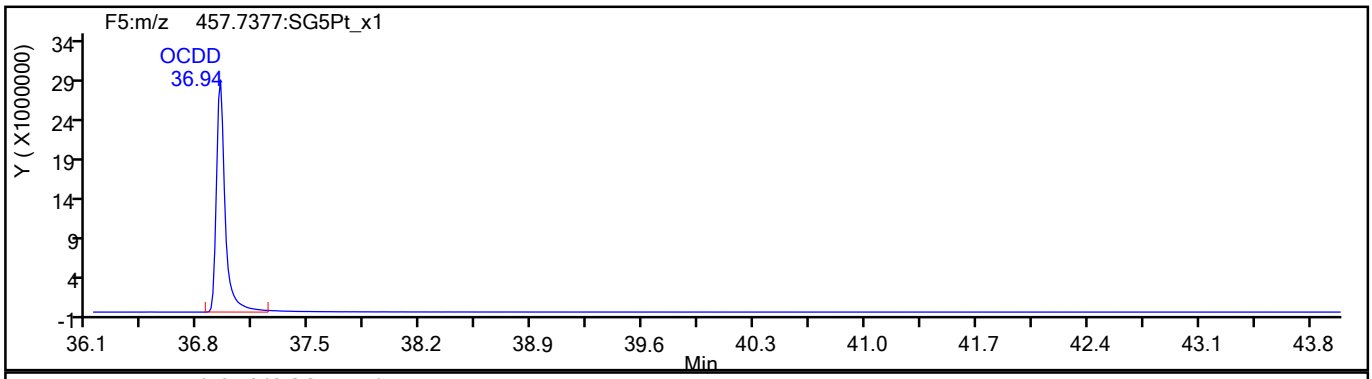

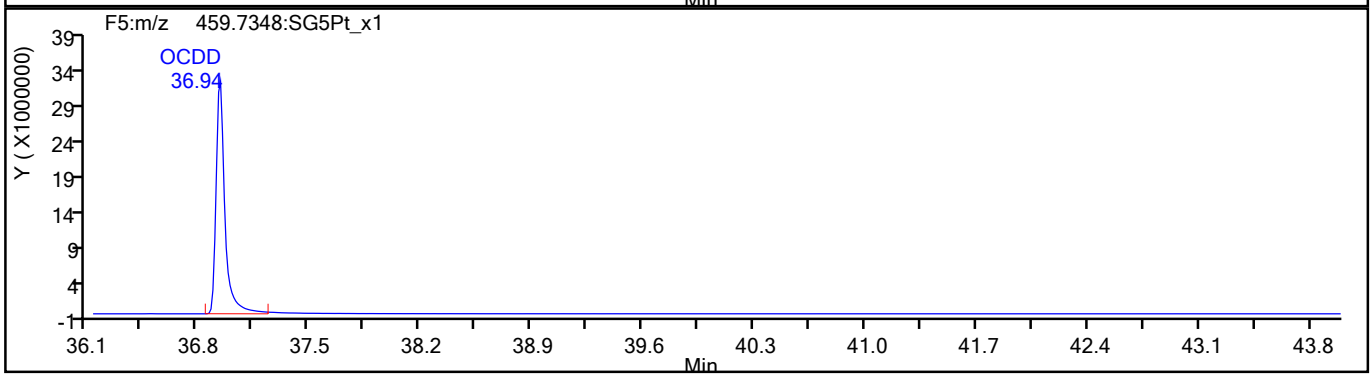

OCDD Standards

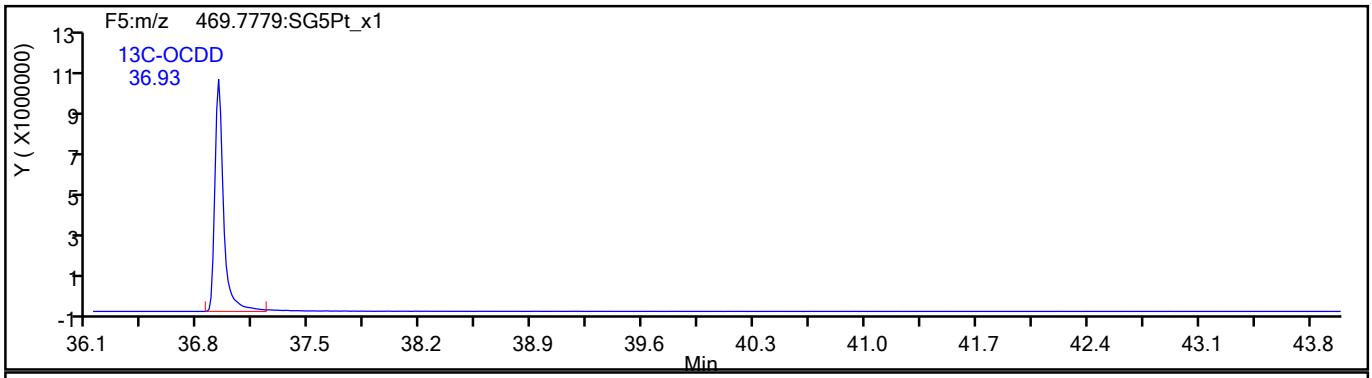

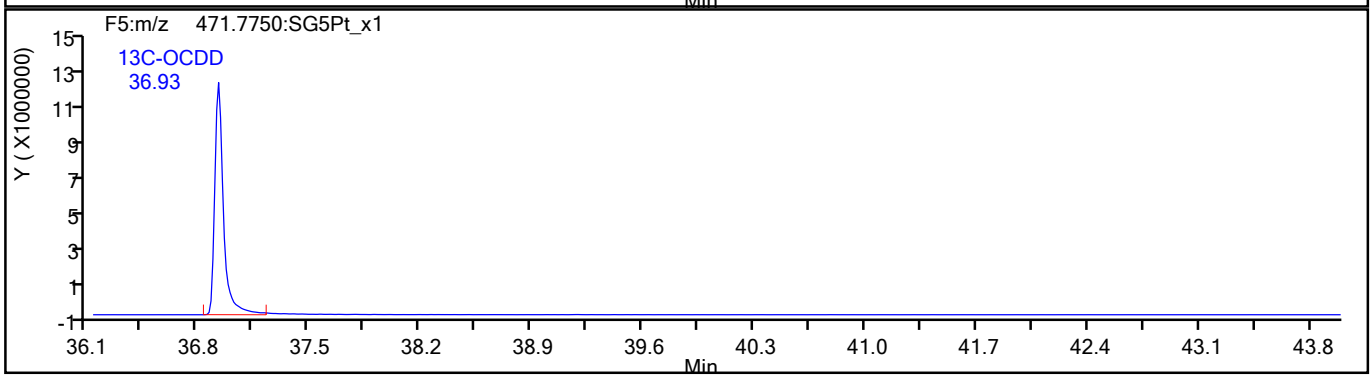

779291

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

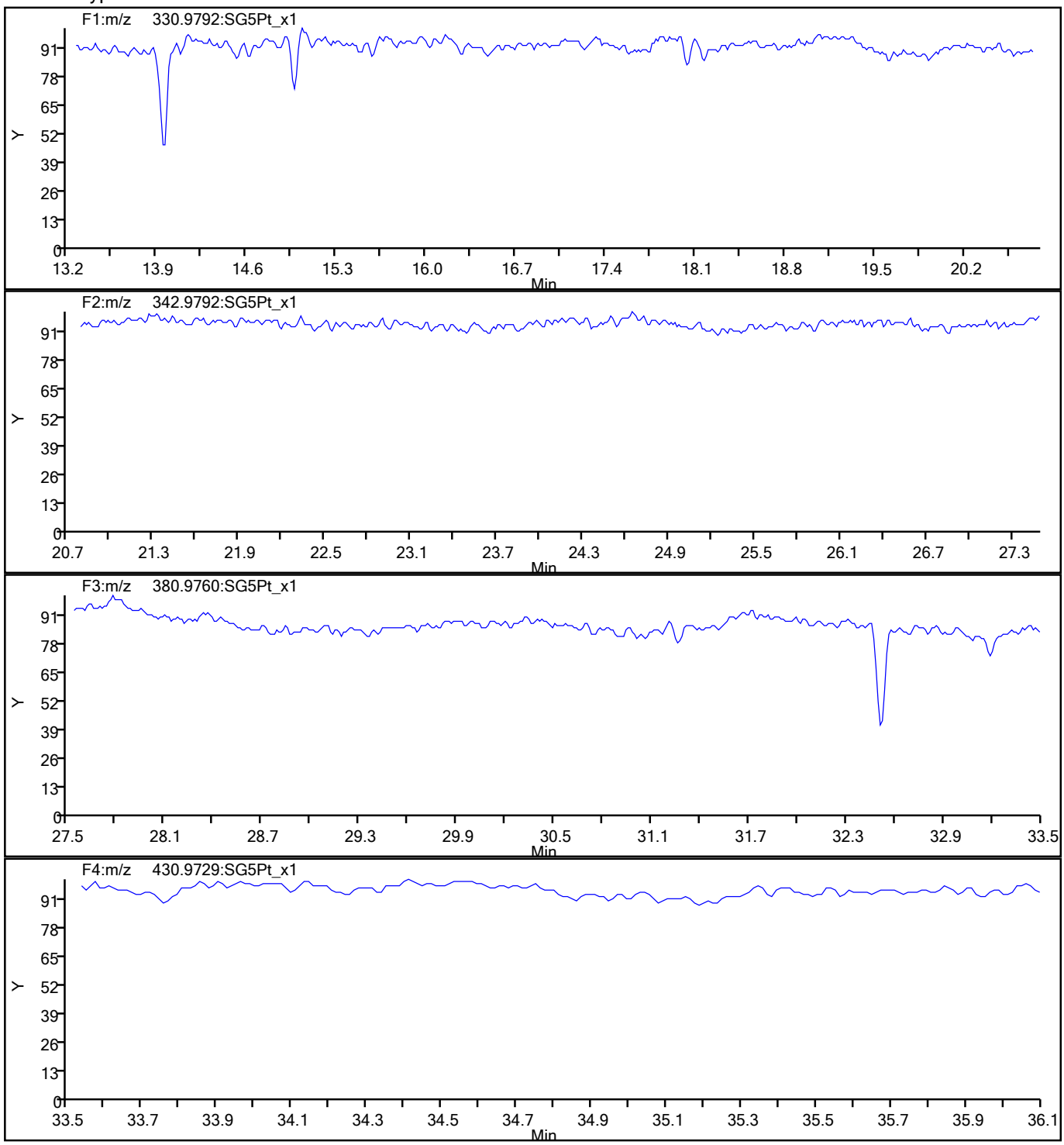

779292

Report Date: 18-Aug-2021 07:26:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_17.d		
Injection Date:	14-Aug-2021 05:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	516836	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

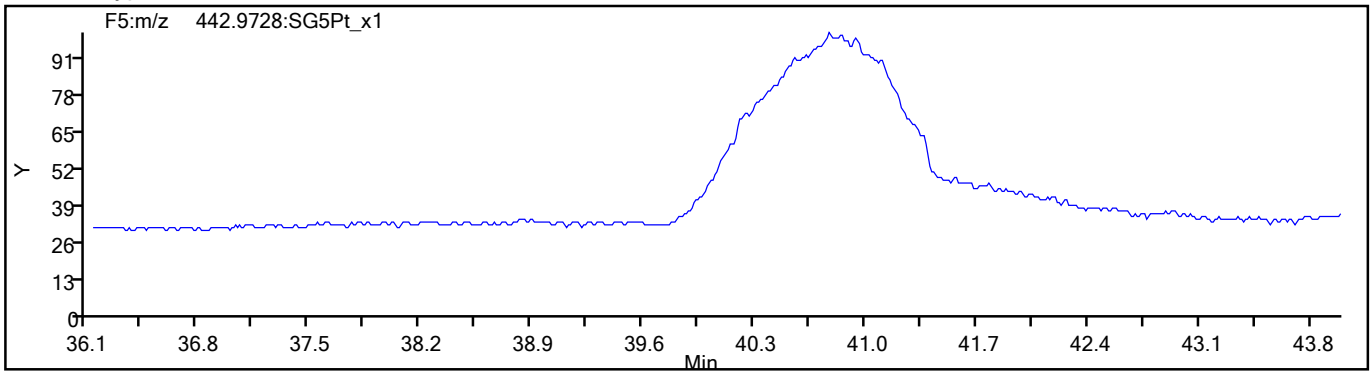

779293

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (2-4) RA
Lab Sample ID: 320-76788-2 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_016.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:05
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.86(g)
Date Analyzed: 08/25/2021 02:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	1700	G E B	2.2	2.2

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	67		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	80		35-197

Report Date: 25-Aug-2021 09:02:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_016.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Sample Type: Client
Inject. Date: 25-Aug-2021 02:12:28 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-2-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:33:07

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	34493104	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	30784552	0.74	1.3327	67.0	67.0	0.7991	0.7991	66.97	
2,3,7,8-TCDF	17.668	154359974	0.79	0.9978	502.5	502.5	0.6539	0.6539		E
D 13C-2,3,7,8-TCDD	16.091	18845651	0.77	0.8749	62.4	62.4	3.825	3.825	62.45	
$ 37Cl4-2,3,7,8-TCDD	16.118	9491291		0.8648	31.8	31.8	0.1468	0.1468	79.54	
2,3,7,8-TCDD	16.118	35094368	0.78	1.0570	176.2	176.2	0.7337	0.7337		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_016.d
Lims ID: 320-76788-A-2-A
Client ID: 11215702-072321-BN-SJSB085 (2-4)
Sample Type: Client
Inject. Date: 25-Aug-2021 02:12:28 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-2-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:33:07

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.285	2		14973749	3333390	44743	111857	75		
333.9339	16.324	16.285	2		19519355	4252278	56789	141972	75	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.601	3	1.081	13106450	2445237	16340	40850	150		
317.9389	17.655	17.601	3	1.081	17678102	3446438	15974	39935	216	0.74(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.668	17.629	2	1.001	68267723	12875104	6664	16660	1932		
305.8987	17.668	17.629	2	1.001	86092251	16428530	8712	21780	1886	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.091	16.051	2	0.986	8187657	1830537	44743	111857	41		
333.9339	16.091	16.051	2	0.986	10657994	2474295	56789	141972	44	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.118	16.065	3	0.987	9491291	2136239	3853	9632	554		
2,3,7,8-TCDD											
319.8965	16.118	16.079	2	1.002	15339018	3451430	7676	19190	450		
321.8936	16.118	16.079	2	1.002	19755350	4392643	5678	14195	774	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 25-Aug-2021 09:02:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_016.d		
Injection Date:	25-Aug-2021 02:12:28	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	519540	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

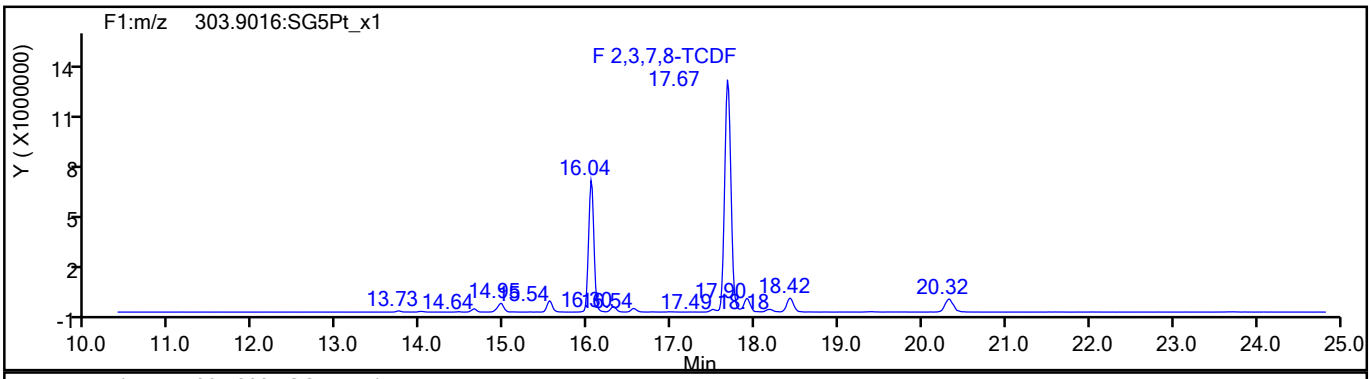

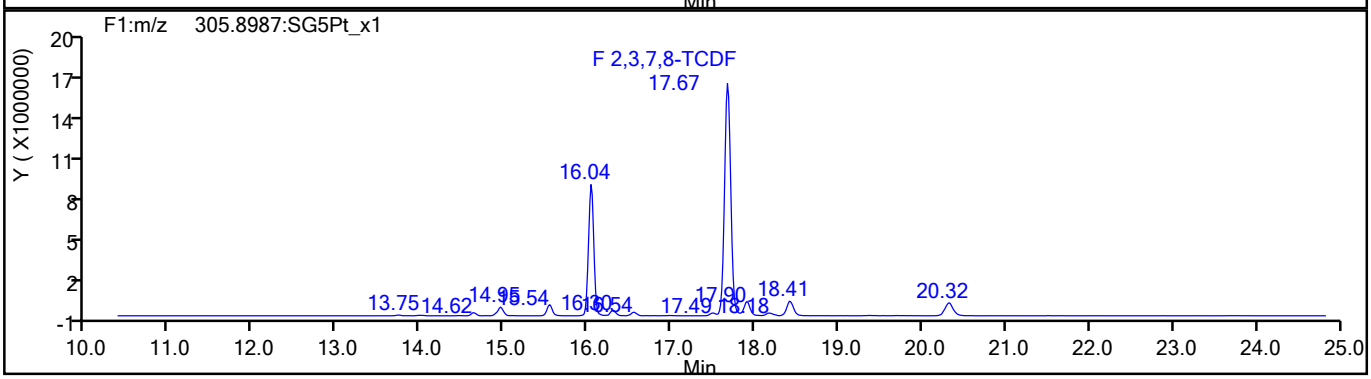

TCDF Standards

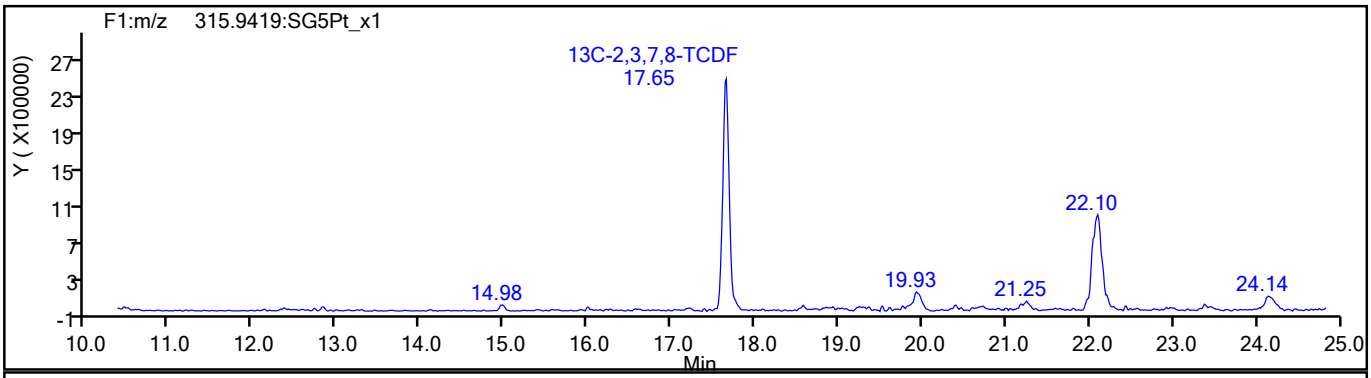

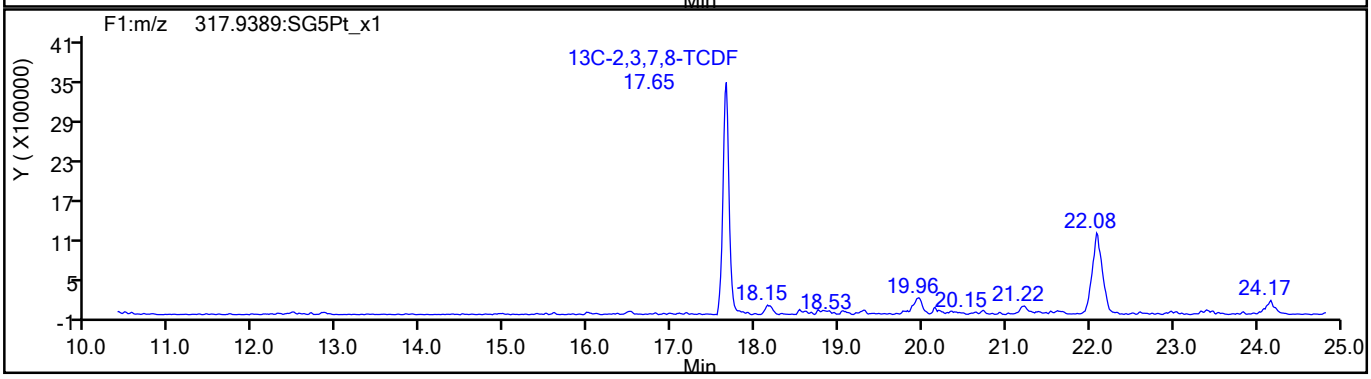

779297

Report Date: 25-Aug-2021 09:02:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_016.d		
Injection Date:	25-Aug-2021 02:12:28	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	519540	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

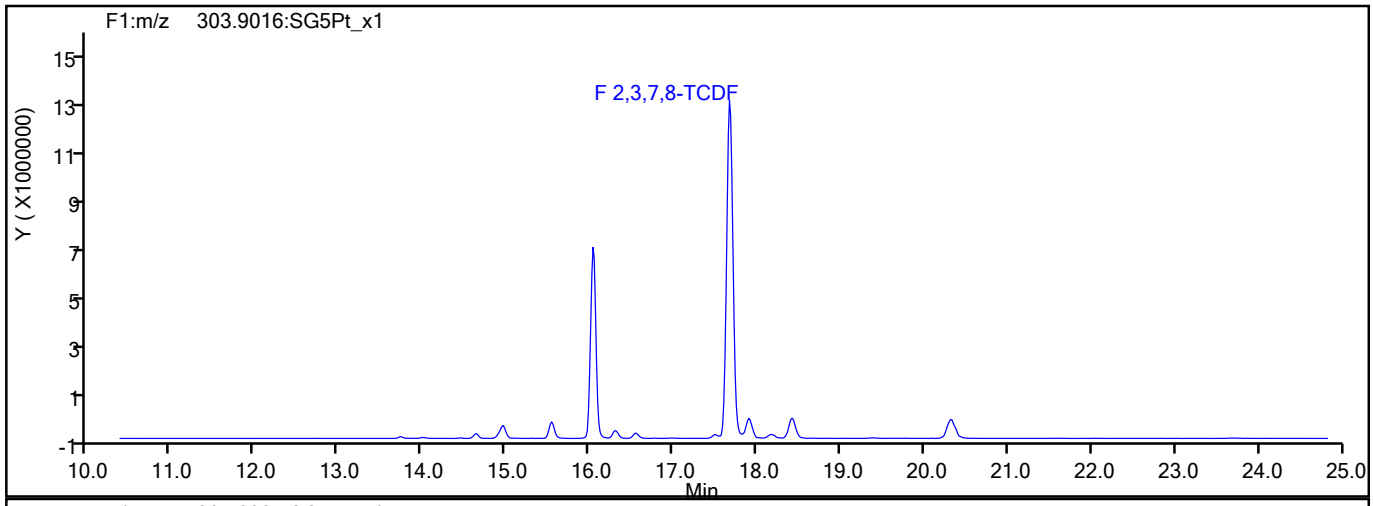

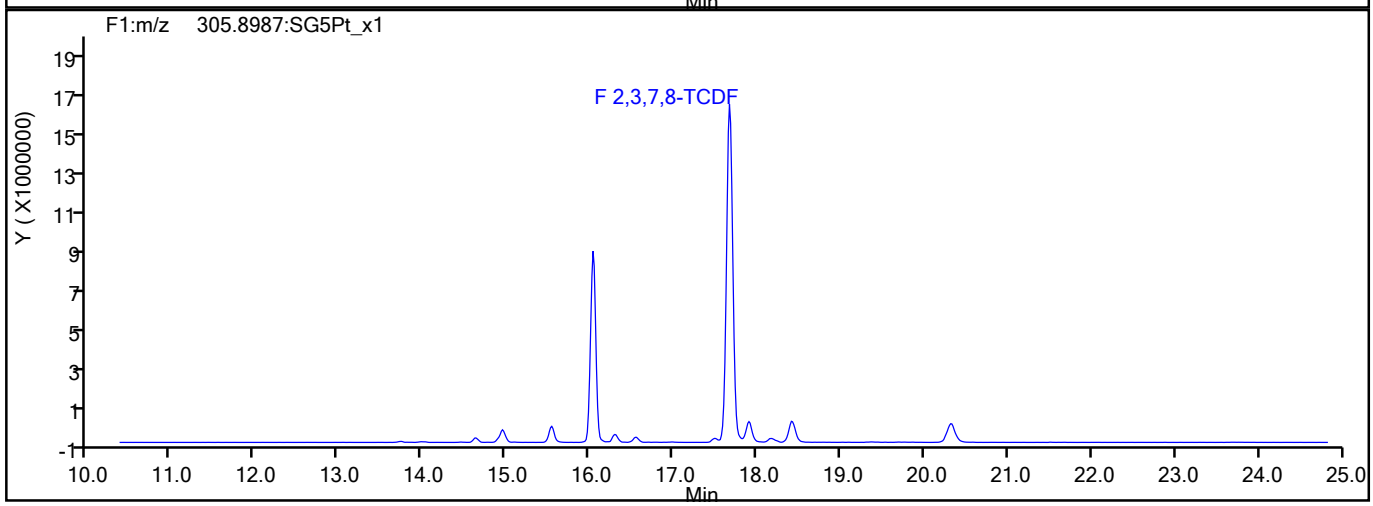

TCDF Interference Mass

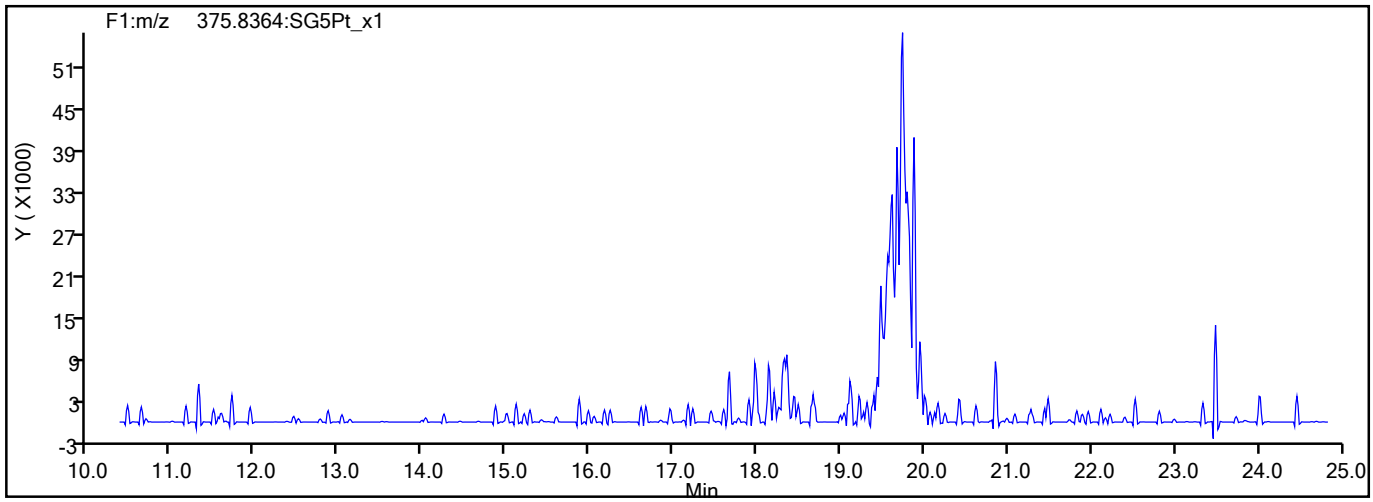

779298

Report Date: 25-Aug-2021 09:02:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_016.d		
Injection Date:	25-Aug-2021 02:12:28	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	519540	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

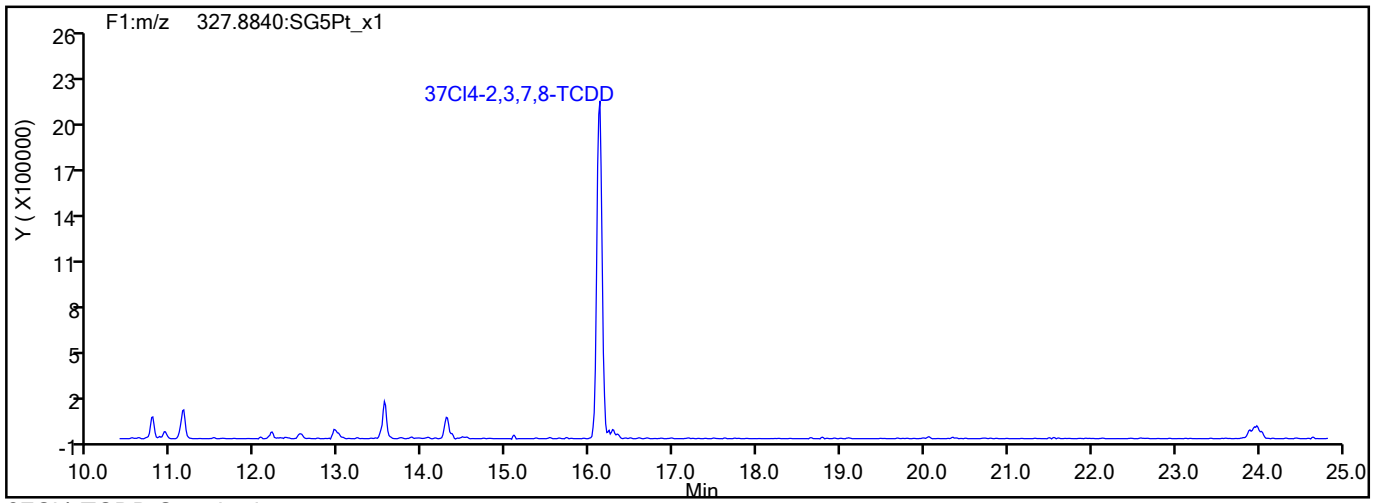

37Cl4-TCDD Standards

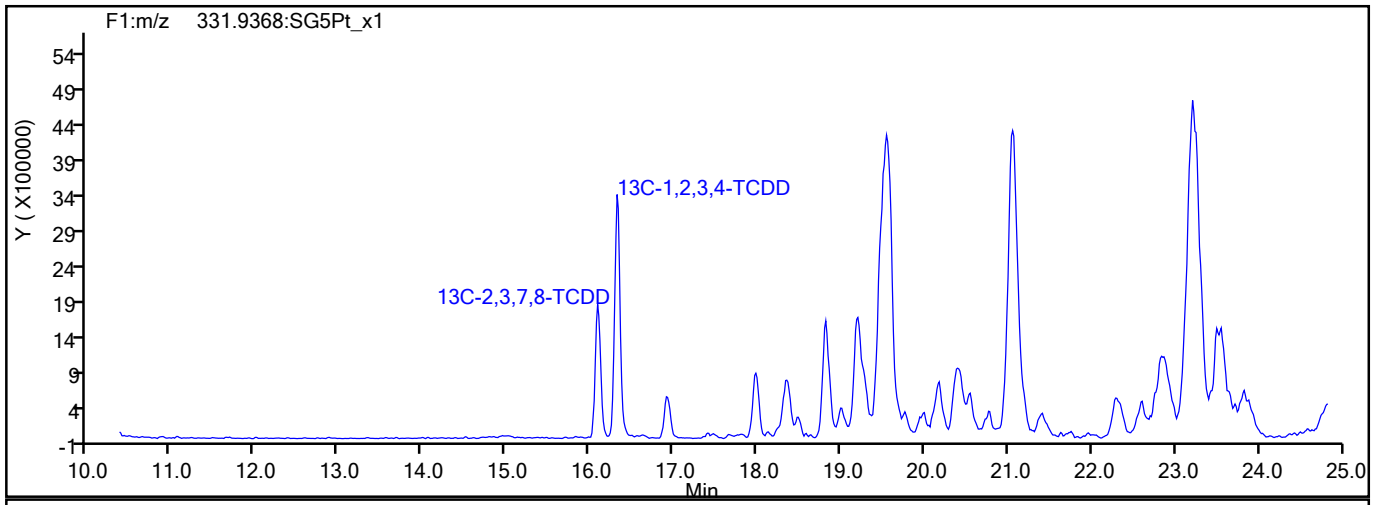

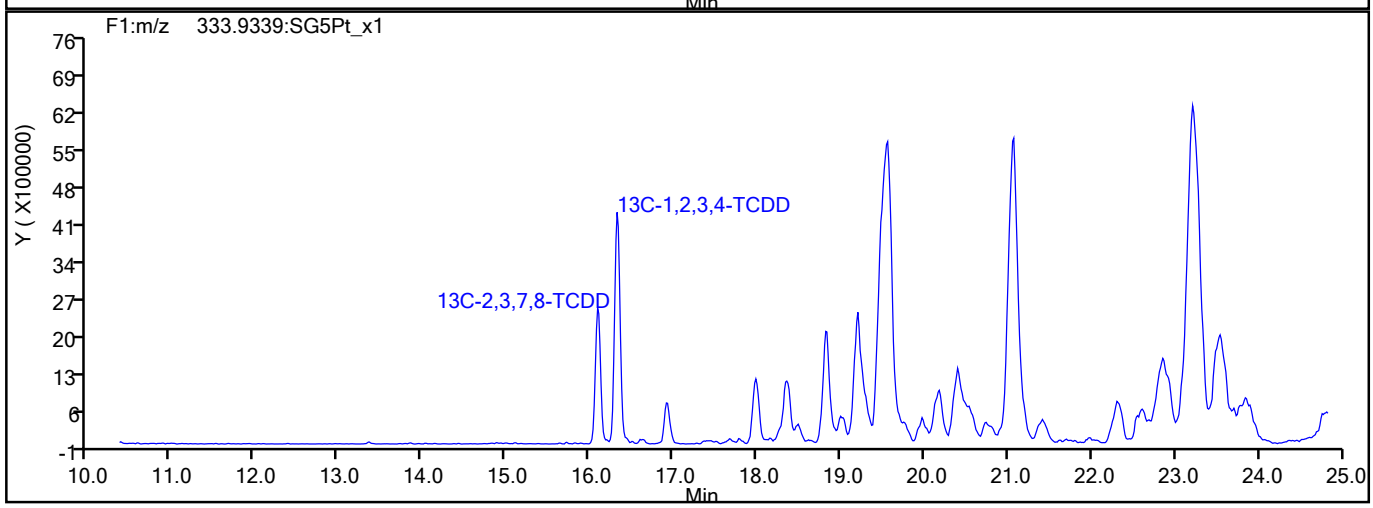

779299

Report Date: 25-Aug-2021 09:02:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_016.d		
Injection Date:	25-Aug-2021 02:12:28	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (2-4)		
Worklist#:	519540	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

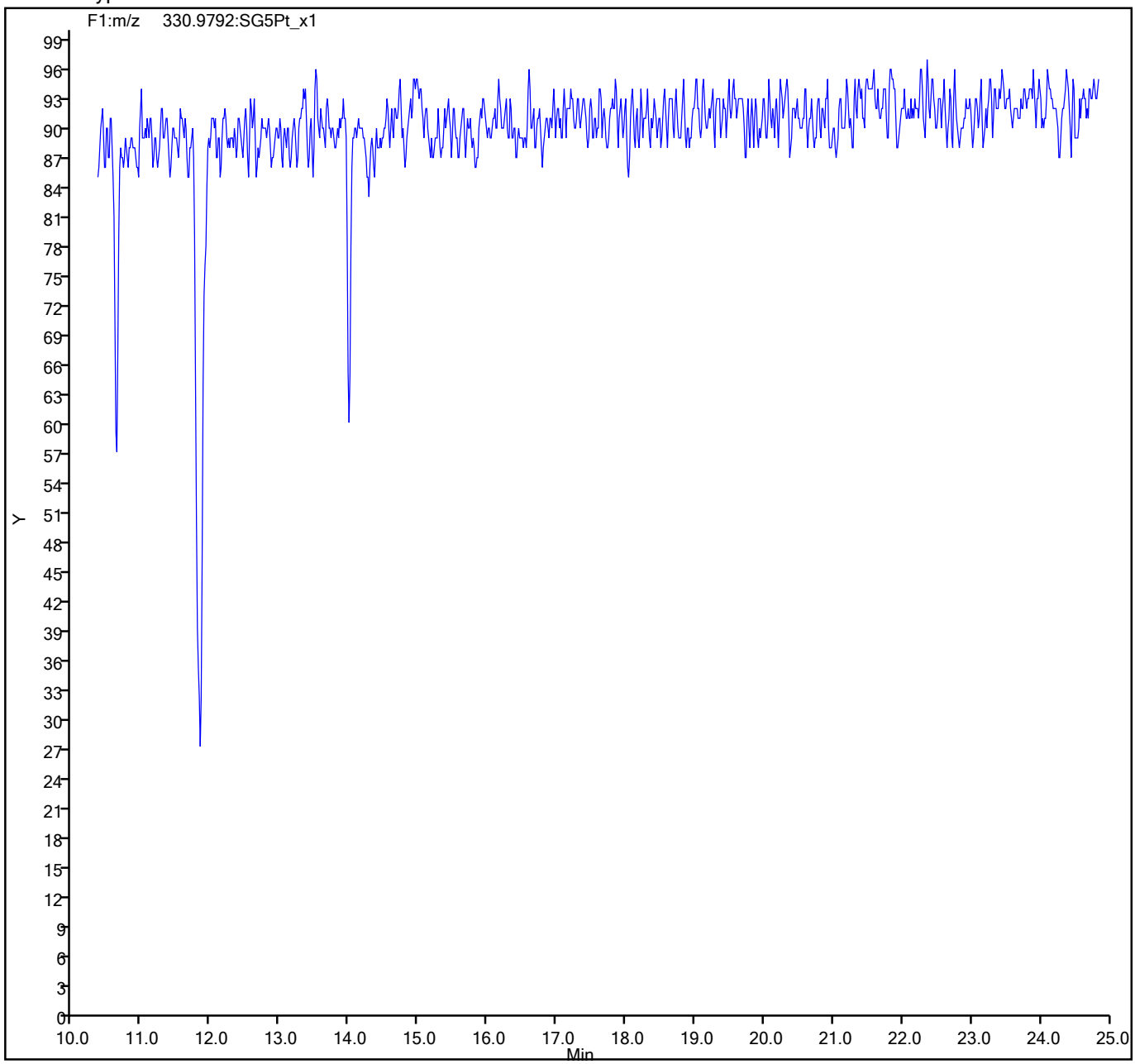

779300

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (4-6)
Lab Sample ID: 320-76788-3
Matrix: Solid
Lab File ID: 13AU2110D5_18.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:10
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.66(g)
Date Analyzed: 08/14/2021 05:56
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 20.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	19	B	1.2	0.12
40321-76-4	1,2,3,7,8-PeCDD	0.21	J q	5.9	0.081
57117-41-6	1,2,3,7,8-PeCDF	1.5	J	5.9	0.044
57117-31-4	2,3,4,7,8-PeCDF	0.97	J	5.9	0.045
39227-28-6	1,2,3,4,7,8-HxCDD	0.44	J B	5.9	0.15
57653-85-7	1,2,3,6,7,8-HxCDD	0.68	J	5.9	0.16
19408-74-3	1,2,3,7,8,9-HxCDD	1.5	J	5.9	0.14
70648-26-9	1,2,3,4,7,8-HxCDF	2.0	J B	5.9	0.032
57117-44-9	1,2,3,6,7,8-HxCDF	0.59	J B	5.9	0.033
72918-21-9	1,2,3,7,8,9-HxCDF	0.12	J B	5.9	0.026
60851-34-5	2,3,4,6,7,8-HxCDF	0.092	J	5.9	0.025
35822-46-9	1,2,3,4,6,7,8-HpCDD	34	B	5.9	0.74
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.64	J B q	5.9	0.031
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.20	J B	5.9	0.038
3268-87-9	OCDD	1000	B	12	1.1
39001-02-0	OCDF	0.88	J B	12	0.025
41903-57-5	Total TCDD	24	B q	1.2	0.12
30402-14-3	Total TCDF	120	B	1.2	0.23
36088-22-9	Total PeCDD	6.0	q	5.9	0.081
30402-15-4	Total PeCDF	3.7	J q	5.9	0.045
34465-46-8	Total HxCDD	28	B q	5.9	0.15
55684-94-1	Total HxCDF	3.1	J B q	5.9	0.029
37871-00-4	Total HpCDD	110	B	5.9	0.74
38998-75-3	Total HpCDF	1.0	J B q	5.9	0.034

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (4-6)
Lab Sample ID: 320-76788-3
Matrix: Solid
Lab File ID: 13AU2110D5_18.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:10
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.66(g)
Date Analyzed: 08/14/2021 05:56
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 20.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	68		25-164
89059-46-1	13C-2,3,7,8-TCDF	67		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	66		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	64		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	69		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	68		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	64		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	69		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	62		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	64		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	63		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	70		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	68		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	78		26-138
114423-97-1	13C-OCDD	77		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	83		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d
Lims ID: 320-76788-A-3-A
Client ID: 11215702-072321-BN-SJSB085 (4-6)
Sample Type: Client
Inject. Date: 14-Aug-2021 05:56:23 ALS Bottle#: 19 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-3-a 320-76788-a-3-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:00:49 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:39:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	116327972	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	125892846	0.77	1.6249	66.6	66.6	0.1316	0.1316	66.60	
2,3,7,8-TCDF	17.371	37981144	0.78	1.0239	29.5	29.5	0.0978	0.0978		
A Non-2,3,7,8-sub-TCDF	17.046	26826593	0.76	1.0239	20.8	20.8	0.0978	12.9		Ma
S Total TCDF					50.3	50.3	0.0978	0.0978		
D 13C-2,3,7,8-TCDD	18.051	71658507	0.82	0.8993	68.5	68.5	0.1954	0.1954	68.50	
2,3,7,8-TCDD	18.066	7244301	0.81	1.2541	8.061	8.061	0.0526	0.0526		
$ 37Cl4-2,3,7,8-TCDD	18.066	42935333		1.1071	33.3	33.3	0.0512	0.0512	83.34	
A Non-2,3,7,8-sub-TCDD	17.499	1989538	0.77	1.2541	2.239	2.214	0.0526	0.8538		RQ
S Total TCDD					10.3	10.3	0.0526	0.0526		RQ
D 13C-1,2,3,7,8-PeCDF	22.367	90276977	1.58	1.2101	64.1	64.1	0.1448	0.1448	64.13	
1,2,3,7,8-PeCDF	22.394	603526	1.56	1.0611	0.6300	0.6300	0.0188	0.0188		M
D 13C-2,3,4,7,8-PeCDF	23.717	99720203	1.58	1.2395	69.2	69.2	0.1414	0.1414	69.16	
2,3,4,7,8-PeCDF	23.717	418491	1.52	1.0184	0.4121	0.4121	0.0193	0.0193		
A F1 PeCDFs	20.093						0.0130	0.0130		
A Non-2,3,7,8-sub-PeCDF	23.241	519306	1.55	1.0398	0.5489	0.5257	0.0190	0.2383		RQMa
S Total PeCDF					1.591	1.568	0.0191	0.0191		RQ
D 13C-1,2,3,7,8-PeCDD	24.426	58628557	1.61	0.7612	66.2	66.2	0.0625	0.0625	66.21	
1,2,3,7,8-PeCDD	24.467	54072	1.55	1.0484	0.1000	0.0880	0.0345	0.0345		RQ
A Non-2,3,7,8-sub-PeCDD	23.349	1512849	1.55	1.0484	2.492	2.461	0.0345	1.278		RQ
S Total PeCDD					2.592	2.549	0.0345	0.0345		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.503	81790207	0.53	1.0837	69.5	69.5	0.2885	0.2885	69.49	
1,2,3,4,7,8-HxCDF	30.529	750079	1.26	1.0851	0.8451	0.8451	0.0137	0.0137		
D 13C-1,2,3,6,7,8-HxCDF	30.689	75809037	0.51	1.1279	61.9	61.9	0.2772	0.2772	61.88	
1,2,3,6,7,8-HxCDF	30.715	215601	1.34	1.1260	0.2526	0.2526	0.0141	0.0141		
D 13C-2,3,4,6,7,8-HxCDF	31.514	73153054	0.52	1.0637	63.3	63.3	0.2939	0.2939	63.32	
2,3,4,6,7,8-HxCDF	31.527	33572	1.36	1.1675	0.0393	0.0393	0.0106	0.0106		
D 13C-1,2,3,7,8,9-HxCDF	32.326	66988862	0.53	0.9676	63.7	63.7	0.3232	0.3232	63.75	
1,2,3,7,8,9-HxCDF	32.326	38268	1.17	1.1664	0.0490	0.0490	0.0112	0.0112		
A Non-2,3,7,8-sub-HxCDF	30.197	97662	1.24	1.1363	0.1361	0.1155	0.0122	0.0517		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					1.322	1.301	0.0124	0.0124		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.140	108607274	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.700	54051737	1.26	0.7334	67.9	67.9	0.2889	0.2889	67.86	
1,2,3,4,7,8-HxCDD	31.714	106495	1.07	1.0640	0.1852	0.1852	0.0655	0.0655		
D 13C-1,2,3,6,7,8-HxCDD	31.807	61551046	1.25	0.8802	64.4	64.4	0.2407	0.2407	64.39	
1,2,3,6,7,8-HxCDD	31.820	177815	1.28	1.0001	0.2889	0.2889	0.0677	0.0677		
1,2,3,7,8,9-HxCDD	32.153	420314	1.25	1.1325	0.6421	0.6421	0.0607	0.0607		
A Non-2,3,7,8-sub-HxCDD	30.882	6702512	1.24	1.0655	10.9	10.9	0.0645	8.192		RQ
S Total HxCDD					12.0	12.0	0.0646	0.0646		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	57329065	0.45	0.7730	68.3	68.3	0.8194	0.8194	68.28	
1,2,3,4,6,7,8-HpCDF	33.778	224240	1.04	1.4413	0.2947	0.2714	0.0132	0.0132		RQ
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	59550893	0.44	0.7008	78.2	78.2	0.9038	0.9038	78.24	
1,2,3,4,7,8,9-HpCDF	34.859	66189	1.10	1.3174	0.0844	0.0844	0.0161	0.0161		M
A Non-2,3,7,8-sub-HpCDF	34.319	66969	0.92	1.3793	0.0831	0.0831	0.0145	0.0831		M
S Total HpCDF					0.4622	0.4388	0.0146	0.0146		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	49401054	1.00	0.6472	70.3	70.3	0.3368	0.3368	70.28	
1,2,3,4,6,7,8-HpCDD	34.568	7776271	1.01	1.0943	14.4	14.4	0.3143	0.3143		
A Non-2,3,7,8-sub-HpCDD	34.301	18405129	1.04	1.0943	34.0	34.0	0.3143	34.0		
S Total HpCDD					48.4	48.4	0.3143	0.3143		
D 13C-OCDD	36.914	74647381	0.88	0.4472	153.7	153.7	0.1622	0.1622	76.85	
OCDF	37.022	200141	0.80	1.4382	0.3729	0.3729	0.0106	0.0106		M
OCDD	36.926	184302109	0.89	1.1070	446.1	446.1	0.4689	0.4689		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d
Lims ID: 320-76788-A-3-A
Client ID: 11215702-072321-BN-SJSB085 (4-6)
Sample Type: Client
Inject. Date: 14-Aug-2021 05:56:23 ALS Bottle#: 19 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-3-a 320-76788-a-3-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:00:49 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:39:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		52094690	13006098	7272	18180	1789		
333.9339	17.855	17.855	0		64233282	16086098	13176	32940	1221	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.971	54777256	13307821	7749	19372	1717		
317.9389	17.341	17.341	0	0.971	71115590	17223355	17142	42855	1005	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.356	1	1.002	16652005	3871696	5321	13302	728		
305.8987	17.356	17.356	0	1.001	21329139	4992680	6904	17260	723	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											Ma
303.9016	15.950	17.046	-66	0.920	243957	69717	5321	13302	13		
305.8987	15.950	17.046	-66	0.920	300310	83600	6904	17260	12	0.81(0.65-0.89)	
303.9016	16.222	17.046	-49	0.935	473328	102214	5321	13302	19		
305.8987	16.222	17.046	-49	0.935	615661	139940	6904	17260	20	0.77(0.65-0.89)	M
303.9016	16.464	17.046	-35	0.949	436137	114545	5321	13302	22		M
305.8987	16.464	17.046	-35	0.949	576882	147946	6904	17260	21	0.76(0.65-0.89)	
303.9016	16.706	17.046	-20	0.963	546442	145869	5321	13302	27		M
305.8987	16.691	17.046	-21	0.963	817992	203772	6904	17260	30	0.67(0.65-0.89)	M
303.9016	16.978	17.046	-4	0.979	7232239	1874387	5321	13302	352		
305.8987	16.978	17.046	-4	0.979	9444373	2455680	6904	17260	356	0.77(0.65-0.89)	
303.9016	17.205	17.046	10	0.992	244391	56028	5321	13302	11		
305.8987	17.205	17.046	10	0.992	322889	79622	6904	17260	12	0.76(0.65-0.89)	
303.9016	17.794	17.046	45	1.026	1119163	258545	5321	13302	49		
305.8987	17.794	17.046	45	1.026	1441295	340399	6904	17260	49	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.036	17.046	59	1.040	207583	44741	5321	13302	8		
305.8987	18.036	17.046	59	1.040	297480	61646	6904	17260	9	0.70(0.65-0.89)	
303.9016	19.185	17.046	128	1.106	1097491	250458	5321	13302	47		
305.8987	19.185	17.046	128	1.106	1408980	319650	6904	17260	46	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	32229906	7529812	7272	18180	1035		
333.9339	18.051	18.051	0	1.011	39428601	9180025	13176	32940	697	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.001	3243997	743991	2257	5642	330		
321.8936	18.066	18.066	0	1.001	4000304	926132	2149	5372	431	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.066	0	1.012	42935333	9956804	6597	16492	1509		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	16.146	17.499	-81	0.894	35990	11302	2257	5642	5		
321.8936	16.131	17.499	-82	0.894	49667	13057	2149	5372	6	0.72(0.65-0.89)	
319.8965	16.373	17.499	-67	0.907	67851	18385	2257	5642	8		
321.8936	16.373	17.499	-67	0.907	110686	25736	2149	5372	12	0.61(0.65-0.89)	
	Empc Correction				88118	23876	2149	5372	11		
319.8965	16.933	17.499	-34	0.938	343750	91257	2257	5642	40		
321.8936	16.933	17.499	-34	0.938	423516	107933	2149	5372	50	0.81(0.65-0.89)	
319.8965	17.825	17.499	19	0.987	99416	25100	2257	5642	11		
321.8936	17.825	17.499	19	0.987	151803	39434	2149	5372	18	0.65(0.65-0.89)	
319.8965	18.429	17.499	56	1.021	310895	68792	2257	5642	30		
321.8936	18.429	17.499	56	1.021	418532	95558	2149	5372	44	0.74(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	55285104	9361885	12333	30832	759		
353.8970	22.367	22.367	0	1.253	34991873	5923721	8063	20157	735	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.394	22.380	1	1.001	367541	64766	564	1410	115		M
341.8567	22.394	22.380	1	1.001	235985	40104	656	1640	61	1.56(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.328	61098273	9556214	12333	30832	775		
353.8970	23.717	23.703	1	1.328	38621930	5957768	8063	20157	739	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.717	23.730	-1	1.000	252503	39414	564	1410	70		
341.8567	23.730	23.730	0	1.001	165988	23609	656	1640	36	1.52(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						262	655			
341.8567	20.093						568	1420			
A Non-2,3,7,8-sub-PeCDF											RQMa
339.8597	21.044	23.241	-132	0.941	143387	26332	564	1410	47		
341.8567	21.044	23.241	-132	0.941	91989	15050	656	1640	23	1.56(1.32-1.78)	M
339.8597	22.258	23.241	-59	0.995	28738	6695	564	1410	12		M
341.8567	22.244	23.241	-60	0.995	19219	4701	656	1640	7	1.50(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	22.926	23.241	-19	1.025	105067	16039	564	1410	28		
	Empc Correction				82139	15008	564	1410	27		
341.8567	22.912	23.241	-20	1.024	52993	9683	656	1640	15	1.98(1.32-1.78)	
339.8597	24.058	23.241	49	1.076	61428	8968	564	1410	16		
341.8567	24.099	23.241	51	1.077	39413	4775	656	1640	7	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.368	36172378	5316265	3238	8095	1642		
369.8919	24.440	24.426	1	1.369	22456179	3333712	2298	5745	1451	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											RQ
355.8546	24.467	24.453	1	1.002	40250	7532	755	1887	10		
	Empc Correction				32867	5899	755	1887	8		
357.8516	24.467	24.453	1	1.002	21205	3806	497	1242	8	1.90(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.249	23.349	-126	0.870	163963	27510	755	1887	36		
357.8516	21.235	23.349	-127	0.869	115149	20087	497	1242	40	1.42(1.32-1.78)	
355.8546	21.985	23.349	-82	0.900	476054	87655	755	1887	116		
357.8516	21.999	23.349	-81	0.901	309692	54185	497	1242	109	1.54(1.32-1.78)	
355.8546	22.667	23.349	-41	0.928	34389	6525	755	1887	9		
	Empc Correction				23806	4533	755	1887	6		
357.8516	22.667	23.349	-41	0.928	15359	2925	497	1242	6	2.24(1.32-1.78)	
355.8546	23.281	23.349	-4	0.953	62957	12293	755	1887	16		
	Empc Correction				54319	10098	755	1887	13		
357.8516	23.294	23.349	-3	0.954	35045	6515	497	1242	13	1.80(1.32-1.78)	
355.8546	23.458	23.349	7	0.960	193377	25331	755	1887	34		
357.8516	23.458	23.349	7	0.960	126085	15766	497	1242	32	1.53(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	28284697	5163015	12491	31227	413		
385.8610	30.503	30.503	0	0.949	53505510	9701538	23156	57890	419	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.001	417797	73027	519	1297	141		
375.8178	30.529	30.529	0	1.001	332282	59313	362	905	164	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	25748112	4721570	12491	31227	378		
385.8610	30.689	30.689	0	0.955	50060925	9124793	23156	57890	394	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.715	30.702	1	1.001	123582	21353	519	1297	41		
375.8178	30.715	30.702	1	1.001	92019	17253	362	905	48	1.34(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	24934461	6094215	12491	31227	488		
385.8610	31.514	31.514	0	0.981	48218593	11742899	23156	57890	507	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.527	31.528	0	1.000	19374	4453	519	1297	9		
375.8178	31.527	31.528	0	1.000	14198	3767	362	905	10	1.36(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	23184497	5935903	12491	31227	475		
385.8610	32.326	32.313	1	1.006	43804365	10974719	23156	57890	474	0.53(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.326	32.326	0	1.000	20646	5551	519	1297	11		
375.8178	32.339	32.326	1	1.000	17622	4862	362	905	13	1.17(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	28.386	30.197	-108	0.931	30218	3389	519	1297	7		
	Empc Correction				22000	3388	519	1297	7		
375.8178	28.386	30.197	-108	0.931	17742	2733	362	905	8	1.70(1.05-1.43)	
373.8208	31.421	30.197	73	1.030	9901	2645	519	1297	5		
	Empc Correction				7847	2139	519	1297	4		
375.8178	31.421	30.197	73	1.030	6329	1725	362	905	5	1.56(1.05-1.43)	
373.8208	32.419	30.197	133	1.063	31386	6732	519	1297	13		
	Empc Correction				24215	7479	519	1297	14		
375.8178	32.419	30.197	133	1.063	19529	6032	362	905	17	1.61(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		60247410	15900053	12773	31932	1245		
403.8529	32.140	32.127	1		48359864	12601433	11380	28450	1107	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.700	31.701	0	0.986	30135828	8277297	12773	31932	648		
403.8529	31.700	31.701	0	0.986	23915909	6592718	11380	28450	579	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.714	0	1.000	55165	16248	1971	4927	8		
391.8127	31.714	31.714	0	1.000	51330	14570	2174	5435	7	1.07(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	34134938	8498651	12773	31932	665		
403.8529	31.807	31.807	0	0.990	27416108	6798552	11380	28450	597	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.820	31.820	0	1.000	99667	29744	1971	4927	15		
391.8127	31.820	31.820	0	1.000	78148	22712	2174	5435	10	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.140	1	1.014	233499	47430	1971	4927	24		
391.8127	32.140	32.140	0	1.014	186815	37777	2174	5435	17	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.544	30.882	-80	0.929	2811879	325609	1971	4927	165		
391.8127	29.544	30.882	-80	0.929	2233708	263121	2174	5435	121	1.26(1.05-1.43)	
389.8157	30.596	30.882	-17	0.962	67026	15474	1971	4927	8		
391.8127	30.569	30.882	-19	0.961	50112	9846	2174	5435	5	1.34(1.05-1.43)	
389.8157	30.968	30.882	5	0.974	774068	149850	1971	4927	76		
391.8127	30.968	30.882	5	0.974	618466	118955	2174	5435	55	1.25(1.05-1.43)	
389.8157	31.155	30.882	16	0.979	94861	19398	1971	4927	10		
	Empc Correction				81515	17392	1971	4927	9		
391.8127	31.155	30.882	16	0.979	65738	14026	2174	5435	6	1.44(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	17676040	5744204	21482	53705	267		
419.8220	33.766	33.754	1	1.051	39653025	12629085	50730	126825	249	0.45(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											RQ
407.7818	33.778	33.766	1	1.000	133591	44768	917	2292	49		
	Empc Correction				114318	36051	917	2292	39		
409.7789	33.766	33.766	0	1.000	109922	34665	481	1202	72	1.22(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.084	18078212	5100146	21482	53705	237		
419.8220	34.847	34.847	0	1.084	41472681	11400639	50730	126825	225	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.859	34.860	0	1.000	34742	10898	917	2292	12		M
409.7789	34.859	34.860	0	1.000	31447	9483	481	1202	20	1.10(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDF											M
407.7818	34.069	34.319	-15	1.009	32143	9505	917	2292	10		M
409.7789	34.069	34.319	-15	1.009	34826	10462	481	1202	22	0.92(0.88-1.20)	M
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.075	24723437	7147100	12381	30952	577		
437.8140	34.556	34.556	0	1.075	24677617	7202134	12469	31172	578	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	3898369	1123973	11203	28007	100		
425.7737	34.568	34.568	0	1.000	3877902	1137415	8540	21350	133	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.985	9371050	2893324	11203	28007	258		
425.7737	34.009	34.301	-17	0.984	9034079	2782938	8540	21350	326	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.914	0	1.149	35022025	8969557	3360	8400	2670		
471.7750	36.914	36.914	0	1.149	39625356	10215265	4909	12272	2081	0.88(0.76-1.02)	
OCDF											M
441.7428	37.022	37.010	1	1.003	88671	20276	254	635	80		M
443.7399	37.010	37.010	0	1.003	111470	23799	330	825	72	0.80(0.76-1.02)	
OCDD											
457.7377	36.926	36.926	0	1.000	87018317	22380136	7761	19402	2884		
459.7348	36.926	36.926	0	1.000	97283792	24812735	12158	30395	2041	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Aug-2021 09:00:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d
Lims ID: 320-76788-A-3-A
Client ID: 11215702-072321-BN-SJSB085 (4-6)
Inject. Date: 14-Aug-2021 05:56:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	125892846	30531176

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	125892846	30531176

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.950	243957	69717	300310	83600	0.4222	0.81	
16.222	473328	102214	615661	139940	0.8448	0.77	M
16.464	436137	114545	576882	147946	0.7859	0.76	Ma
16.706	546442	145869	817992	203772	1.06	0.67	M
16.978	7232239	1874387	9444373	2455680	12.9	0.77	
17.205	244391	56028	322889	79622	0.4401	0.76	
17.794	1119163	258545	1441295	340399	1.99	0.78	
18.036	207583	44741	297480	61646	0.3918	0.70	
19.185	1097491	250458	1408980	319650	1.94	0.78	
Signal Totals:							
	11600731	2916504	15225862	3832255			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	26826593	6748759				0.76	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 20.811 = (26826593 * 100.000) / (125892846 * 1.024)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 09:00:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d
Lims ID: 320-76788-A-3-A
Client ID: 11215702-072321-BN-SJSB085 (4-6)
Inject. Date: 14-Aug-2021 05:56:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	71658507	16709837

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	71658507	16709837

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.146	35990	11302	49667	13057	0.0953	0.72	
16.373	67851	18385	110686	25736	0.1987	0.61	RQ
16.373	67851	18385	88118	23876	0.1736		Empc Correction
16.933	343750	91257	423516	107933	0.8538	0.81	
17.825	99416	25100	151803	39434	0.2795	0.65	
18.429	310895	68792	418532	95558	0.8117	0.74	
Signal Totals:							
	857902	214836	1131636	279858			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2012106	496554				0.74	RQ
	1989538	494694					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.239 = (2012106 * 100.000) / (71658507 * 1.254)
Empc Amount: 2.214 = (1989538 * 100.000) / (71658507 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d
Lims ID: 320-76788-A-3-A
Client ID: 11215702-072321-BN-SJSB085 (4-6)
Inject. Date: 14-Aug-2021 05:56:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 7

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	90276977	15285606
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	99720203	15513982

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	94998590	15399794

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.044	143387	26332	91989	15050	0.2383	1.56	M
22.258	28738	6695	19219	4701	0.0486	1.50	Ma
22.926	105067	16039	52993	9683	0.1600	1.98	RQ
22.926	82139	15008	52993	9683	0.1368		Empc Correction
24.058	61428	8968	39413	4775	0.1021	1.56	
Signal Totals:							
	315692	57003	203614	34209			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	542234	92243				1.66	RQMa
	519306	91212					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5489 = (542234 * 100.000) / (94998590 * 1.040)
Empc Amount: 0.5257 = (519306 * 100.000) / (94998590 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 09:00:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d		
Lims ID:	320-76788-A-3-A		
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Inject. Date:	14-Aug-2021 05:56:23	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516836	Lims Sample ID:	7

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	58628557	8649977

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	58628557	8649977

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	163963	27510	115149	20087	0.4541	1.42	
21.985	476054	87655	309692	54185	1.28	1.54	
22.667	34389	6525	15359	2925	0.0809	2.24	RQ
22.667	23806	4533	15359	2925	0.0637		Empc Correction
23.281	62957	12293	35045	6515	0.1594	1.80	RQ
23.281	54319	10098	35045	6515	0.1454		Empc Correction
23.458	193377	25331	126085	15766	0.5197	1.53	
Signal Totals:							
	911519	155127	601330	99478			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1532070	258792				1.55	RQ
	1512849	254605					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.492 = (1532070 * 100.000) / (58628557 * 1.048)
Empc Amount: 2.461 = (1512849 * 100.000) / (58628557 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:00:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d
Lims ID: 320-76788-A-3-A
Client ID: 11215702-072321-BN-SJSB085 (4-6)
Inject. Date: 14-Aug-2021 05:56:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 7

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	81790207	14864553
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	75809037	13846363
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	73153054	17837114
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	66988862	16910622

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	74435290	15864663

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.386	30218	3389	17742	2733	0.0567	1.70	RQ
28.386	22000	3388	17742	2733	0.0470		Empc Correction
31.421	9901	2645	6329	1725	0.0192	1.56	RQ
31.421	7847	2139	6329	1725	0.0168		Empc Correction
32.419	31386	6732	19529	6032	0.0602	1.61	RQ
32.419	24215	7479	19529	6032	0.0517		Empc Correction
Signal Totals:							
	54062	13006	43600	10490			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	115105	23256				1.64	RQ
	97662	23496					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1361 = (115105 * 100.000) / (74435290 * 1.136)
Empc Amount: 0.1155 = (97662 * 100.000) / (74435290 * 1.136)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:00:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d
Lims ID: 320-76788-A-3-A
Client ID: 11215702-072321-BN-SJSB085 (4-6)
Inject. Date: 14-Aug-2021 05:56:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 7

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	54051737	14870015
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	61551046	15297203
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	57801391	15083609

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.544	2811879	325609	2233708	263121	8.19	1.26	
30.596	67026	15474	50112	9846	0.1902	1.34	
30.968	774068	149850	618466	118955	2.26	1.25	
31.155	94861	19398	65738	14026	0.2608	1.44	RQ
31.155	81515	17392	65738	14026	0.2391		Empc Correction
Signal Totals:							
	3734488	508325	2968024	405948			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6715858	916279				1.26	RQ
	6702512	914273					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 10.904 = (6715858 * 100.000) / (57801391 * 1.066)
Empc Amount: 10.882 = (6702512 * 100.000) / (57801391 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:00:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d
Lims ID: 320-76788-A-3-A
Client ID: 11215702-072321-BN-SJSB085 (4-6)
Inject. Date: 14-Aug-2021 05:56:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 7

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	57329065	18373289
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	59550893	16500785

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	58439979	17437037

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.069	32143	9505	34826	10462	0.0831	0.92	M
Signal Totals:							
	32143	9505	34826	10462			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	66969	19967				0.92	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0831 = (66969 * 100.000) / (58439979 * 1.379)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 09:00:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d
Lims ID: 320-76788-A-3-A
Client ID: 11215702-072321-BN-SJSB085 (4-6)
Inject. Date: 14-Aug-2021 05:56:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 7

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	49401054	14349234

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	49401054	14349234

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	9371050	2893324	9034079	2782938	34.0	1.04	
Signal Totals:							
	9371050	2893324	9034079	2782938			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	18405129	5676262				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 34.046 = (18405129 * 100.000) / (49401054 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.89- 19.20)

Signal: 2

Processing Integration Results

RT = 16.207 Area = 310220

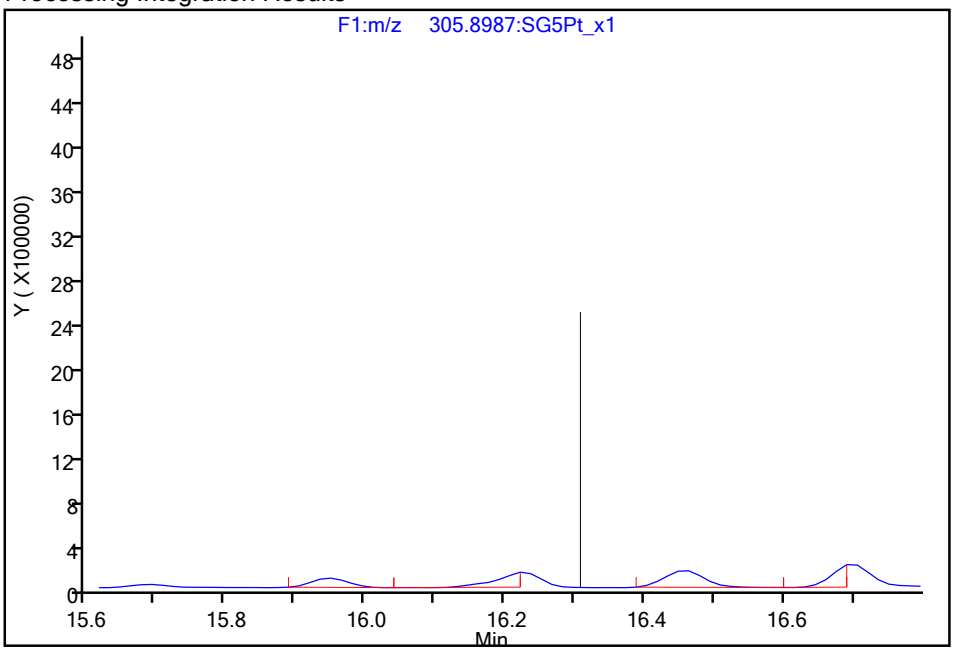

Manual Integration Results

RT = 16.222 Area = 615661 M

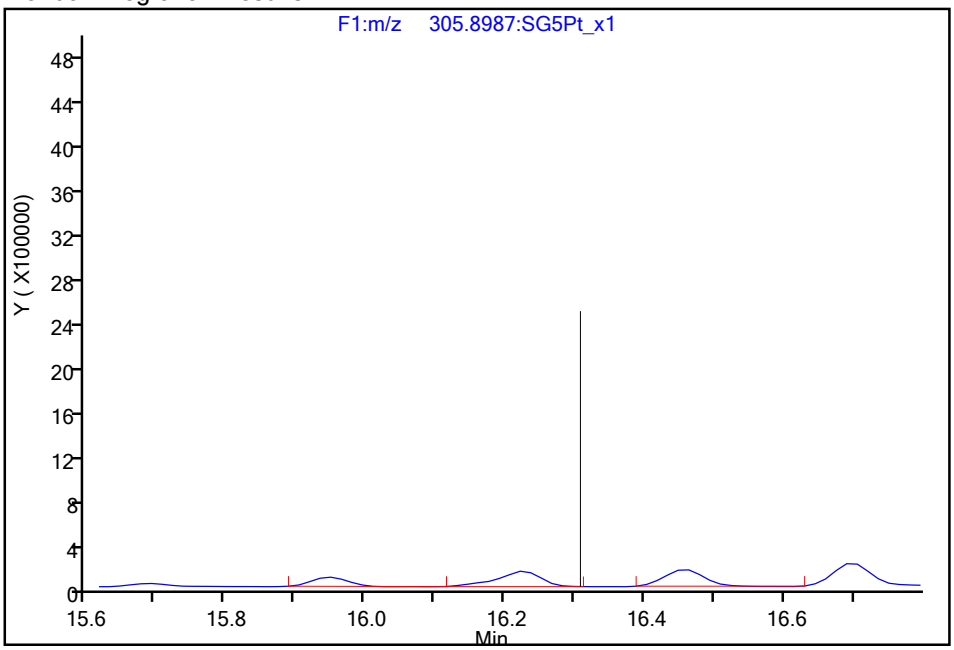

Reviewer: dadunj, 18-Aug-2021 08:58:18

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 16.464 Area = 466810

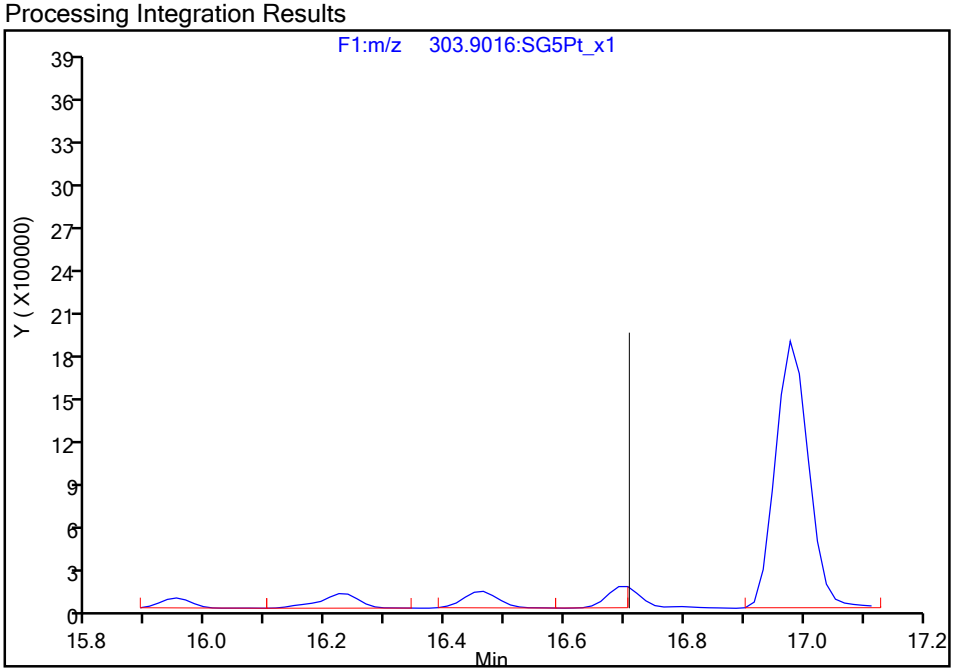

Manual Integration Results

RT = 16.464 Area = 436137 M

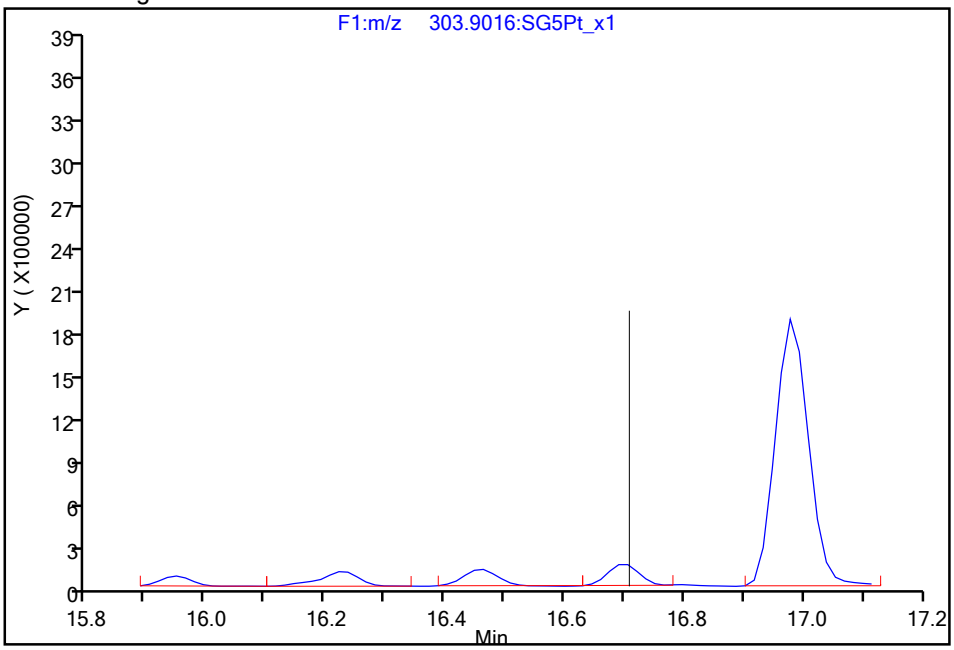

Reviewer: dadunj, 18-Aug-2021 08:58:29

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 16.691 Area = 348299

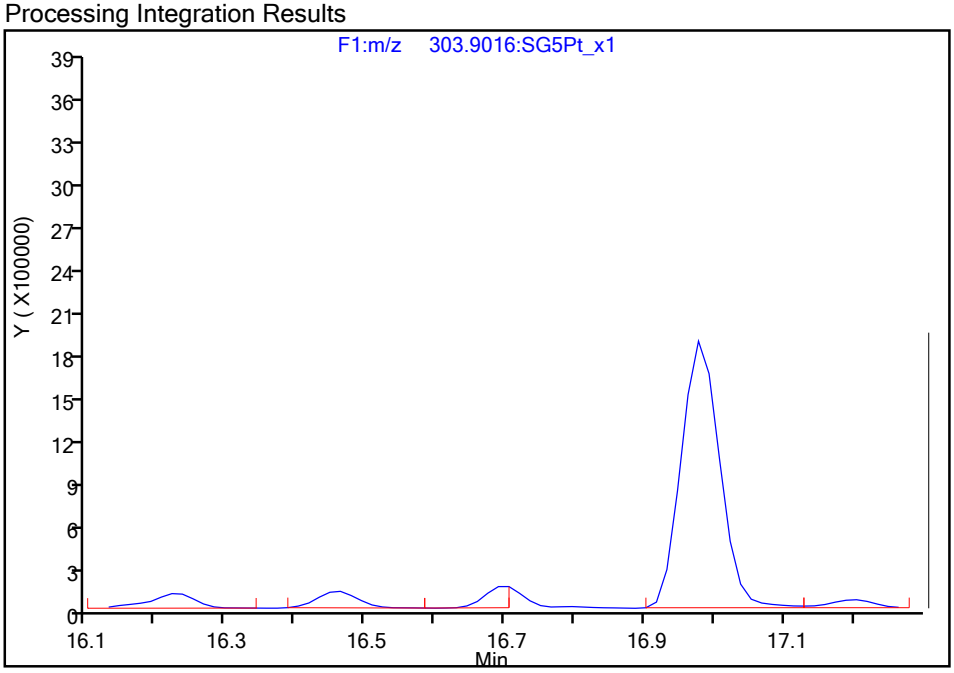

Manual Integration Results

RT = 16.706 Area = 546442 M

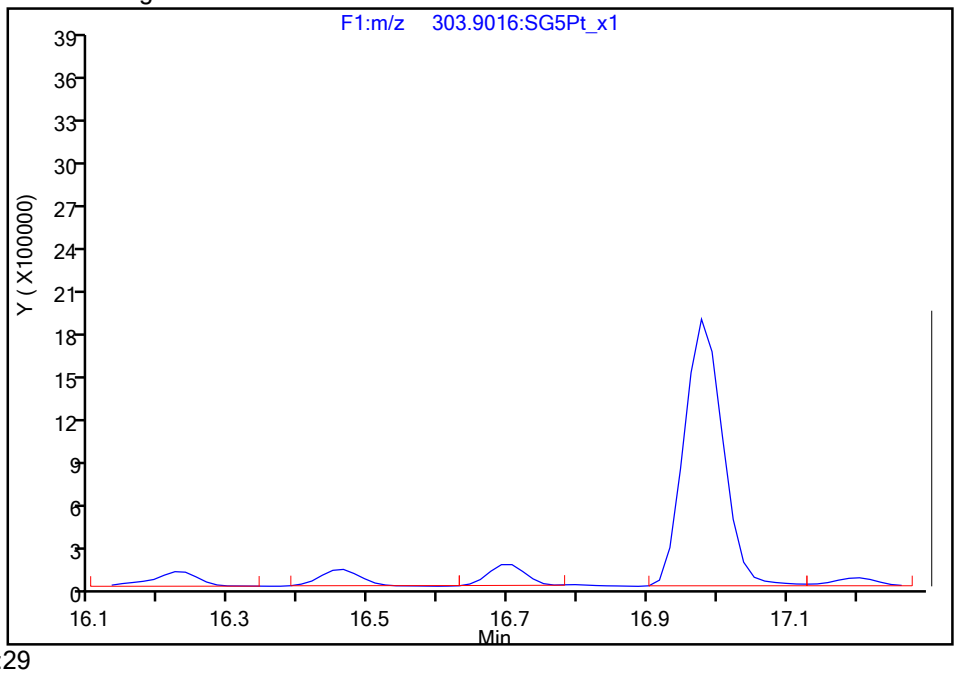

Reviewer: dadunj, 18-Aug-2021 08:58:29

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.89- 19.20)

Signal: 2

Processing Integration Results

RT = 16.676 Area = 305034

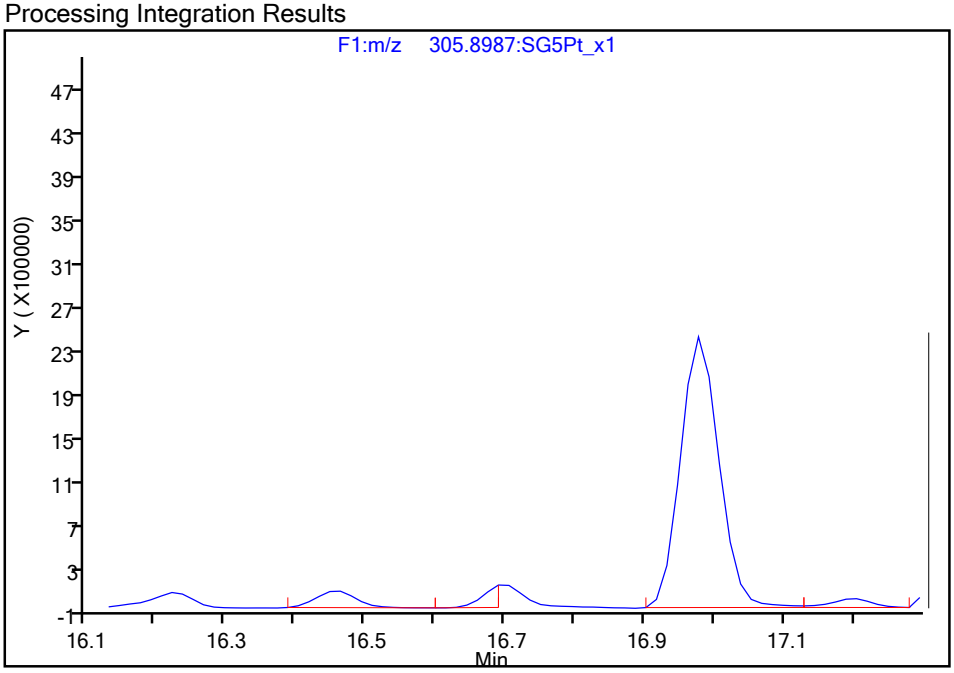

Manual Integration Results

RT = 16.691 Area = 817992 M

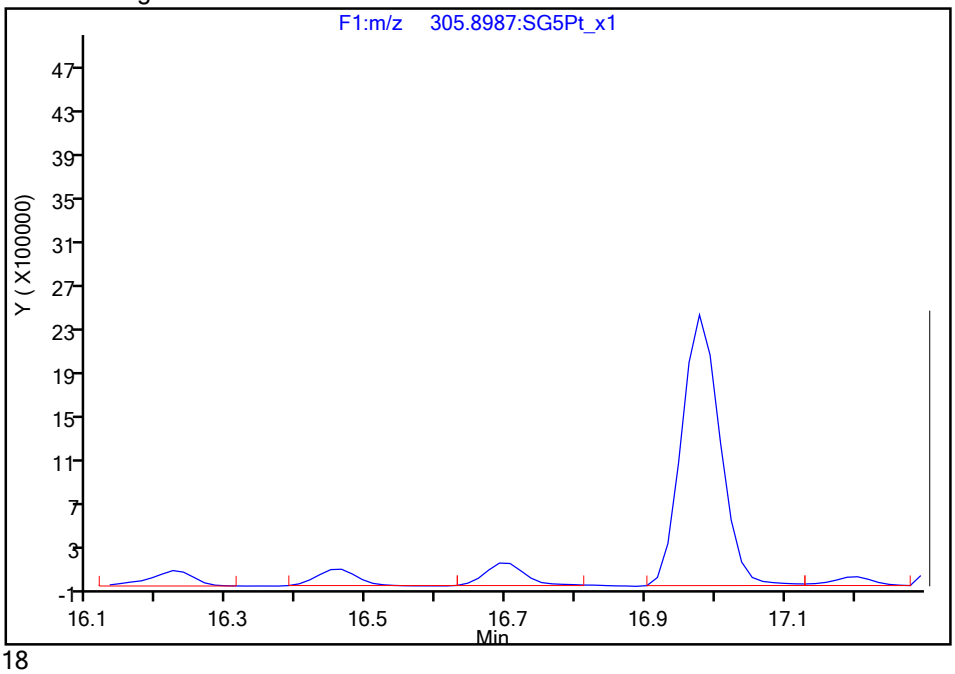

Reviewer: dadunj, 18-Aug-2021 08:58:18

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.39
Area: 249184
Amount: 0.695468
Amount Units: pg/ul

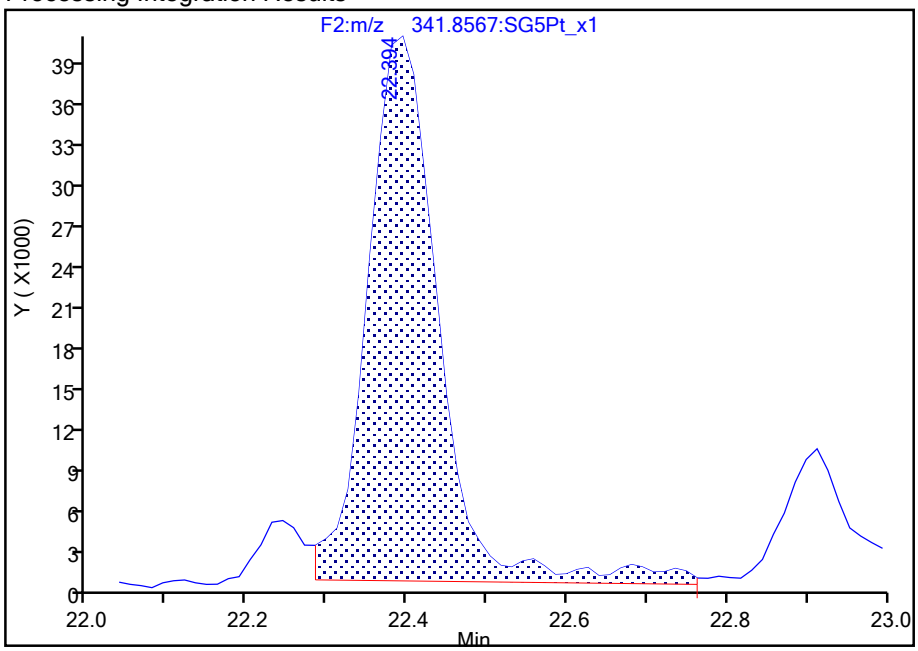

Manual Integration Results

RT: 22.39
Area: 235985
Amount: 0.630011
Amount Units: pg/ul

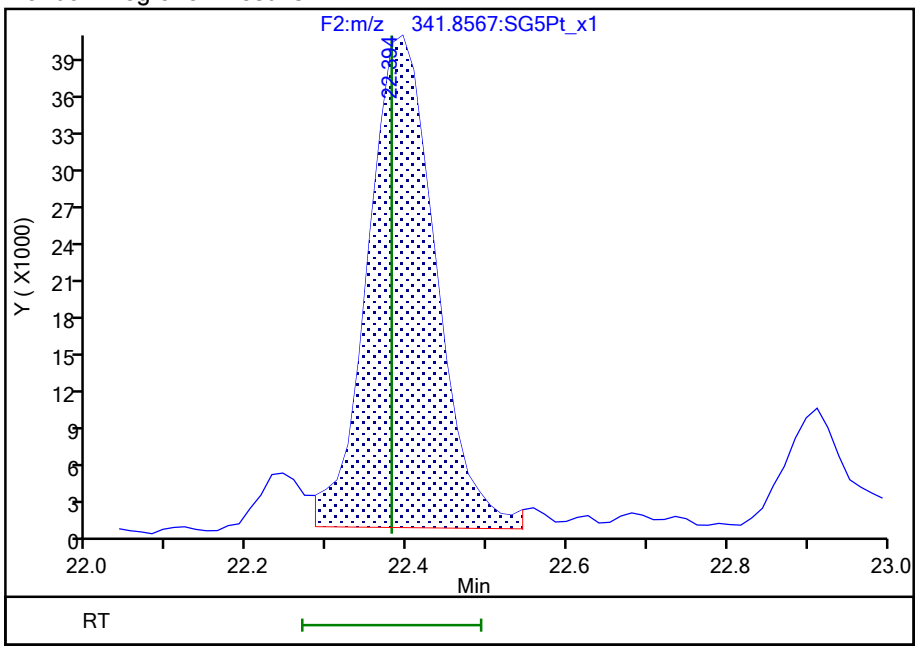

Reviewer: dadunj, 18-Aug-2021 08:58:59

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.39
Area: 417047
Amount: 0.695468
Amount Units: pg/ul

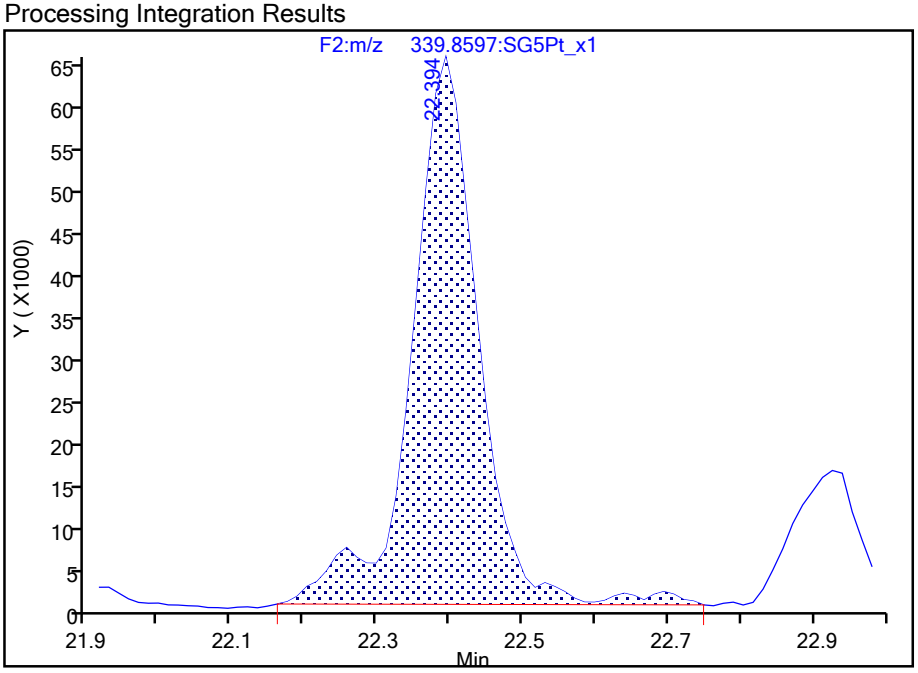

Manual Integration Results

RT: 22.39
Area: 367541
Amount: 0.630011
Amount Units: pg/ul

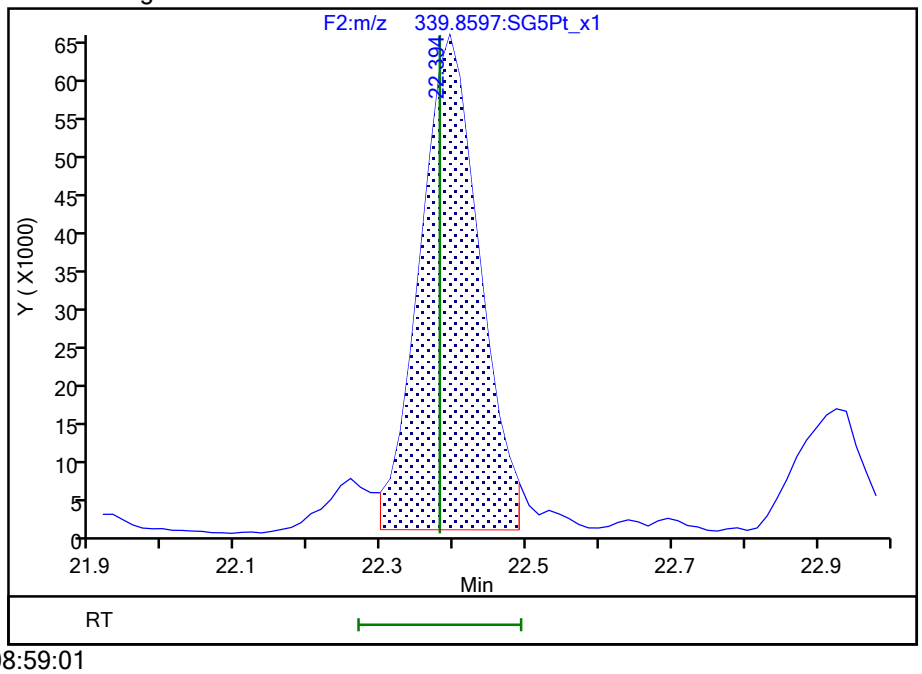

Reviewer: dadunj, 18-Aug-2021 08:59:01
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779325

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 2, m/z: 341.8567, RT: (20.77- 25.71)

Signal: 2

Processing Integration Results

RT = 21.044 Area = 95283

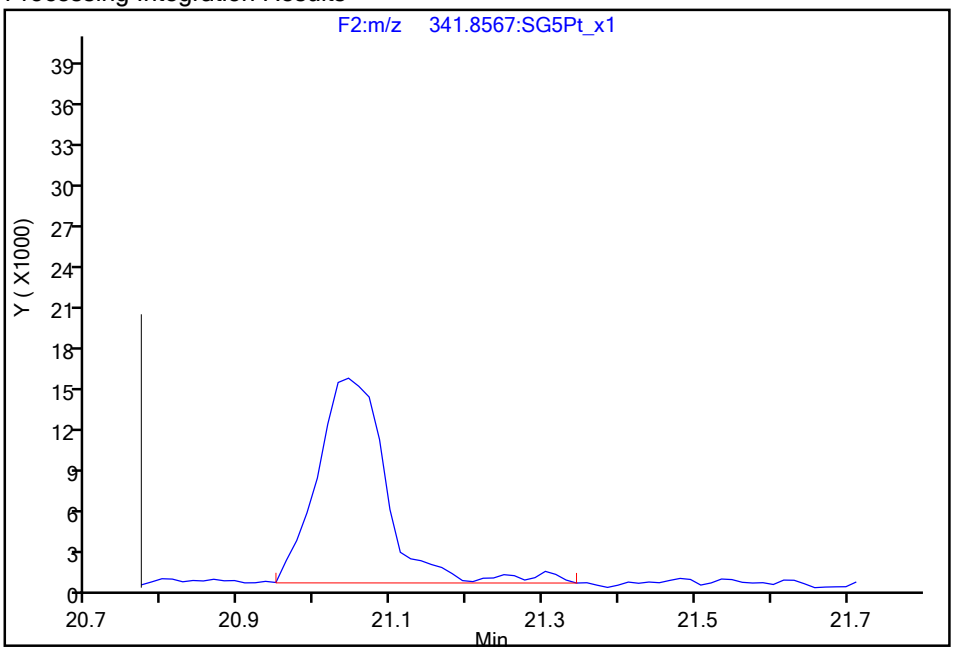

Manual Integration Results

RT = 21.044 Area = 91989 M

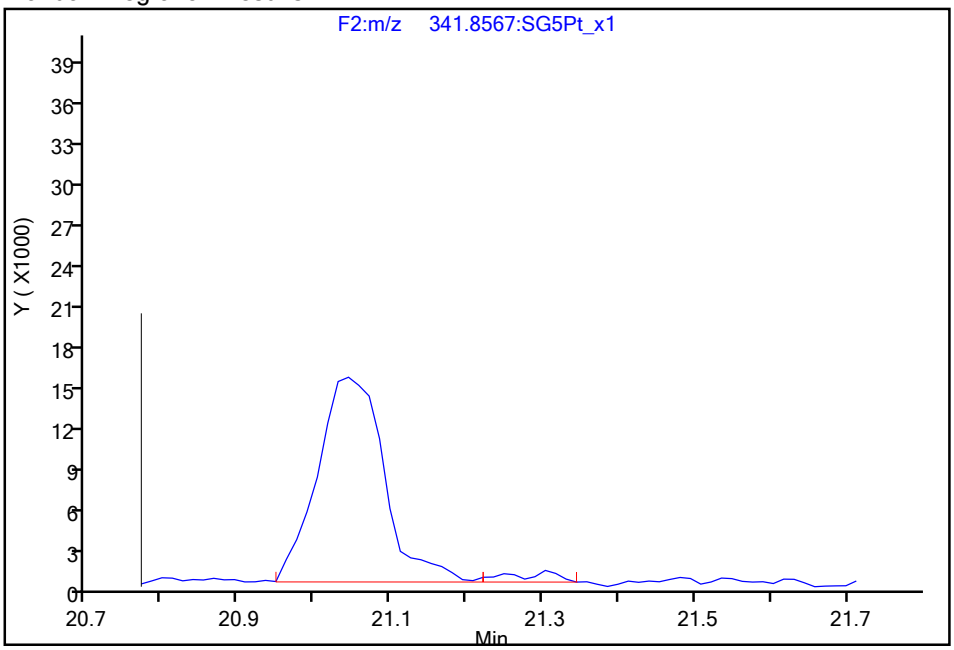

Reviewer: dadunj, 18-Aug-2021 08:59:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 25.71)

Signal: 1

Not Detected
RT: 20.77- 25.71

Processing Integration Results

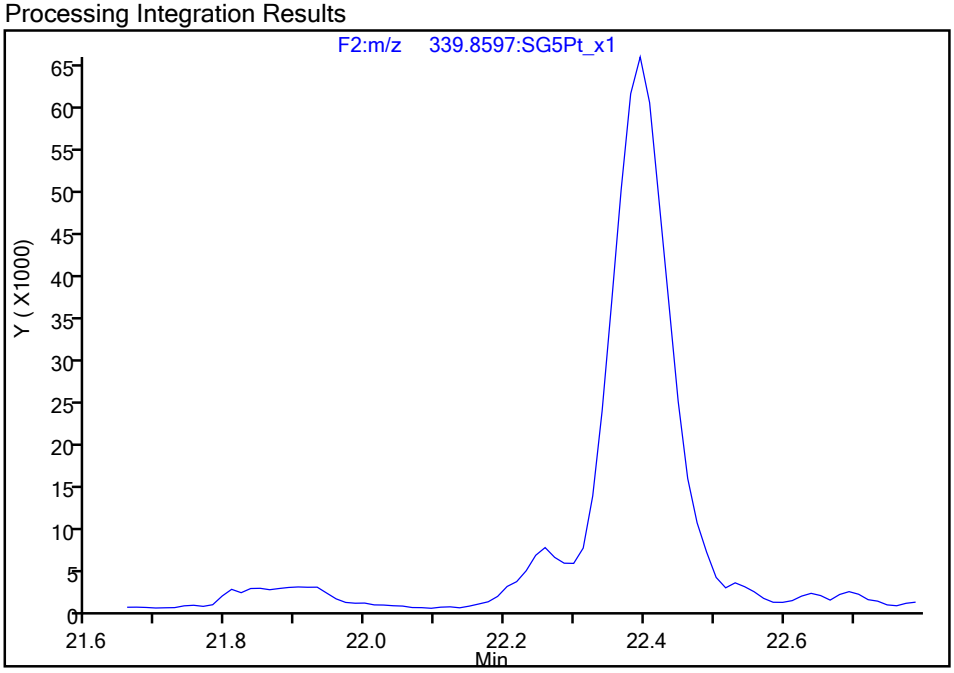

RT = 22.258 Area = 28738 M

Manual Integration Results

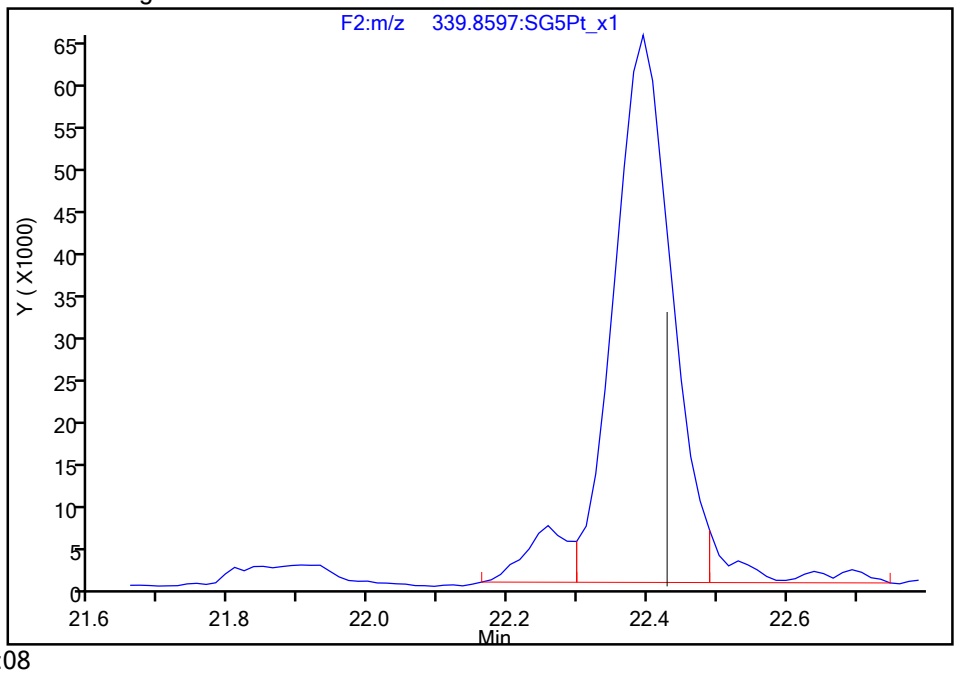

Reviewer: dadunj, 18-Aug-2021 08:59:08
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 34.86
Area: 41412
Amount: 0.095900
Amount Units: pg/ul

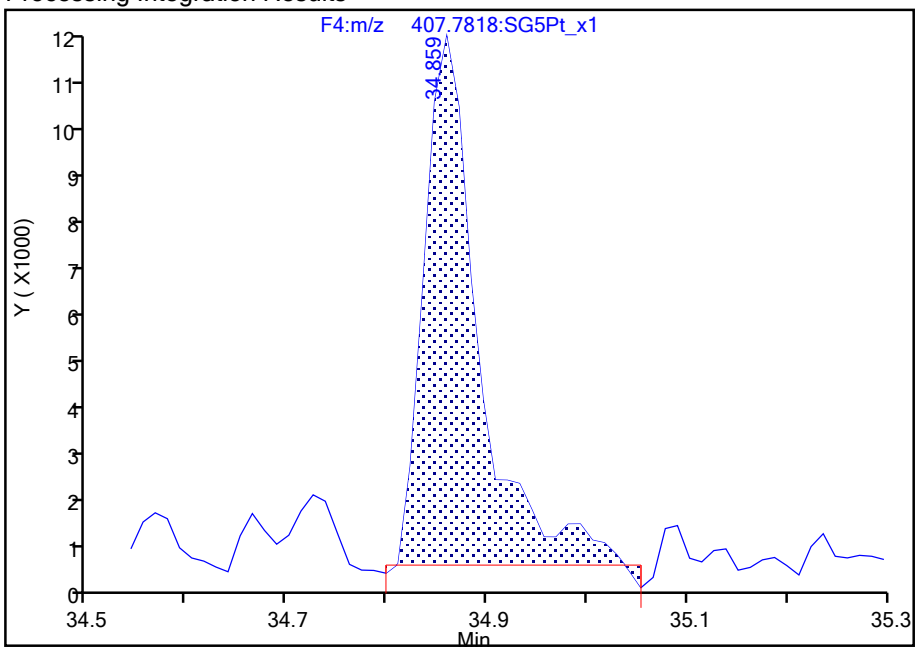

Manual Integration Results

RT: 34.86
Area: 34742
Amount: 0.084369
Amount Units: pg/ul

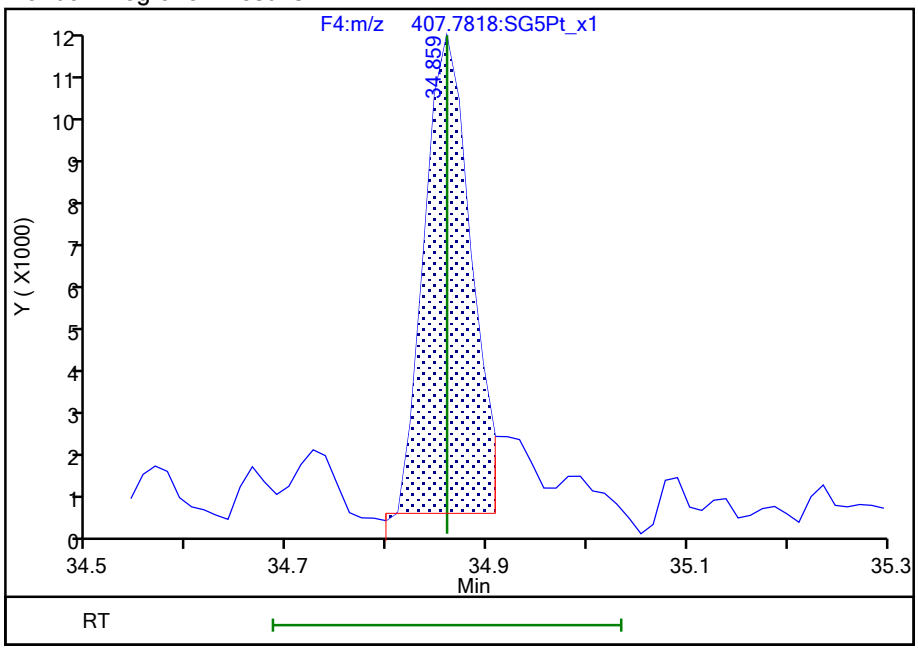

Reviewer: dadunj, 18-Aug-2021 08:59:59

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 2

Processing Integration Results

RT: 34.86
Area: 33823
Amount: 0.095900
Amount Units: pg/ul

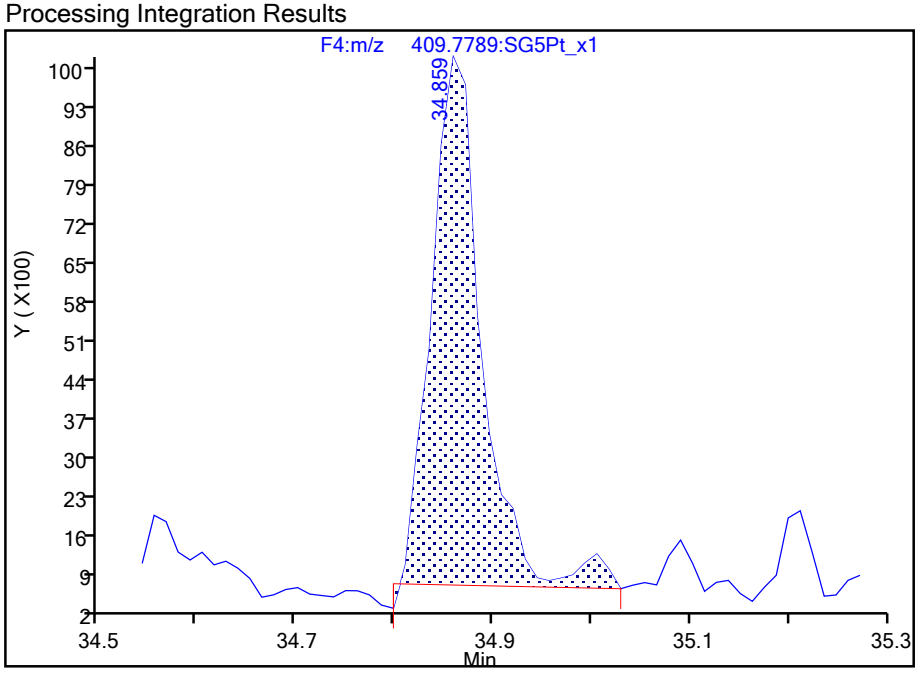

Manual Integration Results

RT: 34.86
Area: 31447
Amount: 0.084369
Amount Units: pg/ul

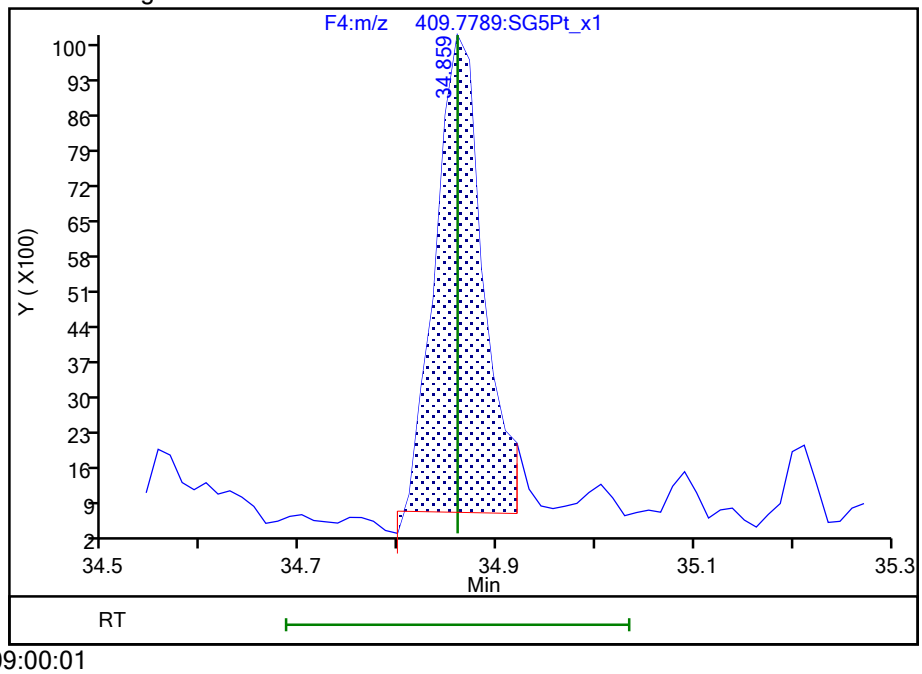

Reviewer: dadunj, 18-Aug-2021 09:00:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7818, RT: (33.75- 34.89)

Signal: 1

Processing Integration Results

RT = 34.069 Area = 37617

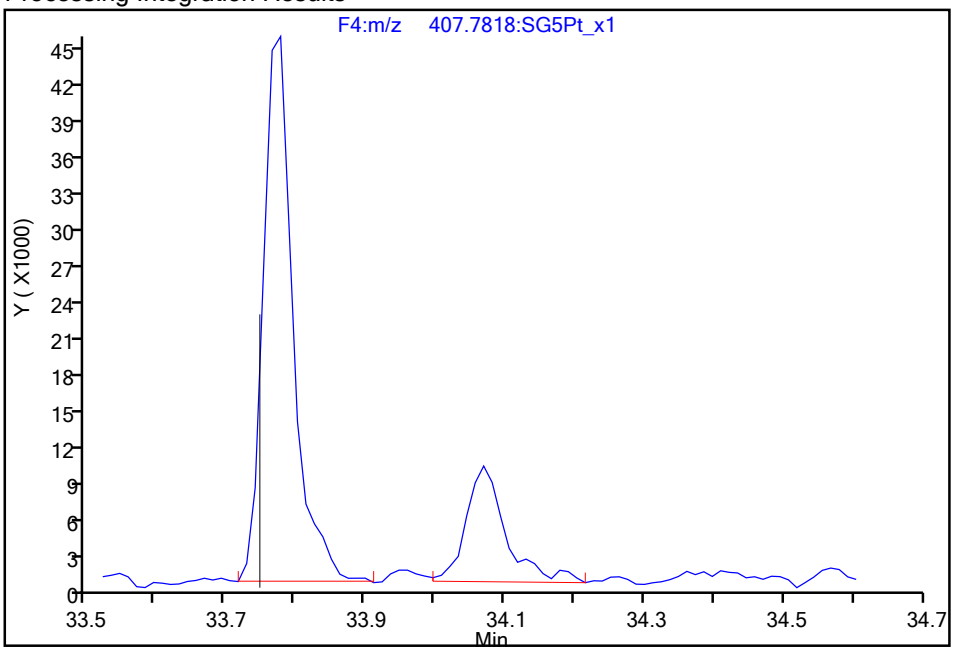

Manual Integration Results

RT = 34.069 Area = 32143 M

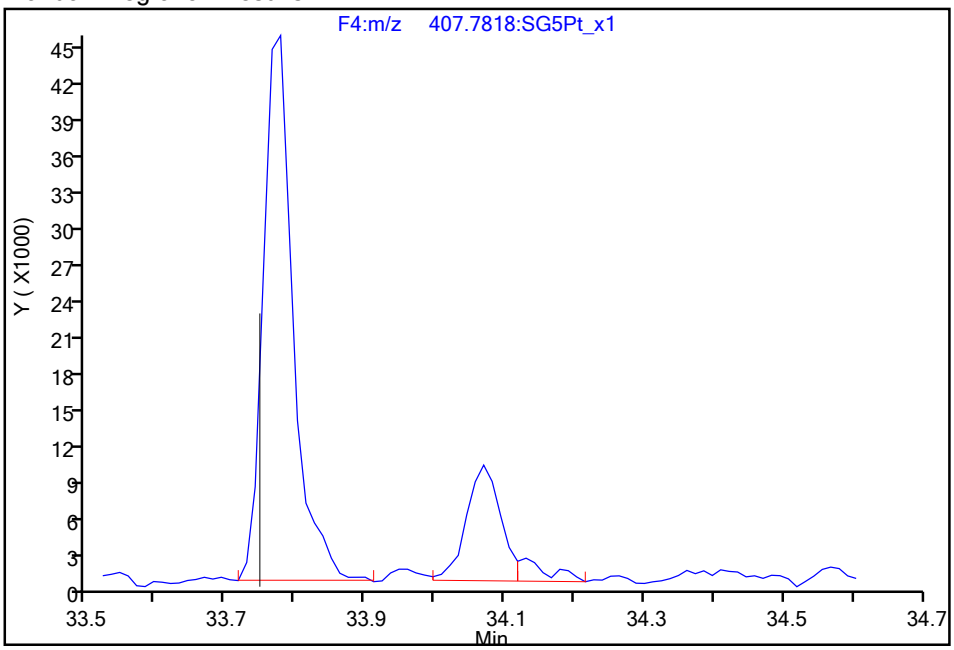

Reviewer: dadunj, 18-Aug-2021 09:00:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 09:00:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 2, m/z: 409.7789, RT: (33.75- 34.89)

Signal: 2

Processing Integration Results

RT = 34.069 Area = 46244

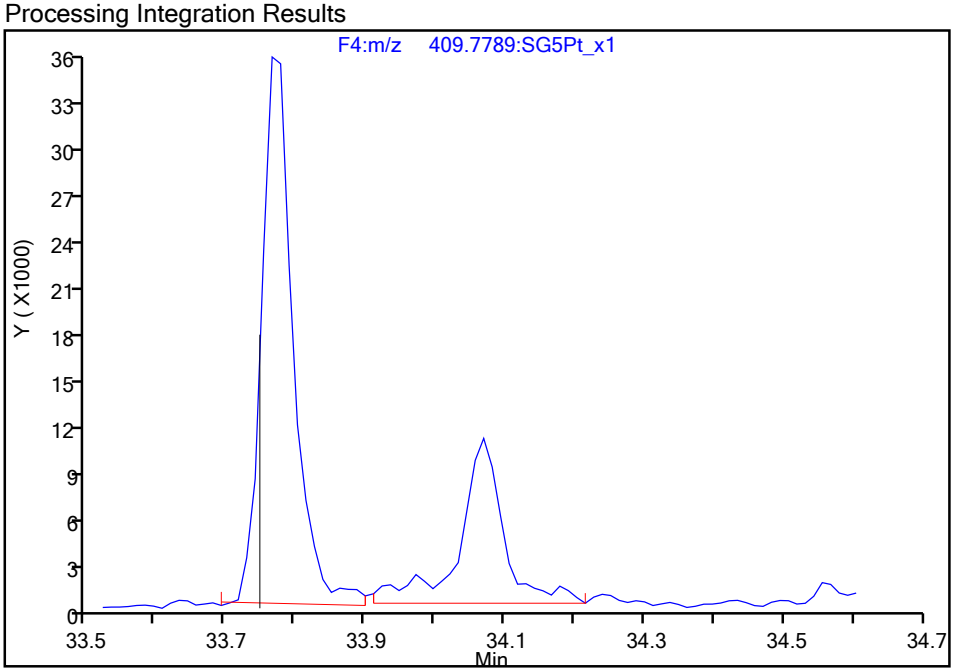

Manual Integration Results

RT = 34.069 Area = 34826 M

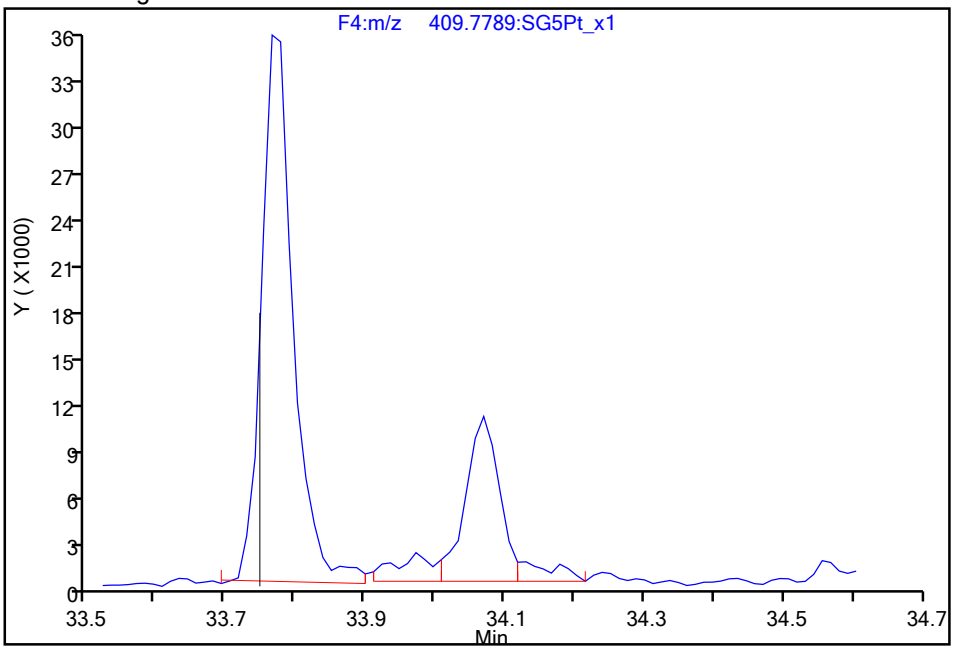

Reviewer: dadunj, 18-Aug-2021 09:00:04

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d				
Injection Date:	14-Aug-2021 05:56:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-3-A	Lab Sample ID:	320-76788-3		
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Operator ID:	DB	ALS Bottle#:	19	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 95283
Amount: 0.385176
Amount Units: pg/ul

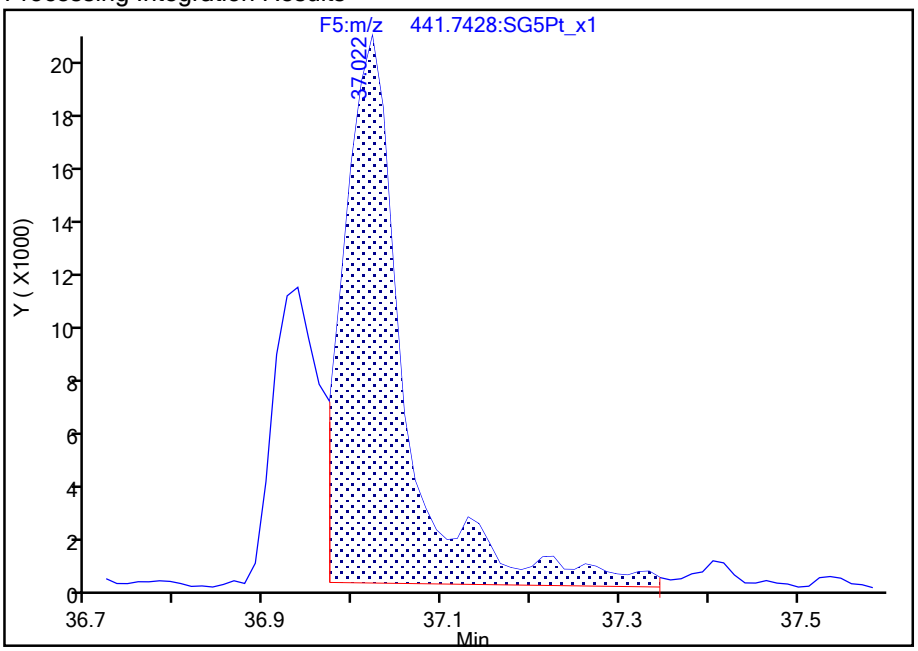

Manual Integration Results

RT: 37.02
Area: 88671
Amount: 0.372858
Amount Units: pg/ul

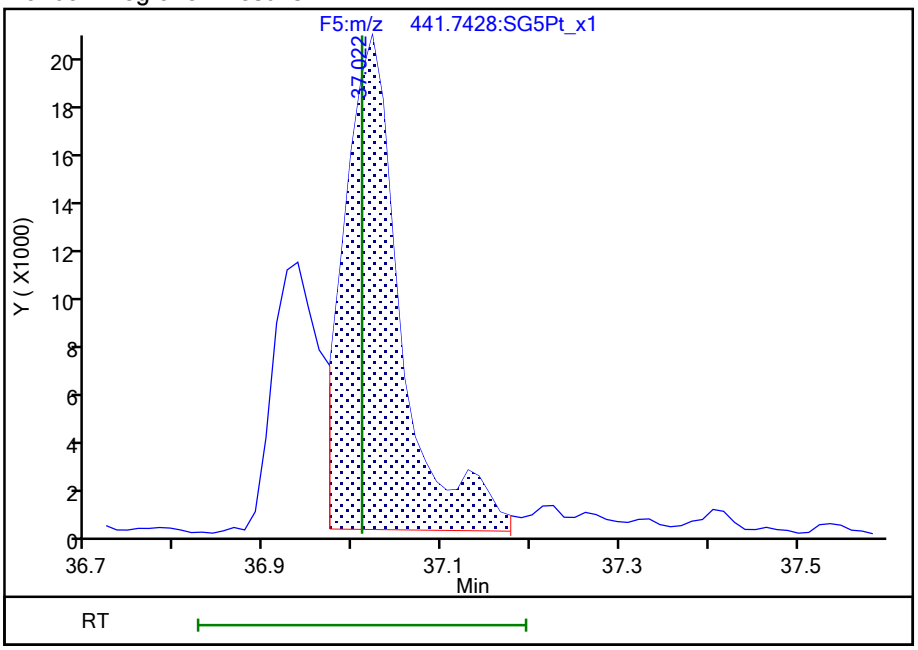

Reviewer: dadunj, 18-Aug-2021 09:00:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 09:00:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d		
Injection Date:	14-Aug-2021 05:56:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	516836	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

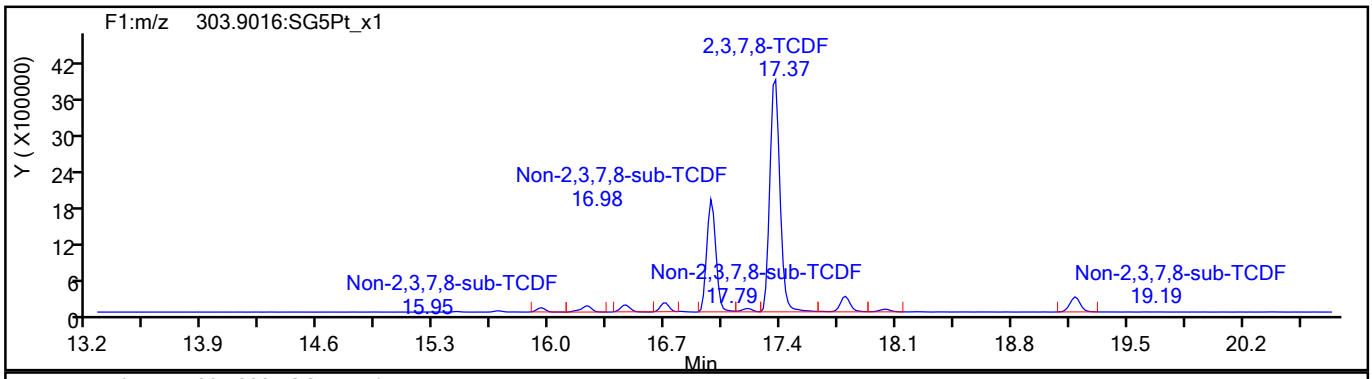

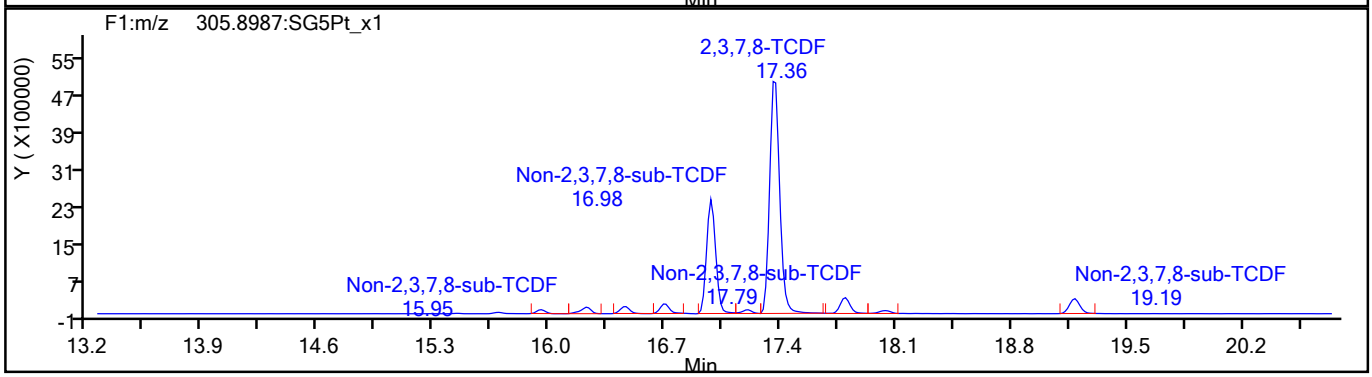

TCDF Standards

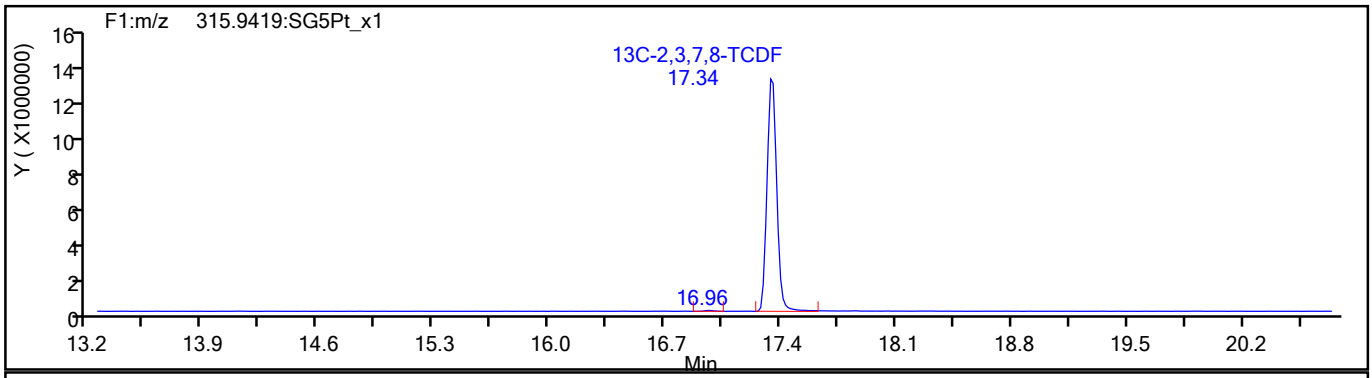

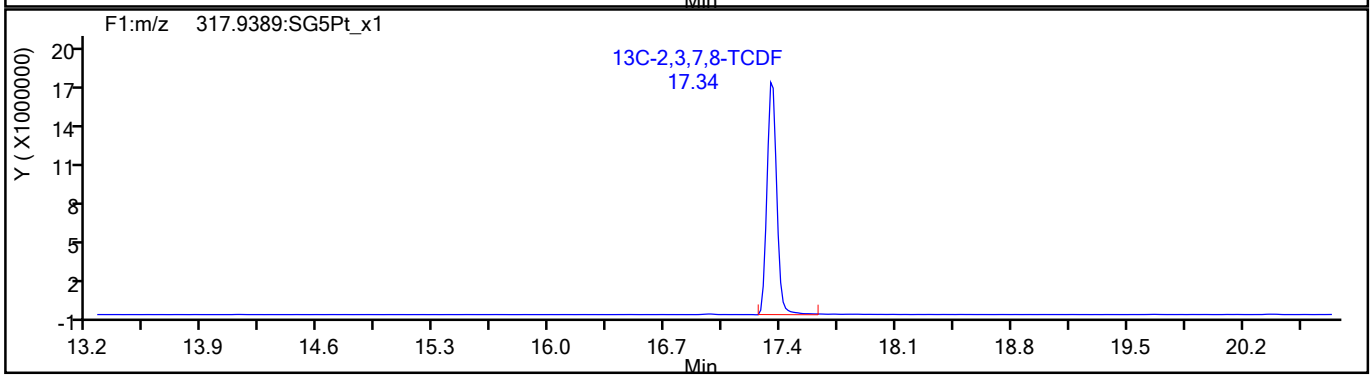

779333

Report Date: 18-Aug-2021 09:00:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d		
Injection Date:	14-Aug-2021 05:56:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	516836	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

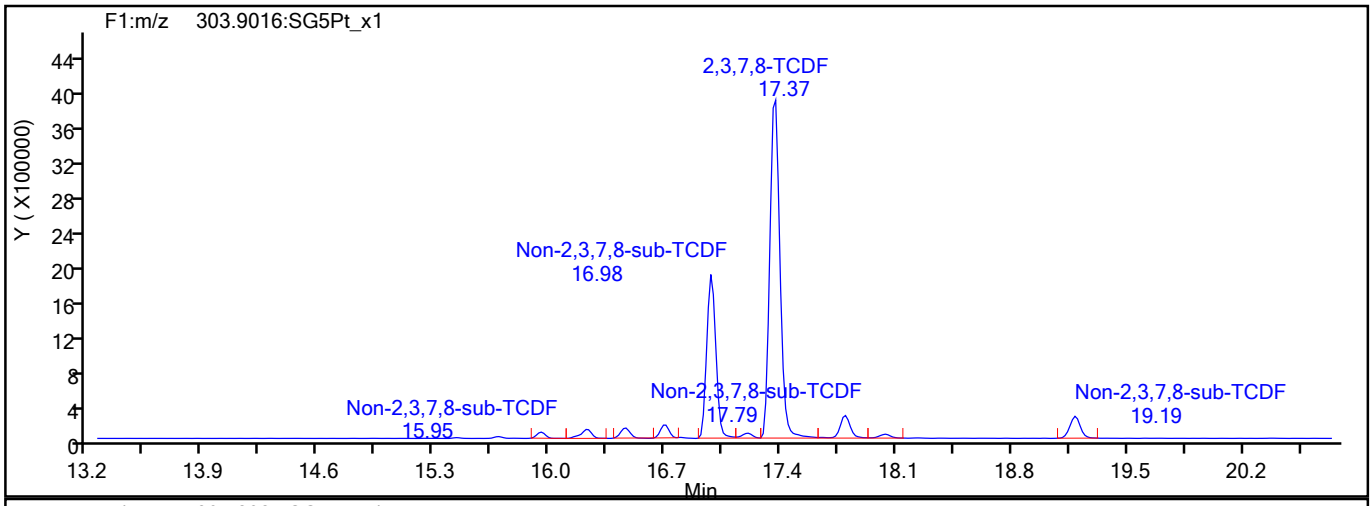

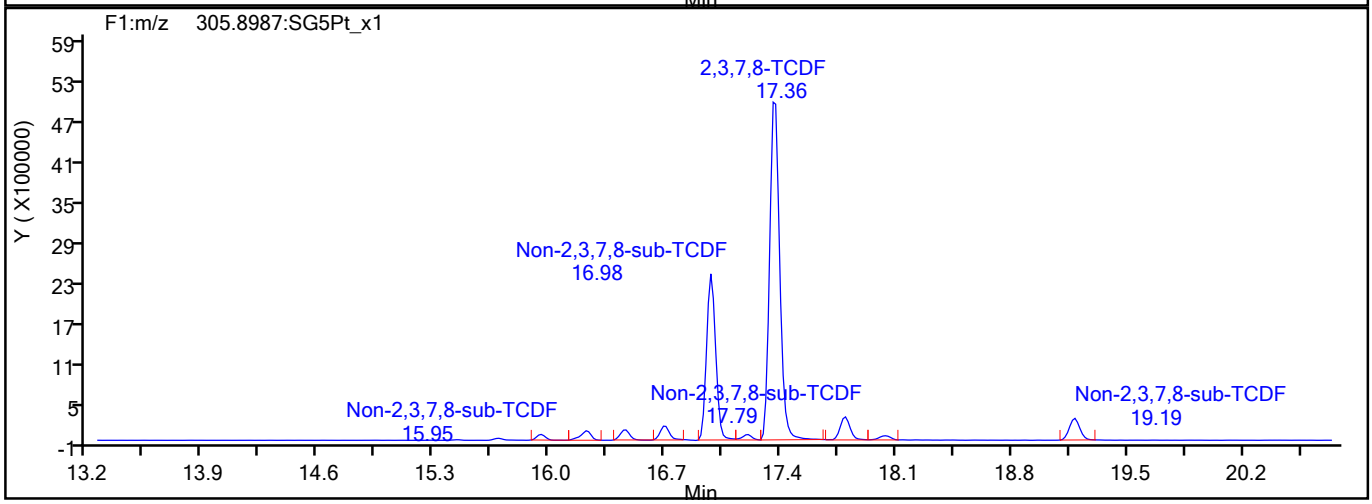

TCDF Interference Mass

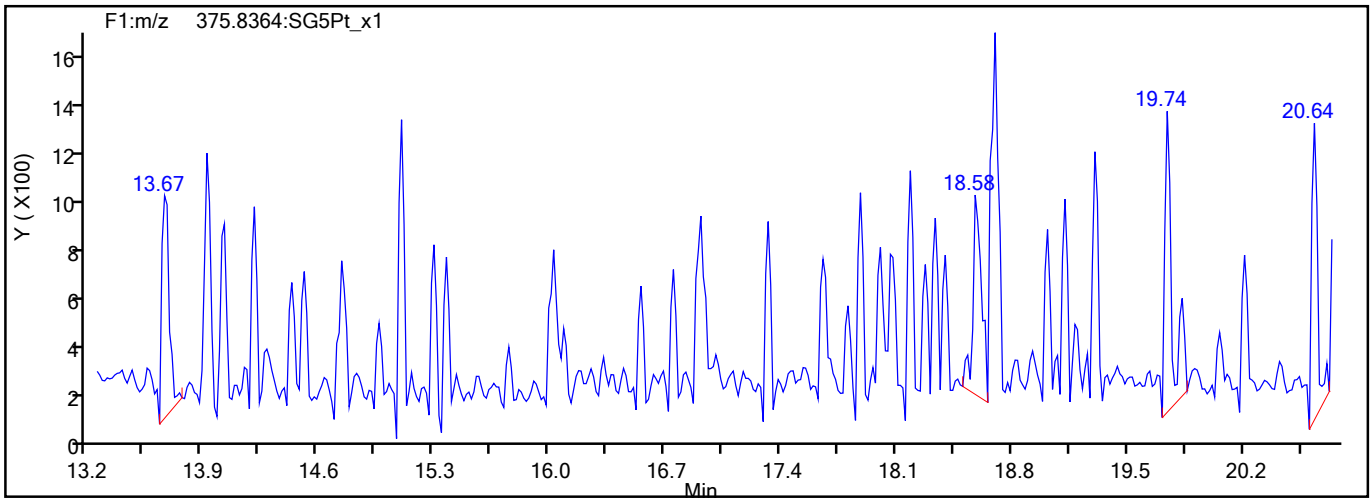

779334

Report Date: 18-Aug-2021 09:00:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d		
Injection Date:	14-Aug-2021 05:56:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	516836	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

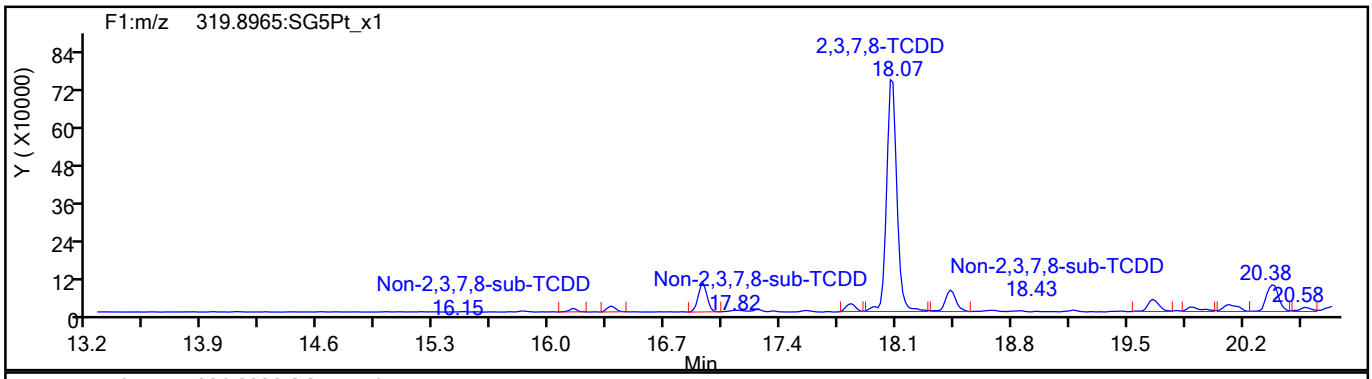

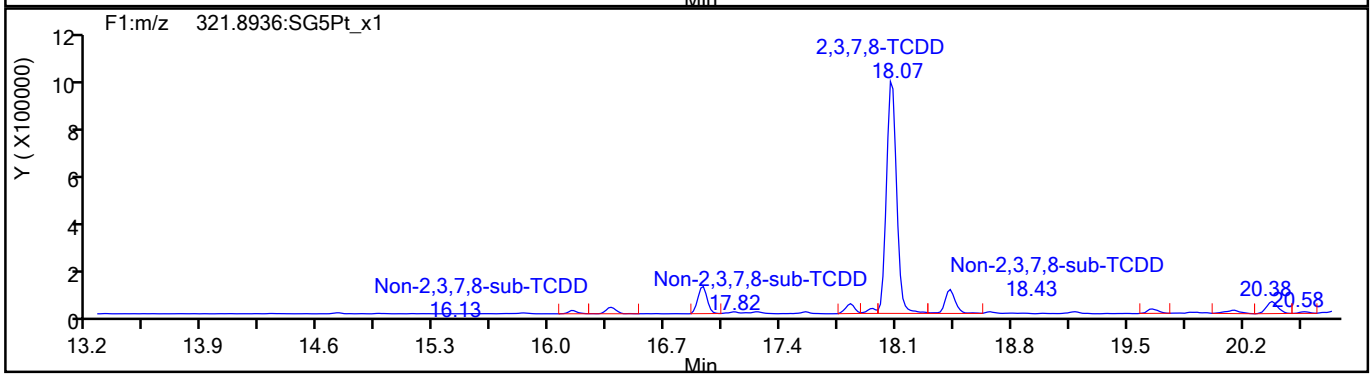

TCDD Standards

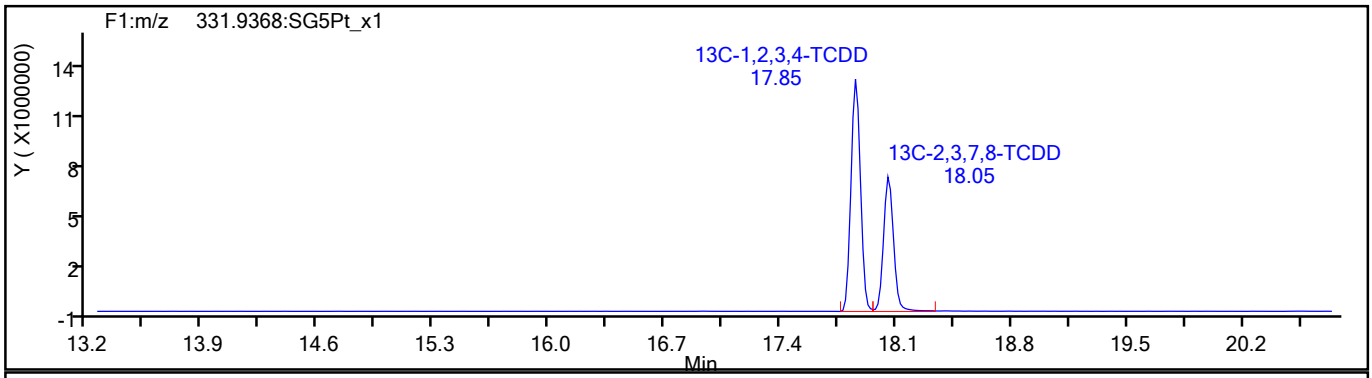

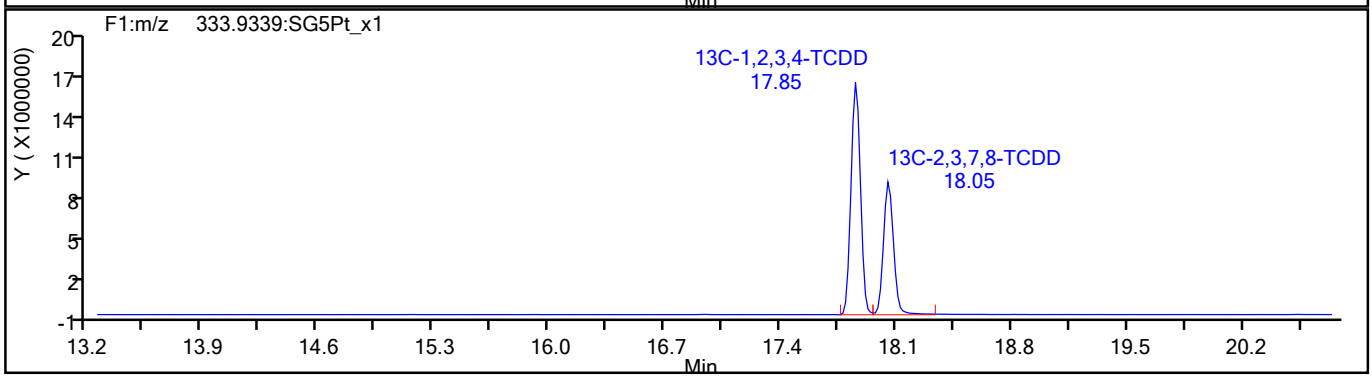

779335

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d		
Injection Date:	14-Aug-2021 05:56:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	516836	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

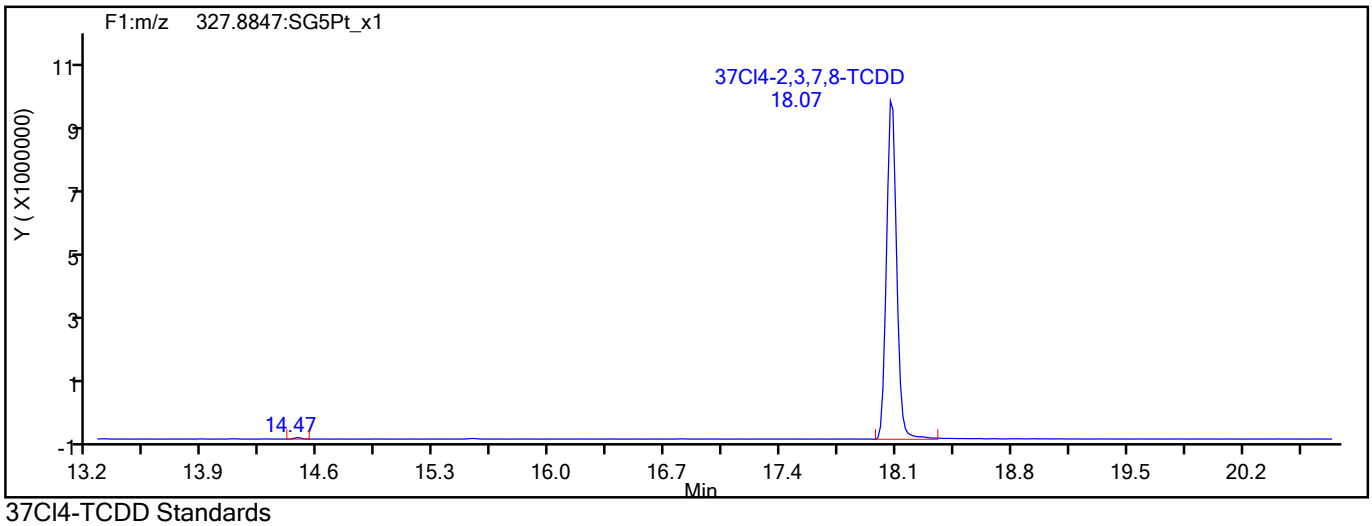

37Cl4-TCDD Standards

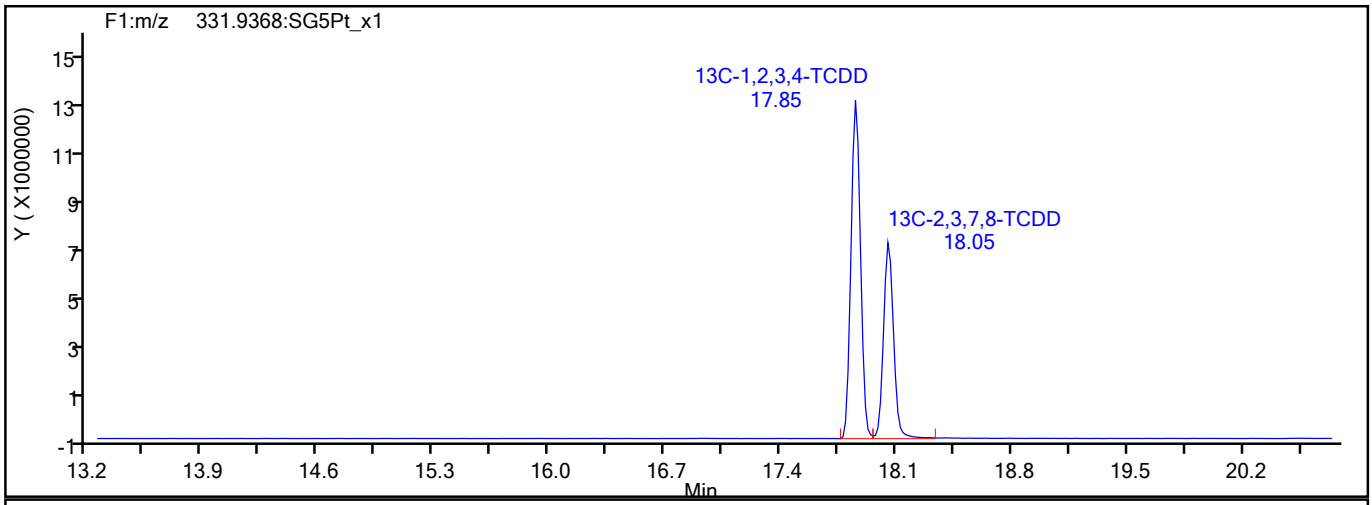

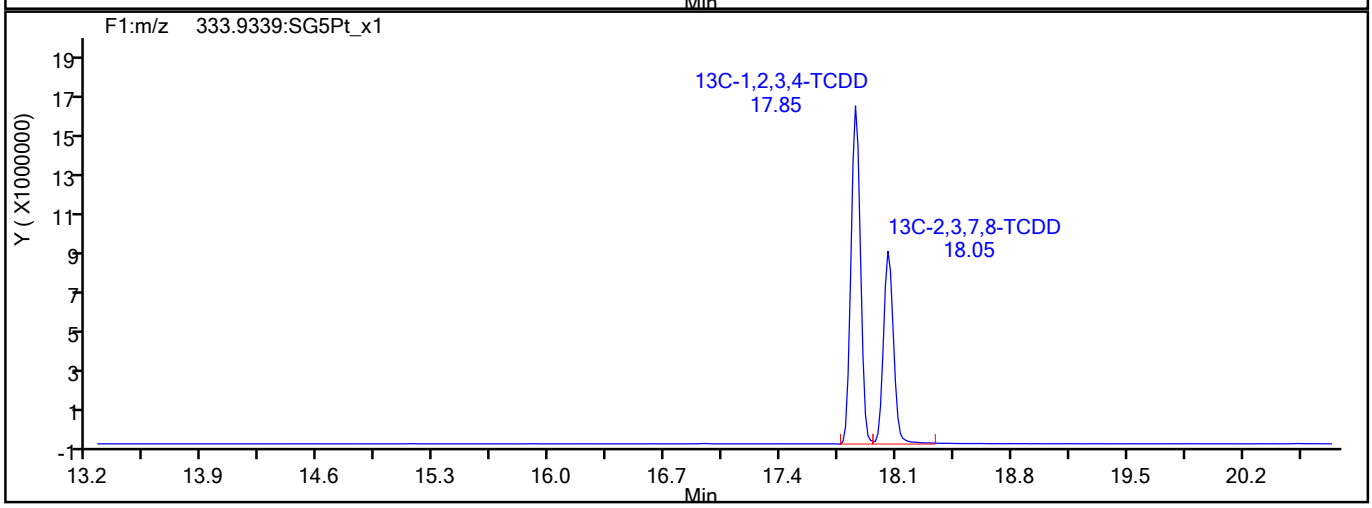

779336

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	516836	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

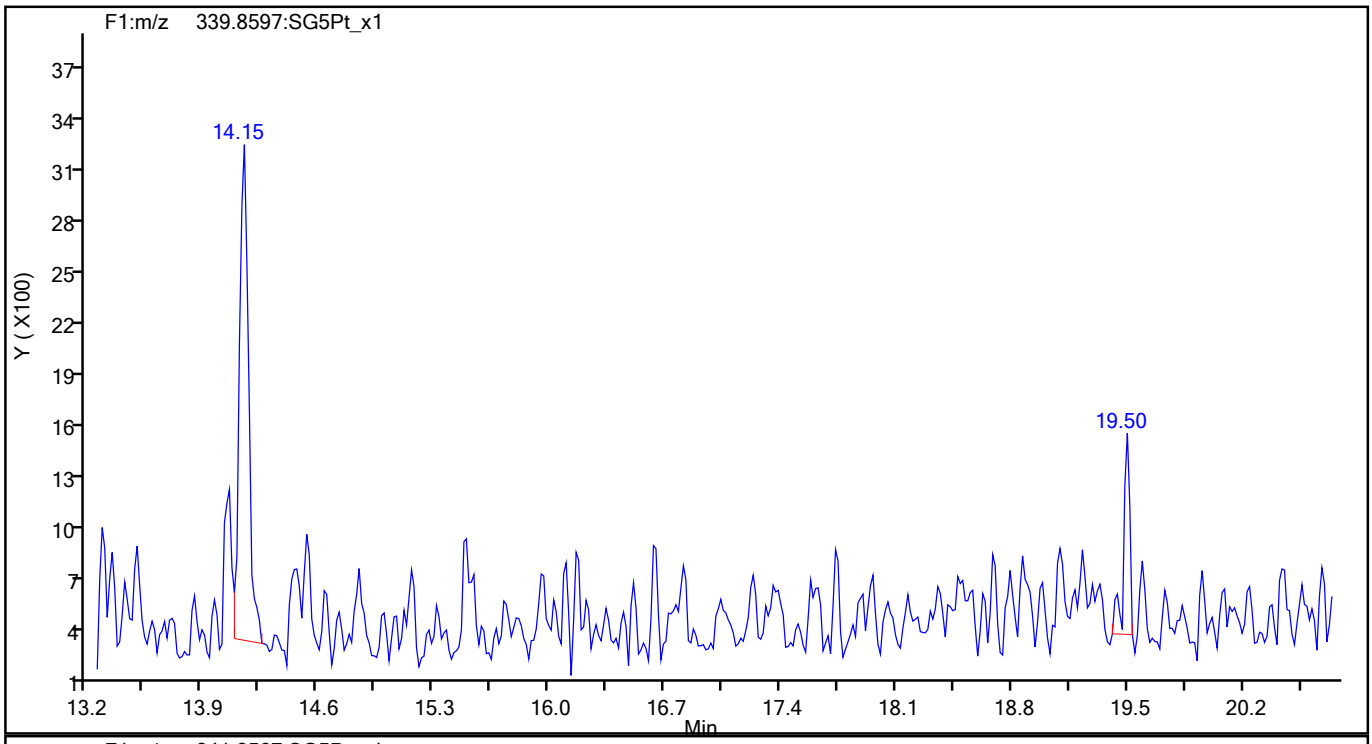

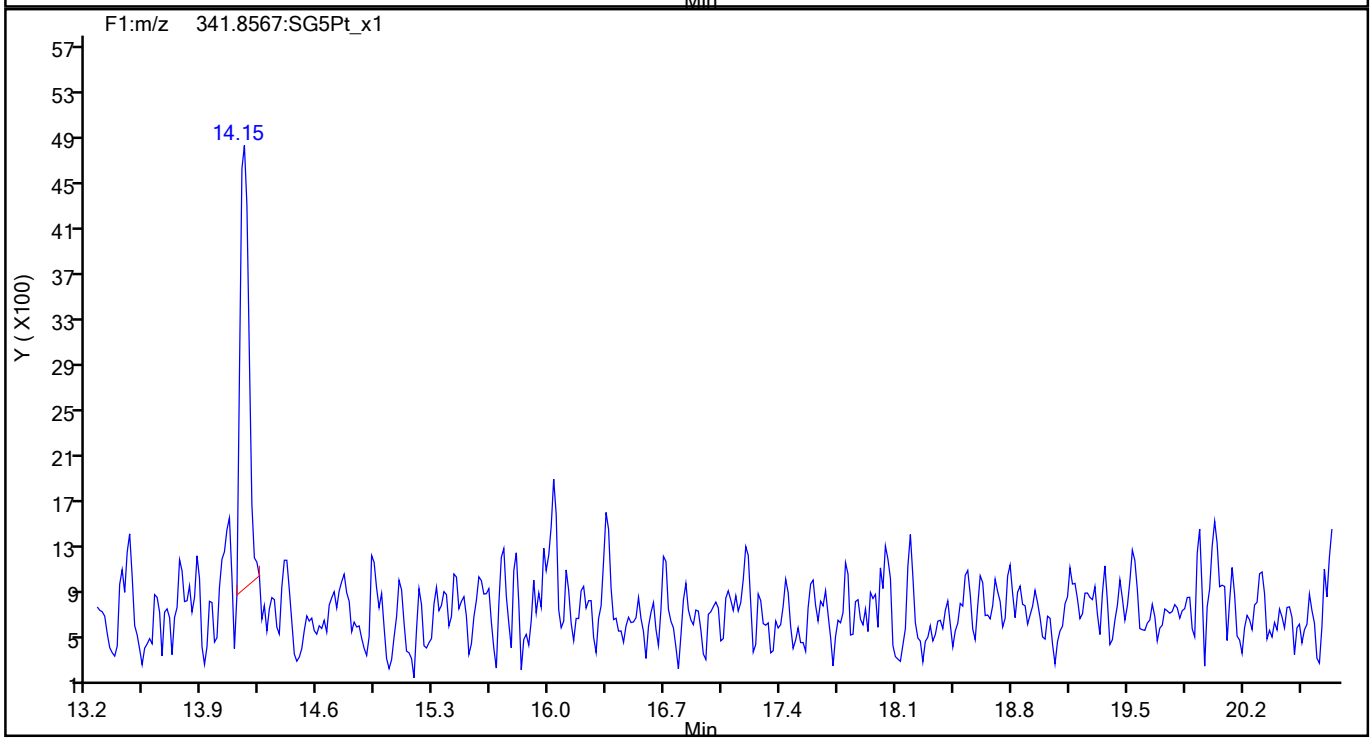

779337

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	516836	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

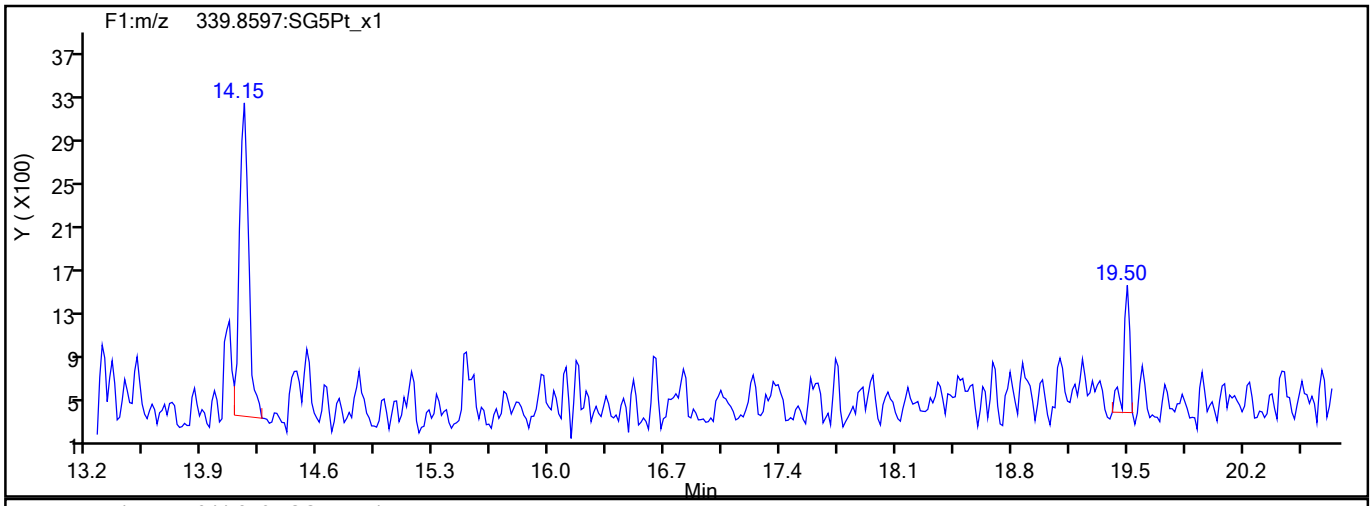

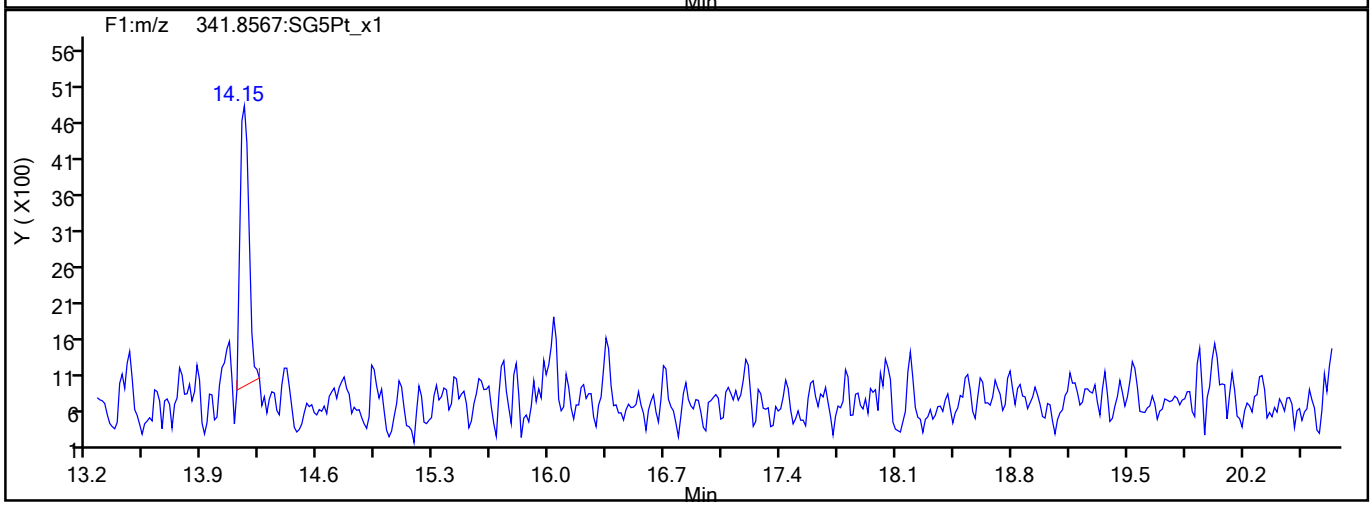

F1 PeCDFs Interference Mass

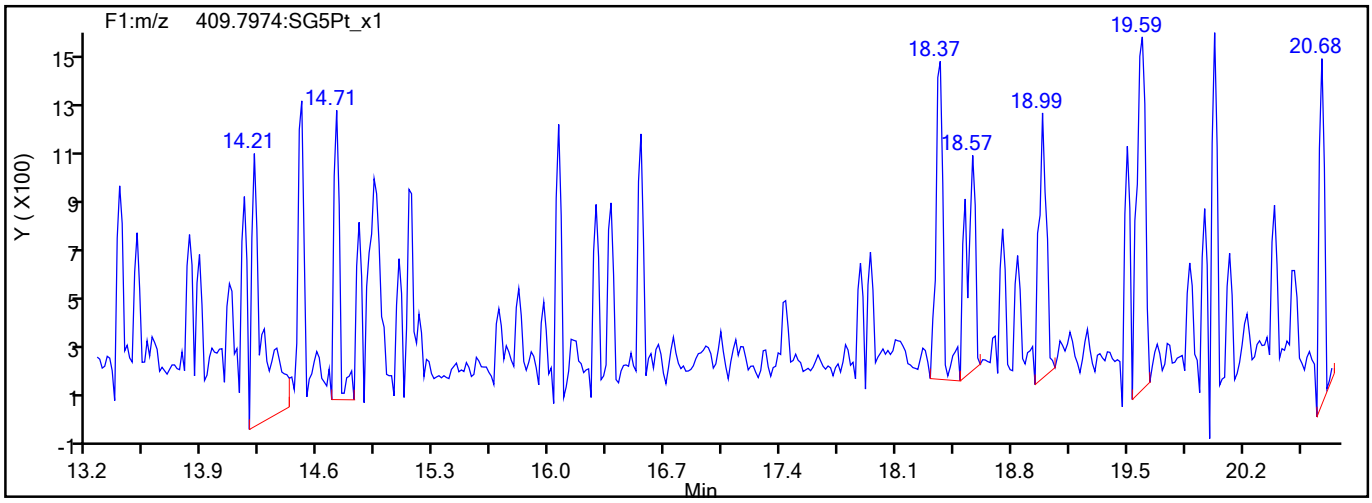

779338

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
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PeCDF

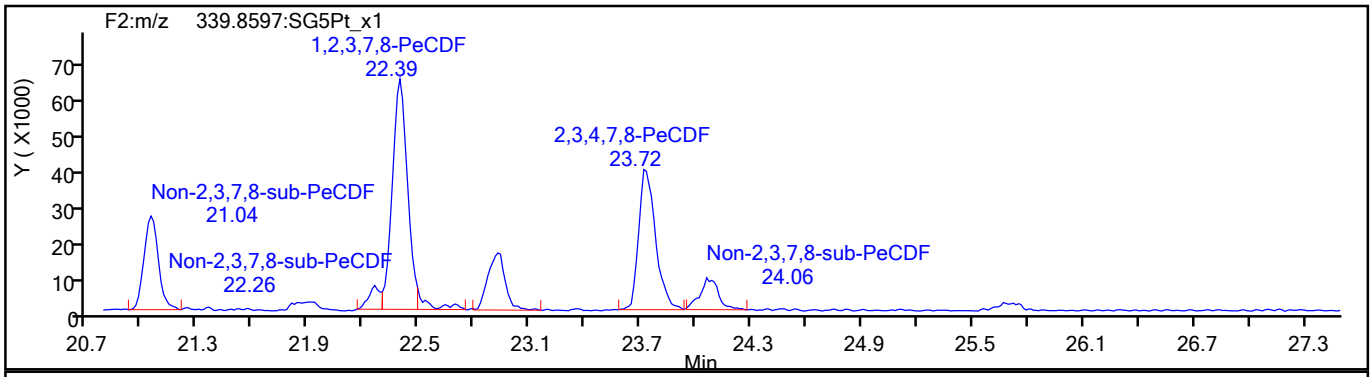

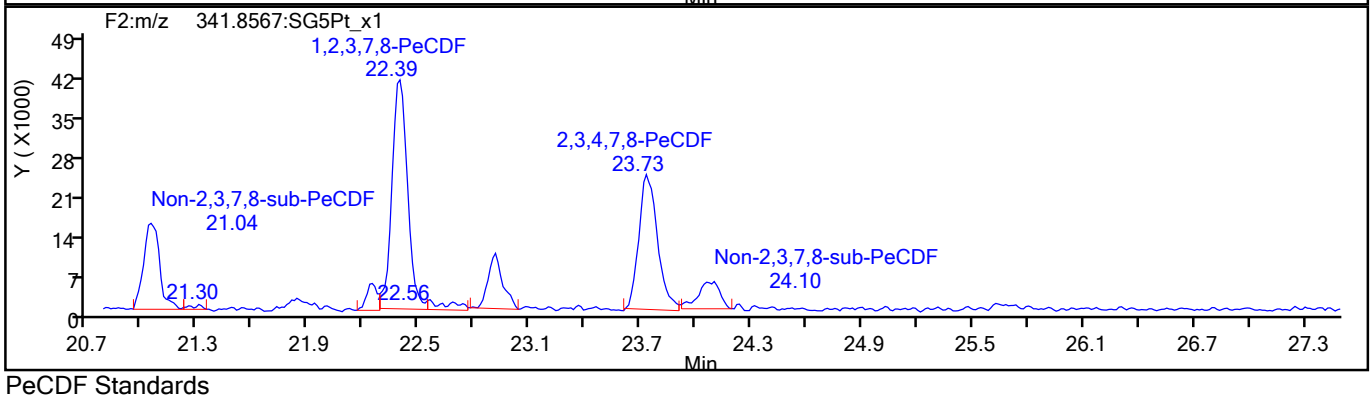

PeCDF Standards

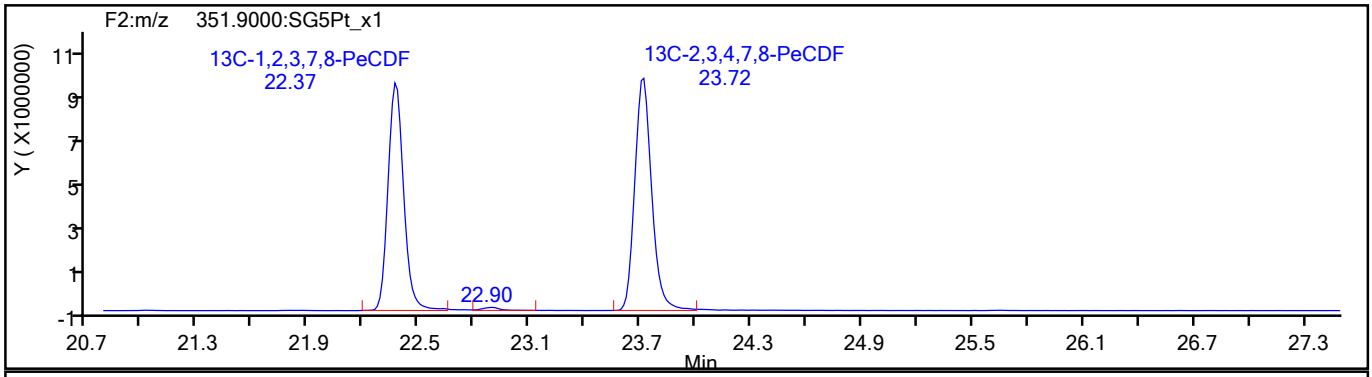

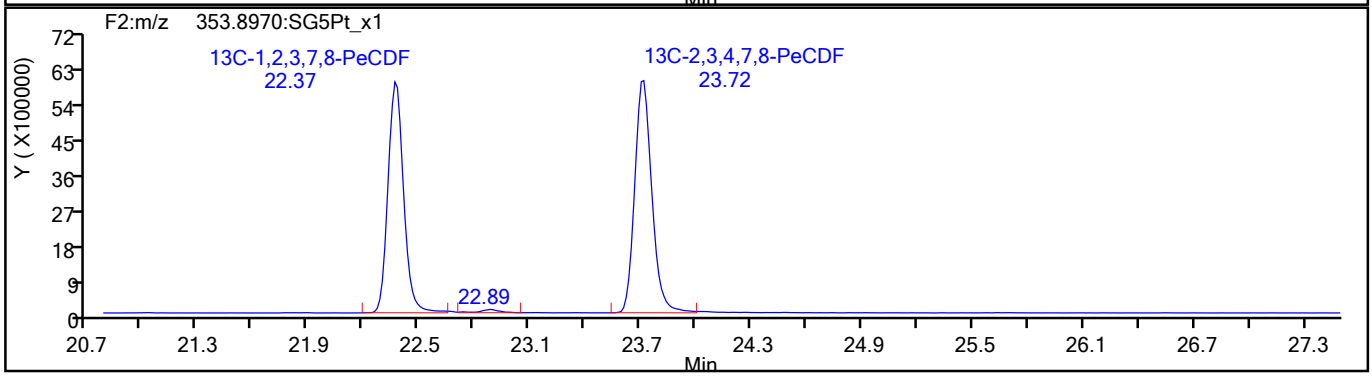

779339

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:	11215702-072321-BN-SJSB085 (4-6)		
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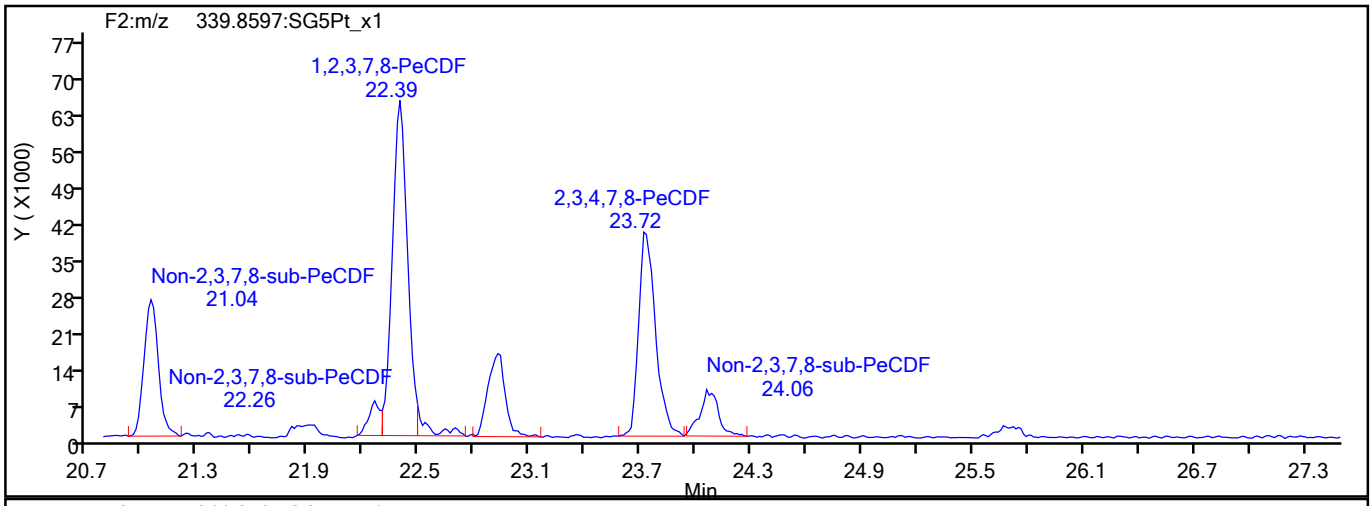

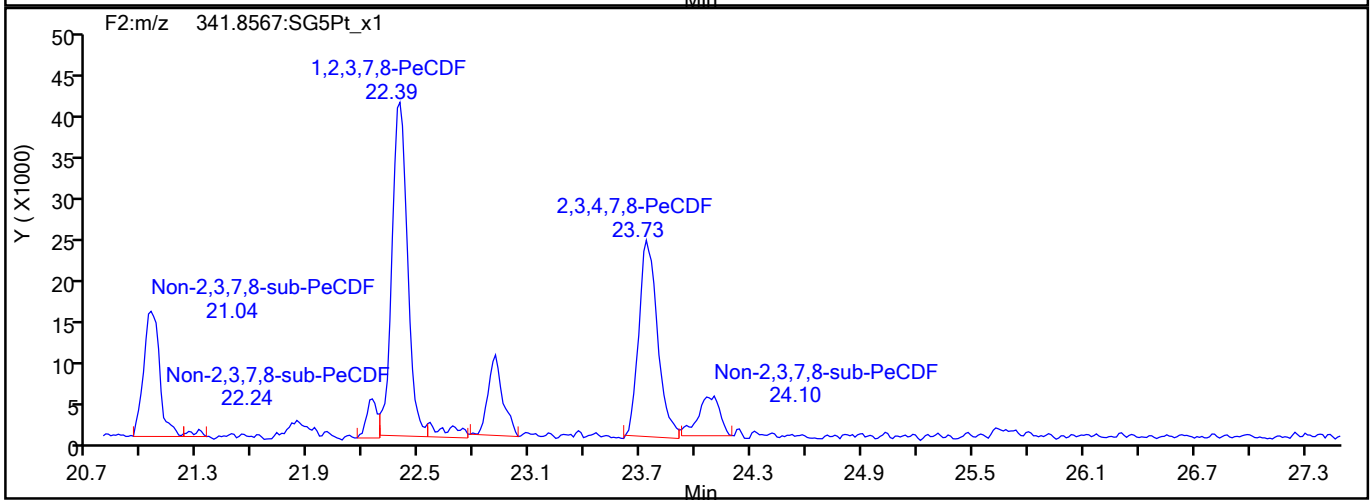

PeCDF Interference Mass

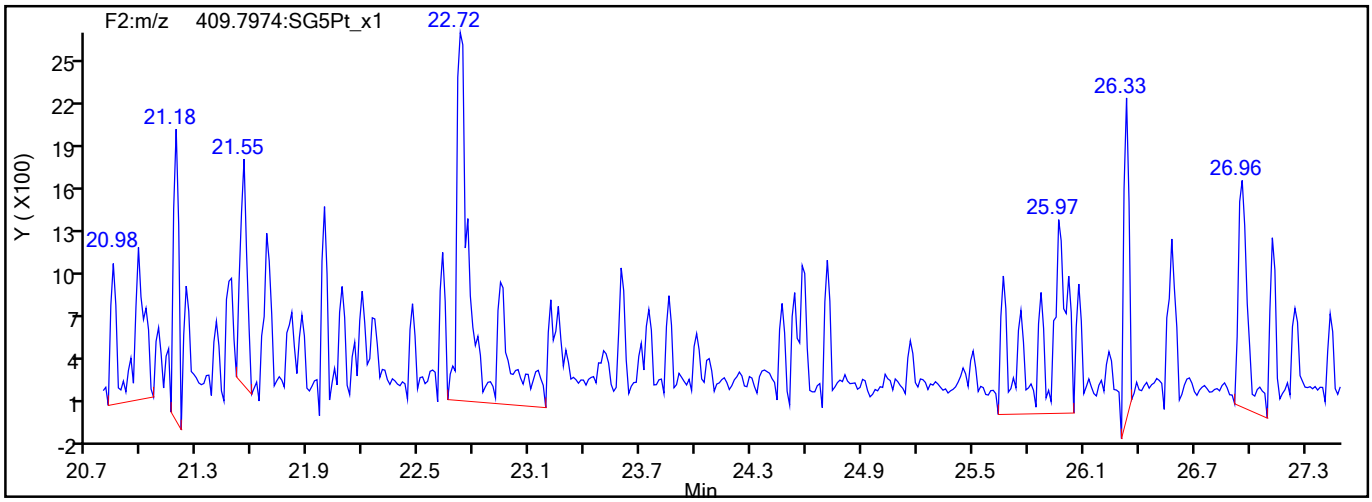

779340

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDD

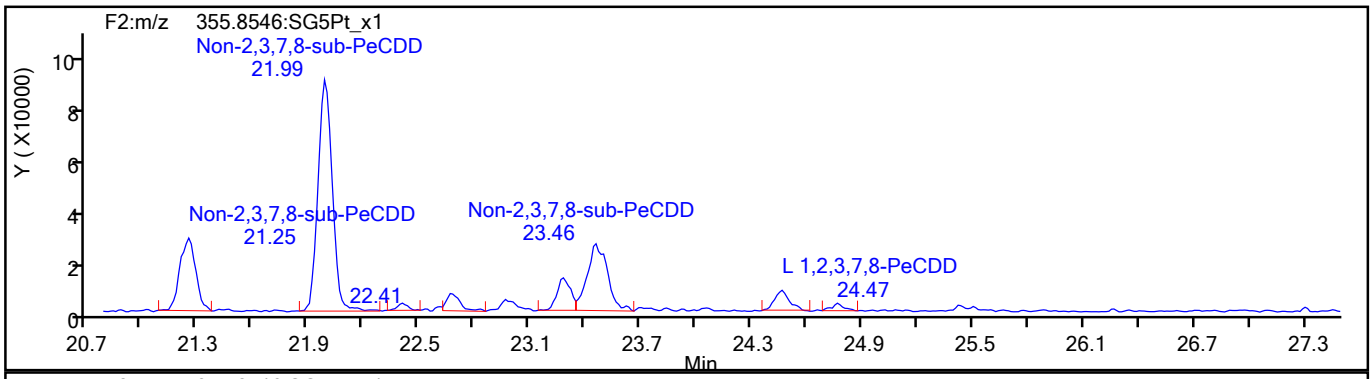

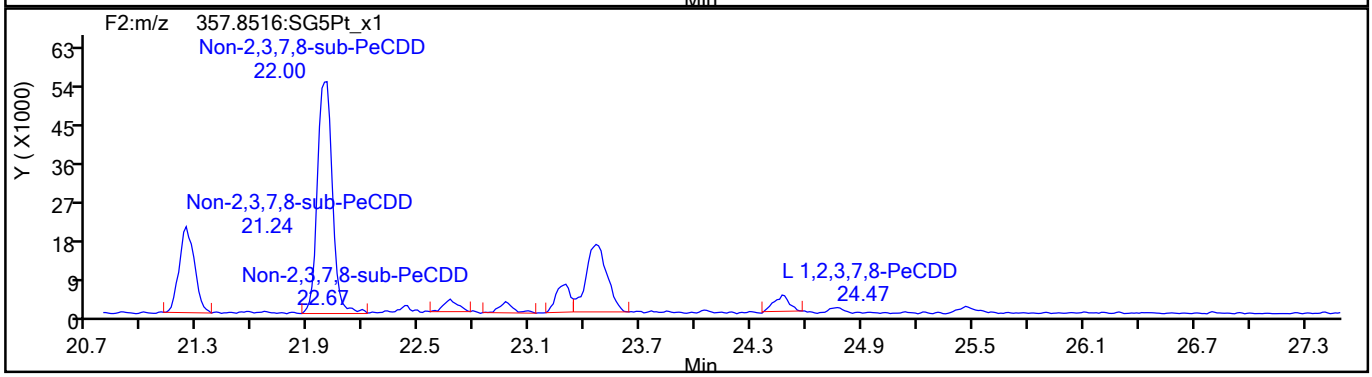

PeCDD Standards

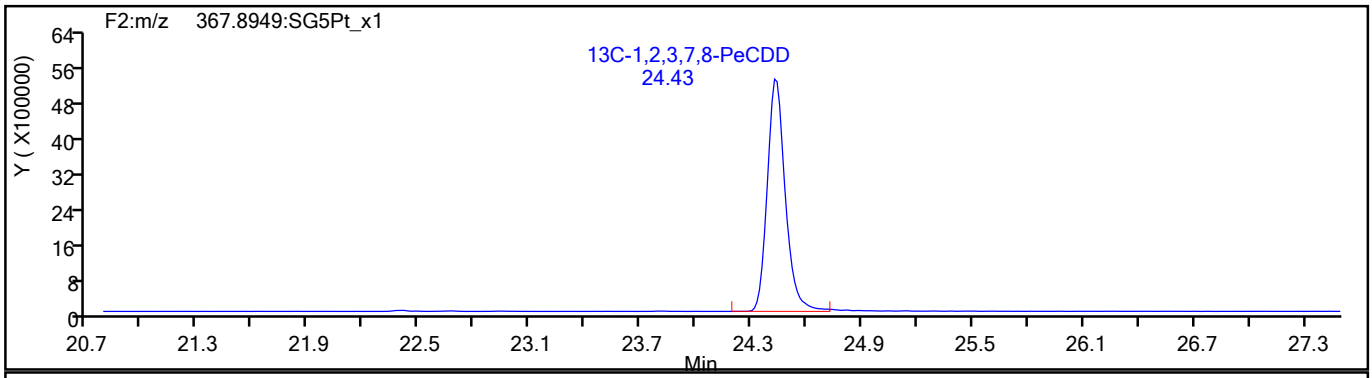

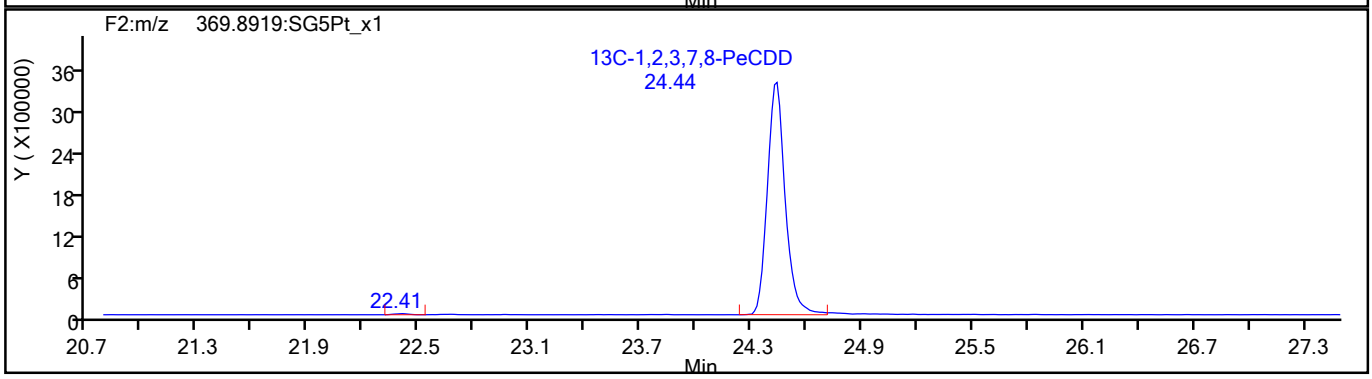

779341

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

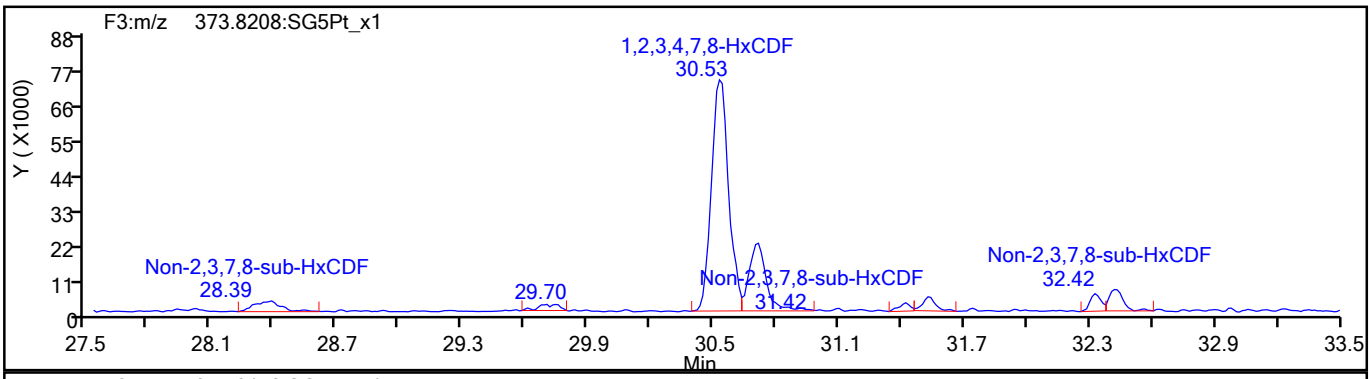

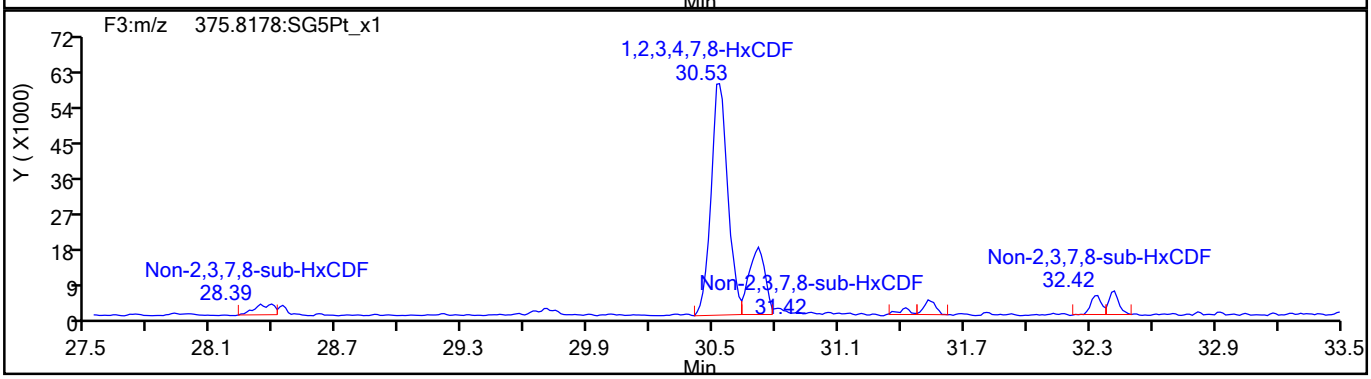

HxCDF Standards

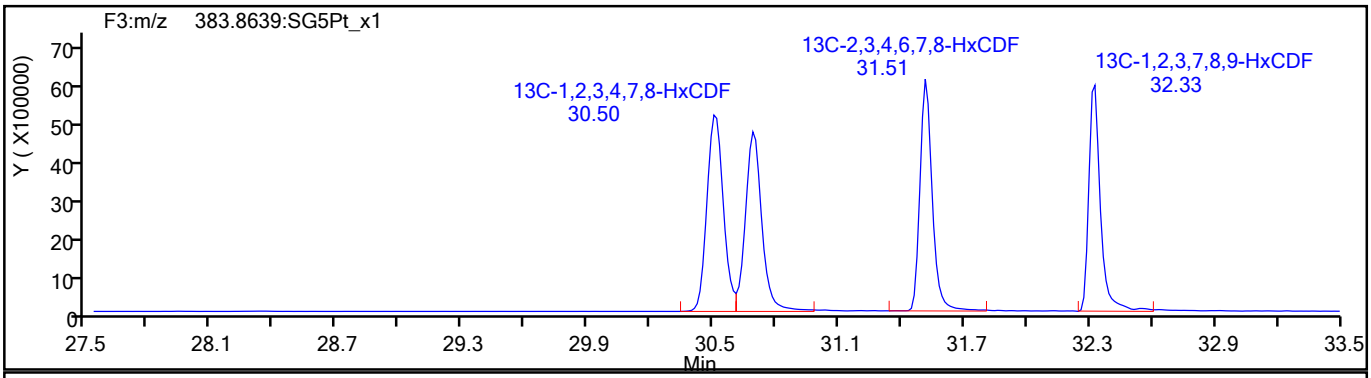

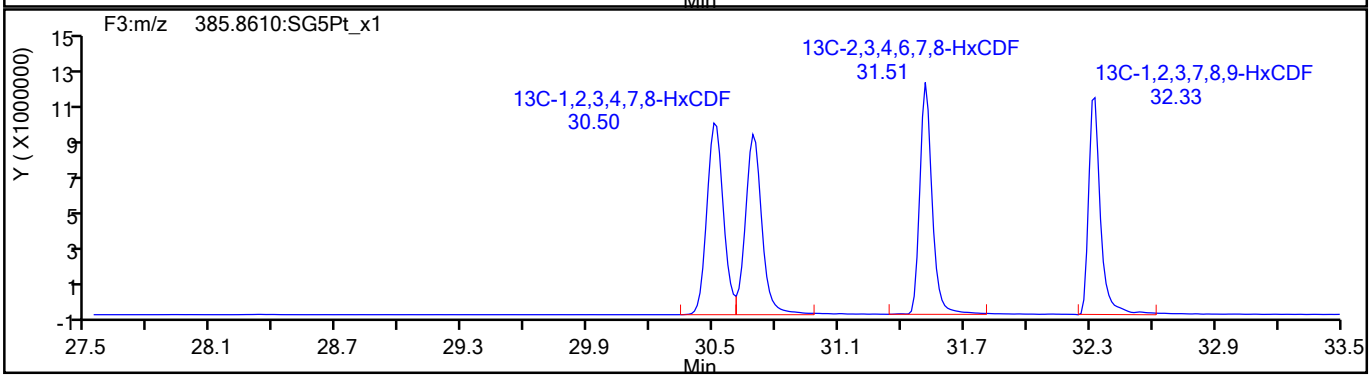

779342

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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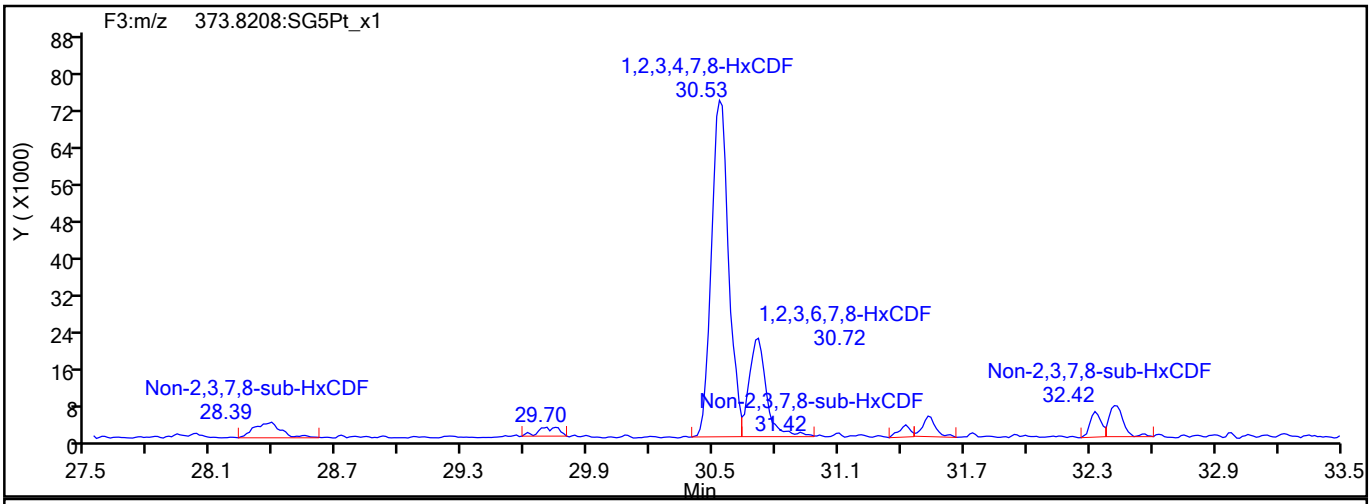

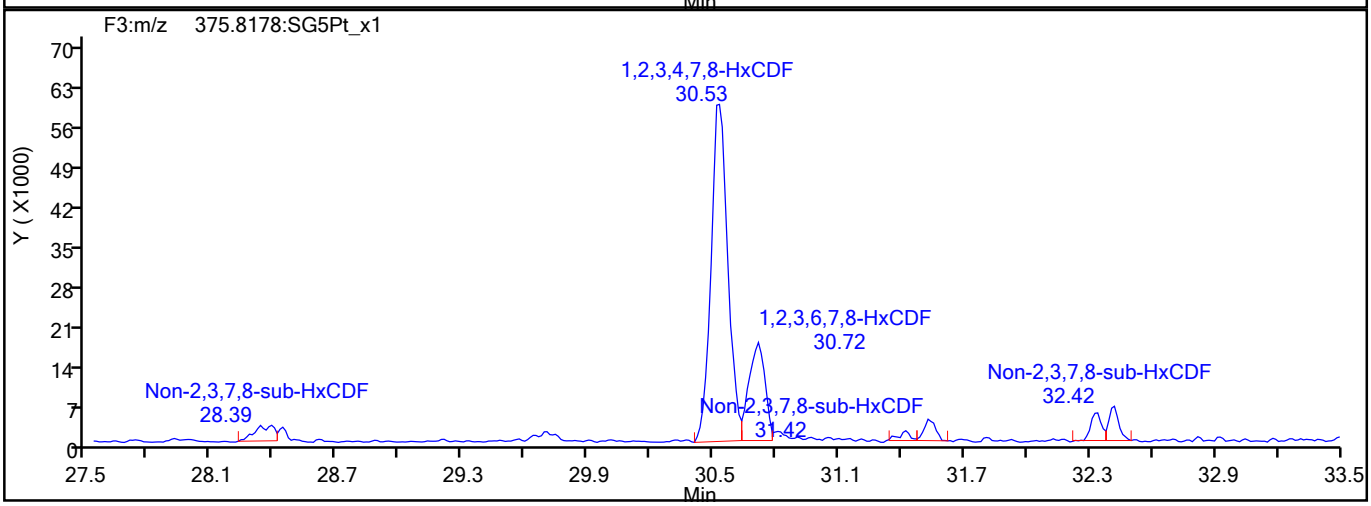

HxCDF Interference Mass

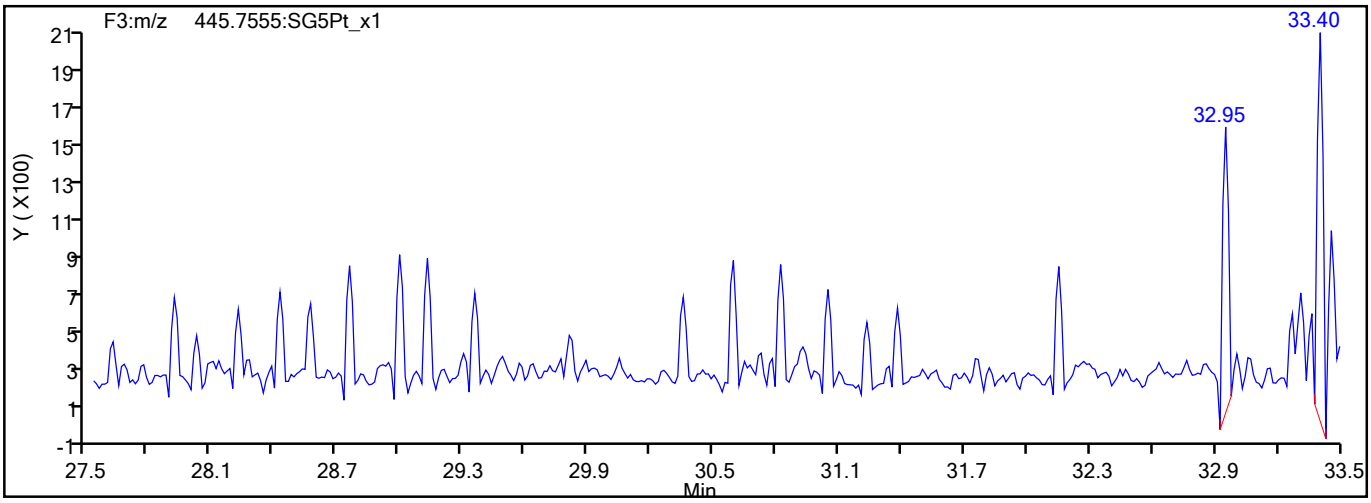

779343

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

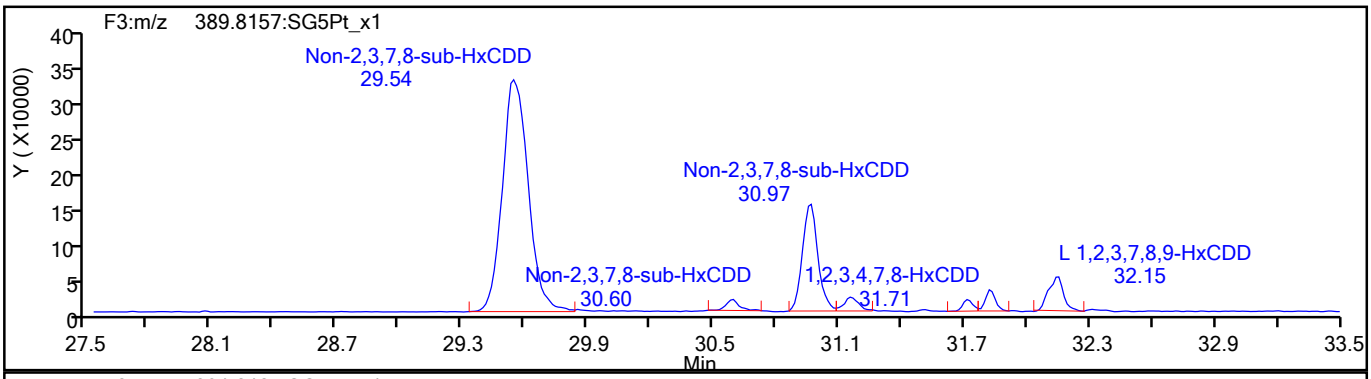

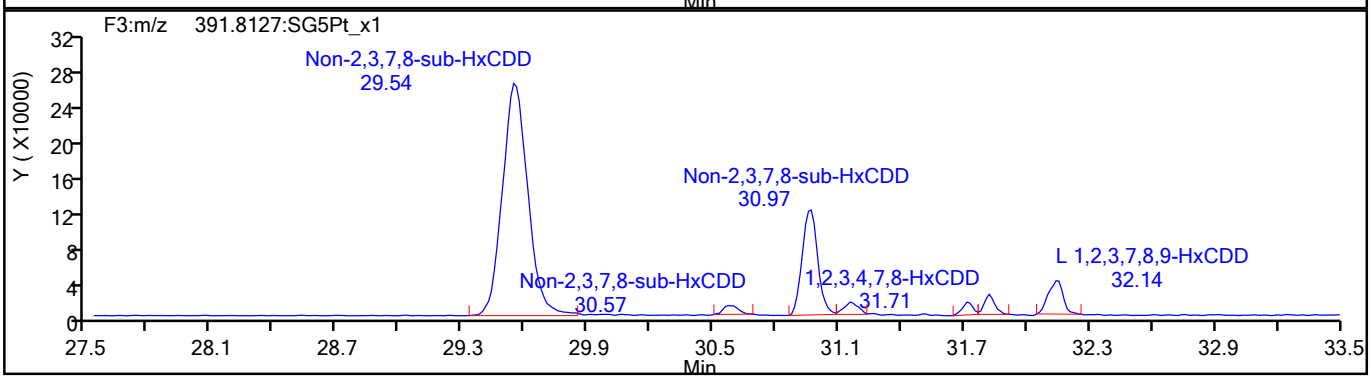

HxCDD Standards

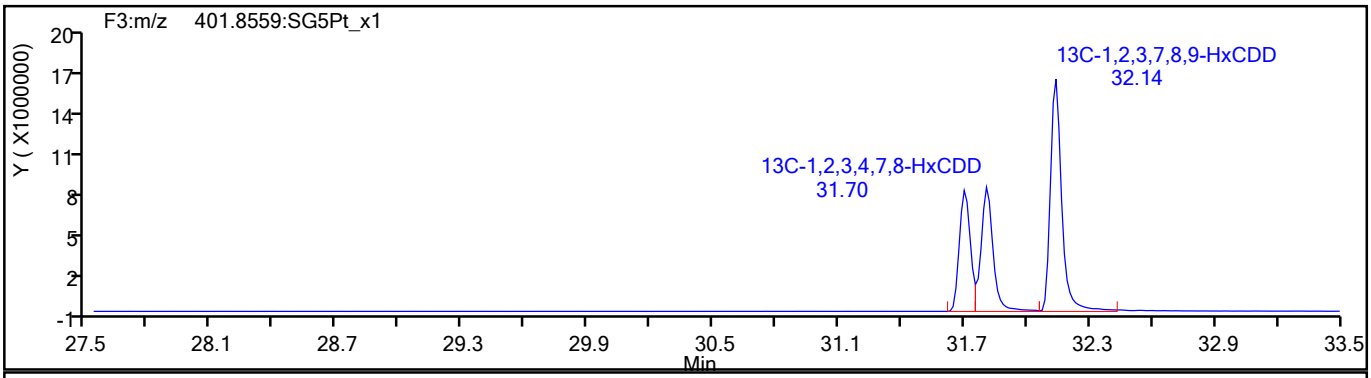

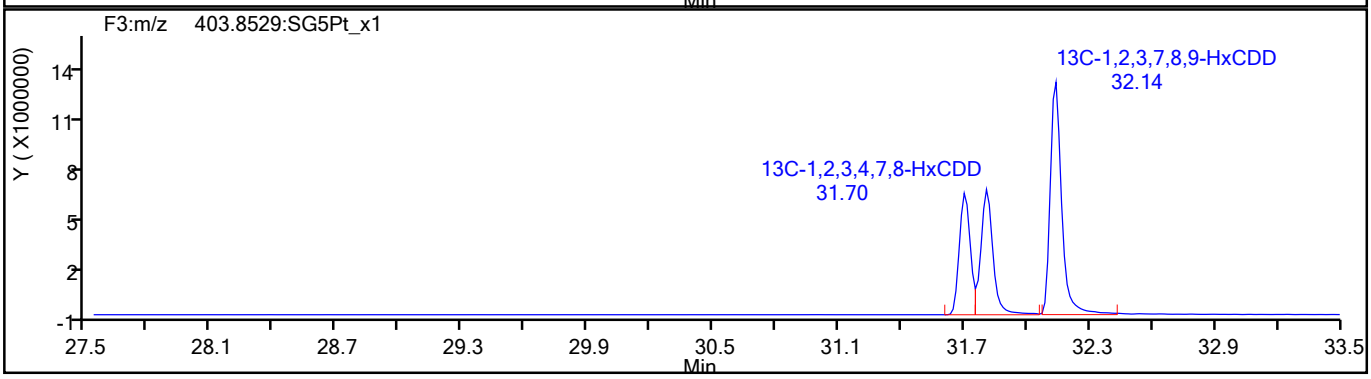

779344

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:	11215702-072321-BN-SJSB085 (4-6)		
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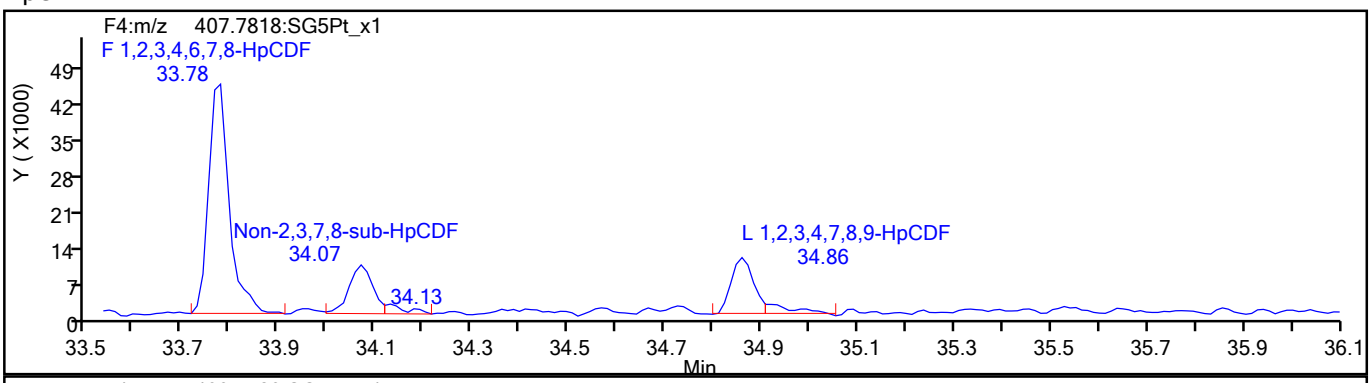

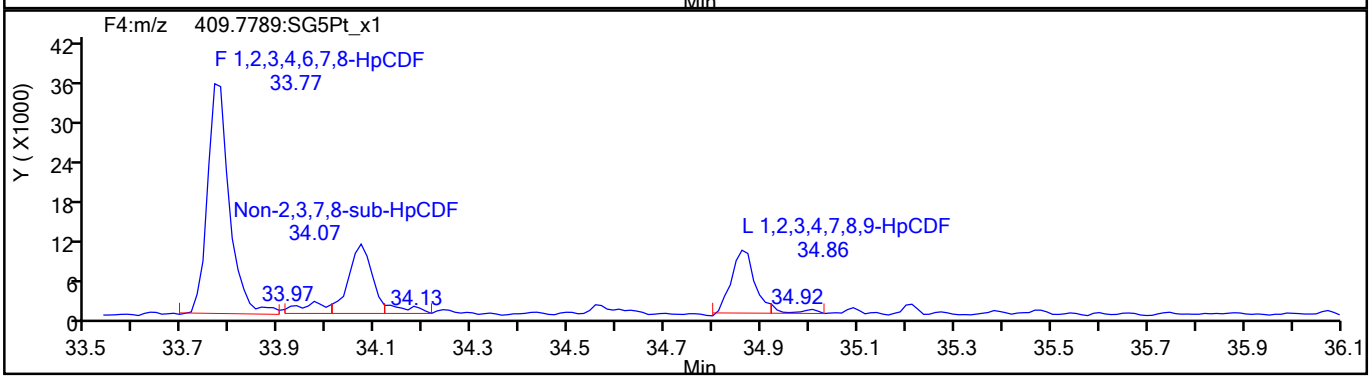

HpCDF Standards

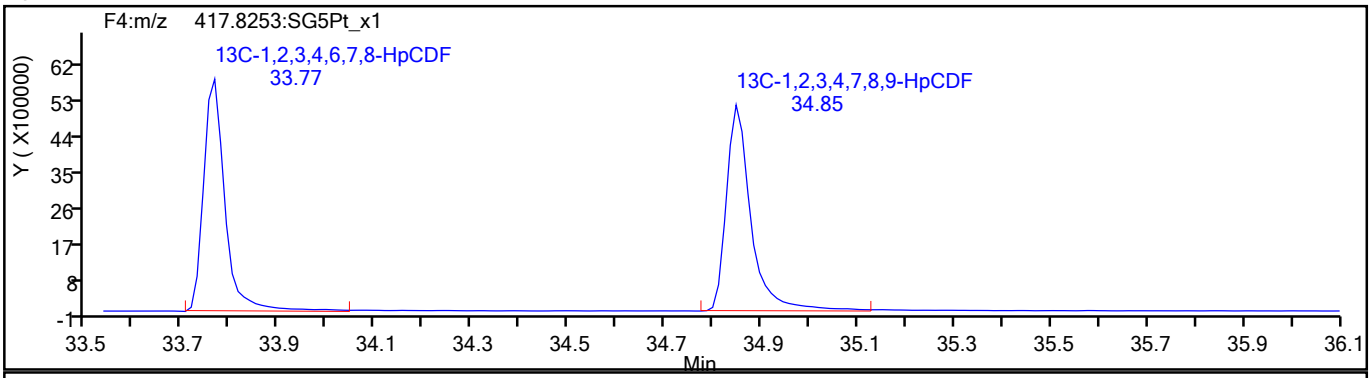

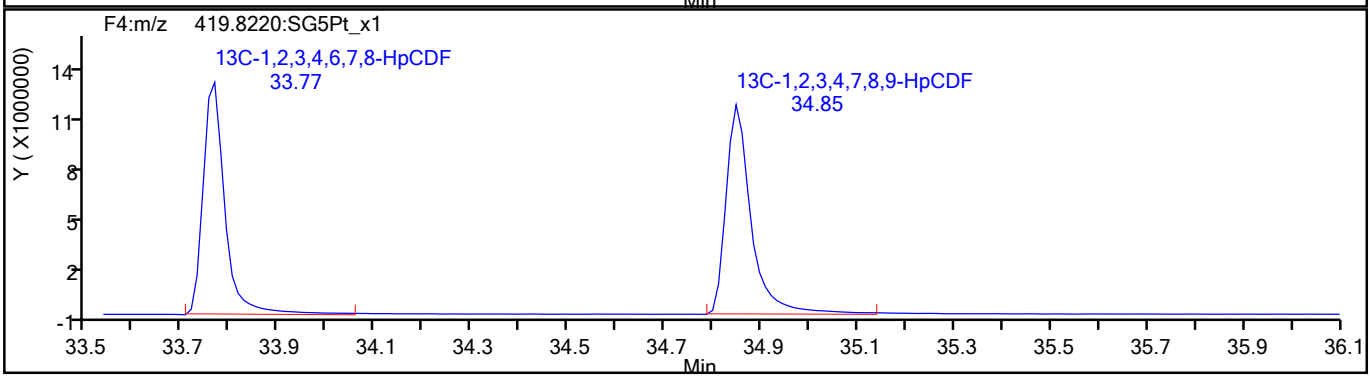

779345

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

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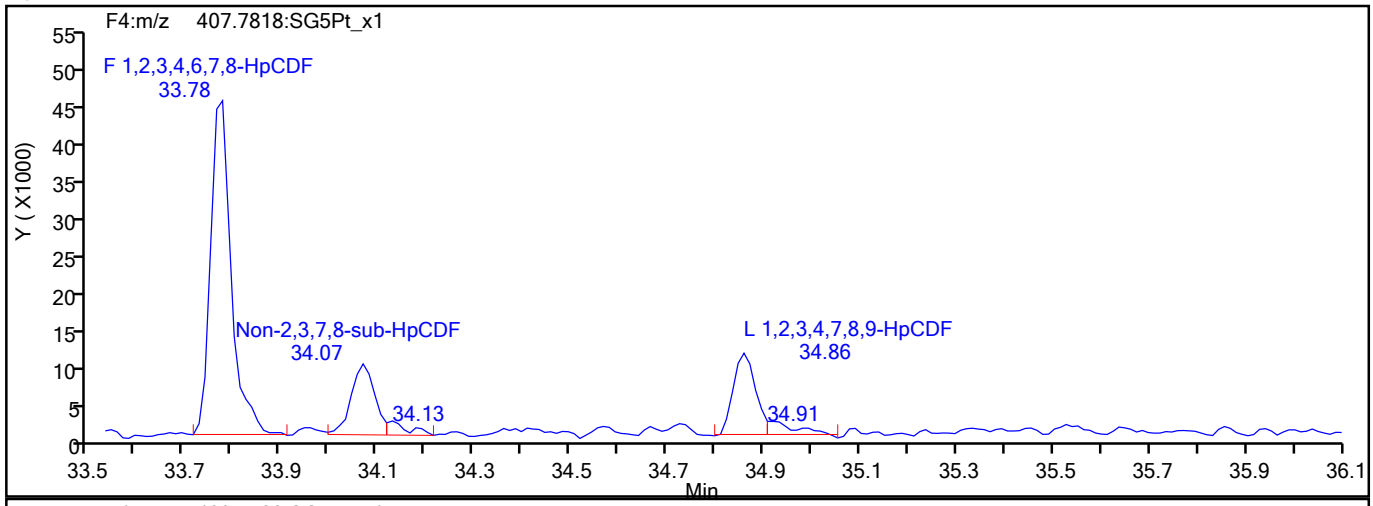

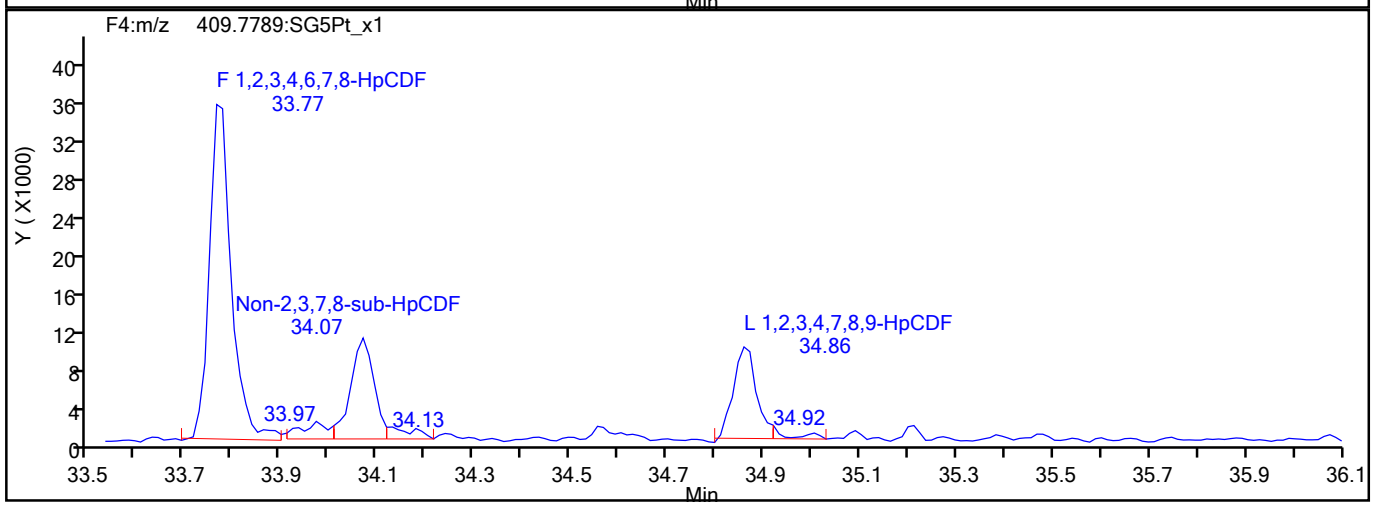

HpCDF Interference Mass

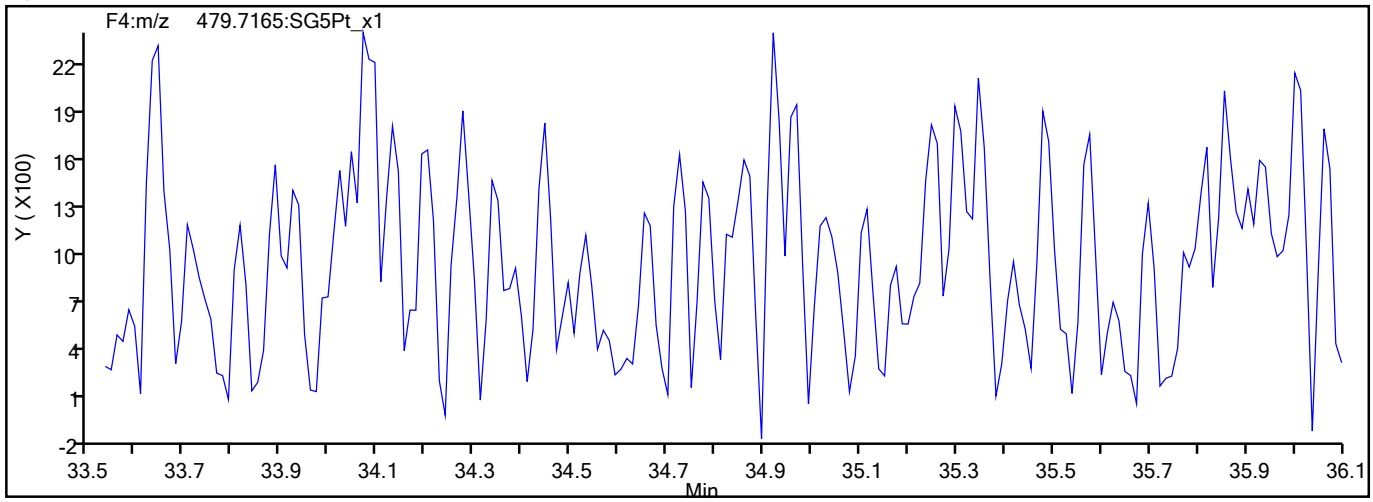

779346

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
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HpCDD

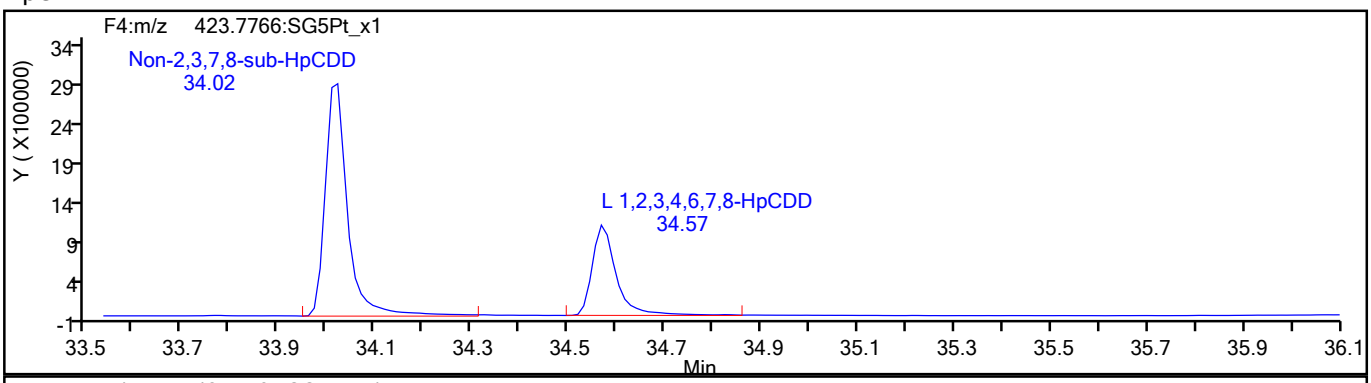

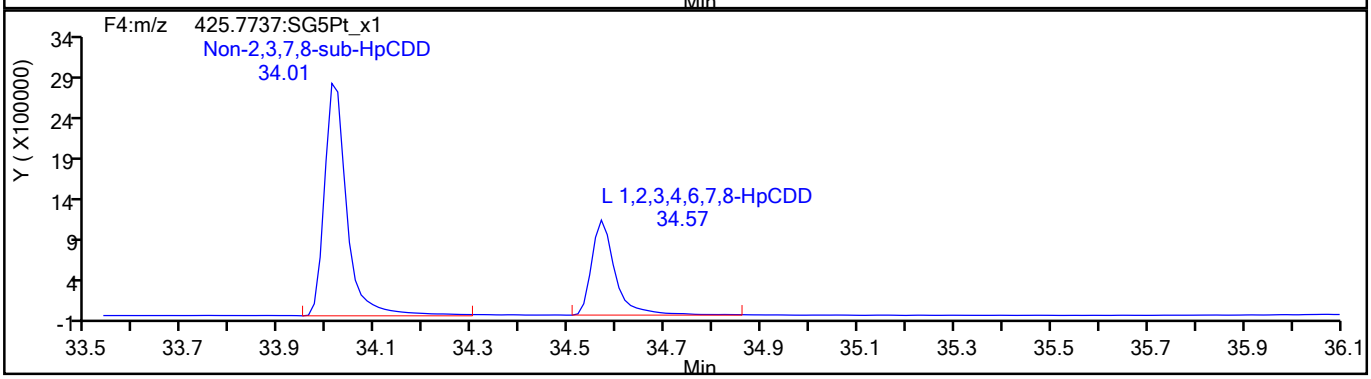

HpCDD Standards

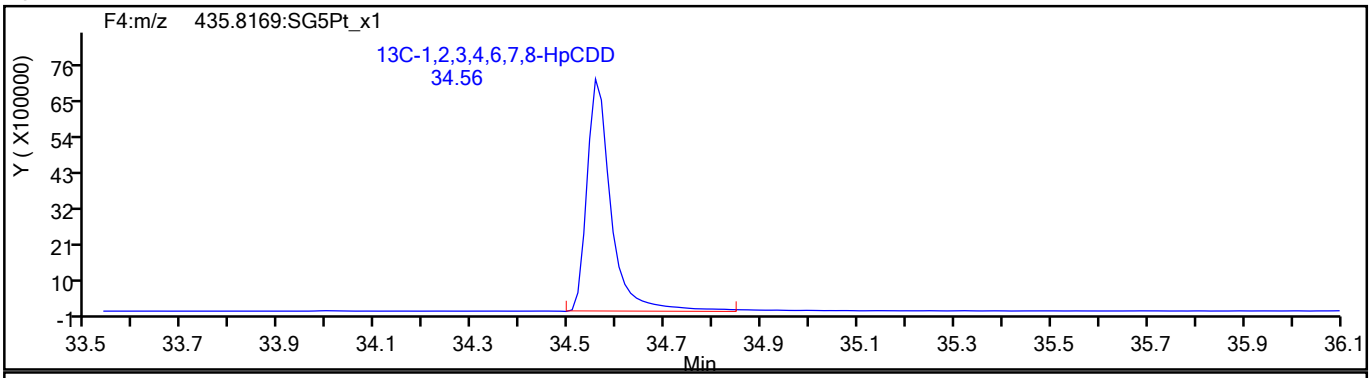

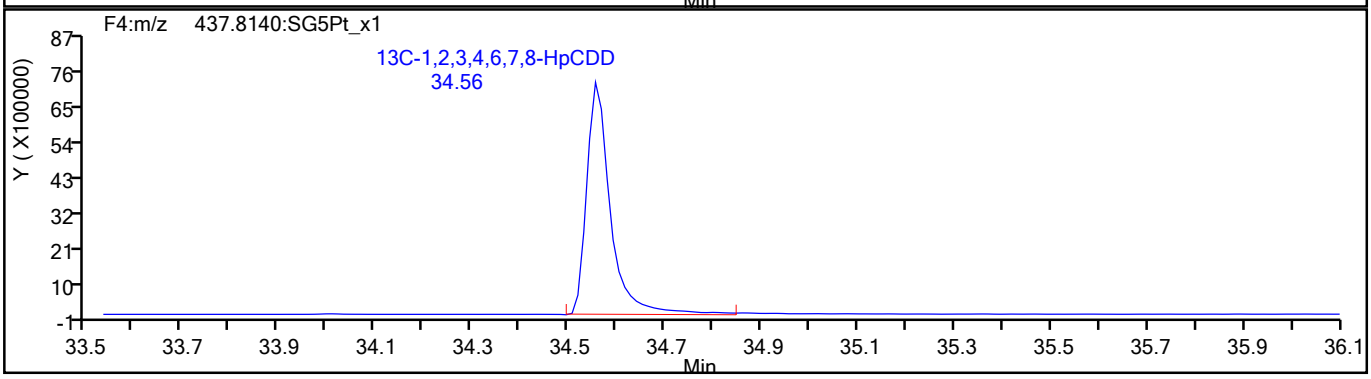

779347

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d		
Injection Date:	14-Aug-2021 05:56:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	516836	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

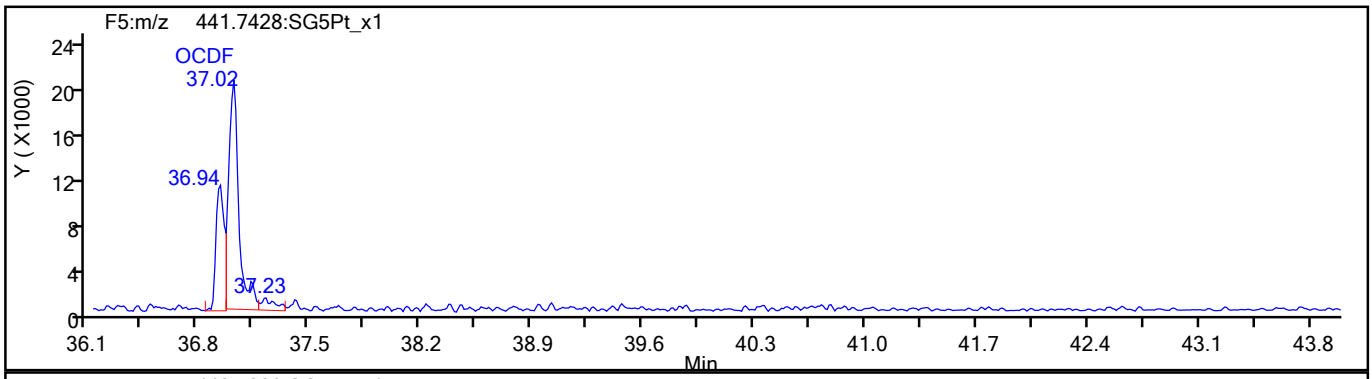

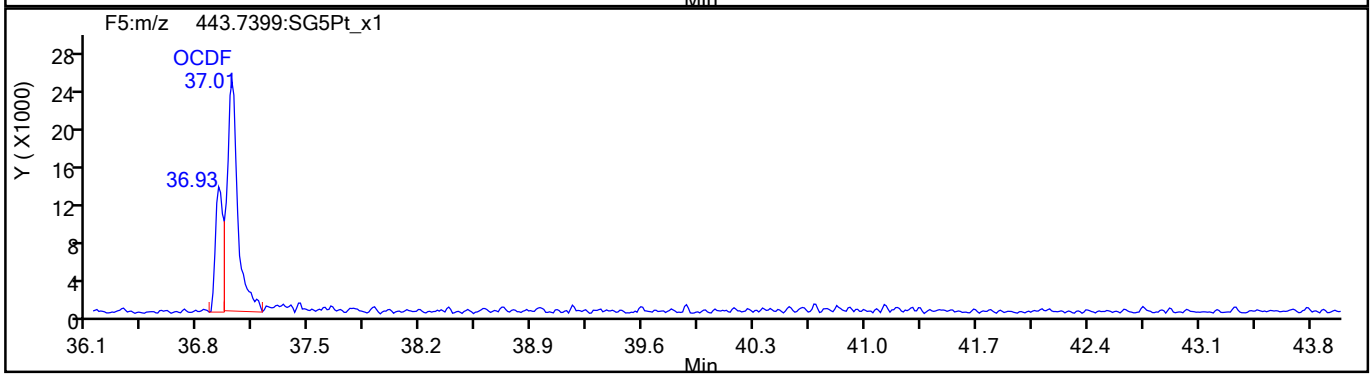

OCDF Standards

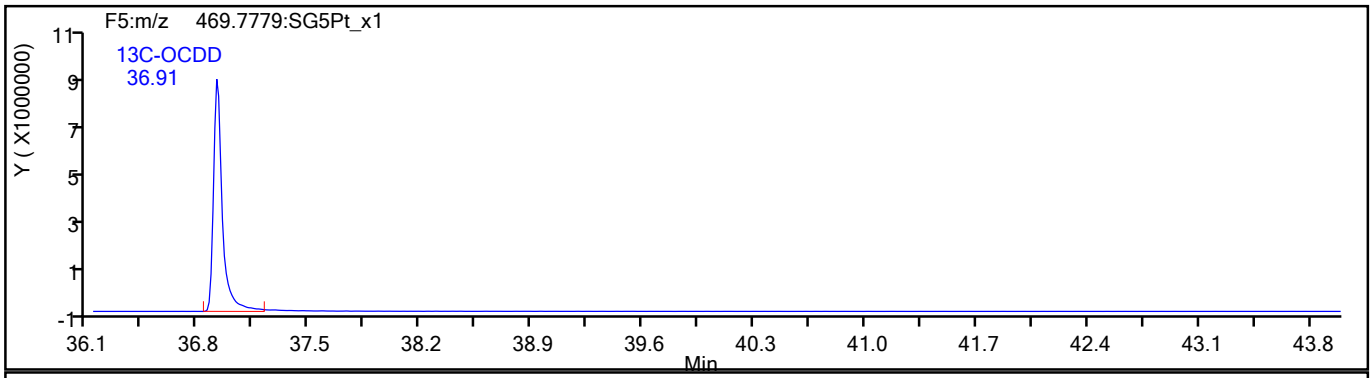

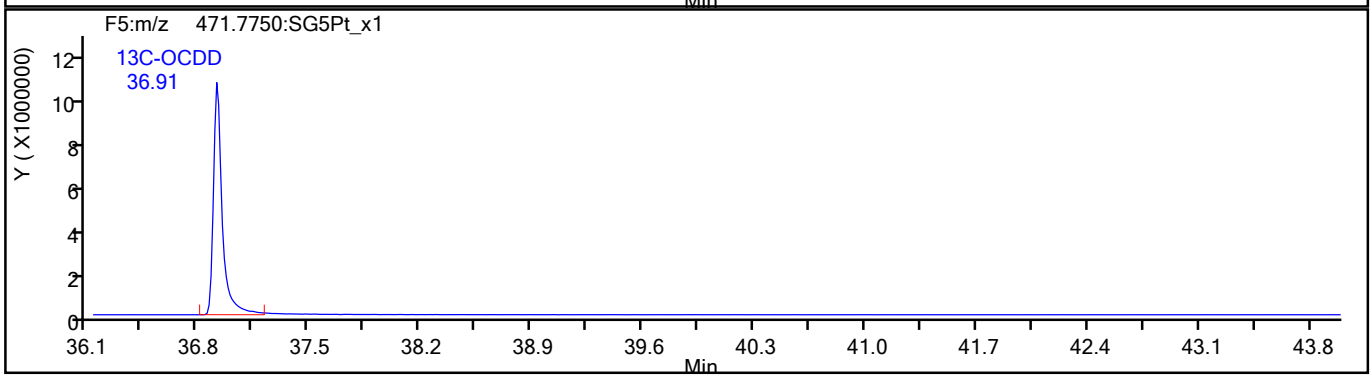

779348

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d		
Injection Date:	14-Aug-2021 05:56:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	516836	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

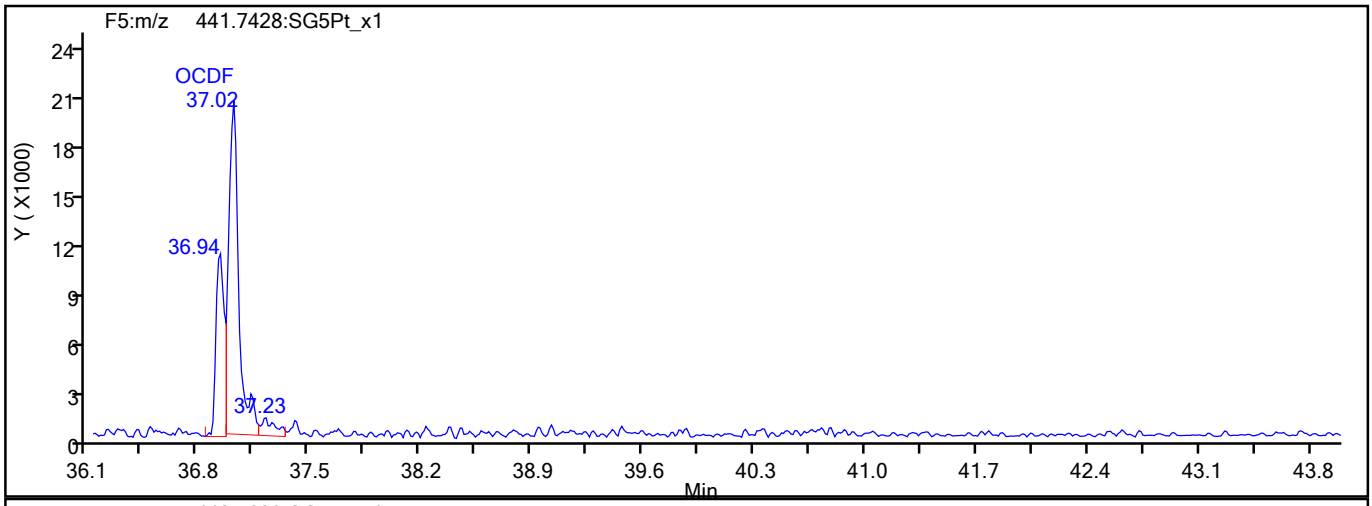

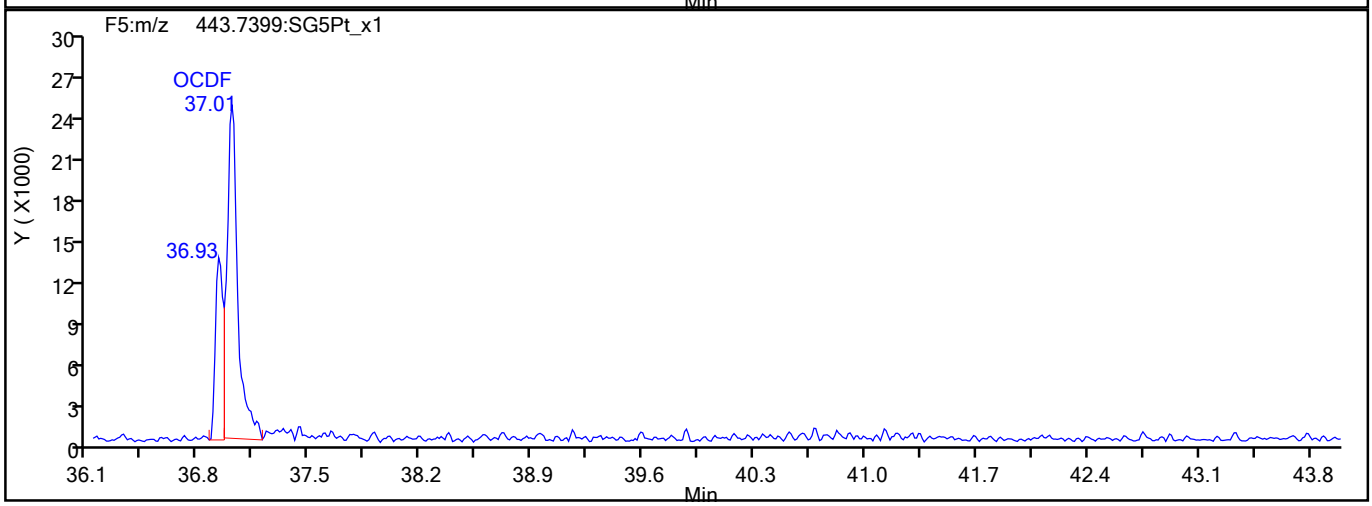

OCDF Interference Mass

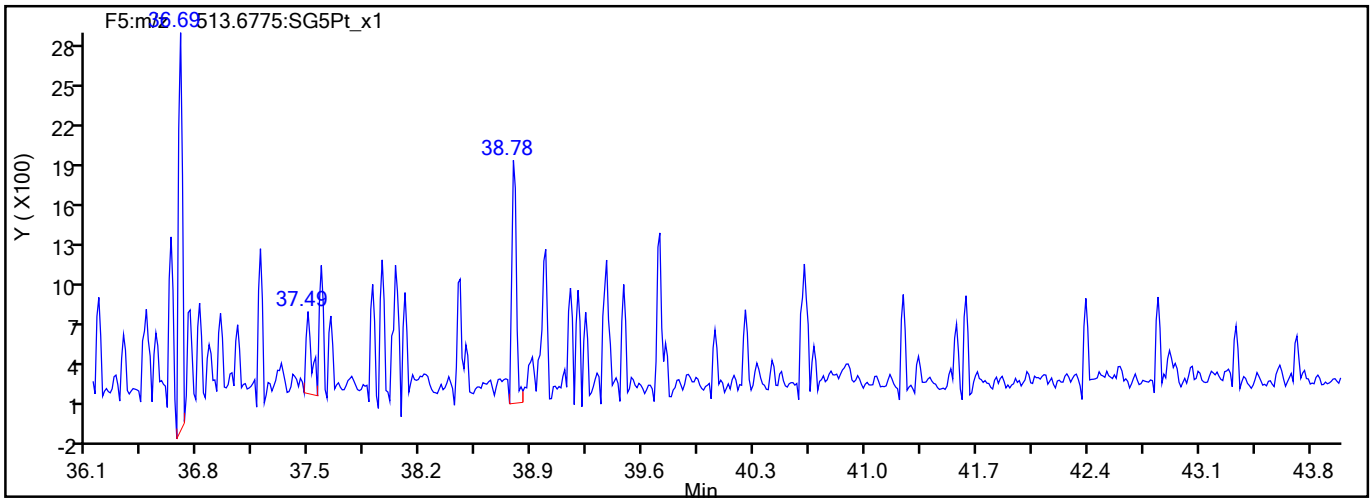

779349

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d		
Injection Date:	14-Aug-2021 05:56:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	516836	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

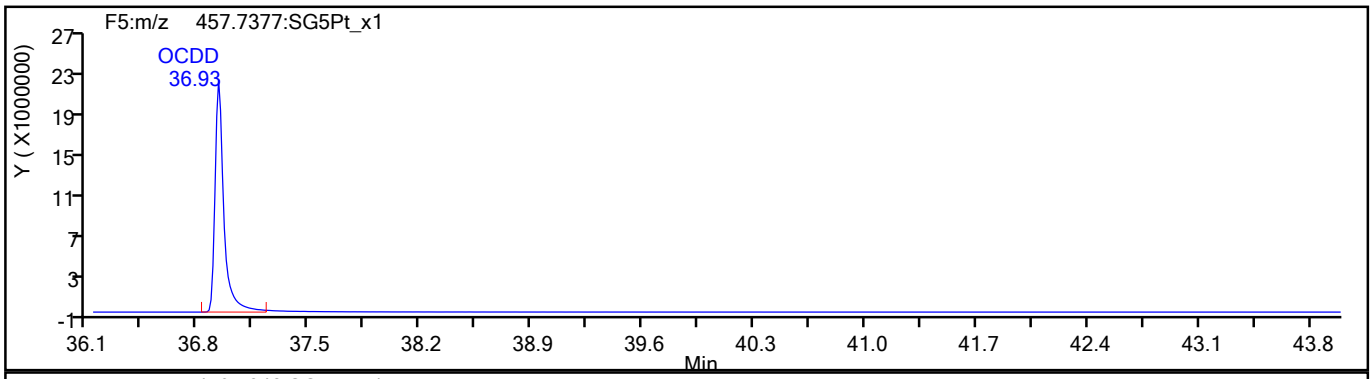

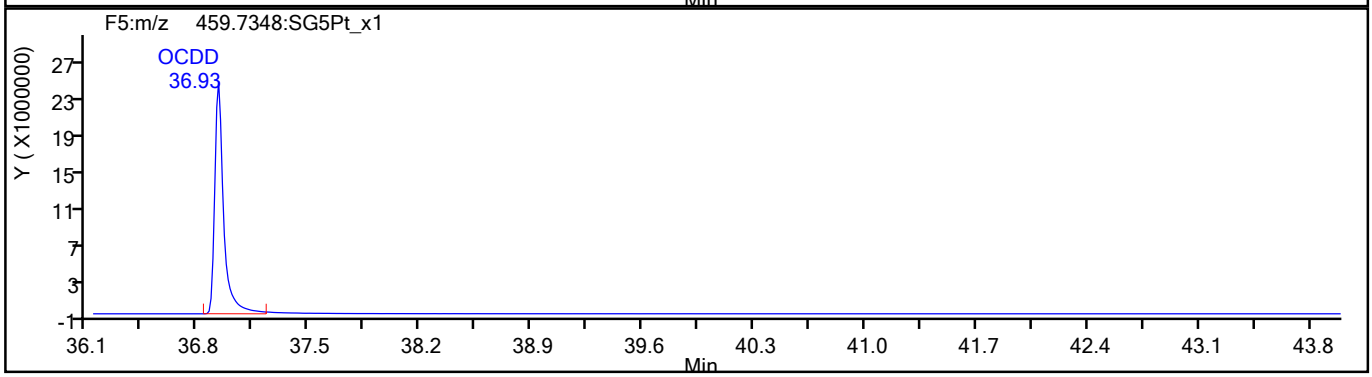

OCDD Standards

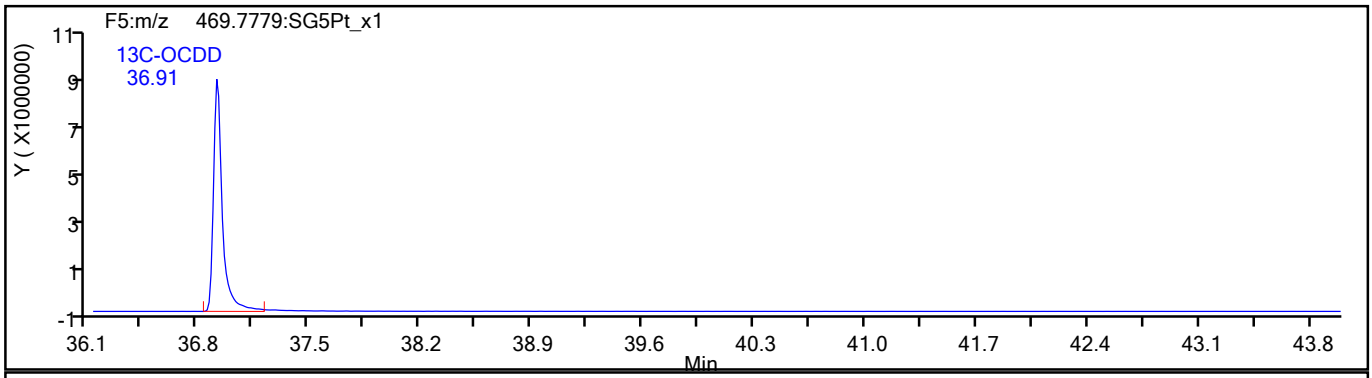

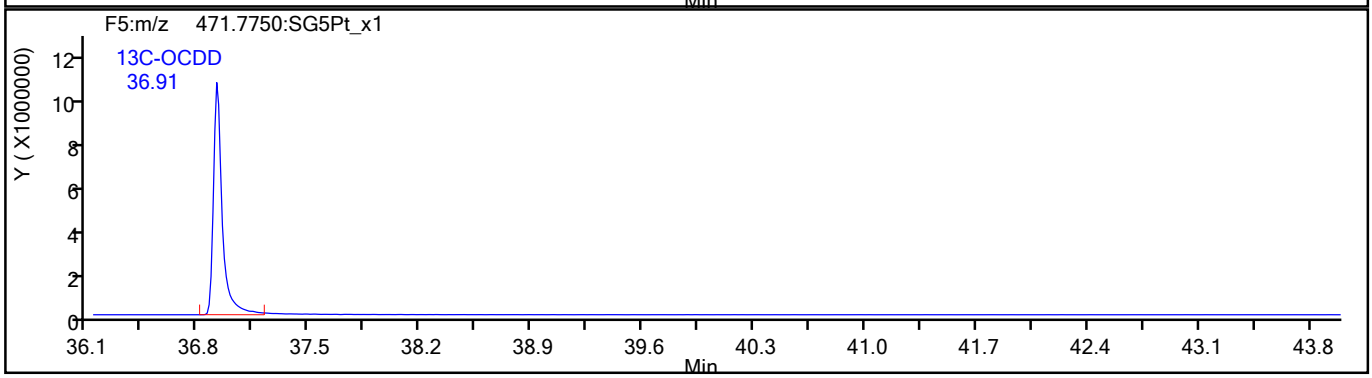

779350

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d		
Injection Date:	14-Aug-2021 05:56:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	516836	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

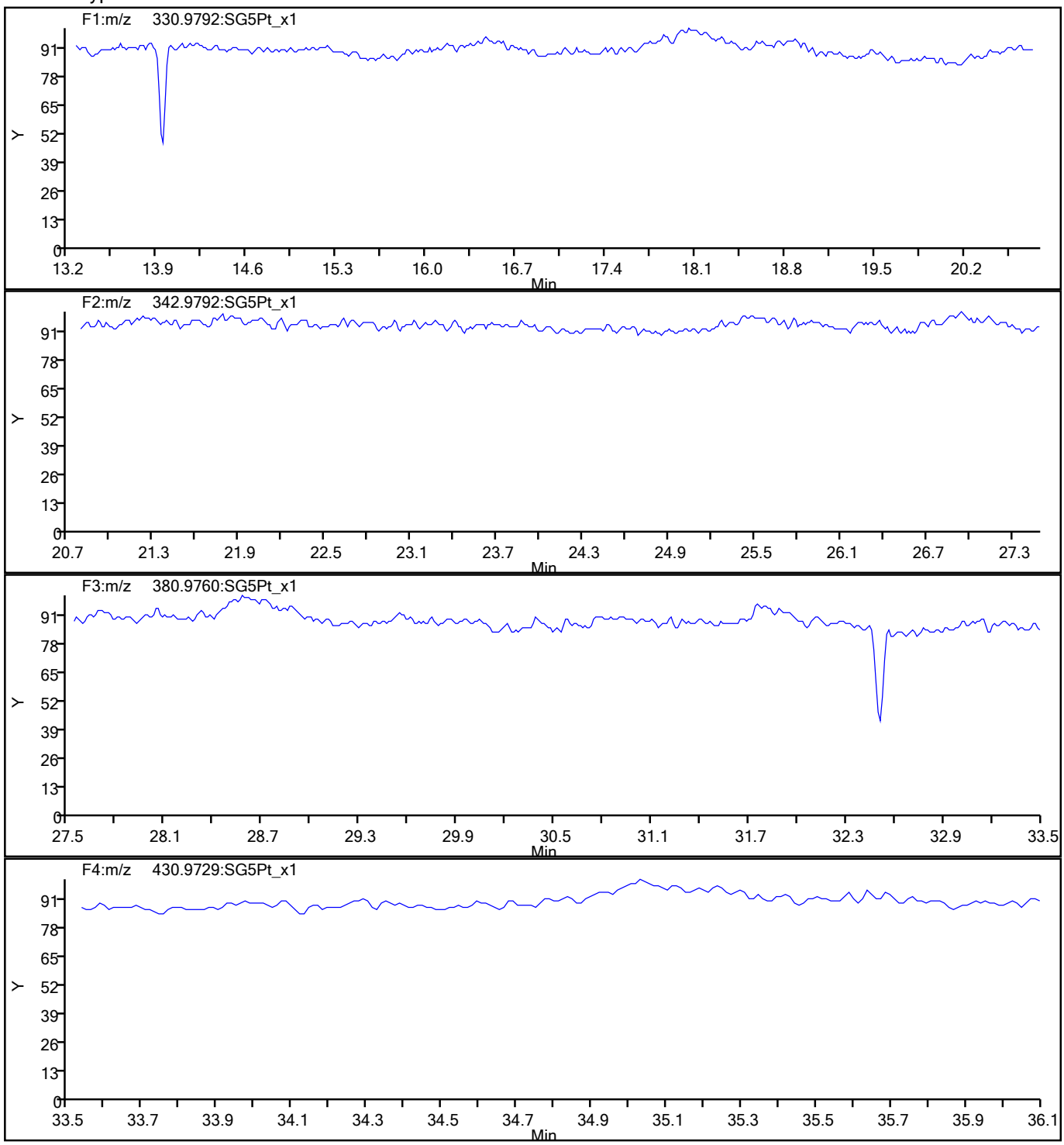

779351

Report Date: 18-Aug-2021 09:00:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_18.d		
Injection Date:	14-Aug-2021 05:56:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	516836	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

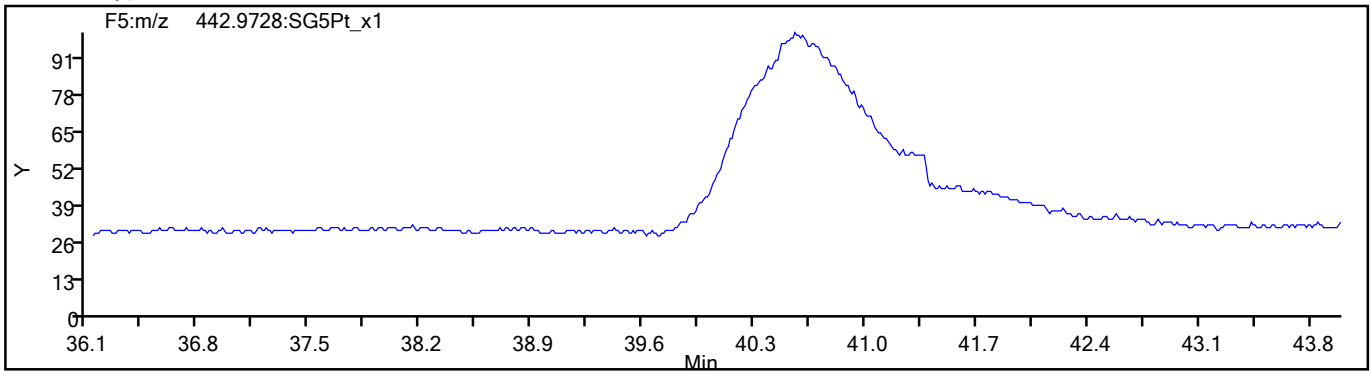

779352

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (4-6) RA
Lab Sample ID: 320-76788-3 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_009.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:10
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.66(g)
Date Analyzed: 08/24/2021 21:43
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 20.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	65	B	1.2	0.26

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	73		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	85		35-197

Report Date: 25-Aug-2021 09:02:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_009.d				
Lims ID:	320-76788-A-3-A				
Client ID:	11215702-072321-BN-SJSB085 (4-6)				
Sample Type:	Client				
Inject. Date:	24-Aug-2021 21:43:52	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-76788-A-3-A				
Misc. Info.:	DB225RES				
Operator ID:		Instrument ID:	11D2		
Method:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m				
Limit Group:	HR - 1613B - ICAL				
Last Update:	25-Aug-2021 09:02:37	Calib Date:	14-Jul-2021 14:47:36		
Integrator:	Picker				
Quant Method:	Isotopic Dilution	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d				
Column 1 :	DB-225 (0.32 mm)		Det: F1:HRSIR		
Process Host:	CTX1623				

First Level Reviewer: stephensk Date: 25-Aug-2021 08:31:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.300	53344328	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.616	51580126	0.83	1.3327	72.6	72.6	0.2370	0.2370	72.55	
2,3,7,8-TCDF	17.644	14227360	0.81	0.9978	27.6	27.6	0.1085	0.1085		
D 13C-2,3,7,8-TCDD	16.067	31959860	0.77	0.8749	68.5	68.5	1.121	1.121	68.48	
$ 37Cl4-2,3,7,8-TCDD	16.080	15710662		0.8648	34.1	34.1	0.1003	0.1003	85.14	
2,3,7,8-TCDD	16.080	3027056	0.79	1.0570	8.961	8.961	0.1268	0.1268		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_009.d
Lims ID: 320-76788-A-3-A
Client ID: 11215702-072321-BN-SJSB085 (4-6)
Sample Type: Client
Inject. Date: 24-Aug-2021 21:43:52 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-3-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:31:09

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.300	16.285	1		23192324	4952810	20295	50737	244		
333.9339	16.300	16.285	1		30152004	6429564	24358	60895	264	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.616	17.601	1	1.081	23424035	4334234	6906	17265	628		
317.9389	17.616	17.601	1	1.081	28156091	5610362	7474	18685	751	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.629	1	1.002	6385898	1155598	2009	5022	575		
305.8987	17.630	17.629	0	1.001	7841462	1424059	2298	5745	620	0.81(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.051	1	0.986	13949312	2998154	20295	50737	148		
333.9339	16.067	16.051	1	0.986	18010548	4123462	24358	60895	169	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.065	1	0.987	15710662	3619934	3949	9872	917		
2,3,7,8-TCDD											
319.8965	16.080	16.079	0	1.001	1338731	303121	1956	4890	155		
321.8936	16.080	16.079	0	1.001	1688325	379705	1862	4655	204	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 25-Aug-2021 09:02:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_009.d		
Injection Date:	24-Aug-2021 21:43:52	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	519540	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

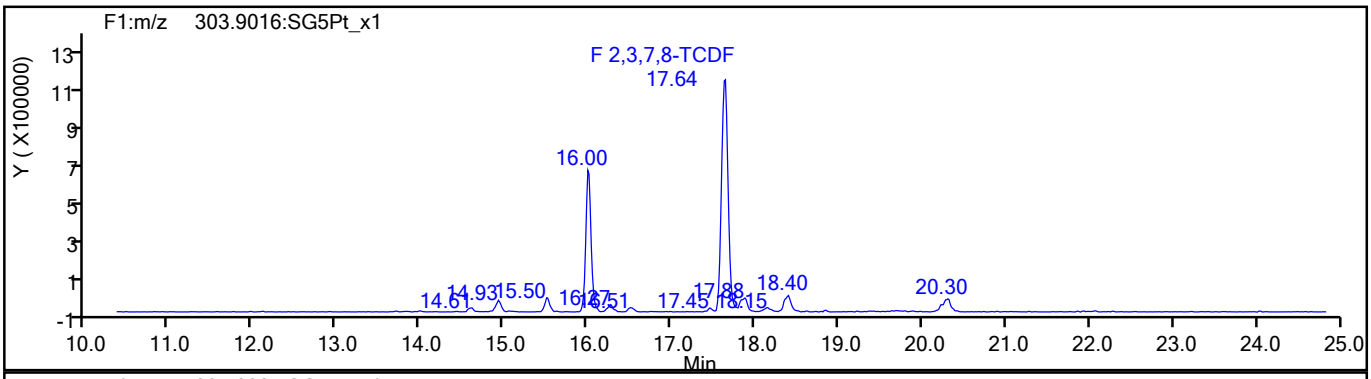

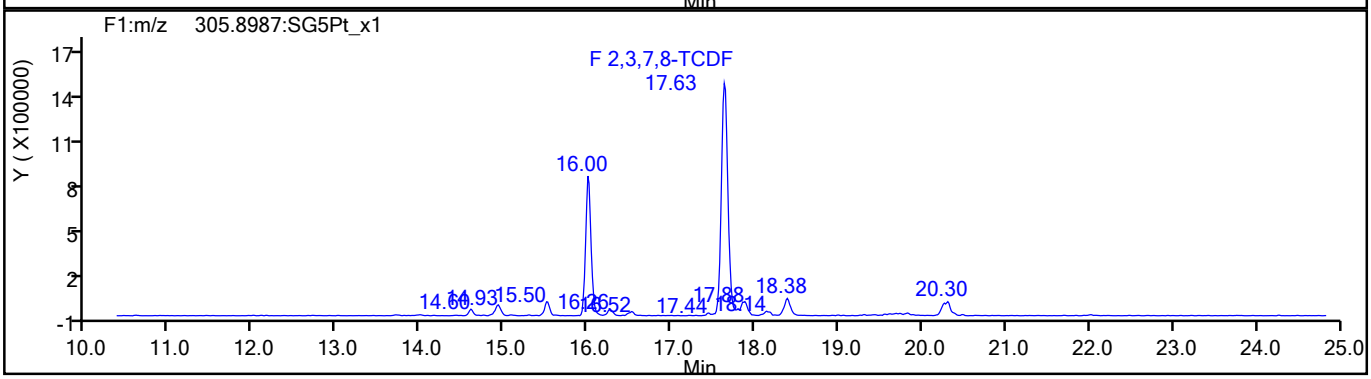

TCDF Standards

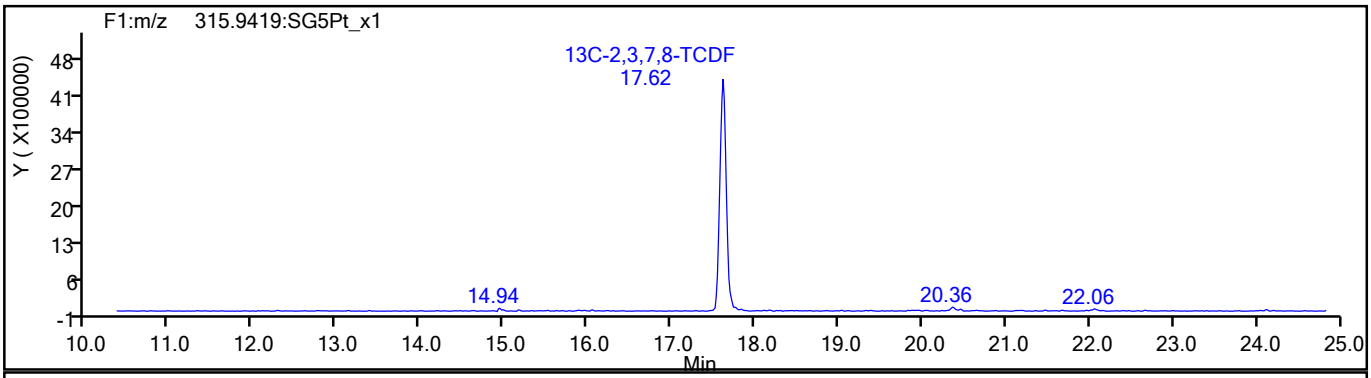

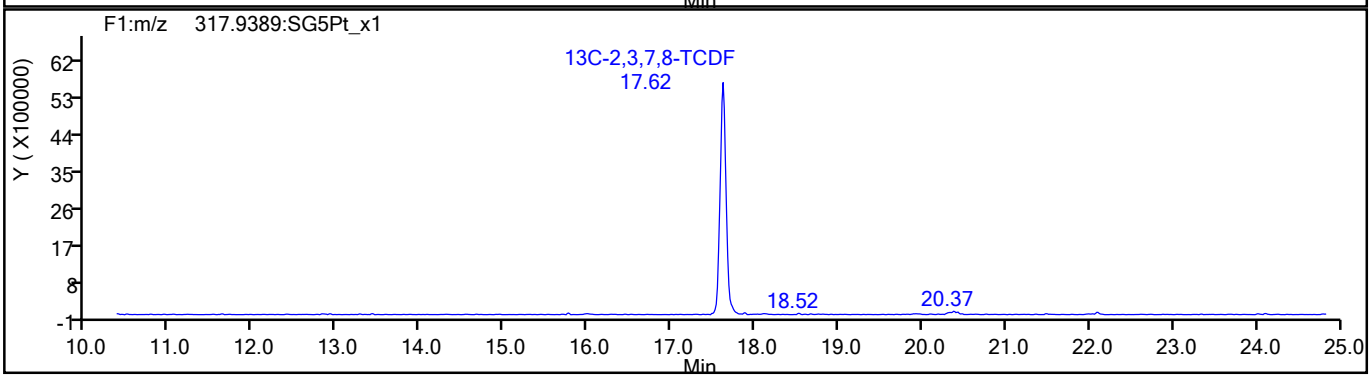

779356

Report Date: 25-Aug-2021 09:02:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_009.d		
Injection Date:	24-Aug-2021 21:43:52	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	519540	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

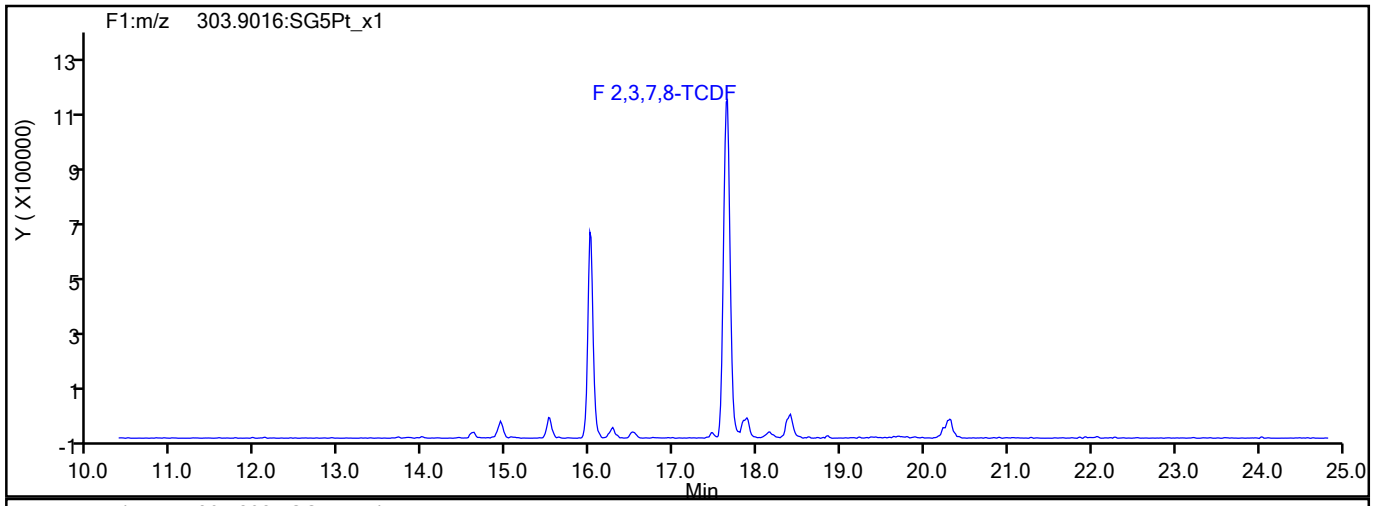

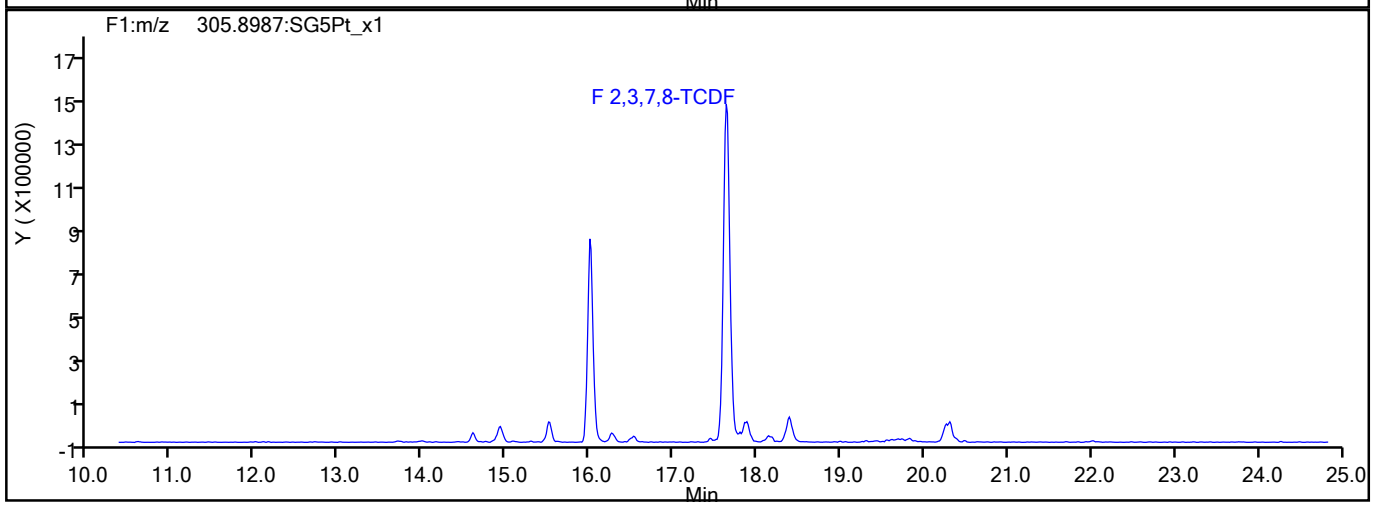

TCDF Interference Mass

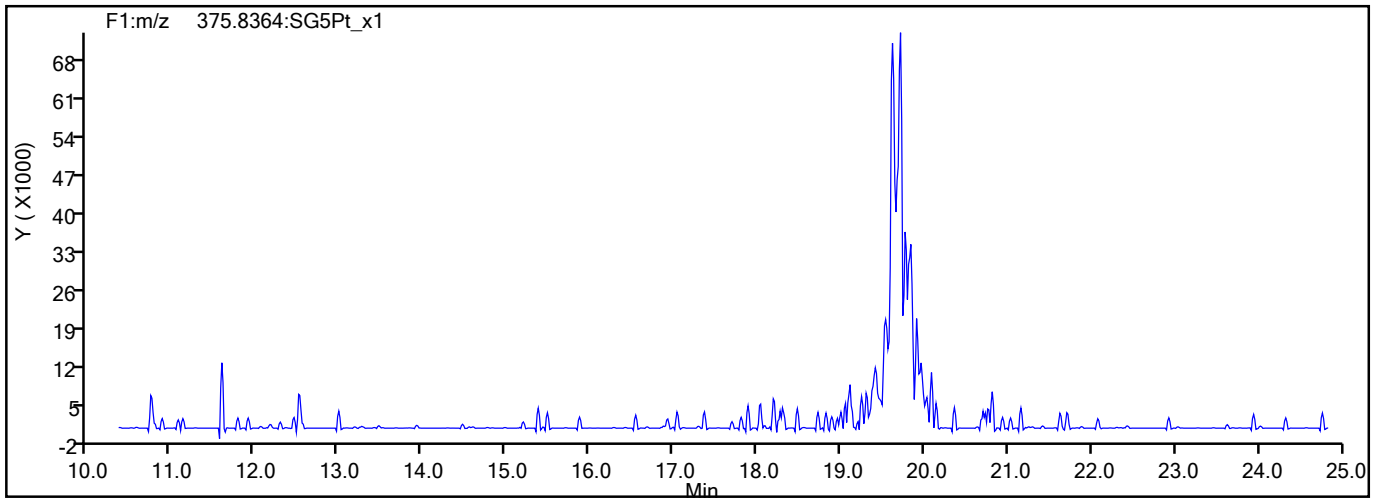

779357

Report Date: 25-Aug-2021 09:02:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_009.d		
Injection Date:	24-Aug-2021 21:43:52	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	519540	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

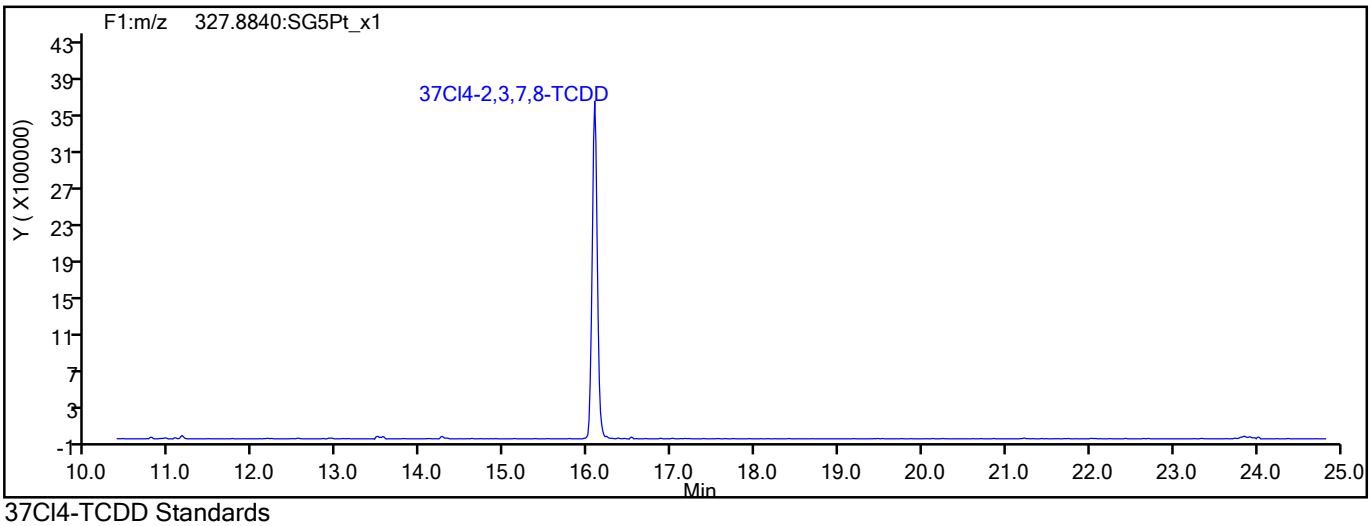

37Cl4-TCDD Standards

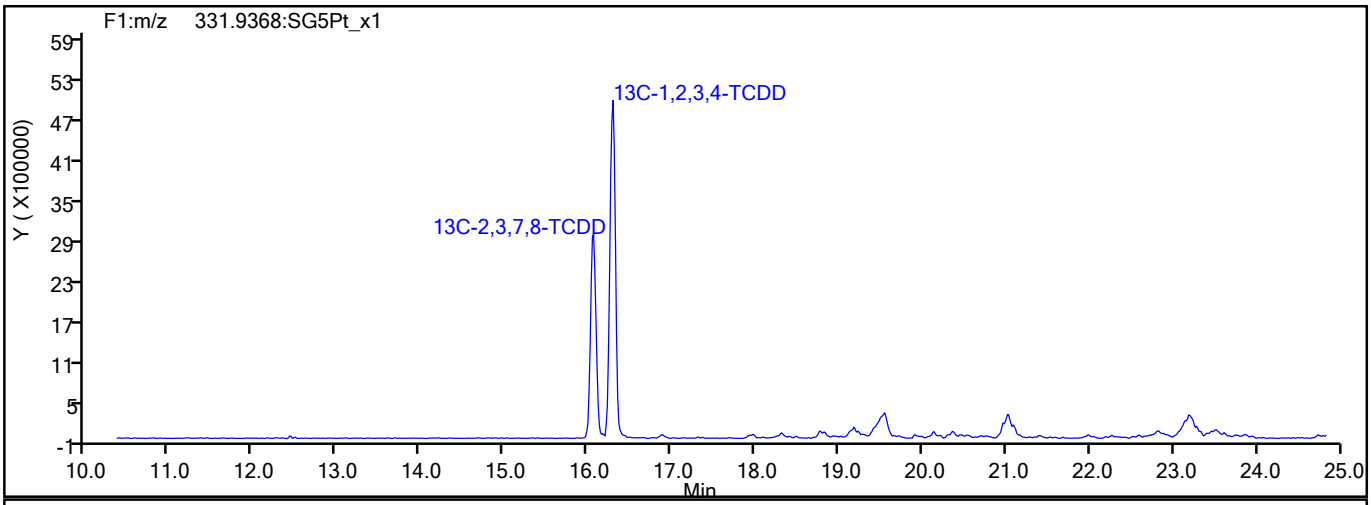

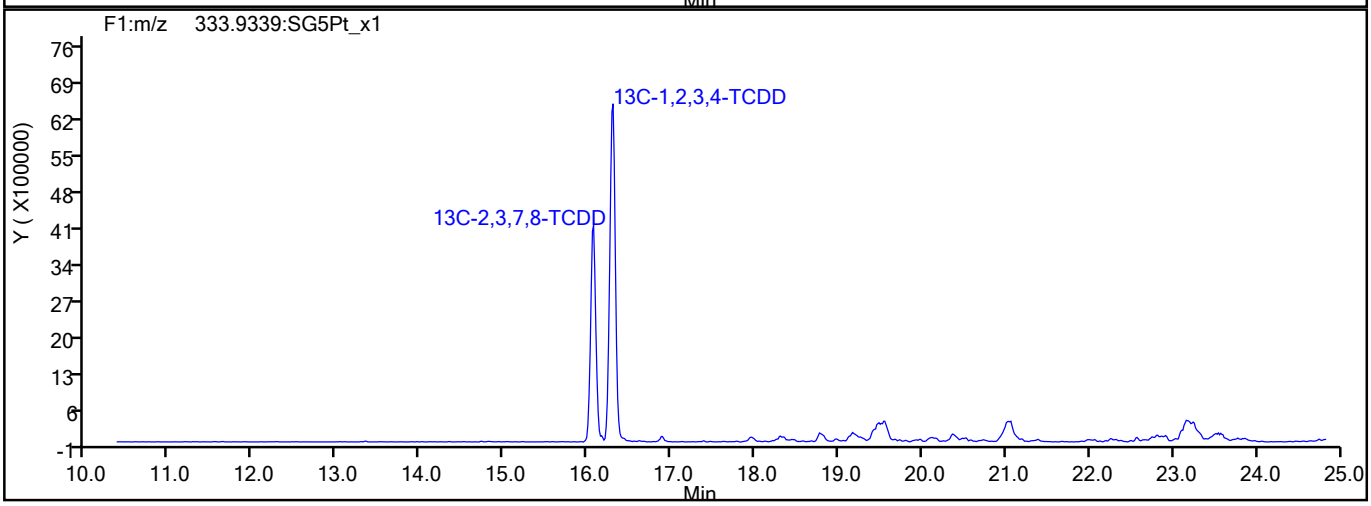

779358

Report Date: 25-Aug-2021 09:02:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_009.d		
Injection Date:	24-Aug-2021 21:43:52	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (4-6)		
Worklist#:	519540	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

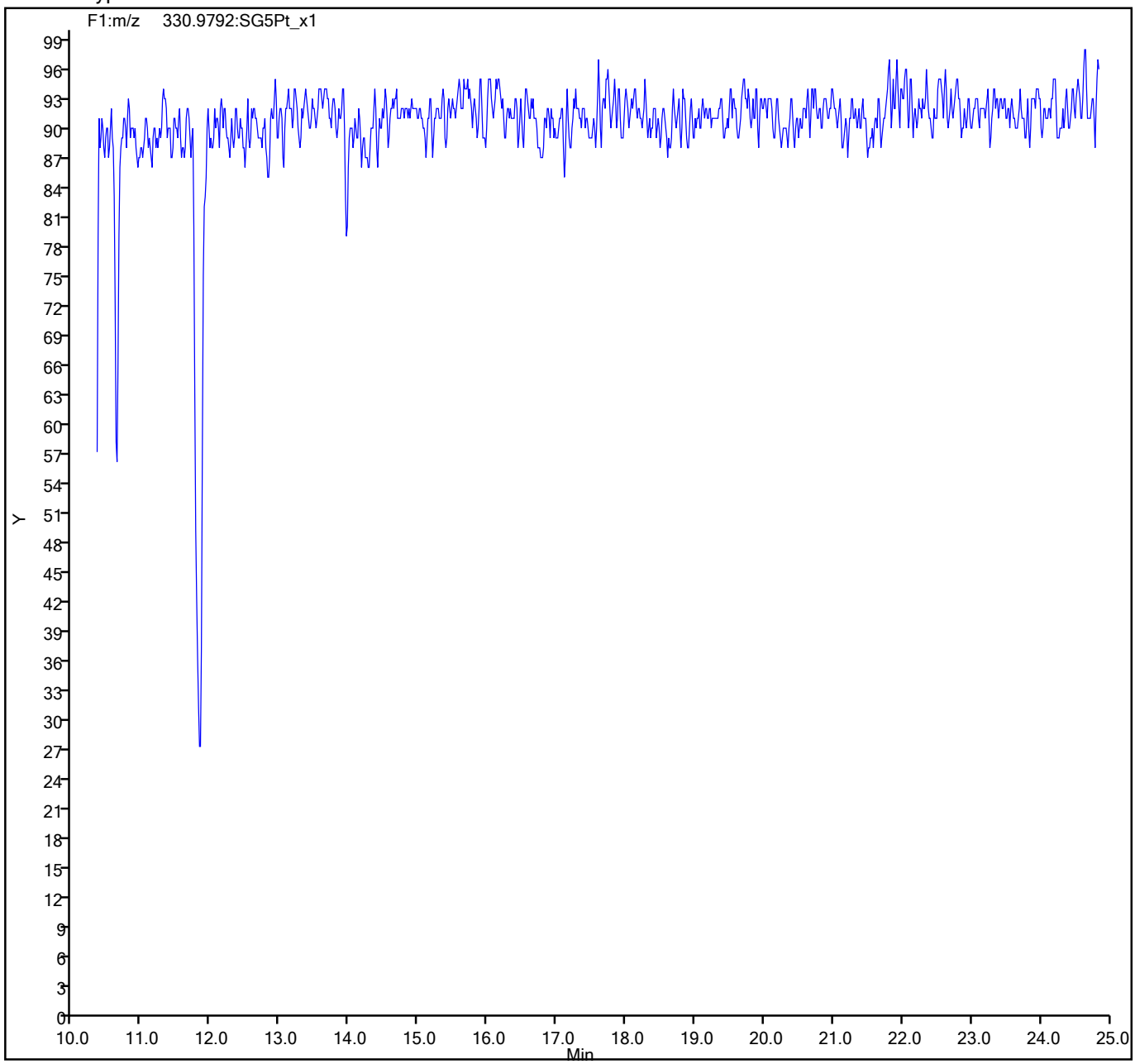

779359

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (6-8)
Lab Sample ID: 320-76788-4
Matrix: Solid
Lab File ID: 13AU2110D5_19.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:15
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.06(g)
Date Analyzed: 08/14/2021 06:41
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 29.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	31	B	1.4	0.20
40321-76-4	1,2,3,7,8-PeCDD	0.49	J	7.1	0.10
57117-41-6	1,2,3,7,8-PeCDF	2.5	J	7.1	0.056
57117-31-4	2,3,4,7,8-PeCDF	1.6	J	7.1	0.056
39227-28-6	1,2,3,4,7,8-HxCDD	0.68	J B	7.1	0.22
57653-85-7	1,2,3,6,7,8-HxCDD	1.5	J	7.1	0.23
19408-74-3	1,2,3,7,8,9-HxCDD	3.1	J	7.1	0.20
70648-26-9	1,2,3,4,7,8-HxCDF	3.5	J B	7.1	0.054
57117-44-9	1,2,3,6,7,8-HxCDF	1.0	J B	7.1	0.056
72918-21-9	1,2,3,7,8,9-HxCDF	ND		7.1	0.044
60851-34-5	2,3,4,6,7,8-HxCDF	0.12	J q	7.1	0.044
35822-46-9	1,2,3,4,6,7,8-HpCDD	72	B	7.1	1.3
67562-39-4	1,2,3,4,6,7,8-HpCDF	1.3	J B	7.1	0.039
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.40	J B q	7.1	0.048
3268-87-9	OCDD	2500	B	14	2.6
39001-02-0	OCDF	2.5	J B	14	0.034
41903-57-5	Total TCDD	38	B	1.4	0.20
30402-14-3	Total TCDF	180	B q	1.4	0.35
36088-22-9	Total PeCDD	8.7	q	7.1	0.10
30402-15-4	Total PeCDF	6.4	J	7.1	0.056
34465-46-8	Total HxCDD	45	B q	7.1	0.22
55684-94-1	Total HxCDF	5.2	J B q	7.1	0.050
37871-00-4	Total HpCDD	200	B	7.1	1.3
38998-75-3	Total HpCDF	2.2	J B q	7.1	0.044

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (6-8)
Lab Sample ID: 320-76788-4
Matrix: Solid
Lab File ID: 13AU2110D5_19.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:15
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.06(g)
Date Analyzed: 08/14/2021 06:41
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 29.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	60		25-164
89059-46-1	13C-2,3,7,8-TCDF	59		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	56		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	61		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	61		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	60		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	54		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	60		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	57		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	67		26-138
114423-97-1	13C-OCDD	64		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	74		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d
Lims ID: 320-76788-A-4-A
Client ID: 11215702-072321-BN-SJSB085 (6-8)
Sample Type: Client
Inject. Date: 14-Aug-2021 06:41:23 ALS Bottle#: 20 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-4-a 320-76788-a-4-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:03:28 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:40:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	143968860	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	137131398	0.77	1.6249	58.6	58.6	0.1035	0.1035	58.62	
2,3,7,8-TCDF	17.356	52463184	0.78	1.0239	37.4	37.4	0.1223	0.1223		
A Non-2,3,7,8-sub-TCDF	17.046	35659223	0.77	1.0239	25.6	25.4	0.1223	16.0		RQ
S Total TCDF					62.9	62.8	0.1223	0.1223		RQ
D 13C-2,3,7,8-TCDD	18.051	77945971	0.81	0.8993	60.2	60.2	0.1848	0.1848	60.20	
2,3,7,8-TCDD	18.066	10745621	0.77	1.2541	11.0	11.0	0.0690	0.0690		
$ 37Cl4-2,3,7,8-TCDD	18.066	47288818		1.1071	29.7	29.7	0.0275	0.0275	74.17	
A Non-2,3,7,8-sub-TCDD	17.499	2212253	0.80	1.2541	2.263	2.263	0.0690	0.8706		
S Total TCDD					13.3	13.3	0.0690	0.0690		
D 13C-1,2,3,7,8-PeCDF	22.367	98361208	1.58	1.2101	56.5	56.5	0.1187	0.1187	56.46	
1,2,3,7,8-PeCDF	22.394	928069	1.56	1.0611	0.8892	0.8892	0.0196	0.0196		M
D 13C-2,3,4,7,8-PeCDF	23.703	109495373	1.59	1.2395	61.4	61.4	0.1159	0.1159	61.36	
2,3,4,7,8-PeCDF	23.717	624997	1.61	1.0184	0.5605	0.5605	0.0198	0.0198		
A F1 PeCDFs	20.093						0.009559	0.009559		
A Non-2,3,7,8-sub-PeCDF	23.241	889082	1.66	1.0398	0.8228	0.8228	0.0197	0.3936		
S Total PeCDF					2.272	2.272	0.0197	0.0197		
D 13C-1,2,3,7,8-PeCDD	24.426	63988058	1.60	0.7612	58.4	58.4	0.0531	0.0531	58.39	
1,2,3,7,8-PeCDD	24.440	115529	1.37	1.0484	0.1722	0.1722	0.0359	0.0359		
A Non-2,3,7,8-sub-PeCDD	23.349	1931975	1.55	1.0484	2.896	2.880	0.0359	1.455		RQ
S Total PeCDD					3.068	3.052	0.0359	0.0359		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.503	89078180	0.52	1.0837	60.2	60.2	0.2367	0.2367	60.20	
1,2,3,4,7,8-HxCDF	30.529	1194379	1.25	1.0851	1.236	1.236	0.0191	0.0191		
D 13C-1,2,3,6,7,8-HxCDF	30.689	82841292	0.52	1.1279	53.8	53.8	0.2274	0.2274	53.78	
1,2,3,6,7,8-HxCDF	30.702	343888	1.17	1.1260	0.3687	0.3687	0.0197	0.0197		
D 13C-2,3,4,6,7,8-HxCDF	31.514	78212586	0.52	1.0637	53.8	53.8	0.2411	0.2411	53.84	
2,3,4,6,7,8-HxCDF	31.528	39509	1.24	1.1675	0.0512	0.0433	0.0156	0.0156		RQM
D 13C-1,2,3,7,8,9-HxCDF	32.313	72091638	0.52	0.9676	54.6	54.6	0.2651	0.2651	54.56	
1,2,3,7,8,9-HxCDF	32.406						0.0154	0.0154		U
A Non-2,3,7,8-sub-HxCDF	30.197	154927	1.24	1.1363	0.1840	0.1693	0.0173	0.0899		RQa

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					1.840	1.817	0.0175	0.0175		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.127	136556103	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	61117197	1.25	0.7334	61.0	61.0	0.2759	0.2759	61.02	
1,2,3,4,7,8-HxCDD	31.714	155058	1.19	1.0640	0.2384	0.2384	0.0779	0.0779		
D 13C-1,2,3,6,7,8-HxCDD	31.807	65404675	1.23	0.8802	54.4	54.4	0.2299	0.2299	54.42	
1,2,3,6,7,8-HxCDD	31.821	354159	1.29	1.0001	0.5414	0.5414	0.0808	0.0808		
1,2,3,7,8,9-HxCDD	32.140	774012	1.23	1.1325	1.080	1.080	0.0722	0.0722		
A Non-2,3,7,8-sub-HxCDD	30.882	9329118	1.24	1.0655	13.9	13.8	0.0768	10.1		RQ
S Total HxCDD					15.7	15.7	0.0770	0.0770		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	60693443	0.44	0.7730	57.5	57.5	0.6174	0.6174	57.50	
1,2,3,4,6,7,8-HpCDF	33.766	396703	1.10	1.4413	0.4535	0.4535	0.0138	0.0138		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	64419261	0.44	0.7008	67.3	67.3	0.6810	0.6810	67.31	
1,2,3,4,7,8,9-HpCDF	34.847	119507	1.04	1.3174	0.1547	0.1408	0.0171	0.0171		RQ
A Non-2,3,7,8-sub-HpCDF	34.319	156620	1.10	1.3793	0.1815	0.1815	0.0153	0.1815		
S Total HpCDF					0.7897	0.7758	0.0155	0.0155		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	52840851	1.00	0.6472	59.8	59.8	0.2727	0.2727	59.79	
1,2,3,4,6,7,8-HpCDD	34.568	14711087	1.03	1.0943	25.4	25.4	0.4575	0.4575		
A Non-2,3,7,8-sub-HpCDD	34.301	26507284	1.05	1.0943	45.8	45.8	0.4575	45.8		
S Total HpCDD					71.3	71.3	0.4575	0.4575		
D 13C-OCDD	36.914	78356534	0.88	0.4472	128.3	128.3	0.1623	0.1623	64.16	
OCDF	37.010	503945	0.90	1.4382	0.8944	0.8944	0.0118	0.0118		M
OCDD	36.926	375207492	0.90	1.1070	865.1	865.1	0.9324	0.9324		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 09:03:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d
Lims ID: 320-76788-A-4-A
Client ID: 11215702-072321-BN-SJSB085 (6-8)
Sample Type: Client
Inject. Date: 14-Aug-2021 06:41:23 ALS Bottle#: 20 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-4-a 320-76788-a-4-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:03:28 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:40:18

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		64891147	16334040	8004	20010	2041		
333.9339	17.855	17.855	0		79077713	19741829	15984	39960	1235	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.971	59690045	14818277	10039	25097	1476		
317.9389	17.341	17.341	0	0.971	77441353	19152771	14235	35587	1345	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.001	22972955	5463907	7620	19050	717		
305.8987	17.356	17.356	0	1.001	29490229	7026632	9397	23492	748	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	15.950	17.046	-66	0.920	353517	97582	7620	19050	13		
305.8987	15.950	17.046	-66	0.920	449821	119338	9397	23492	13	0.79(0.65-0.89)	
303.9016	16.222	17.046	-49	0.935	628140	138605	7620	19050	18		
305.8987	16.222	17.046	-49	0.935	860191	193936	9397	23492	21	0.73(0.65-0.89)	
303.9016	16.449	17.046	-36	0.949	653219	170813	7620	19050	22		
305.8987	16.449	17.046	-36	0.949	833279	208579	9397	23492	22	0.78(0.65-0.89)	
303.9016	16.691	17.046	-21	0.963	894586	219018	7620	19050	29		
305.8987	16.691	17.046	-21	0.963	1159000	281635	9397	23492	30	0.77(0.65-0.89)	
303.9016	16.978	17.046	-4	0.979	9753771	2542052	7620	19050	334		
305.8987	16.978	17.046	-4	0.979	12734631	3272751	9397	23492	348	0.77(0.65-0.89)	
303.9016	17.190	17.046	9	0.991	400061	89021	7620	19050	12		
305.8987	17.190	17.046	9	0.991	459433	109350	9397	23492	12	0.87(0.65-0.89)	
303.9016	17.779	17.046	44	1.025	1681403	315509	7620	19050	41		
	Empc Correction				1418414	322840	7620	19050	42		
305.8987	17.779	17.046	44	1.025	1842097	419274	9397	23492	45	0.91(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	19.170	17.046	127	1.105	1393497	312888	7620	19050	41		
305.8987	19.170	17.046	127	1.105	1825566	410800	9397	23492	44	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	34902264	8147746	8004	20010	1018		
333.9339	18.051	18.051	0	1.011	43043707	9975120	15984	39960	624	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.001	4658955	1087675	3259	8147	334		
321.8936	18.066	18.066	0	1.001	6086666	1443596	3016	7540	479	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.066	0	1.012	47288818	11226660	4391	10977	2557		
A Non-2,3,7,8-sub-TCDD											
319.8965	16.146	17.499	-81	0.894	74023	21761	3259	8147	7		
321.8936	16.146	17.499	-81	0.894	86854	25330	3016	7540	8	0.85(0.65-0.89)	
319.8965	16.373	17.499	-67	0.907	84465	23931	3259	8147	7		
321.8936	16.373	17.499	-67	0.907	102760	27910	3016	7540	9	0.82(0.65-0.89)	
319.8965	16.917	17.499	-35	0.937	362133	92475	3259	8147	28		
321.8936	16.917	17.499	-35	0.937	438061	114129	3016	7540	38	0.83(0.65-0.89)	
319.8965	17.824	17.499	19	0.987	95690	24757	3259	8147	8		
321.8936	17.824	17.499	19	0.987	117185	29972	3016	7540	10	0.82(0.65-0.89)	
319.8965	18.429	17.499	56	1.021	365997	82004	3259	8147	25		
321.8936	18.414	17.499	55	1.020	485085	110084	3016	7540	37	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	60285368	10299353	12436	31090	828		
353.8970	22.367	22.367	0	1.253	38075840	6460004	8297	20742	779	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.394	22.380	1	1.001	566146	93197	599	1497	156		M
341.8567	22.394	22.380	1	1.001	361923	64707	798	1995	81	1.56(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.328	67147671	10485958	12436	31090	843		
353.8970	23.703	23.703	0	1.328	42347702	6803186	8297	20742	820	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.717	23.730	-1	1.001	385507	58072	599	1497	97		
341.8567	23.744	23.730	1	1.002	239490	37850	798	1995	47	1.61(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						244	610			
341.8567	20.093						433	1082			
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.031	23.241	-132	0.940	266285	43952	599	1497	73		
341.8567	21.058	23.241	-131	0.941	159030	28936	798	1995	36	1.67(1.32-1.78)	
339.8597	22.244	23.241	-60	0.995	43708	8355	599	1497	14		
341.8567	22.258	23.241	-59	0.995	29348	6281	798	1995	8	1.49(1.32-1.78)	
339.8597	22.899	23.241	-21	1.024	150604	25614	599	1497	43		
341.8567	22.912	23.241	-20	1.024	93462	17467	798	1995	22	1.61(1.32-1.78)	
339.8597	24.071	23.241	50	1.076	93641	13911	599	1497	23		
341.8567	24.044	23.241	48	1.075	53004	8988	798	1995	11	1.77(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.368	39396866	5960697	3742	9355	1593		
369.8919	24.426	24.426	0	1.368	24591192	3641155	2096	5240	1737	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.440	24.453	-1	1.001	66860	9527	869	2172	11		
357.8516	24.453	24.453	0	1.001	48669	7344	575	1437	13	1.37(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.235	23.349	-127	0.869	268192	45885	869	2172	53		
357.8516	21.249	23.349	-126	0.870	186986	33509	575	1437	58	1.43(1.32-1.78)	
355.8546	21.985	23.349	-82	0.900	583954	106775	869	2172	123		
357.8516	21.985	23.349	-82	0.900	392361	66652	575	1437	116	1.49(1.32-1.78)	
355.8546	22.680	23.349	-40	0.929	47222	8677	869	2172	10		
	Empc Correction				36217	7571	869	2172	9		
357.8516	22.667	23.349	-41	0.928	23366	4885	575	1437	8	2.02(1.32-1.78)	
355.8546	22.967	23.349	-23	0.940	32605	6811	869	2172	8		
357.8516	22.967	23.349	-23	0.940	22912	4631	575	1437	8	1.42(1.32-1.78)	
355.8546	23.444	23.349	6	0.960	232452	32077	869	2172	37		
357.8516	23.471	23.349	7	0.961	152930	20394	575	1437	35	1.52(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	30552861	5668314	12443	31107	456		
385.8610	30.503	30.503	0	0.949	58525319	10774128	24525	61312	439	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.001	662582	119912	731	1827	164		
375.8178	30.516	30.529	-1	1.000	531797	95798	629	1572	152	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	28499660	5274540	12443	31107	424		
385.8610	30.689	30.689	0	0.955	54341632	10026822	24525	61312	409	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.702	30.702	0	1.000	185213	34011	731	1827	47		
375.8178	30.702	30.702	0	1.000	158675	30787	629	1572	49	1.17(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	26867507	6459059	12443	31107	519		
385.8610	31.514	31.514	0	0.981	51345079	12194359	24525	61312	497	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQM
373.8208	31.528	31.528	0	1.000	29108	6837	731	1827	9		
	Empc Correction				21871	5327	731	1827	7		
375.8178	31.528	31.528	0	1.000	17638	4296	629	1572	7	1.65(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.313	0	1.006	24594851	6458608	12443	31107	519		
385.8610	32.313	32.313	0	1.006	47496787	12417974	24525	61312	506	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											U
373.8208	32.326						731	1827			
375.8178	32.326						629	1572			
A Non-2,3,7,8-sub-HxCDF											RQa
373.8208	28.360	30.197	-110	0.930	59097	7197	731	1827	10		
	Empc Correction				45561	6317	731	1827	9		
375.8178	28.373	30.197	-109	0.930	36743	5095	629	1572	8	1.61(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	32.406	30.197	132	1.062	42501	10314	731	1827	14		a
375.8178	32.419	30.197	133	1.063	30122	7553	629	1572	12	1.41(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.127	32.127	0		75820233	19974399	15099	37747	1323		
403.8529	32.127	32.127	0		60735870	16061590	14074	35185	1141	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.987	33991983	8988231	15099	37747	595		
403.8529	31.701	31.701	0	0.987	27125214	7120655	14074	35185	506	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.714	0	1.000	84283	26164	2683	6707	10		
391.8127	31.714	31.714	0	1.000	70775	18930	2655	6637	7	1.19(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	36102206	9074967	15099	37747	601		
403.8529	31.807	31.807	0	0.990	29302469	7436060	14074	35185	528	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.821	31.820	0	1.000	199502	53876	2683	6707	20		
391.8127	31.821	31.820	0	1.000	154657	41319	2655	6637	16	1.29(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.140	0	1.014	427202	90177	2683	6707	34		
391.8127	32.140	32.140	0	1.014	346810	69114	2655	6637	26	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.544	30.882	-80	0.929	3819668	448824	2683	6707	167		
391.8127	29.544	30.882	-80	0.929	2985060	343134	2655	6637	129	1.28(1.05-1.43)	
389.8157	30.596	30.882	-17	0.962	102110	19476	2683	6707	7		
391.8127	30.583	30.882	-18	0.961	106108	18204	2655	6637	7	0.96(1.05-1.43)	
	Empc Correction				82346	15706	2655	6637	6		
389.8157	30.955	30.882	4	0.973	1159623	215576	2683	6707	80		
391.8127	30.955	30.882	4	0.973	923843	176451	2655	6637	66	1.26(1.05-1.43)	
389.8157	31.155	30.882	16	0.979	141237	28245	2683	6707	11		
391.8127	31.155	30.882	16	0.979	115231	23959	2655	6637	9	1.23(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.754	0	1.051	18550805	5951248	21818	54545	273		
419.8220	33.754	33.754	0	1.051	42142638	13445112	46976	117440	286	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.766	33.766	0	1.000	207570	70380	1016	2540	69		M
409.7789	33.766	33.766	0	1.000	189133	65781	532	1330	124	1.10(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.085	19714483	5345245	21818	54545	245		
419.8220	34.847	34.847	0	1.085	44704778	11869671	46976	117440	253	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											RQ
407.7818	34.847	34.860	-1	1.000	72714	17956	1016	2540	18		
	Empc Correction				60925	16622	1016	2540	16		
409.7789	34.847	34.860	-1	1.000	58582	15983	532	1330	30	1.24(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
407.7818	34.058	34.319	-16	1.009	81953	20016	1016	2540	20		
409.7789	34.058	34.319	-16	1.009	74667	18846	532	1330	35	1.10(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.076	26395219	7718750	13331	33327	579		
437.8140	34.556	34.556	0	1.076	26445632	7604373	12110	30275	628	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	7459938	2157370	15125	37812	143		
425.7737	34.568	34.568	0	1.000	7251149	2065409	15558	38895	133	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.009	34.301	-17	0.984	13593339	4280786	15125	37812	283		
425.7737	34.009	34.301	-17	0.984	12913945	4063814	15558	38895	261	1.05(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.914	0	1.149	36780715	9551227	4296	10740	2223		
471.7750	36.914	36.914	0	1.149	41575819	10659511	6162	15405	1730	0.88(0.76-1.02)	
OCDF											M
441.7428	37.010	37.010	0	1.003	239252	60516	306	765	198		M
443.7399	37.010	37.010	0	1.003	264693	66638	382	955	174	0.90(0.76-1.02)	M
OCDD											
457.7377	36.926	36.926	0	1.000	177581751	44967458	18416	46040	2442		
459.7348	36.914	36.926	-1	1.000	197625741	49858686	23305	58262	2139	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 09:03:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d
Lims ID: 320-76788-A-4-A
Client ID: 11215702-072321-BN-SJSB085 (6-8)
Inject. Date: 14-Aug-2021 06:41:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	137131398	33971048

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	137131398	33971048

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.950	353517	97582	449821	119338	0.5721	0.79	
16.222	628140	138605	860191	193936	1.06	0.73	
16.449	653219	170813	833279	208579	1.06	0.78	
16.691	894586	219018	1159000	281635	1.46	0.77	
16.978	9753771	2542052	12734631	3272751	16.0	0.77	
17.190	400061	89021	459433	109350	0.6121	0.87	
17.779	1681403	315509	1842097	419274	2.51	0.91	RQ
17.779	1418414	322840	1842097	419274	2.32		Empc Correction
19.170	1393497	312888	1825566	410800	2.29	0.76	
Signal Totals:							
	15495205	3892819	20164018	5015663			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	35922212	8901151				0.78	RQ
	35659223	8908482					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 25.584 = (35922212 * 100.000) / (137131398 * 1.024)
Empc Amount: 25.396 = (35659223 * 100.000) / (137131398 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:03:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d
Lims ID: 320-76788-A-4-A
Client ID: 11215702-072321-BN-SJSB085 (6-8)
Inject. Date: 14-Aug-2021 06:41:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	77945971	18122866

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	77945971	18122866

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.146	74023	21761	86854	25330	0.1646	0.85	
16.373	84465	23931	102760	27910	0.1915	0.82	
16.917	362133	92475	438061	114129	0.8186	0.83	
17.824	95690	24757	117185	29972	0.2178	0.82	
18.429	365997	82004	485085	110084	0.8706	0.75	
Signal Totals:							
	982308	244928	1229945	307425			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2212253	552353				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.263 = (2212253 * 100.000) / (77945971 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d
Lims ID: 320-76788-A-4-A
Client ID: 11215702-072321-BN-SJSB085 (6-8)
Inject. Date: 14-Aug-2021 06:41:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 8

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	98361208	16759357
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	109495373	17289144

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	103928290	17024250

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.031	266285	43952	159030	28936	0.3936	1.67	
22.244	43708	8355	29348	6281	0.0676	1.49	
22.899	150604	25614	93462	17467	0.2259	1.61	
24.071	93641	13911	53004	8988	0.1357	1.77	
Signal Totals:							
	554238	91832	334844	61672			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	889082	153504				1.66	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8228 = (889082 * 100.000) / (103928290 * 1.040)

Report Date: 18-Aug-2021 09:03:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d		
Lims ID:	320-76788-A-4-A		
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Inject. Date:	14-Aug-2021 06:41:23	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516836	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	63988058	9601852

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	63988058	9601852

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.235	268192	45885	186986	33509	0.6785	1.43	
21.985	583954	106775	392361	66652	1.46	1.49	
22.680	47222	8677	23366	4885	0.1052	2.02	RQ
22.680	36217	7571	23366	4885	0.0888		Empc Correction
22.967	32605	6811	22912	4631	0.0828	1.42	
23.444	232452	32077	152930	20394	0.5745	1.52	
Signal Totals:							
	1153420	199119	778555	130071			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1942980	330296				1.50	RQ
	1931975	329190					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.896 = (1942980 * 100.000) / (63988058 * 1.048)

Empc Amount: 2.880 = (1931975 * 100.000) / (63988058 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:03:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d
Lims ID: 320-76788-A-4-A
Client ID: 11215702-072321-BN-SJSB085 (6-8)
Inject. Date: 14-Aug-2021 06:41:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	89078180	16442442
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	82841292	15301362
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	78212586	18653418
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	72091638	18876582

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	80555924	17318451

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.360	59097	7197	36743	5095	0.1047	1.61	RQ
28.360	45561	6317	36743	5095	0.0899		Empc Correction
32.406	42501	10314	30122	7553	0.0793	1.41	a
Signal Totals:							
	88062	16631	66865	12648			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	168463	30159				1.52	RQa
	154927	29279					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1840 = (168463 * 100.000) / (80555924 * 1.136)
Empc Amount: 0.1693 = (154927 * 100.000) / (80555924 * 1.136)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d
Lims ID: 320-76788-A-4-A
Client ID: 11215702-072321-BN-SJSB085 (6-8)
Inject. Date: 14-Aug-2021 06:41:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	61117197	16108886
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	65404675	16511027
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	63260936	16309956

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.544	3819668	448824	2985060	343134	10.1	1.28	
30.596	102110	19476	106108	18204	0.3089	0.96	RQ
30.596	102110	19476	82346	15706	0.2736		Empc Correction
30.955	1159623	215576	923843	176451	3.09	1.26	
31.155	141237	28245	115231	23959	0.3805	1.23	
Signal Totals:							
	5222638	712121	4106480	559250			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9352880	1273869				1.26	RQ
	9329118	1271371					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 13.875 = (9352880 * 100.000) / (63260936 * 1.066)
Empc Amount: 13.840 = (9329118 * 100.000) / (63260936 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:03:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d
Lims ID: 320-76788-A-4-A
Client ID: 11215702-072321-BN-SJSB085 (6-8)
Inject. Date: 14-Aug-2021 06:41:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	60693443	19396360
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	64419261	17214916

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	62556352	18305638

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.058	81953	20016	74667	18846	0.1815	1.10	
Signal Totals:							
	81953	20016	74667	18846			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	156620	38862				1.10	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1815 = (156620 * 100.000) / (62556352 * 1.379)

Report Date: 18-Aug-2021 09:03:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d
Lims ID: 320-76788-A-4-A
Client ID: 11215702-072321-BN-SJSB085 (6-8)
Inject. Date: 14-Aug-2021 06:41:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	52840851	15323123

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	52840851	15323123

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.009	13593339	4280786	12913945	4063814	45.8	1.05	
Signal Totals:							
	13593339	4280786	12913945	4063814			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	26507284	8344600				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 45.841 = (26507284 * 100.000) / (52840851 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d				
Injection Date:	14-Aug-2021 06:41:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-4-A	Lab Sample ID:	320-76788-4		
Client ID:	11215702-072321-BN-SJSB085 (6-8)				
Operator ID:	DB	ALS Bottle#:	20	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.39
Area: 578407
Amount: 0.912323
Amount Units: pg/ul

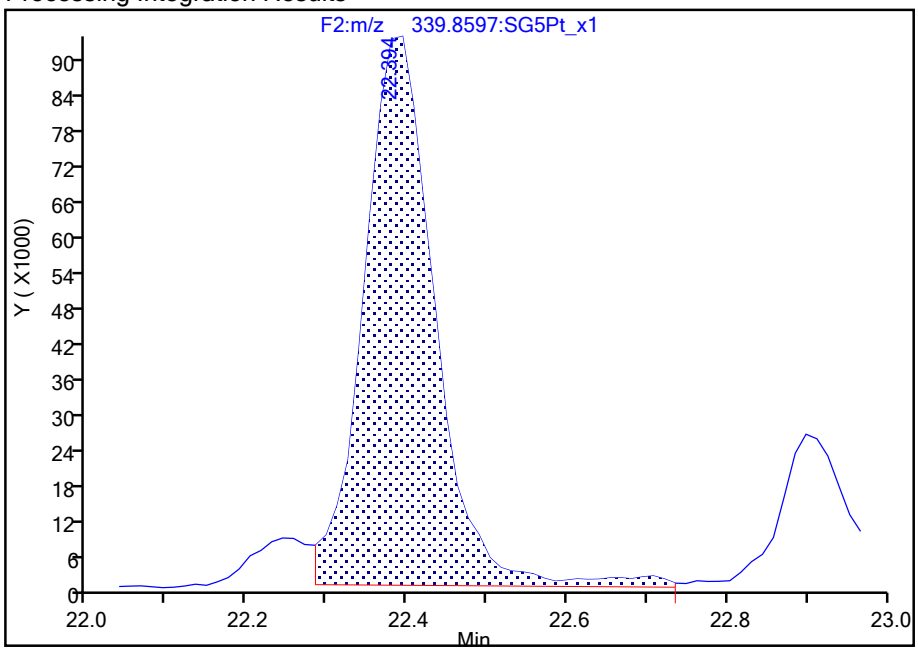

Manual Integration Results

RT: 22.39
Area: 566146
Amount: 0.889172
Amount Units: pg/ul

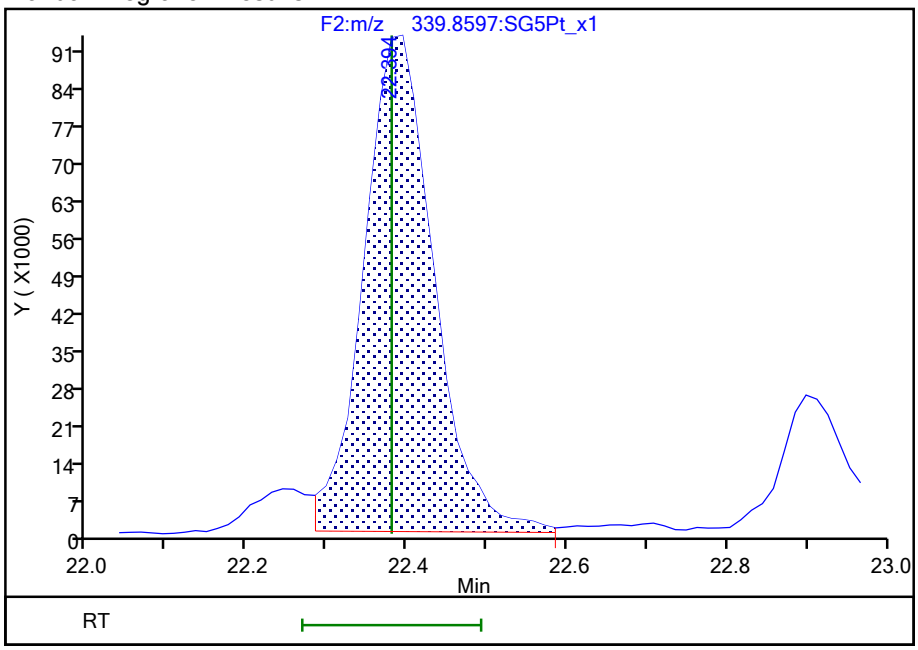

Reviewer: dadunj, 18-Aug-2021 09:01:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d				
Injection Date:	14-Aug-2021 06:41:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-4-A	Lab Sample ID:	320-76788-4		
Client ID:	11215702-072321-BN-SJSB085 (6-8)				
Operator ID:	DB	ALS Bottle#:	20	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.39
Area: 373826
Amount: 0.912323
Amount Units: pg/ul

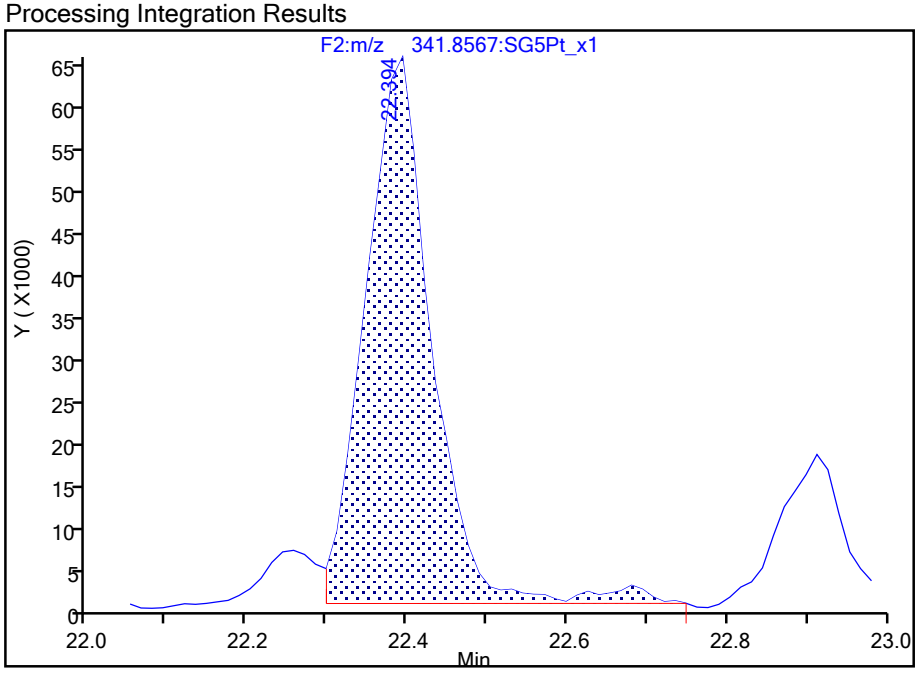

Manual Integration Results

RT: 22.39
Area: 361923
Amount: 0.889172
Amount Units: pg/ul

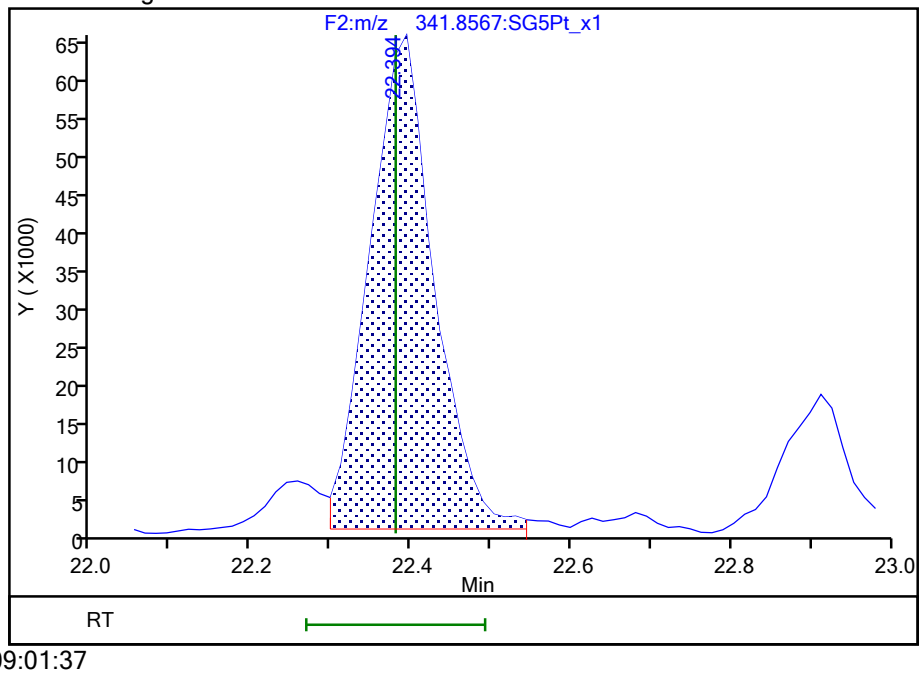

Reviewer: dadunj, 18-Aug-2021 09:01:37

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779380

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d				
Injection Date:	14-Aug-2021 06:41:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-4-A	Lab Sample ID:	320-76788-4		
Client ID:	11215702-072321-BN-SJSB085 (6-8)				
Operator ID:	DB	ALS Bottle#:	20	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.53
Area: 28392
Amount: 0.062968
Amount Units: pg/ul

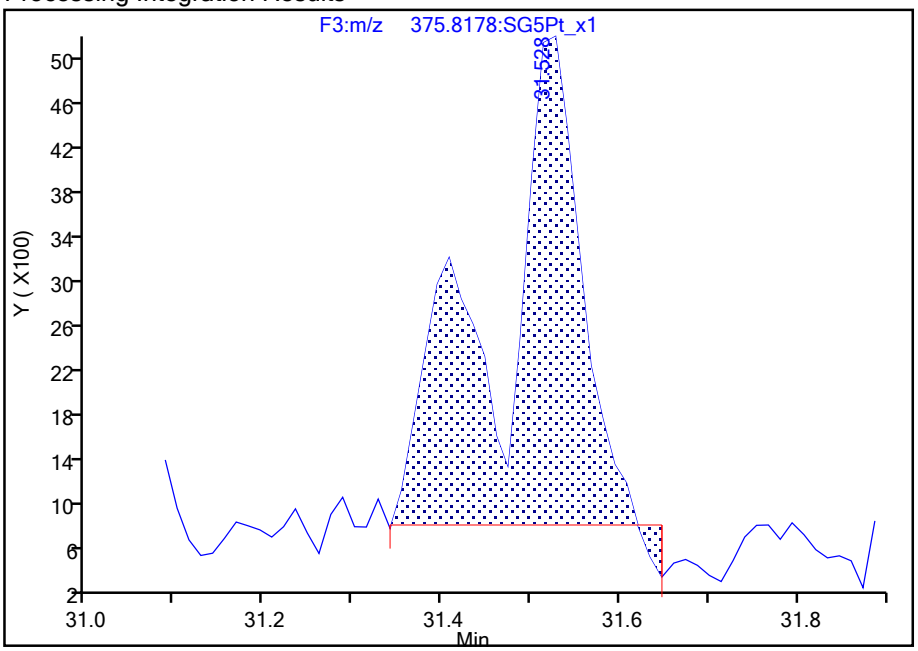

Manual Integration Results

RT: 31.53
Area: 17638
Amount: 0.051191
Amount Units: pg/ul

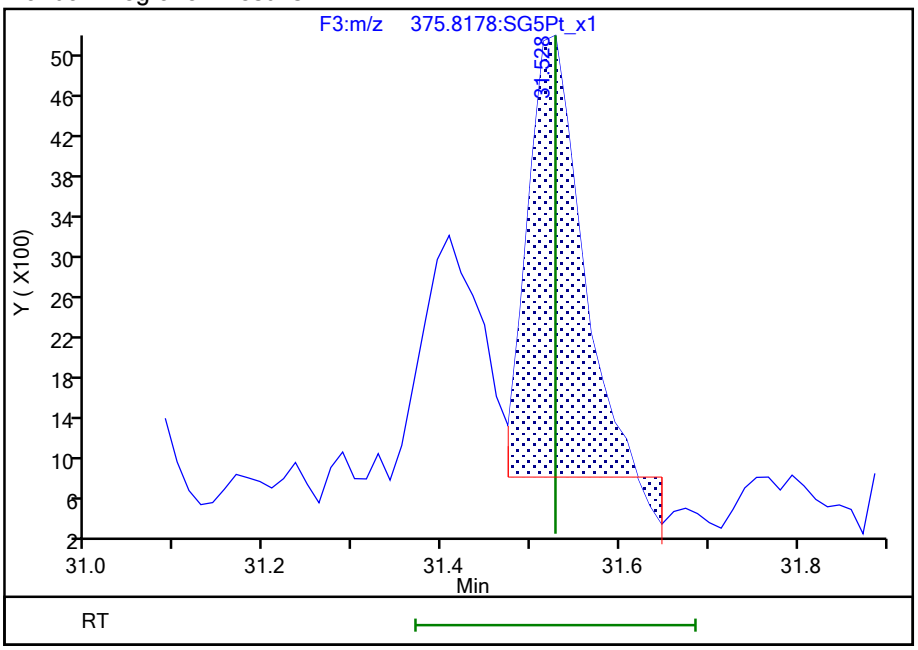

Reviewer: dadunj, 18-Aug-2021 09:01:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d				
Injection Date:	14-Aug-2021 06:41:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-4-A	Lab Sample ID:	320-76788-4		
Client ID:	11215702-072321-BN-SJSB085 (6-8)				
Operator ID:	DB	ALS Bottle#:	20	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.77
Area: 222838
Amount: 0.470948
Amount Units: pg/ul

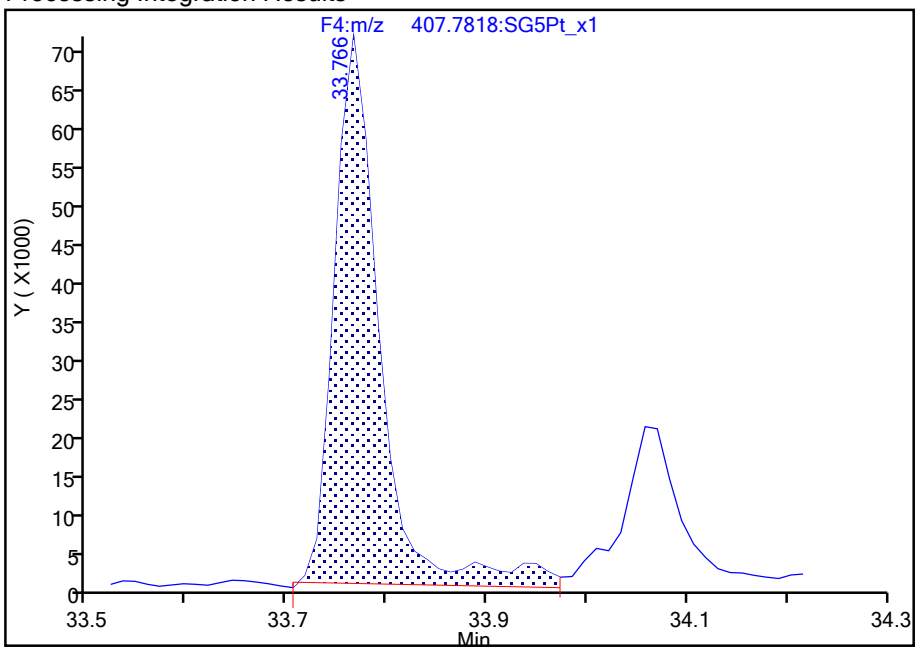

Manual Integration Results

RT: 33.77
Area: 207570
Amount: 0.453494
Amount Units: pg/ul

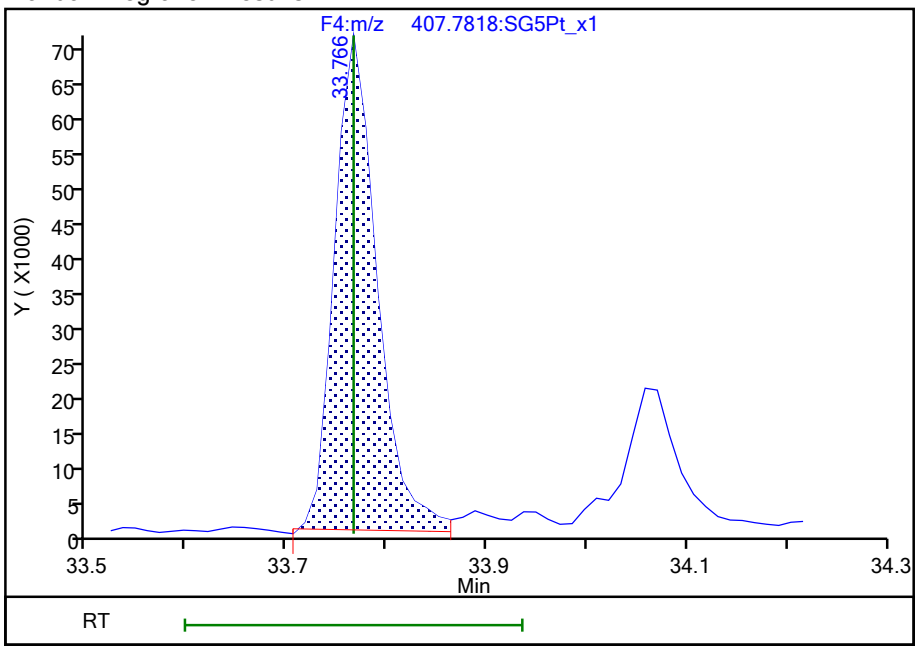

Reviewer: dadunj, 18-Aug-2021 09:02:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d				
Injection Date:	14-Aug-2021 06:41:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-4-A	Lab Sample ID:	320-76788-4		
Client ID:	11215702-072321-BN-SJSB085 (6-8)				
Operator ID:	DB	ALS Bottle#:	20	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.01
Area: 282861
Amount: 0.959260
Amount Units: pg/ul

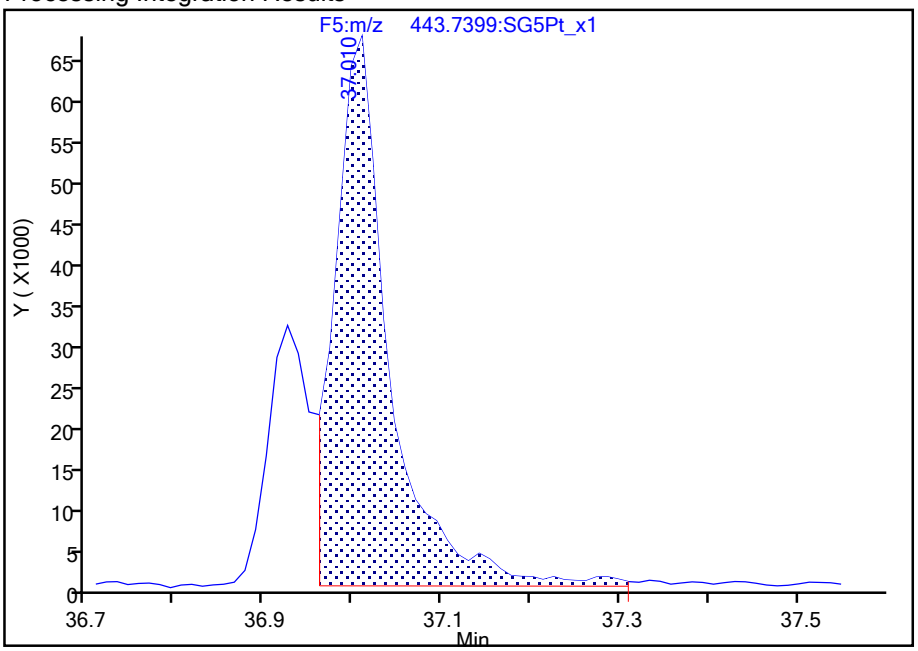

Manual Integration Results

RT: 37.01
Area: 264693
Amount: 0.894397
Amount Units: pg/ul

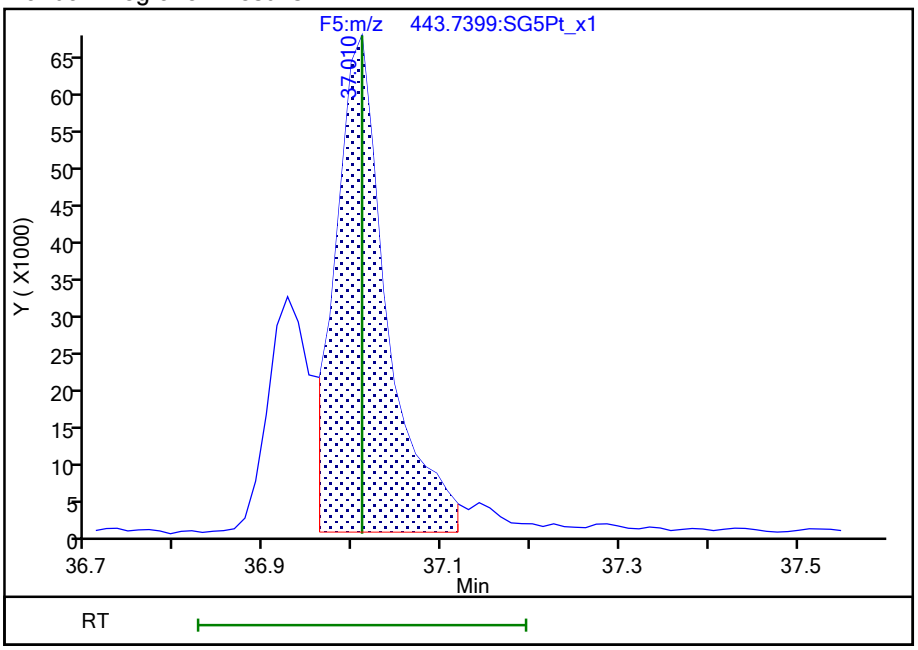

Reviewer: dadunj, 18-Aug-2021 09:02:41

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779383

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d				
Injection Date:	14-Aug-2021 06:41:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-4-A	Lab Sample ID:	320-76788-4		
Client ID:	11215702-072321-BN-SJSB085 (6-8)				
Operator ID:	DB	ALS Bottle#:	20	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.01
Area: 257631
Amount: 0.959260
Amount Units: pg/ul

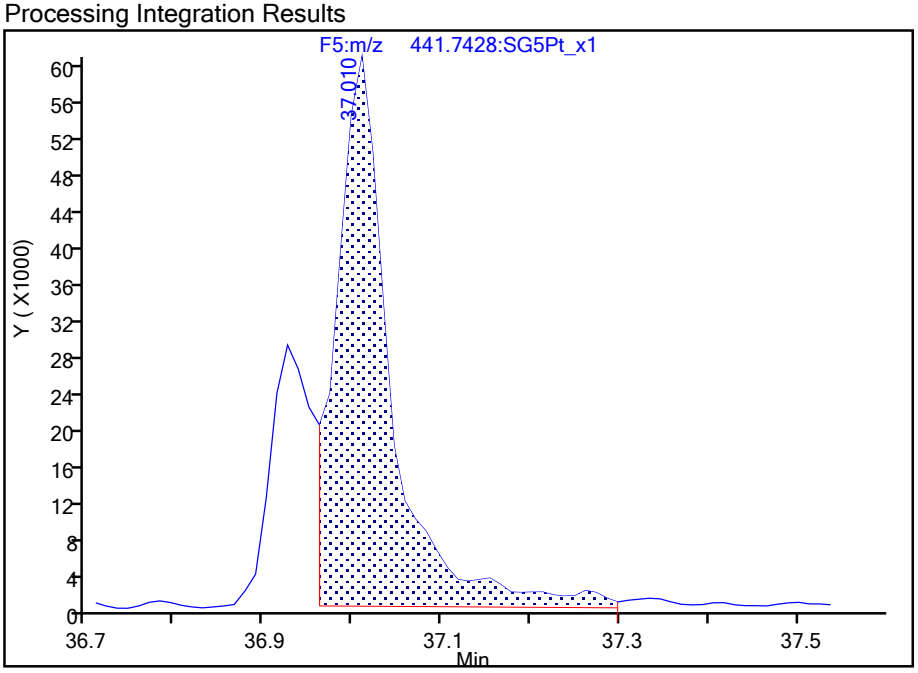

Manual Integration Results

RT: 37.01
Area: 239252
Amount: 0.894397
Amount Units: pg/ul

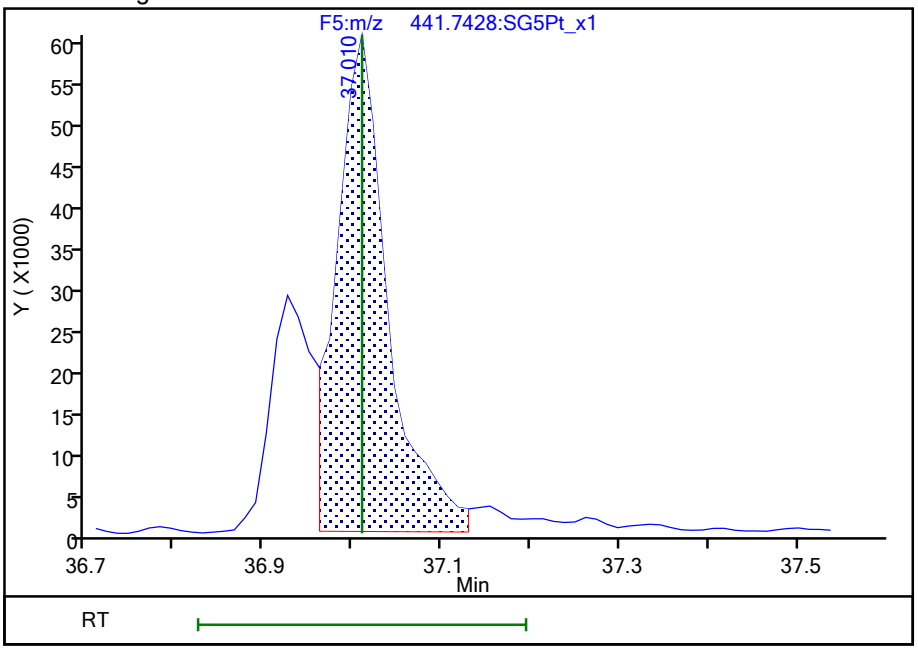

Reviewer: dadunj, 18-Aug-2021 09:02:43
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779384

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d		
Injection Date:	14-Aug-2021 06:41:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	516836	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

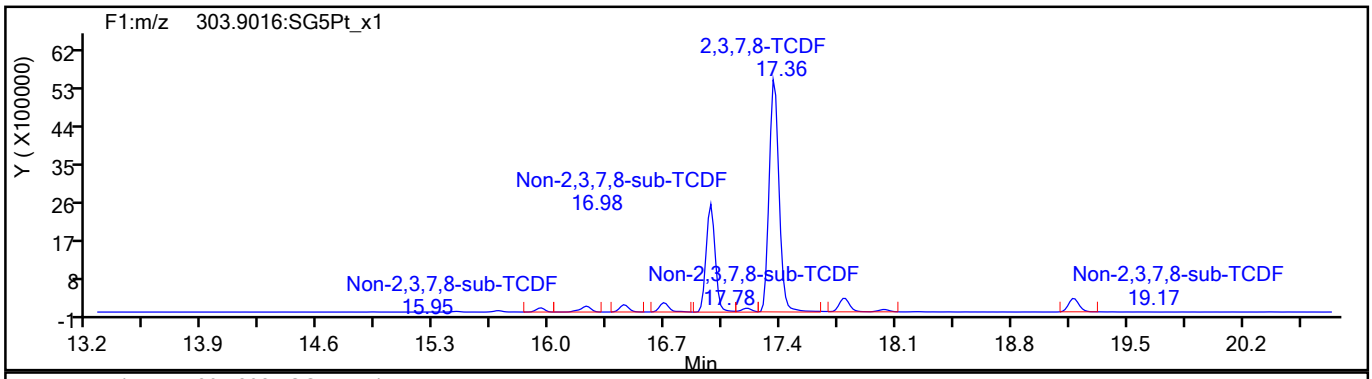

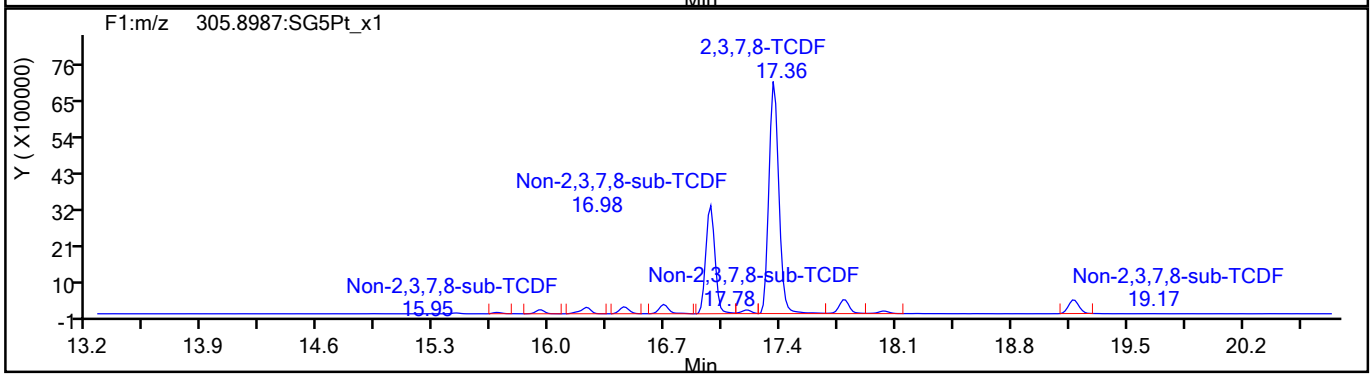

TCDF Standards

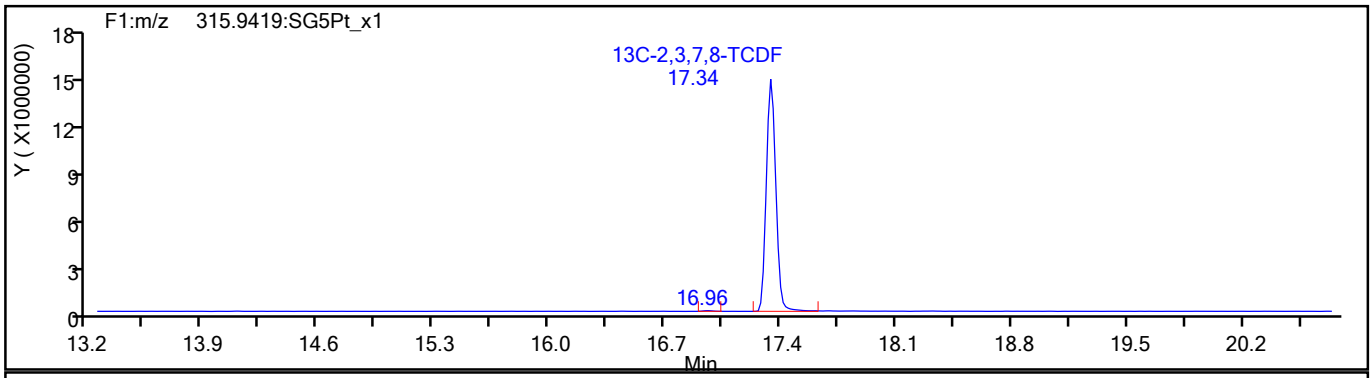

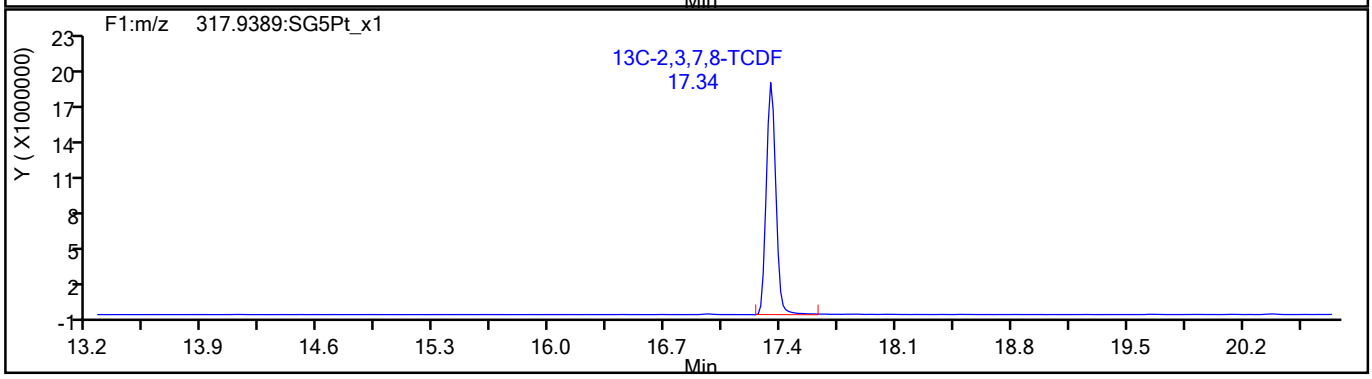

779385

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d		
Injection Date:	14-Aug-2021 06:41:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	516836	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

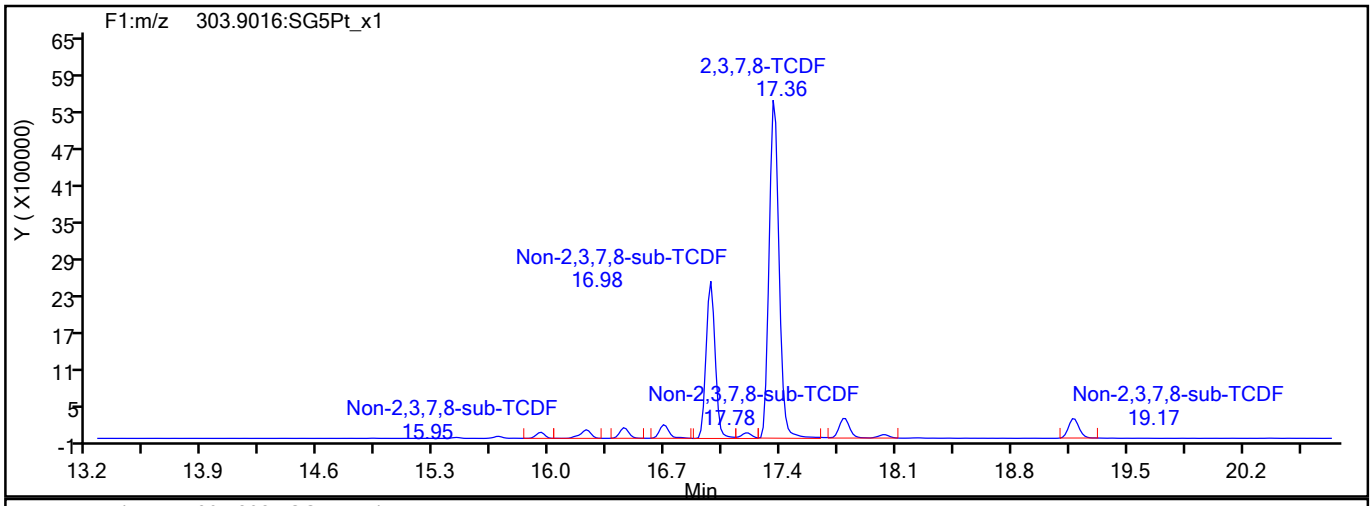

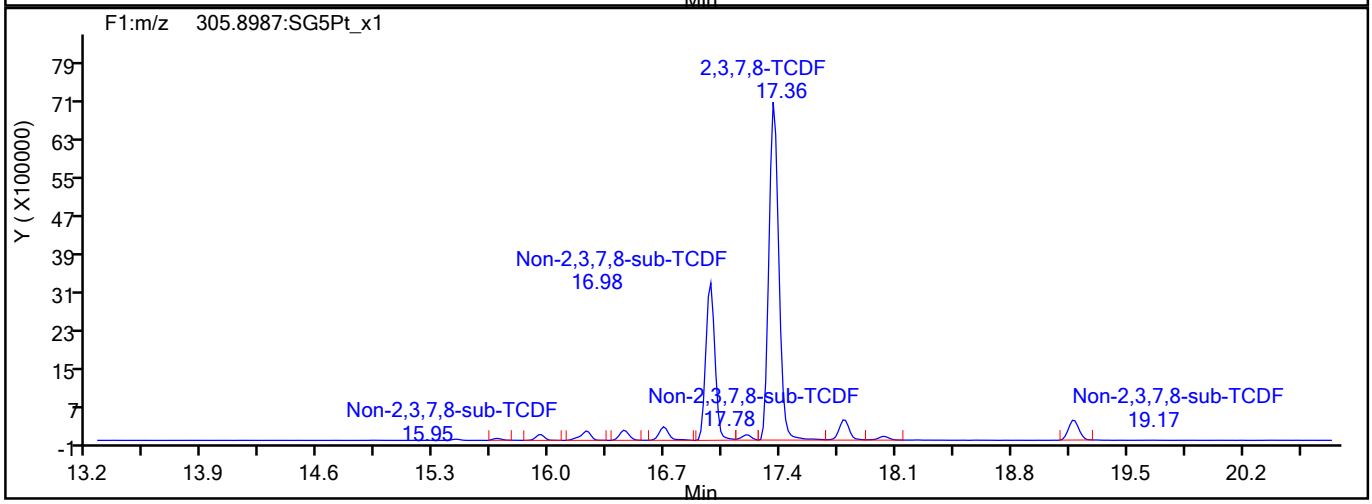

TCDF Interference Mass

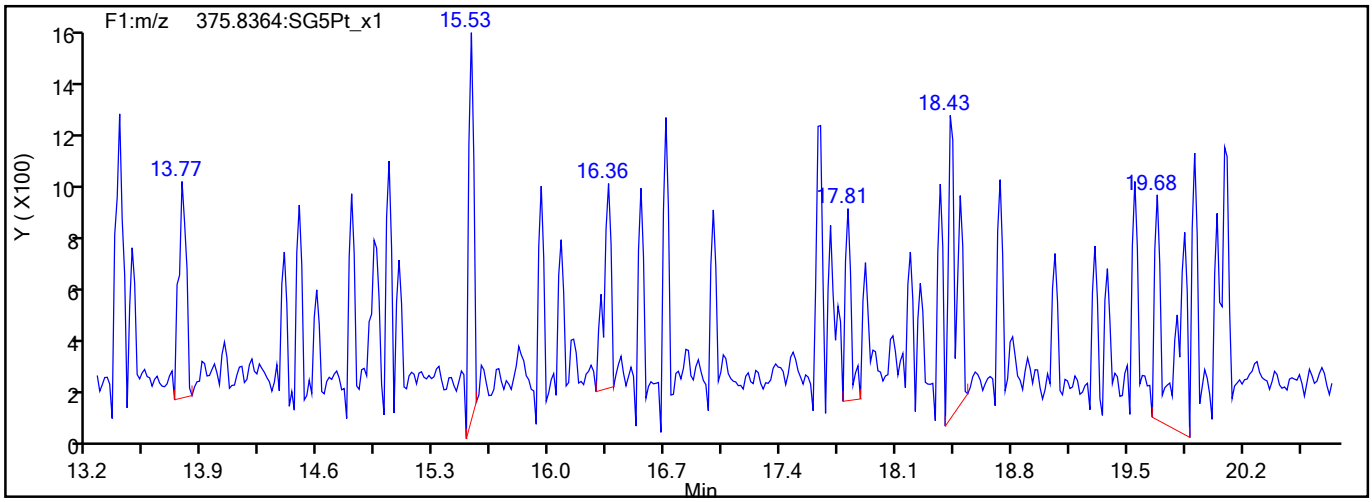

779386

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d		
Injection Date:	14-Aug-2021 06:41:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	516836	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

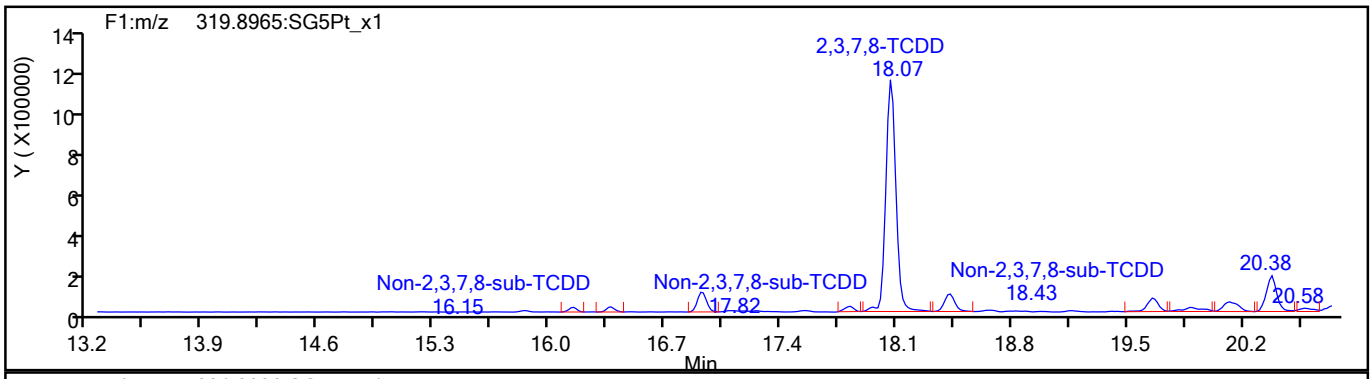

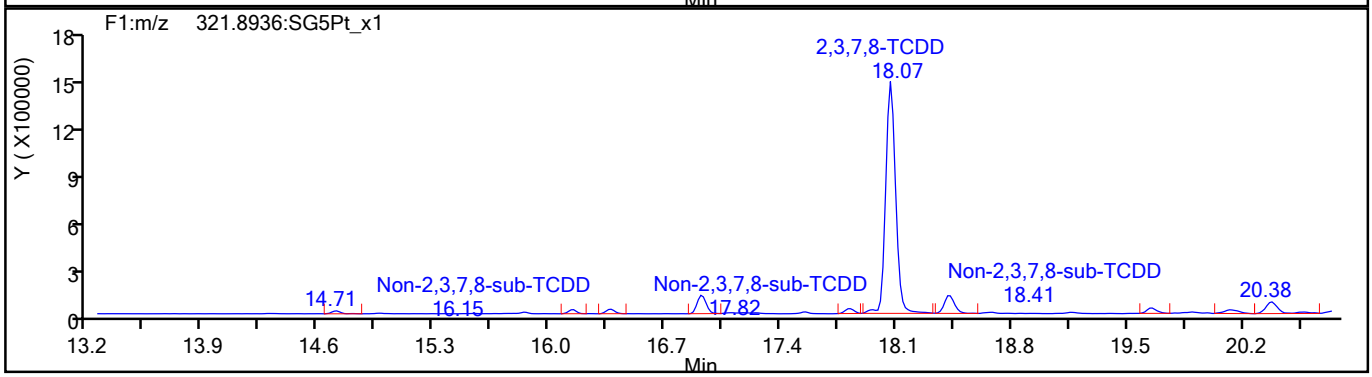

TCDD Standards

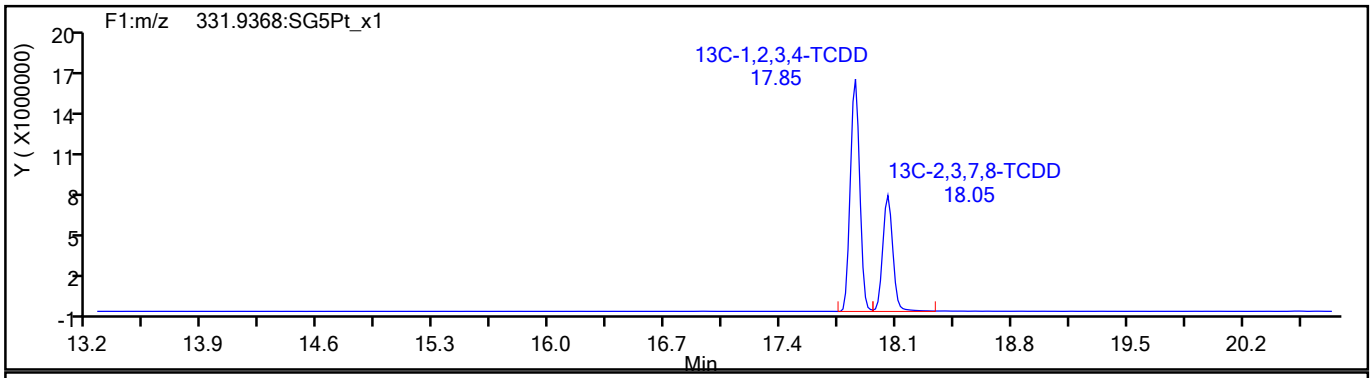

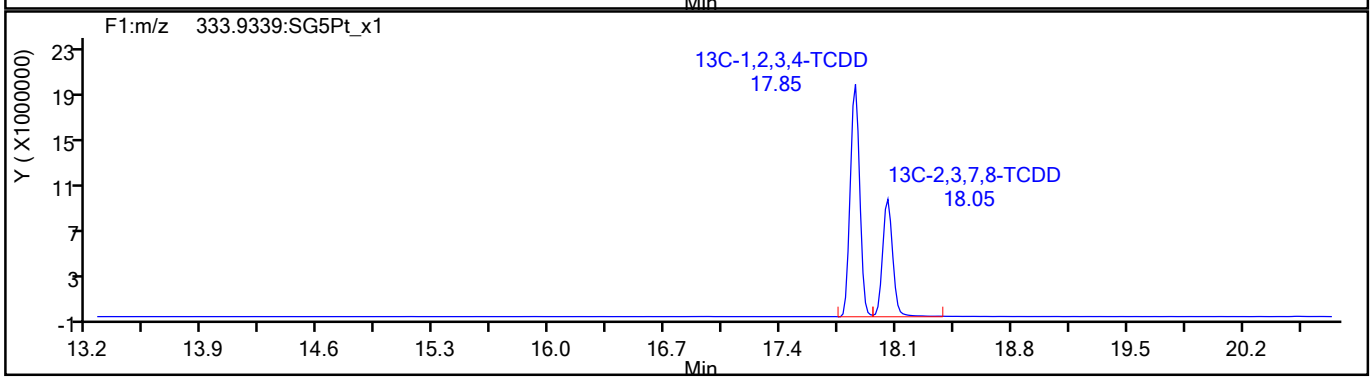

779387

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d		
Injection Date:	14-Aug-2021 06:41:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	516836	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

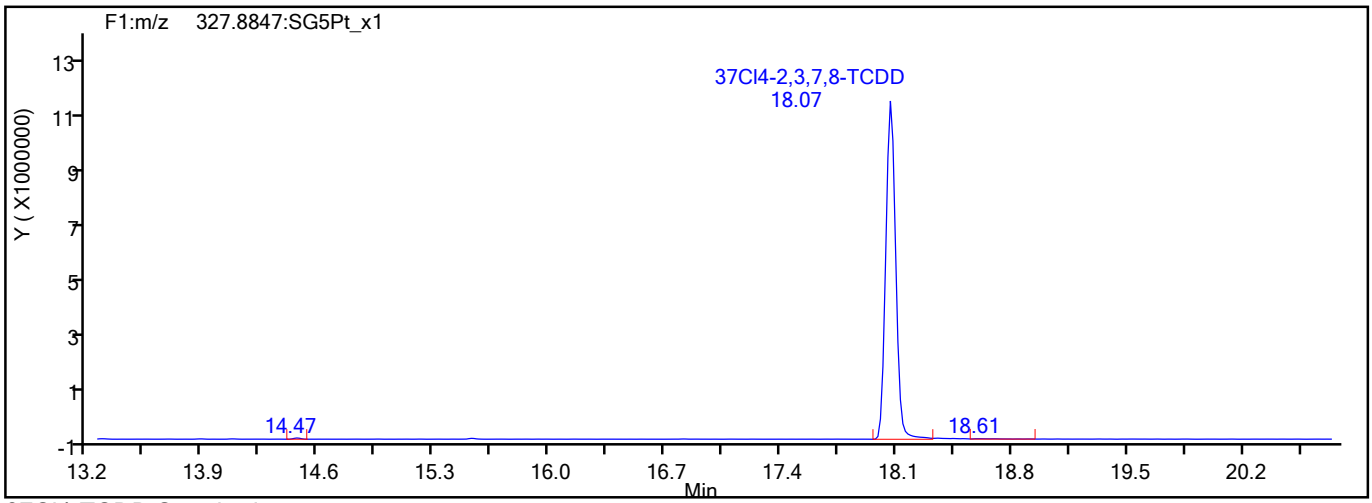

37Cl4-TCDD Standards

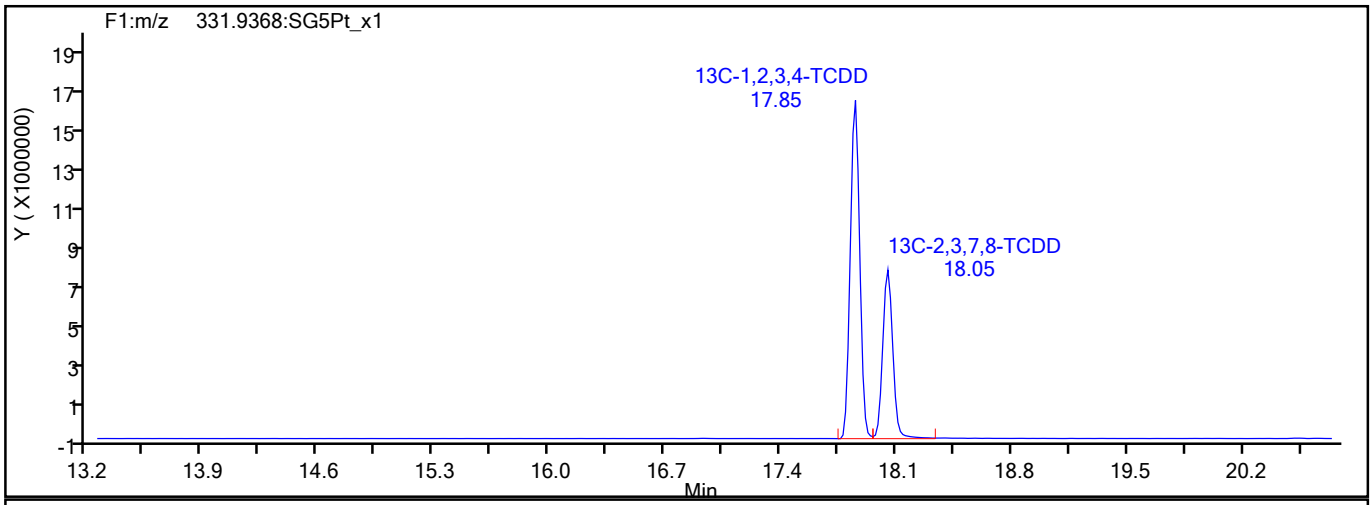

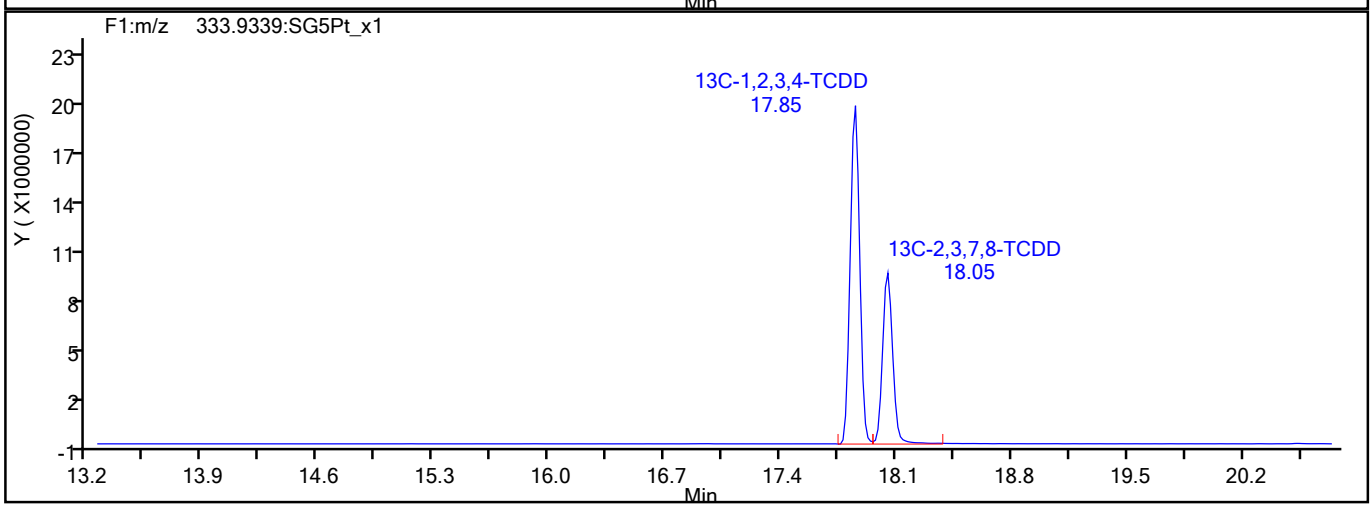

779388

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

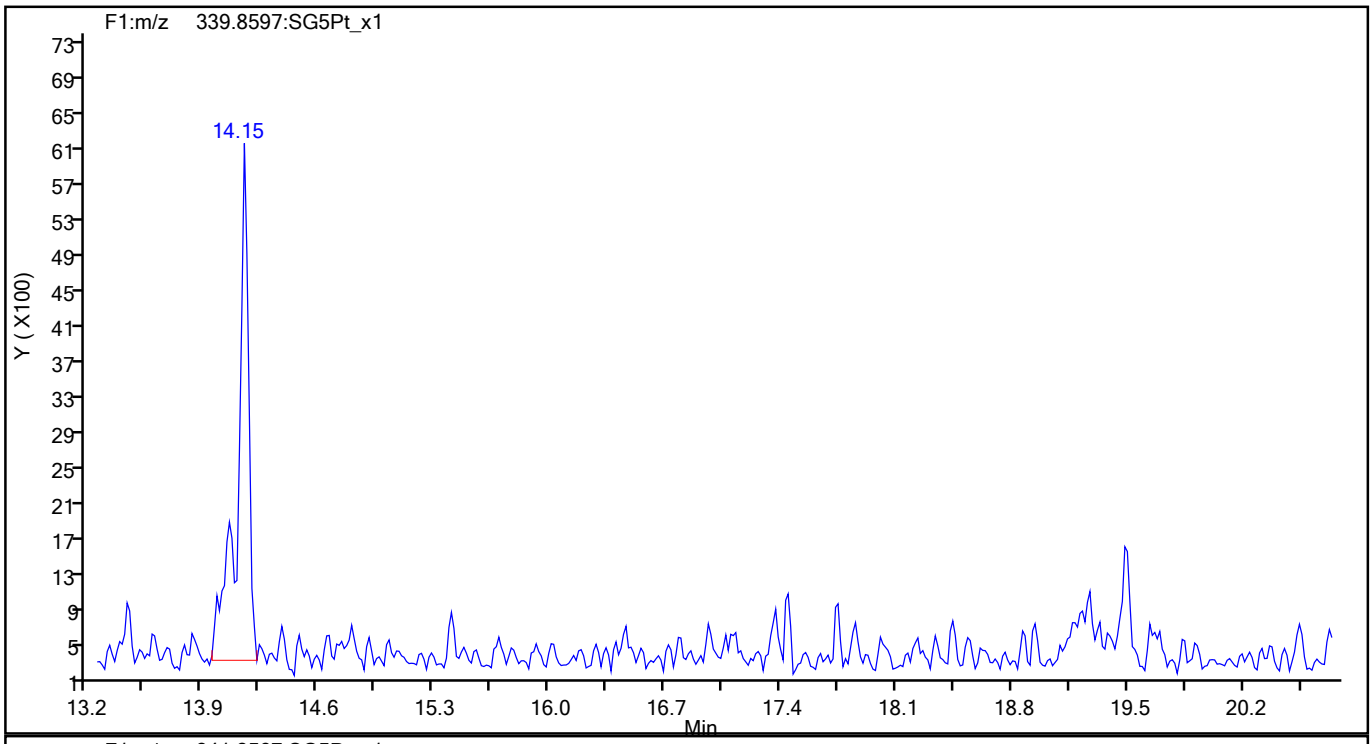

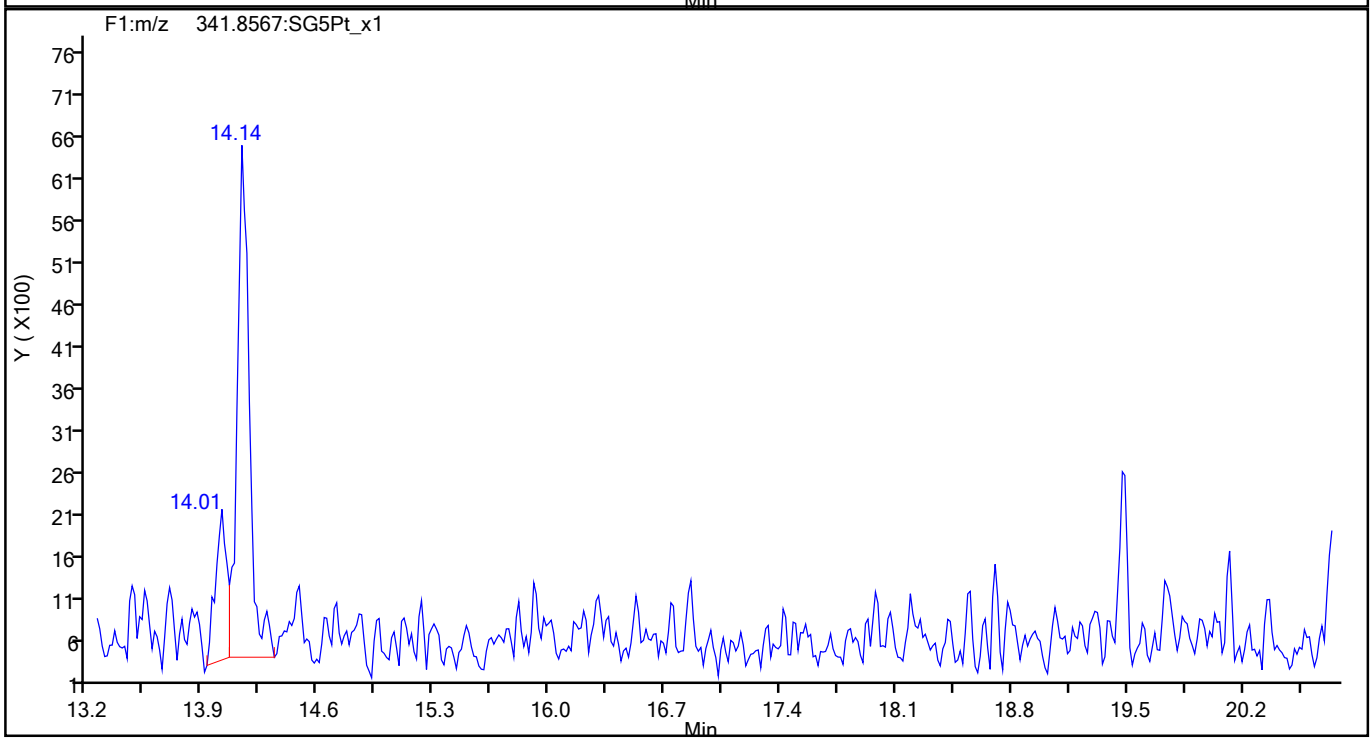

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Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:	11215702-072321-BN-SJSB085 (6-8)		
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F1 PeCDFs

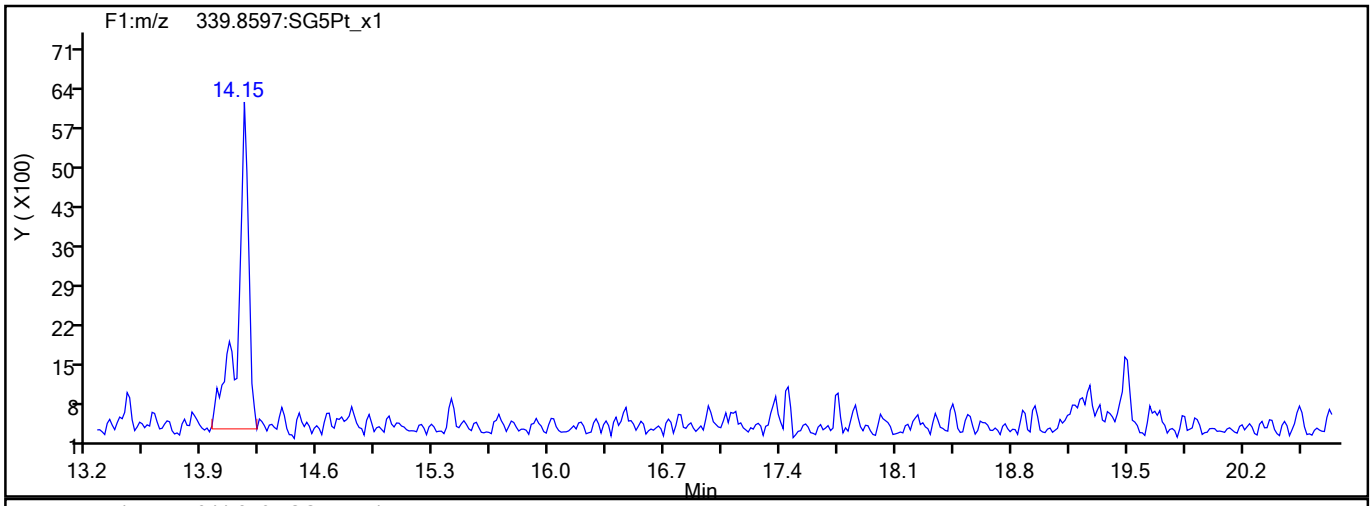

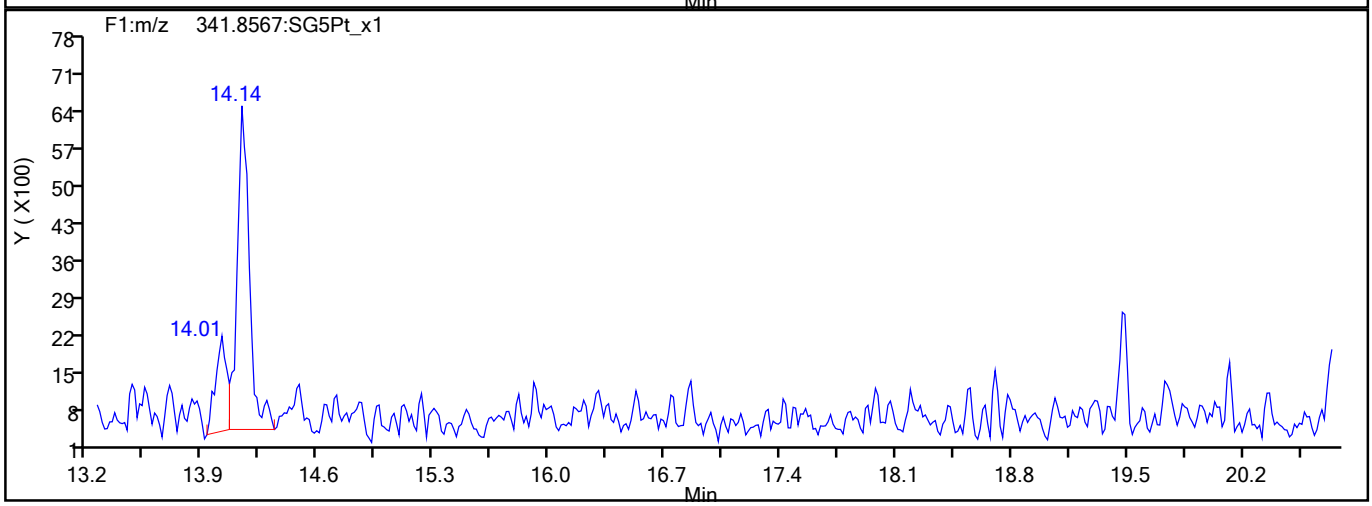

F1 PeCDFs Interference Mass

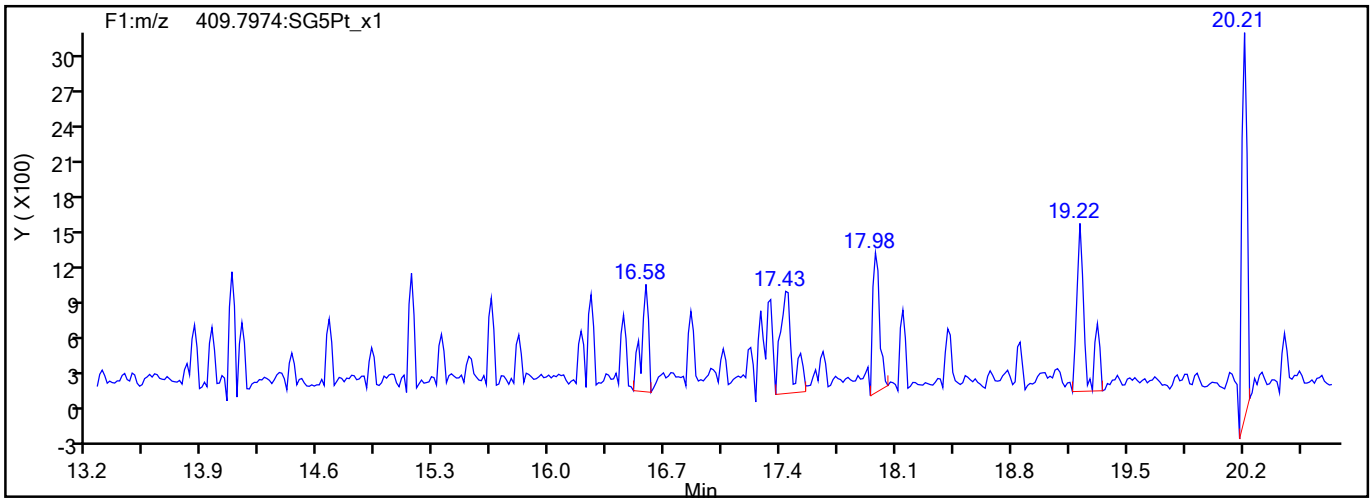

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Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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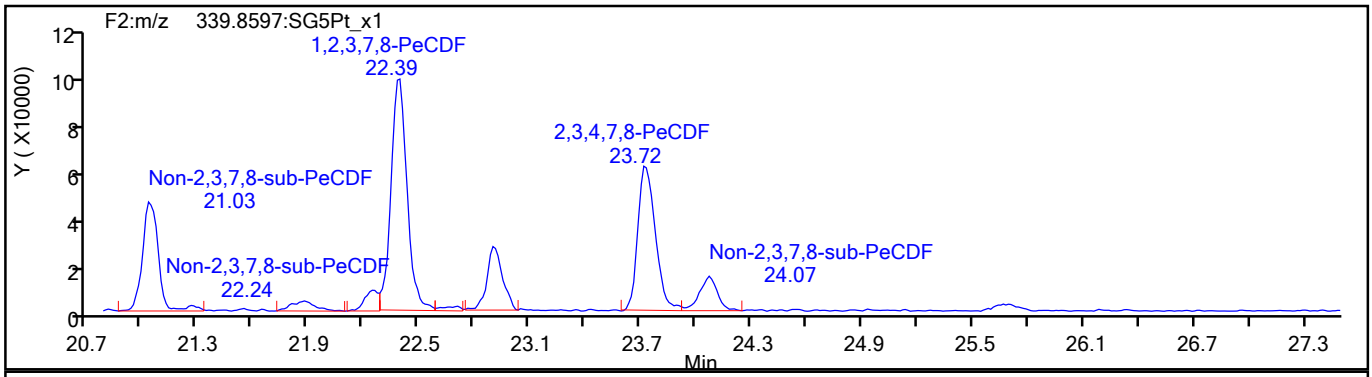

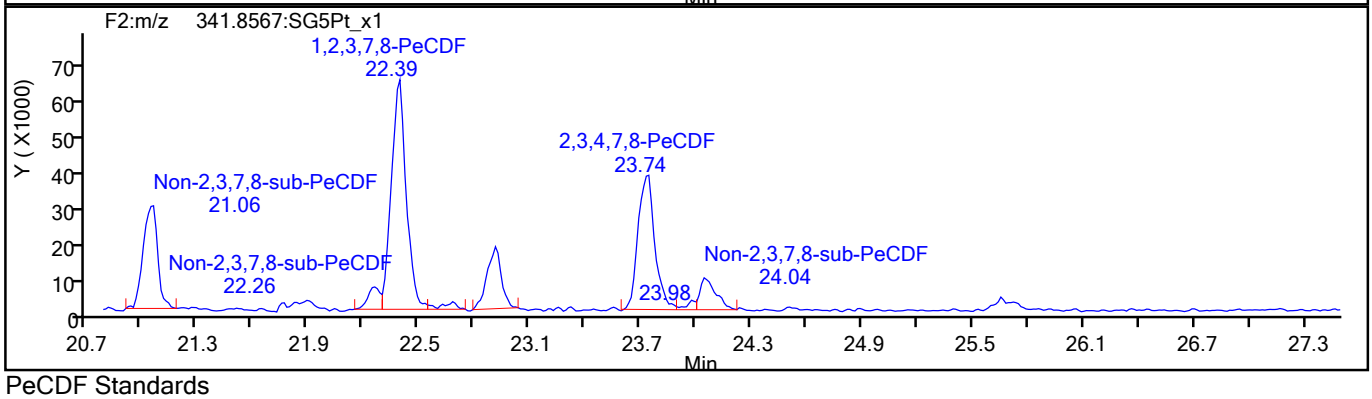

PeCDF Standards

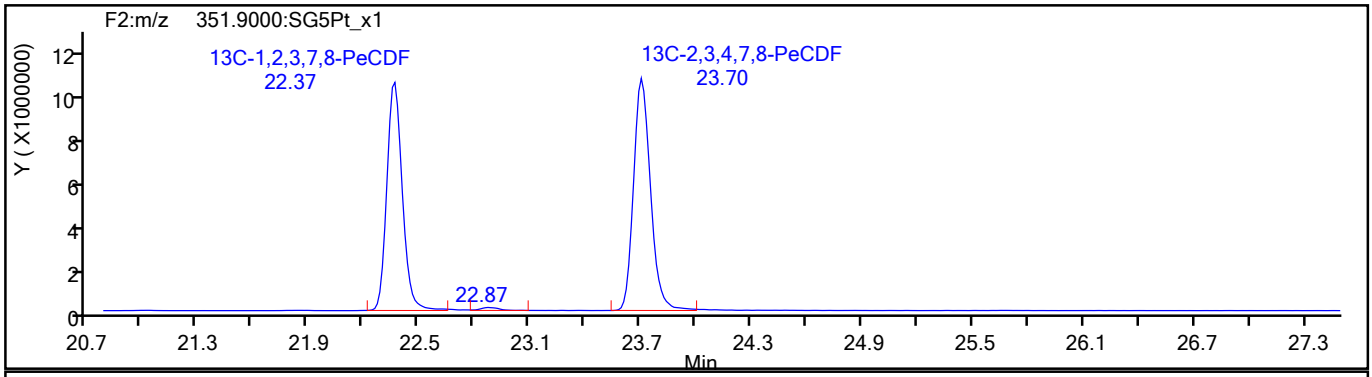

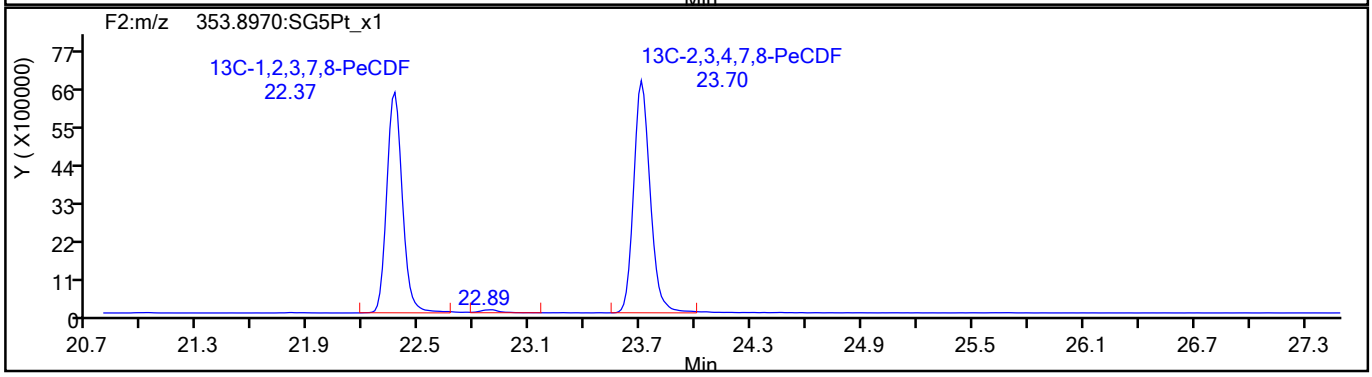

779391

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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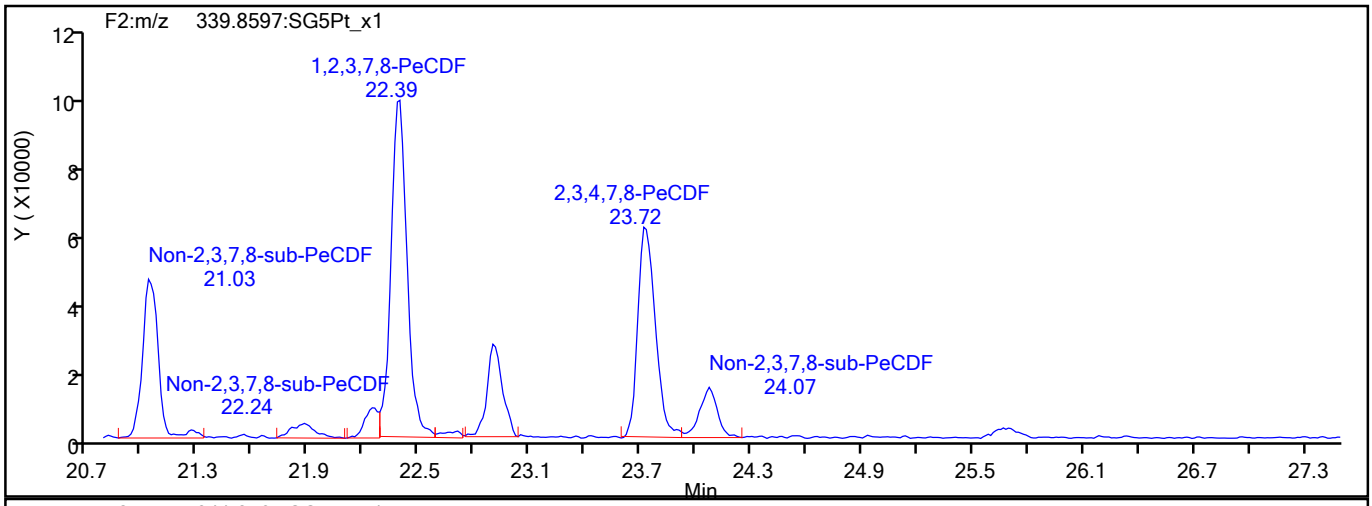

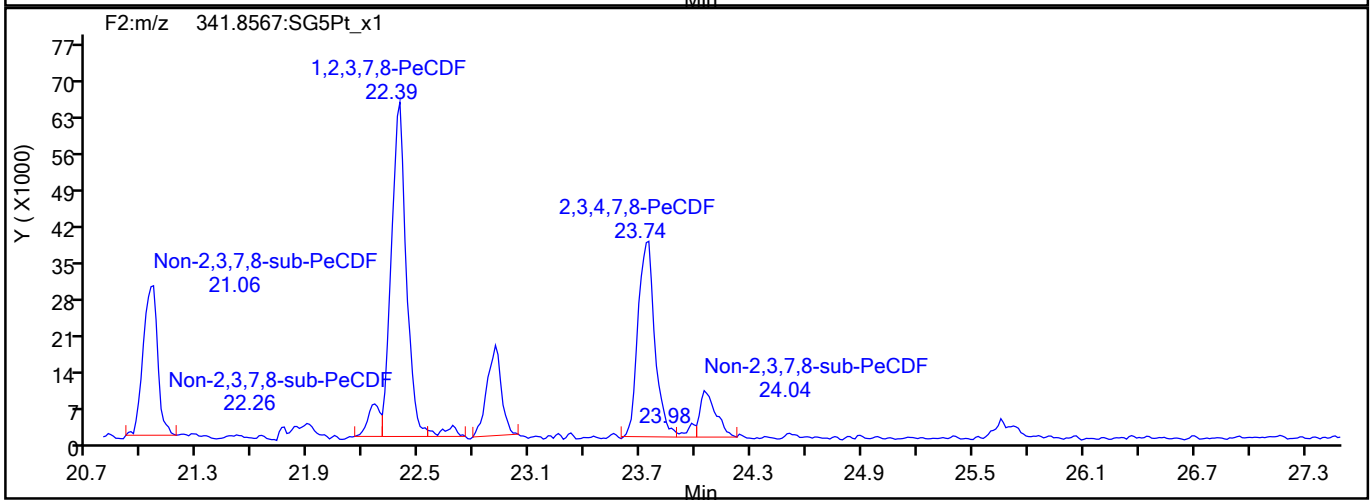

PeCDF Interference Mass

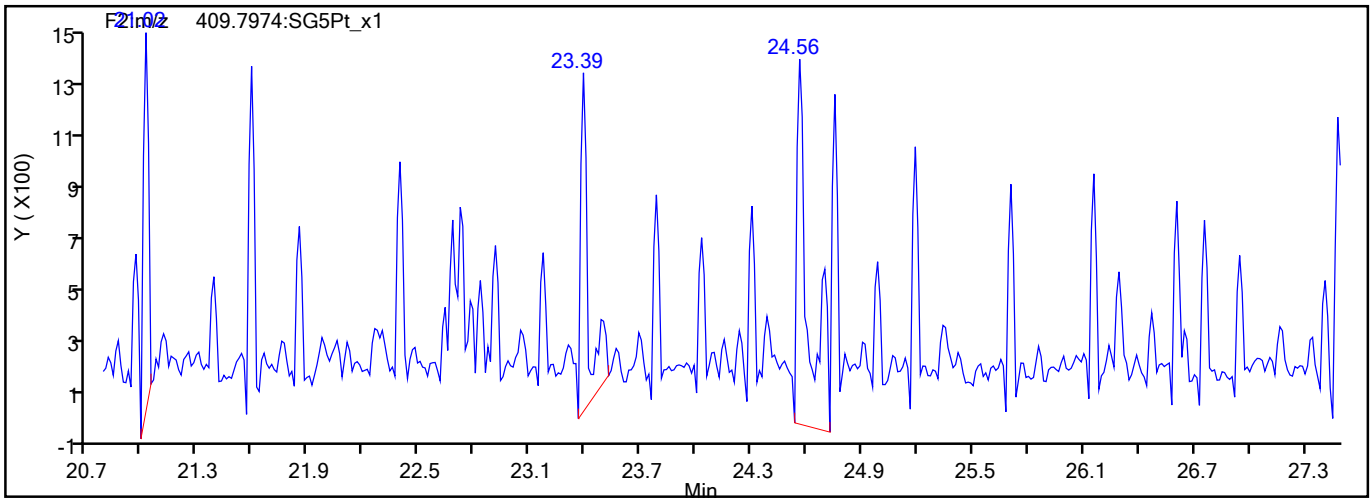

779392

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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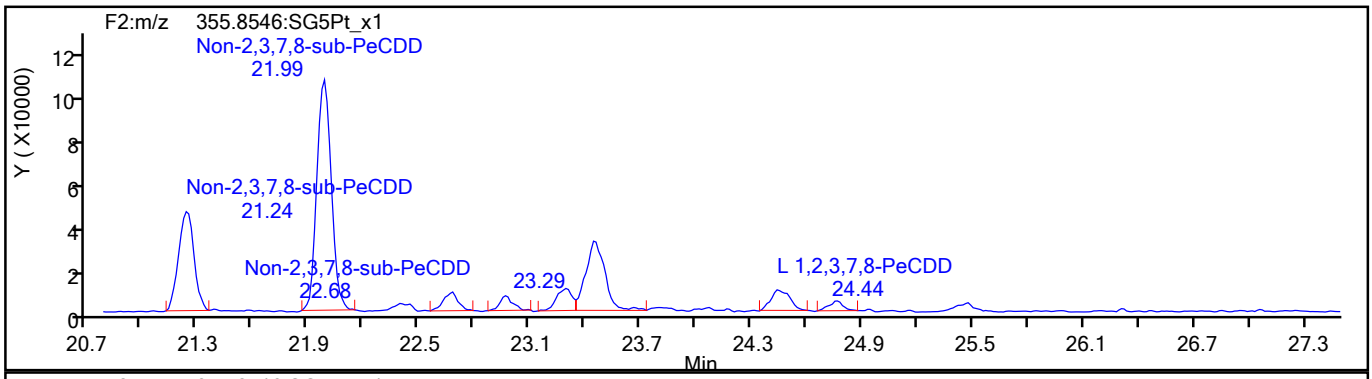

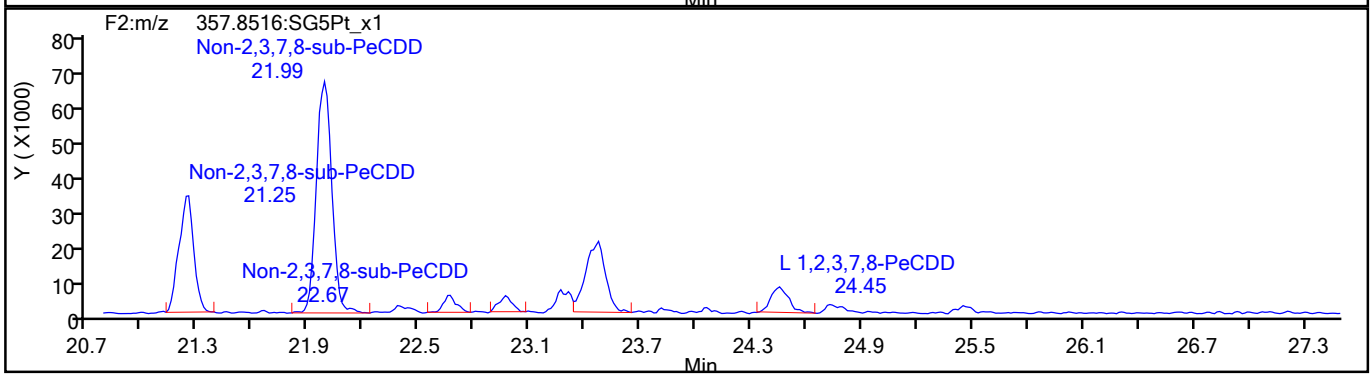

PeCDD Standards

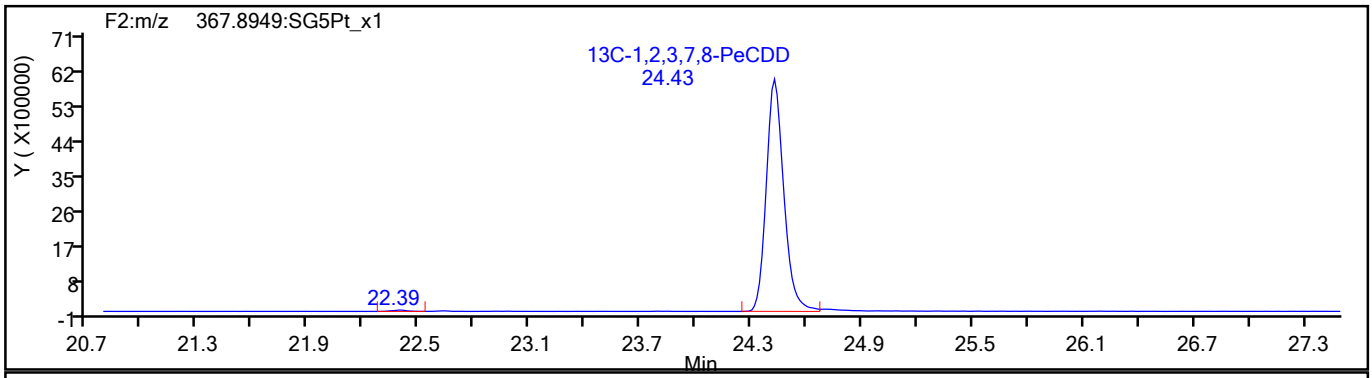

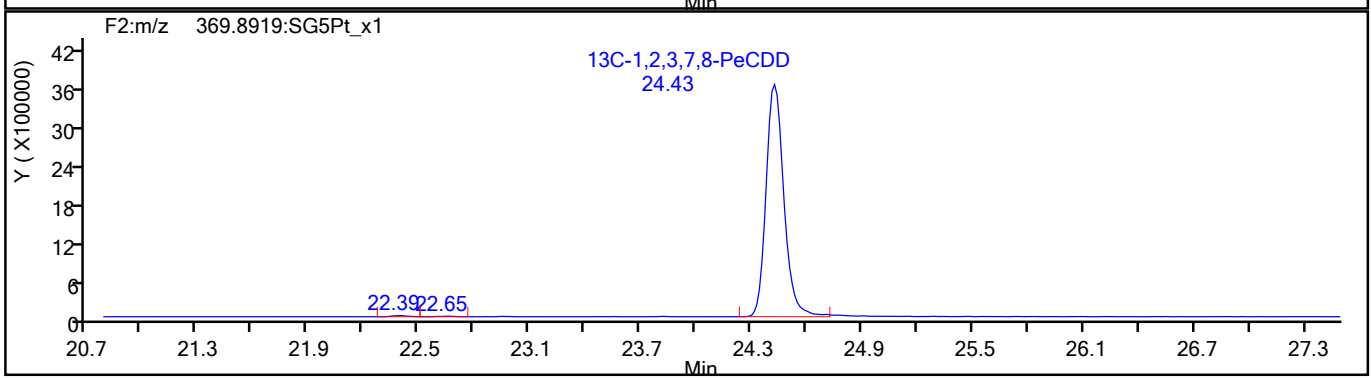

779393

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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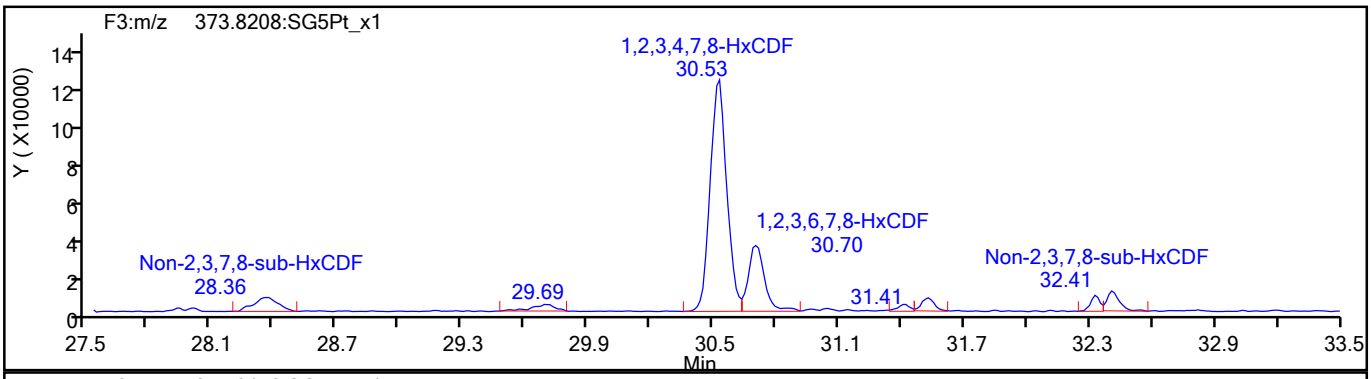

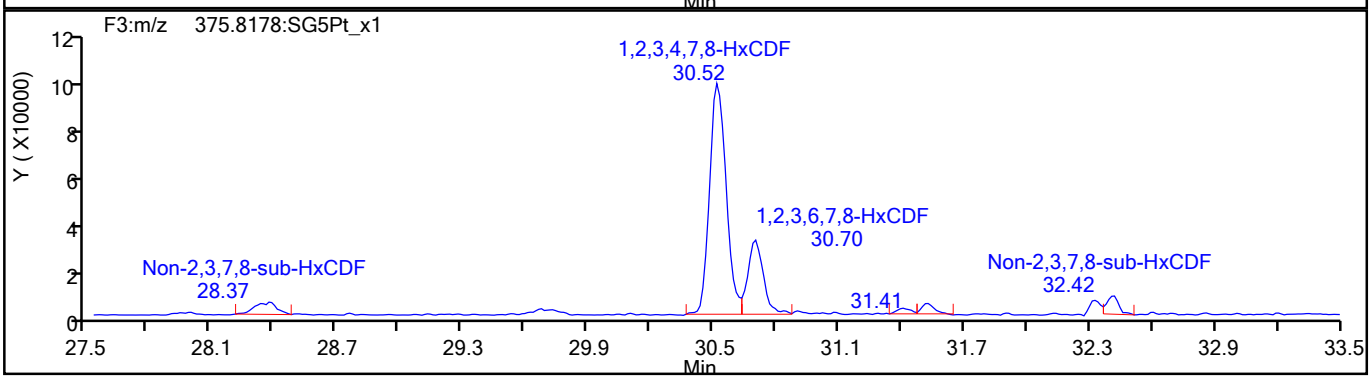

HxCDF Standards

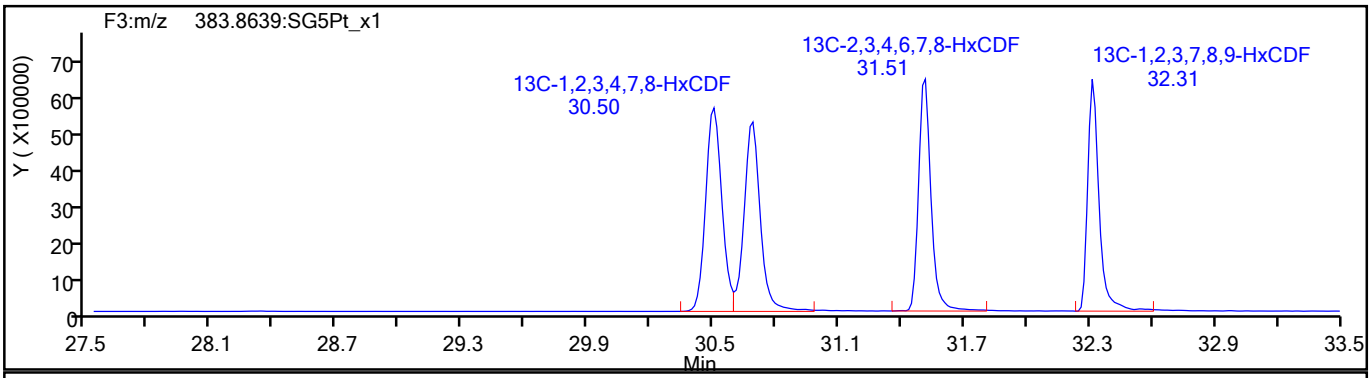

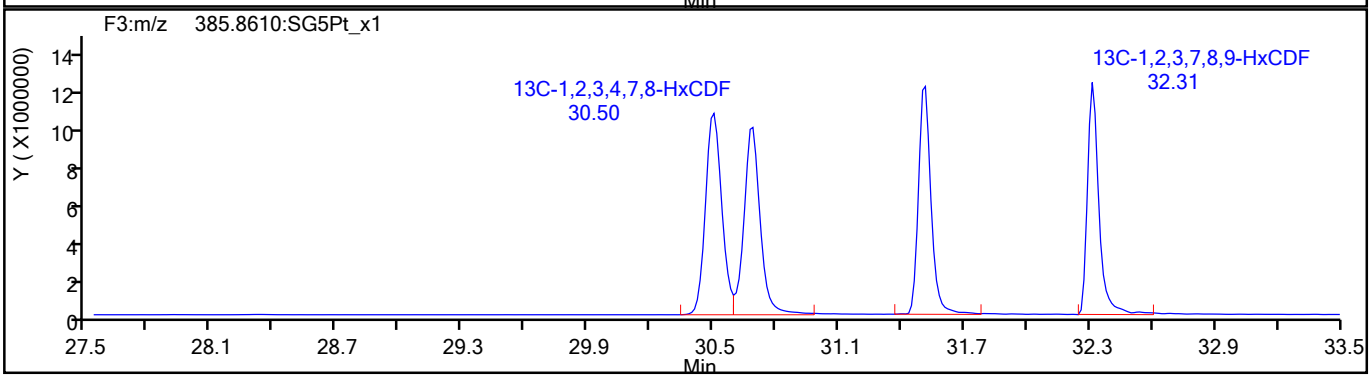

779394

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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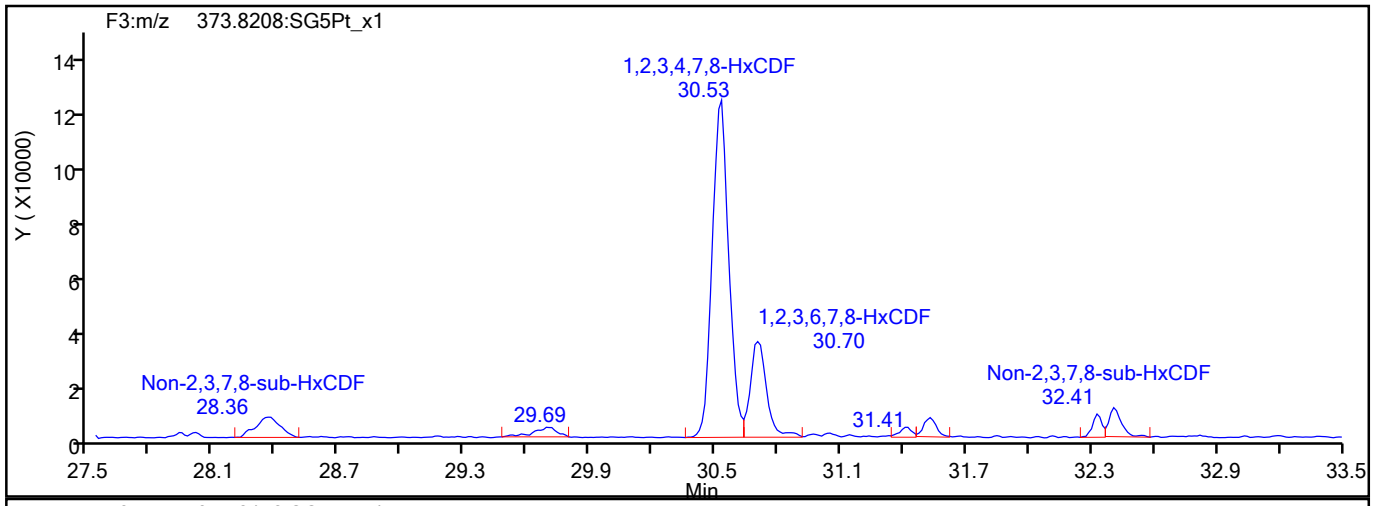

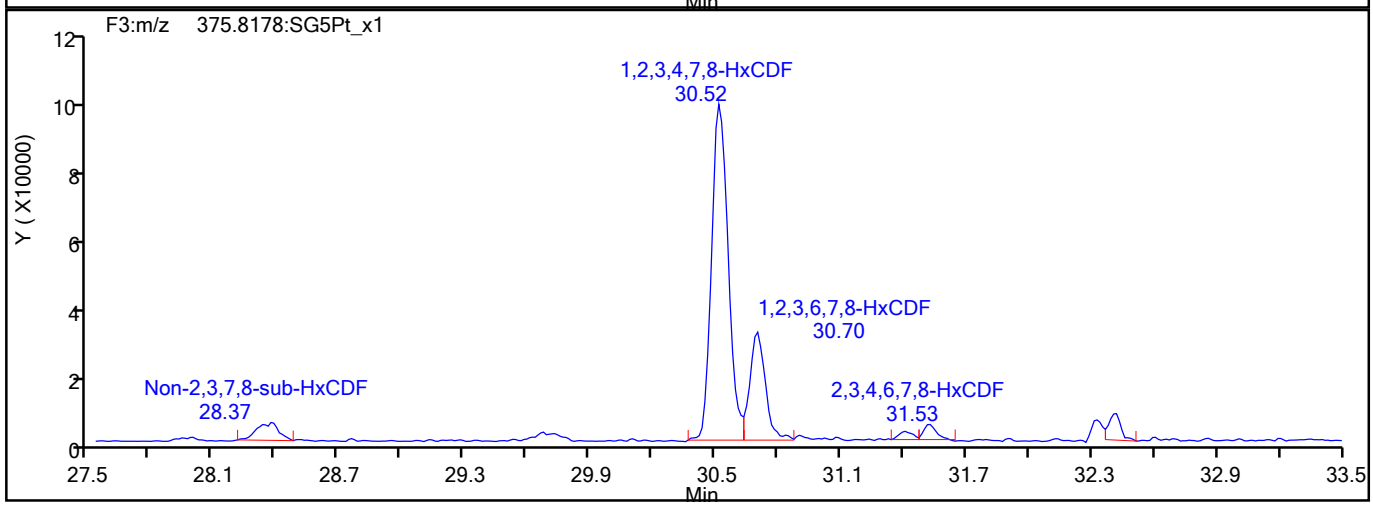

HxCDF Interference Mass

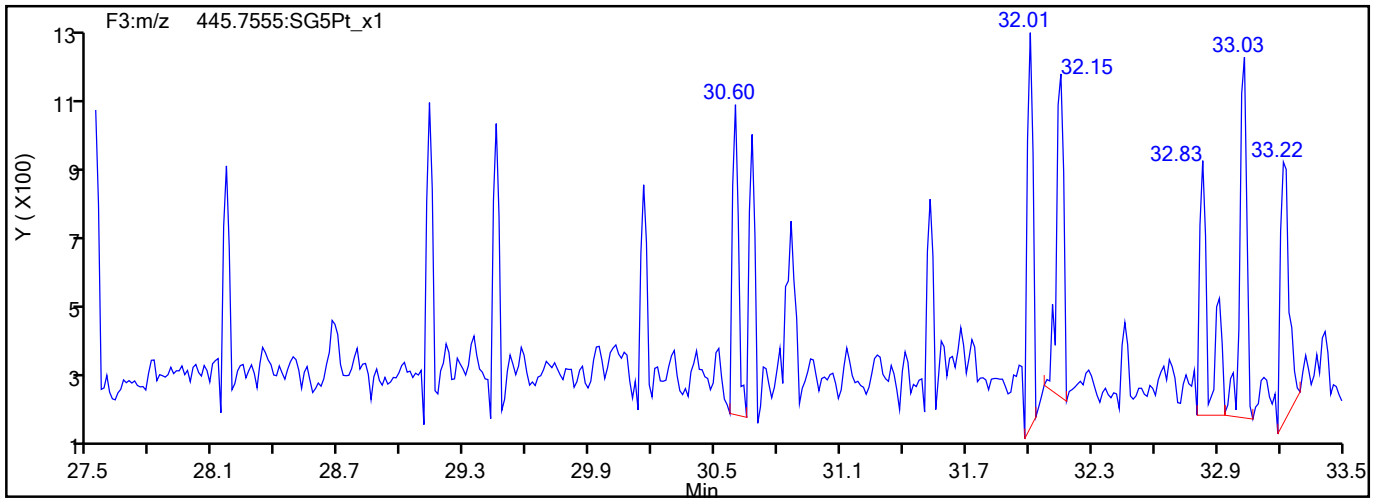

779395

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Eurofins TestAmerica, Sacramento

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HxCDD

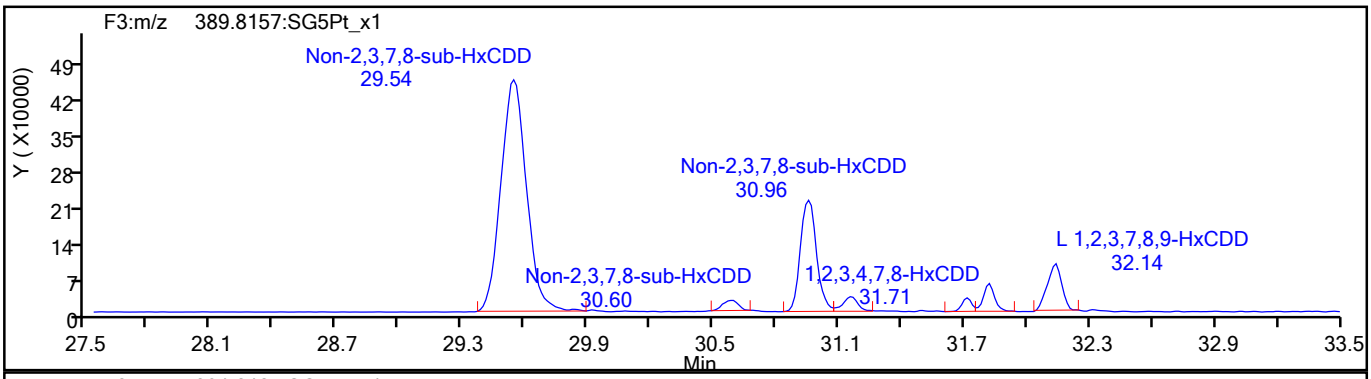

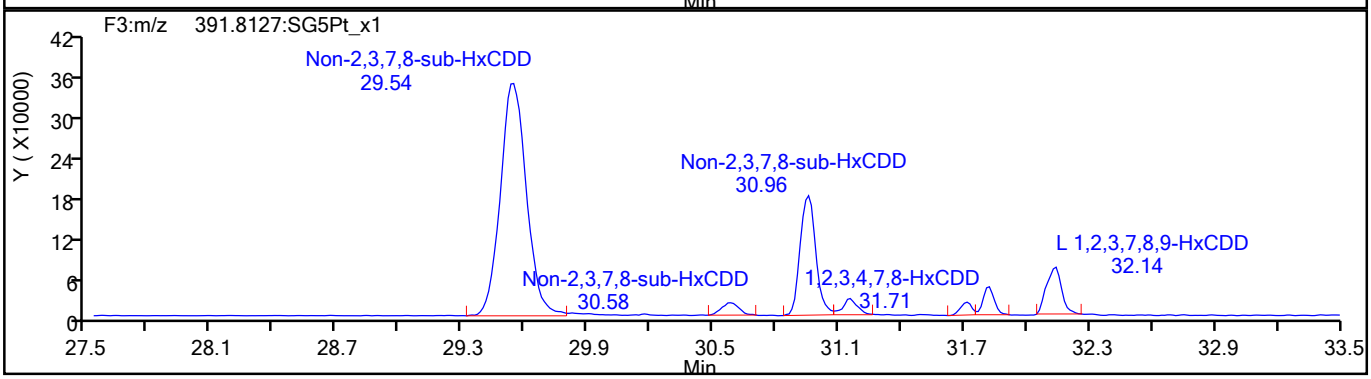

HxCDD Standards

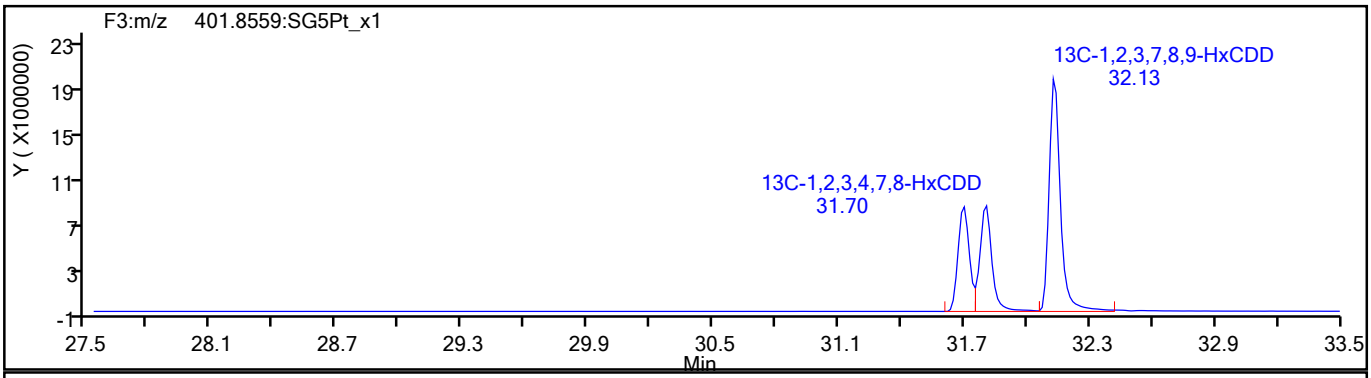

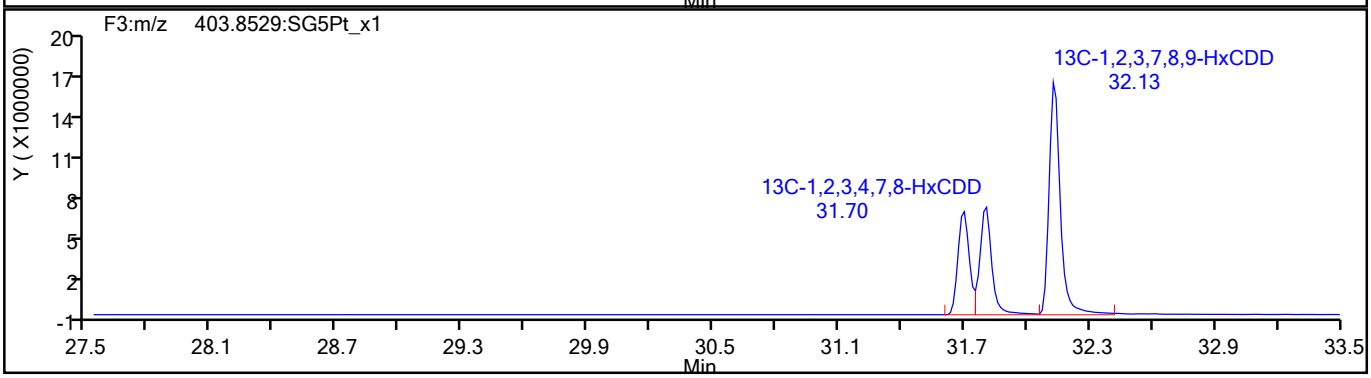

779396

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Eurofins TestAmerica, Sacramento

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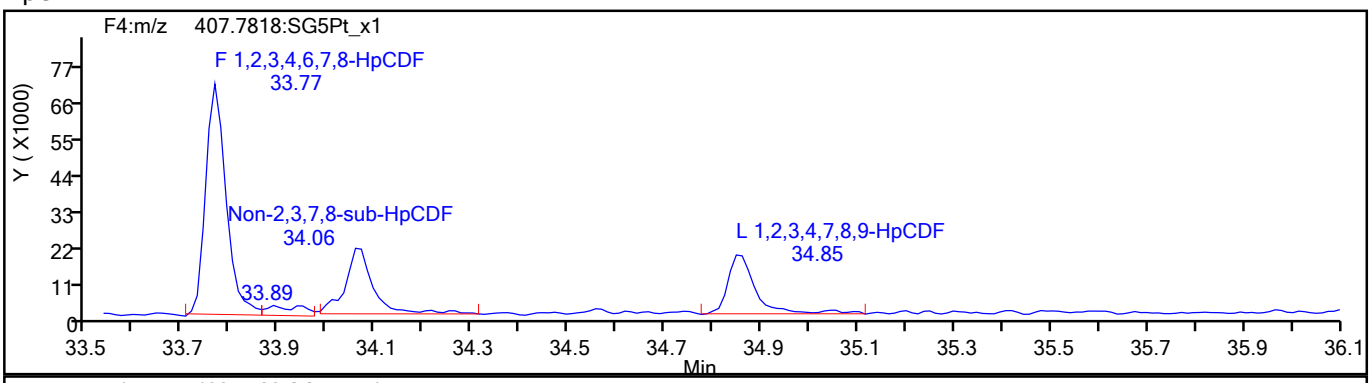

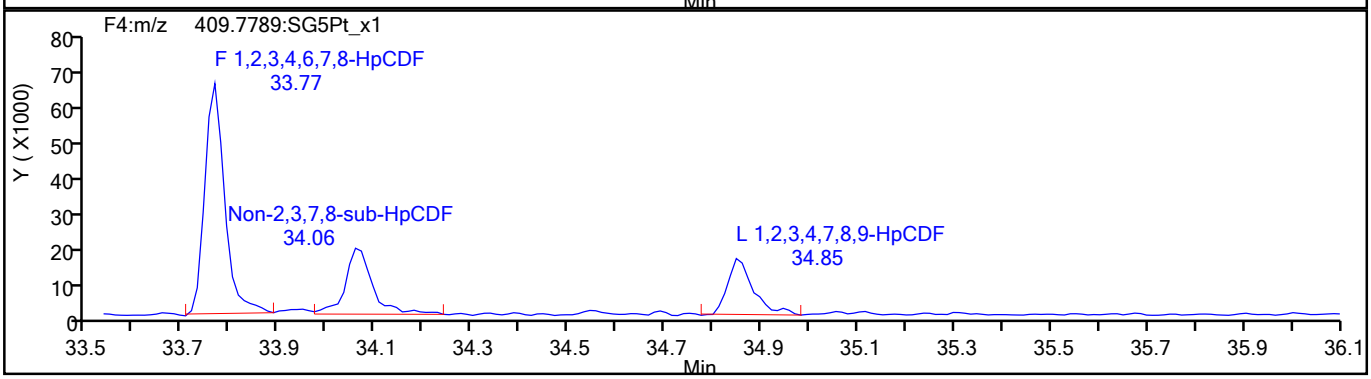

HpCDF Standards

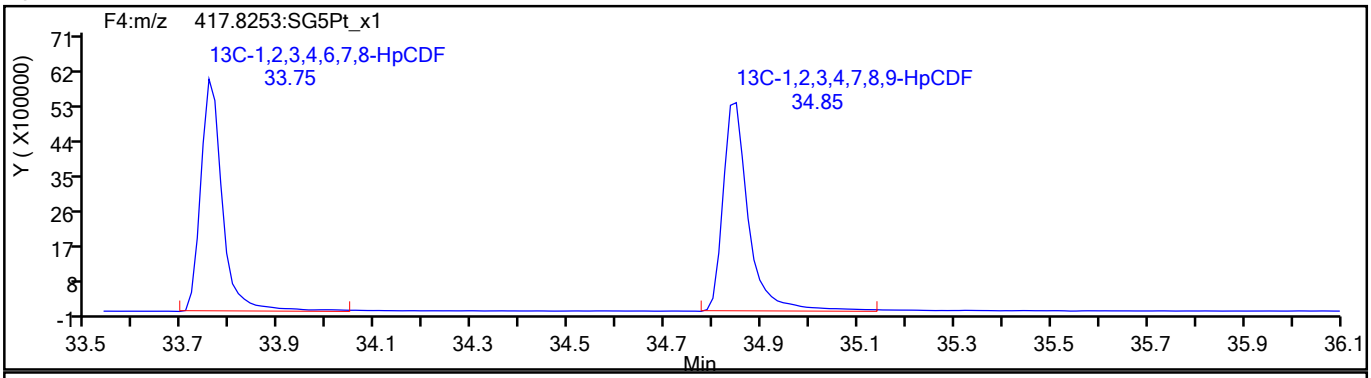

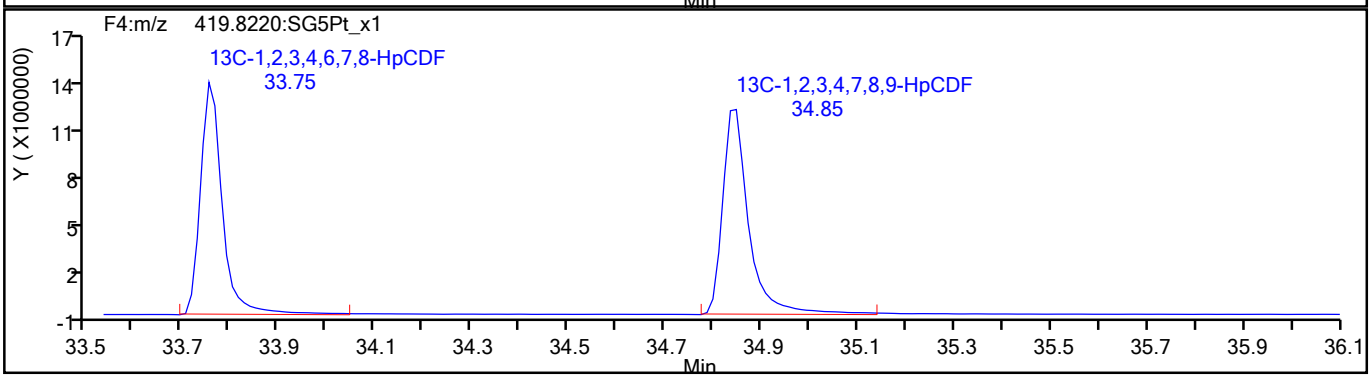

779397

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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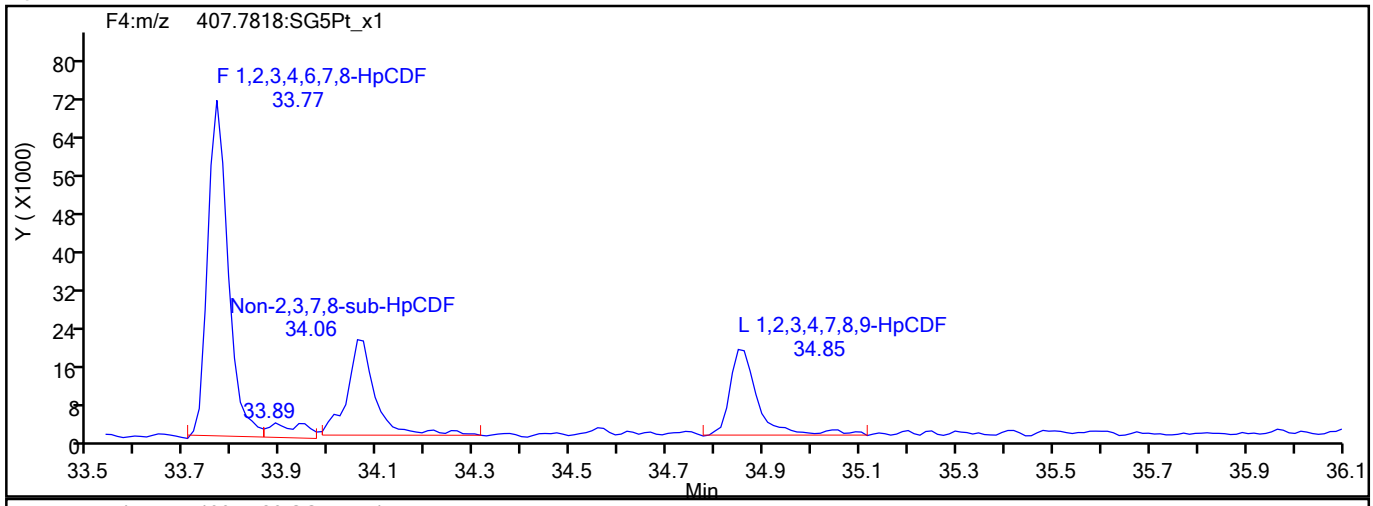

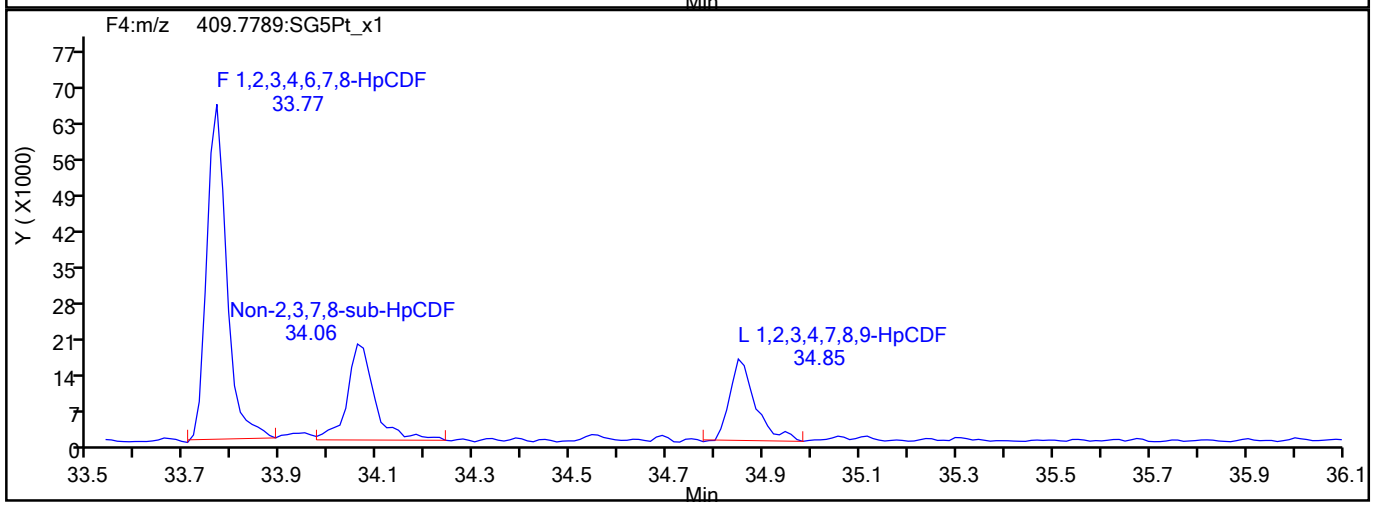

HpCDF Interference Mass

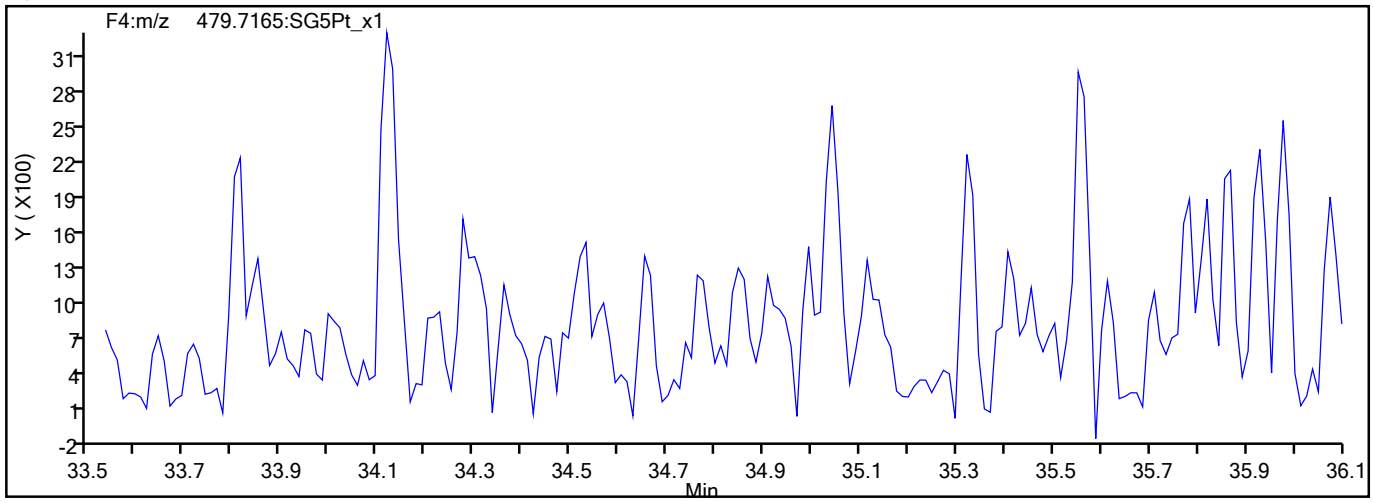

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Eurofins TestAmerica, Sacramento

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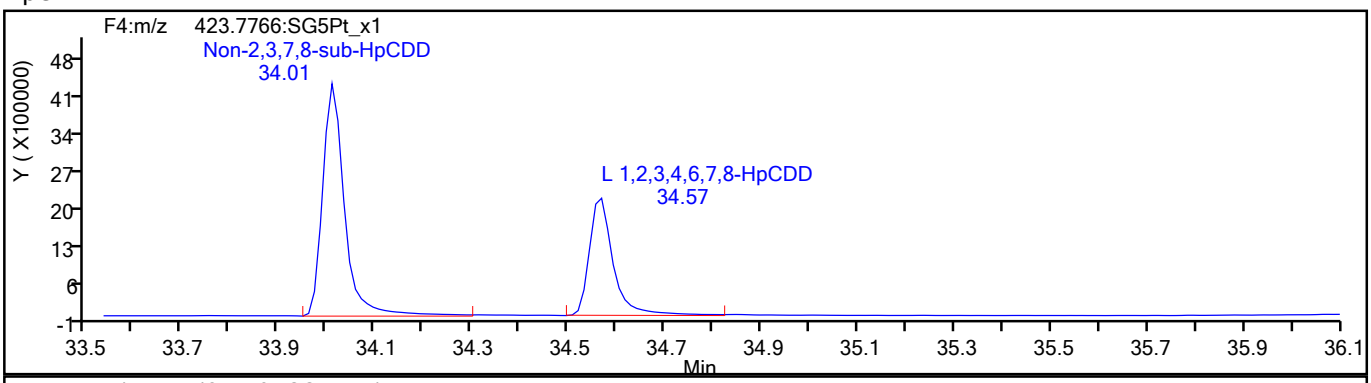

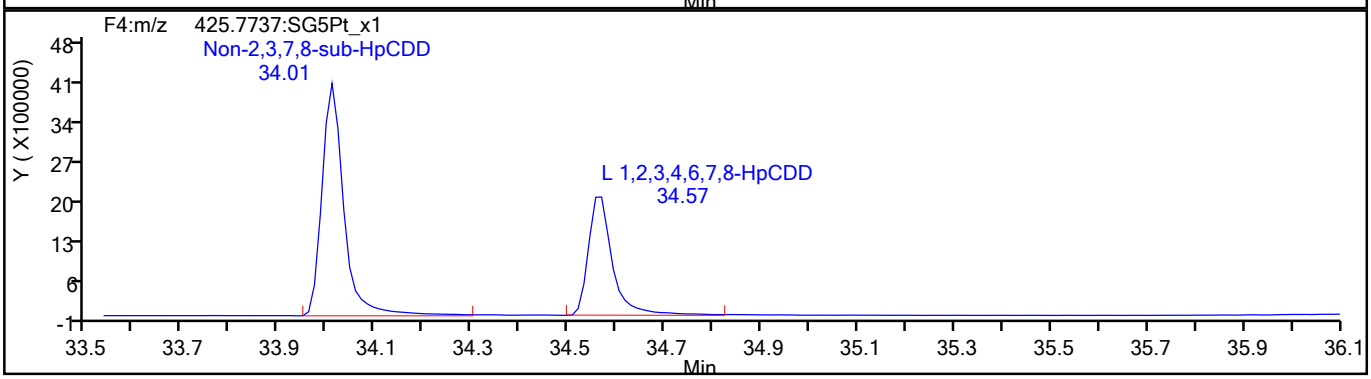

HpCDD Standards

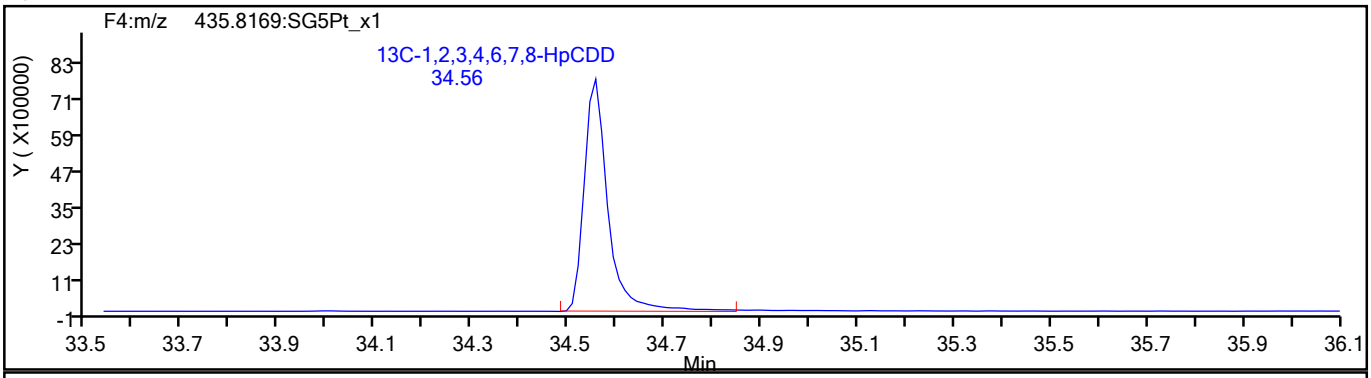

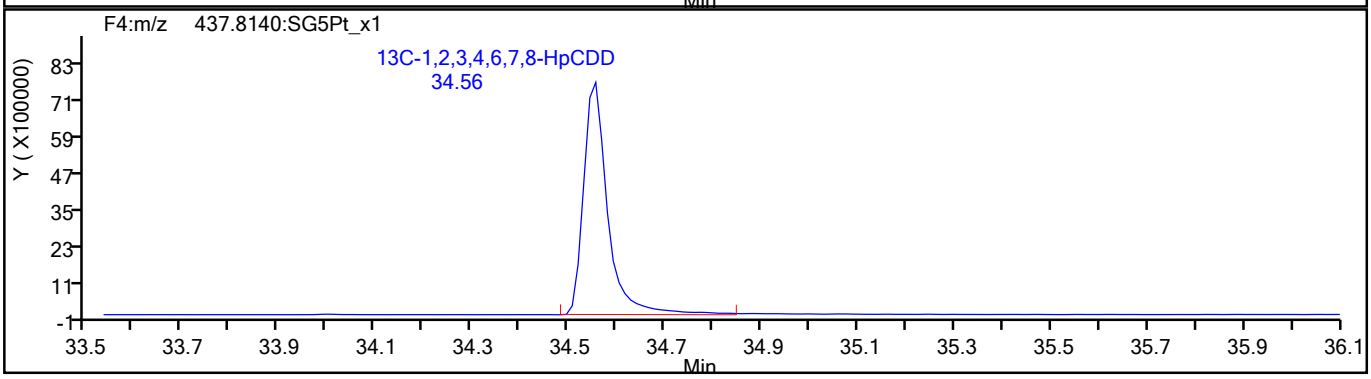

779399

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d		
Injection Date:	14-Aug-2021 06:41:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	516836	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

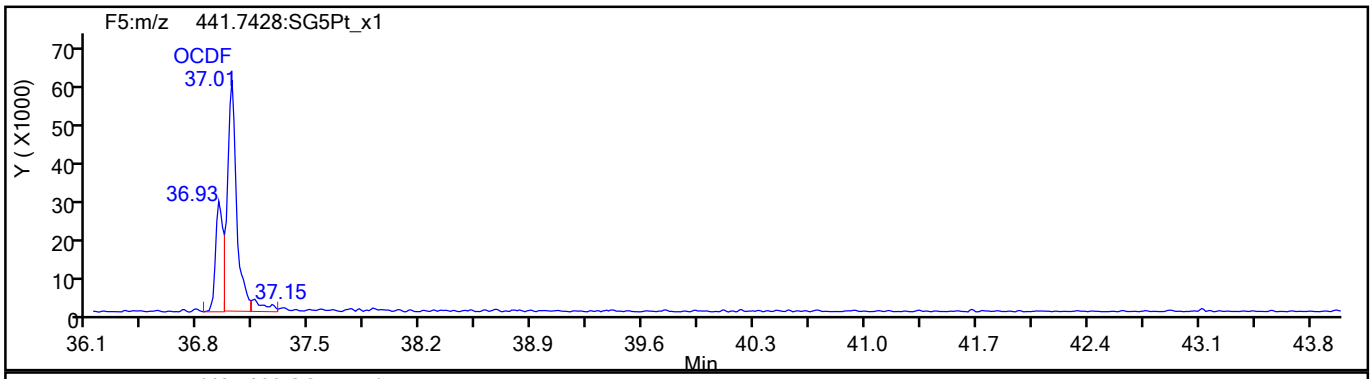

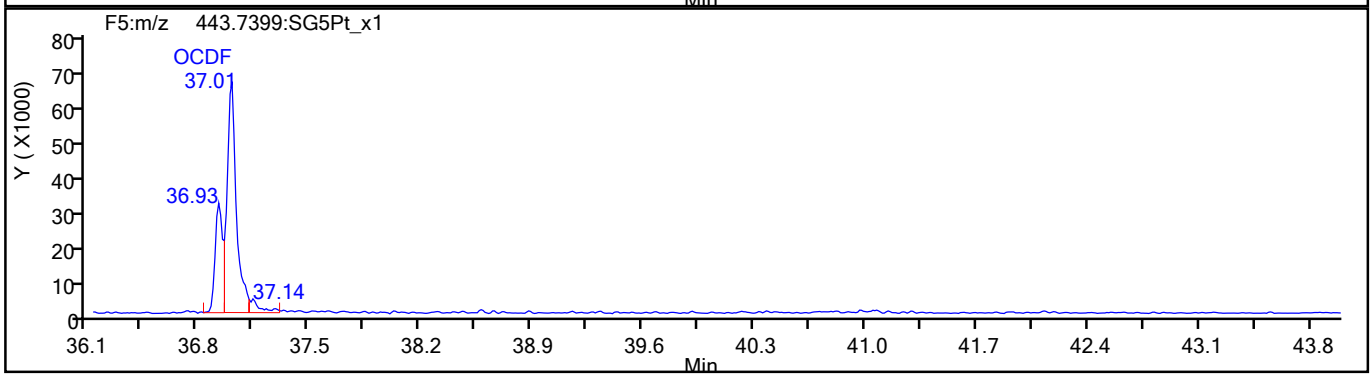

OCDF Standards

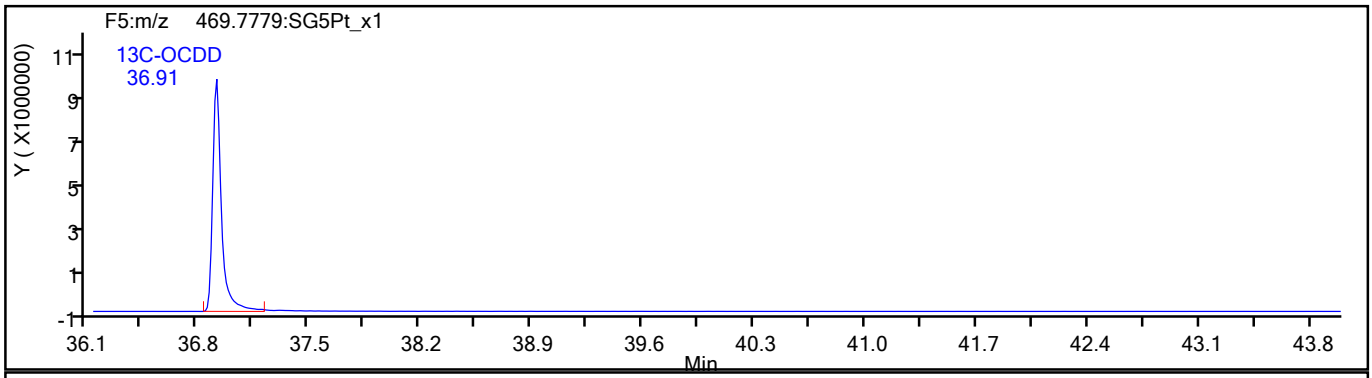

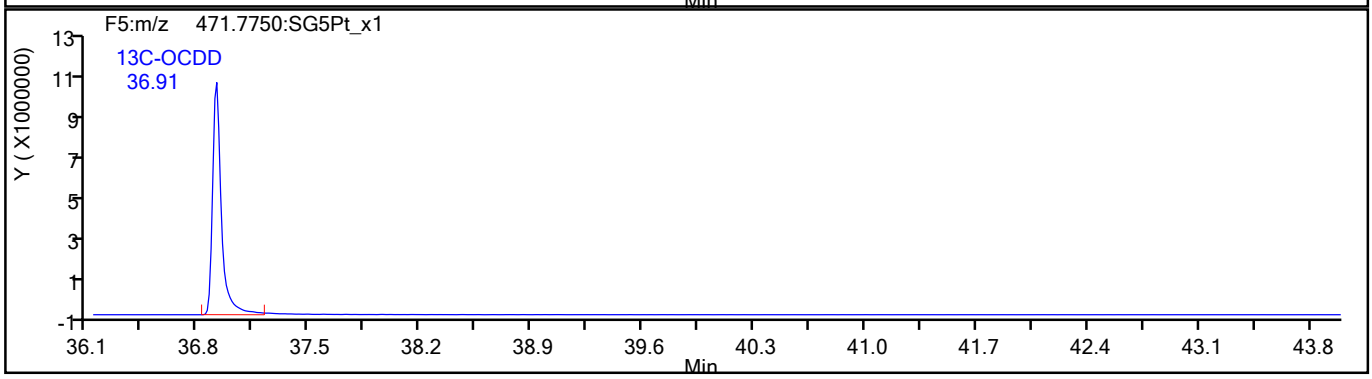

779400

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d		
Injection Date:	14-Aug-2021 06:41:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	516836	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

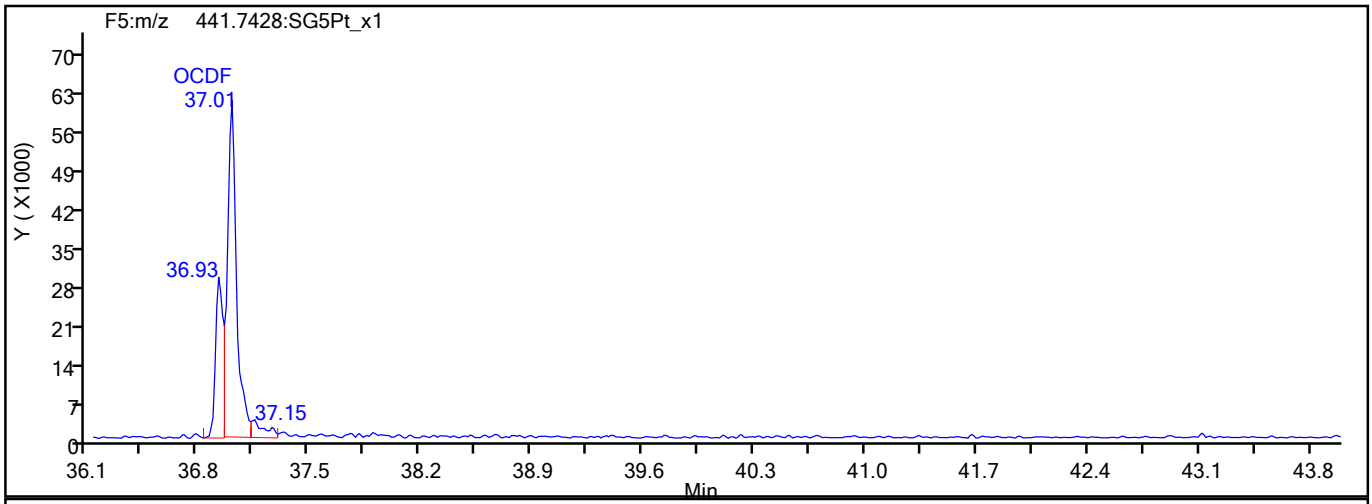

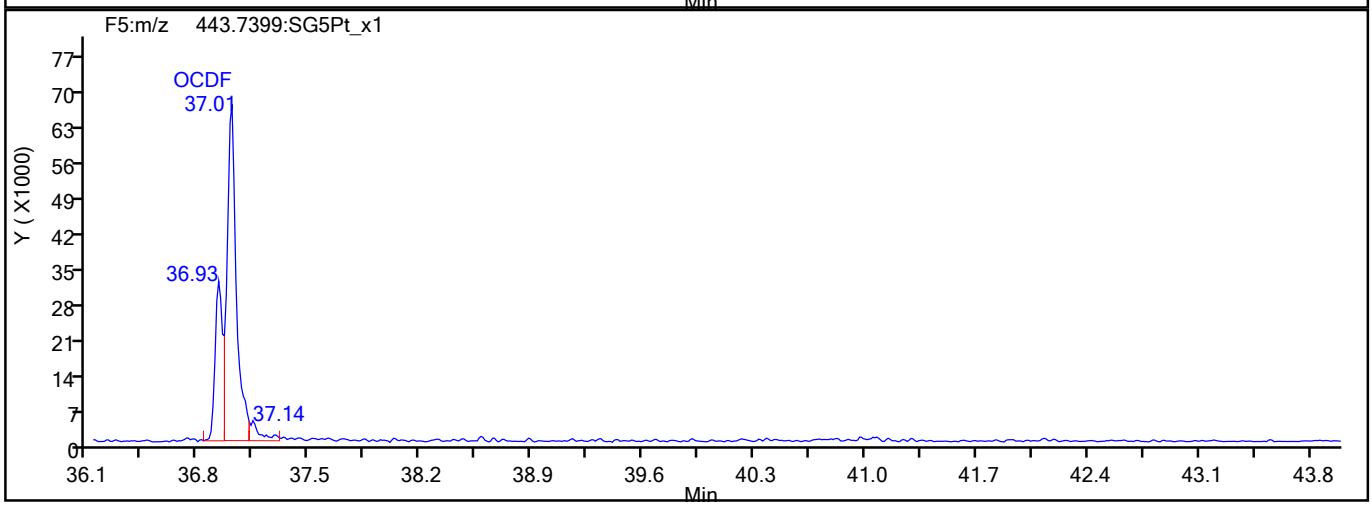

OCDF Interference Mass

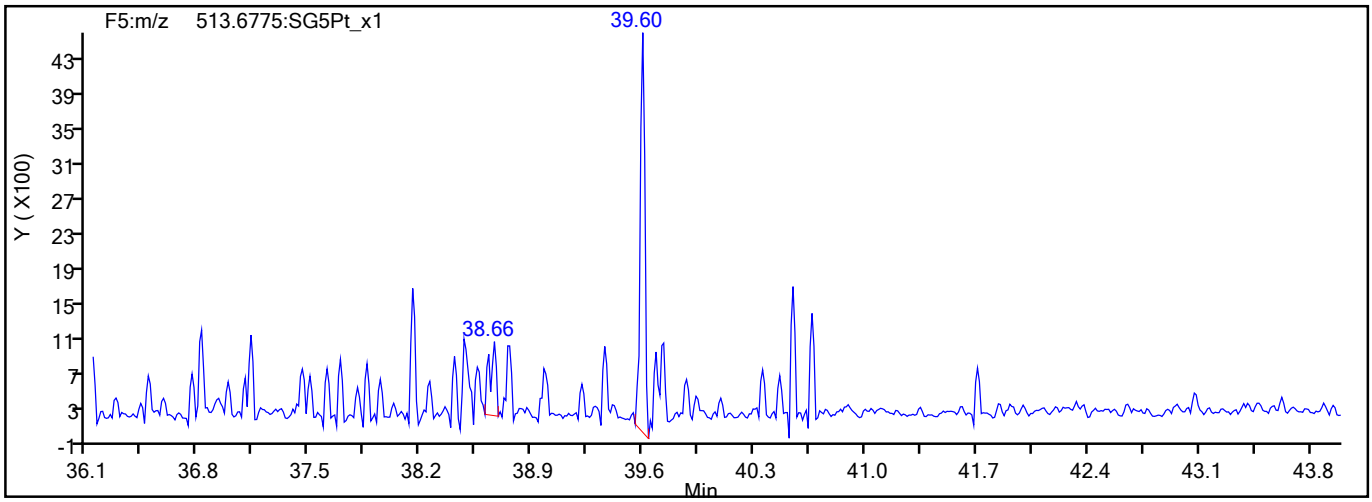

779401

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d		
Injection Date:	14-Aug-2021 06:41:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	516836	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

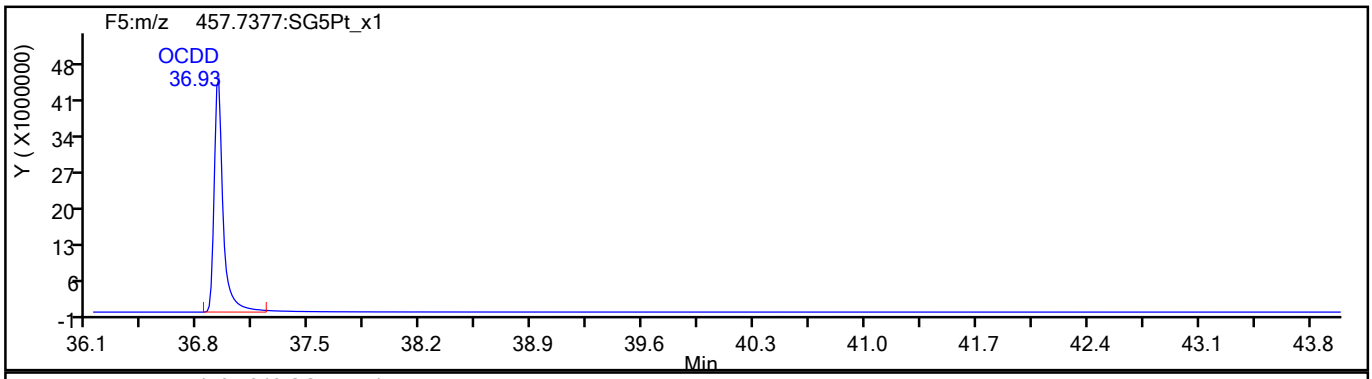

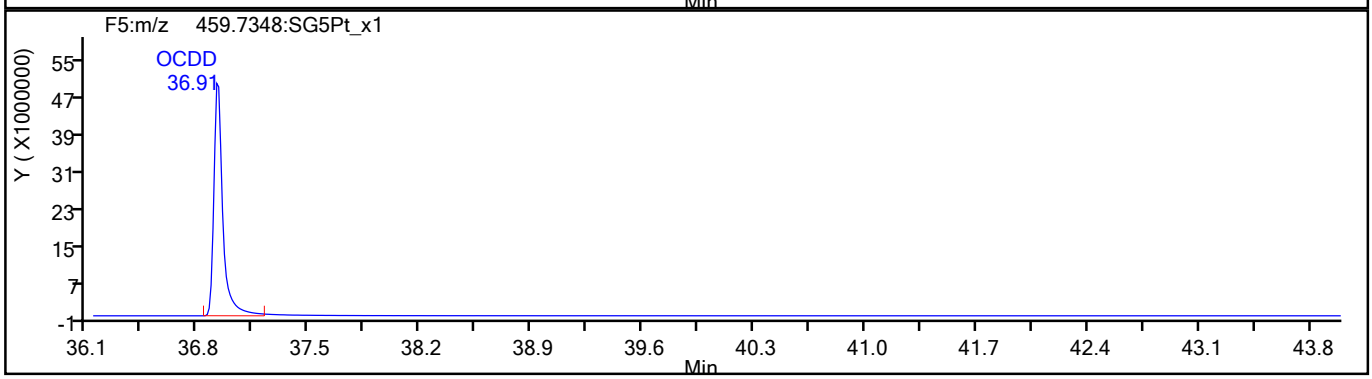

OCDD Standards

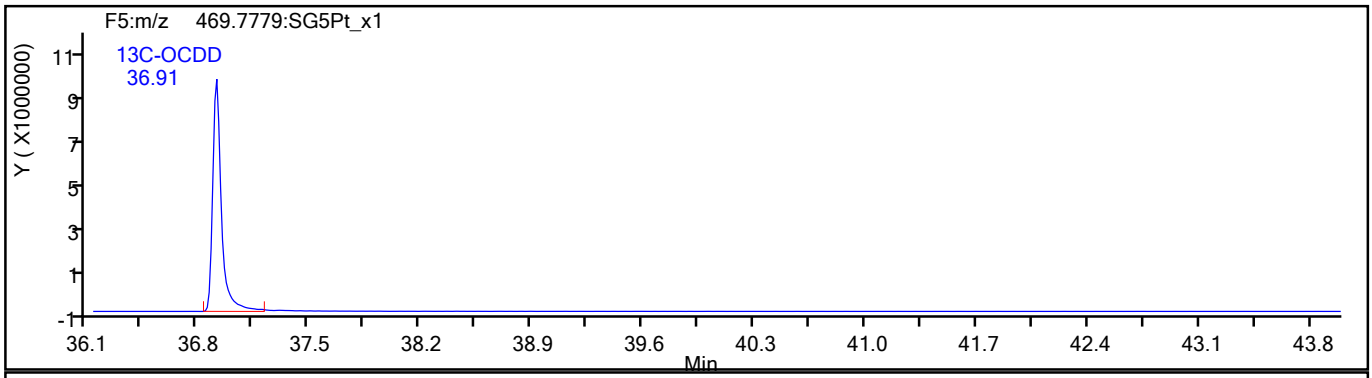

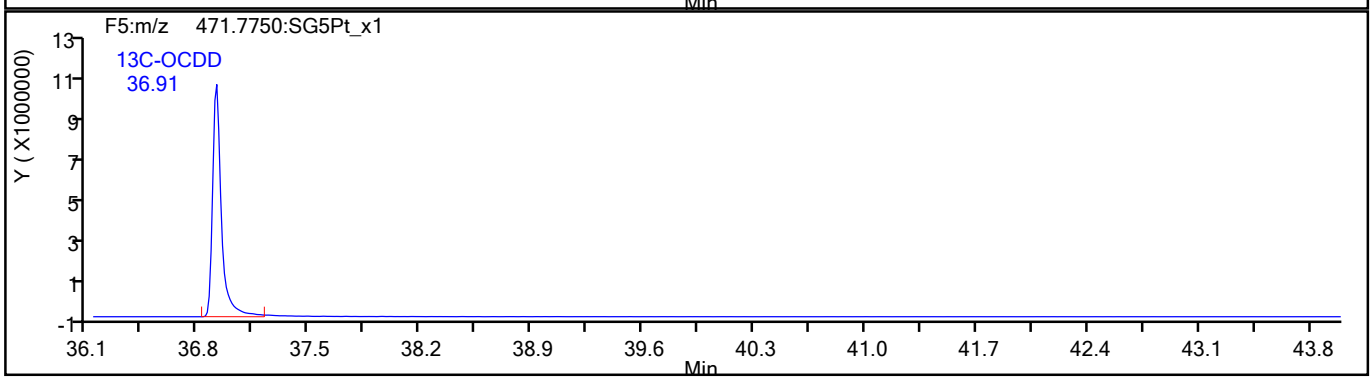

779402

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d		
Injection Date:	14-Aug-2021 06:41:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	516836	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

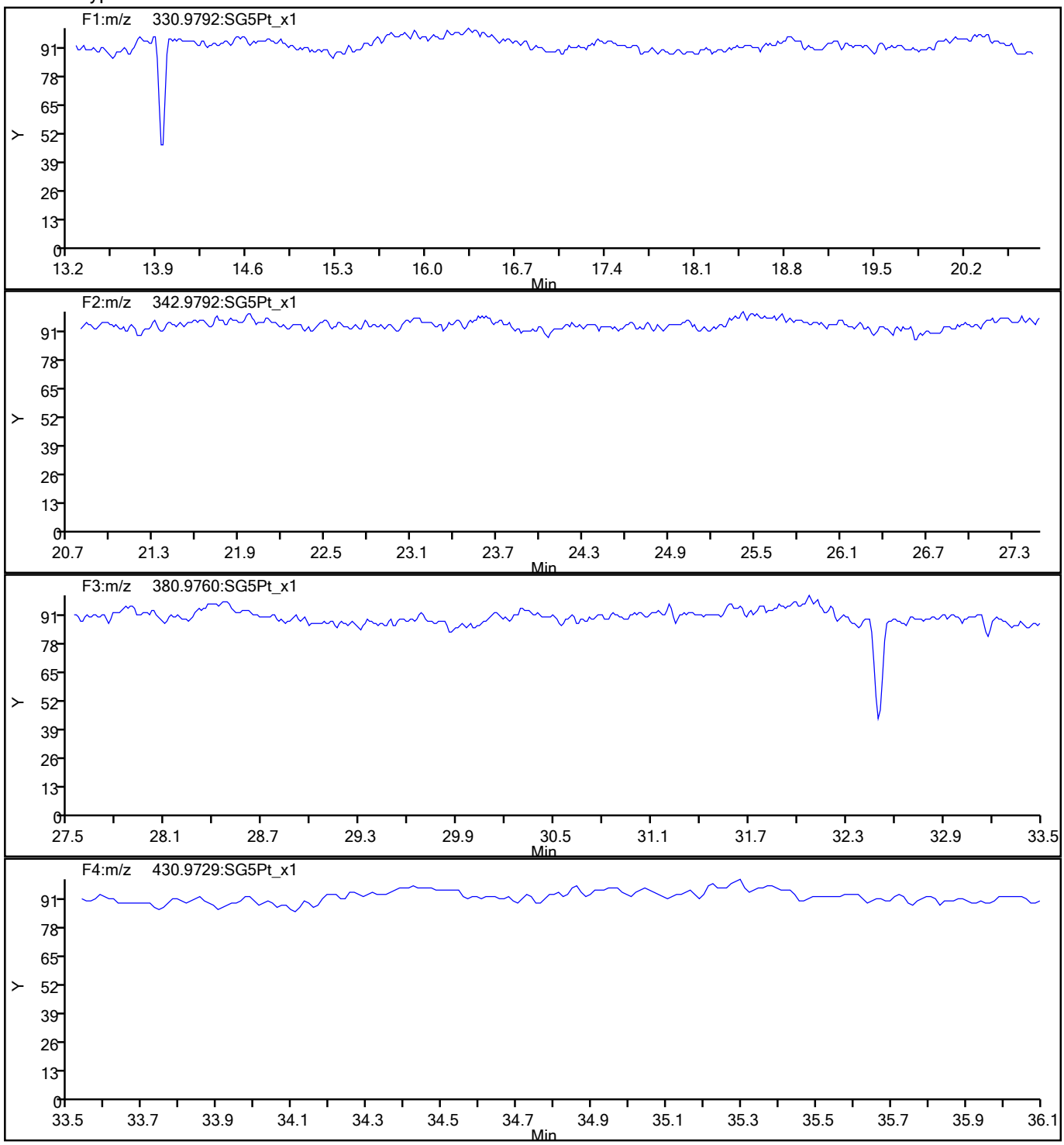

779403

Report Date: 18-Aug-2021 09:03:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_19.d		
Injection Date:	14-Aug-2021 06:41:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	516836	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

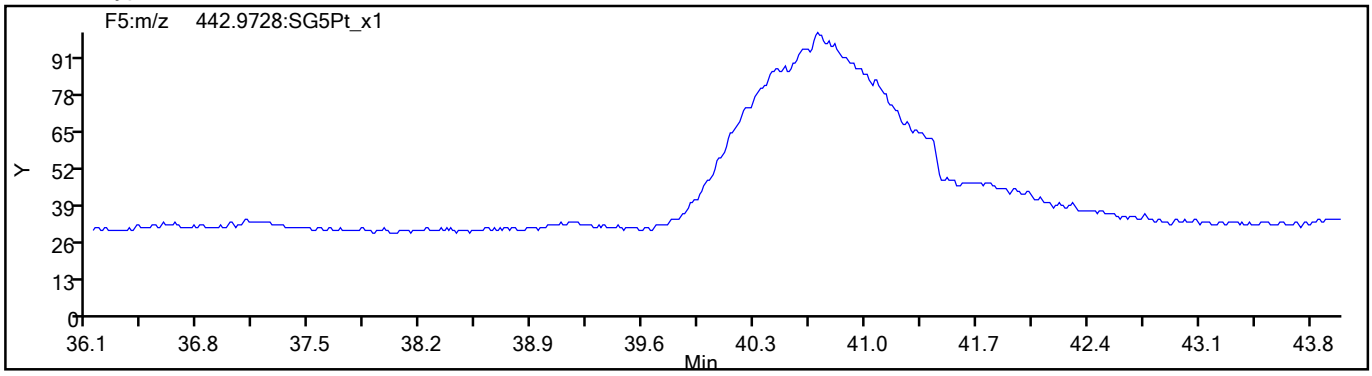

779404

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (6-8) RA
Lab Sample ID: 320-76788-4 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_010.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:15
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.06(g)
Date Analyzed: 08/24/2021 22:22
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 29.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	97	B	1.4	0.33

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	63		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	73		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_010.d
Lims ID: 320-76788-A-4-A
Client ID: 11215702-072321-BN-SJSB085 (6-8)
Sample Type: Client
Inject. Date: 24-Aug-2021 22:22:15 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-4-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:31:24

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.292	66456128	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.608	55634965	0.82	1.3327	62.8	62.8	0.2507	0.2507	62.82	
2,3,7,8-TCDF	17.636	19046697	0.79	0.9978	34.3	34.3	0.1151	0.1151		
D 13C-2,3,7,8-TCDD	16.059	34228243	0.81	0.8749	58.9	58.9	0.996	0.996	58.87	
$ 37Cl4-2,3,7,8-TCDD	16.086	16808206		0.8648	29.2	29.2	0.0545	0.0545	73.11	
2,3,7,8-TCDD	16.086	4091614	0.74	1.0570	11.3	11.3	0.1412	0.1412		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Report Date: 25-Aug-2021 09:02:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_010.d
Lims ID: 320-76788-A-4-A
Client ID: 11215702-072321-BN-SJSB085 (6-8)
Sample Type: Client
Inject. Date: 24-Aug-2021 22:22:15 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-4-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:31:24

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.292	16.285	0		28734391	6229972	21637	54092	288		
333.9339	16.292	16.285	0		37721737	8350757	29177	72942	286	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.608	17.601	0	1.081	25078391	4842489	10043	25107	482		
317.9389	17.608	17.601	0	1.081	30556574	5677424	9441	23602	601	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.636	17.629	0	1.002	8430922	1583221	2492	6230	635		
305.8987	17.636	17.629	0	1.002	10615775	1980230	2342	5855	846	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.059	16.051	0	0.986	15267811	3579479	21637	54092	165		
333.9339	16.059	16.051	0	0.986	18960432	4399957	29177	72942	151	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.086	16.065	1	0.987	16808206	3719075	2747	6867	1354		
2,3,7,8-TCDD											
319.8965	16.086	16.079	0	1.002	1739484	382955	2684	6710	143		
321.8936	16.086	16.079	0	1.002	2352130	520942	2078	5195	251	0.74(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 25-Aug-2021 09:02:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_010.d		
Injection Date:	24-Aug-2021 22:22:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	519540	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

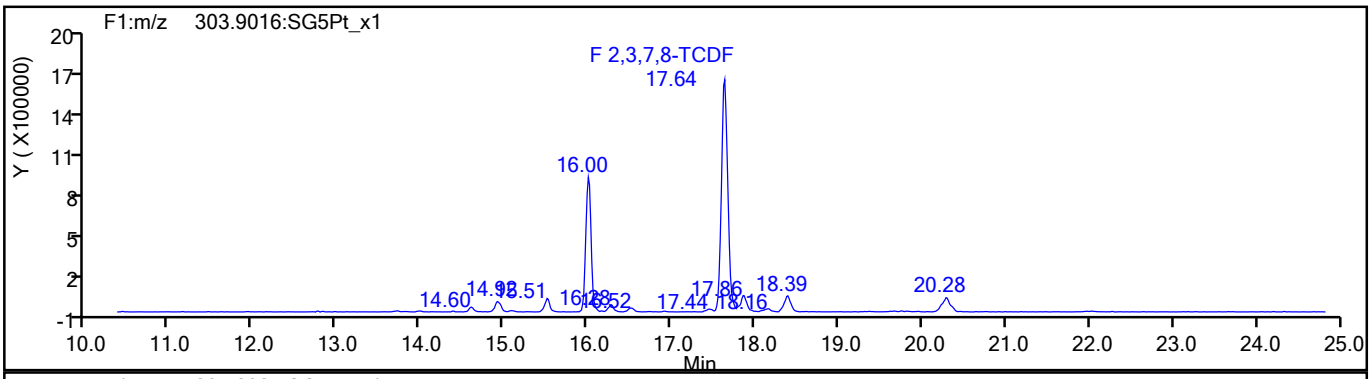

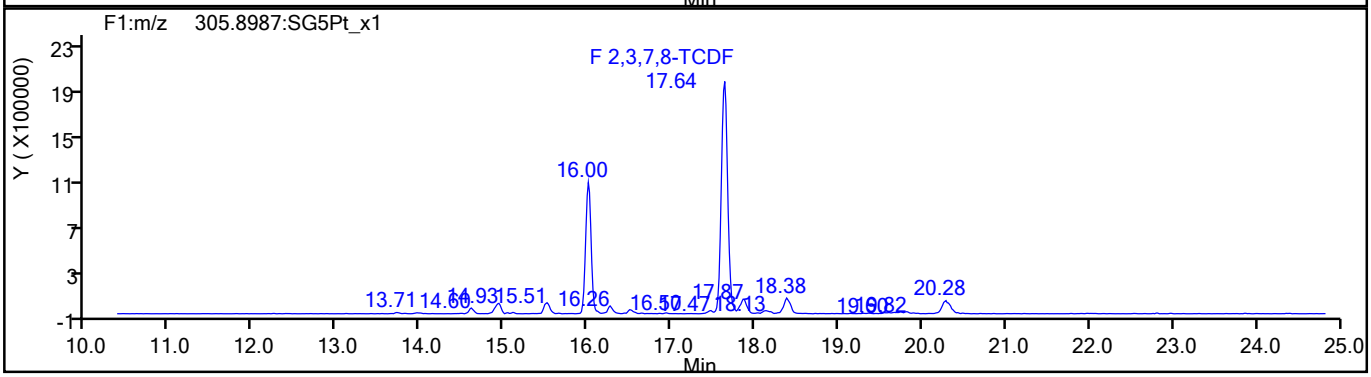

TCDF Standards

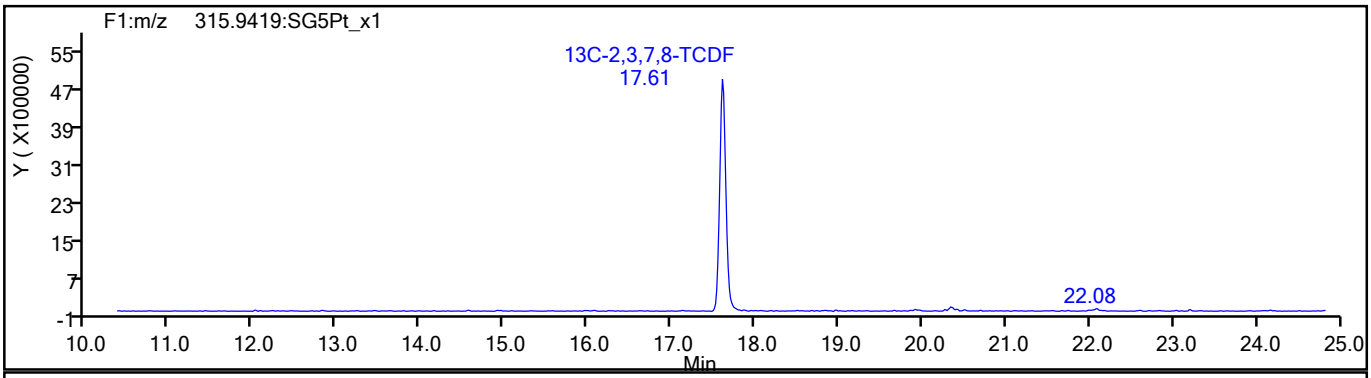

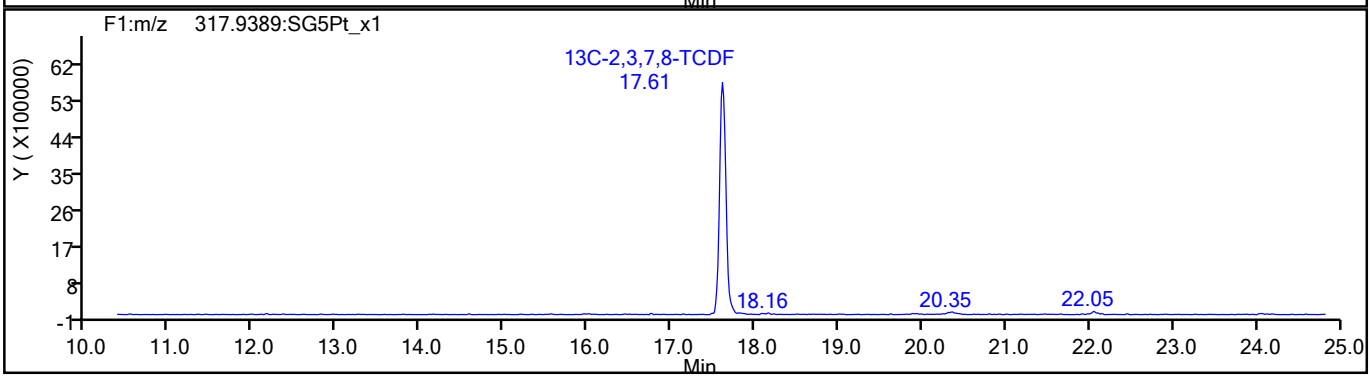

779408

Report Date: 25-Aug-2021 09:02:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_010.d		
Injection Date:	24-Aug-2021 22:22:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	519540	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

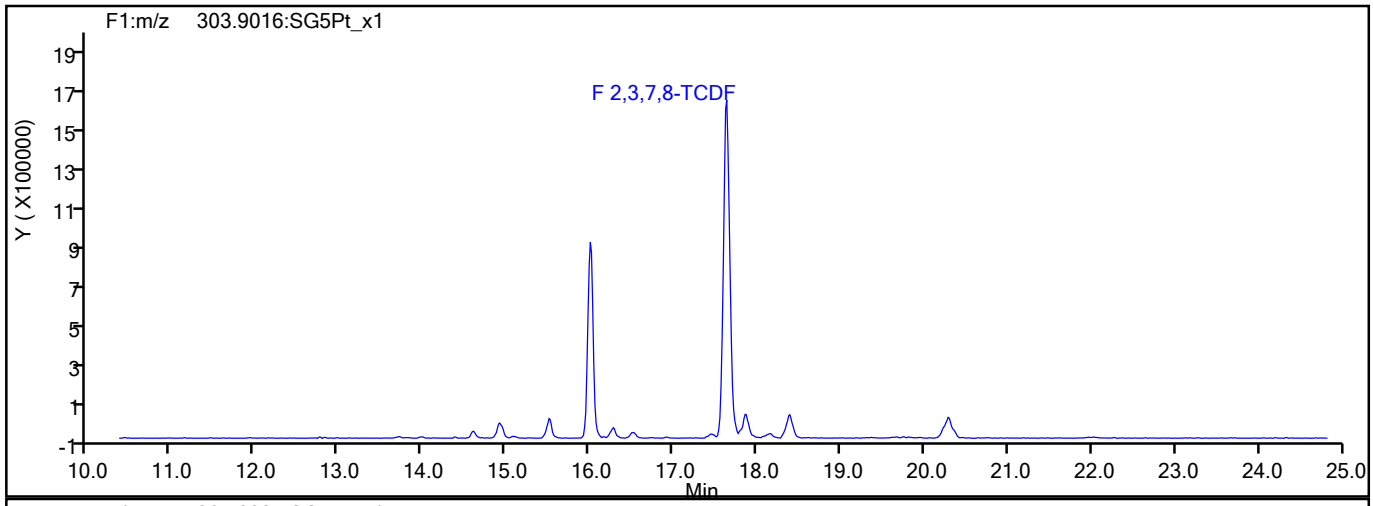

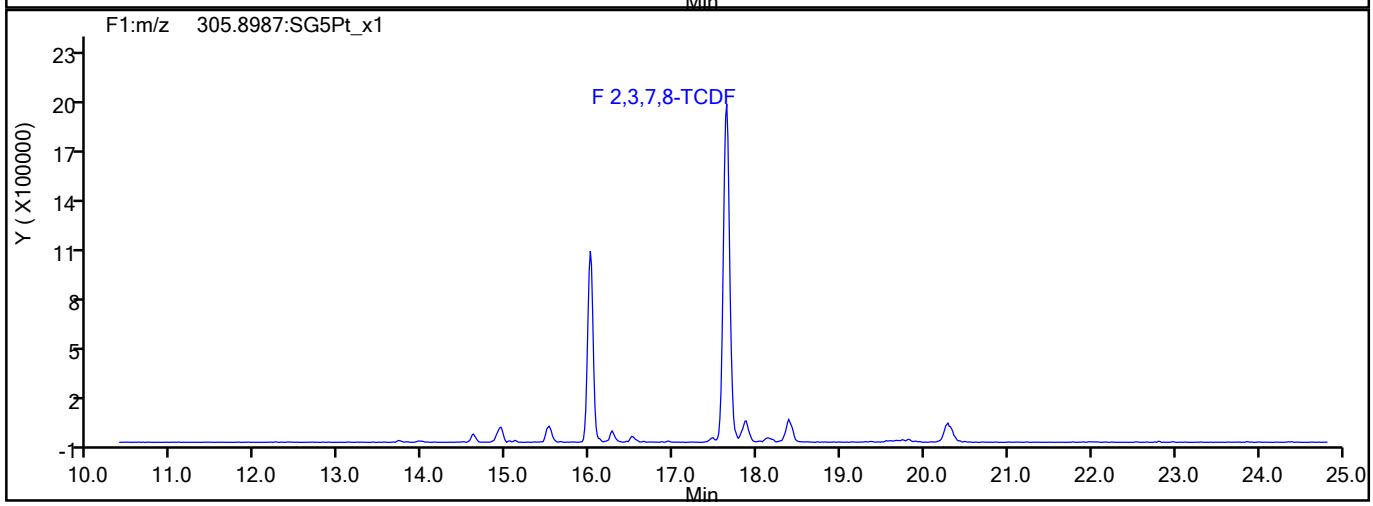

TCDF Interference Mass

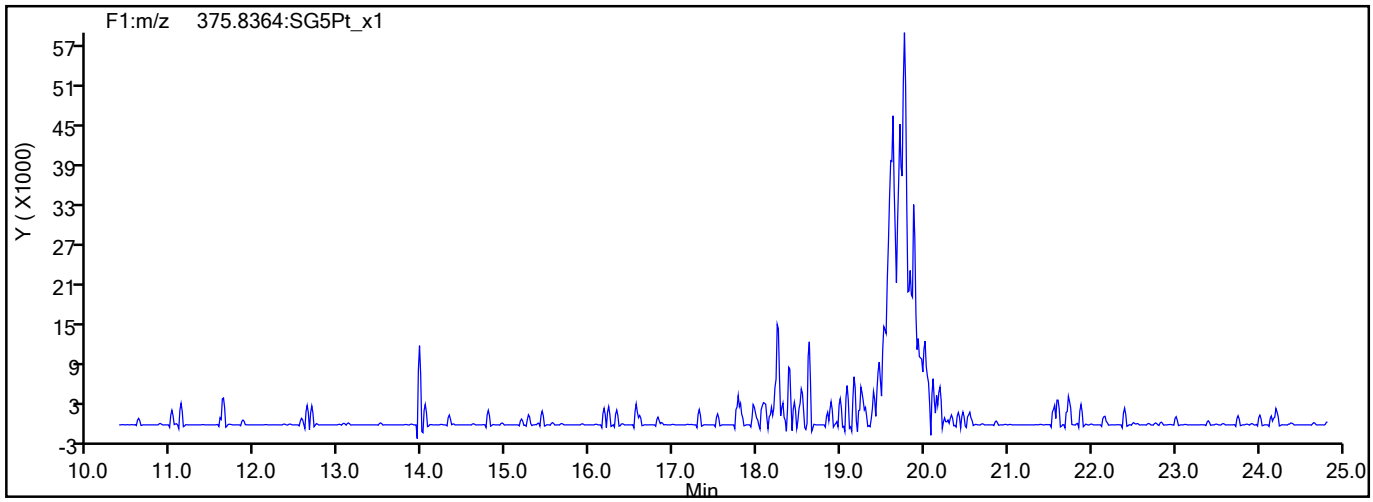

779409

Report Date: 25-Aug-2021 09:02:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_010.d		
Injection Date:	24-Aug-2021 22:22:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	519540	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

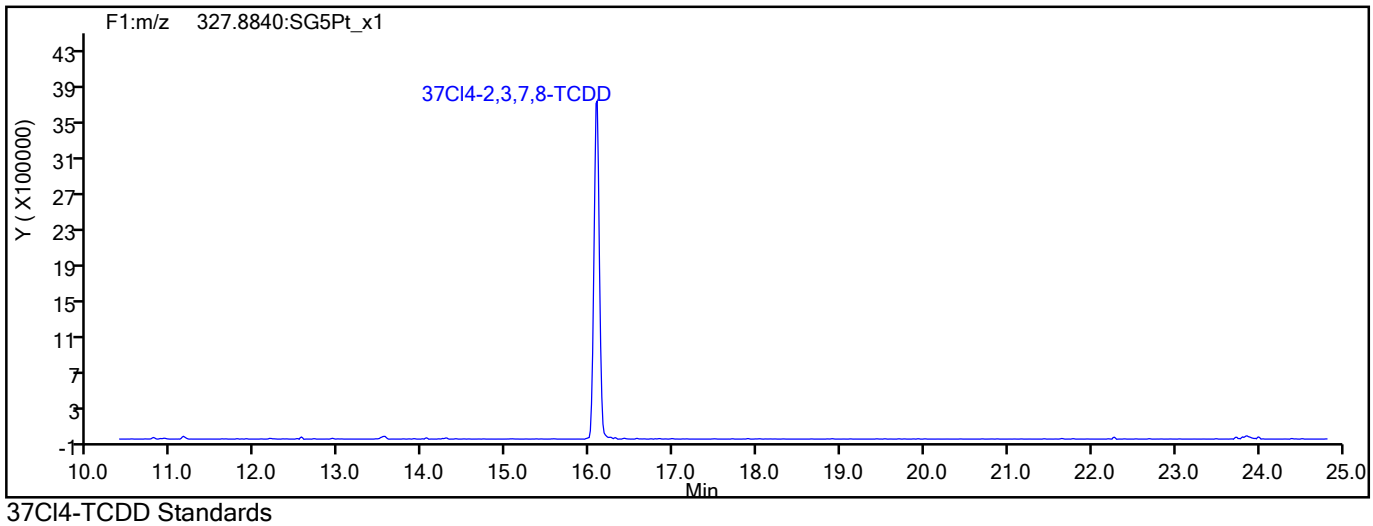

37Cl4-TCDD Standards

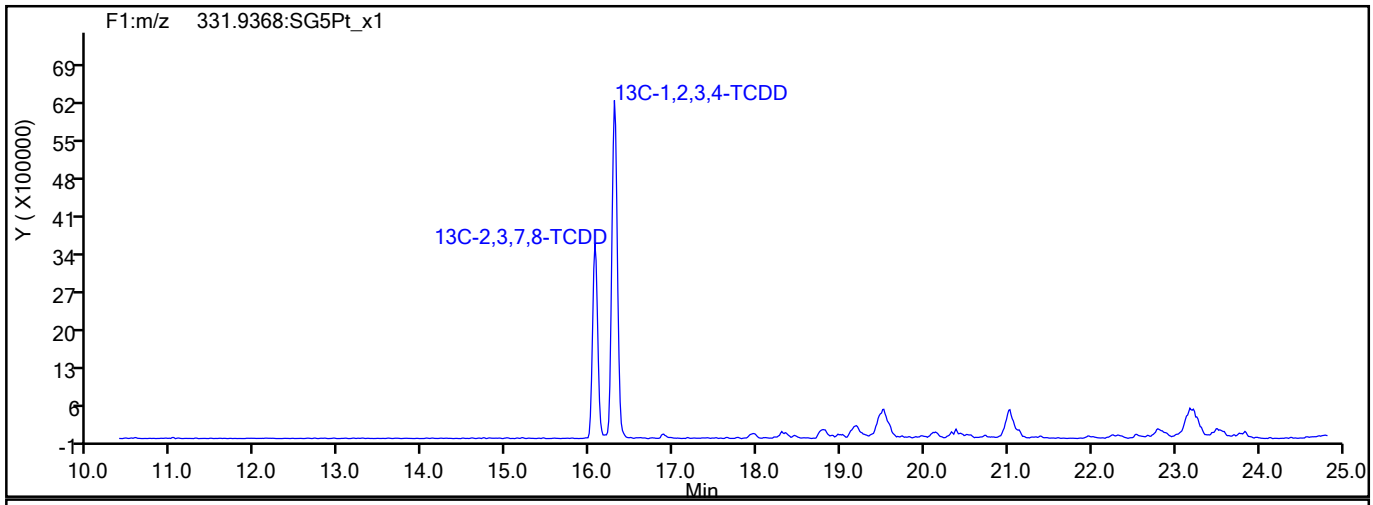

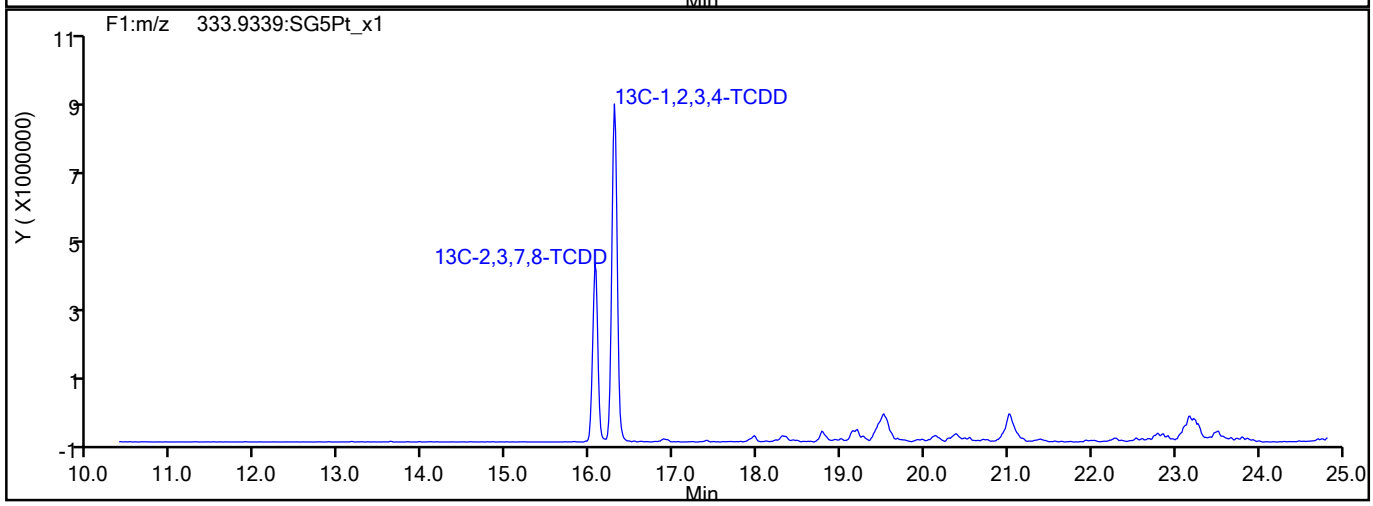

779410

Report Date: 25-Aug-2021 09:02:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_010.d		
Injection Date:	24-Aug-2021 22:22:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (6-8)		
Worklist#:	519540	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

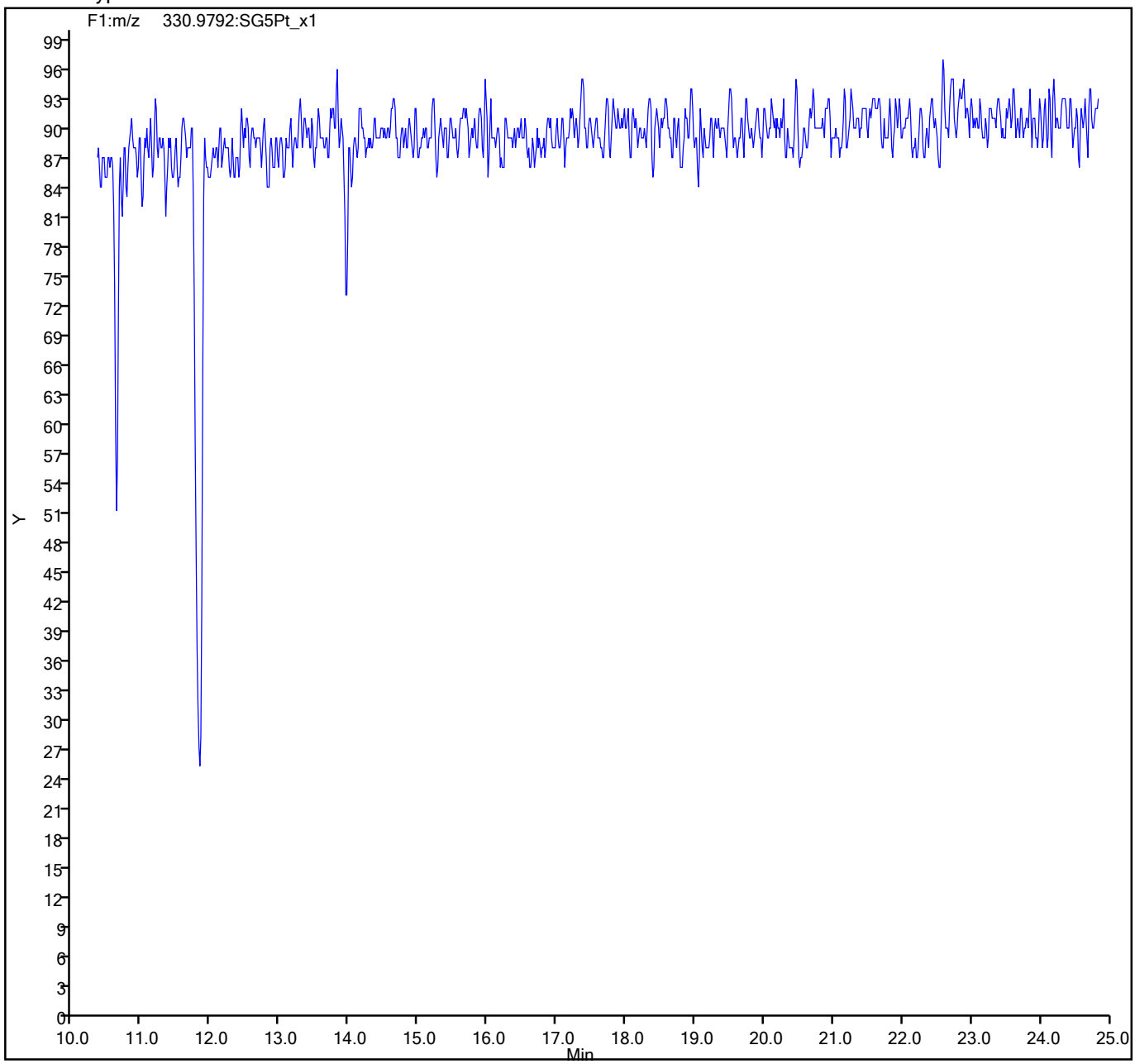

779411

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (8-10)
Lab Sample ID: 320-76788-5
Matrix: Solid
Lab File ID: 13AU2110D5_20.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:20
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.72(g)
Date Analyzed: 08/14/2021 07:26
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	18	B	1.4	0.13
40321-76-4	1,2,3,7,8-PeCDD	0.27	J	6.8	0.060
57117-41-6	1,2,3,7,8-PeCDF	1.7	J	6.8	0.034
57117-31-4	2,3,4,7,8-PeCDF	0.95	J	6.8	0.036
39227-28-6	1,2,3,4,7,8-HxCDD	0.42	J B	6.8	0.11
57653-85-7	1,2,3,6,7,8-HxCDD	0.53	J	6.8	0.12
19408-74-3	1,2,3,7,8,9-HxCDD	0.98	J q	6.8	0.11
70648-26-9	1,2,3,4,7,8-HxCDF	2.5	J B	6.8	0.030
57117-44-9	1,2,3,6,7,8-HxCDF	0.77	J B	6.8	0.031
72918-21-9	1,2,3,7,8,9-HxCDF	0.12	J B	6.8	0.024
60851-34-5	2,3,4,6,7,8-HxCDF	0.090	J	6.8	0.025
35822-46-9	1,2,3,4,6,7,8-HpCDD	24	B	6.8	0.53
67562-39-4	1,2,3,4,6,7,8-HpCDF	1.0	J B	6.8	0.028
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.26	J B	6.8	0.035
3268-87-9	OCDD	750	B	14	0.89
39001-02-0	OCDF	1.1	J B	14	0.022
41903-57-5	Total TCDD	23	B q	1.4	0.13
30402-14-3	Total TCDF	100	B	1.4	0.19
36088-22-9	Total PeCDD	4.1	J q	6.8	0.060
30402-15-4	Total PeCDF	4.1	J q	6.8	0.035
34465-46-8	Total HxCDD	19	B q	6.8	0.11
55684-94-1	Total HxCDF	3.9	J B q	6.8	0.028
37871-00-4	Total HpCDD	79	B	6.8	0.53
38998-75-3	Total HpCDF	1.5	J B	6.8	0.031

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (8-10)
Lab Sample ID: 320-76788-5
Matrix: Solid
Lab File ID: 13AU2110D5_20.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:20
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.72(g)
Date Analyzed: 08/14/2021 07:26
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	78		25-164
89059-46-1	13C-2,3,7,8-TCDF	75		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	76		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	73		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	79		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	80		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	71		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	79		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	70		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	72		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	71		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	80		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	79		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	90		26-138
114423-97-1	13C-OCDD	88		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	81		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d
Lims ID: 320-76788-A-5-A
Client ID: 11215702-072321-BN-SJSB085 (8-10)
Sample Type: Client
Inject. Date: 14-Aug-2021 07:26:23 ALS Bottle#: 21 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-5-a 320-76788-a-5-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:07:00 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:41:36

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	130299862	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	158764290	0.77	1.6249	75.0	75.0	0.1719	0.1719	74.99	
2,3,7,8-TCDF	17.371	36145902	0.76	1.0239	22.2	22.2	0.0686	0.0686		
A Non-2,3,7,8-sub-TCDF	17.046	24969227	0.77	1.0239	15.4	15.4	0.0686	9.594		
S Total TCDF					37.6	37.6	0.0686	0.0686		
D 13C-2,3,7,8-TCDD	18.051	91057850	0.82	0.8993	77.7	77.7	0.1340	0.1340	77.71	
2,3,7,8-TCDD	18.082	7759210	0.77	1.2541	6.795	6.795	0.0486	0.0486		M
$ 37Cl4-2,3,7,8-TCDD	18.082	46648244		1.1071	32.3	32.3	0.0355	0.0355	80.84	
A Non-2,3,7,8-sub-TCDD	17.499	1793955	0.77	1.2541	1.621	1.571	0.0486	0.6074		RQMa
S Total TCDD					8.415	8.365	0.0486	0.0486		RQ
D 13C-1,2,3,7,8-PeCDF	22.367	115316502	1.57	1.2101	73.1	73.1	0.1566	0.1566	73.14	
1,2,3,7,8-PeCDF	22.394	750408	1.68	1.0611	0.6132	0.6132	0.0126	0.0126		M
D 13C-2,3,4,7,8-PeCDF	23.717	127402838	1.56	1.2395	78.9	78.9	0.1529	0.1529	78.88	
2,3,4,7,8-PeCDF	23.744	451455	1.54	1.0184	0.3479	0.3479	0.0132	0.0132		M
A F1 PeCDFs	20.093						0.008624	0.008624		
A Non-2,3,7,8-sub-PeCDF	23.241	671060	1.55	1.0398	0.5465	0.5318	0.0129	0.2283		RQMa
S Total PeCDF					1.508	1.493	0.0129	0.0129		RQ
D 13C-1,2,3,7,8-PeCDD	24.440	75462463	1.59	0.7612	76.1	76.1	0.0692	0.0692	76.08	
1,2,3,7,8-PeCDD	24.467	77366	1.39	1.0484	0.0978	0.0978	0.0223	0.0223		
A Non-2,3,7,8-sub-PeCDD	23.349	1122502	1.55	1.0484	1.436	1.419	0.0223	0.7592		RQ
S Total PeCDD					1.534	1.517	0.0223	0.0223		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	104603417	0.52	1.0837	79.0	79.0	0.3134	0.3134	79.03	
1,2,3,4,7,8-HxCDF	30.529	1058231	1.20	1.0851	0.9323	0.9323	0.0111	0.0111		
D 13C-1,2,3,6,7,8-HxCDF	30.689	96878542	0.52	1.1279	70.3	70.3	0.3011	0.3011	70.33	
1,2,3,6,7,8-HxCDF	30.716	310428	1.19	1.1260	0.2846	0.2846	0.0115	0.0115		
D 13C-2,3,4,6,7,8-HxCDF	31.514	92398000	0.52	1.0637	71.1	71.1	0.3193	0.3193	71.12	
2,3,4,6,7,8-HxCDF	31.541	35712	1.17	1.1675	0.0331	0.0331	0.009107	0.009107		M
D 13C-1,2,3,7,8,9-HxCDF	32.326	85289077	0.53	0.9676	72.2	72.2	0.3510	0.3510	72.17	
1,2,3,7,8,9-HxCDF	32.340	43111	1.25	1.1664	0.0433	0.0433	0.008864	0.008864		Ma
A Non-2,3,7,8-sub-HxCDF	30.197	140240	1.24	1.1363	0.1365	0.1302	0.0100	0.0682		RQMa

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					1.430	1.424	0.0101	0.0101		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.140	122133782	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	71653336	1.24	0.7334	80.0	80.0	0.2852	0.2852	79.99	
1,2,3,4,7,8-HxCDD	31.727	118223	1.13	1.0640	0.1551	0.1551	0.0419	0.0419		
D 13C-1,2,3,6,7,8-HxCDD	31.820	75893248	1.25	0.8802	70.6	70.6	0.2377	0.2377	70.60	
1,2,3,6,7,8-HxCDD	31.834	149311	1.19	1.0001	0.1967	0.1967	0.0435	0.0435		
1,2,3,7,8,9-HxCDD	32.153	301415	1.24	1.1325	0.3975	0.3608	0.0389	0.0389		RQ
A Non-2,3,7,8-sub-HxCDD	30.882	4897802	1.24	1.0655	6.247	6.231	0.0413	4.584		RQ
S Total HxCDD					6.996	6.943	0.0414	0.0414		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	74151342	0.43	0.7730	78.5	78.5	0.8667	0.8667	78.54	
1,2,3,4,6,7,8-HpCDF	33.778	392094	1.10	1.4413	0.3669	0.3669	0.0102	0.0102		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	77007812	0.44	0.7008	90.0	90.0	0.9560	0.9560	89.97	
1,2,3,4,7,8,9-HpCDF	34.860	97669	1.06	1.3174	0.0963	0.0963	0.0128	0.0128		M
A Non-2,3,7,8-sub-HpCDF	34.319	107072	1.16	1.3793	0.1027	0.1027	0.0114	0.1027		M
S Total HpCDF					0.5659	0.5659	0.0115	0.0115		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	63286969	1.00	0.6472	80.1	80.1	0.4482	0.4482	80.06	
1,2,3,4,6,7,8-HpCDD	34.580	6189319	1.01	1.0943	8.937	8.937	0.1957	0.1957		
A Non-2,3,7,8-sub-HpCDD	34.301	14019288	1.05	1.0943	20.2	20.2	0.1957	20.2		
S Total HpCDD					29.2	29.2	0.1957	0.1957		
D 13C-OCDD	36.926	95962265	0.89	0.4472	175.7	175.7	0.1869	0.1869	87.86	
OCDF	37.022	280106	0.94	1.4382	0.4059	0.4059	0.008122	0.008122		M
OCDD	36.938	145994601	0.89	1.1070	274.9	274.9	0.3292	0.3292		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 18-Aug-2021 09:07:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d
Lims ID: 320-76788-A-5-A
Client ID: 11215702-072321-BN-SJSB085 (8-10)
Sample Type: Client
Inject. Date: 14-Aug-2021 07:26:23 ALS Bottle#: 21 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-5-a 320-76788-a-5-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:07:00 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:41:36

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		58961645	14498254	6753	16882	2147		
333.9339	17.855	17.855	0		71338217	17734965	8787	21967	2018	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.341	1	0.972	69056663	16812427	14419	36047	1166		
317.9389	17.356	17.341	1	0.972	89707627	21703068	21599	53997	1005	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.356	1	1.001	15649016	3736275	4684	11710	798		
305.8987	17.371	17.356	1	1.001	20496886	4877196	6130	15325	796	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.950	17.046	-66	0.919	216077	58178	4684	11710	12		
305.8987	15.950	17.046	-66	0.919	246152	66428	6130	15325	11	0.88(0.65-0.89)	
303.9016	16.237	17.046	-48	0.936	394471	84085	4684	11710	18		
305.8987	16.237	17.046	-48	0.936	537422	114977	6130	15325	19	0.73(0.65-0.89)	
303.9016	16.464	17.046	-35	0.949	439232	105903	4684	11710	23		
305.8987	16.464	17.046	-35	0.949	559757	144391	6130	15325	24	0.78(0.65-0.89)	
303.9016	16.706	17.046	-20	0.963	600446	143034	4684	11710	31		
305.8987	16.706	17.046	-20	0.963	799939	190907	6130	15325	31	0.75(0.65-0.89)	
303.9016	16.978	17.046	-4	0.978	6783385	1721716	4684	11710	368		
305.8987	16.978	17.046	-4	0.978	8812214	2256274	6130	15325	368	0.77(0.65-0.89)	
303.9016	17.205	17.046	10	0.991	230368	53586	4684	11710	11		
305.8987	17.205	17.046	10	0.991	307395	71225	6130	15325	12	0.75(0.65-0.89)	
303.9016	17.794	17.046	45	1.025	1028535	232540	4684	11710	50		
305.8987	17.794	17.046	45	1.025	1260312	299510	6130	15325	49	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.036	17.046	59	1.039	206095	45692	4684	11710	10		
305.8987	18.036	17.046	59	1.039	256182	61112	6130	15325	10	0.80(0.65-0.89)	
303.9016	19.185	17.046	128	1.105	991873	213035	4684	11710	45		
305.8987	19.185	17.046	128	1.105	1299372	283572	6130	15325	46	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	40961486	9342125	6753	16882	1383		
333.9339	18.051	18.051	0	1.011	50096364	11348518	8787	21967	1292	0.82(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	18.082	18.066	1	1.002	3385294	790287	2607	6517	303		M
321.8936	18.082	18.066	1	1.002	4373916	1024373	2442	6105	419	0.77(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.066	1	1.013	46648244	10751020	5067	12667	2122		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	16.373	17.499	-67	0.907	79119	19859	2607	6517	8		
321.8936	16.373	17.499	-67	0.907	96738	25858	2442	6105	11	0.82(0.65-0.89)	
319.8965	16.933	17.499	-34	0.938	310320	81544	2607	6517	31		
321.8936	16.933	17.499	-34	0.938	383274	96238	2442	6105	39	0.81(0.65-0.89)	
319.8965	17.825	17.499	19	0.987	89681	23718	2607	6517	9		
321.8936	17.825	17.499	19	0.987	111644	27117	2442	6105	11	0.80(0.65-0.89)	
319.8965	17.976	17.499	29	0.996	49120	16185	2607	6517	6		M
321.8936	17.961	17.499	28	0.995	60176	18512	2442	6105	8	0.82(0.65-0.89)	
319.8965	18.429	17.499	56	1.021	323708	60825	2607	6517	23		
	Empc Correction				267056	59794	2607	6517	23		
321.8936	18.429	17.499	56	1.021	346827	77655	2442	6105	32	0.93(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	70492181	12027348	14734	36835	816		
353.8970	22.367	22.367	0	1.253	44824321	7742964	9696	24240	799	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.394	22.380	1	1.001	470176	80429	473	1182	170		M
341.8567	22.408	22.380	2	1.002	280232	45147	581	1452	78	1.68(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.328	77718077	11925995	14734	36835	809		
353.8970	23.717	23.703	1	1.328	49684761	7716138	9696	24240	796	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	23.744	23.730	1	1.001	273516	42751	473	1182	90		
341.8567	23.744	23.730	1	1.001	177939	28723	581	1452	49	1.54(1.32-1.78)	M
A F1 PeCDFs											
339.8597	20.093						213	532			
341.8567	20.093						494	1235			
A Non-2,3,7,8-sub-PeCDF											RQMa
339.8597	21.058	23.241	-131	0.941	172878	30961	473	1182	65		
341.8567	21.058	23.241	-131	0.941	115248	22398	581	1452	39	1.50(1.32-1.78)	
339.8597	22.271	23.241	-58	0.996	34982	8912	473	1182	19		M
	Empc Correction				24680	6855	473	1182	14		
341.8567	22.244	23.241	-60	0.995	15923	4423	581	1452	8	2.20(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	22.912	23.241	-20	1.024	117286	19436	473	1182	41		
341.8567	22.899	23.241	-20	1.024	78036	11996	581	1452	21	1.50(1.32-1.78)	
339.8597	24.072	23.241	50	1.076	72560	10830	473	1182	23		
341.8567	24.072	23.241	50	1.076	43108	6020	581	1452	10	1.68(1.32-1.78)	
339.8597	25.681	23.241	146	1.148	19051	2273	473	1182	5		
341.8567	25.681	23.241	146	1.148	20595	3059	581	1452	5	0.93(1.32-1.78)	
	Empc Correction				12290	1466	581	1452	3		
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.369	46329447	6847912	3854	9635	1777		
369.8919	24.440	24.426	1	1.369	29133016	4337807	2935	7337	1478	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.467	24.453	1	1.001	44953	8954	646	1615	14		
357.8516	24.467	24.453	1	1.001	32413	6409	398	995	16	1.39(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.249	23.349	-126	0.869	133493	22863	646	1615	35		
357.8516	21.235	23.349	-127	0.869	82881	14521	398	995	36	1.61(1.32-1.78)	
355.8546	21.999	23.349	-81	0.900	367840	60446	646	1615	94		
357.8516	21.985	23.349	-82	0.900	232782	42665	398	995	107	1.58(1.32-1.78)	
355.8546	22.994	23.349	-21	0.941	17926	3282	646	1615	5		
	Empc Correction				12996	2365	646	1615	4		
357.8516	23.008	23.349	-20	0.941	8385	1526	398	995	4	2.14(1.32-1.78)	
355.8546	23.294	23.349	-3	0.953	50383	8379	646	1615	13		
	Empc Correction				41496	8579	646	1615	13		
357.8516	23.281	23.349	-4	0.953	26772	5535	398	995	14	1.88(1.32-1.78)	
355.8546	23.472	23.349	7	0.960	128520	17825	646	1615	28		
357.8516	23.485	23.349	8	0.961	87337	12442	398	995	31	1.47(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	35762961	6612404	15369	38422	430		
385.8610	30.516	30.503	1	0.949	68840456	12520387	28097	70242	446	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.000	578306	108976	556	1390	196		
375.8178	30.529	30.529	0	1.000	479925	90071	364	910	247	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	33237728	6101538	15369	38422	397		
385.8610	30.689	30.689	0	0.955	63640814	11627283	28097	70242	414	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.716	30.702	1	1.001	168406	34054	556	1390	61		
375.8178	30.702	30.702	0	1.000	142022	24827	364	910	68	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	31779472	7463548	15369	38422	486		
385.8610	31.514	31.514	0	0.981	60618528	14167215	28097	70242	504	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.541	31.528	1	1.001	19249	4287	556	1390	8		
375.8178	31.541	31.528	1	1.001	16463	3968	364	910	11	1.17(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	29463601	7724200	15369	38422	503		
385.8610	32.326	32.313	1	1.006	55825476	14523130	28097	70242	517	0.53(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											Ma
373.8208	32.340	32.326	1	1.000	23938	7253	556	1390	13		M
375.8178	32.326	32.326	0	1.000	19173	4660	364	910	13	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	28.360	30.197	-110	0.929	47459	6458	556	1390	12		
	Empc Correction				40647	5841	556	1390	11		
375.8178	28.360	30.197	-110	0.929	32780	4711	364	910	13	1.45(1.05-1.43)	
373.8208	32.419	30.197	133	1.062	35300	9664	556	1390	17		M
375.8178	32.419	30.197	133	1.062	31513	8116	364	910	22	1.12(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		67734138	17708912	14721	36802	1203		
403.8529	32.140	32.127	1		54399644	14286782	12054	30135	1185	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	39707111	10045883	14721	36802	682		
403.8529	31.701	31.701	0	0.986	31946225	8183131	12054	30135	679	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.727	31.714	1	1.001	62668	16917	2179	5447	8		
391.8127	31.727	31.714	1	1.001	55555	12975	1069	2672	12	1.13(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.807	1	0.990	42184706	10342448	14721	36802	703		
403.8529	31.807	31.807	0	0.990	33708542	8312562	12054	30135	690	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.834	31.820	1	1.000	81181	22229	2179	5447	10		
391.8127	31.834	31.820	1	1.000	68130	17756	1069	2672	17	1.19(1.05-1.43)	
1,2,3,7,8,9-HxCDD											RQ
389.8157	32.153	32.140	1	1.014	166855	33229	2179	5447	15		
391.8127	32.140	32.140	0	1.014	165248	31161	1069	2672	29	1.01(1.05-1.43)	
	Empc Correction				134560	26797	1069	2672	25		
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.544	30.882	-80	0.928	1962764	234258	2179	5447	108		
391.8127	29.544	30.882	-80	0.928	1640943	188947	1069	2672	177	1.20(1.05-1.43)	
389.8157	30.583	30.882	-18	0.961	49260	8171	2179	5447	4		
391.8127	30.569	30.882	-19	0.961	52517	9022	1069	2672	8	0.94(1.05-1.43)	
	Empc Correction				39725	6589	1069	2672	6		
389.8157	30.969	30.882	5	0.973	587701	113278	2179	5447	52		
391.8127	30.969	30.882	5	0.973	497754	94144	1069	2672	88	1.18(1.05-1.43)	
389.8157	31.168	30.882	17	0.980	63707	13064	2179	5447	6		
391.8127	31.155	30.882	16	0.979	55948	11700	1069	2672	11	1.14(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	22266618	7195367	25402	63505	283		
419.8220	33.766	33.754	1	1.051	51884724	16509807	60346	150865	274	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.778	33.766	1	1.000	205197	64281	900	2250	71		M
409.7789	33.778	33.766	1	1.000	186897	60108	491	1227	122	1.10(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.847	1	1.085	23366404	6306545	25402	63505	248		
419.8220	34.860	34.847	1	1.085	53641408	14356587	60346	150865	238	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.860	34.860	0	1.000	50309	14438	900	2250	16		M
409.7789	34.860	34.860	0	1.000	47360	13055	491	1227	27	1.06(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDF											M
407.7818	34.082	34.319	-14	1.009	57479	15150	900	2250	17		M
409.7789	34.082	34.319	-14	1.009	49593	14374	491	1227	29	1.16(0.88-1.20)	M
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.556	1	1.076	31711458	9283702	20648	51620	450		
437.8140	34.568	34.556	1	1.076	31575511	9265346	16481	41202	562	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.568	1	1.000	3113253	915968	8111	20277	113		
425.7737	34.580	34.568	1	1.000	3076066	868885	7780	19450	112	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.984	7168149	2248188	8111	20277	277		
425.7737	34.021	34.301	-17	0.984	6851139	2169290	7780	19450	279	1.05(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.914	1	1.149	45140496	11296984	4518	11295	2500		
471.7750	36.926	36.914	1	1.149	50821769	12622166	6179	15447	2043	0.89(0.76-1.02)	
OCDF											M
441.7428	37.022	37.010	1	1.003	135973	31504	258	645	122		M
443.7399	37.022	37.010	1	1.003	144133	34469	301	752	115	0.94(0.76-1.02)	M
OCDD											
457.7377	36.938	36.926	1	1.000	68911723	17143354	8797	21992	1949		
459.7348	36.938	36.926	1	1.000	77082878	18855485	8639	21597	2183	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d
Lims ID: 320-76788-A-5-A
Client ID: 11215702-072321-BN-SJSB085 (8-10)
Inject. Date: 14-Aug-2021 07:26:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 9

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	158764290	38515495

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	158764290	38515495

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.950	216077	58178	246152	66428	0.2843	0.88	
16.237	394471	84085	537422	114977	0.5733	0.73	
16.464	439232	105903	559757	144391	0.6145	0.78	
16.706	600446	143034	799939	190907	0.8615	0.75	
16.978	6783385	1721716	8812214	2256274	9.59	0.77	
17.205	230368	53586	307395	71225	0.3308	0.75	
17.794	1028535	232540	1260312	299510	1.41	0.82	
18.036	206095	45692	256182	61112	0.2844	0.80	
19.185	991873	213035	1299372	283572	1.41	0.76	
Signal Totals:							
	10890482	2657769	14078745	3488396			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	24969227	6146165				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 15.360 = (24969227 * 100.000) / (158764290 * 1.024)

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d
Lims ID: 320-76788-A-5-A
Client ID: 11215702-072321-BN-SJSB085 (8-10)
Inject. Date: 14-Aug-2021 07:26:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 9

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	91057850	20690643

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	91057850	20690643

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.373	79119	19859	96738	25858	0.1540	0.82	
16.933	310320	81544	383274	96238	0.6074	0.81	
17.825	89681	23718	111644	27117	0.1763	0.80	
17.976	49120	16185	60176	18512	0.0957	0.82	Ma
18.429	323708	60825	346827	77655	0.5872	0.93	RQ
18.429	267056	59794	346827	77655	0.5376		Empc Correction
Signal Totals:							
	795296	201100	998659	245380			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1850607	447511				0.85	RQMa
	1793955	446480					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.621 = (1850607 * 100.000) / (91057850 * 1.254)
Empc Amount: 1.571 = (1793955 * 100.000) / (91057850 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Lims ID:	320-76788-A-5-A		
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Inject. Date:	14-Aug-2021 07:26:23	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516836	Lims Sample ID:	9

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	115316502	19770312
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	127402838	19642133

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	121359670	19706222

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.058	172878	30961	115248	22398	0.2283	1.50	
22.271	34982	8912	15923	4423	0.0403	2.20	RQMa
22.271	24680	6855	15923	4423	0.0322		Empc Correction
22.912	117286	19436	78036	11996	0.1548	1.50	
24.072	72560	10830	43108	6020	0.0917	1.68	
25.681	19051	2273	20595	3059	0.0314	0.93	RQ
25.681	19051	2273	12290	1466	0.0248		Empc Correction
Signal Totals:							
	406455	70355	264605	46303			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	689667	120308				1.53	RQMa
	671060	116658					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5465 = (689667 * 100.000) / (121359670 * 1.040)

Empc Amount: 0.5318 = (671060 * 100.000) / (121359670 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Lims ID:	320-76788-A-5-A		
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Inject. Date:	14-Aug-2021 07:26:23	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516836	Lims Sample ID:	9

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	75462463	11185719

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	75462463	11185719

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	133493	22863	82881	14521	0.2735	1.61	
21.999	367840	60446	232782	42665	0.7592	1.58	
22.994	17926	3282	8385	1526	0.0333	2.14	RQ
22.994	12996	2365	8385	1526	0.0270		Empc Correction
23.294	50383	8379	26772	5535	0.0975	1.88	RQ
23.294	41496	8579	26772	5535	0.0863		Empc Correction
23.472	128520	17825	87337	12442	0.2728	1.47	
Signal Totals:							
	684345	112078	438157	76689			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1136319	189484				1.59	RQ
	1122502	188767					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.436 = (1136319 * 100.000) / (75462463 * 1.048)

Empc Amount: 1.419 = (1122502 * 100.000) / (75462463 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d
Lims ID: 320-76788-A-5-A
Client ID: 11215702-072321-BN-SJSB085 (8-10)
Inject. Date: 14-Aug-2021 07:26:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 9

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	104603417	19132791
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	96878542	17728821
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	92398000	21630763
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	85289077	22247330

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	94792259	20184926

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.360	47459	6458	32780	4711	0.0745	1.45	RQ
28.360	40647	5841	32780	4711	0.0682		Empc Correction
32.419	35300	9664	31513	8116	0.0620	1.12	Ma
Signal Totals:							
	75947	15505	64293	12827			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	147052	28949				1.29	RQMa
	140240	28332					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1365 = (147052 * 100.000) / (94792259 * 1.136)
Empc Amount: 0.1302 = (140240 * 100.000) / (94792259 * 1.136)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d
Lims ID: 320-76788-A-5-A
Client ID: 11215702-072321-BN-SJSB085 (8-10)
Inject. Date: 14-Aug-2021 07:26:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 9

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	71653336	18229014
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	75893248	18655010
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	73773292	18442012

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.544	1962764	234258	1640943	188947	4.58	1.20	
30.583	49260	8171	52517	9022	0.1295	0.94	RQ
30.583	49260	8171	39725	6589	0.1132		Empc Correction
30.969	587701	113278	497754	94144	1.38	1.18	
31.168	63707	13064	55948	11700	0.1522	1.14	
Signal Totals:							
	2663432	368771	2234370	301380			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4910594	672584				1.19	RQ
	4897802	670151					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.247 = (4910594 * 100.000) / (73773292 * 1.066)
Empc Amount: 6.231 = (4897802 * 100.000) / (73773292 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d
Lims ID: 320-76788-A-5-A
Client ID: 11215702-072321-BN-SJSB085 (8-10)
Inject. Date: 14-Aug-2021 07:26:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 9

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	74151342	23705174
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	77007812	20663132

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	75579577	22184153

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.082	57479	15150	49593	14374	0.1027	1.16	M
Signal Totals:							
	57479	15150	49593	14374			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	107072	29524				1.16	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1027 = (107072 * 100.000) / (75579577 * 1.379)

QC Flag Legend

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d
Lims ID: 320-76788-A-5-A
Client ID: 11215702-072321-BN-SJSB085 (8-10)
Inject. Date: 14-Aug-2021 07:26:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 9

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	63286969	18549048

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	63286969	18549048

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	7168149	2248188	6851139	2169290	20.2	1.05	
Signal Totals:							
	7168149	2248188	6851139	2169290			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	14019288	4417478				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 20.243 = (14019288 * 100.000) / (63286969 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.08
Area: 3316962
Amount: 6.787359
Amount Units: pg/ul

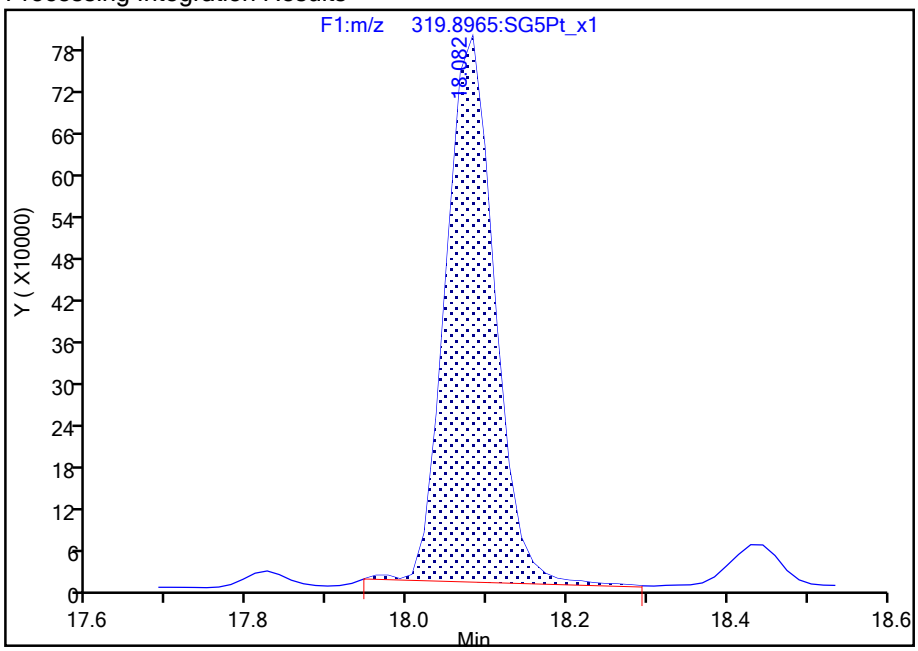

Manual Integration Results

RT: 18.08
Area: 3385294
Amount: 6.794556
Amount Units: pg/ul

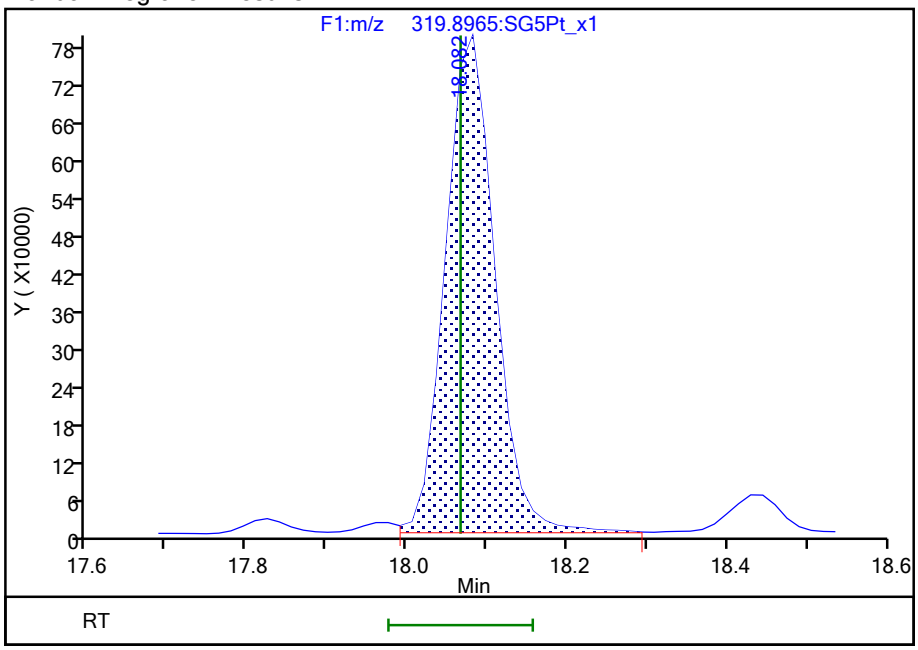

Reviewer: dadunj, 18-Aug-2021 09:04:00

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.08
Area: 4434029
Amount: 6.787359
Amount Units: pg/ul

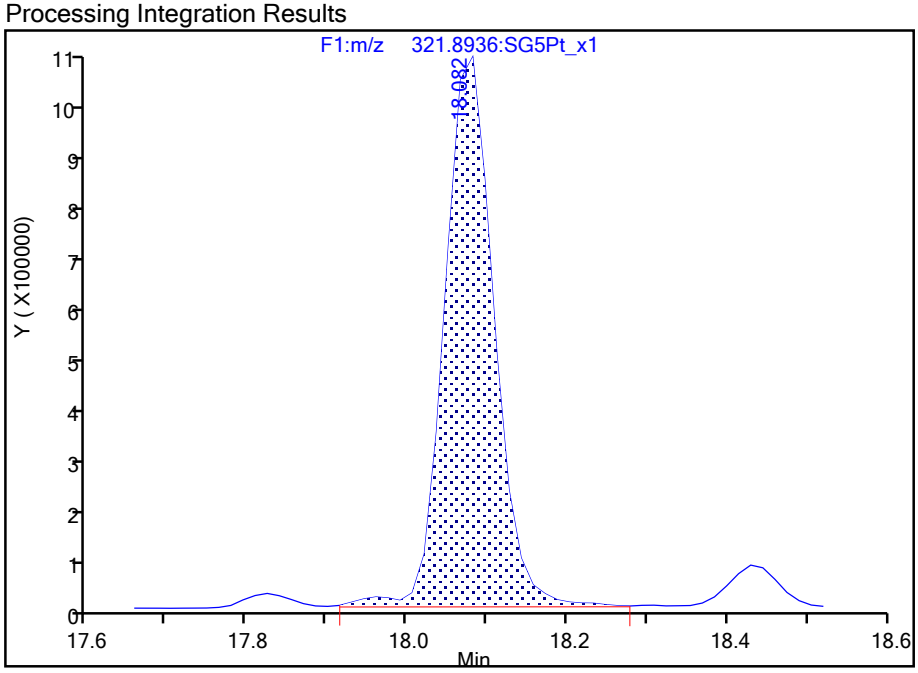

Manual Integration Results

RT: 18.08
Area: 4373916
Amount: 6.794556
Amount Units: pg/ul

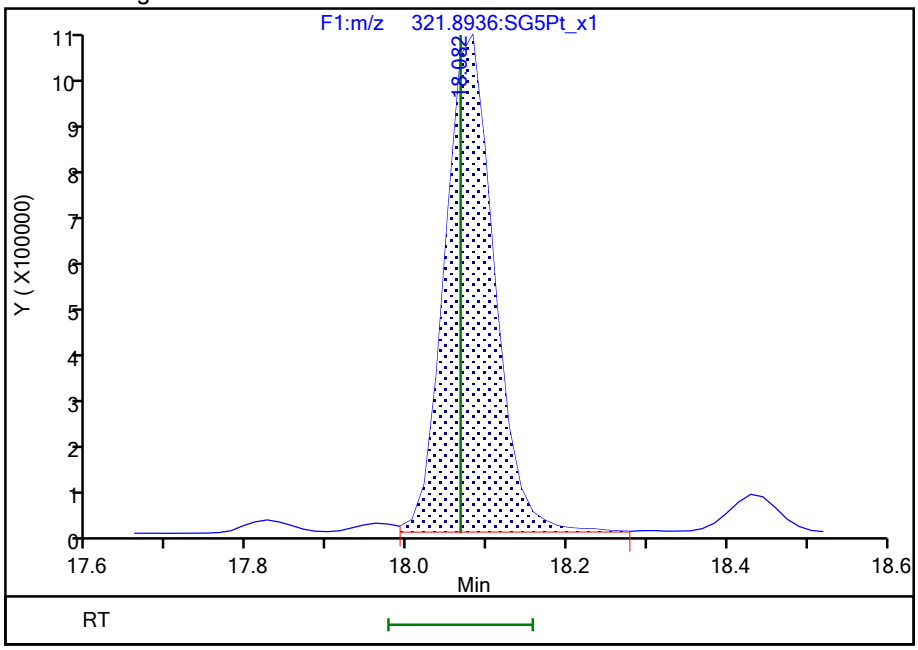

Reviewer: dadunj, 18-Aug-2021 09:04:04

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.80- 19.20)

Signal: 1

Processing Integration Results

Not Detected
RT: 15.80- 19.20

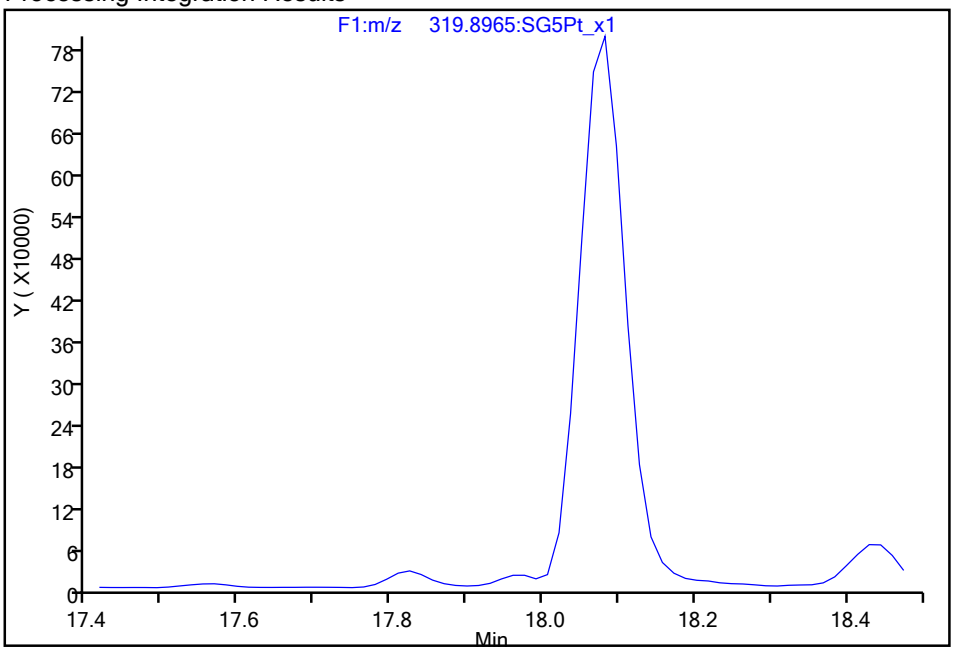

Manual Integration Results

RT = 17.976 Area = 49120 M

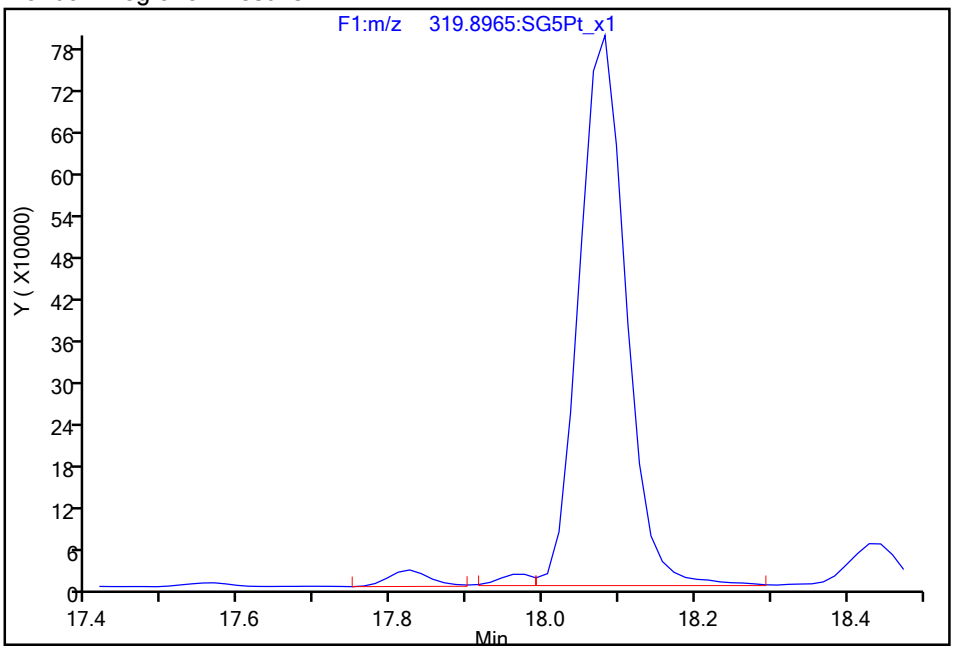

Reviewer: dadunj, 18-Aug-2021 09:04:11

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.41
Area: 288179
Amount: 0.652250
Amount Units: pg/ul

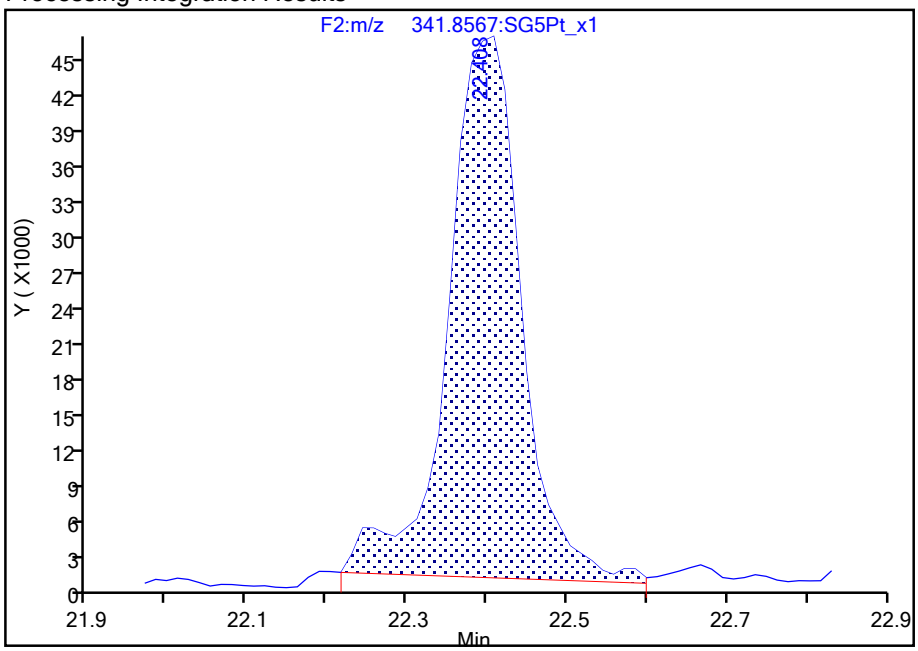

Manual Integration Results

RT: 22.41
Area: 280232
Amount: 0.613247
Amount Units: pg/ul

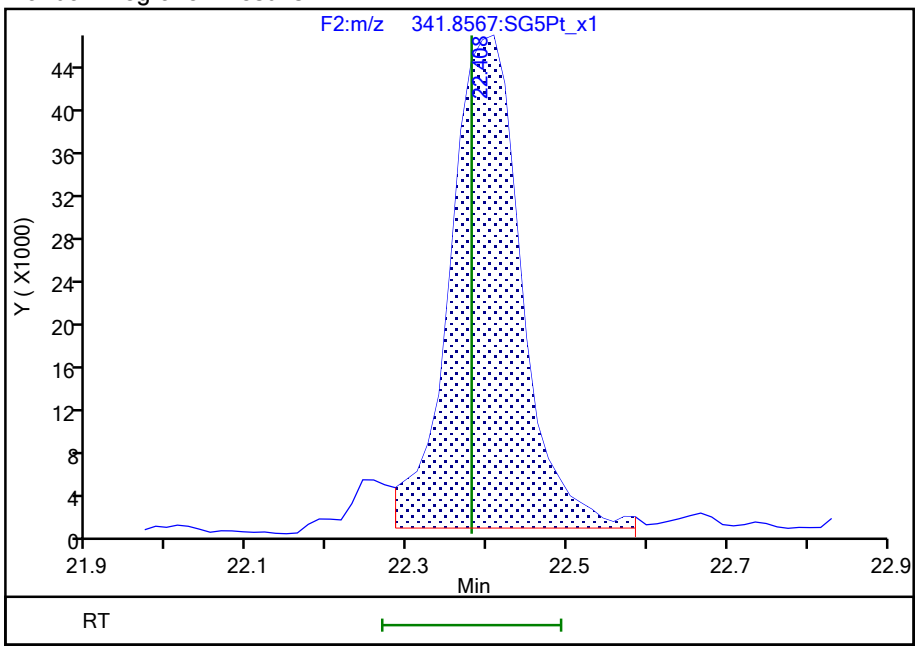

Reviewer: dadunj, 18-Aug-2021 09:04:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.39
Area: 509956
Amount: 0.652250
Amount Units: pg/ul

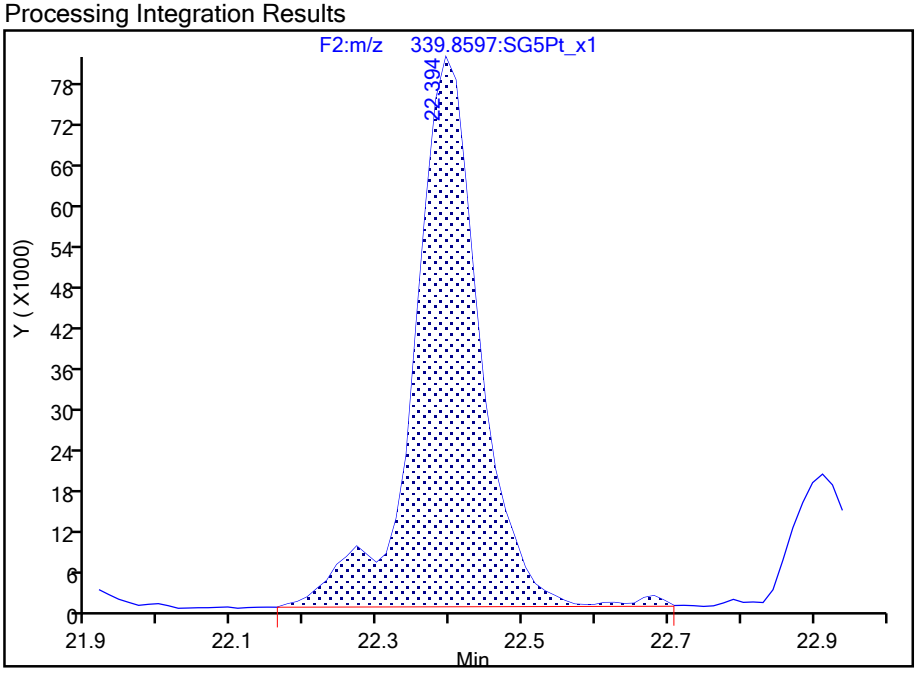

Manual Integration Results

RT: 22.39
Area: 470176
Amount: 0.613247
Amount Units: pg/ul

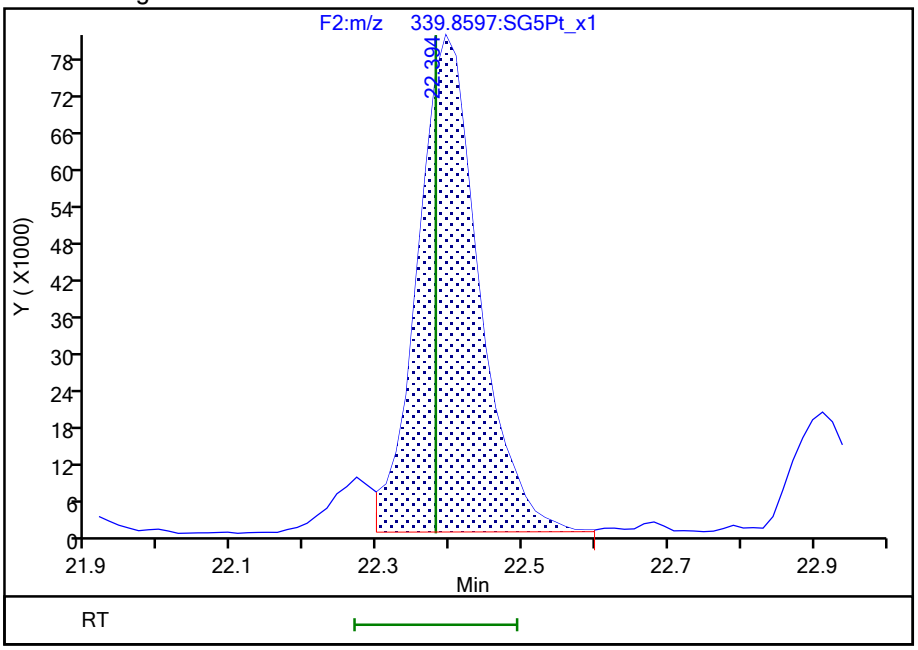

Reviewer: dadunj, 18-Aug-2021 09:04:30

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.74
Area: 182438
Amount: 0.351411
Amount Units: pg/ul

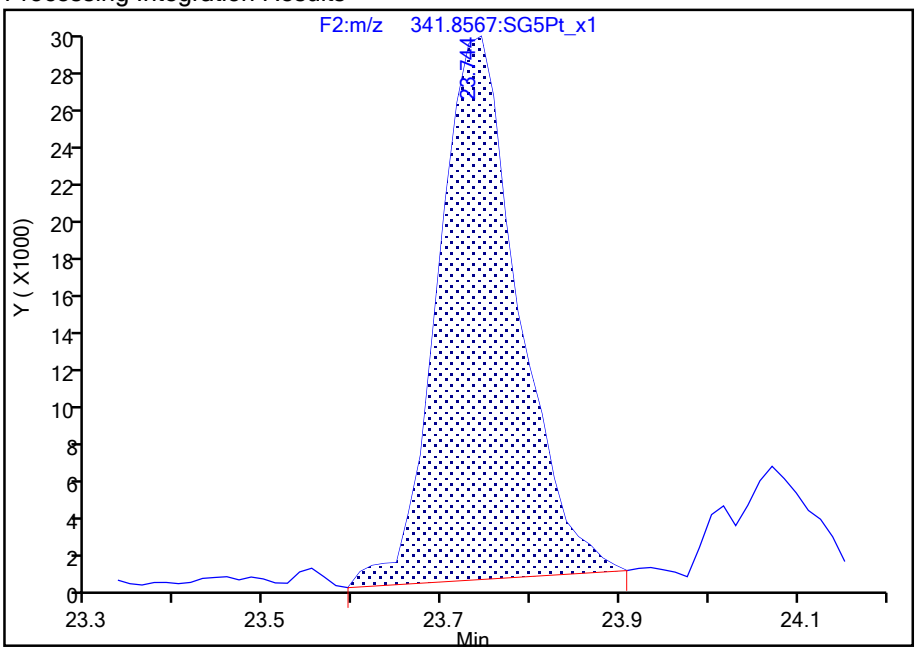

Manual Integration Results

RT: 23.74
Area: 177939
Amount: 0.347944
Amount Units: pg/ul

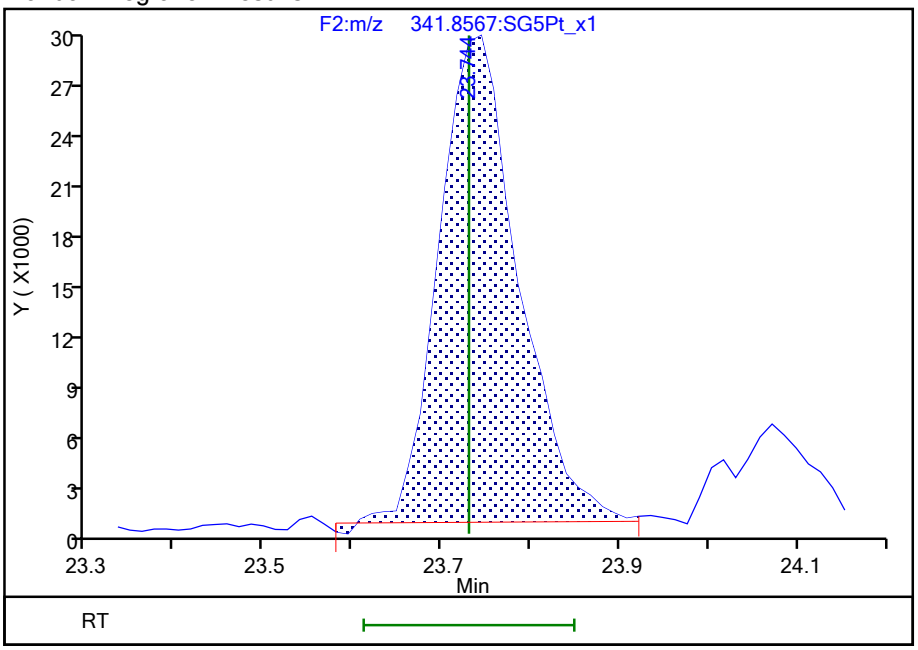

Reviewer: dadunj, 18-Aug-2021 09:04:38

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 25.71)

Signal: 1

Processing Integration Results

Not Detected
RT: 20.77- 25.71

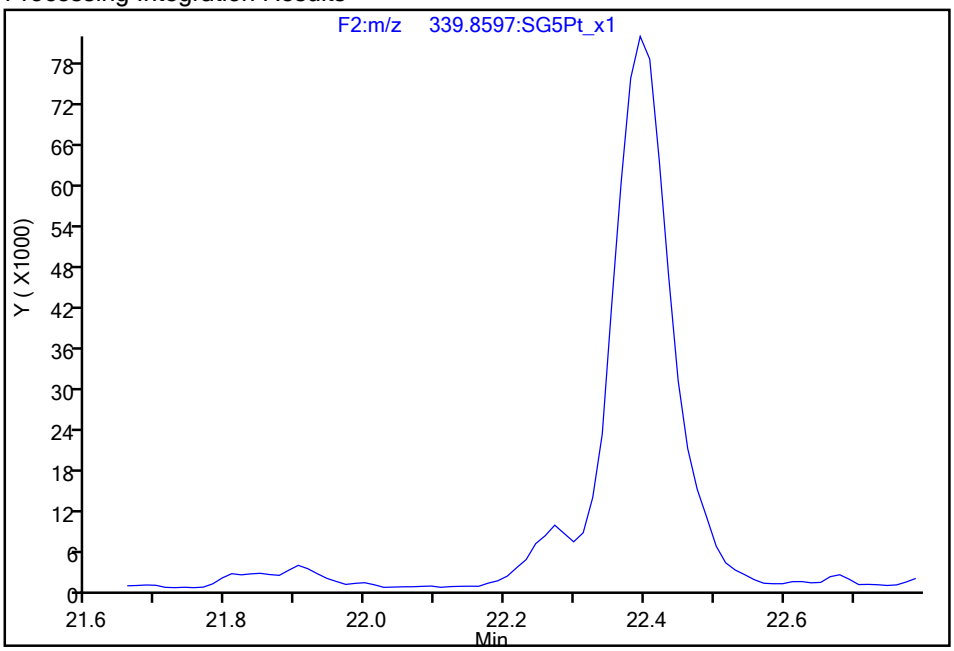

Manual Integration Results

RT = 22.271 Area = 34982 M

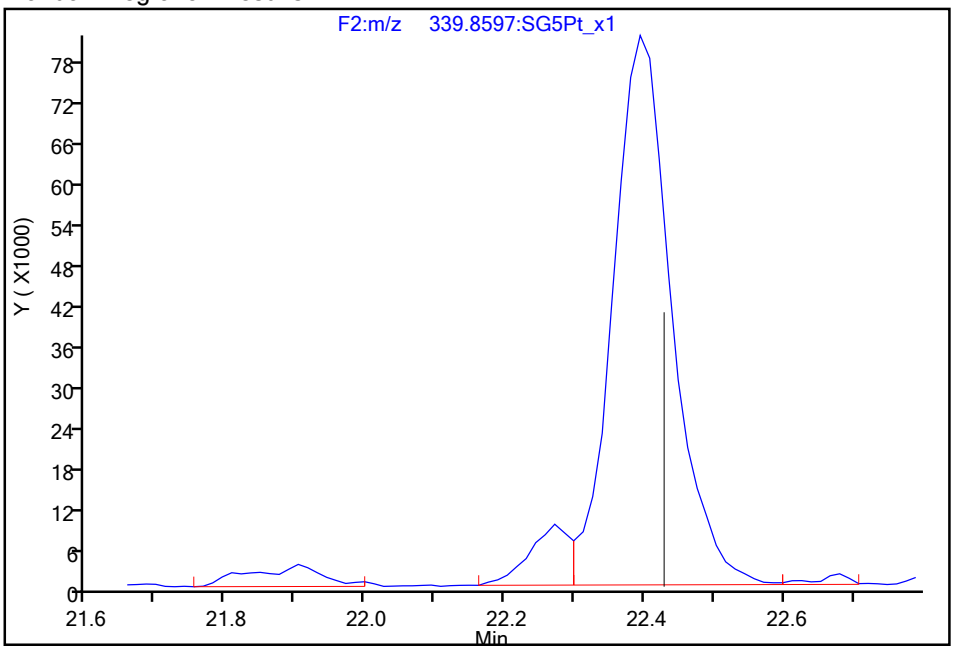

Reviewer: dadunj, 18-Aug-2021 09:04:44

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.54
Area: 27772
Amount: 0.043587
Amount Units: pg/ul

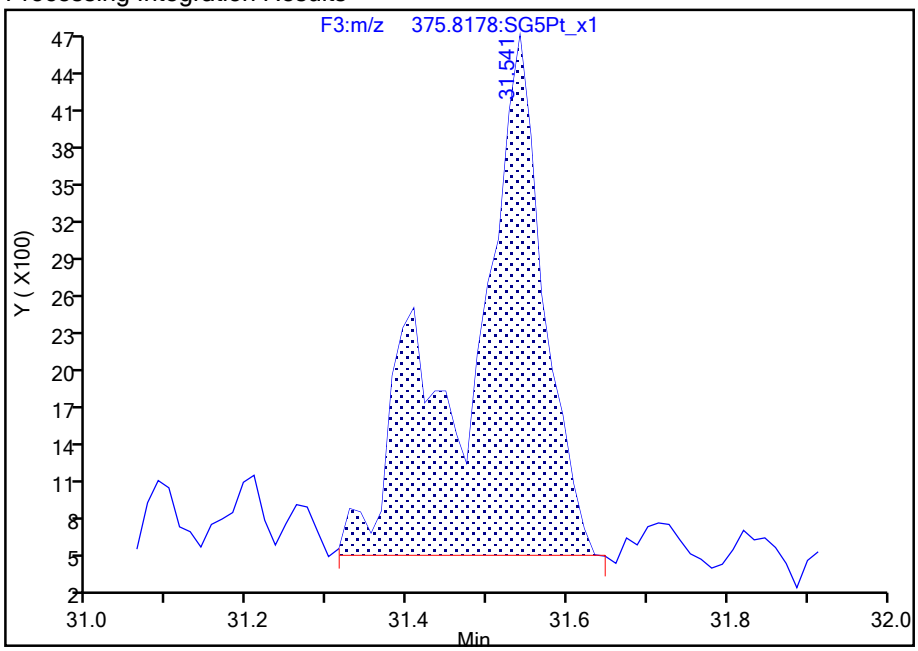

Manual Integration Results

RT: 31.54
Area: 16463
Amount: 0.033104
Amount Units: pg/ul

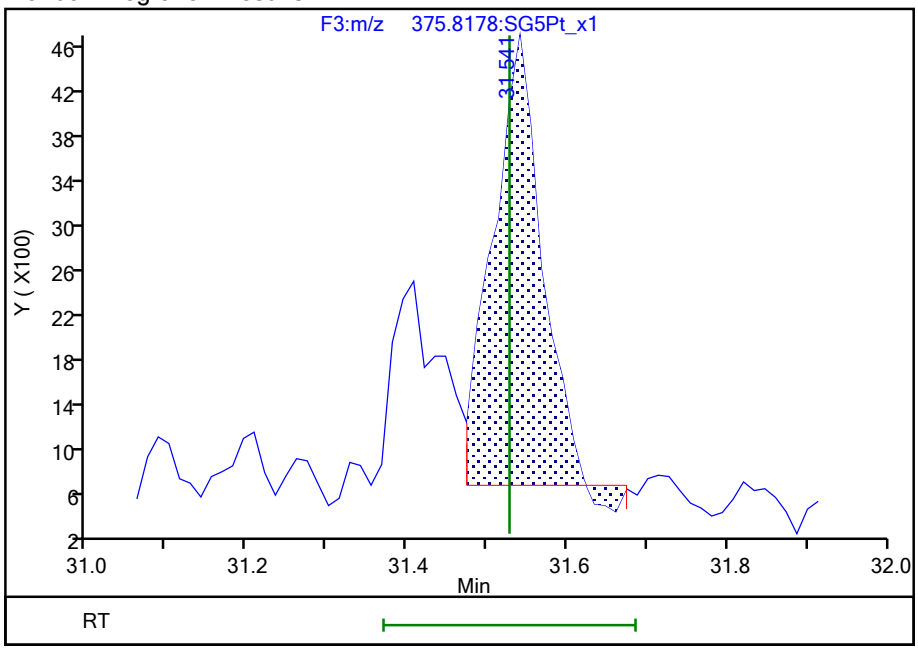

Reviewer: dadunj, 18-Aug-2021 09:05:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.42
Area: 50686
Amount: 0.086438
Amount Units: pg/ul

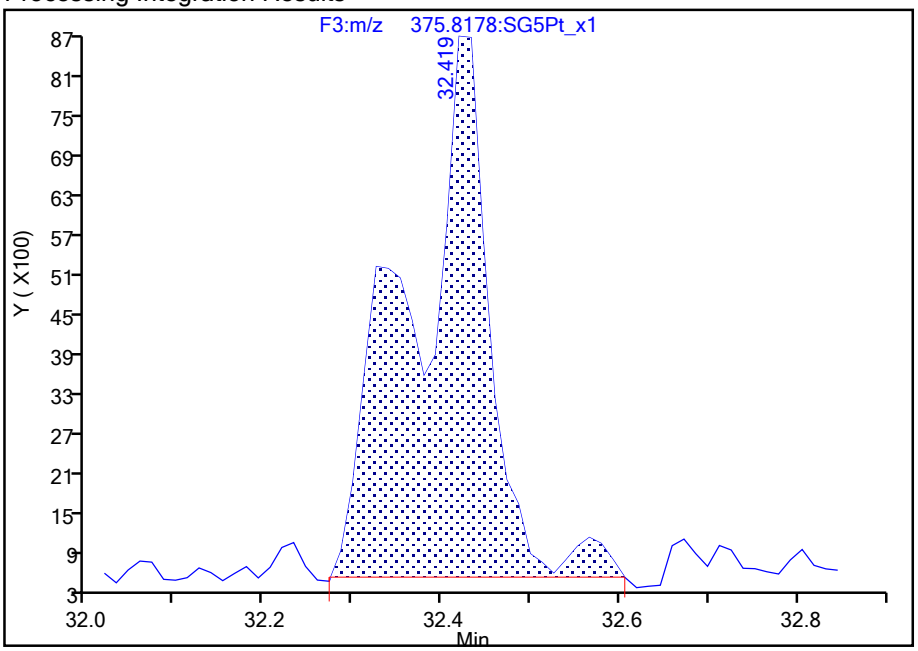

Manual Integration Results

RT: 32.33
Area: 19173
Amount: 0.043338
Amount Units: pg/ul

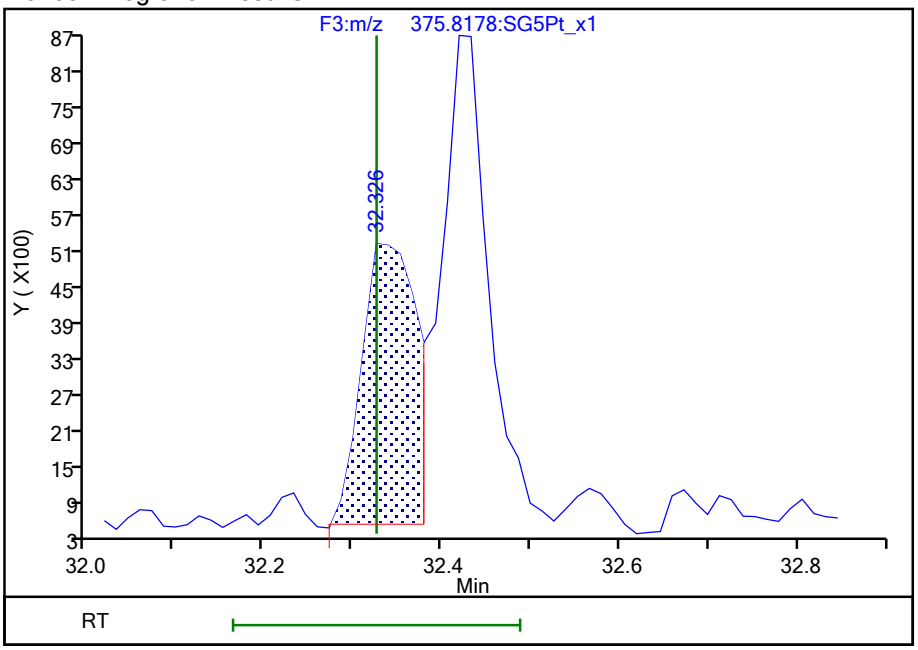

Reviewer: dadunj, 18-Aug-2021 09:05:27

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

779440

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 3

RT: 32.42
Area: 85986
Amount: 0.086438
Amount Units: pg/ul

Processing Integration Results

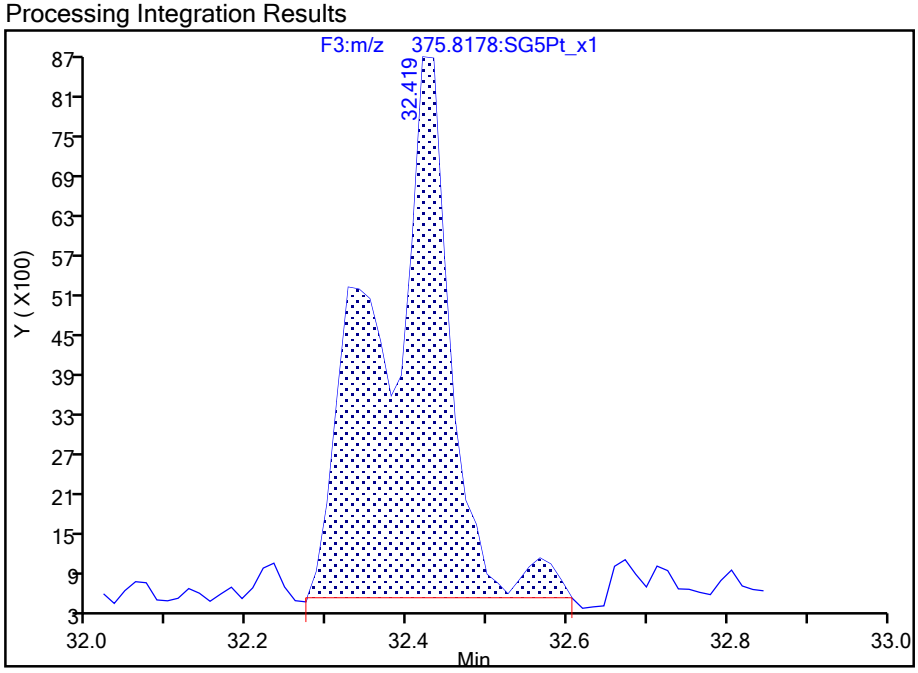

Manual Integration Results

RT: 32.34
Area: 43111
Amount: 0.043338
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 09:05:27
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.42
Area: 35300
Amount: 0.086438
Amount Units: pg/ul

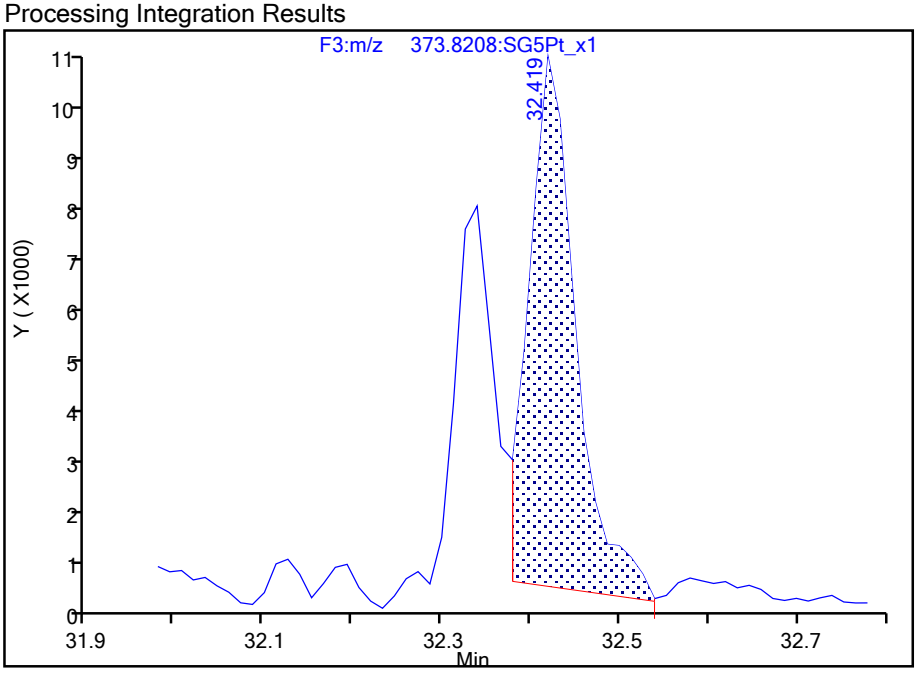

Manual Integration Results

RT: 32.34
Area: 23938
Amount: 0.043338
Amount Units: pg/ul

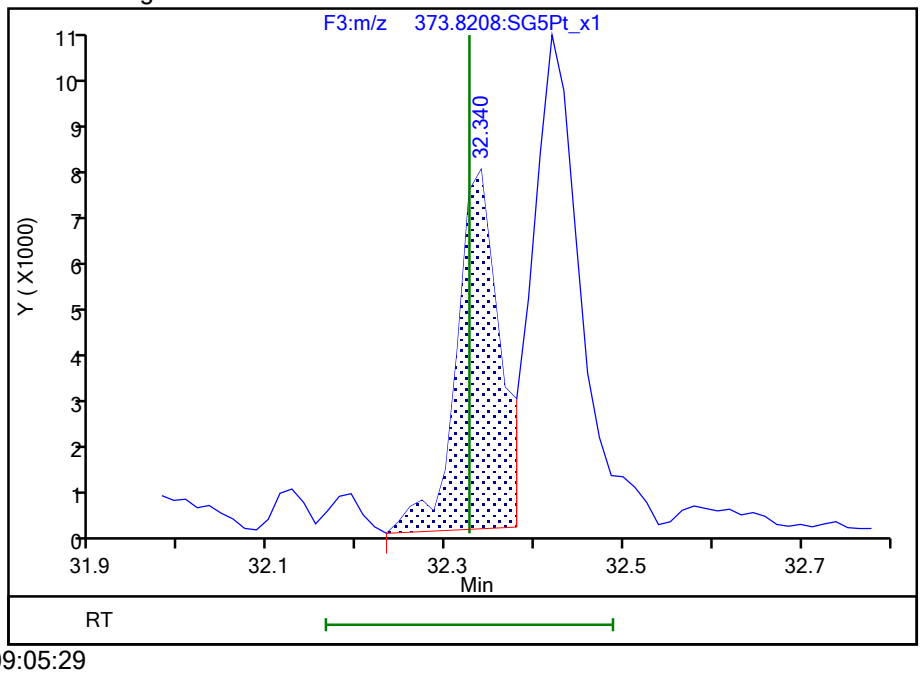

Reviewer: dadunj, 18-Aug-2021 09:05:29

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.419 Area = 35300

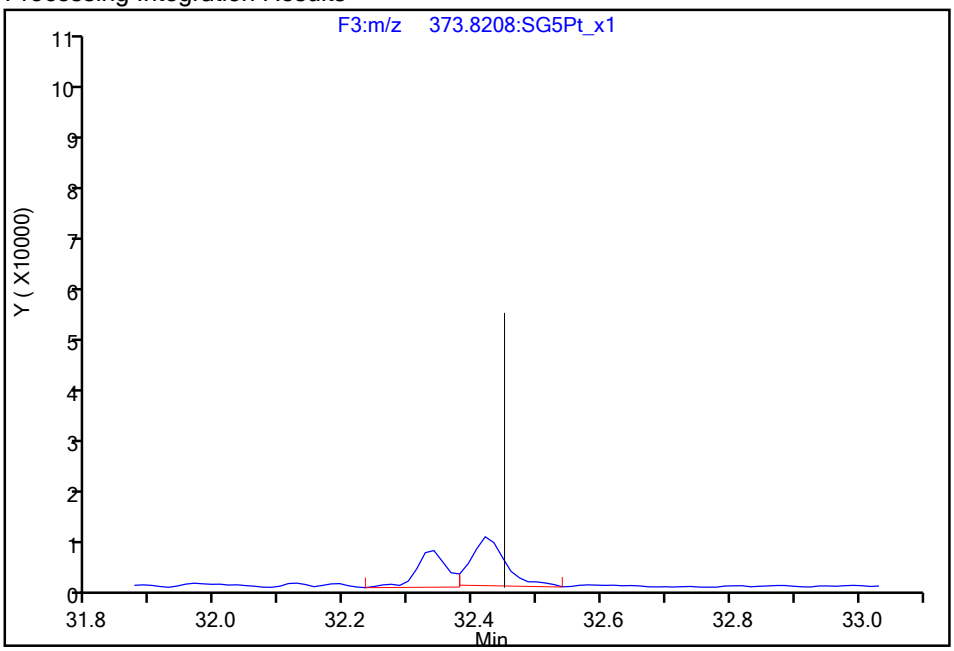

Manual Integration Results

RT = 32.419 Area = 35300

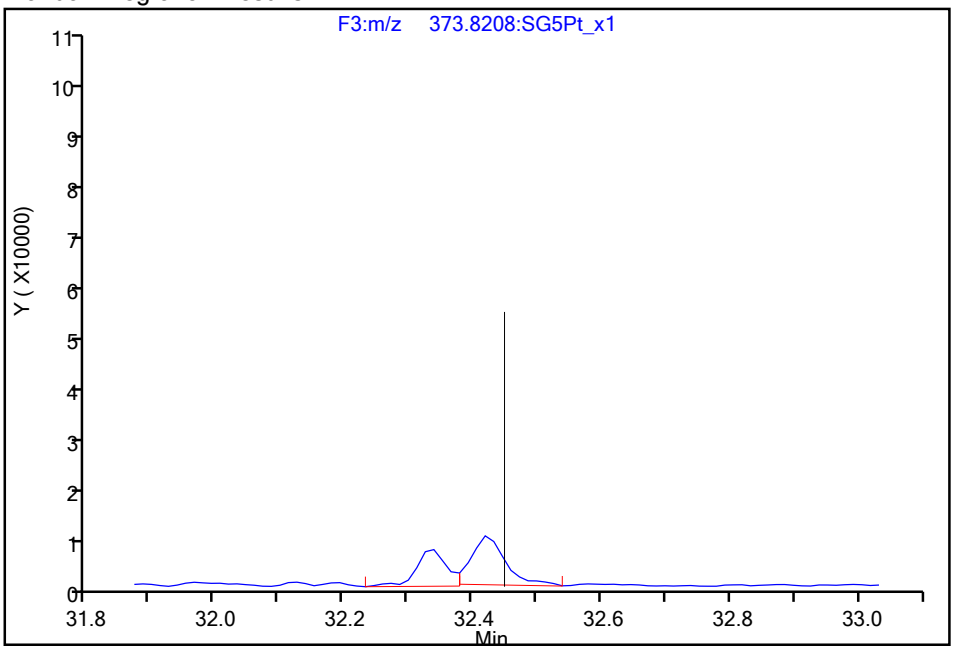

Reviewer: dadunj, 18-Aug-2021 09:05:33

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.78
Area: 215483
Amount: 0.376501
Amount Units: pg/ul

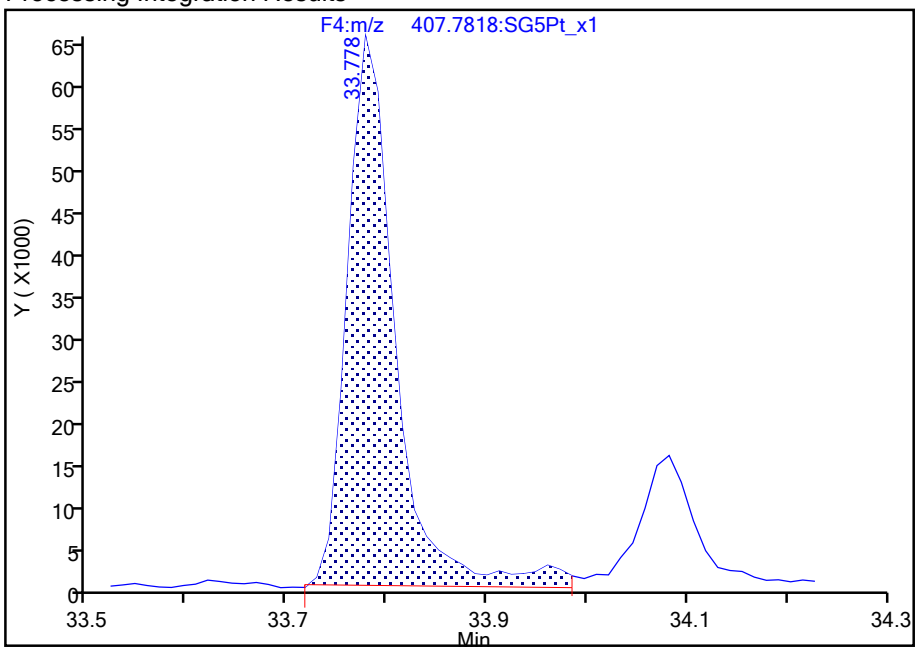

Manual Integration Results

RT: 33.78
Area: 205197
Amount: 0.366876
Amount Units: pg/ul

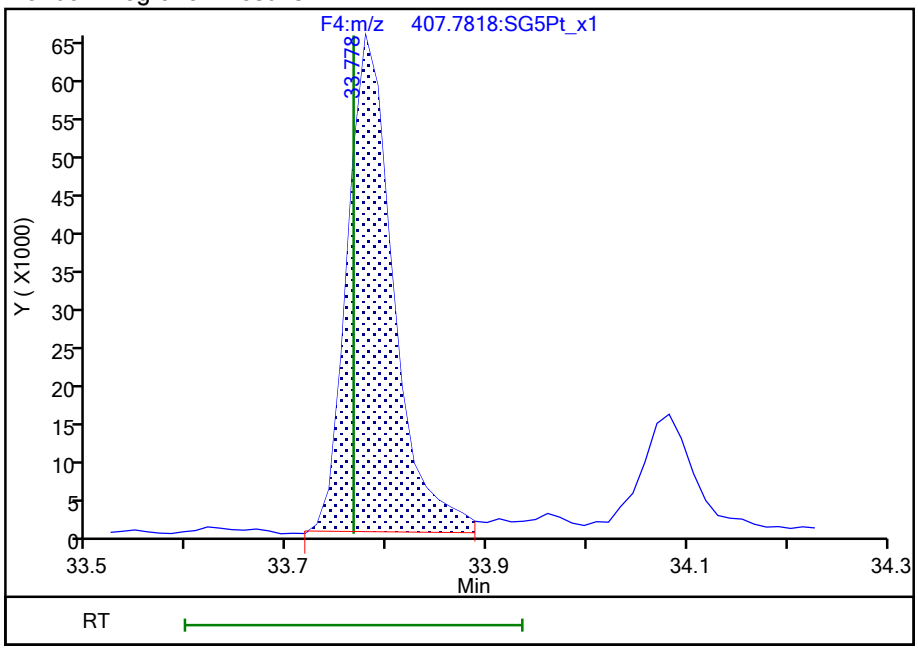

Reviewer: dadunj, 18-Aug-2021 09:05:59
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779444

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 34.86
Area: 64060
Amount: 0.115480
Amount Units: pg/ul

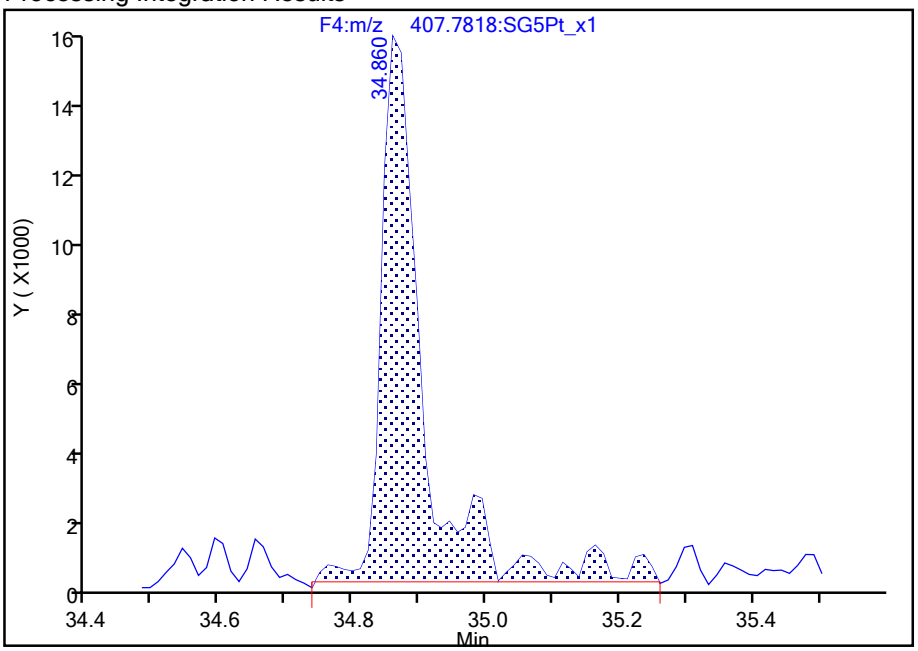

Manual Integration Results

RT: 34.86
Area: 50309
Amount: 0.096274
Amount Units: pg/ul

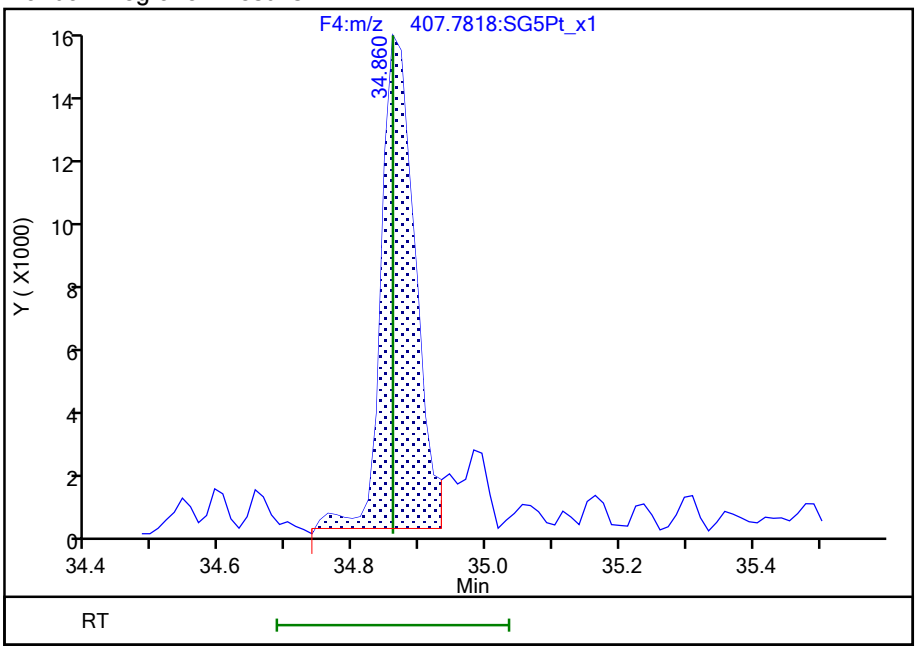

Reviewer: dadunj, 18-Aug-2021 09:06:04

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 2

Processing Integration Results

RT: 34.86
Area: 53093
Amount: 0.115480
Amount Units: pg/ul

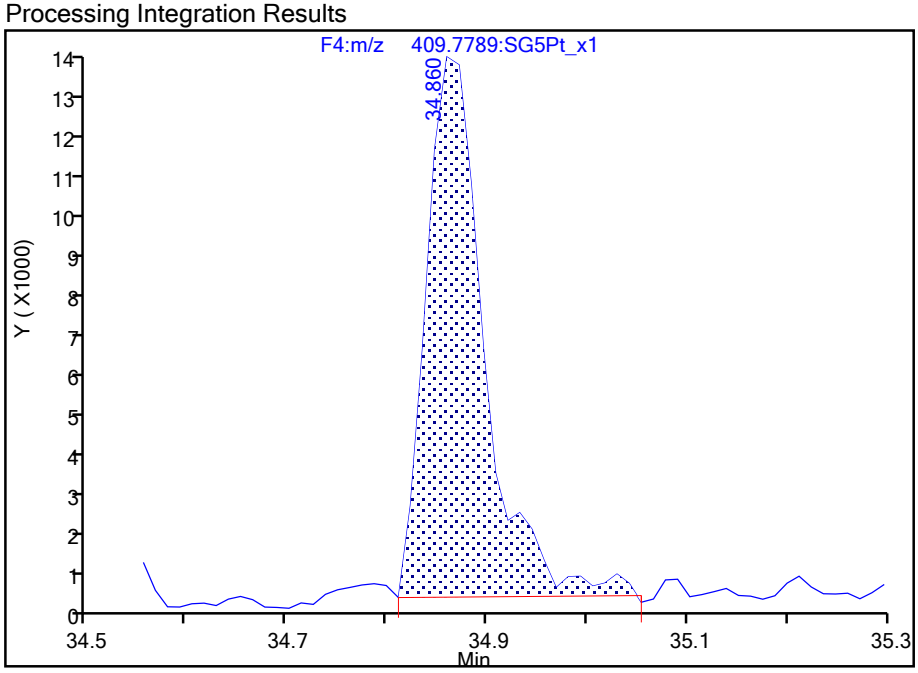

Manual Integration Results

RT: 34.86
Area: 47360
Amount: 0.096274
Amount Units: pg/ul

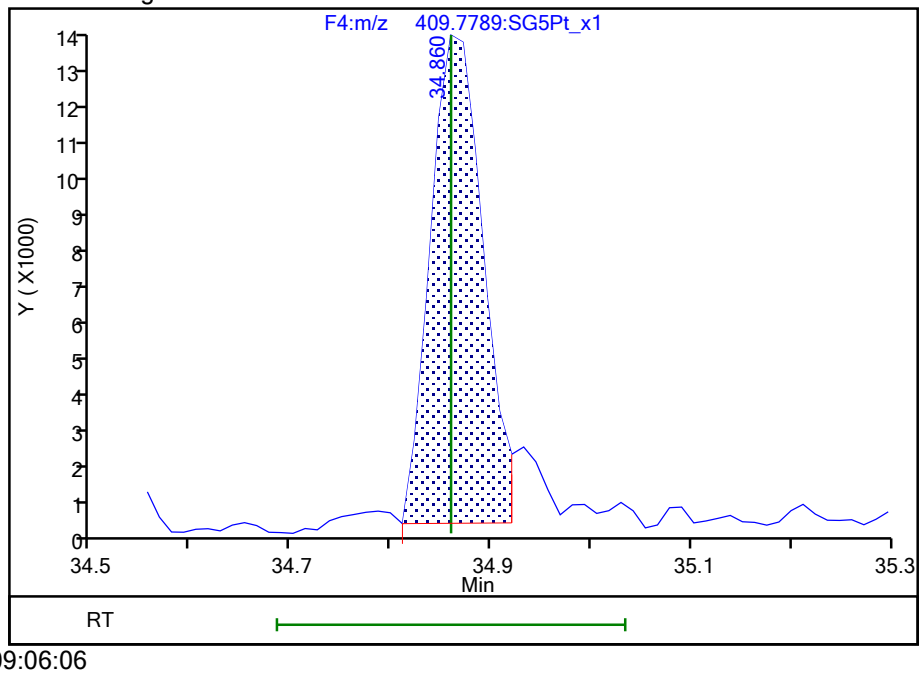

Reviewer: dadunj, 18-Aug-2021 09:06:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7818, RT: (33.75- 34.89)

Signal: 1

Processing Integration Results

RT = 34.082 Area = 65782

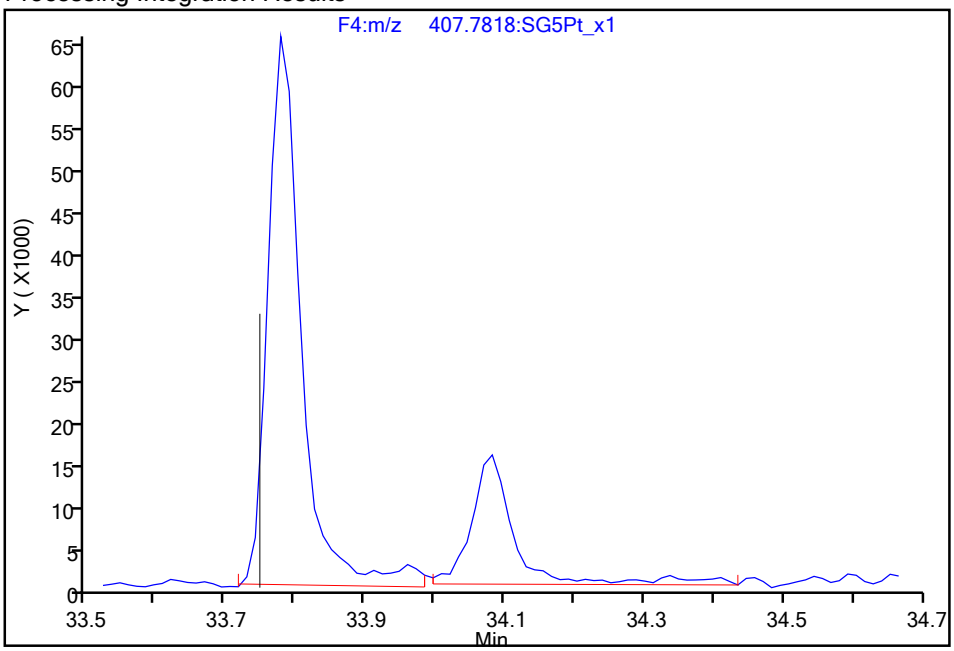

Manual Integration Results

RT = 34.082 Area = 57479 M

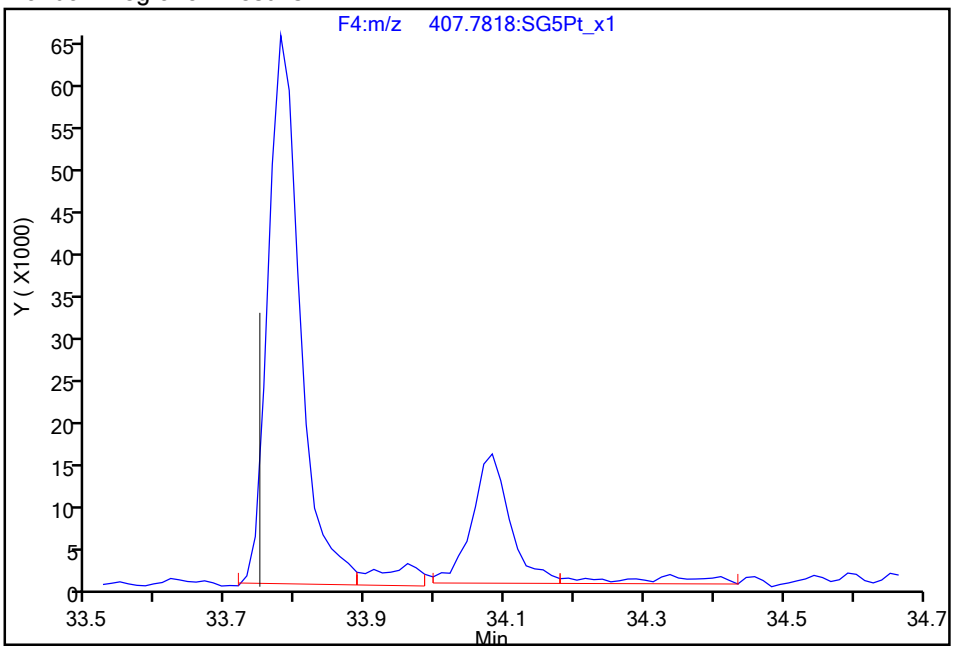

Reviewer: dadunj, 18-Aug-2021 09:06:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 2, m/z: 409.7789, RT: (33.75- 34.89)

Signal: 2

Processing Integration Results

RT = 34.082 Area = 59609

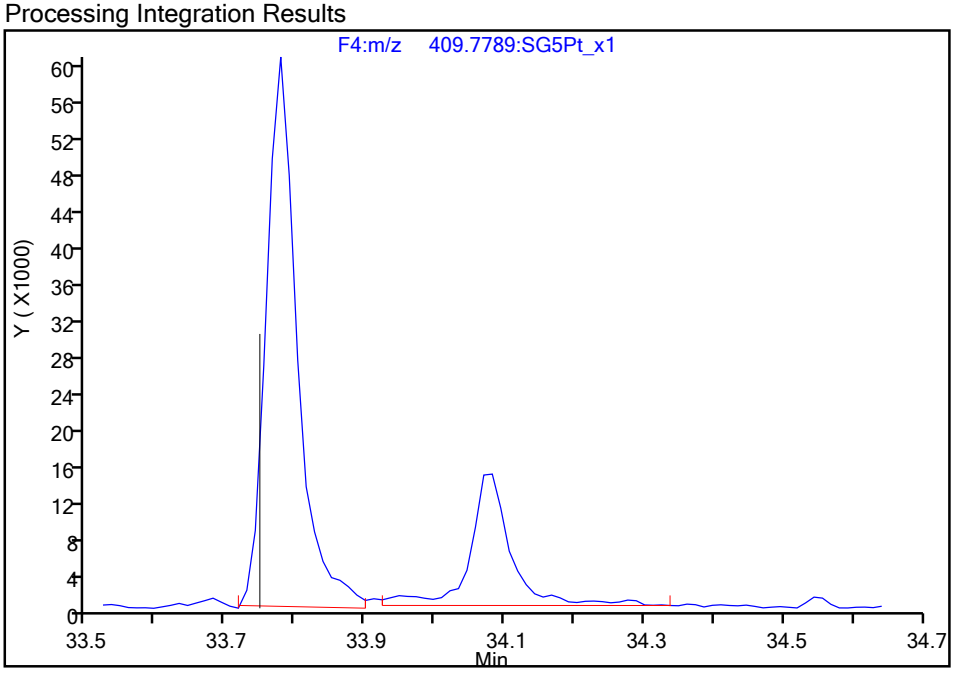

Manual Integration Results

RT = 34.082 Area = 49593 M

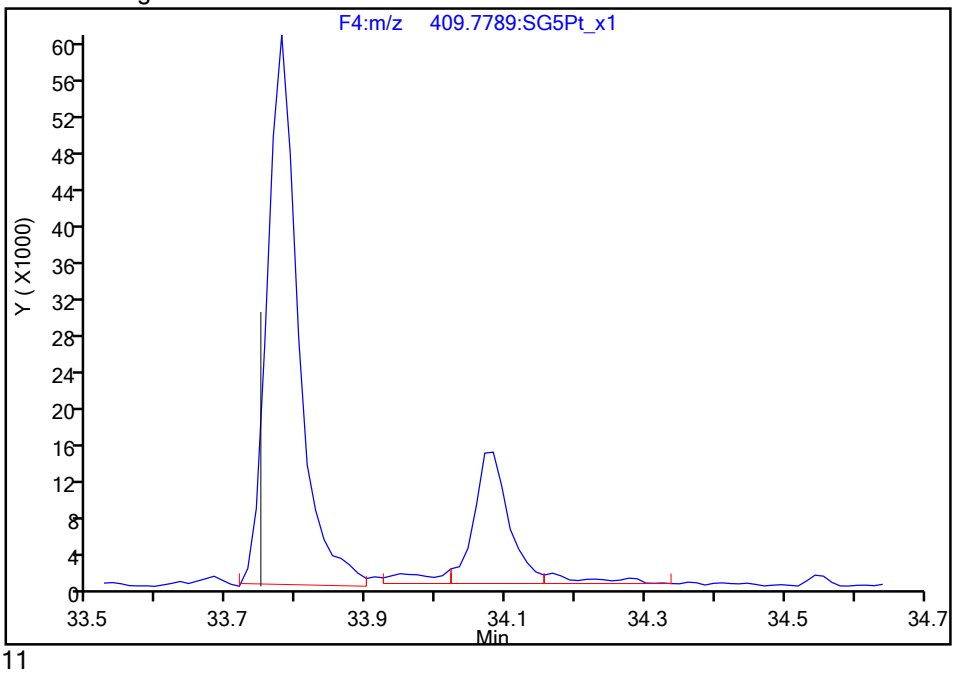

Reviewer: dadunj, 18-Aug-2021 09:06:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 159842
Amount: 0.499310
Amount Units: pg/ul

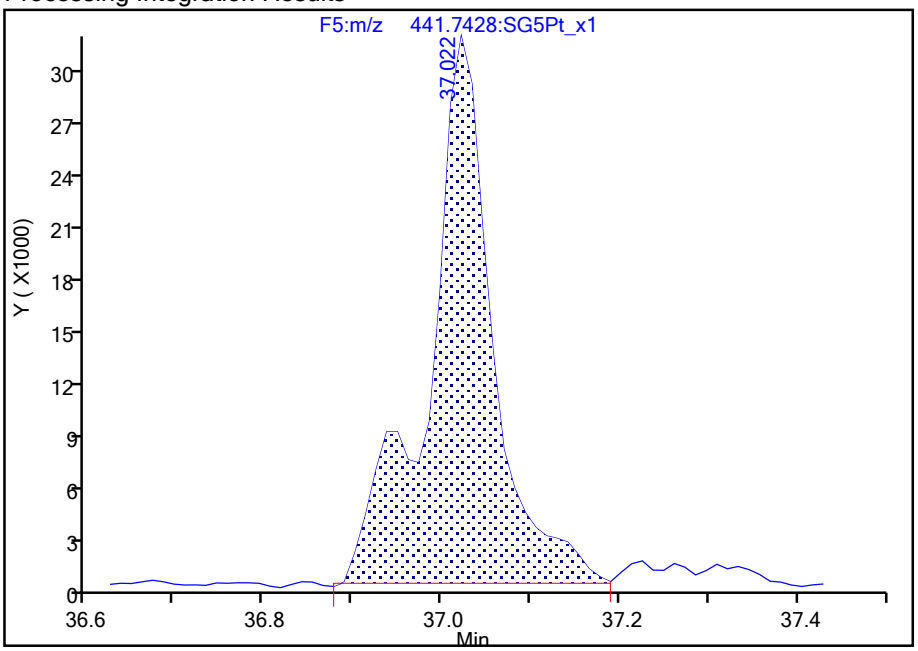

Manual Integration Results

RT: 37.02
Area: 135973
Amount: 0.405924
Amount Units: pg/ul

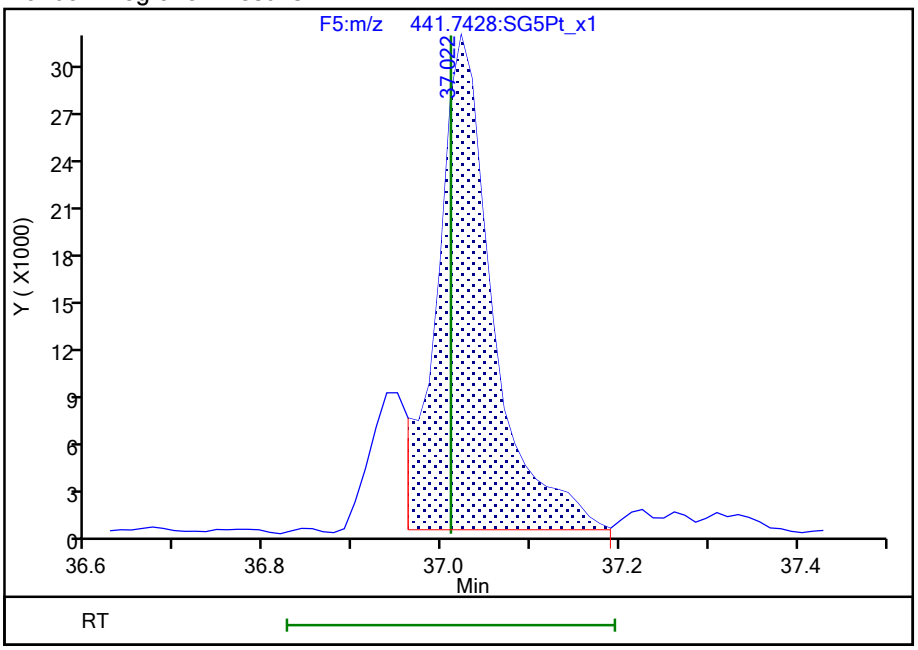

Reviewer: dadunj, 18-Aug-2021 09:06:20

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d				
Injection Date:	14-Aug-2021 07:26:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-5-A	Lab Sample ID:	320-76788-5		
Client ID:	11215702-072321-BN-SJSB085 (8-10)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.02
Area: 184705
Amount: 0.499310
Amount Units: pg/ul

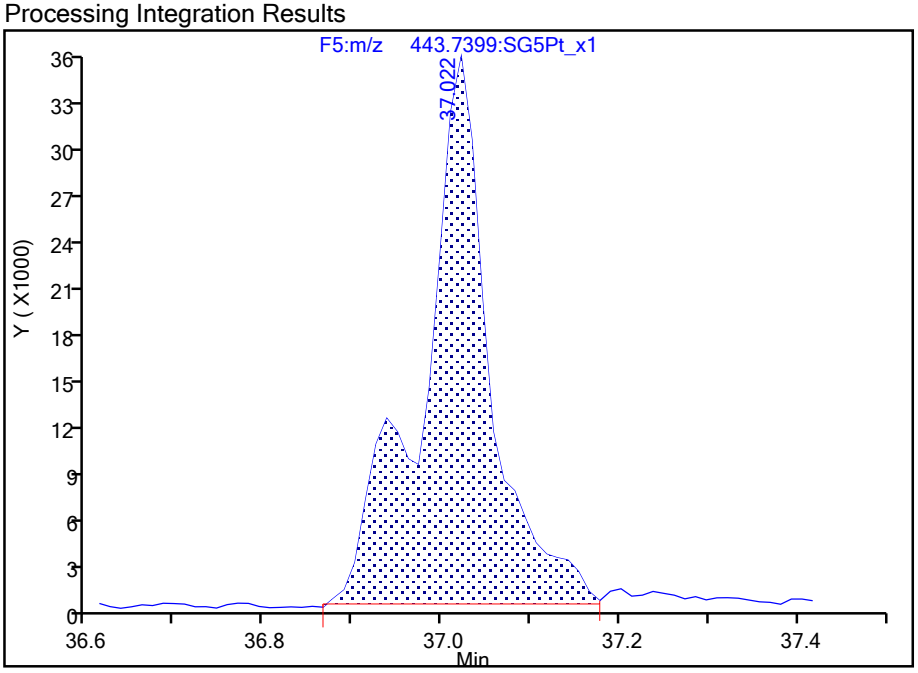

Manual Integration Results

RT: 37.02
Area: 144133
Amount: 0.405924
Amount Units: pg/ul

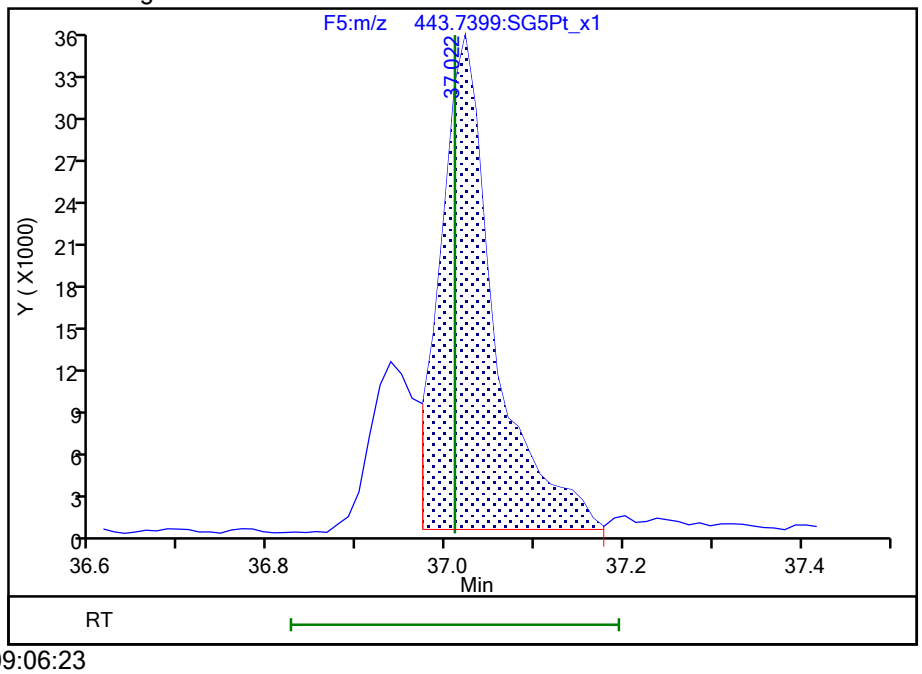

Reviewer: dadunj, 18-Aug-2021 09:06:23
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779450

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

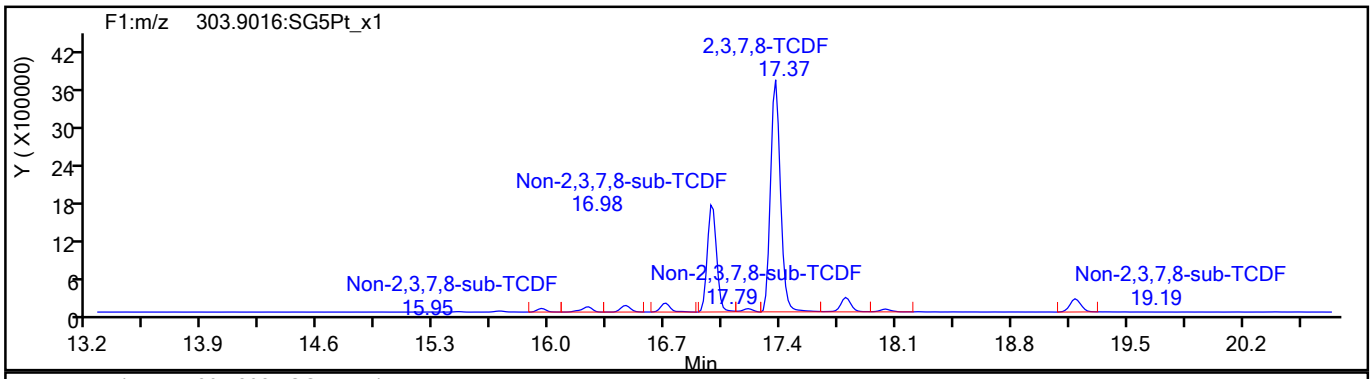

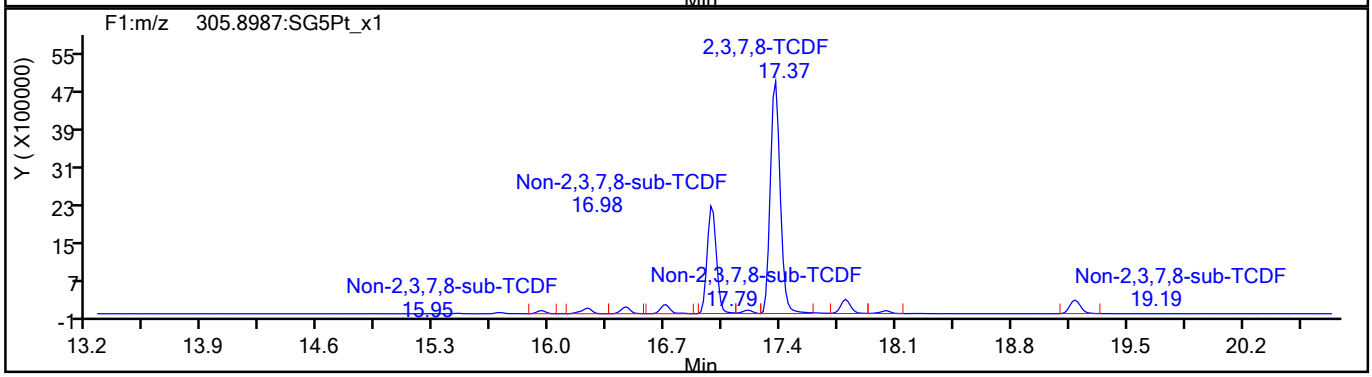

TCDF Standards

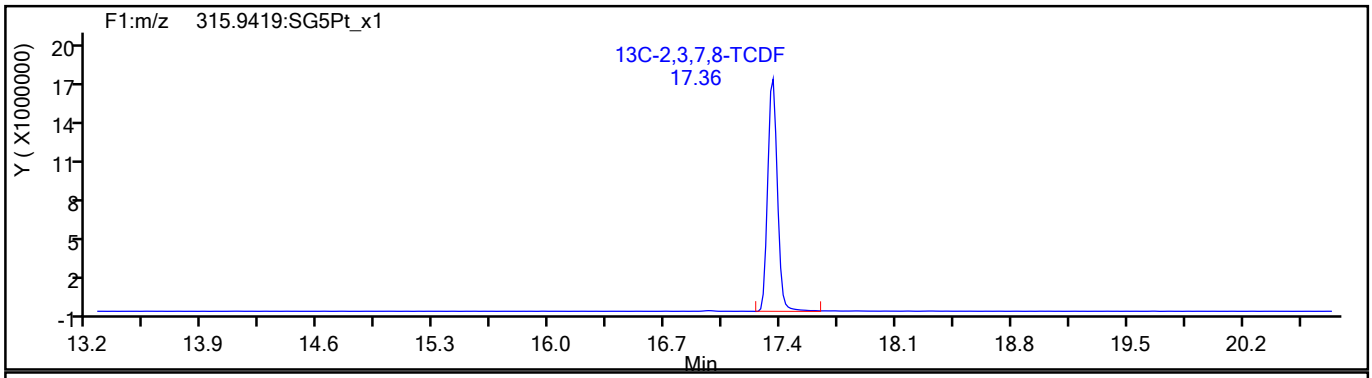

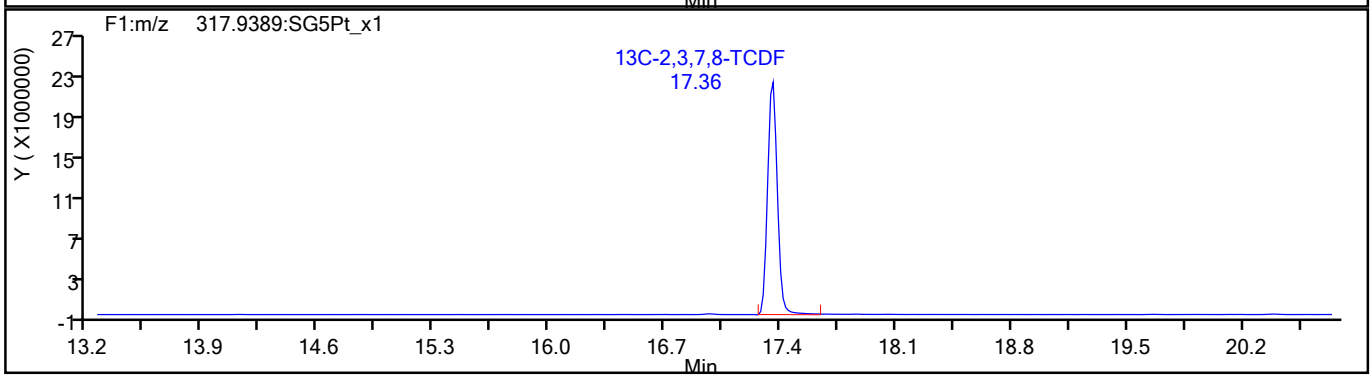

779451

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

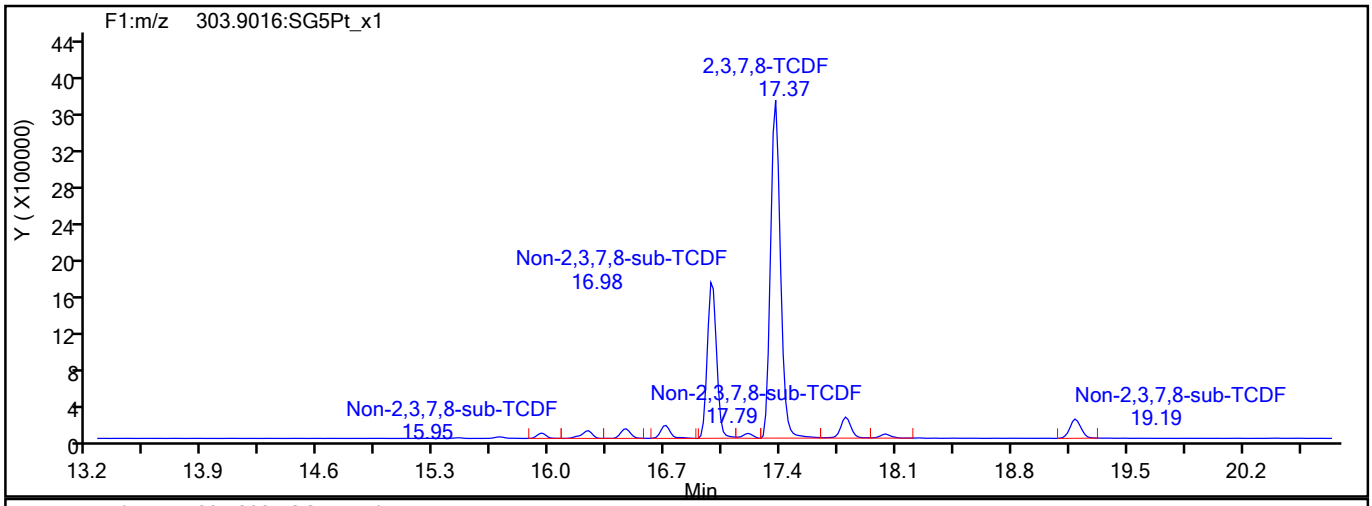

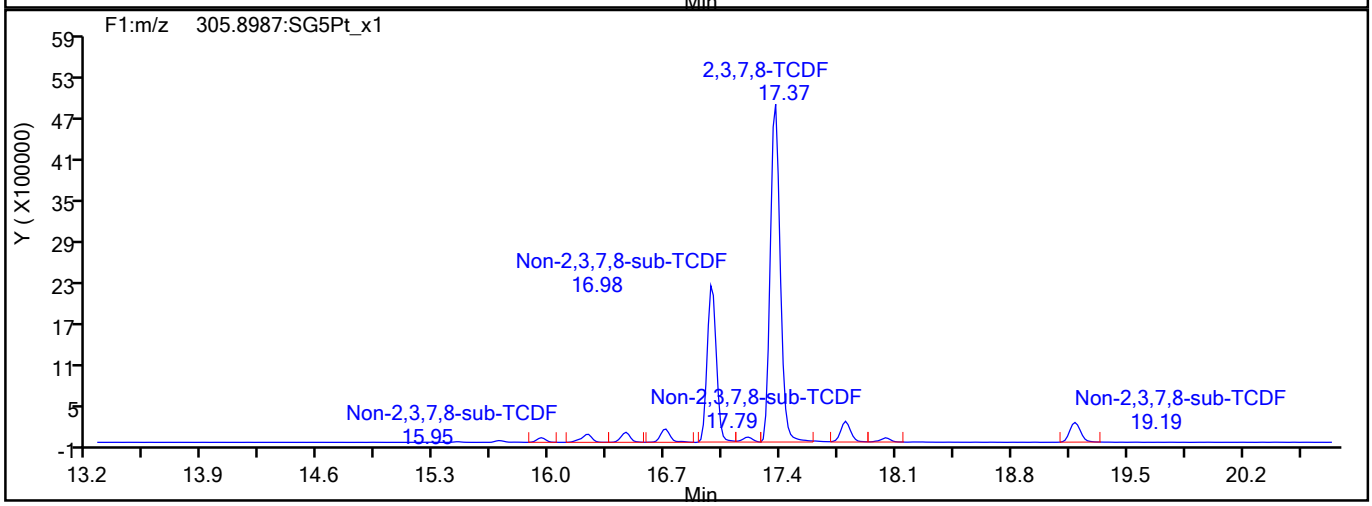

TCDF Interference Mass

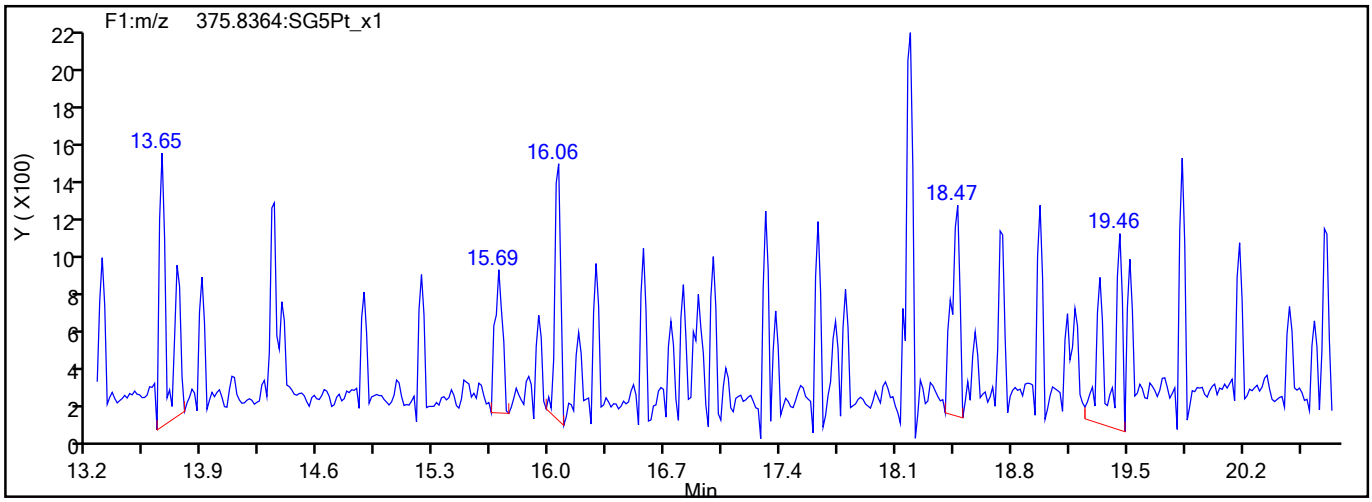

779452

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

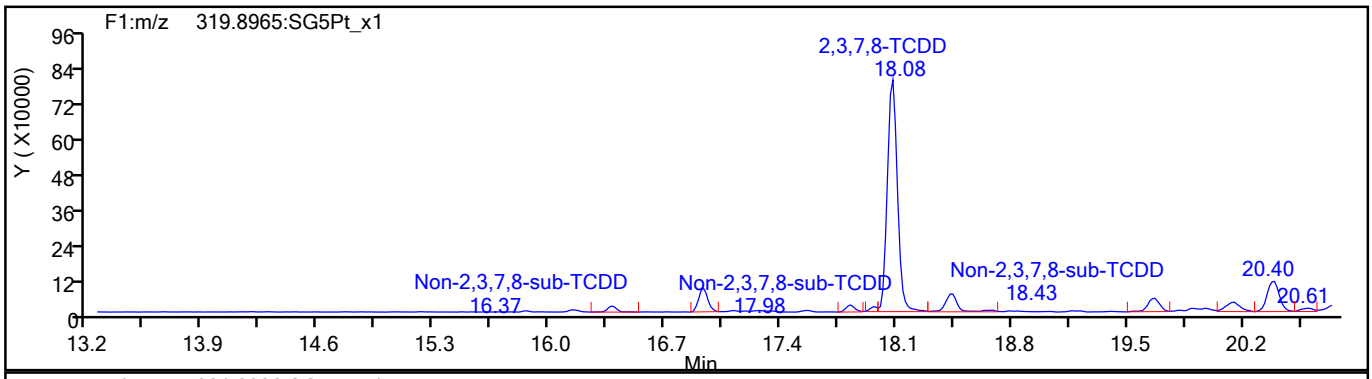

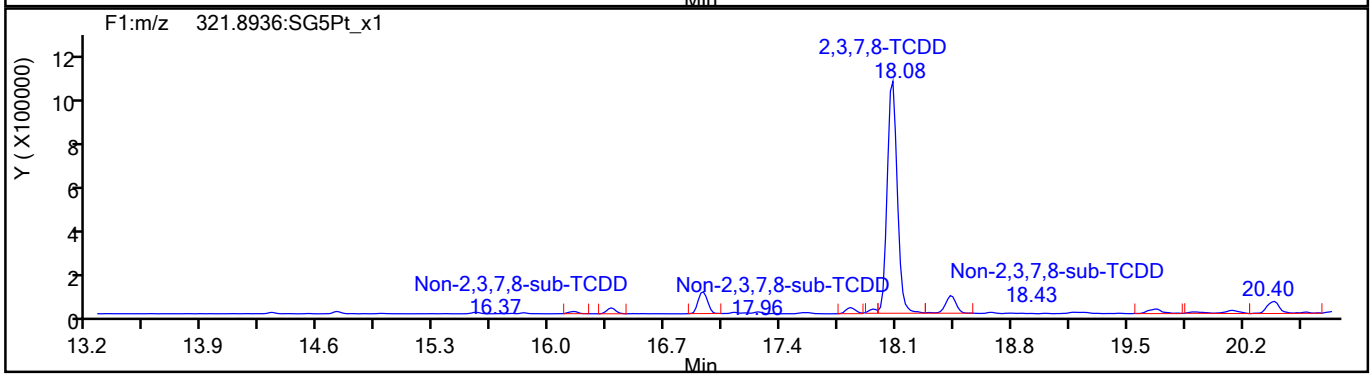

TCDD Standards

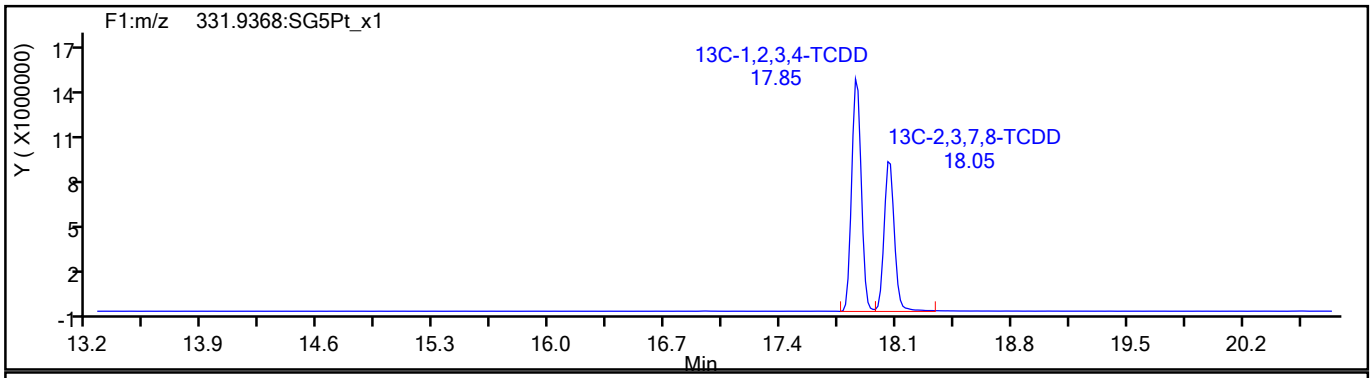

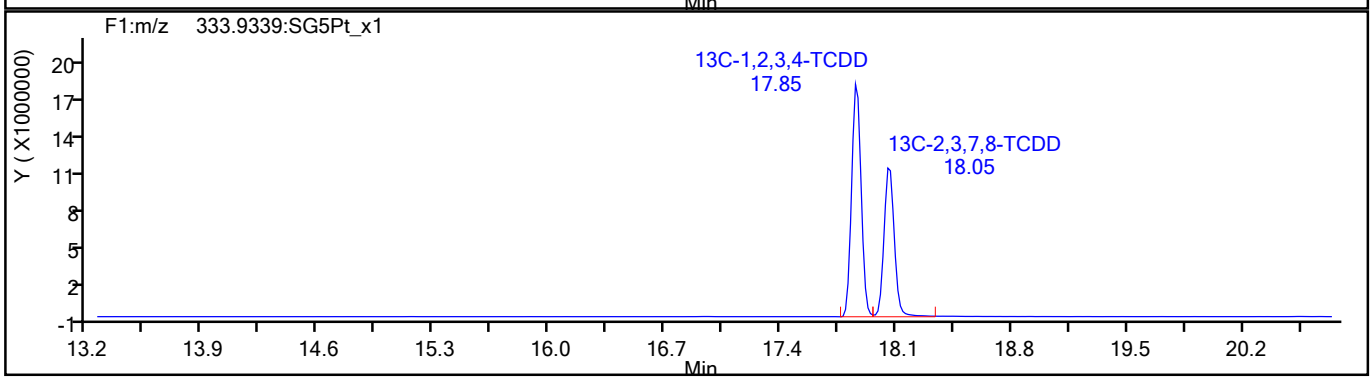

779453

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

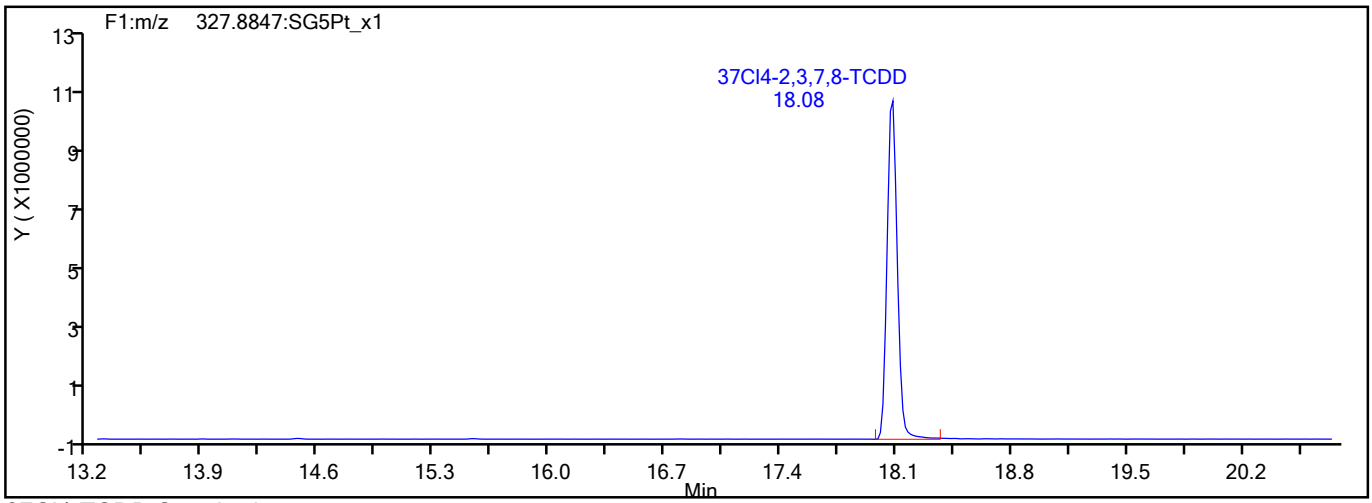

37Cl4-TCDD Standards

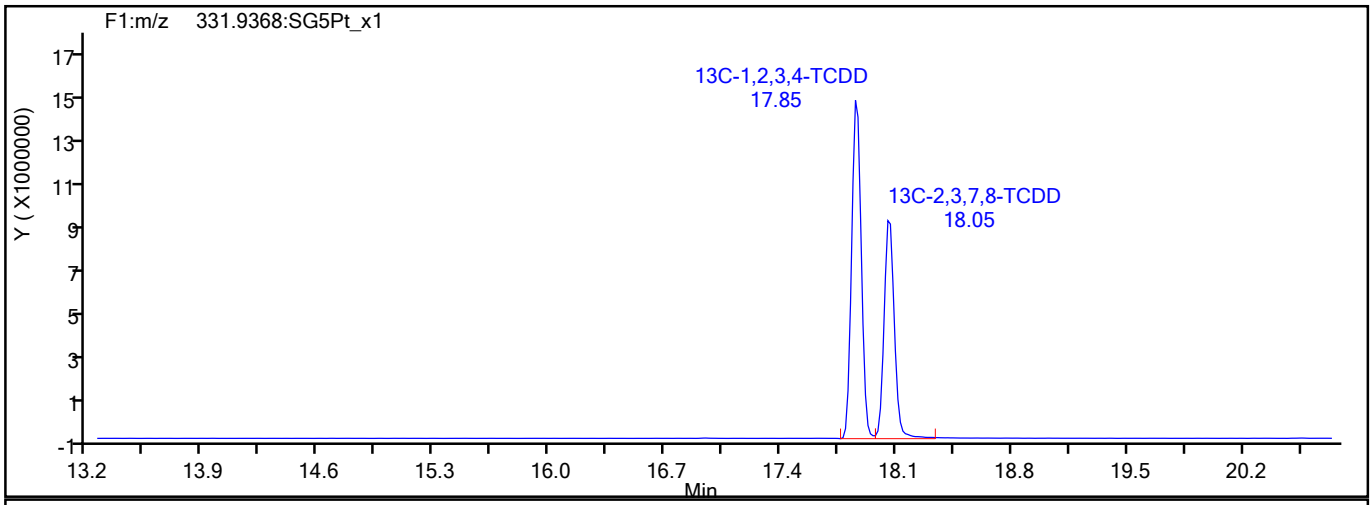

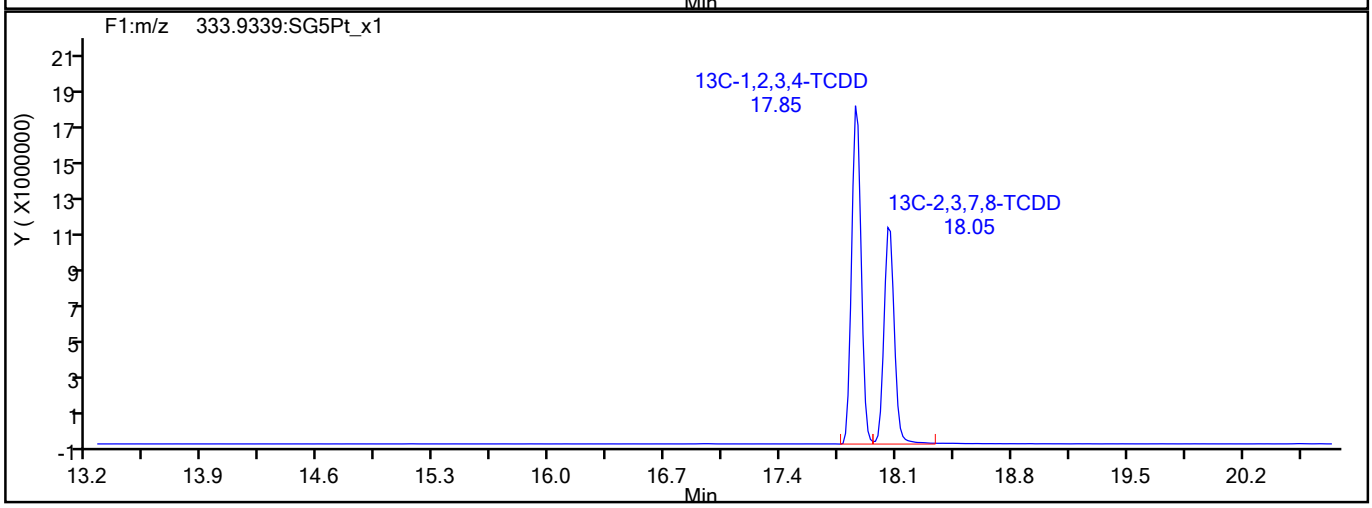

779454

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

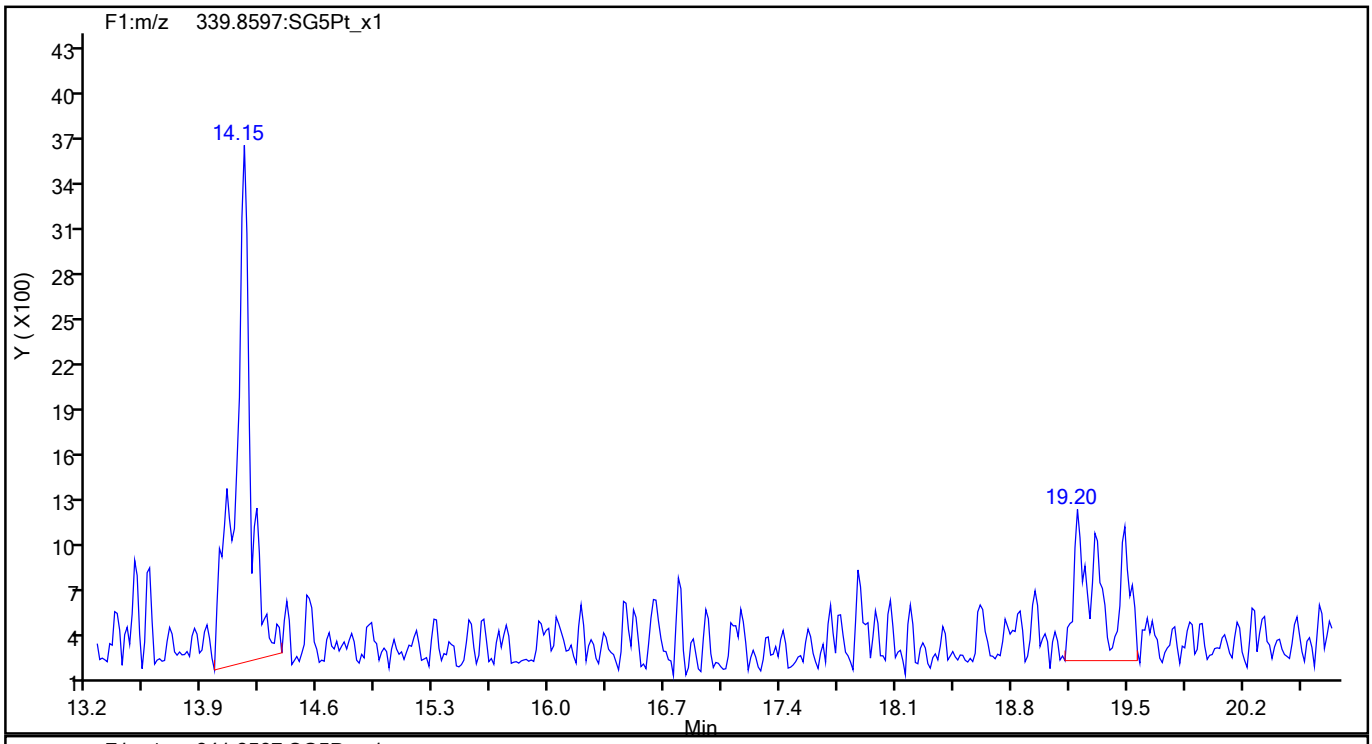

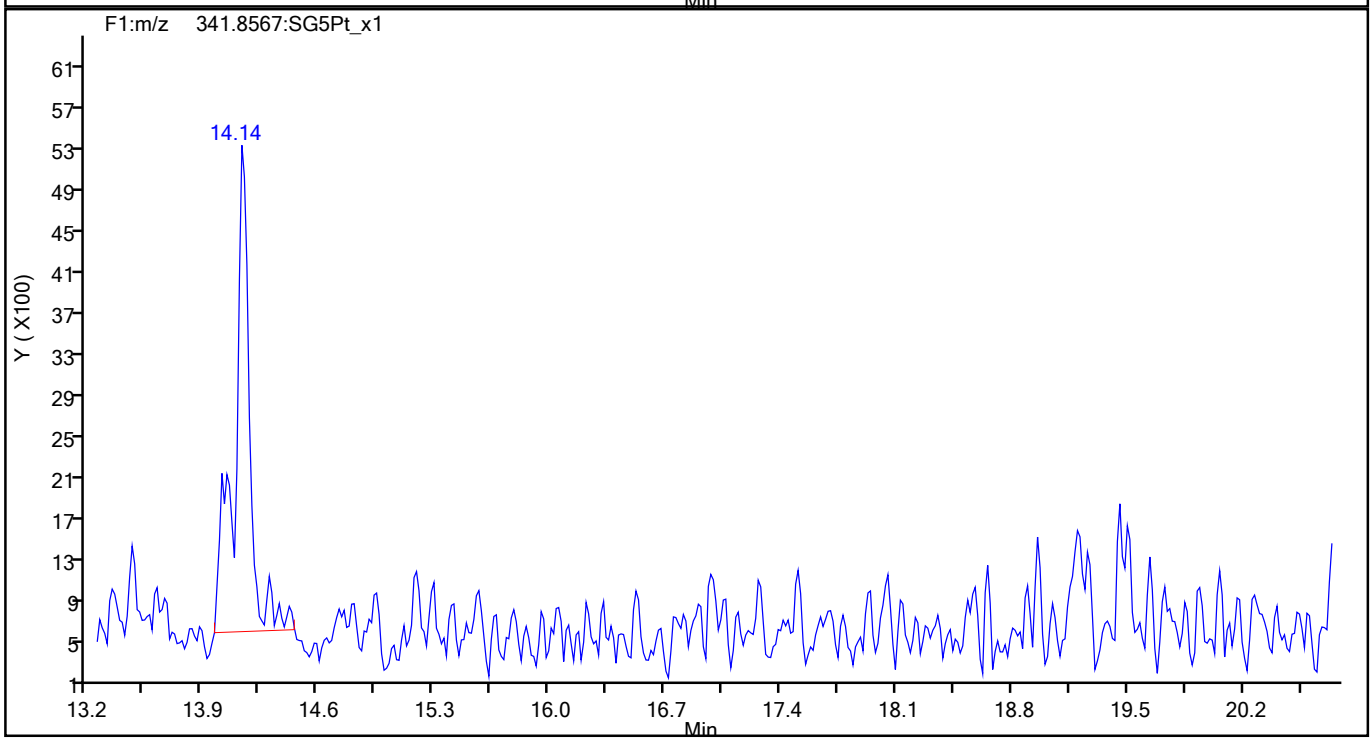

779455

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

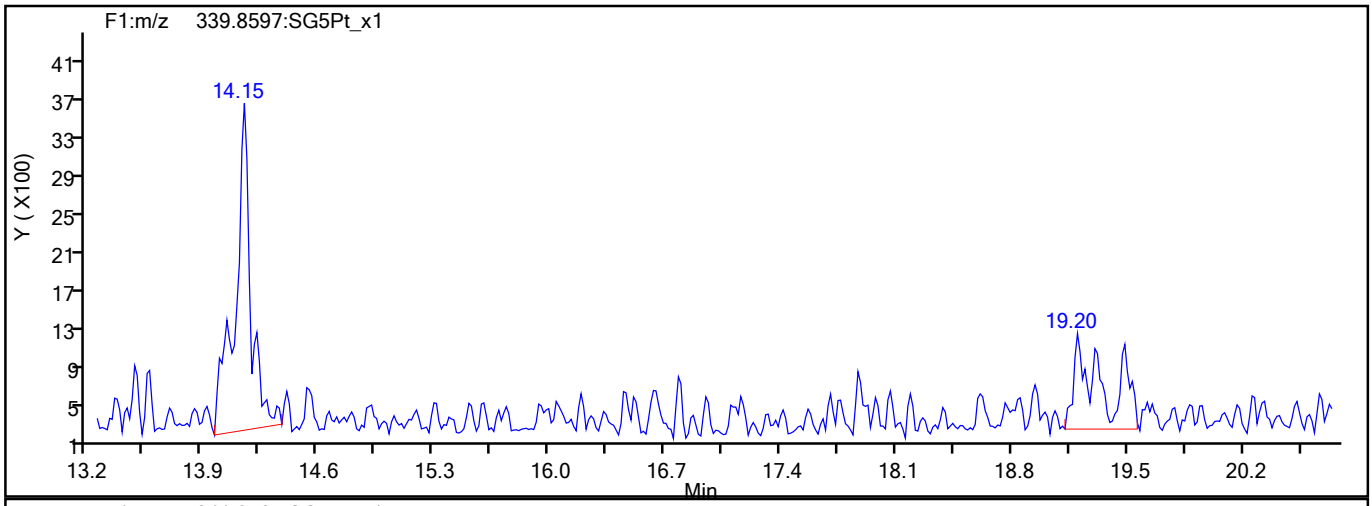

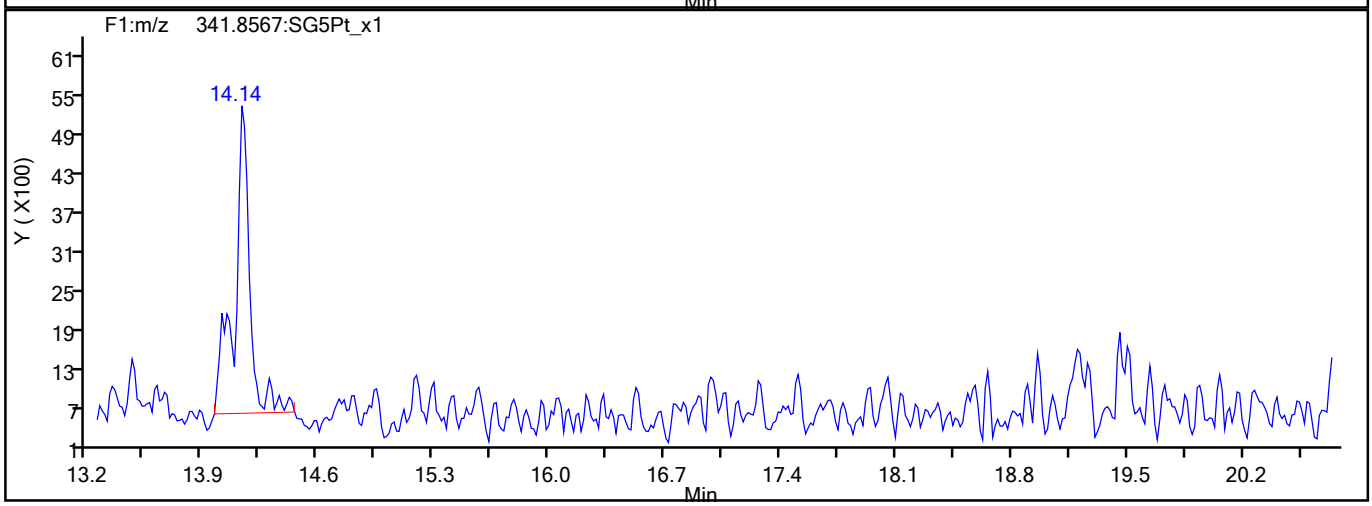

F1 PeCDFs Interference Mass

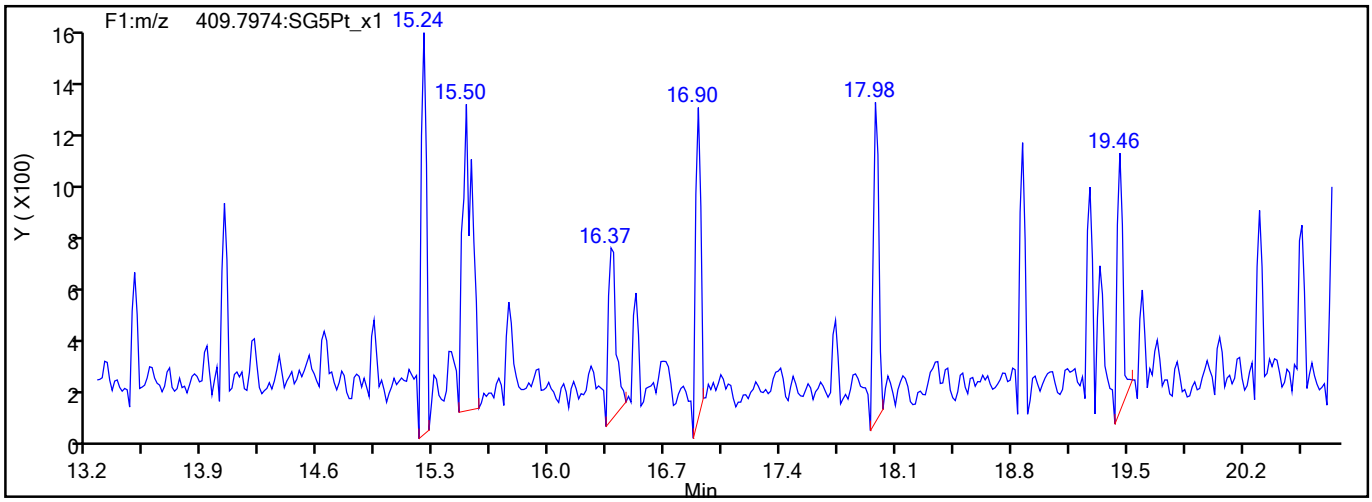

779456

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

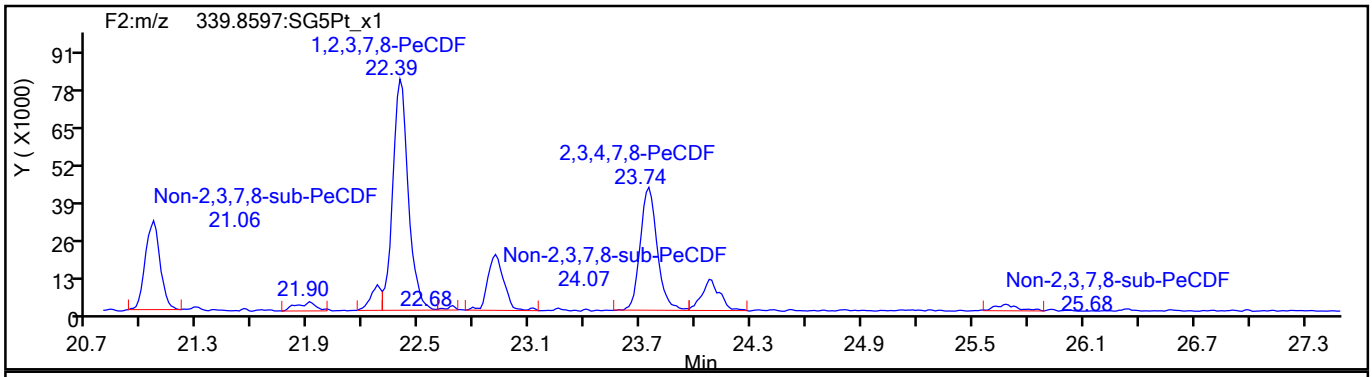

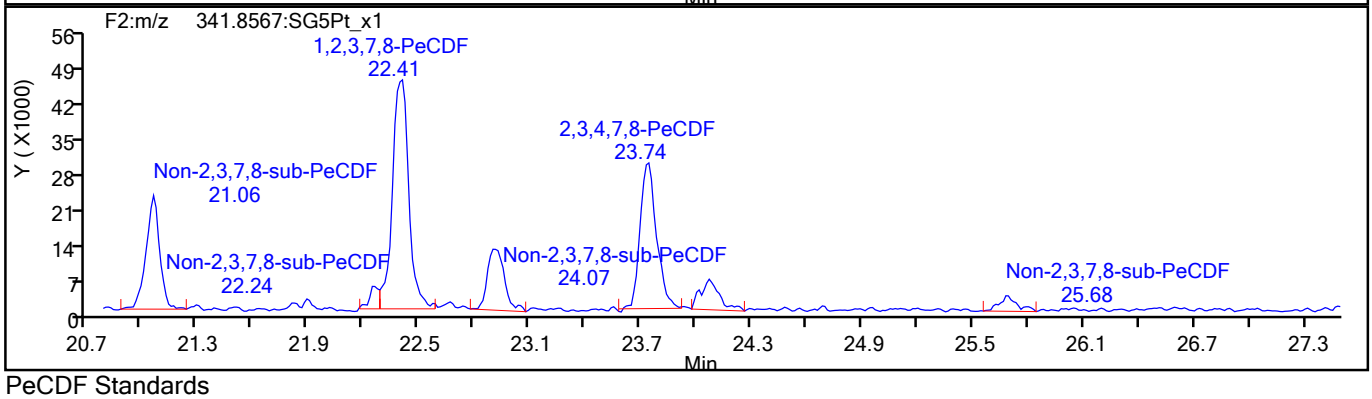

PeCDF Standards

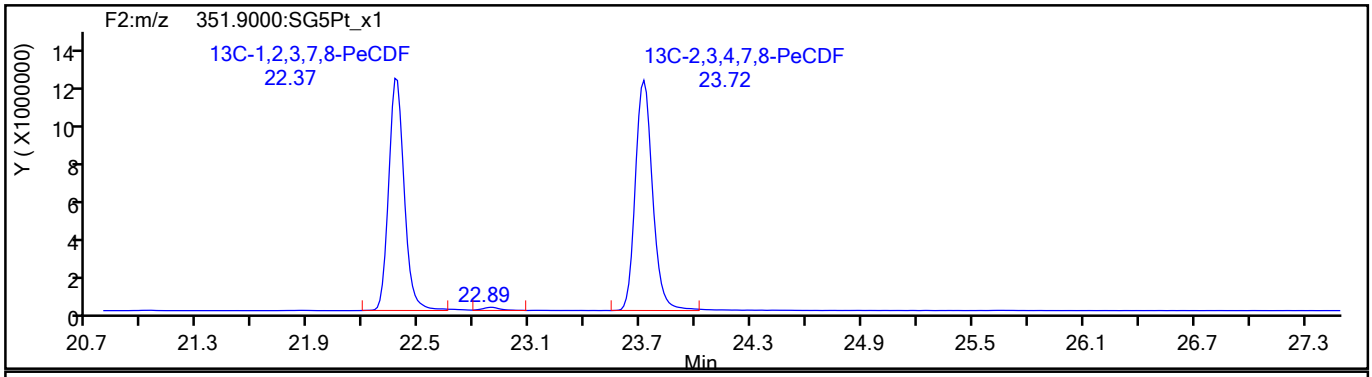

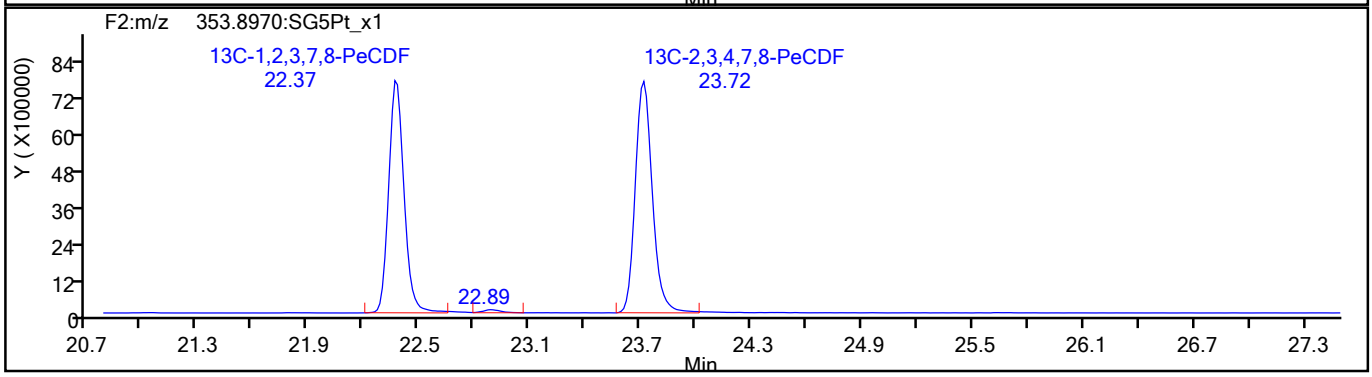

779457

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

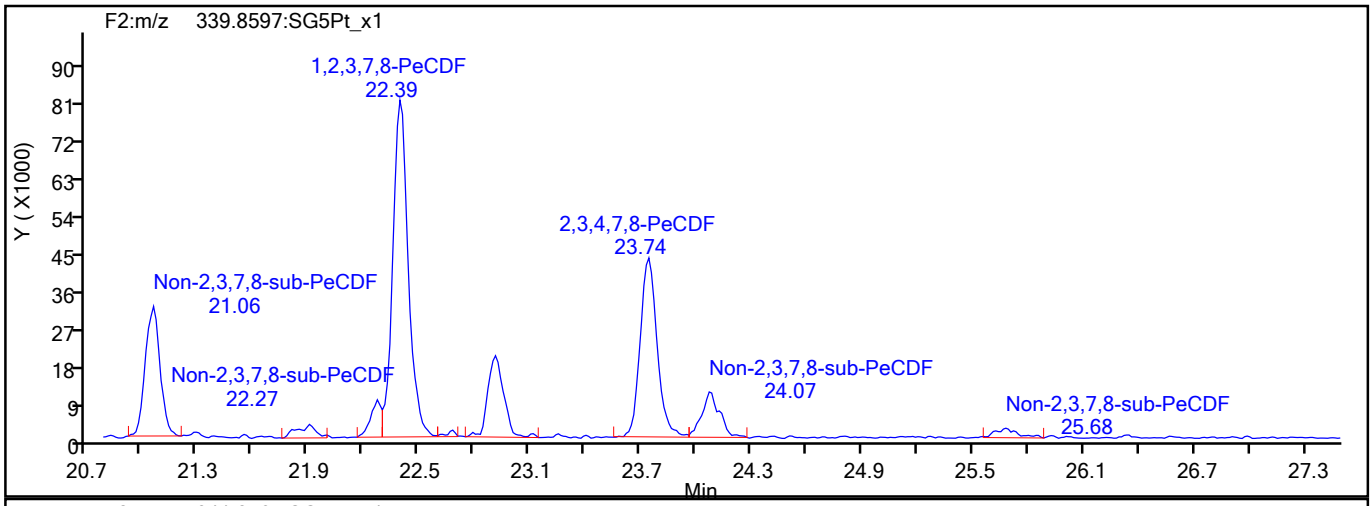

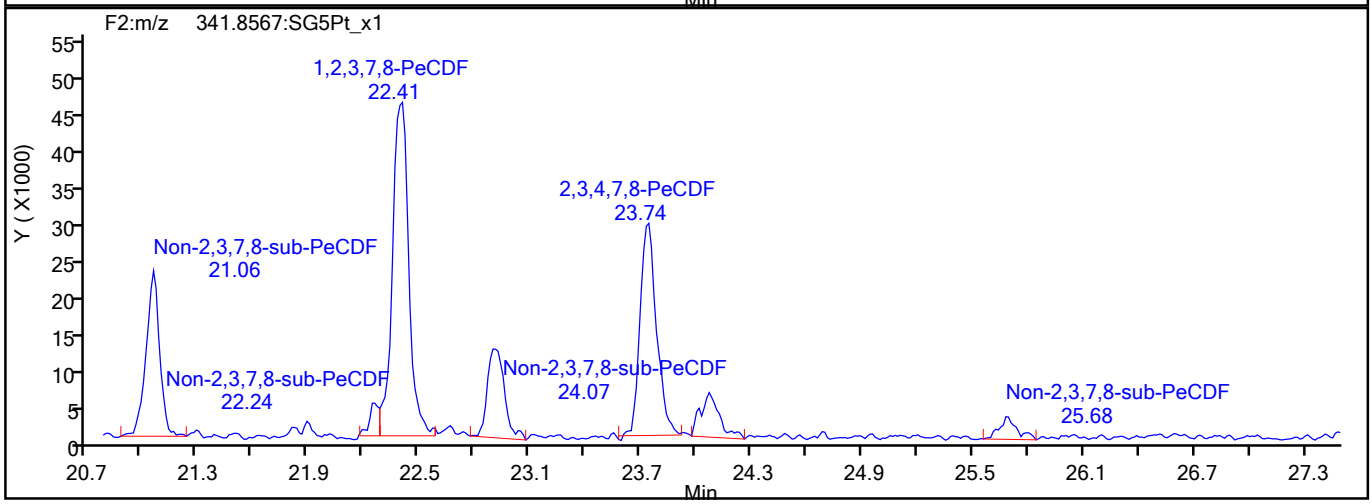

PeCDF Interference Mass

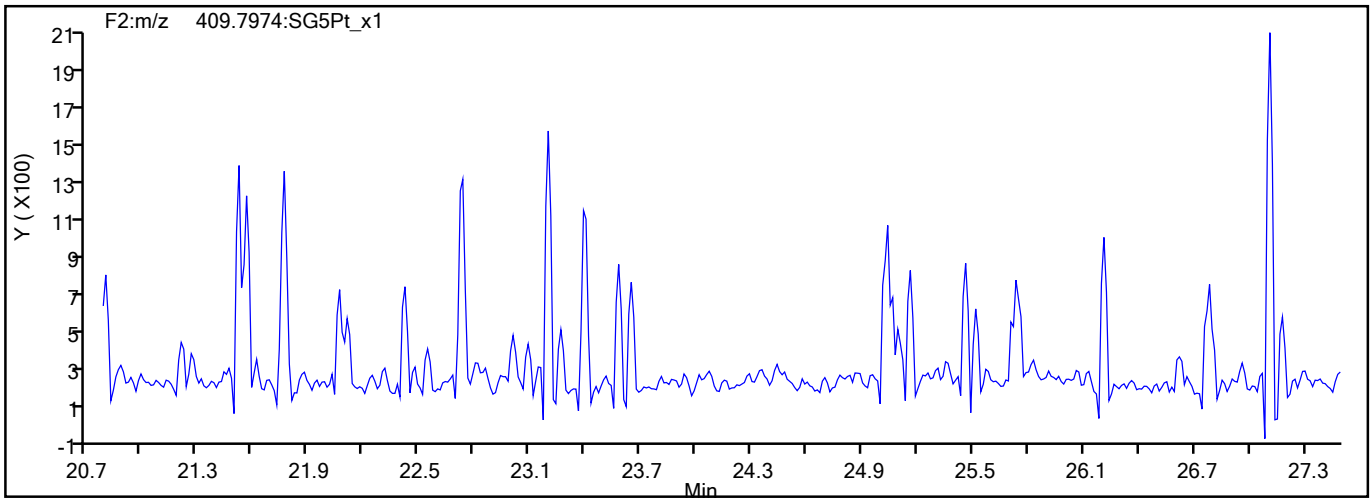

779458

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

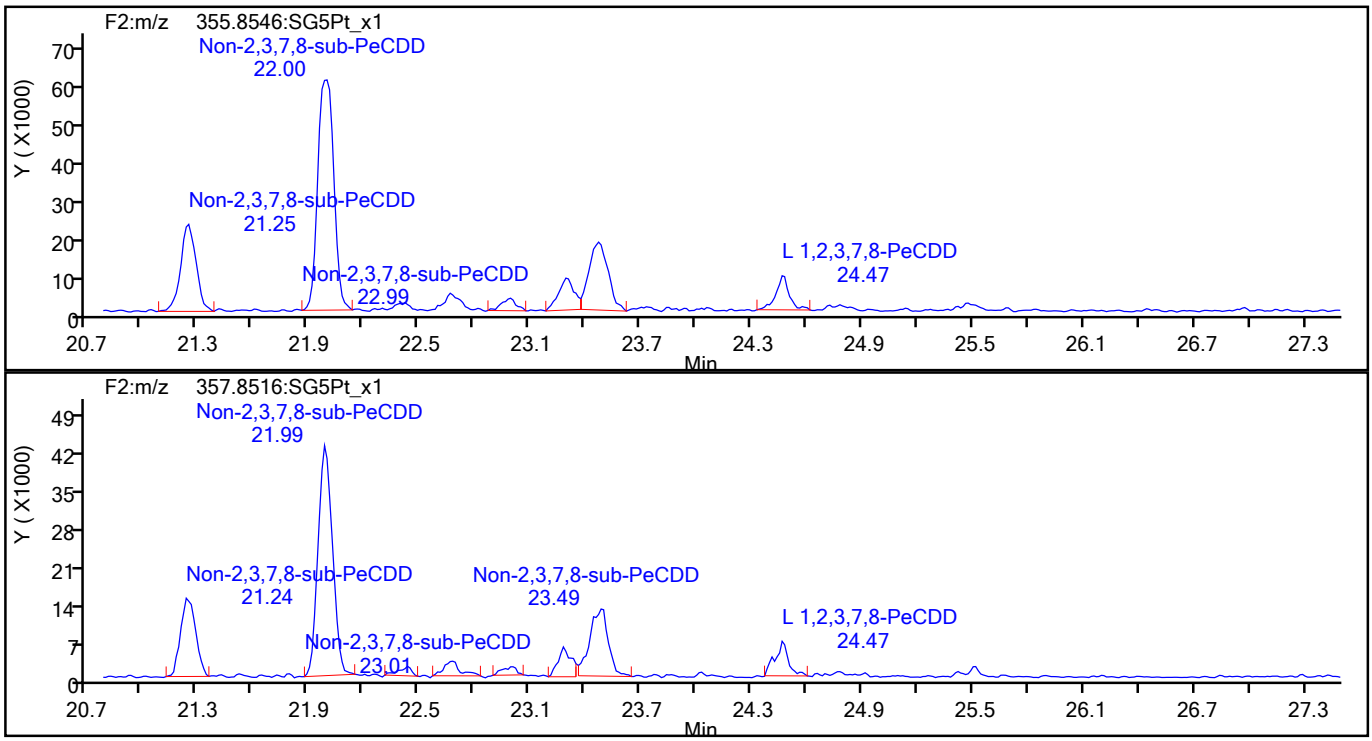

PeCDD Standards

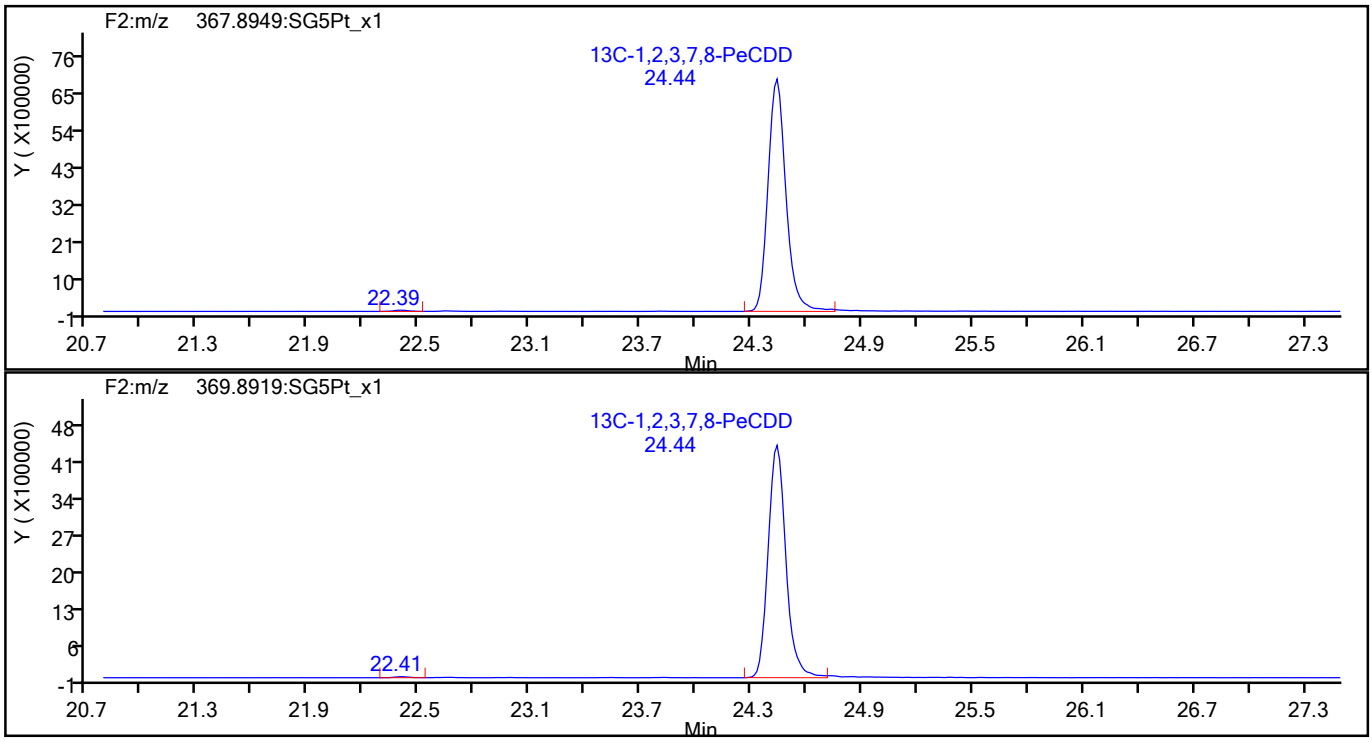

779459

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

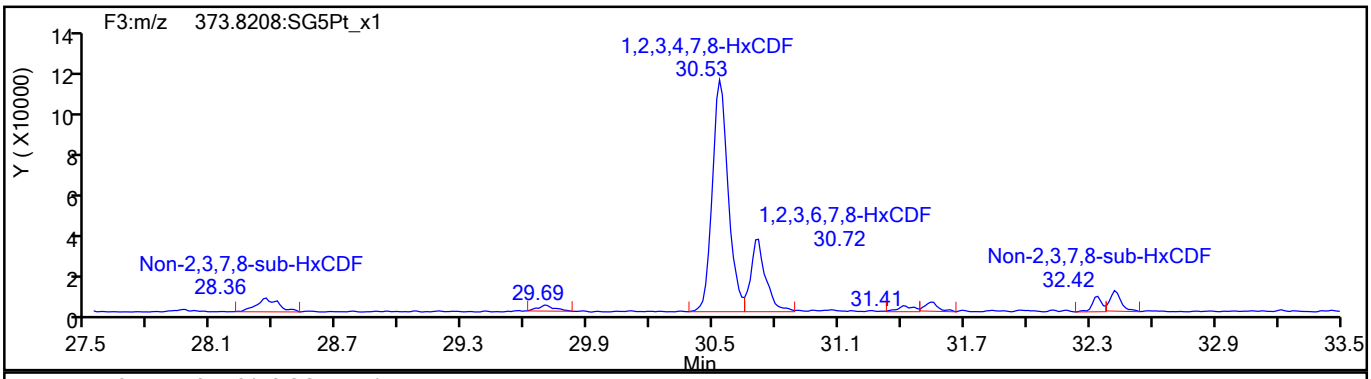

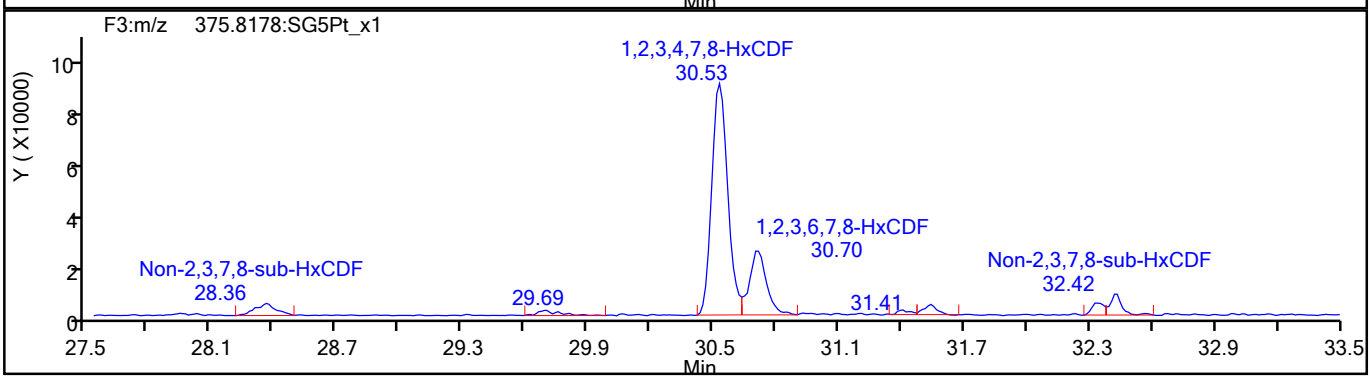

HxCDF Standards

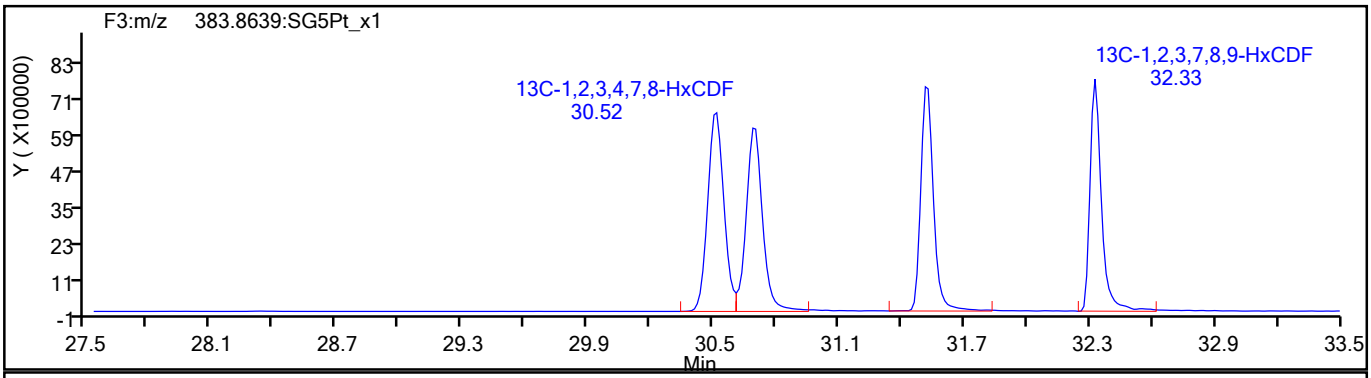

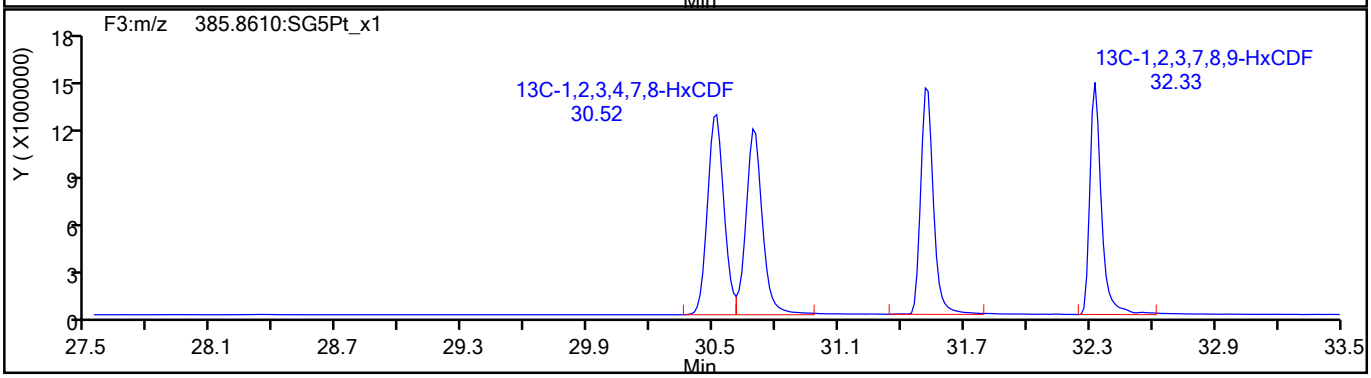

779460

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

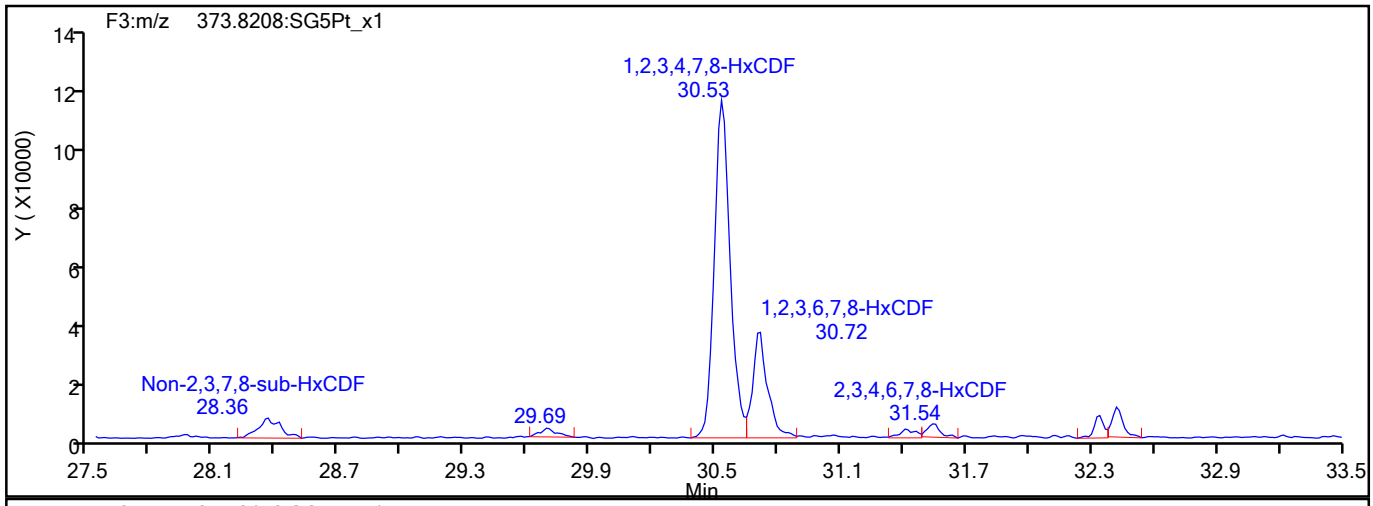

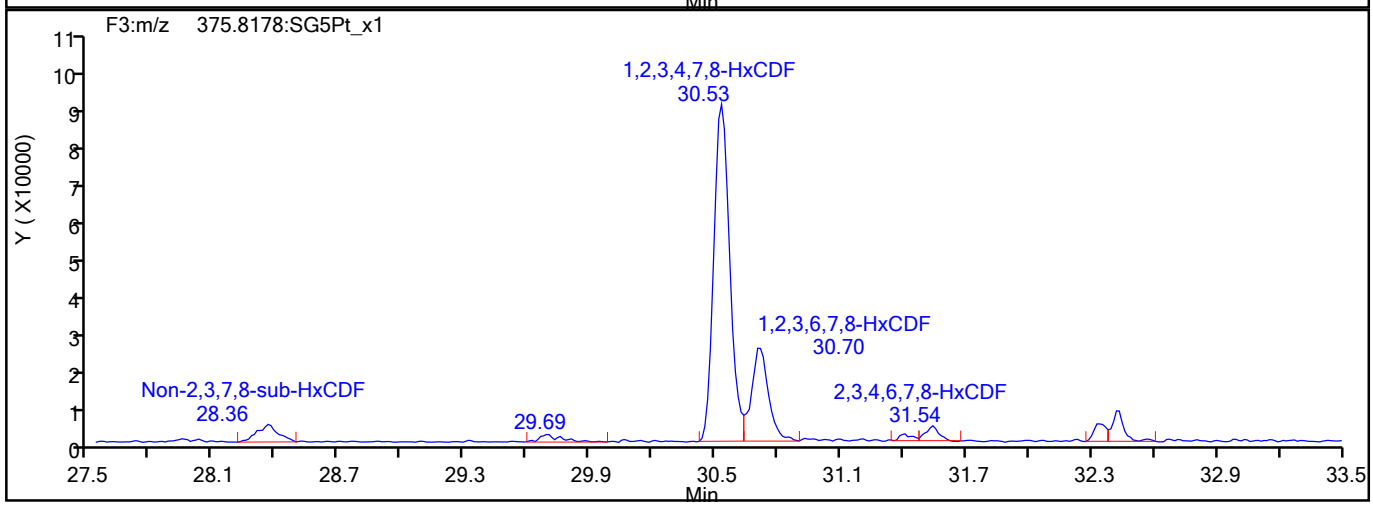

HxCDF Interference Mass

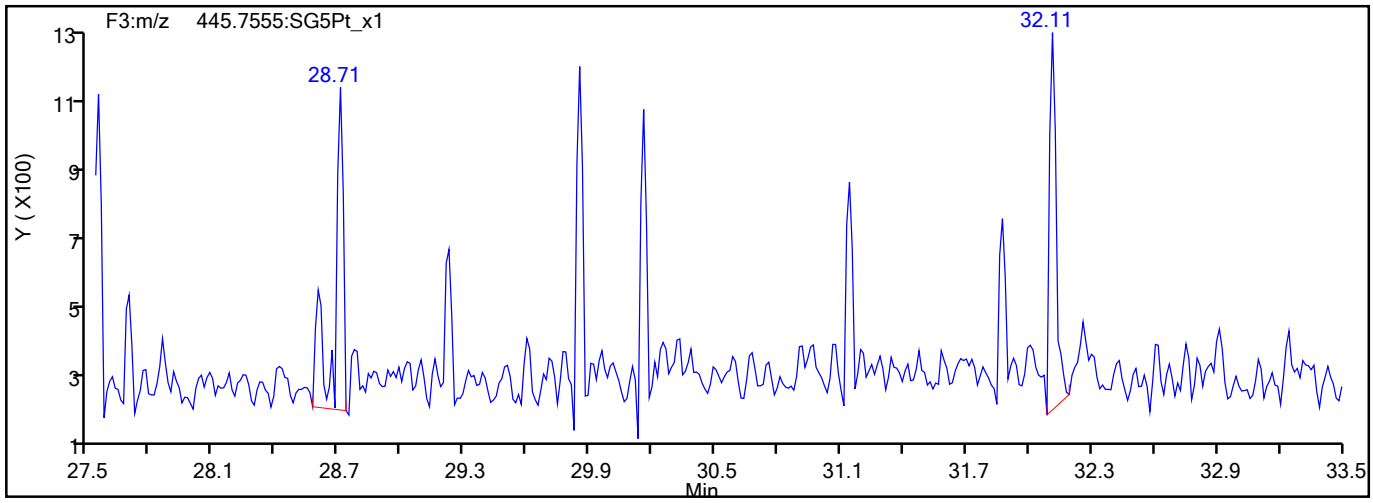

779461

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

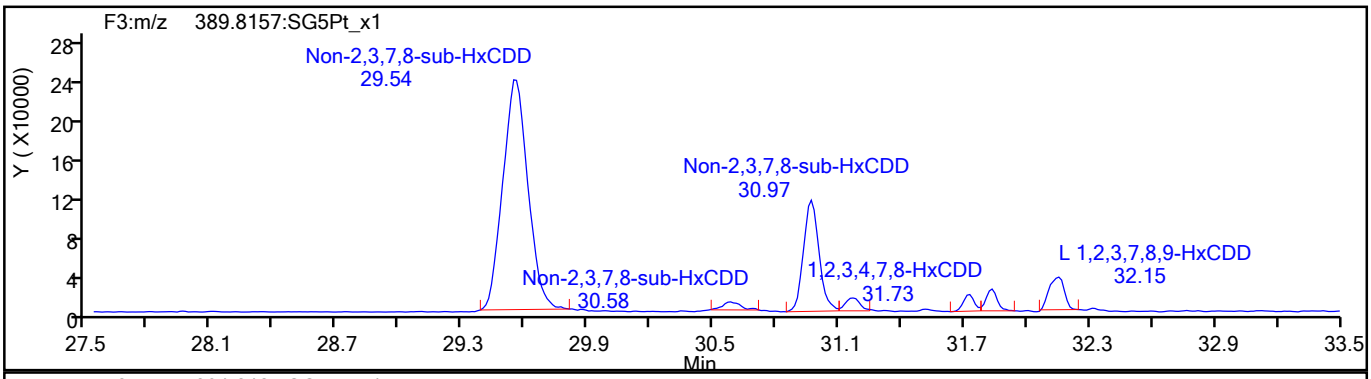

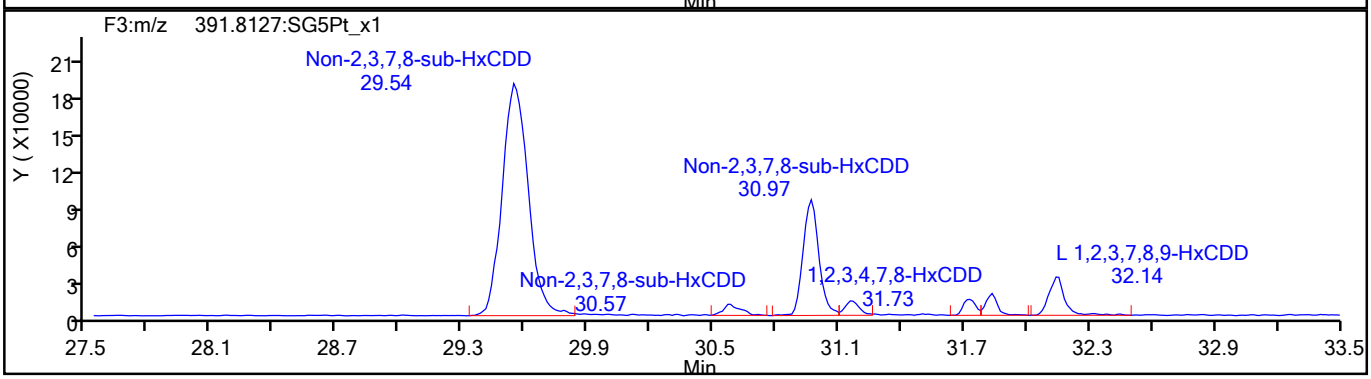

HxCDD Standards

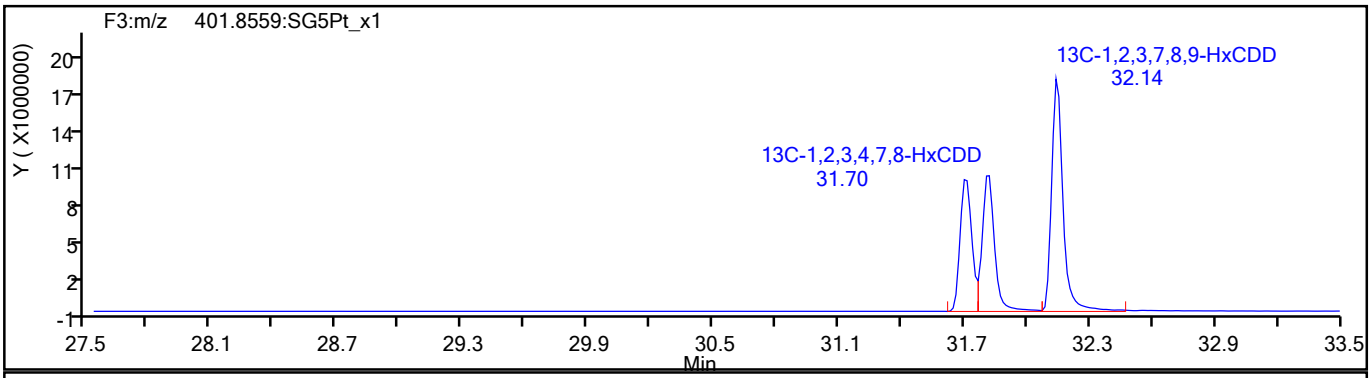

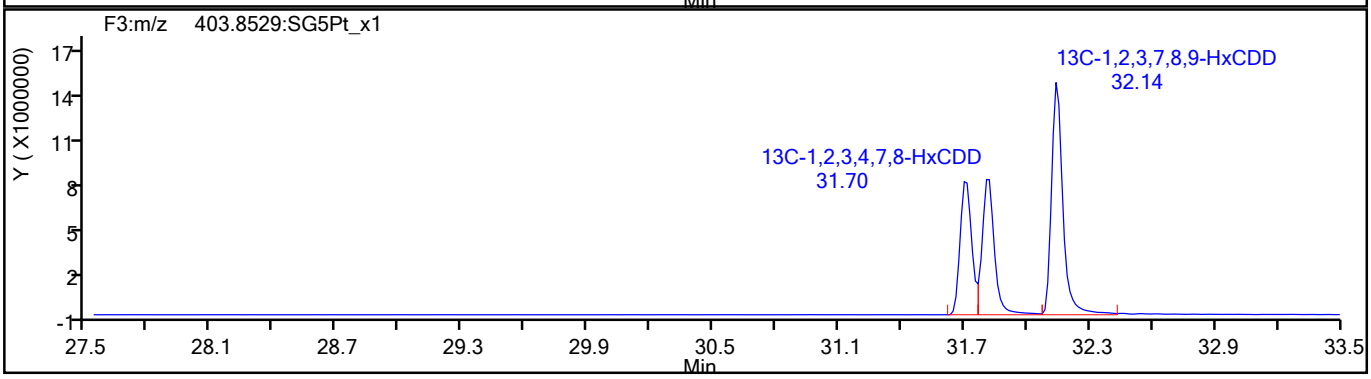

779462

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

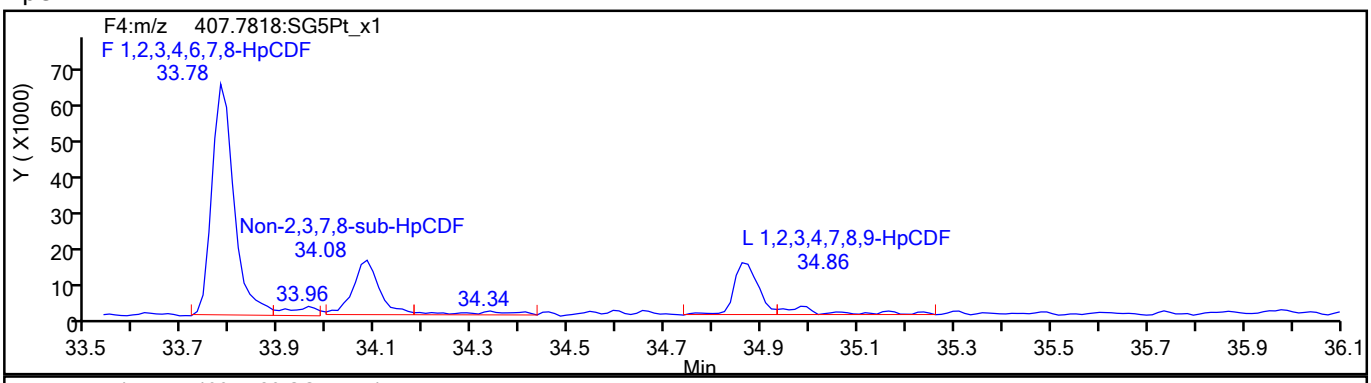

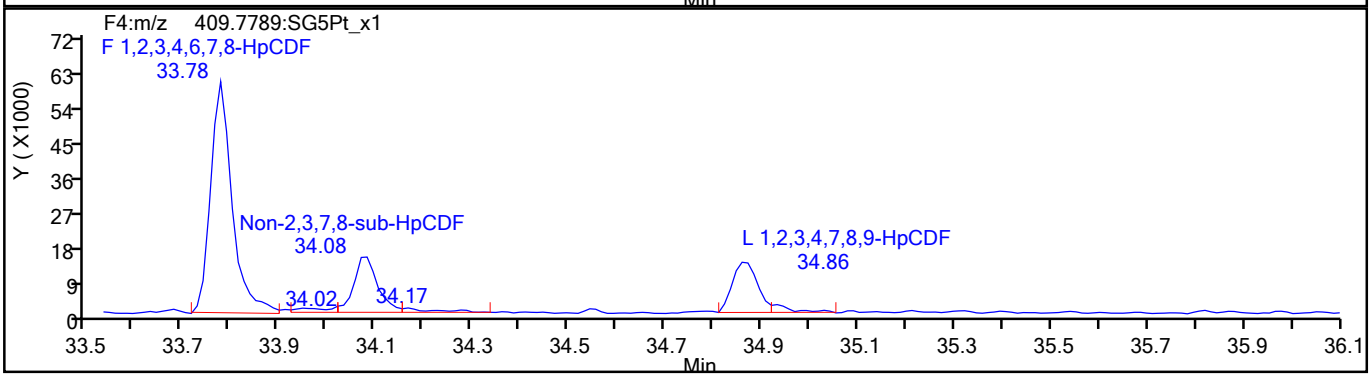

HpCDF Standards

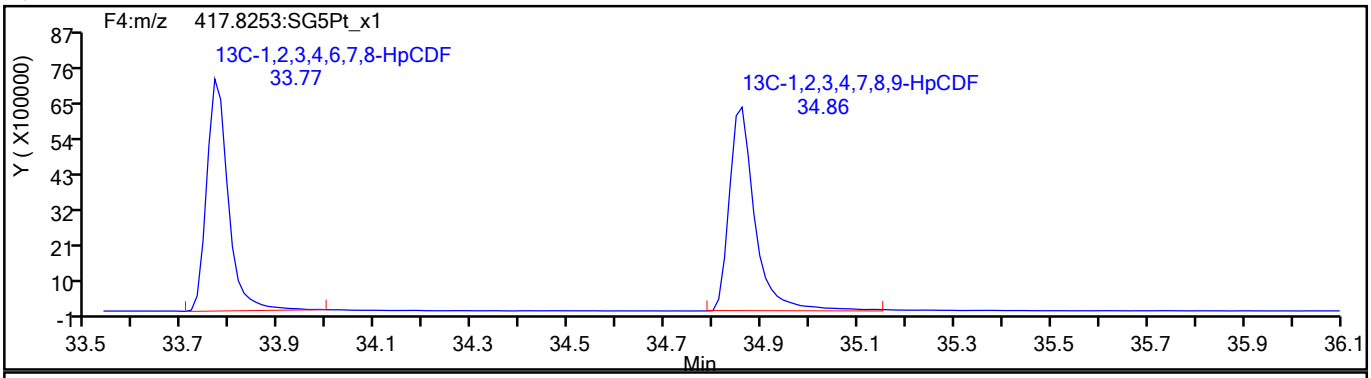

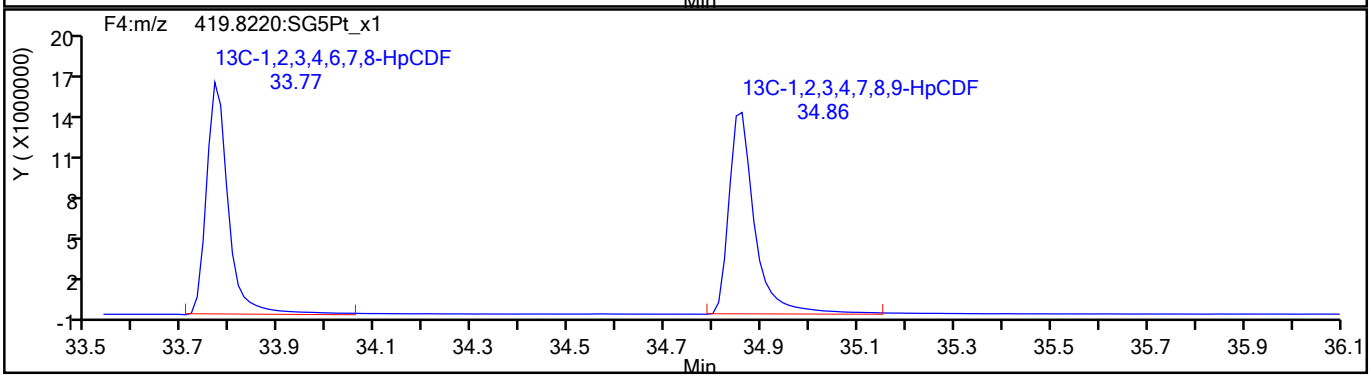

779463

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

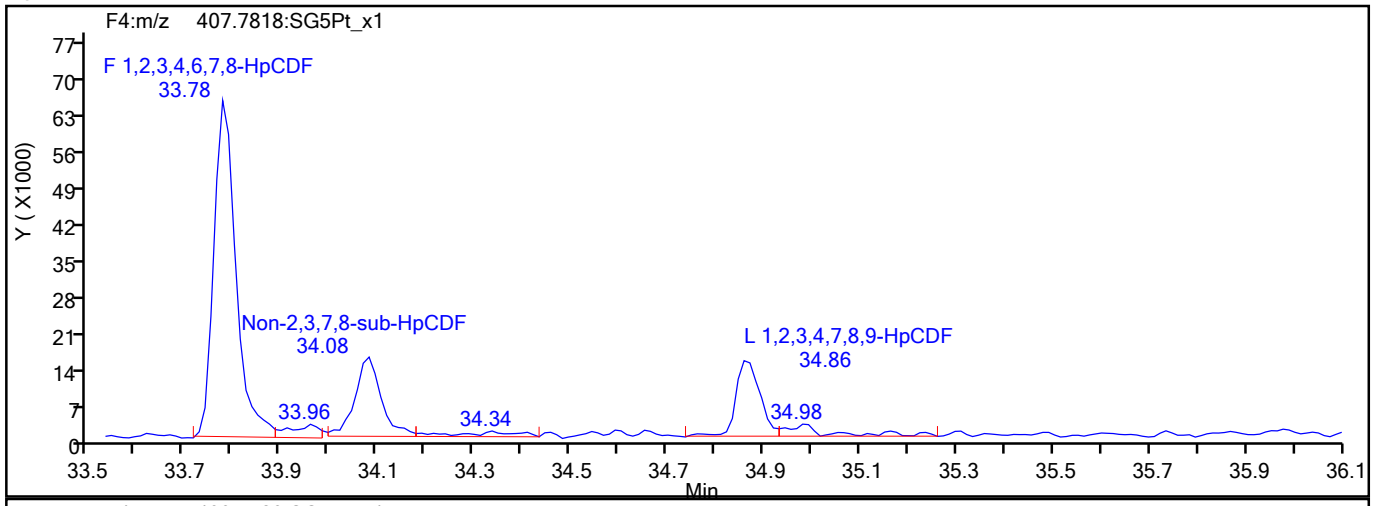

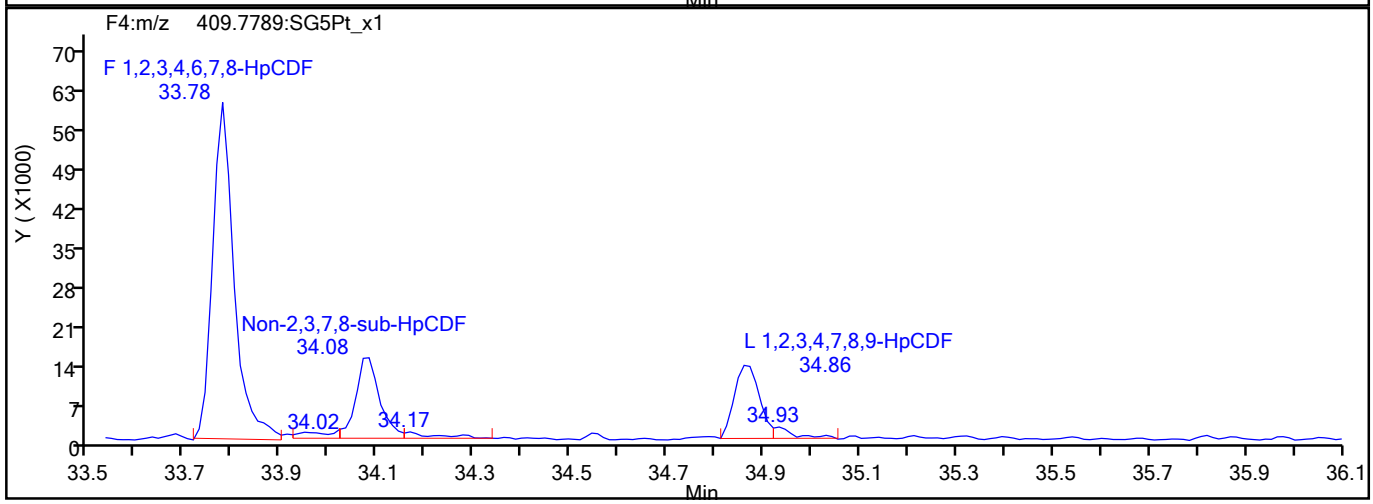

HpCDF Interference Mass

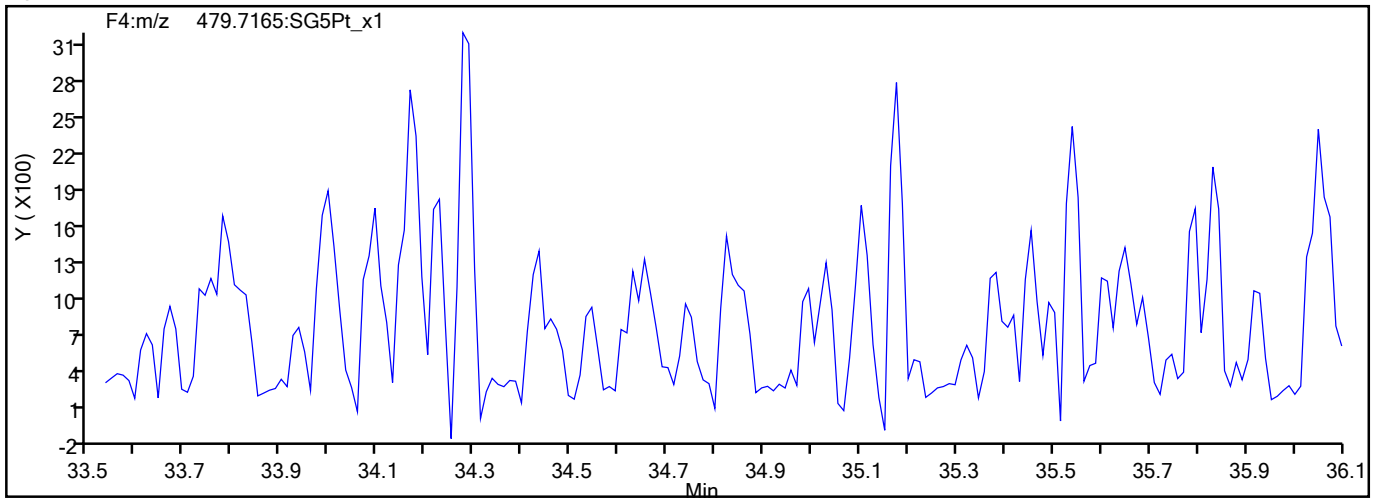

779464

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

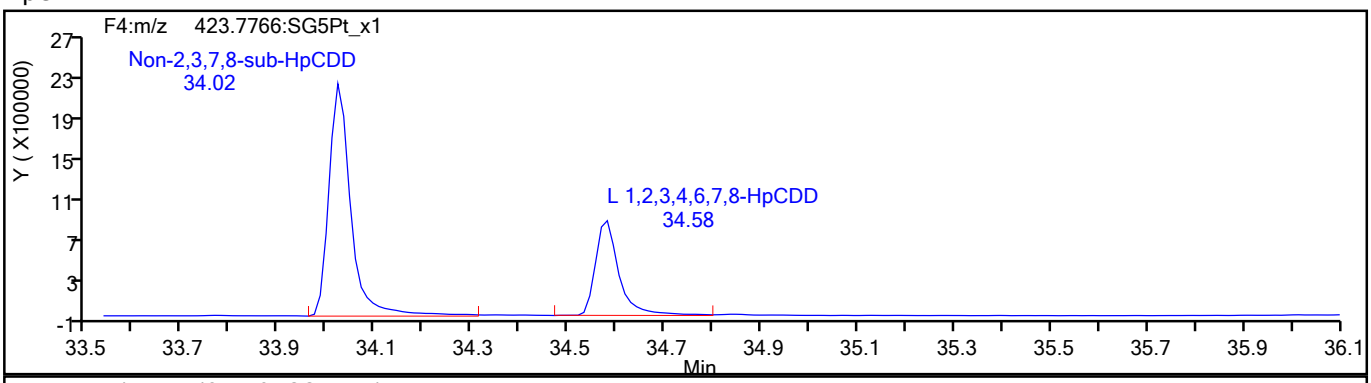

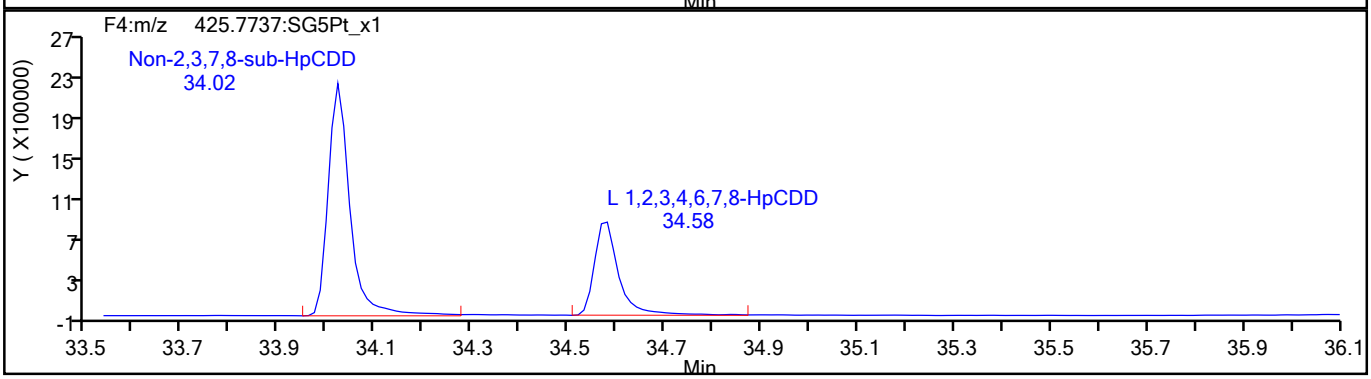

HpCDD Standards

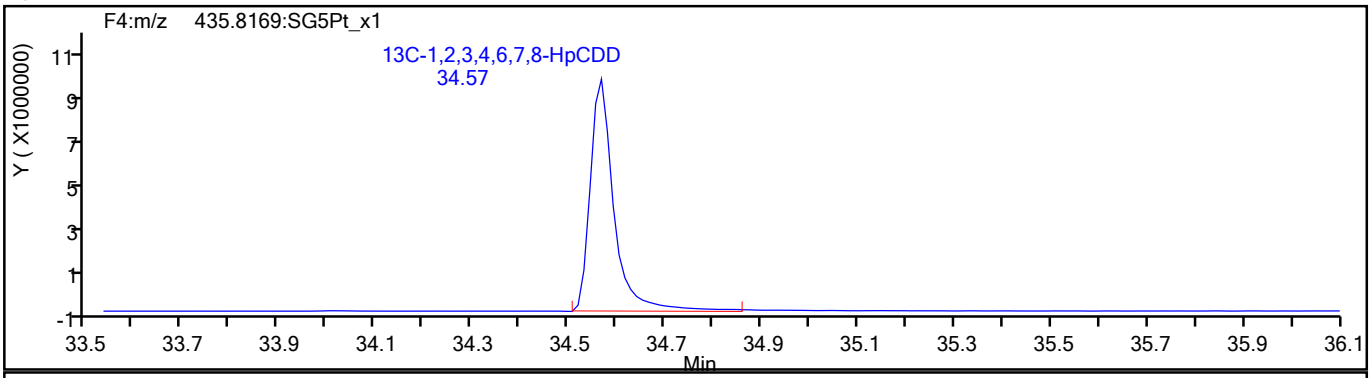

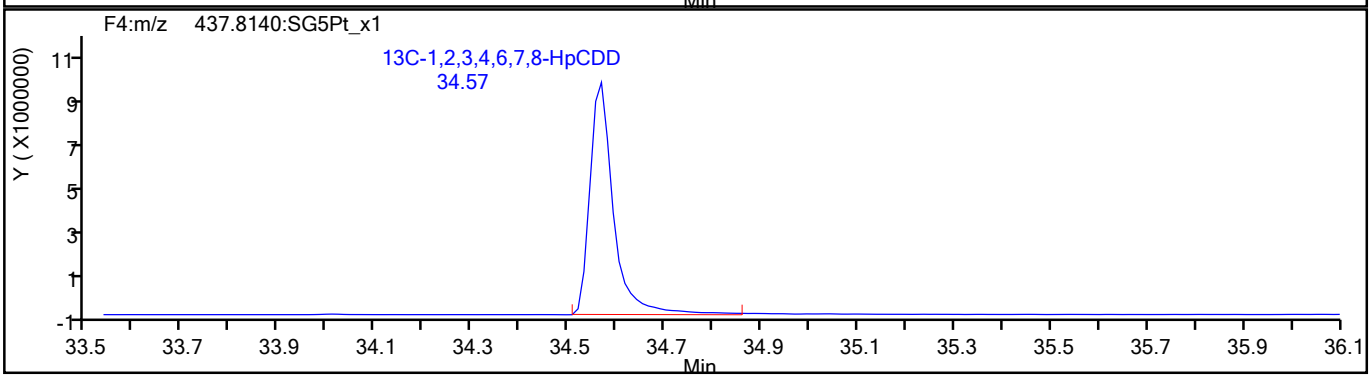

779465

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

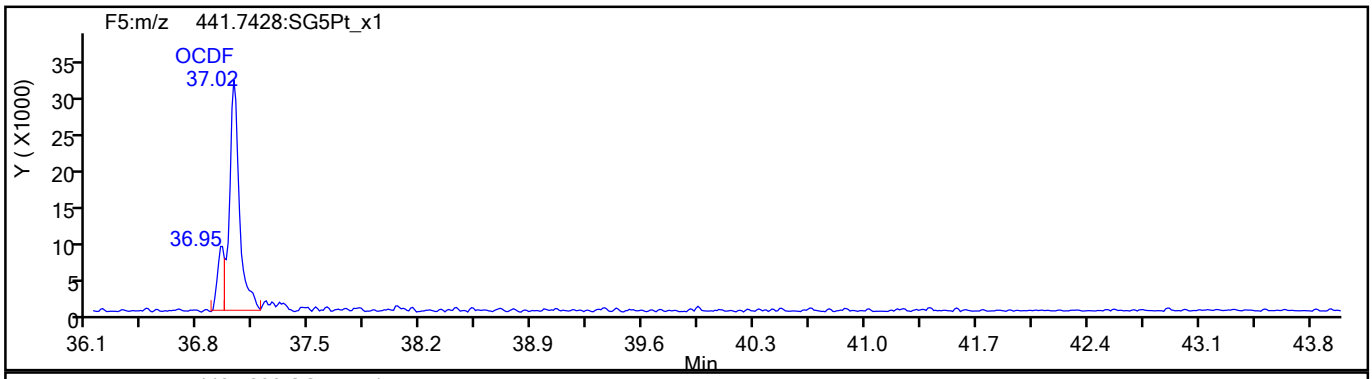

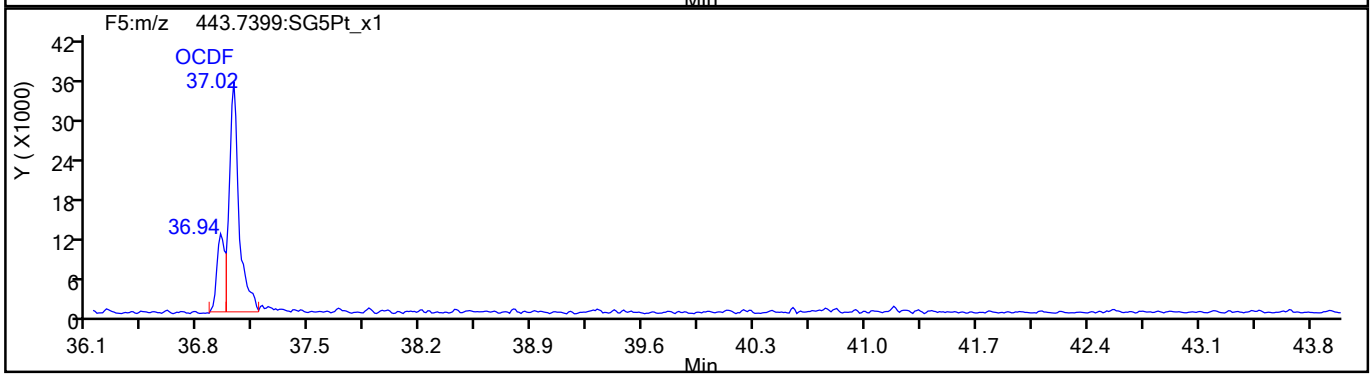

OCDF Standards

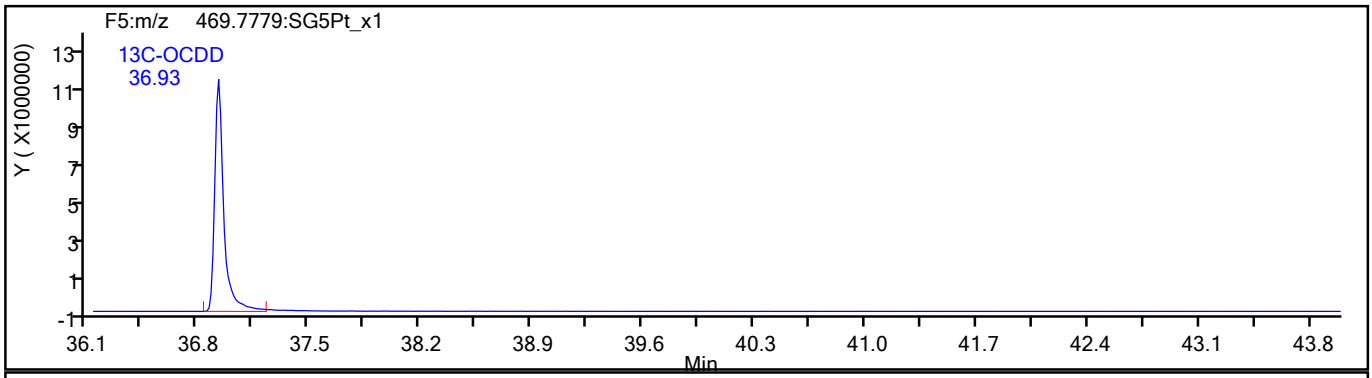

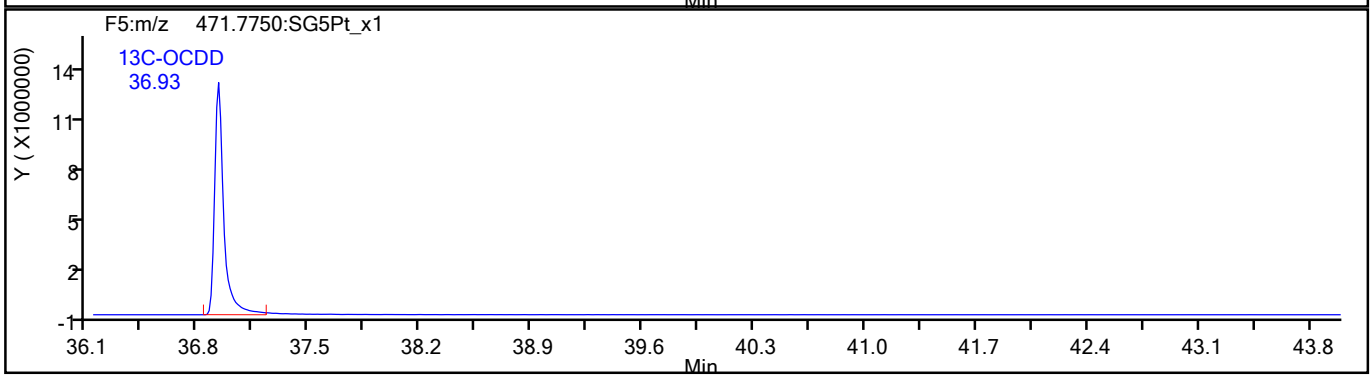

779466

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

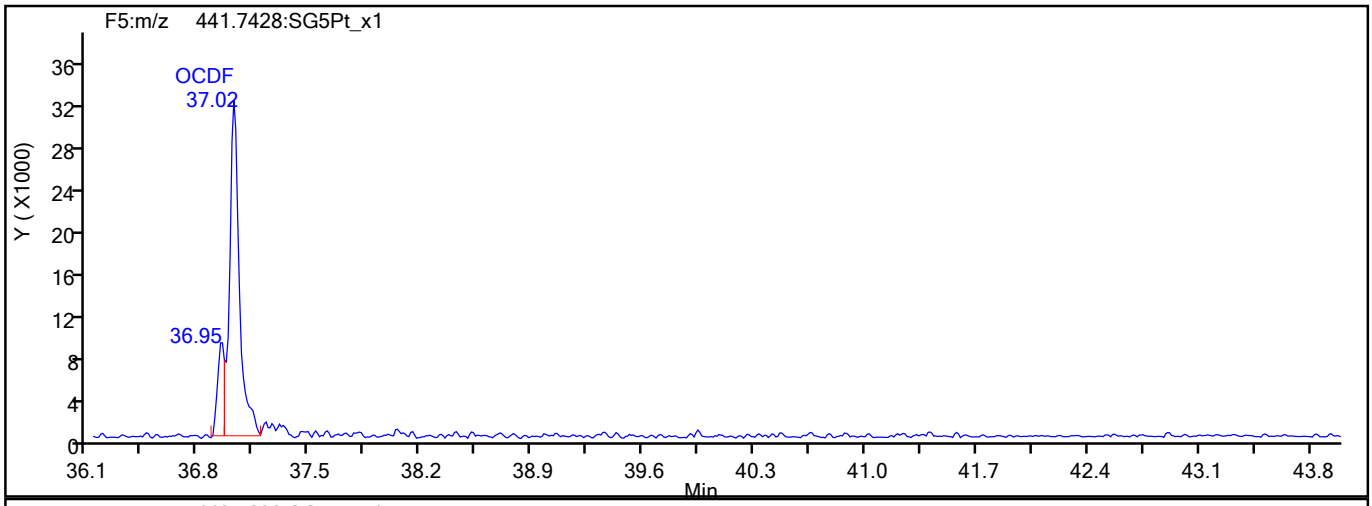

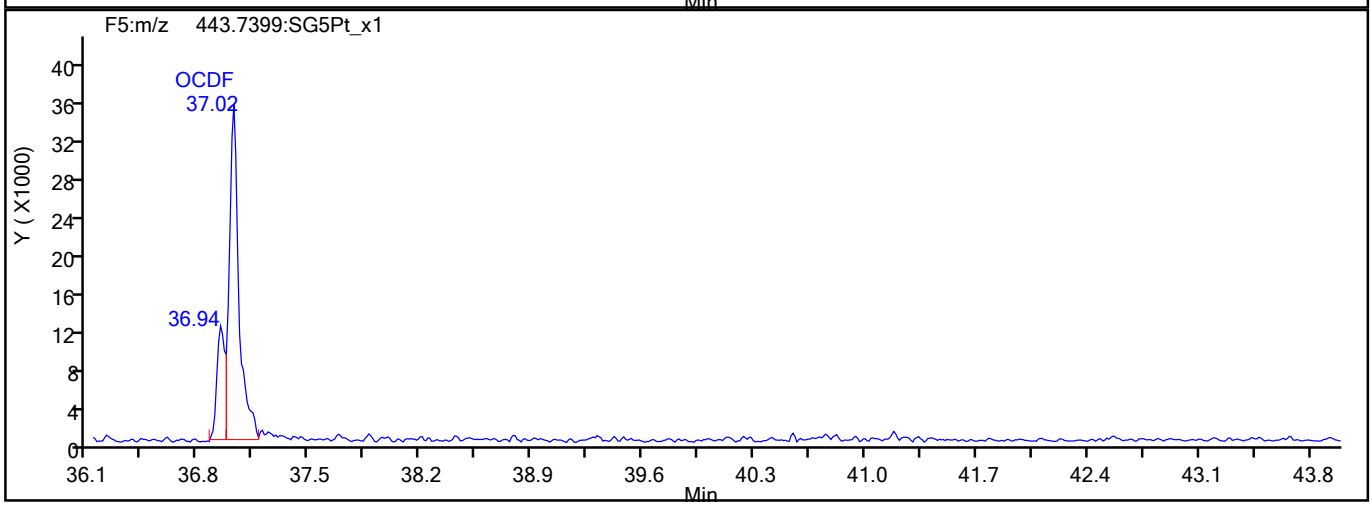

OCDF Interference Mass

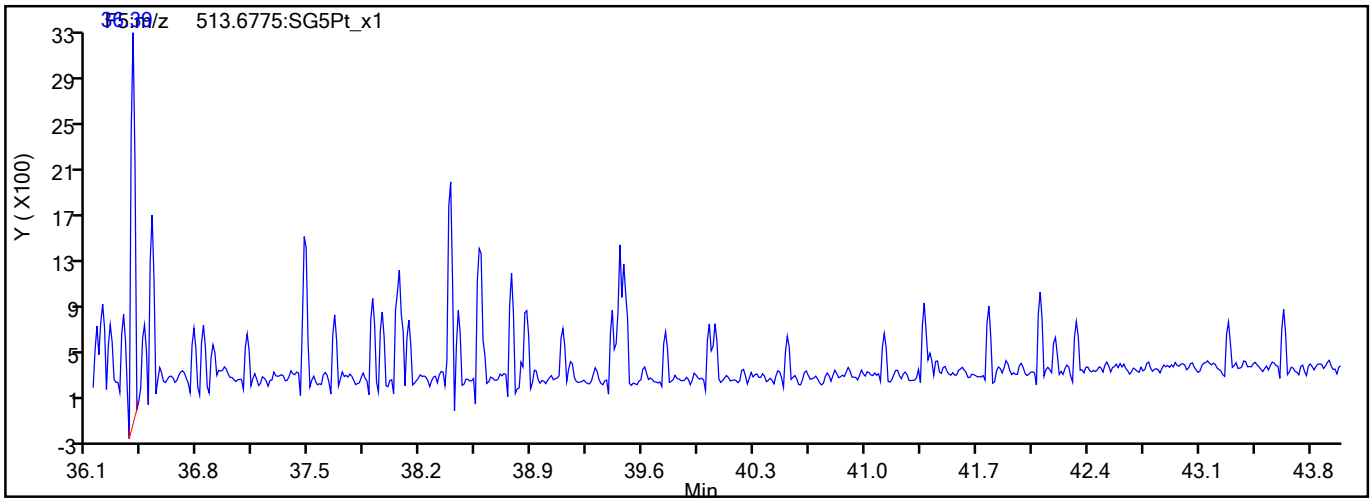

779467

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

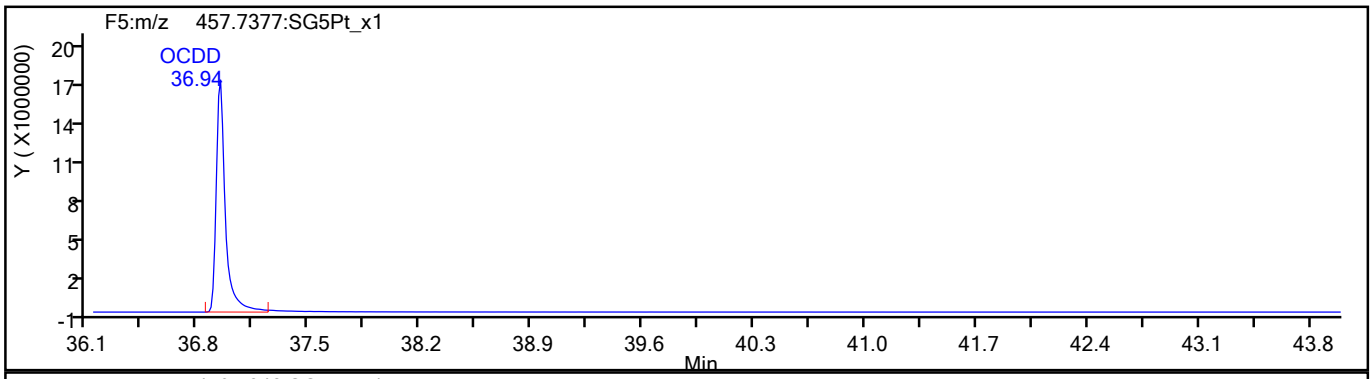

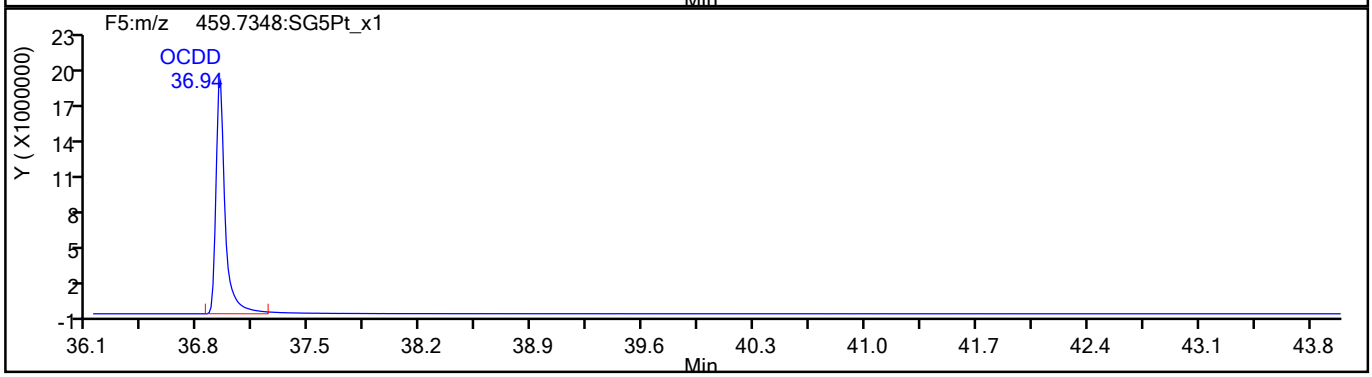

OCDD Standards

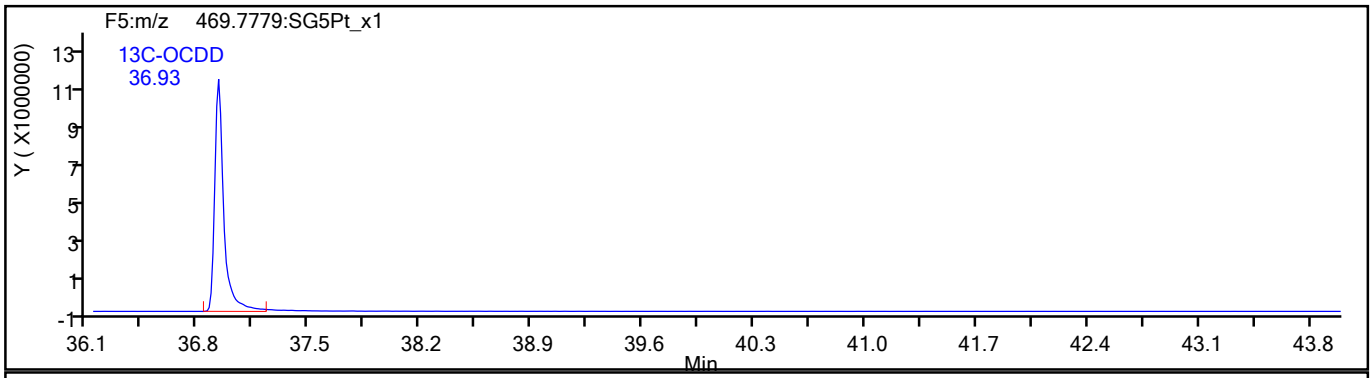

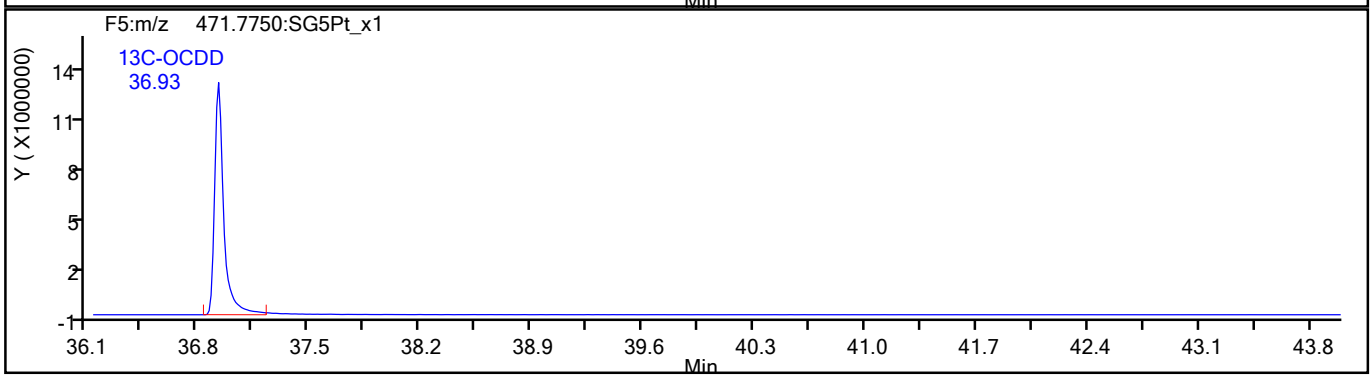

779468

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

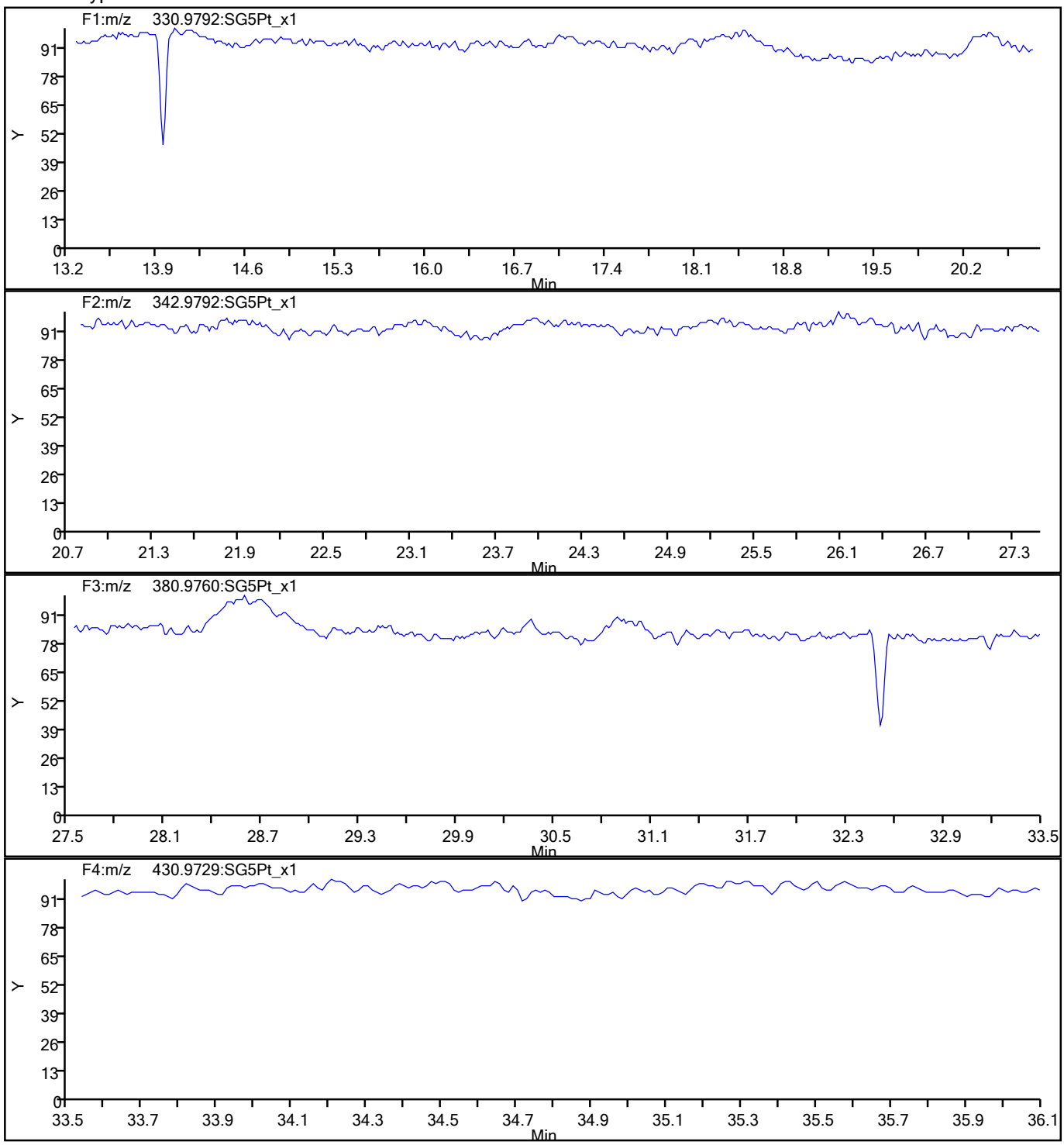

779469

Report Date: 18-Aug-2021 09:07:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_20.d		
Injection Date:	14-Aug-2021 07:26:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	516836	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

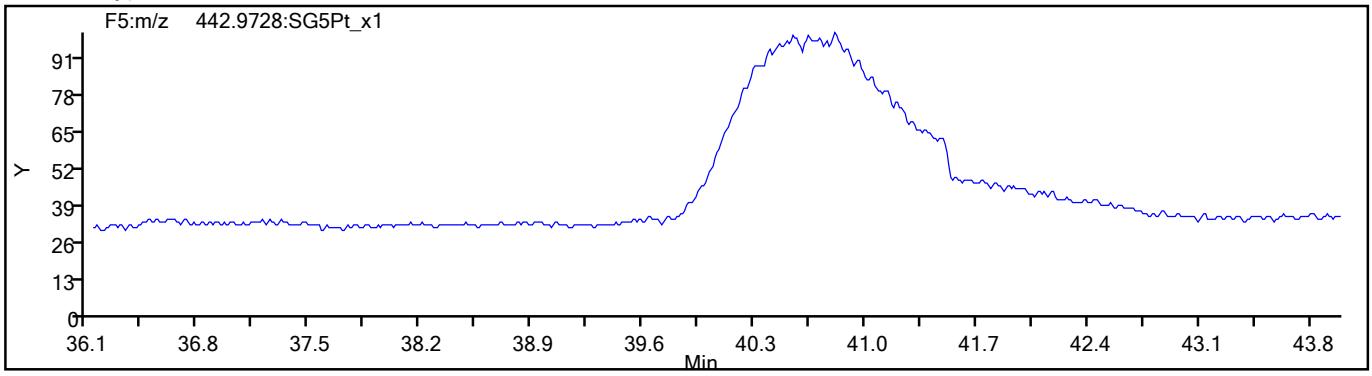

779470

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (8-10) RA
Lab Sample ID: 320-76788-5 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_011.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:20
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.72(g)
Date Analyzed: 08/24/2021 23:00
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	55	B	1.4	0.19

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	83		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	80		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_011.d
Lims ID: 320-76788-A-5-A
Client ID: 11215702-072321-BN-SJSB085 (8-10)
Sample Type: Client
Inject. Date: 24-Aug-2021 23:00:38 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-5-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:31:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.299	61748299	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.630	68688849	0.78	1.3327	83.5	83.5	0.2438	0.2438	83.47	
2,3,7,8-TCDF	17.644	13913737	0.79	0.9978	20.3	20.3	0.0714	0.0714		
D 13C-2,3,7,8-TCDD	16.066	41281525	0.77	0.8749	76.4	76.4	0.8056	0.8056	76.41	
$ 37Cl4-2,3,7,8-TCDD	16.094	17006034		0.8648	31.8	31.8	0.0558	0.0558	79.61	
2,3,7,8-TCDD	16.094	3207791	0.82	1.0570	7.352	7.352	0.0968	0.0968		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_011.d
Lims ID: 320-76788-A-5-A
Client ID: 11215702-072321-BN-SJSB085 (8-10)
Sample Type: Client
Inject. Date: 24-Aug-2021 23:00:38 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-5-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:31:39

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.299	16.285	1		27230935	6098937	18971	47427	321		
333.9339	16.299	16.285	1		34517364	7676079	19867	49667	386	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.630	17.601	2	1.082	30043109	5759894	9770	24425	590		
317.9389	17.630	17.601	2	1.082	38645740	7461125	8131	20327	918	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.629	1	1.001	6147601	1134712	1840	4600	617		
305.8987	17.644	17.629	1	1.001	7766136	1451685	1926	4815	754	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.051	1	0.986	18011476	3950811	18971	47427	208		
333.9339	16.066	16.051	1	0.986	23270049	5126923	19867	49667	258	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.094	16.065	2	0.987	17006034	3808580	2657	6642	1433		
2,3,7,8-TCDD											
319.8965	16.094	16.079	1	1.002	1444103	311304	2059	5147	151		
321.8936	16.094	16.079	1	1.002	1763688	385378	1655	4137	233	0.82(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 25-Aug-2021 09:02:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_011.d		
Injection Date:	24-Aug-2021 23:00:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	519540	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

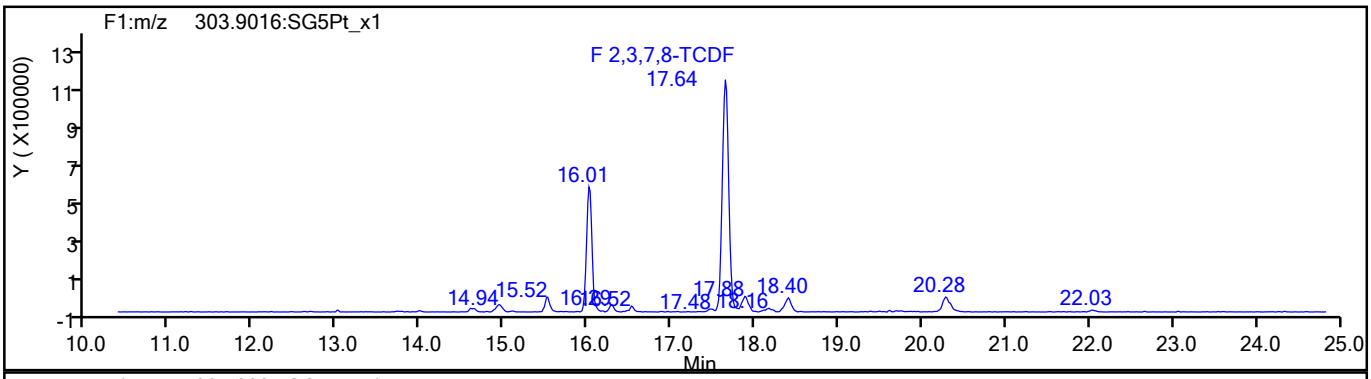

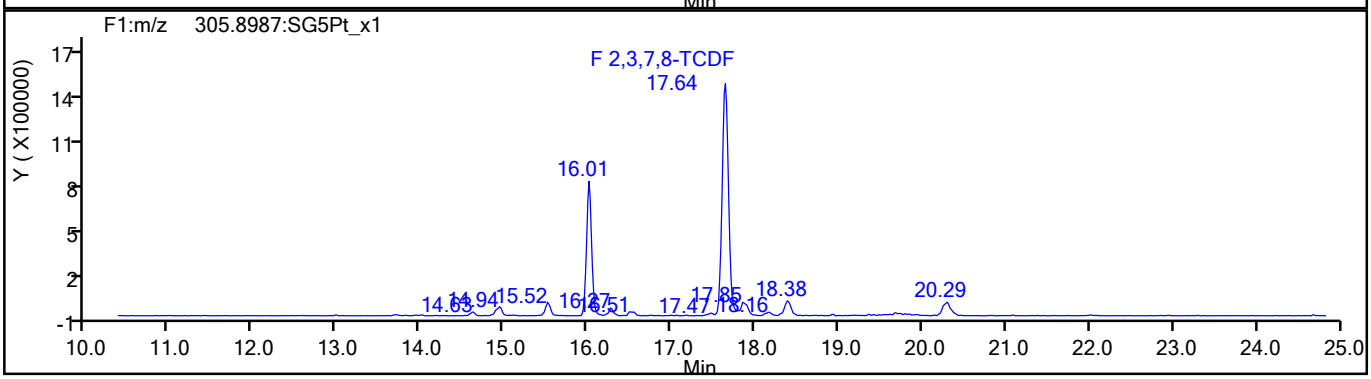

TCDF Standards

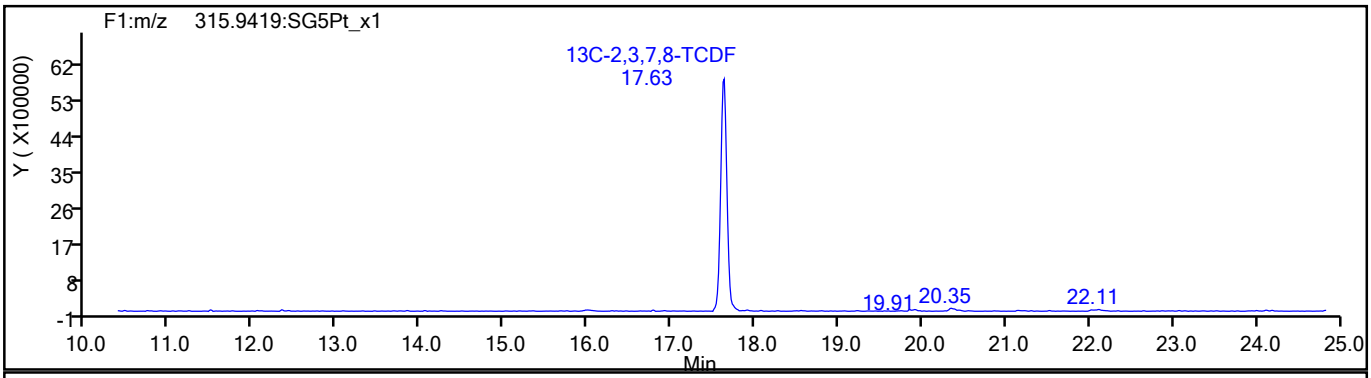

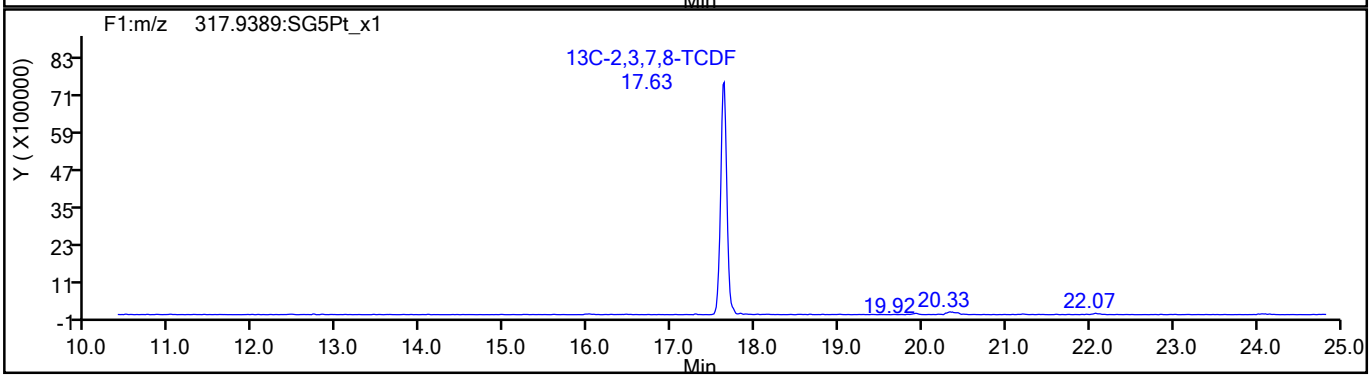

779474

Report Date: 25-Aug-2021 09:02:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_011.d		
Injection Date:	24-Aug-2021 23:00:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	519540	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

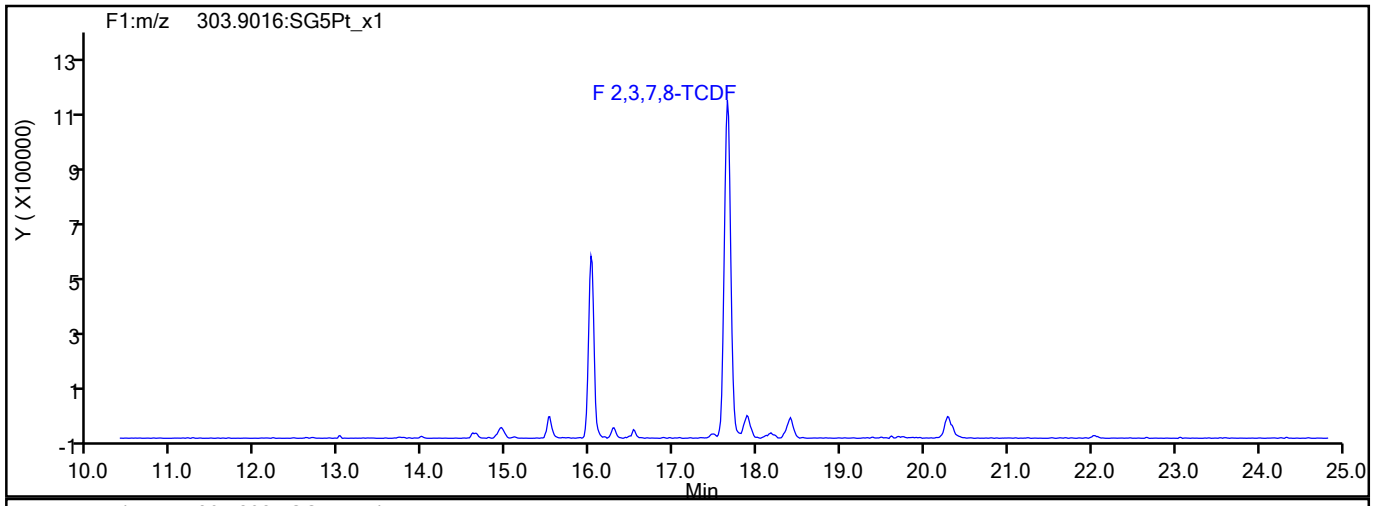

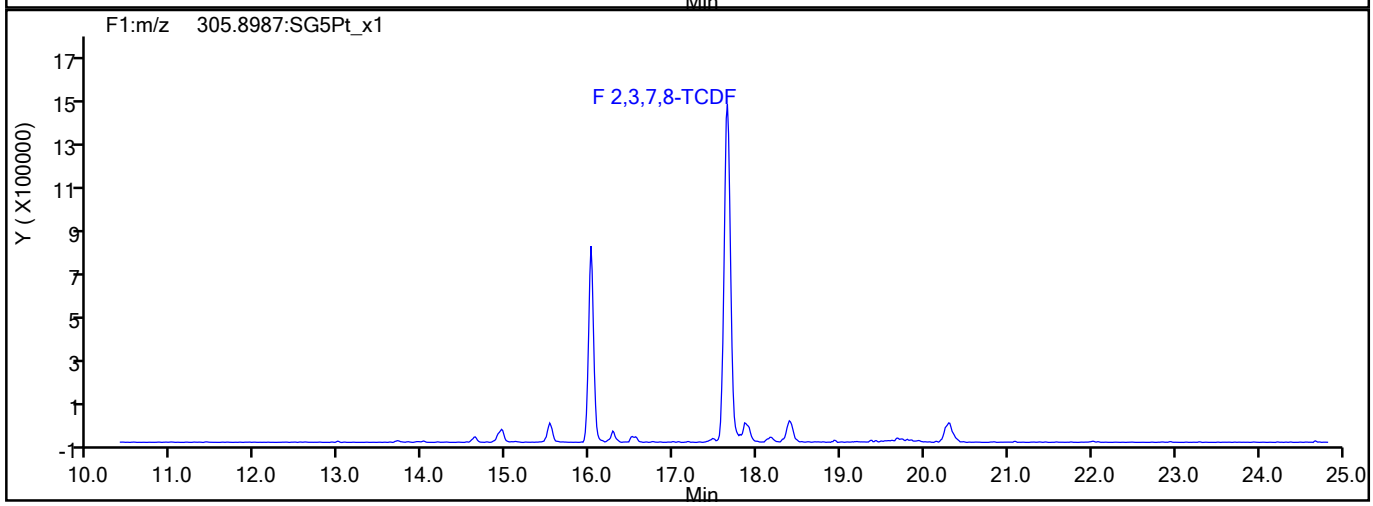

TCDF Interference Mass

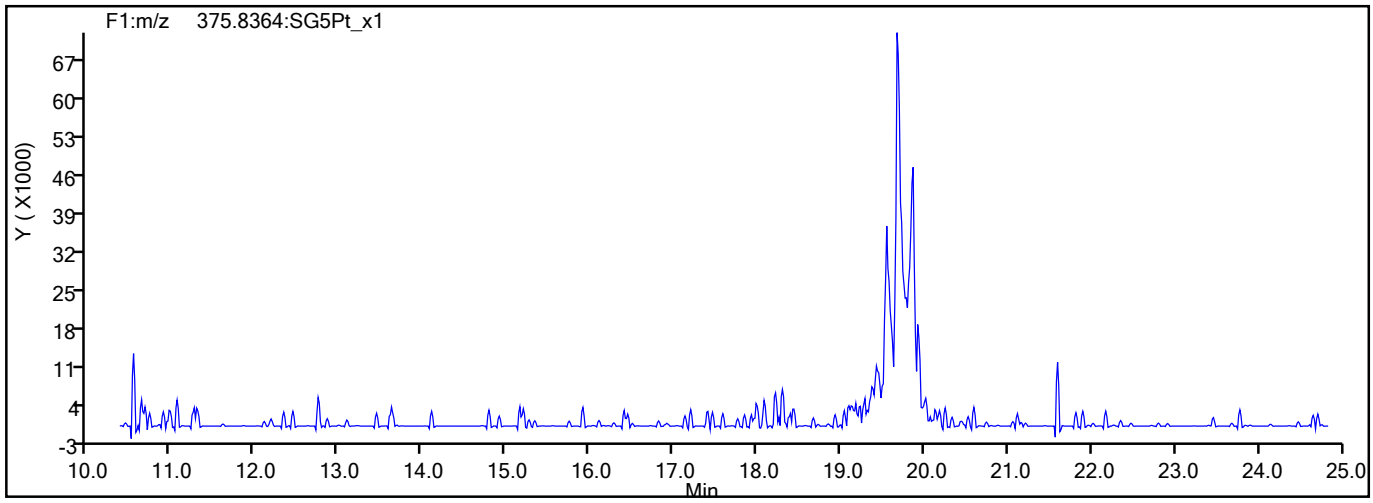

779475

Report Date: 25-Aug-2021 09:02:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_011.d		
Injection Date:	24-Aug-2021 23:00:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	519540	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

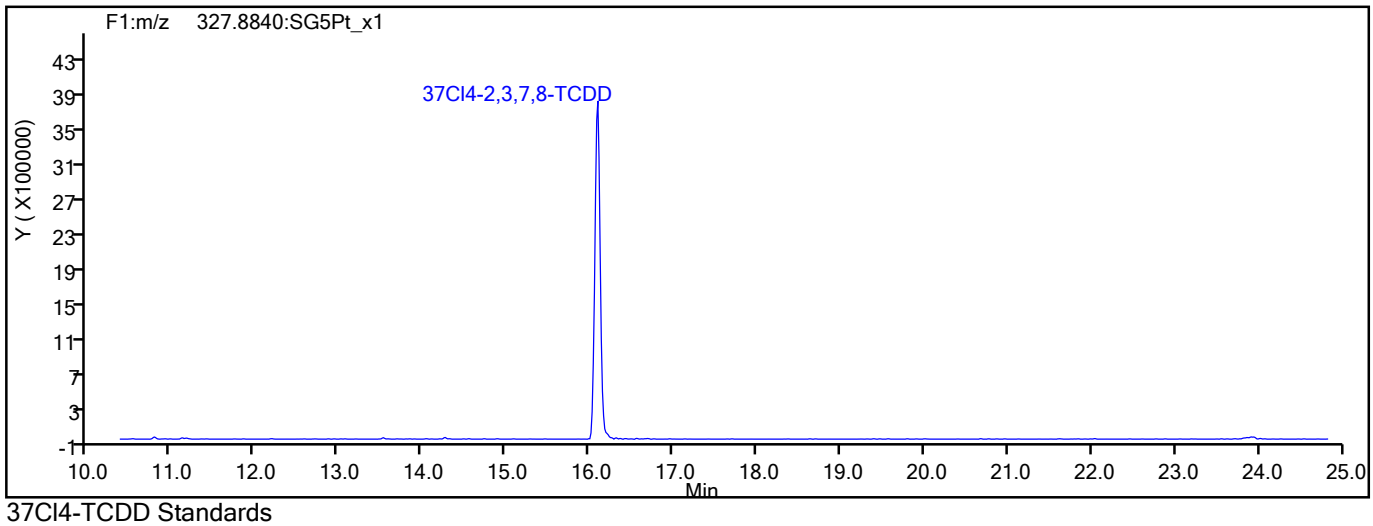

37Cl4-TCDD Standards

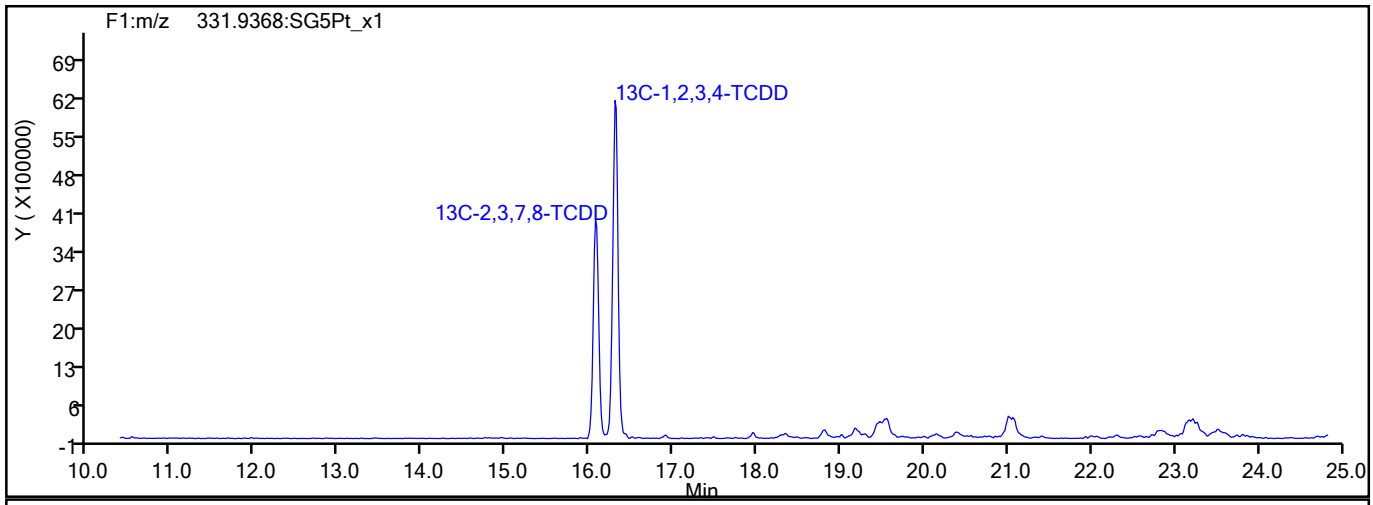

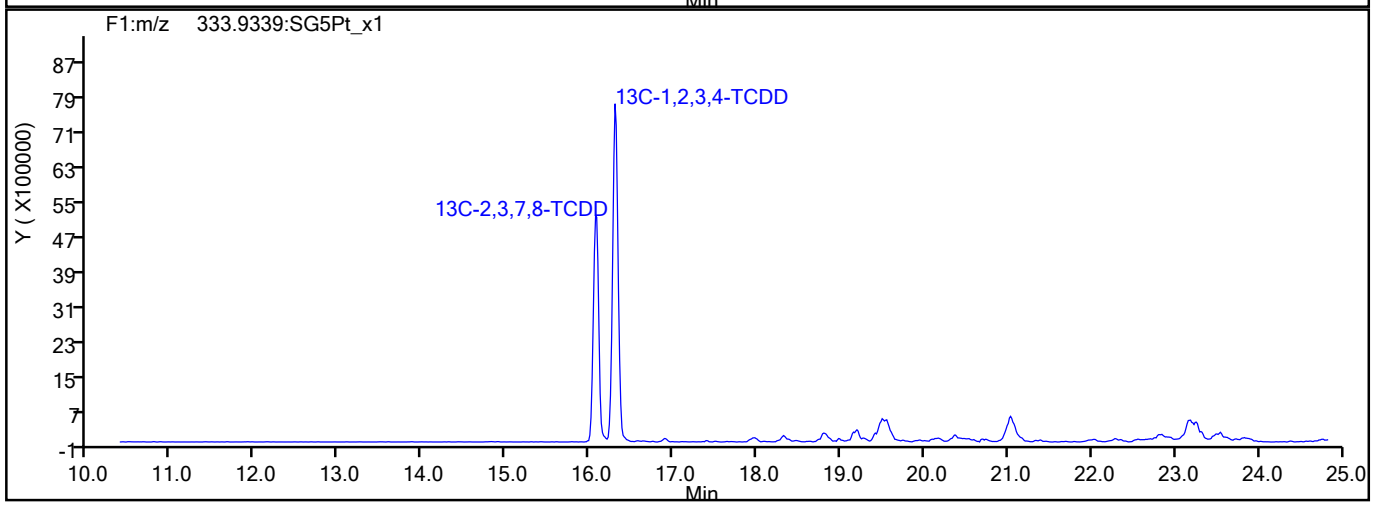

779476

Report Date: 25-Aug-2021 09:02:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_011.d		
Injection Date:	24-Aug-2021 23:00:38	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (8-10)		
Worklist#:	519540	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

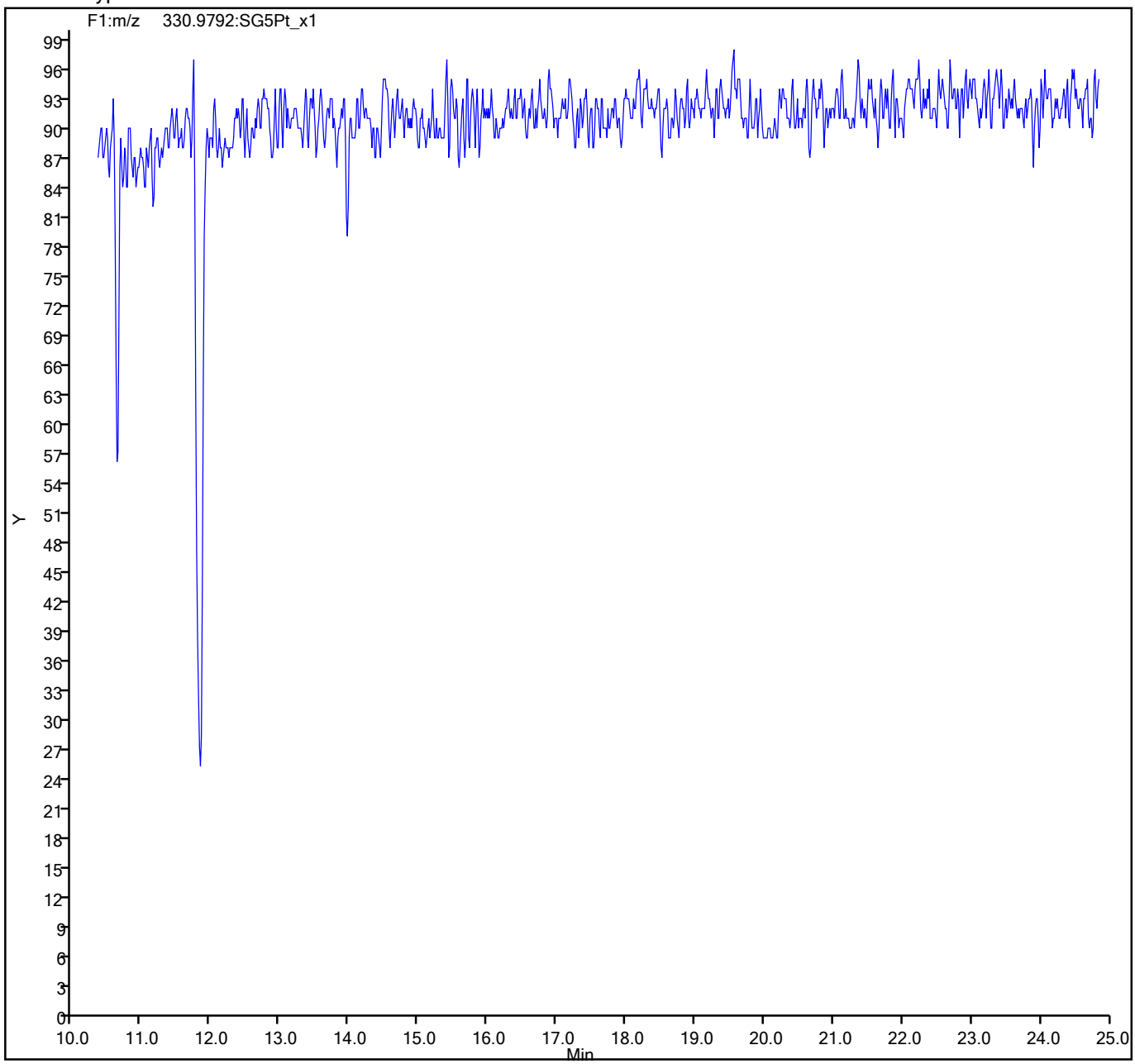

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FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (10-12)
Lab Sample ID: 320-76788-6
Matrix: Solid
Lab File ID: 13AU2110D5_21.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:25
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.97(g)
Date Analyzed: 08/14/2021 08:11
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 41.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	1.5	J B	1.7	0.078
40321-76-4	1,2,3,7,8-PeCDD	0.35	J	8.6	0.14
57117-41-6	1,2,3,7,8-PeCDF	0.17	J	8.6	0.044
57117-31-4	2,3,4,7,8-PeCDF	0.083	J q	8.6	0.045
39227-28-6	1,2,3,4,7,8-HxCDD	1.1	J B	8.6	0.38
57653-85-7	1,2,3,6,7,8-HxCDD	1.7	J	8.6	0.39
19408-74-3	1,2,3,7,8,9-HxCDD	3.8	J	8.6	0.35
70648-26-9	1,2,3,4,7,8-HxCDF	0.28	J B	8.6	0.041
57117-44-9	1,2,3,6,7,8-HxCDF	0.11	J B	8.6	0.042
72918-21-9	1,2,3,7,8,9-HxCDF	0.20	J B	8.6	0.034
60851-34-5	2,3,4,6,7,8-HxCDF	ND		8.6	0.033
35822-46-9	1,2,3,4,6,7,8-HpCDD	82	B	8.6	1.4
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.24	J B	8.6	0.041
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		8.6	0.048
3268-87-9	OCDD	2100	B	17	2.3
39001-02-0	OCDF	0.66	J B	17	0.036
41903-57-5	Total TCDD	7.0	B q	1.7	0.078
30402-14-3	Total TCDF	5.4	B q	1.7	0.036
36088-22-9	Total PeCDD	11	q	8.6	0.14
30402-15-4	Total PeCDF	0.35	J q	8.6	0.045
34465-46-8	Total HxCDD	57	B	8.6	0.38
55684-94-1	Total HxCDF	0.59	J B	8.6	0.037
37871-00-4	Total HpCDD	240	B	8.6	1.4
38998-75-3	Total HpCDF	0.24	J B	8.6	0.044

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (10-12)
Lab Sample ID: 320-76788-6
Matrix: Solid
Lab File ID: 13AU2110D5_21.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:25
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.97(g)
Date Analyzed: 08/14/2021 08:11
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 41.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	55		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	53		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	57		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	57		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	53		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	56		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	52		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	51		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	52		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	58		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	56		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	64		26-138
114423-97-1	13C-OCDD	62		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	78		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d
Lims ID: 320-76788-A-6-A
Client ID: 11215702-072321-BN-SJSB085 (10-12)
Sample Type: Client
Inject. Date: 14-Aug-2021 08:11:23 ALS Bottle#: 22 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-6-a 320-76788-a-6-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:18:24 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:42:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	129200320	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	115605592	0.77	1.6249	55.1	55.1	0.1009	0.1009	55.07	
2,3,7,8-TCDF	17.356	1019699	0.76	1.0239	0.8615	0.8615	0.0104	0.0104		M
A Non-2,3,7,8-sub-TCDF	17.046	841897	0.77	1.0239	0.7362	0.7112	0.0104	0.3835		RQ
S Total TCDF					1.598	1.573	0.0104	0.0104		RQ
D 13C-2,3,7,8-TCDD	18.051	66078583	0.82	0.8993	56.9	56.9	0.1275	0.1275	56.87	
2,3,7,8-TCDD	18.066	364176	0.69	1.2541	0.4395	0.4395	0.0229	0.0229		M
$ 37Cl4-2,3,7,8-TCDD	18.066	44575133		1.1071	31.2	31.2	0.0451	0.0451	77.90	
A Non-2,3,7,8-sub-TCDD	17.499	1334848	0.77	1.2541	1.647	1.611	0.0229	0.5800		RQM
S Total TCDD					2.086	2.050	0.0229	0.0229		RQ
D 13C-1,2,3,7,8-PeCDF	22.367	82391848	1.60	1.2101	52.7	52.7	0.1362	0.1362	52.70	
1,2,3,7,8-PeCDF	22.394	43853	1.71	1.0611	0.0502	0.0502	0.0129	0.0129		M
D 13C-2,3,4,7,8-PeCDF	23.703	91630444	1.57	1.2395	57.2	57.2	0.1330	0.1330	57.22	
2,3,4,7,8-PeCDF	23.717	22521	1.55	1.0184	0.0275	0.0241	0.0132	0.0132		RQM
A F1 PeCDFs	20.093						0.0122	0.0122		
A Non-2,3,7,8-sub-PeCDF	23.241	25585	1.55	1.0398	0.0358	0.0283	0.0130	0.0283		RQM
S Total PeCDF					0.1135	0.1026	0.0130	0.0130		RQ
D 13C-1,2,3,7,8-PeCDD	24.426	54145860	1.62	0.7612	55.1	55.1	0.0514	0.0514	55.05	
1,2,3,7,8-PeCDD	24.453	57542	1.37	1.0484	0.1014	0.1014	0.0401	0.0401		
A Non-2,3,7,8-sub-PeCDD	23.349	1743491	1.55	1.0484	3.159	3.071	0.0401	1.275		RQ
S Total PeCDD					3.260	3.173	0.0401	0.0401		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.502	74856447	0.52	1.0837	56.4	56.4	0.2529	0.2529	56.44	
1,2,3,4,7,8-HxCDF	30.502	67236	1.15	1.0851	0.0828	0.0828	0.0120	0.0120		M
D 13C-1,2,3,6,7,8-HxCDF	30.689	71656924	0.52	1.1279	51.9	51.9	0.2430	0.2430	51.91	
1,2,3,6,7,8-HxCDF	30.702	25870	1.37	1.1260	0.0321	0.0321	0.0123	0.0123		
D 13C-2,3,4,6,7,8-HxCDF	31.514	67332290	0.52	1.0637	51.7	51.7	0.2577	0.2577	51.72	
2,3,4,6,7,8-HxCDF	31.528						0.009589	0.009589		
D 13C-1,2,3,7,8,9-HxCDF	32.313	60799659	0.52	0.9676	51.3	51.3	0.2833	0.2833	51.35	
1,2,3,7,8,9-HxCDF	32.326	41295	1.24	1.1664	0.0582	0.0582	0.009785	0.009785		M
A Non-2,3,7,8-sub-HxCDF	30.197						0.0108	0.0108		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.1731	0.1731	0.0109	0.0109		
* 13C-1,2,3,7,8,9-HxCDD	32.139	122381372	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.700	51024346	1.24	0.7334	56.8	56.8	0.2751	0.2751	56.85	
1,2,3,4,7,8-HxCDD	31.714	172323	1.31	1.0640	0.3174	0.3174	0.1112	0.1112		
D 13C-1,2,3,6,7,8-HxCDD	31.807	57030480	1.25	0.8802	52.9	52.9	0.2292	0.2292	52.94	
1,2,3,6,7,8-HxCDD	31.820	289439	1.32	1.0001	0.5075	0.5075	0.1144	0.1144		
1,2,3,7,8,9-HxCDD	32.139	675992	1.28	1.1325	1.105	1.105	0.1027	0.1027		
A Non-2,3,7,8-sub-HxCDD	30.882	8496004	1.25	1.0655	14.8	14.8	0.1092	10.3		
S Total HxCDD					16.7	16.7	0.1094	0.1094		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	53090675	0.44	0.7730	56.1	56.1	0.7229	0.7229	56.12	
1,2,3,4,6,7,8-HpCDF	33.778	53371	1.04	1.4413	0.0697	0.0697	0.0119	0.0119		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	55133623	0.43	0.7008	64.3	64.3	0.7974	0.7974	64.28	
1,2,3,4,7,8,9-HpCDF	34.860						0.0139	0.0139		
A Non-2,3,7,8-sub-HpCDF	34.319						0.0129	0.0129		
S Total HpCDF					0.0697	0.0697	0.0129	0.0129		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	45974093	1.00	0.6472	58.0	58.0	0.3210	0.3210	58.04	
1,2,3,4,6,7,8-HpCDD	34.568	12026513	1.01	1.0943	23.9	23.9	0.4178	0.4178		
A Non-2,3,7,8-sub-HpCDD	34.301	23668634	1.04	1.0943	47.0	47.0	0.4178	47.0		
S Total HpCDD					71.0	71.0	0.4178	0.4178		
D 13C-OCDD	36.914	67913595	0.89	0.4472	124.1	124.1	0.1700	0.1700	62.05	
OCDF	37.009	93843	0.80	1.4382	0.1922	0.1922	0.0104	0.0104		M
OCDD	36.926	228130564	0.89	1.1070	606.9	606.9	0.6656	0.6656		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d
Lims ID: 320-76788-A-6-A
Client ID: 11215702-072321-BN-SJSB085 (10-12)
Sample Type: Client
Inject. Date: 14-Aug-2021 08:11:23 ALS Bottle#: 22 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-6-a 320-76788-a-6-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:18:24 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:42:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		57883701	14284495	4805	12012	2973		
333.9339	17.855	17.855	0		71316619	17644966	9845	24612	1792	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.971	50379554	12006689	12736	31840	943		
317.9389	17.341	17.341	0	0.971	65226038	15556120	8208	20520	1895	0.77(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.356	17.356	0	1.001	441585	104425	463	1157	226		
305.8987	17.356	17.356	0	1.001	578114	134969	713	1782	189	0.76(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	15.436	17.046	-96	0.890	26672	7698	463	1157	17		
305.8987	15.436	17.046	-96	0.890	42603	11032	713	1782	15	0.63(0.65-0.89)	
	Empc Correction				34638	9997	713	1782	14		
303.9016	15.693	17.046	-81	0.905	9493	2373	463	1157	5		
305.8987	15.693	17.046	-81	0.905	10796	2726	713	1782	4	0.88(0.65-0.89)	
303.9016	15.934	17.046	-67	0.919	15621	2578	463	1157	6		
	Empc Correction				12013	2895	463	1157	6		
305.8987	15.934	17.046	-67	0.919	15602	3760	713	1782	5	1.00(0.65-0.89)	
303.9016	16.237	17.046	-48	0.936	10995	2693	463	1157	6		
305.8987	16.207	17.046	-50	0.935	21767	3948	713	1782	6	0.51(0.65-0.89)	
	Empc Correction				14279	3497	713	1782	5		
303.9016	16.449	17.046	-36	0.949	25845	5930	463	1157	13		
305.8987	16.464	17.046	-35	0.949	31096	6102	713	1782	9	0.83(0.65-0.89)	
303.9016	16.706	17.046	-20	0.963	15400	3758	463	1157	8		
305.8987	16.706	17.046	-20	0.963	30524	6151	713	1782	9	0.50(0.65-0.89)	
	Empc Correction				20000	4880	713	1782	7		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	16.978	17.046	-4	0.979	189508	46787	463	1157	101		
305.8987	16.978	17.046	-4	0.979	264470	64943	713	1782	91	0.72(0.65-0.89)	
303.9016	17.809	17.046	46	1.027	41800	7118	463	1157	15		
305.8987	17.779	17.046	44	1.025	56429	10104	713	1782	14	0.74(0.65-0.89)	
303.9016	19.185	17.046	128	1.106	26357	4519	463	1157	10		
305.8987	19.185	17.046	128	1.106	36504	6976	713	1782	10	0.72(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	29848075	6793604	4805	12012	1414		
333.9339	18.051	18.051	0	1.011	36230508	8278775	9845	24612	841	0.82(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	18.066	18.066	0	1.001	148301	33472	950	2375	35		M
321.8936	18.066	18.066	0	1.001	215875	49602	779	1947	64	0.69(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.066	0	1.012	44575133	10149483	6382	15955	1590		
A Non-2,3,7,8-sub-TCDD											RQM
319.8965	16.146	17.499	-81	0.894	63540	18104	950	2375	19		
321.8936	16.146	17.499	-81	0.894	77474	20595	779	1947	26	0.82(0.65-0.89)	
319.8965	16.373	17.499	-67	0.907	45813	12033	950	2375	13		
321.8936	16.373	17.499	-67	0.907	78651	22561	779	1947	29	0.58(0.65-0.89)	
	Empc Correction				59497	15627	779	1947	20		
319.8965	16.932	17.499	-34	0.938	221071	53926	950	2375	57		M
321.8936	16.932	17.499	-34	0.938	259537	61653	779	1947	79	0.85(0.65-0.89)	
319.8965	17.552	17.499	3	0.972	37508	8516	950	2375	9		
321.8936	17.552	17.499	3	0.972	42336	9952	779	1947	13	0.89(0.65-0.89)	
319.8965	17.824	17.499	19	0.987	96445	23157	950	2375	24		
321.8936	17.824	17.499	19	0.987	137794	29671	779	1947	38	0.70(0.65-0.89)	
319.8965	17.945	17.499	27	0.994	76247	18808	950	2375	20		
321.8936	17.961	17.499	28	0.995	99901	22830	779	1947	29	0.76(0.65-0.89)	
319.8965	18.414	17.499	55	1.020	26499	6536	950	2375	7		
321.8936	18.444	17.499	57	1.022	38214	8591	779	1947	11	0.69(0.65-0.89)	
319.8965	19.185	17.499	101	1.063	33916	7224	950	2375	8		
	Empc Correction				23044	5157	950	2375	5		
321.8936	19.185	17.499	101	1.063	29928	6698	779	1947	9	1.13(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	50684424	8307927	12643	31607	657		
353.8970	22.367	22.367	0	1.253	31707424	5278369	8404	21010	628	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.394	22.380	1	1.001	27673	4520	256	640	18		M
341.8567	22.394	22.380	1	1.001	16180	2912	488	1220	6	1.71(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.328	56037494	8482436	12643	31607	671		
353.8970	23.703	23.703	0	1.328	35592950	5395608	8404	21010	642	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											RQM
339.8597	23.717	23.730	-1	1.001	16868	3003	256	640	12		M
	Empc Correction				13689	2789	256	640	11		
341.8567	23.717	23.730	-1	1.001	8832	1800	488	1220	4	1.91(1.32-1.78)	

779483

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A F1 PeCDFs											
339.8597	20.093						234	585			
341.8567	20.093						461	1152			
A Non-2,3,7,8-sub-PeCDF											RQM
339.8597	21.058	23.241	-131	0.941	15552	2572	256	640	10		M
341.8567	21.058	23.241	-131	0.941	16875	2849	488	1220	6	0.92(1.32-1.78)	
	Empc Correction				10033	1659	488	1220	3		
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.368	33466594	4782268	2870	7175	1666		
369.8919	24.426	24.426	0	1.368	20679266	3015806	2130	5325	1416	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453	24.453	0	1.001	33242	6148	803	2007	8		
357.8516	24.467	24.453	1	1.002	24300	3302	507	1267	7	1.37(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.235	23.349	-127	0.869	214557	34907	803	2007	43		
357.8516	21.235	23.349	-127	0.869	131970	23971	507	1267	47	1.63(1.32-1.78)	
355.8546	21.971	23.349	-82	0.900	442629	76432	803	2007	95		
357.8516	21.971	23.349	-82	0.900	281093	50640	507	1267	100	1.57(1.32-1.78)	
355.8546	22.653	23.349	-42	0.927	63043	11371	803	2007	14		
357.8516	22.680	23.349	-40	0.929	48787	9730	507	1267	19	1.29(1.32-1.78)	
	Empc Correction				40672	7336	507	1267	14		
355.8546	22.980	23.349	-22	0.941	40652	6018	803	2007	7		
357.8516	22.967	23.349	-23	0.940	22911	3787	507	1267	7	1.77(1.32-1.78)	
355.8546	23.280	23.349	-4	0.953	74623	13490	803	2007	17		
357.8516	23.294	23.349	-3	0.954	51876	8209	507	1267	16	1.44(1.32-1.78)	
355.8546	23.458	23.349	7	0.960	272380	32467	803	2007	40		
	Empc Correction				230655	33298	803	2007	41		
357.8516	23.444	23.349	6	0.960	148810	21483	507	1267	42	1.83(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.502	30.503	0	0.949	25710236	4739476	11364	28410	417		
385.8610	30.502	30.503	0	0.949	49146211	8916262	23022	57555	387	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											M
373.8208	30.502	30.529	-2	1.000	35963	6579	441	1102	15		
375.8178	30.489	30.529	-2	1.000	31273	5503	269	672	20	1.15(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	24515543	4396078	11364	28410	387		
385.8610	30.689	30.689	0	0.955	47141381	8377716	23022	57555	364	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.702	30.702	0	1.000	14976	2970	441	1102	7		
375.8178	30.702	30.702	0	1.000	10894	2236	269	672	8	1.37(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	22987786	5459423	11364	28410	480		
385.8610	31.514	31.514	0	0.981	44344504	10395726	23022	57555	452	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						441	1102			
375.8178	31.528						269	672			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.313	0	1.005	20758830	5266894	11364	28410	463		
385.8610	32.313	32.313	0	1.005	40040829	10285290	23022	57555	447	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.326	32.326	0	1.000	22869	6753	441	1102	15		M
375.8178	32.326	32.326	0	1.000	18426	5256	269	672	20	1.24(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.197						441	1102			
375.8178	30.197						269	672			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.139	32.127	1		67806003	17493955	13629	34072	1284		
403.8529	32.139	32.127	1		54575369	13867799	11680	29200	1187	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.700	31.701	0	0.986	28285438	7612830	13629	34072	559		
403.8529	31.700	31.701	0	0.986	22738908	6079151	11680	29200	520	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.714	0	1.000	97760	27538	3600	9000	8		
391.8127	31.714	31.714	0	1.000	74563	19976	2881	7202	7	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	31674549	7834559	13629	34072	575		
403.8529	31.807	31.807	0	0.990	25355931	6329524	11680	29200	542	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.820	31.820	0	1.000	164781	42478	3600	9000	12		
391.8127	31.820	31.820	0	1.000	124658	33283	2881	7202	12	1.32(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.139	32.140	0	1.014	379781	77782	3600	9000	22		
391.8127	32.139	32.140	0	1.014	296211	63487	2881	7202	22	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.544	30.882	-80	0.929	3289888	364982	3600	9000	101		
391.8127	29.531	30.882	-81	0.928	2616684	292467	2881	7202	102	1.26(1.05-1.43)	
389.8157	30.582	30.882	-18	0.962	99253	19972	3600	9000	6		
391.8127	30.582	30.882	-18	0.962	85395	14757	2881	7202	5	1.16(1.05-1.43)	
389.8157	30.955	30.882	4	0.973	1214459	241045	3600	9000	67		
391.8127	30.955	30.882	4	0.973	962129	193085	2881	7202	67	1.26(1.05-1.43)	
389.8157	31.168	30.882	17	0.980	121871	23002	3600	9000	6		
391.8127	31.155	30.882	16	0.979	106325	20335	2881	7202	7	1.15(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	16297111	5096516	22725	56812	224		
419.8220	33.766	33.754	1	1.051	36793564	11184587	47378	118445	236	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.778	33.766	1	1.000	27240	9628	789	1972	12		
409.7789	33.766	33.766	0	1.000	26131	9749	328	820	30	1.04(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.084	16689464	4648454	22725	56812	205		
419.8220	34.847	34.847	0	1.084	38444159	10552433	47378	118445	223	0.43(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860						789	1972			
409.7789	34.860						328	820			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						789	1972			
409.7789	34.319						328	820			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.075	23023524	6795281	13124	32810	518		
437.8140	34.556	34.556	0	1.075	22950569	6755660	12937	32342	522	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	6053122	1796222	11475	28687	157		
425.7737	34.568	34.568	0	1.000	5973391	1736930	13309	33272	131	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.009	34.301	-17	0.984	12062330	3646610	11475	28687	318		
425.7737	34.009	34.301	-17	0.984	11606304	3559520	13309	33272	267	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.914	0	1.149	31889737	8094075	4080	10200	1984		
471.7750	36.914	36.914	0	1.149	36023858	9100155	5456	13640	1668	0.89(0.76-1.02)	
OCDF											M
441.7428	37.009	37.010	0	1.003	41833	7916	226	565	35		M
443.7399	37.009	37.010	0	1.003	52010	10022	288	720	35	0.80(0.76-1.02)	M
OCDD											
457.7377	36.926	36.926	0	1.000	107736556	27079697	11441	28602	2367		
459.7348	36.926	36.926	0	1.000	120394008	30057611	13899	34747	2163	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

Report Date: 18-Aug-2021 09:18:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d
Lims ID: 320-76788-A-6-A
Client ID: 11215702-072321-BN-SJSB085 (10-12)
Inject. Date: 14-Aug-2021 08:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 10

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	115605592	27562809

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	115605592	27562809

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.436	26672	7698	42603	11032	0.0585	0.63	RQ
15.436	26672	7698	34638	9997	0.0518		Empc Correction
15.693	9493	2373	10796	2726	0.0171	0.88	
15.934	15621	2578	15602	3760	0.0264	1.00	RQ
15.934	12013	2895	15602	3760	0.0233		Empc Correction
16.237	10995	2693	21767	3948	0.0277	0.51	RQ
16.237	10995	2693	14279	3497	0.0214		Empc Correction
16.449	25845	5930	31096	6102	0.0481	0.83	
16.706	15400	3758	30524	6151	0.0388	0.50	RQ
16.706	15400	3758	20000	4880	0.0299		Empc Correction
16.978	189508	46787	264470	64943	0.3835	0.72	
17.809	41800	7118	56429	10104	0.0830	0.74	
19.185	26357	4519	36504	6976	0.0531	0.72	
Signal Totals:							
	358083	83771	483814	112985			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	871482	199196				0.71	RQ
	841897	196756					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7362 = (871482 * 100.000) / (115605592 * 1.024)
Empc Amount: 0.7112 = (841897 * 100.000) / (115605592 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:18:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d
Lims ID: 320-76788-A-6-A
Client ID: 11215702-072321-BN-SJSB085 (10-12)
Inject. Date: 14-Aug-2021 08:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 10

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	66078583	15072379

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	66078583	15072379

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.146	63540	18104	77474	20595	0.1702	0.82	
16.373	45813	12033	78651	22561	0.1502	0.58	RQ
16.373	45813	12033	59497	15627	0.1271		Empc Correction
16.932	221071	53926	259537	61653	0.5800	0.85	M
17.552	37508	8516	42336	9952	0.0963	0.89	
17.824	96445	23157	137794	29671	0.2827	0.70	
17.945	76247	18808	99901	22830	0.2126	0.76	
18.414	26499	6536	38214	8591	0.0781	0.69	
19.185	33916	7224	29928	6698	0.0770	1.13	RQ
19.185	23044	5157	29928	6698	0.0639		Empc Correction
Signal Totals:							
	590167	146237	744681	175617			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1364874	330855				0.79	RQM
	1334848	321854					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.647 = (1364874 * 100.000) / (66078583 * 1.254)
Empc Amount: 1.611 = (1334848 * 100.000) / (66078583 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d
Lims ID: 320-76788-A-6-A
Client ID: 11215702-072321-BN-SJSB085 (10-12)
Inject. Date: 14-Aug-2021 08:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 10

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	82391848	13586296
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	91630444	13878044

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	87011146	13732170

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.058	15552	2572	16875	2849	0.0358	0.92	RQM
21.058	15552	2572	10033	1659	0.0283		Empc Correction
Signal Totals:							
	15552	2572	10033	1659			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	32427	5421				0.92	RQM
	25585	4231					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0358 = (32427 * 100.000) / (87011146 * 1.040)
Empc Amount: 0.0283 = (25585 * 100.000) / (87011146 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 09:18:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d
Lims ID: 320-76788-A-6-A
Client ID: 11215702-072321-BN-SJSB085 (10-12)
Inject. Date: 14-Aug-2021 08:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 10

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	54145860	7798074

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	54145860	7798074

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.235	214557	34907	131970	23971	0.6104	1.63	
21.971	442629	76432	281093	50640	1.27	1.57	
22.653	63043	11371	48787	9730	0.1970	1.29	RQ
22.653	63043	11371	40672	7336	0.1827		Empc Correction
22.980	40652	6018	22911	3787	0.1120	1.77	
23.280	74623	13490	51876	8209	0.2228	1.44	
23.458	272380	32467	148810	21483	0.7419	1.83	RQ
23.458	230655	33298	148810	21483	0.6684		Empc Correction
Signal Totals:							
	1066159	175516	677332	115426			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1793331	292505				1.62	RQ
	1743491	290942					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.159 = (1793331 * 100.000) / (54145860 * 1.048)
Empc Amount: 3.071 = (1743491 * 100.000) / (54145860 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d
Lims ID: 320-76788-A-6-A
Client ID: 11215702-072321-BN-SJSB085 (10-12)
Inject. Date: 14-Aug-2021 08:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 10

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	74856447	13655738
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	71656924	12773794
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	67332290	15855149
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	60799659	15552184

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	68661330	14459216

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 18-Aug-2021 09:18:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d
Lims ID: 320-76788-A-6-A
Client ID: 11215702-072321-BN-SJSB085 (10-12)
Inject. Date: 14-Aug-2021 08:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 10

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	51024346	13691981
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	57030480	14164083
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	54027413	13928032

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.544	3289888	364982	2616684	292467	10.3	1.26	
30.582	99253	19972	85395	14757	0.3207	1.16	
30.955	1214459	241045	962129	193085	3.78	1.26	
31.168	121871	23002	106325	20335	0.3964	1.15	
Signal Totals:							
	4725471	649001	3770533	520644			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8496004	1169645				1.25	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 14.758 = (8496004 * 100.000) / (54027413 * 1.066)

Report Date: 18-Aug-2021 09:18:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d
Lims ID: 320-76788-A-6-A
Client ID: 11215702-072321-BN-SJSB085 (10-12)
Inject. Date: 14-Aug-2021 08:11:23 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 10

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	45974093	13550941

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	45974093	13550941

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.009	12062330	3646610	11606304	3559520	47.0	1.04	
Signal Totals:							
	12062330	3646610	11606304	3559520			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23668634	7206130				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 47.046 = (23668634 * 100.000) / (45974093 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.36
Area: 588305
Amount: 0.870062
Amount Units: pg/ul

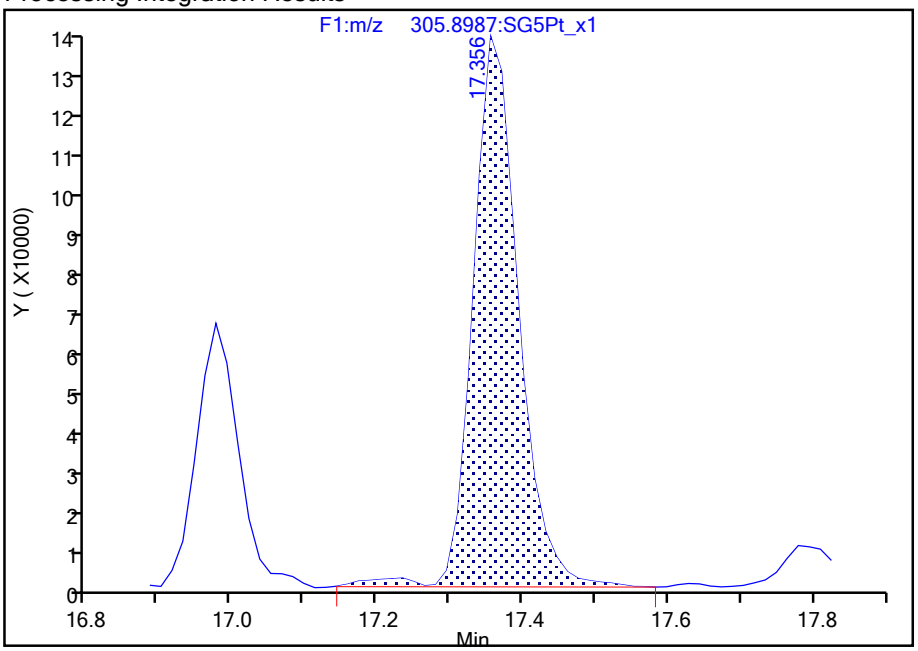

Manual Integration Results

RT: 17.36
Area: 578114
Amount: 0.861452
Amount Units: pg/ul

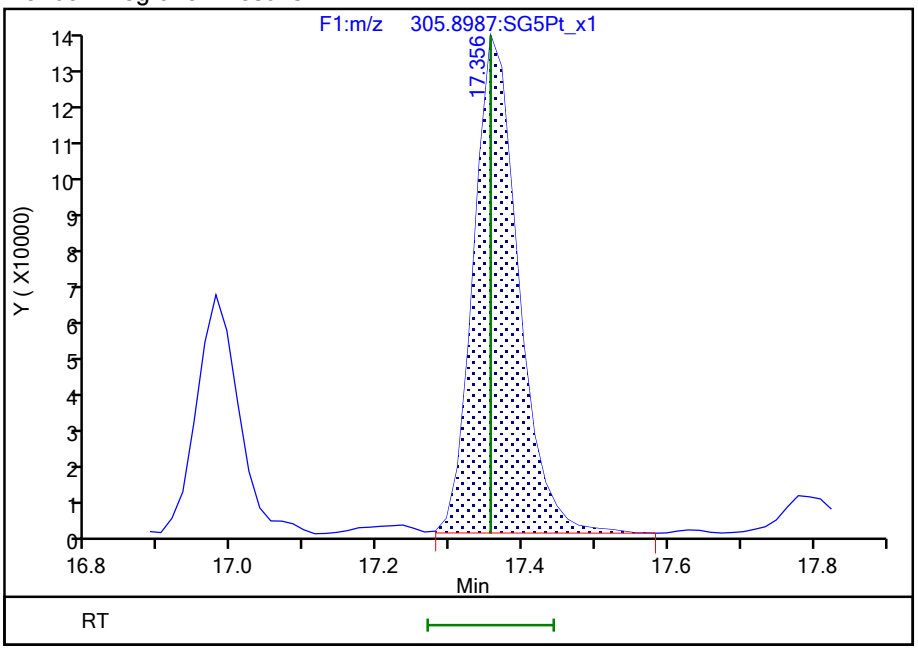

Reviewer: dadunj, 18-Aug-2021 09:09:55

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.07
Area: 221294
Amount: 0.449383
Amount Units: pg/ul

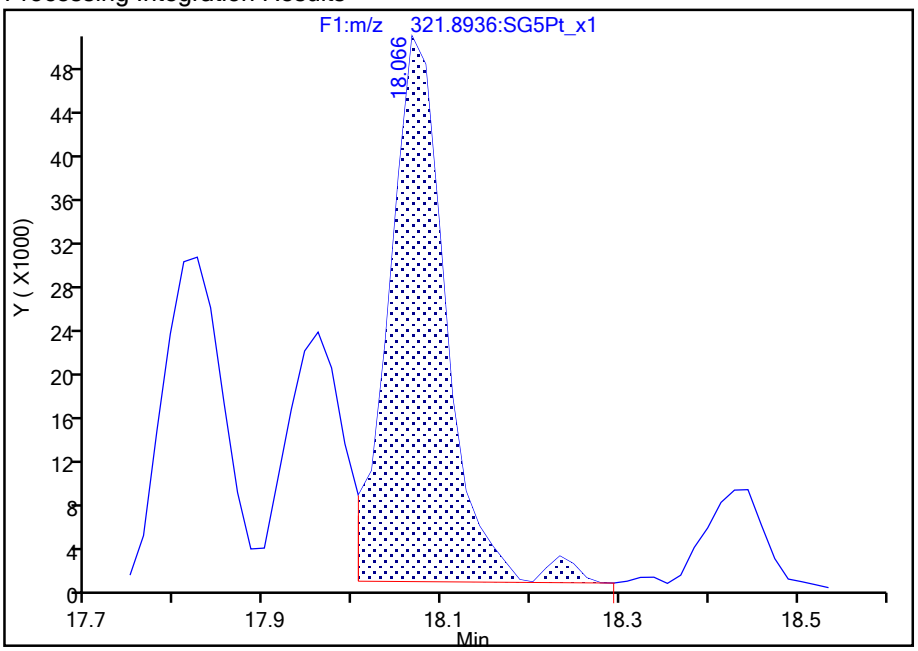

Manual Integration Results

RT: 18.07
Area: 215875
Amount: 0.439452
Amount Units: pg/ul

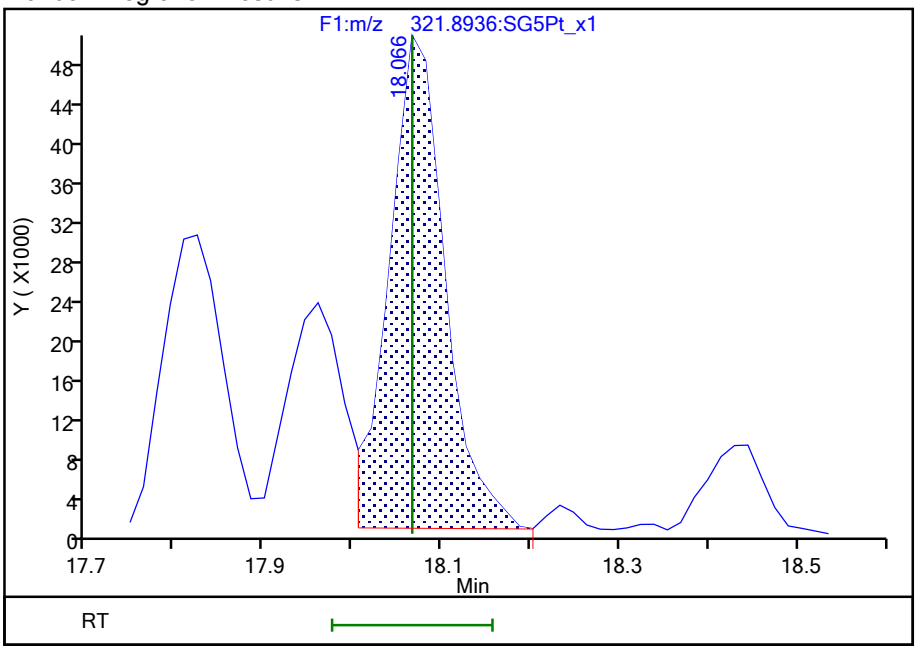

Reviewer: dadunj, 18-Aug-2021 09:15:09

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.07
Area: 151112
Amount: 0.449383
Amount Units: pg/ul

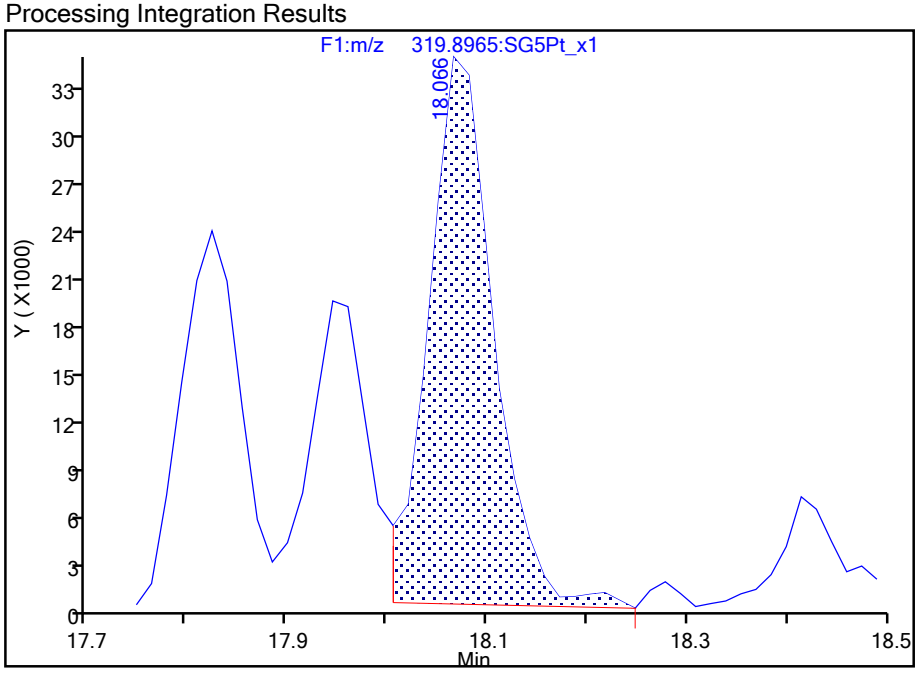

Manual Integration Results

RT: 18.07
Area: 148301
Amount: 0.439452
Amount Units: pg/ul

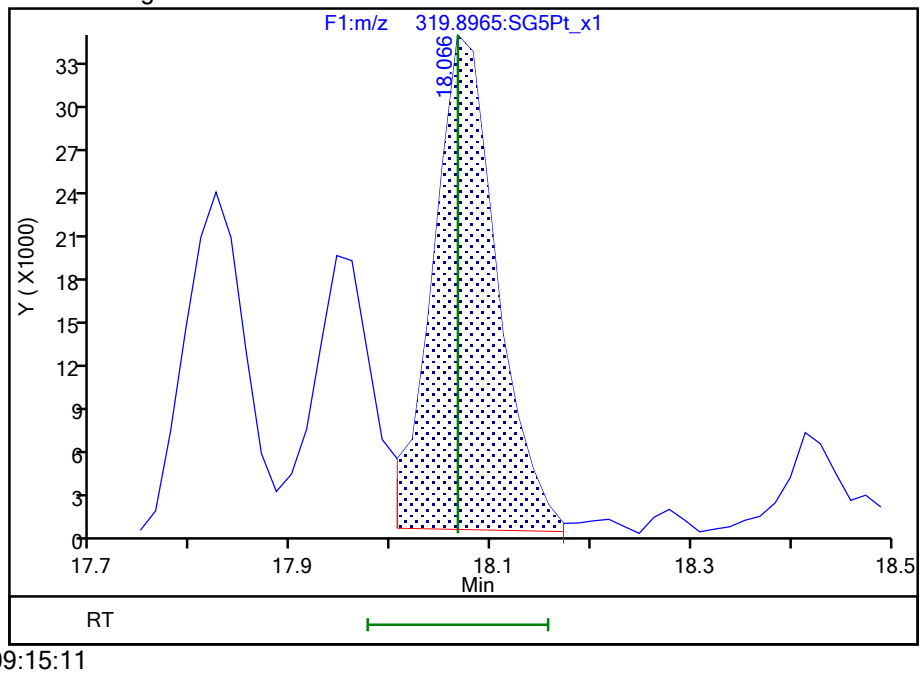

Reviewer: dadunj, 18-Aug-2021 09:15:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779498

Report Date: 18-Aug-2021 09:18:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.80- 19.20)

Signal: 1

Processing Integration Results

RT = 16.932 Area = 283883

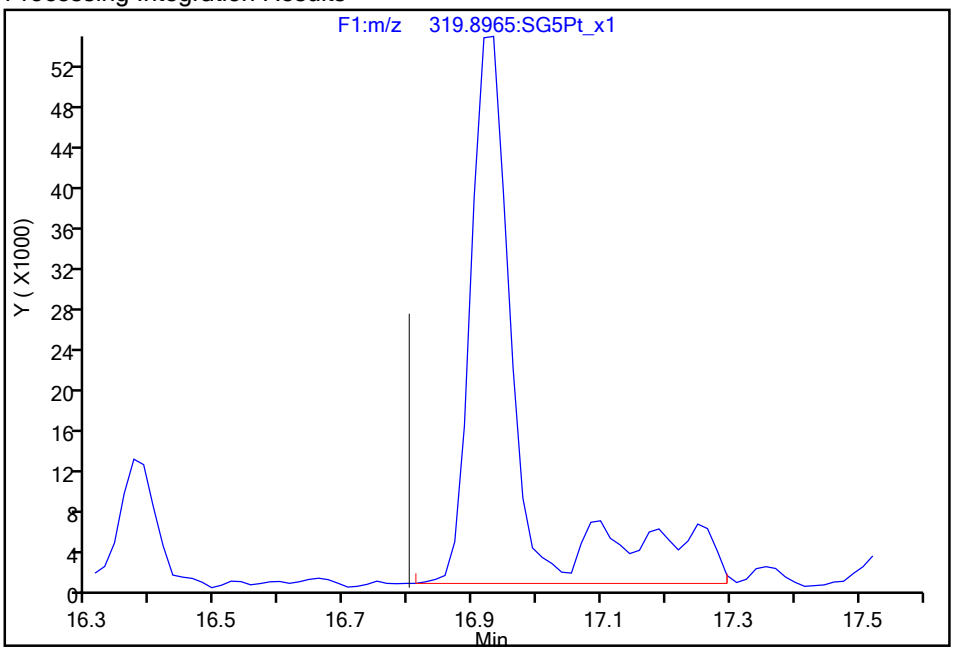

Manual Integration Results

RT = 16.932 Area = 221071 M

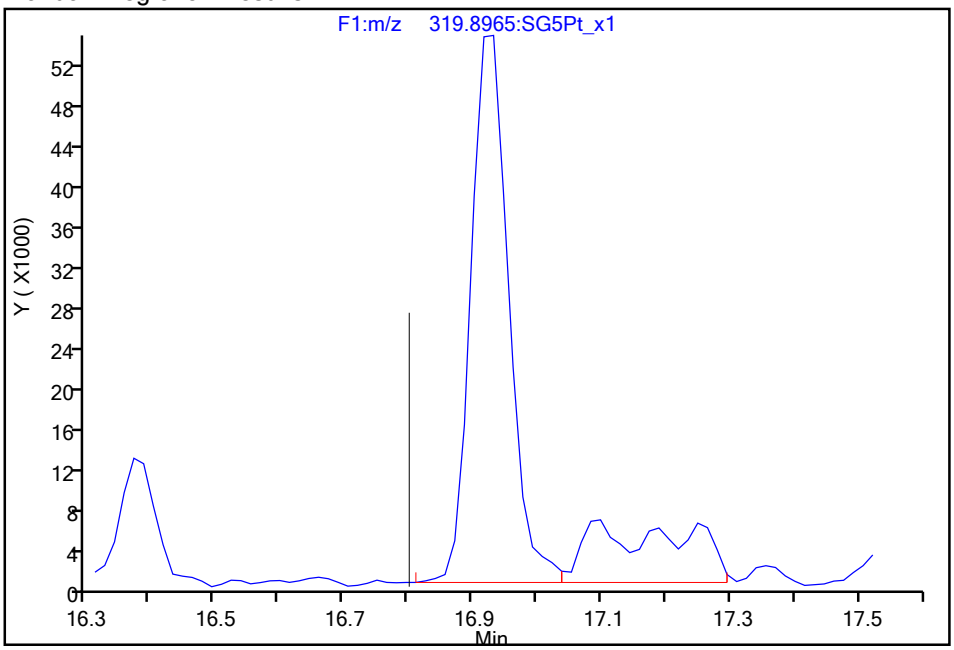

Reviewer: dadunj, 18-Aug-2021 09:15:17

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779499

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.39
Area: 36155
Amount: 0.070417
Amount Units: pg/ul

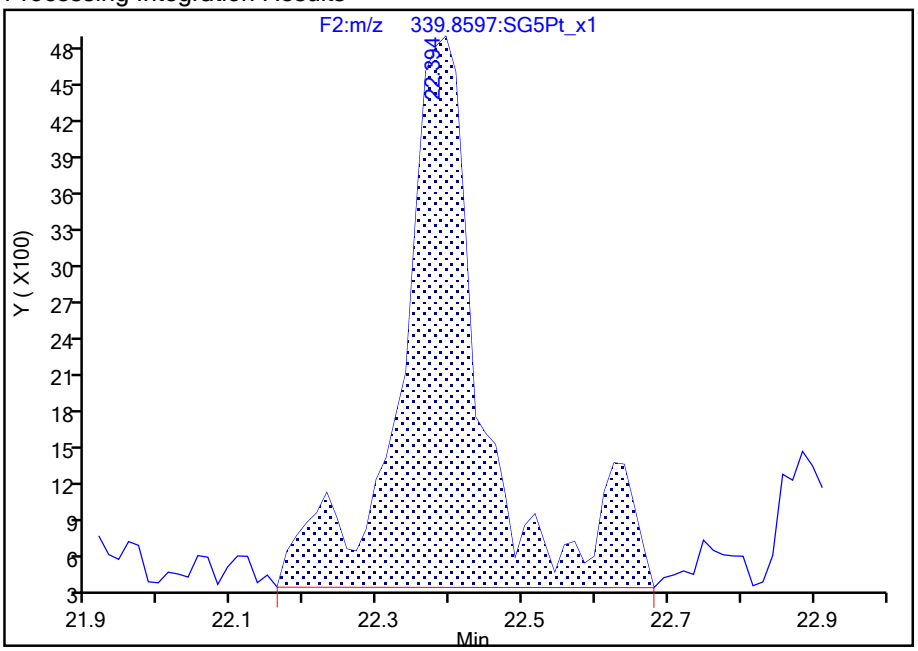

Manual Integration Results

RT: 22.39
Area: 27673
Amount: 0.050159
Amount Units: pg/ul

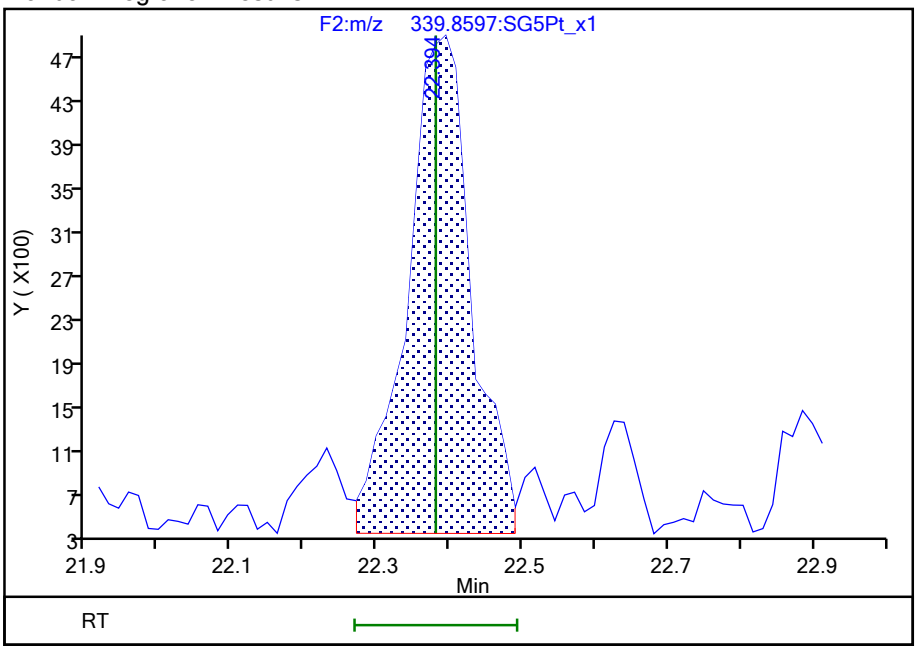

Reviewer: dadunj, 18-Aug-2021 09:15:33

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.39
Area: 25410
Amount: 0.070417
Amount Units: pg/ul

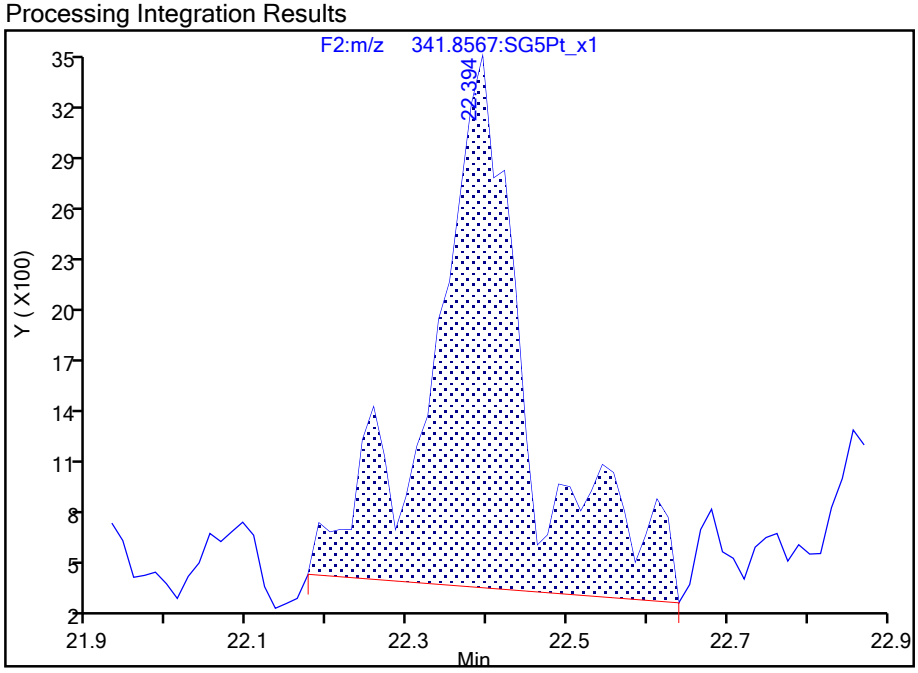

Manual Integration Results

RT: 22.39
Area: 16180
Amount: 0.050159
Amount Units: pg/ul

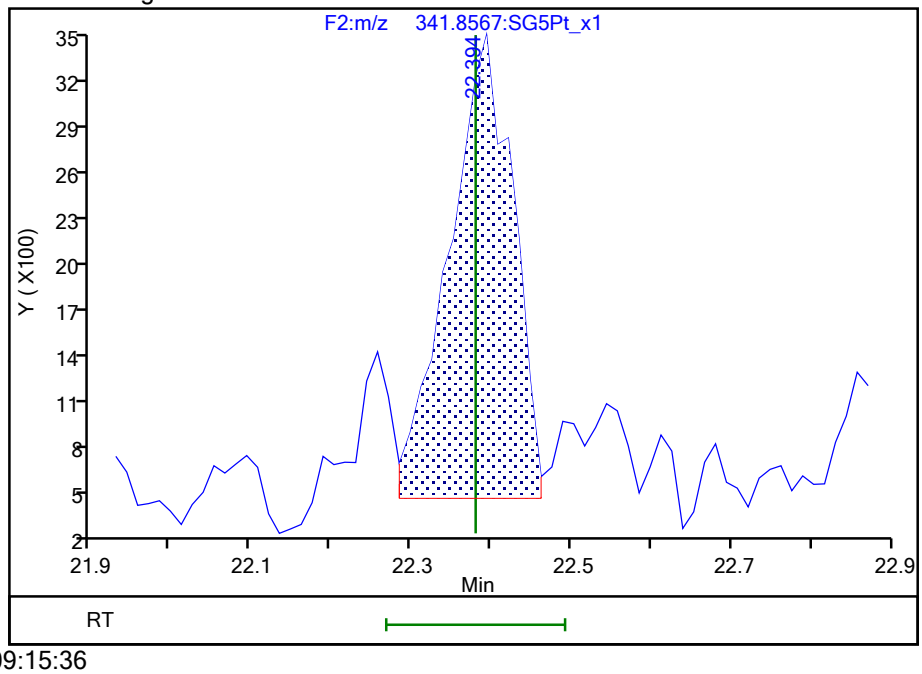

Reviewer: dadunj, 18-Aug-2021 09:15:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 23.72
Area: 22811
Amount: 0.033909
Amount Units: pg/ul

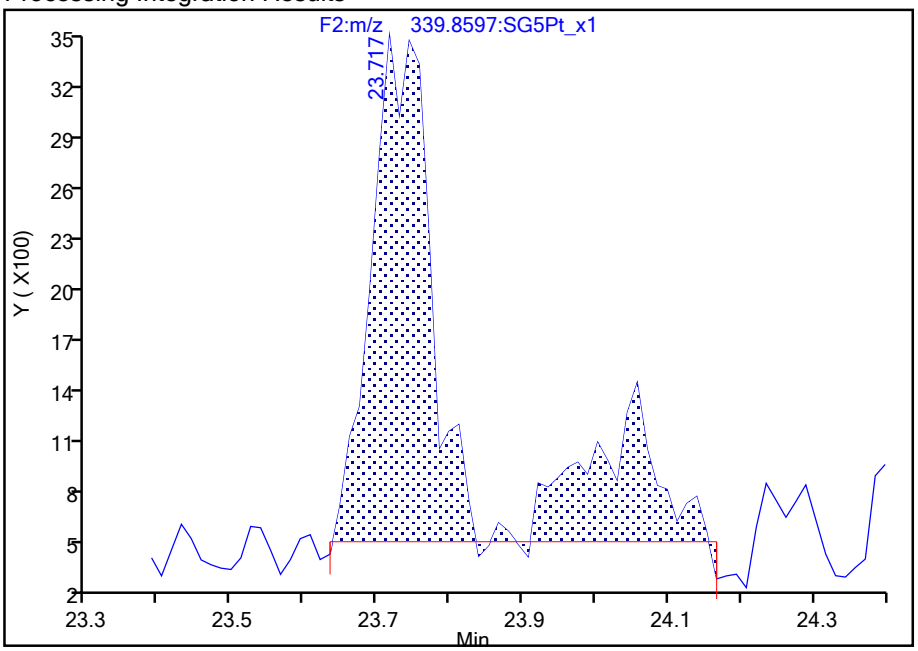

Manual Integration Results

RT: 23.72
Area: 16868
Amount: 0.027540
Amount Units: pg/ul

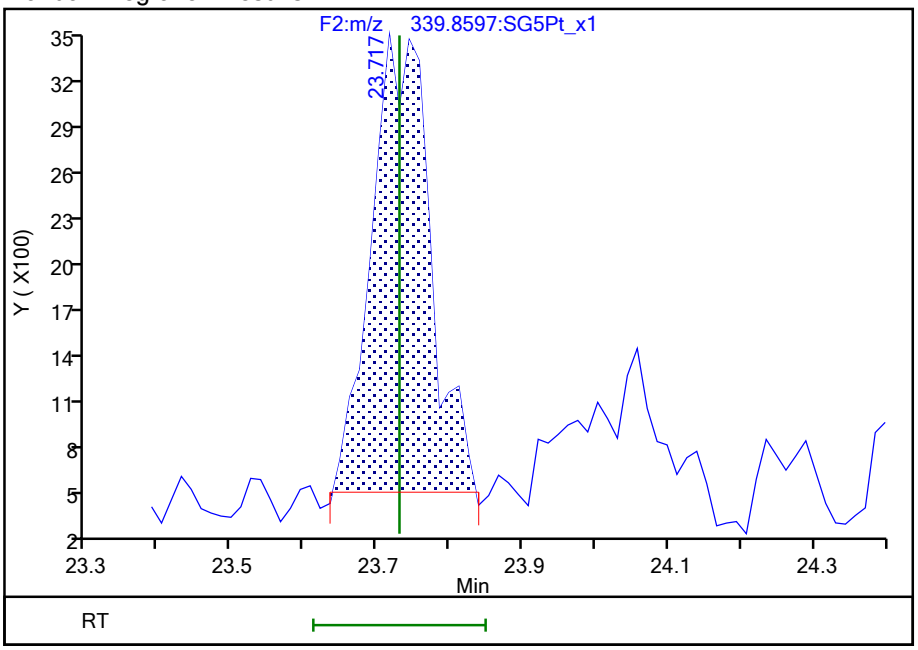

Reviewer: dadunj, 18-Aug-2021 09:17:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 25.71)

Signal: 1

Processing Integration Results

RT = 21.058 Area = 16739

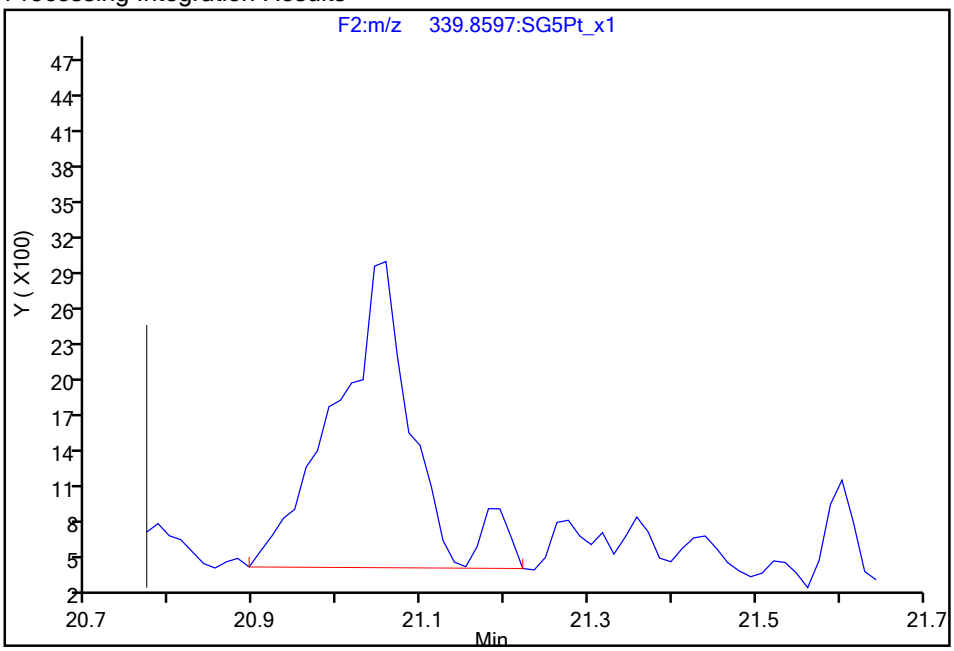

Manual Integration Results

RT = 21.058 Area = 15552 M

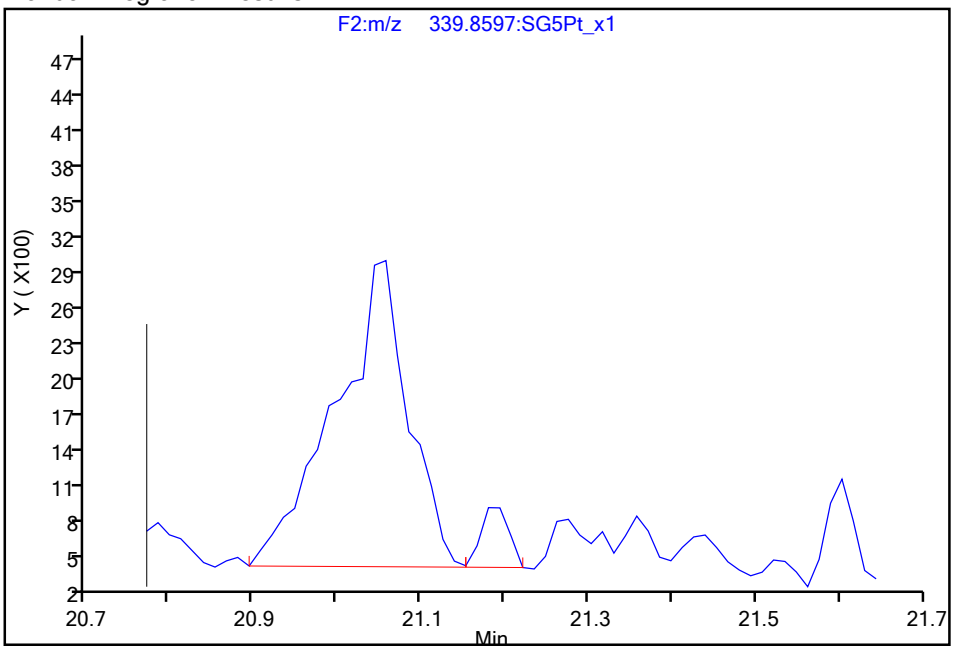

Reviewer: dadunj, 18-Aug-2021 09:15:49

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 2

Processing Integration Results

RT: 30.49
Area: 30199
Amount: 0.081451
Amount Units: pg/ul

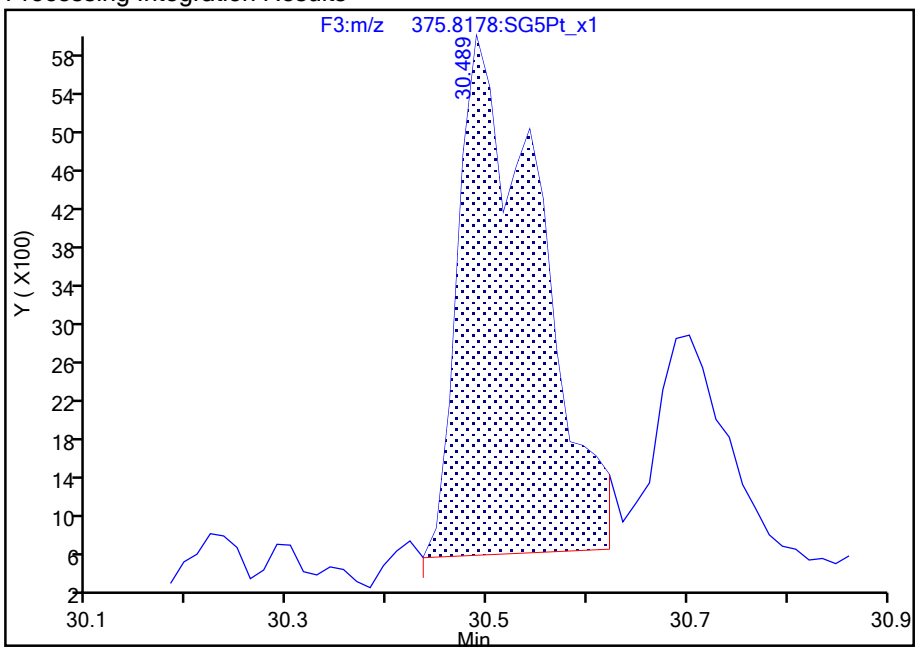

Manual Integration Results

RT: 30.49
Area: 31273
Amount: 0.082774
Amount Units: pg/ul

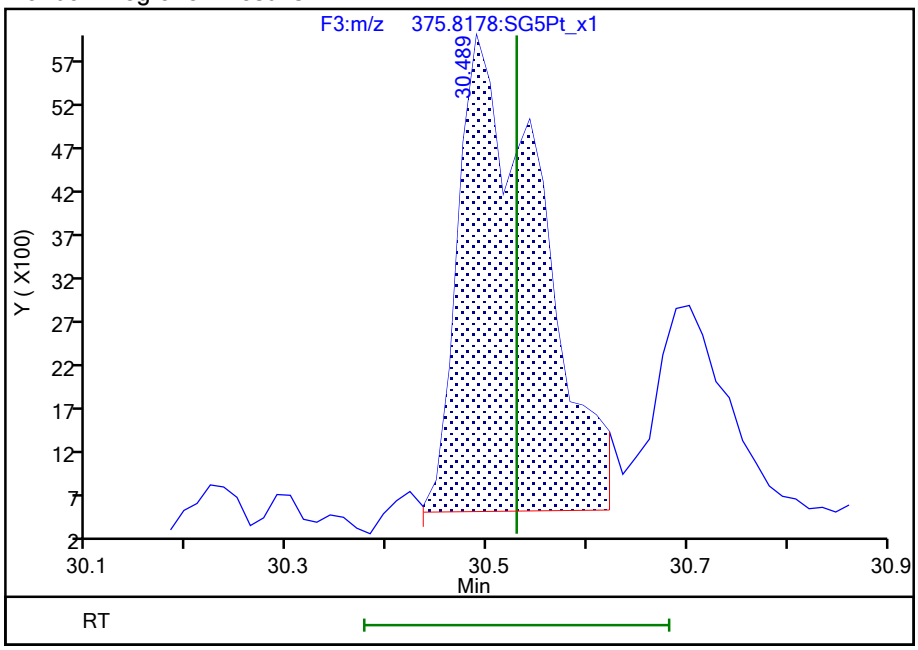

Reviewer: dadunj, 18-Aug-2021 09:16:10

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.33
Area: 25254
Amount: 0.065061
Amount Units: pg/ul

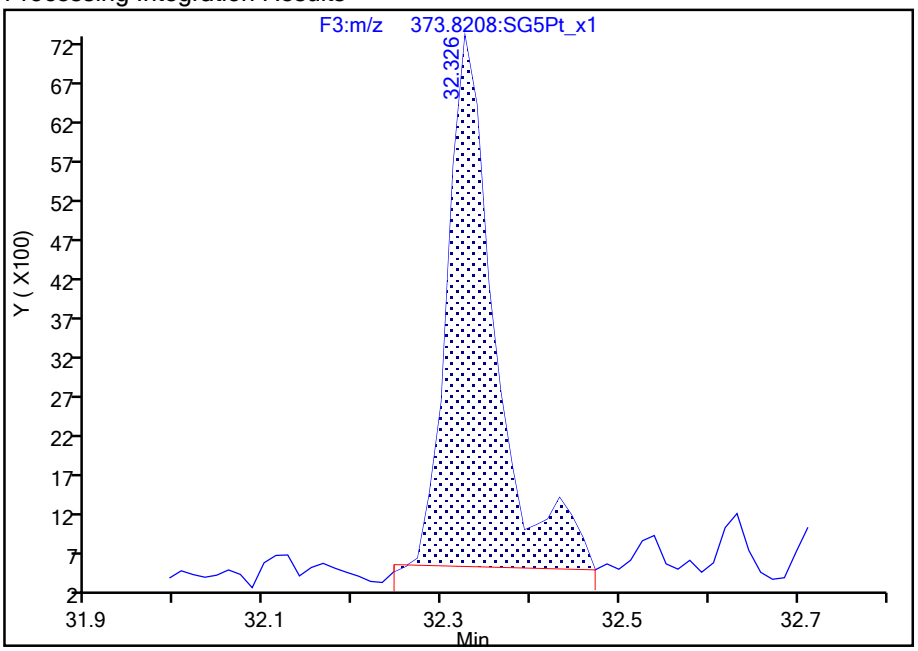

Manual Integration Results

RT: 32.33
Area: 22869
Amount: 0.058233
Amount Units: pg/ul

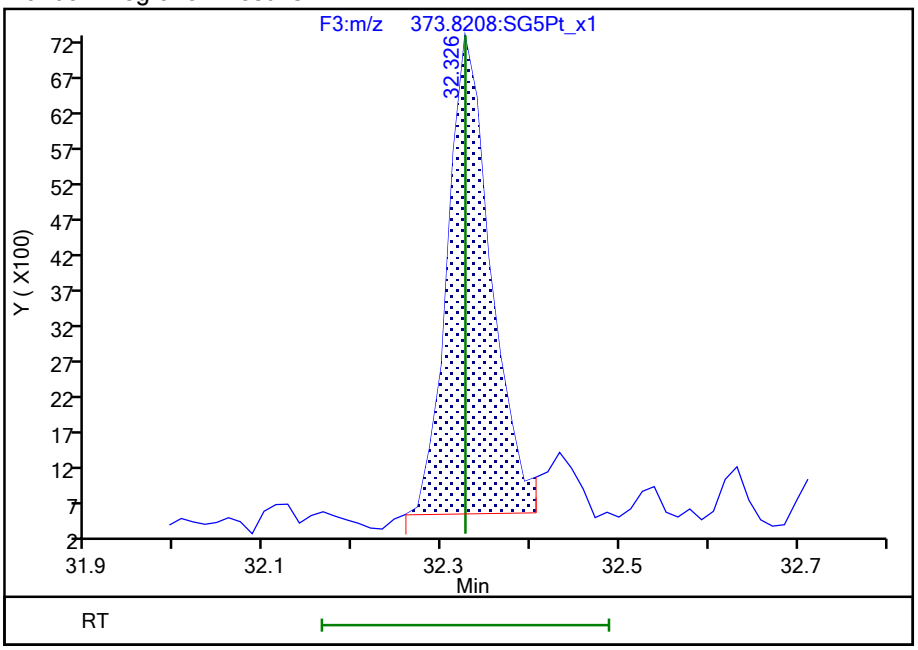

Reviewer: dadunj, 18-Aug-2021 09:16:40

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.33
Area: 20883
Amount: 0.065061
Amount Units: pg/ul

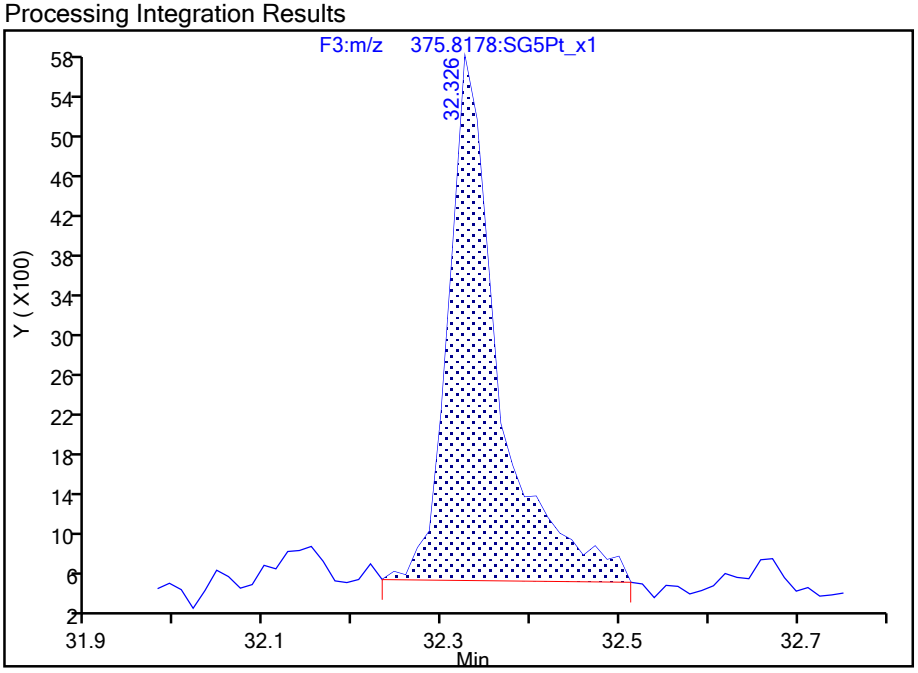

Manual Integration Results

RT: 32.33
Area: 18426
Amount: 0.058233
Amount Units: pg/ul

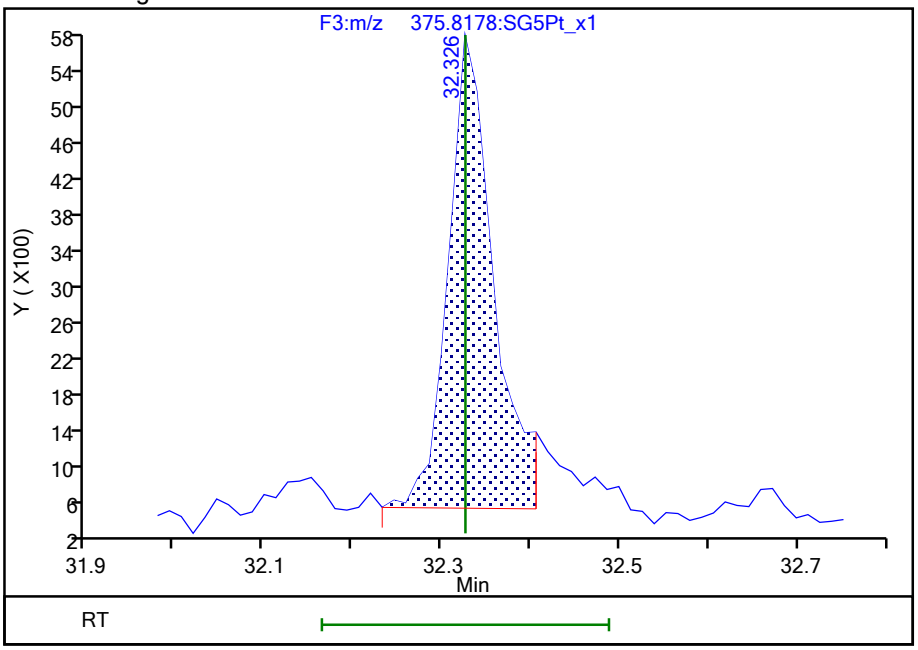

Reviewer: dadunj, 18-Aug-2021 09:16:42
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.77
Area: 27114
Amount: 0.071033
Amount Units: pg/ul

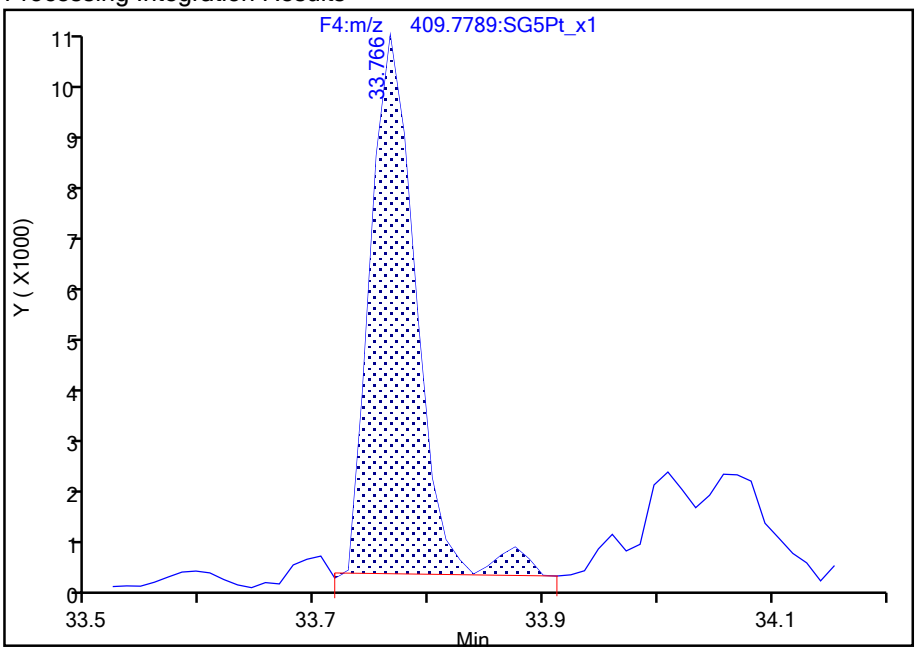

Manual Integration Results

RT: 33.77
Area: 26131
Amount: 0.069749
Amount Units: pg/ul

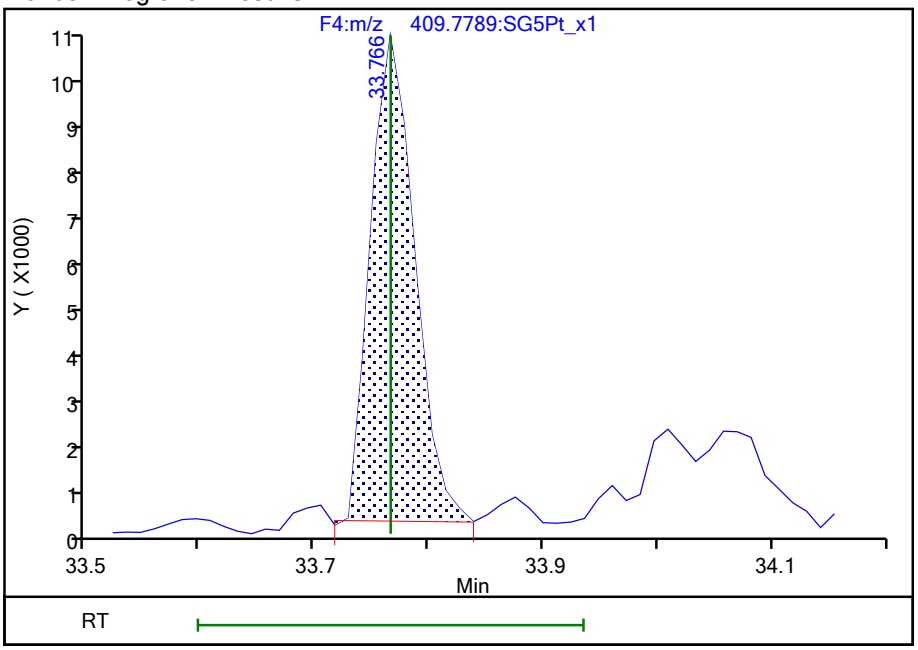

Reviewer: dadunj, 18-Aug-2021 09:17:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.94
Area: 95205
Amount: 0.420871
Amount Units: pg/ul

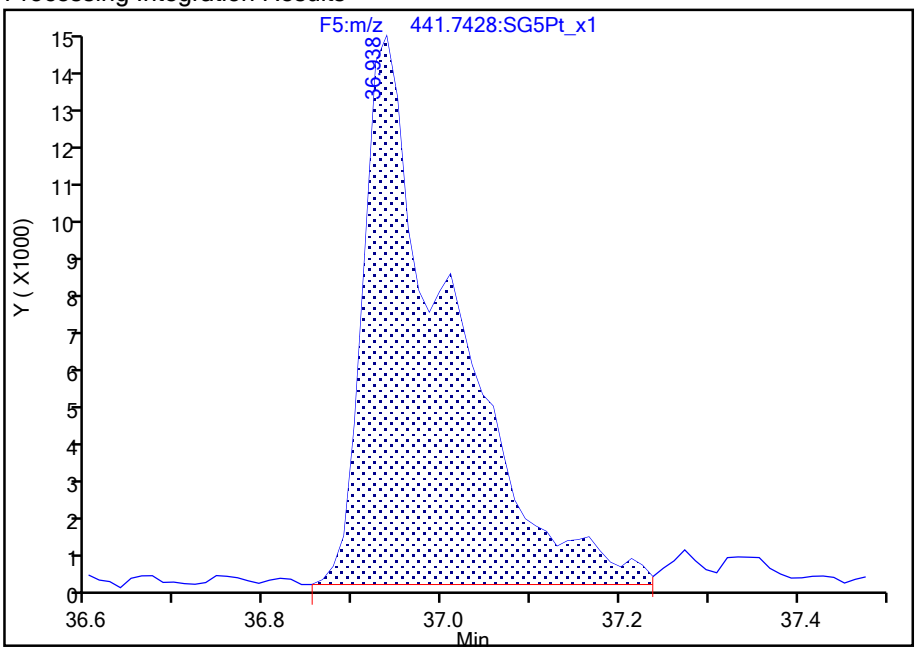

Manual Integration Results

RT: 37.01
Area: 41833
Amount: 0.192162
Amount Units: pg/ul

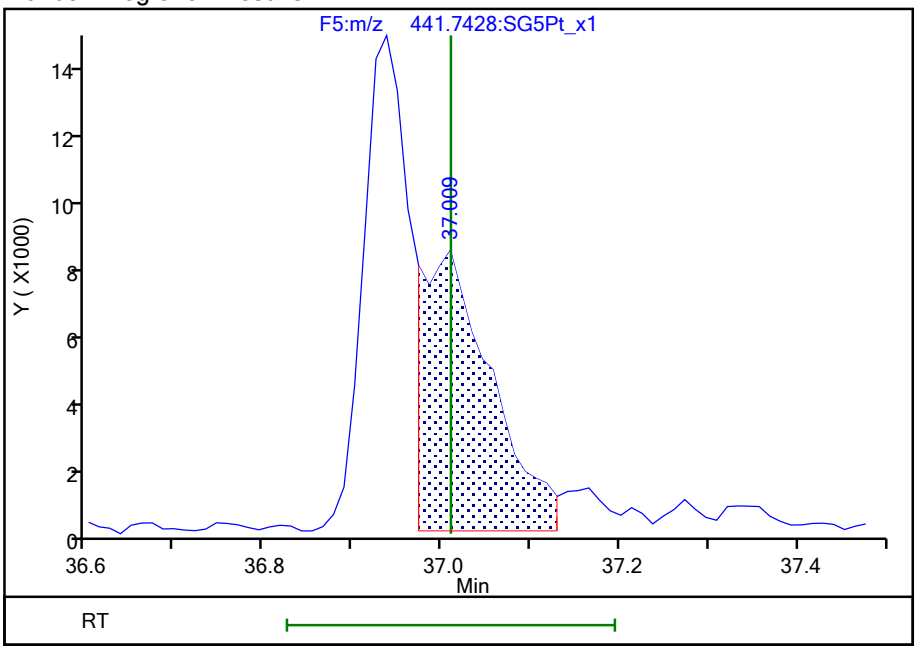

Reviewer: dadunj, 18-Aug-2021 09:17:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d				
Injection Date:	14-Aug-2021 08:11:23	Instrument ID:	10D5		
Lims ID:	320-76788-A-6-A	Lab Sample ID:	320-76788-6		
Client ID:	11215702-072321-BN-SJSB085 (10-12)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.93
Area: 110329
Amount: 0.420871
Amount Units: pg/ul

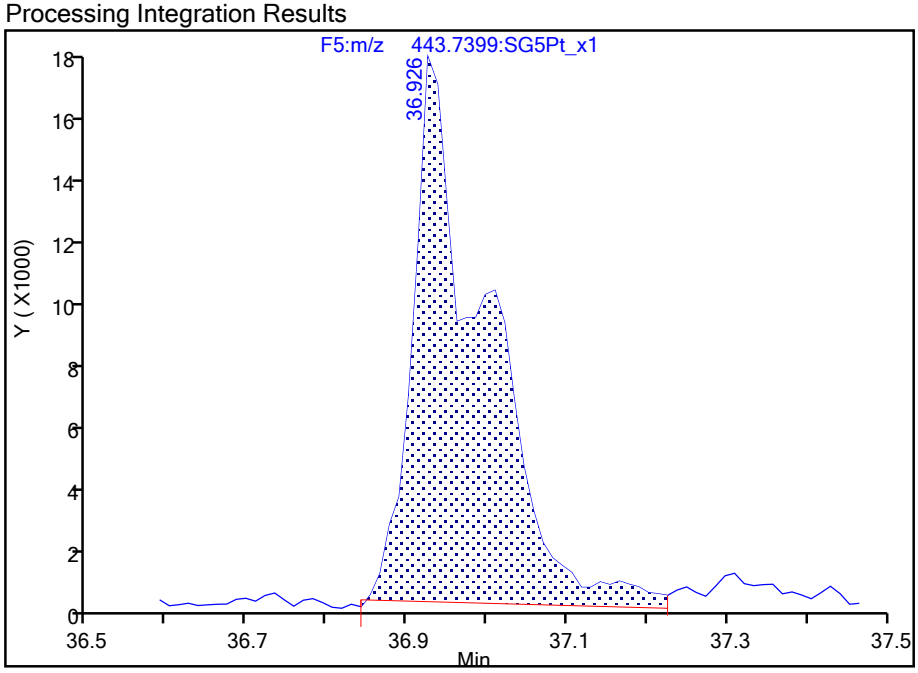

Manual Integration Results

RT: 37.01
Area: 52010
Amount: 0.192162
Amount Units: pg/ul

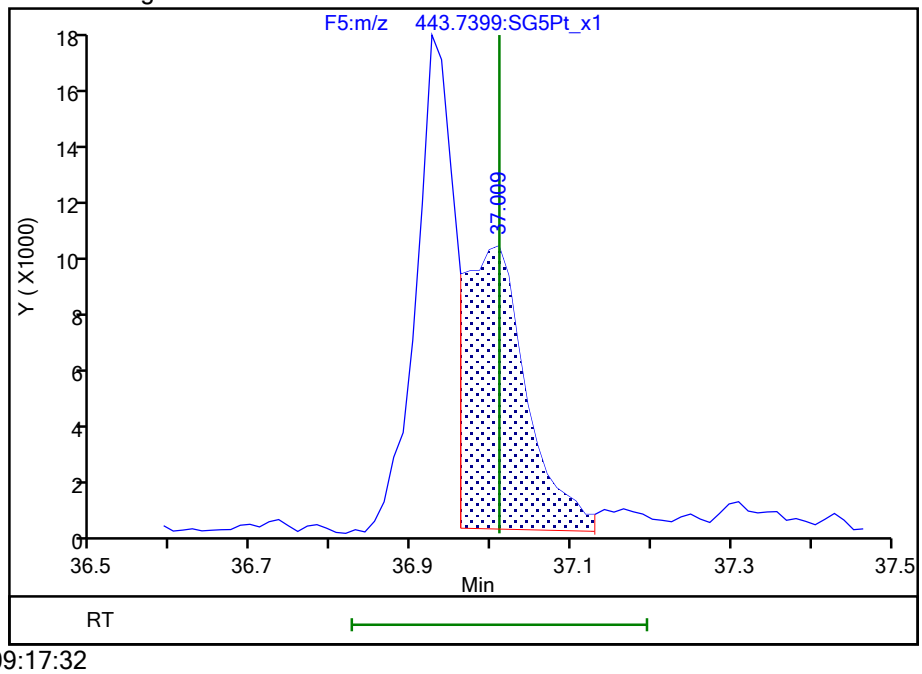

Reviewer: dadunj, 18-Aug-2021 09:17:32

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

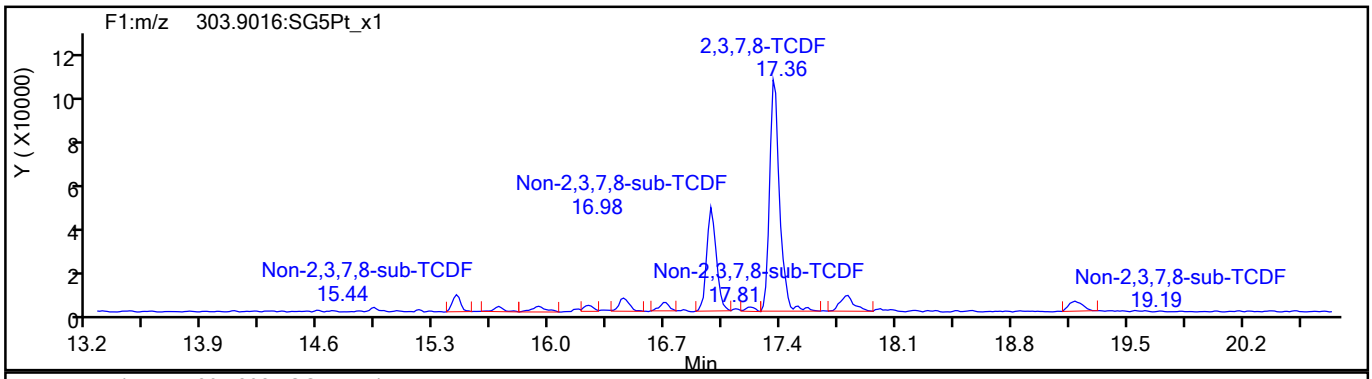

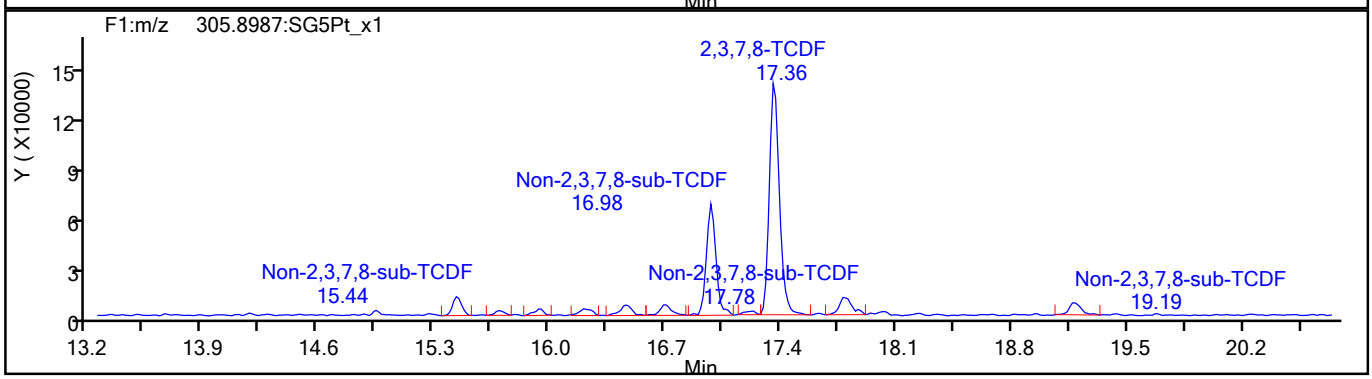

TCDF Standards

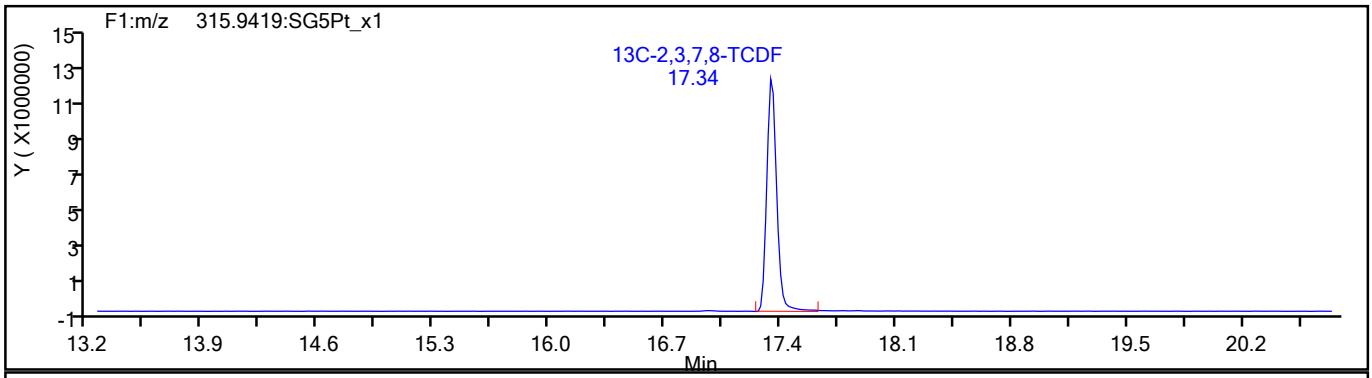

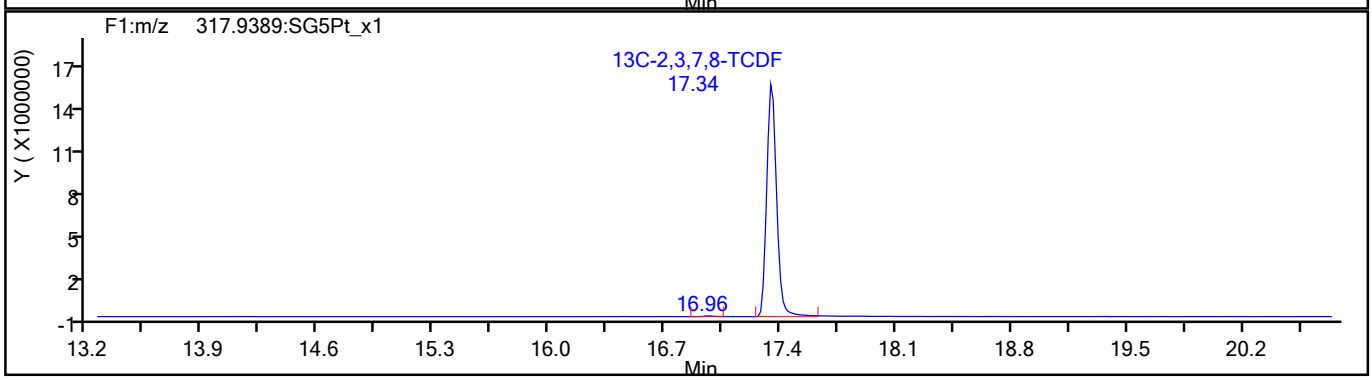

779510

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

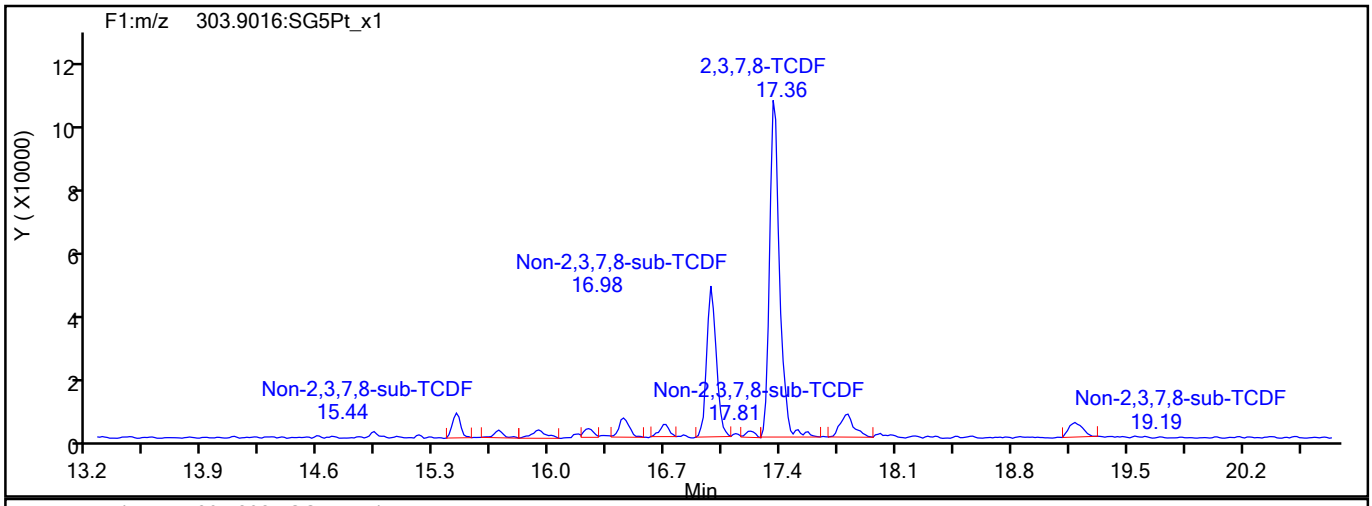

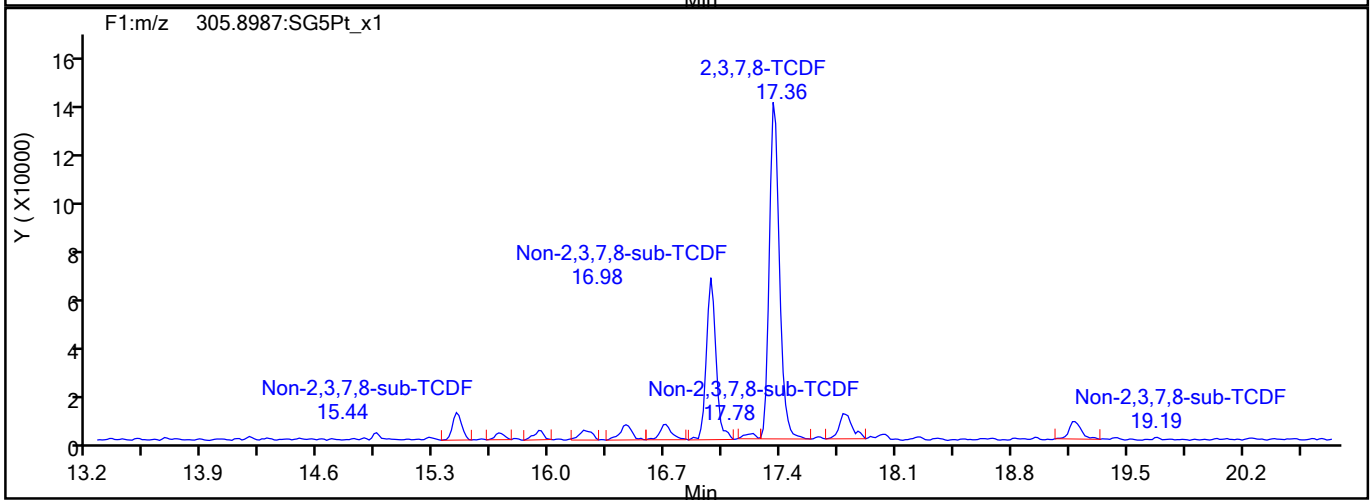

TCDF Interference Mass

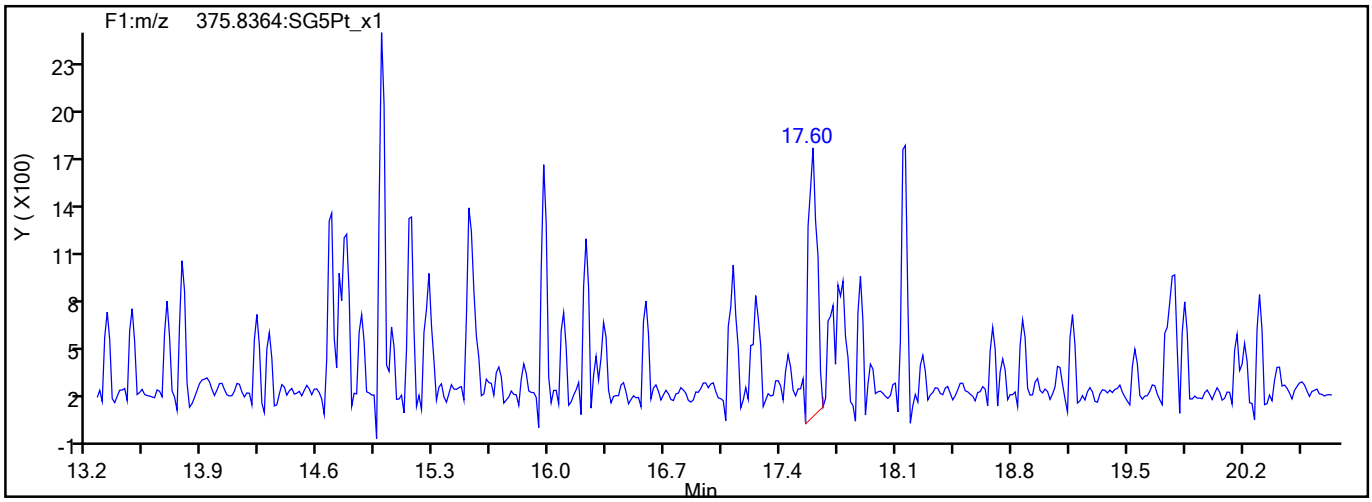

779511

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

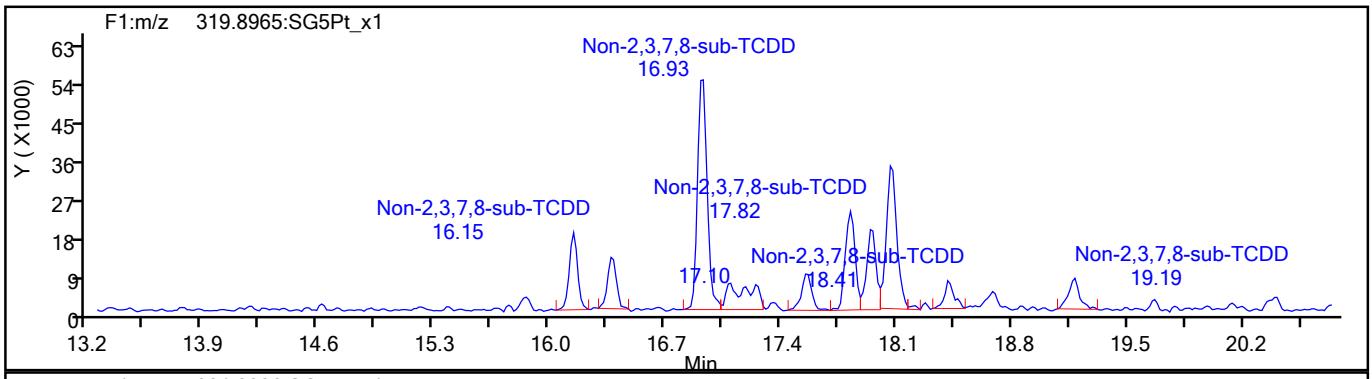

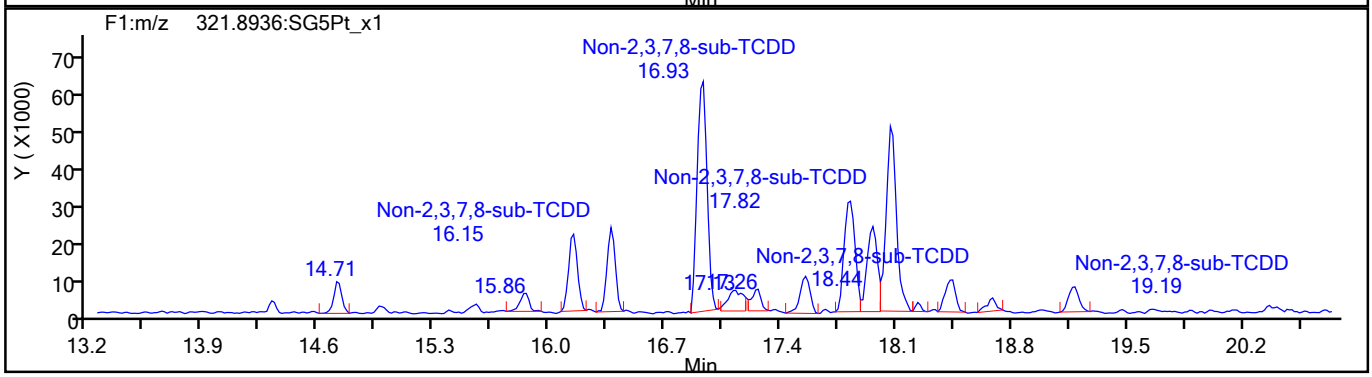

TCDD Standards

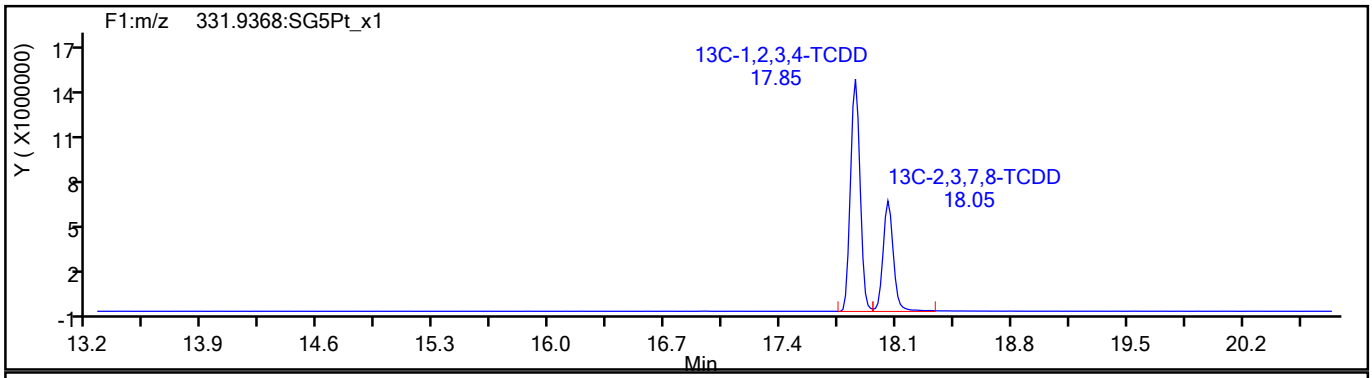

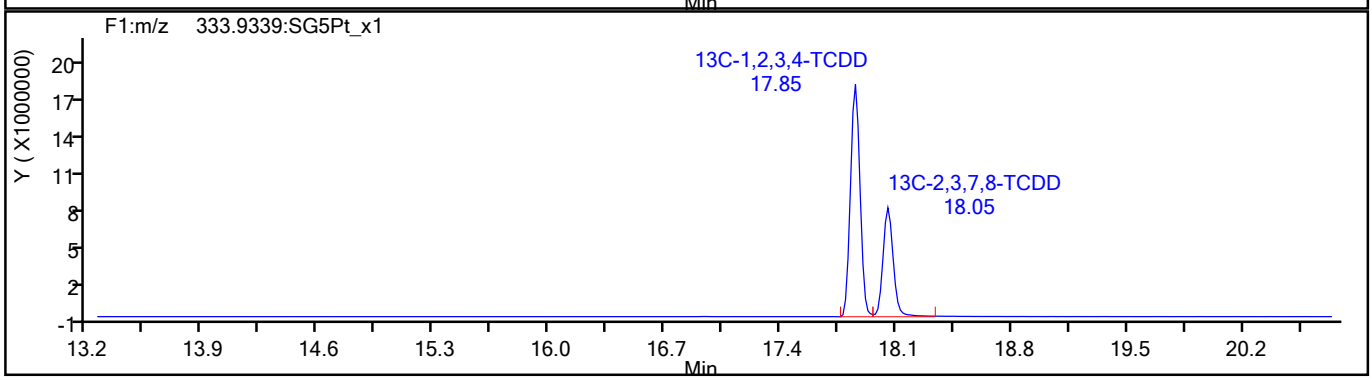

779512

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

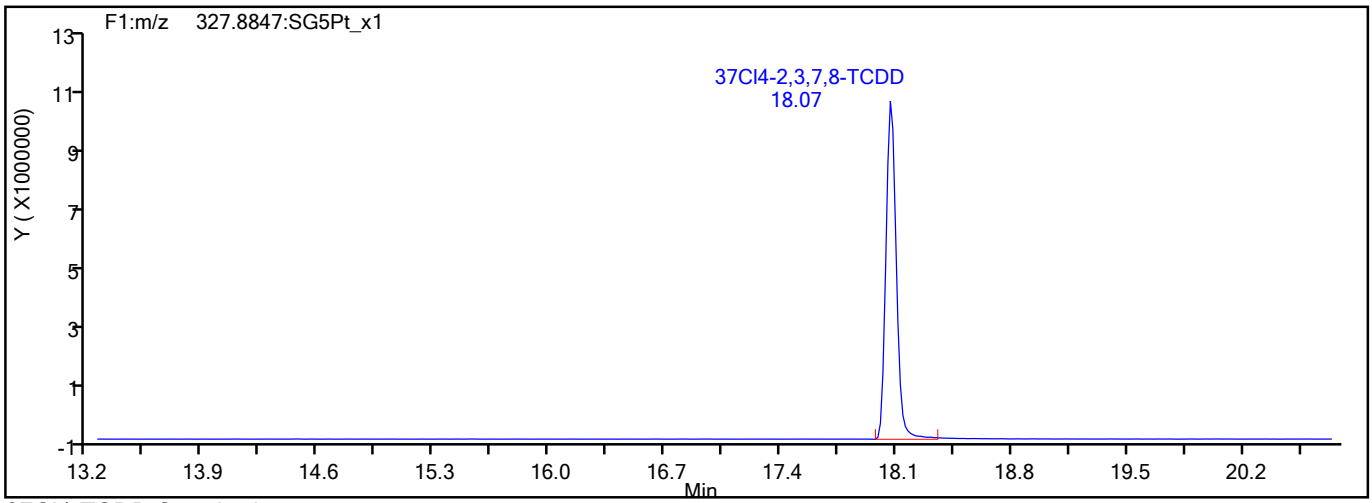

37Cl4-TCDD Standards

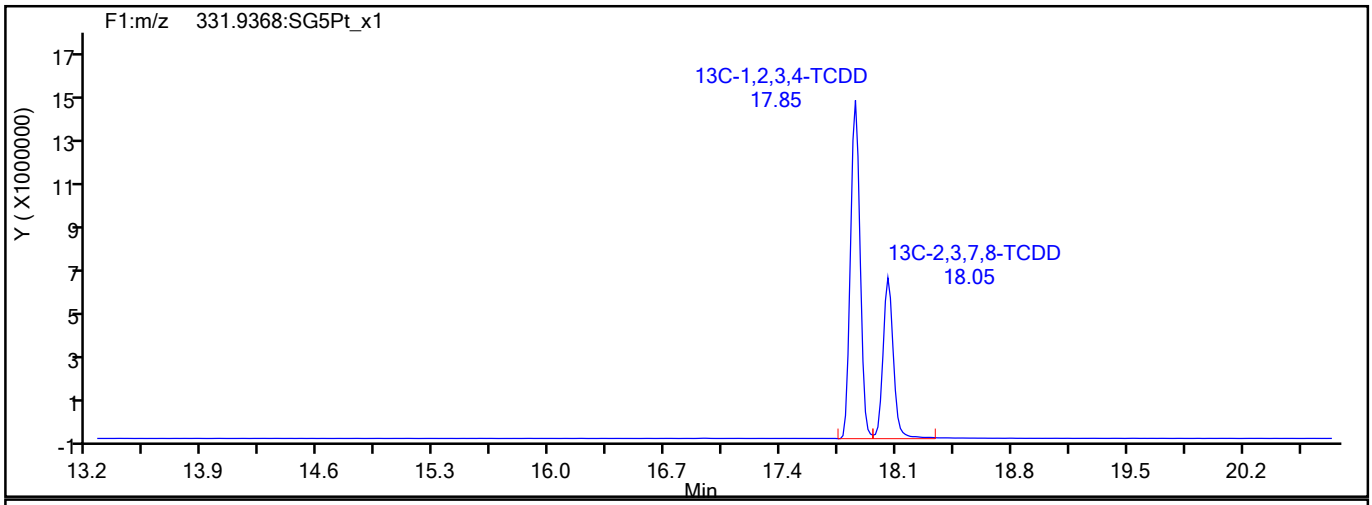

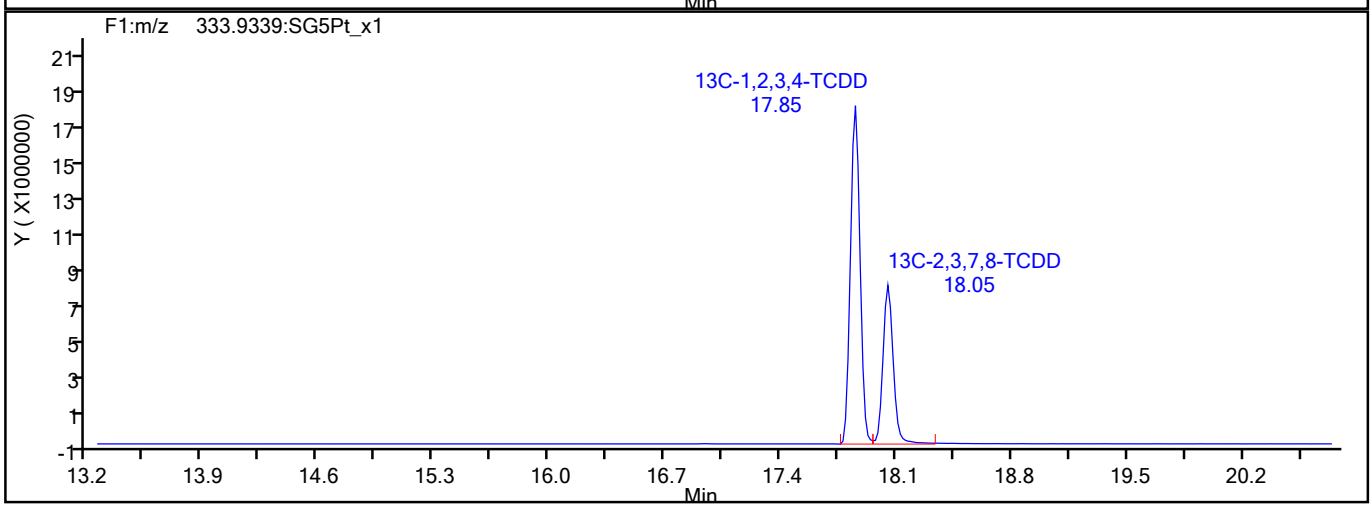

779513

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

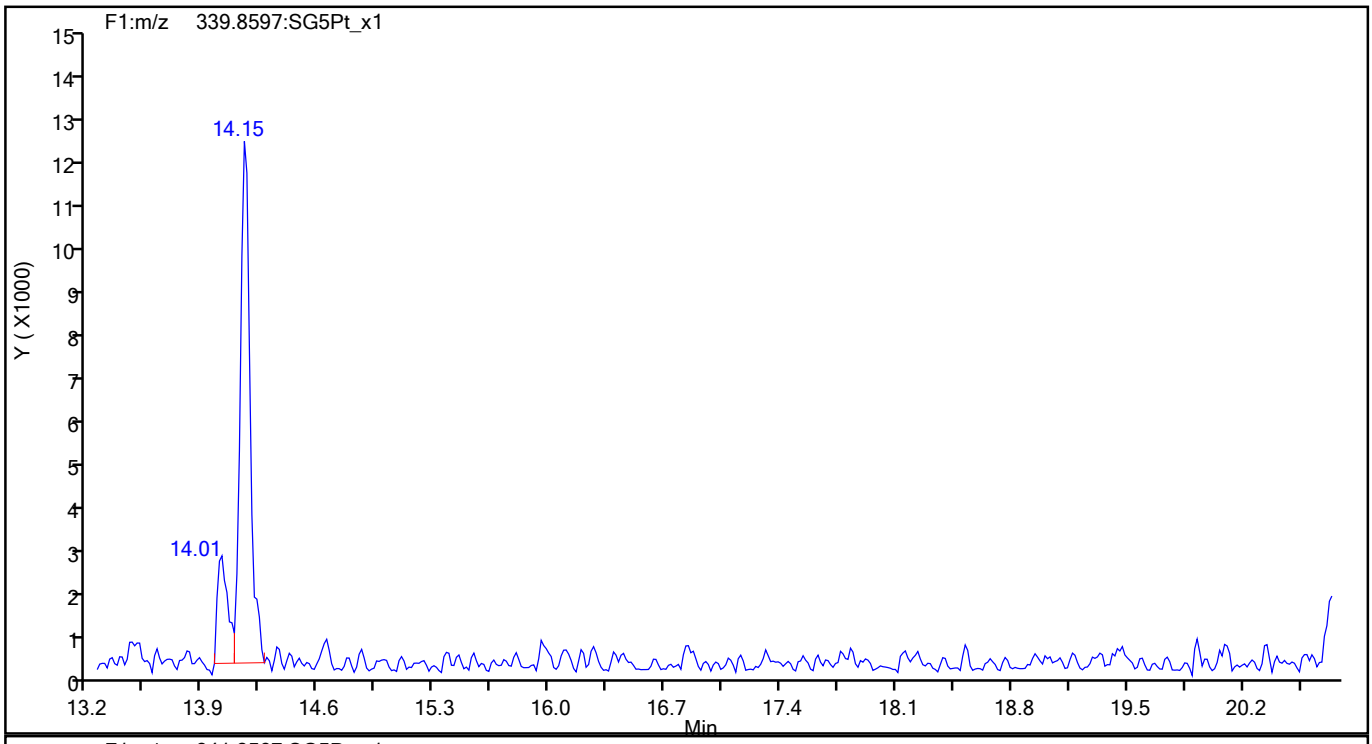

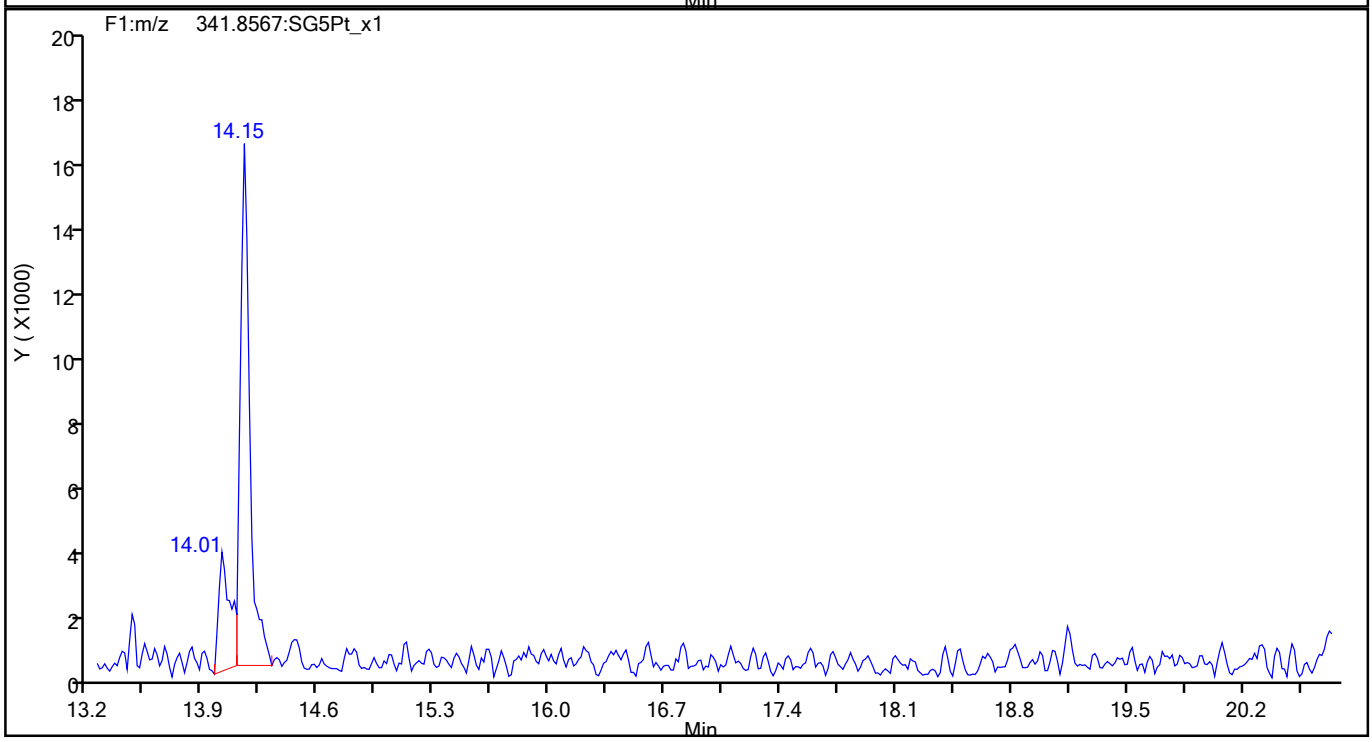

779514

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

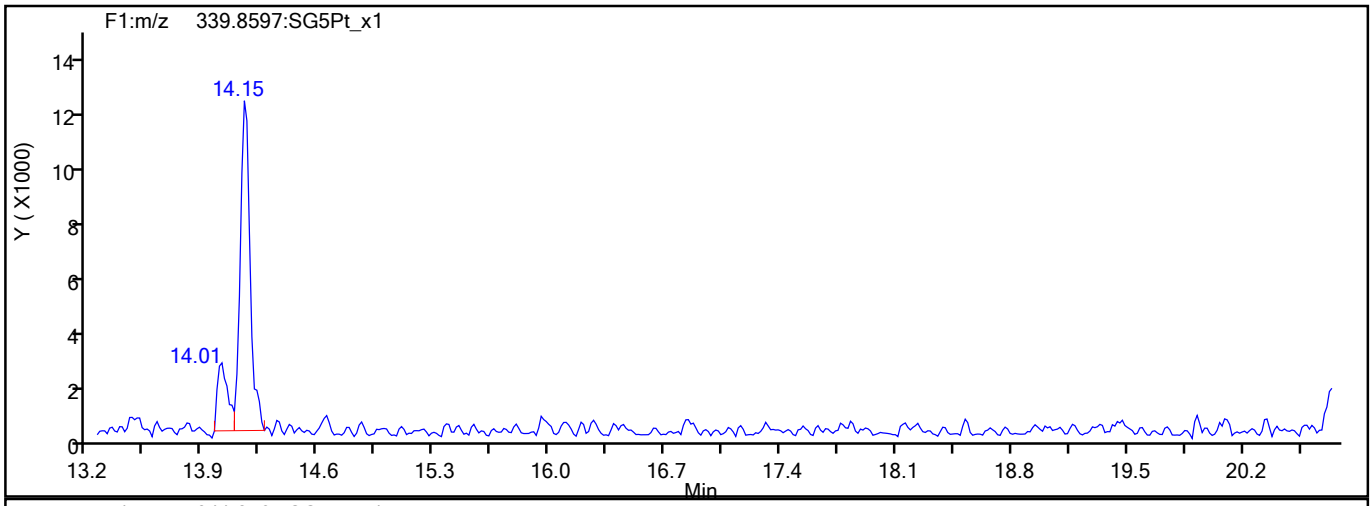

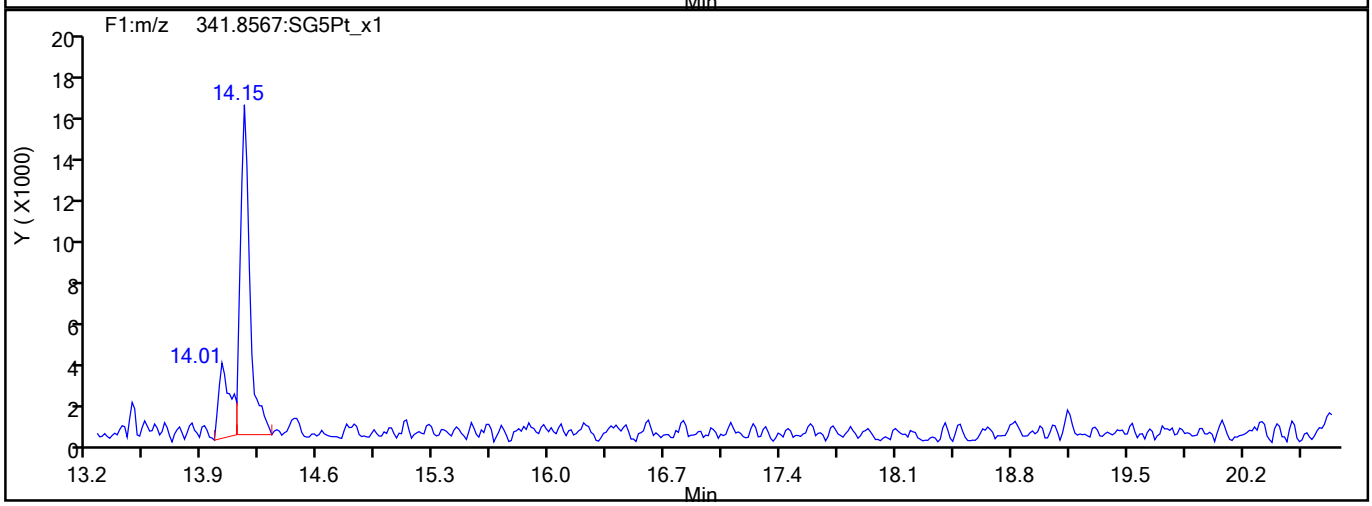

F1 PeCDFs Interference Mass

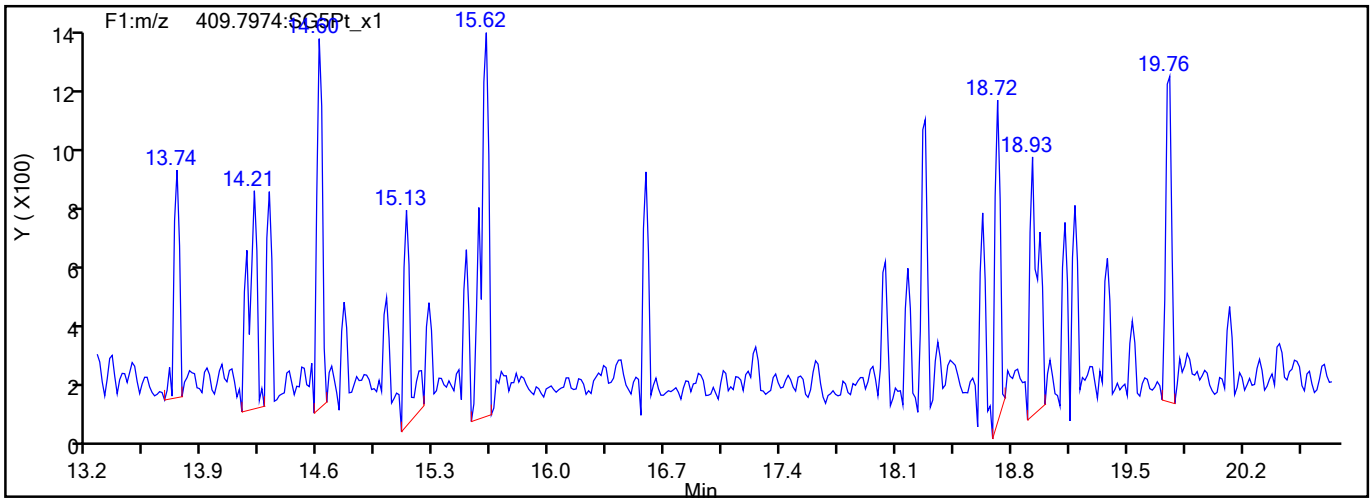

779515

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

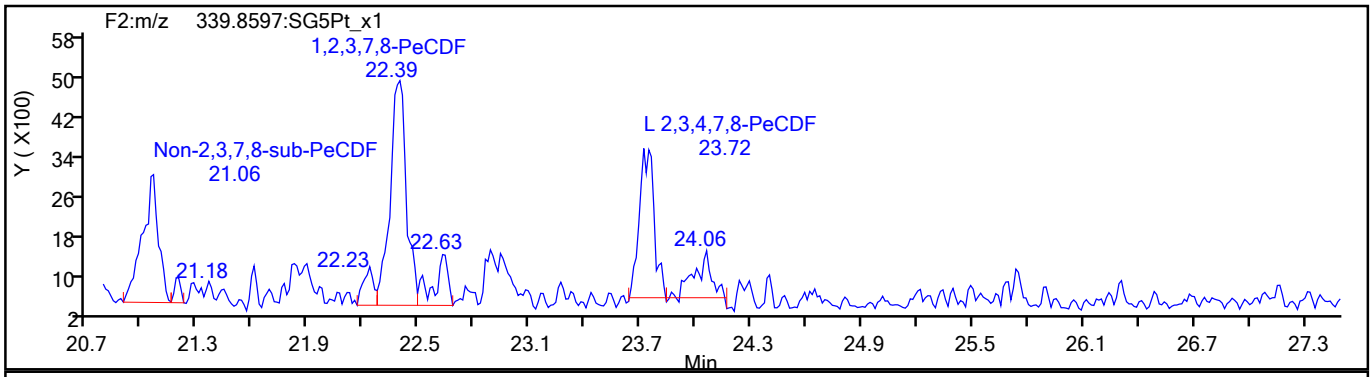

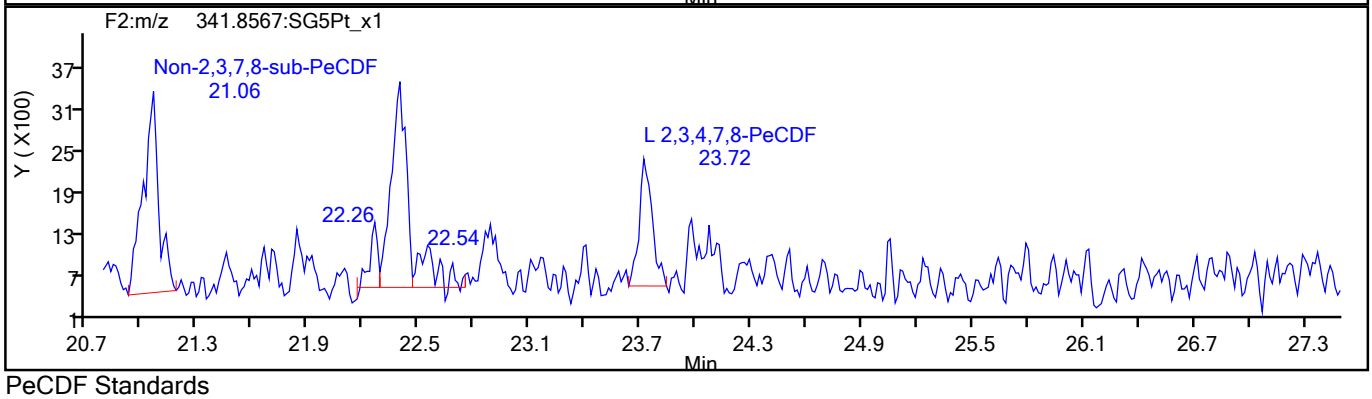

PeCDF Standards

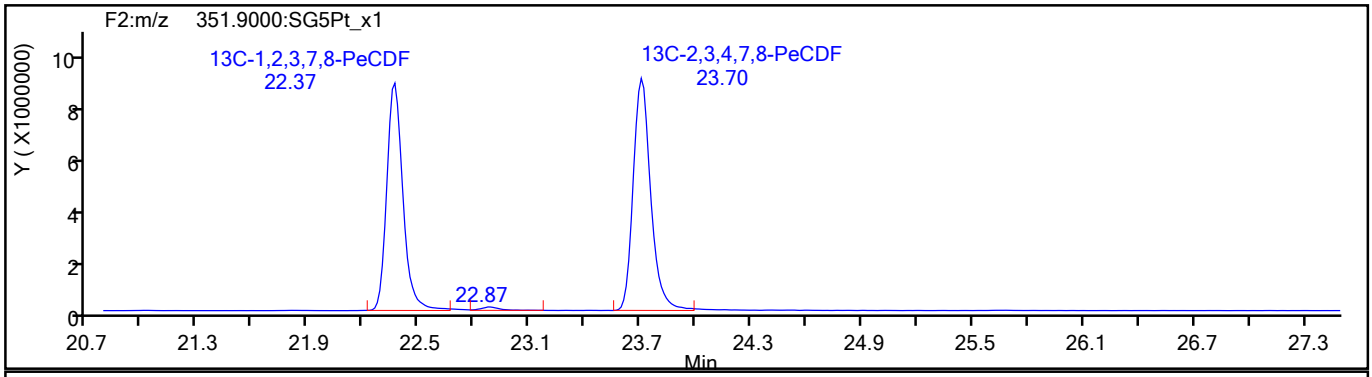

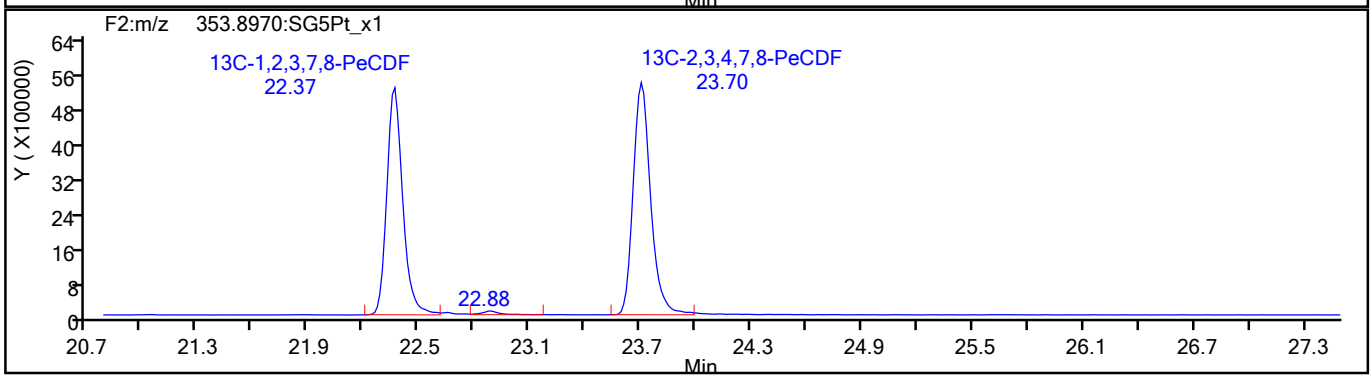

779516

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

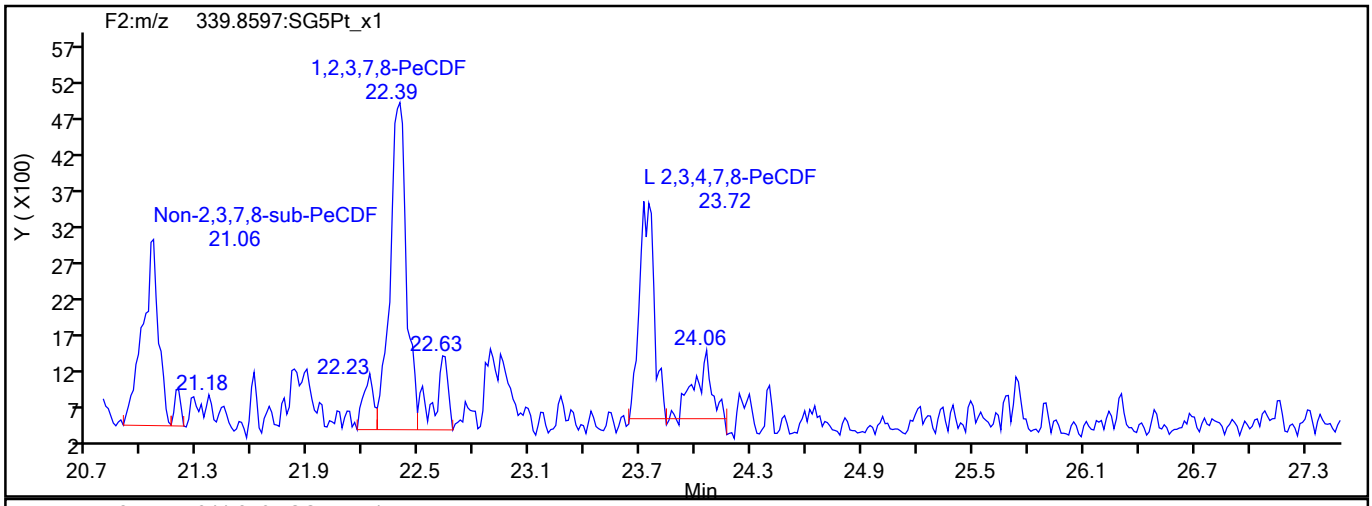

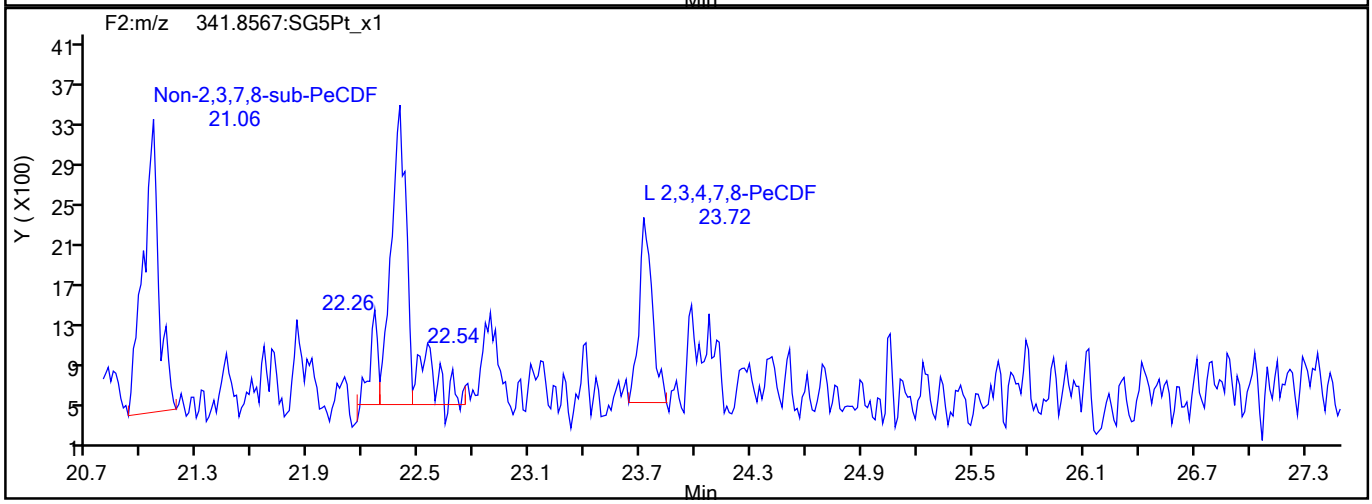

PeCDF Interference Mass

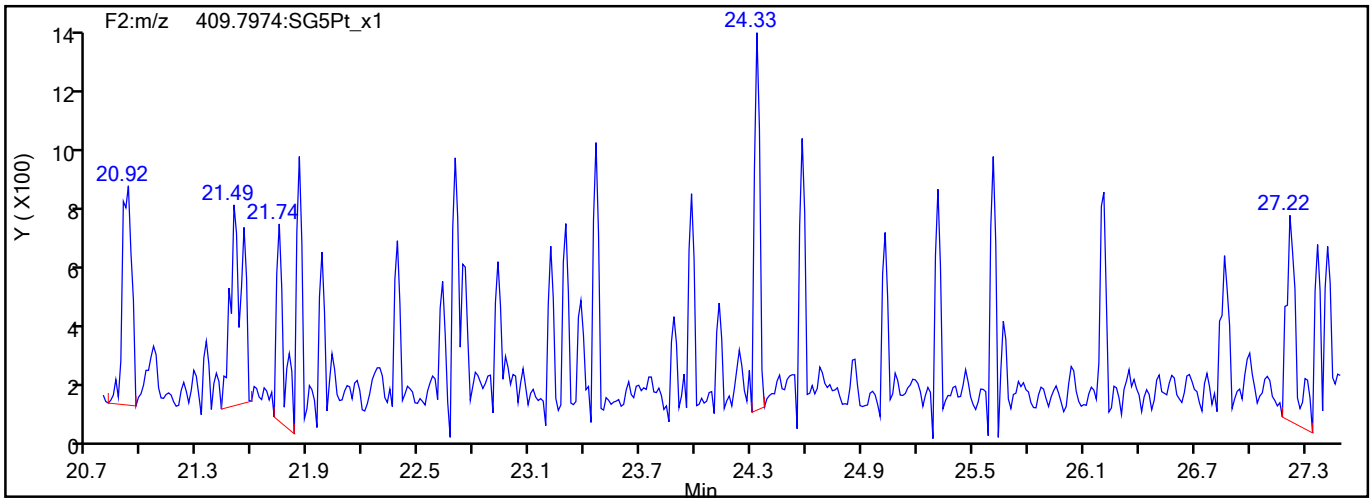

779517

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

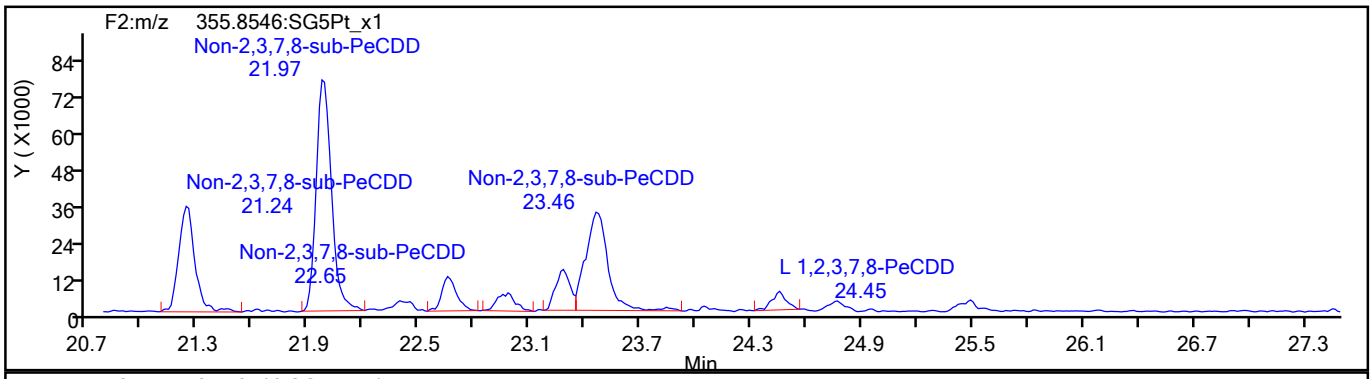

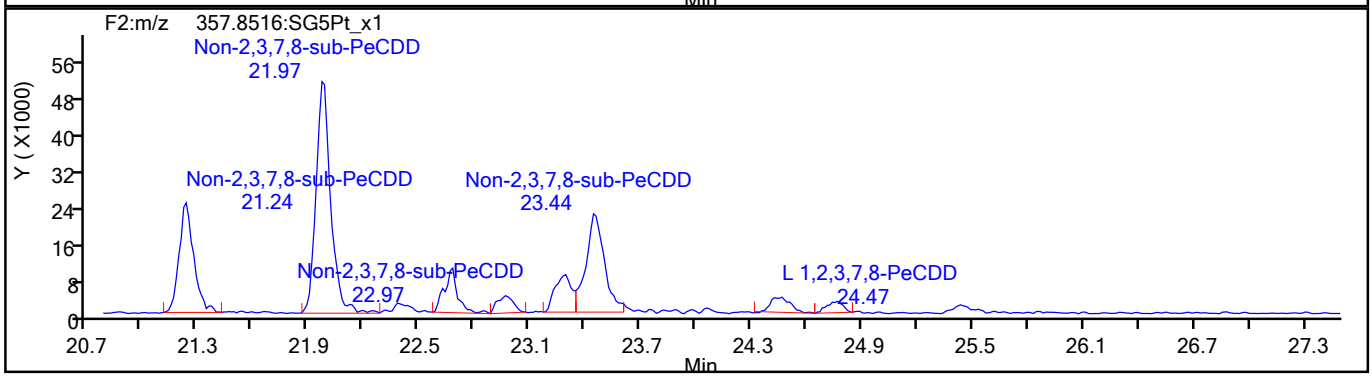

PeCDD Standards

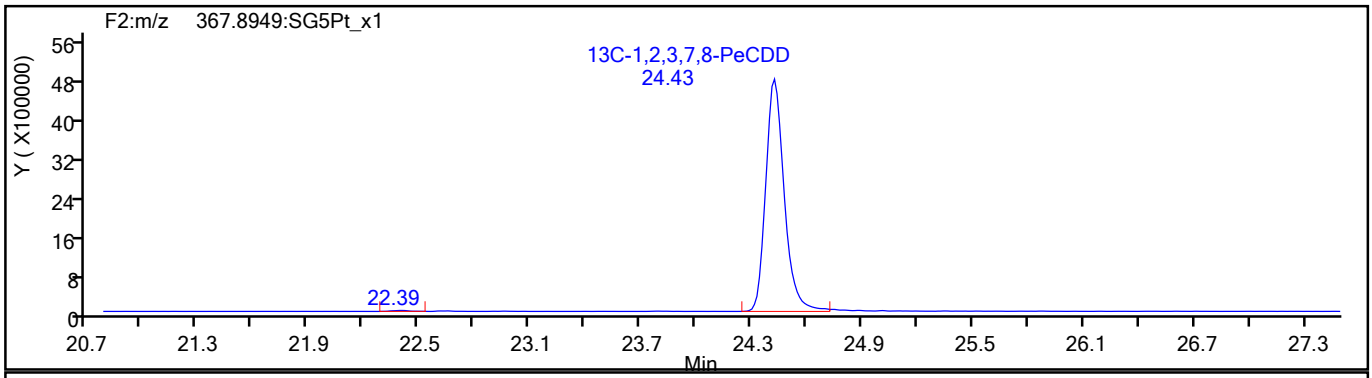

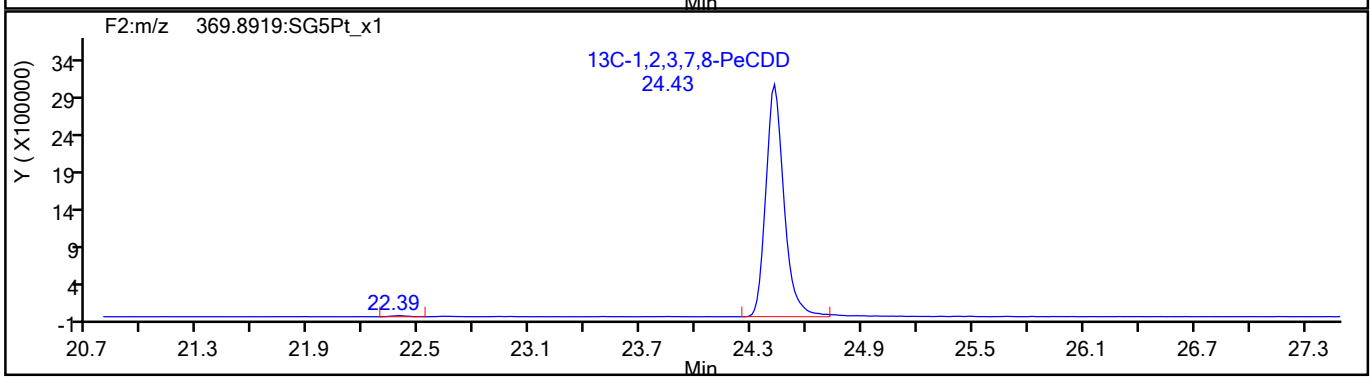

779518

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

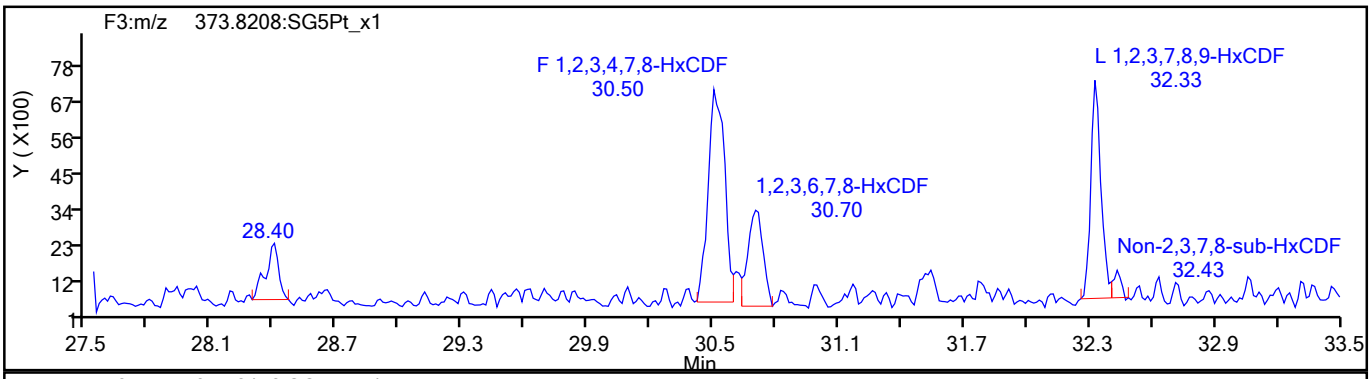

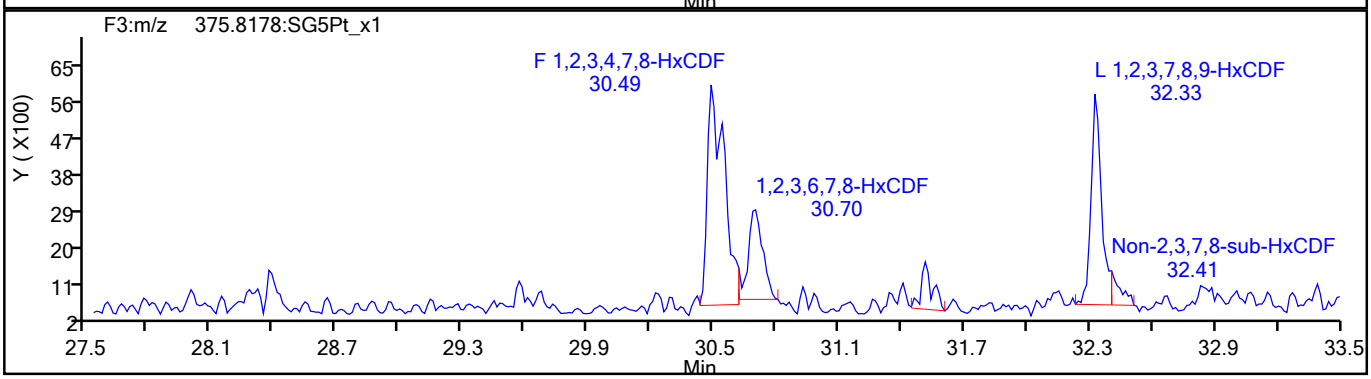

HxCDF Standards

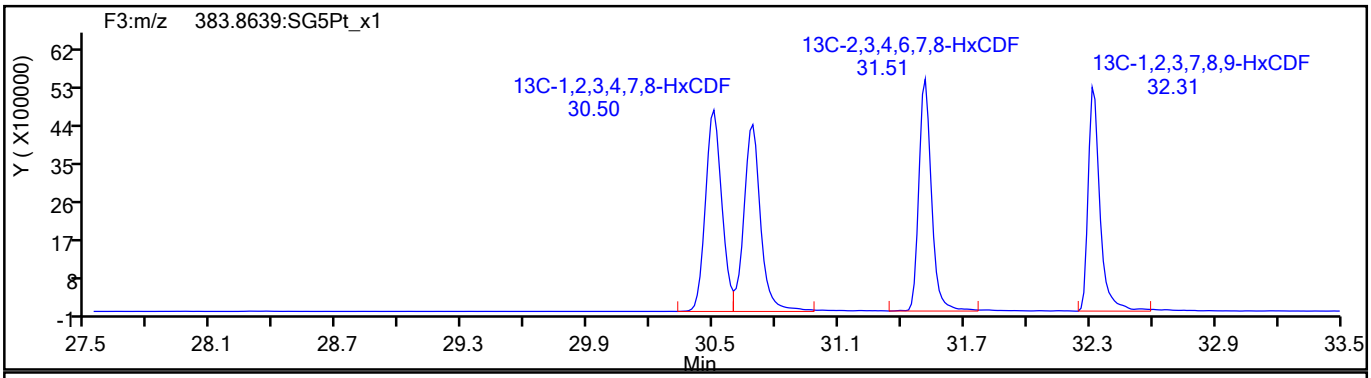

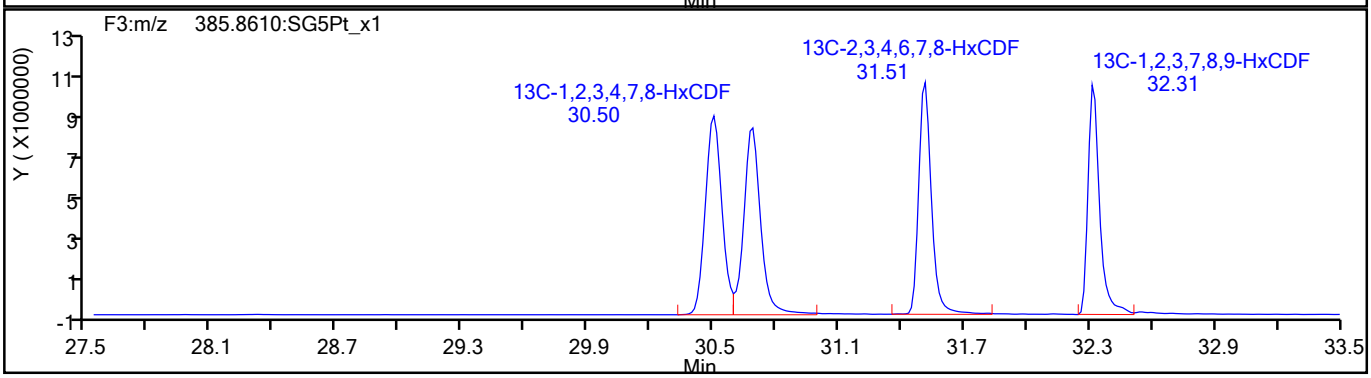

779519

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

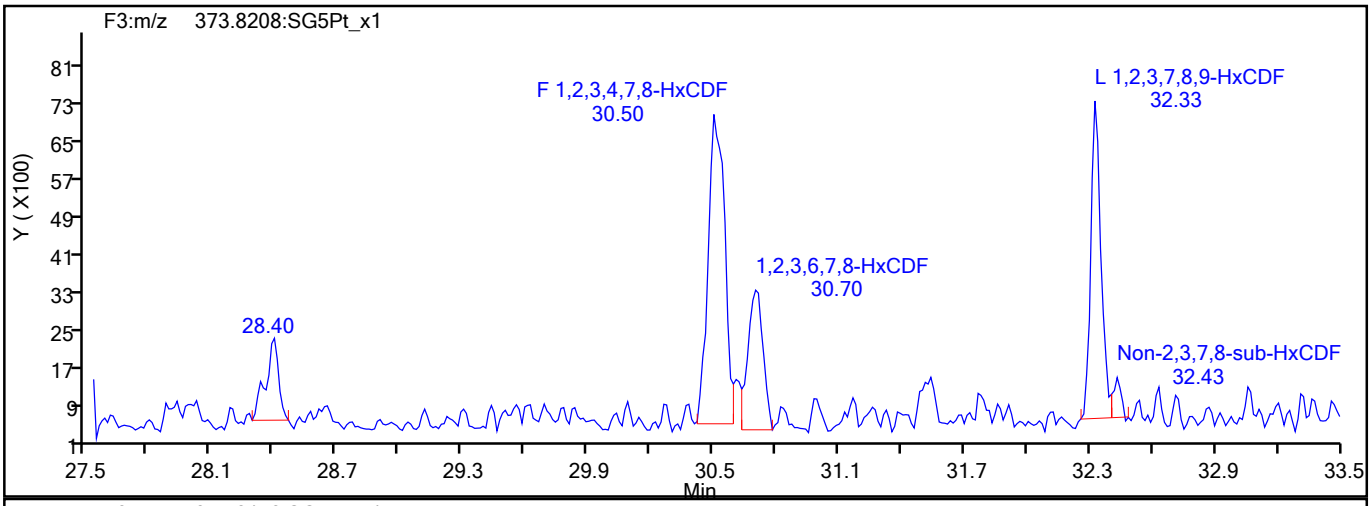

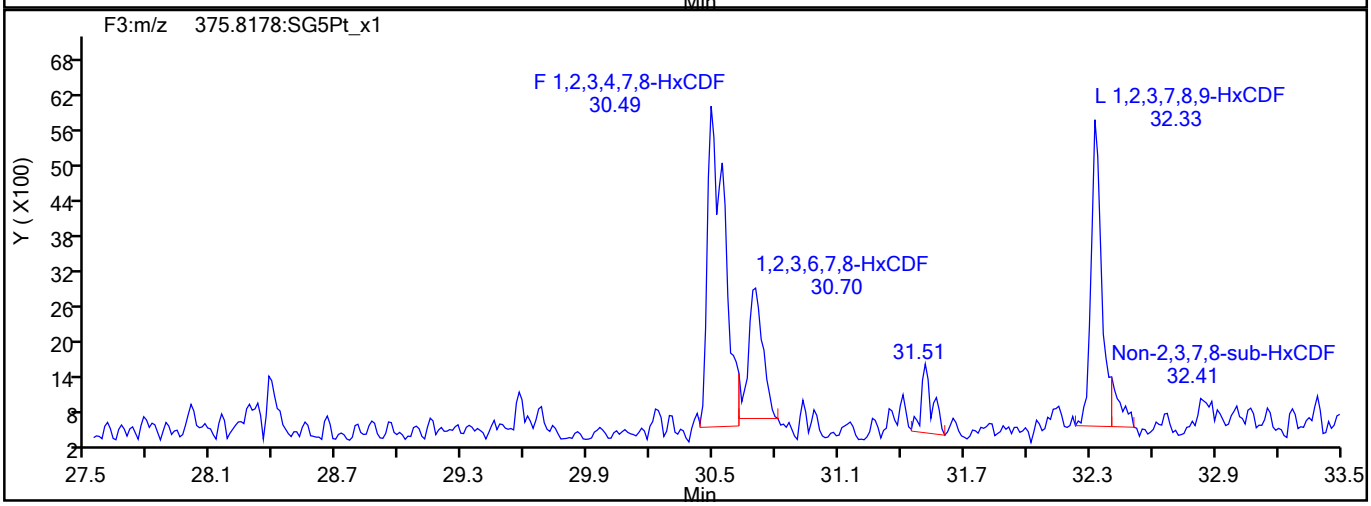

HxCDF Interference Mass

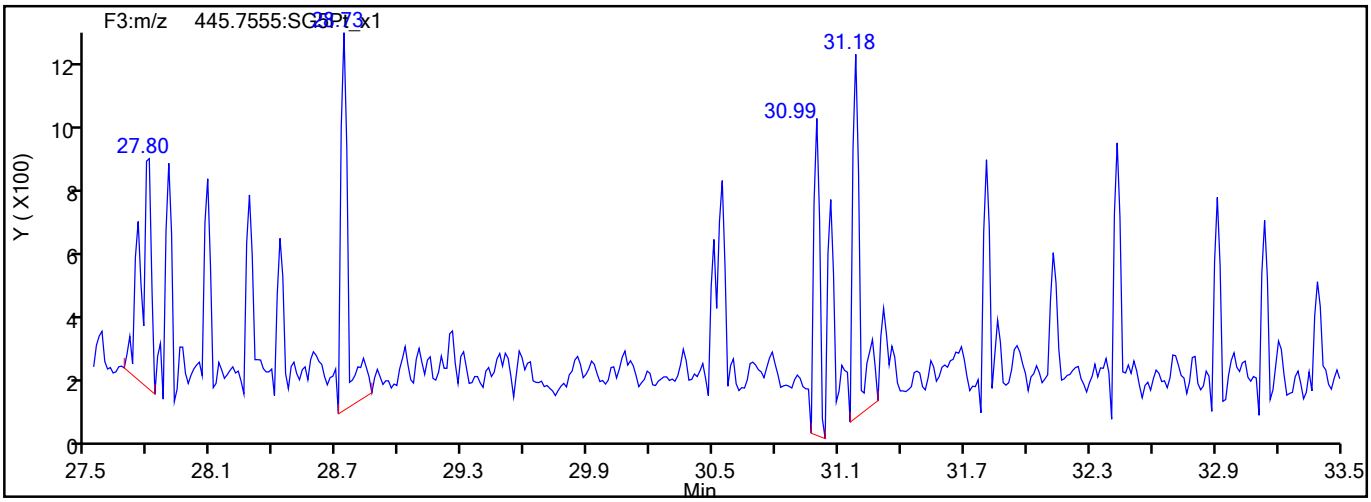

779520

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

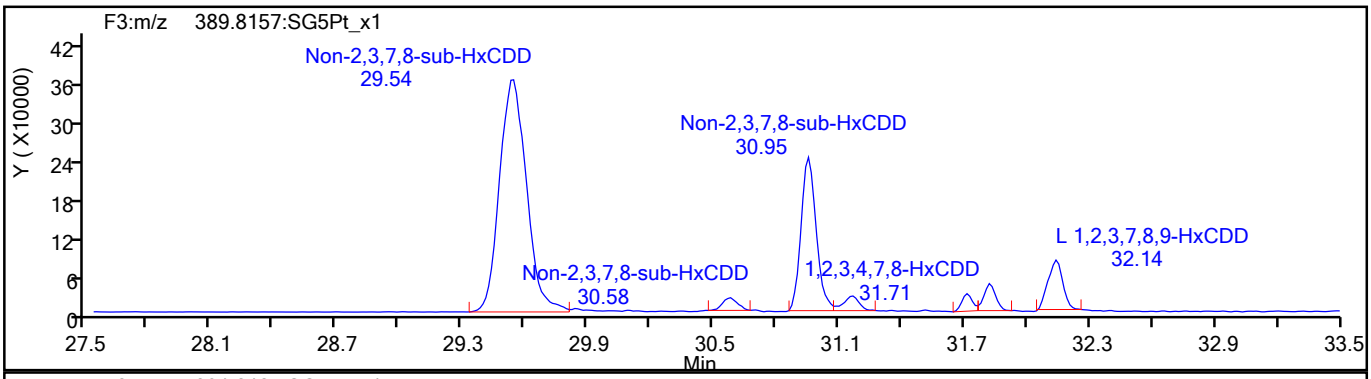

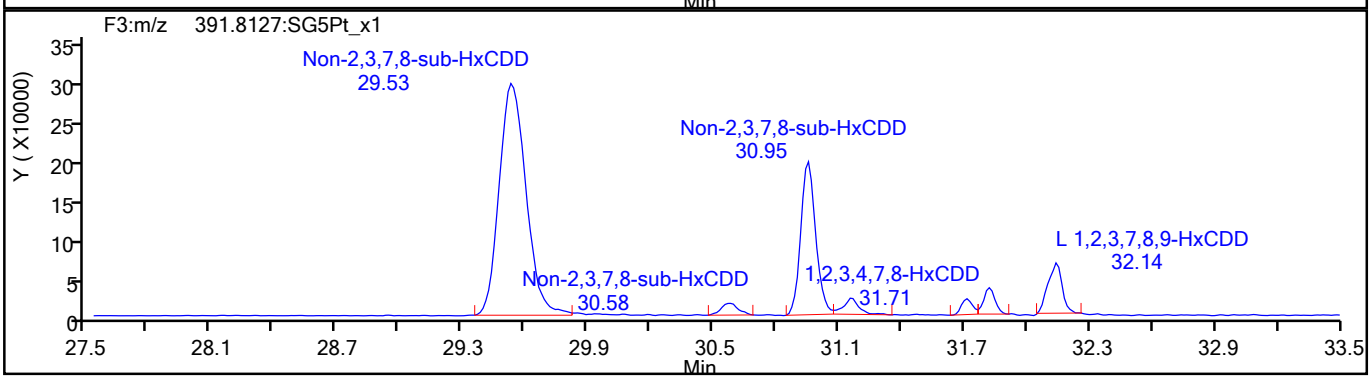

HxCDD Standards

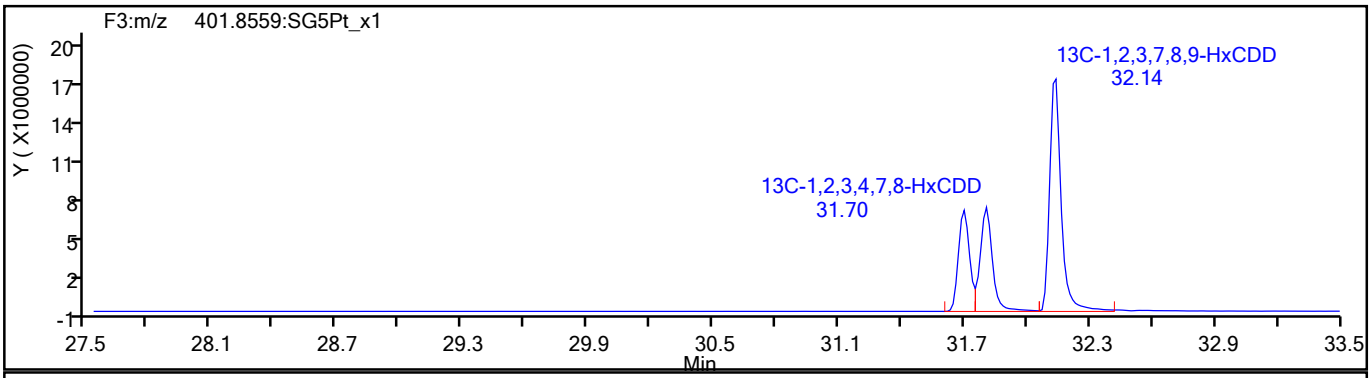

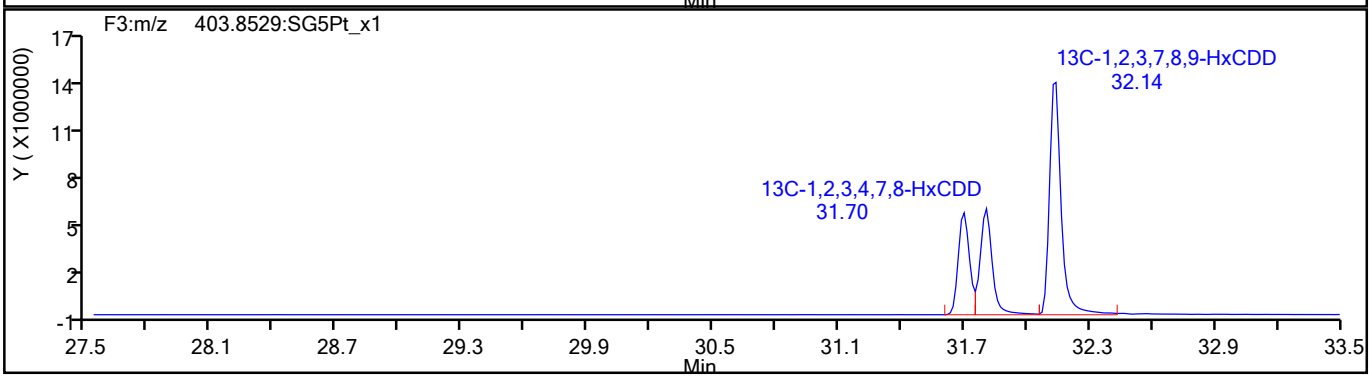

779521

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

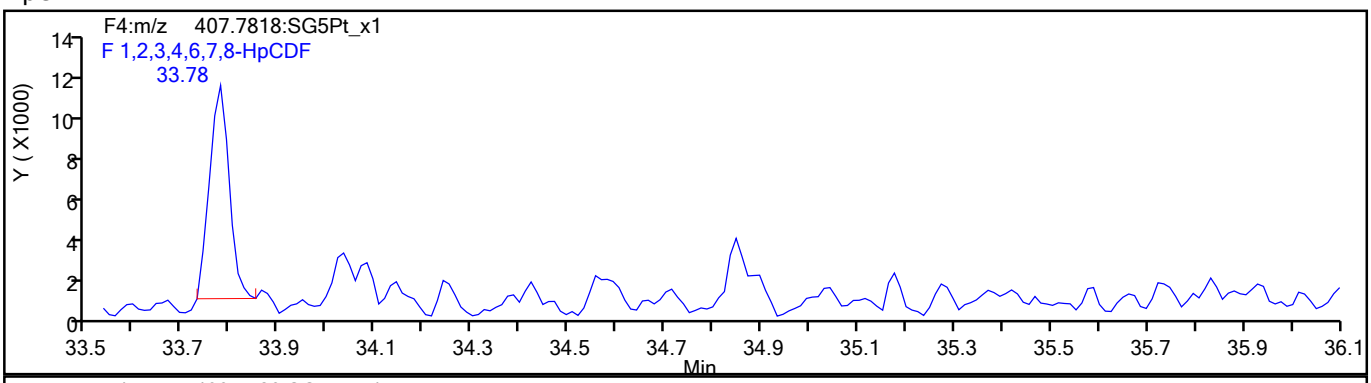

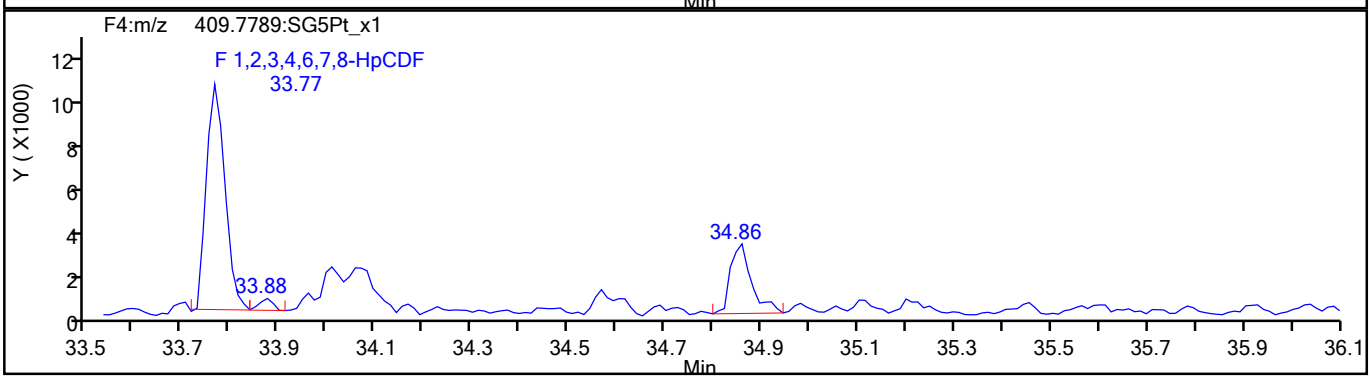

HpCDF Standards

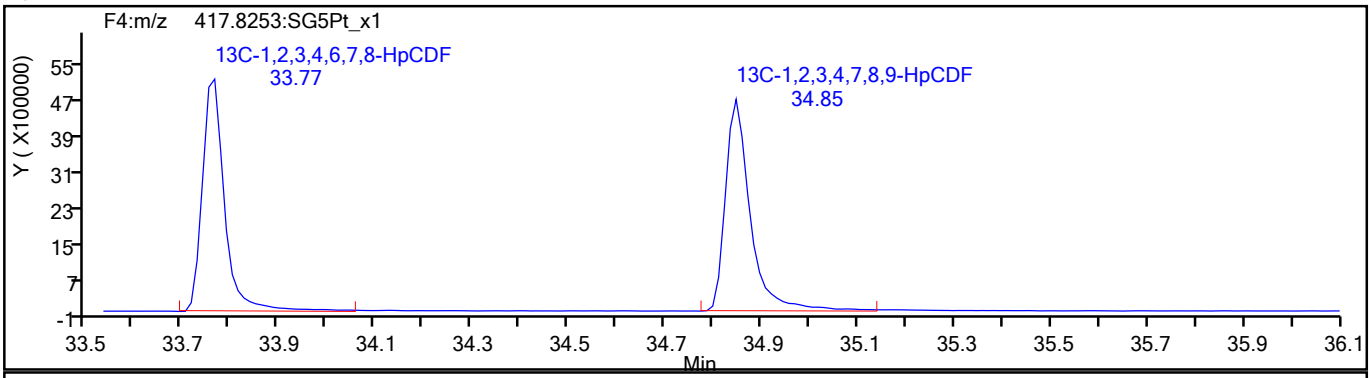

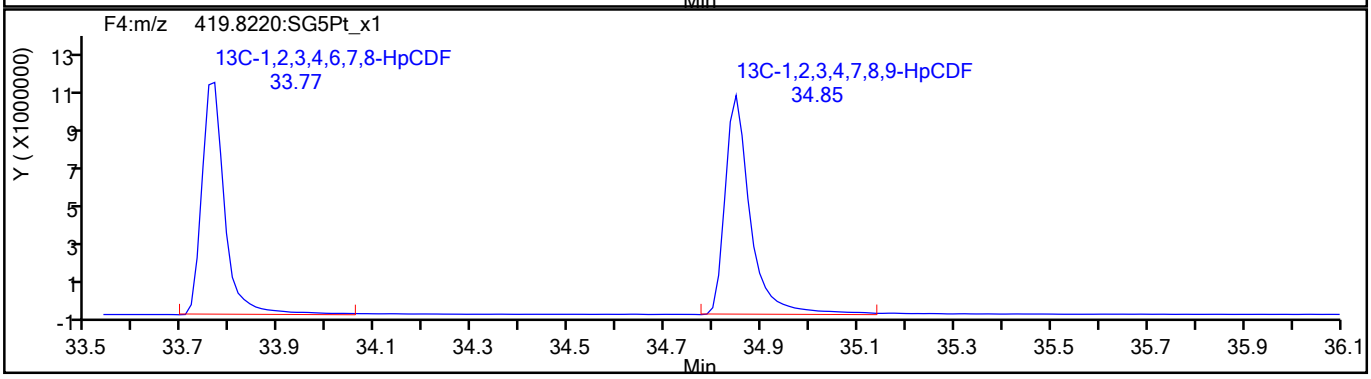

779522

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

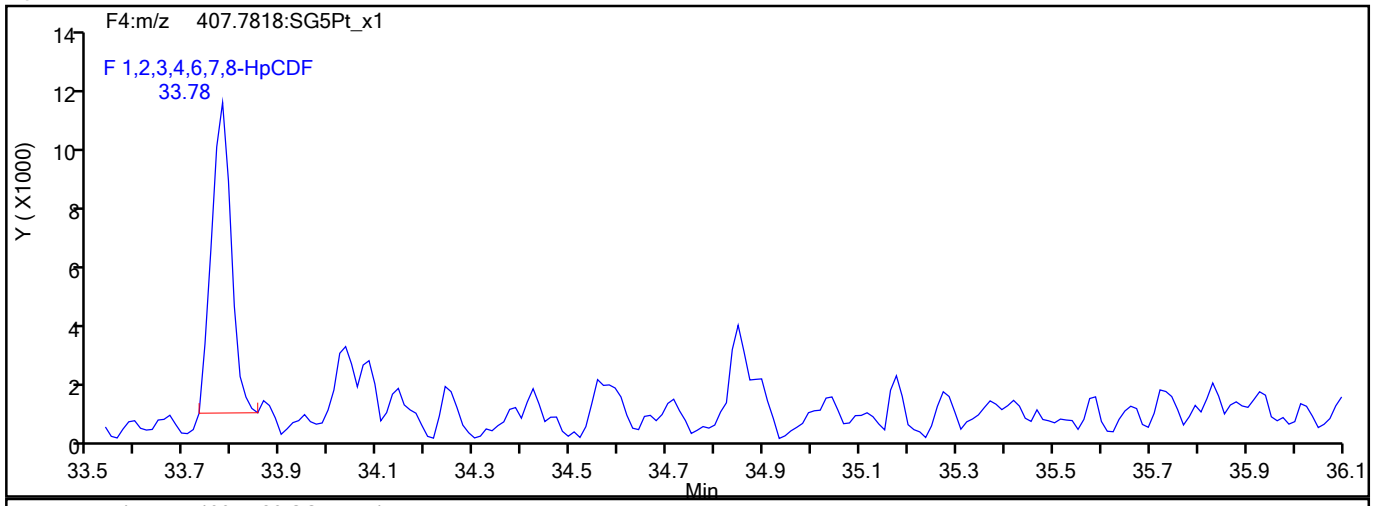

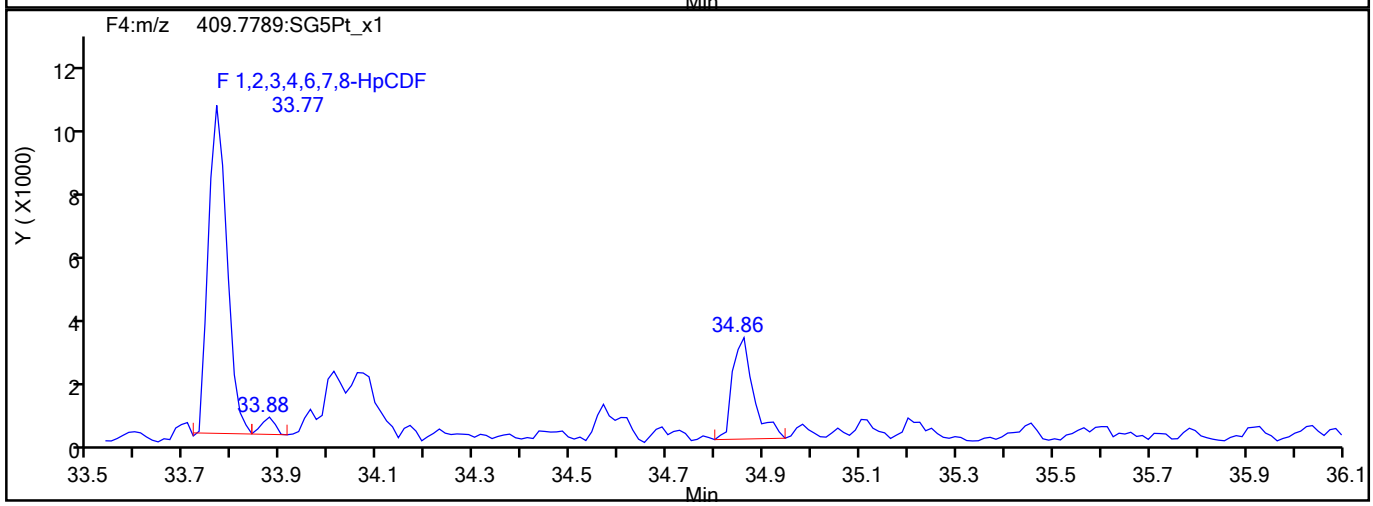

HpCDF Interference Mass

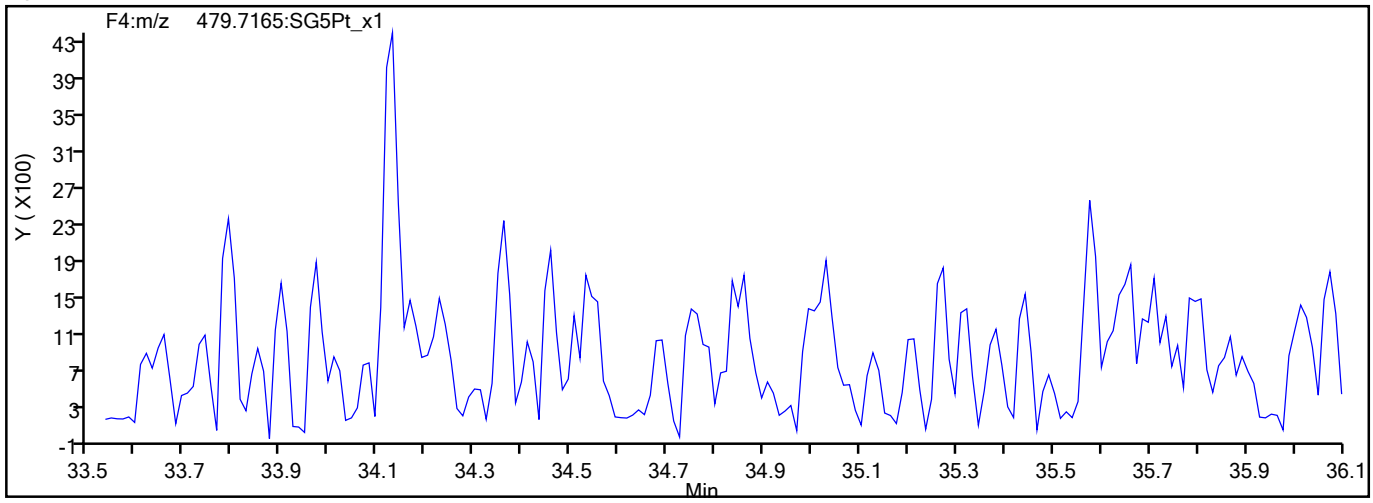

779523

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

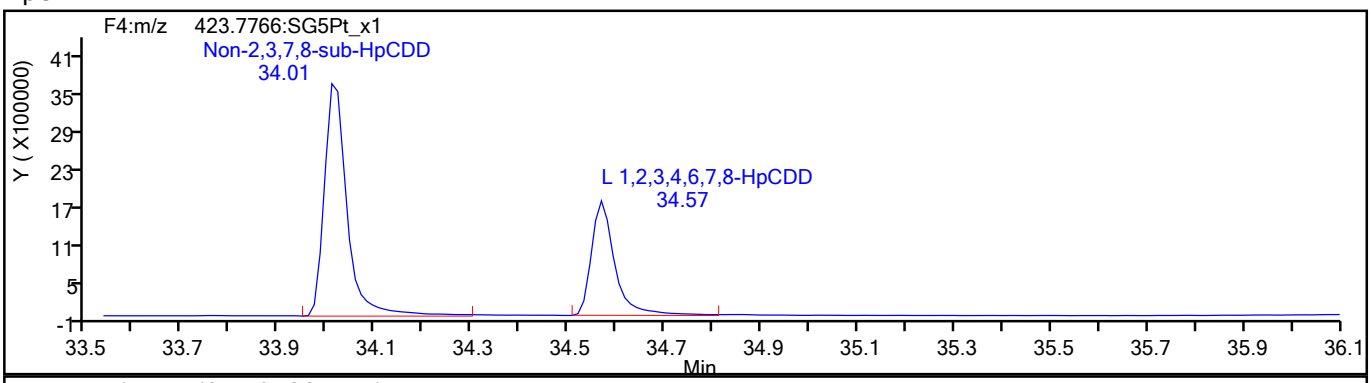

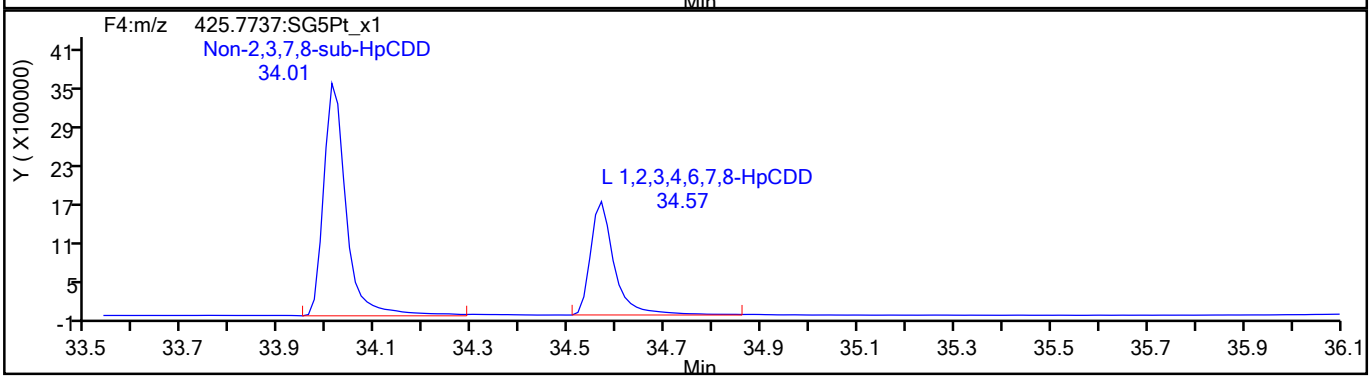

HpCDD Standards

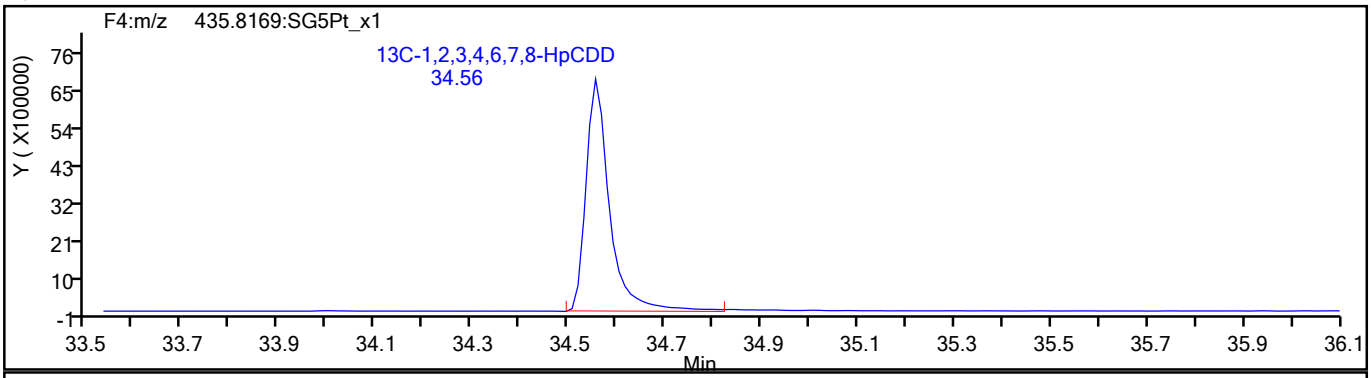

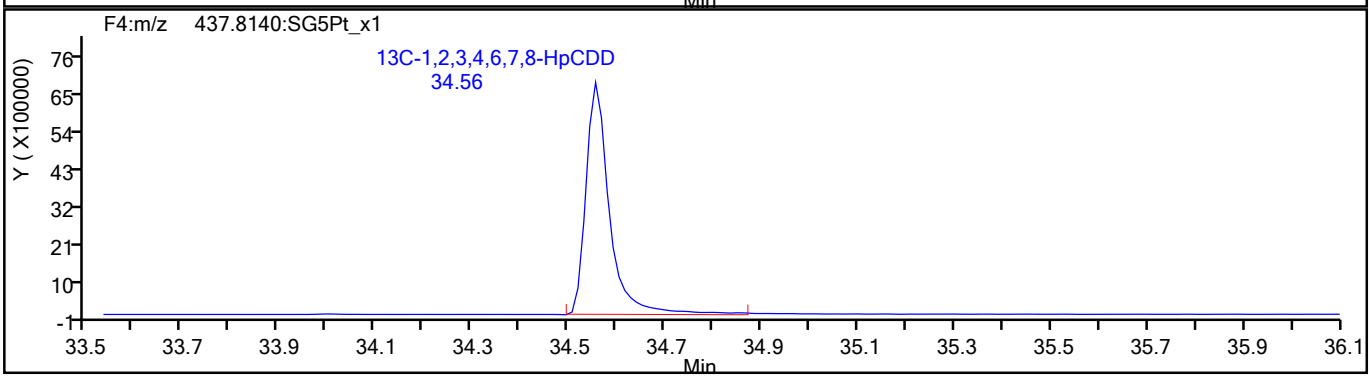

779524

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

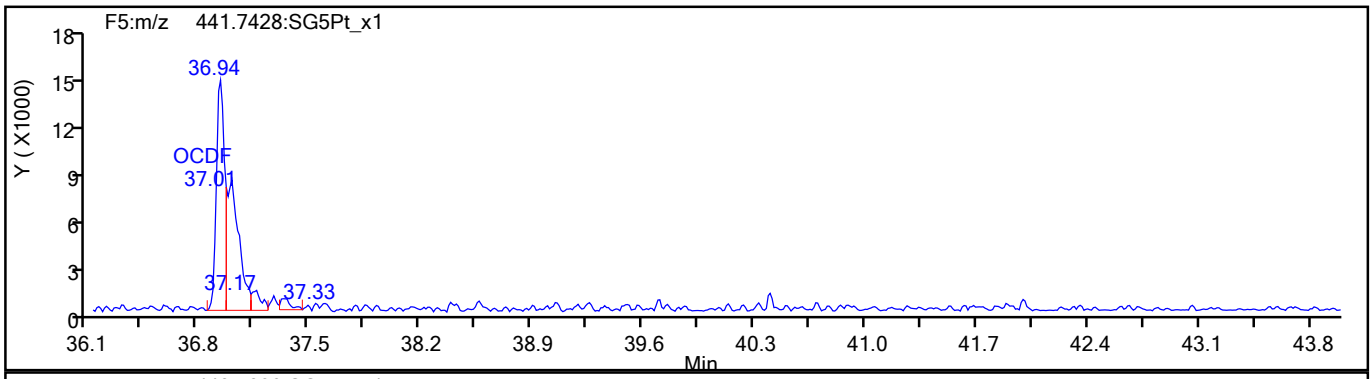

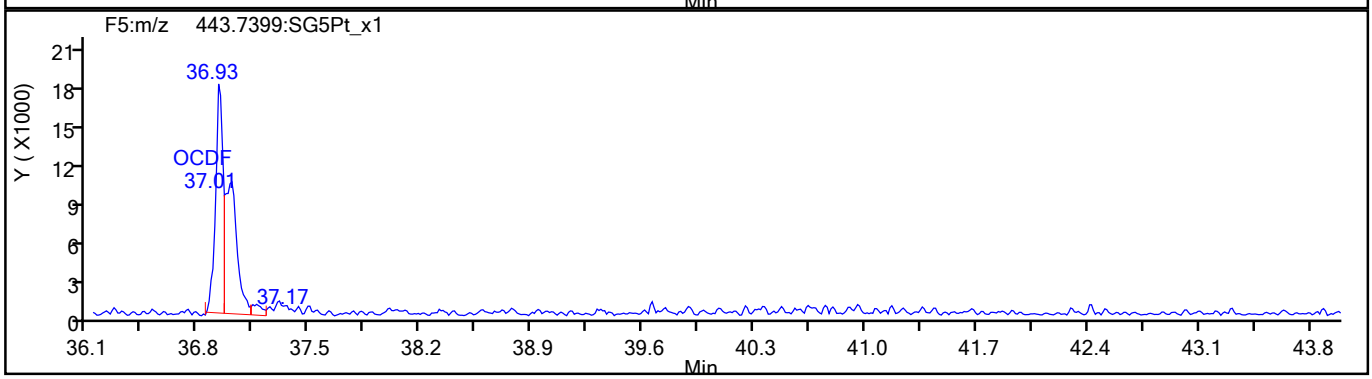

OCDF Standards

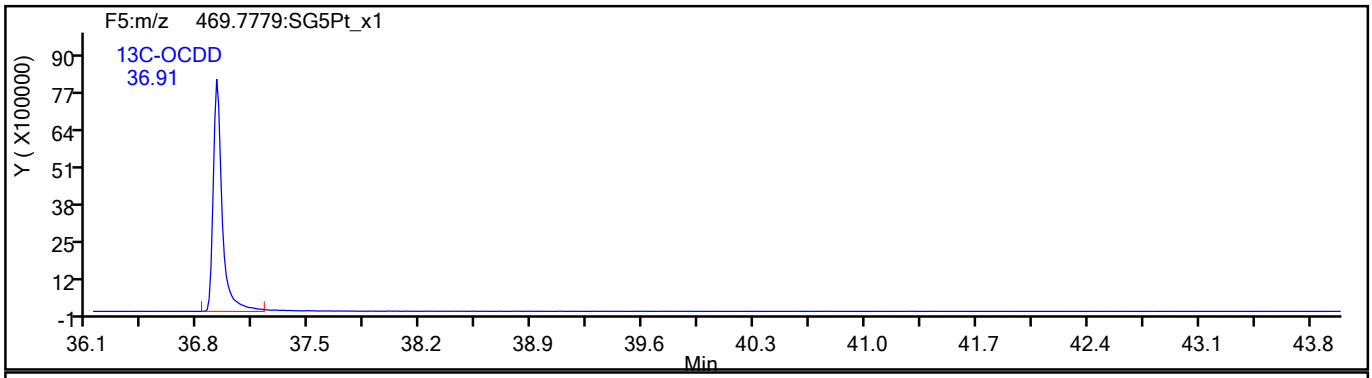

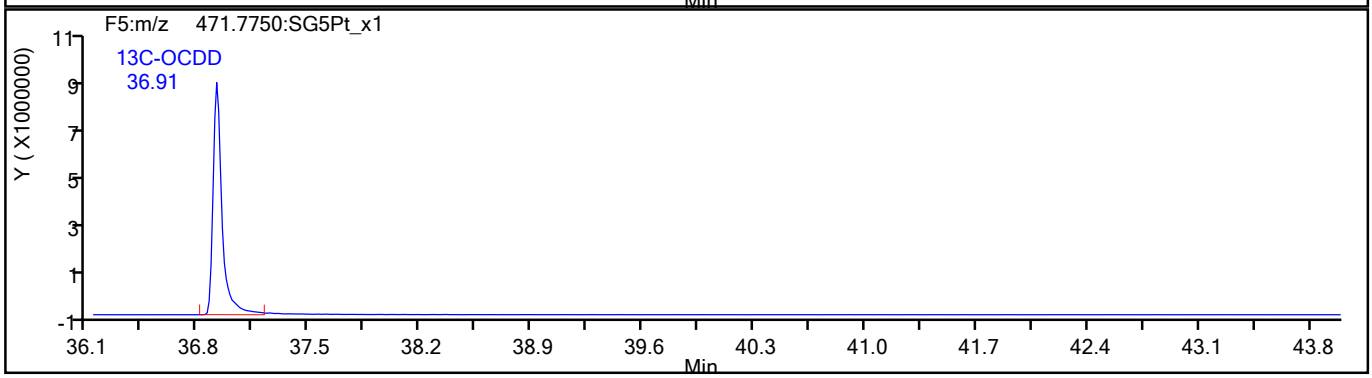

779525

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

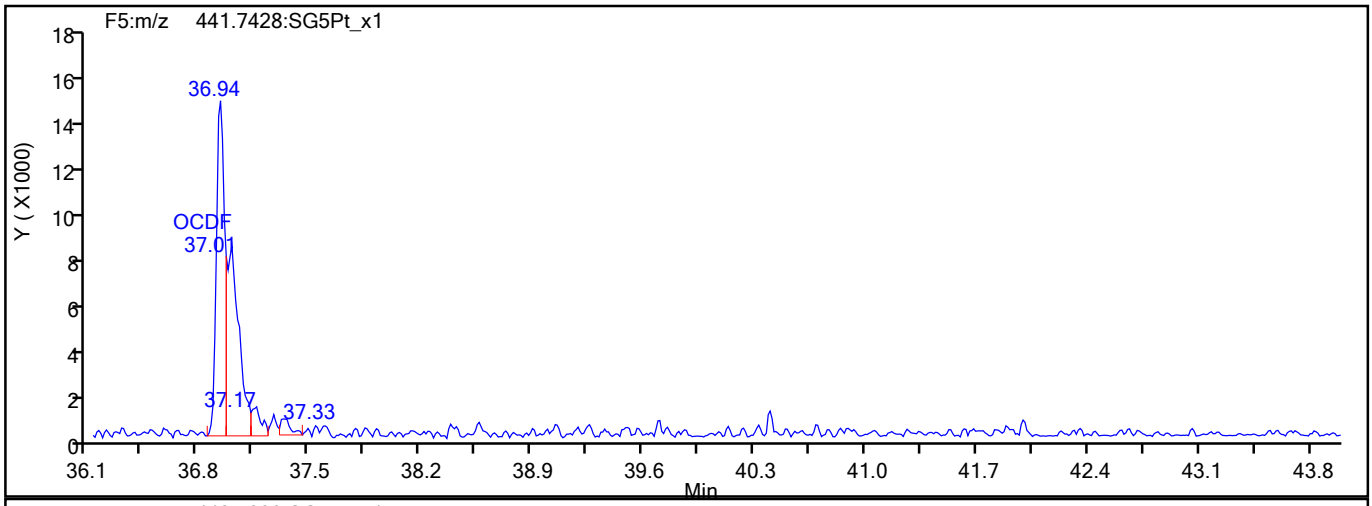

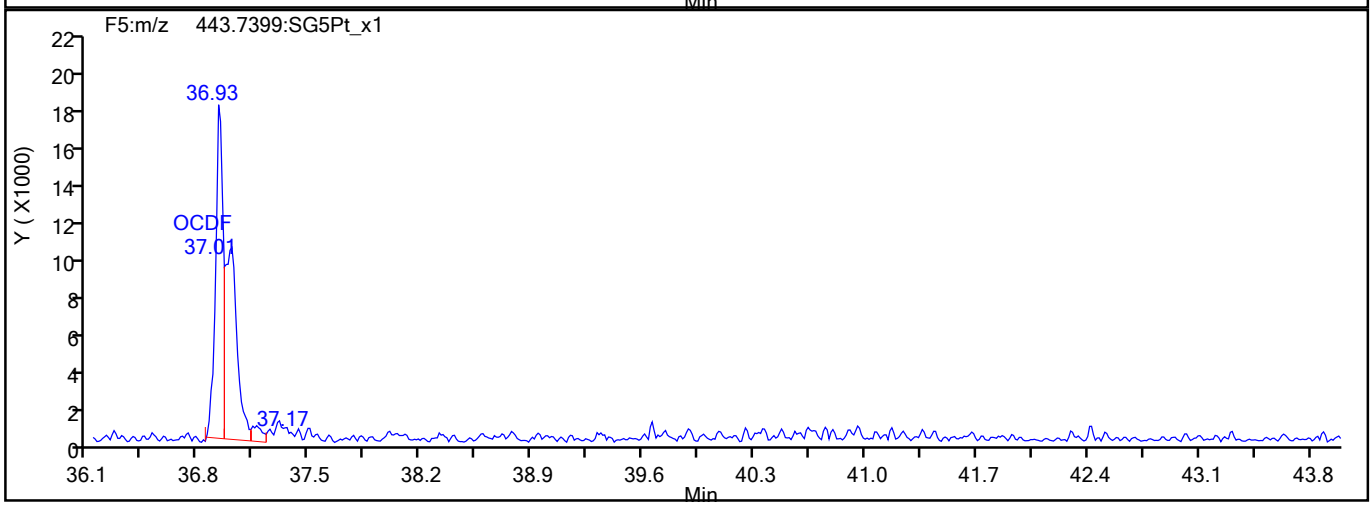

OCDF Interference Mass

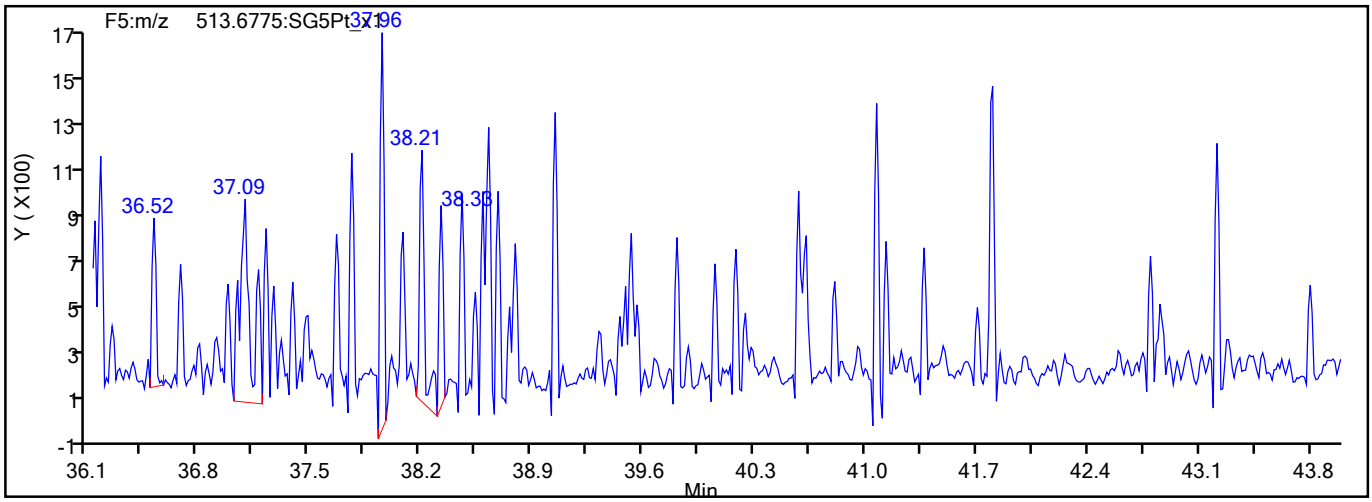

779526

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

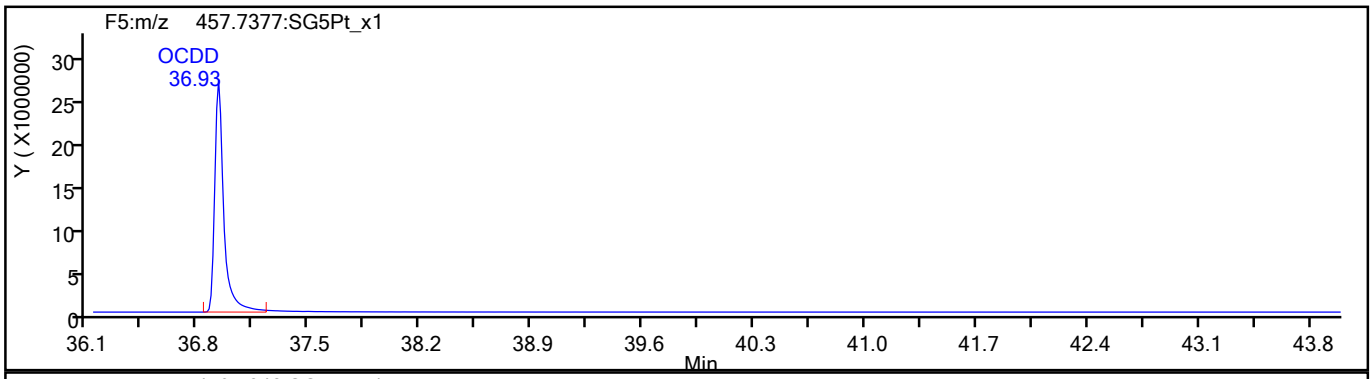

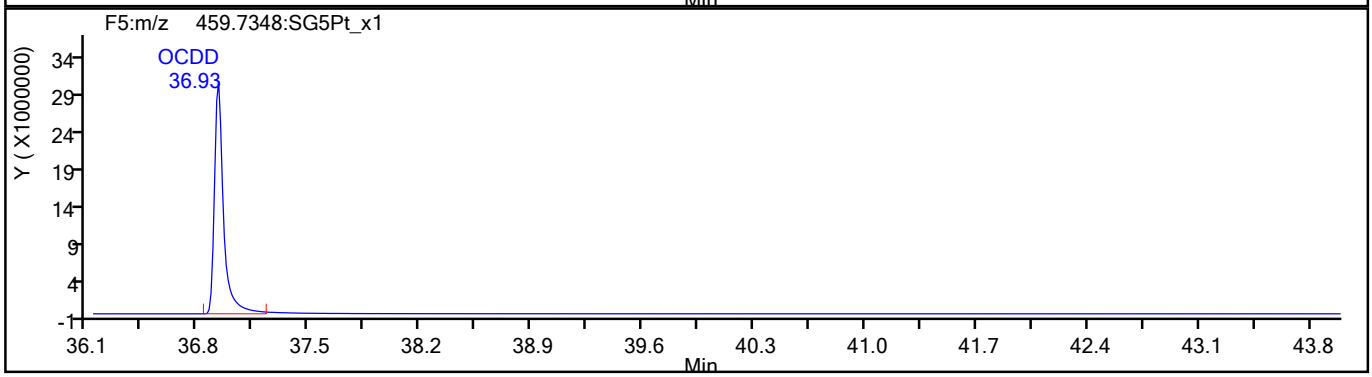

OCDD Standards

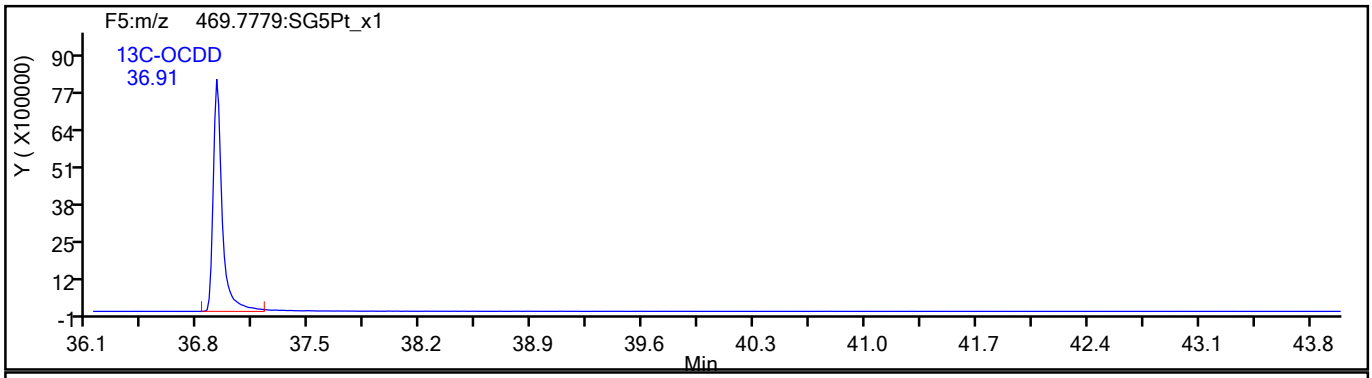

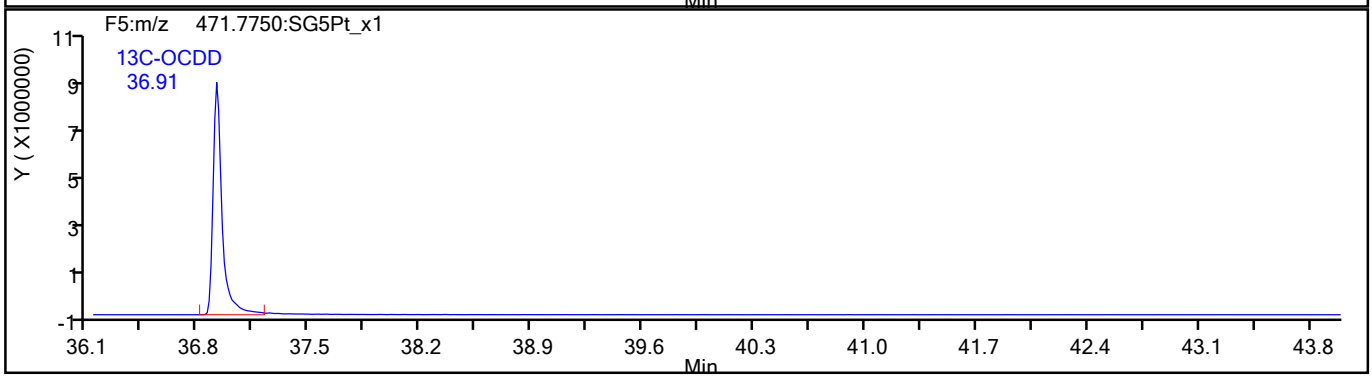

779527

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

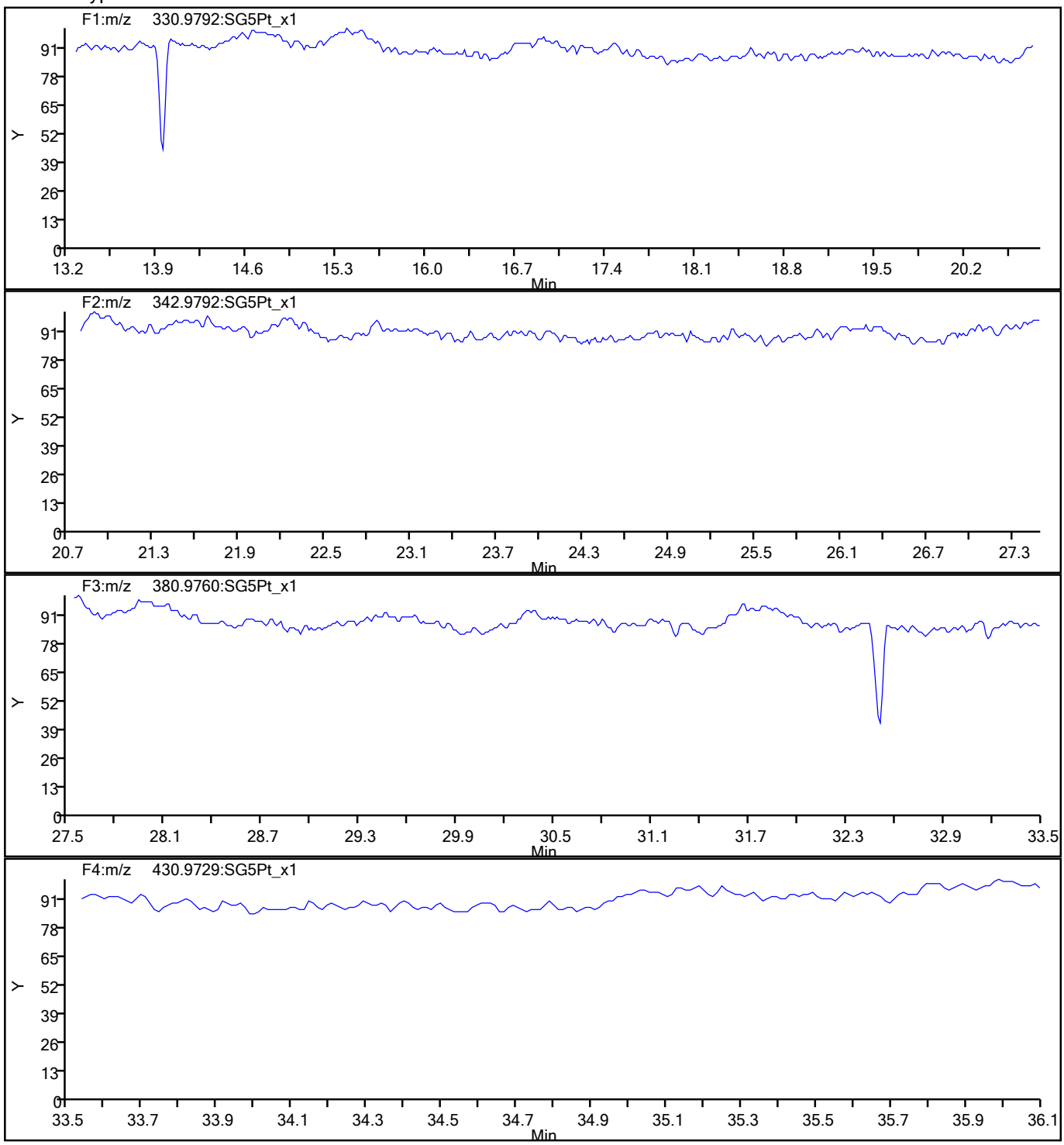

779528

Report Date: 18-Aug-2021 09:18:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_21.d		
Injection Date:	14-Aug-2021 08:11:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	516836	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

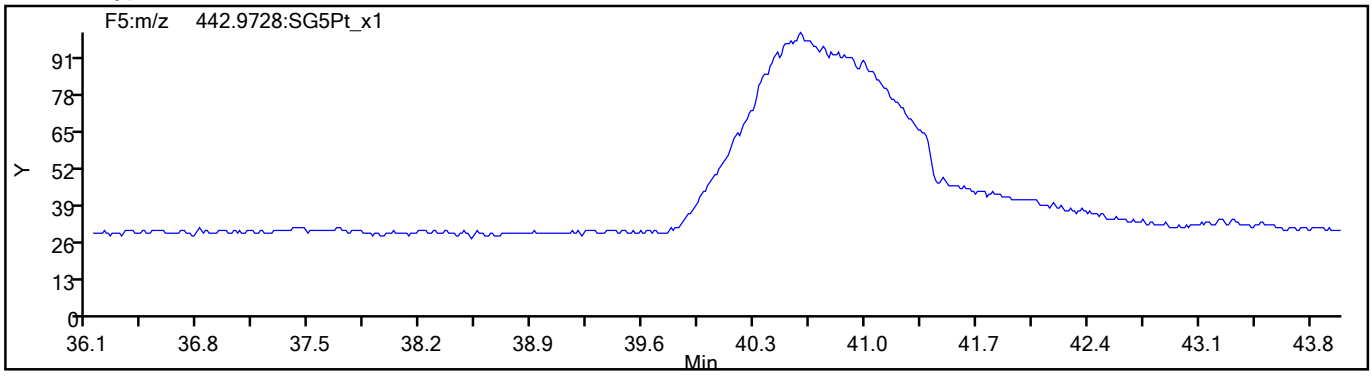

779529

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (10-12) RA
Lab Sample ID: 320-76788-6 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_004.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:25
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.97(g)
Date Analyzed: 08/24/2021 18:32
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 41.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	3.4	B	1.7	0.20

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	60		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	78		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_004.d
Lims ID: 320-76788-A-6-A
Client ID: 11215702-072321-BN-SJSB085 (10-12)
Sample Type: Client
Inject. Date: 24-Aug-2021 18:32:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-6-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:29:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	61101989	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	48724548	0.80	1.3327	59.8	59.8	0.2099	0.2099	59.84	
2,3,7,8-TCDF	17.629	476239	0.68	0.9978	0.9796	0.9796	0.0593	0.0593		
D 13C-2,3,7,8-TCDD	16.065	29917709	0.78	0.8749	56.0	56.0	0.3116	0.3116	55.96	
$ 37Cl4-2,3,7,8-TCDD	16.079	16395127		0.8648	31.0	31.0	0.0751	0.0751	77.57	
2,3,7,8-TCDD	16.065	213718	0.87	1.0570	0.6758	0.6758	0.0638	0.0638		M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Report Date: 25-Aug-2021 09:02:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_004.d
Lims ID: 320-76788-A-6-A
Client ID: 11215702-072321-BN-SJSB085 (10-12)
Sample Type: Client
Inject. Date: 24-Aug-2021 18:32:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-6-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:29:19

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.298	16.285	1		26442802	5983300	7334	18335	816		
333.9339	16.285	16.285	0		34659187	7588716	7467	18667	1016	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.601	1	1.081	21628305	4084426	7762	19405	526		
317.9389	17.615	17.601	1	1.081	27096243	5330765	7427	18567	718	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.629	0	1.001	192656	33968	1029	2572	33		
305.8987	17.629	17.629	0	1.001	283583	54137	1198	2995	45	0.68(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.051	1	0.986	13072196	2947955	7334	18335	402		
333.9339	16.065	16.051	1	0.986	16845513	3776812	7467	18667	506	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.079	16.065	1	0.987	16395127	3694515	3527	8817	1047		
2,3,7,8-TCDD											M
319.8965	16.065	16.079	-1	1.000	99664	21479	926	2315	23		
321.8936	16.079	16.079	0	1.001	114054	24268	888	2220	27	0.87(0.65-0.89)	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Report Date: 25-Aug-2021 09:02:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_004.d		
Injection Date:	24-Aug-2021 18:32:00	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	519540	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

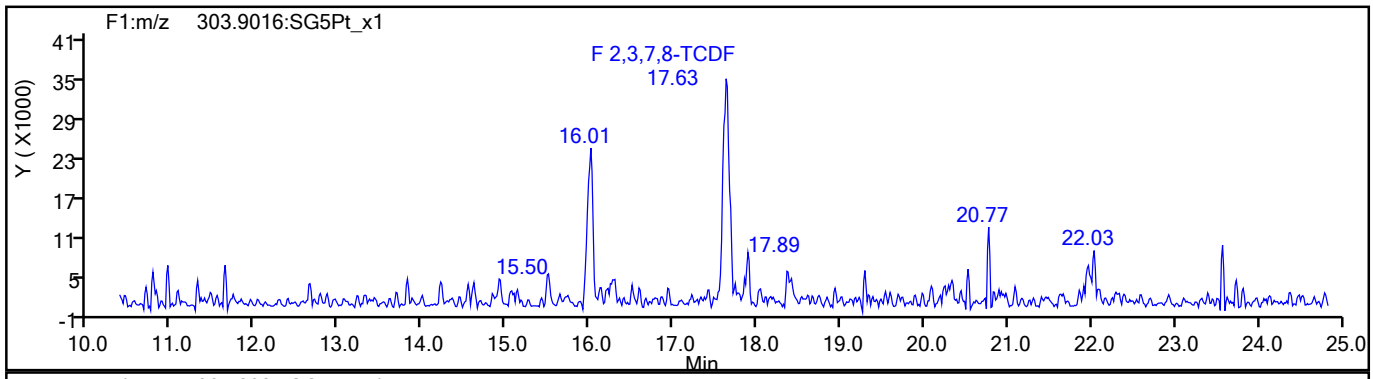

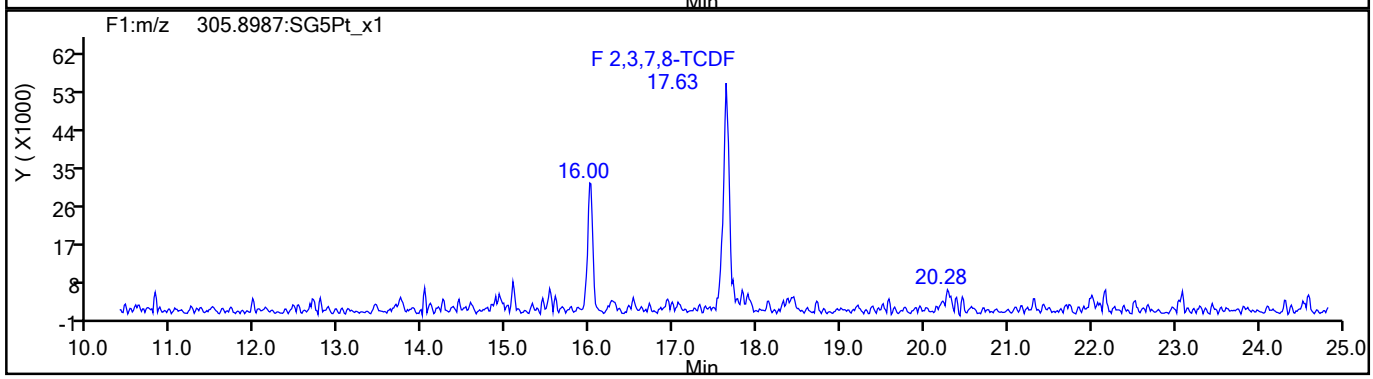

TCDF Standards

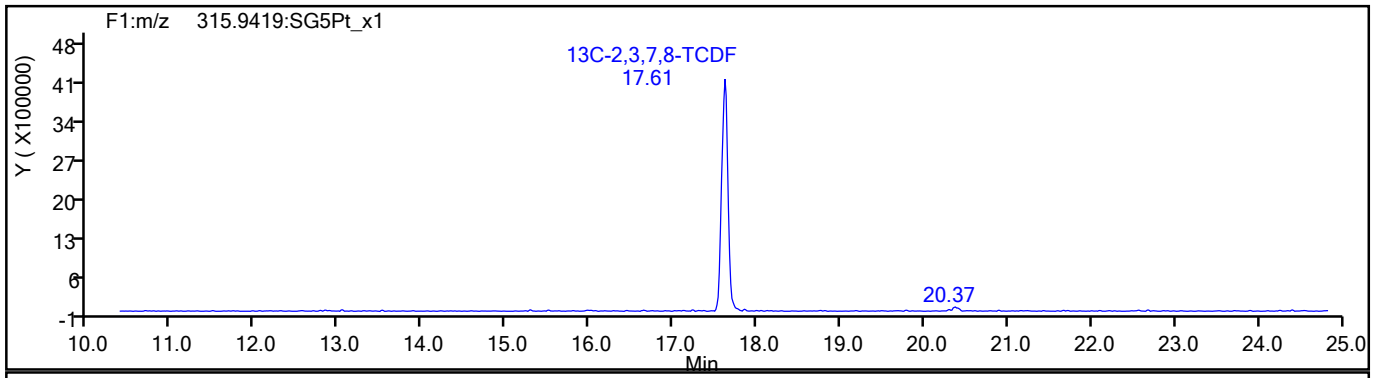

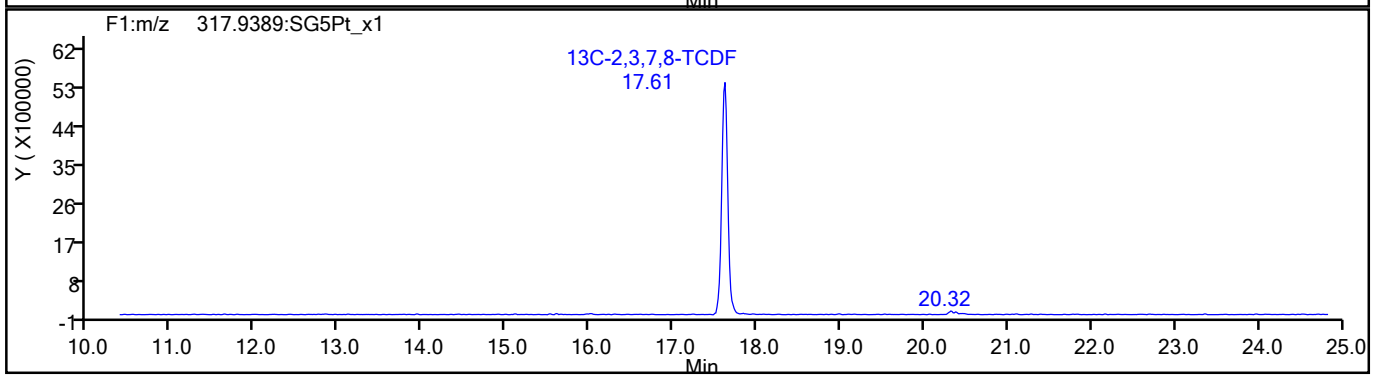

779533

Report Date: 25-Aug-2021 09:02:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_004.d		
Injection Date:	24-Aug-2021 18:32:00	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	519540	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

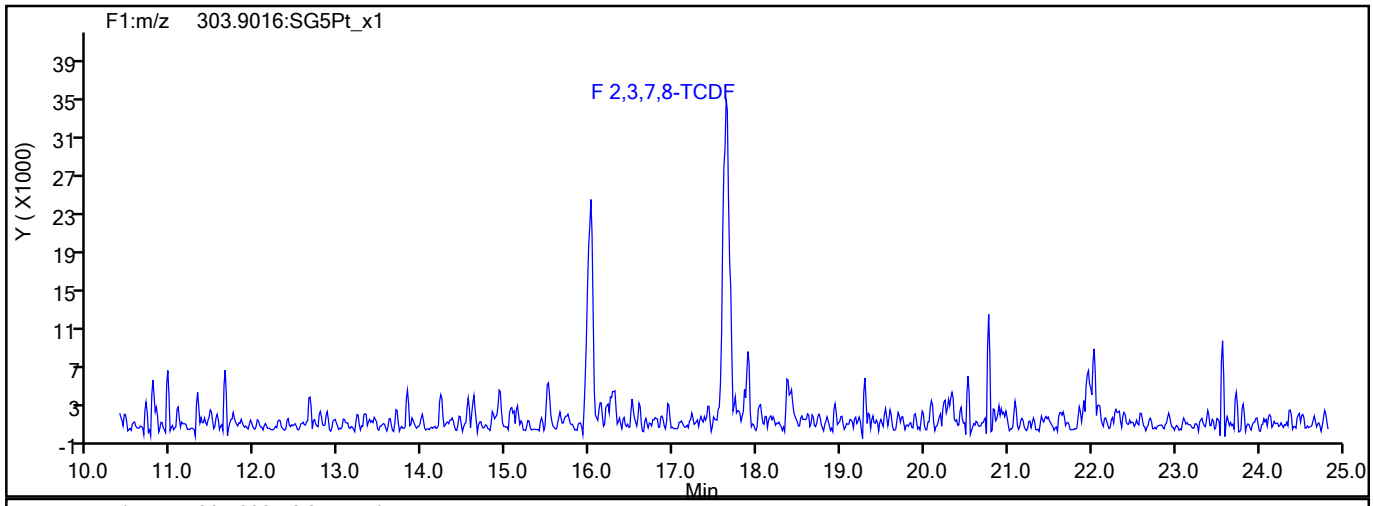

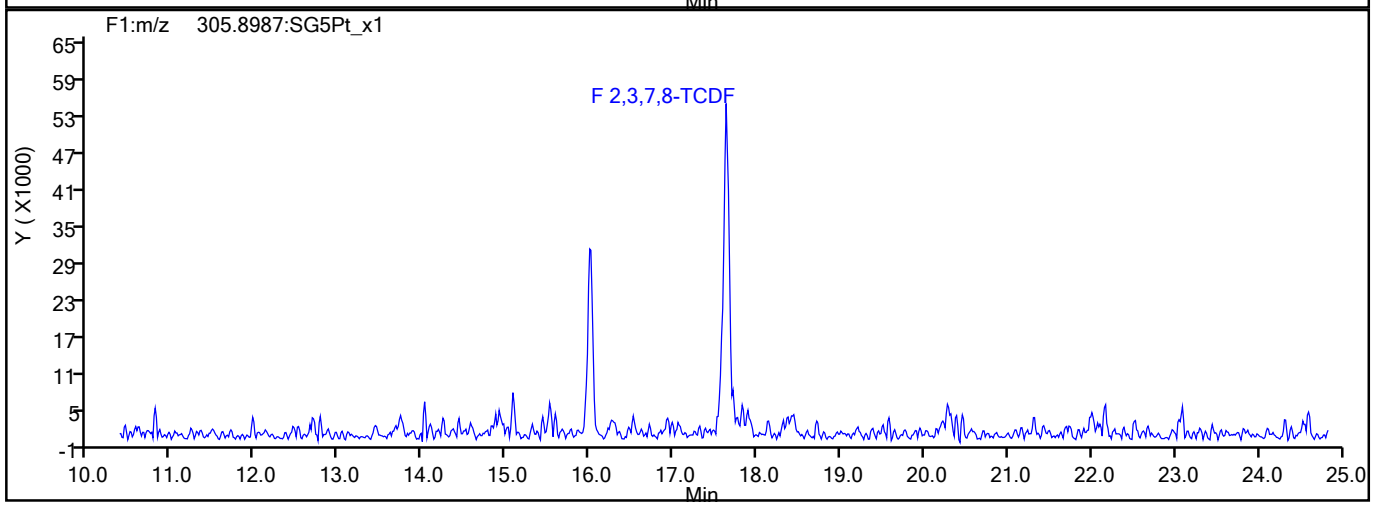

TCDF Interference Mass

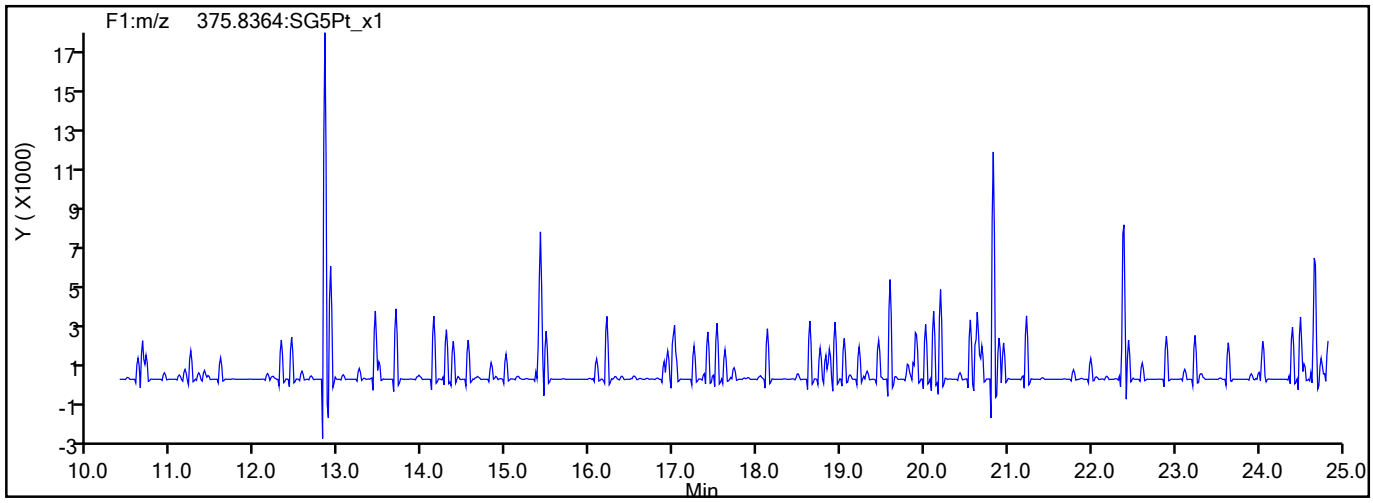

779534

Report Date: 25-Aug-2021 09:02:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_004.d		
Injection Date:	24-Aug-2021 18:32:00	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	519540	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

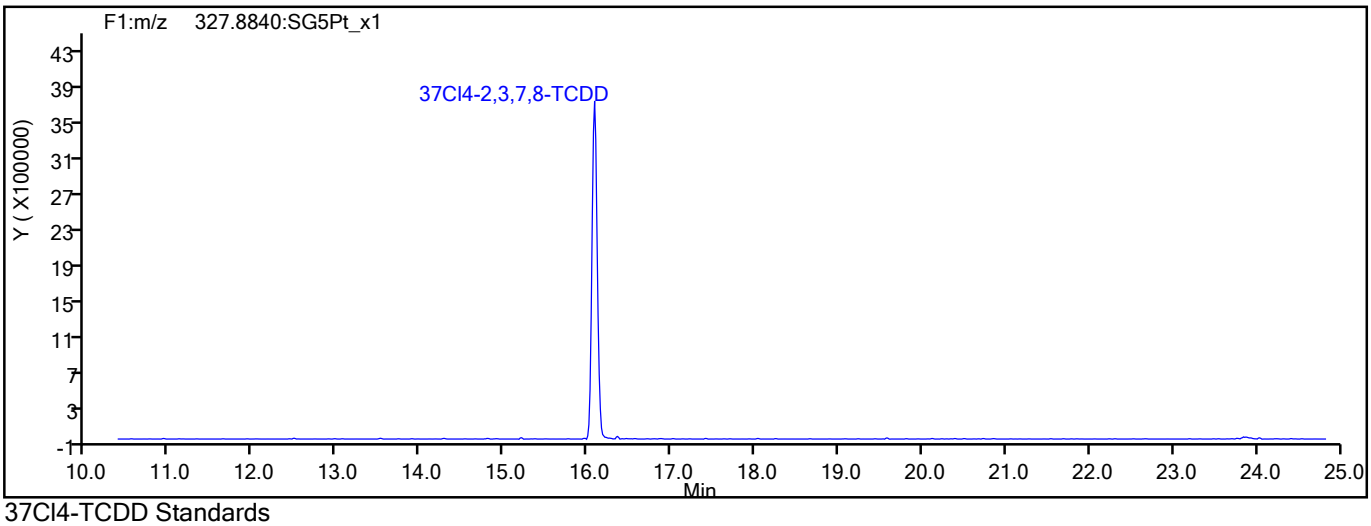

37Cl4-TCDD Standards

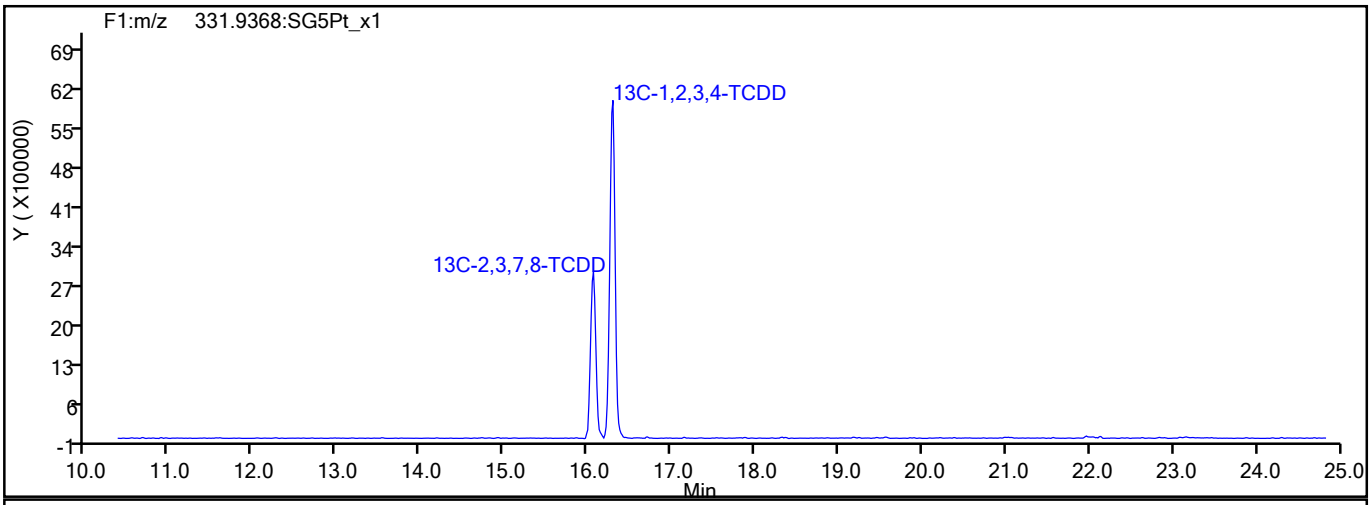

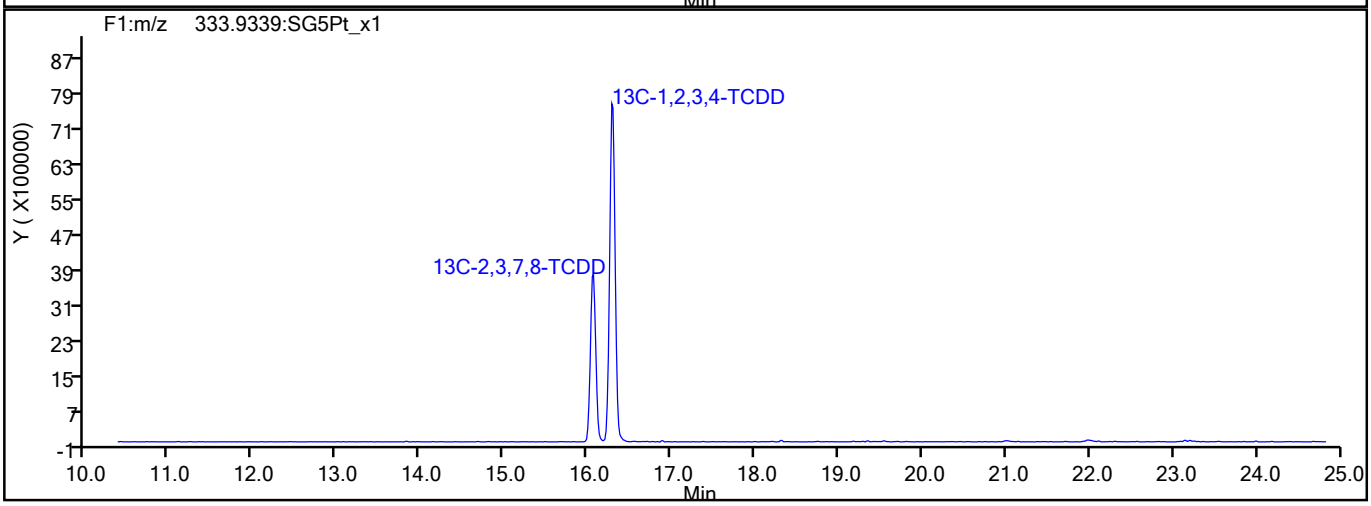

779535

Report Date: 25-Aug-2021 09:02:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_004.d		
Injection Date:	24-Aug-2021 18:32:00	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (10-12)		
Worklist#:	519540	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

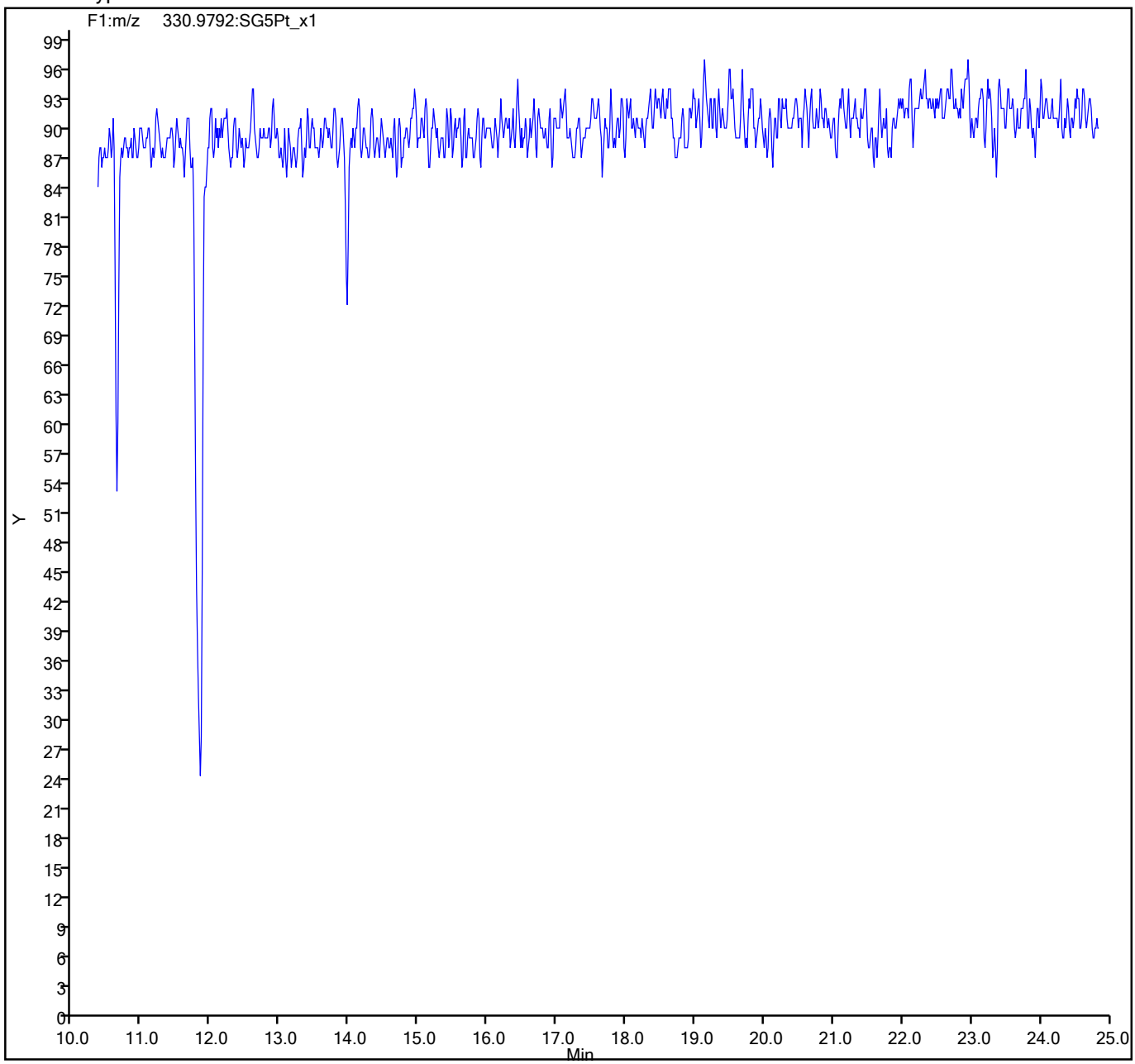

779536

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (12-14)
Lab Sample ID: 320-76788-7
Matrix: Solid
Lab File ID: 13AU2110D5_22.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:30
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.84(g)
Date Analyzed: 08/14/2021 08:56
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 35.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	3.6	B	1.6	0.093
40321-76-4	1,2,3,7,8-PeCDD	0.29	J	7.8	0.13
57117-41-6	1,2,3,7,8-PeCDF	0.30	J q	7.8	0.038
57117-31-4	2,3,4,7,8-PeCDF	0.14	J q	7.8	0.038
39227-28-6	1,2,3,4,7,8-HxCDD	0.87	J B	7.8	0.21
57653-85-7	1,2,3,6,7,8-HxCDD	1.9	J	7.8	0.22
19408-74-3	1,2,3,7,8,9-HxCDD	3.6	J	7.8	0.20
70648-26-9	1,2,3,4,7,8-HxCDF	0.37	J B	7.8	0.033
57117-44-9	1,2,3,6,7,8-HxCDF	0.12	J B q	7.8	0.034
72918-21-9	1,2,3,7,8,9-HxCDF	0.12	J B	7.8	0.026
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.8	0.026
35822-46-9	1,2,3,4,6,7,8-HpCDD	73	B	7.8	1.3
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.20	J B	7.8	0.032
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.078	J B	7.8	0.040
3268-87-9	OCDD	1700	B	16	1.8
39001-02-0	OCDF	0.64	J B	16	0.029
41903-57-5	Total TCDD	9.8	B q	1.6	0.093
30402-14-3	Total TCDF	21	B	1.6	0.062
36088-22-9	Total PeCDD	9.7	q	7.8	0.13
30402-15-4	Total PeCDF	0.69	J q	7.8	0.038
34465-46-8	Total HxCDD	47	B q	7.8	0.21
55684-94-1	Total HxCDF	0.62	J B q	7.8	0.030
37871-00-4	Total HpCDD	200	B	7.8	1.3
38998-75-3	Total HpCDF	0.27	J B	7.8	0.036

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (12-14)
Lab Sample ID: 320-76788-7
Matrix: Solid
Lab File ID: 13AU2110D5_22.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:30
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.84(g)
Date Analyzed: 08/14/2021 08:56
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 35.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	58		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	56		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	61		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	62		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	55		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	60		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	54		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	55		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	61		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	59		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	69		26-138
114423-97-1	13C-OCDD	66		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	78		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d
Lims ID: 320-76788-A-7-A
Client ID: 11215702-072321-BN-SJSB085 (12-14)
Sample Type: Client
Inject. Date: 14-Aug-2021 08:56:24 ALS Bottle#: 23 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-7-a 320-76788-a-7-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:22:23 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:43:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.840	137474918	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	129546963	0.77	1.6249	58.0	58.0	0.1160	0.1160	57.99	
2,3,7,8-TCDF	17.356	5018694	0.77	1.0239	3.784	3.784	0.0198	0.0198		
A Non-2,3,7,8-sub-TCDF	17.046	3871130	0.77	1.0239	2.918	2.918	0.0198	1.643		Ma
S Total TCDF					6.702	6.702	0.0198	0.0198		
D 13C-2,3,7,8-TCDD	18.036	72676918	0.82	0.8993	58.8	58.8	0.1106	0.1106	58.78	
2,3,7,8-TCDD	18.066	1052506	0.75	1.2541	1.155	1.155	0.0298	0.0298		
$ 37Cl4-2,3,7,8-TCDD	18.066	47550291		1.1071	31.2	31.2	0.0245	0.0245	78.10	
A Non-2,3,7,8-sub-TCDD	17.499	1808336	0.77	1.2541	1.997	1.984	0.0298	0.7503		RQ
S Total TCDD					3.151	3.139	0.0298	0.0298		RQ
D 13C-1,2,3,7,8-PeCDF	22.353	92828584	1.57	1.2101	55.8	55.8	0.1358	0.1358	55.80	
1,2,3,7,8-PeCDF	22.381	95056	1.55	1.0611	0.1135	0.0965	0.0121	0.0121		RQM
D 13C-2,3,4,7,8-PeCDF	23.703	104372963	1.58	1.2395	61.3	61.3	0.1326	0.1326	61.25	
2,3,4,7,8-PeCDF	23.717	47356	1.55	1.0184	0.0510	0.0446	0.0122	0.0122		RQM
A F1 PeCDFs	20.093						0.0105	0.0105		
A Non-2,3,7,8-sub-PeCDF	23.241	79257	1.55	1.0398	0.0800	0.0773	0.0121	0.0557		RQM
S Total PeCDF					0.2445	0.2184	0.0122	0.0122		RQ
D 13C-1,2,3,7,8-PeCDD	24.426	60272789	1.60	0.7612	57.6	57.6	0.0500	0.0500	57.59	
1,2,3,7,8-PeCDD	24.453	58609	1.40	1.0484	0.0927	0.0927	0.0409	0.0409		
A Non-2,3,7,8-sub-PeCDD	23.349	1900330	1.55	1.0484	3.095	3.007	0.0409	1.234		RQ
S Total PeCDD					3.187	3.100	0.0409	0.0409		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.489	84348237	0.51	1.0837	60.3	60.3	0.2540	0.2540	60.33	
1,2,3,4,7,8-HxCDF	30.529	109299	1.24	1.0851	0.1194	0.1194	0.0105	0.0105		
D 13C-1,2,3,6,7,8-HxCDF	30.676	78619077	0.52	1.1279	54.0	54.0	0.2441	0.2441	54.02	
1,2,3,6,7,8-HxCDF	30.716	34083	1.24	1.1260	0.0426	0.0385	0.0108	0.0108		RQM
D 13C-2,3,4,6,7,8-HxCDF	31.501	75593948	0.52	1.0637	55.1	55.1	0.2588	0.2588	55.08	
2,3,4,6,7,8-HxCDF	31.528						0.008433	0.008433		
D 13C-1,2,3,7,8,9-HxCDF	32.313	68063494	0.52	0.9676	54.5	54.5	0.2845	0.2845	54.52	
1,2,3,7,8,9-HxCDF	32.326	30348	1.26	1.1664	0.0382	0.0382	0.008397	0.008397		M
A Non-2,3,7,8-sub-HxCDF	30.197						0.009413	0.009413		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.2003	0.1961	0.009523	0.009523		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.127	129020539	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	58733470	1.26	0.7334	62.1	62.1	0.2846	0.2846	62.07	
1,2,3,4,7,8-HxCDD	31.714	174169	1.27	1.0640	0.2787	0.2787	0.0666	0.0666		
D 13C-1,2,3,6,7,8-HxCDD	31.794	62367094	1.25	0.8802	54.9	54.9	0.2372	0.2372	54.92	
1,2,3,6,7,8-HxCDD	31.821	367814	1.17	1.0001	0.5897	0.5897	0.0709	0.0709		
1,2,3,7,8,9-HxCDD	32.140	790540	1.10	1.1325	1.153	1.153	0.0626	0.0626		
A Non-2,3,7,8-sub-HxCDD	30.882	8369166	1.24	1.0655	13.0	13.0	0.0665	8.742		RQ
S Total HxCDD					15.0	15.0	0.0667	0.0667		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	58949144	0.44	0.7730	59.1	59.1	0.6863	0.6863	59.10	
1,2,3,4,6,7,8-HpCDF	33.766	53059	1.19	1.4413	0.0624	0.0624	0.0103	0.0103		
D 13C-1,2,3,4,7,8,9-HpCDF	34.835	62392922	0.45	0.7008	69.0	69.0	0.7570	0.7570	69.00	
1,2,3,4,7,8,9-HpCDF	34.848	20526	1.13	1.3174	0.0250	0.0250	0.0127	0.0127		M
A Non-2,3,7,8-sub-HpCDF	34.319						0.0114	0.0114		
S Total HpCDF					0.0874	0.0874	0.0115	0.0115		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	51133096	1.01	0.6472	61.2	61.2	0.2882	0.2882	61.23	
1,2,3,4,6,7,8-HpCDD	34.568	13051869	1.02	1.0943	23.3	23.3	0.4278	0.4278		
A Non-2,3,7,8-sub-HpCDD	34.301	23181732	1.03	1.0943	41.4	41.4	0.4278	41.4		
S Total HpCDD					64.8	64.8	0.4278	0.4278		
D 13C-OCDD	36.914	76677361	0.88	0.4472	132.9	132.9	0.1479	0.1479	66.45	
OCDF	37.010	113320	0.79	1.4382	0.2055	0.2055	0.009372	0.009372		Ma
OCDD	36.926	228875393	0.90	1.1070	539.3	539.3	0.5584	0.5584		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 09:22:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d
Lims ID: 320-76788-A-7-A
Client ID: 11215702-072321-BN-SJSB085 (12-14)
Sample Type: Client
Inject. Date: 14-Aug-2021 08:56:24 ALS Bottle#: 23 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-7-a 320-76788-a-7-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:22:23 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:43:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.840	17.855	-1		61792256	15242020	5294	13235	2879		
333.9339	17.840	17.855	-1		75682662	18753717	8236	20590	2277	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.972	56429930	13434478	11399	28497	1179		
317.9389	17.341	17.341	0	0.972	73117033	17269073	14232	35580	1213	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.001	2176632	499856	966	2415	517		
305.8987	17.356	17.356	0	1.001	2842062	641231	1527	3817	420	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											Ma
303.9016	15.421	17.046	-97	0.889	79826	24175	966	2415	25		
305.8987	15.421	17.046	-97	0.889	113225	29574	1527	3817	19	0.71(0.65-0.89)	
303.9016	15.935	17.046	-67	0.919	42950	10480	966	2415	11		
305.8987	15.935	17.046	-67	0.919	50533	11578	1527	3817	8	0.85(0.65-0.89)	
303.9016	16.207	17.046	-50	0.935	64413	13847	966	2415	14		M
305.8987	16.222	17.046	-49	0.935	85457	17876	1527	3817	12	0.75(0.65-0.89)	
303.9016	16.449	17.046	-36	0.949	77432	20299	966	2415	21		M
305.8987	16.449	17.046	-36	0.949	103312	23709	1527	3817	16	0.75(0.65-0.89)	
303.9016	16.691	17.046	-21	0.963	94478	19548	966	2415	20		
305.8987	16.676	17.046	-22	0.962	109694	25448	1527	3817	17	0.86(0.65-0.89)	
303.9016	16.963	17.046	-5	0.978	938887	225032	966	2415	233		
305.8987	16.963	17.046	-5	0.978	1240653	296845	1527	3817	194	0.76(0.65-0.89)	
303.9016	17.205	17.046	10	0.992	41864	8488	966	2415	9		
305.8987	17.190	17.046	9	0.991	60403	13209	1527	3817	9	0.69(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.779	17.046	44	1.025	156803	32674	966	2415	34		
305.8987	17.779	17.046	44	1.025	191885	42250	1527	3817	28	0.82(0.65-0.89)	
303.9016	18.021	17.046	58	1.039	35150	7100	966	2415	7		
305.8987	18.006	17.046	57	1.038	42996	8482	1527	3817	6	0.82(0.65-0.89)	
303.9016	19.170	17.046	127	1.106	154073	31118	966	2415	32		
305.8987	19.170	17.046	127	1.106	187096	42013	1527	3817	28	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.036	18.051	-1	1.011	32757727	7274788	5294	13235	1374		
333.9339	18.036	18.051	-1	1.011	39919191	8875231	8236	20590	1078	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.002	451108	103956	1190	2975	87		
321.8936	18.066	18.066	0	1.002	601398	132432	1224	3060	108	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.066	0	1.013	47550291	10584735	3689	9222	2869		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	16.131	17.499	-82	0.894	69800	18511	1190	2975	16		
321.8936	16.131	17.499	-82	0.894	88347	22645	1224	3060	19	0.79(0.65-0.89)	
319.8965	16.358	17.499	-68	0.907	69825	18424	1190	2975	15		
321.8936	16.358	17.499	-68	0.907	83694	20807	1224	3060	17	0.83(0.65-0.89)	
319.8965	16.917	17.499	-35	0.938	312138	80243	1190	2975	67		
321.8936	16.917	17.499	-35	0.938	371684	91844	1224	3060	75	0.84(0.65-0.89)	
319.8965	17.537	17.499	2	0.972	29412	8961	1190	2975	8		
321.8936	17.537	17.499	2	0.972	49782	11415	1224	3060	9	0.59(0.65-0.89)	
	Empc Correction				38197	11637	1224	3060	10		
319.8965	17.809	17.499	19	0.987	129498	32954	1190	2975	28		
321.8936	17.809	17.499	19	0.987	155838	37753	1224	3060	31	0.83(0.65-0.89)	
319.8965	17.946	17.499	27	0.995	62852	16603	1190	2975	14		
321.8936	17.946	17.499	27	0.995	88685	20563	1224	3060	17	0.71(0.65-0.89)	
319.8965	18.430	17.499	56	1.022	73489	17054	1190	2975	14		
321.8936	18.414	17.499	55	1.021	95667	20754	1224	3060	17	0.77(0.65-0.89)	
319.8965	18.656	17.499	69	1.034	19994	5139	1190	2975	4		
321.8936	18.671	17.499	70	1.035	26529	6716	1224	3060	5	0.75(0.65-0.89)	
319.8965	19.170	17.499	100	1.063	39079	8882	1190	2975	7		
321.8936	19.170	17.499	100	1.063	53608	10990	1224	3060	9	0.73(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.353	22.367	-1	1.253	56755492	9411816	13778	34445	683		
353.8970	22.353	22.367	-1	1.253	36073092	6006485	8574	21435	701	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											RQM
339.8597	22.381	22.380	0	1.001	74477	11744	313	782	38		M
	Empc Correction				57779	10178	313	782	33		
341.8567	22.381	22.380	0	1.001	37277	6567	478	1195	14	2.00(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.329	63891217	9759608	13778	34445	708		
353.8970	23.703	23.703	0	1.329	40481746	6122699	8574	21435	714	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											RQM
339.8597	23.717	23.730	-1	1.001	35636	6786	313	782	22		
	Empc Correction				28785	6244	313	782	20		
341.8567	23.730	23.730	0	1.001	18571	4029	478	1195	8	1.92(1.32-1.78)	M
A F1 PeCDFs											
339.8597	20.093						178	445			
341.8567	20.093						503	1257			
A Non-2,3,7,8-sub-PeCDF											RQM
339.8597	21.044	23.241	-132	0.941	36377	6068	313	782	19		M
341.8567	21.031	23.241	-132	0.941	20759	4065	478	1195	9	1.75(1.32-1.78)	M
339.8597	22.899	23.241	-20	1.024	16211	3144	313	782	10		M
	Empc Correction				13446	2428	313	782	8		
341.8567	22.926	23.241	-19	1.026	8675	1567	478	1195	3	1.87(1.32-1.78)	M
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.369	37085992	5321307	3281	8202	1622		
369.8919	24.412	24.426	-1	1.368	23186797	3335306	1895	4737	1760	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453	24.453	0	1.001	34184	5602	967	2417	6		
357.8516	24.453	24.453	0	1.001	24425	3585	519	1297	7	1.40(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.222	23.349	-127	0.869	224777	39209	967	2417	41		
357.8516	21.235	23.349	-127	0.869	140634	22726	519	1297	44	1.60(1.32-1.78)	
355.8546	21.971	23.349	-82	0.900	463275	80456	967	2417	83		
357.8516	21.971	23.349	-82	0.900	316763	55627	519	1297	107	1.46(1.32-1.78)	
355.8546	22.394	23.349	-57	0.917	21571	4893	967	2417	5		
357.8516	22.408	23.349	-56	0.917	12364	1910	519	1297	4	1.74(1.32-1.78)	
355.8546	22.653	23.349	-42	0.927	78155	13839	967	2417	14		
357.8516	22.653	23.349	-42	0.927	48781	8089	519	1297	16	1.60(1.32-1.78)	
355.8546	22.980	23.349	-22	0.941	35776	5706	967	2417	6		
357.8516	22.967	23.349	-23	0.940	30253	4688	519	1297	9	1.18(1.32-1.78)	
	Empc Correction				23081	3681	519	1297	7		
355.8546	23.267	23.349	-5	0.953	89809	17237	967	2417	18		
357.8516	23.267	23.349	-5	0.953	57474	10058	519	1297	19	1.56(1.32-1.78)	
355.8546	23.458	23.349	7	0.960	283756	32898	967	2417	34		
	Empc Correction				235764	31528	967	2417	33		
357.8516	23.444	23.349	6	0.960	152106	20341	519	1297	39	1.87(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.489	30.503	-1	0.949	28640609	5175216	13213	33032	392		
385.8610	30.489	30.503	-1	0.949	55707628	9960983	24322	60805	410	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.001	60451	10982	444	1110	25		
375.8178	30.516	30.529	-1	1.001	48848	10356	243	607	43	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.676	30.689	-1	0.955	26814775	4851405	13213	33032	367		
385.8610	30.676	30.689	-1	0.955	51804302	9258081	24322	60805	381	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDF											RQM
373.8208	30.716	30.702	1	1.001	22530	4580	444	1110	10		
	Empc Correction				18867	3734	444	1110	8		
375.8178	30.689	30.702	-1	1.000	15216	3012	243	607	12	1.48(1.05-1.43)	M
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.501	31.514	-1	0.981	25846605	5961058	13213	33032	451		
385.8610	31.501	31.514	-1	0.981	49747343	11478089	24322	60805	472	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						444	1110			
375.8178	31.528						243	607			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.313	0	1.006	23236575	5985906	13213	33032	453		
385.8610	32.313	32.313	0	1.006	44826919	11544581	24322	60805	475	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.326	32.326	0	1.000	16908	4964	444	1110	11		M
375.8178	32.326	32.326	0	1.000	13440	4035	243	607	17	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.197						444	1110			
375.8178	30.197						243	607			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.127	32.127	0		71511872	18811128	16464	41160	1143		
403.8529	32.127	32.127	0		57508667	15277572	11999	29997	1273	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.987	32746790	8352982	16464	41160	507		
403.8529	31.688	31.701	-1	0.986	25986680	6650582	11999	29997	554	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.714	0	1.000	97367	26993	2813	7032	10		
391.8127	31.714	31.714	0	1.000	76802	20001	1438	3595	14	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.794	31.807	-1	0.990	34601833	8310111	16464	41160	505		
403.8529	31.794	31.807	-1	0.990	27765261	6676600	11999	29997	556	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.821	31.820	0	1.001	198637	50105	2813	7032	18		
391.8127	31.807	31.820	-1	1.000	169177	40905	1438	3595	28	1.17(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.140	0	1.014	414409	87822	2813	7032	31		
391.8127	32.140	32.140	0	1.014	376131	71754	1438	3595	50	1.10(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.531	30.882	-81	0.929	3108698	356594	2813	7032	127		
391.8127	29.531	30.882	-81	0.929	2531841	285914	1438	3595	199	1.23(1.05-1.43)	
389.8157	30.569	30.882	-19	0.961	90815	17625	2813	7032	6		
391.8127	30.556	30.882	-20	0.961	84193	13344	1438	3595	9	1.08(1.05-1.43)	
389.8157	30.955	30.882	4	0.974	1300493	246261	2813	7032	88		
391.8127	30.955	30.882	4	0.974	1040375	196332	1438	3595	137	1.25(1.05-1.43)	
389.8157	31.155	30.882	16	0.980	117773	24838	2813	7032	9		
391.8127	31.142	30.882	16	0.979	126376	22560	1438	3595	16	0.93(1.05-1.43)	
	Empc Correction				94978	20030	1438	3595	14		

Report Date: 18-Aug-2021 09:22:23 Chrom Revision: 2.3 13-May-2021 07:57:40
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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.754	0	1.051	18036905	5731210	20956	52390	273		
419.8220	33.754	33.754	0	1.051	40912239	12986572	51387	128467	253	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.766	0	1.000	28826	9652	756	1890	13		
409.7789	33.766	33.766	0	1.000	24233	7908	354	885	22	1.19(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.835	34.847	-1	1.084	19223319	5179182	20956	52390	247		
419.8220	34.835	34.847	-1	1.084	43169603	11470894	51387	128467	223	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.848	34.860	-1	1.000	10874	3759	756	1890	5		
409.7789	34.848	34.860	-1	1.000	9652	3438	354	885	10	1.13(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						756	1890			
409.7789	34.319						354	885			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.076	25654324	7401024	14153	35382	523		
437.8140	34.556	34.556	0	1.076	25478772	7336121	11282	28205	650	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	6582920	1893398	13729	34322	138		
425.7737	34.568	34.568	0	1.000	6468949	1838770	13869	34672	133	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.009	34.301	-17	0.984	11786480	3637043	13729	34322	265		
425.7737	34.009	34.301	-17	0.984	11395252	3533995	13869	34672	255	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.914	0	1.149	35801294	8952594	3770	9425	2375		
471.7750	36.914	36.914	0	1.149	40876067	10070378	5250	13125	1918	0.88(0.76-1.02)	
OCDF											Ma
441.7428	37.010	37.010	0	1.003	50059	11305	244	610	46		M
443.7399	36.998	37.010	-1	1.002	63261	14691	269	672	55	0.79(0.76-1.02)	M
OCDD											
457.7377	36.926	36.926	0	1.000	108318383	26439953	12105	30262	2184		
459.7348	36.914	36.926	-1	1.000	120557010	29341158	11412	28530	2571	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 09:22:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d
Lims ID: 320-76788-A-7-A
Client ID: 11215702-072321-BN-SJSB085 (12-14)
Inject. Date: 14-Aug-2021 08:56:24 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 11

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	129546963	30703551

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	129546963	30703551

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.421	79826	24175	113225	29574	0.1455	0.71	
15.935	42950	10480	50533	11578	0.0705	0.85	
16.207	64413	13847	85457	17876	0.1130	0.75	Ma
16.449	77432	20299	103312	23709	0.1363	0.75	M
16.691	94478	19548	109694	25448	0.1539	0.86	
16.963	938887	225032	1240653	296845	1.64	0.76	
17.205	41864	8488	60403	13209	0.0771	0.69	
17.779	156803	32674	191885	42250	0.2629	0.82	
18.021	35150	7100	42996	8482	0.0589	0.82	
19.170	154073	31118	187096	42013	0.2572	0.82	
Signal Totals:	1685876	392761	2185254	510984			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3871130	903745				0.77	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.918 = (3871130 * 100.000) / (129546963 * 1.024)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 09:22:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Lims ID:	320-76788-A-7-A		
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Inject. Date:	14-Aug-2021 08:56:24	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516836	Lims Sample ID:	11

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	72676918	16150019

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	72676918	16150019

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.131	69800	18511	88347	22645	0.1735	0.79	
16.358	69825	18424	83694	20807	0.1684	0.83	
16.917	312138	80243	371684	91844	0.7503	0.84	
17.537	29412	8961	49782	11415	0.0869	0.59	RQ
17.537	29412	8961	38197	11637	0.0742		Empc Correction
17.809	129498	32954	155838	37753	0.3131	0.83	
17.946	62852	16603	88685	20563	0.1663	0.71	
18.430	73489	17054	95667	20754	0.1856	0.77	
18.656	19994	5139	26529	6716	0.0510	0.75	
19.170	39079	8882	53608	10990	0.1017	0.73	
Signal Totals:							
	806087	206771	1002249	243709			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1819921	450258				0.80	RQ
	1808336	450480					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.997 = (1819921 * 100.000) / (72676918 * 1.254)

Empc Amount: 1.984 = (1808336 * 100.000) / (72676918 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d
Lims ID: 320-76788-A-7-A
Client ID: 11215702-072321-BN-SJSB085 (12-14)
Inject. Date: 14-Aug-2021 08:56:24 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 11

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	92828584	15418301
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	104372963	15882307

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	98600773	15650304

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.044	36377	6068	20759	4065	0.0557	1.75	M
22.899	16211	3144	8675	1567	0.0243	1.87	RQM
22.899	13446	2428	8675	1567	0.0216		Empc Correction
Signal Totals:							
	49823	8496	29434	5632			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	82022	14844				1.79	RQM
	79257	14128					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0800 = (82022 * 100.000) / (98600773 * 1.040)
Empc Amount: 0.0773 = (79257 * 100.000) / (98600773 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 09:22:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Lims ID:	320-76788-A-7-A		
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Inject. Date:	14-Aug-2021 08:56:24	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516836	Lims Sample ID:	11

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	60272789	8656613

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	60272789	8656613

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.222	224777	39209	140634	22726	0.5783	1.60	
21.971	463275	80456	316763	55627	1.23	1.46	
22.394	21571	4893	12364	1910	0.0537	1.74	
22.653	78155	13839	48781	8089	0.2009	1.60	
22.980	35776	5706	30253	4688	0.1045	1.18	RQ
22.980	35776	5706	23081	3681	0.0931		Empc Correction
23.267	89809	17237	57474	10058	0.2331	1.56	
23.458	283756	32898	152106	20341	0.6897	1.87	RQ
23.458	235764	31528	152106	20341	0.6138		Empc Correction
Signal Totals:							
	1149127	192868	751203	122432			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1955494	317677				1.58	RQ
	1900330	315300					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.095 = (1955494 * 100.000) / (60272789 * 1.048)

Empc Amount: 3.007 = (1900330 * 100.000) / (60272789 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:22:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Lims ID:	320-76788-A-7-A		
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Inject. Date:	14-Aug-2021 08:56:24	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516836	Lims Sample ID:	11

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	84348237	15136199
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	78619077	14109486
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	75593948	17439147
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	68063494	17530487

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	76656189	16053829

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d
Lims ID: 320-76788-A-7-A
Client ID: 11215702-072321-BN-SJSB085 (12-14)
Inject. Date: 14-Aug-2021 08:56:24 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 11

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	58733470	15003564
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	62367094	14986711
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	60550282	14995137

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.531	3108698	356594	2531841	285914	8.74	1.23	
30.569	90815	17625	84193	13344	0.2713	1.08	
30.955	1300493	246261	1040375	196332	3.63	1.25	
31.155	117773	24838	126376	22560	0.3784	0.93	RQ
31.155	117773	24838	94978	20030	0.3297		Empc Correction
Signal Totals:							
	4617779	645318	3751387	515620			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8400564	1163468				1.22	RQ
	8369166	1160938					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 13.020 = (8400564 * 100.000) / (60550282 * 1.066)
Empc Amount: 12.972 = (8369166 * 100.000) / (60550282 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:22:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d
Lims ID: 320-76788-A-7-A
Client ID: 11215702-072321-BN-SJSB085 (12-14)
Inject. Date: 14-Aug-2021 08:56:24 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 11

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	51133096	14737145

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	51133096	14737145

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.009	11786480	3637043	11395252	3533995	41.4	1.03	
Signal Totals:							
	11786480	3637043	11395252	3533995			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23181732	7171038				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 41.429 = (23181732 * 100.000) / (51133096 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 16.207 Area = 65391

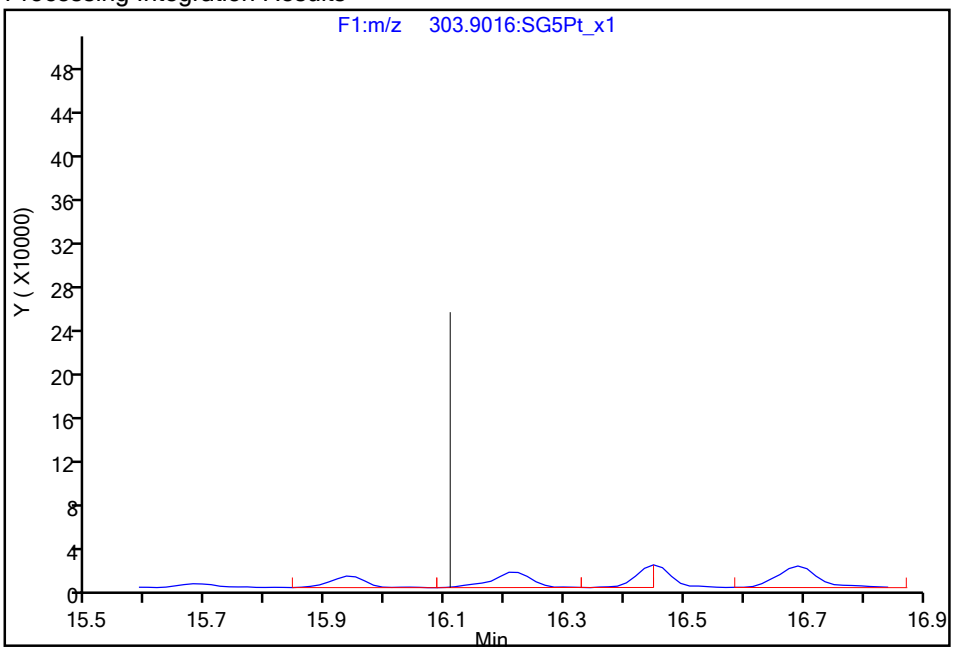

Manual Integration Results

RT = 16.207 Area = 64413 M

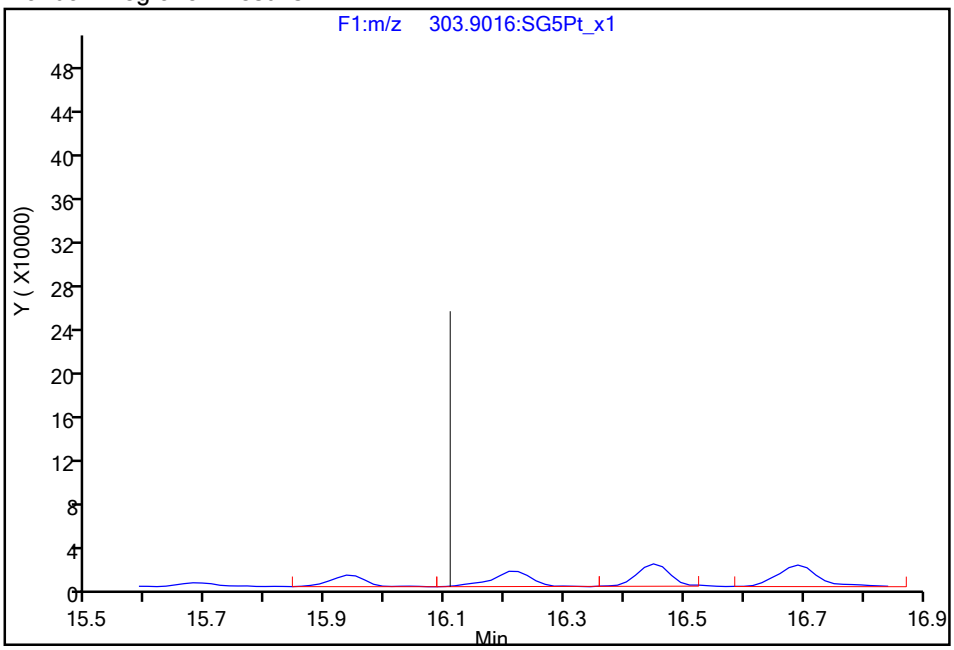

Reviewer: dadunj, 18-Aug-2021 09:18:55

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 16.434 Area = 39988

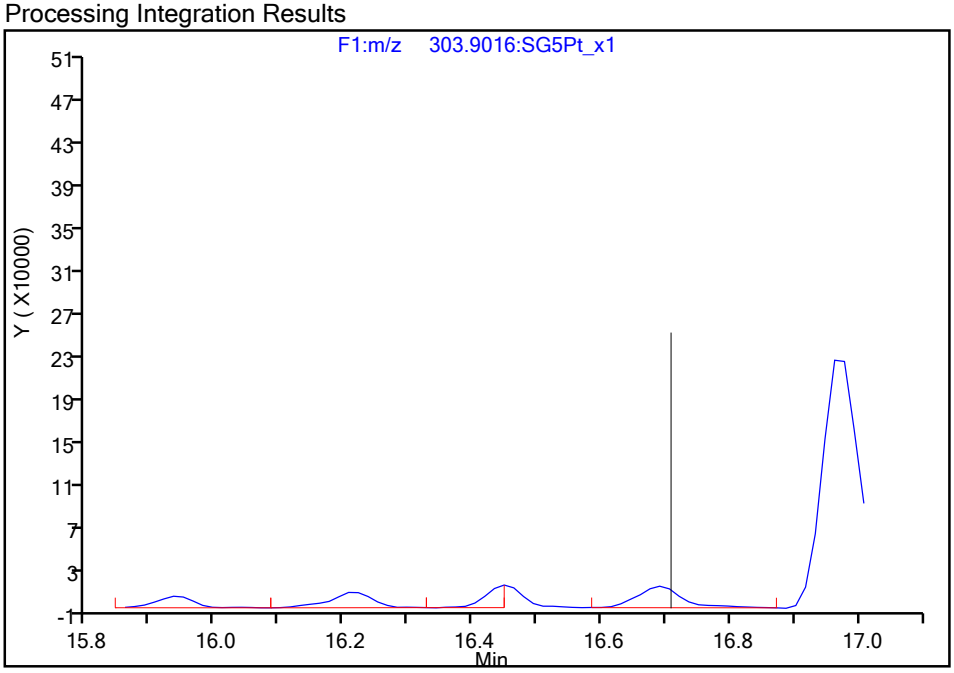

Manual Integration Results

RT = 16.449 Area = 77432 M

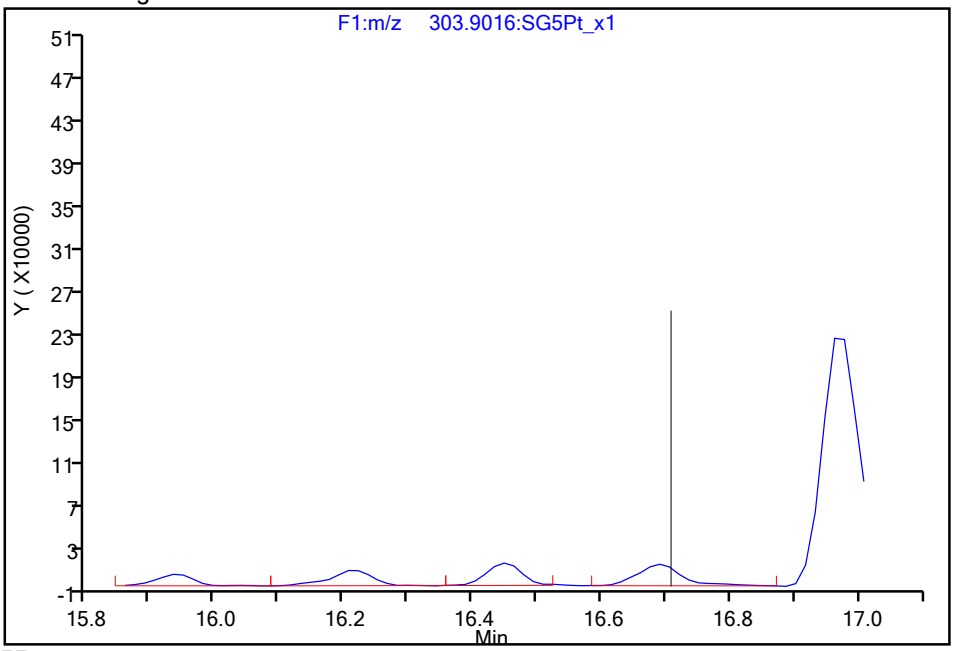

Reviewer: dadunj, 18-Aug-2021 09:18:55

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.38
Area: 78534
Amount: 0.121976
Amount Units: pg/ul

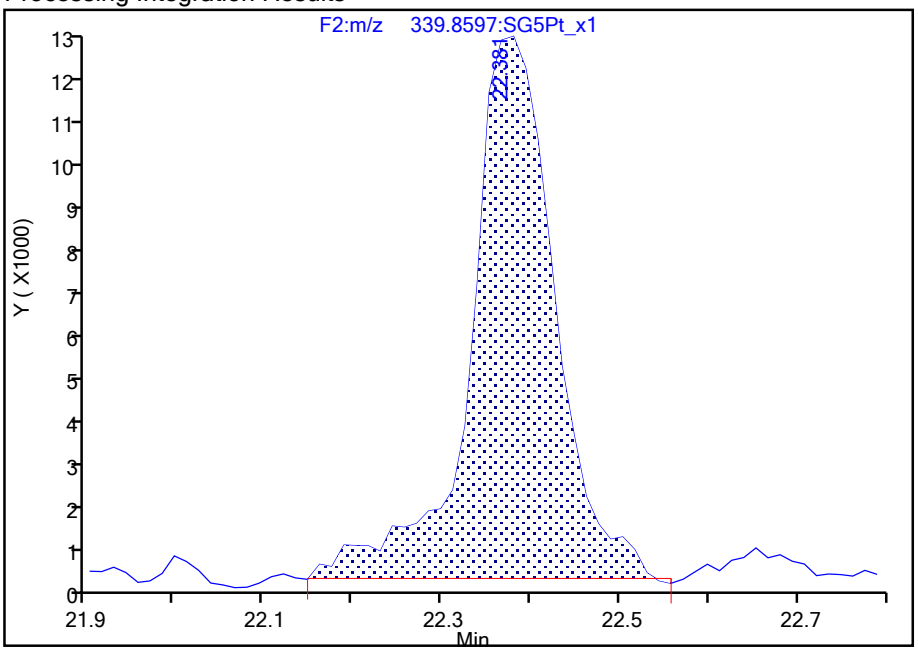

Manual Integration Results

RT: 22.38
Area: 74477
Amount: 0.113452
Amount Units: pg/ul

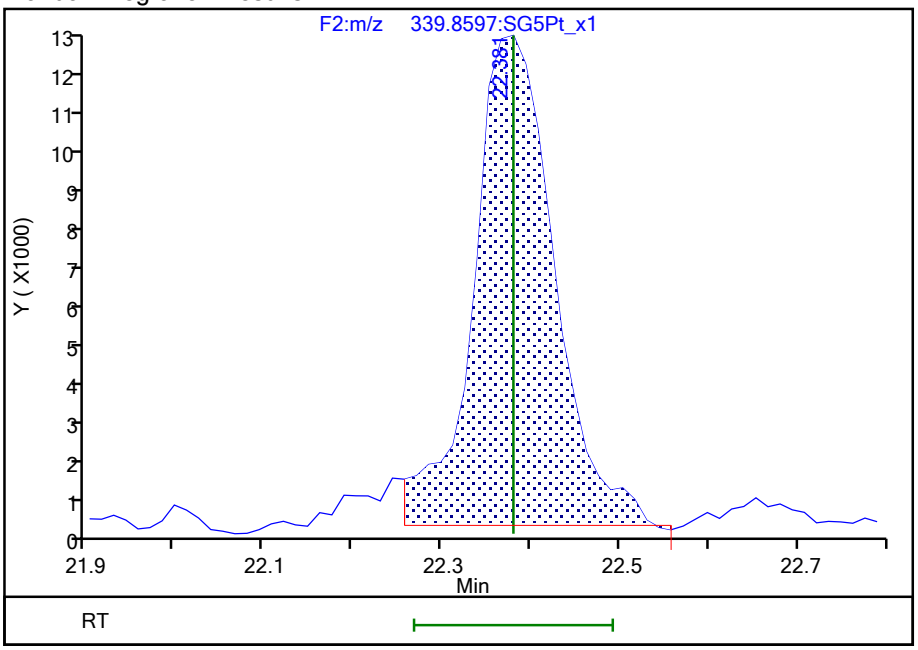

Reviewer: dadunj, 18-Aug-2021 09:19:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.38
Area: 41617
Amount: 0.121976
Amount Units: pg/ul

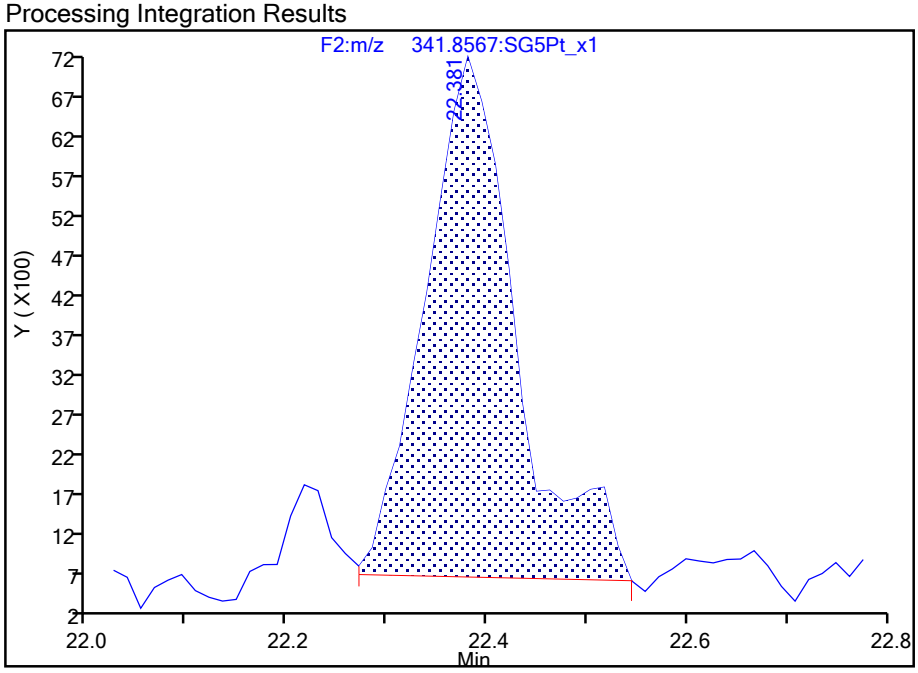

Manual Integration Results

RT: 22.38
Area: 37277
Amount: 0.113452
Amount Units: pg/ul

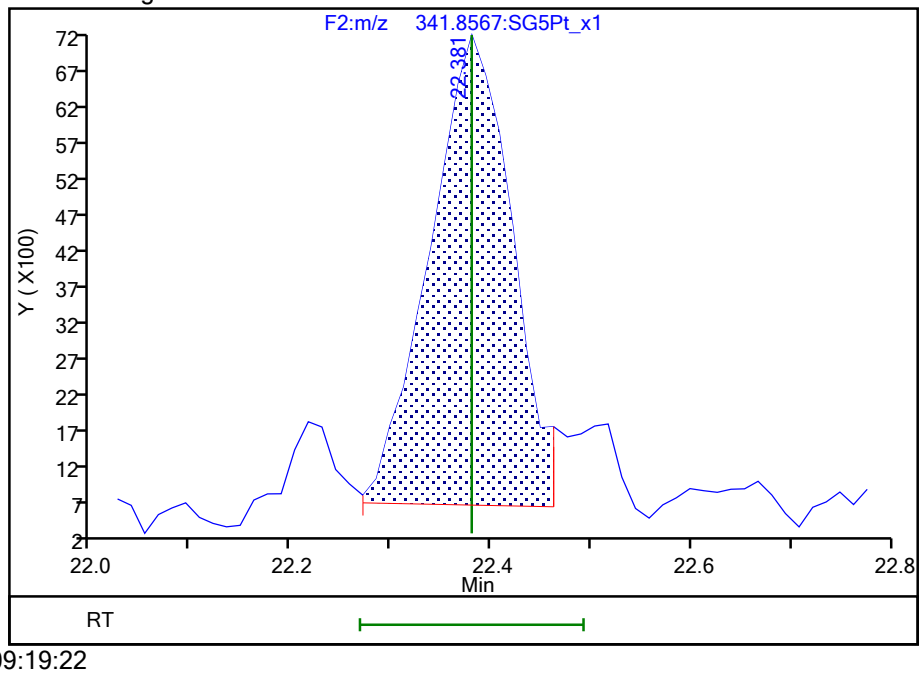

Reviewer: dadunj, 18-Aug-2021 09:19:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.73
Area: 20462
Amount: 0.052776
Amount Units: pg/ul

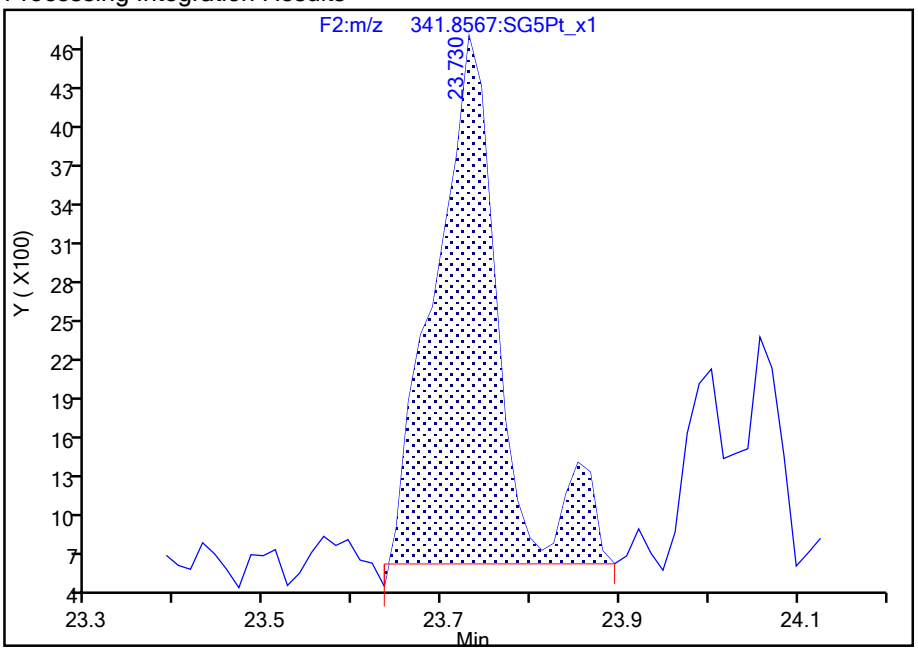

Manual Integration Results

RT: 23.73
Area: 18571
Amount: 0.050997
Amount Units: pg/ul

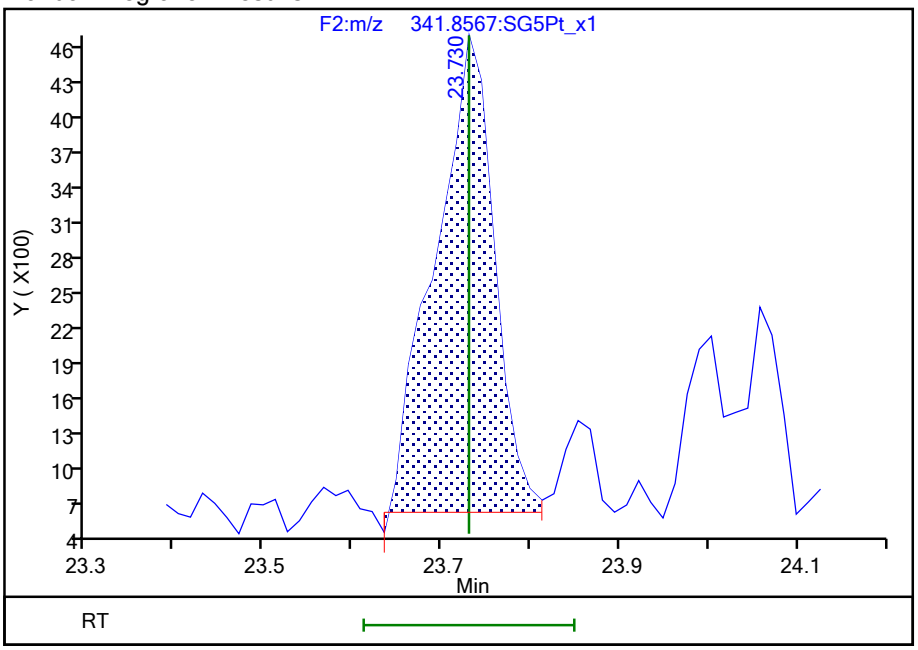

Reviewer: dadunj, 18-Aug-2021 09:19:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 25.71)

Signal: 1

Processing Integration Results

RT = 21.044 Area = 39166

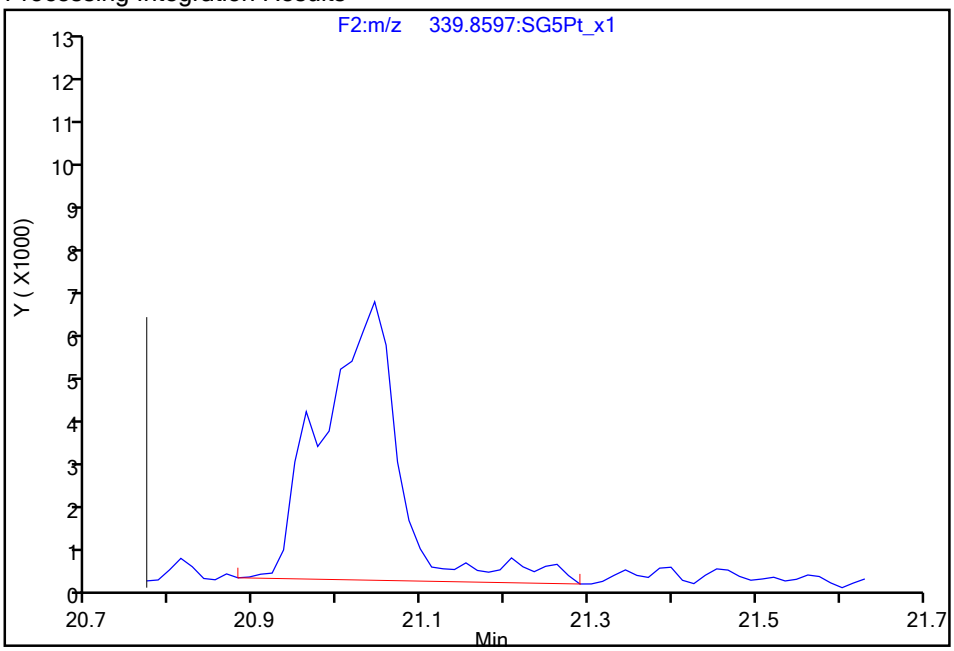

Manual Integration Results

RT = 21.044 Area = 36377 M

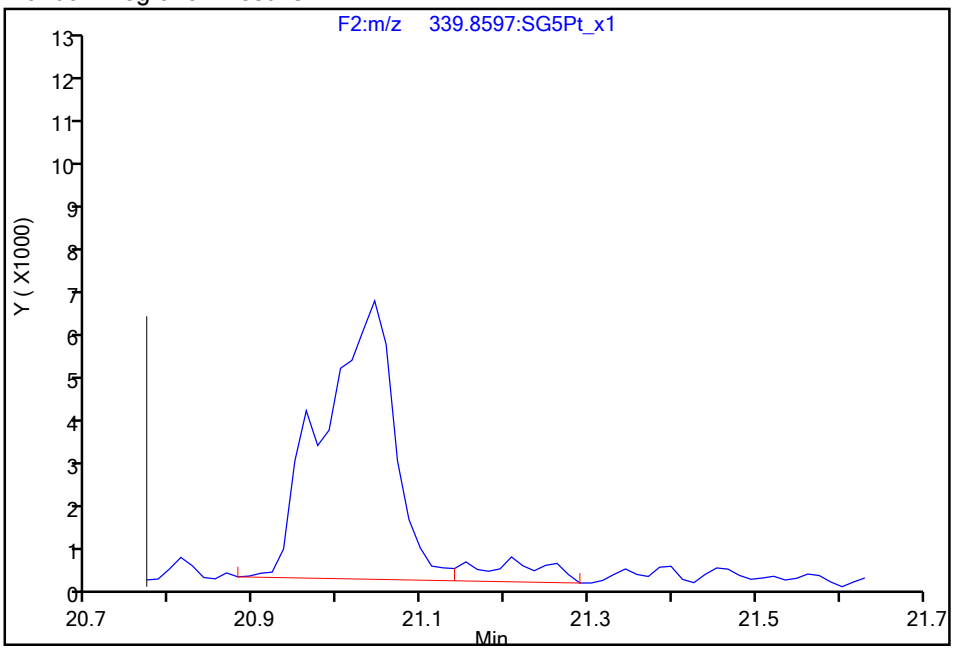

Reviewer: dadunj, 18-Aug-2021 09:19:46

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 2, m/z: 341.8567, RT: (20.77- 25.71)

Signal: 2

Processing Integration Results

RT = 21.031 Area = 22460

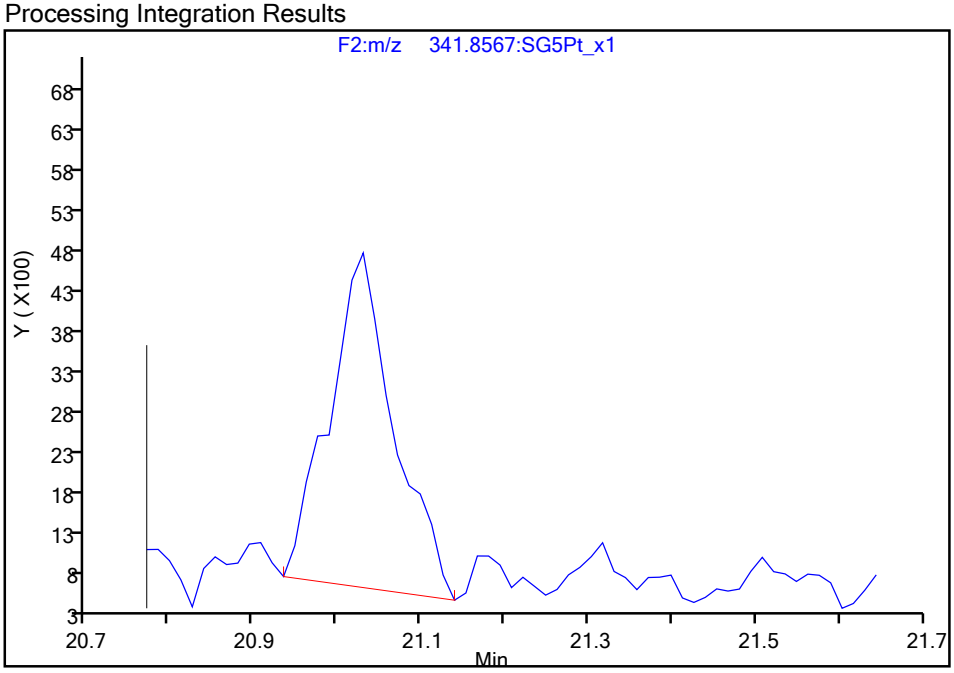

Manual Integration Results

RT = 21.031 Area = 20759 M

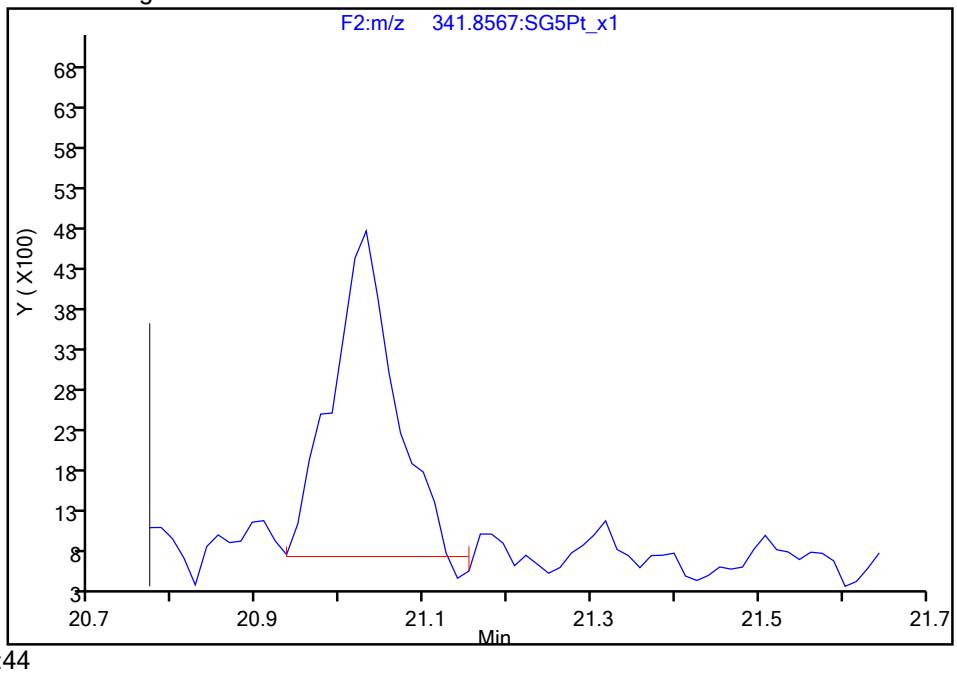

Reviewer: dadunj, 18-Aug-2021 09:19:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 25.71)

Signal: 1

Processing Integration Results

RT = 22.899 Area = 17686

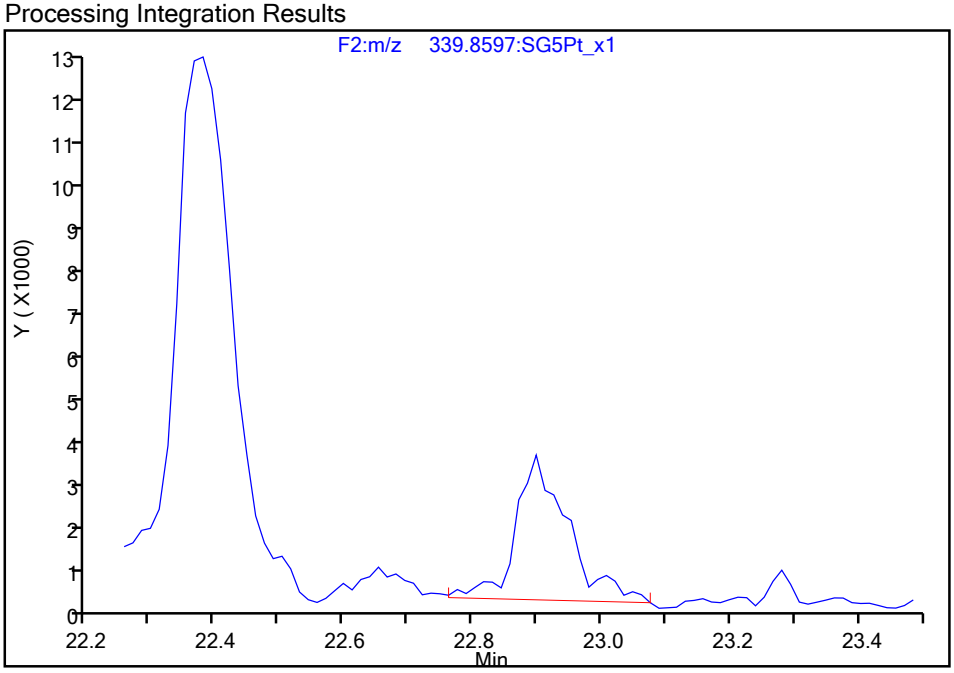

Manual Integration Results

RT = 22.899 Area = 16211 M

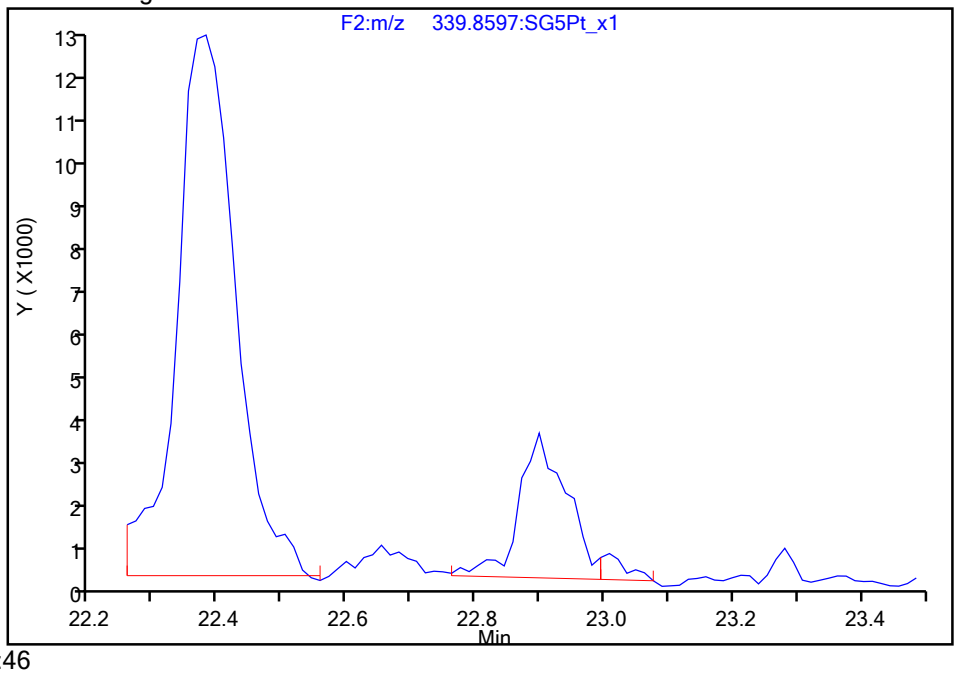

Reviewer: dadunj, 18-Aug-2021 09:19:46

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 2, m/z: 341.8567, RT: (20.77- 25.71)

Signal: 2

Processing Integration Results

RT = 22.926 Area = 12587

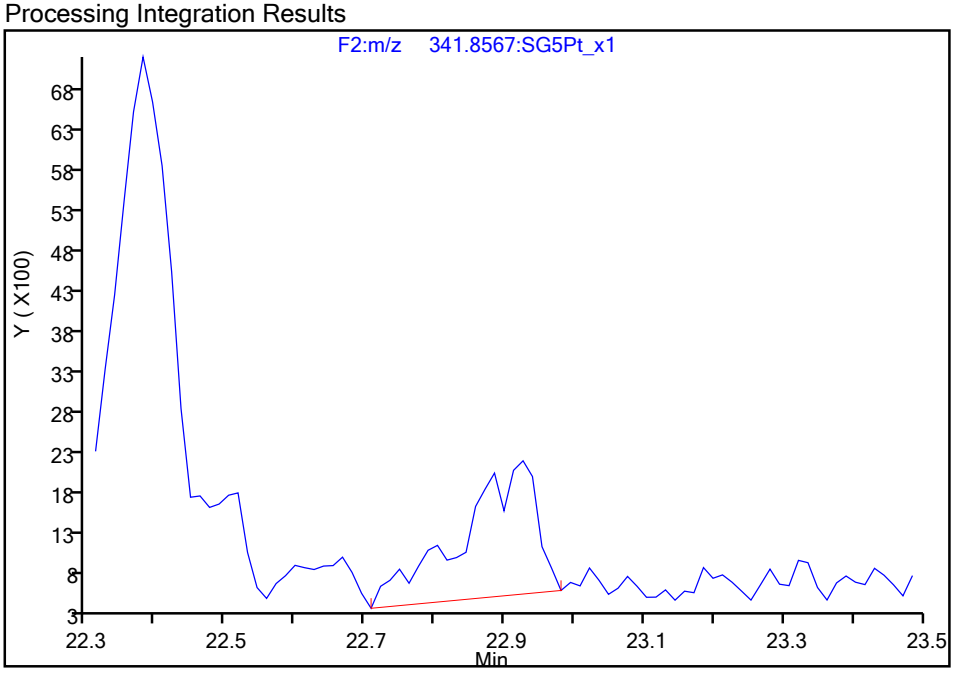

Manual Integration Results

RT = 22.926 Area = 8675 M

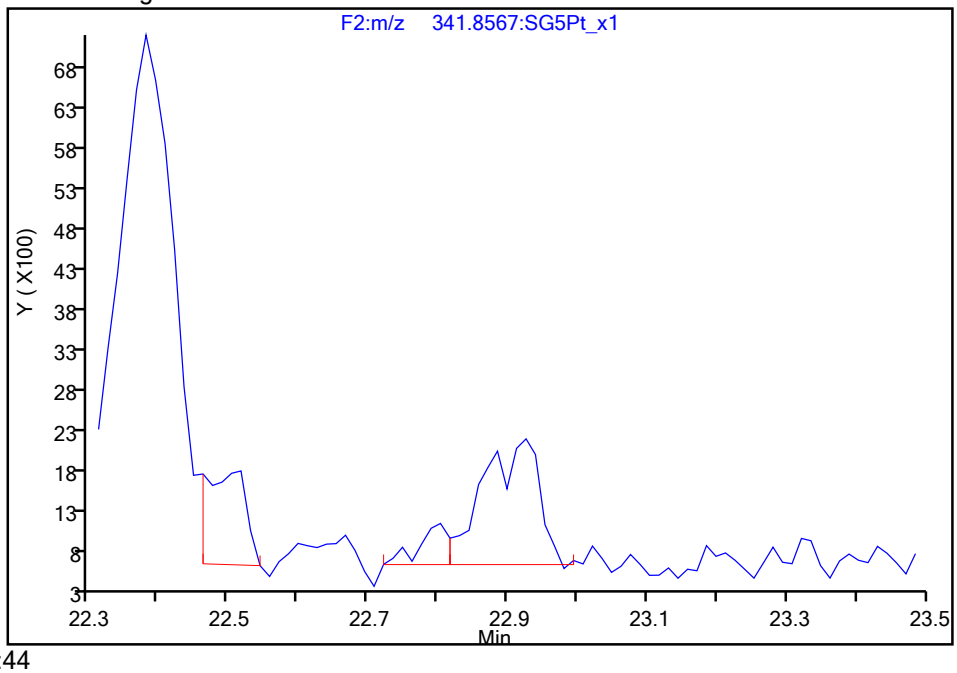

Reviewer: dadunj, 18-Aug-2021 09:19:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779563

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 30.69
Area: 16887
Amount: 0.044526
Amount Units: pg/ul

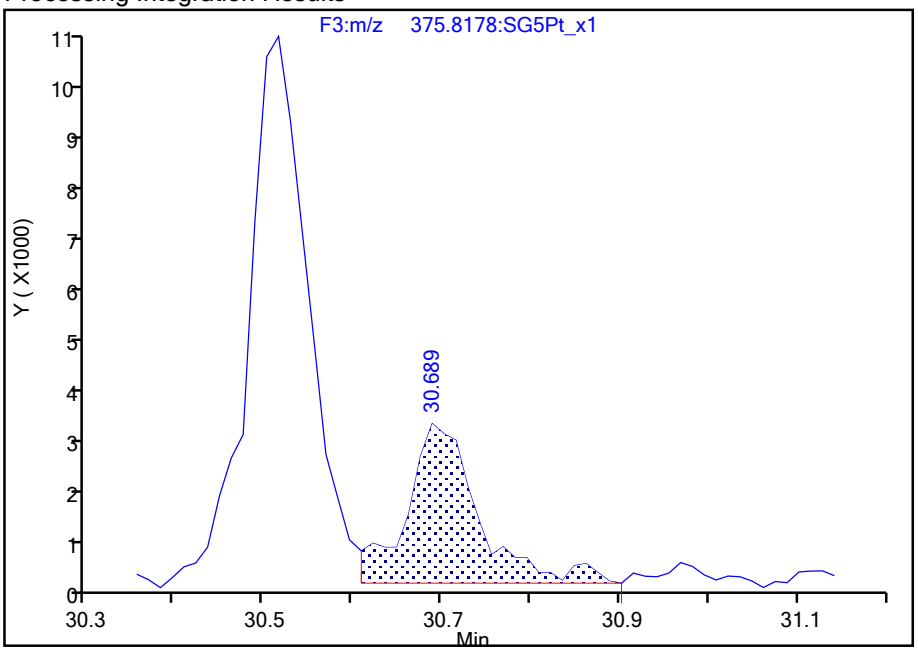

Manual Integration Results

RT: 30.69
Area: 15216
Amount: 0.042638
Amount Units: pg/ul

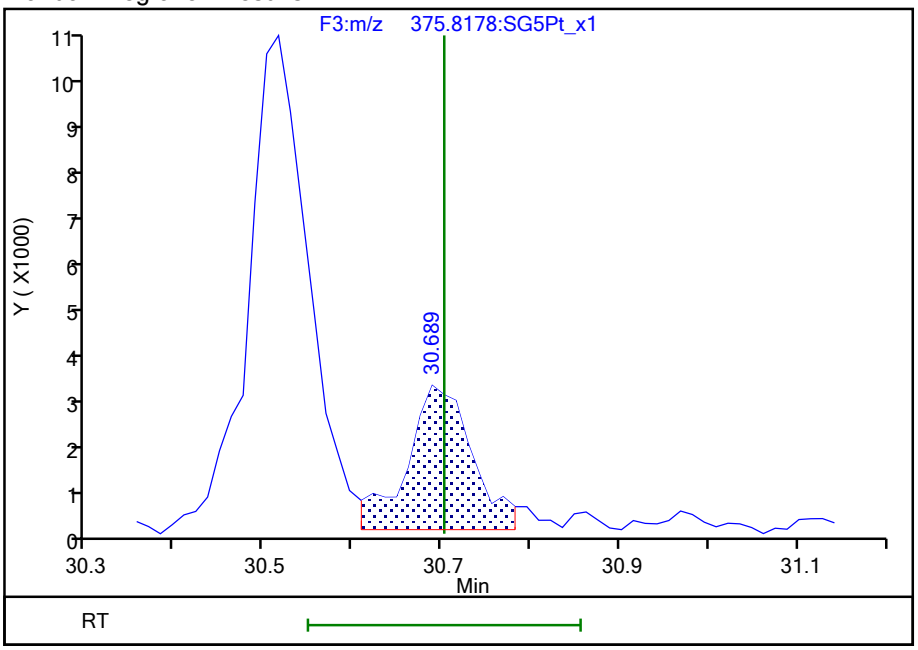

Reviewer: dadunj, 18-Aug-2021 09:19:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779564

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.33
Area: 22865
Amount: 0.045732
Amount Units: pg/ul

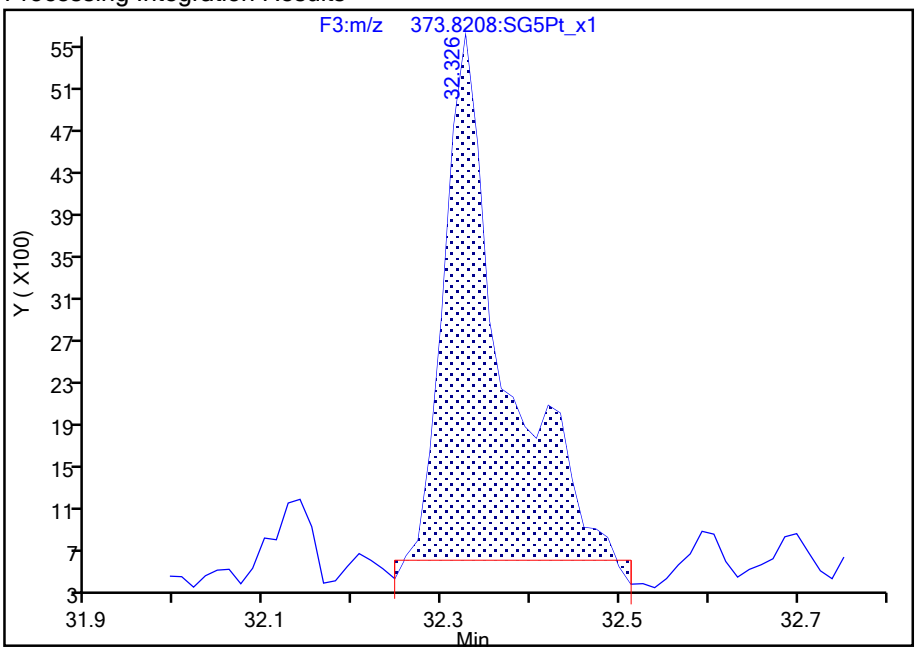

Manual Integration Results

RT: 32.33
Area: 16908
Amount: 0.038228
Amount Units: pg/ul

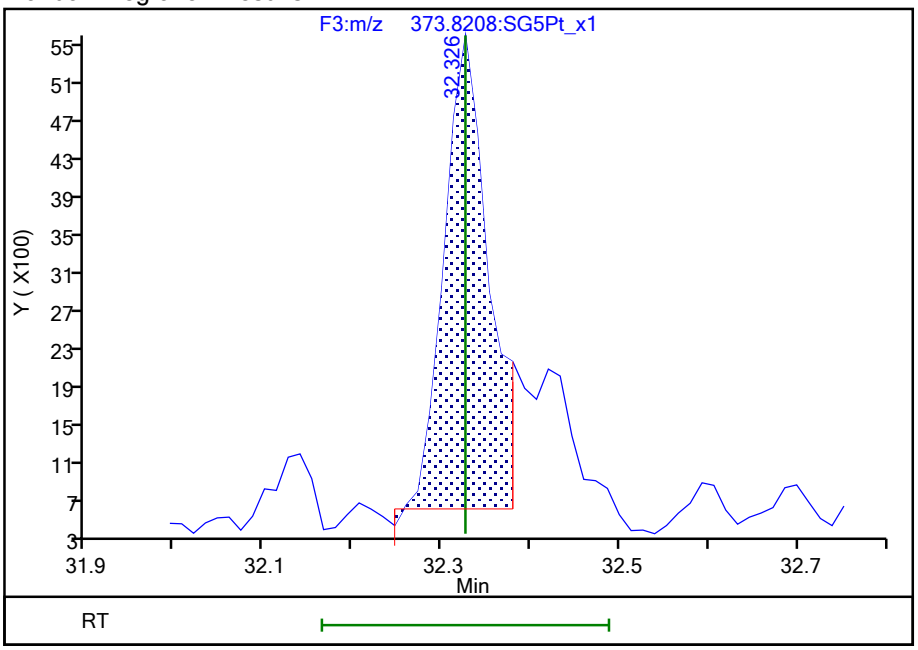

Reviewer: dadunj, 18-Aug-2021 09:20:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 2

Processing Integration Results

RT: 34.85
Area: 10619
Amount: 0.026149
Amount Units: pg/ul

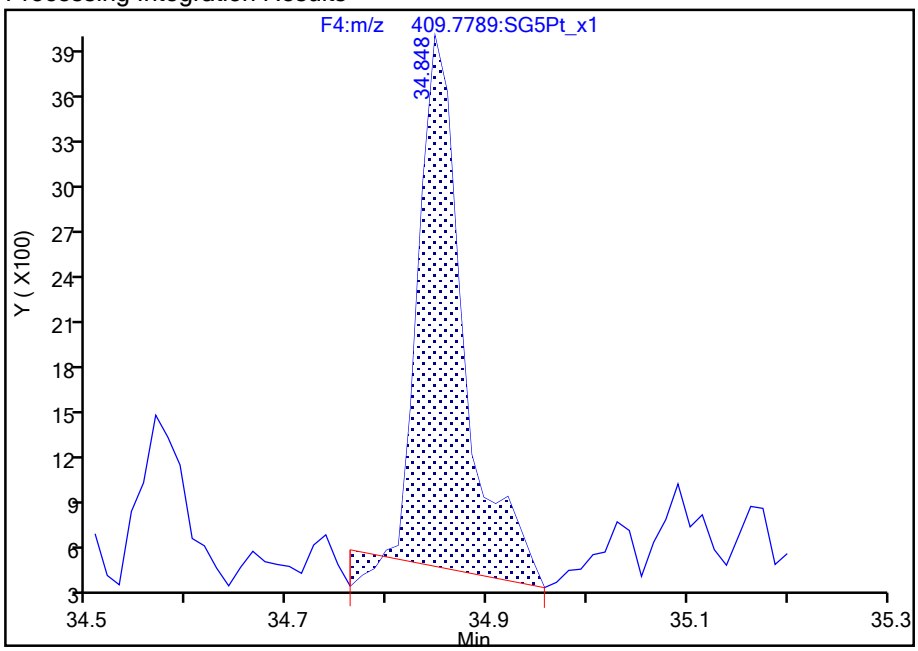

Manual Integration Results

RT: 34.85
Area: 9652
Amount: 0.024972
Amount Units: pg/ul

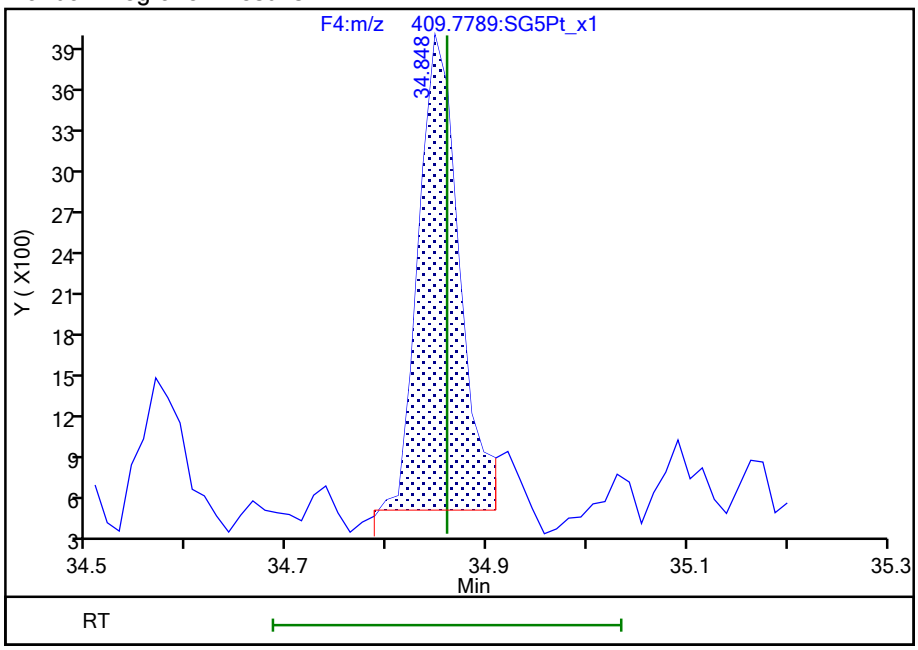

Reviewer: dadunj, 18-Aug-2021 09:20:31

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779566

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 3

Processing Integration Results

RT:	36.93
Area:	168601
Amount:	0.305784
Amount Units:	pg/ul

Manual Integration Results

RT:	37.01
Area:	113320
Amount:	0.205524
Amount Units:	pg/ul

Reviewer: dadunj, 18-Aug-2021 09:20:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.93
Area: 114077
Amount: 0.305784
Amount Units: pg/ul

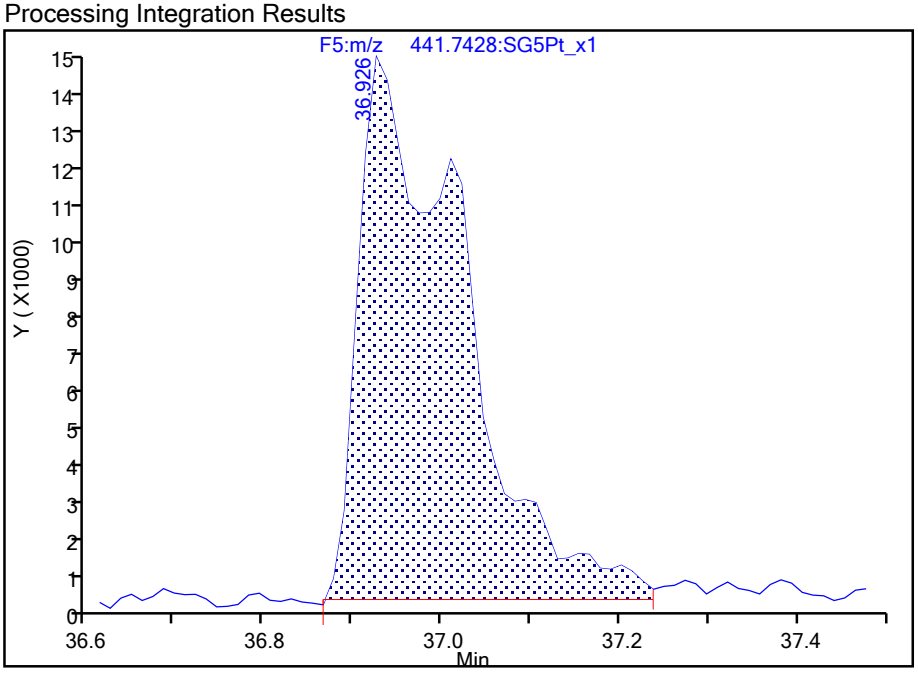

Manual Integration Results

RT: 37.01
Area: 50059
Amount: 0.205524
Amount Units: pg/ul

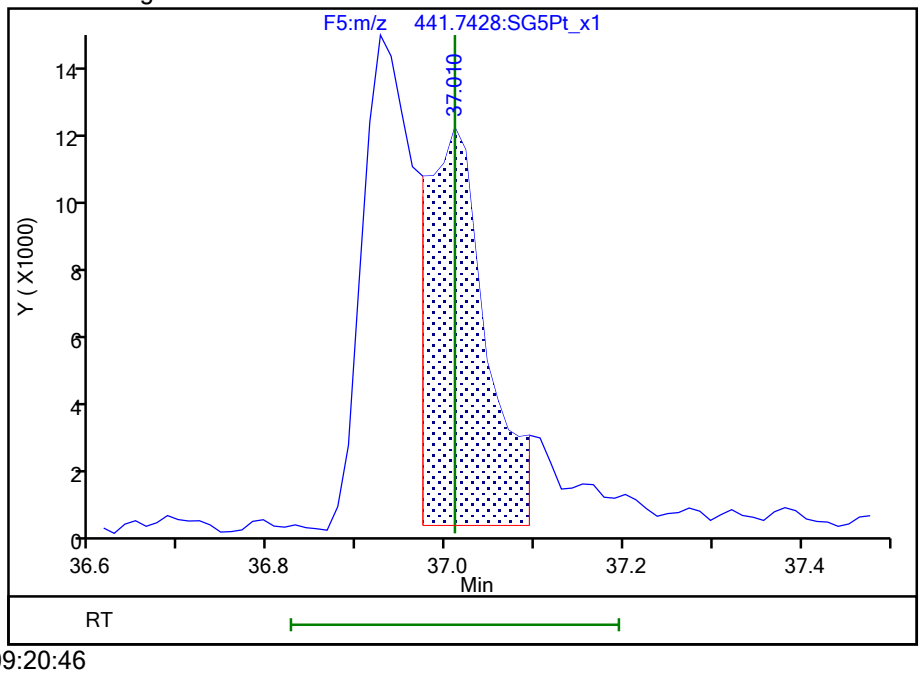

Reviewer: dadunj, 18-Aug-2021 09:20:46

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

779568

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d				
Injection Date:	14-Aug-2021 08:56:24	Instrument ID:	10D5		
Lims ID:	320-76788-A-7-A	Lab Sample ID:	320-76788-7		
Client ID:	11215702-072321-BN-SJSB085 (12-14)				
Operator ID:	DB	ALS Bottle#:	23	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.93
Area: 54524
Amount: 0.305784
Amount Units: pg/ul

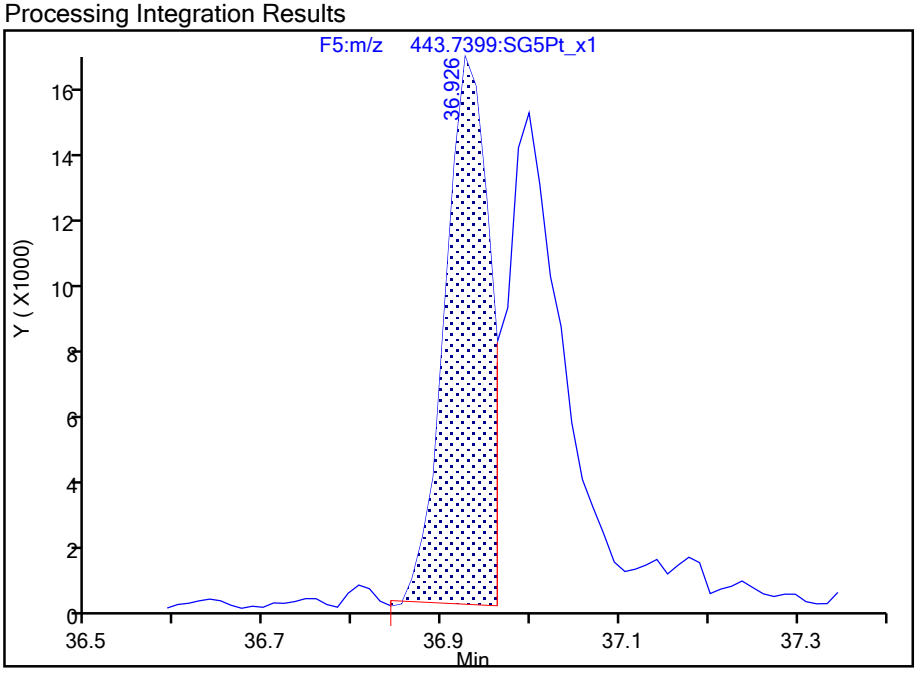

Manual Integration Results

RT: 37.00
Area: 63261
Amount: 0.205524
Amount Units: pg/ul

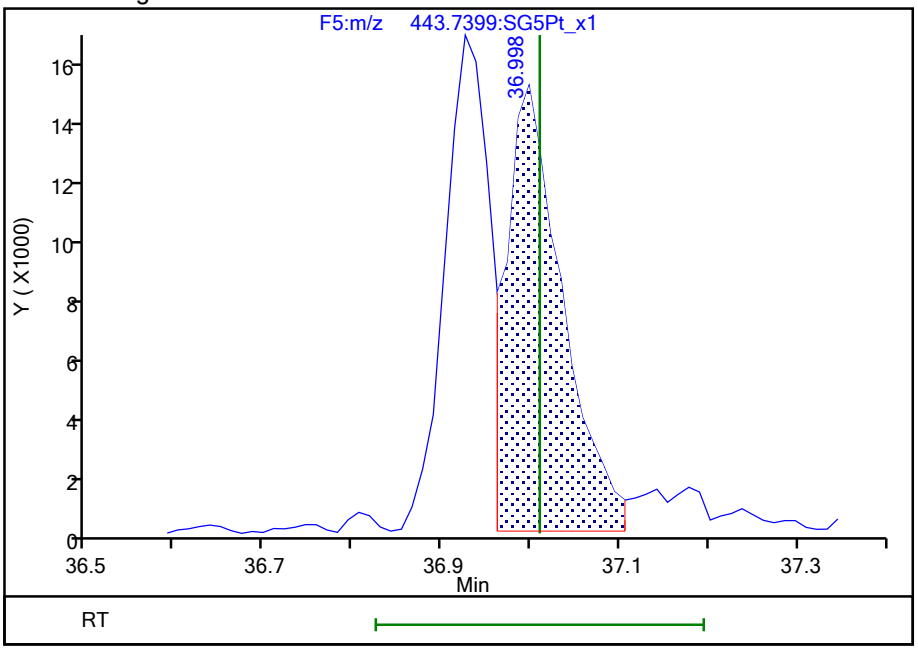

Reviewer: dadunj, 18-Aug-2021 09:20:50
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779569

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

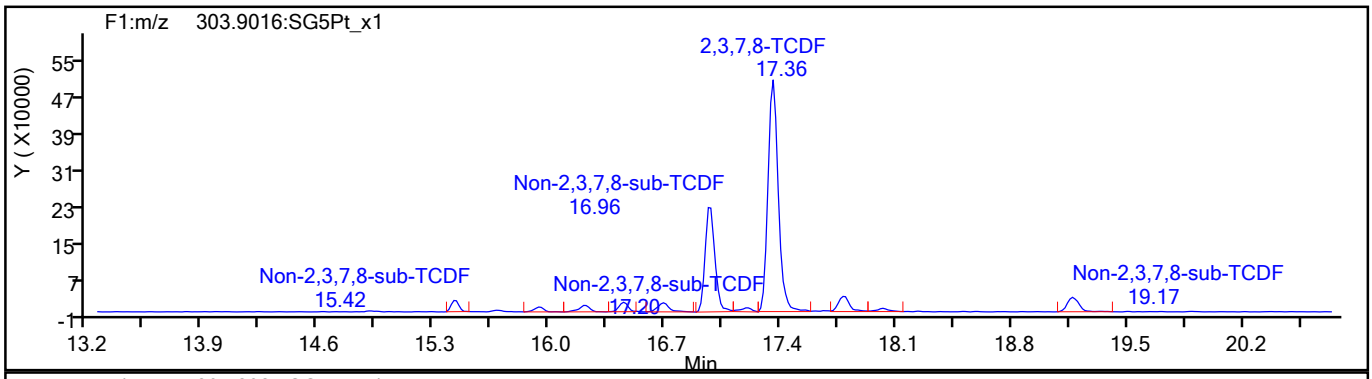

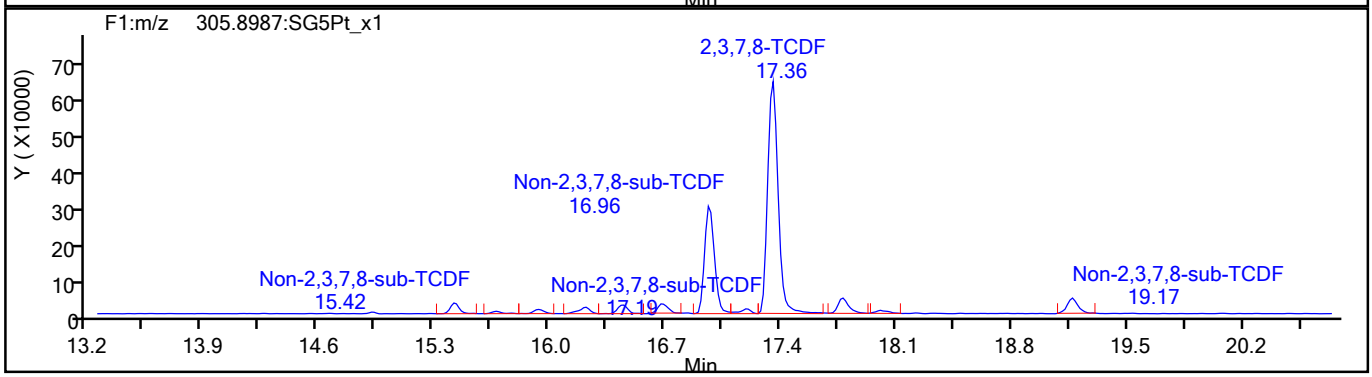

TCDF Standards

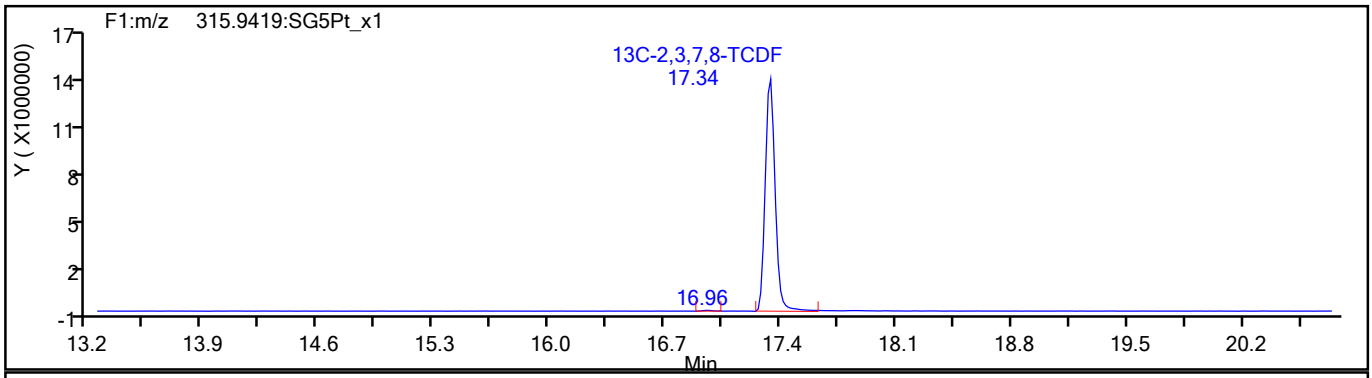

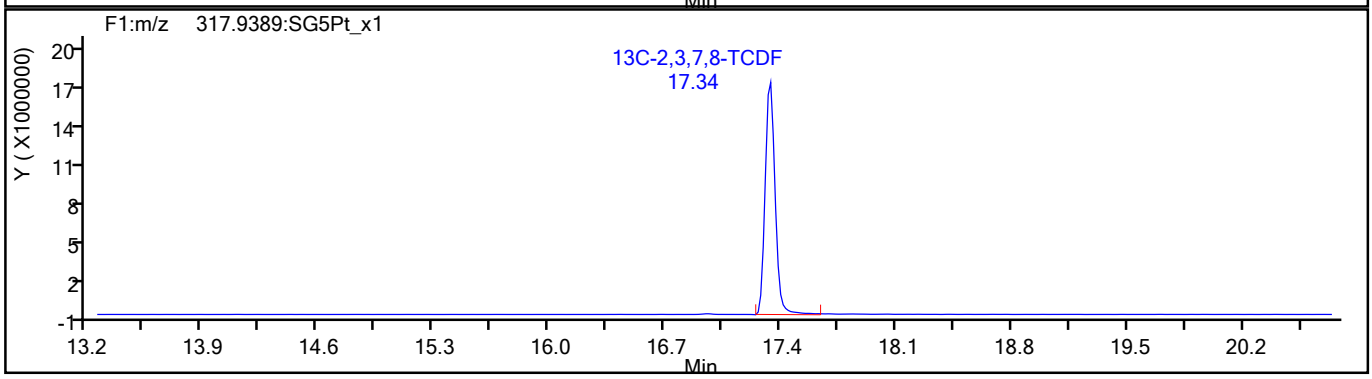

779570

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

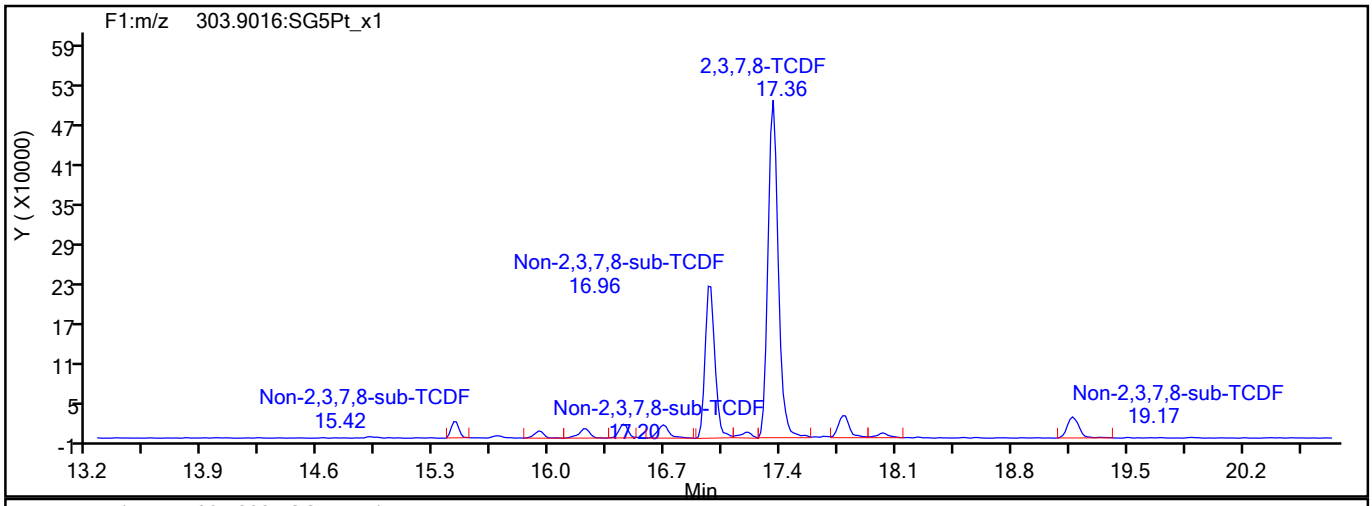

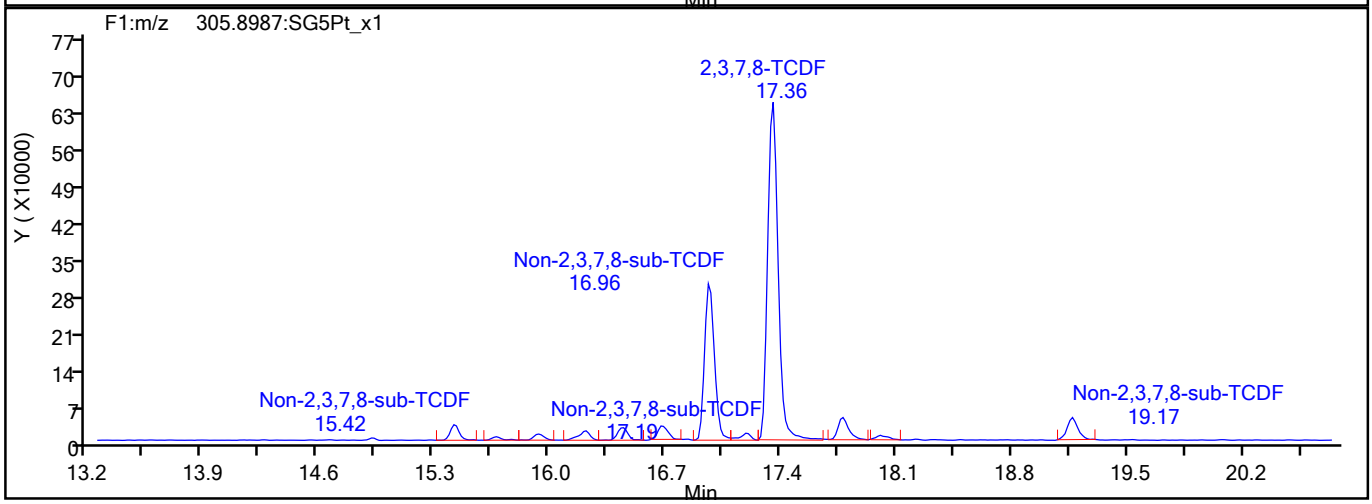

TCDF Interference Mass

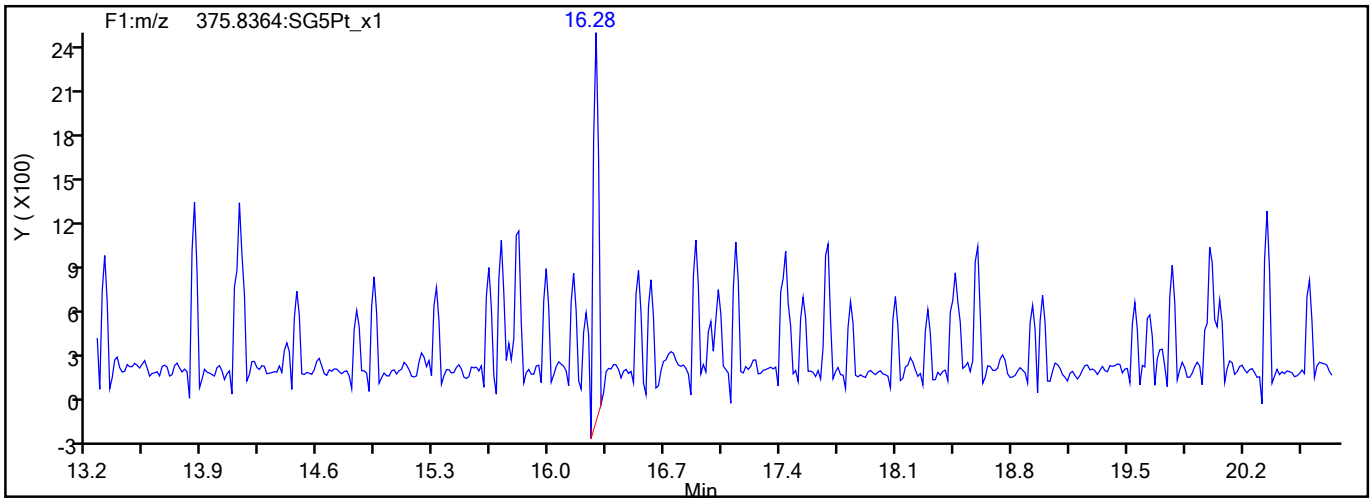

779571

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

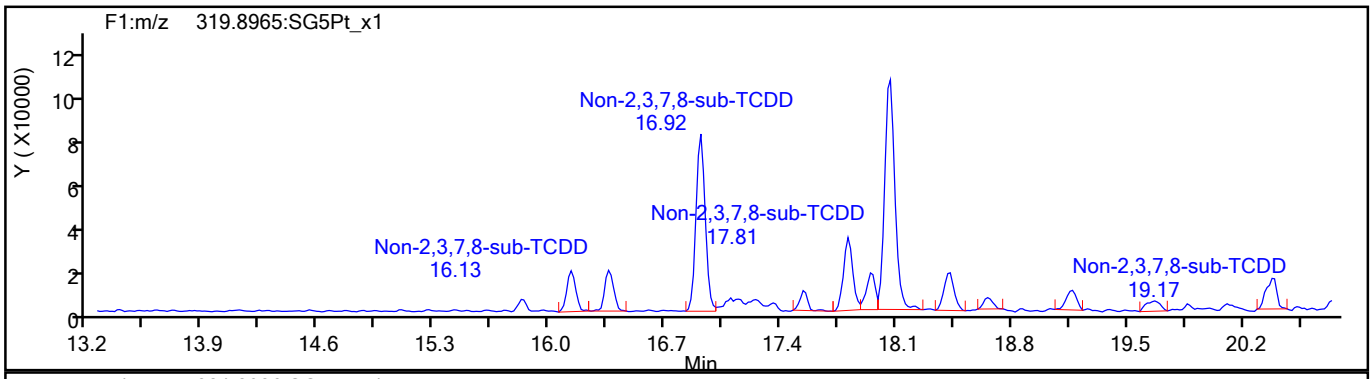

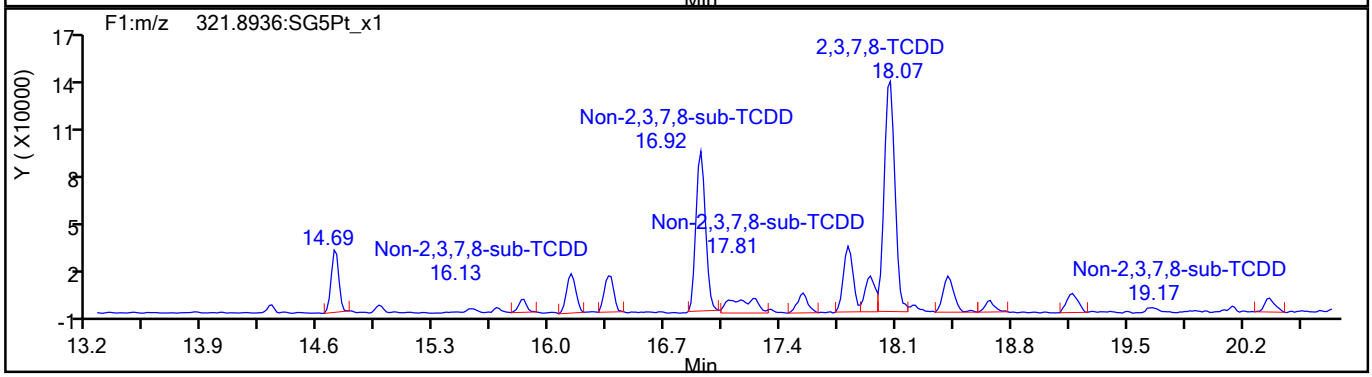

TCDD Standards

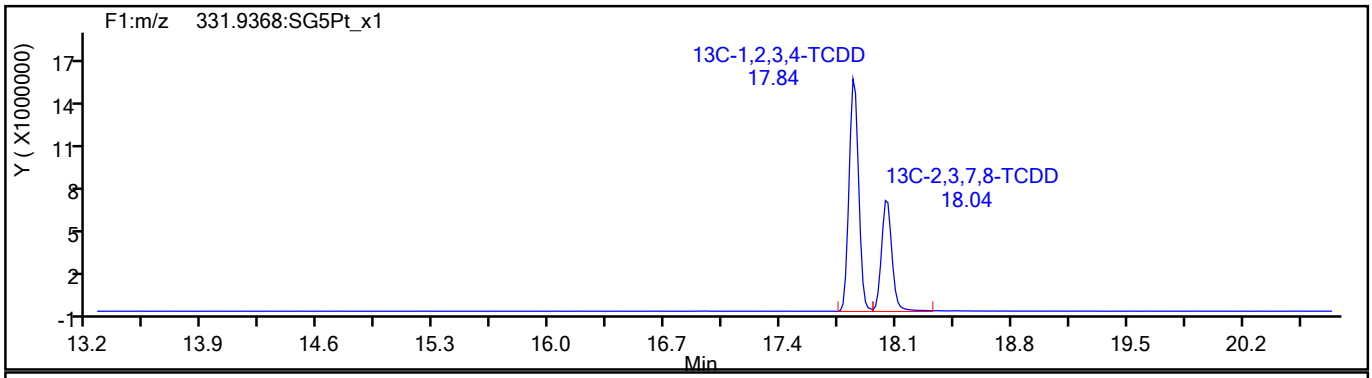

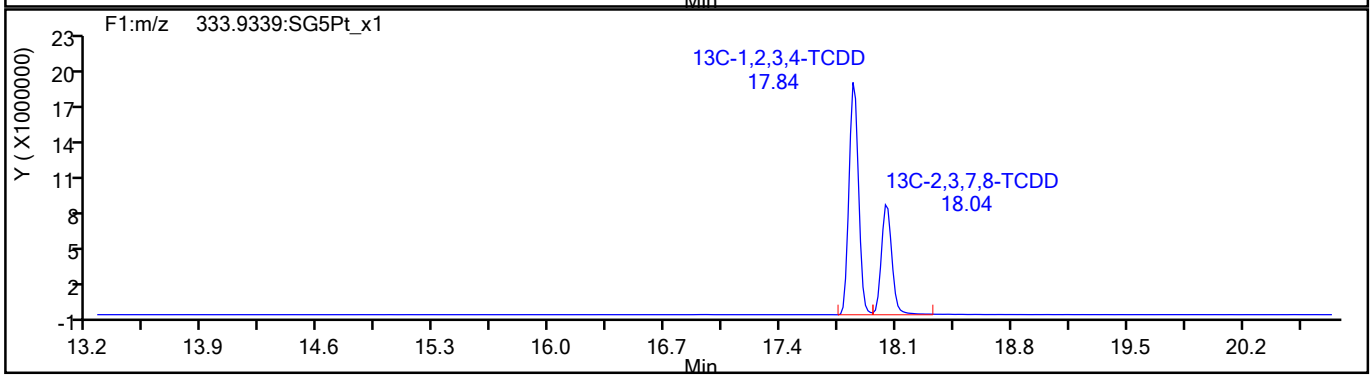

779572

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

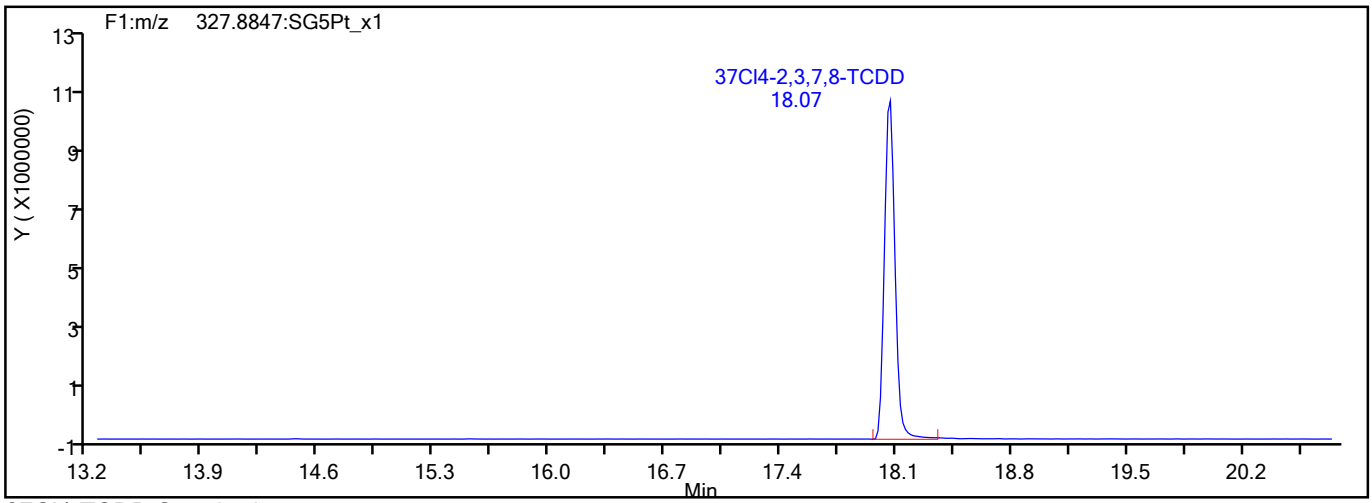

37Cl4-TCDD Standards

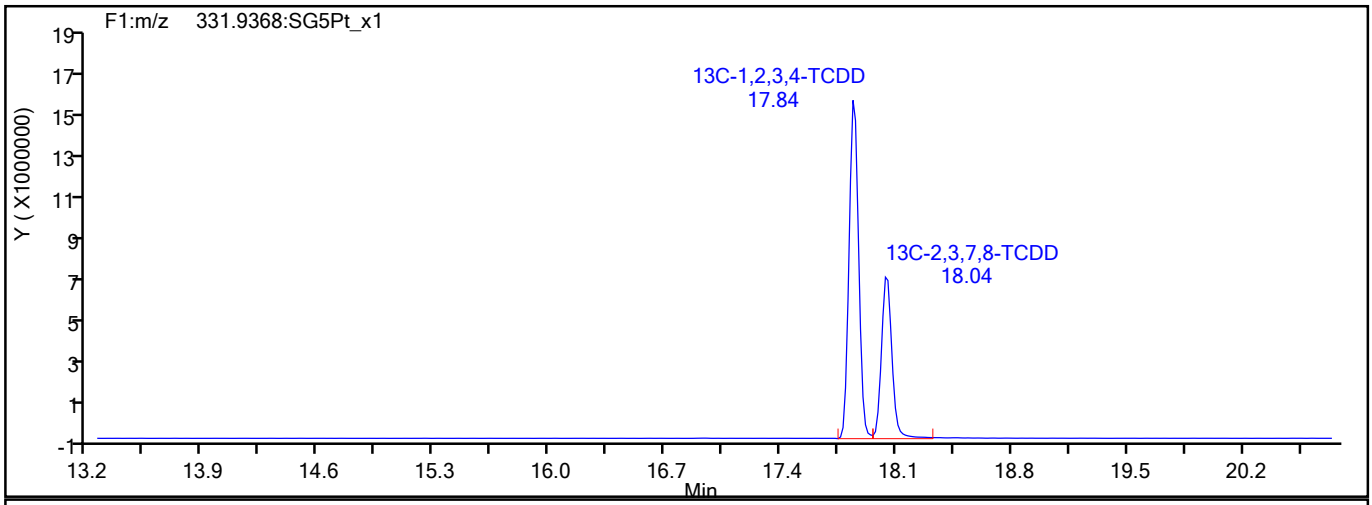

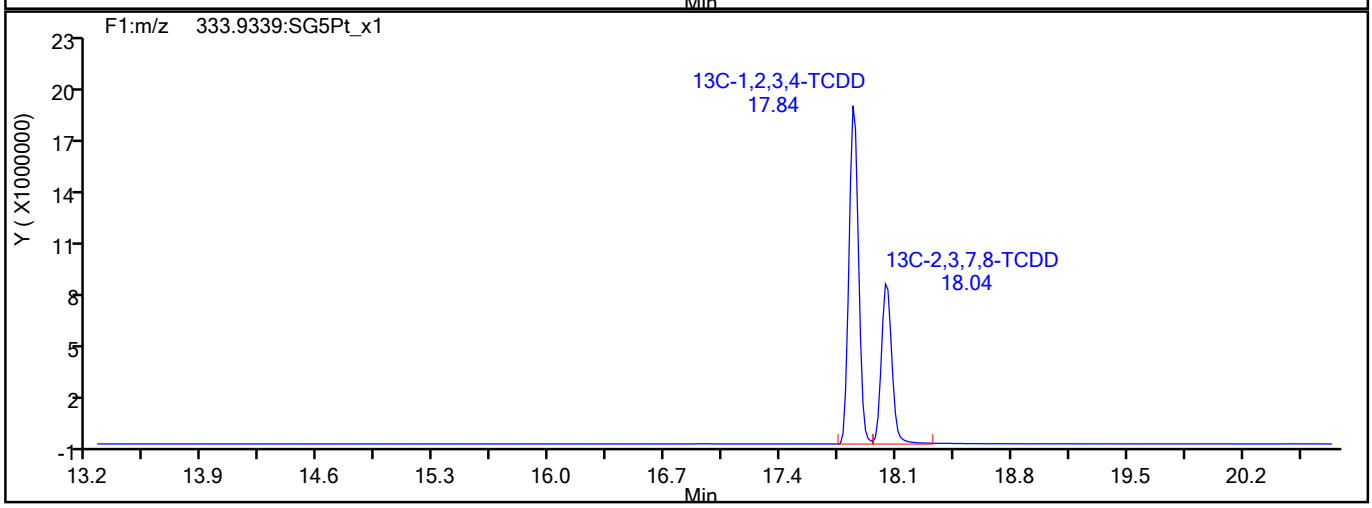

779573

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

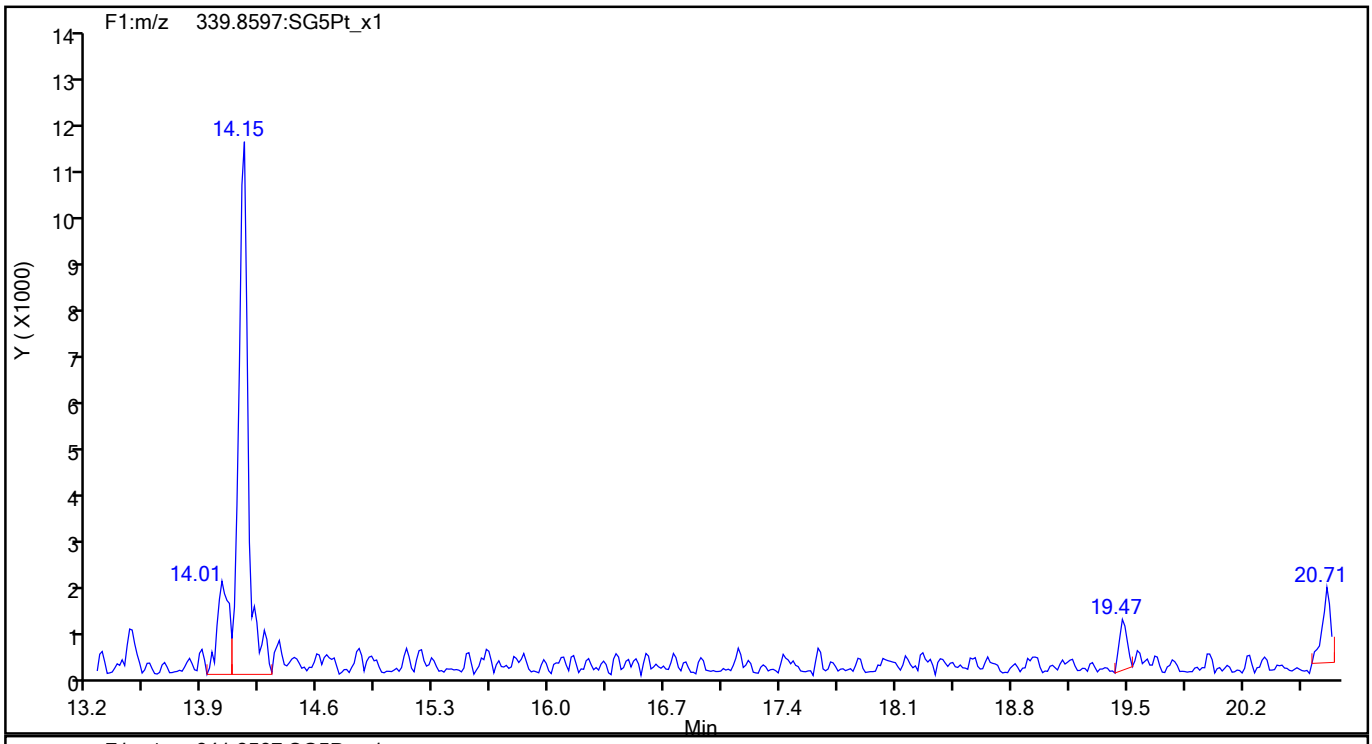

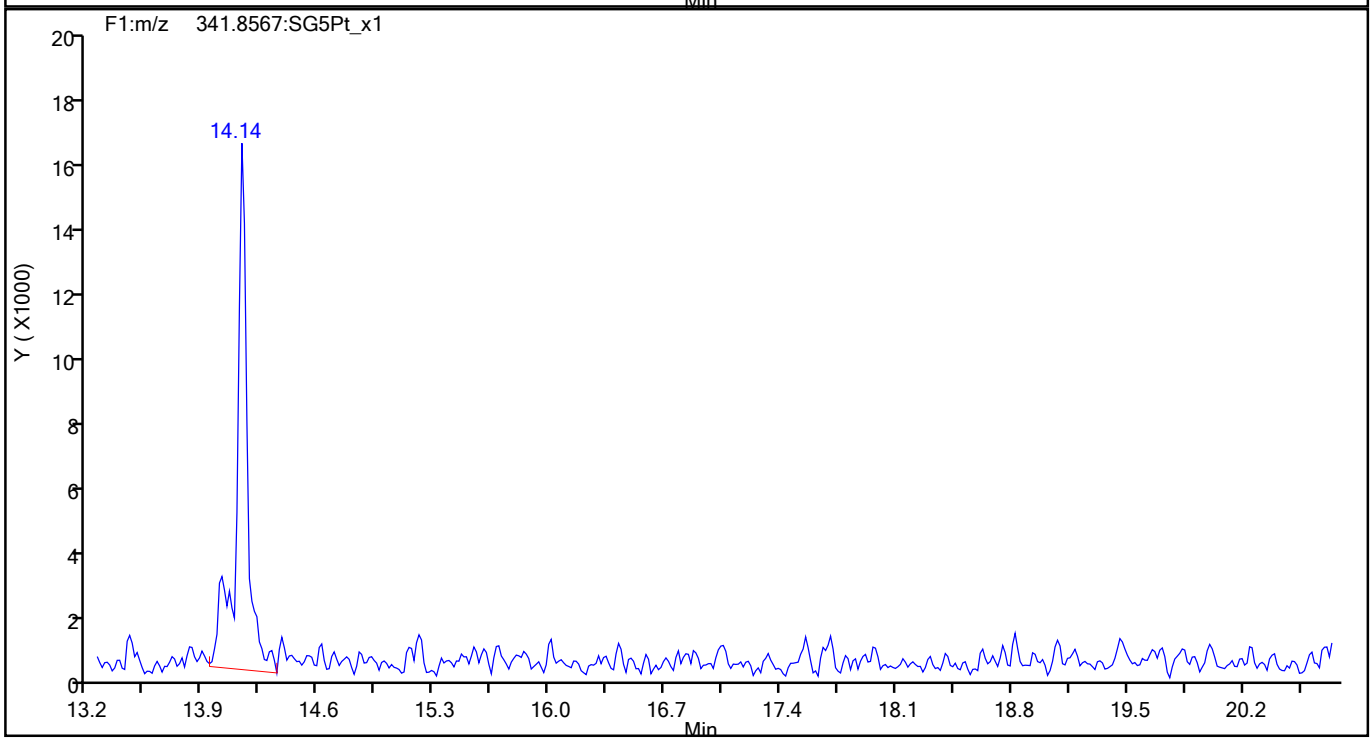

779574

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

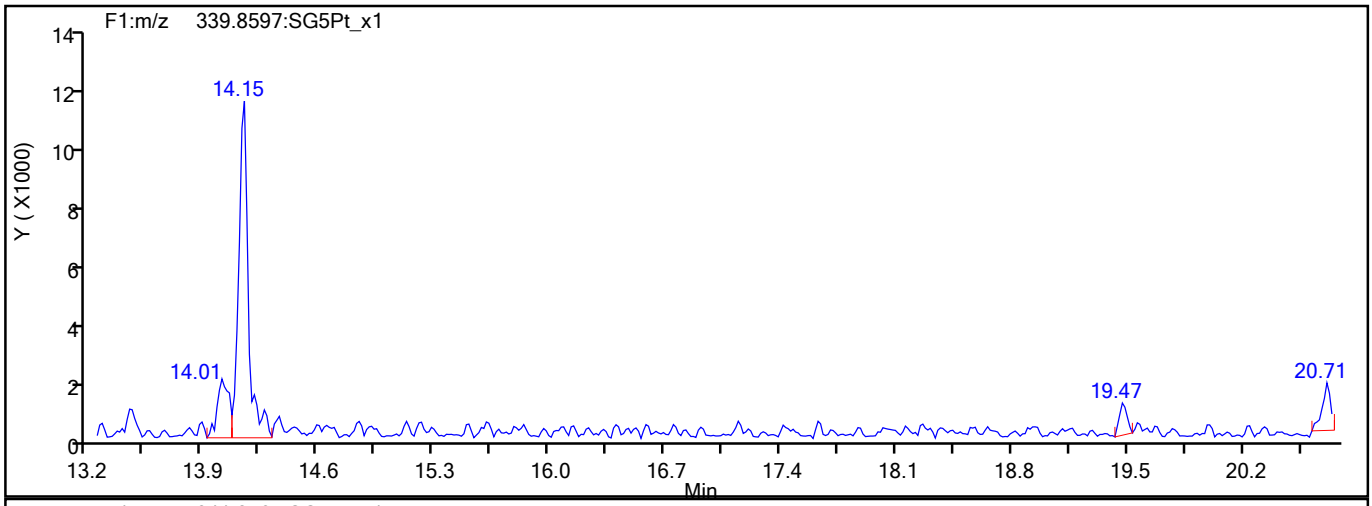

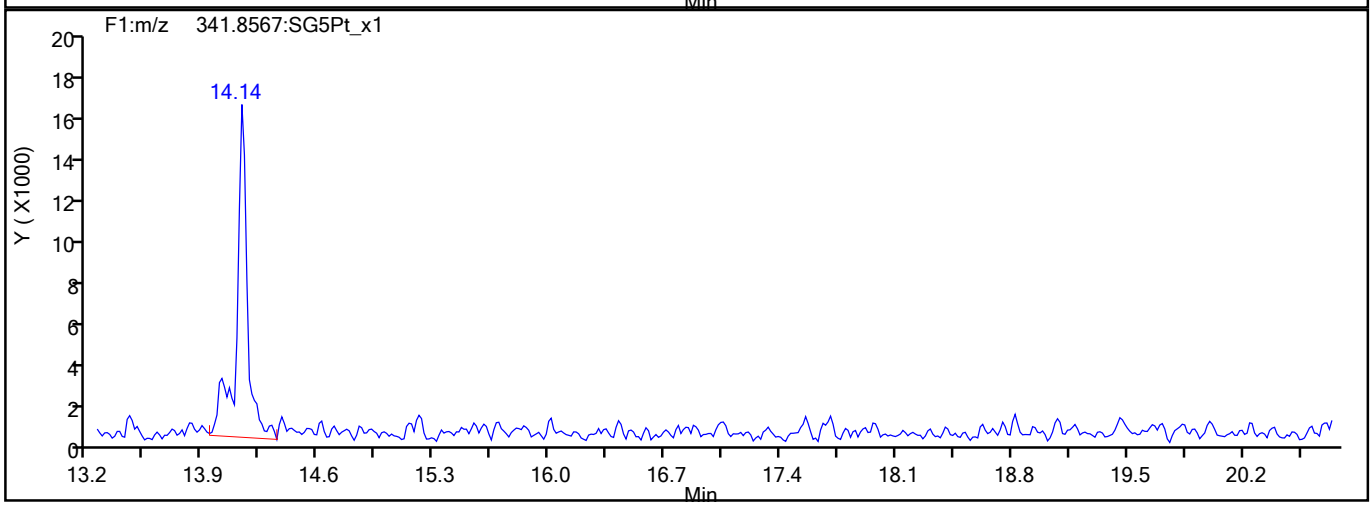

F1 PeCDFs Interference Mass

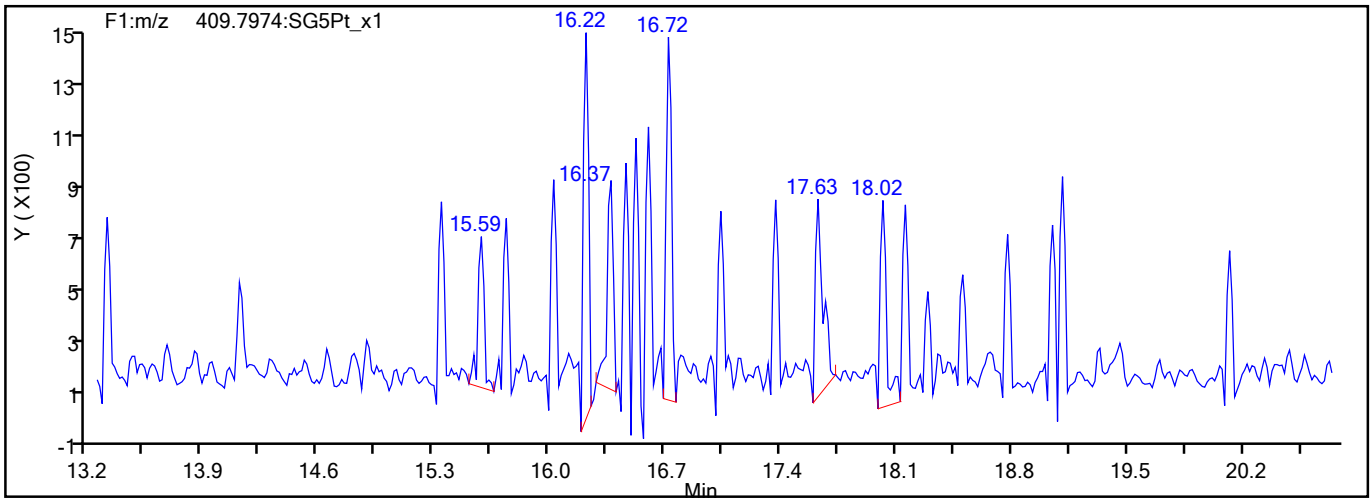

779575

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

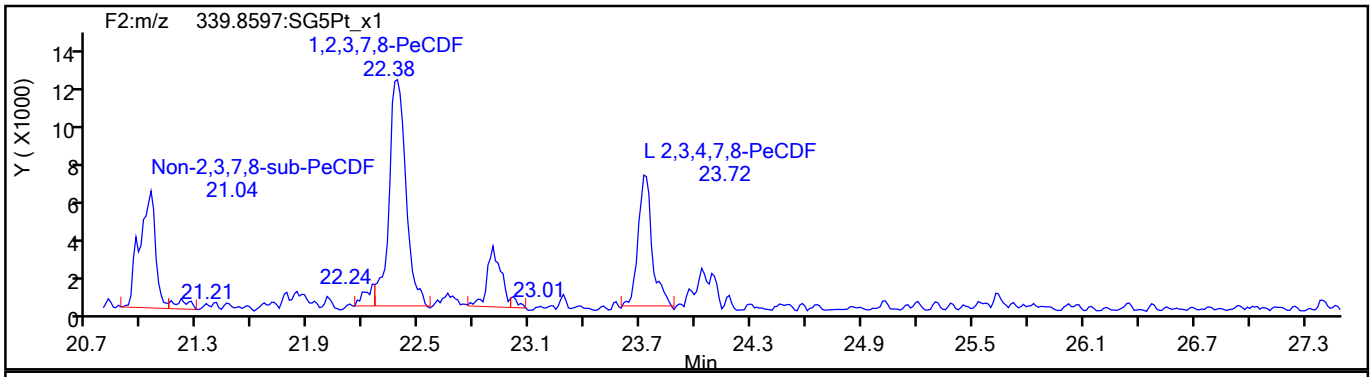

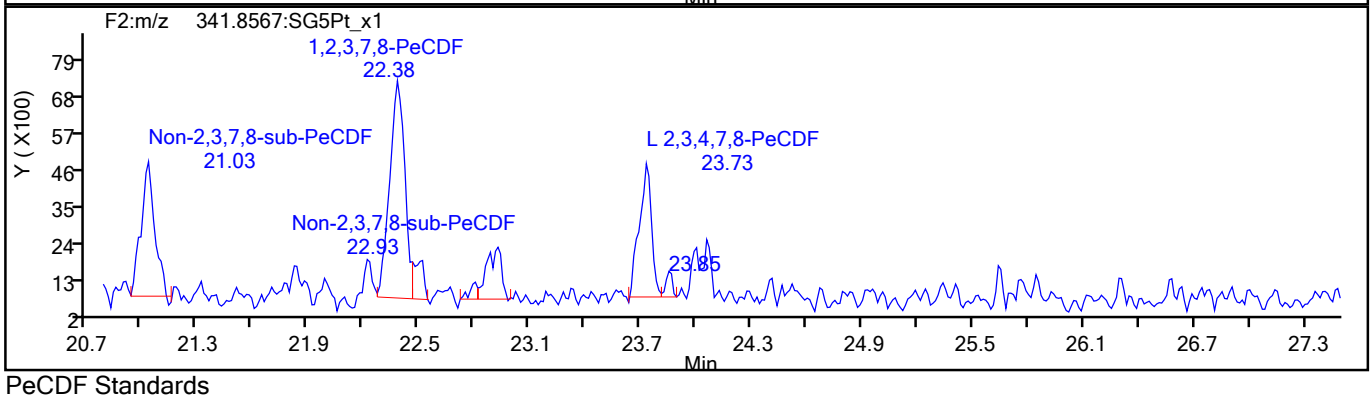

PeCDF Standards

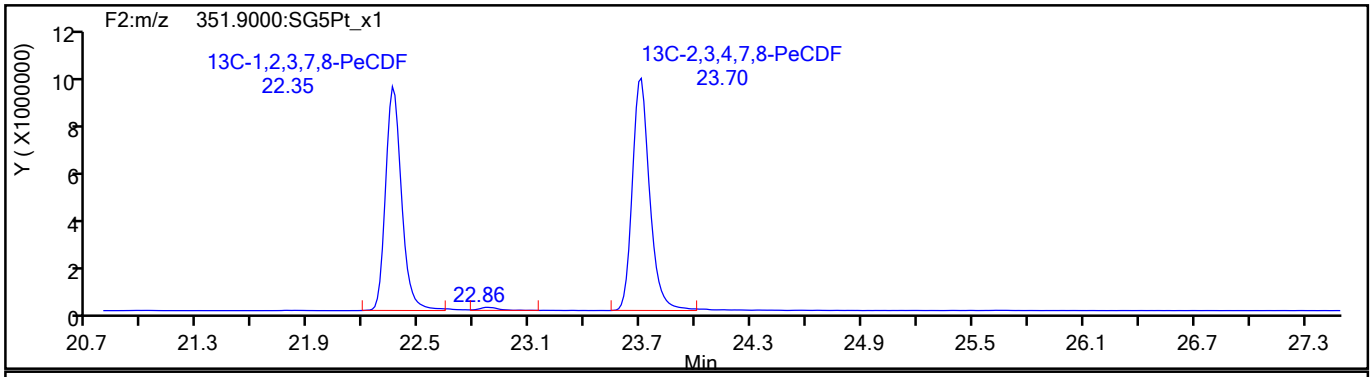

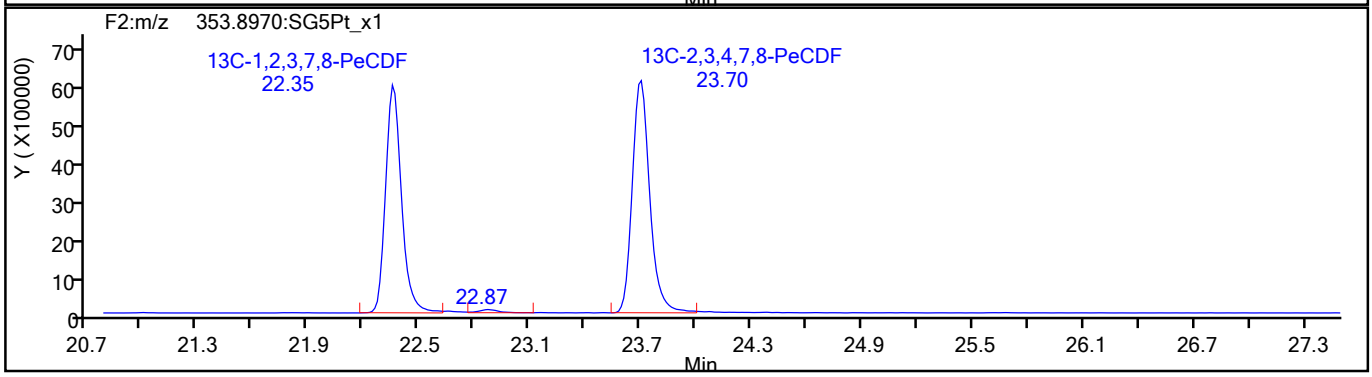

779576

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

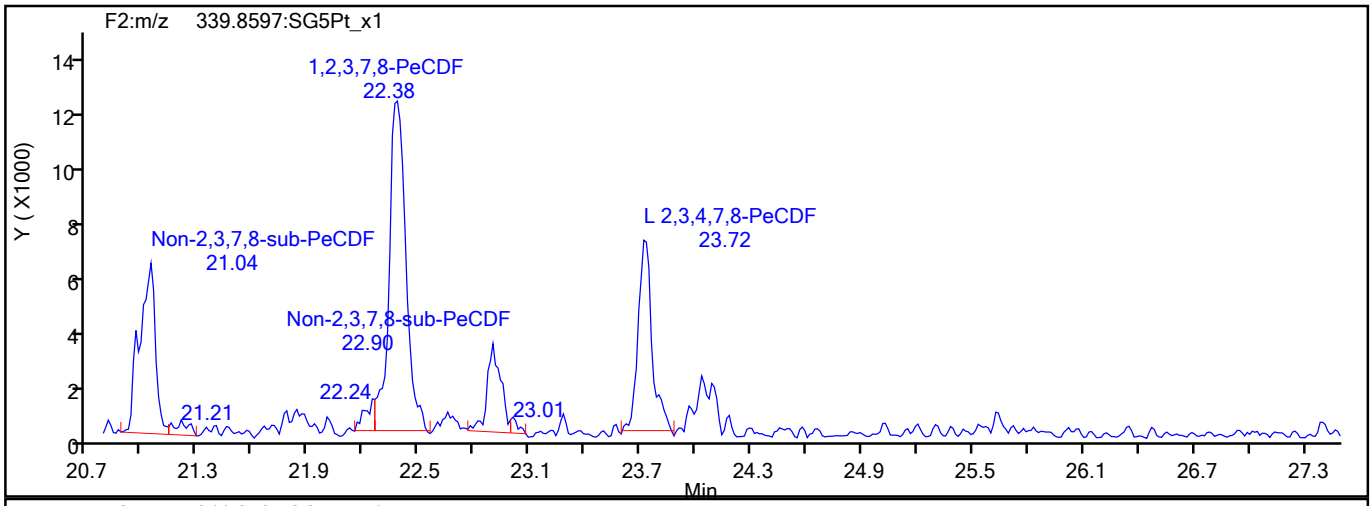

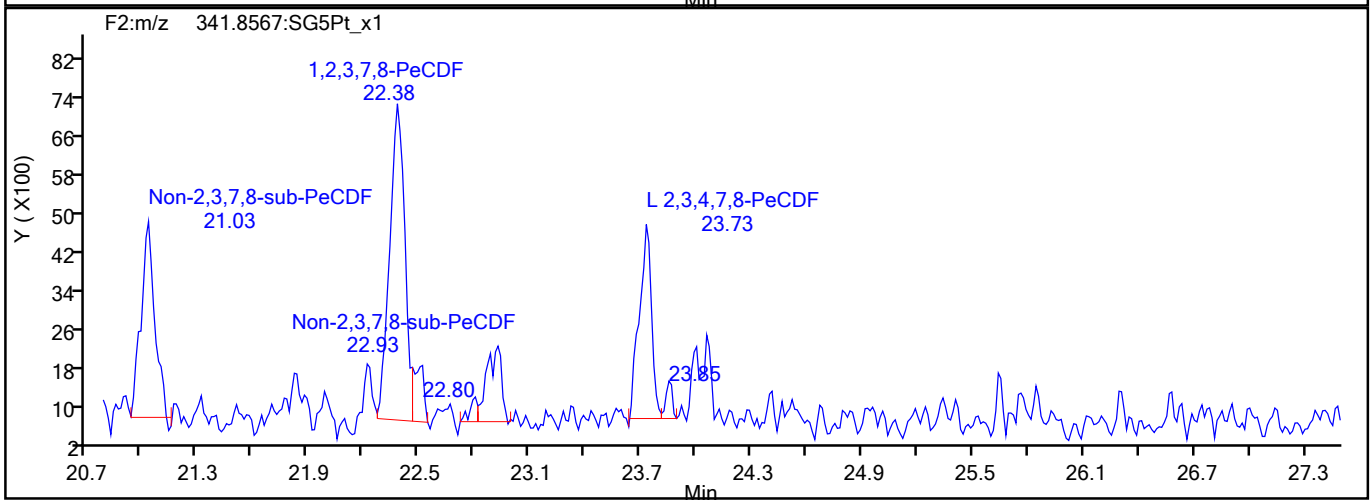

PeCDF Interference Mass

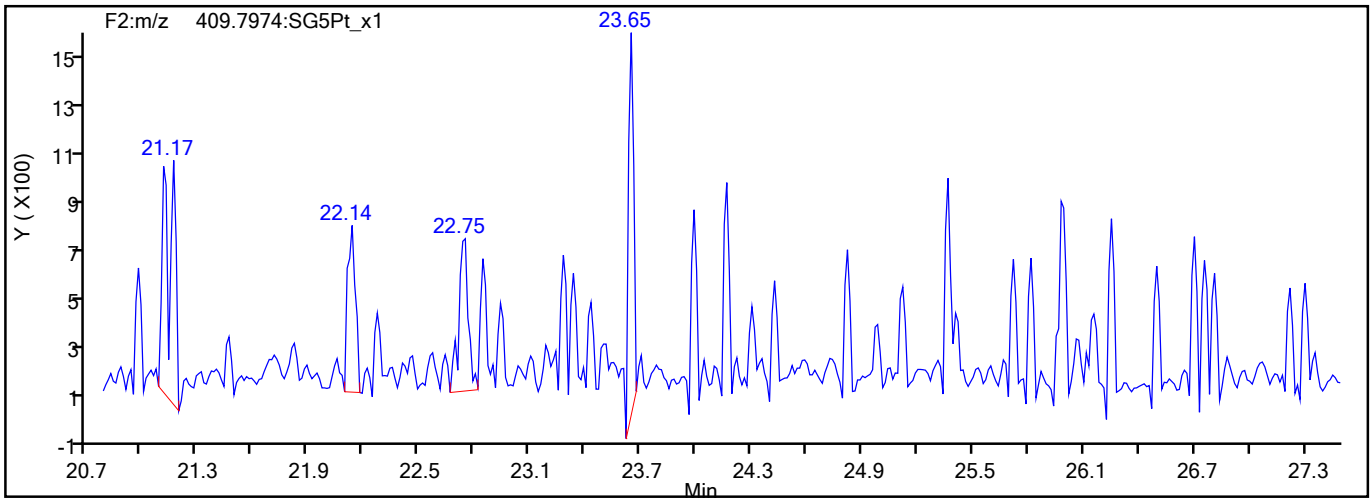

779577

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

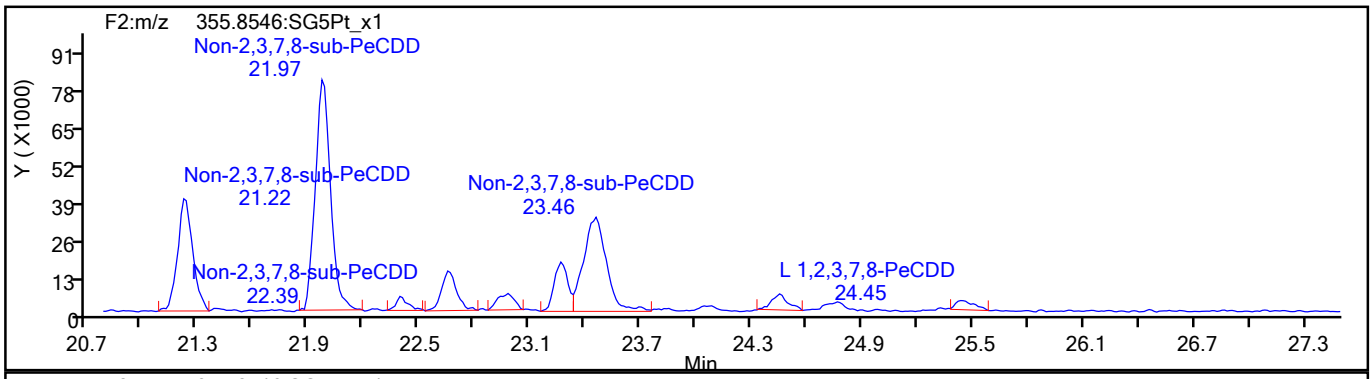

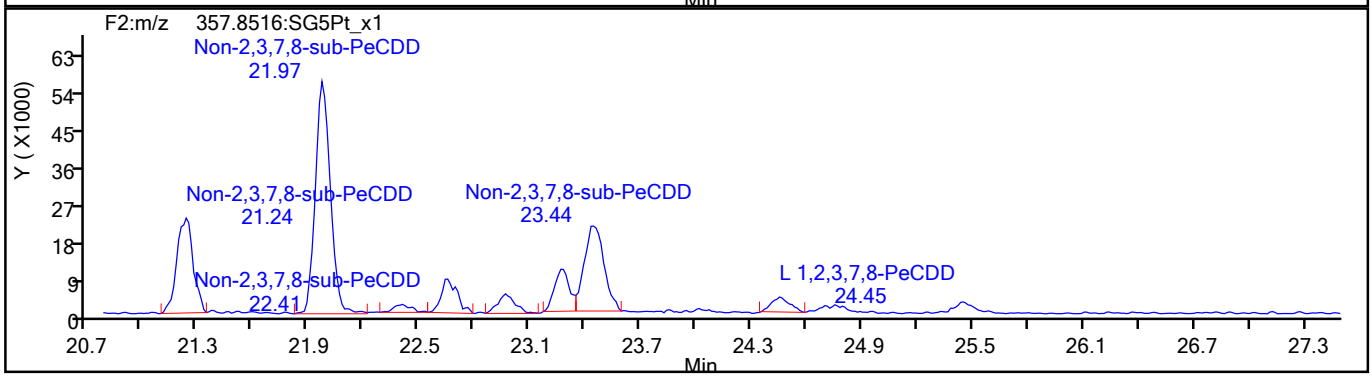

PeCDD Standards

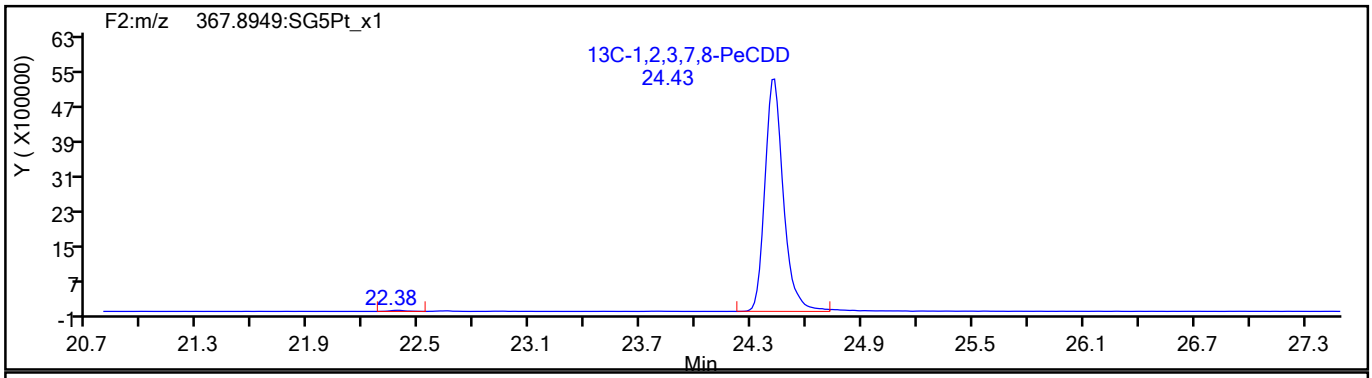

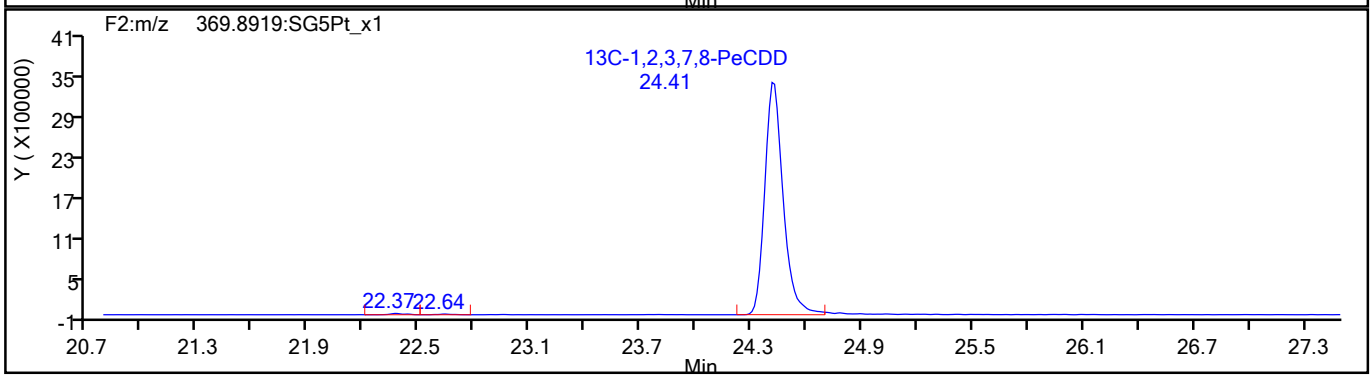

779578

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

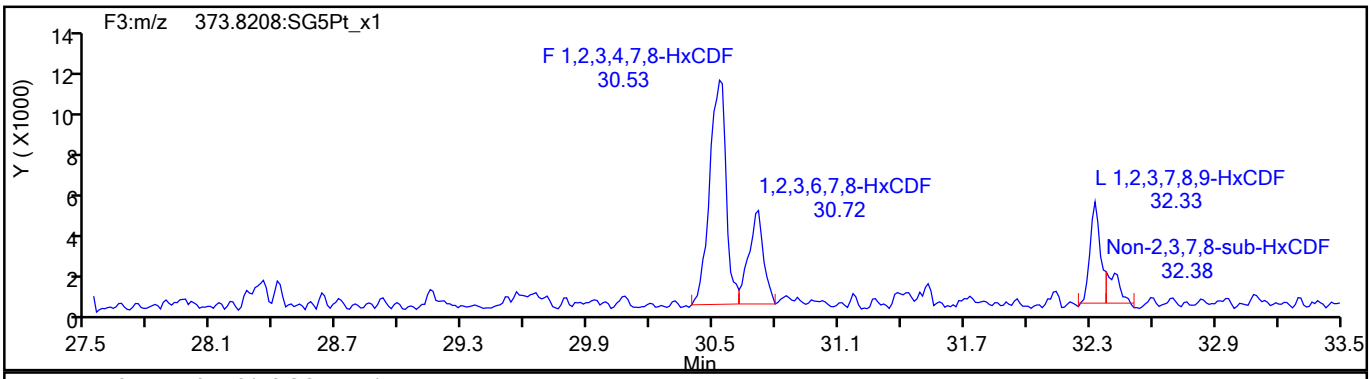

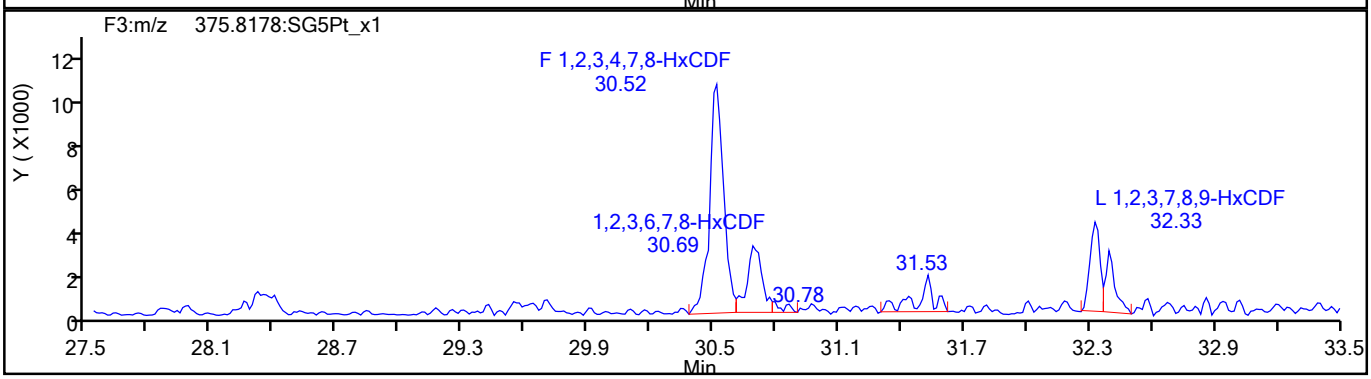

HxCDF Standards

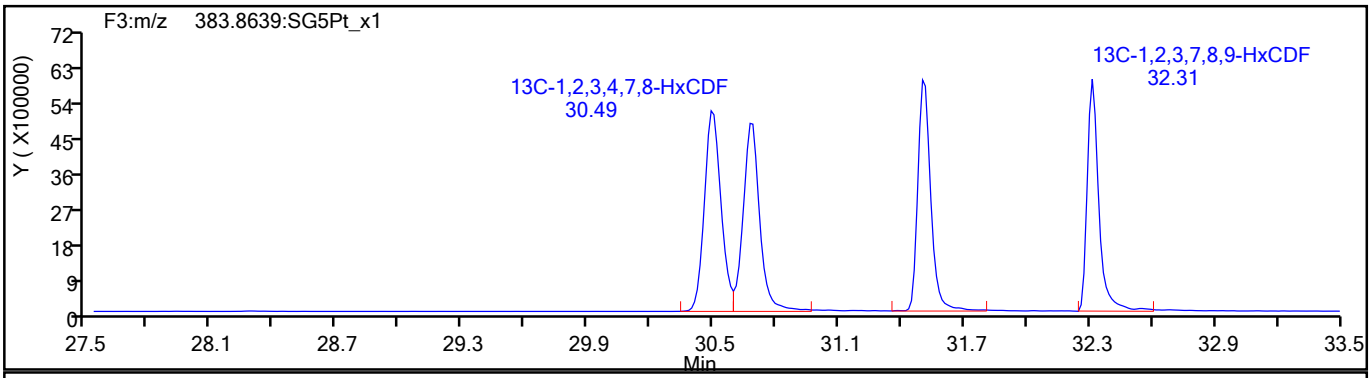

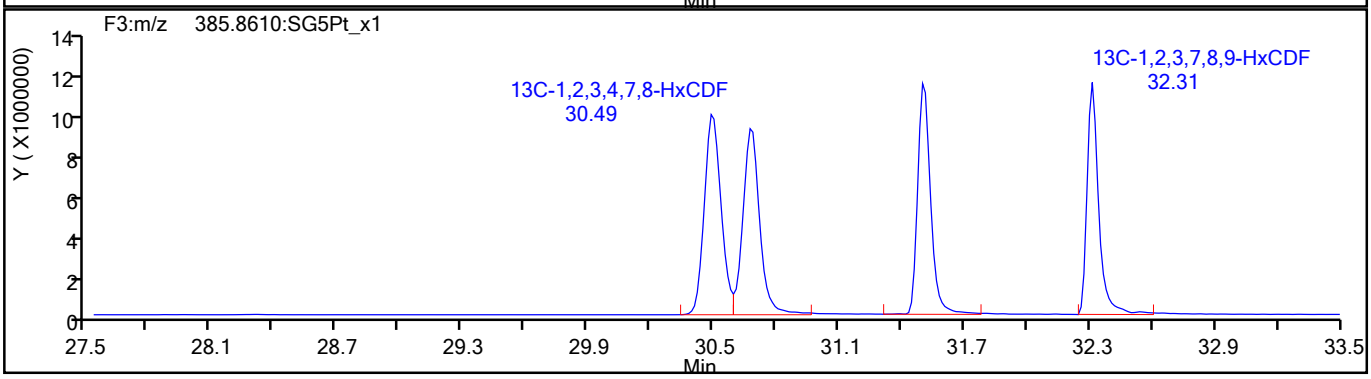

779579

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

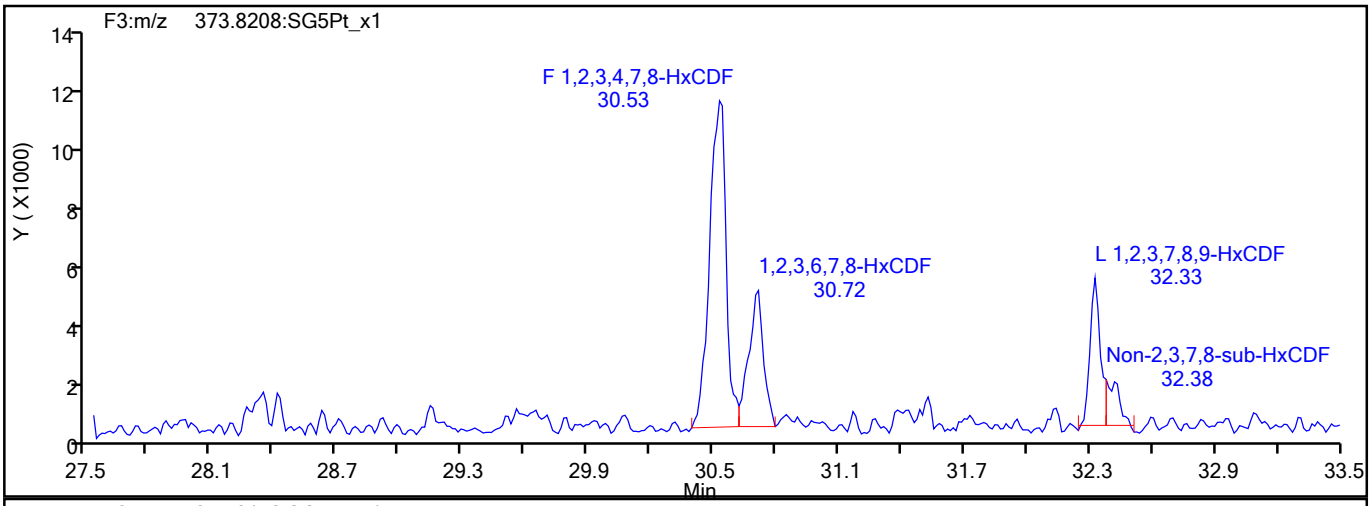

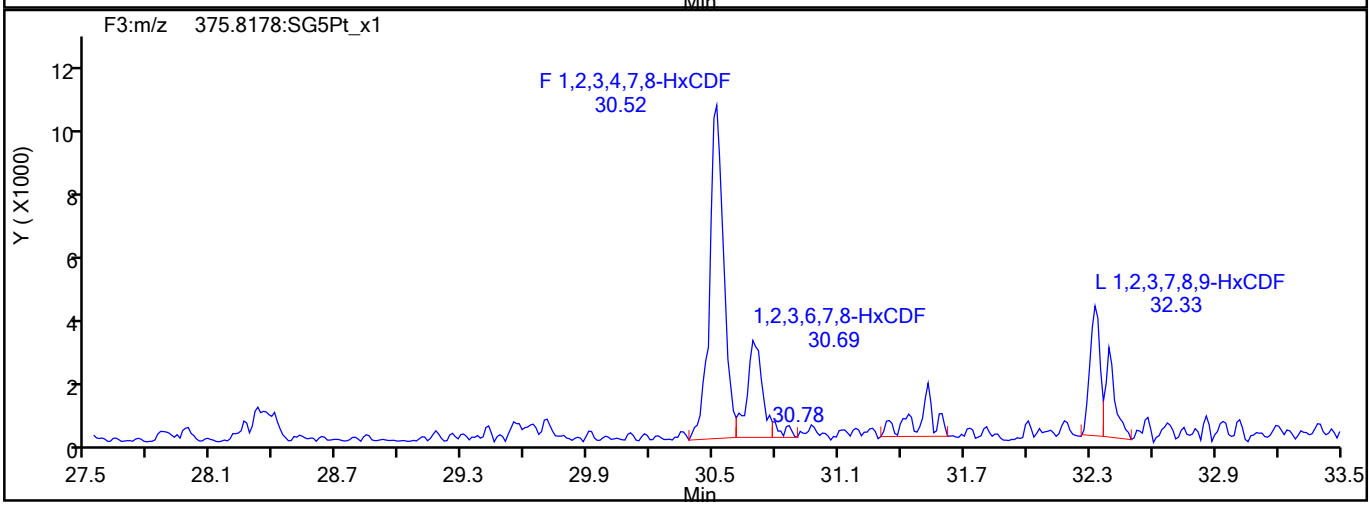

HxCDF Interference Mass

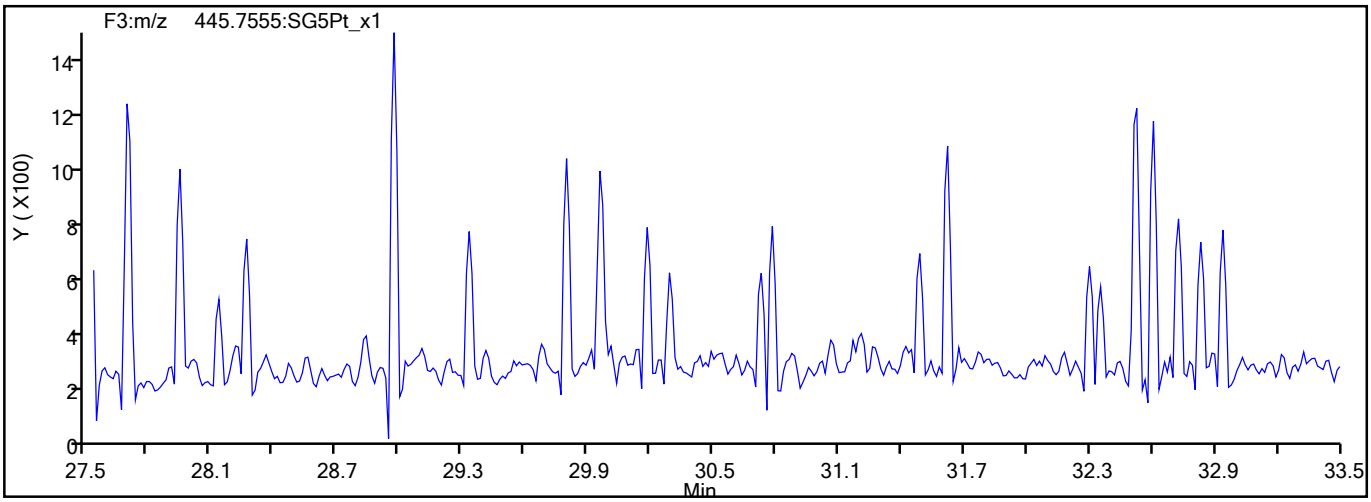

779580

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

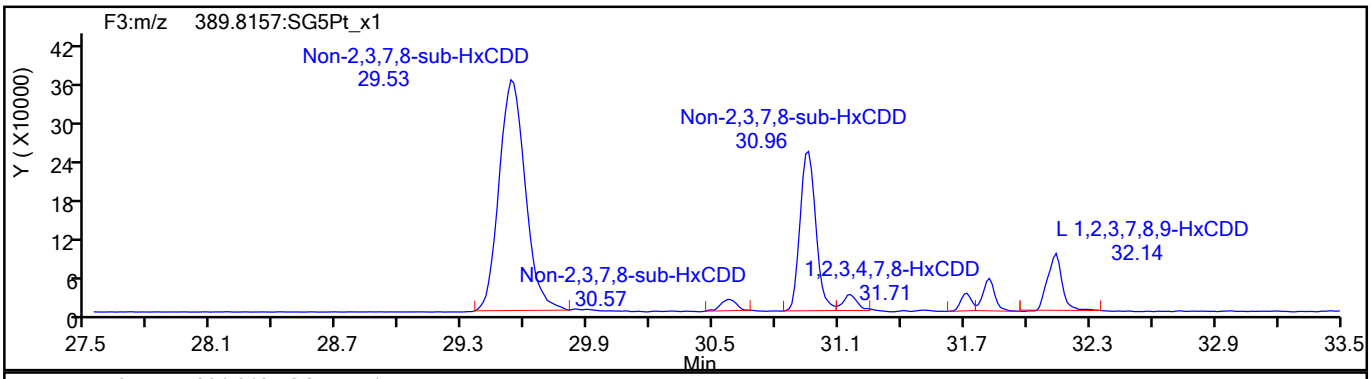

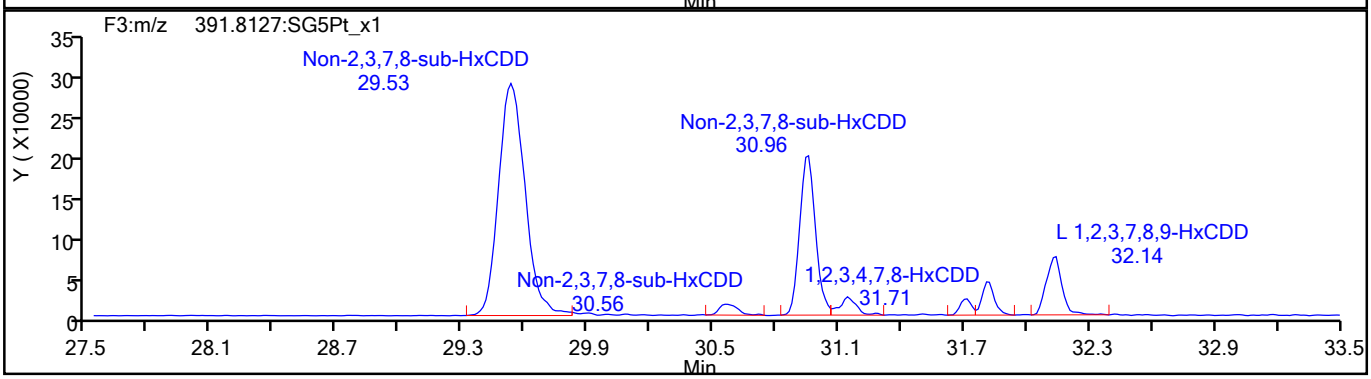

HxCDD Standards

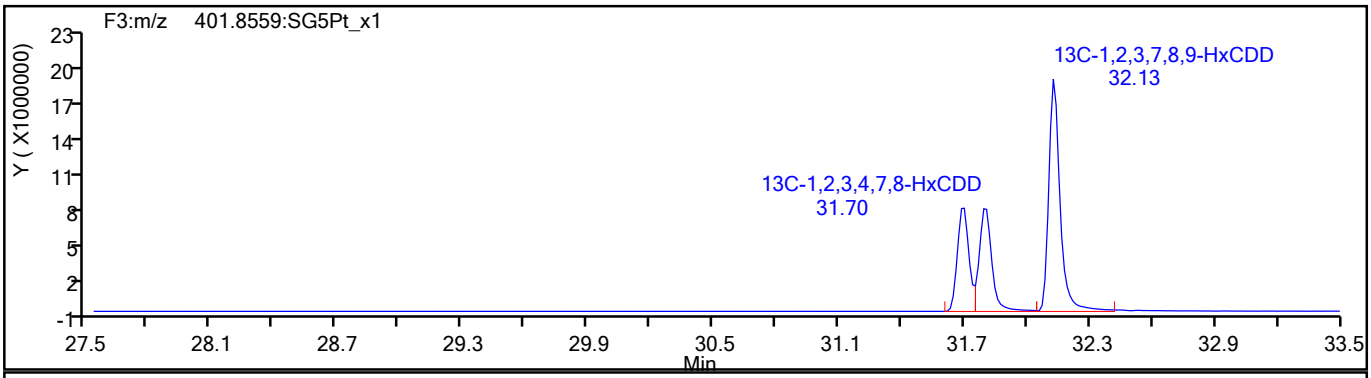

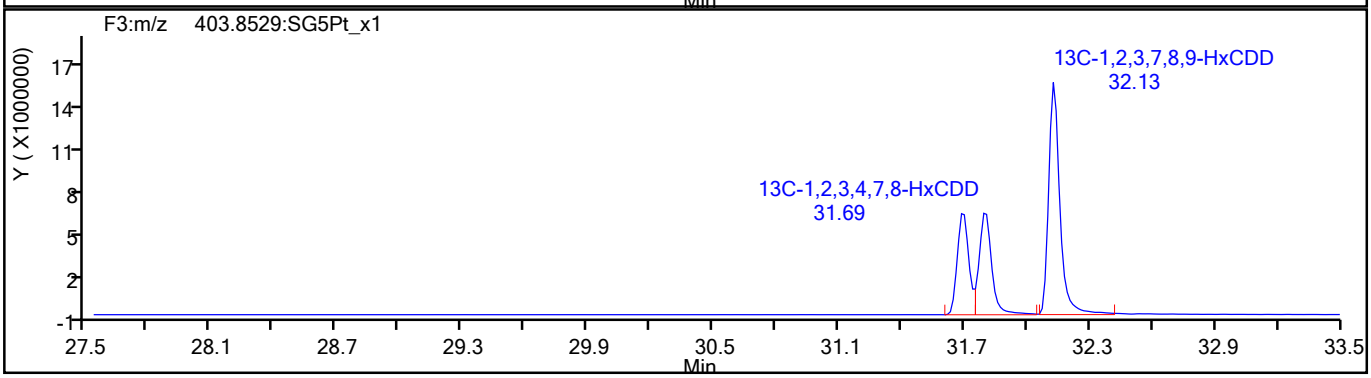

779581

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

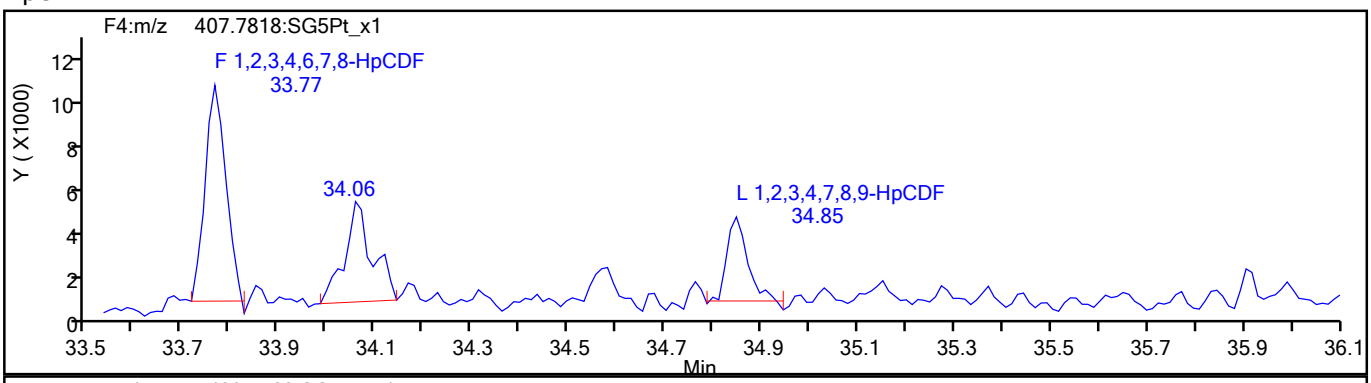

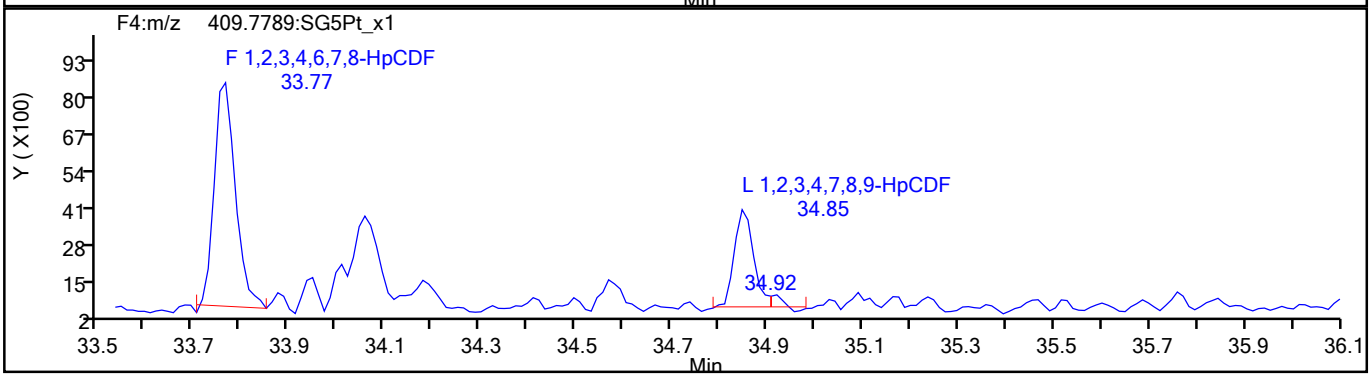

HpCDF Standards

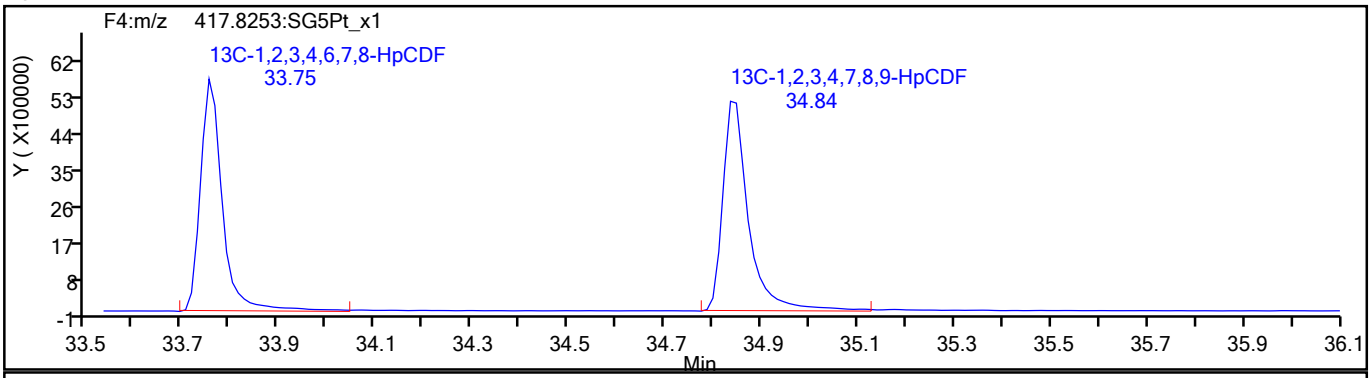

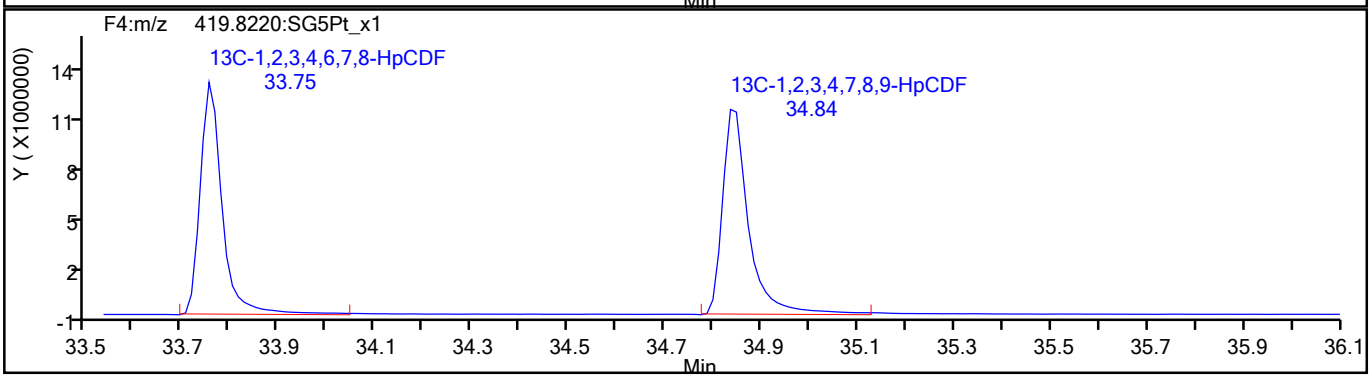

779582

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

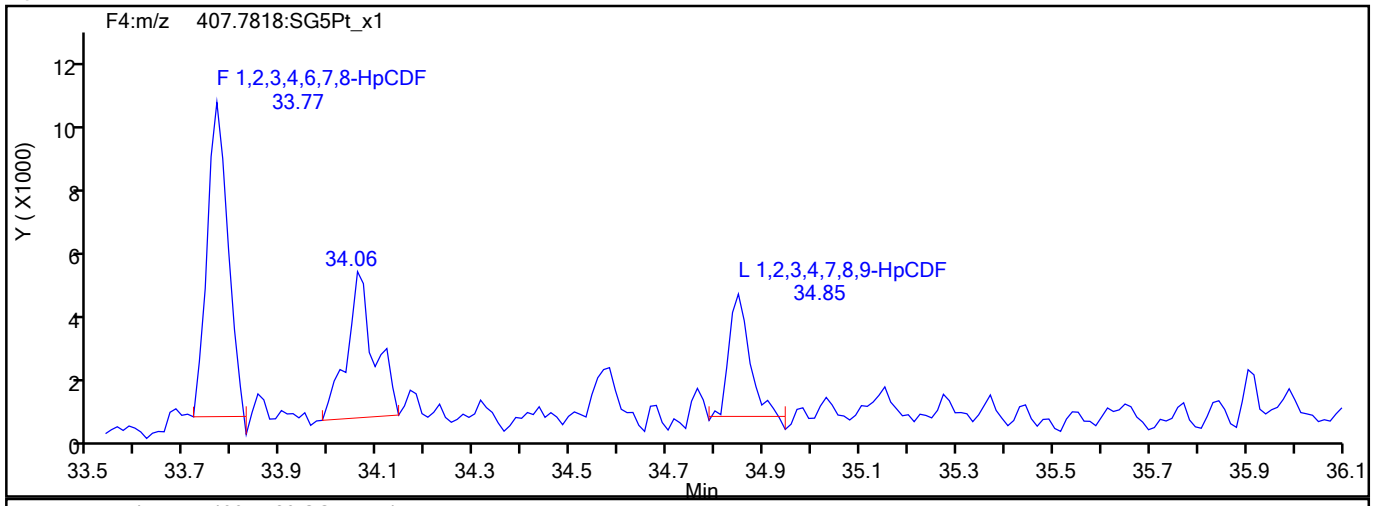

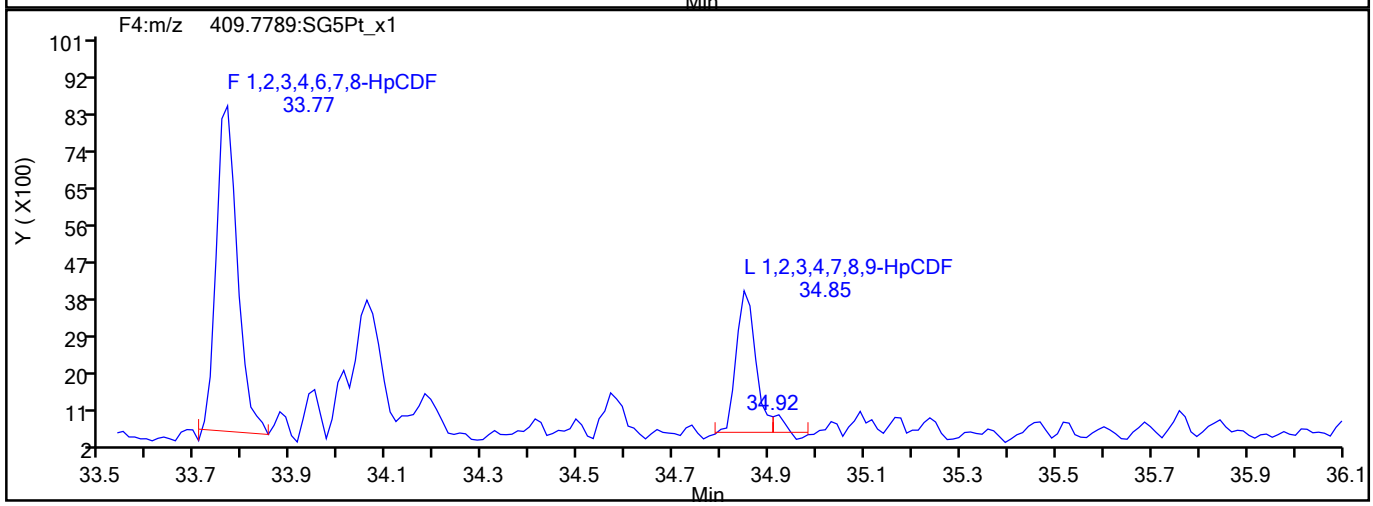

HpCDF Interference Mass

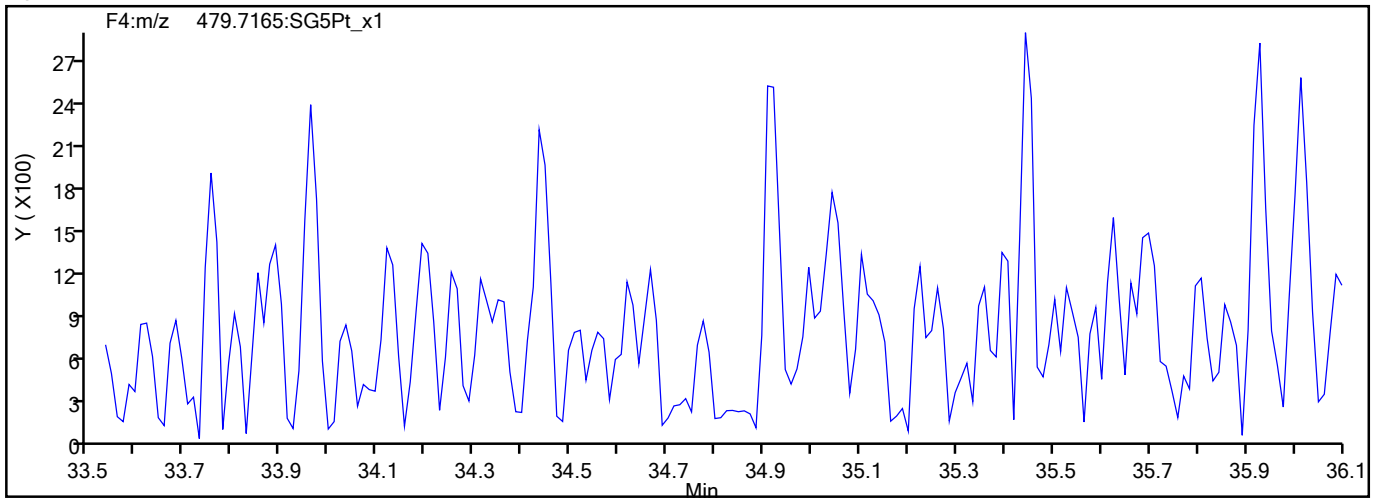

779583

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

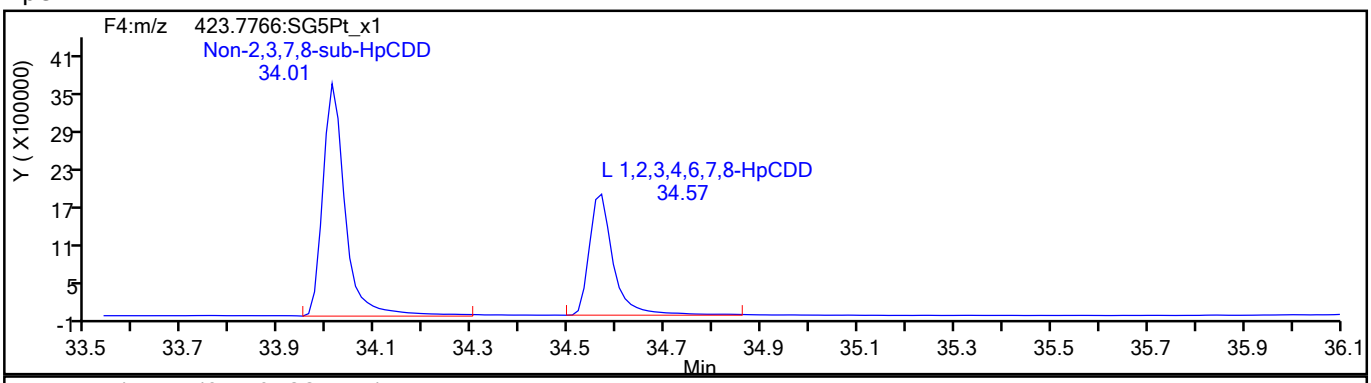

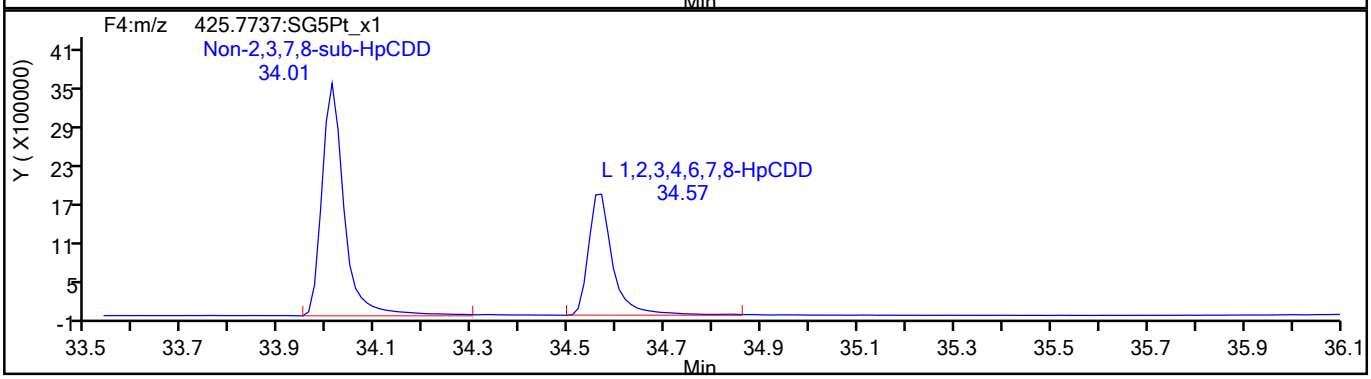

HpCDD Standards

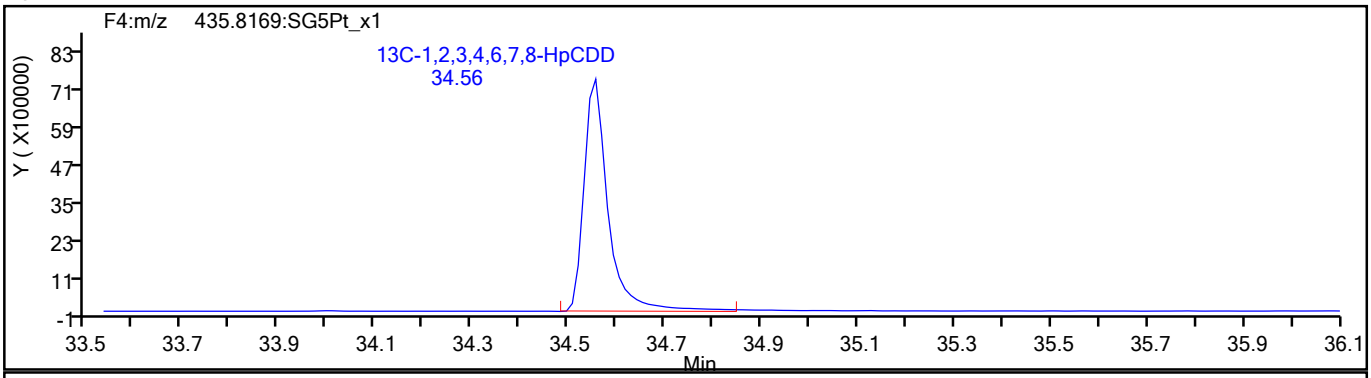

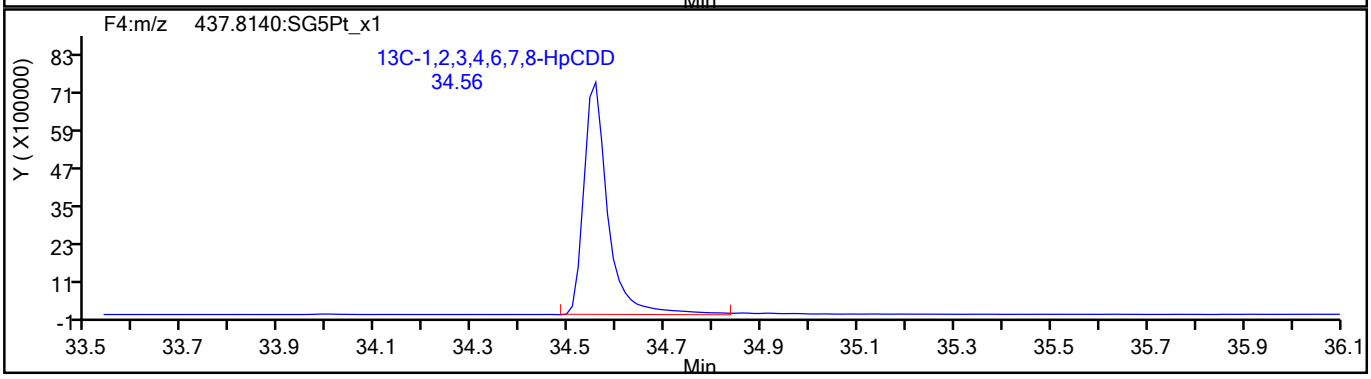

779584

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

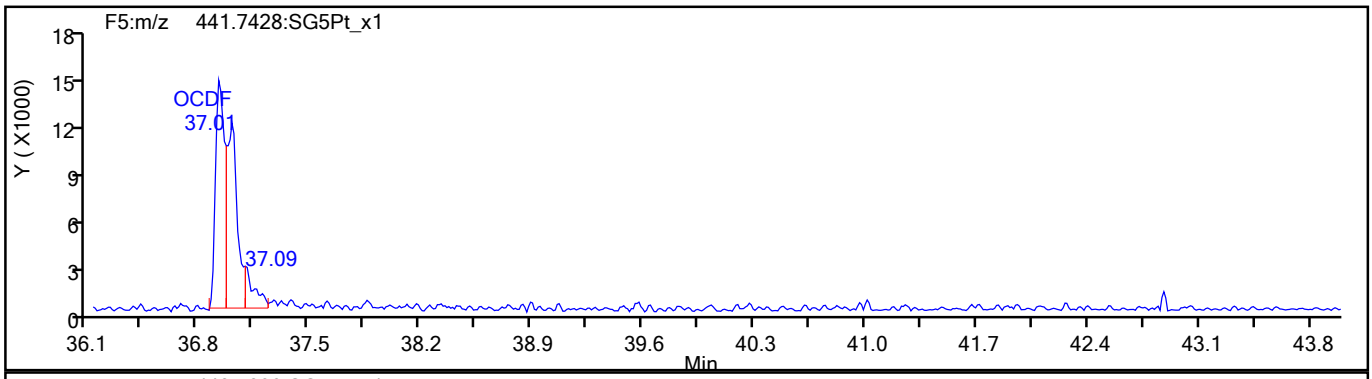

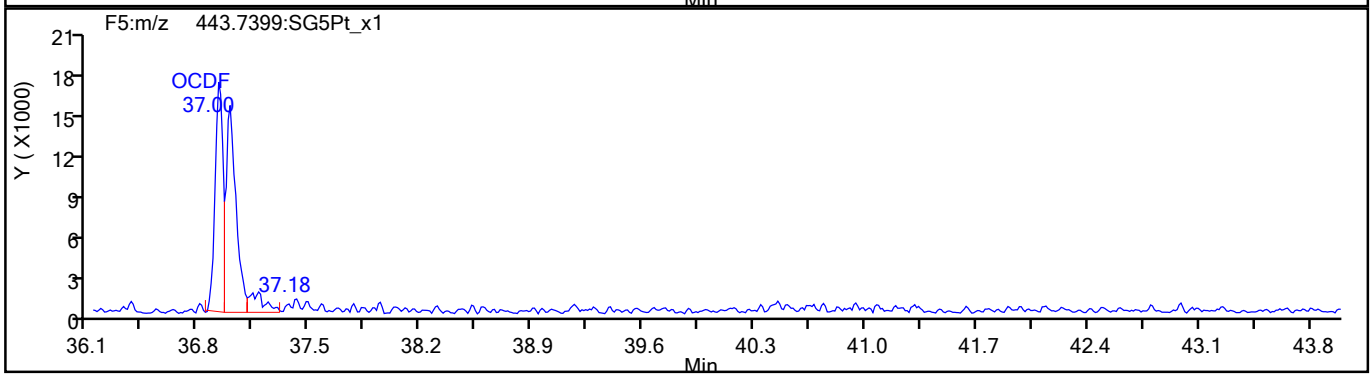

OCDF Standards

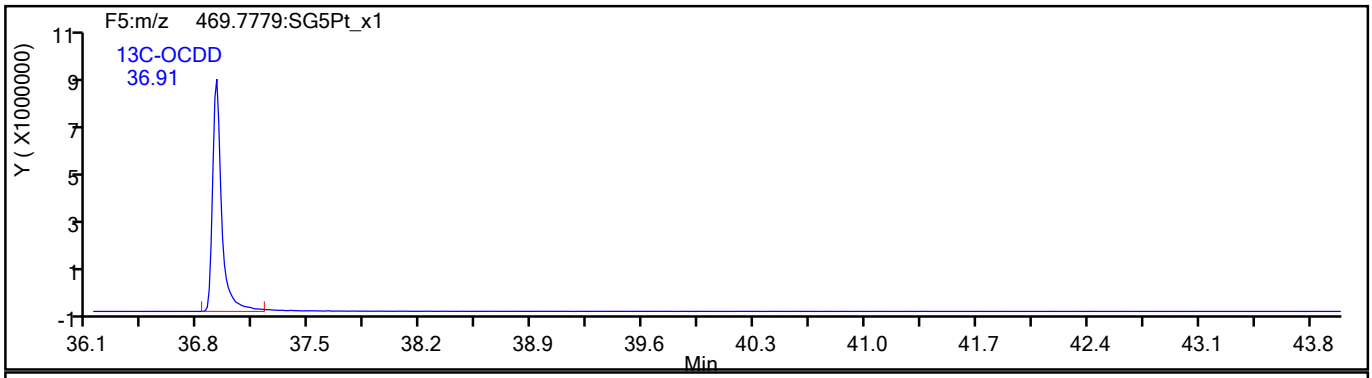

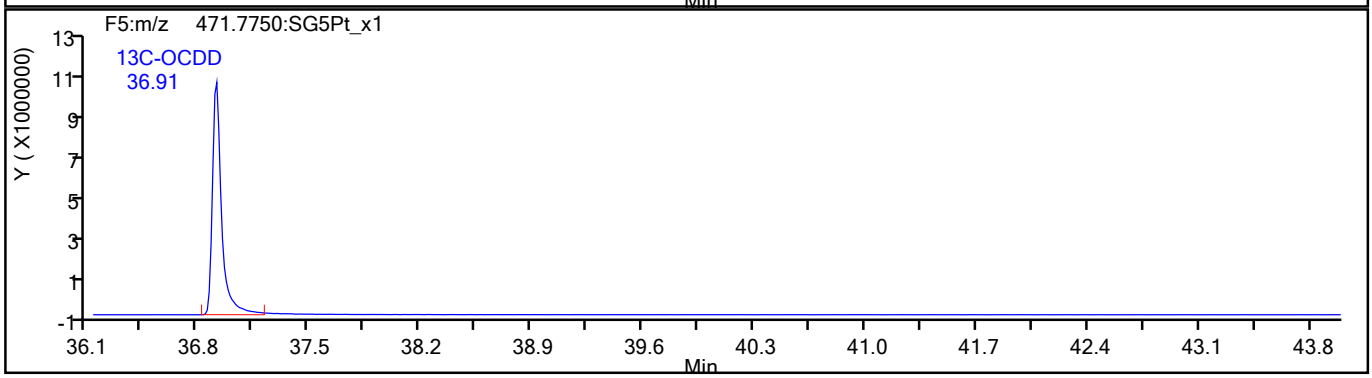

779585

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

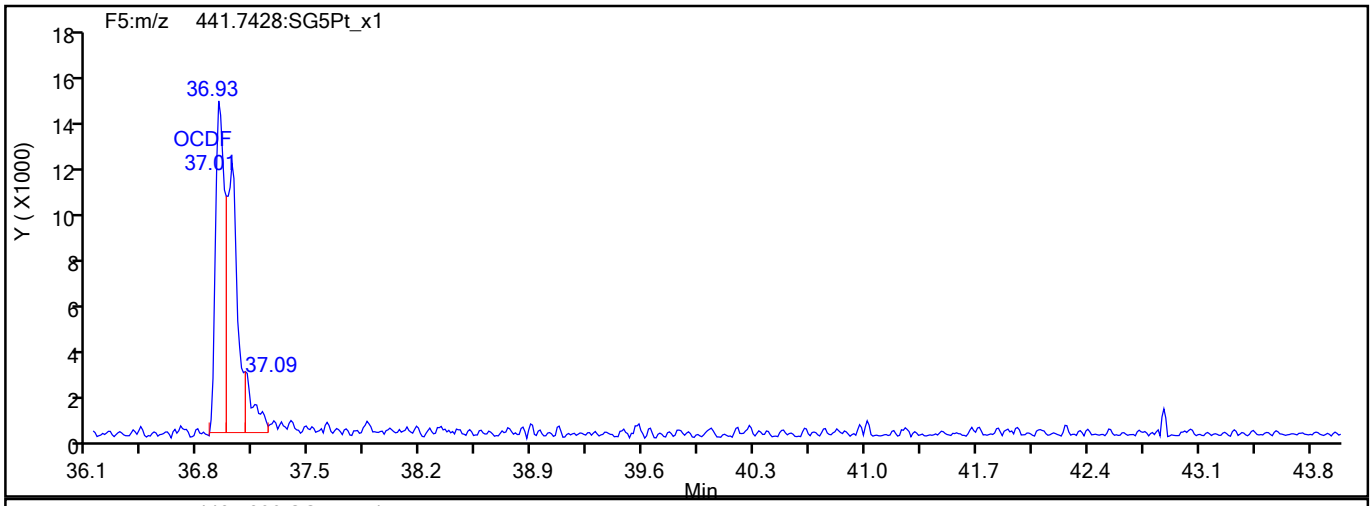

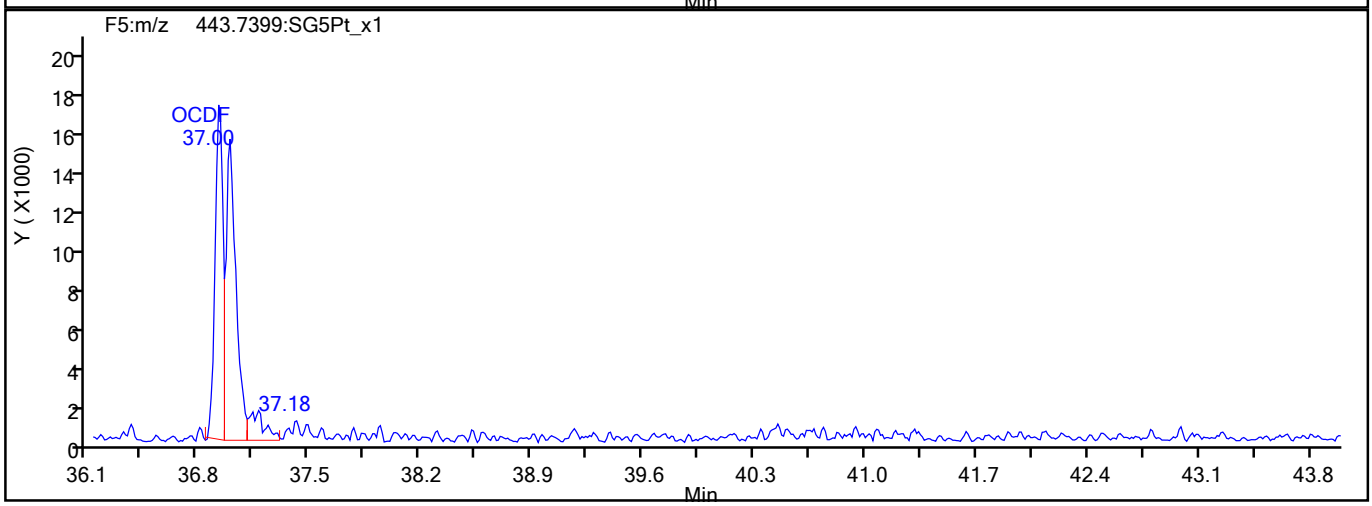

OCDF Interference Mass

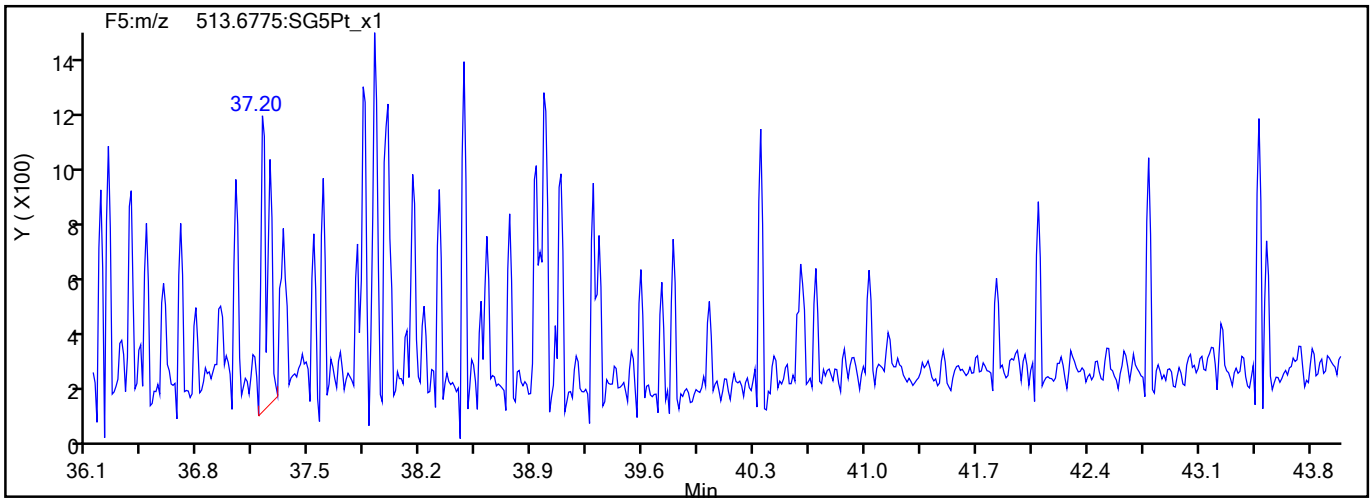

779586

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

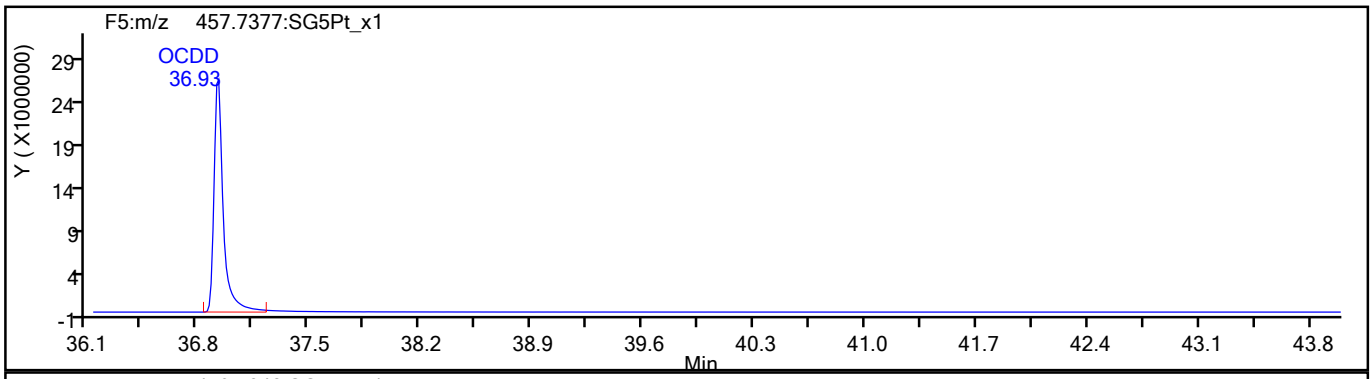

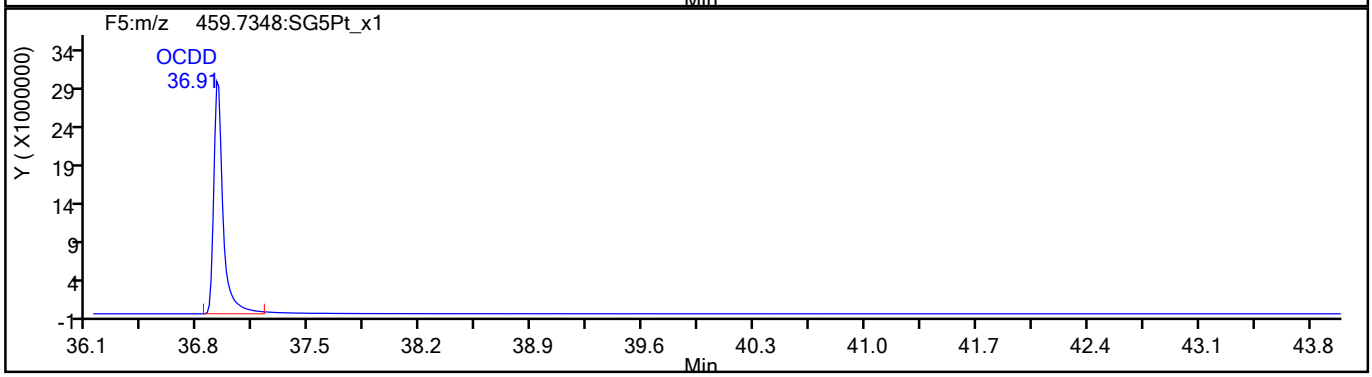

OCDD Standards

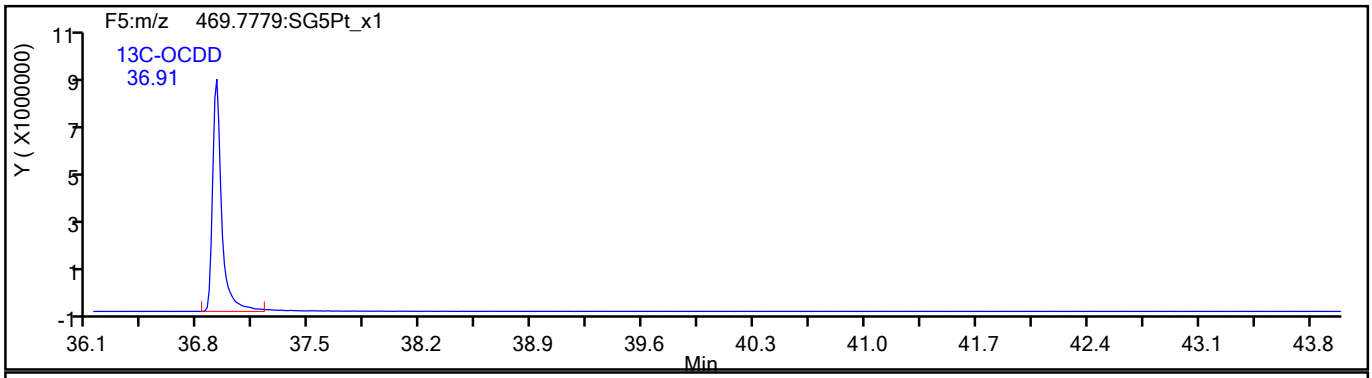

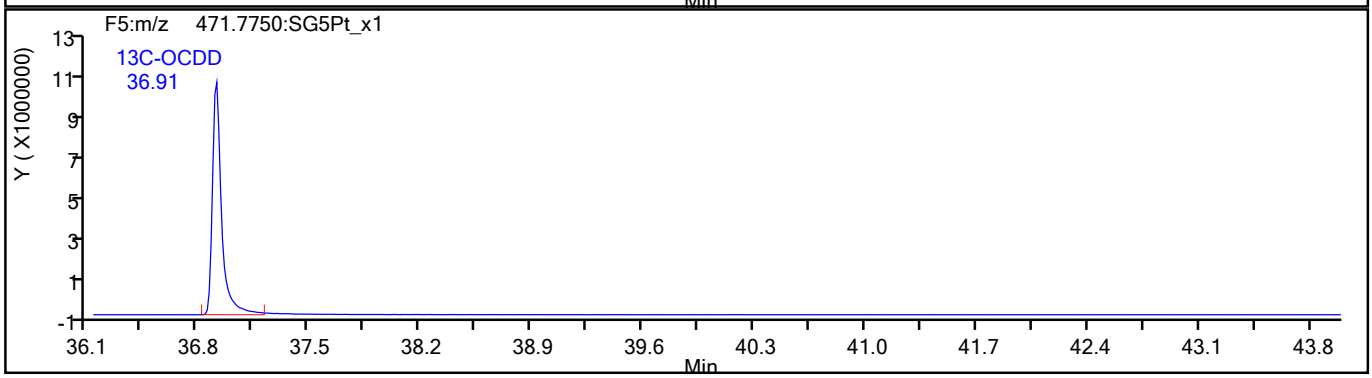

779587

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

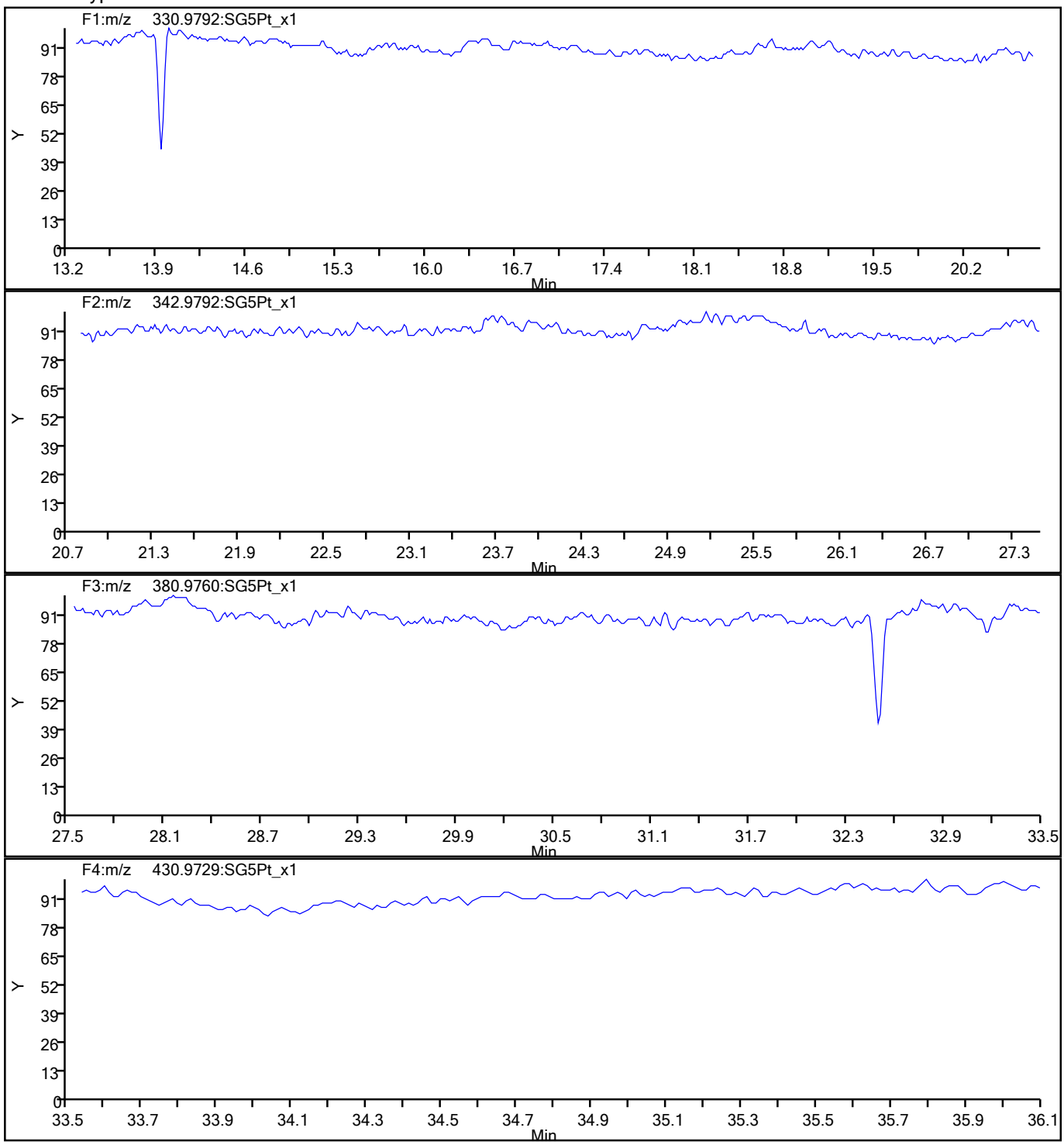

779588

Report Date: 18-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_22.d		
Injection Date:	14-Aug-2021 08:56:24	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	516836	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

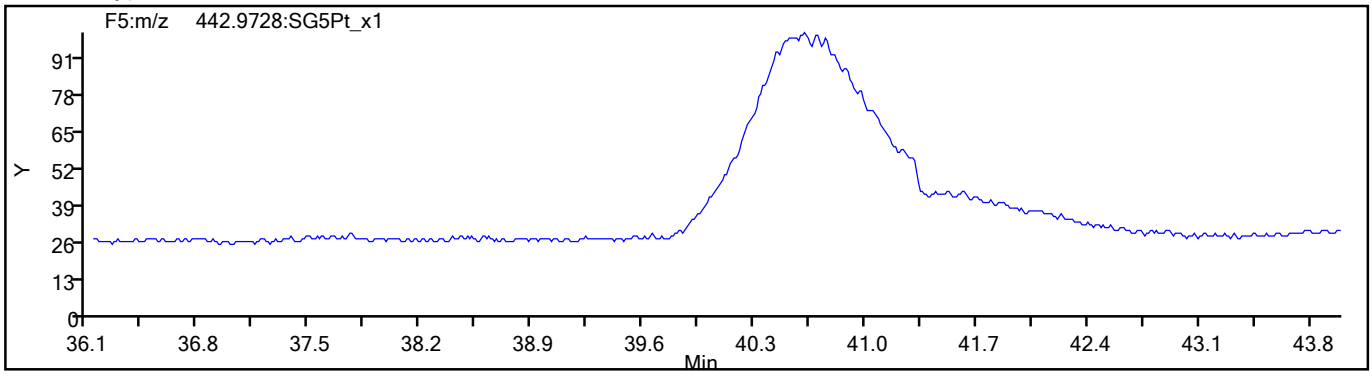

779589

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (12-14) RA
Lab Sample ID: 320-76788-7 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_005.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:30
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.84(g)
Date Analyzed: 08/24/2021 19:10
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 35.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	12	B	1.6	0.22

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	61		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	78		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_005.d
Lims ID: 320-76788-A-7-A
Client ID: 11215702-072321-BN-SJSB085 (12-14)
Sample Type: Client
Inject. Date: 24-Aug-2021 19:10:24 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-7-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:29:36

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.291	66319425	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.608	53785631	0.77	1.3327	60.9	60.9	0.2082	0.2082	60.86	
2,3,7,8-TCDF	17.622	2052915	0.80	0.9978	3.825	3.825	0.0690	0.0690		
D 13C-2,3,7,8-TCDD	16.058	33557213	0.76	0.8749	57.8	57.8	0.3399	0.3399	57.83	
$ 37Cl4-2,3,7,8-TCDD	16.072	17892223		0.8648	31.2	31.2	0.0913	0.0913	77.99	
2,3,7,8-TCDD	16.072	461494	0.82	1.0570	1.301	1.301	0.0767	0.0767		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_005.d
Lims ID: 320-76788-A-7-A
Client ID: 11215702-072321-BN-SJSB085 (12-14)
Sample Type: Client
Inject. Date: 24-Aug-2021 19:10:24 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-7-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:29:36

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.291	16.285	0		28587551	6320503	8072	20180	783		
333.9339	16.291	16.285	0		37731874	8251627	9260	23150	891	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.608	17.601	0	1.081	23414384	4466735	8429	21072	530		
317.9389	17.608	17.601	0	1.081	30371247	5911866	7742	19355	764	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.622	17.629	0	1.001	910066	168236	1445	3612	116		
305.8987	17.635	17.629	0	1.002	1142849	226230	1415	3537	160	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.058	16.051	0	0.986	14475781	3383343	8072	20180	419		
333.9339	16.058	16.051	0	0.986	19081432	4225989	9260	23150	456	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.072	16.065	0	0.987	17892223	3969710	4602	11505	863		
2,3,7,8-TCDD											
319.8965	16.072	16.079	0	1.001	207298	47956	1328	3320	36		
321.8936	16.072	16.079	0	1.001	254196	57116	1139	2847	50	0.82(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 25-Aug-2021 09:02:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_005.d		
Injection Date:	24-Aug-2021 19:10:24	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	519540	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

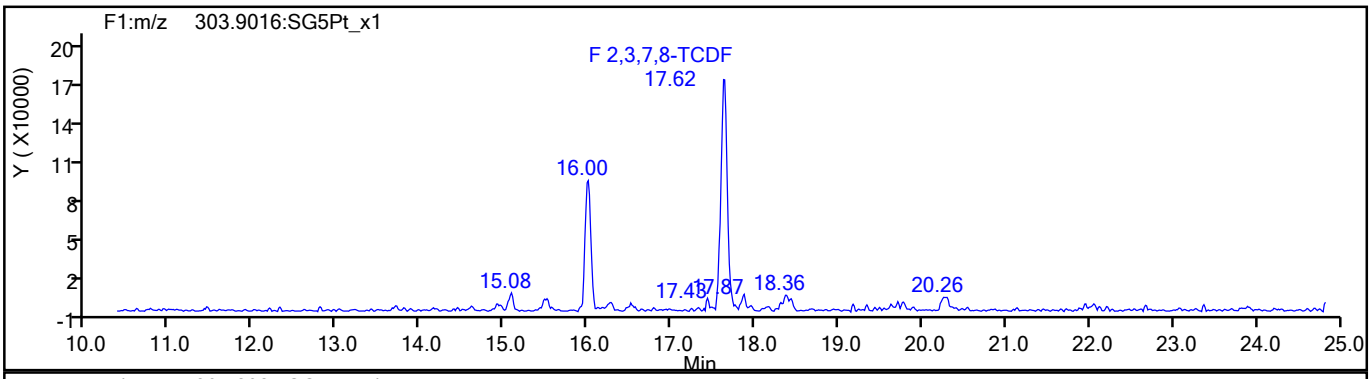

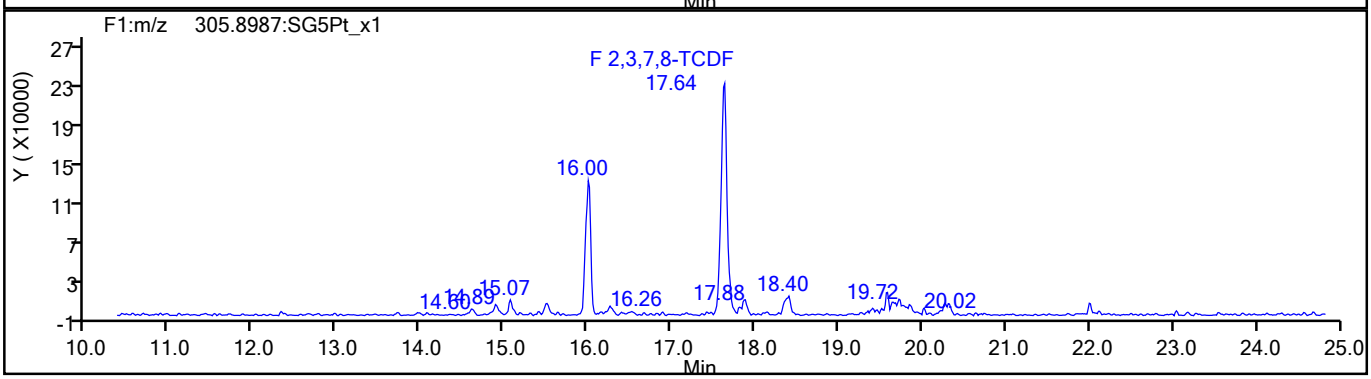

TCDF Standards

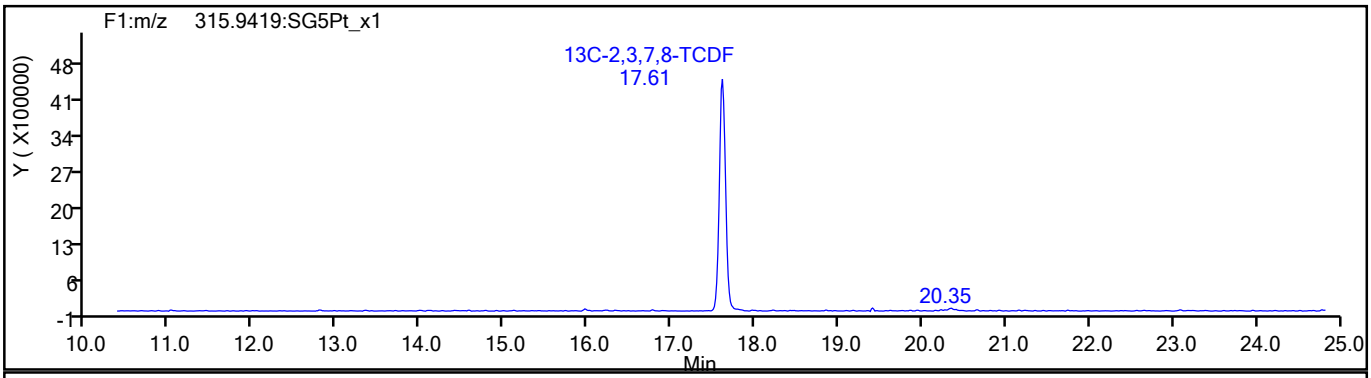

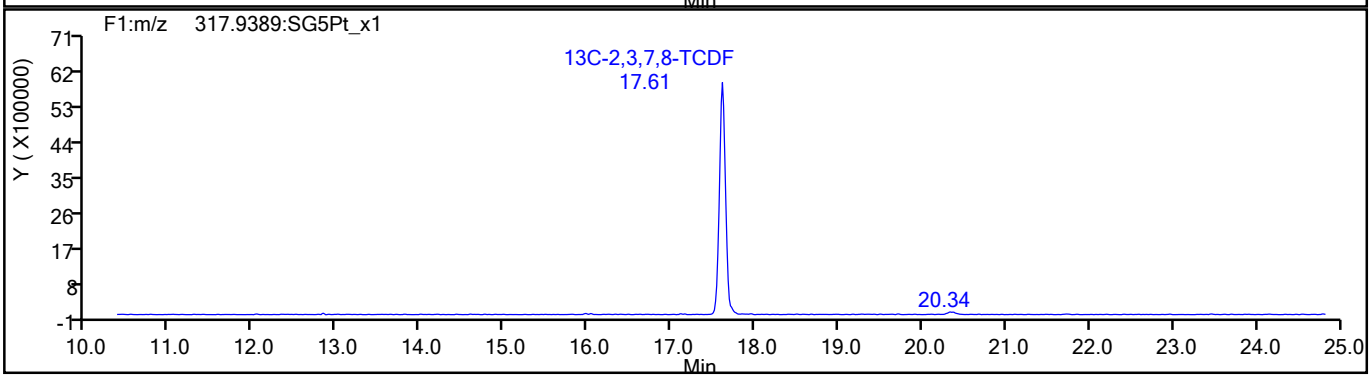

779593

Report Date: 25-Aug-2021 09:02:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_005.d		
Injection Date:	24-Aug-2021 19:10:24	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	519540	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

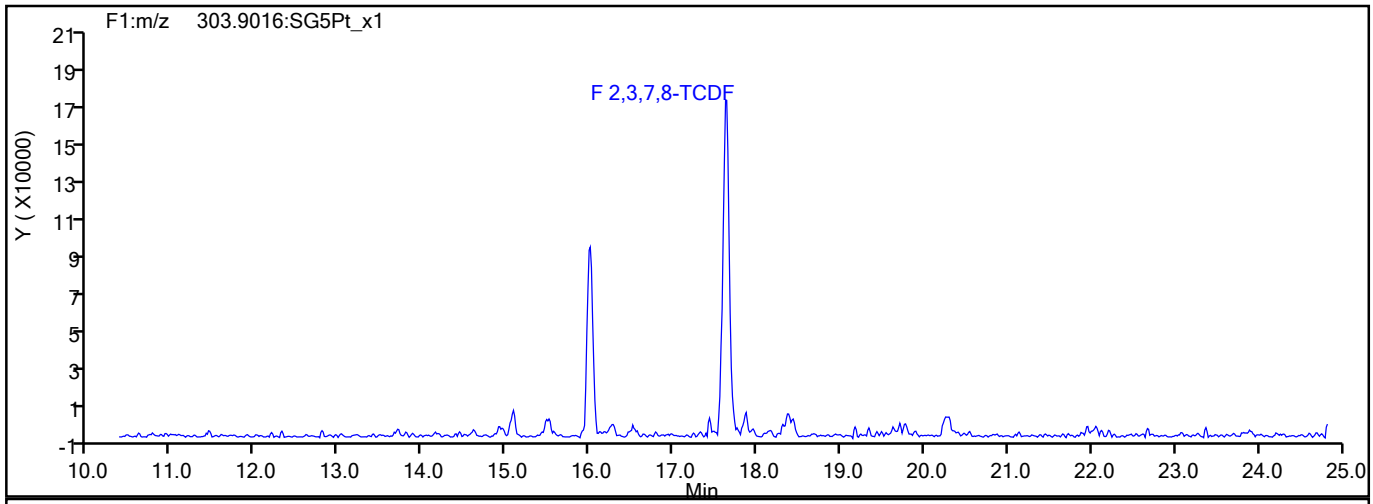

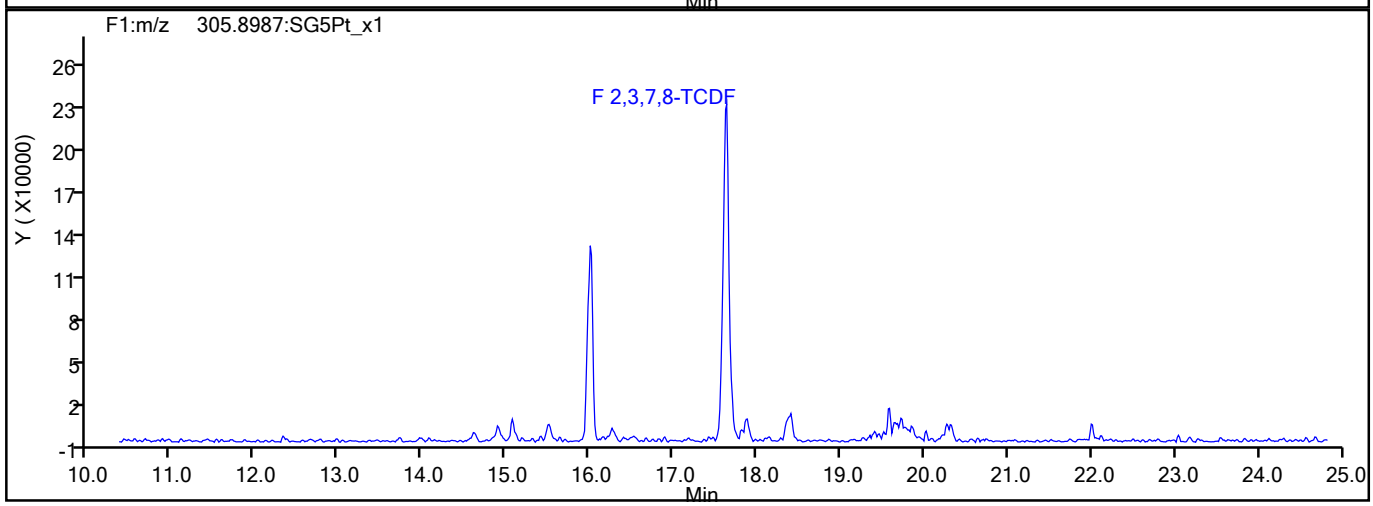

TCDF Interference Mass

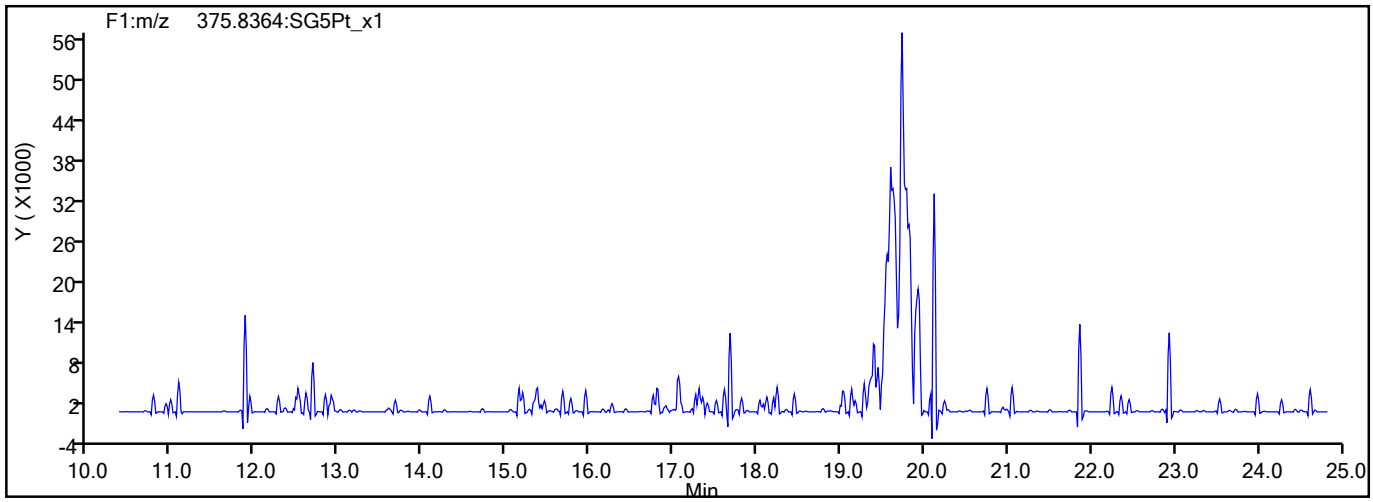

779594

Report Date: 25-Aug-2021 09:02:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_005.d		
Injection Date:	24-Aug-2021 19:10:24	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	519540	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

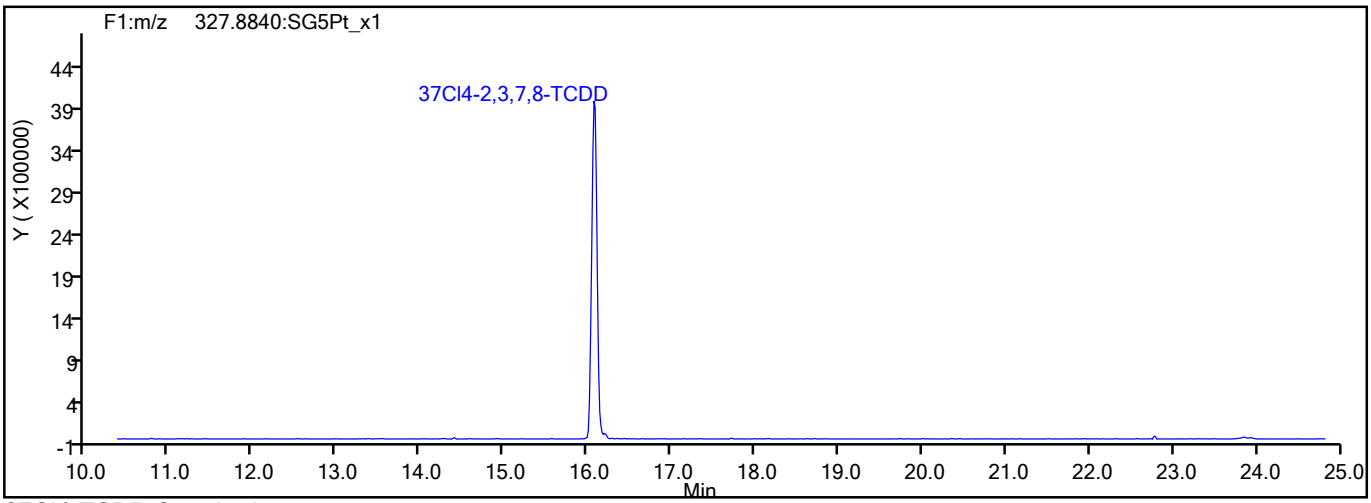

37Cl4-TCDD Standards

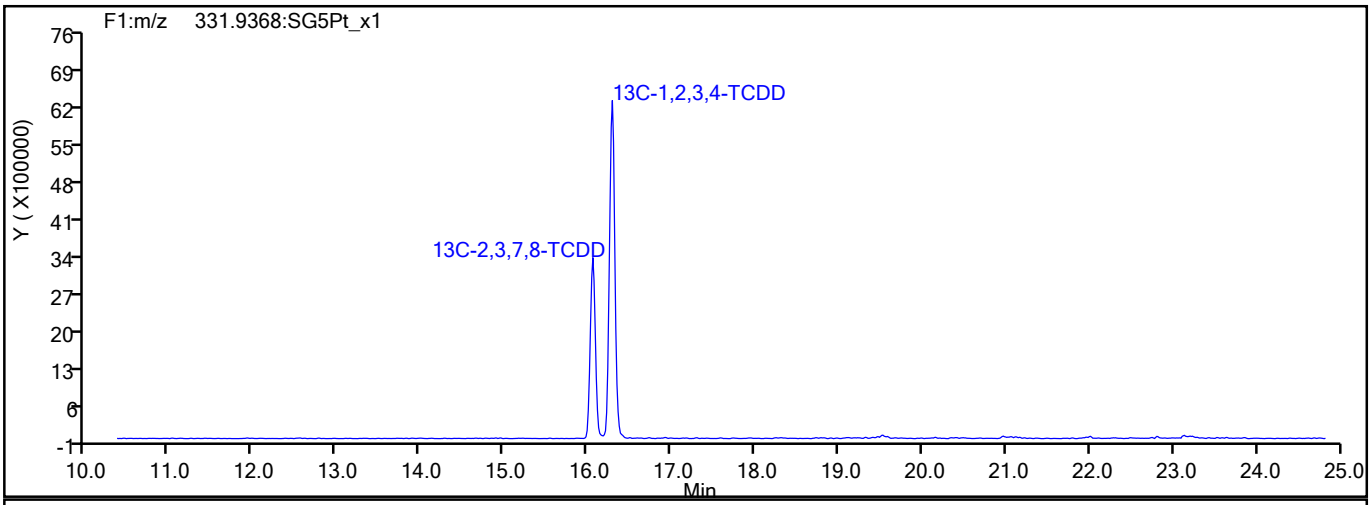

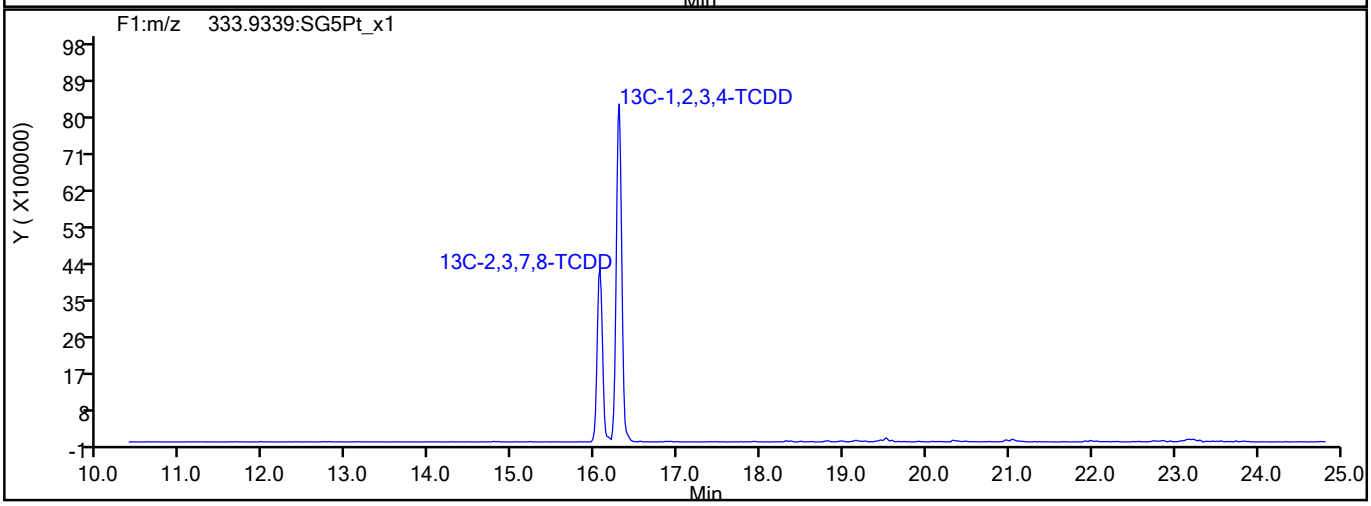

779595

Report Date: 25-Aug-2021 09:02:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_005.d		
Injection Date:	24-Aug-2021 19:10:24	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (12-14)		
Worklist#:	519540	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

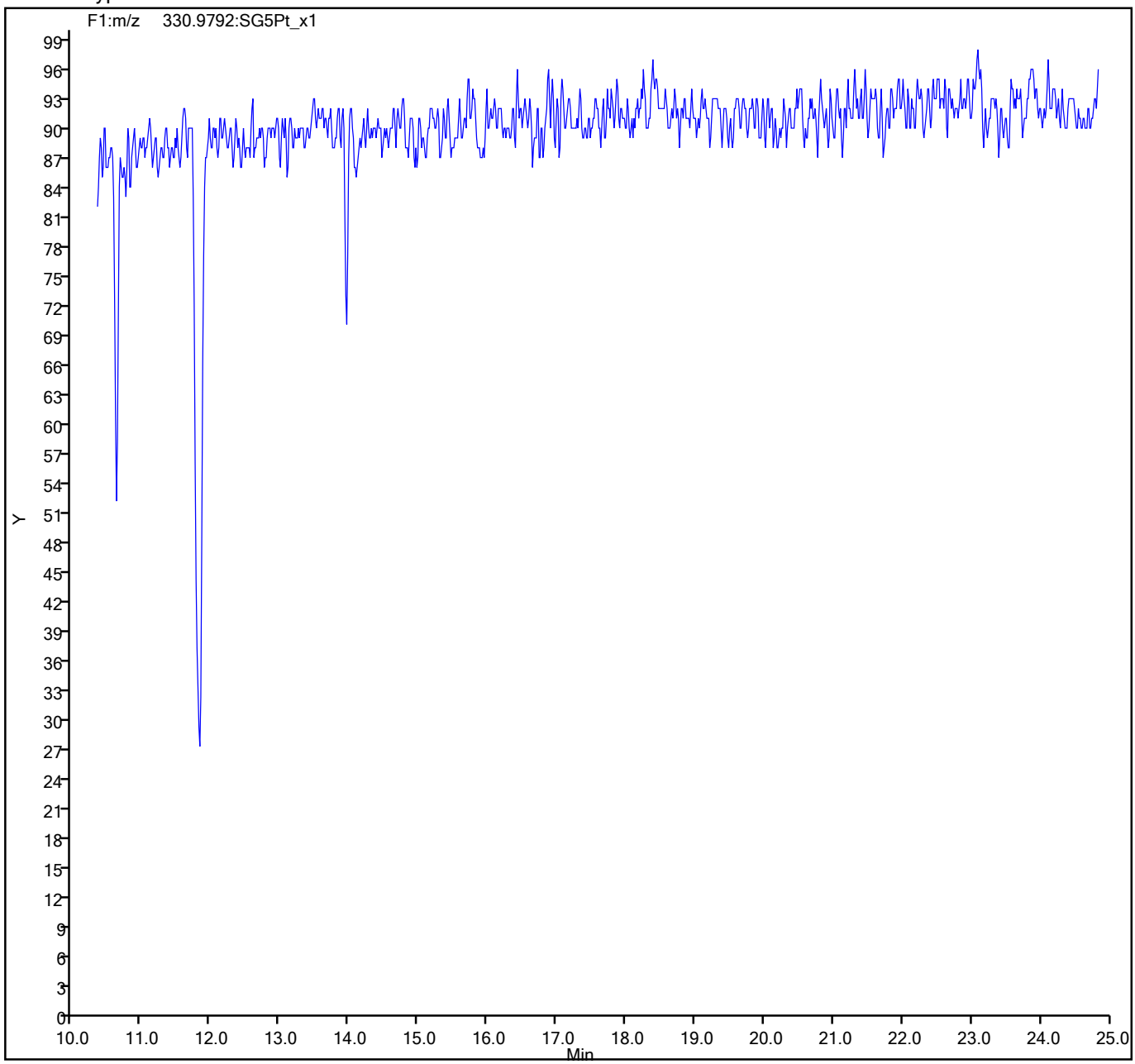

779596

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (14-16)
Lab Sample ID: 320-76788-8
Matrix: Solid
Lab File ID: 13AU2110D5_29.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:35
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.78(g)
Date Analyzed: 08/14/2021 14:31
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 39.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	6.3	B	1.7	0.11
40321-76-4	1,2,3,7,8-PeCDD	0.37	J	8.4	0.13
57117-41-6	1,2,3,7,8-PeCDF	0.70	J	8.4	0.048
57117-31-4	2,3,4,7,8-PeCDF	0.33	J q	8.4	0.049
39227-28-6	1,2,3,4,7,8-HxCDD	0.73	J B	8.4	0.30
57653-85-7	1,2,3,6,7,8-HxCDD	1.6	J q	8.4	0.30
19408-74-3	1,2,3,7,8,9-HxCDD	3.6	J	8.4	0.27
70648-26-9	1,2,3,4,7,8-HxCDF	0.86	J B	8.4	0.047
57117-44-9	1,2,3,6,7,8-HxCDF	0.26	J B	8.4	0.047
72918-21-9	1,2,3,7,8,9-HxCDF	0.16	J B	8.4	0.040
60851-34-5	2,3,4,6,7,8-HxCDF	0.10	J	8.4	0.039
35822-46-9	1,2,3,4,6,7,8-HpCDD	66	B	8.4	1.5
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.85	J B	8.4	0.053
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.20	J B q	8.4	0.067
3268-87-9	OCDD	1600	B	17	2.1
39001-02-0	OCDF	1.8	J B	17	0.032
41903-57-5	Total TCDD	13	B q	1.7	0.11
30402-14-3	Total TCDF	38	B	1.7	0.12
36088-22-9	Total PeCDD	9.3	q	8.4	0.13
30402-15-4	Total PeCDF	1.5	J q	8.4	0.048
34465-46-8	Total HxCDD	46	B q	8.4	0.29
55684-94-1	Total HxCDF	1.4	J B	8.4	0.043
37871-00-4	Total HpCDD	190	B	8.4	1.5
38998-75-3	Total HpCDF	1.1	J B q	8.4	0.060

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (14-16)
Lab Sample ID: 320-76788-8
Matrix: Solid
Lab File ID: 13AU2110D5_29.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:35
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.78(g)
Date Analyzed: 08/14/2021 14:31
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 39.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	63		25-164
89059-46-1	13C-2,3,7,8-TCDF	61		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	62		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	59		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	64		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	63		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	62		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	64		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	59		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	58		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	58		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	70		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	70		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	76		26-138
114423-97-1	13C-OCDD	79		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	78		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d
Lims ID: 320-76788-A-8-A
Client ID: 11215702-072321-BN-SJSB085 (14-16)
Sample Type: Client
Inject. Date: 14-Aug-2021 14:31:36 ALS Bottle#: 29 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-8-a 320-76788-a-8-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:36:45 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 14:02:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	83167011	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	82477296	0.78	1.6249	61.0	61.0	0.0710	0.0710	61.03	
2,3,7,8-TCDF	17.356	5417091	0.78	1.0239	6.415	6.415	0.0344	0.0344		
A Non-2,3,7,8-sub-TCDF	17.046	4113993	0.75	1.0239	4.872	4.872	0.0344	2.844		
S Total TCDF					11.3	11.3	0.0344	0.0344		
D 13C-2,3,7,8-TCDD	18.051	47219618	0.82	0.8993	63.1	63.1	0.1226	0.1226	63.13	
2,3,7,8-TCDD	18.066	1114002	0.71	1.2541	1.881	1.881	0.0320	0.0320		
$ 37Cl4-2,3,7,8-TCDD	18.066	28891188		1.1071	31.4	31.4	0.0250	0.0250	78.44	
A Non-2,3,7,8-sub-TCDD	17.499	1130333	0.77	1.2541	1.928	1.909	0.0320	0.7005		RQ
S Total TCDD					3.810	3.790	0.0320	0.0320		RQ
D 13C-1,2,3,7,8-PeCDF	22.367	59152751	1.58	1.2101	58.8	58.8	0.1549	0.1549	58.78	
1,2,3,7,8-PeCDF	22.408	130444	1.48	1.0611	0.2078	0.2078	0.0143	0.0143		M
D 13C-2,3,4,7,8-PeCDF	23.717	65928710	1.58	1.2395	64.0	64.0	0.1513	0.1513	63.96	
2,3,4,7,8-PeCDF	23.717	66085	1.55	1.0184	0.1121	0.0984	0.0145	0.0145		RQ
A F1 PeCDFs	20.093						0.0121	0.0121		
A Non-2,3,7,8-sub-PeCDF	23.241	82334	1.55	1.0398	0.1375	0.1266	0.0144	0.0770		RQM
S Total PeCDF					0.4574	0.4329	0.0144	0.0144		RQ
D 13C-1,2,3,7,8-PeCDD	24.440	39364268	1.63	0.7612	62.2	62.2	0.0617	0.0617	62.18	
1,2,3,7,8-PeCDD	24.467	45113	1.49	1.0484	0.1093	0.1093	0.0391	0.0391		
A Non-2,3,7,8-sub-PeCDD	23.349	1096422	1.55	1.0484	2.667	2.657	0.0391	1.174		RQ
S Total PeCDD					2.777	2.766	0.0391	0.0391		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	53767424	0.52	1.0837	64.3	64.3	0.3129	0.3129	64.32	
1,2,3,4,7,8-HxCDF	30.529	149933	1.21	1.0851	0.2570	0.2570	0.0140	0.0140		
D 13C-1,2,3,6,7,8-HxCDF	30.689	51560695	0.52	1.1279	59.3	59.3	0.3006	0.3006	59.26	
1,2,3,6,7,8-HxCDF	30.702	44587	1.42	1.1260	0.0768	0.0768	0.0141	0.0141		M
D 13C-2,3,4,6,7,8-HxCDF	31.514	47600610	0.52	1.0637	58.0	58.0	0.3187	0.3187	58.01	
2,3,4,6,7,8-HxCDF	31.528	16445	1.39	1.1675	0.0296	0.0296	0.0115	0.0115		M
D 13C-1,2,3,7,8,9-HxCDF	32.326	42971045	0.51	0.9676	57.6	57.6	0.3504	0.3504	57.57	
1,2,3,7,8,9-HxCDF	32.326	24105	1.15	1.1664	0.0481	0.0481	0.0120	0.0120		M
A Non-2,3,7,8-sub-HxCDF	30.197						0.0128	0.0485		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.4115	0.4115	0.0129	0.0129		
* 13C-1,2,3,7,8,9-HxCDD	32.140	77140021	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	35789505	1.24	0.7334	63.3	63.3	0.3391	0.3391	63.26	
1,2,3,4,7,8-HxCDD	31.714	82307	1.38	1.0640	0.2161	0.2161	0.0883	0.0883		
D 13C-1,2,3,6,7,8-HxCDD	31.808	42076160	1.25	0.8802	62.0	62.0	0.2825	0.2825	61.97	
1,2,3,6,7,8-HxCDD	31.821	195092	1.24	1.0001	0.5142	0.4636	0.0897	0.0897		RQ
1,2,3,7,8,9-HxCDD	32.153	468034	1.21	1.1325	1.061	1.061	0.0810	0.0810		
A Non-2,3,7,8-sub-HxCDD	30.882	4898289	1.24	1.0655	11.8	11.8	0.0861	7.702		RQ
S Total HxCDD					13.6	13.5	0.0863	0.0863		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	41462522	0.44	0.7730	69.5	69.5	0.9182	0.9182	69.53	
1,2,3,4,6,7,8-HpCDF	33.778	151025	1.04	1.4413	0.2527	0.2527	0.0157	0.0157		
D 13C-1,2,3,4,7,8,9-HpCDF	34.848	40826163	0.43	0.7008	75.5	75.5	1.013	1.013	75.52	
1,2,3,4,7,8,9-HpCDF	34.860	32411	1.04	1.3174	0.0654	0.0603	0.0200	0.0200		RQM
A Non-2,3,7,8-sub-HpCDF	34.319						0.0177	0.0177		
S Total HpCDF					0.3181	0.3130	0.0179	0.0179		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	34808499	1.00	0.6472	69.7	69.7	0.3929	0.3929	69.72	
1,2,3,4,6,7,8-HpCDD	34.568	7443542	1.02	1.0943	19.5	19.5	0.4486	0.4486		
A Non-2,3,7,8-sub-HpCDD	34.301	14256339	1.04	1.0943	37.4	37.4	0.4486	37.4		
S Total HpCDD					57.0	57.0	0.4486	0.4486		
D 13C-OCDD	36.914	54712641	0.88	0.4472	158.6	158.6	0.1880	0.1880	79.31	
OCDF	37.010	212223	0.94	1.4382	0.5394	0.5394	0.009604	0.009604		M
OCDD	36.926	142281621	0.89	1.1070	469.8	469.8	0.6192	0.6192		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d
Lims ID: 320-76788-A-8-A
Client ID: 11215702-072321-BN-SJSB085 (14-16)
Sample Type: Client
Inject. Date: 14-Aug-2021 14:31:36 ALS Bottle#: 29 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-8-a 320-76788-a-8-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:36:45 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 14:02:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		37398680	9273293	3772	9430	2458		
333.9339	17.855	17.855	0		45768331	11222151	5264	13160	2132	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.971	36147734	8615165	5143	12857	1675		
317.9389	17.341	17.341	0	0.971	46329562	10950895	4319	10797	2536	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.001	2368572	530002	1252	3130	423		
305.8987	17.356	17.356	0	1.001	3048519	681320	1506	3765	452	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.436	17.046	-96	0.890	35512	8649	1252	3130	7		
305.8987	15.436	17.046	-96	0.890	41539	12150	1506	3765	8	0.85(0.65-0.89)	
303.9016	15.950	17.046	-66	0.920	39605	10906	1252	3130	9		
305.8987	15.950	17.046	-66	0.920	56009	14951	1506	3765	10	0.71(0.65-0.89)	
303.9016	16.222	17.046	-49	0.935	67201	13908	1252	3130	11		
305.8987	16.222	17.046	-49	0.935	99948	20836	1506	3765	14	0.67(0.65-0.89)	
303.9016	16.449	17.046	-36	0.949	80599	19996	1252	3130	16		
305.8987	16.449	17.046	-36	0.949	101445	23708	1506	3765	16	0.79(0.65-0.89)	
303.9016	16.691	17.046	-21	0.963	102636	23301	1252	3130	19		
305.8987	16.691	17.046	-21	0.963	139689	28396	1506	3765	19	0.73(0.65-0.89)	
303.9016	16.978	17.046	-4	0.979	1031617	250058	1252	3130	200		
305.8987	16.978	17.046	-4	0.979	1370419	333592	1506	3765	222	0.75(0.65-0.89)	
303.9016	17.205	17.046	10	0.992	43690	10424	1252	3130	8		
305.8987	17.190	17.046	9	0.991	60207	12801	1506	3765	9	0.73(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.794	17.046	45	1.026	158171	34454	1252	3130	28		
305.8987	17.794	17.046	45	1.026	215970	43555	1506	3765	29	0.73(0.65-0.89)	
303.9016	18.036	17.046	59	1.040	32169	5961	1252	3130	5		
305.8987	18.051	17.046	60	1.041	45886	9013	1506	3765	6	0.70(0.65-0.89)	
303.9016	19.185	17.046	128	1.106	170353	32522	1252	3130	26		
305.8987	19.185	17.046	128	1.106	221328	44913	1506	3765	30	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	21285767	4854069	3772	9430	1287		
333.9339	18.051	18.051	0	1.011	25933851	5971366	5264	13160	1134	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.001	462154	99802	781	1952	128		
321.8936	18.066	18.066	0	1.001	651848	138871	957	2392	145	0.71(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.066	0	1.012	28891188	6549735	2265	5662	2892		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	16.131	17.499	-82	0.894	41054	10667	781	1952	14		
321.8936	16.131	17.499	-82	0.894	51883	12632	957	2392	13	0.79(0.65-0.89)	
319.8965	16.373	17.499	-67	0.907	35158	9795	781	1952	13		
321.8936	16.373	17.499	-67	0.907	53644	15747	957	2392	16	0.66(0.65-0.89)	
319.8965	16.933	17.499	-34	0.938	177266	41580	781	1952	53		
321.8936	16.917	17.499	-35	0.937	237543	58985	957	2392	62	0.75(0.65-0.89)	
319.8965	17.552	17.499	3	0.972	27070	6564	781	1952	8		
	Empc Correction				15411	3852	781	1952	5		
321.8936	17.537	17.499	2	0.972	20015	5003	957	2392	5	1.35(0.65-0.89)	
319.8965	17.824	17.499	19	0.987	84683	19202	781	1952	25		
321.8936	17.824	17.499	19	0.987	106892	26775	957	2392	28	0.79(0.65-0.89)	
319.8965	17.961	17.499	28	0.995	83699	21132	781	1952	27		
321.8936	17.961	17.499	28	0.995	102721	24996	957	2392	26	0.81(0.65-0.89)	
319.8965	18.429	17.499	56	1.021	53878	11305	781	1952	14		
321.8936	18.444	17.499	57	1.022	66486	13129	957	2392	14	0.81(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	36187391	5984186	9173	22932	652		
353.8970	22.367	22.367	0	1.253	22965360	3809688	6198	15495	615	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.408	22.380	2	1.002	77741	11958	265	662	45		
341.8567	22.394	22.380	1	1.001	52703	8620	331	827	26	1.48(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.328	40412652	6201784	9173	22932	676		
353.8970	23.717	23.703	1	1.328	25516058	3904698	6198	15495	630	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											RQ
339.8597	23.717	23.730	-1	1.000	49338	6846	265	662	26		
	Empc Correction				40169	6857	265	662	26		
341.8567	23.730	23.730	0	1.001	25916	4424	331	827	13	1.90(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						202	505			
341.8567	20.093						297	742			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQM
339.8597	21.031	23.241	-132	0.940	37531	7363	265	662	28		M
	Empc Correction				30445	5048	265	662	19		
341.8567	21.044	23.241	-132	0.941	19642	3257	331	827	10	1.91(1.32-1.78)	
339.8597	22.912	23.241	-20	1.024	19772	3313	265	662	13		M
341.8567	22.926	23.241	-19	1.025	12475	2357	331	827	7	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.369	24373775	3466182	2218	5545	1563		
369.8919	24.440	24.426	1	1.369	14990493	2145445	1632	4080	1315	1.63(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.467	24.453	1	1.001	26960	4419	569	1422	8		
357.8516	24.467	24.453	1	1.001	18153	4032	351	877	11	1.49(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.249	23.349	-126	0.869	113664	19245	569	1422	34		
357.8516	21.249	23.349	-126	0.869	73554	12953	351	877	37	1.55(1.32-1.78)	
355.8546	21.985	23.349	-82	0.900	293600	52365	569	1422	92		
357.8516	21.999	23.349	-81	0.900	190896	32828	351	877	94	1.54(1.32-1.78)	
355.8546	22.667	23.349	-41	0.927	31442	5004	569	1422	9		
357.8516	22.667	23.349	-41	0.927	20300	3506	351	877	10	1.55(1.32-1.78)	
355.8546	22.994	23.349	-21	0.941	16727	3531	569	1422	6		
357.8516	23.008	23.349	-20	0.941	15249	2253	351	877	6	1.10(1.32-1.78)	
	Empc Correction				10791	2278	351	877	6		
355.8546	23.267	23.349	-5	0.952	57566	9286	569	1422	16		
357.8516	23.294	23.349	-3	0.953	41733	7665	351	877	22	1.38(1.32-1.78)	
355.8546	23.471	23.349	7	0.960	141018	19175	569	1422	34		
357.8516	23.444	23.349	6	0.959	105131	15021	351	877	43	1.34(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	18282659	3361112	9323	23307	361		
385.8610	30.516	30.503	1	0.949	35484765	6365827	17638	44095	361	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.000	81980	15196	294	735	52		
375.8178	30.543	30.529	1	1.001	67953	12589	297	742	42	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	17691417	3141721	9323	23307	337		
385.8610	30.689	30.689	0	0.955	33869278	6174435	17638	44095	350	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											M
373.8208	30.702	30.702	0	1.000	26146	3944	294	735	13		
375.8178	30.689	30.702	-1	1.000	18441	3373	297	742	11	1.42(1.05-1.43)	M
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	16189178	3757542	9323	23307	403		
385.8610	31.514	31.514	0	0.981	31411432	7269440	17638	44095	412	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.528	31.528	0	1.000	9575	2393	294	735	8		M
375.8178	31.541	31.528	1	1.001	6870	1928	297	742	6	1.39(1.05-1.43)	M

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	14544041	3594786	9323	23307	386		
385.8610	32.326	32.313	1	1.006	28427004	6934814	17638	44095	393	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.326	32.326	0	1.000	12903	3450	294	735	12		M
375.8178	32.340	32.326	1	1.000	11202	3632	297	742	12	1.15(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	28.347	30.197	-111	0.929	14690	2583	294	735	9		
375.8178	28.360	30.197	-110	0.929	12274	1471	297	742	5	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		42852907	11071904	10727	26817	1032		
403.8529	32.140	32.127	1		34287114	8807393	9048	22620	973	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	19810349	5347987	10727	26817	499		
403.8529	31.701	31.701	0	0.986	15979156	4348940	9048	22620	481	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.714	0	1.000	47659	13583	1839	4597	7		
391.8127	31.714	31.714	0	1.000	34648	9900	1804	4510	5	1.38(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.808	31.807	0	0.990	23359144	5648790	10727	26817	527		
403.8529	31.808	31.807	0	0.990	18717016	4500469	9048	22620	497	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQ
389.8157	31.821	31.820	0	1.000	129269	30260	1839	4597	16		
	Empc Correction				107997	27408	1839	4597	15		
391.8127	31.821	31.820	0	1.000	87095	22104	1804	4510	12	1.48(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.140	1	1.014	256152	52367	1839	4597	28		
391.8127	32.153	32.140	1	1.014	211882	41333	1804	4510	23	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.571	30.882	-78	0.930	1839749	208009	1839	4597	113		
391.8127	29.558	30.882	-79	0.929	1355342	163053	1804	4510	90	1.36(1.05-1.43)	
389.8157	30.596	30.882	-17	0.962	44704	8466	1839	4597	5		
391.8127	30.596	30.882	-17	0.962	45015	7956	1804	4510	4	0.99(1.05-1.43)	
	Empc Correction				36051	6827	1804	4510	4		
389.8157	30.955	30.882	4	0.973	811718	154568	1839	4597	84		
391.8127	30.955	30.882	4	0.973	651016	120334	1804	4510	67	1.25(1.05-1.43)	
389.8157	31.182	30.882	18	0.980	93772	16644	1839	4597	9		
391.8127	31.168	30.882	17	0.980	65937	12629	1804	4510	7	1.42(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	12695932	4060539	16586	41465	245		
419.8220	33.766	33.754	1	1.051	28766590	9033653	39853	99632	227	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.766	1	1.000	77141	24551	872	2180	28		
409.7789	33.766	33.766	0	1.000	73884	22067	312	780	71	1.04(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.848	34.847	0	1.084	12371921	3447977	16586	41465	208		
419.8220	34.848	34.847	0	1.084	28454242	7765525	39853	99632	195	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											RQM
407.7818	34.860	34.860	0	1.000	19285	5442	872	2180	6		M
	Empc Correction				16523	5257	872	2180	6		
409.7789	34.860	34.860	0	1.000	15888	5055	312	780	16	1.21(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						872	2180			
409.7789	34.319						312	780			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.075	17385004	4947955	9375	23437	528		
437.8140	34.556	34.556	0	1.075	17423495	4994522	10845	27112	461	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	3759701	1077298	9892	24730	109		
425.7737	34.568	34.568	0	1.000	3683841	1059886	9630	24075	110	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.985	7263866	2132798	9892	24730	216		
425.7737	34.009	34.301	-17	0.984	6992473	2038327	9630	24075	212	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.914	0	1.149	25679383	6398581	2487	6217	2573		
471.7750	36.914	36.914	0	1.149	29033258	7285121	4198	10495	1735	0.88(0.76-1.02)	
OCDF											M
441.7428	37.010	37.010	0	1.003	102692	19871	156	390	127		
443.7399	37.010	37.010	0	1.003	109531	25351	222	555	114	0.94(0.76-1.02)	M
OCDD											
457.7377	36.926	36.926	0	1.000	67145415	16980175	8850	22125	1919		
459.7348	36.926	36.926	0	1.000	75136206	19008566	9908	24770	1919	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
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- M - Manually Integrated
- U - Marked Undetected

Report Date: 18-Aug-2021 09:36:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d
Lims ID: 320-76788-A-8-A
Client ID: 11215702-072321-BN-SJSB085 (14-16)
Inject. Date: 14-Aug-2021 14:31:36 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 18

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	82477296	19566060

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	82477296	19566060

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.436	35512	8649	41539	12150	0.0912	0.85	
15.950	39605	10906	56009	14951	0.1132	0.71	
16.222	67201	13908	99948	20836	0.1979	0.67	
16.449	80599	19996	101445	23708	0.2156	0.79	
16.691	102636	23301	139689	28396	0.2869	0.73	
16.978	1031617	250058	1370419	333592	2.84	0.75	
17.205	43690	10424	60207	12801	0.1230	0.73	
17.794	158171	34454	215970	43555	0.4430	0.73	
18.036	32169	5961	45886	9013	0.0924	0.70	
19.185	170353	32522	221328	44913	0.4638	0.77	
Signal Totals:							
	1761553	410179	2352440	543915			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4113993	954094				0.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.872 = (4113993 * 100.000) / (82477296 * 1.024)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d
Lims ID: 320-76788-A-8-A
Client ID: 11215702-072321-BN-SJSB085 (14-16)
Inject. Date: 14-Aug-2021 14:31:36 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 18

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	47219618	10825435

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	47219618	10825435

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.131	41054	10667	51883	12632	0.1569	0.79	
16.373	35158	9795	53644	15747	0.1500	0.66	
16.933	177266	41580	237543	58985	0.7005	0.75	
17.552	27070	6564	20015	5003	0.0795	1.35	RQ
17.552	15411	3852	20015	5003	0.0598		Empc Correction
17.824	84683	19202	106892	26775	0.3235	0.79	
17.961	83699	21132	102721	24996	0.3148	0.81	
18.429	53878	11305	66486	13129	0.2033	0.81	
Signal Totals:							
	491149	117533	639184	157267			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1141992	277512				0.79	RQ
	1130333	274800					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.928 = (1141992 * 100.000) / (47219618 * 1.254)
Empc Amount: 1.909 = (1130333 * 100.000) / (47219618 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d
Lims ID: 320-76788-A-8-A
Client ID: 11215702-072321-BN-SJSB085 (14-16)
Inject. Date: 14-Aug-2021 14:31:36 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 18

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	59152751	9793874
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	65928710	10106482

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	62540730	9950178

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.031	37531	7363	19642	3257	0.0879	1.91	RQM
21.031	30445	5048	19642	3257	0.0770		Empc Correction
22.912	19772	3313	12475	2357	0.0496	1.58	M
Signal Totals:							
	50217	8361	32117	5614			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	89420	16290				1.78	RQM
	82334	13975					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1375 = (89420 * 100.000) / (62540730 * 1.040)
Empc Amount: 0.1266 = (82334 * 100.000) / (62540730 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 09:36:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Lims ID:	320-76788-A-8-A		
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Inject. Date:	14-Aug-2021 14:31:36	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	18

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	39364268	5611627

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	39364268	5611627

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	113664	19245	73554	12953	0.4536	1.55	
21.985	293600	52365	190896	32828	1.17	1.54	
22.667	31442	5004	20300	3506	0.1254	1.55	
22.994	16727	3531	15249	2253	0.0775	1.10	RQ
22.994	16727	3531	10791	2278	0.0667		Empc Correction
23.267	57566	9286	41733	7665	0.2406	1.38	
23.471	141018	19175	105131	15021	0.5964	1.34	
Signal Totals:							
	654017	108606	442405	74251			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1100880	182832				1.46	RQ
	1096422	182857					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.667 = (1100880 * 100.000) / (39364268 * 1.048)
Empc Amount: 2.657 = (1096422 * 100.000) / (39364268 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d
Lims ID: 320-76788-A-8-A
Client ID: 11215702-072321-BN-SJSB085 (14-16)
Inject. Date: 14-Aug-2021 14:31:36 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 18

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	53767424	9726939
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	51560695	9316156
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	47600610	11026982
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	42971045	10529600

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	48974943	10149919

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.347	14690	2583	12274	1471	0.0485	1.20	

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d
Lims ID: 320-76788-A-8-A
Client ID: 11215702-072321-BN-SJSB085 (14-16)
Inject. Date: 14-Aug-2021 14:31:36 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 18

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	35789505	9696927
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	42076160	10149259
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	38932832	9923093

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.571	1839749	208009	1355342	163053	7.70	1.36	
30.596	44704	8466	45015	7956	0.2163	0.99	RQ
30.596	44704	8466	36051	6827	0.1947		Empc Correction
30.955	811718	154568	651016	120334	3.53	1.25	
31.182	93772	16644	65937	12629	0.3850	1.42	
Signal Totals:							
	2789943	387687	2108346	302843			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4907253	691659				1.32	RQ
	4898289	690530					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 11.829 = (4907253 * 100.000) / (38932832 * 1.066)
Empc Amount: 11.807 = (4898289 * 100.000) / (38932832 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:36:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Lims ID:	320-76788-A-8-A		
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Inject. Date:	14-Aug-2021 14:31:36	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	18

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	34808499	9942477

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	34808499	9942477

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	7263866	2132798	6992473	2038327	37.4	1.04	
Signal Totals:							
	7263866	2132798	6992473	2038327			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	14256339	4171125				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 37.427 = (14256339 * 100.000) / (34808499 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d				
Injection Date:	14-Aug-2021 14:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-8-A	Lab Sample ID:	320-76788-8		
Client ID:	11215702-072321-BN-SJSB085 (14-16)				
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.39
Area: 58387
Amount: 0.216871
Amount Units: pg/ul

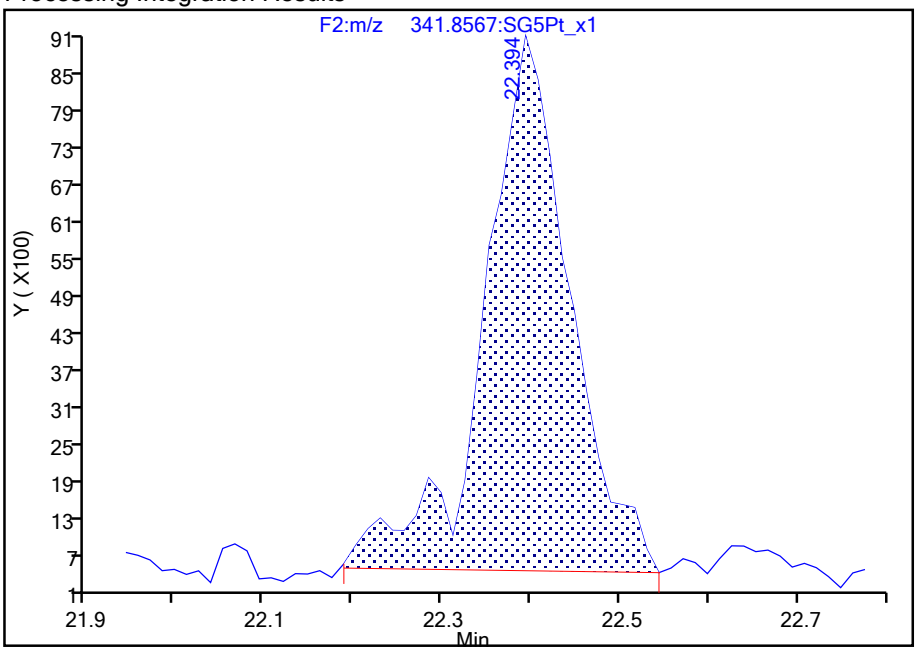

Manual Integration Results

RT: 22.39
Area: 52703
Amount: 0.207816
Amount Units: pg/ul

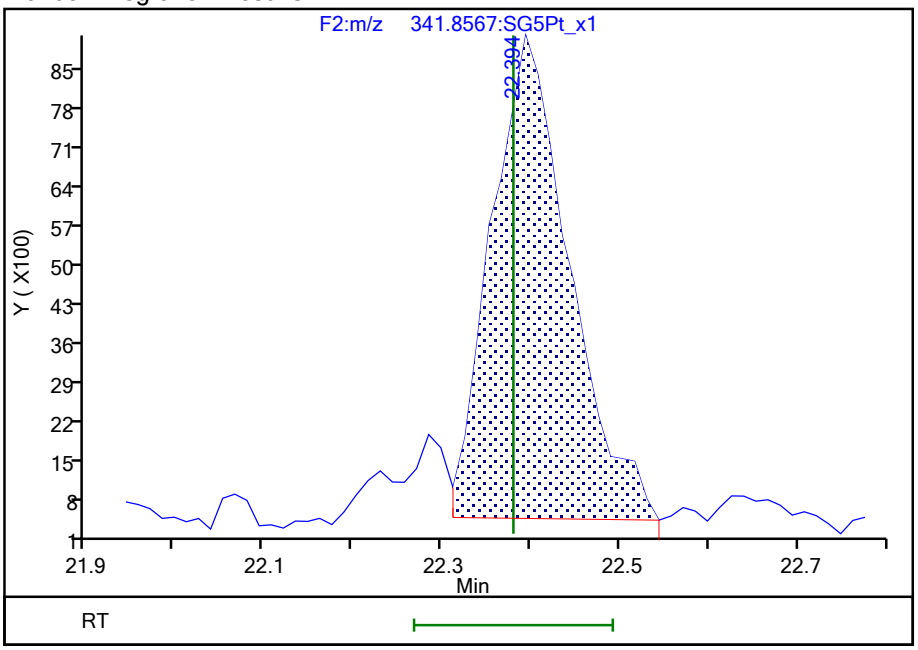

Reviewer: dadunj, 18-Aug-2021 09:35:05

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779613

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d				
Injection Date:	14-Aug-2021 14:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-8-A	Lab Sample ID:	320-76788-8		
Client ID:	11215702-072321-BN-SJSB085 (14-16)				
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 25.71)

Signal: 1

Processing Integration Results

RT = 21.031 Area = 44305

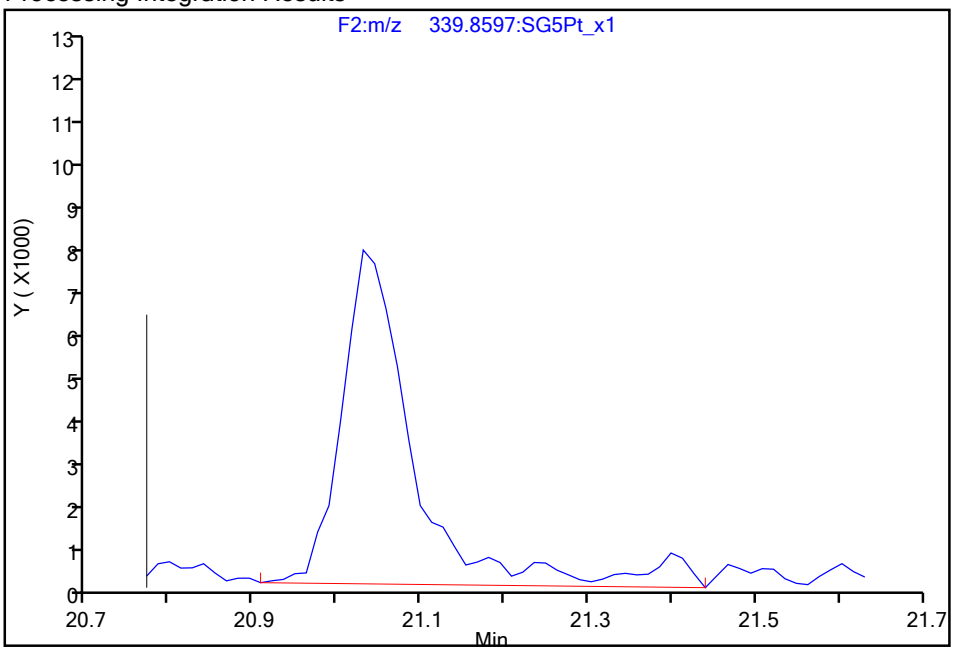

Manual Integration Results

RT = 21.031 Area = 37531 M

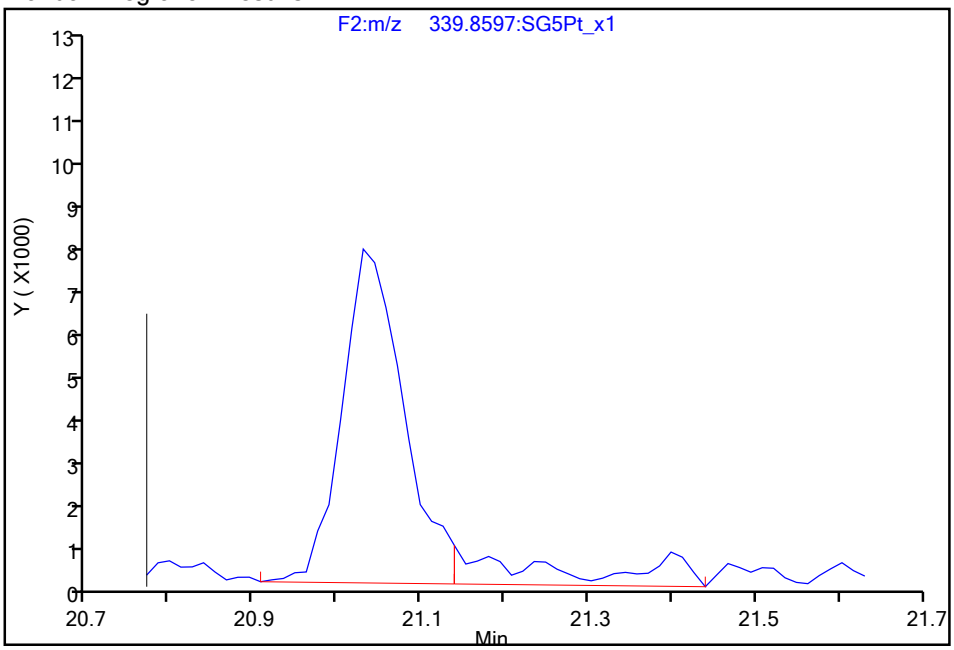

Reviewer: dadunj, 18-Aug-2021 09:35:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d				
Injection Date:	14-Aug-2021 14:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-8-A	Lab Sample ID:	320-76788-8		
Client ID:	11215702-072321-BN-SJSB085 (14-16)				
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 25.71)

Signal: 1

Processing Integration Results

RT = 22.912 Area = 22982

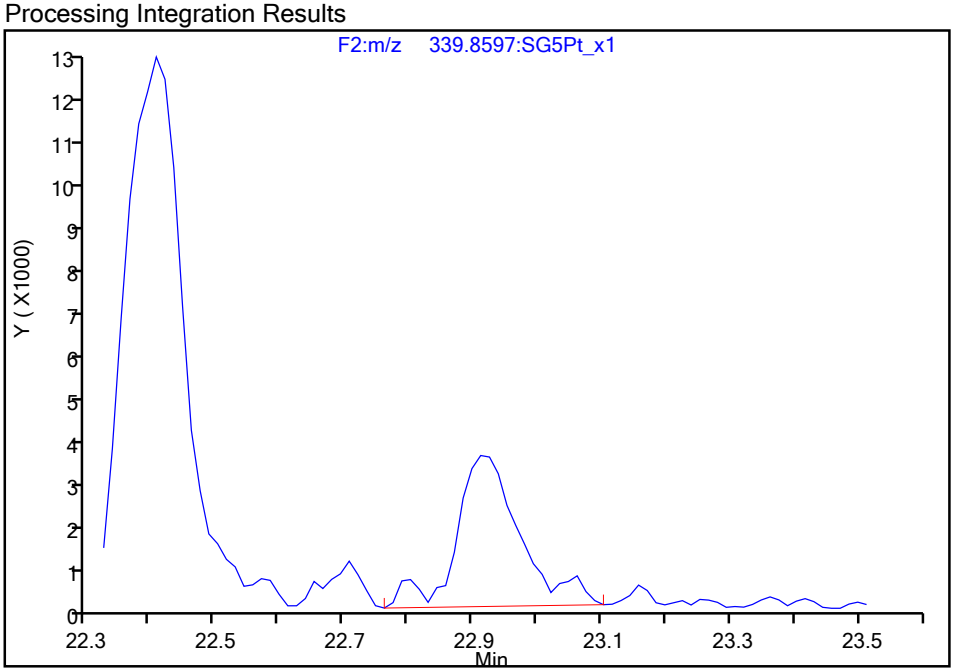

Manual Integration Results

RT = 22.912 Area = 19772 M

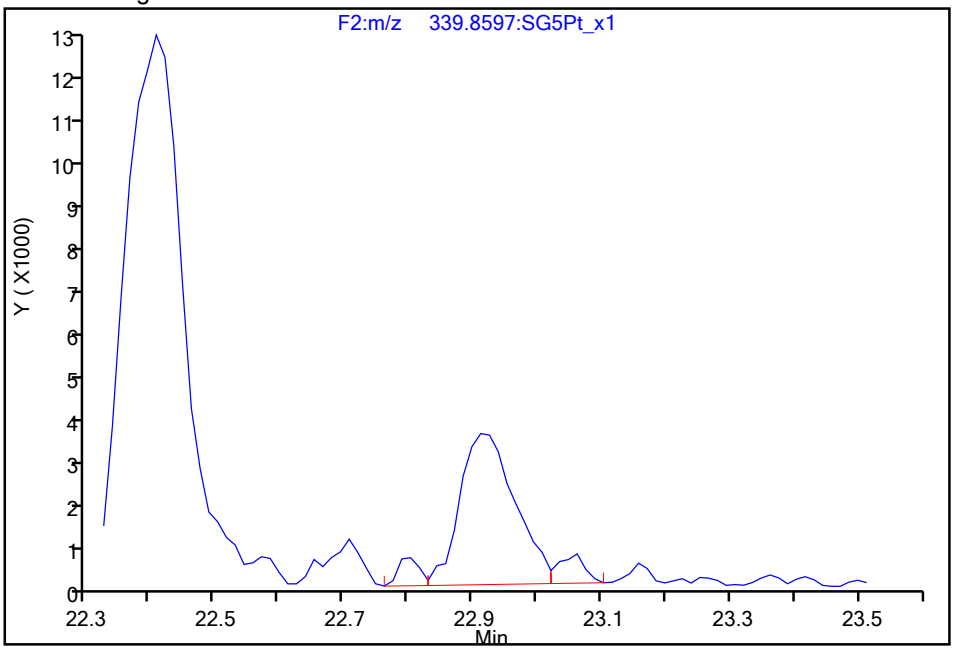

Reviewer: dadunj, 18-Aug-2021 09:35:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d				
Injection Date:	14-Aug-2021 14:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-8-A	Lab Sample ID:	320-76788-8		
Client ID:	11215702-072321-BN-SJSB085 (14-16)				
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 30.69
Area: 20003
Amount: 0.079488
Amount Units: pg/ul

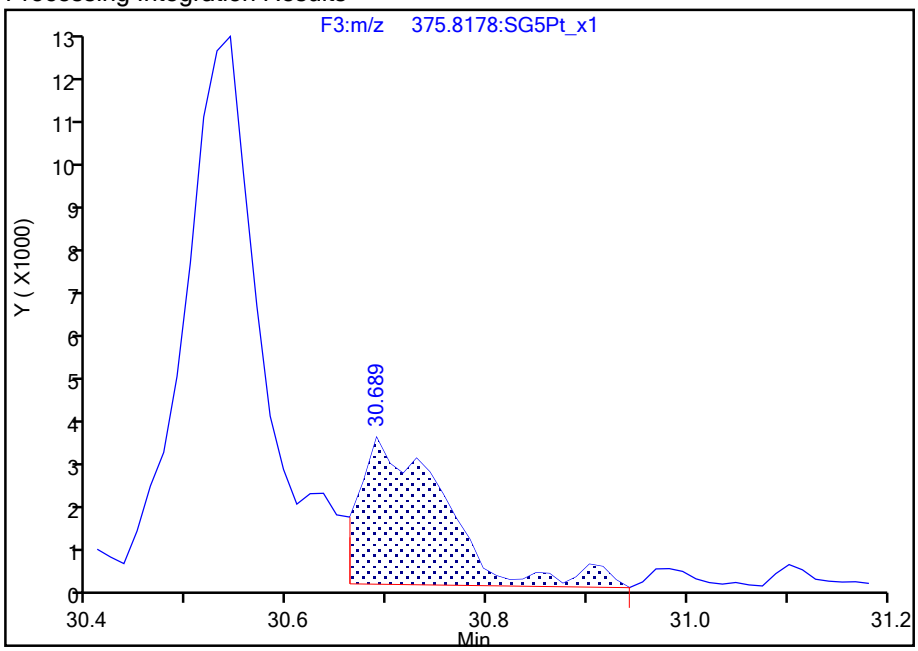

Manual Integration Results

RT: 30.69
Area: 18441
Amount: 0.076797
Amount Units: pg/ul

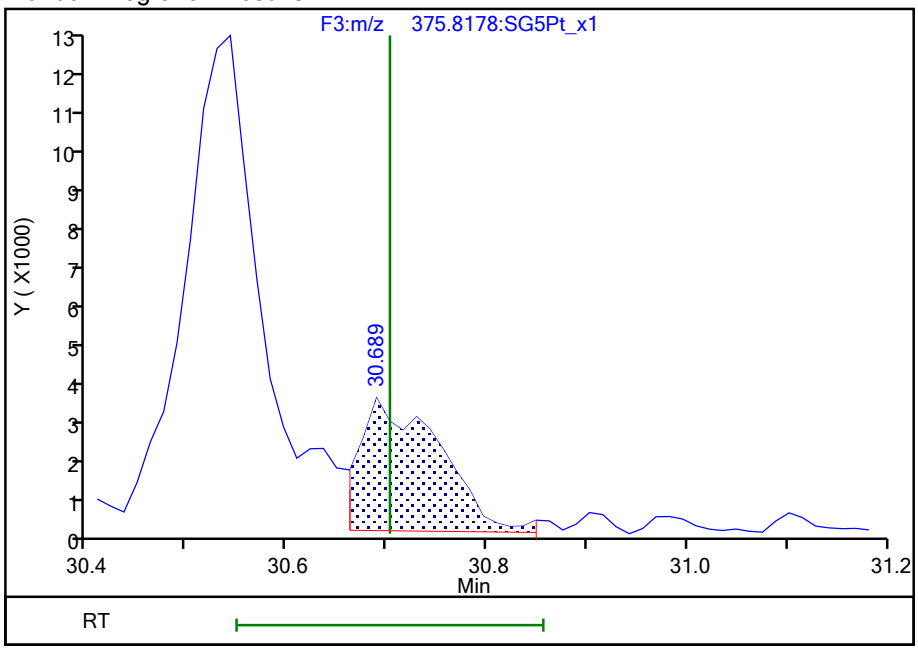

Reviewer: dadunj, 18-Aug-2021 09:35:24

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779616

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d				
Injection Date:	14-Aug-2021 14:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-8-A	Lab Sample ID:	320-76788-8		
Client ID:	11215702-072321-BN-SJSB085 (14-16)				
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.54
Area: 9090
Amount: 0.039775
Amount Units: pg/ul

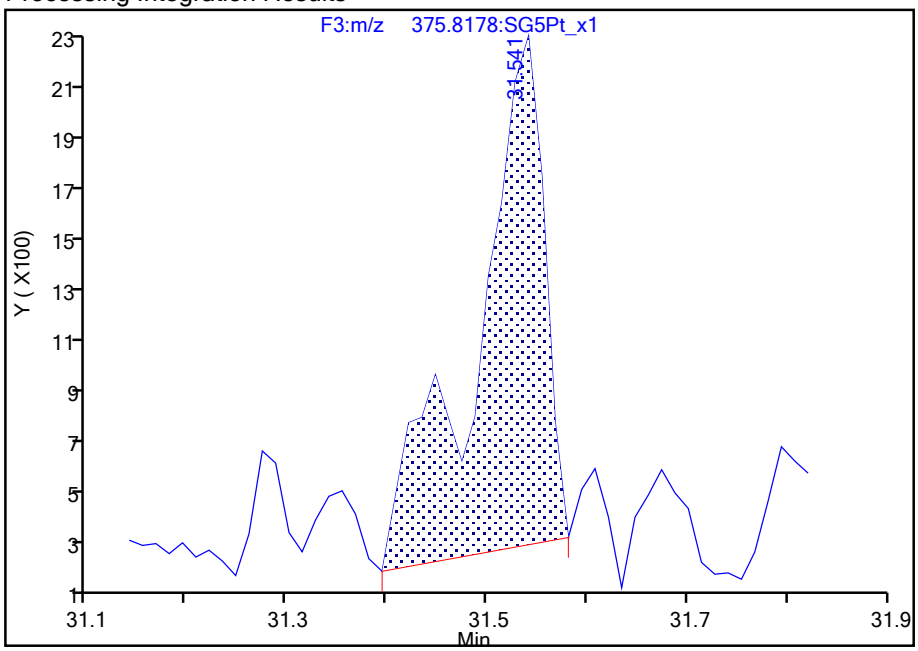

Manual Integration Results

RT: 31.54
Area: 6870
Amount: 0.029590
Amount Units: pg/ul

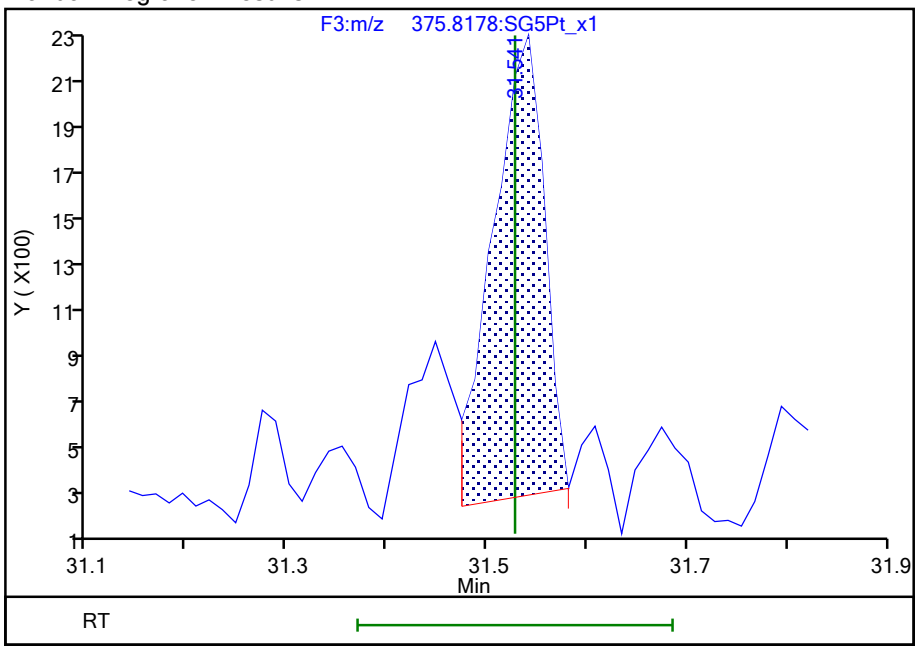

Reviewer: dadunj, 18-Aug-2021 09:35:32

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d				
Injection Date:	14-Aug-2021 14:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-8-A	Lab Sample ID:	320-76788-8		
Client ID:	11215702-072321-BN-SJSB085 (14-16)				
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.53
Area: 13015
Amount: 0.039775
Amount Units: pg/ul

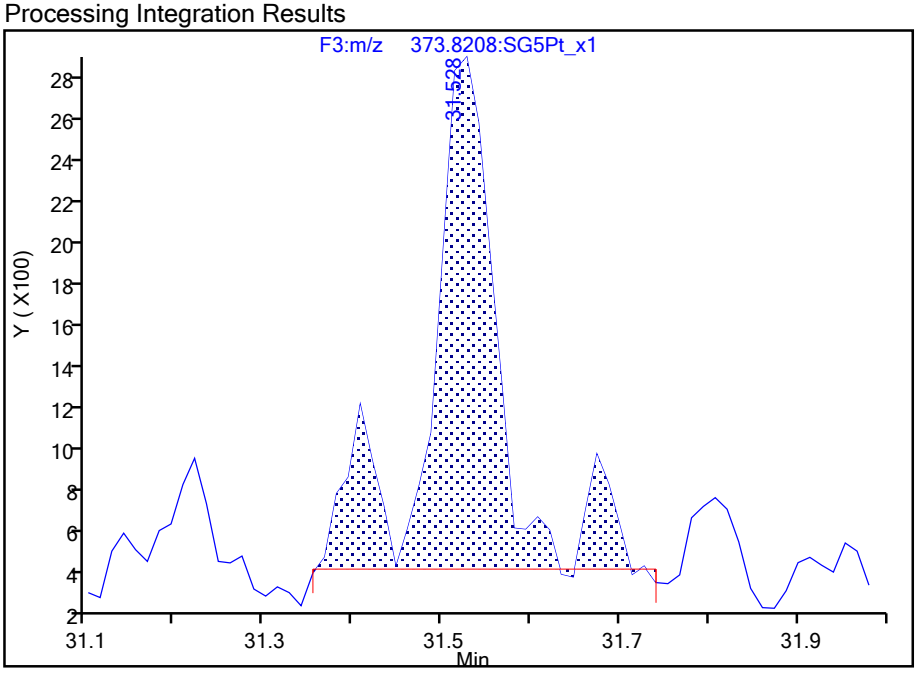

Manual Integration Results

RT: 31.53
Area: 9575
Amount: 0.029590
Amount Units: pg/ul

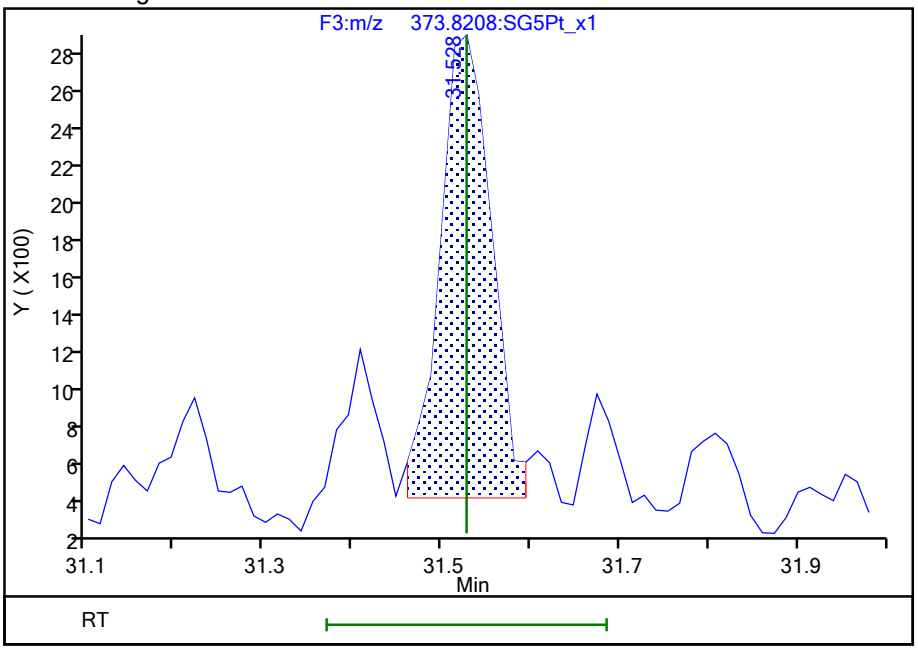

Reviewer: dadunj, 18-Aug-2021 09:35:33

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779618

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d				
Injection Date:	14-Aug-2021 14:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-8-A	Lab Sample ID:	320-76788-8		
Client ID:	11215702-072321-BN-SJSB085 (14-16)				
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.33
Area: 23387
Amount: 0.090189
Amount Units: pg/ul

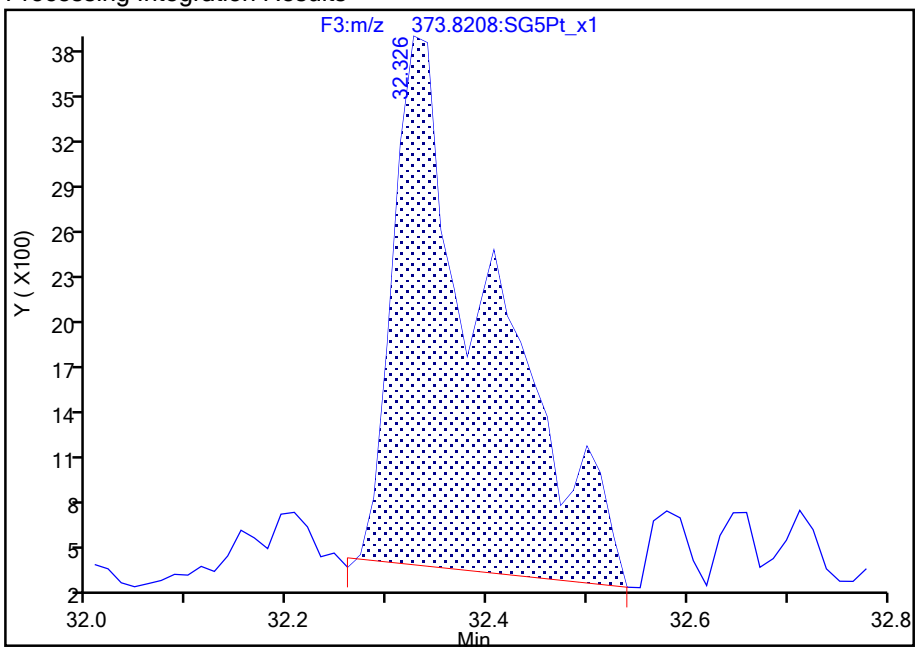

Manual Integration Results

RT: 32.33
Area: 12903
Amount: 0.048095
Amount Units: pg/ul

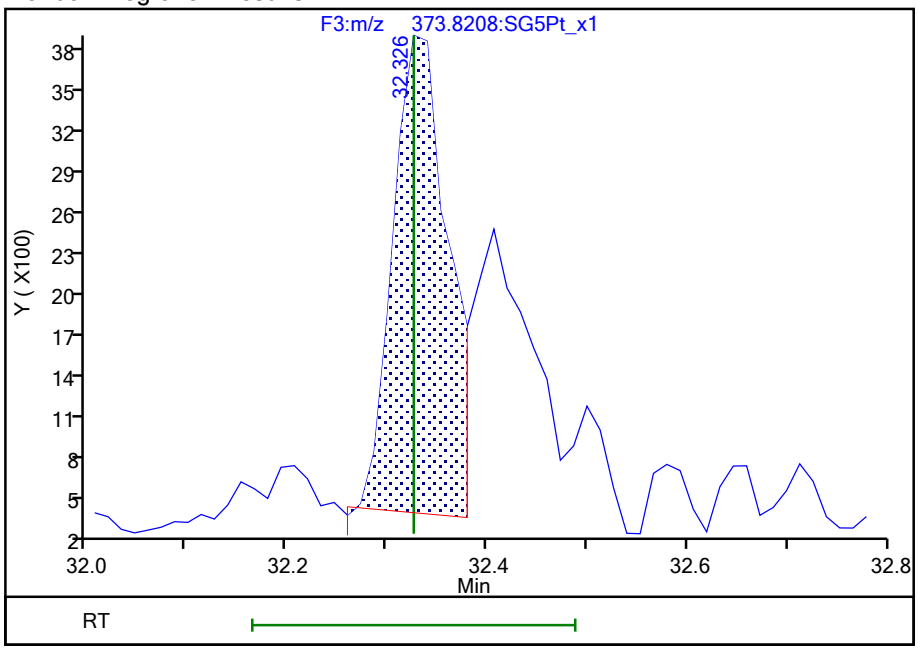

Reviewer: dadunj, 18-Aug-2021 09:35:39

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d				
Injection Date:	14-Aug-2021 14:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-8-A	Lab Sample ID:	320-76788-8		
Client ID:	11215702-072321-BN-SJSB085 (14-16)				
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.34
Area: 21815
Amount: 0.090189
Amount Units: pg/ul

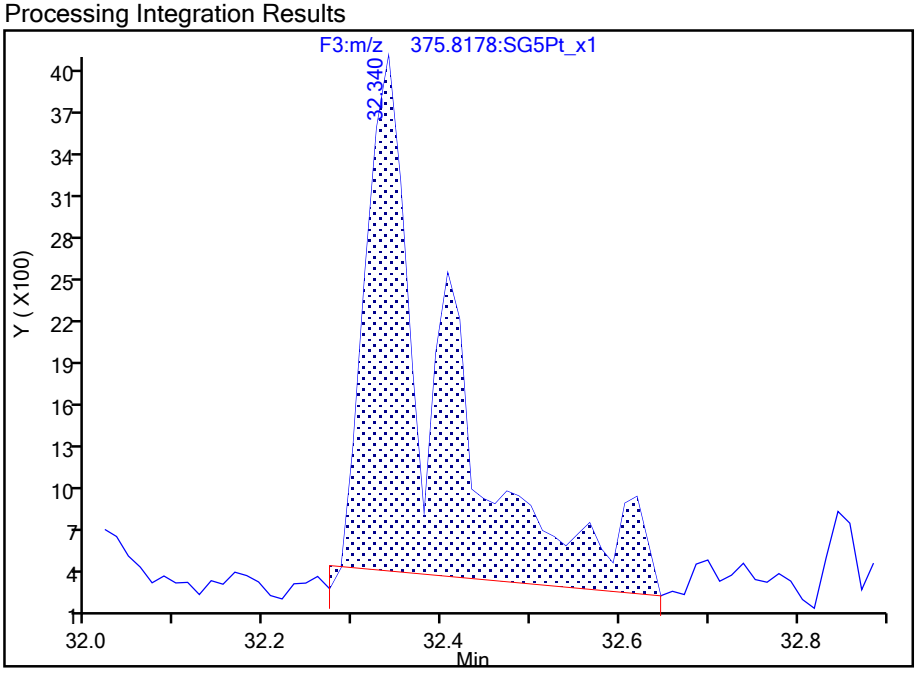

Manual Integration Results

RT: 32.34
Area: 11202
Amount: 0.048095
Amount Units: pg/ul

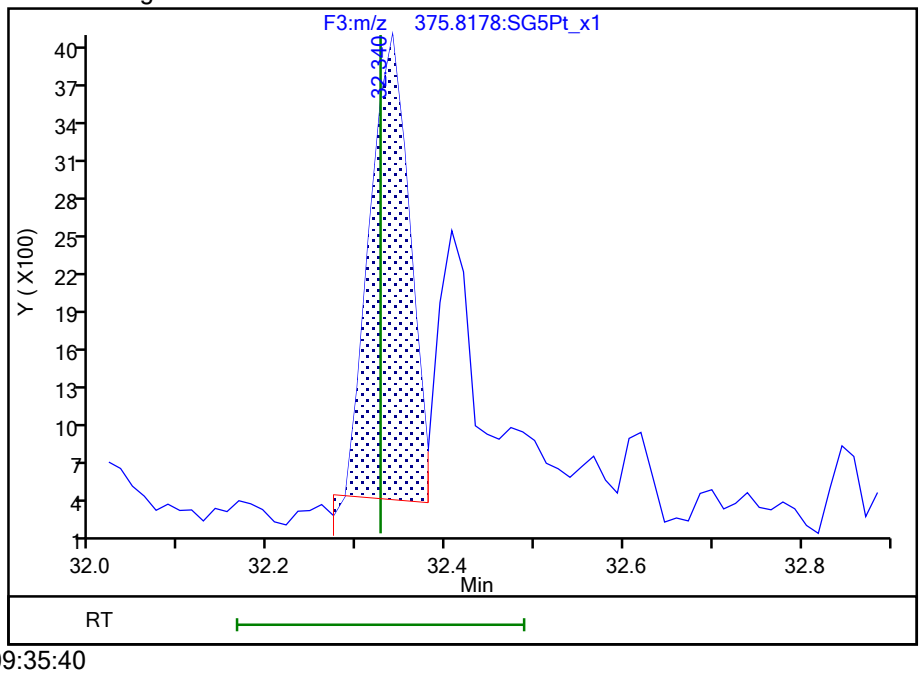

Reviewer: dadunj, 18-Aug-2021 09:35:40
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779620

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d				
Injection Date:	14-Aug-2021 14:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-8-A	Lab Sample ID:	320-76788-8		
Client ID:	11215702-072321-BN-SJSB085 (14-16)				
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 34.86
Area: 24790
Amount: 0.075633
Amount Units: pg/ul

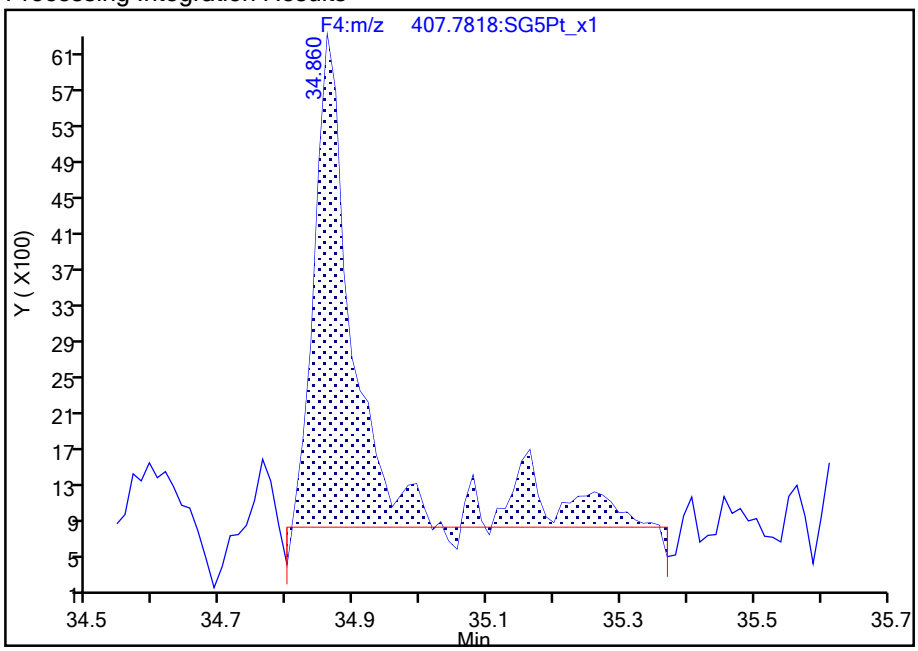

Manual Integration Results

RT: 34.86
Area: 19285
Amount: 0.065397
Amount Units: pg/ul

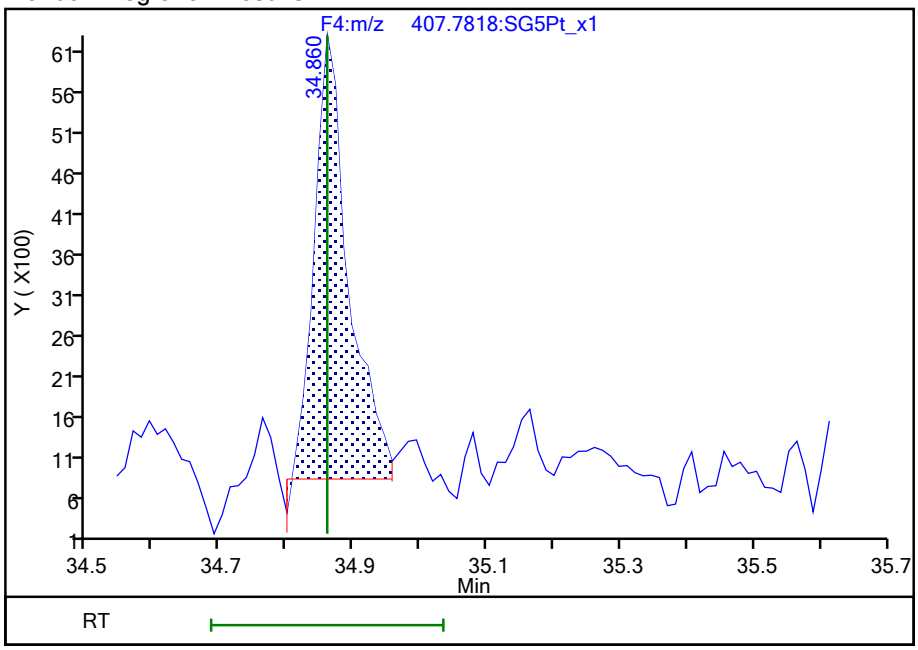

Reviewer: dadunj, 18-Aug-2021 09:35:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d				
Injection Date:	14-Aug-2021 14:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-8-A	Lab Sample ID:	320-76788-8		
Client ID:	11215702-072321-BN-SJSB085 (14-16)				
Operator ID:	DB	ALS Bottle#:	29	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.01
Area: 140810
Amount: 0.618924
Amount Units: pg/ul

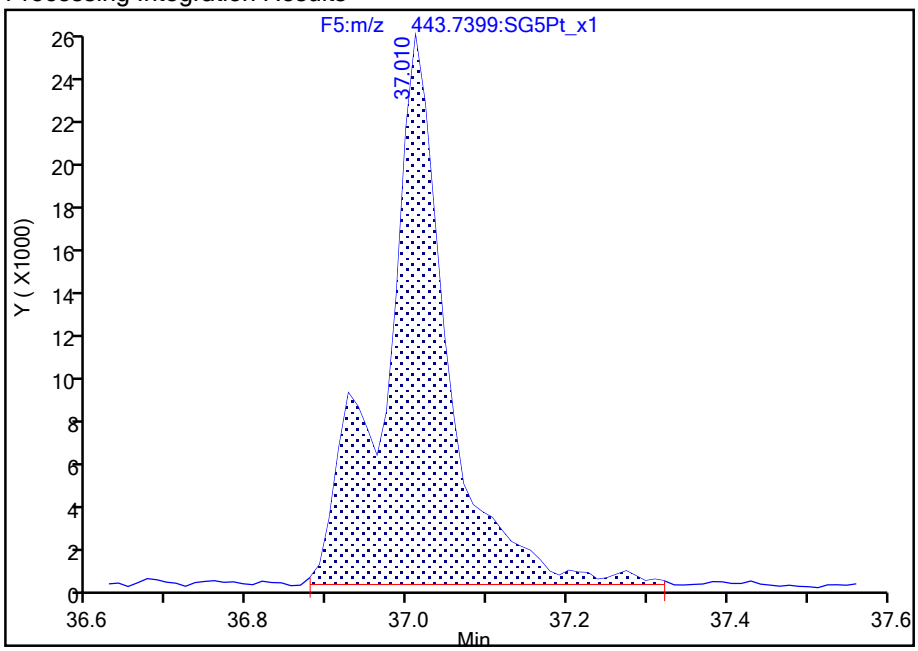

Manual Integration Results

RT: 37.01
Area: 109531
Amount: 0.539420
Amount Units: pg/ul

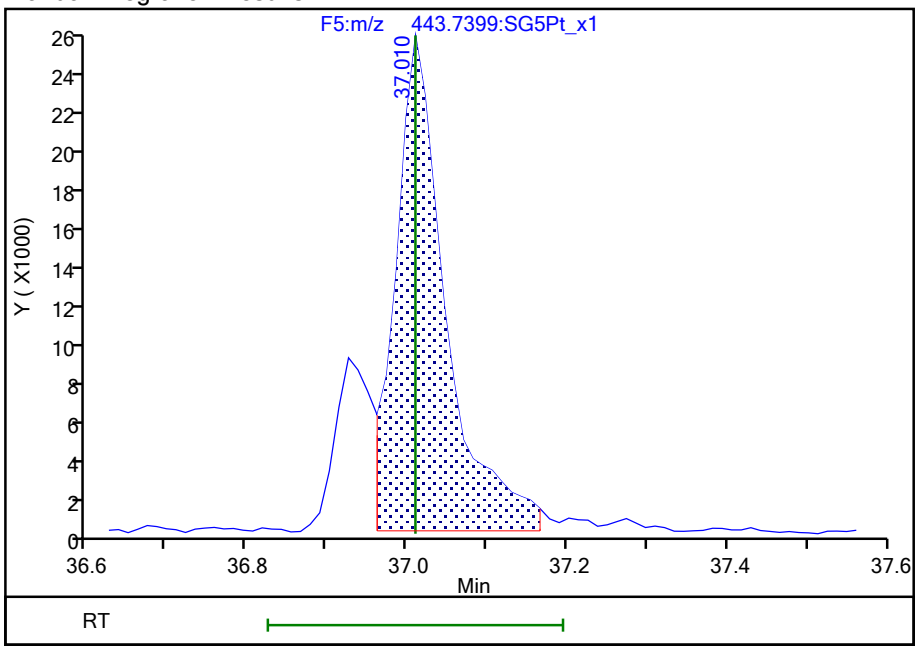

Reviewer: dadunj, 18-Aug-2021 09:36:05

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

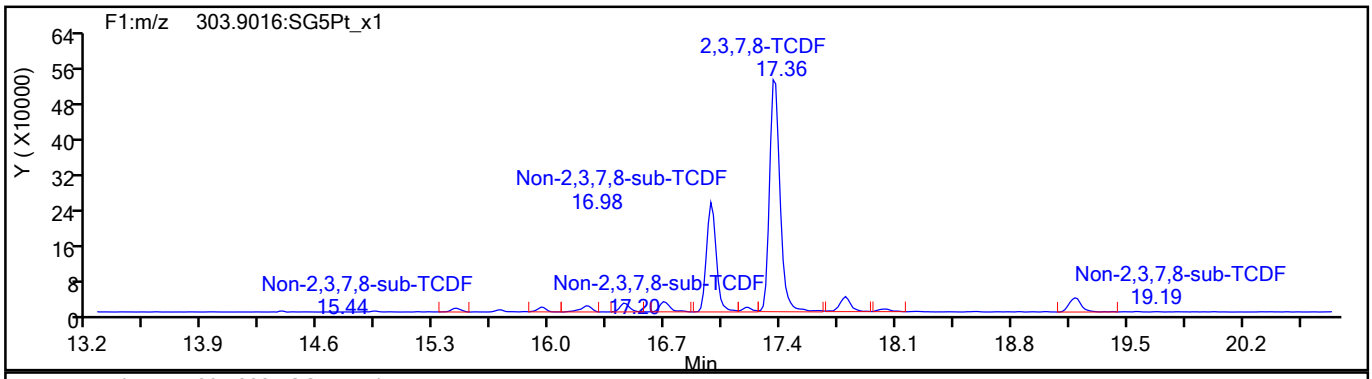

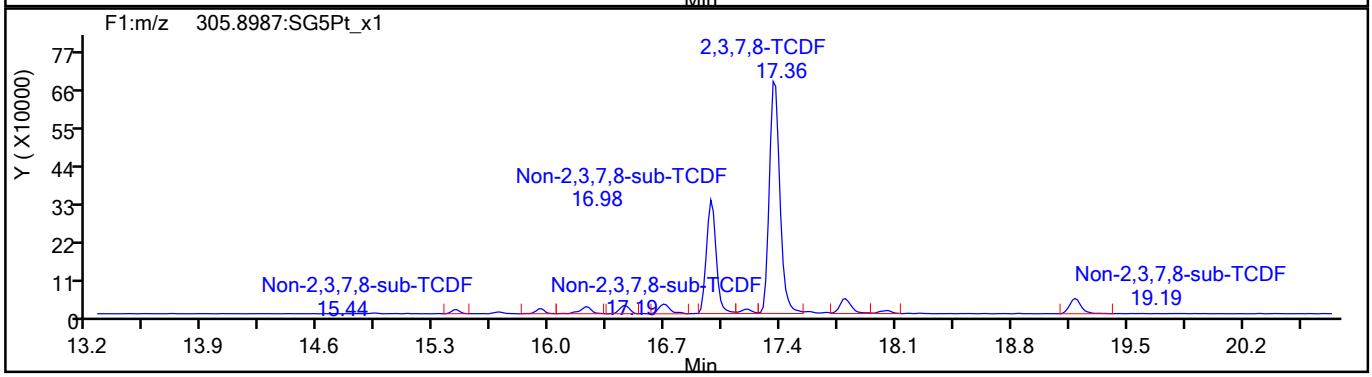

TCDF Standards

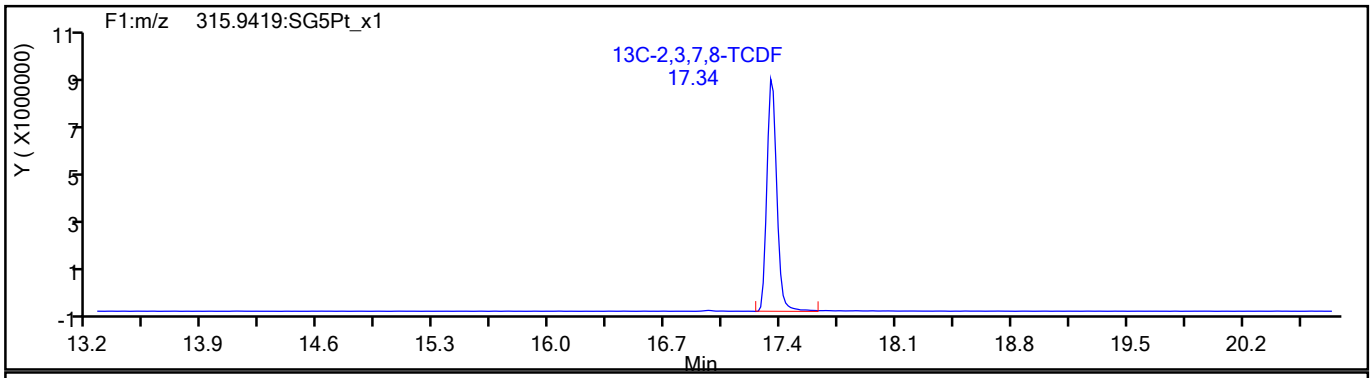

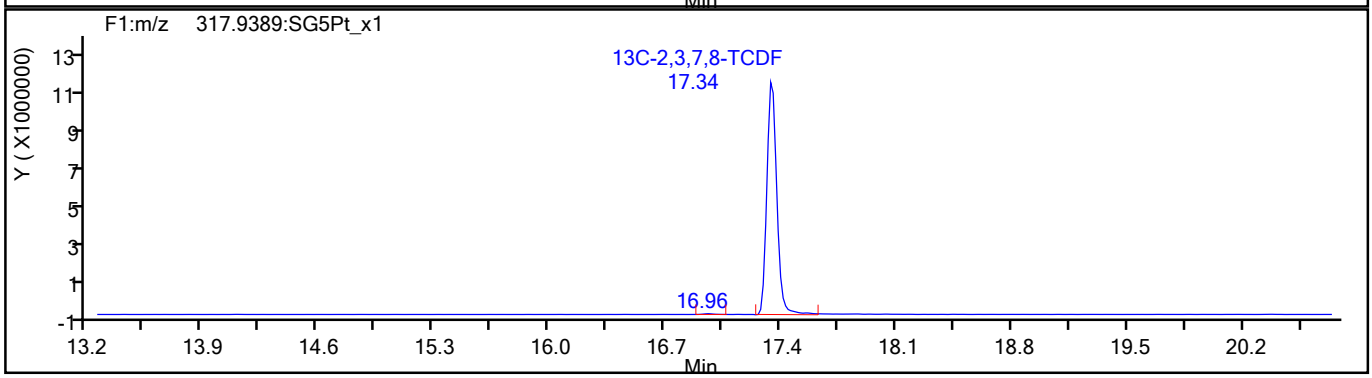

779623

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

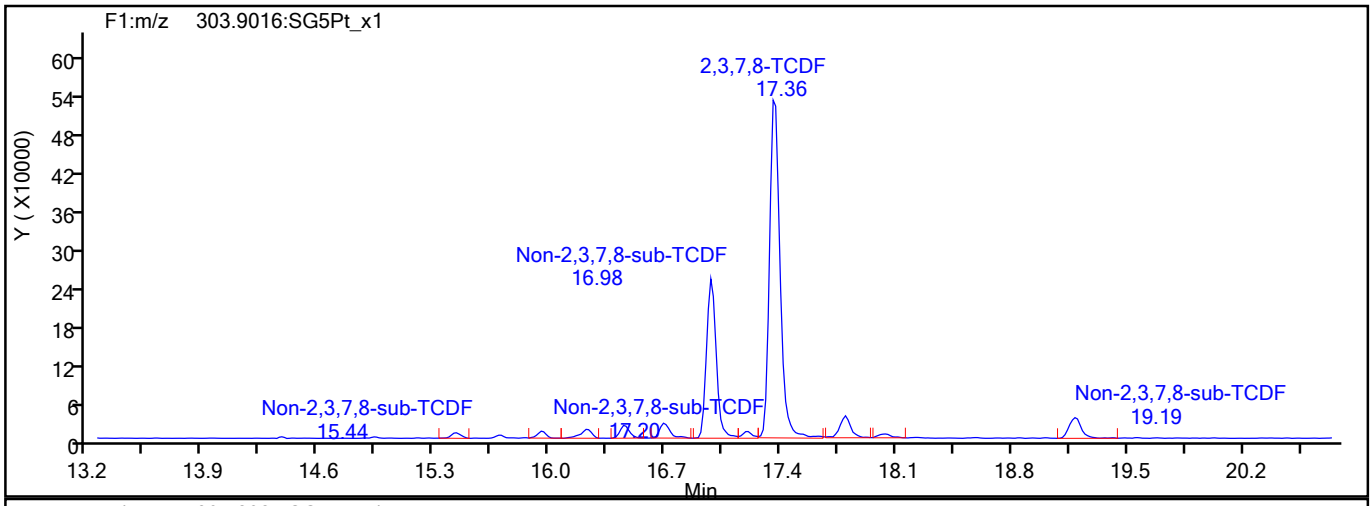

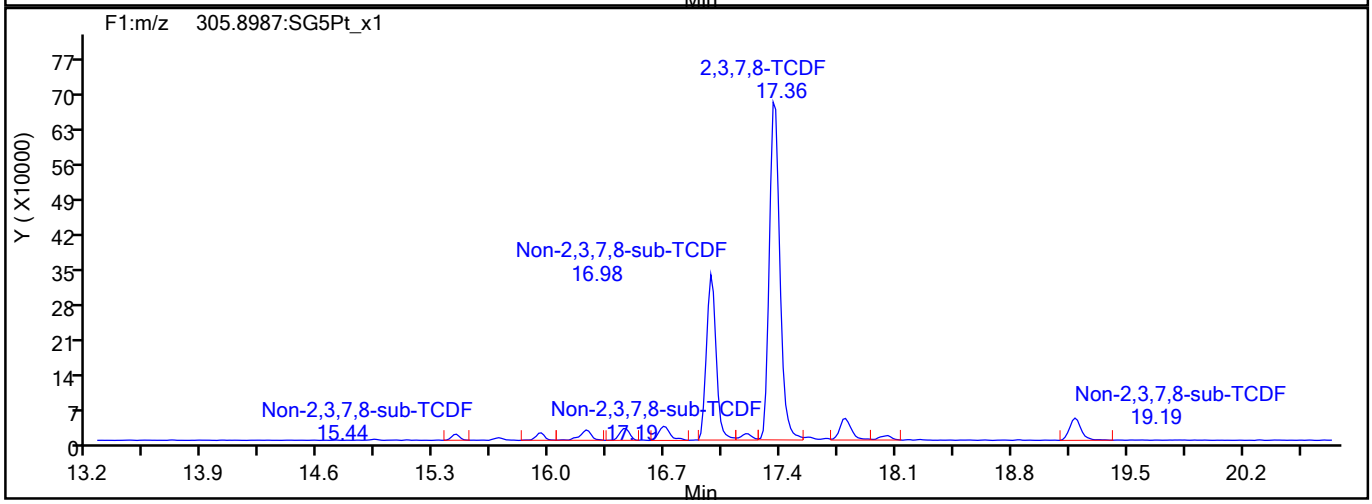

TCDF Interference Mass

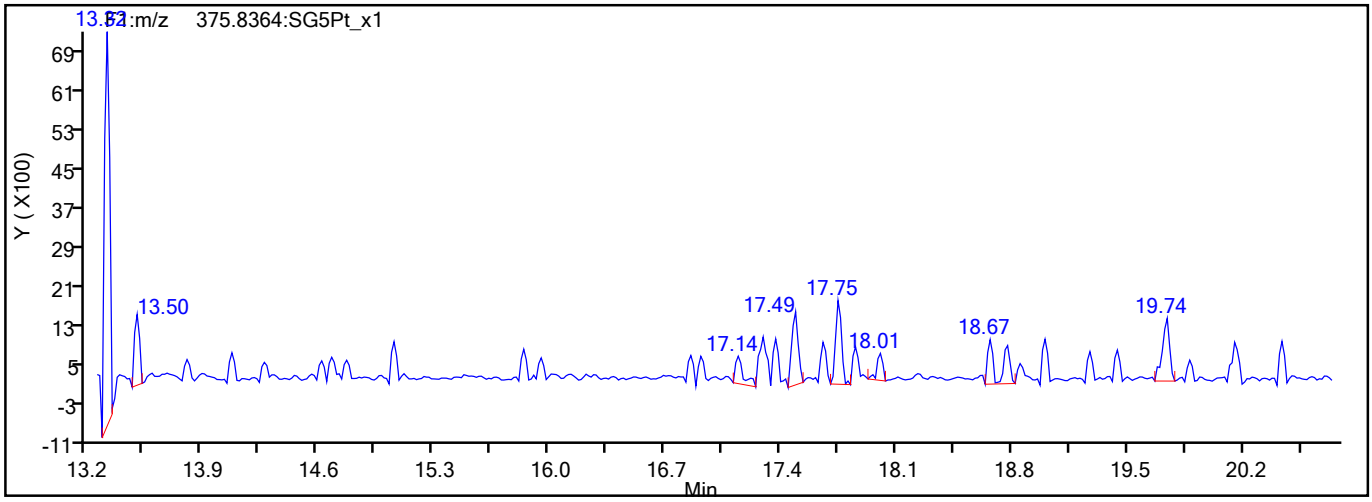

779624

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

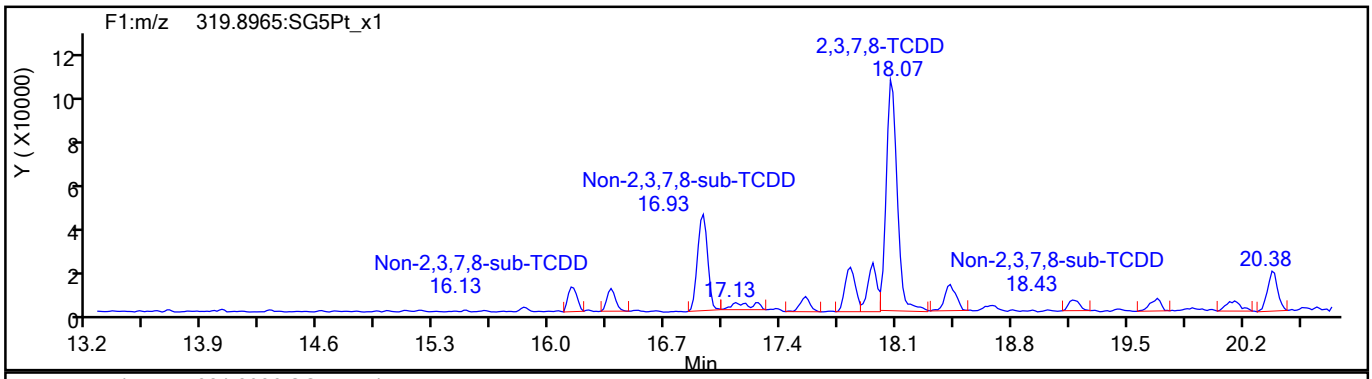

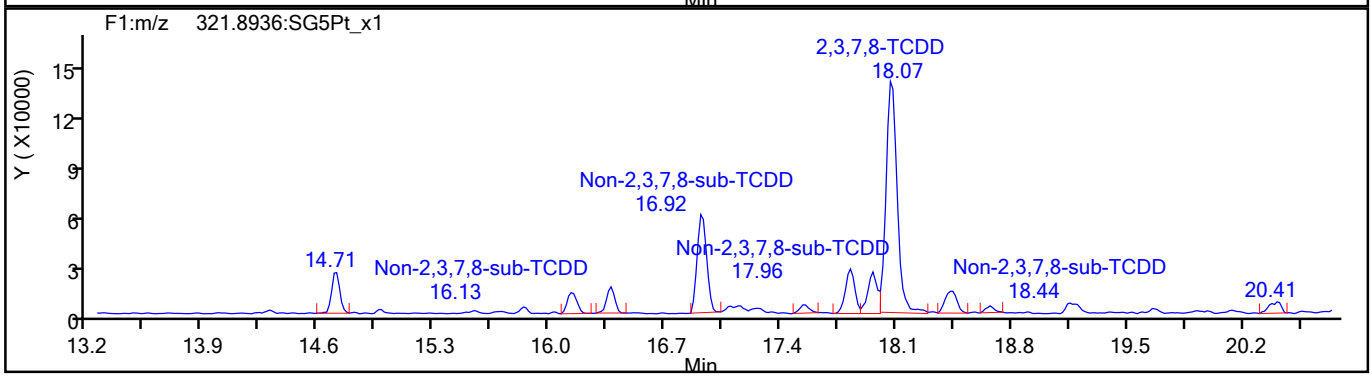

TCDD Standards

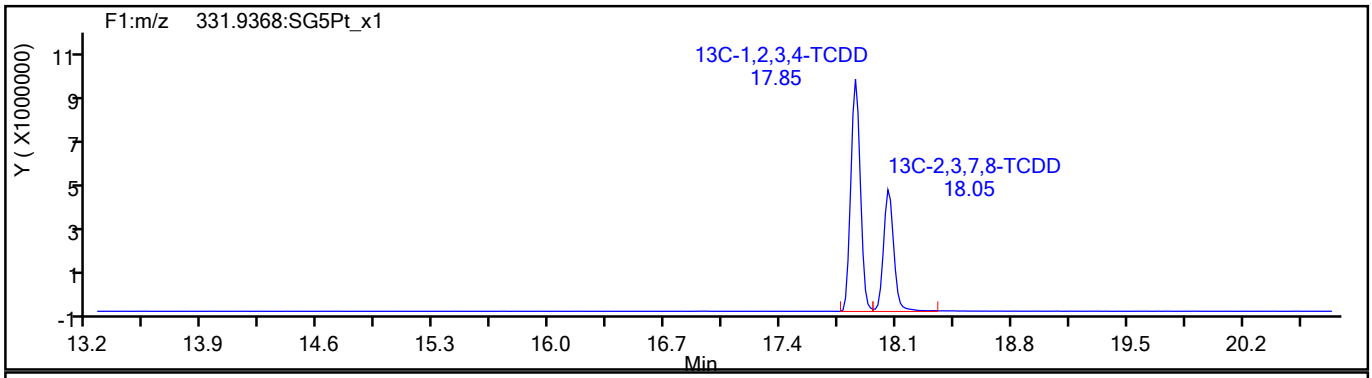

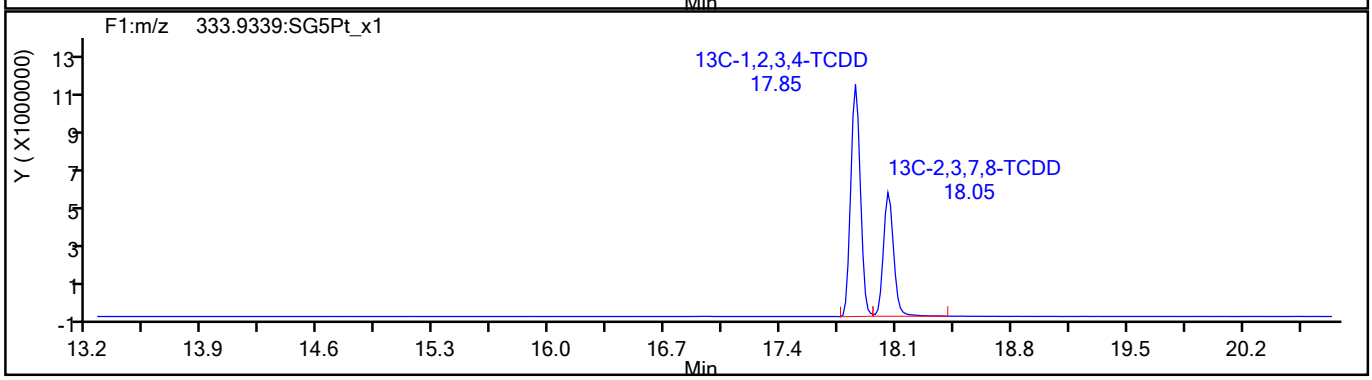

779625

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

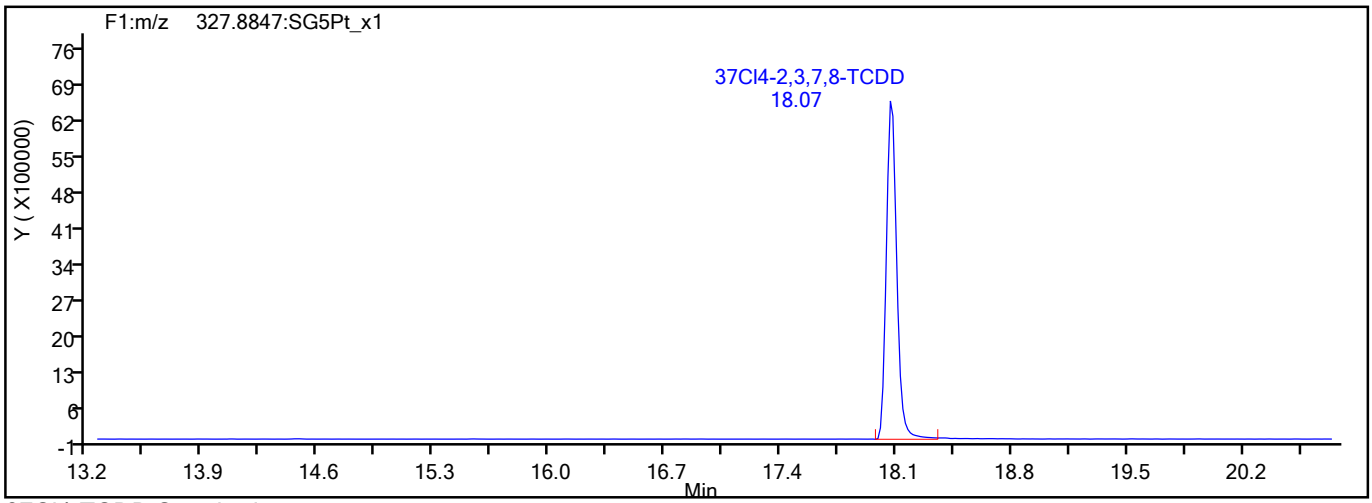

37Cl4-TCDD Standards

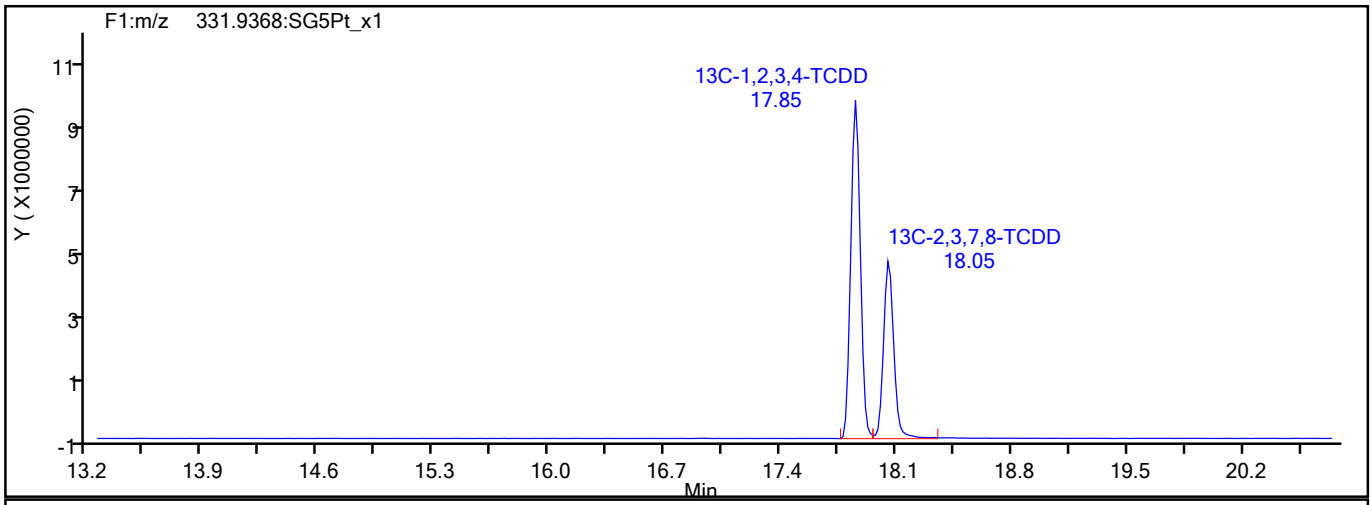

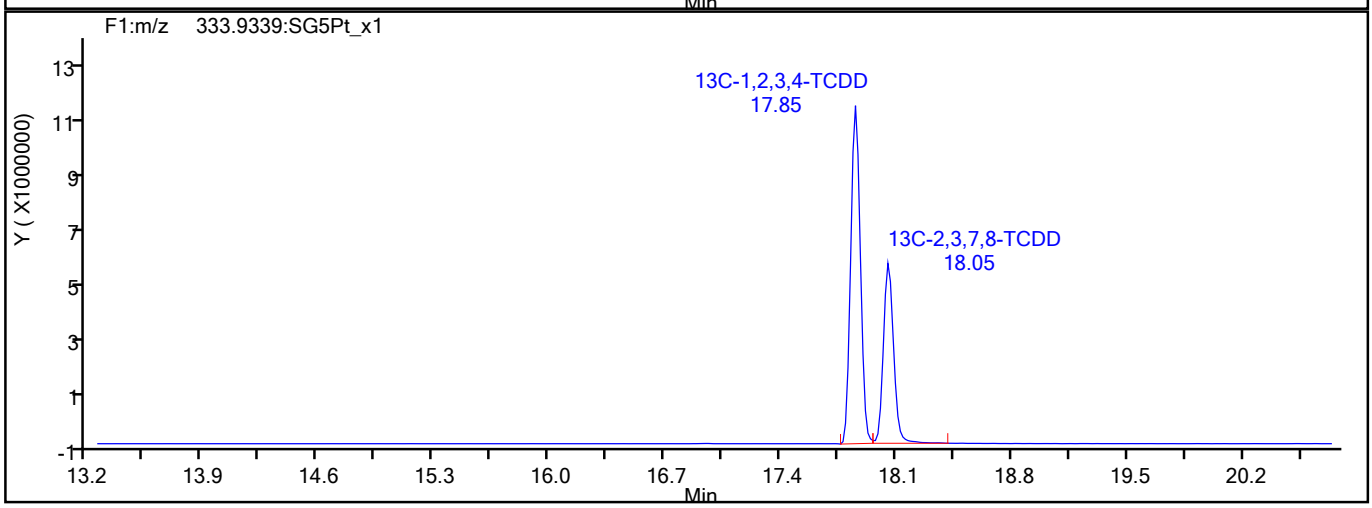

779626

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

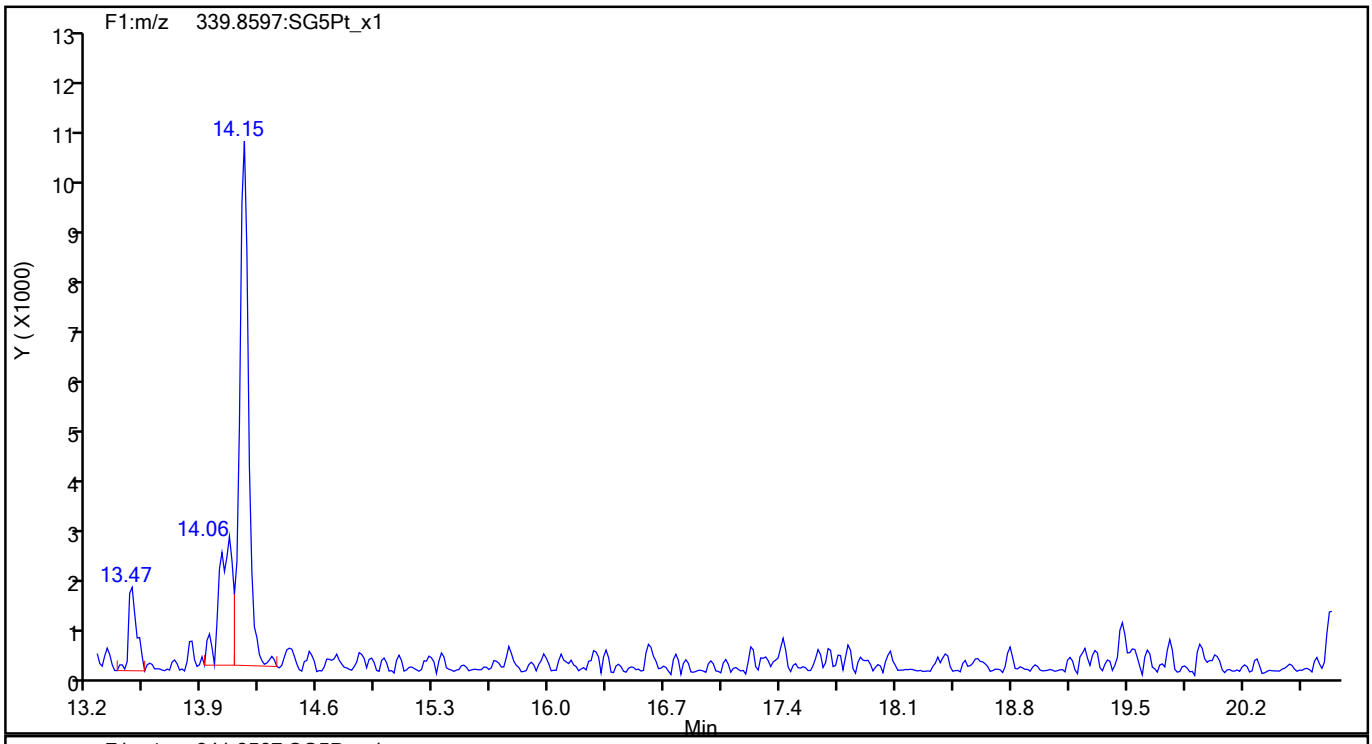

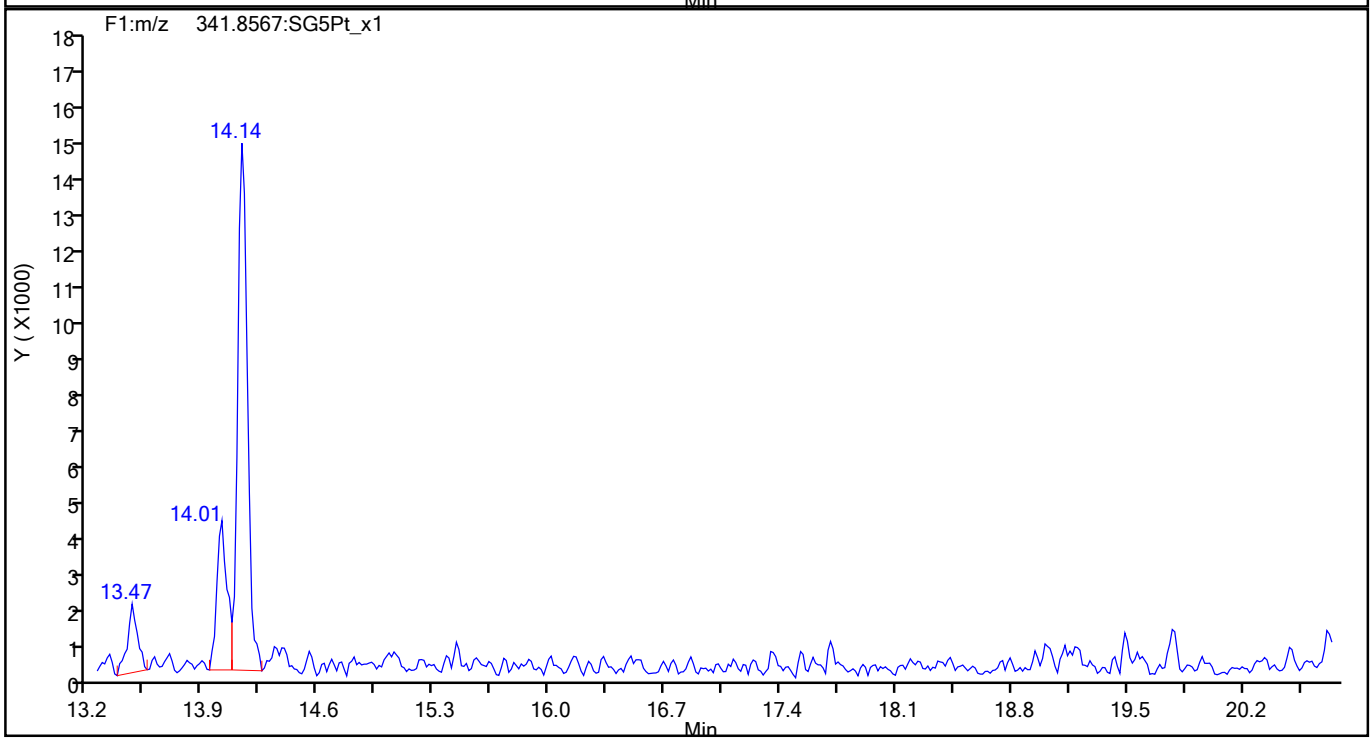

779627

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

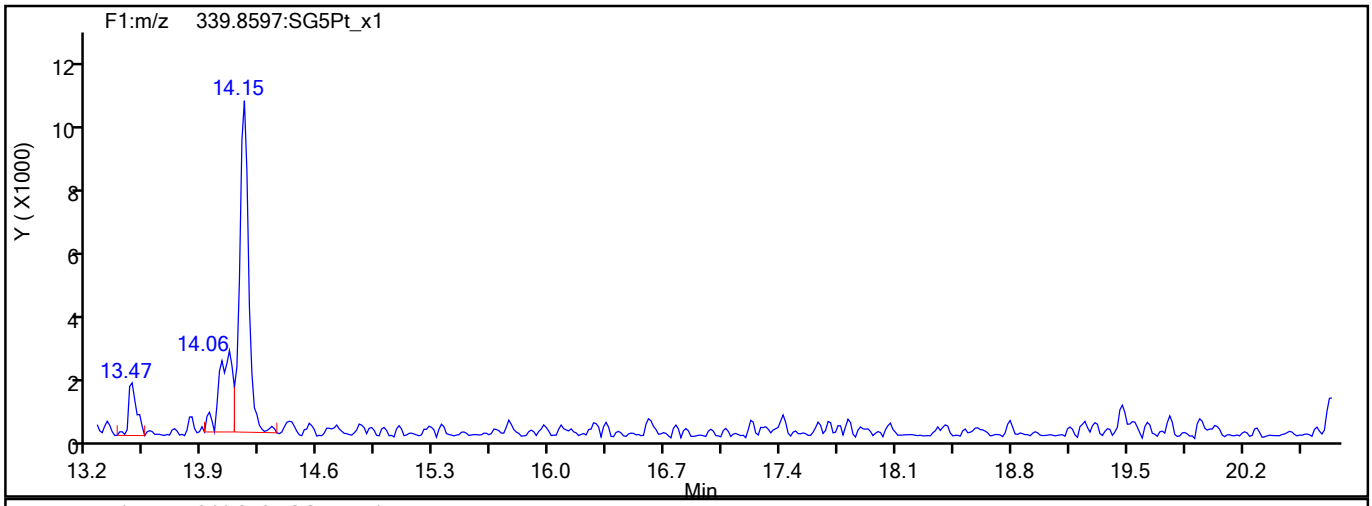

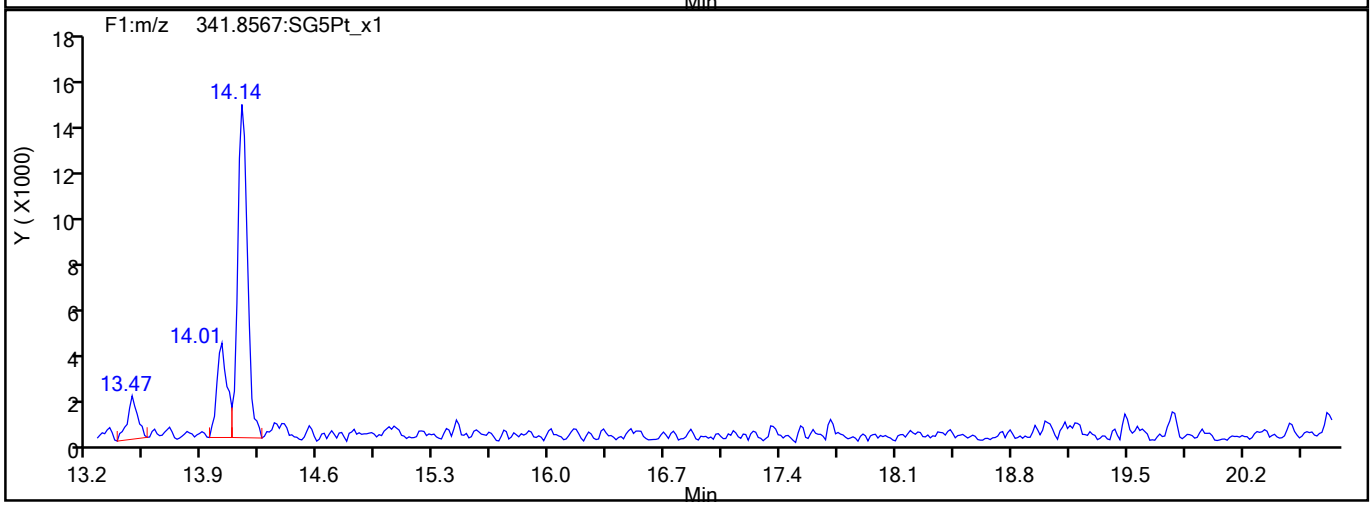

F1 PeCDFs Interference Mass

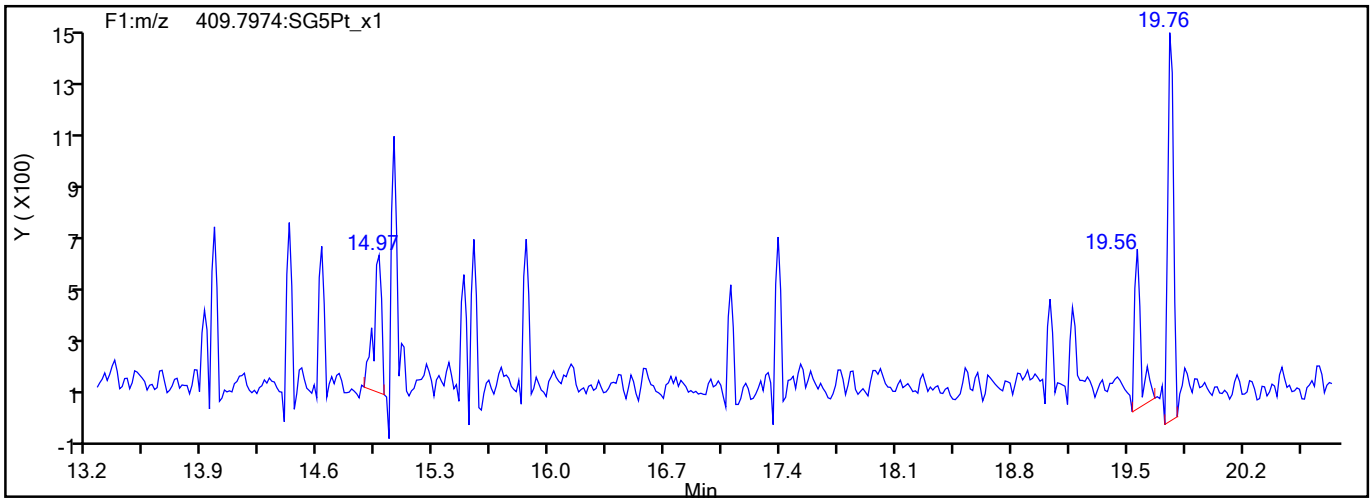

779628

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

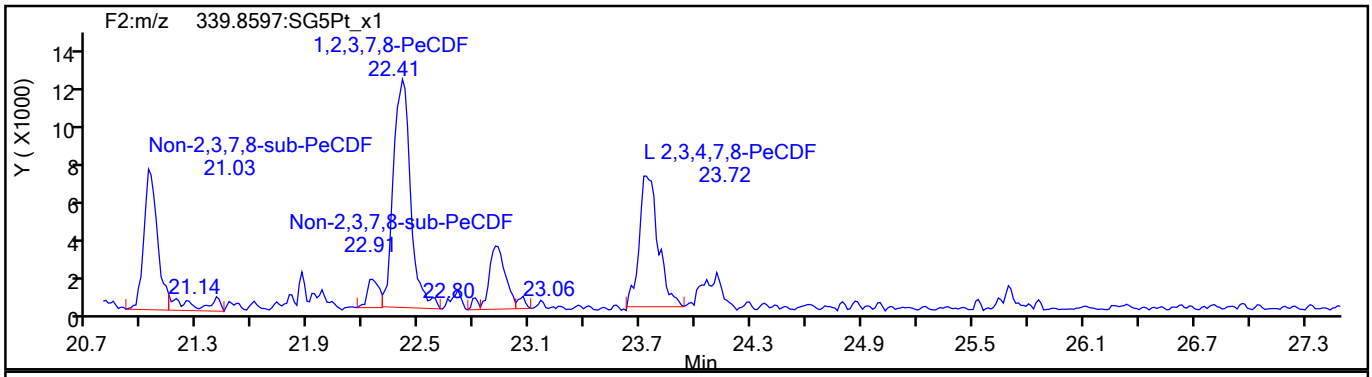

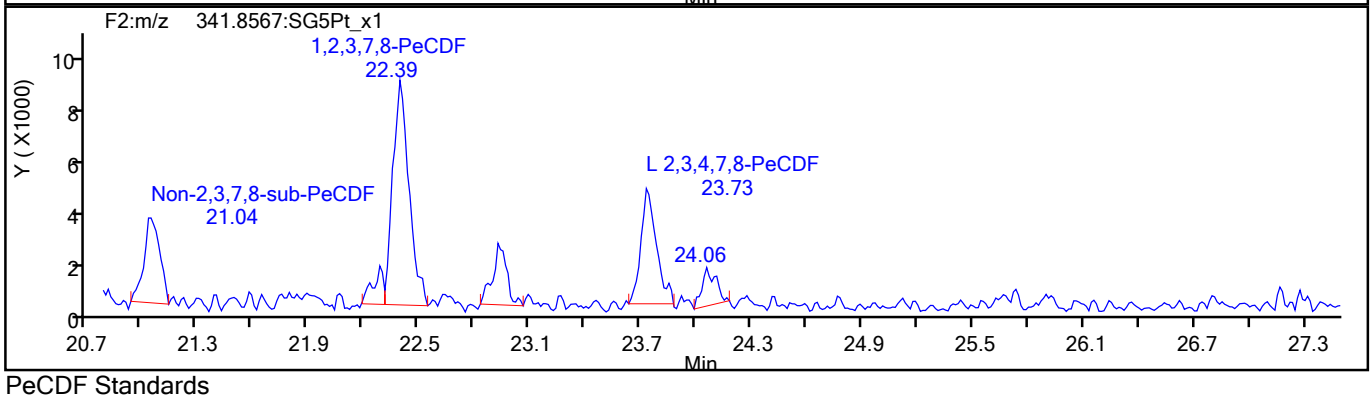

PeCDF Standards

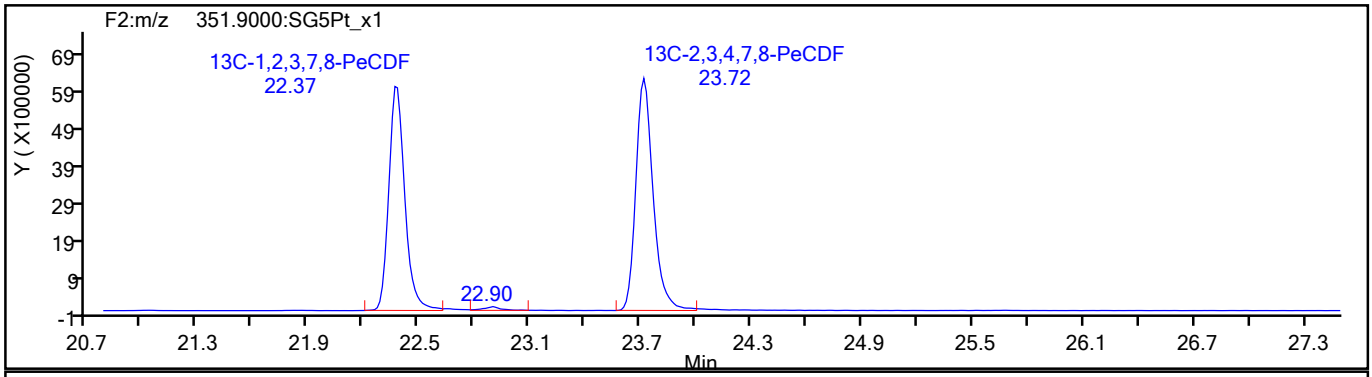

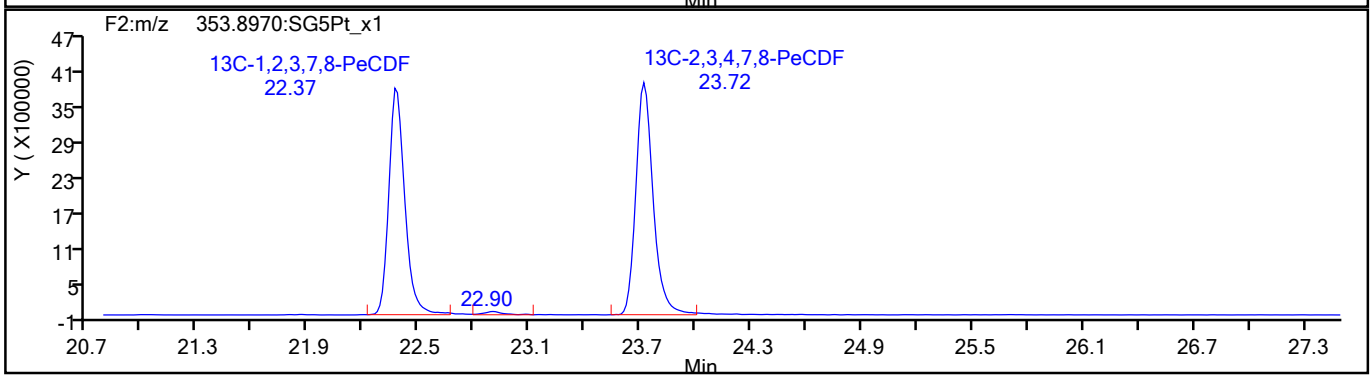

779629

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

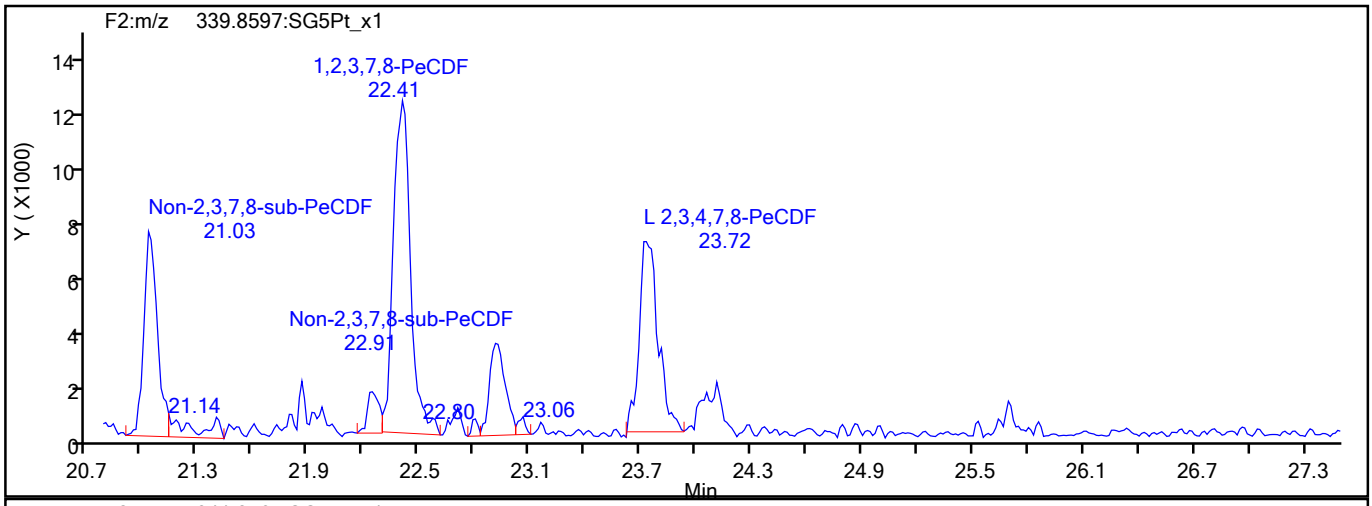

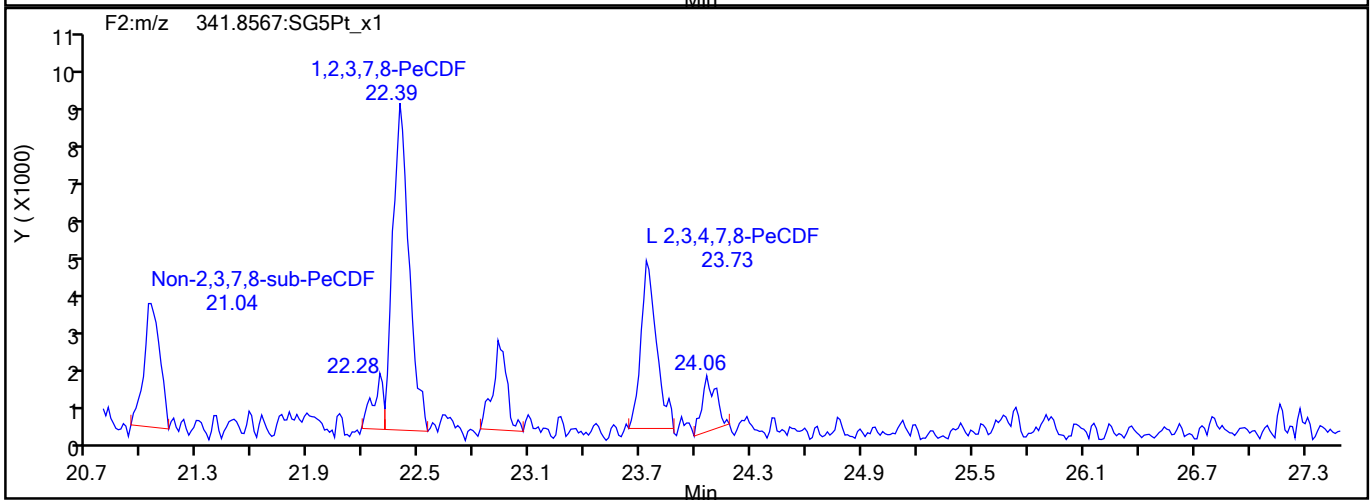

PeCDF Interference Mass

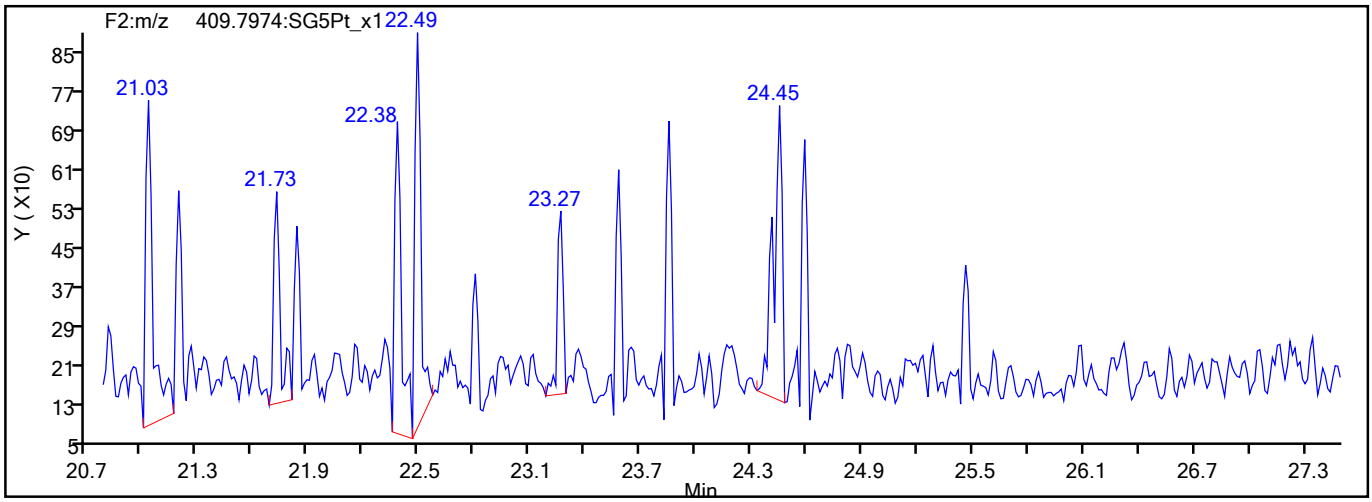

779630

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

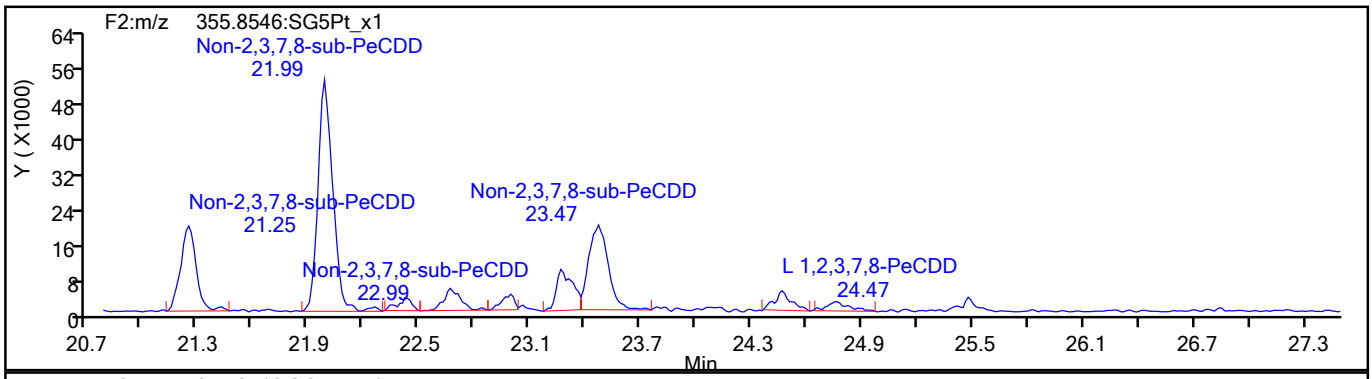

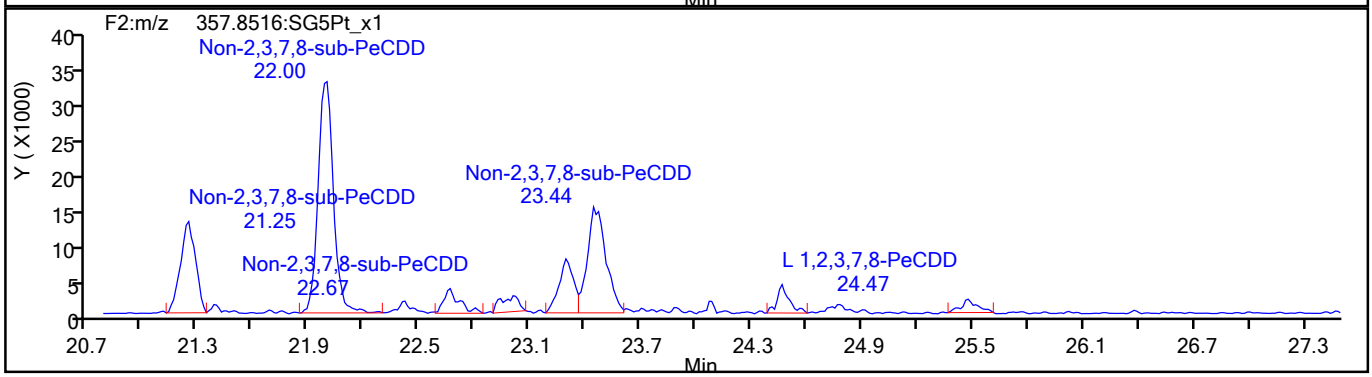

PeCDD Standards

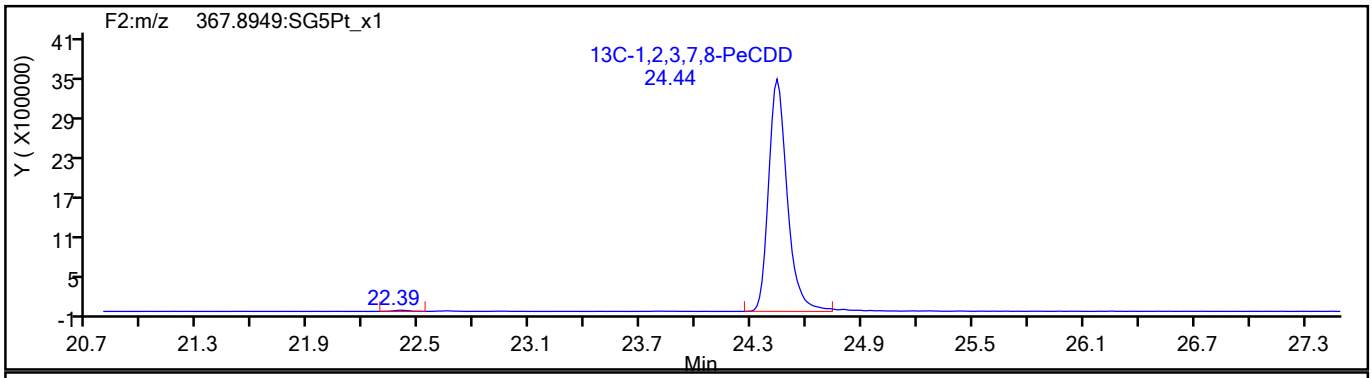

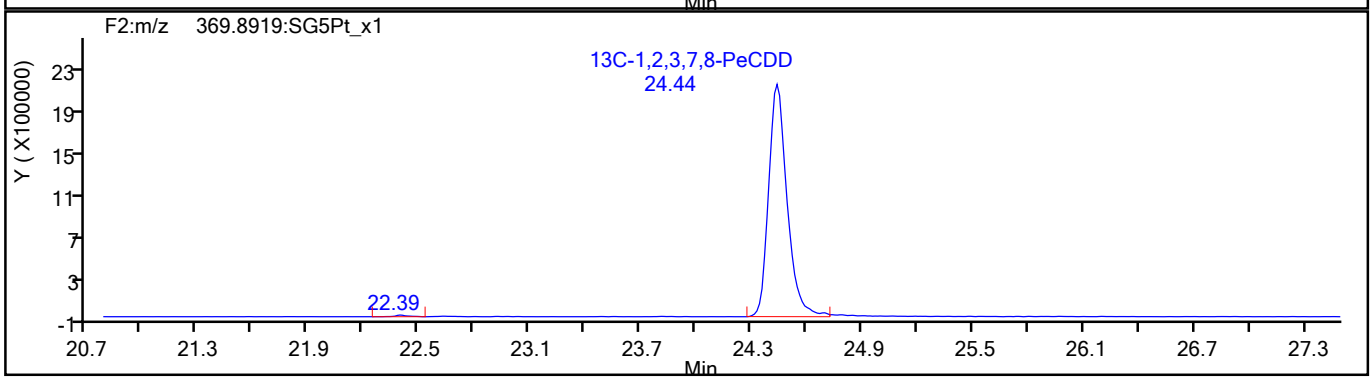

779631

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

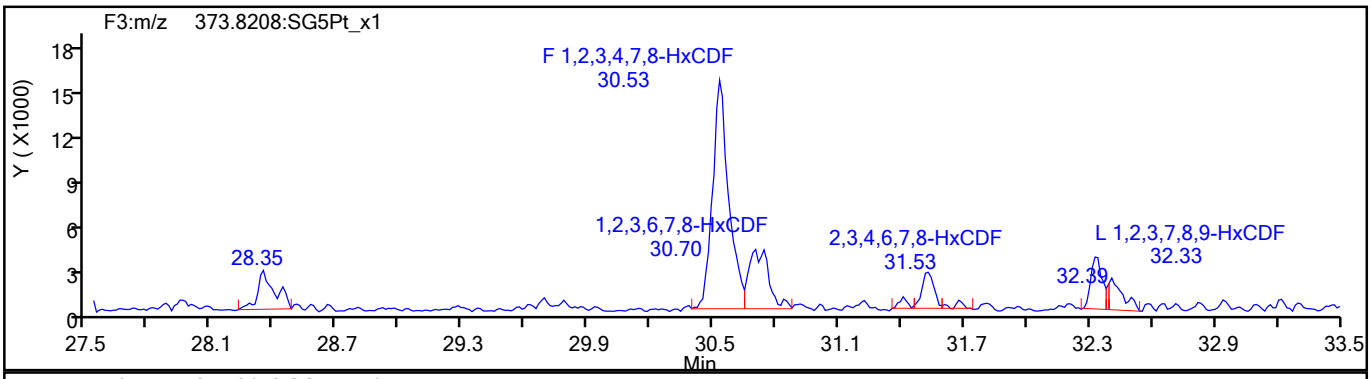

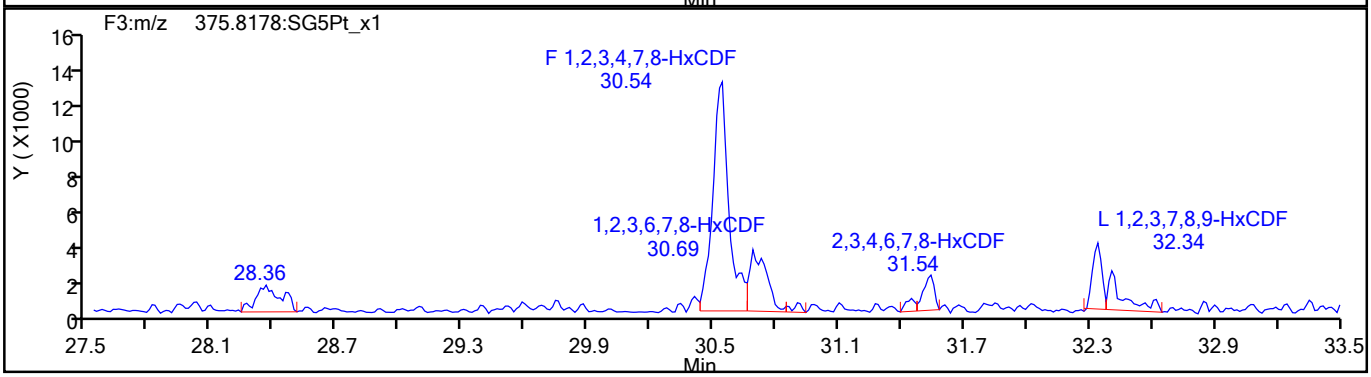

HxCDF Standards

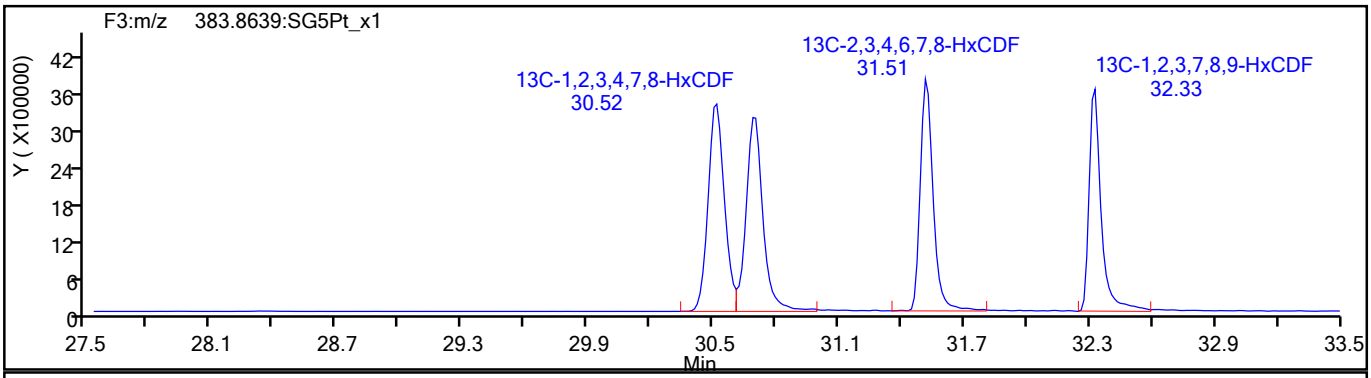

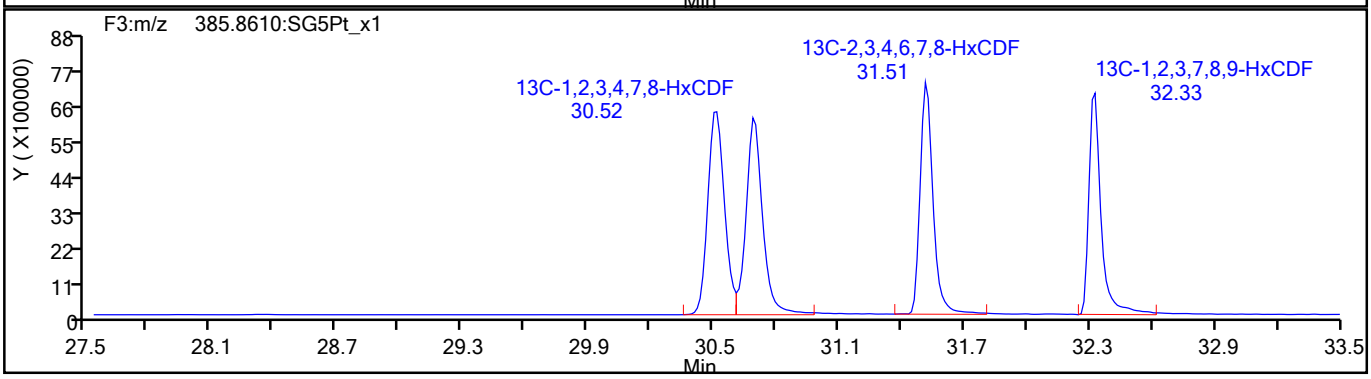

779632

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

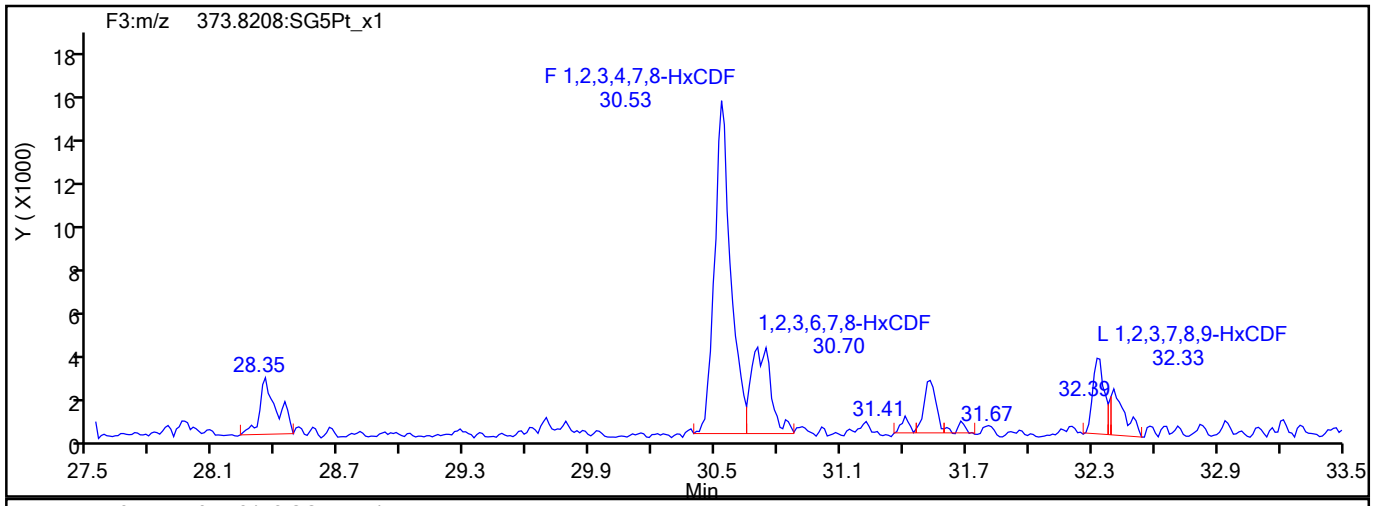

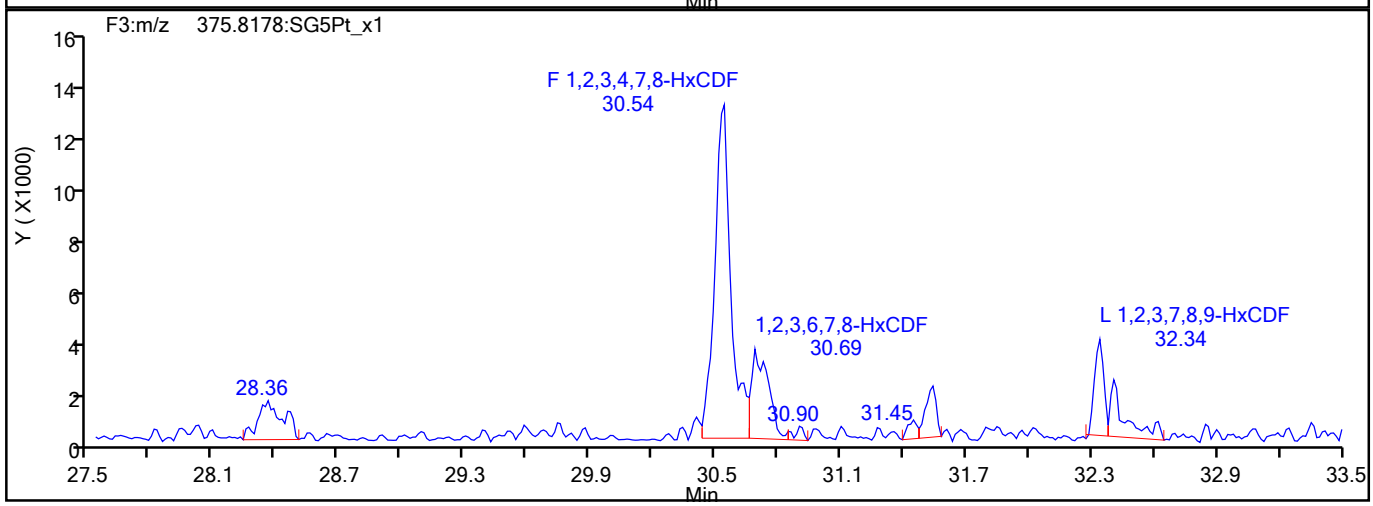

HxCDF Interference Mass

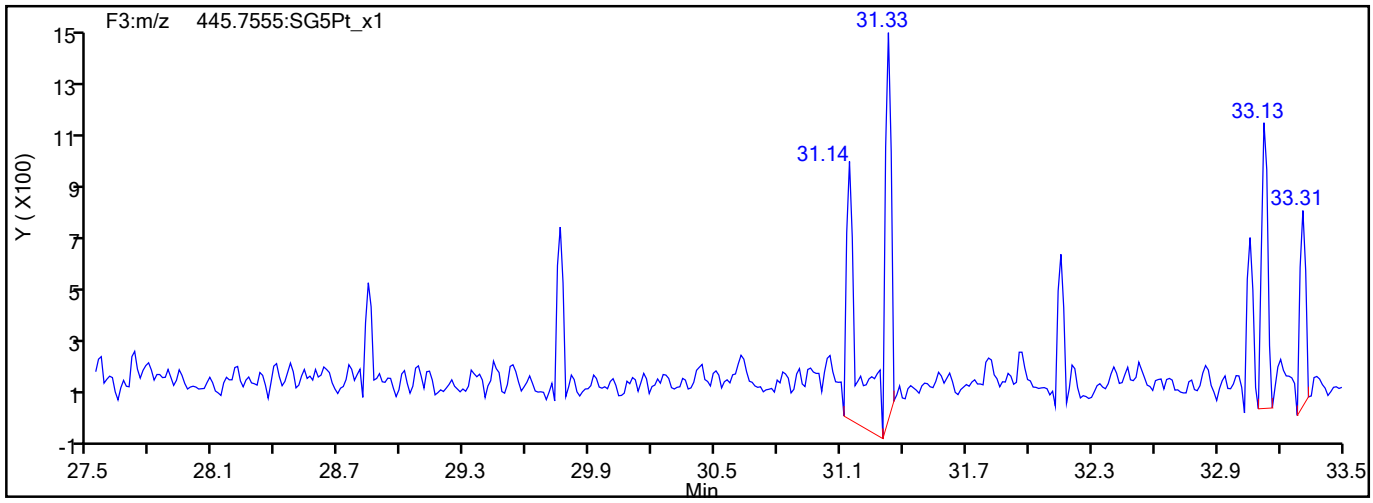

779633

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

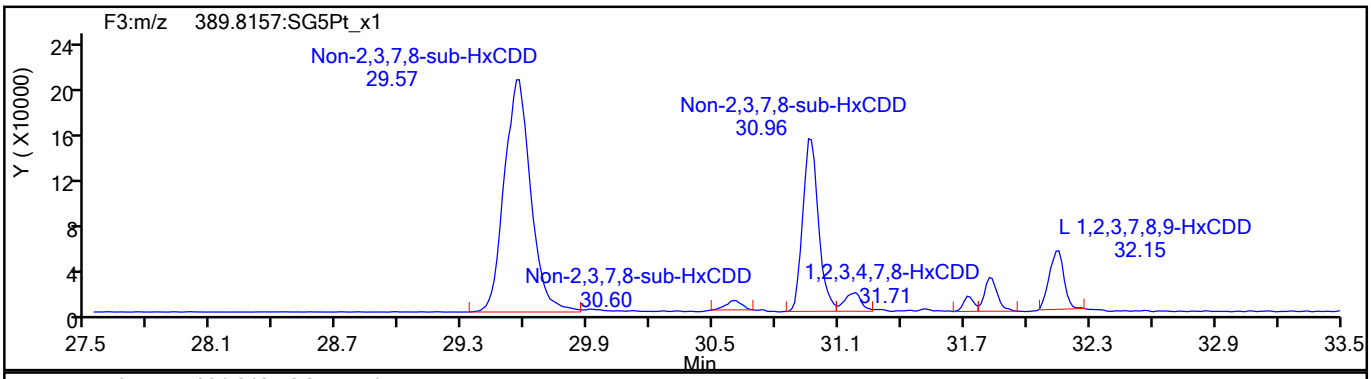

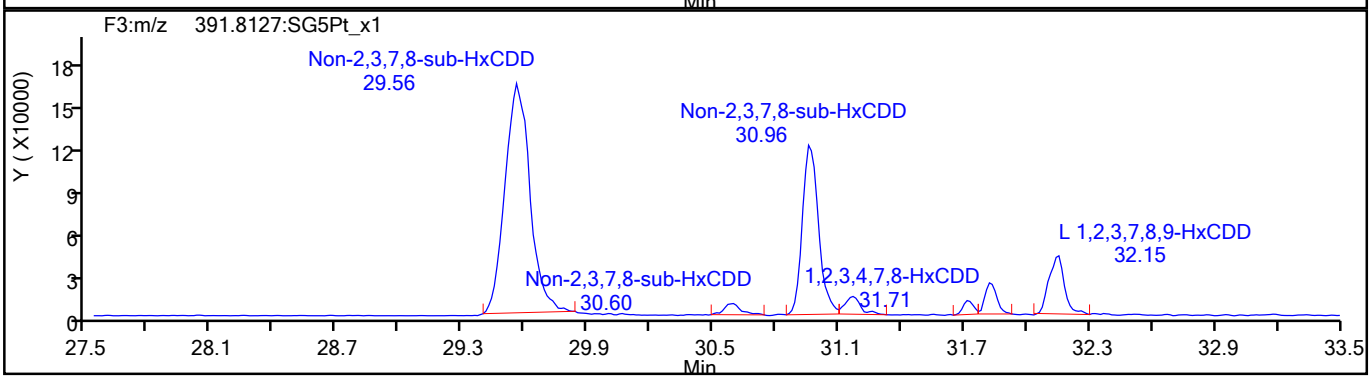

HxCDD Standards

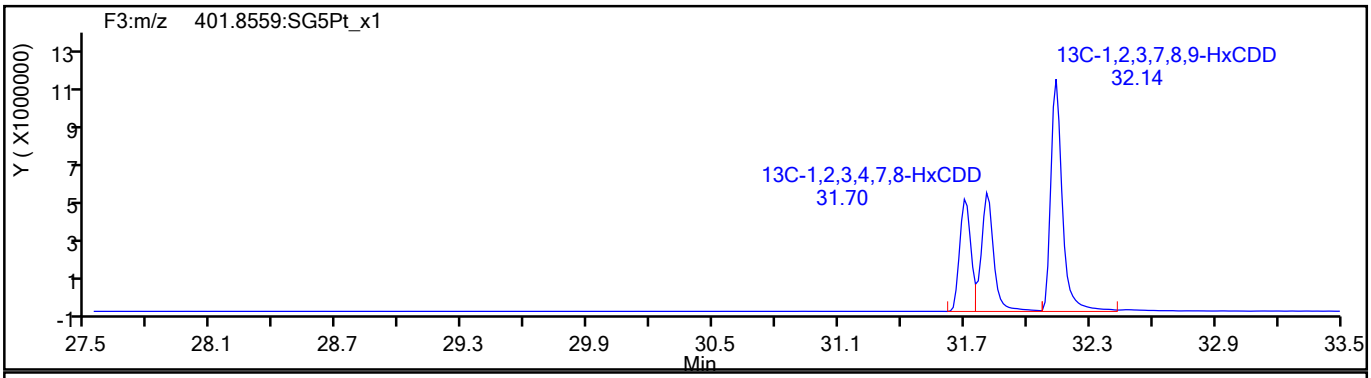

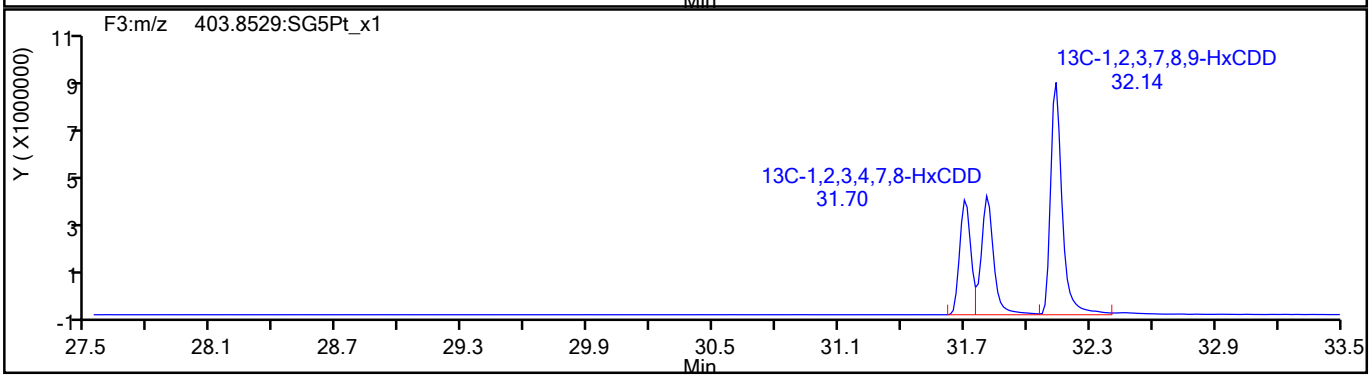

779634

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

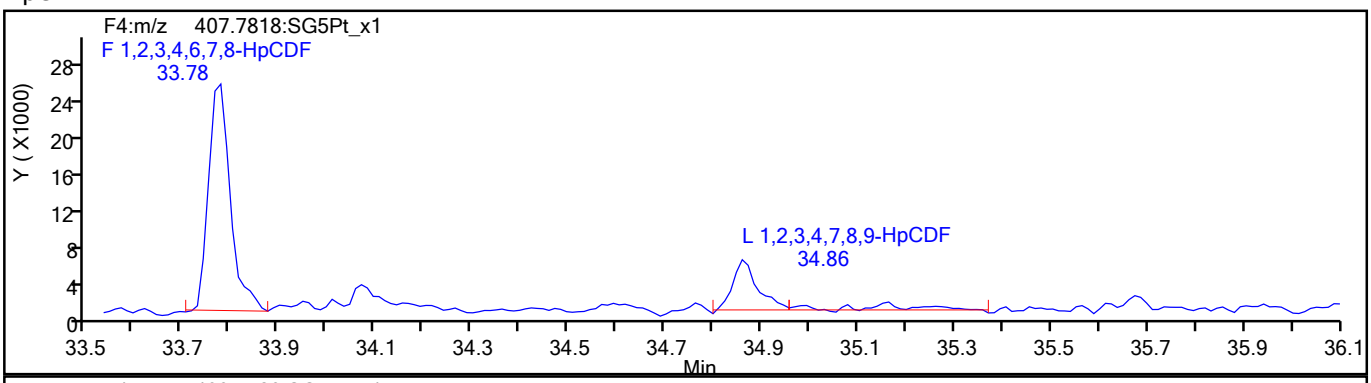

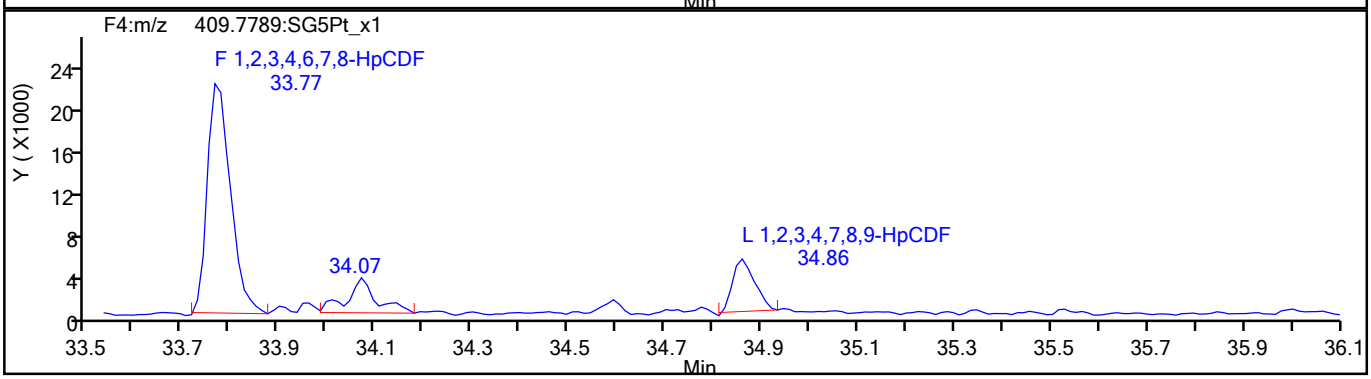

HpCDF Standards

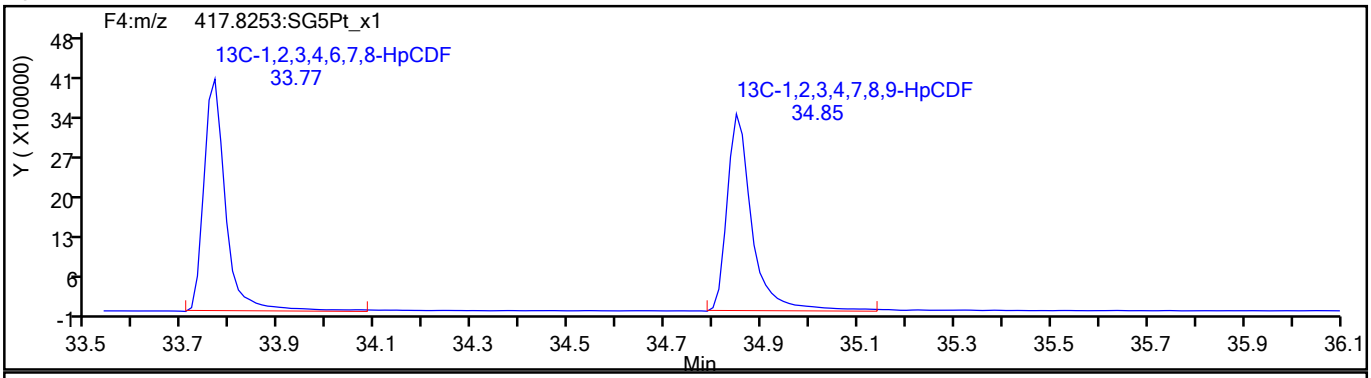

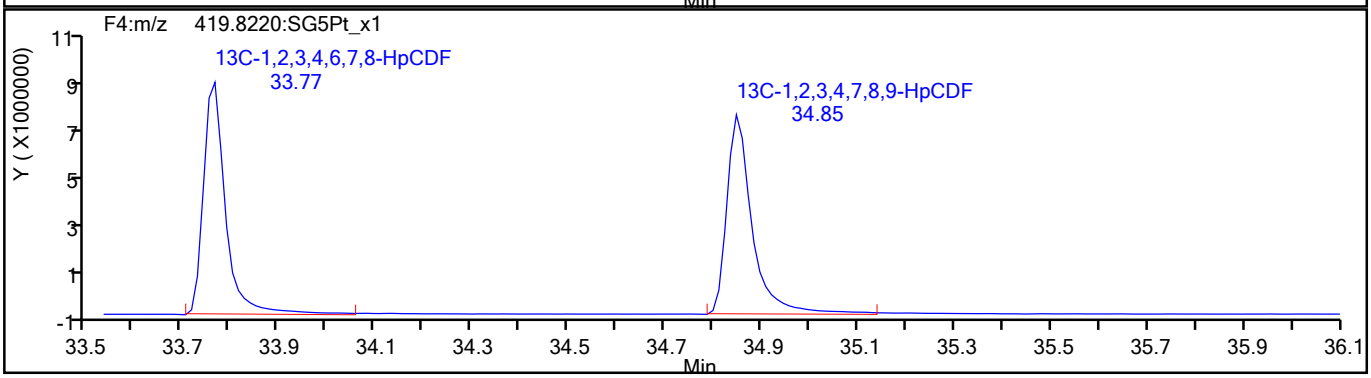

779635

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

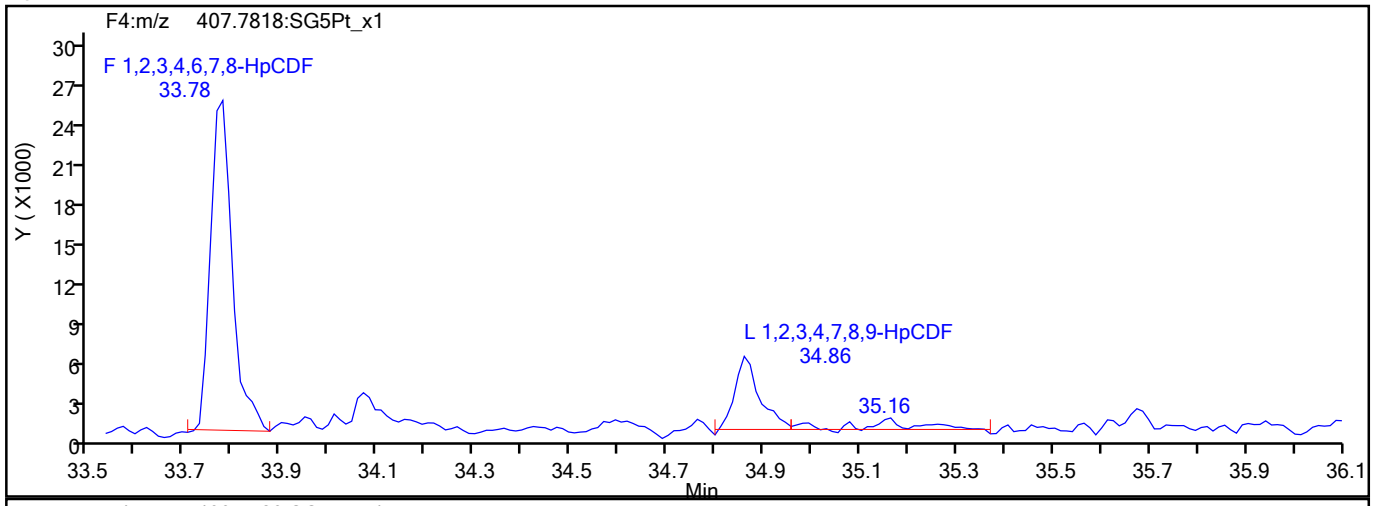

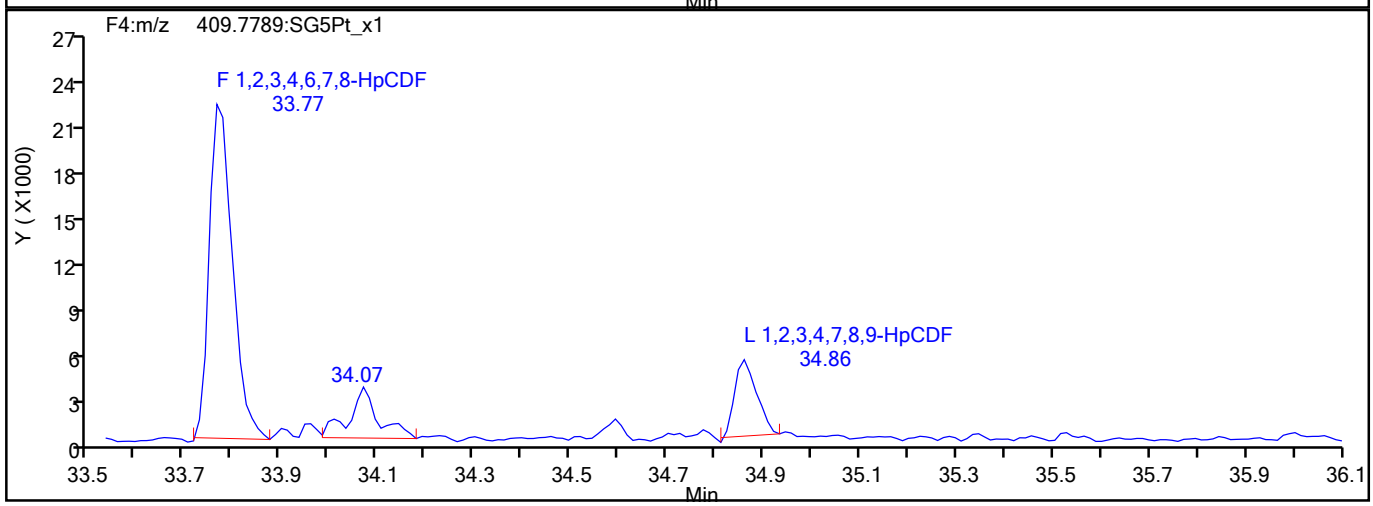

HpCDF Interference Mass

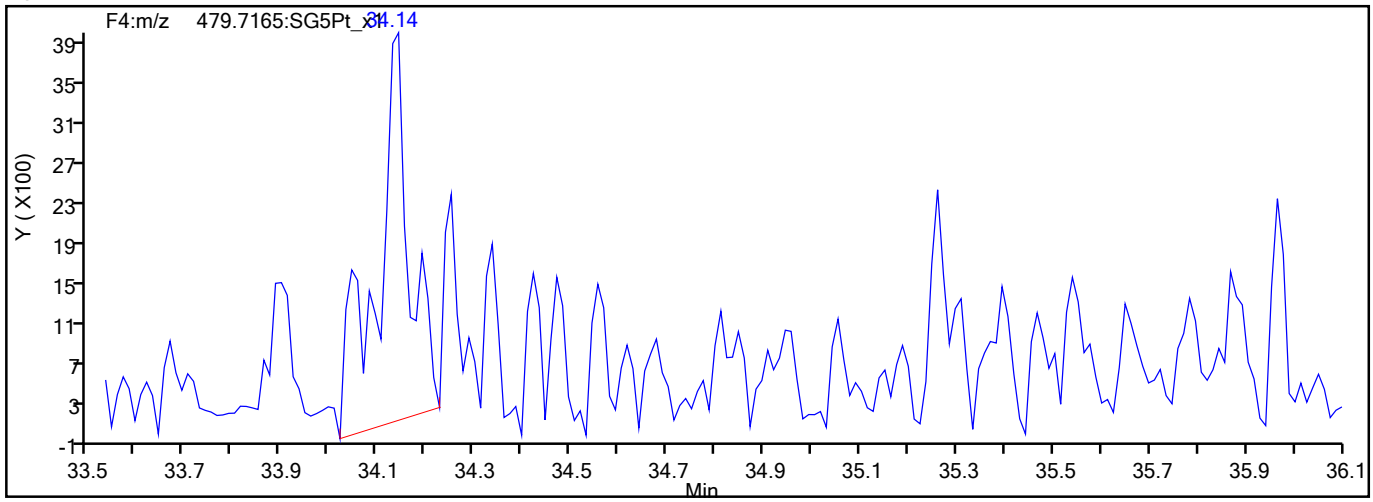

779636

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

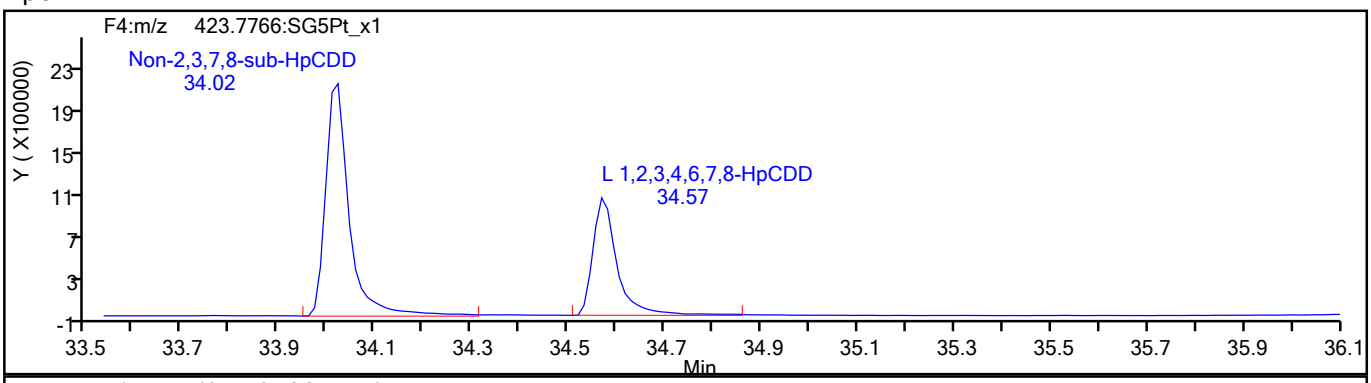

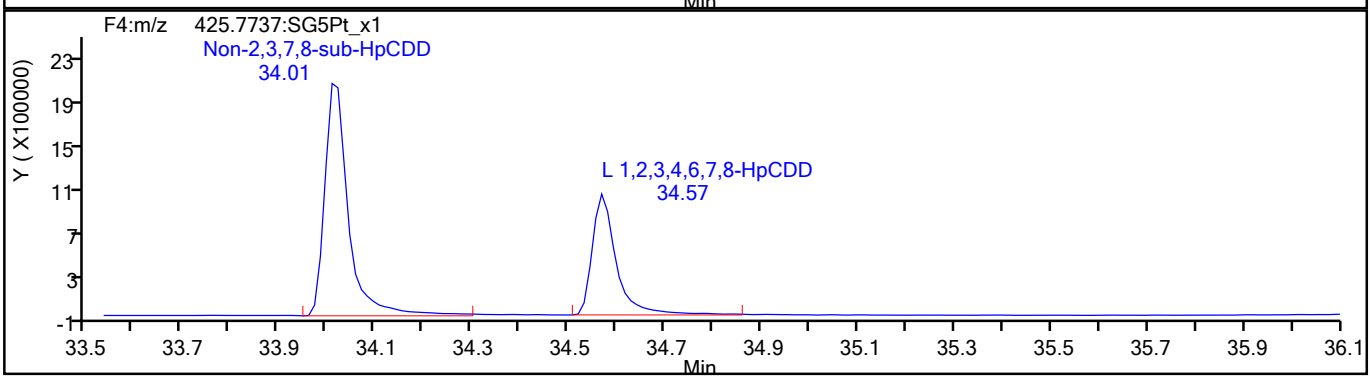

HpCDD Standards

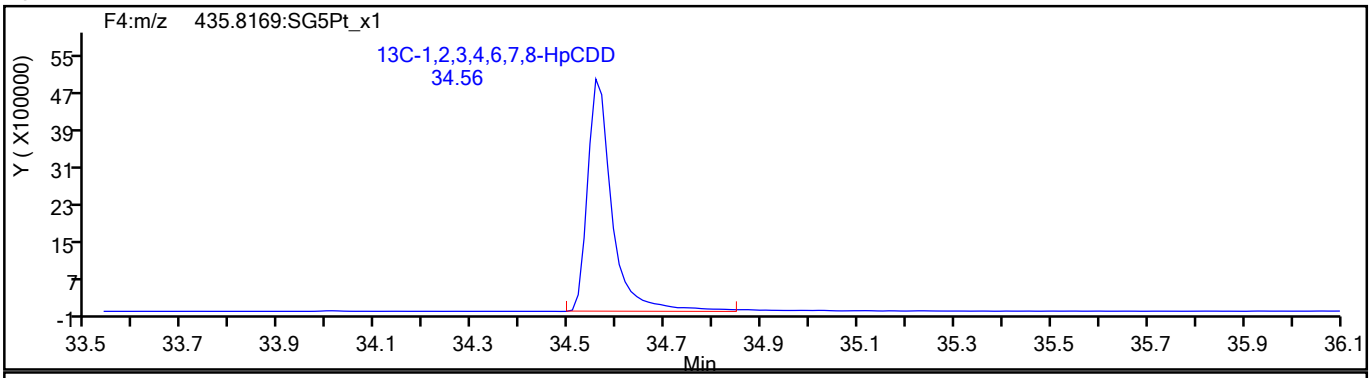

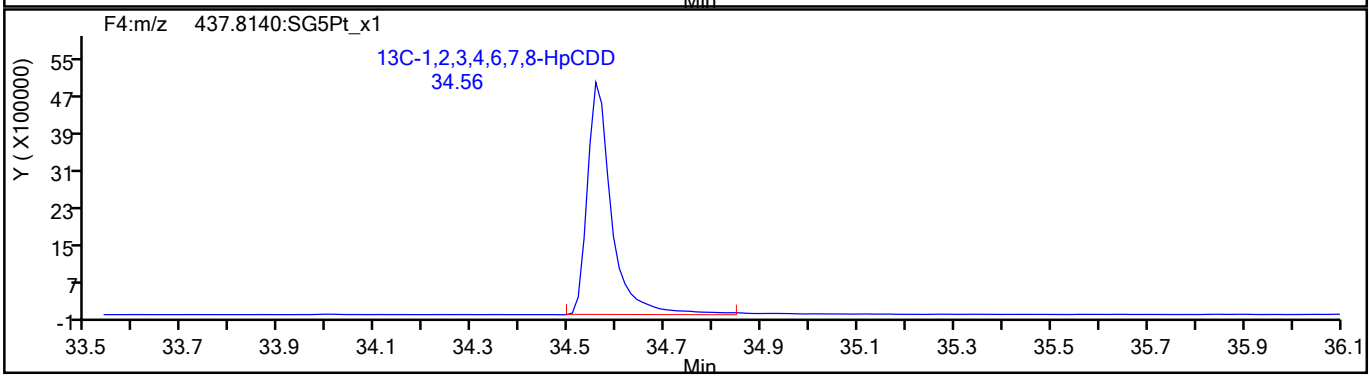

779637

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

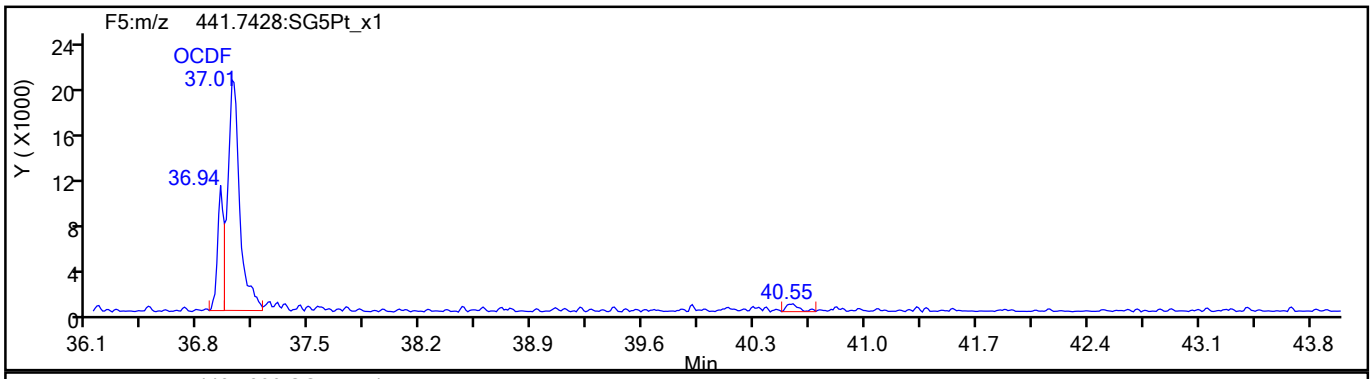

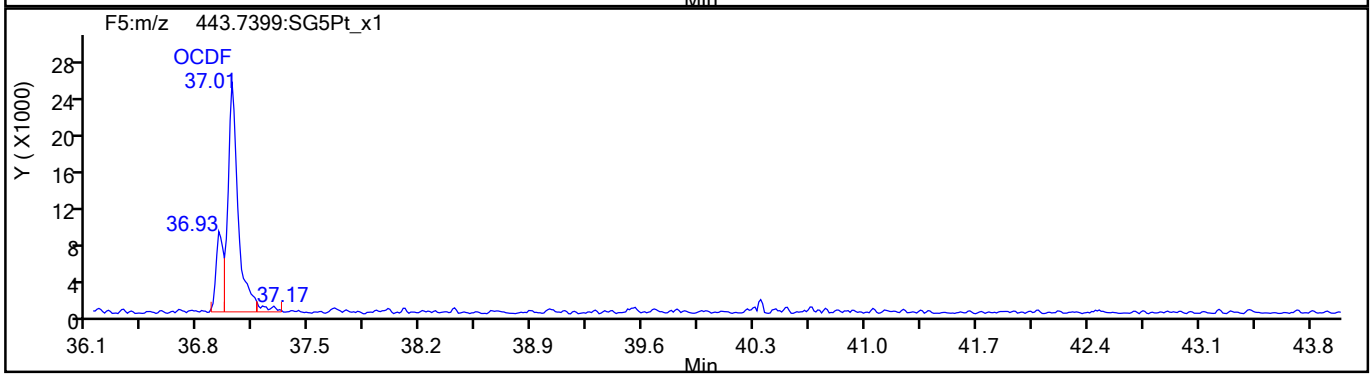

OCDF Standards

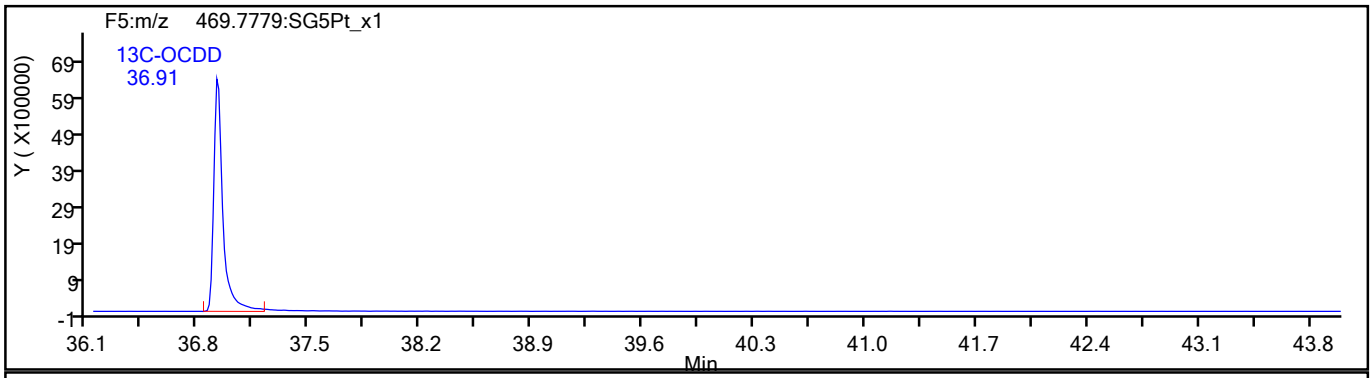

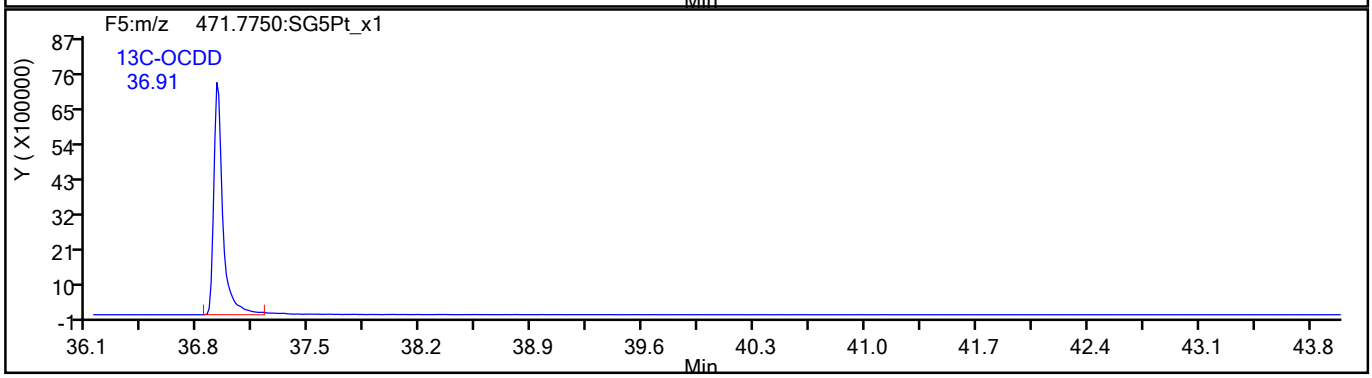

779638

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

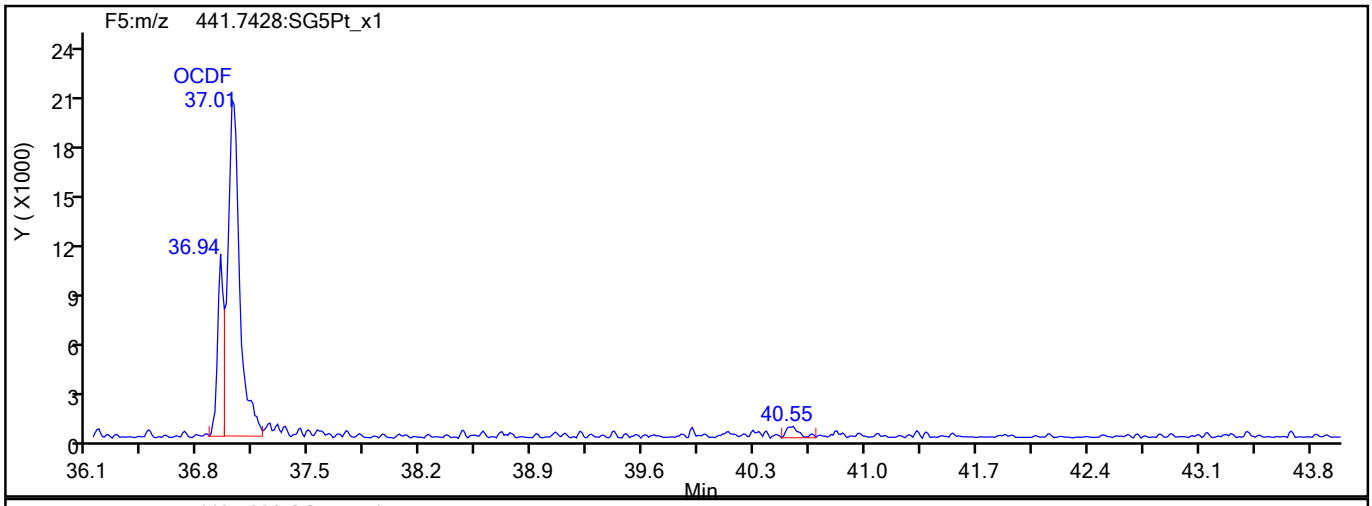

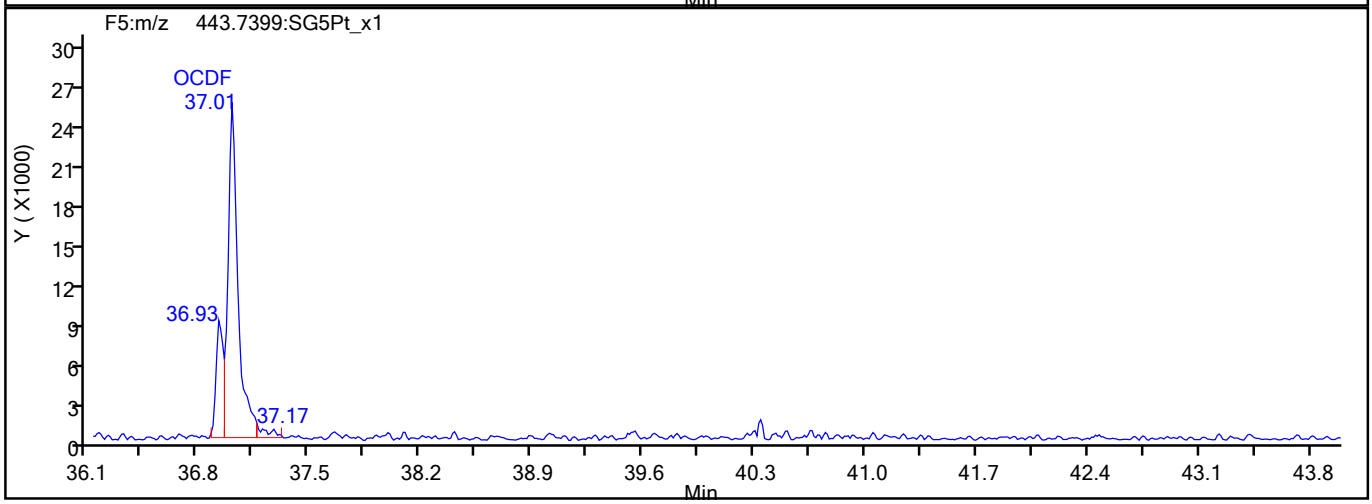

OCDF Interference Mass

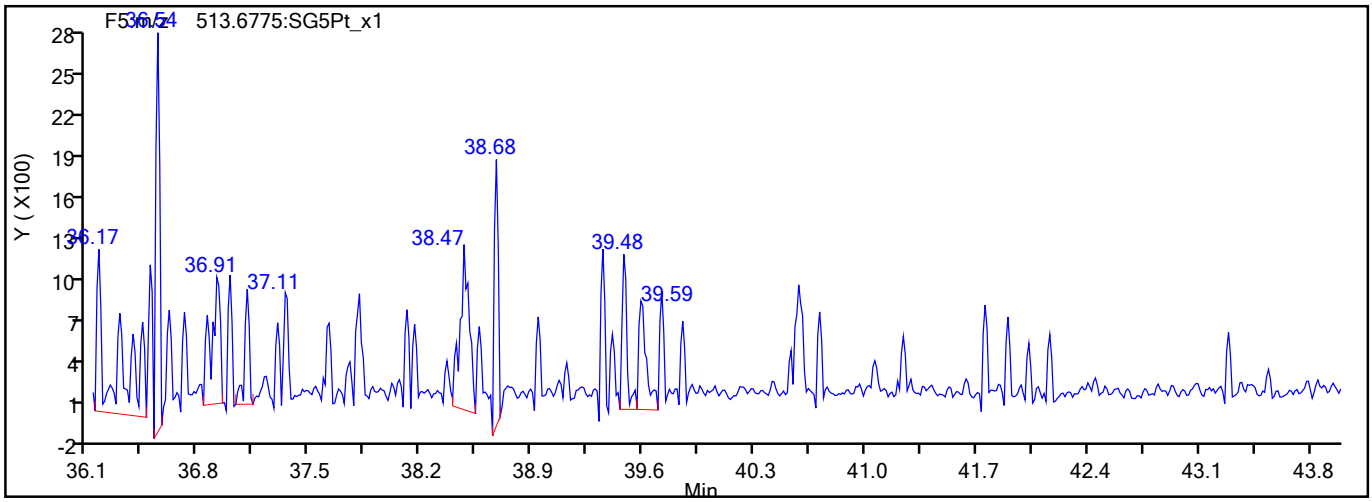

779639

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

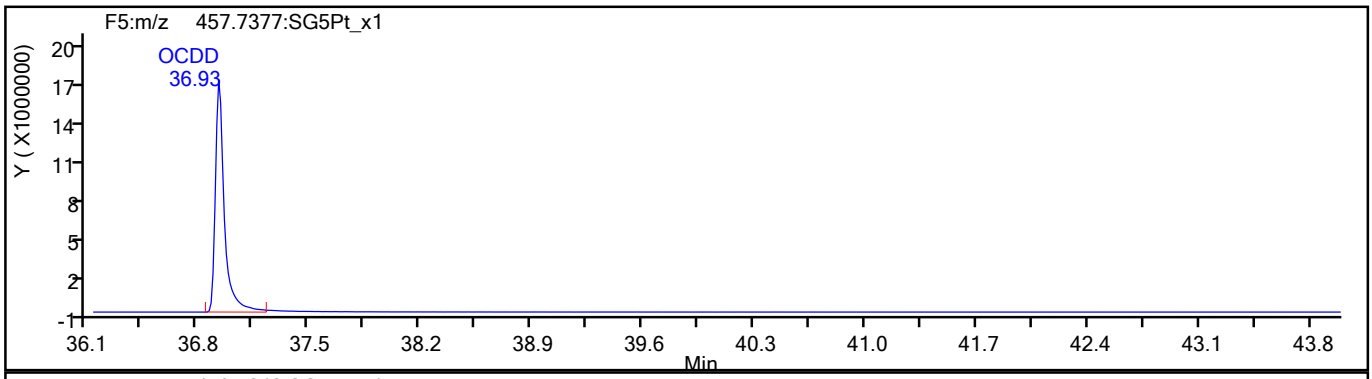

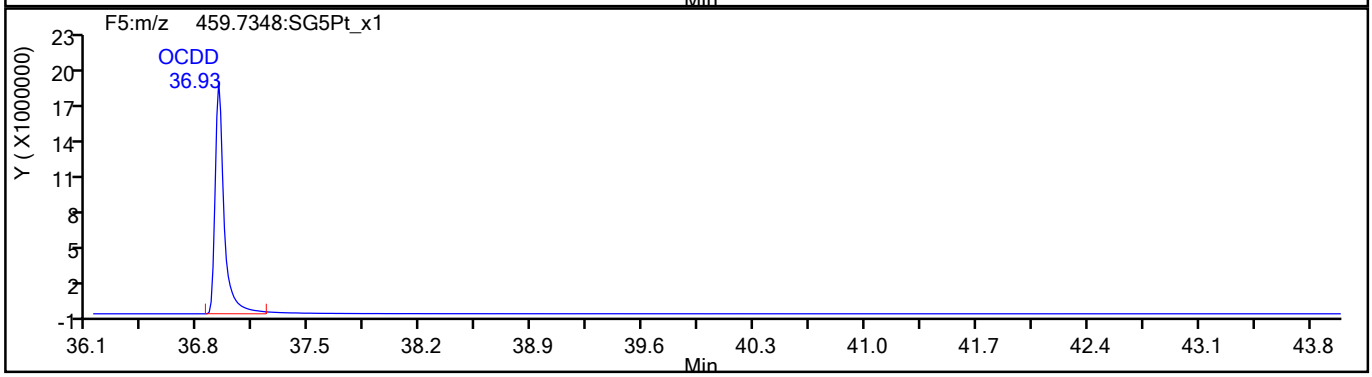

OCDD Standards

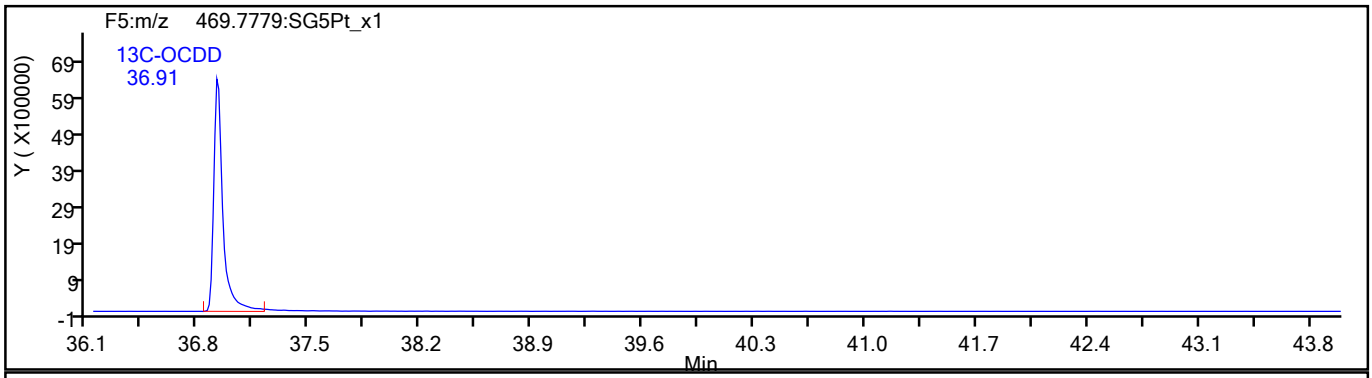

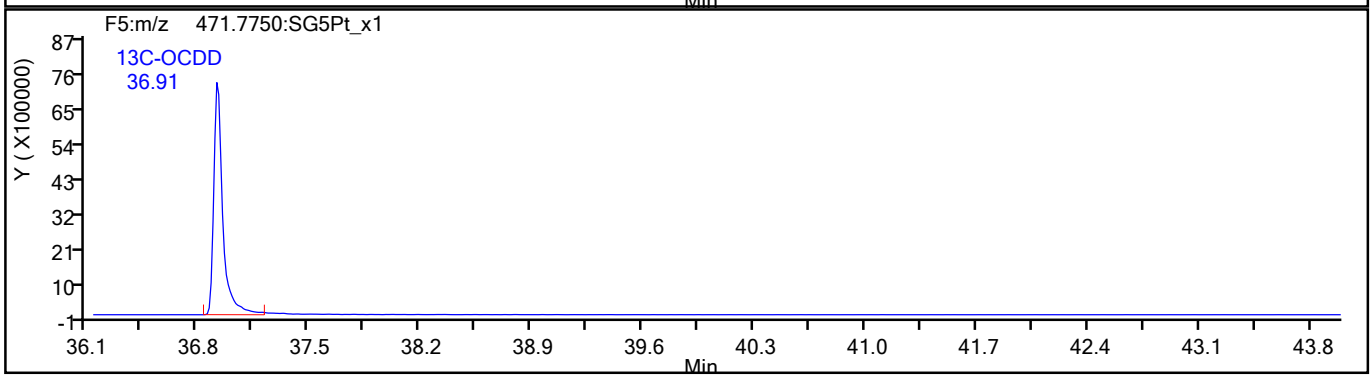

779640

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

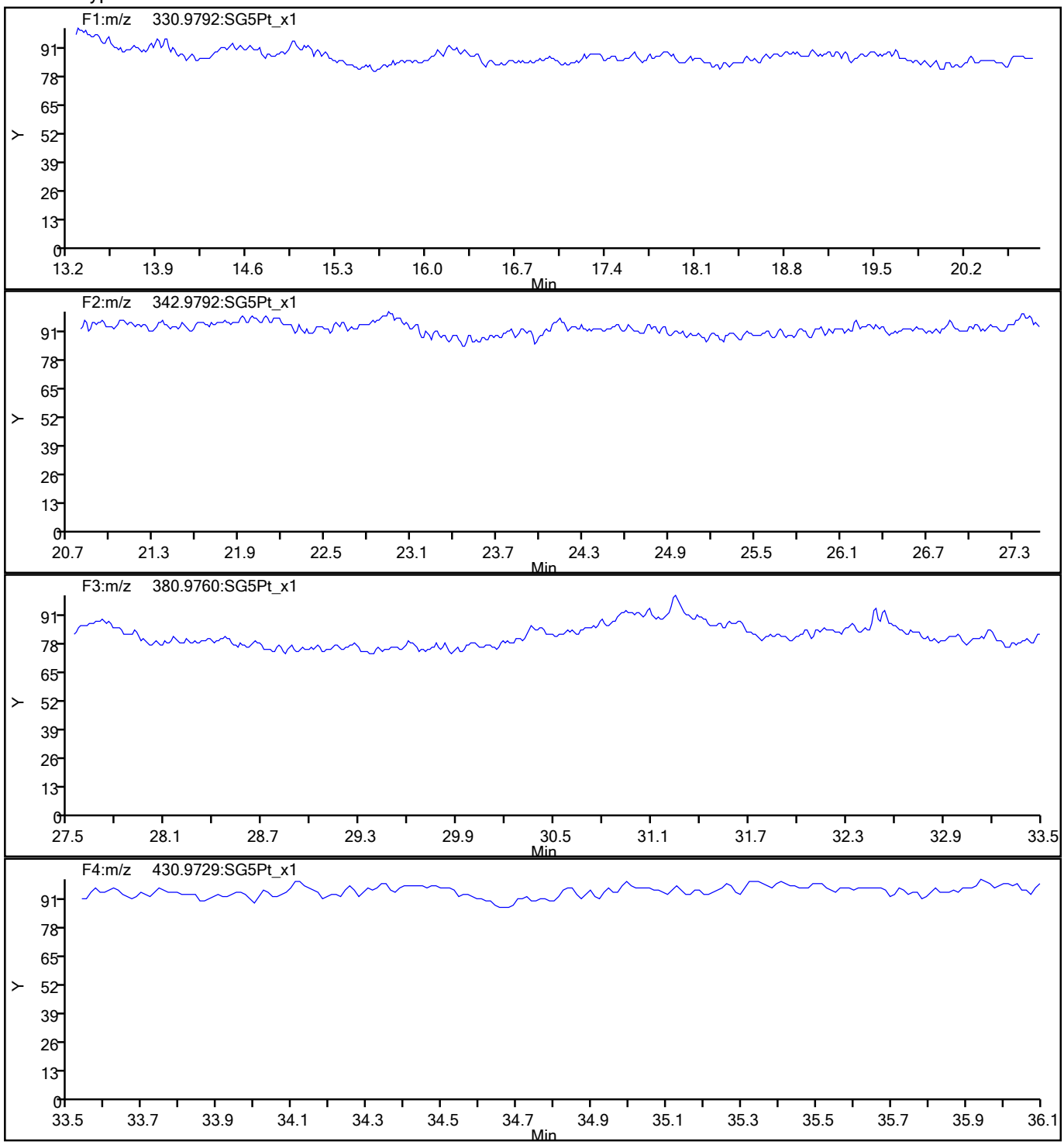

779641

Report Date: 18-Aug-2021 09:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_29.d		
Injection Date:	14-Aug-2021 14:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	516846	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

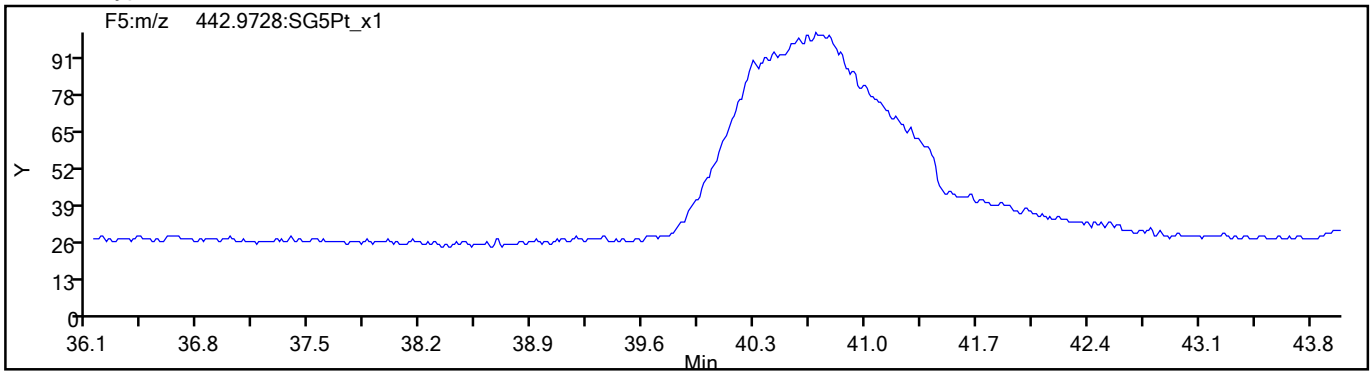

779642

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (14-16) RA
Lab Sample ID: 320-76788-8 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_006.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:35
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.78(g)
Date Analyzed: 08/24/2021 19:48
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 39.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	21	B	1.7	0.25

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	69		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	85		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_006.d
Lims ID: 320-76788-A-8-A
Client ID: 11215702-072321-BN-SJSB085 (14-16)
Sample Type: Client
Inject. Date: 24-Aug-2021 19:48:46 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-8-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:30:24

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	52149928	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	48174536	0.82	1.3327	69.3	69.3	0.2461	0.2461	69.32	
2,3,7,8-TCDF	17.642	3032118	0.78	0.9978	6.308	6.308	0.0745	0.0745		
D 13C-2,3,7,8-TCDD	16.065	30917624	0.83	0.8749	67.8	67.8	0.6694	0.6694	67.76	
$ 37Cl4-2,3,7,8-TCDD	16.092	15274710		0.8648	33.9	33.9	0.0995	0.0995	84.67	
2,3,7,8-TCDD	16.092	698908	0.65	1.0570	2.139	2.139	0.0872	0.0872		M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_006.d
Lims ID: 320-76788-A-8-A
Client ID: 11215702-072321-BN-SJSB085 (14-16)
Sample Type: Client
Inject. Date: 24-Aug-2021 19:48:46 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-8-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:30:24

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.298	16.285	1		22303728	4892683	12613	31532	388		
333.9339	16.311	16.285	2		29846200	6461043	13986	34965	462	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.601	2	1.082	21672198	4146720	6938	17345	598		
317.9389	17.614	17.601	1	1.081	26502338	4952003	7959	19897	622	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.642	17.629	1	1.001	1327526	253094	1368	3420	185		
305.8987	17.642	17.629	1	1.001	1704592	332300	1338	3345	248	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.051	1	0.986	14001591	3098911	12613	31532	246		
333.9339	16.065	16.051	1	0.986	16916033	3924836	13986	34965	281	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.065	2	0.987	15274710	3364101	3907	9767	861		
2,3,7,8-TCDD											M
319.8965	16.092	16.079	1	1.002	274613	68296	1448	3620	47		M
321.8936	16.078	16.079	0	1.001	424295	92245	1141	2852	81	0.65(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Report Date: 25-Aug-2021 09:02:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_006.d		
Injection Date:	24-Aug-2021 19:48:46	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	519540	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

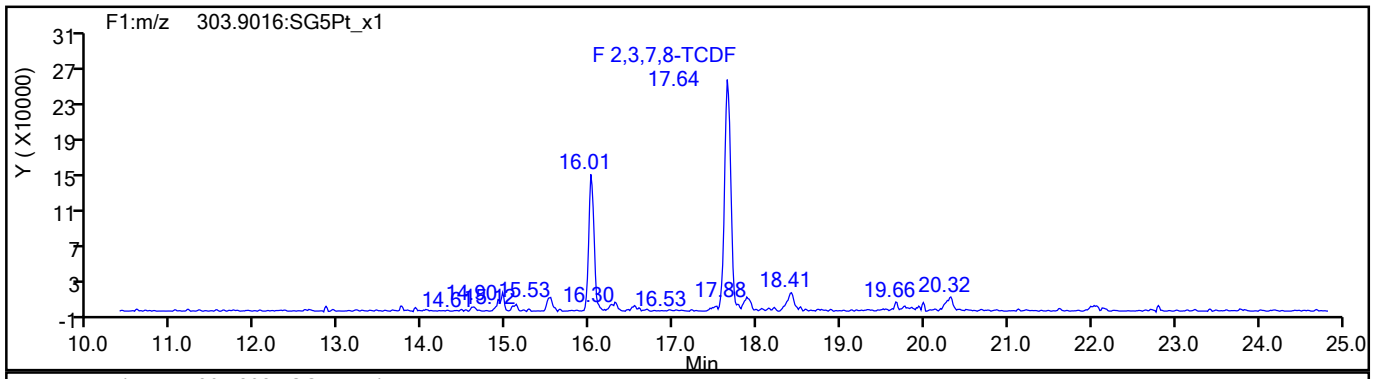

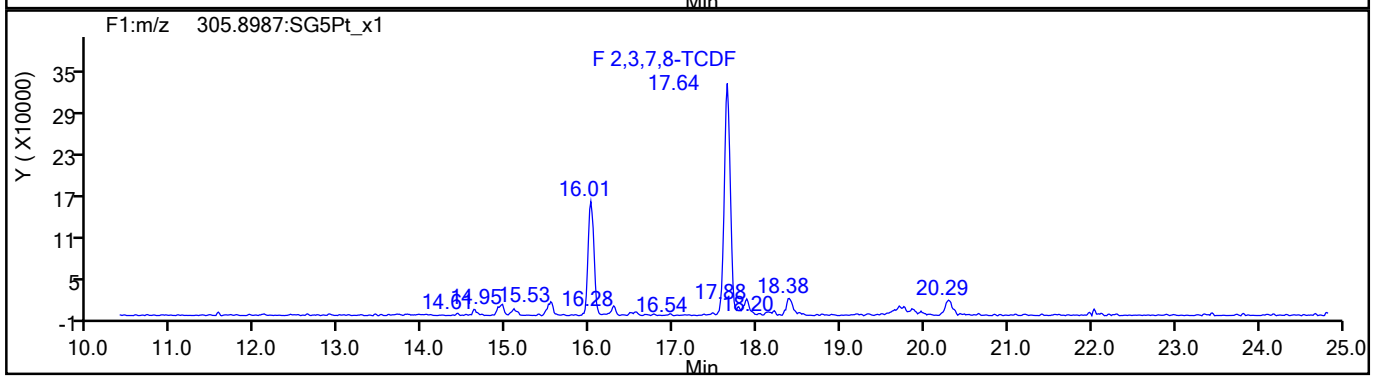

TCDF Standards

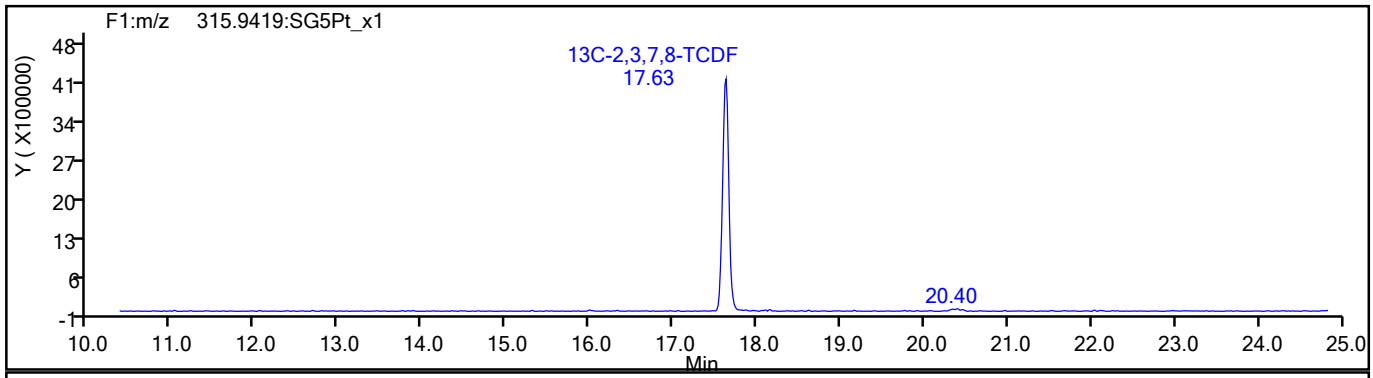

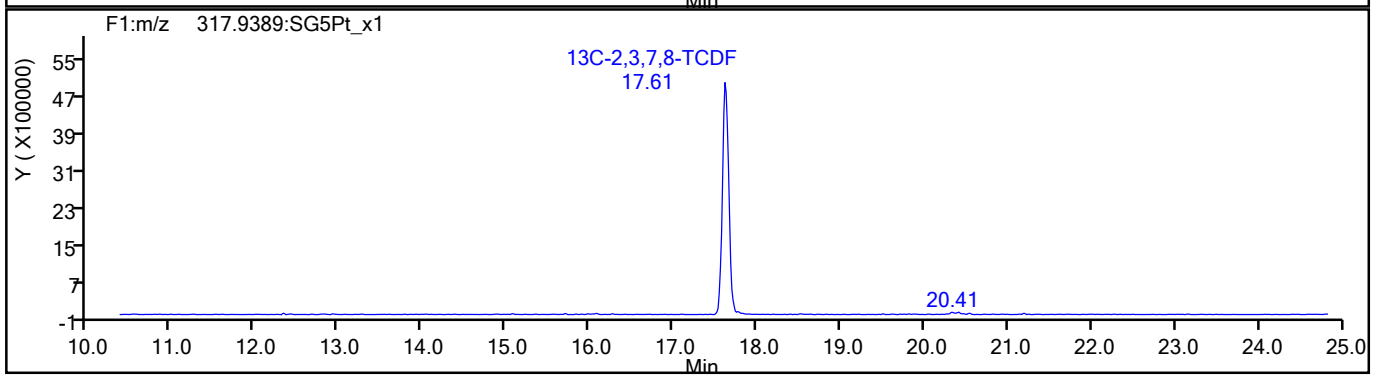

779646

Report Date: 25-Aug-2021 09:02:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_006.d		
Injection Date:	24-Aug-2021 19:48:46	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	519540	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

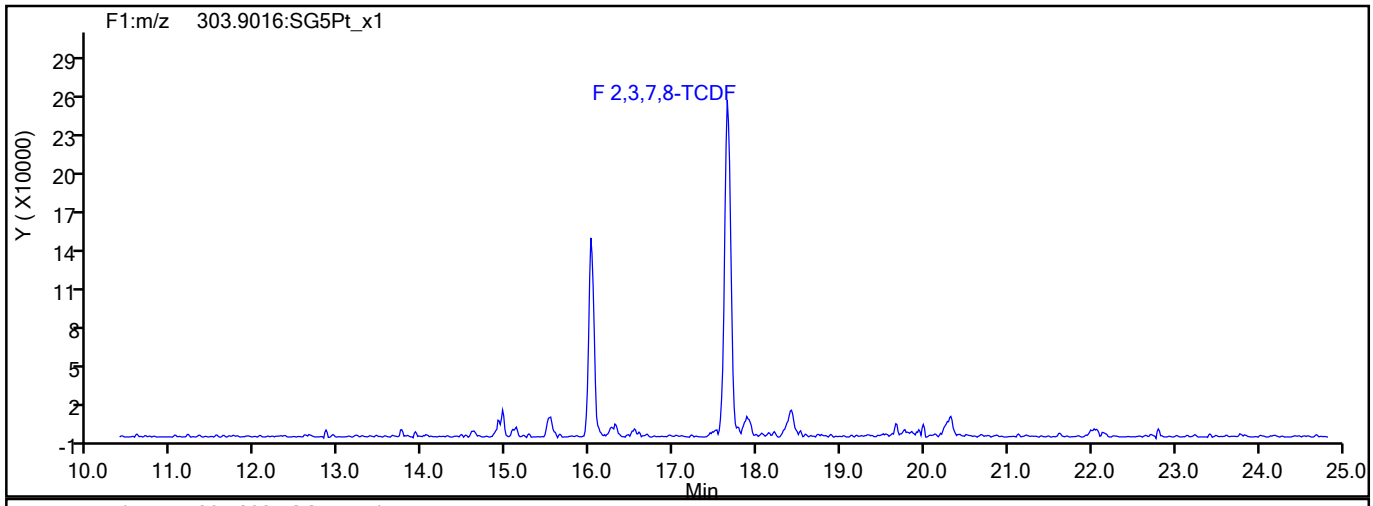

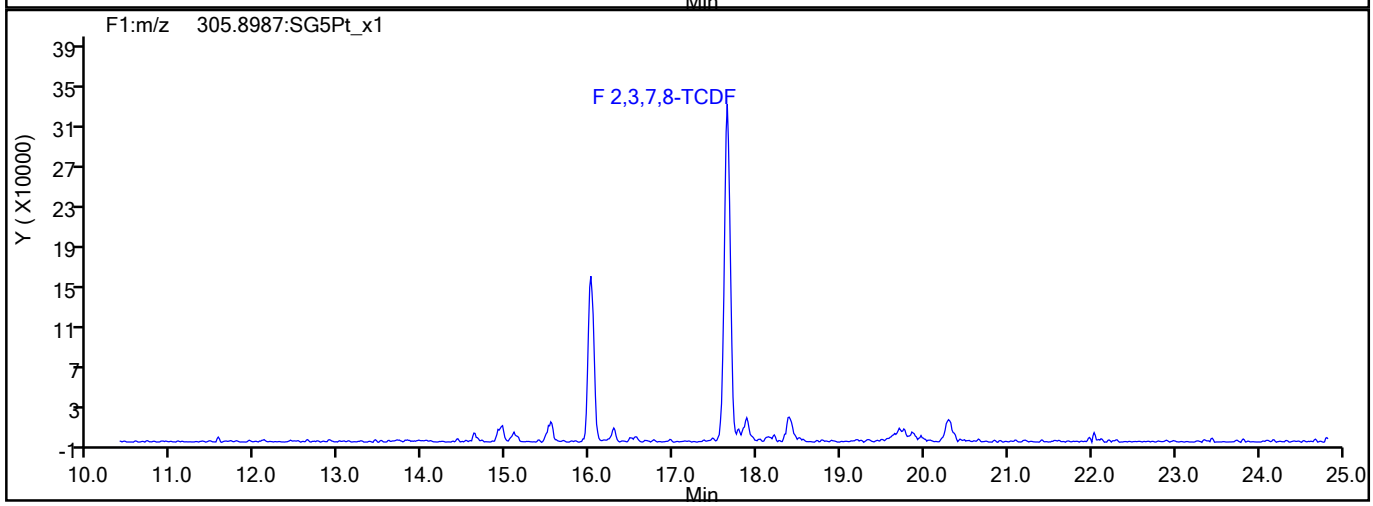

TCDF Interference Mass

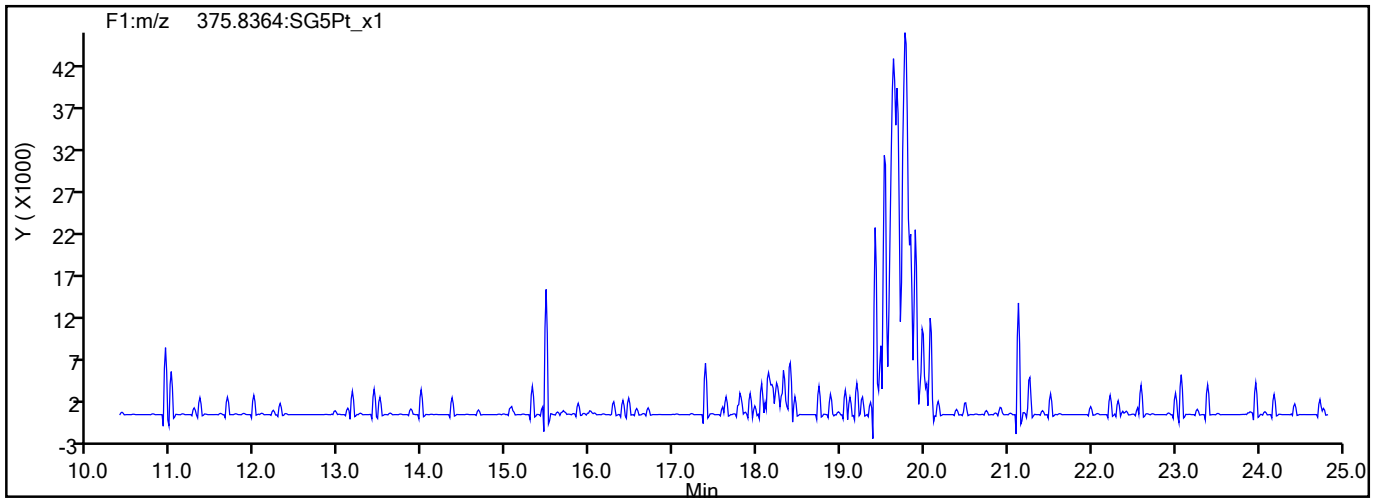

779647

Report Date: 25-Aug-2021 09:02:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_006.d		
Injection Date:	24-Aug-2021 19:48:46	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	519540	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

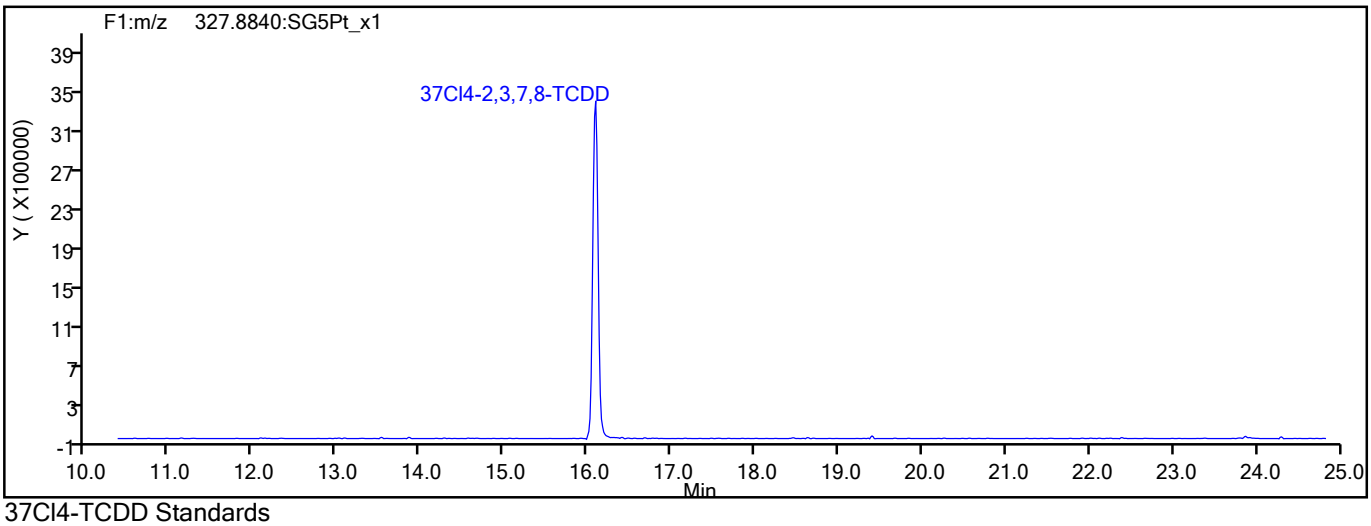

37Cl4-TCDD Standards

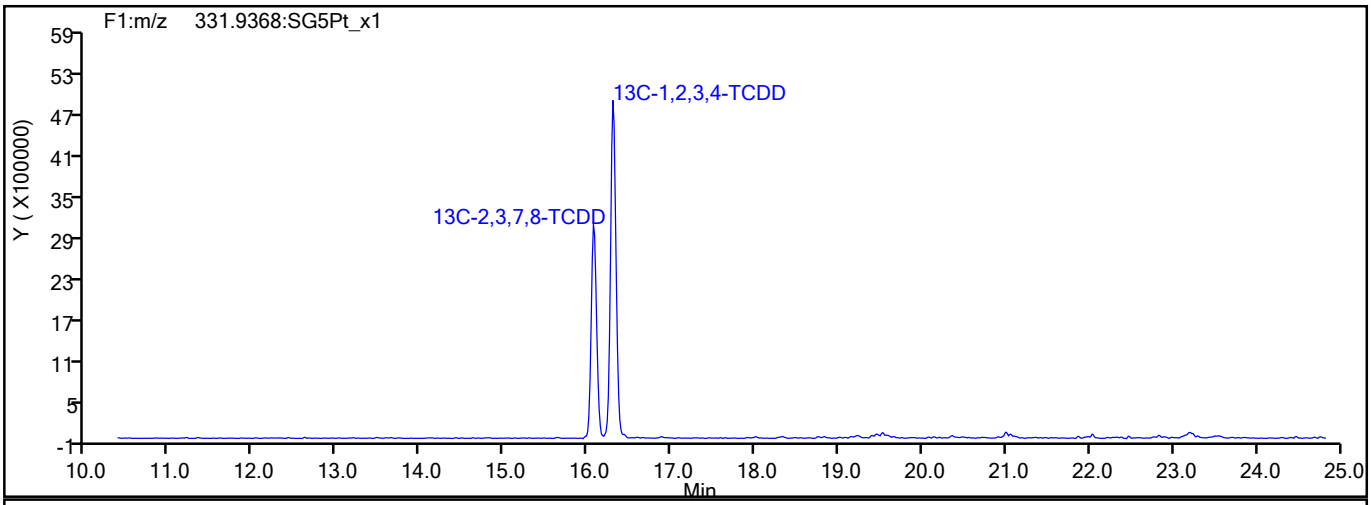

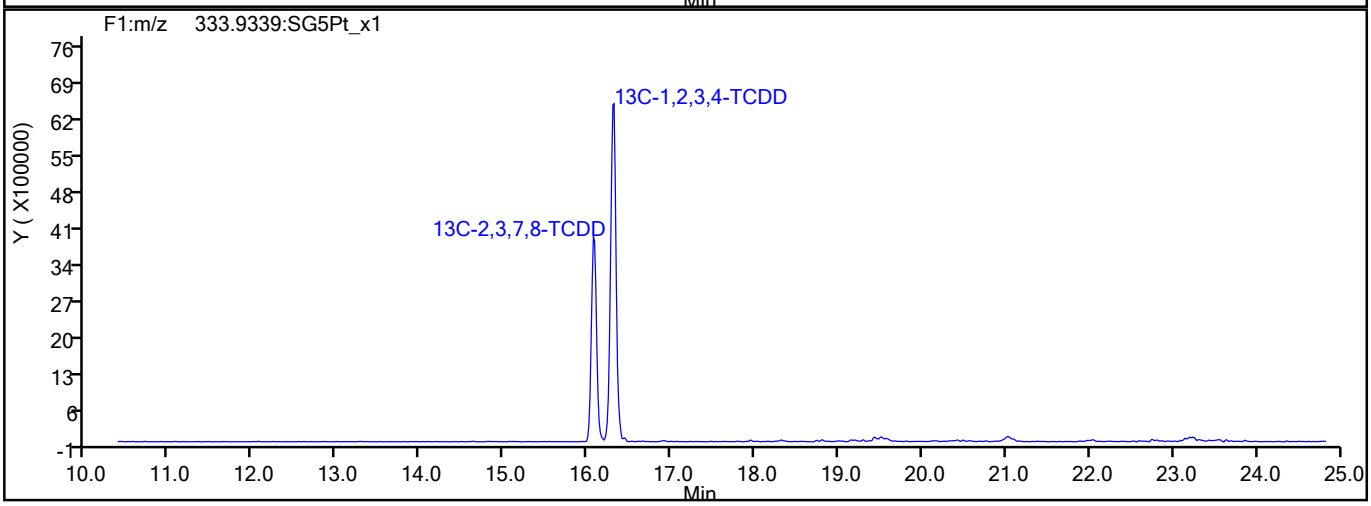

779648

Report Date: 25-Aug-2021 09:02:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_006.d		
Injection Date:	24-Aug-2021 19:48:46	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (14-16)		
Worklist#:	519540	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

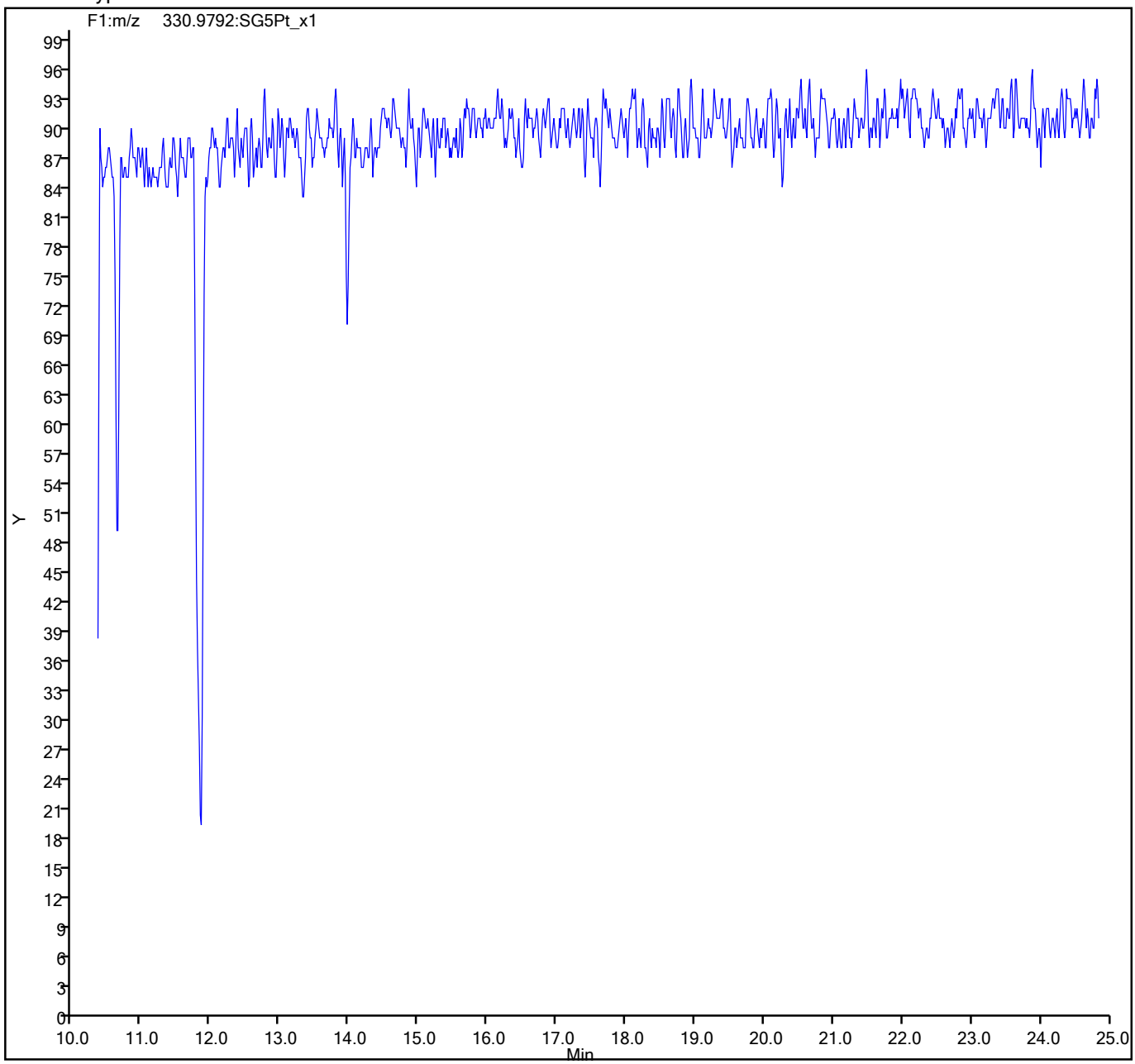

779649

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (0-2)
Lab Sample ID: 320-76788-13
Matrix: Solid
Lab File ID: 13AU2110D5_31.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:30
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.13(g)
Date Analyzed: 08/14/2021 16:01
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 49.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
40321-76-4	1,2,3,7,8-PeCDD	240		9.8	3.3
57117-41-6	1,2,3,7,8-PeCDF	2000	G	17	17
57117-31-4	2,3,4,7,8-PeCDF	1400	G	14	14
39227-28-6	1,2,3,4,7,8-HxCDD	3.0	J B q	9.8	0.39
57653-85-7	1,2,3,6,7,8-HxCDD	11		9.8	0.39
19408-74-3	1,2,3,7,8,9-HxCDD	6.7	J q	9.8	0.36
70648-26-9	1,2,3,4,7,8-HxCDF	2500	B	9.8	8.5
57117-44-9	1,2,3,6,7,8-HxCDF	710	B	9.8	7.9
72918-21-9	1,2,3,7,8,9-HxCDF	40	B	9.8	7.9
60851-34-5	2,3,4,6,7,8-HxCDF	80		9.8	8.0
35822-46-9	1,2,3,4,6,7,8-HpCDD	180	B	9.8	2.4
67562-39-4	1,2,3,4,6,7,8-HpCDF	800	B	9.8	6.8
55673-89-7	1,2,3,4,7,8,9-HpCDF	240	B	9.8	7.5
3268-87-9	OCDD	3200	B	20	6.3
39001-02-0	OCDF	470	B	20	0.69
36088-22-9	Total PeCDD	260	q	9.8	3.3
30402-15-4	Total PeCDF	5400	G	16	16
34465-46-8	Total HxCDD	110	B q	9.8	0.38
55684-94-1	Total HxCDF	3700	B	9.8	8.1
37871-00-4	Total HpCDD	420	B	9.8	2.4
38998-75-3	Total HpCDF	1200	B	9.8	7.2

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (0-2)
Lab Sample ID: 320-76788-13
Matrix: Solid
Lab File ID: 13AU2110D5_31.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:30
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.13(g)
Date Analyzed: 08/14/2021 16:01
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 49.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
109719-79-1	13C-1,2,3,7,8-PeCDD	79		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	70		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	74		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	57		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	70		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	63		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	52		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	56		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	61		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	52		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	63		26-138
114423-97-1	13C-OCDD	75		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	116		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Sample Type: Client
Inject. Date: 14-Aug-2021 16:01:35 ALS Bottle#: 31 Worklist Smp#: 20
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-13-a 320-76788-a-13-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:45:30 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 14:03:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	22033796	0.79	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.613	20270905	0.78	1.6249	56.6	56.6	4.867	4.867	56.62	
2,3,7,8-TCDF	17.628	5072888601	0.78	1.0239	24441	24441	44.6	44.6		Ea
A Non-2,3,7,8-sub-TCDF	17.046	3642859729	0.78	1.0239	17551	17551	44.6	11063		
S Total TCDF					41992	41992	44.6	44.6		
D 13C-2,3,7,8-TCDD	18.444	10842288	0.80	0.8993	54.7	54.7	1.282	1.282	54.72	Ma
2,3,7,8-TCDD	18.459	957600202	0.79	1.2541	7042.5	7042.5	44.1	44.1		Ea
$ 37Cl4-2,3,7,8-TCDD	18.459	11276320		1.1071	46.2	46.2	3.079	3.079	116	
A Non-2,3,7,8-sub-TCDD	17.499	100335465	0.82	1.2541	737.9	737.9	44.1	737.9		
S Total TCDD					7780.4	7780.4	44.1	44.1		
D 13C-1,2,3,7,8-PeCDF	22.776	18569420	1.64	1.2101	69.6	69.6	0.8054	0.8054	69.65	
1,2,3,7,8-PeCDF	22.803	99649964	1.60	1.0611	505.7	505.7	4.415	4.415		a
D 13C-2,3,4,7,8-PeCDF	24.085	20326517	1.57	1.2395	74.4	74.4	0.7863	0.7863	74.43	
2,3,4,7,8-PeCDF	24.112	75346672	1.61	1.0184	364.0	364.0	3.586	3.586		a
A F1 PeCDFs	20.093	576012	1.47	1.0398	2.849	2.849	0.0713	2.849		
A Non-2,3,7,8-sub-PeCDF	23.241	102196770	1.60	1.0398	505.4	505.4	3.947	228.9		
S Total PeCDF					1377.9	1377.9	4.000	4.000		
D 13C-1,2,3,7,8-PeCDD	24.781	13330413	1.62	0.7612	79.5	79.5	0.3393	0.3393	79.48	
1,2,3,7,8-PeCDD	24.808	8668306	1.63	1.0484	62.0	62.0	0.8517	0.8517		a
A Non-2,3,7,8-sub-PeCDD	23.349	507921	1.55	1.0484	4.295	3.634	0.8517	2.104		RQ
S Total PeCDD					66.3	65.7	0.8517	0.8517		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.715	24054642	0.52	1.0837	70.1	70.1	0.3137	0.3137	70.08	
1,2,3,4,7,8-HxCDF	30.729	167621684	1.22	1.0851	642.2	642.2	2.160	2.160		a
D 13C-1,2,3,6,7,8-HxCDF	30.862	22422871	0.51	1.1279	62.8	62.8	0.3014	0.3014	62.77	
1,2,3,6,7,8-HxCDF	30.889	45307629	1.21	1.1260	179.4	179.4	2.015	2.015		a
D 13C-2,3,4,6,7,8-HxCDF	31.647	18716622	0.51	1.0637	55.6	55.6	0.3196	0.3196	55.55	a
2,3,4,6,7,8-HxCDF	31.661	4433262	1.17	1.1675	20.3	20.3	2.048	2.048		M
D 13C-1,2,3,7,8,9-HxCDF	32.419	16085809	0.52	0.9676	52.5	52.5	0.3513	0.3513	52.49	a
1,2,3,7,8,9-HxCDF	32.433	1903086	1.19	1.1664	10.1	10.1	2.014	2.014		M
A Non-2,3,7,8-sub-HxCDF	30.197	23162227	1.24	1.1363	100.3	100.3	2.057	36.7		Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					952.4	952.4	2.059	2.059		
* 13C-1,2,3,7,8,9-HxCDD	32.233	31672838	1.24	6.2E+05	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	31.834	13464370	1.25	0.7334	58.0	58.0	0.3404	0.3404	57.96	
1,2,3,4,7,8-HxCDD	31.847	108333	1.24	1.0640	0.8857	0.7562	0.0995	0.0995		RQ
D 13C-1,2,3,6,7,8-HxCDD	31.927	15849013	1.22	0.8802	56.9	56.9	0.2837	0.2837	56.85	
1,2,3,6,7,8-HxCDD	31.940	426009	1.24	1.0001	2.688	2.688	0.0994	0.0994		
1,2,3,7,8,9-HxCDD	32.246	283118	1.24	1.1325	1.906	1.706	0.0906	0.0906		RQ
A Non-2,3,7,8-sub-HxCDD	30.882	3672896	1.28	1.0655	23.5	23.5	0.0963	11.0		
S Total HxCDD					29.0	28.7	0.0965	0.0965		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.827	12816699	0.43	0.7730	52.3	52.3	0.7009	0.7009	52.35	
1,2,3,4,6,7,8-HpCDF	33.827	37766337	1.05	1.4413	204.4	204.4	1.733	1.733		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.896	14086599	0.43	0.7008	63.5	63.5	0.7732	0.7732	63.46	
1,2,3,4,7,8,9-HpCDF	34.896	11311451	1.04	1.3174	61.0	61.0	1.905	1.905		
A Non-2,3,7,8-sub-HpCDF	34.319	8144692	1.05	1.3793	43.9	43.9	1.815	43.9		
S Total HpCDF					309.3	309.3	1.819	1.819		
D 13C-1,2,3,4,6,7,8-HpCDD	34.604	12554679	1.03	0.6472	61.2	61.2	0.4624	0.4624	61.24	
1,2,3,4,6,7,8-HpCDD	34.617	6192190	1.02	1.0943	45.1	45.1	0.6064	0.6064		
A Non-2,3,7,8-sub-HpCDD	34.301	8427116	1.03	1.0943	61.3	61.3	0.6064	61.3		
S Total HpCDD					106.4	106.4	0.6064	0.6064		
D 13C-OCDD	36.950	21114954	0.87	0.4472	149.1	149.1	0.2886	0.2886	74.54	
OCDF	37.057	18186523	0.88	1.4382	119.8	119.8	0.1767	0.1767		
OCDD	36.962	94154387	0.89	1.1070	805.6	805.6	1.594	1.594		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Sample Type: Client
Inject. Date: 14-Aug-2021 16:01:35 ALS Bottle#: 31 Worklist Smp#: 20
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-13-a 320-76788-a-13-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:45:30 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 14:03:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	18.127	17.855	16		9704150	1812754	6944	17360	261		a
333.9339	18.127	17.855	16		12329646	2285834	11954	29885	191	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.341	16	0.972	8898358	2538132	24548	61370	103		
317.9389	17.613	17.341	16	0.972	11372547	3320027	105100	262750	32	0.78(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.628	17.356	16	1.001	2220606943	595043600	463798	1159495	1283		a
305.8987	17.628	17.356	16	1.001	2852281658	766347258	607080	1517700	1262	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.965	17.046	-65	0.906	22863116	5808436	463798	1159495	13		
305.8987	15.965	17.046	-65	0.906	29958584	7505994	607080	1517700	12	0.76(0.65-0.89)	
303.9016	16.222	17.046	-49	0.921	56687717	13349811	463798	1159495	29		
305.8987	16.222	17.046	-49	0.921	73485021	17148286	607080	1517700	28	0.77(0.65-0.89)	
303.9016	16.509	17.046	-32	0.937	108289869	23486252	463798	1159495	51		
305.8987	16.509	17.046	-32	0.937	141172775	30806406	607080	1517700	51	0.77(0.65-0.89)	
303.9016	16.736	17.046	-19	0.950	102799494	29994611	463798	1159495	65		
305.8987	16.736	17.046	-19	0.950	132842998	38665073	607080	1517700	64	0.77(0.65-0.89)	
303.9016	16.963	17.046	-5	0.963	109487615	31550024	463798	1159495	68		
305.8987	16.948	17.046	-6	0.962	142469036	40791699	607080	1517700	67	0.77(0.65-0.89)	
303.9016	17.220	17.046	10	0.978	1005379649	213184778	463798	1159495	460		
305.8987	17.220	17.046	10	0.978	1290873233	272951931	607080	1517700	450	0.78(0.65-0.89)	
303.9016	17.462	17.046	25	0.991	41639262	7708455	463798	1159495	17		
305.8987	17.462	17.046	25	0.991	54217043	10046528	607080	1517700	17	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.051	17.046	60	1.025	145091075	35579104	463798	1159495	77		
305.8987	18.051	17.046	60	1.025	185603242	45238372	607080	1517700	75	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											Ma
331.9368	18.444	18.051	24	1.018	4803492	850836	6944	17360	123		M
333.9339	18.444	18.051	24	1.018	6038796	1088032	11954	29885	91	0.80(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	18.459	18.066	24	1.001	423724711	88625123	194089	485222	457		a
321.8936	18.459	18.066	24	1.001	533875491	114167930	235215	588037	485	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.459	18.066	24	1.018	11276320	2489692	55891	139727	45		
A Non-2,3,7,8-sub-TCDD											
319.8965	18.701	17.499	72	1.014	45095021	10665653	194089	485222	55		
321.8936	18.701	17.499	72	1.014	55240444	13246034	235215	588037	56	0.82(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.776	22.367	25	1.256	11528524	1659382	8831	22077	188		
353.8970	22.776	22.367	25	1.256	7040896	1027138	7147	17867	144	1.64(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.803	22.380	25	1.001	61364235	8924681	31354	78385	285		a
341.8567	22.803	22.380	25	1.001	38285729	5613110	18991	47477	296	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.085	23.703	23	1.329	12407365	2120582	8831	22077	240		
353.8970	24.085	23.703	23	1.329	7919152	1326142	7147	17867	186	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	24.112	23.730	23	1.001	46463115	7672757	31354	78385	245		a
341.8567	24.112	23.730	23	1.001	28883557	4866379	18991	47477	256	1.61(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.866	20.093	-14	0.872	342610	69421	388	970	179		
341.8567	19.866	20.093	-14	0.872	233402	49045	522	1305	94	1.47(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.412	23.241	-110	0.940	28498216	5641522	31354	78385	180		
341.8567	21.412	23.241	-110	0.940	17787508	3561920	18991	47477	188	1.60(1.32-1.78)	
339.8597	21.631	23.241	-96	0.950	568679	126846	31354	78385	4		
341.8567	21.631	23.241	-96	0.950	380444	79248	18991	47477	4	1.49(1.32-1.78)	
339.8597	22.244	23.241	-60	0.977	2606530	269984	31354	78385	9		
341.8567	22.230	23.241	-61	0.976	1647973	166362	18991	47477	9	1.58(1.32-1.78)	
339.8597	22.653	23.241	-35	0.995	4505884	1026712	31354	78385	33		
341.8567	22.653	23.241	-35	0.995	2882237	639978	18991	47477	34	1.56(1.32-1.78)	
339.8597	23.076	23.241	-10	1.013	820632	233278	31354	78385	7		
341.8567	23.076	23.241	-10	1.013	512826	144820	18991	47477	8	1.60(1.32-1.78)	
339.8597	23.294	23.241	3	1.023	16532343	3543679	31354	78385	113		
341.8567	23.294	23.241	3	1.023	10269169	2174536	18991	47477	115	1.61(1.32-1.78)	
339.8597	24.440	23.241	72	1.073	9346469	1305149	31354	78385	42		
341.8567	24.440	23.241	72	1.073	5837860	811908	18991	47477	43	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.781	24.426	21	1.367	8234579	1312397	2651	6627	495		
369.8919	24.781	24.426	21	1.367	5095834	772609	1583	3957	488	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											a
355.8546	24.808	24.453	21	1.001	5369747	850301	3885	9712	219		a
357.8516	24.808	24.453	21	1.001	3298559	508892	3562	8905	143	1.63(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	23.049	23.349	-18	0.930	206957	60522	3885	9712	16		
	Empc Correction				178763	55950	3885	9712	14		
357.8516	23.049	23.349	-18	0.930	115331	36097	3562	8905	10	1.79(1.32-1.78)	
355.8546	25.067	23.349	103	1.012	194196	30833	3885	9712	8		
	Empc Correction				129973	26286	3885	9712	7		
357.8516	25.080	23.349	104	1.012	83854	16959	3562	8905	5	2.32(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.715	30.503	13	0.953	8271772	1759675	5123	12807	343		
385.8610	30.715	30.503	13	0.953	15782870	3413771	6191	15477	551	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											a
373.8208	30.729	30.529	12	1.000	92044276	19972102	27066	67665	738		a
375.8178	30.729	30.529	12	1.000	75577408	16427849	21435	53587	766	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.862	30.689	10	0.957	7597362	1794329	5123	12807	350		
385.8610	30.862	30.689	10	0.957	14825509	3550638	6191	15477	574	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											a
373.8208	30.889	30.702	11	1.001	24776432	5980591	27066	67665	221		a
375.8178	30.889	30.702	11	1.001	20531197	4913669	21435	53587	229	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											a
383.8639	31.647	31.514	8	0.982	6345215	1677219	5123	12807	327		a
385.8610	31.647	31.514	8	0.982	12371407	3394255	6191	15477	548	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.661	31.528	8	1.000	2387956	679578	27066	67665	25		M
375.8178	31.661	31.528	8	1.000	2045306	567546	21435	53587	26	1.17(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											a
383.8639	32.419	32.313	6	1.006	5474766	1765960	5123	12807	345		a
385.8610	32.419	32.313	6	1.006	10611043	3395226	6191	15477	548	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.433	32.326	6	1.000	1033138	380878	27066	67665	14		M
375.8178	32.433	32.326	6	1.000	869948	309389	21435	53587	14	1.19(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	28.826	30.197	-82	0.938	4672757	871610	27066	67665	32		
375.8178	28.826	30.197	-82	0.938	3802170	712703	21435	53587	33	1.23(1.05-1.43)	
373.8208	30.010	30.197	-11	0.977	2501657	477926	27066	67665	18		
375.8178	30.010	30.197	-11	0.977	2003715	390406	21435	53587	18	1.25(1.05-1.43)	
373.8208	31.554	30.197	81	1.027	1512456	411531	27066	67665	15		M
375.8178	31.554	30.197	81	1.027	1204322	332699	21435	53587	16	1.26(1.05-1.43)	
373.8208	32.499	30.197	138	1.058	4130220	1396485	27066	67665	52		M
375.8178	32.499	30.197	138	1.058	3334930	1142181	21435	53587	53	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											a
401.8559	32.233	32.127	6		17504632	4571897	4583	11457	998		a
403.8529	32.233	32.127	6		14168206	3749223	3728	9320	1006	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.834	31.701	8	0.988	7478491	2299175	4583	11457	502		
403.8529	31.834	31.701	8	0.988	5985879	1824620	3728	9320	489	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQ
389.8157	31.847	31.714	8	1.000	78532	24968	652	1630	38		
	Empc Correction				59970	19548	652	1630	30		
391.8127	31.834	31.714	7	1.000	48363	15765	1095	2737	14	1.62(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.927	31.807	7	0.991	8705009	2418073	4583	11457	528		
403.8529	31.927	31.807	7	0.991	7144004	1974223	3728	9320	530	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.940	31.820	7	1.000	236086	66745	652	1630	102		
391.8127	31.940	31.820	7	1.000	189923	56531	1095	2737	52	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											RQ
389.8157	32.246	32.140	6	1.013	189957	41586	652	1630	64		
	Empc Correction				156726	41267	652	1630	63		
391.8127	32.246	32.140	6	1.013	126392	33280	1095	2737	30	1.50(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.877	30.882	-60	0.936	915772	133470	652	1630	205		
391.8127	29.877	30.882	-60	0.936	702527	103850	1095	2737	95	1.30(1.05-1.43)	
389.8157	30.782	30.882	-6	0.964	137853	31639	652	1630	49		
391.8127	30.782	30.882	-6	0.964	105005	24888	1095	2737	23	1.31(1.05-1.43)	
389.8157	31.115	30.882	14	0.975	956744	196519	652	1630	301		
391.8127	31.115	30.882	14	0.975	763647	159948	1095	2737	146	1.25(1.05-1.43)	
389.8157	31.301	30.882	25	0.980	50490	13509	652	1630	21		
391.8127	31.301	30.882	25	0.980	40858	8573	1095	2737	8	1.24(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.827	33.754	4	1.049	3880330	1301421	5310	13275	245		
419.8220	33.827	33.754	4	1.049	8936369	2972872	12725	31812	234	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.827	33.766	4	1.000	19359167	6576618	20888	52220	315		M
409.7789	33.827	33.766	4	1.000	18407170	6307950	21826	54565	289	1.05(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.896	34.847	3	1.083	4255218	1286397	5310	13275	242		
419.8220	34.884	34.847	2	1.082	9831381	2968636	12725	31812	233	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.896	34.860	2	1.000	5762479	1817362	20888	52220	87		
409.7789	34.896	34.860	2	1.000	5548972	1772979	21826	54565	81	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.118	34.319	-12	1.009	4174000	1488230	20888	52220	71		
409.7789	34.118	34.319	-12	1.009	3970692	1438641	21826	54565	66	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.604	34.556	3	1.074	6361555	1997330	5506	13765	363		
437.8140	34.604	34.556	3	1.074	6193124	1918053	4455	11137	431	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.617	34.568	3	1.000	3123515	975396	4853	12132	201		
425.7737	34.617	34.568	3	1.000	3068675	939886	5540	13850	170	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.070	34.301	-14	0.985	4268547	1497180	4853	12132	309		
425.7737	34.070	34.301	-14	0.985	4158569	1445705	5540	13850	261	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.950	36.914	2	1.146	9832519	2615461	1753	4382	1492		
471.7750	36.950	36.914	2	1.146	11282435	2956797	2542	6355	1163	0.87(0.76-1.02)	
OCDF											
441.7428	37.057	37.010	3	1.003	8518814	2302629	1414	3535	1628		
443.7399	37.057	37.010	3	1.003	9667709	2563530	1418	3545	1808	0.88(0.76-1.02)	
OCDD											
457.7377	36.962	36.926	2	1.000	44278046	11732403	10629	26572	1104		
459.7348	36.962	36.926	2	1.000	49876341	13214296	9038	22595	1462	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Aug-2021 09:45:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Inject. Date: 14-Aug-2021 16:01:35 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 20

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	20270905	5858159

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	20270905	5858159

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.965	22863116	5808436	29958584	7505994	254.5	0.76	
16.222	56687717	13349811	73485021	17148286	627.2	0.77	
16.509	108289869	23486252	141172775	30806406	1201.9	0.77	
16.736	102799494	29994611	132842998	38665073	1135.3	0.77	
16.963	109487615	31550024	142469036	40791699	1213.9	0.77	
17.220	1005379649	213184778	1290873233	272951931	11063	0.78	
17.462	41639262	7708455	54217043	10046528	461.8	0.77	
18.051	145091075	35579104	185603242	45238372	1593.3	0.78	
Signal Totals:							
	1592237797	360661471	2050621932	463154289			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3642859729	823815760				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 17551 = (3642859729 * 100.000) / (20270905 * 1.024)

Report Date: 18-Aug-2021 09:45:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Lims ID:	320-76788-A-13-A		
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Inject. Date:	14-Aug-2021 16:01:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	20

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	10842288	1938868

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	10842288	1938868

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.701	45095021	10665653	55240444	13246034	737.9	0.82	
Signal Totals:							
	45095021	10665653	55240444	13246034			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	100335465	23911687				0.82	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 737.895 = (100335465 * 100.000) / (10842288 * 1.254)

Report Date: 18-Aug-2021 09:45:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Inject. Date: 14-Aug-2021 16:01:35 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 20

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	18569420	2686520
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	20326517	3446724

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	19447968	3066622

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.866	342610	69421	233402	49045	2.85	1.47	
Signal Totals:							
	342610	69421	233402	49045			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	576012	118466				1.47	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.849 = (576012 * 100.000) / (19447968 * 1.040)

Report Date: 18-Aug-2021 09:45:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Lims ID:	320-76788-A-13-A		
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Inject. Date:	14-Aug-2021 16:01:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	20

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	18569420	2686520
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	20326517	3446724

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	19447968	3066622

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.412	28498216	5641522	17787508	3561920	228.9	1.60	
21.631	568679	126846	380444	79248	4.69	1.49	
22.244	2606530	269984	1647973	166362	21.0	1.58	
22.653	4505884	1026712	2882237	639978	36.5	1.56	
23.076	820632	233278	512826	144820	6.59	1.60	
23.294	16532343	3543679	10269169	2174536	132.5	1.61	
24.440	9346469	1305149	5837860	811908	75.1	1.60	
Signal Totals:							
	62878753	12147170	39318017	7578772			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	102196770	19725942				1.60	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 505.386 = (102196770 * 100.000) / (19447968 * 1.040)

Report Date: 18-Aug-2021 09:45:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Inject. Date: 14-Aug-2021 16:01:35 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 20

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	13330413	2085006

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	13330413	2085006

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
23.049	206957	60522	115331	36097	2.31	1.79	RQ
23.049	178763	55950	115331	36097	2.10		Empc Correction
25.067	194196	30833	83854	16959	1.99	2.32	RQ
25.067	129973	26286	83854	16959	1.53		Empc Correction
Signal Totals:							
	308736	82236	199185	53056			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	600338	144411				2.01	RQ
	507921	135292					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.295 = (600338 * 100.000) / (13330413 * 1.048)
Empc Amount: 3.634 = (507921 * 100.000) / (13330413 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Inject. Date: 14-Aug-2021 16:01:35 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 20

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	24054642	5173446
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	22422871	5344967
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	18716622	5071474
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	16085809	5161186

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	20319986	5187768

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.826	4672757	871610	3802170	712703	36.7	1.23	
30.010	2501657	477926	2003715	390406	19.5	1.25	
31.554	1512456	411531	1204322	332699	11.8	1.26	Ma
32.499	4130220	1396485	3334930	1142181	32.3	1.24	Ma
Signal Totals:							
	12817090	3157552	10345137	2577989			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23162227	5735541				1.24	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 100.318 = (23162227 * 100.000) / (20319986 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 09:45:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Inject. Date: 14-Aug-2021 16:01:35 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 20

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	13464370	4123795
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	15849013	4392296
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	14656691	4258045

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.877	915772	133470	702527	103850	10.4	1.30	
30.782	137853	31639	105005	24888	1.56	1.31	
31.115	956744	196519	763647	159948	11.0	1.25	
31.301	50490	13509	40858	8573	0.5849	1.24	
Signal Totals:							
	2060859	375137	1612037	297259			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3672896	672396				1.28	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 23.518 = (3672896 * 100.000) / (14656691 * 1.066)

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Lims ID:	320-76788-A-13-A		
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Inject. Date:	14-Aug-2021 16:01:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	20

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	12816699	4274293
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	14086599	4255033

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	13451649	4264663

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.118	4174000	1488230	3970692	1438641	43.9	1.05	
Signal Totals:							
	4174000	1488230	3970692	1438641			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8144692	2926871				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 43.896 = (8144692 * 100.000) / (13451649 * 1.379)

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Inject. Date: 14-Aug-2021 16:01:35 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 20

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	12554679	3915383

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	12554679	3915383

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.070	4268547	1497180	4158569	1445705	61.3	1.03	
Signal Totals:							
	4268547	1497180	4158569	1445705			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8427116	2942885				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 61.339 = (8427116 * 100.000) / (12554679 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Not Detected
Expected RT: 22.38

Processing Integration Results

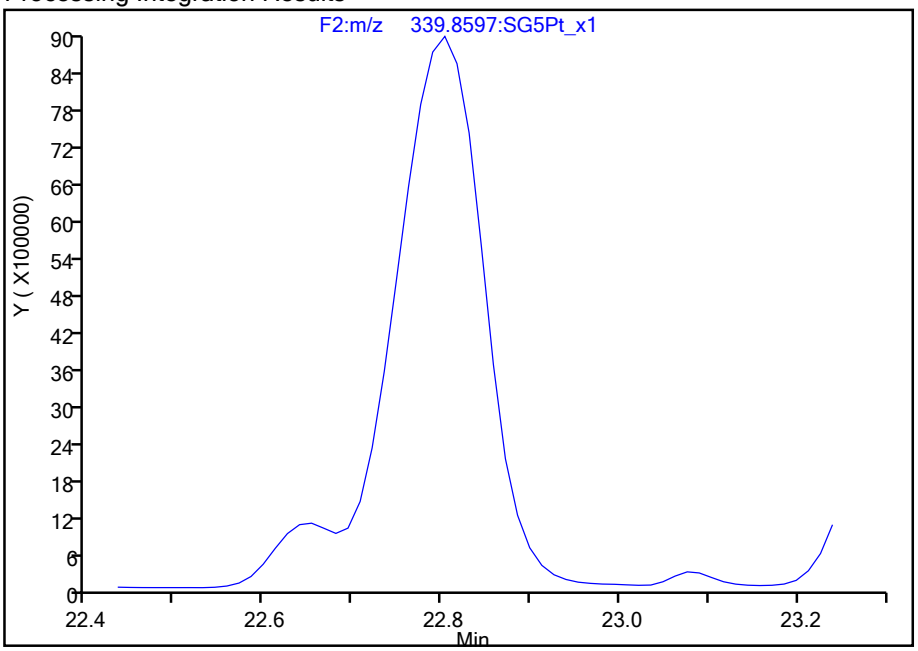

RT: 22.80
Area: 61364235
Amount: 505.7179
Amount Units: pg/ul

Manual Integration Results

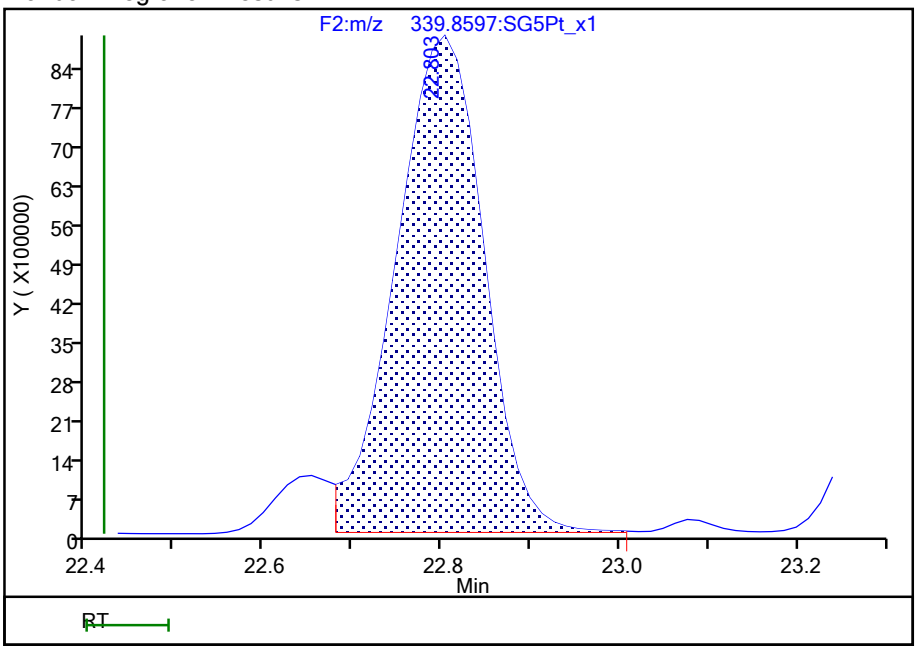

Reviewer: dadunj, 18-Aug-2021 09:41:23
Audit Action: Assigned Compound ID Audit Reason: Split Peak

779668

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 23.73

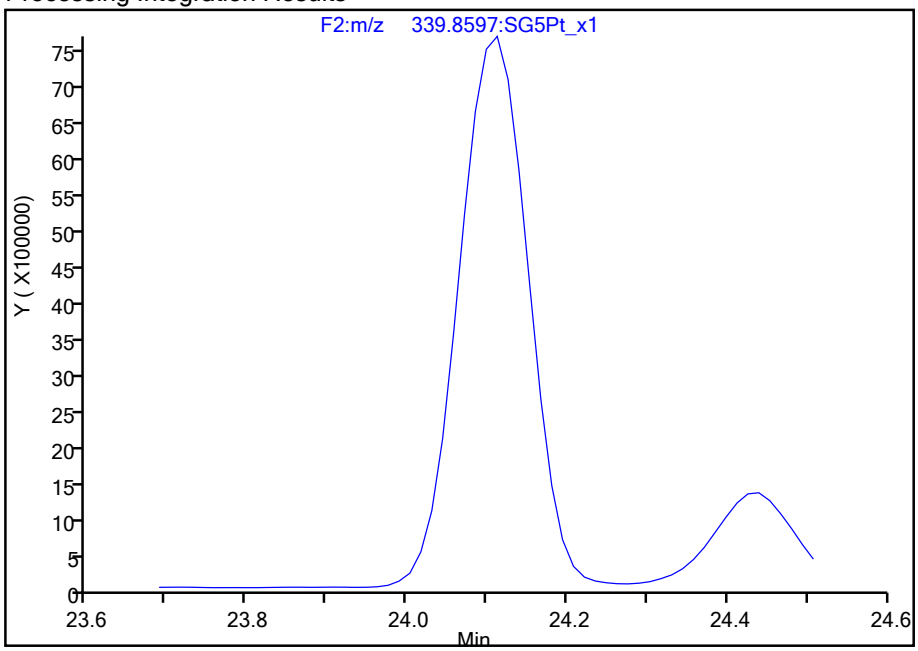

Manual Integration Results

RT: 24.11
Area: 46463115
Amount: 363.9779
Amount Units: pg/ul

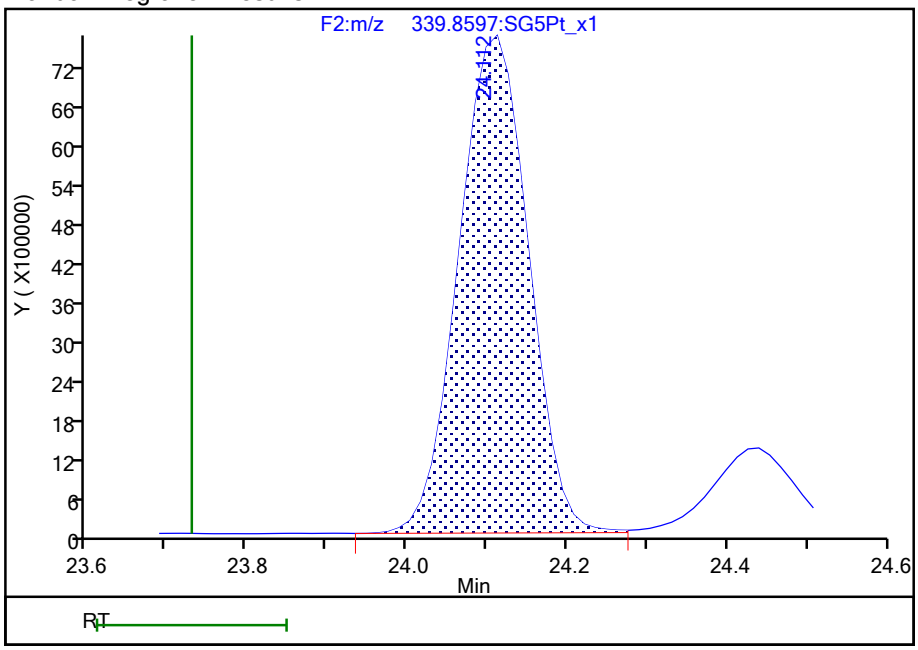

Reviewer: dadunj, 18-Aug-2021 09:41:29
Audit Action: Assigned Compound ID Audit Reason: Split Peak

779669

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.45

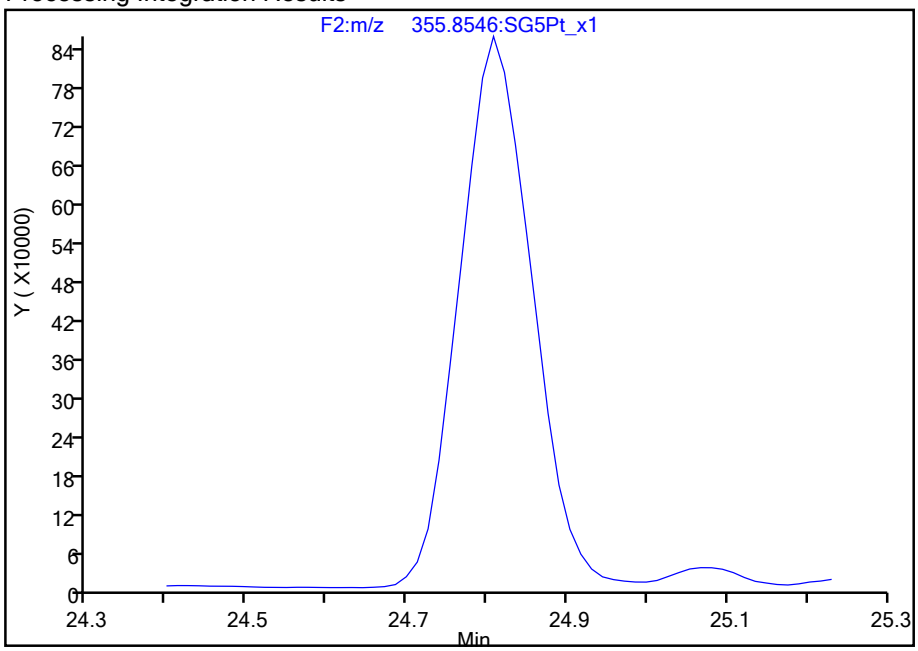

Manual Integration Results

RT: 24.81
Area: 5369747
Amount: 62.022745
Amount Units: pg/ul

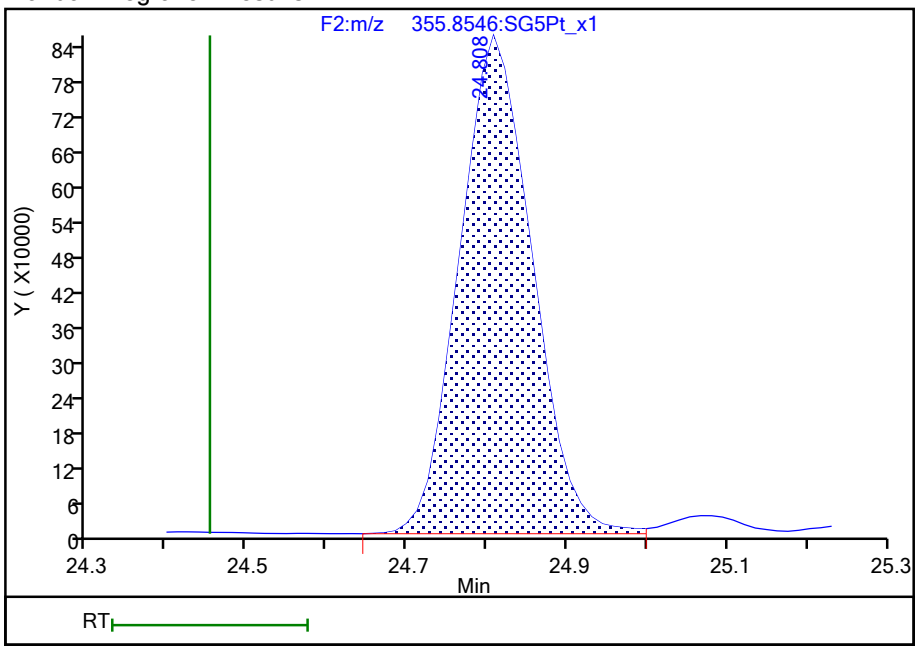

Reviewer: dadunj, 18-Aug-2021 09:42:06
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.53

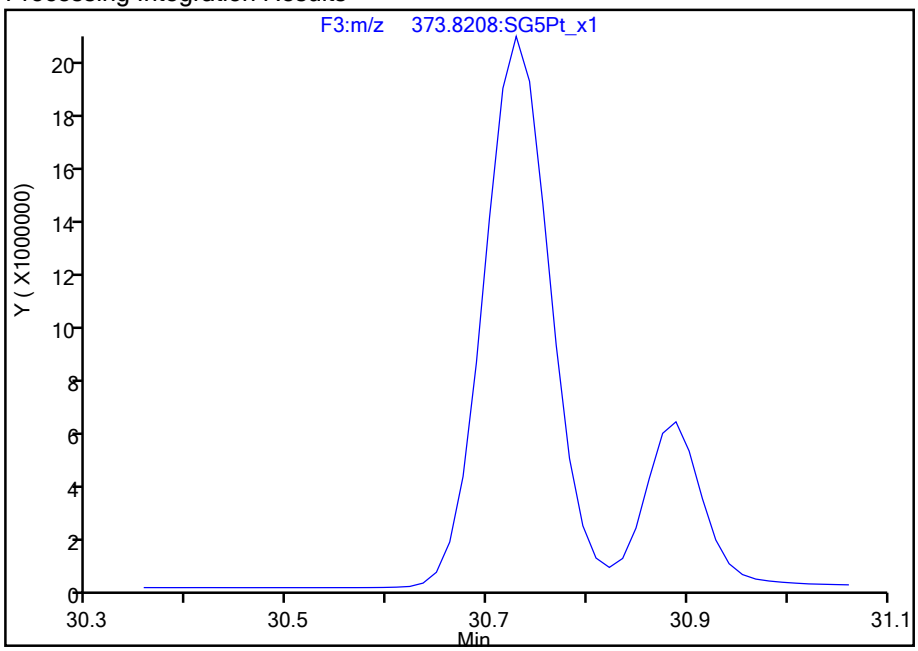

Manual Integration Results

RT: 30.73
Area: 92044276
Amount: 642.1712
Amount Units: pg/ul

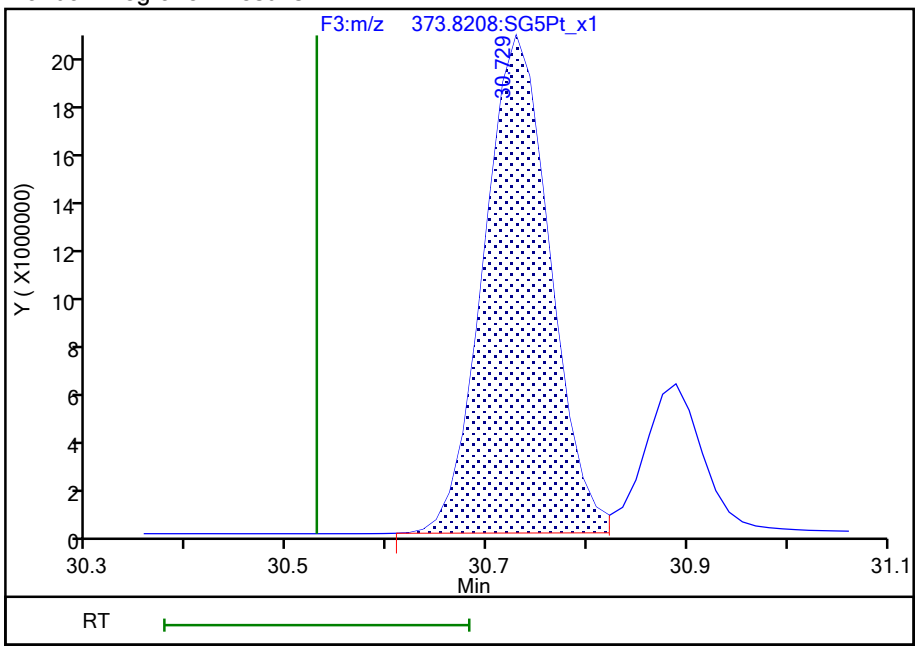

Reviewer: dadunj, 18-Aug-2021 09:42:16
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.73
Area: 92044276
Amount: 663.8896
Amount Units: pg/ul

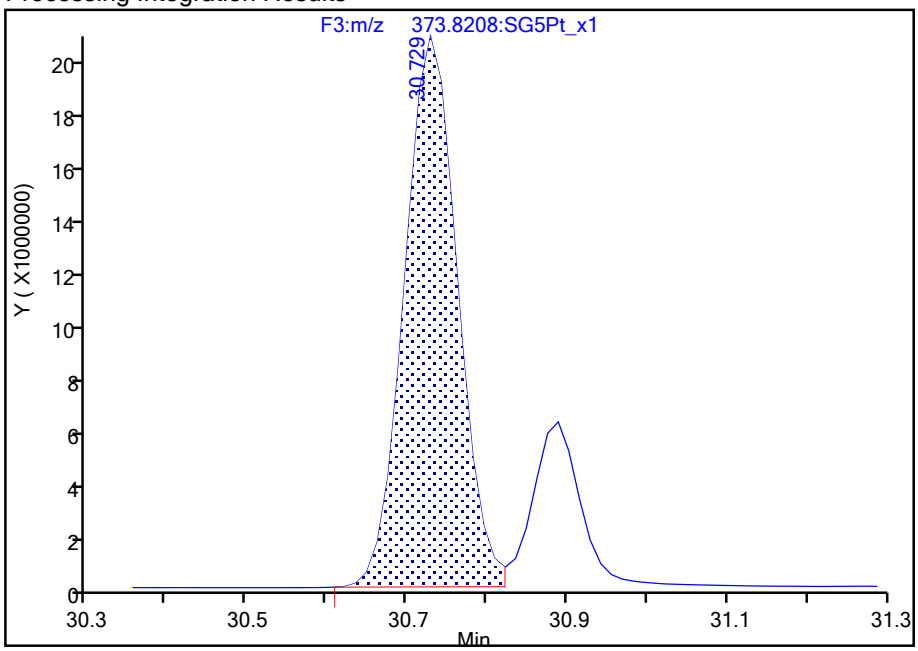

Manual Integration Results

RT: 30.89
Area: 24776432
Amount: 179.4473
Amount Units: pg/ul

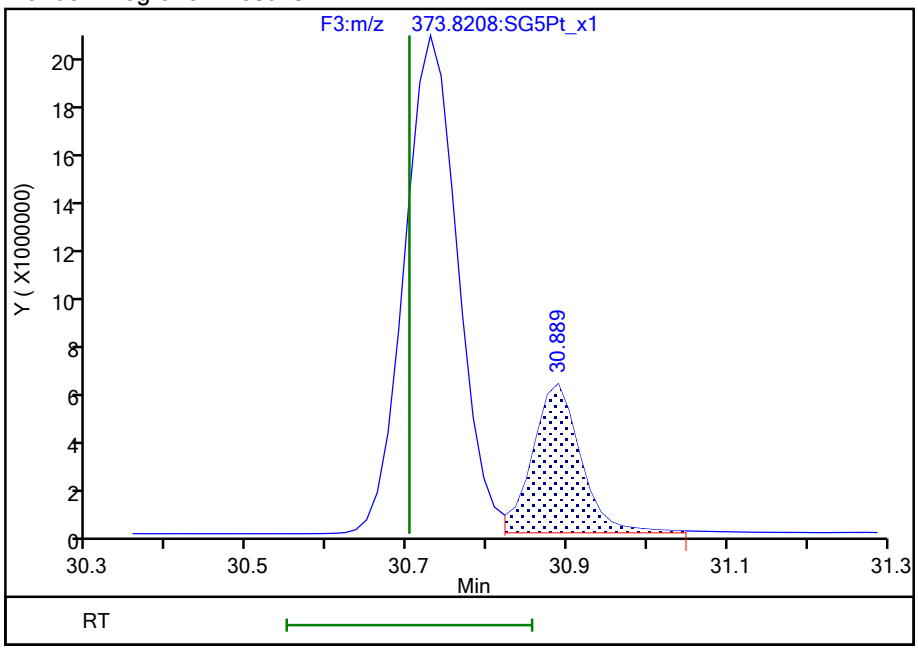

Reviewer: dadunj, 18-Aug-2021 09:42:21

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-2,3,4,6,7,8-HxCDF, CAS: 116843-05-1

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.51

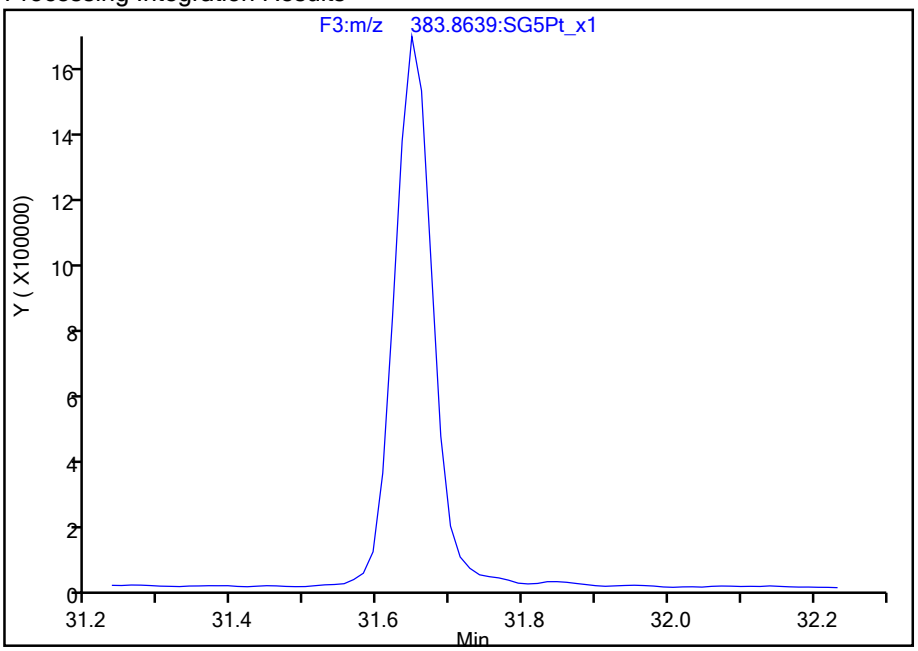

Manual Integration Results

RT: 31.65
Area: 6345215
Amount: 55.553212
Amount Units: pg/ul

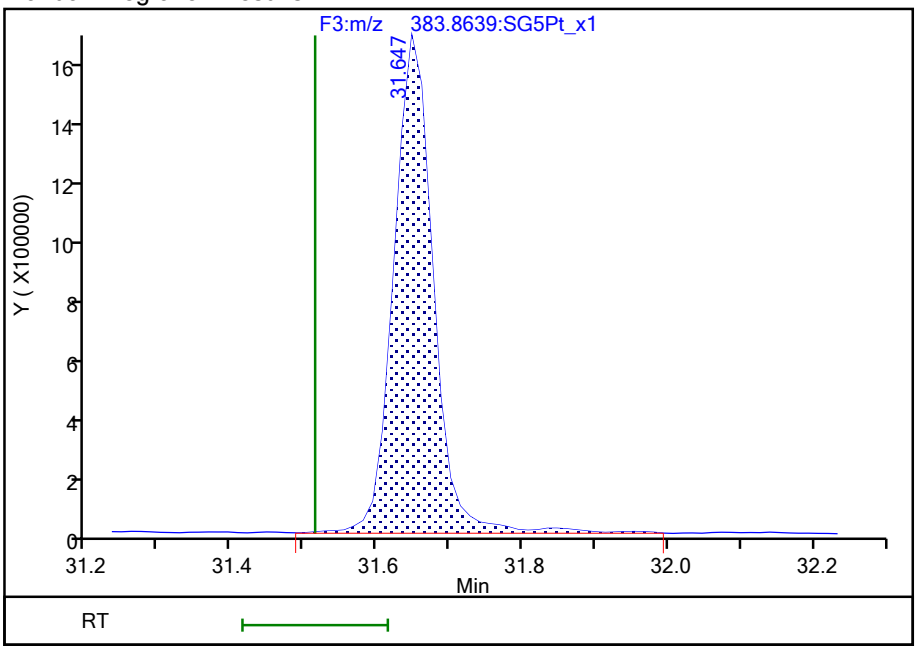

Reviewer: dadunj, 18-Aug-2021 09:42:42
Audit Action: Assigned Compound ID Audit Reason: Split Peak

779673

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.66
Area: 3900425
Amount: 32.718744
Amount Units: pg/ul

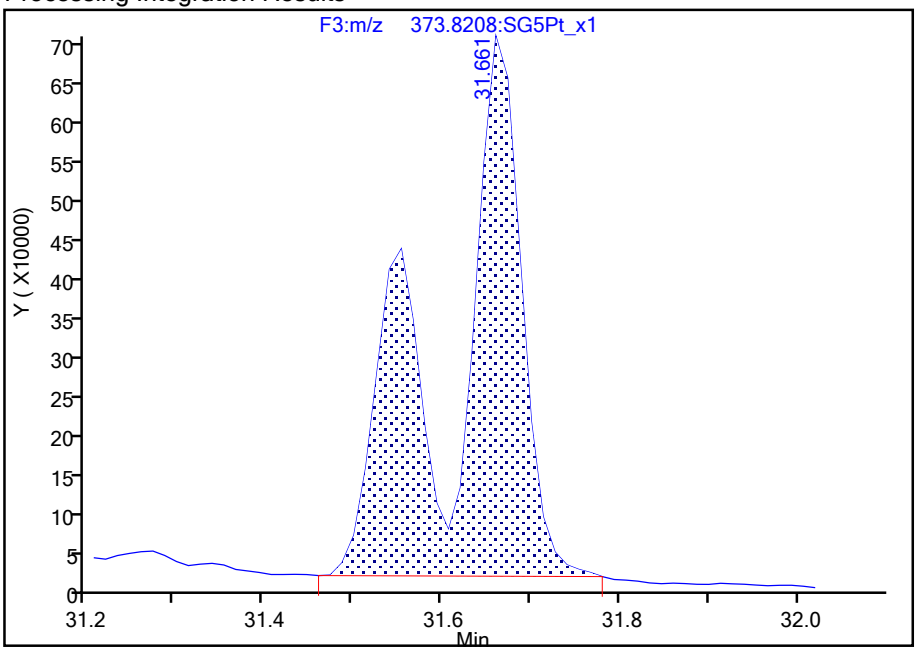

Manual Integration Results

RT: 31.66
Area: 2387956
Amount: 20.287311
Amount Units: pg/ul

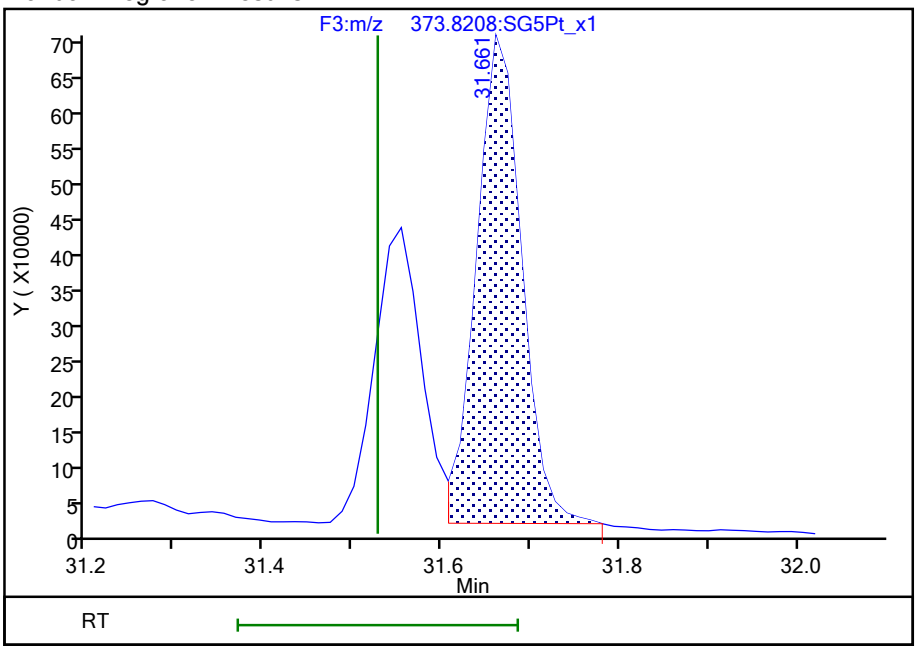

Reviewer: dadunj, 18-Aug-2021 09:42:48

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.66
Area: 3249402
Amount: 32.718744
Amount Units: pg/ul

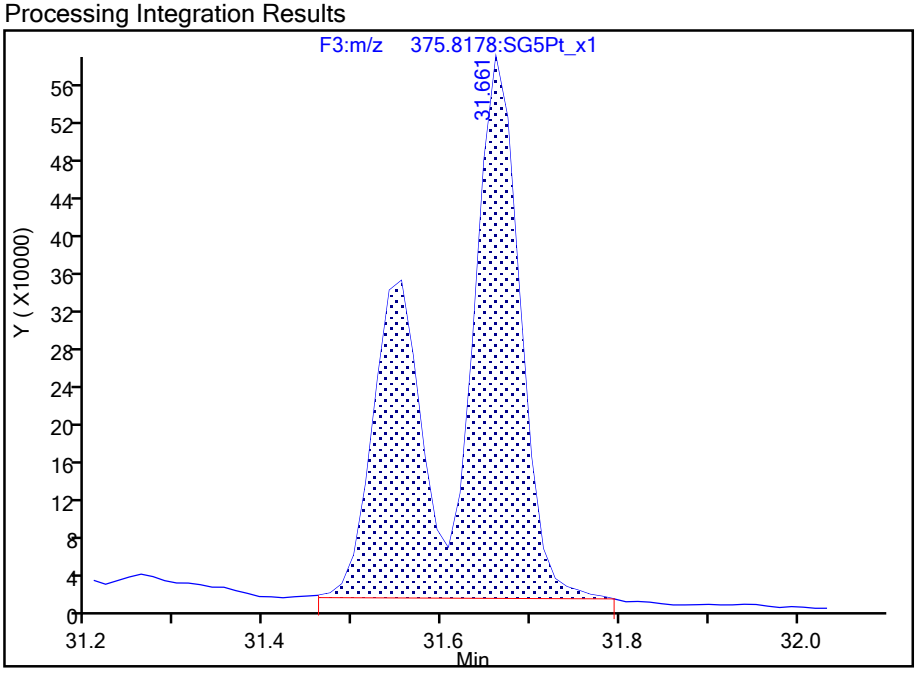

Manual Integration Results

RT: 31.66
Area: 2045306
Amount: 20.287311
Amount Units: pg/ul

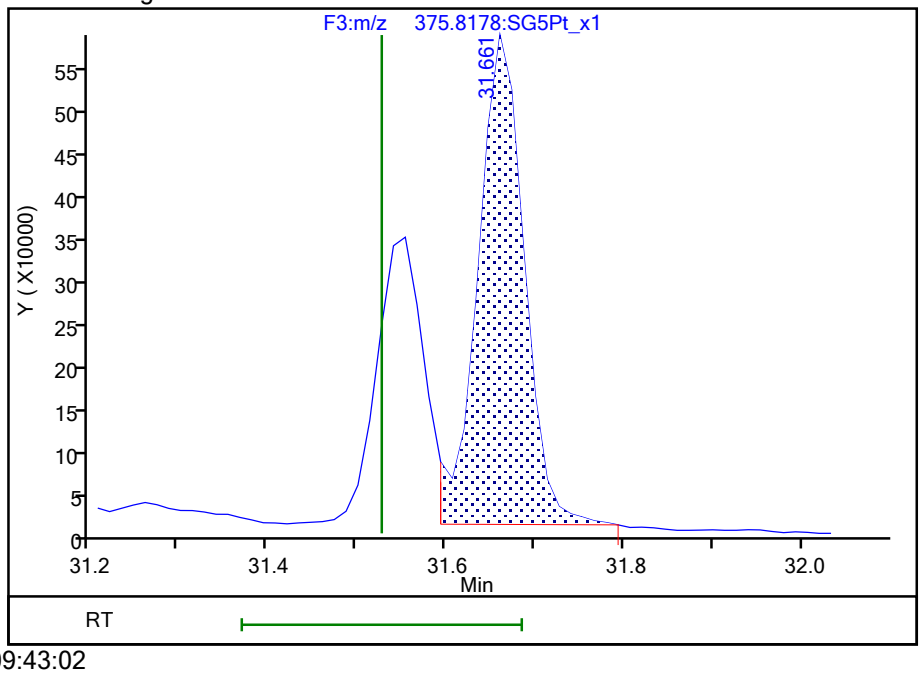

Reviewer: dadunj, 18-Aug-2021 09:43:02
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779675

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,7,8,9-HxCDF, CAS: 116843-04-0

Signal: 1

Processing Integration Results

RT: 31.65
Area: 6345215
Amount: 0
Amount Units: pg/ul

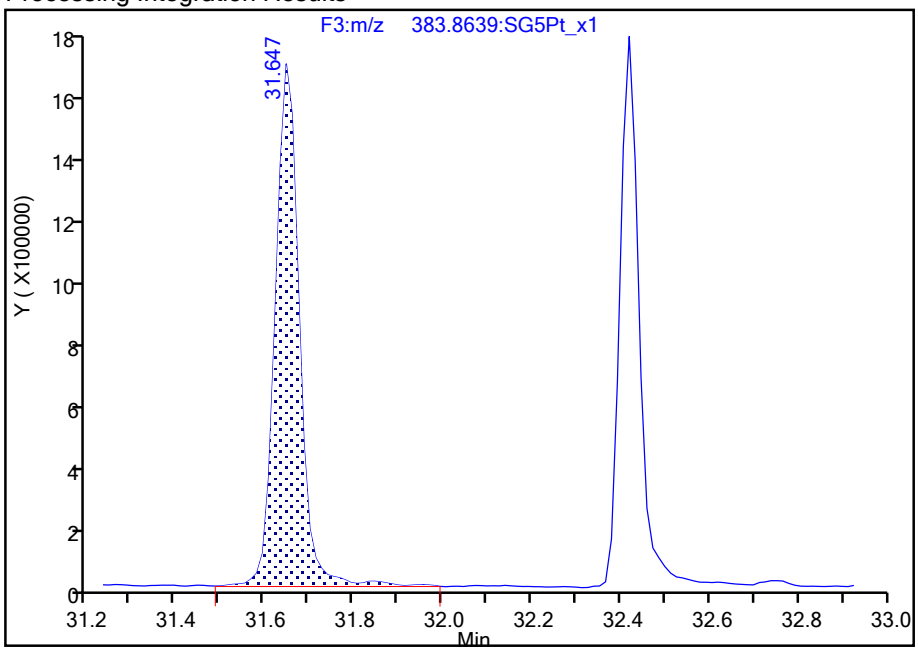

Manual Integration Results

RT: 32.42
Area: 5474766
Amount: 52.489759
Amount Units: pg/ul

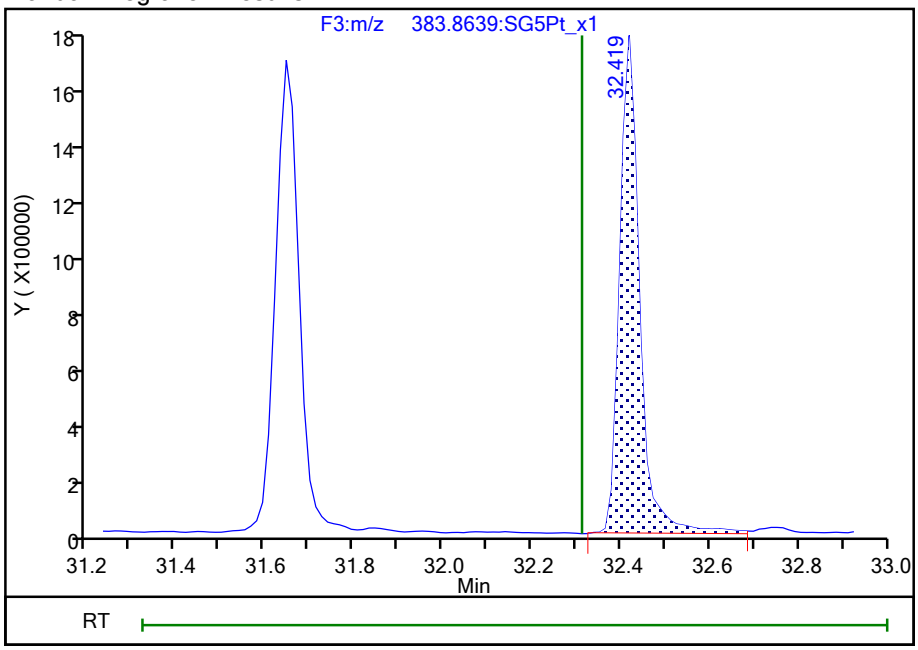

Reviewer: dadunj, 18-Aug-2021 09:42:54

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Not Detected
Expected RT: 32.33

Processing Integration Results

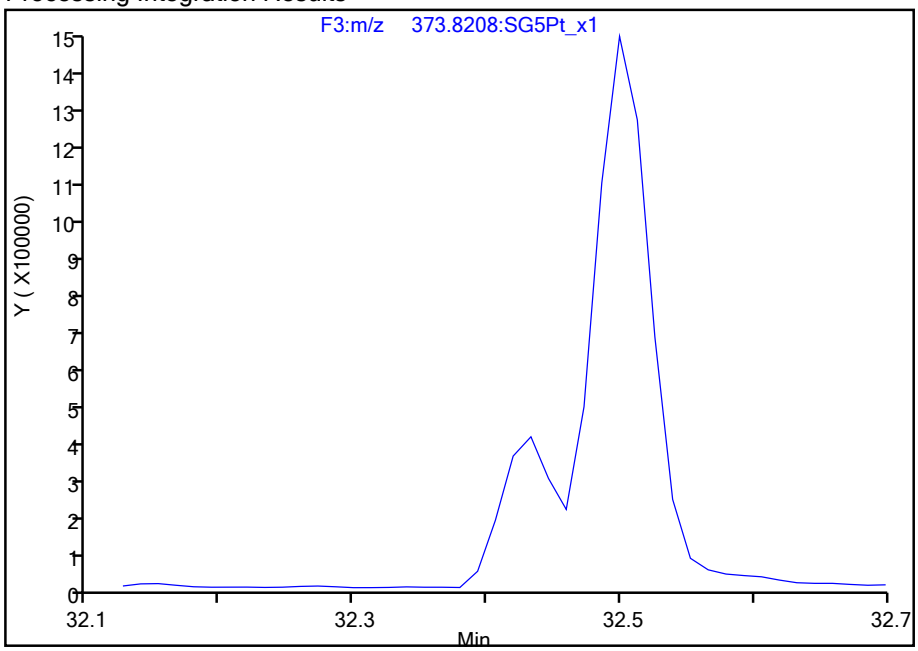

Manual Integration Results

RT: 32.43
Area: 1033138
Amount: 10.143460
Amount Units: pg/ul

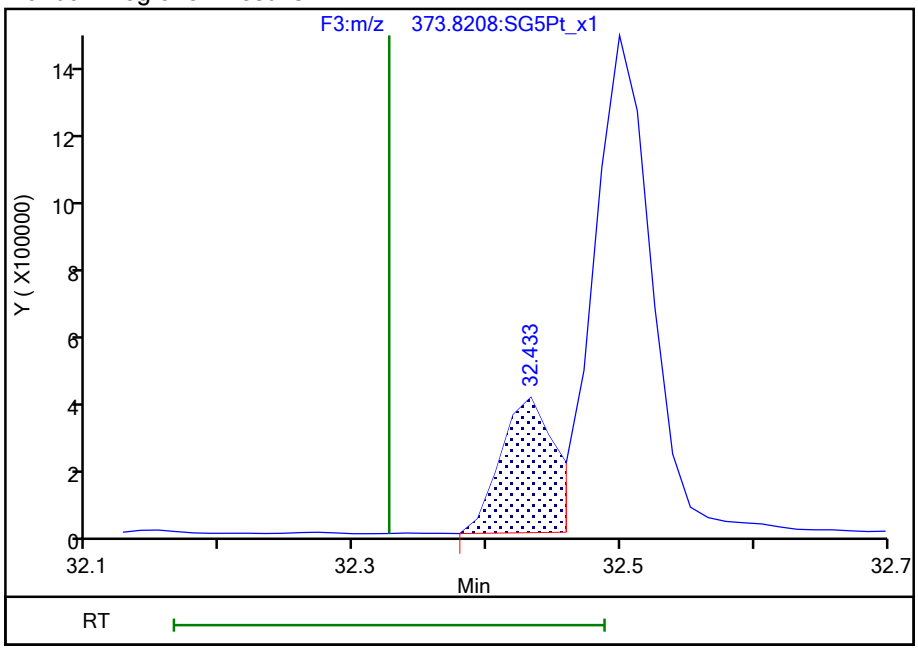

Reviewer: dadunj, 18-Aug-2021 09:43:10
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779677

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Not Detected
Expected RT: 32.33

Processing Integration Results

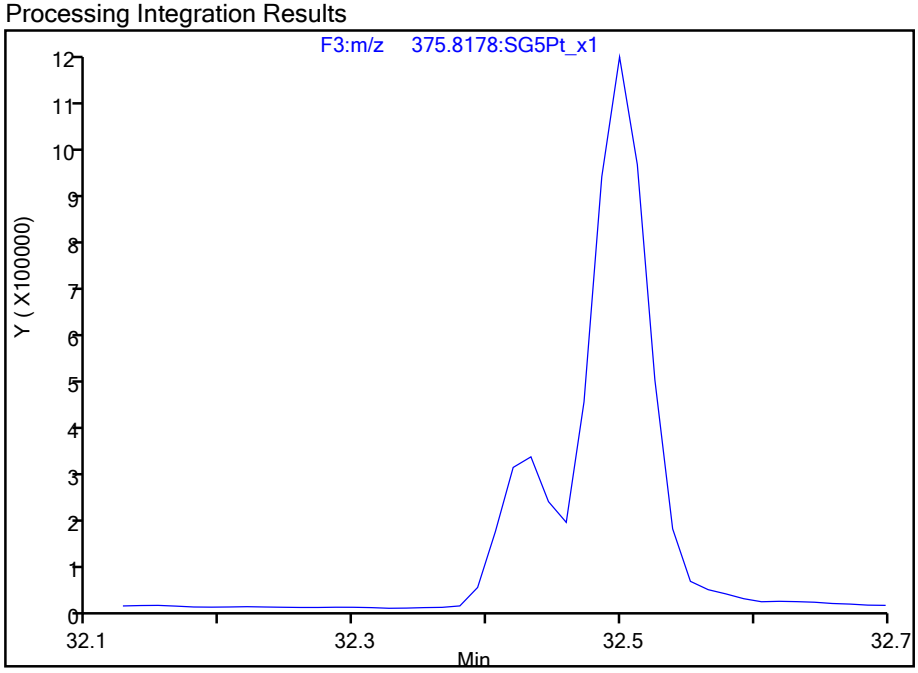

Manual Integration Results

RT: 32.43
Area: 869948
Amount: 10.143460
Amount Units: pg/ul

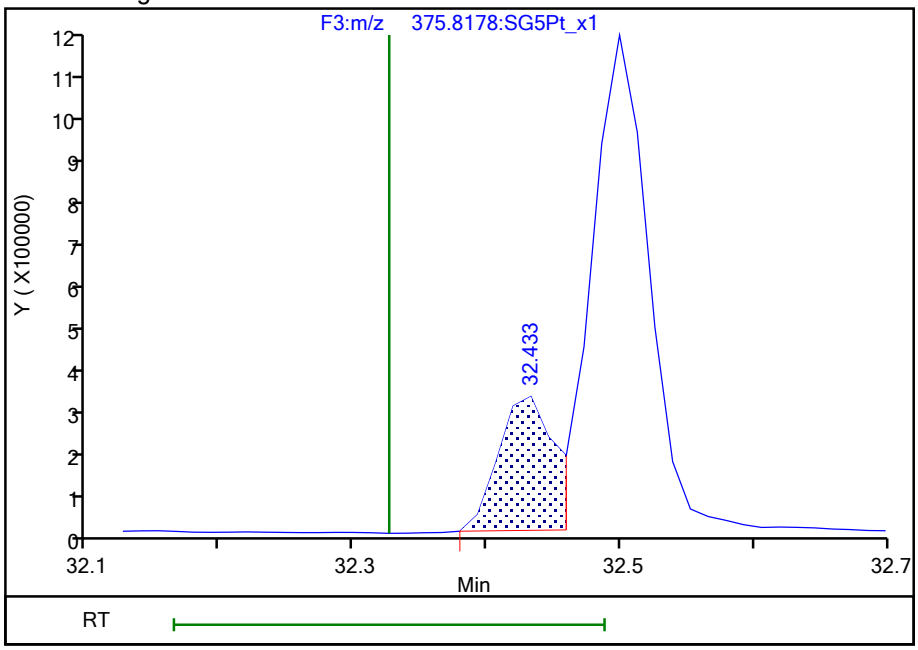

Reviewer: dadunj, 18-Aug-2021 09:43:13
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779678

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Not Detected
RT: 27.94- 32.45

Processing Integration Results

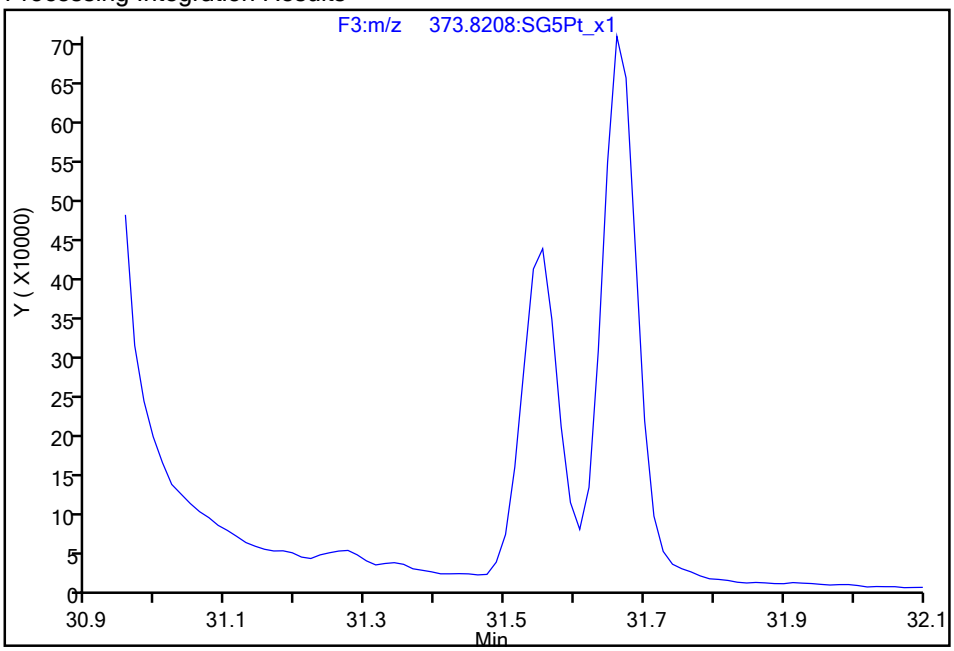

RT = 31.554 Area = 1512456 M

Manual Integration Results

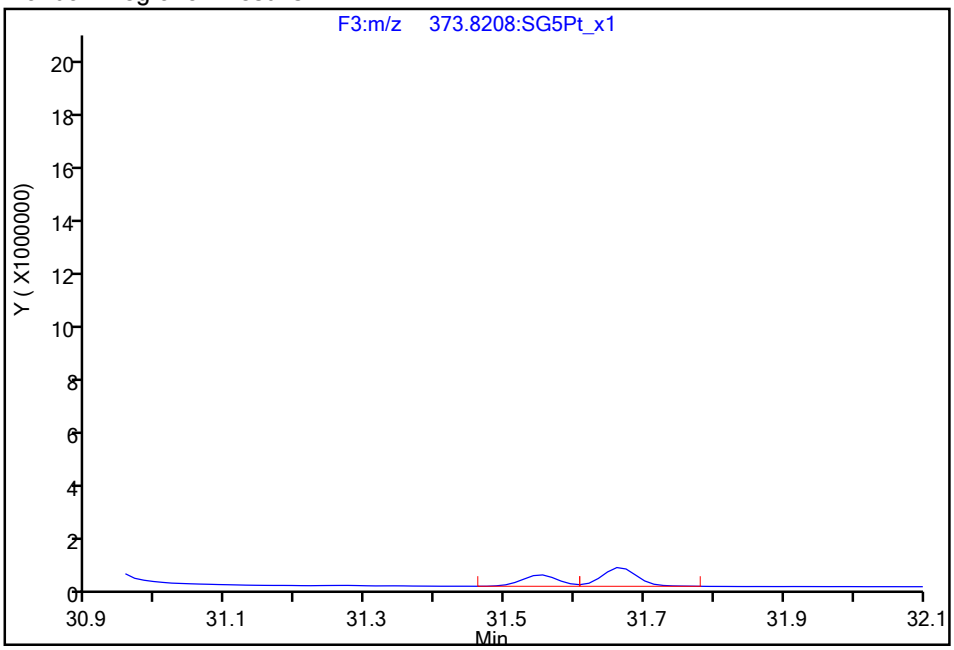

Reviewer: dadunj, 18-Aug-2021 09:43:22

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.499 Area = 5163642

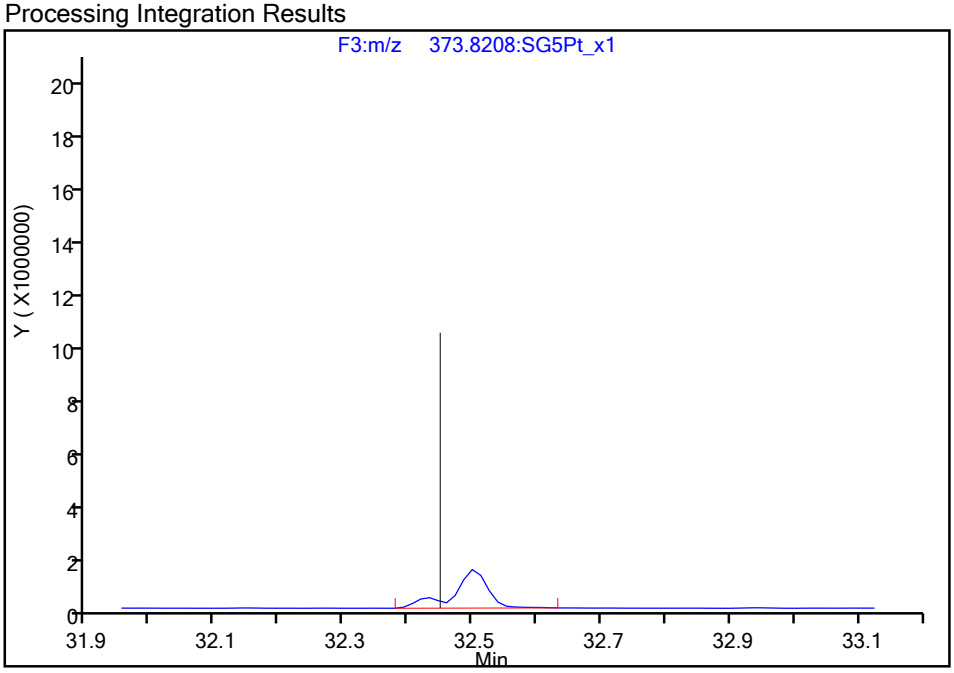

Manual Integration Results

RT = 32.499 Area = 4130220 M

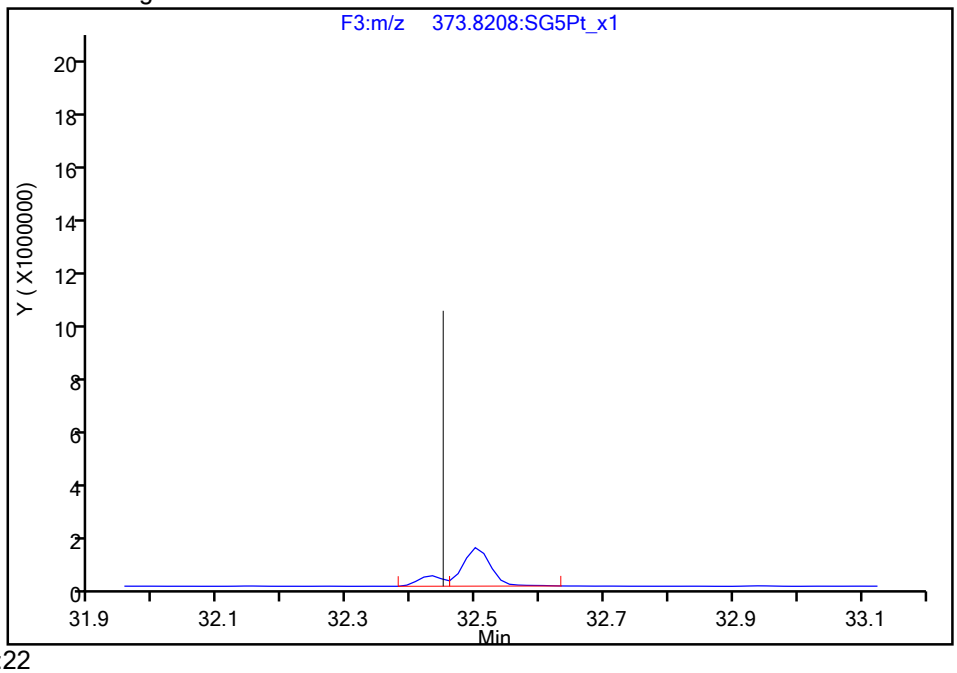

Reviewer: dadunj, 18-Aug-2021 09:43:22

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.83
Area: 19847603
Amount: 208.9832
Amount Units: pg/ul

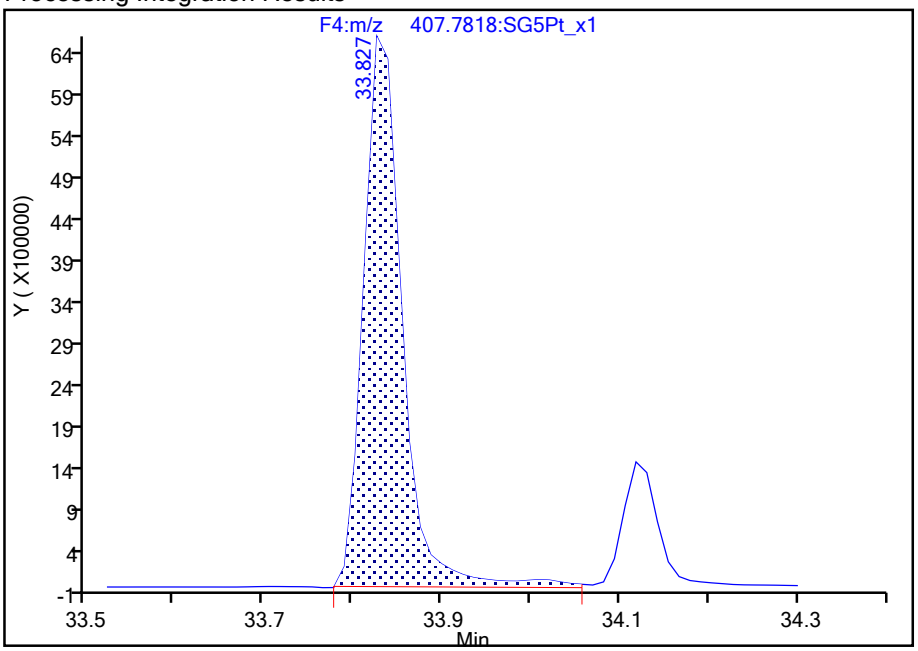

Manual Integration Results

RT: 33.83
Area: 19359167
Amount: 204.4452
Amount Units: pg/ul

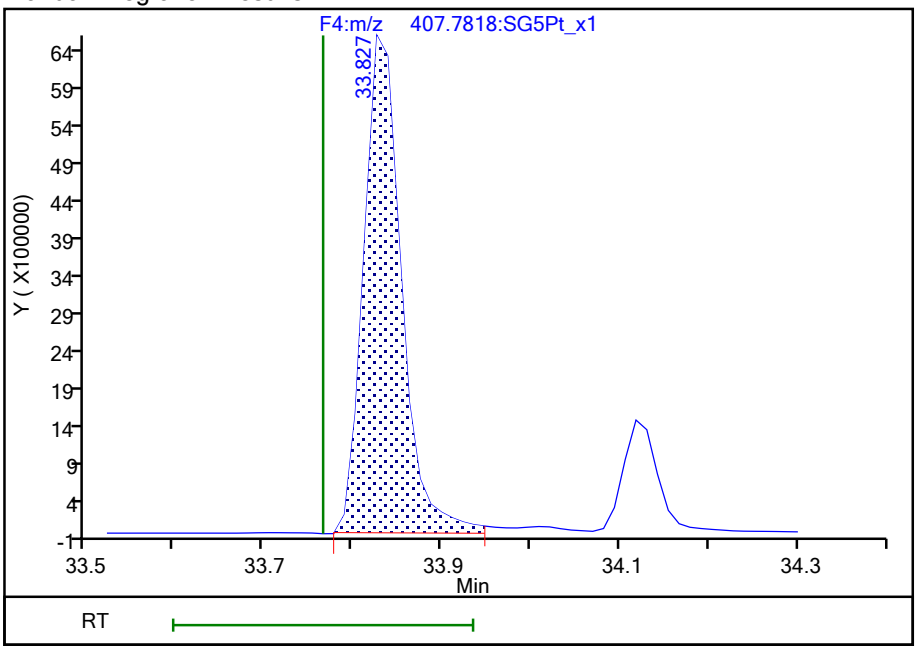

Reviewer: dadunj, 18-Aug-2021 09:43:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d				
Injection Date:	14-Aug-2021 16:01:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	31	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.83
Area: 18757016
Amount: 208.9832
Amount Units: pg/ul

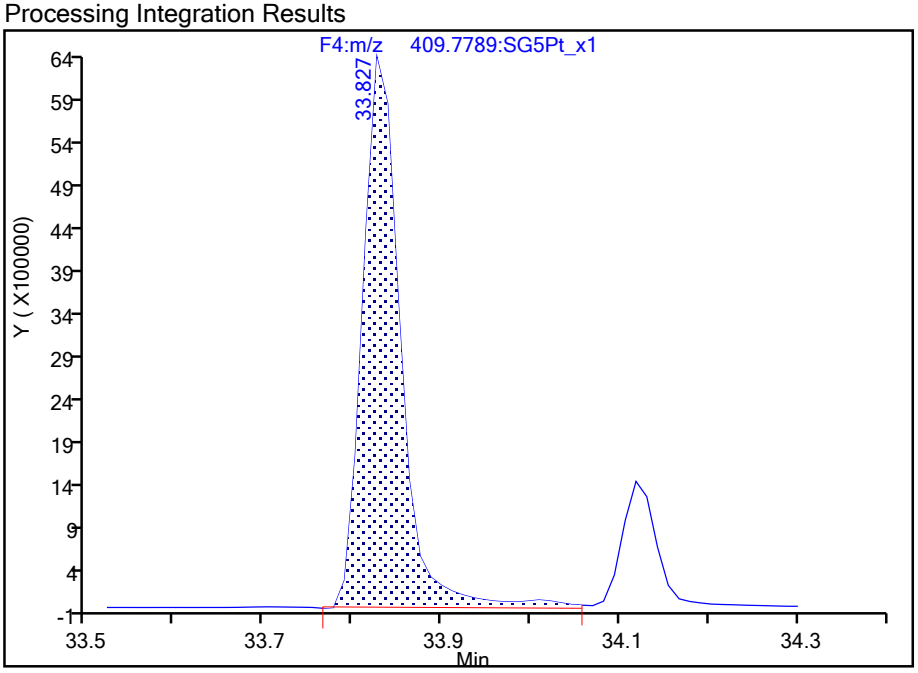

Manual Integration Results

RT: 33.83
Area: 18407170
Amount: 204.4452
Amount Units: pg/ul

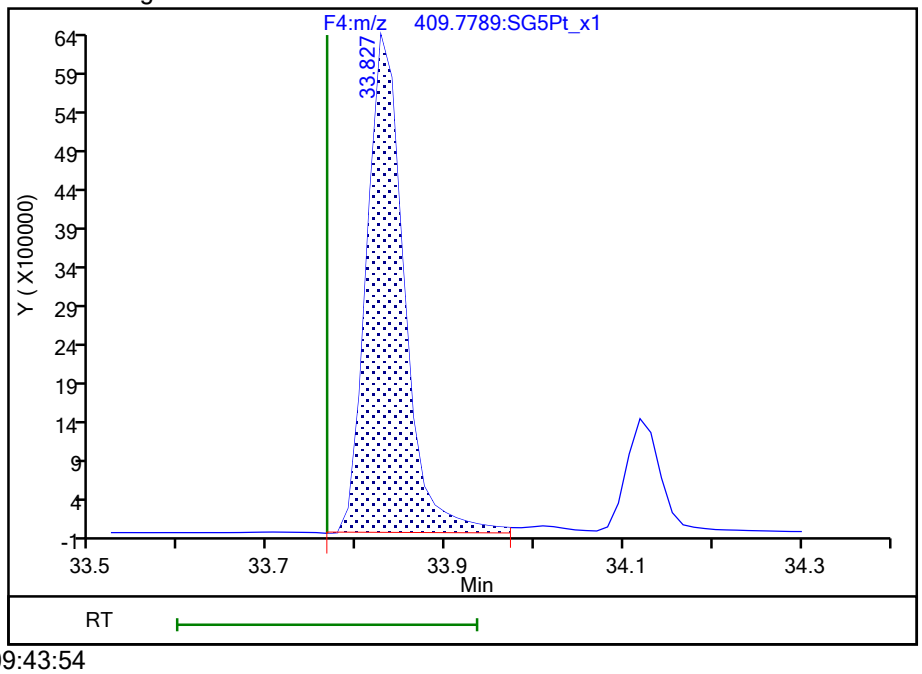

Reviewer: dadunj, 18-Aug-2021 09:43:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

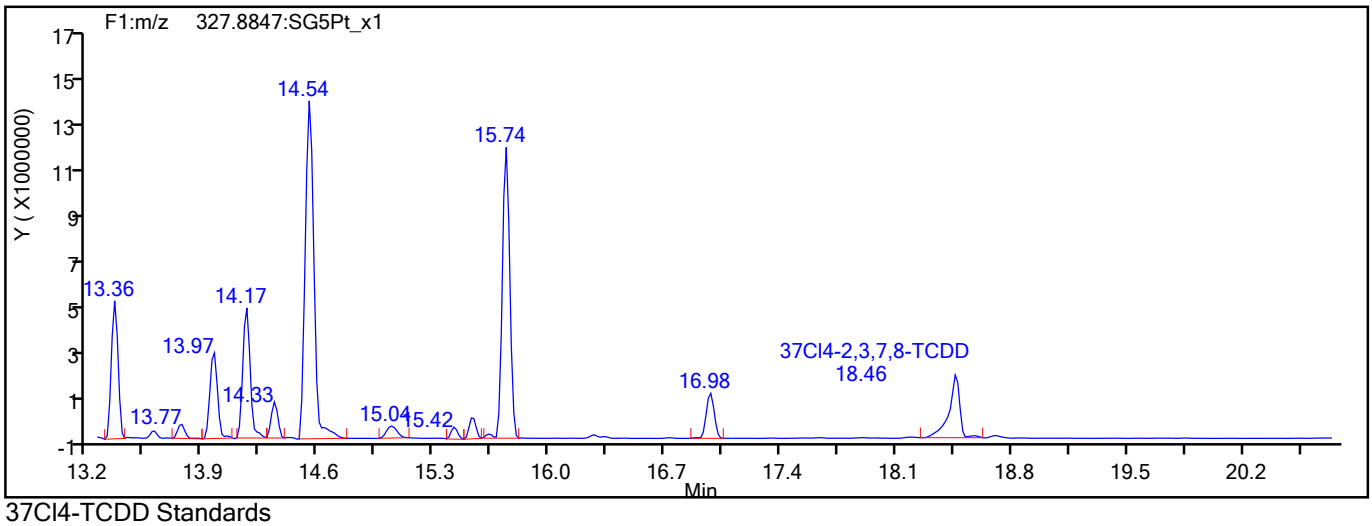

37Cl4-TCDD Standards

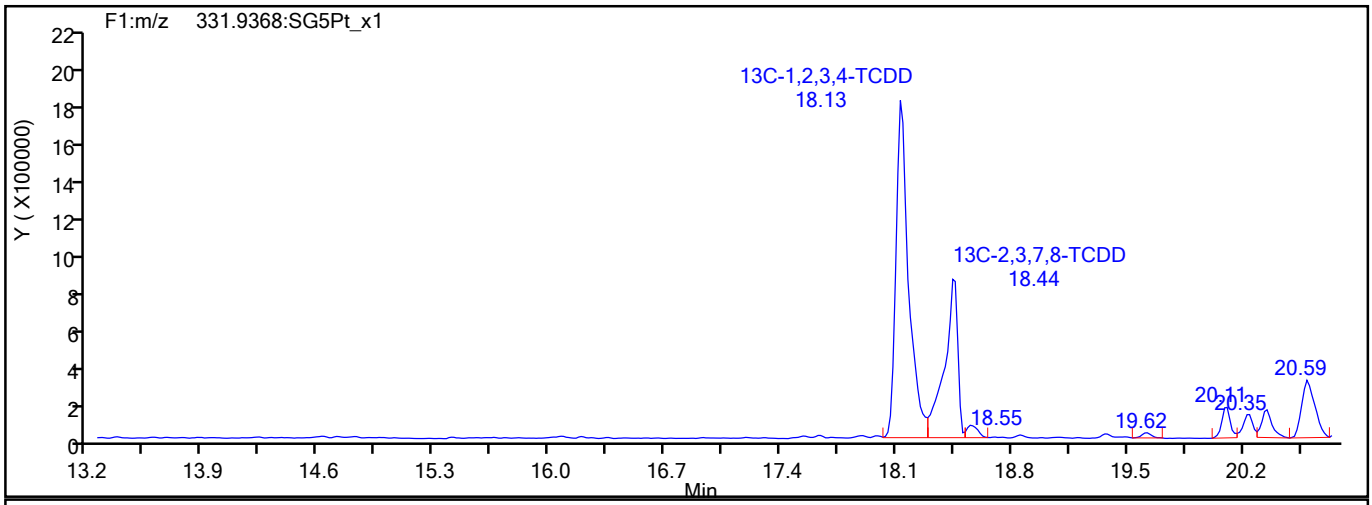

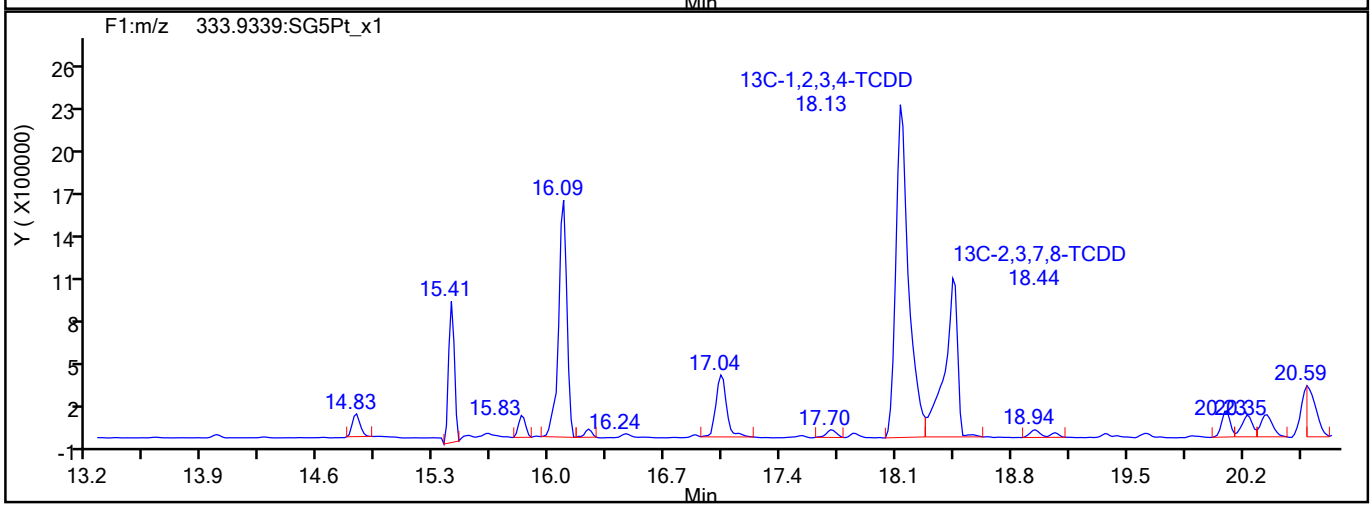

779683

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

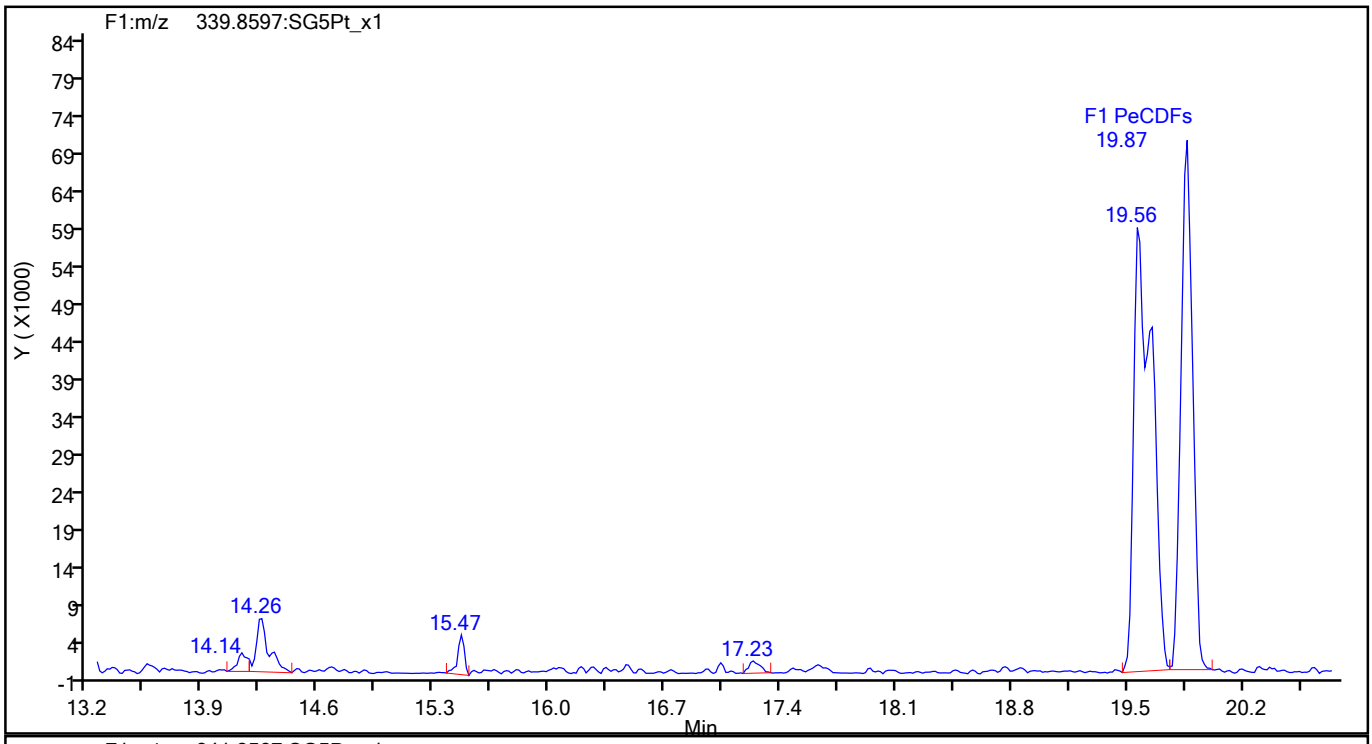

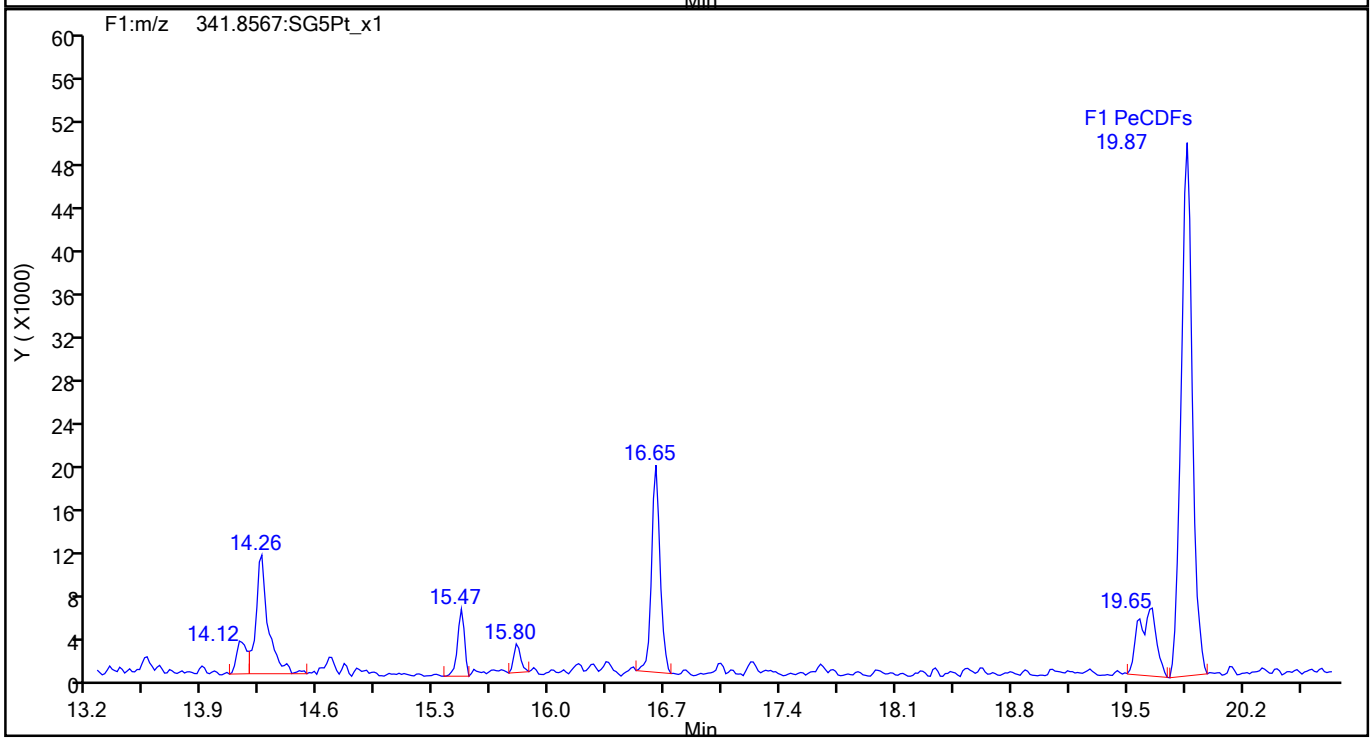

779684

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

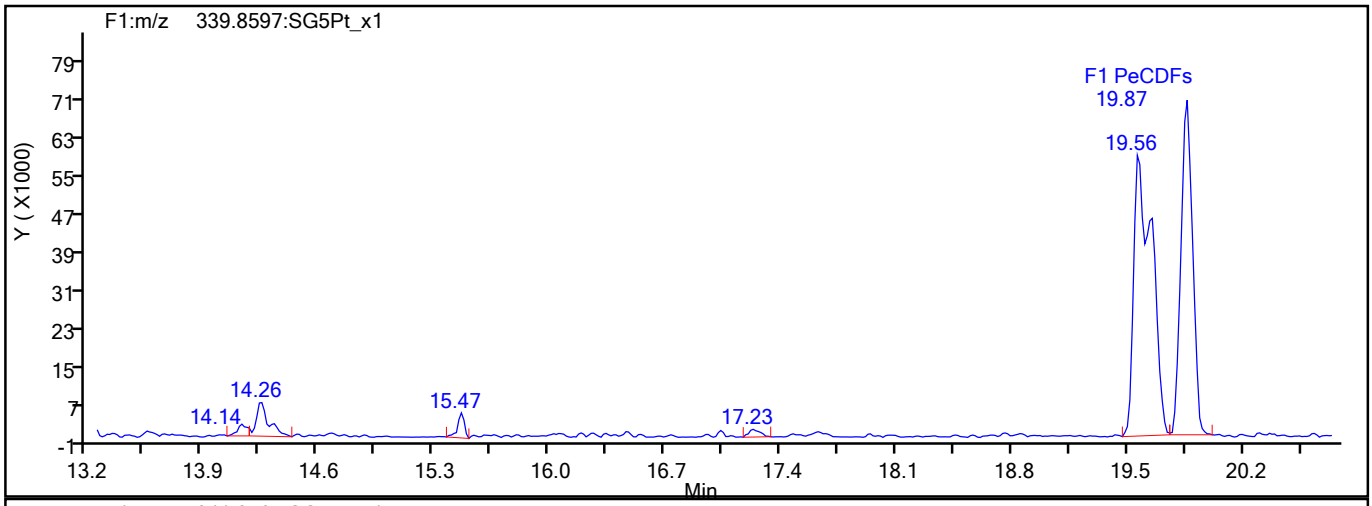

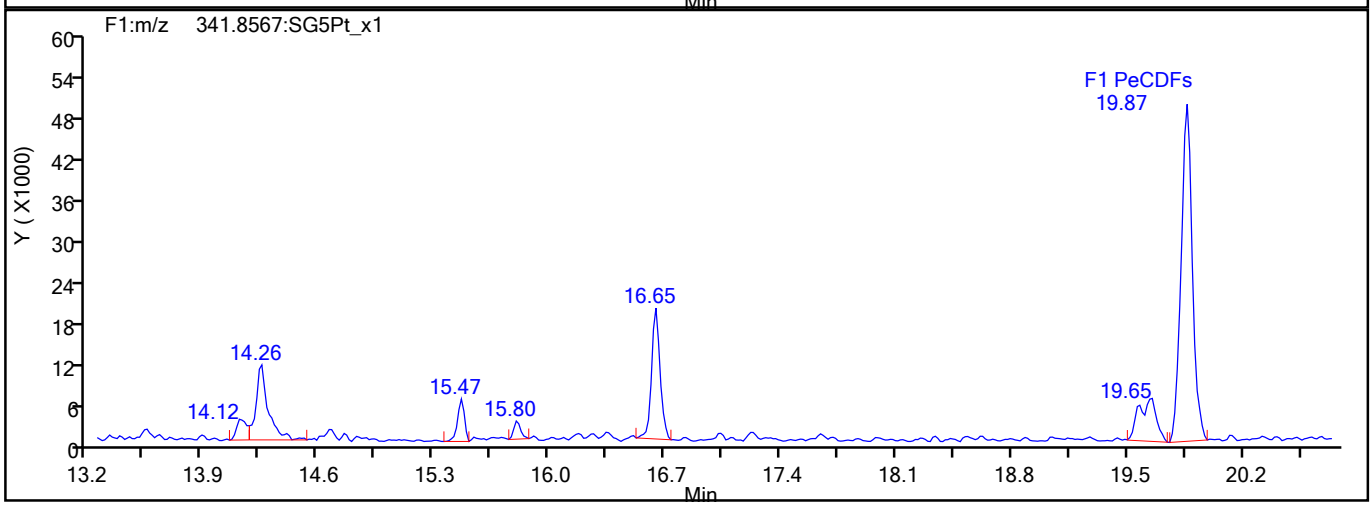

F1 PeCDFs Interference Mass

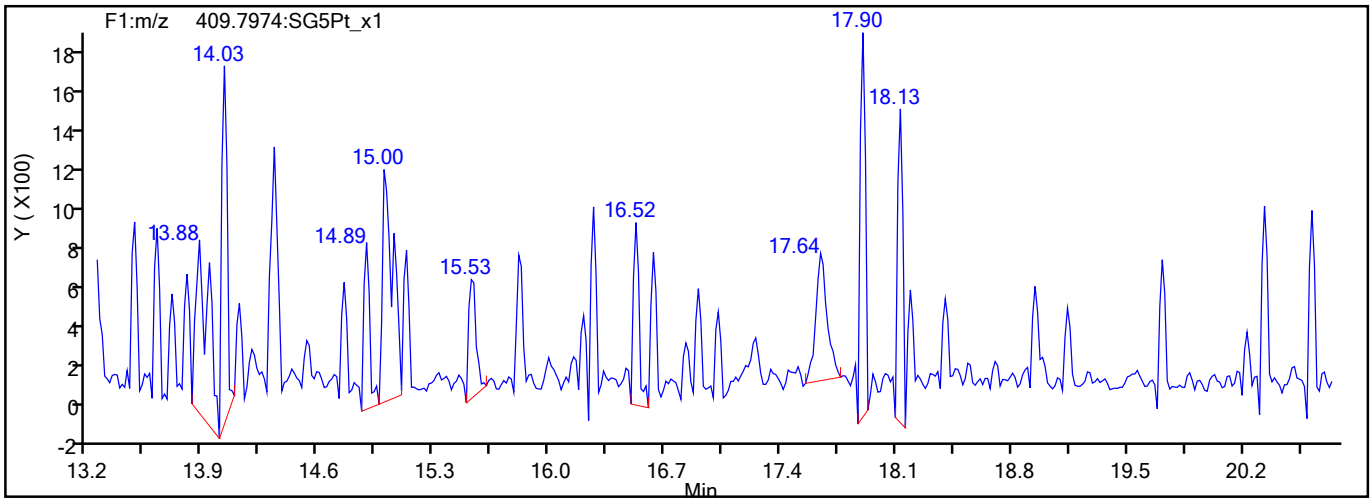

779685

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

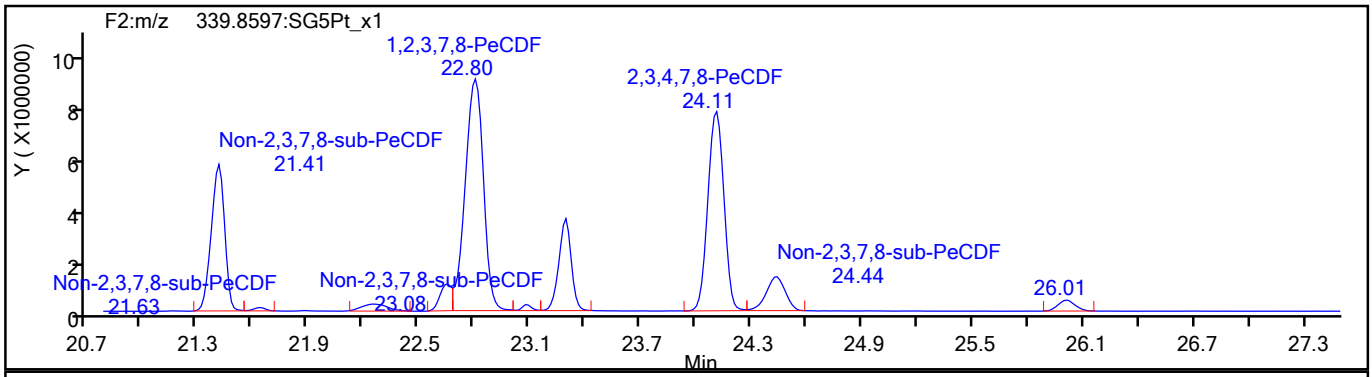

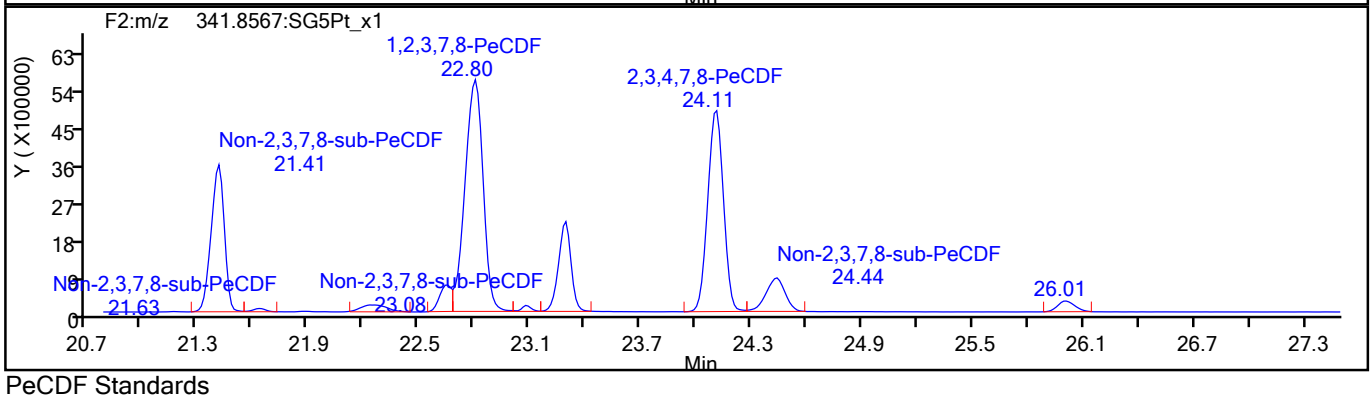

PeCDF Standards

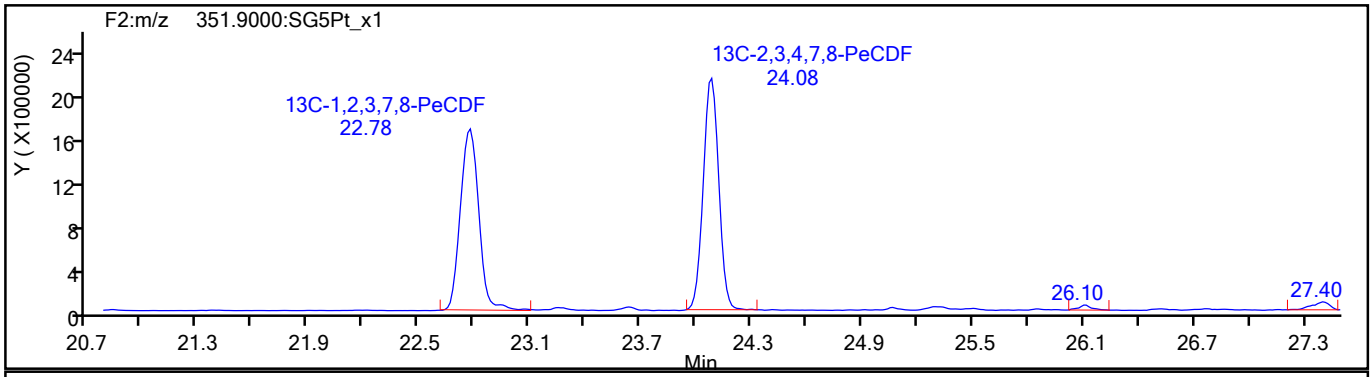

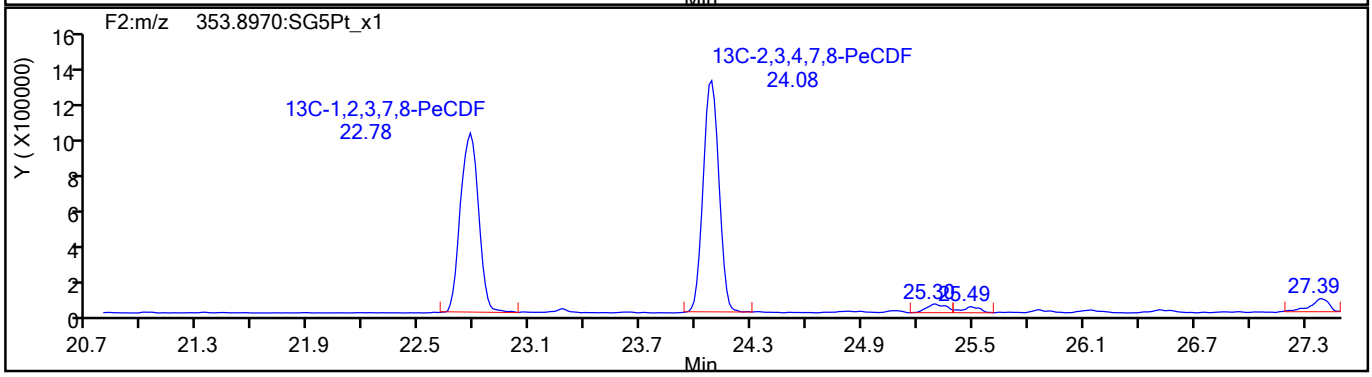

779686

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

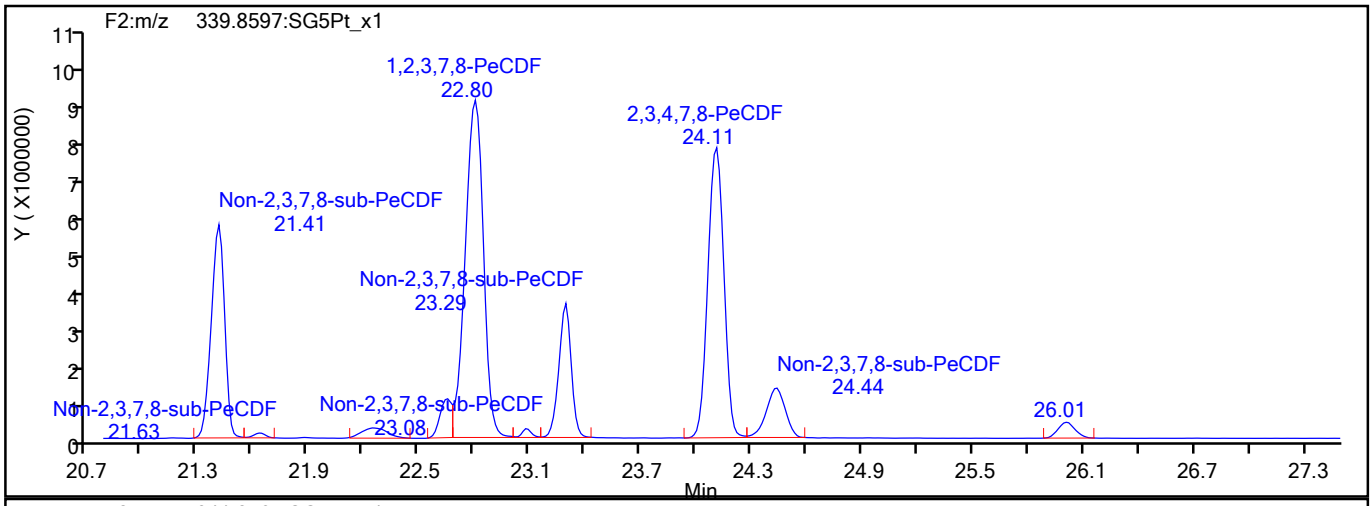

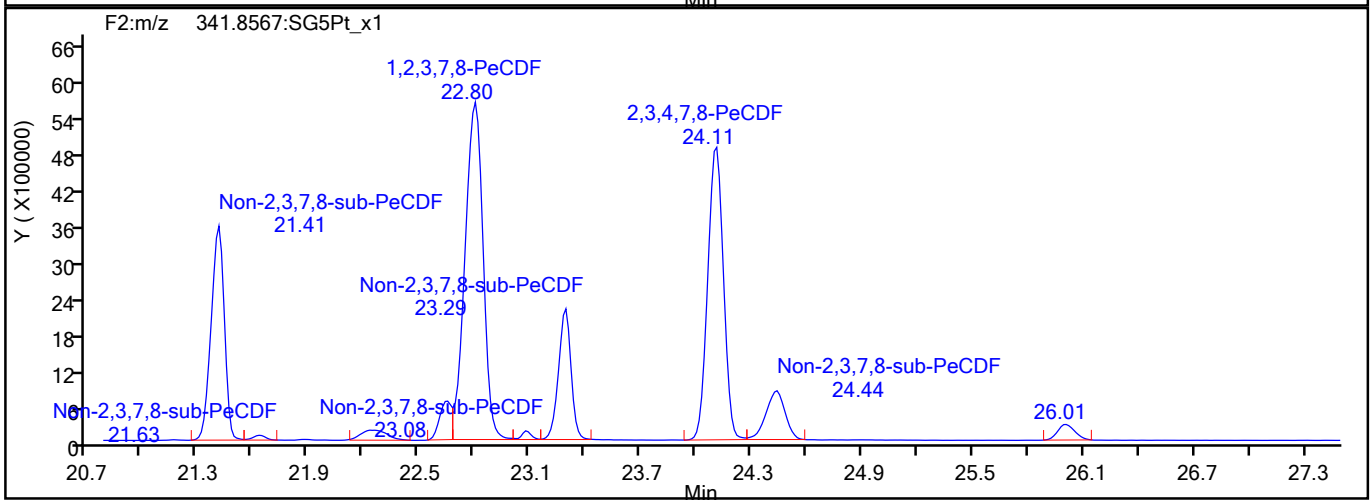

PeCDF Interference Mass

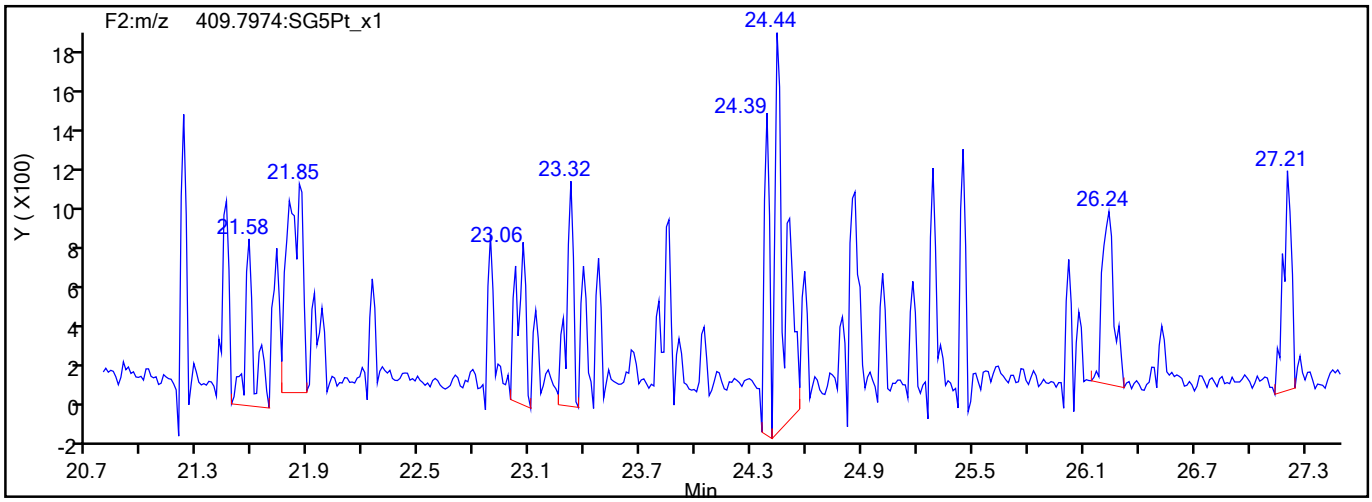

779687

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

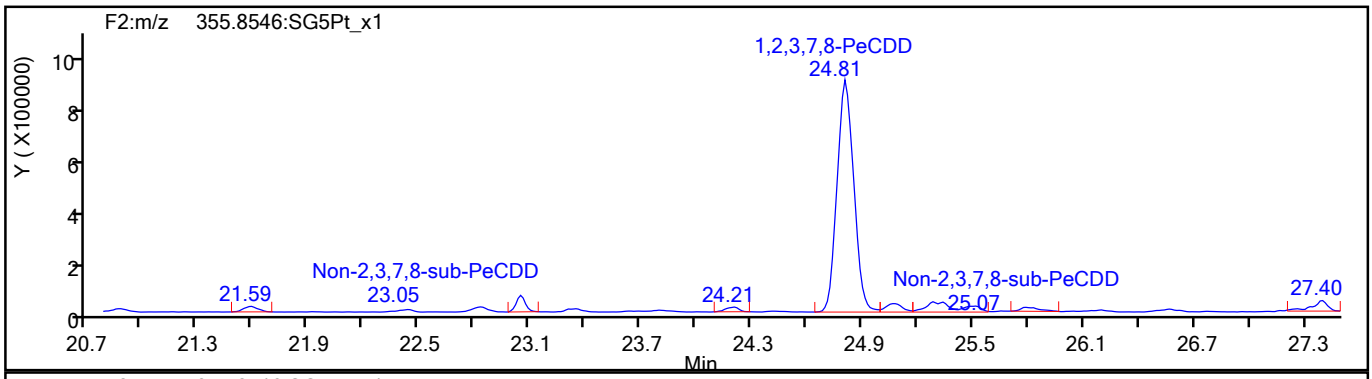

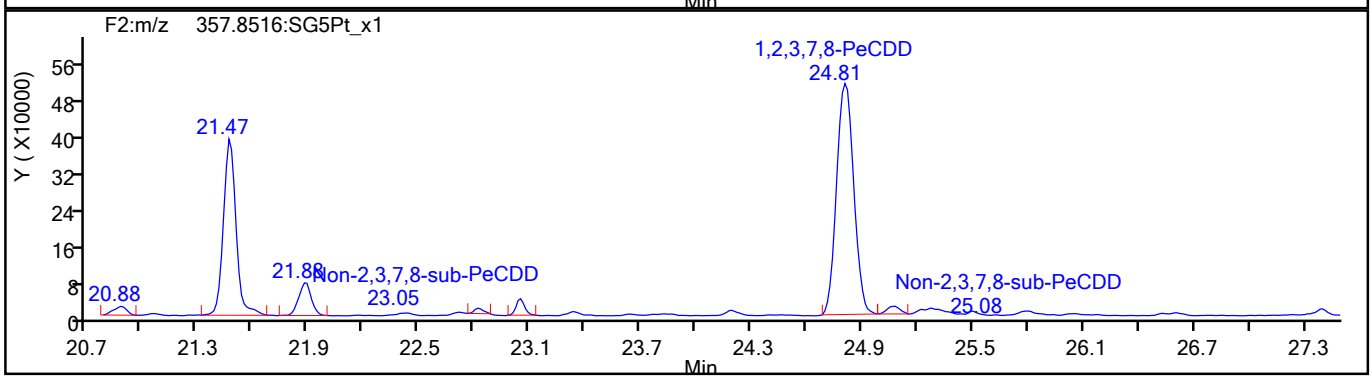

PeCDD Standards

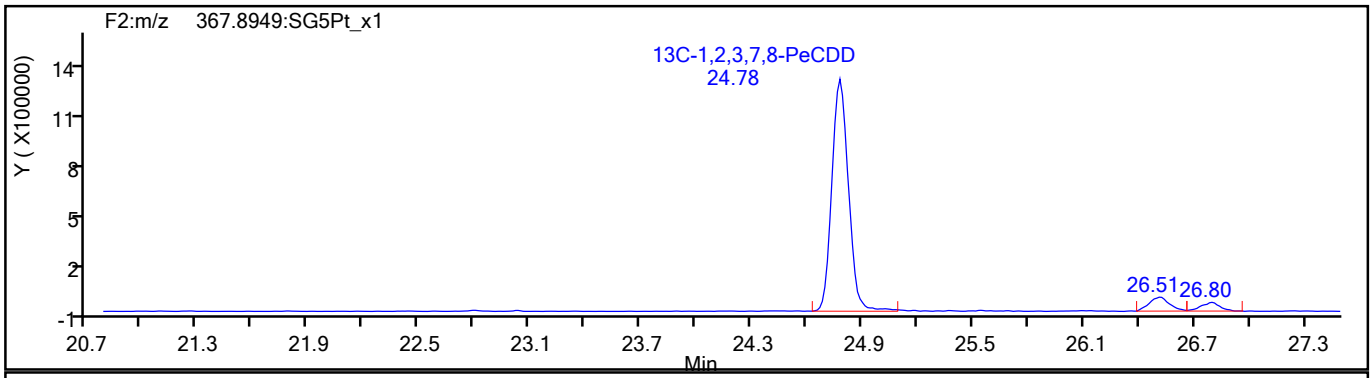

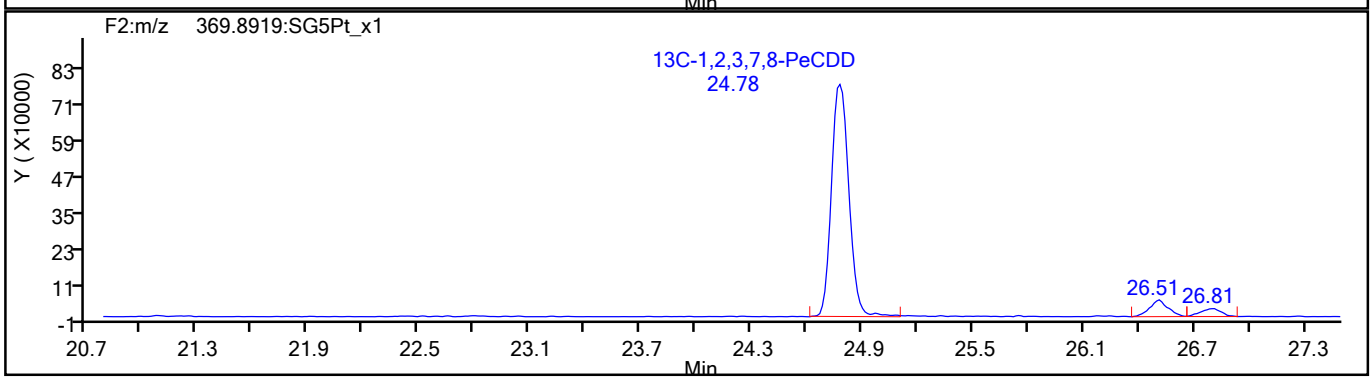

779688

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

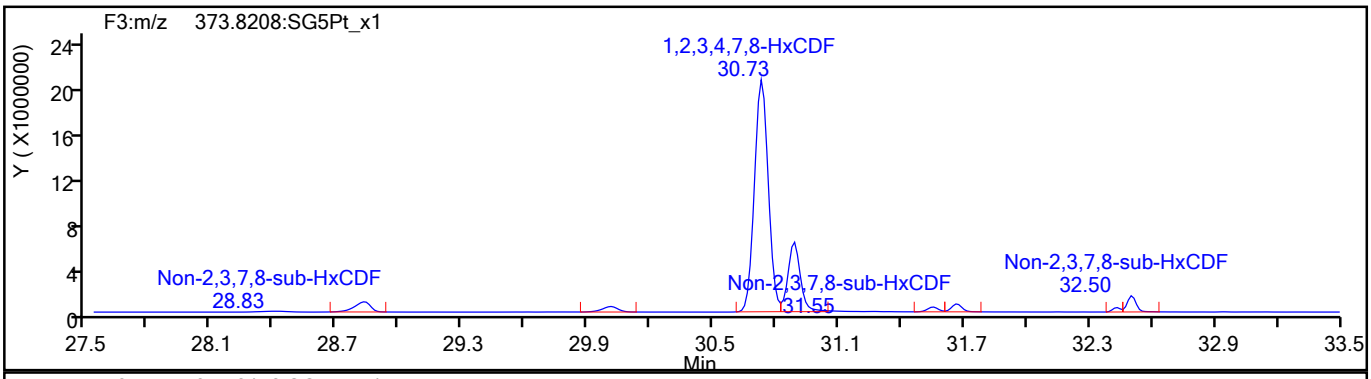

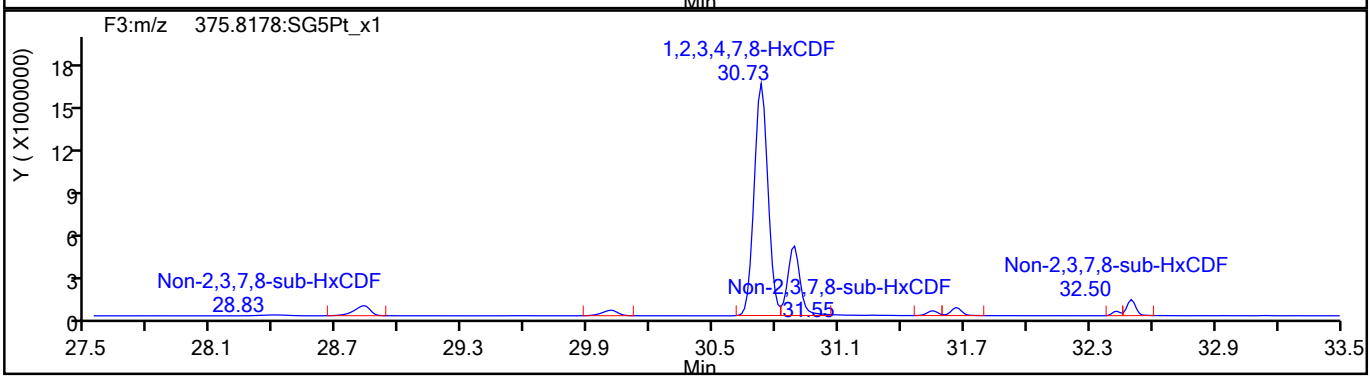

HxCDF Standards

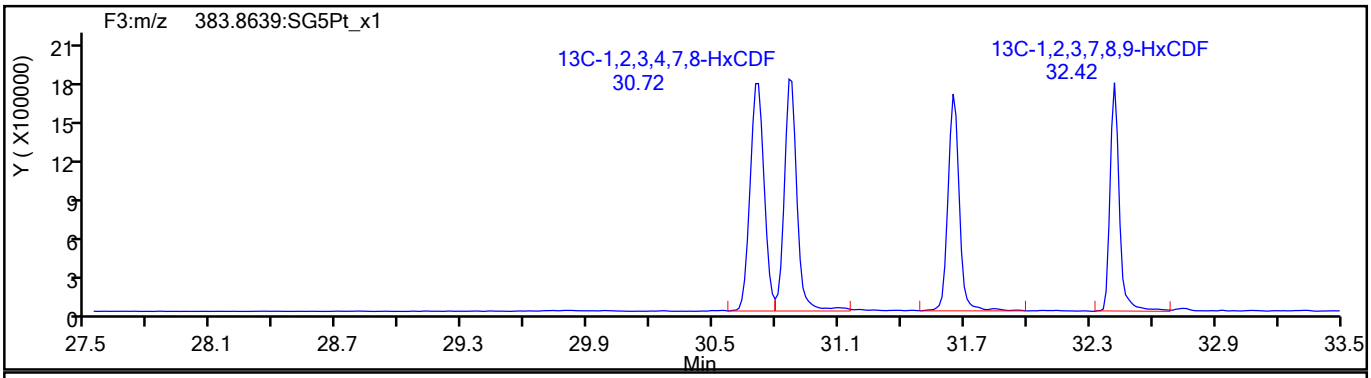

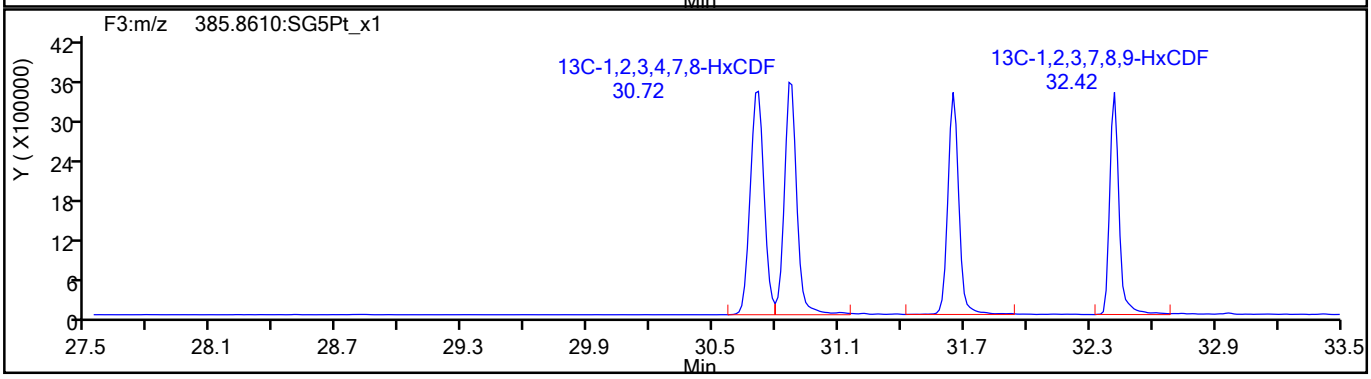

779689

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

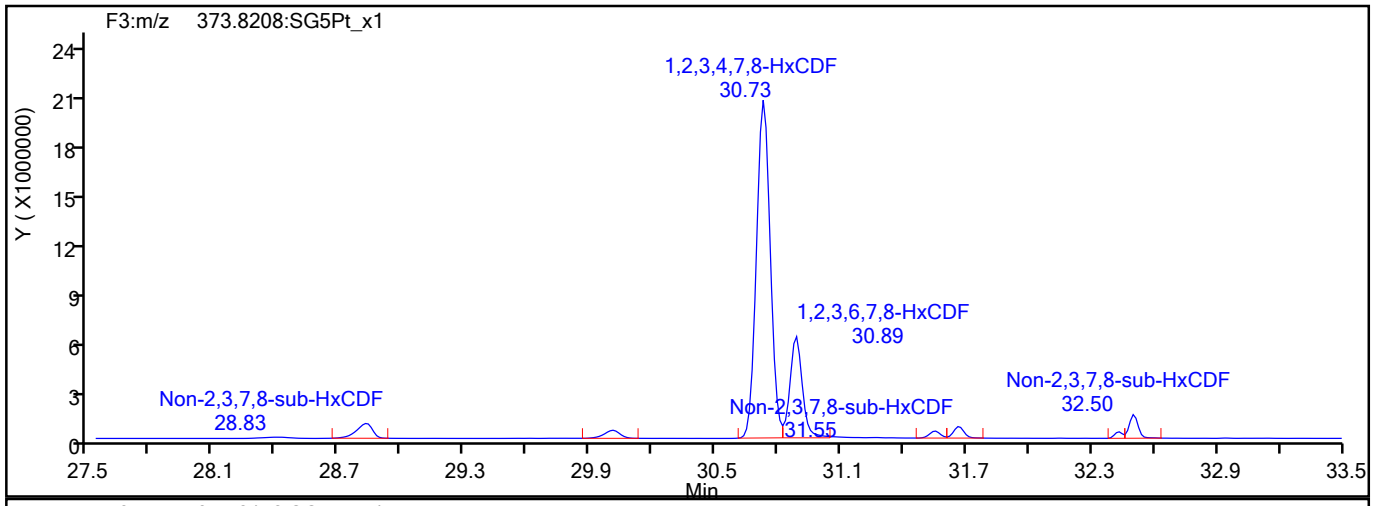

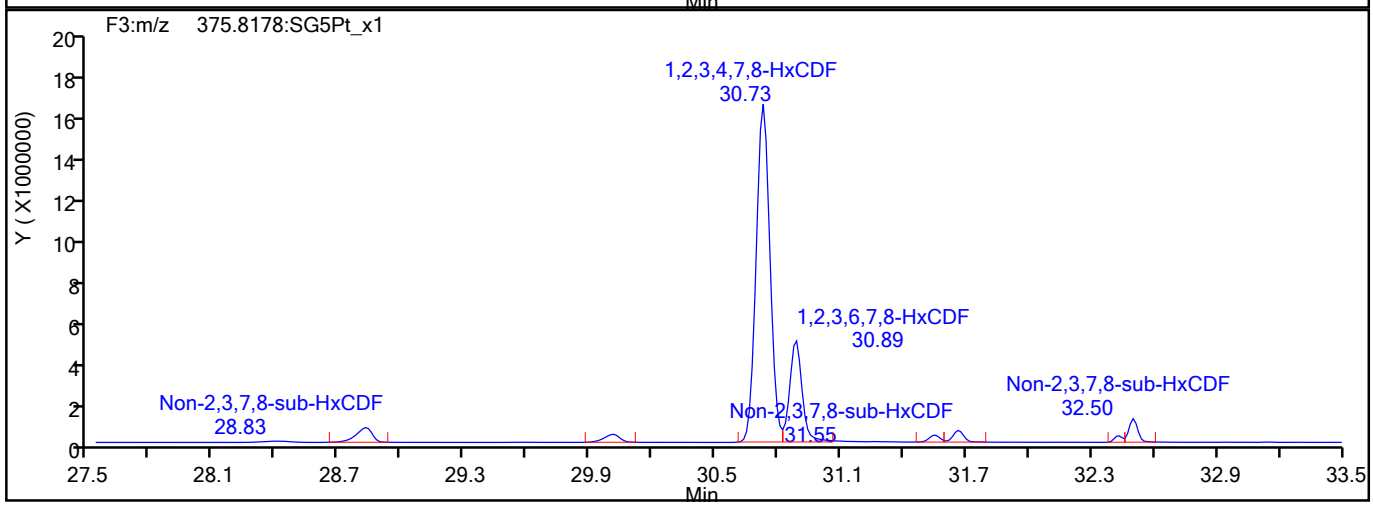

HxCDF Interference Mass

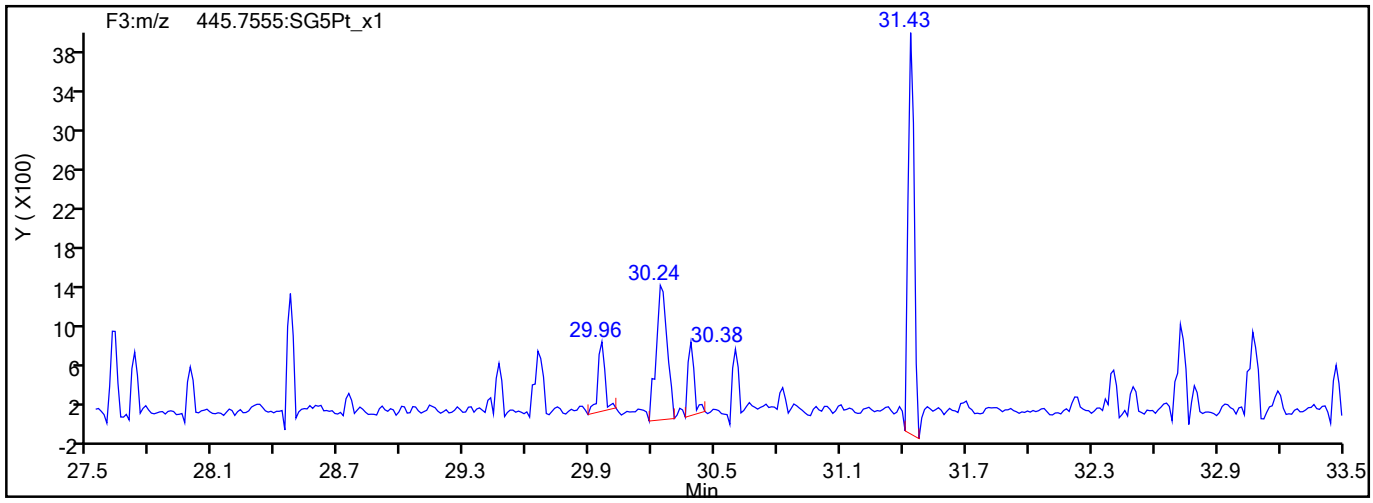

779690

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

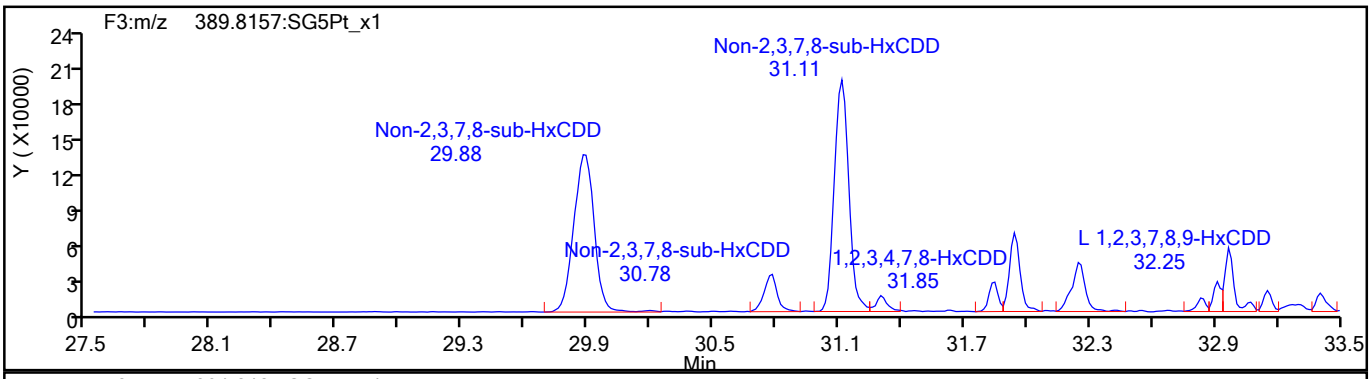

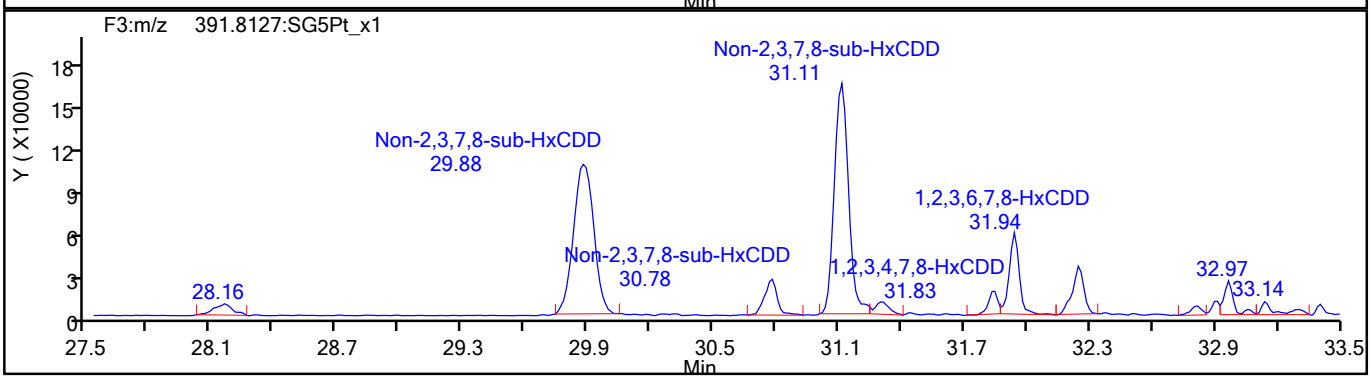

HxCDD Standards

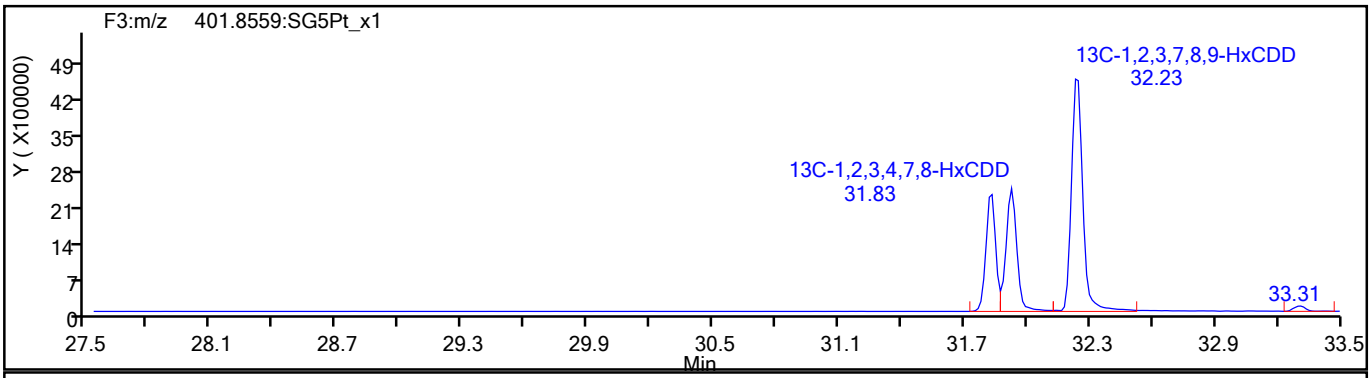

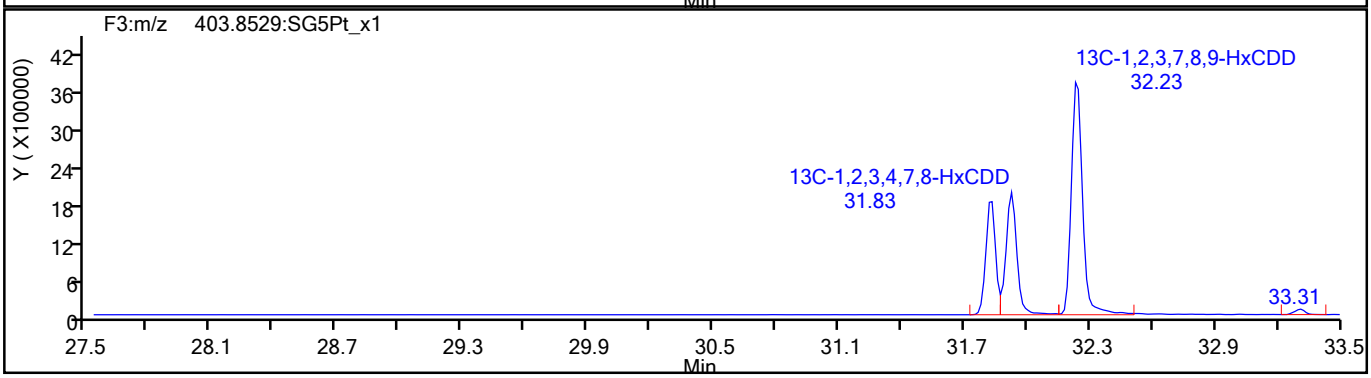

779691

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

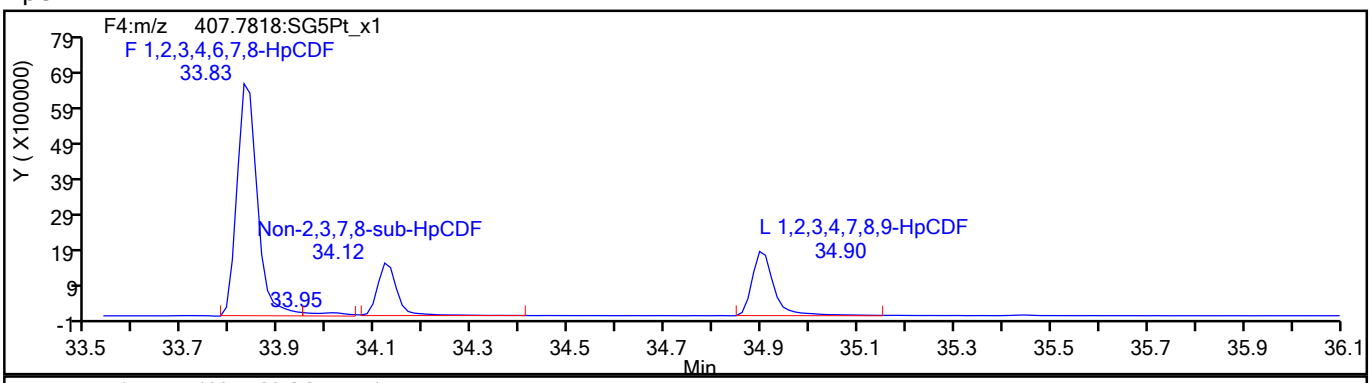

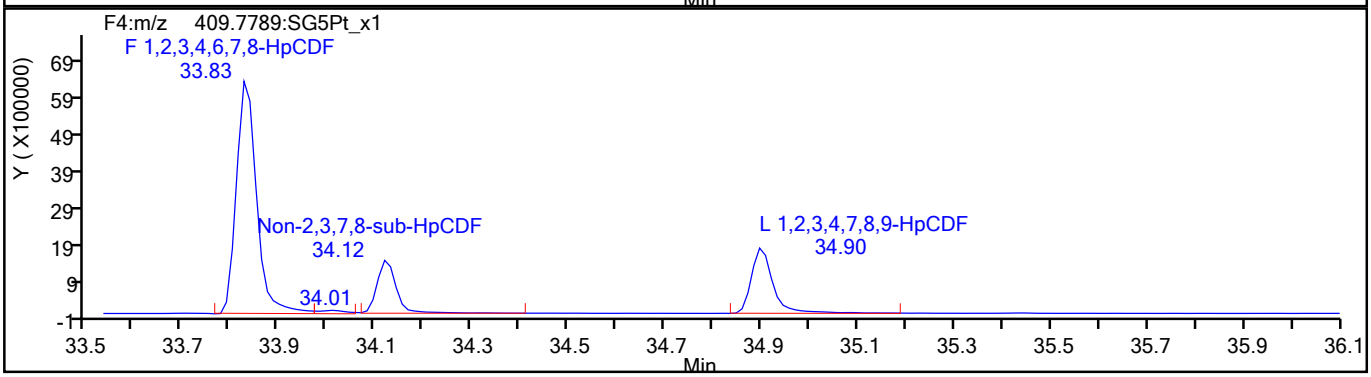

HpCDF Standards

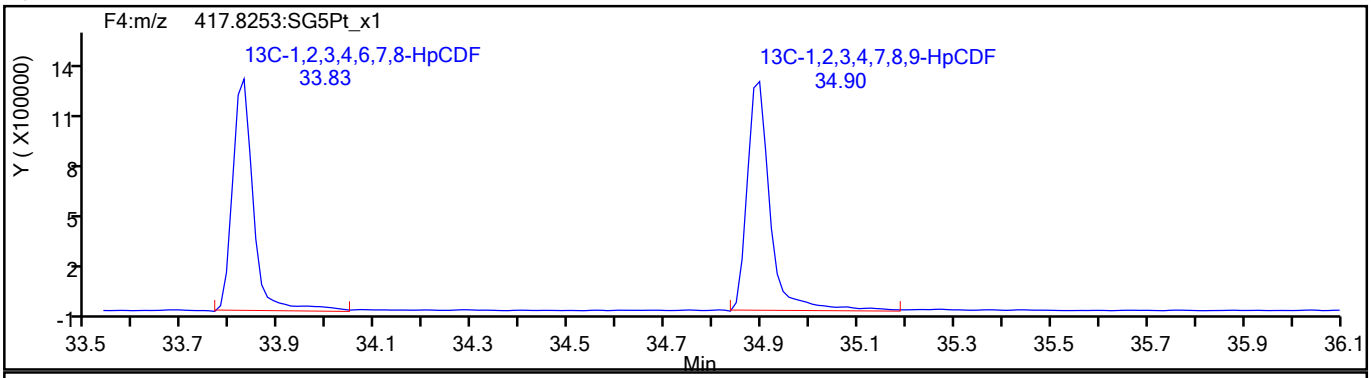

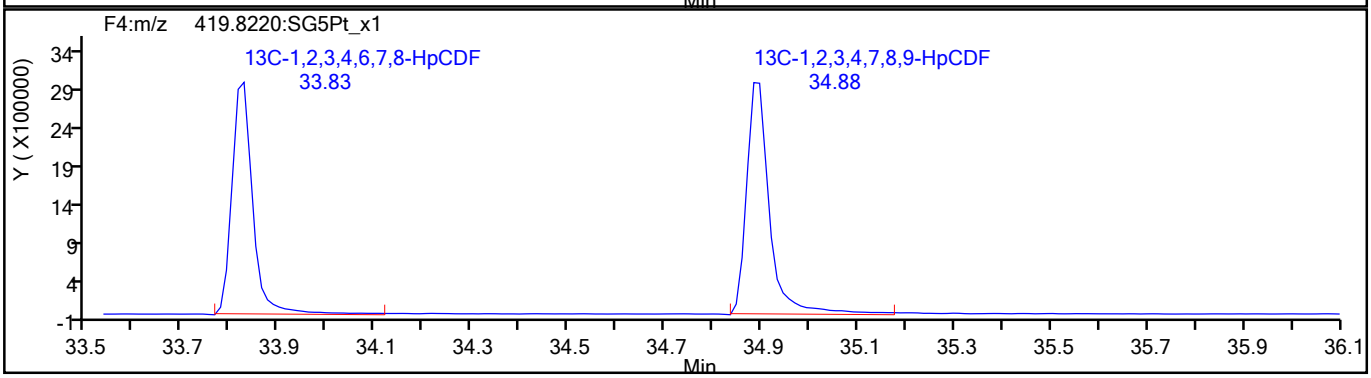

779692

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

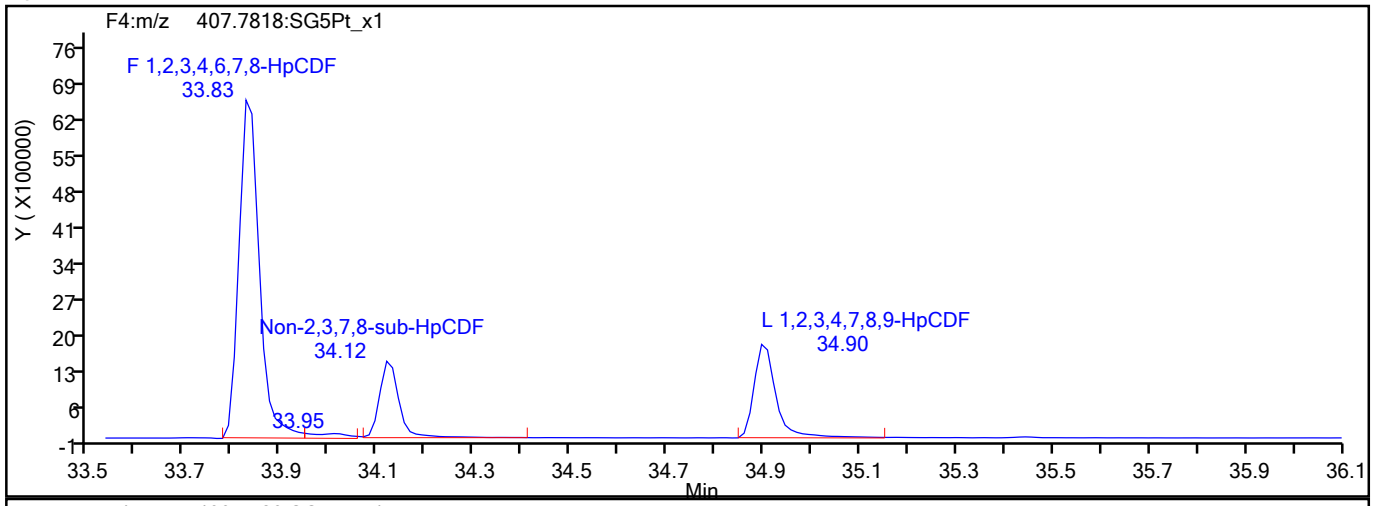

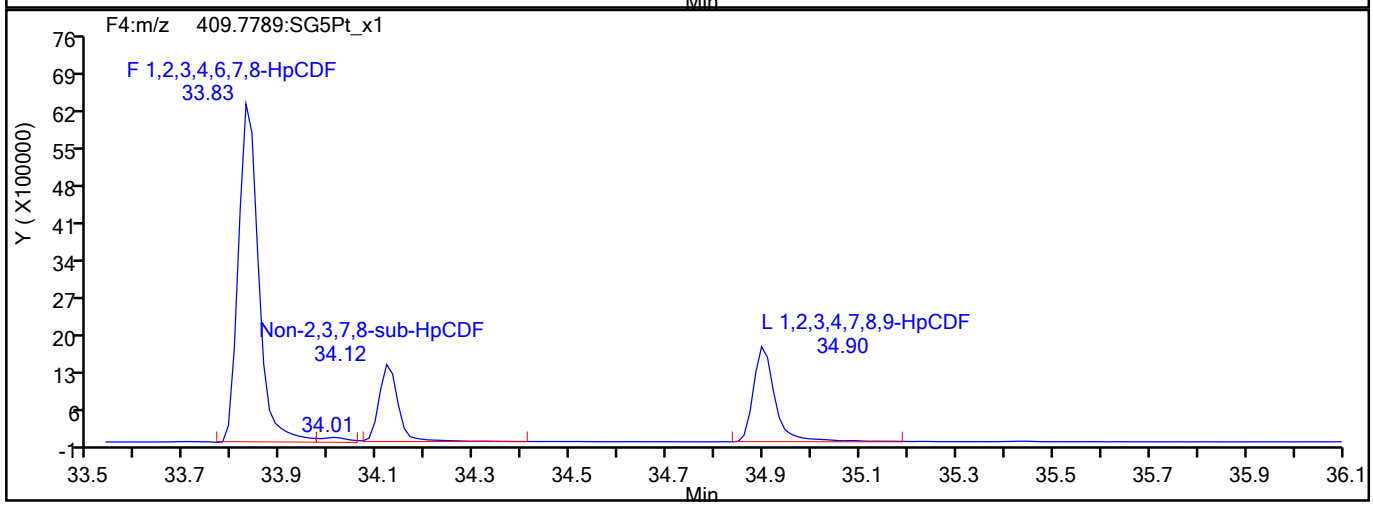

HpCDF Interference Mass

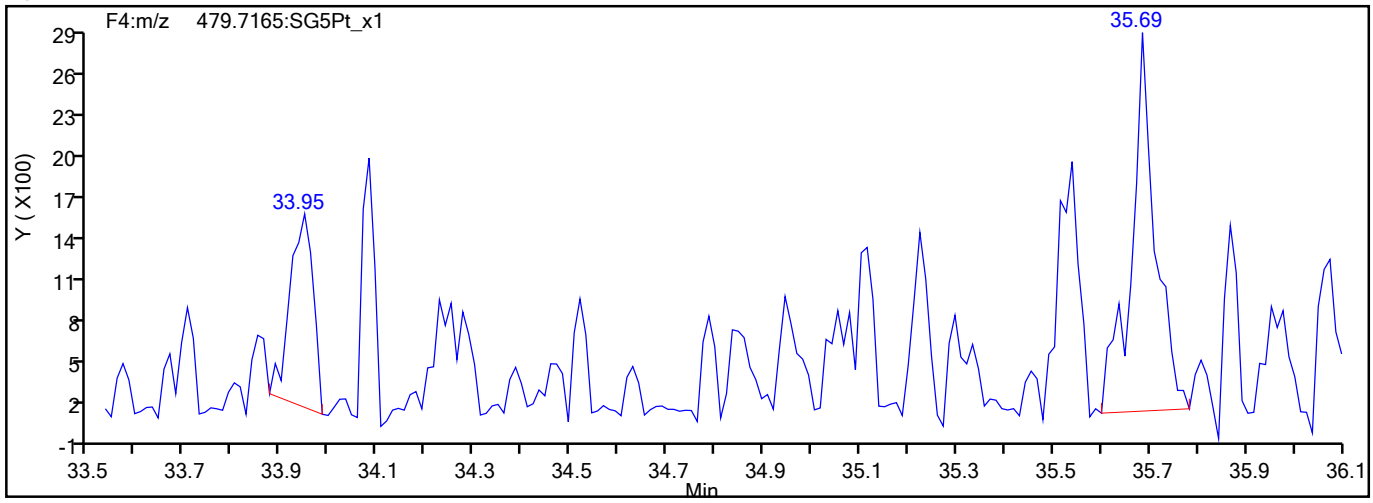

779693

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

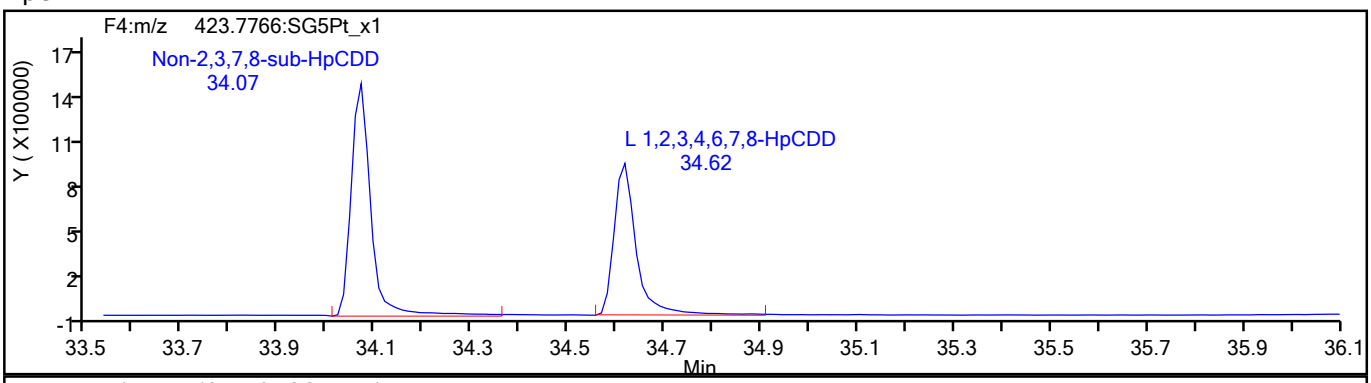

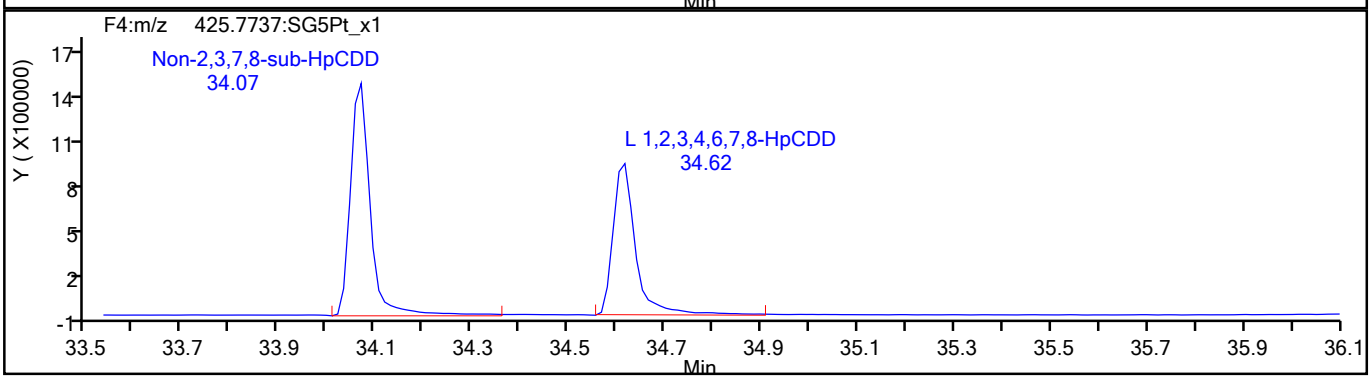

HpCDD Standards

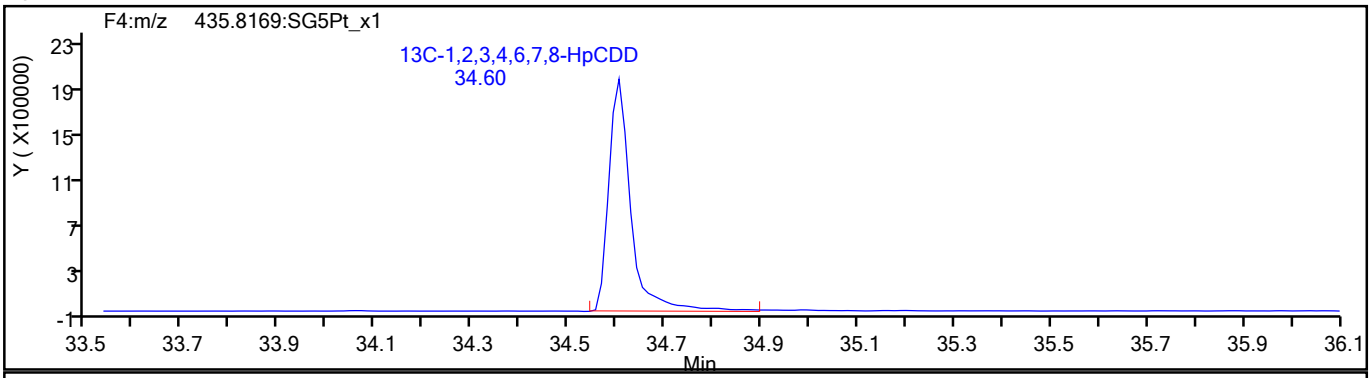

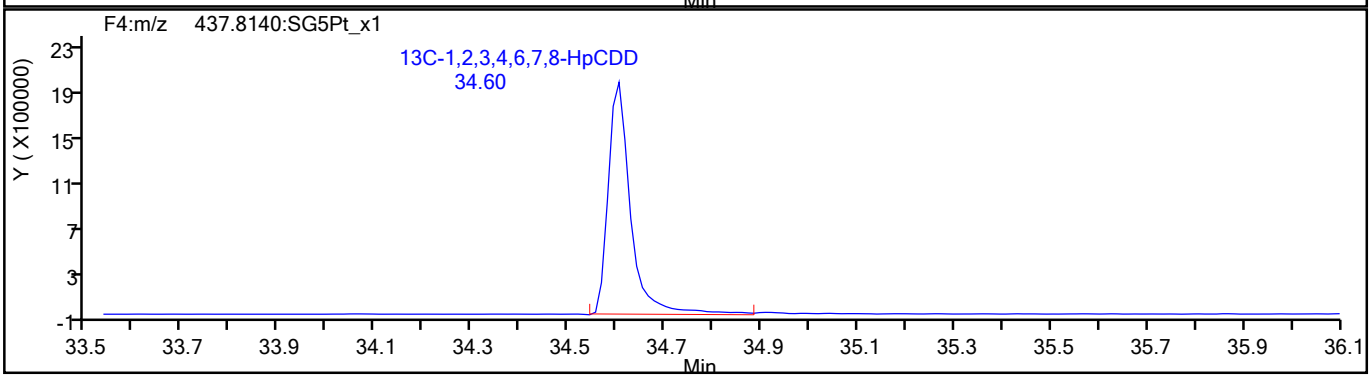

779694

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

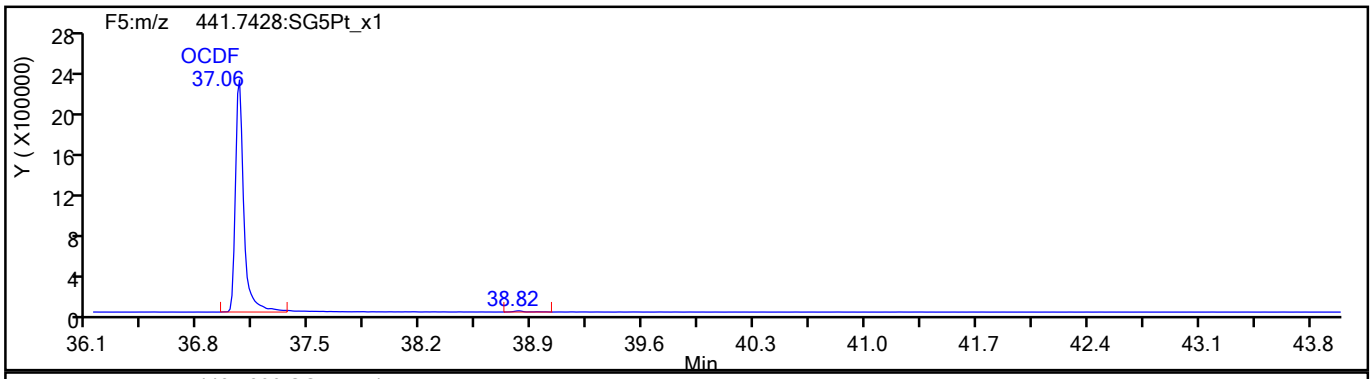

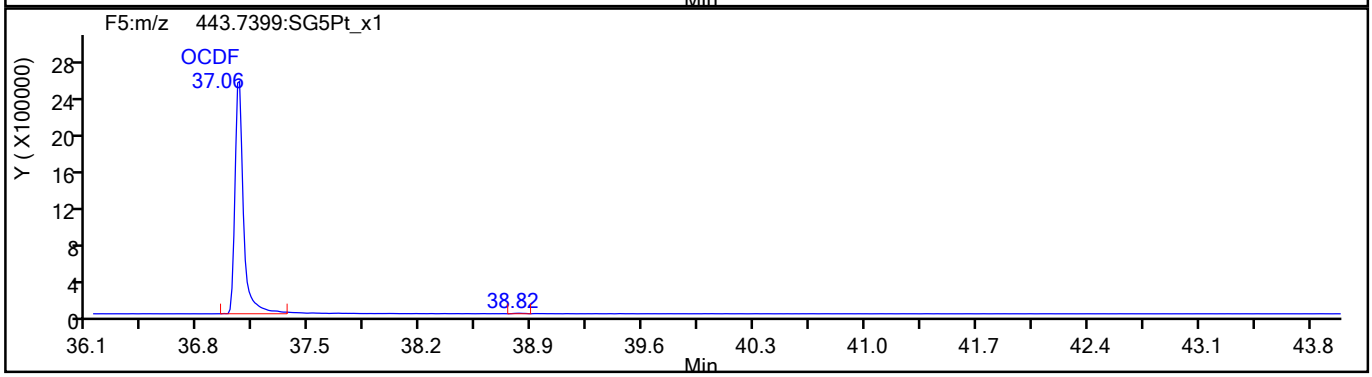

OCDF Standards

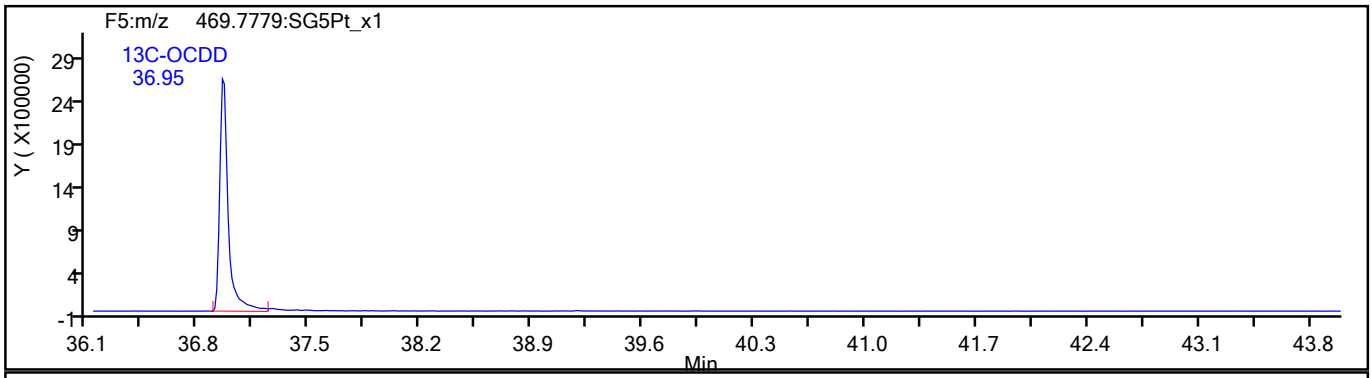

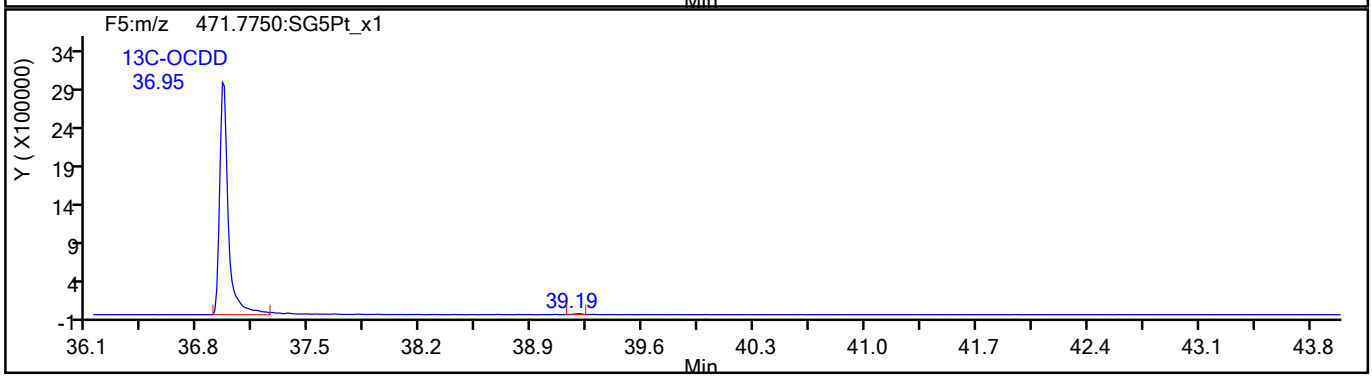

779695

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

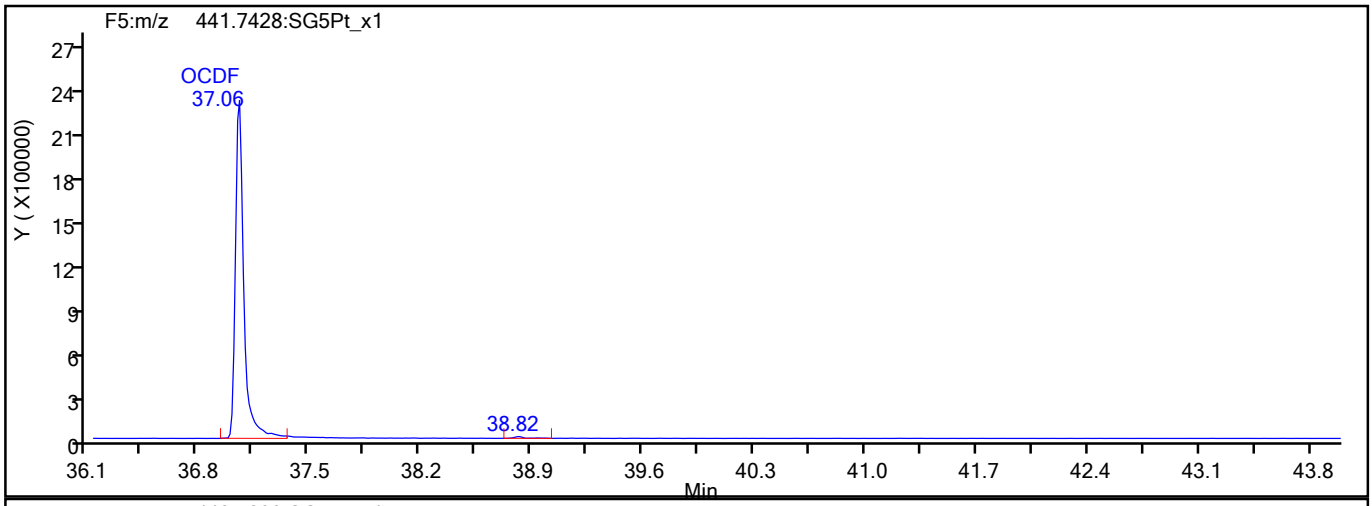

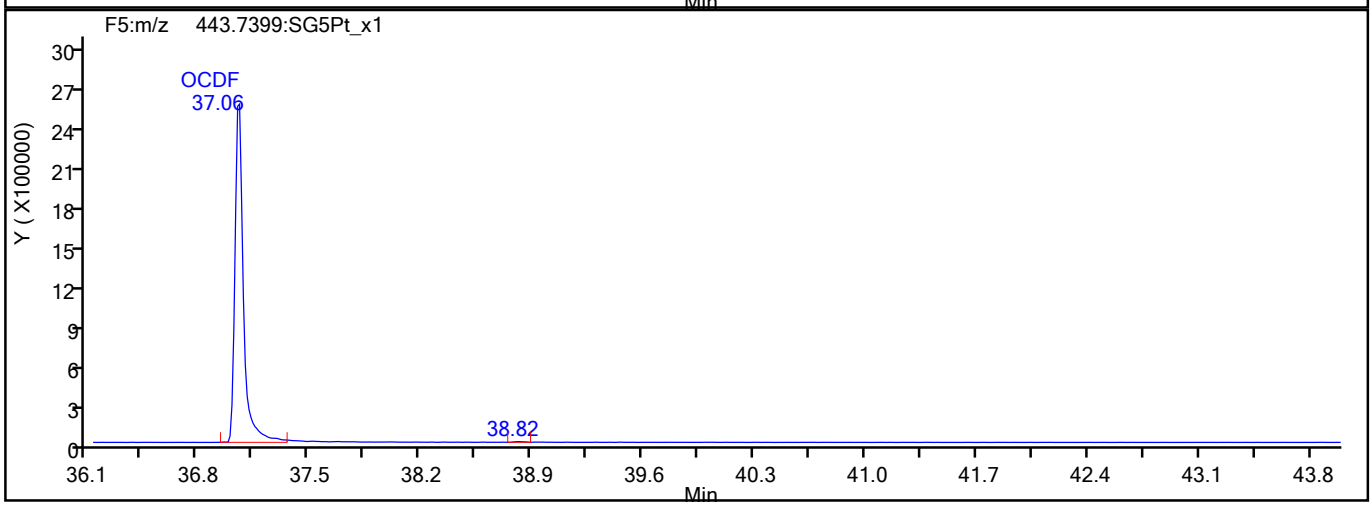

OCDF Interference Mass

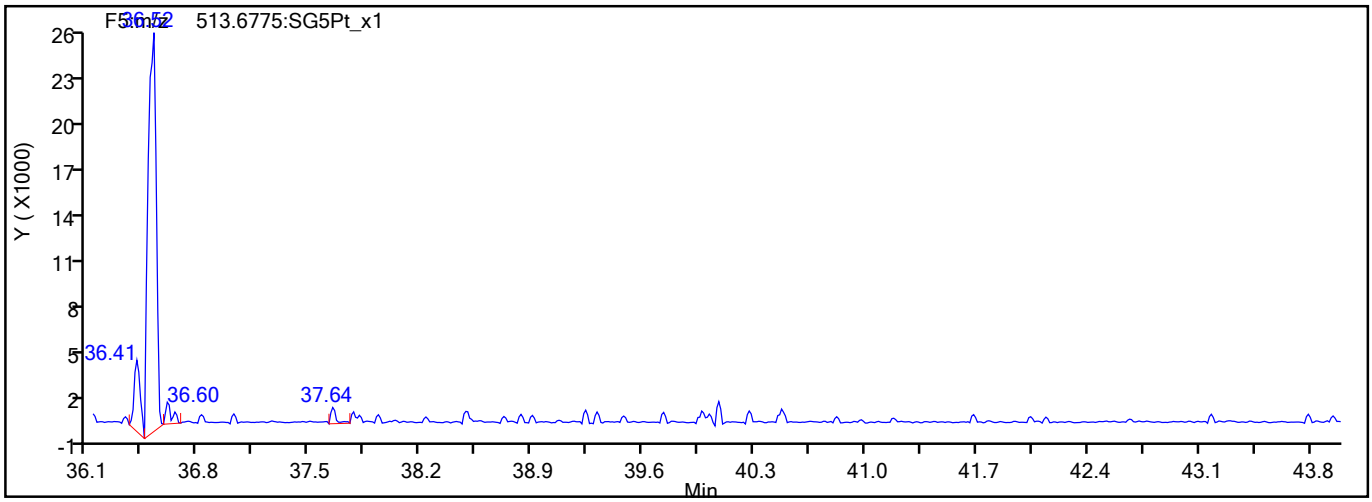

779696

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

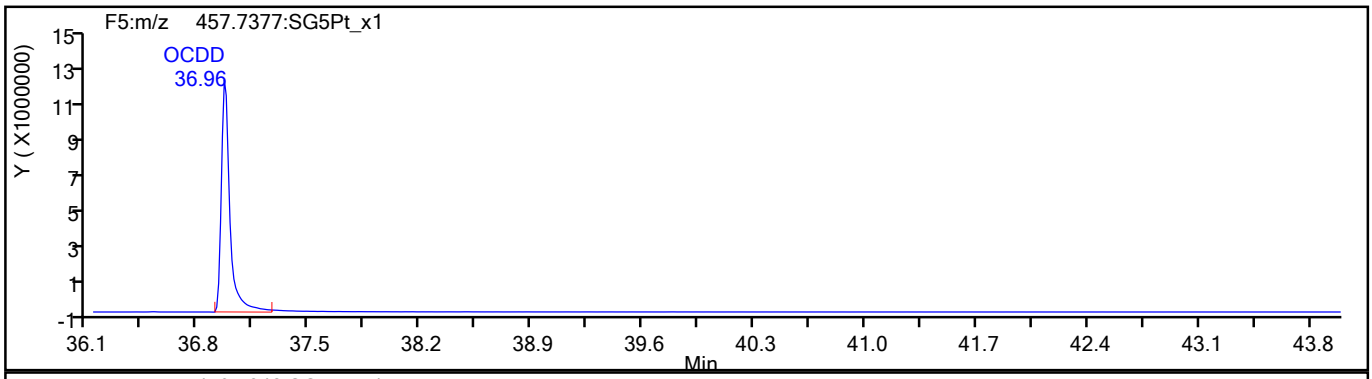

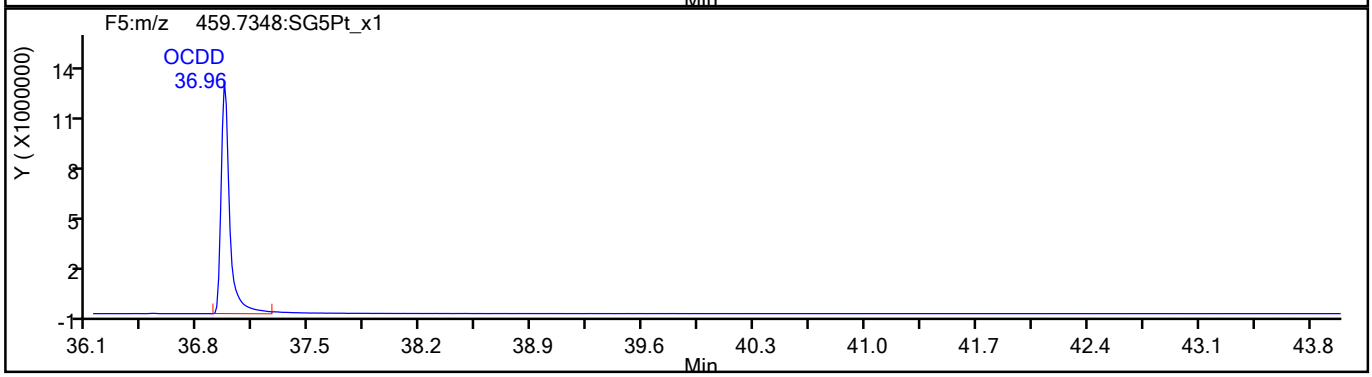

OCDD Standards

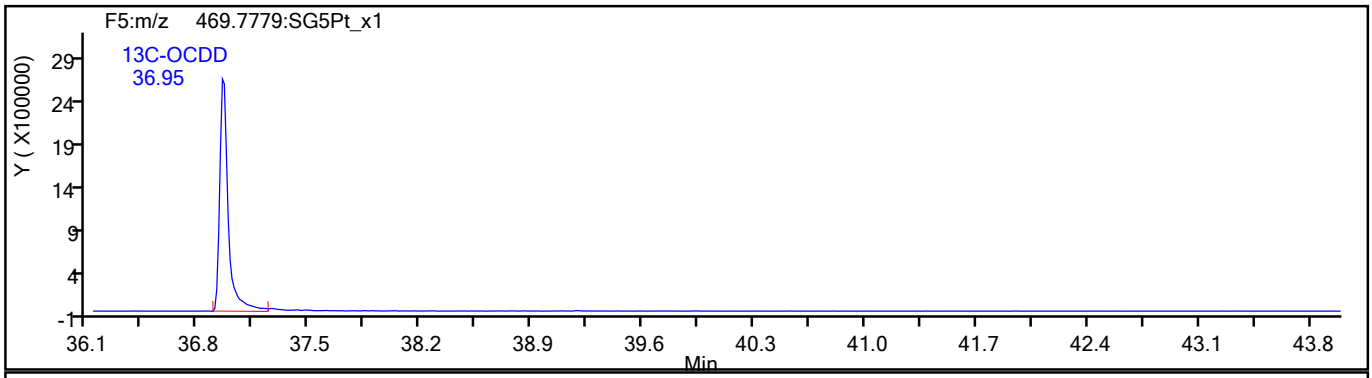

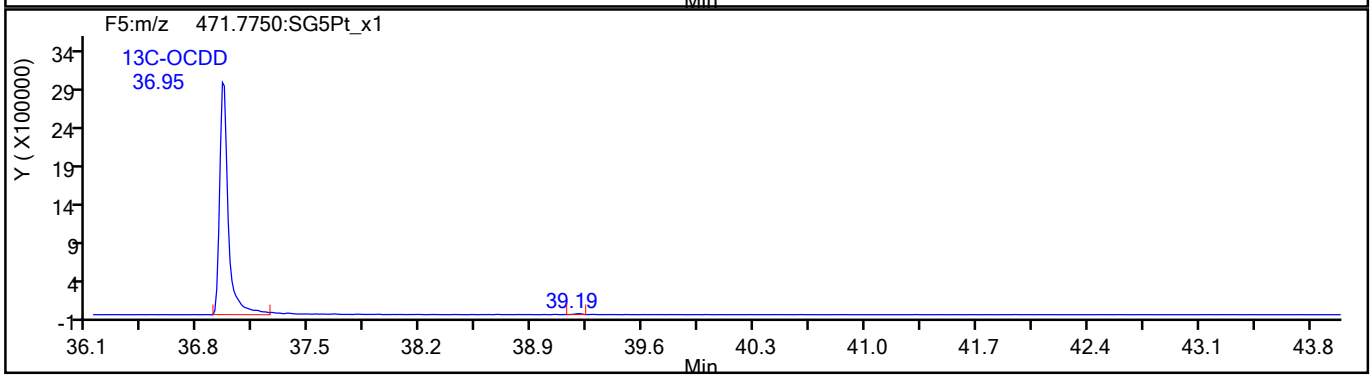

779697

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

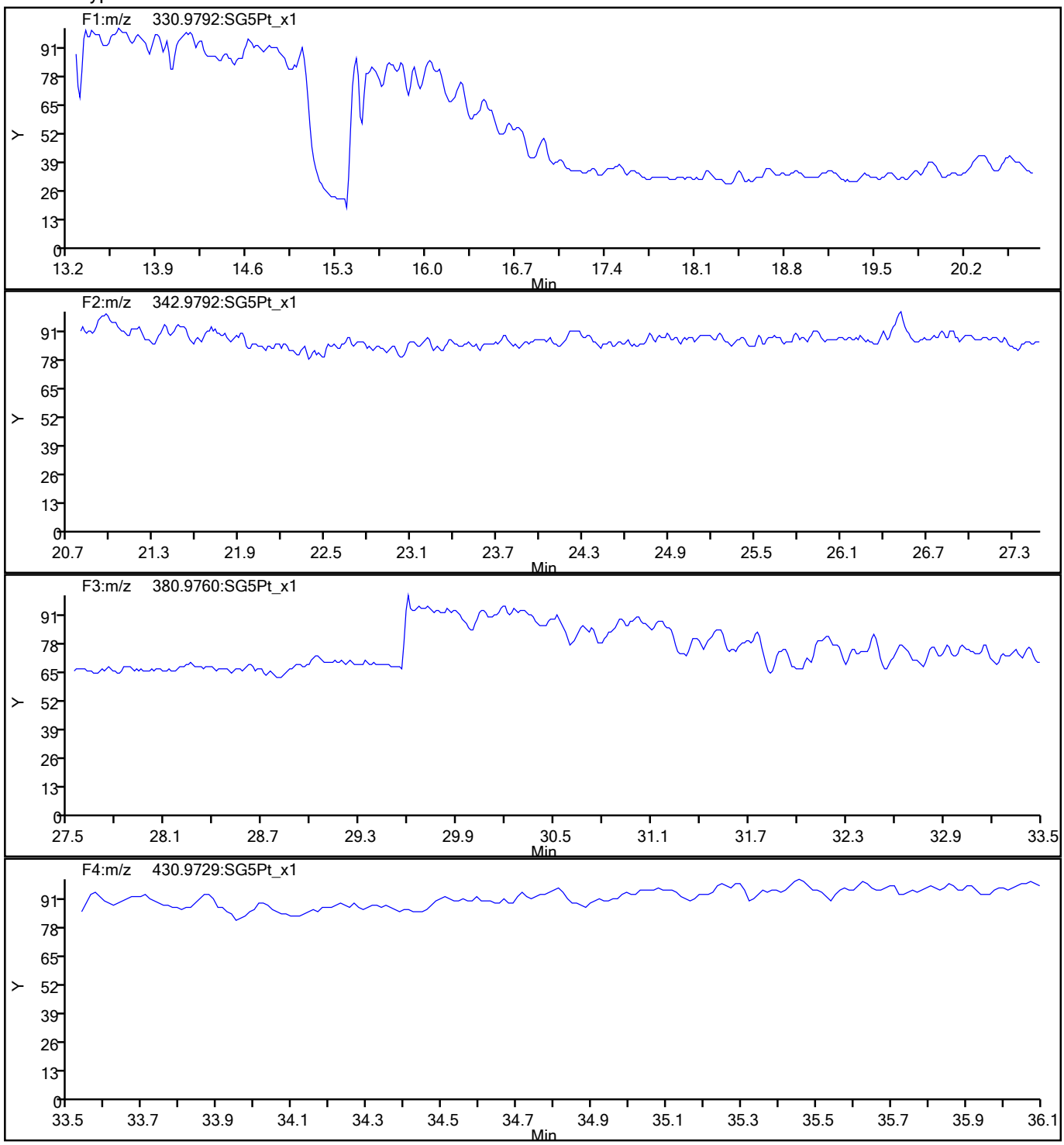

779698

Report Date: 18-Aug-2021 09:45:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_31.d		
Injection Date:	14-Aug-2021 16:01:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	516846	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

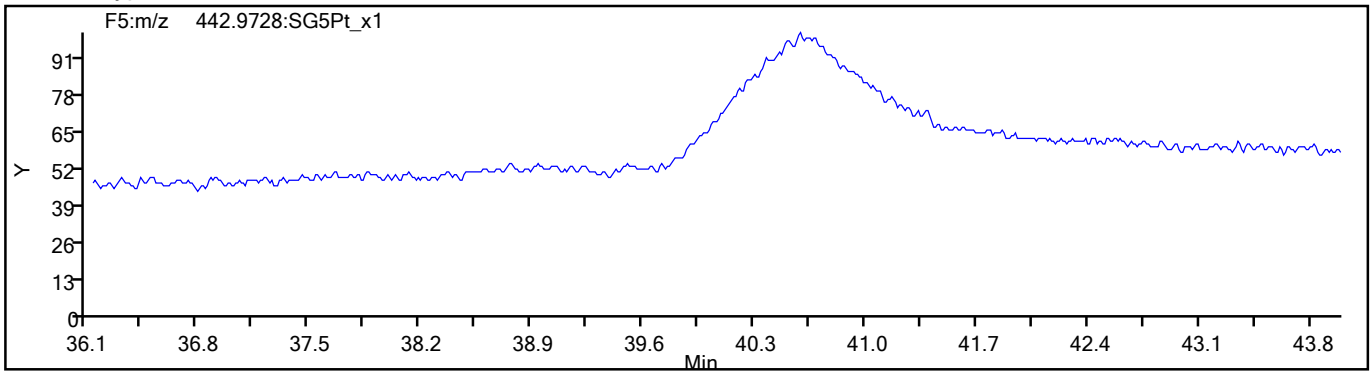

779699

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (0-2) DL
Lab Sample ID: 320-76788-13 DL
Matrix: Solid
Lab File ID: 17AU21A10D5_20.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:30
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.13(g)
Date Analyzed: 08/18/2021 05:59
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 49.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517241
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	27000	G E B	67	67
41903-57-5	Total TCDD	30000	G B	67	67
30402-14-3	Total TCDF	160000	G B	230	230

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		25-164
89059-46-1	13C-2,3,7,8-TCDF	60		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	110		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Sample Type: Client
Inject. Date: 18-Aug-2021 05:59:40 ALS Bottle#: 21 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76788-A-13-A X5 320-76788-A-13-A X5
Misc. Info.: 17AU21A10D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:58:27 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1606

First Level Reviewer: arghestanis Date: 18-Aug-2021 09:53:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.915	11859911	0.79	6.2E+05	20.0	20.0				a
D 13C-2,3,7,8-TCDF	17.386	11492045	0.80	1.6249	11.9	11.9	0.3139	0.3139	59.63	
2,3,7,8-TCDF	17.401	2785491342	0.79	1.0239	4734.5	4734.5	11.6	11.6		E
A Non-2,3,7,8-sub-TCDF	17.031	2094160424	0.78	1.0239	3559.4	3559.4	11.6	2257.2		a
S Total TCDF					8293.9	8293.9	11.6	11.6		
D 13C-2,3,7,8-TCDD	18.142	5749344	0.83	0.8993	10.8	10.8	0.2758	0.2758	53.90	a
2,3,7,8-TCDD	18.157	497901356	0.79	1.2541	1381.1	1381.1	3.408	3.408		Ea
$ 37Cl4-2,3,7,8-TCDD	18.157	5802404		1.1071	8.838	8.838	0.2070	0.2070	110	
A Non-2,3,7,8-sub-TCDD	17.477	50864756	0.71	1.2541	141.1	141.1	3.408	141.1		
S Total TCDD					1522.2	1522.2	3.408	3.408		
D 13C-1,2,3,7,8-PeCDF	22.435	9507871	1.65	1.2101	13.3	13.3	0.1492	0.1492	66.25	
1,2,3,7,8-PeCDF	22.462	55564996	1.58	1.0611	110.1	110.1	0.8549	0.8549		
D 13C-2,3,4,7,8-PeCDF	23.758	10855506	1.57	1.2395	14.8	14.8	0.1456	0.1456	73.85	
2,3,4,7,8-PeCDF	23.785	39823206	1.60	1.0184	72.0	72.0	0.7791	0.7791		
A F1 PeCDFs	20.077	389687	1.55	1.0398	1.086	0.7362	0.0159	0.6095		RQ
A Non-2,3,7,8-sub-PeCDF	23.221	47314382	1.60	1.0398	89.4	89.4	0.8141	41.7		
S Total PeCDF					272.7	272.3	0.8170	0.8170		RQ
D 13C-1,2,3,7,8-PeCDD	24.467	6741969	1.66	0.7612	14.9	14.9	0.0719	0.0719	74.68	
1,2,3,7,8-PeCDD	24.494	4482103	1.60	1.0484	12.7	12.7	0.1894	0.1894		
A Non-2,3,7,8-sub-PeCDD	23.301	511839	1.55	1.0484	3.977	1.448	0.1894	0.4726		RQ
S Total PeCDD					16.7	14.1	0.1894	0.1894		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	9524834	0.53	1.0837	13.3	13.3	0.0782	0.0782	66.26	
1,2,3,4,7,8-HxCDF	30.529	67034158	1.20	1.0851	129.7	129.7	0.5726	0.5726		
D 13C-1,2,3,6,7,8-HxCDF	30.689	8756372	0.51	1.1279	11.7	11.7	0.0751	0.0751	58.52	
1,2,3,6,7,8-HxCDF	30.716	17717714	1.21	1.1260	35.9	35.9	0.5521	0.5521		
D 13C-2,3,4,6,7,8-HxCDF	31.514	8184358	0.53	1.0637	11.6	11.6	0.0796	0.0796	58.00	
2,3,4,6,7,8-HxCDF	31.528	3043199	1.19	1.1675	6.369	6.369	0.4728	0.4728		
D 13C-1,2,3,7,8,9-HxCDF	32.313	7483628	0.53	0.9676	11.7	11.7	0.0875	0.0875	58.31	
1,2,3,7,8,9-HxCDF	32.406	4332753	1.22	1.1664	9.928	9.928	0.4590	0.4590		
A Non-2,3,7,8-sub-HxCDF	30.163	6493354	1.23	1.1363	13.5	13.5	0.5104	9.555		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					195.4	195.4	0.5141	0.5141		
* 13C-1,2,3,7,8,9-HxCDD	32.140	13265521	1.26	6.2E+05	20.0	20.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	6285364	1.26	0.7334	12.9	12.9	0.1044	0.1044	64.60	
1,2,3,4,7,8-HxCDD	31.714	68570	1.33	1.0640	0.2051	0.2051	0.0222	0.0222		
D 13C-1,2,3,6,7,8-HxCDD	31.807	7029188	1.28	0.8802	12.0	12.0	0.0870	0.0870	60.20	
1,2,3,6,7,8-HxCDD	31.820	204560	1.14	1.0001	0.5820	0.5820	0.0235	0.0235		
1,2,3,7,8,9-HxCDD	32.140	157841	1.37	1.1325	0.4187	0.4187	0.0208	0.0208		
A Non-2,3,7,8-sub-HxCDD	30.836	1458864	1.24	1.0655	4.155	4.113	0.0221	1.872		RQ
S Total HxCDD					5.360	5.319	0.0222	0.0222		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	5617677	0.46	0.7730	11.0	11.0	0.1528	0.1528	54.78	
1,2,3,4,6,7,8-HpCDF	33.766	16935174	1.06	1.4413	41.8	41.8	0.3407	0.3407		
D 13C-1,2,3,4,7,8,9-HpCDF	34.835	5817520	0.43	0.7008	12.5	12.5	0.1685	0.1685	62.58	
1,2,3,4,7,8,9-HpCDF	34.835	4703731	1.07	1.3174	12.3	12.3	0.4194	0.4194		
A Non-2,3,7,8-sub-HpCDF	34.295	4032684	1.08	1.3793	10.2	10.2	0.3770	10.2		
S Total HpCDF					64.3	64.3	0.3801	0.3801		
D 13C-1,2,3,4,6,7,8-HpCDD	34.544	4834650	1.01	0.6472	11.3	11.3	0.0996	0.0996	56.31	
1,2,3,4,6,7,8-HpCDD	34.556	2403762	1.04	1.0943	9.087	9.087	0.1637	0.1637		
A Non-2,3,7,8-sub-HpCDD	34.271	3641255	1.02	1.0943	13.8	13.8	0.1637	13.8		
S Total HpCDD					22.9	22.9	0.1637	0.1637		
D 13C-OCDD	36.890	6936434	0.89	0.4472	23.4	23.4	0.0677	0.0677	58.47	
OCDF	36.986	6421581	0.88	1.4382	25.7	25.7	0.0491	0.0491		
OCDD	36.902	31899898	0.88	1.1070	166.2	166.2	0.2637	0.2637		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Sample Type: Client
Inject. Date: 18-Aug-2021 05:59:40 ALS Bottle#: 21 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76788-A-13-A X5 320-76788-A-13-A X5
Misc. Info.: 17AU21A10D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:58:27 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1606

First Level Reviewer: arghestanis Date: 18-Aug-2021 09:53:04

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.915	17.809	6		5243728	1017192	4334	10835	235		a
333.9339	17.915	17.809	6		6616183	1243579	6882	17205	181	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.386	17.310	5	0.970	5115800	1352395	8743	21857	155		
317.9389	17.386	17.310	5	0.970	6376245	1672081	14323	35807	117	0.80(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.401	17.326	5	1.001	1226736501	306777634	316904	792260	968		
305.8987	17.401	17.326	5	1.001	1558754841	393367221	398890	997225	986	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	15.995	17.031	-62	0.920	15520624	4471911	316904	792260	14		
305.8987	15.995	17.031	-62	0.920	19745244	5674551	398890	997225	14	0.79(0.65-0.89)	
303.9016	16.282	17.031	-45	0.937	30950957	5992299	316904	792260	19		
305.8987	16.282	17.031	-45	0.937	39564511	7626251	398890	997225	19	0.78(0.65-0.89)	
303.9016	16.509	17.031	-31	0.950	34475718	9280561	316904	792260	29		
305.8987	16.509	17.031	-31	0.950	44030599	11825495	398890	997225	30	0.78(0.65-0.89)	
303.9016	16.736	17.031	-18	0.963	51436102	13424421	316904	792260	42		
305.8987	16.736	17.031	-18	0.963	65479245	17316471	398890	997225	43	0.79(0.65-0.89)	
303.9016	17.008	17.031	-1	0.978	584414549	144019089	316904	792260	454		
305.8987	17.008	17.031	-1	0.978	743597660	183837752	398890	997225	461	0.79(0.65-0.89)	
303.9016	17.250	17.031	13	0.992	17868970	4064871	316904	792260	13		
305.8987	17.250	17.031	13	0.992	23249696	5072139	398890	997225	13	0.77(0.65-0.89)	
303.9016	17.825	17.031	48	1.025	87857652	20831269	316904	792260	66		
305.8987	17.825	17.031	48	1.025	111776399	26872998	398890	997225	67	0.79(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.127	17.031	66	1.043	14515935	2259900	316904	792260	7		
305.8987	18.127	17.031	66	1.043	18912819	2879850	398890	997225	7	0.77(0.65-0.89)	
303.9016	19.246	17.031	133	1.107	83573342	19372256	316904	792260	61		a
305.8987	19.246	17.031	133	1.107	107190402	24623550	398890	997225	62	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	18.142	18.006	8	1.013	2602230	692790	4334	10835	160		a
333.9339	18.142	18.006	8	1.013	3147114	824497	6882	17205	120	0.83(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	18.157	18.021	8	1.001	219123504	59202327	77209	193022	767		a
321.8936	18.157	18.021	8	1.001	278777852	73659602	52496	131240	1403	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.157	18.021	8	1.013	5802404	1553495	10365	25912	150		
A Non-2,3,7,8-sub-TCDD											
319.8965	18.459	17.477	59	1.018	21139358	4828744	77209	193022	63		
321.8936	18.459	17.477	59	1.018	29725398	6284914	52496	131240	120	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.435	22.299	8	1.252	5915525	1024548	4413	11032	232		
353.8970	22.435	22.299	8	1.252	3592346	619668	3749	9372	165	1.65(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.462	22.326	8	1.001	34021003	5321926	18297	45742	291		
341.8567	22.462	22.326	8	1.001	21543993	3382560	11533	28832	293	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.758	23.635	7	1.326	6623769	1135694	4413	11032	257		
353.8970	23.758	23.635	7	1.326	4231737	744062	3749	9372	198	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.785	23.662	7	1.001	24496406	4291290	18297	45742	235		
341.8567	23.785	23.662	7	1.001	15326800	2689496	11533	28832	233	1.60(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	19.276	20.077	-48	0.859	225813	28754	251	627	115		
	Empc Correction				40775	5221	251	627	21		
341.8567	19.276	20.077	-48	0.859	26307	3369	331	827	10	8.58(1.32-1.78)	
339.8597	19.548	20.077	-32	0.871	194649	45166	251	627	180		
341.8567	19.563	20.077	-31	0.872	127956	28756	331	827	87	1.52(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.099	23.221	-127	0.940	13531839	2682481	18297	45742	147		
341.8567	21.099	23.221	-127	0.940	8541251	1699855	11533	28832	147	1.58(1.32-1.78)	
339.8597	21.944	23.221	-76	0.978	1427432	153989	18297	45742	8		
341.8567	21.917	23.221	-78	0.977	814835	99359	11533	28832	9	1.75(1.32-1.78)	
339.8597	22.735	23.221	-29	1.013	437980	89785	18297	45742	5		
341.8567	22.722	23.221	-30	1.013	299941	59820	11533	28832	5	1.46(1.32-1.78)	
339.8597	22.967	23.221	-15	1.024	8662114	1626878	18297	45742	89		
341.8567	22.967	23.221	-15	1.024	5434288	1031702	11533	28832	89	1.59(1.32-1.78)	
339.8597	24.112	23.221	53	1.075	5064259	758160	18297	45742	41		
341.8567	24.112	23.221	53	1.075	3100443	463115	11533	28832	40	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.467	24.358	7	1.366	4208810	699013	1465	3662	477		
369.8919	24.467	24.358	7	1.366	2533159	406131	1010	2525	402	1.66(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.494	24.385	7	1.001	2757068	451761	2334	5835	194		
357.8516	24.494	24.385	7	1.001	1725035	283876	2056	5140	138	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.276	23.301	-121	0.870	55494	9561	2334	5835	4		
357.8516	21.262	23.301	-122	0.869	828684	166561	2056	5140	81	0.07(1.32-1.78)	
	Empc Correction				35802	6168	2056	5140	3		
355.8546	22.490	23.301	-49	0.919	55672	9939	2334	5835	4		
357.8516	22.490	23.301	-49	0.919	80036	15145	2056	5140	7	0.70(1.32-1.78)	
	Empc Correction				35917	6412	2056	5140	3		
355.8546	22.722	23.301	-35	0.929	95364	21604	2334	5835	9		
357.8516	22.708	23.301	-36	0.928	71676	13961	2056	5140	7	1.33(1.32-1.78)	
355.8546	24.972	23.301	100	1.021	155135	14825	2334	5835	6		
	Empc Correction				98418	11606	2334	5835	5		
357.8516	24.999	23.301	102	1.022	63496	7488	2056	5140	4	2.44(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.449	4	0.949	3281557	631973	2637	6592	240		
385.8610	30.516	30.449	4	0.949	6243277	1192246	3313	8282	360	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.463	4	1.000	36565040	7150172	12270	30675	583		
375.8178	30.529	30.463	4	1.000	30469118	5913605	10400	26000	569	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.636	3	0.955	2946553	620287	2637	6592	235		
385.8610	30.689	30.636	3	0.955	5809819	1203070	3313	8282	363	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.716	30.649	4	1.001	9694011	1926622	12270	30675	157		
375.8178	30.716	30.649	4	1.001	8023703	1603814	10400	26000	154	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.475	2	0.981	2819763	693065	2637	6592	263		
385.8610	31.514	31.475	2	0.981	5364595	1360294	3313	8282	411	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528	31.488	2	1.000	1654320	274190	12270	30675	22		
375.8178	31.528	31.488	2	1.000	1388879	231457	10400	26000	22	1.19(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.286	2	1.005	2606127	727107	2637	6592	276		
385.8610	32.313	32.286	2	1.005	4877501	1389986	3313	8282	420	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.406	32.300	6	1.003	2384668	592069	12270	30675	48		
375.8178	32.406	32.300	6	1.003	1948085	500300	10400	26000	48	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	28.413	30.163	-105	0.931	2540855	369042	12270	30675	30		
375.8178	28.413	30.163	-105	0.931	2066412	315462	10400	26000	30	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	29.718	30.163	-27	0.974	1042369	153528	12270	30675	13		
375.8178	29.704	30.163	-28	0.973	843718	118255	10400	26000	11	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.100	2		7404648	1981690	3005	7512	659		
403.8529	32.127	32.100	2		5860873	1531026	2376	5940	644	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.661	2	0.986	3505509	1025524	3005	7512	341		
403.8529	31.701	31.661	2	0.986	2779855	814319	2376	5940	343	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.674	2	1.000	39078	10636	402	1005	26		
391.8127	31.714	31.674	2	1.000	29492	8363	466	1165	18	1.33(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.767	2	0.990	3948141	1041061	3005	7512	346		
403.8529	31.807	31.767	2	0.990	3081047	805042	2376	5940	339	1.28(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.820	31.781	2	1.000	109027	31335	402	1005	78		
391.8127	31.820	31.781	2	1.000	95533	21014	466	1165	45	1.14(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.113	2	1.014	91123	18814	402	1005	47		
391.8127	32.140	32.113	2	1.014	66718	15038	466	1165	32	1.37(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.571	30.836	-76	0.930	345491	43552	402	1005	108		
391.8127	29.558	30.836	-77	0.929	301555	39384	466	1165	85	1.15(1.05-1.43)	
389.8157	30.583	30.836	-15	0.961	61391	12538	402	1005	31		
391.8127	30.569	30.836	-16	0.961	43840	7951	466	1165	17	1.40(1.05-1.43)	
389.8157	30.955	30.836	7	0.973	366762	72995	402	1005	182		
391.8127	30.955	30.836	7	0.973	297289	56612	466	1165	121	1.23(1.05-1.43)	
389.8157	31.155	30.836	19	0.979	23547	5479	402	1005	14		
391.8127	31.128	30.836	18	0.979	33717	6638	466	1165	14	0.70(1.05-1.43)	
	Empc Correction				18989	4418	466	1165	9		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.730	1	1.050	1759330	577393	3067	7667	188		
419.8220	33.754	33.730	1	1.050	3858347	1274300	5229	13072	244	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.742	1	1.000	8715101	2905099	9808	24520	296		
409.7789	33.766	33.742	1	1.000	8220073	2697651	8380	20950	322	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.835	34.811	1	1.084	1746947	480537	3067	7667	157		
419.8220	34.823	34.811	1	1.083	4070573	1165427	5229	13072	223	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.835	34.823	1	1.000	2432634	708138	9808	24520	72		
409.7789	34.835	34.823	1	1.000	2271097	664236	8380	20950	79	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.058	34.295	-14	1.009	2096054	649161	9808	24520	66		
409.7789	34.058	34.295	-14	1.009	1936630	621908	8380	20950	74	1.08(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.544	34.520	1	1.075	2424380	759296	2063	5157	368		
437.8140	34.544	34.520	1	1.075	2410270	729138	2467	6167	296	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.556	34.532	1	1.000	1224935	365563	2376	5940	154		
425.7737	34.556	34.532	1	1.000	1178827	344721	2956	7390	117	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.997	34.271	-16	0.984	1838656	587351	2376	5940	247		
425.7737	33.997	34.271	-16	0.984	1802599	569055	2956	7390	193	1.02(0.88-1.20)	
13C-OCDD											
469.7779	36.890	36.866	1	1.148	3258443	812597	847	2117	959		
471.7750	36.890	36.866	1	1.148	3677991	934600	1279	3197	731	0.89(0.76-1.02)	
OCDF											
441.7428	36.986	36.974	1	1.003	3002519	753256	652	1630	1155		
443.7399	36.986	36.974	1	1.003	3419062	867729	583	1457	1488	0.88(0.76-1.02)	
OCDD											
457.7377	36.902	36.878	1	1.000	14976751	3806674	2321	5802	1640		
459.7348	36.902	36.878	1	1.000	16923147	4311528	2780	6950	1551	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Report Date: 26-Aug-2021 10:58:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Inject. Date: 18-Aug-2021 05:59:40 Dil. Factor: 5.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 517241 Lims Sample ID: 9

Non-2,3,7,8-sub-TCDF, RT: 17.031

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	11492045	3024476

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		20.000	11492045	3024476

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.995	15520624	4471911	19745244	5674551	59.9	0.79	
16.282	30950957	5992299	39564511	7626251	119.9	0.78	
16.509	34475718	9280561	44030599	11825495	133.4	0.78	
16.736	51436102	13424421	65479245	17316471	198.7	0.79	
17.008	584414549	144019089	743597660	183837752	2257.2	0.79	
17.250	17868970	4064871	23249696	5072139	69.9	0.77	
17.825	87857652	20831269	111776399	26872998	339.3	0.79	
18.127	14515935	2259900	18912819	2879850	56.8	0.77	
19.246	83573342	19372256	107190402	24623550	324.2	0.78	a
Signal Totals:	920613849	223716577	1173546575	285729057			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2094160424	509445634				0.78	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3559.4 = (2094160424 * 20.000) / (11492045 * 1.024)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 26-Aug-2021 10:58:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Lims ID:	320-76788-A-13-A		
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Inject. Date:	18-Aug-2021 05:59:40	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	9

Non-2,3,7,8-sub-TCDD, RT: 17.477

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	5749344	1517287

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		20.000	5749344	1517287

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.459	21139358	4828744	29725398	6284914	141.1	0.71	
Signal Totals:							
	21139358	4828744	29725398	6284914			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	50864756	11113658				0.71	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 141.088 = (50864756 * 20.000) / (5749344 * 1.254)

Report Date: 26-Aug-2021 10:58:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Lims ID:	320-76788-A-13-A		
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Inject. Date:	18-Aug-2021 05:59:40	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	9

F1 PeCDFs, RT: 20.077

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	9507871	1644216
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	10855506	1879756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		20.000	10181688	1761986

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.276	225813	28754	26307	3369	0.4763	8.58	RQ
19.276	40775	5221	26307	3369	0.1267		Empc Correction
19.548	194649	45166	127956	28756	0.6095	1.52	
Signal Totals:							
	235424	50387	154263	32125			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	574725	106045				2.73	RQ
	389687	82512					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.086 = (574725 * 20.000) / (10181688 * 1.040)

Empc Amount: 0.7362 = (389687 * 20.000) / (10181688 * 1.040)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 26-Aug-2021 10:58:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Lims ID:	320-76788-A-13-A		
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Inject. Date:	18-Aug-2021 05:59:40	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	9

Non-2,3,7,8-sub-PeCDF, RT: 23.221

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	9507871	1644216
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	10855506	1879756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		20.000	10181688	1761986

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.099	13531839	2682481	8541251	1699855	41.7	1.58	
21.944	1427432	153989	814835	99359	4.24	1.75	
22.735	437980	89785	299941	59820	1.39	1.46	
22.967	8662114	1626878	5434288	1031702	26.6	1.59	
24.112	5064259	758160	3100443	463115	15.4	1.63	
Signal Totals:							
	29123624	5311293	18190758	3353851			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	47314382	8665144				1.60	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 89.385 = (47314382 * 20.000) / (10181688 * 1.040)

Report Date: 26-Aug-2021 10:58:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Lims ID:	320-76788-A-13-A		
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Inject. Date:	18-Aug-2021 05:59:40	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	9

Non-2,3,7,8-sub-PeCDD, RT: 23.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	6741969	1105144

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		20.000	6741969	1105144

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.276	55494	9561	828684	166561	2.50	0.07	RQ
21.276	55494	9561	35802	6168	0.2583		Empc Correction
22.490	55672	9939	80036	15145	0.3840	0.70	RQ
22.490	55672	9939	35917	6412	0.2591		Empc Correction
22.722	95364	21604	71676	13961	0.4726	1.33	
24.972	155135	14825	63496	7488	0.6186	2.44	RQ
24.972	98418	11606	63496	7488	0.4581		Empc Correction
Signal Totals:							
	304948	52710	206891	34029			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1405557	259084				0.35	RQ
	511839	86739					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.977 = (1405557 * 20.000) / (6741969 * 1.048)
Empc Amount: 1.448 = (511839 * 20.000) / (6741969 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 26-Aug-2021 10:58:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Lims ID:	320-76788-A-13-A		
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Inject. Date:	18-Aug-2021 05:59:40	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	9

Non-2,3,7,8-sub-HxCDF, RT: 30.163

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	9524834	1824219
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	8756372	1823357
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	8184358	2053359
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	7483628	2117093

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		20.000	8487298	1954507

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.413	2540855	369042	2066412	315462	9.55	1.23	
29.718	1042369	153528	843718	118255	3.91	1.24	
Signal Totals:							
	3583224	522570	2910130	433717			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6493354	956287				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.466 = (6493354 * 20.000) / (8487298 * 1.136)

Report Date: 26-Aug-2021 10:58:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Lims ID:	320-76788-A-13-A		
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Inject. Date:	18-Aug-2021 05:59:40	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	9

Non-2,3,7,8-sub-HxCDD, RT: 30.836

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	6285364	1839843
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	7029188	1846103
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		20.000	6657276	1842973

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.571	345491	43552	301555	39384	1.82	1.15	
30.583	61391	12538	43840	7951	0.2967	1.40	
30.955	366762	72995	297289	56612	1.87	1.23	
31.155	23547	5479	33717	6638	0.1615	0.70	RQ
31.155	23547	5479	18989	4418	0.1199		Empc Correction
Signal Totals:							
	797191	134564	661673	108365			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1473592	245149				1.18	RQ
	1458864	242929					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.155 = (1473592 * 20.000) / (6657276 * 1.066)
Empc Amount: 4.113 = (1458864 * 20.000) / (6657276 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Lims ID:	320-76788-A-13-A		
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Inject. Date:	18-Aug-2021 05:59:40	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	9

Non-2,3,7,8-sub-HpCDF, RT: 34.295

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	5617677	1851693
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	5817520	1645964

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		20.000	5717598	1748828

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.058	2096054	649161	1936630	621908	10.2	1.08	
Signal Totals:							
	2096054	649161	1936630	621908			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4032684	1271069				1.08	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 10.227 = (4032684 * 20.000) / (5717598 * 1.379)

Report Date: 26-Aug-2021 10:58:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Lims ID:	320-76788-A-13-A		
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Inject. Date:	18-Aug-2021 05:59:40	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	9

Non-2,3,7,8-sub-HpCDD, RT: 34.271

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	4834650	1488434

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		20.000	4834650	1488434

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.997	1838656	587351	1802599	569055	13.8	1.02	
Signal Totals:							
	1838656	587351	1802599	569055			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3641255	1156406				1.02	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.765 = (3641255 * 20.000) / (4834650 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d				
Injection Date:	18-Aug-2021 05:59:40	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 17.92
Area: 5243728
Amount: 22.239108
Amount Units: pg/ul

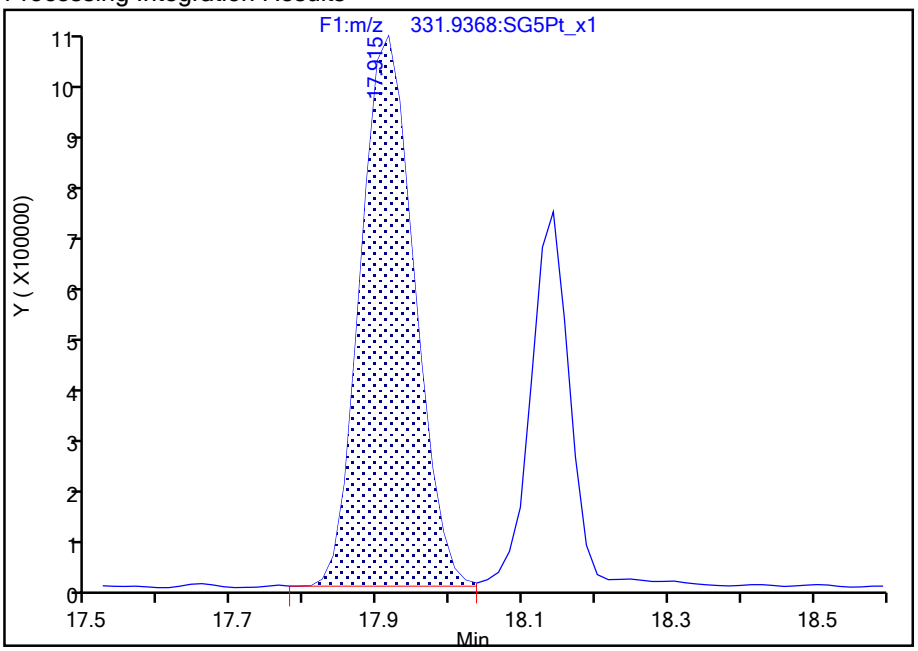

Manual Integration Results

RT: 18.14
Area: 2602230
Amount: 10.780881
Amount Units: pg/ul

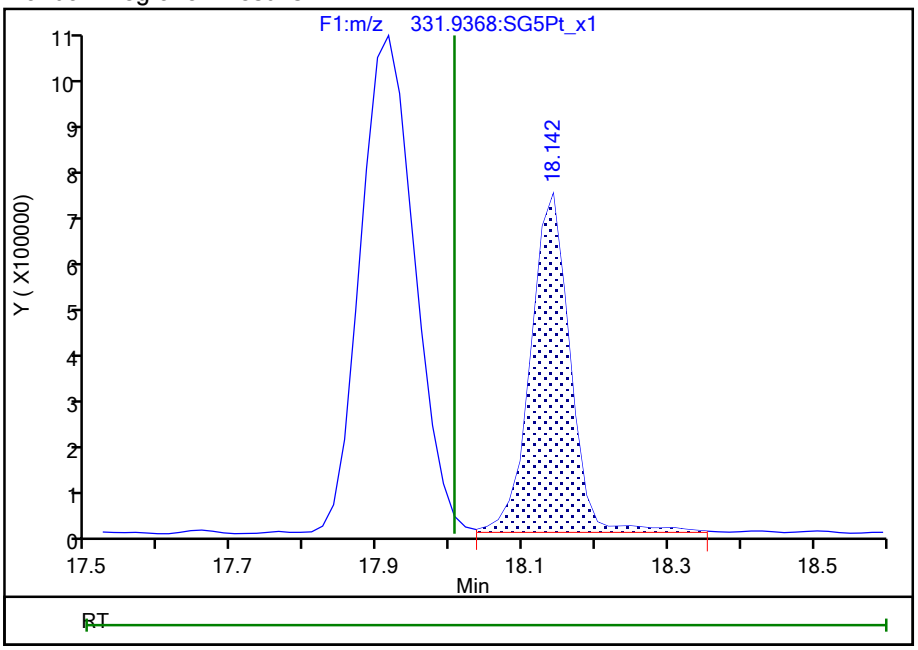

Reviewer: arghestanis, 18-Aug-2021 09:52:37

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d				
Injection Date:	18-Aug-2021 05:59:40	Instrument ID:	10D5		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:	DB	ALS Bottle#:	21	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 18.02

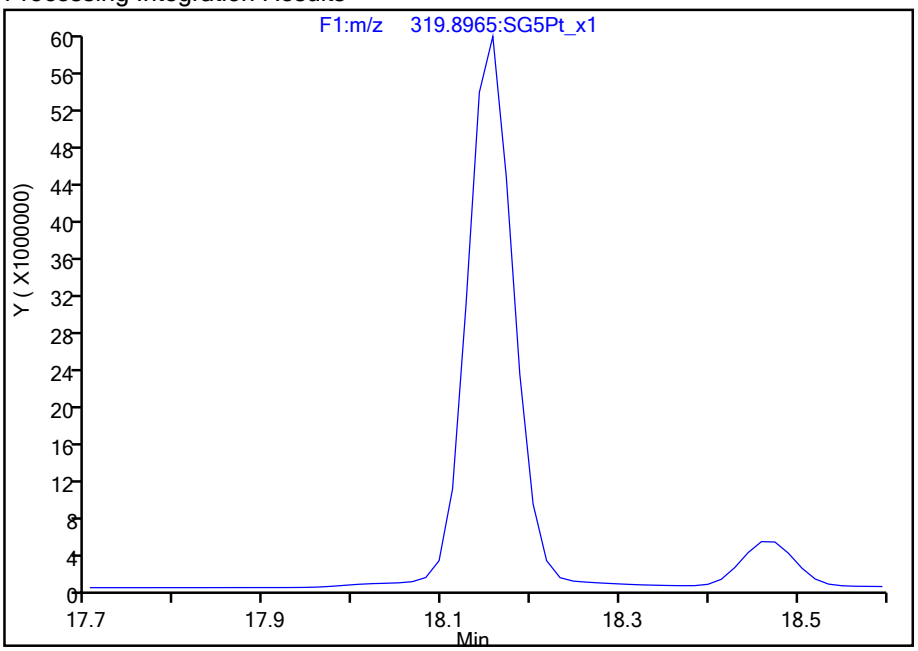

Manual Integration Results

RT: 18.16
Area: 219123504
Amount: 1381.0709
Amount Units: pg/ul

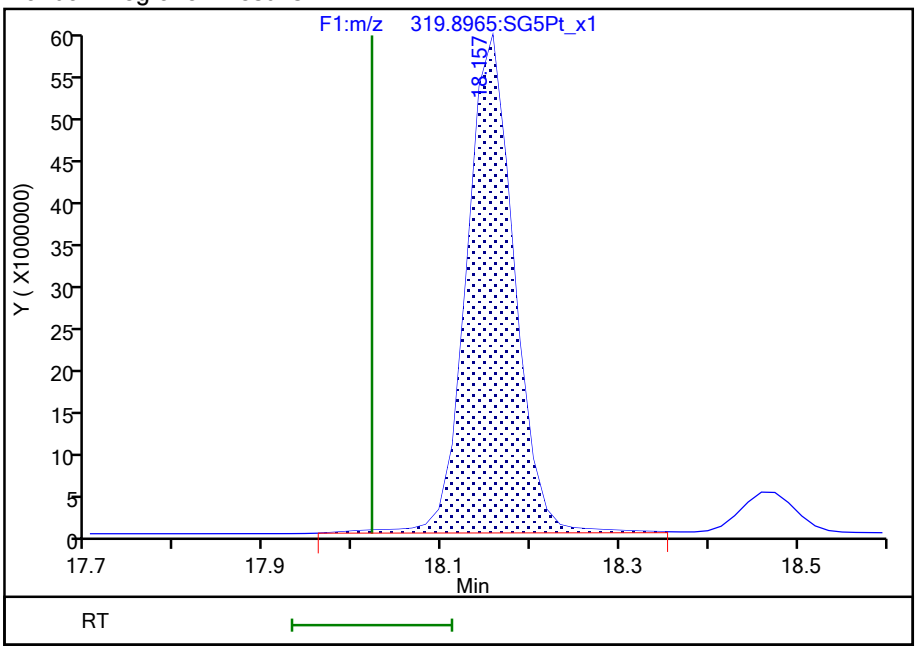

Reviewer: arghestanis, 18-Aug-2021 09:52:47
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

779718

Report Date: 26-Aug-2021 10:58:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Injection Date:	18-Aug-2021 05:59:40	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	517241	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

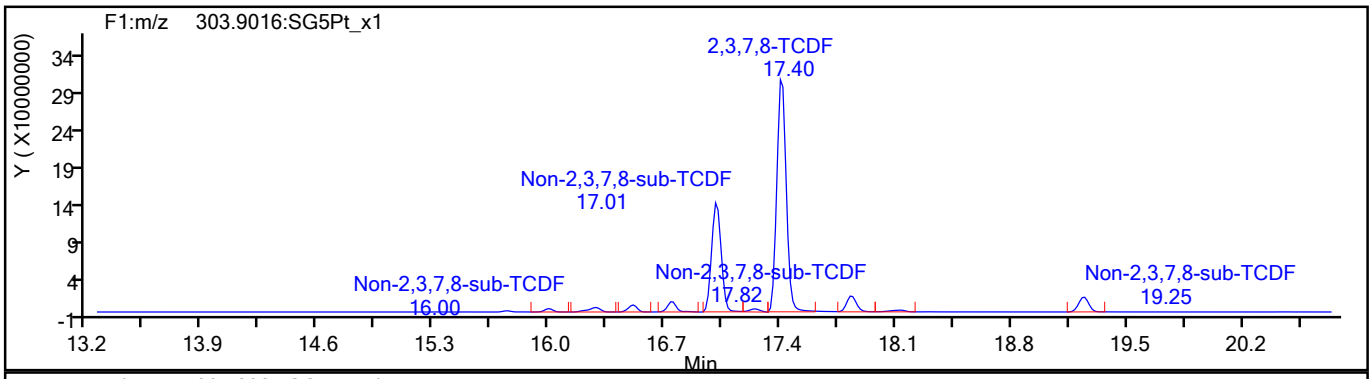

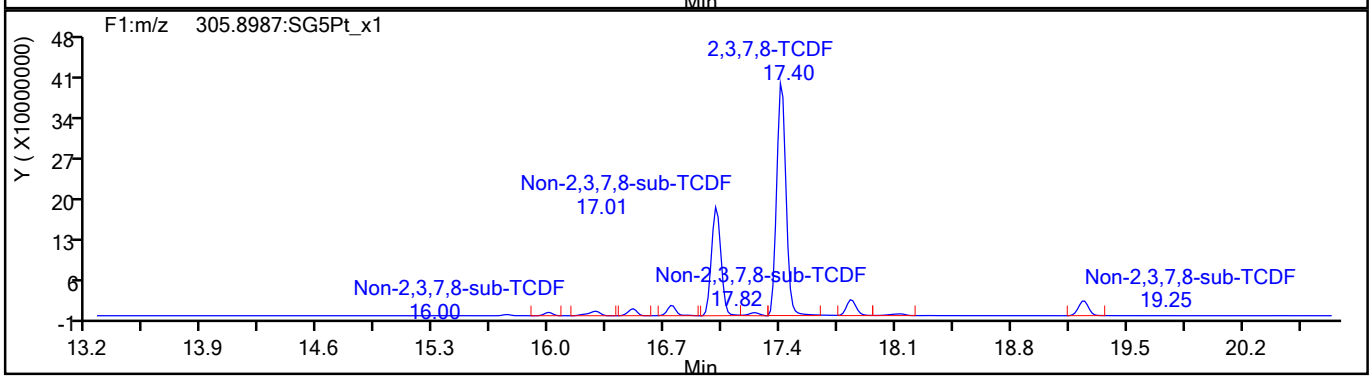

TCDF Standards

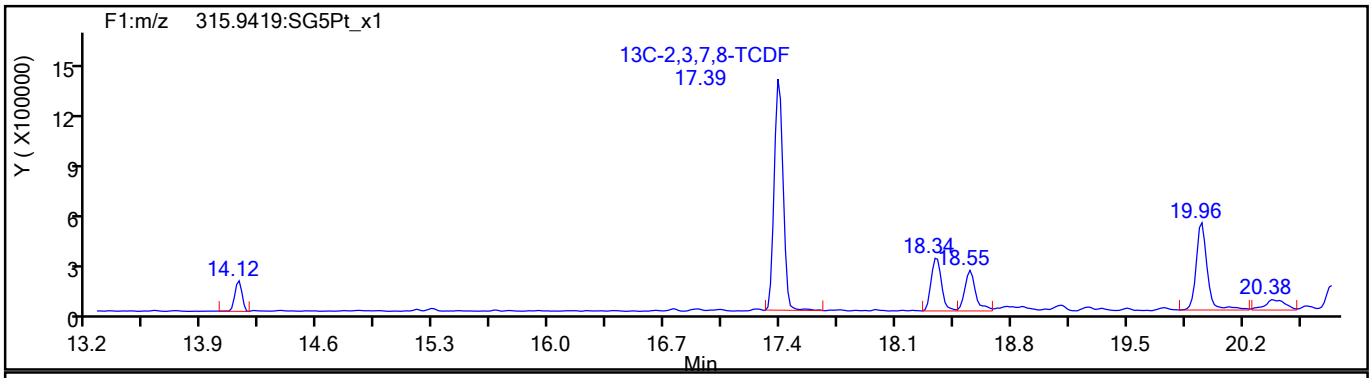

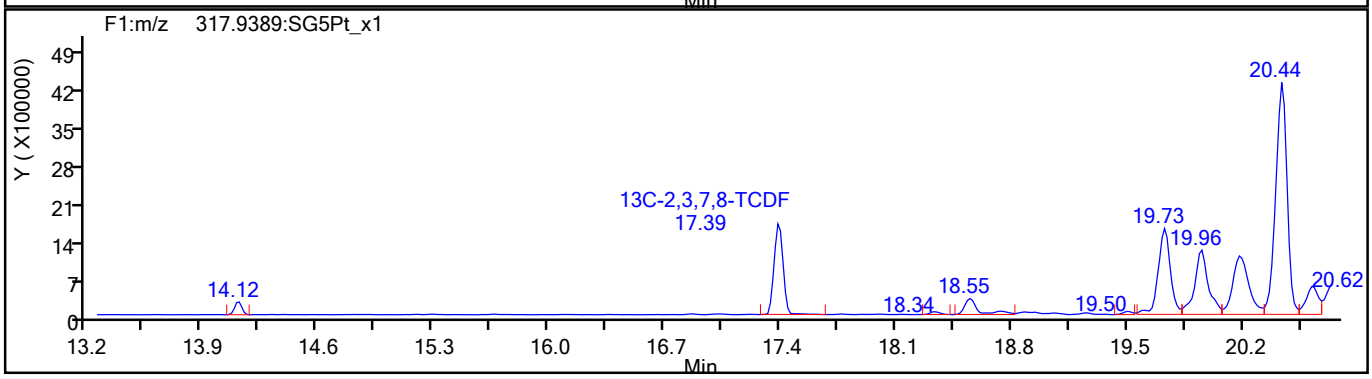

779719

Report Date: 26-Aug-2021 10:58:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Injection Date:	18-Aug-2021 05:59:40	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	517241	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

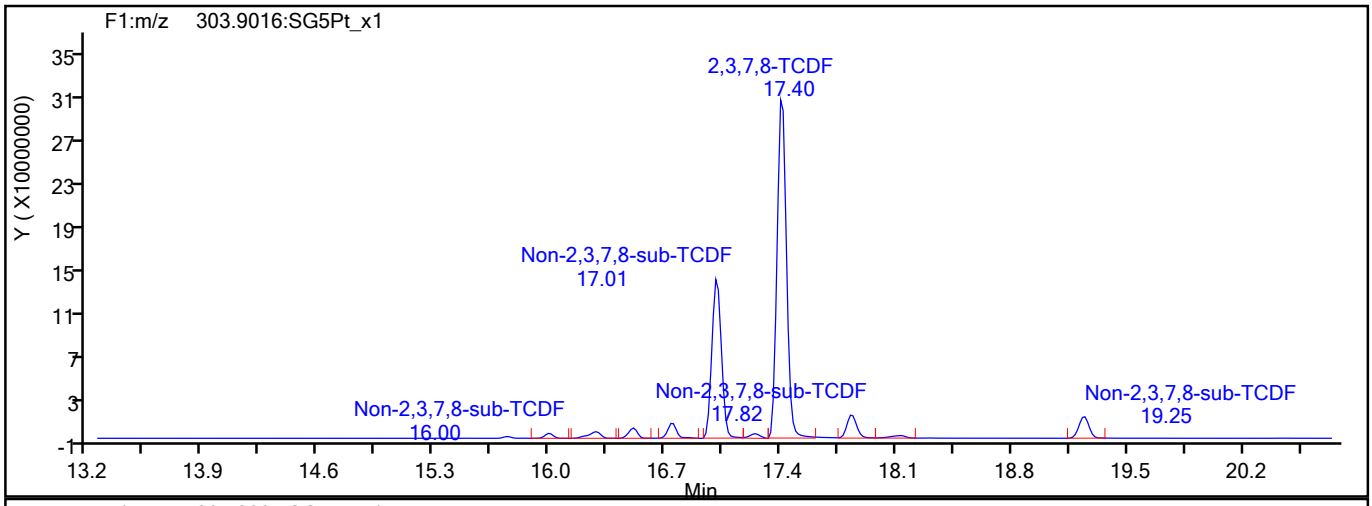

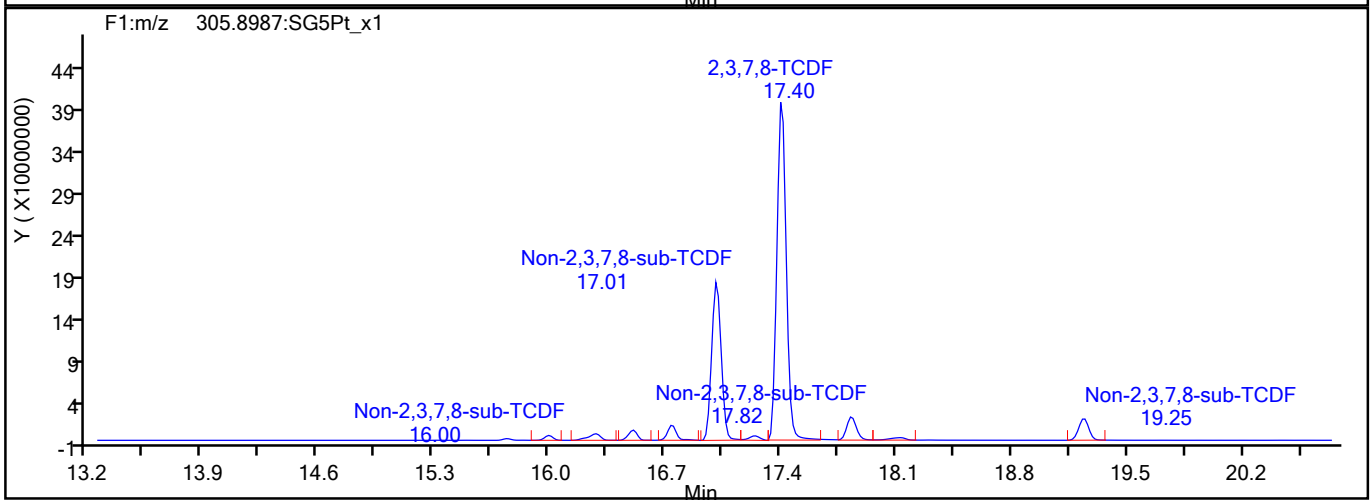

TCDF Interference Mass

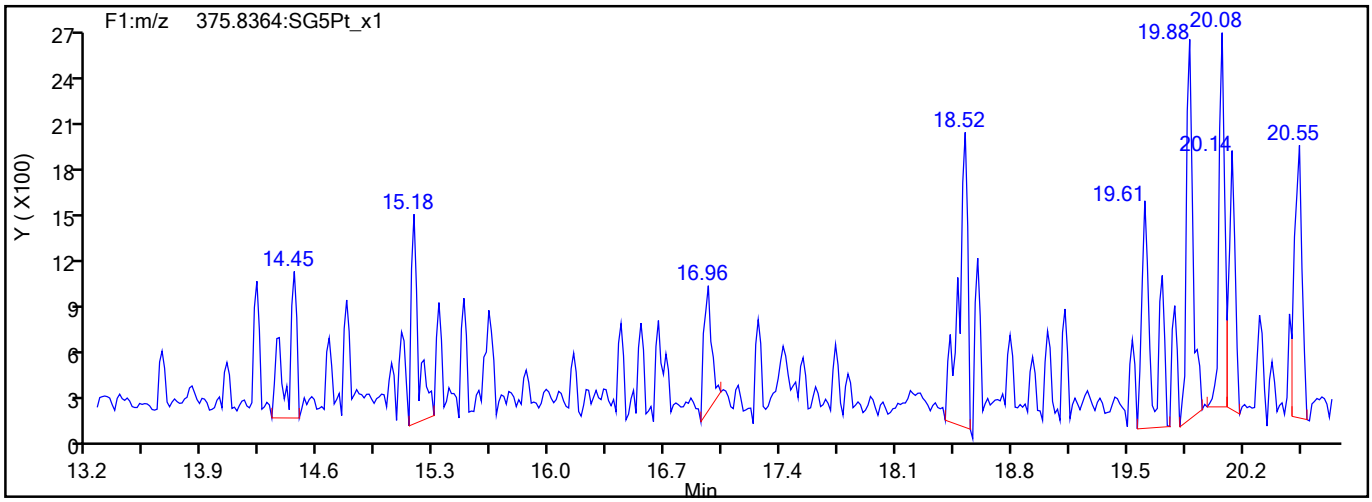

779720

Report Date: 26-Aug-2021 10:58:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Injection Date:	18-Aug-2021 05:59:40	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	517241	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

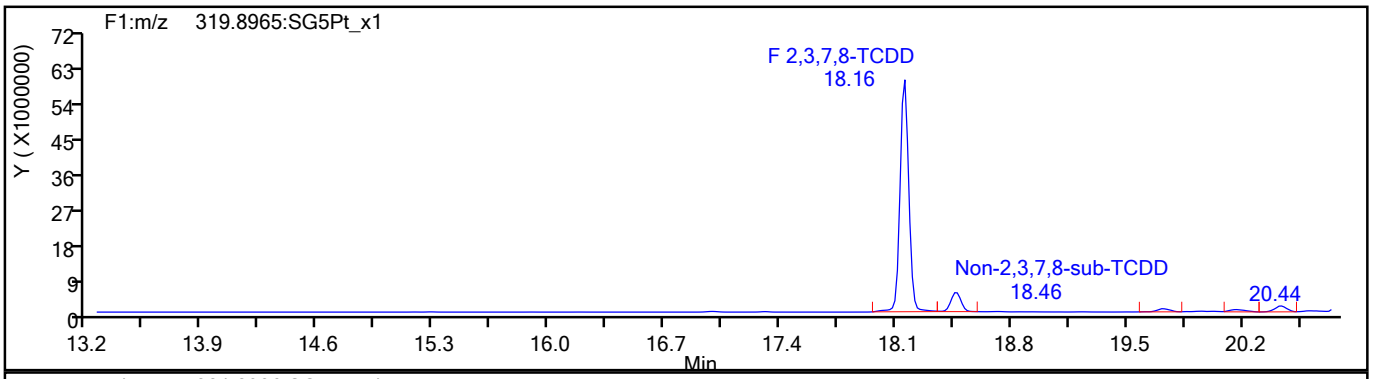

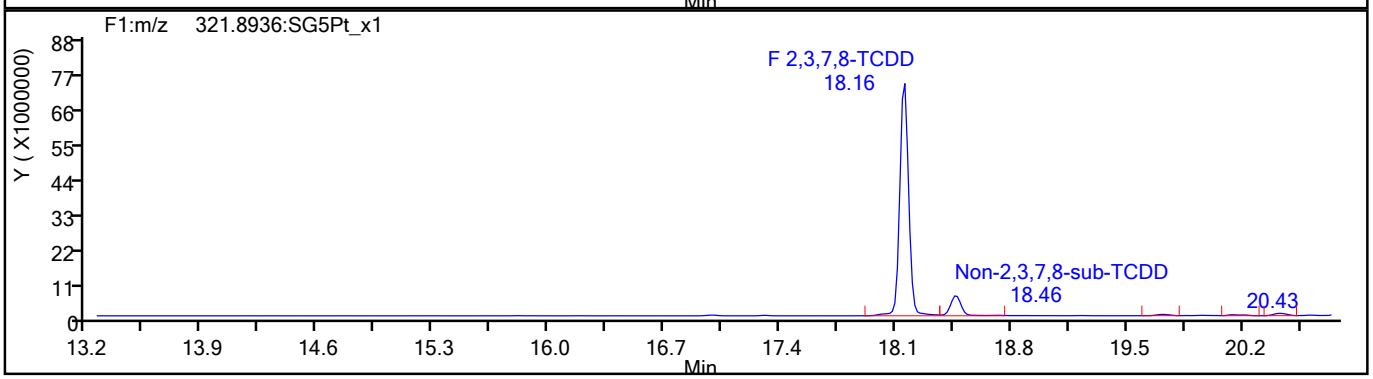

TCDD Standards

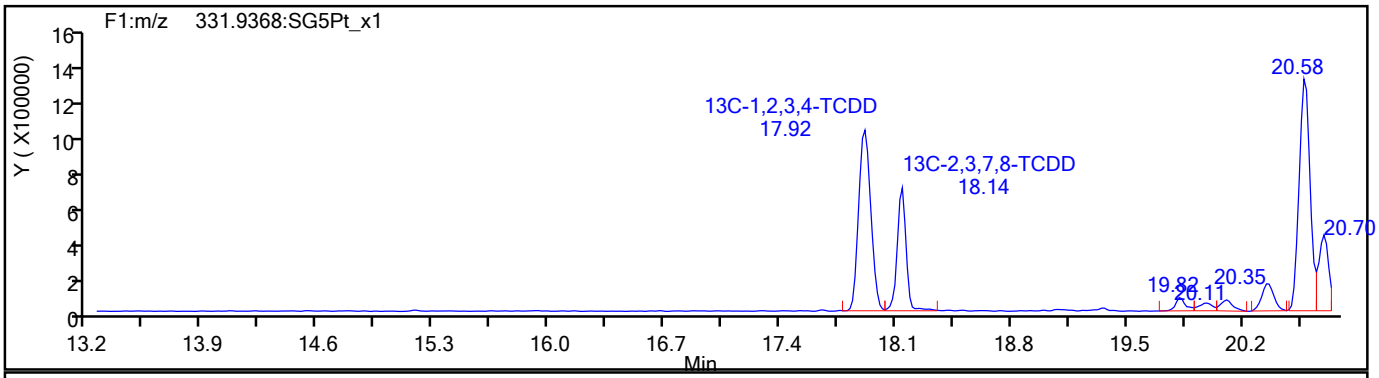

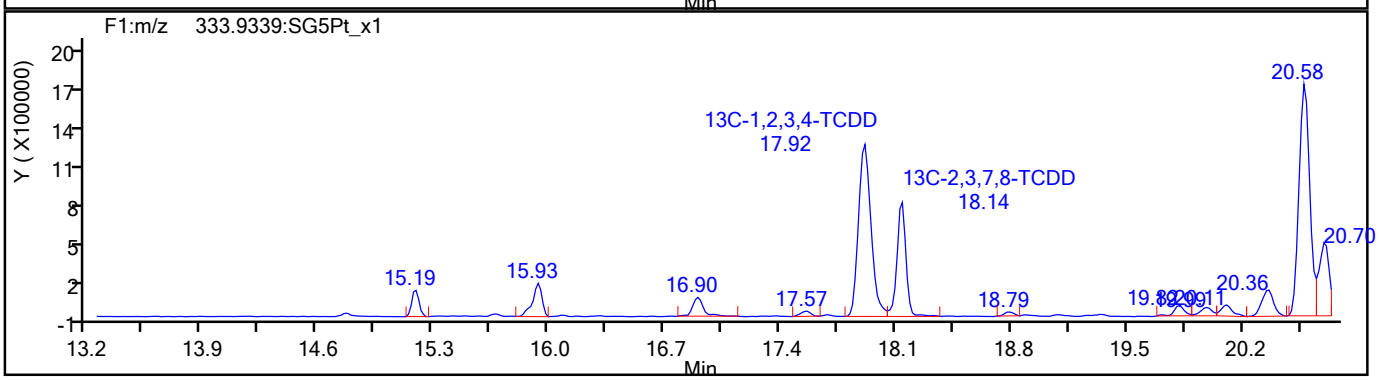

779721

Report Date: 26-Aug-2021 10:58:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Injection Date:	18-Aug-2021 05:59:40	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	517241	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

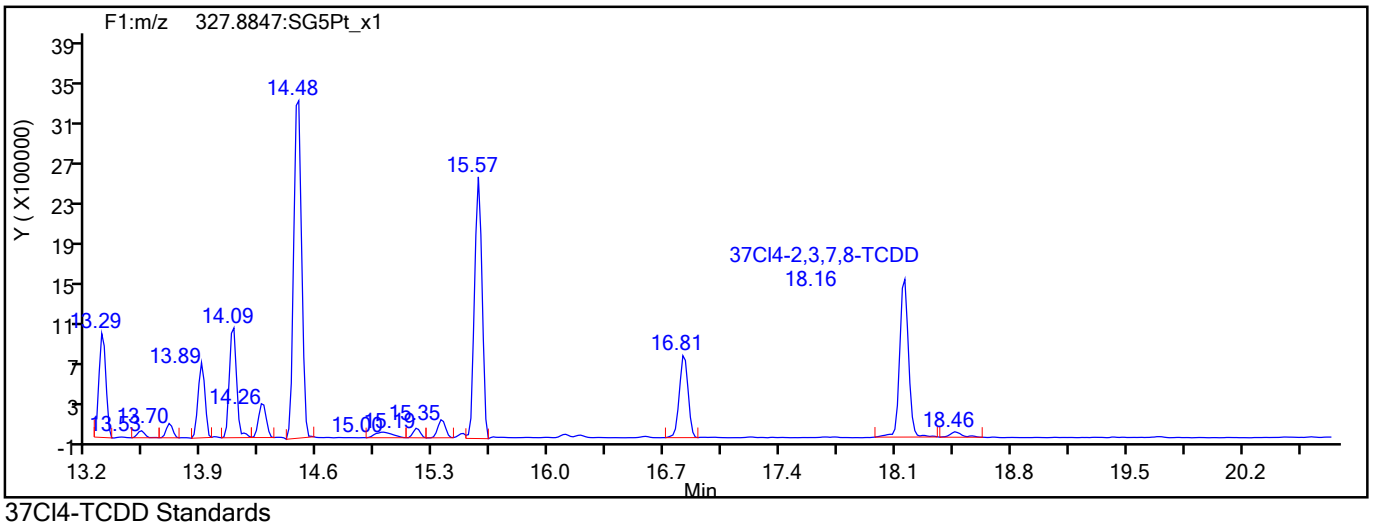

37Cl4-TCDD Standards

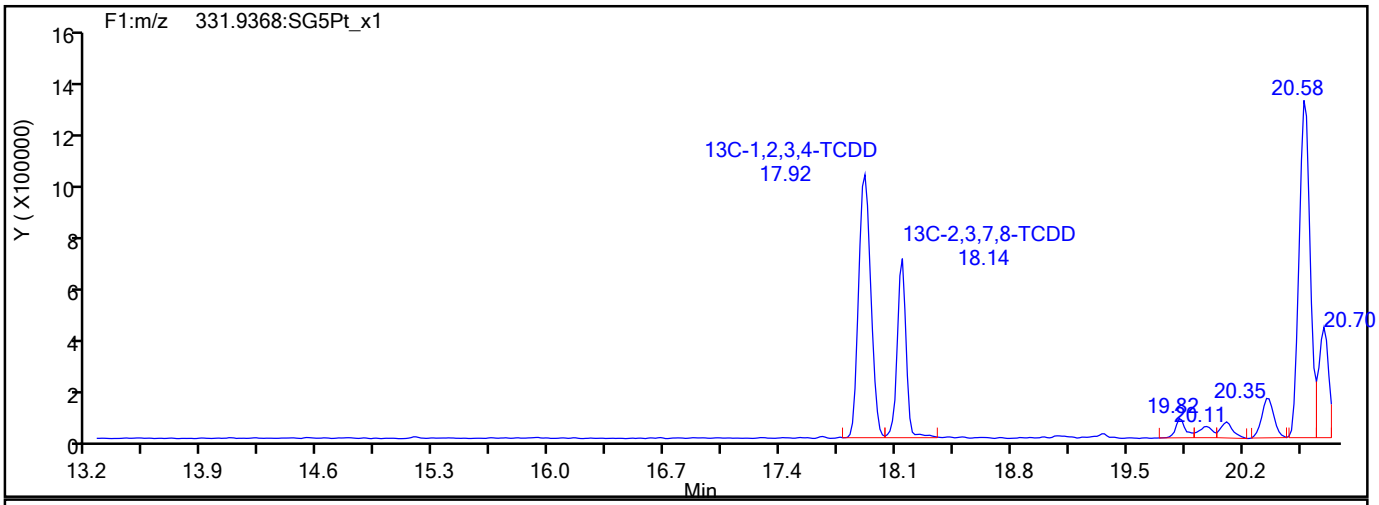

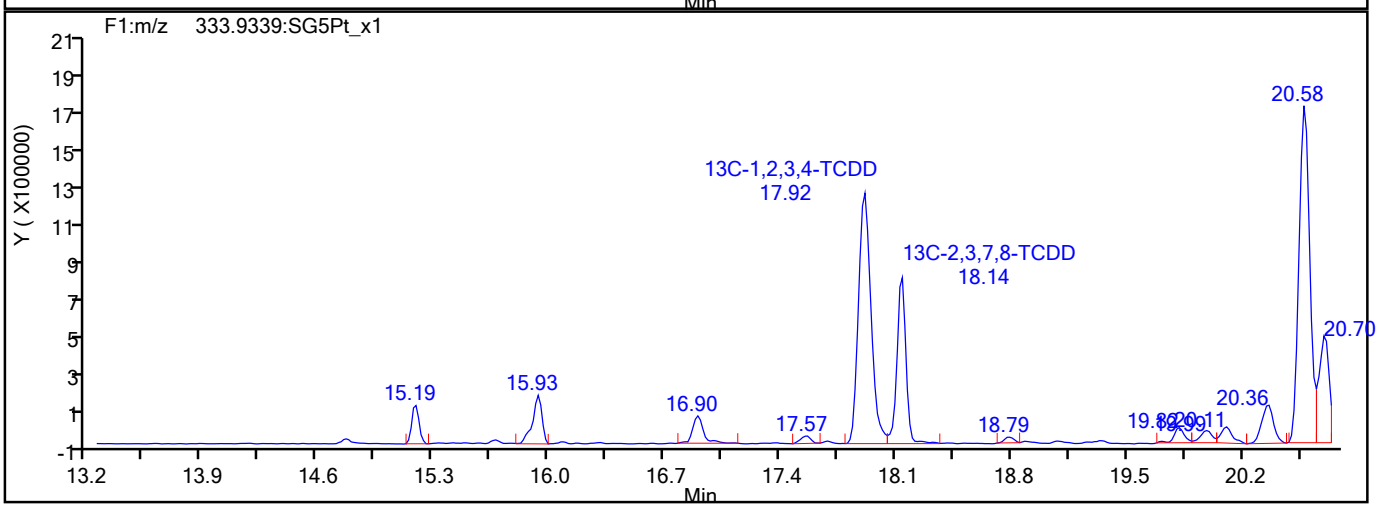

779722

Report Date: 26-Aug-2021 10:58:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Injection Date:	18-Aug-2021 05:59:40	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	517241	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

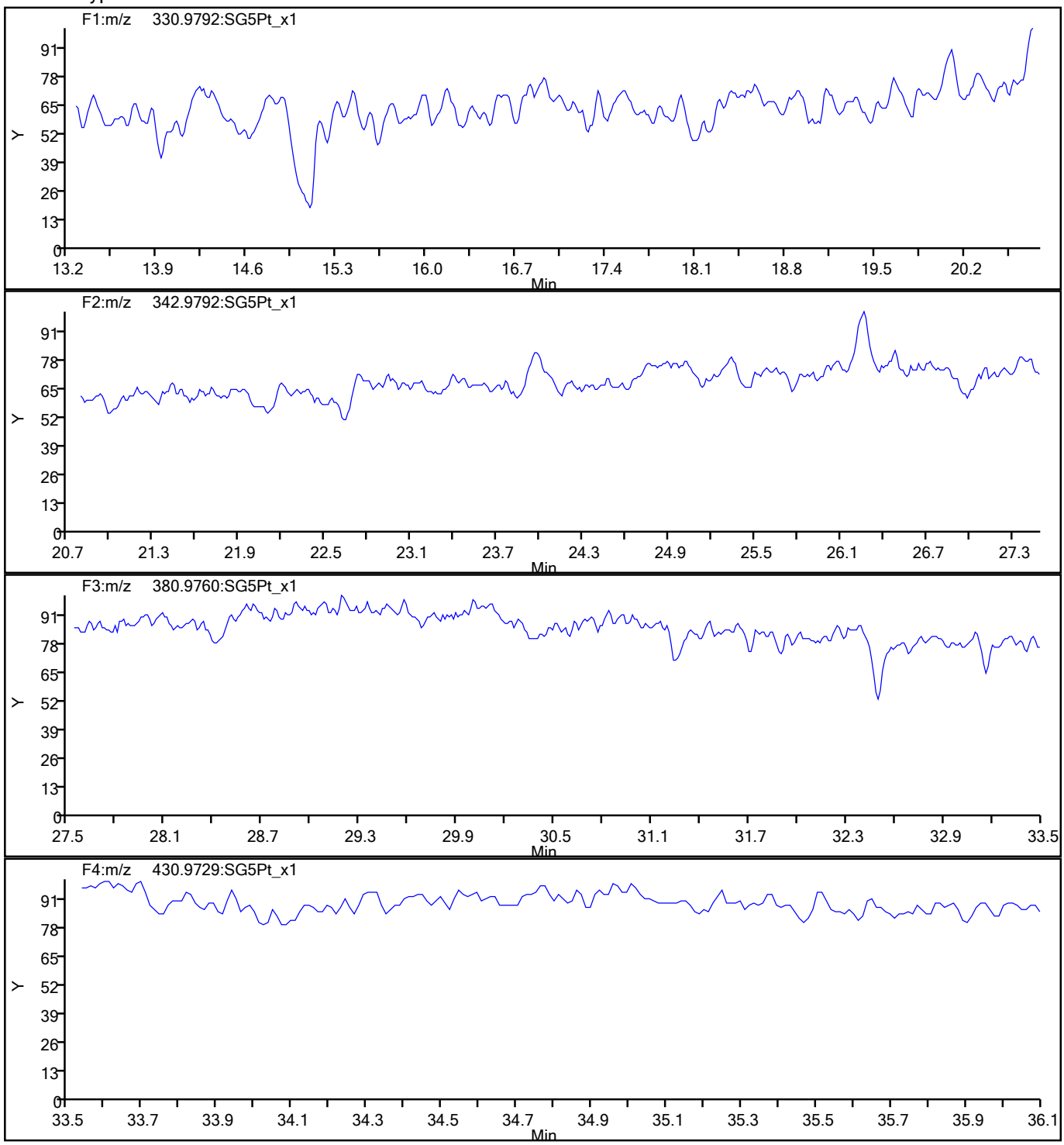

779723

Report Date: 26-Aug-2021 10:58:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_20.d		
Injection Date:	18-Aug-2021 05:59:40	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	517241	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

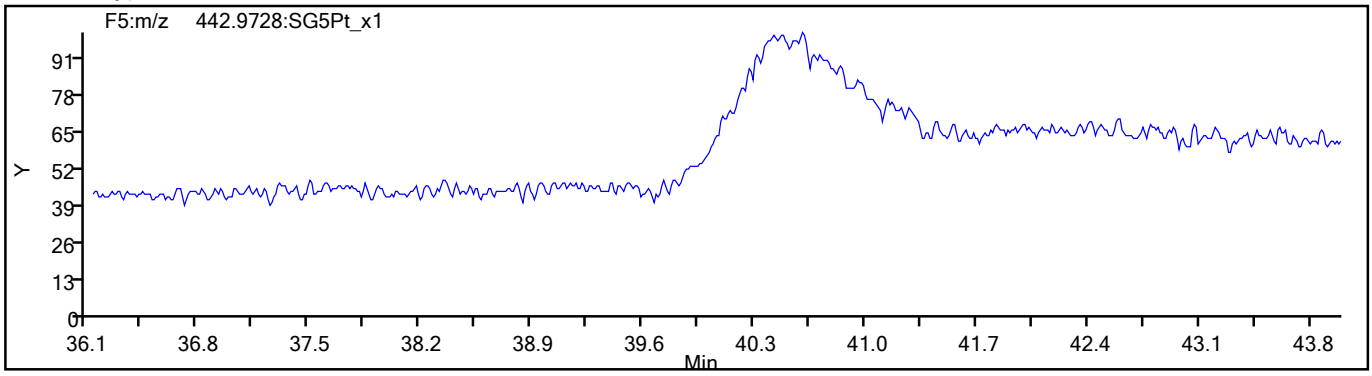

779724

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (0-2) RADL
Lab Sample ID: 320-76788-13 RADL
Matrix: Solid
Lab File ID: 25AU21A11D2_013.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:30
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.13(g)
Date Analyzed: 08/25/2021 20:38
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 49.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	83000	E B G	73	73

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	33		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	49		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_013.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Sample Type: Client
Inject. Date: 25-Aug-2021 20:38:43 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76788-A-13-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:13:49

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.355	10683484	0.84	7.2E+05	20.0	20.0				M
D 13C-2,3,7,8-TCDF	17.671	4670158	0.83	1.3327	6.560	6.560	3.241	3.241	32.80	M
2,3,7,8-TCDF	17.699	987151782	0.79	0.9978	4236.8	4236.8	3.724	3.724		E
D 13C-2,3,7,8-TCDD	16.108	2490015	0.85	0.8749	5.328	5.328	17.3	17.3	26.64	nM
2,3,7,8-TCDD	16.135	187867642	0.78	1.0570	1427.6	1427.6	5.871	5.871		Ea
$ 37Cl4-2,3,7,8-TCDD	16.135	1792842		0.8648	3.881	3.881	0.2332	0.2332	48.51	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_013.d
Lims ID: 320-76788-A-13-A
Client ID: 11215702-072321-BN-SJSB105 (0-2)
Sample Type: Client
Inject. Date: 25-Aug-2021 20:38:43 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76788-A-13-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:13:49

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.355	16.298	3		4888873	683298	241970	604925	3		M
333.9339	16.355	16.298	3		5794611	764600	195646	489115	4	0.84(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.671	17.615	3	1.081	2115287	398599	53712	134280	7		M
317.9389	17.671	17.615	3	1.081	2554871	352428	71383	178457	5	0.83(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.699	17.628	4	1.002	434977037	77906545	25127	62817	3101		
305.8987	17.699	17.628	4	1.002	552174745	99579430	30680	76700	3246	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.108	16.065	3	0.985	1142018	233459	241970	604925	1		M
333.9339	16.122	16.065	3	0.986	1347997	291429	195646	489115	1	0.85(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.135	16.078	3	1.002	82594798	19075633	40391	100977	472		a
321.8936	16.135	16.078	3	1.002	105272844	24124474	24749	61872	975	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.135	16.078	3	0.987	1792842	408412	5841	14602	70		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_013.d				
Injection Date:	25-Aug-2021 20:38:43	Instrument ID:	11D2		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.67
Area: 2346939
Amount: 7.936185
Amount Units: pg/ul

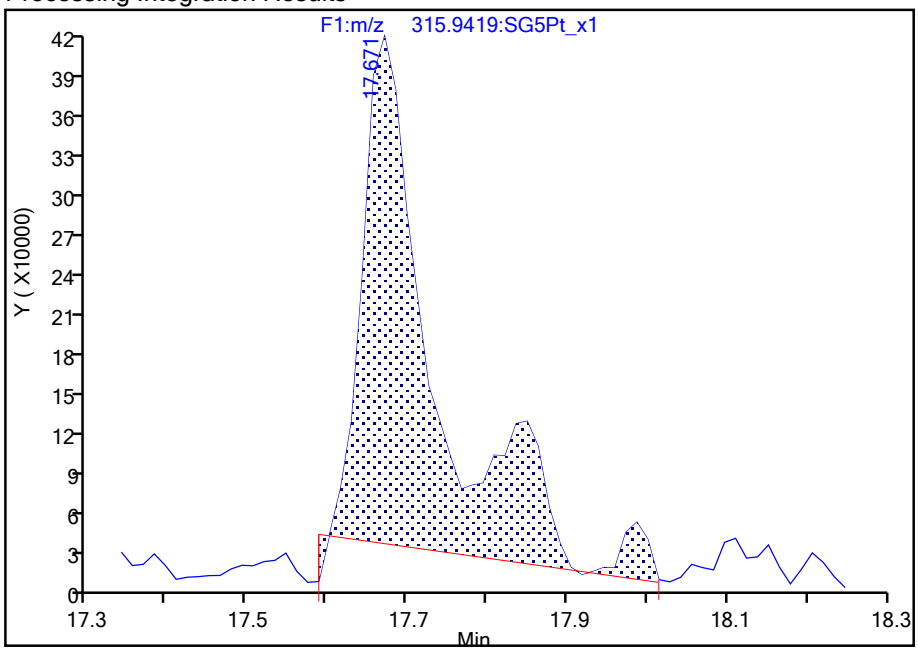

Manual Integration Results

RT: 17.67
Area: 2115287
Amount: 6.560257
Amount Units: pg/ul

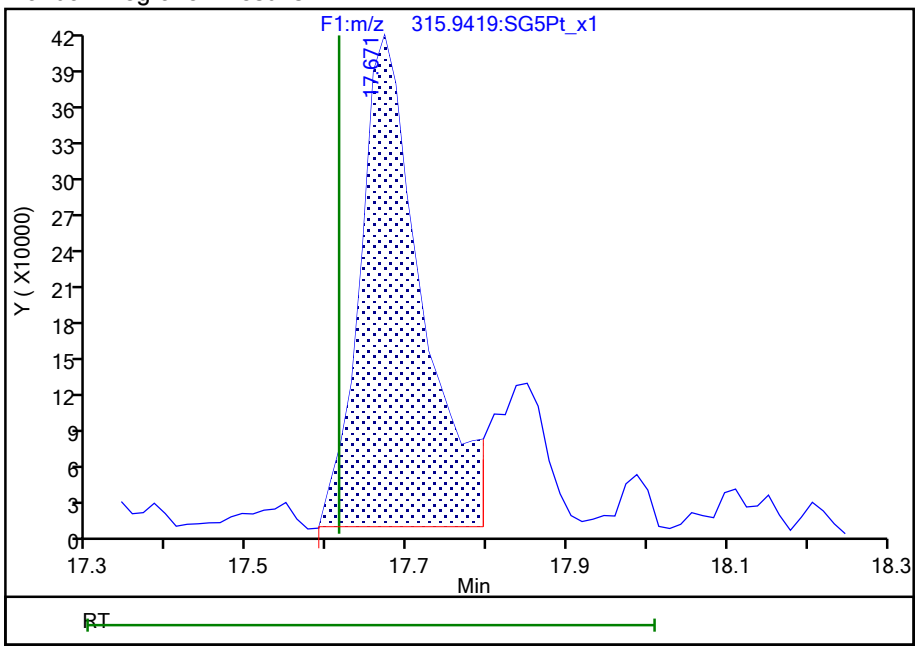

Reviewer: stephensk, 26-Aug-2021 09:12:45

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_013.d				
Injection Date:	25-Aug-2021 20:38:43	Instrument ID:	11D2		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.67
Area: 3302724
Amount: 7.936185
Amount Units: pg/ul

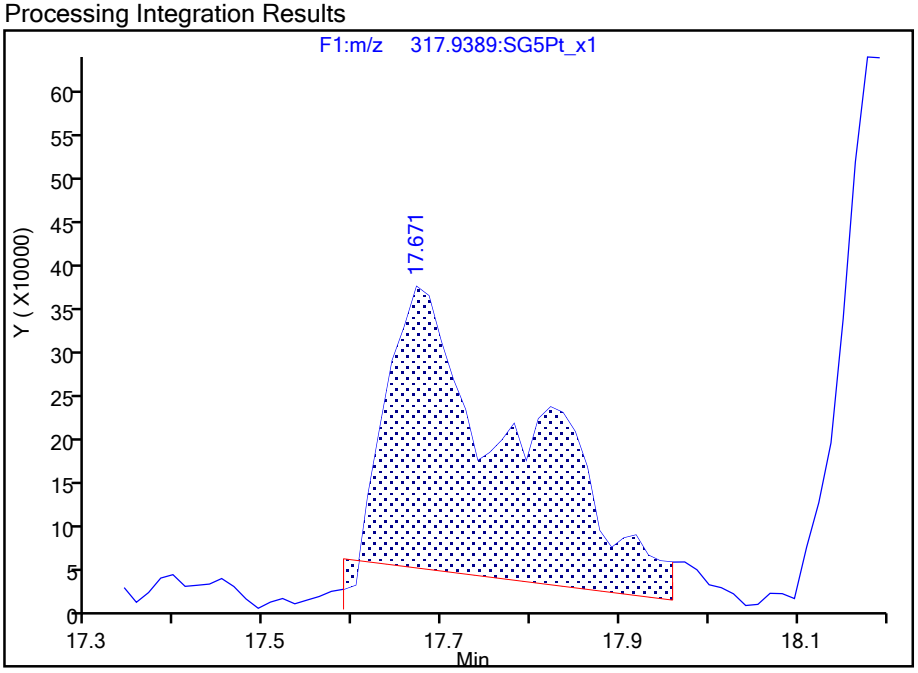

Manual Integration Results

RT: 17.67
Area: 2554871
Amount: 6.560257
Amount Units: pg/ul

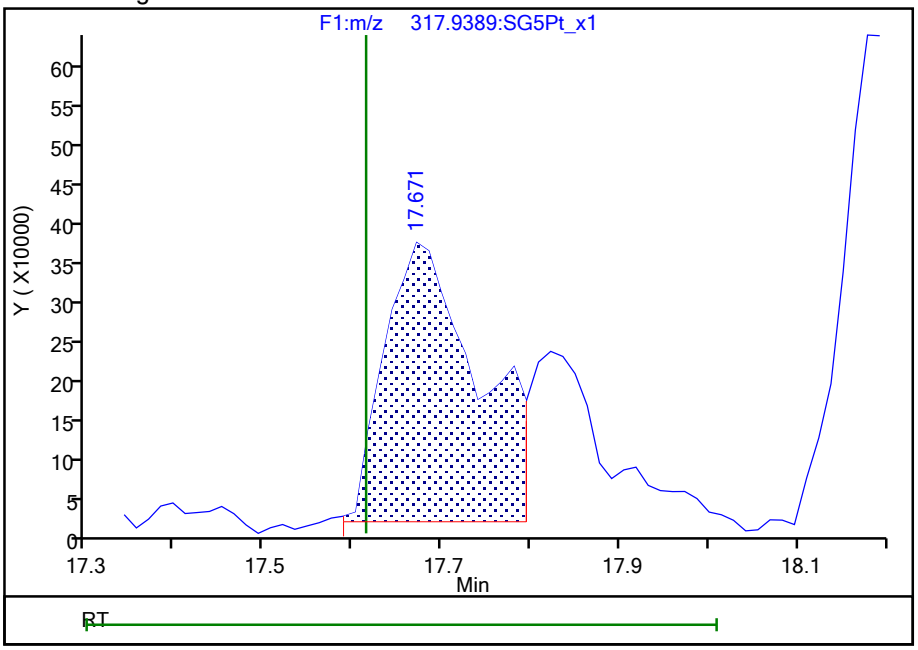

Reviewer: stephensk, 26-Aug-2021 09:12:52

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_013.d				
Injection Date:	25-Aug-2021 20:38:43	Instrument ID:	11D2		
Lims ID:	320-76788-A-13-A	Lab Sample ID:	320-76788-13		
Client ID:	11215702-072321-BN-SJSB105 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

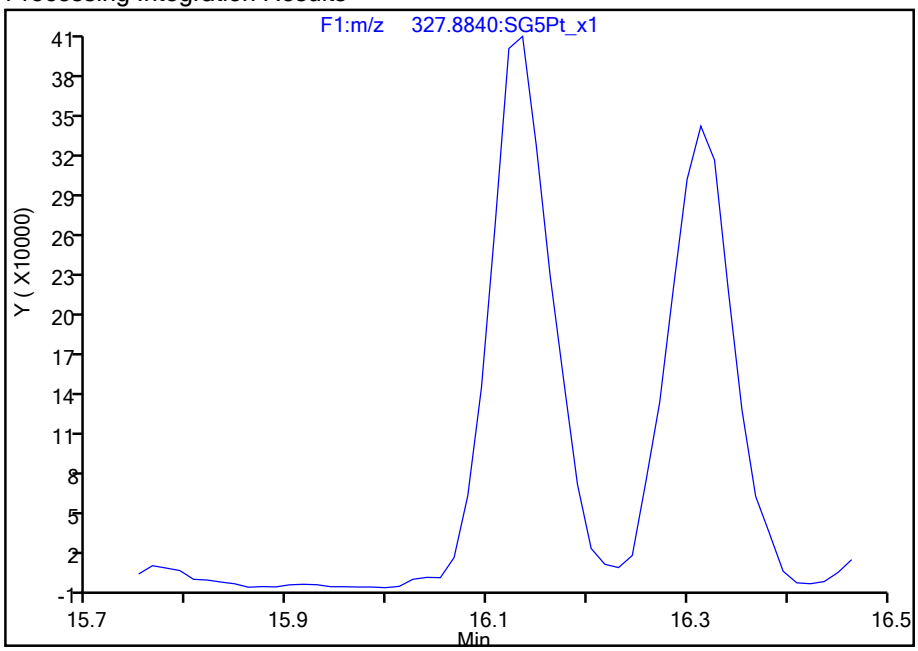

Manual Integration Results

RT: 16.14
Area: 1792842
Amount: 3.880925
Amount Units: pg/ul

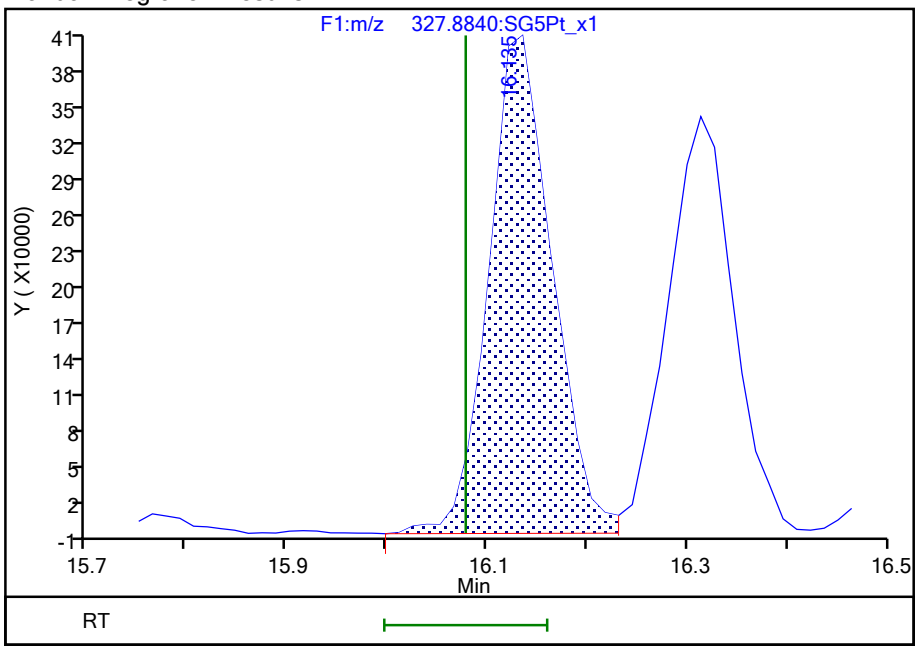

Reviewer: stephensk, 26-Aug-2021 09:13:41
Audit Action: Assigned Compound ID Audit Reason: Retention Time Shift

779730

Report Date: 26-Aug-2021 09:30:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_013.d		
Injection Date:	25-Aug-2021 20:38:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	519744	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

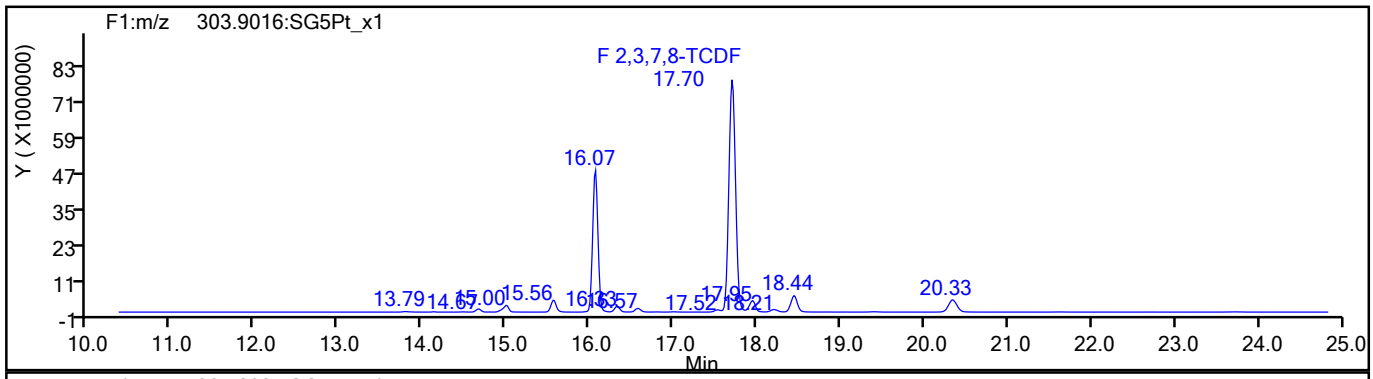

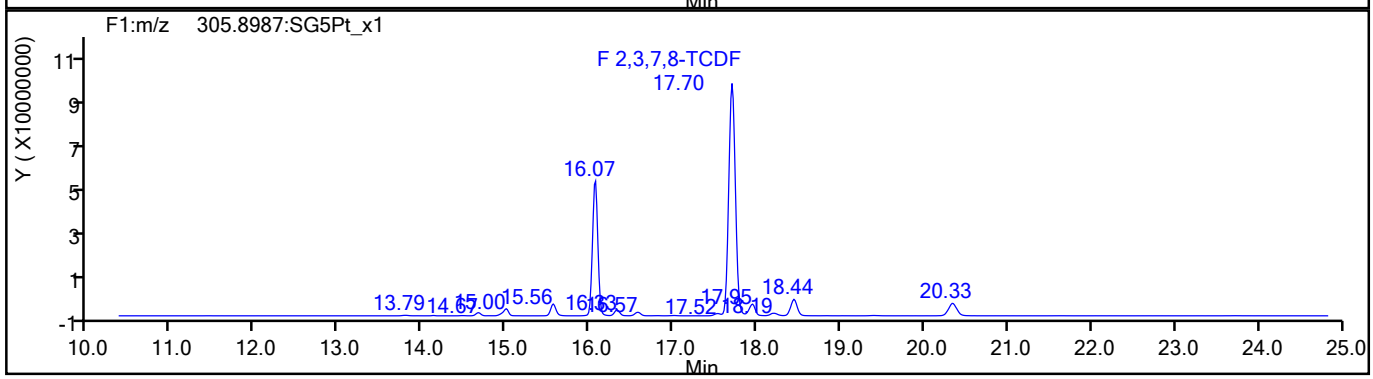

TCDF Standards

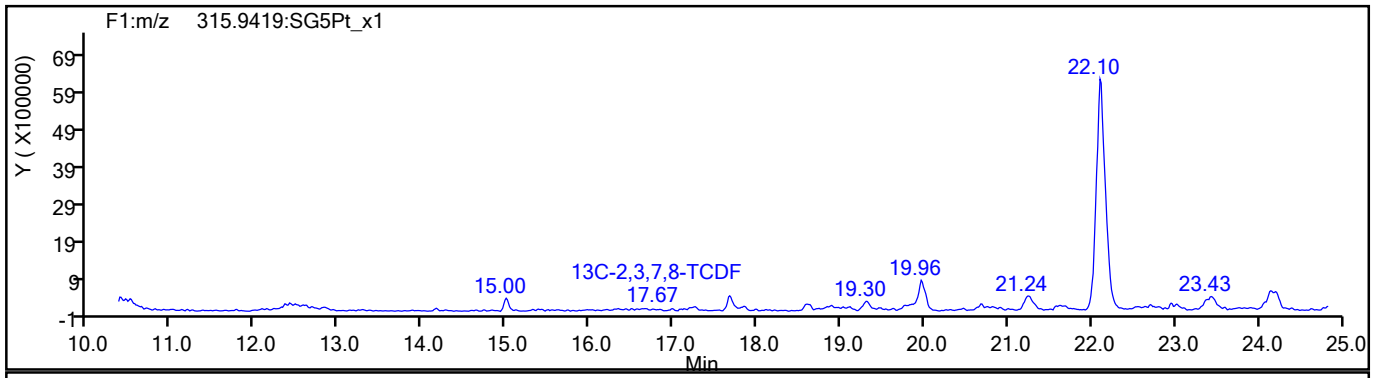

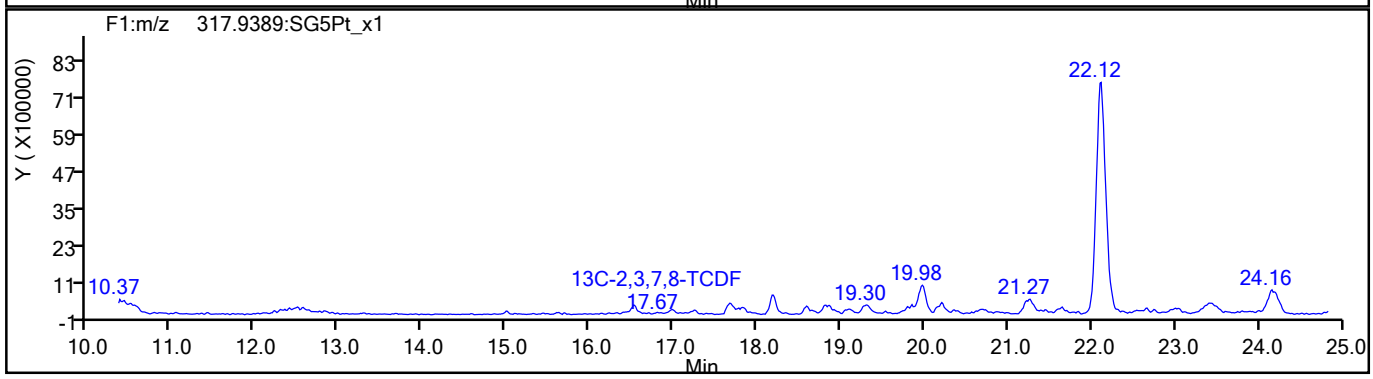

779731

Report Date: 26-Aug-2021 09:30:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_013.d		
Injection Date:	25-Aug-2021 20:38:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	519744	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

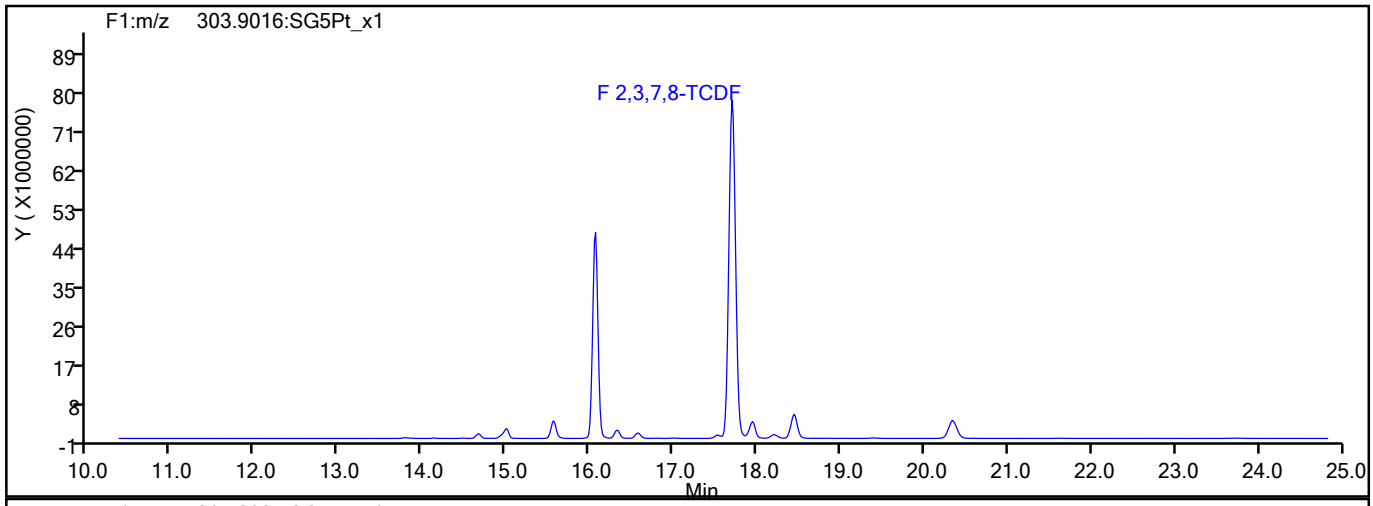

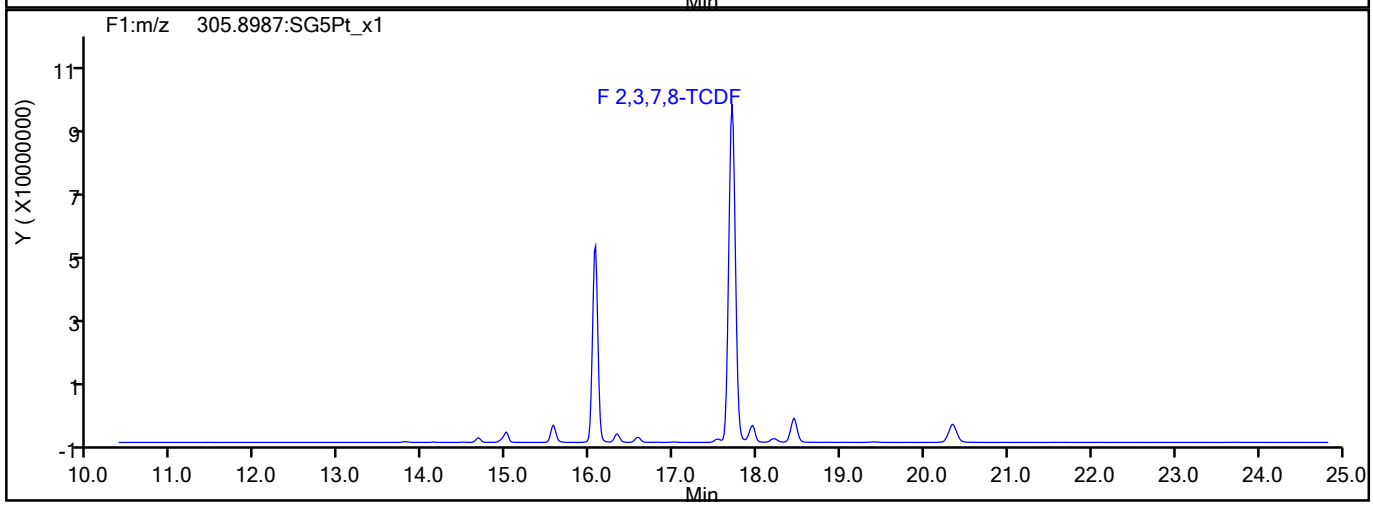

TCDF Interference Mass

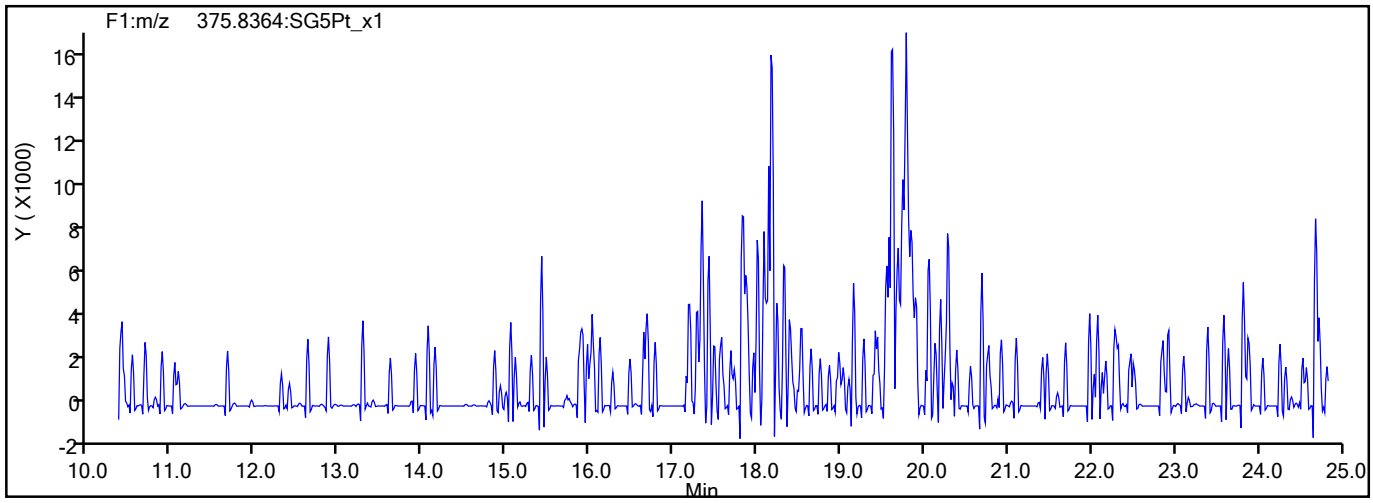

779732

Report Date: 26-Aug-2021 09:30:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_013.d		
Injection Date:	25-Aug-2021 20:38:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	519744	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

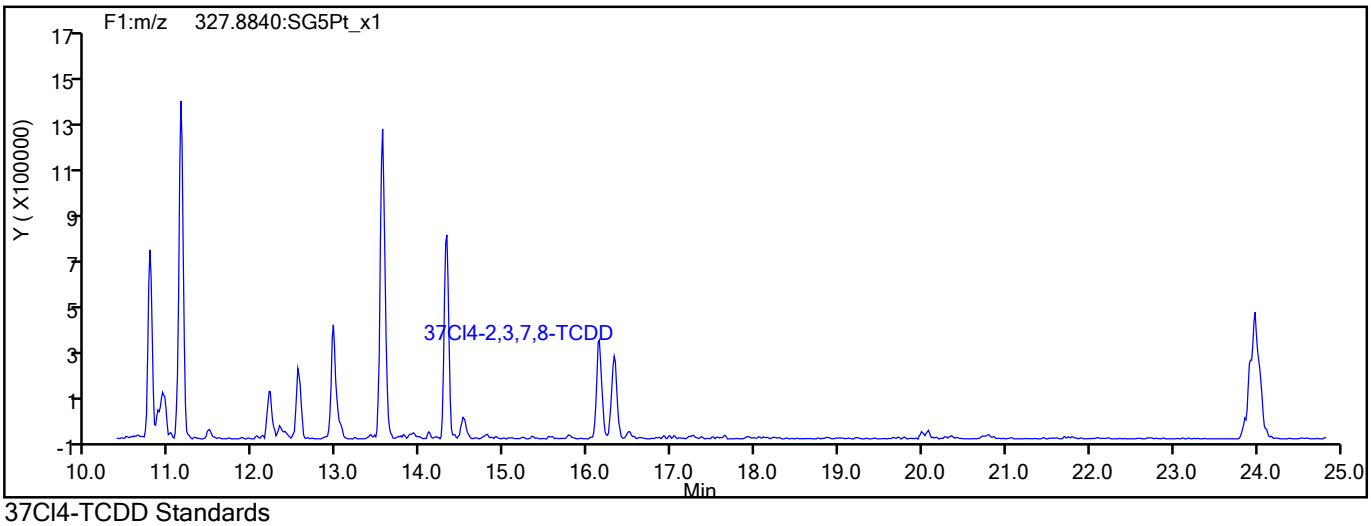

37Cl4-TCDD Standards

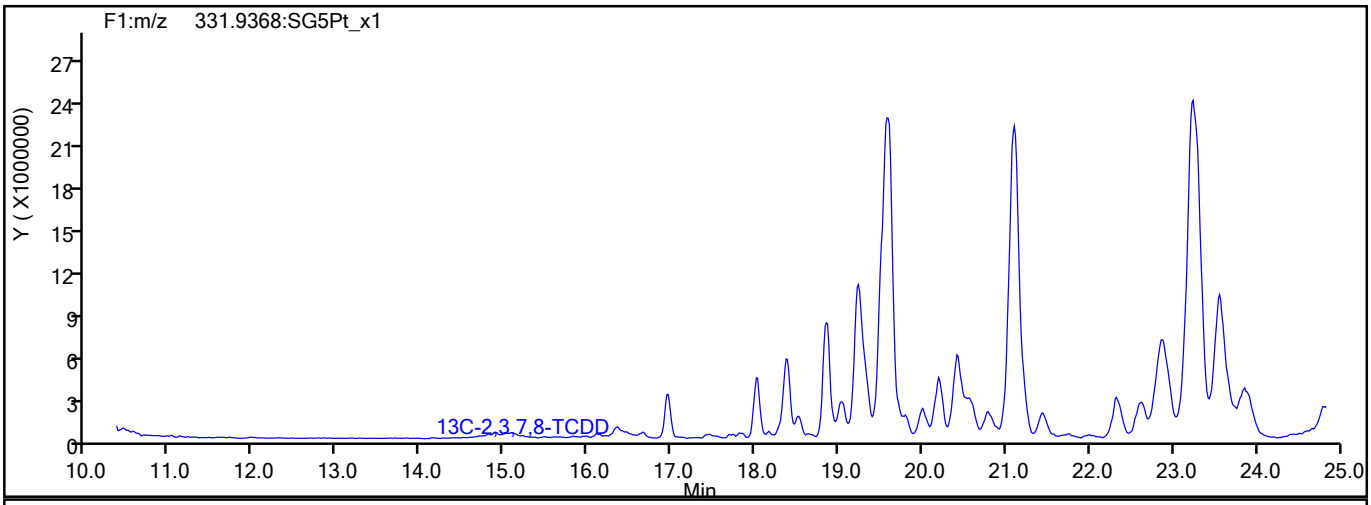

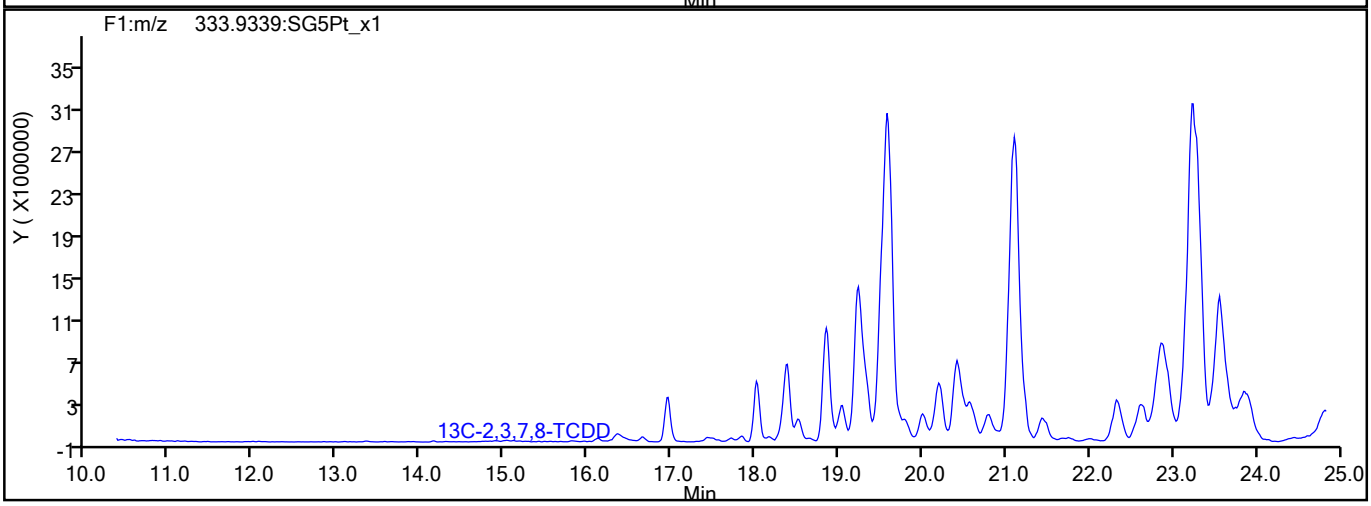

779733

Report Date: 26-Aug-2021 09:30:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_013.d		
Injection Date:	25-Aug-2021 20:38:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (0-2)		
Worklist#:	519744	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

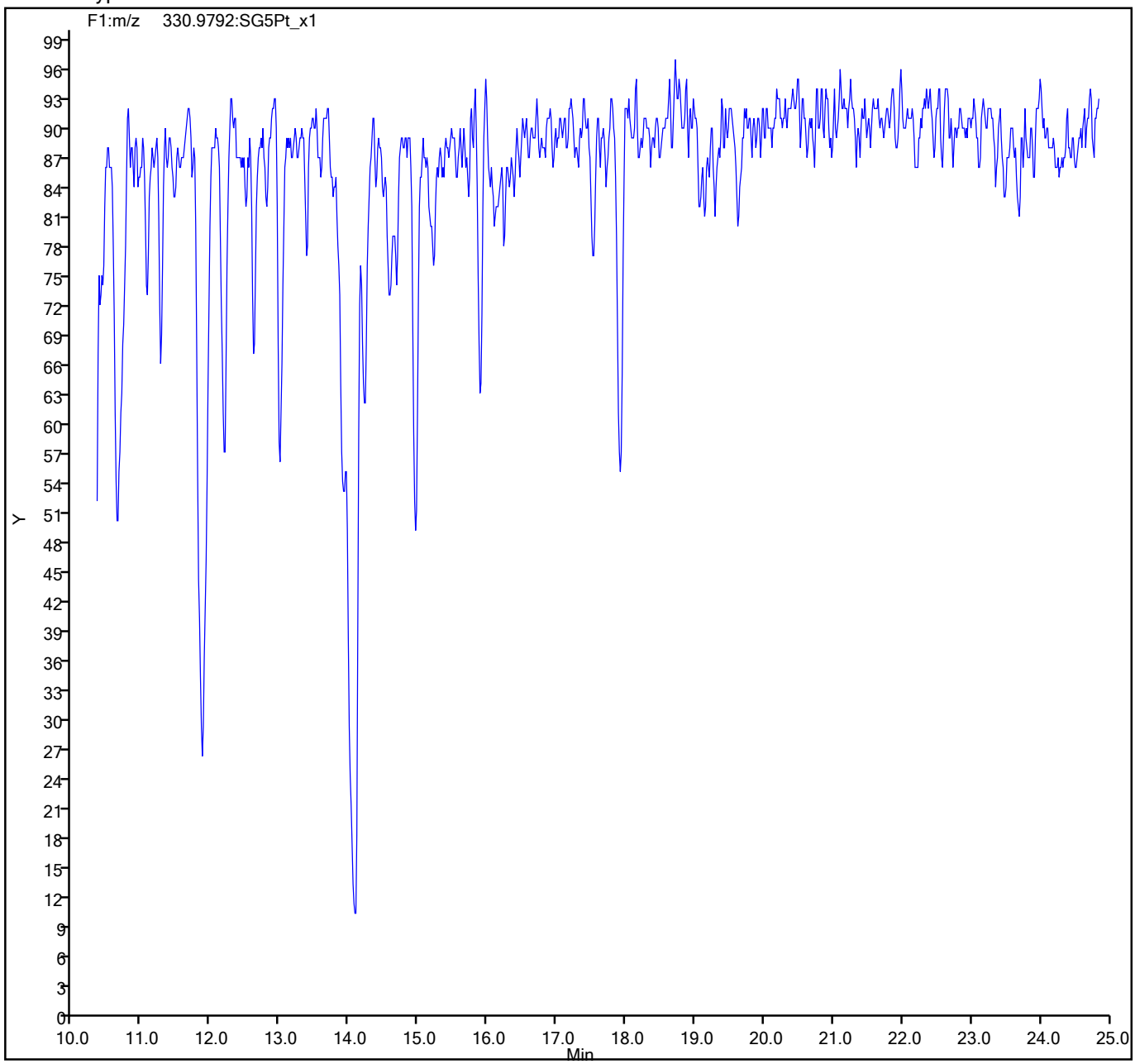

779734

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (2-4)
Lab Sample ID: 320-76788-14
Matrix: Solid
Lab File ID: 13AU2110D5_40.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:35
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.13(g)
Date Analyzed: 08/14/2021 22:46
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 48.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
40321-76-4	1,2,3,7,8-PeCDD	300		9.5	3.8
57117-41-6	1,2,3,7,8-PeCDF	2600	G	24	24
57117-31-4	2,3,4,7,8-PeCDF	1900	G	17	17
39227-28-6	1,2,3,4,7,8-HxCDD	3.4	J B	9.5	0.24
57653-85-7	1,2,3,6,7,8-HxCDD	8.4	J	9.5	0.23
19408-74-3	1,2,3,7,8,9-HxCDD	5.1	J	9.5	0.22
57117-44-9	1,2,3,6,7,8-HxCDF	1100	G B	11	11
72918-21-9	1,2,3,7,8,9-HxCDF	54	G q B	10	10
60851-34-5	2,3,4,6,7,8-HxCDF	110	G	11	11
35822-46-9	1,2,3,4,6,7,8-HpCDD	110	B	9.5	1.0
67562-39-4	1,2,3,4,6,7,8-HpCDF	1200	B	9.5	4.8
55673-89-7	1,2,3,4,7,8,9-HpCDF	440	B	9.5	4.9
3268-87-9	OCDD	1600	B	19	1.4
39001-02-0	OCDF	480	B	19	0.41
36088-22-9	Total PeCDD	320	q	9.5	3.8
30402-15-4	Total PeCDF	6800	G q	21	21
34465-46-8	Total HxCDD	59	B	9.5	0.23
55684-94-1	Total HxCDF	6000	G q B	11	11
37871-00-4	Total HpCDD	230	B	9.5	1.0
38998-75-3	Total HpCDF	1900	B	9.5	4.9

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (2-4)
Lab Sample ID: 320-76788-14
Matrix: Solid
Lab File ID: 13AU2110D5_40.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:35
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.13(g)
Date Analyzed: 08/14/2021 22:46
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 48.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
109719-79-1	13C-1,2,3,7,8-PeCDD	97		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	77		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	87		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	55		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	66		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	59		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	59		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	65		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	58		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	70		26-138
114423-97-1	13C-OCDD	76		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	71		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Sample Type: Client
Inject. Date: 14-Aug-2021 22:46:34 ALS Bottle#: 40 Worklist Smp#: 29
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-14-a 320-76788-a-14-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 07:51:36 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: krenns Date: 18-Aug-2021 07:51:36

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.218	74283678	0.80	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.688	62962662	0.83	1.6249	52.2	52.2	2.771	2.771	52.16	
2,3,7,8-TCDF	17.704	116073674380	0.77	1.0239	19503	18005	55.4	55.4		REQa
A Non-2,3,7,8-sub-TCDF	17.046	150240778050	0.80	1.0239	23305	23305	55.4	16636		a
S Total TCDF					42808	41309	55.4	55.4		RQ
D 13C-2,3,7,8-TCDD	18.566	24781017	0.87	0.8993	37.1	37.1	1.838	1.838	37.09	a
2,3,7,8-TCDD	18.581	2418709912	0.82	1.2541	7782.6	7782.6	61.5	61.5		EM
$ 37Cl4-2,3,7,8-TCDD	18.581	23339301		1.1071	28.4	28.4	3.227	3.227	70.95	
A Non-2,3,7,8-sub-TCDD	17.499	446747621	0.82	1.2541	1437.5	1437.5	61.5	1437.5		M
S Total TCDD					9220.1	9220.1	61.5	61.5		
D 13C-1,2,3,7,8-PeCDF	22.872	69298913	1.64	1.2101	77.1	77.1	1.050	1.050	77.09	
1,2,3,7,8-PeCDF	22.912	496778251	1.56	1.0611	675.6	675.6	6.417	6.417		a
D 13C-2,3,4,7,8-PeCDF	24.167	80018895	1.54	1.2395	86.9	86.9	1.025	1.025	86.91	
2,3,4,7,8-PeCDF	24.181	406707087	1.58	1.0184	499.1	499.1	4.520	4.520		a
A F1 PeCDFs	20.093	3178868	1.55	1.0398	6.971	4.095	0.0449	3.238		RQ
A Non-2,3,7,8-sub-PeCDF	23.241	485099921	1.55	1.0398	630.4	624.9	5.283	253.0		RQa
S Total PeCDF					1812.1	1803.6	5.468	5.468		RQ
D 13C-1,2,3,7,8-PeCDD	24.849	54715148	1.60	0.7612	96.8	96.8	0.4802	0.4802	96.76	
1,2,3,7,8-PeCDD	24.876	45124642	1.60	1.0484	78.7	78.7	1.003	1.003		a
A Non-2,3,7,8-sub-PeCDD	23.349	2525716	1.55	1.0484	4.612	4.403	1.003	2.215		RQ
S Total PeCDD					83.3	83.1	1.003	1.003		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.729	80592905	0.53	1.0837	66.5	66.5	0.2726	0.2726	66.46	
1,2,3,4,7,8-HxCDF	30.756	948480417	1.21	1.0851	1084.6	1084.6	3.380	3.380		Ea
D 13C-1,2,3,6,7,8-HxCDF	30.889	74045090	0.51	1.1279	58.7	58.7	0.2619	0.2619	58.66	
1,2,3,6,7,8-HxCDF	30.902	237464750	1.22	1.1260	284.8	284.8	2.842	2.842		a
D 13C-2,3,4,6,7,8-HxCDF	31.661	69905826	0.53	1.0637	58.7	58.7	0.2777	0.2777	58.72	a
2,3,4,6,7,8-HxCDF	31.674	22782502	1.19	1.1675	27.9	27.9	2.840	2.840		M
D 13C-1,2,3,7,8,9-HxCDF	32.433	59781842	0.54	0.9676	55.2	55.2	0.3053	0.3053	55.21	a
1,2,3,7,8,9-HxCDF	32.433	9934564	1.24	1.1664	16.1	14.2	2.744	2.744		RQM
A Non-2,3,7,8-sub-HxCDF	30.197	135407597	1.25	1.1363	167.7	167.7	2.935	63.3		Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					1581.0	1579.2	2.951	2.951		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.246	111910833	1.25	6.2E+05	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	31.834	47481892	1.24	0.7334	57.8	57.8	0.3086	0.3086	57.85	
1,2,3,4,7,8-HxCDD	31.860	458739	1.25	1.0640	0.9080	0.9080	0.0635	0.0635		
D 13C-1,2,3,6,7,8-HxCDD	31.940	54493521	1.23	0.8802	55.3	55.3	0.2572	0.2572	55.32	
1,2,3,6,7,8-HxCDD	31.954	1208811	1.24	1.0001	2.218	2.218	0.0616	0.0616		
1,2,3,7,8,9-HxCDD	32.260	772437	1.21	1.1325	1.338	1.338	0.0569	0.0569		
A Non-2,3,7,8-sub-HxCDD	30.882	6066316	1.19	1.0655	11.2	11.2	0.0605	6.773		
S Total HxCDD					15.6	15.6	0.0607	0.0607		
D 13C-1,2,3,4,6,7,8-HpCDF	33.827	50040593	0.44	0.7730	57.8	57.8	0.4855	0.4855	57.84	
1,2,3,4,6,7,8-HpCDF	33.827	231703738	1.05	1.4413	321.3	321.3	1.271	1.271		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.884	54597332	0.44	0.7008	69.6	69.6	0.5355	0.5355	69.61	
1,2,3,4,7,8,9-HpCDF	34.896	82606784	1.05	1.3174	114.9	114.9	1.291	1.291		
A Non-2,3,7,8-sub-HpCDF	34.319	51311595	1.05	1.3793	71.1	71.1	1.279	71.1		
S Total HpCDF					507.2	507.2	1.281	1.281		
D 13C-1,2,3,4,6,7,8-HpCDD	34.604	47000275	1.00	0.6472	64.9	64.9	0.3868	0.3868	64.89	
1,2,3,4,6,7,8-HpCDD	34.604	15230221	1.04	1.0943	29.6	29.6	0.2662	0.2662		
A Non-2,3,7,8-sub-HpCDD	34.301	15834949	1.04	1.0943	30.8	30.8	0.2662	30.8		
S Total HpCDD					60.4	60.4	0.2662	0.2662		
D 13C-OCDD	36.950	75695253	0.87	0.4472	151.3	151.3	0.1823	0.1823	75.63	
OCDF	37.046	68765645	0.88	1.4382	126.3	126.3	0.1080	0.1080		
OCDD	36.962	173217003	0.89	1.1070	413.4	413.4	0.3646	0.3646		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Sample Type: Client
Inject. Date: 14-Aug-2021 22:46:34 ALS Bottle#: 40 Worklist Smp#: 29
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-14-a 320-76788-a-14-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 07:51:36 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: krenns Date: 18-Aug-2021 07:51:36

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	18.218	17.855	22		32905749	6216287	23838	59595	261		a
333.9339	18.218	17.855	22		41377929	7801412	68851	172127	113	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.688	17.341	21	0.971	28564282	7327077	57351	143377	128		
317.9389	17.688	17.341	21	0.971	34398380	8949735	195117	487792	46	0.83(0.65-0.89)	
2,3,7,8-TCDF											REQa
303.9016	17.704	17.356	21	1.001	6015573243	1112199515	17873954468487		622		ae
	Empc Correction				5049532633	868148096	17873954468487		486		
305.8987	17.734	17.356	23	1.003	6557834805	1127465116	19090234772557		591	0.92(0.65-0.89)	e
A Non-2,3,7,8-sub-TCDF											a
303.9016	16.025	17.046	-61	0.906	42633839	9198072	17873954468487		5		
305.8987	16.025	17.046	-61	0.906	53935943	11749405	19090234772557		6	0.79(0.65-0.89)	
303.9016	16.298	17.046	-45	0.921	152961605	34807908	17873954468487		19		
305.8987	16.298	17.046	-45	0.921	191937737	43494805	19090234772557		23	0.80(0.65-0.89)	
303.9016	16.585	17.046	-28	0.938	243322895	51825773	17873954468487		29		
305.8987	16.585	17.046	-28	0.938	308169521	66134354	19090234772557		35	0.79(0.65-0.89)	
303.9016	16.812	17.046	-14	0.950	229612706	64188636	17873954468487		36		
305.8987	16.812	17.046	-14	0.950	292529660	83048392	19090234772557		44	0.78(0.65-0.89)	
303.9016	17.038	17.046	0	0.963	419390319	123897525	17873954468487		69		
305.8987	17.038	17.046	0	0.963	528695301	153714225	19090234772557		81	0.79(0.65-0.89)	
303.9016	17.295	17.046	15	0.978	4773860489	888030257	17873954468487		497		a
305.8987	17.295	17.046	15	0.978	5950746204	1078839826	19090234772557		565	0.80(0.65-0.89)	e
303.9016	17.552	17.046	30	0.992	151337312	28438060	17873954468487		16		
305.8987	17.552	17.046	30	0.992	193930796	36012115	19090234772557		19	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.142	17.046	66	1.026	650450279	142986427	17873954468487		80		
305.8987	18.142	17.046	66	1.026	840563199	182604499	19090234772557		96	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	18.566	18.051	31	1.019	11501994	955288	23838	59595	40		a
333.9339	18.490	18.051	26	1.015	13279023	1130768	68851	172127	16	0.87(0.65-0.89)	
2,3,7,8-TCDD											EM
319.8965	18.581	18.066	31	1.001	1091002238	120318703	249519	623797	482		M
321.8936	18.581	18.066	31	1.001	1327707674	154029609	394046	985115	391	0.82(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	18.581	18.066	31	1.020	23339301	2995356	200355	500887	15		
A Non-2,3,7,8-sub-TCDD											M
319.8965	18.792	17.499	77	1.012	200639353	49113631	249519	623797	197		
321.8936	18.792	17.499	77	1.012	246108268	61459931	394046	985115	156	0.82(0.65-0.89)	M
13C-1,2,3,7,8-PeCDF											
351.9000	22.872	22.367	30	1.255	43057689	5617348	42772	106930	131		
353.8970	22.872	22.367	30	1.255	26241224	3582452	28451	71127	126	1.64(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.912	22.380	32	1.002	302754401	40959256	155065	387662	264		a
341.8567	22.899	22.380	31	1.001	194023850	26092892	95514	238785	273	1.56(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.167	23.703	28	1.327	48530865	8263653	42772	106930	193		
353.8970	24.167	23.703	28	1.327	31488030	5345771	28451	71127	188	1.54(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	24.181	23.730	27	1.001	249344323	41940600	155065	387662	270		a
341.8567	24.181	23.730	27	1.001	157362764	26729367	95514	238785	280	1.58(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	19.684	20.093	-24	0.861	2637518	307440	977	2442	315		
	Empc Correction				404532	43919	977	2442	45		
341.8567	19.684	20.093	-24	0.861	260989	28335	1154	2885	25	10.11(1.32-1.78)	
339.8597	19.987	20.093	-6	0.874	1581417	304822	977	2442	312		
341.8567	19.972	20.093	-7	0.873	931930	186342	1154	2885	161	1.70(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQa
339.8597	21.508	23.241	-104	0.940	120581705	23898460	155065	387662	154		
341.8567	21.508	23.241	-104	0.940	75833097	14959816	95514	238785	157	1.59(1.32-1.78)	
339.8597	22.340	23.241	-54	0.977	10023130	1058769	155065	387662	7		a
341.8567	22.340	23.241	-54	0.977	6632265	674927	95514	238785	7	1.51(1.32-1.78)	
339.8597	22.749	23.241	-29	0.995	23512526	5080820	155065	387662	33		
	Empc Correction				19205637	4813949	155065	387662	31		
341.8567	22.749	23.241	-29	0.995	12390734	3105774	95514	238785	33	1.90(1.32-1.78)	
339.8597	23.185	23.241	-3	1.014	3906988	1176636	155065	387662	8		
341.8567	23.185	23.241	-3	1.014	2436838	718709	95514	238785	8	1.60(1.32-1.78)	
339.8597	23.390	23.241	9	1.023	85393661	19333733	155065	387662	125		
341.8567	23.376	23.241	8	1.022	53499674	12230059	95514	238785	128	1.60(1.32-1.78)	
339.8597	24.508	23.241	76	1.072	58523502	7833421	155065	387662	51		
341.8567	24.508	23.241	76	1.072	36672690	4955196	95514	238785	52	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.849	24.426	25	1.364	33675583	5366548	10887	27217	493		
369.8919	24.849	24.426	25	1.364	21039565	3435805	9611	24027	357	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											a
355.8546	24.876	24.453	25	1.001	27780993	4296592	20843	52107	206		a
357.8516	24.876	24.453	25	1.001	17343649	2706993	16175	40437	167	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	23.144	23.349	-12	0.931	791672	264784	20843	52107	13		
357.8516	23.144	23.349	-12	0.931	478928	170558	16175	40437	11	1.65(1.32-1.78)	
355.8546	25.135	23.349	107	1.012	762914	155858	20843	52107	7		
357.8516	25.135	23.349	107	1.012	612355	113847	16175	40437	7	1.25(1.32-1.78)	
	Empc Correction				492202	100553	16175	40437	6		
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.729	30.503	14	0.953	27821024	5992732	17402	43505	344		
385.8610	30.729	30.503	14	0.953	52771881	11384622	19136	47840	595	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											Ea
373.8208	30.756	30.529	14	1.001	519187030	113478395	140782	351955	806		a
375.8178	30.756	30.529	14	1.001	429293387	93059272	114141	285352	815	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.889	30.689	12	0.958	25017789	6835392	17402	43505	393		
385.8610	30.889	30.689	12	0.958	49027301	13081877	19136	47840	684	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											a
373.8208	30.902	30.702	12	1.000	130298630	34117129	140782	351955	242		a
375.8178	30.902	30.702	12	1.000	107166120	28229389	114141	285352	247	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											a
383.8639	31.661	31.514	9	0.982	24124481	6554371	17402	43505	377		a
385.8610	31.661	31.514	9	0.982	45781345	12669126	19136	47840	662	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.674	31.528	9	1.000	12374852	3614722	140782	351955	26		M
375.8178	31.674	31.528	9	1.000	10407650	3004020	114141	285352	26	1.19(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											a
383.8639	32.433	32.313	7	1.006	20916275	6960173	17402	43505	400		a
385.8610	32.419	32.313	6	1.005	38865567	12952628	19136	47840	677	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	32.433	32.326	6	1.000	5499491	2328433	140782	351955	17		M
375.8178	32.433	32.326	6	1.000	5722722	1951630	114141	285352	17	0.96(1.05-1.43)	M
	Empc Correction				4435073	1877768	114141	285352	16		
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	28.906	30.197	-77	0.941	28179323	5393367	140782	351955	38		
375.8178	28.906	30.197	-77	0.941	22971879	4441402	114141	285352	39	1.23(1.05-1.43)	
373.8208	30.050	30.197	-9	0.978	14531996	2979619	140782	351955	21		
375.8178	30.050	30.197	-9	0.978	11889912	2448049	114141	285352	21	1.22(1.05-1.43)	
373.8208	31.567	30.197	82	1.027	9209892	2328215	140782	351955	17		M
375.8178	31.567	30.197	82	1.027	7224081	1882609	114141	285352	16	1.27(1.05-1.43)	
373.8208	32.499	30.197	138	1.058	23409379	7928033	140782	351955	56		M
375.8178	32.499	30.197	138	1.058	17991135	6695142	114141	285352	59	1.30(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											a
401.8559	32.246	32.127	7		62142333	17207920	14707	36767	1170		a
403.8529	32.246	32.127	7		49768500	13711692	13287	33217	1032	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.834	31.701	8	0.987	26318969	7951670	14707	36767	541		
403.8529	31.834	31.701	8	0.987	21162923	6365810	13287	33217	479	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.860	31.714	9	1.001	254742	75999	2022	5055	38		
391.8127	31.847	31.714	8	1.000	203997	55117	1849	4622	30	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.940	31.807	8	0.991	30051367	8672701	14707	36767	590		
403.8529	31.940	31.807	8	0.991	24442154	7036362	13287	33217	530	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.954	31.820	8	1.000	669271	199011	2022	5055	98		
391.8127	31.954	31.820	8	1.000	539540	156890	1849	4622	85	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.260	32.140	7	1.013	422405	90562	2022	5055	45		
391.8127	32.260	32.140	7	1.013	350032	73182	1849	4622	40	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.930	30.882	-57	0.937	861289	130792	2022	5055	65		
391.8127	29.930	30.882	-57	0.937	728632	99751	1849	4622	54	1.18(1.05-1.43)	
389.8157	30.795	30.882	-5	0.964	339415	78404	2022	5055	39		
391.8127	30.795	30.882	-5	0.964	278880	66037	1849	4622	36	1.22(1.05-1.43)	
389.8157	31.128	30.882	15	0.975	1998316	416793	2022	5055	206		
391.8127	31.128	30.882	15	0.975	1681186	349893	1849	4622	189	1.19(1.05-1.43)	
389.8157	31.328	30.882	27	0.981	91623	19558	2022	5055	10		
391.8127	31.328	30.882	27	0.981	86975	17444	1849	4622	9	1.05(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.827	33.754	4	1.049	15331976	5223416	16123	40307	324		
419.8220	33.827	33.754	4	1.049	34708617	11781358	30296	75740	389	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.827	33.766	4	1.000	118496417	40539818	66525	166312	609		M
409.7789	33.827	33.766	4	1.000	113207321	39737847	58120	145300	684	1.05(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.884	34.847	2	1.082	16739467	5669282	16123	40307	352		
419.8220	34.884	34.847	2	1.082	37857865	12647724	30296	75740	417	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.896	34.860	2	1.000	42244385	14272487	66525	166312	215		
409.7789	34.896	34.860	2	1.000	40362399	13686715	58120	145300	235	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.118	34.319	-12	1.009	26292201	9553235	66525	166312	144		
409.7789	34.118	34.319	-12	1.009	25019394	9233762	58120	145300	159	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.604	34.556	3	1.073	23553008	7653839	16776	41940	456		
437.8140	34.604	34.556	3	1.073	23447267	7590722	14185	35462	535	1.00(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.604	34.568	2	1.000	7772885	2532986	8254	20635	307		
425.7737	34.604	34.568	2	1.000	7457336	2476614	9506	23765	261	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.070	34.301	-14	0.985	8091028	3013960	8254	20635	365		
425.7737	34.057	34.301	-15	0.984	7743921	2878457	9506	23765	303	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.950	36.914	2	1.146	35180621	10074944	5097	12742	1977		
471.7750	36.950	36.914	2	1.146	40514632	11578991	4986	12465	2322	0.87(0.76-1.02)	
OCDF											
441.7428	37.046	37.010	2	1.003	32215701	9306699	3147	7867	2957		
443.7399	37.046	37.010	2	1.003	36549944	10658175	3582	8955	2975	0.88(0.76-1.02)	
OCDD											
457.7377	36.962	36.926	2	1.000	81718761	23060839	8513	21282	2709		
459.7348	36.962	36.926	2	1.000	91498242	25857286	8965	22412	2884	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Inject. Date: 14-Aug-2021 22:46:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 29

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	62962662	16276812

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	62962662	16276812

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.025	42633839	9198072	53935943	11749405	149.8	0.79	
16.298	152961605	34807908	191937737	43494805	535.0	0.80	
16.585	243322895	51825773	308169521	66134354	855.4	0.79	
16.812	229612706	64188636	292529660	83048392	809.9	0.78	
17.038	419390319	123897525	528695301	153714225	1470.6	0.79	
17.295	4773860489	888030257	5950746204	1078839826	16636	0.80	a
17.552	151337312	28438060	193930796	36012115	535.6	0.78	
18.142	650450279	142986427	840563199	182604499	2312.8	0.77	
Signal Totals:							
	6663569444	1343372658	8360508361	1655597621			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15024077805	2998970279				0.80	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 23305 = (15024077805 * 100.000) / (62962662 * 1.024)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Inject. Date: 14-Aug-2021 22:46:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 29

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	24781017	2086056

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	24781017	2086056

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.792	200639353	49113631	246108268	61459931	1437.5	0.82	M
Signal Totals:							
	200639353	49113631	246108268	61459931			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	446747621	110573562				0.82	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1437.5 = (446747621 * 100.000) / (24781017 * 1.254)

QC Flag Legend

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Inject. Date: 14-Aug-2021 22:46:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 29

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	69298913	9199800
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	80018895	13609424

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	74658904	11404612

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.684	2637518	307440	260989	28335	3.73	10.11	RQ
19.684	404532	43919	260989	28335	0.8573		Empc Correction
19.987	1581417	304822	931930	186342	3.24	1.70	
Signal Totals:							
	1985949	348741	1192919	214677			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5411854	826939				3.54	RQ
	3178868	563418					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.971 = (5411854 * 100.000) / (74658904 * 1.040)
Empc Amount: 4.095 = (3178868 * 100.000) / (74658904 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Inject. Date: 14-Aug-2021 22:46:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 29

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	69298913	9199800
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	80018895	13609424

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	74658904	11404612

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.508	120581705	23898460	75833097	14959816	253.0	1.59	
22.340	10023130	1058769	6632265	674927	21.5	1.51	a
22.749	23512526	5080820	12390734	3105774	46.3	1.90	RQ
22.749	19205637	4813949	12390734	3105774	40.7		Empc Correction
23.185	3906988	1176636	2436838	718709	8.17	1.60	
23.390	85393661	19333733	53499674	12230059	178.9	1.60	
24.508	58523502	7833421	36672690	4955196	122.6	1.60	
Signal Totals:							
	297634623	58114968	187465298	36644481			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	489406810	95026320				1.61	RQa
	485099921	94759449					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 630.447 = (489406810 * 100.000) / (74658904 * 1.040)
Empc Amount: 624.899 = (485099921 * 100.000) / (74658904 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d		
Lims ID:	320-76788-A-14-A		
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Inject. Date:	14-Aug-2021 22:46:34	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	29

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	54715148	8802353

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	54715148	8802353

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
23.144	791672	264784	478928	170558	2.21	1.65	
25.135	762914	155858	612355	113847	2.40	1.25	RQ
25.135	762914	155858	492202	100553	2.19		Empc Correction
Signal Totals:							
	1554586	420642	971130	271111			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2645869	705047				1.42	RQ
	2525716	691753					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.612 = (2645869 * 100.000) / (54715148 * 1.048)
Empc Amount: 4.403 = (2525716 * 100.000) / (54715148 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Inject. Date: 14-Aug-2021 22:46:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 29

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	80592905	17377354
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	74045090	19917269
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	69905826	19223497
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	59781842	19912801

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	71081415	19107730

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.906	28179323	5393367	22971879	4441402	63.3	1.23	
30.050	14531996	2979619	11889912	2448049	32.7	1.22	
31.567	9209892	2328215	7224081	1882609	20.3	1.27	Ma
32.499	23409379	7928033	17991135	6695142	51.3	1.30	Ma
Signal Totals:							
	75330590	18629234	60077007	15467202			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	135407597	34096436				1.25	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 167.653 = (135407597 * 100.000) / (71081415 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Inject. Date: 14-Aug-2021 22:46:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 29

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	47481892	14317480
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	54493521	15709063
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	50987706	15013271

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.930	861289	130792	728632	99751	2.93	1.18	
30.795	339415	78404	278880	66037	1.14	1.22	
31.128	1998316	416793	1681186	349893	6.77	1.19	
31.328	91623	19558	86975	17444	0.3287	1.05	
Signal Totals:							
	3290643	645547	2775673	533125			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6066316	1178672				1.19	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 11.166 = (6066316 * 100.000) / (50987706 * 1.066)

Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Inject. Date: 14-Aug-2021 22:46:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 29

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	50040593	17004774
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	54597332	18317006

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	52318962	17660890

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.118	26292201	9553235	25019394	9233762	71.1	1.05	
Signal Totals:							
	26292201	9553235	25019394	9233762			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	51311595	18786997				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 71.103 = (51311595 * 100.000) / (52318962 * 1.379)

Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Inject. Date: 14-Aug-2021 22:46:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 29

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	47000275	15244561

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	47000275	15244561

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.070	8091028	3013960	7743921	2878457	30.8	1.04	
Signal Totals:							
	8091028	3013960	7743921	2878457			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15834949	5892417				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 30.788 = (15834949 * 100.000) / (47000275 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.34
Area: 6632265
Amount: 22.649468
Amount Units: pg/ul

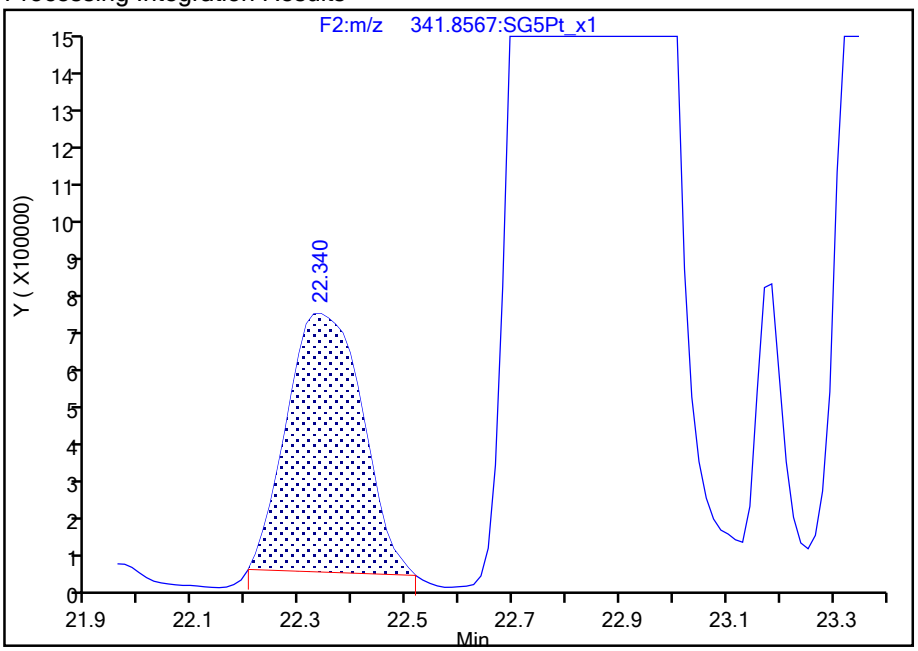

Manual Integration Results

RT: 22.90
Area: 194023850
Amount: 675.5627
Amount Units: pg/ul

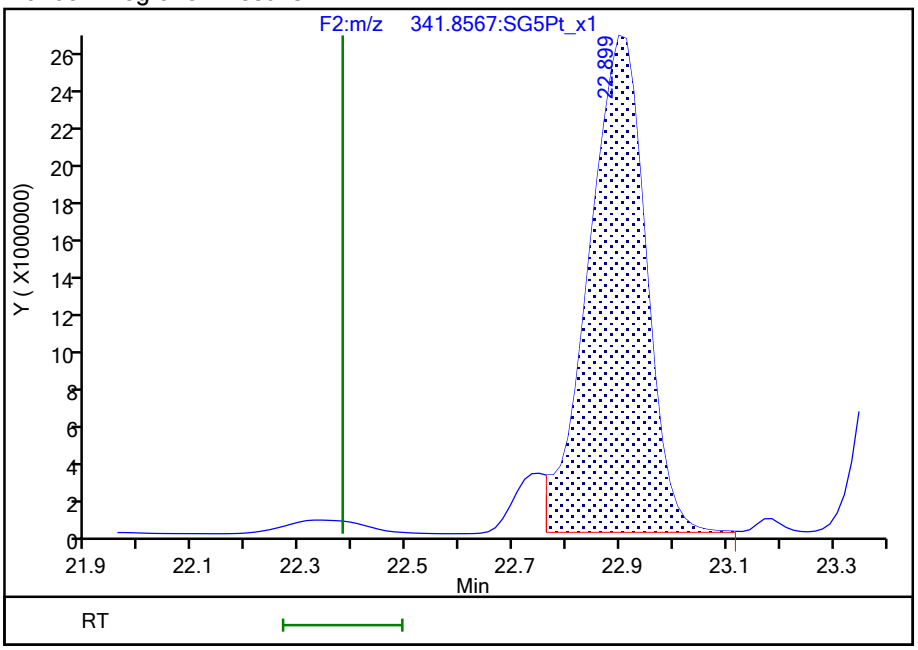

Reviewer: dadunj, 18-Aug-2021 10:17:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

RT: 22.34
Area: 16655395
Amount: 22.649468
Amount Units: pg/ul

Processing Integration Results

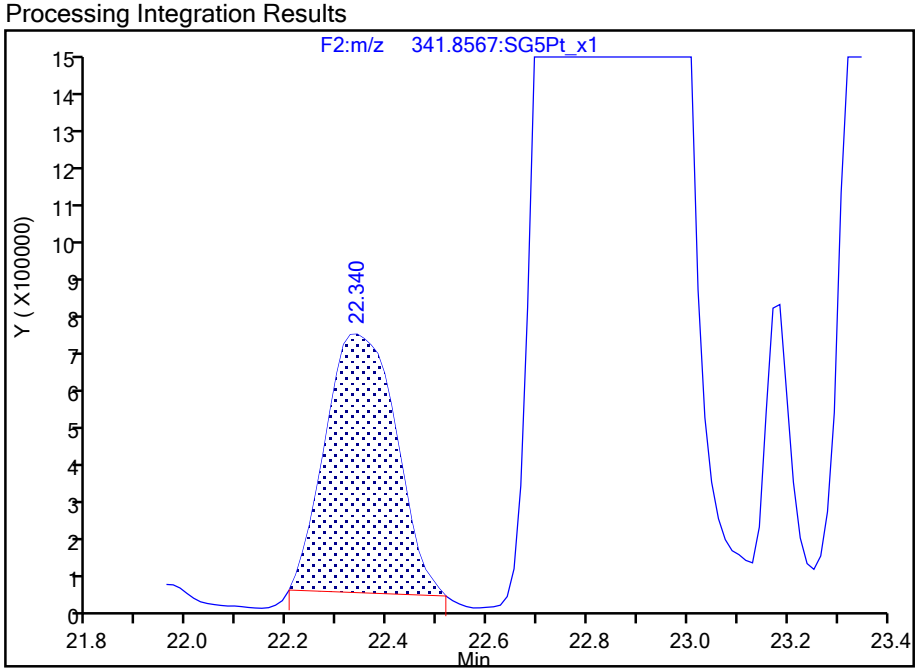

Manual Integration Results

RT: 22.91
Area: 496778251
Amount: 675.5627
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 10:17:04
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.34
Area: 10023130
Amount: 22.649468
Amount Units: pg/ul

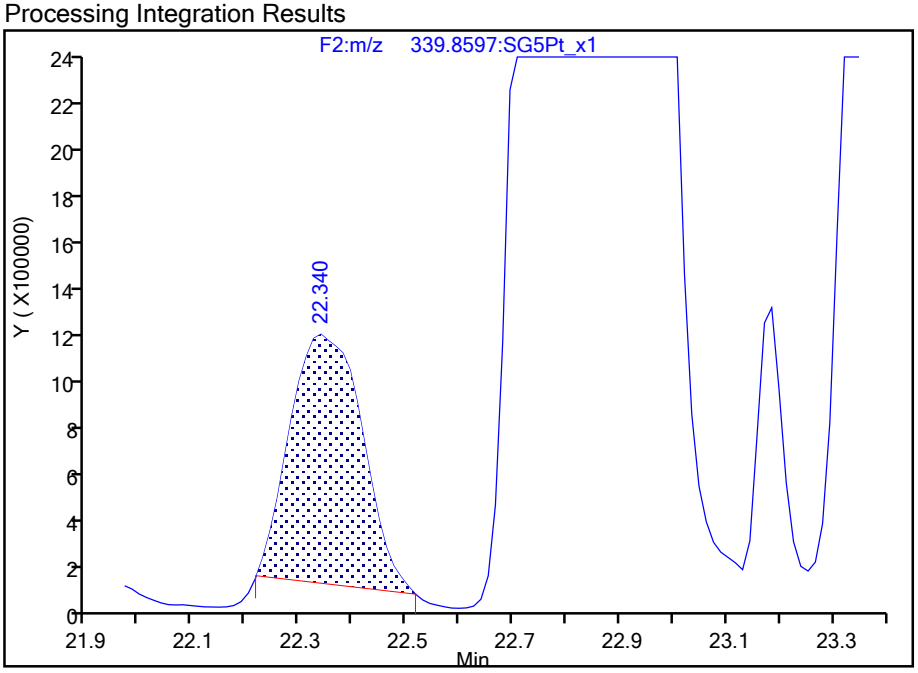

Manual Integration Results

RT: 22.91
Area: 302754401
Amount: 675.5627
Amount Units: pg/ul

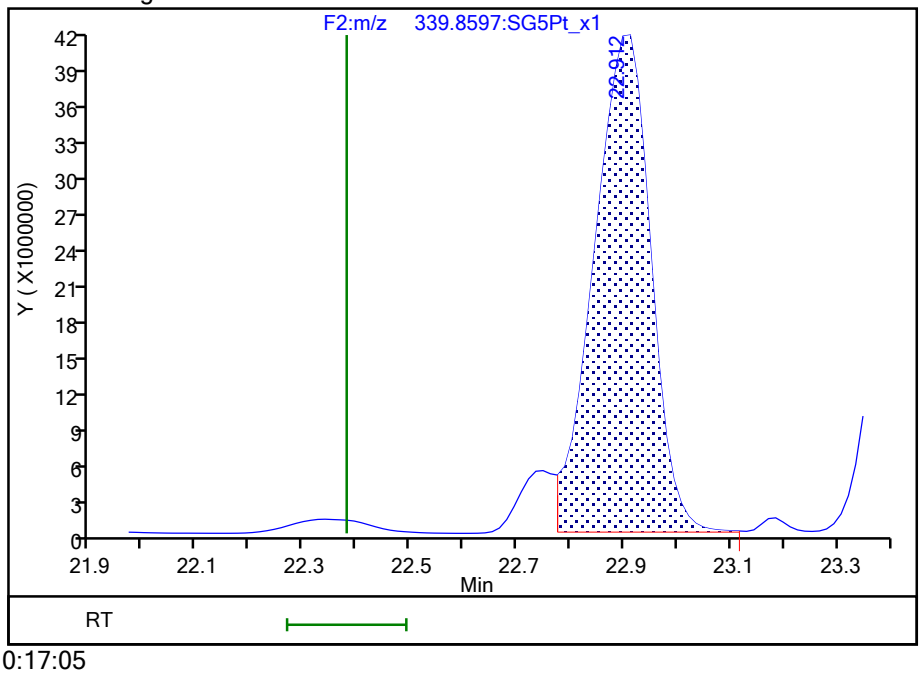

Reviewer: dadunj, 18-Aug-2021 10:17:05
Audit Action: Assigned Compound ID Audit Reason: Split Peak

779756

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Not Detected
Expected RT: 23.73

Processing Integration Results

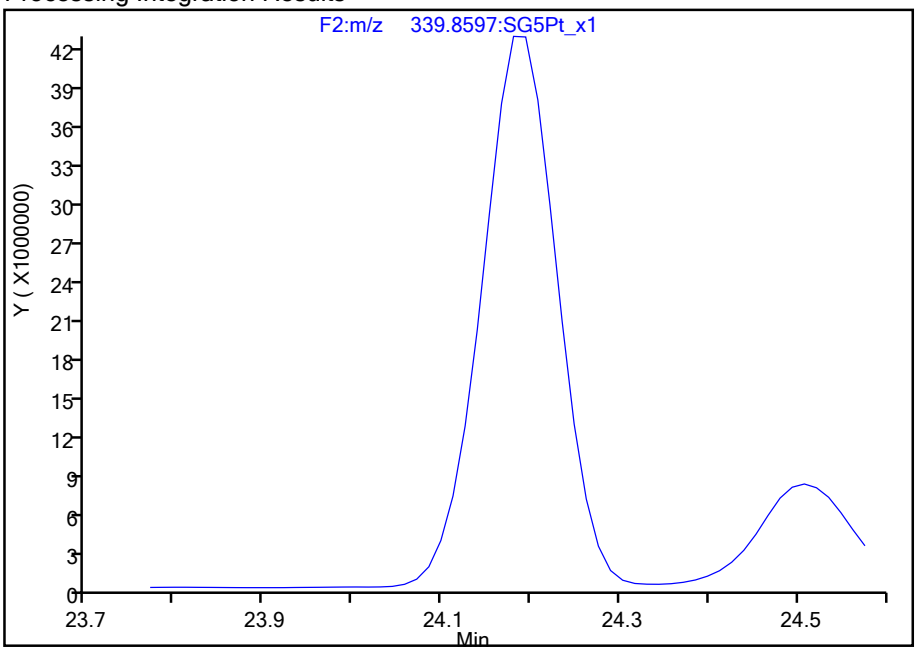

Manual Integration Results

RT: 24.18
Area: 249344323
Amount: 499.0719
Amount Units: pg/ul

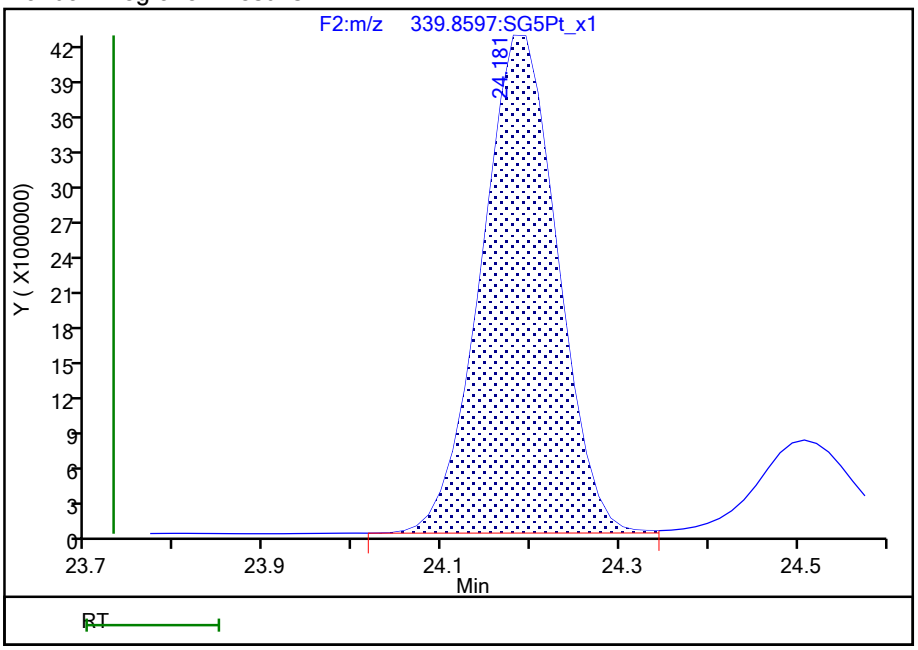

Reviewer: dadunj, 18-Aug-2021 10:17:09
Audit Action: Assigned Compound ID Audit Reason: Split Peak

779757

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.45

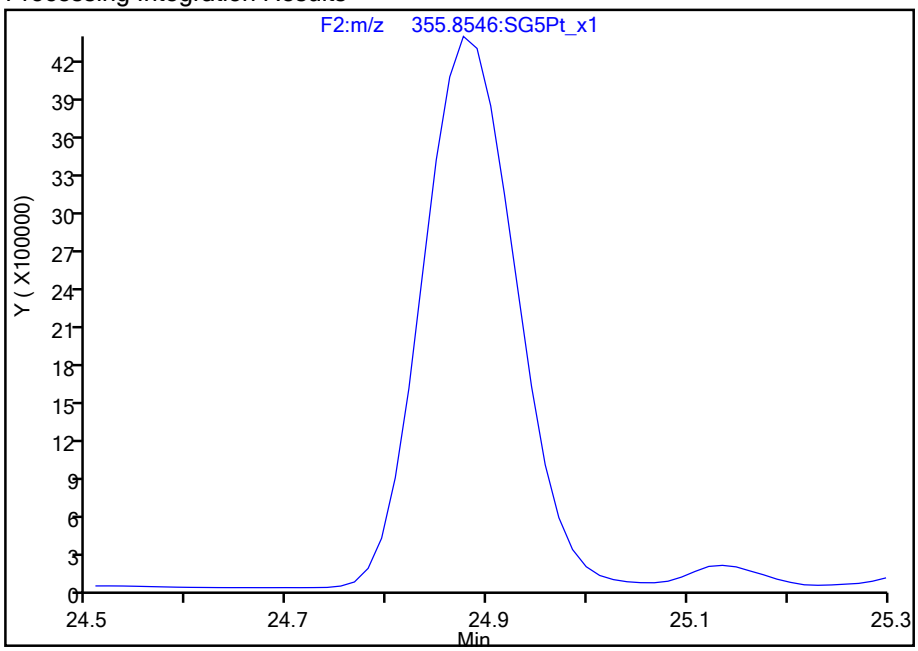

Manual Integration Results

RT: 24.88
Area: 27780993
Amount: 78.662283
Amount Units: pg/ul

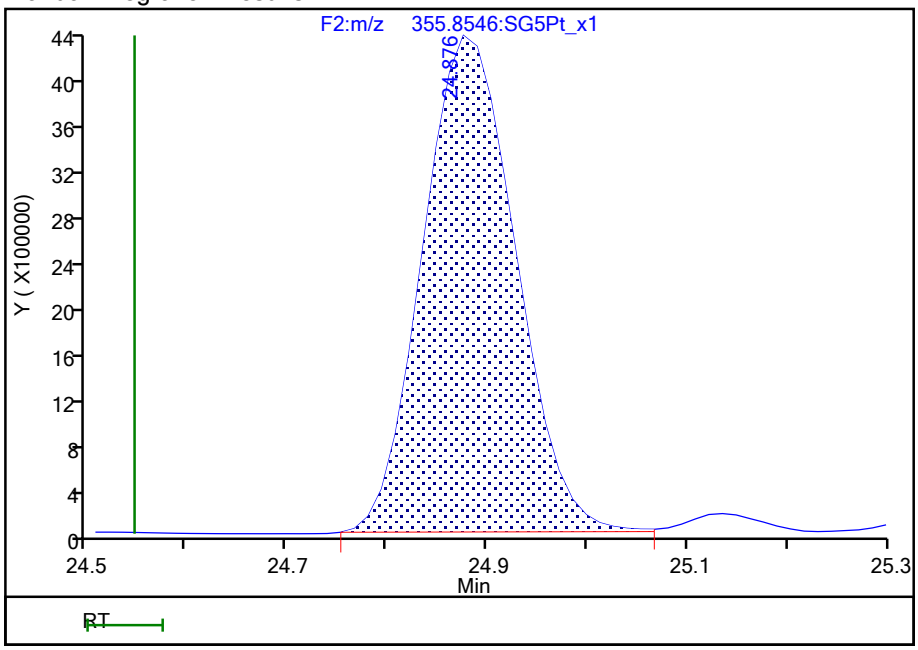

Reviewer: dadunj, 18-Aug-2021 10:17:42
Audit Action: Assigned Compound ID Audit Reason: Split Peak

779758

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.53

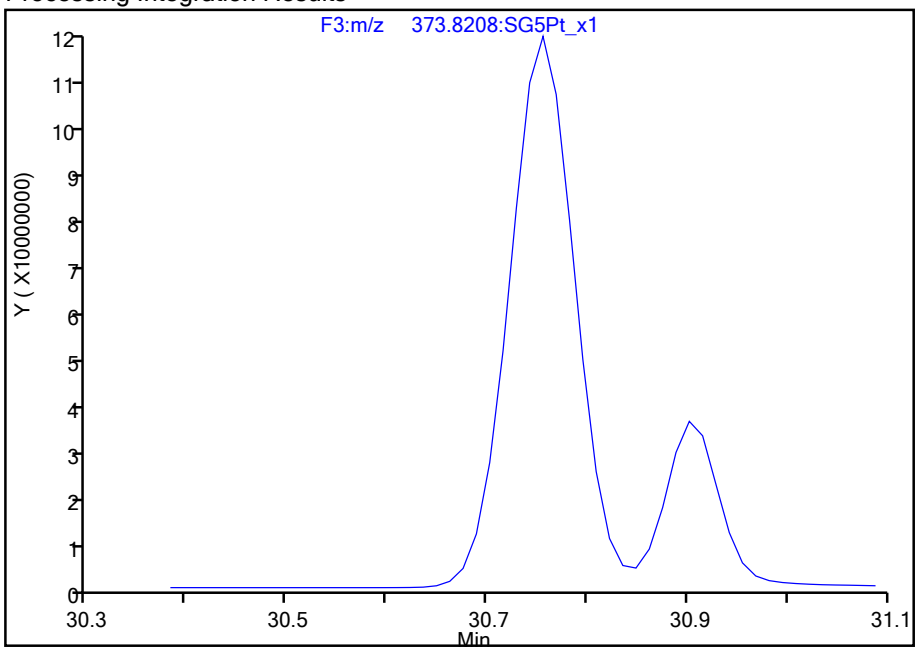

Manual Integration Results

RT: 30.76
Area: 519187030
Amount: 1084.5537
Amount Units: pg/ul

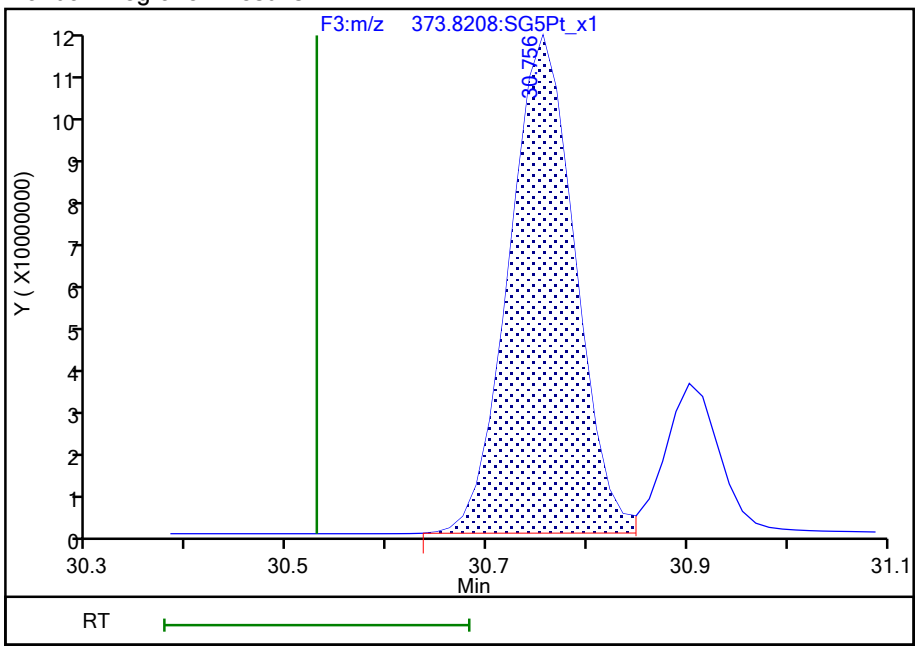

Reviewer: dadunj, 18-Aug-2021 10:17:56
Audit Action: Assigned Compound ID Audit Reason: Split Peak

779759

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.76
Area: 519187030
Amount: 1137.5984
Amount Units: pg/ul

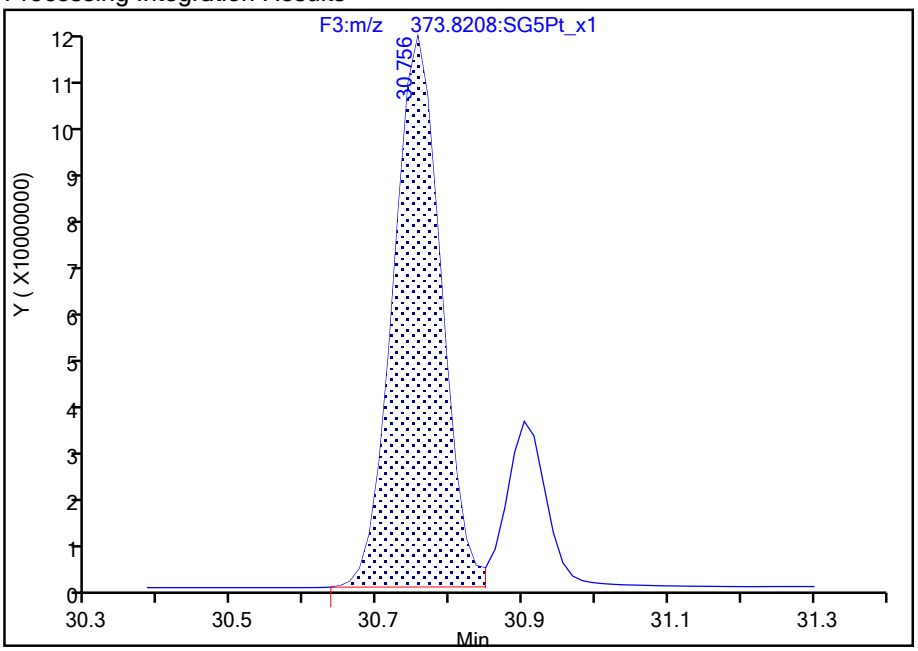

Manual Integration Results

RT: 30.90
Area: 130298630
Amount: 284.8130
Amount Units: pg/ul

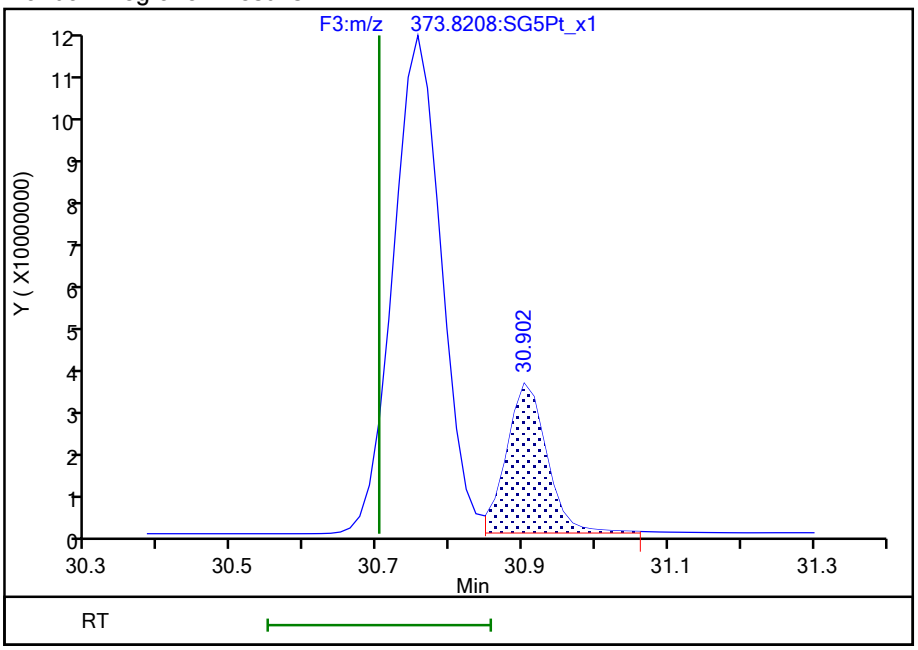

Reviewer: dadunj, 18-Aug-2021 10:18:02

Audit Action: Assigned Compound ID Audit Reason: Split Peak

779760

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-2,3,4,6,7,8-HxCDF, CAS: 116843-05-1

Signal: 1

Not Detected
Expected RT: 31.51

Processing Integration Results

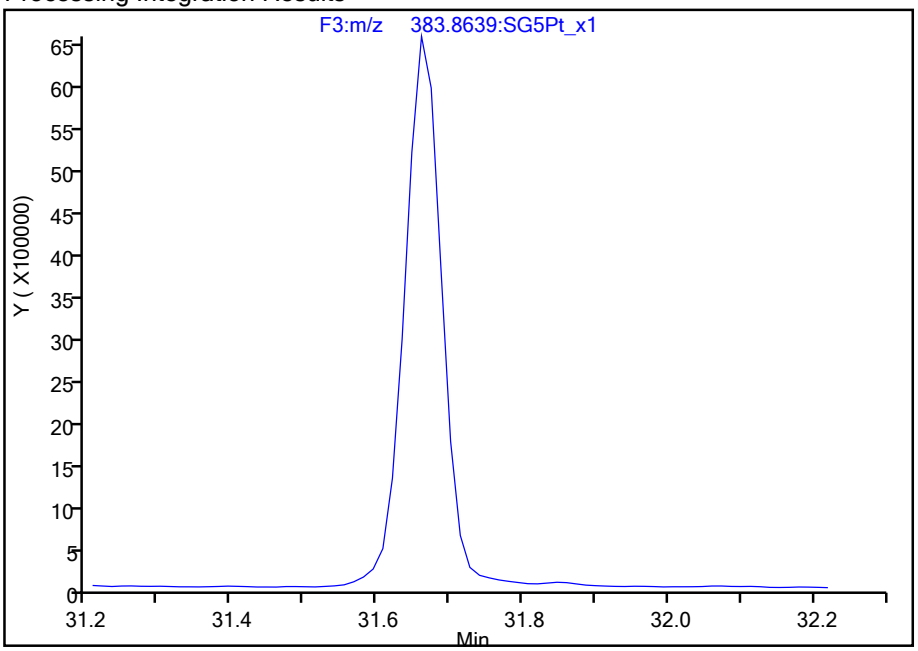

Manual Integration Results

RT: 31.66
Area: 24124481
Amount: 58.723228
Amount Units: pg/ul

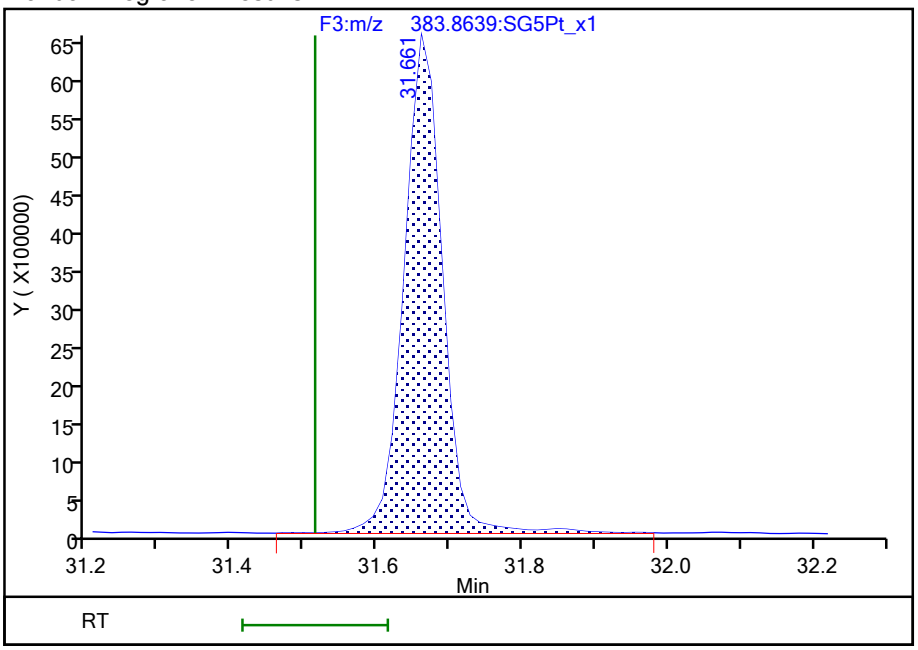

Reviewer: dadunj, 18-Aug-2021 10:18:07
Audit Action: Assigned Compound ID Audit Reason: Split Peak

779761

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.67
Area: 21584244
Amount: 48.048263
Amount Units: pg/ul

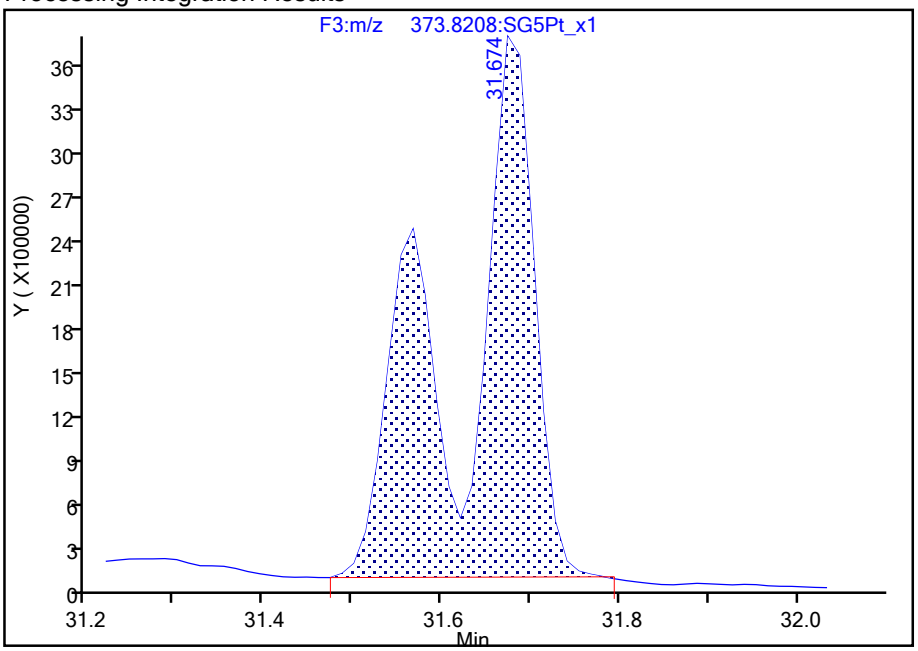

Manual Integration Results

RT: 31.67
Area: 12374852
Amount: 27.913648
Amount Units: pg/ul

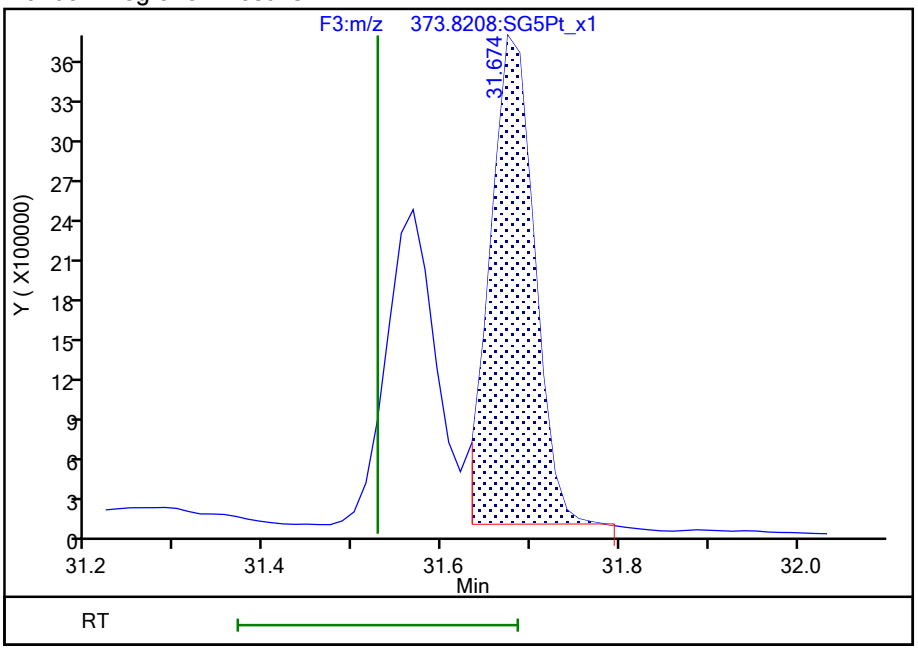

Reviewer: dadunj, 18-Aug-2021 10:18:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.67
Area: 17631685
Amount: 48.048263
Amount Units: pg/ul

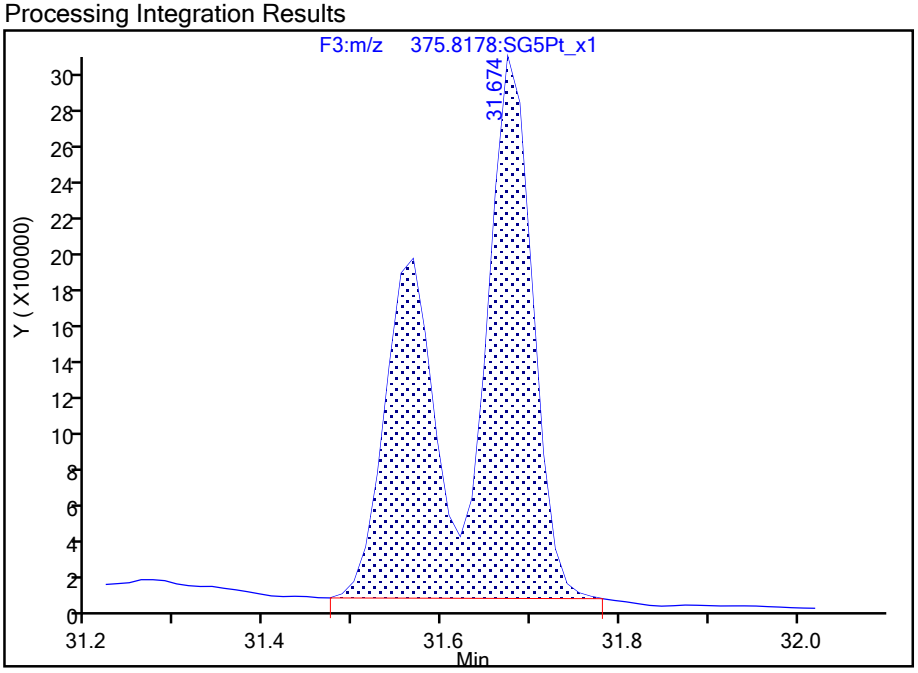

Manual Integration Results

RT: 31.67
Area: 10407650
Amount: 27.913648
Amount Units: pg/ul

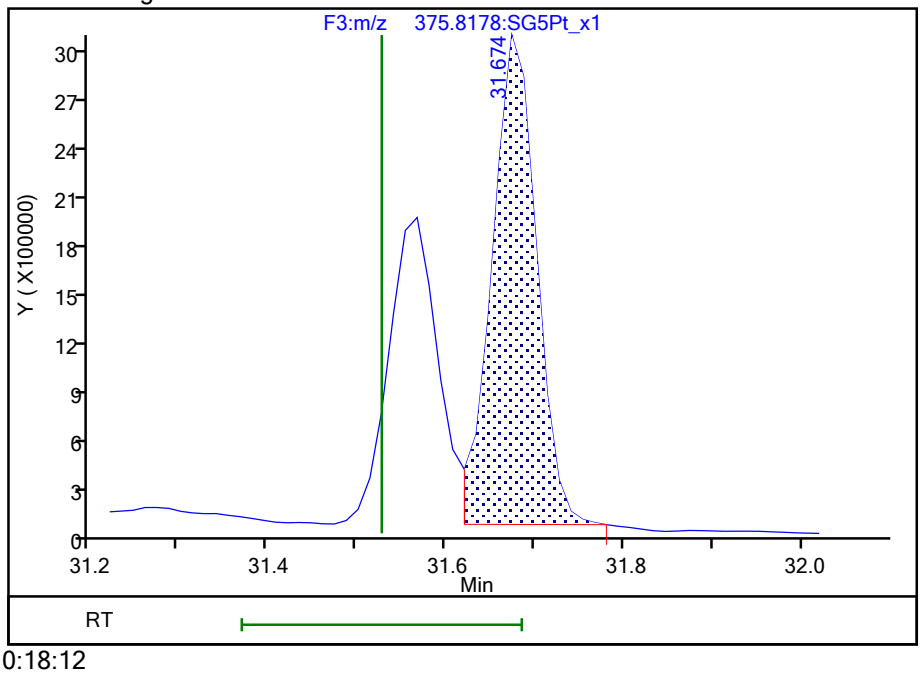

Reviewer: dadunj, 18-Aug-2021 10:18:12
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779763

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,7,8,9-HxCDF, CAS: 116843-04-0

Signal: 1

Processing Integration Results

RT: 31.66
Area: 24124481
Amount: 0
Amount Units: pg/ul

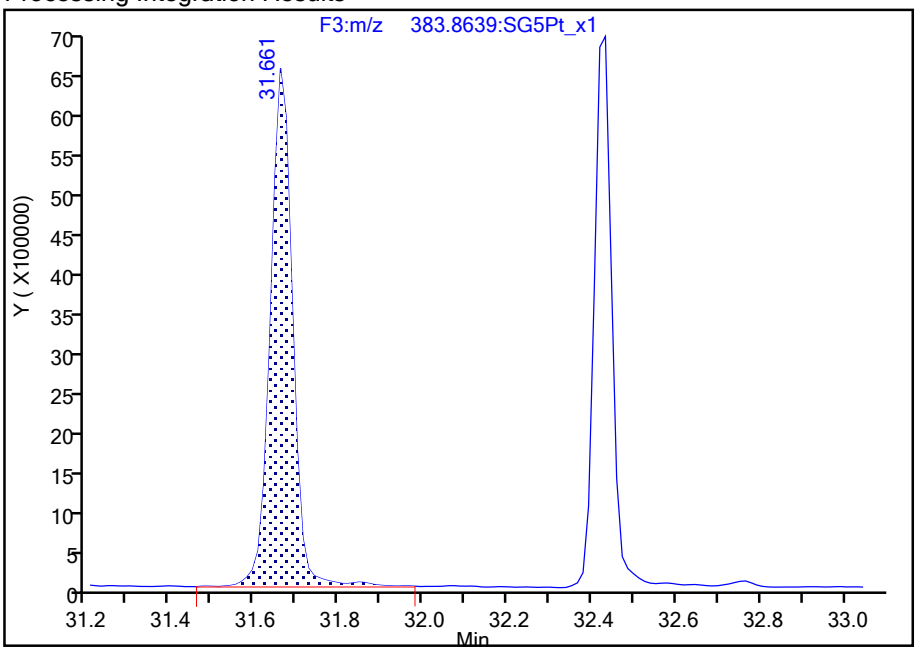

Manual Integration Results

RT: 32.43
Area: 20916275
Amount: 55.209754
Amount Units: pg/ul

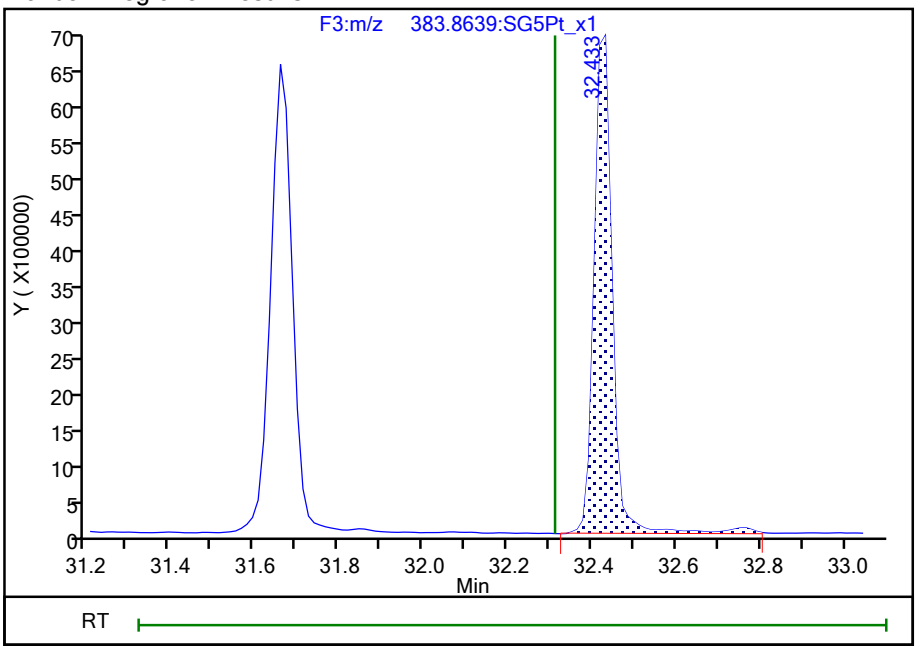

Reviewer: dadunj, 18-Aug-2021 10:18:15

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 32.33

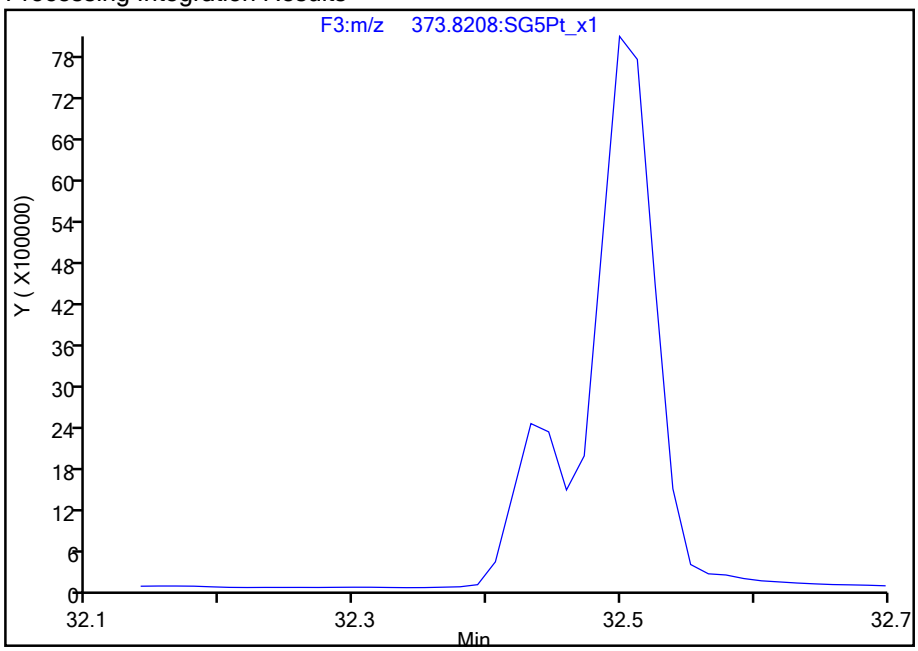

Manual Integration Results

RT: 32.43
Area: 5499491
Amount: 16.094586
Amount Units: pg/ul

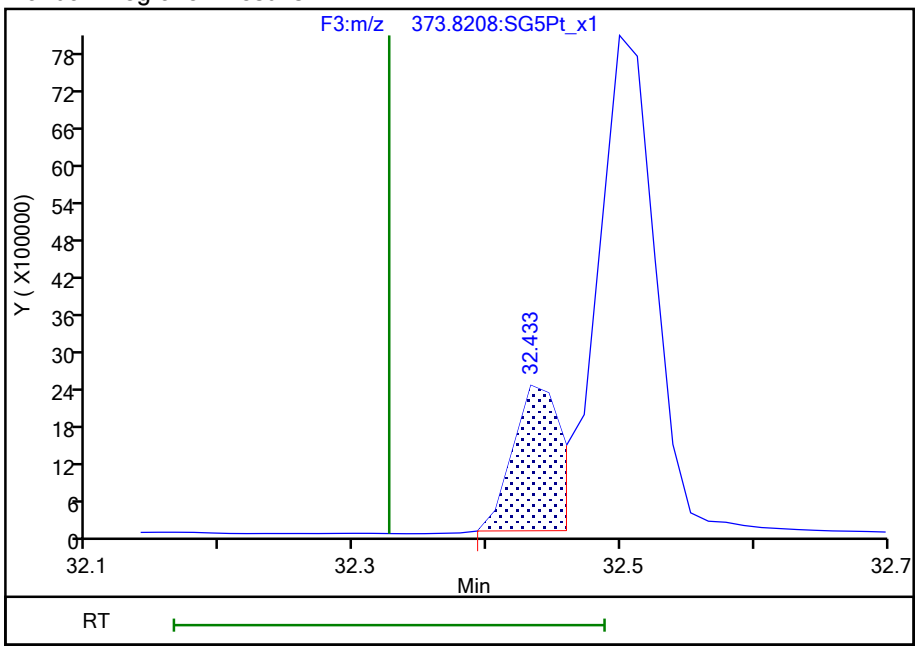

Reviewer: dadunj, 18-Aug-2021 10:18:22
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779765

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Not Detected
Expected RT: 32.33

Processing Integration Results

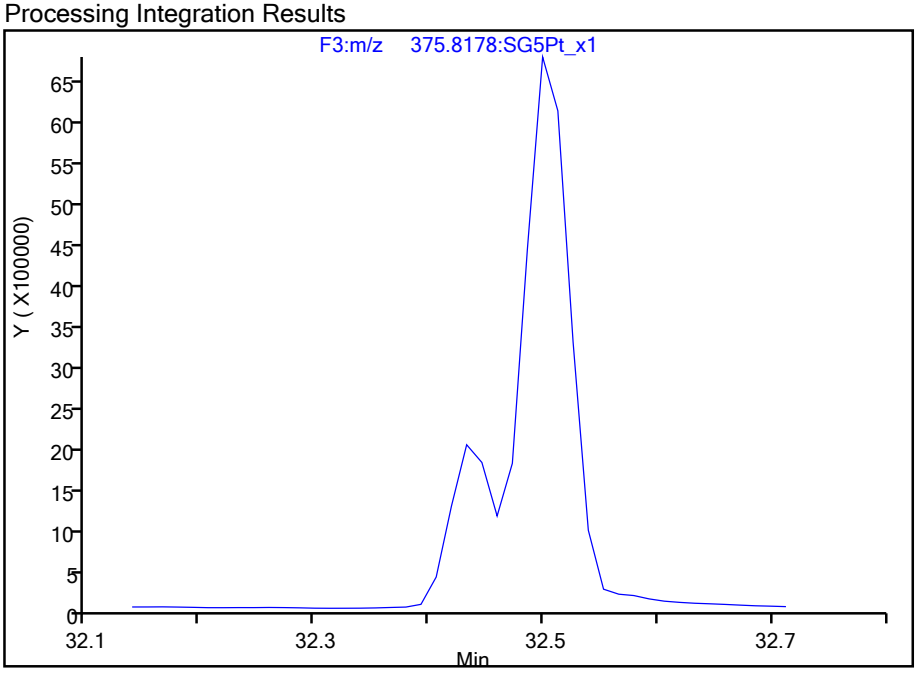

RT: 32.43
Area: 5722722
Amount: 16.094586
Amount Units: pg/ul

Manual Integration Results

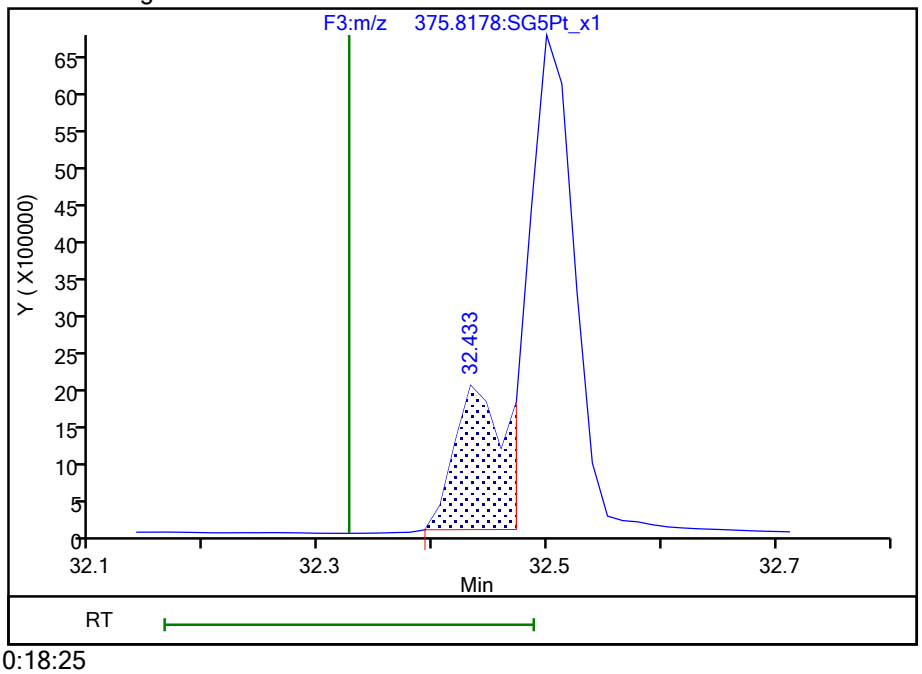

Reviewer: dadunj, 18-Aug-2021 10:18:25
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779766

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

Not Detected
RT: 27.94- 32.45

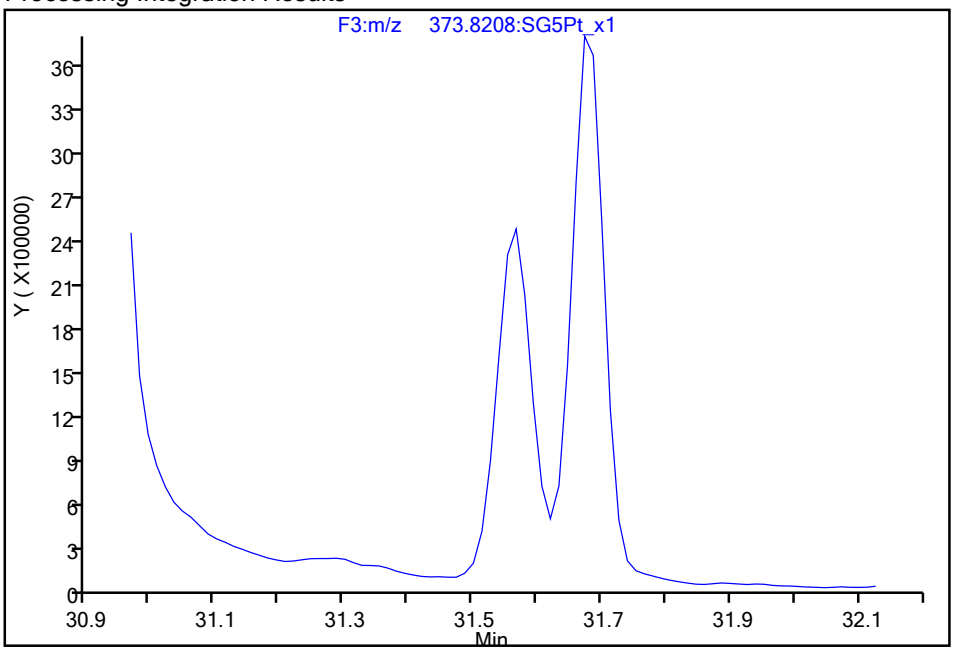

Manual Integration Results

RT = 31.567 Area = 9209892 M

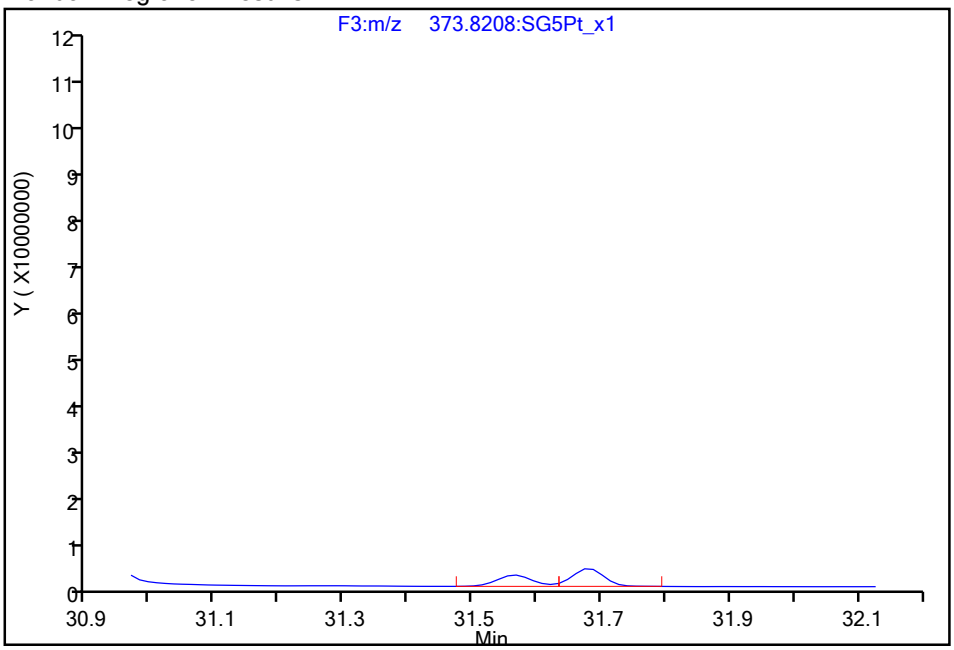

Reviewer: dadunj, 18-Aug-2021 10:18:39

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.499 Area = 28906160

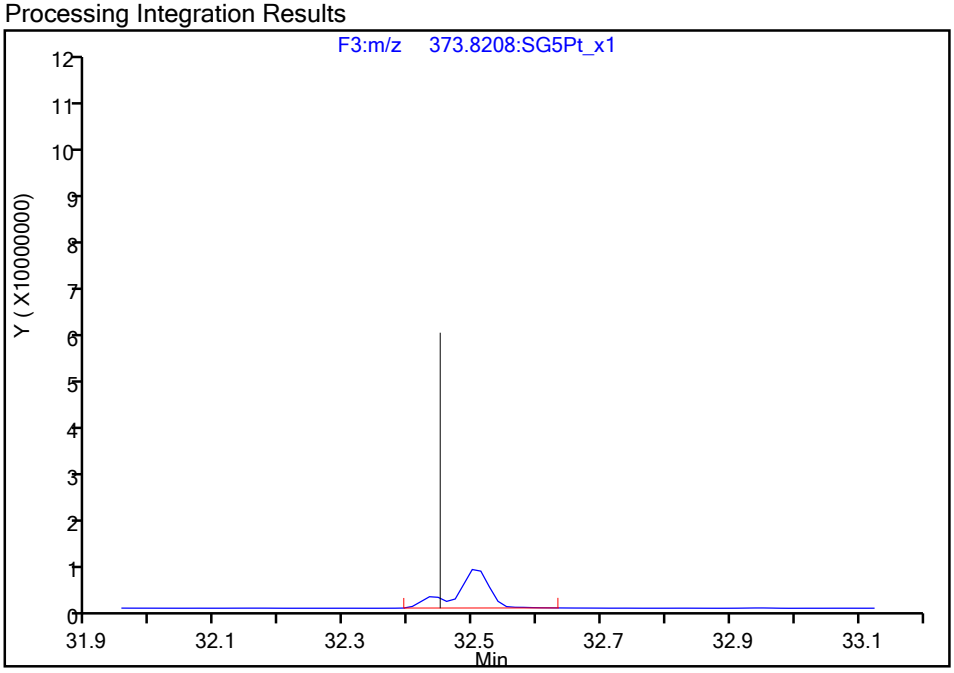

Manual Integration Results

RT = 32.499 Area = 23409379 M

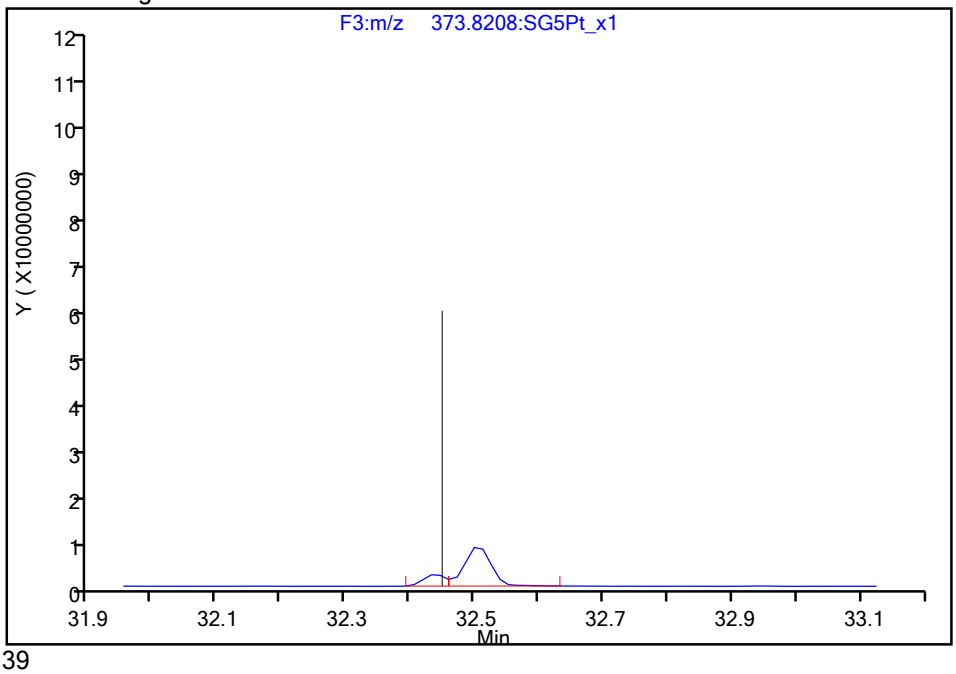

Reviewer: dadunj, 18-Aug-2021 10:18:39

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.83
Area: 120031993
Amount: 325.4118
Amount Units: pg/ul

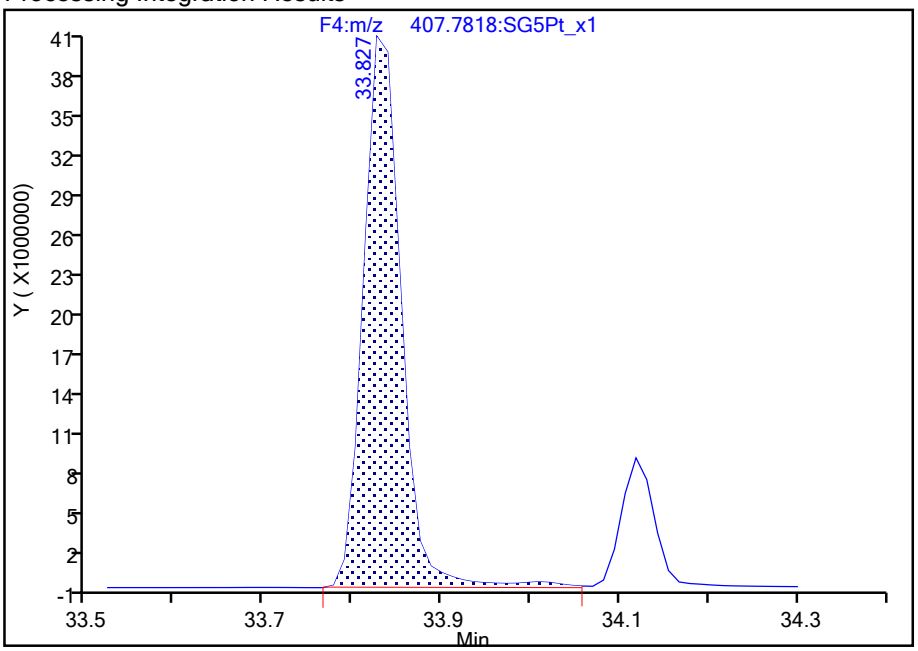

Manual Integration Results

RT: 33.83
Area: 118496417
Amount: 321.2616
Amount Units: pg/ul

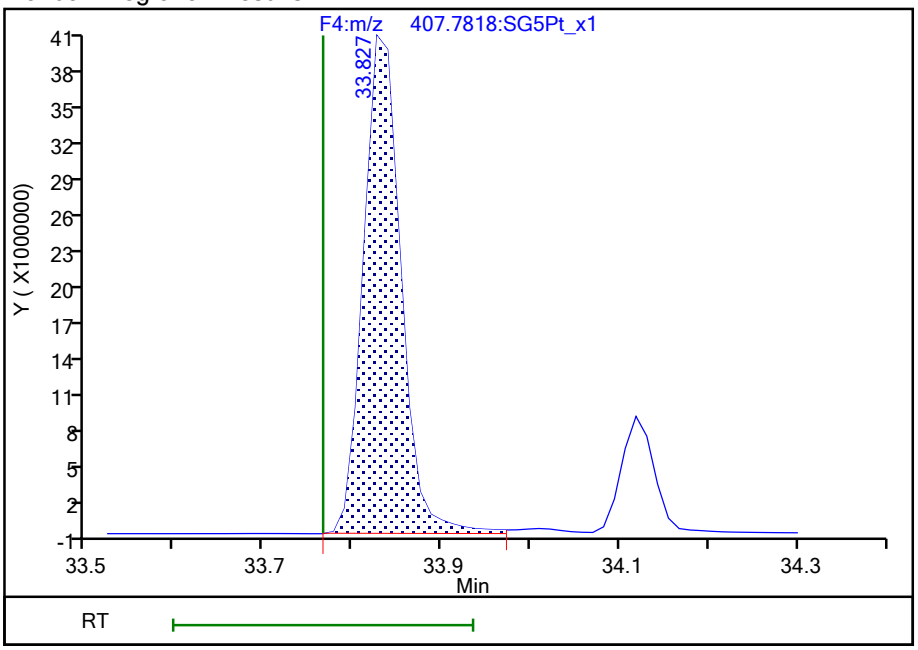

Reviewer: dadunj, 18-Aug-2021 10:19:00

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d				
Injection Date:	14-Aug-2021 22:46:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	40	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.83
Area: 114665002
Amount: 325.4118
Amount Units: pg/ul

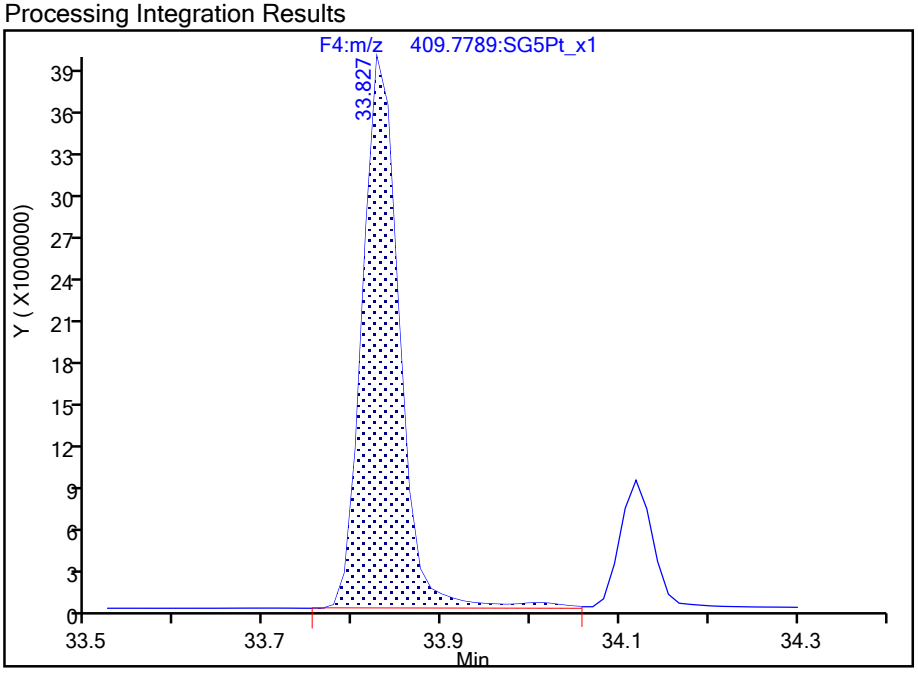

Manual Integration Results

RT: 33.83
Area: 113207321
Amount: 321.2616
Amount Units: pg/ul

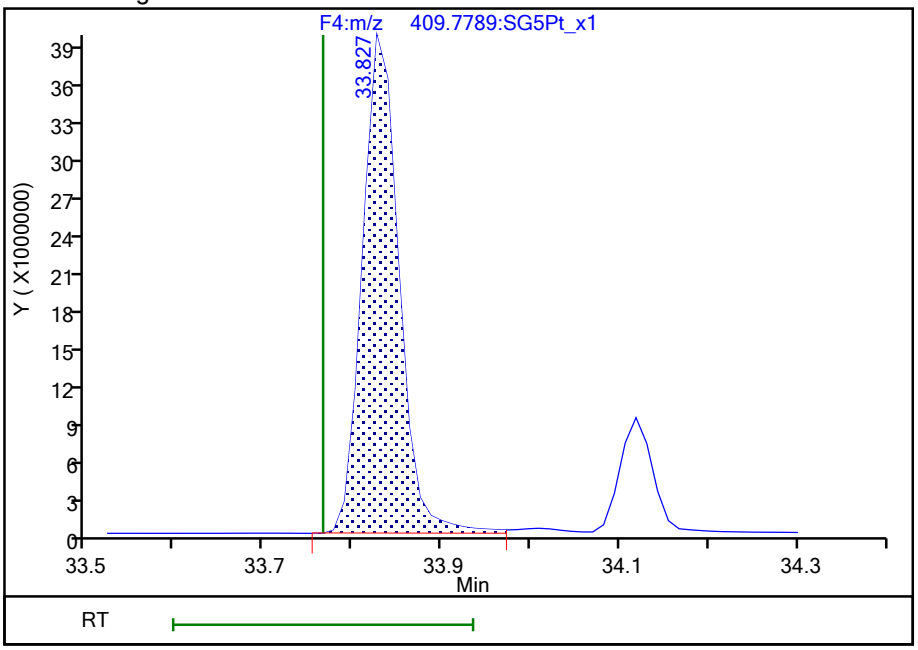

Reviewer: dadunj, 18-Aug-2021 10:19:01
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779770

Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d		
Injection Date:	14-Aug-2021 22:46:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	516846	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

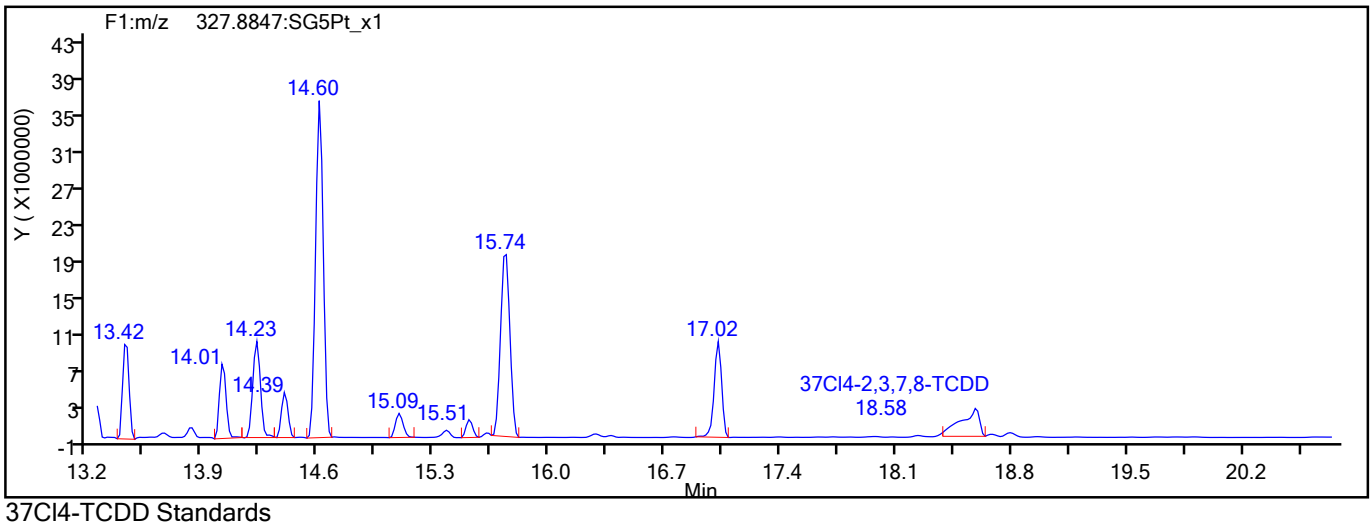

37Cl4-TCDD Standards

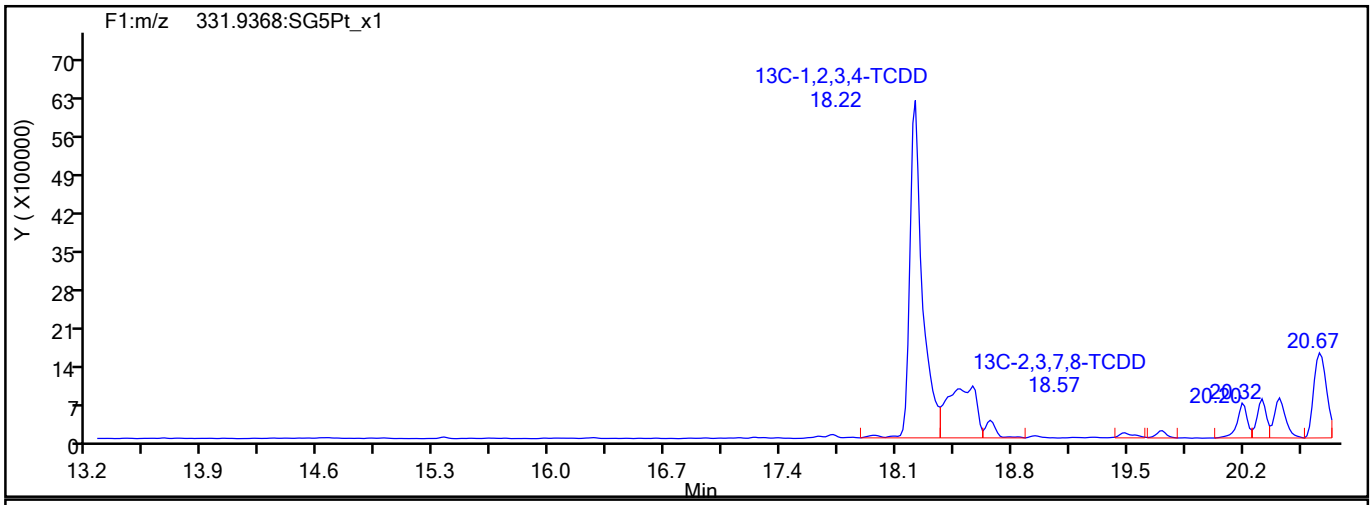

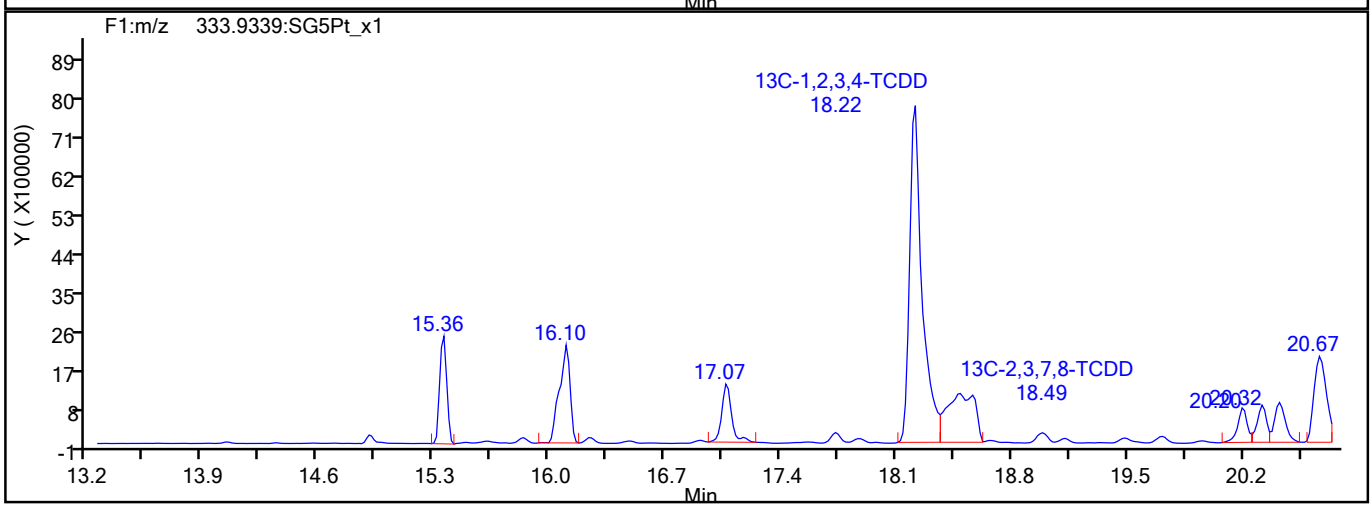

779771

Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	516846	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

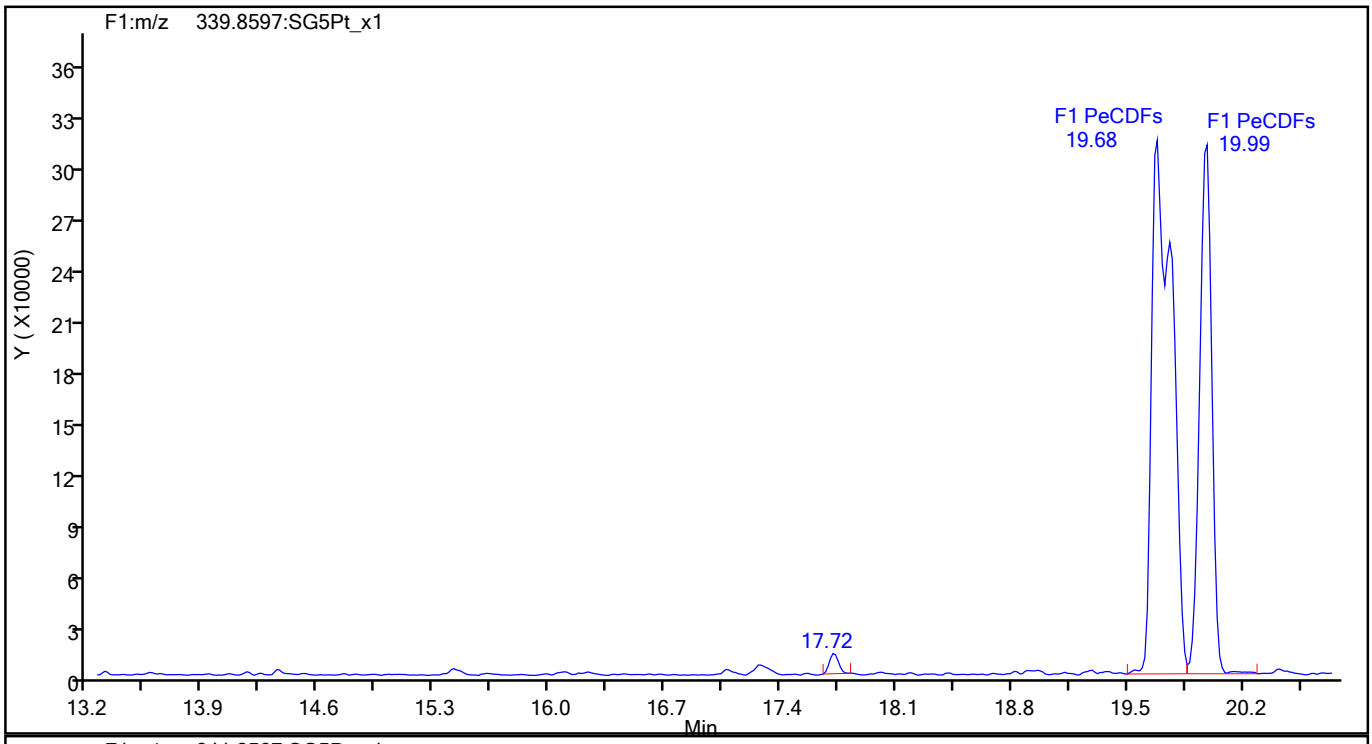

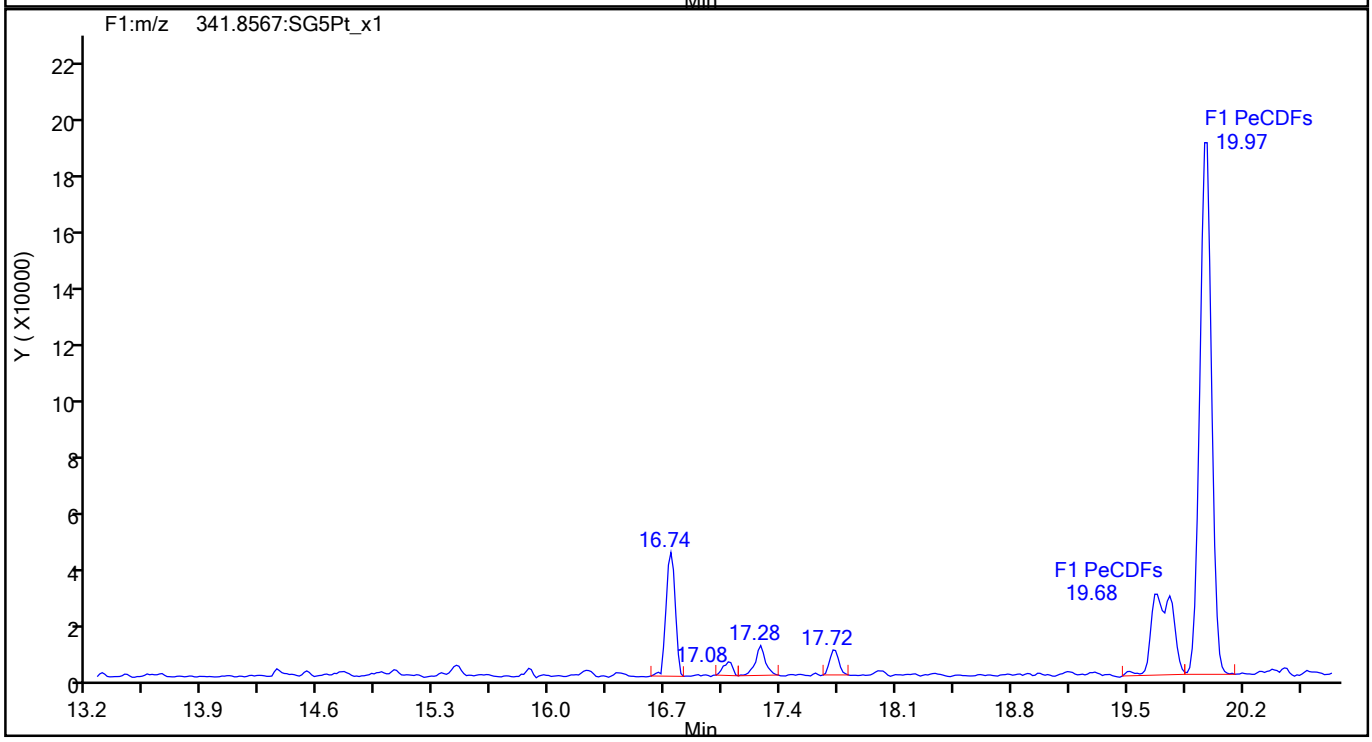

779772

Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

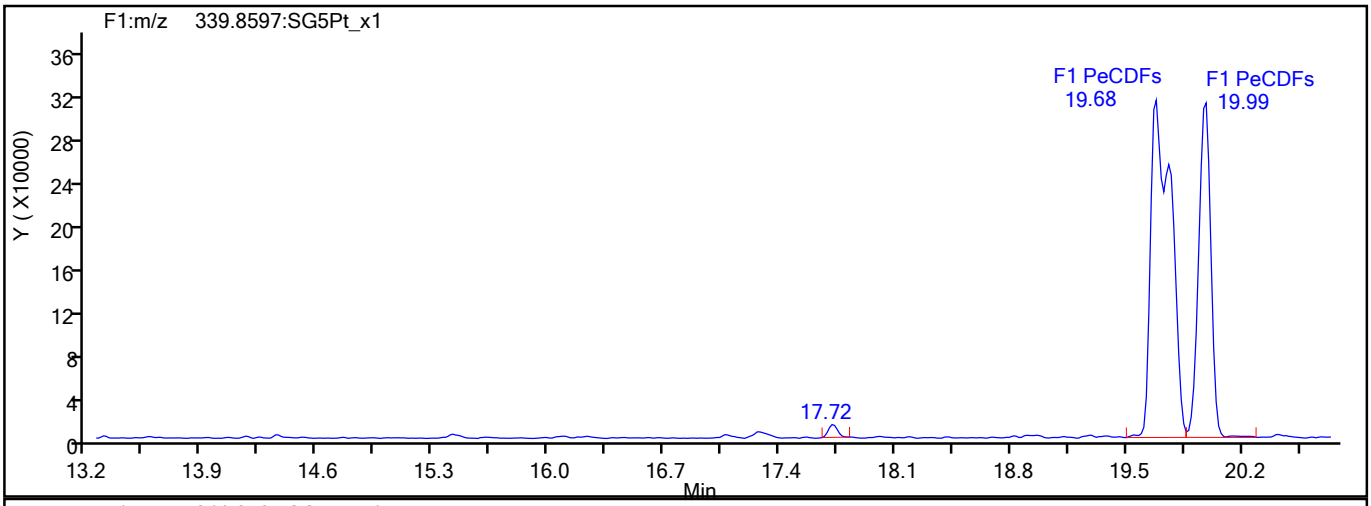

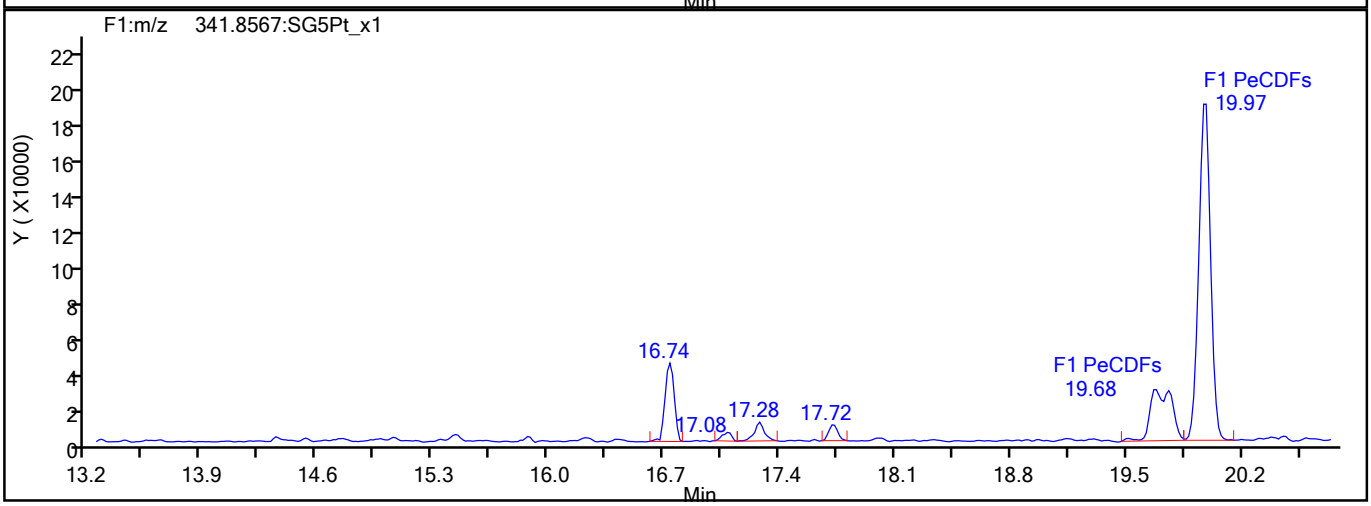

F1 PeCDFs Interference Mass

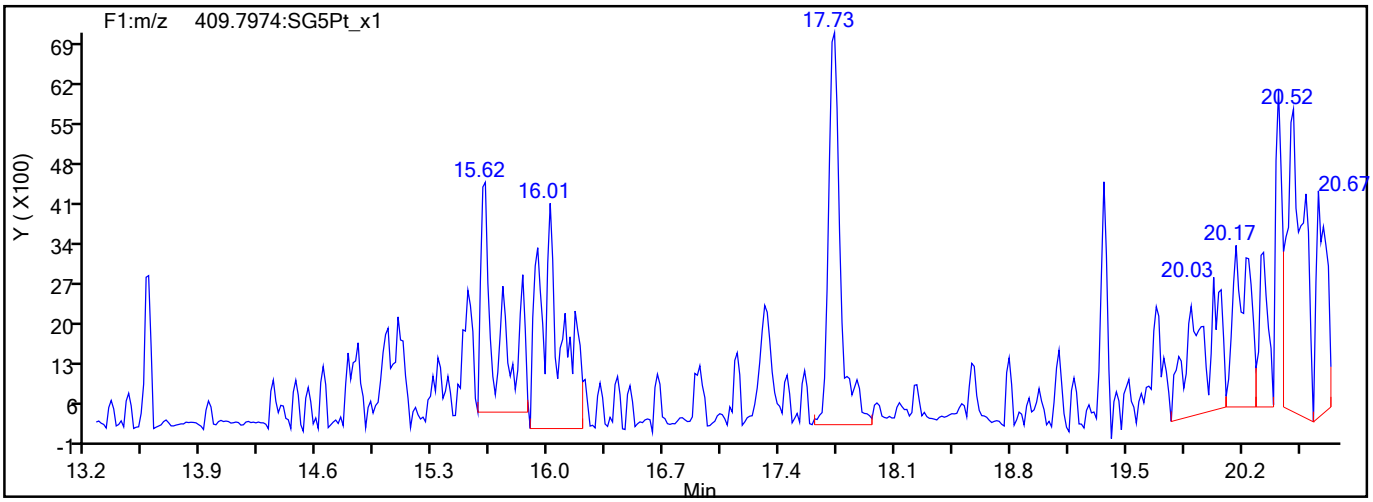

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Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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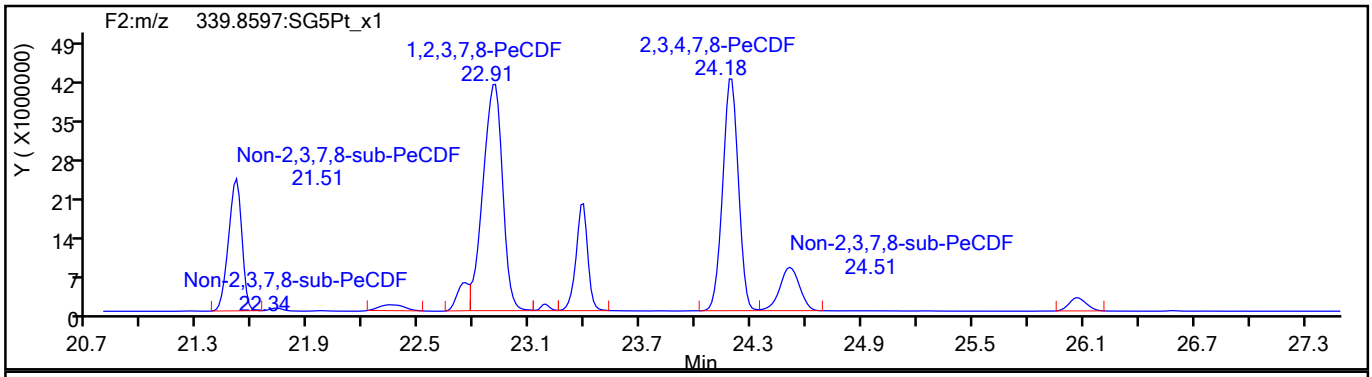

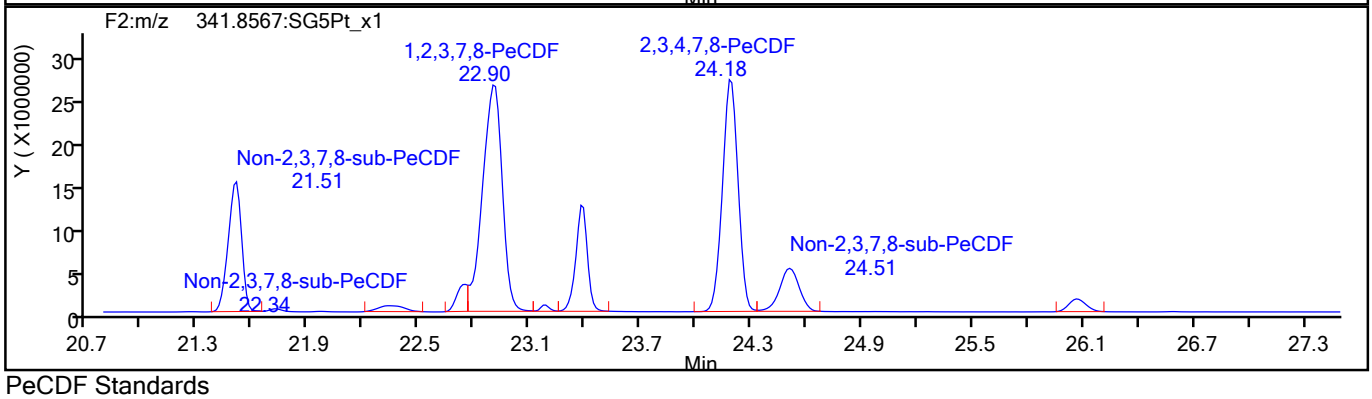

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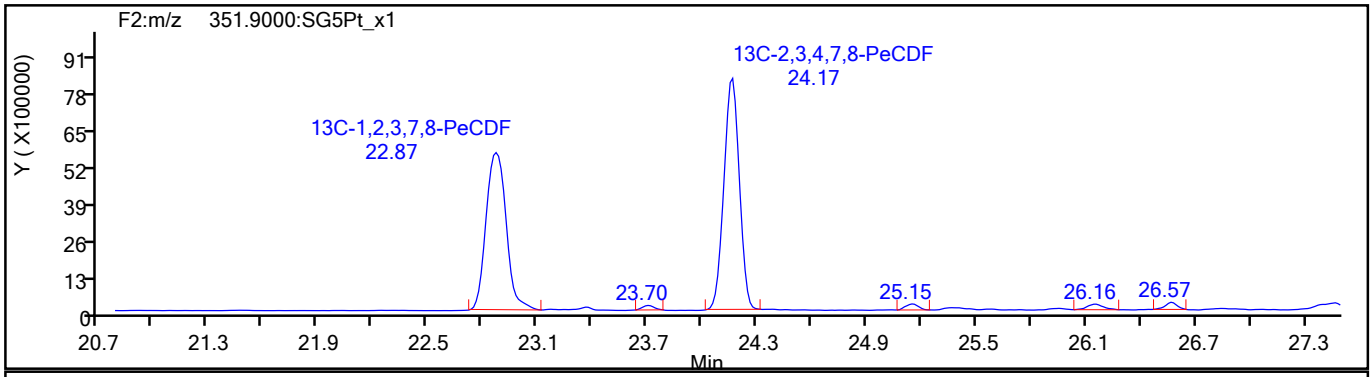

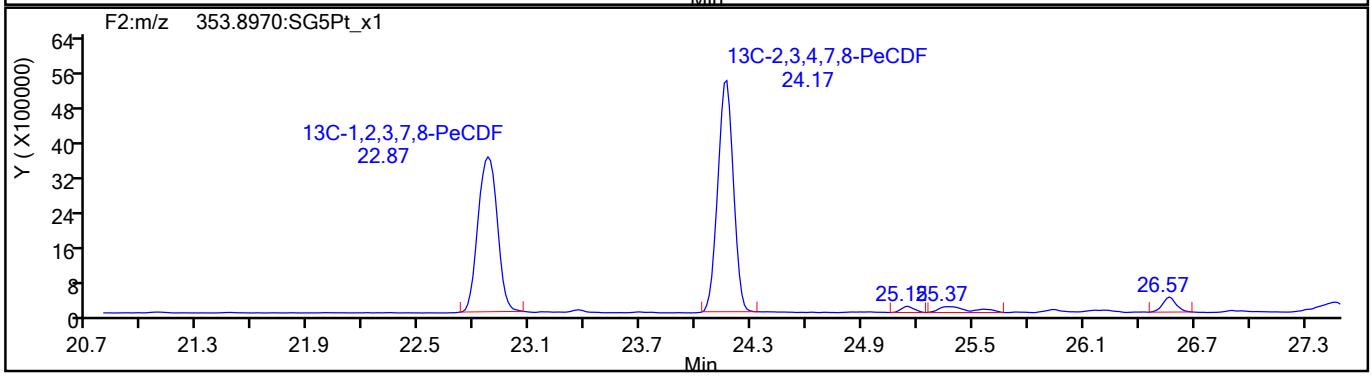

779774

Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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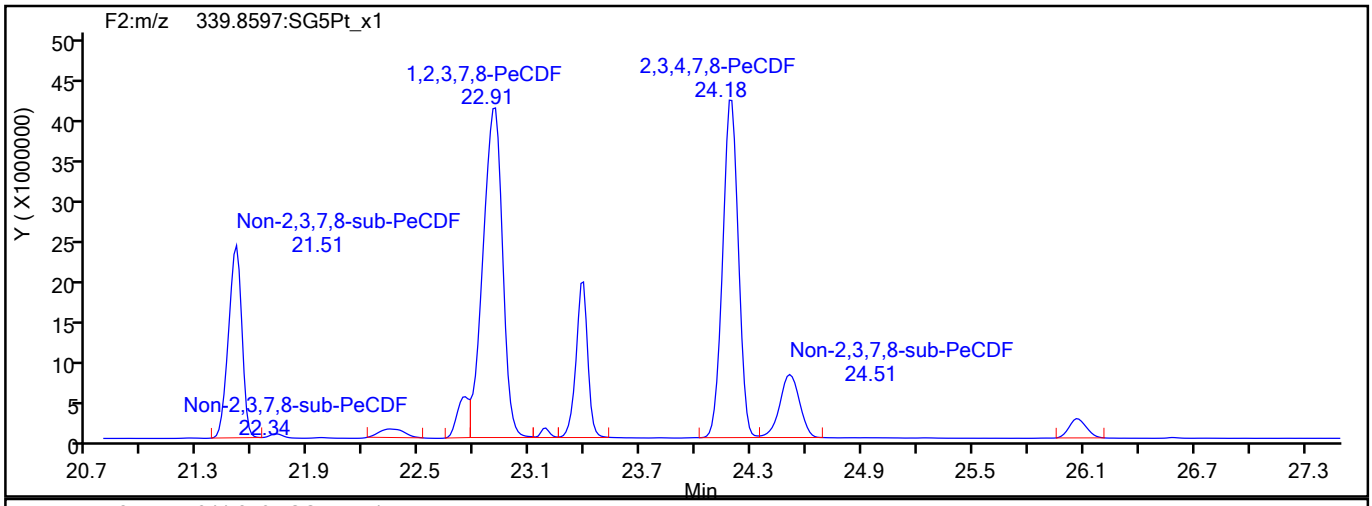

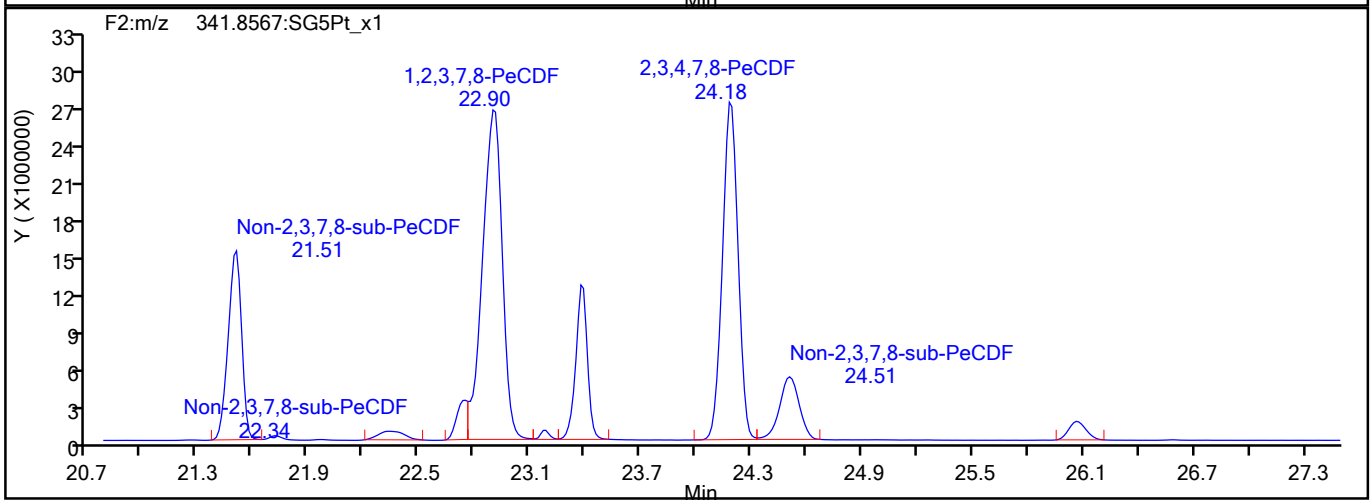

PeCDF Interference Mass

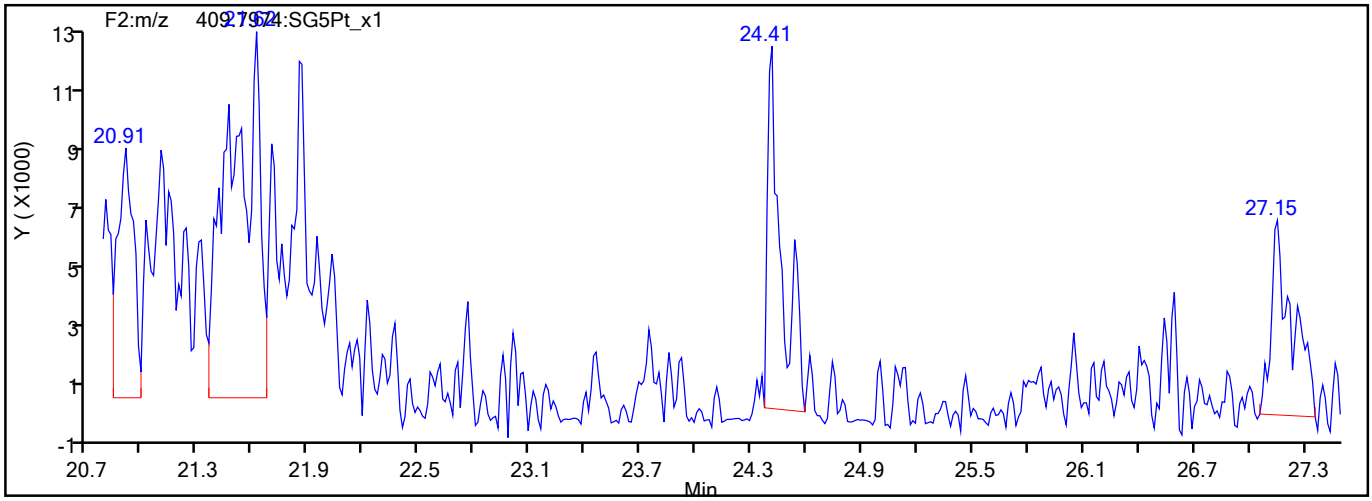

779775

Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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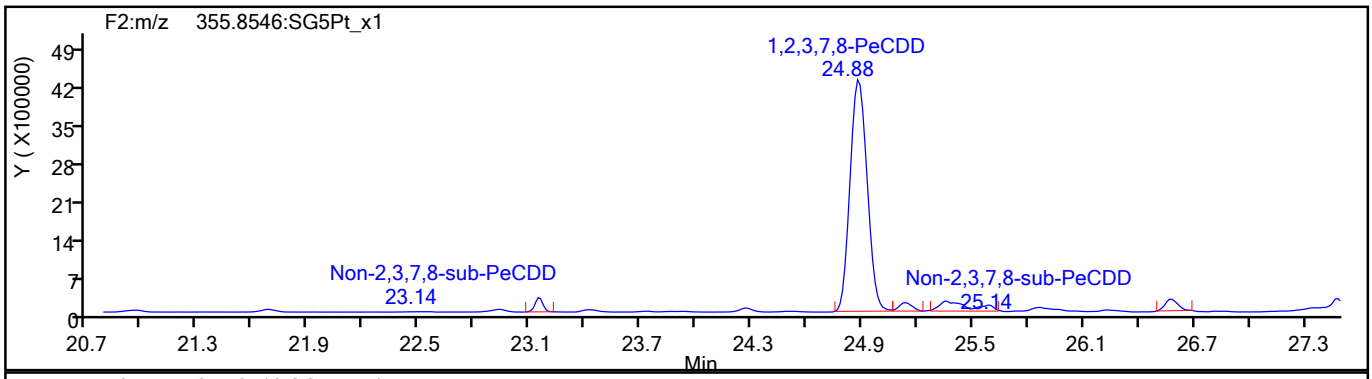

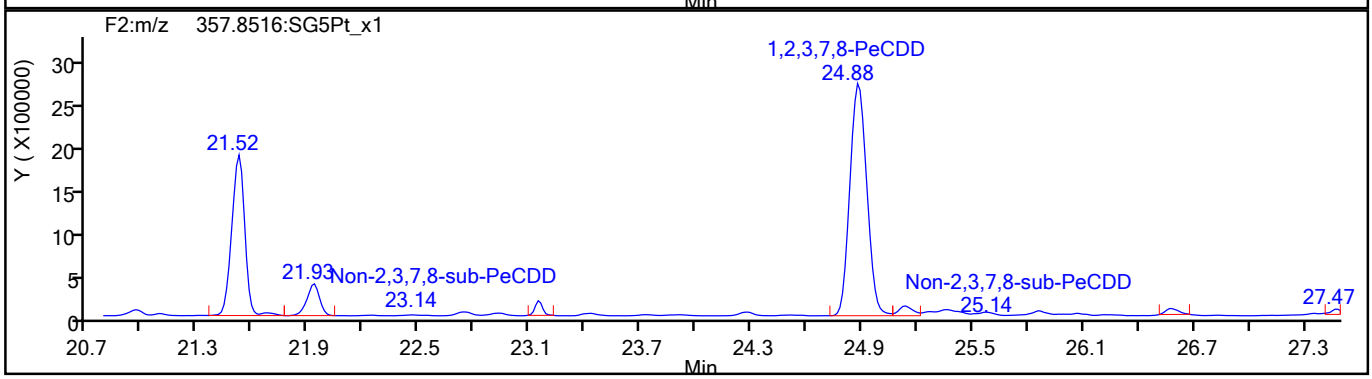

PeCDD Standards

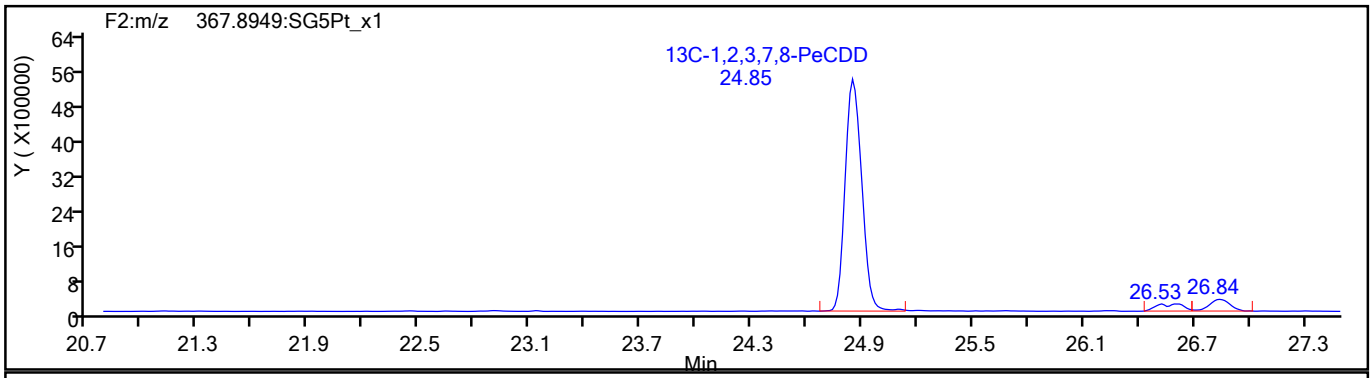

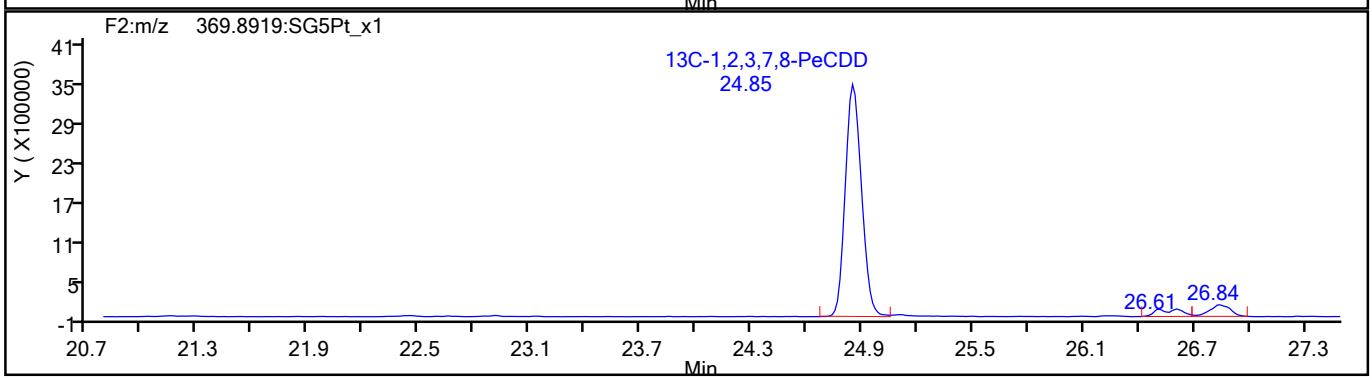

779776

Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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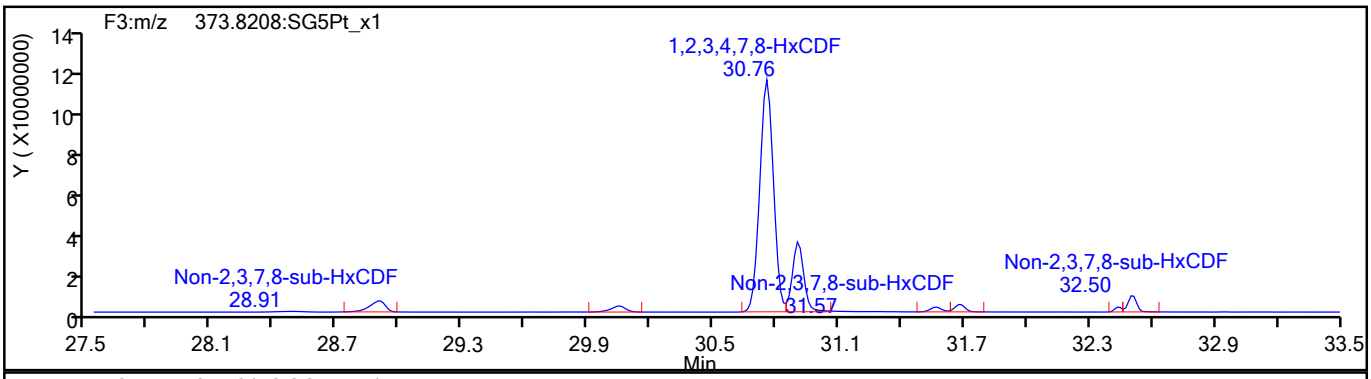

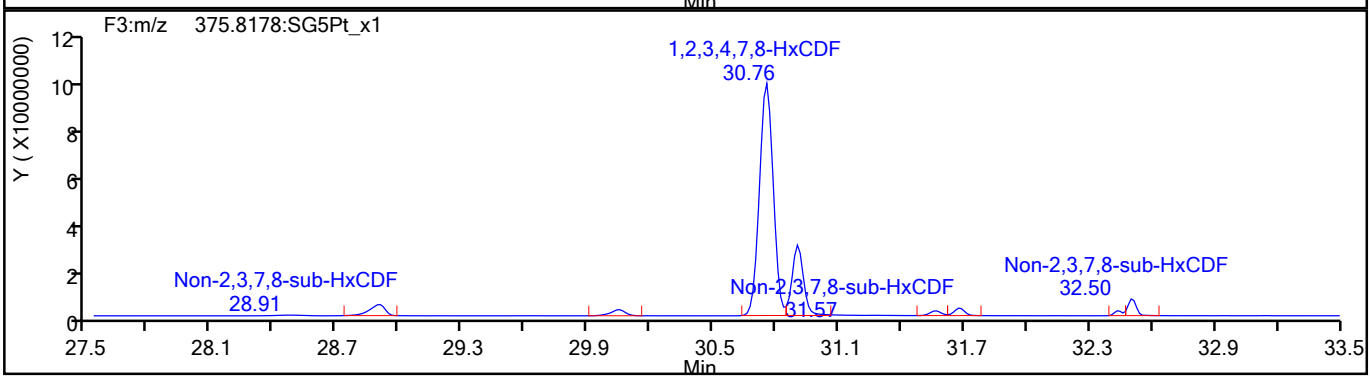

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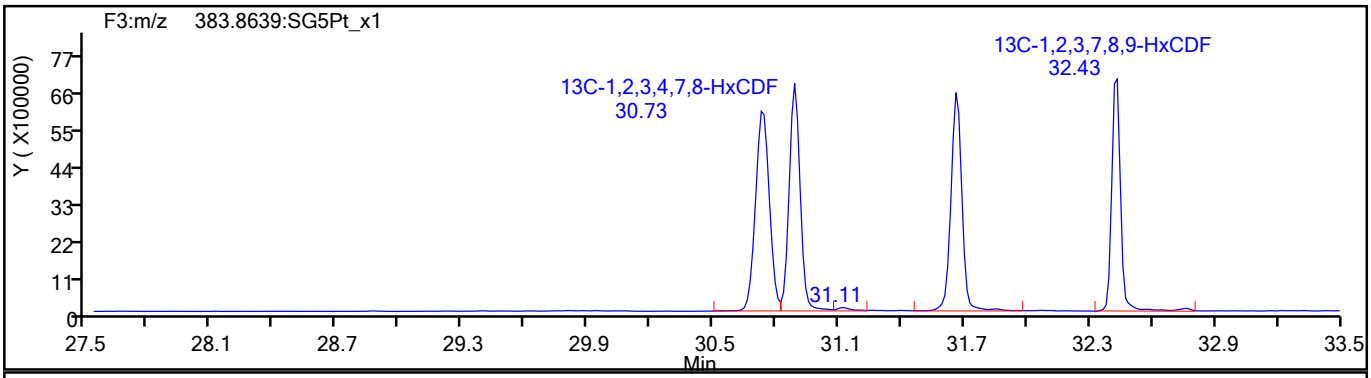

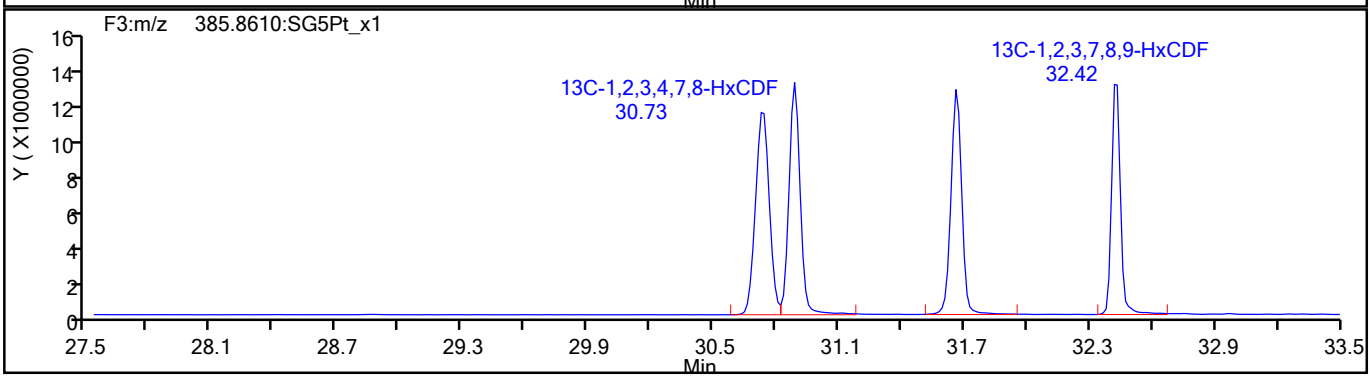

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Report Date: 18-Aug-2021 07:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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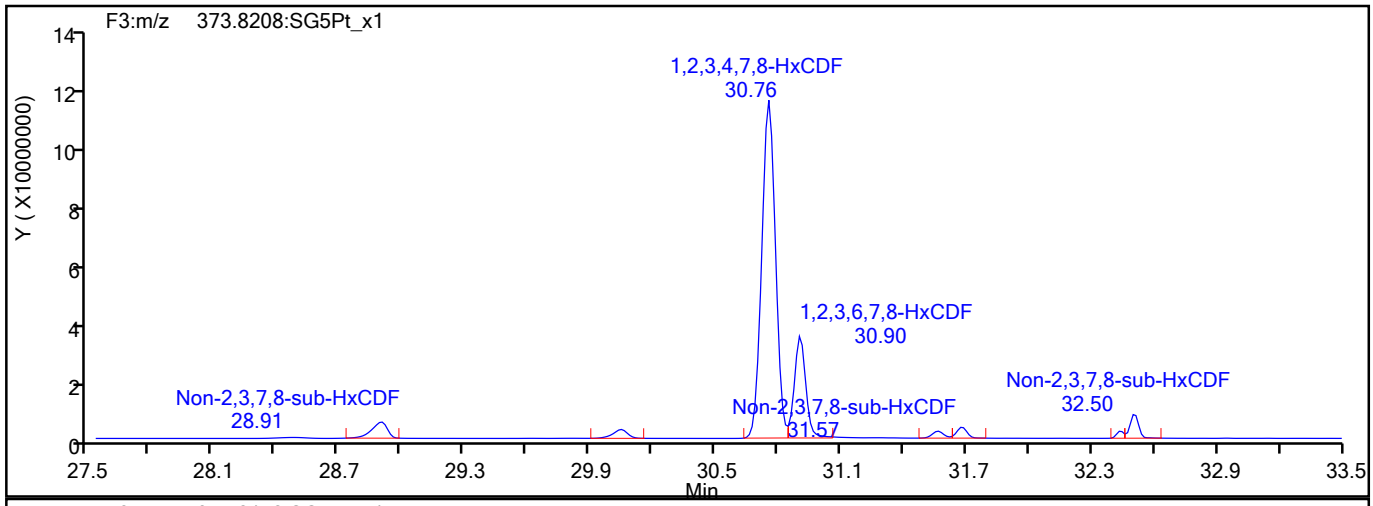

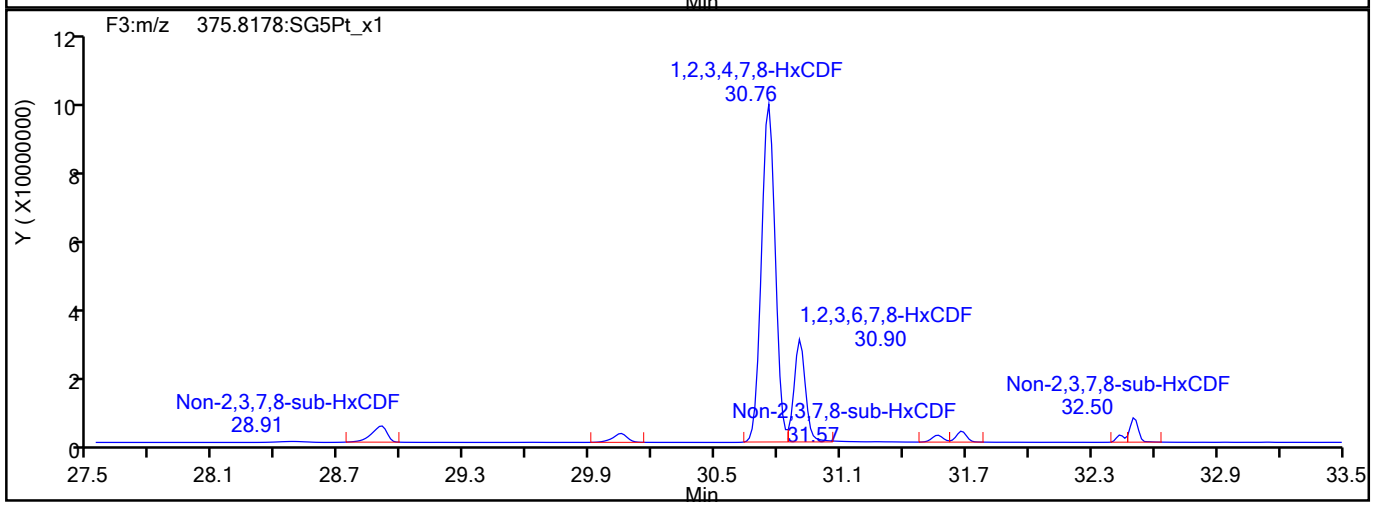

HxCDF Interference Mass

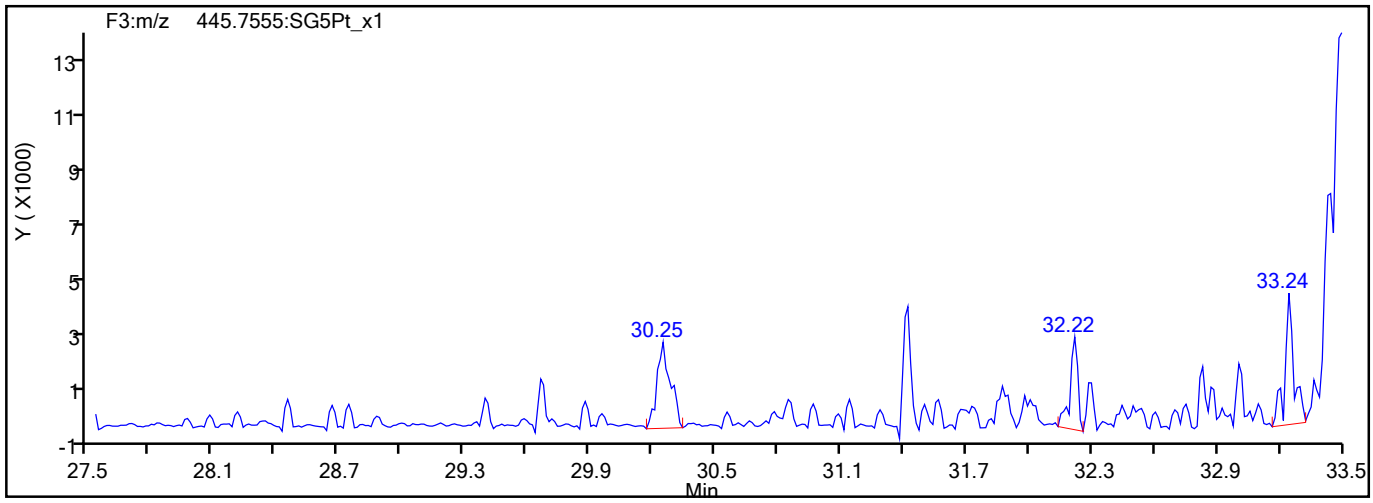

779778

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Eurofins TestAmerica, Sacramento

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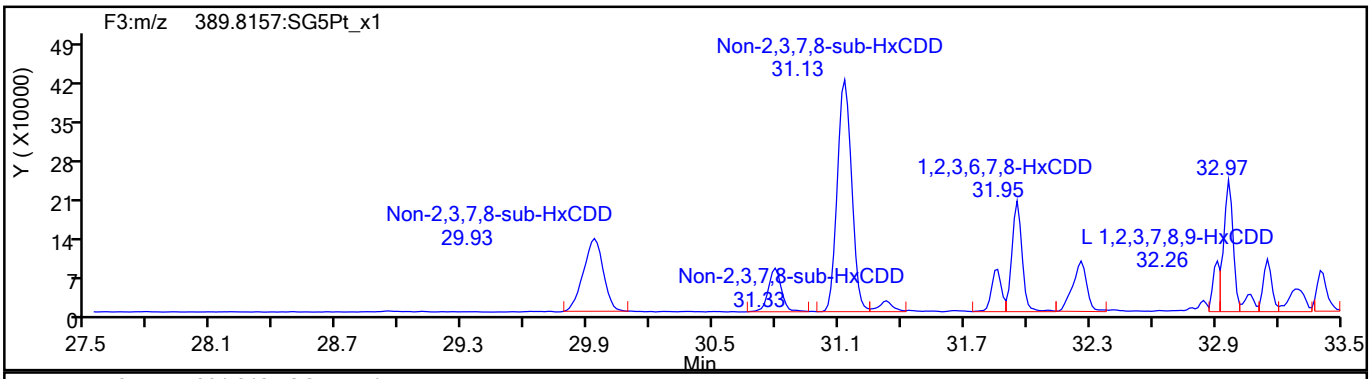

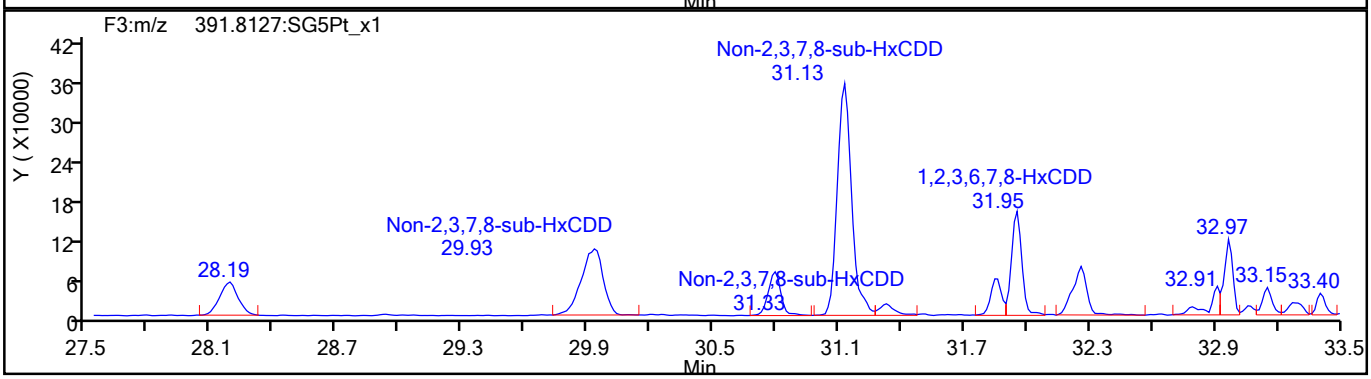

HxCDD Standards

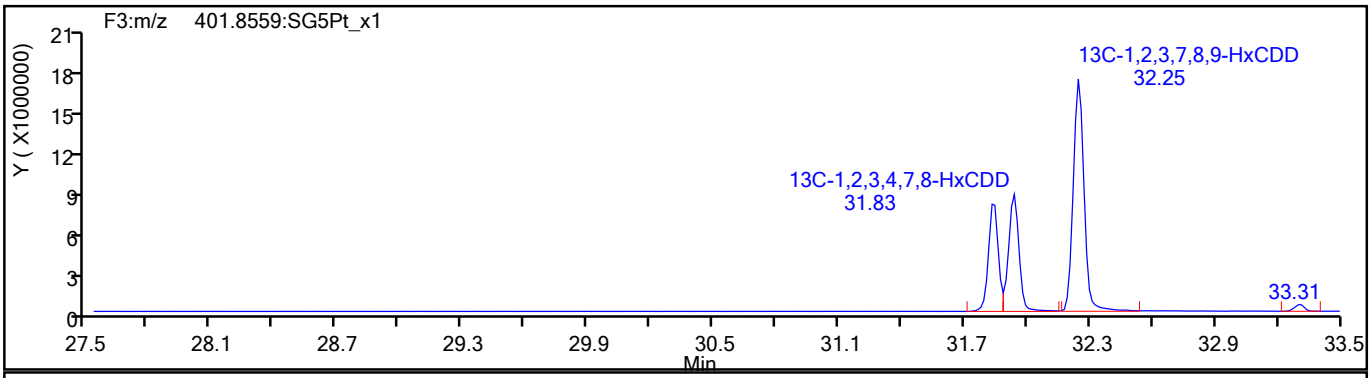

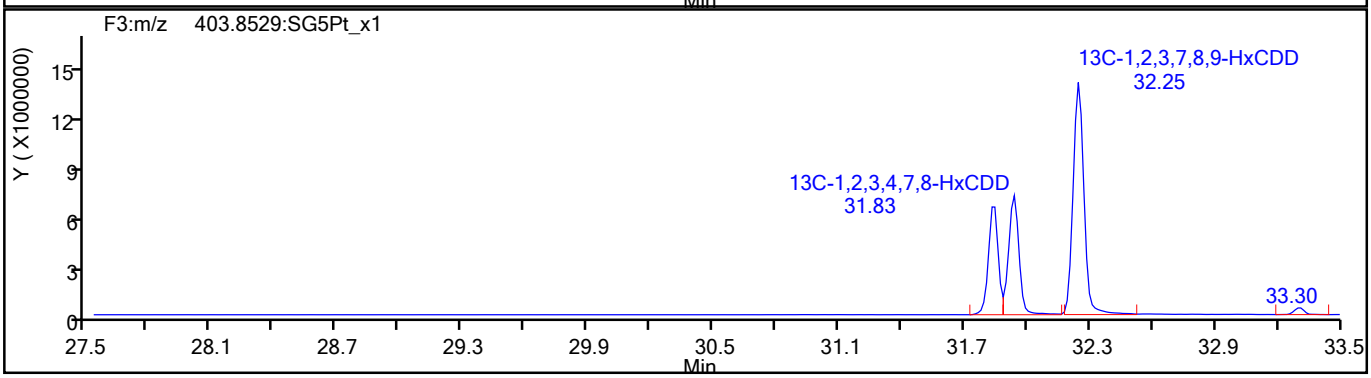

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Eurofins TestAmerica, Sacramento

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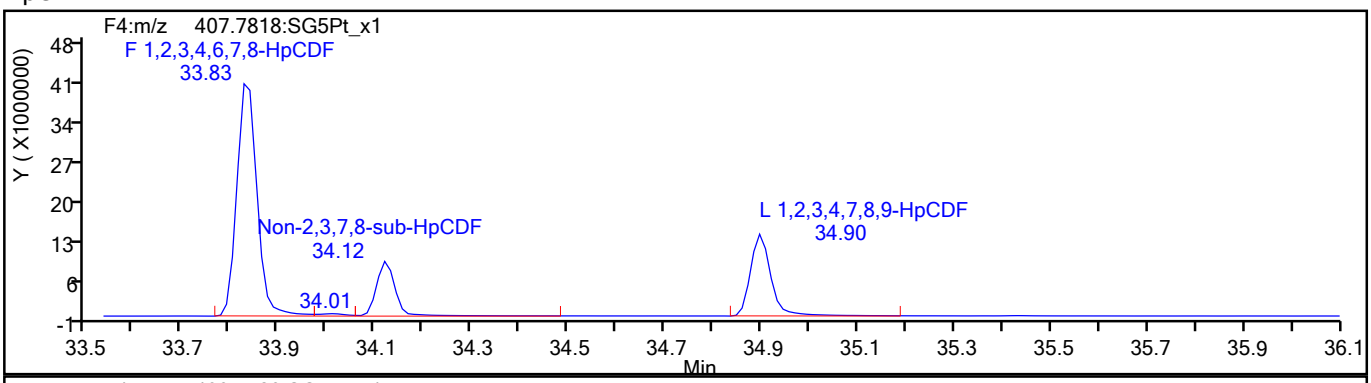

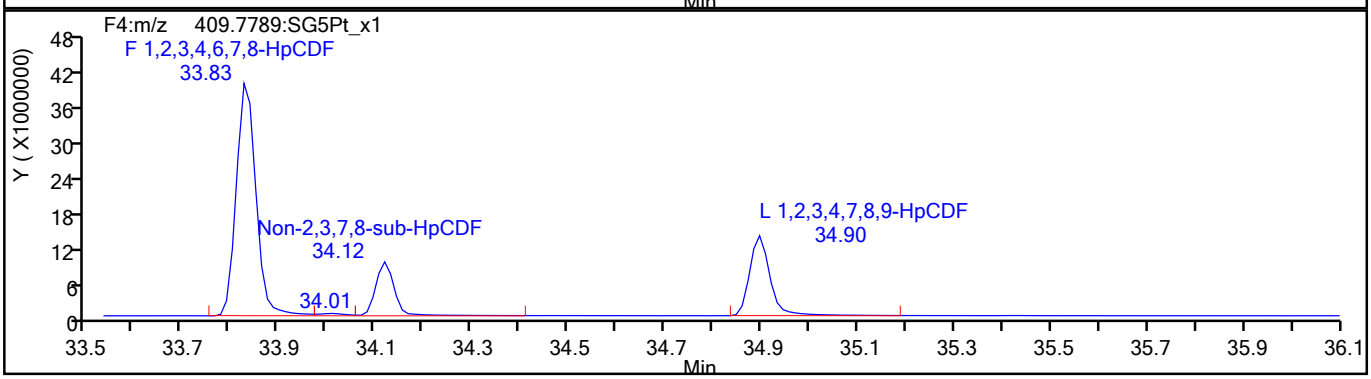

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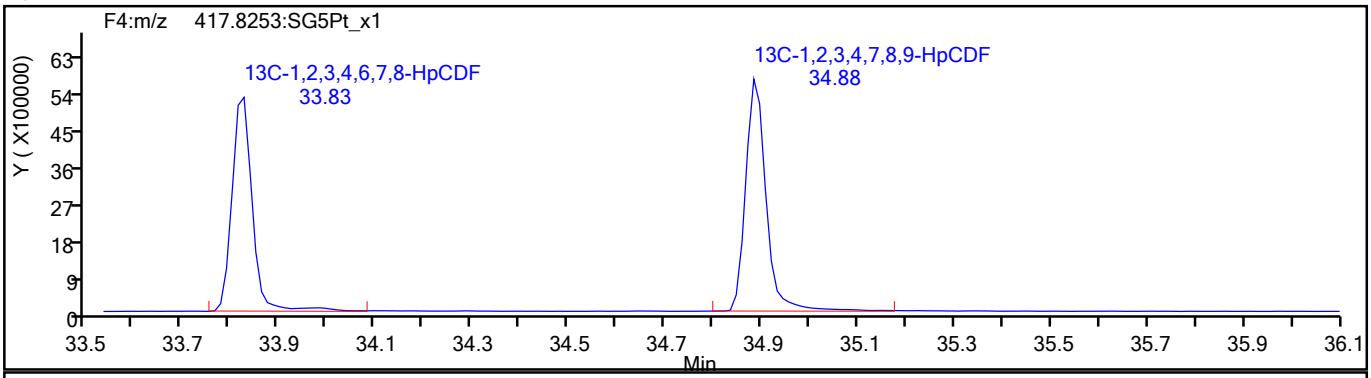

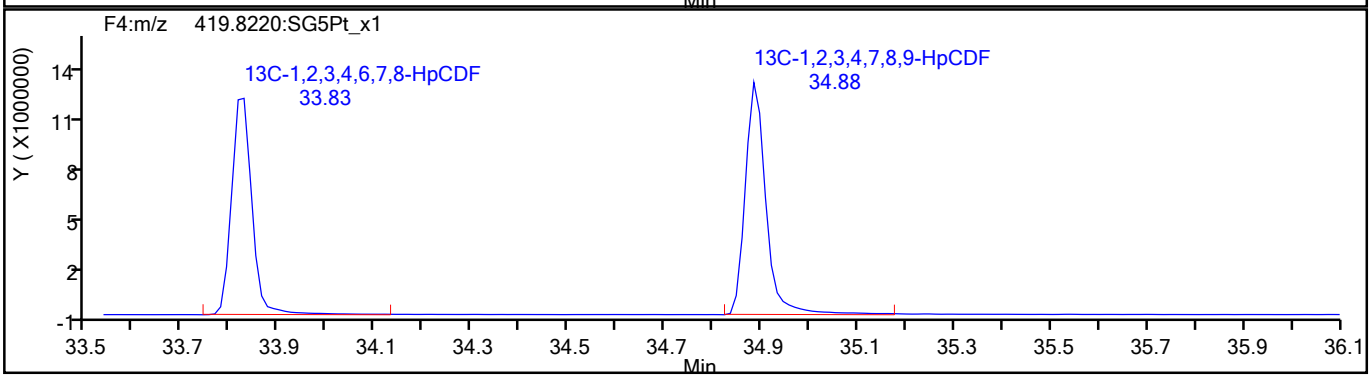

779780

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Eurofins TestAmerica, Sacramento

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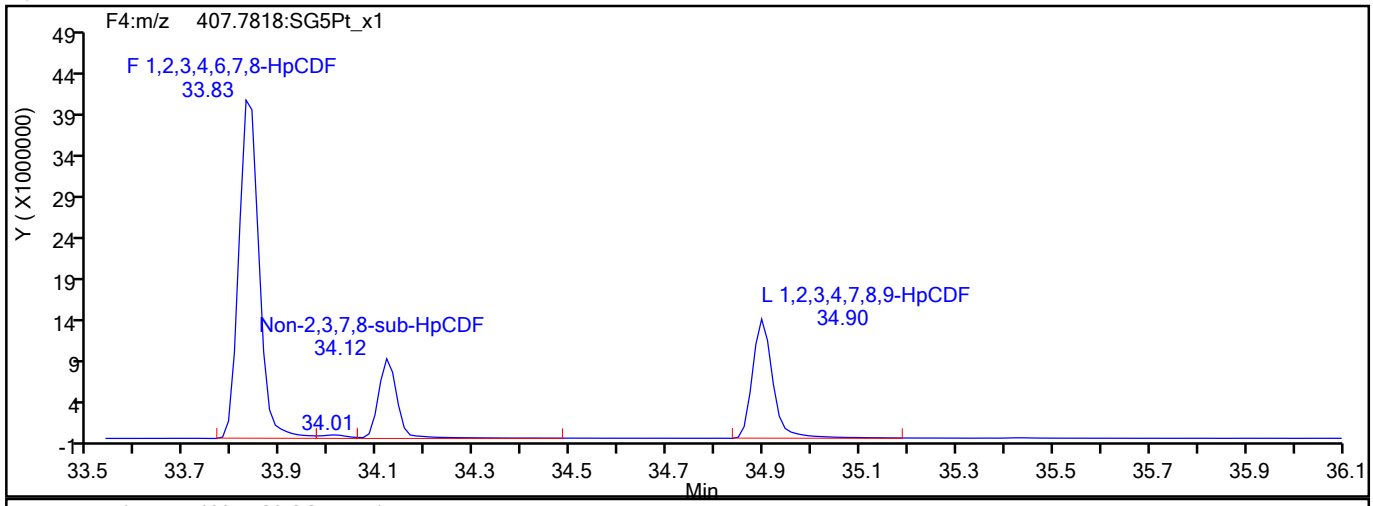

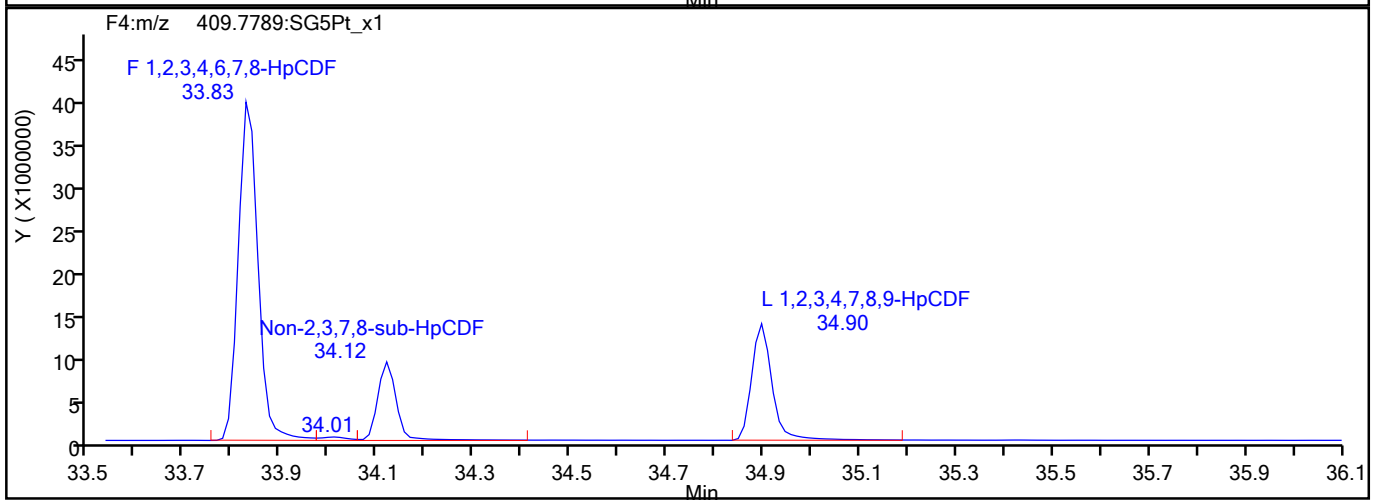

HpCDF Interference Mass

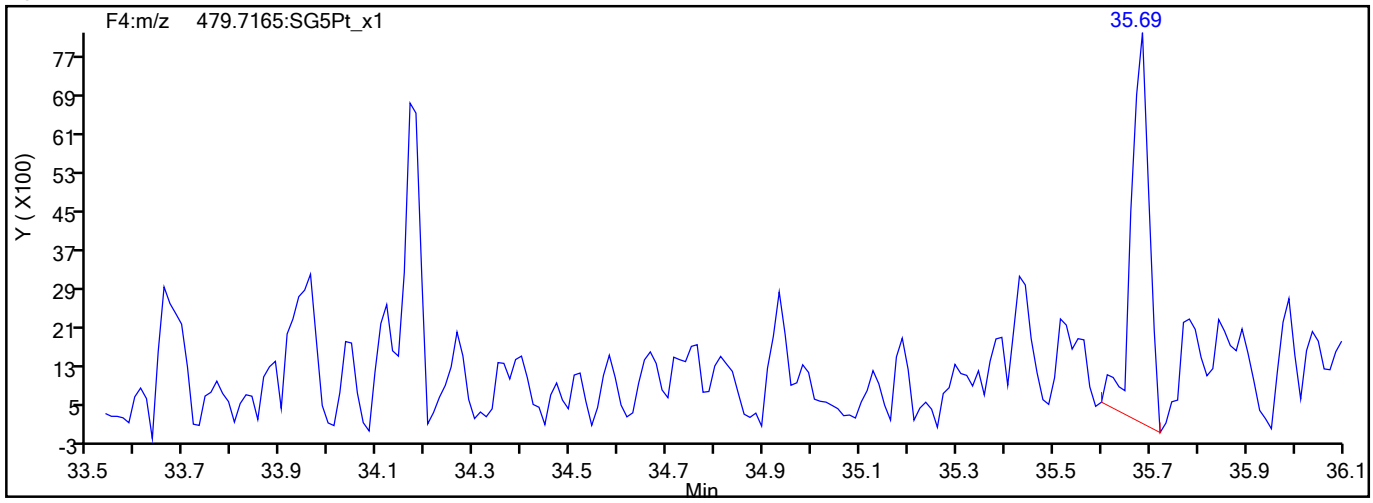

779781

Report Date: 18-Aug-2021 07:51:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

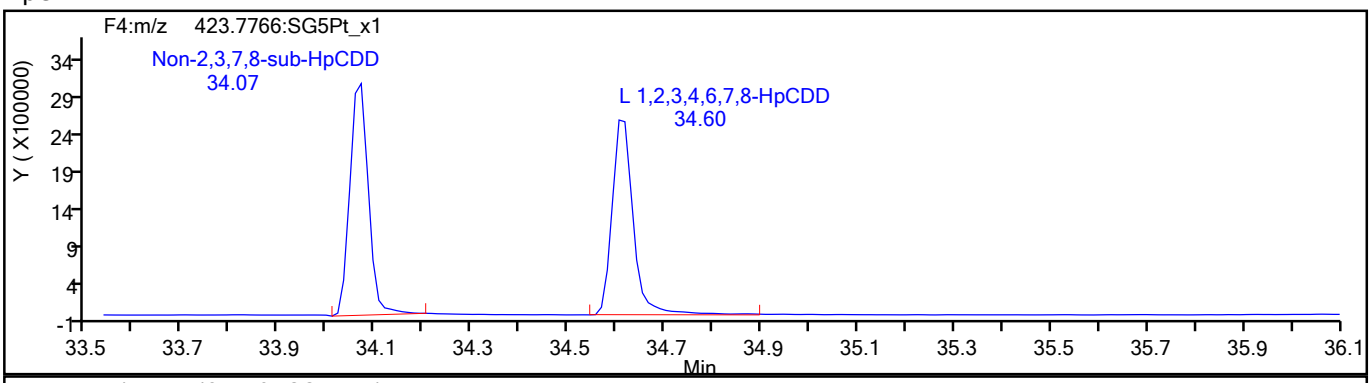

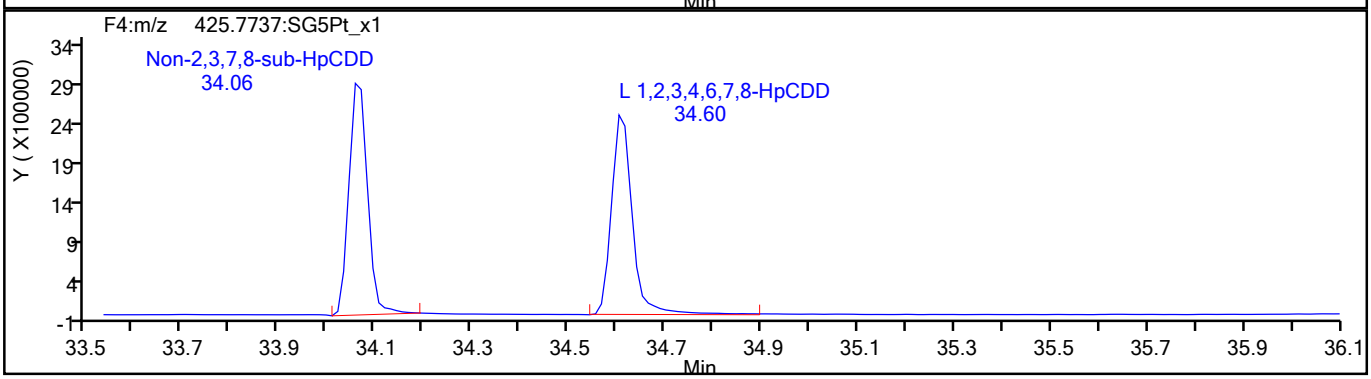

HpCDD Standards

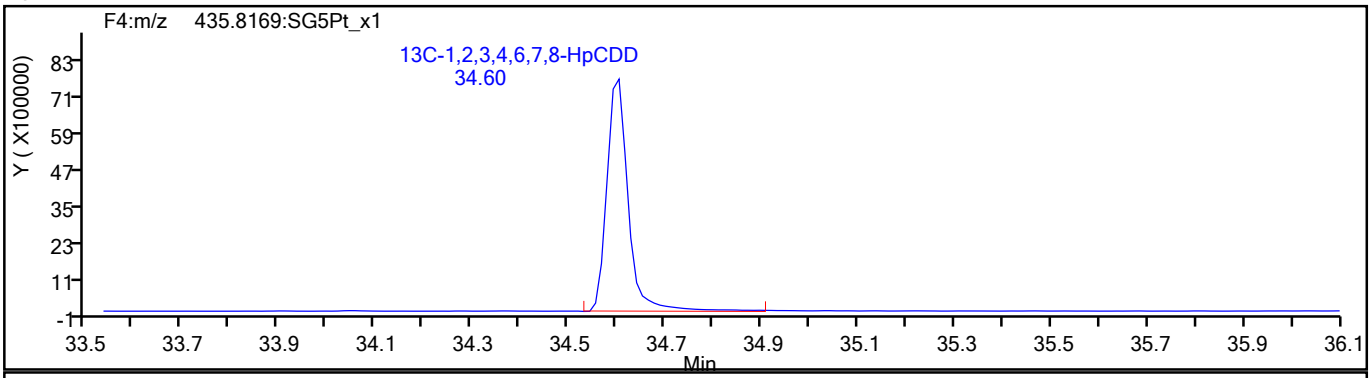

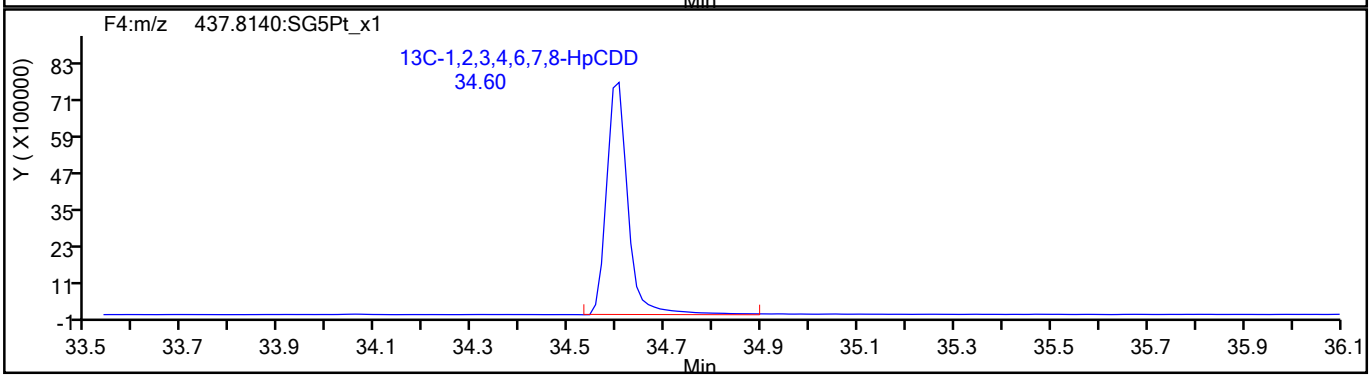

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Report Date: 18-Aug-2021 07:51:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Worklist#:	516846	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

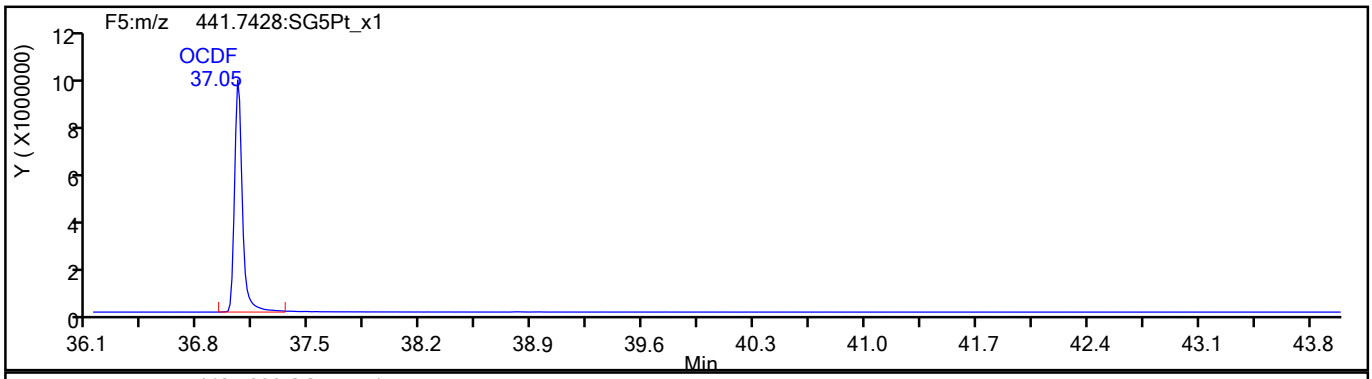

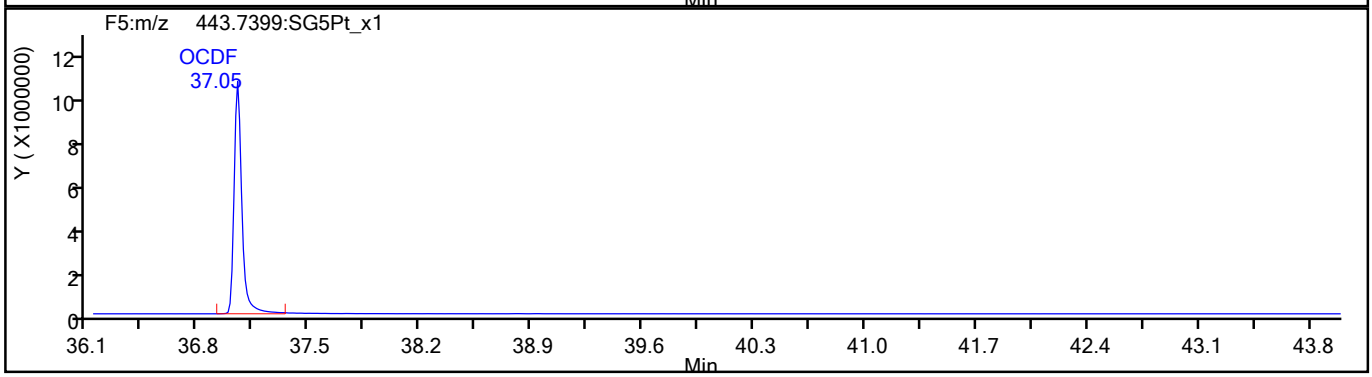

OCDF Standards

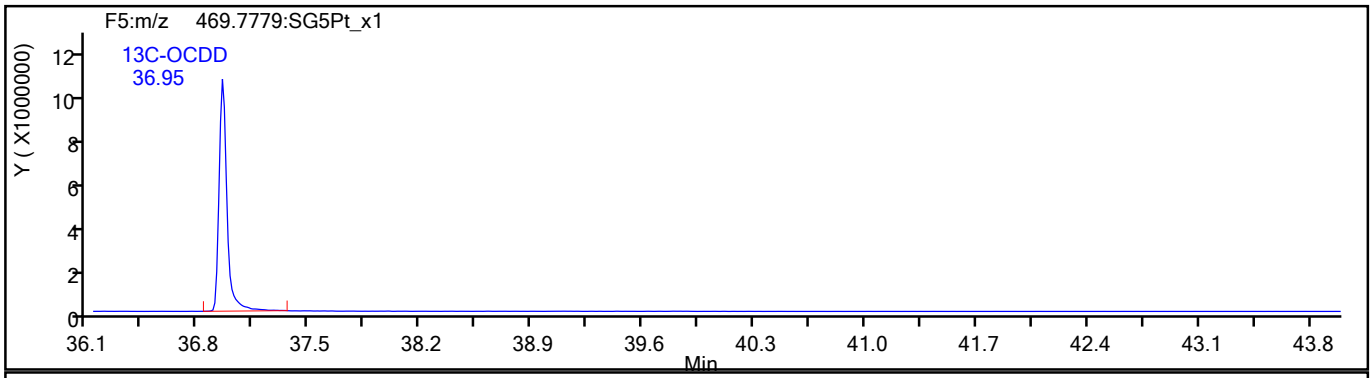

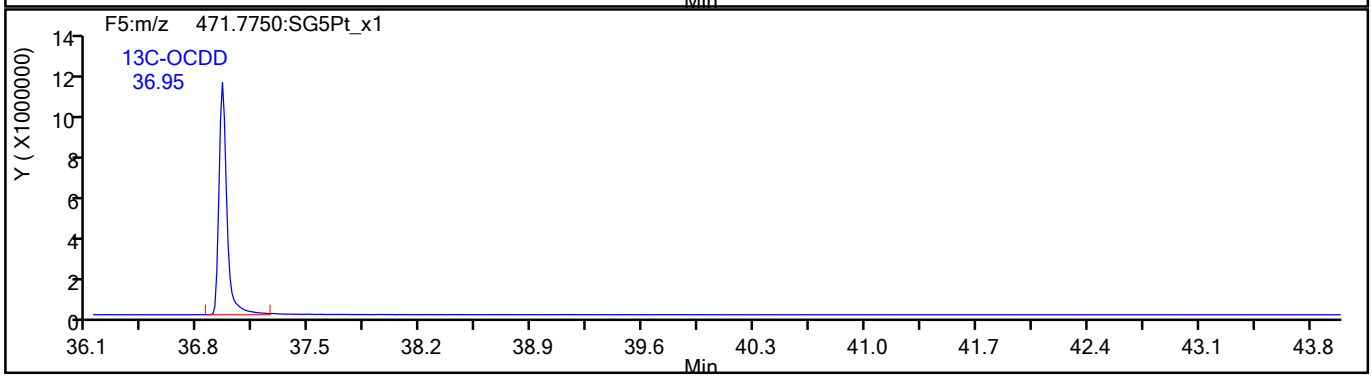

779783

Report Date: 18-Aug-2021 07:51:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d		
Injection Date:	14-Aug-2021 22:46:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	516846	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

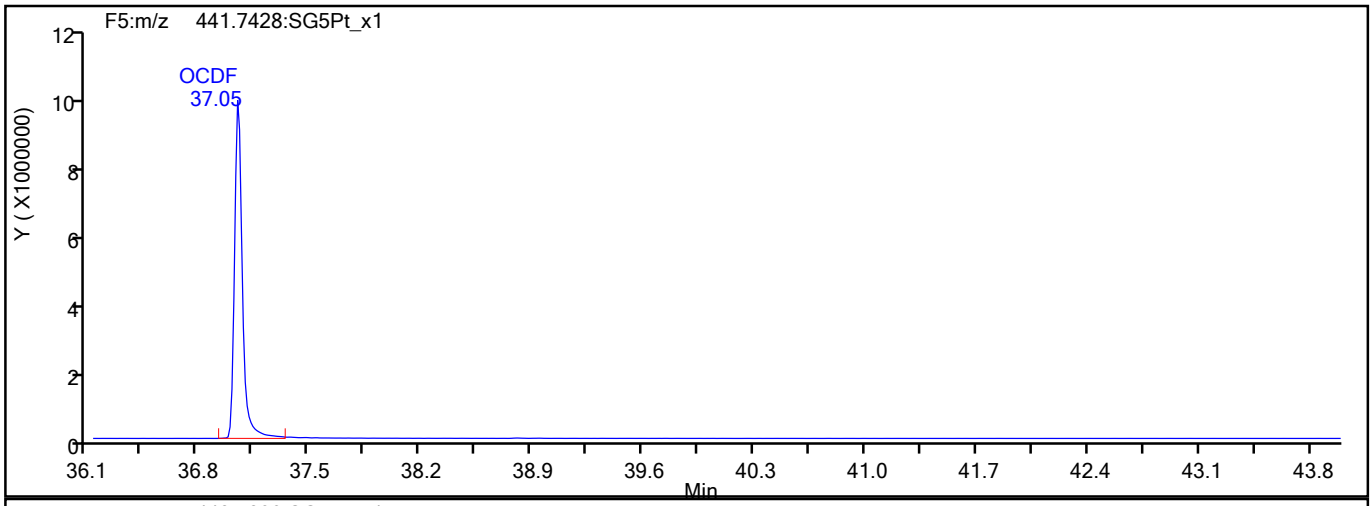

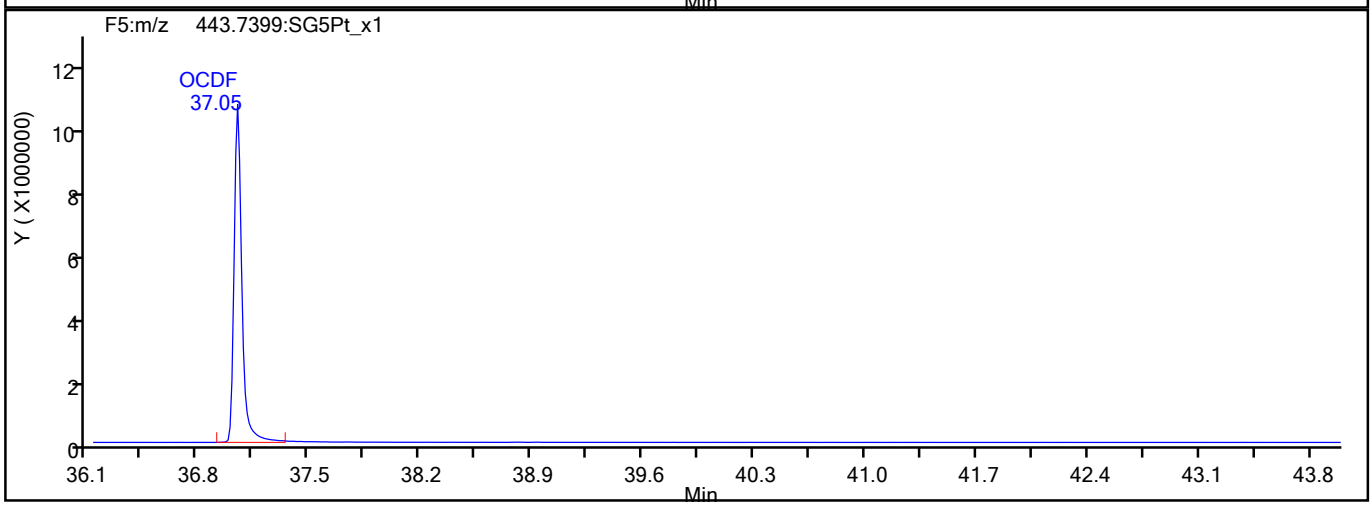

OCDF Interference Mass

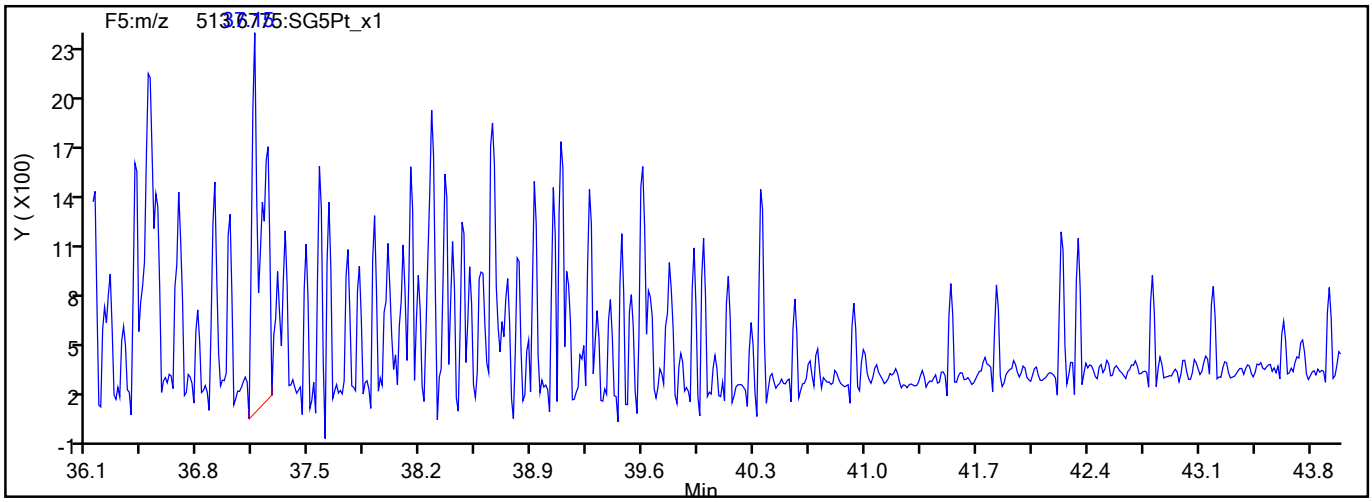

779784

Report Date: 18-Aug-2021 07:51:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d		
Injection Date:	14-Aug-2021 22:46:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	516846	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

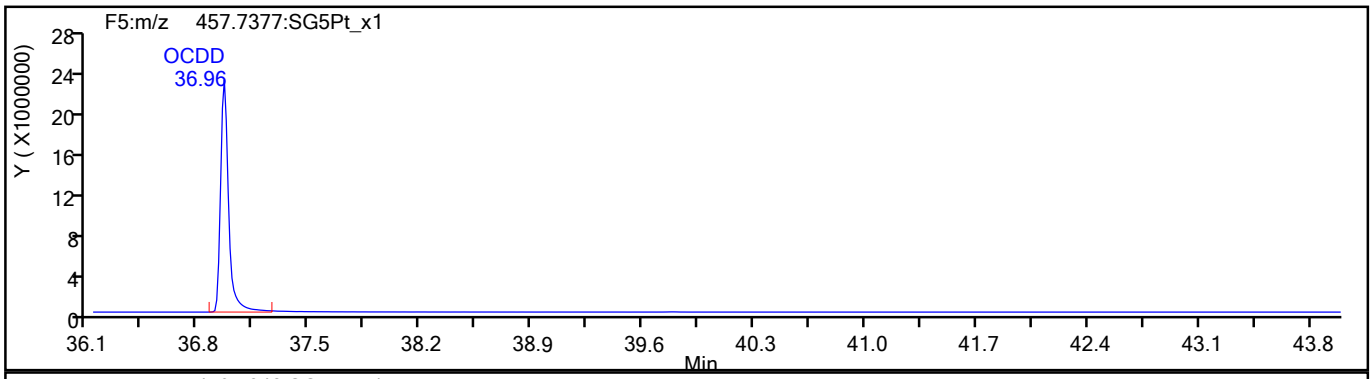

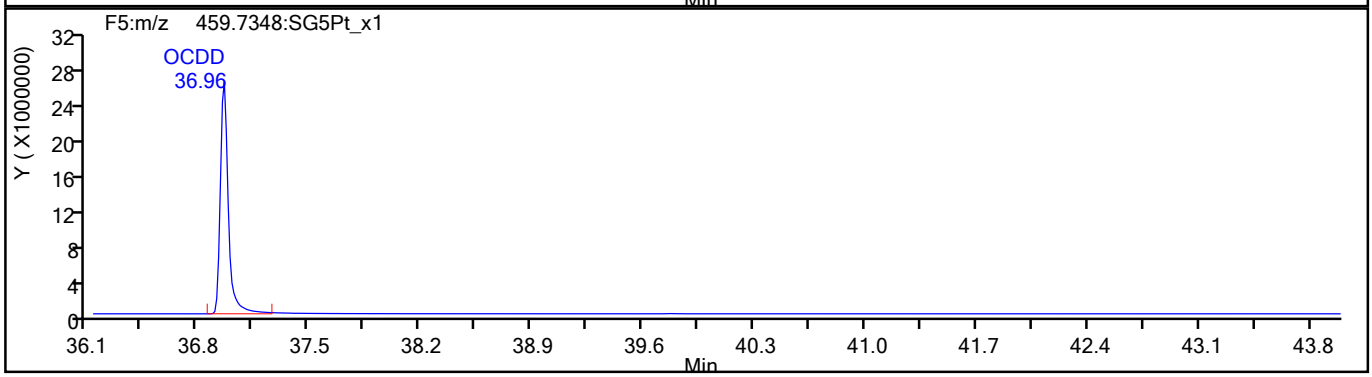

OCDD Standards

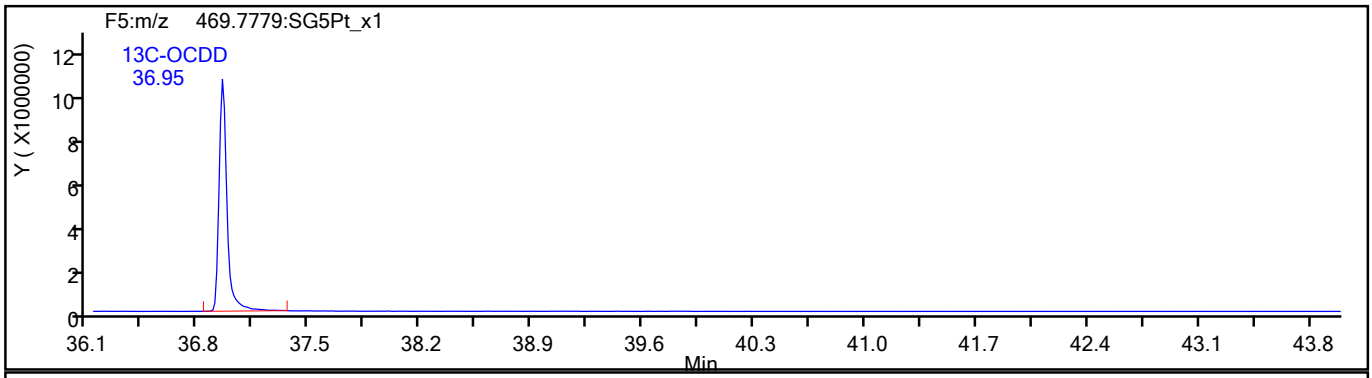

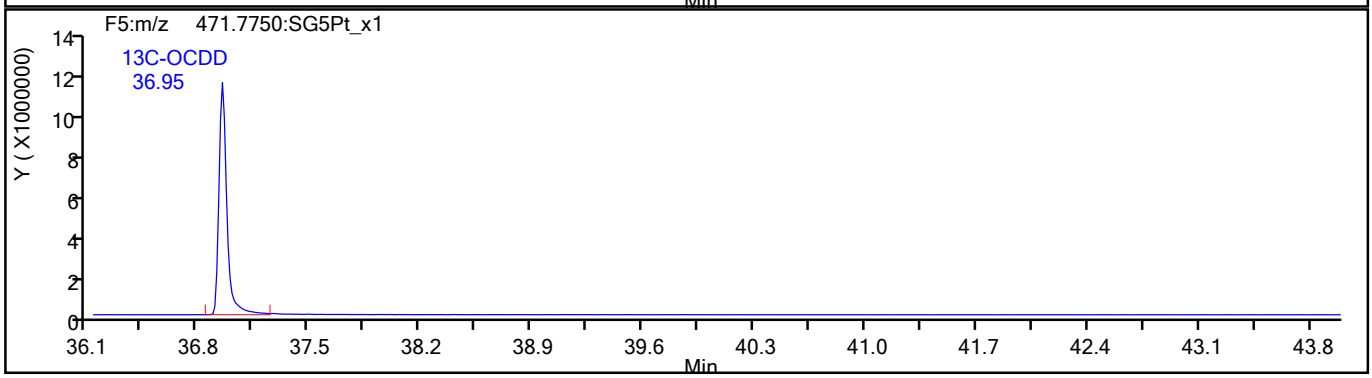

779785

Report Date: 18-Aug-2021 07:51:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d		
Injection Date:	14-Aug-2021 22:46:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	516846	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

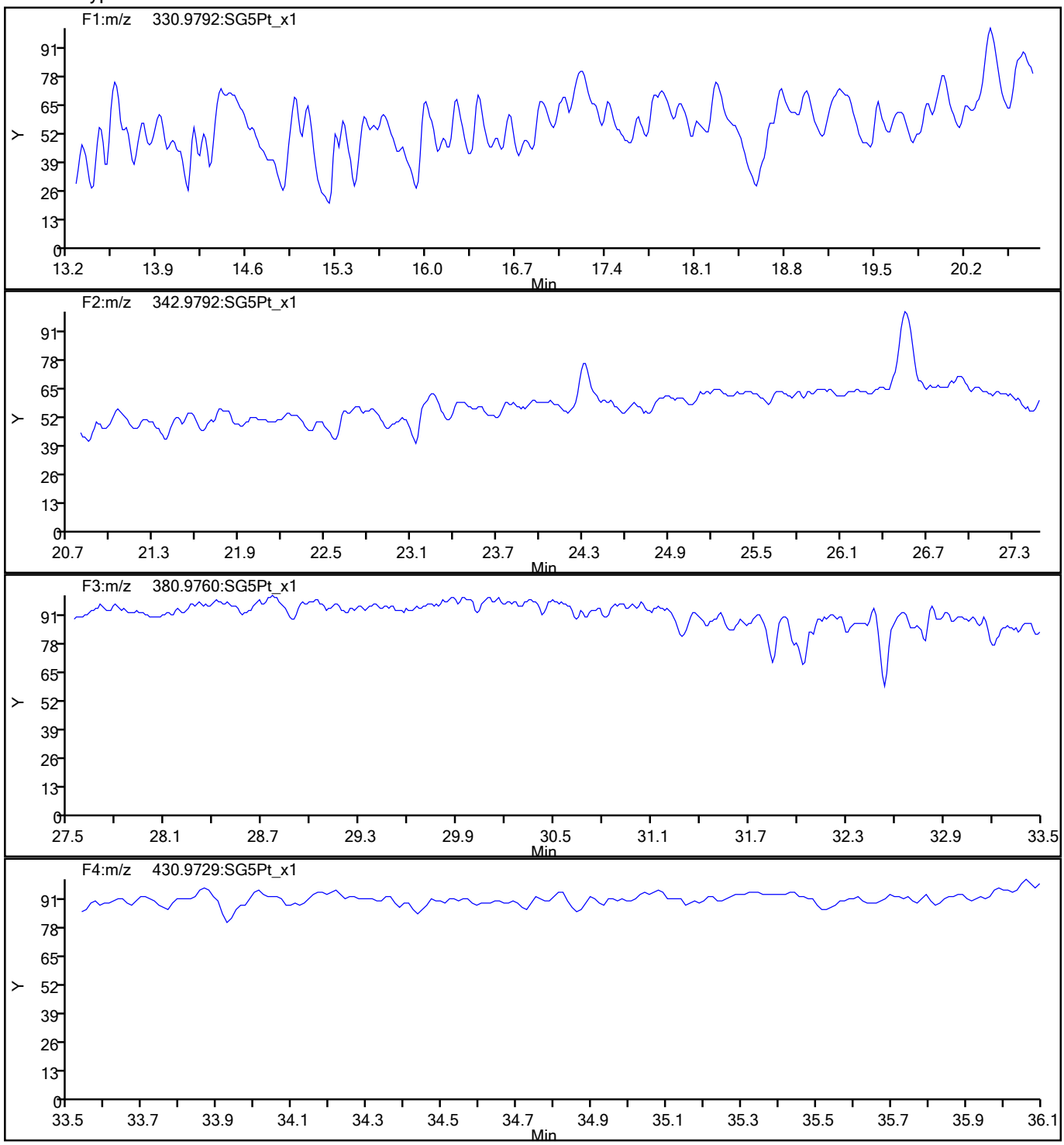

779786

Report Date: 18-Aug-2021 07:51:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_40.d		
Injection Date:	14-Aug-2021 22:46:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	516846	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

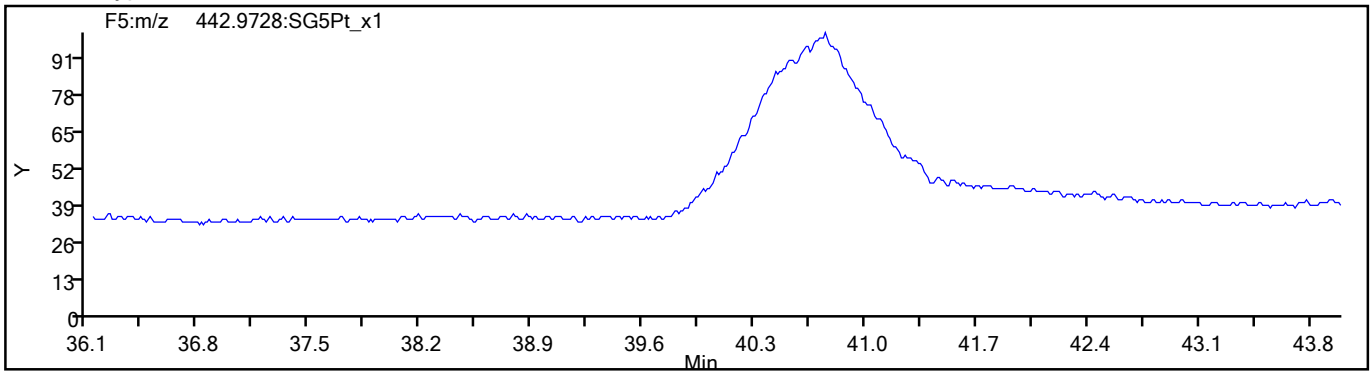

779787

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (2-4) DL
Lab Sample ID: 320-76788-14 DL
Matrix: Solid
Lab File ID: 17AU21A10D5_21.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:35
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.13(g)
Date Analyzed: 08/18/2021 06:44
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 48.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517241
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	33000	G E B	69	69
70648-26-9	1,2,3,4,7,8-HxCDF	4200	B	47	23
41903-57-5	Total TCDD	37000	G B	69	69
30402-14-3	Total TCDF	210000	G B	320	320

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	49	q	25-164
89059-46-1	13C-2,3,7,8-TCDF	61		24-169
114423-98-2	13C-1,2,3,4,7,8-HxCDF	66		26-152

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	125		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Sample Type: Client
Inject. Date: 18-Aug-2021 06:44:38 ALS Bottle#: 22 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76788-A-14-A X5 320-76788-A-14-A X5
Misc. Info.: 17AU21A10D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:59:54 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1606

First Level Reviewer: arghestanis Date: 18-Aug-2021 09:54:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.930	12596345	0.80	6.2E+05	20.0	20.0				a
D 13C-2,3,7,8-TCDF	17.416	12446662	0.81	1.6249	12.2	12.2	0.4463	0.4463	60.81	
2,3,7,8-TCDF	17.431	4020253861	0.79	1.0239	6309.1	6309.1	17.1	17.1		Ea
A Non-2,3,7,8-sub-TCDF	17.031	3075087016	0.79	1.0239	4825.8	4825.8	17.1	3068.4		a
S Total TCDF					11135	11135	17.1	17.1		
D 13C-2,3,7,8-TCDD	18.172	5584578	0.77	0.8993	10.7	9.860	0.3789	0.3789	53.67	RQa
2,3,7,8-TCDD	18.187	669068277	0.79	1.2541	1755.0	1755.0	3.632	3.632		Ea
$ 37Cl4-2,3,7,8-TCDD	18.187	6975873		1.1071	10.0	10.0	0.6228	0.6228	125	
A Non-2,3,7,8-sub-TCDD	17.477	78337090	0.79	1.2541	205.5	205.5	3.632	205.5		
S Total TCDD					1960.5	1960.5	3.632	3.632		
D 13C-1,2,3,7,8-PeCDF	22.449	10324698	1.63	1.2101	13.5	13.5	0.2053	0.2053	67.74	
1,2,3,7,8-PeCDF	22.476	83137656	1.60	1.0611	151.8	151.8	1.107	1.107		
D 13C-2,3,4,7,8-PeCDF	23.771	11397817	1.63	1.2395	14.6	14.6	0.2004	0.2004	73.00	
2,3,4,7,8-PeCDF	23.799	60022566	1.59	1.0184	103.4	103.4	0.993	0.993		
A F1 PeCDFs	20.077	565943	1.55	1.0398	1.702	1.002	0.0169	0.8047		RQ
A Non-2,3,7,8-sub-PeCDF	23.221	68979843	1.60	1.0398	122.2	122.2	1.045	54.7		
S Total PeCDF					379.0	378.3	1.050	1.050		RQ
D 13C-1,2,3,7,8-PeCDD	24.480	7580838	1.59	0.7612	15.8	15.8	0.0867	0.0867	79.06	
1,2,3,7,8-PeCDD	24.508	6099128	1.57	1.0484	15.3	15.3	0.2192	0.2192		
A Non-2,3,7,8-sub-PeCDD	23.301	220253	1.53	1.0484	0.5542	0.5542	0.2192	0.5542		
S Total PeCDD					15.9	15.9	0.2192	0.2192		
D 13C-1,2,3,4,7,8-HxCDF	30.516	10461989	0.51	1.0837	13.2	13.2	0.0756	0.0756	66.12	
1,2,3,4,7,8-HxCDF	30.529	126606153	1.20	1.0851	223.0	223.0	1.207	1.207		
D 13C-1,2,3,6,7,8-HxCDF	30.689	9706890	0.52	1.1279	11.8	11.8	0.0726	0.0726	58.94	
1,2,3,6,7,8-HxCDF	30.715	32097051	1.21	1.1260	58.7	58.7	1.193	1.193		
D 13C-2,3,4,6,7,8-HxCDF	31.514	9120568	0.52	1.0637	11.7	11.7	0.0770	0.0770	58.72	
2,3,4,6,7,8-HxCDF	31.527	2753392	1.24	1.1675	7.582	5.171	1.010	1.010		RQ
D 13C-1,2,3,7,8,9-HxCDF	32.313	8092316	0.52	0.9676	11.5	11.5	0.0846	0.0846	57.28	
1,2,3,7,8,9-HxCDF	32.406	7482649	1.28	1.1664	15.9	15.9	0.995	0.995		
A Non-2,3,7,8-sub-HxCDF	30.163	10323548	1.23	1.1363	19.4	19.4	1.094	13.2		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					324.7	322.2	1.101	1.101		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.126	14602298	1.26	6.2E+05	20.0	20.0				
D 13C-1,2,3,4,7,8-HxCDD	31.700	6692470	1.27	0.7334	12.5	12.5	0.0912	0.0912	62.49	
1,2,3,4,7,8-HxCDD	31.714	68335	1.38	1.0640	0.1919	0.1919	0.0202	0.0202		
D 13C-1,2,3,6,7,8-HxCDD	31.807	7388421	1.26	0.8802	11.5	11.5	0.0760	0.0760	57.49	
1,2,3,6,7,8-HxCDD	31.820	193652	1.40	1.0001	0.5242	0.5242	0.0216	0.0216		
1,2,3,7,8,9-HxCDD	32.140	109626	1.26	1.1325	0.2750	0.2750	0.0190	0.0190		
A Non-2,3,7,8-sub-HxCDD	30.836	840416	1.24	1.0655	2.299	2.241	0.0202	1.302		RQ
S Total HxCDD					3.290	3.232	0.0203	0.0203		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	6076280	0.45	0.7730	10.8	10.8	0.1387	0.1387	53.83	
1,2,3,4,6,7,8-HpCDF	33.766	29592999	1.04	1.4413	67.6	67.6	0.4302	0.4302		
D 13C-1,2,3,4,7,8,9-HpCDF	34.823	6363623	0.44	0.7008	12.4	12.4	0.1530	0.1530	62.18	
1,2,3,4,7,8,9-HpCDF	34.835	9711696	1.03	1.3174	23.2	23.2	0.5069	0.5069		
A Non-2,3,7,8-sub-HpCDF	34.295	6738785	1.02	1.3793	15.7	15.7	0.4662	15.7		
S Total HpCDF					106.5	106.5	0.4685	0.4685		
D 13C-1,2,3,4,6,7,8-HpCDD	34.543	5414016	1.00	0.6472	11.5	11.5	0.0682	0.0682	57.29	
1,2,3,4,6,7,8-HpCDD	34.556	1721782	1.05	1.0943	5.812	5.812	0.0870	0.0870		
A Non-2,3,7,8-sub-HpCDD	34.271	1908982	1.06	1.0943	6.444	6.444	0.0870	6.444		
S Total HpCDD					12.3	12.3	0.0870	0.0870		
D 13C-OCDD	36.890	7471654	0.87	0.4472	22.9	22.9	0.0528	0.0528	57.21	
OCDF	36.986	7339166	0.89	1.4382	27.3	27.3	0.0447	0.0447		
OCDD	36.902	18073656	0.89	1.1070	87.4	87.4	0.1229	0.1229		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Sample Type: Client
Inject. Date: 18-Aug-2021 06:44:38 ALS Bottle#: 22 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76788-A-14-A X5 320-76788-A-14-A X5
Misc. Info.: 17AU21A10D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:59:54 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1606

First Level Reviewer: arghestanis Date: 18-Aug-2021 09:54:04

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.930	17.809	7		5612906	1029692	5798	14495	178		a
333.9339	17.930	17.809	7		6983439	1210851	9471	23677	128	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.416	17.310	6	0.971	5566780	1497562	12370	30925	121		
317.9389	17.416	17.310	6	0.971	6879882	1803890	20130	50325	90	0.81(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.431	17.326	6	1.001	1776148452	448046649	508648	1271620	881		a
305.8987	17.431	17.326	6	1.001	2244105409	558308075	647558	1618895	862	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	15.753	17.031	-77	0.905	8867835	2487448	508648	1271620	5		
305.8987	15.753	17.031	-77	0.905	11491877	3217027	647558	1618895	5	0.77(0.65-0.89)	
303.9016	16.010	17.031	-61	0.919	31182045	8607161	508648	1271620	17		
305.8987	16.010	17.031	-61	0.919	39491067	10930195	647558	1618895	17	0.79(0.65-0.89)	
303.9016	16.298	17.031	-44	0.936	52626157	9681300	508648	1271620	19		
305.8987	16.298	17.031	-44	0.936	66950379	12476046	647558	1618895	19	0.79(0.65-0.89)	
303.9016	16.524	17.031	-30	0.949	49494299	13280874	508648	1271620	26		
305.8987	16.524	17.031	-30	0.949	63343933	17084355	647558	1618895	26	0.78(0.65-0.89)	
303.9016	16.766	17.031	-16	0.963	76566561	20036562	508648	1271620	39		
305.8987	16.766	17.031	-16	0.963	97693923	25206912	647558	1618895	39	0.78(0.65-0.89)	
303.9016	17.023	17.031	0	0.977	861827050	201080151	508648	1271620	395		
305.8987	17.023	17.031	0	0.977	1093425486	257914663	647558	1618895	398	0.79(0.65-0.89)	
303.9016	17.855	17.031	49	1.025	149874448	30638818	508648	1271620	60		
305.8987	17.855	17.031	49	1.025	191056969	38486569	647558	1618895	59	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	19.261	17.031	134	1.106	123849172	29231310	508648	1271620	57		a
305.8987	19.261	17.031	134	1.106	157345815	37232299	647558	1618895	57	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											RQa
331.9368	18.172	18.006	10	1.013	2924477	737007	5798	14495	127		a
	Empc Correction				2429449	660569	5798	14495	114		
333.9339	18.172	18.006	10	1.013	3155129	857882	9471	23677	91	0.93(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	18.187	18.021	10	1.001	296120263	78415028	76540	191350	1024		a
321.8936	18.187	18.021	10	1.001	372948014	97495555	68739	171847	1418	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.187	18.021	10	1.014	6975873	1870971	30901	77252	61		
A Non-2,3,7,8-sub-TCDD											
319.8965	18.490	17.477	61	1.017	34538439	7428502	76540	191350	97		
321.8936	18.490	17.477	61	1.017	43798651	9357730	68739	171847	136	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.449	22.299	9	1.252	6401122	1068185	6114	15285	175		
353.8970	22.449	22.299	9	1.252	3923576	656273	5018	12545	131	1.63(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.476	22.326	9	1.001	51166348	7947094	24921	62302	319		
341.8567	22.476	22.326	9	1.001	31971308	5048634	15579	38947	324	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.771	23.635	8	1.326	7059701	1229446	6114	15285	201		
353.8970	23.771	23.635	8	1.326	4338116	772267	5018	12545	154	1.63(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.799	23.662	8	1.001	36814319	6463142	24921	62302	259		
341.8567	23.799	23.662	8	1.001	23208247	4046564	15579	38947	260	1.59(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	19.382	20.077	-42	0.863	463039	60583	308	770	197		
	Empc Correction				67818	8208	308	770	27		
341.8567	19.321	20.077	-45	0.861	43754	5296	346	865	15	10.58(1.32-1.78)	
339.8597	19.578	20.077	-30	0.872	280589	58485	308	770	190		
341.8567	19.578	20.077	-30	0.872	173782	37649	346	865	109	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.126	23.221	-125	0.941	19051759	3867412	24921	62302	155		
341.8567	21.126	23.221	-125	0.941	11853324	2398402	15579	38947	154	1.61(1.32-1.78)	
339.8597	21.944	23.221	-76	0.978	1721142	204358	24921	62302	8		
341.8567	21.944	23.221	-76	0.978	1094970	132357	15579	38947	8	1.57(1.32-1.78)	
339.8597	22.749	23.221	-28	1.013	631383	133487	24921	62302	5		
341.8567	22.762	23.221	-27	1.014	428776	84098	15579	38947	5	1.47(1.32-1.78)	
339.8597	22.980	23.221	-14	1.024	12930429	2530520	24921	62302	102		
341.8567	22.980	23.221	-14	1.024	8097623	1541692	15579	38947	99	1.60(1.32-1.78)	
339.8597	24.126	23.221	54	1.075	8090288	1180861	24921	62302	47		
341.8567	24.126	23.221	54	1.075	5080149	732667	15579	38947	47	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.480	24.358	7	1.365	4655594	774061	1789	4472	433		
369.8919	24.467	24.358	7	1.365	2925244	467661	1170	2925	400	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											
355.8546	24.508	24.385	7	1.001	3728379	612310	3062	7655	200		
357.8516	24.494	24.385	7	1.001	2370749	382976	2646	6615	145	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	22.735	23.301	-34	0.929	133194	27130	3062	7655	9		
357.8516	22.735	23.301	-34	0.929	87059	20167	2646	6615	8	1.53(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.449	4	0.950	3551324	709217	2729	6822	260		
385.8610	30.516	30.449	4	0.950	6910665	1366841	3599	8997	380	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.463	4	1.000	69011066	13586985	22333	55832	608		
375.8178	30.529	30.463	4	1.000	57595087	11428813	32029	80072	357	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.636	3	0.955	3336341	699412	2729	6822	256		
385.8610	30.689	30.636	3	0.955	6370549	1323477	3599	8997	368	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.715	30.649	4	1.001	17586427	3596846	22333	55832	161		
375.8178	30.715	30.649	4	1.001	14510624	2966117	32029	80072	93	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.475	2	0.981	3133460	792324	2729	6822	290		
385.8610	31.514	31.475	2	0.981	5987108	1512189	3599	8997	420	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQ
373.8208	31.527	31.488	2	1.000	2807444	430996	22333	55832	19		
	Empc Correction				1524199	419836	22333	55832	19		
375.8178	31.527	31.488	2	1.000	1229193	338578	32029	80072	11	2.28(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.286	2	1.006	2769258	820052	2729	6822	300		
385.8610	32.313	32.286	2	1.006	5323058	1523033	3599	8997	423	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.406	32.300	6	1.003	4193890	1100513	22333	55832	49		
375.8178	32.406	32.300	6	1.003	3288759	900735	32029	80072	28	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	28.426	30.163	-104	0.932	3844519	584283	22333	55832	26		
375.8178	28.413	30.163	-105	0.931	3154119	475723	32029	80072	15	1.22(1.05-1.43)	
373.8208	29.717	30.163	-27	0.974	1840014	271321	22333	55832	12		
375.8178	29.717	30.163	-27	0.974	1484896	218475	32029	80072	7	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.126	32.100	2		8146531	2156527	2929	7322	736		
403.8529	32.126	32.100	2		6455767	1708106	2244	5610	761	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.700	31.661	2	0.987	3738779	1071263	2929	7322	366		
403.8529	31.700	31.661	2	0.987	2953691	860284	2244	5610	383	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.674	2	1.000	39652	10031	446	1115	22		
391.8127	31.714	31.674	2	1.000	28683	8168	384	960	21	1.38(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.767	2	0.990	4117215	1065829	2929	7322	364		
403.8529	31.807	31.767	2	0.990	3271206	855036	2244	5610	381	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.820	31.781	2	1.000	112843	31310	446	1115	70		
391.8127	31.820	31.781	2	1.000	80809	20945	384	960	55	1.40(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.113	2	1.014	61101	13112	446	1115	29		
391.8127	32.140	32.113	2	1.014	48525	7979	384	960	21	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.571	30.836	-76	0.930	120477	17831	446	1115	40		
391.8127	29.571	30.836	-76	0.930	113578	13031	384	960	34	1.06(1.05-1.43)	
389.8157	30.596	30.836	-14	0.962	50979	10575	446	1115	24		
391.8127	30.582	30.836	-15	0.962	42541	8724	384	960	23	1.20(1.05-1.43)	
389.8157	30.955	30.836	7	0.973	258819	53620	446	1115	120		
391.8127	30.955	30.836	7	0.973	229498	48897	384	960	127	1.13(1.05-1.43)	
389.8157	31.155	30.836	19	0.979	13576	3291	446	1115	7		
391.8127	31.128	30.836	18	0.979	32792	6118	384	960	16	0.41(1.05-1.43)	
	Empc Correction				10948	2654	384	960	7		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.730	1	1.051	1872038	606827	2818	7045	215		
419.8220	33.754	33.730	1	1.051	4204242	1434379	5469	13672	262	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.742	1	1.000	15097814	4954732	12646	31615	392		
409.7789	33.754	33.742	1	1.000	14495185	4674407	12667	31667	369	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.823	34.811	1	1.084	1942936	578426	2818	7045	205		
419.8220	34.823	34.811	1	1.084	4420687	1317015	5469	13672	241	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.835	34.823	1	1.000	4928307	1474963	12646	31615	117		
409.7789	34.835	34.823	1	1.000	4783389	1429122	12667	31667	113	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.057	34.295	-14	1.009	3408466	1070630	12646	31615	85		
409.7789	34.057	34.295	-14	1.009	3330319	1006043	12667	31667	79	1.02(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.543	34.520	1	1.075	2706624	814827	1551	3877	525		
437.8140	34.543	34.520	1	1.075	2707392	808835	1863	4657	434	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.556	34.532	1	1.000	883254	263412	1724	4310	153		
425.7737	34.543	34.532	1	1.000	838528	247350	1367	3417	181	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.997	34.271	-16	0.984	983728	323487	1724	4310	188		
425.7737	33.997	34.271	-16	0.984	925254	319886	1367	3417	234	1.06(0.88-1.20)	
13C-OCDD											
469.7779	36.890	36.866	1	1.148	3486398	885375	974	2435	909		
471.7750	36.890	36.866	1	1.148	3985256	999286	851	2127	1174	0.87(0.76-1.02)	

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											
441.7428	36.986	36.974	1	1.003	3453633	890093	506	1265	1759		
443.7399	36.986	36.974	1	1.003	3885533	1006503	705	1762	1428	0.89(0.76-1.02)	
OCDD											
457.7377	36.902	36.878	1	1.000	8525875	2134240	1360	3400	1569		
459.7348	36.902	36.878	1	1.000	9547781	2326597	1205	3012	1931	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Inject. Date: 18-Aug-2021 06:44:38 Dil. Factor: 5.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 517241 Lims Sample ID: 10

Non-2,3,7,8-sub-TCDF, RT: 17.031

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	12446662	3301452

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		20.000	12446662	3301452

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.753	8867835	2487448	11491877	3217027	32.0	0.77	
16.010	31182045	8607161	39491067	10930195	110.9	0.79	
16.298	52626157	9681300	66950379	12476046	187.7	0.79	
16.524	49494299	13280874	63343933	17084355	177.1	0.78	
16.766	76566561	20036562	97693923	25206912	273.5	0.78	
17.023	861827050	201080151	1093425486	257914663	3068.4	0.79	
17.855	149874448	30638818	191056969	38486569	535.0	0.78	
19.261	123849172	29231310	157345815	37232299	441.3	0.79	a
Signal Totals:							
	1354287567	315043624	1720799449	402548066			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3075087016	717591690				0.79	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4825.8 = (3075087016 * 20.000) / (12446662 * 1.024)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Inject. Date: 18-Aug-2021 06:44:38 Dil. Factor: 5.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 517241 Lims Sample ID: 10

Non-2,3,7,8-sub-TCDD, RT: 17.477

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	6079606	1594889

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		20.000	6079606	1594889

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.490	34538439	7428502	43798651	9357730	205.5	0.79	
Signal Totals:							
	34538439	7428502	43798651	9357730			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	78337090	16786232				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 205.486 = (78337090 * 20.000) / (6079606 * 1.254)

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Lims ID:	320-76788-A-14-A		
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Inject. Date:	18-Aug-2021 06:44:38	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	10

F1 PeCDFs, RT: 20.077

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	10324698	1724458
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	11397817	2001713

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		20.000	10861257	1863085

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.382	463039	60583	43754	5296	0.8975	10.58	RQ
19.382	67818	8208	43754	5296	0.1976		Empc Correction
19.578	280589	58485	173782	37649	0.8047	1.61	
Signal Totals:							
	348407	66693	217536	42945			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	961164	162013				3.42	RQ
	565943	109638					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.702 = (961164 * 20.000) / (10861257 * 1.040)

Empc Amount: 1.002 = (565943 * 20.000) / (10861257 * 1.040)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Lims ID:	320-76788-A-14-A		
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Inject. Date:	18-Aug-2021 06:44:38	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	10

Non-2,3,7,8-sub-PeCDF, RT: 23.221

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	10324698	1724458
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	11397817	2001713

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		20.000	10861257	1863085

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.126	19051759	3867412	11853324	2398402	54.7	1.61	
21.944	1721142	204358	1094970	132357	4.99	1.57	
22.749	631383	133487	428776	84098	1.88	1.47	
22.980	12930429	2530520	8097623	1541692	37.2	1.60	
24.126	8090288	1180861	5080149	732667	23.3	1.59	
Signal Totals:							
	42425001	7916638	26554842	4889216			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	68979843	12805854				1.60	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 122.161 = (68979843 * 20.000) / (10861257 * 1.040)

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Lims ID:	320-76788-A-14-A		
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Inject. Date:	18-Aug-2021 06:44:38	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	10

Non-2,3,7,8-sub-PeCDD, RT: 23.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	7580838	1241722

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		20.000	7580838	1241722

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.735	133194	27130	87059	20167	0.5542	1.53	
Signal Totals:							
	133194	27130	87059	20167			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	220253	47297				1.53	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5542 = (220253 * 20.000) / (7580838 * 1.048)

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Lims ID:	320-76788-A-14-A		
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Inject. Date:	18-Aug-2021 06:44:38	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	10

Non-2,3,7,8-sub-HxCDF, RT: 30.163

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	10461989	2076058
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	9706890	2022889
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	9120568	2304513
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	8092316	2343085

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		20.000	9345440	2186636

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.426	3844519	584283	3154119	475723	13.2	1.22	
29.717	1840014	271321	1484896	218475	6.26	1.24	
Signal Totals:							
	5684533	855604	4639015	694198			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10323548	1549802				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 19.444 = (10323548 * 20.000) / (9345440 * 1.136)

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Lims ID:	320-76788-A-14-A		
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Inject. Date:	18-Aug-2021 06:44:38	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	10

Non-2,3,7,8-sub-HxCDD, RT: 30.836

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	6692470	1931547
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	7388421	1920865
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		20.000	7040445	1926206

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.571	120477	17831	113578	13031	0.6240	1.06	
30.596	50979	10575	42541	8724	0.2493	1.20	
30.955	258819	53620	229498	48897	1.30	1.13	
31.155	13576	3291	32792	6118	0.1236	0.41	RQ
31.155	13576	3291	10948	2654	0.0654		Empc Correction
Signal Totals:							
	443851	85317	396565	73306			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	862260	162087				1.06	RQ
	840416	158623					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.299 = (862260 * 20.000) / (7040445 * 1.066)

Empc Amount: 2.241 = (840416 * 20.000) / (7040445 * 1.066)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Lims ID:	320-76788-A-14-A		
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Inject. Date:	18-Aug-2021 06:44:38	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	10

Non-2,3,7,8-sub-HpCDF, RT: 34.295

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	6076280	2041206
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	6363623	1895441

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		20.000	6219951	1968323

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.057	3408466	1070630	3330319	1006043	15.7	1.02	
Signal Totals:							
	3408466	1070630	3330319	1006043			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6738785	2076673				1.02	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 15.709 = (6738785 * 20.000) / (6219951 * 1.379)

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Lims ID:	320-76788-A-14-A		
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Inject. Date:	18-Aug-2021 06:44:38	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	517241	Lims Sample ID:	10

Non-2,3,7,8-sub-HpCDD, RT: 34.271

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	5414016	1623662

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		20.000	5414016	1623662

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.997	983728	323487	925254	319886	6.44	1.06	
Signal Totals:							
	983728	323487	925254	319886			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1908982	643373				1.06	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 6.444 = (1908982 * 20.000) / (5414016 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d				
Injection Date:	18-Aug-2021 06:44:38	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.26
Area: 27765121
Amount: 99.618620
Amount Units: pg/ul

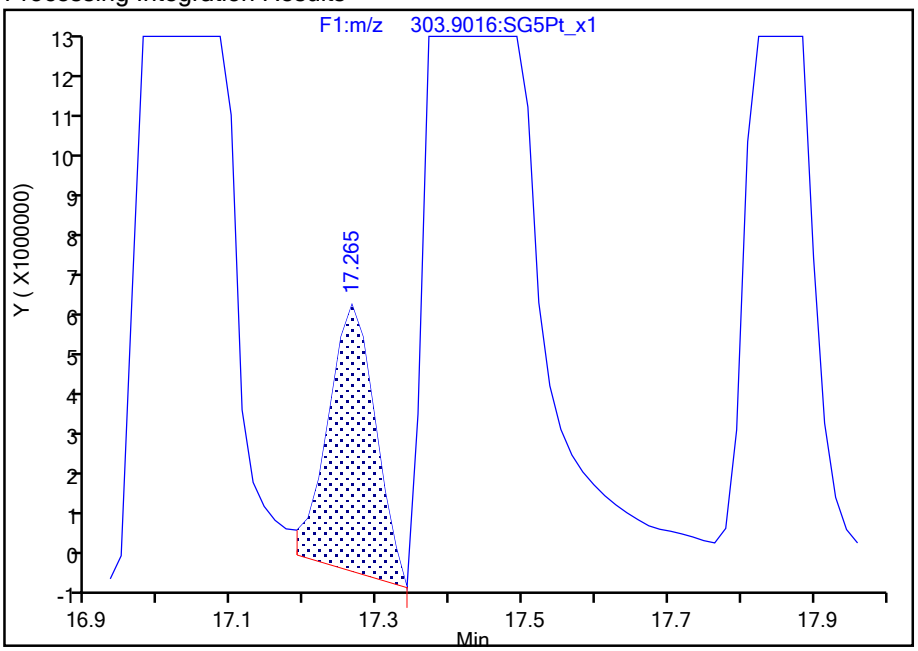

Manual Integration Results

RT: 17.43
Area: 1776148452
Amount: 6309.1169
Amount Units: pg/ul

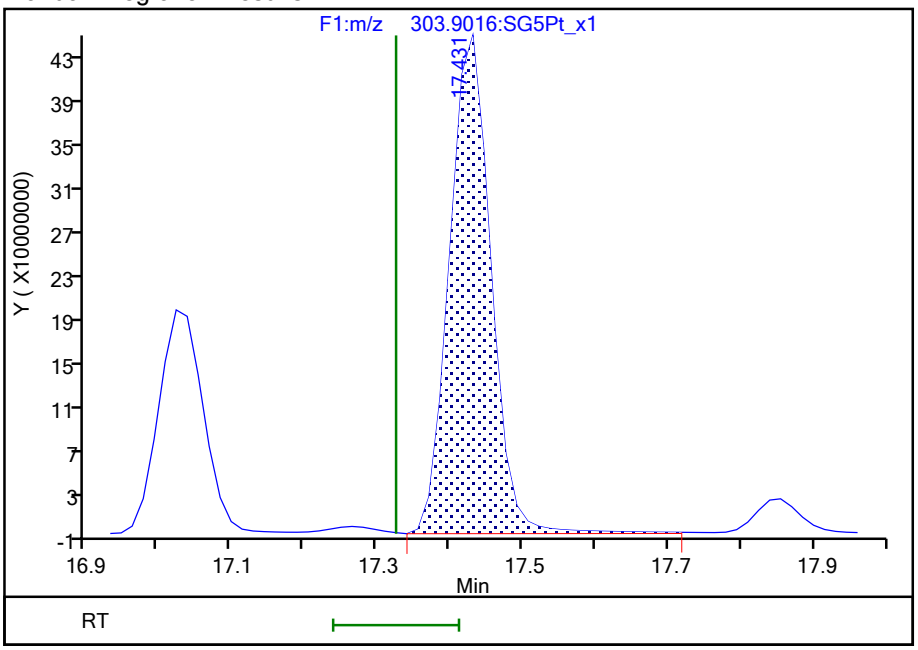

Reviewer: arghestanis, 18-Aug-2021 11:34:26

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d				
Injection Date:	18-Aug-2021 06:44:38	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 17.93
Area: 5612906
Amount: 22.239108
Amount Units: pg/ul

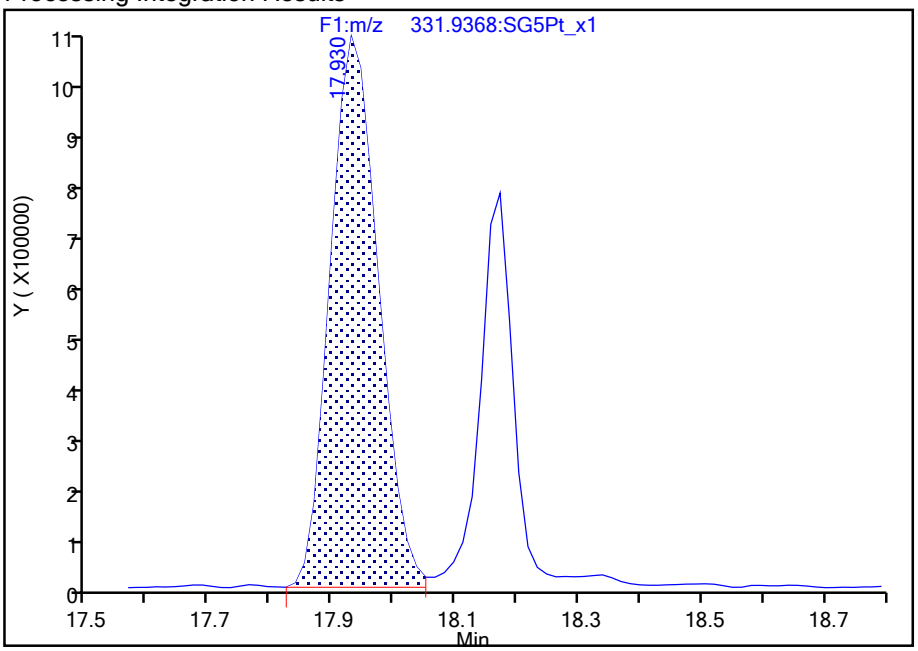

Manual Integration Results

RT: 18.17
Area: 2924477
Amount: 10.733671
Amount Units: pg/ul

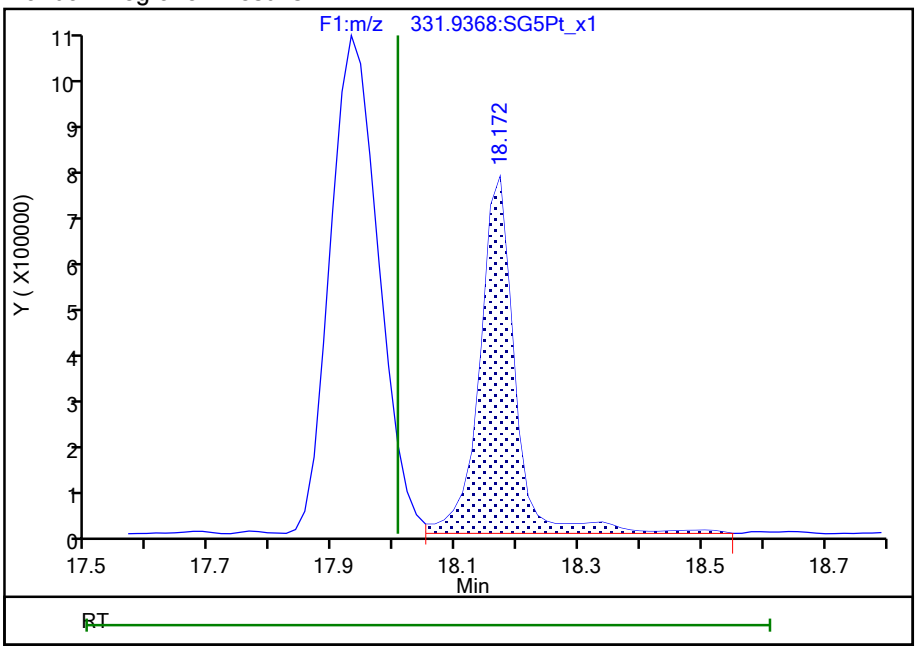

Reviewer: arghestanis, 18-Aug-2021 09:53:40

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d				
Injection Date:	18-Aug-2021 06:44:38	Instrument ID:	10D5		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:	DB	ALS Bottle#:	22	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 18.02

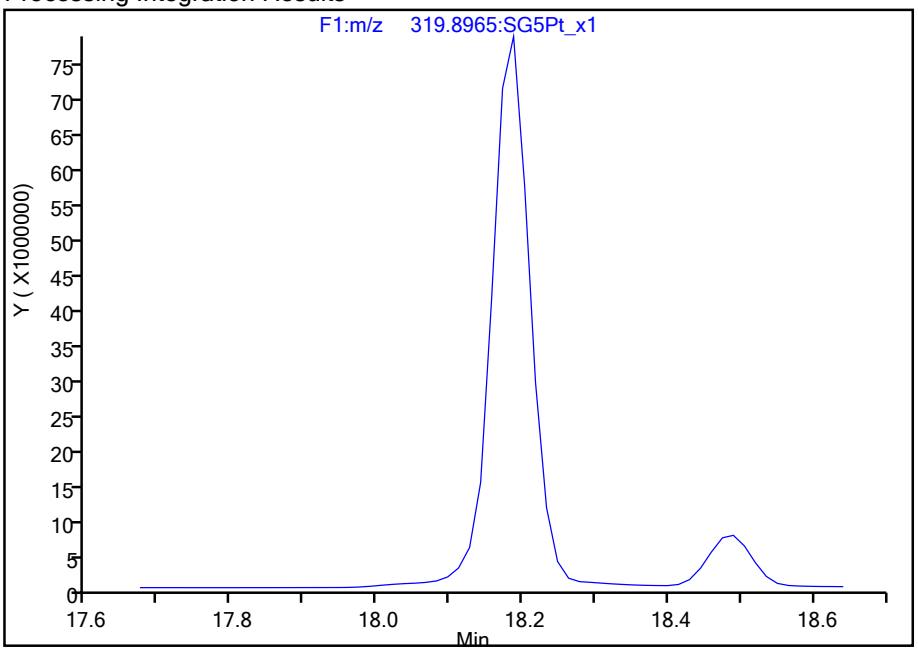

Manual Integration Results

RT: 18.19
Area: 296120263
Amount: 1755.0357
Amount Units: pg/ul

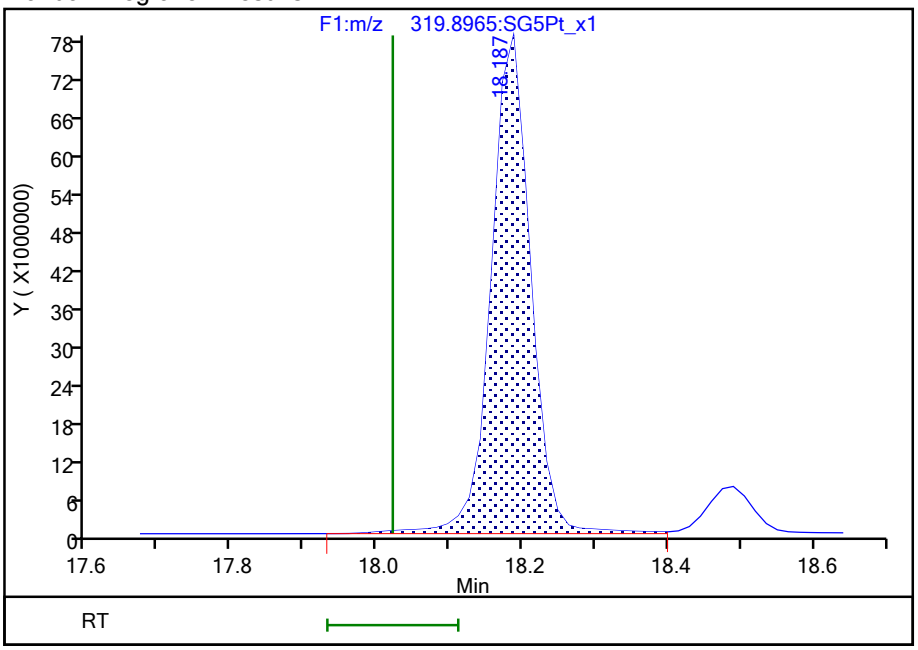

Reviewer: arghestanis, 18-Aug-2021 09:53:49
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

779807

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Injection Date:	18-Aug-2021 06:44:38	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	517241	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

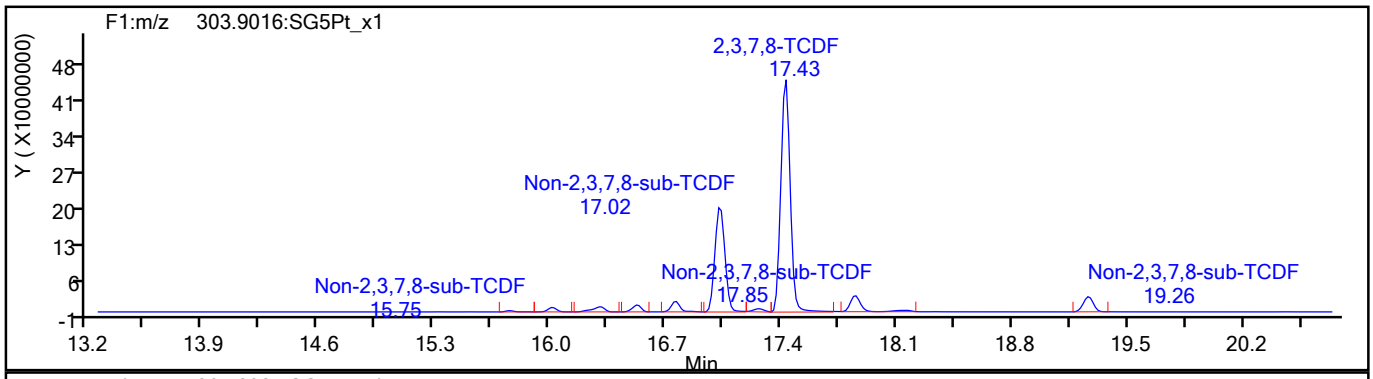

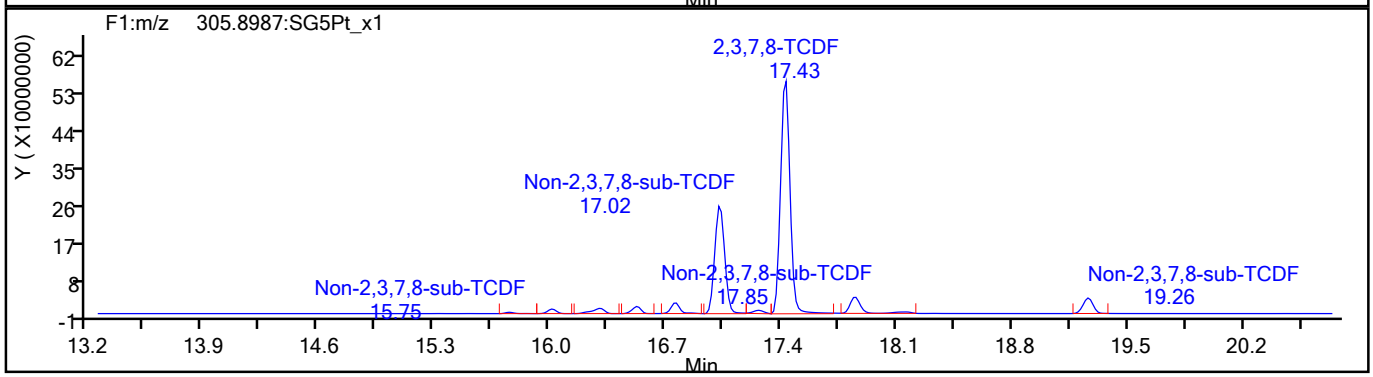

TCDF Standards

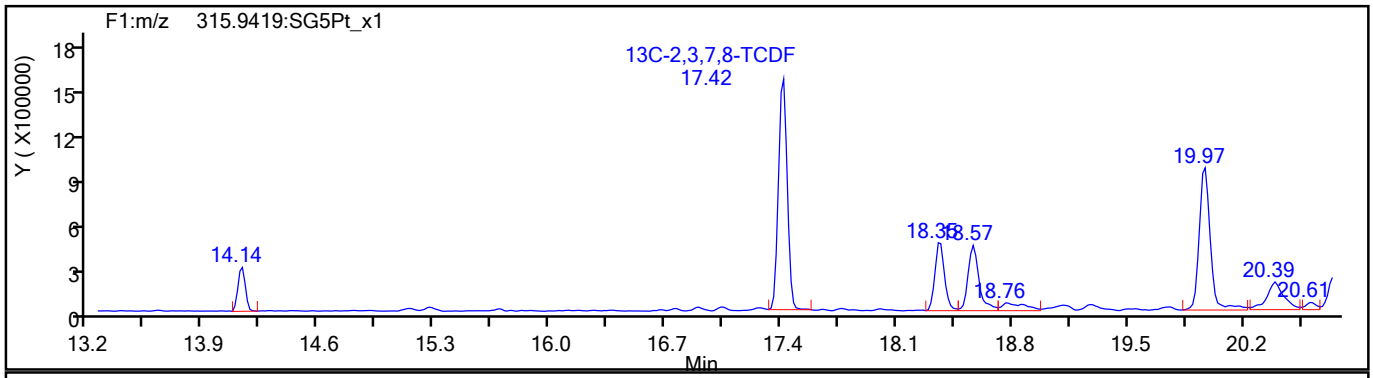

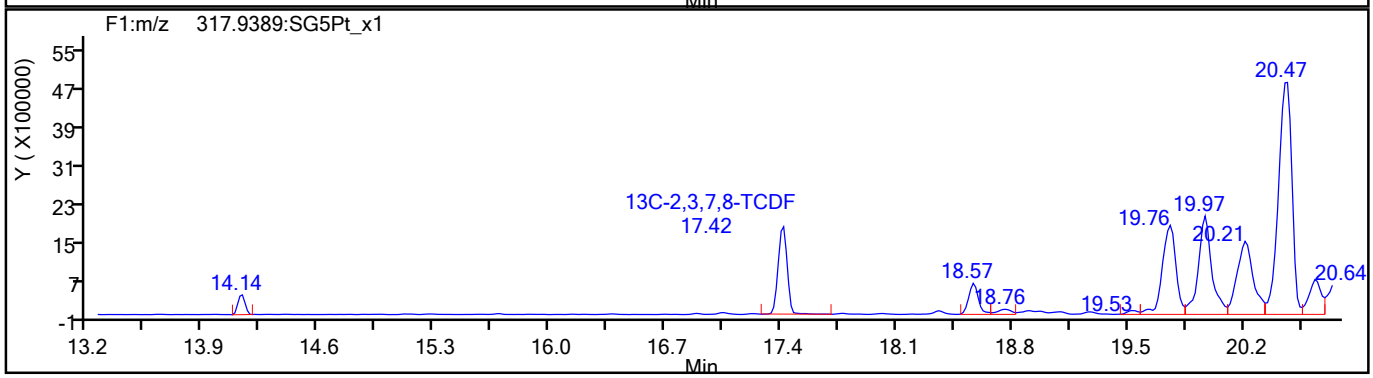

779808

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Injection Date:	18-Aug-2021 06:44:38	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	517241	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

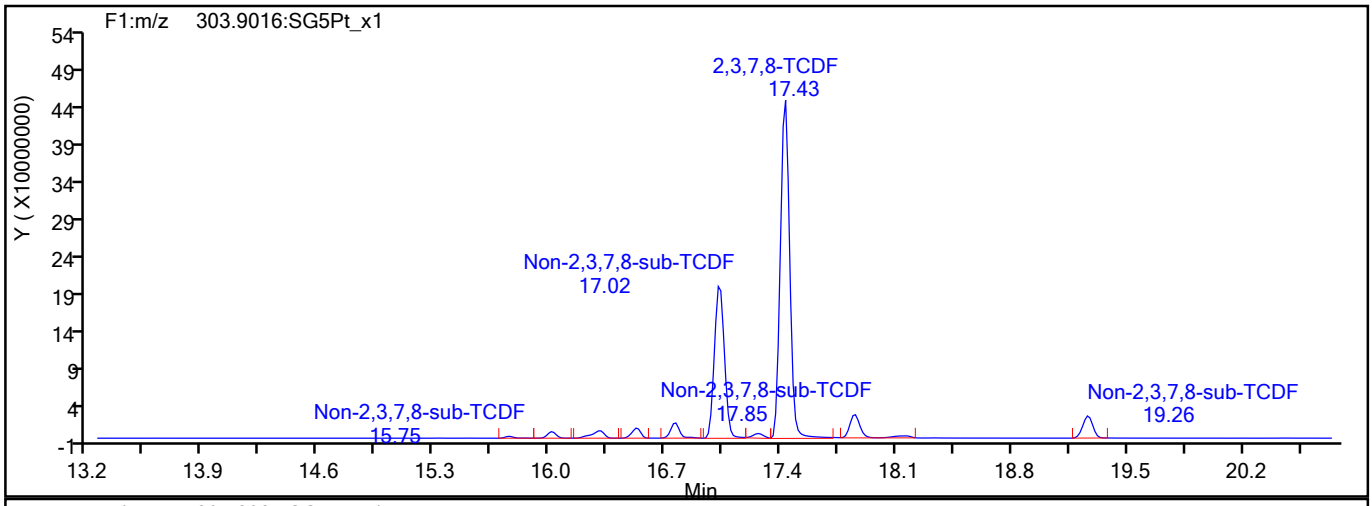

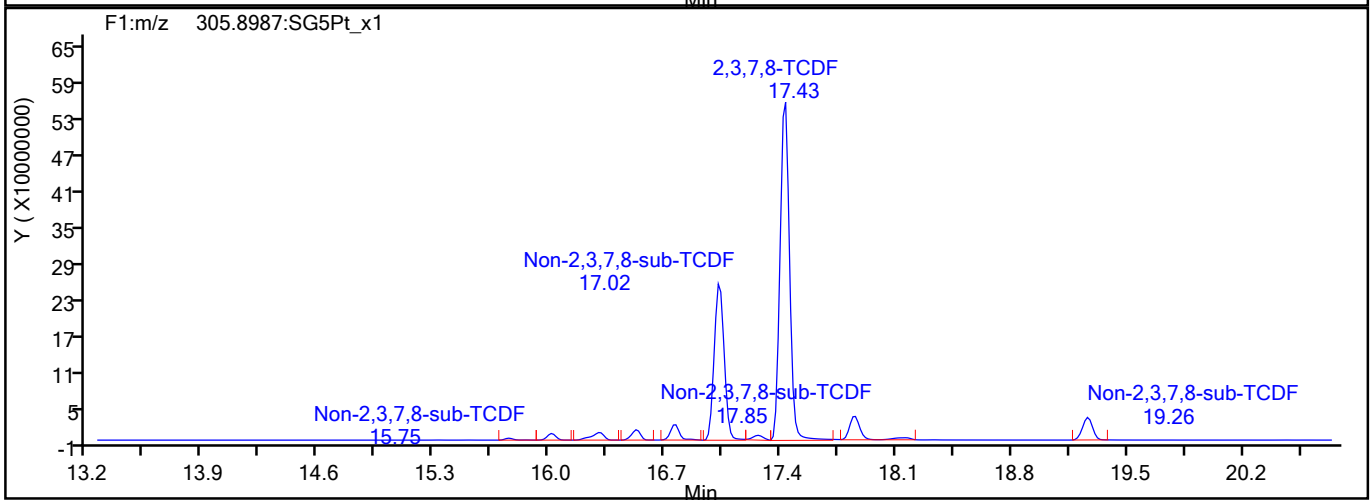

TCDF Interference Mass

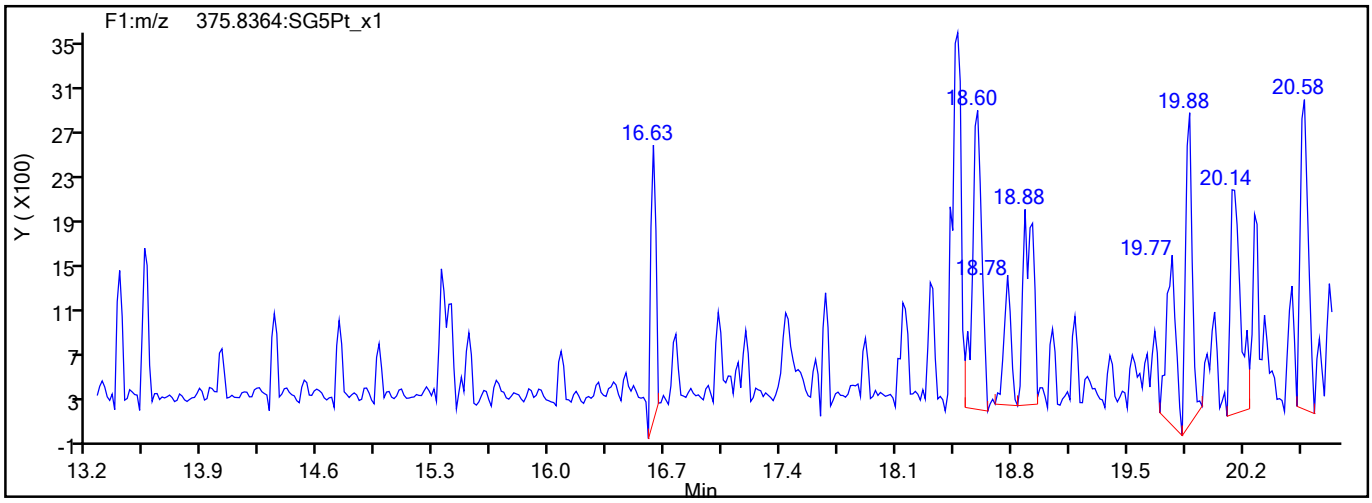

779809

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Injection Date:	18-Aug-2021 06:44:38	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	517241	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

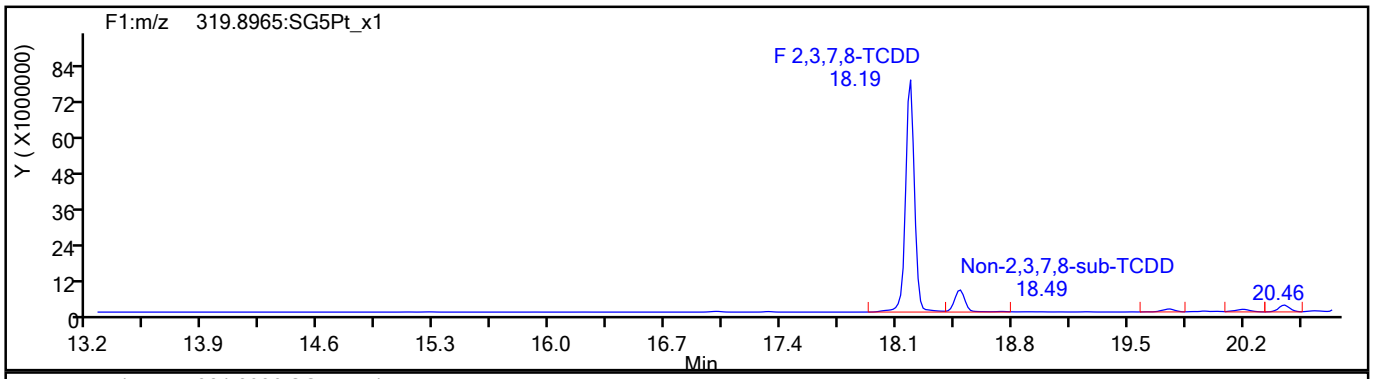

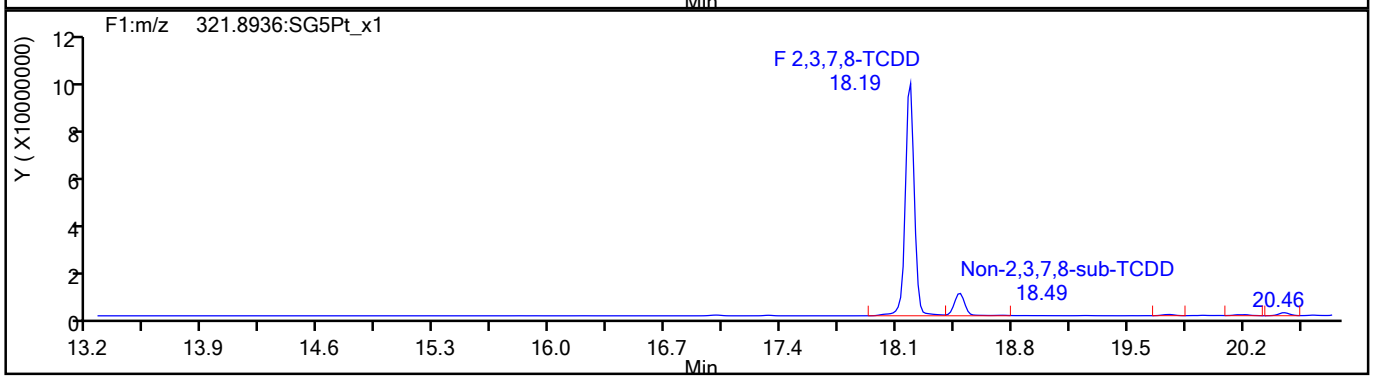

TCDD Standards

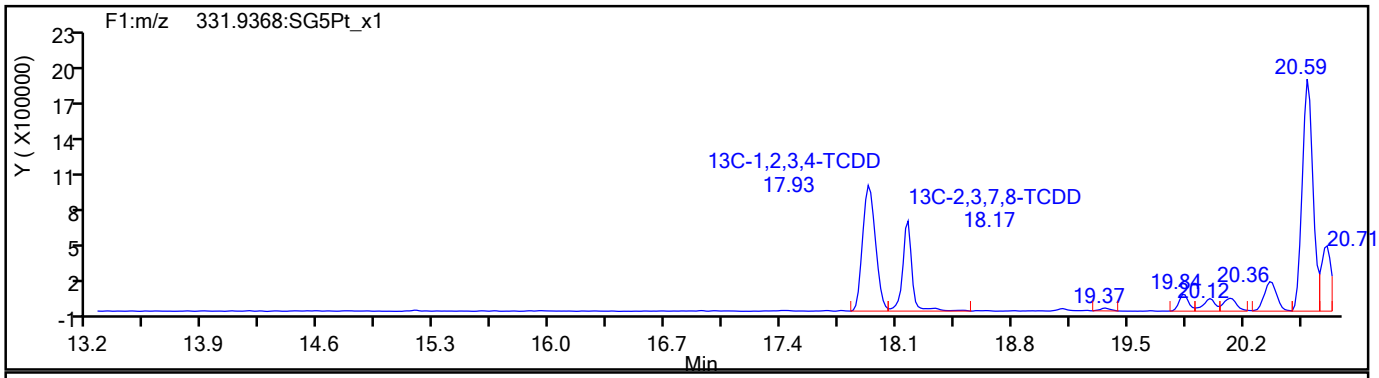

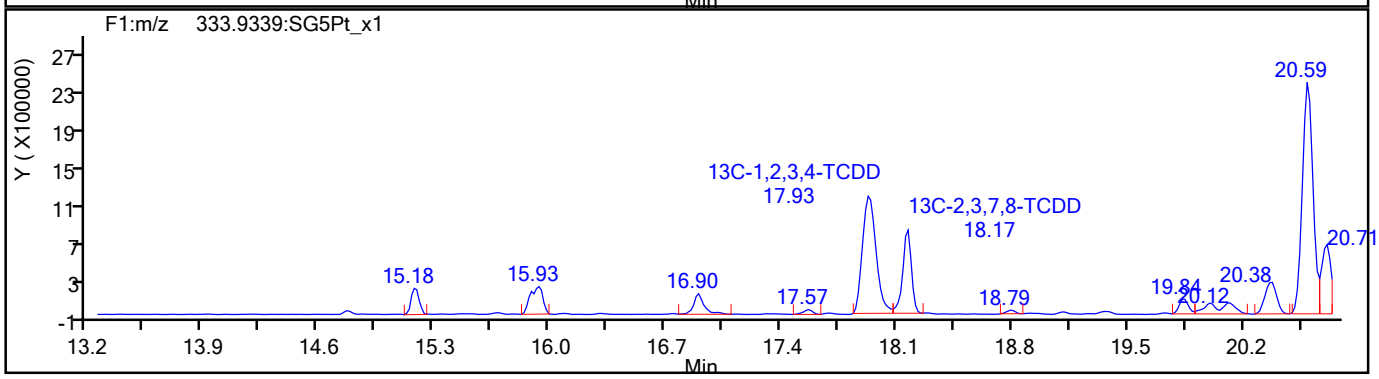

779810

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Injection Date:	18-Aug-2021 06:44:38	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	517241	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

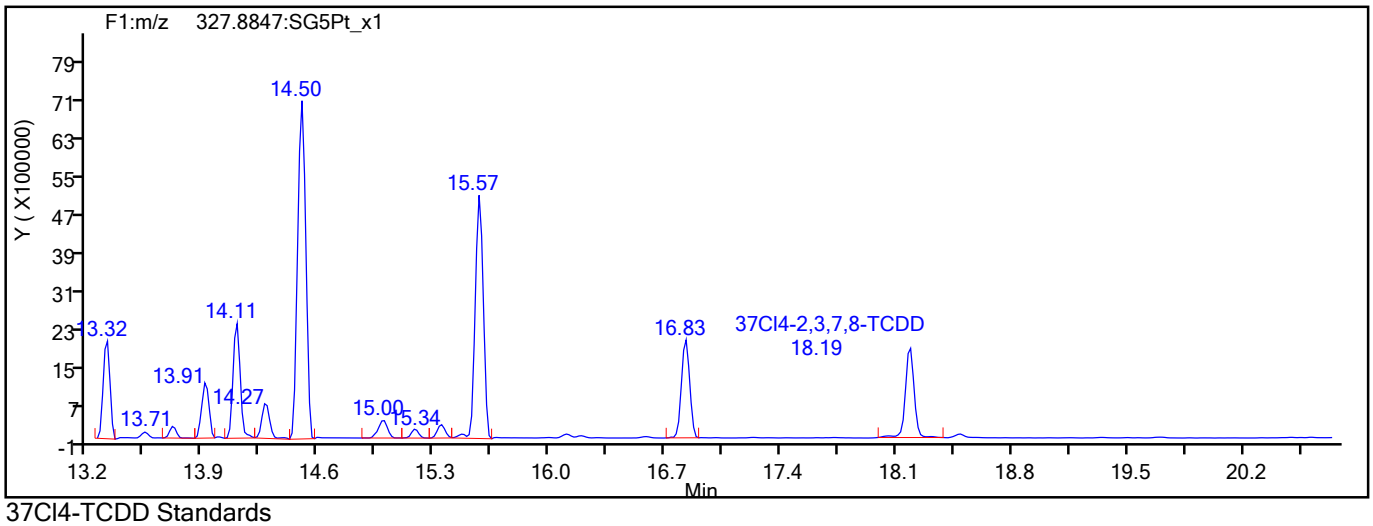

37Cl4-TCDD Standards

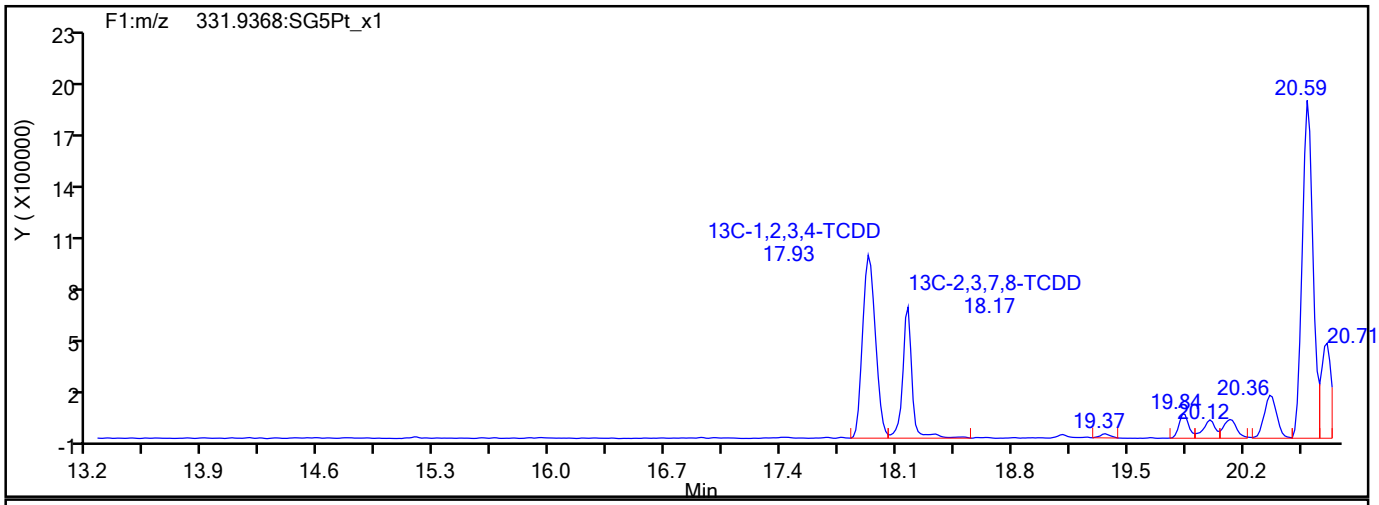

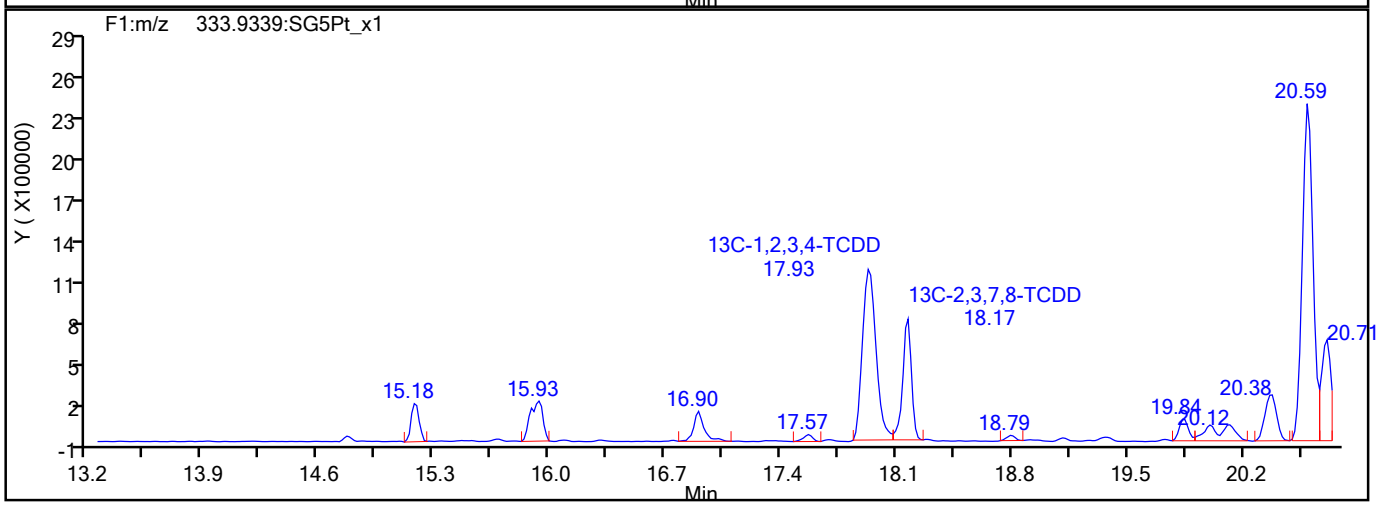

779811

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Injection Date:	18-Aug-2021 06:44:38	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	517241	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

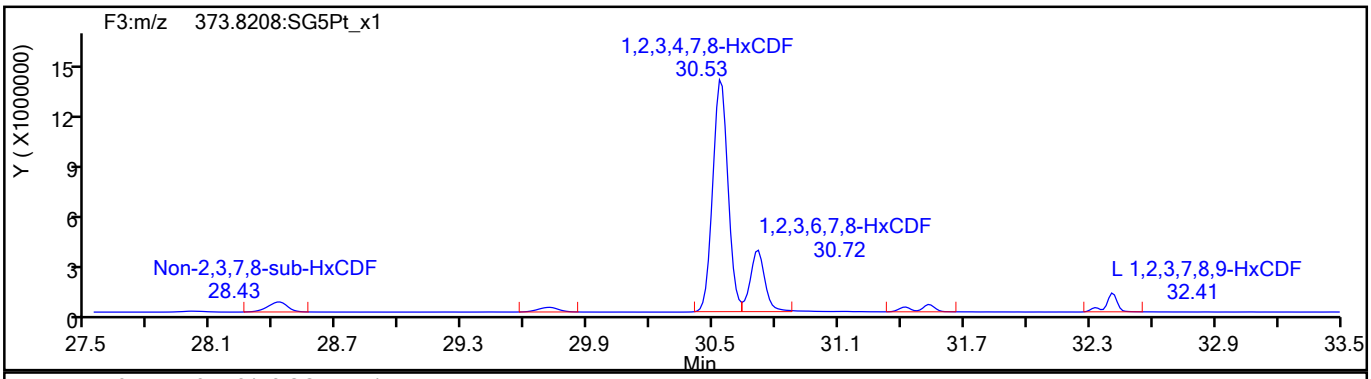

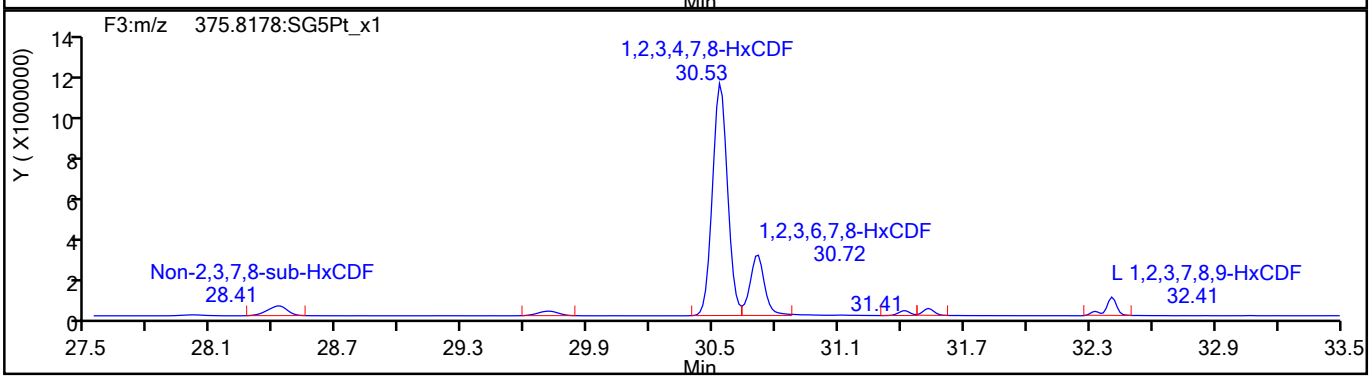

HxCDF Standards

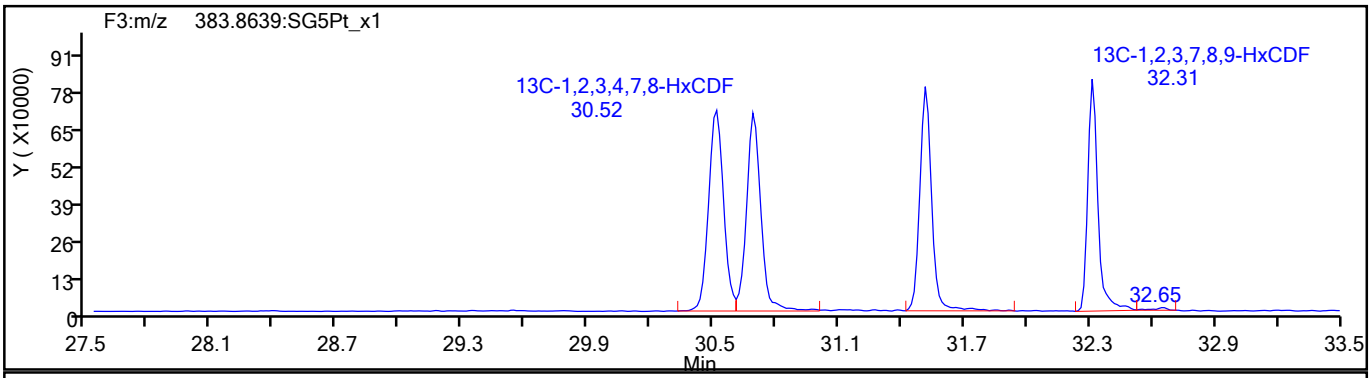

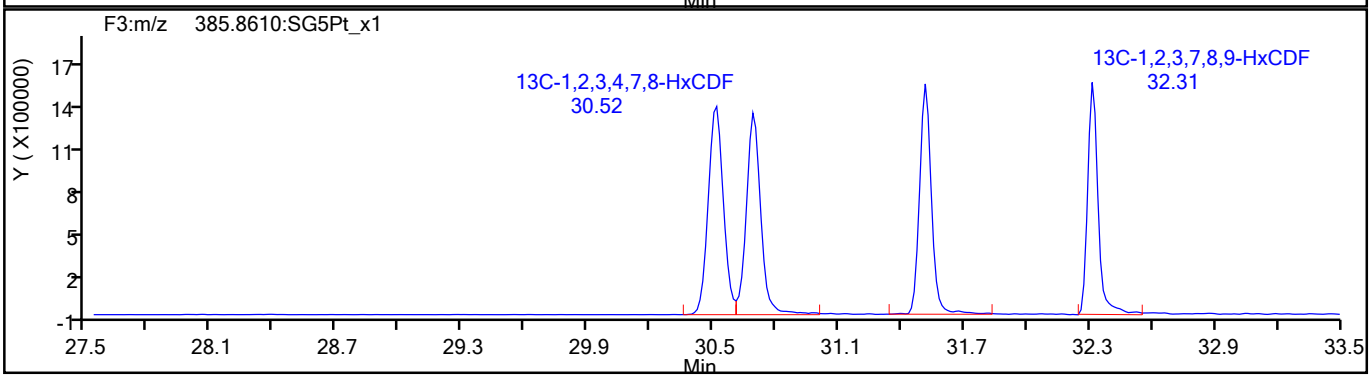

779812

Report Date: 26-Aug-2021 10:59:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Injection Date:	18-Aug-2021 06:44:38	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	517241	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

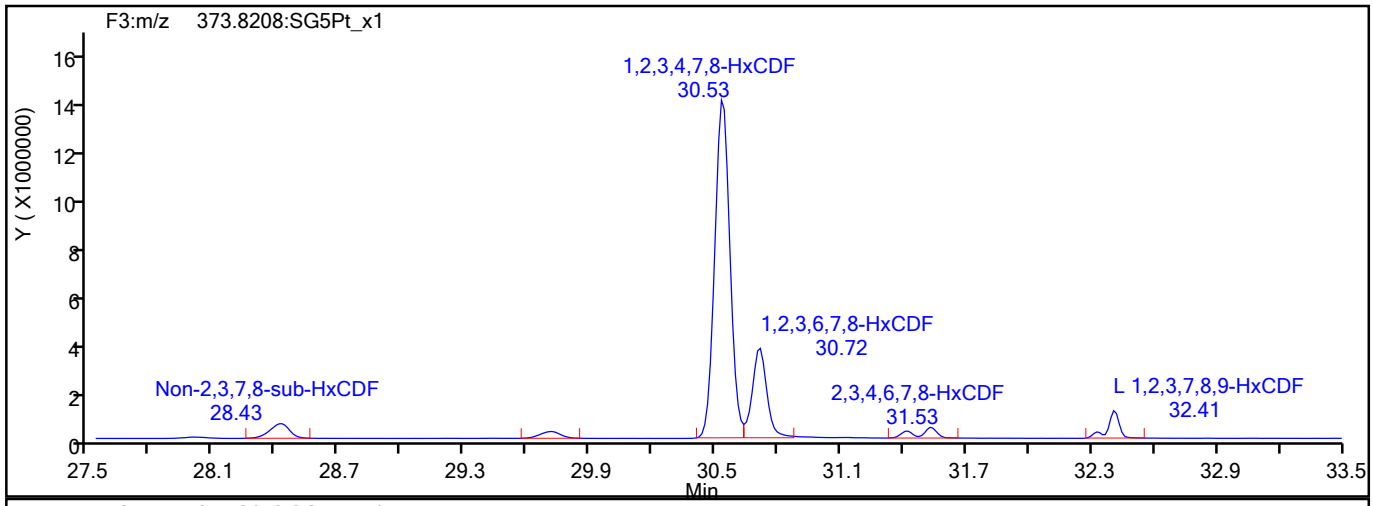

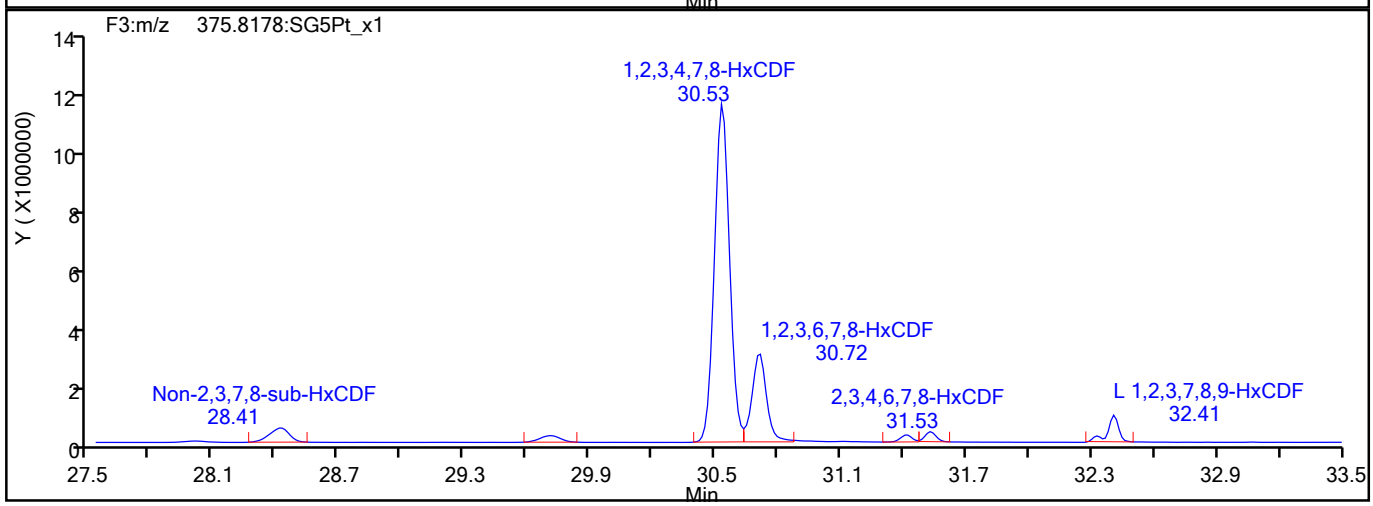

HxCDF Interference Mass

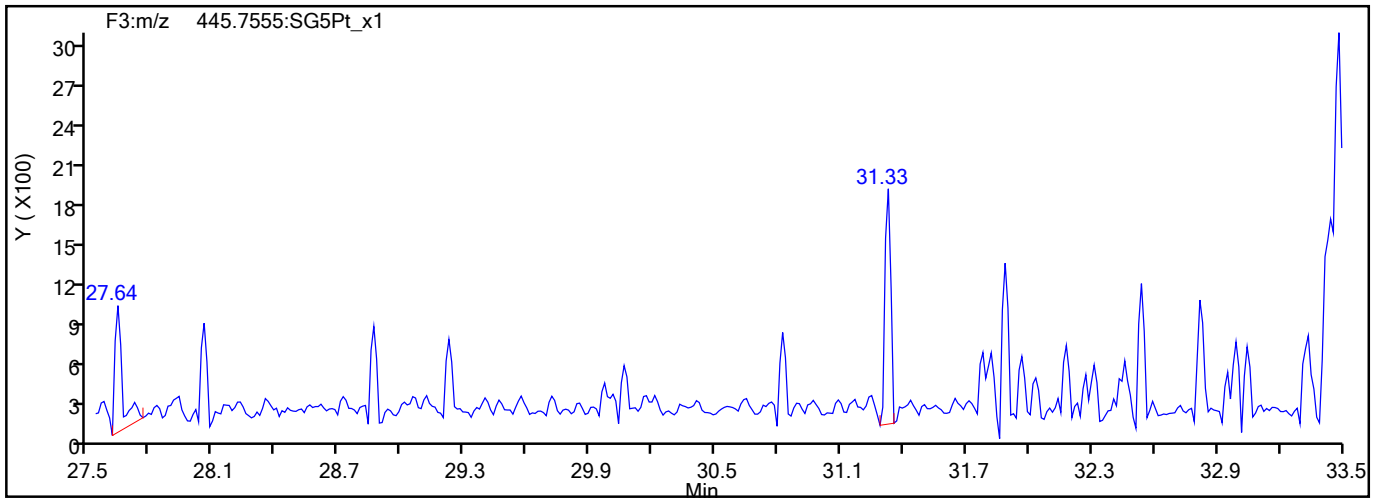

779813

Report Date: 26-Aug-2021 10:59:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Injection Date:	18-Aug-2021 06:44:38	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	517241	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

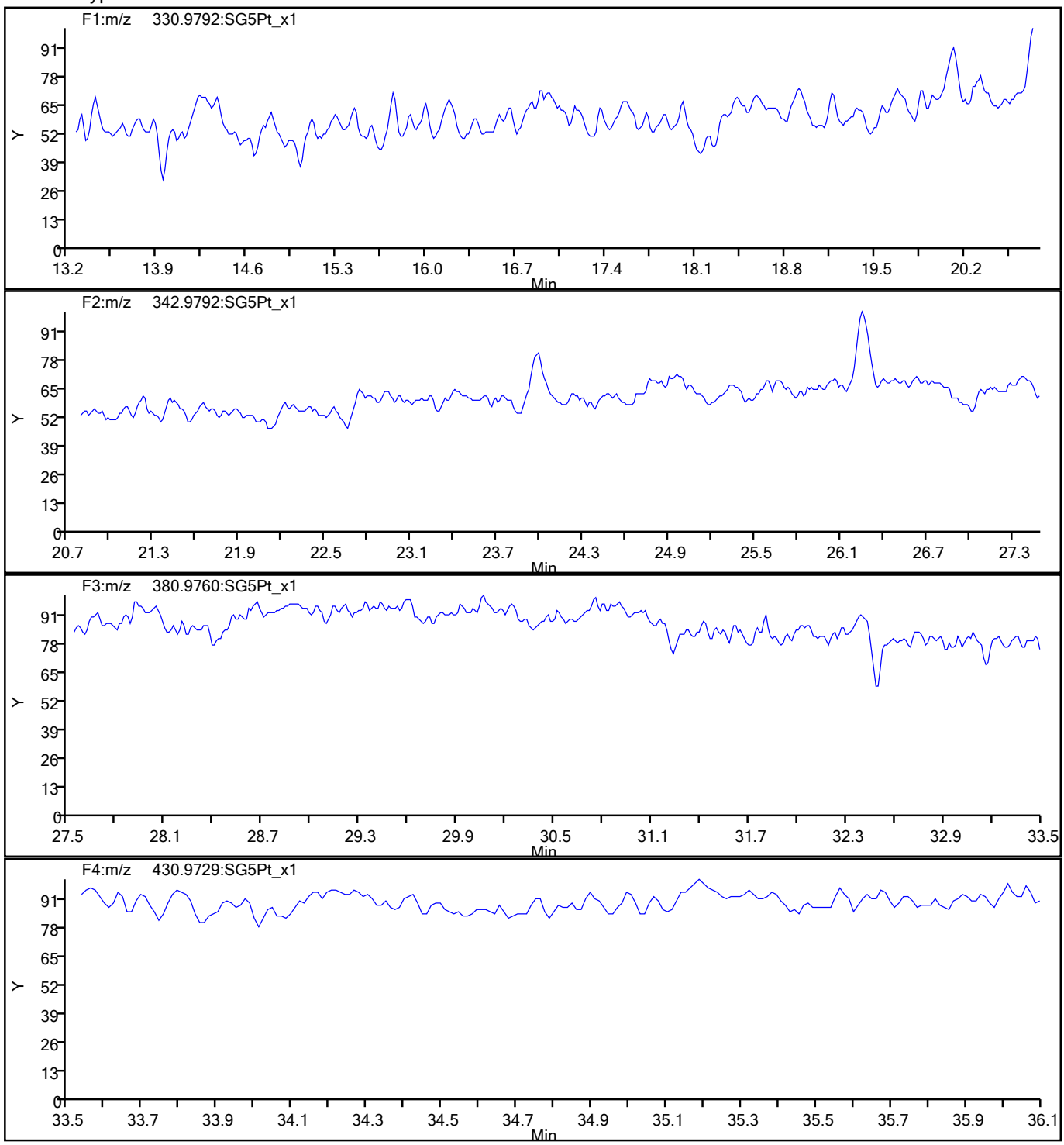

779814

Report Date: 26-Aug-2021 10:59:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_21.d		
Injection Date:	18-Aug-2021 06:44:38	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	517241	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

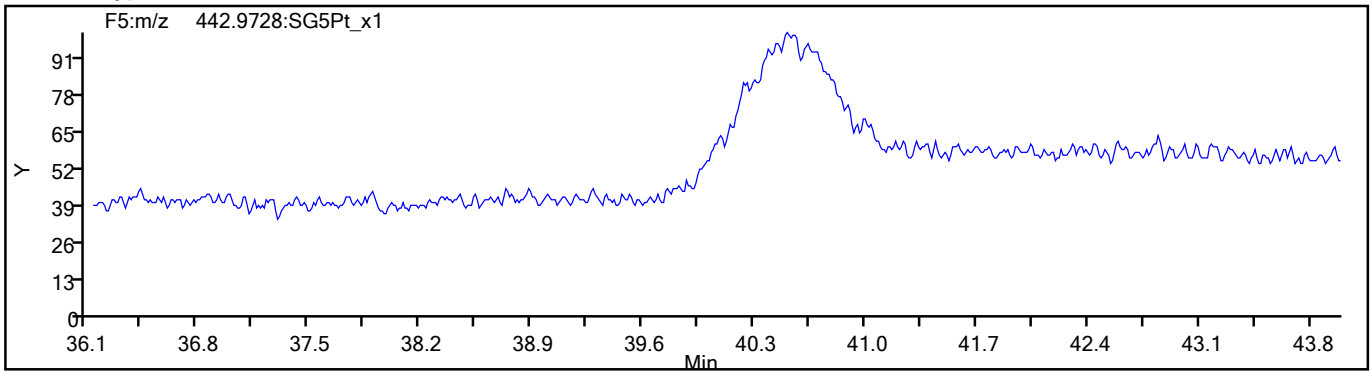

779815

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (2-4) RADL
Lab Sample ID: 320-76788-14 RADL
Matrix: Solid
Lab File ID: 25AU21A11D2_014.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:35
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.13(g)
Date Analyzed: 08/25/2021 21:17
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 48.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	130000	E B G	88	88

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	45		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	96		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_014.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Sample Type: Client
Inject. Date: 25-Aug-2021 21:17:01 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76788-A-14-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:16:16

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.369	7120762	0.89	7.2E+05	20.0	20.0				nM
D 13C-2,3,7,8-TCDF	17.700	4296407	0.81	1.3327	9.055	9.055	3.534	3.534	45.27	M
2,3,7,8-TCDF	17.714	1468170849	0.79	0.9978	6849.4	6849.4	4.643	4.643		E
D 13C-2,3,7,8-TCDD	16.123	3636156	0.87	0.8749	11.7	11.7	34.8	34.8	58.36	nM
2,3,7,8-TCDD	16.150	266822859	0.79	1.0570	1388.5	1388.5	7.111	7.111		Ea
$ 37Cl4-2,3,7,8-TCDD	16.136	2356667		0.8648	7.654	7.654	0.3917	0.3917	95.67	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 26-Aug-2021 09:30:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_014.d
Lims ID: 320-76788-A-14-A
Client ID: 11215702-072321-BN-SJSB105 (2-4)
Sample Type: Client
Inject. Date: 25-Aug-2021 21:17:01 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76788-A-14-A X5
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:16:16

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											nM
331.9368	16.369	16.298	4		3360356	623646	578868	1447170	1		M
333.9339	16.356	16.298	3		3760406	771800	271655	679137	3	0.89(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.700	17.615	5	1.081	1920413	417334	64067	160167	7		M
317.9389	17.700	17.615	5	1.081	2375994	470050	67382	168455	7	0.81(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.714	17.628	5	1.001	646688381	117131253	37946	94865	3087		
305.8987	17.714	17.628	5	1.001	821482468	148376854	44278	110695	3351	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.123	16.065	3	0.985	1692666	276965	578868	1447170	0		M
333.9339	16.123	16.065	3	0.985	1943490	403184	271655	679137	1	0.87(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.150	16.078	4	1.002	117854174	26084016	64675	161687	403		a
321.8936	16.150	16.078	4	1.002	148968685	32588658	37576	93940	867	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.136	16.078	3	0.986	2356667	515252	9455	23637	54		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_014.d				
Injection Date:	25-Aug-2021 21:17:01	Instrument ID:	11D2		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.70
Area: 2883149
Amount: 15.647067
Amount Units: pg/ul

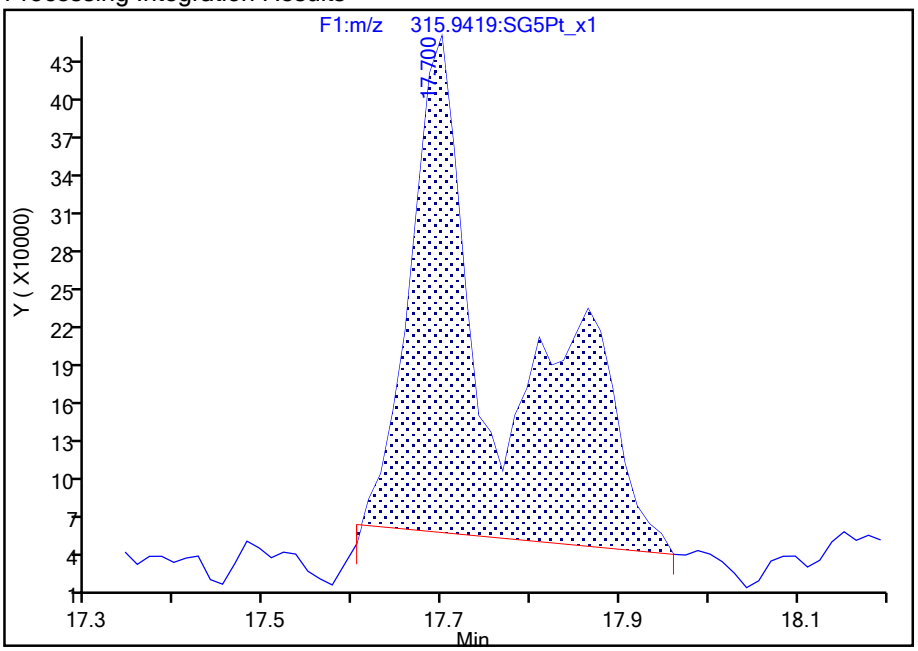

Manual Integration Results

RT: 17.70
Area: 1920413
Amount: 9.054847
Amount Units: pg/ul

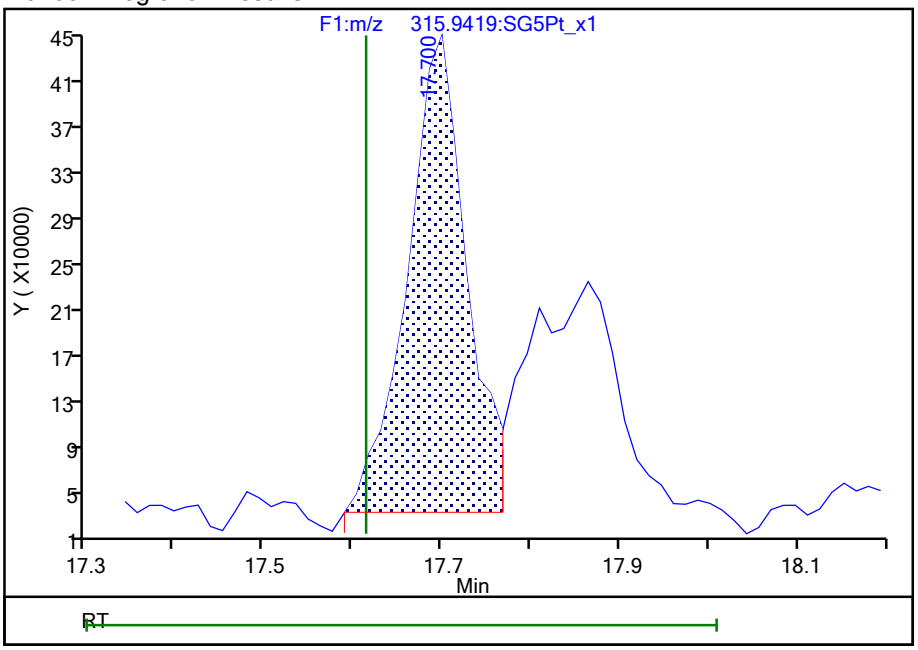

Reviewer: stephensk, 26-Aug-2021 09:15:10

Audit Action: Manually Integrated Audit Reason: Poor chromatography

779819

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_014.d				
Injection Date:	25-Aug-2021 21:17:01	Instrument ID:	11D2		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.70
Area: 4541181
Amount: 15.647067
Amount Units: pg/ul

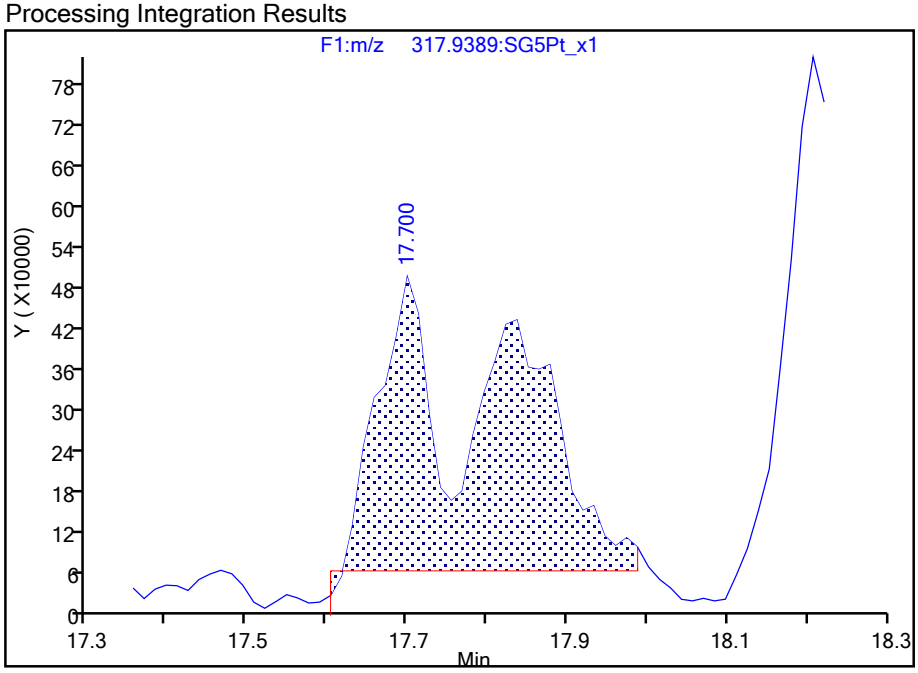

Manual Integration Results

RT: 17.70
Area: 2375994
Amount: 9.054847
Amount Units: pg/ul

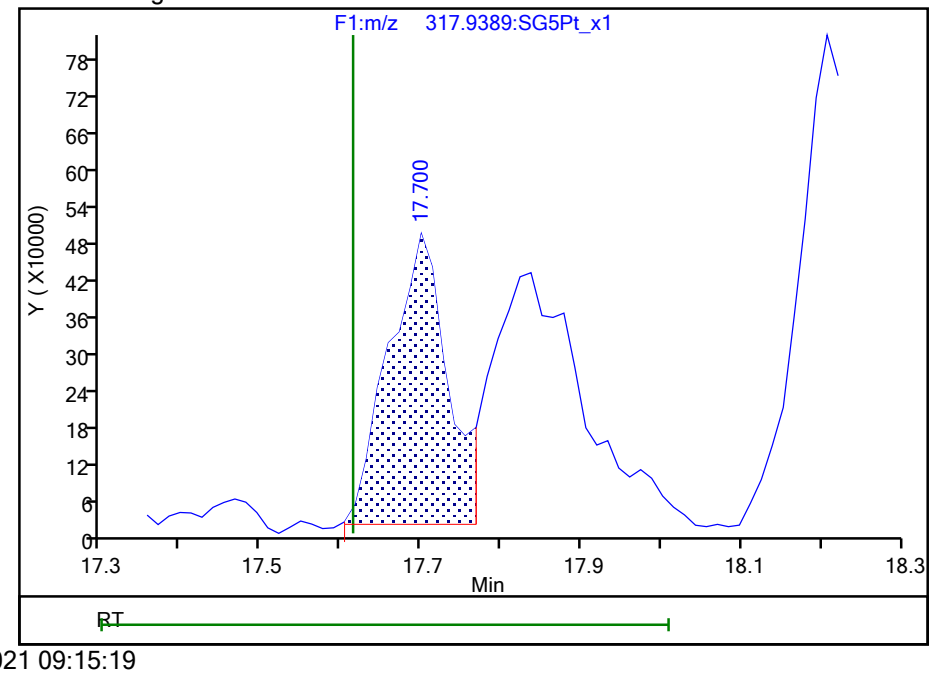

Reviewer: stephensk, 26-Aug-2021 09:15:19

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_014.d				
Injection Date:	25-Aug-2021 21:17:01	Instrument ID:	11D2		
Lims ID:	320-76788-A-14-A	Lab Sample ID:	320-76788-14		
Client ID:	11215702-072321-BN-SJSB105 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

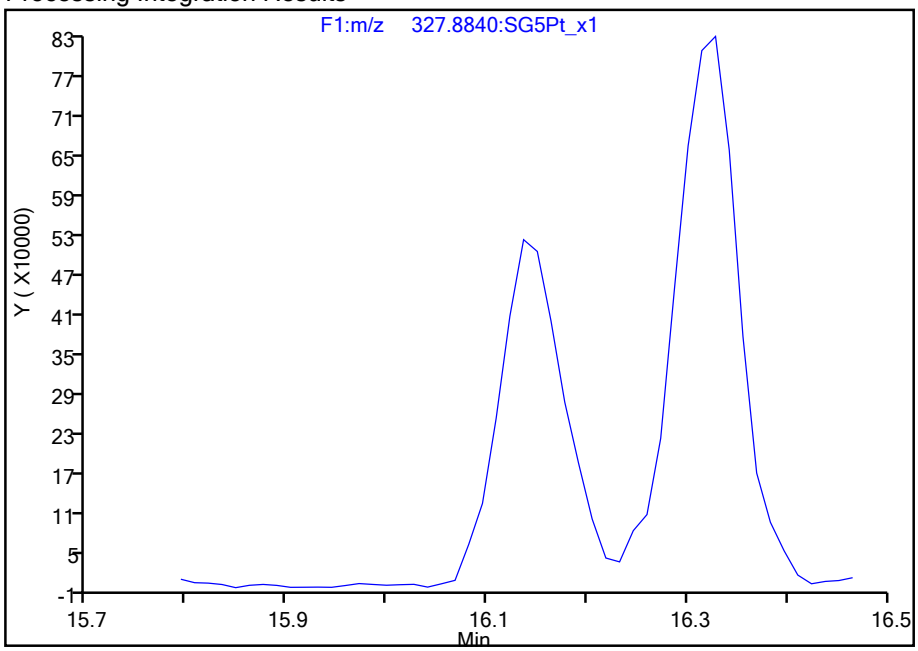

Manual Integration Results

RT: 16.14
Area: 2356667
Amount: 7.653815
Amount Units: pg/ul

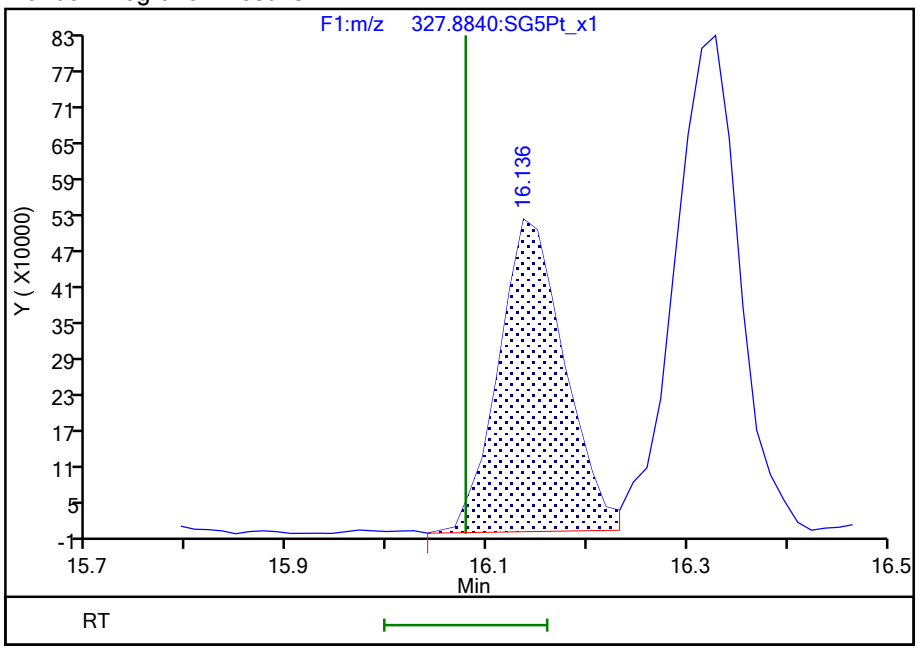

Reviewer: stephensk, 26-Aug-2021 09:14:01
Audit Action: Assigned Compound ID Audit Reason: Retention Time Shift

779821

Report Date: 26-Aug-2021 09:30:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_014.d		
Injection Date:	25-Aug-2021 21:17:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	519744	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

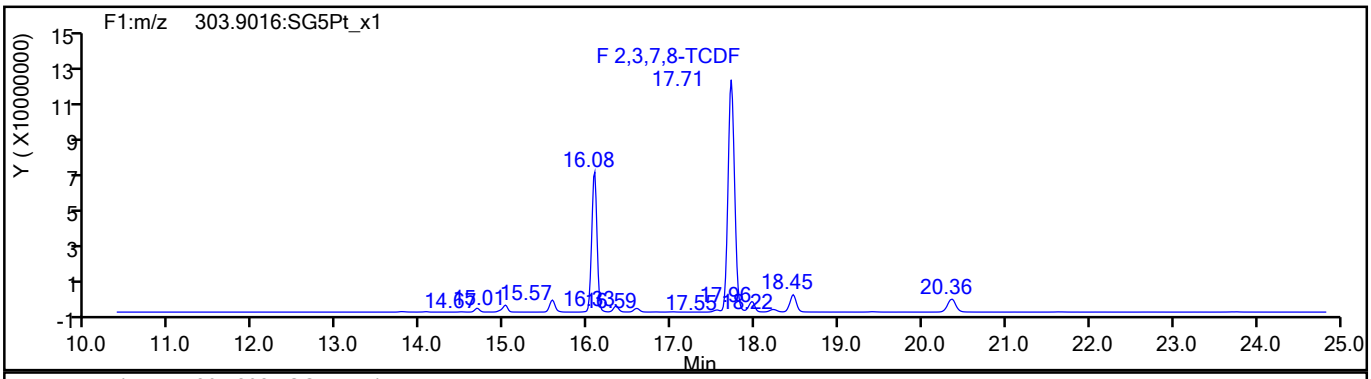

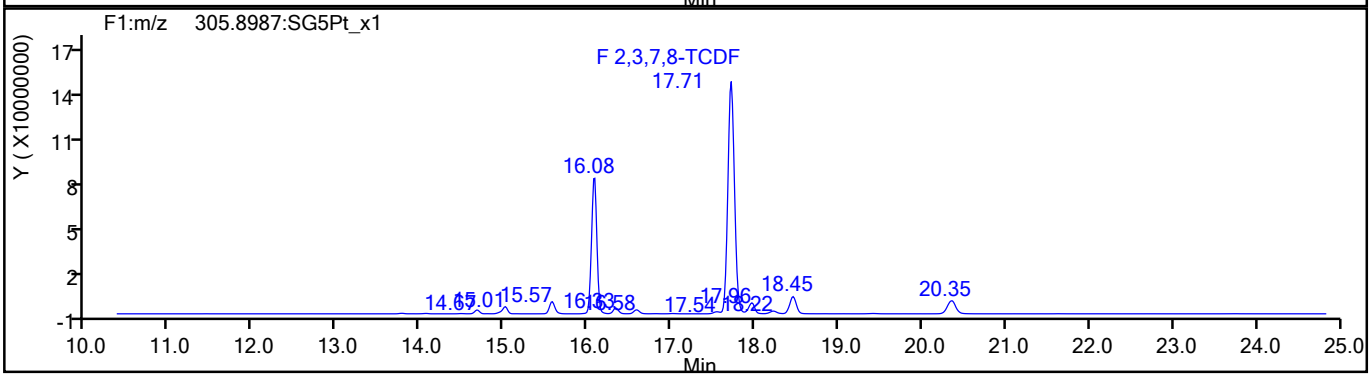

TCDF Standards

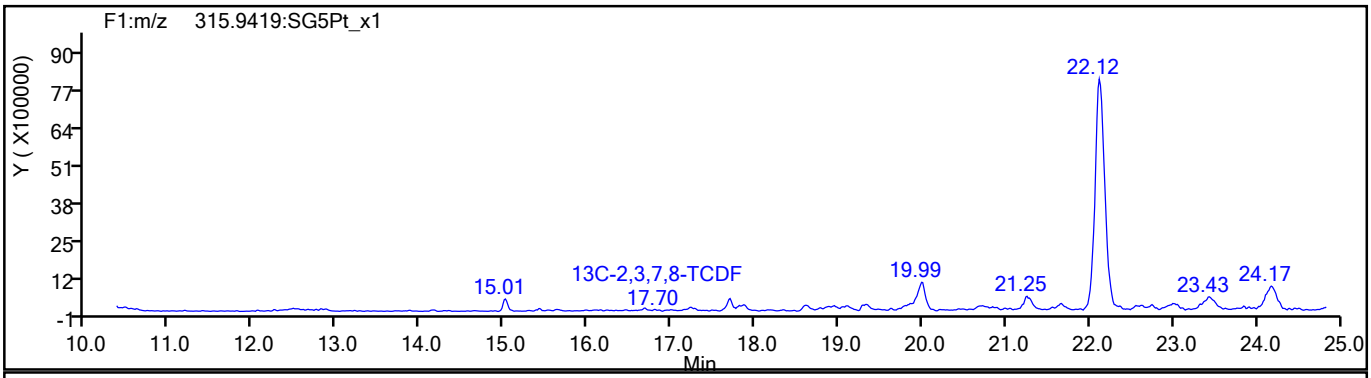

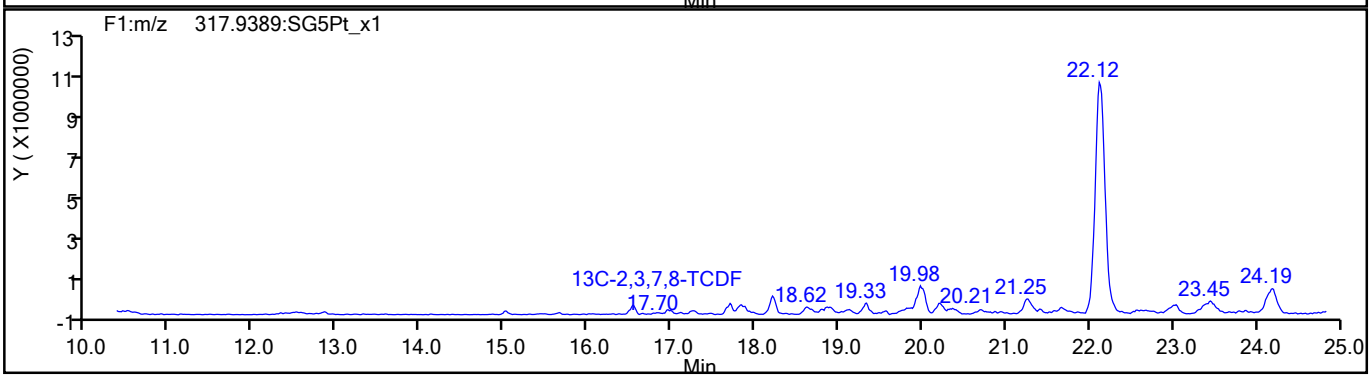

779822

Report Date: 26-Aug-2021 09:30:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_014.d		
Injection Date:	25-Aug-2021 21:17:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	519744	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

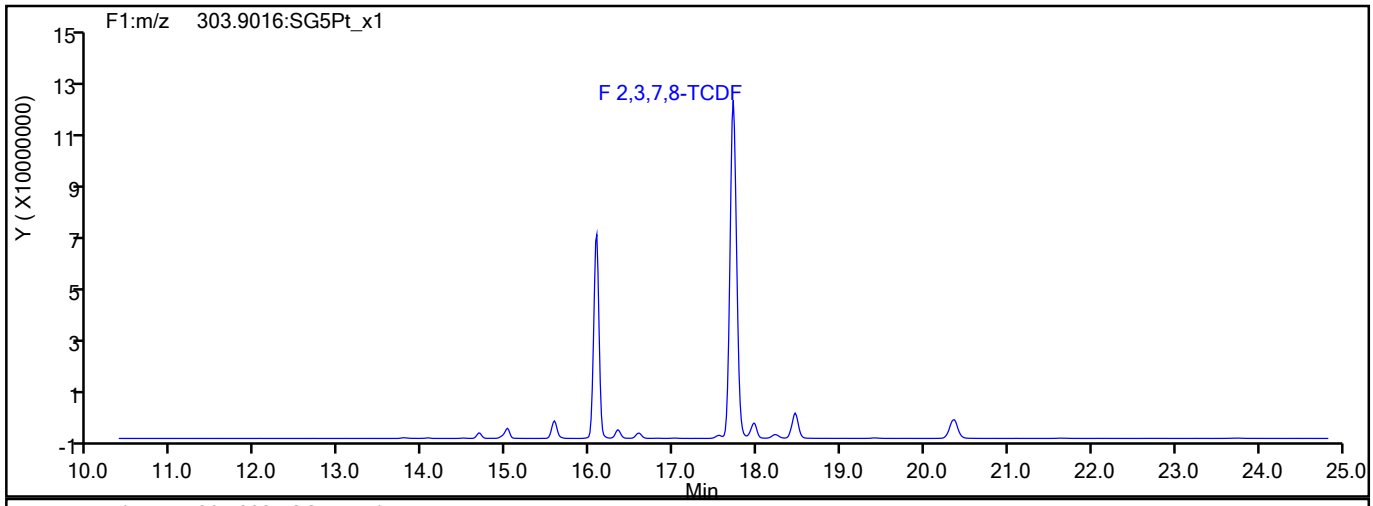

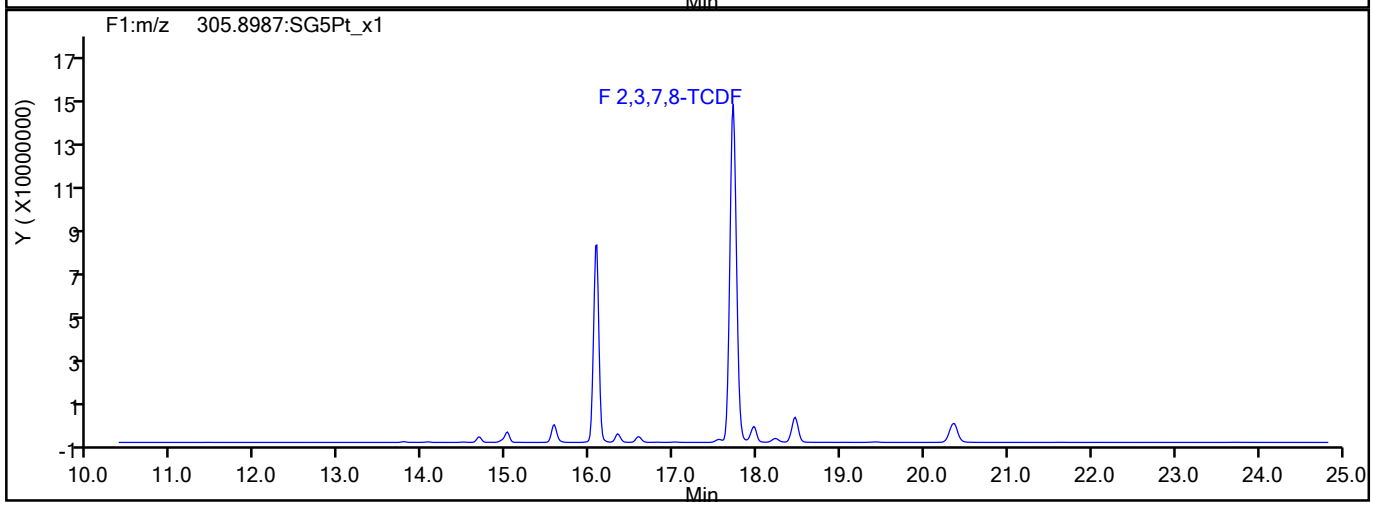

TCDF Interference Mass

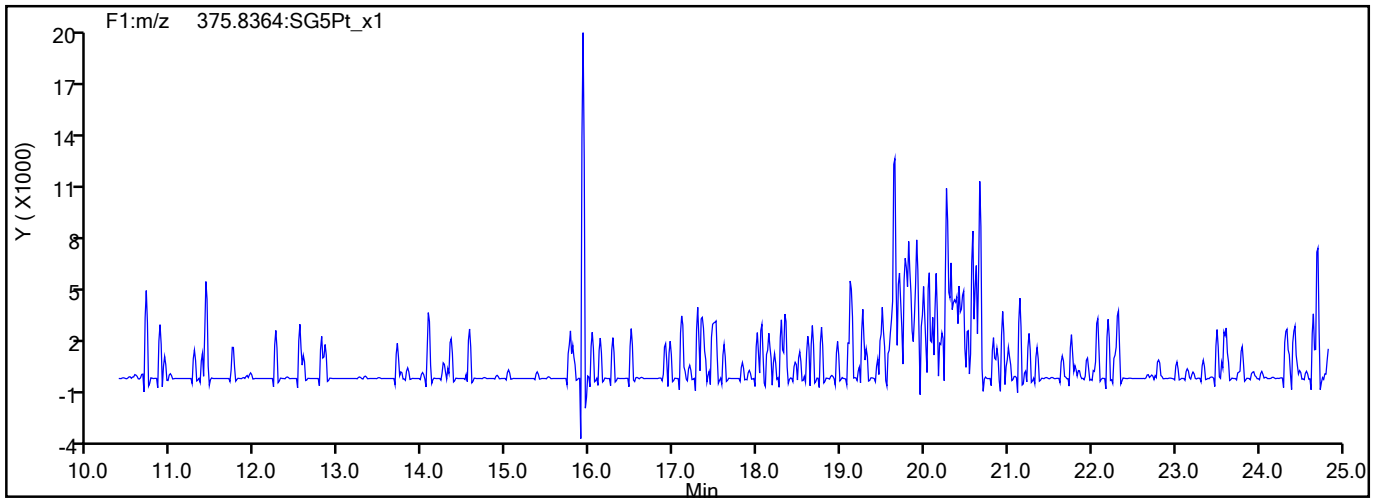

779823

Report Date: 26-Aug-2021 09:30:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_014.d		
Injection Date:	25-Aug-2021 21:17:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	519744	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

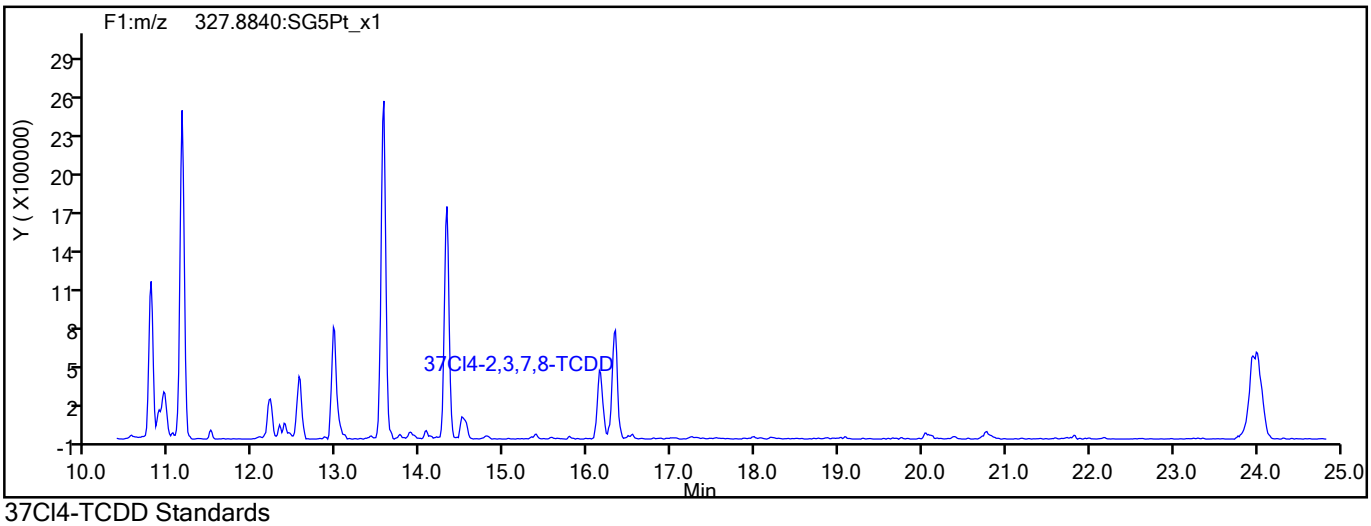

37Cl4-TCDD Standards

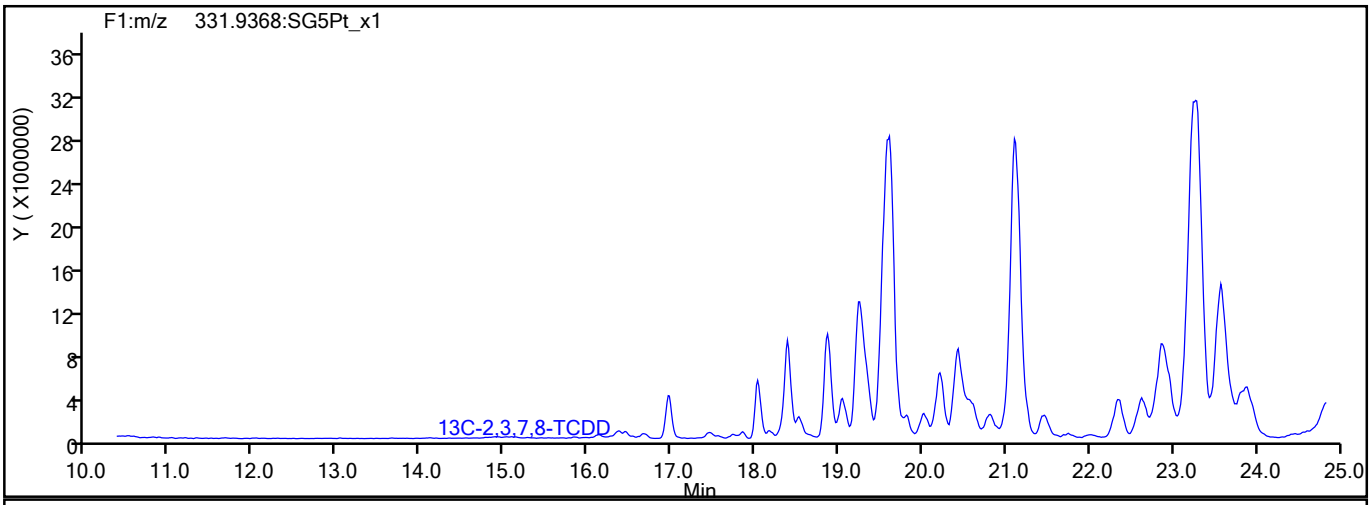

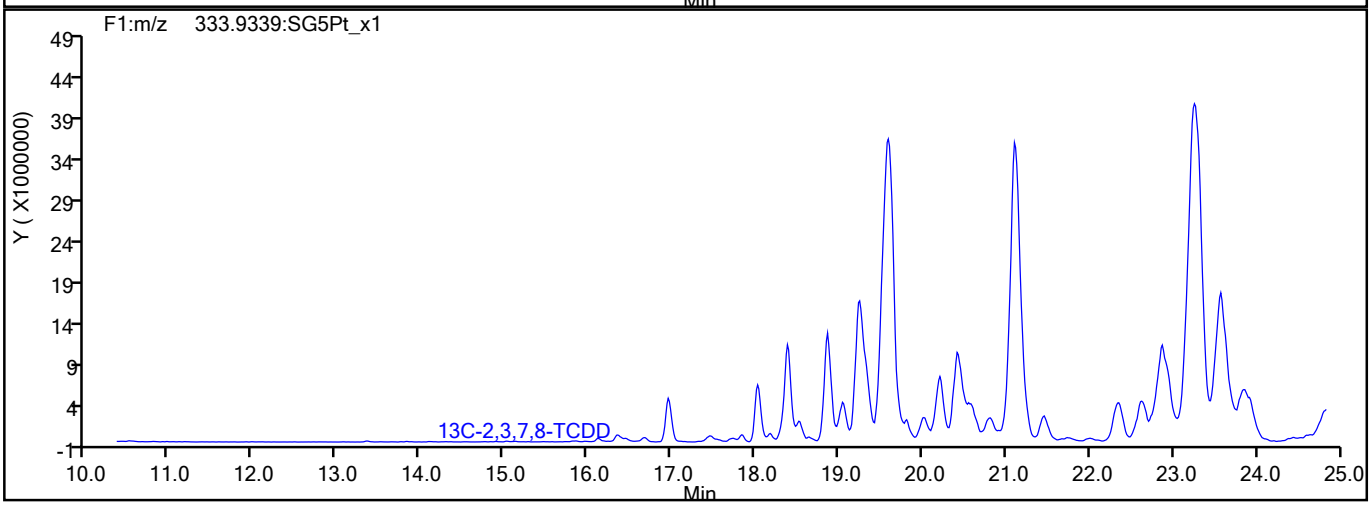

779824

Report Date: 26-Aug-2021 09:30:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_014.d		
Injection Date:	25-Aug-2021 21:17:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (2-4)		
Worklist#:	519744	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

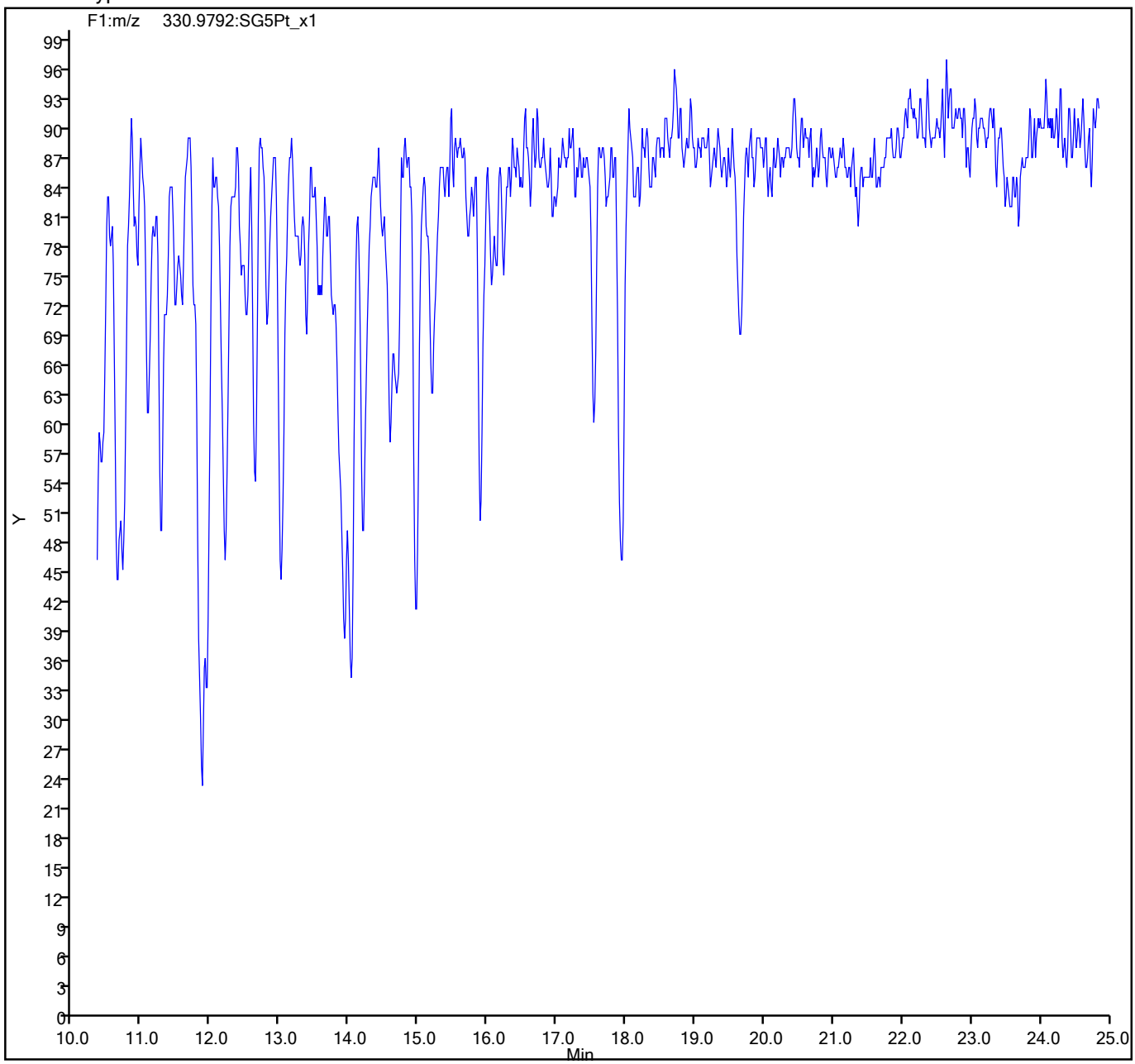

779825

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (4-6)
Lab Sample ID: 320-76788-15
Matrix: Solid
Lab File ID: 13AU2110D5_32.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:40
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.30(g)
Date Analyzed: 08/14/2021 16:46
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	170	B	1.4	0.74
40321-76-4	1,2,3,7,8-PeCDD	1.9	J	7.0	0.16
57117-41-6	1,2,3,7,8-PeCDF	12		7.0	0.20
57117-31-4	2,3,4,7,8-PeCDF	9.2		7.0	0.20
39227-28-6	1,2,3,4,7,8-HxCDD	0.54	J B q	7.0	0.27
57653-85-7	1,2,3,6,7,8-HxCDD	0.90	J	7.0	0.27
19408-74-3	1,2,3,7,8,9-HxCDD	2.1	J	7.0	0.25
70648-26-9	1,2,3,4,7,8-HxCDF	17	B	7.0	0.18
57117-44-9	1,2,3,6,7,8-HxCDF	5.2	J B	7.0	0.18
72918-21-9	1,2,3,7,8,9-HxCDF	0.38	J B	7.0	0.14
60851-34-5	2,3,4,6,7,8-HxCDF	0.53	J q	7.0	0.14
35822-46-9	1,2,3,4,6,7,8-HpCDD	49	B	7.0	1.3
67562-39-4	1,2,3,4,6,7,8-HpCDF	5.0	J B	7.0	0.13
55673-89-7	1,2,3,4,7,8,9-HpCDF	1.6	J B	7.0	0.16
3268-87-9	OCDD	1500	B	14	2.0
39001-02-0	OCDF	3.9	J B	14	0.093
41903-57-5	Total TCDD	190	B	1.4	0.74
30402-14-3	Total TCDF	1100	B q G	1.9	1.9
36088-22-9	Total PeCDD	7.7	q	7.0	0.16
30402-15-4	Total PeCDF	34	q	7.0	0.20
34465-46-8	Total HxCDD	33	B q	7.0	0.26
55684-94-1	Total HxCDF	24	B q	7.0	0.16
37871-00-4	Total HpCDD	170	B	7.0	1.3
38998-75-3	Total HpCDF	8.0	B	7.0	0.15

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (4-6)
Lab Sample ID: 320-76788-15
Matrix: Solid
Lab File ID: 13AU2110D5_32.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:40
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.30(g)
Date Analyzed: 08/14/2021 16:46
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	73		25-164
89059-46-1	13C-2,3,7,8-TCDF	69		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	74		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	68		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	71		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	81		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	76		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	73		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	66		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	69		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	67		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	79		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	70		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	82		26-138
114423-97-1	13C-OCDD	86		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	85		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d
Lims ID: 320-76788-A-15-A
Client ID: 11215702-072321-BN-SJSB105 (4-6)
Sample Type: Client
Inject. Date: 14-Aug-2021 16:46:35 ALS Bottle#: 32 Worklist Smp#: 21
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-15-a 320-76788-a-15-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:49:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 14:03:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	24944793	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	27827982	0.75	1.6249	68.7	68.7	0.2420	0.2420	68.66	
2,3,7,8-TCDF	17.356	66081217	0.78	1.0239	231.9	231.9	0.6824	0.6824		E
A Non-2,3,7,8-sub-TCDF	17.046	45112416	0.77	1.0239	159.6	158.3	0.6824	101.4		RQ
S Total TCDF					391.5	390.2	0.6824	0.6824		RQ
D 13C-2,3,7,8-TCDD	18.051	16485141	0.84	0.8993	73.5	73.5	0.3100	0.3100	73.49	
2,3,7,8-TCDD	18.066	12884529	0.78	1.2541	62.3	62.3	0.2656	0.2656		
$ 37Cl4-2,3,7,8-TCDD	18.066	9344421		1.1071	33.8	33.8	0.0678	0.0678	84.59	
A Non-2,3,7,8-sub-TCDD	17.499	1374729	0.77	1.2541	6.649	6.649	0.2656	5.761		
S Total TCDD					69.0	69.0	0.2656	0.2656		
D 13C-1,2,3,7,8-PeCDF	22.380	20481806	1.59	1.2101	67.9	67.9	0.1765	0.1765	67.85	
1,2,3,7,8-PeCDF	22.408	959894	1.55	1.0611	4.417	4.417	0.0706	0.0706		M
D 13C-2,3,4,7,8-PeCDF	23.730	22055589	1.60	1.2395	71.3	71.3	0.1723	0.1723	71.33	
2,3,4,7,8-PeCDF	23.758	736361	1.61	1.0184	3.278	3.278	0.0731	0.0731		
A F1 PeCDFs	20.093						0.0244	0.0244		
A Non-2,3,7,8-sub-PeCDF	23.241	984774	1.55	1.0398	4.519	4.453	0.0718	1.887		RQ
S Total PeCDF					12.2	12.1	0.0718	0.0718		RQ
D 13C-1,2,3,7,8-PeCDD	24.453	14043973	1.58	0.7612	74.0	74.0	0.1221	0.1221	73.96	
1,2,3,7,8-PeCDD	24.480	98573	1.64	1.0484	0.6695	0.6695	0.0578	0.0578		
A Non-2,3,7,8-sub-PeCDD	23.349	306092	1.55	1.0484	2.260	2.079	0.0578	1.110		RQ
S Total PeCDD					2.929	2.748	0.0578	0.0578		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.516	18176104	0.51	1.0837	72.7	72.7	0.3839	0.3839	72.71	
1,2,3,4,7,8-HxCDF	30.542	1198680	1.19	1.0851	6.077	6.077	0.0638	0.0638		
D 13C-1,2,3,6,7,8-HxCDF	30.702	17168543	0.51	1.1279	66.0	66.0	0.3689	0.3689	65.99	
1,2,3,6,7,8-HxCDF	30.729	356604	1.22	1.1260	1.845	1.845	0.0636	0.0636		
D 13C-2,3,4,6,7,8-HxCDF	31.527	16515372	0.52	1.0637	67.3	67.3	0.3911	0.3911	67.31	
2,3,4,6,7,8-HxCDF	31.527	36482	1.24	1.1675	0.2178	0.1892	0.0497	0.0497		RQM
D 13C-1,2,3,7,8,9-HxCDF	32.326	15379685	0.51	0.9676	68.9	68.9	0.4300	0.4300	68.91	
1,2,3,7,8,9-HxCDF	32.339	24224	1.43	1.1664	0.1350	0.1350	0.0510	0.0510		
A Non-2,3,7,8-sub-HxCDF	30.197	89850	1.24	1.1363	0.5372	0.4704	0.0564	0.3483		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					8.812	8.717	0.0570	0.0570		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.140	23067867	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	13639115	1.25	0.7334	80.6	80.6	0.4363	0.4363	80.62	
1,2,3,4,7,8-HxCDD	31.740	28104	1.24	1.0640	0.2120	0.1937	0.0967	0.0967		RQ
D 13C-1,2,3,6,7,8-HxCDD	31.820	15517376	1.28	0.8802	76.4	76.4	0.3636	0.3636	76.43	
1,2,3,6,7,8-HxCDD	31.833	50217	1.18	1.0001	0.3236	0.3236	0.0965	0.0965		
1,2,3,7,8,9-HxCDD	32.166	126280	1.13	1.1325	0.7649	0.7649	0.0879	0.0879		
A Non-2,3,7,8-sub-HxCDD	30.882	1616438	1.24	1.0655	10.4	10.4	0.0935	7.541		RQM
S Total HxCDD					11.7	11.7	0.0937	0.0937		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	12396682	0.42	0.7730	69.5	69.5	0.9286	0.9286	69.52	
1,2,3,4,6,7,8-HpCDF	33.778	322699	1.10	1.4413	1.806	1.806	0.0471	0.0471		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	13243584	0.43	0.7008	81.9	81.9	1.024	1.024	81.92	
1,2,3,4,7,8,9-HpCDF	34.871	99976	0.95	1.3174	0.5730	0.5730	0.0581	0.0581		M
A Non-2,3,7,8-sub-HpCDF	34.319	85278	1.01	1.3793	0.4823	0.4823	0.0522	0.4823		
S Total HpCDF					2.861	2.861	0.0526	0.0526		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	11750341	1.01	0.6472	78.7	78.7	0.5548	0.5548	78.70	
1,2,3,4,6,7,8-HpCDD	34.568	2236040	1.06	1.0943	17.4	17.4	0.4569	0.4569		
A Non-2,3,7,8-sub-HpCDD	34.301	5548323	1.03	1.0943	43.1	43.1	0.4569	43.1		
S Total HpCDD					60.5	60.5	0.4569	0.4569		
D 13C-OCDD	36.926	17660277	0.88	0.4472	171.2	171.2	0.2588	0.2588	85.61	
OCDF	37.021	177933	0.82	1.4382	1.401	1.401	0.0333	0.0333		
OCDD	36.938	53558510	0.90	1.1070	547.9	547.9	0.7246	0.7246		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d
Lims ID: 320-76788-A-15-A
Client ID: 11215702-072321-BN-SJSB105 (4-6)
Sample Type: Client
Inject. Date: 14-Aug-2021 16:46:35 ALS Bottle#: 32 Worklist Smp#: 21
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-15-a 320-76788-a-15-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:49:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 14:03:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		11171530	2744696	3712	9280	739		
333.9339	17.855	17.855	0		13773263	3414028	3156	7890	1082	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.971	11956783	2972976	4346	10865	684		
317.9389	17.341	17.341	0	0.971	15871199	3901208	5340	13350	731	0.75(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.356	17.356	0	1.001	28981130	6925892	8311	20777	833		
305.8987	17.356	17.356	0	1.001	37100087	8814342	10902	27255	809	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	15.935	17.046	-67	0.919	411113	108799	8311	20777	13		
305.8987	15.935	17.046	-67	0.919	509333	138517	10902	27255	13	0.81(0.65-0.89)	
303.9016	16.207	17.046	-50	0.935	485099	155516	8311	20777	19		
305.8987	16.222	17.046	-49	0.935	990205	214707	10902	27255	20	0.49(0.65-0.89)	
	Empc Correction				629998	201968	10902	27255	19		
303.9016	16.449	17.046	-36	0.949	779261	199066	8311	20777	24		
305.8987	16.449	17.046	-36	0.949	926891	242761	10902	27255	22	0.84(0.65-0.89)	
303.9016	16.691	17.046	-21	0.963	1067268	270368	8311	20777	33		
305.8987	16.691	17.046	-21	0.963	1388309	331474	10902	27255	30	0.77(0.65-0.89)	
303.9016	16.963	17.046	-5	0.978	12483762	3127001	8311	20777	376		
305.8987	16.963	17.046	-5	0.978	16413482	4117792	10902	27255	378	0.76(0.65-0.89)	
303.9016	17.190	17.046	9	0.991	404128	91320	8311	20777	11		
305.8987	17.190	17.046	9	0.991	531829	137281	10902	27255	13	0.76(0.65-0.89)	
303.9016	17.794	17.046	45	1.026	1777817	405020	8311	20777	49		
305.8987	17.779	17.046	44	1.025	2381931	550367	10902	27255	50	0.75(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.036	17.046	59	1.040	311339	71706	8311	20777	9		
305.8987	18.021	17.046	58	1.039	479455	100671	10902	27255	9	0.65(0.65-0.89)	
303.9016	19.185	17.046	128	1.106	1795689	383609	8311	20777	46		
305.8987	19.185	17.046	128	1.106	2335712	505322	10902	27255	46	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	7513957	1756981	3712	9280	473		
333.9339	18.051	18.051	0	1.011	8971184	2170558	3156	7890	688	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.001	5639740	1276823	2640	6600	484		
321.8936	18.066	18.066	0	1.001	7244789	1696117	2593	6482	654	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.066	0	1.012	9344421	2209111	1849	4622	1195		
A Non-2,3,7,8-sub-TCDD											
319.8965	16.917	17.499	-35	0.937	79158	19214	2640	6600	7		
321.8936	16.917	17.499	-35	0.937	104460	24644	2593	6482	10	0.76(0.65-0.89)	
319.8965	18.429	17.499	56	1.021	518932	108668	2640	6600	41		
321.8936	18.429	17.499	56	1.021	672179	143938	2593	6482	56	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.380	22.367	1	1.253	12575185	2174732	3049	7622	713		
353.8970	22.380	22.367	1	1.253	7906621	1344979	2213	5532	608	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.408	22.380	2	1.001	582833	96531	574	1435	168		M
341.8567	22.408	22.380	2	1.001	377061	61977	480	1200	129	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.730	23.703	2	1.329	13560957	2183238	3049	7622	716		
353.8970	23.730	23.703	2	1.329	8494632	1357480	2213	5532	613	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.758	23.730	2	1.001	454367	69010	574	1435	120		
341.8567	23.758	23.730	2	1.001	281994	42185	480	1200	88	1.61(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						139	347			
341.8567	20.093						220	550			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.058	23.241	-131	0.941	257988	47616	574	1435	83		
341.8567	21.058	23.241	-131	0.941	159419	29857	480	1200	62	1.62(1.32-1.78)	
339.8597	22.271	23.241	-58	0.995	53874	11599	574	1435	20		
	Empc Correction				46101	10380	574	1435	18		
341.8567	22.271	23.241	-58	0.995	29743	6697	480	1200	14	1.81(1.32-1.78)	
339.8597	22.926	23.241	-19	1.024	167527	28340	574	1435	49		
341.8567	22.926	23.241	-19	1.024	112513	21619	480	1200	45	1.49(1.32-1.78)	
339.8597	24.085	23.241	51	1.076	105573	17009	574	1435	30		
341.8567	24.085	23.241	51	1.076	60709	9027	480	1200	19	1.74(1.32-1.78)	
339.8597	25.694	23.241	147	1.148	34301	4541	574	1435	8		
	Empc Correction				27475	4105	574	1435	7		
341.8567	25.694	23.241	147	1.148	17726	2649	480	1200	6	1.94(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.426	2	1.370	8592229	1256107	1238	3095	1015		
369.8919	24.453	24.426	2	1.370	5451744	789625	1052	2630	751	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.480	24.453	2	1.001	61182	8148	318	795	26		
357.8516	24.480	24.453	2	1.001	37391	5746	178	445	32	1.64(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.249	23.349	-126	0.869	35939	6518	318	795	20		
357.8516	21.249	23.349	-126	0.869	45888	8193	178	445	46	0.78(1.32-1.78)	
	Empc Correction				23186	4205	178	445	24		
355.8546	21.985	23.349	-82	0.899	96239	16657	318	795	52		
357.8516	21.999	23.349	-81	0.900	67184	11219	178	445	63	1.43(1.32-1.78)	
355.8546	23.335	23.349	-1	0.954	18519	3227	318	795	10		
	Empc Correction				14607	2907	318	795	9		
357.8516	23.294	23.349	-3	0.953	9424	1876	178	445	11	1.97(1.32-1.78)	
355.8546	23.471	23.349	7	0.960	37964	4944	318	795	16		
357.8516	23.499	23.349	9	0.961	21549	3971	178	445	22	1.76(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	6170313	1120270	3365	8412	333		
385.8610	30.516	30.503	1	0.949	12005791	2152147	6321	15802	340	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.542	30.529	1	1.001	651394	120374	423	1057	285		
375.8178	30.542	30.529	1	1.001	547286	97760	483	1207	202	1.19(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	5823217	1070440	3365	8412	318		
385.8610	30.702	30.689	1	0.955	11345326	2091421	6321	15802	331	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.729	30.702	2	1.001	196013	32715	423	1057	77		
375.8178	30.715	30.702	1	1.000	160591	29342	483	1207	61	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.527	31.514	1	0.981	5671292	1353971	3365	8412	402		
385.8610	31.527	31.514	1	0.981	10844080	2547617	6321	15802	403	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQM
373.8208	31.527	31.528	0	1.000	25710	6005	423	1057	14		M
	Empc Correction				20195	4862	423	1057	11		
375.8178	31.541	31.528	1	1.000	16287	3921	483	1207	8	1.58(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	5220480	1293094	3365	8412	384		
385.8610	32.326	32.313	1	1.006	10159205	2511439	6321	15802	397	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.339	32.326	1	1.000	14270	4028	423	1057	10		
375.8178	32.339	32.326	1	1.000	9954	3819	483	1207	8	1.43(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	29.744	30.197	-27	0.975	12908	2108	423	1057	5		
375.8178	29.730	30.197	-28	0.974	13056	2216	483	1207	5	0.99(1.05-1.43)	
	Empc Correction				10409	1699	483	1207	4		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	32.432	30.197	134	1.063	36831	10592	423	1057	25		
375.8178	32.419	30.197	133	1.062	39809	9955	483	1207	21	0.93(1.05-1.43)	
	Empc Correction				29702	8541	483	1207	18		
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		12718167	3198321	4460	11150	717		
403.8529	32.140	32.127	1		10349700	2622009	2990	7475	877	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.987	7590197	1954701	4460	11150	438		
403.8529	31.714	31.701	1	0.987	6048918	1574829	2990	7475	527	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQ
389.8157	31.740	31.714	2	1.001	15558	4207	813	2032	5		
391.8127	31.740	31.714	2	1.001	15206	3282	640	1600	5	1.02(1.05-1.43)	
	Empc Correction				12546	3392	640	1600	5		
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.807	1	0.990	8721534	2124676	4460	11150	476		
403.8529	31.820	31.807	1	0.990	6795842	1639584	2990	7475	548	1.28(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.833	31.820	1	1.000	27200	8225	813	2032	10		
391.8127	31.820	31.820	0	1.000	23017	5316	640	1600	8	1.18(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.166	32.140	2	1.014	66974	12413	813	2032	15		
391.8127	32.153	32.140	1	1.014	59306	12060	640	1600	19	1.13(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQM
389.8157	29.571	30.882	-79	0.929	644364	80460	813	2032	99		
391.8127	29.584	30.882	-78	0.930	527004	61869	640	1600	97	1.22(1.05-1.43)	
389.8157	30.582	30.882	-18	0.961	17503	4049	813	2032	5		
391.8127	30.582	30.882	-18	0.961	20767	3480	640	1600	5	0.84(1.05-1.43)	
	Empc Correction				14115	3265	640	1600	5		
389.8157	30.968	30.882	5	0.973	234626	44415	813	2032	55		
391.8127	30.982	30.882	6	0.974	178826	33375	640	1600	52	1.31(1.05-1.43)	M
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	3678600	1206729	4875	12187	248		
419.8220	33.766	33.754	1	1.051	8718082	2747524	11837	29592	232	0.42(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.778	33.766	1	1.000	169293	56253	701	1752	80		
409.7789	33.778	33.766	1	1.000	153406	46088	374	935	123	1.10(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.084	3961705	1034781	4875	12187	212		
419.8220	34.847	34.847	0	1.084	9281879	2474684	11837	29592	209	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.871	34.860	1	1.001	48683	15112	701	1752	22		
409.7789	34.859	34.860	0	1.000	51293	13931	374	935	37	0.95(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.069	34.319	-15	1.009	42832	14200	701	1752	20		
409.7789	34.069	34.319	-15	1.009	42446	12521	374	935	33	1.01(0.88-1.20)	

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.556	1	1.076	5915319	1641616	4925	12312	333		
437.8140	34.568	34.556	1	1.076	5835022	1629718	3435	8587	474	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	1151966	311948	3405	8512	92		
425.7737	34.568	34.568	0	1.000	1084074	299999	3137	7842	96	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.984	2816149	864232	3405	8512	254		
425.7737	34.021	34.301	-17	0.984	2732174	829076	3137	7842	264	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.914	1	1.149	8278677	1990635	1611	4027	1236		
471.7750	36.926	36.914	1	1.149	9381600	2209656	1083	2707	2040	0.88(0.76-1.02)	
OCDF											
441.7428	37.021	37.010	1	1.003	80417	18860	166	415	114		
443.7399	37.021	37.010	1	1.003	97516	22331	236	590	95	0.82(0.76-1.02)	
OCDD											
457.7377	36.938	36.926	1	1.000	25341737	5899167	3775	9437	1563		
459.7348	36.926	36.926	0	1.000	28216773	6633014	2964	7410	2238	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Lims ID:	320-76788-A-15-A		
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Inject. Date:	14-Aug-2021 16:46:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	21

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	27827982	6874184

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	27827982	6874184

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.935	411113	108799	509333	138517	3.23	0.81	
16.207	485099	155516	990205	214707	5.18	0.49	RQ
16.207	485099	155516	629998	201968	3.91		Empc Correction
16.449	779261	199066	926891	242761	5.99	0.84	
16.691	1067268	270368	1388309	331474	8.62	0.77	
16.963	12483762	3127001	16413482	4117792	101.4	0.76	
17.190	404128	91320	531829	137281	3.28	0.76	
17.794	1777817	405020	2381931	550367	14.6	0.75	
18.036	311339	71706	479455	100671	2.78	0.65	
19.185	1795689	383609	2335712	505322	14.5	0.77	
Signal Totals:							
	19515476	4812405	25596940	6326153			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	45472623	11151297				0.75	RQ
	45112416	11138558					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 159.590 = (45472623 * 100.000) / (27827982 * 1.024)

Empc Amount: 158.326 = (45112416 * 100.000) / (27827982 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d
Lims ID: 320-76788-A-15-A
Client ID: 11215702-072321-BN-SJSB105 (4-6)
Inject. Date: 14-Aug-2021 16:46:35 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 21

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	16485141	3927539

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	16485141	3927539

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.917	79158	19214	104460	24644	0.8881	0.76	
18.429	518932	108668	672179	143938	5.76	0.77	
Signal Totals:							
	598090	127882	776639	168582			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1374729	296464				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.649 = (1374729 * 100.000) / (16485141 * 1.254)

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Lims ID:	320-76788-A-15-A		
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Inject. Date:	14-Aug-2021 16:46:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	21

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	20481806	3519711
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	22055589	3540718

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	21268697	3530214

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.058	257988	47616	159419	29857	1.89	1.62	
22.271	53874	11599	29743	6697	0.3781	1.81	RQ
22.271	46101	10380	29743	6697	0.3430		Empc Correction
22.926	167527	28340	112513	21619	1.27	1.49	
24.085	105573	17009	60709	9027	0.7519	1.74	
25.694	34301	4541	17726	2649	0.2353	1.94	RQ
25.694	27475	4105	17726	2649	0.2044		Empc Correction
Signal Totals:							
	604664	107450	380110	69849			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	999373	178954				1.63	RQ
	984774	177299					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.519 = (999373 * 100.000) / (21268697 * 1.040)

Empc Amount: 4.453 = (984774 * 100.000) / (21268697 * 1.040)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Lims ID:	320-76788-A-15-A		
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Inject. Date:	14-Aug-2021 16:46:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	21

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	14043973	2045732

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	14043973	2045732

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	35939	6518	45888	8193	0.5557	0.78	RQ
21.249	35939	6518	23186	4205	0.4016		Empc Correction
21.985	96239	16657	67184	11219	1.11	1.43	
23.335	18519	3227	9424	1876	0.1898	1.97	RQ
23.335	14607	2907	9424	1876	0.1632		Empc Correction
23.471	37964	4944	21549	3971	0.4042	1.76	
Signal Totals:							
	184749	31026	121343	21271			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	332706	56605				1.31	RQ
	306092	52297					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.260 = (332706 * 100.000) / (14043973 * 1.048)

Empc Amount: 2.079 = (306092 * 100.000) / (14043973 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Lims ID:	320-76788-A-15-A		
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Inject. Date:	14-Aug-2021 16:46:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	21

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	18176104	3272417
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	17168543	3161861
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	16515372	3901588
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	15379685	3804533

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	16809926	3535099

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.744	12908	2108	13056	2216	0.1359	0.99	RQ
29.744	12908	2108	10409	1699	0.1221		Empc Correction
32.432	36831	10592	39809	9955	0.4012	0.93	RQ
32.432	36831	10592	29702	8541	0.3483		Empc Correction
Signal Totals:							
	49739	12700	40111	10240			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	102604	24871				0.94	RQ
	89850	22940					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5372 = (102604 * 100.000) / (16809926 * 1.136)

Empc Amount: 0.4704 = (89850 * 100.000) / (16809926 * 1.136)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Lims ID:	320-76788-A-15-A		
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Inject. Date:	14-Aug-2021 16:46:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	21

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	13639115	3529530
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	15517376	3764260
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	14578245	3646895

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.571	644364	80460	527004	61869	7.54	1.22	
30.582	17503	4049	20767	3480	0.2464	0.84	RQ
30.582	17503	4049	14115	3265	0.2035		Empc Correction
30.968	234626	44415	178826	33375	2.66	1.31	M
Signal Totals:							
	896493	128924	719945	98509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1623090	227648				1.23	RQM
	1616438	227433					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 10.449 = (1623090 * 100.000) / (14578245 * 1.066)

Empc Amount: 10.406 = (1616438 * 100.000) / (14578245 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Lims ID:	320-76788-A-15-A		
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Inject. Date:	14-Aug-2021 16:46:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	21

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	12396682	3954253
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	13243584	3509465

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	12820133	3731859

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.069	42832	14200	42446	12521	0.4823	1.01	
Signal Totals:							
	42832	14200	42446	12521			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	85278	26721				1.01	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.4823 = (85278 * 100.000) / (12820133 * 1.379)

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d
Lims ID: 320-76788-A-15-A
Client ID: 11215702-072321-BN-SJSB105 (4-6)
Inject. Date: 14-Aug-2021 16:46:35 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 21

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	11750341	3271334

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	11750341	3271334

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	2816149	864232	2732174	829076	43.1	1.03	
Signal Totals:							
	2816149	864232	2732174	829076			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5548323	1693308				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 43.149 = (5548323 * 100.000) / (11750341 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d				
Injection Date:	14-Aug-2021 16:46:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-15-A	Lab Sample ID:	320-76788-15		
Client ID:	11215702-072321-BN-SJSB105 (4-6)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.41
Area: 597191
Amount: 4.482626
Amount Units: pg/ul

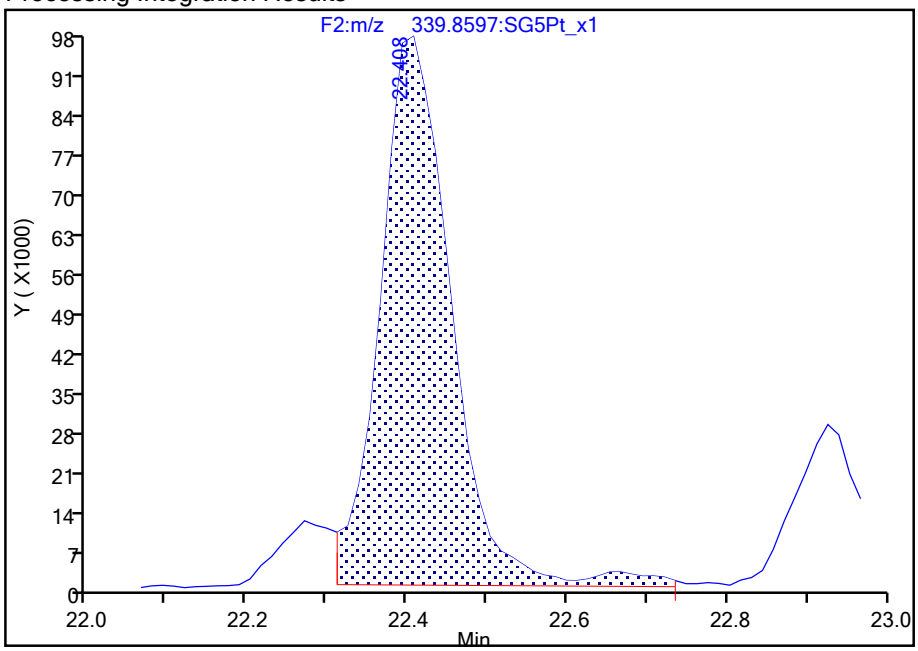

Manual Integration Results

RT: 22.41
Area: 582833
Amount: 4.416564
Amount Units: pg/ul

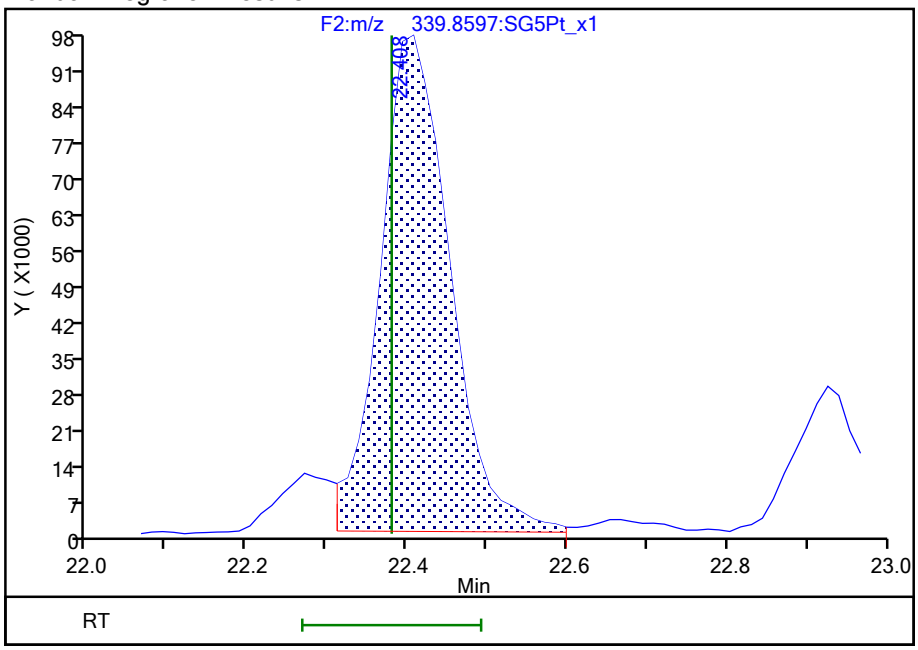

Reviewer: dadunj, 18-Aug-2021 09:47:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d				
Injection Date:	14-Aug-2021 16:46:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-15-A	Lab Sample ID:	320-76788-15		
Client ID:	11215702-072321-BN-SJSB105 (4-6)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.53
Area: 36111
Amount: 0.271741
Amount Units: pg/ul

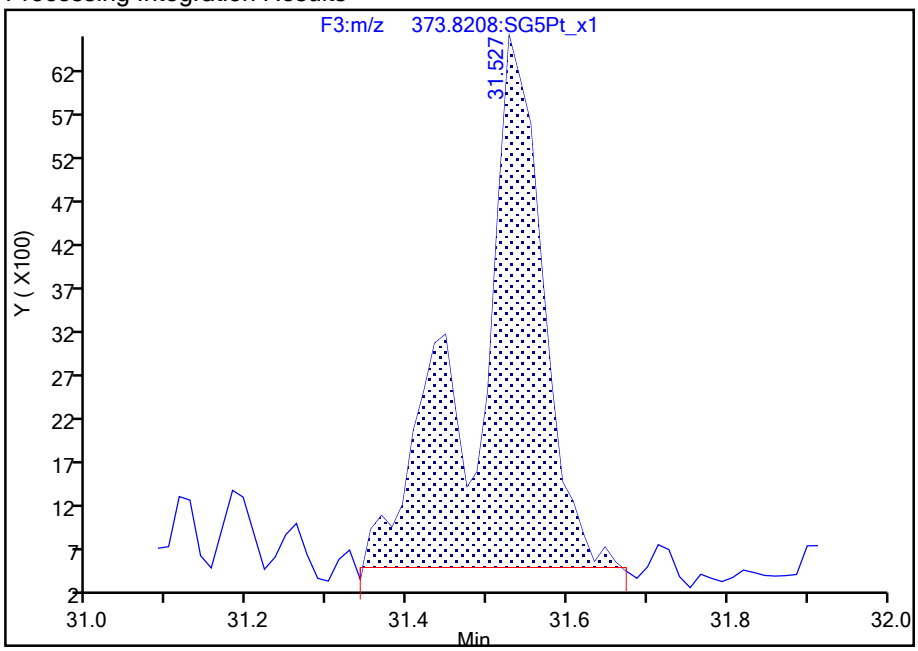

Manual Integration Results

RT: 31.53
Area: 25710
Amount: 0.217800
Amount Units: pg/ul

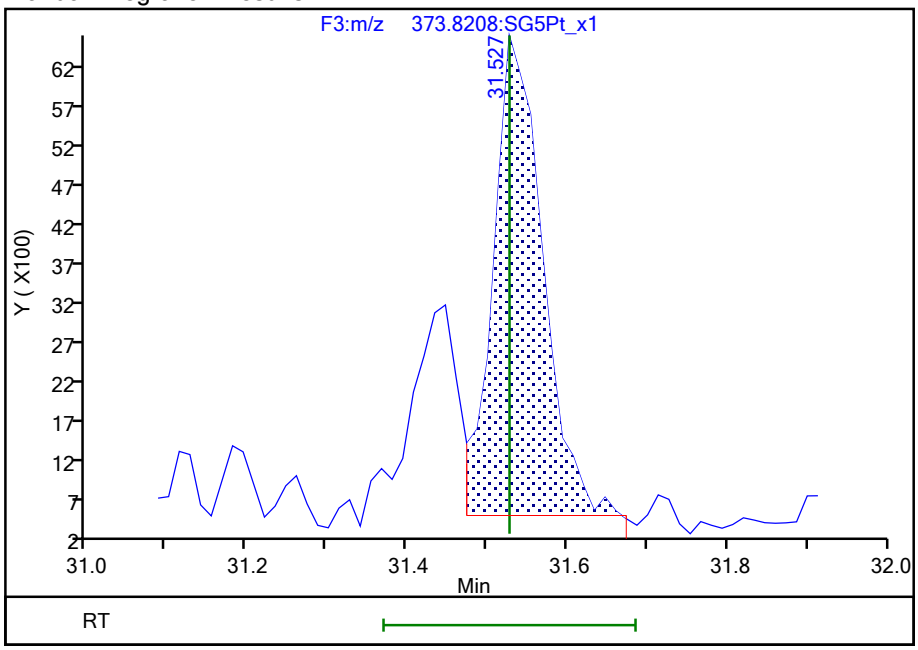

Reviewer: dadunj, 18-Aug-2021 09:47:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d				
Injection Date:	14-Aug-2021 16:46:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-15-A	Lab Sample ID:	320-76788-15		
Client ID:	11215702-072321-BN-SJSB105 (4-6)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (29.36- 32.41)

Signal: 2

Processing Integration Results

RT = 30.982 Area = 201500

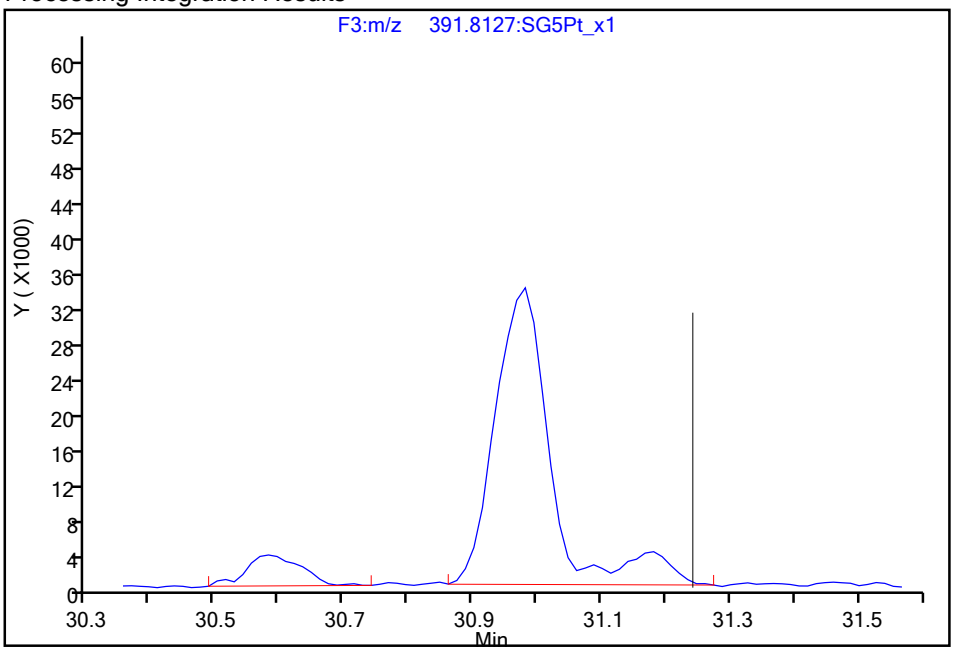

Manual Integration Results

RT = 30.982 Area = 178826 M

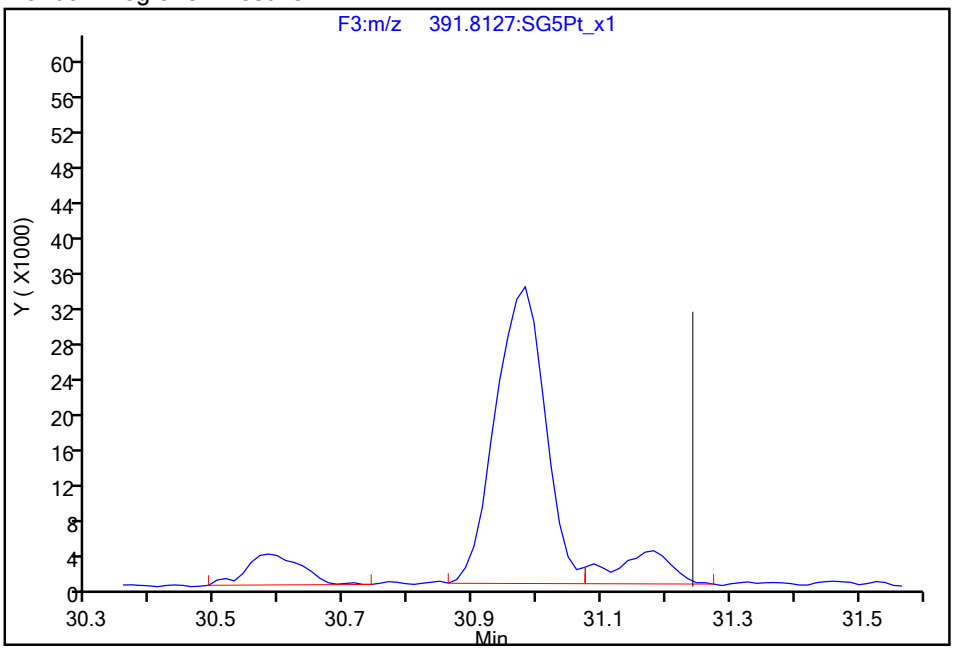

Reviewer: dadunj, 18-Aug-2021 09:48:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779847

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d				
Injection Date:	14-Aug-2021 16:46:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-15-A	Lab Sample ID:	320-76788-15		
Client ID:	11215702-072321-BN-SJSB105 (4-6)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.78
Area: 157751
Amount: 1.830412
Amount Units: pg/ul

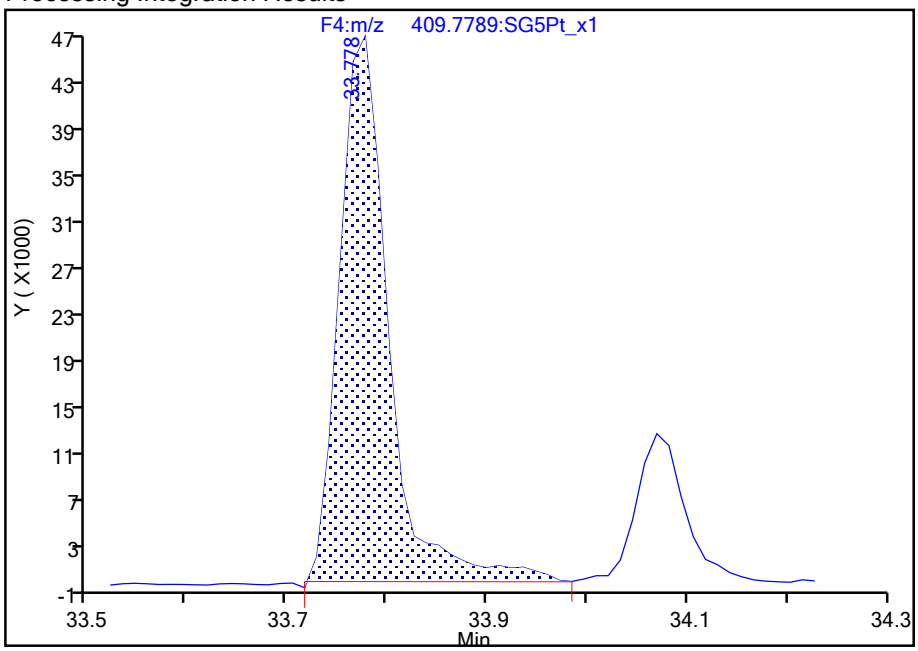

Manual Integration Results

RT: 33.78
Area: 153406
Amount: 1.806094
Amount Units: pg/ul

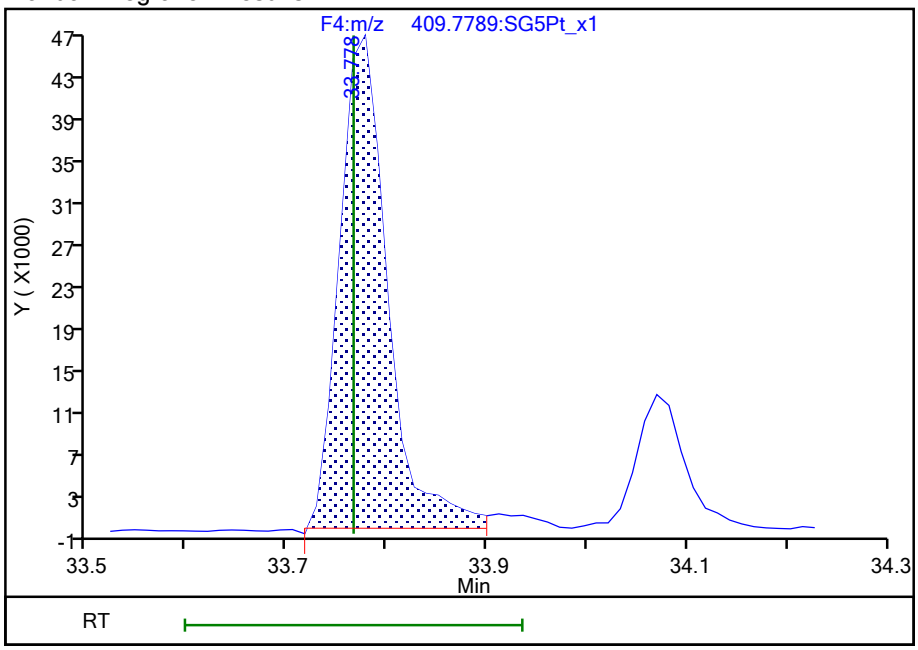

Reviewer: dadunj, 18-Aug-2021 09:48:19

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779848

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d				
Injection Date:	14-Aug-2021 16:46:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-15-A	Lab Sample ID:	320-76788-15		
Client ID:	11215702-072321-BN-SJSB105 (4-6)				
Operator ID:	DB	ALS Bottle#:	32	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 2

Processing Integration Results

RT: 34.86
Area: 53591
Amount: 0.586202
Amount Units: pg/ul

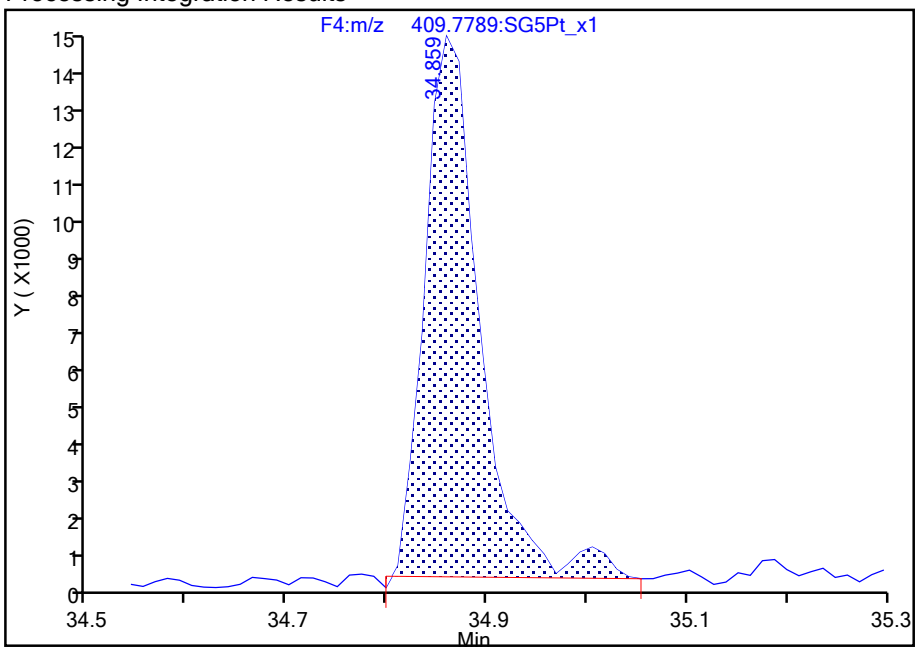

Manual Integration Results

RT: 34.86
Area: 51293
Amount: 0.573031
Amount Units: pg/ul

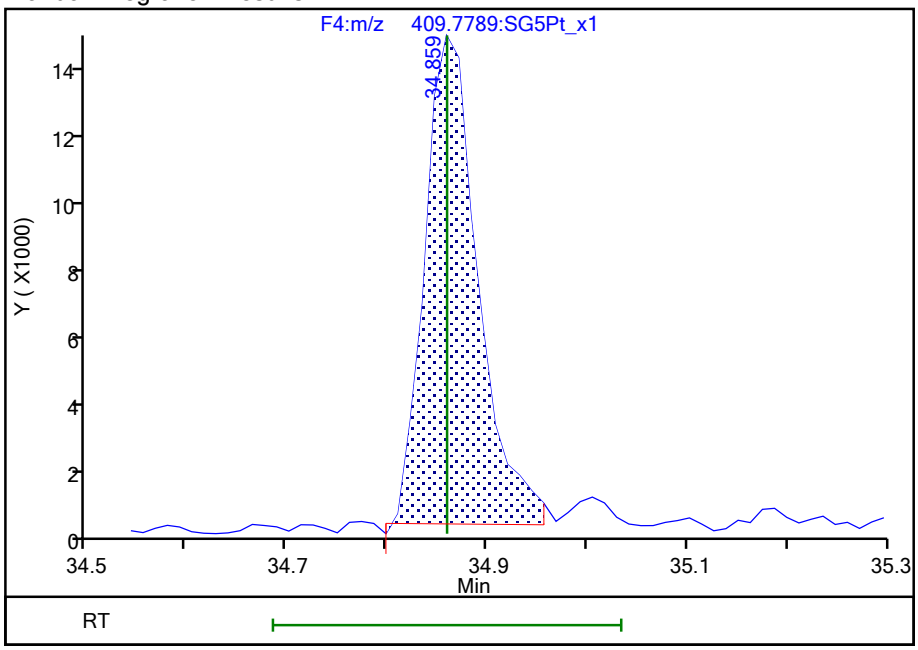

Reviewer: dadunj, 18-Aug-2021 09:48:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Injection Date:	14-Aug-2021 16:46:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

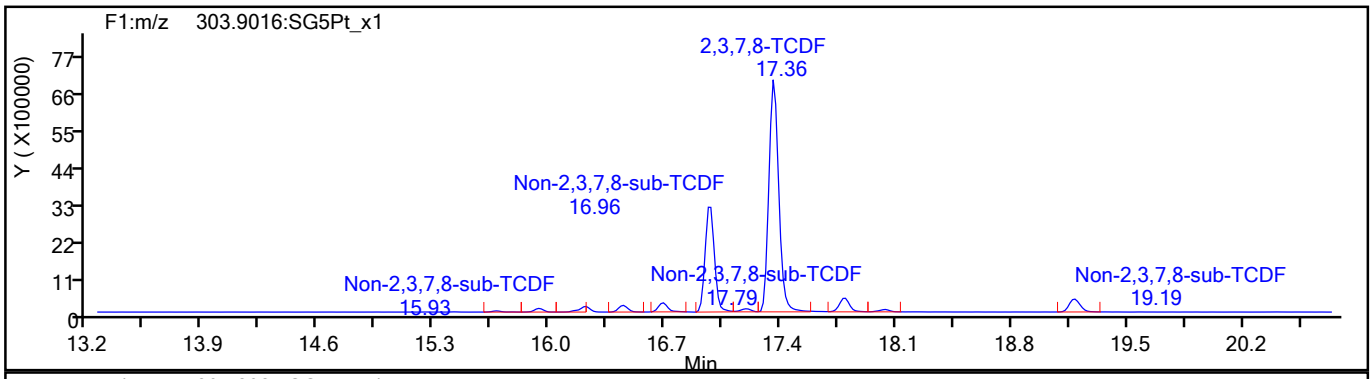

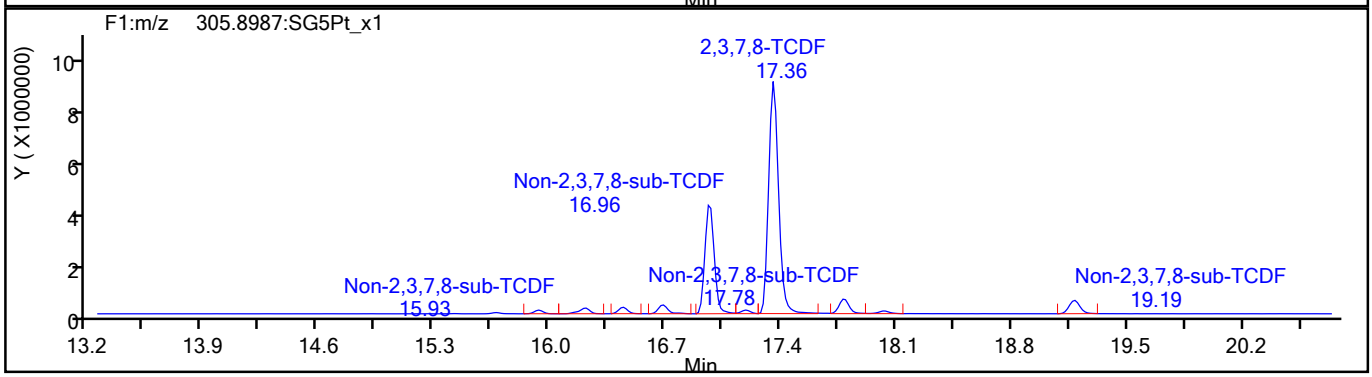

TCDF Standards

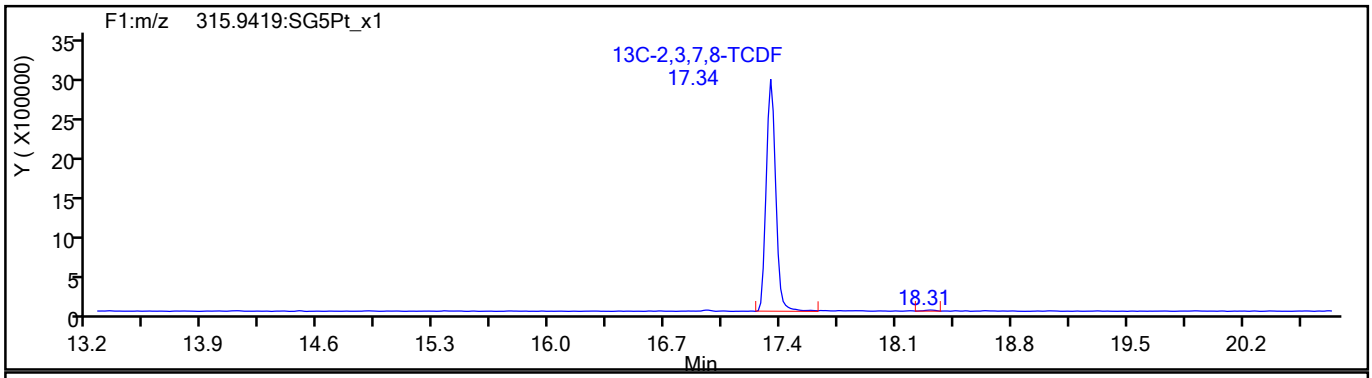

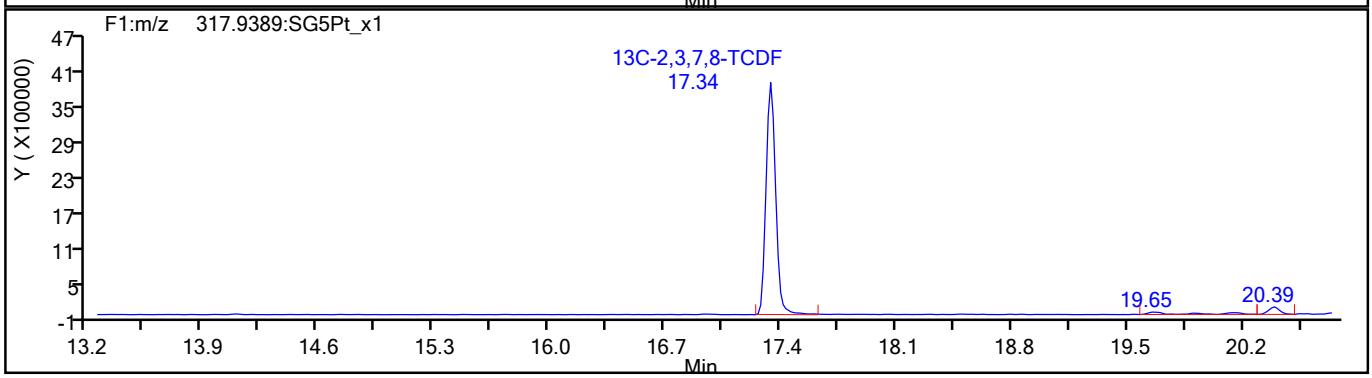

779850

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Injection Date:	14-Aug-2021 16:46:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

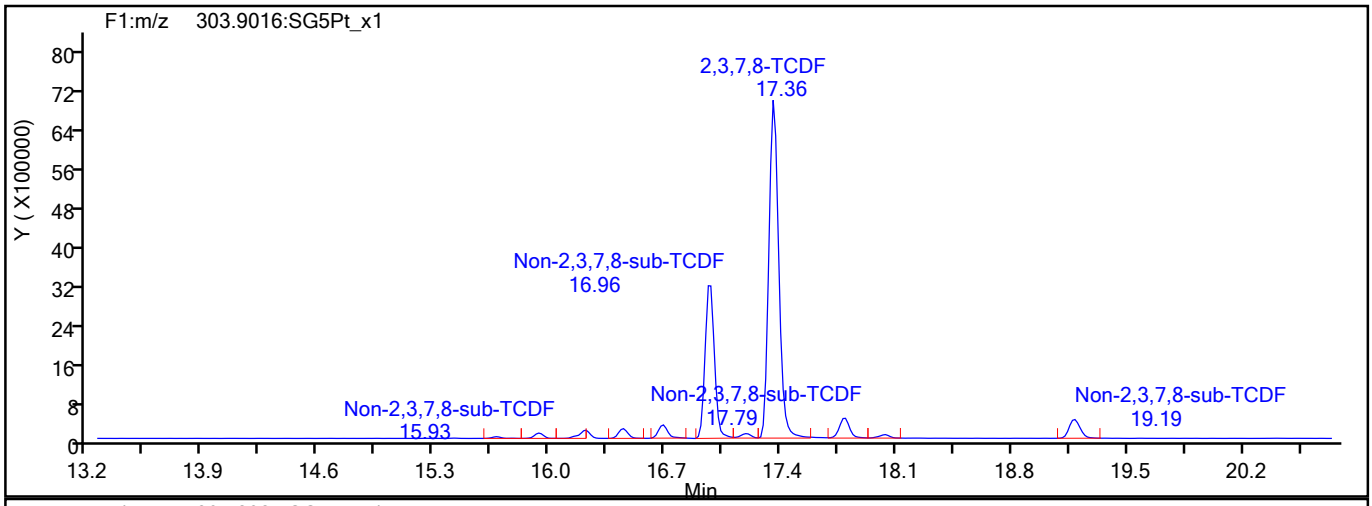

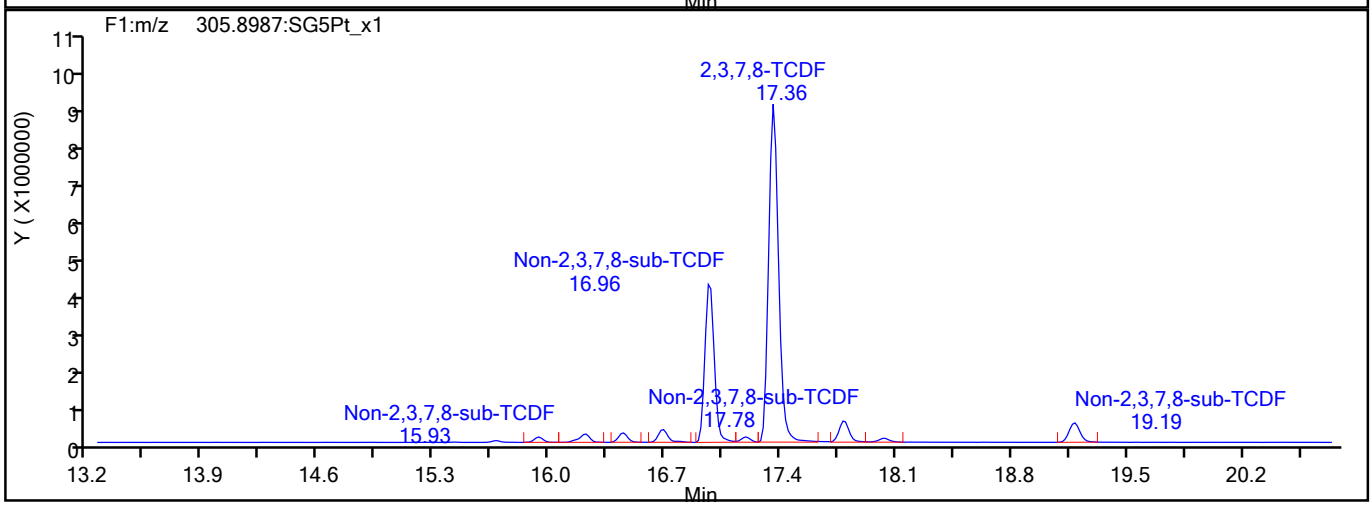

TCDF Interference Mass

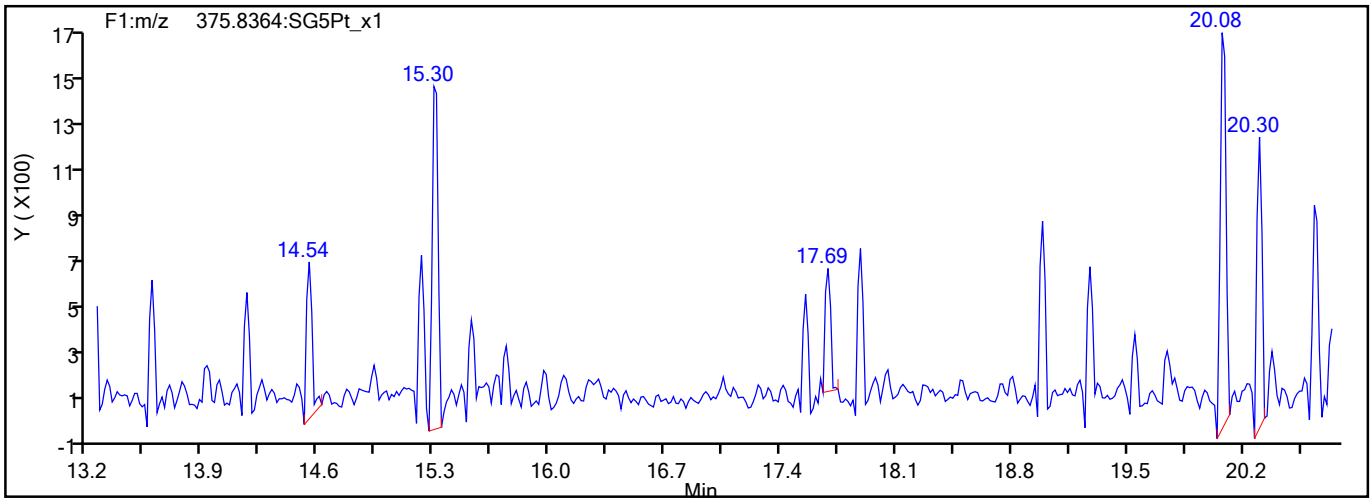

779851

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

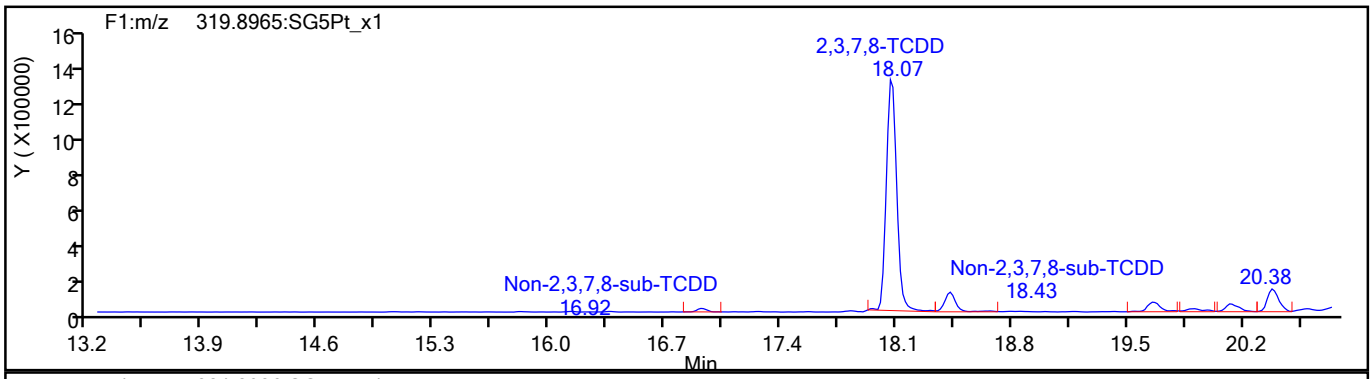

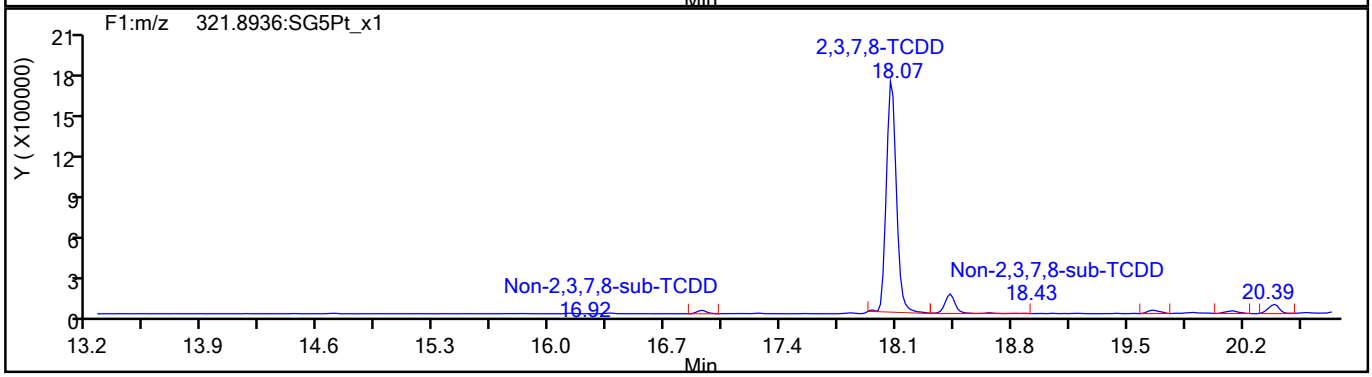

TCDD Standards

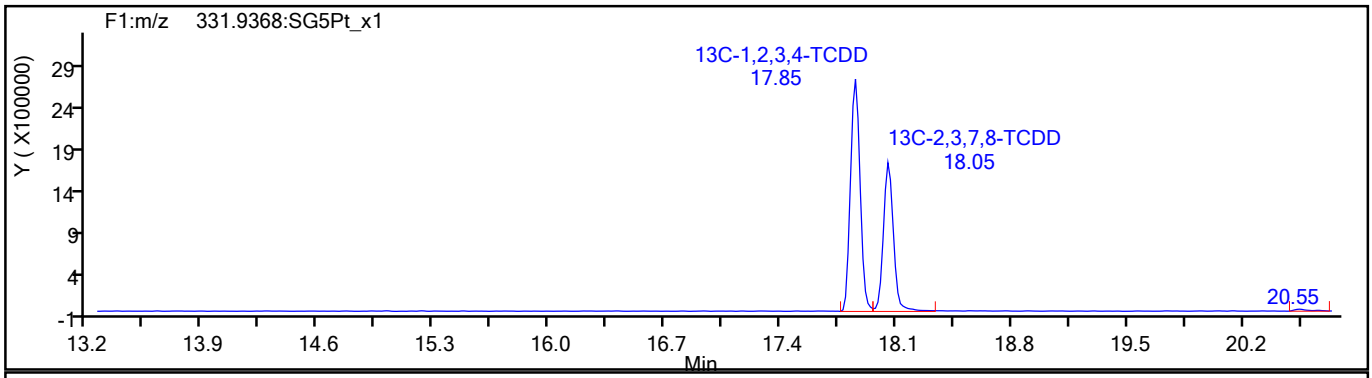

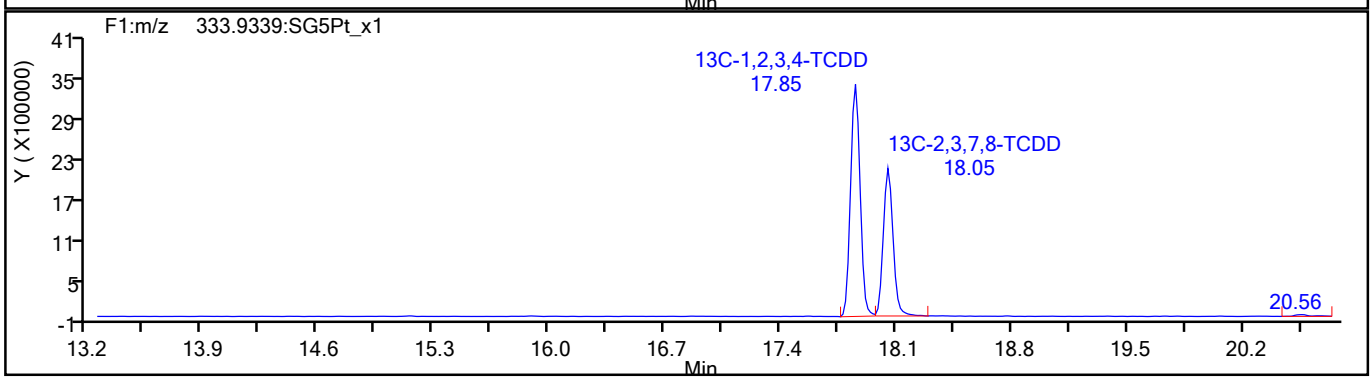

779852

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

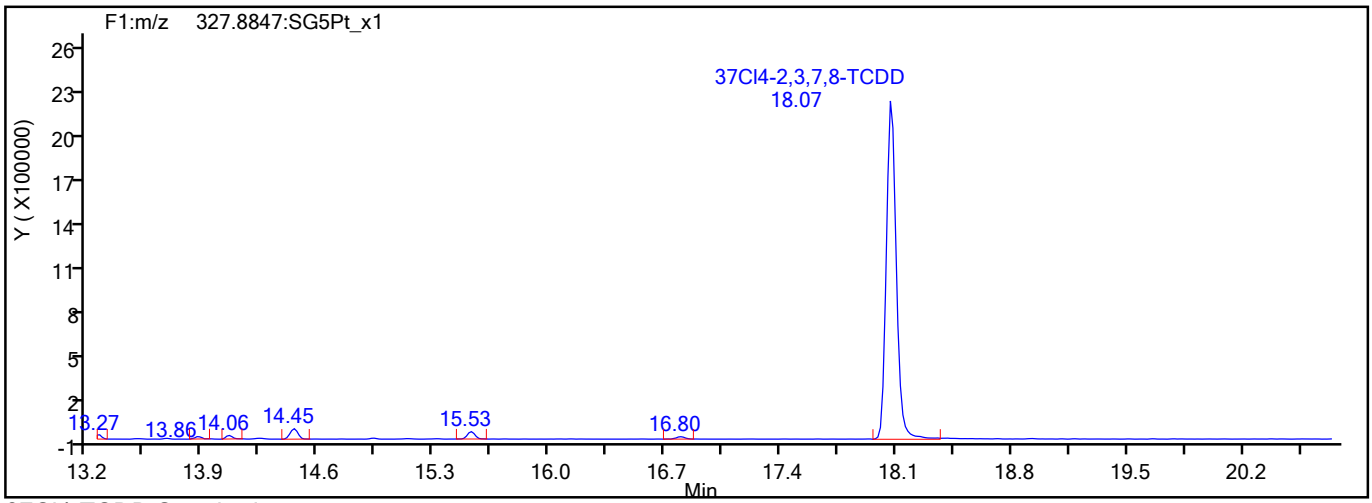

37Cl4-TCDD Standards

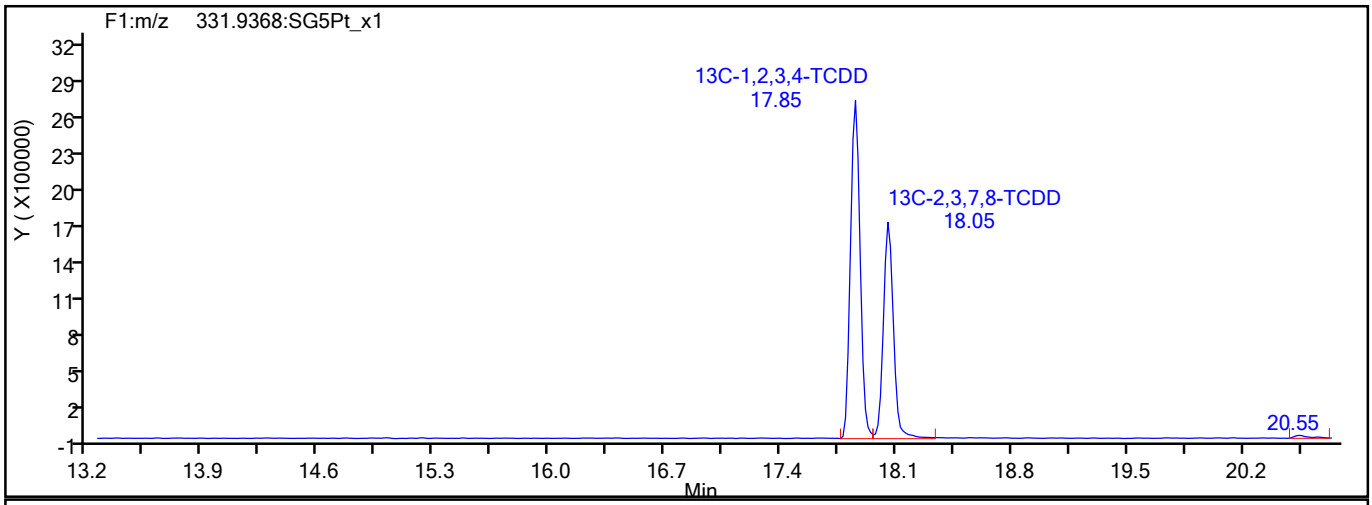

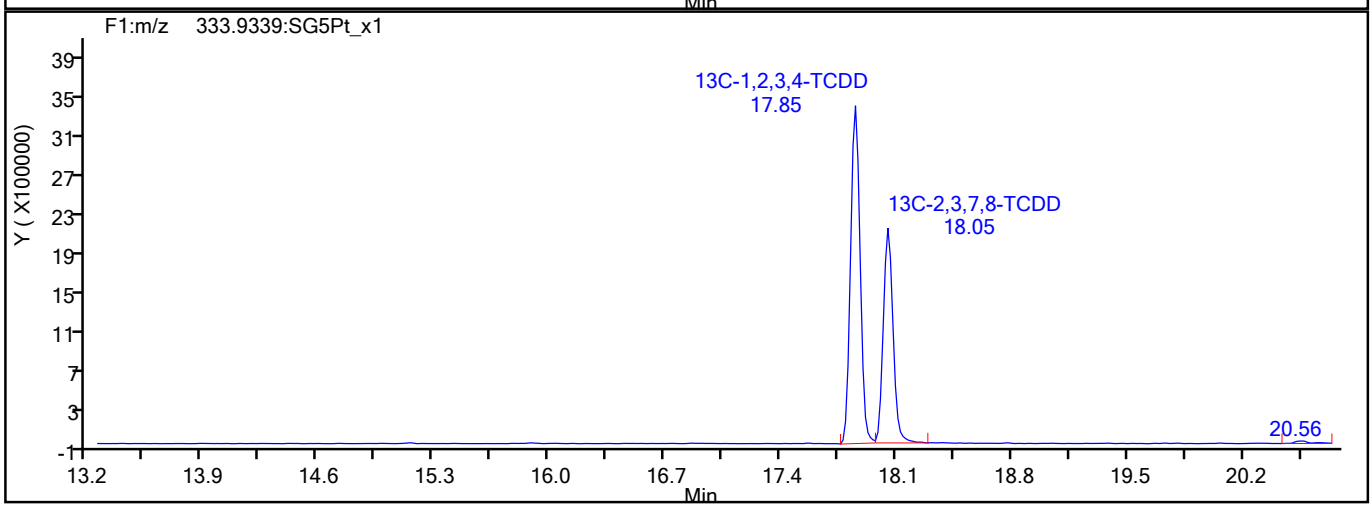

779853

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

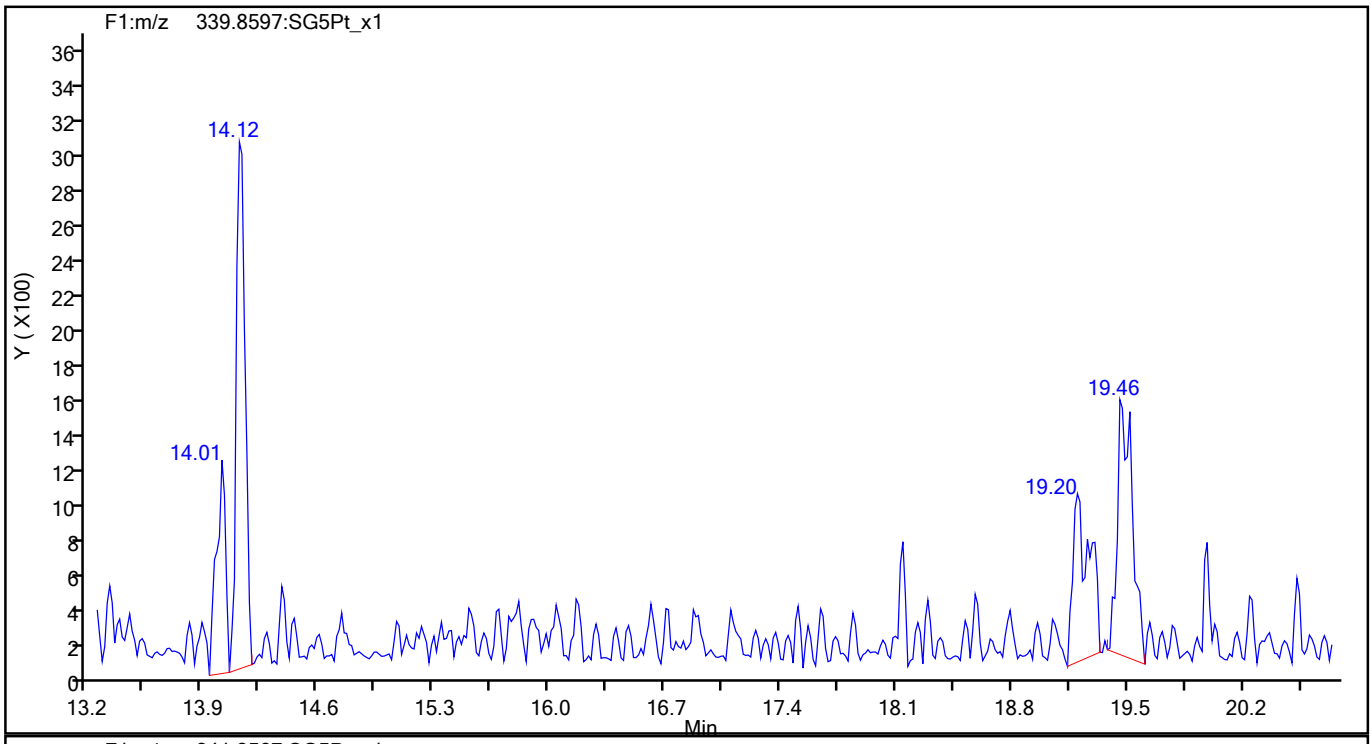

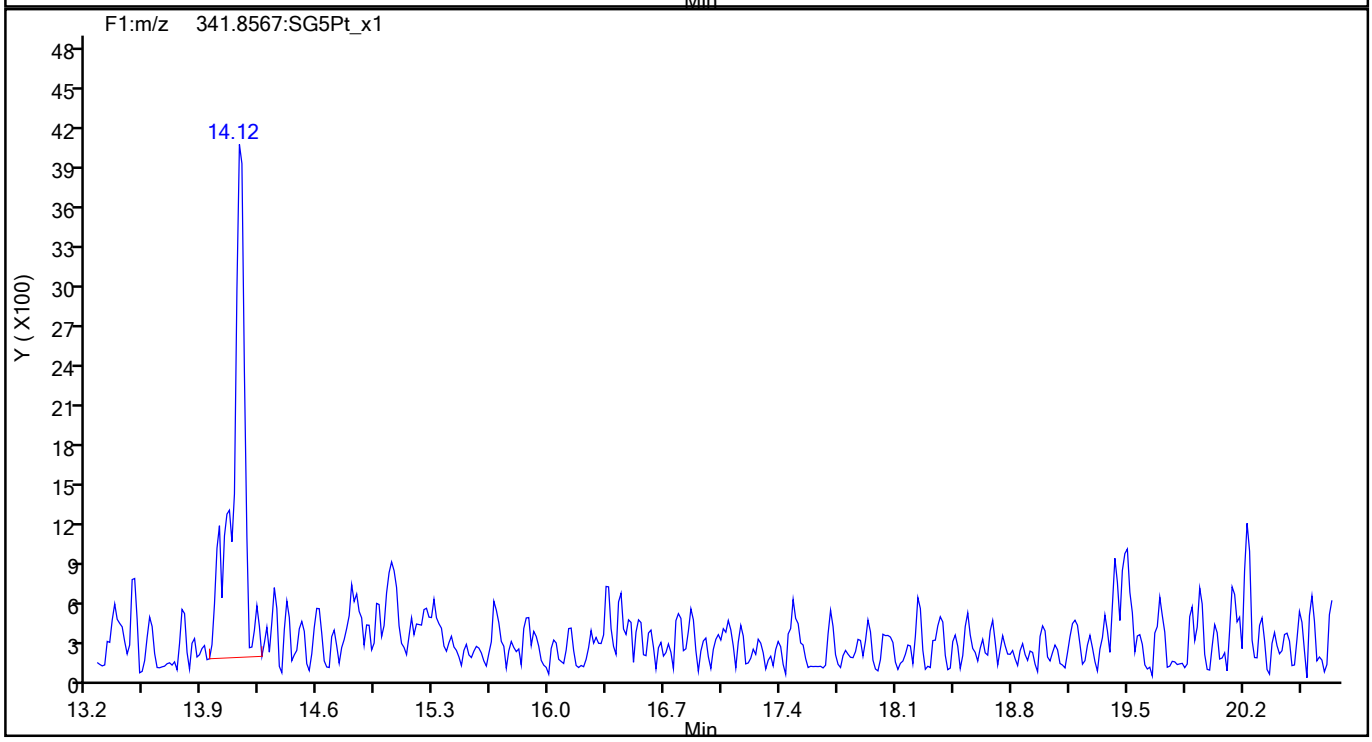

779854

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

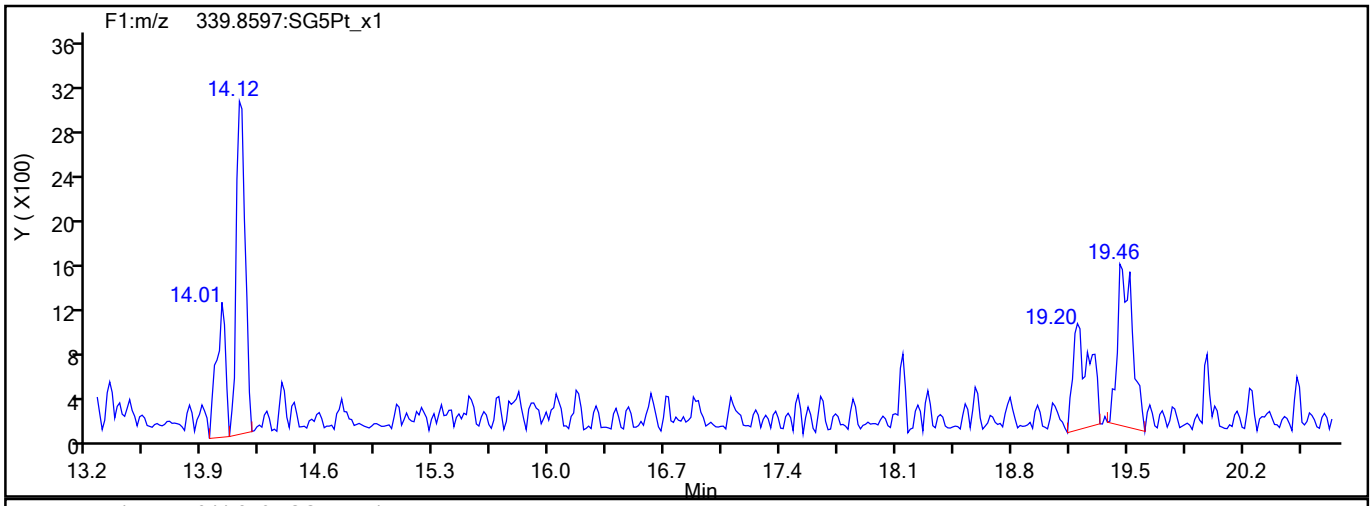

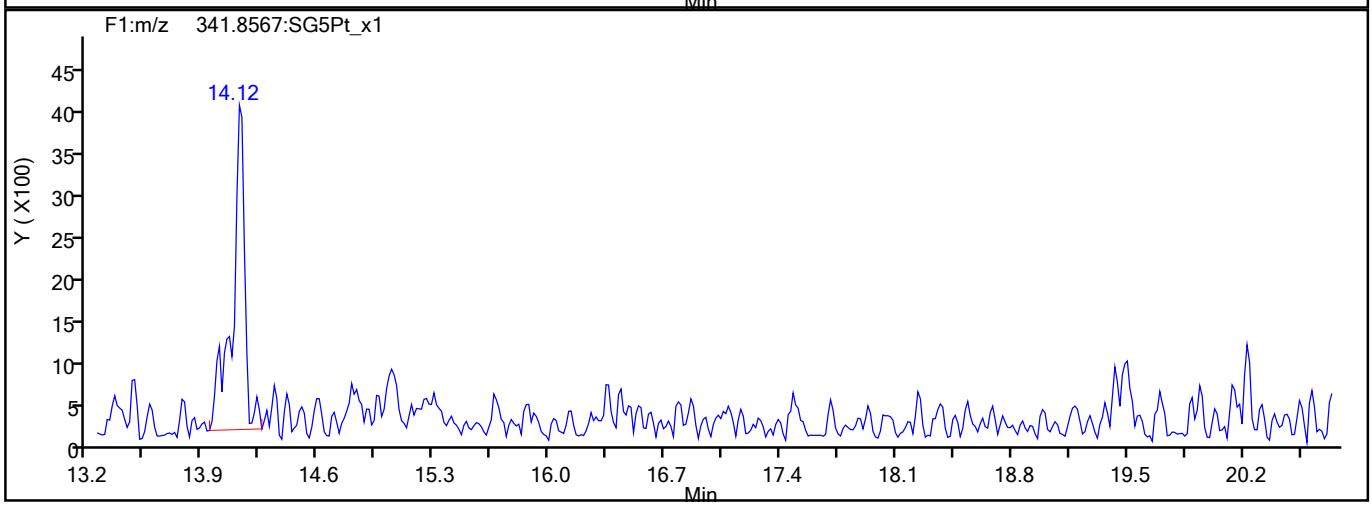

F1 PeCDFs Interference Mass

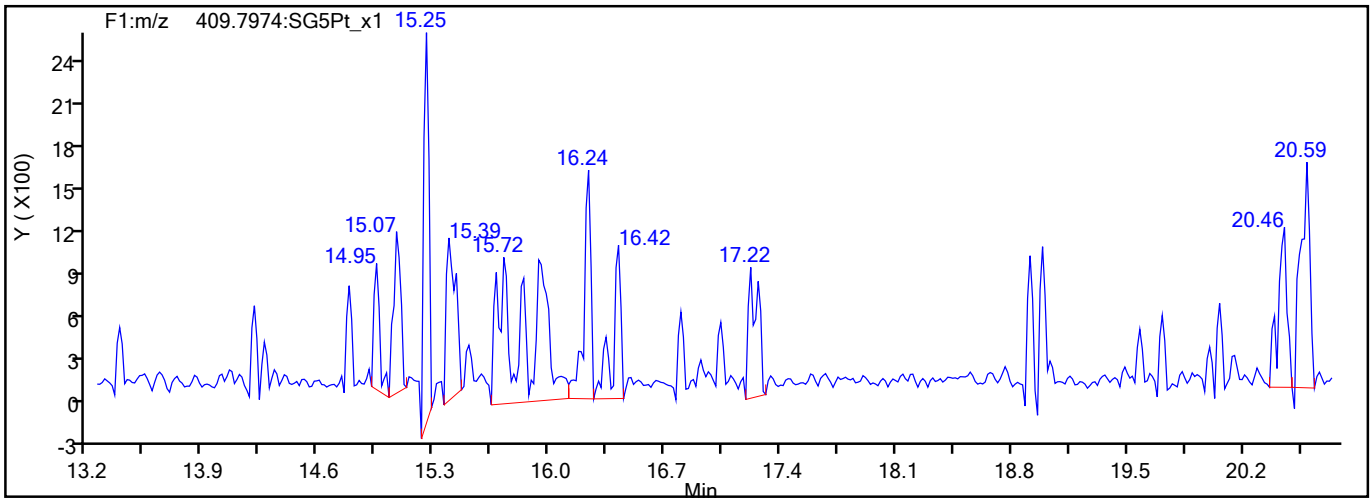

779855

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 16:46:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

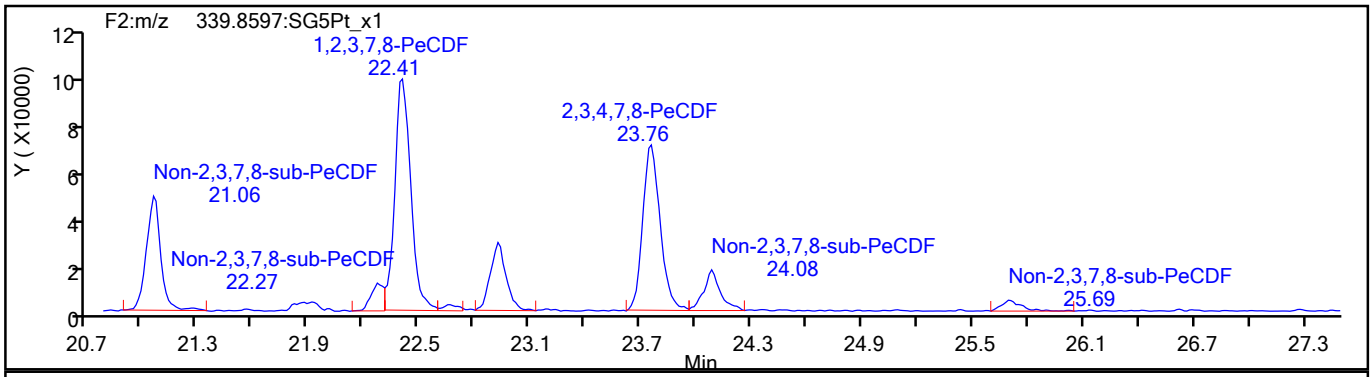

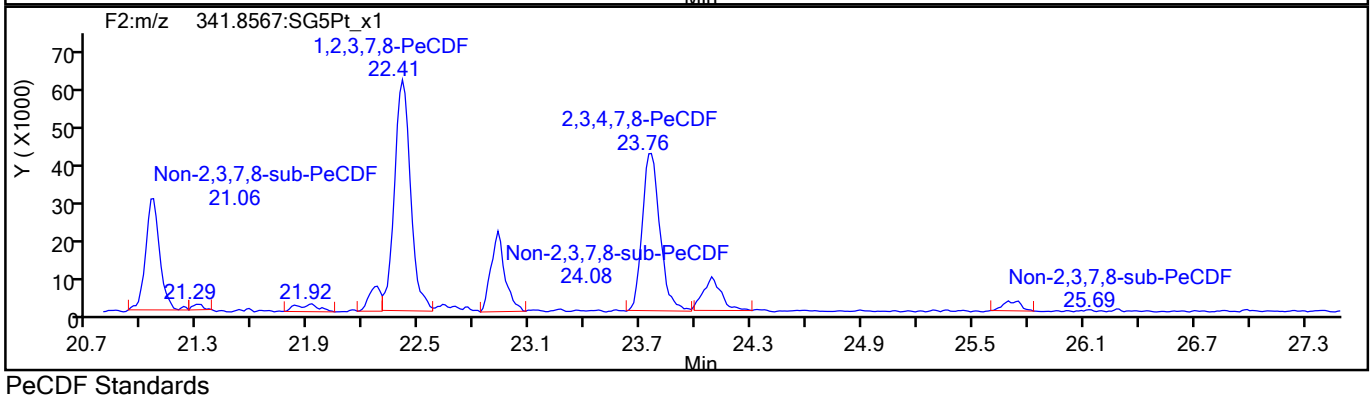

PeCDF Standards

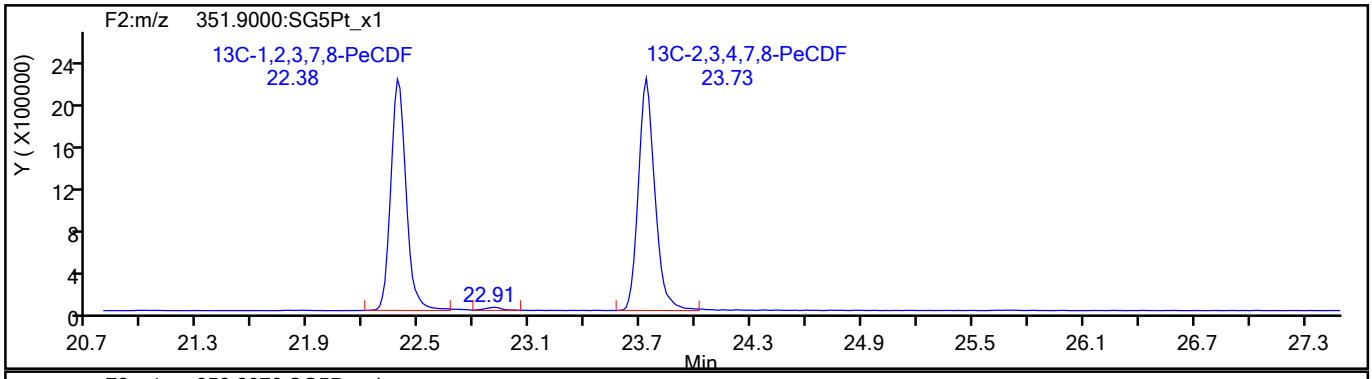

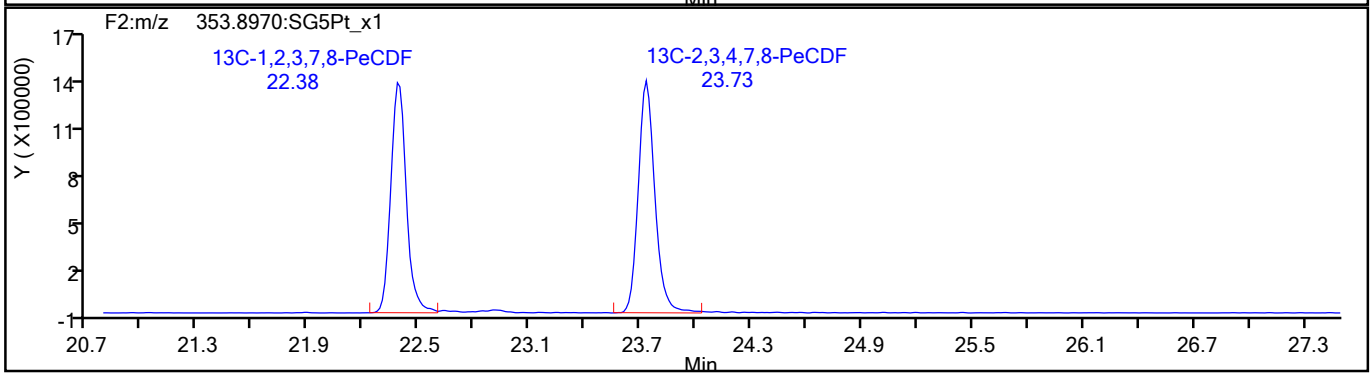

779856

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
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PeCDF

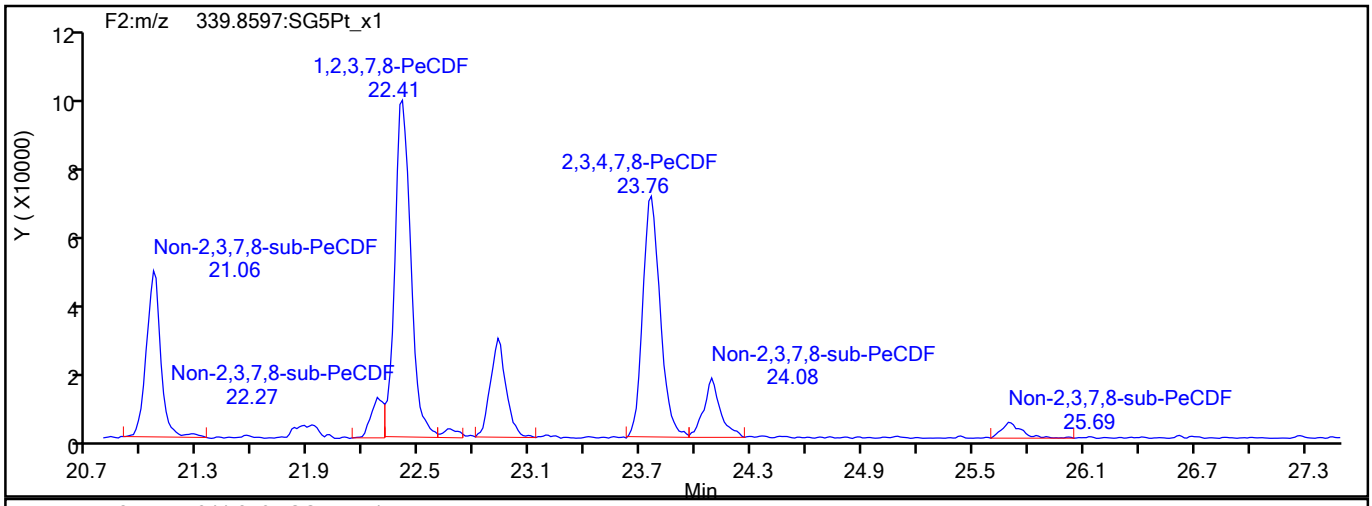

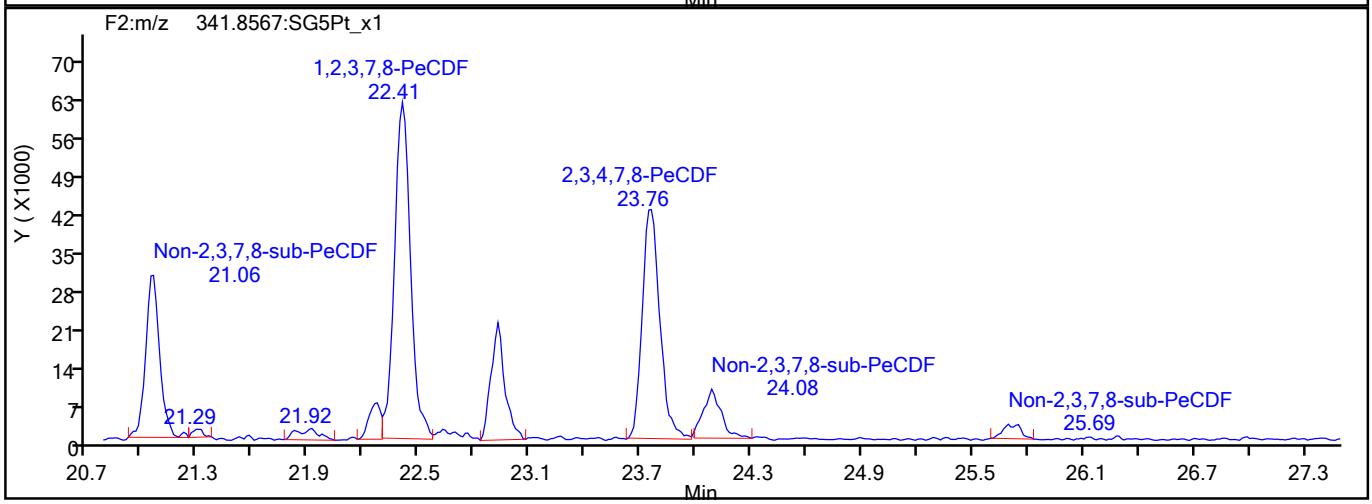

PeCDF Interference Mass

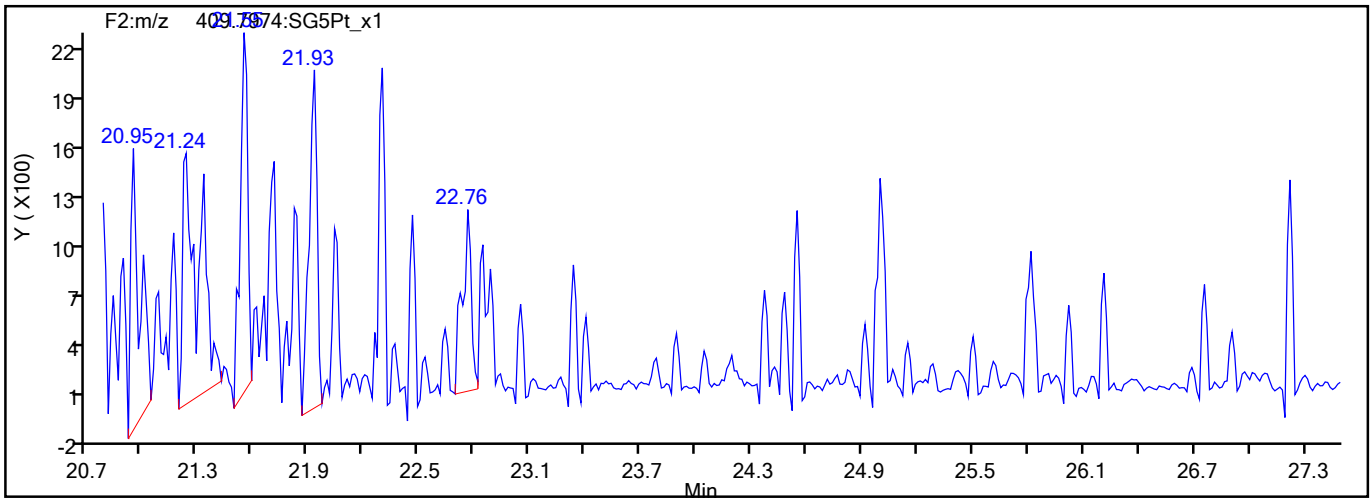

779857

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

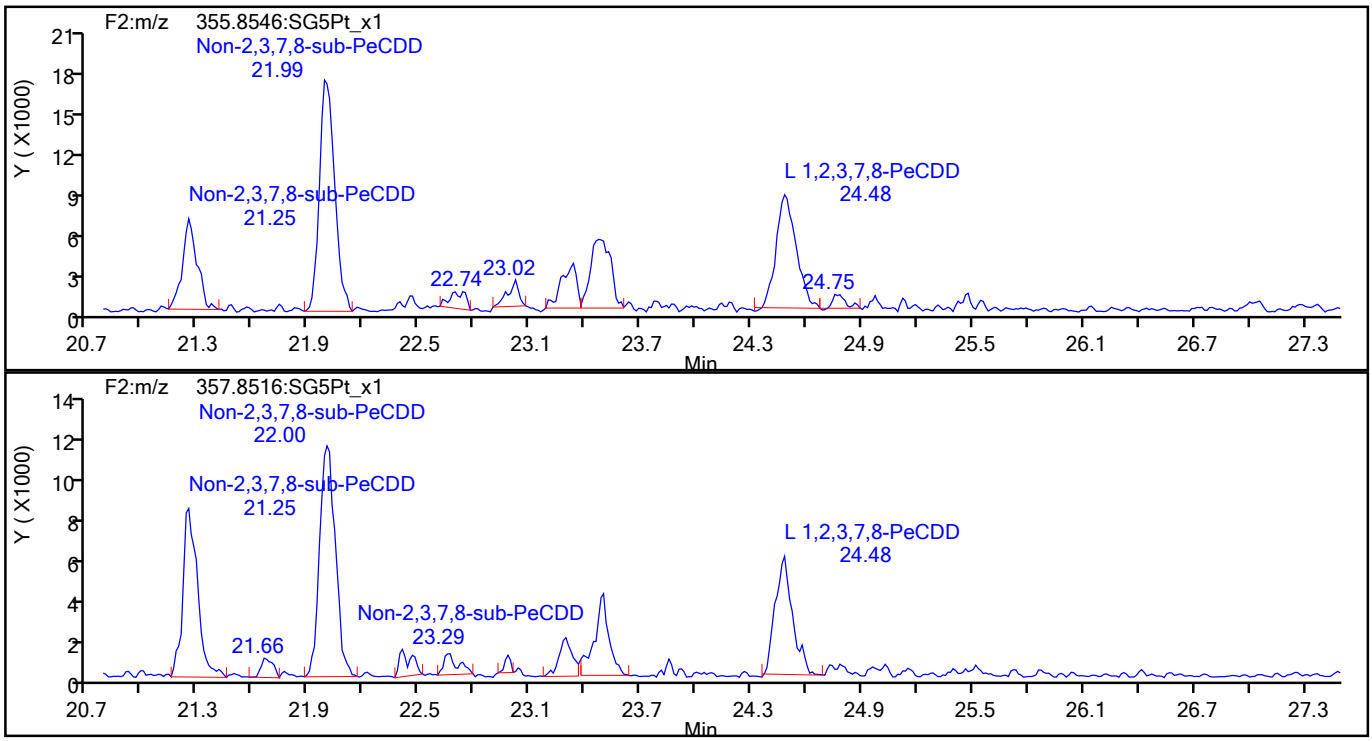

PeCDD Standards

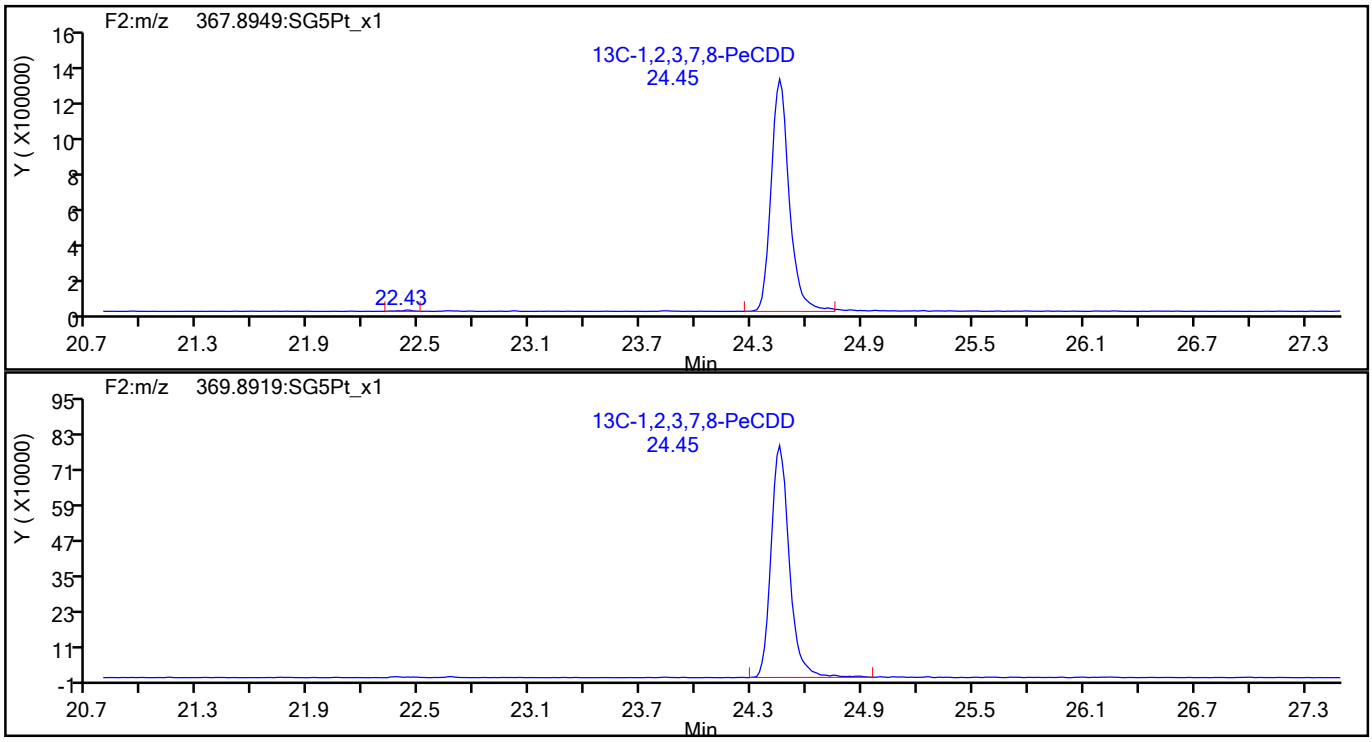

779858

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

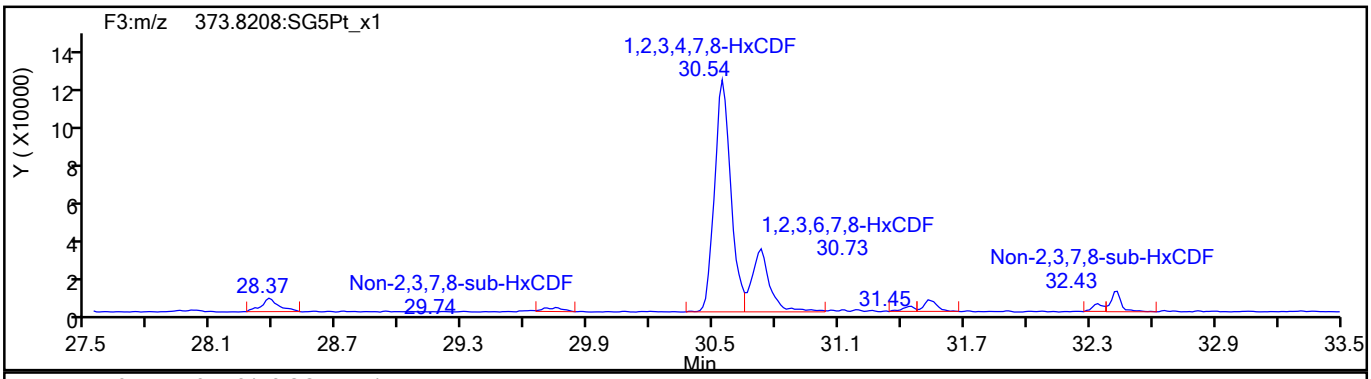

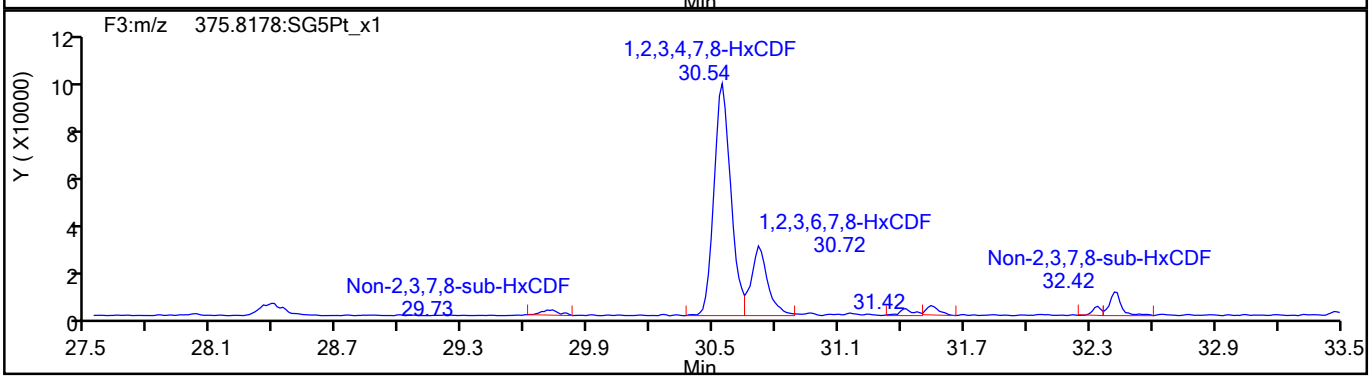

HxCDF Standards

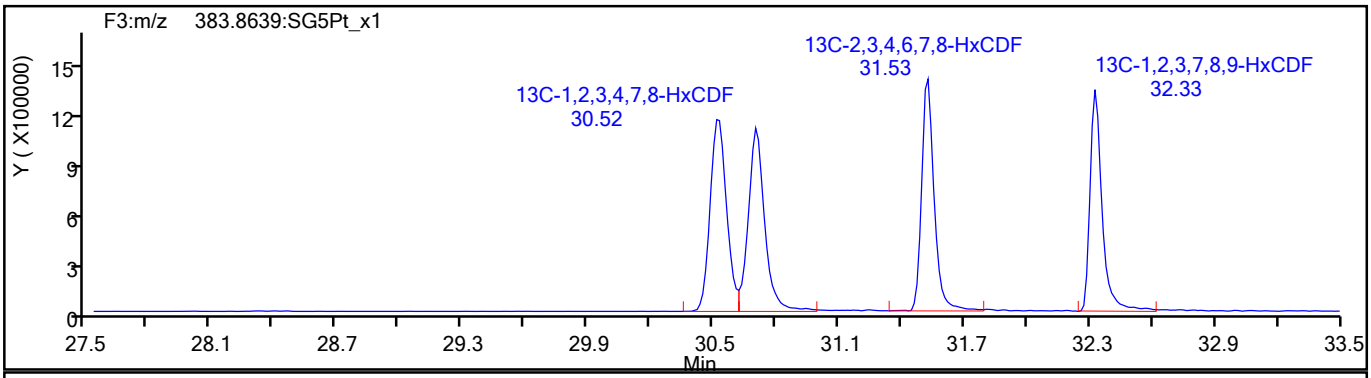

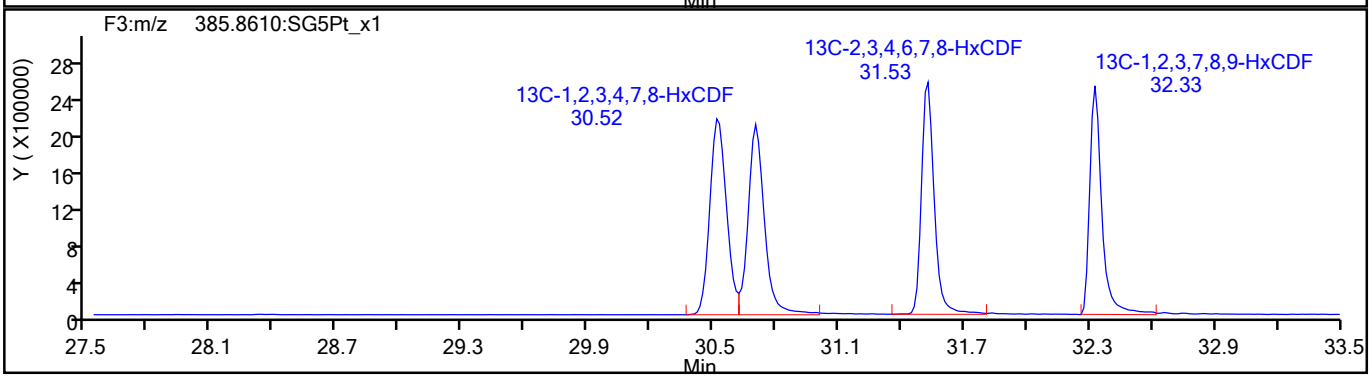

779859

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 16:46:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

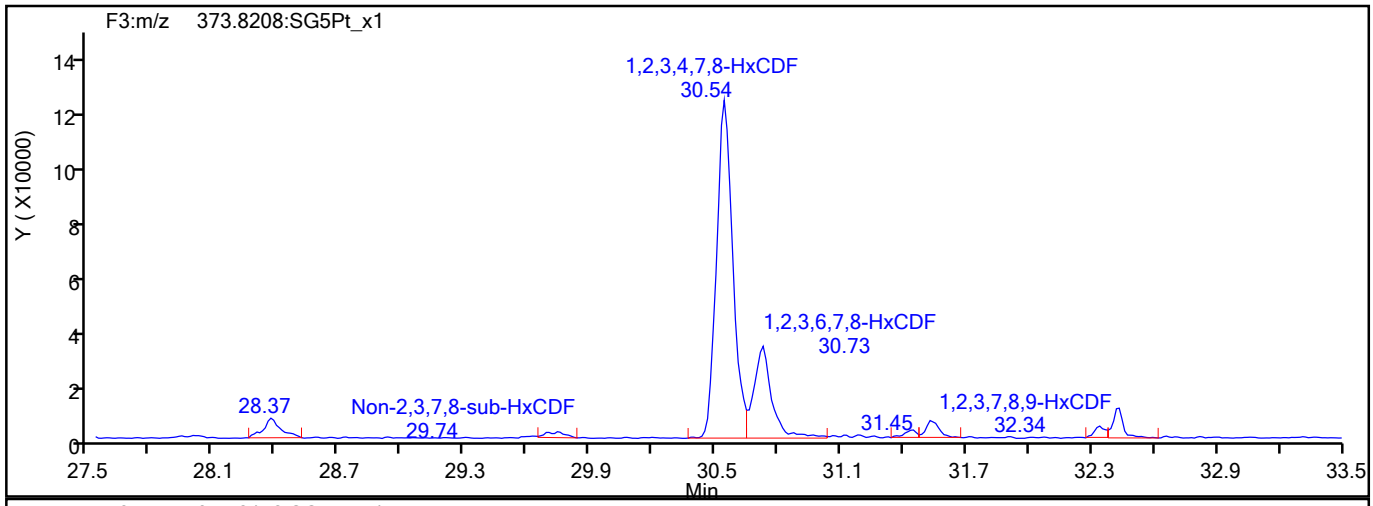

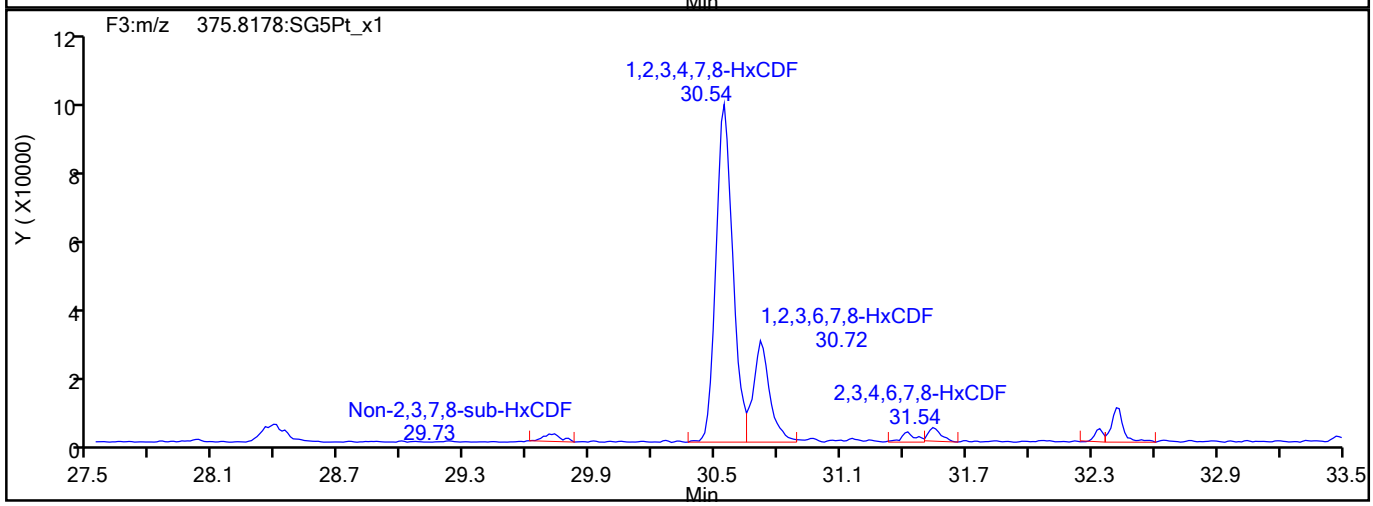

HxCDF Interference Mass

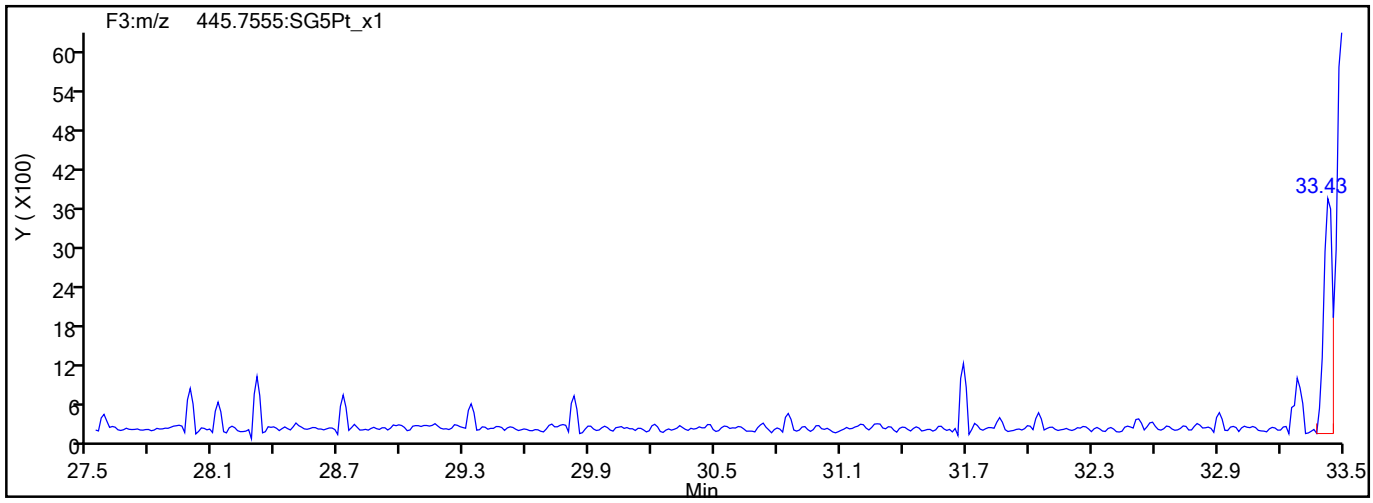

779860

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

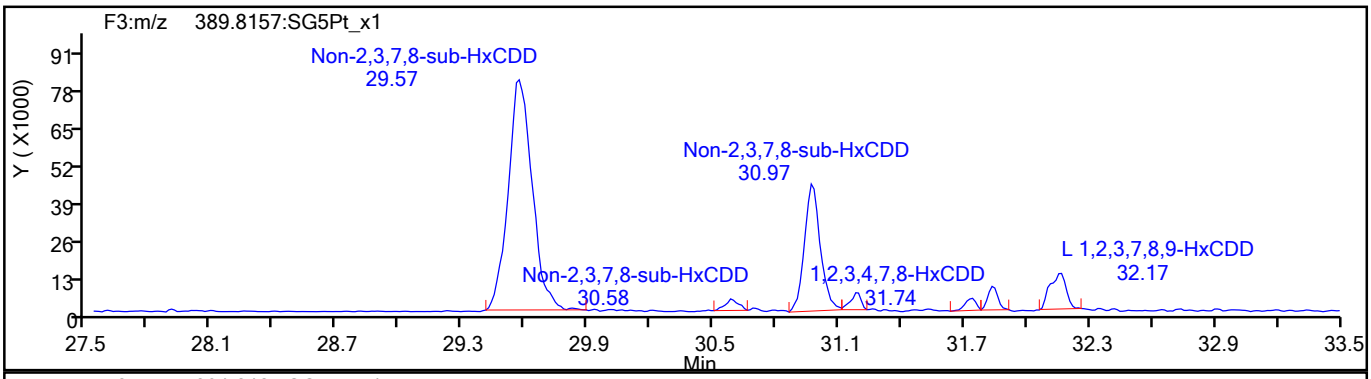

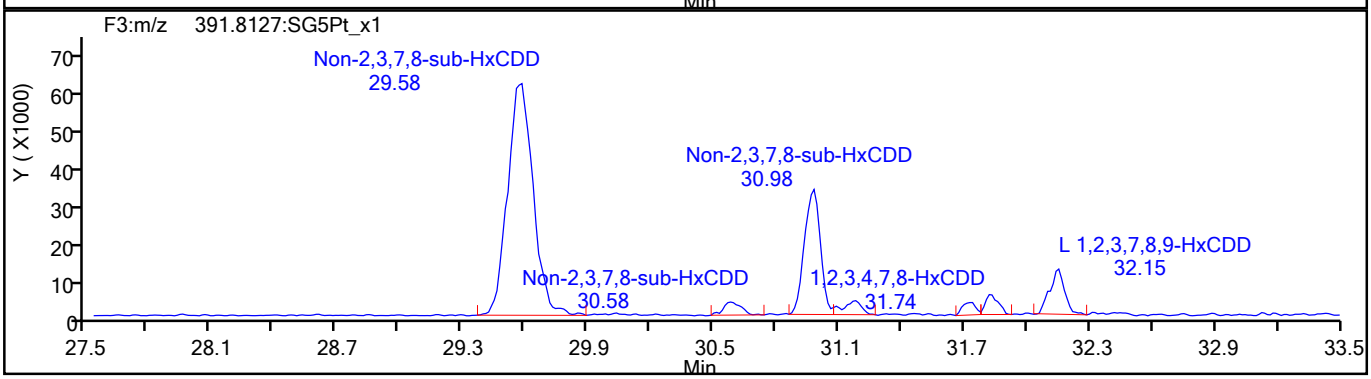

HxCDD Standards

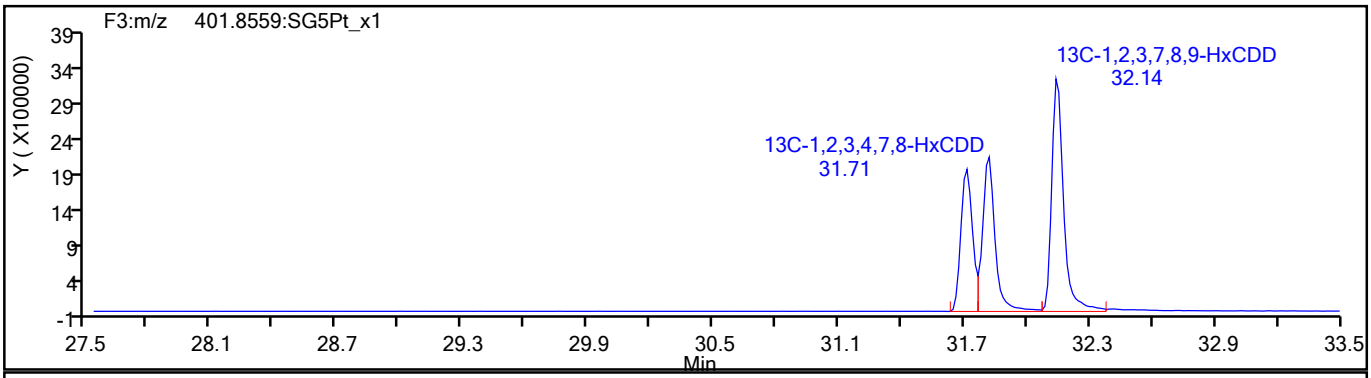

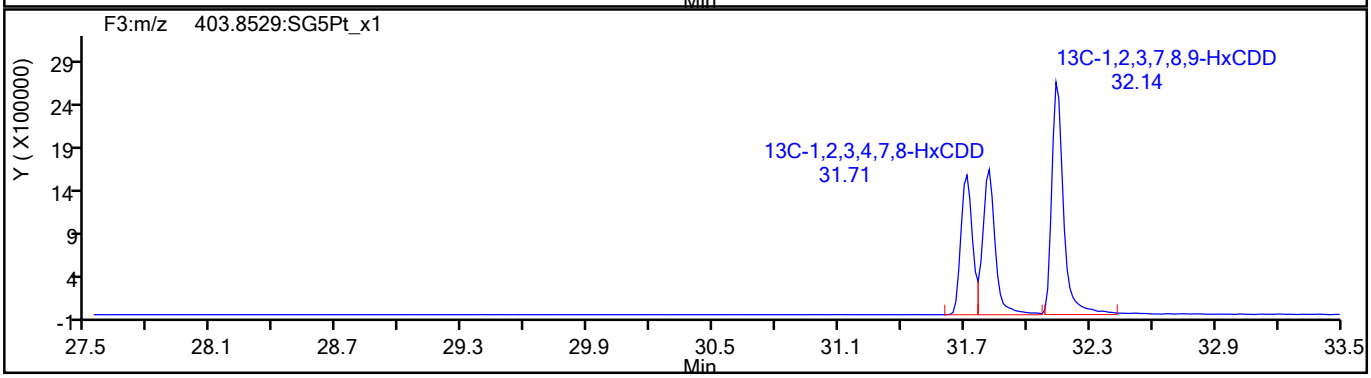

779861

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Injection Date:	14-Aug-2021 16:46:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

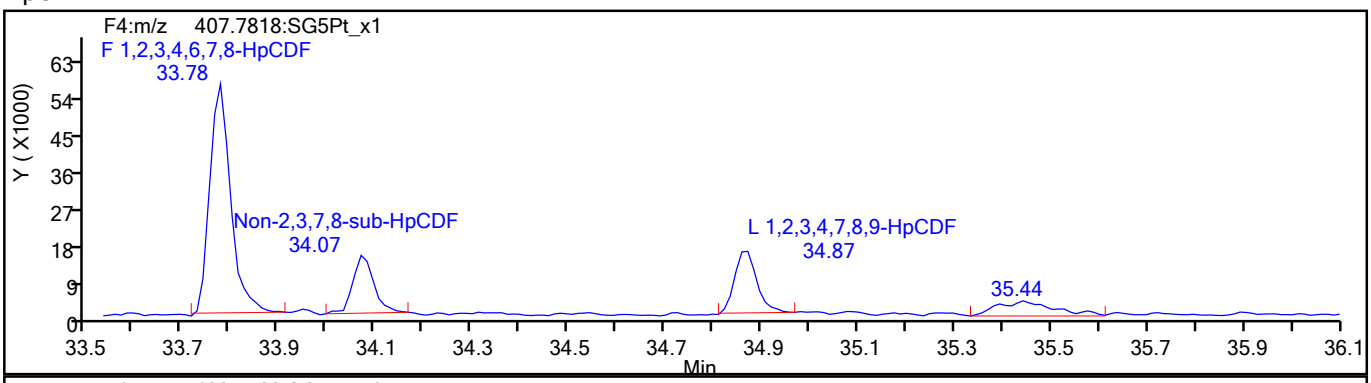

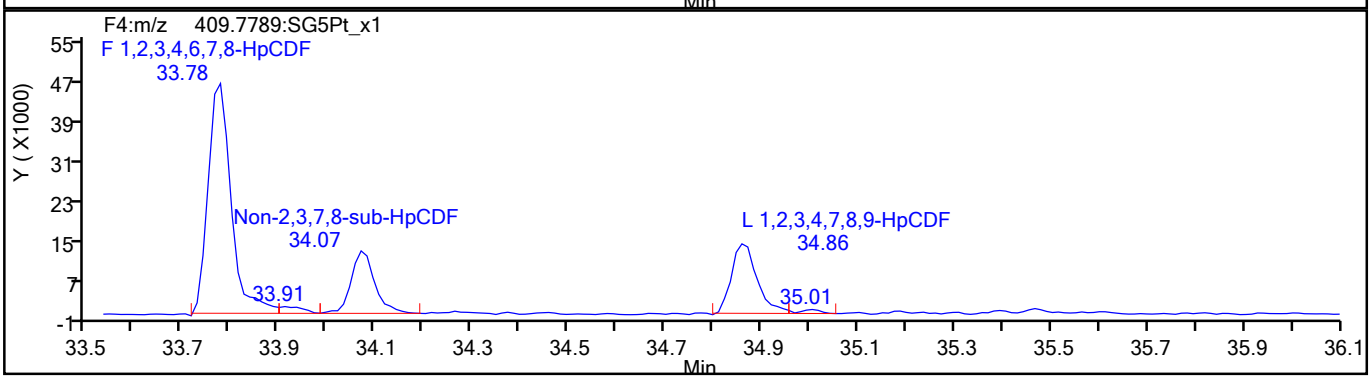

HpCDF Standards

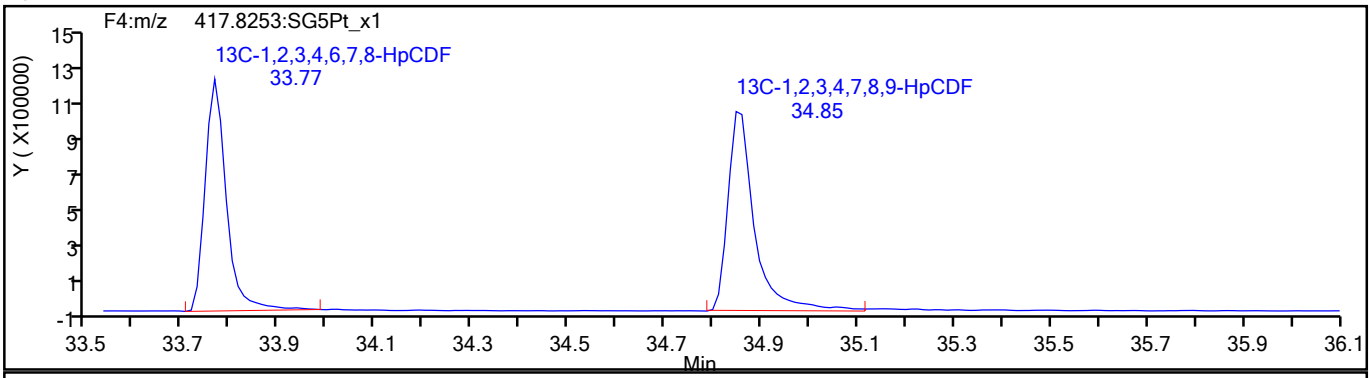

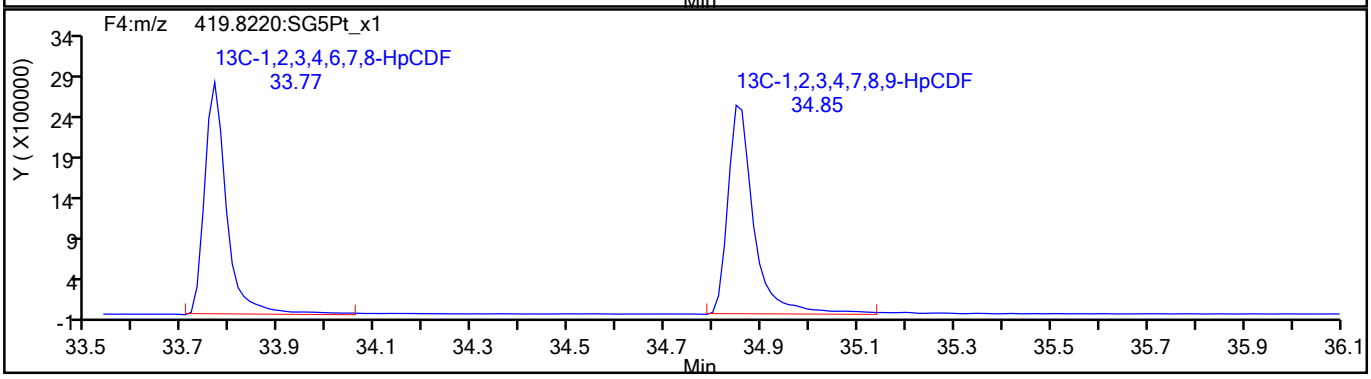

779862

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Injection Date:	14-Aug-2021 16:46:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

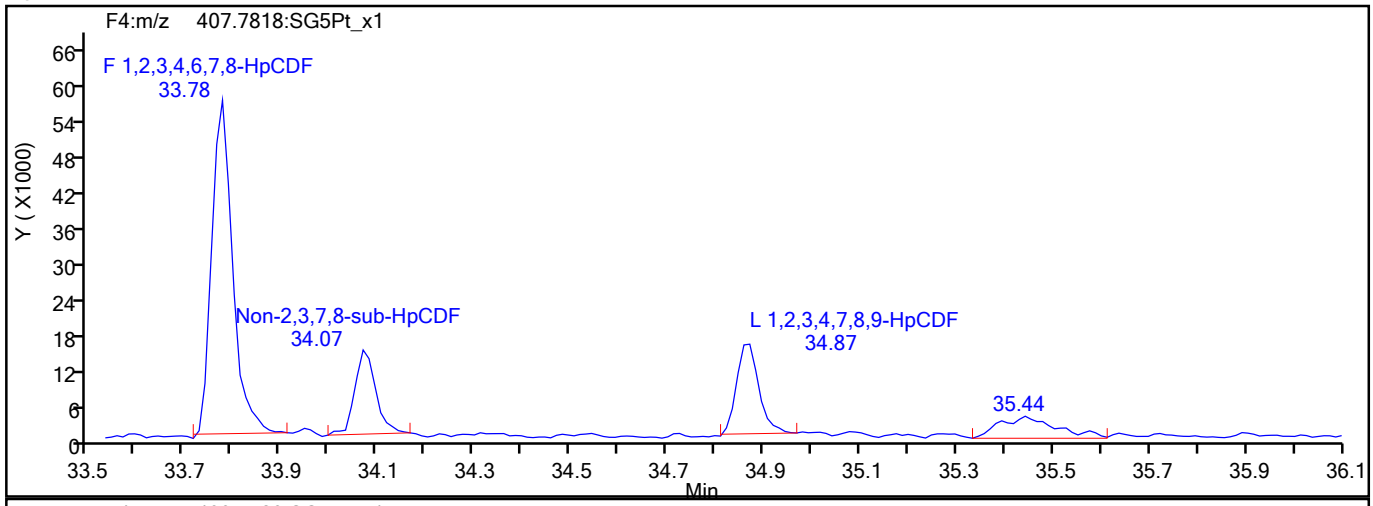

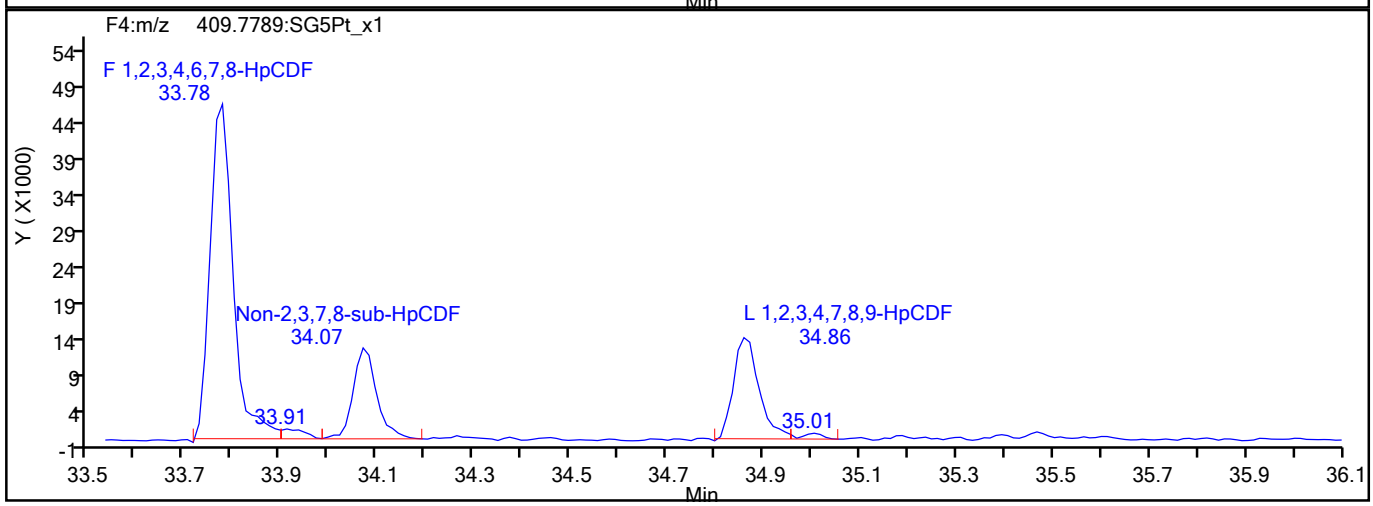

HpCDF Interference Mass

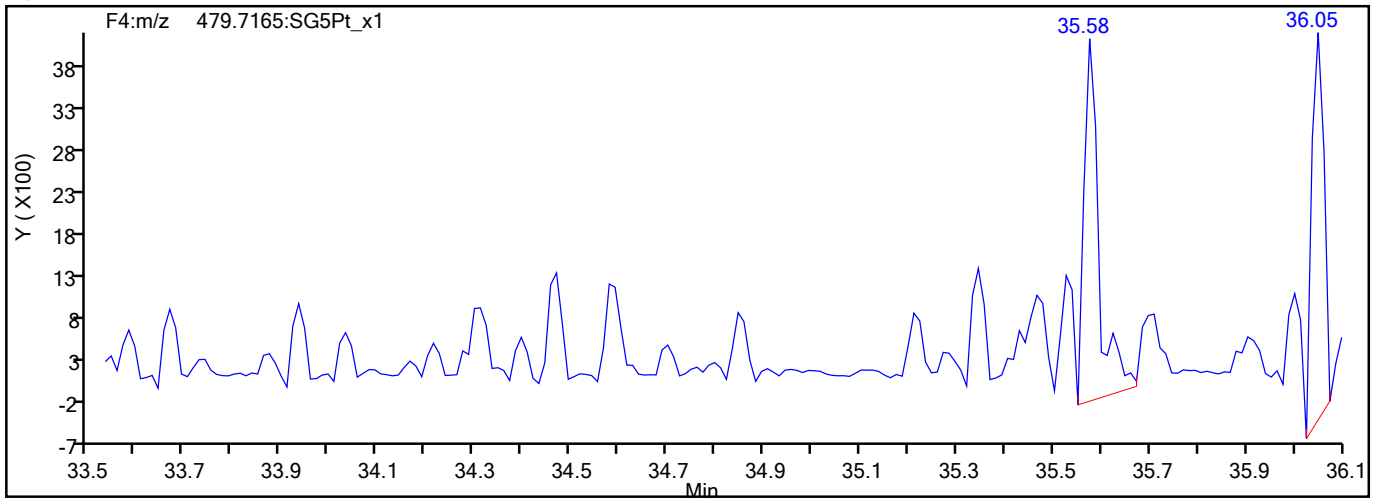

779863

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Injection Date:	14-Aug-2021 16:46:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

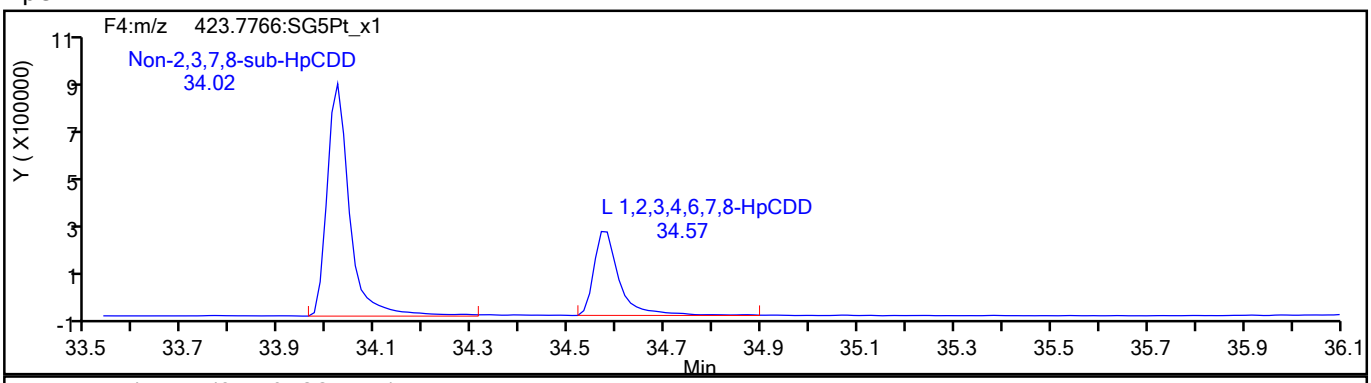

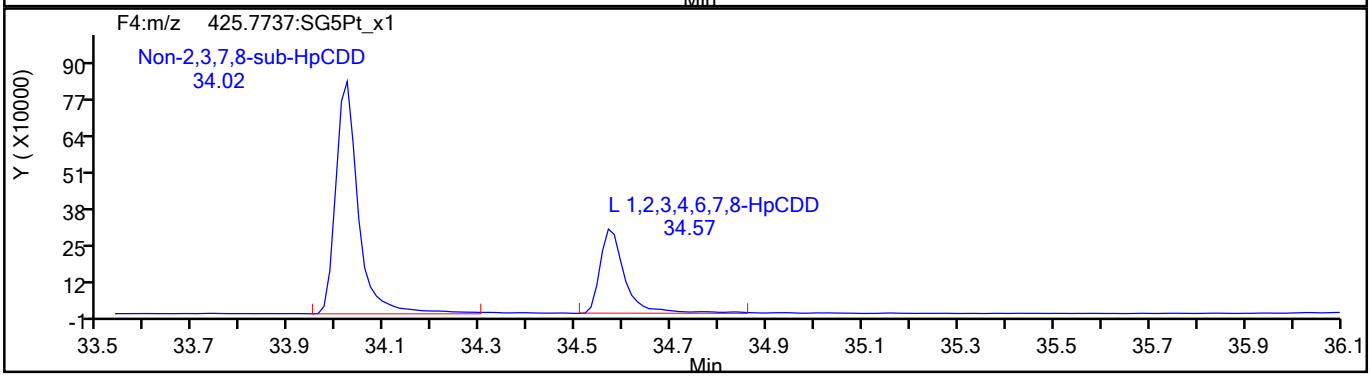

HpCDD Standards

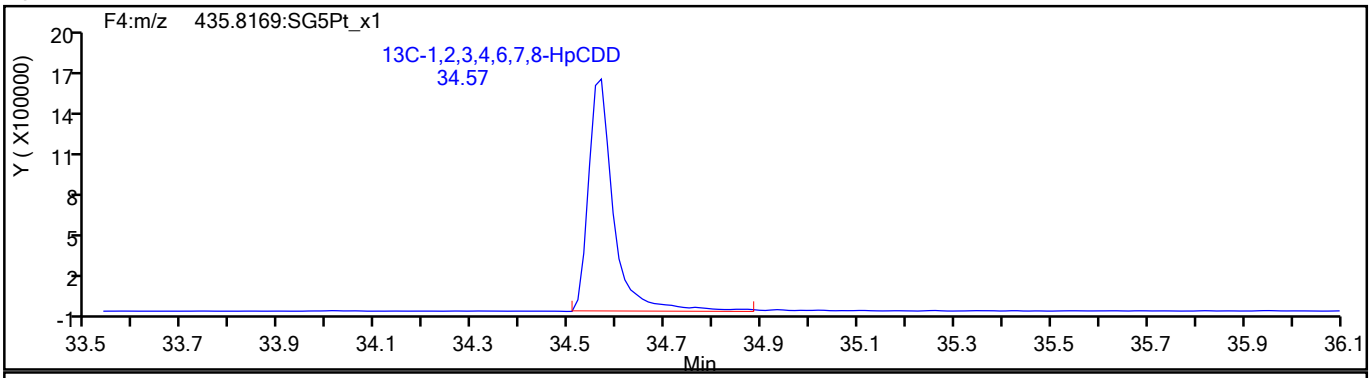

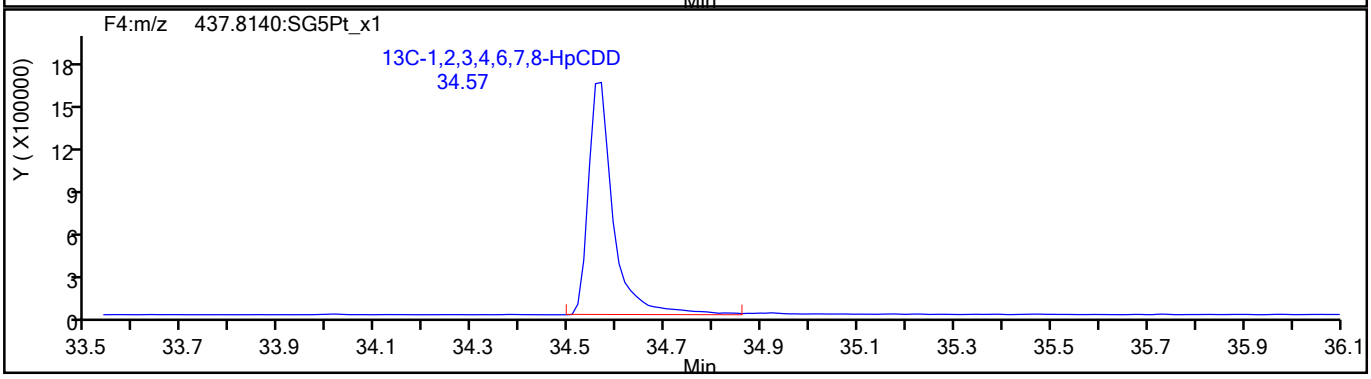

779864

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Injection Date:	14-Aug-2021 16:46:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

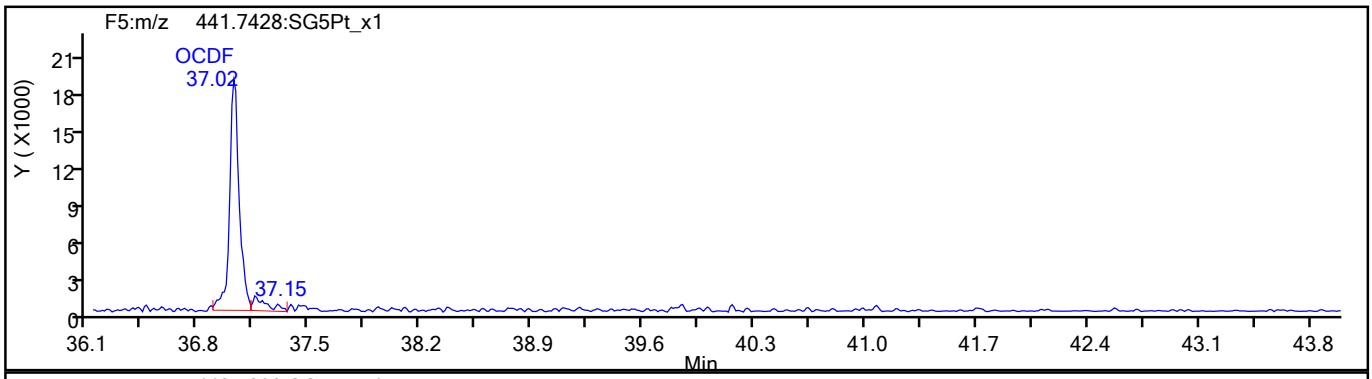

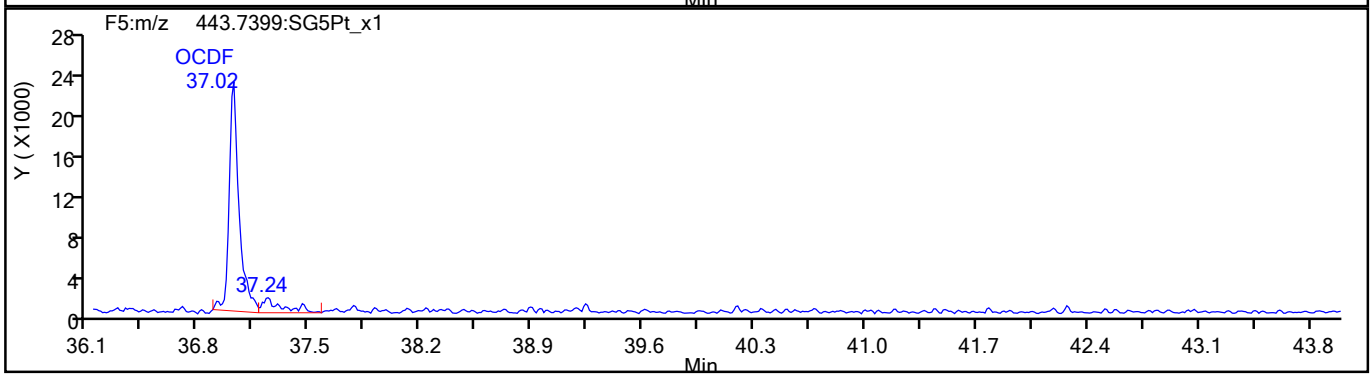

OCDF Standards

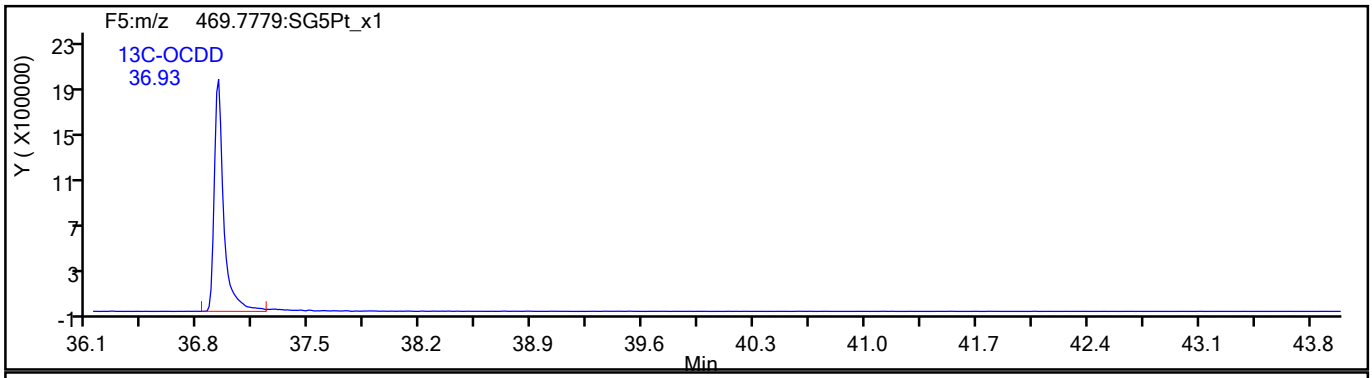

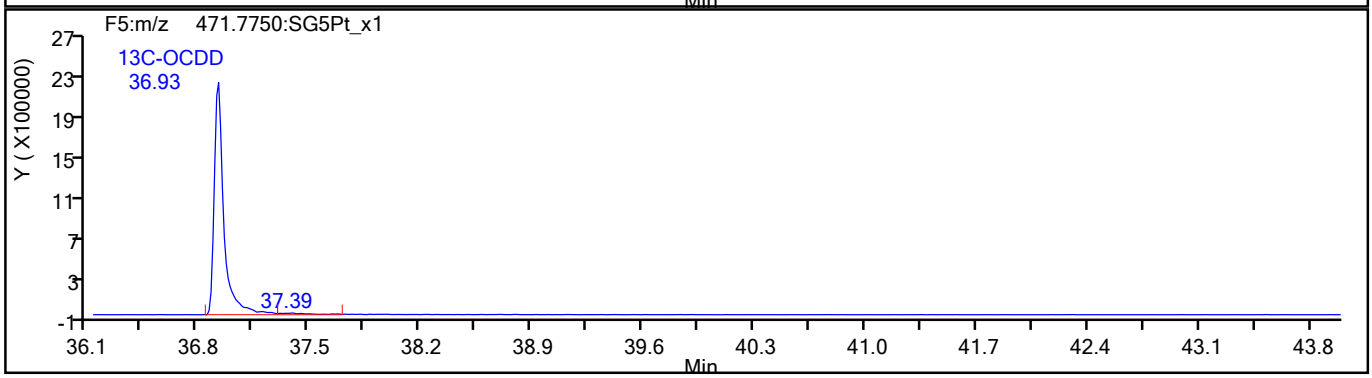

779865

Report Date: 18-Aug-2021 09:49:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Injection Date:	14-Aug-2021 16:46:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

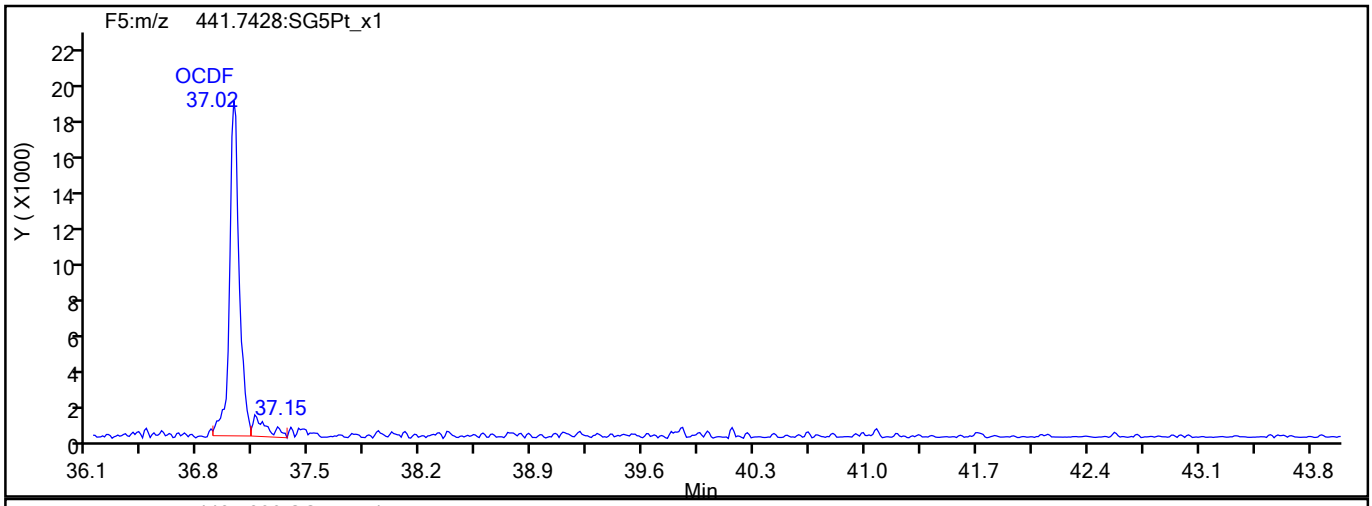

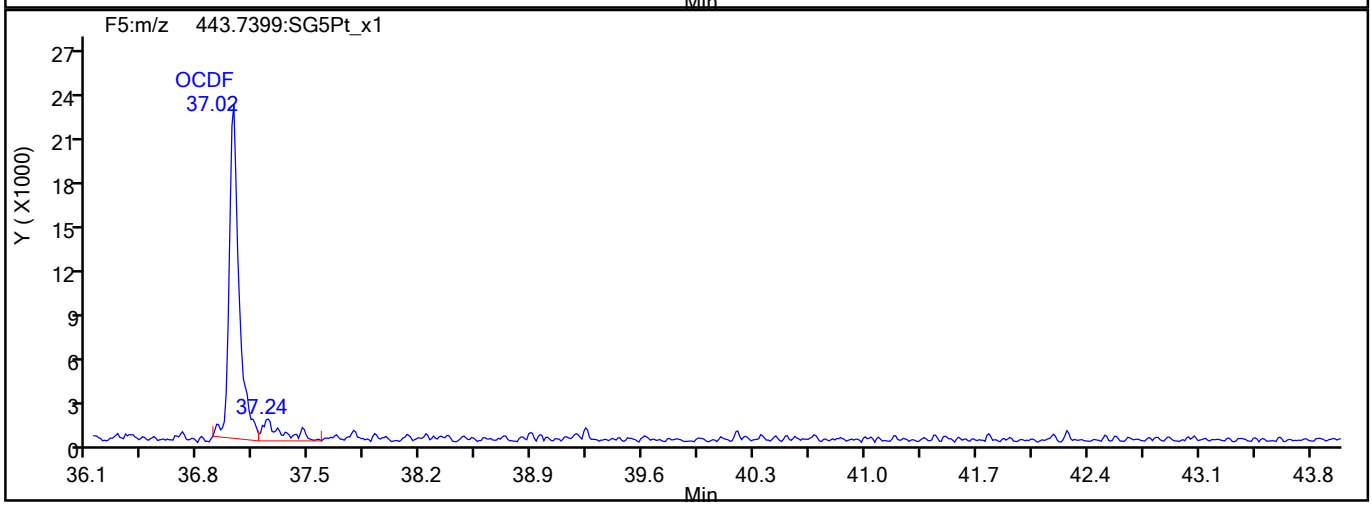

OCDF Interference Mass

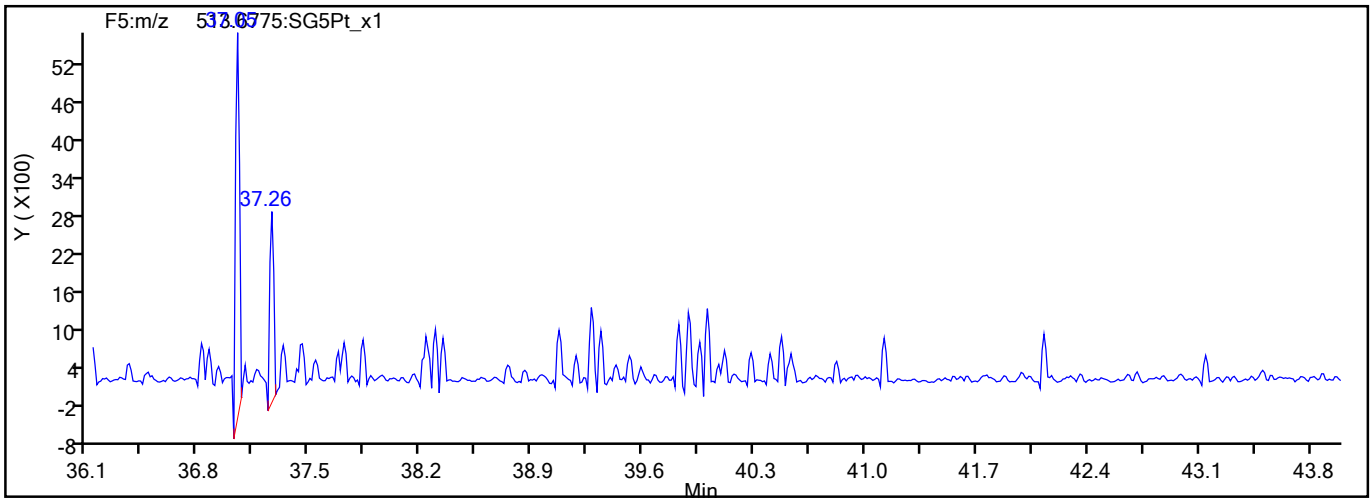

779866

Report Date: 18-Aug-2021 09:49:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Injection Date:	14-Aug-2021 16:46:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

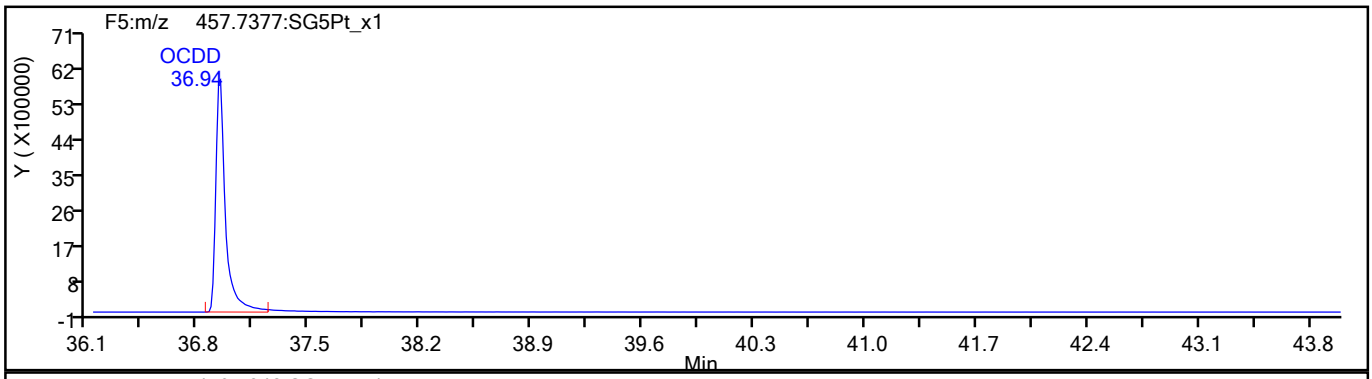

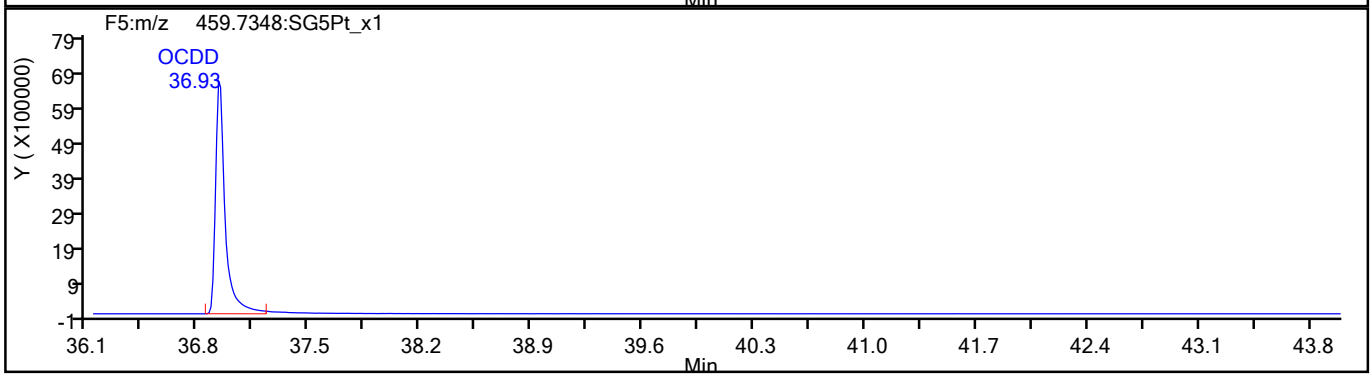

OCDD Standards

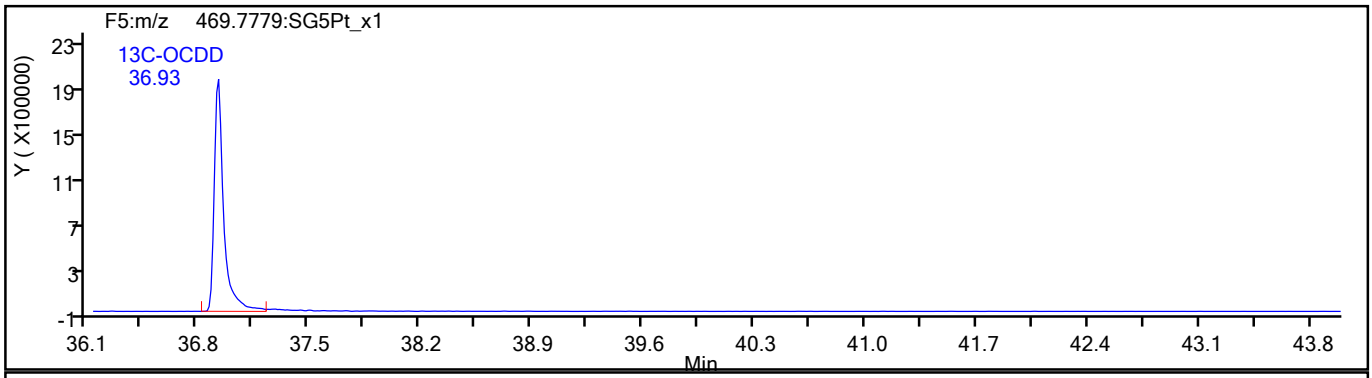

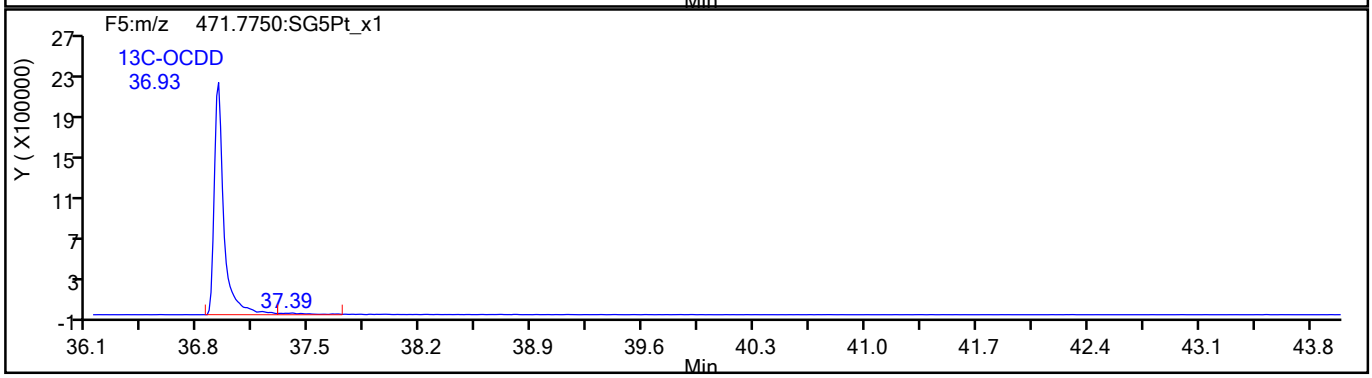

779867

Report Date: 18-Aug-2021 09:49:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Injection Date:	14-Aug-2021 16:46:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

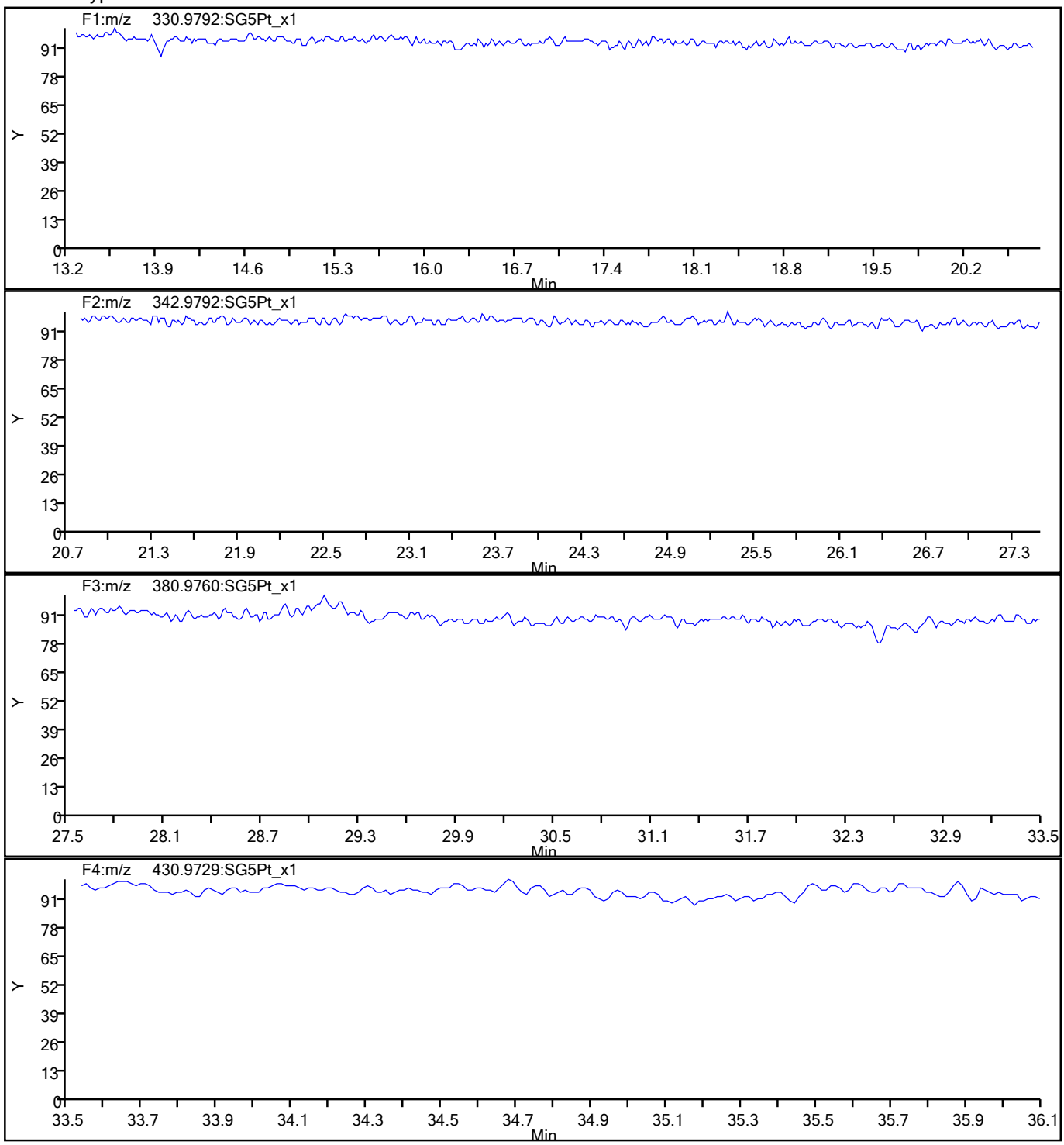

779868

Report Date: 18-Aug-2021 09:49:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_32.d		
Injection Date:	14-Aug-2021 16:46:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	516846	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

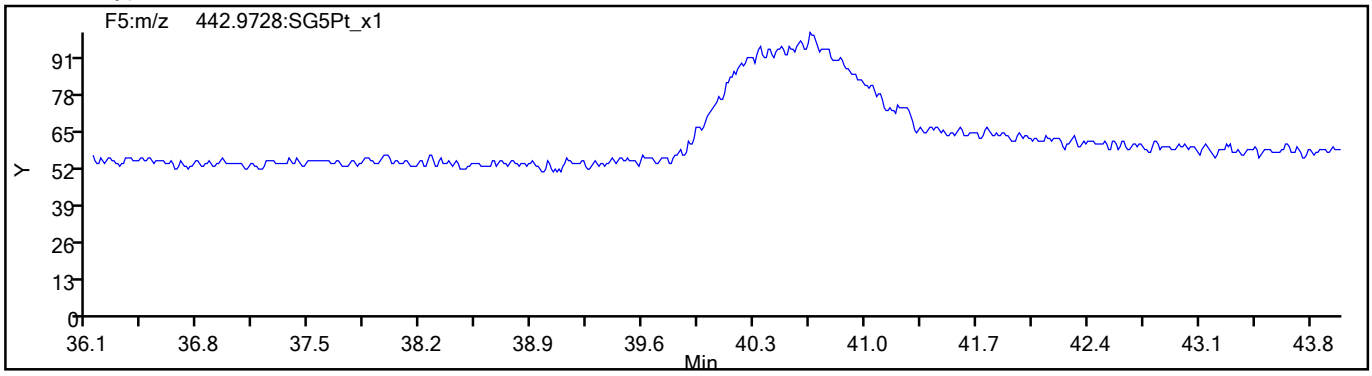

779869

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (4-6) RA
Lab Sample ID: 320-76788-15 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_014.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:40
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.30(g)
Date Analyzed: 08/25/2021 00:55
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	610	E B	1.4	0.66

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	83		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	87		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_014.d
Lims ID: 320-76788-A-15-A
Client ID: 11215702-072321-BN-SJSB105 (4-6)
Sample Type: Client
Inject. Date: 25-Aug-2021 00:55:44 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-15-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:32:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	58389854	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	64609738	0.81	1.3327	83.0	83.0	0.4445	0.4445	83.03	
2,3,7,8-TCDF	17.642	141332787	0.79	0.9978	219.2	219.2	0.2361	0.2361		E
D 13C-2,3,7,8-TCDD	16.065	38942662	0.76	0.8749	76.2	76.2	2.712	2.712	76.23	
$ 37Cl4-2,3,7,8-TCDD	16.092	17664977		0.8648	35.0	35.0	0.0917	0.0917	87.46	
2,3,7,8-TCDD	16.092	26880185	0.79	1.0570	65.3	65.3	0.3450	0.3450		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Report Date: 25-Aug-2021 09:02:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_014.d
Lims ID: 320-76788-A-15-A
Client ID: 11215702-072321-BN-SJSB105 (4-6)
Sample Type: Client
Inject. Date: 25-Aug-2021 00:55:44 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-15-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:32:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.298	16.285	1		24994710	5603124	63923	159807	88		
333.9339	16.298	16.285	1		33395144	7337208	58891	147227	125	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.601	1	1.081	28965993	5420848	11503	28757	471		
317.9389	17.615	17.601	1	1.081	35643745	6571963	19157	47892	343	0.81(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.642	17.629	1	1.002	62207057	11863240	5081	12702	2335		
305.8987	17.642	17.629	1	1.002	79125730	14752942	6218	15545	2373	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.051	1	0.986	16861640	3858881	63923	159807	60		
333.9339	16.065	16.051	1	0.986	22081022	4955345	58891	147227	84	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.065	2	0.987	17664977	4135814	4106	10265	1007		
2,3,7,8-TCDD											
319.8965	16.092	16.079	1	1.002	11861198	2638229	7014	17535	376		
321.8936	16.092	16.079	1	1.002	15018987	3331716	5843	14607	570	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 25-Aug-2021 09:02:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_014.d		
Injection Date:	25-Aug-2021 00:55:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	519540	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

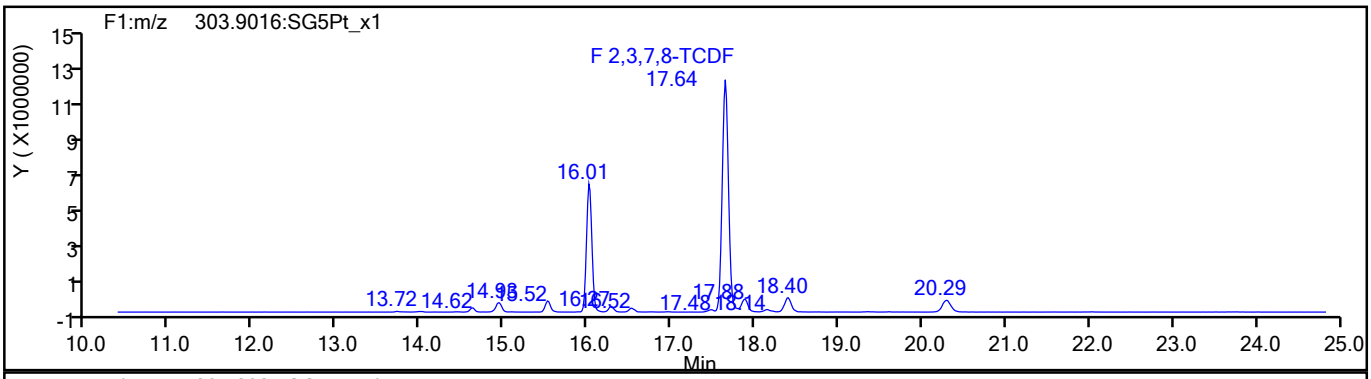

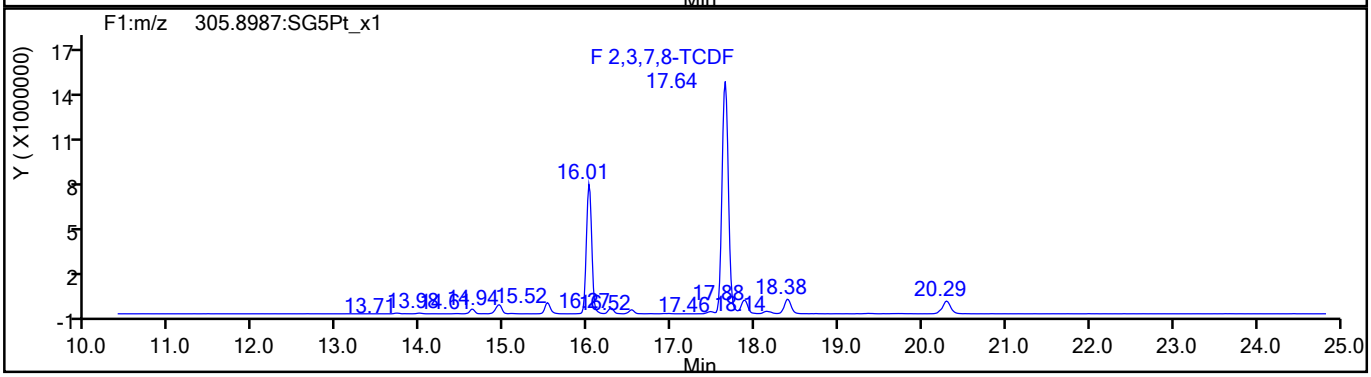

TCDF Standards

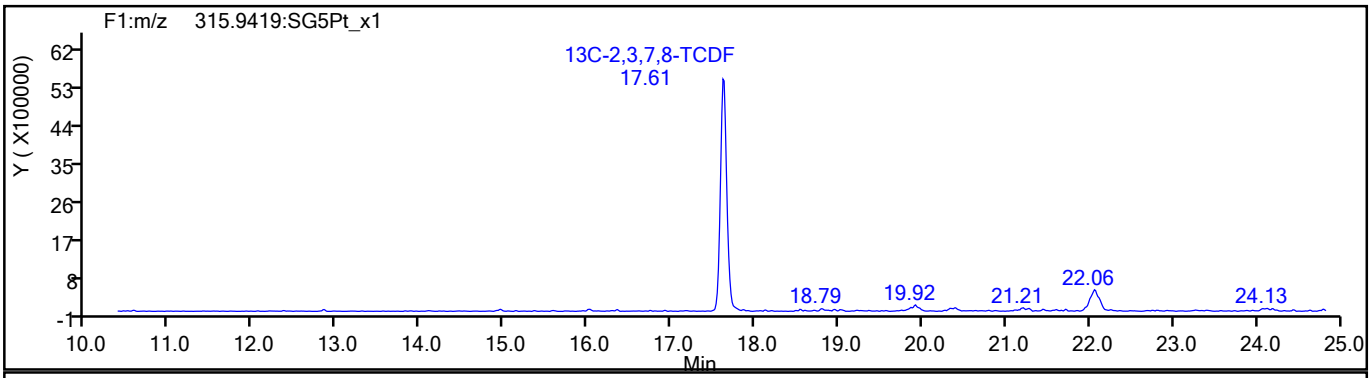

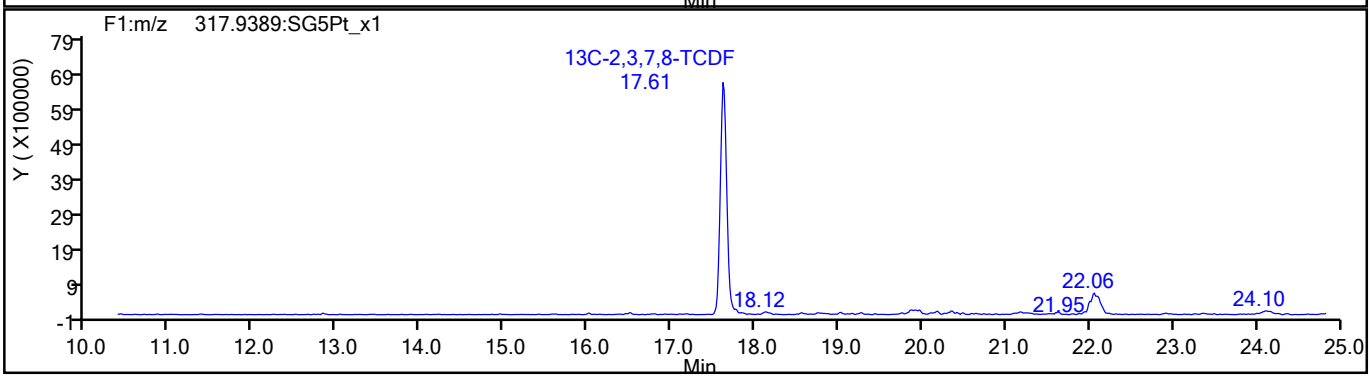

779873

Report Date: 25-Aug-2021 09:02:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_014.d		
Injection Date:	25-Aug-2021 00:55:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	519540	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

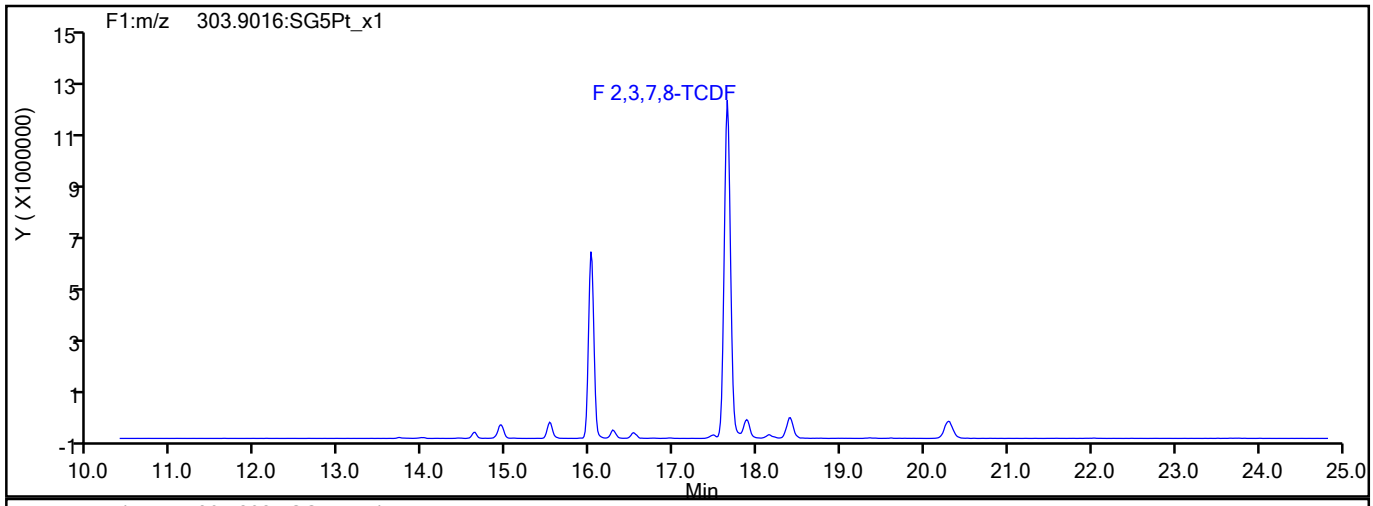

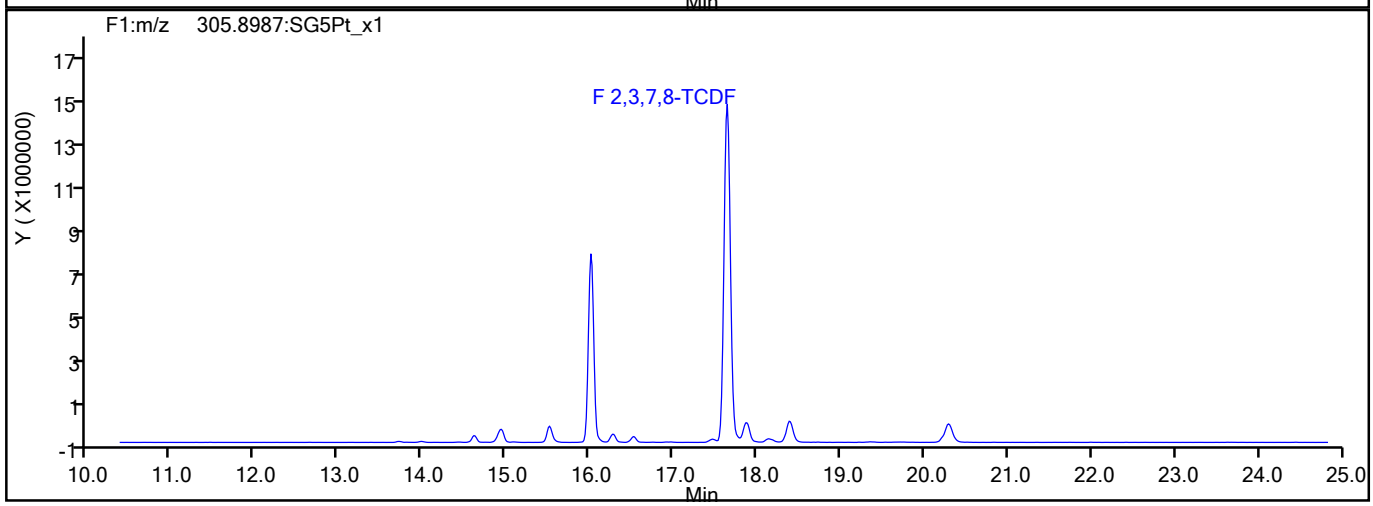

TCDF Interference Mass

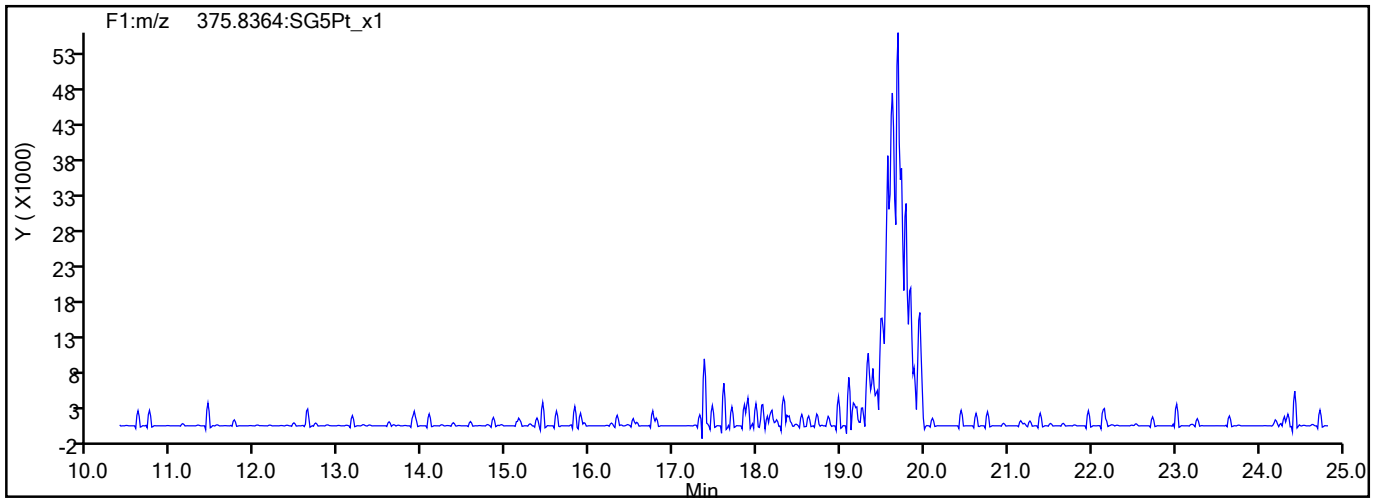

779874

Report Date: 25-Aug-2021 09:02:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_014.d		
Injection Date:	25-Aug-2021 00:55:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	519540	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

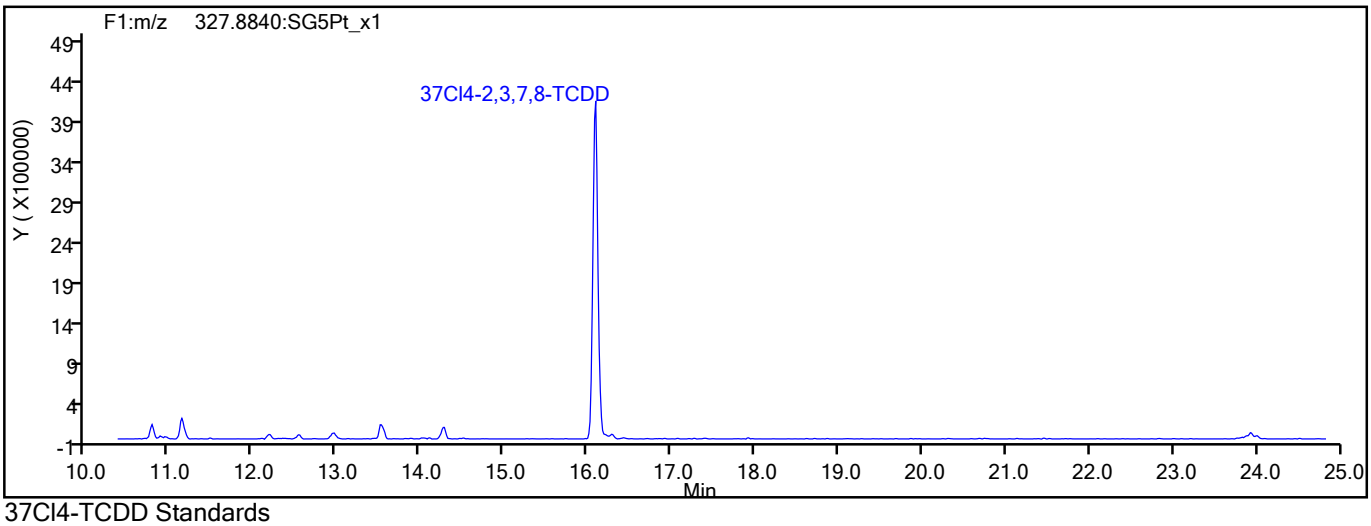

37Cl4-TCDD Standards

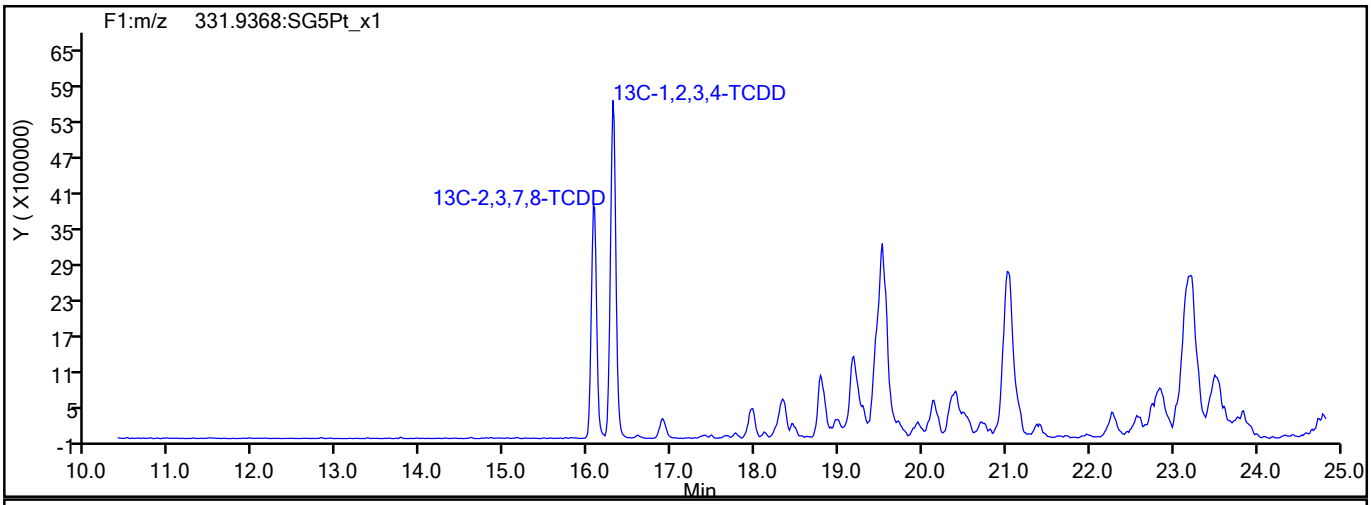

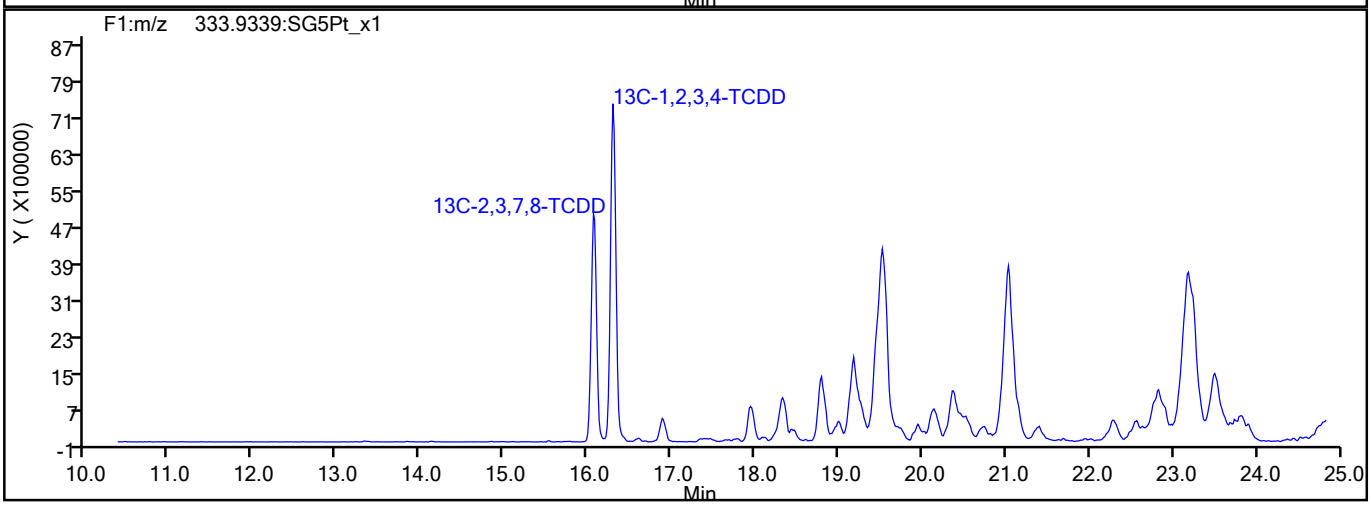

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Report Date: 25-Aug-2021 09:02:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_014.d		
Injection Date:	25-Aug-2021 00:55:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (4-6)		
Worklist#:	519540	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

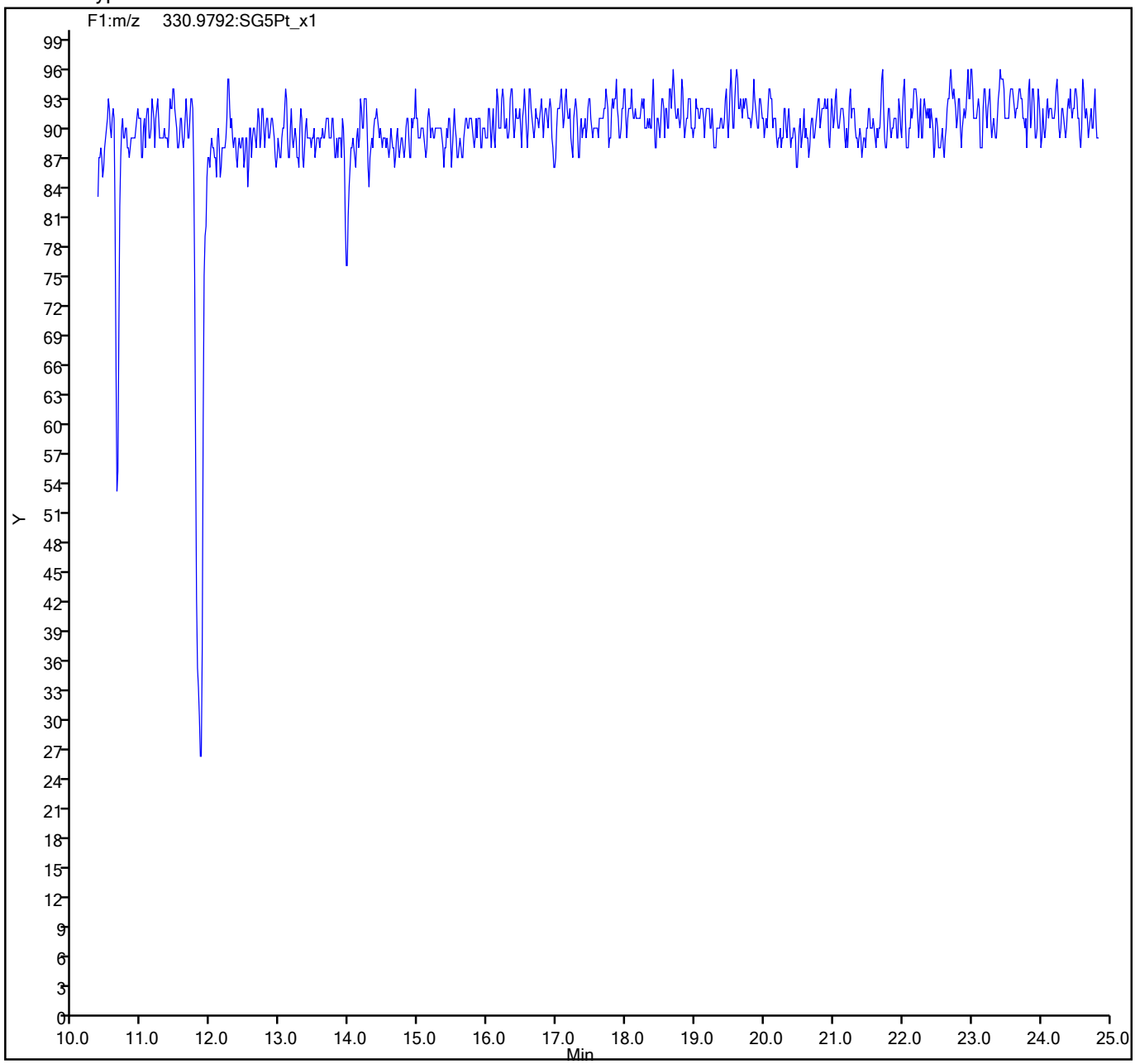

779876

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (6-8)
Lab Sample ID: 320-76788-16
Matrix: Solid
Lab File ID: 13AU2110D5_33.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:45
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.28(g)
Date Analyzed: 08/14/2021 17:31
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	20	B	1.4	0.21
40321-76-4	1,2,3,7,8-PeCDD	ND		7.0	0.15
57117-41-6	1,2,3,7,8-PeCDF	1.2	J q	7.0	0.078
57117-31-4	2,3,4,7,8-PeCDF	1.0	J	7.0	0.086
39227-28-6	1,2,3,4,7,8-HxCDD	0.50	J B q	7.0	0.35
57653-85-7	1,2,3,6,7,8-HxCDD	1.9	J	7.0	0.35
19408-74-3	1,2,3,7,8,9-HxCDD	3.2	J	7.0	0.32
70648-26-9	1,2,3,4,7,8-HxCDF	1.8	J B	7.0	0.062
57117-44-9	1,2,3,6,7,8-HxCDF	0.53	J B	7.0	0.065
72918-21-9	1,2,3,7,8,9-HxCDF	ND		7.0	0.053
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.0	0.051
35822-46-9	1,2,3,4,6,7,8-HpCDD	68	B	7.0	1.3
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.52	J B q	7.0	0.072
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.18	J B	7.0	0.088
3268-87-9	OCDD	1800	B	14	2.7
39001-02-0	OCDF	0.47	J B q	14	0.055
41903-57-5	Total TCDD	26	B q	1.4	0.21
30402-14-3	Total TCDF	120	B q	1.4	0.32
36088-22-9	Total PeCDD	8.3	q	7.0	0.15
30402-15-4	Total PeCDF	3.4	J q	7.0	0.082
34465-46-8	Total HxCDD	40	B q	7.0	0.34
55684-94-1	Total HxCDF	2.3	J B	7.0	0.058
37871-00-4	Total HpCDD	190	B	7.0	1.3
38998-75-3	Total HpCDF	0.70	J B q	7.0	0.080

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (6-8)
Lab Sample ID: 320-76788-16
Matrix: Solid
Lab File ID: 13AU2110D5_33.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:45
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.28(g)
Date Analyzed: 08/14/2021 17:31
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	53		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	55		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	60		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	62		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	56		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	52		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	52		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	64		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	68		26-138
114423-97-1	13C-OCDD	70		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	79		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d
Lims ID: 320-76788-A-16-A
Client ID: 11215702-072321-BN-SJSB105 (6-8)
Sample Type: Client
Inject. Date: 14-Aug-2021 17:31:36 ALS Bottle#: 33 Worklist Smp#: 22
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-16-a 320-76788-a-16-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:52:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 09:52:34

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	31985131	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.371	28554361	0.75	1.6249	54.9	54.9	0.1228	0.1228	54.94	
2,3,7,8-TCDF	17.386	7656541	0.78	1.0239	26.2	26.2	0.1154	0.1154		
A Non-2,3,7,8-sub-TCDF	17.046	4677089	0.77	1.0239	16.2	16.0	0.1154	11.5		RQ
S Total TCDF					42.4	42.2	0.1154	0.1154		RQ
D 13C-2,3,7,8-TCDD	18.066	16900744	0.78	0.8993	58.8	58.8	0.1381	0.1381	58.76	
2,3,7,8-TCDD	18.097	1510191	0.74	1.2541	7.125	7.125	0.0754	0.0754		
$ 37Cl4-2,3,7,8-TCDD	18.097	11194658		1.1071	31.6	31.6	0.0353	0.0353	79.03	
A Non-2,3,7,8-sub-TCDD	17.499	495678	0.77	1.2541	2.393	2.339	0.0754	0.8702		RQ
S Total TCDD					9.518	9.464	0.0754	0.0754		RQ
D 13C-1,2,3,7,8-PeCDF	22.394	20456212	1.57	1.2101	52.9	52.9	0.1449	0.1449	52.85	
1,2,3,7,8-PeCDF	22.394	94921	1.55	1.0611	0.4995	0.4373	0.0281	0.0281		RQM
D 13C-2,3,4,7,8-PeCDF	23.730	21954749	1.58	1.2395	55.4	55.4	0.1415	0.1415	55.38	
2,3,4,7,8-PeCDF	23.758	83217	1.73	1.0184	0.3722	0.3722	0.0307	0.0307		
A F1 PeCDFs	20.093						0.0211	0.0211		
A Non-2,3,7,8-sub-PeCDF	23.241	93184	1.55	1.0398	0.4389	0.4226	0.0294	0.2019		RQ
S Total PeCDF					1.310	1.232	0.0294	0.0294		RQ
D 13C-1,2,3,7,8-PeCDD	24.453	14062924	1.59	0.7612	57.8	57.8	0.0682	0.0682	57.76	
1,2,3,7,8-PeCDD	24.453						0.0536	0.0536		
A Non-2,3,7,8-sub-PeCDD	23.349	437326	1.55	1.0484	2.999	2.966	0.0536	1.549		RQM
S Total PeCDD					2.999	2.966	0.0536	0.0536		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.529	18224130	0.50	1.0837	55.8	55.8	0.3410	0.3410	55.83	
1,2,3,4,7,8-HxCDF	30.556	128727	1.25	1.0851	0.6509	0.6509	0.0223	0.0223		
D 13C-1,2,3,6,7,8-HxCDF	30.702	17613093	0.51	1.1279	51.8	51.8	0.3276	0.3276	51.84	
1,2,3,6,7,8-HxCDF	30.716	37427	1.19	1.1260	0.1887	0.1887	0.0232	0.0232		M
D 13C-2,3,4,6,7,8-HxCDF	31.528	16584520	0.52	1.0637	51.8	51.8	0.3474	0.3474	51.76	
2,3,4,6,7,8-HxCDF	31.554						0.0183	0.0183		U
D 13C-1,2,3,7,8,9-HxCDF	32.340	15314570	0.51	0.9676	52.5	52.5	0.3819	0.3819	52.55	
1,2,3,7,8,9-HxCDF	32.433						0.0189	0.0189		U
A Non-2,3,7,8-sub-HxCDF	30.197						0.0205	0.0618		RQU

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.8397	0.8397	0.0207	0.0207		
* 13C-1,2,3,7,8,9-HxCDD	32.153	30121179	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	13248236	1.26	0.7334	60.0	60.0	0.3936	0.3936	59.97	
1,2,3,4,7,8-HxCDD	31.741	25153	1.24	1.0640	0.2085	0.1784	0.1252	0.1252		RQMa
D 13C-1,2,3,6,7,8-HxCDD	31.820	16322929	1.25	0.8802	61.6	61.6	0.3280	0.3280	61.57	
1,2,3,6,7,8-HxCDD	31.834	112728	1.12	1.0001	0.6906	0.6906	0.1252	0.1252		M
1,2,3,7,8,9-HxCDD	32.167	193103	1.24	1.1325	1.153	1.153	0.1140	0.1140		
A Non-2,3,7,8-sub-HxCDD	30.882	1934833	1.27	1.0655	12.3	12.3	0.1211	8.999		
S Total HxCDD					14.3	14.3	0.1215	0.1215		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.778	13914292	0.43	0.7730	59.8	59.8	0.8094	0.8094	59.76	
1,2,3,4,6,7,8-HpCDF	33.791	37010	1.04	1.4413	0.2114	0.1845	0.0257	0.0257		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	14354834	0.44	0.7008	68.0	68.0	0.8928	0.8928	68.00	
1,2,3,4,7,8,9-HpCDF	34.872	12491	0.94	1.3174	0.0661	0.0661	0.0315	0.0315		
A Non-2,3,7,8-sub-HpCDF	34.319						0.0284	0.0284		
S Total HpCDF					0.2774	0.2506	0.0286	0.0286		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	12397599	1.01	0.6472	63.6	63.6	0.3400	0.3400	63.59	
1,2,3,4,6,7,8-HpCDD	34.581	3295800	1.04	1.0943	24.3	24.3	0.4519	0.4519		
A Non-2,3,7,8-sub-HpCDD	34.301	6160962	1.00	1.0943	45.4	45.4	0.4519	45.4		
S Total HpCDD					69.7	69.7	0.4519	0.4519		
D 13C-OCDD	36.938	18897634	0.86	0.4472	140.3	140.3	0.2424	0.2424	70.15	
OCDF	37.022	22926	0.89	1.4382	0.2059	0.1687	0.0197	0.0197		RQMa
OCDD	36.938	68074866	0.89	1.1070	650.8	650.8	0.9595	0.9595		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d
Lims ID: 320-76788-A-16-A
Client ID: 11215702-072321-BN-SJSB105 (6-8)
Sample Type: Client
Inject. Date: 14-Aug-2021 17:31:36 ALS Bottle#: 33 Worklist Smp#: 22
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-16-a 320-76788-a-16-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:52:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 09:52:34

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		14333078	3553570	2187	5467	1625		
333.9339	17.870	17.855	1		17652053	4386886	1759	4397	2494	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.371	17.341	2	0.972	12245701	2968723	3315	8287	896		
317.9389	17.371	17.341	2	0.972	16308660	3906468	3023	7557	1292	0.75(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.386	17.356	2	1.001	3350713	768223	1533	3832	501		
305.8987	17.386	17.356	2	1.001	4305828	1008823	1717	4292	588	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.252	17.046	-48	0.936	54712	12127	1533	3832	8		
305.8987	16.237	17.046	-48	0.935	89576	18067	1717	4292	11	0.61(0.65-0.89)	
	Empc Correction				71054	15749	1717	4292	9		
303.9016	16.479	17.046	-34	0.949	85634	19916	1533	3832	13		
305.8987	16.479	17.046	-34	0.949	113312	28862	1717	4292	17	0.76(0.65-0.89)	
303.9016	16.721	17.046	-19	0.963	122477	29538	1533	3832	19		
305.8987	16.706	17.046	-20	0.962	145739	34578	1717	4292	20	0.84(0.65-0.89)	
303.9016	16.993	17.046	-3	0.978	1481369	376736	1533	3832	246		
305.8987	16.993	17.046	-3	0.978	1882560	473496	1717	4292	276	0.79(0.65-0.89)	
303.9016	17.205	17.046	10	0.990	72021	11235	1533	3832	7		
	Empc Correction				47796	11656	1533	3832	8		
305.8987	17.220	17.046	10	0.991	62073	15138	1717	4292	9	1.16(0.65-0.89)	
303.9016	17.809	17.046	46	1.025	231742	47231	1533	3832	31		
305.8987	17.809	17.046	46	1.025	297221	70574	1717	4292	41	0.78(0.65-0.89)	
303.9016	18.066	17.046	61	1.040	46173	9812	1533	3832	6		
	Empc Correction				35411	6873	1533	3832	4		
305.8987	18.051	17.046	60	1.039	45989	8927	1717	4292	5	1.00(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	7430350	1748043	2187	5467	799		
333.9339	18.066	18.051	1	1.011	9470394	2182467	1759	4397	1241	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.097	18.066	2	1.002	643783	147531	886	2215	167		
321.8936	18.081	18.066	1	1.001	866408	195923	600	1500	327	0.74(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.097	18.066	2	1.013	11194658	2587373	1243	3107	2082		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	16.162	17.499	-80	0.895	20624	5594	886	2215	6		
	Empc Correction				16185	3557	886	2215	4		
321.8936	16.146	17.499	-81	0.894	21020	4620	600	1500	8	0.98(0.65-0.89)	
319.8965	16.388	17.499	-67	0.907	19842	5620	886	2215	6		
	Empc Correction				12737	3650	886	2215	4		
321.8936	16.388	17.499	-67	0.907	16542	4741	600	1500	8	1.20(0.65-0.89)	
319.8965	16.948	17.499	-33	0.938	74953	19803	886	2215	22		
321.8936	16.948	17.499	-33	0.938	109495	24652	600	1500	41	0.68(0.65-0.89)	
319.8965	17.840	17.499	20	0.987	51853	7640	886	2215	9		
321.8936	17.976	17.499	29	0.995	73211	12818	600	1500	21	0.71(0.65-0.89)	
319.8965	18.444	17.499	57	1.021	51763	12035	886	2215	14		
321.8936	18.444	17.499	57	1.021	67919	15067	600	1500	25	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.394	22.367	2	1.253	12498491	2141053	3232	8080	662		
353.8970	22.394	22.367	2	1.253	7957721	1337868	2339	5847	572	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											RQM
339.8597	22.394	22.380	1	1.000	71192	10799	213	532	51		M
	Empc Correction				57697	10369	213	532	49		
341.8567	22.421	22.380	2	1.001	37224	6690	202	505	33	1.91(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.730	23.703	2	1.328	13435260	2046519	3232	8080	633		
353.8970	23.730	23.703	2	1.328	8519489	1265319	2339	5847	541	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.758	23.730	2	1.001	52770	9863	213	532	46		
341.8567	23.771	23.730	2	1.002	30447	4797	202	505	24	1.73(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						79	197			
341.8567	20.093						219	547			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.071	23.241	-130	0.941	27242	4897	213	532	23		
341.8567	21.058	23.241	-131	0.940	17277	3361	202	505	17	1.58(1.32-1.78)	
339.8597	22.940	23.241	-18	1.024	15351	3653	213	532	17		
341.8567	22.912	23.241	-20	1.023	13481	2019	202	505	10	1.14(1.32-1.78)	
	Empc Correction				9903	2356	202	505	12		
339.8597	24.071	23.241	50	1.075	13922	1785	213	532	8		
341.8567	24.099	23.241	51	1.076	9489	2000	202	505	10	1.47(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.426	2	1.368	8641482	1240452	799	1997	1553		
369.8919	24.453	24.426	2	1.368	5421442	771463	850	2125	908	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453						288	720			
357.8516	24.453						164	410			
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	21.262	23.349	-125	0.870	46138	9022	288	720	31		
357.8516	21.262	23.349	-125	0.870	33750	7309	164	410	45	1.37(1.32-1.78)	
355.8546	21.999	23.349	-81	0.900	133292	24827	288	720	86		M
357.8516	21.999	23.349	-81	0.900	95154	18020	164	410	110	1.40(1.32-1.78)	
355.8546	23.294	23.349	-3	0.953	23980	5070	288	720	18		
	Empc Correction				19165	3400	288	720	12		
357.8516	23.281	23.349	-4	0.952	12365	2194	164	410	13	1.94(1.32-1.78)	
355.8546	23.526	23.349	11	0.962	56968	6800	288	720	24		
357.8516	23.512	23.349	10	0.962	40494	5373	164	410	33	1.41(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.529	30.503	2	0.949	6108144	1130065	3855	9637	293		
385.8610	30.529	30.503	2	0.949	12115986	2203367	7125	17812	309	0.50(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.556	30.529	2	1.001	71511	13350	166	415	80		
375.8178	30.542	30.529	1	1.000	57216	11290	156	390	72	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	5962551	1058763	3855	9637	275		
385.8610	30.702	30.689	1	0.955	11650542	2027347	7125	17812	285	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											M
373.8208	30.716	30.702	1	1.000	20343	5084	166	415	31		M
375.8178	30.716	30.702	1	1.000	17084	2518	156	390	16	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.528	31.514	1	0.981	5709043	1271344	3855	9637	330		
385.8610	31.528	31.514	1	0.981	10875477	2503335	7125	17812	351	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											U
373.8208	31.528						166	415			
375.8178	31.528						156	390			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.340	32.313	2	1.006	5195381	1215297	3855	9637	315		
385.8610	32.340	32.313	2	1.006	10119189	2430560	7125	17812	341	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											U
373.8208	32.326						166	415			
375.8178	32.326						156	390			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	28.346	30.197	-111	0.929	7629	1250	166	415	8		
	Empc Correction				6578	1351	166	415	8		
375.8178	28.386	30.197	-108	0.930	5305	1090	156	390	7	1.44(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.127	2		16737818	4132539	5119	12797	807		
403.8529	32.153	32.127	2		13383361	3295262	3459	8647	953	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.986	7394415	1965419	5119	12797	384		
403.8529	31.714	31.701	1	0.986	5853821	1574783	3459	8647	455	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQMa
389.8157	31.741	31.714	2	1.001	13924	4052	915	2287	4		M
391.8127	31.741	31.714	2	1.001	15465	4135	971	2427	4	0.90(1.05-1.43)	
	Empc Correction				11229	3267	971	2427	3		
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.807	1	0.990	9065394	2076711	5119	12797	406		
403.8529	31.820	31.807	1	0.990	7257535	1688542	3459	8647	488	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.834	31.820	1	1.000	59512	15035	915	2287	16		M
391.8127	31.847	31.820	2	1.001	53216	12501	971	2427	13	1.12(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.167	32.140	2	1.014	106709	22908	915	2287	25		
391.8127	32.167	32.140	2	1.014	86394	18473	971	2427	19	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.584	30.882	-78	0.930	785684	97691	915	2287	107		
391.8127	29.571	30.882	-79	0.929	632107	74781	971	2427	77	1.24(1.05-1.43)	
389.8157	30.609	30.882	-16	0.962	24985	4968	915	2287	5		
391.8127	30.596	30.882	-17	0.962	19938	3932	971	2427	4	1.25(1.05-1.43)	
389.8157	30.982	30.882	6	0.974	271281	52616	915	2287	58		
391.8127	30.982	30.882	6	0.974	200838	37897	971	2427	39	1.35(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.778	33.754	1	1.051	4203397	1312669	6535	16337	201		
419.8220	33.778	33.754	1	1.051	9710895	2945267	12055	30137	244	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7818	33.791	33.766	1	1.000	18868	6293	457	1142	14		M
409.7789	33.778	33.766	1	1.000	23523	7454	174	435	43	0.80(0.88-1.20)	M
	Empc Correction				18142	6050	174	435	35		
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.847	1	1.084	4387946	1132398	6535	16337	173		
419.8220	34.860	34.847	1	1.084	9966888	2662621	12055	30137	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.860	1	1.000	6049	1695	457	1142	4		
409.7789	34.872	34.860	1	1.000	6442	1690	174	435	10	0.94(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						457	1142			
409.7789	34.319						174	435			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.556	1	1.075	6221421	1742725	3559	8897	490		
437.8140	34.568	34.556	1	1.075	6176178	1715570	2979	7447	576	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.581	34.568	1	1.000	1679898	470394	3582	8955	131		
425.7737	34.581	34.568	1	1.000	1615902	448312	3258	8145	138	1.04(0.88-1.20)	

Report Date: 18-Aug-2021 09:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.034	34.301	-16	0.985	3086735	920465	3582	8955	257		
425.7737	34.021	34.301	-17	0.984	3074227	901560	3258	8145	277	1.00(0.88-1.20)	
13C-OCDD											
469.7779	36.938	36.914	1	1.149	8711365	2052517	1237	3092	1659		
471.7750	36.938	36.914	1	1.149	10186269	2404293	1984	4960	1212	0.86(0.76-1.02)	
OCDF											RQMa
441.7428	37.022	37.010	1	1.002	10796	2985	83	207	36		M
443.7399	37.034	37.010	1	1.003	17177	5753	169	422	34	0.63(0.76-1.02)	
	Empc Correction				12130	3353	169	422	20		
OCDD											
457.7377	36.938	36.926	1	1.000	32004337	7649047	4187	10467	1827		
459.7348	36.938	36.926	1	1.000	36070529	8732948	5281	13202	1654	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Lims ID:	320-76788-A-16-A		
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Inject. Date:	14-Aug-2021 17:31:36	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	22

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	28554361	6875191

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	28554361	6875191

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.252	54712	12127	89576	18067	0.4935	0.61	RQ
16.252	54712	12127	71054	15749	0.4302		Empc Correction
16.479	85634	19916	113312	28862	0.6805	0.76	
16.721	122477	29538	145739	34578	0.9174	0.84	
16.993	1481369	376736	1882560	473496	11.5	0.79	
17.205	72021	11235	62073	15138	0.4586	1.16	RQ
17.205	47796	11656	62073	15138	0.3758		Empc Correction
17.809	231742	47231	297221	70574	1.81	0.78	
18.066	46173	9812	45989	8927	0.3152	1.00	RQ
18.066	35411	6873	45989	8927	0.2784		Empc Correction
Signal Totals:							
	2059141	504077	2617948	647324			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4730598	1156237				0.79	RQ
	4677089	1151401					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 16.180 = (4730598 * 100.000) / (28554361 * 1.024)

Empc Amount: 15.997 = (4677089 * 100.000) / (28554361 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Lims ID:	320-76788-A-16-A		
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Inject. Date:	14-Aug-2021 17:31:36	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	22

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	16900744	3930510

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	16900744	3930510

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.162	20624	5594	21020	4620	0.1965	0.98	RQ
16.162	16185	3557	21020	4620	0.1755		Empc Correction
16.388	19842	5620	16542	4741	0.1717	1.20	RQ
16.388	12737	3650	16542	4741	0.1381		Empc Correction
16.948	74953	19803	109495	24652	0.8702	0.68	
17.840	51853	7640	73211	12818	0.5900	0.71	
18.444	51763	12035	67919	15067	0.5647	0.76	
Signal Totals:							
	207491	46685	288187	61898			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	507222	112590				0.76	RQ
	495678	108583					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.393 = (507222 * 100.000) / (16900744 * 1.254)

Empc Amount: 2.339 = (495678 * 100.000) / (16900744 * 1.254)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Lims ID:	320-76788-A-16-A		
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Inject. Date:	14-Aug-2021 17:31:36	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	22

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	20456212	3478921
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	21954749	3311838

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	21205480	3395379

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.071	27242	4897	17277	3361	0.2019	1.58	
22.940	15351	3653	13481	2019	0.1308	1.14	RQ
22.940	15351	3653	9903	2356	0.1145		Empc Correction
24.071	13922	1785	9489	2000	0.1062	1.47	
Signal Totals:							
	56515	10335	36669	7717			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	96762	17715				1.40	RQ
	93184	18052					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.4389 = (96762 * 100.000) / (21205480 * 1.040)

Empc Amount: 0.4226 = (93184 * 100.000) / (21205480 * 1.040)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Lims ID:	320-76788-A-16-A		
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Inject. Date:	14-Aug-2021 17:31:36	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	22

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	14062924	2011915

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	14062924	2011915

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.262	46138	9022	33750	7309	0.5418	1.37	
21.999	133292	24827	95154	18020	1.55	1.40	M
23.294	23980	5070	12365	2194	0.2465	1.94	RQ
23.294	19165	3400	12365	2194	0.2138		Empc Correction
23.526	56968	6800	40494	5373	0.6610	1.41	
Signal Totals:							
	255563	44049	181763	32896			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	442141	78615				1.43	RQM
	437326	76945					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.999 = (442141 * 100.000) / (14062924 * 1.048)

Empc Amount: 2.966 = (437326 * 100.000) / (14062924 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Lims ID:	320-76788-A-16-A		
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Inject. Date:	14-Aug-2021 17:31:36	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	22

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	18224130	3333432
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	17613093	3086110
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	16584520	3774679
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	15314570	3645857

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	16934078	3460019

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.346	7629	1250	5305	1090	0.0672	1.44	RQ
28.346	6578	1351	5305	1090	0.0618		Empc Correction

Compound is Marked ND

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d
Lims ID: 320-76788-A-16-A
Client ID: 11215702-072321-BN-SJSB105 (6-8)
Inject. Date: 14-Aug-2021 17:31:36 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 22

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	13248236	3540202
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	16322929	3765253
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	14785582	3652727

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.584	785684	97691	632107	74781	9.00	1.24	
30.609	24985	4968	19938	3932	0.2851	1.25	
30.982	271281	52616	200838	37897	3.00	1.35	
Signal Totals:							
	1081950	155275	852883	116610			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1934833	271885				1.27	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 12.281 = (1934833 * 100.000) / (14785582 * 1.066)

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d
Lims ID: 320-76788-A-16-A
Client ID: 11215702-072321-BN-SJSB105 (6-8)
Inject. Date: 14-Aug-2021 17:31:36 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 22

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	12397599	3458295

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	12397599	3458295

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.034	3086735	920465	3074227	901560	45.4	1.00	
Signal Totals:							
	3086735	920465	3074227	901560			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6160962	1822025				1.00	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 45.412 = (6160962 * 100.000) / (12397599 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.42
Area: 41313
Amount: 0.521228
Amount Units: pg/ul

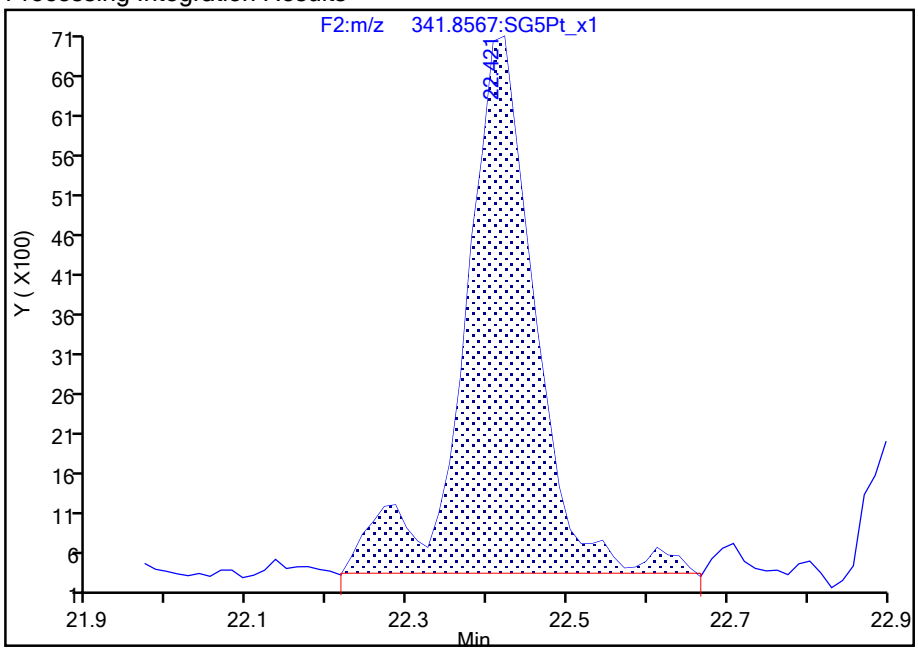

Manual Integration Results

RT: 22.42
Area: 37224
Amount: 0.499456
Amount Units: pg/ul

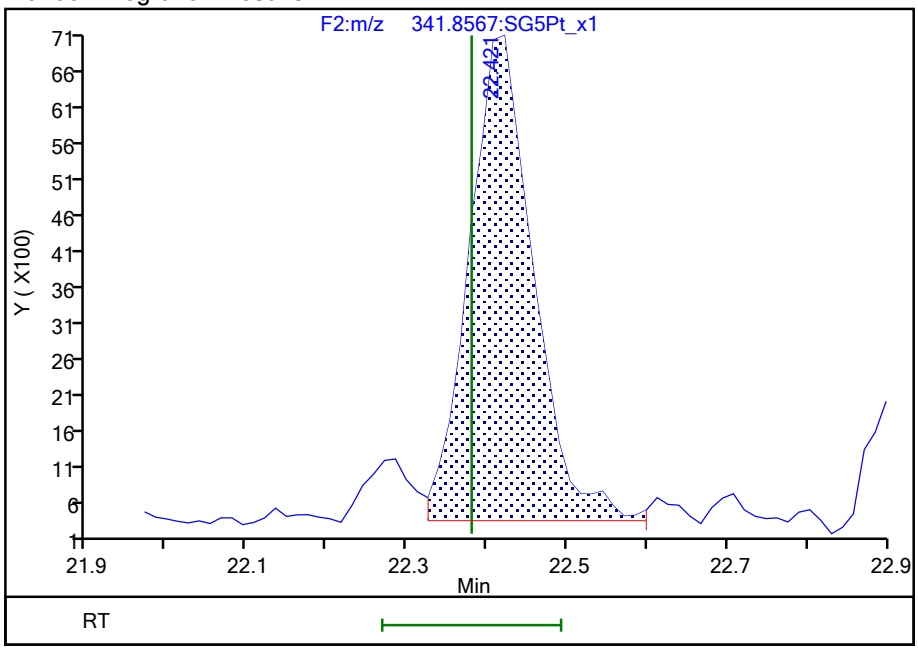

Reviewer: dadunj, 18-Aug-2021 09:50:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.39
Area: 71829
Amount: 0.521228
Amount Units: pg/ul

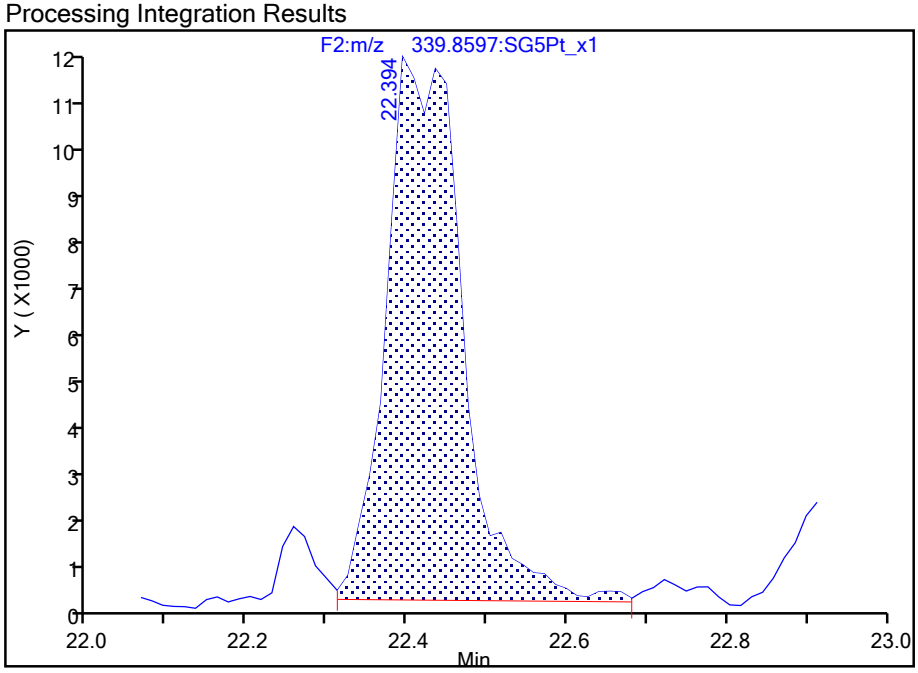

Manual Integration Results

RT: 22.39
Area: 71192
Amount: 0.499456
Amount Units: pg/ul

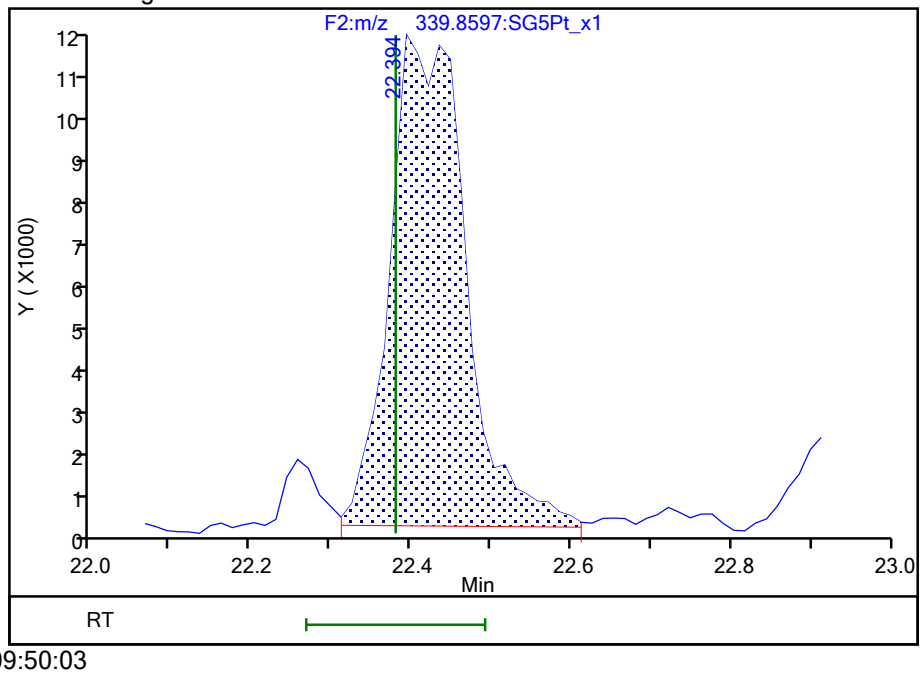

Reviewer: dadunj, 18-Aug-2021 09:50:03
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779896

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.21- 25.49)

Signal: 1

Processing Integration Results

RT = 21.999 Area = 137395

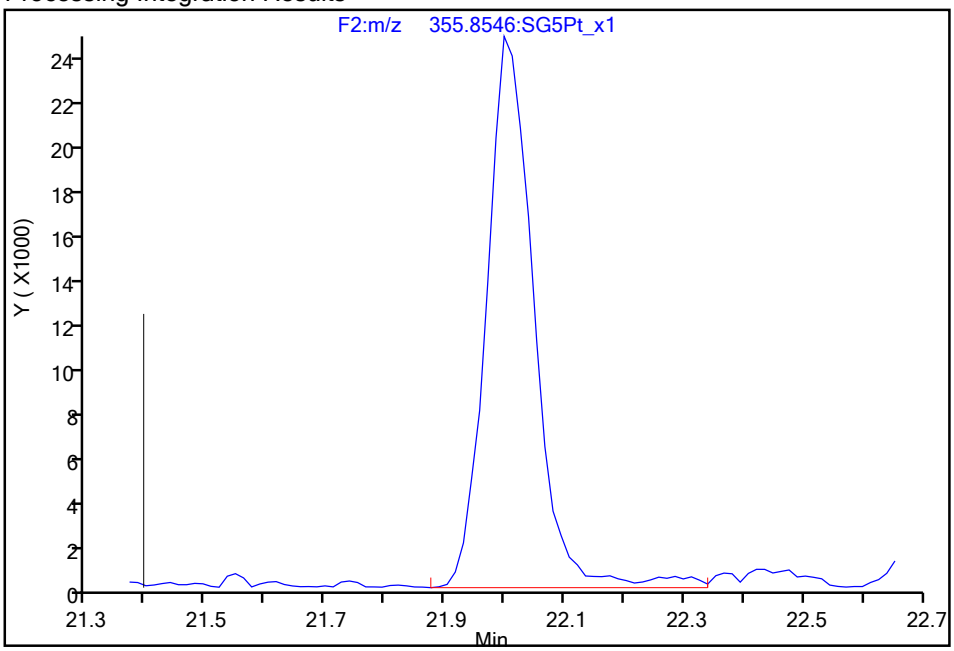

Manual Integration Results

RT = 21.999 Area = 133292 M

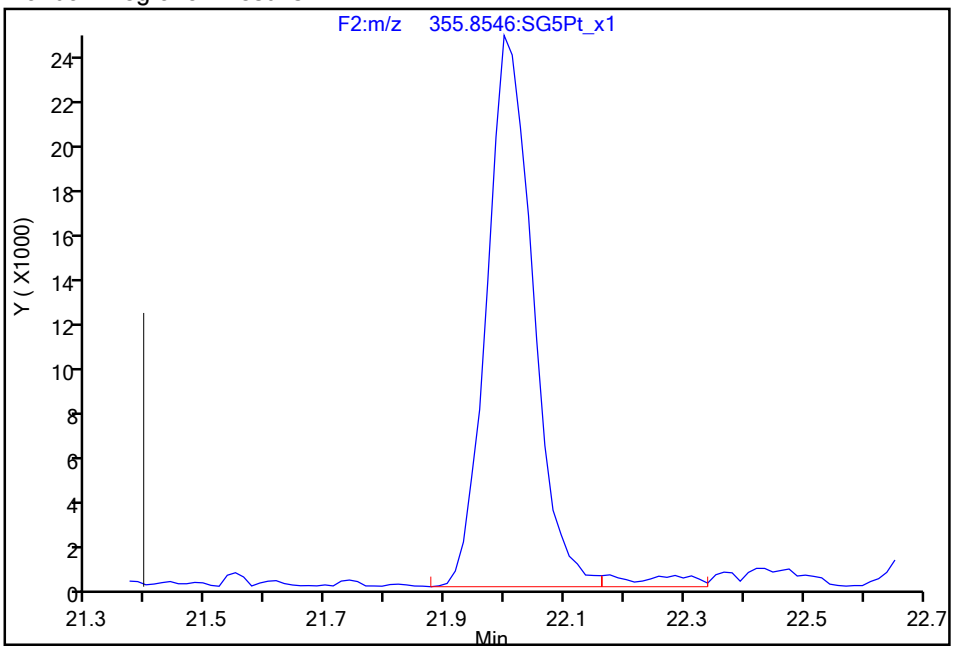

Reviewer: dadunj, 18-Aug-2021 09:50:16

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.72
Area: 22720
Amount: 0.200700
Amount Units: pg/ul

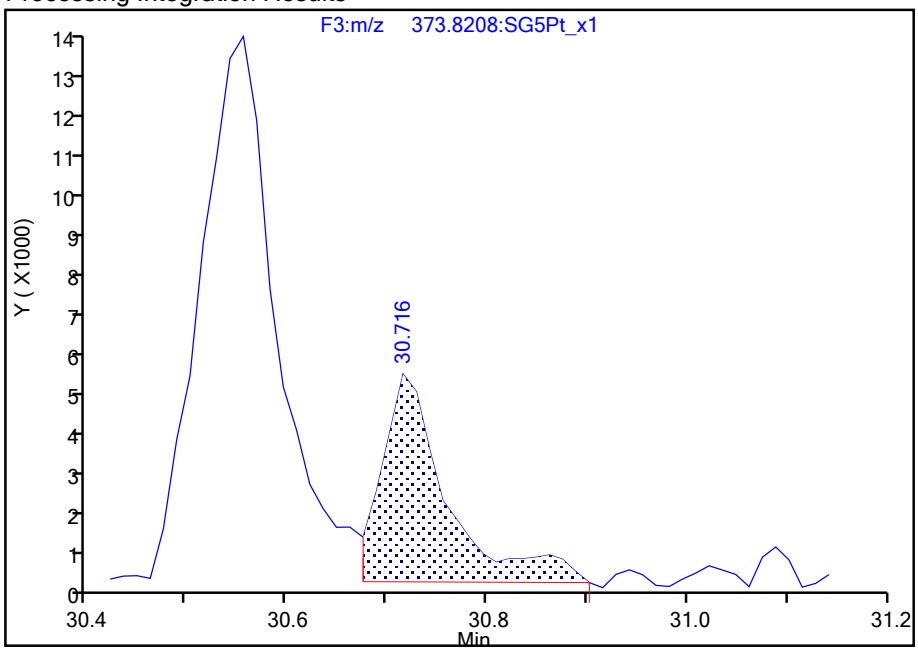

Manual Integration Results

RT: 30.72
Area: 20343
Amount: 0.188715
Amount Units: pg/ul

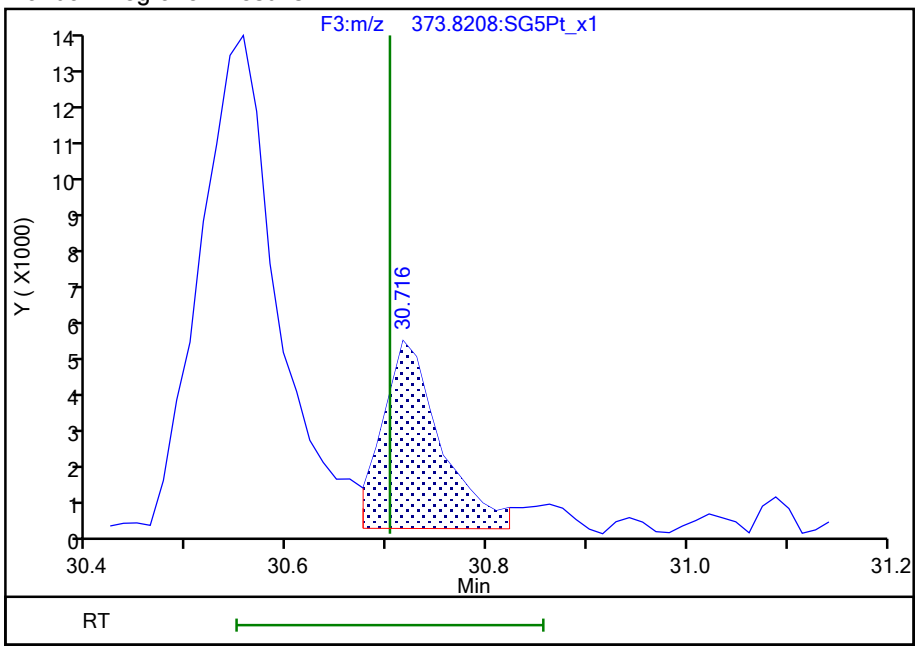

Reviewer: dadunj, 18-Aug-2021 09:50:31

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779898

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.85
Area: 53216
Amount: 0.898182
Amount Units: pg/ul

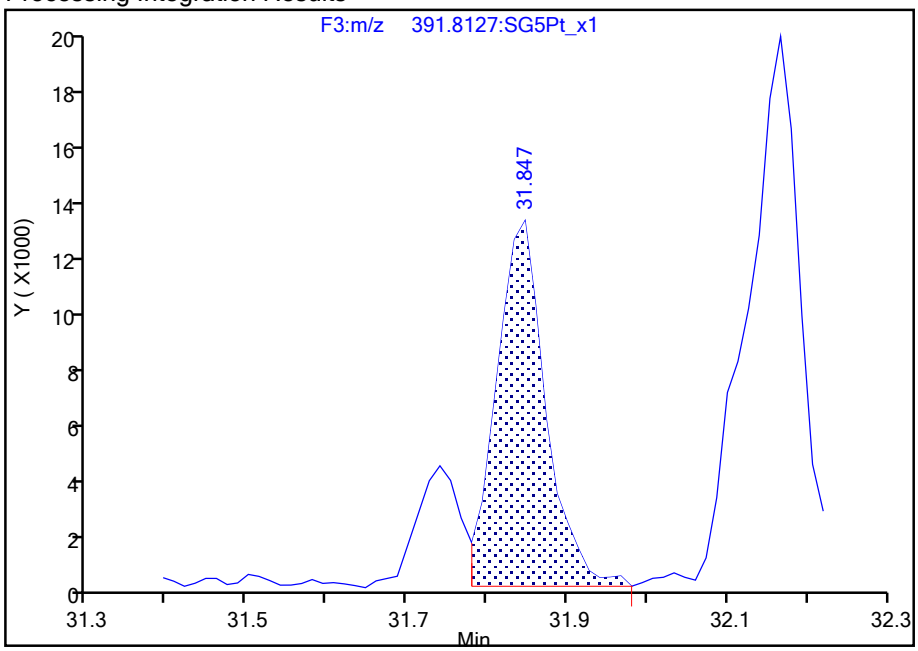

Manual Integration Results

RT: 31.74
Area: 15465
Amount: 0.208483
Amount Units: pg/ul

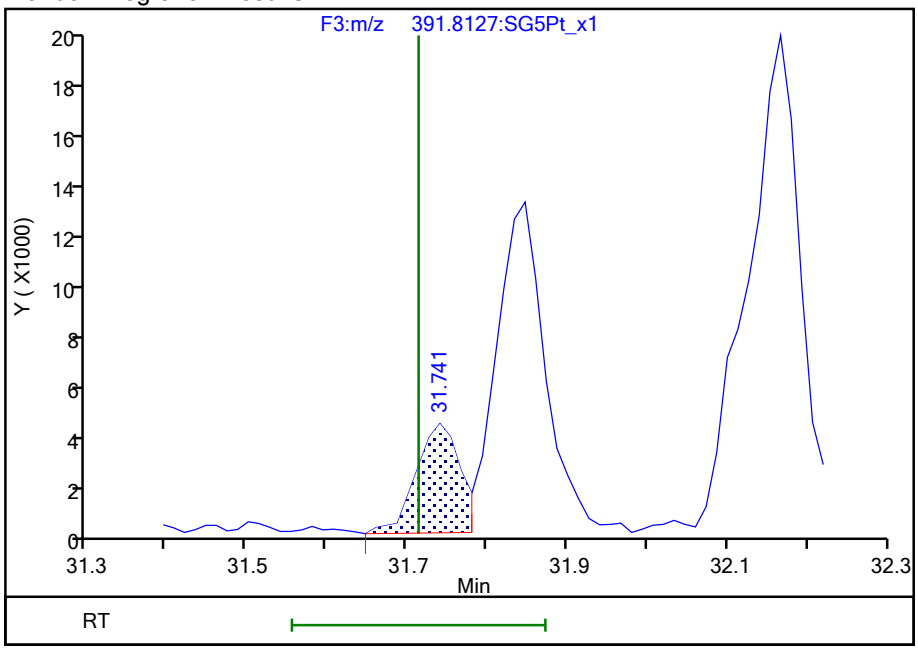

Reviewer: dadunj, 18-Aug-2021 09:50:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

779899

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

RT: 31.83
Area: 126613
Amount: 0.898182
Amount Units: pg/ul

Processing Integration Results

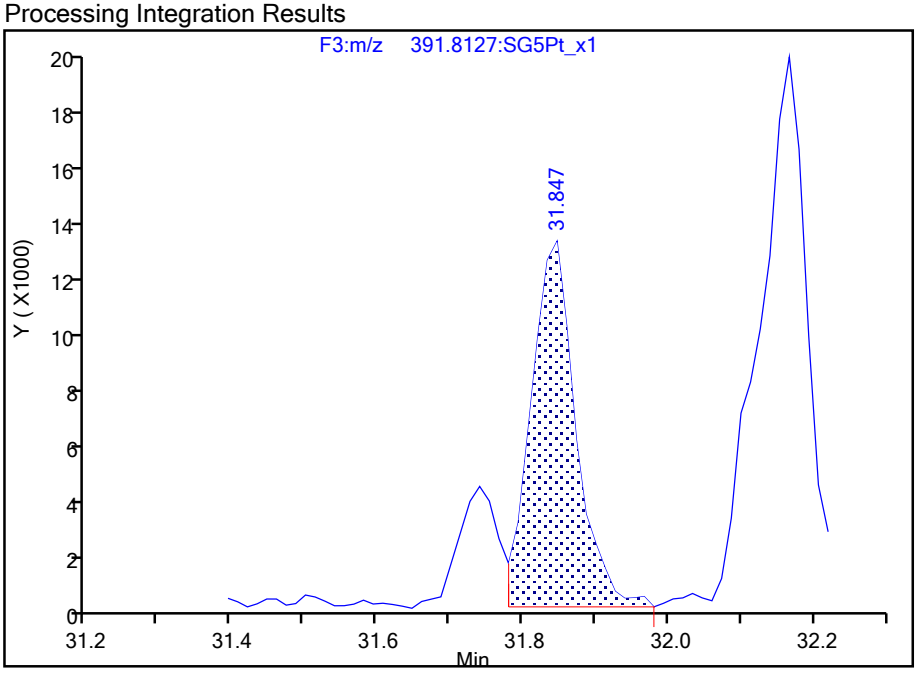

Manual Integration Results

RT: 31.74
Area: 29389
Amount: 0.208483
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 09:50:48
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.83
Area: 73397
Amount: 0.898182
Amount Units: pg/ul

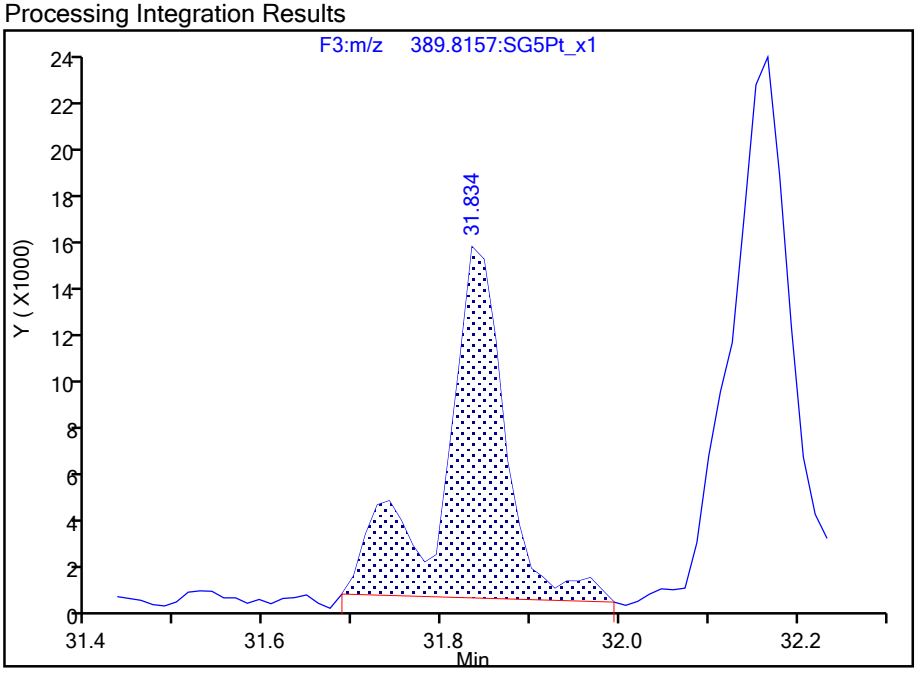

Manual Integration Results

RT: 31.74
Area: 13924
Amount: 0.208483
Amount Units: pg/ul

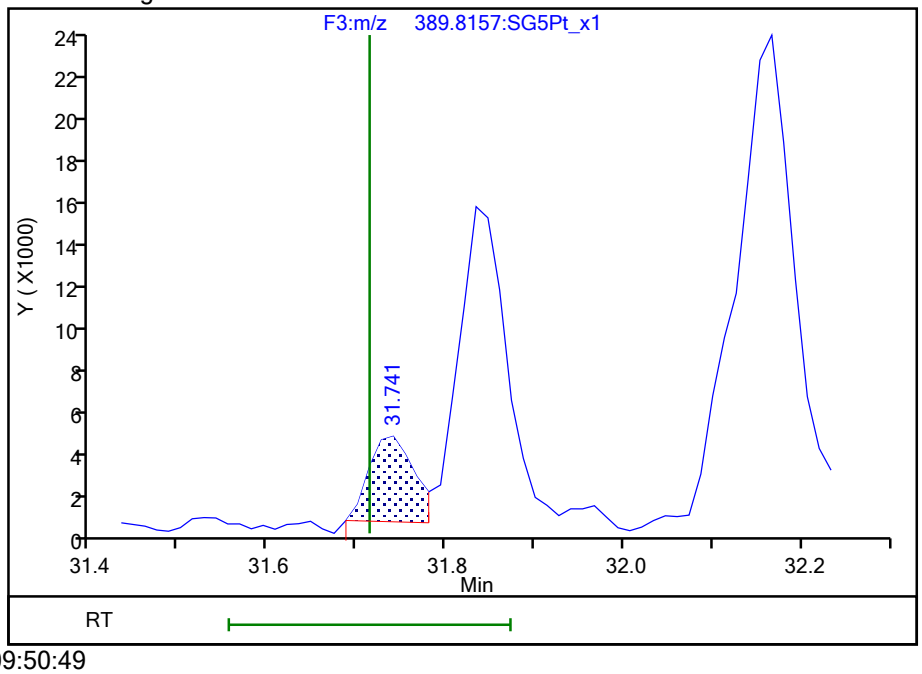

Reviewer: dadunj, 18-Aug-2021 09:50:49

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.83
Area: 73397
Amount: 0.775615
Amount Units: pg/ul

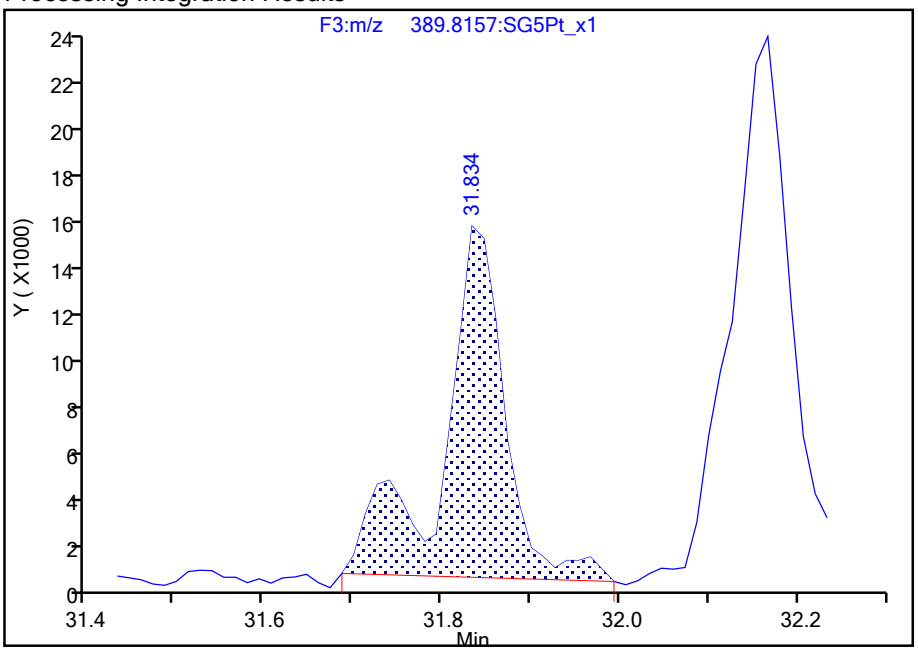

Manual Integration Results

RT: 31.83
Area: 59512
Amount: 0.690557
Amount Units: pg/ul

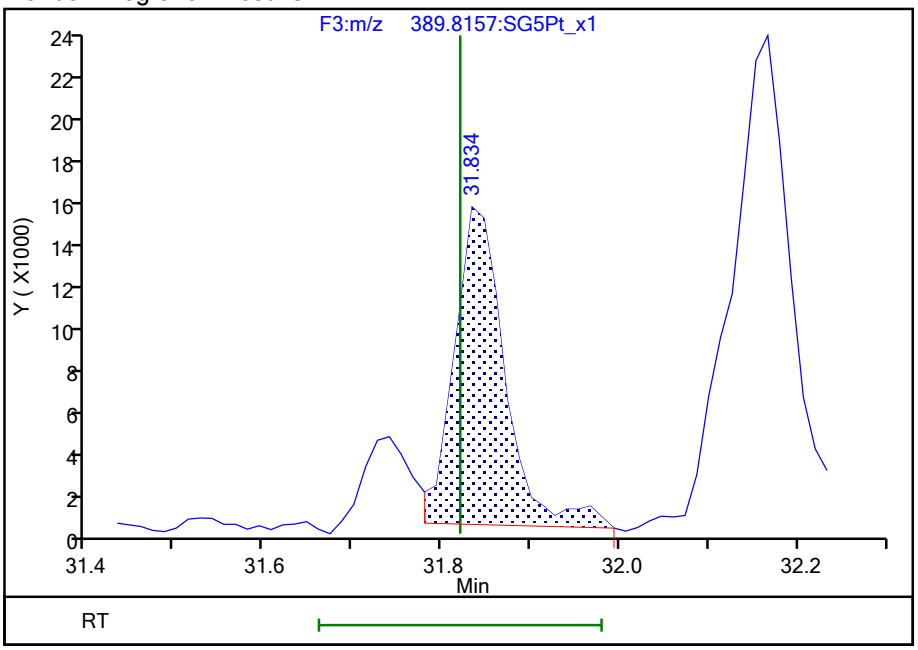

Reviewer: dadunj, 18-Aug-2021 09:50:46

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.79
Area: 18062
Amount: 0.211777
Amount Units: pg/ul

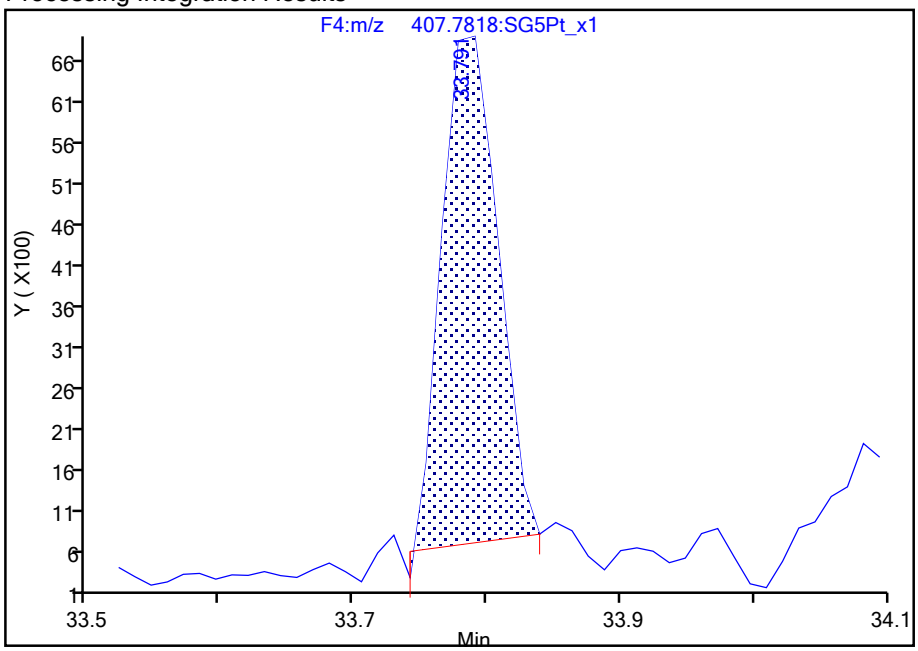

Manual Integration Results

RT: 33.79
Area: 18868
Amount: 0.211378
Amount Units: pg/ul

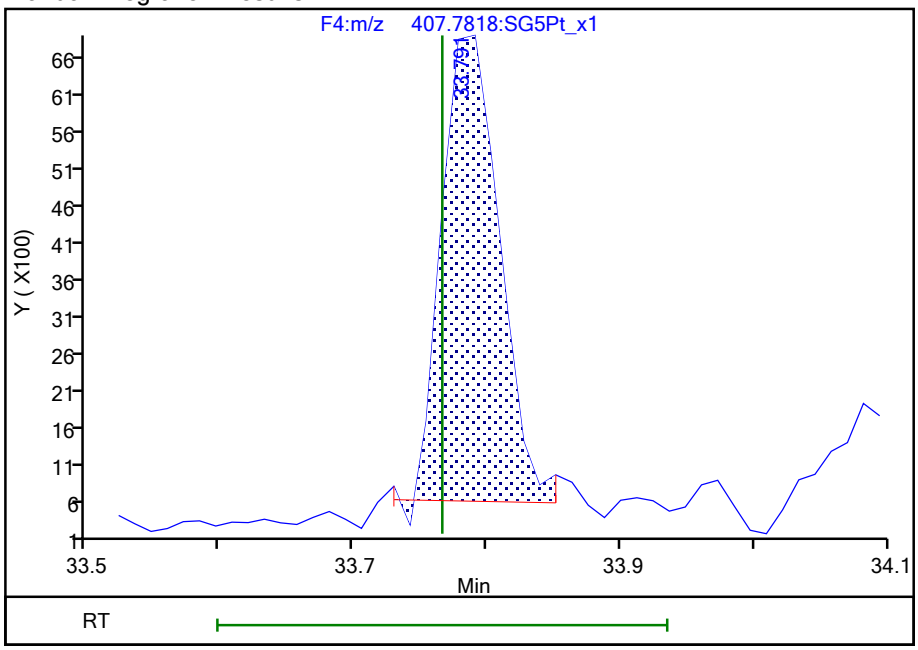

Reviewer: dadunj, 18-Aug-2021 09:51:02

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.78
Area: 24409
Amount: 0.211777
Amount Units: pg/ul

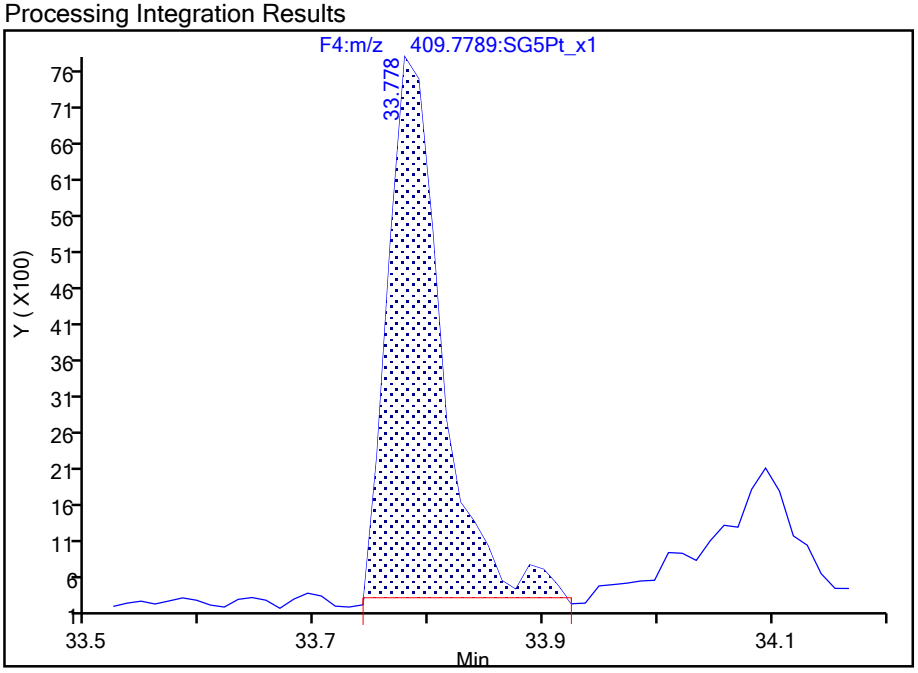

Manual Integration Results

RT: 33.78
Area: 23523
Amount: 0.211378
Amount Units: pg/ul

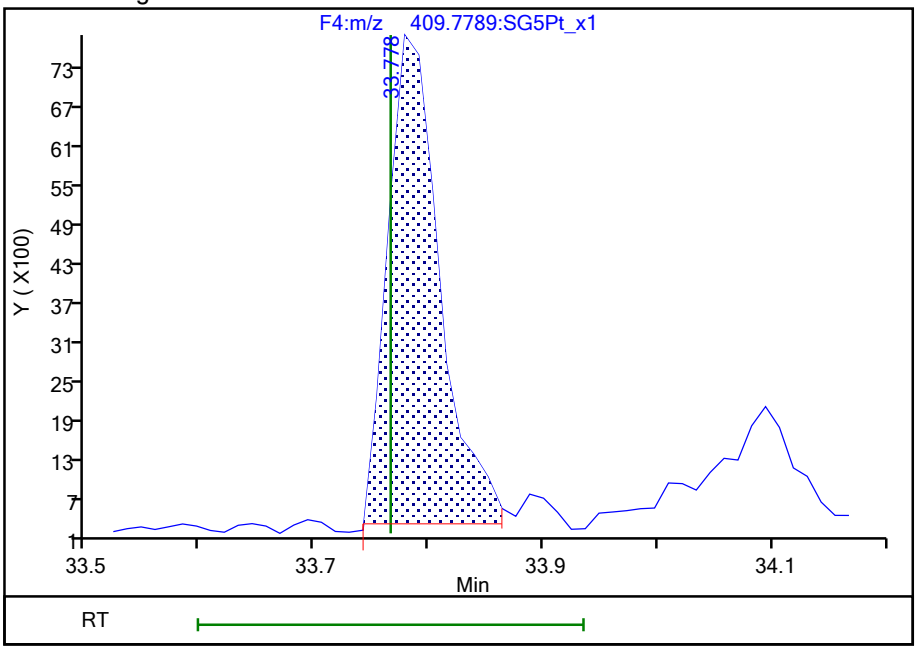

Reviewer: dadunj, 18-Aug-2021 09:51:07

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.95
Area: 11074
Amount: 0.242168
Amount Units: pg/ul

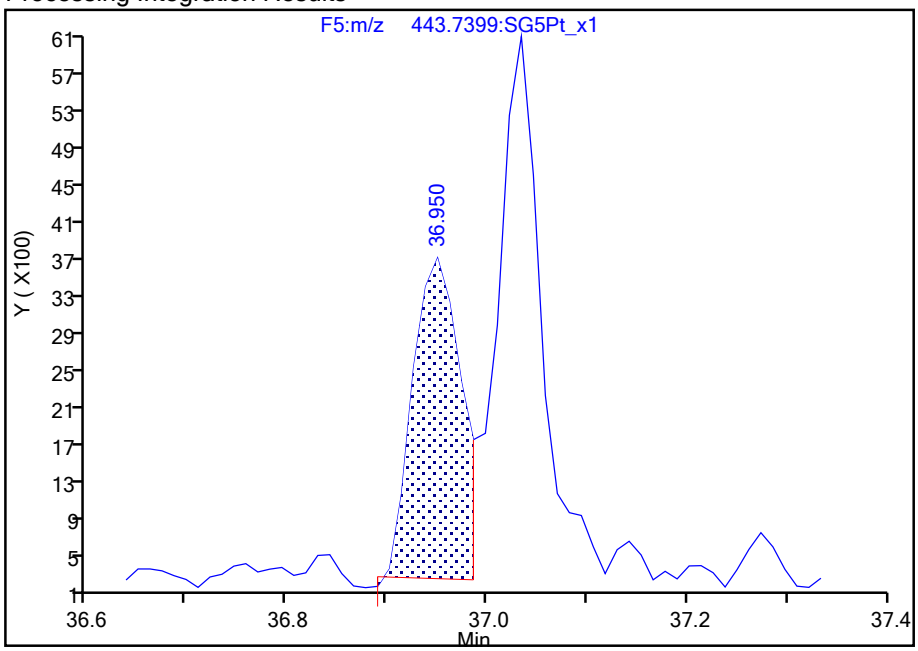

Manual Integration Results

RT: 37.03
Area: 17177
Amount: 0.205851
Amount Units: pg/ul

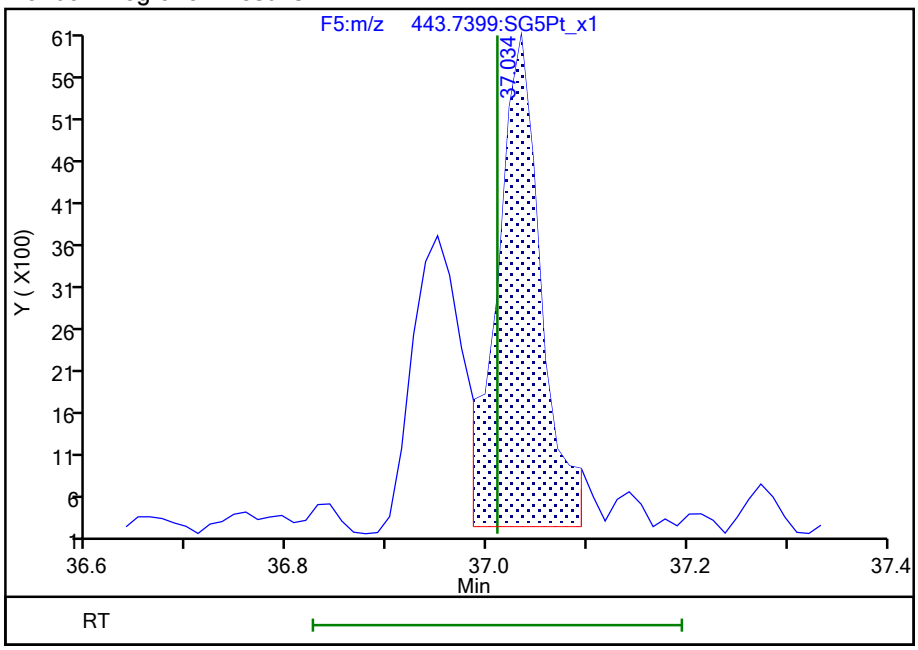

Reviewer: dadunj, 18-Aug-2021 09:51:22

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 3

Processing Integration Results

RT: 36.96
Area: 32908
Amount: 0.242168
Amount Units: pg/ul

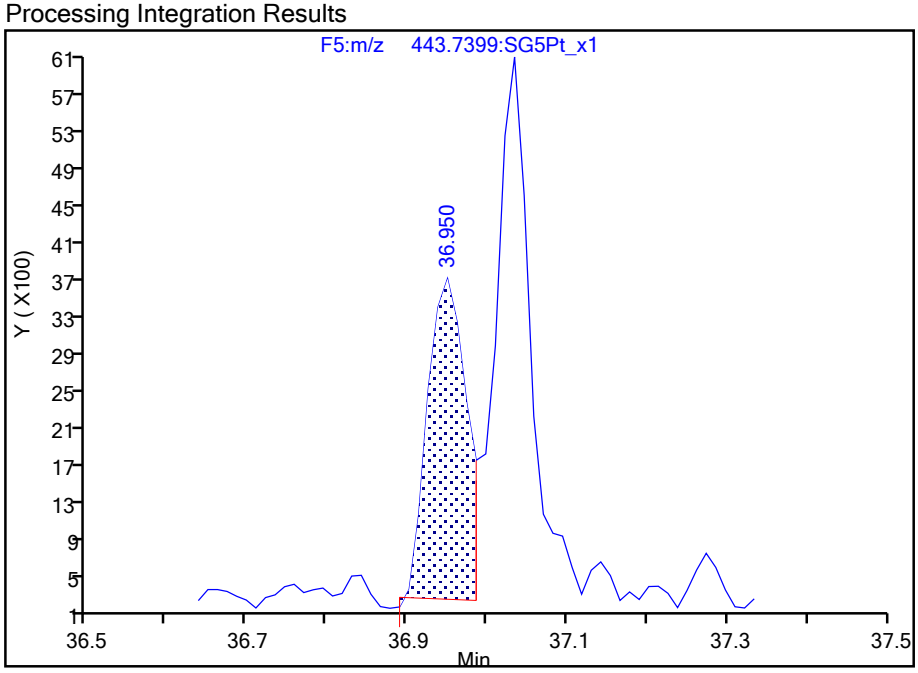

Manual Integration Results

RT: 37.02
Area: 27973
Amount: 0.205851
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 09:51:22
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d				
Injection Date:	14-Aug-2021 17:31:36	Instrument ID:	10D5		
Lims ID:	320-76788-A-16-A	Lab Sample ID:	320-76788-16		
Client ID:	11215702-072321-BN-SJSB105 (6-8)				
Operator ID:	DB	ALS Bottle#:	33	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.96
Area: 21834
Amount: 0.242168
Amount Units: pg/ul

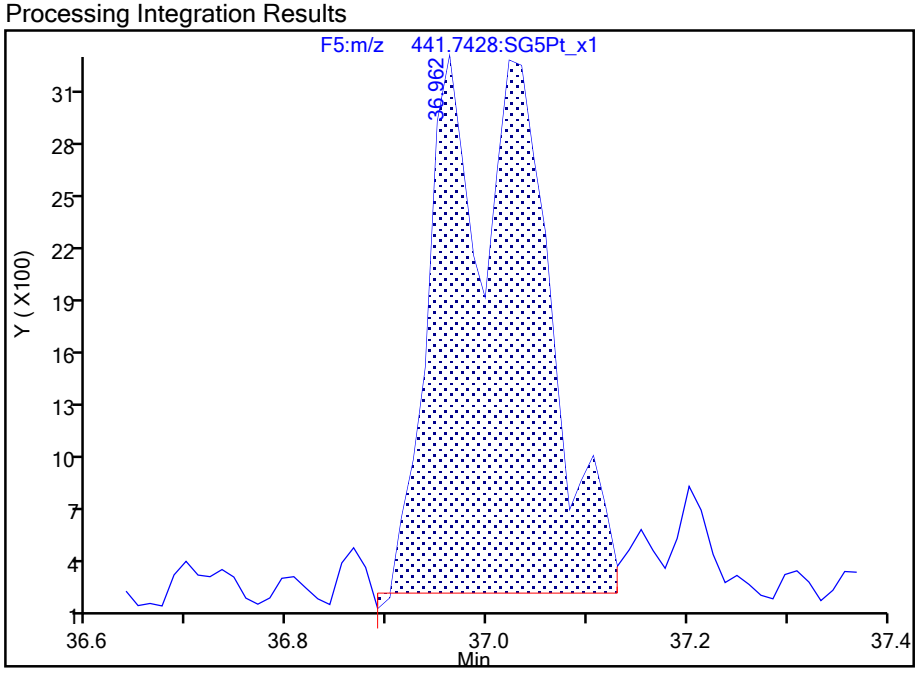

Manual Integration Results

RT: 37.02
Area: 10796
Amount: 0.205851
Amount Units: pg/ul

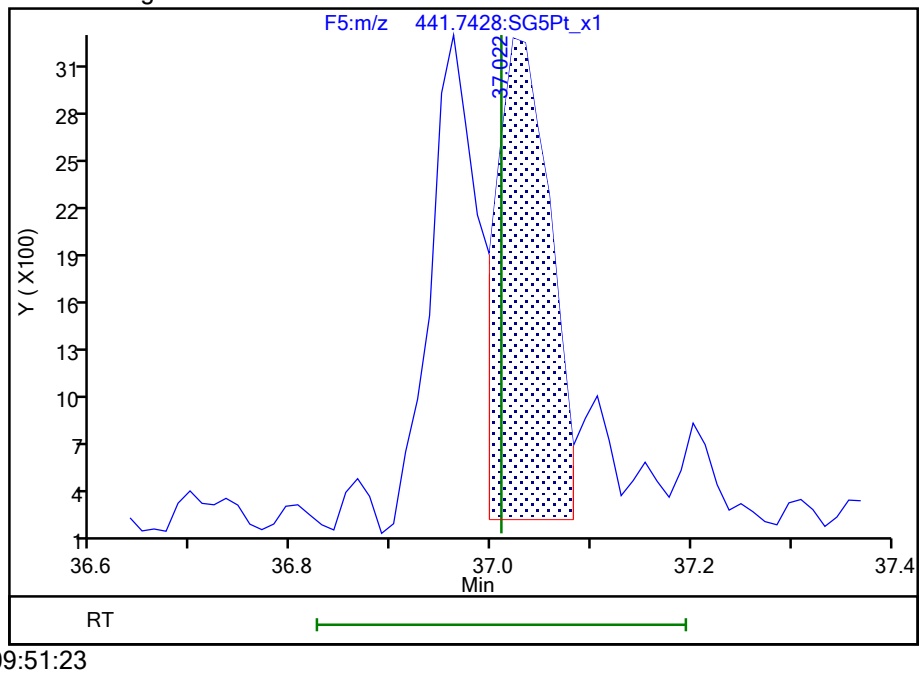

Reviewer: dadunj, 18-Aug-2021 09:51:23

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

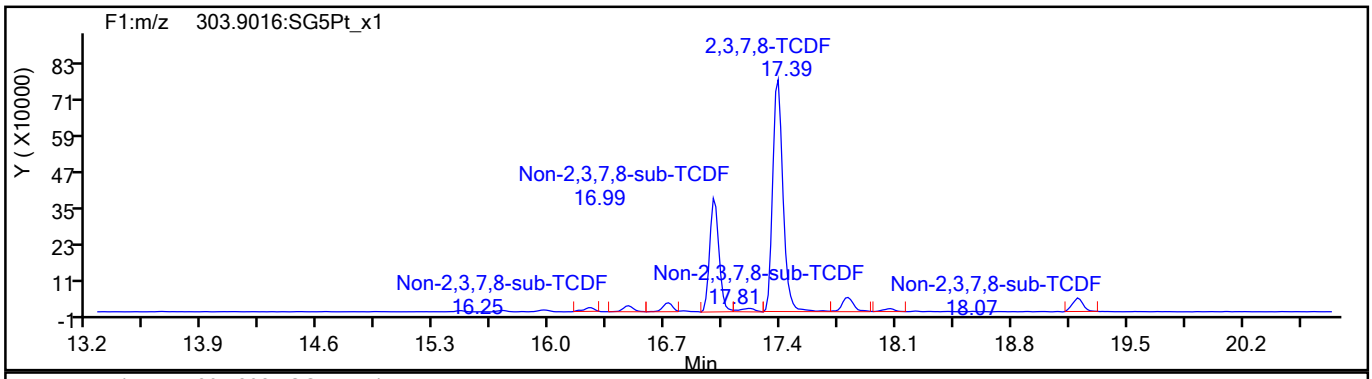

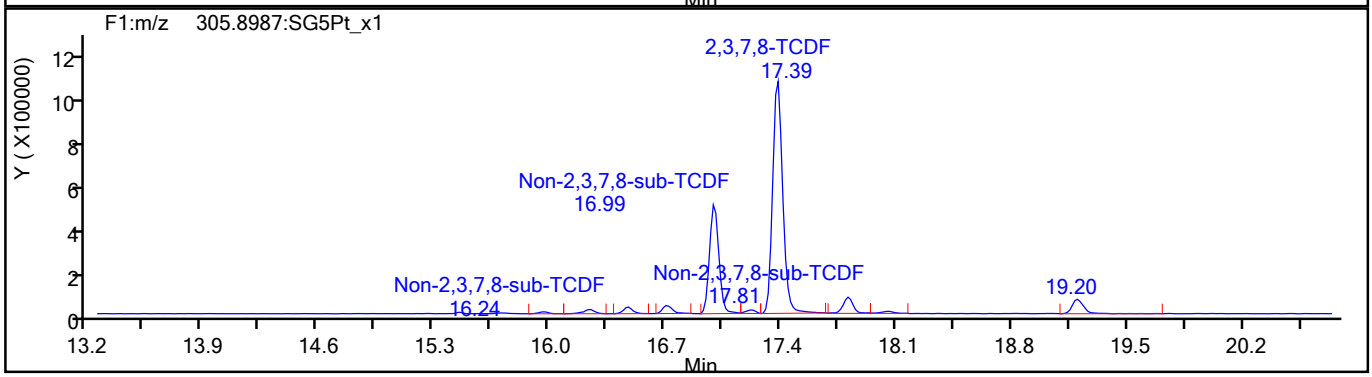

TCDF Standards

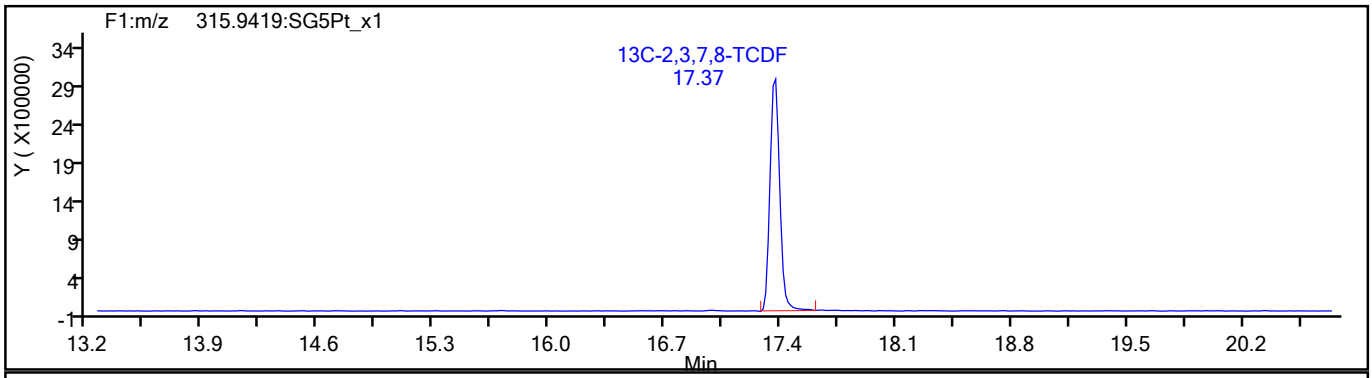

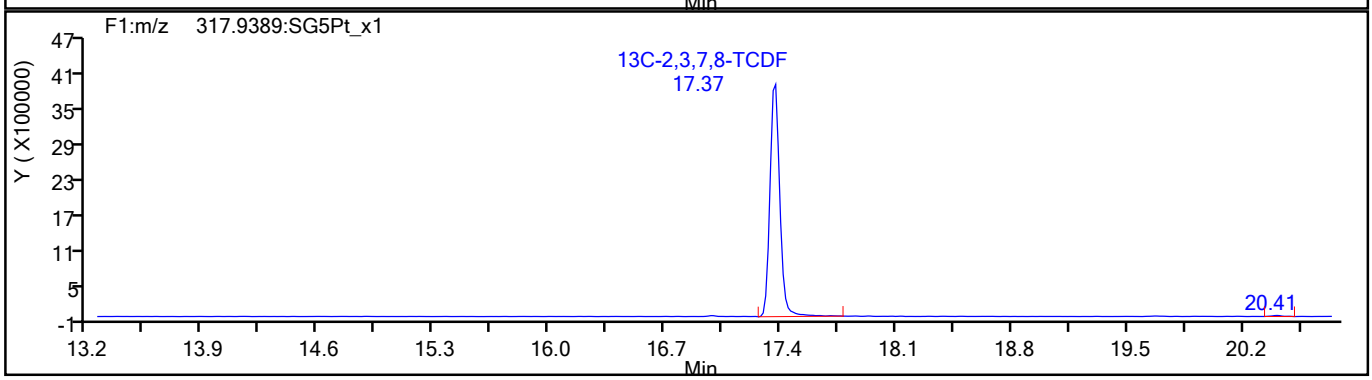

779908

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

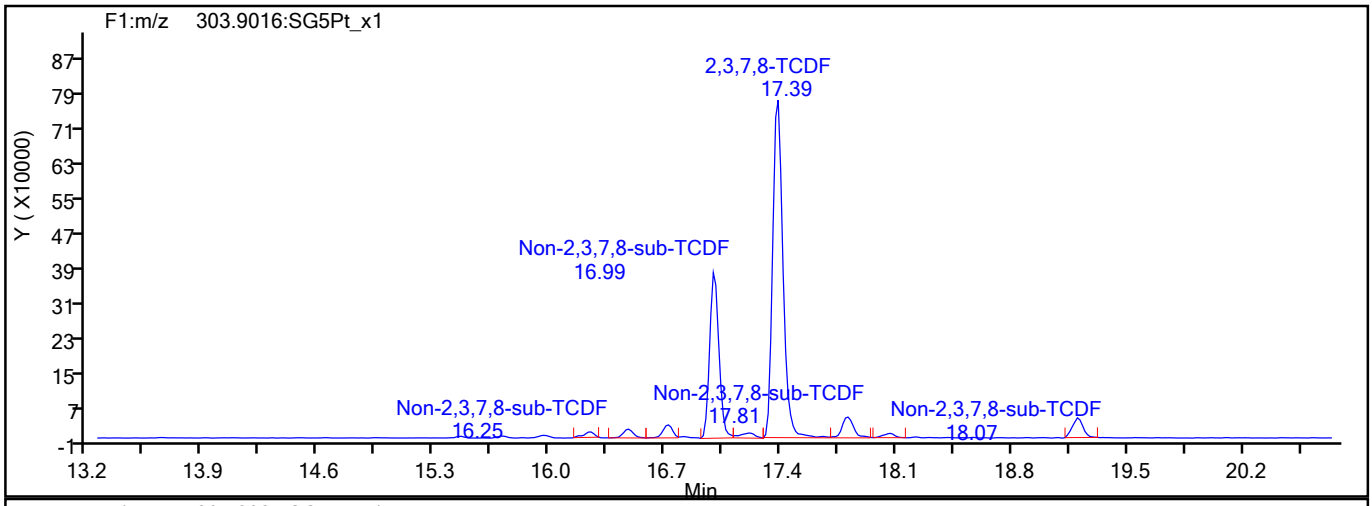

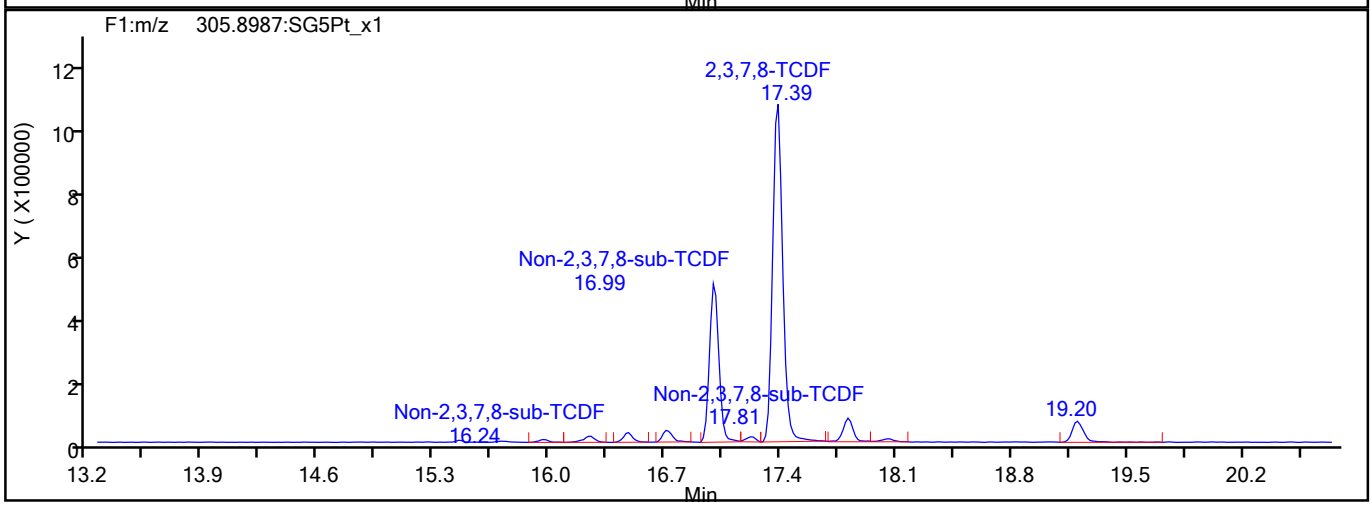

TCDF Interference Mass

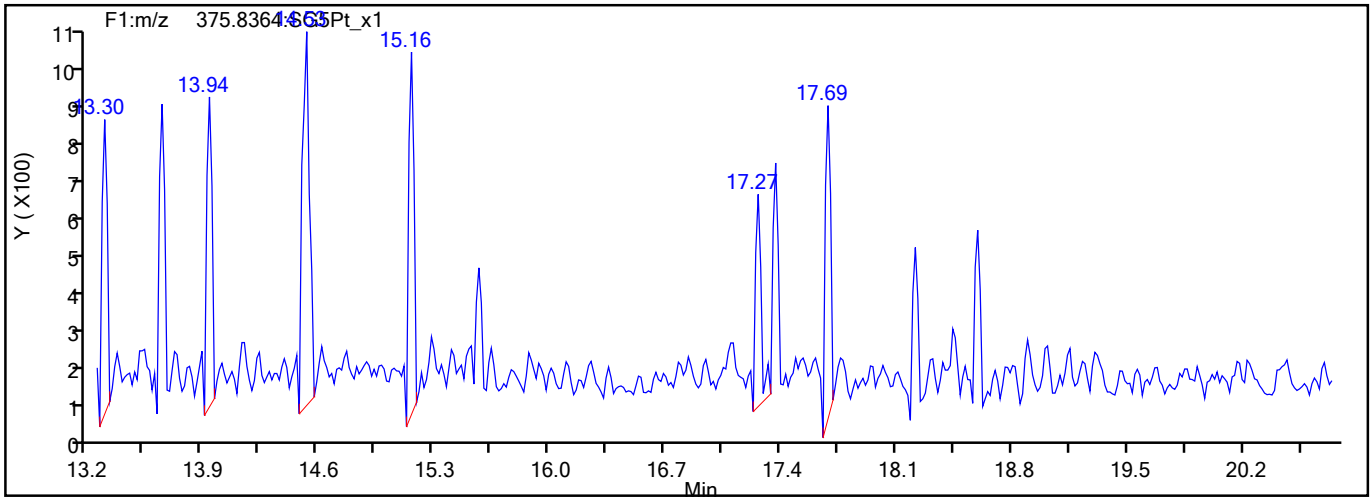

779909

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

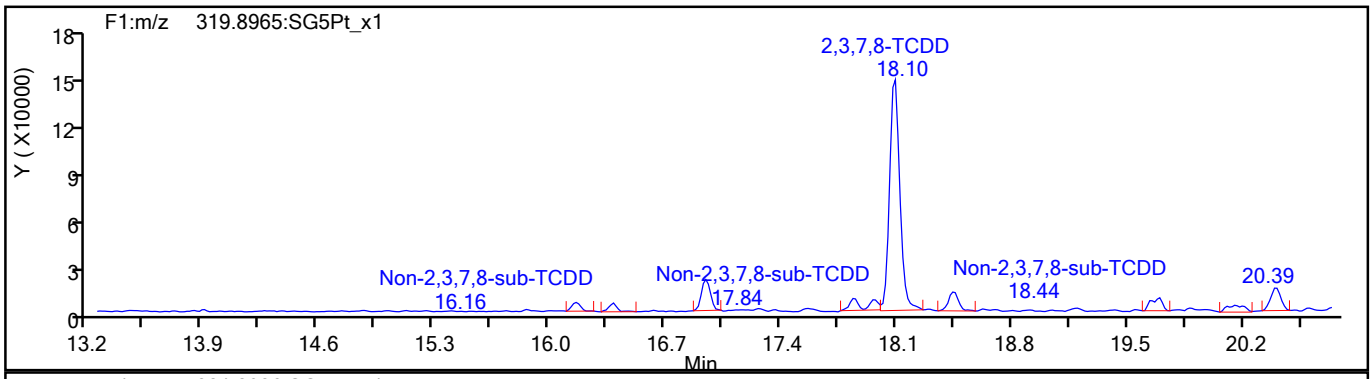

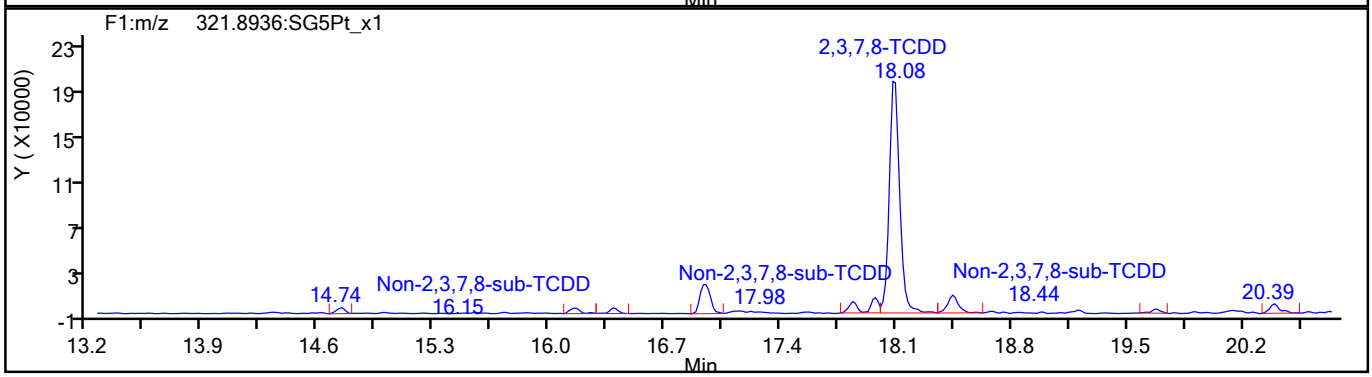

TCDD Standards

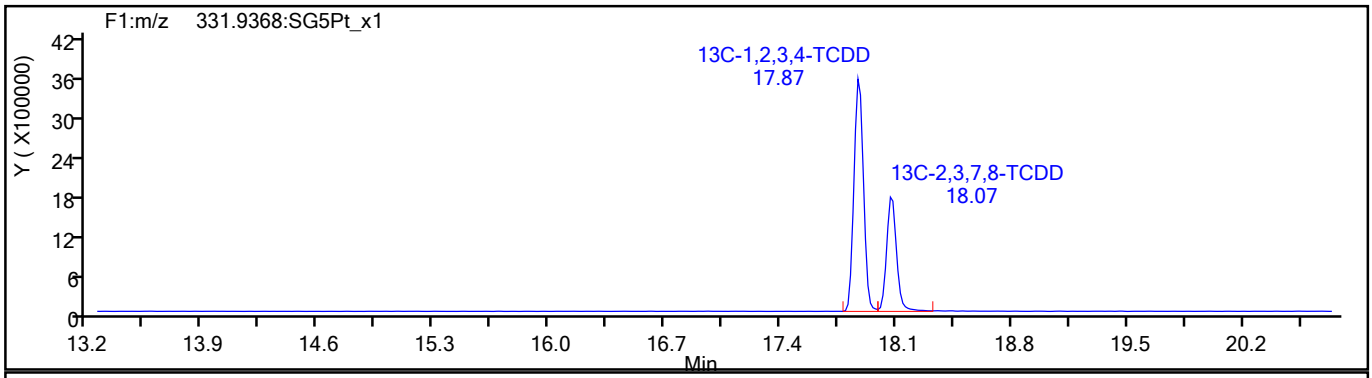

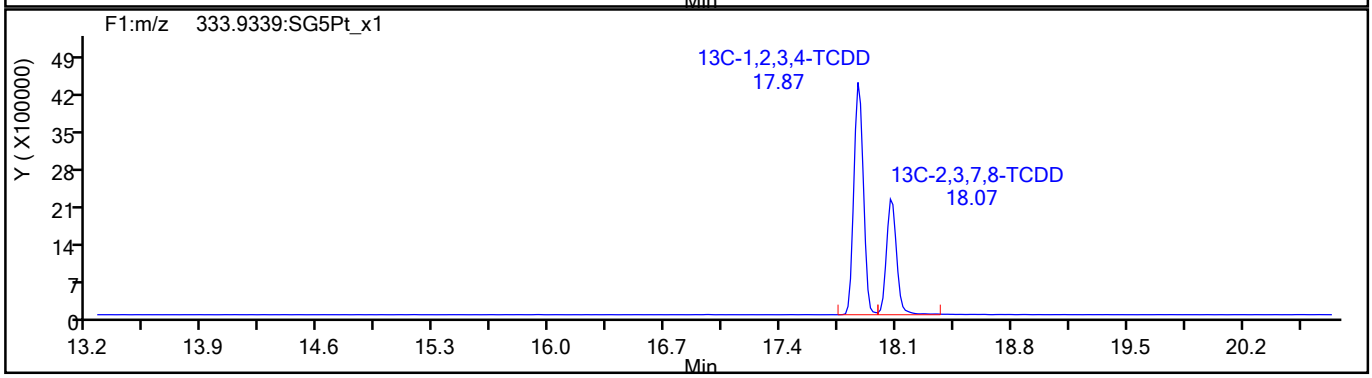

779910

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

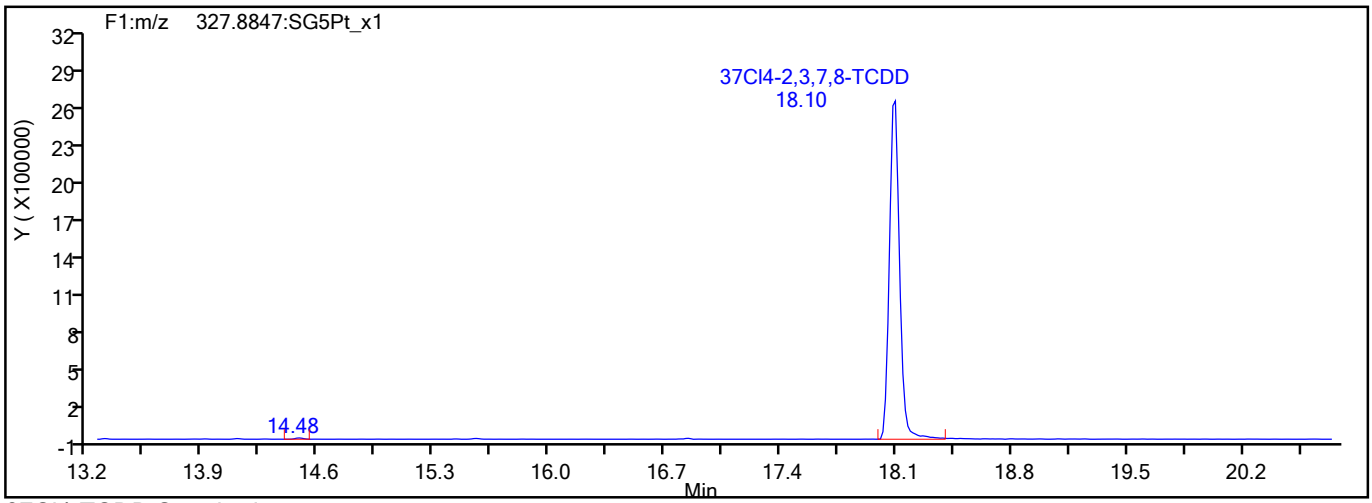

37Cl4-TCDD Standards

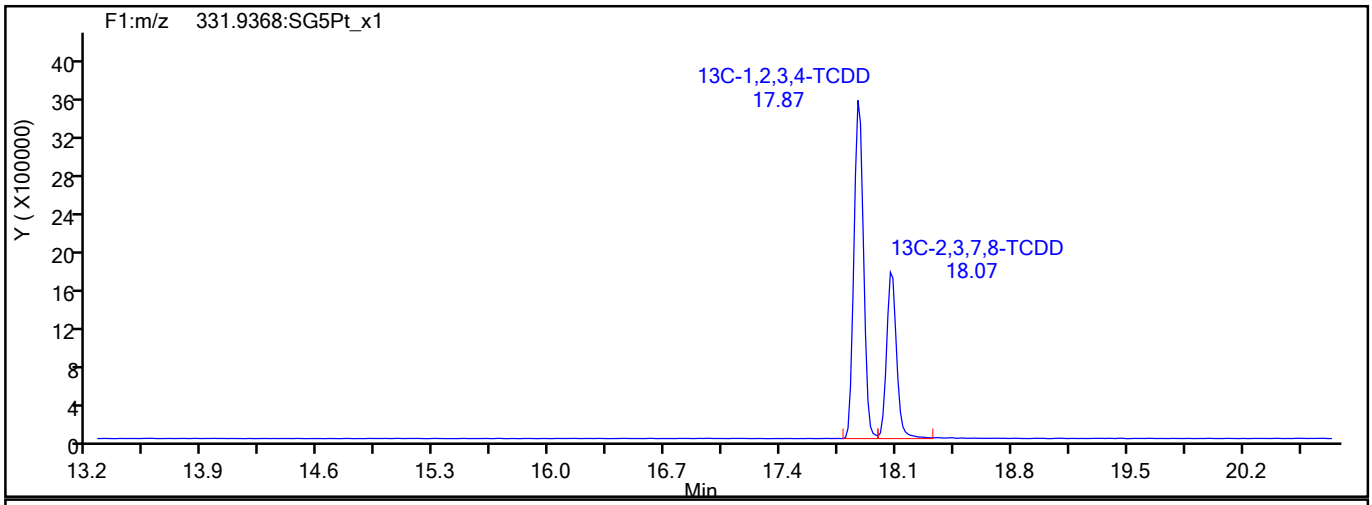

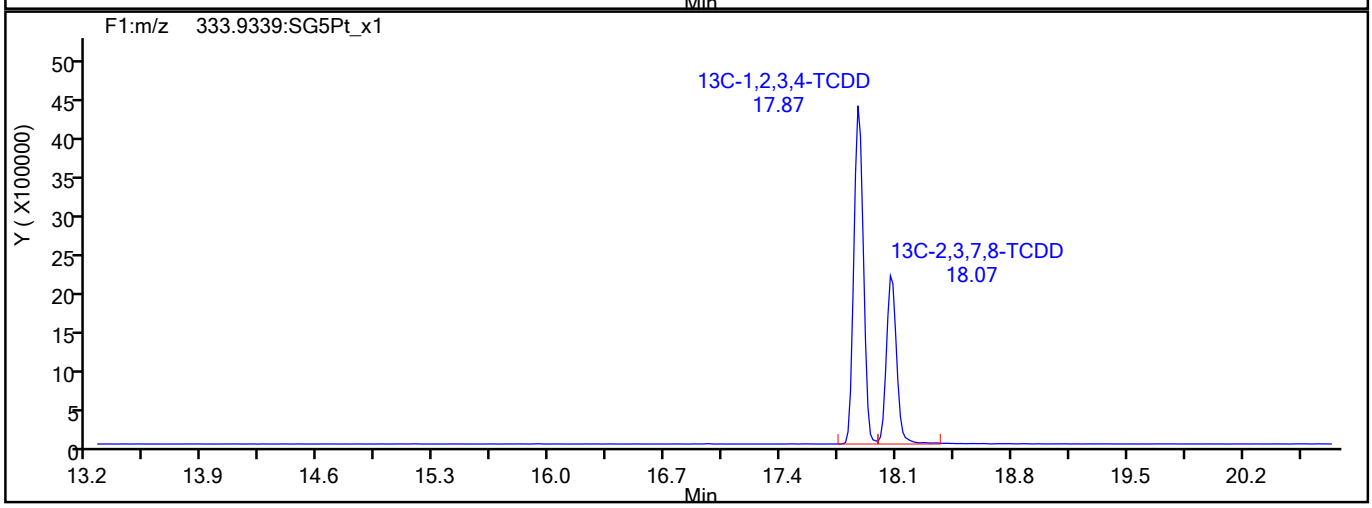

779911

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

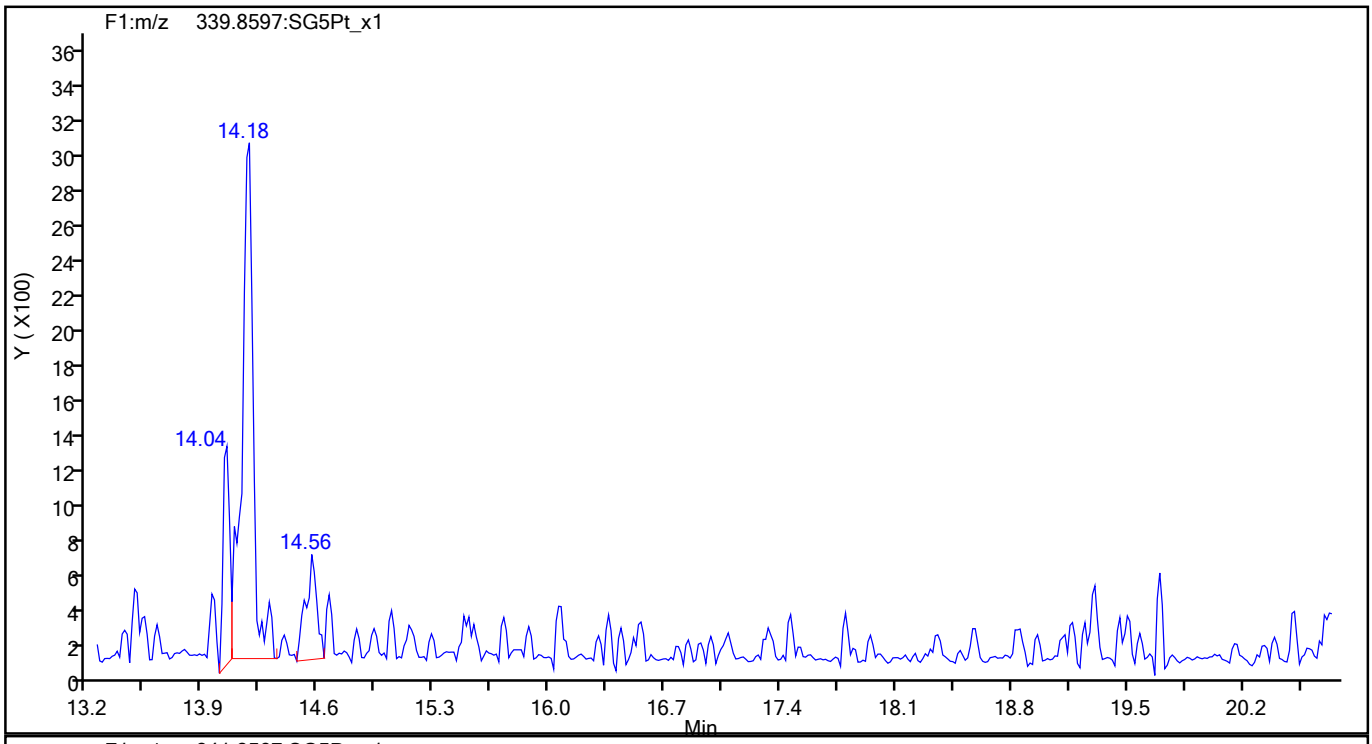

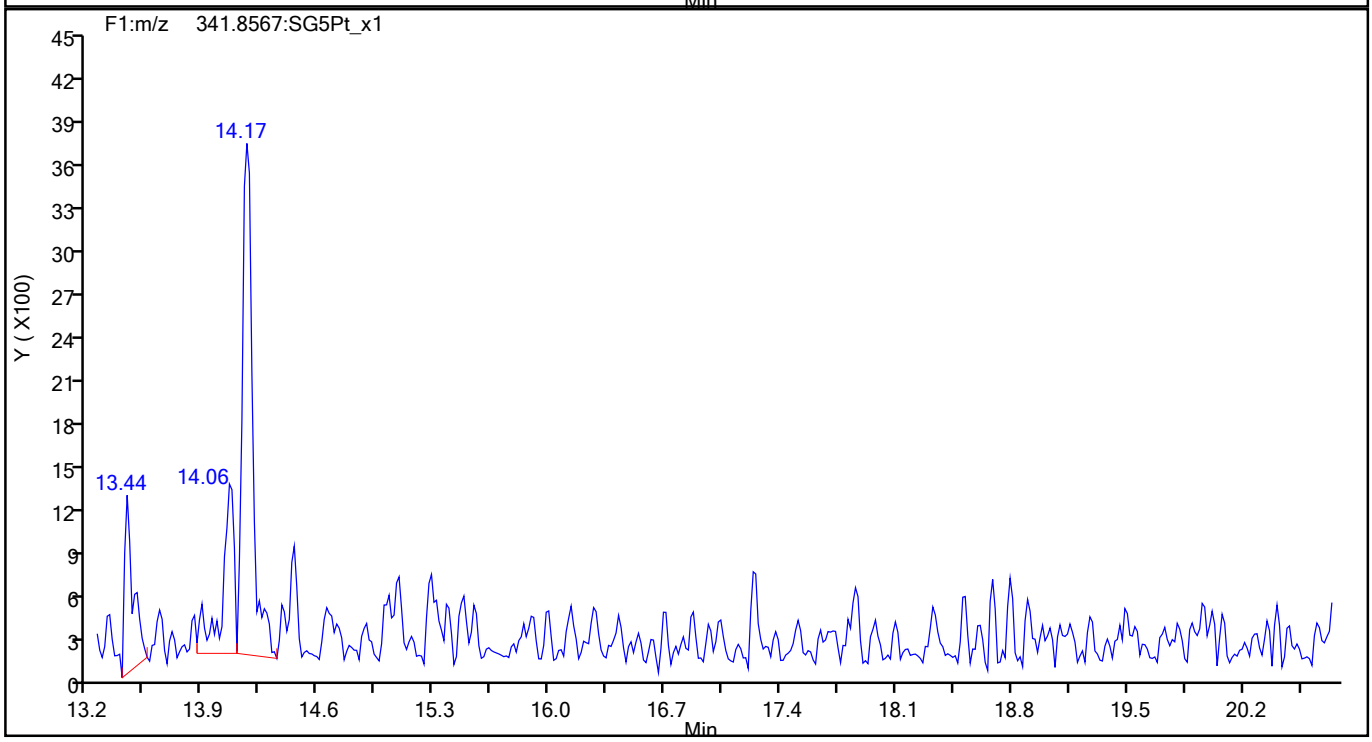

779912

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

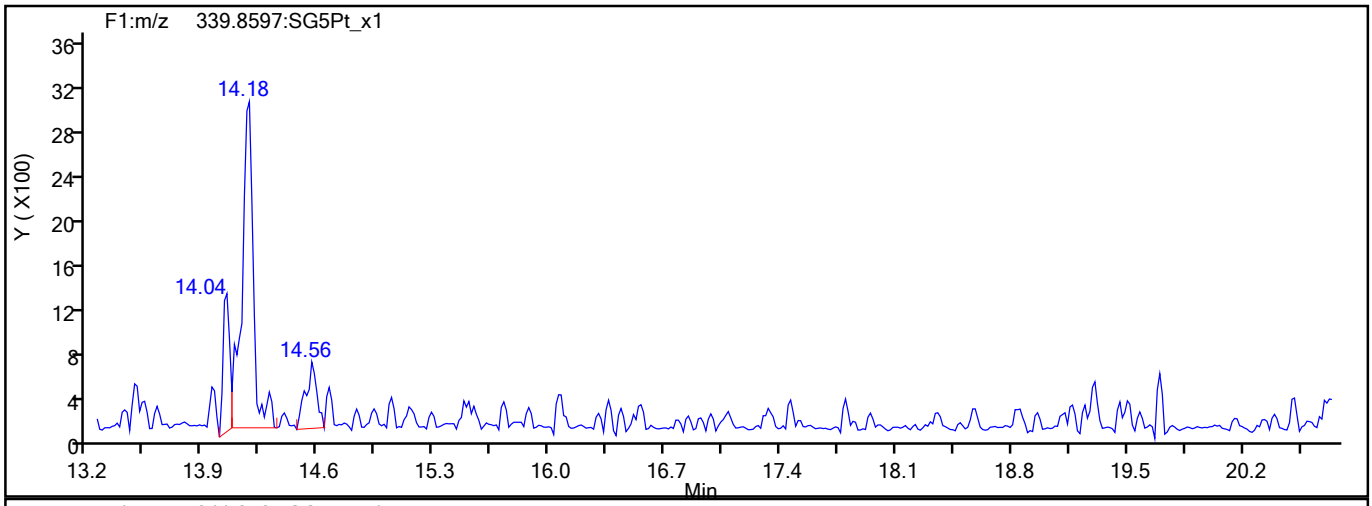

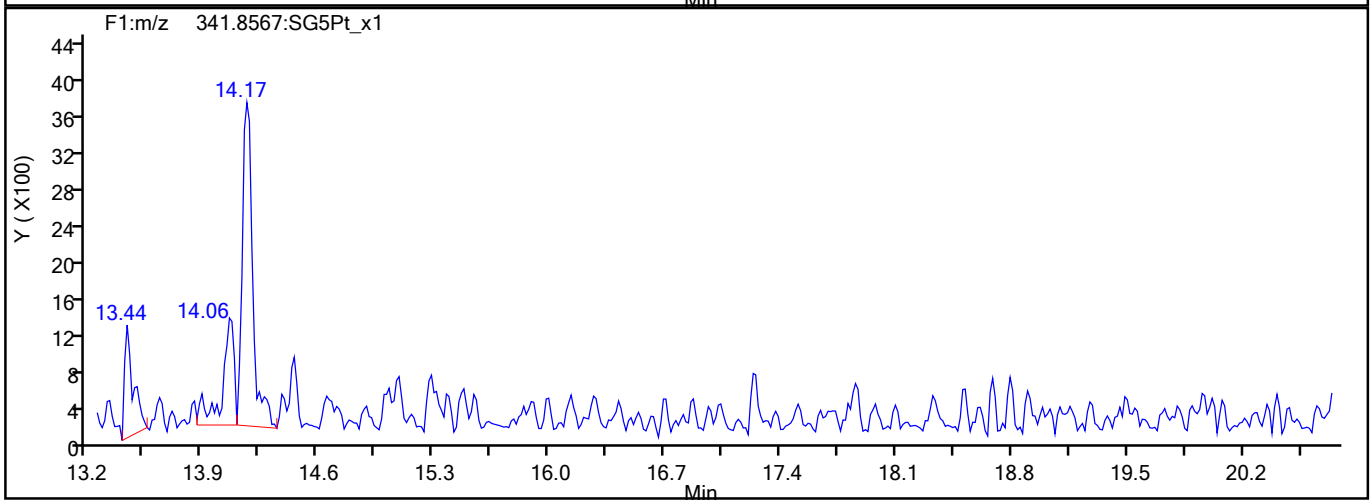

F1 PeCDFs Interference Mass

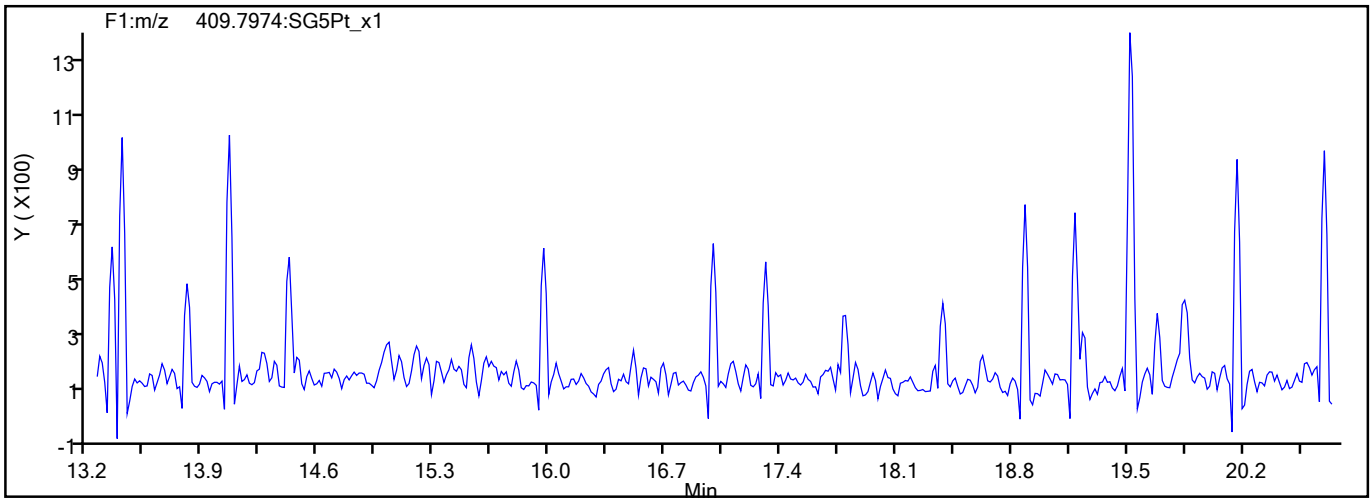

779913

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

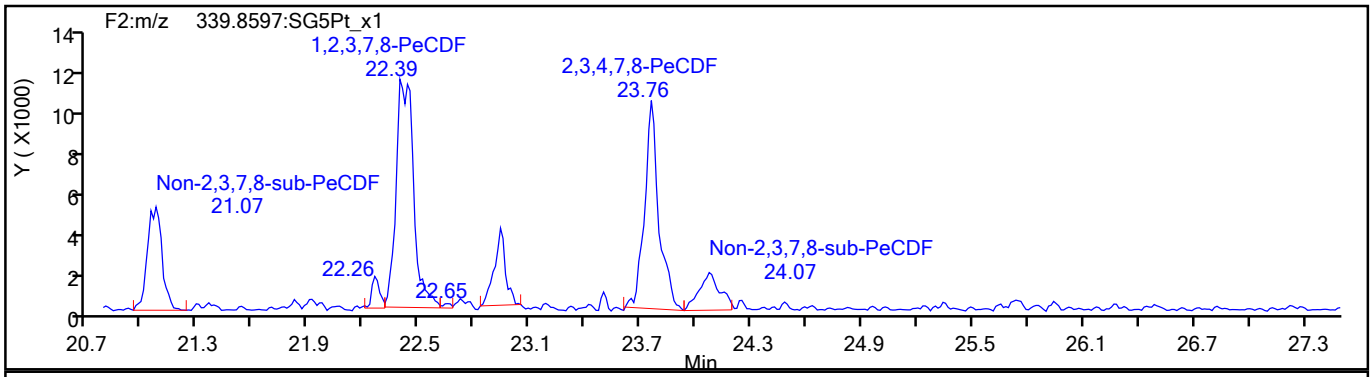

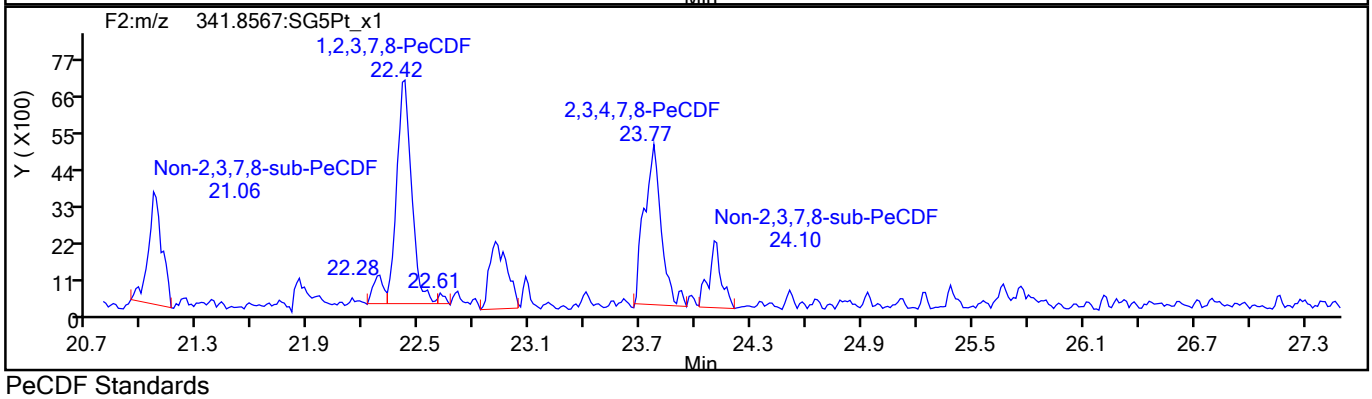

PeCDF Standards

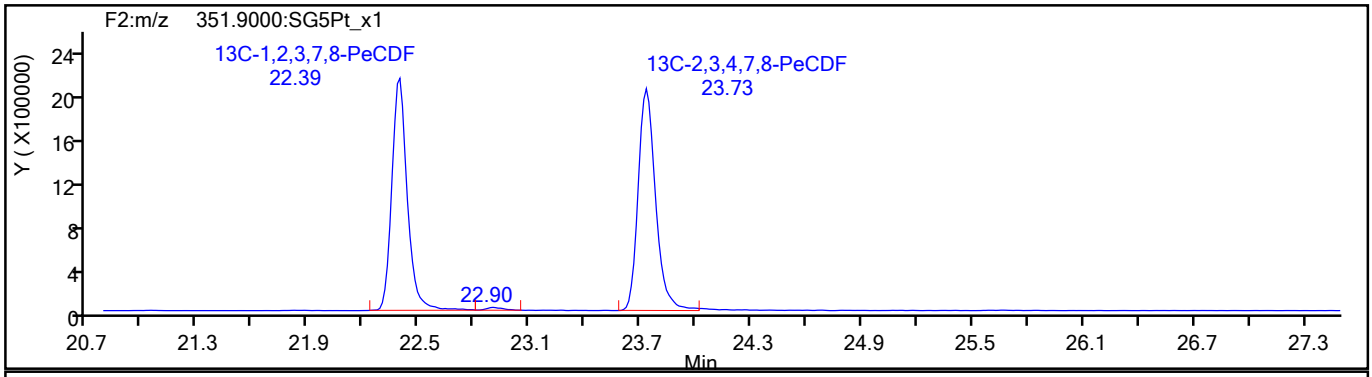

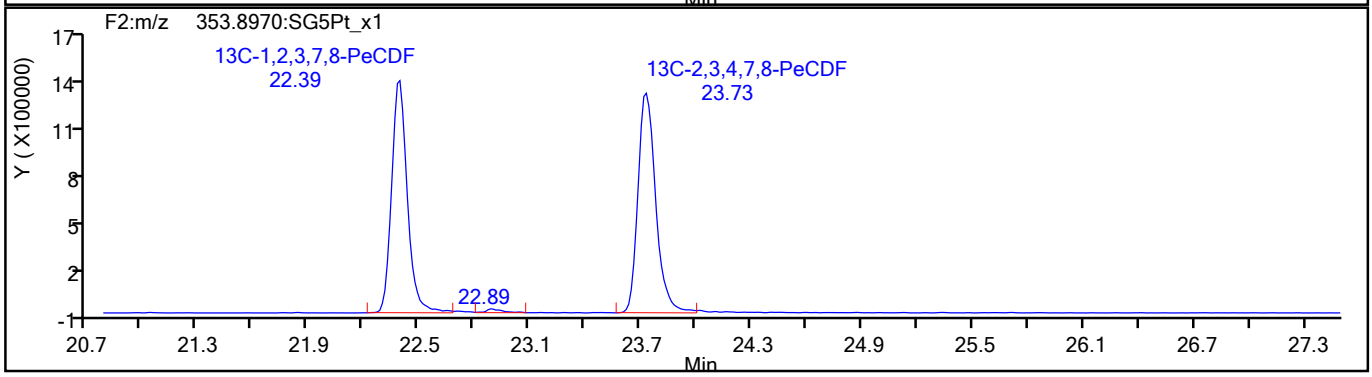

779914

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

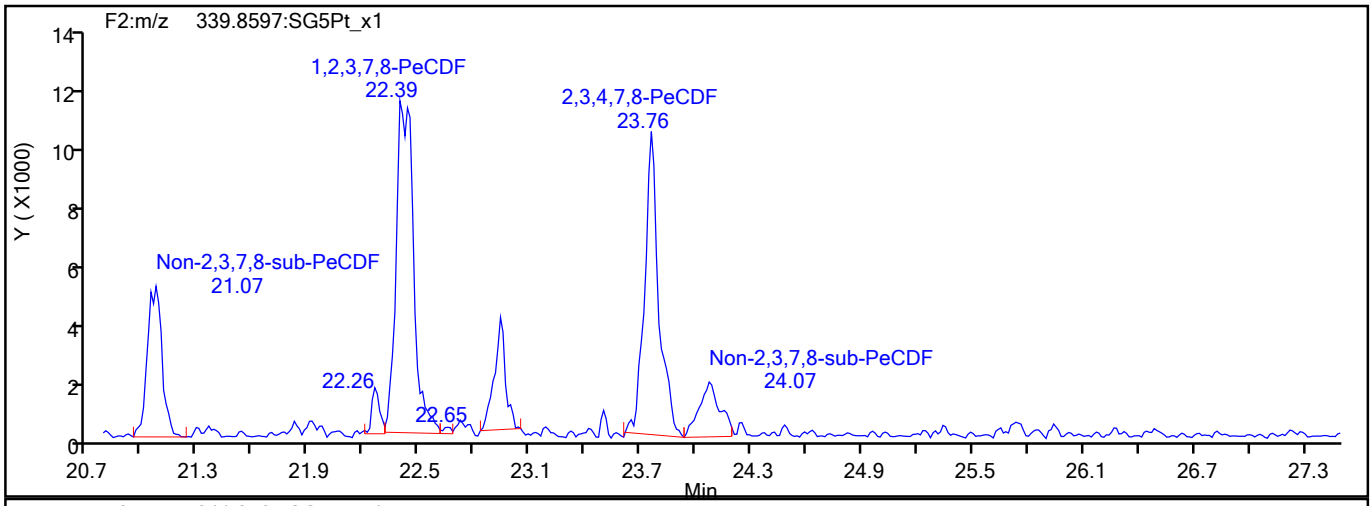

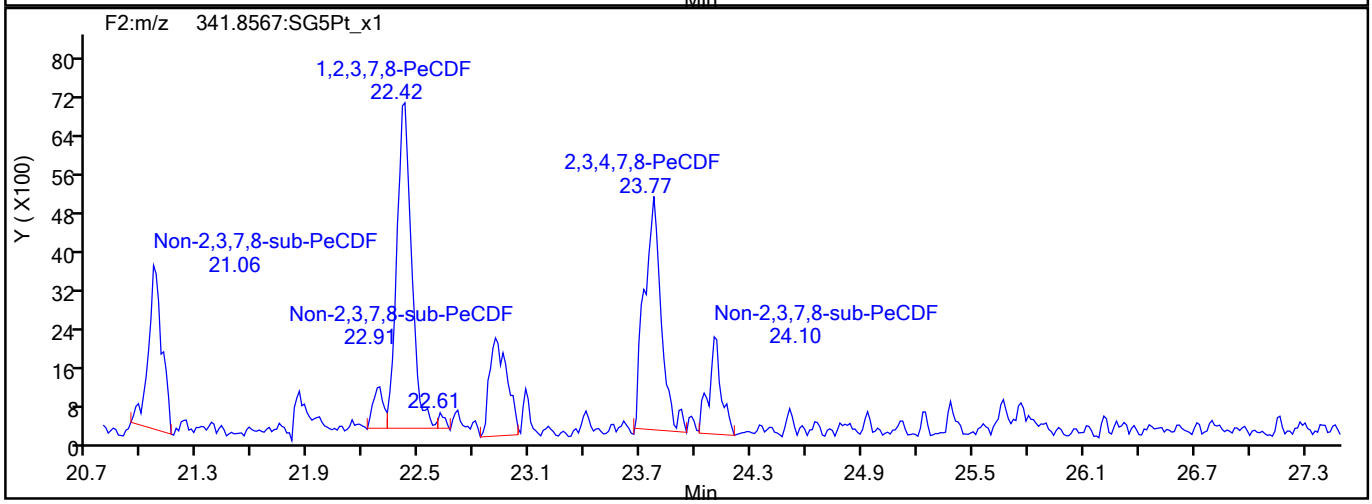

PeCDF Interference Mass

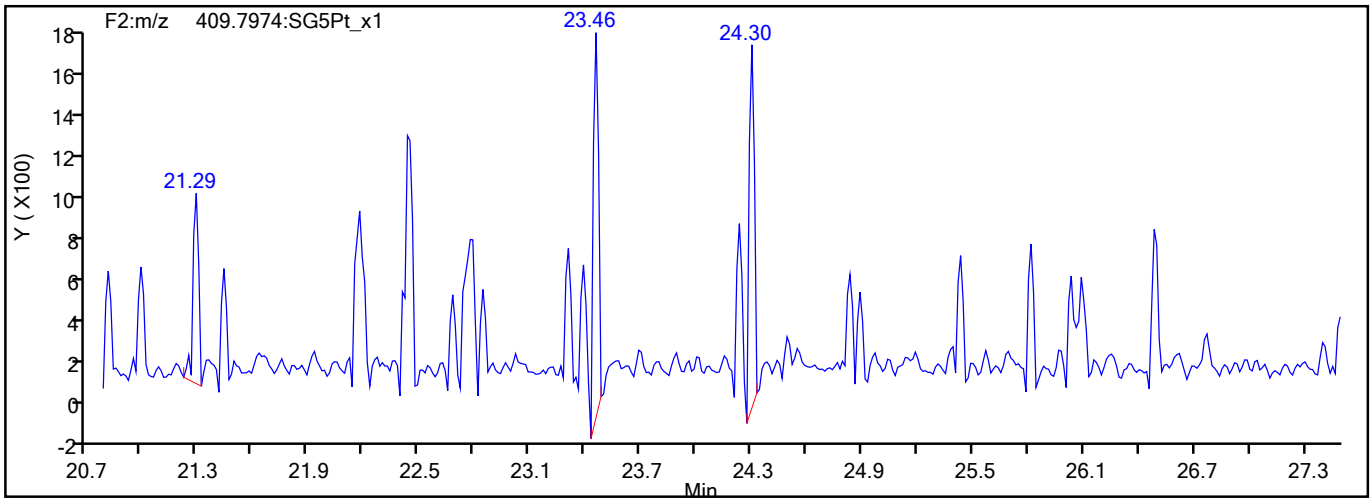

779915

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

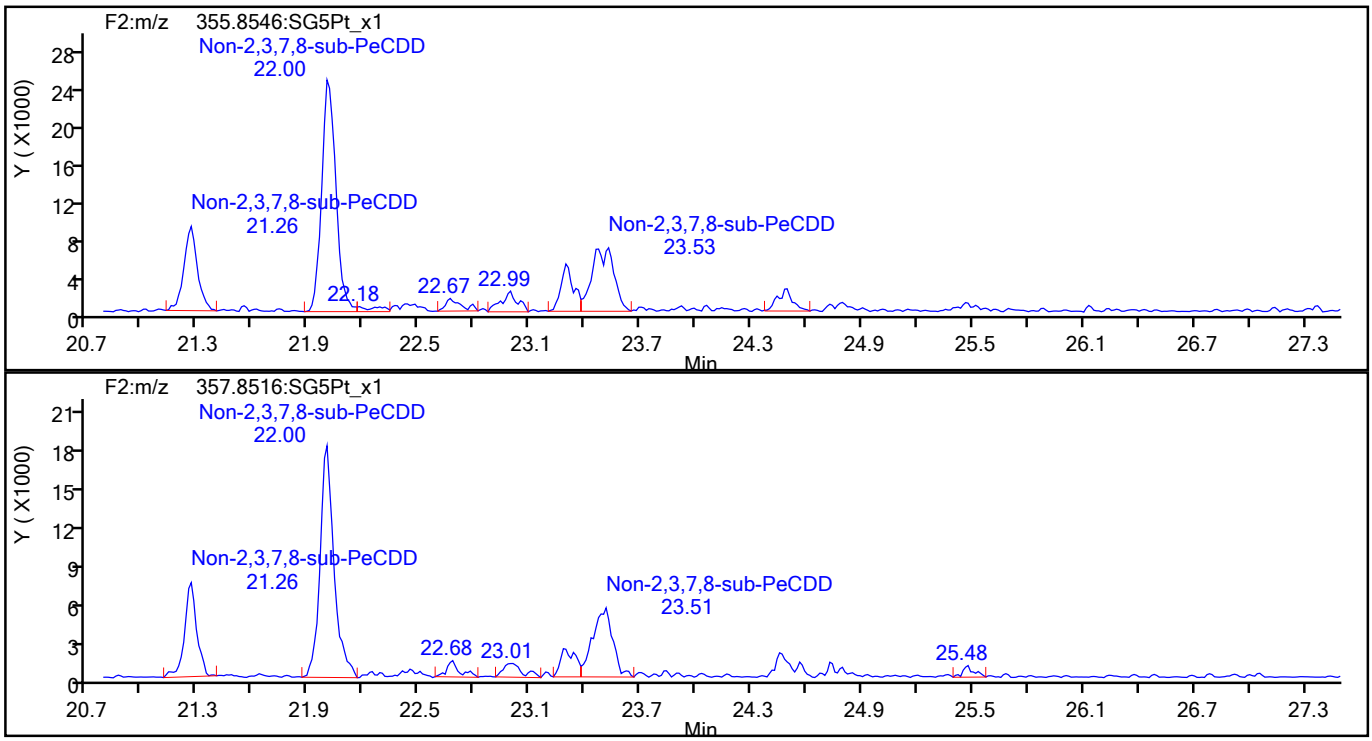

PeCDD Standards

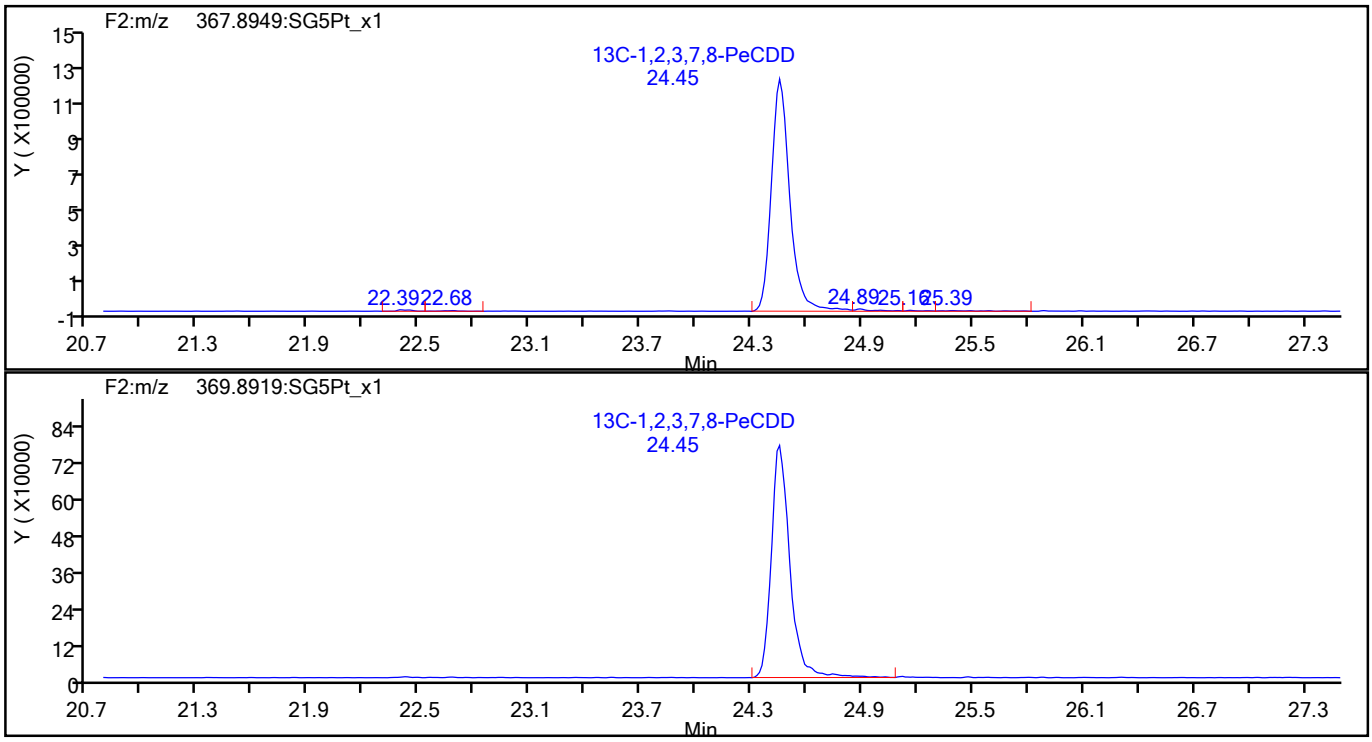

779916

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

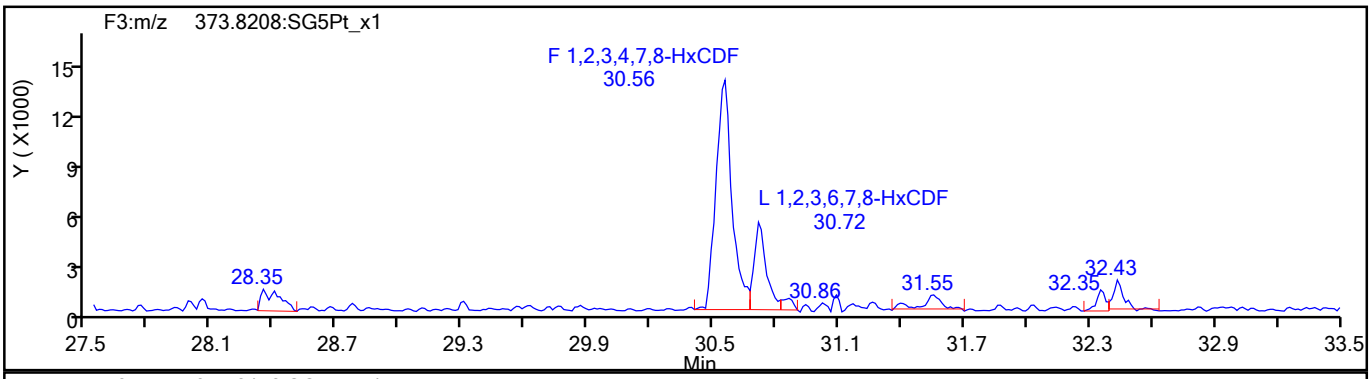

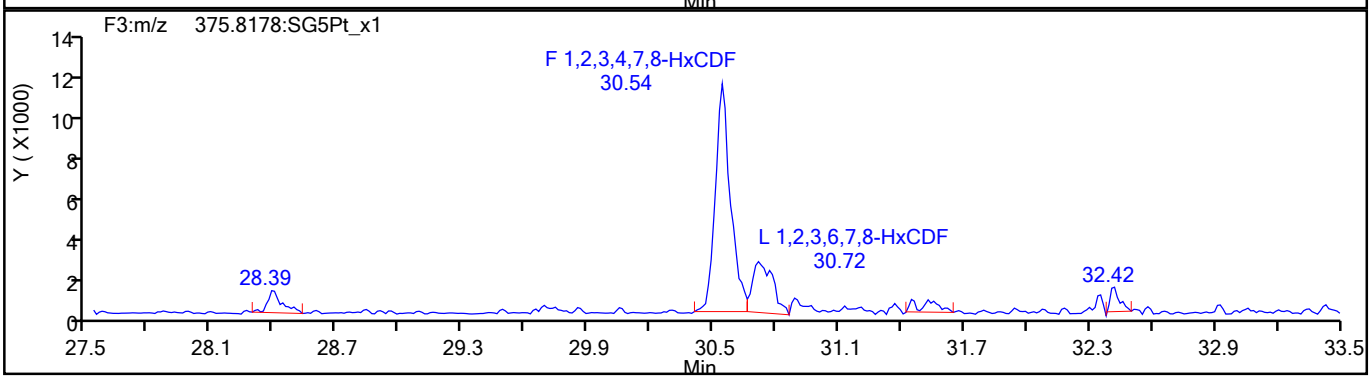

HxCDF Standards

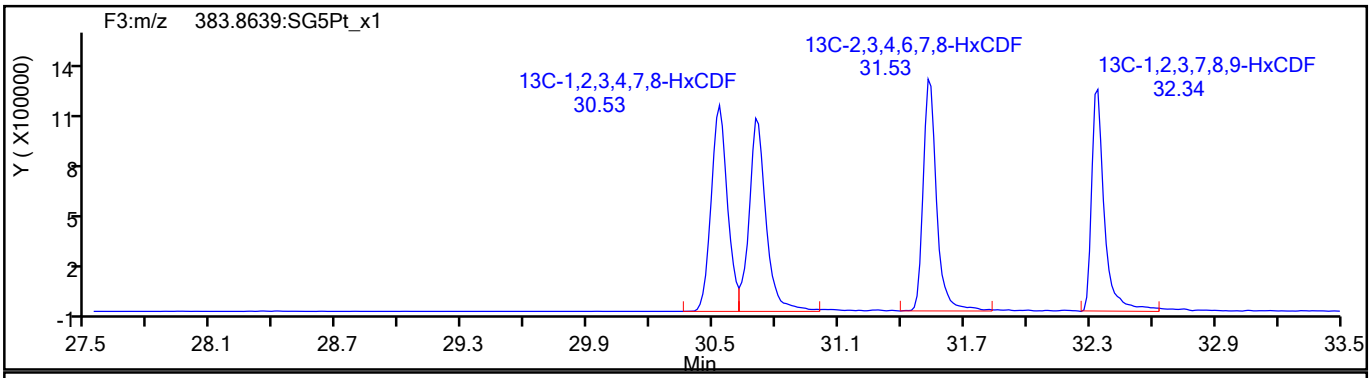

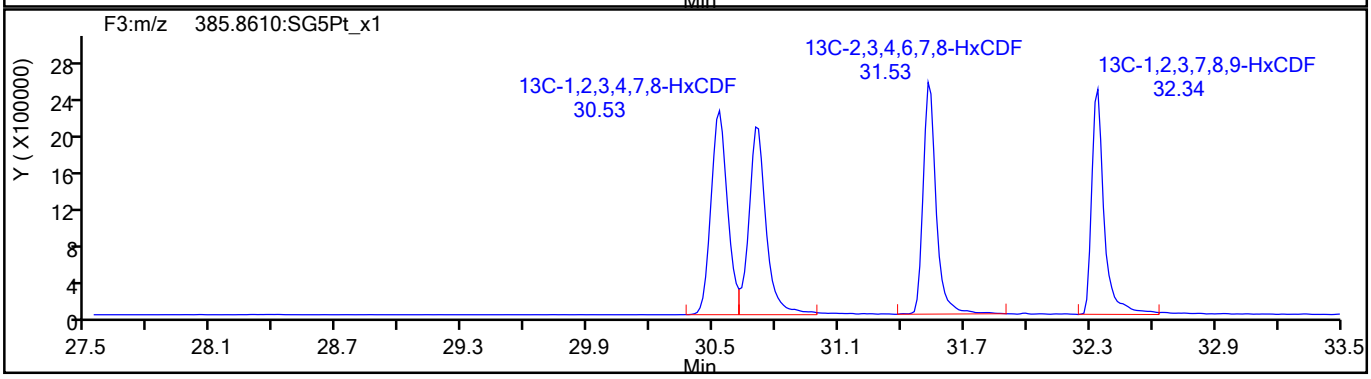

779917

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

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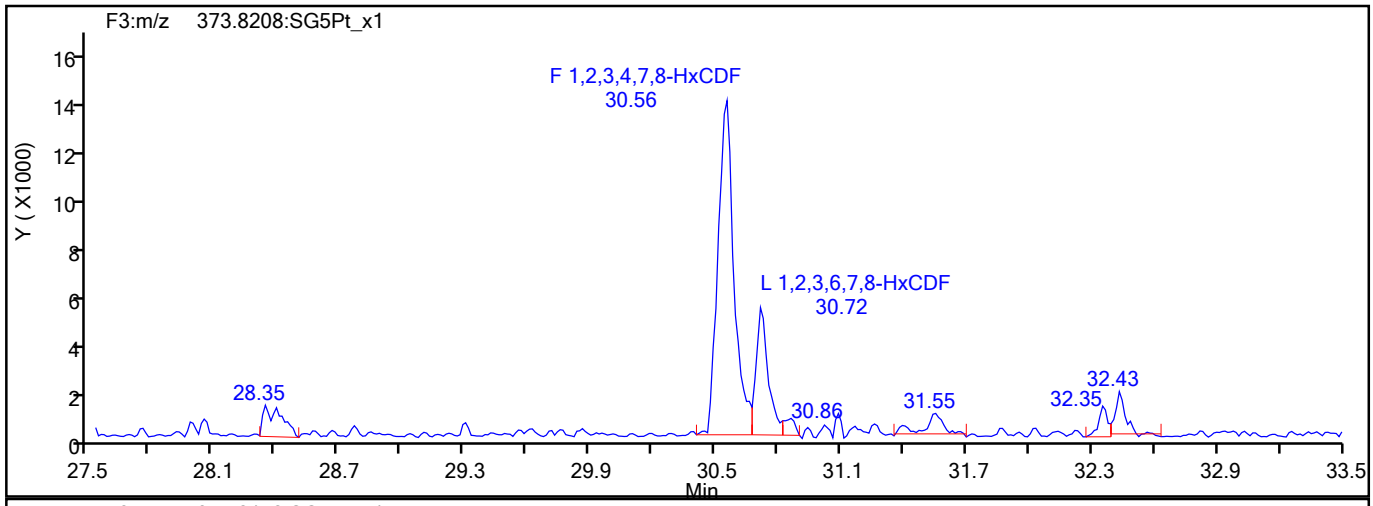

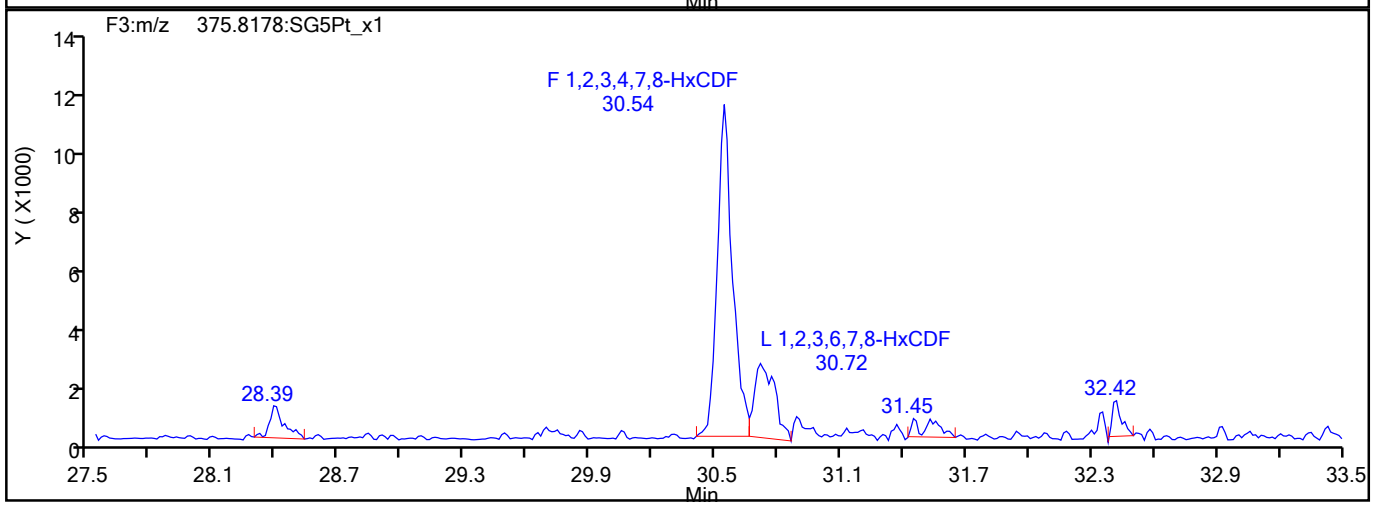

HxCDF Interference Mass

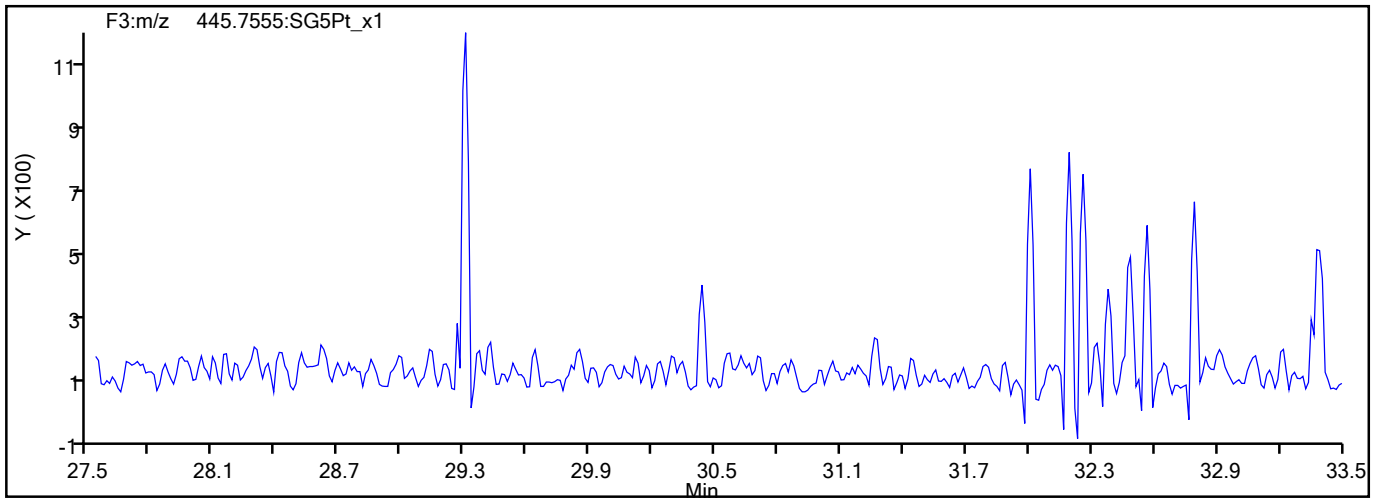

779918

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

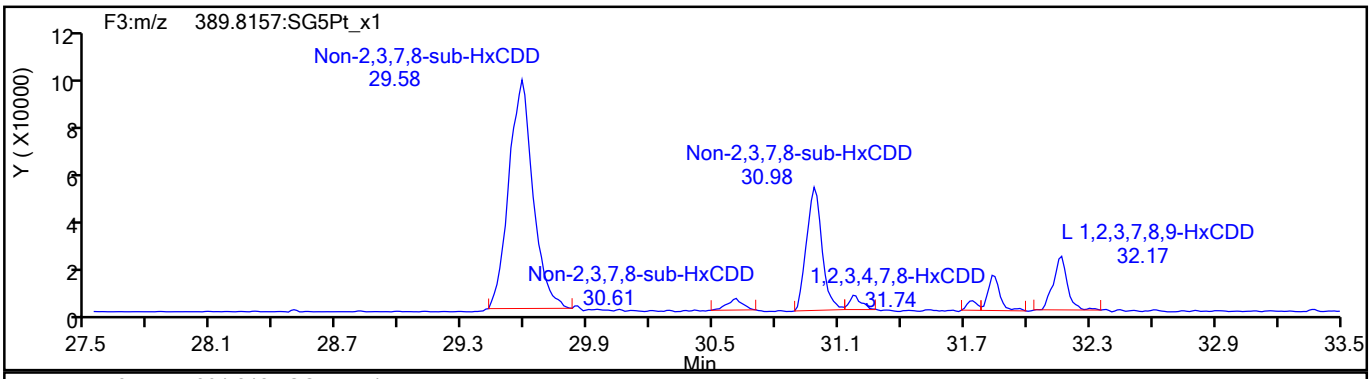

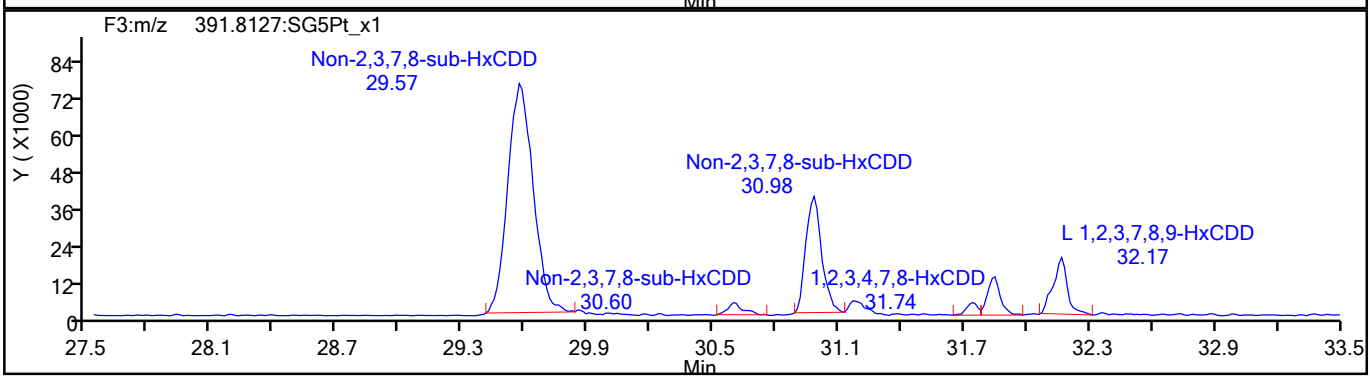

HxCDD Standards

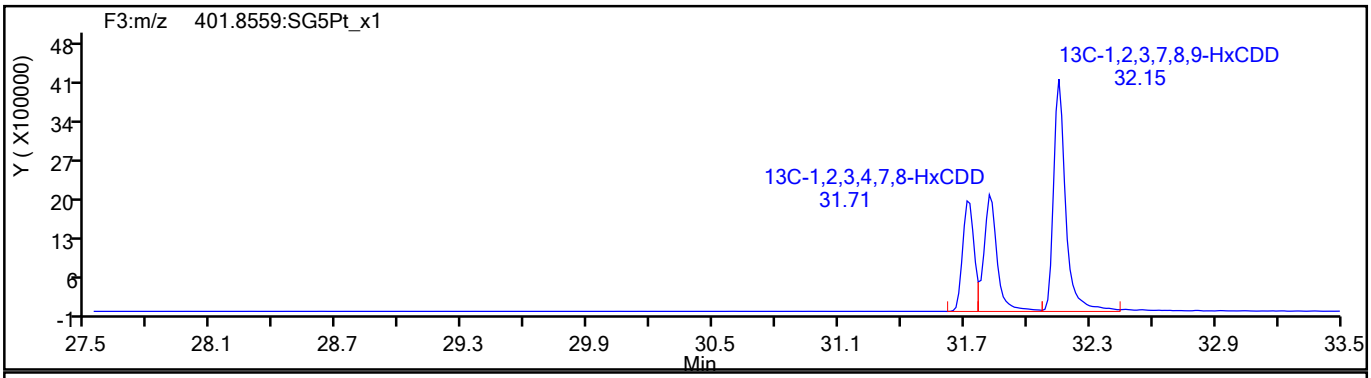

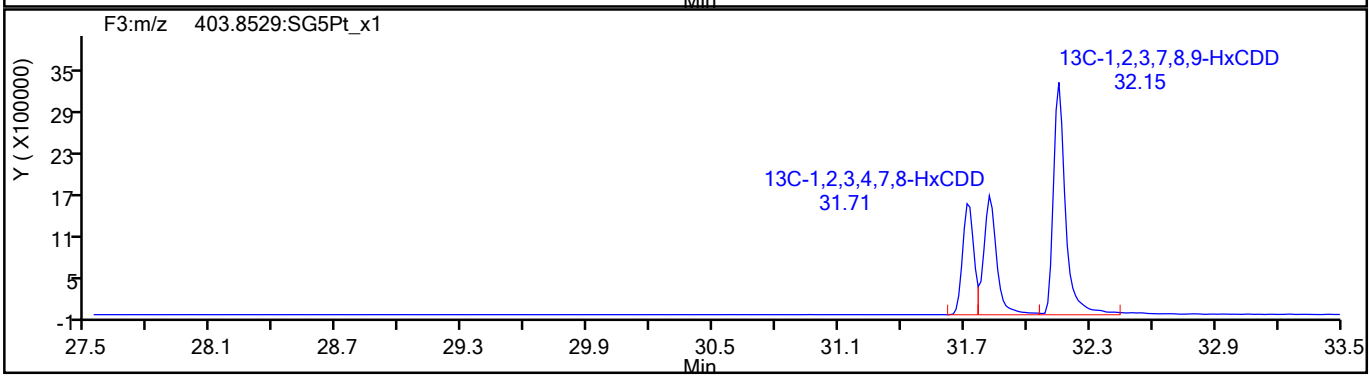

779919

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

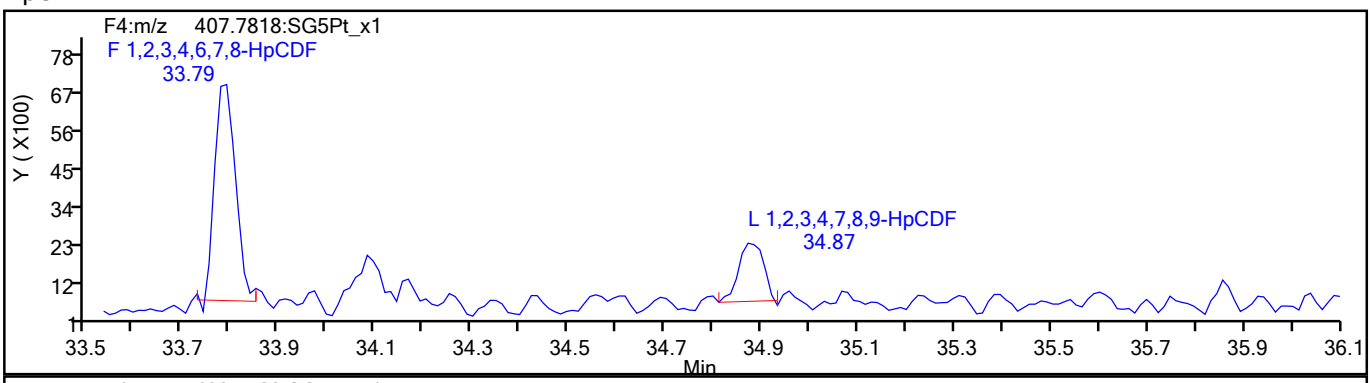

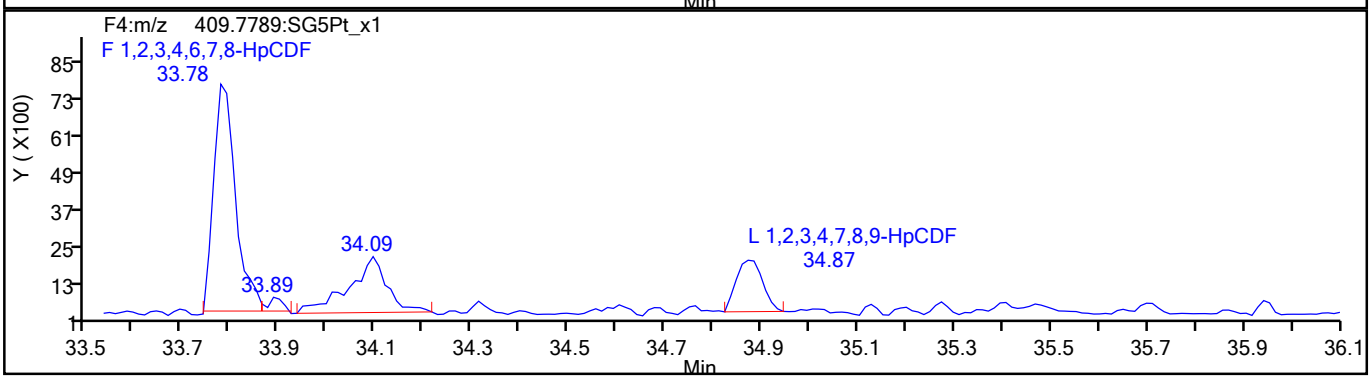

HpCDF Standards

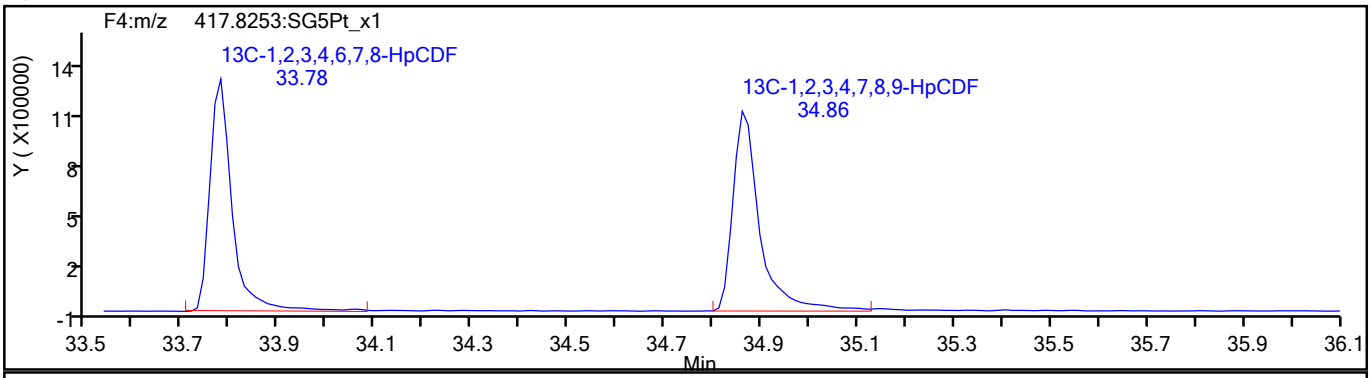

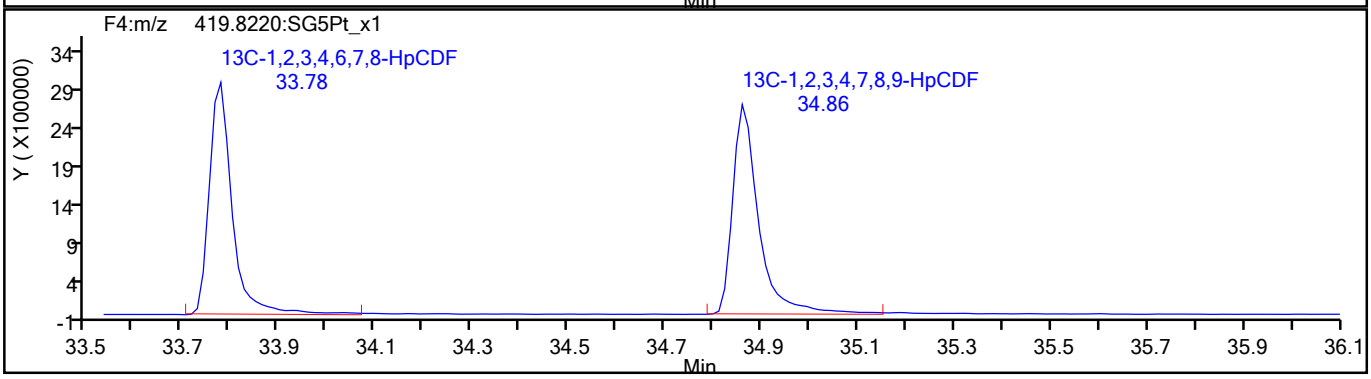

779920

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

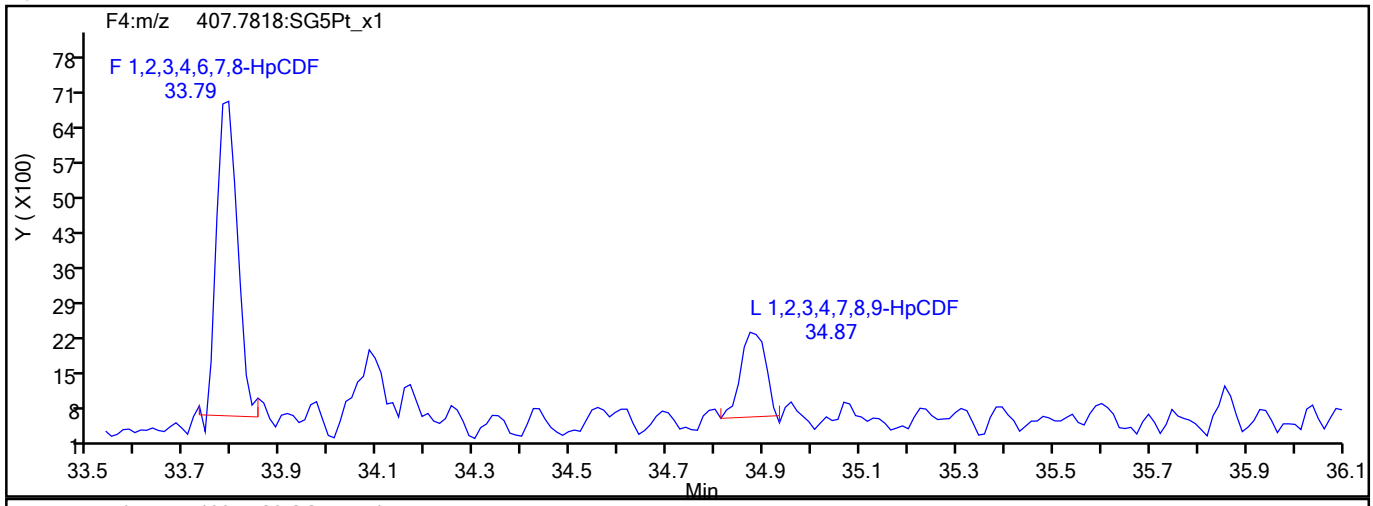

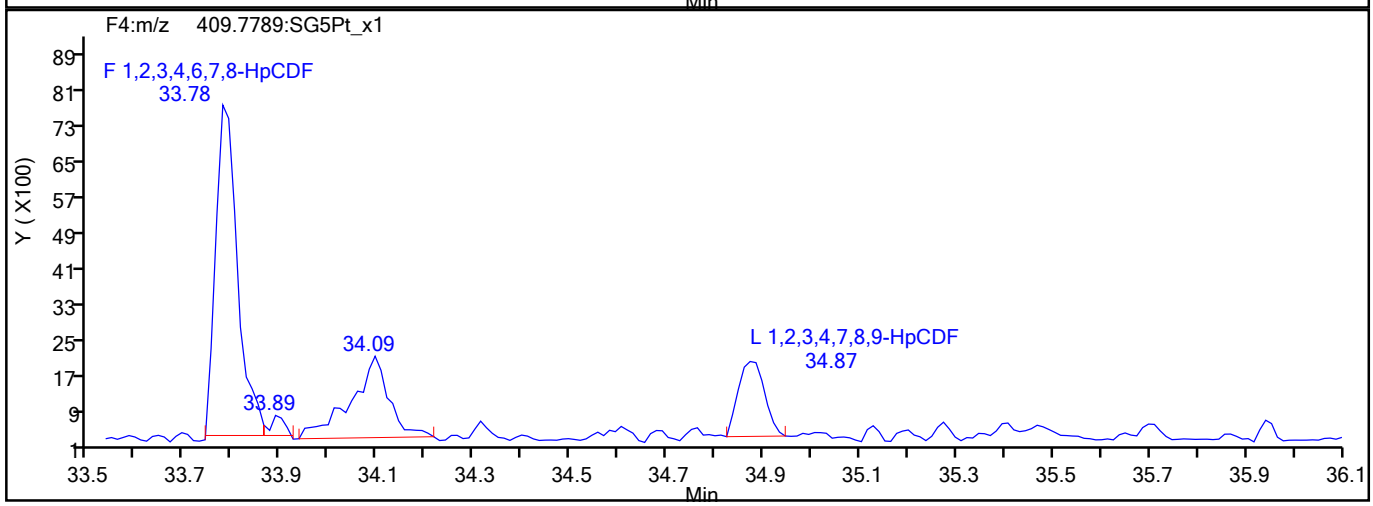

HpCDF Interference Mass

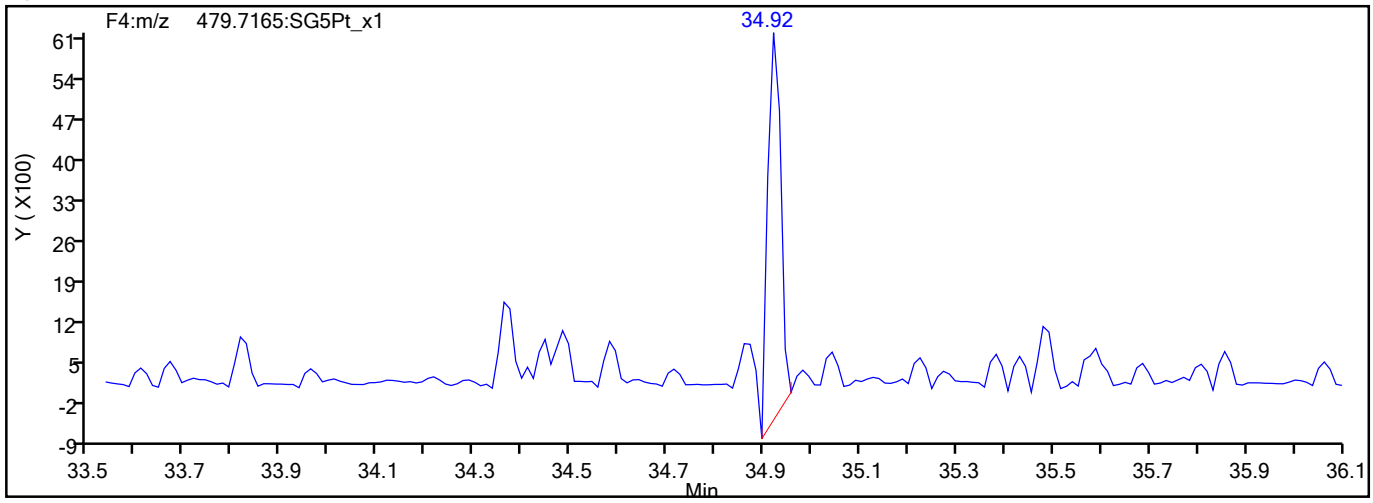

779921

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

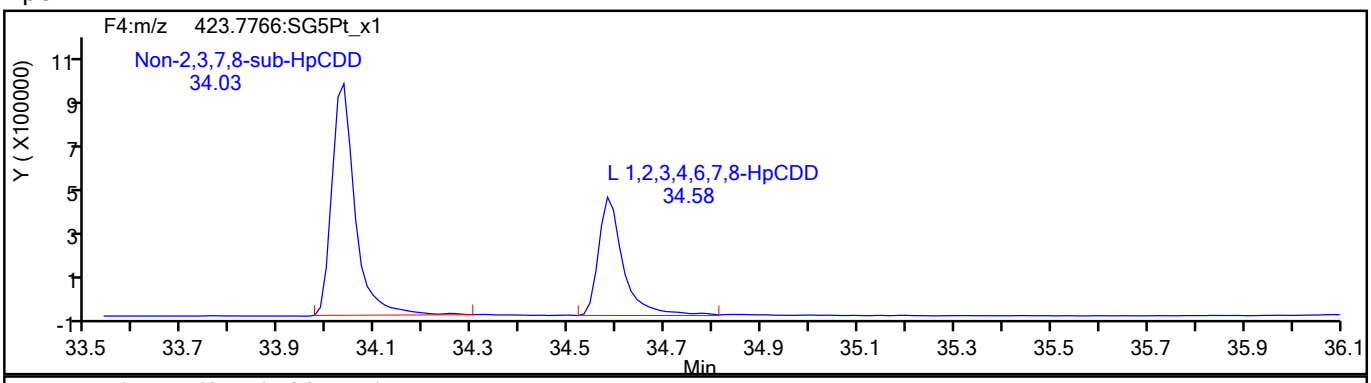

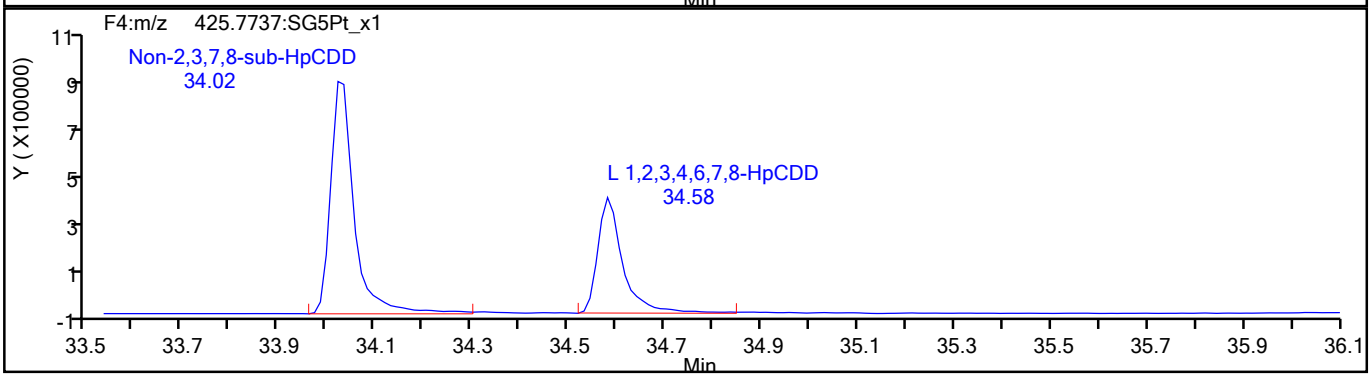

HpCDD Standards

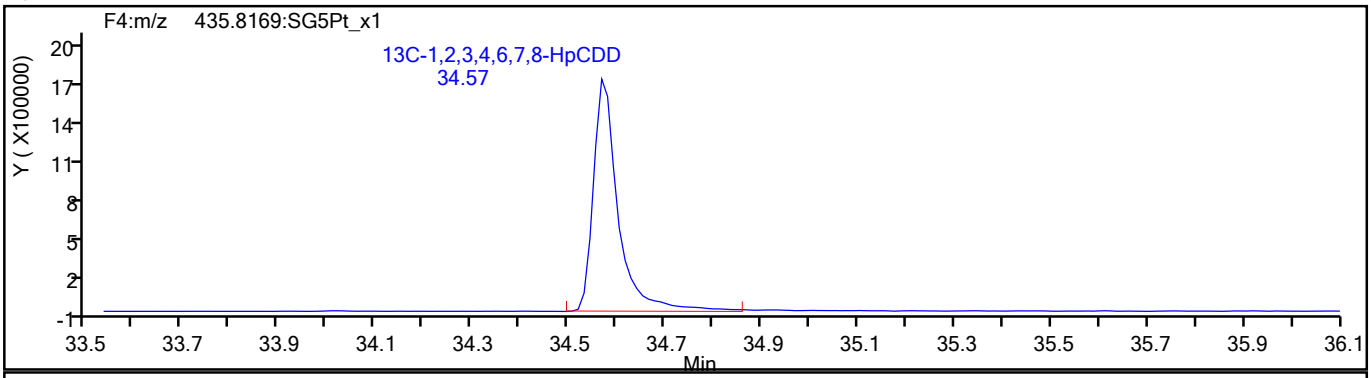

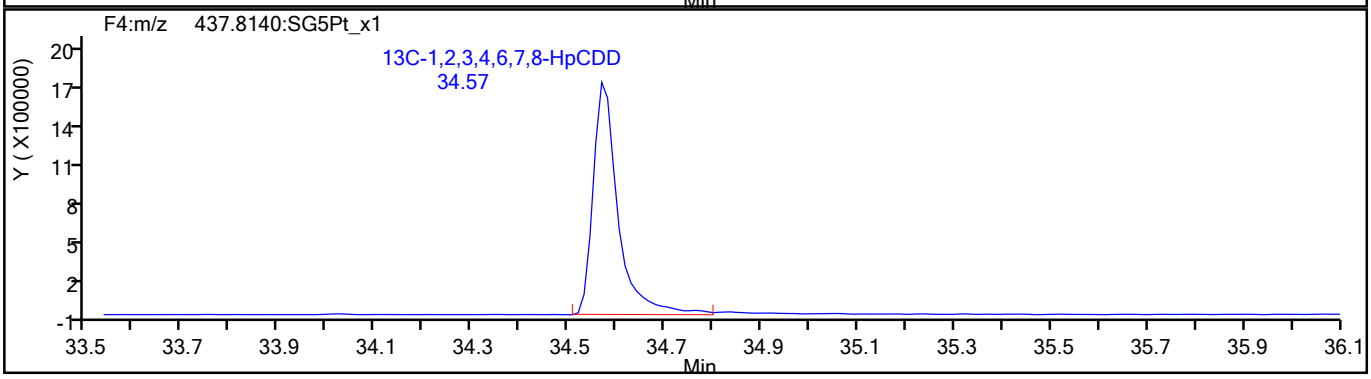

779922

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

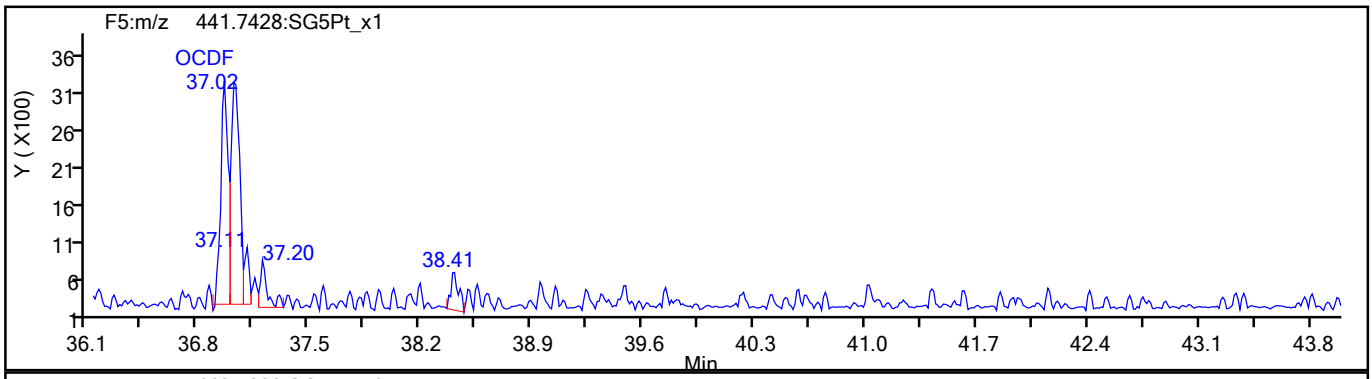

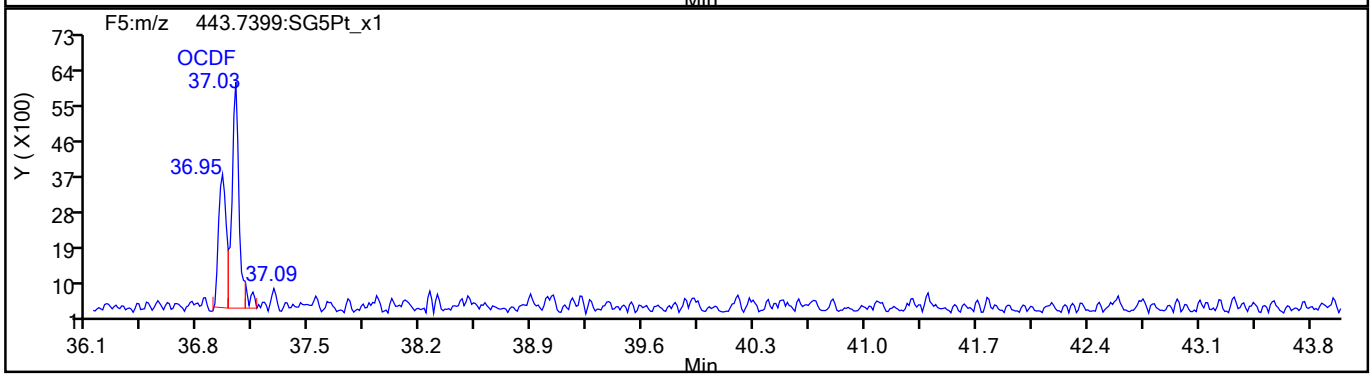

OCDF Standards

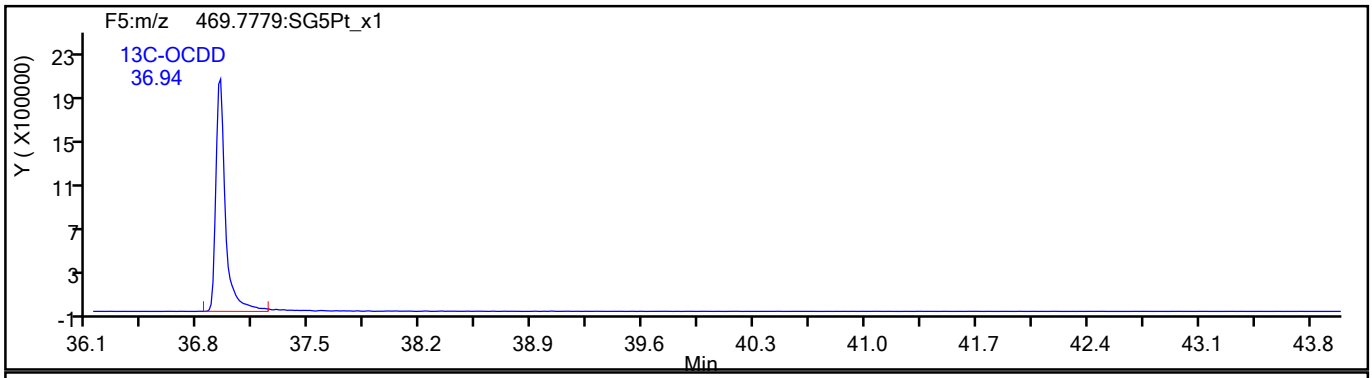

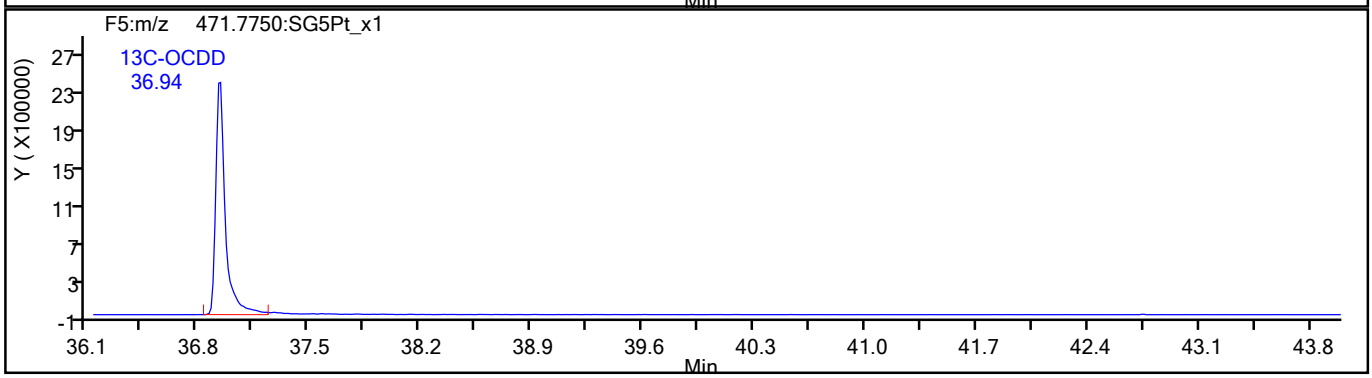

779923

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

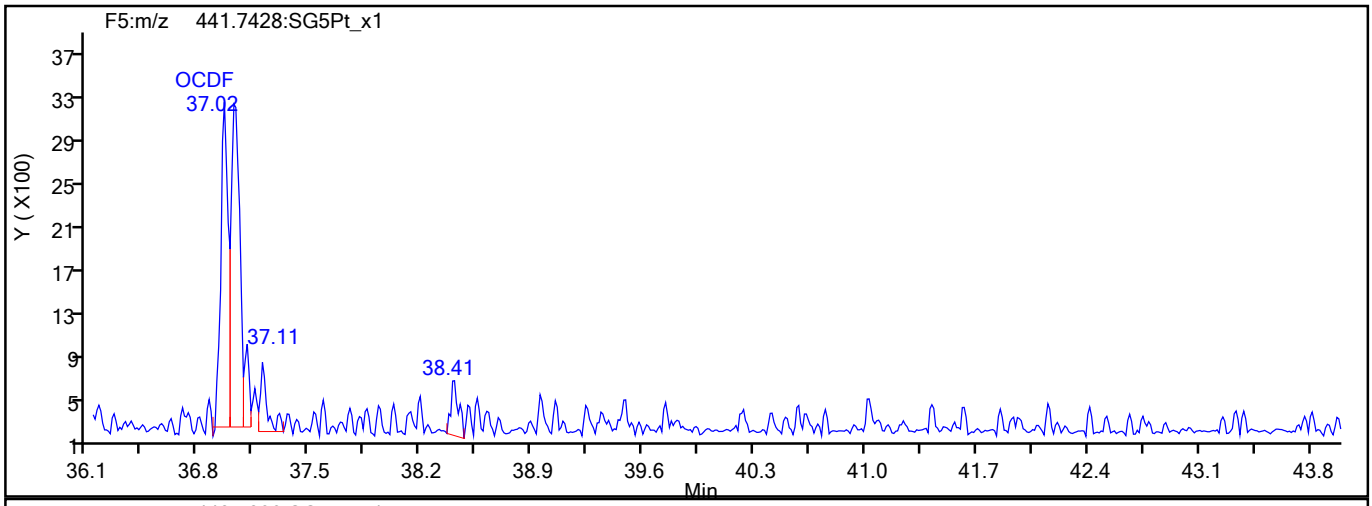

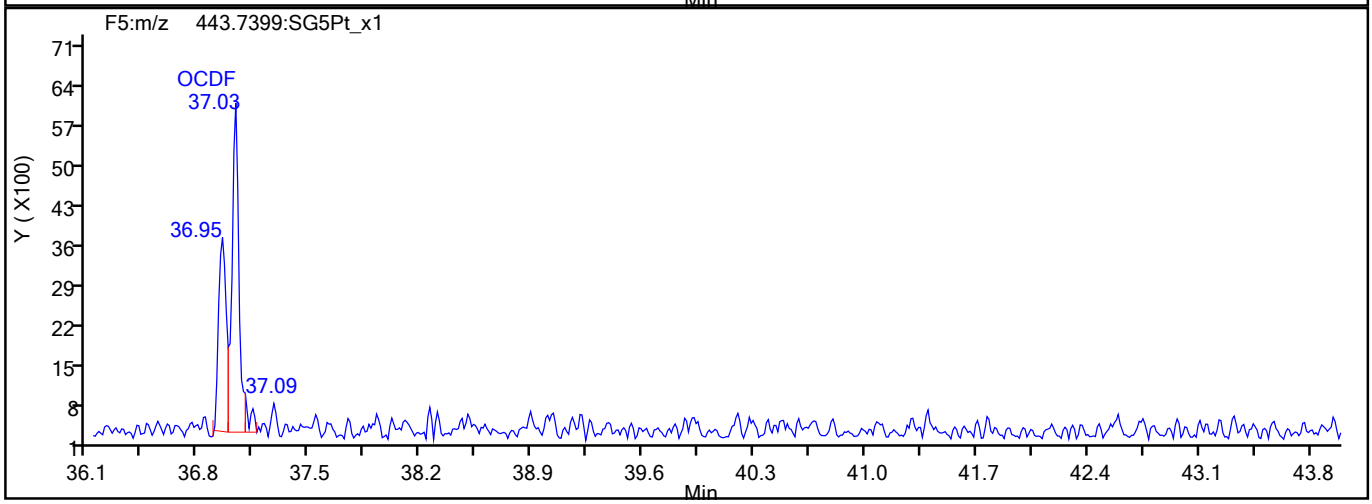

OCDF Interference Mass

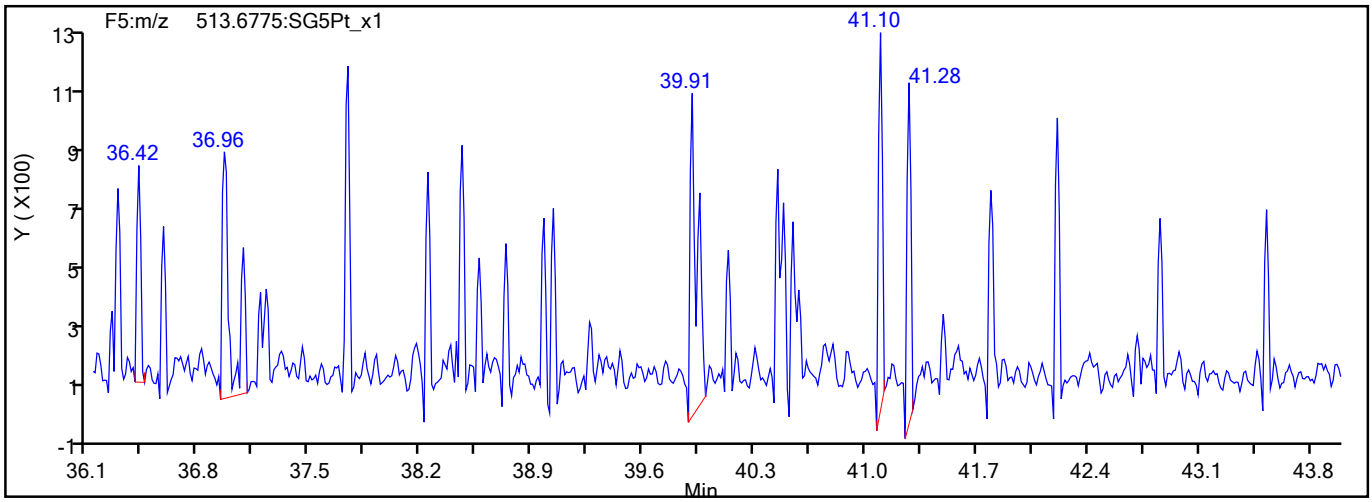

779924

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

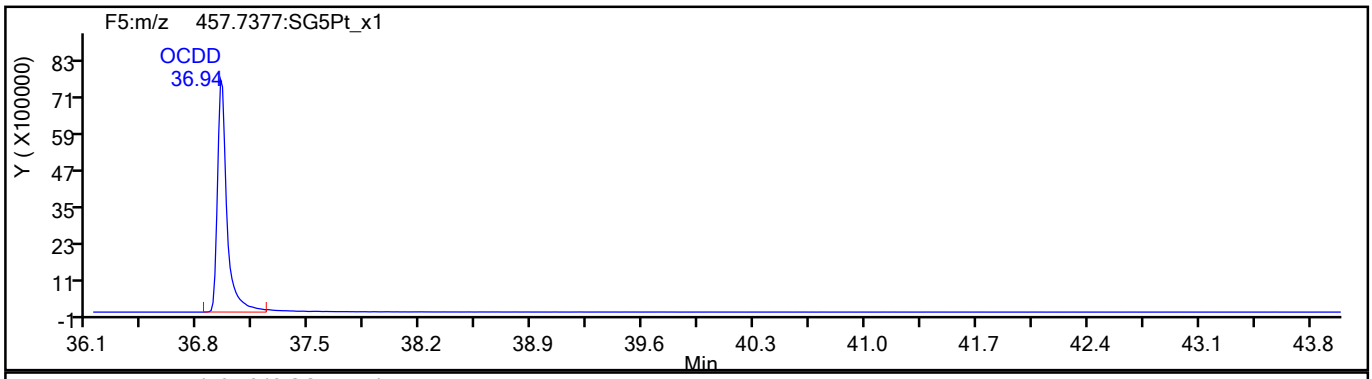

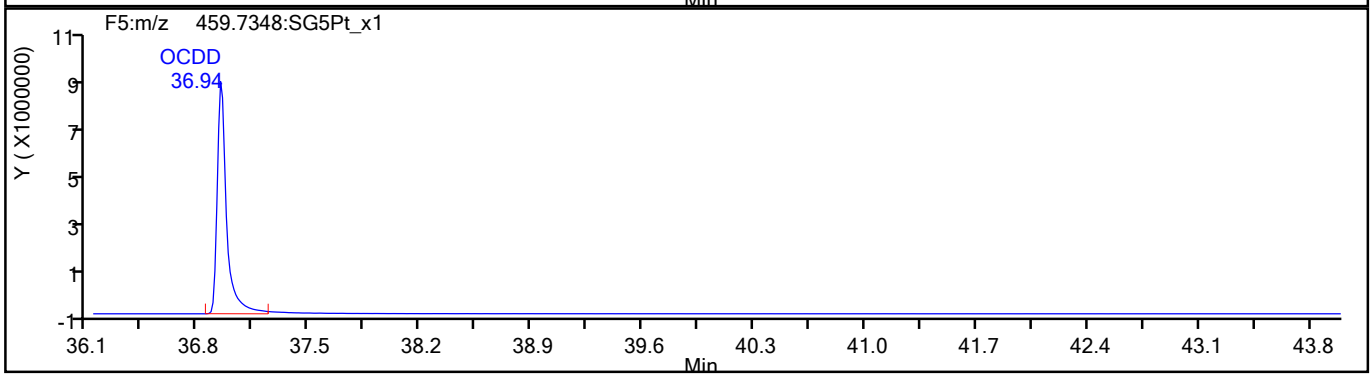

OCDD Standards

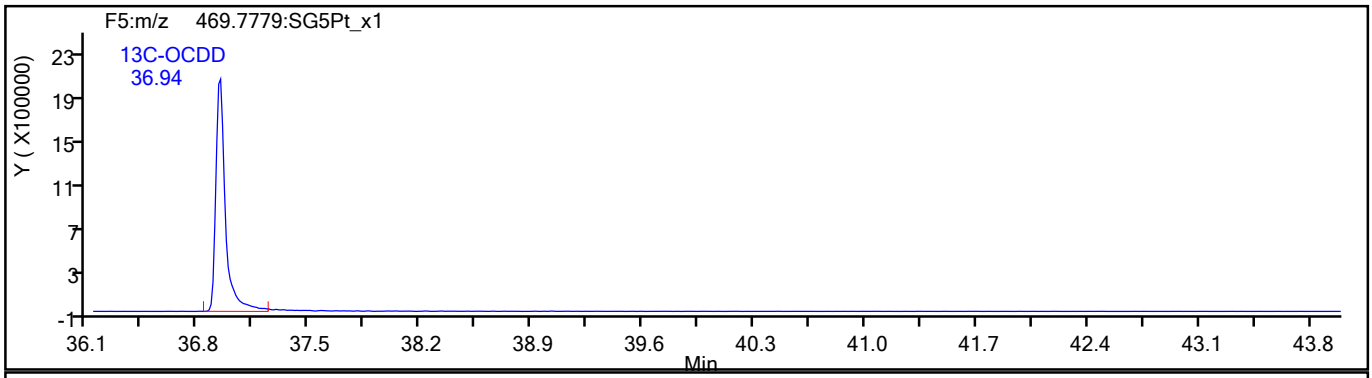

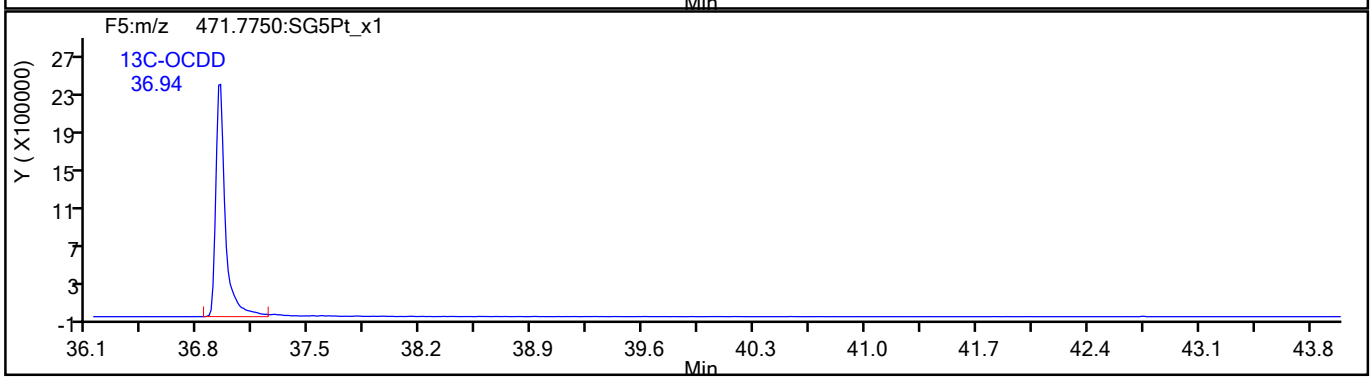

779925

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

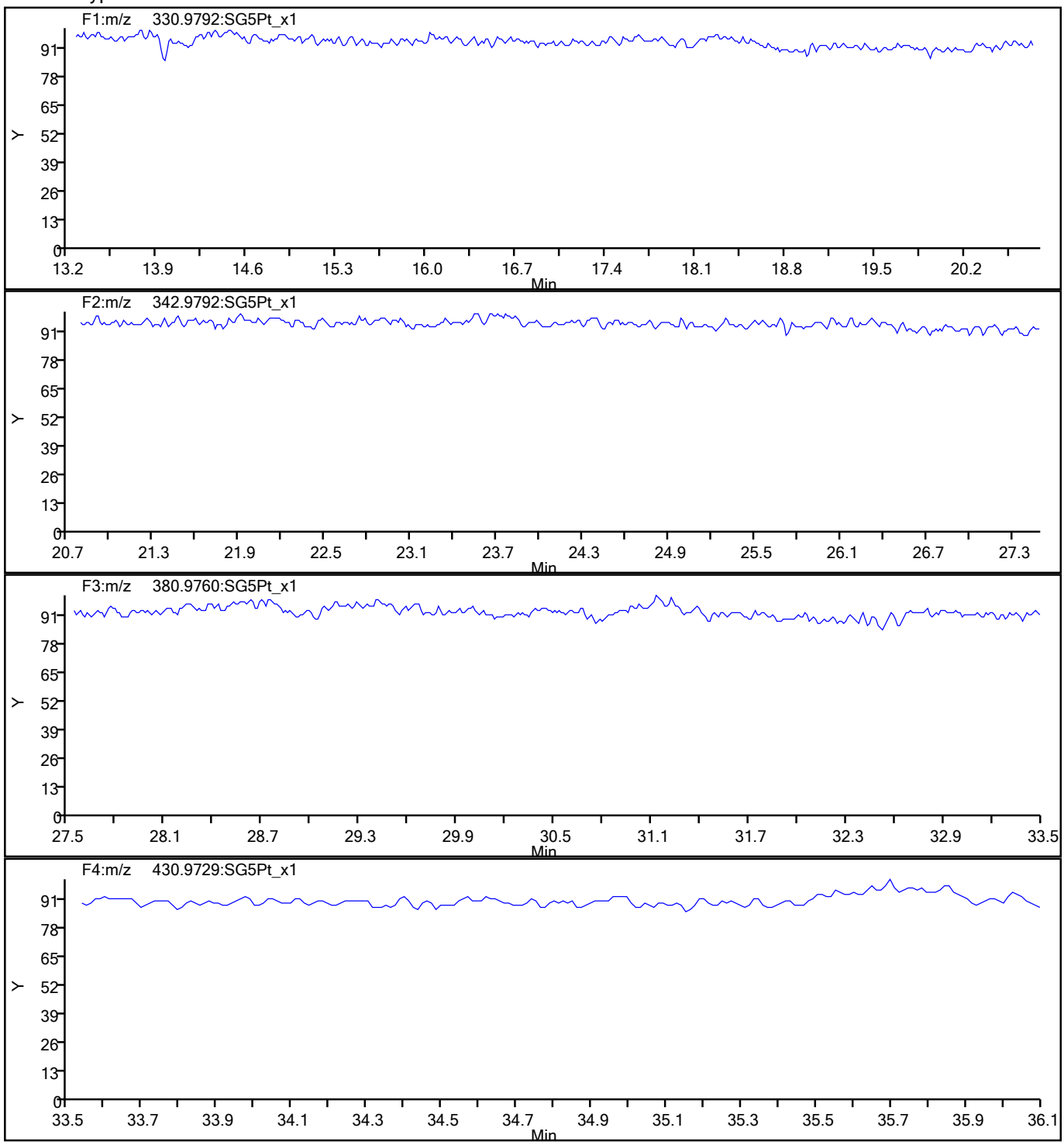

779926

Report Date: 18-Aug-2021 09:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_33.d		
Injection Date:	14-Aug-2021 17:31:36	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	516846	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

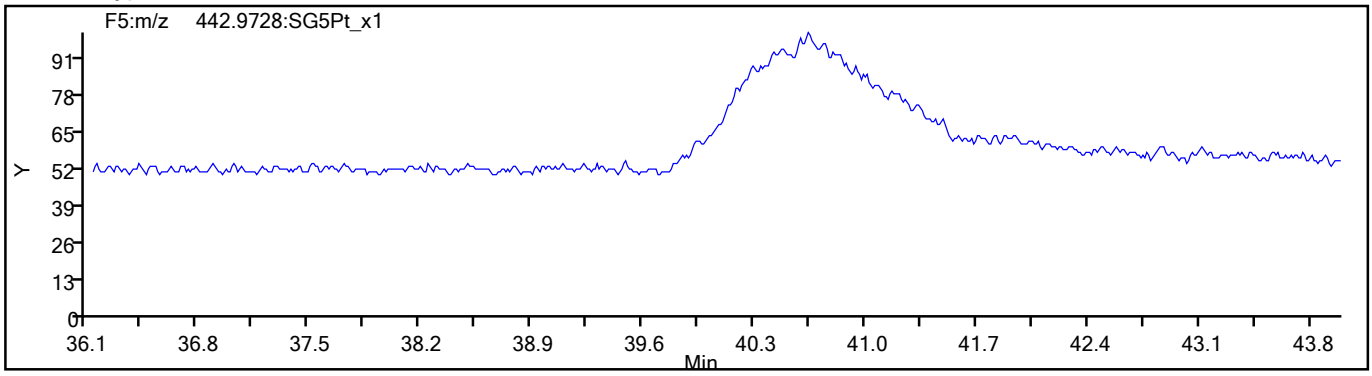

779927

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (6-8) RA
Lab Sample ID: 320-76788-16 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_012.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:45
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.28(g)
Date Analyzed: 08/24/2021 23:38
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	71	B	1.4	0.44

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	67		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	83		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_012.d
Lims ID: 320-76788-A-16-A
Client ID: 11215702-072321-BN-SJSB105 (6-8)
Sample Type: Client
Inject. Date: 24-Aug-2021 23:38:59 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-16-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:31:55

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.328	31119047	0.81	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.645	27842665	0.79	1.3327	67.1	67.1	0.3471	0.3471	67.14	
2,3,7,8-TCDF	17.658	7086942	0.80	0.9978	25.5	25.5	0.1580	0.1580		
D 13C-2,3,7,8-TCDD	16.081	16600502	0.73	0.8749	61.0	61.0	0.9072	0.9072	60.97	
$ 37Cl4-2,3,7,8-TCDD	16.108	8965284		0.8648	33.3	33.3	0.0934	0.0934	83.28	
2,3,7,8-TCDD	16.108	1469161	0.75	1.0570	8.373	8.373	0.1850	0.1850		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_012.d
Lims ID: 320-76788-A-16-A
Client ID: 11215702-072321-BN-SJSB105 (6-8)
Sample Type: Client
Inject. Date: 24-Aug-2021 23:38:59 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-16-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:31:55

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.328	16.285	3		13927631	3014146	10957	27392	275		
333.9339	16.314	16.285	2		17191416	3853828	10849	27122	355	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.645	17.601	3	1.081	12253758	2287190	6879	17197	332		
317.9389	17.645	17.601	3	1.081	15588907	2890348	5827	14567	496	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.629	2	1.001	3140034	590346	1404	3510	420		
305.8987	17.658	17.629	2	1.001	3946908	736866	1862	4655	396	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.081	16.051	2	0.985	7004160	1518850	10957	27392	139		
333.9339	16.095	16.051	3	0.986	9596342	2195162	10849	27122	202	0.73(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.108	16.065	3	0.987	8965284	1922091	2218	5545	867		
2,3,7,8-TCDD											
319.8965	16.108	16.079	2	1.002	630360	134203	1502	3755	89		
321.8936	16.108	16.079	2	1.002	838801	182200	1403	3507	130	0.75(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 25-Aug-2021 09:02:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_012.d		
Injection Date:	24-Aug-2021 23:38:59	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	519540	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

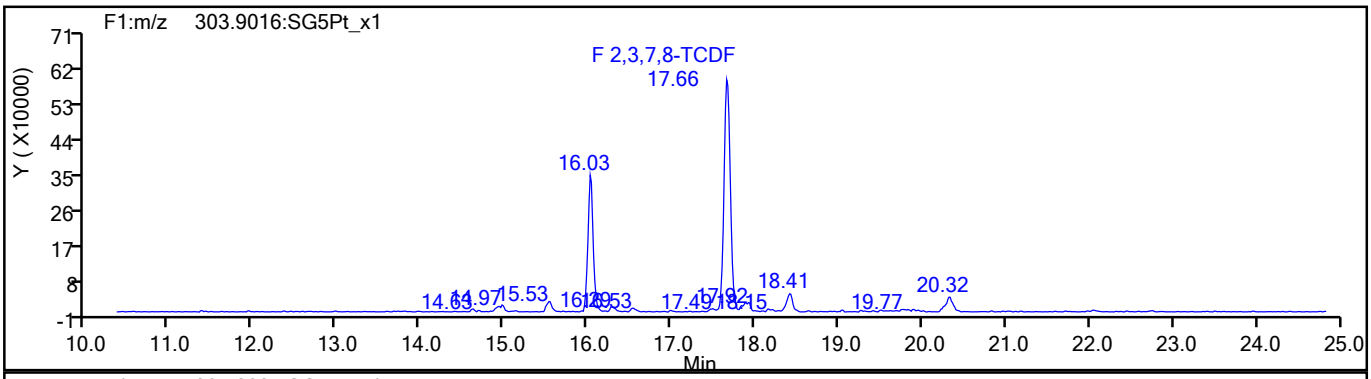

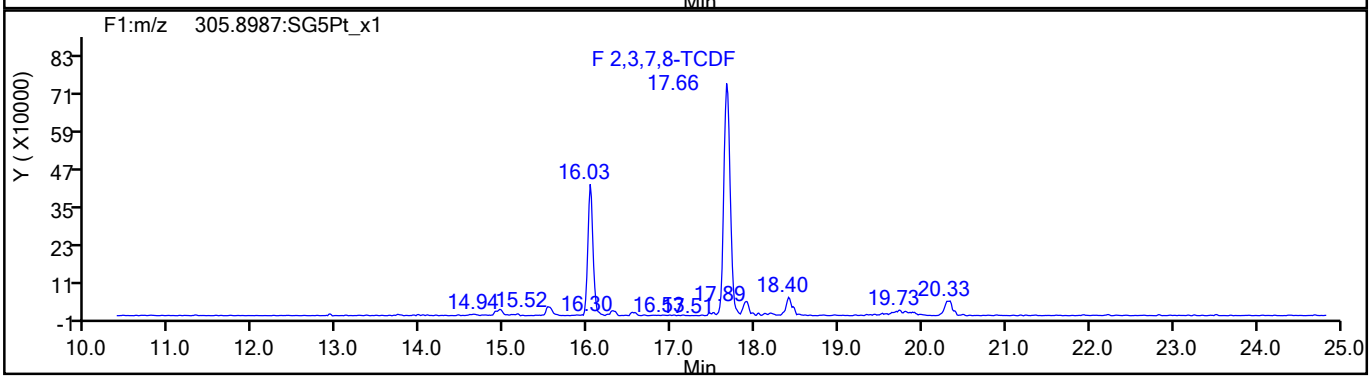

TCDF Standards

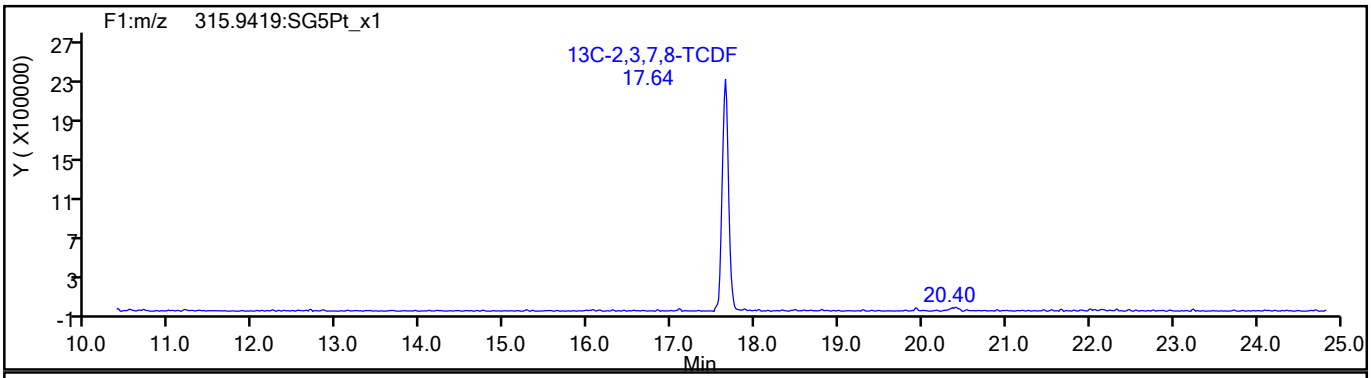

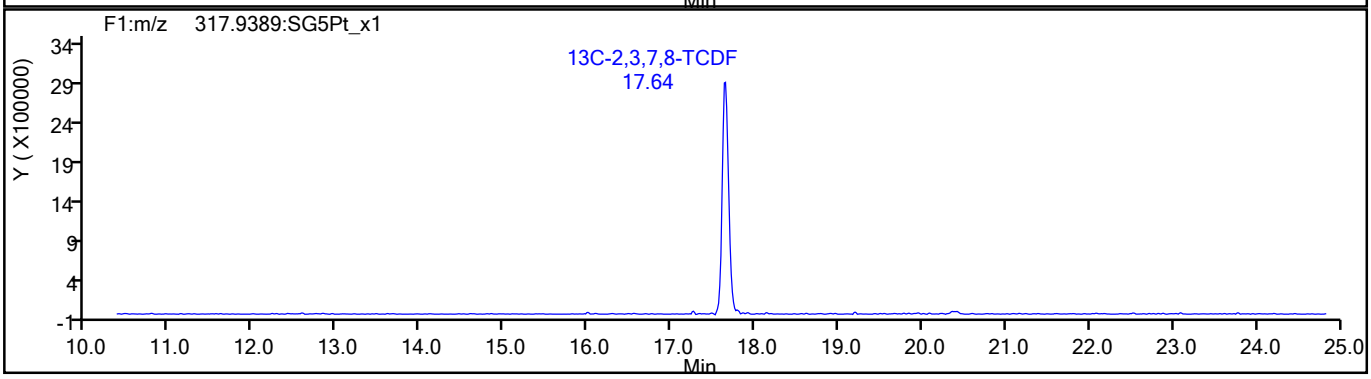

779931

Report Date: 25-Aug-2021 09:02:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_012.d		
Injection Date:	24-Aug-2021 23:38:59	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	519540	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

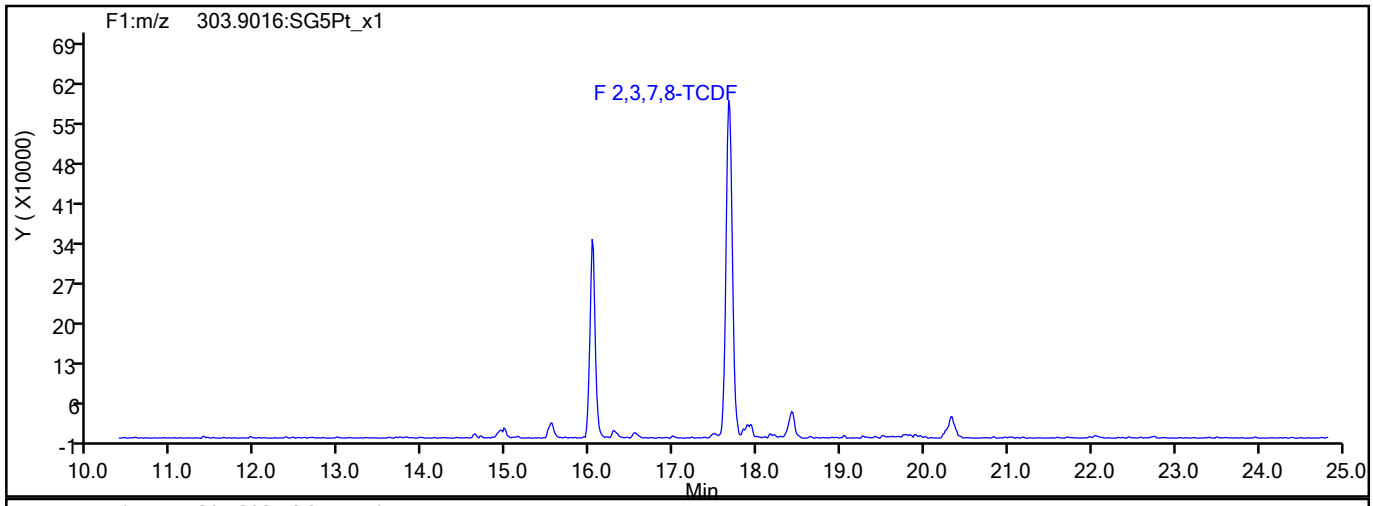

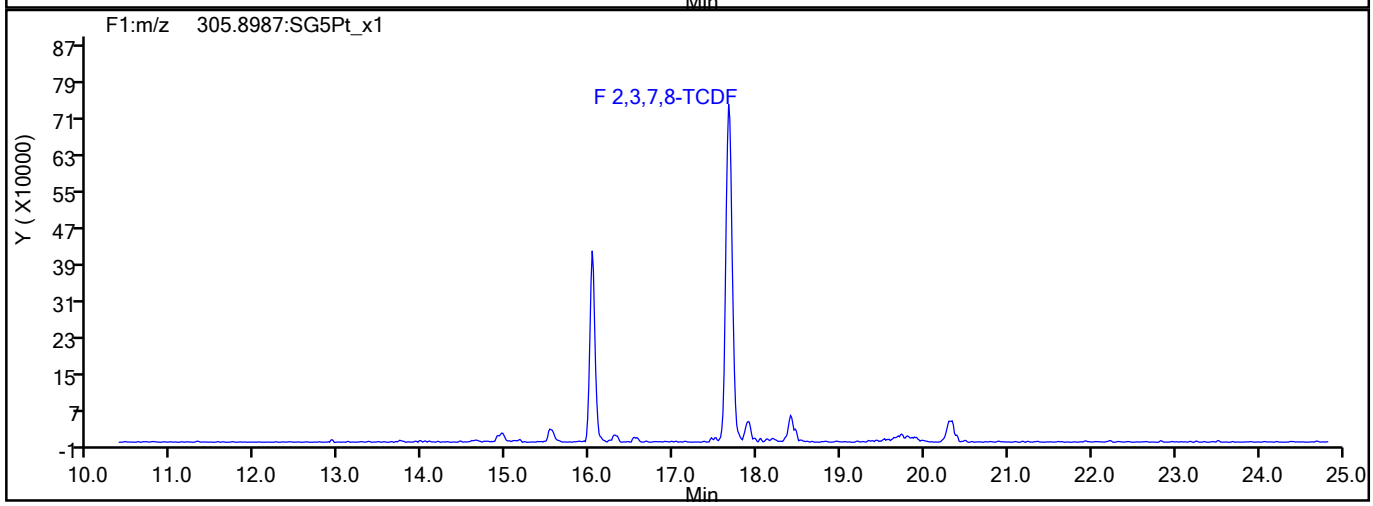

TCDF Interference Mass

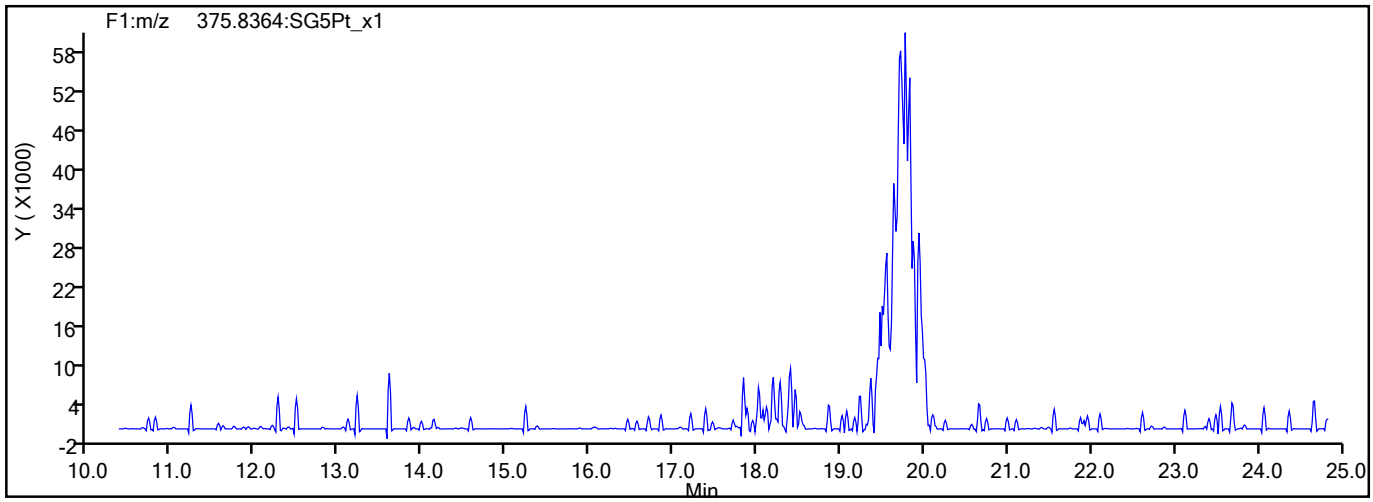

779932

Report Date: 25-Aug-2021 09:02:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_012.d		
Injection Date:	24-Aug-2021 23:38:59	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	519540	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

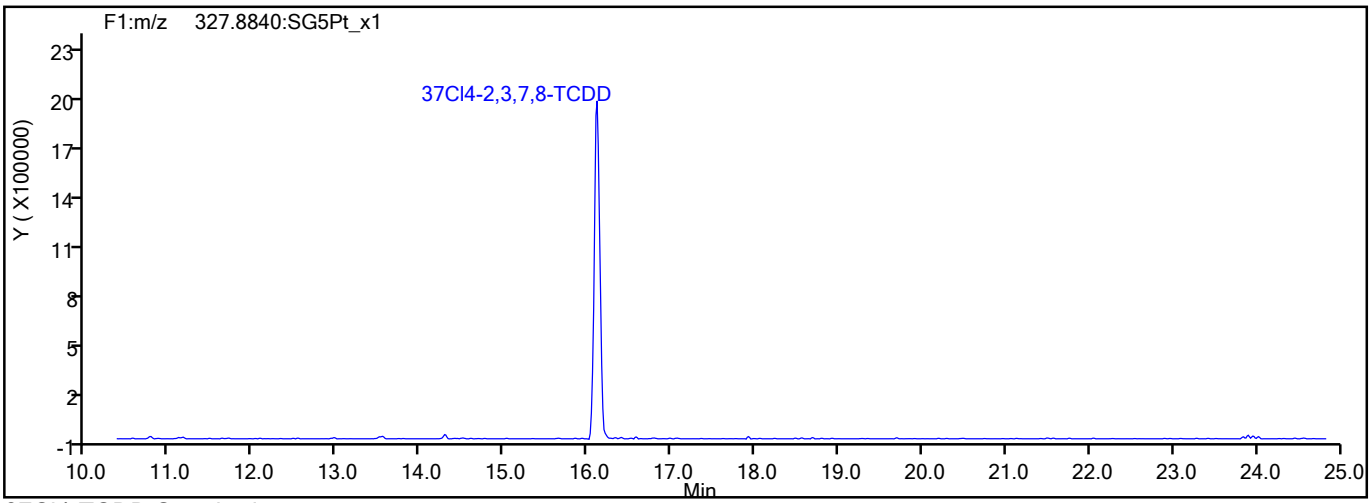

37Cl4-TCDD Standards

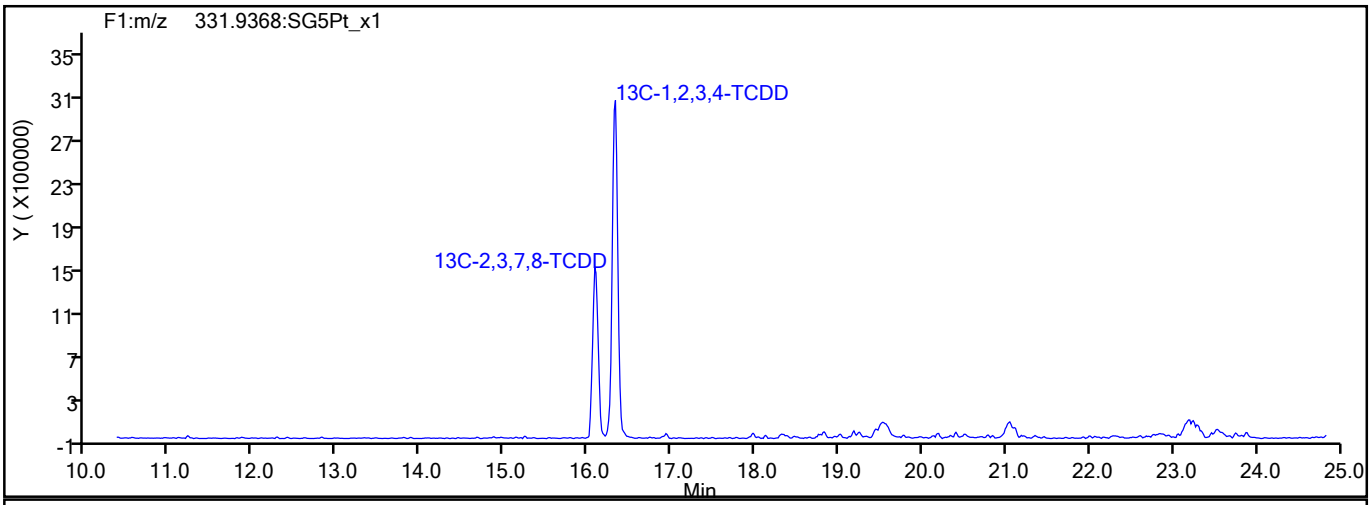

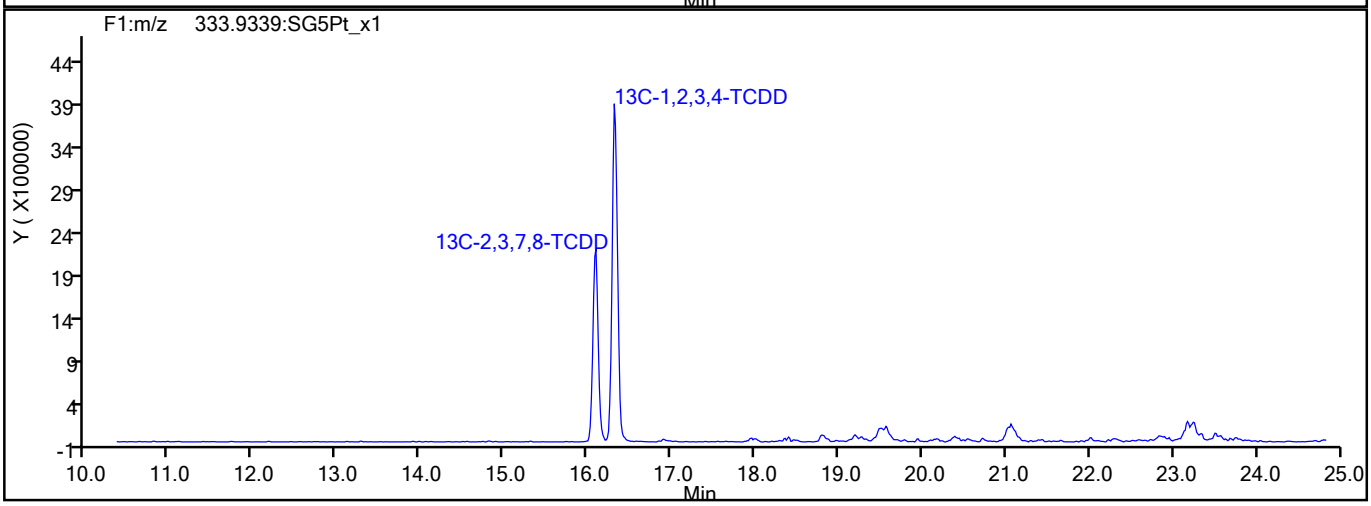

779933

Report Date: 25-Aug-2021 09:02:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_012.d		
Injection Date:	24-Aug-2021 23:38:59	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (6-8)		
Worklist#:	519540	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

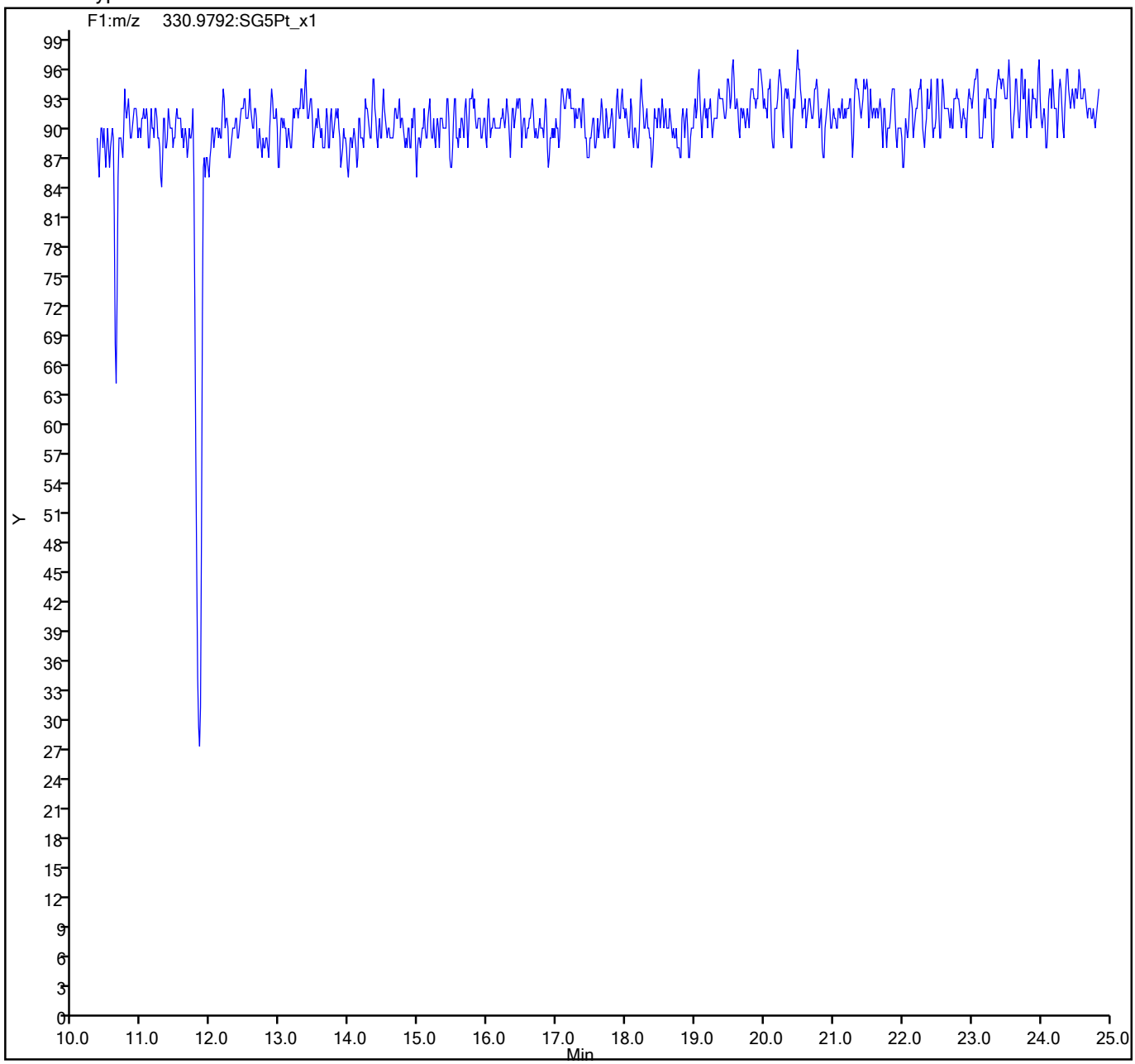

779934

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (8-10)
Lab Sample ID: 320-76788-17
Matrix: Solid
Lab File ID: 13AU2110D5_34.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:50
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.90(g)
Date Analyzed: 08/14/2021 18:16
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 39.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	8.1	B	1.5	0.17
40321-76-4	1,2,3,7,8-PeCDD	ND		7.6	0.16
57117-41-6	1,2,3,7,8-PeCDF	0.44	J q	7.6	0.075
57117-31-4	2,3,4,7,8-PeCDF	0.39	J	7.6	0.078
39227-28-6	1,2,3,4,7,8-HxCDD	0.92	J B	7.6	0.39
57653-85-7	1,2,3,6,7,8-HxCDD	1.4	J	7.6	0.41
19408-74-3	1,2,3,7,8,9-HxCDD	3.1	J	7.6	0.36
70648-26-9	1,2,3,4,7,8-HxCDF	0.55	J B	7.6	0.055
57117-44-9	1,2,3,6,7,8-HxCDF	0.22	J B	7.6	0.055
72918-21-9	1,2,3,7,8,9-HxCDF	ND		7.6	0.046
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.6	0.044
35822-46-9	1,2,3,4,6,7,8-HpCDD	64	B	7.6	1.5
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.15	J B q	7.6	0.069
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.6	0.080
3268-87-9	OCDD	1600	B	15	1.7
39001-02-0	OCDF	0.49	J B q	15	0.059
41903-57-5	Total TCDD	16	B q	1.5	0.17
30402-14-3	Total TCDF	57	B q	1.5	0.20
36088-22-9	Total PeCDD	13		7.6	0.16
30402-15-4	Total PeCDF	0.83	J q	7.6	0.076
34465-46-8	Total HxCDD	51	B	7.6	0.39
55684-94-1	Total HxCDF	0.78	J B	7.6	0.050
37871-00-4	Total HpCDD	200	B	7.6	1.5
38998-75-3	Total HpCDF	0.15	J B q	7.6	0.074

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (8-10)
Lab Sample ID: 320-76788-17
Matrix: Solid
Lab File ID: 13AU2110D5_34.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:50
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.90(g)
Date Analyzed: 08/14/2021 18:16
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 39.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		25-164
89059-46-1	13C-2,3,7,8-TCDF	53		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	55		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	51		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	55		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	60		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	59		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	55		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	51		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	51		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	51		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	61		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	57		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	65		26-138
114423-97-1	13C-OCDD	73		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	78		35-197

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d
Lims ID: 320-76788-A-17-A
Client ID: 11215702-072321-BN-SJSB105 (8-10)
Sample Type: Client
Inject. Date: 14-Aug-2021 18:16:34 ALS Bottle#: 34 Worklist Smp#: 23
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-17-a 320-76788-a-17-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:55:39 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 14:06:16

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	33307492	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	28593628	0.75	1.6249	52.8	52.8	0.1184	0.1184	52.83	
2,3,7,8-TCDF	17.371	3168445	0.72	1.0239	10.8	10.8	0.0654	0.0654		
A Non-2,3,7,8-sub-TCDF	17.046	2285180	0.77	1.0239	7.962	7.805	0.0654	4.950		RQa
S Total TCDF					18.8	18.6	0.0654	0.0654		RQ
D 13C-2,3,7,8-TCDD	18.066	17159706	0.81	0.8993	57.3	57.3	0.1376	0.1376	57.29	
2,3,7,8-TCDD	18.097	569655	0.74	1.2541	2.647	2.647	0.0555	0.0555		M
$ 37Cl4-2,3,7,8-TCDD	18.081	11458105		1.1071	31.1	31.1	0.0441	0.0441	77.68	
A Non-2,3,7,8-sub-TCDD	17.499	564493	0.77	1.2541	2.714	2.623	0.0555	0.9841		RQMa
S Total TCDD					5.361	5.270	0.0555	0.0555		RQ
D 13C-1,2,3,7,8-PeCDF	22.381	20746612	1.59	1.2101	51.5	51.5	0.1432	0.1432	51.47	
1,2,3,7,8-PeCDF	22.408	32046	1.55	1.0611	0.1584	0.1456	0.0245	0.0245		RQM
D 13C-2,3,4,7,8-PeCDF	23.730	22530393	1.59	1.2395	54.6	54.6	0.1398	0.1398	54.57	
2,3,4,7,8-PeCDF	23.744	29183	1.63	1.0184	0.1272	0.1272	0.0255	0.0255		M
A F1 PeCDFs	20.093						0.0188	0.0188		
A Non-2,3,7,8-sub-PeCDF	23.241						0.0250	0.0632		RQU
S Total PeCDF					0.2856	0.2727	0.0250	0.0250		RQ
D 13C-1,2,3,7,8-PeCDD	24.453	13893251	1.63	0.7612	54.8	54.8	0.0769	0.0769	54.80	
1,2,3,7,8-PeCDD	24.453						0.0538	0.0538		
A Non-2,3,7,8-sub-PeCDD	23.349	622353	1.60	1.0484	4.273	4.273	0.0538	1.706		
S Total PeCDD					4.273	4.273	0.0538	0.0538		
D 13C-1,2,3,4,7,8-HxCDF	30.516	18082425	0.50	1.0837	54.7	54.7	0.3338	0.3338	54.71	
1,2,3,4,7,8-HxCDF	30.556	35683	1.08	1.0851	0.1819	0.1819	0.0181	0.0181		M
D 13C-1,2,3,6,7,8-HxCDF	30.702	17431641	0.51	1.1279	50.7	50.7	0.3207	0.3207	50.67	
1,2,3,6,7,8-HxCDF	30.742	14329	1.06	1.1260	0.0730	0.0730	0.0182	0.0182		Ma
D 13C-2,3,4,6,7,8-HxCDF	31.528	16406378	0.51	1.0637	50.6	50.6	0.3400	0.3400	50.57	
2,3,4,6,7,8-HxCDF	31.528						0.0144	0.0144		
D 13C-1,2,3,7,8,9-HxCDF	32.326	14921134	0.50	0.9676	50.6	50.6	0.3738	0.3738	50.56	
1,2,3,7,8,9-HxCDF	32.326						0.0152	0.0152		
A Non-2,3,7,8-sub-HxCDF	30.197						0.0163	0.0163		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.2549	0.2549	0.0165	0.0165		
* 13C-1,2,3,7,8,9-HxCDD	32.153	30501009	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	13365165	1.28	0.7334	59.7	59.7	0.4715	0.4715	59.75	
1,2,3,4,7,8-HxCDD	31.727	42985	1.12	1.0640	0.3023	0.3023	0.1283	0.1283		M
D 13C-1,2,3,6,7,8-HxCDD	31.820	15828737	1.24	0.8802	59.0	59.0	0.3929	0.3929	58.96	
1,2,3,6,7,8-HxCDD	31.834	71600	1.22	1.0001	0.4523	0.4523	0.1342	0.1342		M
1,2,3,7,8,9-HxCDD	32.140	168617	1.27	1.1325	1.020	1.020	0.1195	0.1195		
A Non-2,3,7,8-sub-HxCDD	30.882	2348563	1.21	1.0655	15.1	15.1	0.1270	11.5		M
S Total HxCDD					16.9	16.9	0.1273	0.1273		
D 13C-1,2,3,4,6,7,8-HpCDF	33.778	13391523	0.43	0.7730	56.8	56.8	0.7957	0.7957	56.80	
1,2,3,4,6,7,8-HpCDF	33.790	9186	1.04	1.4413	0.0582	0.0476	0.0225	0.0225		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	13997824	0.43	0.7008	65.5	65.5	0.8777	0.8777	65.49	
1,2,3,4,7,8,9-HpCDF	34.860						0.0263	0.0263		
A Non-2,3,7,8-sub-HpCDF	34.319						0.0243	0.0243		
S Total HpCDF					0.0582	0.0476	0.0244	0.0244		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	12133441	1.01	0.6472	61.5	61.5	0.3740	0.3740	61.46	
1,2,3,4,6,7,8-HpCDD	34.580	2765660	1.05	1.0943	20.8	20.8	0.4946	0.4946		
A Non-2,3,7,8-sub-HpCDD	34.301	5919319	1.04	1.0943	44.6	44.6	0.4946	44.6		
S Total HpCDD					65.4	65.4	0.4946	0.4946		
D 13C-OCDD	36.926	19921239	0.90	0.4472	146.1	146.1	0.2752	0.2752	73.03	
OCDF	36.974	22953	0.89	1.4382	0.1920	0.1602	0.0193	0.0193		RQM
OCDD	36.938	57695689	0.90	1.1070	523.2	523.2	0.5431	0.5431		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d
Lims ID: 320-76788-A-17-A
Client ID: 11215702-072321-BN-SJSB105 (8-10)
Sample Type: Client
Inject. Date: 14-Aug-2021 18:16:34 ALS Bottle#: 34 Worklist Smp#: 23
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-17-a 320-76788-a-17-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:55:39 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 14:06:16

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		14936595	3816777	2166	5415	1762		
333.9339	17.870	17.855	1		18370897	4613335	2006	5015	2300	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.341	1	0.971	12223635	2921260	3909	9772	747		
317.9389	17.356	17.341	1	0.971	16369993	3918973	2578	6445	1520	0.75(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.356	1	1.001	1327600	293843	832	2080	353		
305.8987	17.371	17.356	1	1.001	1840845	404108	999	2497	405	0.72(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQa
303.9016	15.965	17.046	-65	0.920	19688	6474	832	2080	8		
305.8987	15.965	17.046	-65	0.920	29478	7667	999	2497	8	0.67(0.65-0.89)	
303.9016	16.237	17.046	-48	0.936	37137	10087	832	2080	12		
	Empc Correction				29112	7263	832	2080	9		
305.8987	16.237	17.046	-48	0.936	37808	9433	999	2497	9	0.98(0.65-0.89)	
303.9016	16.479	17.046	-34	0.949	49874	12915	832	2080	16		
	Empc Correction				38715	10015	832	2080	12		
305.8987	16.464	17.046	-35	0.949	50280	13007	999	2497	13	0.99(0.65-0.89)	
303.9016	16.721	17.046	-19	0.963	53761	14106	832	2080	17		
305.8987	16.706	17.046	-20	0.963	76926	15472	999	2497	15	0.70(0.65-0.89)	
303.9016	16.993	17.046	-3	0.979	616653	152087	832	2080	183		
305.8987	16.993	17.046	-3	0.979	832620	207933	999	2497	208	0.74(0.65-0.89)	
303.9016	17.220	17.046	10	0.992	37655	7600	832	2080	9		
	Empc Correction				28791	6455	832	2080	8		
305.8987	17.205	17.046	10	0.991	37392	8384	999	2497	8	1.01(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.809	17.046	46	1.026	96235	20050	832	2080	24		
305.8987	17.809	17.046	46	1.026	134317	31297	999	2497	31	0.72(0.65-0.89)	
303.9016	19.200	17.046	129	1.106	106313	21896	832	2080	26		a
	Empc Correction				88486	18210	832	2080	22		
305.8987	19.200	17.046	129	1.106	114918	23650	999	2497	24	0.93(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	7696019	1733445	2166	5415	800		
333.9339	18.066	18.051	1	1.011	9463687	2159014	2006	5015	1076	0.81(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	18.097	18.066	2	1.002	241610	52002	579	1447	90		
321.8936	18.081	18.066	1	1.001	328045	76488	505	1262	151	0.74(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	18.081	18.066	1	1.012	11458105	2630414	1647	4117	1597		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	16.161	17.499	-80	0.895	21100	4651	579	1447	8		
	Empc Correction				17012	4799	579	1447	8		
321.8936	16.161	17.499	-80	0.895	22094	6233	505	1262	12	0.96(0.65-0.89)	
319.8965	16.388	17.499	-67	0.907	18761	4607	579	1447	8		
321.8936	16.388	17.499	-67	0.907	26037	6015	505	1262	12	0.72(0.65-0.89)	
319.8965	16.948	17.499	-33	0.938	98841	24484	579	1447	42		
321.8936	16.933	17.499	-34	0.937	112943	26948	505	1262	53	0.88(0.65-0.89)	
319.8965	17.552	17.499	3	0.972	10536	3424	579	1447	6		M
321.8936	17.552	17.499	3	0.972	12327	2324	505	1262	5	0.85(0.65-0.89)	
319.8965	17.840	17.499	20	0.987	44642	10980	579	1447	19		
321.8936	17.840	17.499	20	0.987	61438	16594	505	1262	33	0.73(0.65-0.89)	
319.8965	17.976	17.499	29	0.995	23531	5393	579	1447	9		M
	Empc Correction				12463	3881	579	1447	7		
321.8936	17.976	17.499	29	0.995	16187	5041	505	1262	10	1.45(0.65-0.89)	
319.8965	18.444	17.499	57	1.021	35323	7728	579	1447	13		
321.8936	18.444	17.499	57	1.021	52382	12081	505	1262	24	0.67(0.65-0.89)	
319.8965	18.686	17.499	71	1.034	14618	3841	579	1447	7		
	Empc Correction				10226	2624	579	1447	5		
321.8936	18.701	17.499	72	1.035	13281	3409	505	1262	7	1.10(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.252	12748320	2071488	3269	8172	634		
353.8970	22.381	22.367	1	1.252	7998292	1354305	2576	6440	526	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											RQM
339.8597	22.408	22.380	2	1.001	19479	3309	111	277	30		M
341.8567	22.421	22.380	2	1.002	15390	3017	245	612	12	1.27(1.32-1.78)	M
	Empc Correction				12567	2134	245	612	9		
13C-2,3,4,7,8-PeCDF											
351.9000	23.730	23.703	2	1.328	13819315	2104310	3269	8172	644		
353.8970	23.730	23.703	2	1.328	8711078	1319114	2576	6440	512	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	23.744	23.730	1	1.001	18107	3203	111	277	29		M
341.8567	23.730	23.730	0	1.000	11076	2324	245	612	9	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A F1 PeCDFs											
339.8597	20.093						94	235			
341.8567	20.093						174	435			
A Non-2,3,7,8-sub-PeCDF											U
339.8597	21.044	23.241	-132	0.940	8637	1961	111	277	18		
341.8567	21.085	23.241	-129	0.942	9625	2098	245	612	9	0.90(1.32-1.78)	
	Empc Correction				5572	1265	245	612	5		
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.426	2	1.368	8608972	1184107	1125	2812	1053		
369.8919	24.453	24.426	2	1.368	5284279	753274	849	2122	887	1.63(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453						282	705			
357.8516	24.453						155	387			
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.249	23.349	-126	0.869	65899	12046	282	705	43		
357.8516	21.249	23.349	-126	0.869	41505	7478	155	387	48	1.59(1.32-1.78)	
355.8546	21.999	23.349	-81	0.900	151408	28958	282	705	103		
357.8516	21.999	23.349	-81	0.900	97156	14739	155	387	95	1.56(1.32-1.78)	
355.8546	22.681	23.349	-40	0.928	35268	5965	282	705	21		
357.8516	22.667	23.349	-41	0.927	20714	3401	155	387	22	1.70(1.32-1.78)	
355.8546	23.021	23.349	-20	0.941	10807	1943	282	705	7		
357.8516	22.994	23.349	-21	0.940	6317	1479	155	387	10	1.71(1.32-1.78)	
355.8546	23.321	23.349	-2	0.954	19720	3399	282	705	12		
357.8516	23.294	23.349	-3	0.953	13826	2641	155	387	17	1.43(1.32-1.78)	
355.8546	23.485	23.349	8	0.960	99671	13945	282	705	49		
357.8516	23.499	23.349	9	0.961	60062	7373	155	387	48	1.66(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	6033598	1061519	3621	9052	293		
385.8610	30.529	30.503	2	0.949	12048827	2101723	6961	17402	302	0.50(0.43-0.59)	
1,2,3,4,7,8-HxCDF											M
373.8208	30.556	30.529	2	1.001	18497	3062	128	320	24		
375.8178	30.556	30.529	2	1.001	17186	2575	121	302	21	1.08(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	5903164	1031126	3621	9052	285		
385.8610	30.702	30.689	1	0.955	11528477	2008484	6961	17402	289	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											Ma
373.8208	30.742	30.702	2	1.001	7366	1679	128	320	13		M
375.8178	30.729	30.702	2	1.001	6963	1253	121	302	10	1.06(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.528	31.514	1	0.981	5518713	1234146	3621	9052	341		
385.8610	31.528	31.514	1	0.981	10887665	2471015	6961	17402	355	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						128	320			
375.8178	31.528						121	302			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.005	4968948	1169789	3621	9052	323		
385.8610	32.326	32.313	1	1.005	9952186	2336614	6961	17402	336	0.50(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.326						128	320			
375.8178	32.326						121	302			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						128	320			
375.8178	30.197						121	302			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.153	32.127	2		16842855	4053809	5670	14175	715		
403.8529	32.153	32.127	2		13658154	3260380	4447	11117	733	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.986	7490421	1997654	5670	14175	352		
403.8529	31.714	31.701	1	0.986	5874744	1552613	4447	11117	349	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.727	31.714	1	1.000	22694	6117	1100	2750	6		M
391.8127	31.714	31.714	0	1.000	20291	4893	838	2095	6	1.12(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.807	1	0.990	8775304	2007255	5670	14175	354		
403.8529	31.820	31.807	1	0.990	7053433	1603573	4447	11117	361	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.834	31.820	1	1.000	39390	10787	1100	2750	10		M
391.8127	31.834	31.820	1	1.000	32210	8733	838	2095	10	1.22(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.140	0	1.013	94285	16472	1100	2750	15		
391.8127	32.153	32.140	1	1.014	74332	12539	838	2095	15	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											M
389.8157	29.558	30.882	-79	0.929	978339	105927	1100	2750	96		
391.8127	29.571	30.882	-78	0.929	806278	94559	838	2095	113	1.21(1.05-1.43)	
389.8157	30.982	30.882	6	0.974	307943	54598	1100	2750	50		M
391.8127	30.969	30.882	5	0.973	256003	47211	838	2095	56	1.20(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.778	33.754	1	1.051	4009427	1186869	5665	14162	210		
419.8220	33.778	33.754	1	1.051	9382096	2725592	12332	30830	221	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7818	33.790	33.766	1	1.000	6731	2061	364	910	6		M
	Empc Correction				4683	2134	364	910	6		
409.7789	33.778	33.766	1	1.000	4503	2052	143	357	14	1.49(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.847	1	1.084	4227204	1106835	5665	14162	195		
419.8220	34.860	34.847	1	1.084	9770620	2555312	12332	30830	207	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860						364	910			
409.7789	34.860						143	357			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						364	910			
409.7789	34.319						143	357			

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.556	1	1.075	6083518	1703215	3619	9047	471		
437.8140	34.568	34.556	1	1.075	6049923	1673574	3464	8660	483	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.568	1	1.000	1414106	389314	3593	8982	108		
425.7737	34.580	34.568	1	1.000	1351554	370499	3718	9295	100	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.984	3012001	867502	3593	8982	241		
425.7737	34.021	34.301	-17	0.984	2907318	842772	3718	9295	227	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.914	1	1.148	9432991	2279334	1343	3357	1697		
471.7750	36.926	36.914	1	1.148	10488248	2535902	2258	5645	1123	0.90(0.76-1.02)	
OCDF											RQM
441.7428	36.974	37.010	-2	1.001	10809	1585	110	275	14		M
443.7399	36.962	37.010	-3	1.001	16700	2628	158	395	17	0.65(0.76-1.02)	
	Empc Correction				12144	1780	158	395	11		
OCDD											
457.7377	36.938	36.926	1	1.000	27249882	6638056	2720	6800	2440		
459.7348	36.938	36.926	1	1.000	30445807	7404972	3070	7675	2412	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d
Lims ID: 320-76788-A-17-A
Client ID: 11215702-072321-BN-SJSB105 (8-10)
Inject. Date: 14-Aug-2021 18:16:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 23

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	28593628	6840233

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	28593628	6840233

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.965	19688	6474	29478	7667	0.1679	0.67	
16.237	37137	10087	37808	9433	0.2560	0.98	RQ
16.237	29112	7263	37808	9433	0.2286		Empc Correction
16.479	49874	12915	50280	13007	0.3421	0.99	RQ
16.479	38715	10015	50280	13007	0.3040		Empc Correction
16.721	53761	14106	76926	15472	0.4464	0.70	
16.993	616653	152087	832620	207933	4.95	0.74	
17.220	37655	7600	37392	8384	0.2563	1.01	RQ
17.220	28791	6455	37392	8384	0.2261		Empc Correction
17.809	96235	20050	134317	31297	0.7875	0.72	
19.200	106313	21896	114918	23650	0.7556	0.93	RQa
19.200	88486	18210	114918	23650	0.6947		Empc Correction
Signal Totals:							
	971441	234660	1313739	316843			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2331055	562058				0.77	RQa
	2285180	551503					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.962 = (2331055 * 100.000) / (28593628 * 1.024)
Empc Amount: 7.805 = (2285180 * 100.000) / (28593628 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Lims ID:	320-76788-A-17-A		
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Inject. Date:	14-Aug-2021 18:16:34	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	23

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	17159706	3892459

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	17159706	3892459

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.161	21100	4651	22094	6233	0.2007	0.96	RQ
16.161	17012	4799	22094	6233	0.1817		Empc Correction
16.388	18761	4607	26037	6015	0.2082	0.72	
16.948	98841	24484	112943	26948	0.9841	0.88	
17.552	10536	3424	12327	2324	0.1062	0.85	M
17.840	44642	10980	61438	16594	0.4929	0.73	
17.976	23531	5393	16187	5041	0.1846	1.45	RQMa
17.976	12463	3881	16187	5041	0.1331		Empc Correction
18.444	35323	7728	52382	12081	0.4075	0.67	
18.686	14618	3841	13281	3409	0.1296	1.10	RQ
18.686	10226	2624	13281	3409	0.1092		Empc Correction
Signal Totals:							
	247804	62527	316689	78645			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	584041	143753				0.84	RQMa
	564493	141172					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.714 = (584041 * 100.000) / (17159706 * 1.254)

Empc Amount: 2.623 = (564493 * 100.000) / (17159706 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Lims ID:	320-76788-A-17-A		
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Inject. Date:	14-Aug-2021 18:16:34	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	23

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	20746612	3425793
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	22530393	3423424

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	21638502	3424608

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.044	8637	1961	9625	2098	0.0812	0.90	RQ
21.044	8637	1961	5572	1265	0.0632		Empc Correction

Compound is Marked ND

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d
Lims ID: 320-76788-A-17-A
Client ID: 11215702-072321-BN-SJSB105 (8-10)
Inject. Date: 14-Aug-2021 18:16:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 23

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	13893251	1937381

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	13893251	1937381

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	65899	12046	41505	7478	0.7374	1.59	
21.999	151408	28958	97156	14739	1.71	1.56	
22.681	35268	5965	20714	3401	0.3843	1.70	
23.021	10807	1943	6317	1479	0.1176	1.71	
23.321	19720	3399	13826	2641	0.2303	1.43	
23.485	99671	13945	60062	7373	1.10	1.66	
Signal Totals:							
	382773	66256	239580	37111			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	622353	103367				1.60	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.273 = (622353 * 100.000) / (13893251 * 1.048)

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d
Lims ID: 320-76788-A-17-A
Client ID: 11215702-072321-BN-SJSB105 (8-10)
Inject. Date: 14-Aug-2021 18:16:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 23

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	13365165	3550267
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	15828737	3610828
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	14596951	3580547

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.558	978339	105927	806278	94559	11.5	1.21	
30.982	307943	54598	256003	47211	3.63	1.20	M
Signal Totals:							
	1286282	160525	1062281	141770			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2348563	302295				1.21	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 15.100 = (2348563 * 100.000) / (14596951 * 1.066)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d
Lims ID: 320-76788-A-17-A
Client ID: 11215702-072321-BN-SJSB105 (8-10)
Inject. Date: 14-Aug-2021 18:16:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 23

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	12133441	3376789

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	12133441	3376789

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	3012001	867502	2907318	842772	44.6	1.04	
Signal Totals:							
	3012001	867502	2907318	842772			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5919319	1710274				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 44.581 = (5919319 * 100.000) / (12133441 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.08
Area: 344226
Amount: 2.722245
Amount Units: pg/ul

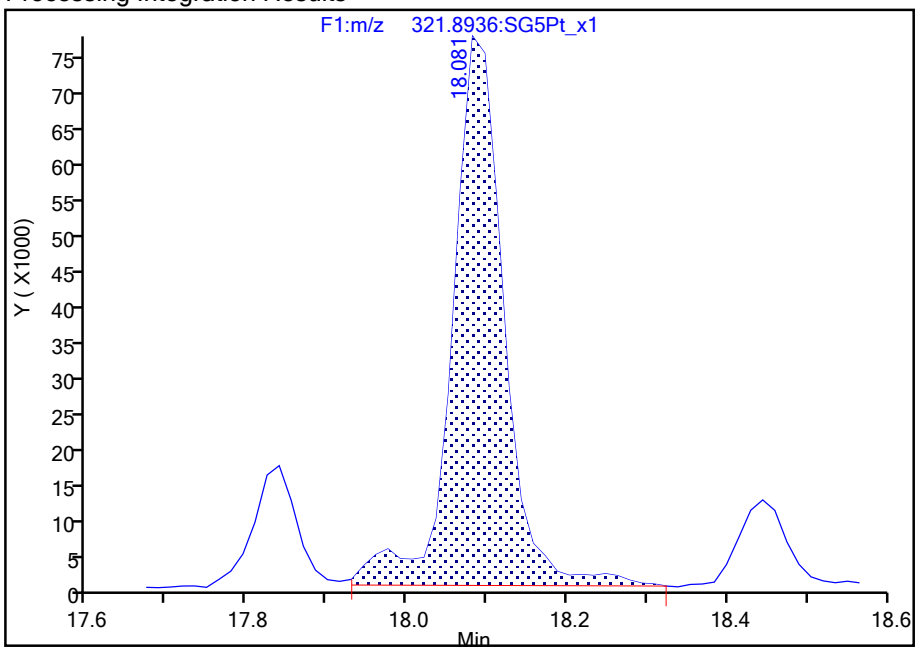

Manual Integration Results

RT: 18.08
Area: 328045
Amount: 2.647055
Amount Units: pg/ul

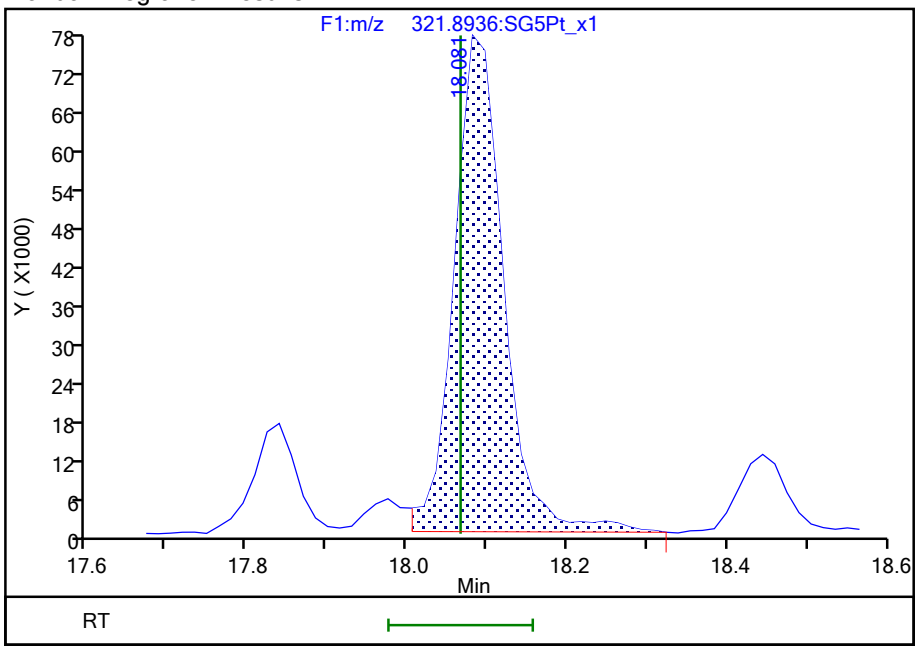

Reviewer: dadunj, 18-Aug-2021 09:53:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779952

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.80- 19.20)

Signal: 1

Processing Integration Results

RT = 17.552 Area = 13831

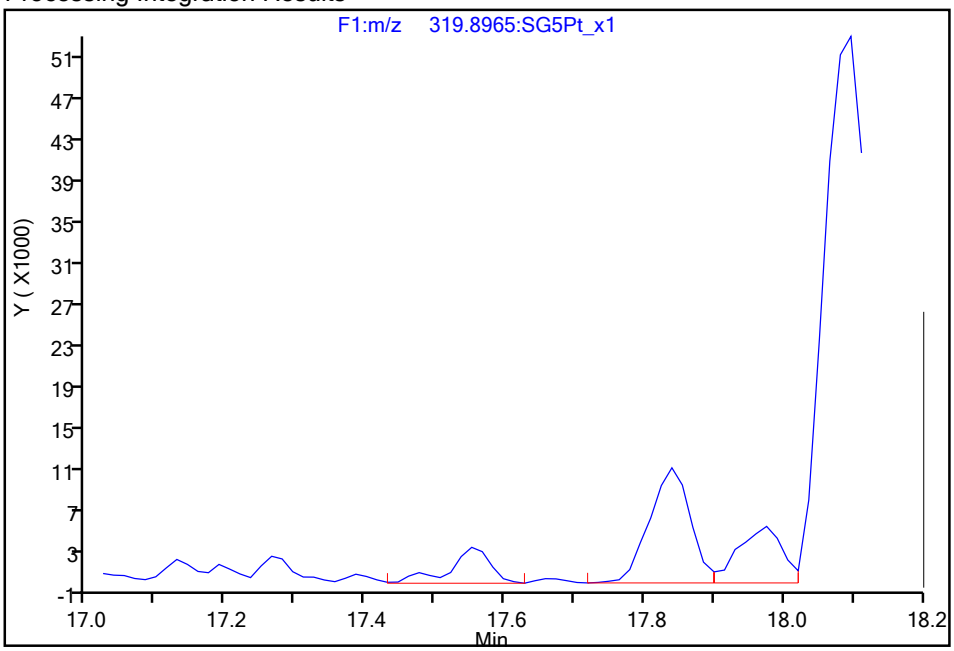

Manual Integration Results

RT = 17.552 Area = 10536 M

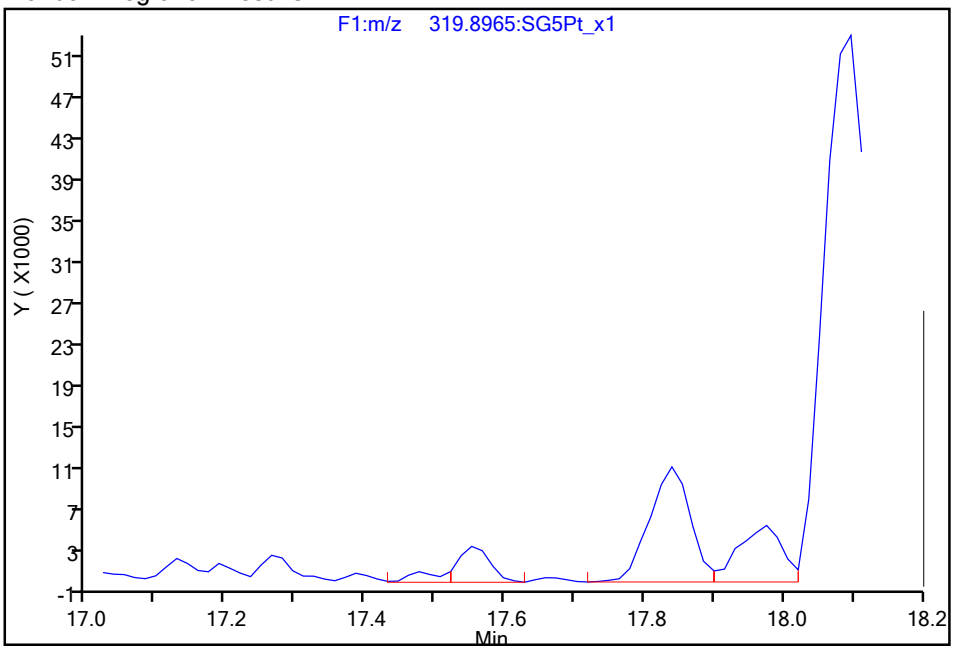

Reviewer: dadunj, 18-Aug-2021 09:55:14

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.80- 19.20)

Signal: 1

Processing Integration Results

RT = 17.976 Area = 23531

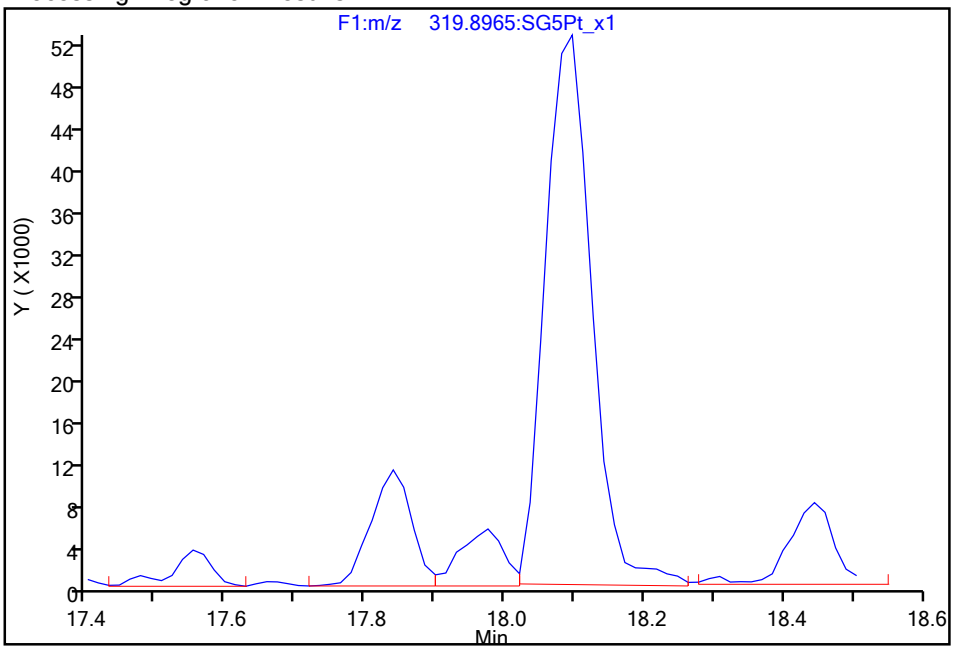

Manual Integration Results

RT = 17.976 Area = 23531

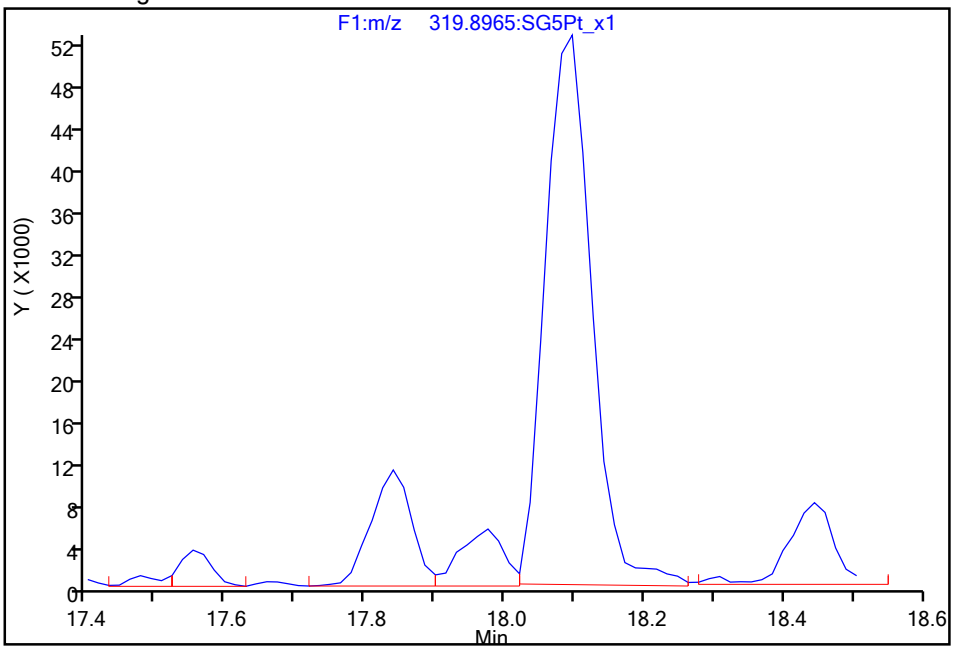

Reviewer: dadunj, 18-Aug-2021 09:55:14

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

779954

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.41
Area: 23211
Amount: 0.180586
Amount Units: pg/ul

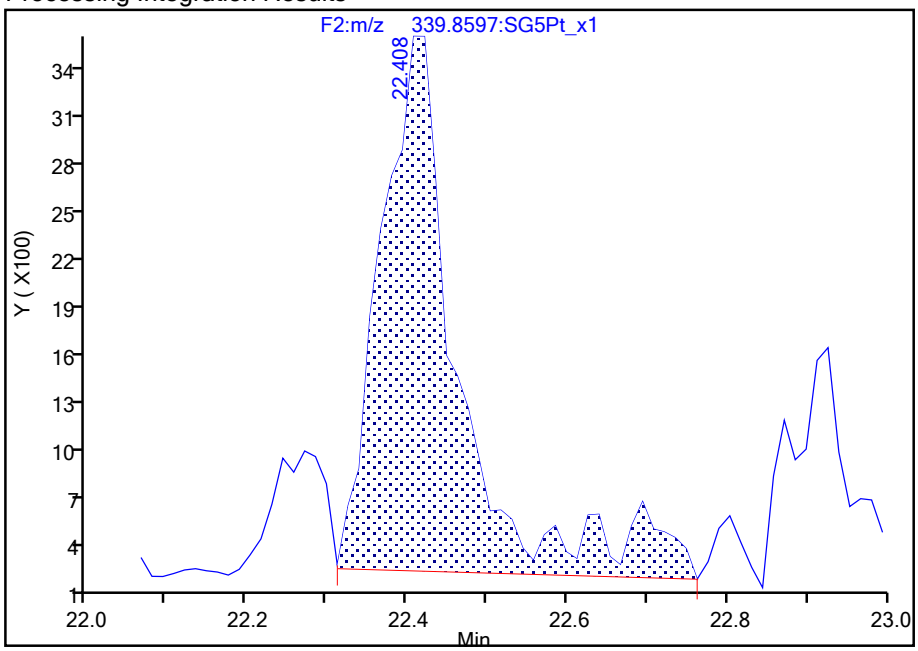

Manual Integration Results

RT: 22.41
Area: 19479
Amount: 0.158388
Amount Units: pg/ul

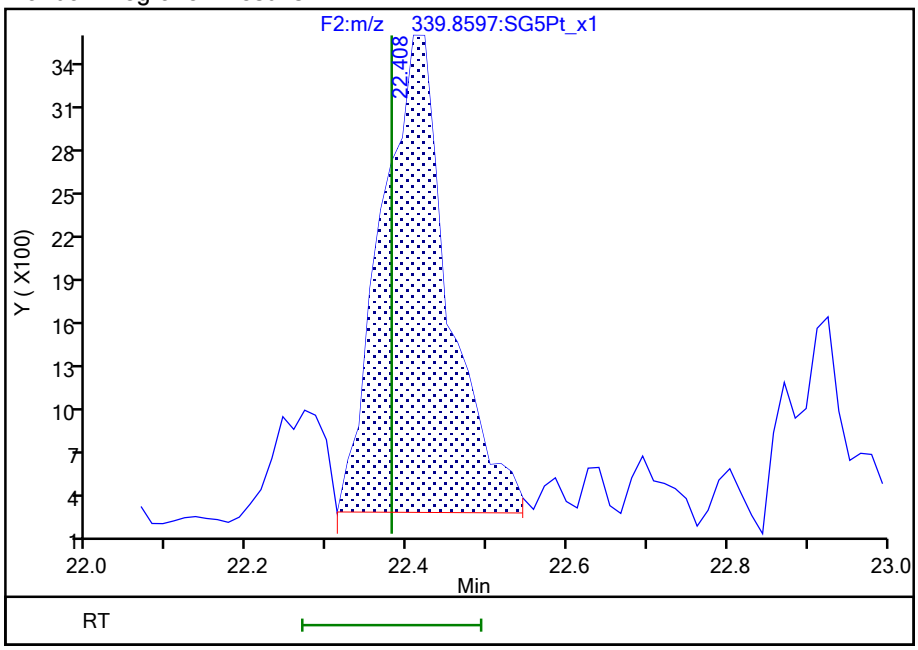

Reviewer: dadunj, 18-Aug-2021 09:53:51

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.42
Area: 16545
Amount: 0.180586
Amount Units: pg/ul

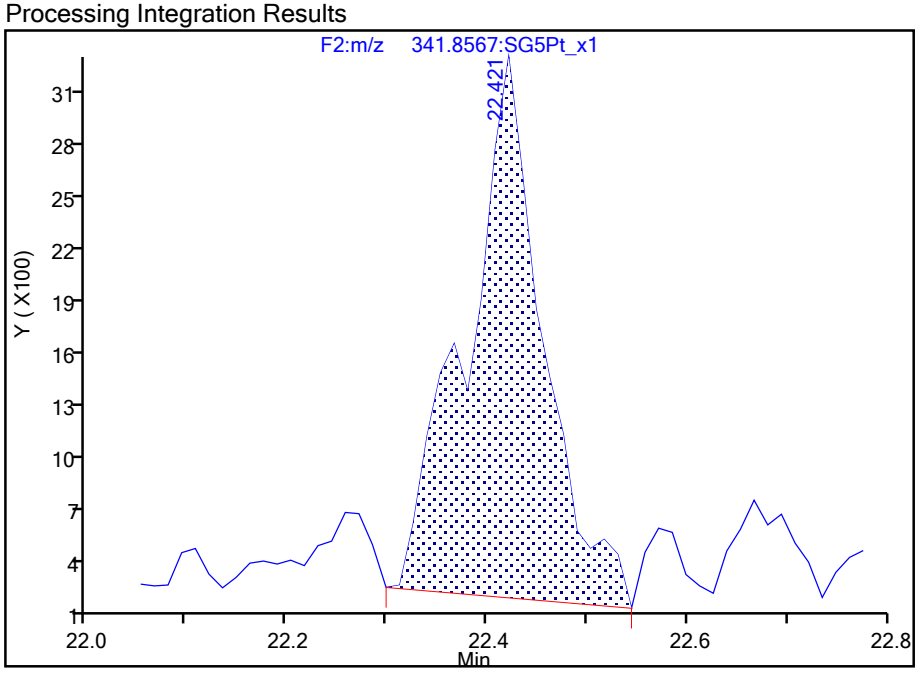

Manual Integration Results

RT: 22.42
Area: 15390
Amount: 0.158388
Amount Units: pg/ul

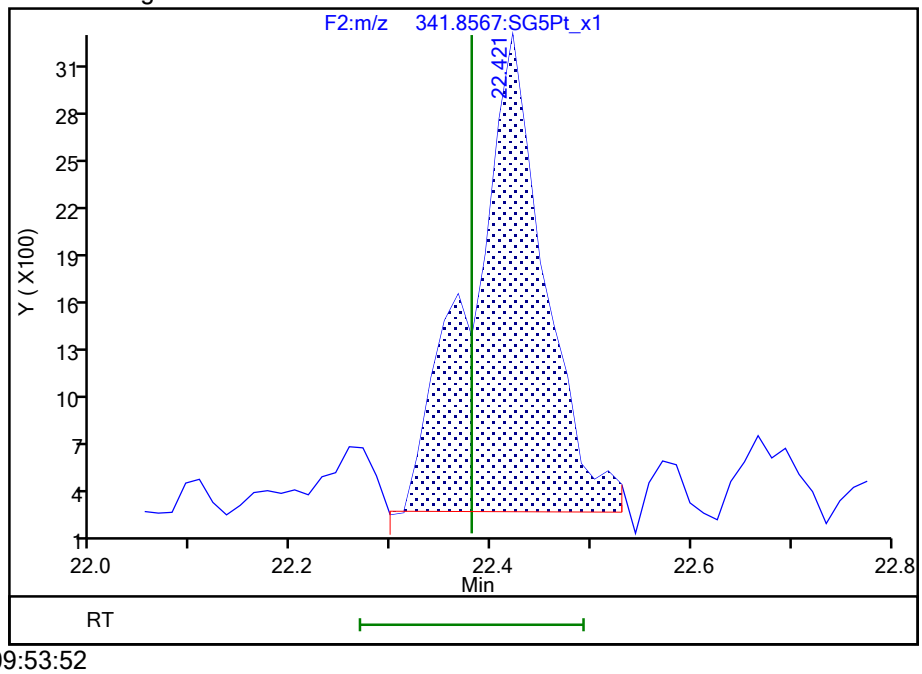

Reviewer: dadunj, 18-Aug-2021 09:53:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 23.74
Area: 20256
Amount: 0.136550
Amount Units: pg/ul

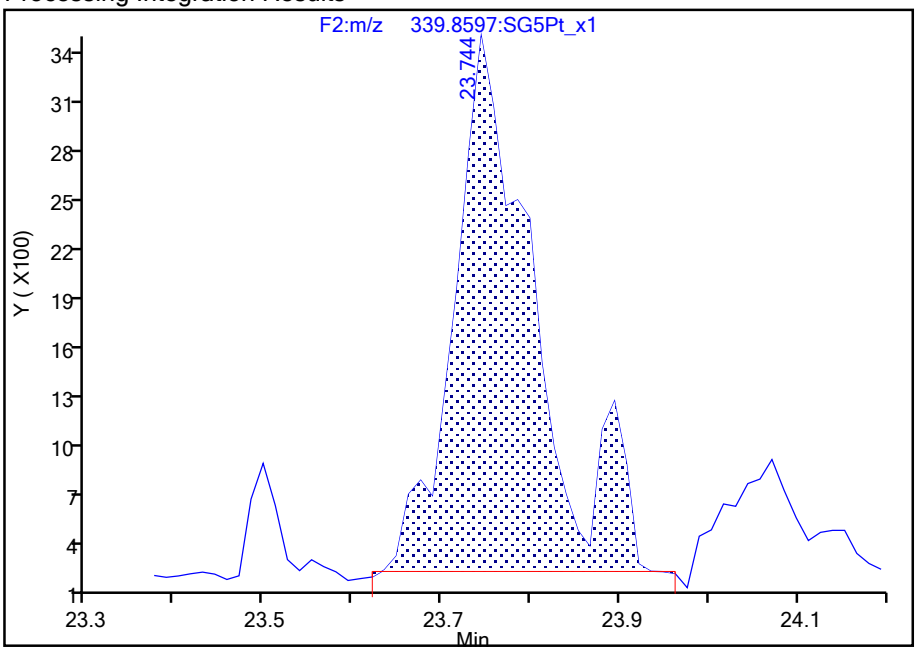

Manual Integration Results

RT: 23.74
Area: 18107
Amount: 0.127185
Amount Units: pg/ul

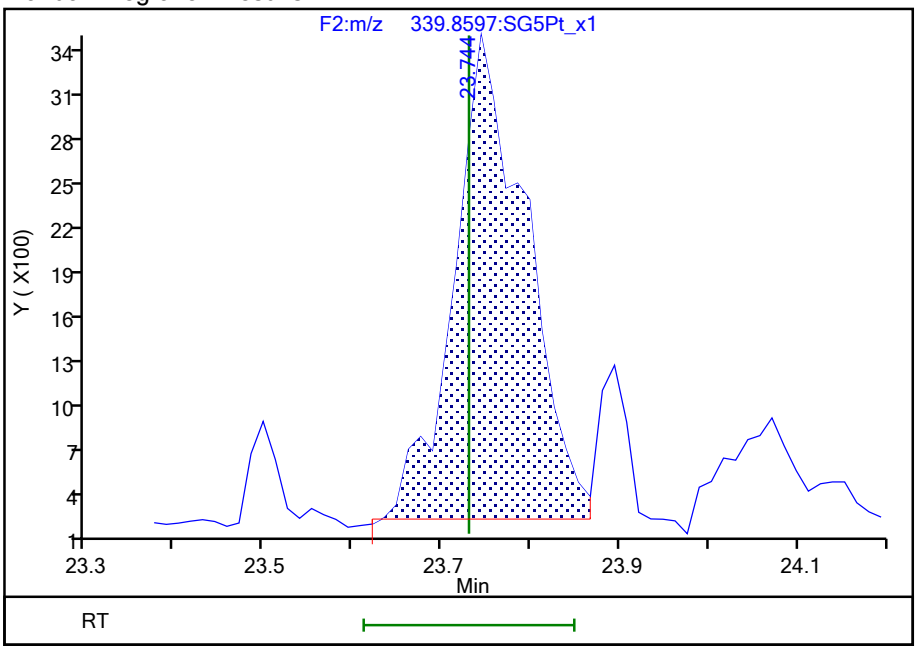

Reviewer: dadunj, 18-Aug-2021 09:53:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 2

Processing Integration Results

RT: 30.56
Area: 24150
Amount: 0.217346
Amount Units: pg/ul

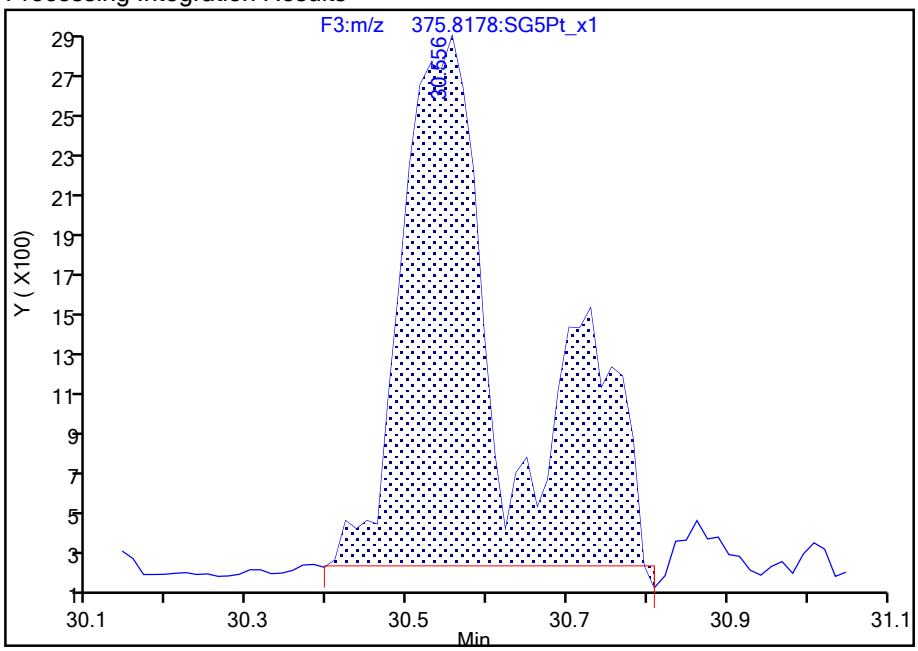

Manual Integration Results

RT: 30.56
Area: 17186
Amount: 0.181855
Amount Units: pg/ul

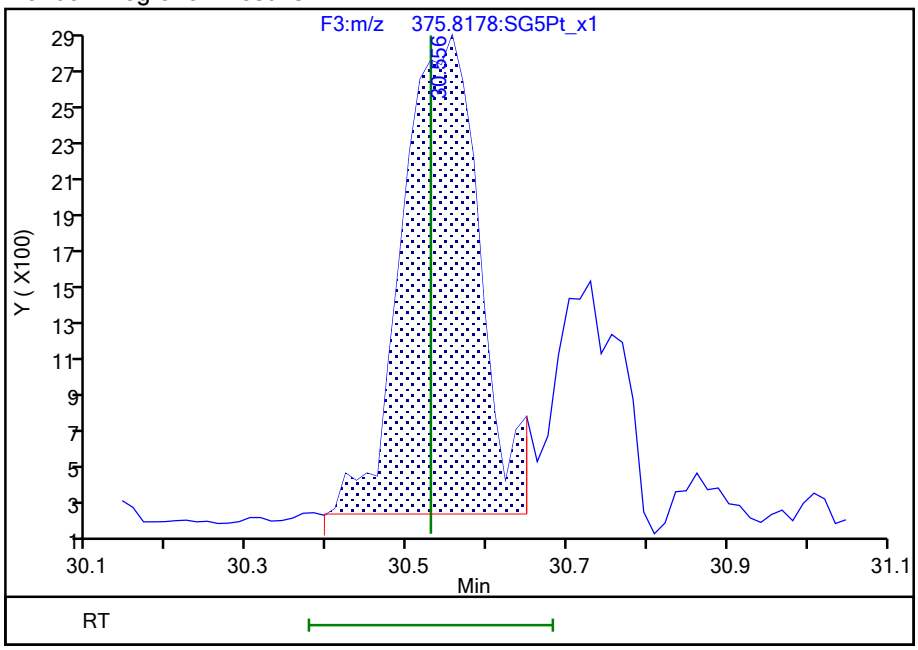

Reviewer: bennettd, 17-Aug-2021 14:05:00

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

779958

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 30.56
Area: 24150
Amount: 0.217274
Amount Units: pg/ul

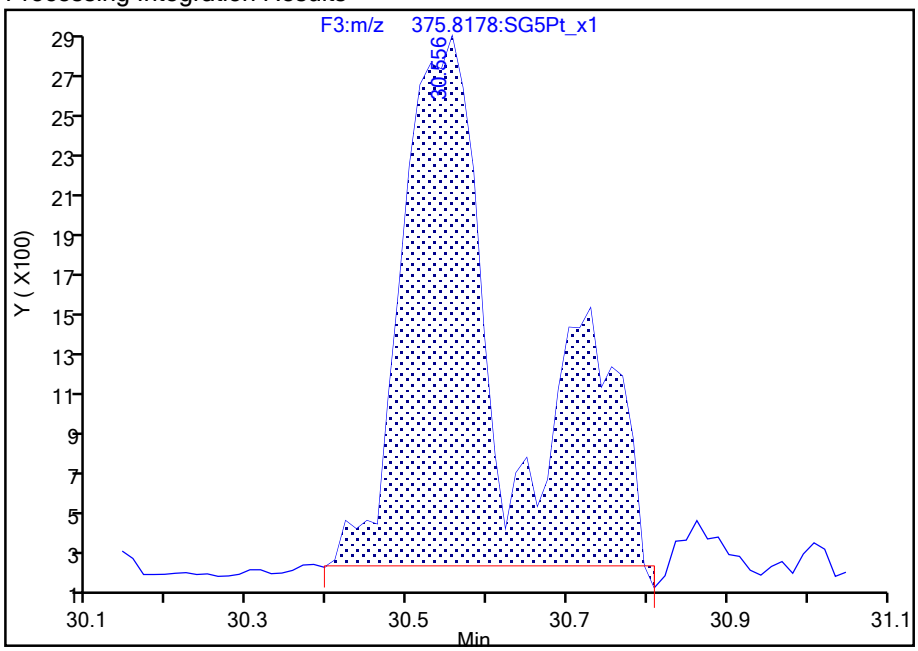

Manual Integration Results

RT: 30.73
Area: 6963
Amount: 0.073002
Amount Units: pg/ul

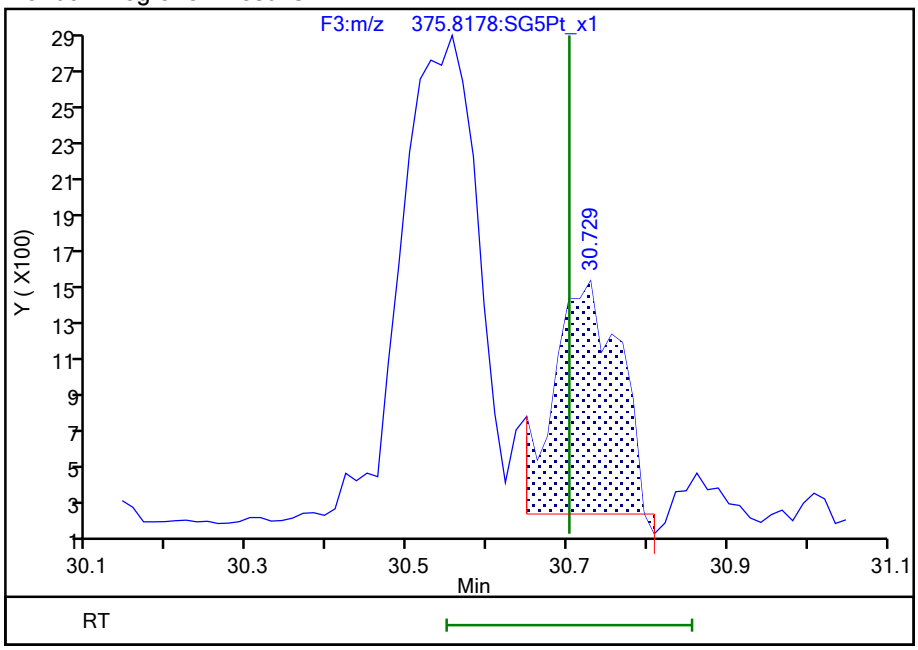

Reviewer: bennettd, 17-Aug-2021 14:05:00

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

779959

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.56
Area: 18497
Amount: 0.217274
Amount Units: pg/ul

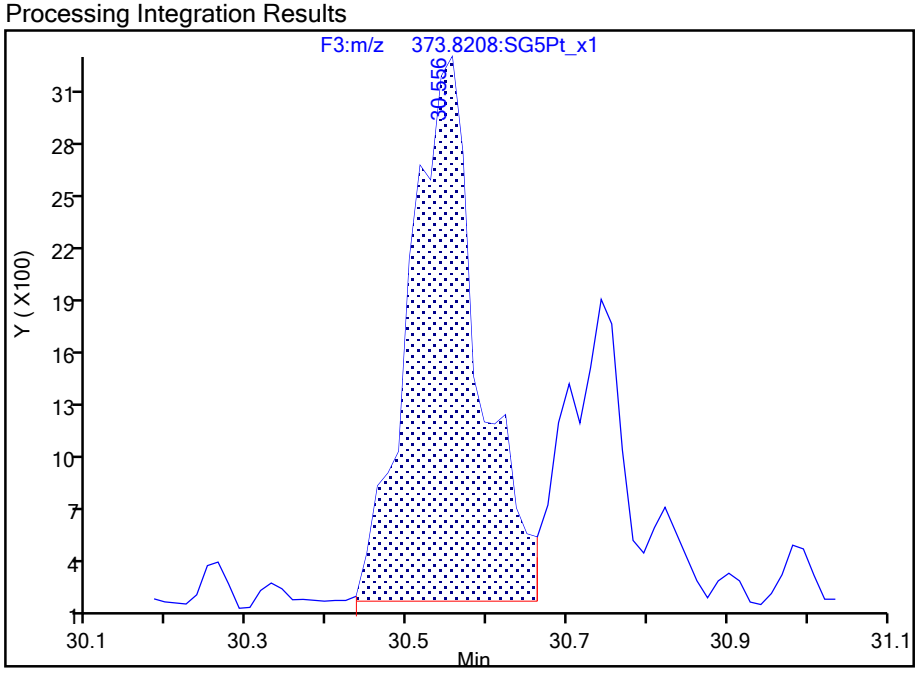

Manual Integration Results

RT: 30.74
Area: 7366
Amount: 0.073002
Amount Units: pg/ul

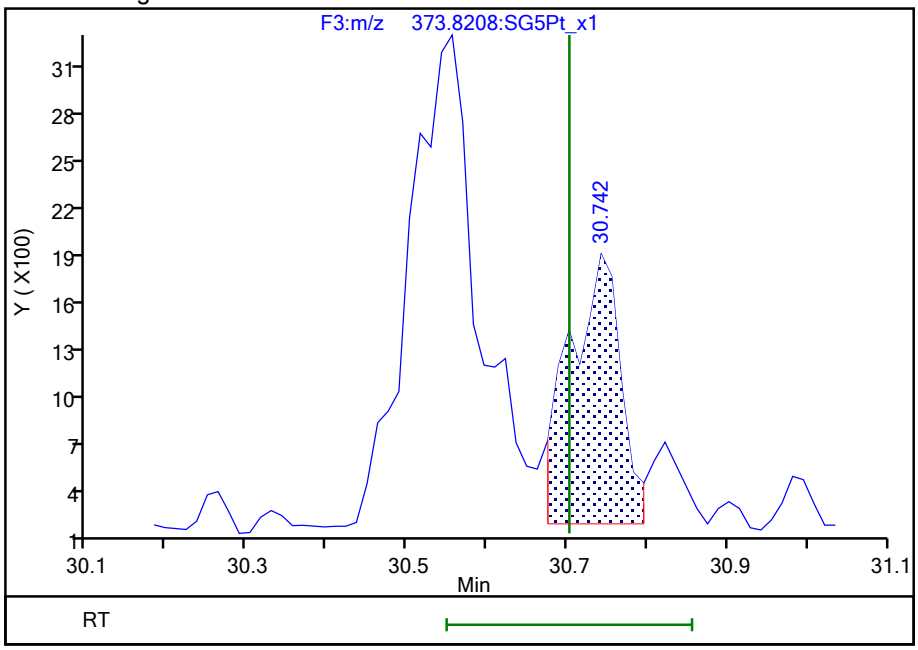

Reviewer: dadunj, 18-Aug-2021 09:54:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

779960

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.83
Area: 29704
Amount: 0.577983
Amount Units: pg/ul

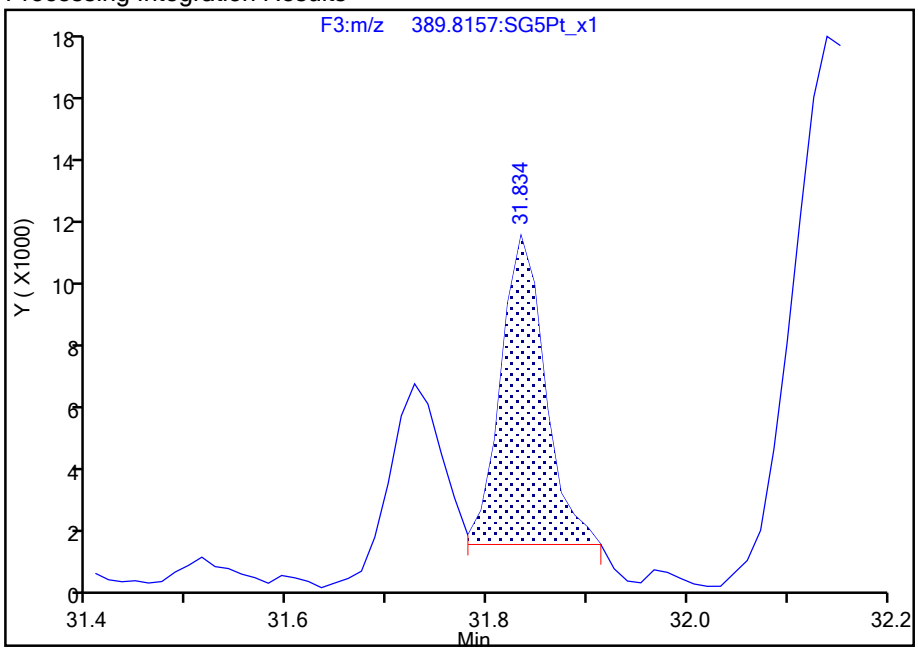

Manual Integration Results

RT: 31.73
Area: 22694
Amount: 0.302264
Amount Units: pg/ul

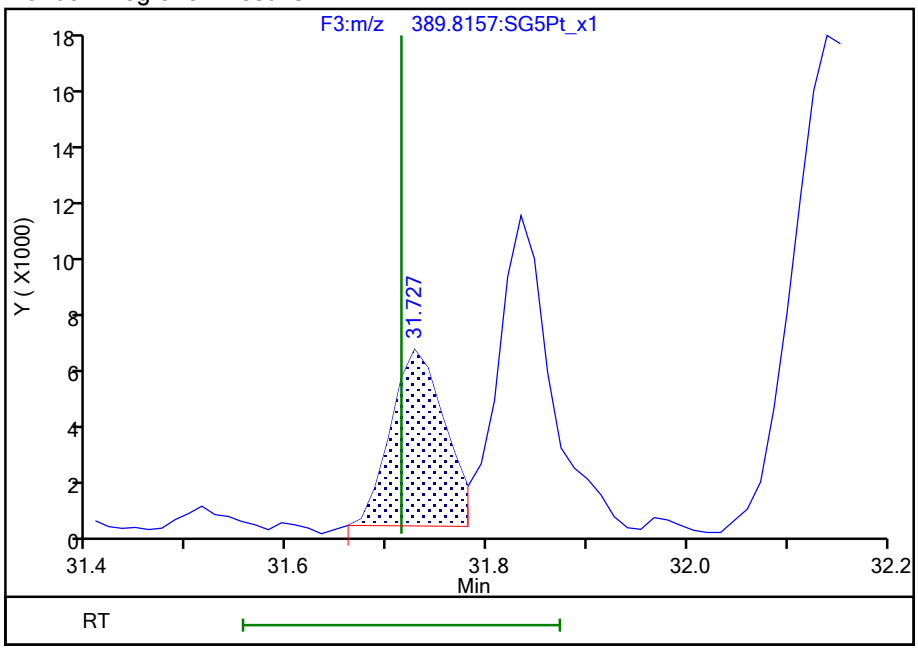

Reviewer: bennettd, 17-Aug-2021 14:05:50
Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

779961

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.83
Area: 52491
Amount: 0.577983
Amount Units: pg/ul

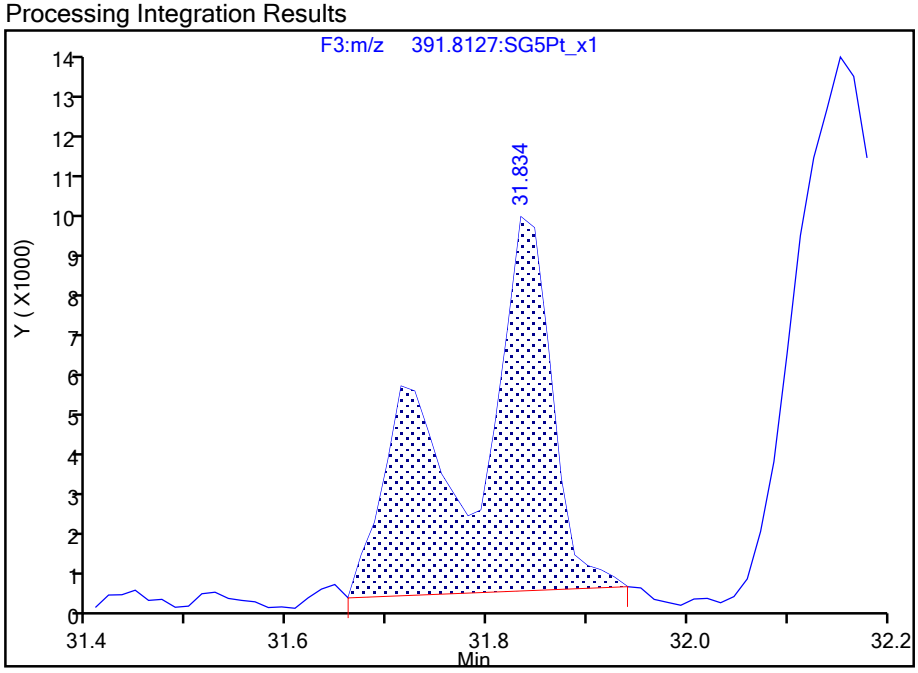

Manual Integration Results

RT: 31.71
Area: 20291
Amount: 0.302264
Amount Units: pg/ul

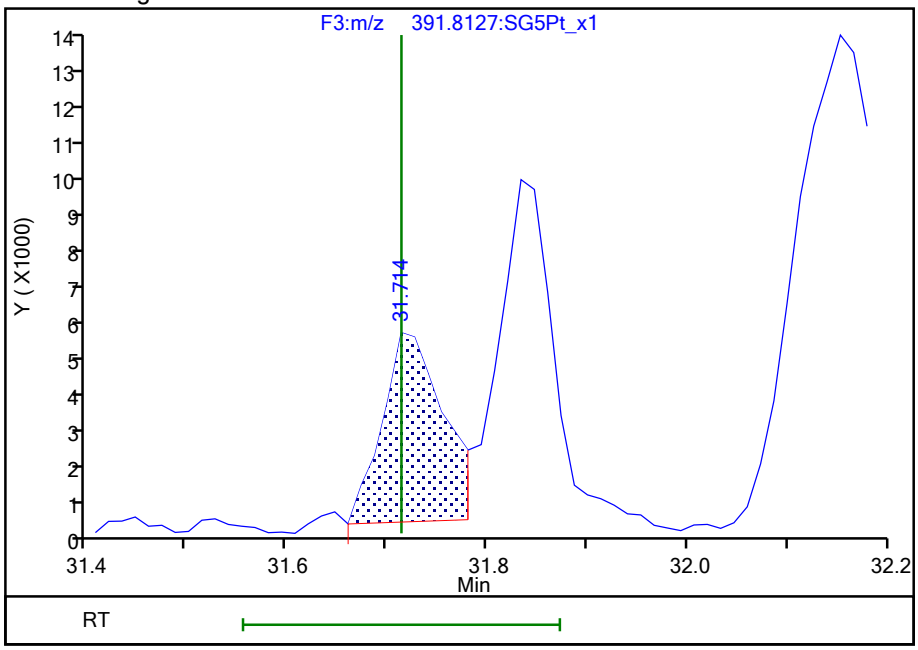

Reviewer: bennettd, 17-Aug-2021 14:05:54

Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

779962

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.83
Area: 29704
Amount: 0.519236
Amount Units: pg/ul

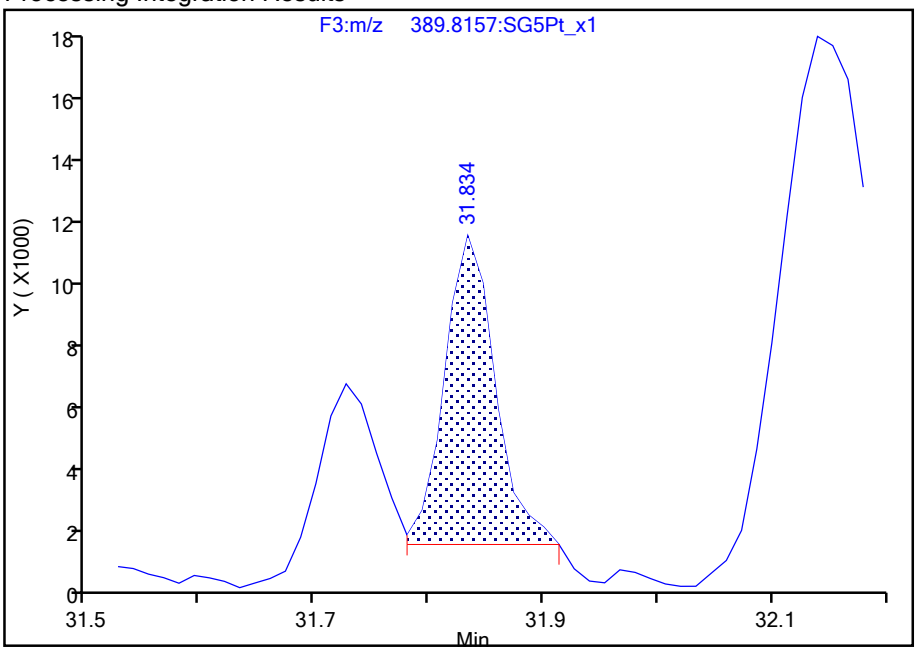

Manual Integration Results

RT: 31.83
Area: 39390
Amount: 0.452306
Amount Units: pg/ul

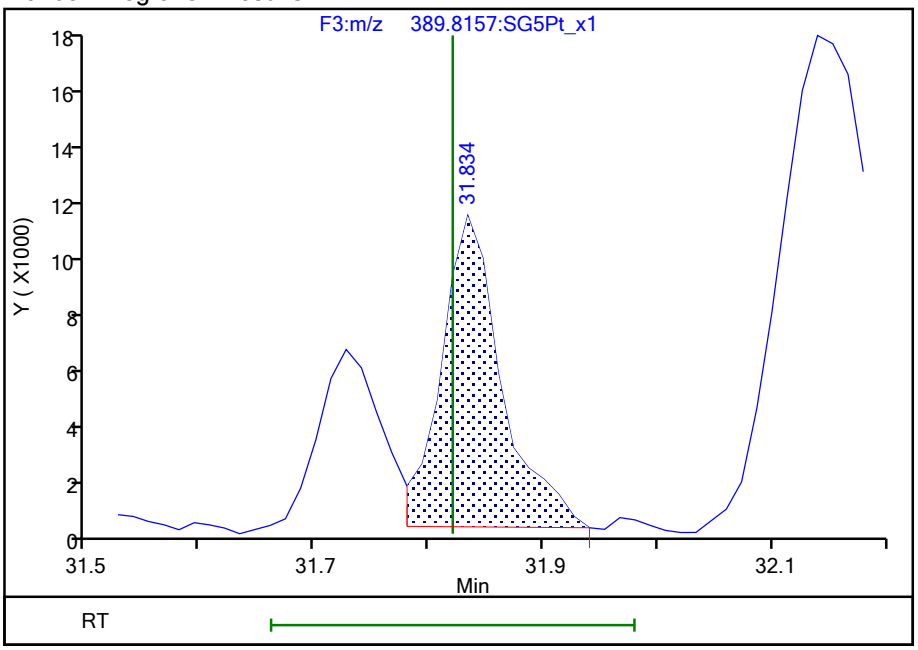

Reviewer: bennettd, 17-Aug-2021 14:05:50

Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

779963

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.83
Area: 52491
Amount: 0.519236
Amount Units: pg/ul

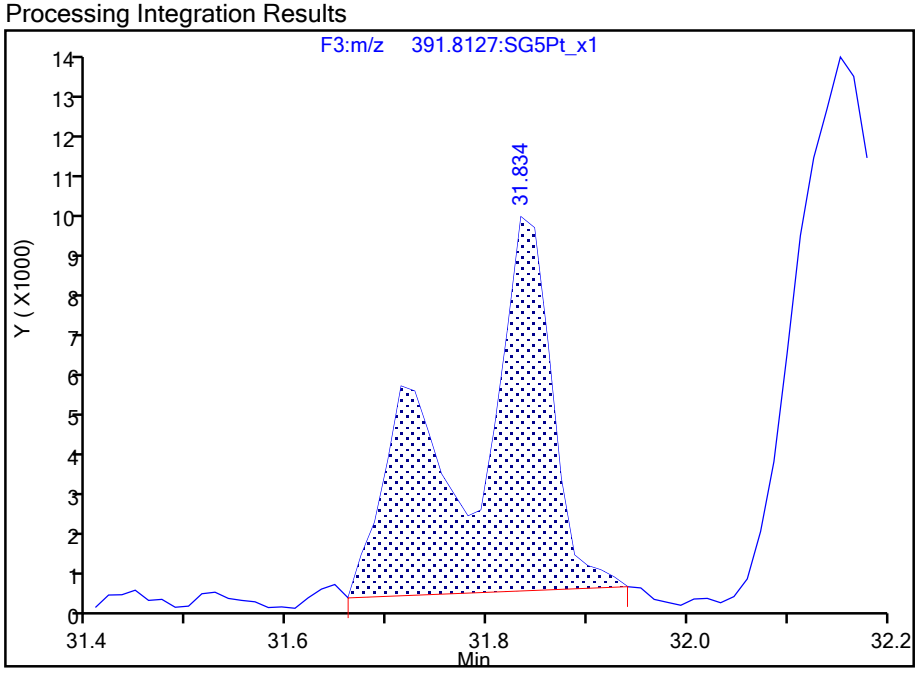

Manual Integration Results

RT: 31.83
Area: 32210
Amount: 0.452306
Amount Units: pg/ul

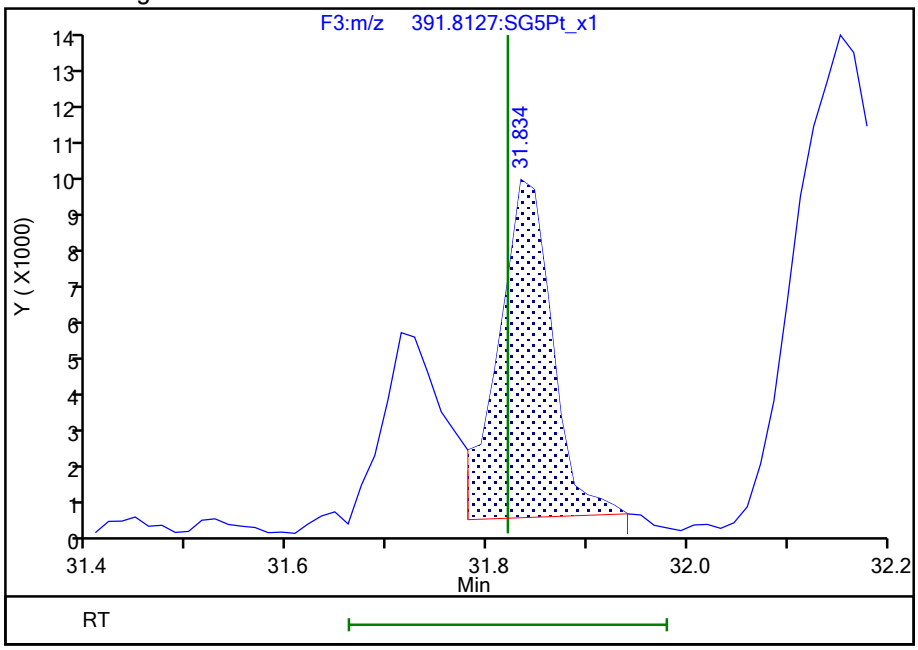

Reviewer: bennettd, 17-Aug-2021 14:05:54

Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (29.36- 32.41)

Signal: 1

Processing Integration Results

RT = 30.982 Area = 345185

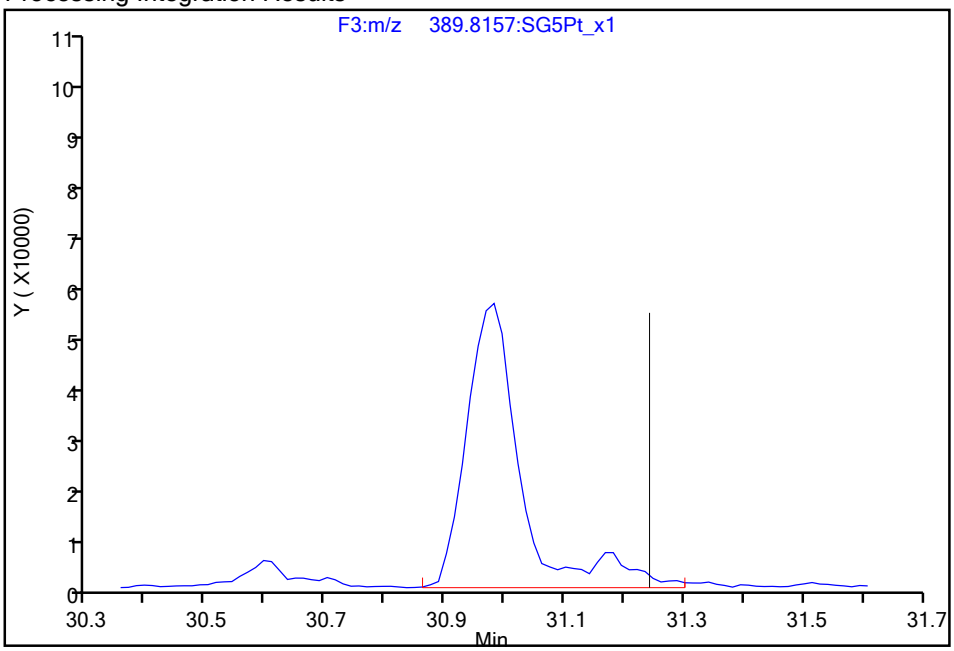

Manual Integration Results

RT = 30.982 Area = 307943 M

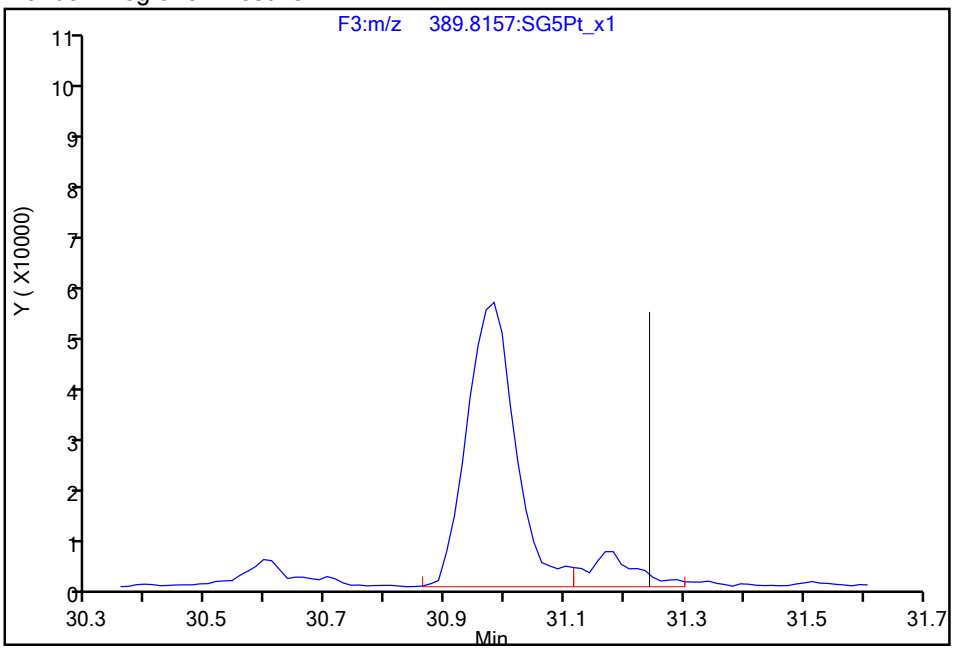

Reviewer: dadunj, 18-Aug-2021 09:54:33

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.79
Area: 8201
Amount: 0.070892
Amount Units: pg/ul

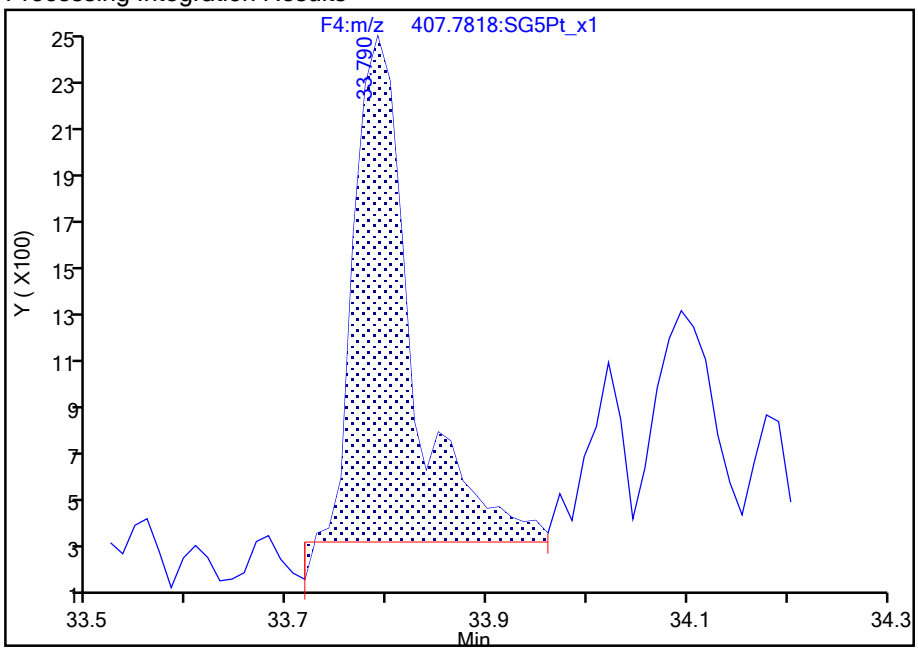

Manual Integration Results

RT: 33.79
Area: 6731
Amount: 0.058204
Amount Units: pg/ul

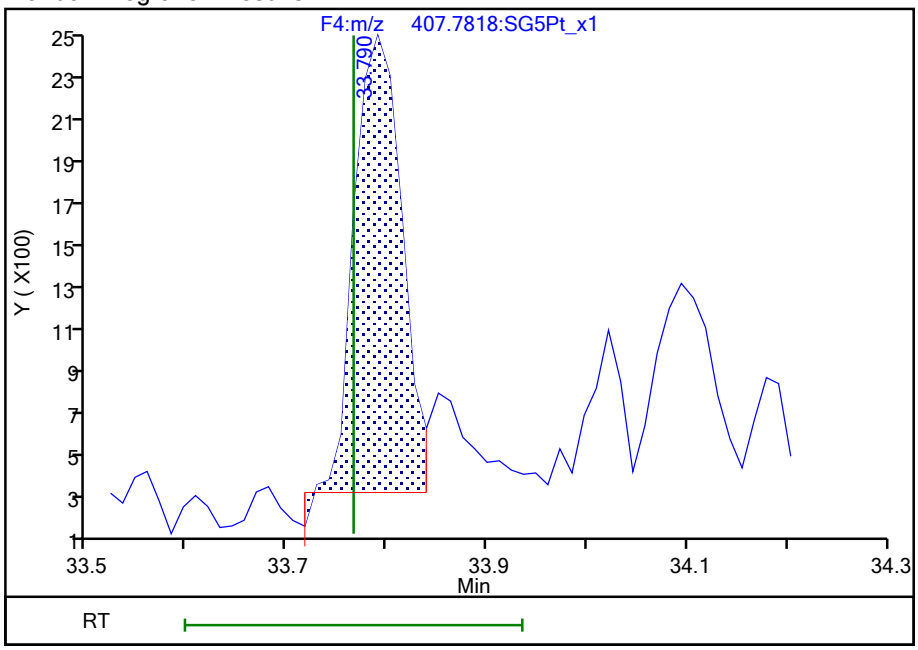

Reviewer: dadunj, 18-Aug-2021 09:54:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.78
Area: 5482
Amount: 0.070892
Amount Units: pg/ul

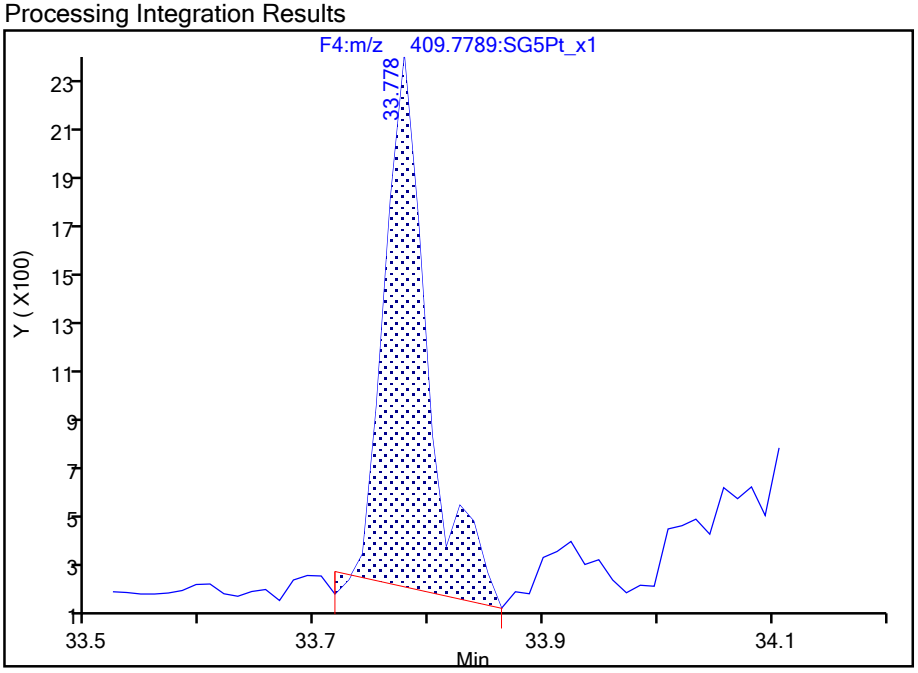

Manual Integration Results

RT: 33.78
Area: 4503
Amount: 0.058204
Amount Units: pg/ul

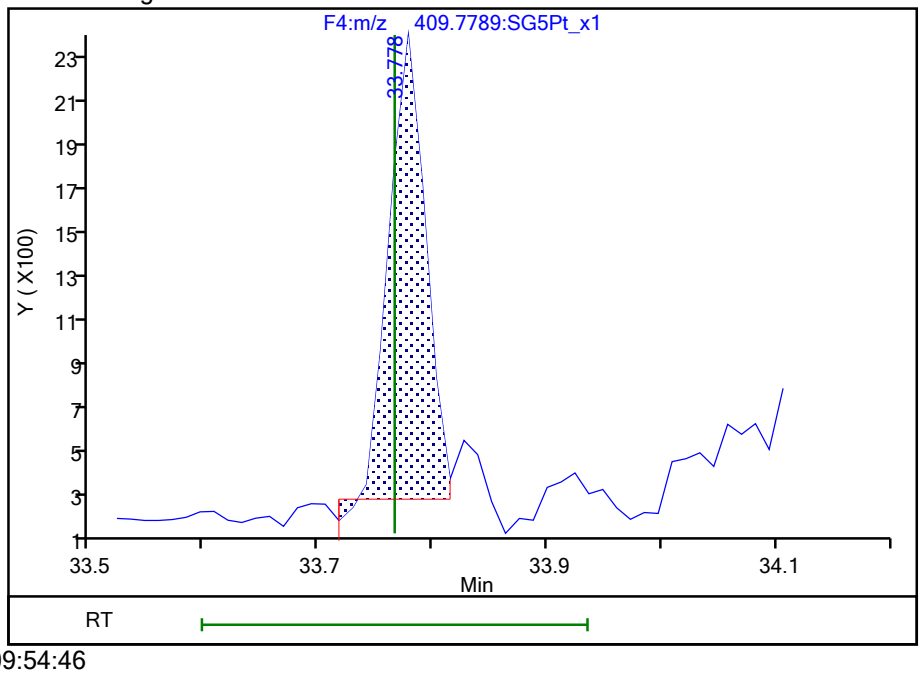

Reviewer: dadunj, 18-Aug-2021 09:54:46

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d				
Injection Date:	14-Aug-2021 18:16:34	Instrument ID:	10D5		
Lims ID:	320-76788-A-17-A	Lab Sample ID:	320-76788-17		
Client ID:	11215702-072321-BN-SJSB105 (8-10)				
Operator ID:	DB	ALS Bottle#:	34	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.97
Area: 12702
Amount: 0.205250
Amount Units: pg/ul

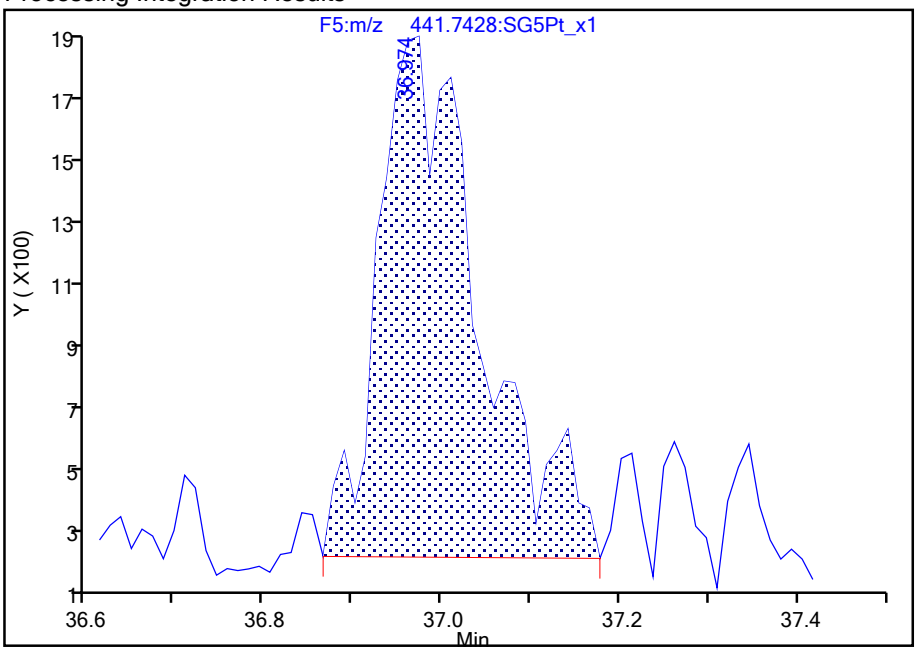

Manual Integration Results

RT: 36.97
Area: 10809
Amount: 0.192035
Amount Units: pg/ul

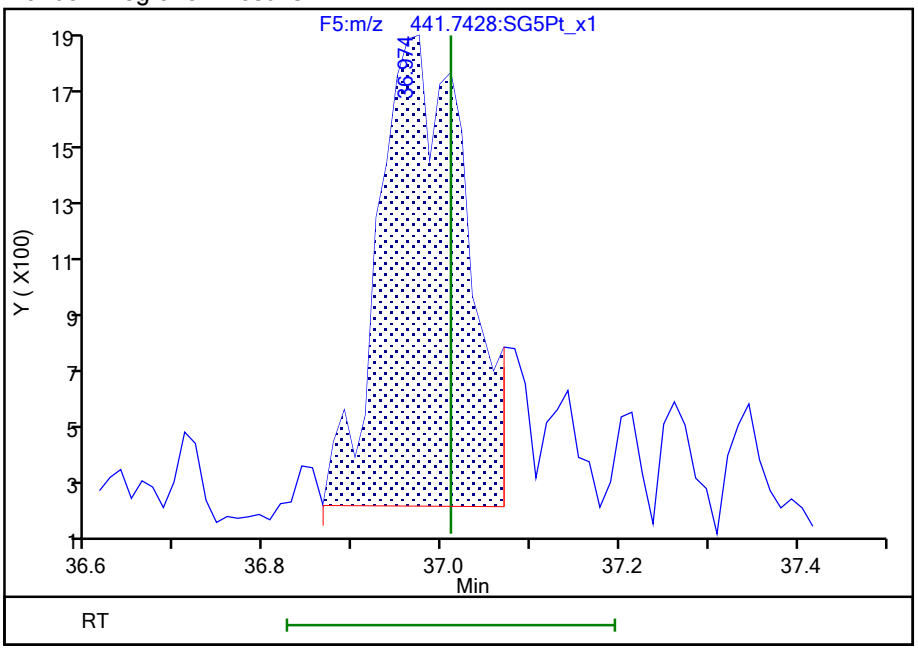

Reviewer: dadunj, 18-Aug-2021 09:54:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

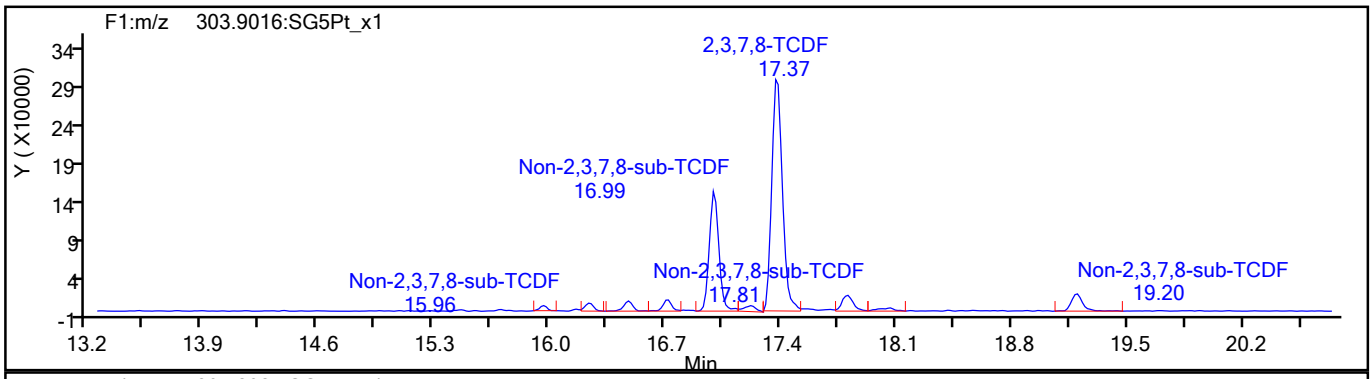

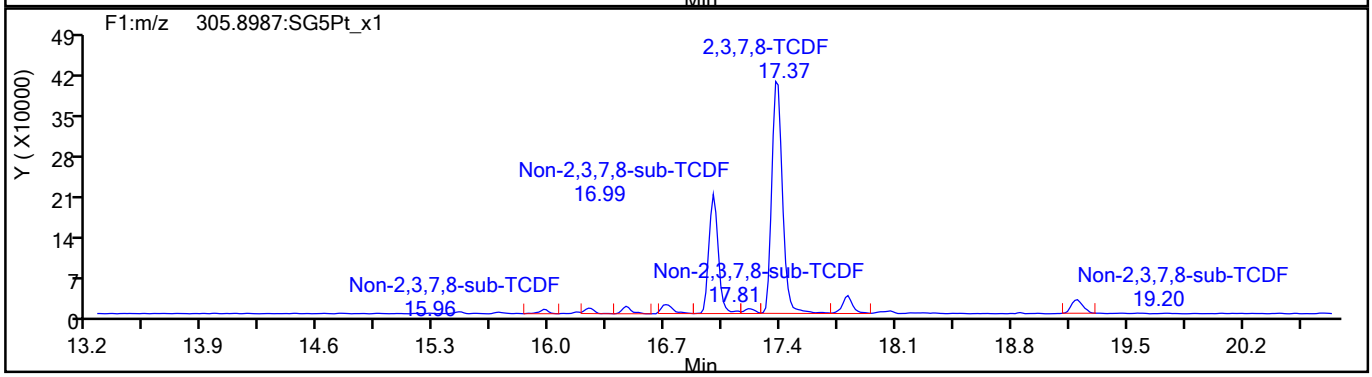

TCDF Standards

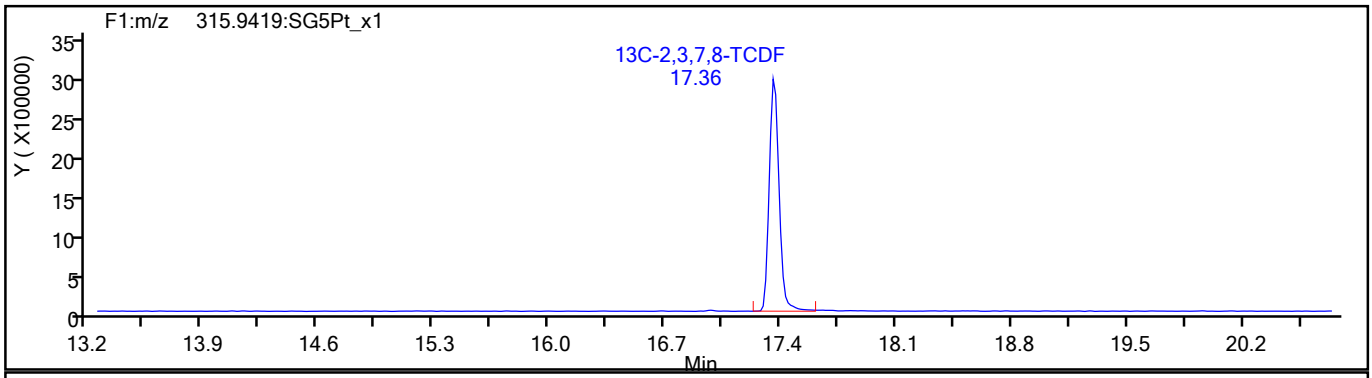

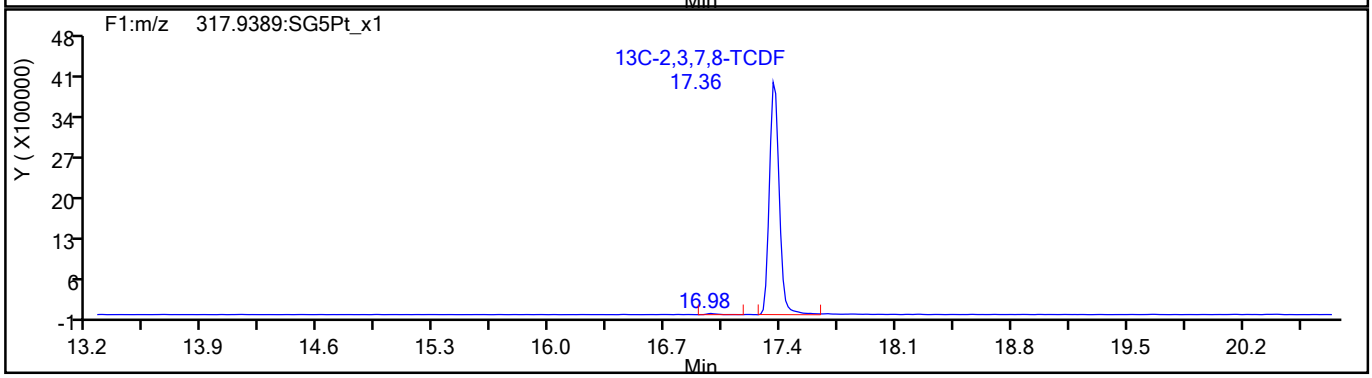

779969

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

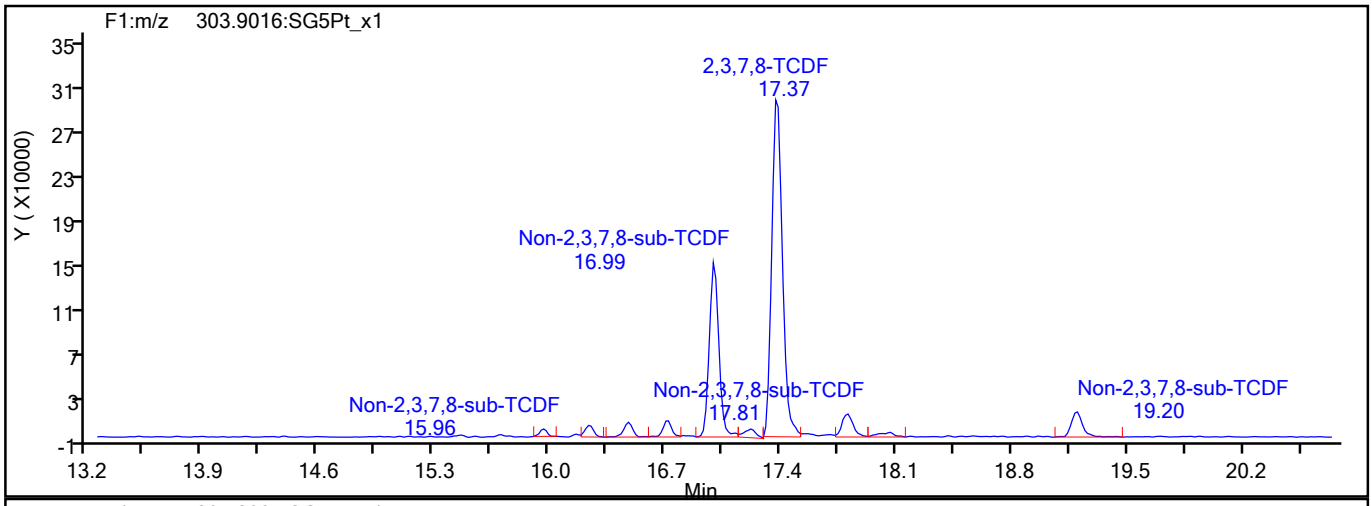

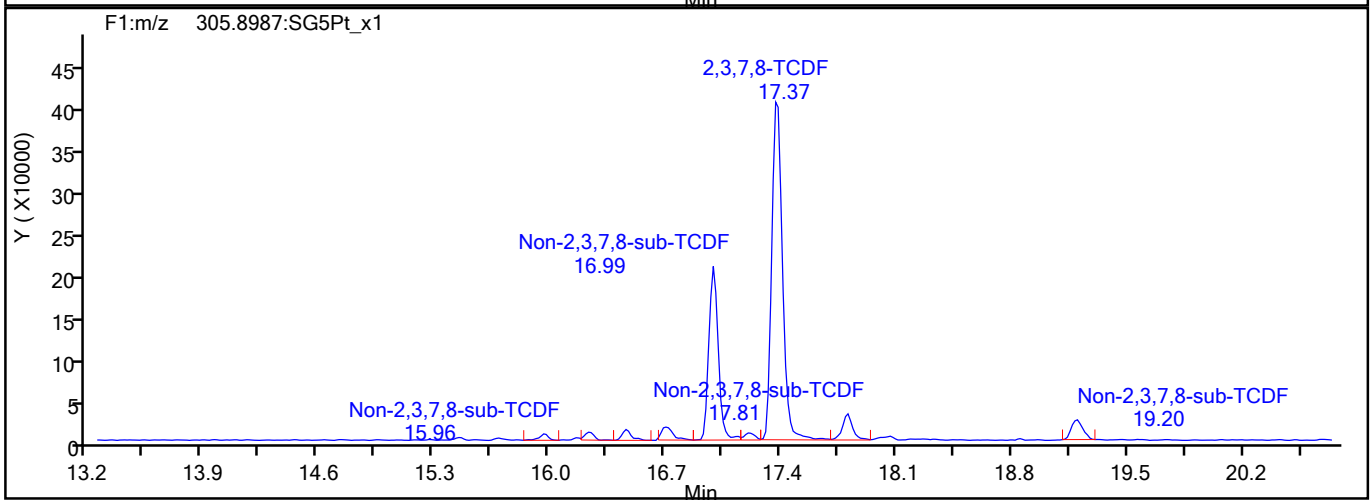

TCDF Interference Mass

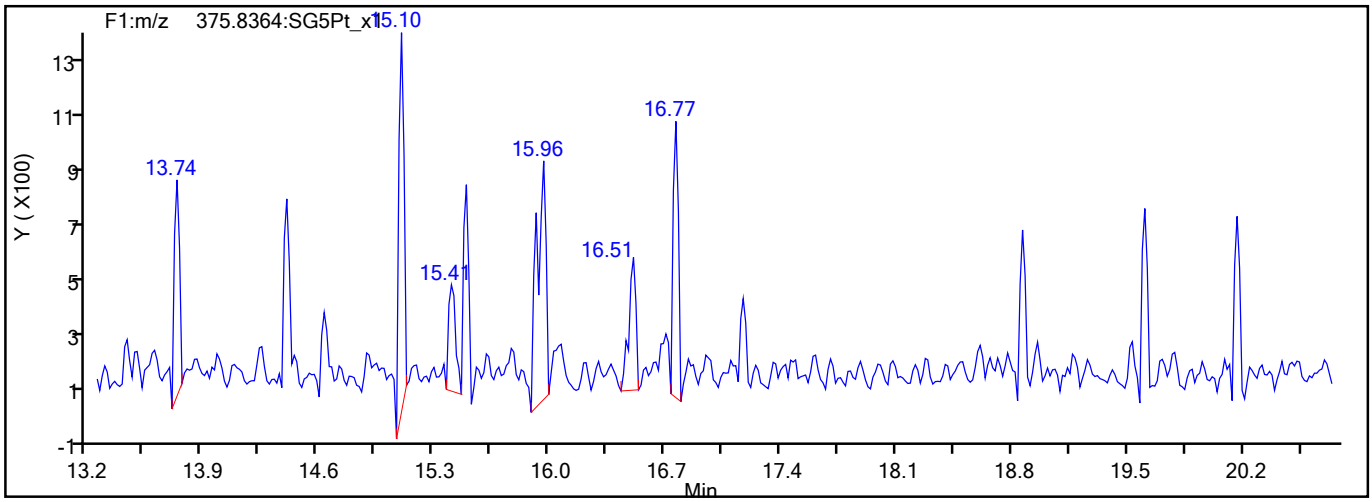

779970

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

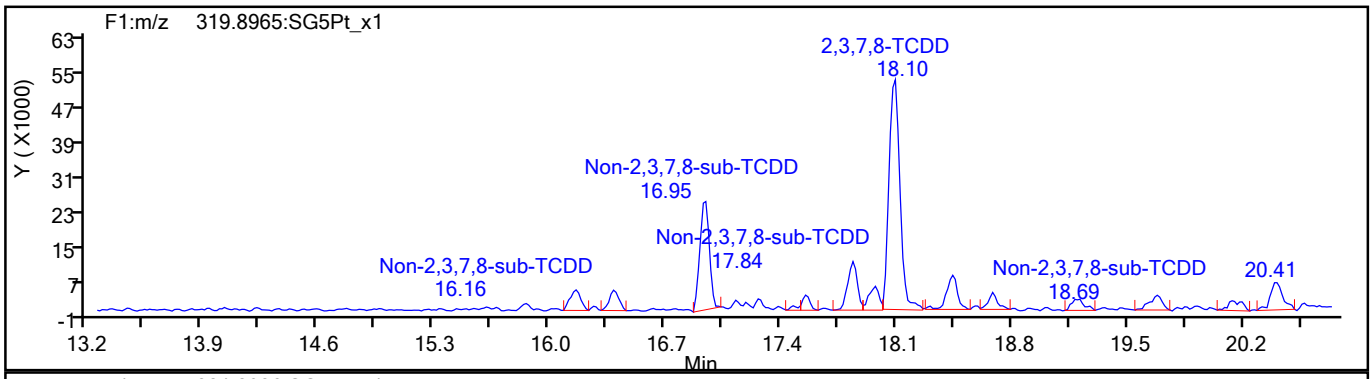

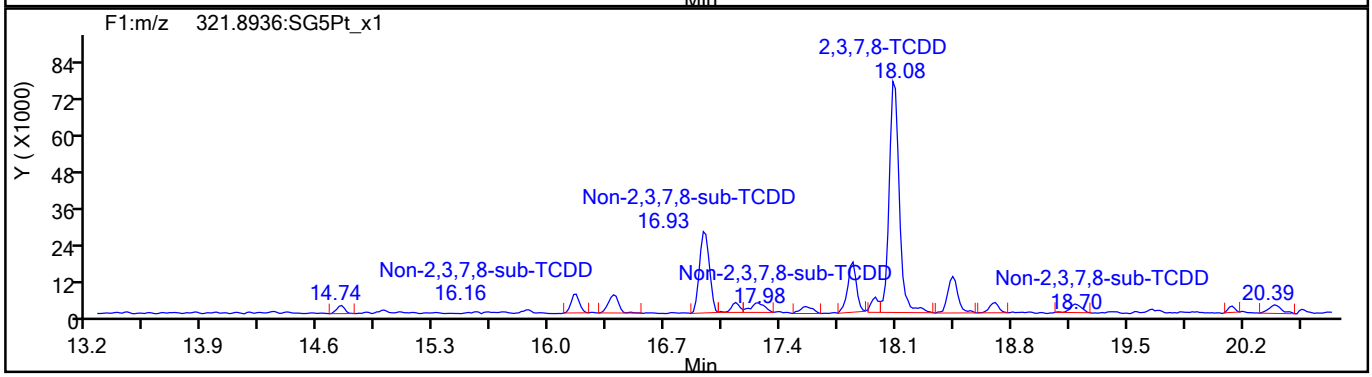

TCDD Standards

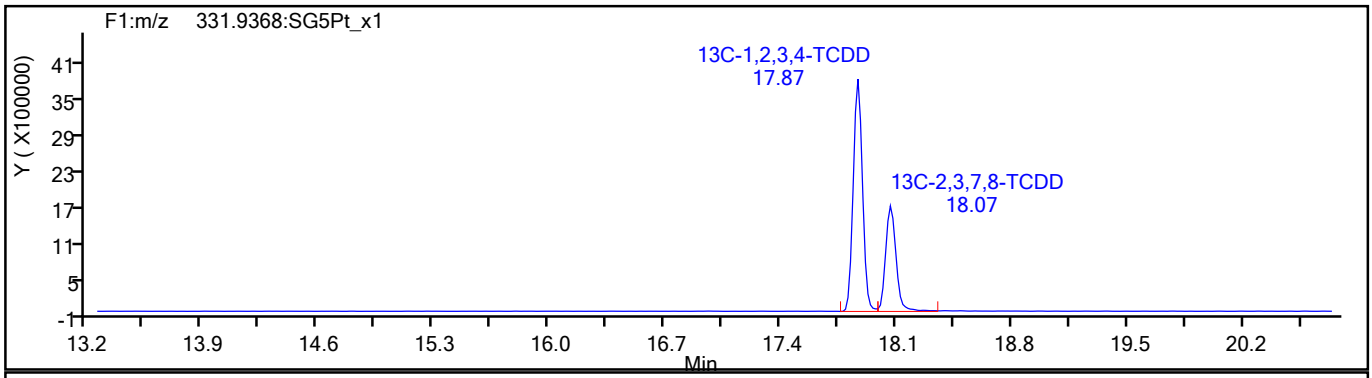

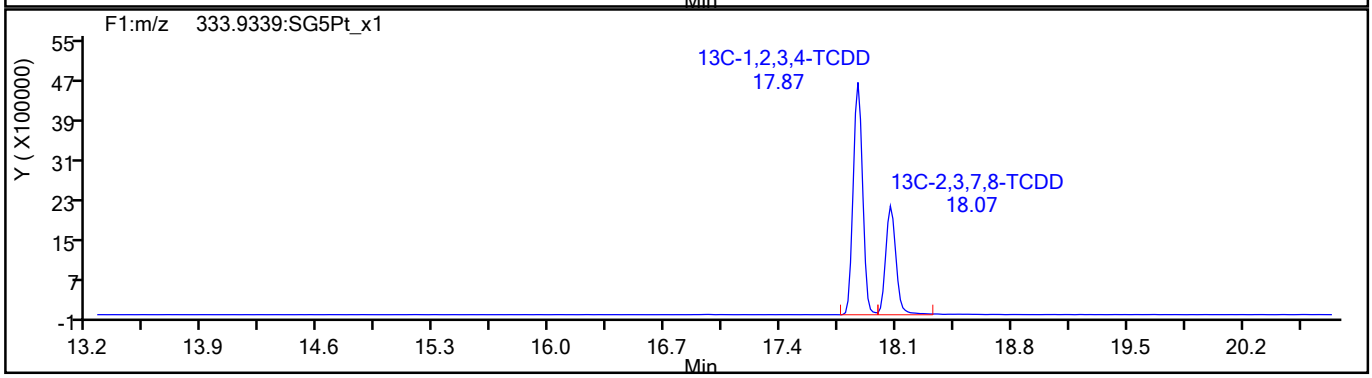

779971

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

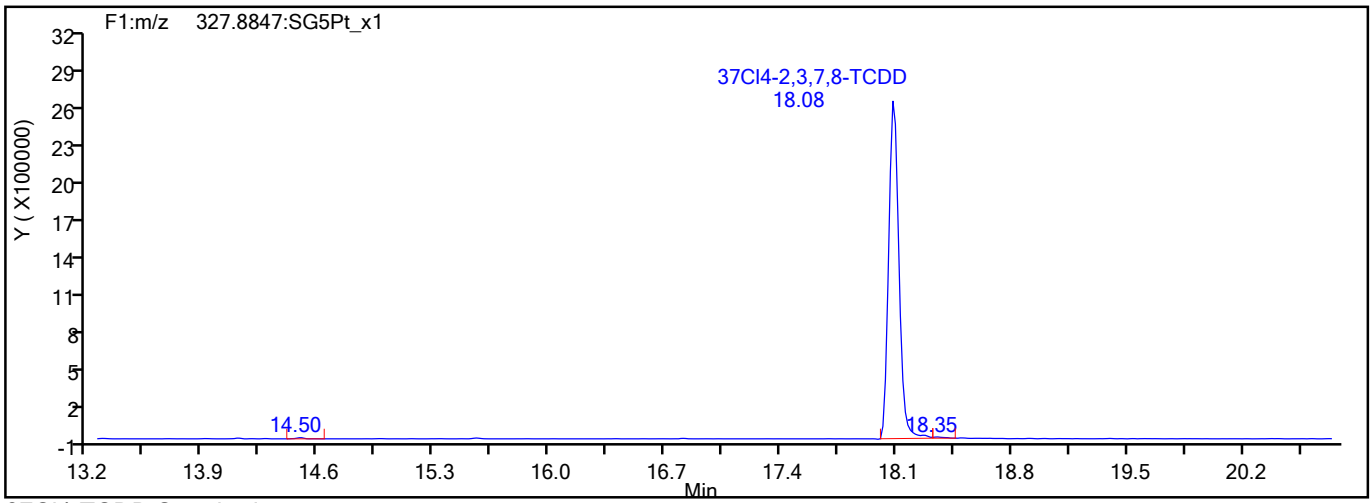

37Cl4-TCDD Standards

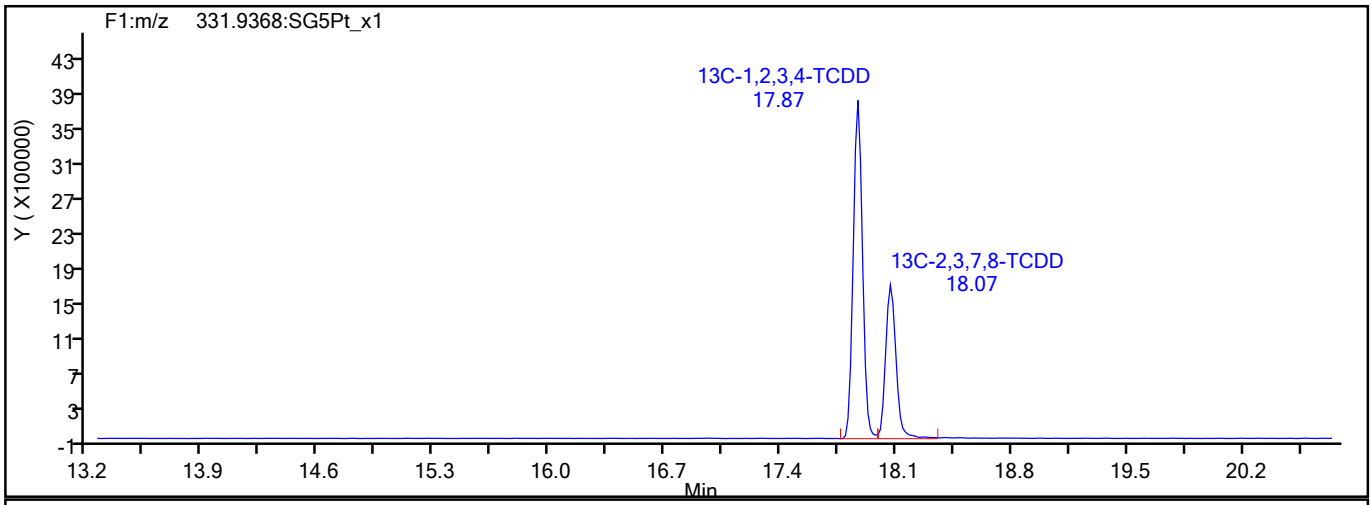

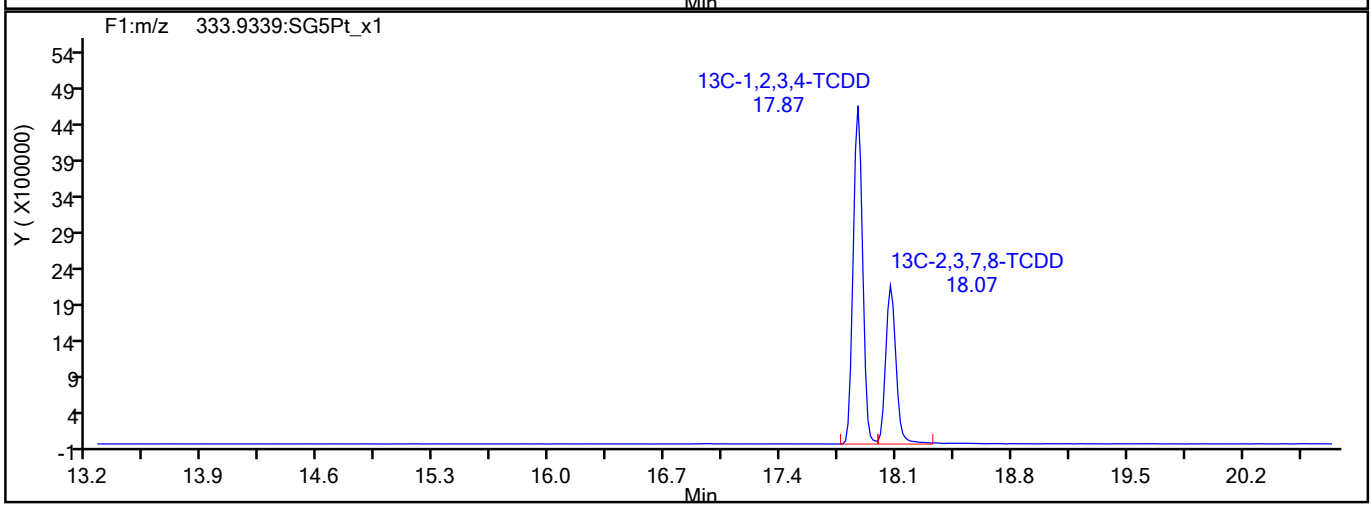

779972

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

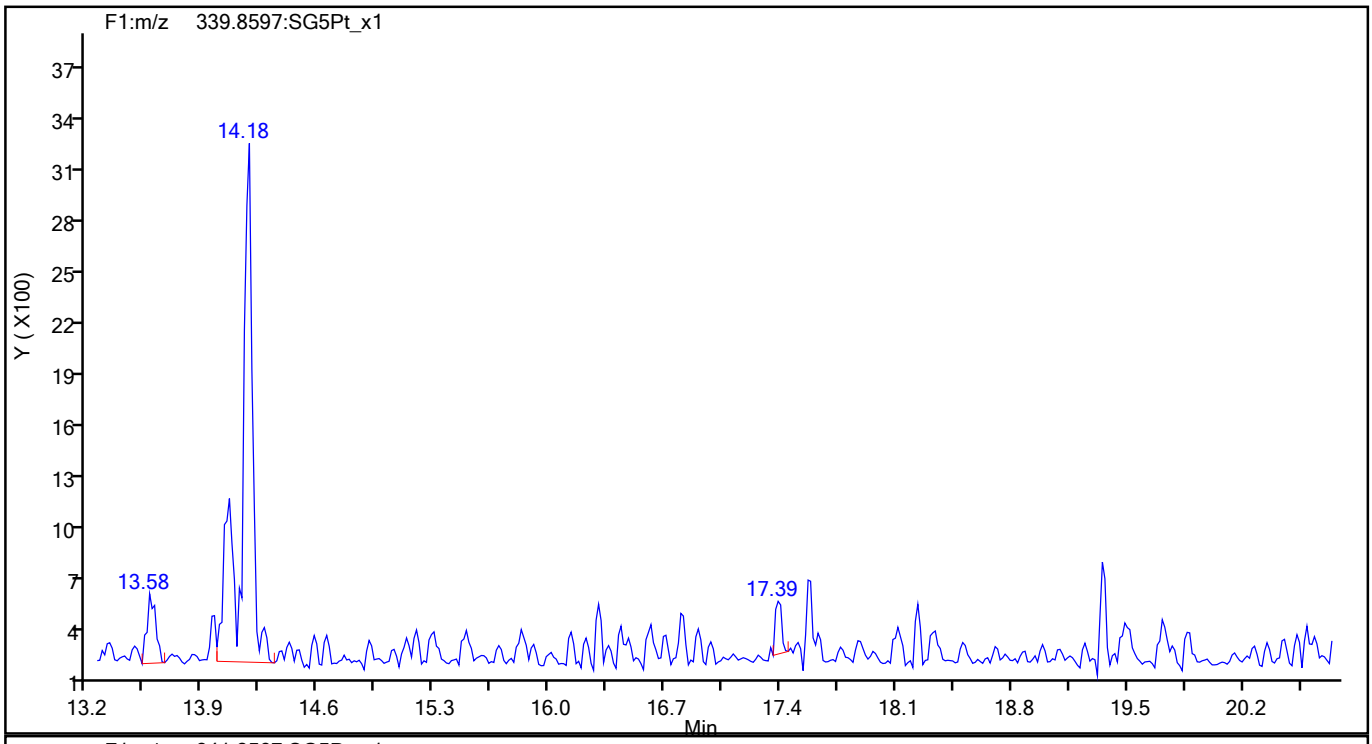

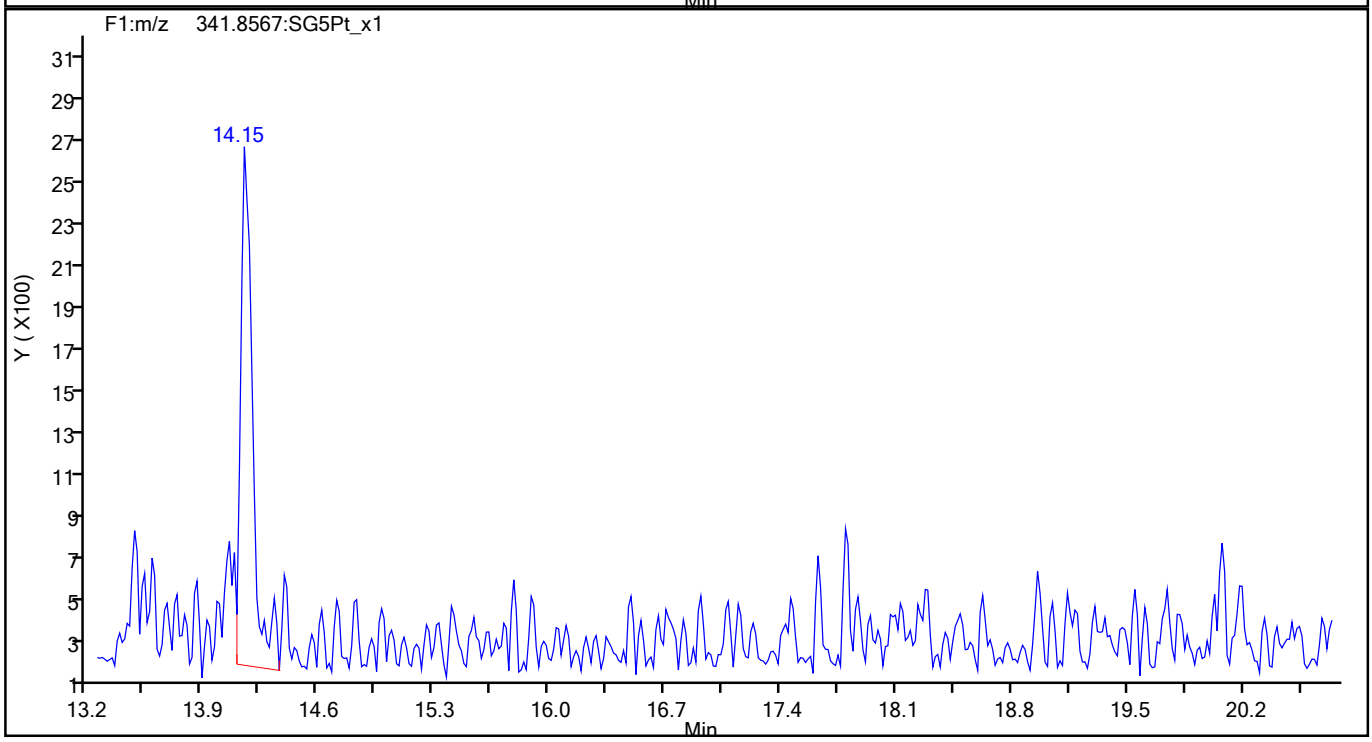

779973

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

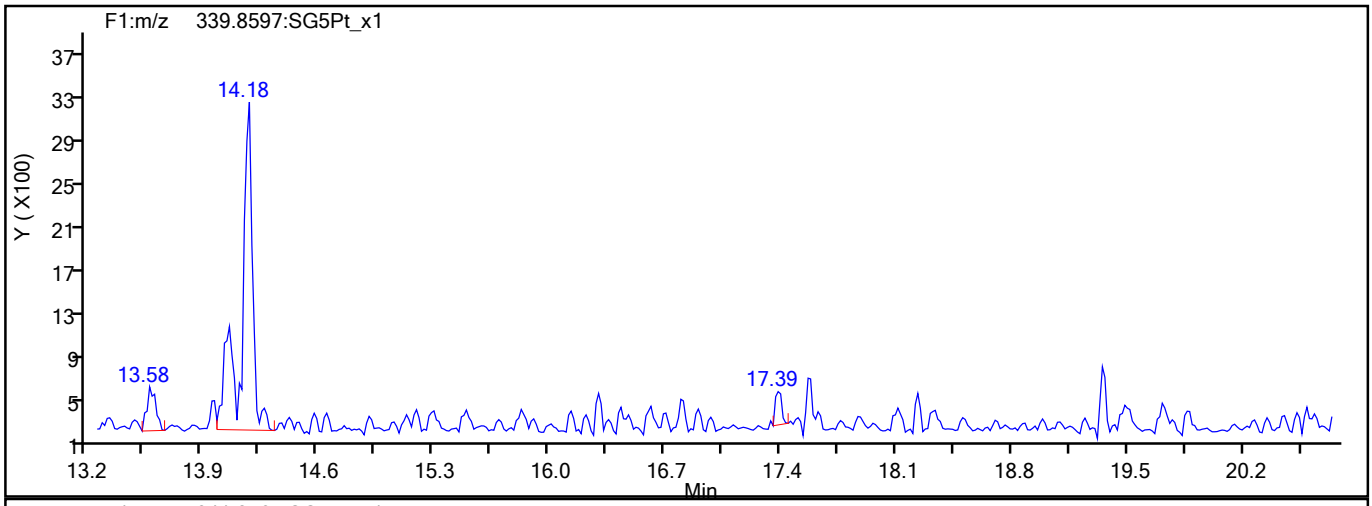

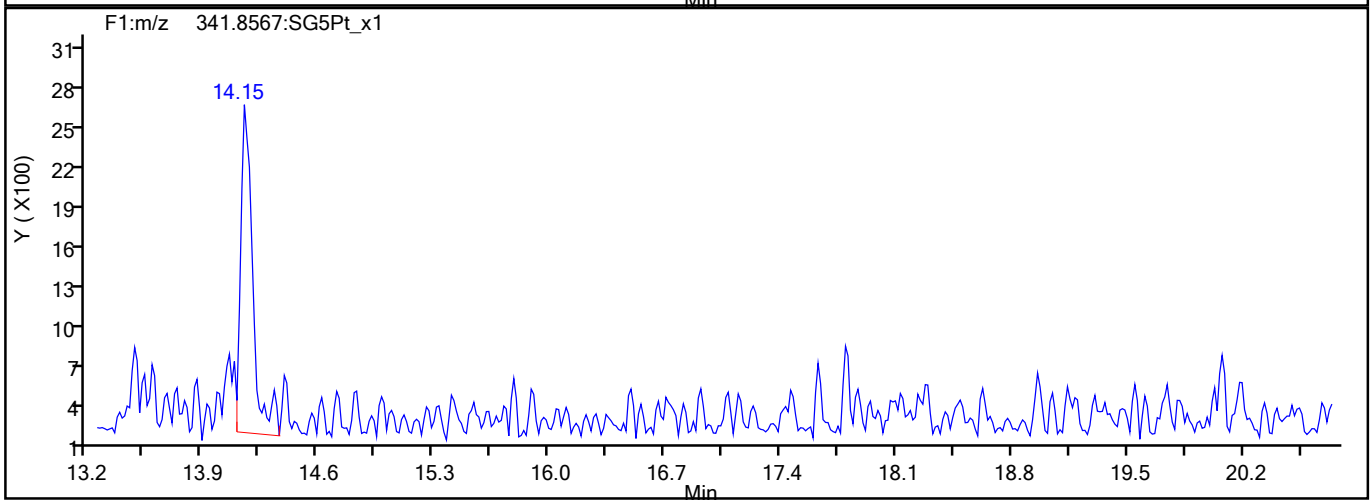

F1 PeCDFs Interference Mass

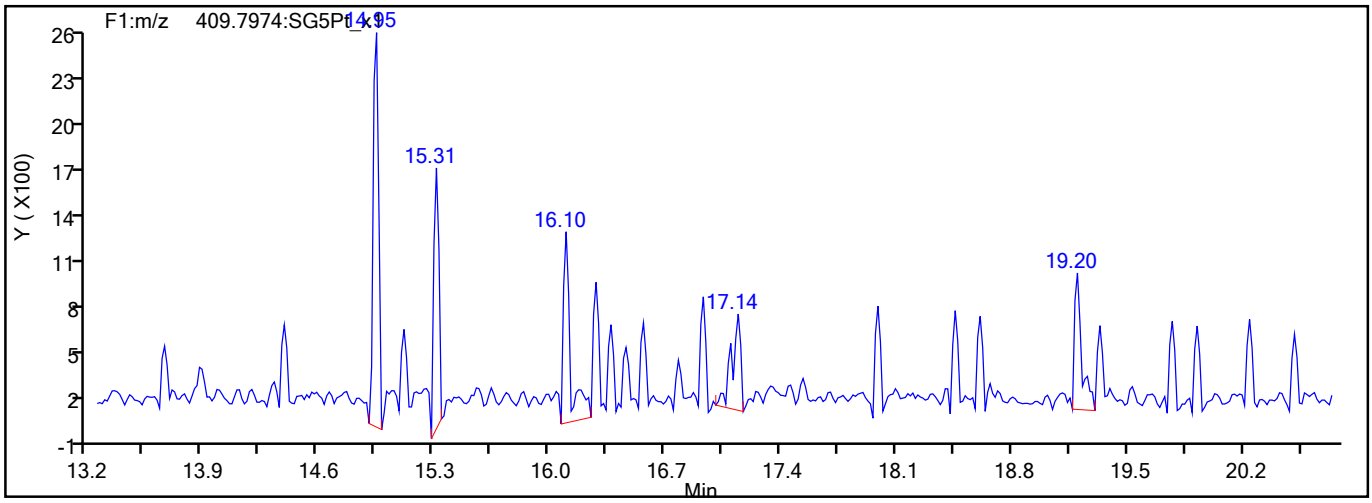

779974

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

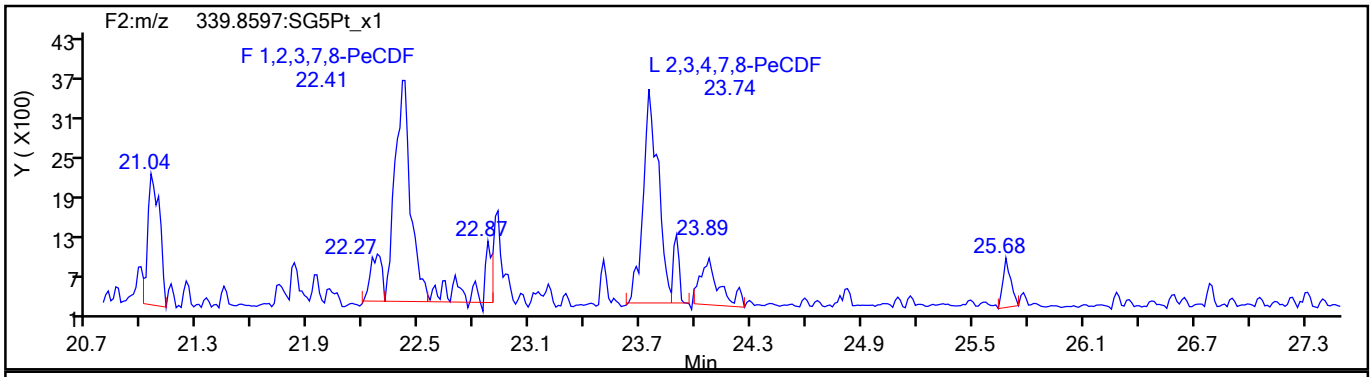

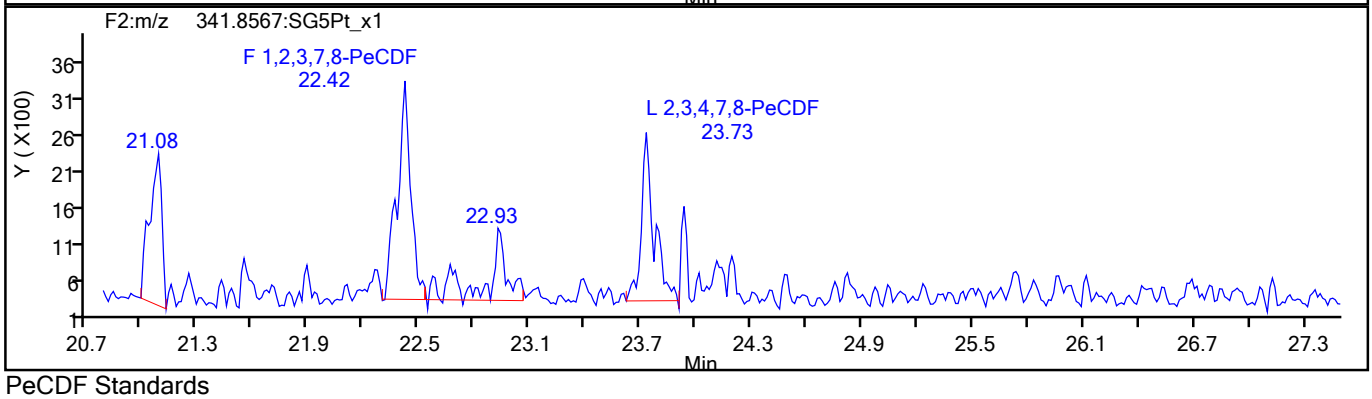

PeCDF Standards

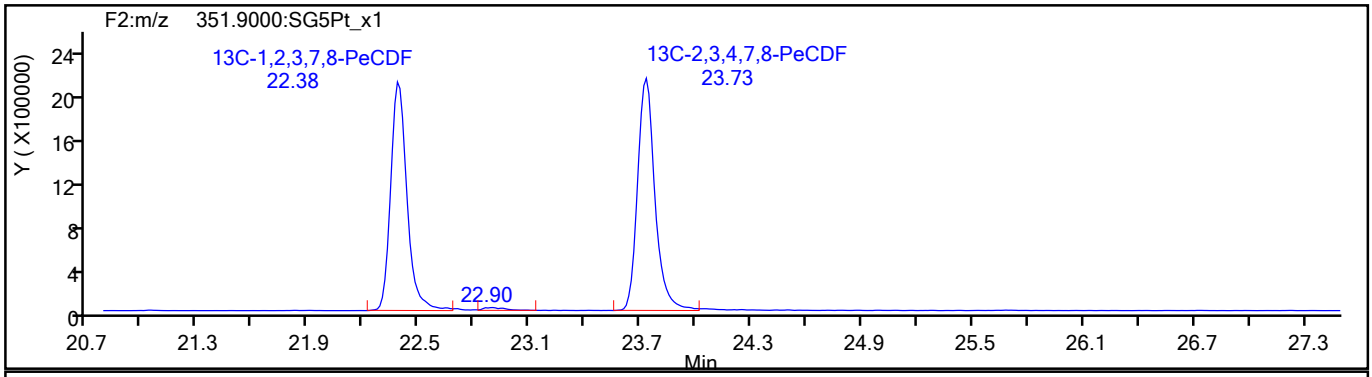

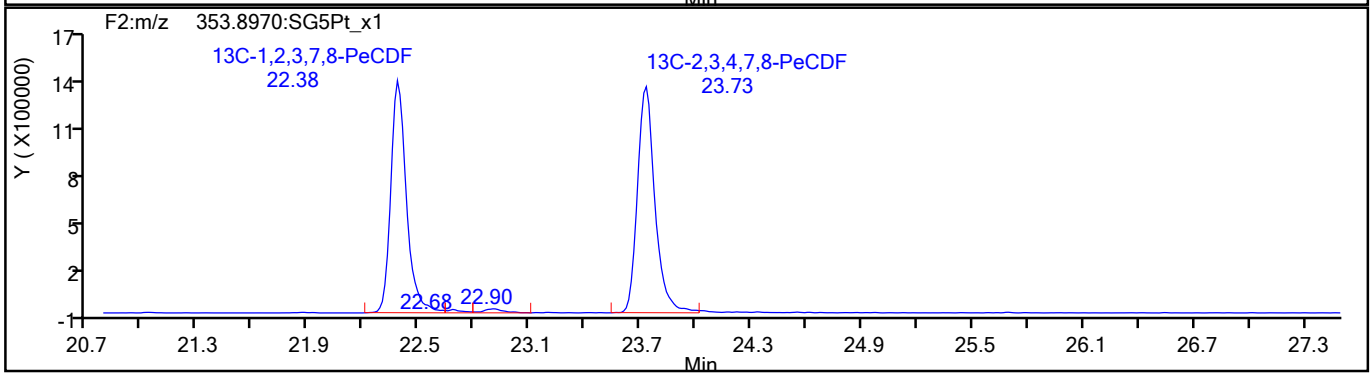

779975

Report Date: 18-Aug-2021 09:55:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
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PeCDF

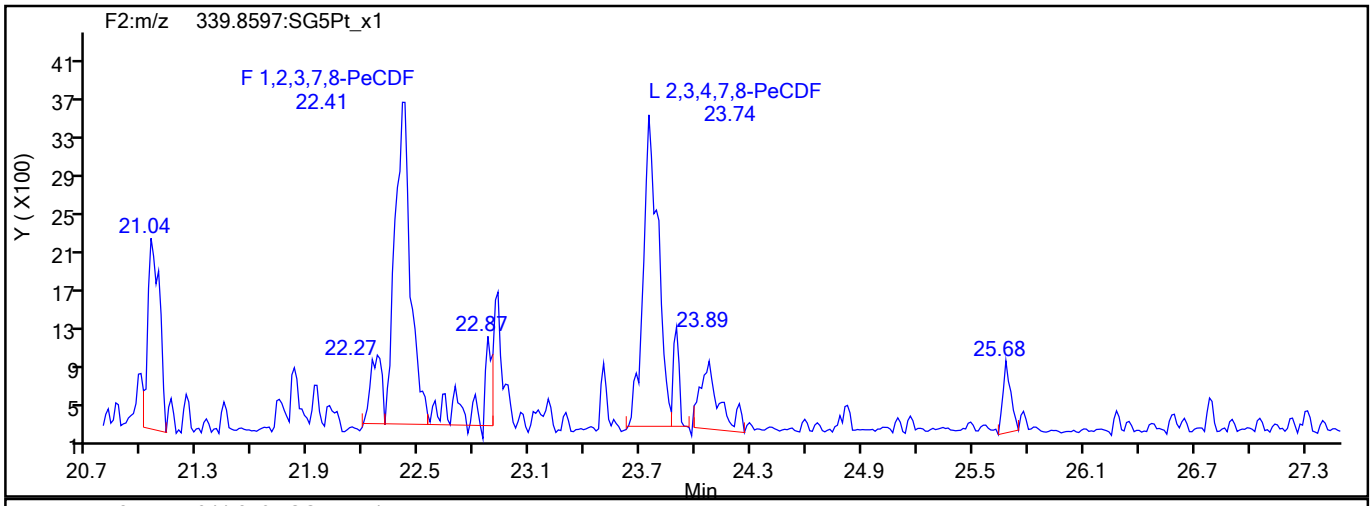

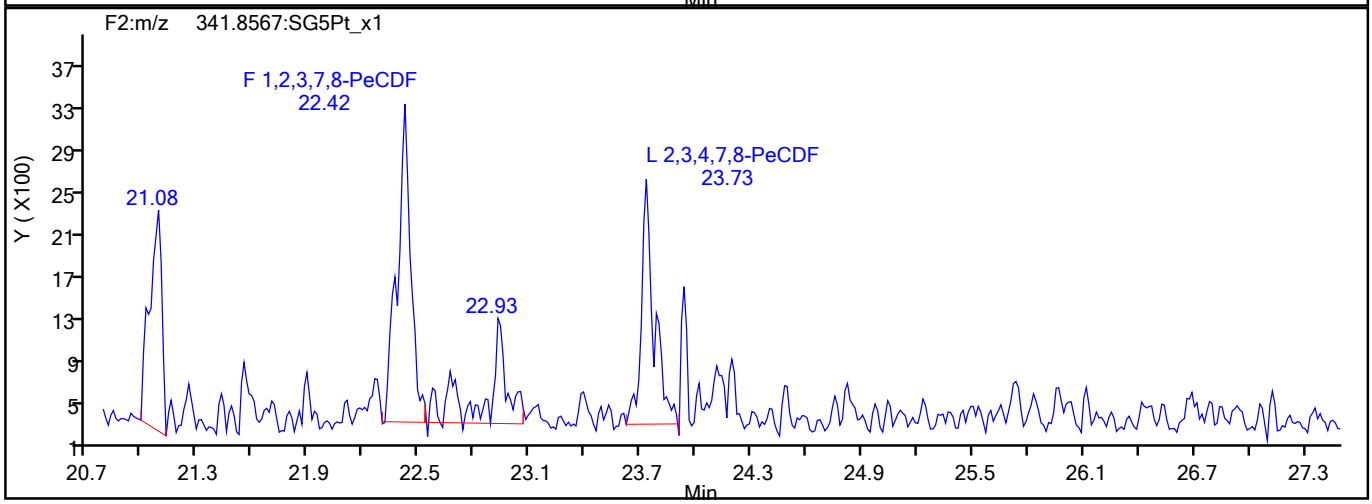

PeCDF Interference Mass

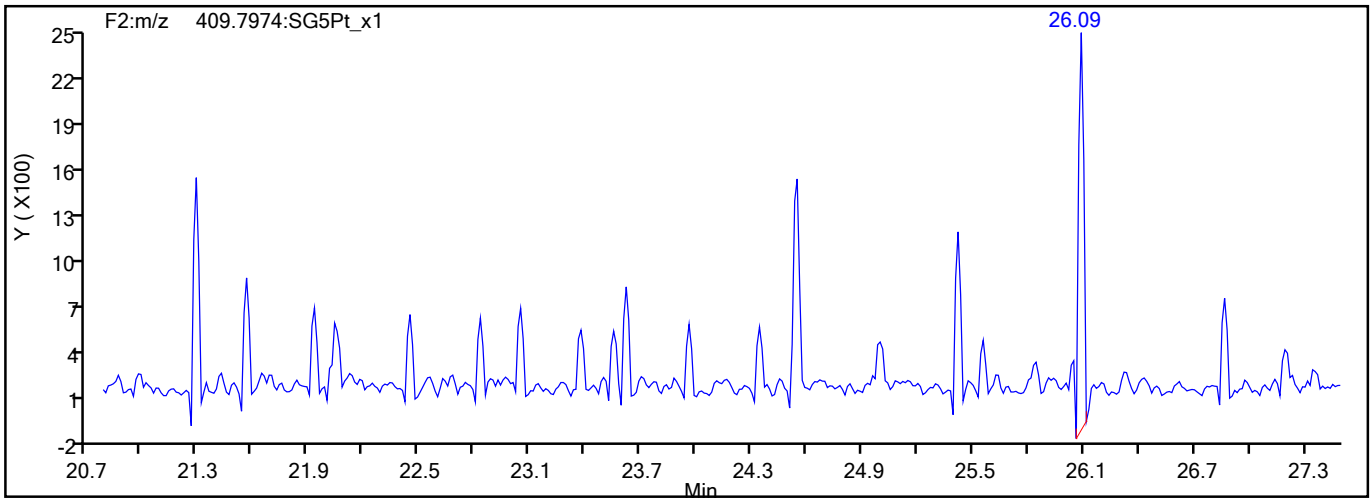

779976

Report Date: 18-Aug-2021 09:55:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

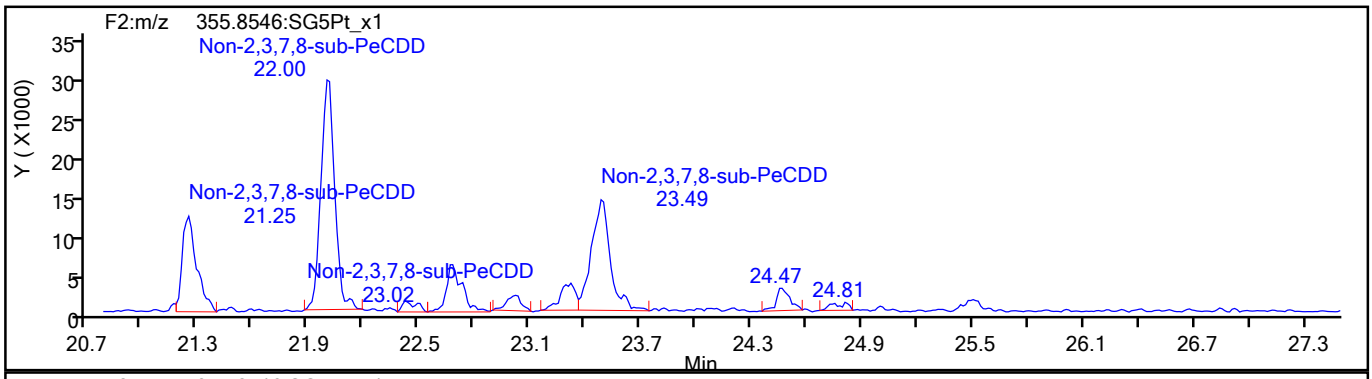

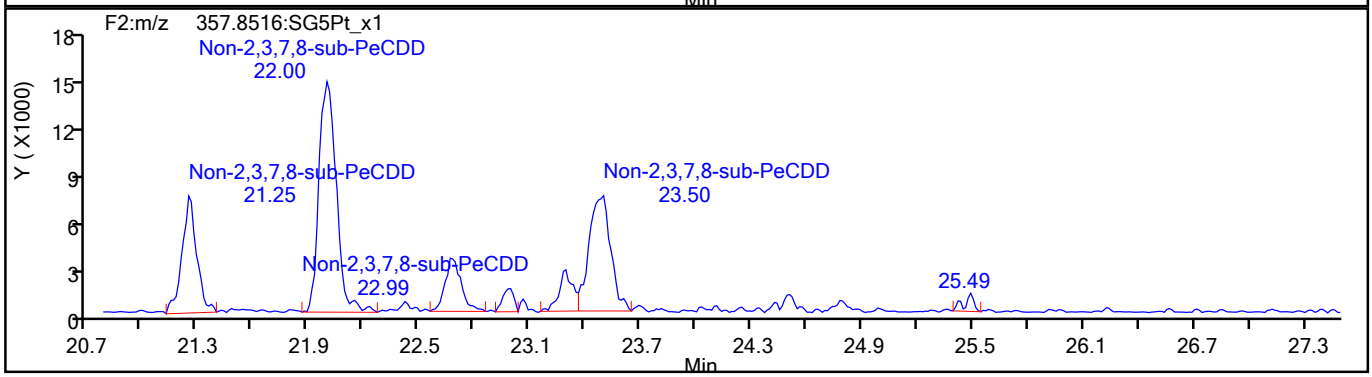

PeCDD Standards

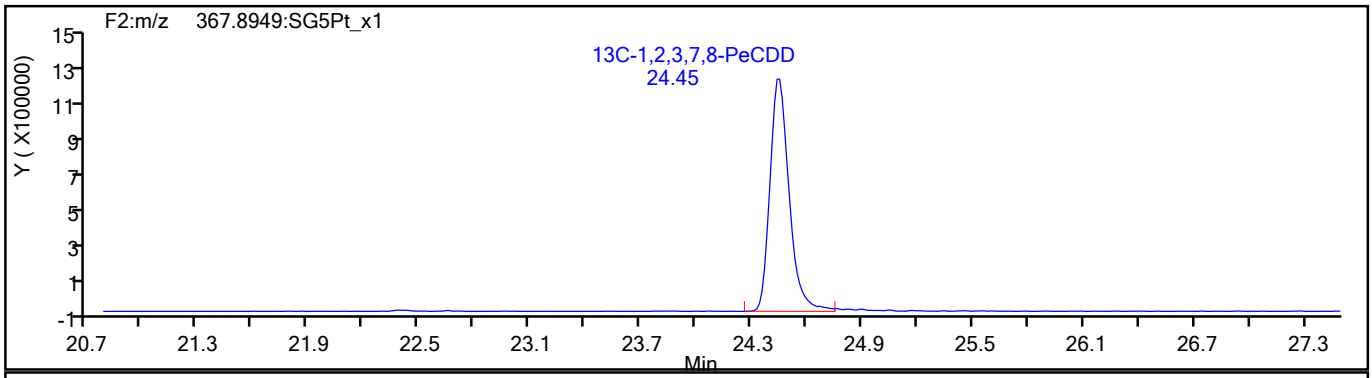

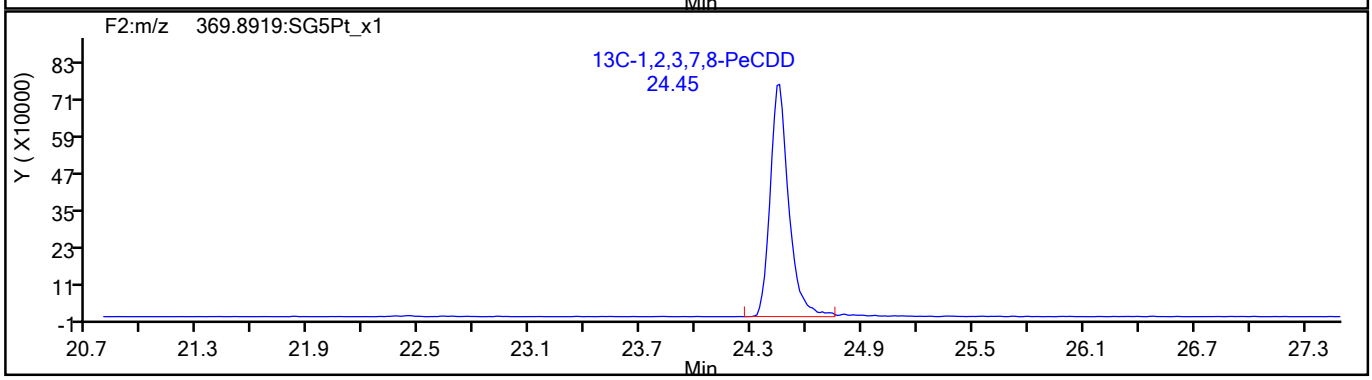

779977

Report Date: 18-Aug-2021 09:55:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

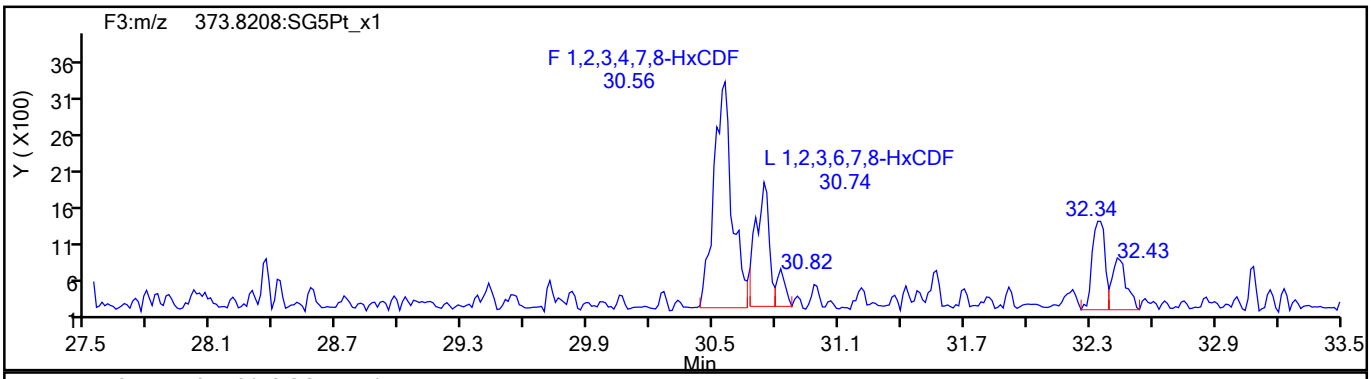

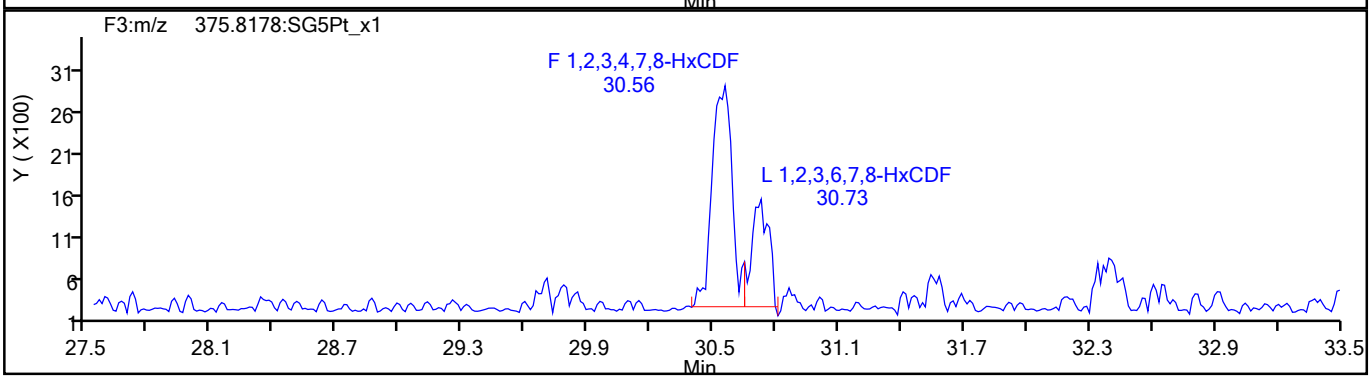

HxCDF Standards

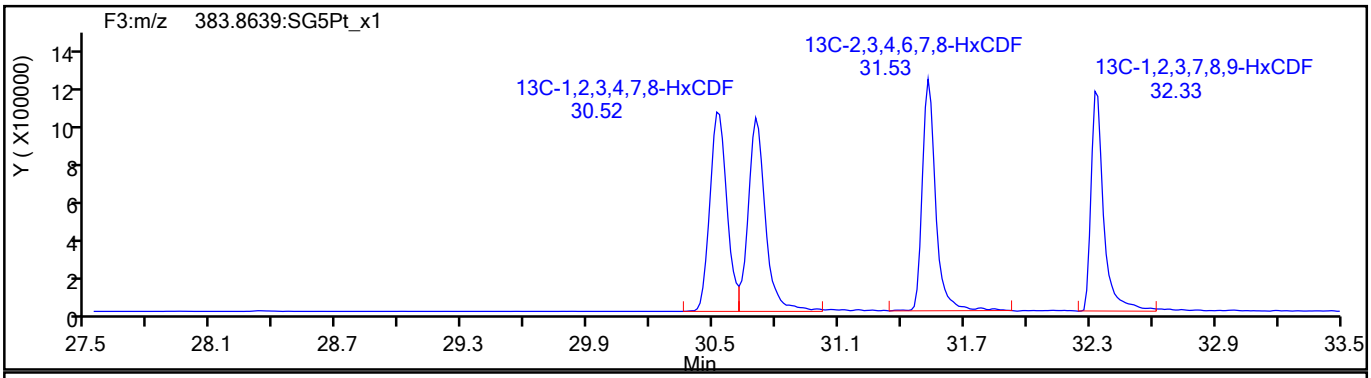

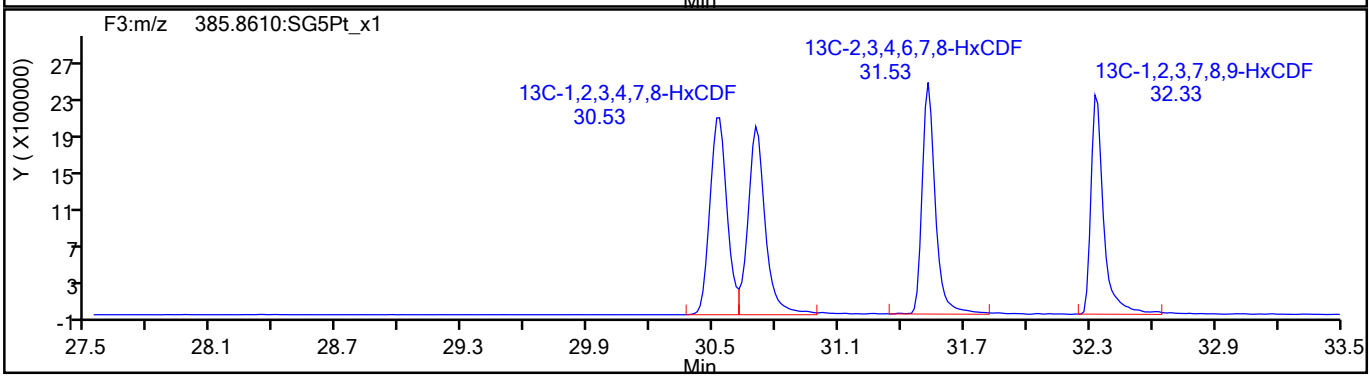

779978

Report Date: 18-Aug-2021 09:55:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

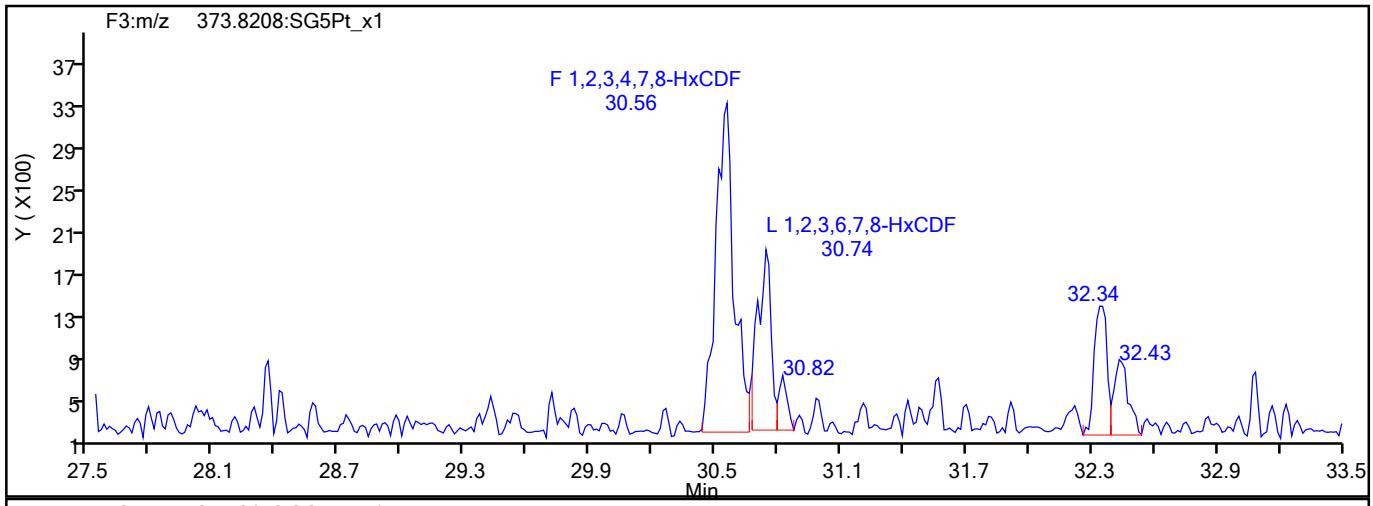

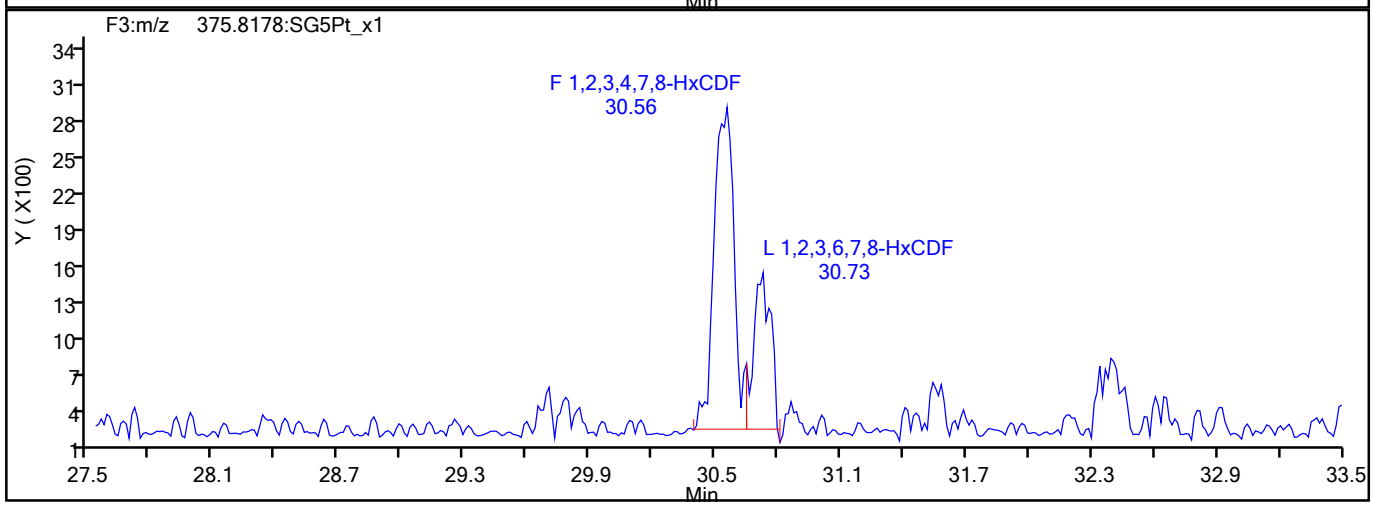

HxCDF Interference Mass

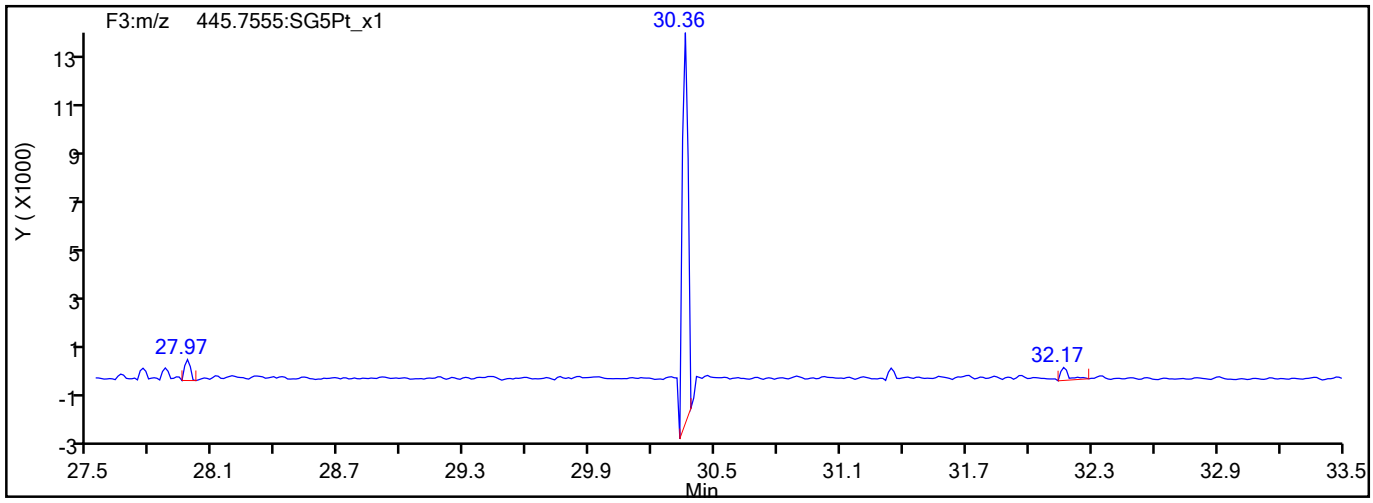

779979

Report Date: 18-Aug-2021 09:55:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

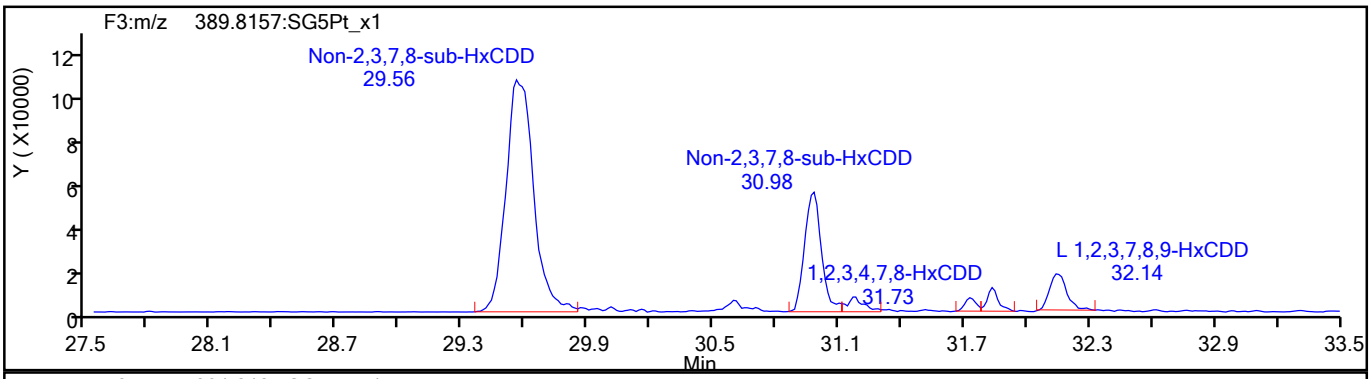

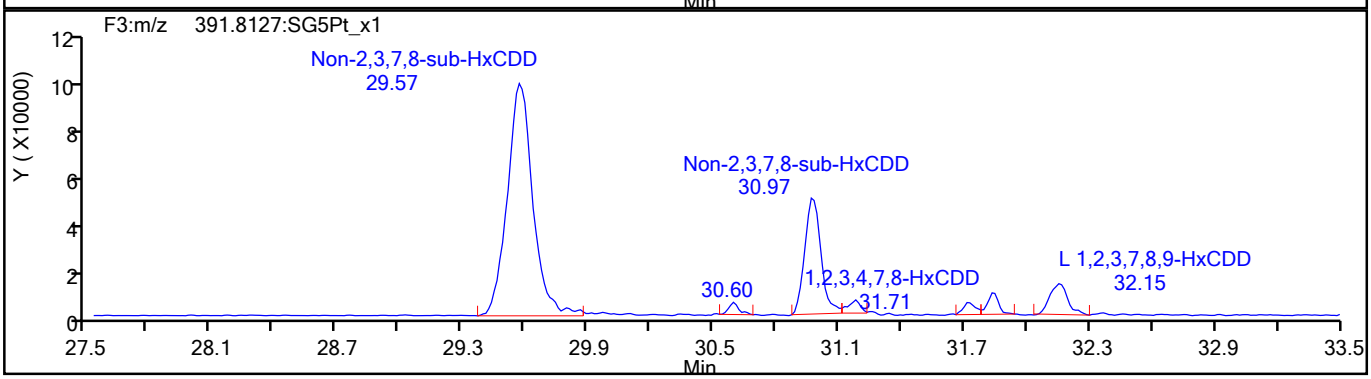

HxCDD Standards

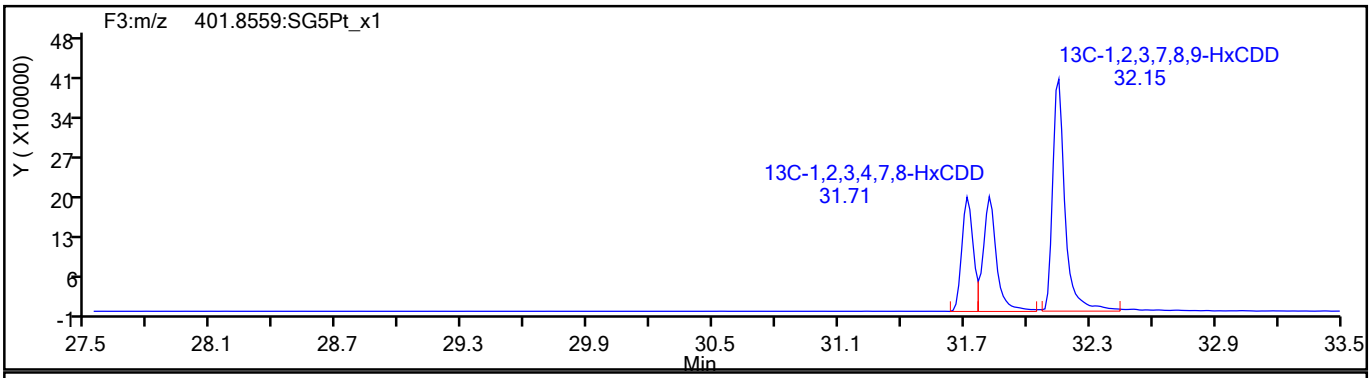

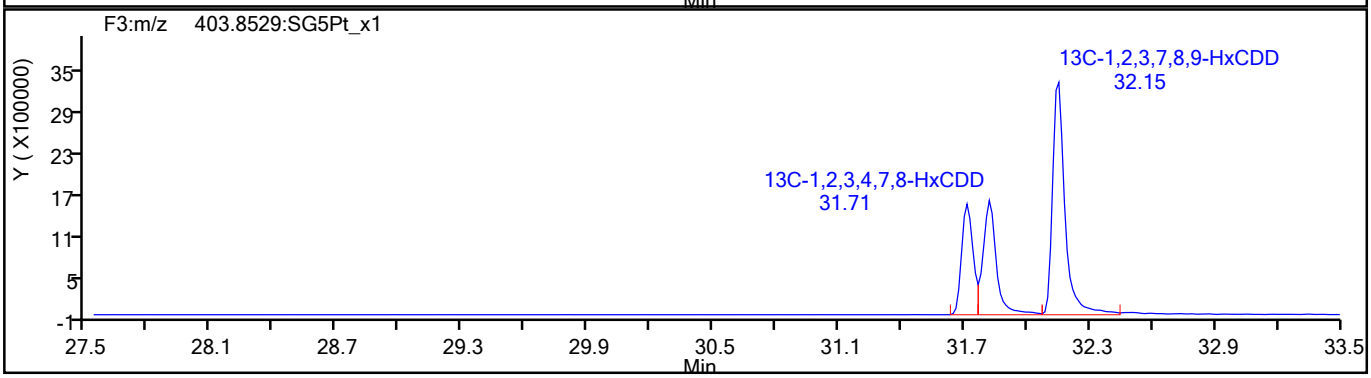

779980

Report Date: 18-Aug-2021 09:55:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

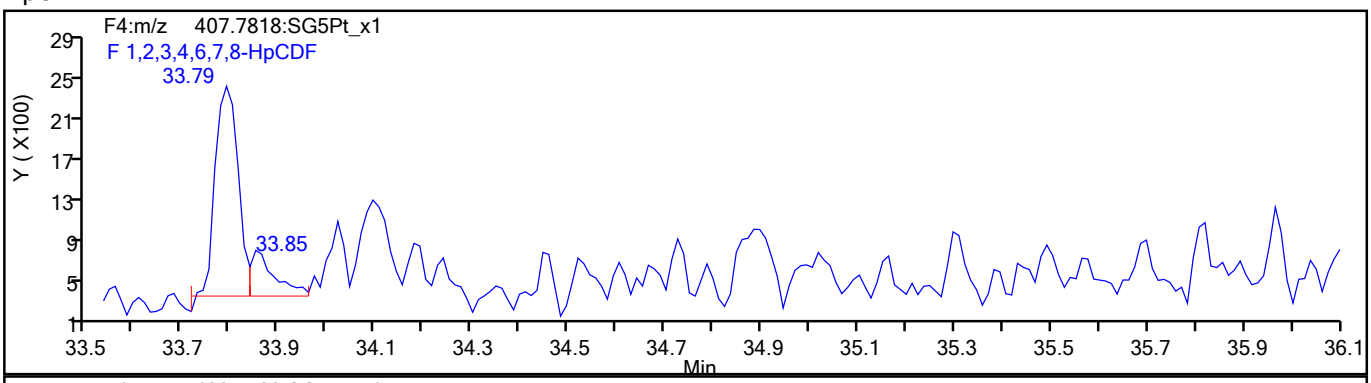

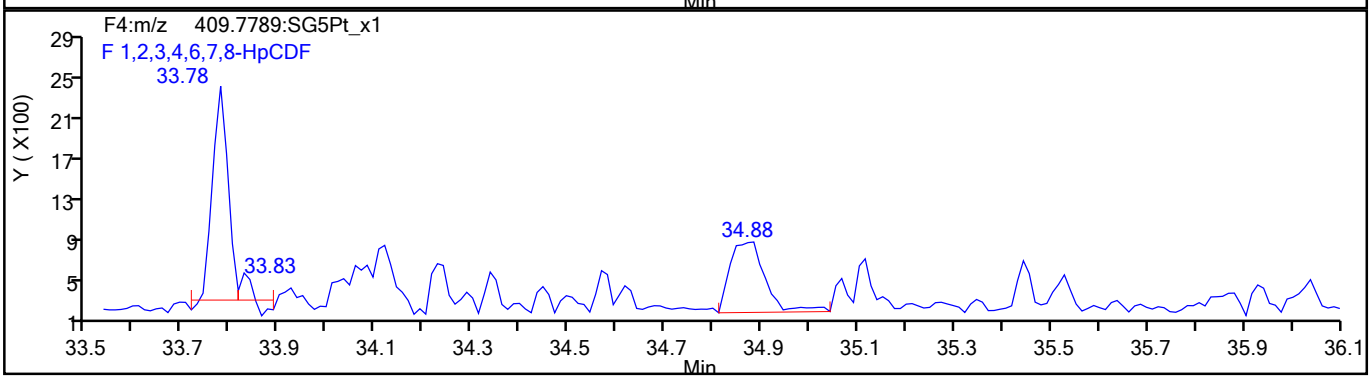

HpCDF Standards

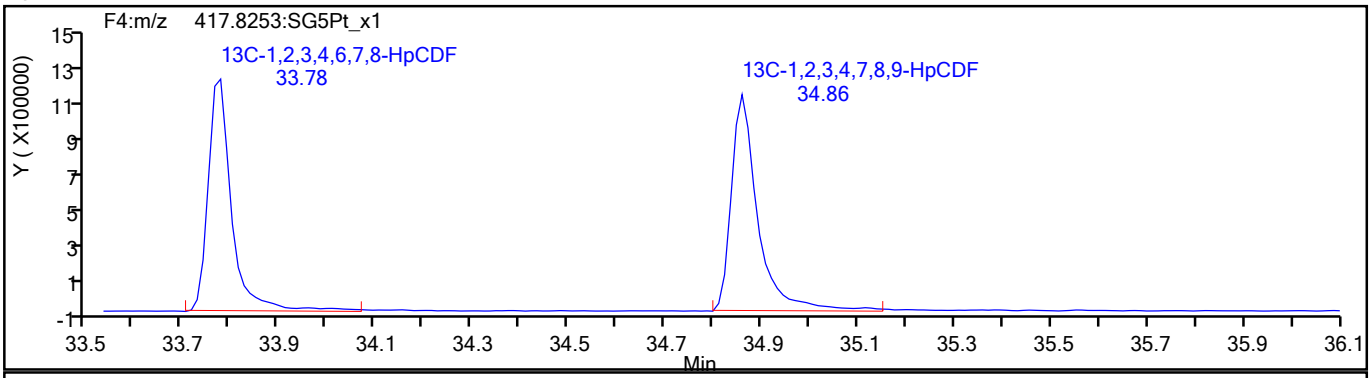

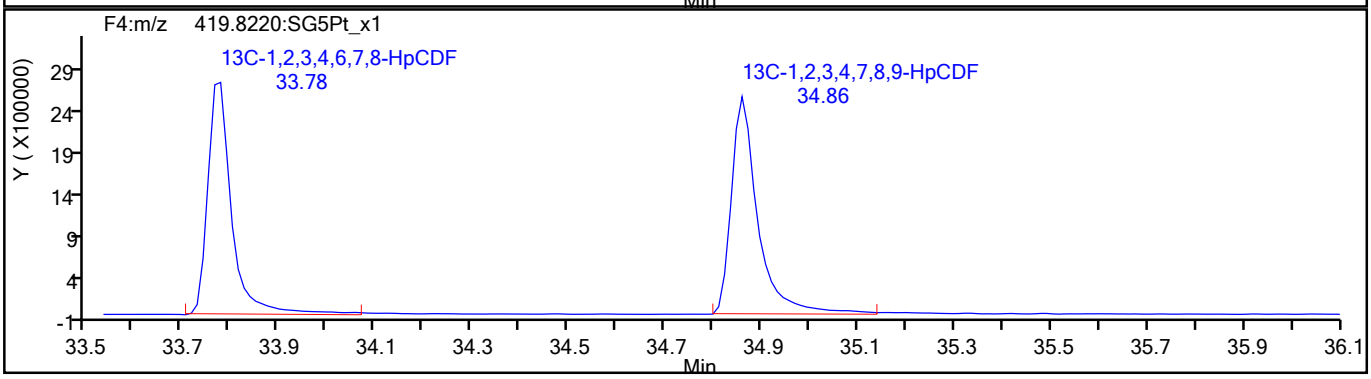

779981

Report Date: 18-Aug-2021 09:55:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

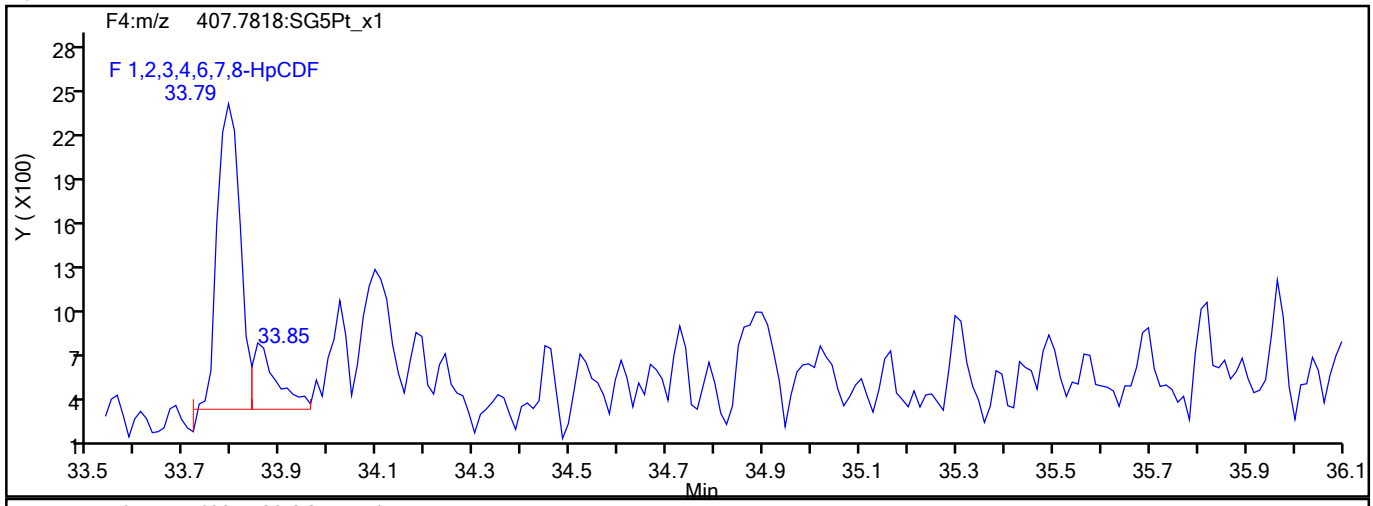

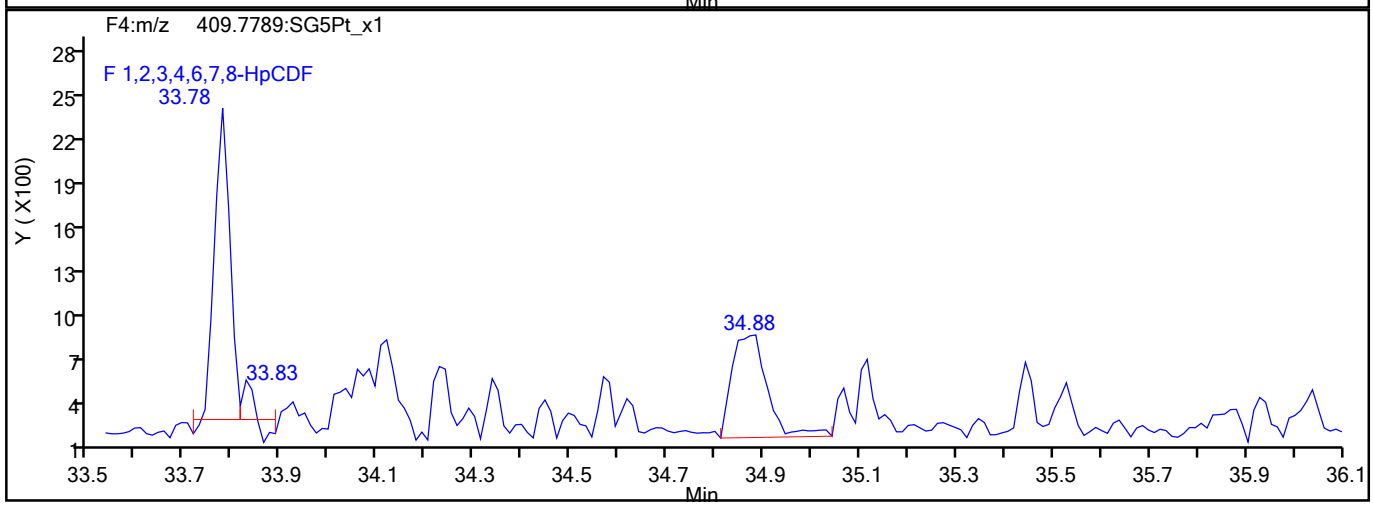

HpCDF Interference Mass

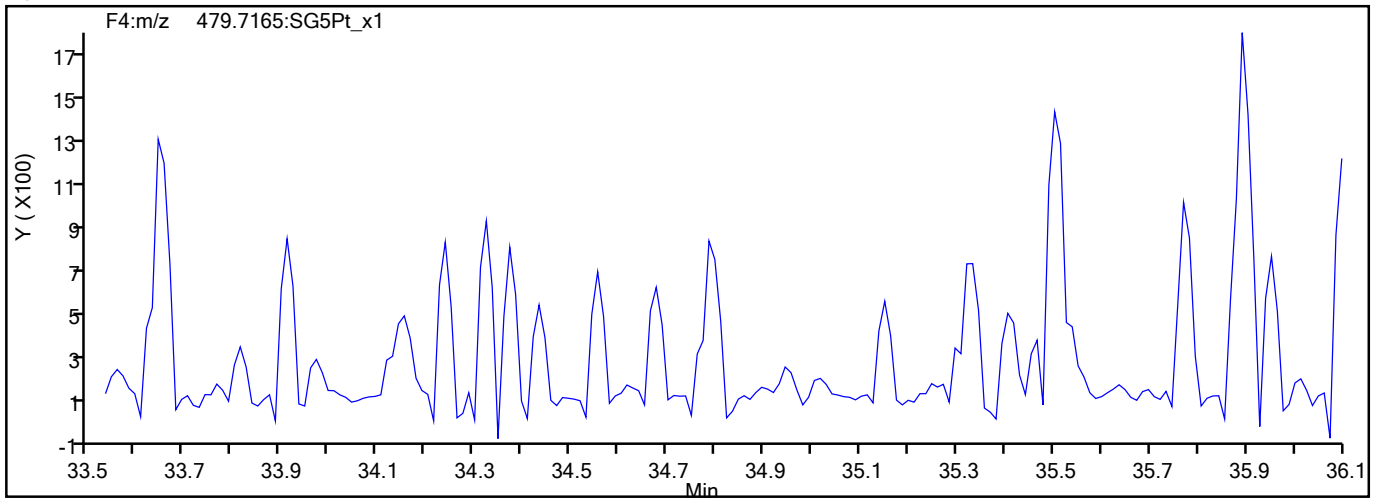

779982

Report Date: 18-Aug-2021 09:55:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

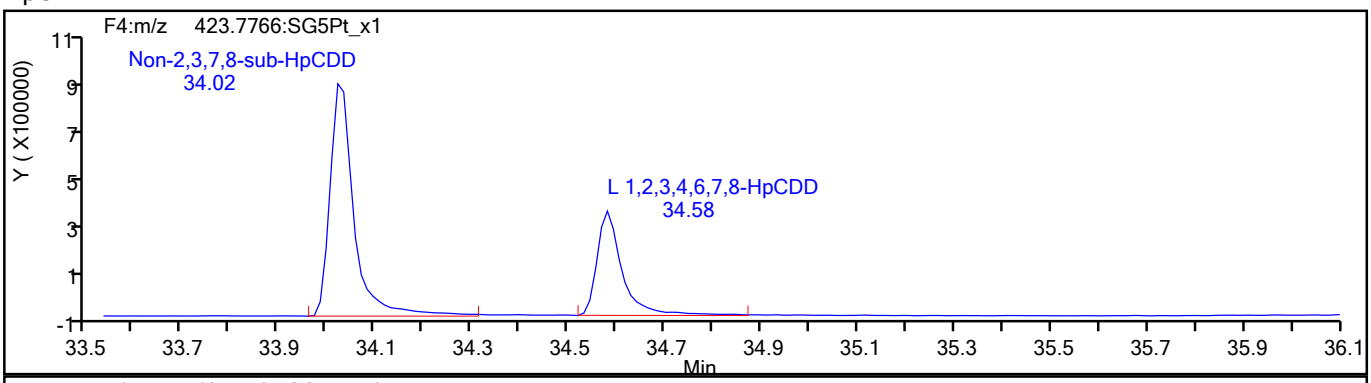

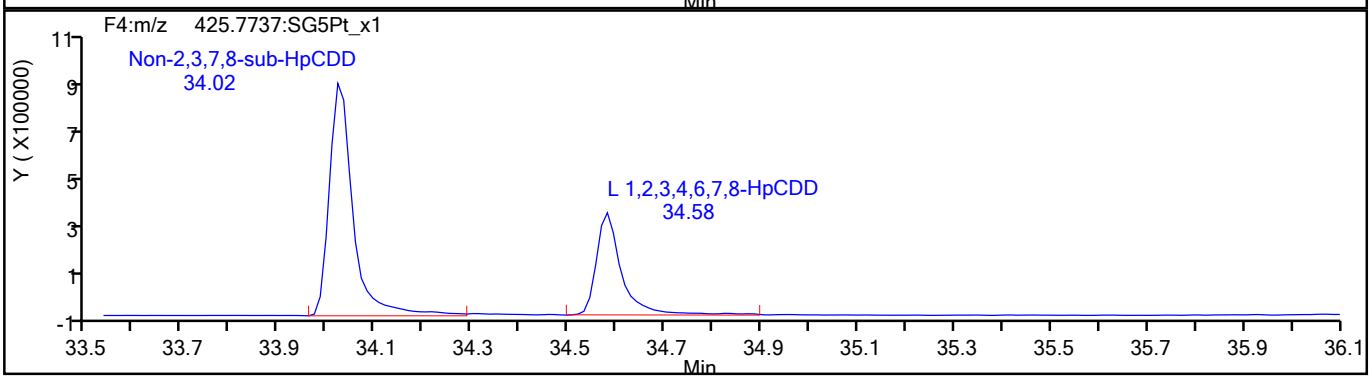

HpCDD Standards

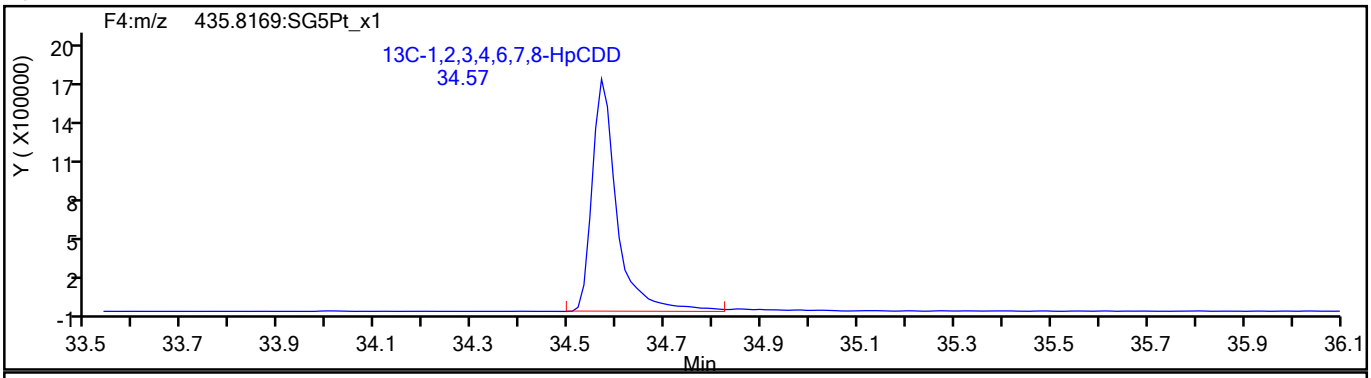

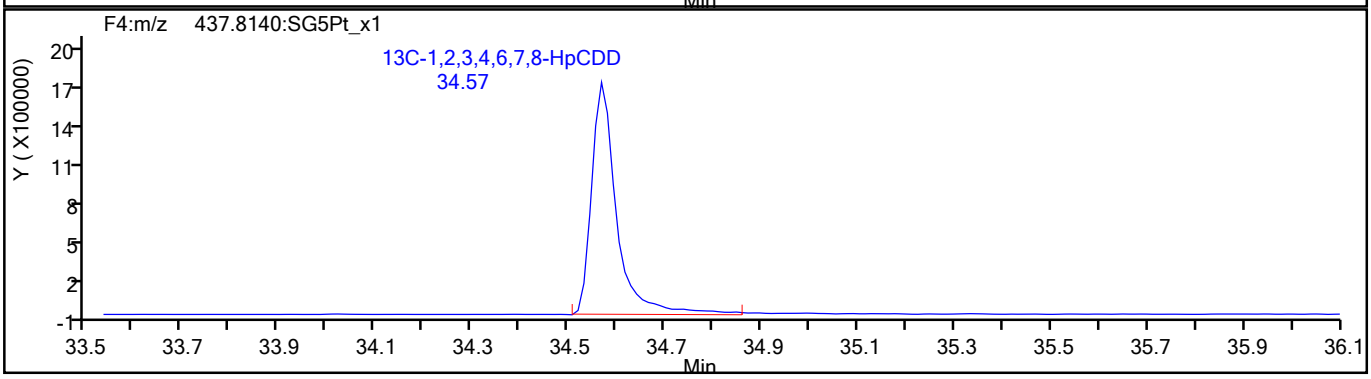

779983

Report Date: 18-Aug-2021 09:55:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

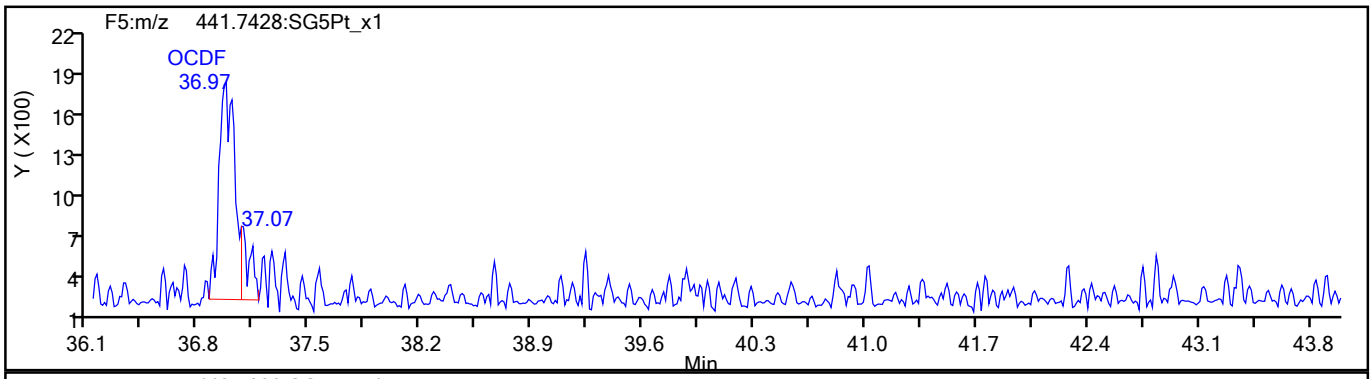

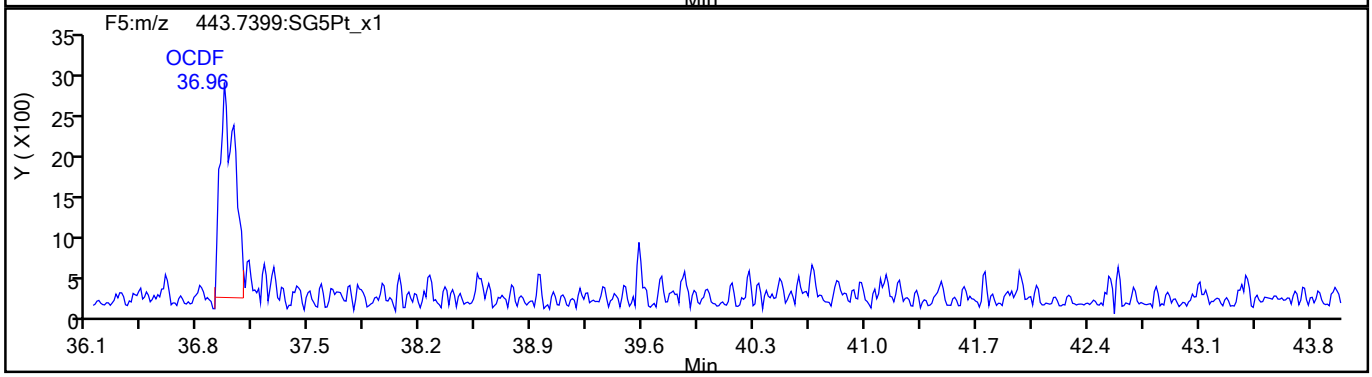

OCDF Standards

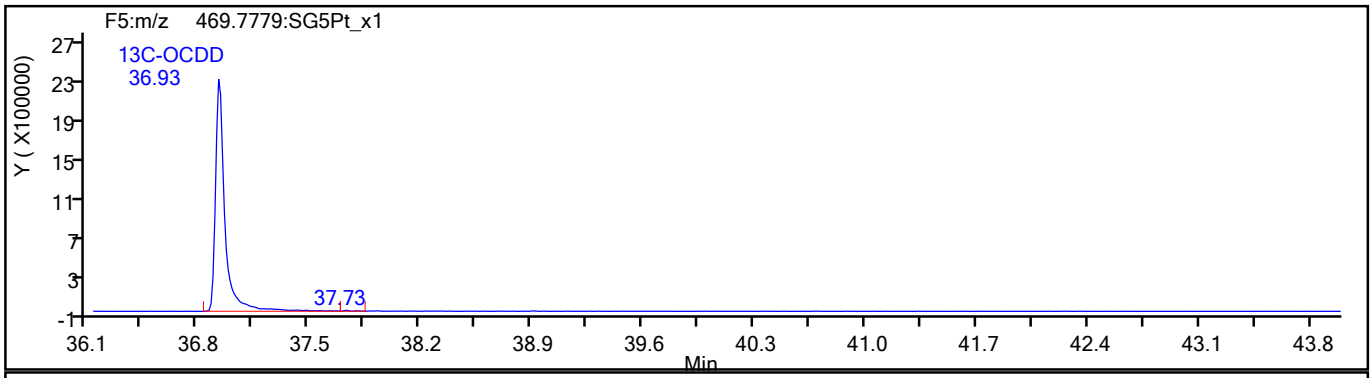

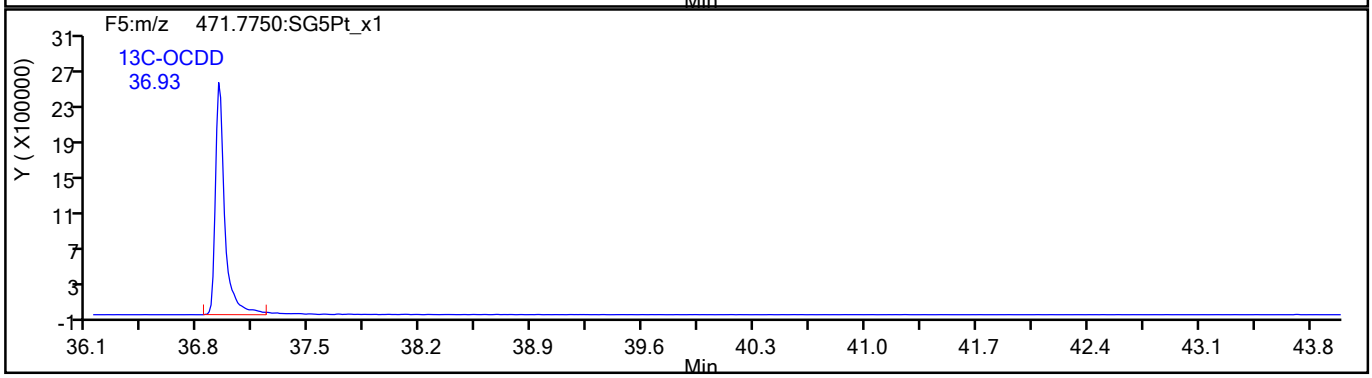

779984

Report Date: 18-Aug-2021 09:55:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

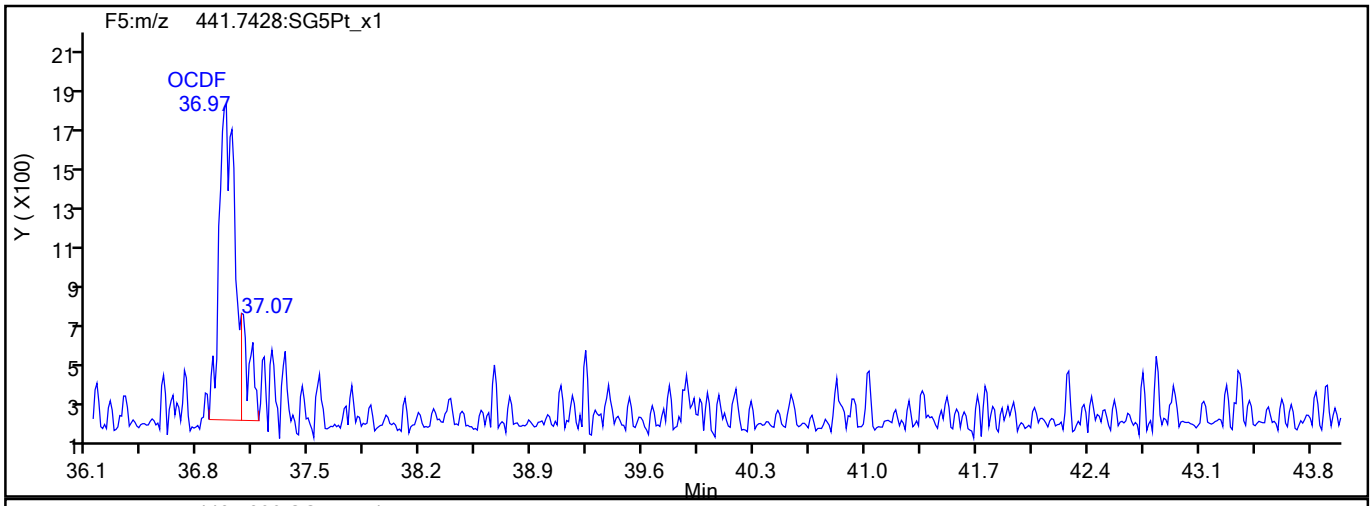

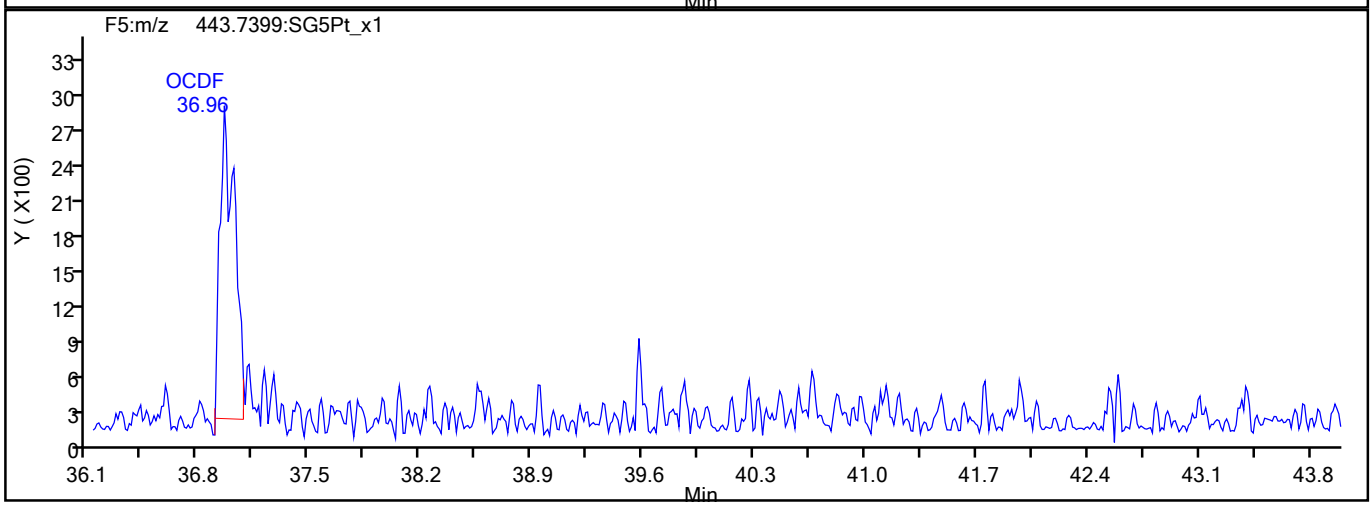

OCDF Interference Mass

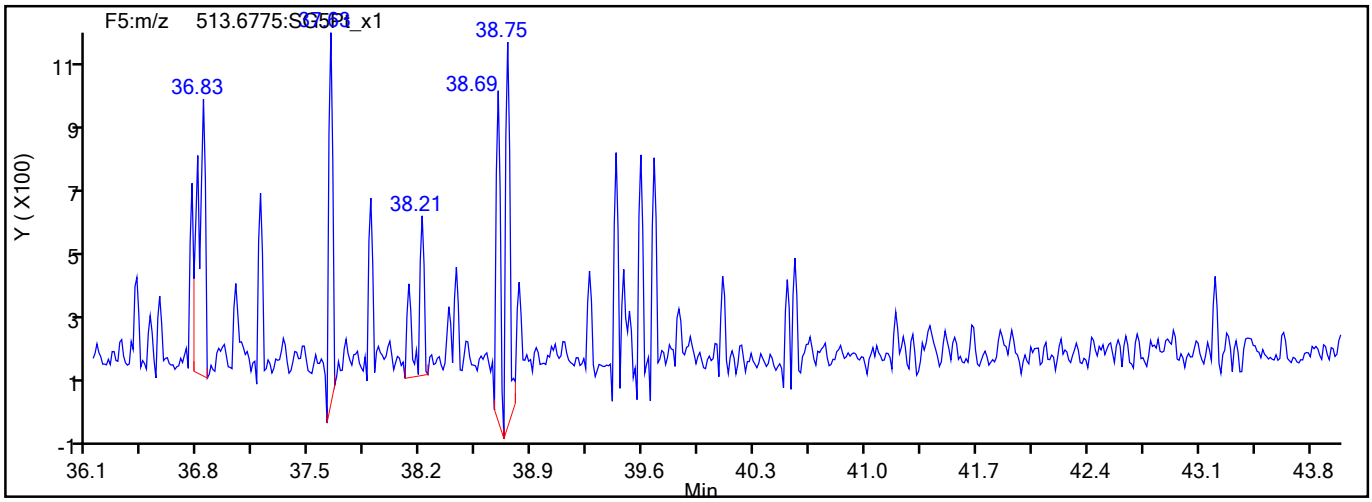

779985

Report Date: 18-Aug-2021 09:55:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

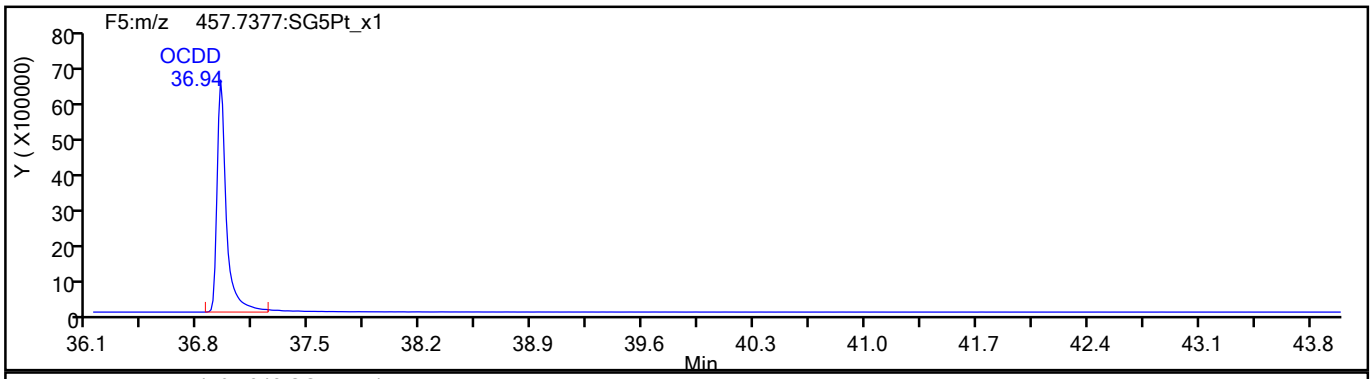

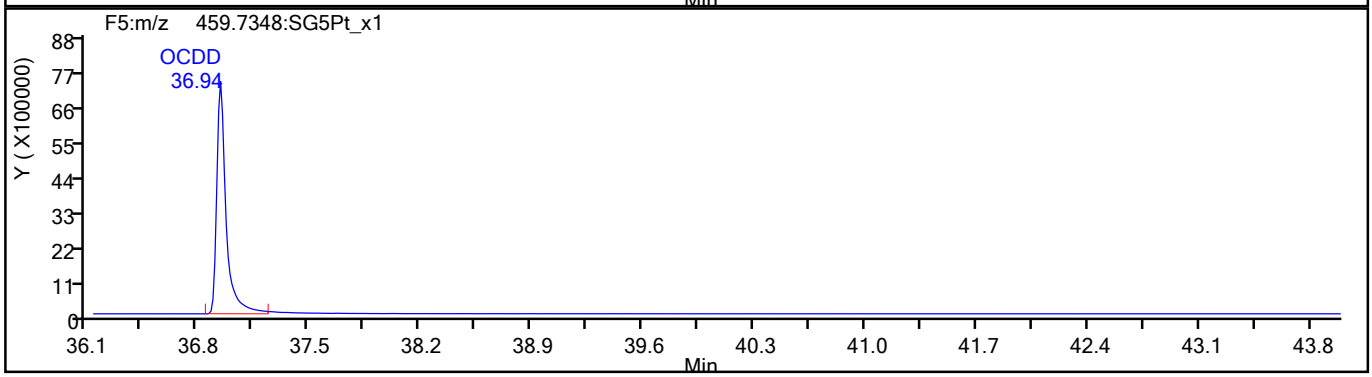

OCDD Standards

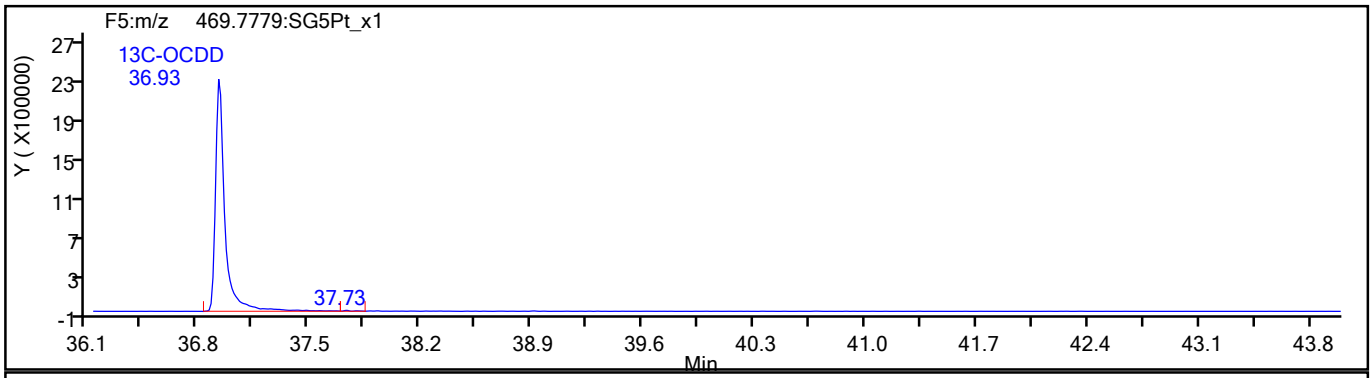

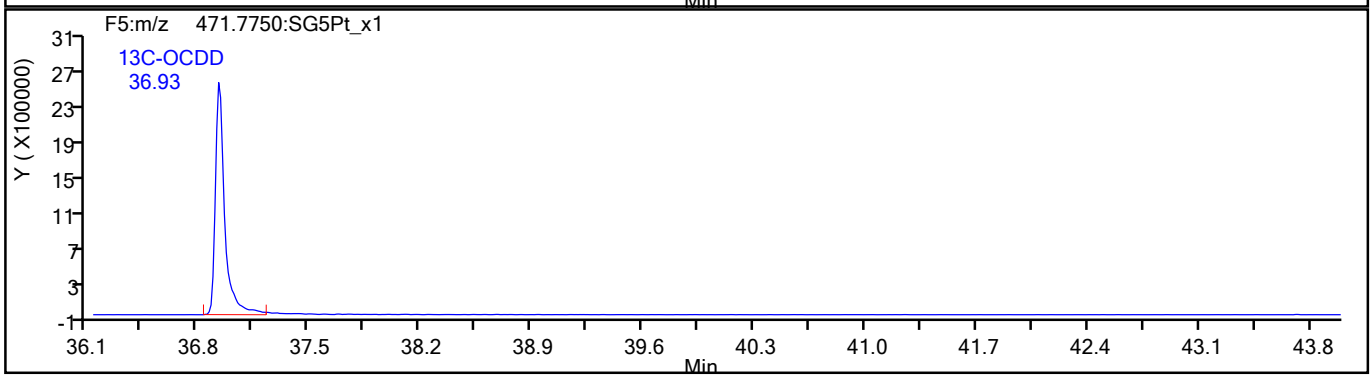

779986

Report Date: 18-Aug-2021 09:55:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

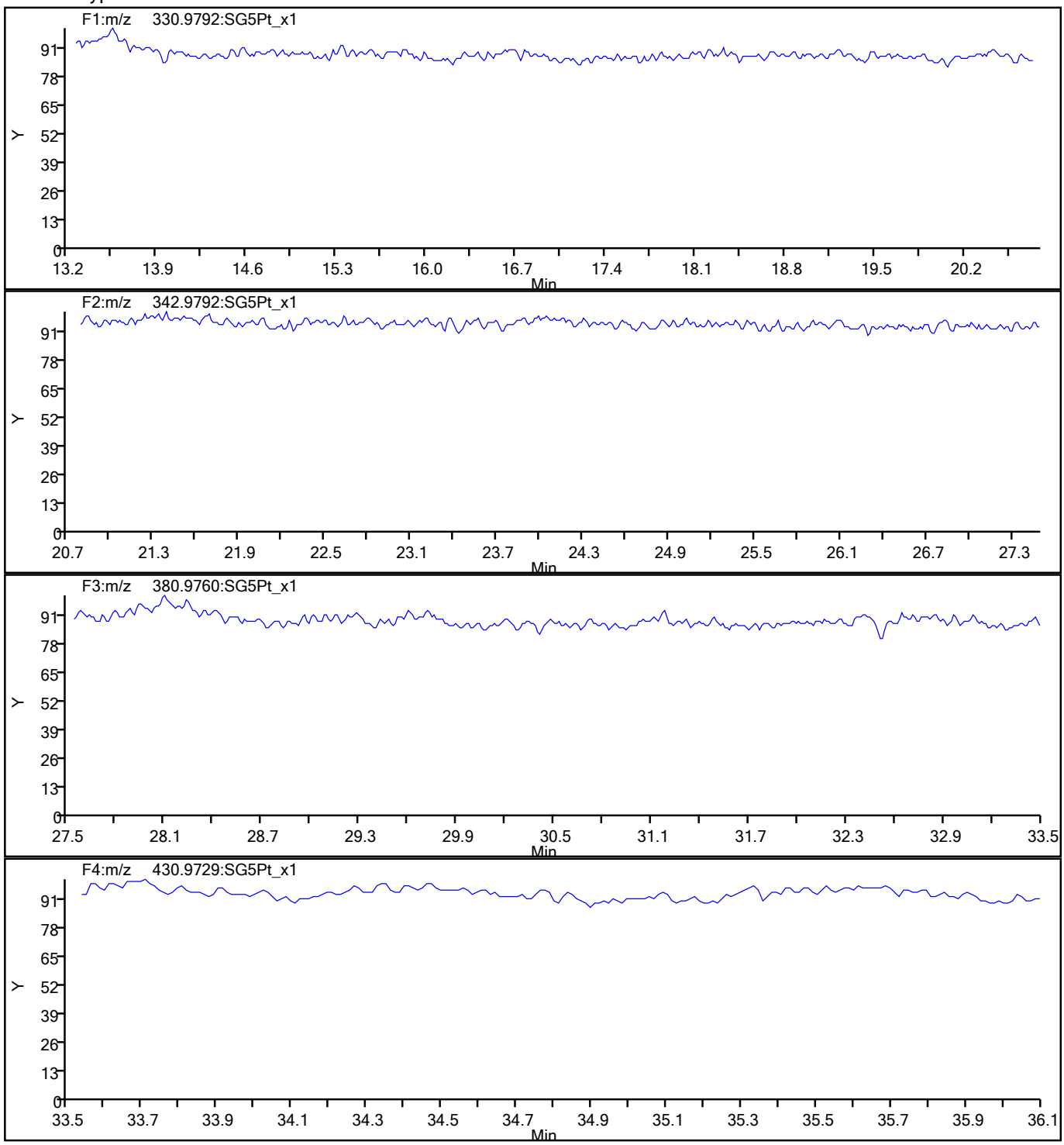

779987

Report Date: 18-Aug-2021 09:55:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_34.d		
Injection Date:	14-Aug-2021 18:16:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	516846	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

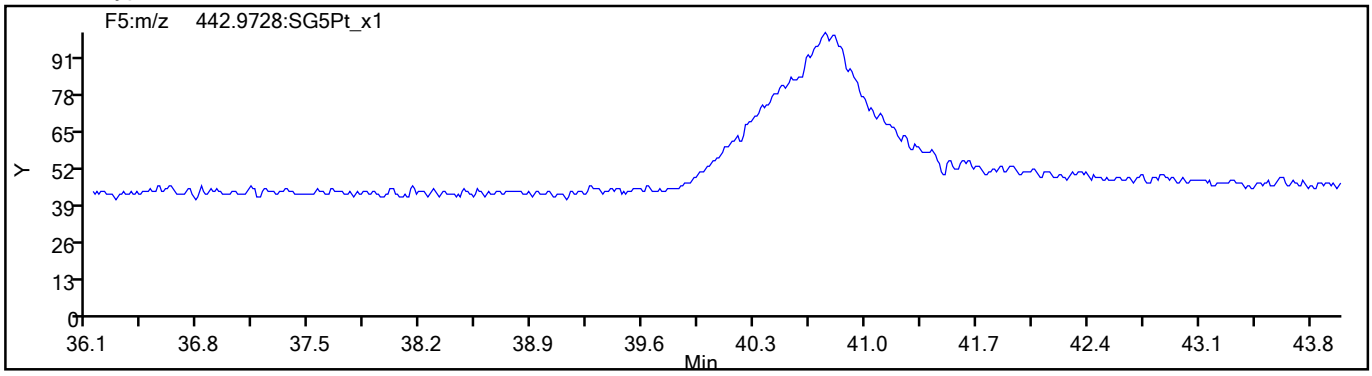

779988

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (8-10) RA
Lab Sample ID: 320-76788-17 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_007.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:50
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.90(g)
Date Analyzed: 08/24/2021 20:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 39.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	33	B	1.5	0.80

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	64		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	85		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_007.d
Lims ID: 320-76788-A-17-A
Client ID: 11215702-072321-BN-SJSB105 (8-10)
Sample Type: Client
Inject. Date: 24-Aug-2021 20:27:08 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-17-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:30:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	16305830	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.669	13805550	0.85	1.3327	63.5	63.5	0.5354	0.5354	63.53	
2,3,7,8-TCDF	17.683	1471861	0.84	0.9978	10.7	10.7	0.2610	0.2610		
D 13C-2,3,7,8-TCDD	16.092	8022817	0.76	0.8749	56.2	56.2	0.9227	0.9227	56.24	
$ 37Cl4-2,3,7,8-TCDD	16.120	4788808		0.8648	34.0	34.0	0.1797	0.1797	84.90	
2,3,7,8-TCDD	16.120	280833	0.77	1.0570	3.312	3.312	0.3005	0.3005		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_007.d
Lims ID: 320-76788-A-17-A
Client ID: 11215702-072321-BN-SJSB105 (8-10)
Sample Type: Client
Inject. Date: 24-Aug-2021 20:27:08 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-17-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:30:39

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.285	2		7095338	1474791	6240	15600	236		
333.9339	16.325	16.285	2		9210492	1984549	4931	12327	402	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.669	17.601	4	1.082	6341072	1226682	5533	13832	222		
317.9389	17.669	17.601	4	1.082	7464478	1351462	4341	10852	311	0.85(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.629	3	1.001	671827	126163	1144	2860	110		
305.8987	17.683	17.629	3	1.001	800034	144677	1542	3855	94	0.84(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.092	16.051	2	0.986	3469389	738649	6240	15600	118		
333.9339	16.106	16.051	3	0.987	4553428	970991	4931	12327	197	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.120	16.065	3	0.987	4788808	918620	2151	5377	427		
2,3,7,8-TCDD											
319.8965	16.120	16.079	2	1.002	122114	32005	1044	2610	31		
321.8936	16.120	16.079	2	1.002	158719	33366	1128	2820	30	0.77(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 25-Aug-2021 09:02:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_007.d		
Injection Date:	24-Aug-2021 20:27:08	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	519540	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

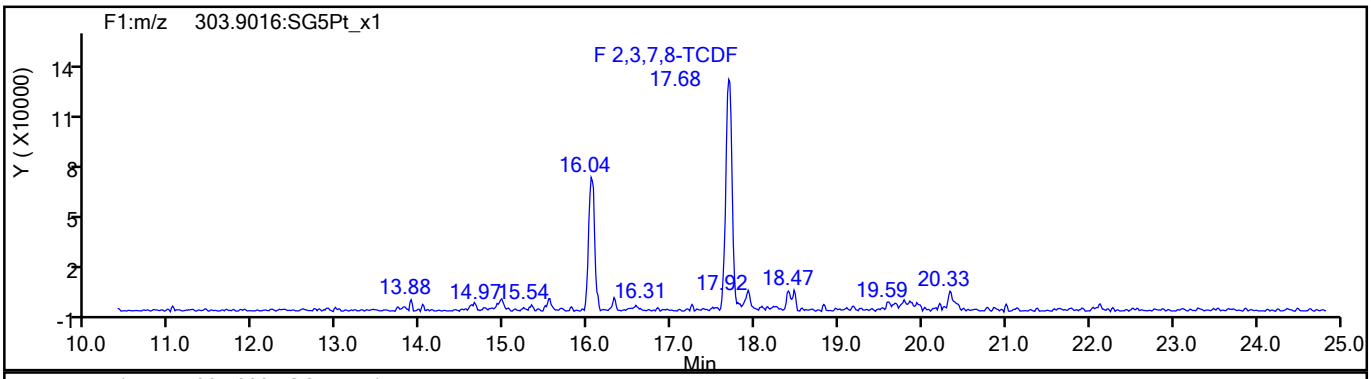

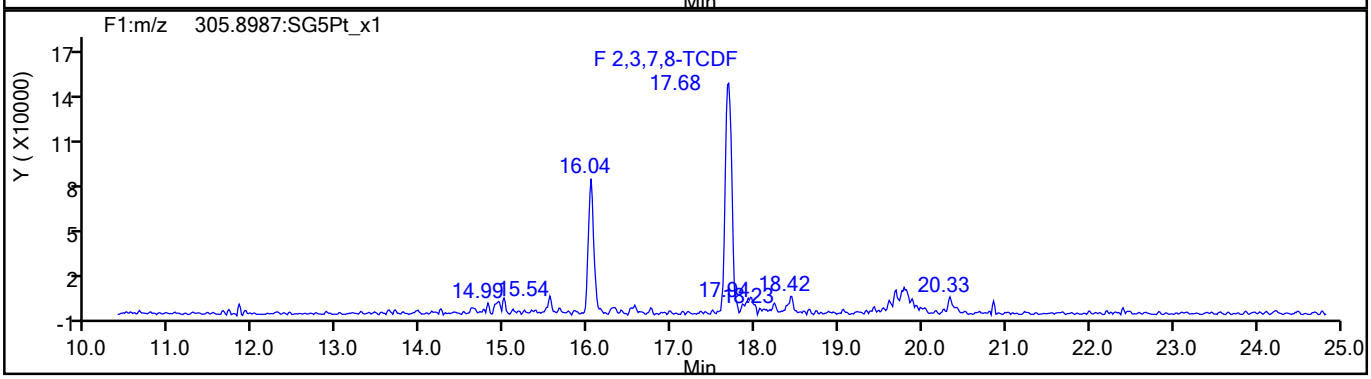

TCDF Standards

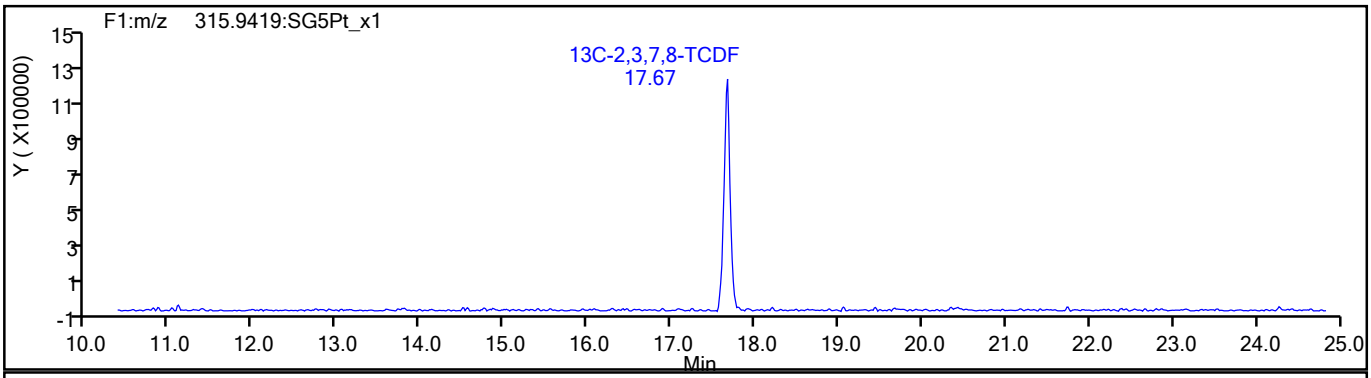

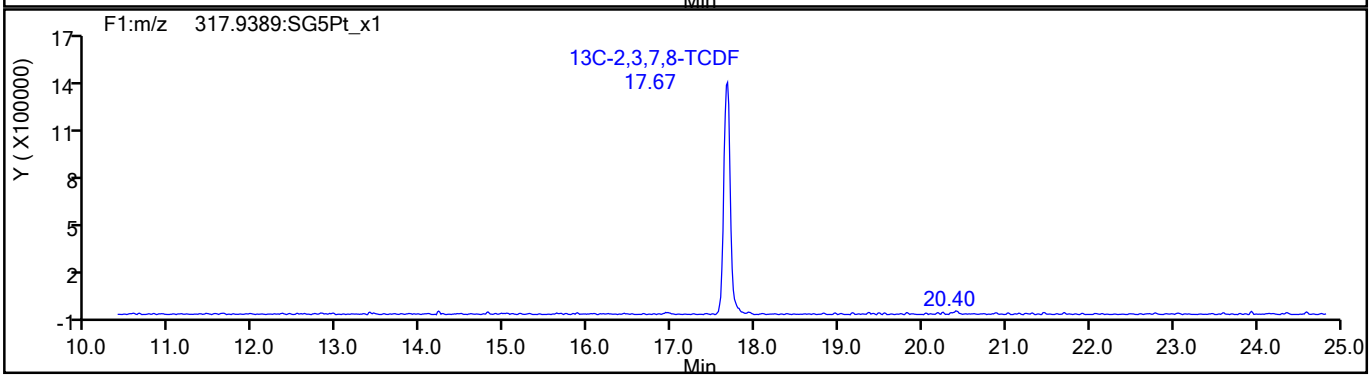

779992

Report Date: 25-Aug-2021 09:02:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_007.d		
Injection Date:	24-Aug-2021 20:27:08	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	519540	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

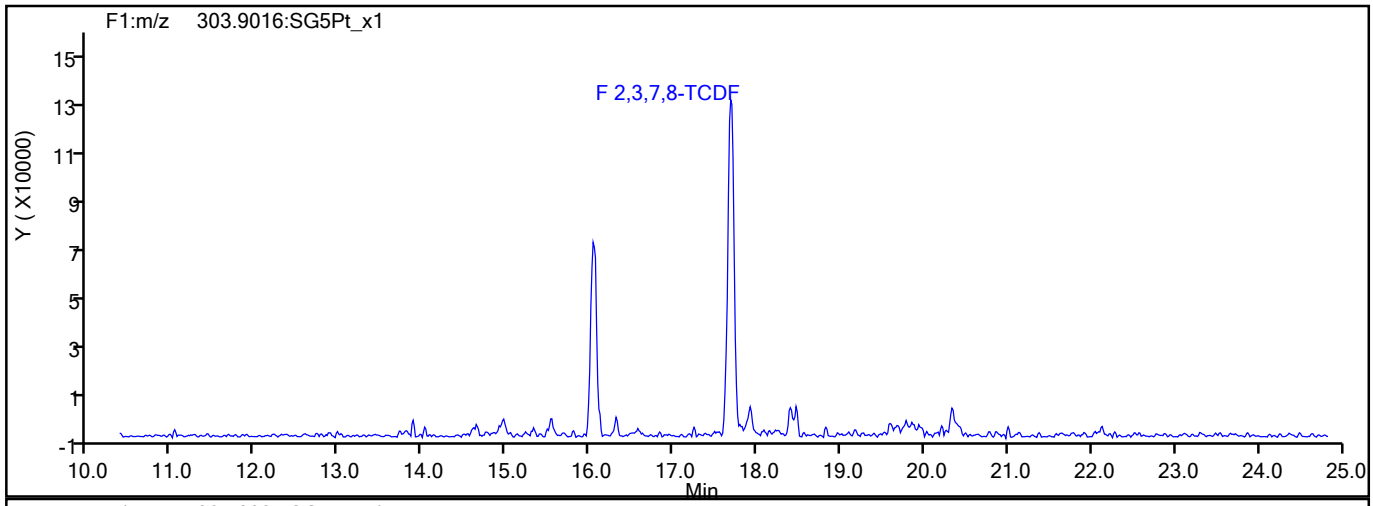

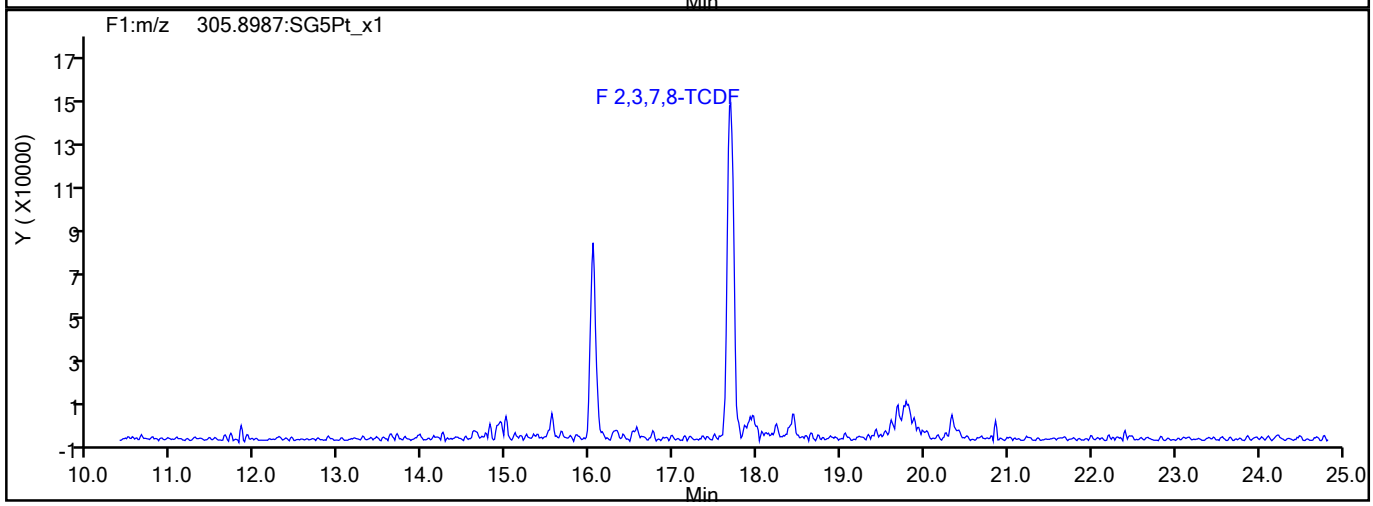

TCDF Interference Mass

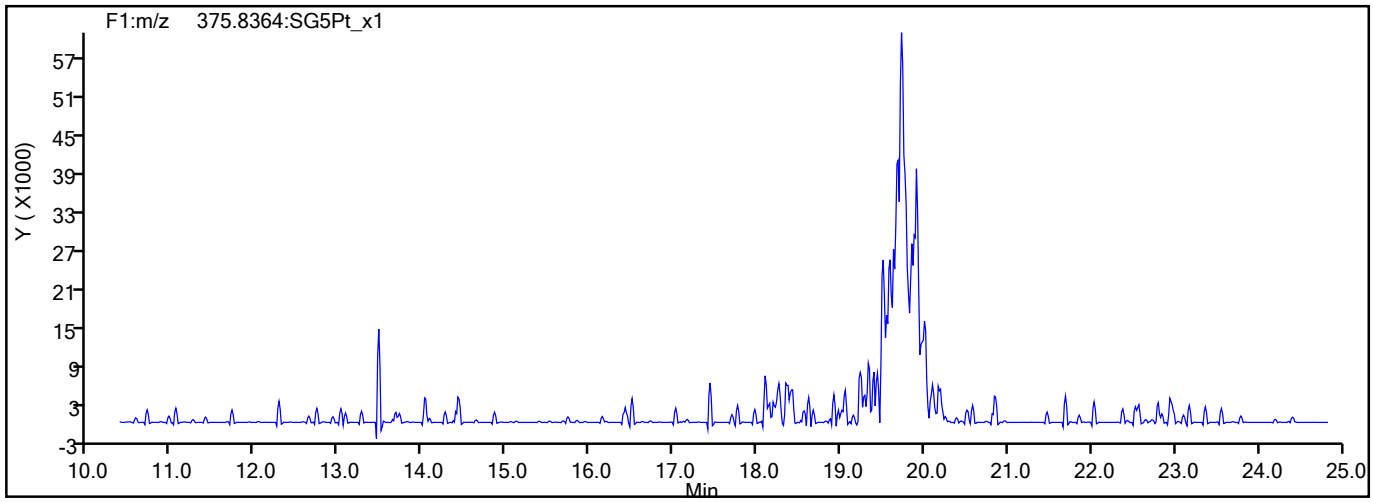

779993

Report Date: 25-Aug-2021 09:02:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_007.d		
Injection Date:	24-Aug-2021 20:27:08	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	519540	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

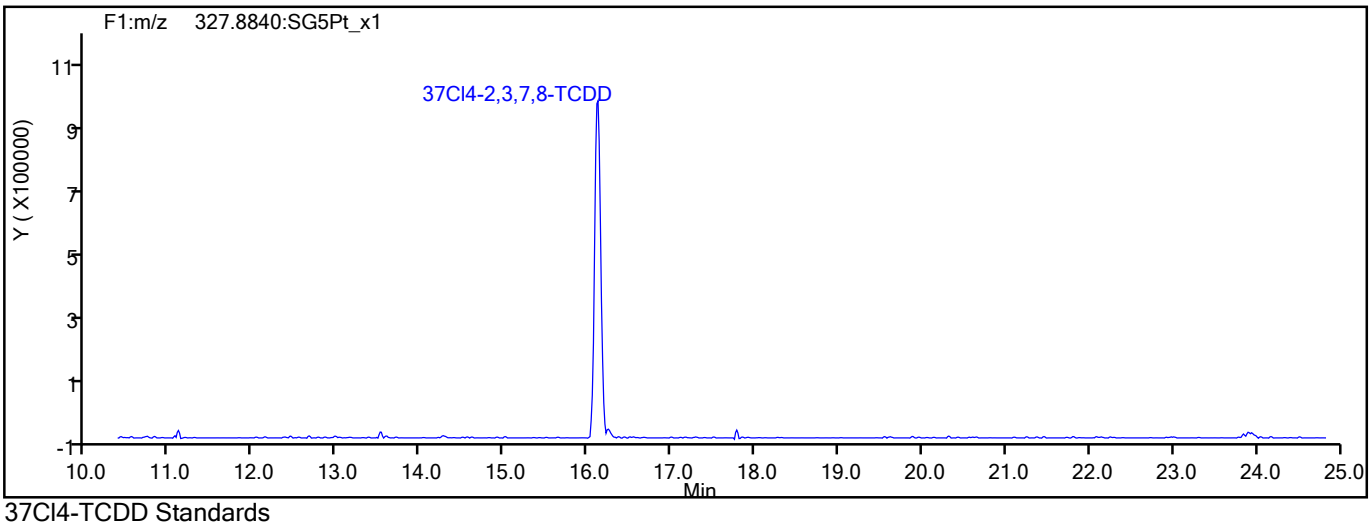

37Cl4-TCDD Standards

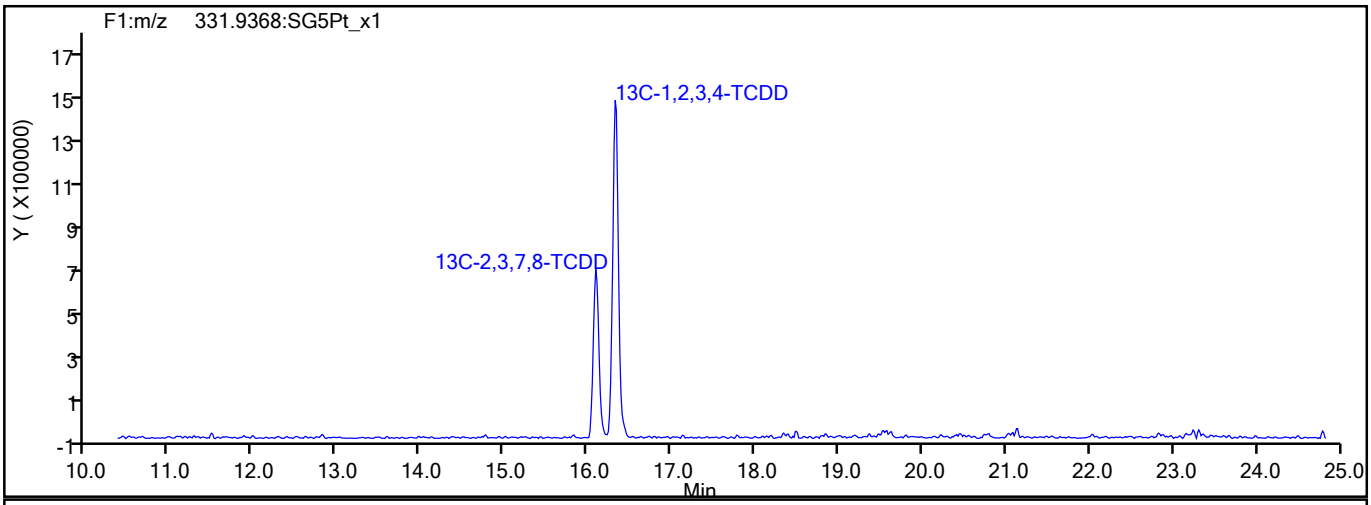

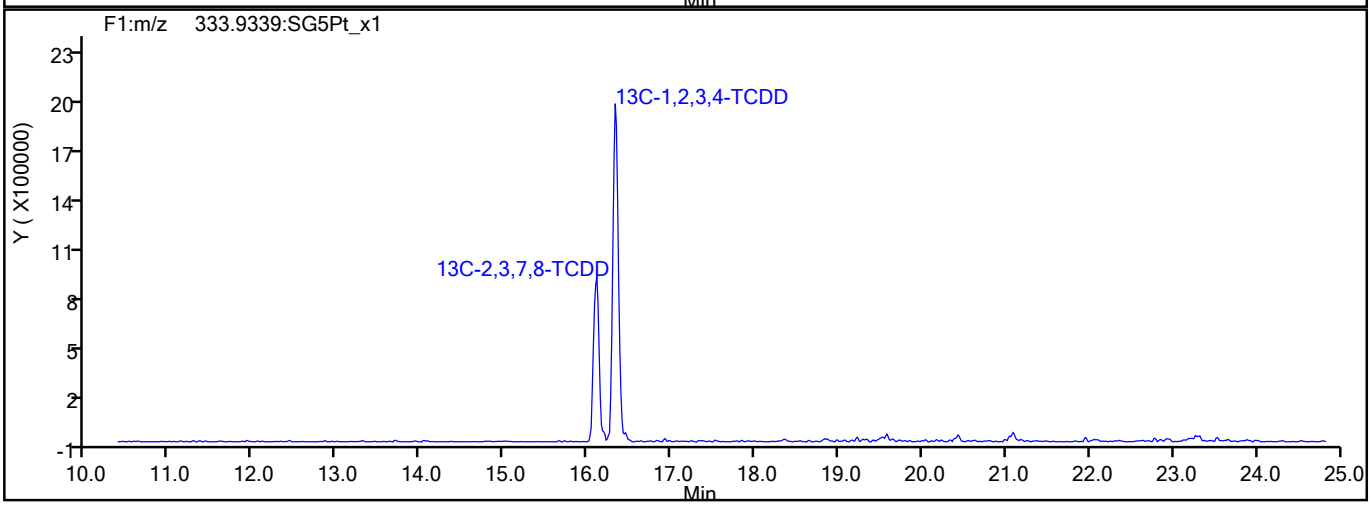

779994

Report Date: 25-Aug-2021 09:02:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_007.d		
Injection Date:	24-Aug-2021 20:27:08	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (8-10)		
Worklist#:	519540	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

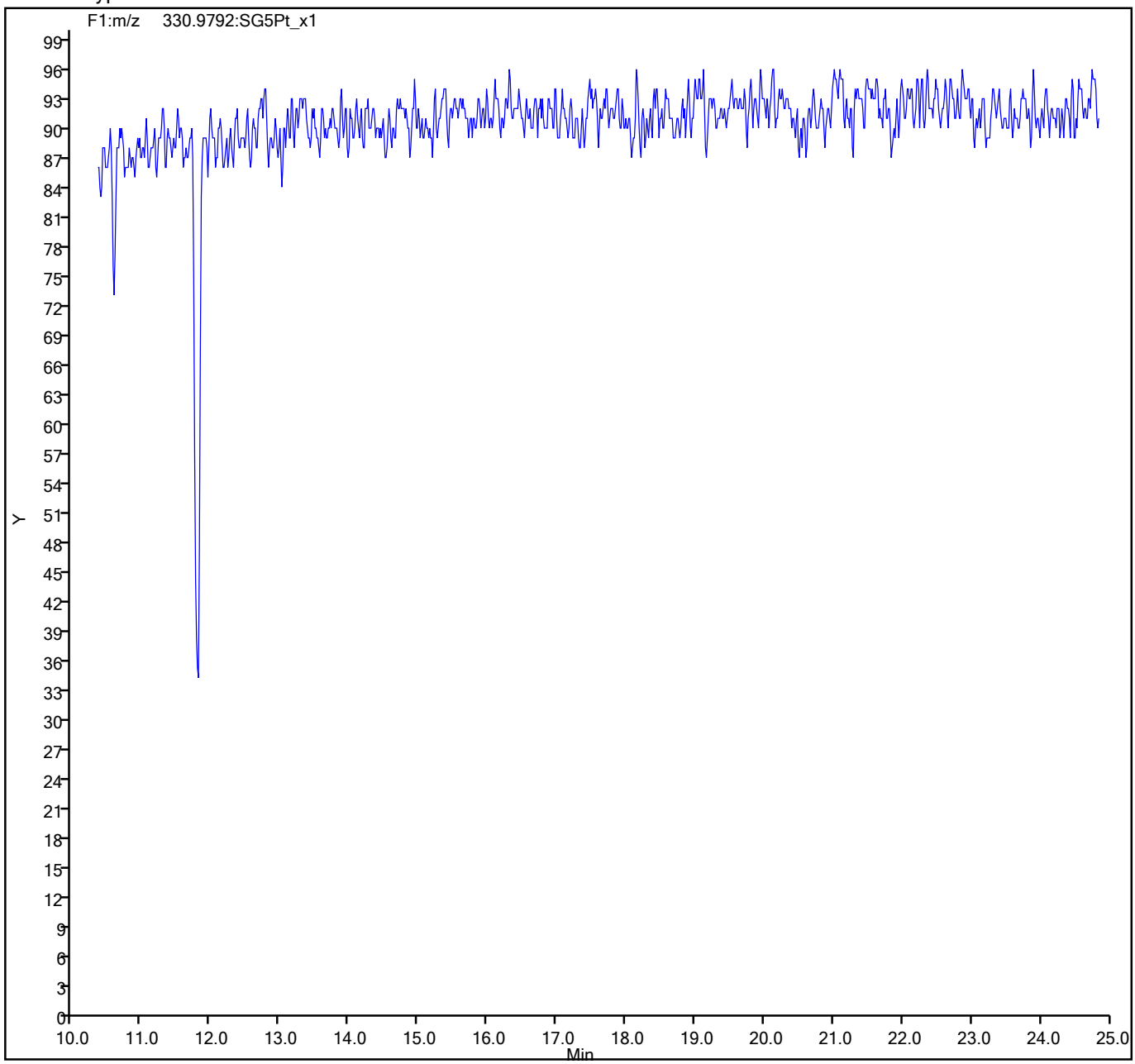

779995

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (10-12)
Lab Sample ID: 320-76788-18
Matrix: Solid
Lab File ID: 13AU2110D5_35.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:55
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.94(g)
Date Analyzed: 08/14/2021 19:01
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 39.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	11	B	1.7	0.17
40321-76-4	1,2,3,7,8-PeCDD	0.27	J q	8.3	0.14
57117-41-6	1,2,3,7,8-PeCDF	0.86	J	8.3	0.065
57117-31-4	2,3,4,7,8-PeCDF	0.54	J	8.3	0.067
39227-28-6	1,2,3,4,7,8-HxCDD	0.63	J B	8.3	0.27
57653-85-7	1,2,3,6,7,8-HxCDD	0.89	J	8.3	0.28
19408-74-3	1,2,3,7,8,9-HxCDD	1.8	J	8.3	0.25
70648-26-9	1,2,3,4,7,8-HxCDF	1.0	J B	8.3	0.047
57117-44-9	1,2,3,6,7,8-HxCDF	0.29	J B	8.3	0.048
72918-21-9	1,2,3,7,8,9-HxCDF	ND		8.3	0.040
60851-34-5	2,3,4,6,7,8-HxCDF	ND		8.3	0.039
35822-46-9	1,2,3,4,6,7,8-HpCDD	37	B	8.3	0.89
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.32	J B	8.3	0.056
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		8.3	0.062
3268-87-9	OCDD	1100	B	17	1.5
39001-02-0	OCDF	0.39	J B	17	0.054
41903-57-5	Total TCDD	18	B q	1.7	0.17
30402-14-3	Total TCDF	70	B q	1.7	0.20
36088-22-9	Total PeCDD	6.0	J q	8.3	0.14
30402-15-4	Total PeCDF	1.7	J q	8.3	0.066
34465-46-8	Total HxCDD	26	B	8.3	0.27
55684-94-1	Total HxCDF	1.3	J B	8.3	0.044
37871-00-4	Total HpCDD	110	B	8.3	0.89
38998-75-3	Total HpCDF	0.32	J B	8.3	0.059

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (10-12)
Lab Sample ID: 320-76788-18
Matrix: Solid
Lab File ID: 13AU2110D5_35.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:55
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.94(g)
Date Analyzed: 08/14/2021 19:01
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 39.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	73		25-164
89059-46-1	13C-2,3,7,8-TCDF	67		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	67		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	63		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	65		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	74		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	74		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	69		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	63		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	64		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	62		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	79		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	68		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	86		26-138
114423-97-1	13C-OCDD	93		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	78		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d
Lims ID: 320-76788-A-18-A
Client ID: 11215702-072321-BN-SJSB105 (10-12)
Sample Type: Client
Inject. Date: 14-Aug-2021 19:01:33 ALS Bottle#: 35 Worklist Smp#: 24
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-18-a 320-76788-a-18-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:58:41 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 14:06:41

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	39965260	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	43455819	0.76	1.6249	66.9	66.9	0.1281	0.1281	66.92	
2,3,7,8-TCDF	17.371	5474633	0.77	1.0239	12.3	12.3	0.0591	0.0591		
A Non-2,3,7,8-sub-TCDF	17.046	3884149	0.77	1.0239	8.811	8.729	0.0591	5.286		RQMa
S Total TCDF					21.1	21.0	0.0591	0.0591		RQ
D 13C-2,3,7,8-TCDD	18.066	26195707	0.78	0.8993	72.9	72.9	0.1532	0.1532	72.88	
2,3,7,8-TCDD	18.082	1097246	0.79	1.2541	3.340	3.340	0.0507	0.0507		
$ 37Cl4-2,3,7,8-TCDD	18.082	13778875		1.1071	31.1	31.1	0.0384	0.0384	77.85	
A Non-2,3,7,8-sub-TCDD	17.499	654593	0.77	1.2541	2.045	1.993	0.0507	0.7928		RQ
S Total TCDD					5.385	5.332	0.0507	0.0507		RQ
D 13C-1,2,3,7,8-PeCDF	22.367	30395114	1.56	1.2101	62.9	62.9	0.1727	0.1727	62.85	
1,2,3,7,8-PeCDF	22.408	83735	1.49	1.0611	0.2596	0.2596	0.0197	0.0197		M
D 13C-2,3,4,7,8-PeCDF	23.717	32388930	1.58	1.2395	65.4	65.4	0.1686	0.1686	65.38	
2,3,4,7,8-PeCDF	23.730	53577	1.73	1.0184	0.1624	0.1624	0.0202	0.0202		M
A F1 PeCDFs	20.093						0.0138	0.0138		
A Non-2,3,7,8-sub-PeCDF	23.241	34384	1.55	1.0398	0.1298	0.1053	0.0200	0.1053		RQM
S Total PeCDF					0.5519	0.5274	0.0200	0.0200		RQ
D 13C-1,2,3,7,8-PeCDD	24.440	20336566	1.60	0.7612	66.8	66.8	0.0903	0.0903	66.85	
1,2,3,7,8-PeCDD	24.494	17438	1.55	1.0484	0.0957	0.0818	0.0410	0.0410		RQM
A Non-2,3,7,8-sub-PeCDD	23.349	369559	1.55	1.0484	1.849	1.733	0.0410	0.8829		RQM
S Total PeCDD					1.944	1.815	0.0410	0.0410		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.503	24312337	0.50	1.0837	69.4	69.4	0.4188	0.4188	69.38	
1,2,3,4,7,8-HxCDF	30.529	82038	1.15	1.0851	0.3110	0.3110	0.0141	0.0141		
D 13C-1,2,3,6,7,8-HxCDF	30.689	23040890	0.51	1.1279	63.2	63.2	0.4024	0.4024	63.17	
1,2,3,6,7,8-HxCDF	30.689	22969	1.34	1.1260	0.0885	0.0885	0.0146	0.0146		
D 13C-2,3,4,6,7,8-HxCDF	31.514	21399626	0.51	1.0637	62.2	62.2	0.4267	0.4267	62.21	
2,3,4,6,7,8-HxCDF	31.528						0.0118	0.0118		
D 13C-1,2,3,7,8,9-HxCDF	32.326	19962574	0.50	0.9676	63.8	63.8	0.4691	0.4691	63.80	
1,2,3,7,8,9-HxCDF	32.326						0.0121	0.0121		
A Non-2,3,7,8-sub-HxCDF	30.197						0.0131	0.0131		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.3995	0.3995	0.0132	0.0132		
* 13C-1,2,3,7,8,9-HxCDD	32.140	32336337	1.27	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	17512258	1.26	0.7334	73.8	73.8	0.4178	0.4178	73.84	
1,2,3,4,7,8-HxCDD	31.701	35677	1.16	1.0640	0.1915	0.1915	0.0825	0.0825		
D 13C-1,2,3,6,7,8-HxCDD	31.807	21195147	1.25	0.8802	74.5	74.5	0.3482	0.3482	74.47	
1,2,3,6,7,8-HxCDD	31.821	56847	1.26	1.0001	0.2682	0.2682	0.0847	0.0847		
1,2,3,7,8,9-HxCDD	32.153	121281	1.33	1.1325	0.5533	0.5533	0.0761	0.0761		
A Non-2,3,7,8-sub-HxCDD	30.882	1390288	1.24	1.0655	6.742	6.742	0.0809	5.000		
S Total HxCDD					7.755	7.755	0.0811	0.0811		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	17112355	0.42	0.7730	68.5	68.5	1.029	1.029	68.46	
1,2,3,4,6,7,8-HpCDF	33.766	23595	1.12	1.4413	0.0957	0.0957	0.0168	0.0168		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	19452730	0.44	0.7008	85.8	85.8	1.135	1.135	85.84	
1,2,3,4,7,8,9-HpCDF	34.860						0.0187	0.0187		
A Non-2,3,7,8-sub-HpCDF	34.319						0.0177	0.0177		
S Total HpCDF					0.0957	0.0957	0.0177	0.0177		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	16478018	1.01	0.6472	78.7	78.7	0.4795	0.4795	78.73	
1,2,3,4,6,7,8-HpCDD	34.568	2013283	0.99	1.0943	11.2	11.2	0.2676	0.2676		
A Non-2,3,7,8-sub-HpCDD	34.301	3942997	1.04	1.0943	21.9	21.9	0.2676	21.9		
S Total HpCDD					33.0	33.0	0.2676	0.2676		
D 13C-OCDD	36.914	27015531	0.89	0.4472	186.8	186.8	0.3533	0.3533	93.42	
OCDF	37.034	22908	0.88	1.4382	0.1179	0.1179	0.0164	0.0164		M
OCDD	36.926	49989076	0.89	1.1070	334.3	334.3	0.4502	0.4502		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 18-Aug-2021 09:58:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d
Lims ID: 320-76788-A-18-A
Client ID: 11215702-072321-BN-SJSB105 (10-12)
Sample Type: Client
Inject. Date: 14-Aug-2021 19:01:33 ALS Bottle#: 35 Worklist Smp#: 24
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-18-a 320-76788-a-18-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 09:58:41 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: bennettd Date: 17-Aug-2021 14:06:41

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		17829938	4413121	2274	5685	1941		
333.9339	17.855	17.855	0		22135322	5405669	3139	7847	1722	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.341	1	0.971	18760973	4565675	3903	9757	1170		
317.9389	17.356	17.341	1	0.971	24694846	6070690	4275	10687	1420	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.356	1	1.001	2388947	559734	1083	2707	517		
305.8987	17.371	17.356	1	1.001	3085686	733735	1490	3725	492	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	15.451	17.046	-96	0.890	21439	6130	1083	2707	6		
305.8987	15.451	17.046	-96	0.890	29312	7382	1490	3725	5	0.73(0.65-0.89)	
303.9016	15.965	17.046	-65	0.920	33110	10027	1083	2707	9		
305.8987	15.950	17.046	-66	0.919	51396	13330	1490	3725	9	0.64(0.65-0.89)	
	Empc Correction				43000	13022	1490	3725	9		
303.9016	16.237	17.046	-48	0.936	67600	15052	1083	2707	14		M
305.8987	16.237	17.046	-48	0.936	85726	17590	1490	3725	12	0.79(0.65-0.89)	
303.9016	16.464	17.046	-35	0.949	75569	20735	1083	2707	19		
	Empc Correction				62364	16278	1083	2707	15		
305.8987	16.464	17.046	-35	0.949	80993	21141	1490	3725	14	0.93(0.65-0.89)	M
303.9016	16.706	17.046	-20	0.963	105313	24279	1083	2707	22		
305.8987	16.706	17.046	-20	0.963	127926	29780	1490	3725	20	0.82(0.65-0.89)	
303.9016	16.993	17.046	-3	0.979	1035729	268149	1083	2707	248		
305.8987	16.993	17.046	-3	0.979	1316196	337793	1490	3725	227	0.79(0.65-0.89)	
303.9016	17.205	17.046	10	0.991	35969	9337	1083	2707	9		
305.8987	17.205	17.046	10	0.991	61323	15520	1490	3725	10	0.59(0.65-0.89)	
	Empc Correction				46712	12125	1490	3725	8		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.794	17.046	45	1.025	152088	36830	1083	2707	34		
305.8987	17.794	17.046	45	1.025	201777	44752	1490	3725	30	0.75(0.65-0.89)	
303.9016	18.052	17.046	60	1.040	31853	7713	1083	2707	7		
305.8987	18.052	17.046	60	1.040	43144	7533	1490	3725	5	0.74(0.65-0.89)	
303.9016	19.185	17.046	128	1.105	161047	33890	1083	2707	31		
305.8987	19.185	17.046	128	1.105	202851	48461	1490	3725	33	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	11517320	2666077	2274	5685	1172		
333.9339	18.066	18.051	1	1.011	14678387	3305261	3139	7847	1053	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.082	18.066	1	1.001	483121	105923	770	1925	138		
321.8936	18.082	18.066	1	1.001	614125	145738	750	1875	194	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.066	1	1.012	13778875	3200158	1668	4170	1919		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	16.146	17.499	-81	0.894	22329	5781	770	1925	8		
321.8936	16.162	17.499	-80	0.895	28168	7306	750	1875	10	0.79(0.65-0.89)	
319.8965	16.373	17.499	-67	0.906	11841	4034	770	1925	5		
321.8936	16.373	17.499	-67	0.906	25120	6575	750	1875	9	0.47(0.65-0.89)	
	Empc Correction				15377	5238	750	1875	7		
319.8965	16.933	17.499	-34	0.937	108339	28065	770	1925	36		
321.8936	16.933	17.499	-34	0.937	152115	40926	750	1875	55	0.71(0.65-0.89)	
319.8965	17.825	17.499	19	0.987	43605	10935	770	1925	14		
	Empc Correction				36035	8238	770	1925	11		
321.8936	17.825	17.499	19	0.987	46799	10700	750	1875	14	0.93(0.65-0.89)	
319.8965	17.976	17.499	29	0.995	50664	11730	770	1925	15		
321.8936	17.961	17.499	28	0.994	73525	18610	750	1875	25	0.69(0.65-0.89)	
319.8965	18.429	17.499	56	1.020	49169	11873	770	1925	15		
321.8936	18.444	17.499	57	1.021	60232	12500	750	1875	17	0.82(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.252	18533012	3112310	4956	12390	628		
353.8970	22.367	22.367	0	1.252	11862102	1980923	3251	8127	609	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.408	22.380	2	1.002	50112	7888	212	530	37		M
341.8567	22.394	22.380	1	1.001	33623	5319	214	535	25	1.49(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.327	19835899	3192420	4956	12390	644		
353.8970	23.717	23.703	1	1.327	12553031	1980617	3251	8127	609	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	23.730	23.730	0	1.001	33924	5502	212	530	26		
341.8567	23.717	23.730	-1	1.000	19653	3569	214	535	17	1.73(1.32-1.78)	M
A F1 PeCDFs											
339.8597	20.093						105	262			
341.8567	20.093						190	475			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQM
339.8597	21.058	23.241	-131	0.941	28887	4550	212	530	21		
	Empc Correction				20900	4660	212	530	22		
341.8567	21.058	23.241	-131	0.941	13484	3007	214	535	14	2.14(1.32-1.78)	M
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.368	12500796	1823946	1649	4122	1106		
369.8919	24.440	24.426	1	1.368	7835770	1133506	1051	2627	1079	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											RQM
355.8546	24.494	24.453	2	1.002	10600	1739	337	842	5		
357.8516	24.480	24.453	2	1.002	9794	1444	172	430	8	1.08(1.32-1.78)	
	Empc Correction				6838	1121	172	430	7		
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	21.249	23.349	-126	0.869	42857	7206	337	842	21		
357.8516	21.249	23.349	-126	0.869	36774	6049	172	430	35	1.17(1.32-1.78)	
	Empc Correction				27649	4649	172	430	27		
355.8546	21.985	23.349	-82	0.900	115365	23731	337	842	70		
357.8516	21.985	23.349	-82	0.900	72879	13088	172	430	76	1.58(1.32-1.78)	M
355.8546	22.667	23.349	-41	0.927	8381	2207	337	842	7		
357.8516	22.667	23.349	-41	0.927	9111	1854	172	430	11	0.92(1.32-1.78)	
	Empc Correction				5407	1423	172	430	8		
355.8546	23.267	23.349	-5	0.952	16856	3396	337	842	10		
	Empc Correction				14180	3346	337	842	10		
357.8516	23.281	23.349	-4	0.953	9149	2159	172	430	13	1.84(1.32-1.78)	M
355.8546	23.444	23.349	6	0.959	53921	8338	337	842	25		
	Empc Correction				44793	6733	337	842	20		
357.8516	23.471	23.349	7	0.960	28899	4344	172	430	25	1.87(1.32-1.78)	M
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	8106118	1448607	4761	11902	304		
385.8610	30.516	30.503	1	0.949	16206219	2906327	9346	23365	311	0.50(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.001	43850	8196	161	402	51		
375.8178	30.516	30.529	-1	1.000	38188	7028	106	265	66	1.15(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	7773657	1355791	4761	11902	285		
385.8610	30.689	30.689	0	0.955	15267233	2702008	9346	23365	289	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.689	30.702	-1	1.000	13147	1826	161	402	11		
375.8178	30.716	30.702	1	1.001	9822	1838	106	265	17	1.34(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	7225008	1648232	4761	11902	346		
385.8610	31.514	31.514	0	0.981	14174618	3181555	9346	23365	340	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						161	402			
375.8178	31.528						106	265			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	6630846	1595947	4761	11902	335		
385.8610	32.326	32.313	1	1.006	13331728	3143685	9346	23365	336	0.50(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.326						161	402			
375.8178	32.326						106	265			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						161	402			
375.8178	30.197						106	265			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		18094168	4336683	5243	13107	827		
403.8529	32.140	32.127	1		14242169	3433482	4282	10705	802	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	9763058	2626933	5243	13107	501		
403.8529	31.701	31.701	0	0.986	7749200	2073230	4282	10705	484	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.701	31.714	-1	1.000	19196	4869	940	2350	5		
391.8127	31.714	31.714	0	1.000	16481	3746	710	1775	5	1.16(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	11778673	2711221	5243	13107	517		
403.8529	31.807	31.807	0	0.990	9416474	2161105	4282	10705	505	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.821	31.820	0	1.000	31699	7677	940	2350	8		
391.8127	31.821	31.820	0	1.000	25148	6018	710	1775	8	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.140	1	1.014	69209	13993	940	2350	15		
391.8127	32.153	32.140	1	1.014	52072	10048	710	1775	14	1.33(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.558	30.882	-79	0.929	569531	60995	940	2350	65		
391.8127	29.558	30.882	-79	0.929	461496	52656	710	1775	74	1.23(1.05-1.43)	
389.8157	30.969	30.882	5	0.974	199162	36437	940	2350	39		
391.8127	30.969	30.882	5	0.974	160099	28914	710	1775	41	1.24(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	5086417	1540320	7743	19357	199		
419.8220	33.766	33.754	1	1.051	12025938	3654262	16980	42450	215	0.42(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.766	33.766	0	1.000	12489	4250	347	867	12		M
409.7789	33.778	33.766	1	1.000	11106	3438	156	390	22	1.12(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.084	5899159	1578386	7743	19357	204		
419.8220	34.847	34.847	0	1.084	13553571	3533739	16980	42450	208	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860						347	867			
409.7789	34.860						156	390			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						347	867			
409.7789	34.319						156	390			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.075	8292403	2251570	4760	11900	473		
437.8140	34.556	34.556	0	1.075	8185615	2241511	4885	12212	459	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	999867	266496	2912	7280	92		
425.7737	34.568	34.568	0	1.000	1013416	273315	2350	5875	116	0.99(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.985	2010280	559930	2912	7280	192		
425.7737	34.009	34.301	-17	0.984	1932717	537228	2350	5875	229	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.914	0	1.149	12698259	2948216	2114	5285	1395		
471.7750	36.914	36.914	0	1.149	14317272	3385824	2796	6990	1211	0.89(0.76-1.02)	
OCDF											M
441.7428	37.034	37.010	1	1.003	10692	2162	129	322	17		M
443.7399	37.022	37.010	1	1.003	12216	3133	170	425	18	0.88(0.76-1.02)	M
OCDD											
457.7377	36.926	36.926	0	1.000	23581276	5575474	2455	6137	2271		
459.7348	36.926	36.926	0	1.000	26407800	6338724	3858	9645	1643	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d
Lims ID: 320-76788-A-18-A
Client ID: 11215702-072321-BN-SJSB105 (10-12)
Inject. Date: 14-Aug-2021 19:01:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 24

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	43455819	10636365

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	43455819	10636365

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.451	21439	6130	29312	7382	0.1141	0.73	
15.965	33110	10027	51396	13330	0.1899	0.64	RQ
15.965	33110	10027	43000	13022	0.1711		Empc Correction
16.237	67600	15052	85726	17590	0.3446	0.79	Ma
16.464	75569	20735	80993	21141	0.3519	0.93	RQM
16.464	62364	16278	80993	21141	0.3222		Empc Correction
16.706	105313	24279	127926	29780	0.5242	0.82	
16.993	1035729	268149	1316196	337793	5.29	0.79	
17.205	35969	9337	61323	15520	0.2187	0.59	RQ
17.205	35969	9337	46712	12125	0.1858		Empc Correction
17.794	152088	36830	201777	44752	0.7953	0.75	
18.052	31853	7713	43144	7533	0.1686	0.74	
19.185	161047	33890	202851	48461	0.8178	0.79	
Signal Totals:							
	1706512	427685	2177637	539579			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3920361	975424				0.78	RQMa
	3884149	967264					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 8.811 = (3920361 * 100.000) / (43455819 * 1.024)
Empc Amount: 8.729 = (3884149 * 100.000) / (43455819 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Lims ID:	320-76788-A-18-A		
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Inject. Date:	14-Aug-2021 19:01:33	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	24

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	26195707	5971338

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	26195707	5971338

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.146	22329	5781	28168	7306	0.1537	0.79	
16.373	11841	4034	25120	6575	0.1125	0.47	RQ
16.373	11841	4034	15377	5238	0.0828		Empc Correction
16.933	108339	28065	152115	40926	0.7928	0.71	
17.825	43605	10935	46799	10700	0.2752	0.93	RQ
17.825	36035	8238	46799	10700	0.2521		Empc Correction
17.976	50664	11730	73525	18610	0.3780	0.69	
18.429	49169	11873	60232	12500	0.3330	0.82	
Signal Totals:							
	278377	69721	376216	95280			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	671906	169035				0.74	RQ
	654593	165001					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.045 = (671906 * 100.000) / (26195707 * 1.254)

Empc Amount: 1.993 = (654593 * 100.000) / (26195707 * 1.254)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Lims ID:	320-76788-A-18-A		
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Inject. Date:	14-Aug-2021 19:01:33	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	24

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	30395114	5093233
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	32388930	5173037

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	31392022	5133135

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.058	28887	4550	13484	3007	0.1298	2.14	RQM
21.058	20900	4660	13484	3007	0.1053		Empc Correction
Signal Totals:							
	20900	4660	13484	3007			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	42371	7557				2.14	RQM
	34384	7667					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1298 = (42371 * 100.000) / (31392022 * 1.040)
Empc Amount: 0.1053 = (34384 * 100.000) / (31392022 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Lims ID:	320-76788-A-18-A		
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Inject. Date:	14-Aug-2021 19:01:33	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	24

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	20336566	2957452

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	20336566	2957452

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	42857	7206	36774	6049	0.3735	1.17	RQ
21.249	42857	7206	27649	4649	0.3307		Empc Correction
21.985	115365	23731	72879	13088	0.8829	1.58	M
22.667	8381	2207	9111	1854	0.0820	0.92	RQ
22.667	8381	2207	5407	1423	0.0647		Empc Correction
23.267	16856	3396	9149	2159	0.1220	1.84	RQM
23.267	14180	3346	9149	2159	0.1094		Empc Correction
23.444	53921	8338	28899	4344	0.3884	1.87	RQM
23.444	44793	6733	28899	4344	0.3456		Empc Correction
Signal Totals:							
	225576	43223	143983	25663			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	394192	72372				1.51	RQM
	369559	68886					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.849 = (394192 * 100.000) / (20336566 * 1.048)

Empc Amount: 1.733 = (369559 * 100.000) / (20336566 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d
Lims ID: 320-76788-A-18-A
Client ID: 11215702-072321-BN-SJSB105 (10-12)
Inject. Date: 14-Aug-2021 19:01:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 24

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	17512258	4700163
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	21195147	4872326
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	19353702	4786244

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.558	569531	60995	461496	52656	5.00	1.23	
30.969	199162	36437	160099	28914	1.74	1.24	
Signal Totals:							
	768693	97432	621595	81570			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1390288	179002				1.24	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.742 = (1390288 * 100.000) / (19353702 * 1.066)

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d
Lims ID: 320-76788-A-18-A
Client ID: 11215702-072321-BN-SJSB105 (10-12)
Inject. Date: 14-Aug-2021 19:01:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 24

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	16478018	4493081

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	16478018	4493081

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	2010280	559930	1932717	537228	21.9	1.04	
Signal Totals:							
	2010280	559930	1932717	537228			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3942997	1097158				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 21.867 = (3942997 * 100.000) / (16478018 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 16.237 Area = 67600

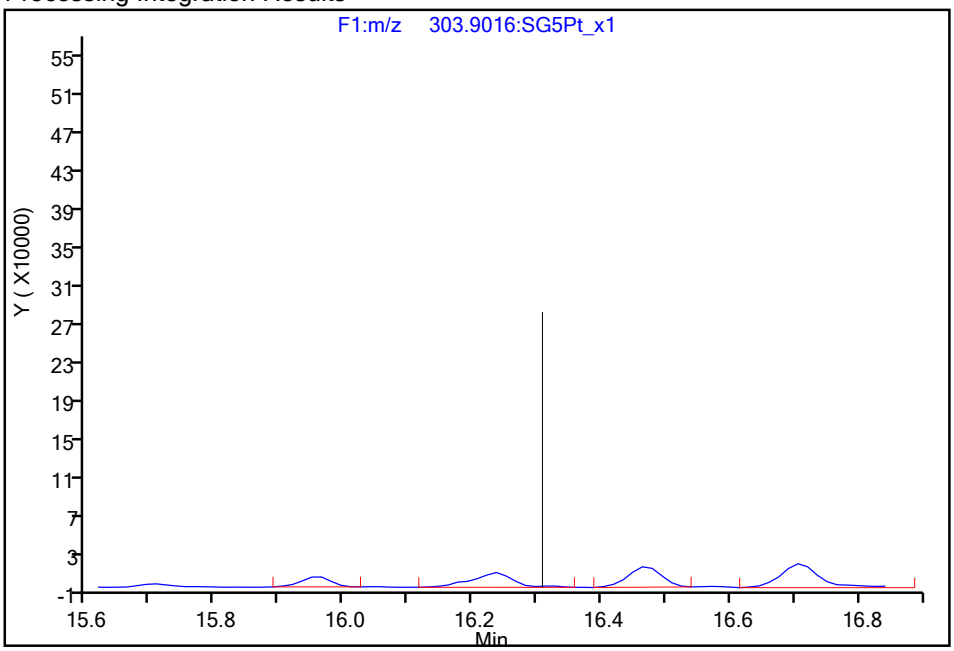

Manual Integration Results

RT = 16.237 Area = 67600

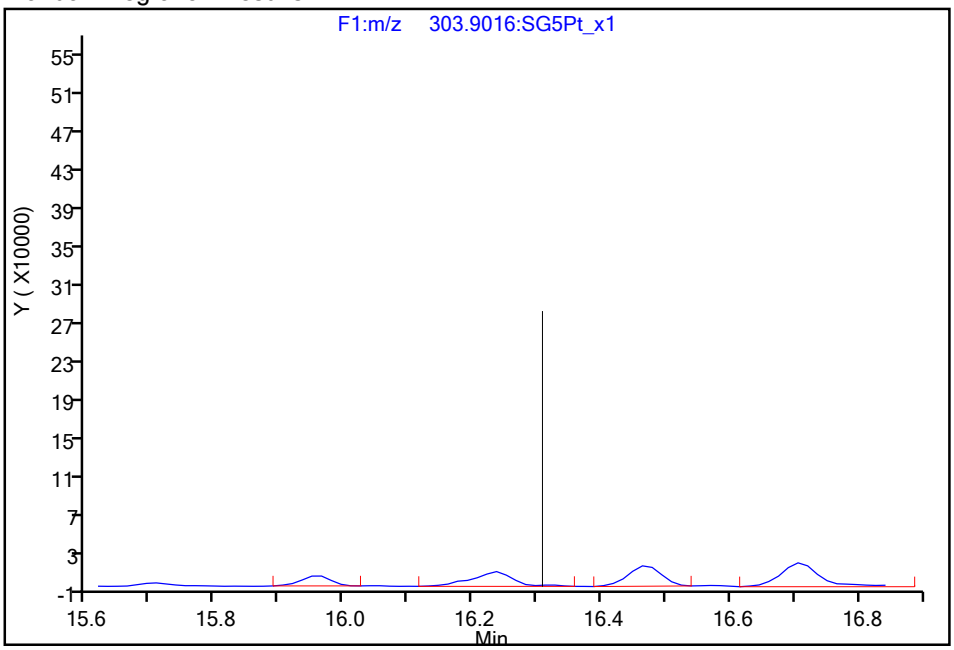

Reviewer: dadunj, 18-Aug-2021 09:56:10

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.89- 19.20)

Signal: 2

Processing Integration Results

RT = 16.449 Area = 38352

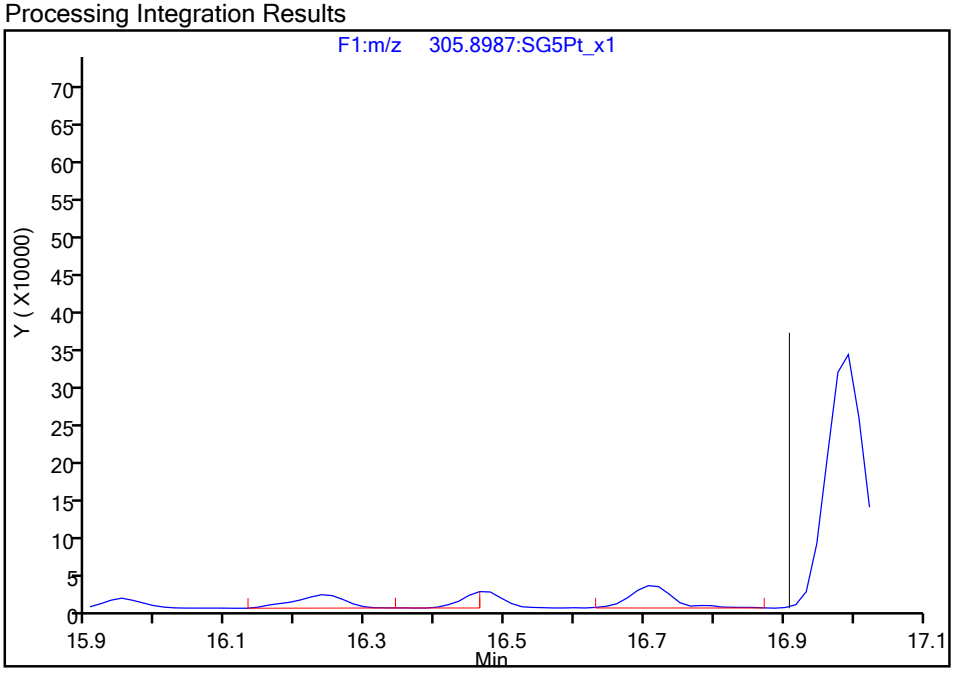

Manual Integration Results

RT = 16.464 Area = 80993 M

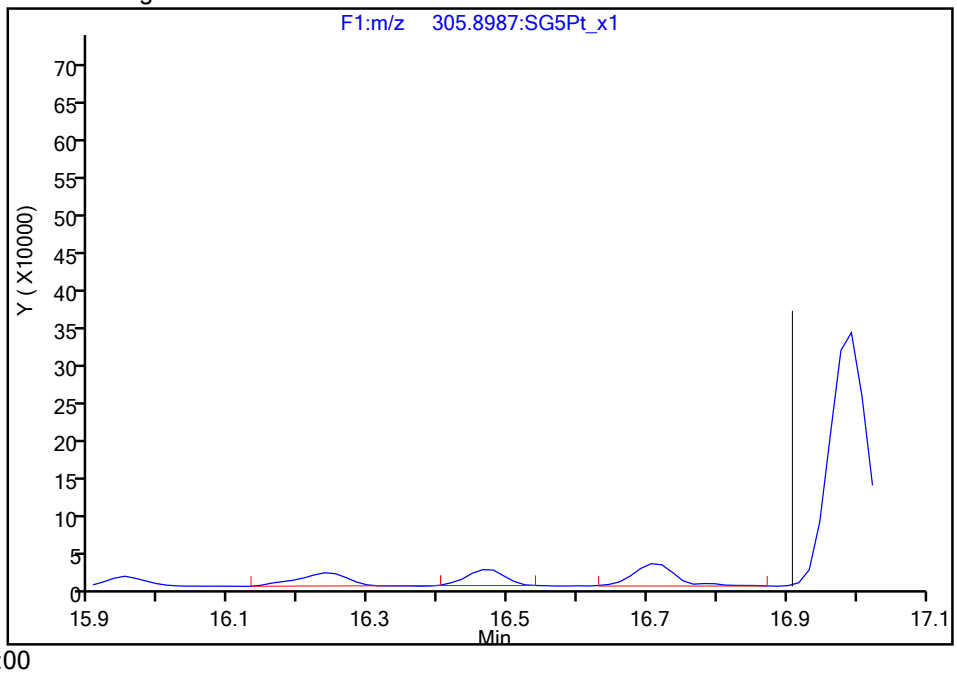

Reviewer: dadunj, 18-Aug-2021 09:56:00

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.41
Area: 55233
Amount: 0.278387
Amount Units: pg/ul

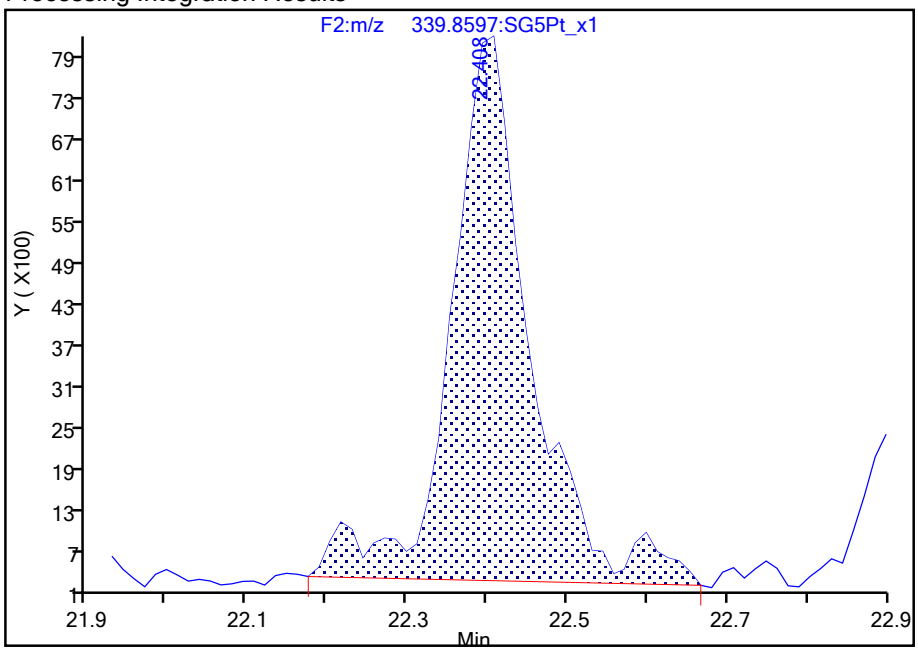

Manual Integration Results

RT: 22.41
Area: 50112
Amount: 0.259617
Amount Units: pg/ul

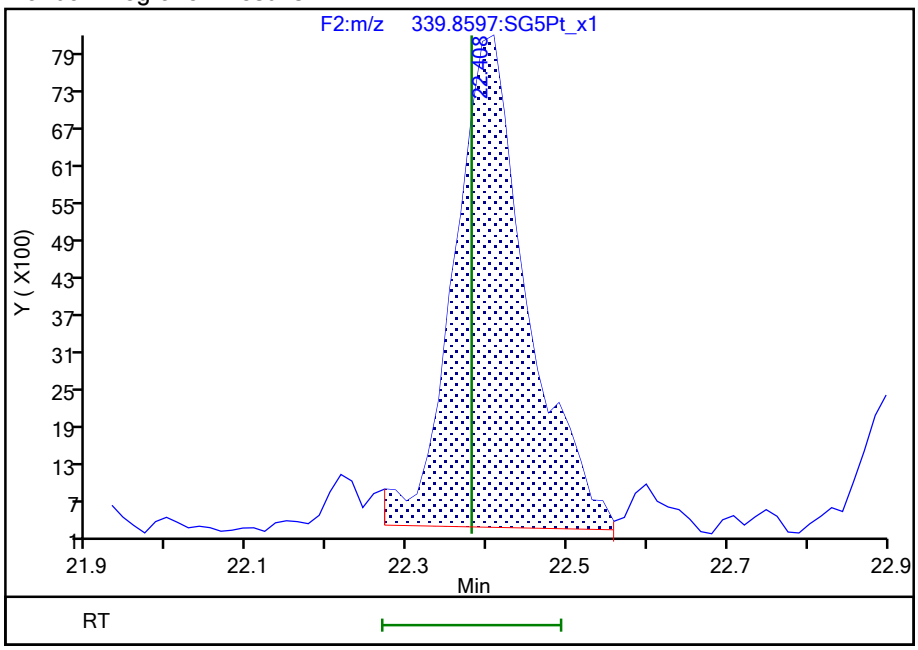

Reviewer: dadunj, 18-Aug-2021 09:56:32

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.39
Area: 34556
Amount: 0.278387
Amount Units: pg/ul

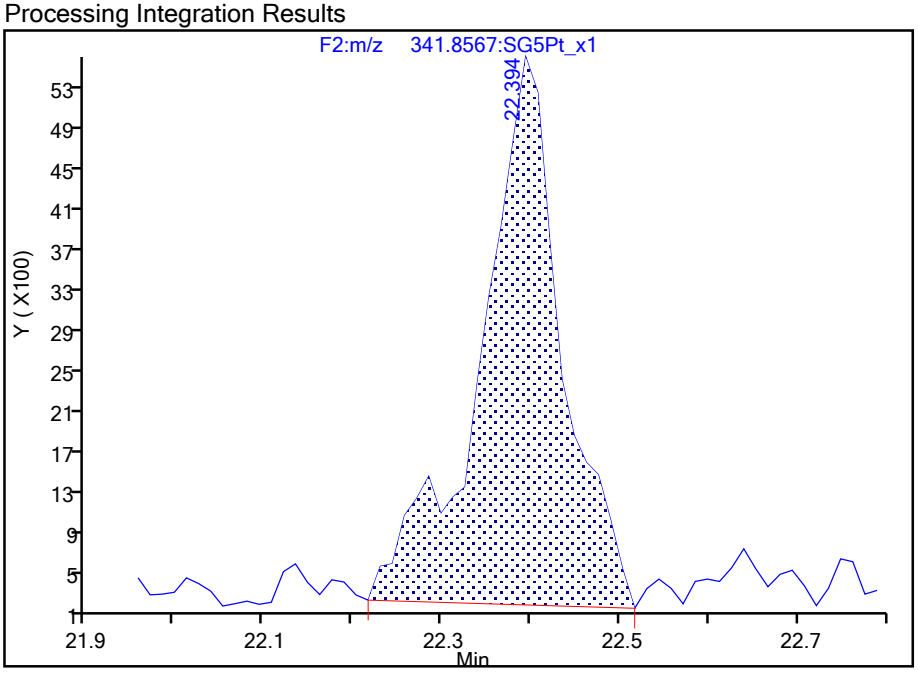

Manual Integration Results

RT: 22.39
Area: 33623
Amount: 0.259617
Amount Units: pg/ul

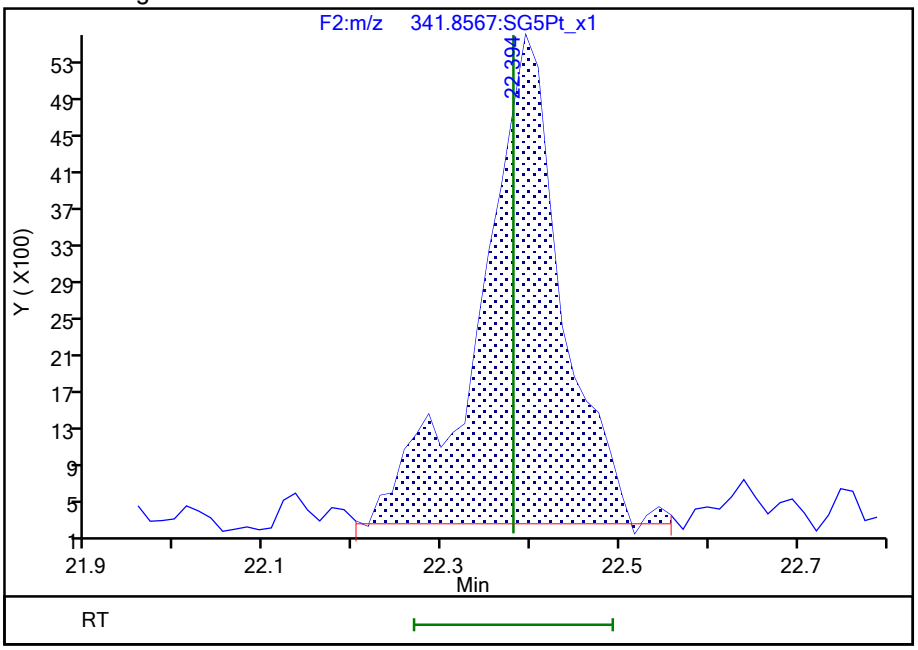

Reviewer: dadunj, 18-Aug-2021 09:57:41

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.72
Area: 20419
Amount: 0.164748
Amount Units: pg/ul

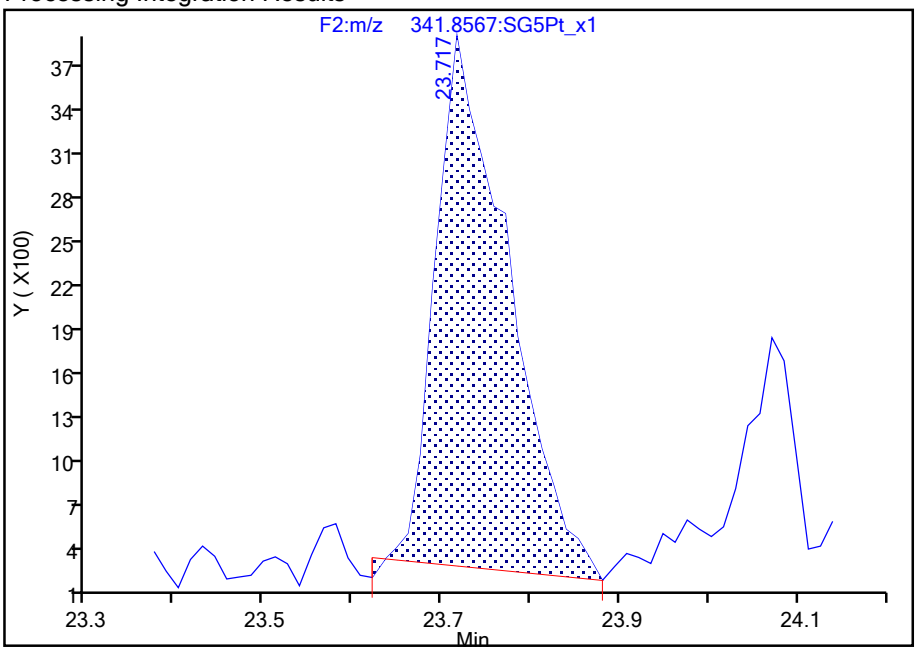

Manual Integration Results

RT: 23.72
Area: 19653
Amount: 0.162426
Amount Units: pg/ul

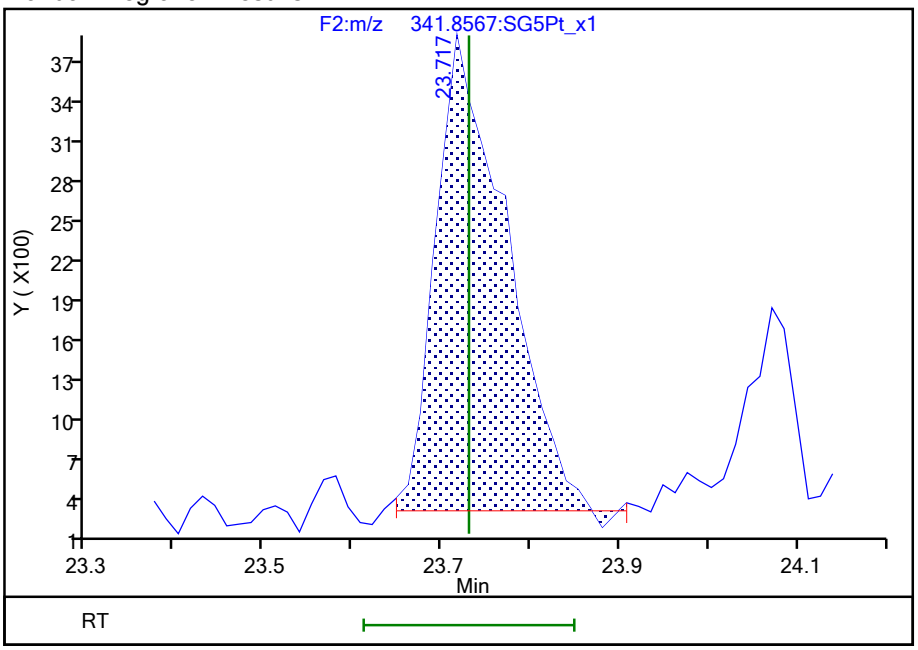

Reviewer: dadunj, 18-Aug-2021 09:57:54

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 2, m/z: 341.8567, RT: (20.77- 25.71)

Signal: 2

Processing Integration Results

RT = 21.058 Area = 15575

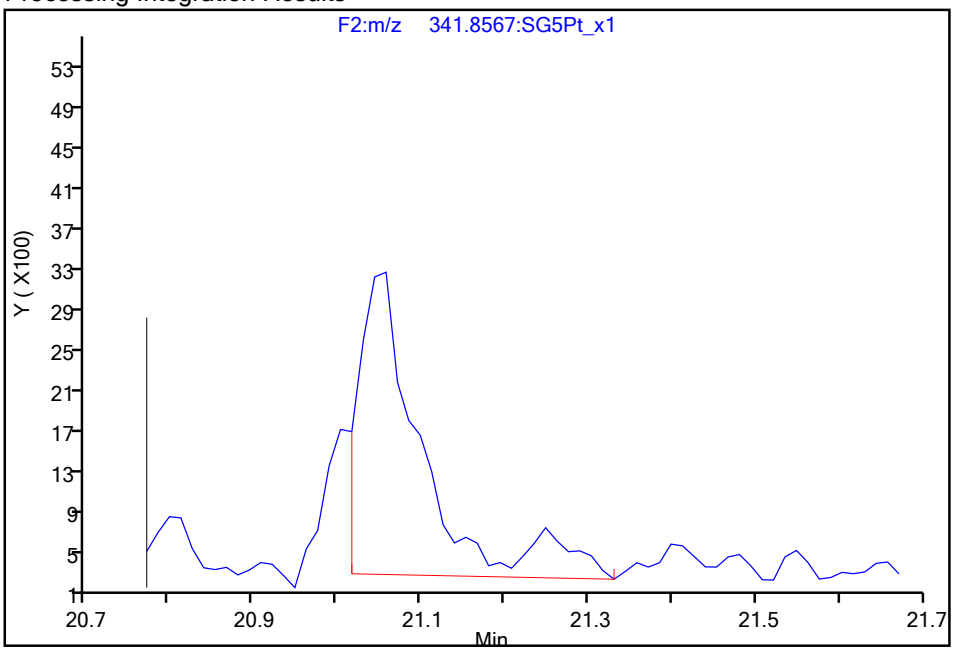

Manual Integration Results

RT = 21.058 Area = 13484 M

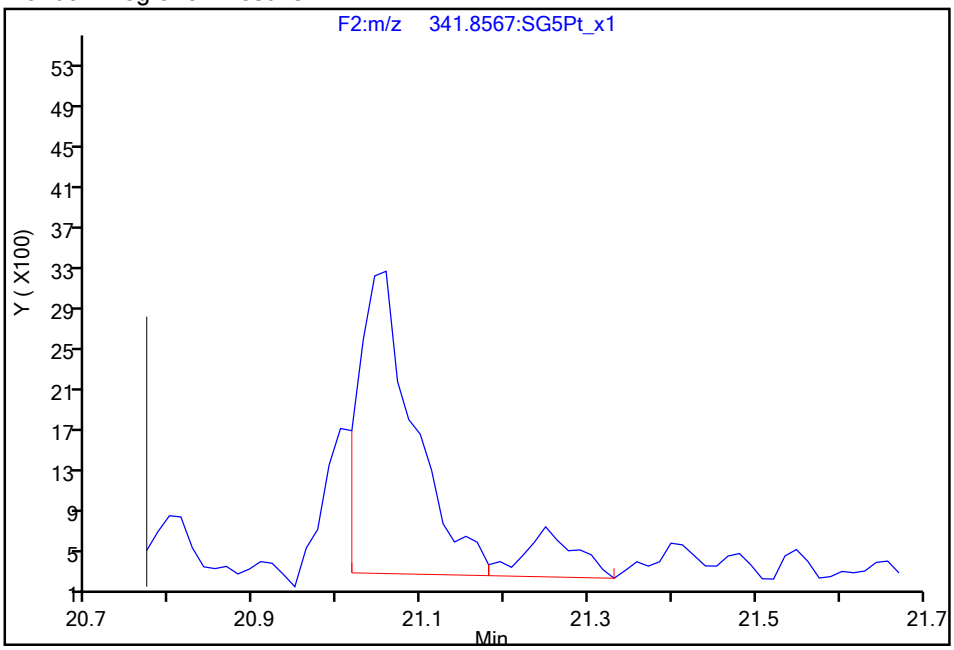

Reviewer: dadunj, 18-Aug-2021 09:56:38

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 2

Processing Integration Results

RT: 24.48
Area: 12259
Amount: 0.107211
Amount Units: pg/ul

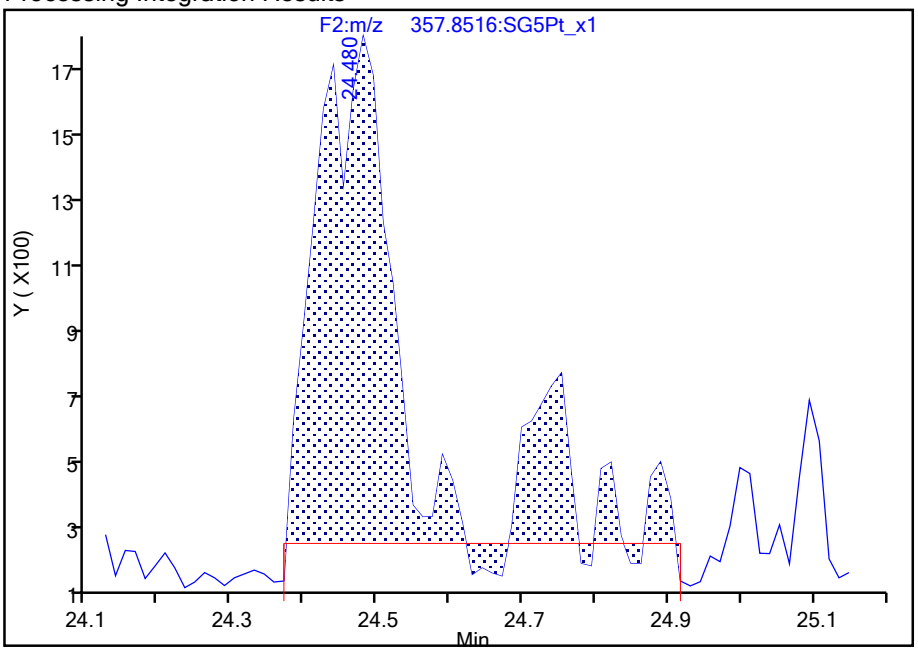

Manual Integration Results

RT: 24.48
Area: 9794
Amount: 0.095650
Amount Units: pg/ul

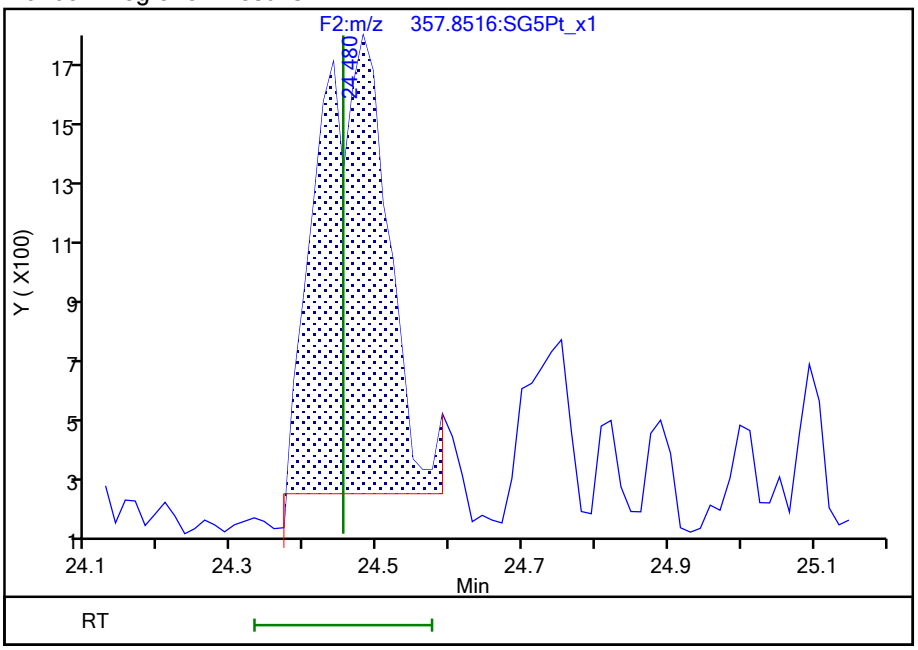

Reviewer: dadunj, 18-Aug-2021 09:58:00

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 3

RT: 24.49
Area: 22859
Amount: 0.107211
Amount Units: pg/ul

Processing Integration Results

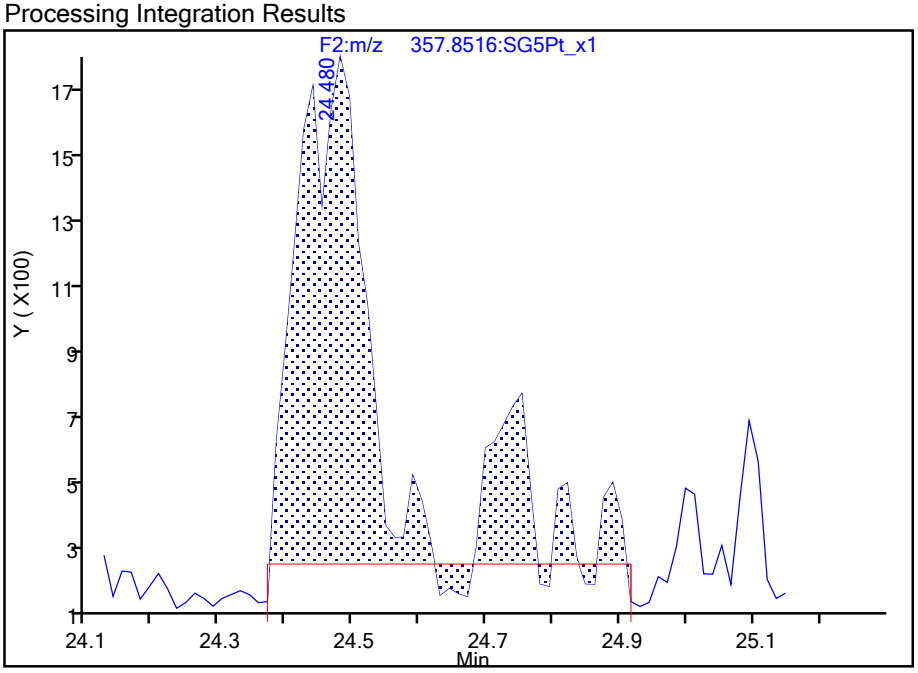

Manual Integration Results

RT: 24.49
Area: 20394
Amount: 0.095650
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 09:58:00
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.21- 25.49)

Signal: 2

Processing Integration Results

RT = 21.985 Area = 75093

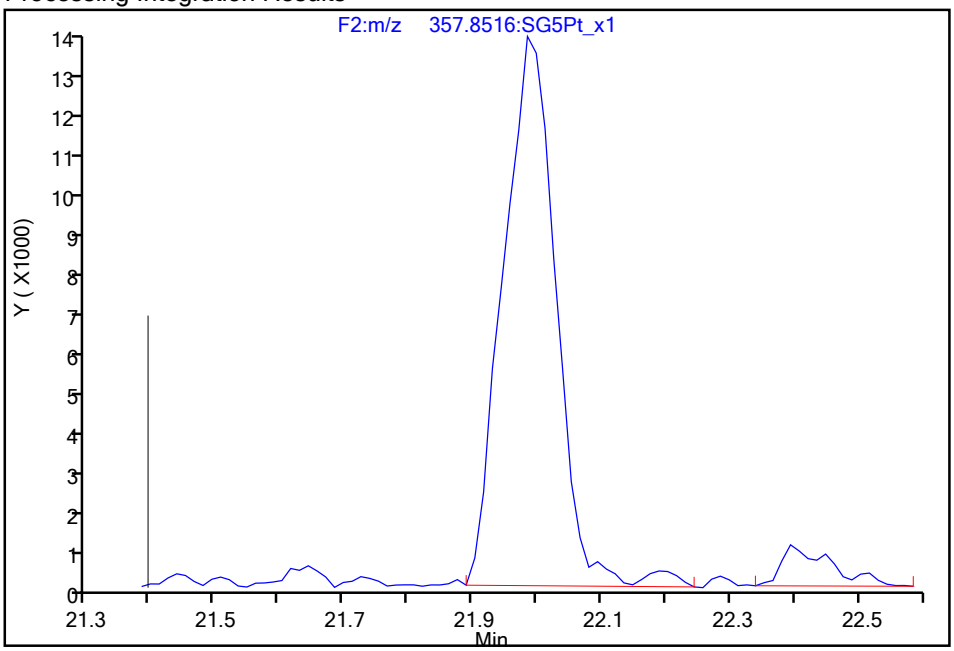

Manual Integration Results

RT = 21.985 Area = 72879 M

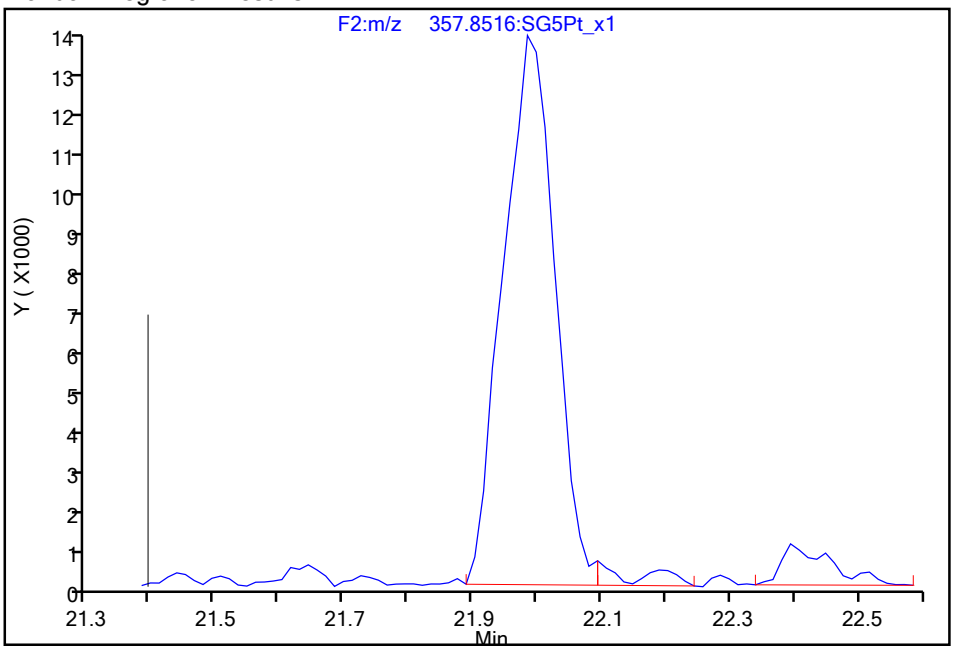

Reviewer: dadunj, 18-Aug-2021 09:58:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.21- 25.49)

Signal: 2

Processing Integration Results

RT = 23.281 Area = 10408

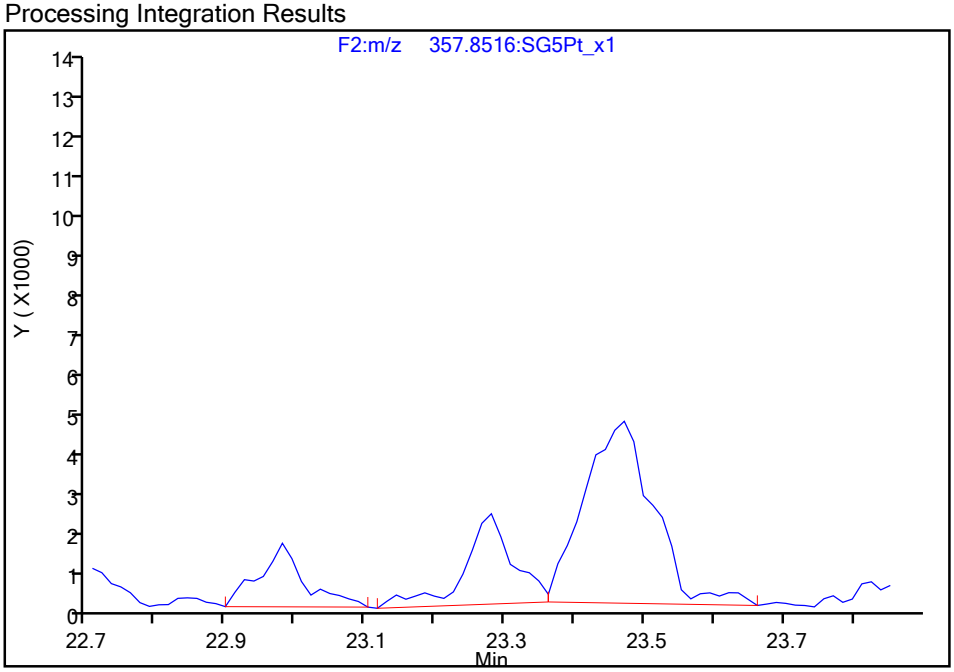

Manual Integration Results

RT = 23.281 Area = 9149 M

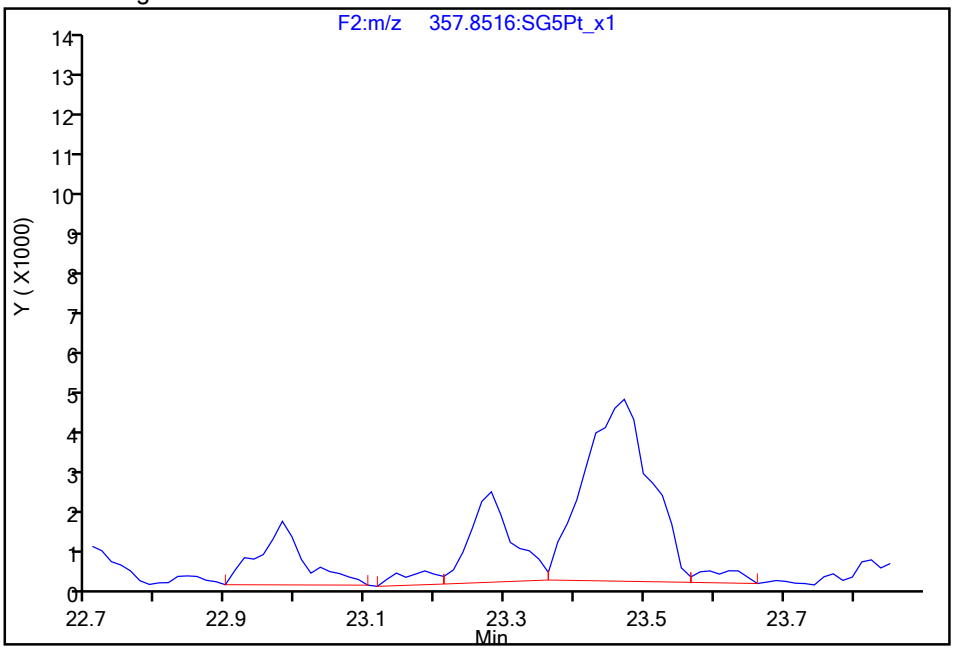

Reviewer: dadunj, 18-Aug-2021 09:58:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.21- 25.49)

Signal: 2

Processing Integration Results

RT = 23.471 Area = 30173

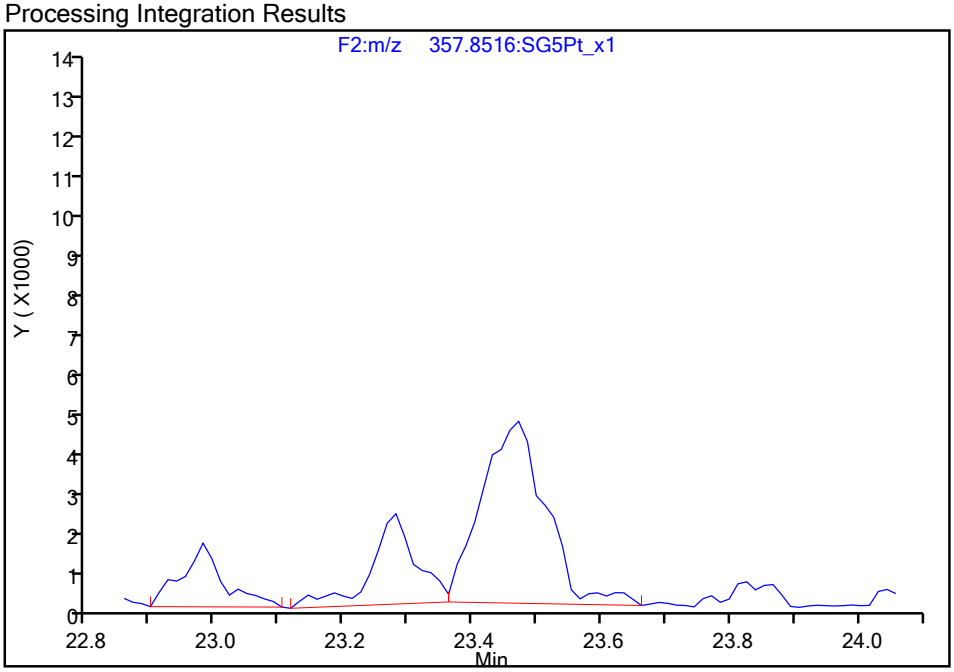

Manual Integration Results

RT = 23.471 Area = 28899 M

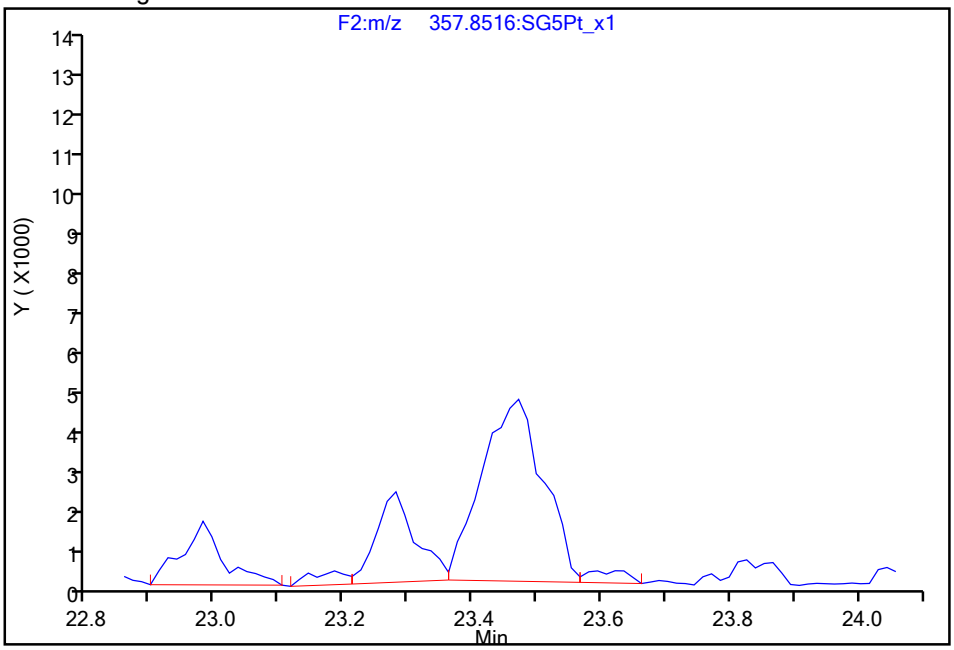

Reviewer: dadunj, 18-Aug-2021 09:58:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.77
Area: 13206
Amount: 0.098573
Amount Units: pg/ul

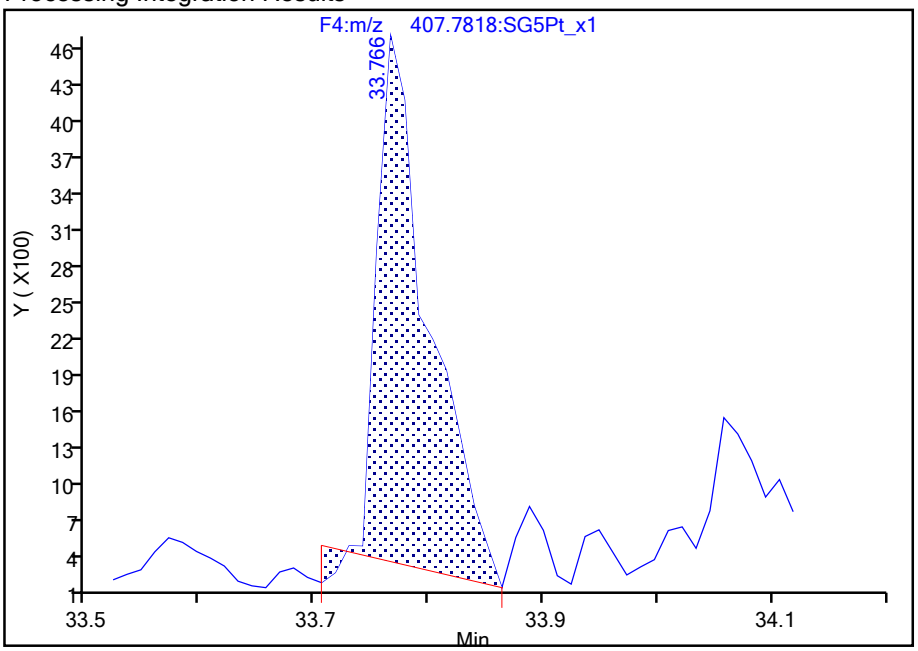

Manual Integration Results

RT: 33.77
Area: 12489
Amount: 0.095666
Amount Units: pg/ul

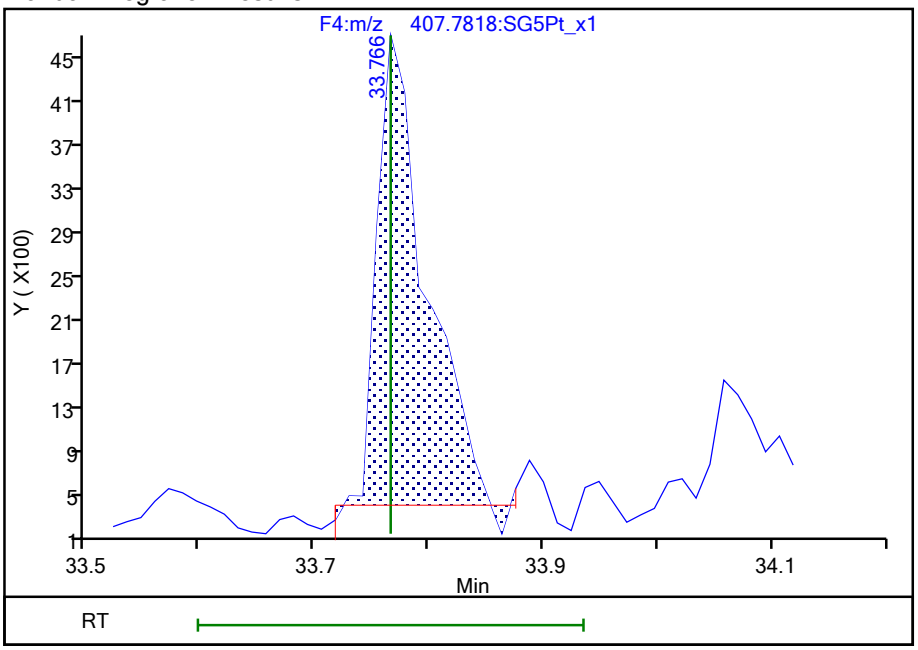

Reviewer: dadunj, 18-Aug-2021 09:57:03

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.03
Area: 11687
Amount: 0.168925
Amount Units: pg/ul

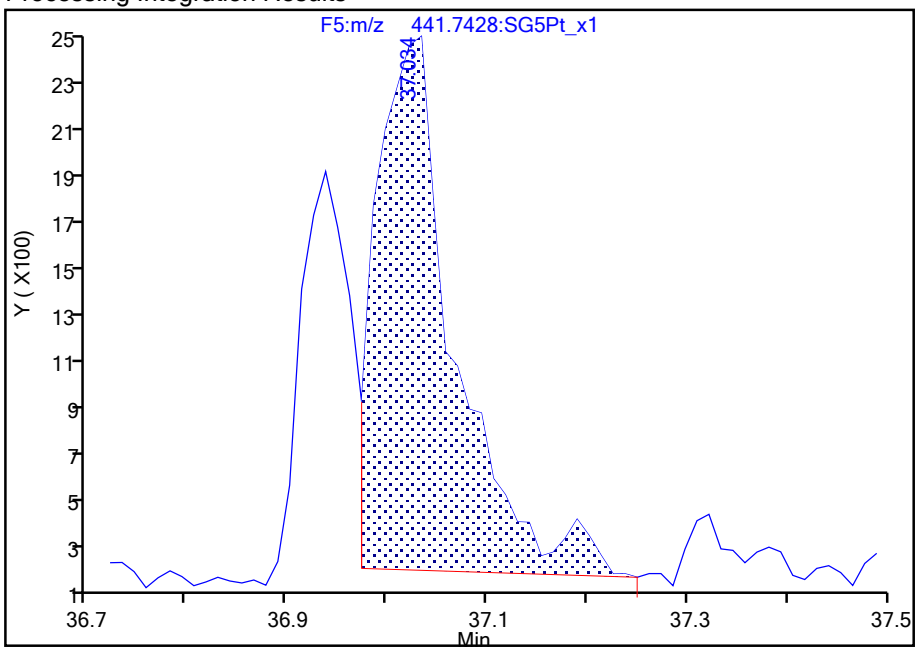

Manual Integration Results

RT: 37.03
Area: 10692
Amount: 0.117922
Amount Units: pg/ul

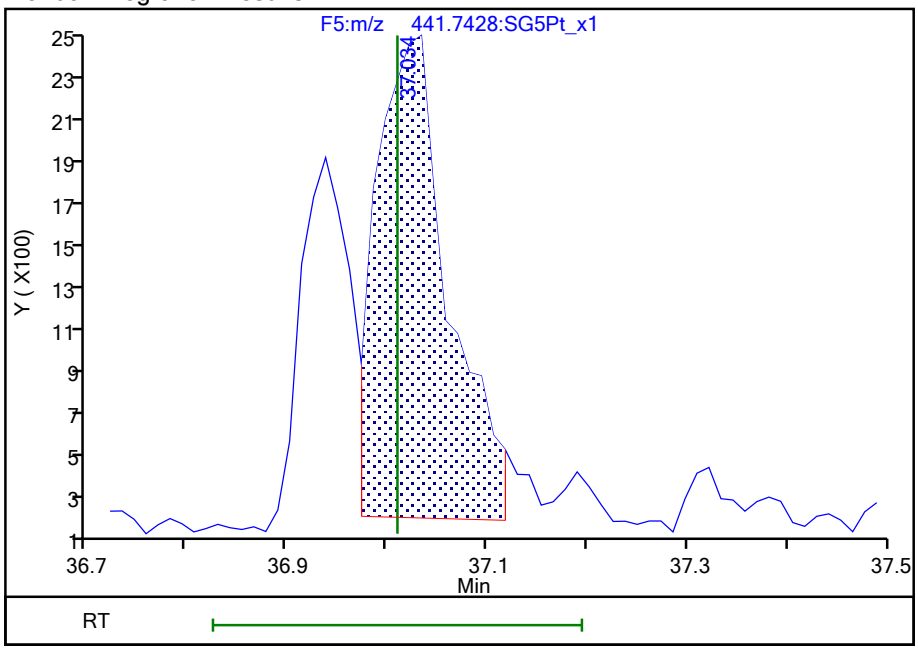

Reviewer: dadunj, 18-Aug-2021 09:57:19

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d				
Injection Date:	14-Aug-2021 19:01:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-18-A	Lab Sample ID:	320-76788-18		
Client ID:	11215702-072321-BN-SJSB105 (10-12)				
Operator ID:	DB	ALS Bottle#:	35	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.02
Area: 21129
Amount: 0.168925
Amount Units: pg/ul

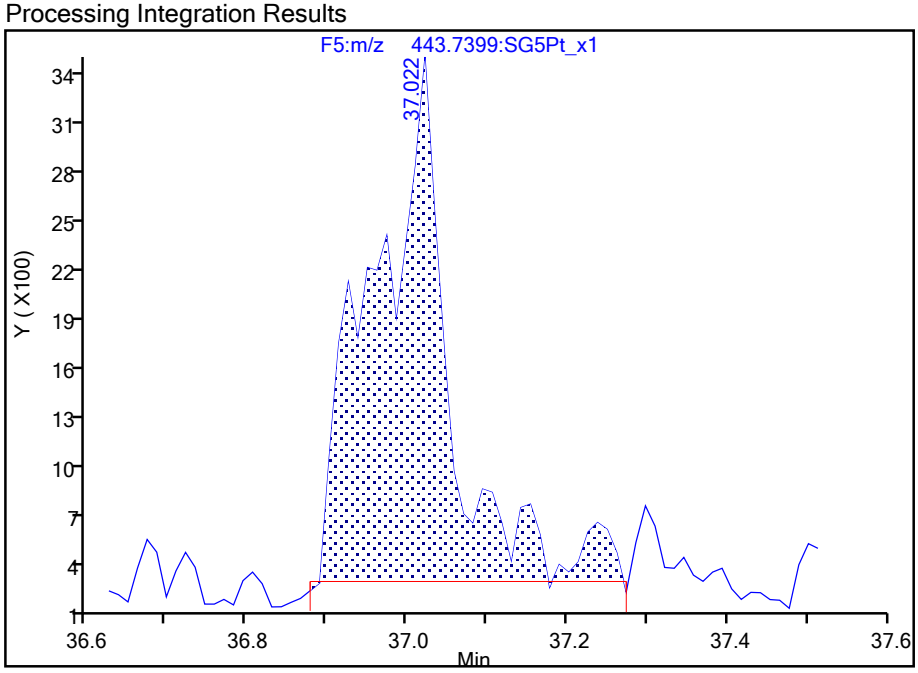

Manual Integration Results

RT: 37.02
Area: 12216
Amount: 0.117922
Amount Units: pg/ul

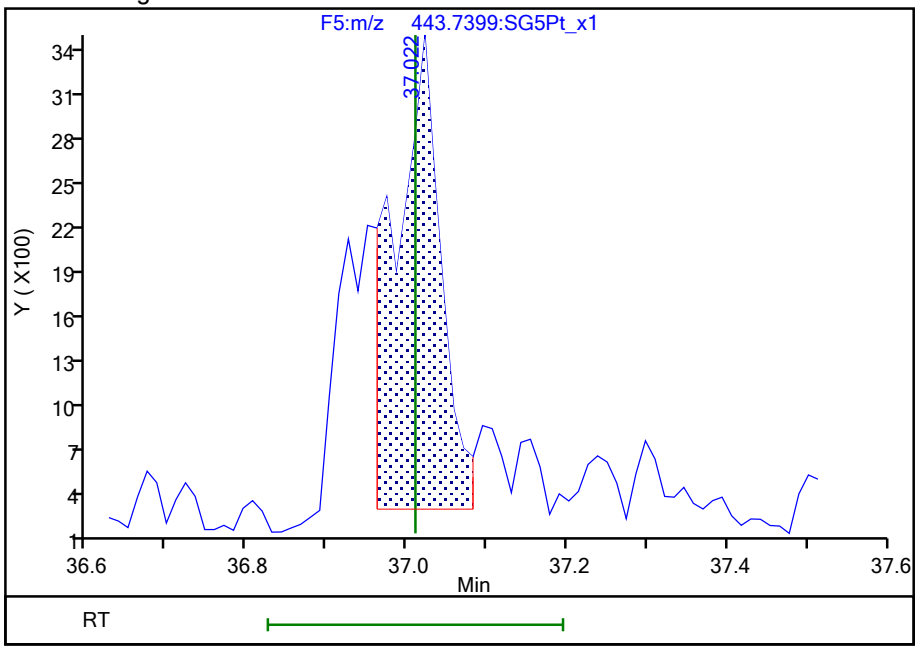

Reviewer: dadunj, 18-Aug-2021 09:57:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

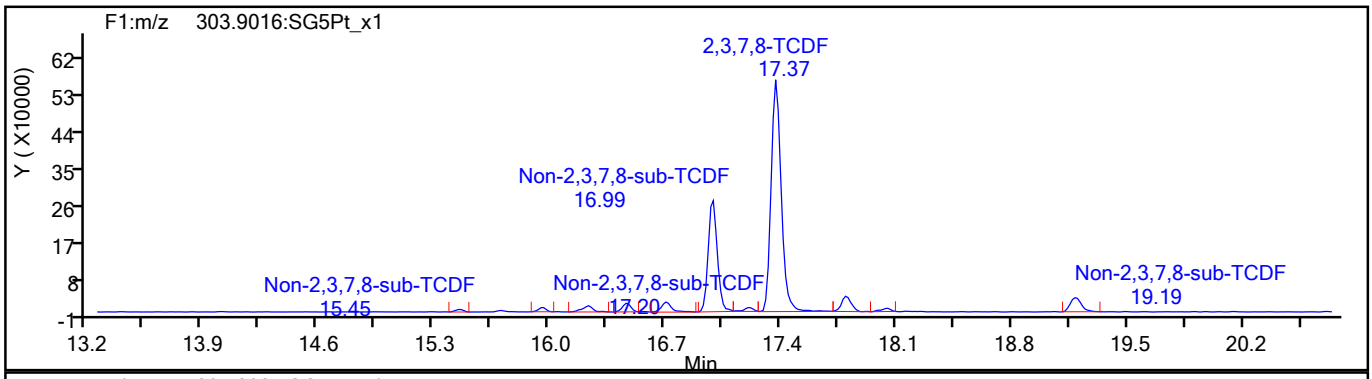

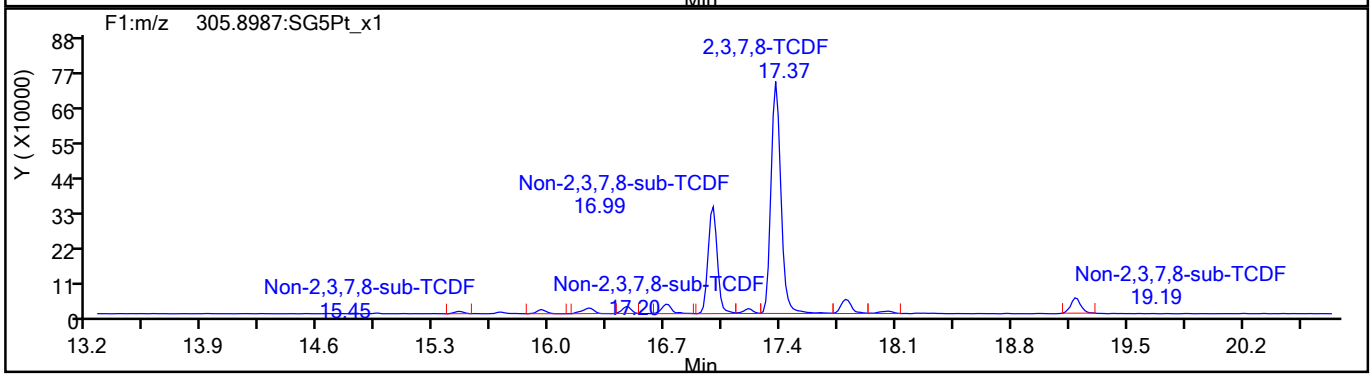

TCDF Standards

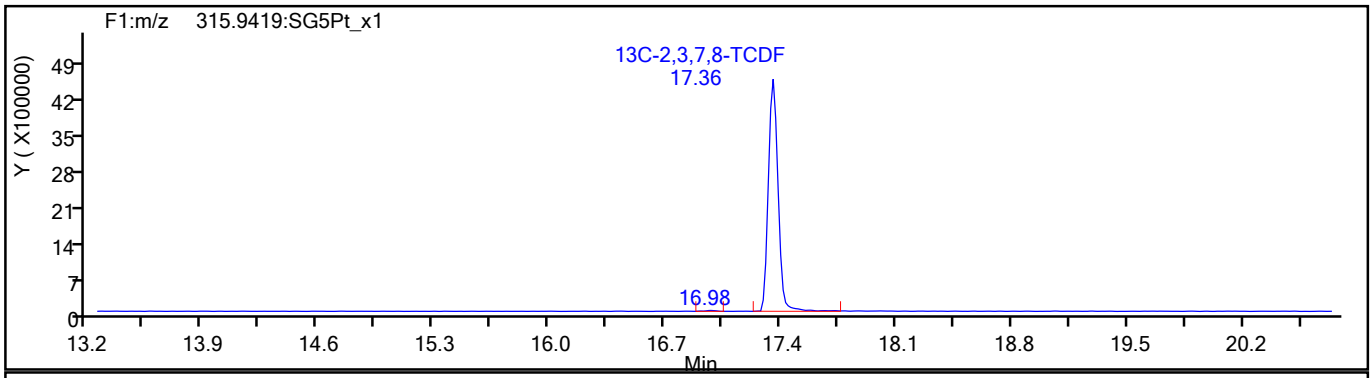

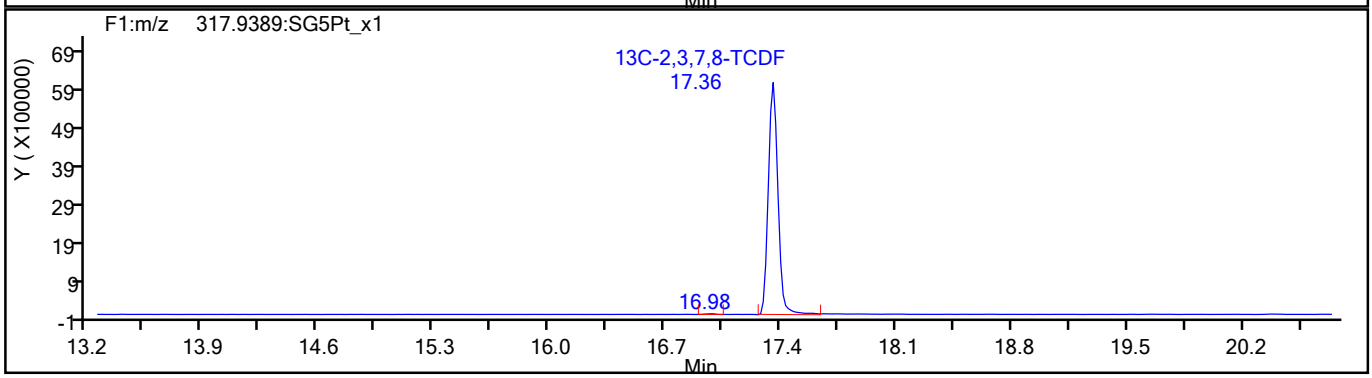

780027

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

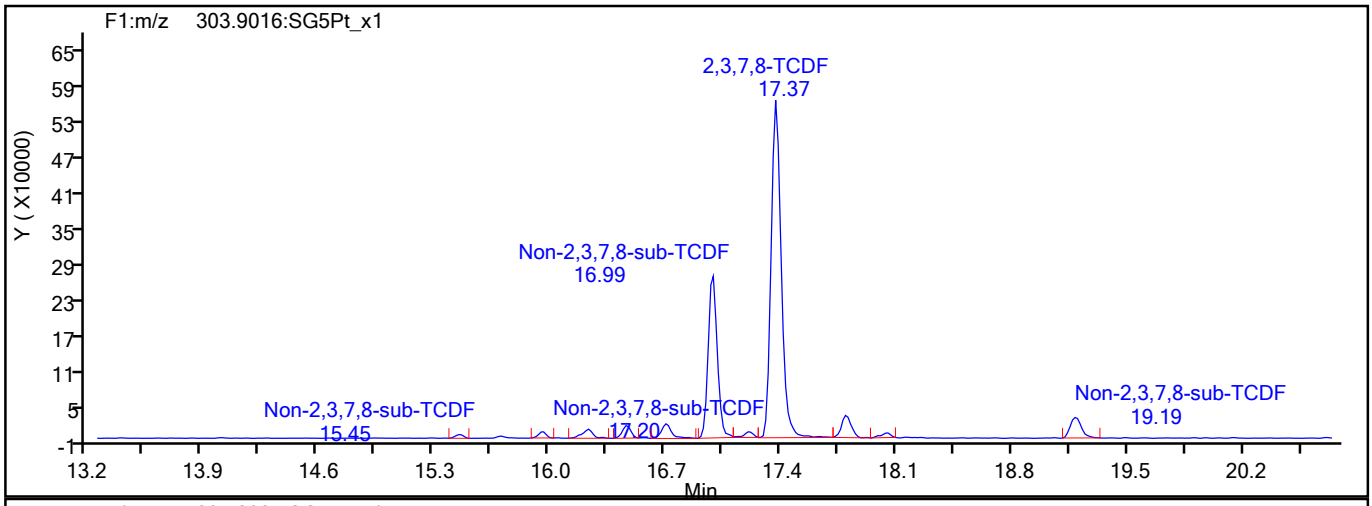

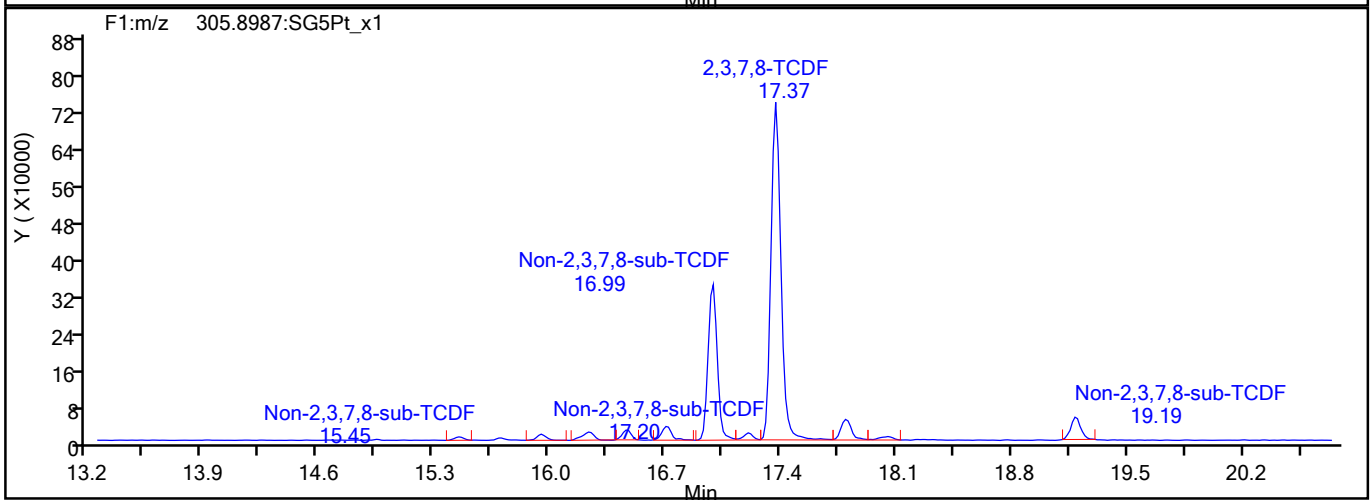

TCDF Interference Mass

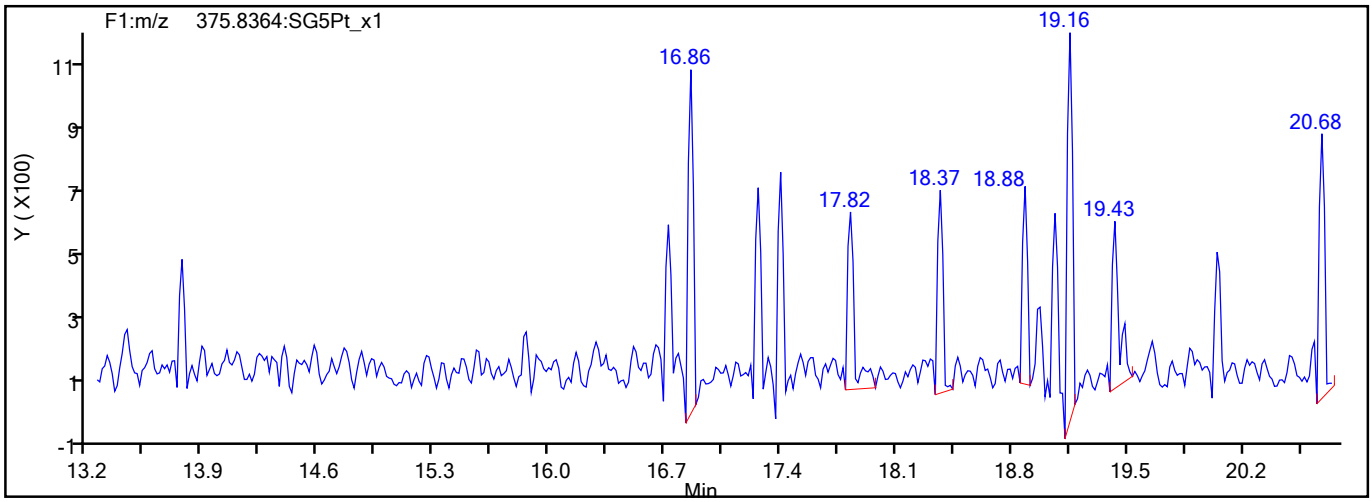

780028

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

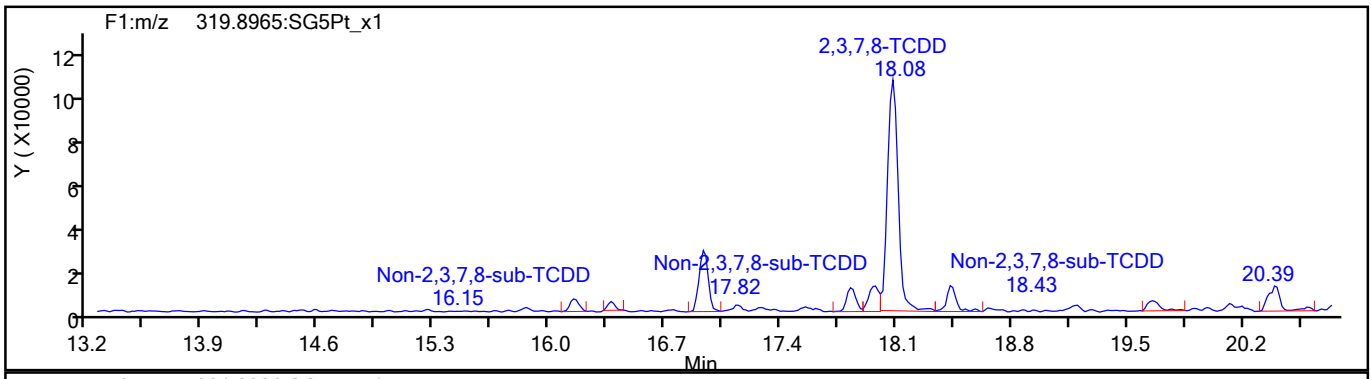

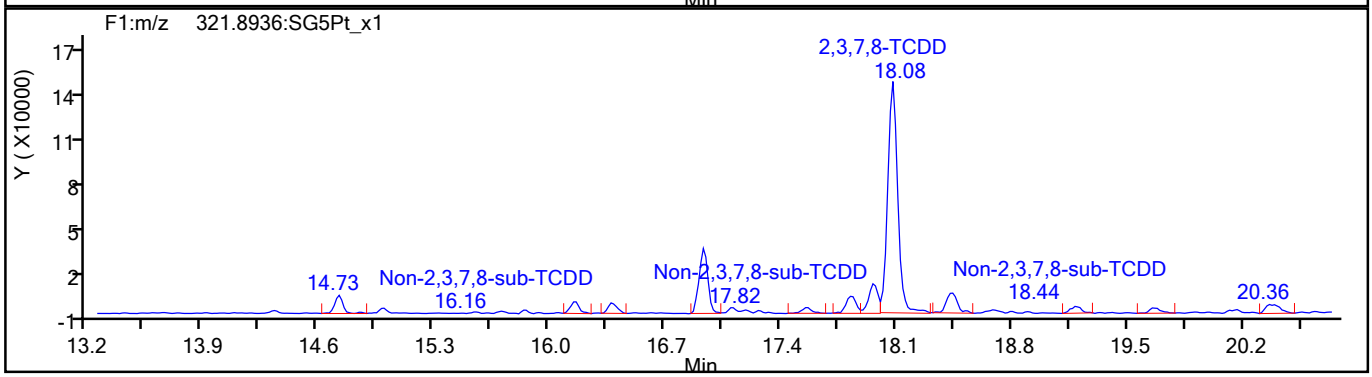

TCDD Standards

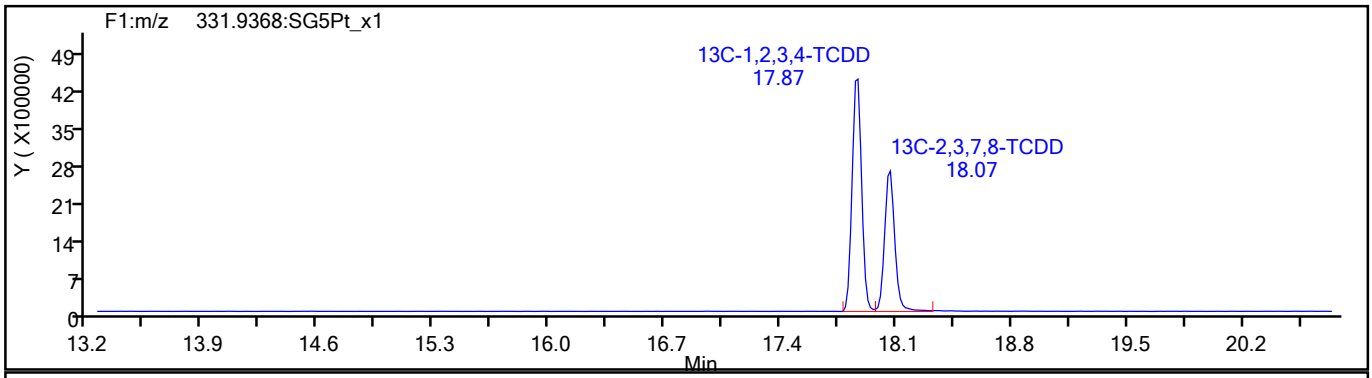

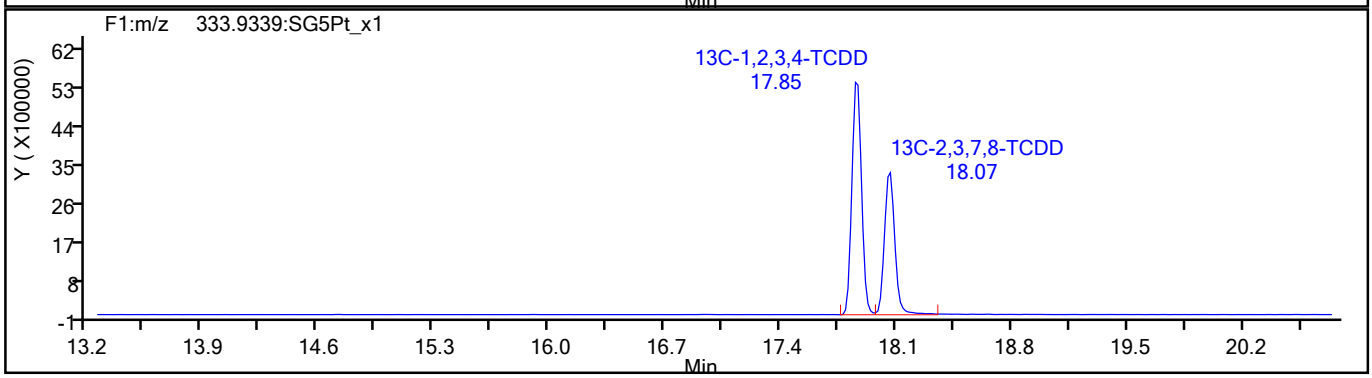

780029

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

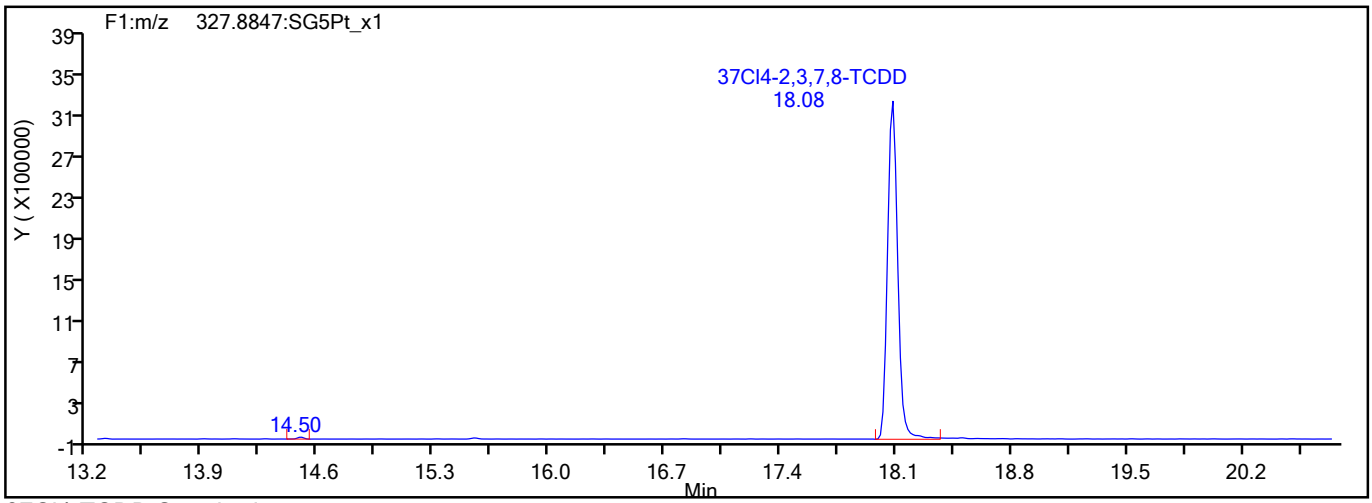

37Cl4-TCDD Standards

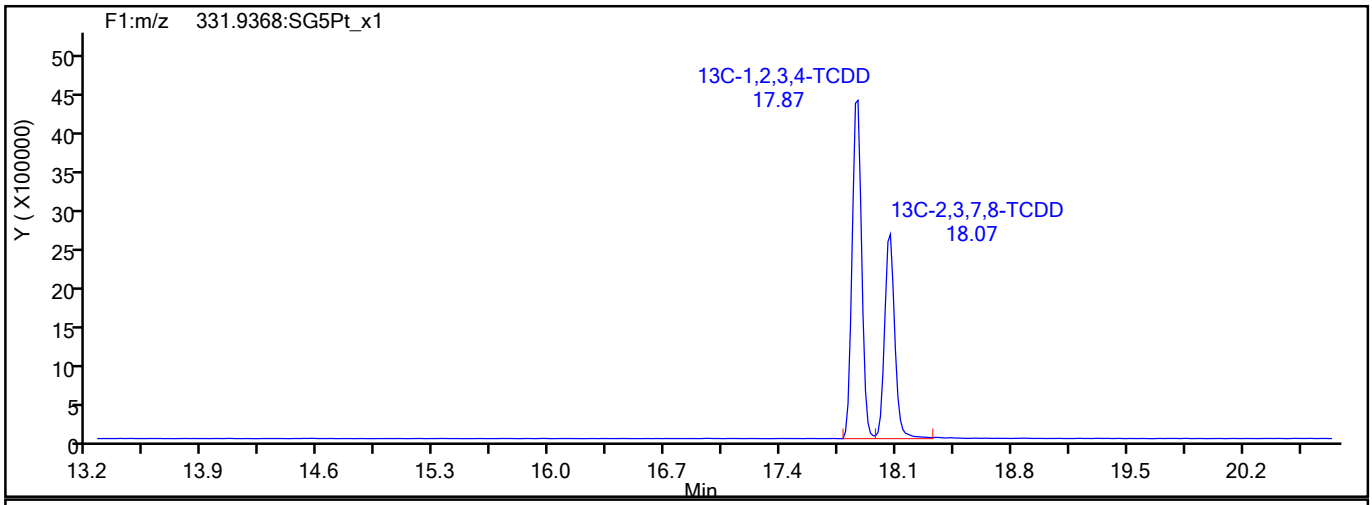

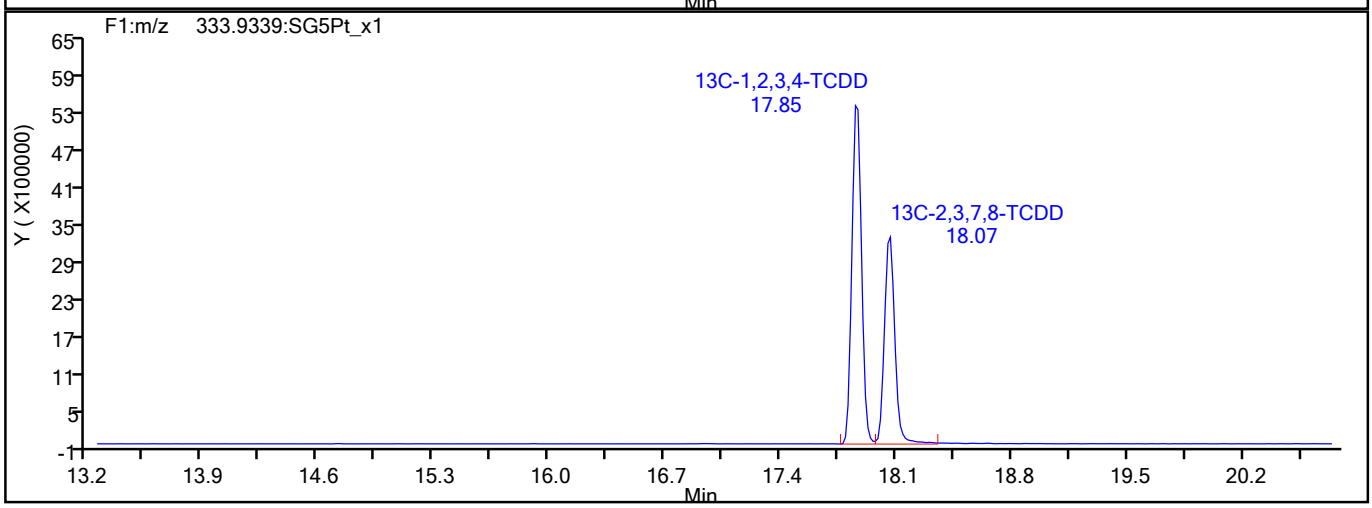

780030

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

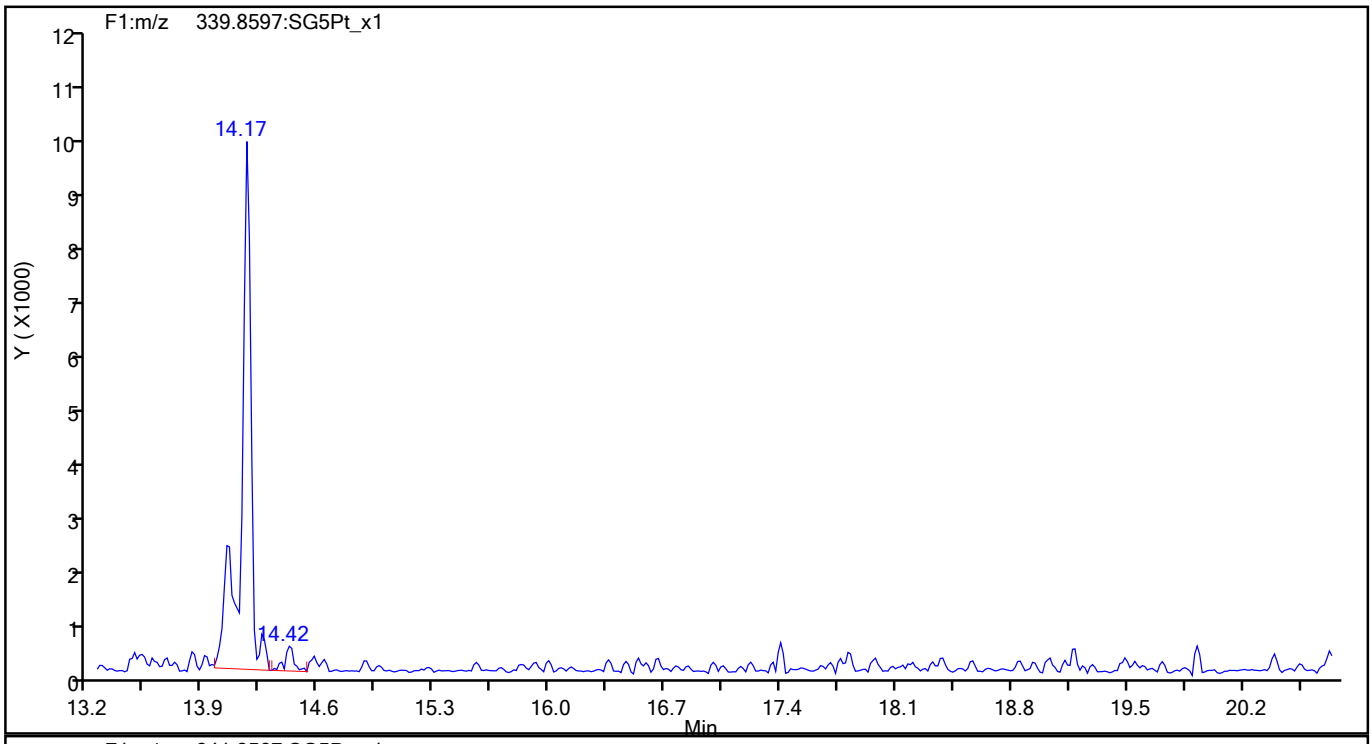

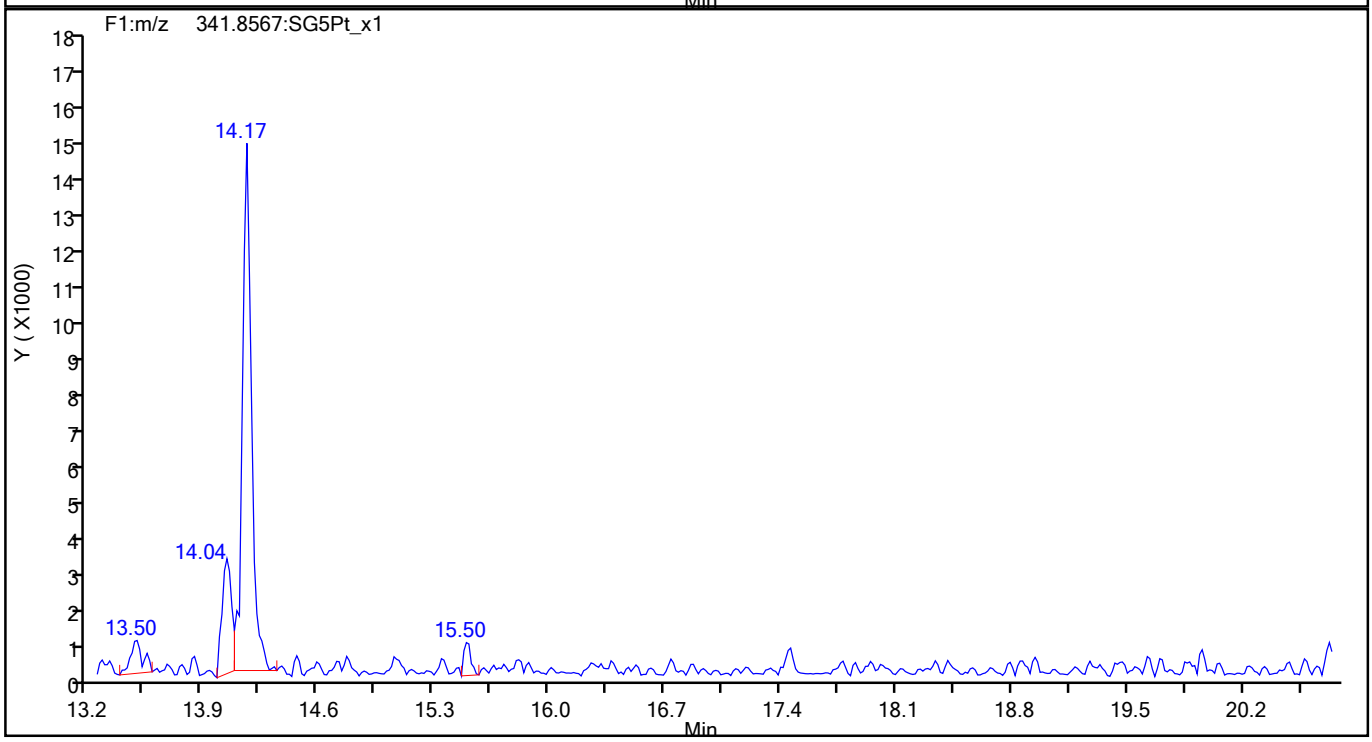

780031

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

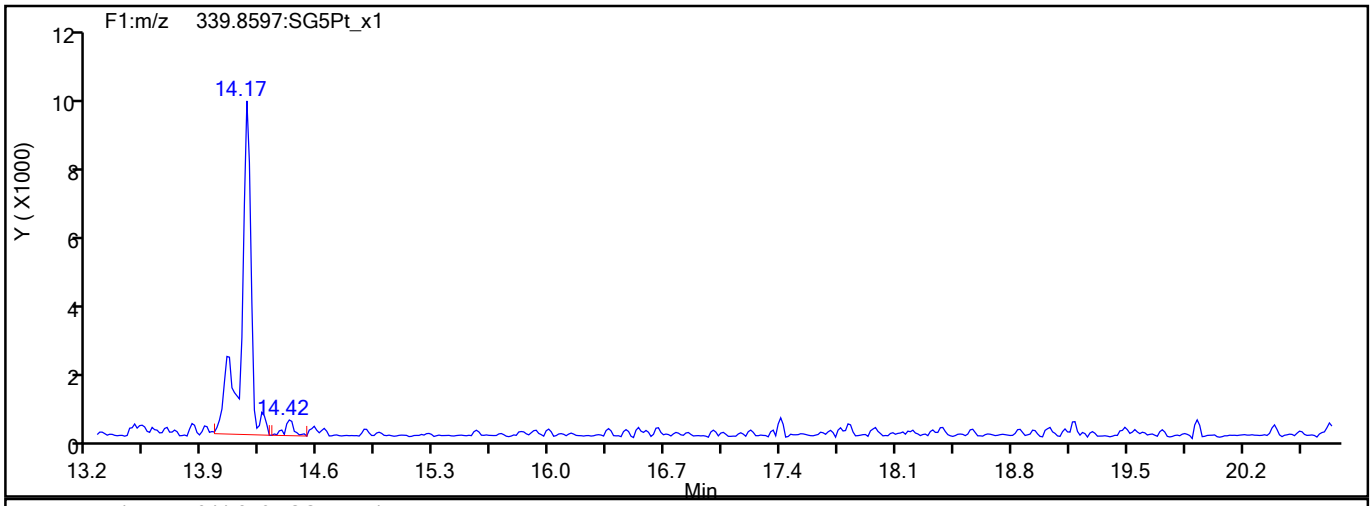

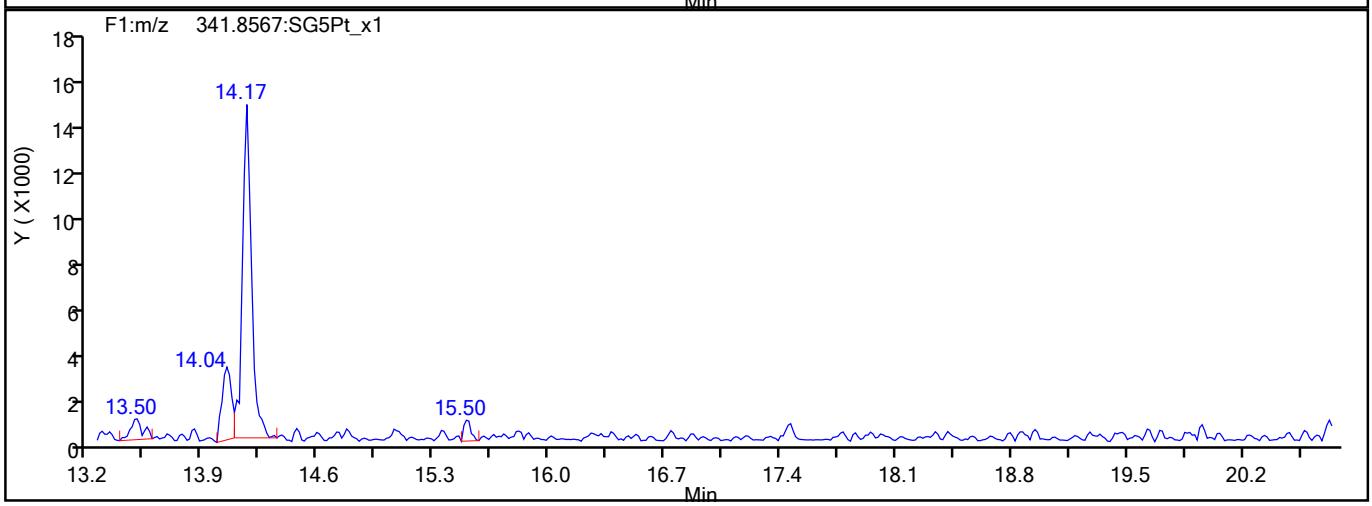

F1 PeCDFs Interference Mass

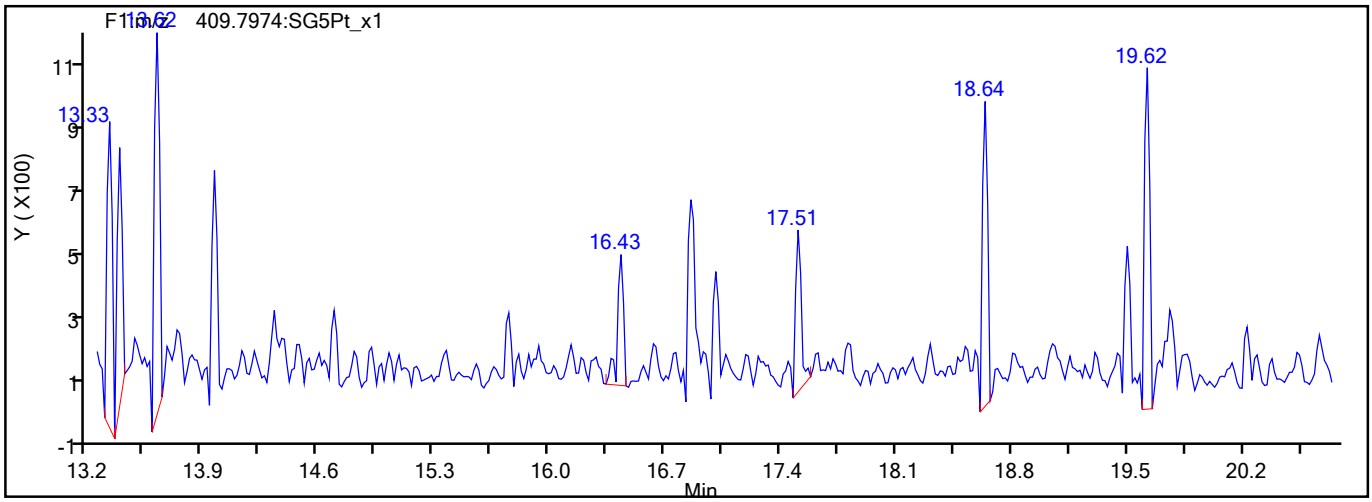

780032

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

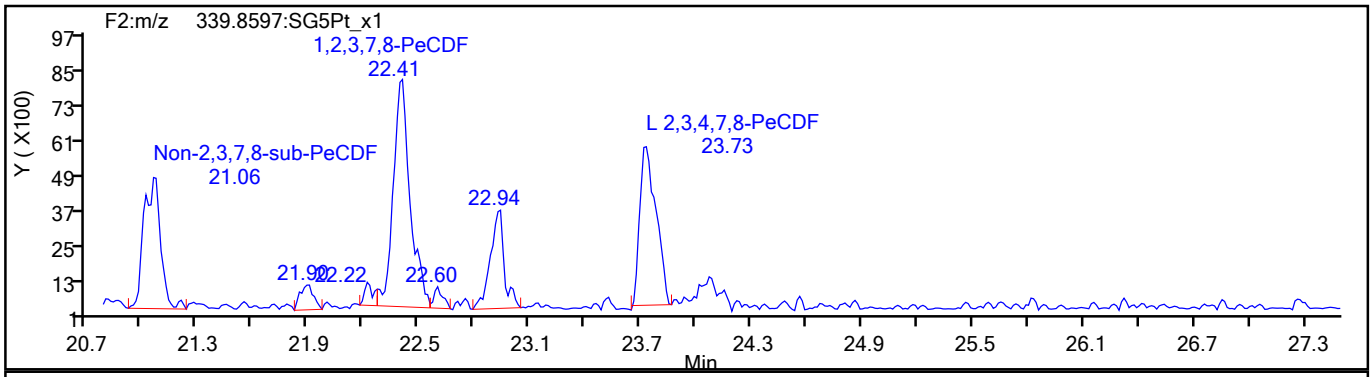

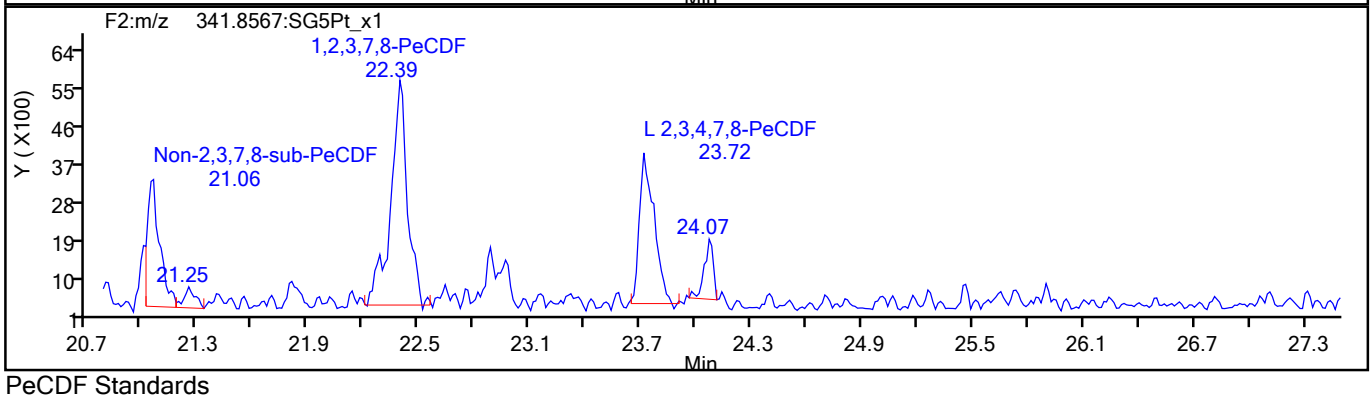

PeCDF Standards

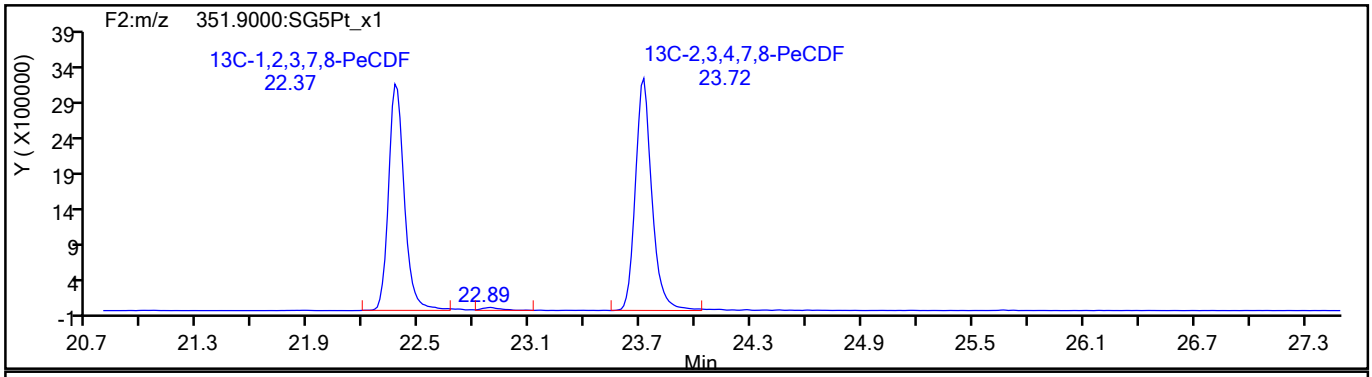

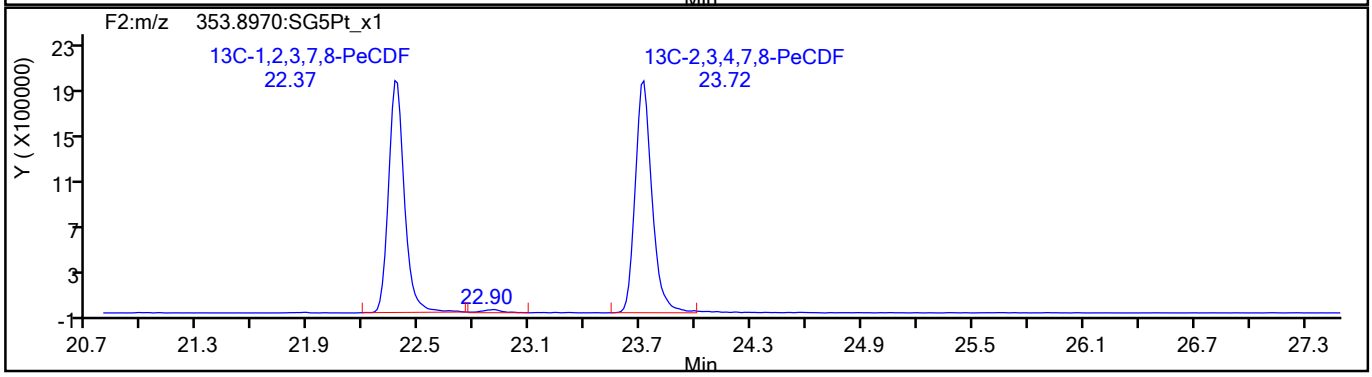

780033

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

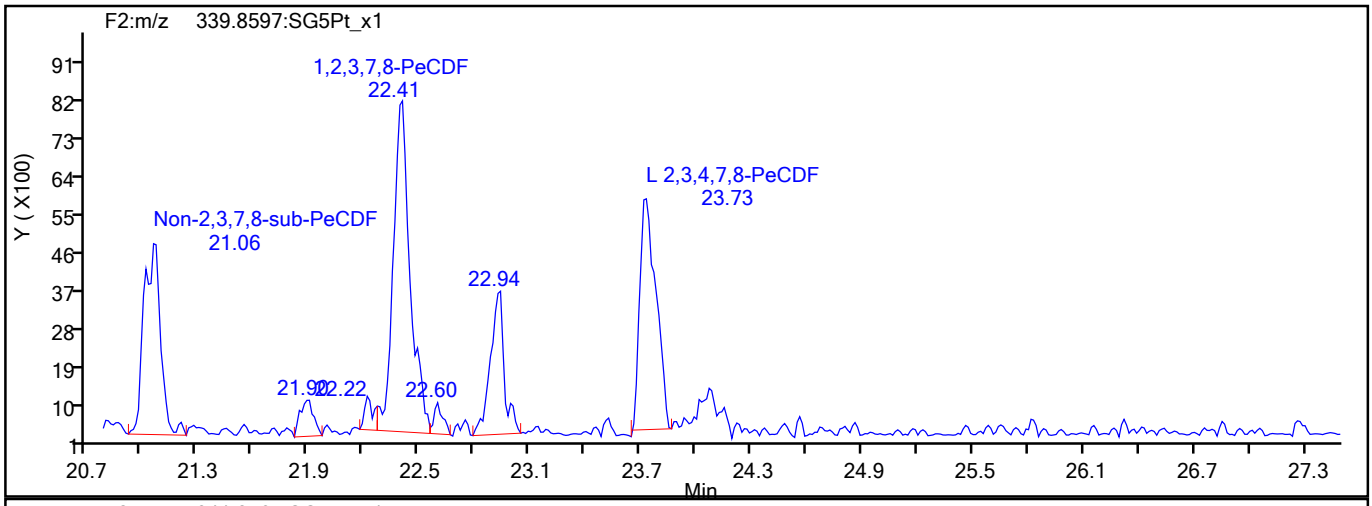

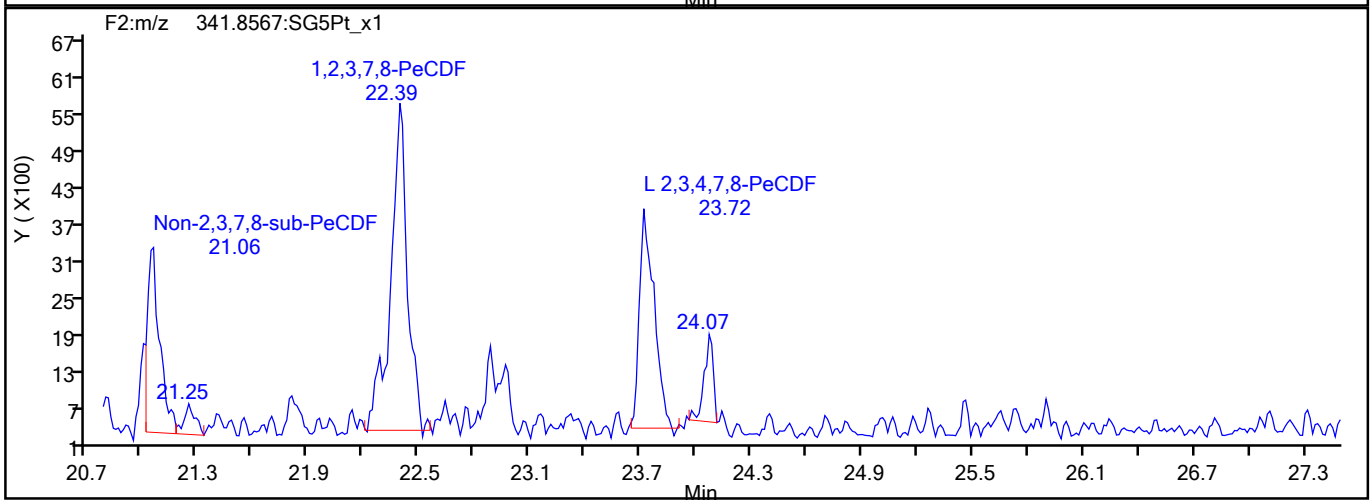

PeCDF Interference Mass

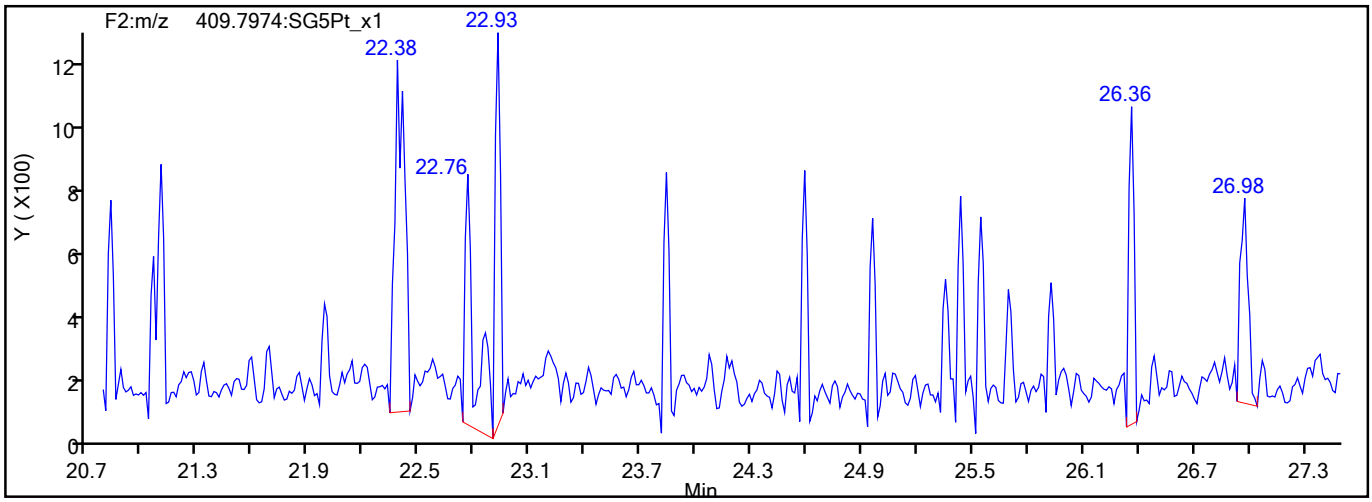

780034

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

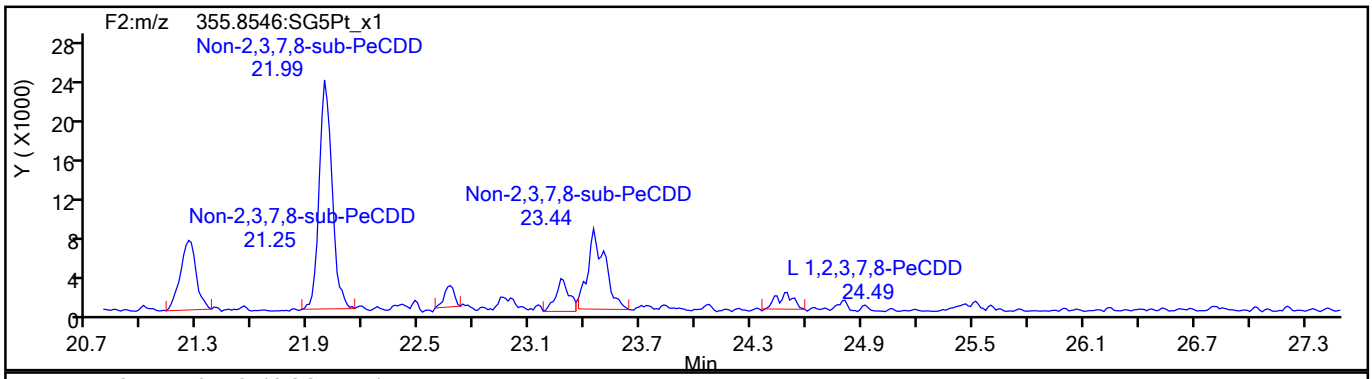

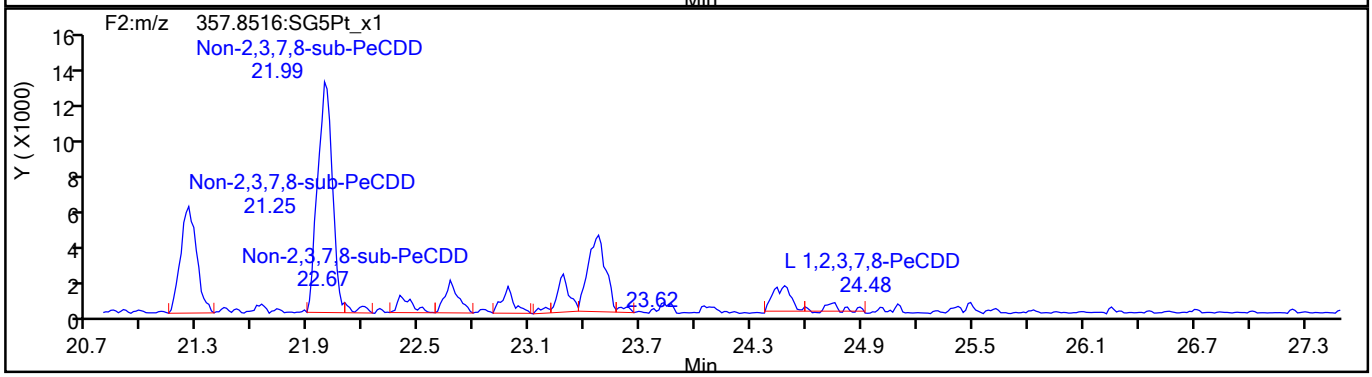

PeCDD Standards

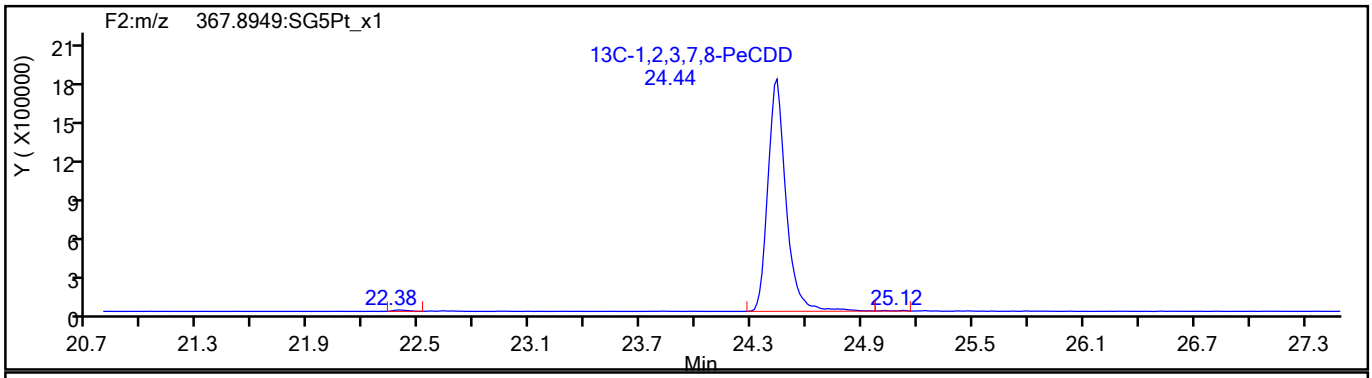

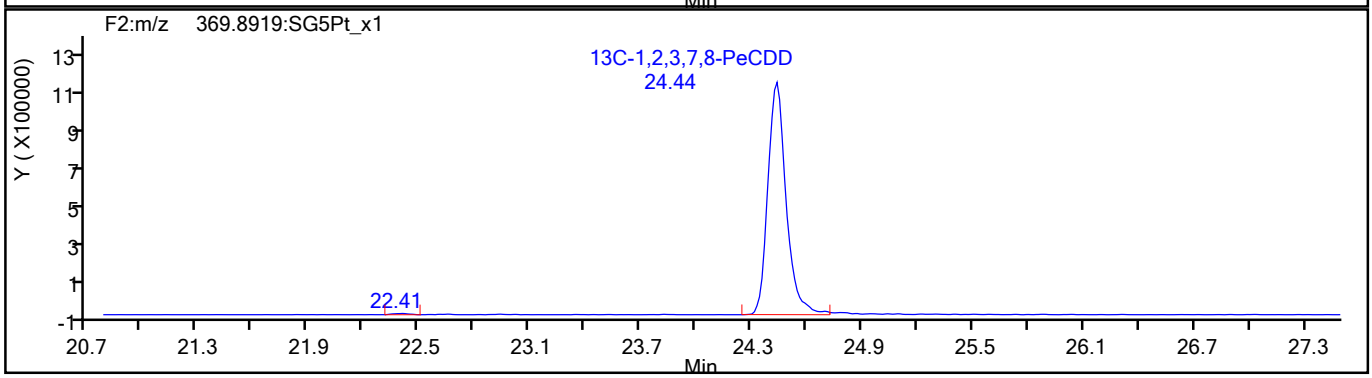

780035

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

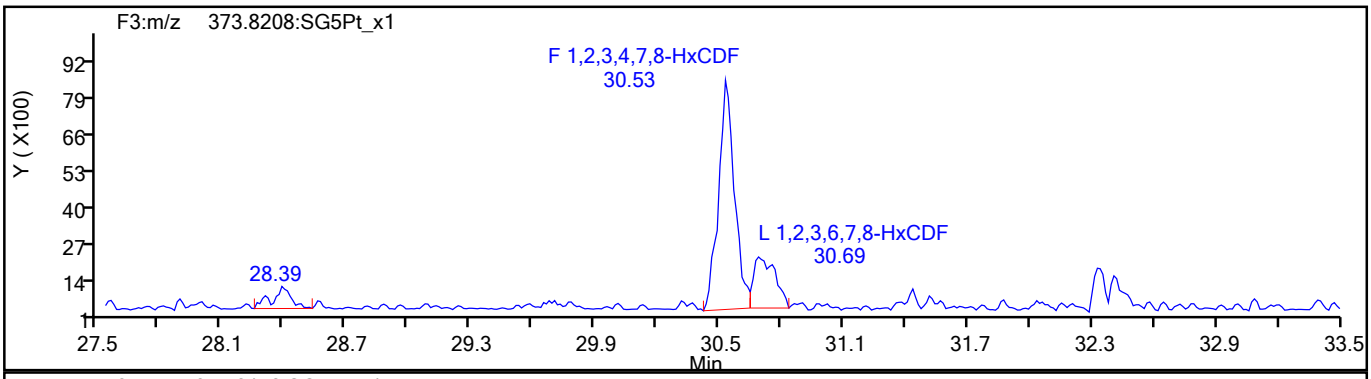

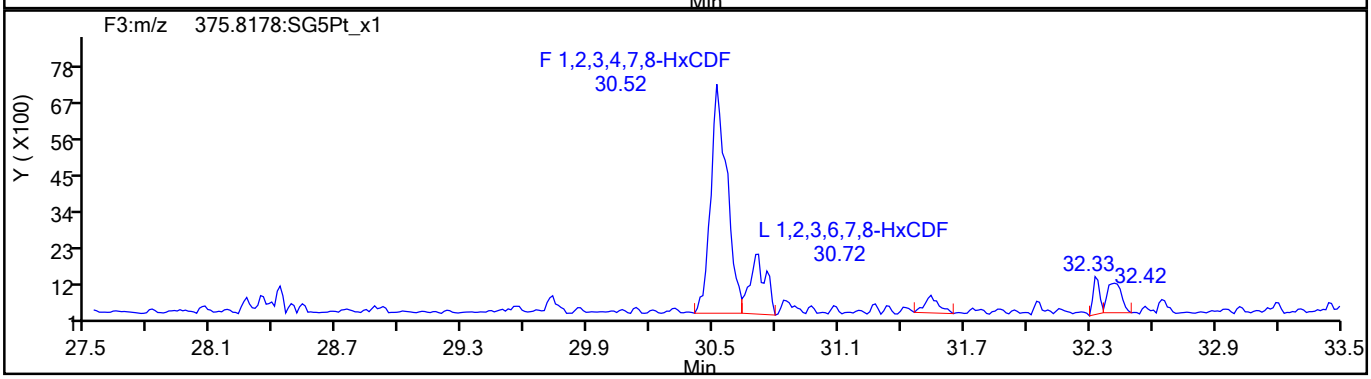

HxCDF Standards

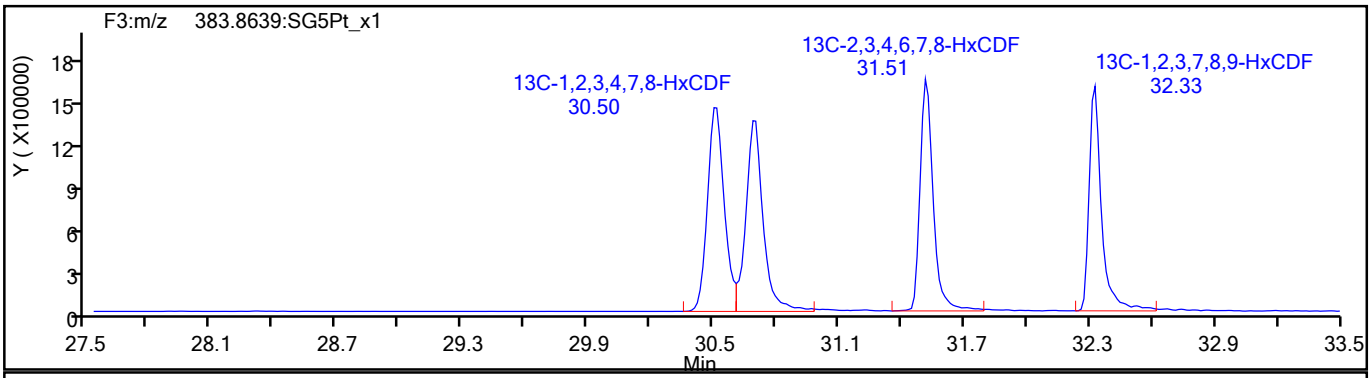

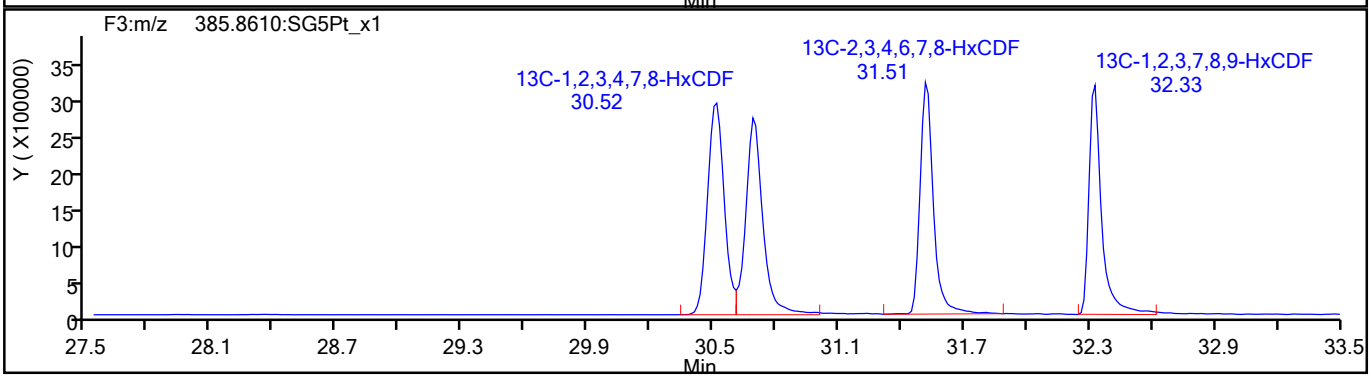

780036

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

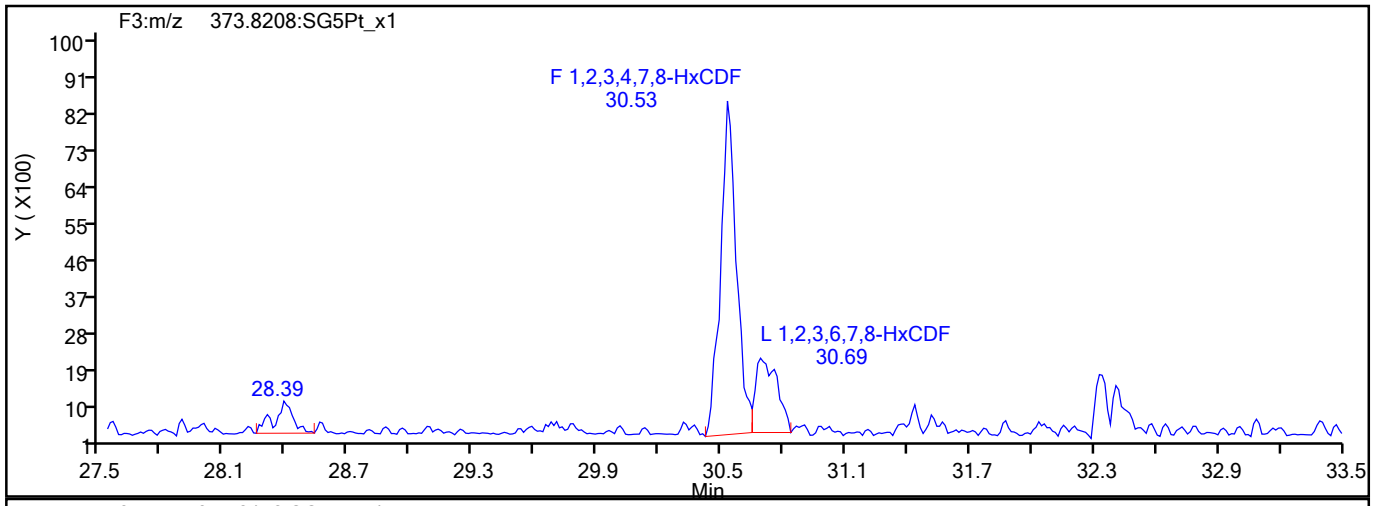

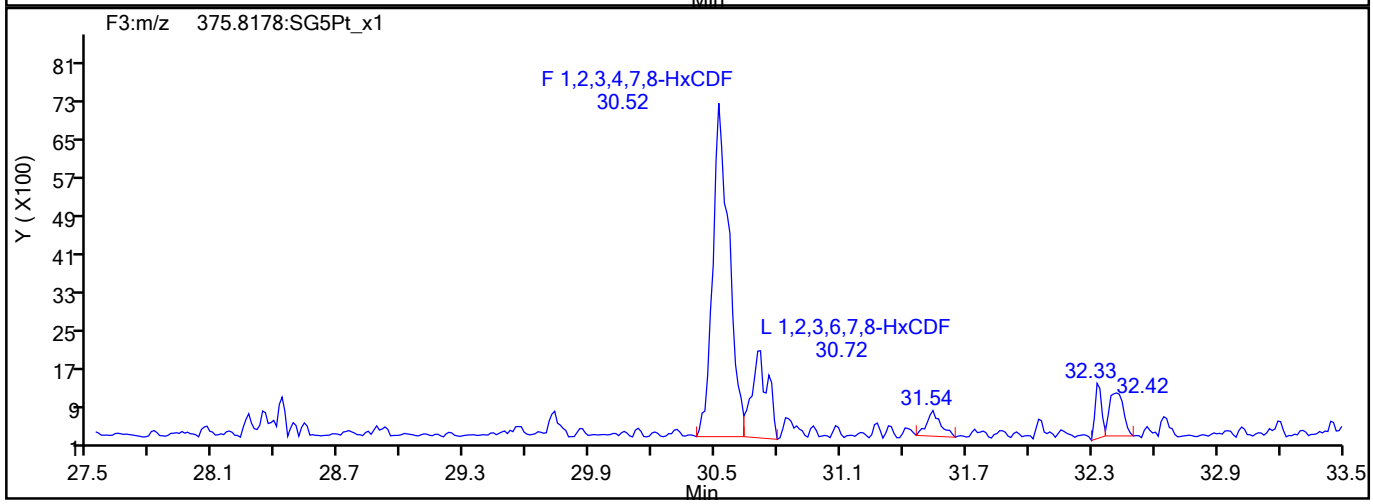

HxCDF Interference Mass

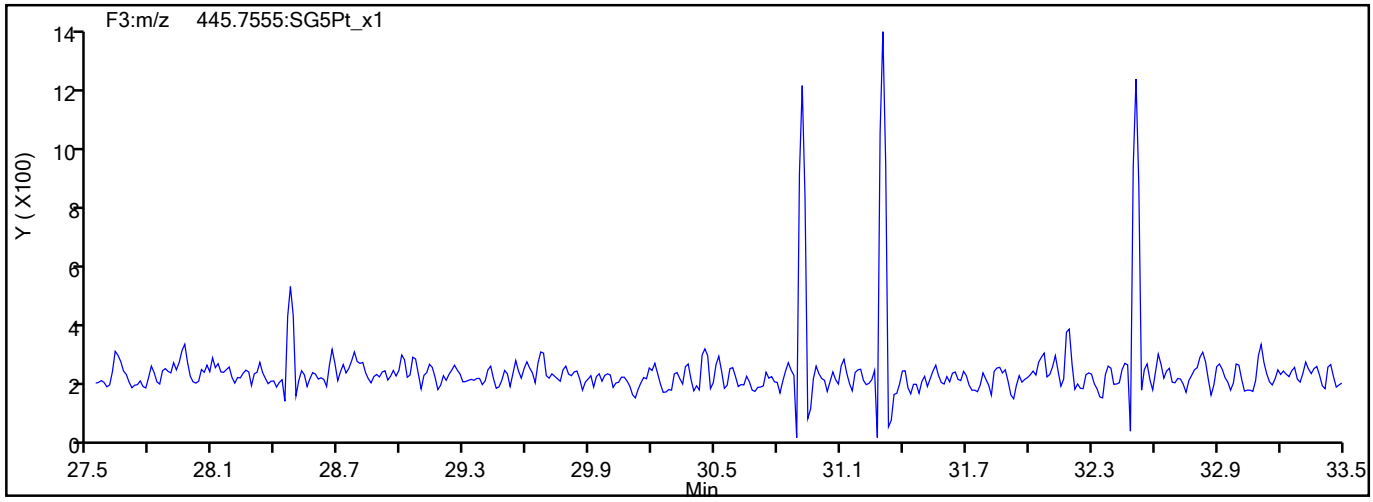

780037

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

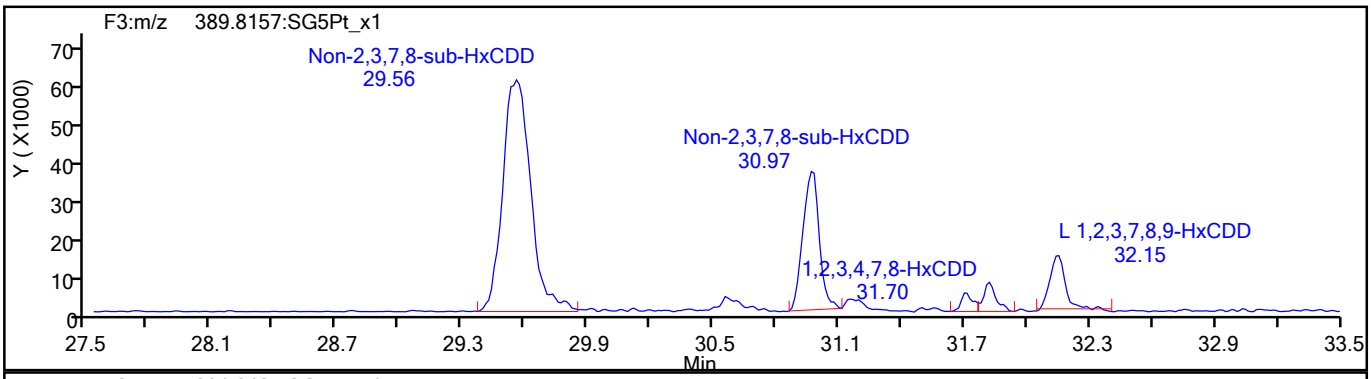

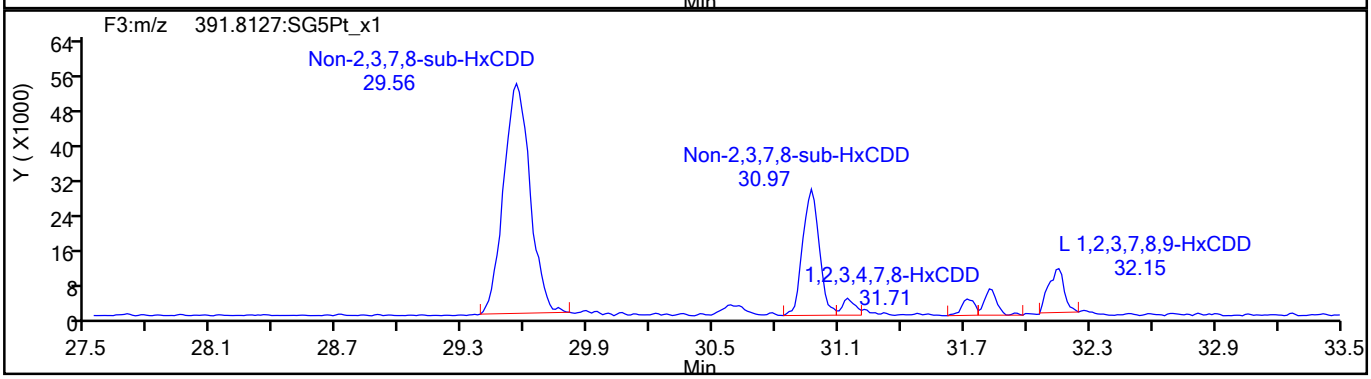

HxCDD Standards

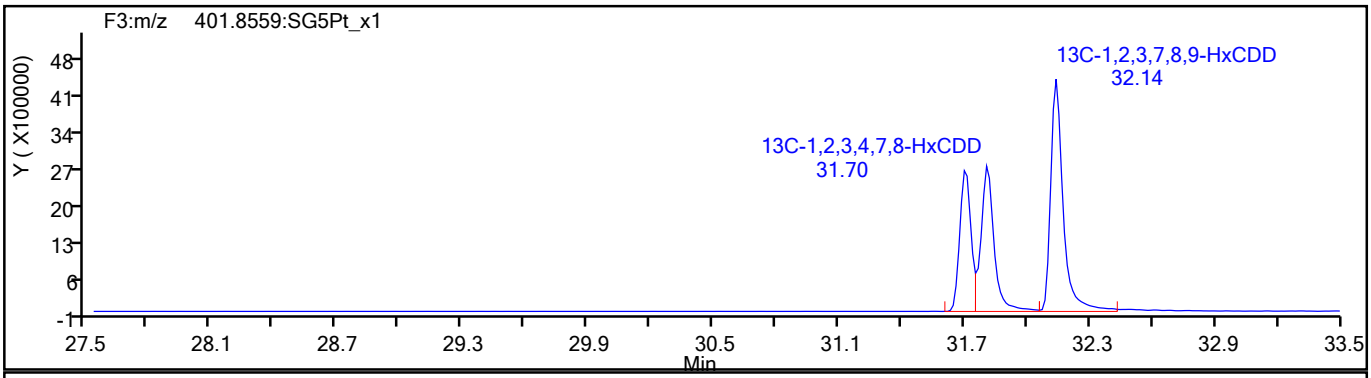

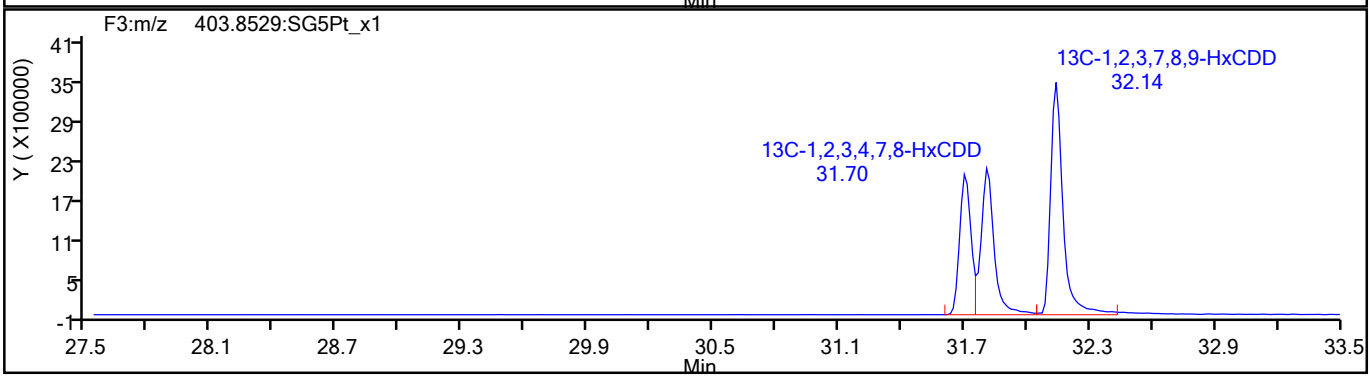

780038

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

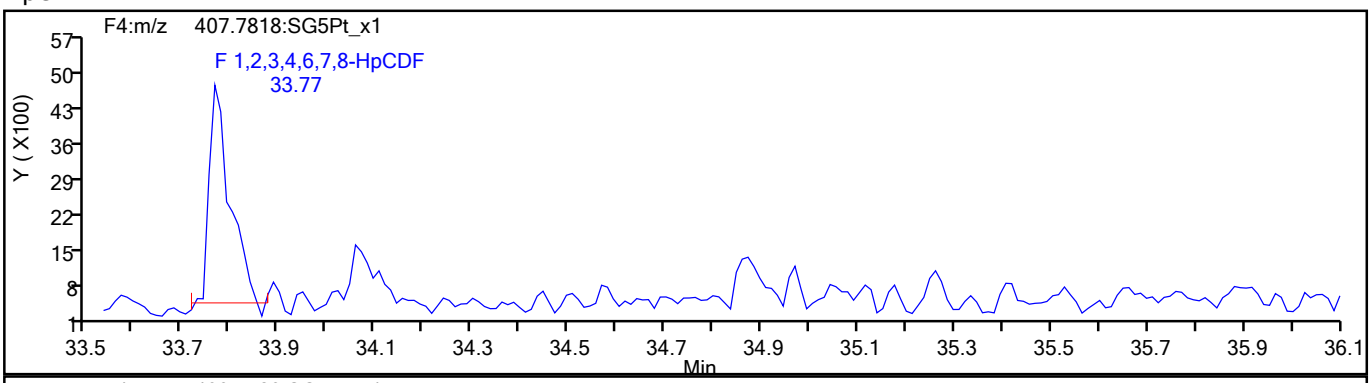

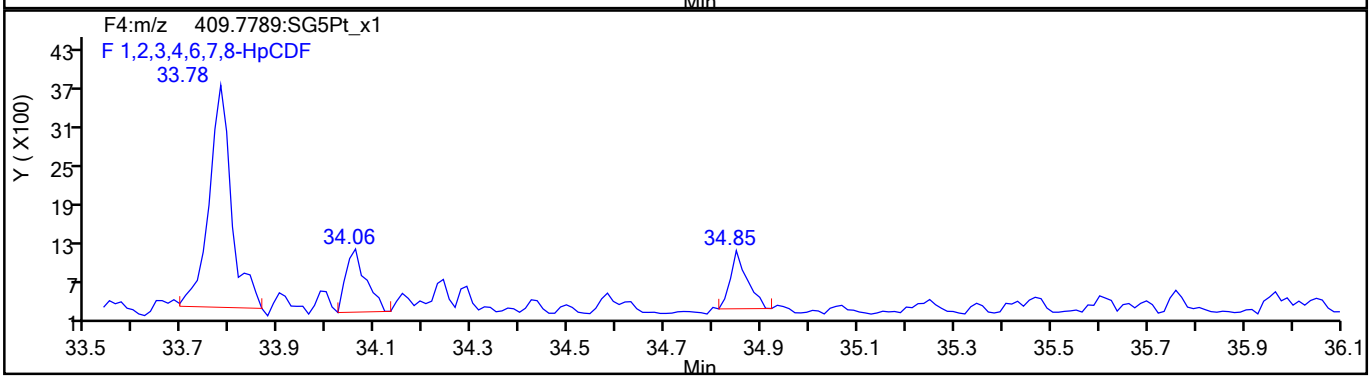

HpCDF Standards

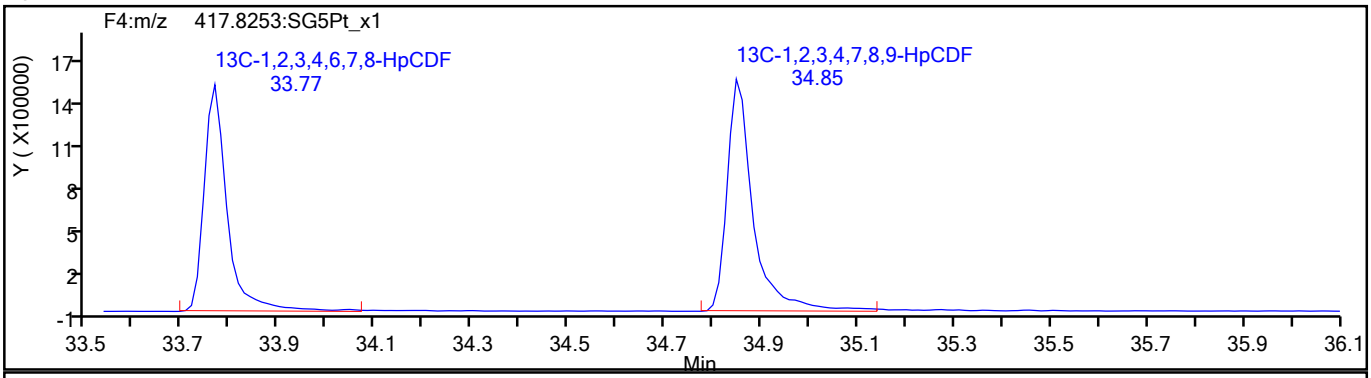

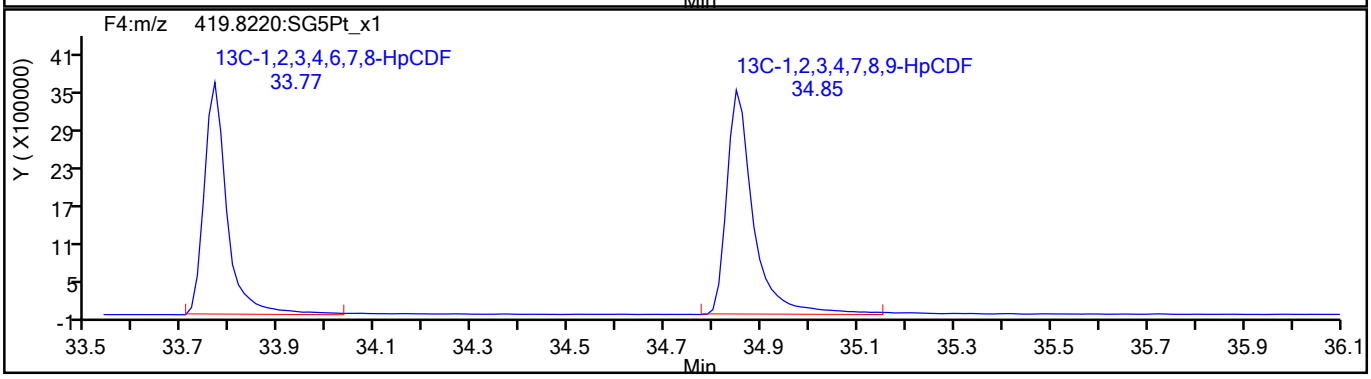

780039

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

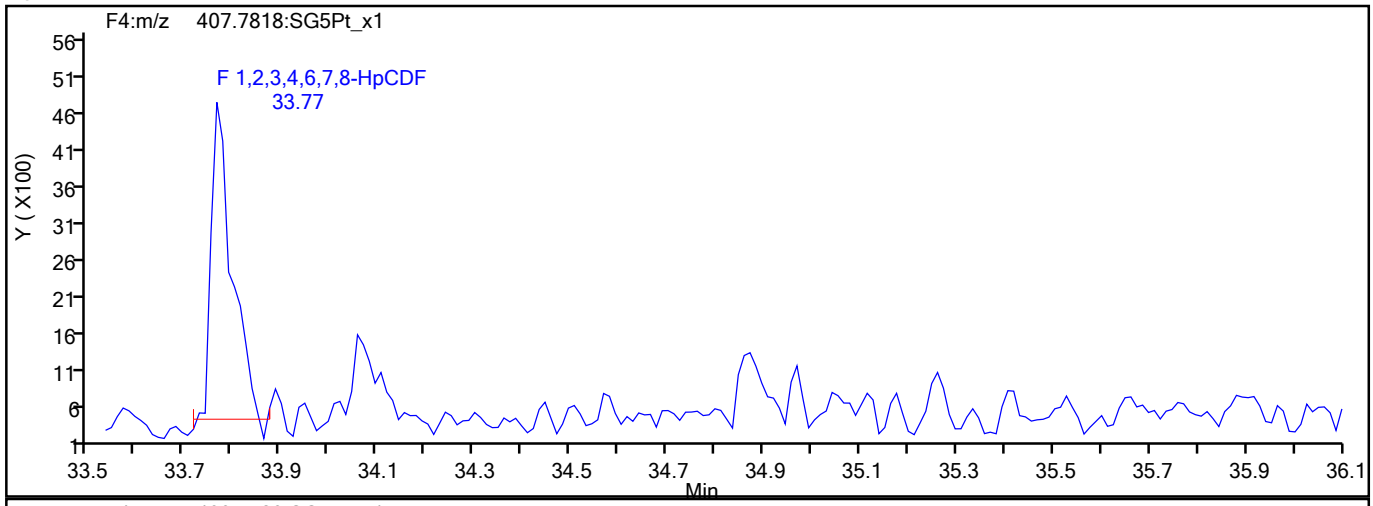

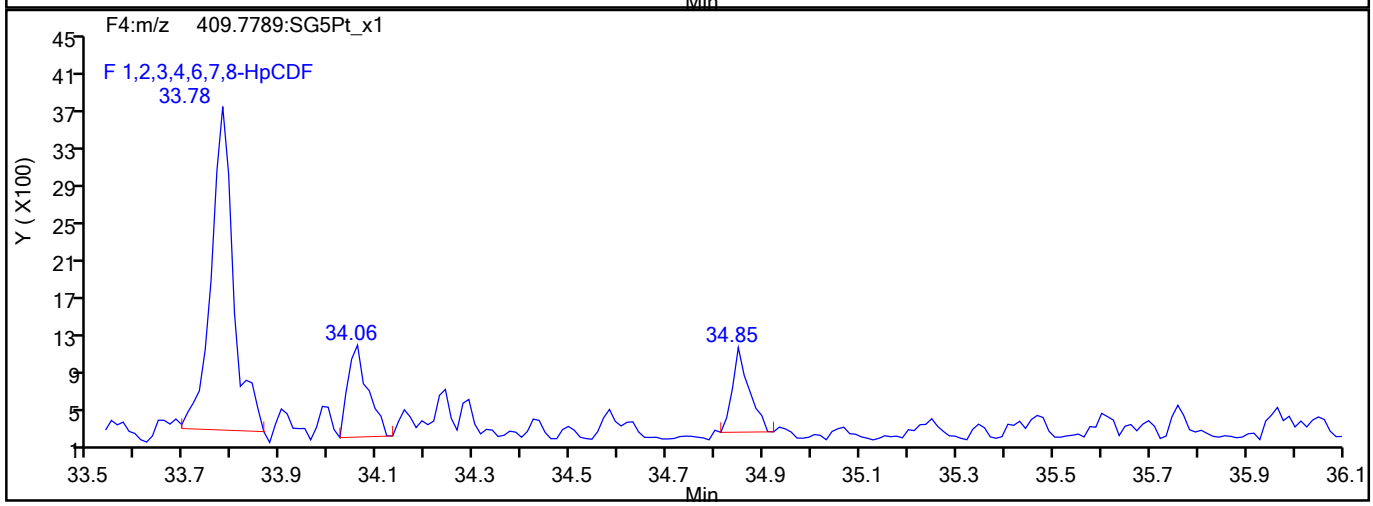

HpCDF Interference Mass

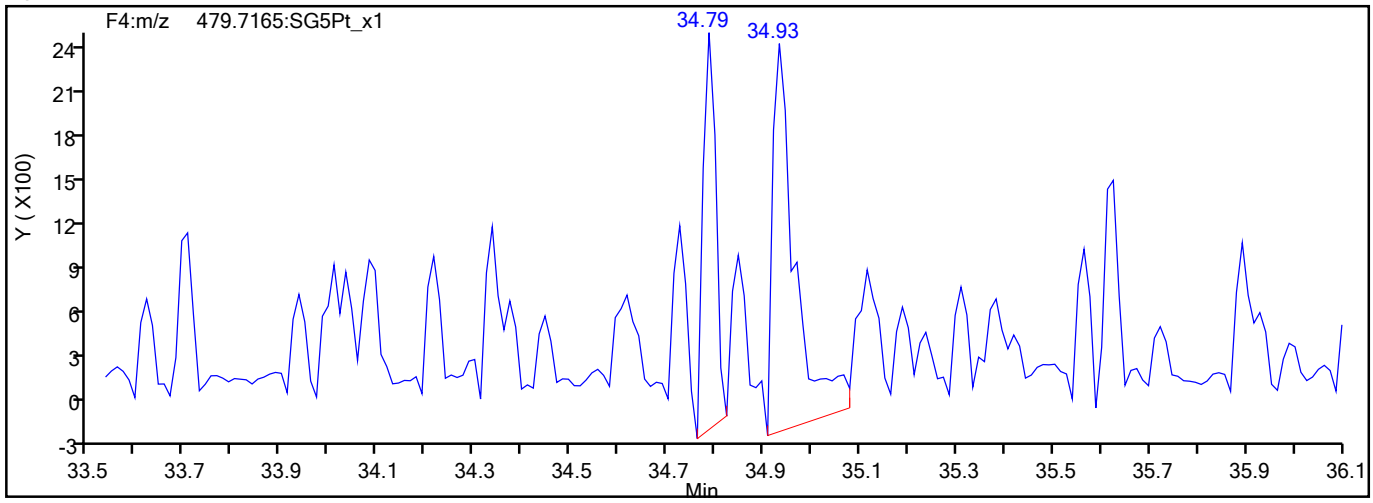

780040

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

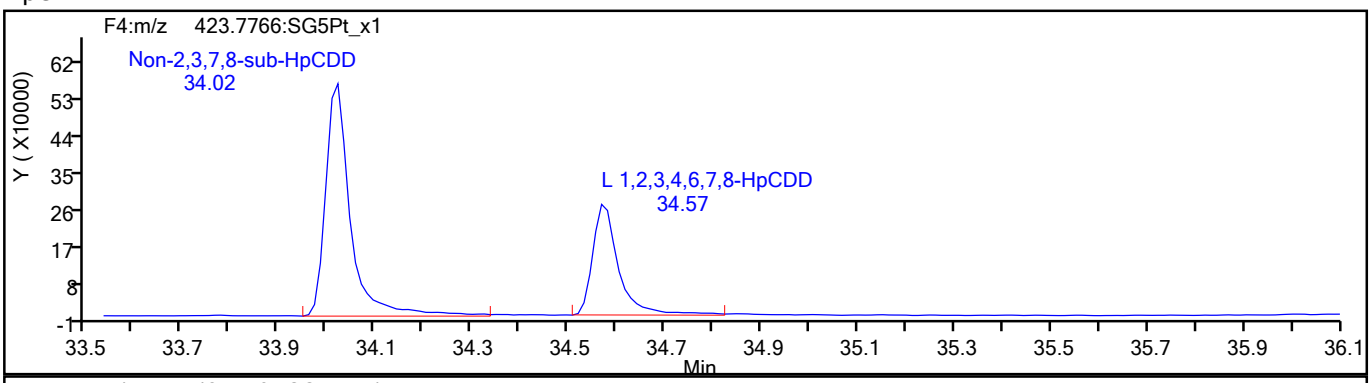

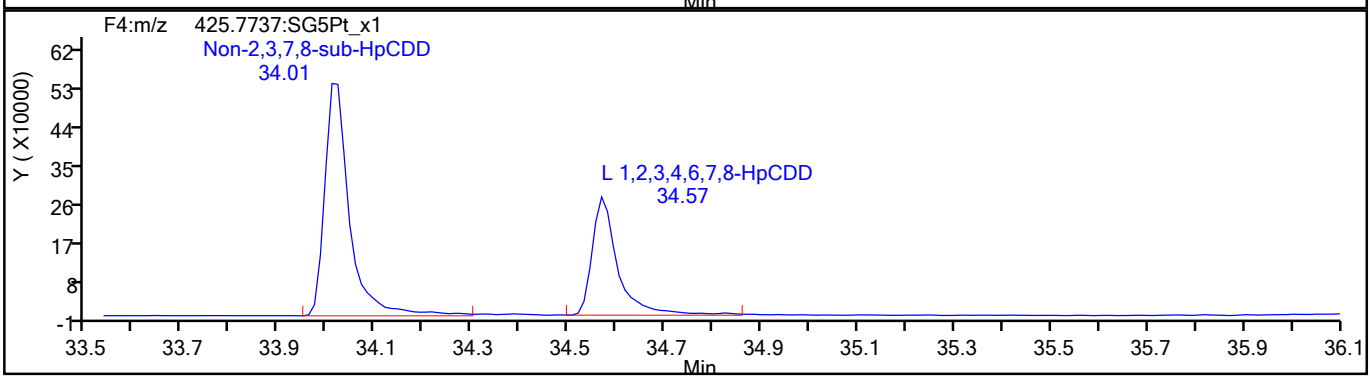

HpCDD Standards

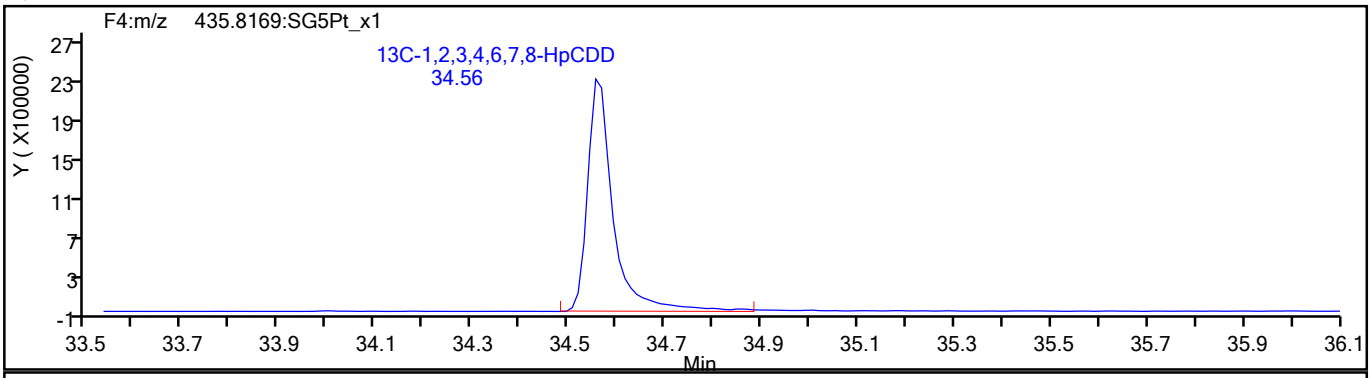

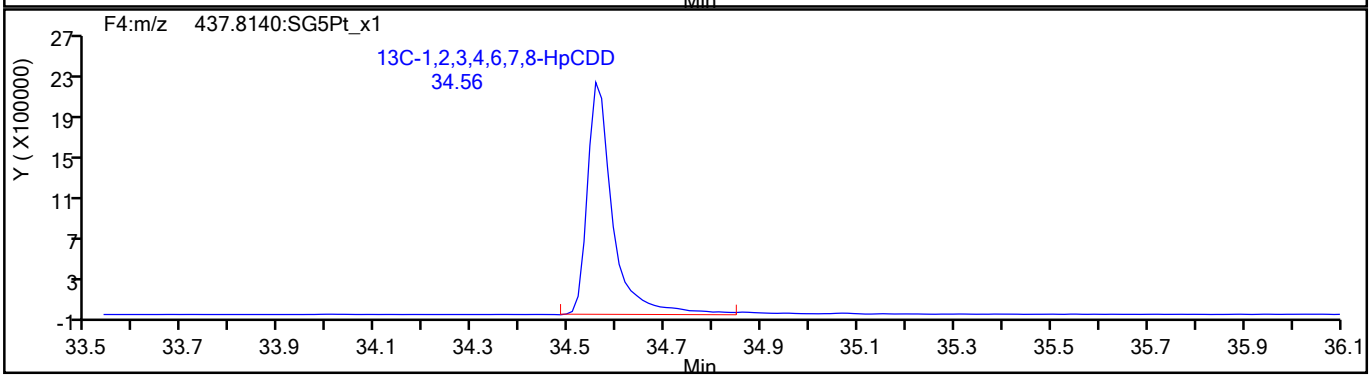

780041

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

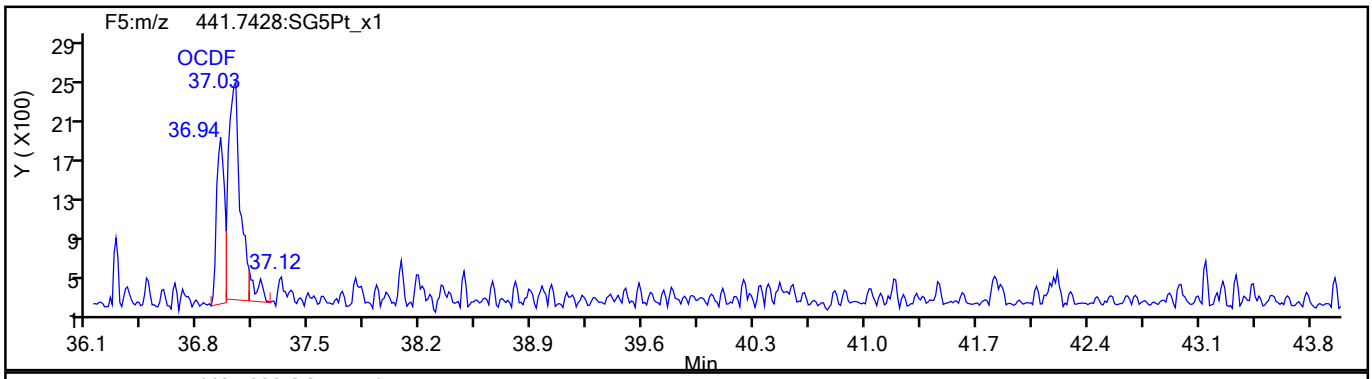

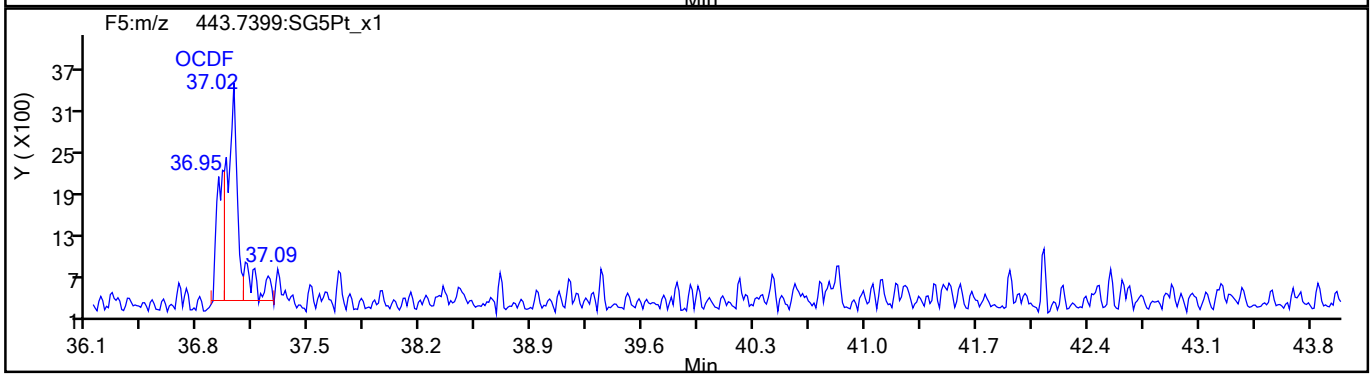

OCDF Standards

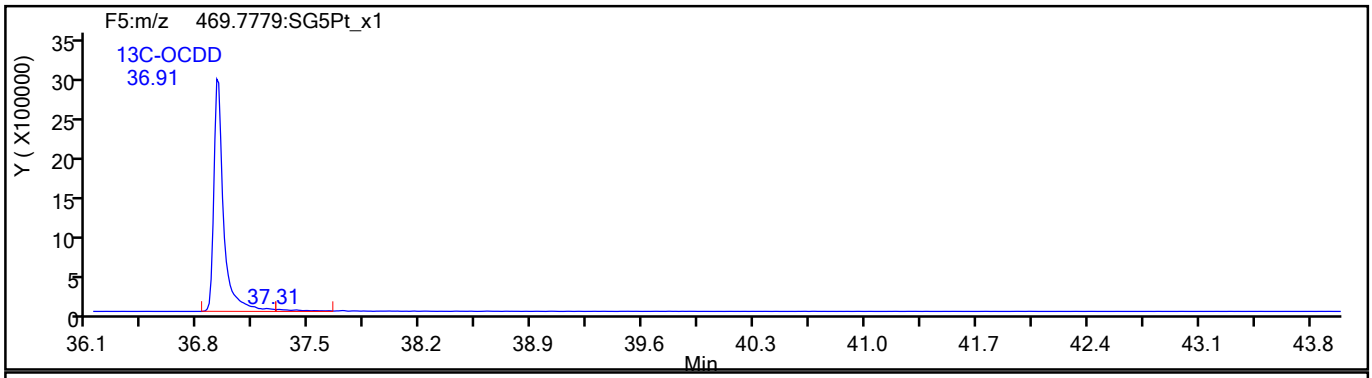

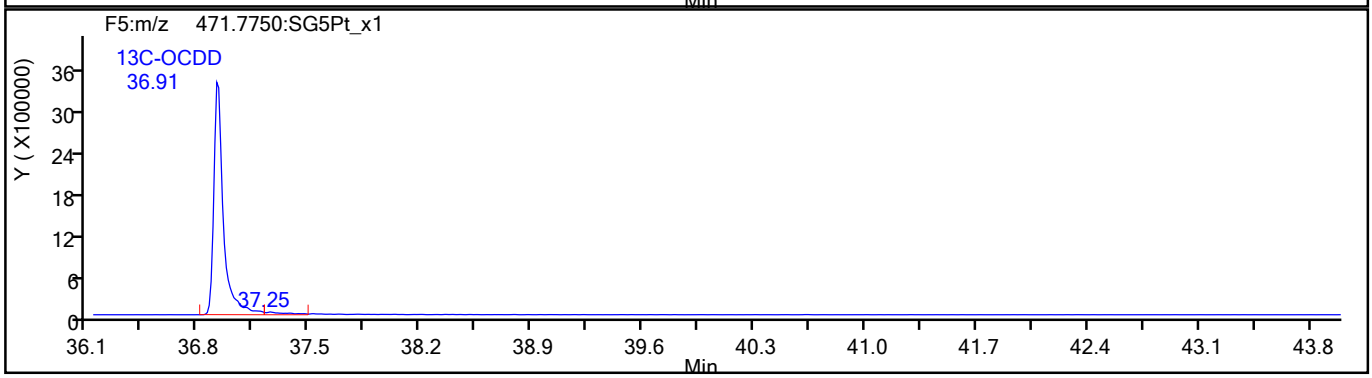

780042

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

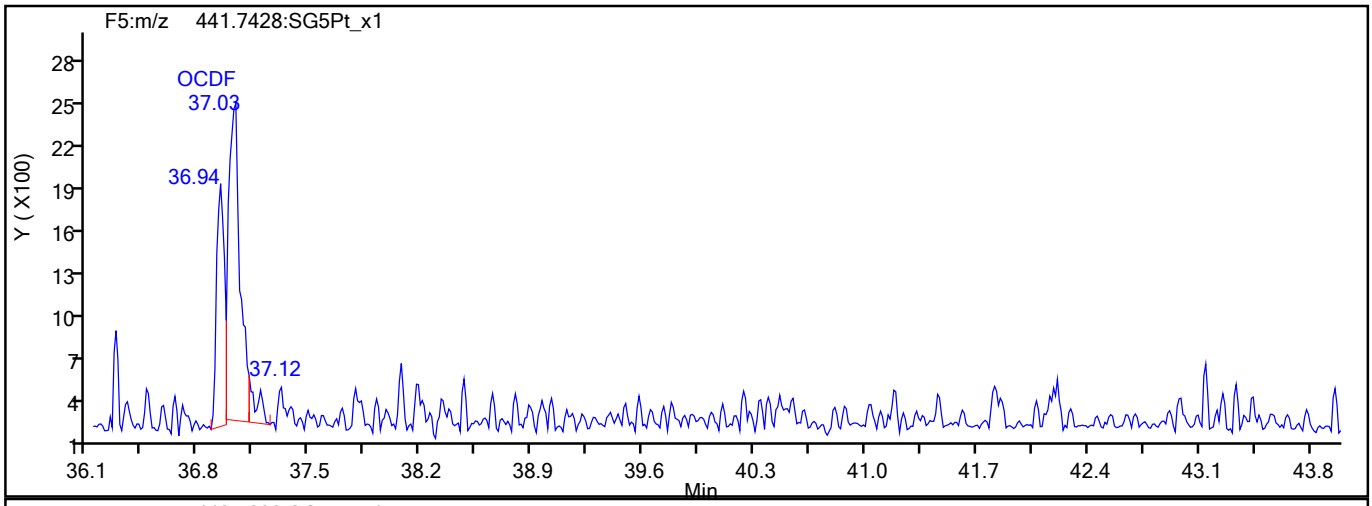

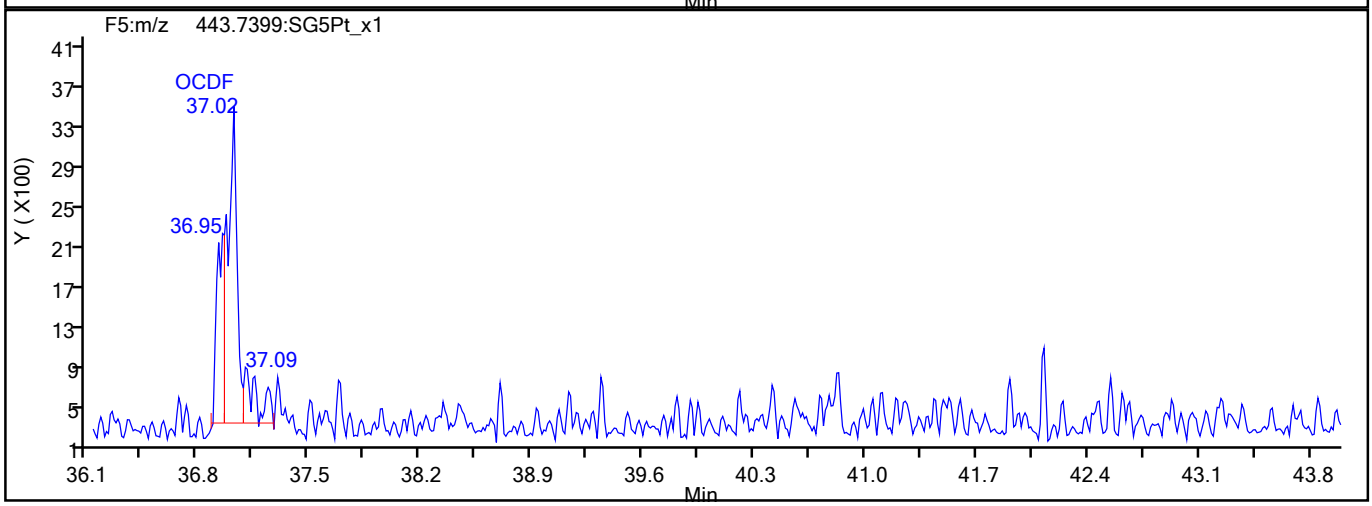

OCDF Interference Mass

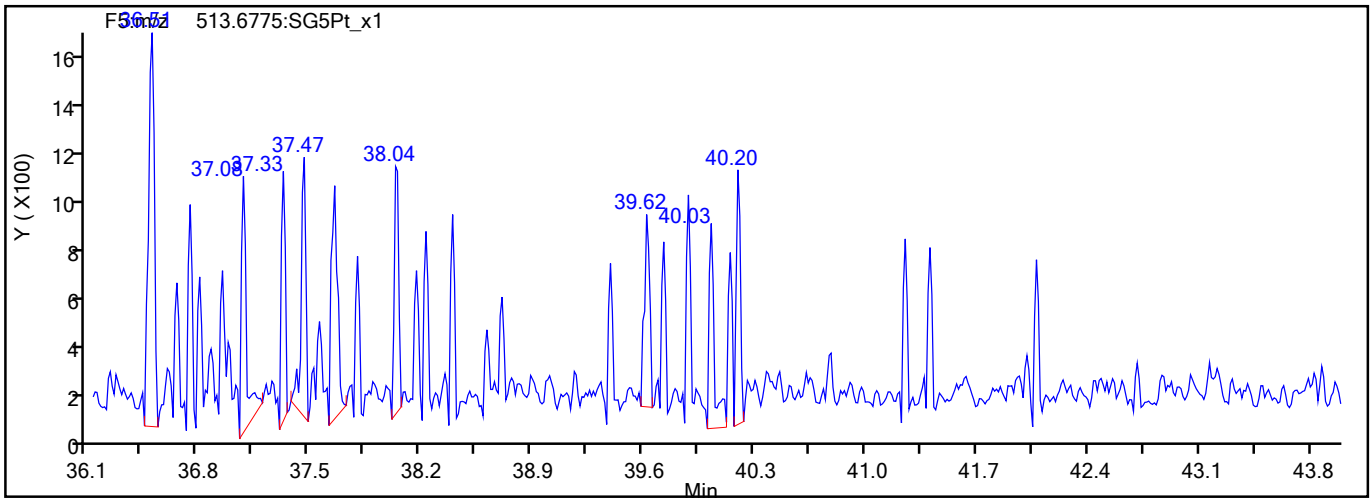

780043

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

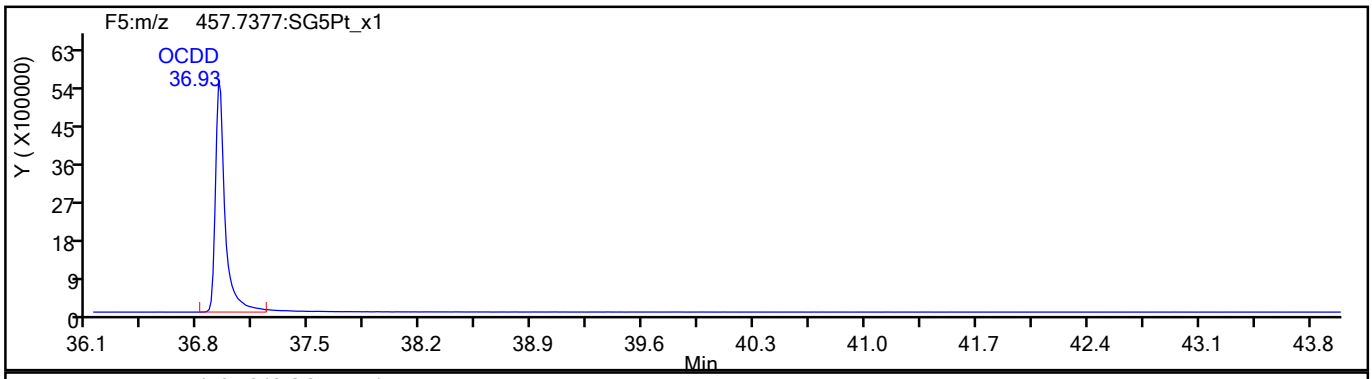

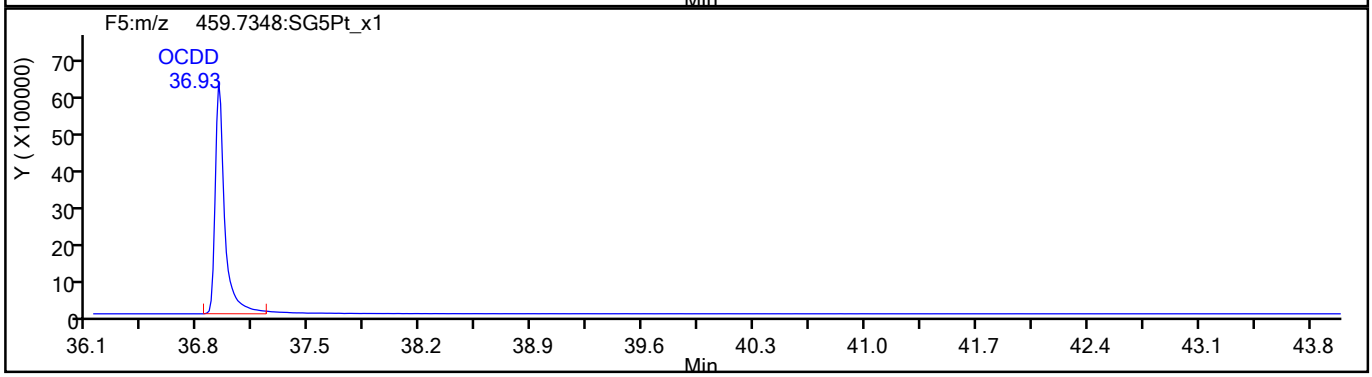

OCDD Standards

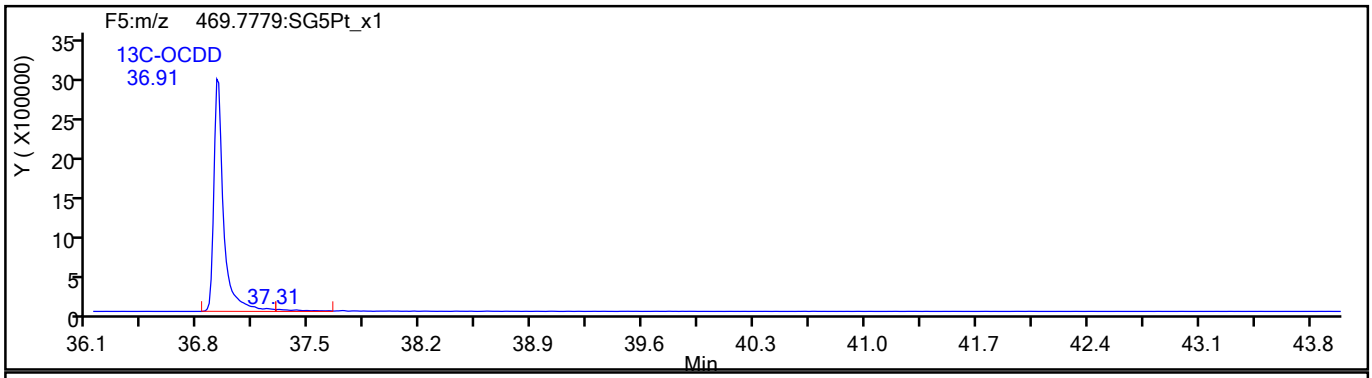

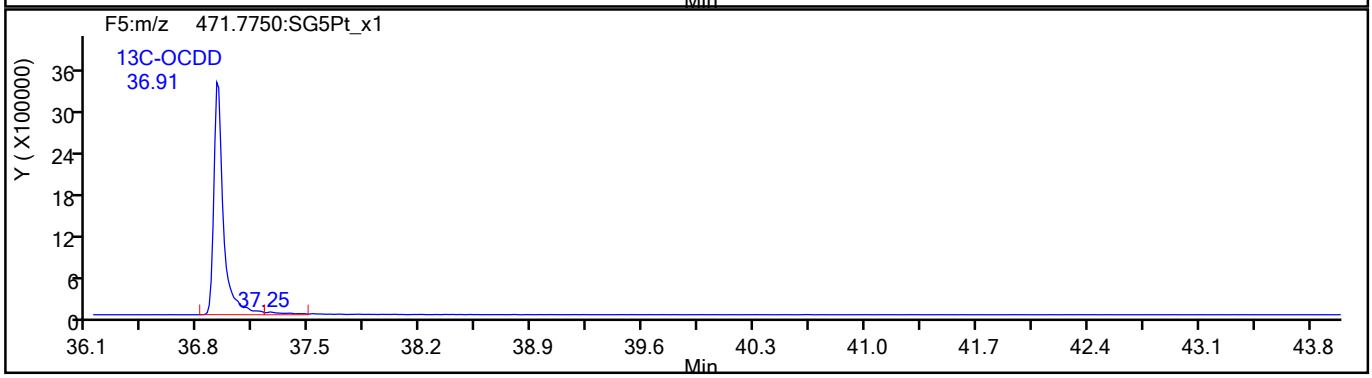

780044

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

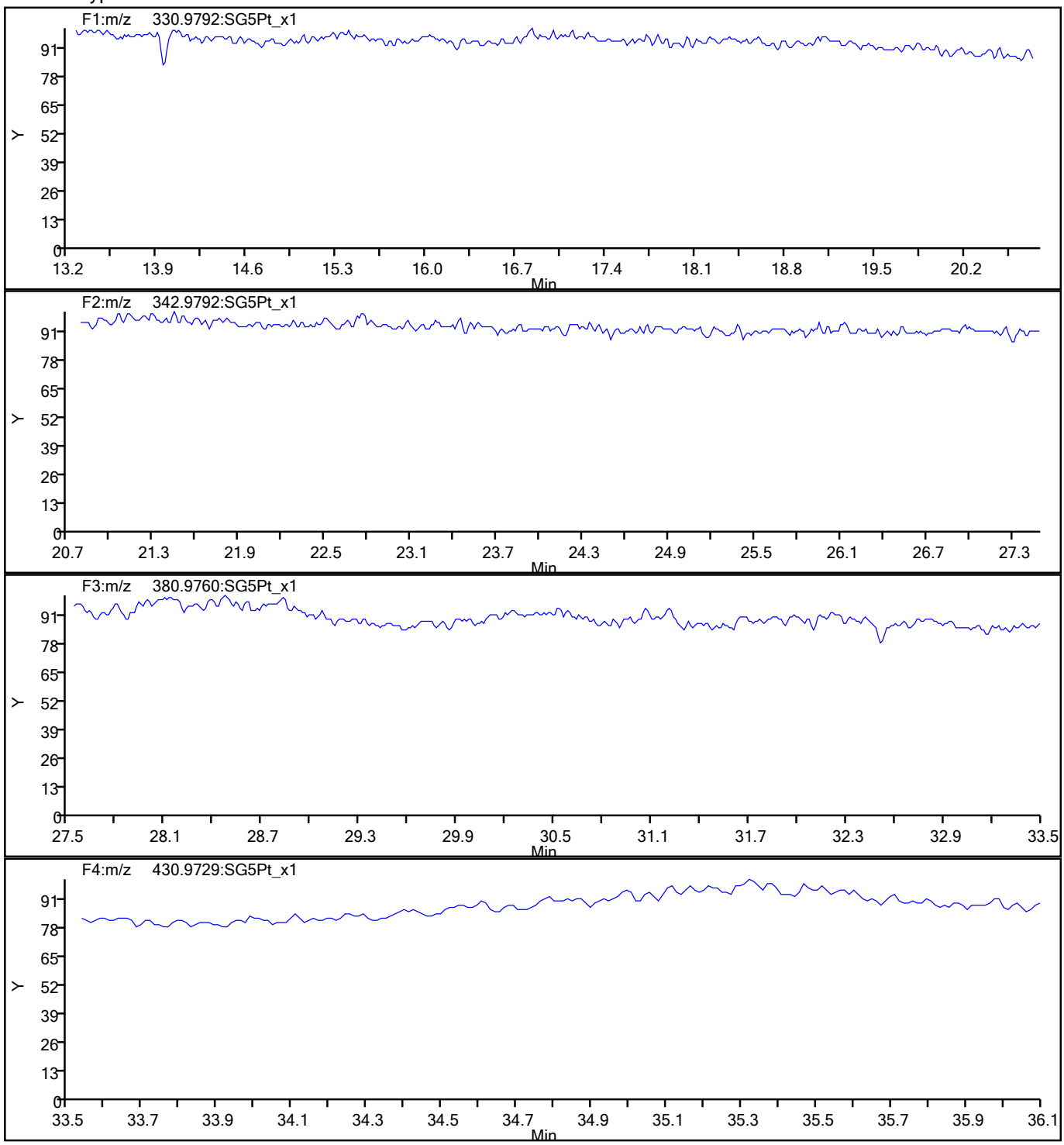

780045

Report Date: 18-Aug-2021 09:58:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_35.d		
Injection Date:	14-Aug-2021 19:01:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	516846	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

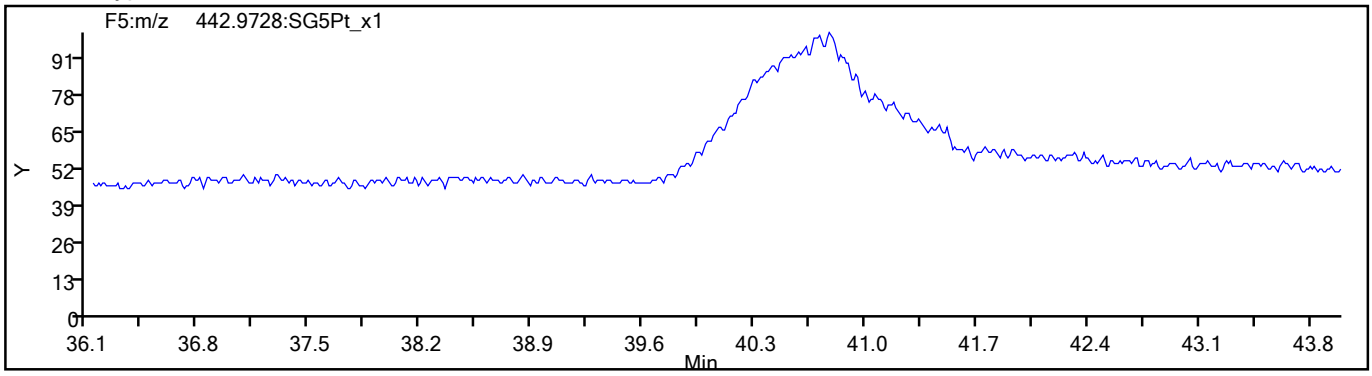

780046

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (10-12) RA
Lab Sample ID: 320-76788-18 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_008.d
Analysis Method: 1613B
Date Collected: 07/23/2021 15:55
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.94(g)
Date Analyzed: 08/24/2021 21:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 39.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	39	B	1.7	0.22

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	84		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	84		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_008.d
Lims ID: 320-76788-A-18-A
Client ID: 11215702-072321-BN-SJSB105 (10-12)
Sample Type: Client
Inject. Date: 24-Aug-2021 21:05:31 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-18-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:30:55

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.289	57794147	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.605	64418626	0.79	1.3327	83.6	83.6	0.2646	0.2646	83.64	
2,3,7,8-TCDF	17.633	7624485	0.77	0.9978	11.9	11.9	0.0660	0.0660		
D 13C-2,3,7,8-TCDD	16.055	38916858	0.80	0.8749	77.0	77.0	0.7588	0.7588	76.96	
$ 37Cl4-2,3,7,8-TCDD	16.083	16775055		0.8648	33.6	33.6	0.0998	0.0998	83.91	
2,3,7,8-TCDD	16.083	1673564	0.68	1.0570	4.068	4.068	0.0765	0.0765		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_008.d
Lims ID: 320-76788-A-18-A
Client ID: 11215702-072321-BN-SJSB105 (10-12)
Sample Type: Client
Inject. Date: 24-Aug-2021 21:05:31 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-18-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:30:55

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.289	16.285	0		25120274	5510837	18312	45780	301		
333.9339	16.289	16.285	0		32673873	7291084	15683	39207	465	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.605	17.601	0	1.081	28517120	5286773	8662	21655	610		
317.9389	17.619	17.601	1	1.082	35901506	6839307	9394	23485	728	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.633	17.629	0	1.002	3310928	634695	1520	3800	418		
305.8987	17.633	17.629	0	1.002	4313557	759039	1676	4190	453	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.055	16.051	0	0.986	17346803	4057409	18312	45780	222		
333.9339	16.069	16.051	1	0.987	21570055	4961642	15683	39207	316	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.083	16.065	1	0.987	16775055	3626746	4418	11045	821		
2,3,7,8-TCDD											
319.8965	16.083	16.079	0	1.002	679251	148943	1437	3592	104		
321.8936	16.069	16.079	-1	1.001	994313	189285	1481	3702	128	0.68(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 25-Aug-2021 09:02:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_008.d		
Injection Date:	24-Aug-2021 21:05:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	519540	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

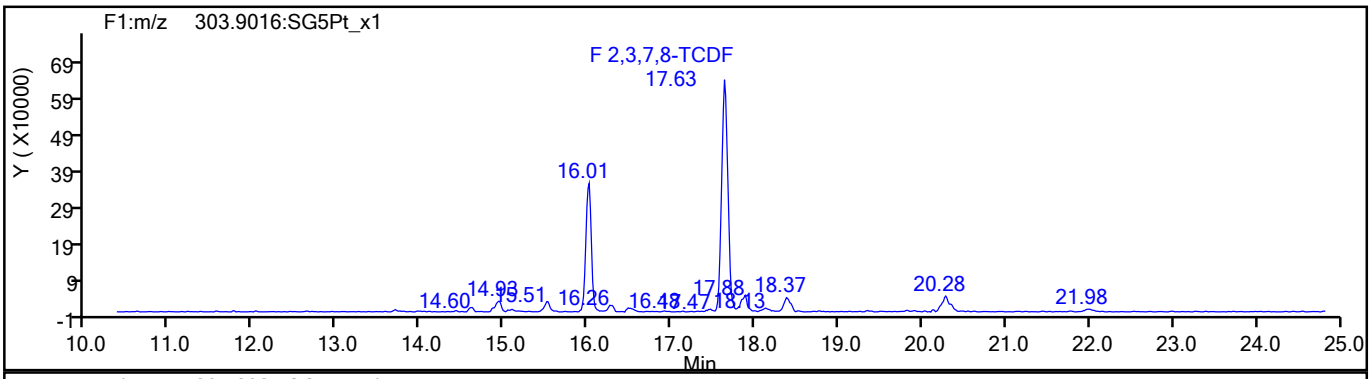

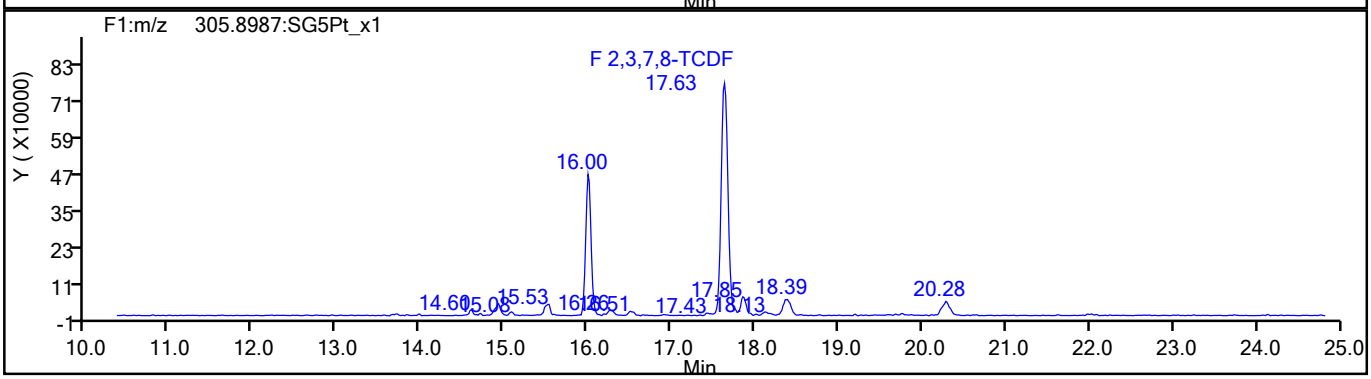

TCDF Standards

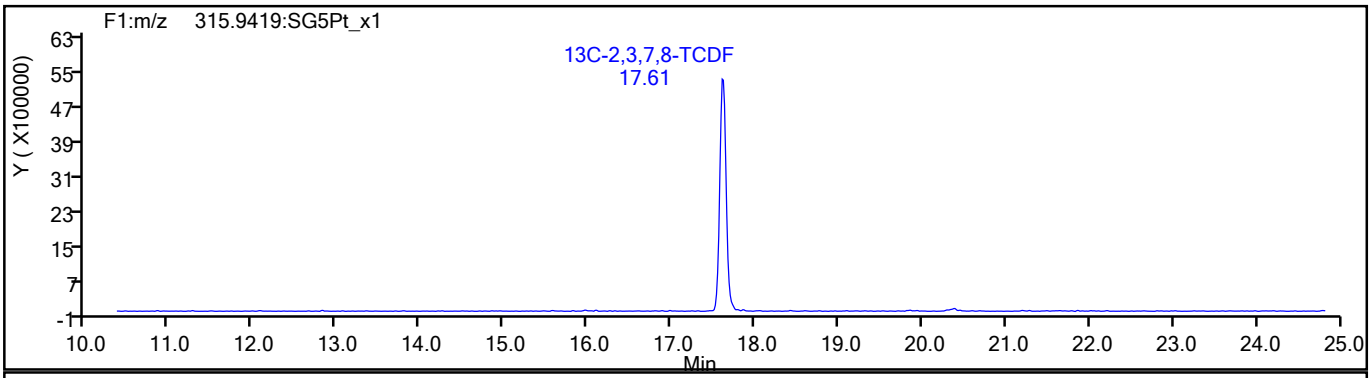

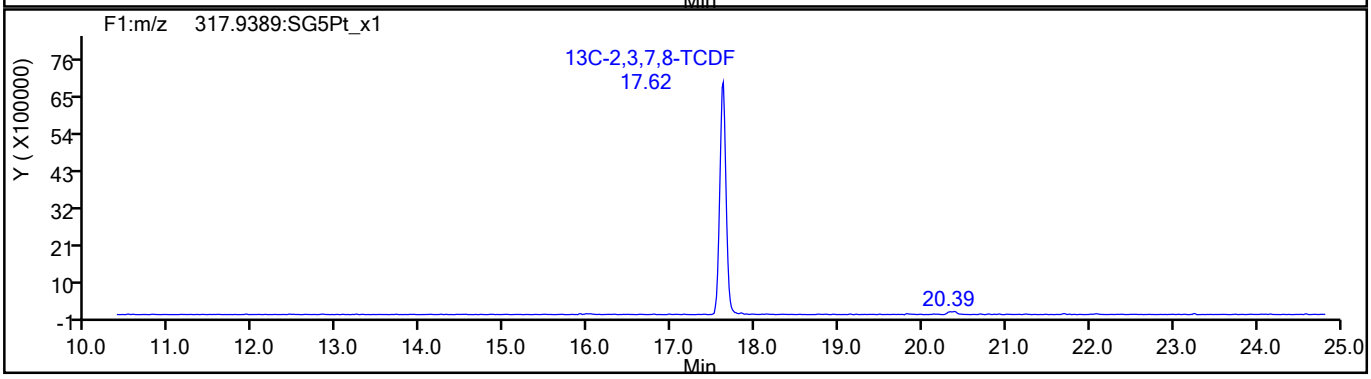

780050

Report Date: 25-Aug-2021 09:02:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_008.d		
Injection Date:	24-Aug-2021 21:05:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	519540	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

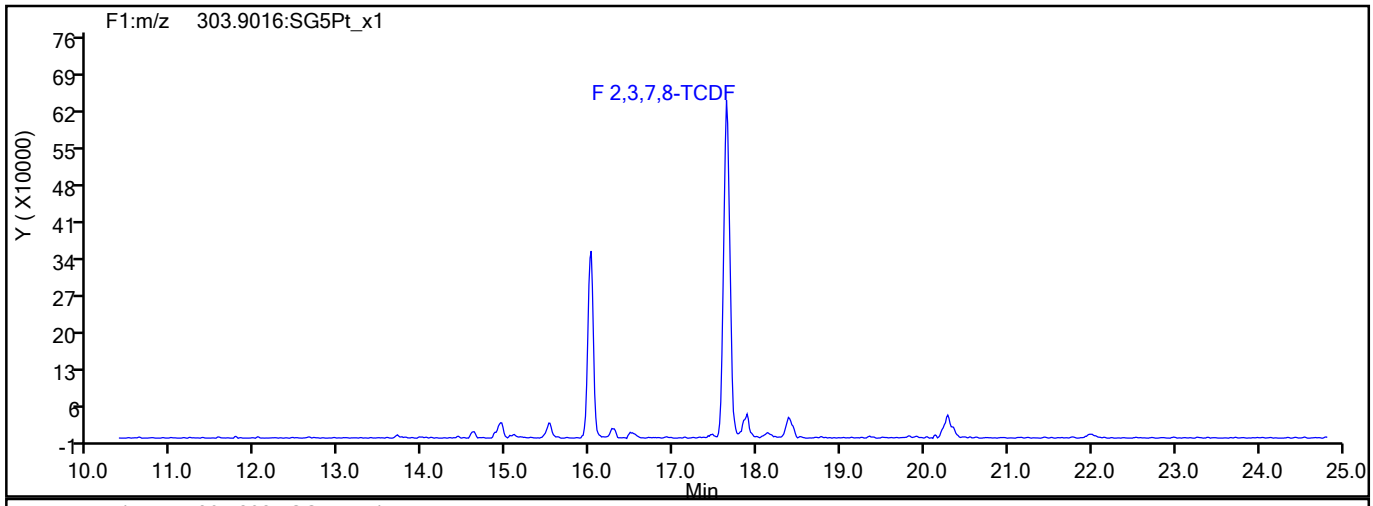

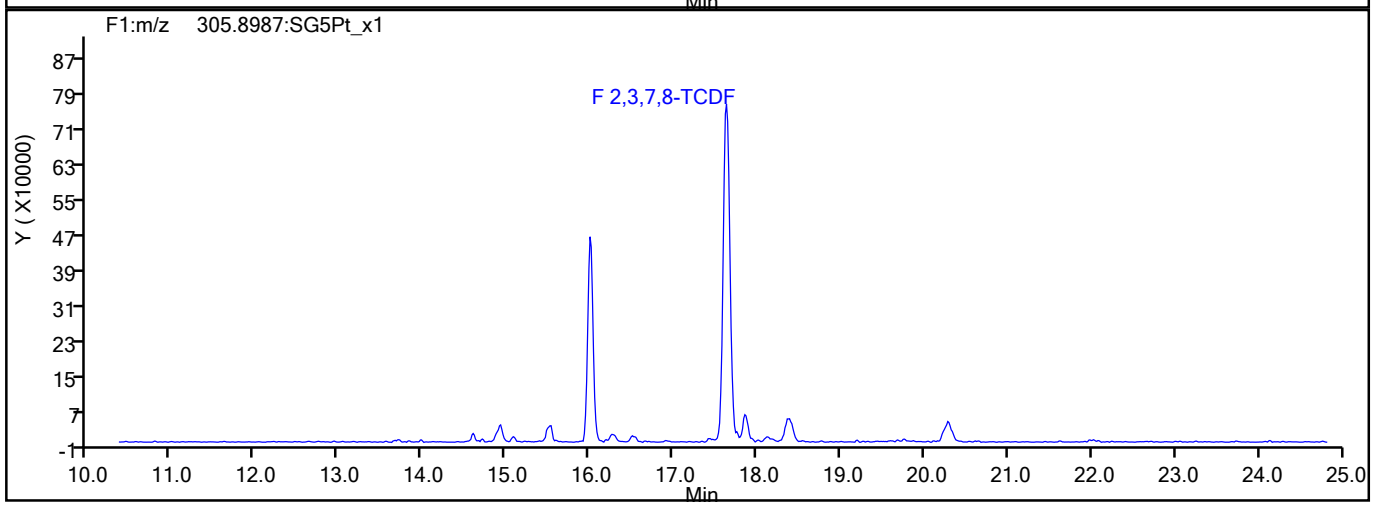

TCDF Interference Mass

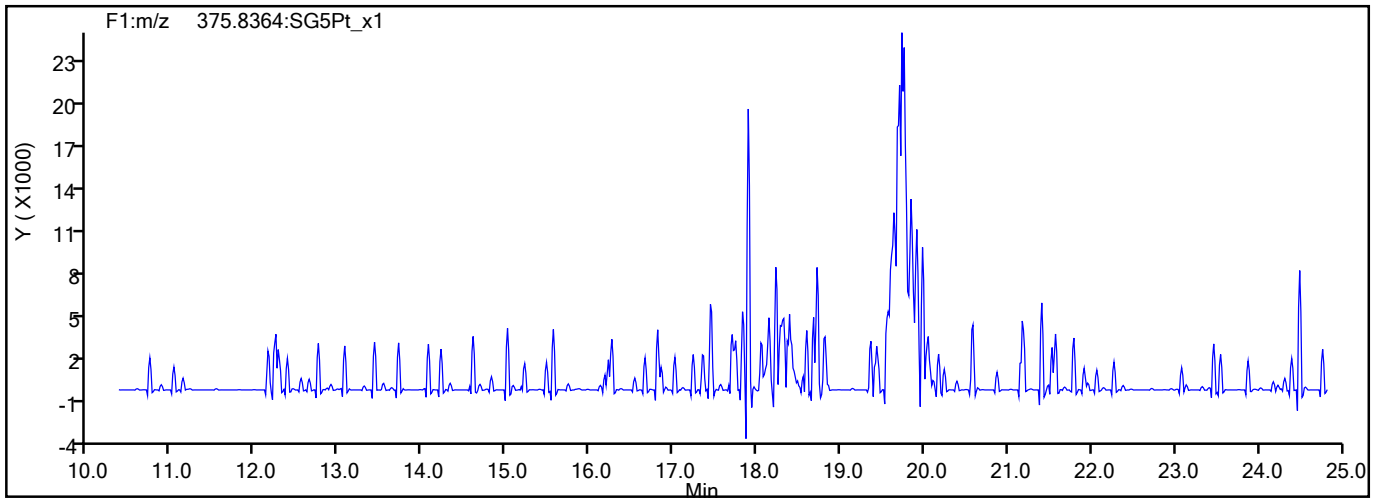

780051

Report Date: 25-Aug-2021 09:02:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_008.d		
Injection Date:	24-Aug-2021 21:05:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	519540	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

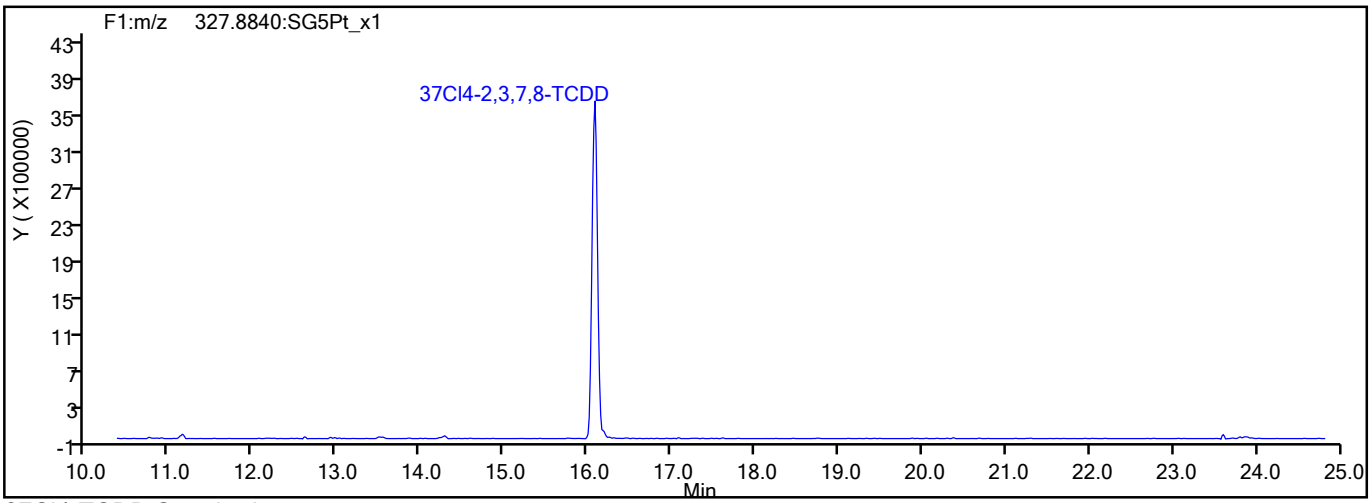

37Cl4-TCDD Standards

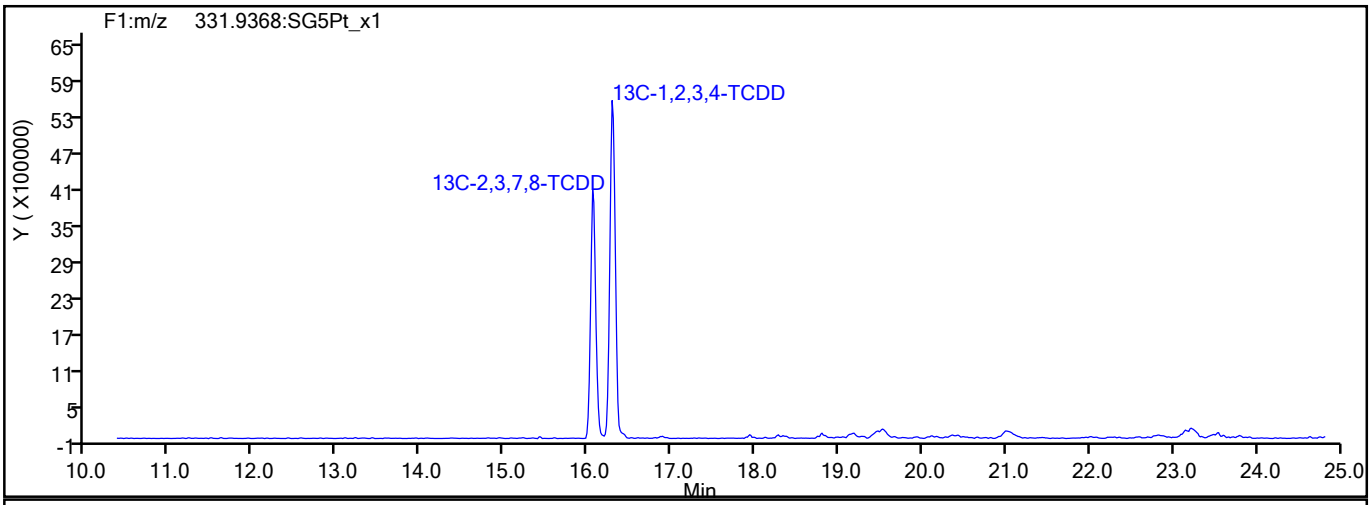

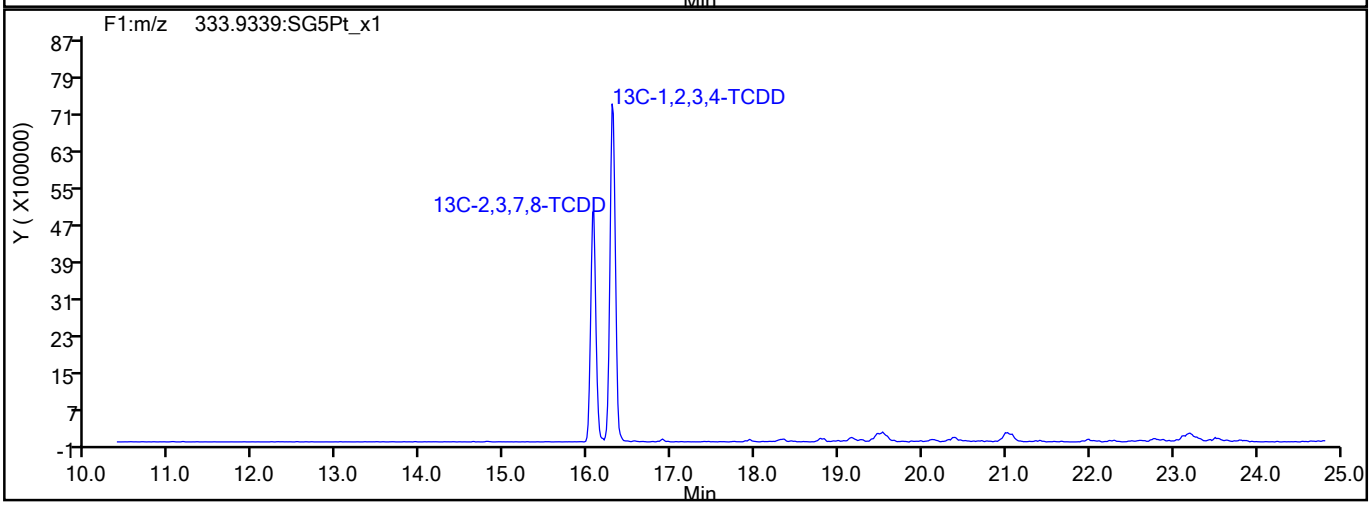

780052

Report Date: 25-Aug-2021 09:02:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_008.d		
Injection Date:	24-Aug-2021 21:05:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (10-12)		
Worklist#:	519540	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

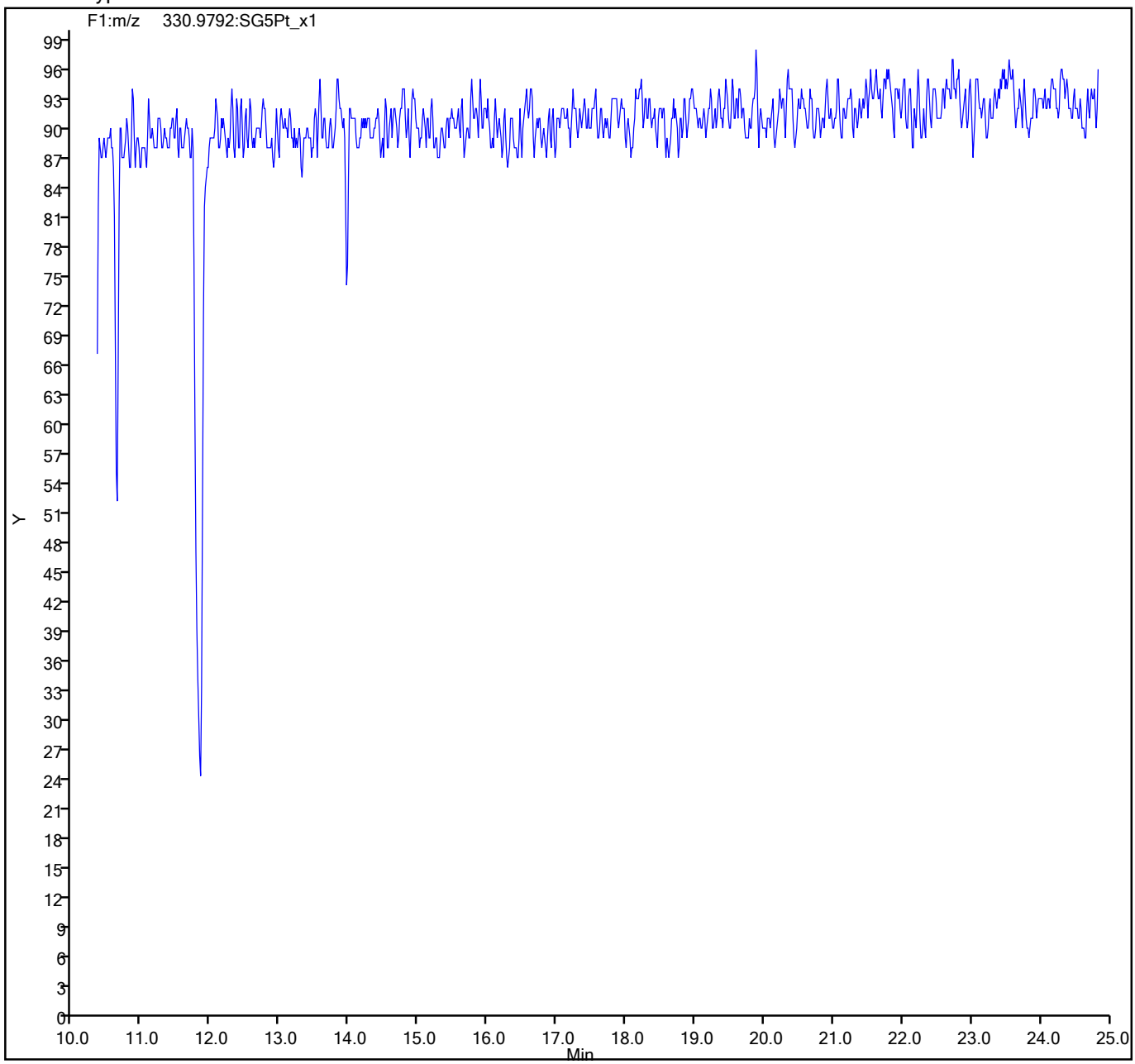

780053

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (12-14)
Lab Sample ID: 320-76788-19
Matrix: Solid
Lab File ID: 13AU2110D5_36.d
Analysis Method: 1613B
Date Collected: 07/23/2021 16:00
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.06(g)
Date Analyzed: 08/14/2021 19:46
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 33.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	250	B	1.5	1.2
40321-76-4	1,2,3,7,8-PeCDD	2.6	J	7.5	0.19
57117-41-6	1,2,3,7,8-PeCDF	18		7.5	0.22
57117-31-4	2,3,4,7,8-PeCDF	13		7.5	0.22
39227-28-6	1,2,3,4,7,8-HxCDD	0.58	J B q	7.5	0.26
57653-85-7	1,2,3,6,7,8-HxCDD	1.2	J	7.5	0.28
19408-74-3	1,2,3,7,8,9-HxCDD	2.8	J	7.5	0.25
70648-26-9	1,2,3,4,7,8-HxCDF	24	B	7.5	0.15
57117-44-9	1,2,3,6,7,8-HxCDF	6.8	J B	7.5	0.16
72918-21-9	1,2,3,7,8,9-HxCDF	0.41	J B q	7.5	0.13
60851-34-5	2,3,4,6,7,8-HxCDF	0.79	J	7.5	0.12
35822-46-9	1,2,3,4,6,7,8-HpCDD	64	B	7.5	1.5
67562-39-4	1,2,3,4,6,7,8-HpCDF	7.0	J B	7.5	0.11
55673-89-7	1,2,3,4,7,8,9-HpCDF	2.1	J B q	7.5	0.13
3268-87-9	OCDD	1600	B	15	1.9
39001-02-0	OCDF	4.3	J B	15	0.066
41903-57-5	Total TCDD	270	B	1.5	1.2
30402-14-3	Total TCDF	1600	B G	2.9	2.9
36088-22-9	Total PeCDD	12	q	7.5	0.19
30402-15-4	Total PeCDF	48		7.5	0.22
34465-46-8	Total HxCDD	45	B q	7.5	0.26
55684-94-1	Total HxCDF	36	B q	7.5	0.14
37871-00-4	Total HpCDD	200	B	7.5	1.5
38998-75-3	Total HpCDF	11	B q	7.5	0.12

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (12-14)
Lab Sample ID: 320-76788-19
Matrix: Solid
Lab File ID: 13AU2110D5_36.d
Analysis Method: 1613B
Date Collected: 07/23/2021 16:00
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.06(g)
Date Analyzed: 08/14/2021 19:46
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 33.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	58		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	60		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	56		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	60		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	63		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	61		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	58		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	52		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	53		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	57		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	51		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	61		26-138
114423-97-1	13C-OCDD	61		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	78		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d
Lims ID: 320-76788-A-19-A
Client ID: 11215702-072321-BN-SJSB105 (12-14)
Sample Type: Client
Inject. Date: 14-Aug-2021 19:46:33 ALS Bottle#: 36 Worklist Smp#: 25
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-19-a 320-76788-a-19-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:01:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 10:01:12

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	45298085	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	40196270	0.76	1.6249	54.6	54.6	0.1536	0.1536	54.61	
2,3,7,8-TCDF	17.371	126825051	0.78	1.0239	308.1	308.1	0.9601	0.9601		E
A Non-2,3,7,8-sub-TCDF	17.046	88647876	0.77	1.0239	215.4	215.4	0.9601	134.6		
S Total TCDF					523.5	523.5	0.9601	0.9601		
D 13C-2,3,7,8-TCDD	18.067	23769735	0.82	0.8993	58.3	58.3	0.1889	0.1889	58.35	
2,3,7,8-TCDD	18.082	24932609	0.78	1.2541	83.6	83.6	0.4017	0.4017		
$ 37Cl4-2,3,7,8-TCDD	18.082	15554735		1.1071	31.0	31.0	0.0583	0.0583	77.54	
A Non-2,3,7,8-sub-TCDD	17.499	2249411	0.71	1.2541	7.546	7.546	0.4017	6.663		
S Total TCDD					91.2	91.2	0.4017	0.4017		
D 13C-1,2,3,7,8-PeCDF	22.381	30436898	1.55	1.2101	55.5	55.5	0.1312	0.1312	55.53	
1,2,3,7,8-PeCDF	22.408	1926103	1.52	1.0611	5.964	5.964	0.0741	0.0741		M
D 13C-2,3,4,7,8-PeCDF	23.717	33579321	1.58	1.2395	59.8	59.8	0.1281	0.1281	59.81	
2,3,4,7,8-PeCDF	23.731	1451559	1.62	1.0184	4.245	4.245	0.0745	0.0745		
A F1 PeCDFs	20.093	20439	1.75	1.0398	0.0614	0.0614	0.0150	0.0614		
A Non-2,3,7,8-sub-PeCDF	23.241	1932425	1.49	1.0398	5.806	5.806	0.0743	2.540		Ma
S Total PeCDF					16.1	16.1	0.0743	0.0743		
D 13C-1,2,3,7,8-PeCDD	24.440	20840639	1.61	0.7612	60.4	60.4	0.0763	0.0763	60.44	
1,2,3,7,8-PeCDD	24.467	192216	1.50	1.0484	0.8797	0.8797	0.0650	0.0650		
A Non-2,3,7,8-sub-PeCDD	23.349	700823	1.55	1.0484	3.342	3.207	0.0650	1.400		RQ
S Total PeCDD					4.222	4.087	0.0650	0.0650		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.517	28671074	0.51	1.0837	58.1	58.1	0.2628	0.2628	58.15	
1,2,3,4,7,8-HxCDF	30.530	2473072	1.16	1.0851	7.949	7.949	0.0506	0.0506		
D 13C-1,2,3,6,7,8-HxCDF	30.690	26886740	0.51	1.1279	52.4	52.4	0.2525	0.2525	52.39	
1,2,3,6,7,8-HxCDF	30.716	689787	1.19	1.1260	2.278	2.278	0.0533	0.0533		
D 13C-2,3,4,6,7,8-HxCDF	31.515	25589819	0.51	1.0637	52.9	52.9	0.2678	0.2678	52.87	
2,3,4,6,7,8-HxCDF	31.541	79430	1.16	1.1675	0.2659	0.2659	0.0416	0.0416		M
D 13C-1,2,3,7,8,9-HxCDF	32.327	23319648	0.51	0.9676	53.0	53.0	0.2944	0.2944	52.97	
1,2,3,7,8,9-HxCDF	32.353	37430	1.24	1.1664	0.1547	0.1376	0.0420	0.0420		RQM
A Non-2,3,7,8-sub-HxCDF	30.197	377396	1.24	1.1363	1.347	1.272	0.0464	0.5631		RQMa

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					12.0	11.9	0.0469	0.0469		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.140	45502224	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	20860365	1.27	0.7334	62.5	62.5	0.3628	0.3628	62.51	
1,2,3,4,7,8-HxCDD	31.714	43258	1.24	1.0640	0.2312	0.1949	0.0876	0.0876		RQ
D 13C-1,2,3,6,7,8-HxCDD	31.808	24309258	1.23	0.8802	60.7	60.7	0.3023	0.3023	60.70	
1,2,3,6,7,8-HxCDD	31.821	95942	1.22	1.0001	0.3946	0.3946	0.0951	0.0951		
1,2,3,7,8,9-HxCDD	32.140	237932	1.14	1.1325	0.9302	0.9302	0.0832	0.0832		
A Non-2,3,7,8-sub-HxCDD	30.882	3227811	1.24	1.0655	13.5	13.4	0.0884	9.441		RQ
S Total HxCDD					15.0	14.9	0.0886	0.0886		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	17953404	0.42	0.7730	51.0	51.0	0.6891	0.6891	51.04	
1,2,3,4,6,7,8-HpCDF	33.778	605779	1.00	1.4413	2.341	2.341	0.0383	0.0383		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.848	19335769	0.44	0.7008	60.6	60.6	0.7601	0.7601	60.64	
1,2,3,4,7,8,9-HpCDF	34.860	180899	1.04	1.3174	0.7890	0.7102	0.0440	0.0440		RQ
A Non-2,3,7,8-sub-HpCDF	34.319	156494	1.04	1.3793	0.6605	0.6085	0.0410	0.6085		RQ
S Total HpCDF					3.791	3.660	0.0412	0.0412		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	16770153	1.00	0.6472	56.9	56.9	0.3280	0.3280	56.94	
1,2,3,4,6,7,8-HpCDD	34.568	3911144	1.04	1.0943	21.3	21.3	0.4900	0.4900		
A Non-2,3,7,8-sub-HpCDD	34.301	8428478	1.01	1.0943	45.9	45.9	0.4900	45.9		
S Total HpCDD					67.2	67.2	0.4900	0.4900		
D 13C-OCDD	36.926	25008670	0.89	0.4472	122.9	122.9	0.1776	0.1776	61.46	
OCDF	37.022	258226	0.89	1.4382	1.436	1.436	0.0222	0.0222		M
OCDD	36.926	76179192	0.89	1.1070	550.3	550.3	0.6297	0.6297		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d
Lims ID: 320-76788-A-19-A
Client ID: 11215702-072321-BN-SJSB105 (12-14)
Sample Type: Client
Inject. Date: 14-Aug-2021 19:46:33 ALS Bottle#: 36 Worklist Smp#: 25
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-19-a 320-76788-a-19-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:01:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 10:01:12

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		20225915	5051513	3321	8302	1521		
333.9339	17.870	17.855	1		25072170	6173050	4308	10770	1433	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.341	1	0.971	17344620	4441093	4760	11900	933		
317.9389	17.356	17.341	1	0.971	22851650	5794557	6445	16112	899	0.76(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.371	17.356	1	1.001	55446483	13505016	15769	39422	856		
305.8987	17.371	17.356	1	1.001	71378568	17358528	24479	61197	709	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.950	17.046	-66	0.919	888284	245334	15769	39422	16		
305.8987	15.950	17.046	-66	0.919	1114573	307940	24479	61197	13	0.80(0.65-0.89)	
303.9016	16.237	17.046	-48	0.936	1622514	362276	15769	39422	23		
305.8987	16.237	17.046	-48	0.936	2168050	472163	24479	61197	19	0.75(0.65-0.89)	
303.9016	16.464	17.046	-35	0.949	1500250	400041	15769	39422	25		
305.8987	16.464	17.046	-35	0.949	1970878	521212	24479	61197	21	0.76(0.65-0.89)	
303.9016	16.706	17.046	-20	0.963	2094025	506099	15769	39422	32		
305.8987	16.706	17.046	-20	0.963	2742421	698206	24479	61197	29	0.76(0.65-0.89)	
303.9016	16.993	17.046	-3	0.979	24179992	6149712	15769	39422	390		
305.8987	16.978	17.046	-4	0.978	31223845	8010772	24479	61197	327	0.77(0.65-0.89)	
303.9016	17.205	17.046	10	0.991	814303	201166	15769	39422	13		
305.8987	17.205	17.046	10	0.991	1140082	275207	24479	61197	11	0.71(0.65-0.89)	
303.9016	17.795	17.046	45	1.025	3351791	782419	15769	39422	50		
305.8987	17.795	17.046	45	1.025	4542775	1089496	24479	61197	45	0.74(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.036	17.046	59	1.039	624307	133903	15769	39422	8		
305.8987	18.036	17.046	59	1.039	860657	184131	24479	61197	8	0.73(0.65-0.89)	
303.9016	19.185	17.046	128	1.105	3389047	741012	15769	39422	47		
305.8987	19.185	17.046	128	1.105	4420082	984210	24479	61197	40	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.067	18.051	1	1.011	10681420	2488705	3321	8302	749		
333.9339	18.067	18.051	1	1.011	13088315	3055762	4308	10770	709	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.082	18.066	1	1.001	10922725	2627400	5425	13562	484		
321.8936	18.082	18.066	1	1.001	14009884	3342899	5748	14370	582	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.066	1	1.012	15554735	3723860	2900	7250	1284		
A Non-2,3,7,8-sub-TCDD											
319.8965	16.933	17.499	-34	0.937	122561	27668	5425	13562	5		
321.8936	16.933	17.499	-34	0.937	140621	34938	5748	14370	6	0.87(0.65-0.89)	
319.8965	18.430	17.499	56	1.020	813881	184478	5425	13562	34		
321.8936	18.430	17.499	56	1.020	1172348	254285	5748	14370	44	0.69(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.252	18498899	3207487	4237	10592	757		
353.8970	22.381	22.367	1	1.252	11937999	2074454	2892	7230	717	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.408	22.380	2	1.001	1161324	201712	978	2445	206		M
341.8567	22.394	22.380	1	1.001	764779	129380	684	1710	189	1.52(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.327	20550232	3350203	4237	10592	791		
353.8970	23.717	23.703	1	1.327	13029089	2125152	2892	7230	735	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.731	23.730	0	1.001	896859	141344	978	2445	145		
341.8567	23.744	23.730	1	1.001	554700	85466	684	1710	125	1.62(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.488	20.093	-36	0.871	13001	2748	111	277	25		
341.8567	19.503	20.093	-35	0.871	7438	2121	224	560	9	1.75(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											Ma
339.8597	21.058	23.241	-131	0.941	513352	94890	978	2445	97		
341.8567	21.044	23.241	-132	0.940	331989	59586	684	1710	87	1.55(1.32-1.78)	
339.8597	22.258	23.241	-59	0.995	114903	23341	978	2445	24		M
341.8567	22.272	23.241	-58	0.995	70221	15713	684	1710	23	1.64(1.32-1.78)	
339.8597	22.913	23.241	-20	1.024	325634	56035	978	2445	57		
341.8567	22.913	23.241	-20	1.024	227891	39602	684	1710	58	1.43(1.32-1.78)	
339.8597	24.072	23.241	50	1.076	203985	31969	978	2445	33		
341.8567	24.085	23.241	51	1.076	144450	22574	684	1710	33	1.41(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.368	12870222	1934615	1416	3540	1366		
369.8919	24.440	24.426	1	1.368	7970417	1207533	1193	2982	1012	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											
355.8546	24.467	24.453	1	1.001	115336	17378	516	1290	34		
357.8516	24.467	24.453	1	1.001	76880	12527	340	850	37	1.50(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.235	23.349	-127	0.869	89491	15349	516	1290	30		
357.8516	21.235	23.349	-127	0.869	79046	13425	340	850	39	1.13(1.32-1.78)	
	Empc Correction				57736	9902	340	850	29		
355.8546	21.999	23.349	-81	0.900	189300	38059	516	1290	74		
357.8516	21.999	23.349	-81	0.900	116685	21247	340	850	62	1.62(1.32-1.78)	
355.8546	22.667	23.349	-41	0.927	22877	4135	516	1290	8		
357.8516	22.681	23.349	-40	0.928	16140	3198	340	850	9	1.42(1.32-1.78)	
355.8546	22.994	23.349	-21	0.941	9539	2155	516	1290	4		
357.8516	22.994	23.349	-21	0.941	7806	1521	340	850	4	1.22(1.32-1.78)	
	Empc Correction				6154	1390	340	850	4		
355.8546	23.281	23.349	-4	0.953	38821	7702	516	1290	15		
	Empc Correction				32303	5339	516	1290	10		
357.8516	23.281	23.349	-4	0.953	20841	3445	340	850	10	1.86(1.32-1.78)	
355.8546	23.485	23.349	8	0.961	82212	10702	516	1290	21		
357.8516	23.472	23.349	7	0.960	57545	7383	340	850	22	1.43(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.517	30.503	1	0.949	9695891	1827884	4641	11602	394		
385.8610	30.517	30.503	1	0.949	18975183	3539592	8728	21820	406	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.530	30.529	0	1.000	1326959	251314	673	1682	373		
375.8178	30.530	30.529	0	1.000	1146113	210221	505	1262	416	1.16(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.690	30.689	0	0.955	9050713	1641603	4641	11602	354		
385.8610	30.690	30.689	0	0.955	17836027	3262909	8728	21820	374	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.716	30.702	1	1.001	374343	72413	673	1682	108		
375.8178	30.716	30.702	1	1.001	315444	54242	505	1262	107	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.515	31.514	0	0.981	8637591	2034692	4641	11602	438		
385.8610	31.515	31.514	0	0.981	16952228	4032270	8728	21820	462	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.541	31.528	1	1.001	42661	10777	673	1682	16		M
375.8178	31.528	31.528	0	1.000	36769	8139	505	1262	16	1.16(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.327	32.313	1	1.006	7899409	2034201	4641	11602	438		
385.8610	32.327	32.313	1	1.006	15420239	3978229	8728	21820	456	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	32.353	32.326	2	1.001	25371	6945	673	1682	10		M
	Empc Correction				20720	7508	673	1682	11		
375.8178	32.327	32.326	0	1.000	16710	6055	505	1262	12	1.52(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	28.373	30.197	-109	0.930	94282	12557	673	1682	19		
375.8178	28.347	30.197	-111	0.929	72821	10713	505	1262	21	1.29(1.05-1.43)	
373.8208	29.731	30.197	-28	0.974	45259	6226	673	1682	9		
	Empc Correction				35488	5758	673	1682	9		
375.8178	29.691	30.197	-30	0.973	28620	4644	505	1262	9	1.58(1.05-1.43)	
373.8208	32.420	30.197	133	1.062	80924	23599	673	1682	35		M
375.8178	32.420	30.197	133	1.062	77755	22525	505	1262	45	1.04(1.05-1.43)	
	Empc Correction				65261	19031	505	1262	38		
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		25179027	6537996	7262	18155	900		
403.8529	32.140	32.127	1		20323197	5196362	5228	13070	994	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	11654251	3206018	7262	18155	441		
403.8529	31.701	31.701	0	0.986	9206114	2581151	5228	13070	494	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQ
389.8157	31.714	31.714	0	1.000	32005	8124	1045	2612	8		
	Empc Correction				23946	7684	1045	2612	7		
391.8127	31.714	31.714	0	1.000	19312	6197	1114	2785	6	1.66(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.808	31.807	0	0.990	13423908	3154744	7262	18155	434		
403.8529	31.808	31.807	0	0.990	10885350	2519553	5228	13070	482	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.821	31.820	0	1.000	52806	15364	1045	2612	15		
391.8127	31.821	31.820	0	1.000	43136	12794	1114	2785	11	1.22(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.140	0	1.014	126837	24557	1045	2612	23		
391.8127	32.140	32.140	0	1.014	111095	19377	1114	2785	17	1.14(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.558	30.882	-79	0.929	1254561	148721	1045	2612	142		
391.8127	29.558	30.882	-79	0.929	1017462	126202	1114	2785	113	1.23(1.05-1.43)	
389.8157	30.596	30.882	-17	0.962	33385	7252	1045	2612	7		
	Empc Correction				26905	7108	1045	2612	7		
391.8127	30.583	30.882	-18	0.962	21698	5733	1114	2785	5	1.54(1.05-1.43)	
389.8157	30.969	30.882	5	0.974	466458	94083	1045	2612	90		
391.8127	30.956	30.882	4	0.973	377111	73831	1114	2785	66	1.24(1.05-1.43)	
389.8157	31.169	30.882	17	0.980	44547	10350	1045	2612	10		
	Empc Correction				35216	8748	1045	2612	8		
391.8127	31.169	30.882	17	0.980	28400	7055	1114	2785	6	1.57(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	5351425	1659149	8061	20152	206		
419.8220	33.766	33.754	1	1.051	12601979	3847261	16942	42355	227	0.42(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.778	33.766	1	1.000	303287	101161	707	1767	143		M
409.7789	33.766	33.766	0	1.000	302492	95165	510	1275	187	1.00(0.88-1.20)	M

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.848	34.847	0	1.084	5910349	1590302	8061	20152	197		
419.8220	34.848	34.847	0	1.084	13425420	3655197	16942	42355	216	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											RQ
407.7818	34.860	34.860	0	1.000	112308	26570	707	1767	38		
	Empc Correction				92223	27750	707	1767	39		
409.7789	34.860	34.860	0	1.000	88676	26683	510	1275	52	1.27(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											RQ
407.7818	34.070	34.319	-15	1.009	93138	26670	707	1767	38		
	Empc Correction				79781	23039	707	1767	33		
409.7789	34.070	34.319	-15	1.009	76713	22153	510	1275	43	1.21(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.075	8391562	2396466	4650	11625	515		
437.8140	34.556	34.556	0	1.075	8378591	2400498	5314	13285	452	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	1998143	572865	4968	12420	115		
425.7737	34.568	34.568	0	1.000	1913001	555494	5321	13302	104	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.985	4235178	1299287	4968	12420	262		
425.7737	34.009	34.301	-17	0.984	4193300	1262756	5321	13302	237	1.01(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.914	1	1.149	11781090	2826617	1984	4960	1425		
471.7750	36.926	36.914	1	1.149	13227580	3153004	1744	4360	1808	0.89(0.76-1.02)	
OCDF											M
441.7428	37.022	37.010	1	1.003	121325	31089	163	407	191		M
443.7399	37.010	37.010	0	1.002	136901	31706	219	547	145	0.89(0.76-1.02)	M
OCDD											
457.7377	36.926	36.926	0	1.000	35929703	8785538	3439	8597	2555		
459.7348	36.926	36.926	0	1.000	40249489	9931261	4898	12245	2028	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d
Lims ID: 320-76788-A-19-A
Client ID: 11215702-072321-BN-SJSB105 (12-14)
Inject. Date: 14-Aug-2021 19:46:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 25

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	40196270	10235650

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	40196270	10235650

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.950	888284	245334	1114573	307940	4.87	0.80	
16.237	1622514	362276	2168050	472163	9.21	0.75	
16.464	1500250	400041	1970878	521212	8.43	0.76	
16.706	2094025	506099	2742421	698206	11.8	0.76	
16.993	24179992	6149712	31223845	8010772	134.6	0.77	
17.205	814303	201166	1140082	275207	4.75	0.71	
17.795	3351791	782419	4542775	1089496	19.2	0.74	
18.036	624307	133903	860657	184131	3.61	0.73	
19.185	3389047	741012	4420082	984210	19.0	0.77	
Signal Totals:							
	38464513	9521962	50183363	12543337			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	88647876	22065299				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 215.388 = (88647876 * 100.000) / (40196270 * 1.024)

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

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Lims ID: 320-76788-A-19-A
Client ID: 11215702-072321-BN-SJSB105 (12-14)
Inject. Date: 14-Aug-2021 19:46:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 25

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	23769735	5544467

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	23769735	5544467

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.933	122561	27668	140621	34938	0.8829	0.87	
18.430	813881	184478	1172348	254285	6.66	0.69	
Signal Totals:							
	936442	212146	1312969	289223			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2249411	501369				0.71	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.546 = (2249411 * 100.000) / (23769735 * 1.254)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d
Lims ID: 320-76788-A-19-A
Client ID: 11215702-072321-BN-SJSB105 (12-14)
Inject. Date: 14-Aug-2021 19:46:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 25

F1 PeCDFs, RT: 20.093

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	30436898	5281941
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	33579321	5475355

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	32008109	5378648

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.488	13001	2748	7438	2121	0.0614	1.75	
Signal Totals:							
	13001	2748	7438	2121			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	20439	4869				1.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0614 = (20439 * 100.000) / (32008109 * 1.040)

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Lims ID:	320-76788-A-19-A		
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Inject. Date:	14-Aug-2021 19:46:33	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	25

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	30436898	5281941
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	33579321	5475355

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	32008109	5378648

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.058	513352	94890	331989	59586	2.54	1.55	
22.258	114903	23341	70221	15713	0.5562	1.64	Ma
22.913	325634	56035	227891	39602	1.66	1.43	
24.072	203985	31969	144450	22574	1.05	1.41	
Signal Totals:							
	1157874	206235	774551	137475			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1932425	343710				1.49	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 5.806 = (1932425 * 100.000) / (32008109 * 1.040)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Lims ID:	320-76788-A-19-A		
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Inject. Date:	14-Aug-2021 19:46:33	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	25

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	20840639	3142148

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	20840639	3142148

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.235	89491	15349	79046	13425	0.7713	1.13	RQ
21.235	89491	15349	57736	9902	0.6738		Empc Correction
21.999	189300	38059	116685	21247	1.40	1.62	
22.667	22877	4135	16140	3198	0.1786	1.42	
22.994	9539	2155	7806	1521	0.0794	1.22	RQ
22.994	9539	2155	6154	1390	0.0718		Empc Correction
23.281	38821	7702	20841	3445	0.2731	1.86	RQ
23.281	32303	5339	20841	3445	0.2432		Empc Correction
23.485	82212	10702	57545	7383	0.6396	1.43	
Signal Totals:							
	425722	75739	275101	46565			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	730303	128321				1.45	RQ
	700823	122304					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.342 = (730303 * 100.000) / (20840639 * 1.048)

Empc Amount: 3.207 = (700823 * 100.000) / (20840639 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Lims ID:	320-76788-A-19-A		
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Inject. Date:	14-Aug-2021 19:46:33	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	25

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	28671074	5367476
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	26886740	4904512
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	25589819	6066962
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	23319648	6012430

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	26116820	5587845

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.373	94282	12557	72821	10713	0.5631	1.29	
29.731	45259	6226	28620	4644	0.2490	1.58	RQ
29.731	35488	5758	28620	4644	0.2160		Empc Correction
32.420	80924	23599	77755	22525	0.5347	1.04	RQMa
32.420	80924	23599	65261	19031	0.4926		Empc Correction
Signal Totals:							
	210694	41914	166702	34388			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	399661	80264				1.23	RQMa
	377396	76302					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.347 = (399661 * 100.000) / (26116820 * 1.136)

Empc Amount: 1.272 = (377396 * 100.000) / (26116820 * 1.136)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Lims ID:	320-76788-A-19-A		
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Inject. Date:	14-Aug-2021 19:46:33	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	25

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	20860365	5787169
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	24309258	5674297
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	22584811	5730733

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.558	1254561	148721	1017462	126202	9.44	1.23	
30.596	33385	7252	21698	5733	0.2289	1.54	RQ
30.596	26905	7108	21698	5733	0.2020		Empc Correction
30.969	466458	94083	377111	73831	3.51	1.24	
31.169	44547	10350	28400	7055	0.3031	1.57	RQ
31.169	35216	8748	28400	7055	0.2643		Empc Correction
Signal Totals:							
	1783140	258660	1444671	212821			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3243622	473227				1.25	RQ
	3227811	471481					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.479 = (3243622 * 100.000) / (22584811 * 1.066)

Empc Amount: 13.413 = (3227811 * 100.000) / (22584811 * 1.066)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Lims ID:	320-76788-A-19-A		
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Inject. Date:	14-Aug-2021 19:46:33	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	25

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	17953404	5506410
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	19335769	5245499

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	18644586	5375954

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.070	93138	26670	76713	22153	0.6605	1.21	RQ
34.070	79781	23039	76713	22153	0.6085		Empc Correction
Signal Totals:							
	79781	23039	76713	22153			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	169851	48823				1.21	RQ
	156494	45192					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6605 = (169851 * 100.000) / (18644586 * 1.379)
Empc Amount: 0.6085 = (156494 * 100.000) / (18644586 * 1.379)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d
Lims ID: 320-76788-A-19-A
Client ID: 11215702-072321-BN-SJSB105 (12-14)
Inject. Date: 14-Aug-2021 19:46:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 25

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	16770153	4796964

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	16770153	4796964

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	4235178	1299287	4193300	1262756	45.9	1.01	
Signal Totals:							
	4235178	1299287	4193300	1262756			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8428478	2562043				1.01	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 45.928 = (8428478 * 100.000) / (16770153 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d				
Injection Date:	14-Aug-2021 19:46:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-19-A	Lab Sample ID:	320-76788-19		
Client ID:	11215702-072321-BN-SJSB105 (12-14)				
Operator ID:	DB	ALS Bottle#:	36	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.41
Area: 1276199
Amount: 6.364556
Amount Units: pg/ul

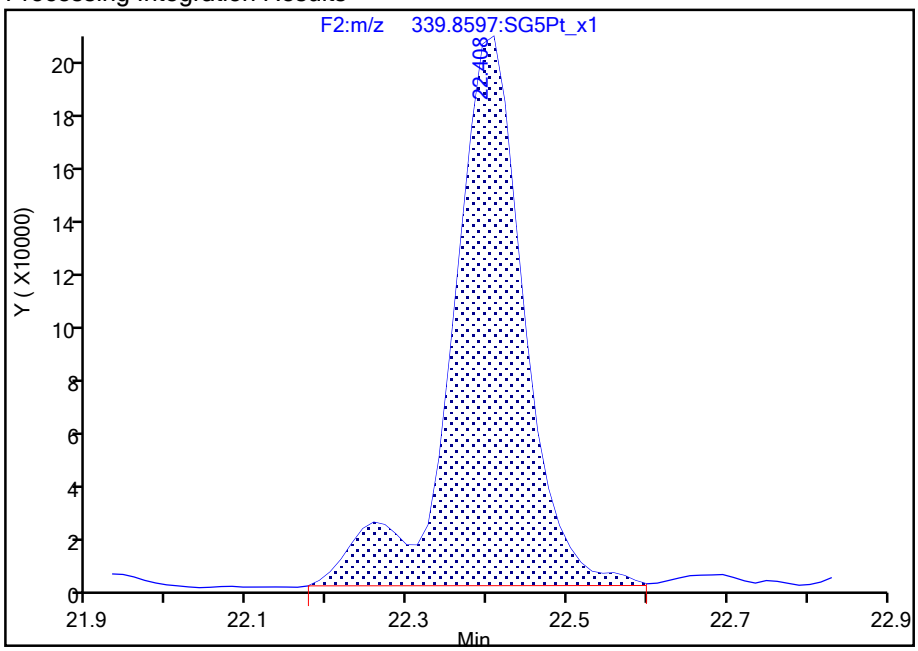

Manual Integration Results

RT: 22.41
Area: 1161324
Amount: 5.963601
Amount Units: pg/ul

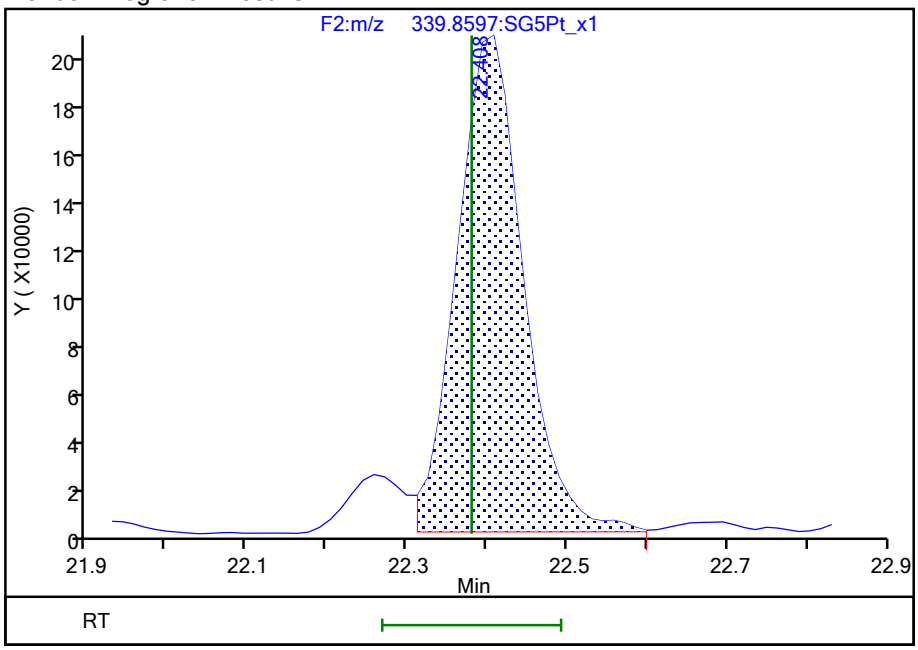

Reviewer: dadunj, 18-Aug-2021 09:59:25

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d				
Injection Date:	14-Aug-2021 19:46:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-19-A	Lab Sample ID:	320-76788-19		
Client ID:	11215702-072321-BN-SJSB105 (12-14)				
Operator ID:	DB	ALS Bottle#:	36	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.39
Area: 779403
Amount: 6.364556
Amount Units: pg/ul

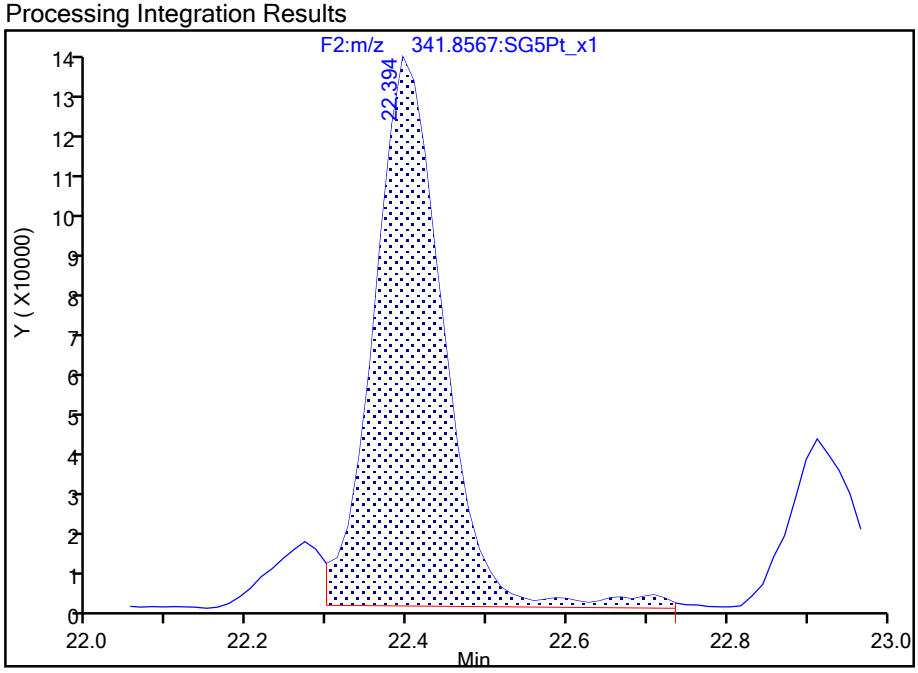

Manual Integration Results

RT: 22.39
Area: 764779
Amount: 5.963601
Amount Units: pg/ul

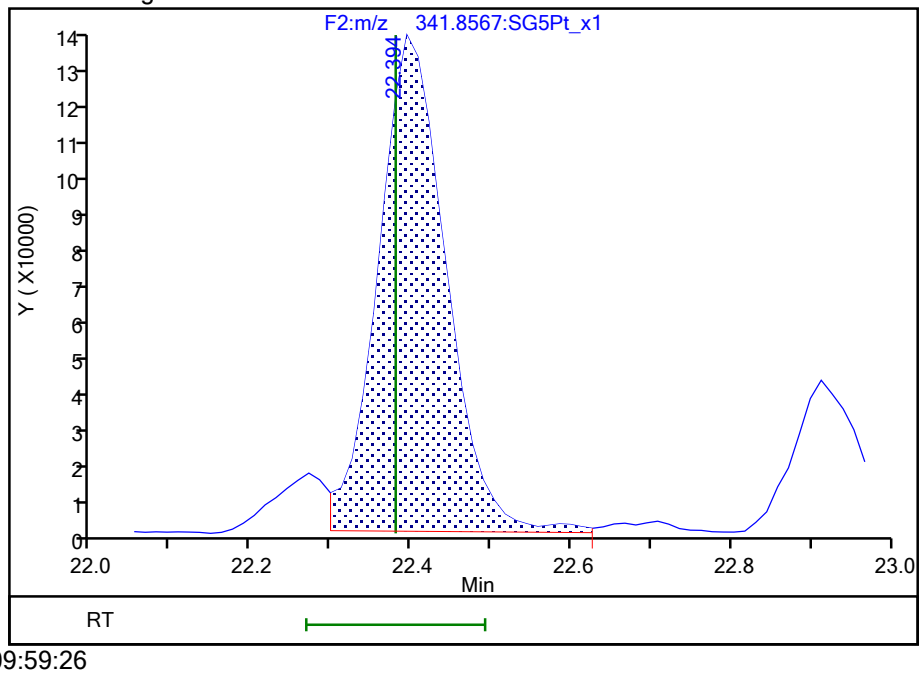

Reviewer: dadunj, 18-Aug-2021 09:59:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d				
Injection Date:	14-Aug-2021 19:46:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-19-A	Lab Sample ID:	320-76788-19		
Client ID:	11215702-072321-BN-SJSB105 (12-14)				
Operator ID:	DB	ALS Bottle#:	36	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 25.71)

Signal: 1

Processing Integration Results

Not Detected

RT: 20.77- 25.71

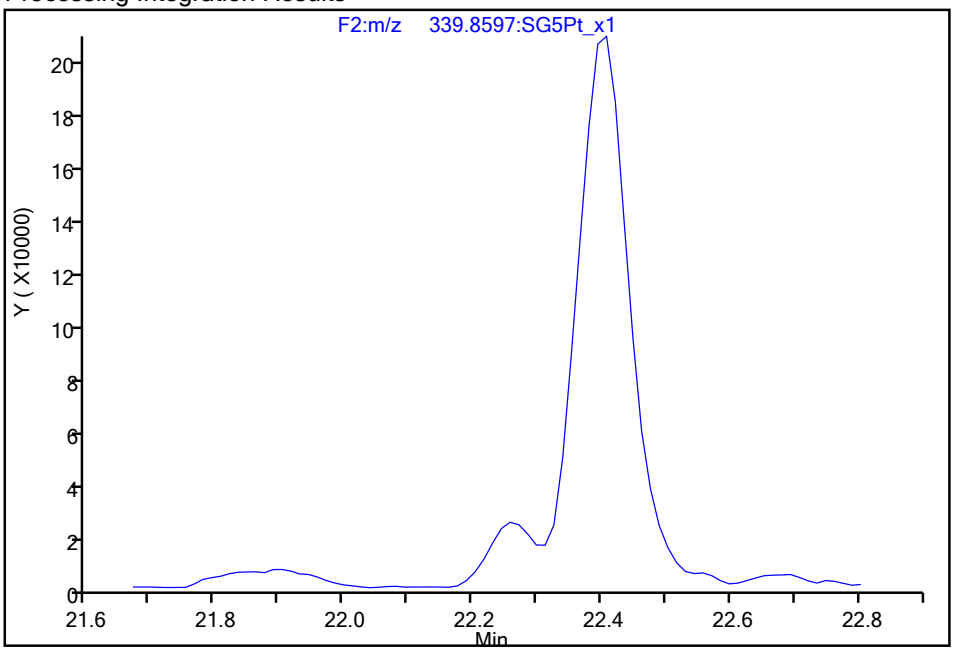

Manual Integration Results

RT = 22.258 Area = 114903 M

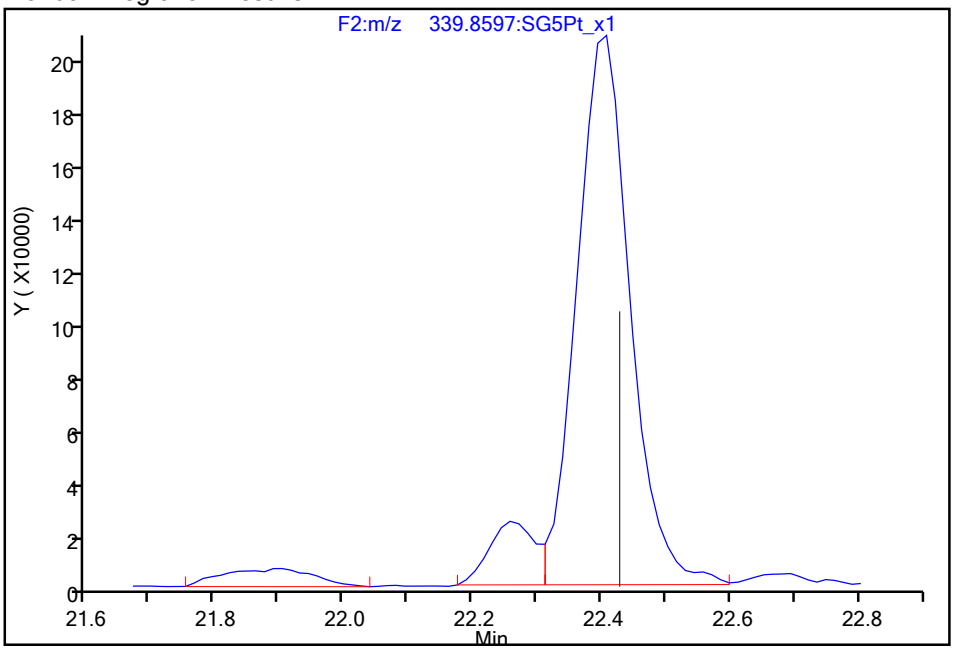

Reviewer: dadunj, 18-Aug-2021 09:59:32

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d				
Injection Date:	14-Aug-2021 19:46:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-19-A	Lab Sample ID:	320-76788-19		
Client ID:	11215702-072321-BN-SJSB105 (12-14)				
Operator ID:	DB	ALS Bottle#:	36	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.54
Area: 65272
Amount: 0.341536
Amount Units: pg/ul

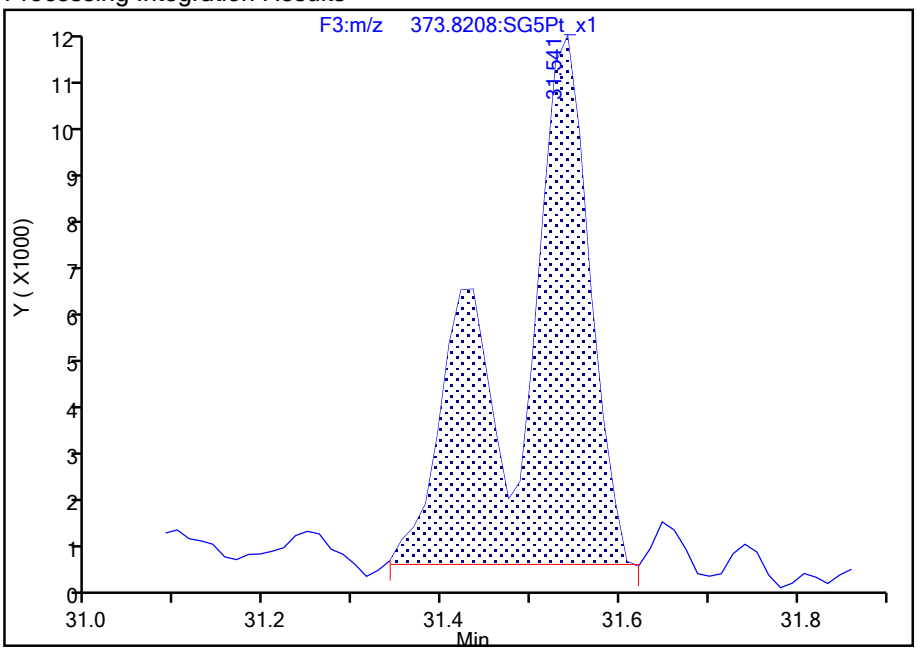

Manual Integration Results

RT: 31.54
Area: 42661
Amount: 0.265856
Amount Units: pg/ul

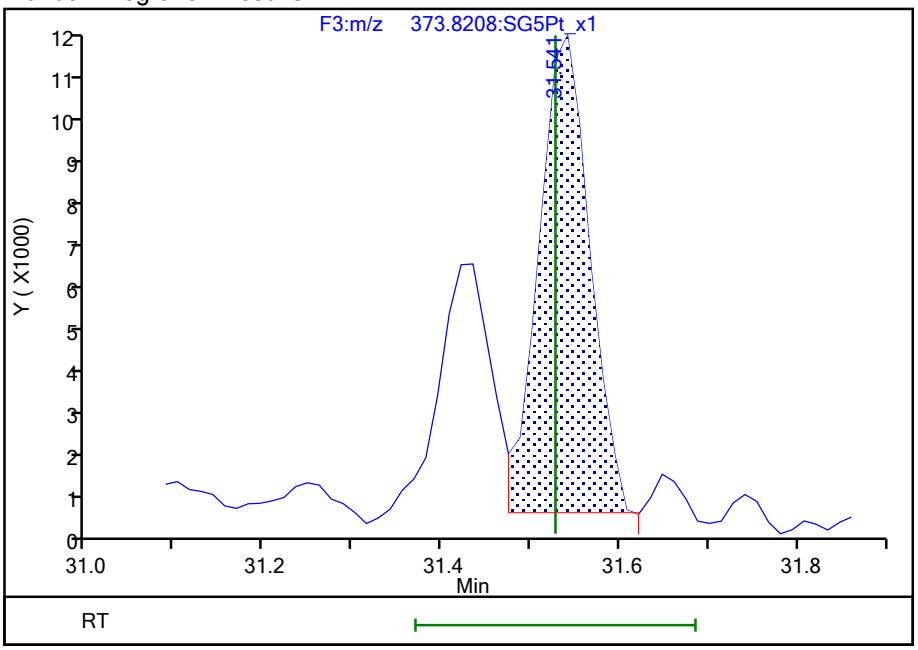

Reviewer: dadunj, 18-Aug-2021 09:59:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d				
Injection Date:	14-Aug-2021 19:46:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-19-A	Lab Sample ID:	320-76788-19		
Client ID:	11215702-072321-BN-SJSB105 (12-14)				
Operator ID:	DB	ALS Bottle#:	36	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.42
Area: 106302
Amount: 0.738030
Amount Units: pg/ul

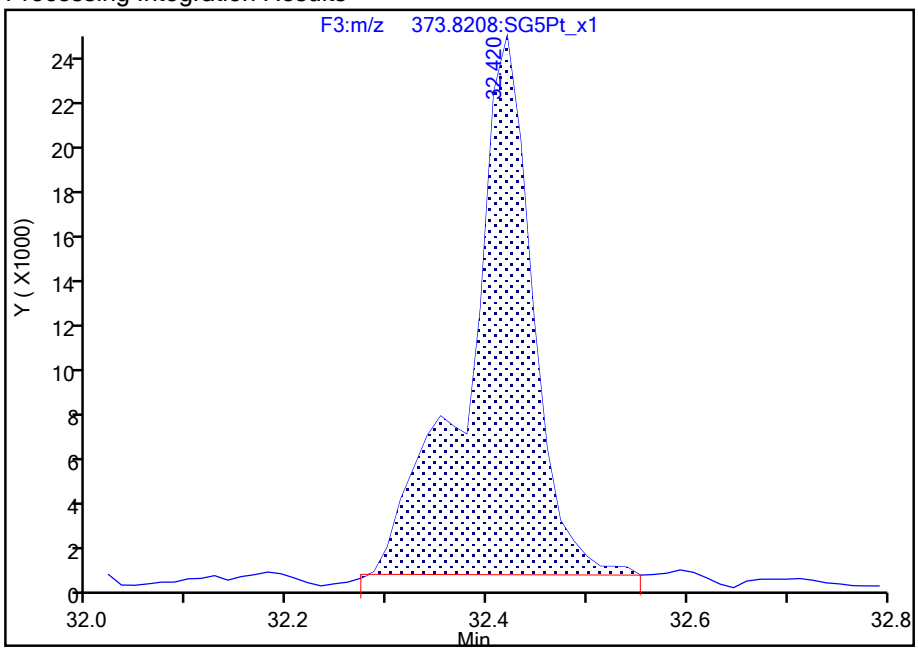

Manual Integration Results

RT: 32.35
Area: 25371
Amount: 0.154716
Amount Units: pg/ul

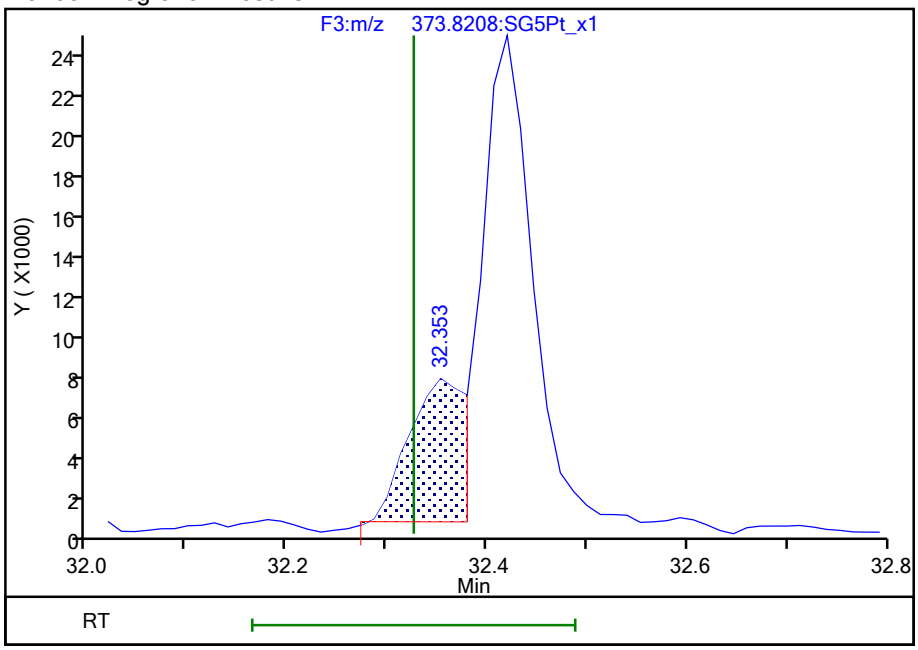

Reviewer: dadunj, 18-Aug-2021 10:00:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d				
Injection Date:	14-Aug-2021 19:46:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-19-A	Lab Sample ID:	320-76788-19		
Client ID:	11215702-072321-BN-SJSB105 (12-14)				
Operator ID:	DB	ALS Bottle#:	36	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.42
Area: 94434
Amount: 0.738030
Amount Units: pg/ul

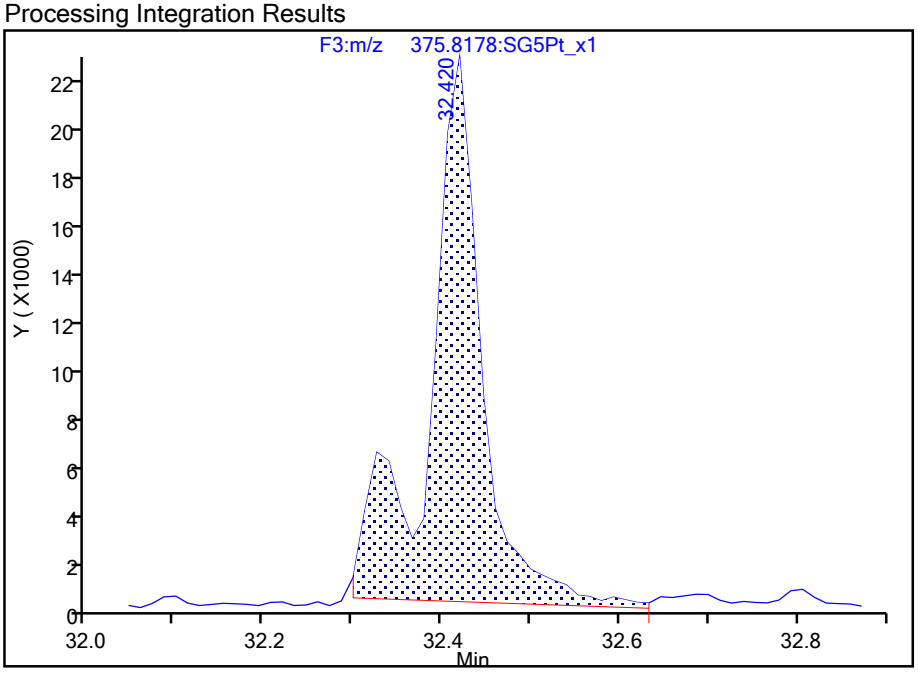

Manual Integration Results

RT: 32.33
Area: 16710
Amount: 0.154716
Amount Units: pg/ul

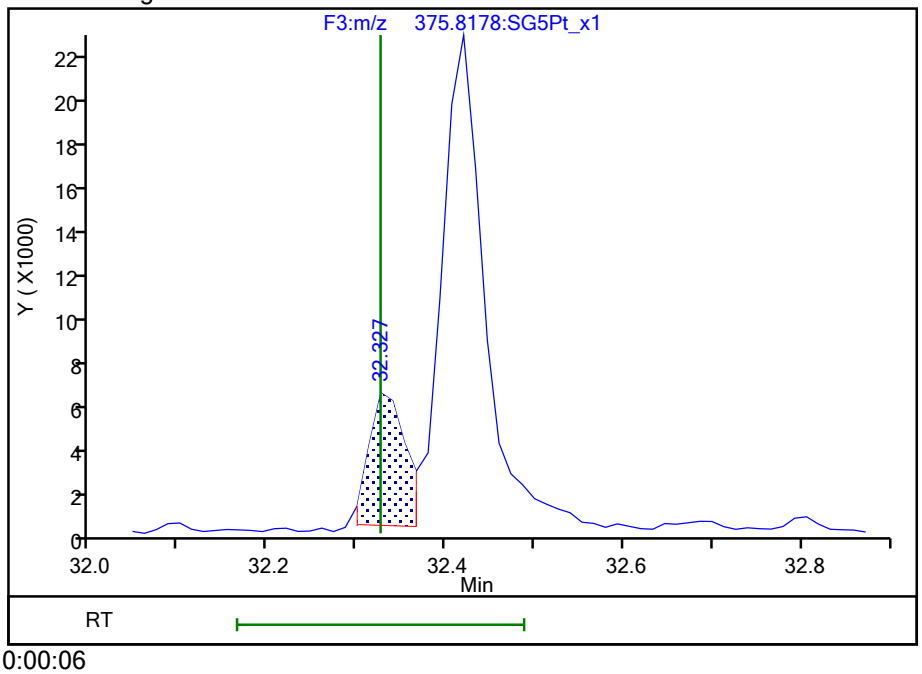

Reviewer: dadunj, 18-Aug-2021 10:00:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d				
Injection Date:	14-Aug-2021 19:46:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-19-A	Lab Sample ID:	320-76788-19		
Client ID:	11215702-072321-BN-SJSB105 (12-14)				
Operator ID:	DB	ALS Bottle#:	36	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.420 Area = 106302

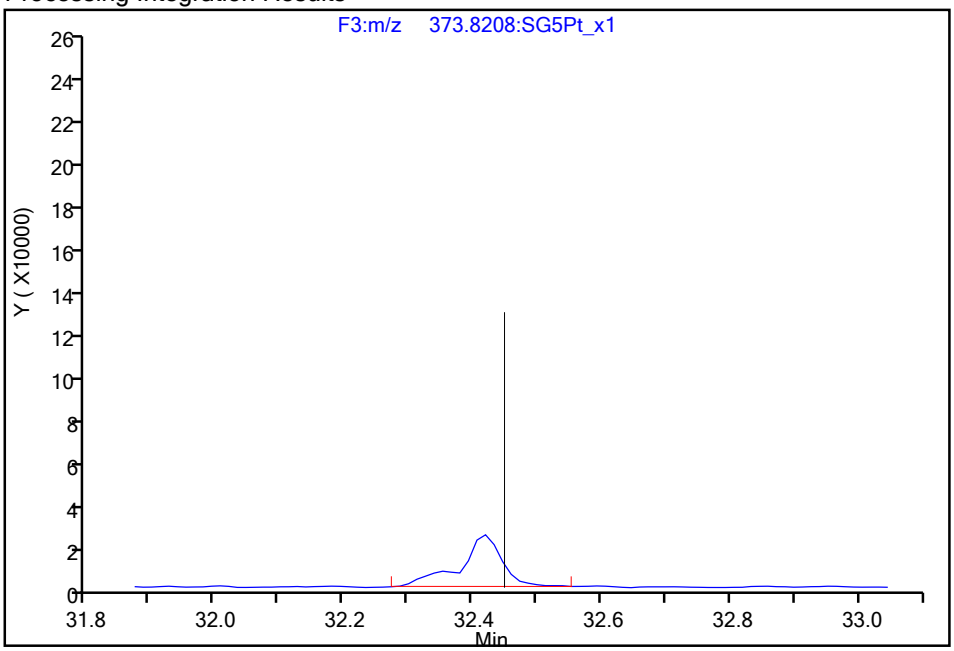

Manual Integration Results

RT = 32.420 Area = 80924 M

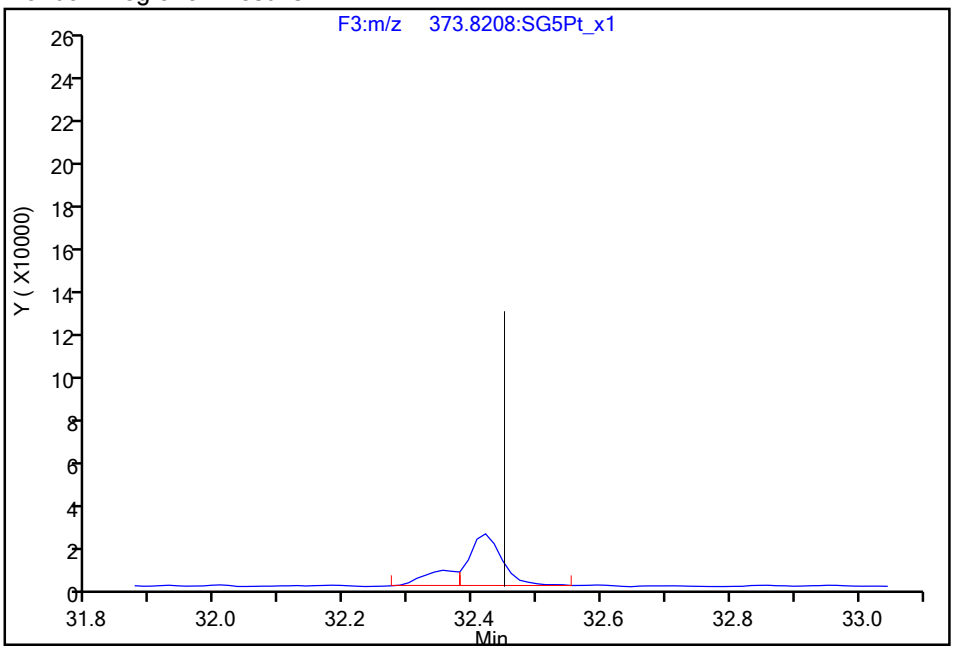

Reviewer: dadunj, 18-Aug-2021 10:00:14

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d				
Injection Date:	14-Aug-2021 19:46:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-19-A	Lab Sample ID:	320-76788-19		
Client ID:	11215702-072321-BN-SJSB105 (12-14)				
Operator ID:	DB	ALS Bottle#:	36	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.77
Area: 327716
Amount: 2.523798
Amount Units: pg/ul

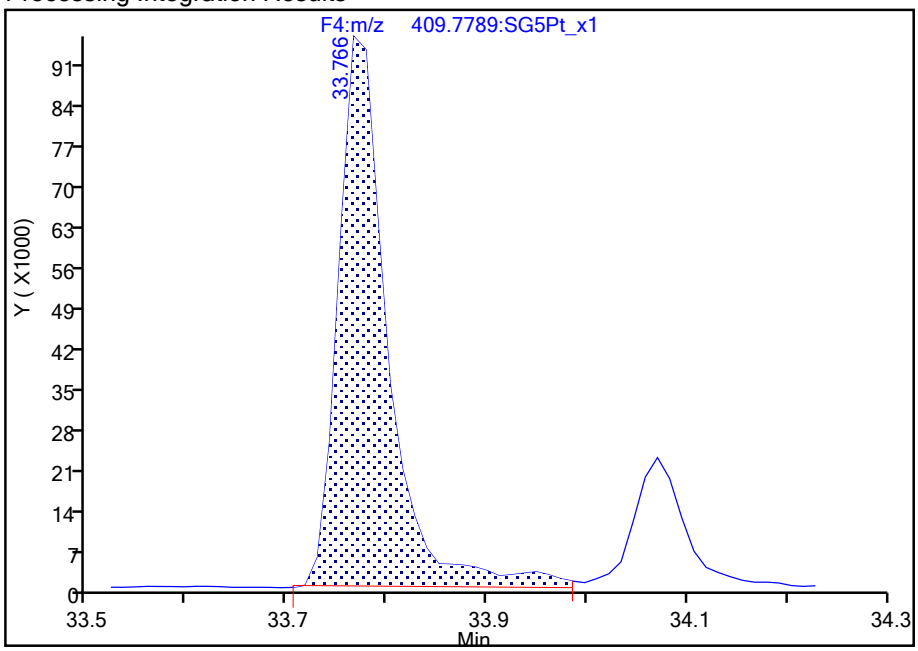

Manual Integration Results

RT: 33.77
Area: 302492
Amount: 2.341077
Amount Units: pg/ul

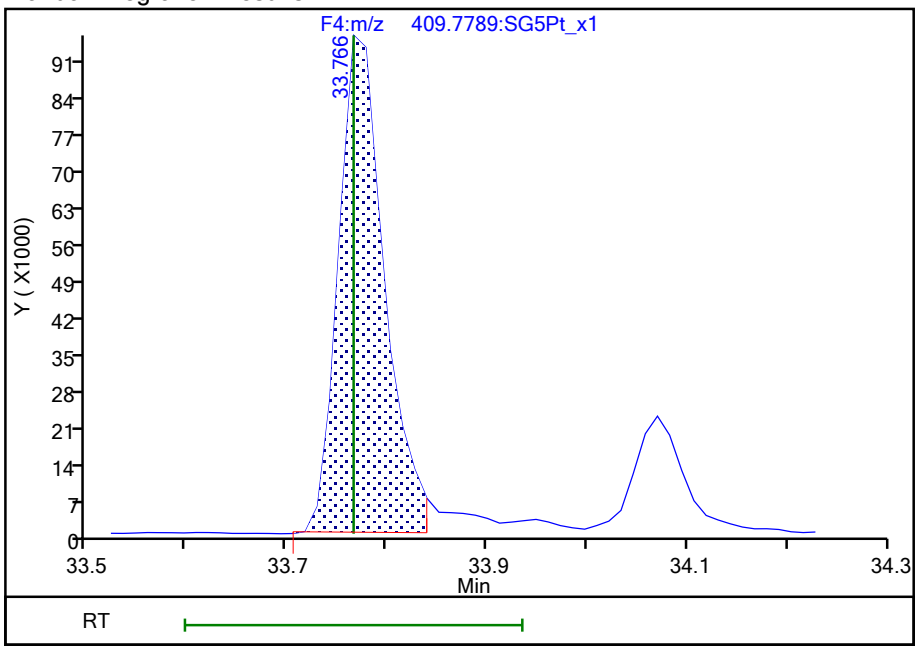

Reviewer: dadunj, 18-Aug-2021 10:00:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d				
Injection Date:	14-Aug-2021 19:46:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-19-A	Lab Sample ID:	320-76788-19		
Client ID:	11215702-072321-BN-SJSB105 (12-14)				
Operator ID:	DB	ALS Bottle#:	36	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.78
Area: 325344
Amount: 2.523798
Amount Units: pg/ul

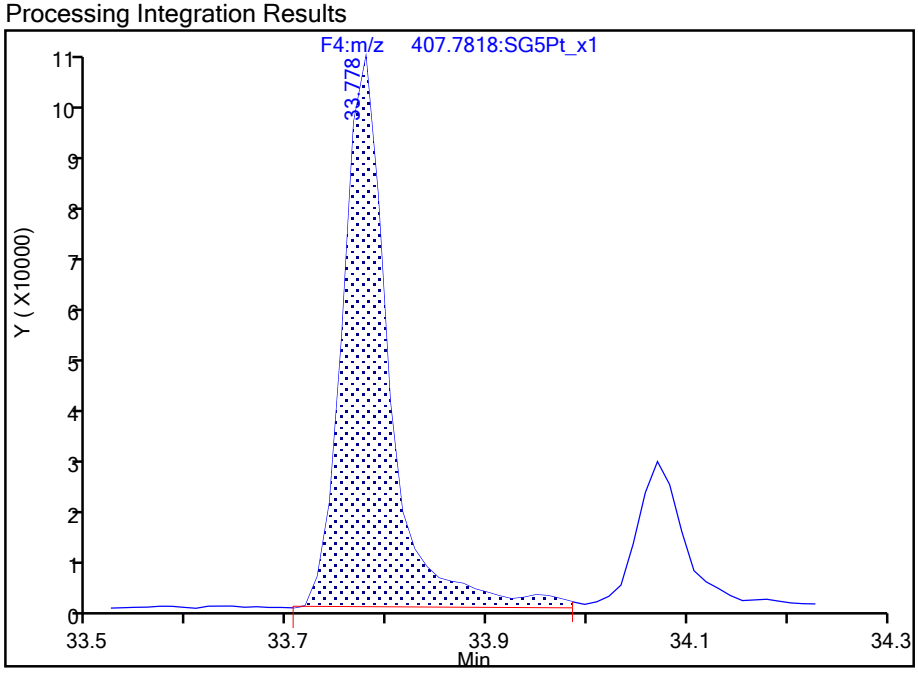

Manual Integration Results

RT: 33.78
Area: 303287
Amount: 2.341077
Amount Units: pg/ul

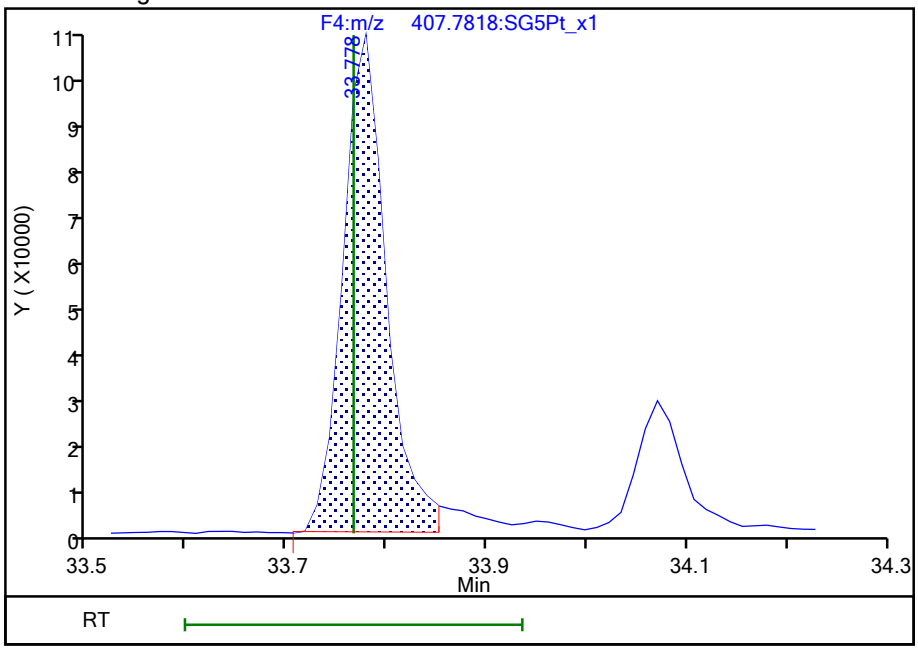

Reviewer: dadunj, 18-Aug-2021 10:00:30

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d				
Injection Date:	14-Aug-2021 19:46:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-19-A	Lab Sample ID:	320-76788-19		
Client ID:	11215702-072321-BN-SJSB105 (12-14)				
Operator ID:	DB	ALS Bottle#:	36	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.01
Area: 153651
Amount: 1.582717
Amount Units: pg/ul

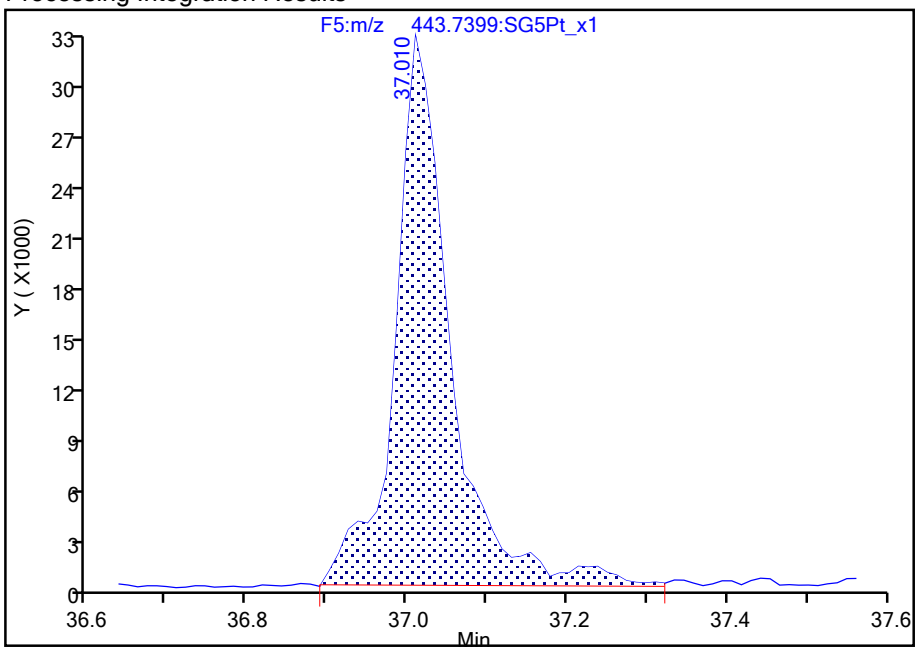

Manual Integration Results

RT: 37.01
Area: 136901
Amount: 1.435925
Amount Units: pg/ul

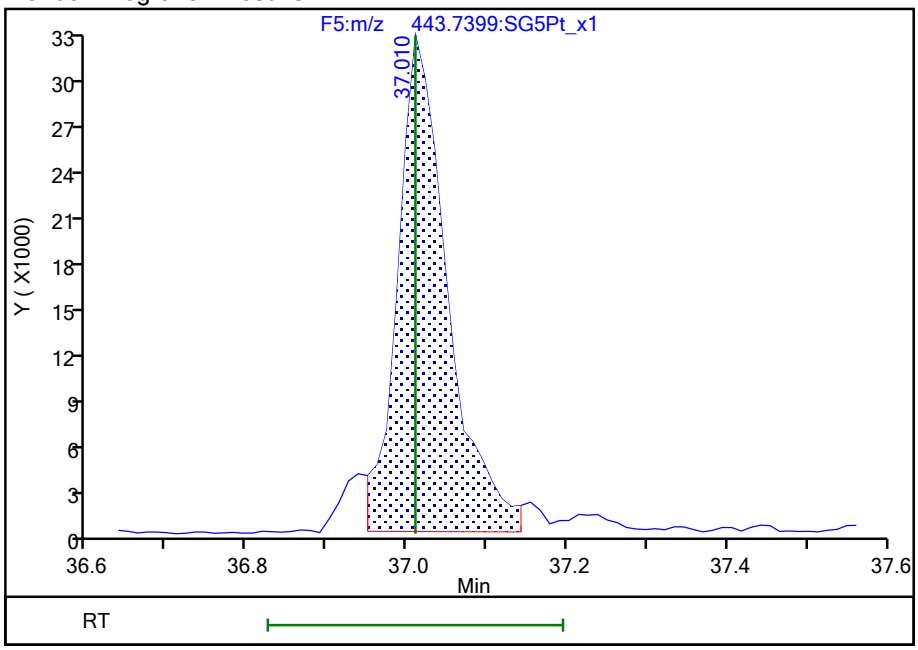

Reviewer: dadunj, 18-Aug-2021 10:00:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d				
Injection Date:	14-Aug-2021 19:46:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-19-A	Lab Sample ID:	320-76788-19		
Client ID:	11215702-072321-BN-SJSB105 (12-14)				
Operator ID:	DB	ALS Bottle#:	36	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 130973
Amount: 1.582717
Amount Units: pg/ul

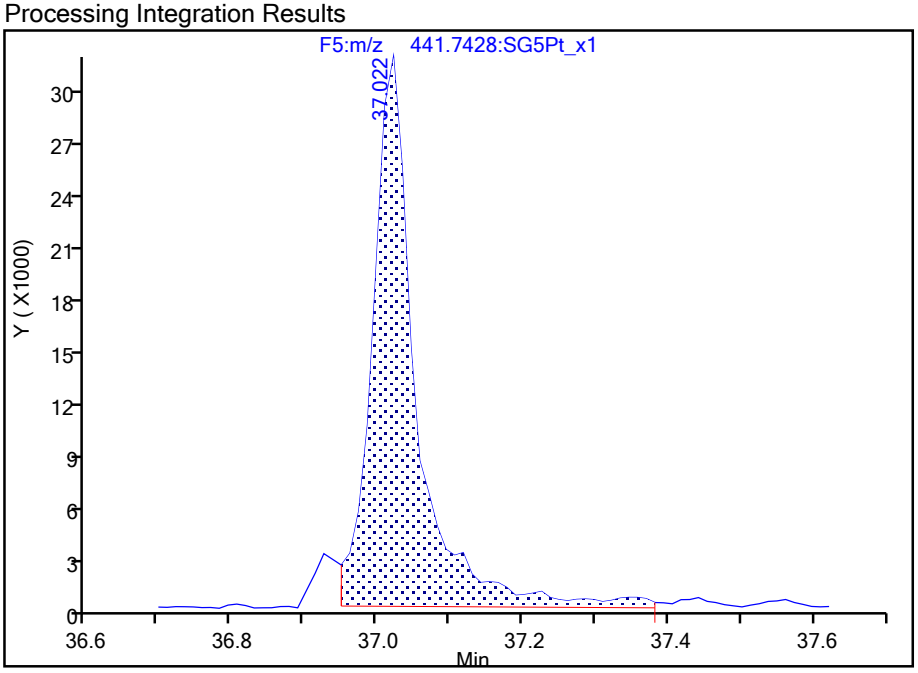

Manual Integration Results

RT: 37.02
Area: 121325
Amount: 1.435925
Amount Units: pg/ul

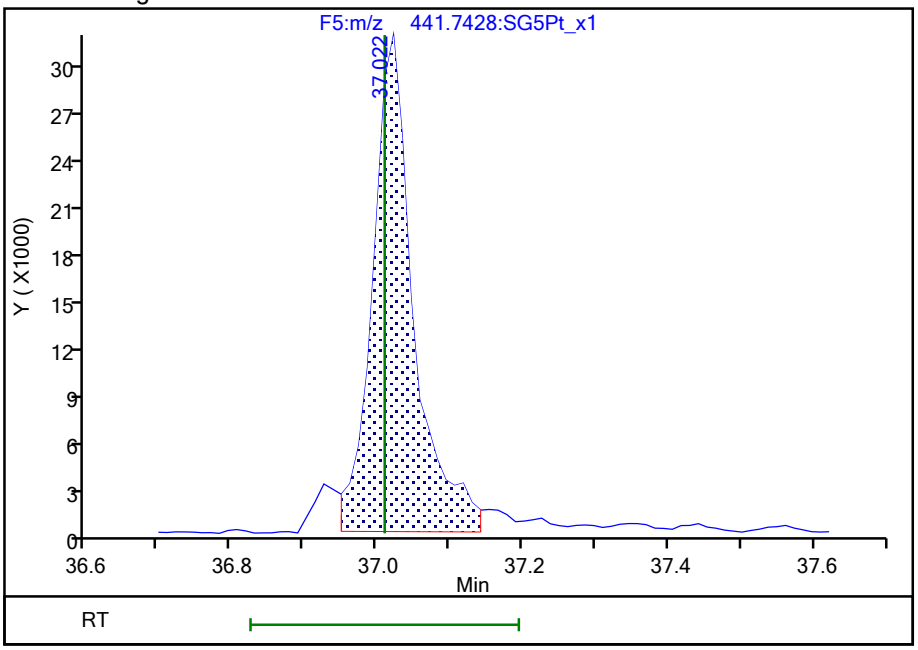

Reviewer: dadunj, 18-Aug-2021 10:00:43
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

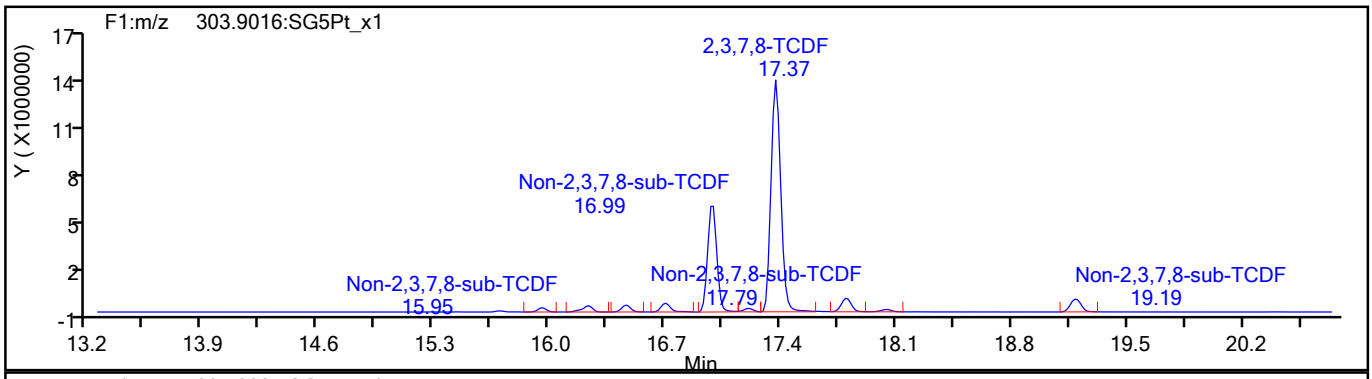

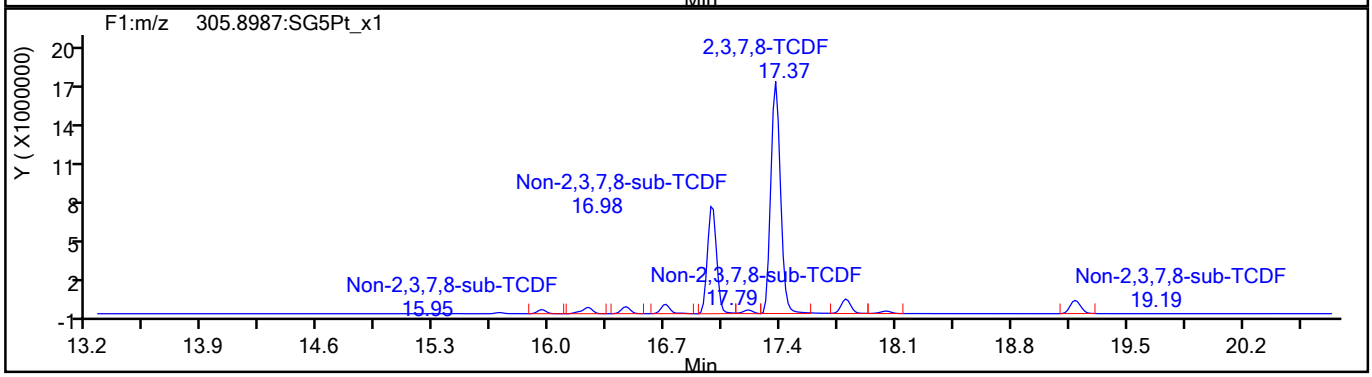

TCDF Standards

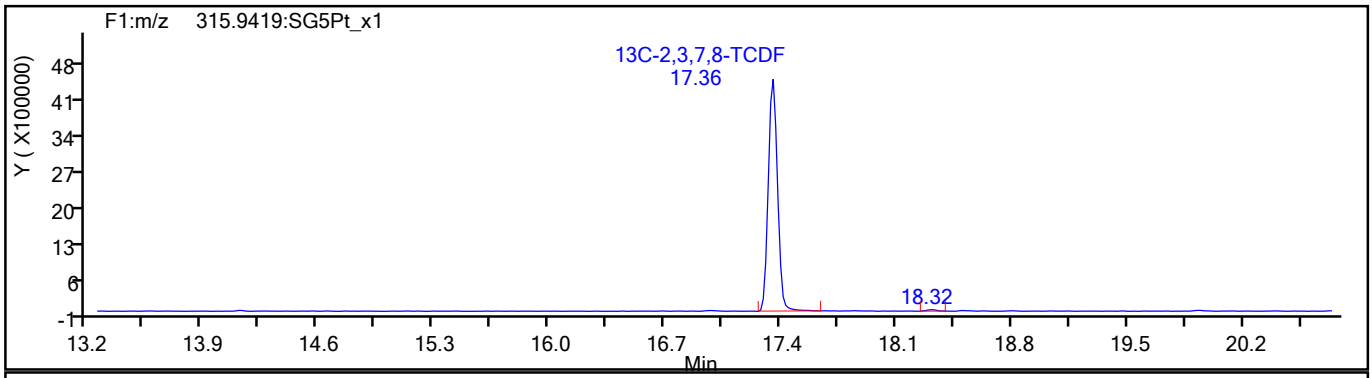

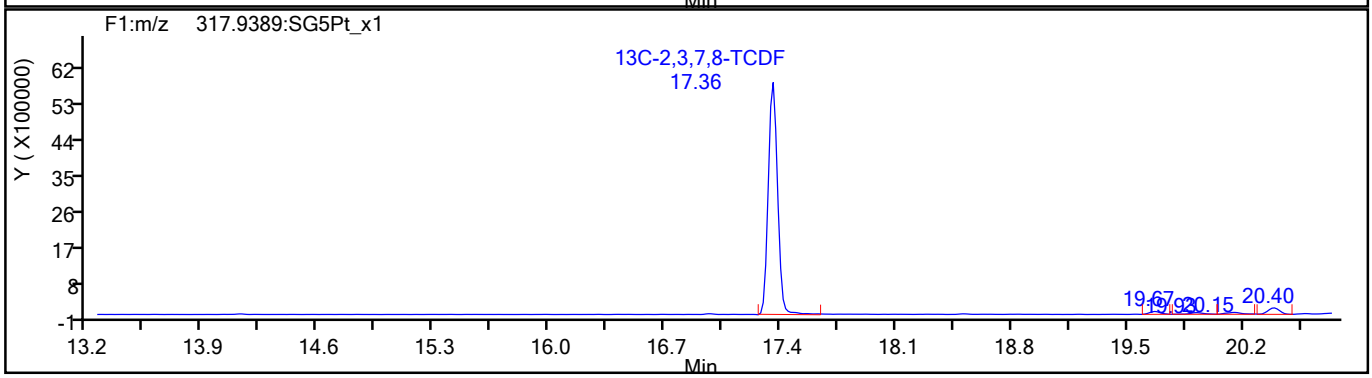

780085

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

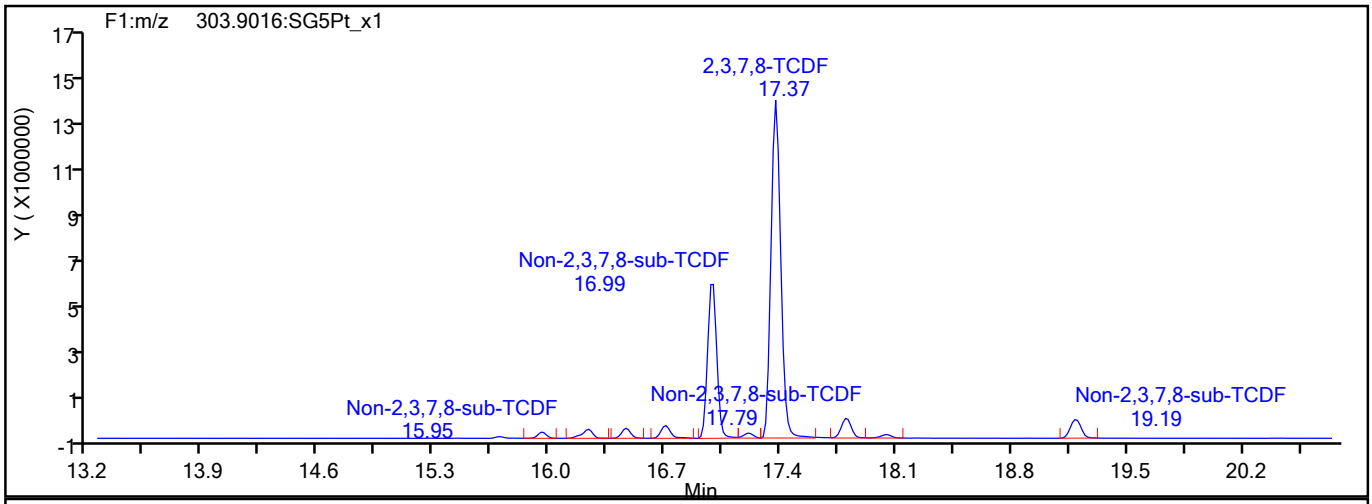

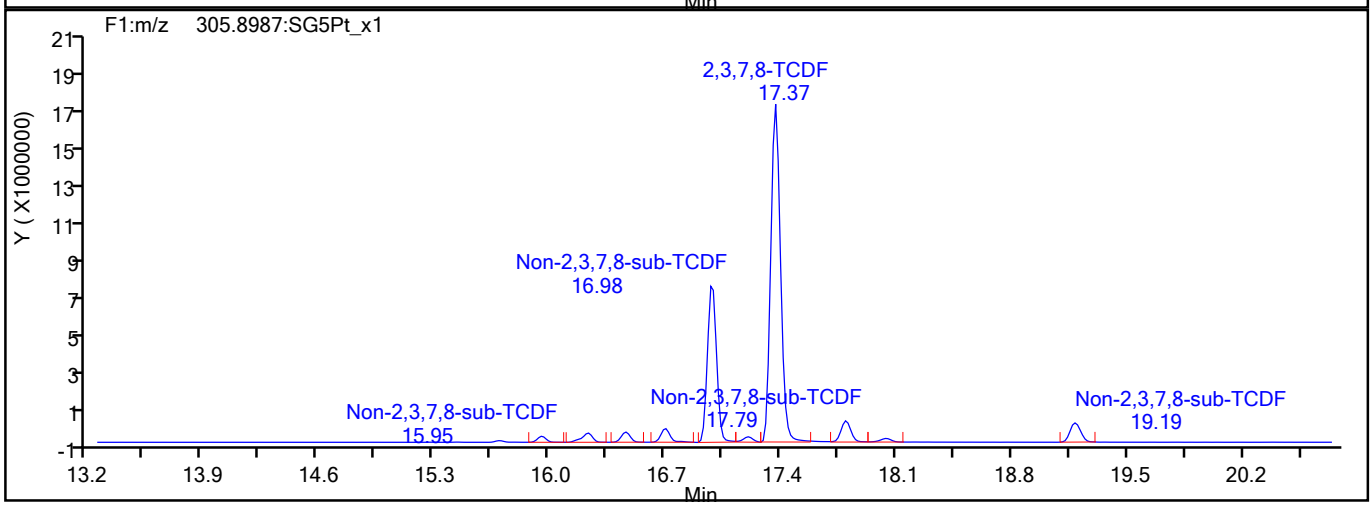

TCDF Interference Mass

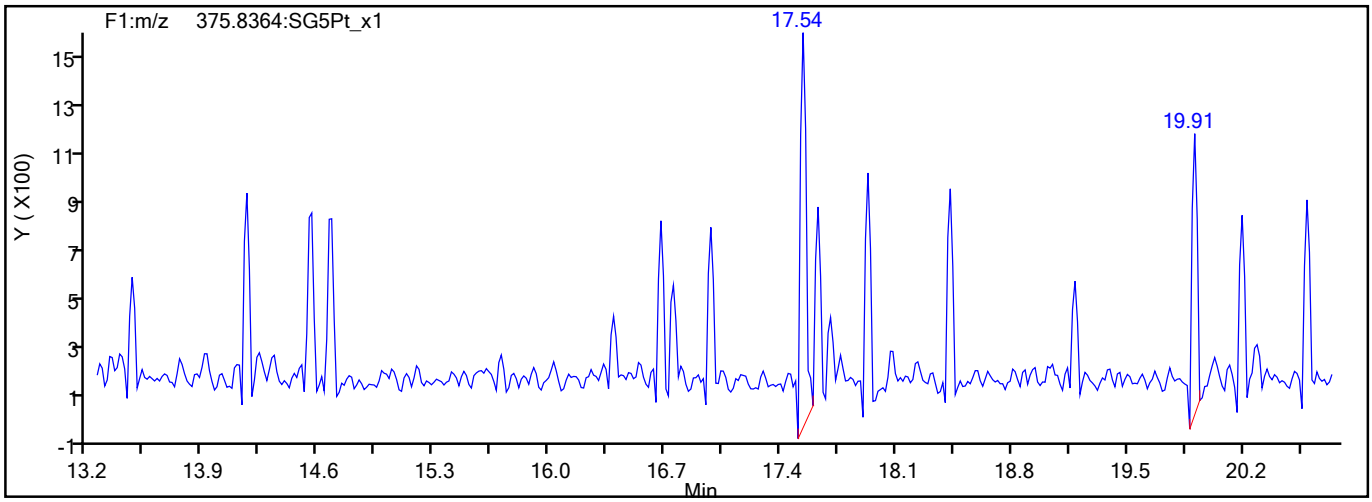

780086

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

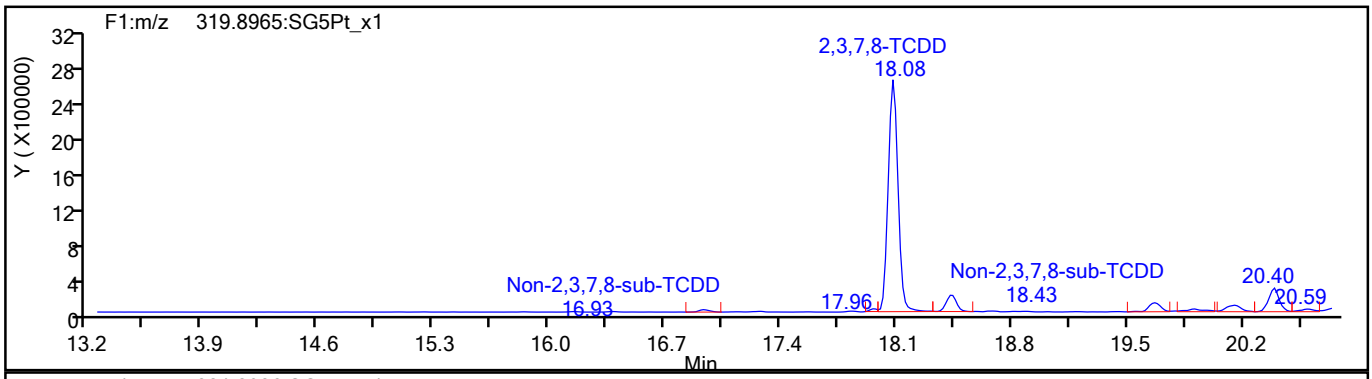

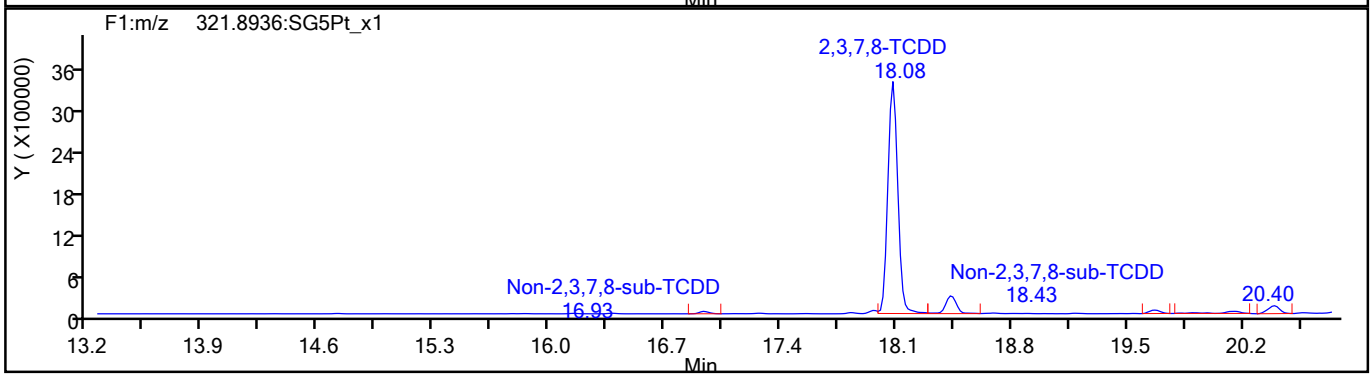

TCDD Standards

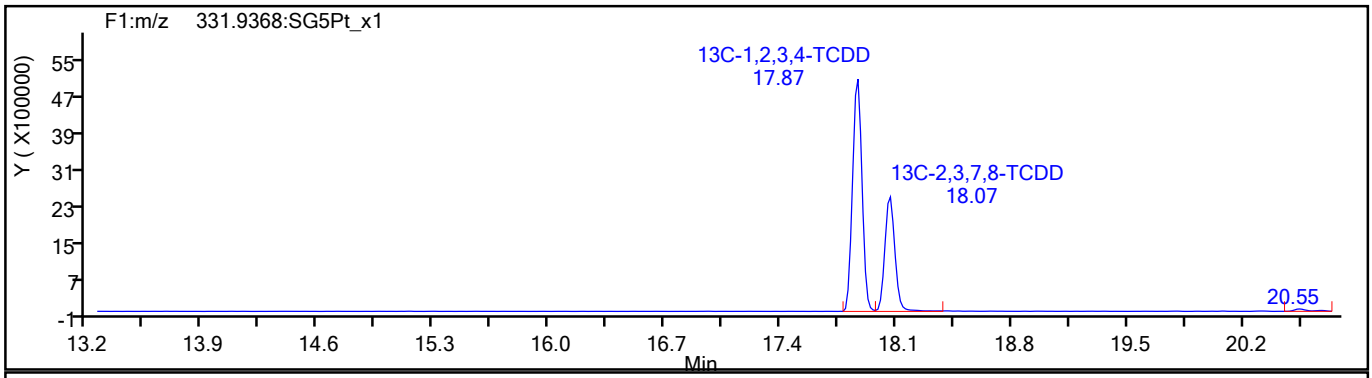

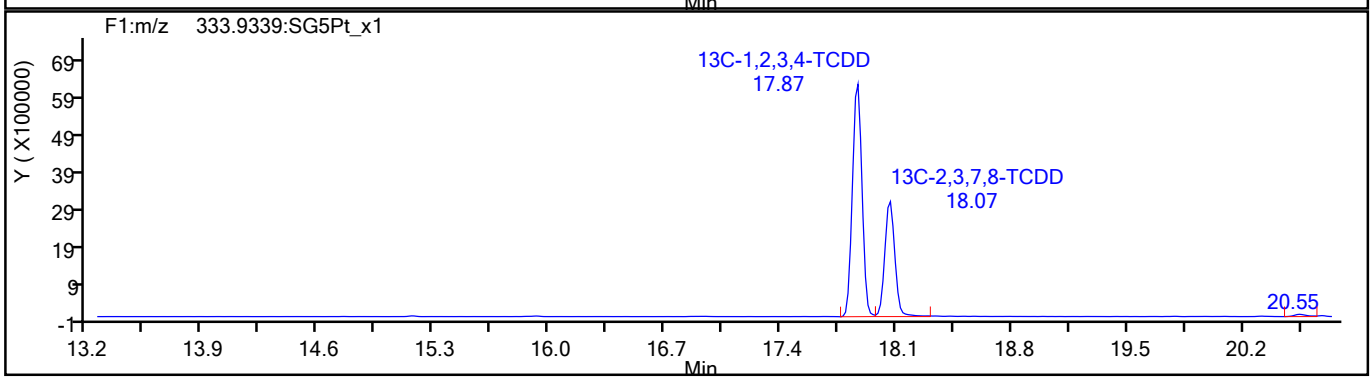

780087

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

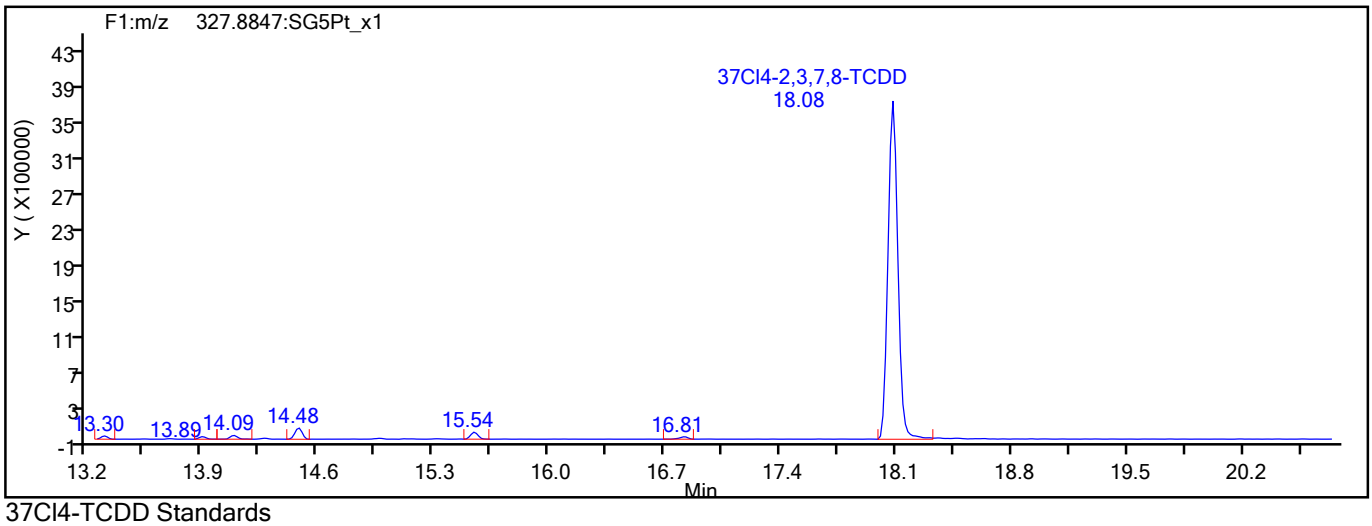

37Cl4-TCDD Standards

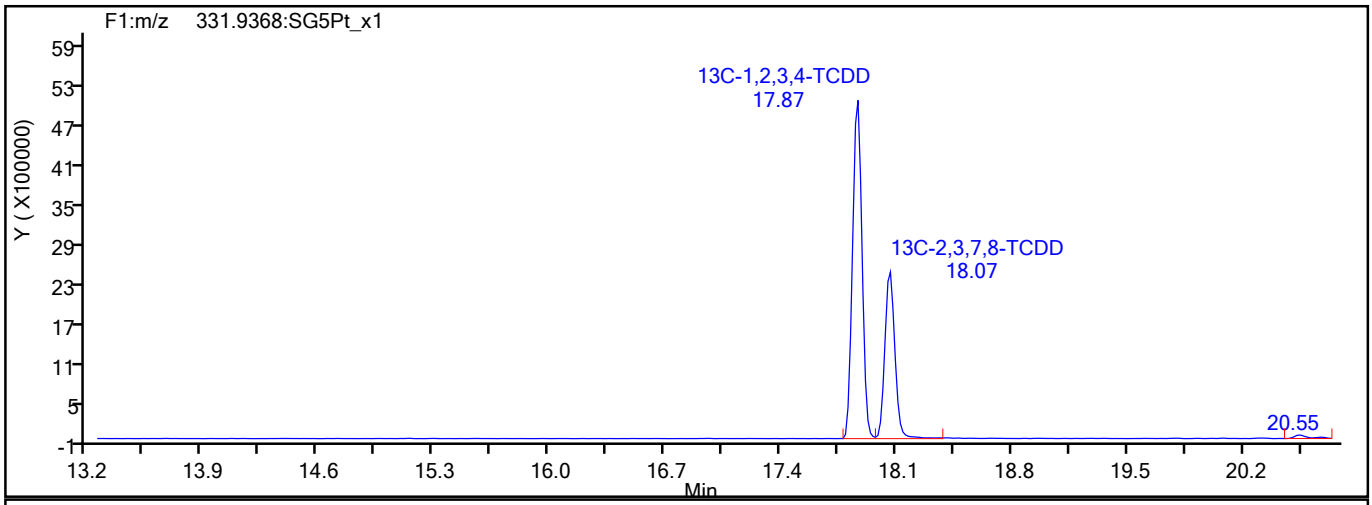

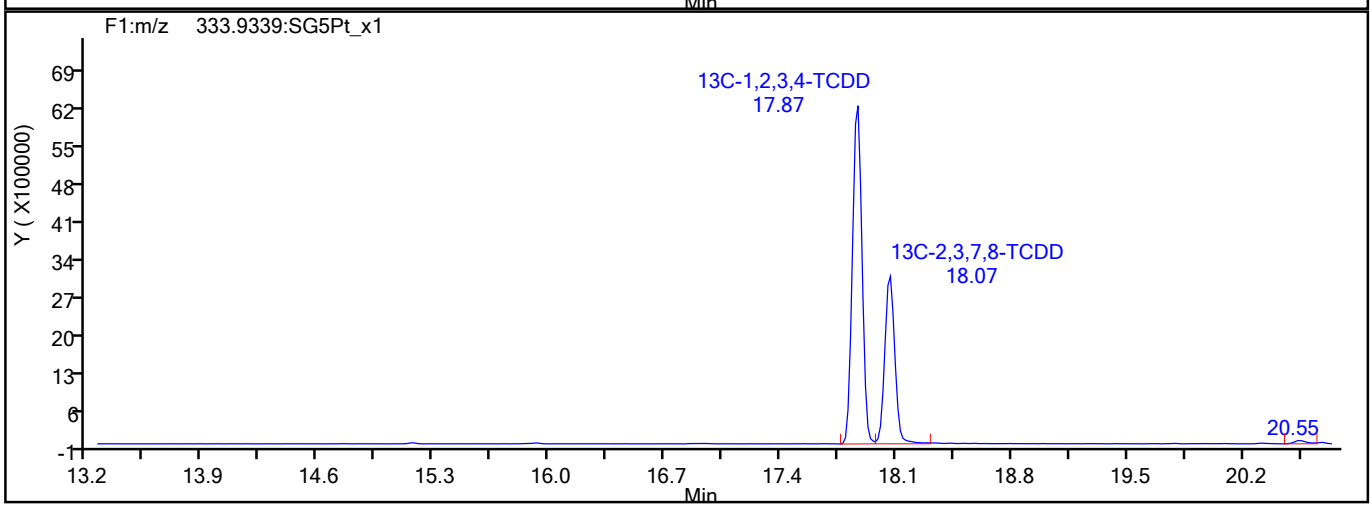

780088

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

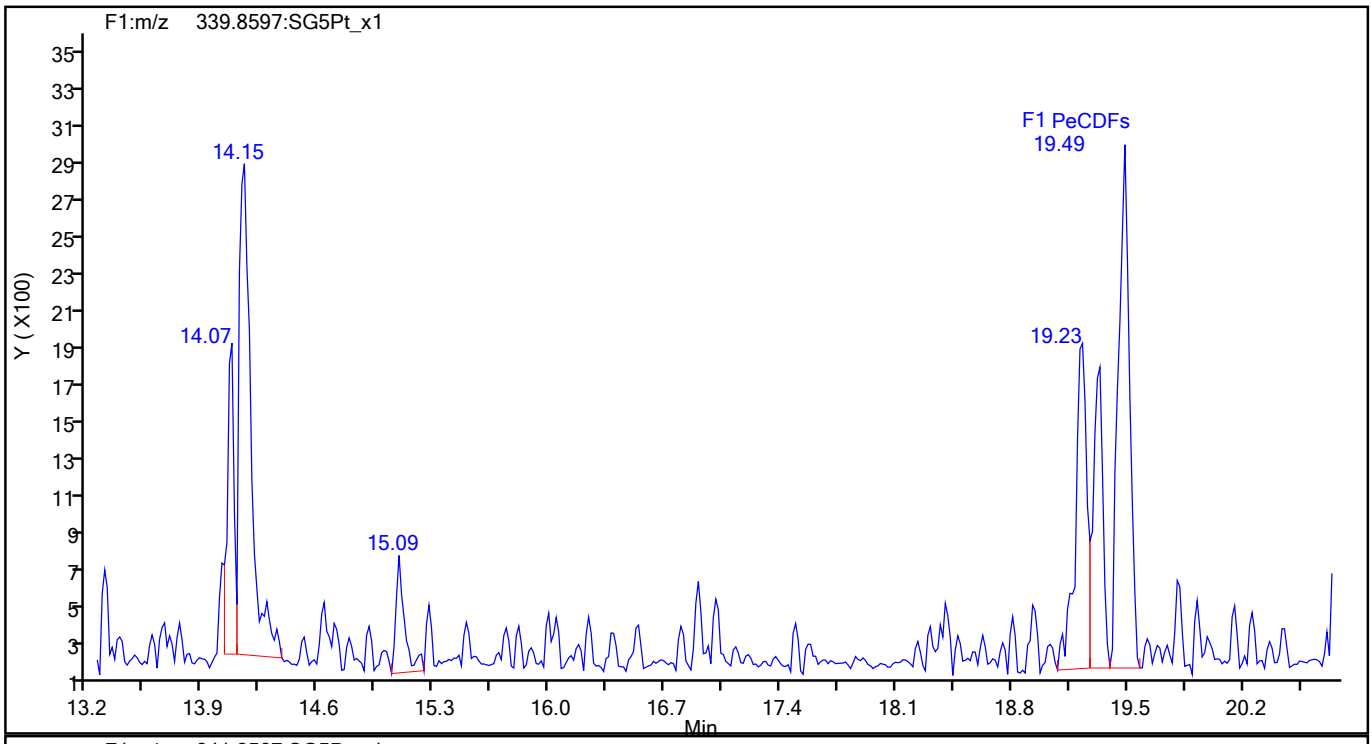

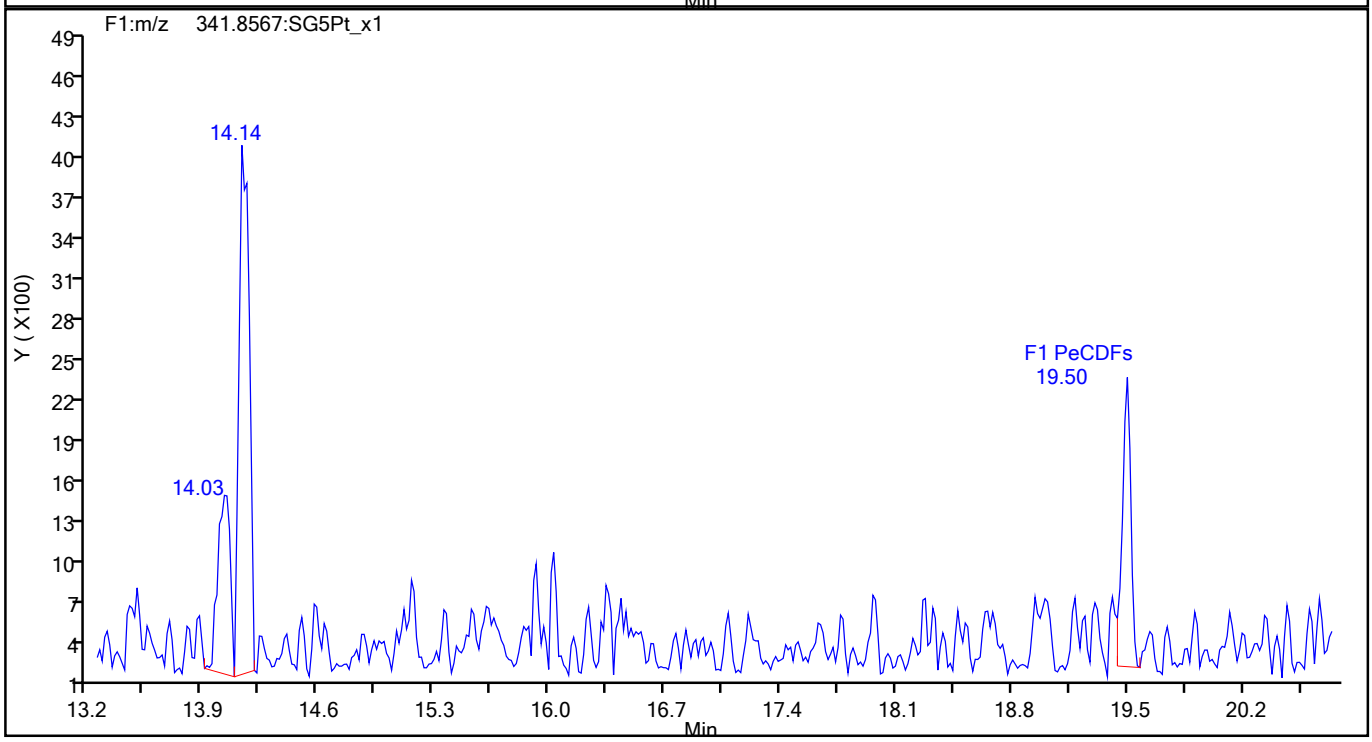

780089

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
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F1 PeCDFs

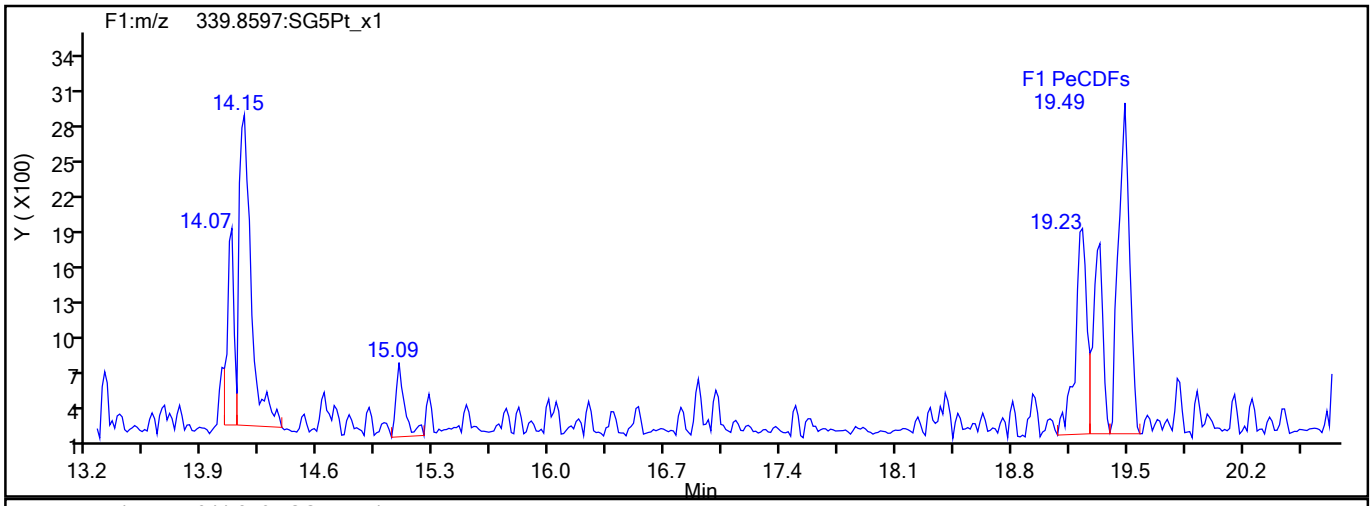

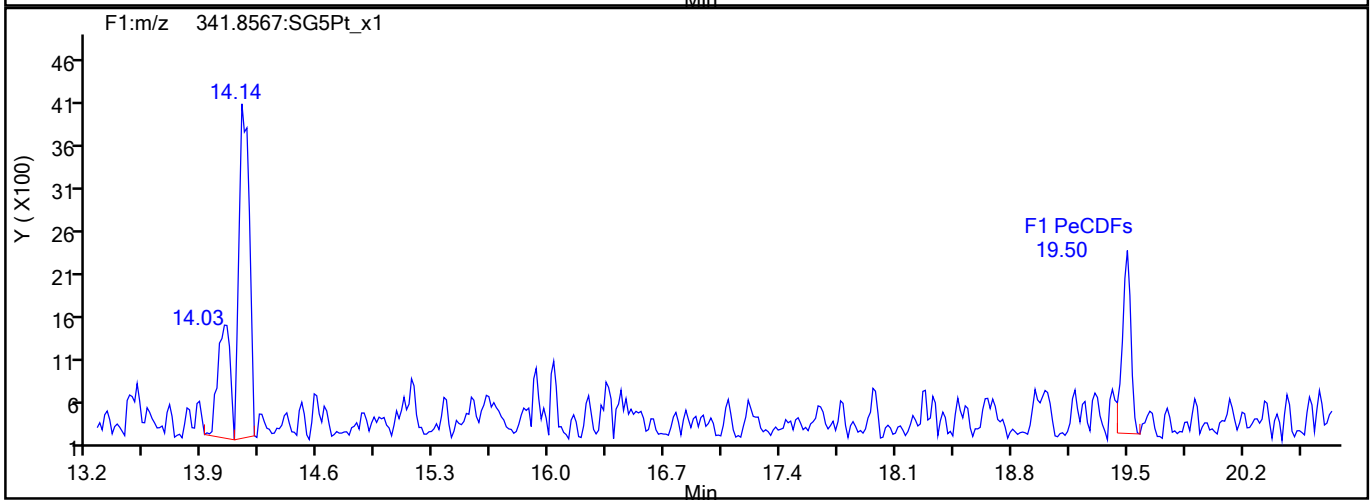

F1 PeCDFs Interference Mass

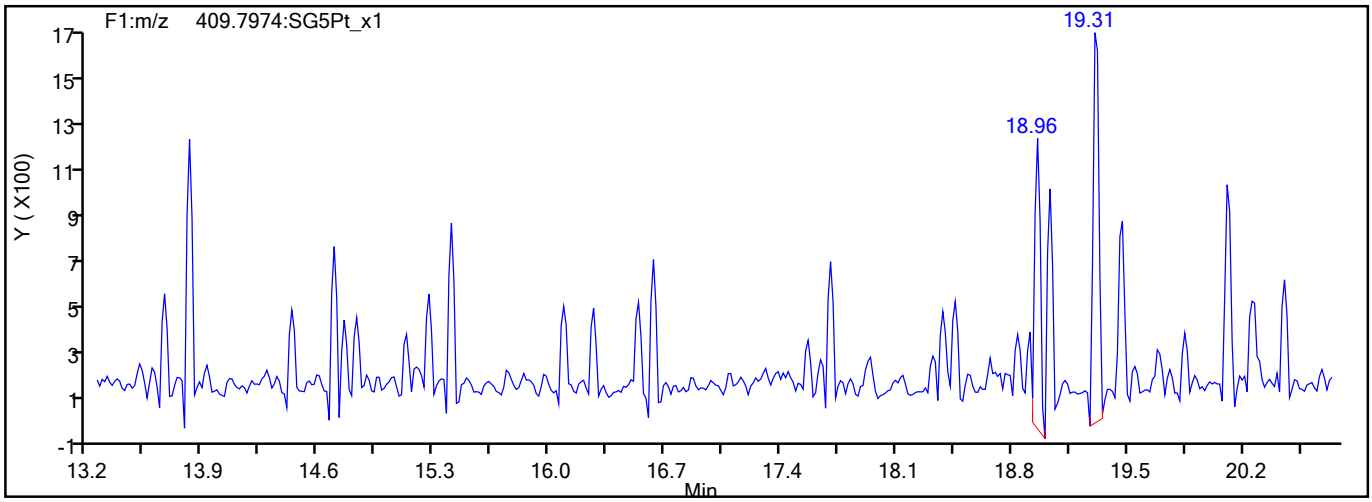

780090

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

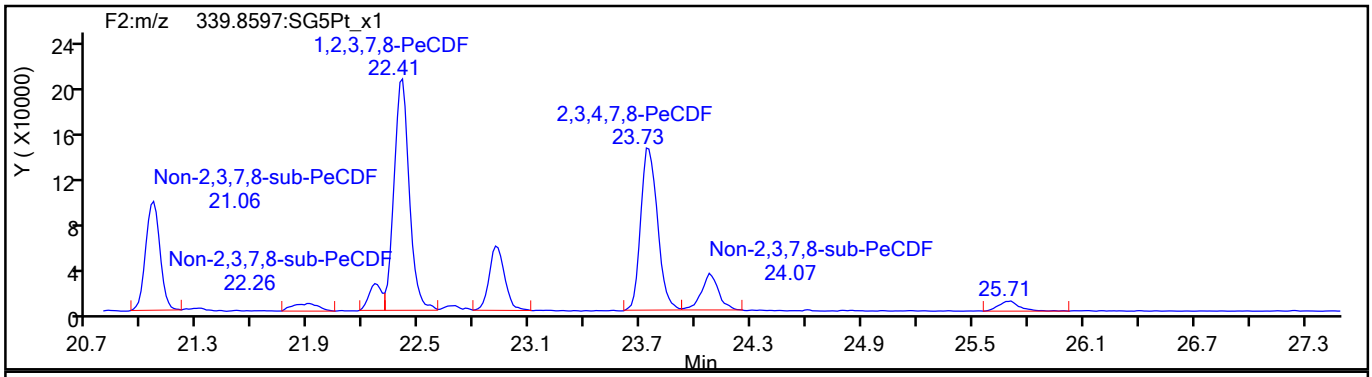

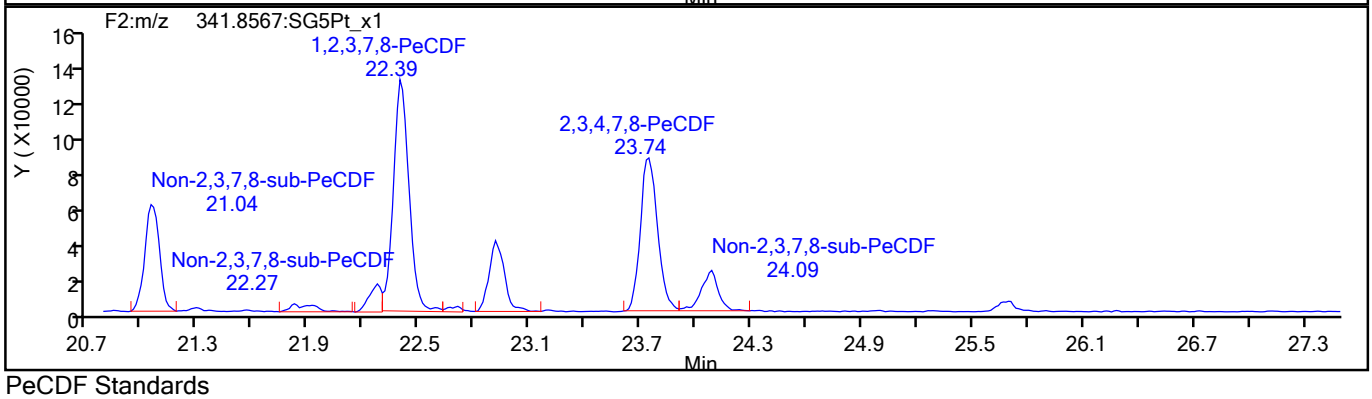

PeCDF Standards

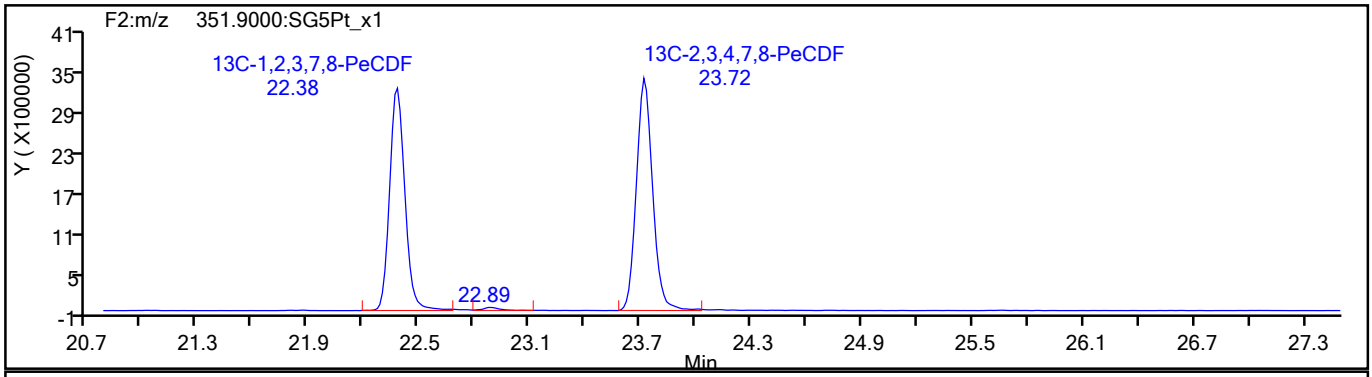

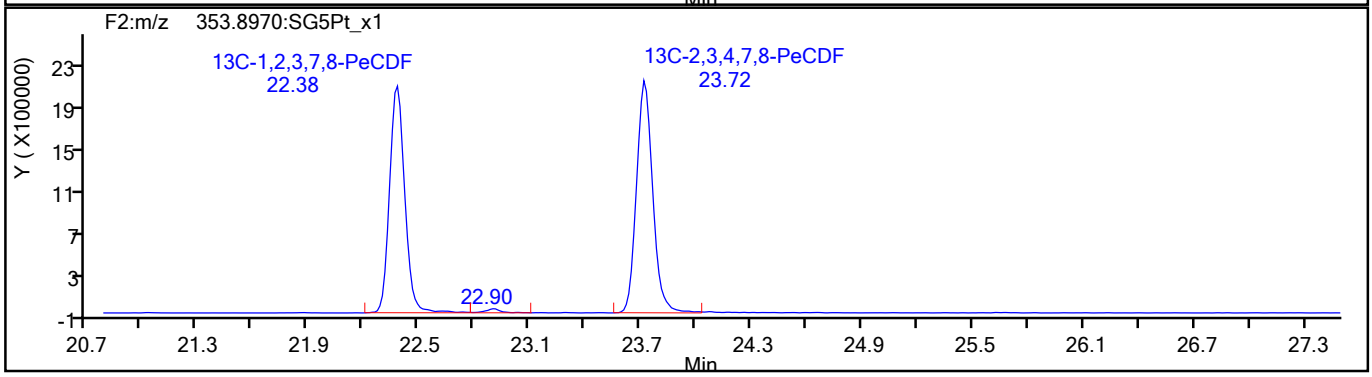

780091

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
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PeCDF

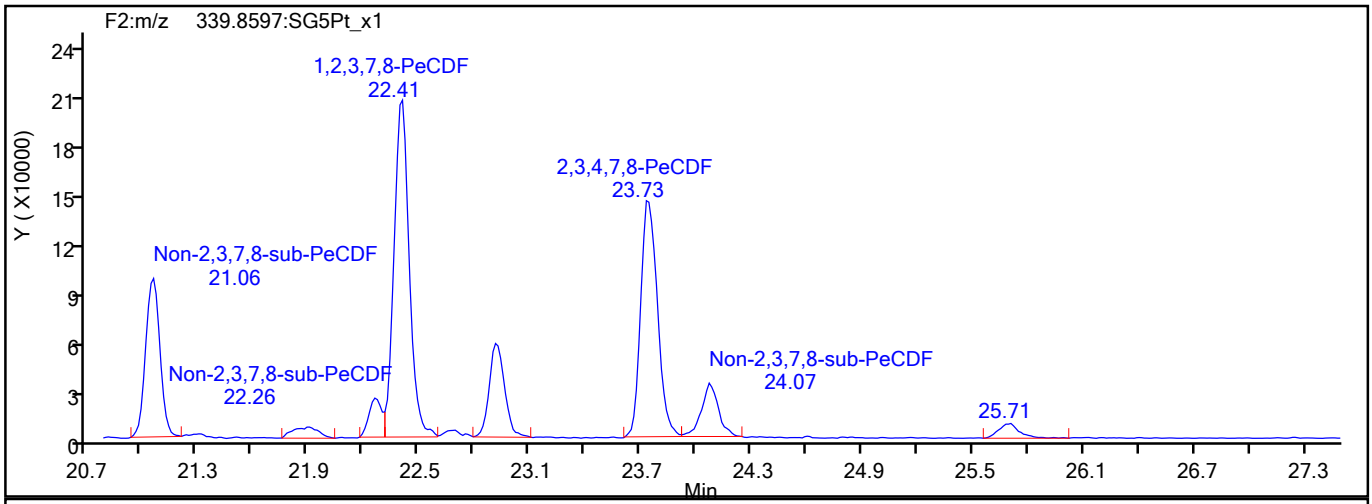

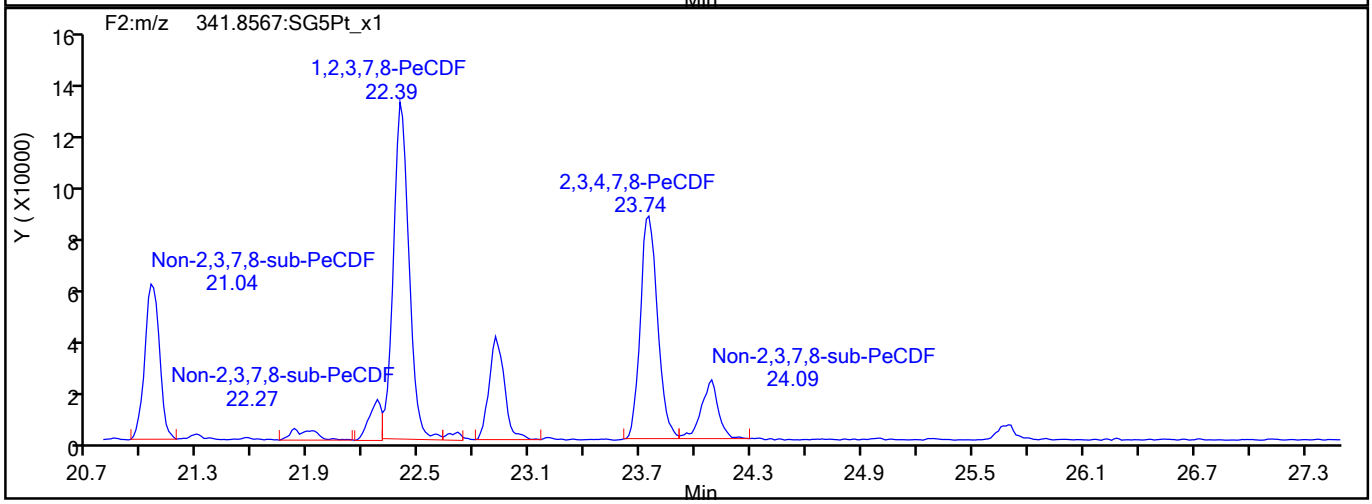

PeCDF Interference Mass

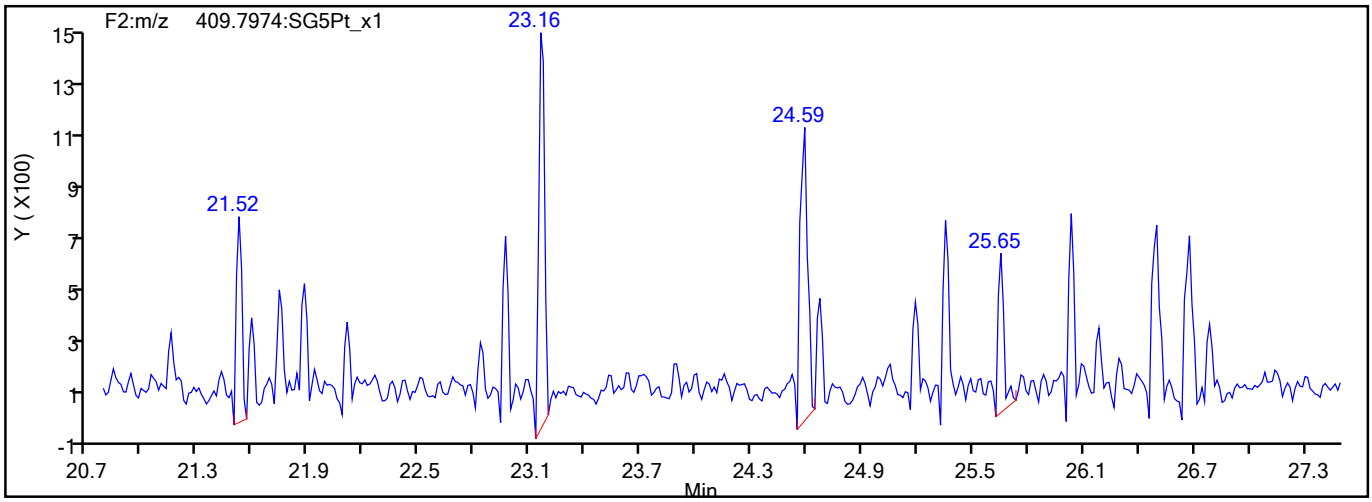

780092

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

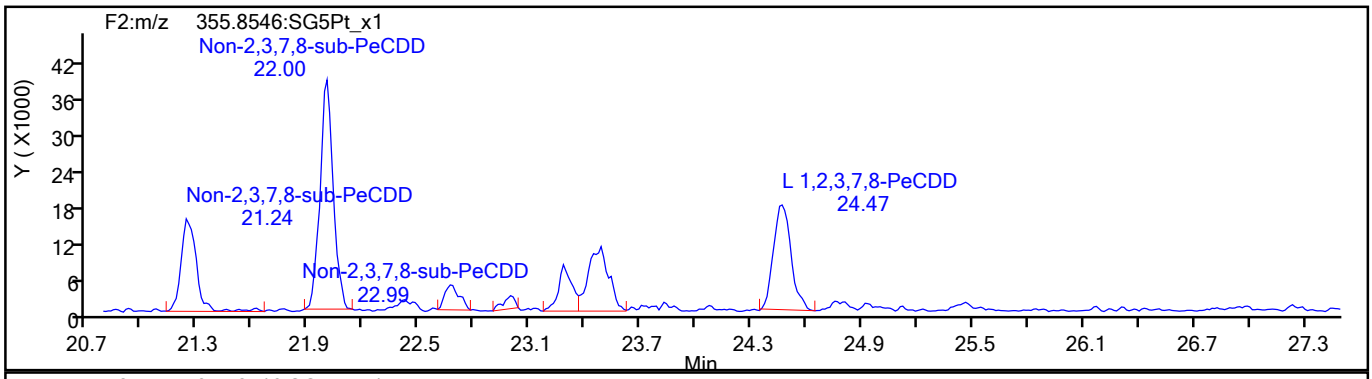

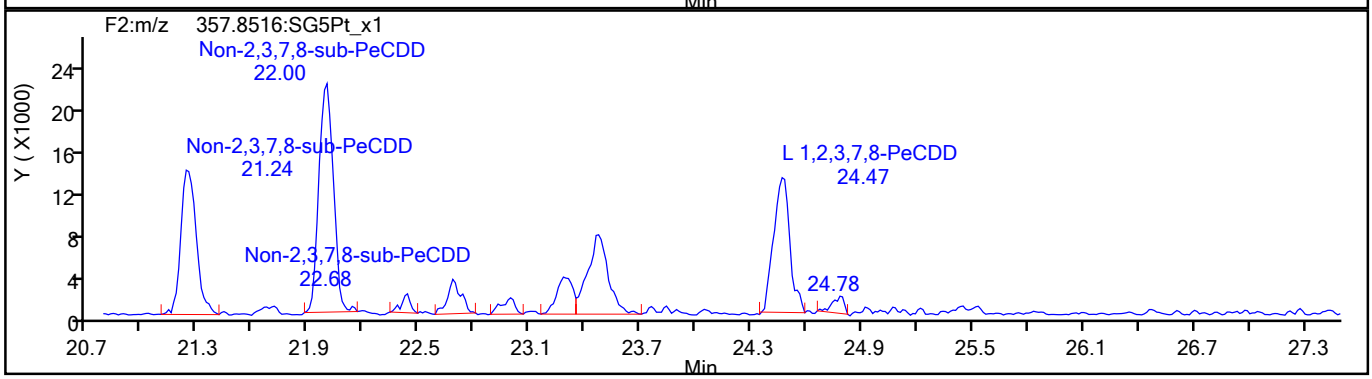

PeCDD Standards

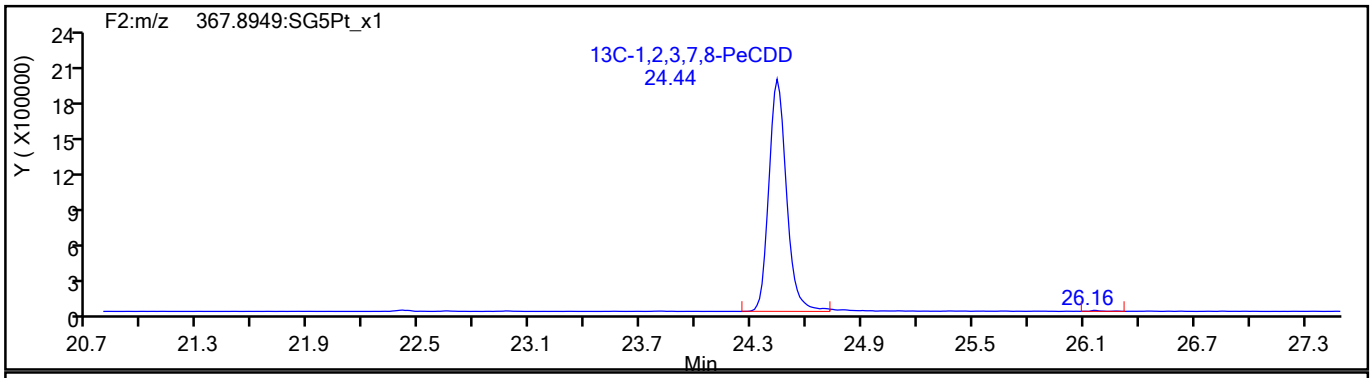

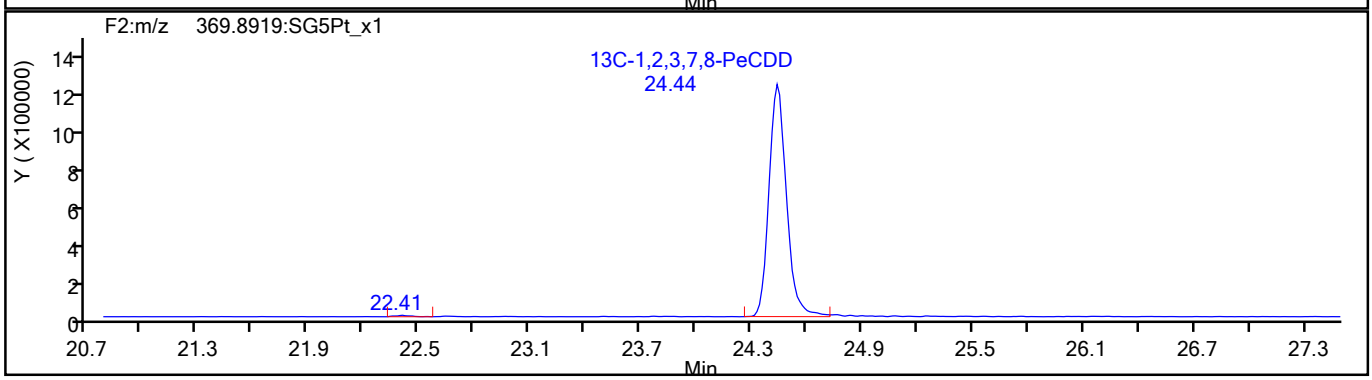

780093

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

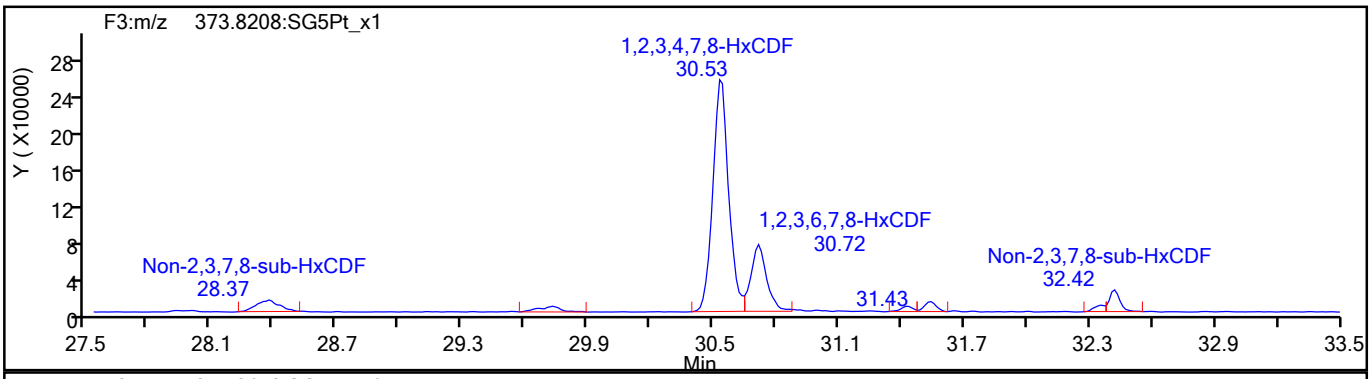

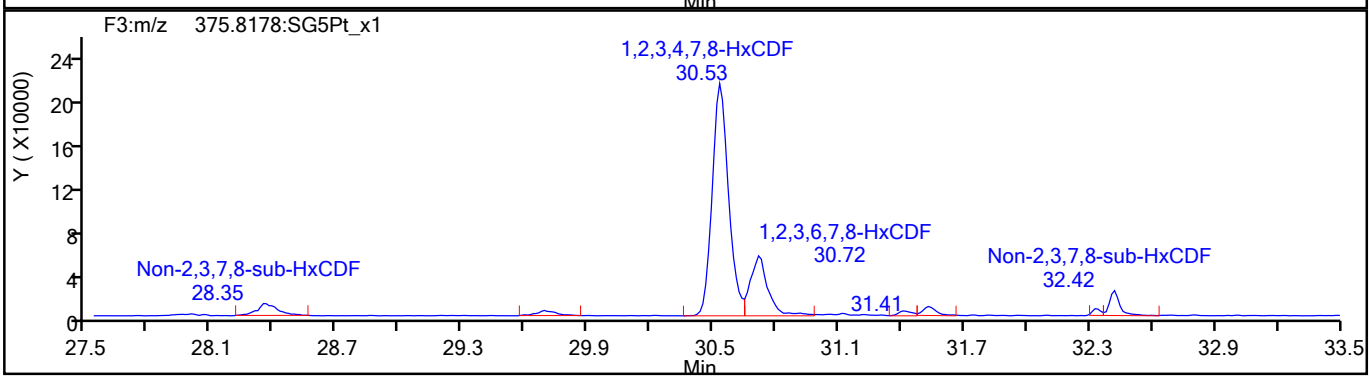

HxCDF Standards

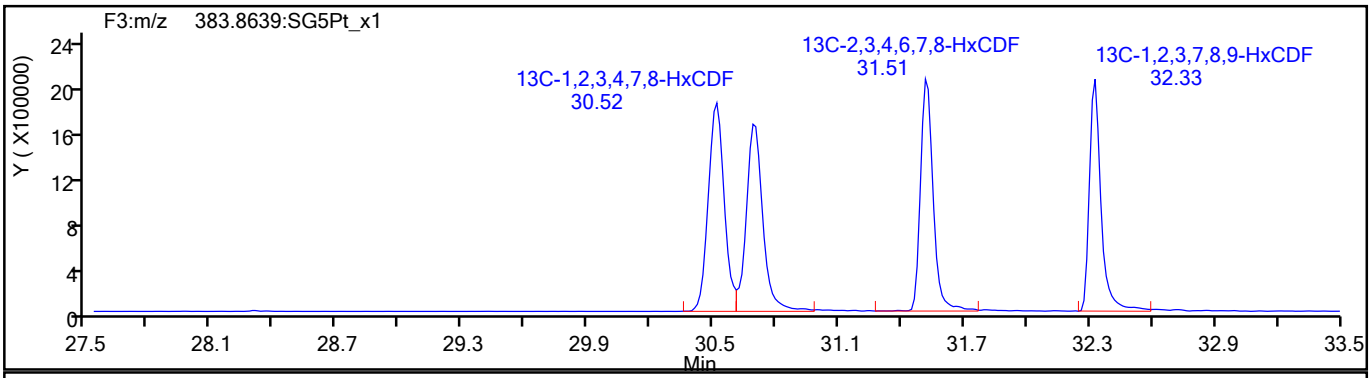

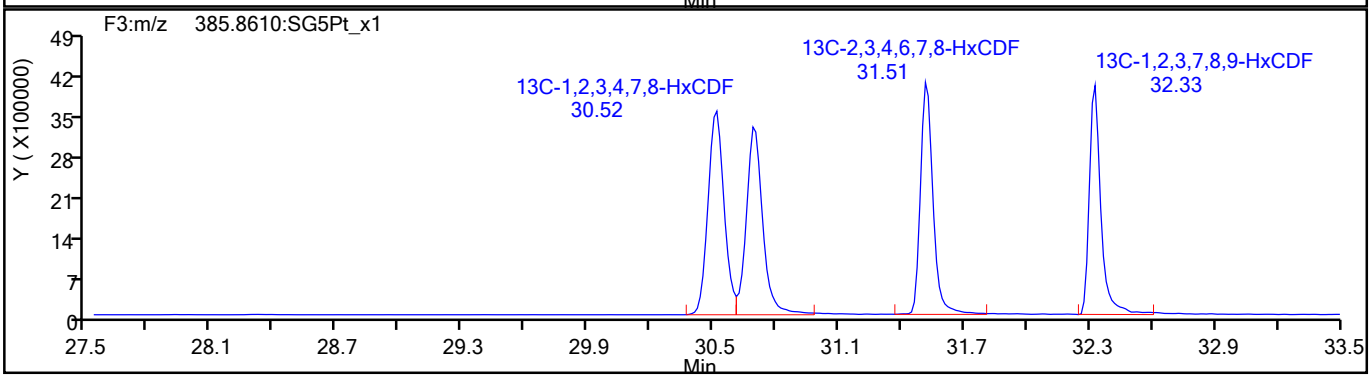

780094

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

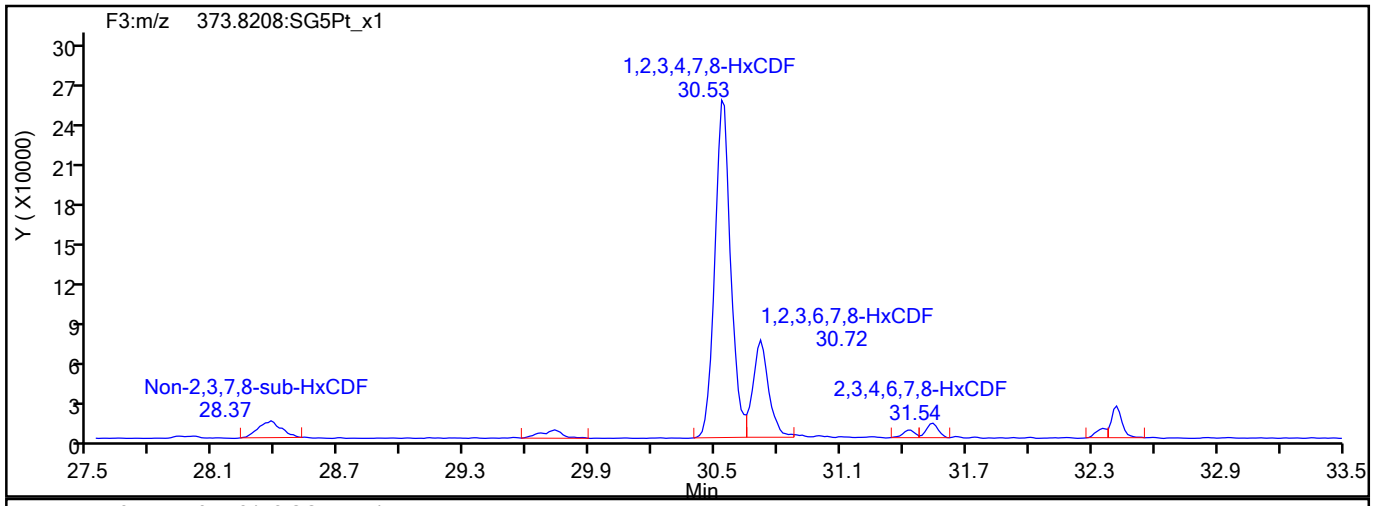

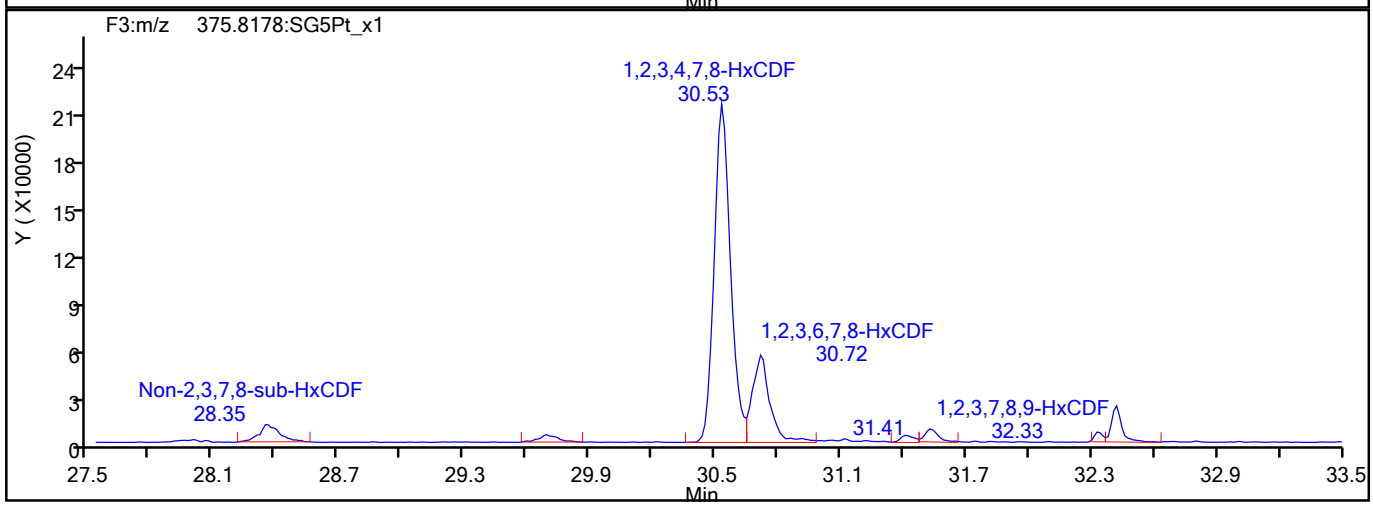

HxCDF Interference Mass

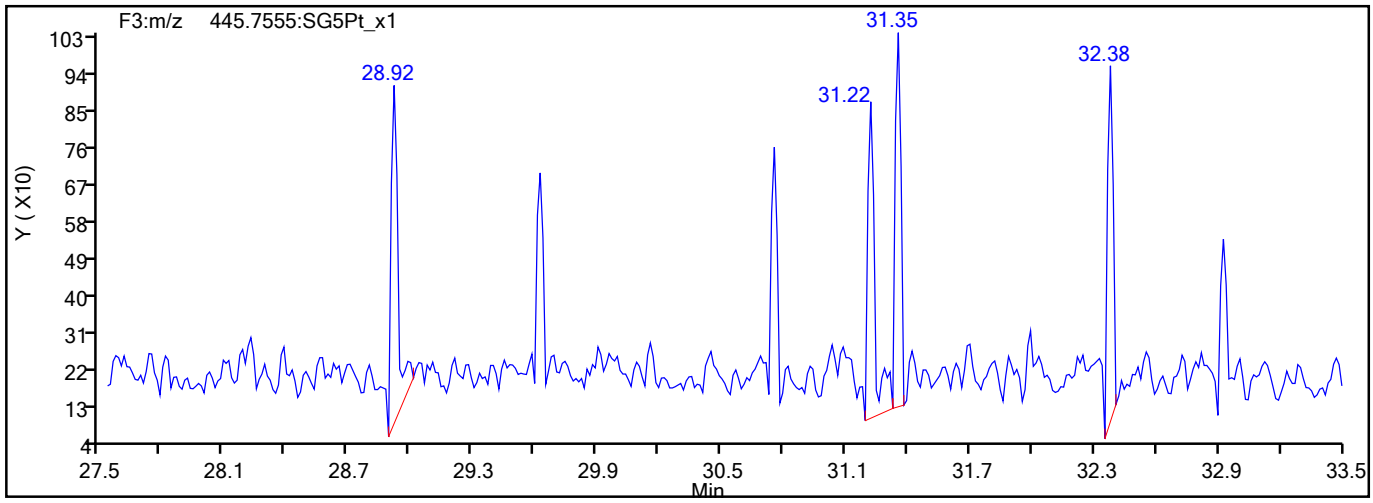

780095

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

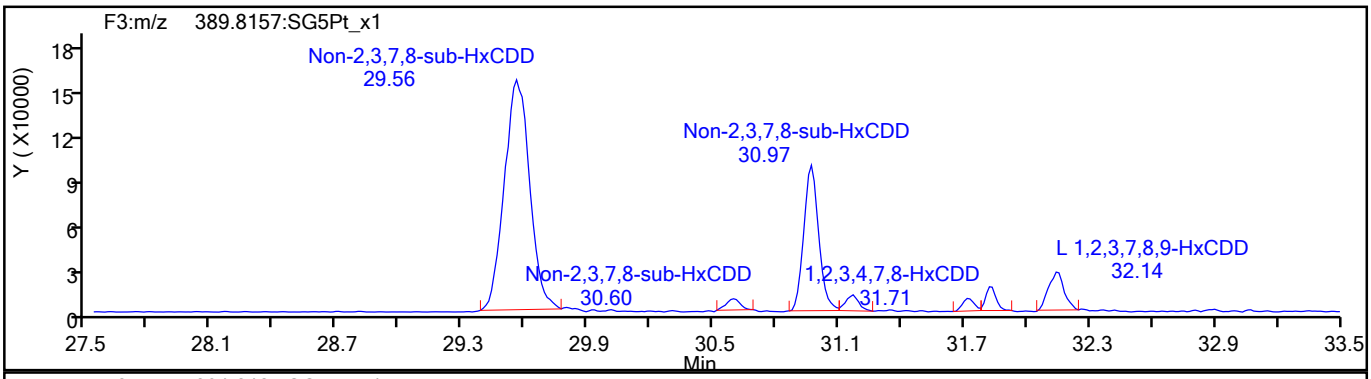

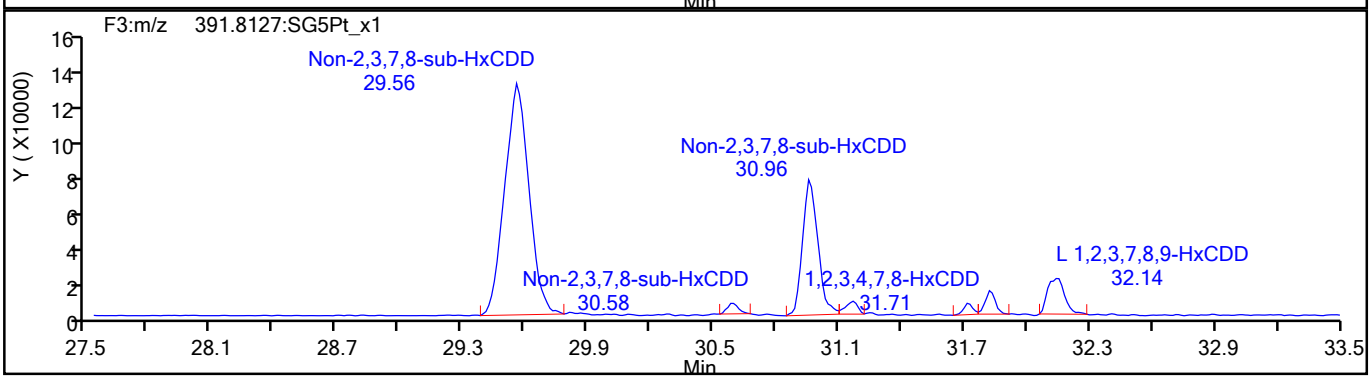

HxCDD Standards

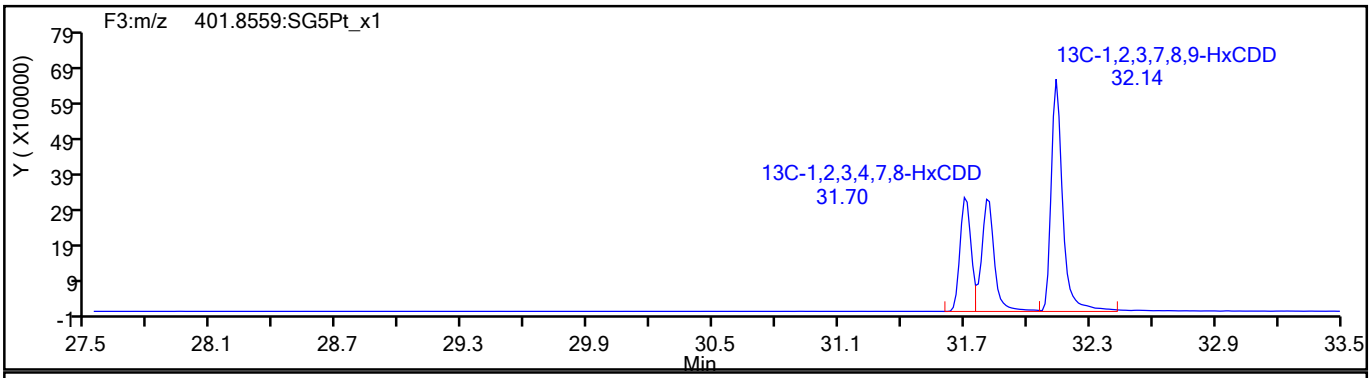

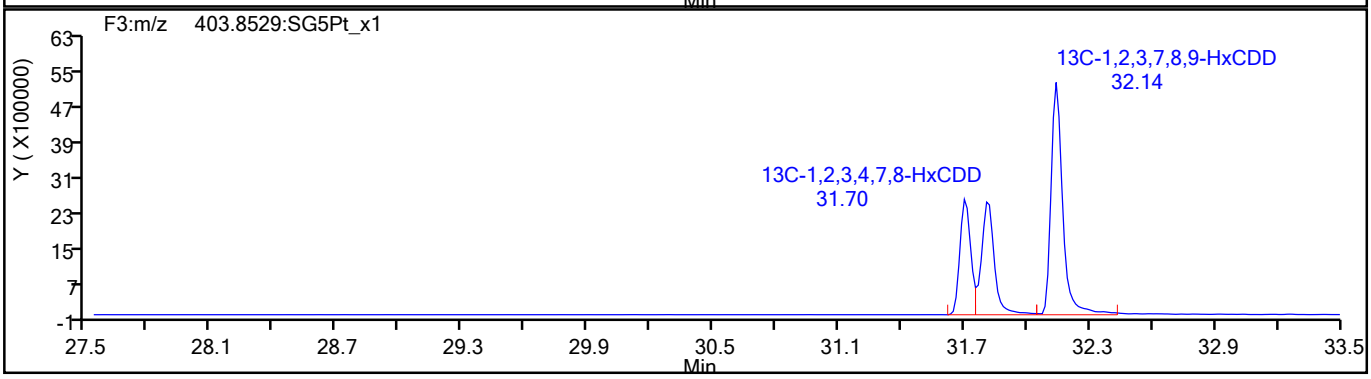

780096

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

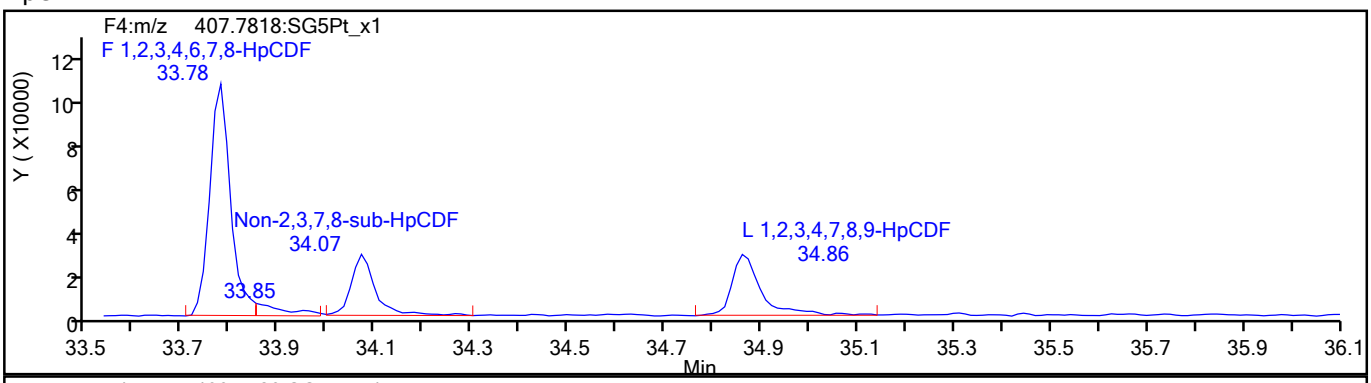

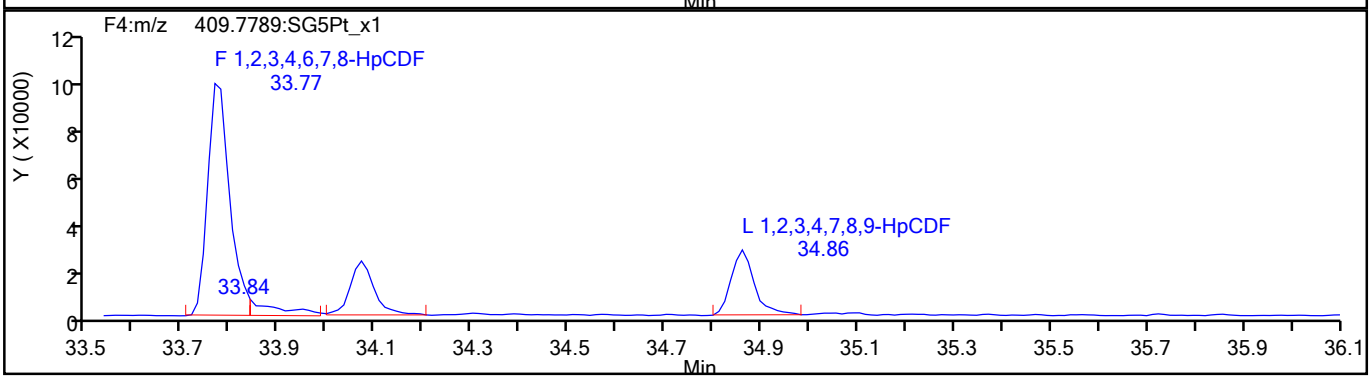

HpCDF Standards

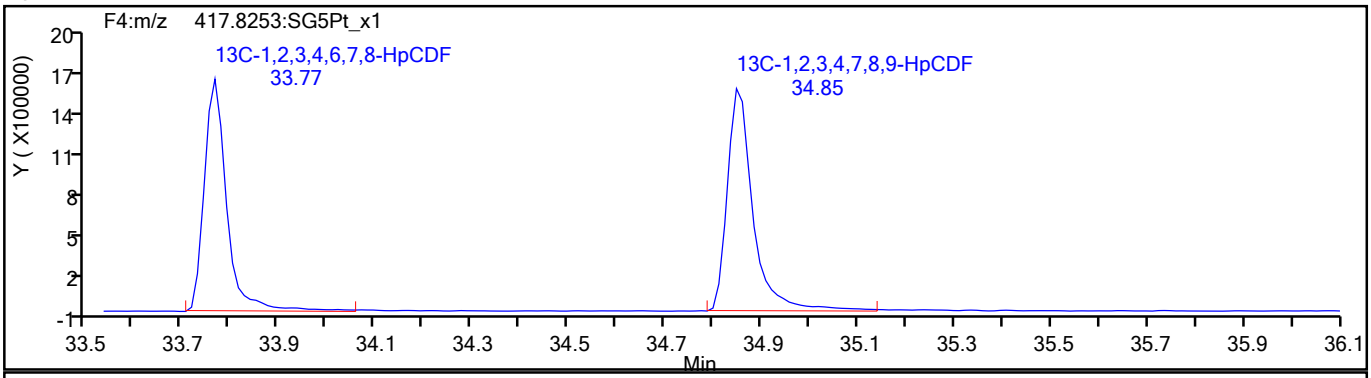

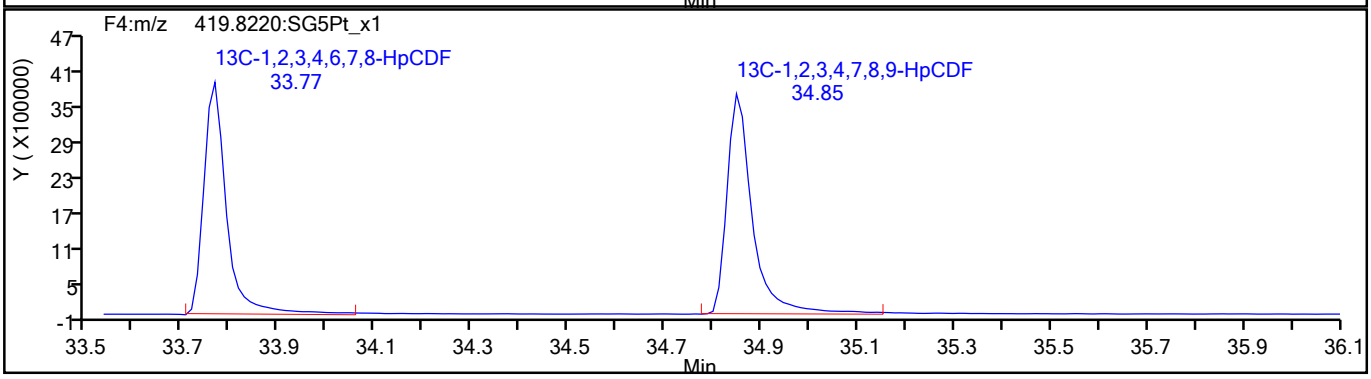

780097

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

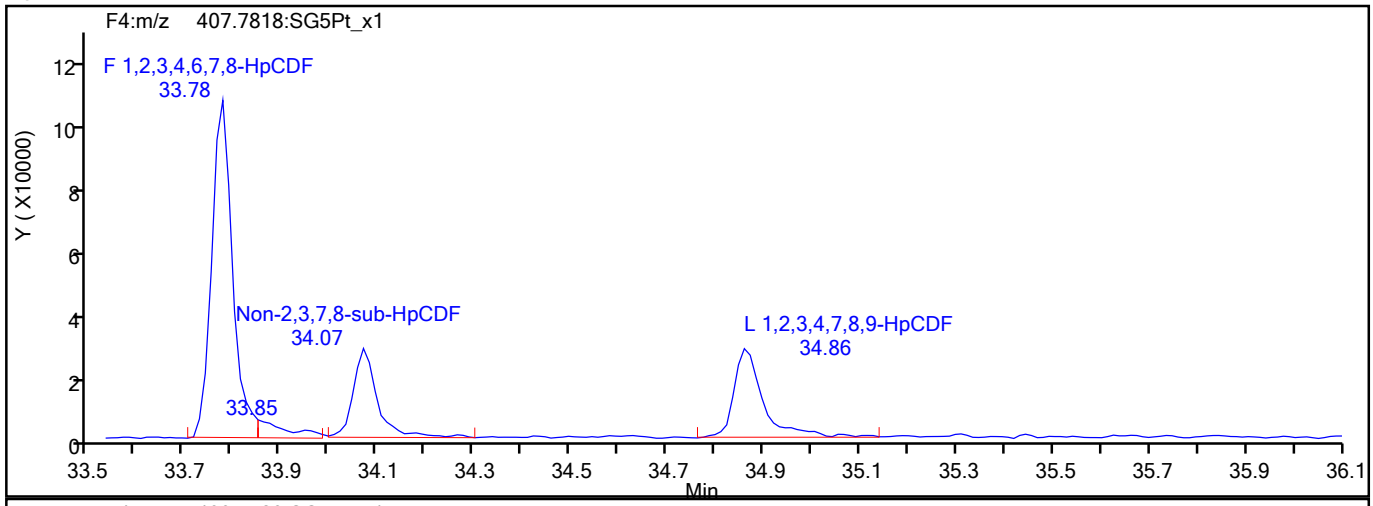

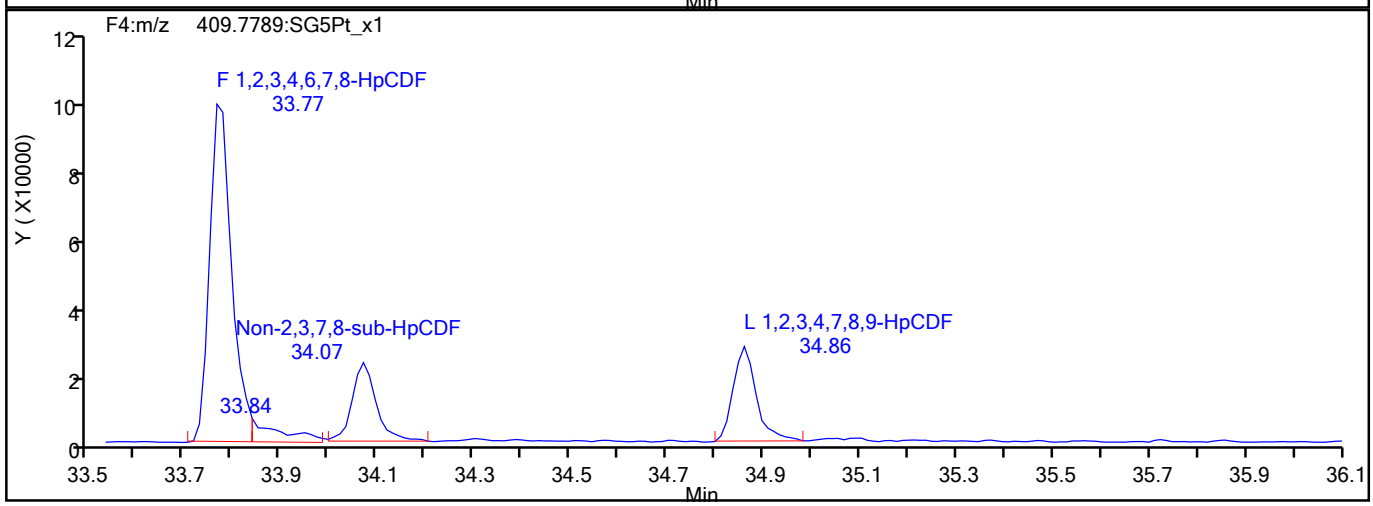

HpCDF Interference Mass

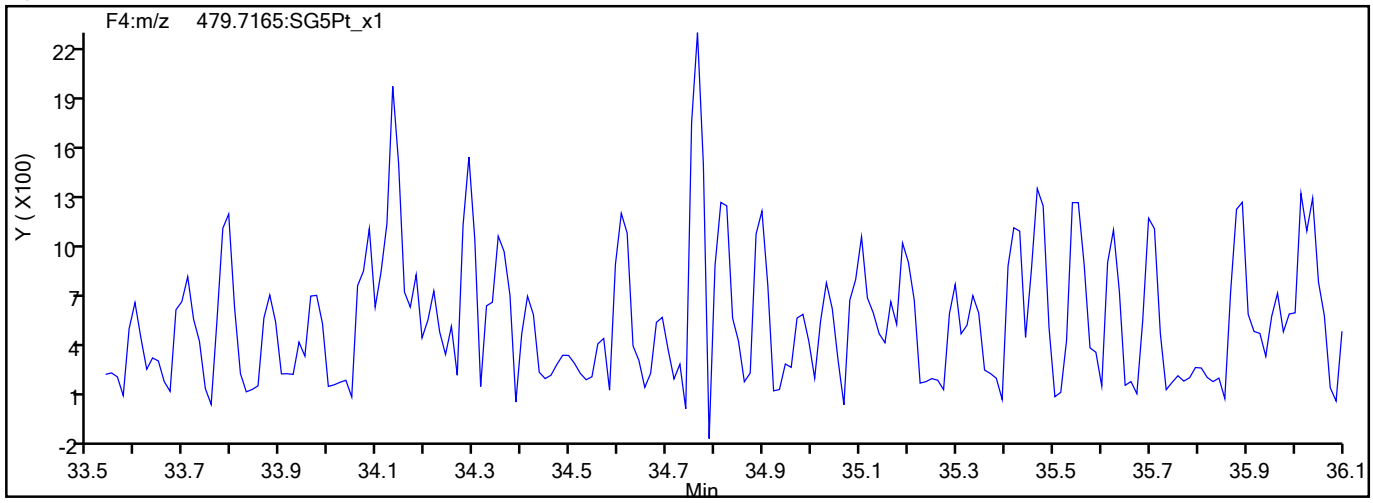

780098

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

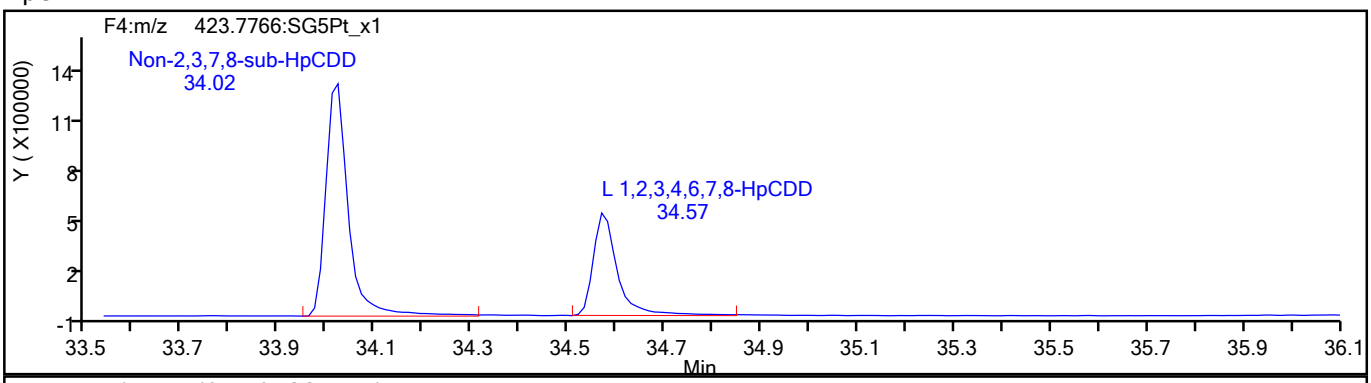

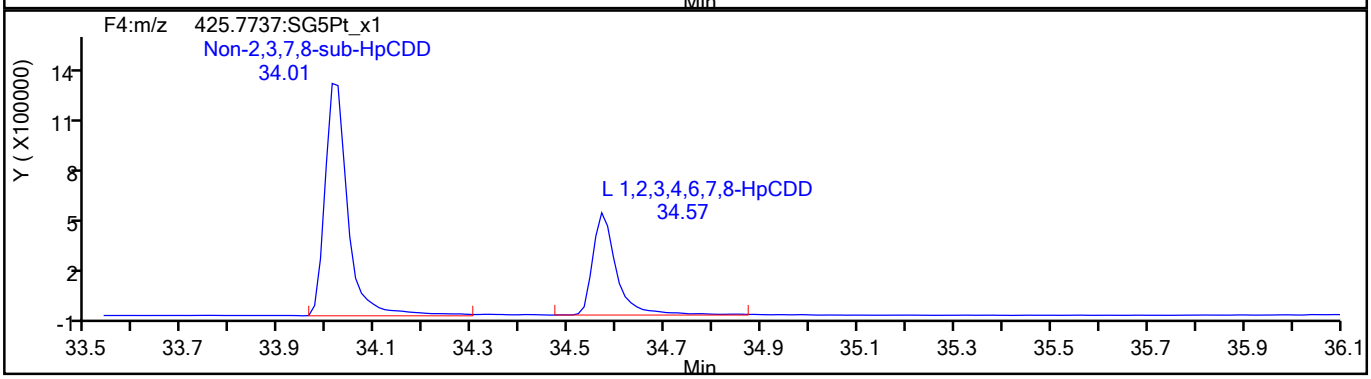

HpCDD Standards

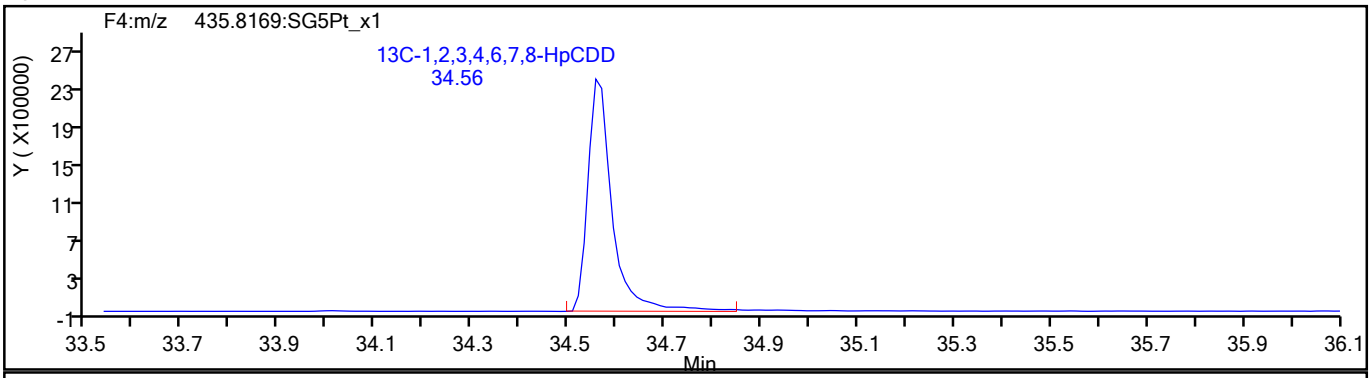

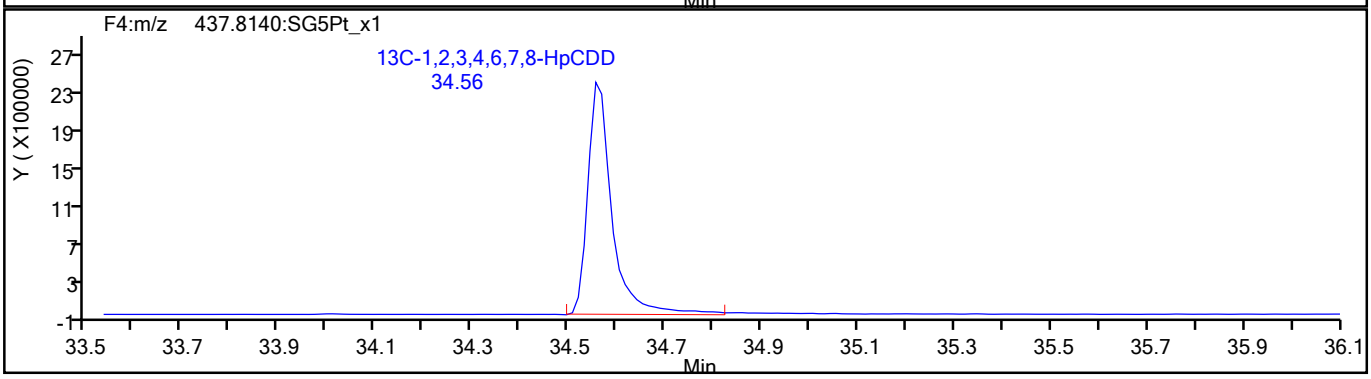

780099

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

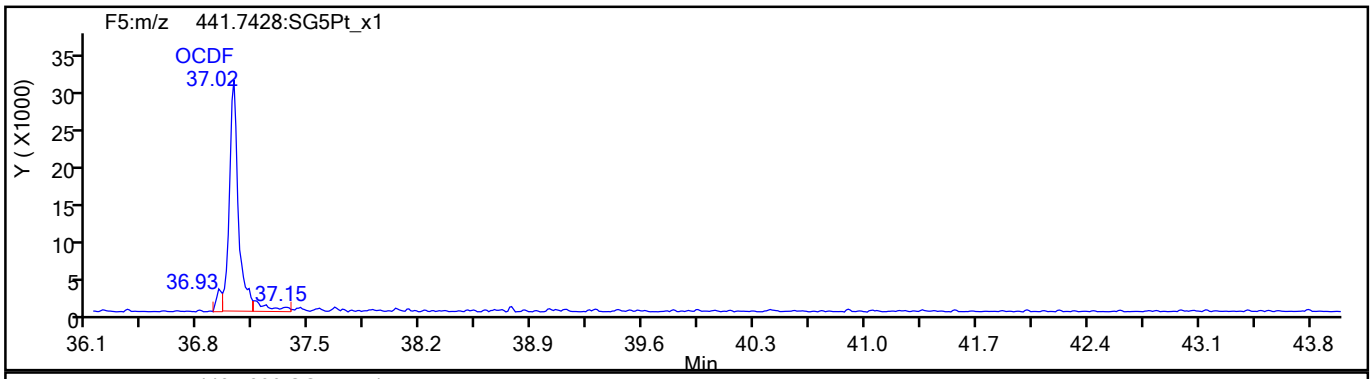

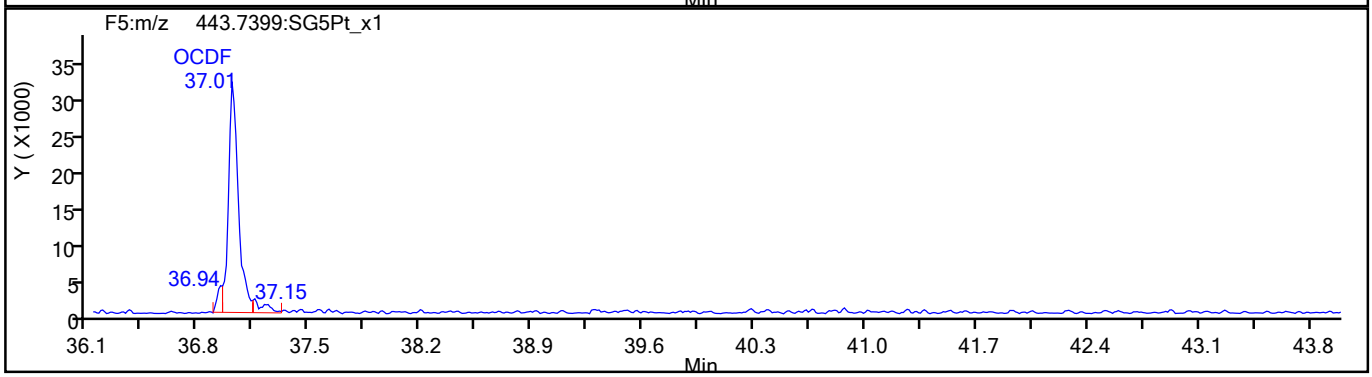

OCDF Standards

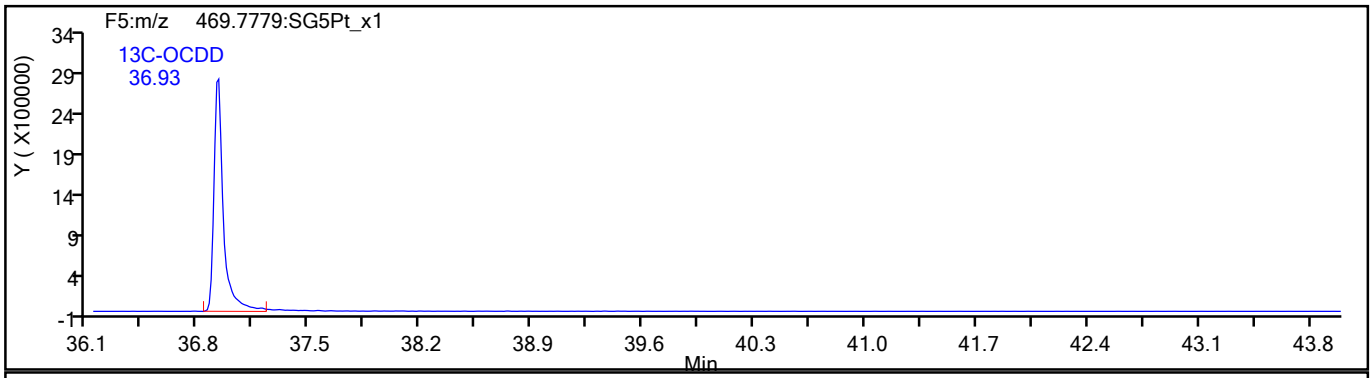

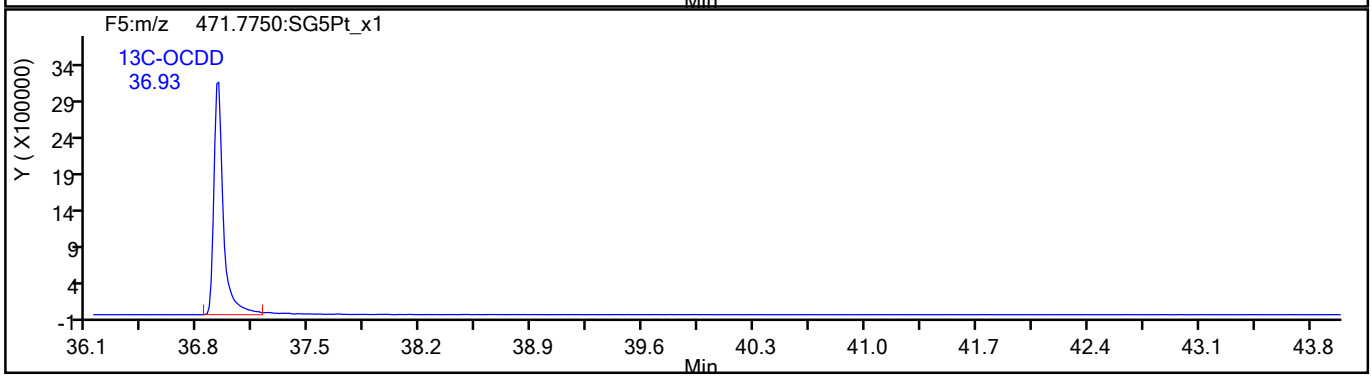

780100

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

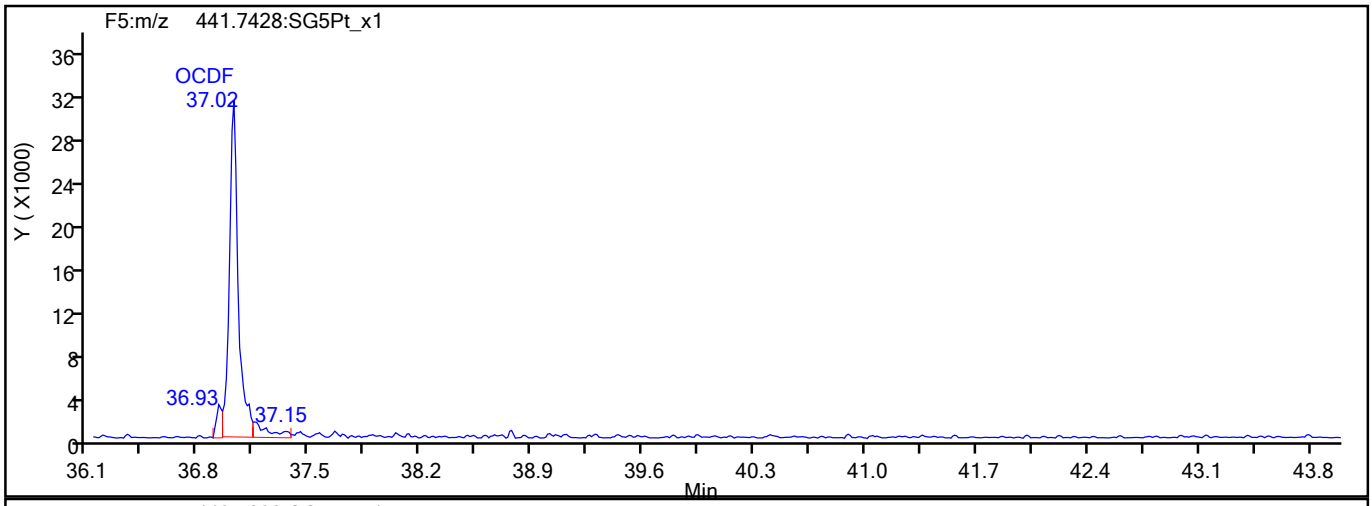

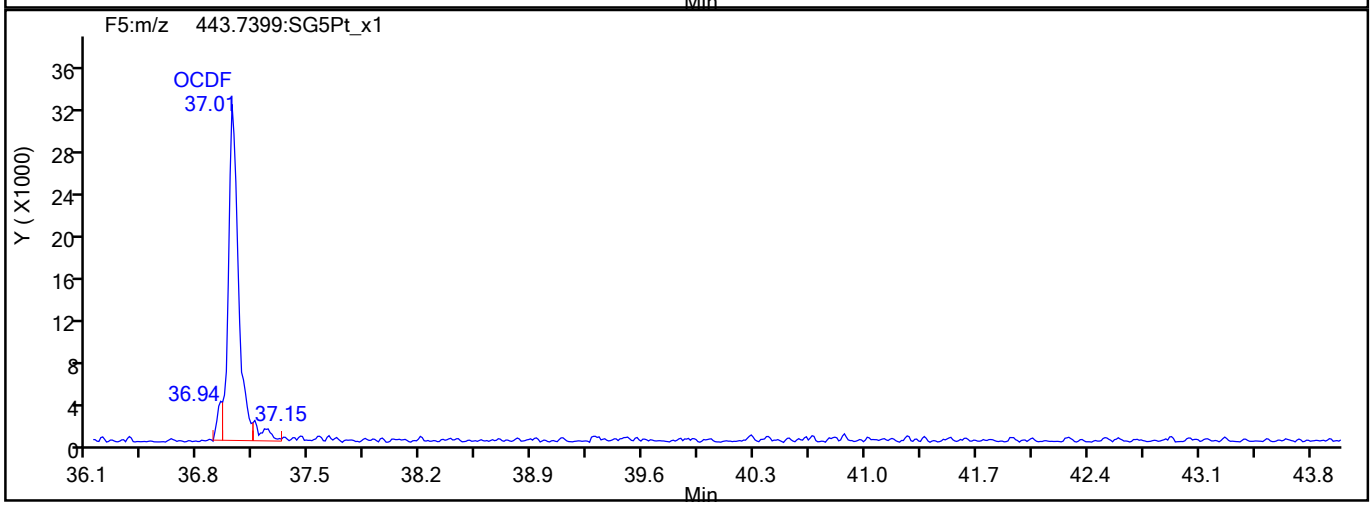

OCDF Interference Mass

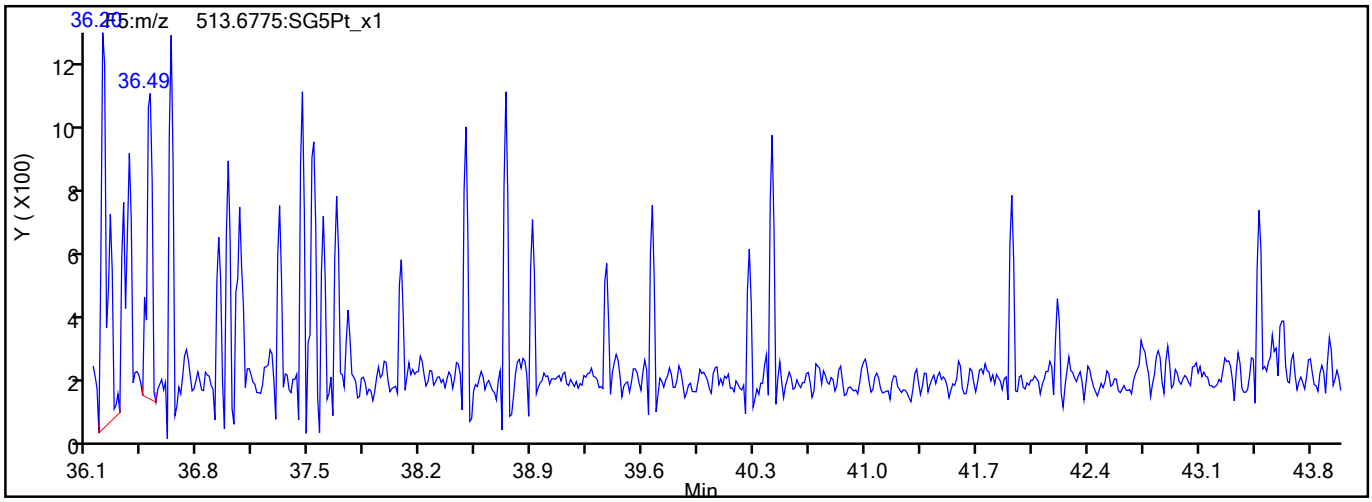

780101

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

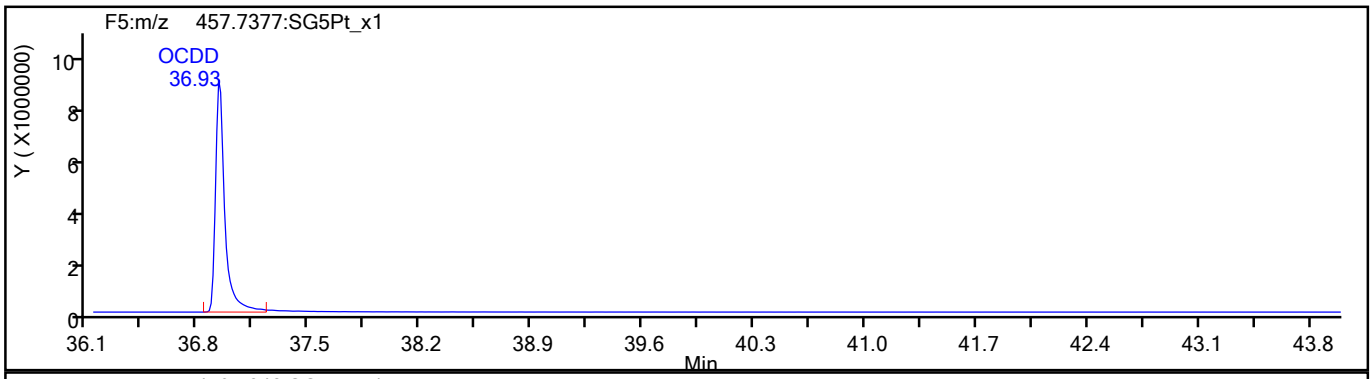

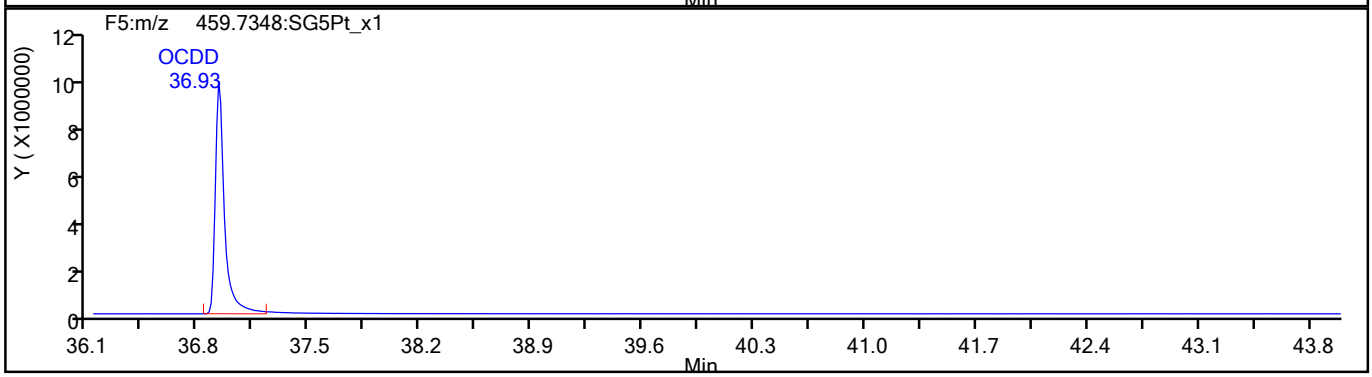

OCDD Standards

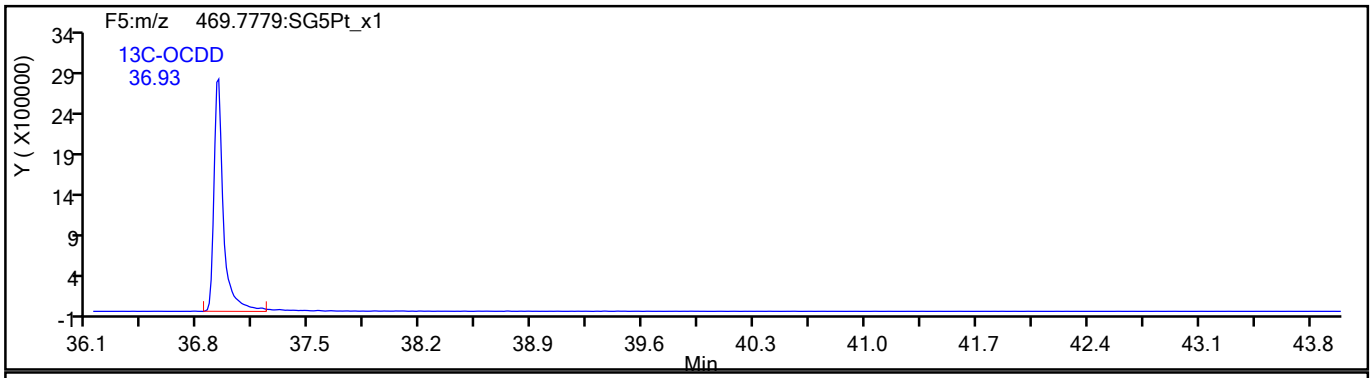

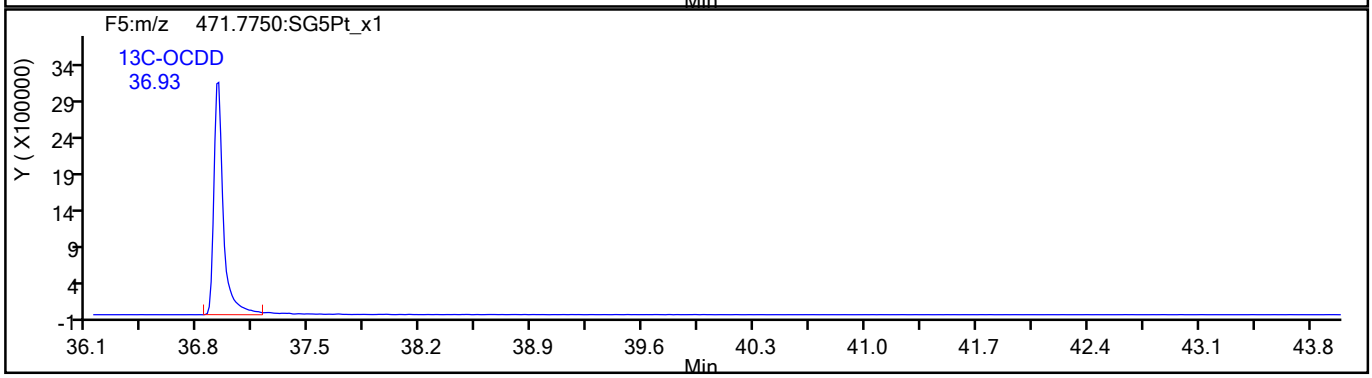

780102

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

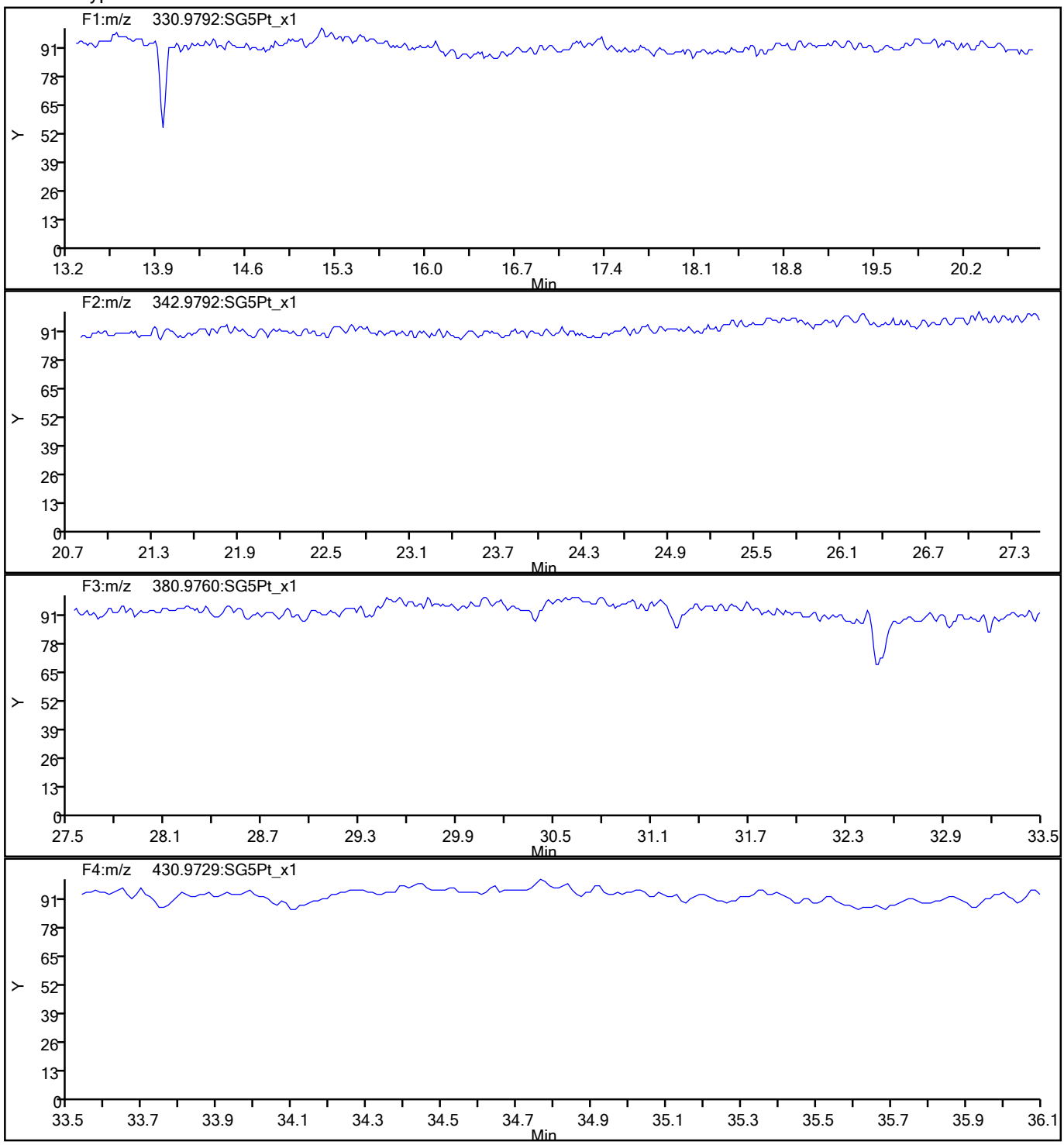

780103

Report Date: 18-Aug-2021 10:01:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_36.d		
Injection Date:	14-Aug-2021 19:46:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	516846	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

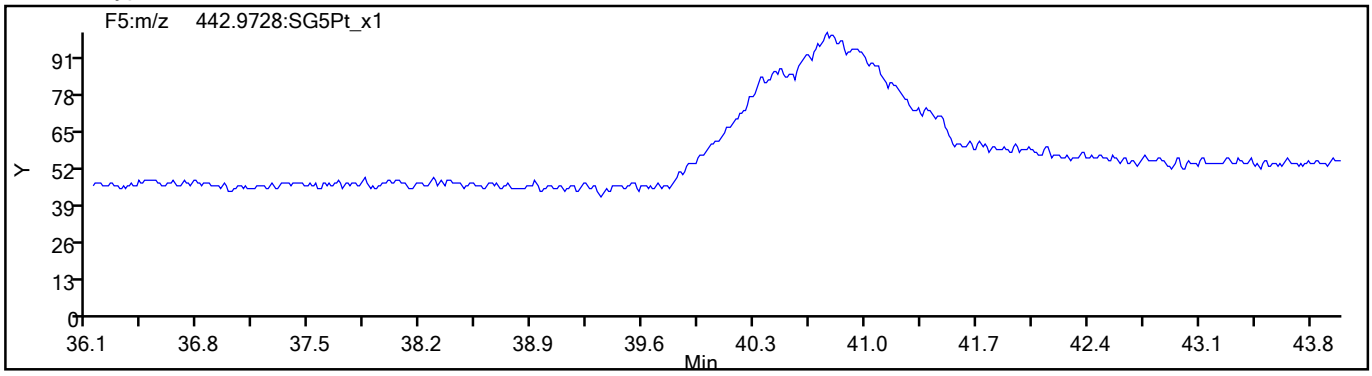

780104

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (12-14) RA
Lab Sample ID: 320-76788-19 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_015.d
Analysis Method: 1613B
Date Collected: 07/23/2021 16:00
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.06(g)
Date Analyzed: 08/25/2021 01:34
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 33.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	900	E B	1.5	0.97

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	62		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	79		35-197

Report Date: 25-Aug-2021 09:02:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_015.d
Lims ID: 320-76788-A-19-A
Client ID: 11215702-072321-BN-SJSB105 (12-14)
Sample Type: Client
Inject. Date: 25-Aug-2021 01:34:06 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-19-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:32:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.312	54433376	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	44963993	0.78	1.3327	62.0	62.0	0.4039	0.4039	61.98	
2,3,7,8-TCDF	17.642	135211084	0.79	0.9978	301.4	301.4	0.3235	0.3235		E
D 13C-2,3,7,8-TCDD	16.078	27792689	0.76	0.8749	58.4	58.4	2.880	2.880	58.36	
$ 37Cl4-2,3,7,8-TCDD	16.092	14799203		0.8648	31.4	31.4	0.0879	0.0879	78.59	
2,3,7,8-TCDD	16.092	25527817	0.78	1.0570	86.9	86.9	0.4510	0.4510		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_015.d
Lims ID: 320-76788-A-19-A
Client ID: 11215702-072321-BN-SJSB105 (12-14)
Sample Type: Client
Inject. Date: 25-Aug-2021 01:34:06 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-19-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:32:52

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.312	16.285	2		23362186	5122197	56235	140587	91		
333.9339	16.312	16.285	2		31071190	6724917	63189	157972	106	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.601	2	1.081	19737800	3751437	12911	32277	291		
317.9389	17.628	17.601	2	1.081	25226193	4865311	12598	31495	386	0.78(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.642	17.629	1	1.001	59771790	11414482	5279	13197	2162		
305.8987	17.642	17.629	1	1.001	75439294	14244305	5847	14617	2436	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.051	2	0.986	12040739	2797421	56235	140587	50		
333.9339	16.078	16.051	2	0.986	15751950	3490468	63189	157972	55	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.065	2	0.987	14799203	3339804	3601	9002	927		
2,3,7,8-TCDD											
319.8965	16.092	16.079	1	1.001	11188177	2498663	6686	16715	374		
321.8936	16.092	16.079	1	1.001	14339640	3175123	5303	13257	599	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 25-Aug-2021 09:02:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_015.d		
Injection Date:	25-Aug-2021 01:34:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	519540	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

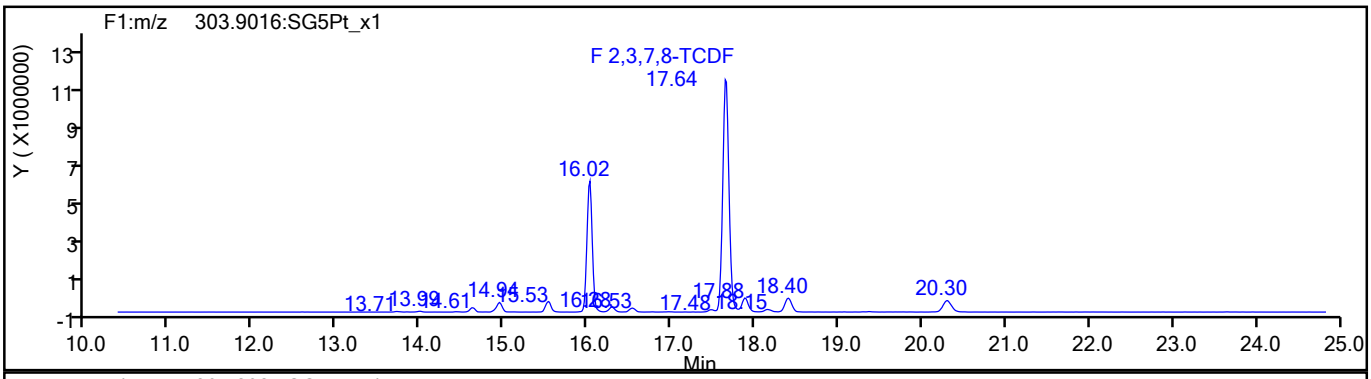

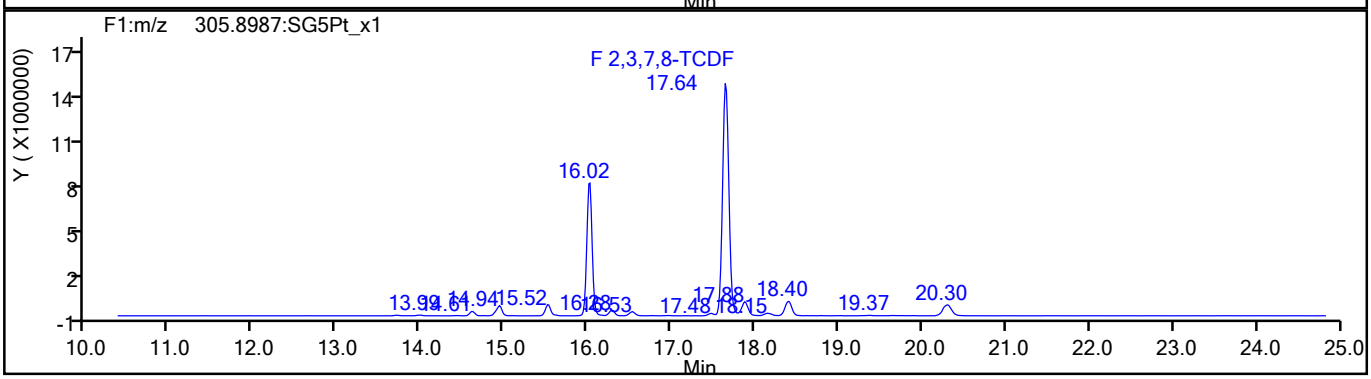

TCDF Standards

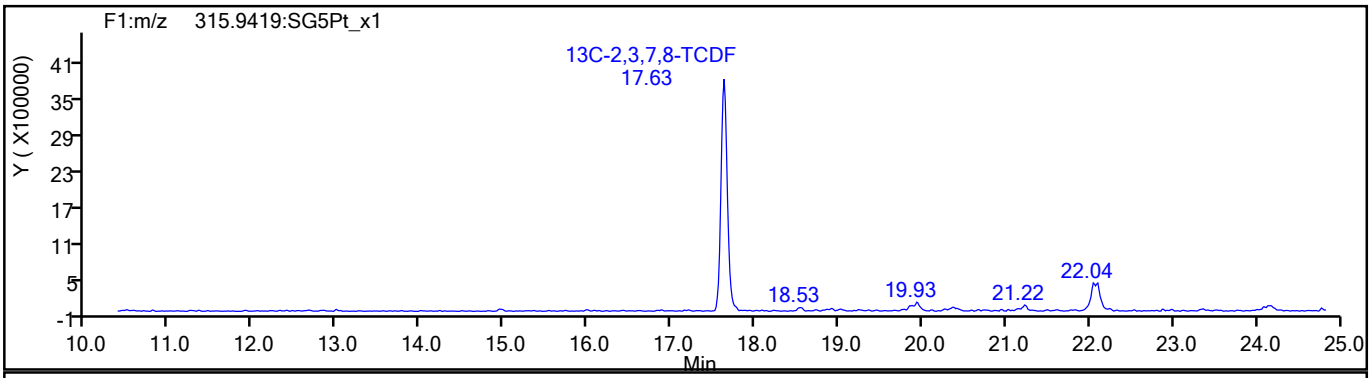

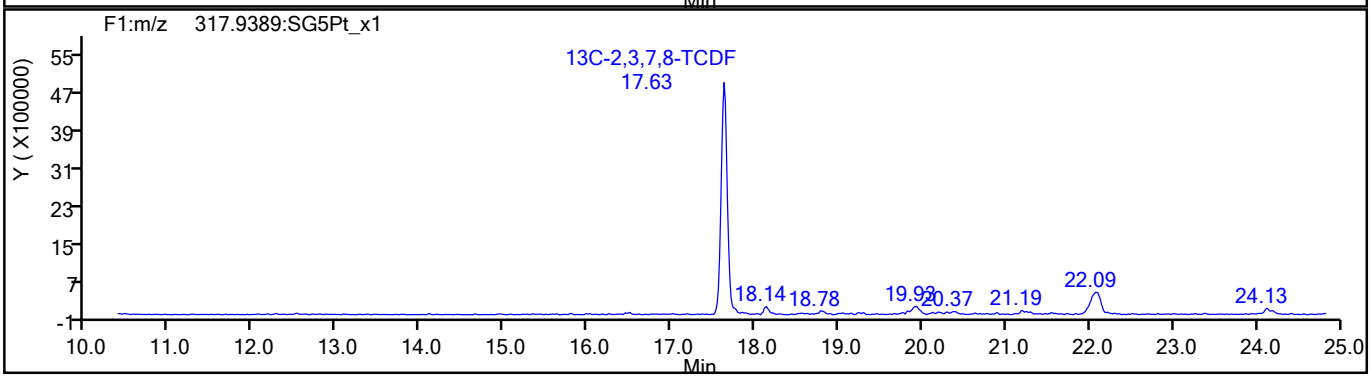

780108

Report Date: 25-Aug-2021 09:02:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_015.d		
Injection Date:	25-Aug-2021 01:34:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	519540	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

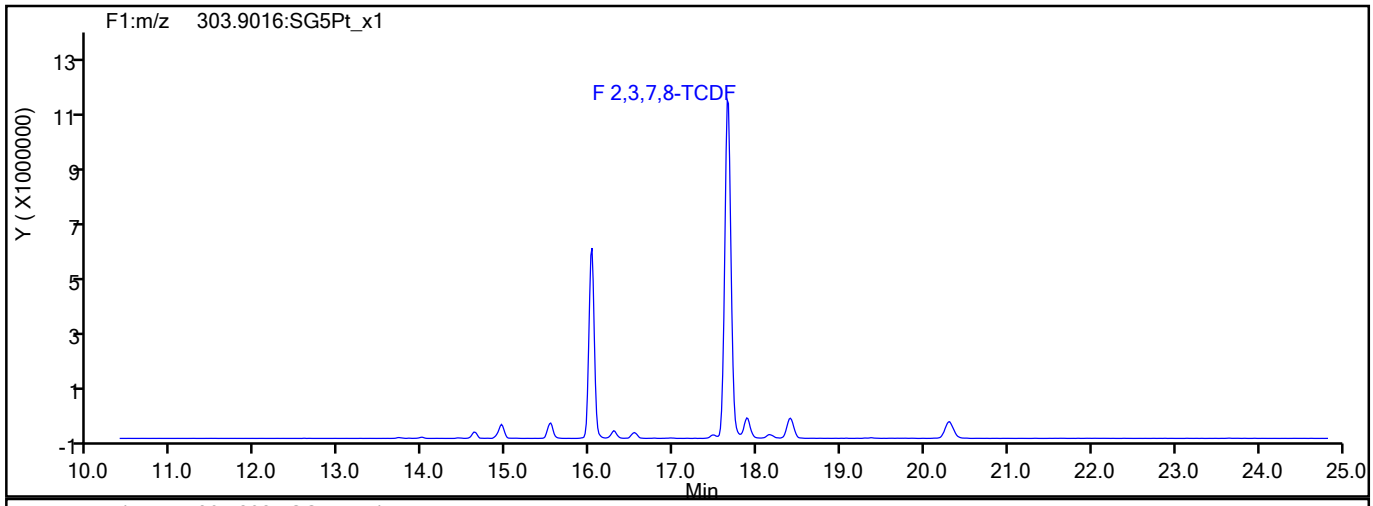

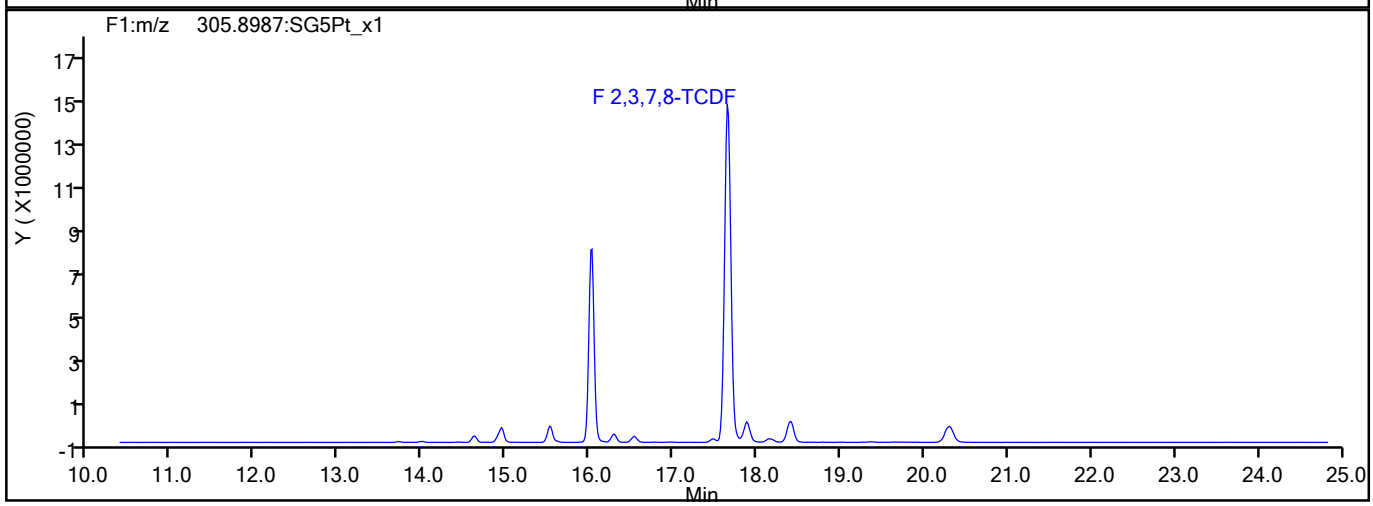

TCDF Interference Mass

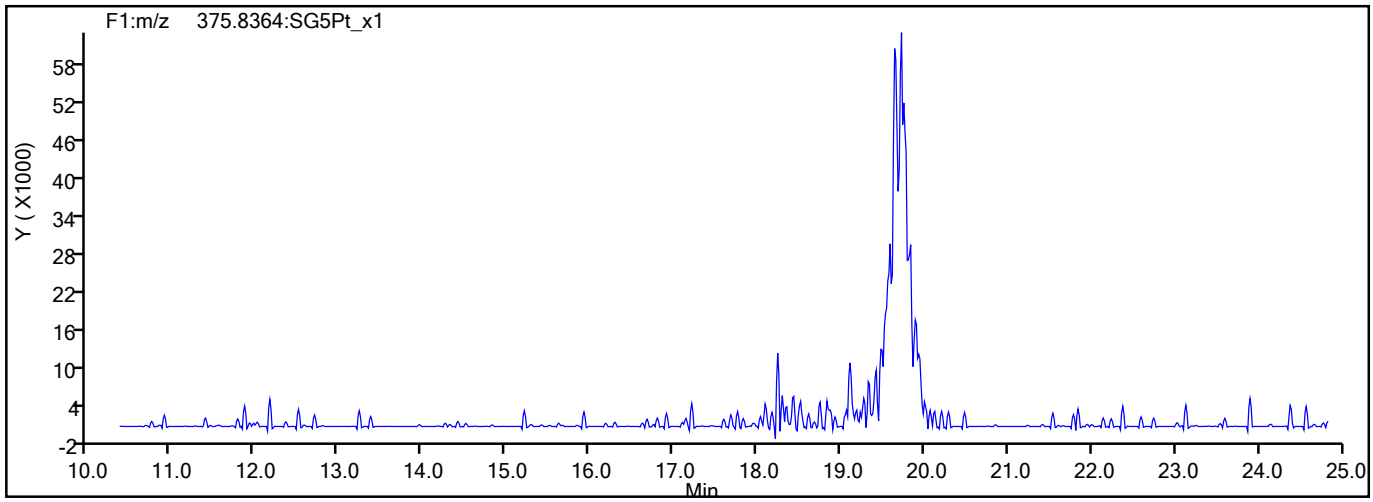

780109

Report Date: 25-Aug-2021 09:02:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_015.d		
Injection Date:	25-Aug-2021 01:34:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	519540	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

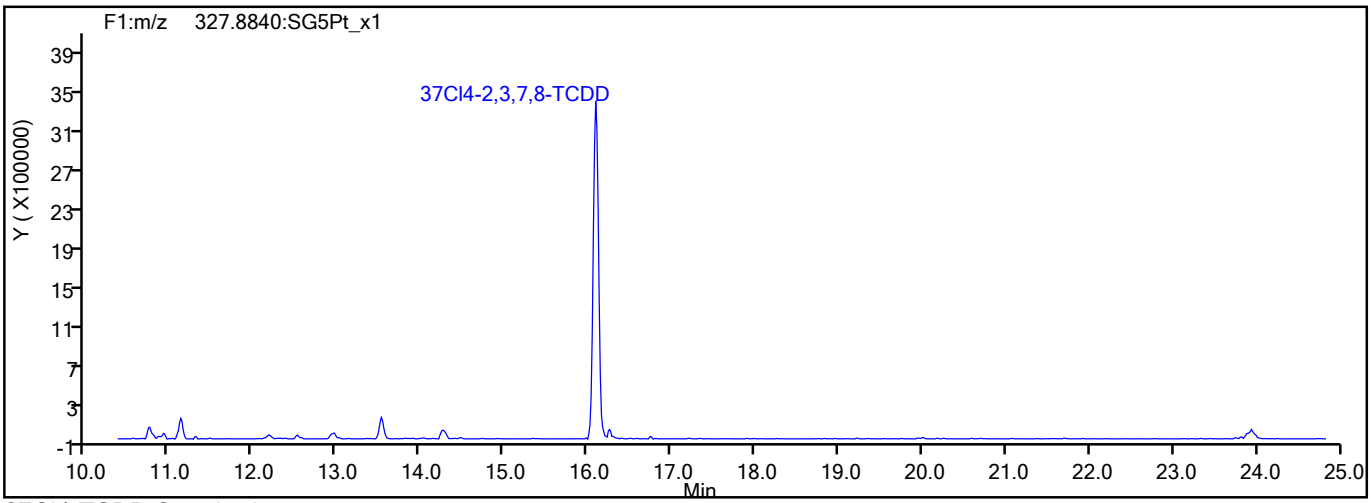

37Cl4-TCDD Standards

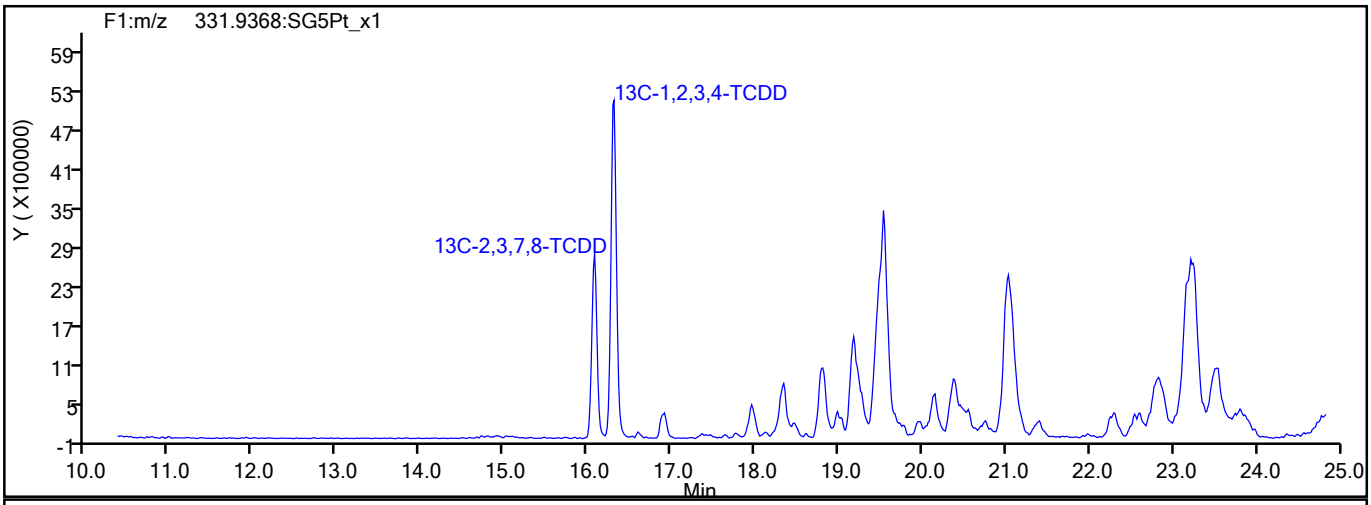

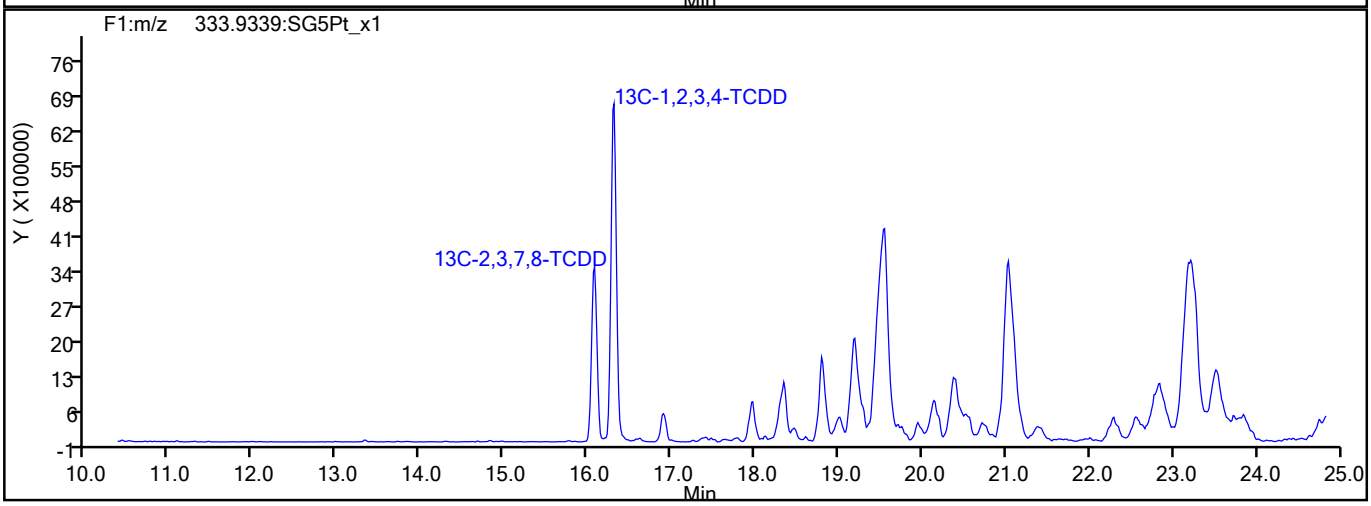

780110

Report Date: 25-Aug-2021 09:02:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_015.d		
Injection Date:	25-Aug-2021 01:34:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (12-14)		
Worklist#:	519540	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

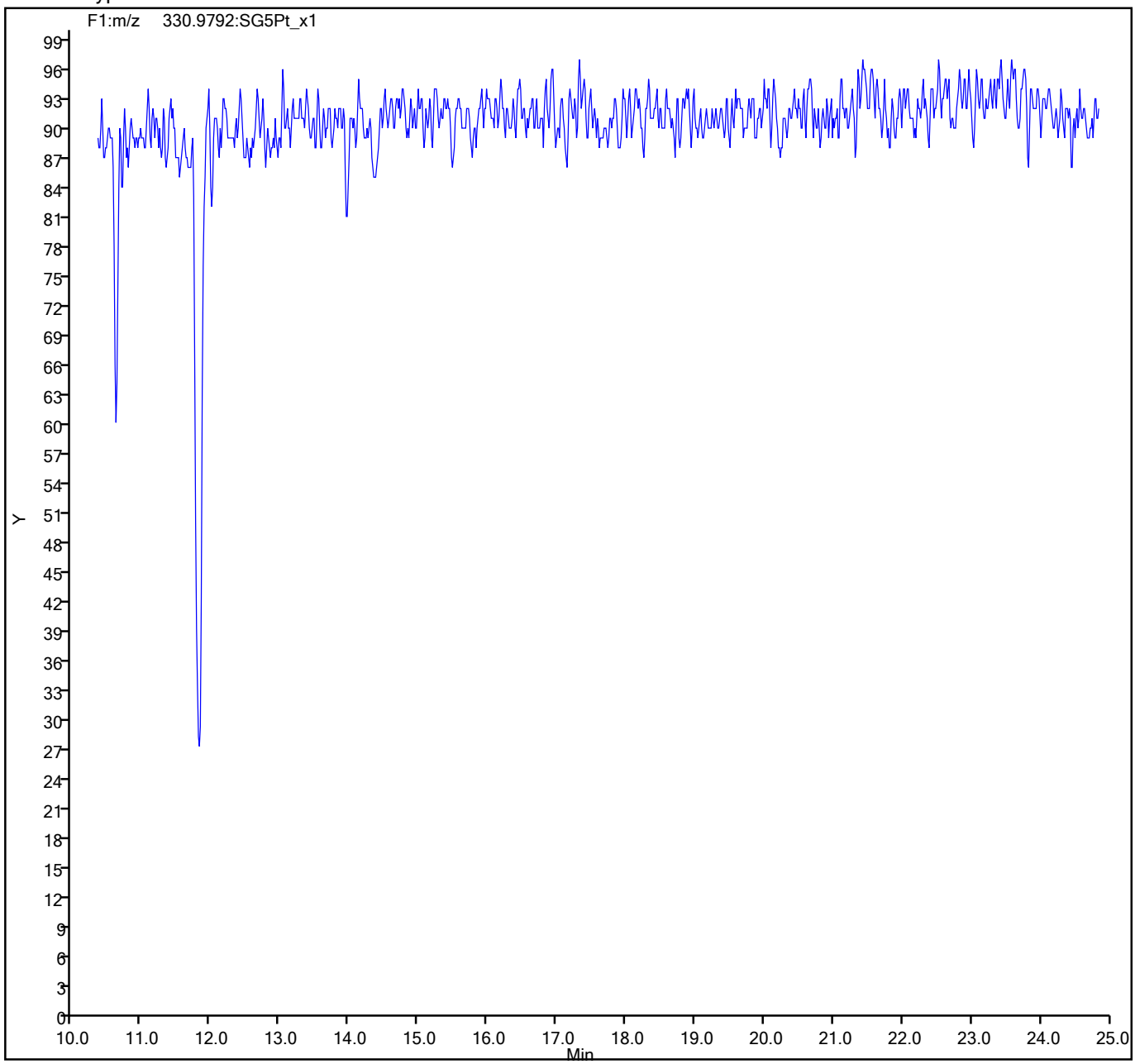

780111

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (14-16)
Lab Sample ID: 320-76788-20
Matrix: Solid
Lab File ID: 13AU2110D5_37.d
Analysis Method: 1613B
Date Collected: 07/23/2021 16:05
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.83(g)
Date Analyzed: 08/14/2021 20:31
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 34.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	41	B	1.6	0.27
40321-76-4	1,2,3,7,8-PeCDD	0.59	J	7.8	0.12
57117-41-6	1,2,3,7,8-PeCDF	2.9	J	7.8	0.067
57117-31-4	2,3,4,7,8-PeCDF	2.1	J	7.8	0.071
39227-28-6	1,2,3,4,7,8-HxCDD	0.62	J B q	7.8	0.24
57653-85-7	1,2,3,6,7,8-HxCDD	1.2	J	7.8	0.25
19408-74-3	1,2,3,7,8,9-HxCDD	2.6	J	7.8	0.23
70648-26-9	1,2,3,4,7,8-HxCDF	3.3	J B	7.8	0.045
57117-44-9	1,2,3,6,7,8-HxCDF	1.0	J B	7.8	0.045
72918-21-9	1,2,3,7,8,9-HxCDF	0.21	J B	7.8	0.037
60851-34-5	2,3,4,6,7,8-HxCDF	0.12	J q	7.8	0.037
35822-46-9	1,2,3,4,6,7,8-HpCDD	57	B	7.8	1.0
67562-39-4	1,2,3,4,6,7,8-HpCDF	1.3	J B	7.8	0.046
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.68	J B	7.8	0.059
3268-87-9	OCDD	1400	B	16	1.2
39001-02-0	OCDF	2.9	J B	16	0.044
41903-57-5	Total TCDD	50	B q	1.6	0.27
30402-14-3	Total TCDF	290	B	1.6	0.51
36088-22-9	Total PeCDD	8.6	q	7.8	0.12
30402-15-4	Total PeCDF	7.9	q	7.8	0.069
34465-46-8	Total HxCDD	42	B q	7.8	0.24
55684-94-1	Total HxCDF	5.3	J B q	7.8	0.041
37871-00-4	Total HpCDD	180	B	7.8	1.0
38998-75-3	Total HpCDF	2.2	J B	7.8	0.053

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (14-16)
Lab Sample ID: 320-76788-20
Matrix: Solid
Lab File ID: 13AU2110D5_37.d
Analysis Method: 1613B
Date Collected: 07/23/2021 16:05
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.83(g)
Date Analyzed: 08/14/2021 20:31
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 34.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	65		25-164
89059-46-1	13C-2,3,7,8-TCDF	60		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	68		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	62		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	68		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	66		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	64		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	66		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	59		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	59		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	59		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	67		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	66		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	73		26-138
114423-97-1	13C-OCDD	79		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	80		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d
Lims ID: 320-76788-A-20-A
Client ID: 11215702-072321-BN-SJSB105 (14-16)
Sample Type: Client
Inject. Date: 14-Aug-2021 20:31:33 ALS Bottle#: 37 Worklist Smp#: 26
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-20-a 320-76788-a-20-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:04:20 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 10:04:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	84291950	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	82367456	0.77	1.6249	60.1	60.1	0.1058	0.1058	60.14	
2,3,7,8-TCDF	17.371	45858521	0.77	1.0239	54.4	54.4	0.1657	0.1657		
A Non-2,3,7,8-sub-TCDF	17.046	31943996	0.76	1.0239	37.9	37.9	0.1657	23.9		
S Total TCDF					92.3	92.3	0.1657	0.1657		
D 13C-2,3,7,8-TCDD	18.066	49275104	0.81	0.8993	65.0	65.0	0.1277	0.1277	65.00	
2,3,7,8-TCDD	18.082	8177243	0.77	1.2541	13.2	13.2	0.0864	0.0864		M
$ 37Cl4-2,3,7,8-TCDD	18.082	29986263		1.1071	32.1	32.1	0.0358	0.0358	80.33	
A Non-2,3,7,8-sub-TCDD	17.499	1707800	0.77	1.2541	2.977	2.764	0.0864	1.116		RQMa
S Total TCDD					16.2	16.0	0.0864	0.0864		RQ
D 13C-1,2,3,7,8-PeCDF	22.367	63418385	1.55	1.2101	62.2	62.2	0.1532	0.1532	62.18	
1,2,3,7,8-PeCDF	22.394	625442	1.62	1.0611	0.9294	0.9294	0.0217	0.0217		M
D 13C-2,3,4,7,8-PeCDF	23.703	71544957	1.57	1.2395	68.5	68.5	0.1496	0.1496	68.48	
2,3,4,7,8-PeCDF	23.730	494812	1.61	1.0184	0.6791	0.6791	0.0230	0.0230		
A F1 PeCDFs	20.093						0.0122	0.0122		
A Non-2,3,7,8-sub-PeCDF	23.241	649561	1.55	1.0398	0.9430	0.9258	0.0223	0.4059		RQMa
S Total PeCDF					2.552	2.534	0.0224	0.0224		RQ
D 13C-1,2,3,7,8-PeCDD	24.426	43814735	1.58	0.7612	68.3	68.3	0.0715	0.0715	68.28	
1,2,3,7,8-PeCDD	24.453	87828	1.68	1.0484	0.1912	0.1912	0.0388	0.0388		
A Non-2,3,7,8-sub-PeCDD	23.349	1192043	1.55	1.0484	2.634	2.595	0.0388	1.269		RQ
S Total PeCDD					2.826	2.786	0.0388	0.0388		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.503	63495955	0.51	1.0837	65.6	65.6	0.2952	0.2952	65.62	
1,2,3,4,7,8-HxCDF	30.529	743106	1.21	1.0851	1.079	1.079	0.0146	0.0146		
D 13C-1,2,3,6,7,8-HxCDF	30.689	59732543	0.51	1.1279	59.3	59.3	0.2836	0.2836	59.31	
1,2,3,6,7,8-HxCDF	30.716	226692	1.21	1.1260	0.3370	0.3370	0.0145	0.0145		
D 13C-2,3,4,6,7,8-HxCDF	31.514	55929937	0.52	1.0637	58.9	58.9	0.3008	0.3008	58.89	
2,3,4,6,7,8-HxCDF	31.541	25504	1.24	1.1675	0.0584	0.0391	0.0118	0.0118		RQM
D 13C-1,2,3,7,8,9-HxCDF	32.326	51219297	0.51	0.9676	59.3	59.3	0.3306	0.3306	59.29	
1,2,3,7,8,9-HxCDF	32.340	40480	1.34	1.1664	0.0678	0.0678	0.0121	0.0121		Ma
A Non-2,3,7,8-sub-HxCDF	30.197	130860	1.17	1.1363	0.2000	0.2000	0.0131	0.0955		Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					1.742	1.722	0.0132	0.0132		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.140	89289369	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	43121110	1.24	0.7334	65.8	65.8	0.3424	0.3424	65.85	
1,2,3,4,7,8-HxCDD	31.728	91998	1.24	1.0640	0.2325	0.2005	0.0784	0.0784		RQMa
D 13C-1,2,3,6,7,8-HxCDD	31.807	50081601	1.25	0.8802	63.7	63.7	0.2853	0.2853	63.72	
1,2,3,6,7,8-HxCDD	31.821	201231	1.26	1.0001	0.4018	0.4018	0.0822	0.0822		M
1,2,3,7,8,9-HxCDD	32.153	447535	1.27	1.1325	0.8480	0.8480	0.0731	0.0731		
A Non-2,3,7,8-sub-HxCDD	30.882	6010781	1.24	1.0655	12.1	12.1	0.0777	8.603		RQ
S Total HxCDD					13.6	13.6	0.0779	0.0779		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	45356714	0.44	0.7730	65.7	65.7	0.8031	0.8031	65.71	
1,2,3,4,6,7,8-HpCDF	33.778	270863	1.10	1.4413	0.4143	0.4143	0.0147	0.0147		
D 13C-1,2,3,4,7,8,9-HpCDF	34.848	45694486	0.43	0.7008	73.0	73.0	0.8858	0.8858	73.02	
1,2,3,4,7,8,9-HpCDF	34.860	132170	1.00	1.3174	0.2196	0.2196	0.0192	0.0192		M
A Non-2,3,7,8-sub-HpCDF	34.319	51267	1.01	1.3793	0.0816	0.0816	0.0167	0.0816		M
S Total HpCDF					0.7155	0.7155	0.0170	0.0170		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	38979387	0.98	0.6472	67.4	67.4	0.2997	0.2997	67.45	
1,2,3,4,6,7,8-HpCDD	34.568	7856172	1.04	1.0943	18.4	18.4	0.3265	0.3265		
A Non-2,3,7,8-sub-HpCDD	34.301	16606640	1.03	1.0943	38.9	38.9	0.3265	38.9		
S Total HpCDD					57.4	57.4	0.3265	0.3265		
D 13C-OCDD	36.926	62801785	0.87	0.4472	157.3	157.3	0.1676	0.1676	78.65	
OCDF	37.022	424026	0.86	1.4382	0.9390	0.9390	0.0140	0.0140		M
OCDD	36.926	160317728	0.90	1.1070	461.2	461.2	0.3812	0.3812		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d
Lims ID: 320-76788-A-20-A
Client ID: 11215702-072321-BN-SJSB105 (14-16)
Sample Type: Client
Inject. Date: 14-Aug-2021 20:31:33 ALS Bottle#: 37 Worklist Smp#: 26
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-20-a 320-76788-a-20-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:04:20 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 10:04:20

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		37418285	9191098	4309	10772	2133		
333.9339	17.855	17.855	0		46873665	11447113	5173	12932	2213	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.341	1	0.972	35758814	8804104	6530	16325	1348		
317.9389	17.356	17.341	1	0.972	46608642	11481188	7666	19165	1498	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.356	1	1.001	19968931	4787232	5911	14777	810		
305.8987	17.371	17.356	1	1.001	25889590	6225016	7858	19645	792	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.965	17.046	-65	0.920	259356	70948	5911	14777	12		
305.8987	15.965	17.046	-65	0.920	339218	91458	7858	19645	12	0.76(0.65-0.89)	
303.9016	16.237	17.046	-48	0.936	523053	114007	5911	14777	19		
305.8987	16.237	17.046	-48	0.936	691642	158411	7858	19645	20	0.76(0.65-0.89)	
303.9016	16.464	17.046	-35	0.949	549936	141219	5911	14777	24		
305.8987	16.464	17.046	-35	0.949	679707	171801	7858	19645	22	0.81(0.65-0.89)	
303.9016	16.706	17.046	-20	0.963	753193	186385	5911	14777	32		
305.8987	16.706	17.046	-20	0.963	978315	236676	7858	19645	30	0.77(0.65-0.89)	
303.9016	16.993	17.046	-3	0.979	8641604	2224858	5911	14777	376		
305.8987	16.993	17.046	-3	0.979	11486626	2885937	7858	19645	367	0.75(0.65-0.89)	
303.9016	17.205	17.046	10	0.991	294408	69542	5911	14777	12		
305.8987	17.205	17.046	10	0.991	391586	98354	7858	19645	13	0.75(0.65-0.89)	
303.9016	17.794	17.046	45	1.025	1277654	294773	5911	14777	50		
305.8987	17.794	17.046	45	1.025	1701400	390190	7858	19645	50	0.75(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.036	17.046	59	1.039	258873	53416	5911	14777	9		
305.8987	18.036	17.046	59	1.039	333904	72696	7858	19645	9	0.78(0.65-0.89)	
303.9016	19.185	17.046	128	1.105	1194595	260221	5911	14777	44		
305.8987	19.185	17.046	128	1.105	1588926	342302	7858	19645	44	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.012	21978336	5040522	4309	10772	1170		
333.9339	18.051	18.051	0	1.011	27296768	6290908	5173	12932	1216	0.81(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	18.082	18.066	1	1.001	3565530	829454	2466	6165	336		M
321.8936	18.082	18.066	1	1.001	4611713	1107171	2446	6115	453	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.066	1	1.013	29986263	7018060	3274	8185	2144		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	16.146	17.499	-81	0.894	37381	10921	2466	6165	4		
321.8936	16.146	17.499	-81	0.894	58176	14920	2446	6115	6	0.64(0.65-0.89)	
	Empc Correction				48546	14183	2446	6115	6		
319.8965	16.388	17.499	-67	0.907	48879	14675	2466	6165	6		
321.8936	16.373	17.499	-67	0.906	76197	19404	2446	6115	8	0.64(0.65-0.89)	
	Empc Correction				63479	19058	2446	6115	8		
319.8965	16.933	17.499	-34	0.937	199225	51106	2466	6165	21		
321.8936	16.933	17.499	-34	0.937	272933	75407	2446	6115	31	0.73(0.65-0.89)	
319.8965	17.825	17.499	19	0.987	68792	21696	2466	6165	9		
321.8936	17.825	17.499	19	0.987	112330	27498	2446	6115	11	0.61(0.65-0.89)	
	Empc Correction				89340	28176	2446	6115	12		
319.8965	17.961	17.499	28	0.994	78822	21709	2466	6165	9		M
321.8936	17.976	17.499	29	0.995	110701	30339	2446	6115	12	0.71(0.65-0.89)	
319.8965	18.429	17.499	56	1.020	300040	70560	2466	6165	29		
321.8936	18.429	17.499	56	1.020	476460	90792	2446	6115	37	0.63(0.65-0.89)	
	Empc Correction				389662	91636	2446	6115	37		
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	38509562	6721172	9319	23297	721		
353.8970	22.367	22.367	0	1.253	24908823	4397281	5989	14972	734	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.394	22.380	1	1.001	386973	66463	491	1227	135		M
341.8567	22.381	22.380	0	1.001	238469	40400	534	1335	76	1.62(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.328	43712144	6645084	9319	23297	713		
353.8970	23.703	23.703	0	1.328	27832813	4295852	5989	14972	717	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.730	23.730	0	1.001	305572	44717	491	1227	91		
341.8567	23.744	23.730	1	1.002	189240	27126	534	1335	51	1.61(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						174	435			
341.8567	20.093						387	967			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQMa
339.8597	21.044	23.241	-132	0.941	180222	29224	491	1227	60		
341.8567	21.058	23.241	-131	0.941	104613	18546	534	1335	35	1.72(1.32-1.78)	
339.8597	22.258	23.241	-59	0.995	31405	7508	491	1227	15		M
341.8567	22.258	23.241	-59	0.995	29007	5993	534	1335	11	1.08(1.32-1.78)	
	Empc Correction				20261	4843	534	1335	9		
339.8597	22.912	23.241	-20	1.024	111064	18910	491	1227	39		
341.8567	22.912	23.241	-20	1.024	77076	12321	534	1335	23	1.44(1.32-1.78)	
339.8597	24.072	23.241	50	1.076	61824	10277	491	1227	21		M
341.8567	24.058	23.241	49	1.076	41065	5691	534	1335	11	1.51(1.32-1.78)	M
339.8597	25.694	23.241	147	1.149	16777	2502	491	1227	5		
	Empc Correction				13391	2307	491	1227	5		
341.8567	25.708	23.241	148	1.149	8640	1489	534	1335	3	1.94(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.368	26858530	3931351	2683	6707	1465		
369.8919	24.426	24.426	0	1.368	16956205	2482664	1809	4522	1372	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453	24.453	0	1.001	55064	9162	647	1617	14		
357.8516	24.426	24.453	-2	1.000	32764	5754	398	995	14	1.68(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.249	23.349	-126	0.870	135838	22970	647	1617	36		
357.8516	21.222	23.349	-127	0.869	105721	17845	398	995	45	1.28(1.32-1.78)	
	Empc Correction				87637	14819	398	995	37		
355.8546	21.999	23.349	-81	0.901	348976	63102	647	1617	98		
357.8516	21.985	23.349	-82	0.900	234128	43885	398	995	110	1.49(1.32-1.78)	
355.8546	22.981	23.349	-22	0.941	22087	3504	647	1617	5		
357.8516	22.994	23.349	-21	0.941	14581	2873	398	995	7	1.51(1.32-1.78)	
355.8546	23.281	23.349	-4	0.953	67145	12133	647	1617	19		
357.8516	23.294	23.349	-3	0.954	41568	7194	398	995	18	1.62(1.32-1.78)	
355.8546	23.472	23.349	7	0.961	146783	21529	647	1617	33		
357.8516	23.458	23.349	7	0.960	93300	14501	398	995	36	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	21467155	3901953	10439	26097	374		
385.8610	30.503	30.503	0	0.949	42028800	7482294	18428	46070	406	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.001	406809	71032	394	985	180		
375.8178	30.529	30.529	0	1.001	336297	56198	327	817	172	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	20228217	3750227	10439	26097	359		
385.8610	30.689	30.689	0	0.955	39504326	7279767	18428	46070	395	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.716	30.702	1	1.001	124021	22174	394	985	56		
375.8178	30.716	30.702	1	1.001	102671	19415	327	817	59	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	19078454	4450451	10439	26097	426		
385.8610	31.514	31.514	0	0.981	36851483	8623523	18428	46070	468	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											RQM
373.8208	31.541	31.528	1	1.001	26724	5277	394	985	13		
	Empc Correction				14118	3556	394	985	9		
375.8178	31.541	31.528	1	1.001	11386	2868	327	817	9	2.35(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	17384678	4358449	10439	26097	418		
385.8610	32.326	32.313	1	1.006	33834619	8424193	18428	46070	457	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											Ma
373.8208	32.340	32.326	1	1.000	23216	6949	394	985	18		M
375.8178	32.326	32.326	0	1.000	17264	4649	327	817	14	1.34(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	28.360	30.197	-110	0.930	34482	5528	394	985	14		
375.8178	28.347	30.197	-111	0.929	28005	3757	327	817	11	1.23(1.05-1.43)	
373.8208	31.435	30.197	74	1.031	7782	1967	394	985	5		M
375.8178	31.435	30.197	74	1.031	7050	1671	327	817	5	1.10(1.05-1.43)	
373.8208	32.433	30.197	134	1.063	28232	5854	394	985	15		M
375.8178	32.419	30.197	133	1.063	25309	6975	327	817	21	1.12(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		49541967	12472805	13942	34855	895		
403.8529	32.140	32.127	1		39747402	10084838	8715	21787	1157	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	23905247	6498551	13942	34855	466		
403.8529	31.701	31.701	0	0.986	19215863	5256246	8715	21787	603	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQMa
389.8157	31.728	31.714	1	1.001	50928	13687	2400	6000	6		M
391.8127	31.728	31.714	1	1.001	55764	13940	1524	3810	9	0.91(1.05-1.43)	
	Empc Correction				41070	11037	1524	3810	7		
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	27866510	6647759	13942	34855	477		
403.8529	31.807	31.807	0	0.990	22215091	5292677	8715	21787	607	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.821	31.820	0	1.000	112314	29422	2400	6000	12		M
391.8127	31.821	31.820	0	1.000	88917	21489	1524	3810	14	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.140	1	1.014	250325	48520	2400	6000	20		
391.8127	32.140	32.140	0	1.014	197210	41123	1524	3810	27	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.545	30.882	-80	0.929	2366680	275102	2400	6000	115		
391.8127	29.545	30.882	-80	0.929	1905101	219769	1524	3810	144	1.24(1.05-1.43)	
389.8157	30.583	30.882	-18	0.961	67772	12496	2400	6000	5		
391.8127	30.583	30.882	-18	0.961	60419	11134	1524	3810	7	1.12(1.05-1.43)	
389.8157	30.955	30.882	4	0.973	824949	156591	2400	6000	65		
391.8127	30.955	30.882	4	0.973	665836	127472	1524	3810	84	1.24(1.05-1.43)	
389.8157	31.168	30.882	17	0.980	66442	15986	2400	6000	7		
391.8127	31.155	30.882	16	0.979	72280	16851	1524	3810	11	0.92(1.05-1.43)	
	Empc Correction				53582	12891	1524	3810	8		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	13878167	4454970	17250	43125	258		
419.8220	33.766	33.754	1	1.051	31478547	10152405	38766	96915	262	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.766	1	1.000	141592	43781	862	2155	51		
409.7789	33.766	33.766	0	1.000	129271	40440	380	950	106	1.10(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.848	34.847	0	1.084	13777536	3713711	17250	43125	215		
419.8220	34.848	34.847	0	1.084	31916950	8576984	38766	96915	221	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.860	34.860	0	1.000	66029	17059	862	2155	20		M
409.7789	34.860	34.860	0	1.000	66141	20094	380	950	53	1.00(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDF											M
407.7818	34.070	34.319	-15	1.009	25737	8637	862	2155	10		M
409.7789	34.070	34.319	-15	1.009	25530	7296	380	950	19	1.01(0.88-1.20)	M
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.075	19279225	5386700	8276	20690	651		
437.8140	34.556	34.556	0	1.075	19700162	5587672	9228	23070	606	0.98(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	4008639	1151508	8203	20507	140		
425.7737	34.568	34.568	0	1.000	3847533	1121866	7480	18700	150	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.021	34.301	-17	0.985	8406417	2563497	8203	20507	313		
425.7737	34.021	34.301	-17	0.985	8200223	2426659	7480	18700	324	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.926	36.914	1	1.149	29195687	7254042	3510	8775	2067		
471.7750	36.926	36.914	1	1.149	33606098	8221333	3252	8130	2528	0.87(0.76-1.02)	
OCDF											M
441.7428	37.022	37.010	1	1.003	196648	49382	272	680	182		M
443.7399	37.010	37.010	0	1.002	227378	53195	353	882	151	0.86(0.76-1.02)	M
OCDD											
457.7377	36.926	36.926	0	1.000	75732967	18673464	6004	15010	3110		
459.7348	36.926	36.926	0	1.000	84584761	21138415	7058	17645	2995	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d
Lims ID: 320-76788-A-20-A
Client ID: 11215702-072321-BN-SJSB105 (14-16)
Inject. Date: 14-Aug-2021 20:31:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 26

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	82367456	20285292

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	82367456	20285292

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.965	259356	70948	339218	91458	0.7097	0.76	
16.237	523053	114007	691642	158411	1.44	0.76	
16.464	549936	141219	679707	171801	1.46	0.81	
16.706	753193	186385	978315	236676	2.05	0.77	
16.993	8641604	2224858	11486626	2885937	23.9	0.75	
17.205	294408	69542	391586	98354	0.8134	0.75	
17.794	1277654	294773	1701400	390190	3.53	0.75	
18.036	258873	53416	333904	72696	0.7029	0.78	
19.185	1194595	260221	1588926	342302	3.30	0.75	
Signal Totals:							
	13752672	3415369	18191324	4447825			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	31943996	7863194				0.76	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 37.877 = (31943996 * 100.000) / (82367456 * 1.024)

Report Date: 18-Aug-2021 10:04:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d
Lims ID: 320-76788-A-20-A
Client ID: 11215702-072321-BN-SJSB105 (14-16)
Inject. Date: 14-Aug-2021 20:31:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 26

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	49275104	11331430

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	49275104	11331430

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.146	37381	10921	58176	14920	0.1546	0.64	RQ
16.146	37381	10921	48546	14183	0.1390		Empc Correction
16.388	48879	14675	76197	19404	0.2024	0.64	RQ
16.388	48879	14675	63479	19058	0.1818		Empc Correction
16.933	199225	51106	272933	75407	0.7640	0.73	
17.825	68792	21696	112330	27498	0.2931	0.61	RQ
17.825	68792	21696	89340	28176	0.2559		Empc Correction
17.961	78822	21709	110701	30339	0.3067	0.71	Ma
18.429	300040	70560	476460	90792	1.26	0.63	RQ
18.429	300040	70560	389662	91636	1.12		Empc Correction
Signal Totals:							
	733139	190667	974661	258799			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1839936	449027				0.66	RQMa
	1707800	449466					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.977 = (1839936 * 100.000) / (49275104 * 1.254)
Empc Amount: 2.764 = (1707800 * 100.000) / (49275104 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:04:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d
Lims ID: 320-76788-A-20-A
Client ID: 11215702-072321-BN-SJSB105 (14-16)
Inject. Date: 14-Aug-2021 20:31:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 26

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	63418385	11118453
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71544957	10940936

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	67481671	11029694

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.044	180222	29224	104613	18546	0.4059	1.72	
22.258	31405	7508	29007	5993	0.0861	1.08	RQMa
22.258	31405	7508	20261	4843	0.0736		Empc Correction
22.912	111064	18910	77076	12321	0.2681	1.44	
24.072	61824	10277	41065	5691	0.1466	1.51	M
25.694	16777	2502	8640	1489	0.0362	1.94	RQ
25.694	13391	2307	8640	1489	0.0314		Empc Correction
Signal Totals:							
	397906	68226	251655	42890			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	661693	112461				1.54	RQMa
	649561	111116					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.9430 = (661693 * 100.000) / (67481671 * 1.040)
Empc Amount: 0.9258 = (649561 * 100.000) / (67481671 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:04:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Lims ID:	320-76788-A-20-A		
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Inject. Date:	14-Aug-2021 20:31:33	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	26

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	43814735	6414015

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	43814735	6414015

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	135838	22970	105721	17845	0.5259	1.28	RQ
21.249	135838	22970	87637	14819	0.4865		Empc Correction
21.999	348976	63102	234128	43885	1.27	1.49	
22.981	22087	3504	14581	2873	0.0798	1.51	
23.281	67145	12133	41568	7194	0.2367	1.62	
23.472	146783	21529	93300	14501	0.5226	1.57	
Signal Totals:							
	720829	123238	471214	83272			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1210127	209536				1.47	RQ
	1192043	206510					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.634 = (1210127 * 100.000) / (43814735 * 1.048)

Empc Amount: 2.595 = (1192043 * 100.000) / (43814735 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d
Lims ID: 320-76788-A-20-A
Client ID: 11215702-072321-BN-SJSB105 (14-16)
Inject. Date: 14-Aug-2021 20:31:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 26

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	63495955	11384247
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	59732543	11029994
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	55929937	13073974
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	51219297	12782642

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	57594433	12067714

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.360	34482	5528	28005	3757	0.0955	1.23	
31.435	7782	1967	7050	1671	0.0227	1.10	Ma
32.433	28232	5854	25309	6975	0.0818	1.12	Ma
Signal Totals:							
	70496	13349	60364	12403			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	130860	25752				1.17	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2000 = (130860 * 100.000) / (57594433 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:04:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Lims ID:	320-76788-A-20-A		
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Inject. Date:	14-Aug-2021 20:31:33	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	26

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	43121110	11754797
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	50081601	11940436
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	46601355	11847616

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.545	2366680	275102	1905101	219769	8.60	1.24	
30.583	67772	12496	60419	11134	0.2582	1.12	
30.955	824949	156591	665836	127472	3.00	1.24	
31.168	66442	15986	72280	16851	0.2794	0.92	RQ
31.168	66442	15986	53582	12891	0.2417		Empc Correction
Signal Totals:							
	3325843	460175	2684938	371266			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6029479	835401				1.23	RQ
	6010781	831441					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 12.143 = (6029479 * 100.000) / (46601355 * 1.066)

Empc Amount: 12.105 = (6010781 * 100.000) / (46601355 * 1.066)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:04:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d
Lims ID: 320-76788-A-20-A
Client ID: 11215702-072321-BN-SJSB105 (14-16)
Inject. Date: 14-Aug-2021 20:31:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 26

Non-2,3,7,8-sub-HpCDF, RT: 34.319

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	45356714	14607375
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	45694486	12290695

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	45525600	13449035

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.070	25737	8637	25530	7296	0.0816	1.01	M
Signal Totals:							
	25737	8637	25530	7296			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	51267	15933				1.01	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0816 = (51267 * 100.000) / (45525600 * 1.379)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 10:04:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d
Lims ID: 320-76788-A-20-A
Client ID: 11215702-072321-BN-SJSB105 (14-16)
Inject. Date: 14-Aug-2021 20:31:33 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 26

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	38979387	10974372

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	38979387	10974372

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	8406417	2563497	8200223	2426659	38.9	1.03	
Signal Totals:							
	8406417	2563497	8200223	2426659			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	16606640	4990156				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 38.932 = (16606640 * 100.000) / (38979387 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.08
Area: 3644353
Amount: 13.360004
Amount Units: pg/ul

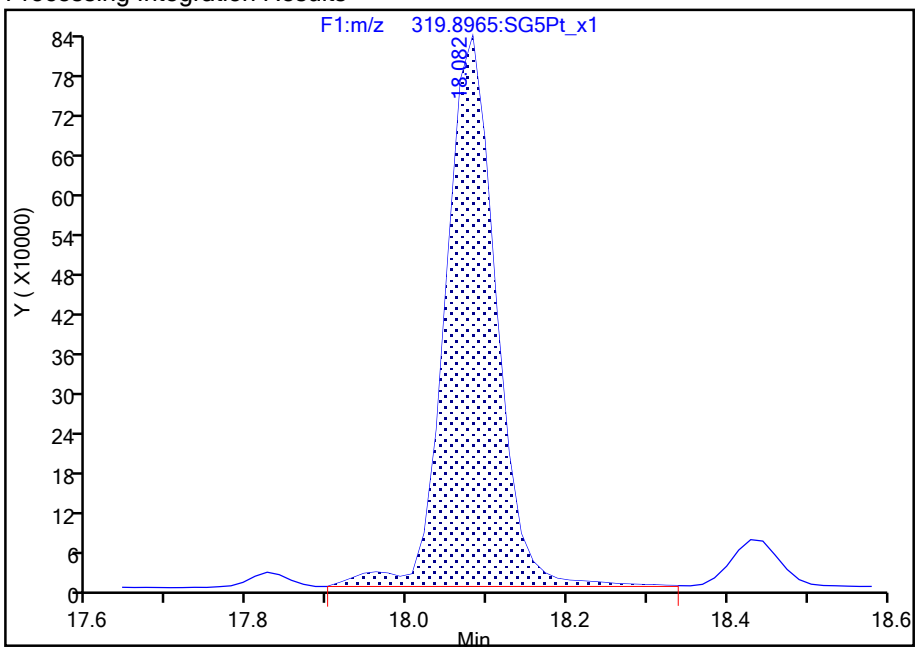

Manual Integration Results

RT: 18.08
Area: 3565530
Amount: 13.232452
Amount Units: pg/ul

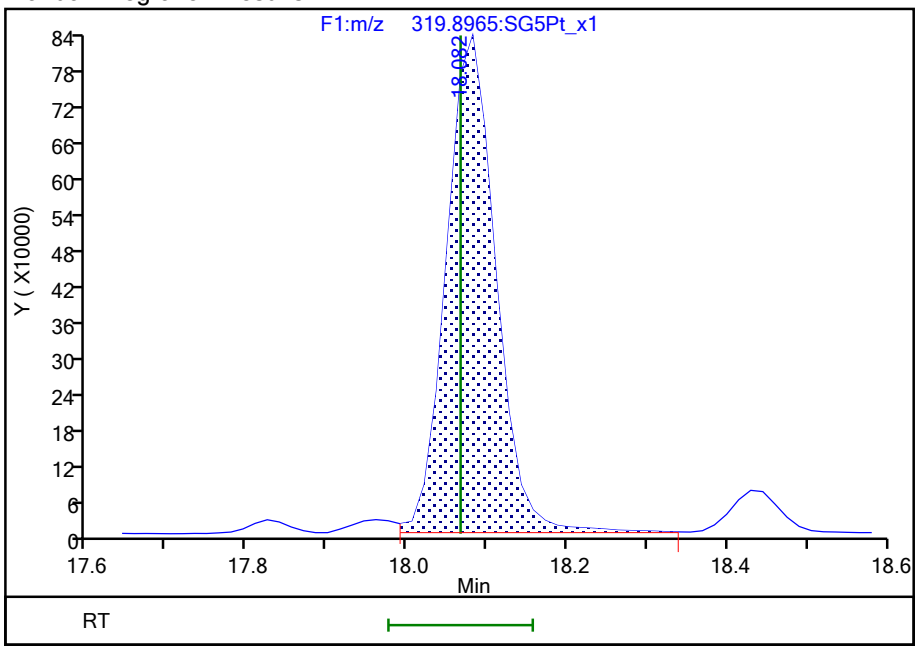

Reviewer: dadunj, 18-Aug-2021 10:01:31

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:04:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.80- 19.20)

Signal: 1

Not Detected

RT: 15.80- 19.20

Processing Integration Results

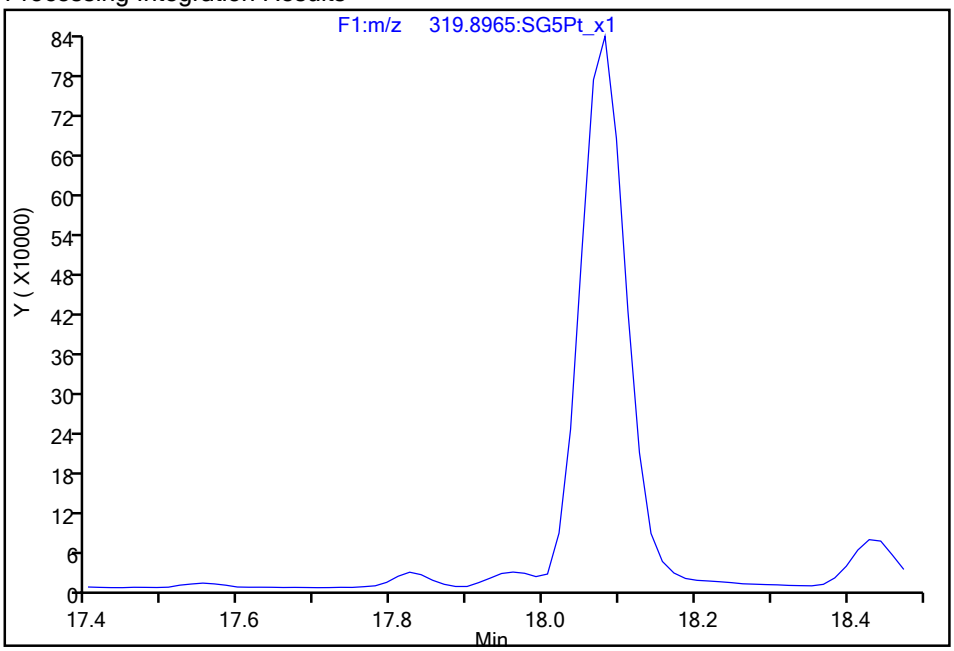

RT = 17.961 Area = 78822 M

Manual Integration Results

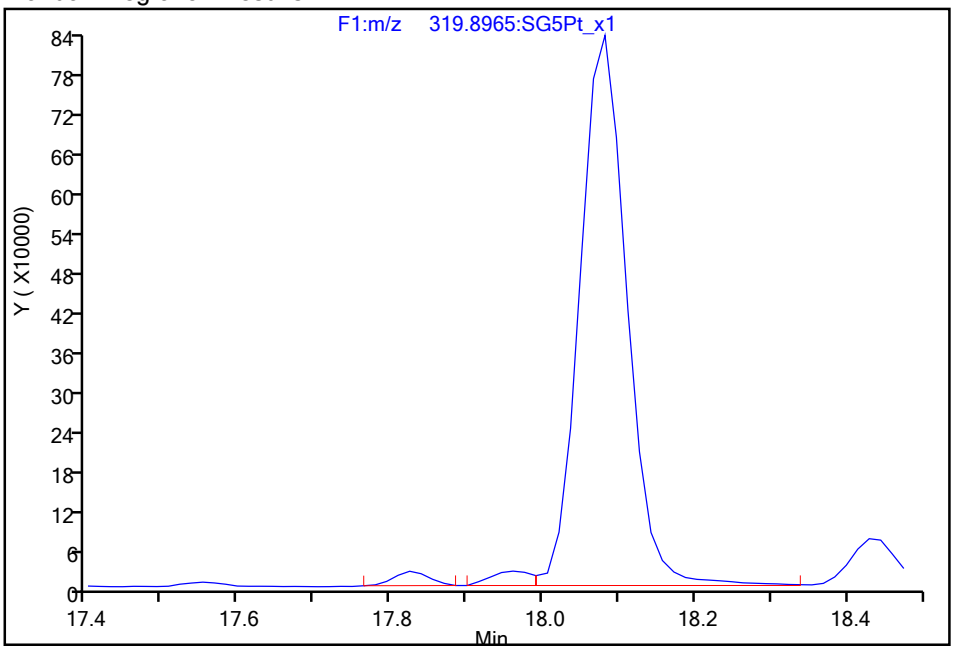

Reviewer: dadunj, 18-Aug-2021 10:01:36

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.39
Area: 425963
Amount: 0.996047
Amount Units: pg/ul

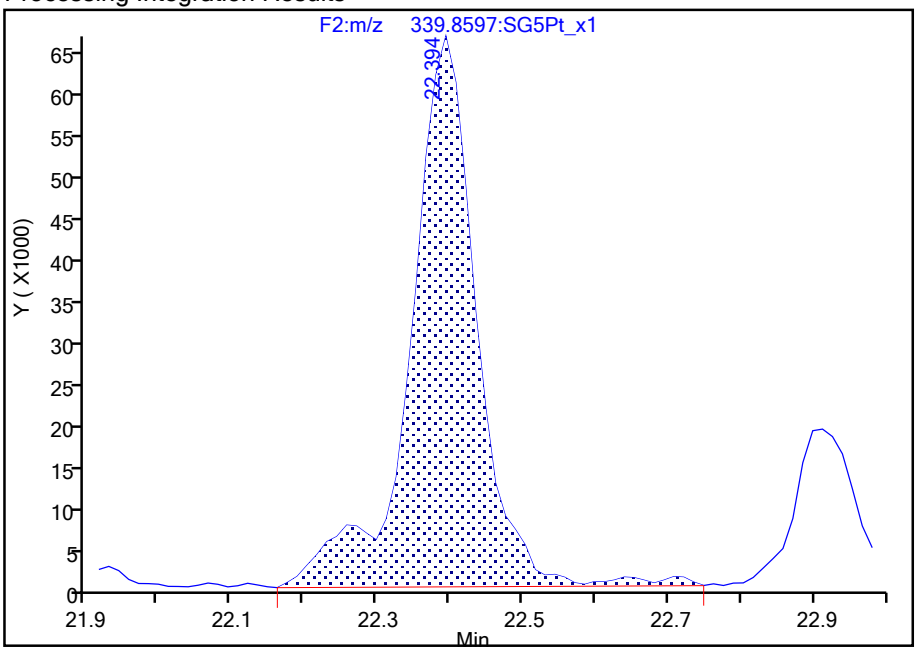

Manual Integration Results

RT: 22.39
Area: 386973
Amount: 0.929397
Amount Units: pg/ul

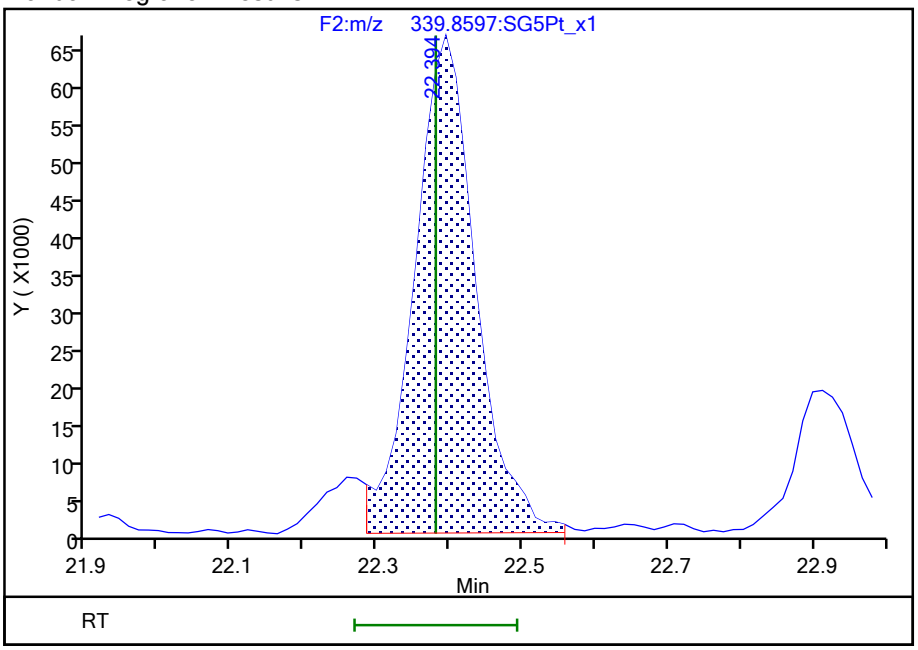

Reviewer: dadunj, 18-Aug-2021 10:01:46

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.38
Area: 244331
Amount: 0.996047
Amount Units: pg/ul

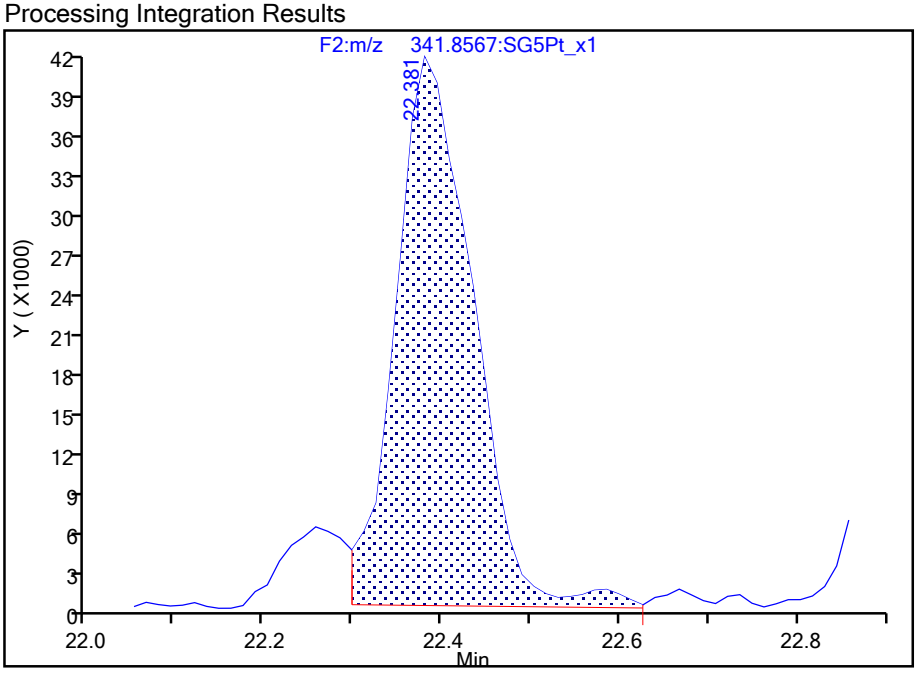

Manual Integration Results

RT: 22.38
Area: 238469
Amount: 0.929397
Amount Units: pg/ul

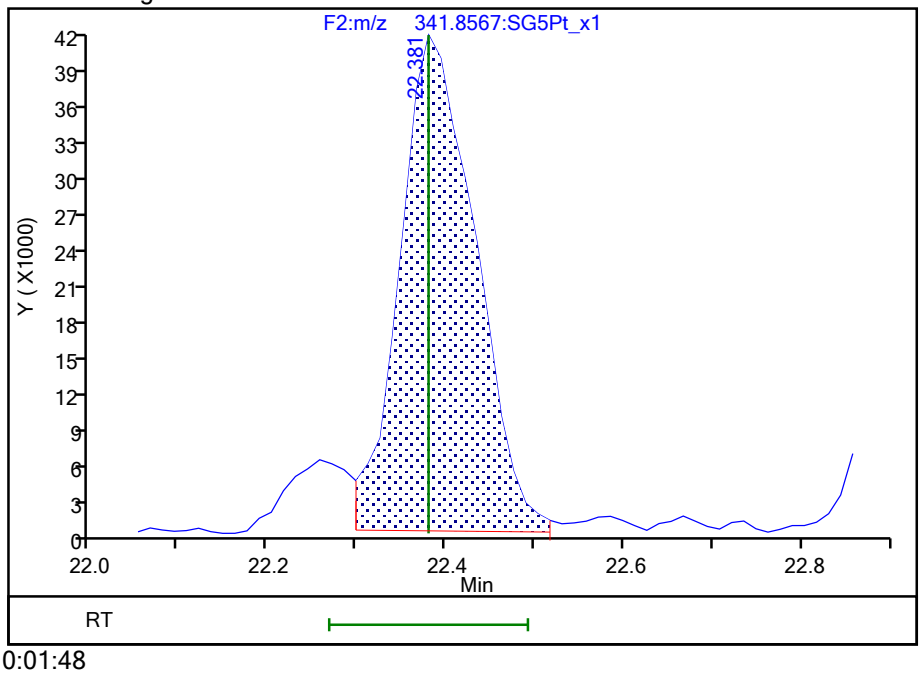

Reviewer: dadunj, 18-Aug-2021 10:01:48
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 25.71)

Signal: 1

Not Detected
RT: 20.77- 25.71

Processing Integration Results

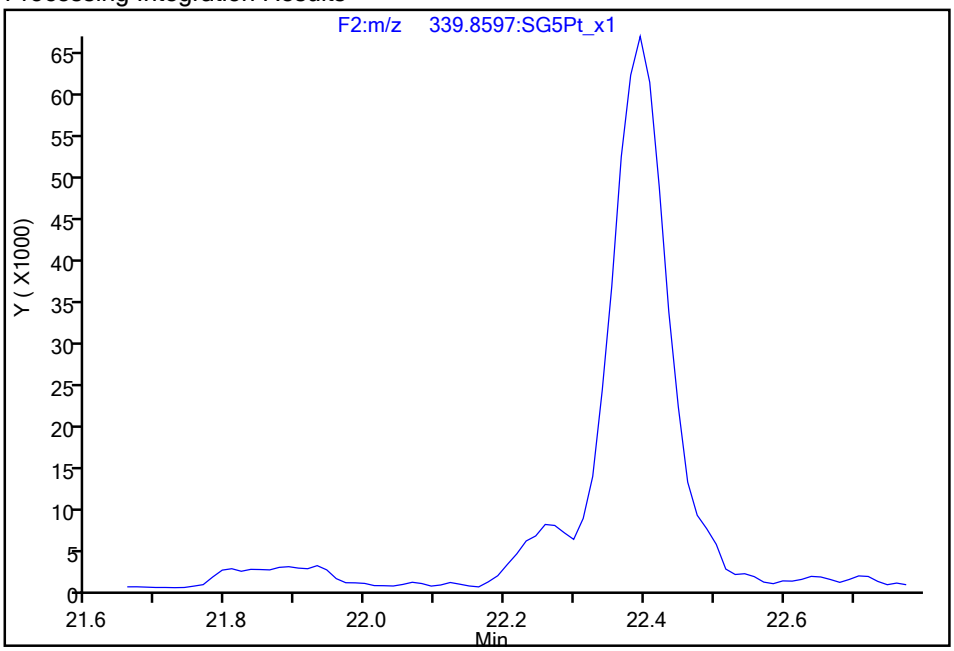

RT = 22.258 Area = 31405 M

Manual Integration Results

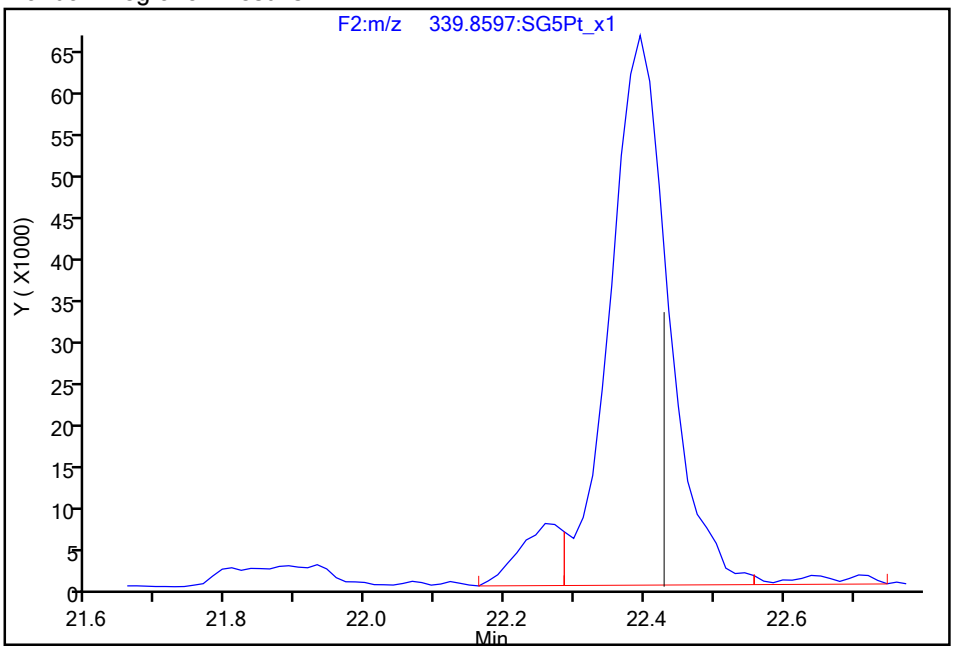

Reviewer: dadunj, 18-Aug-2021 10:03:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 25.71)

Signal: 1

Processing Integration Results

RT = 24.072 Area = 65937

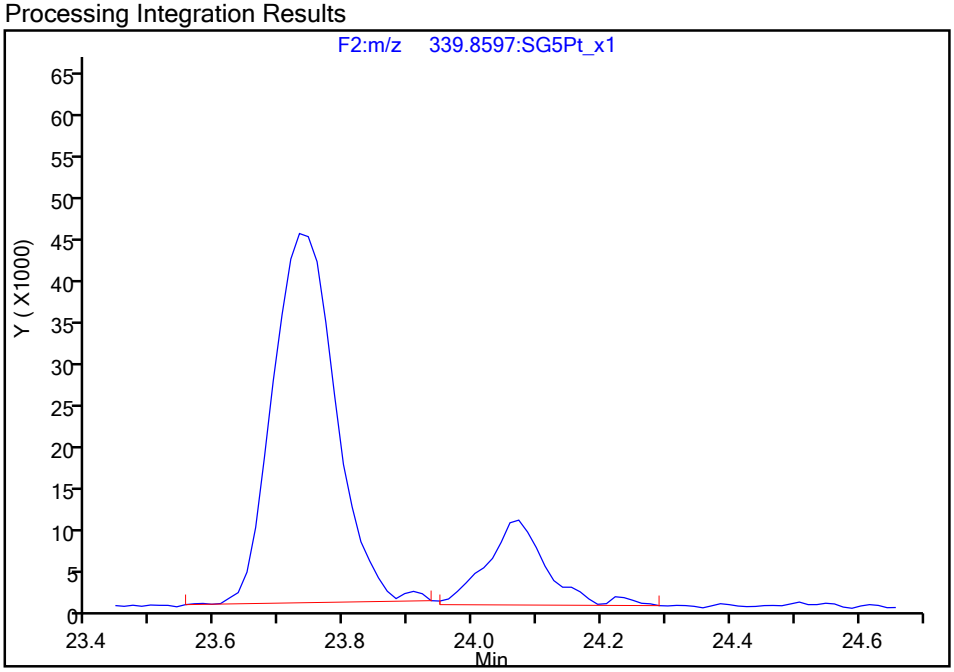

Manual Integration Results

RT = 24.072 Area = 61824 M

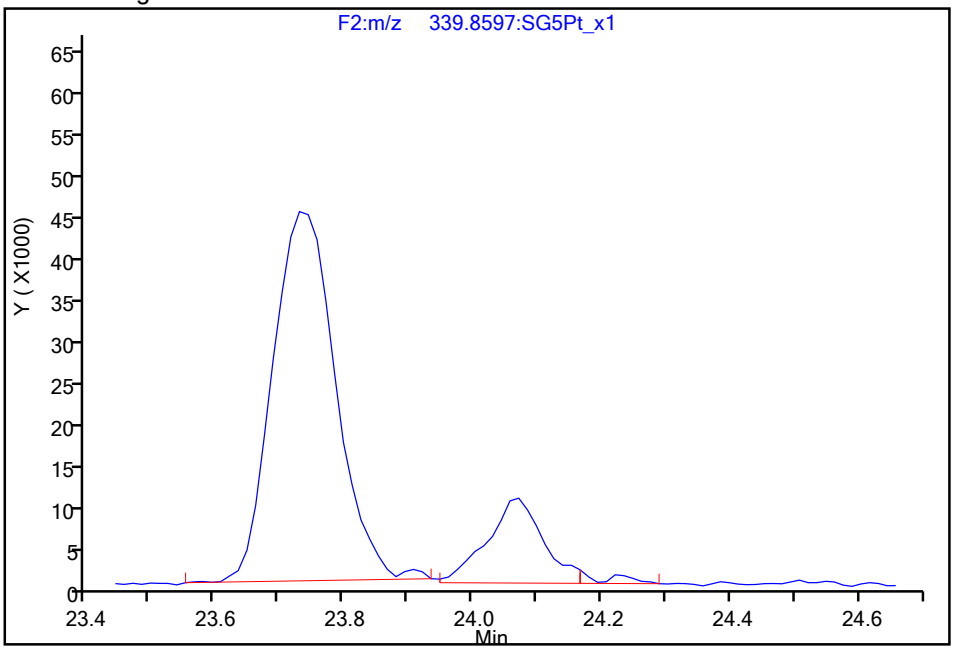

Reviewer: dadunj, 18-Aug-2021 10:03:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 2, m/z: 341.8567, RT: (20.77- 25.71)

Signal: 2

Processing Integration Results

RT = 24.058 Area = 44680

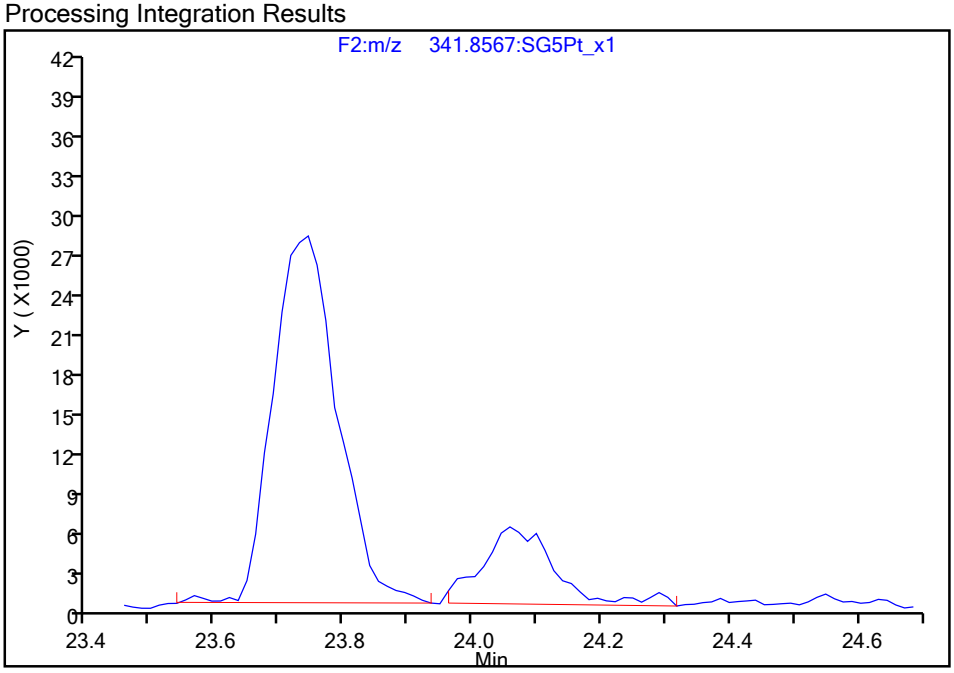

Manual Integration Results

RT = 24.058 Area = 41065 M

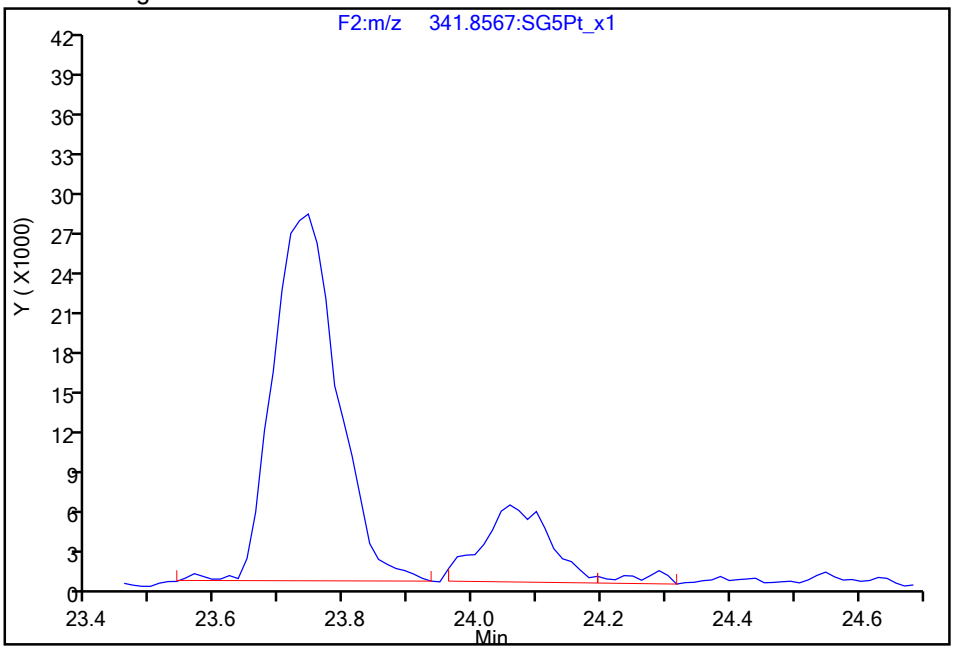

Reviewer: dadunj, 18-Aug-2021 10:03:50

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.54
Area: 18450
Amount: 0.069179
Amount Units: pg/ul

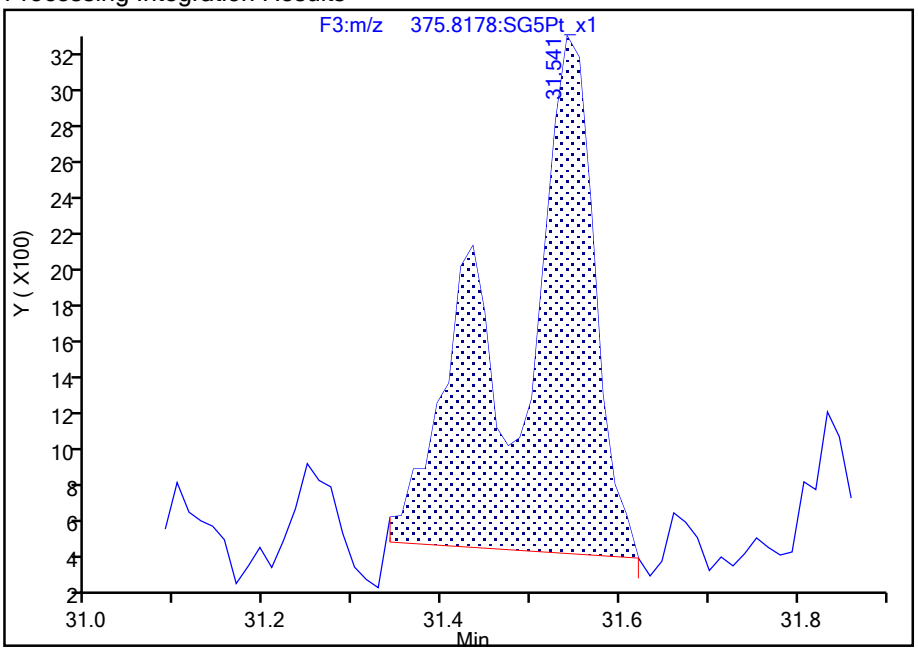

Manual Integration Results

RT: 31.54
Area: 11386
Amount: 0.058361
Amount Units: pg/ul

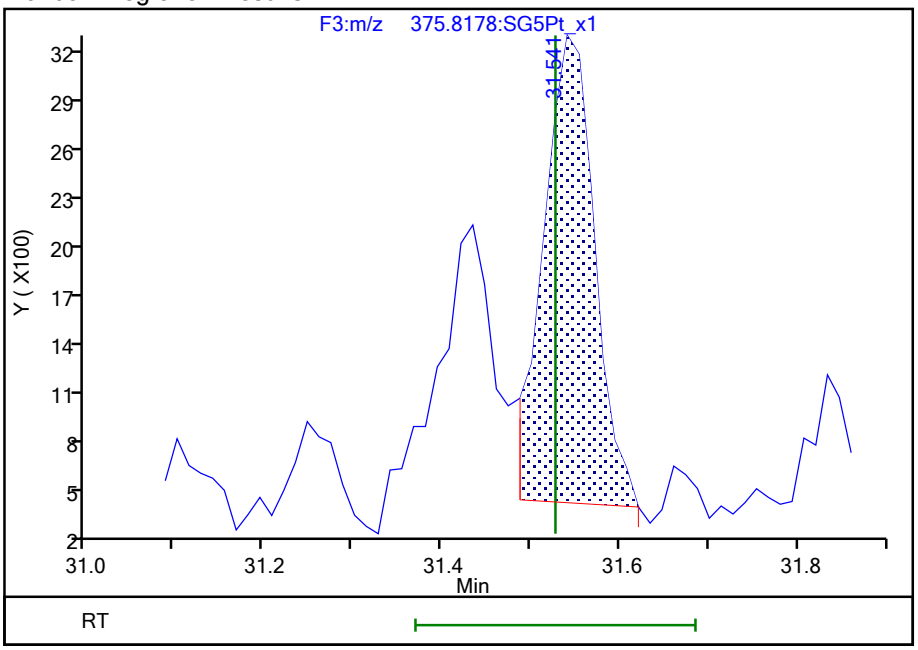

Reviewer: dadunj, 18-Aug-2021 10:02:16

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.42
Area: 42574
Amount: 0.118524
Amount Units: pg/ul

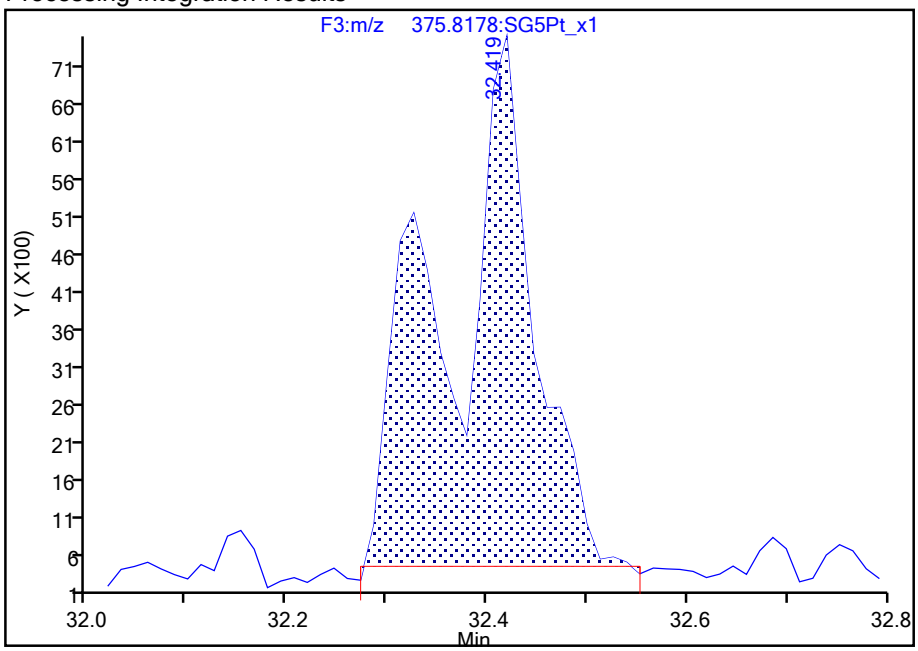

Manual Integration Results

RT: 32.33
Area: 17264
Amount: 0.067761
Amount Units: pg/ul

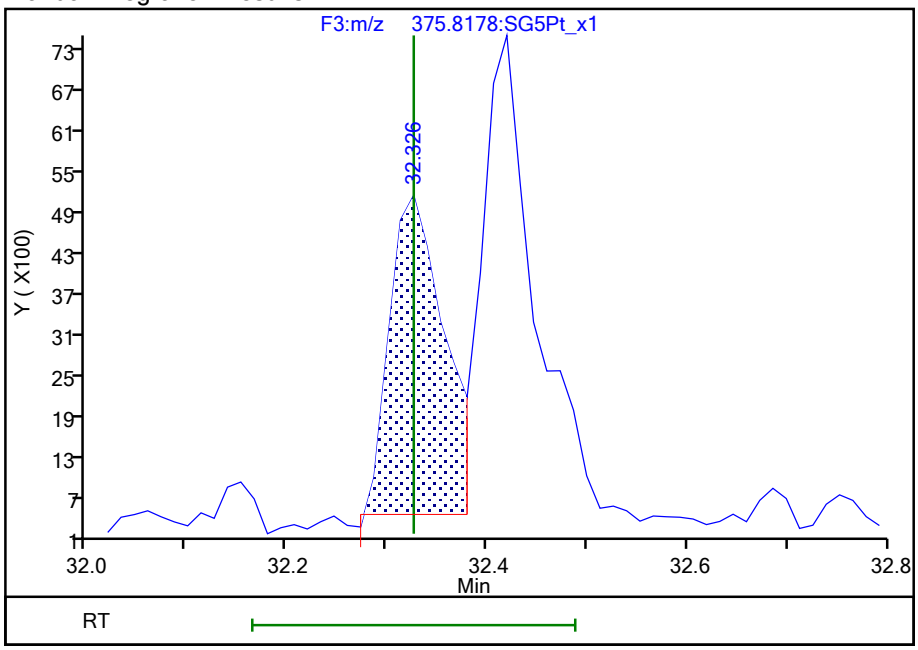

Reviewer: dadunj, 18-Aug-2021 10:02:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 3

Processing Integration Results

RT: 32.43
Area: 70806
Amount: 0.118524
Amount Units: pg/ul

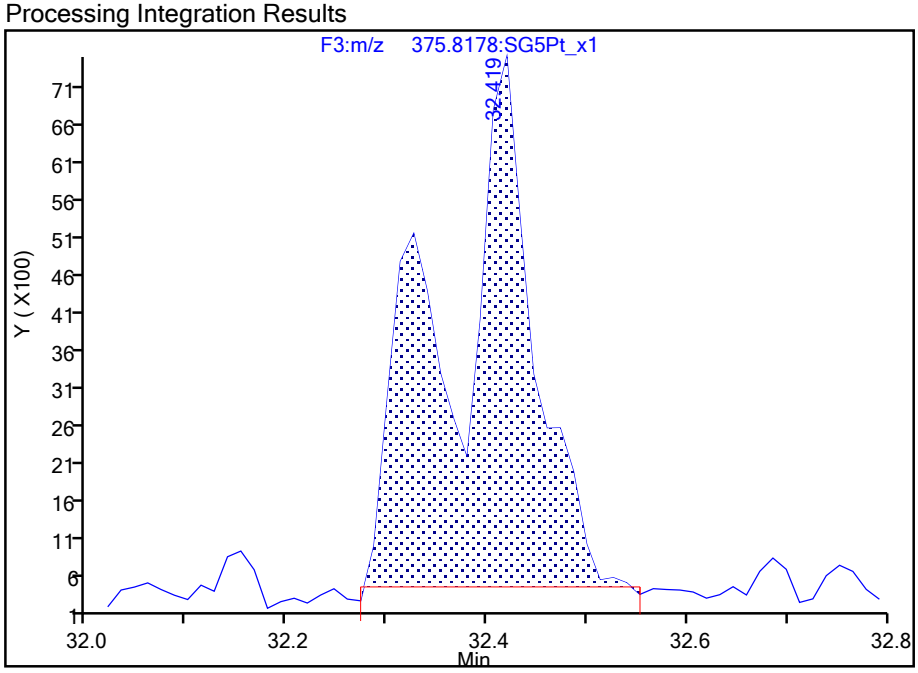

Manual Integration Results

RT: 32.34
Area: 40480
Amount: 0.067761
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 10:02:23
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.43
Area: 28232
Amount: 0.118524
Amount Units: pg/ul

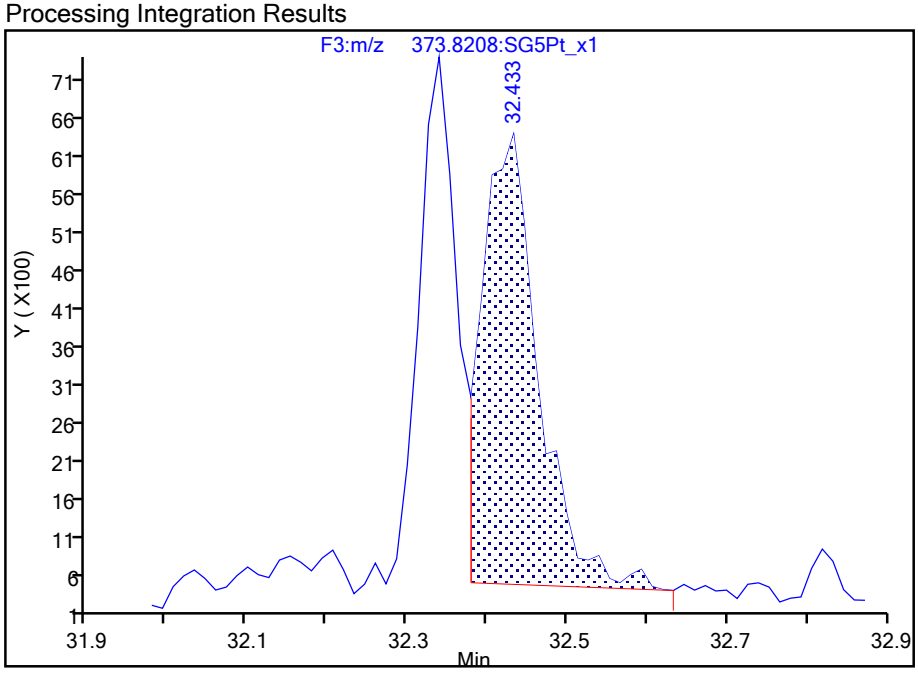

Manual Integration Results

RT: 32.34
Area: 23216
Amount: 0.067761
Amount Units: pg/ul

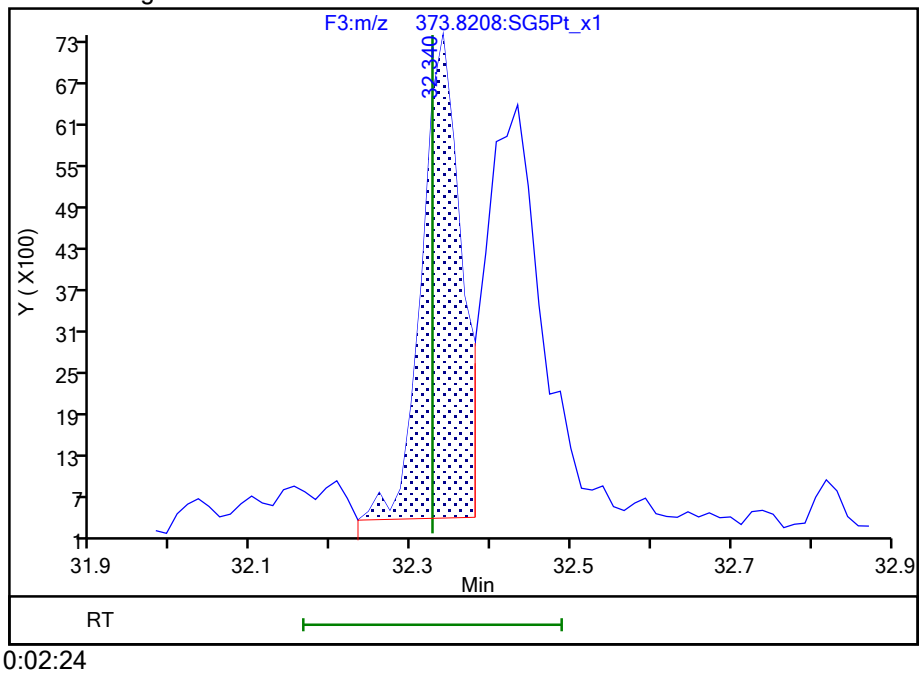

Reviewer: dadunj, 18-Aug-2021 10:02:24

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 31.435 Area = 7782

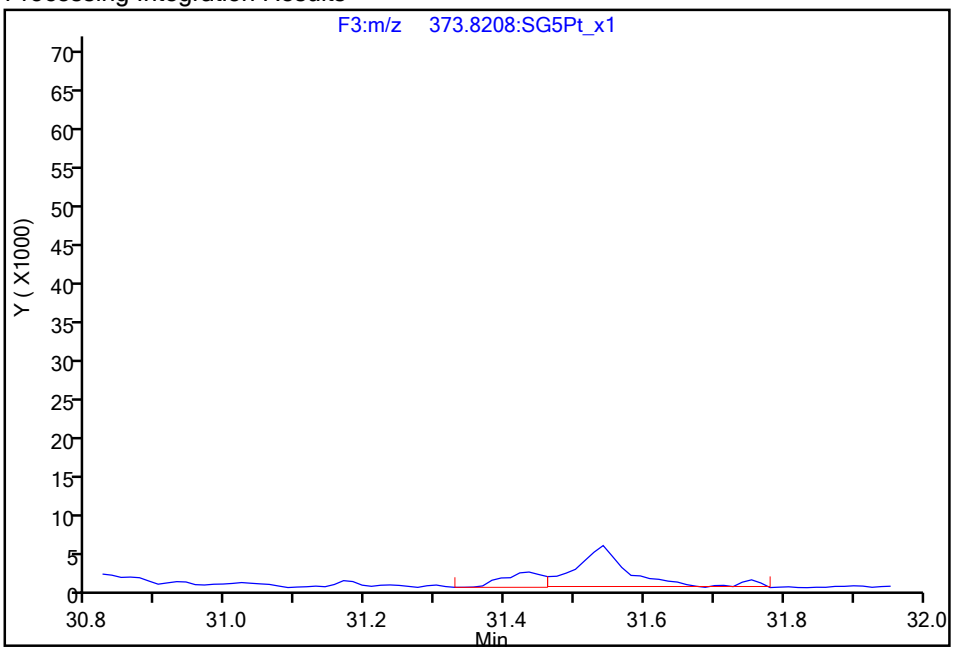

Manual Integration Results

RT = 31.435 Area = 7782

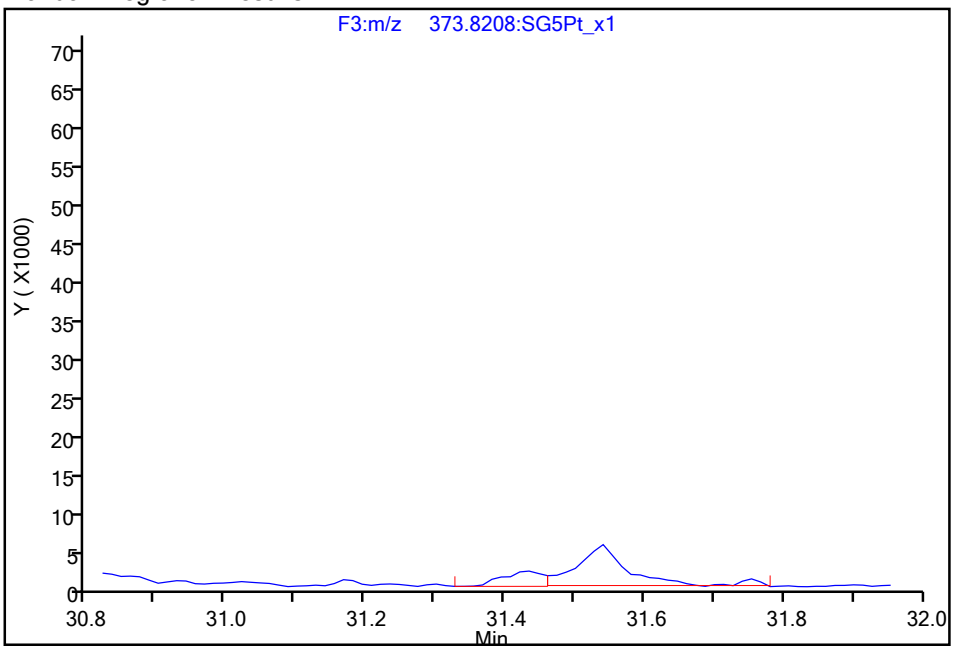

Reviewer: dadunj, 18-Aug-2021 10:02:41

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (27.94- 32.45)

Signal: 1

Processing Integration Results

RT = 32.433 Area = 28232

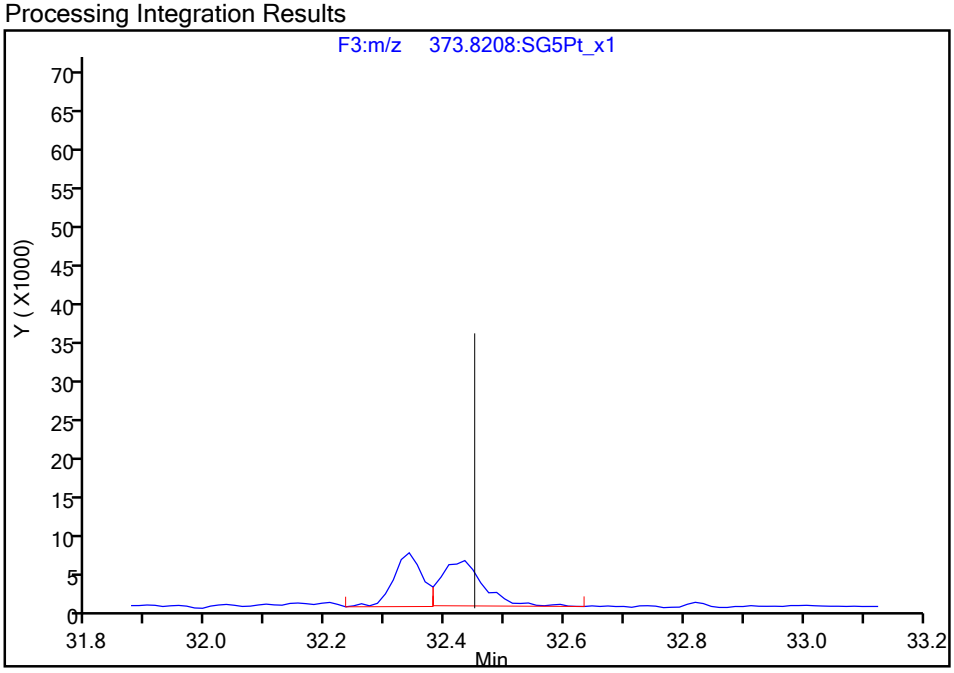

Manual Integration Results

RT = 32.433 Area = 28232

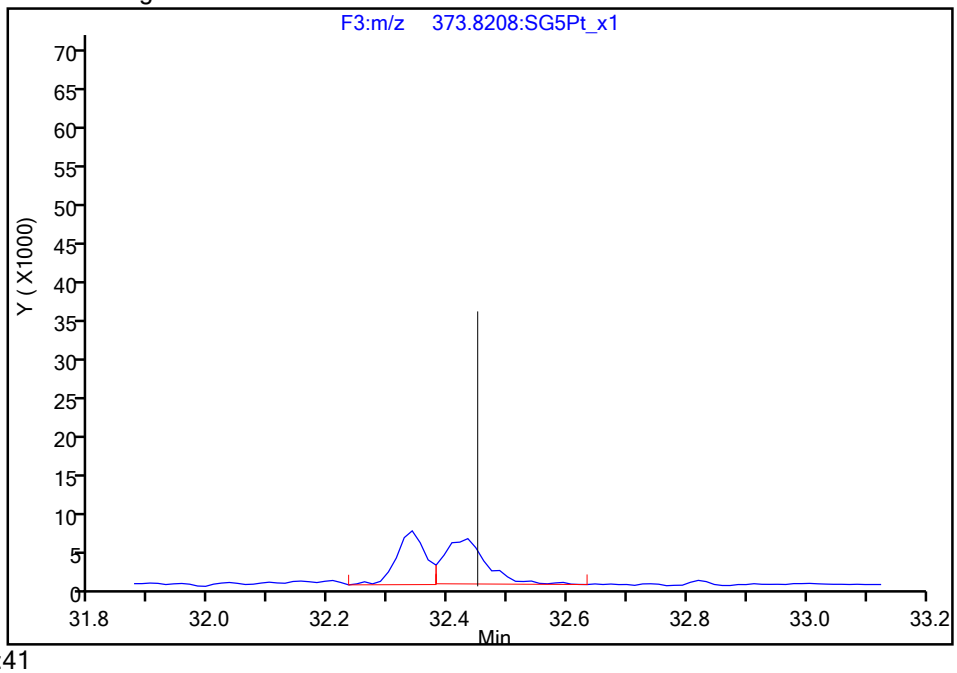

Reviewer: dadunj, 18-Aug-2021 10:02:41

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.82
Area: 88917
Amount: 0.549787
Amount Units: pg/ul

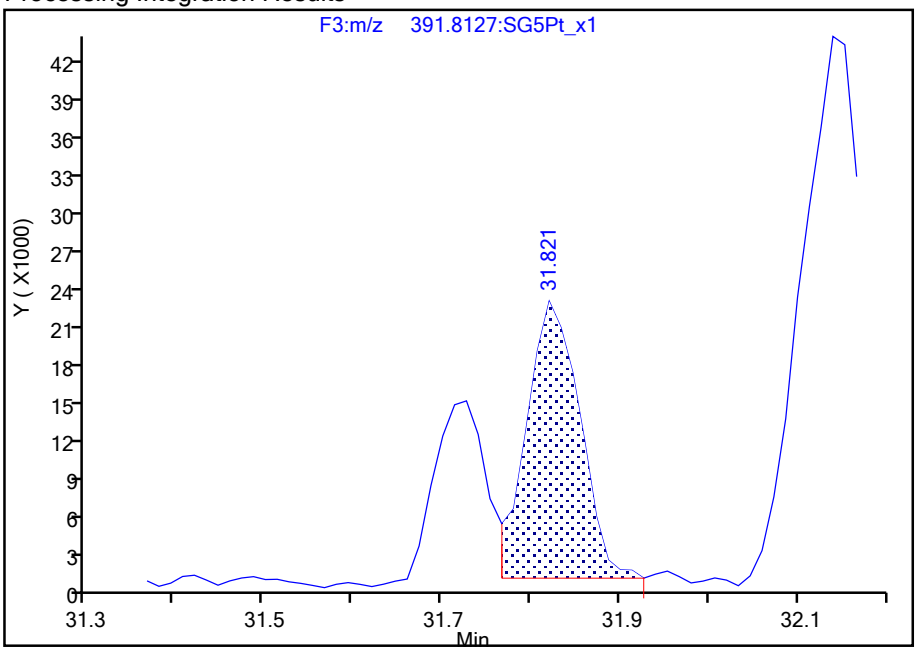

Manual Integration Results

RT: 31.73
Area: 55764
Amount: 0.232534
Amount Units: pg/ul

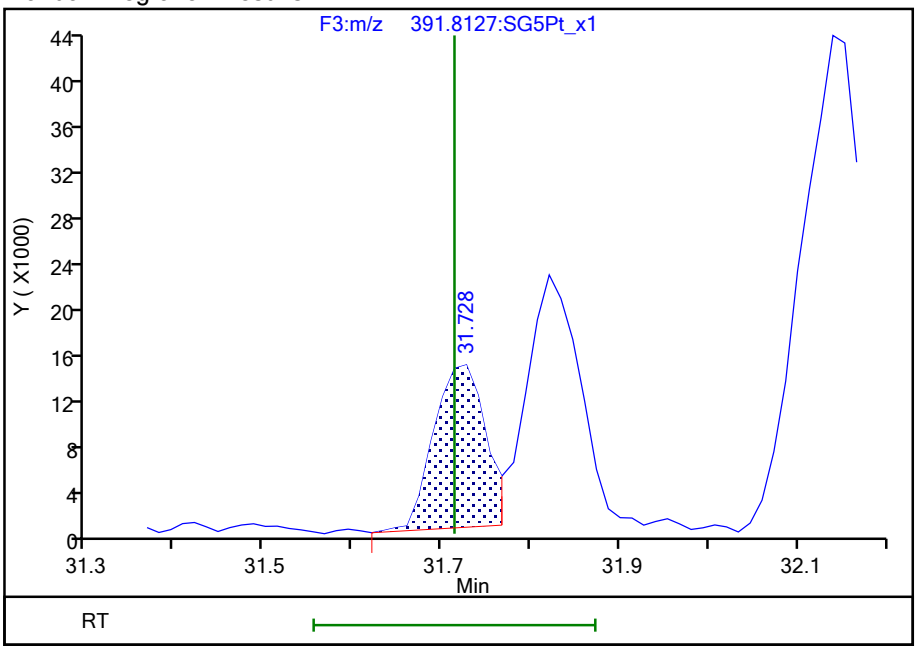

Reviewer: dadunj, 18-Aug-2021 10:02:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

RT: 31.82
Area: 252255
Amount: 0.549787
Amount Units: pg/ul

Processing Integration Results

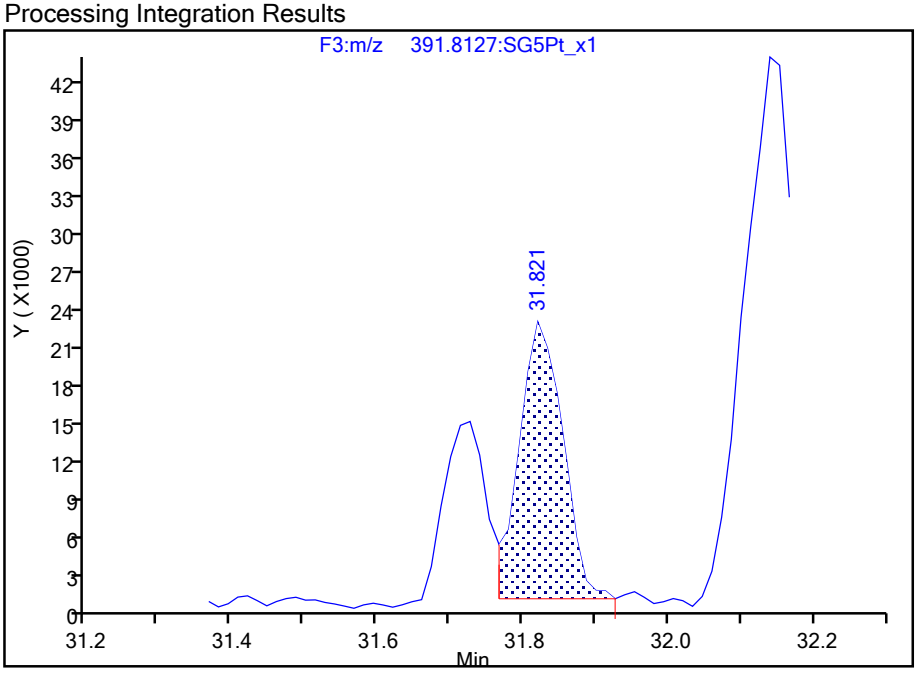

Manual Integration Results

RT: 31.73
Area: 106692
Amount: 0.232534
Amount Units: pg/ul
Reviewer: dadunj, 18-Aug-2021 10:02:50
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.82
Area: 163338
Amount: 0.549787
Amount Units: pg/ul

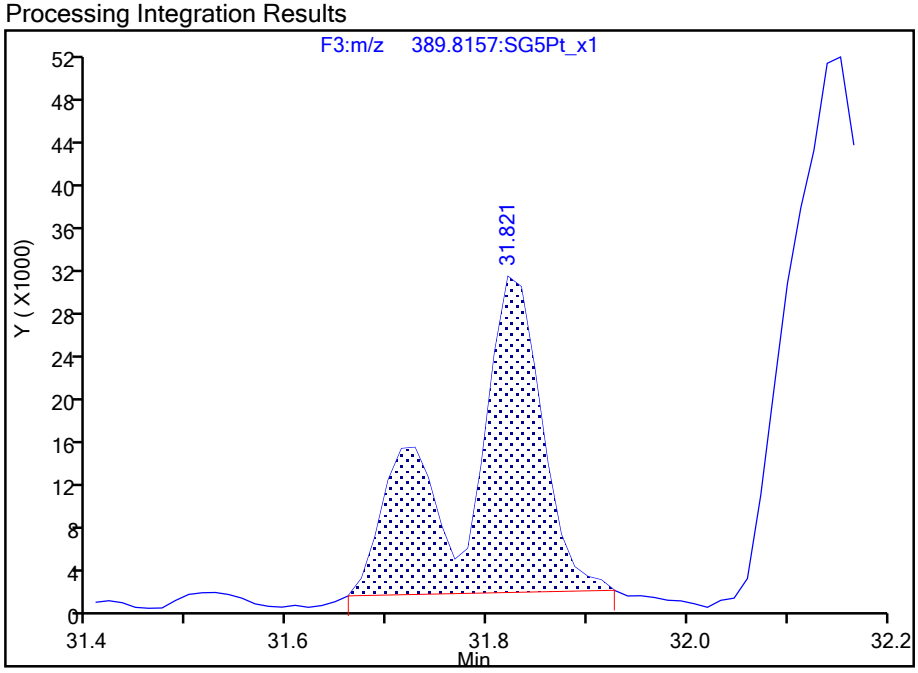

Manual Integration Results

RT: 31.73
Area: 50928
Amount: 0.232534
Amount Units: pg/ul

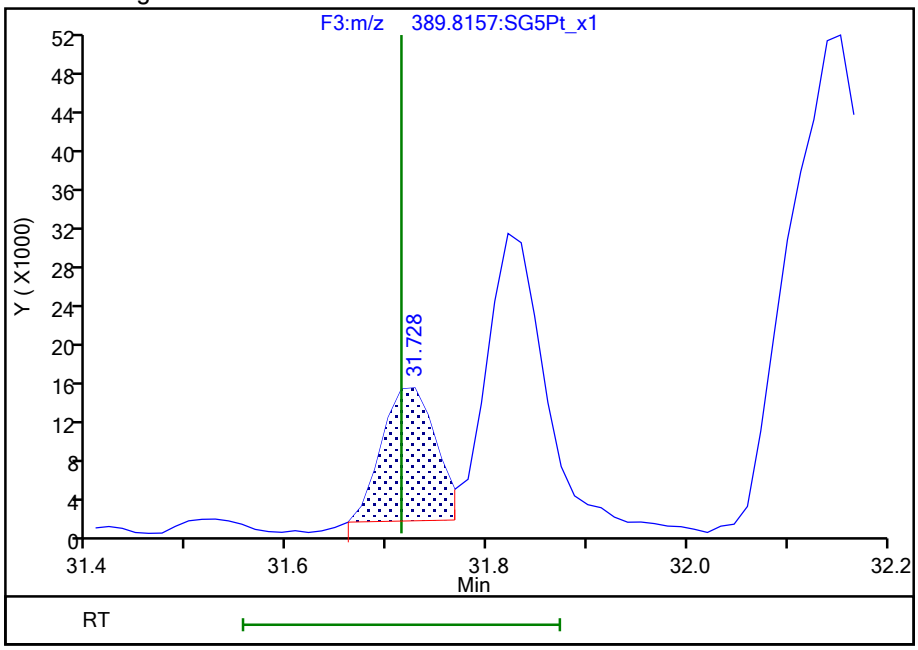

Reviewer: dadunj, 18-Aug-2021 10:02:52

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.82
Area: 163338
Amount: 0.503648
Amount Units: pg/ul

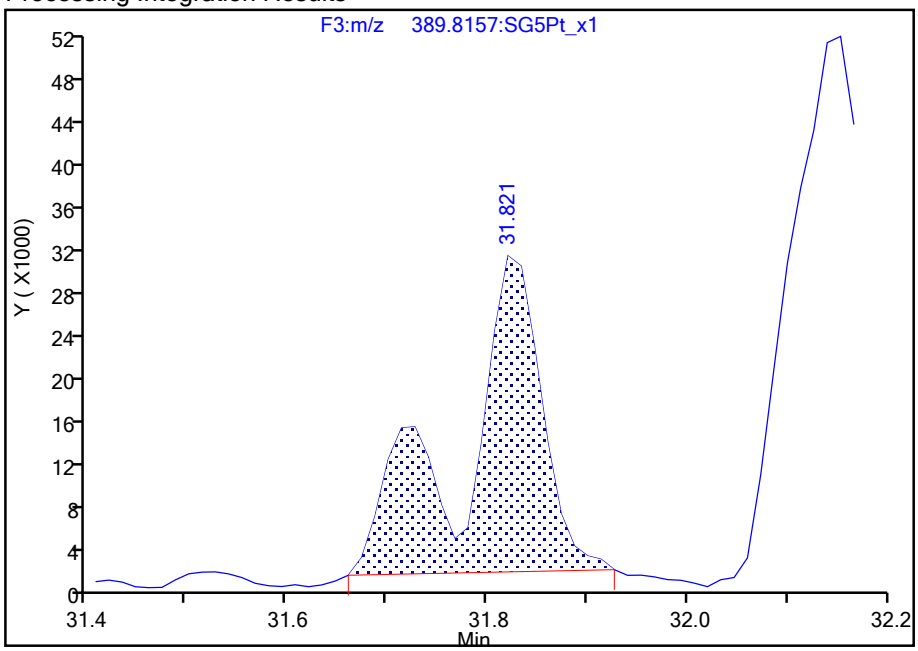

Manual Integration Results

RT: 31.82
Area: 112314
Amount: 0.401775
Amount Units: pg/ul

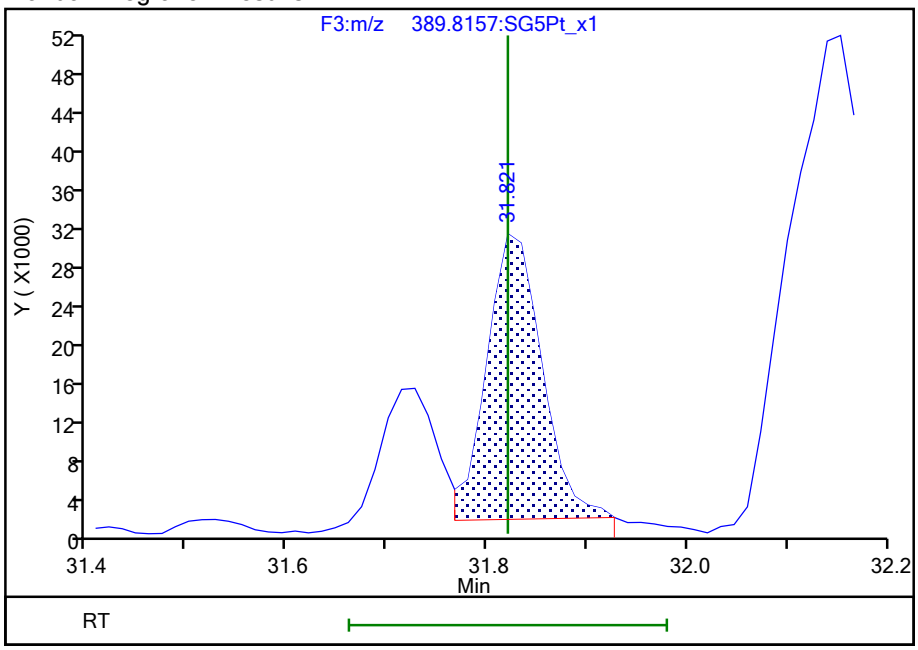

Reviewer: dadunj, 18-Aug-2021 10:02:50

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 2

Processing Integration Results

RT: 34.86
Area: 75345
Amount: 0.249588
Amount Units: pg/ul

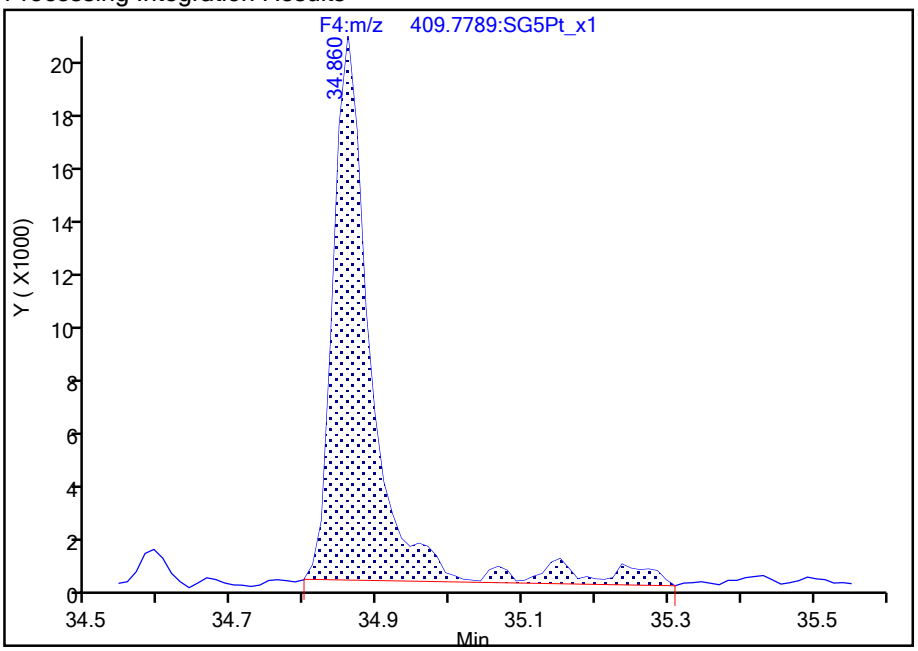

Manual Integration Results

RT: 34.86
Area: 66141
Amount: 0.219562
Amount Units: pg/ul

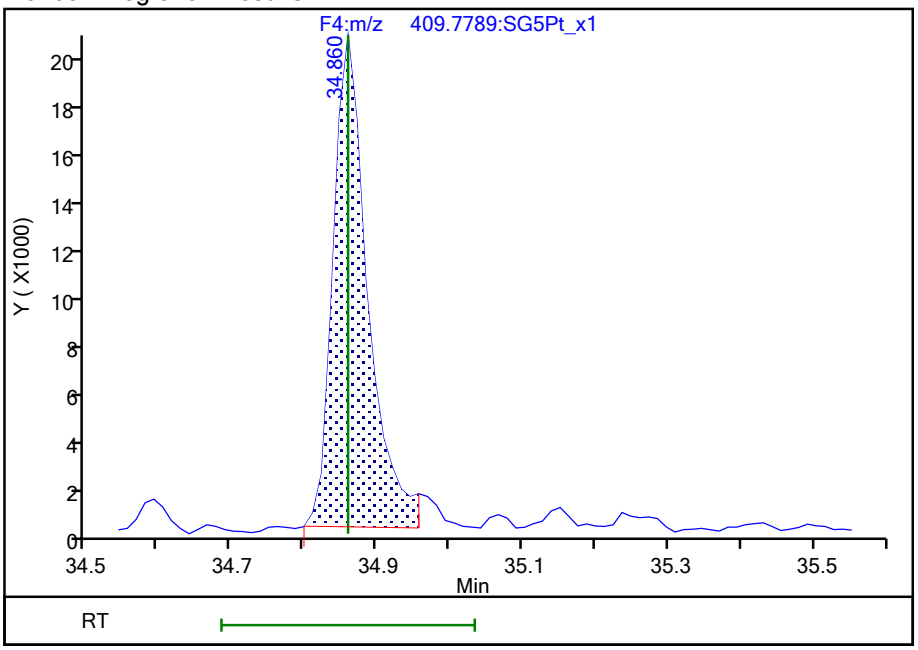

Reviewer: dadunj, 18-Aug-2021 10:03:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

RT: 34.86
Area: 74900
Amount: 0.249588
Amount Units: pg/ul

Processing Integration Results

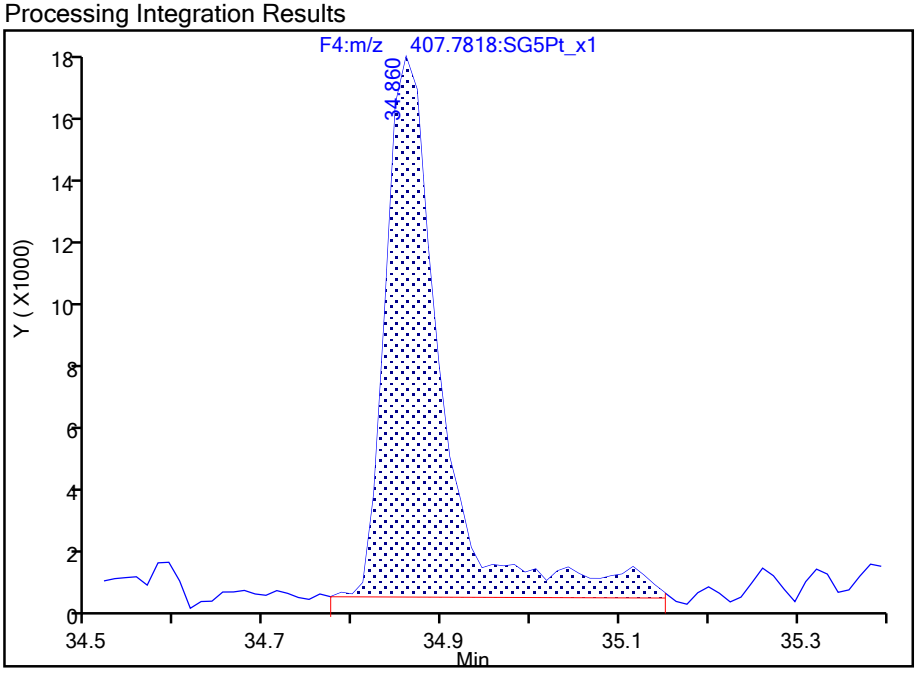

RT: 34.86
Area: 66029
Amount: 0.219562
Amount Units: pg/ul

Manual Integration Results

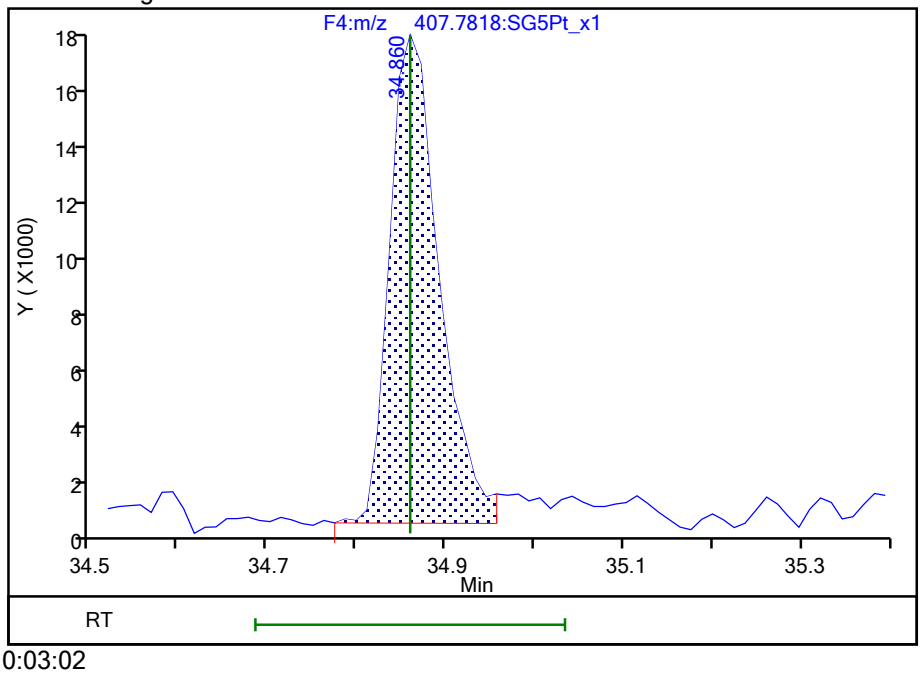

Reviewer: dadunj, 18-Aug-2021 10:03:02
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:04:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7818, RT: (33.75- 34.89)

Signal: 1

Processing Integration Results

RT = 34.070 Area = 39197

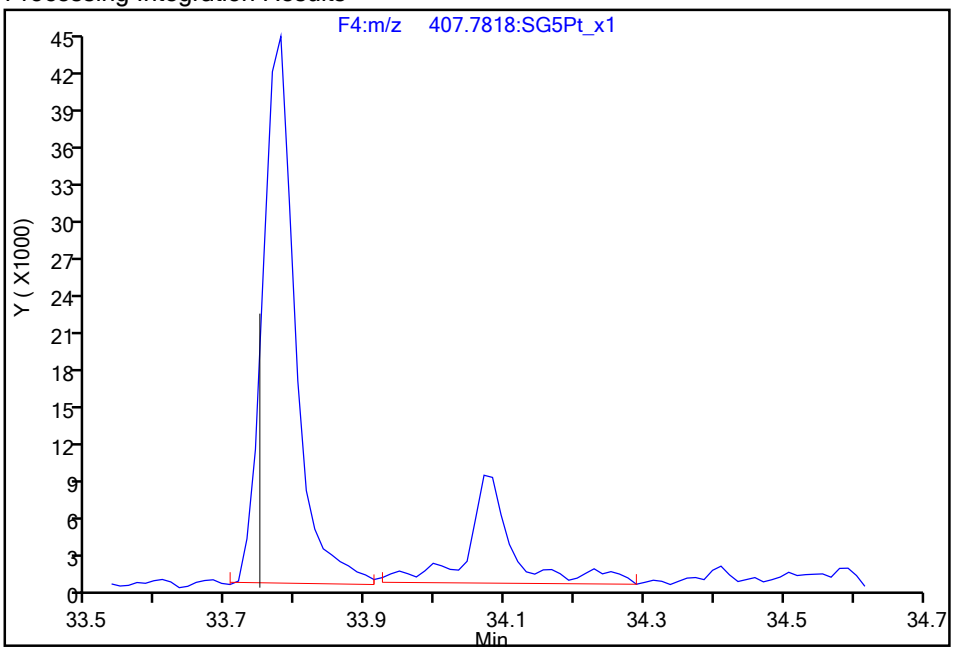

Manual Integration Results

RT = 34.070 Area = 25737 M

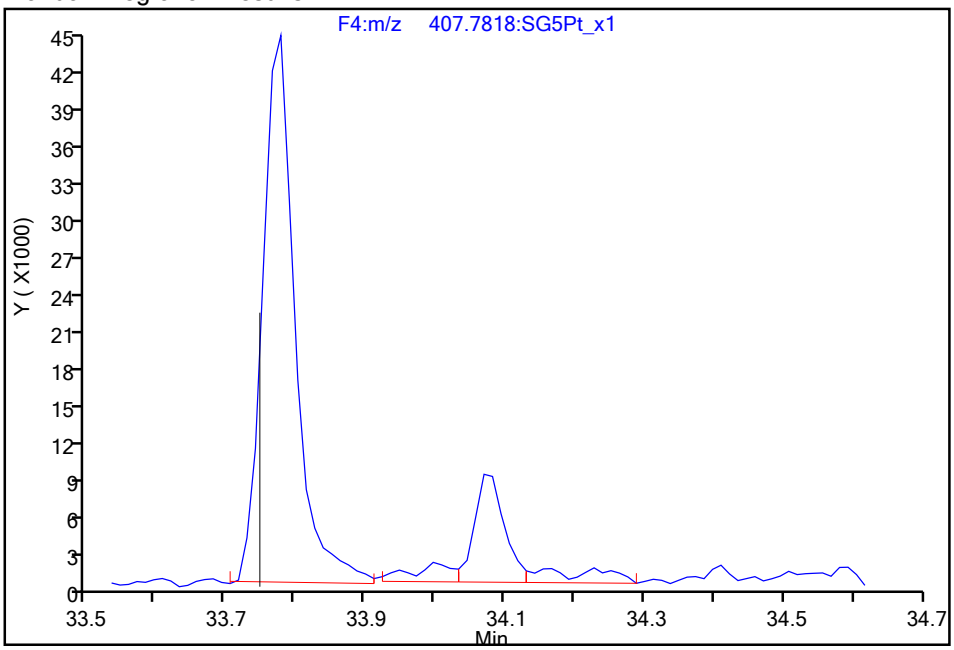

Reviewer: dadunj, 18-Aug-2021 10:03:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:04:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 2, m/z: 409.7789, RT: (33.75- 34.89)

Signal: 2

Processing Integration Results

RT = 34.070 Area = 30770

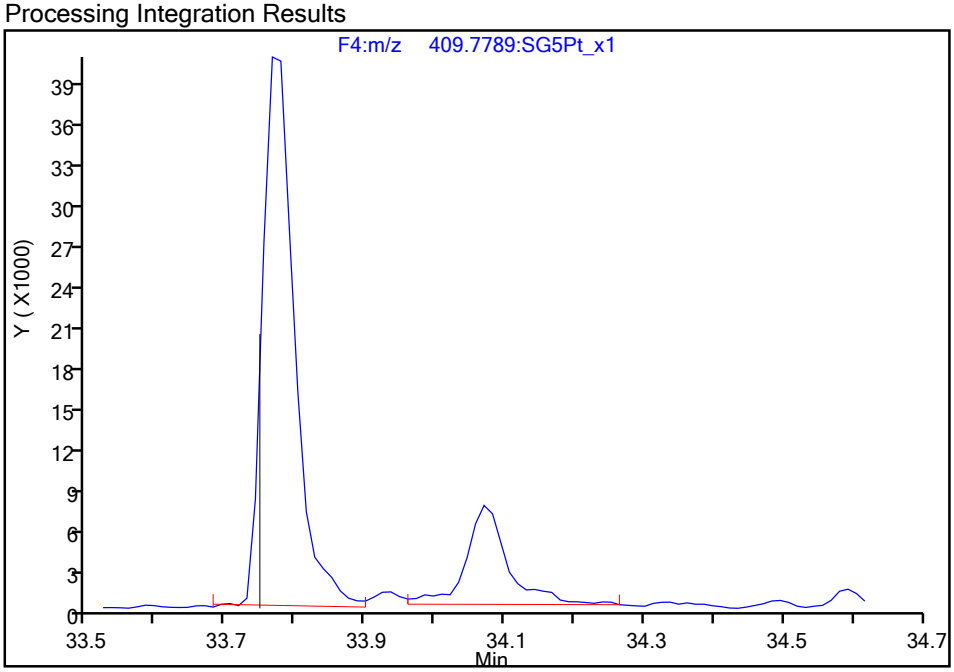

Manual Integration Results

RT = 34.070 Area = 25530 M

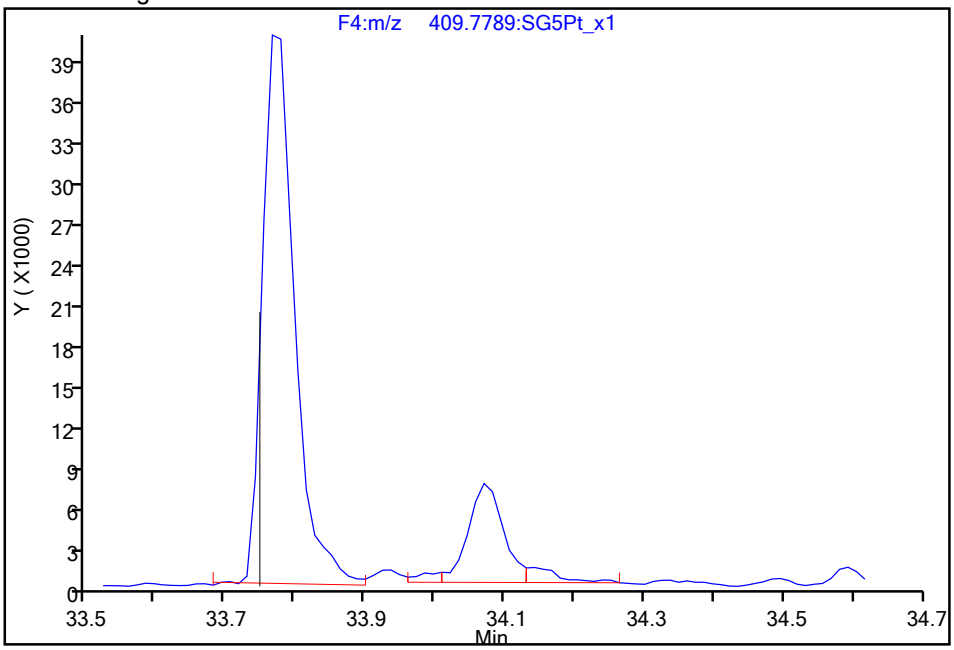

Reviewer: dadunj, 18-Aug-2021 10:03:09

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.02
Area: 216860
Amount: 1.087971
Amount Units: pg/ul

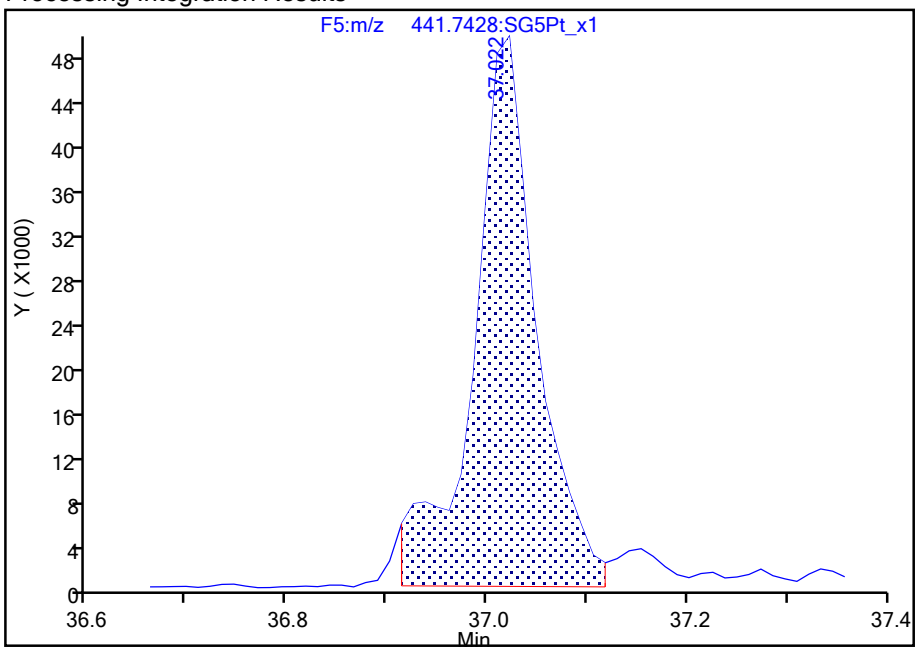

Manual Integration Results

RT: 37.02
Area: 196648
Amount: 0.938951
Amount Units: pg/ul

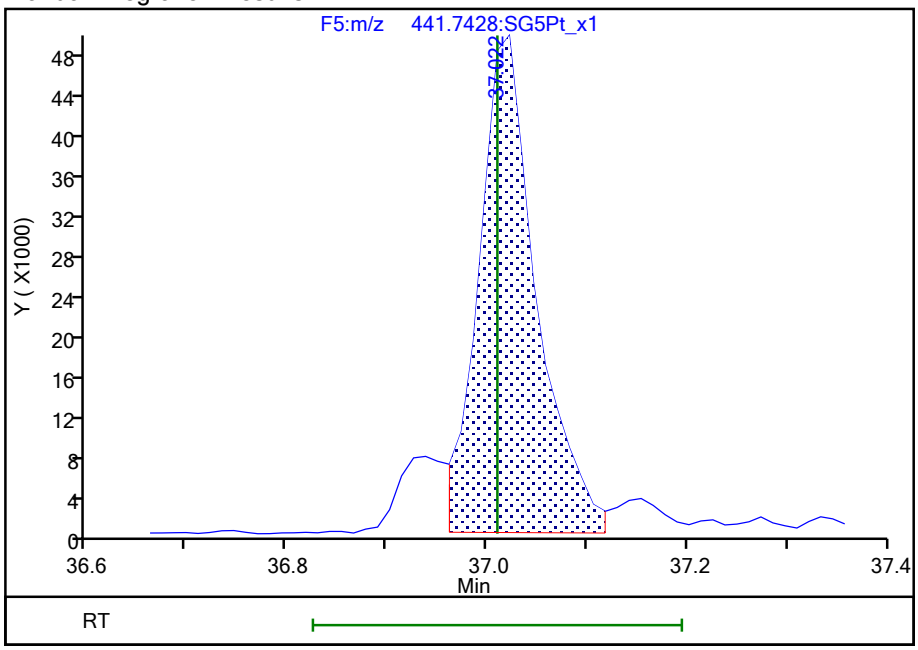

Reviewer: dadunj, 18-Aug-2021 10:03:23

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d				
Injection Date:	14-Aug-2021 20:31:33	Instrument ID:	10D5		
Lims ID:	320-76788-A-20-A	Lab Sample ID:	320-76788-20		
Client ID:	11215702-072321-BN-SJSB105 (14-16)				
Operator ID:	DB	ALS Bottle#:	37	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.01
Area: 274463
Amount: 1.087971
Amount Units: pg/ul

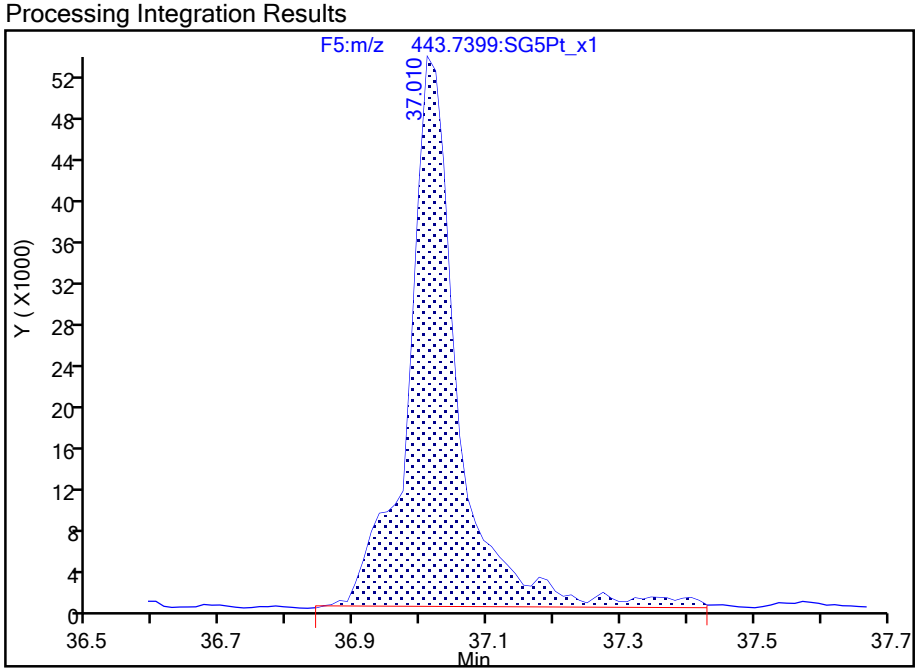

Manual Integration Results

RT: 37.01
Area: 227378
Amount: 0.938951
Amount Units: pg/ul

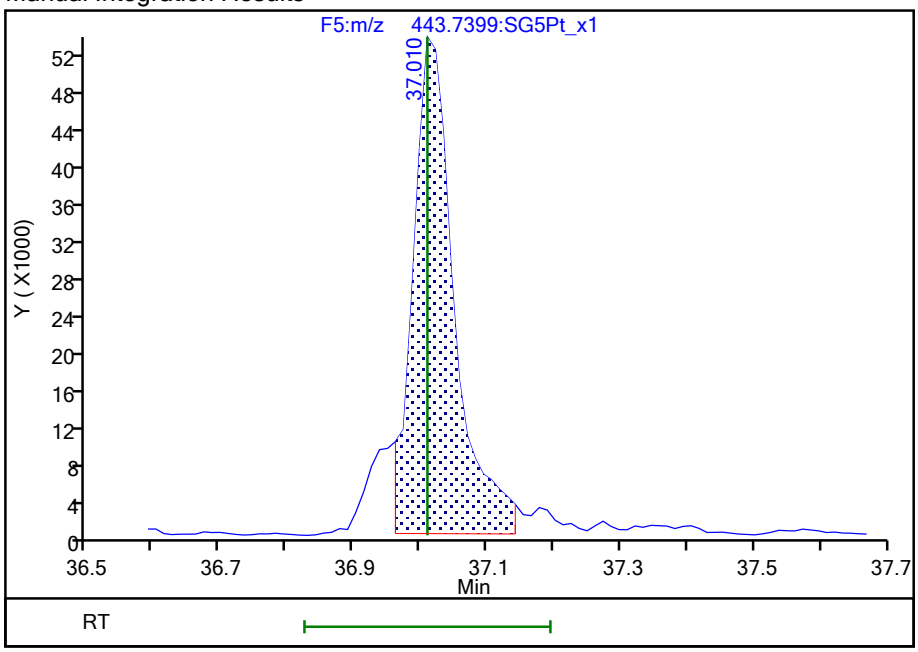

Reviewer: dadunj, 18-Aug-2021 10:03:25

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 10:04:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

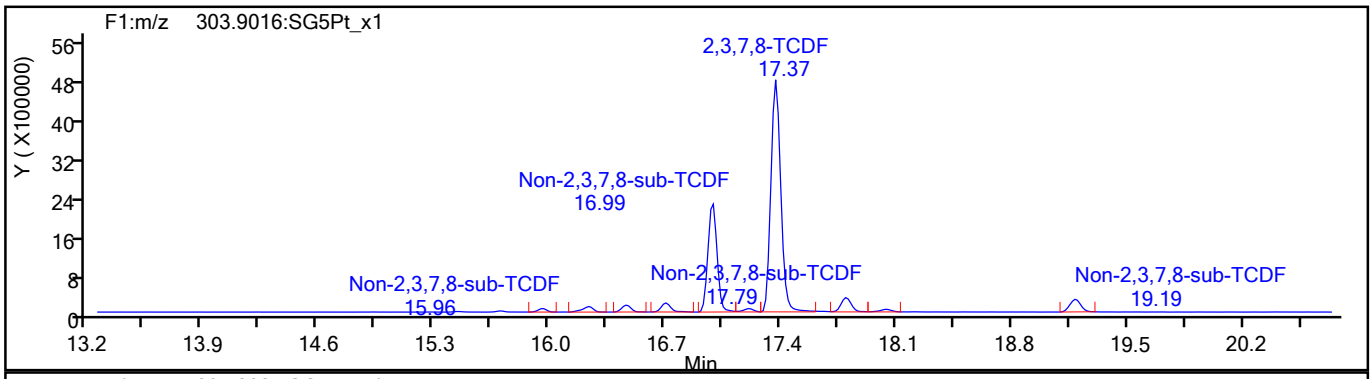

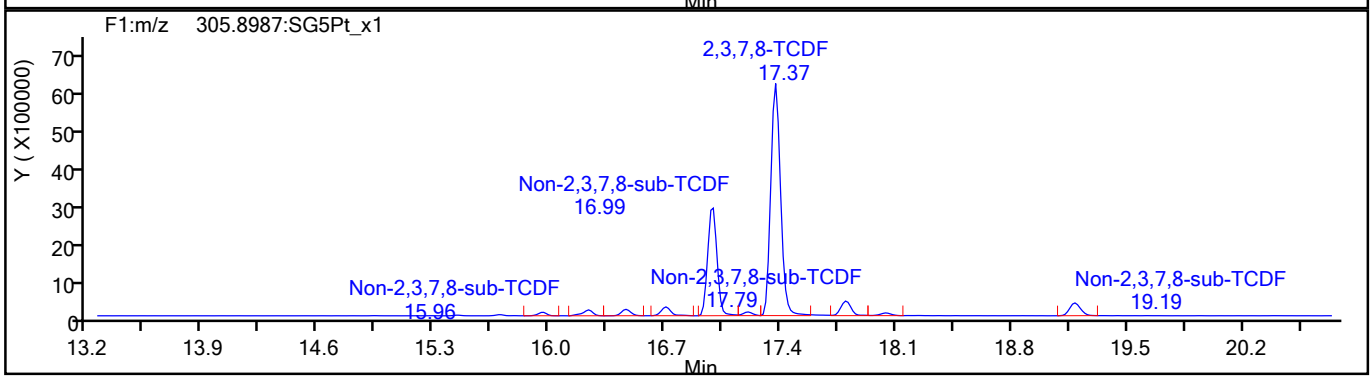

TCDF Standards

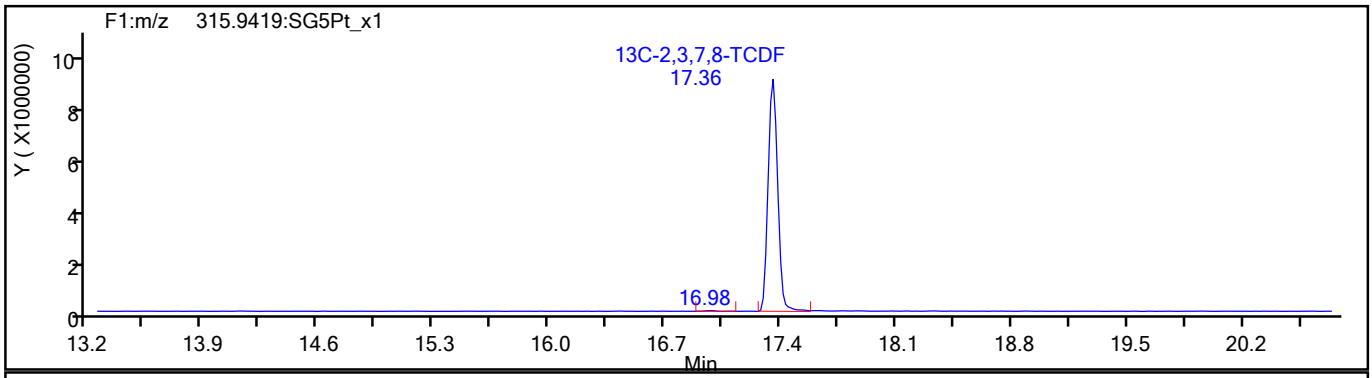

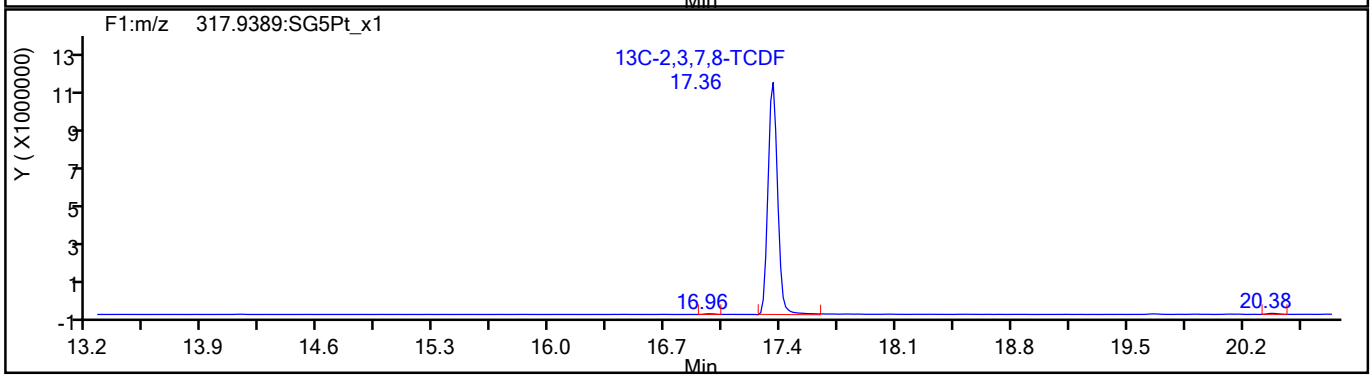

780154

Report Date: 18-Aug-2021 10:04:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

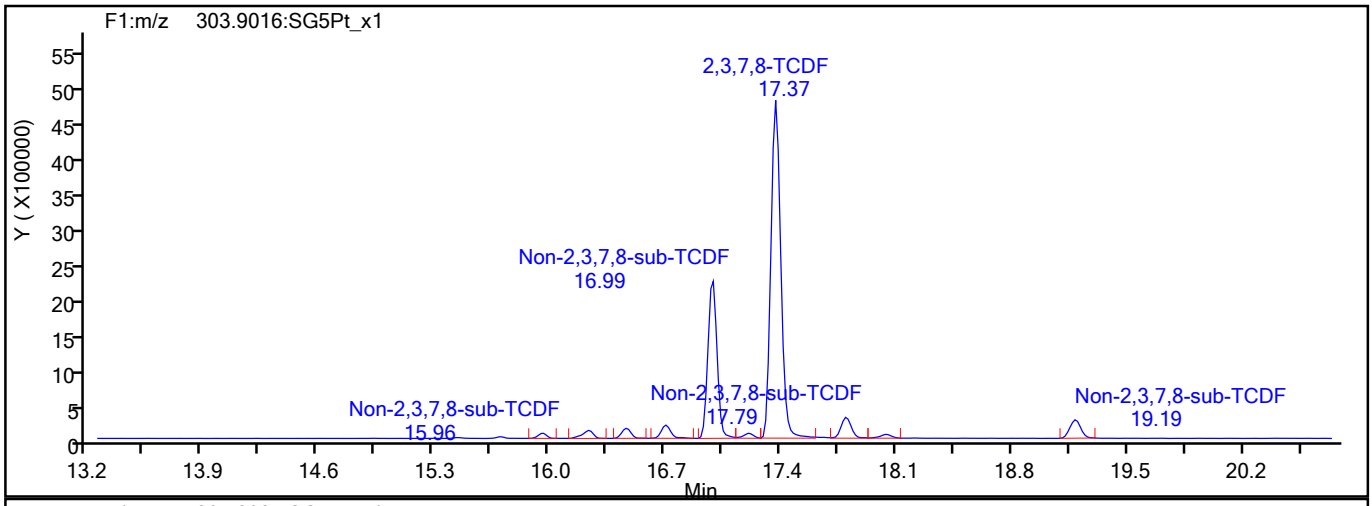

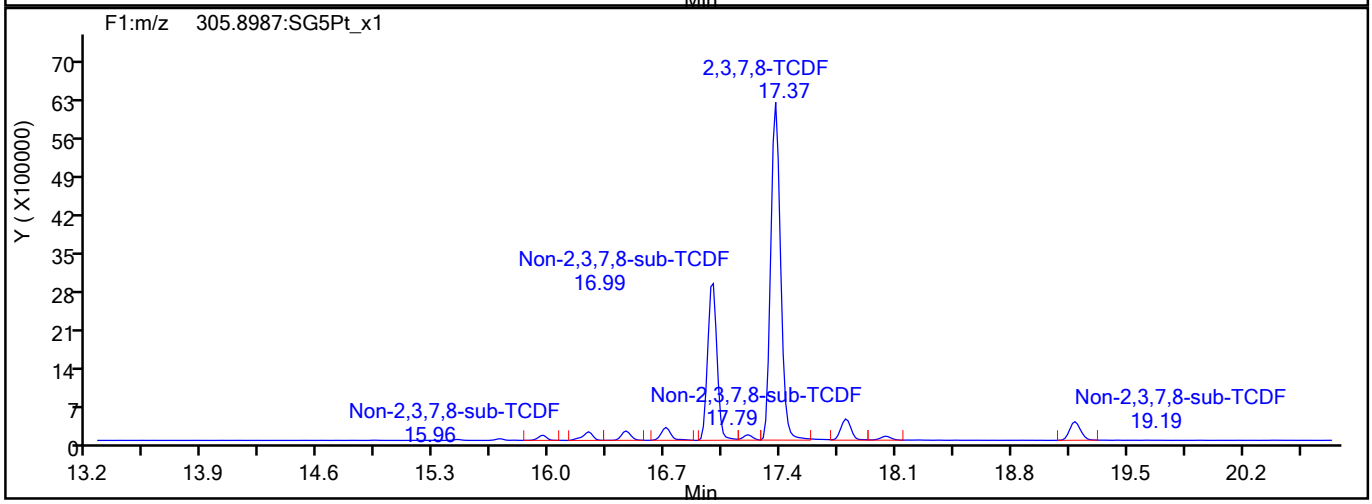

TCDF Interference Mass

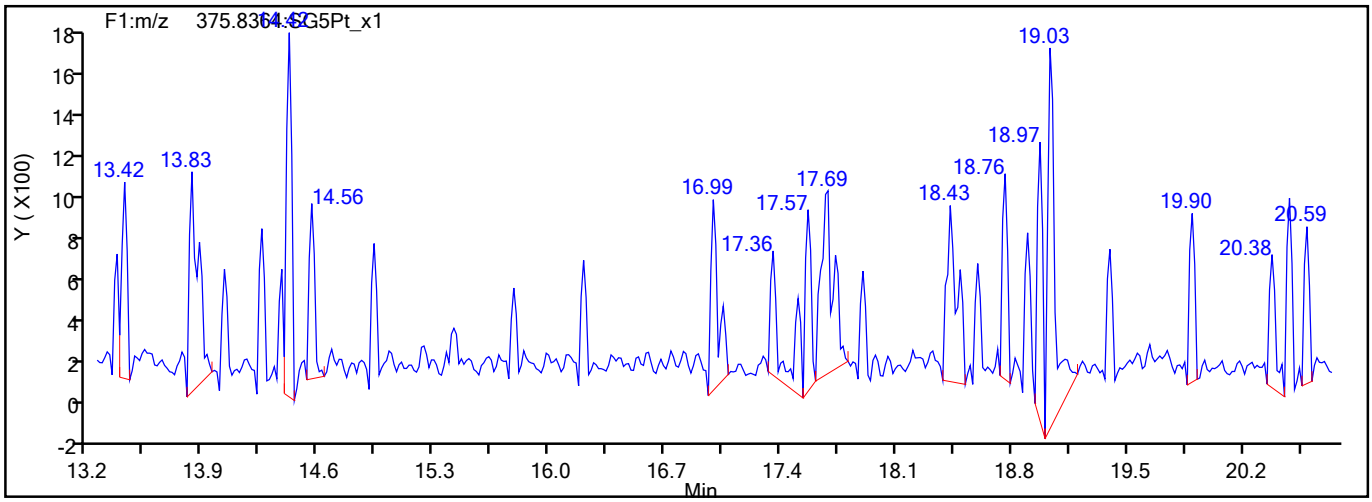

780155

Report Date: 18-Aug-2021 10:04:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

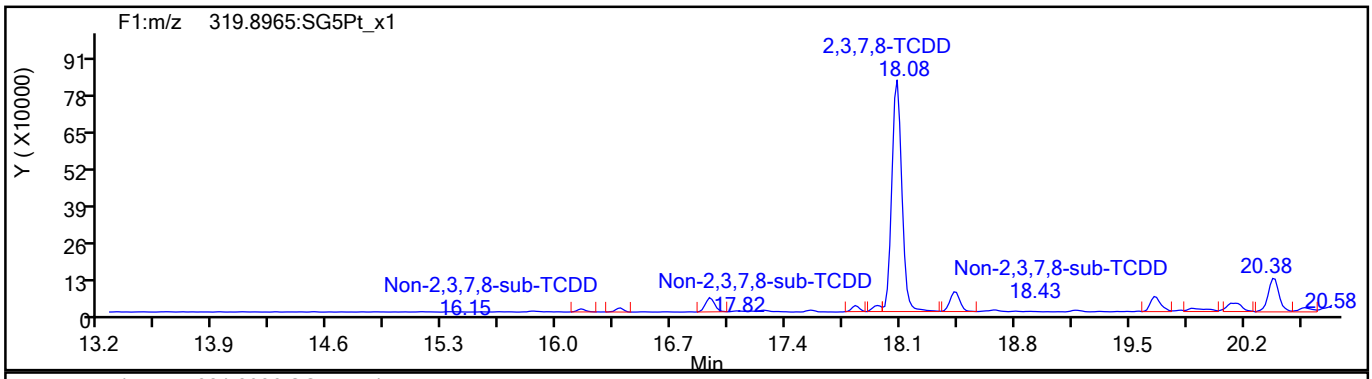

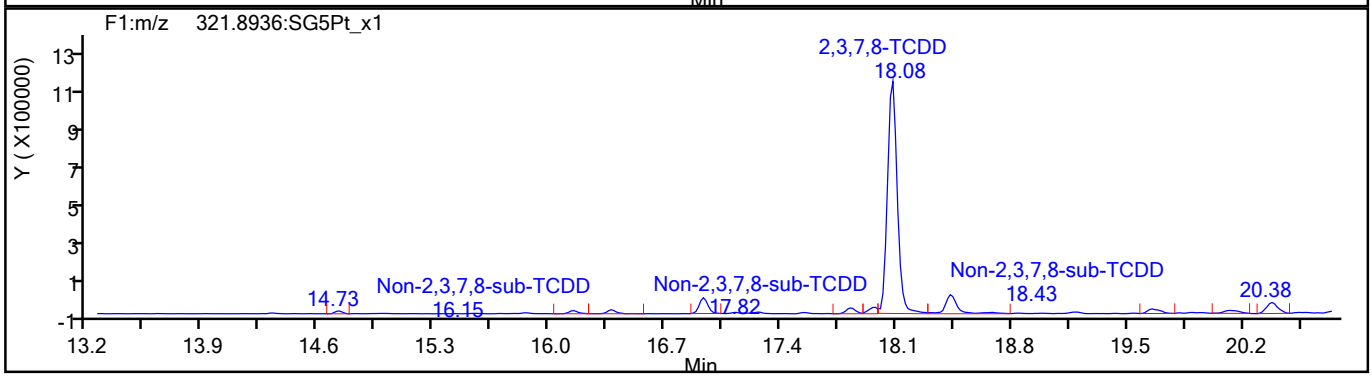

TCDD Standards

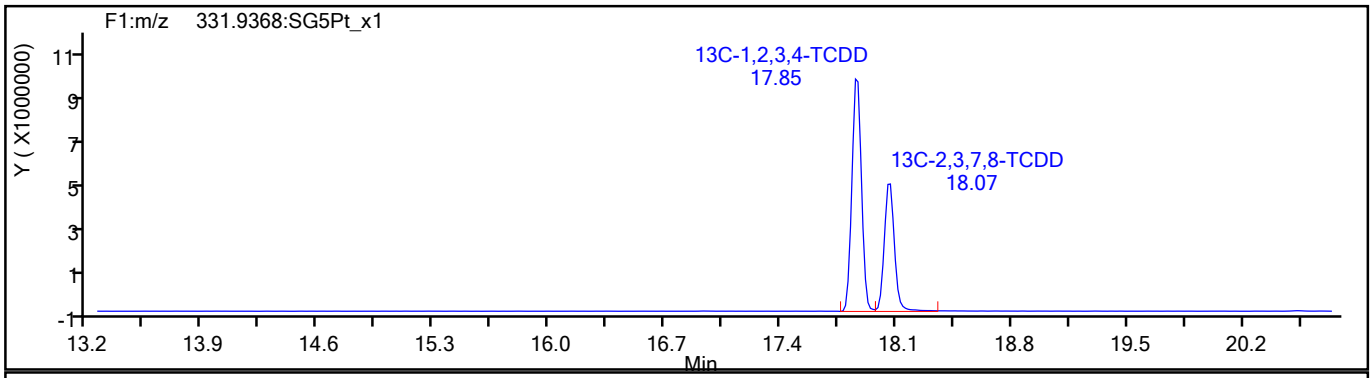

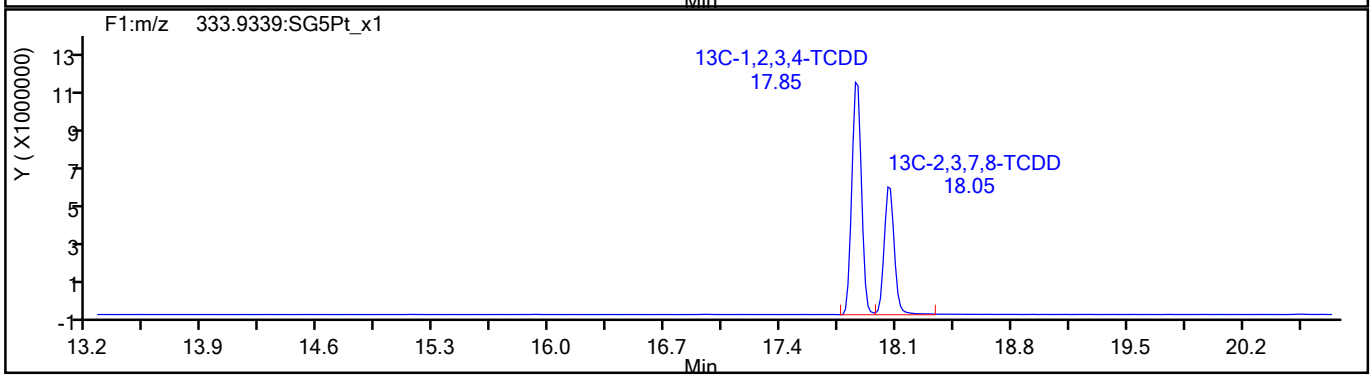

780156

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

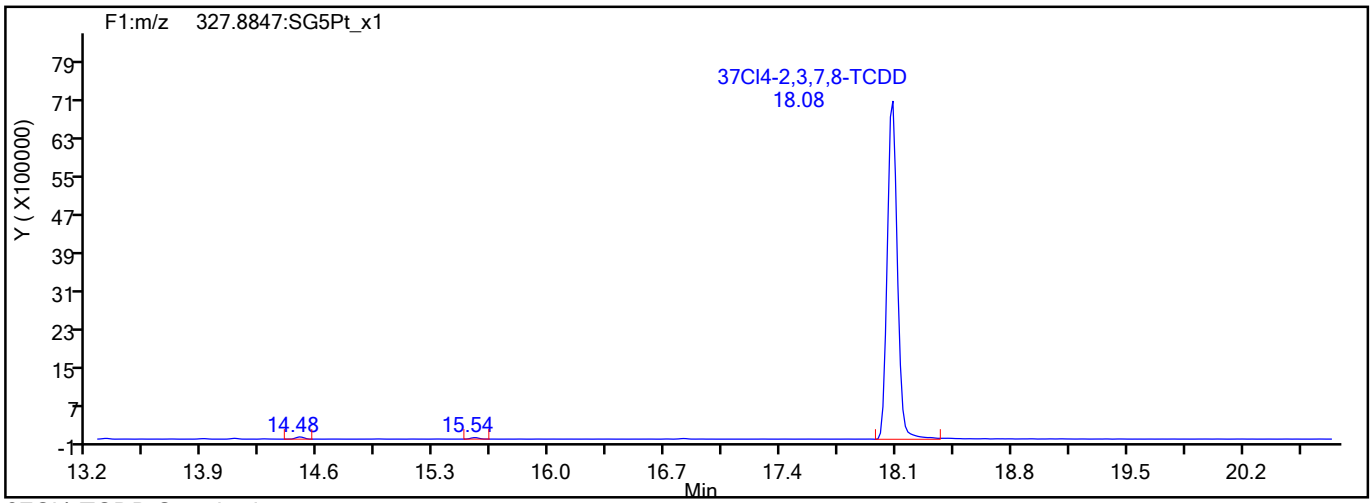

37Cl4-TCDD Standards

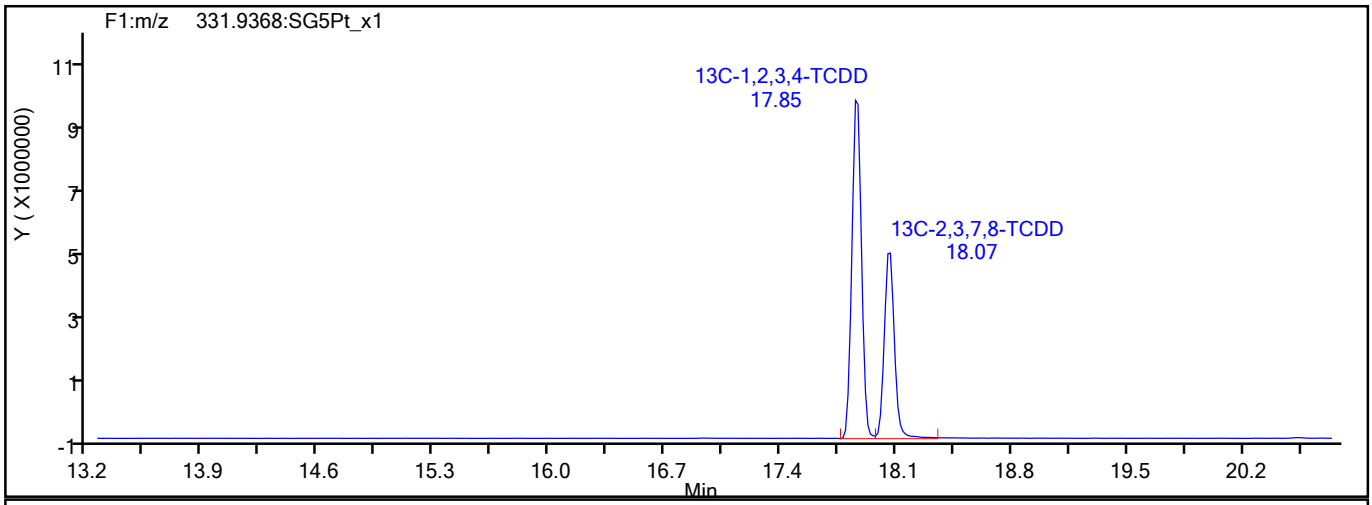

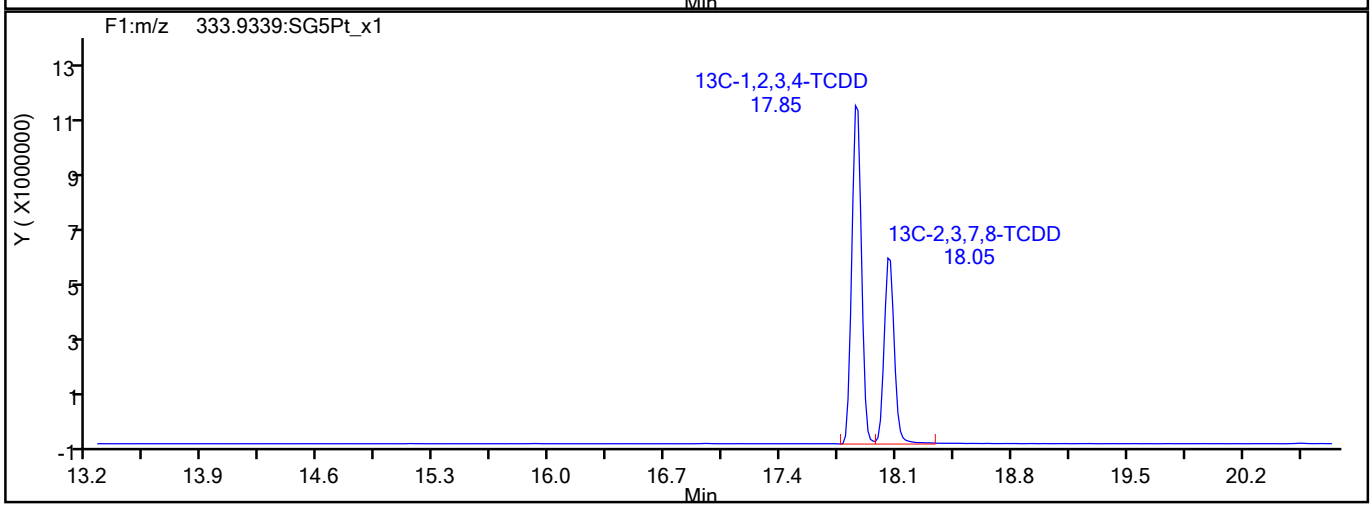

780157

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

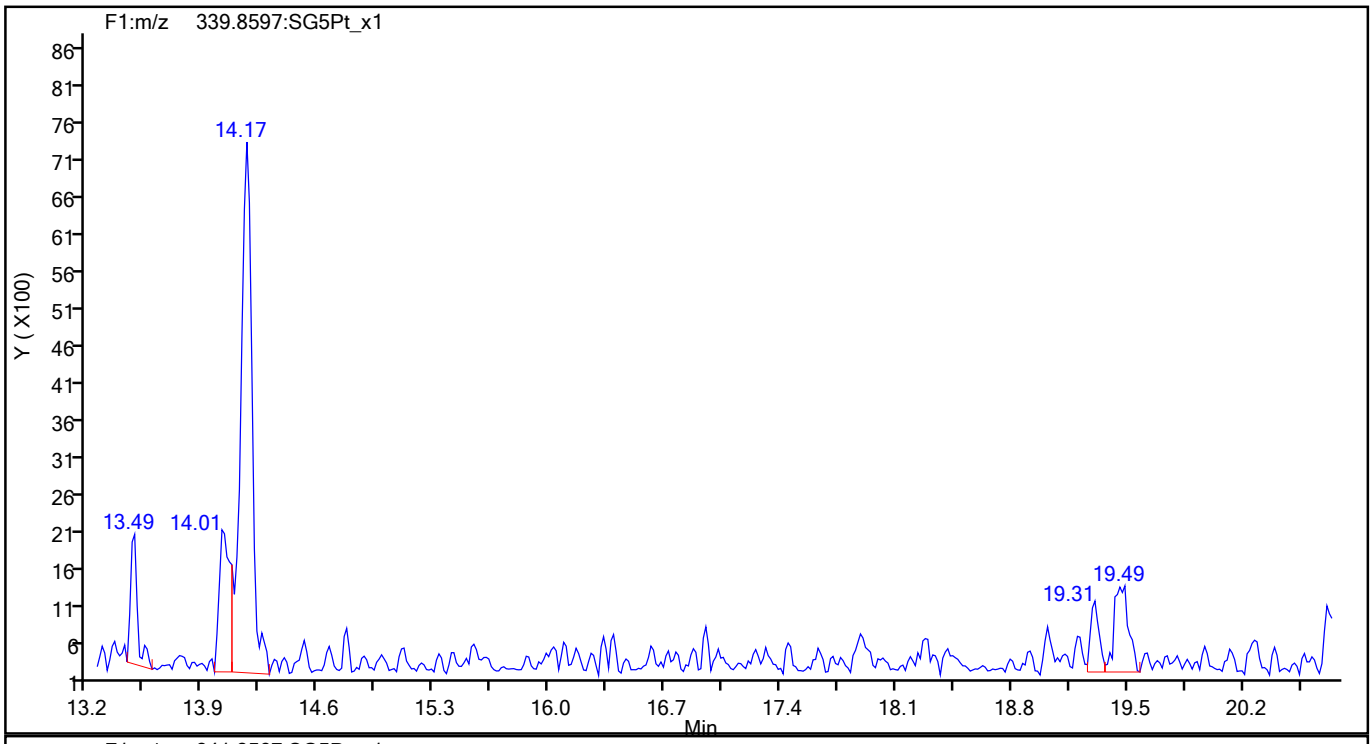

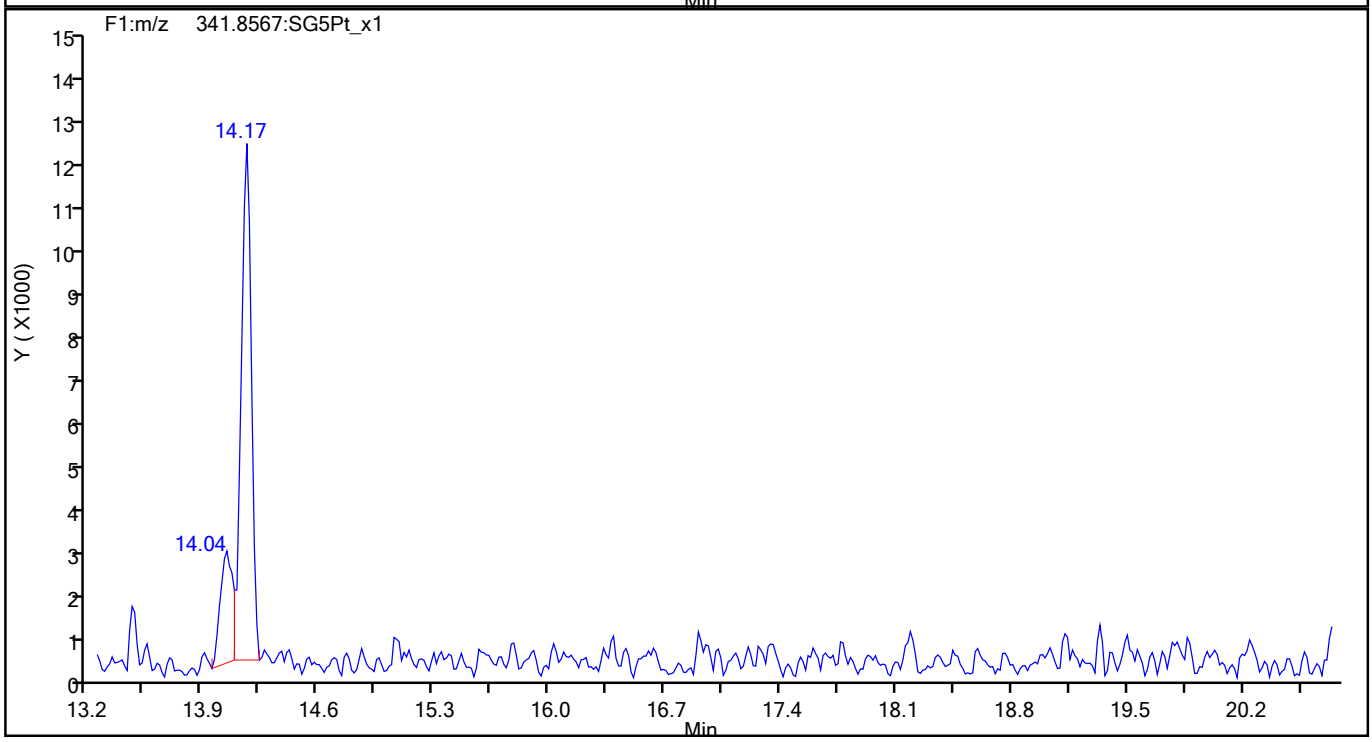

780158

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

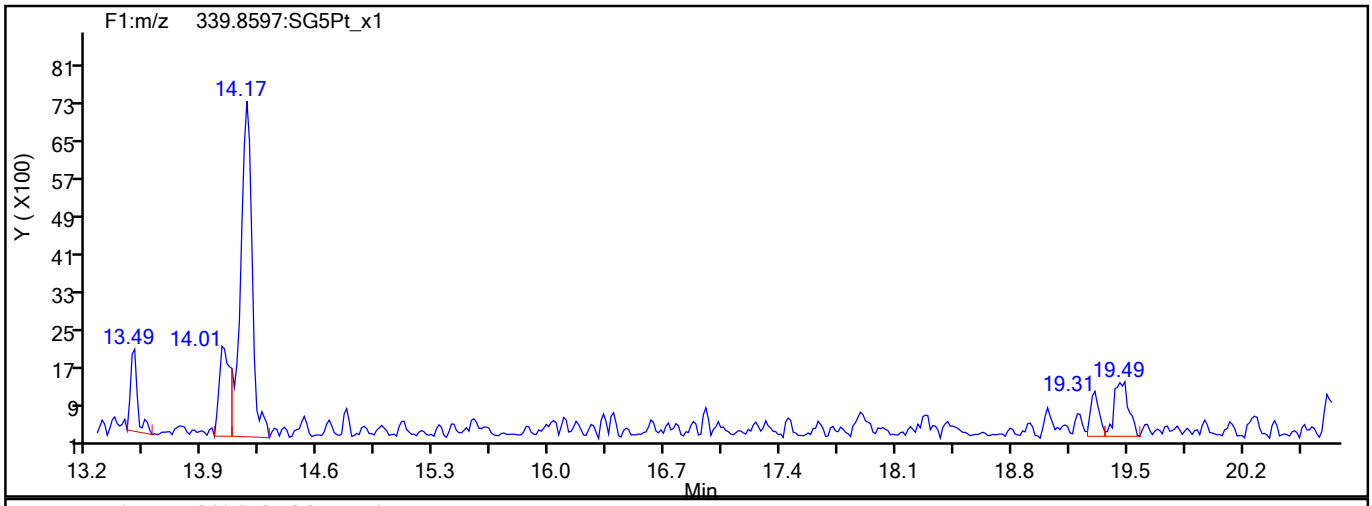

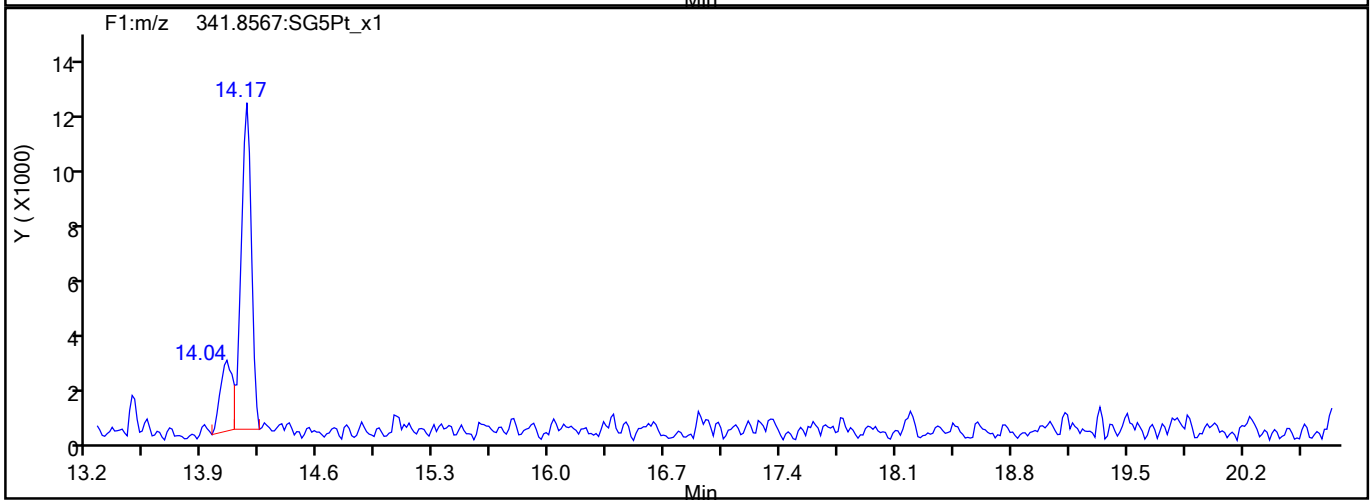

F1 PeCDFs Interference Mass

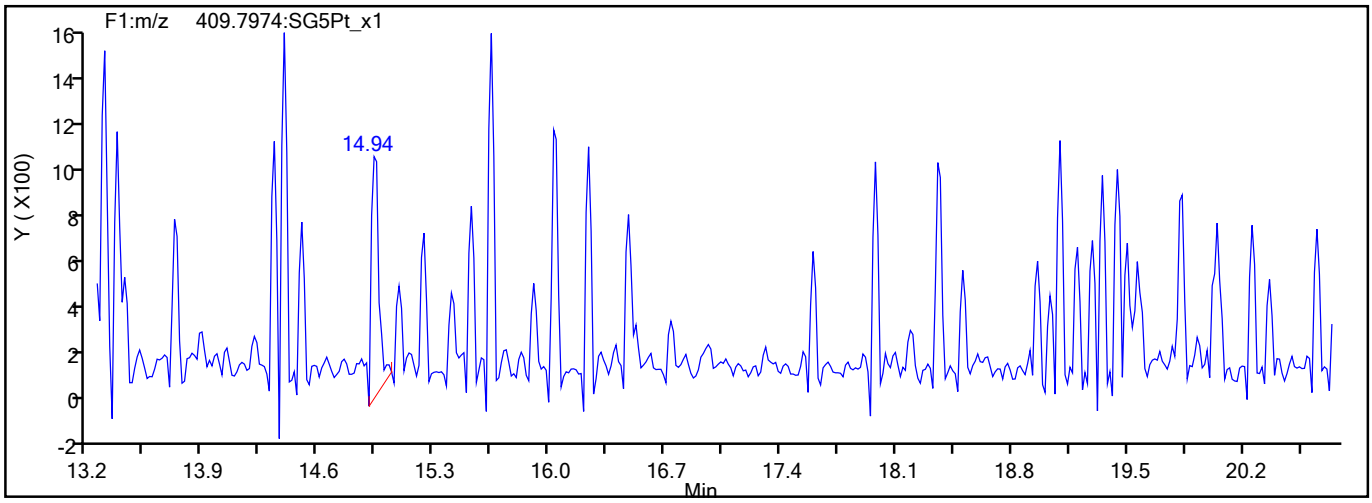

780159

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

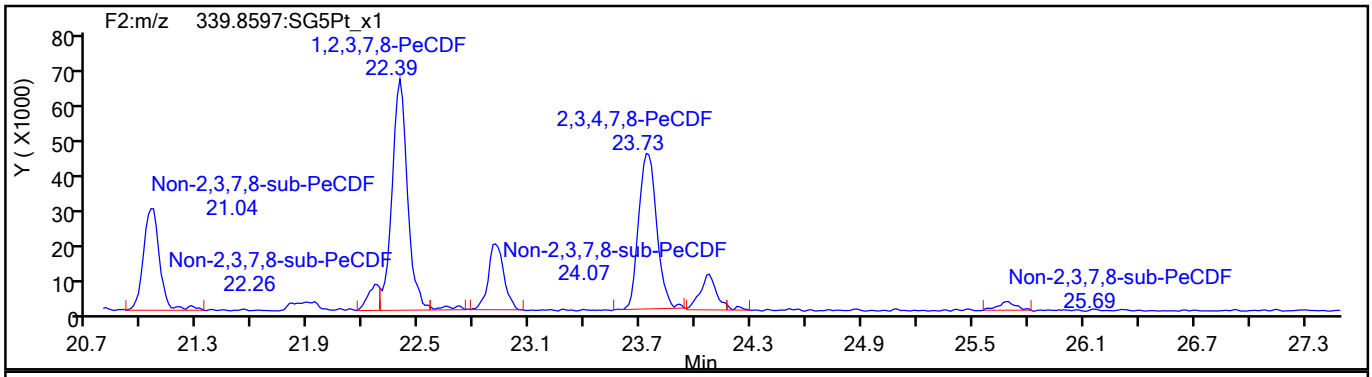

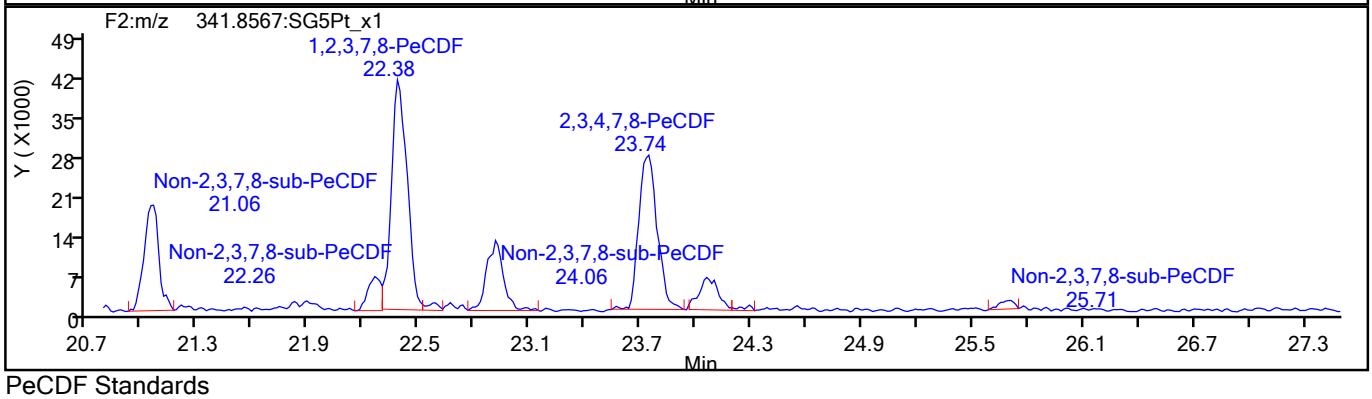

PeCDF Standards

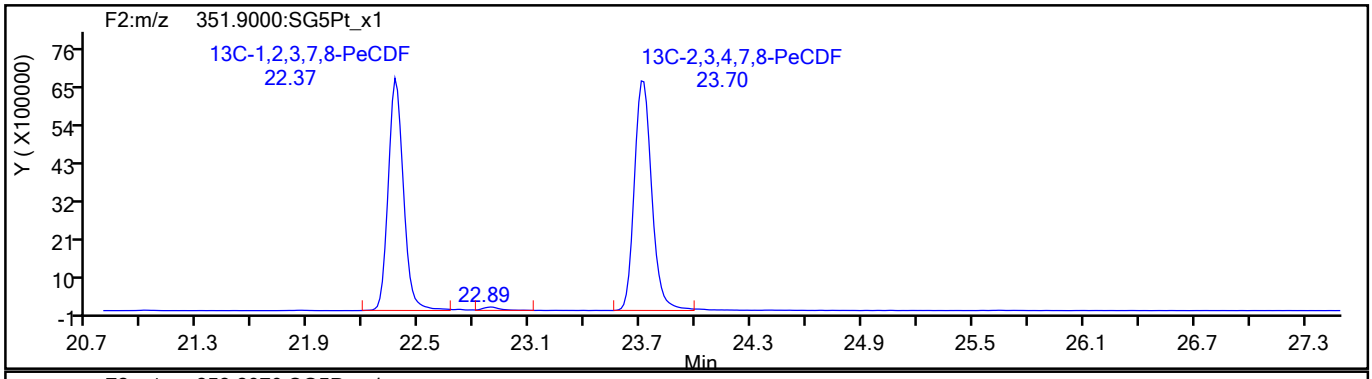

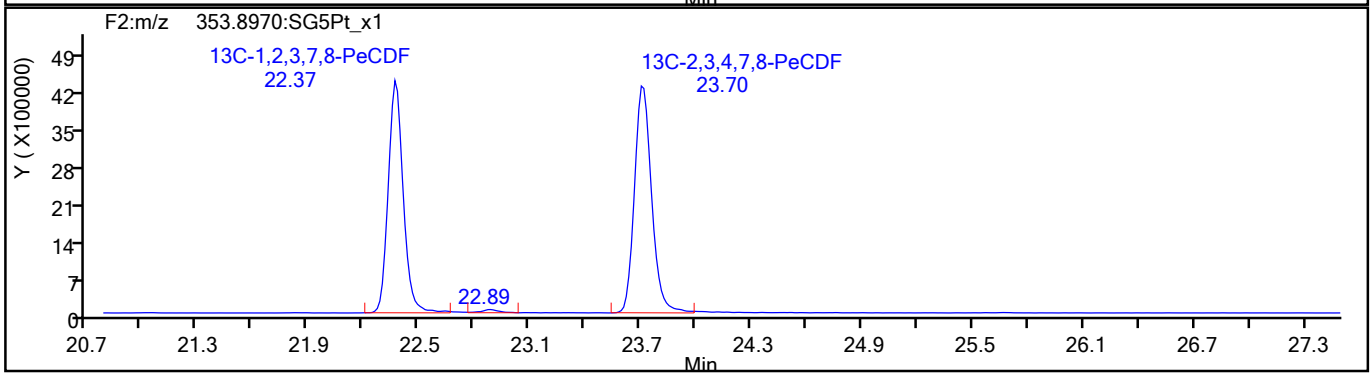

780160

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

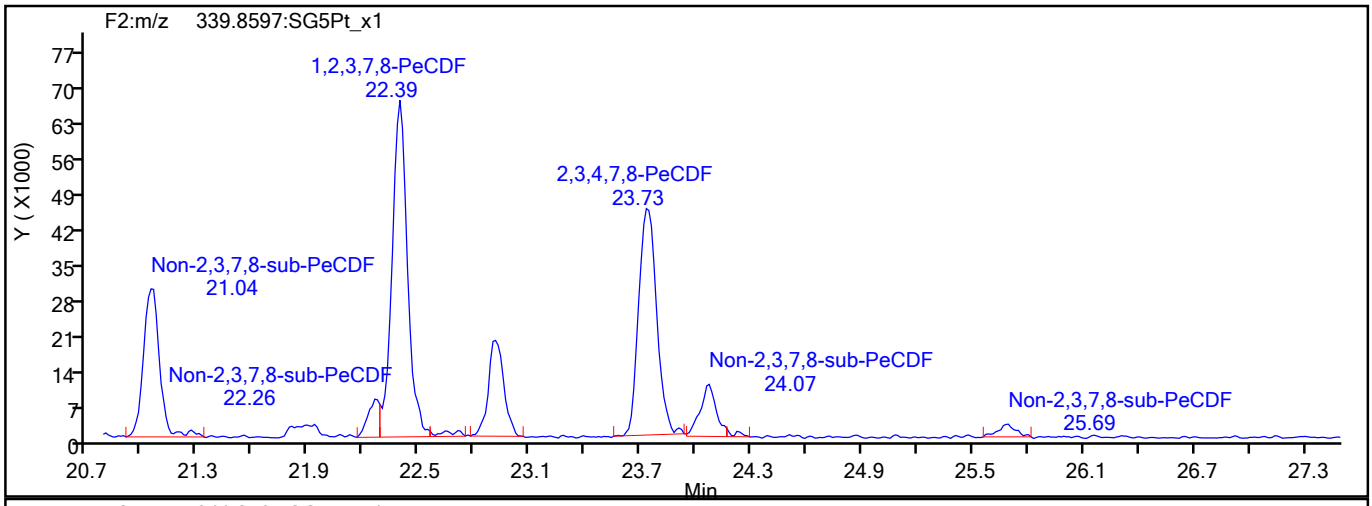

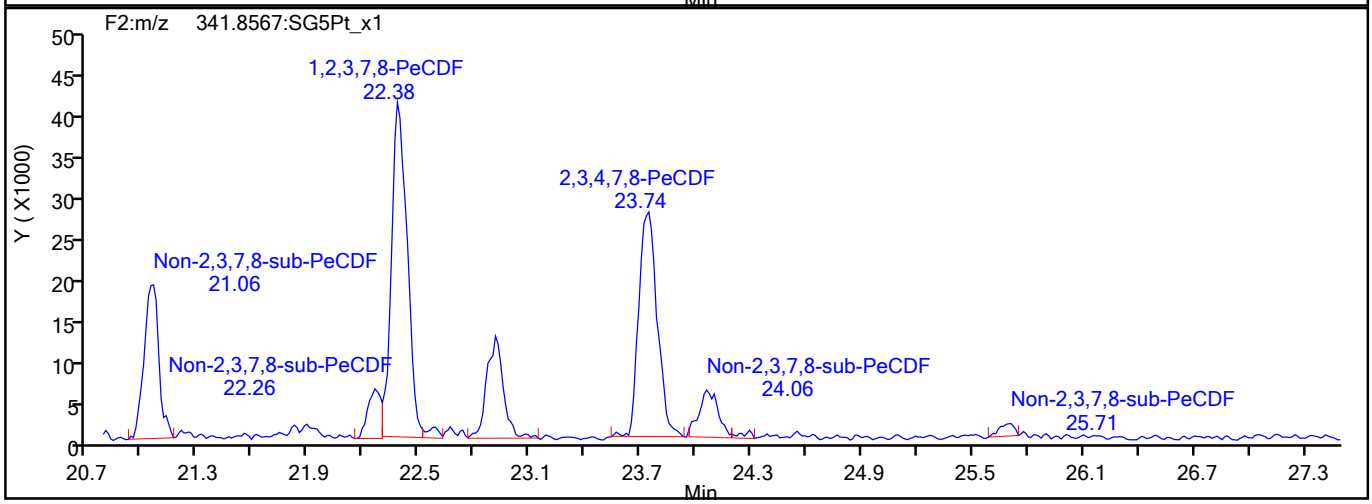

PeCDF Interference Mass

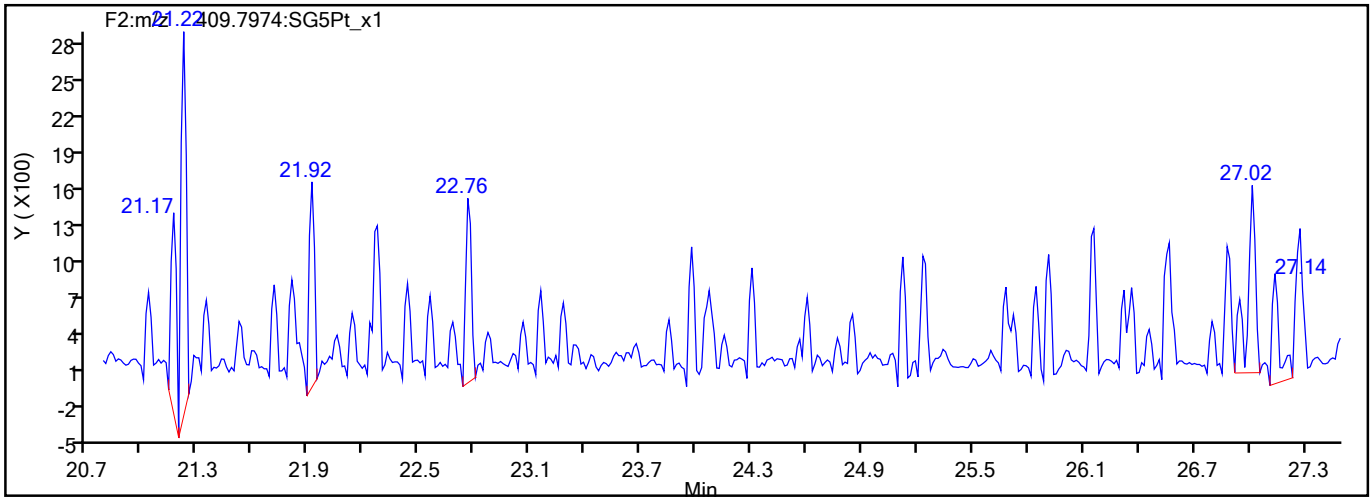

780161

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

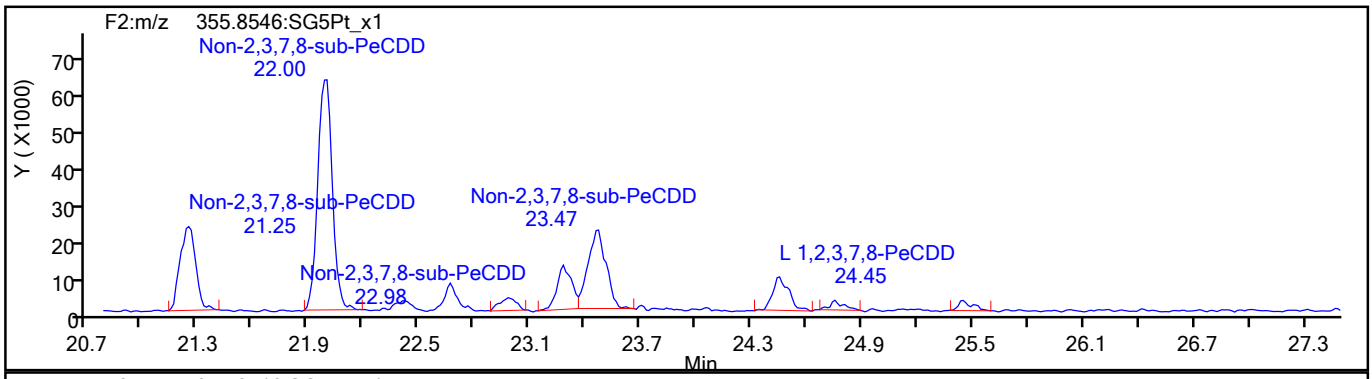

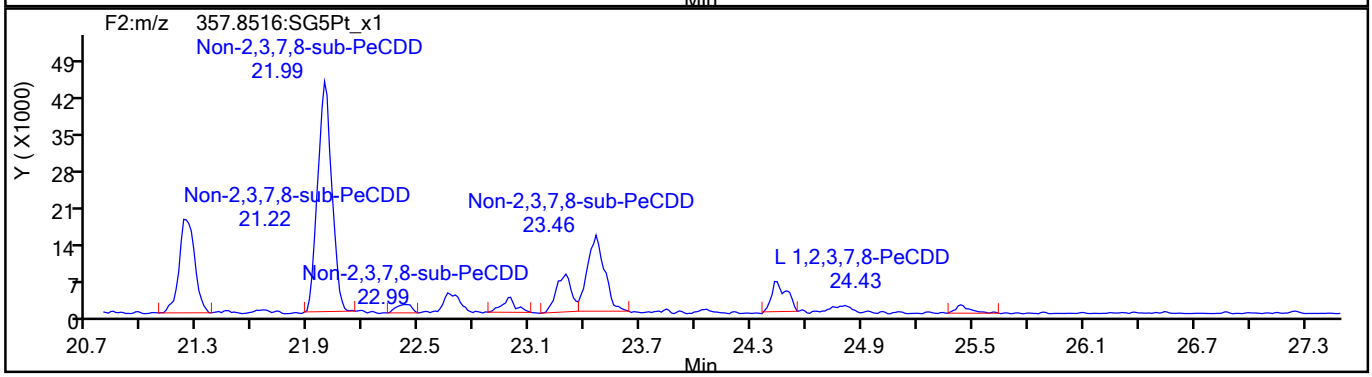

PeCDD Standards

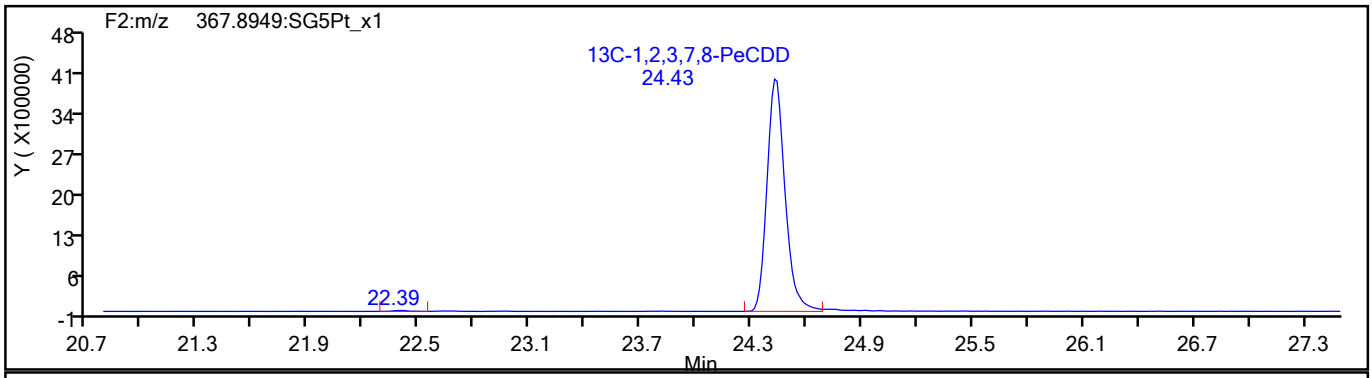

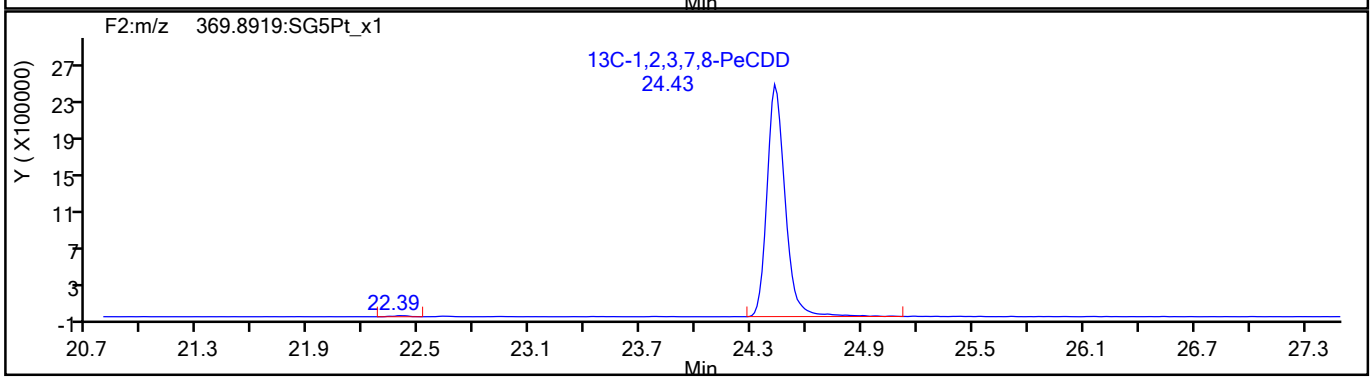

780162

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

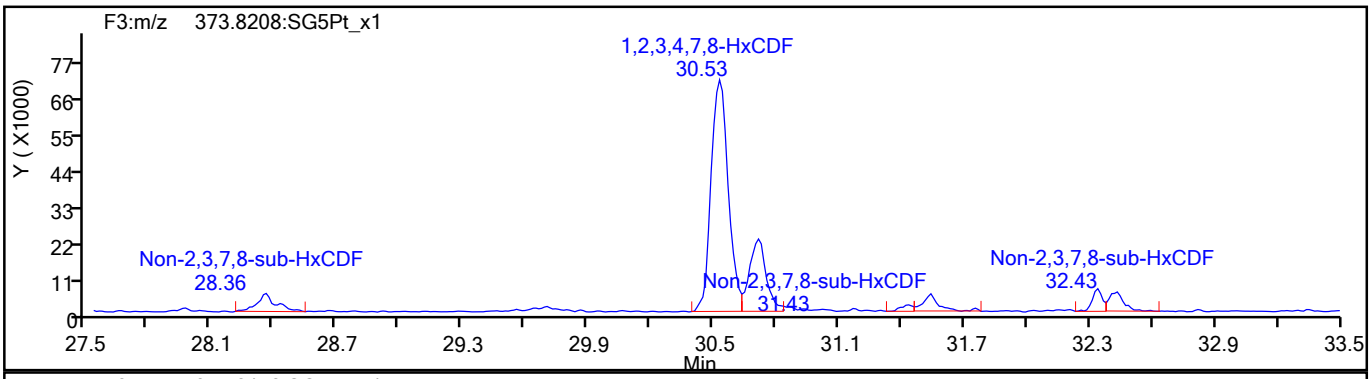

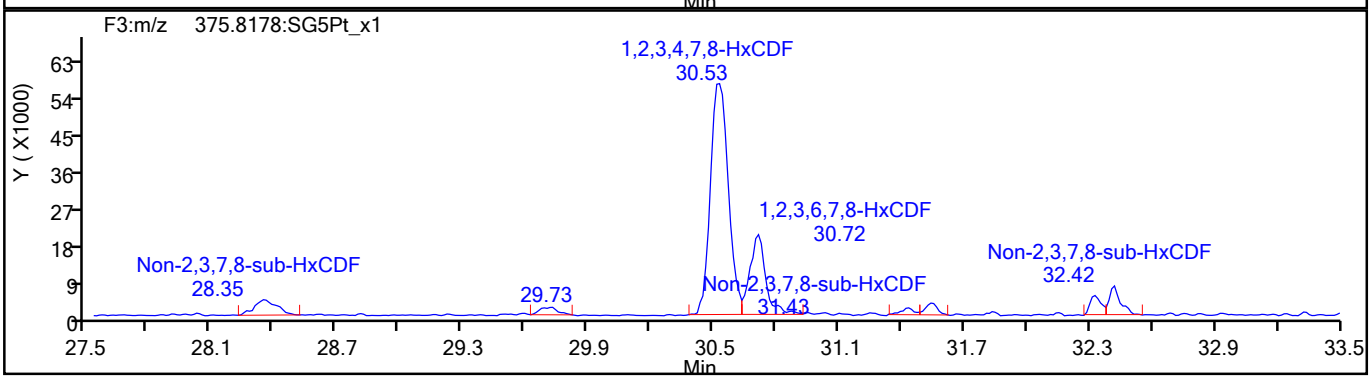

HxCDF Standards

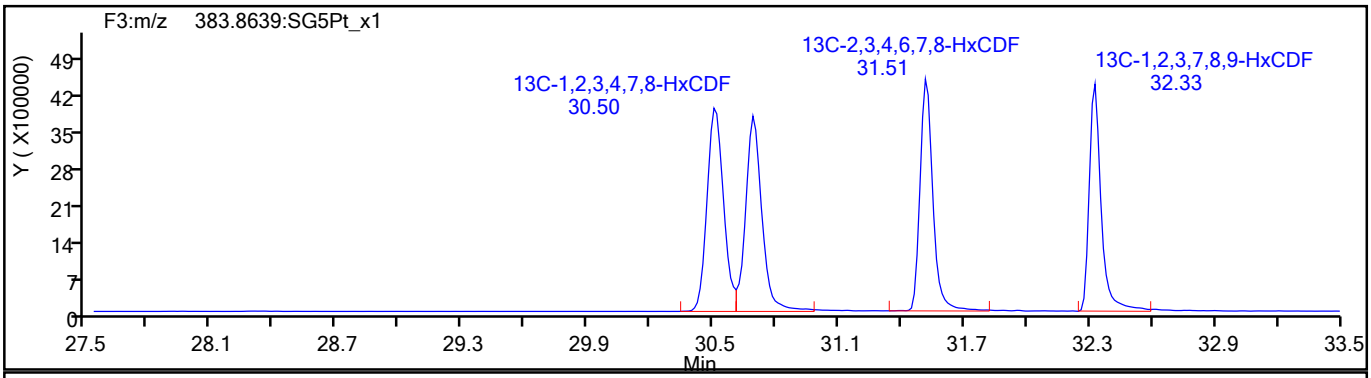

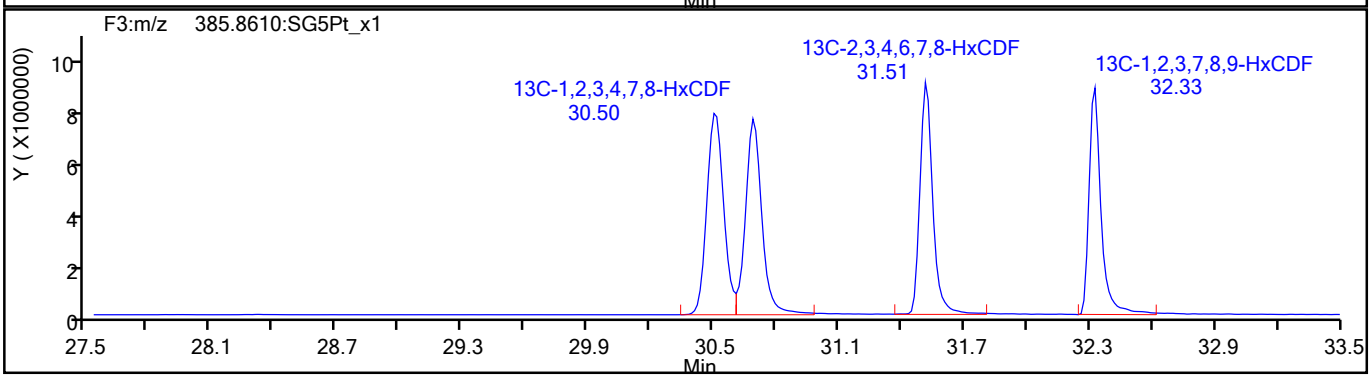

780163

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

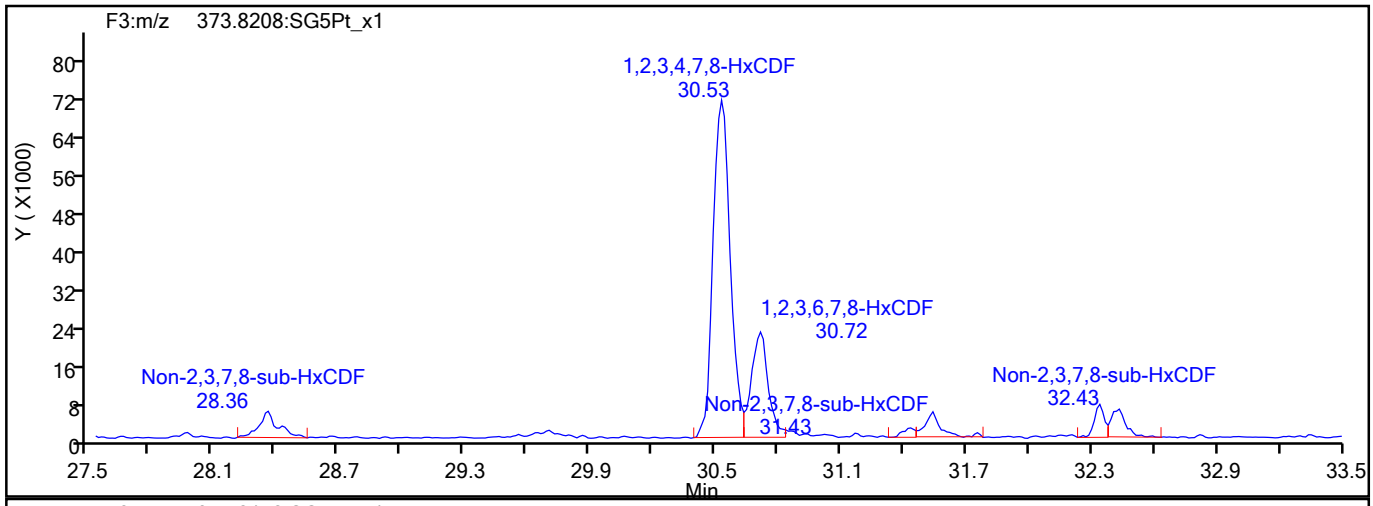

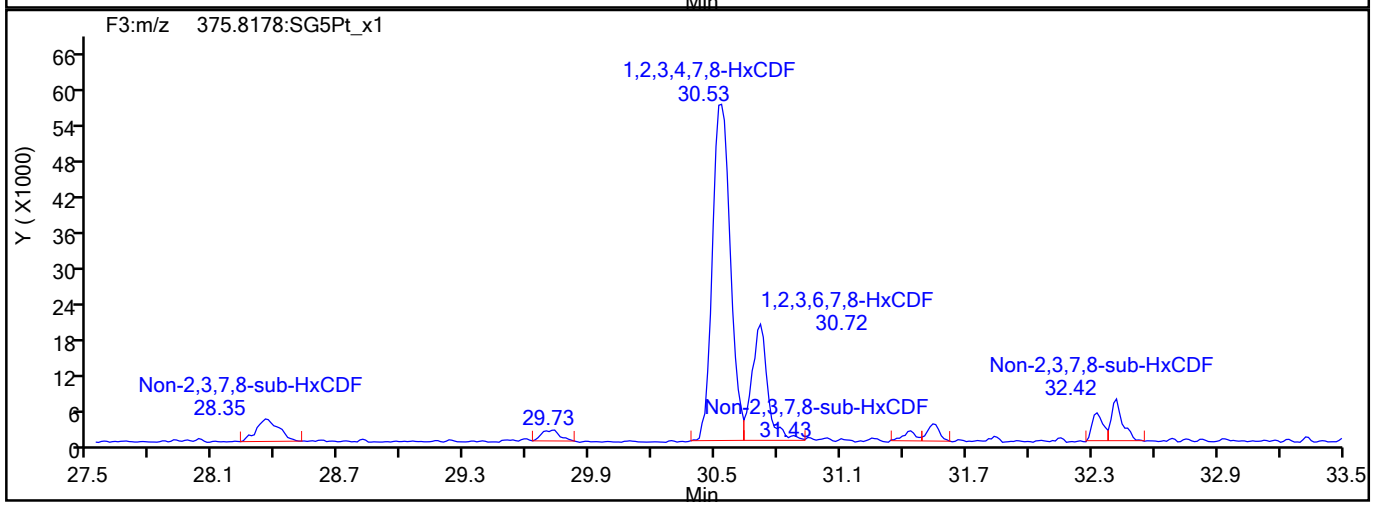

HxCDF Interference Mass

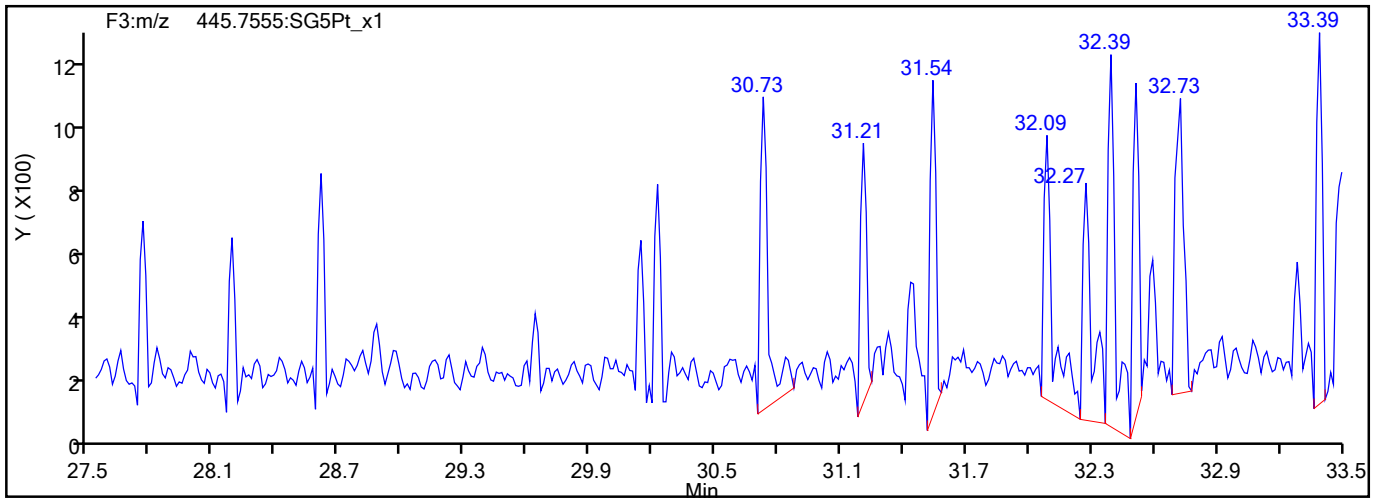

780164

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

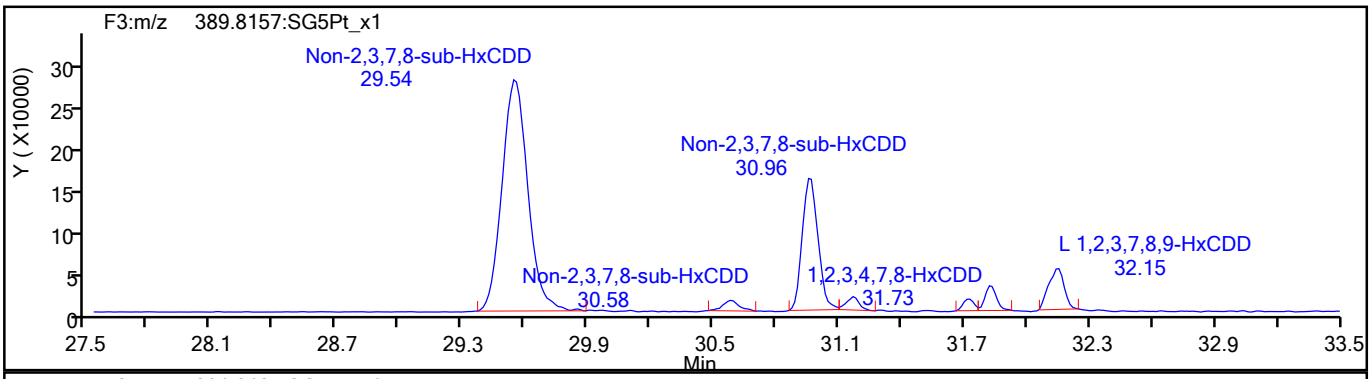

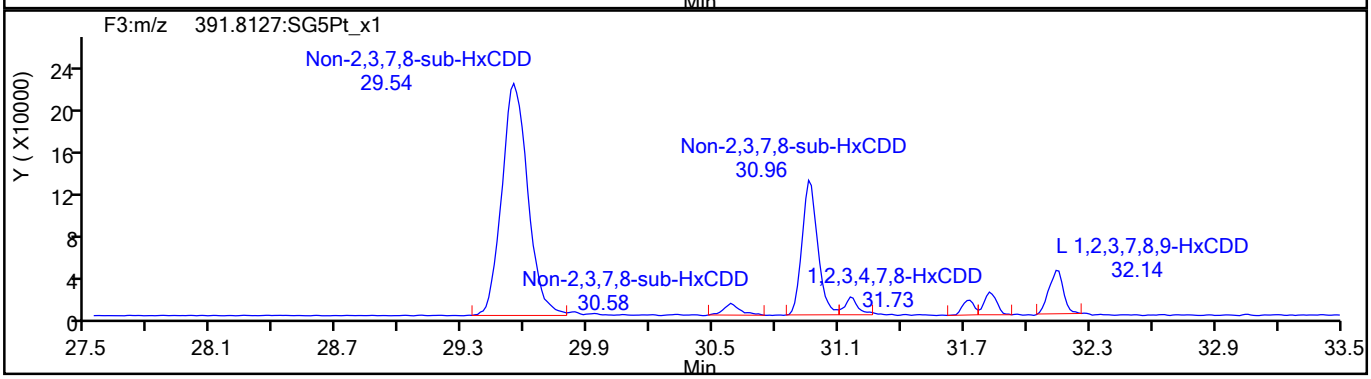

HxCDD Standards

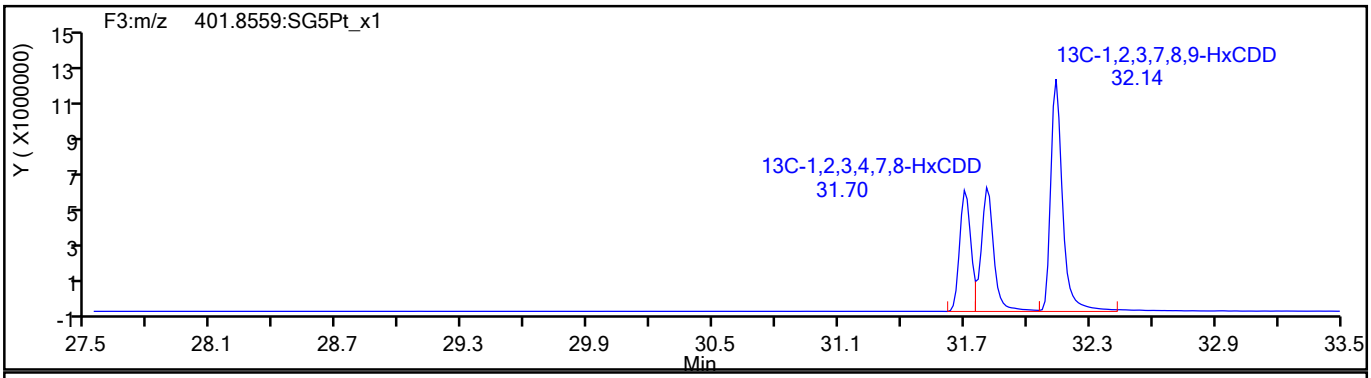

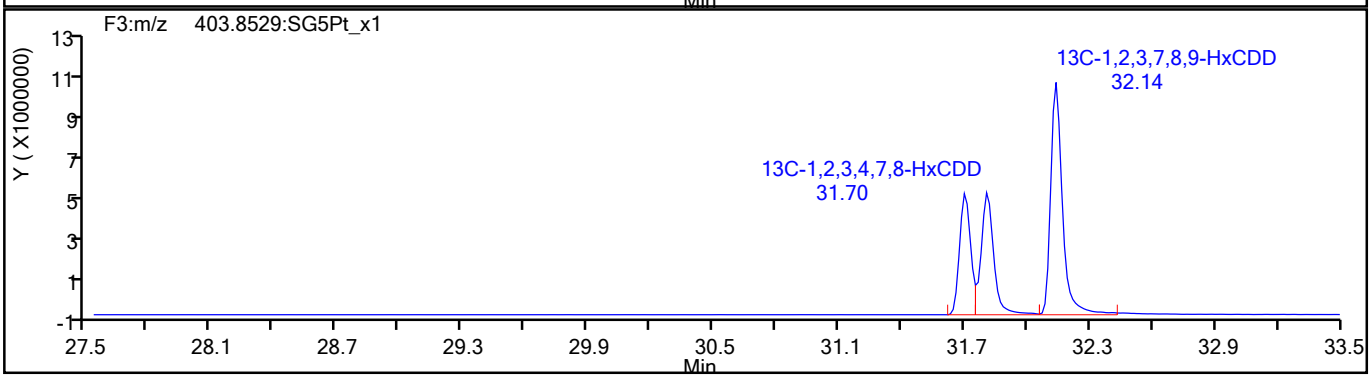

780165

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

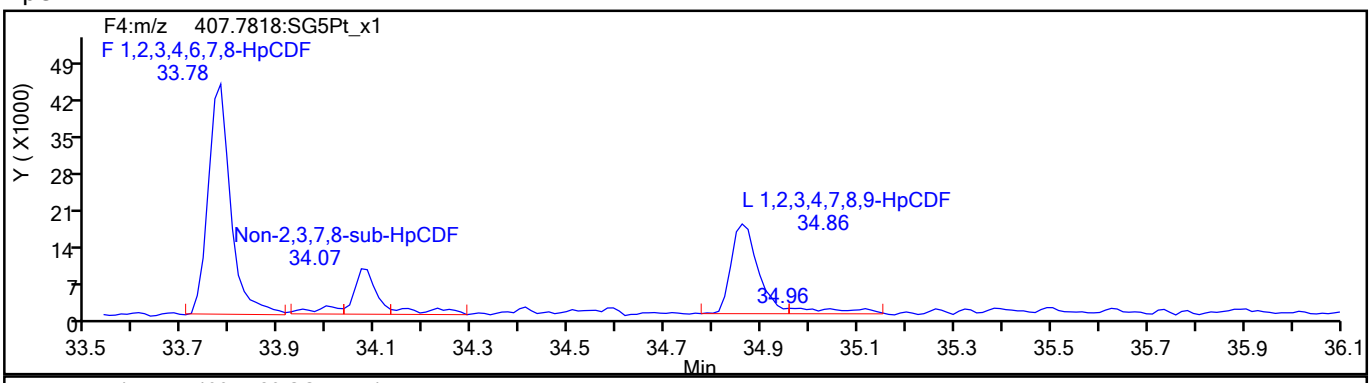

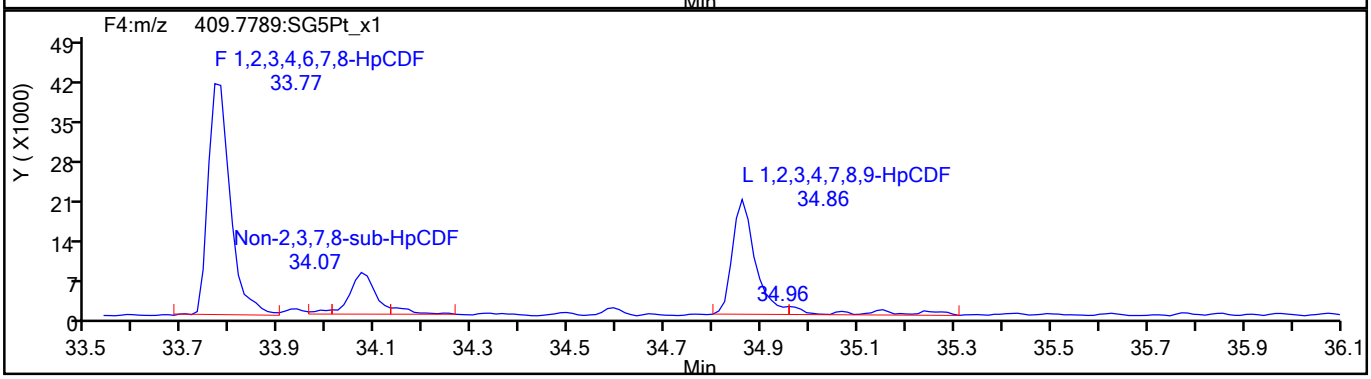

HpCDF Standards

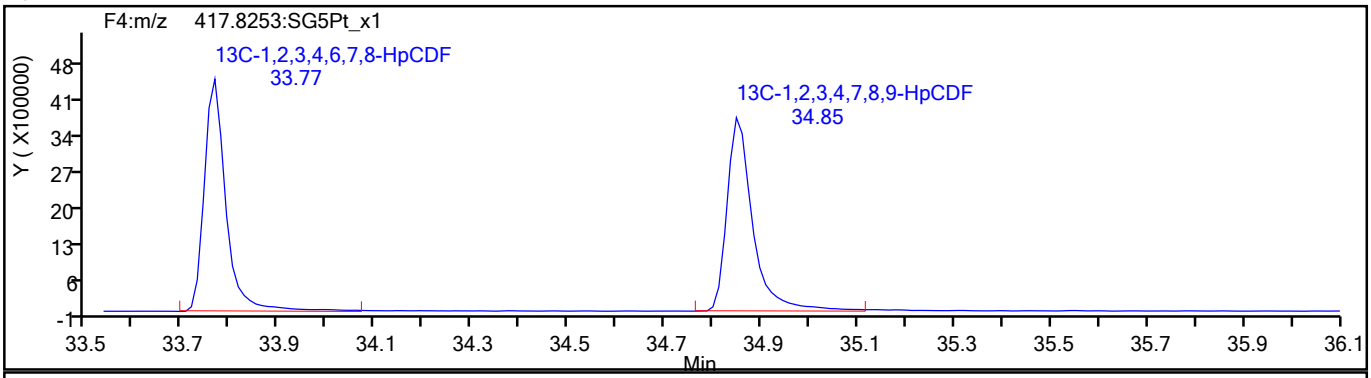

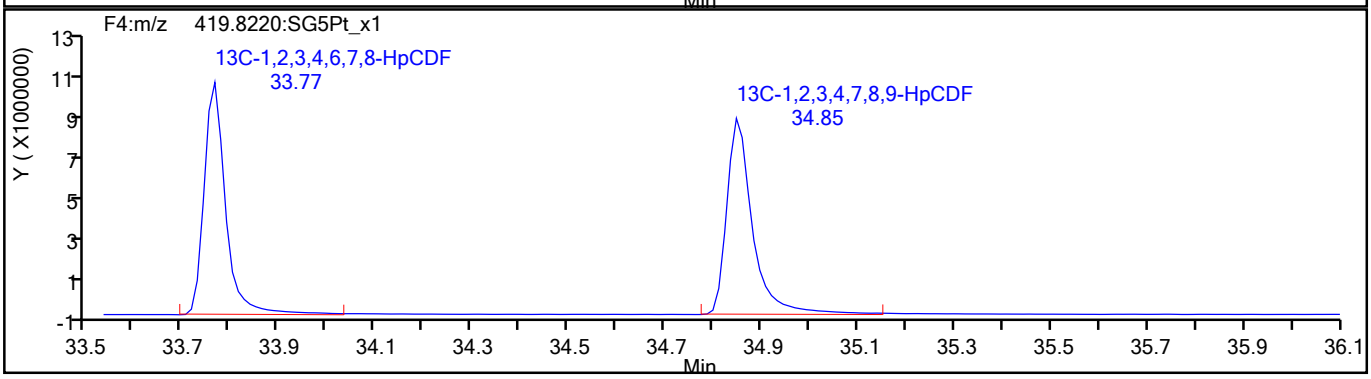

780166

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

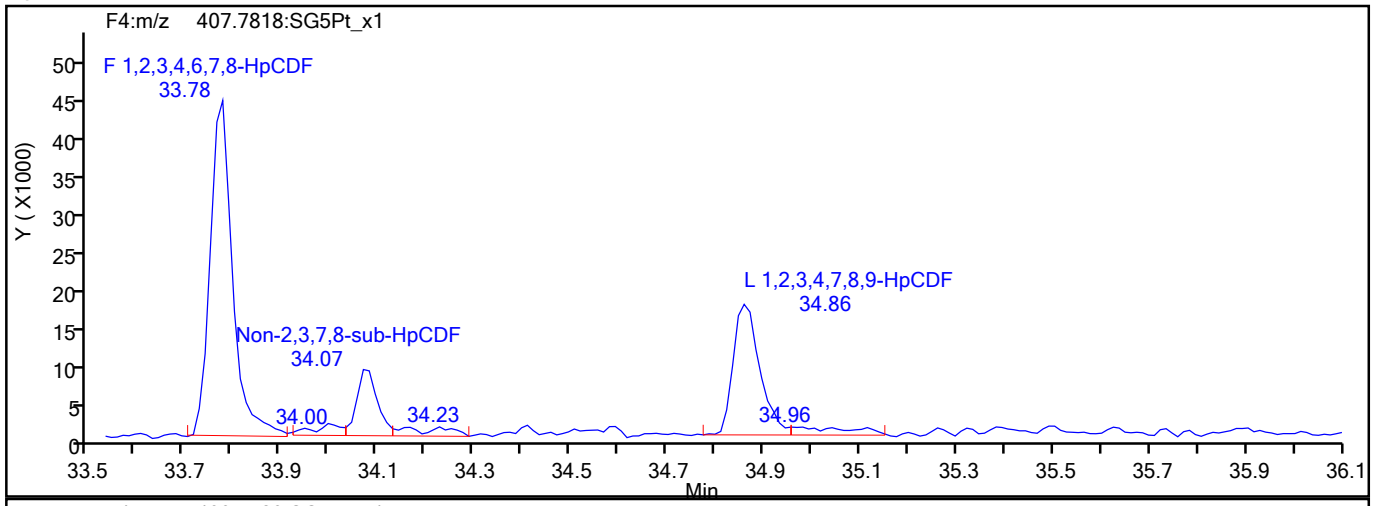

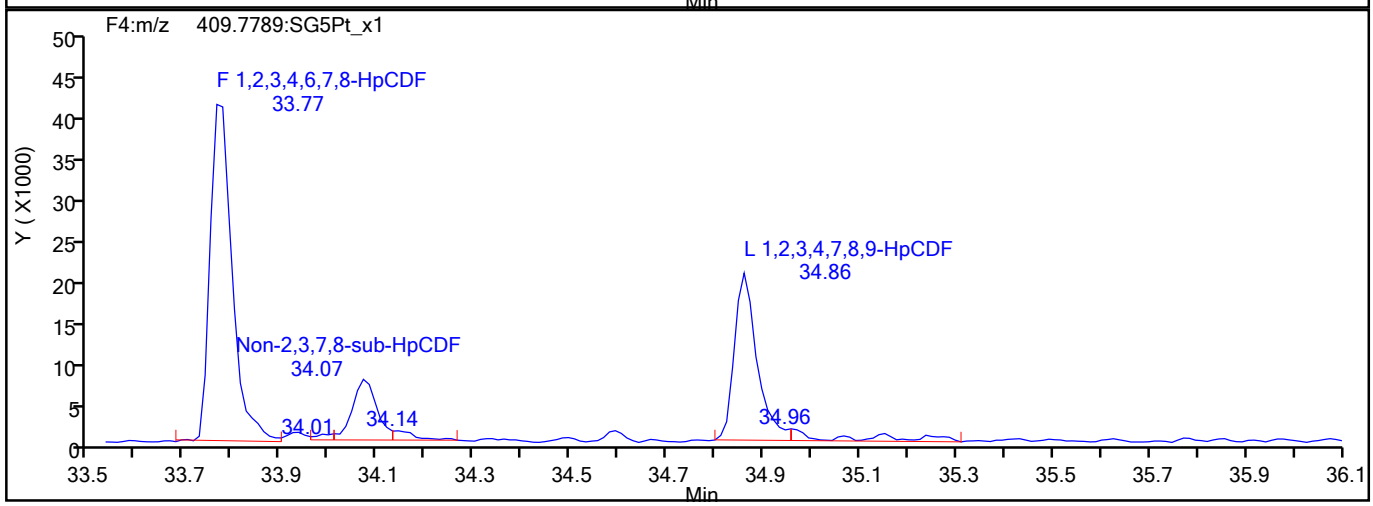

HpCDF Interference Mass

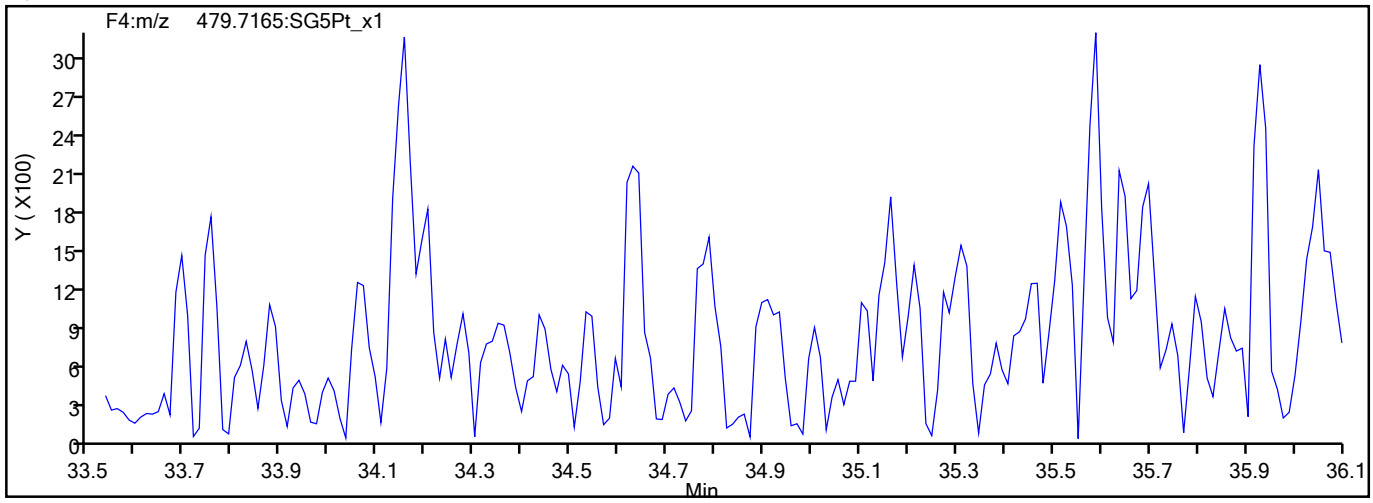

780167

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

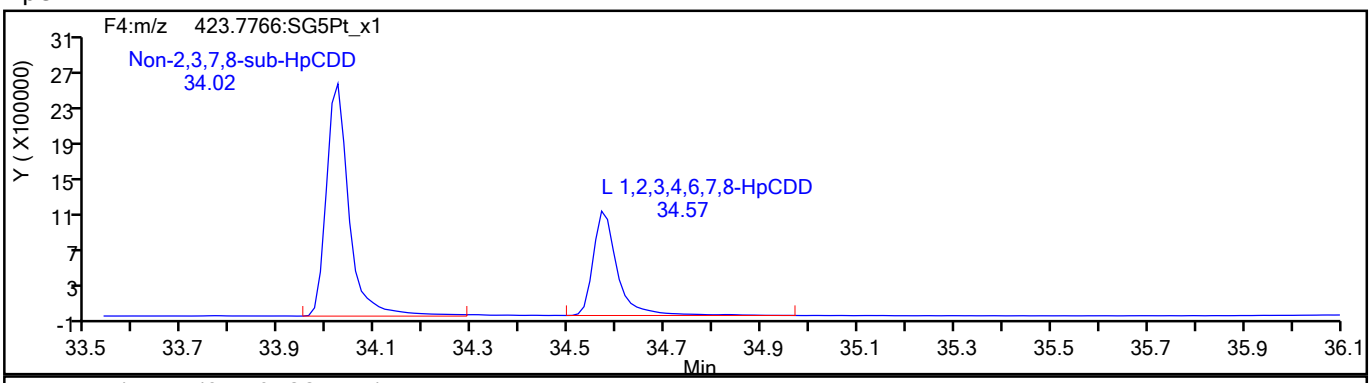

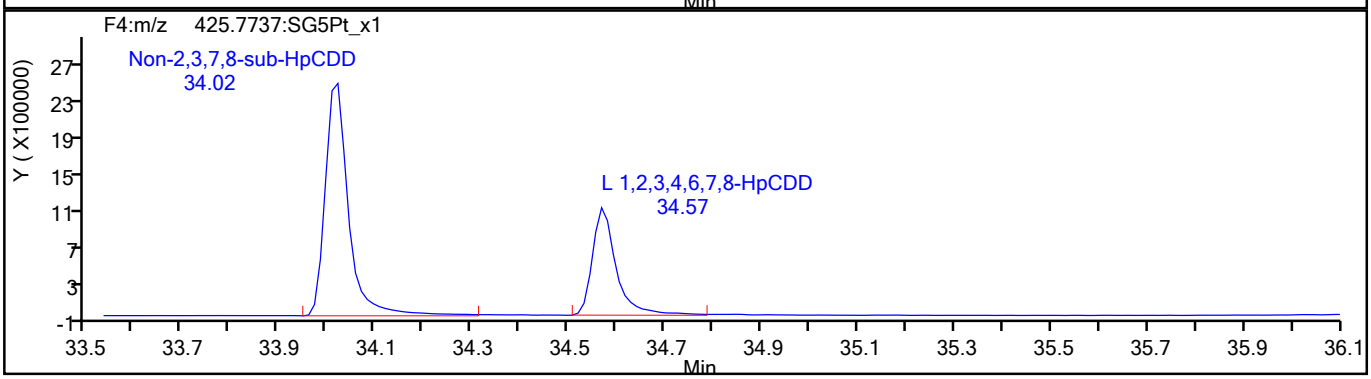

HpCDD Standards

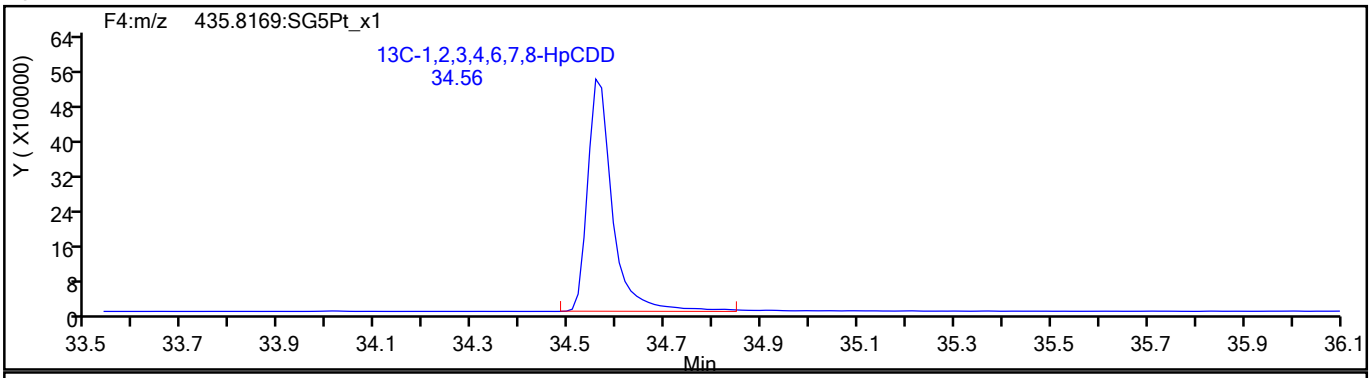

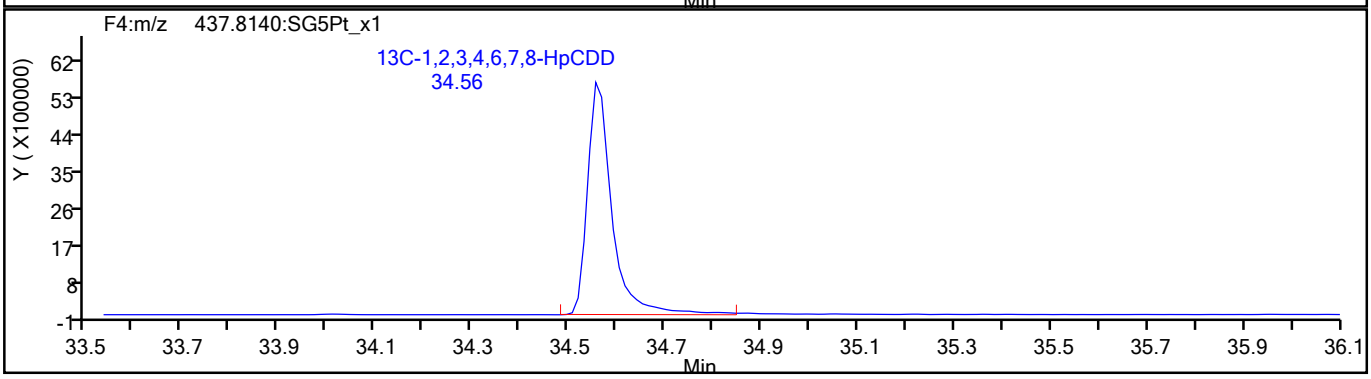

780168

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

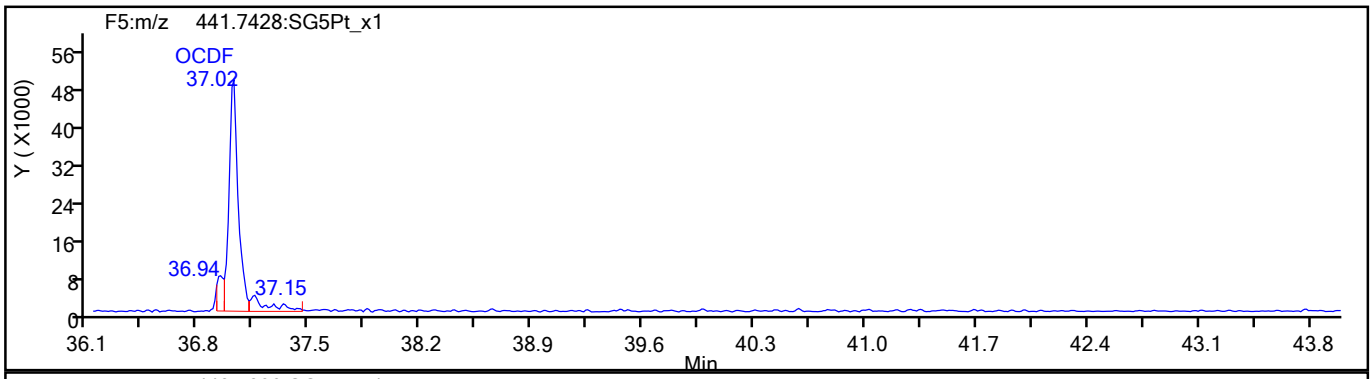

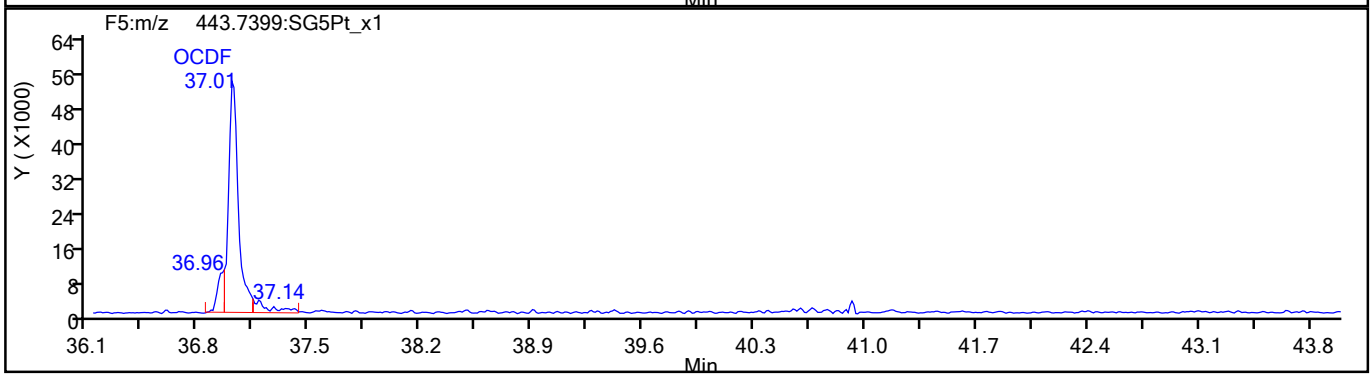

OCDF Standards

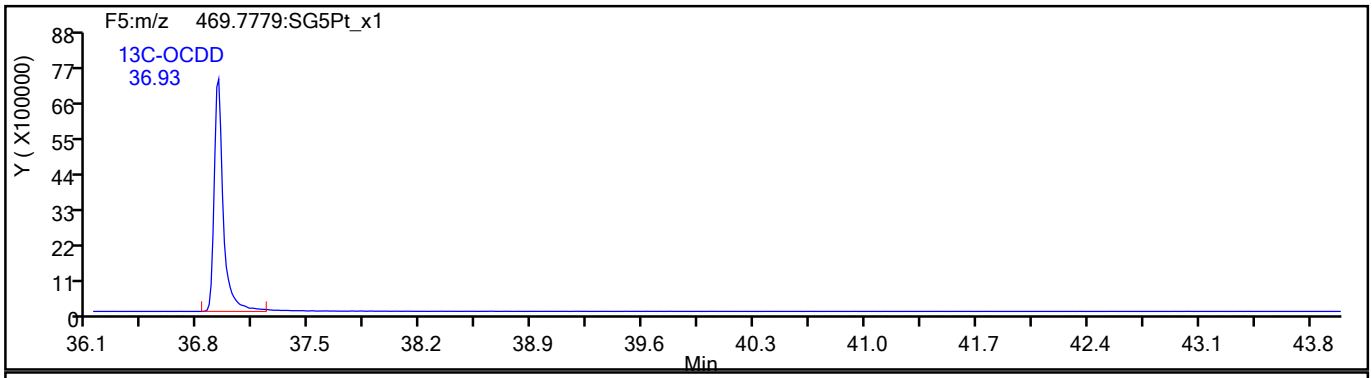

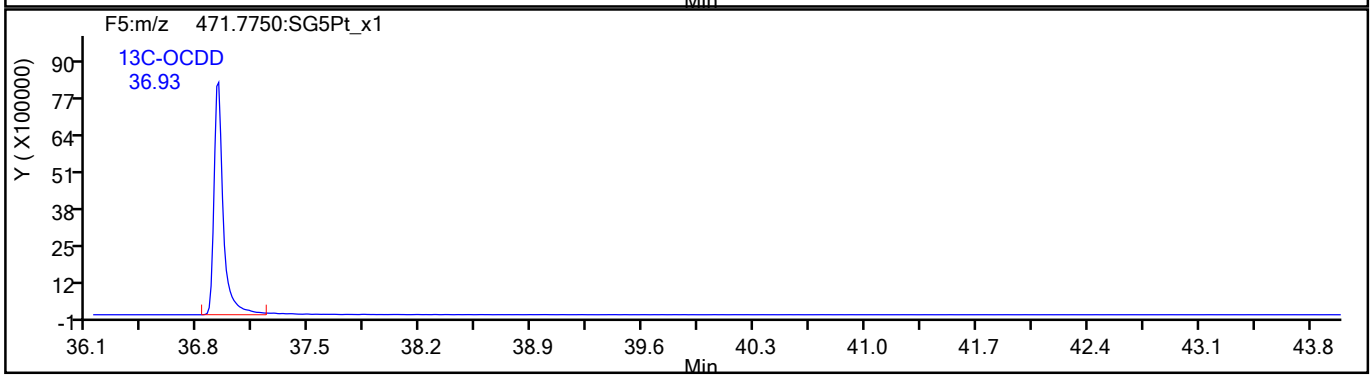

780169

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

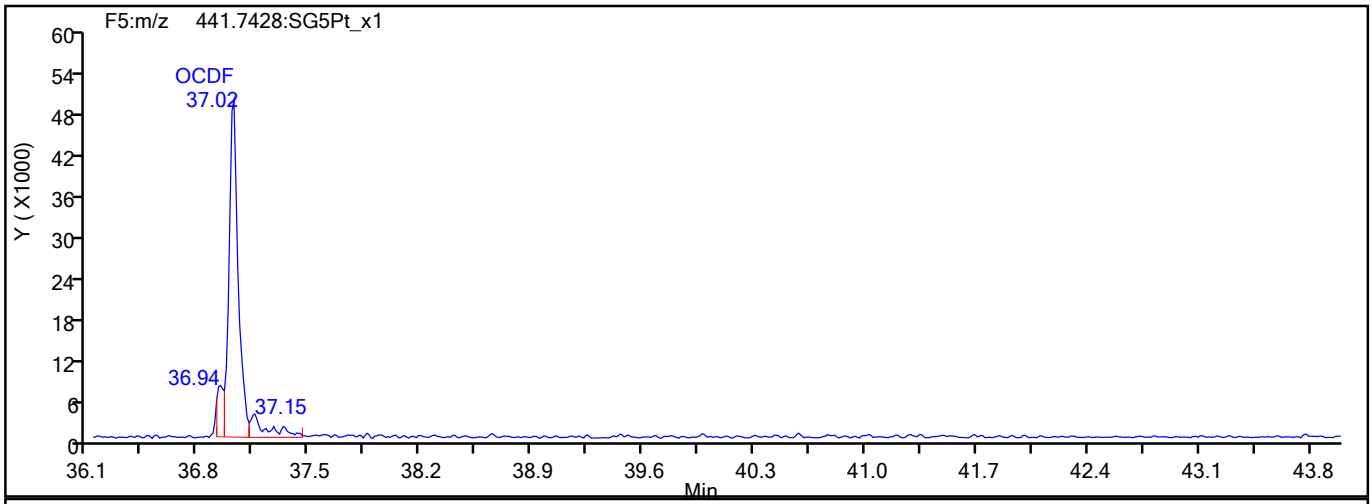

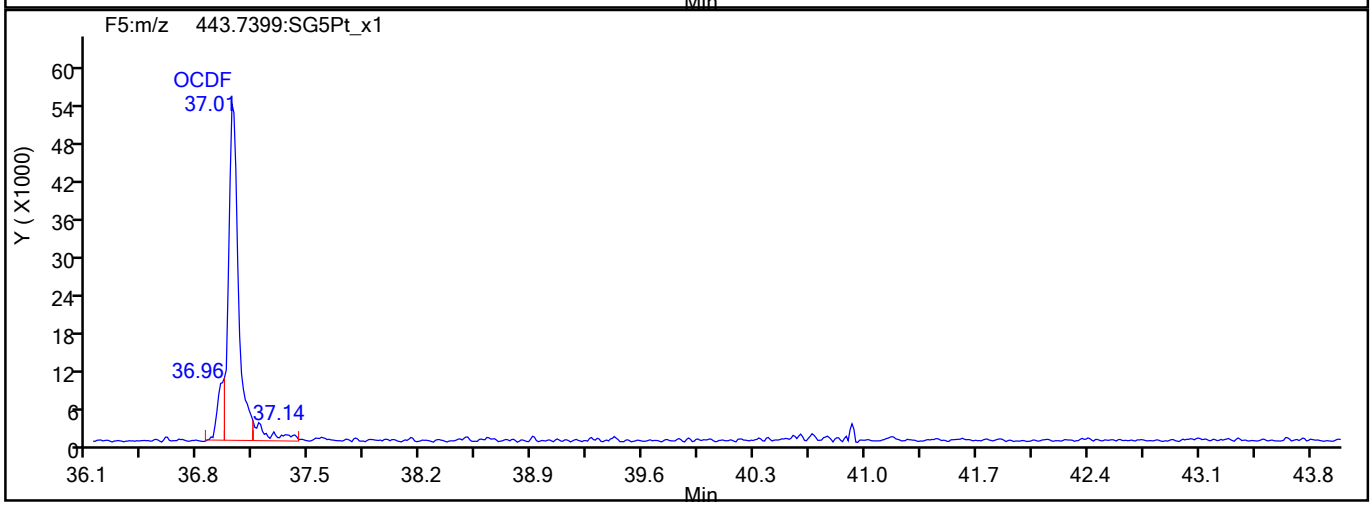

OCDF Interference Mass

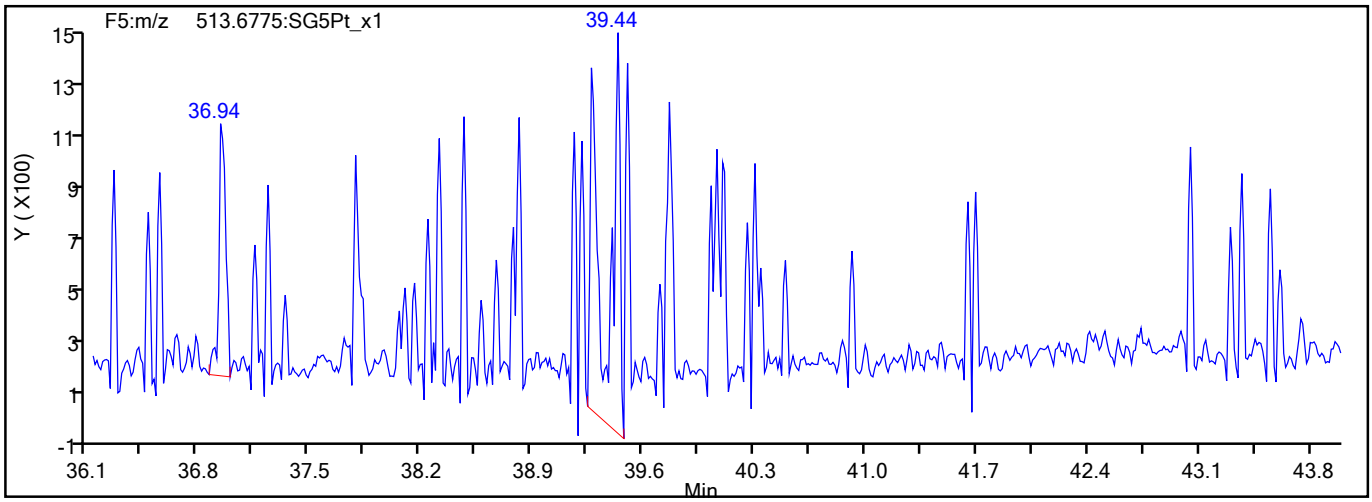

780170

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

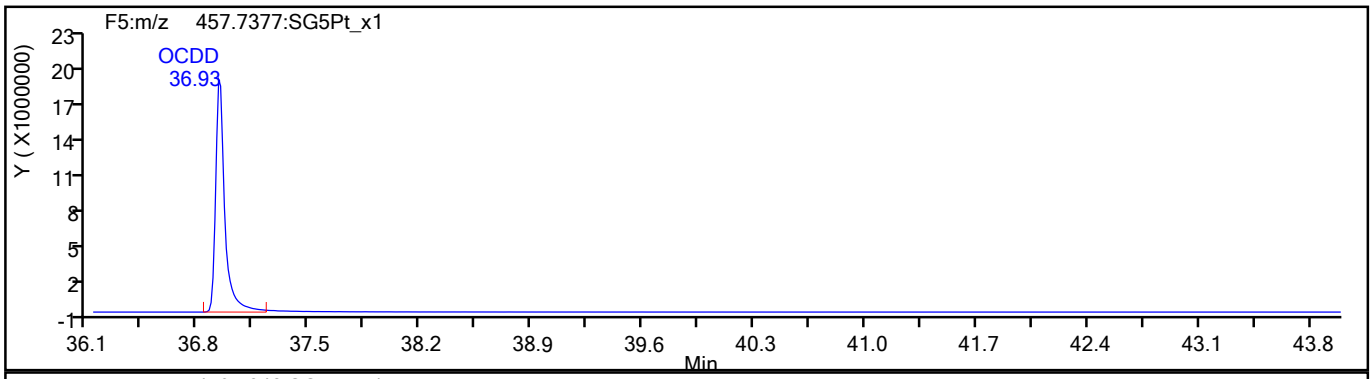

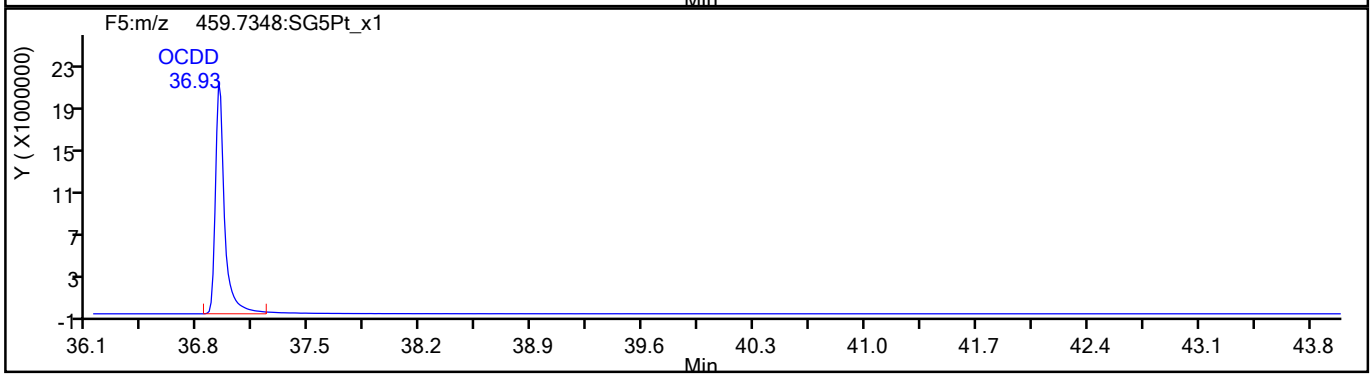

OCDD Standards

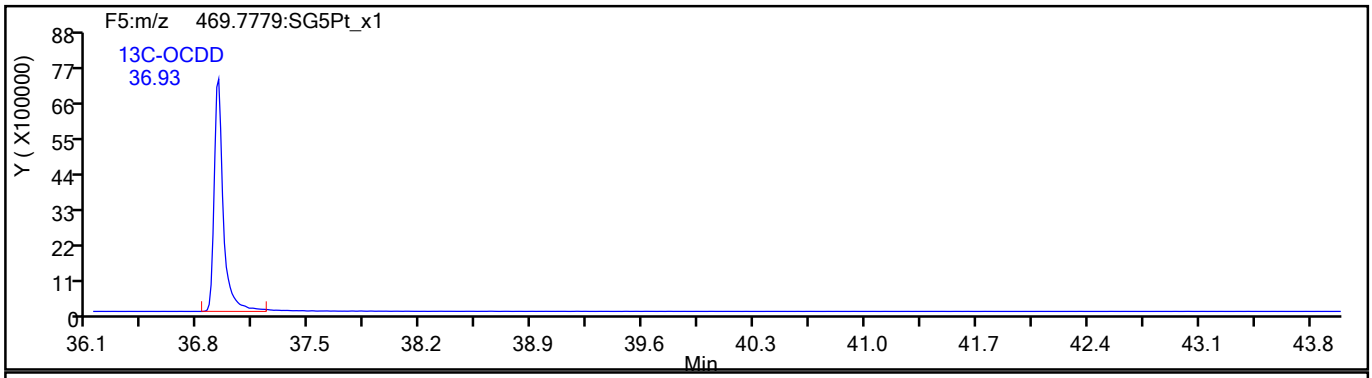

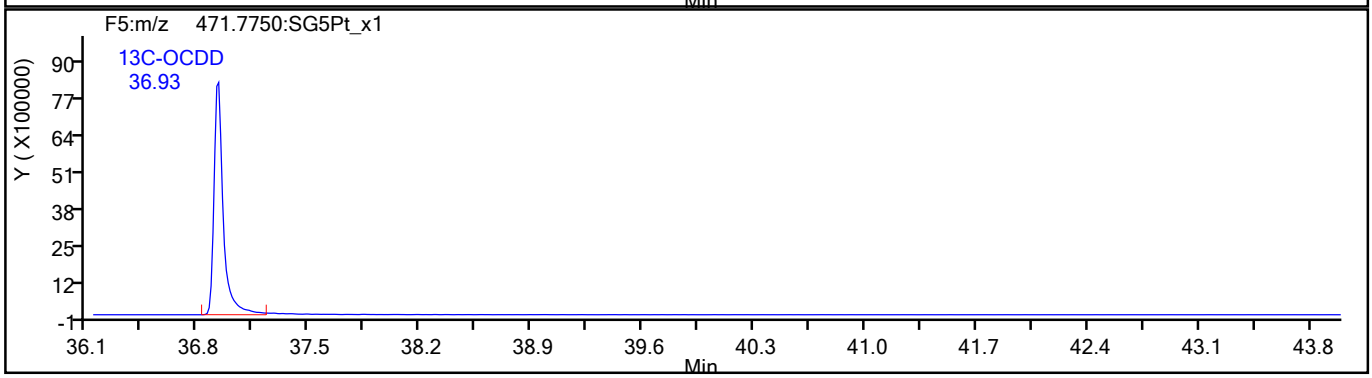

780171

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

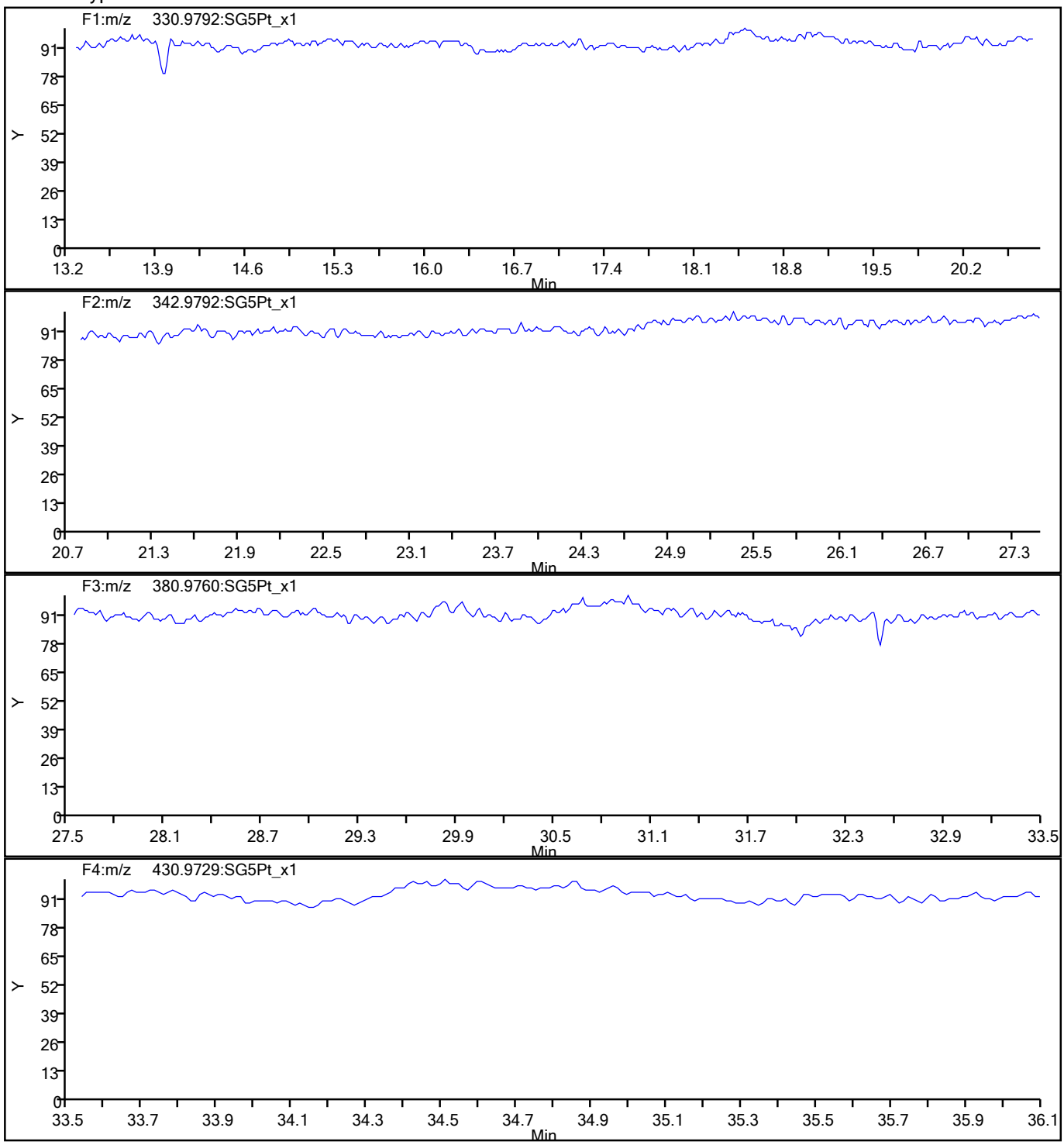

780172

Report Date: 18-Aug-2021 10:04:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_37.d		
Injection Date:	14-Aug-2021 20:31:33	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	516846	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

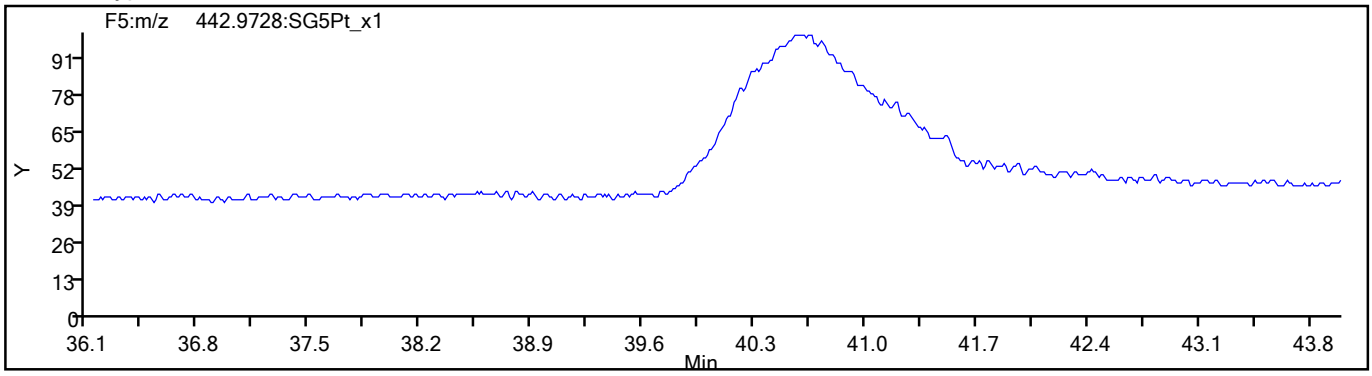

780173

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (14-16) RA
Lab Sample ID: 320-76788-20 RA
Matrix: Solid
Lab File ID: 24AU21A11D2_013.d
Analysis Method: 1613B
Date Collected: 07/23/2021 16:05
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.83(g)
Date Analyzed: 08/25/2021 00:17
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 34.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519540
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	160	B	1.6	0.32

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	68		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	83		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_013.d
Lims ID: 320-76788-A-20-A
Client ID: 11215702-072321-BN-SJSB105 (14-16)
Sample Type: Client
Inject. Date: 25-Aug-2021 00:17:22 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-20-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:32:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.299	55626278	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.616	50498161	0.81	1.3327	68.1	68.1	0.2733	0.2733	68.12	
2,3,7,8-TCDF	17.643	25811026	0.79	0.9978	51.2	51.2	0.1037	0.1037		
D 13C-2,3,7,8-TCDD	16.066	30933214	0.74	0.8749	63.6	63.6	1.146	1.146	63.56	
$ 37Cl4-2,3,7,8-TCDD	16.079	15968621		0.8648	33.2	33.2	0.1118	0.1118	82.99	
2,3,7,8-TCDD	16.079	5232540	0.80	1.0570	16.0	16.0	0.1479	0.1479		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_013.d
Lims ID: 320-76788-A-20-A
Client ID: 11215702-072321-BN-SJSB105 (14-16)
Sample Type: Client
Inject. Date: 25-Aug-2021 00:17:22 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-20-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:32:11

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.299	16.285	1		24374288	5628493	24834	62085	227		
333.9339	16.299	16.285	1		31251990	7292033	26990	67475	270	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.616	17.601	1	1.081	22674303	4441544	8652	21630	513		
317.9389	17.616	17.601	1	1.081	27823858	5413240	10172	25430	532	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.629	1	1.002	11371868	2172384	1722	4305	1262		
305.8987	17.643	17.629	1	1.002	14439158	2664473	2357	5892	1130	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.051	1	0.986	13167123	3142558	24834	62085	127		
333.9339	16.066	16.051	1	0.986	17766091	4216534	26990	67475	156	0.74(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.079	16.065	1	0.987	15968621	3855323	4995	12487	772		
2,3,7,8-TCDD											
319.8965	16.079	16.079	0	1.001	2321437	497316	2075	5187	240		
321.8936	16.079	16.079	0	1.001	2911103	643825	2526	6315	255	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 25-Aug-2021 09:02:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_013.d		
Injection Date:	25-Aug-2021 00:17:22	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	519540	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

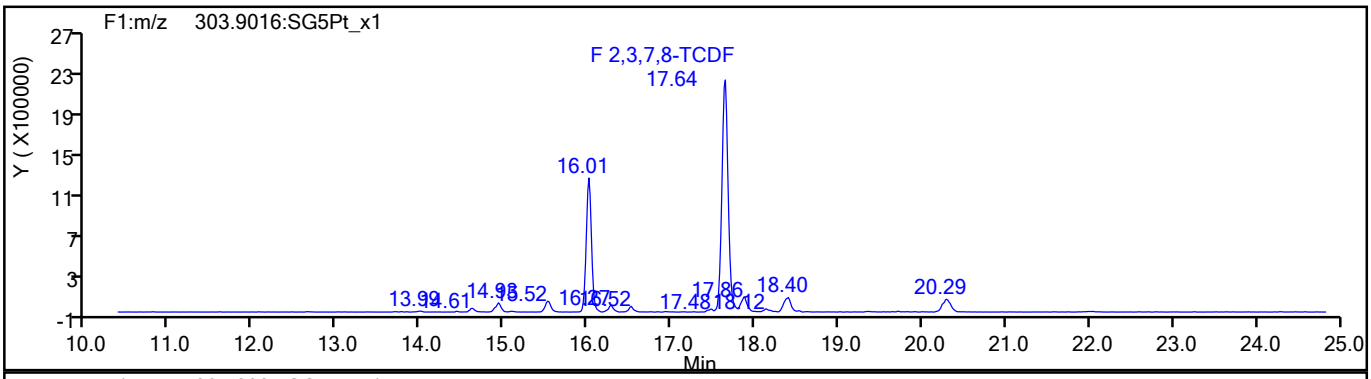

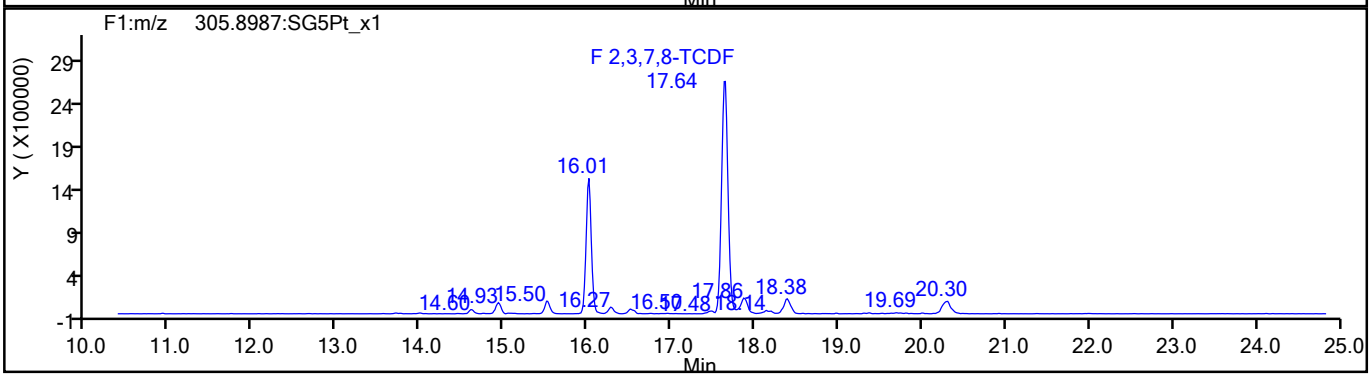

TCDF Standards

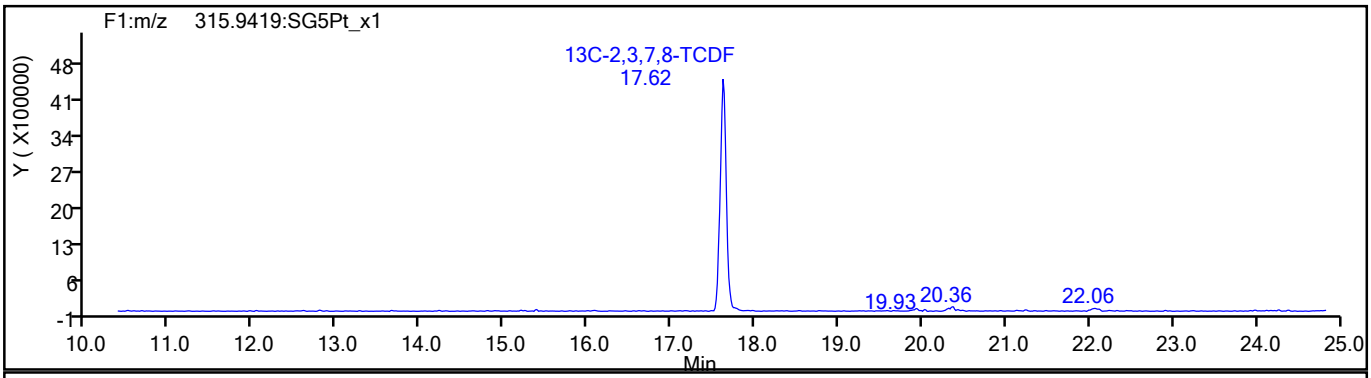

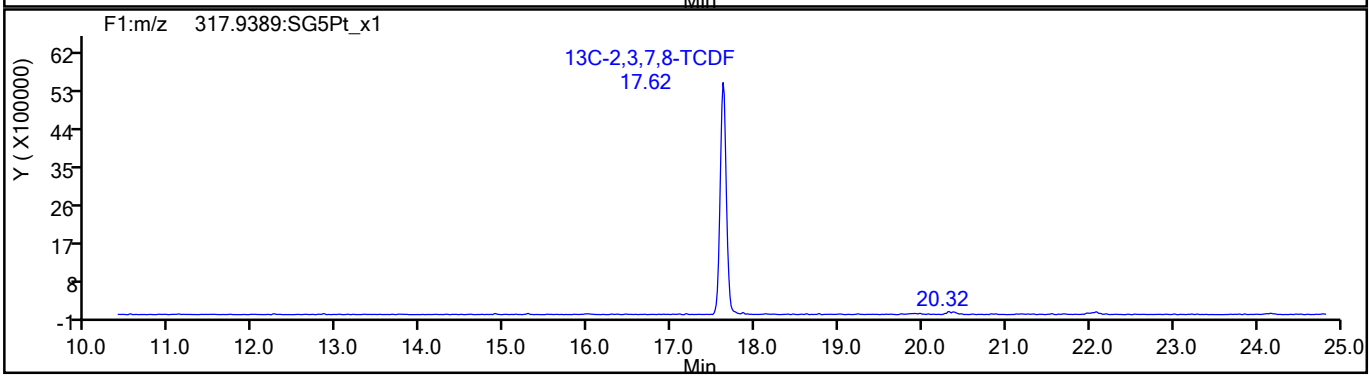

780177

Report Date: 25-Aug-2021 09:02:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_013.d		
Injection Date:	25-Aug-2021 00:17:22	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	519540	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

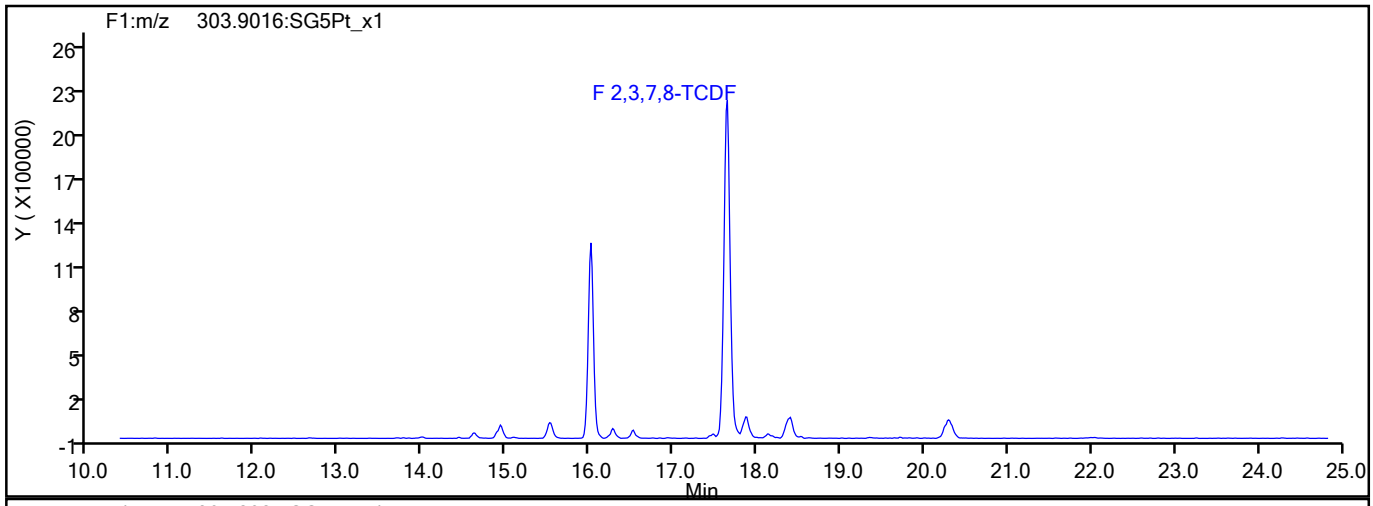

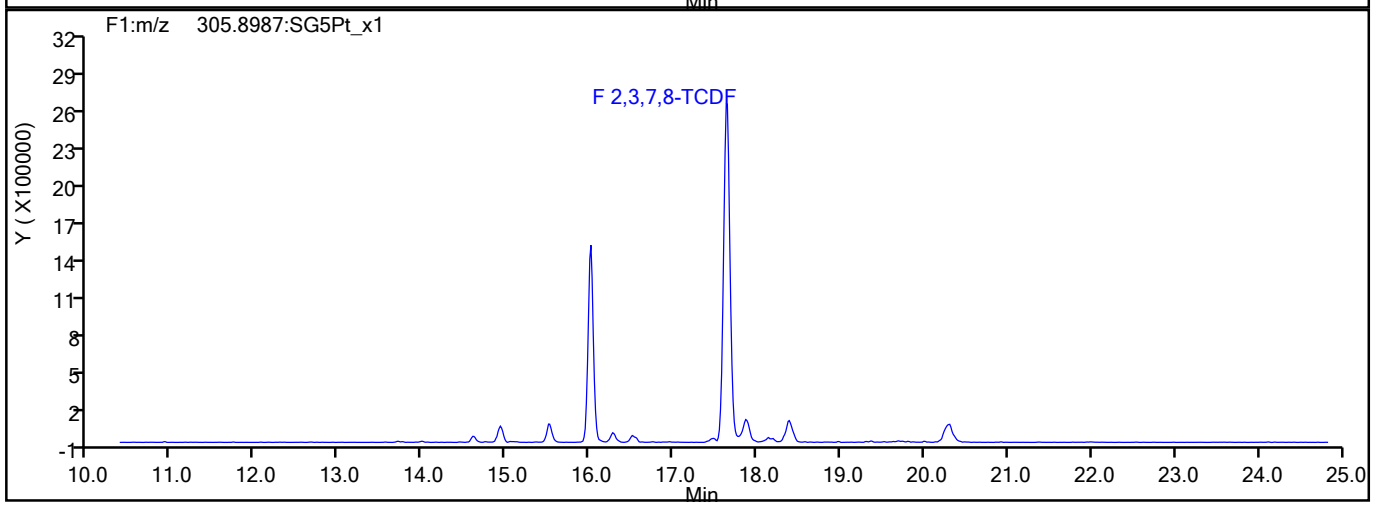

TCDF Interference Mass

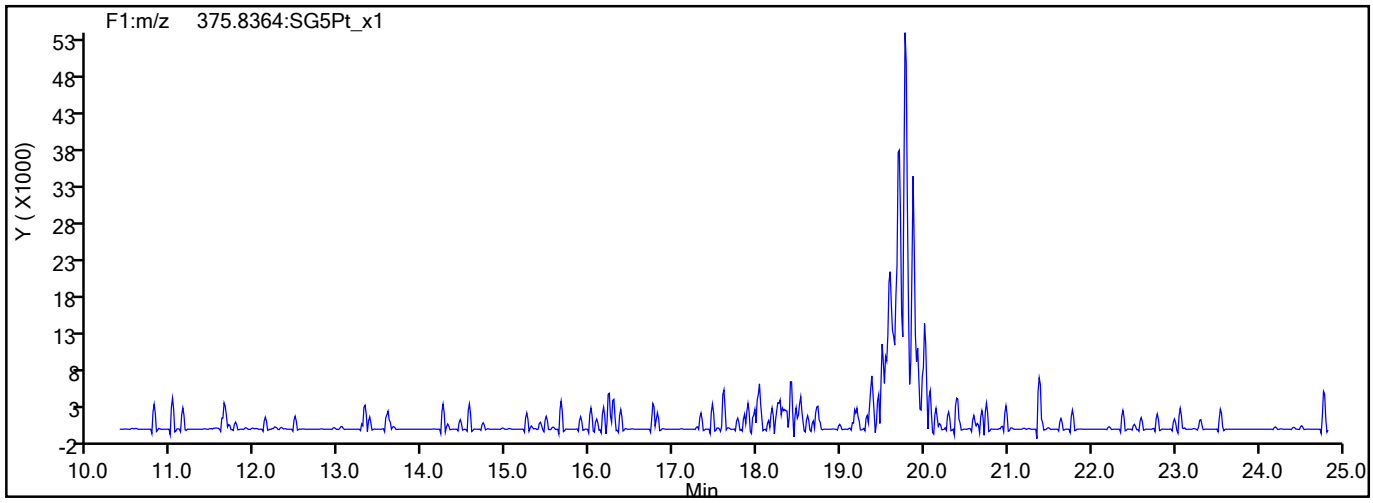

780178

Report Date: 25-Aug-2021 09:02:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_013.d		
Injection Date:	25-Aug-2021 00:17:22	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	519540	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

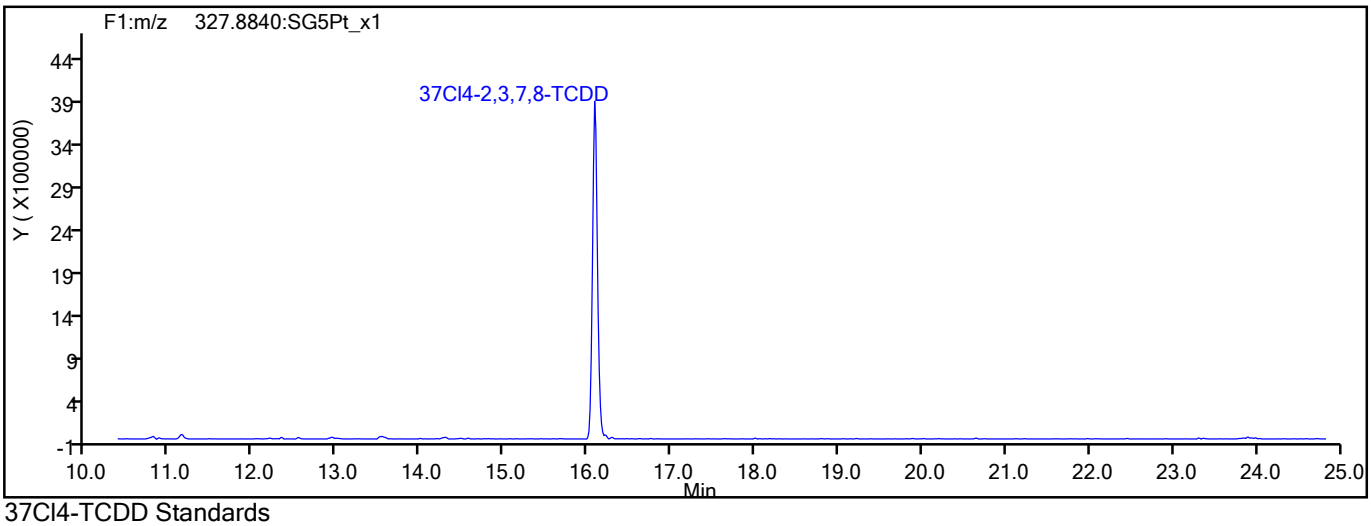

37Cl4-TCDD Standards

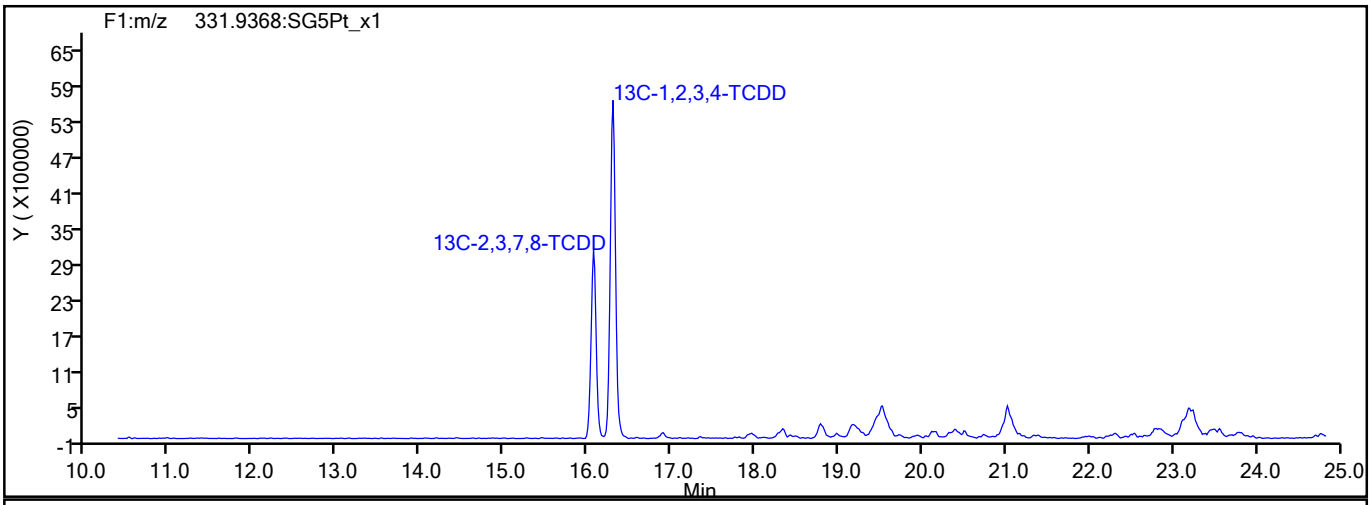

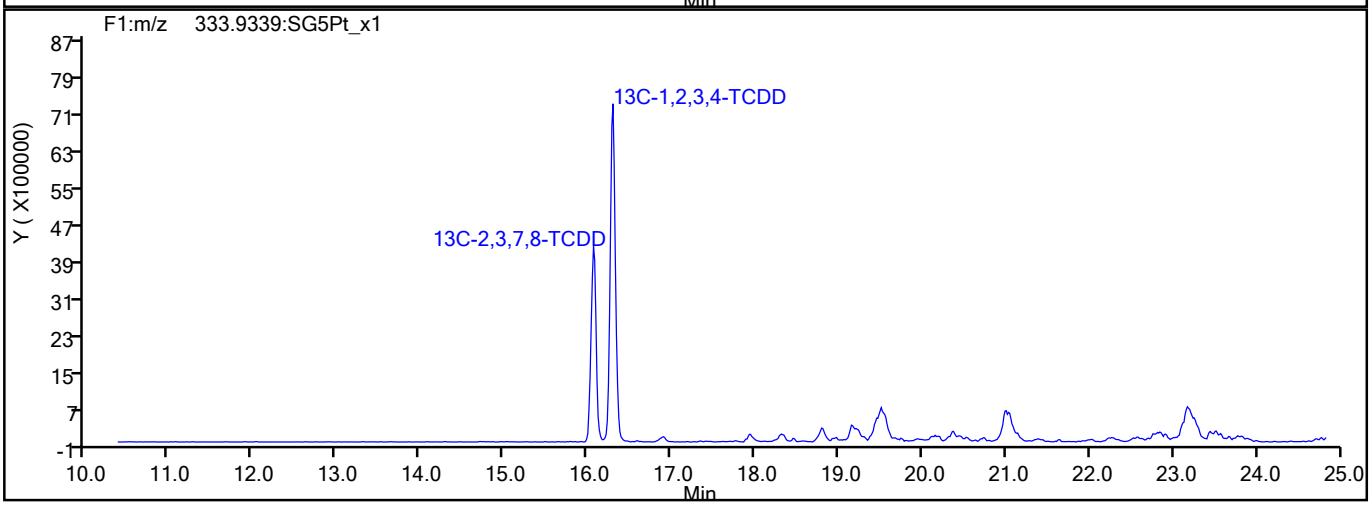

780179

Report Date: 25-Aug-2021 09:02:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_013.d		
Injection Date:	25-Aug-2021 00:17:22	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (14-16)		
Worklist#:	519540	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

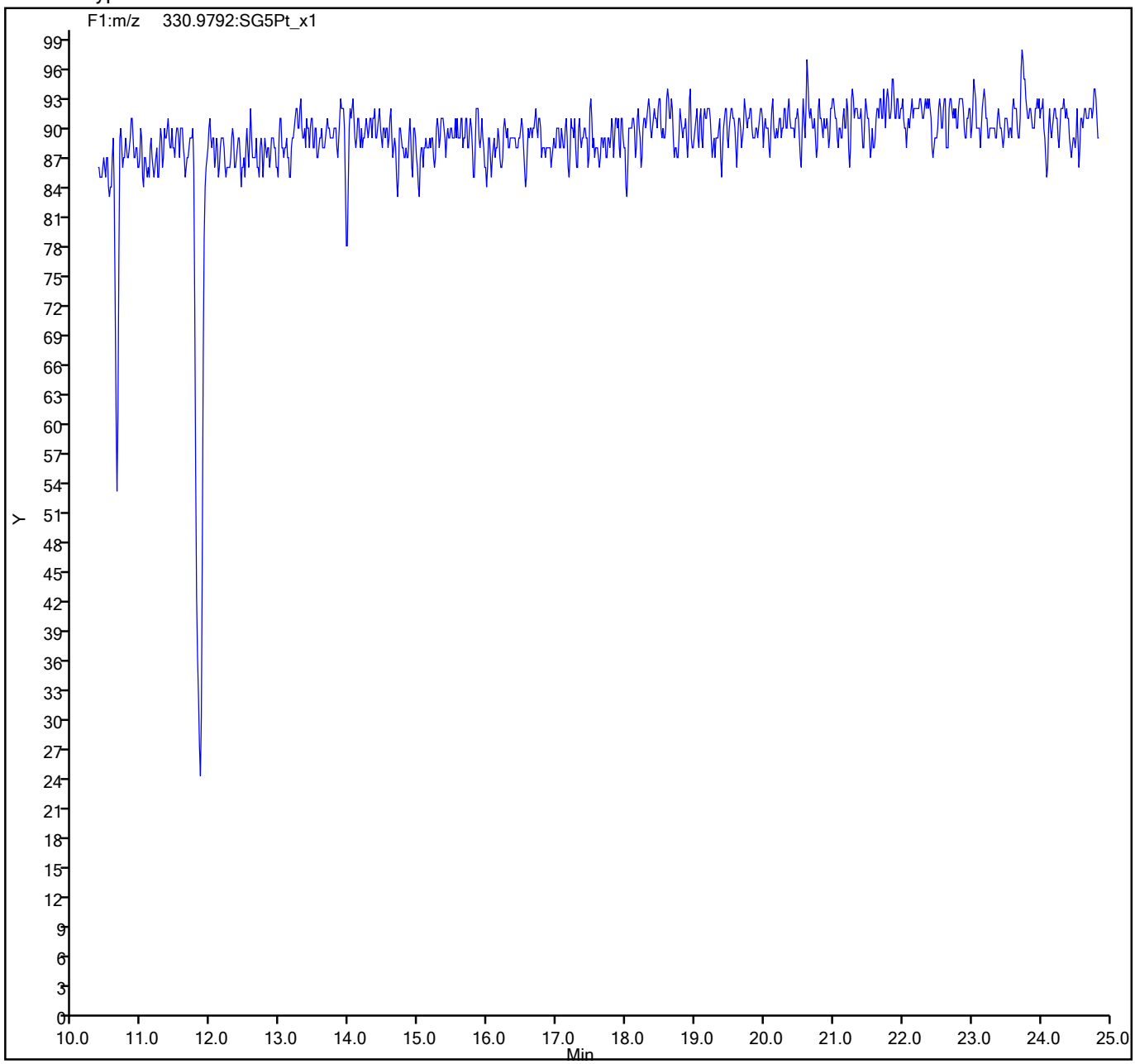

780180

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.0287	0.8698	1.0458	1.1094	1.0657	AveID		1.0239				8.9		20.0			
2,3,7,8-TCDD	1.2575	1.0971	1.2651	1.3434	1.3075	AveID		1.2541				7.5		20.0			
1,2,3,7,8-PeCDF	1.0739	0.9128	1.0891	1.1370	1.0928	AveID		1.0611				8.1		20.0			
2,3,4,7,8-PeCDF	1.0408	0.8610	1.0466	1.1082	1.0356	AveID		1.0184				9.1		20.0			
1,2,3,7,8-PeCDD	1.0578	0.9031	1.0680	1.1310	1.0823	AveID		1.0484				8.2		20.0			
1,2,3,4,7,8-HxCDF	1.1222	0.9192	1.1025	1.1936	1.0881	AveID		1.0851				9.3		20.0			
1,2,3,6,7,8-HxCDF	1.1488	0.9637	1.1546	1.1966	1.1664	AveID		1.1260				8.2		20.0			
2,3,4,6,7,8-HxCDF	1.2223	0.9863	1.1858	1.2415	1.2018	AveID		1.1675				8.9		20.0			
1,2,3,4,7,8-HxCDD	1.0979	0.8906	1.1304	1.1671	1.0341	AveID		1.0640				10.2		20.0			
1,2,3,6,7,8-HxCDD	1.0294	0.8529	1.0113	1.0930	1.0138	AveID		1.0001				8.9		20.0			
1,2,3,7,8,9-HxCDD	1.1551	0.9428	1.1999	1.2421	1.1227	AveID		1.1325				10.2		20.0			
1,2,3,7,8,9-HxCDF	1.1733	1.0136	1.1898	1.2479	1.2072	AveID		1.1664				7.7		20.0			
1,2,3,4,6,7,8-HpCDF	1.4474	1.2413	1.4986	1.5485	1.4706	AveID		1.4413				8.2		20.0			
1,2,3,4,6,7,8-HpCDD	1.1119	0.9539	1.1176	1.1675	1.1205	AveID		1.0943				7.5		20.0			
1,2,3,4,7,8,9-HpCDF	1.3136	1.1269	1.3622	1.4520	1.3321	AveID		1.3174				9.0		20.0			
OCDD	1.1009	0.9635	1.1652	1.1829	1.1226	AveID		1.1070				7.8		20.0			
OCDF	1.3863	1.1912	1.5145	1.5858	1.5129	AveID		1.4382				10.8		20.0			
13C-2,3,7,8-TCDF	1.6500	1.5631	1.6241	1.6170	1.6703	Ave		1.6249				2.5		35.0			
13C-2,3,7,8-TCDD	0.9128	0.8588	0.8965	0.8940	0.9345	Ave		0.8993				3.1		35.0			
13C-1,2,3,7,8-PeCDF	1.1977	1.1539	1.2193	1.2121	1.2674	Ave		1.2101				3.4		35.0			
13C-2,3,4,7,8-PeCDF	1.2269	1.1924	1.2487	1.2129	1.3165	Ave		1.2395				3.8		35.0			
13C-1,2,3,7,8-PeCDD	0.7558	0.7433	0.7524	0.7498	0.8049	Ave		0.7612				3.3		35.0			
13C-1,2,3,4,7,8-HxCDF	1.0875	1.1006	1.0706	1.0371	1.1225	Ave		1.0837				3.0		35.0			
13C-1,2,3,6,7,8-HxCDF	1.1466	1.1401	1.1115	1.1251	1.1163	Ave		1.1279				1.3		35.0			
13C-2,3,4,6,7,8-HxCDF	1.0781	1.0785	1.0541	1.0562	1.0518	Ave		1.0637				1.3		35.0			
13C-1,2,3,4,7,8-HxCDD	0.7413	0.7515	0.6926	0.7049	0.7769	Ave		0.7334				4.7		35.0			
13C-1,2,3,6,7,8-HxCDD	0.8884	0.8870	0.8694	0.8685	0.8876	Ave		0.8802				1.2		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9787	0.9851	0.9497	0.9522	0.9722	Ave		0.9676				1.6		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.8030	0.7818	0.7501	0.7625	0.7677	Ave		0.7730				2.6		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6554	0.6478	0.6343	0.6458	0.6528	Ave		0.6472				1.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6985	0.7093	0.6800	0.6816	0.7346	Ave		0.7008				3.2		35.0			
13C-OCDD	0.4462	0.4357	0.4273	0.4575	0.4691	Ave		0.4472				3.7		35.0			
37Cl4-2,3,7,8-TCDD	0.9705	0.9794	1.1718	1.1876	1.2264	Ave		1.1071				11.1					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	557485	1709191	10638776	44524782	204575642	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	376984	1184284	7104238	29808948	140421448	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	2112140	6620354	41588176	171023920	795873691	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	2096967	6452410	40928436	166805723	783403837	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	1312779	4219570	25165054	105236005	500555284	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	1949462	6041767	37525146	155057762	737075796	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	2104086	6561860	40802767	168618976	785709889	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	2104896	6352404	39741365	164241378	762810877	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	1300030	3996910	24891170	103044220	484857042	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	1460747	4517909	27953752	118900298	543061818	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	1503407	4612548	29794954	122394998	563888565	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	1834100	5963032	35924190	148834491	708280047	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	1856599	5795616	35740964	147892240	681312007	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	1164074	3690749	22538791	94435922	441437476	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	1465634	4773949	29450636	123968724	590555312	2.50	10.0	50.0	200	1000
OCDD		AveID	1569338	5013385	31656667	135570174	635652839	5.00	20.0	100	400	2000
OCDF		AveID	1976175	6198469	41147202	181747068	856685987	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	108384725	98246522	101724636	100332269	95980421	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	59957723	53975587	56155483	55471422	53698206	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	78674290	72525655	76368219	75205597	72829681	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	80591659	74944110	78214582	75259591	75649463	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	49643581	46721712	47124414	46524396	46251010	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	69484482	65726932	68075509	64951889	67741189	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	73262388	68089005	70677463	70459920	67363664	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	68885161	64406928	67028498	66145684	63471184	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	47363504	44877133	44039927	44144841	46886171	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	56759108	52974056	55284532	54392394	53564396	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	62528954	58828058	60389284	59636084	58669892	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	51308225	46691158	47697671	47752972	46328151	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	41876556	38689128	40333717	40442950	39395832	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	44628352	42362179	43238622	42687625	44333848	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	57018462	52034518	54338243	57303880	56623863	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	318727	1231219	7339670	29474361	140953034	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\26JL2110D5.SPL
Last Modified: Monday, July 26, 2021 16:58:03 Pacific Daylight Time
Printed: Tuesday, July 27, 2021 07:40:45 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	26JL2110D5_1	WDM HRDXNCP_00042	WDM 072621	Tray01:1	Dioxin		SMA
2	26JL2110D5_2	SB Solvent Blank C-14	SB 072621	Tray01:3			SMA
3	26JL2110D5_3	CS-2 HRDXNL2_00032	IC 072621	Tray01:4	Dioxin		SMA
4	26JL2110D5_4	CS-3 HRDXNL3_00029	IC 072621A	Tray01:5	Dioxin		SMA
5	26JL2110D5_5	CS-4 HRDXNL4_00099	IC 072621B	Tray01:2	Dioxin		SMA
6	26JL2110D5_6	CS-5 HRDXNL5_00032	IC 072621C	Tray01:6	Dioxin		SMA
7	26JL2110D5_7	CS-6 HRDXNL6_00028	IC 072621D	Tray01:7	Dioxin		SMA
8	26JL2110D5_8	SB Solvent Blank C-14	SB 072621A	Tray01:3			SMA
9	26JL2110D5_9	ICV HRDXNIC_00047	ICV 072621	Tray01:8	Dioxin		SMA
10	26JL2110D5_10	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS
11	26JL2110D5_11	WDM HRDXNCP_00042	WDM 031621C	Tray01:1	Dioxin		KSS
12	26JL2110D5_12	SB Solvent Blank C-14	SB 072621B	Tray01:3			KSS
13	26JL2110D5_13	mb 320-508015/1-a	mb 320-508015/1-a	Tray01:9	1613B/8290/Water	D255	KSS
14	26JL2110D5_14	lcs 320-508015/2-a	lcs 320-508015/2-a	Tray01:10	1613B/8290/Water		KSS
15	26JL2110D5_15	lcsd 320-508015/3-a	lcsd 320-508015/3-a	Tray01:11	1613B/8290/Water		KSS
16	26JL2110D5_16	320-76081-a-3-c	320-76081-a-3-c	Tray01:12	1613B/8290/Water		KSS
17	26JL2110D5_17	SB Solvent Blank C-14	SB 072621C	Tray01:3			KSS
18	26JL2110D5_18	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS

LOGFILE CHECKED
DB 7/27/21

780186

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:18:21 Pacific Daylight Time

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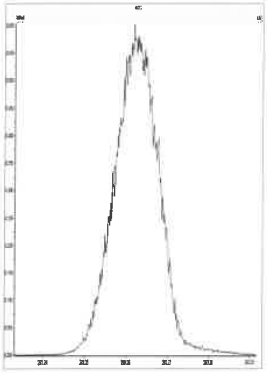

M 304.9824 R 12752

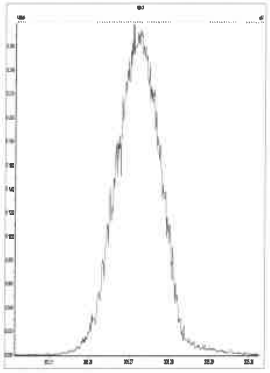

M 318.9792 R 13230

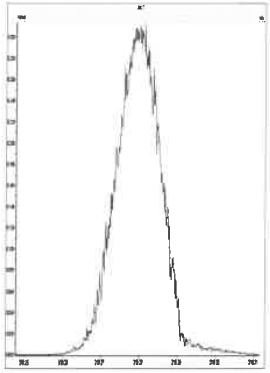

M 330.9792 R 12691

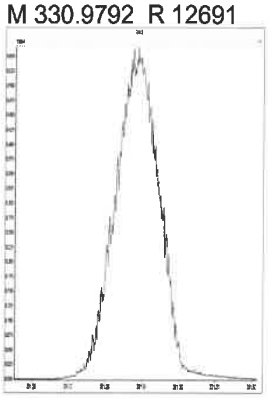

M 342.9792 R 12885

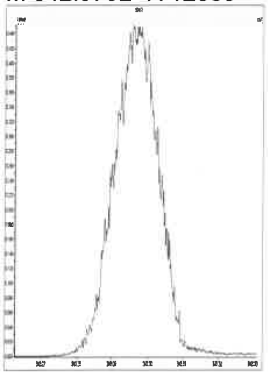

M 354.9792 R 12138

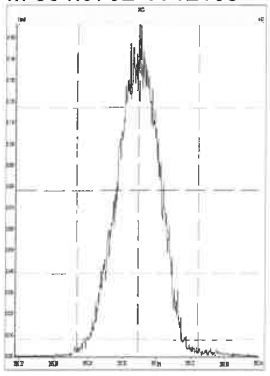

M 366.9792 R 13090

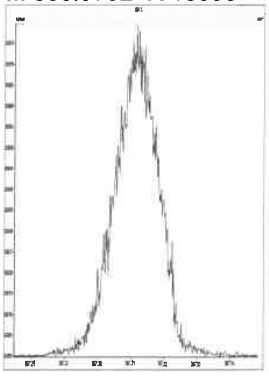

M 380.9760 R 12562

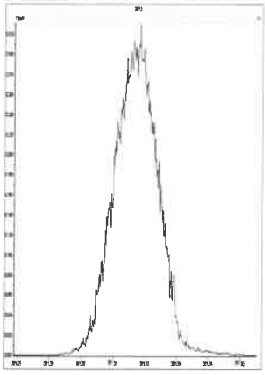

M 392.9760 R 12753

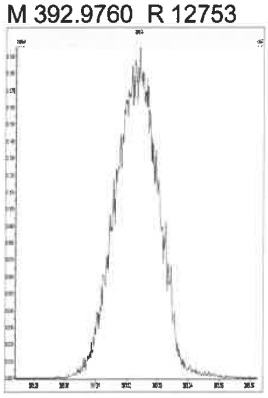

M 404.9760 R 12137

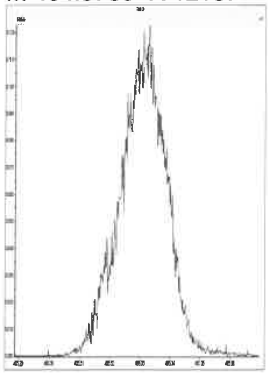

M 416.9760 R 12563

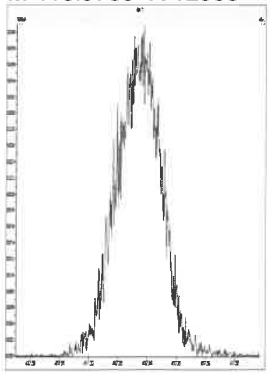

780187

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:04 Pacific Daylight Time

M 318.9792 R 13300

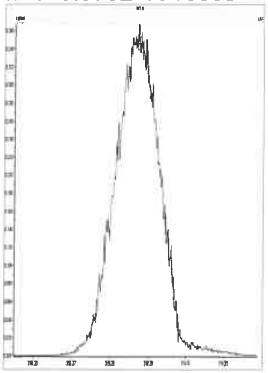

M 330.9792 R 12691

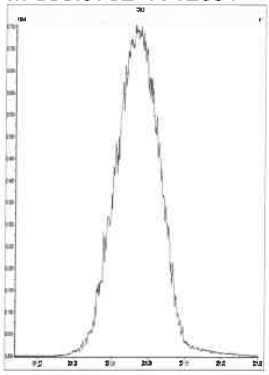

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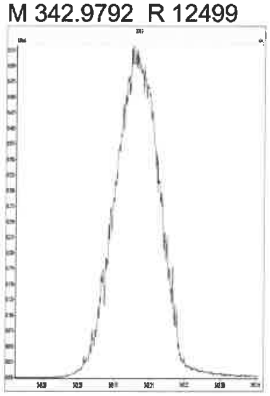

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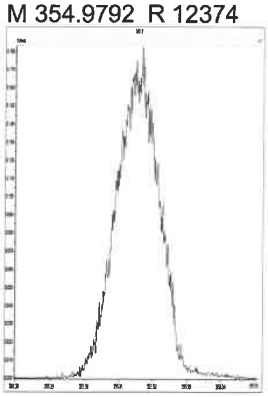

M 366.9792 R 12691

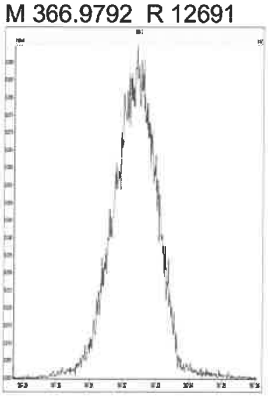

M 380.9760 R 12690

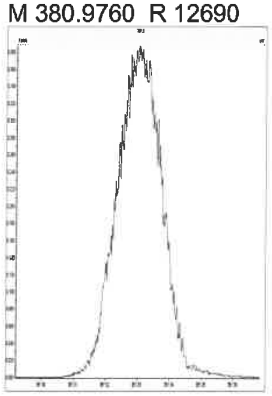

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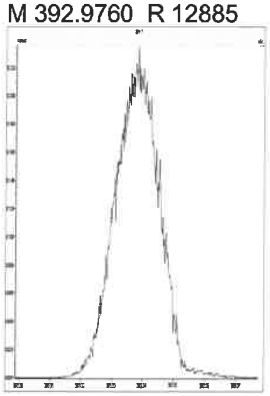

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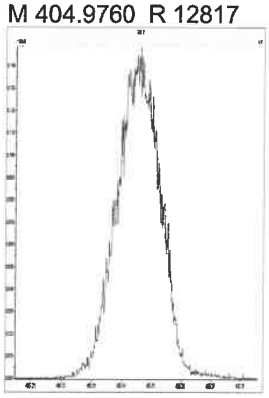

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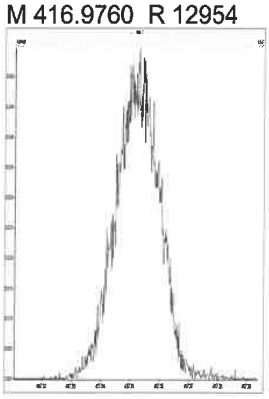

780188

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:43 Pacific Daylight Time

M 366.9792 R 12440

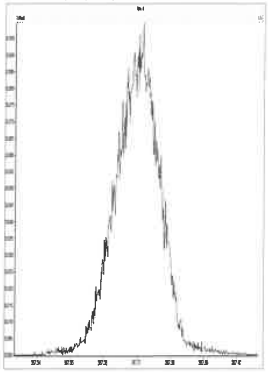

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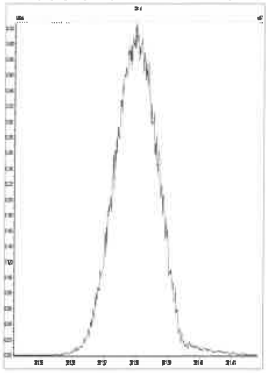

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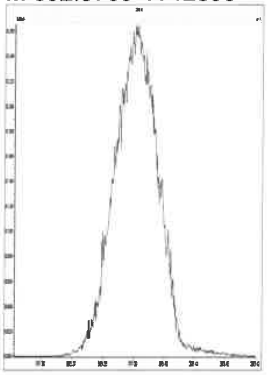

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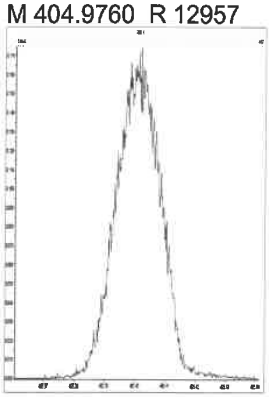

M 416.9760 R 13516

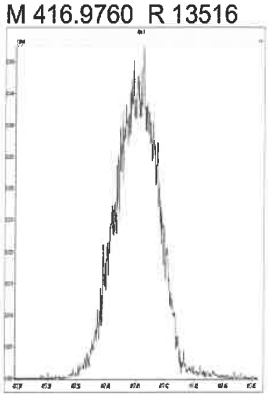

M 430.9728 R 12564

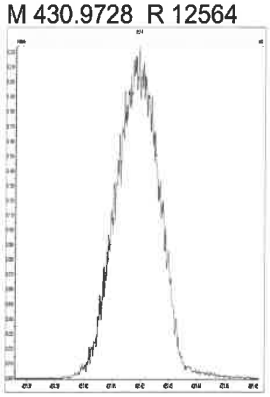

M 442.9728 R 12953

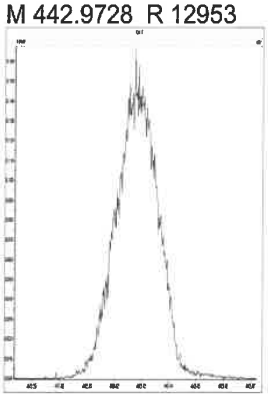

M 454.9728 R 13226

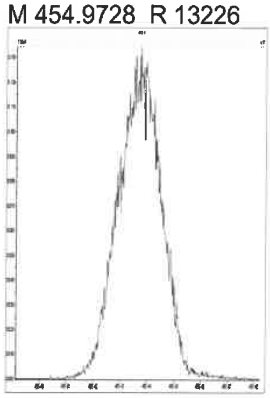

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File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

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M 380.9760 R 12885

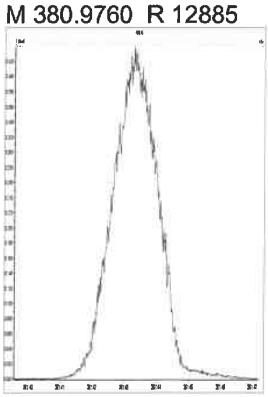

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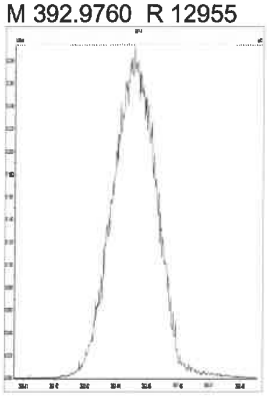

M 404.9760 R 12756

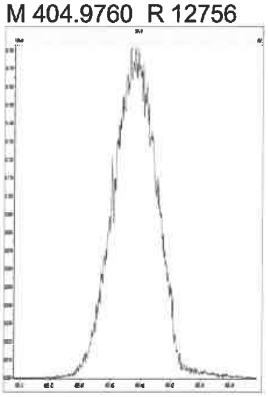

M 416.9760 R 13368

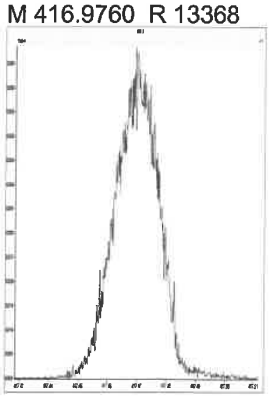

M 430.9728 R 12758

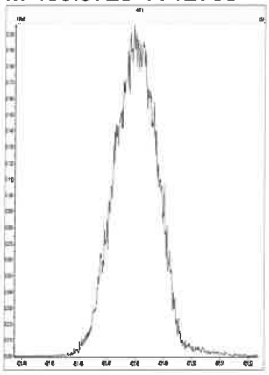

M 442.9728 R 13229

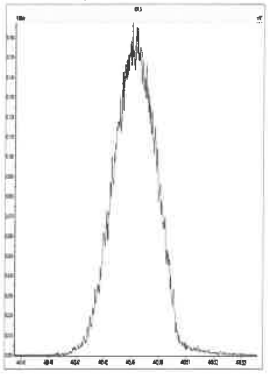

M 454.9728 R 13737

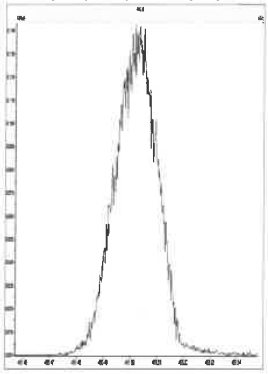

M 466.9728 R 12952

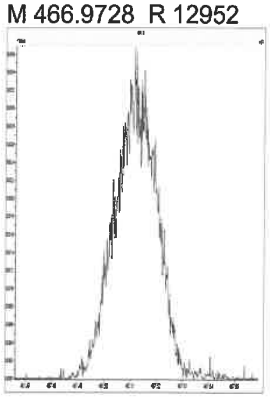

M 480.9696 R 12819

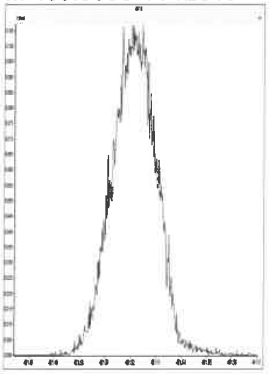

780190

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

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M 380.9760 R 12630

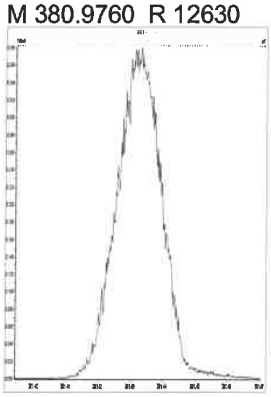

M 392.9760 R 12687

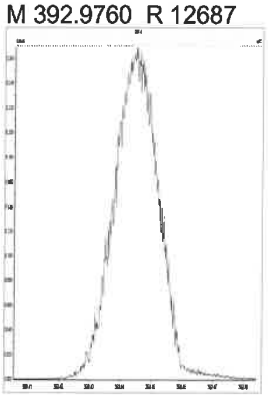

M 404.9760 R 13441

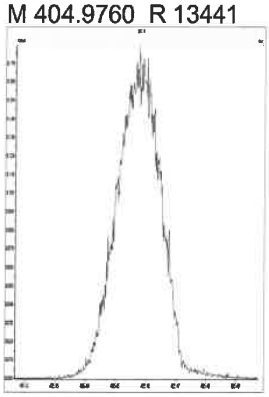

M 416.9760 R 12886

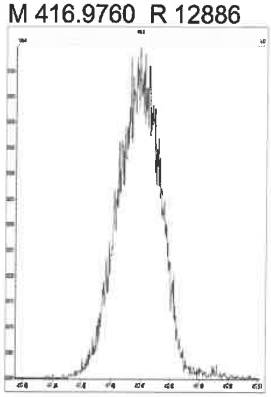

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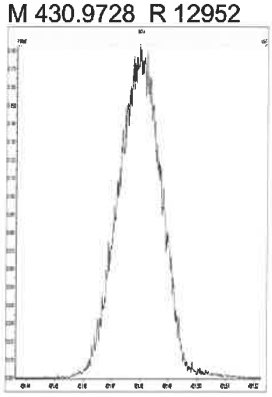

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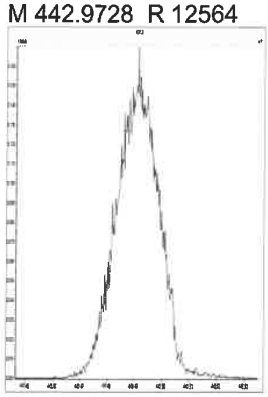

M 454.9728 R 13228

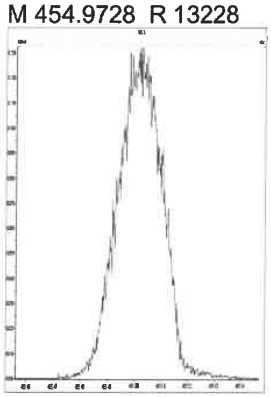

M 466.9728 R 12689

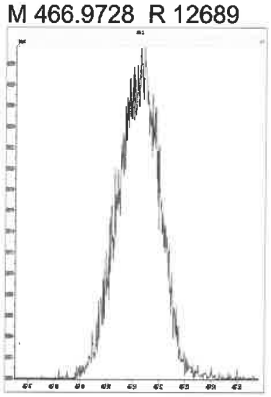

M 480.9696 R 13226

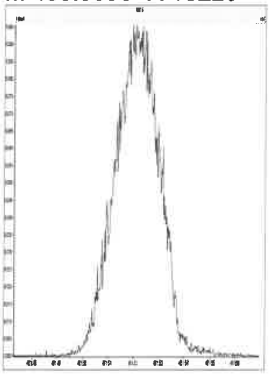

M 492.9696 R 13090

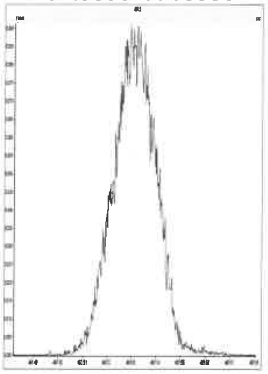

M 504.9696 R 13021

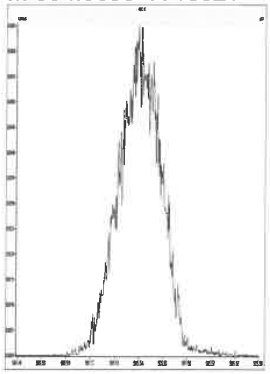

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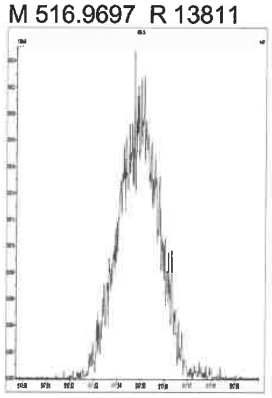

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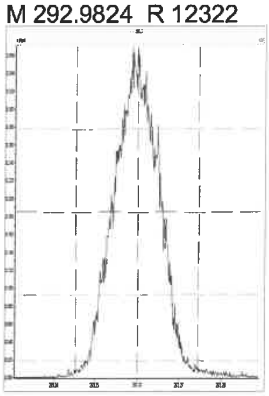

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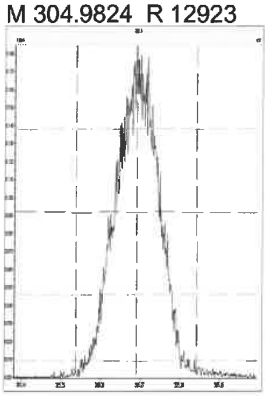

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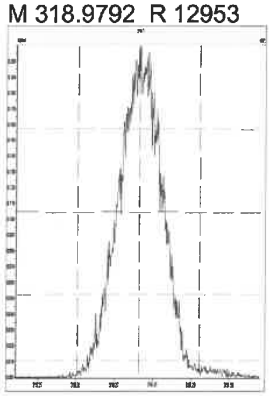

M 330.9792 R 12791

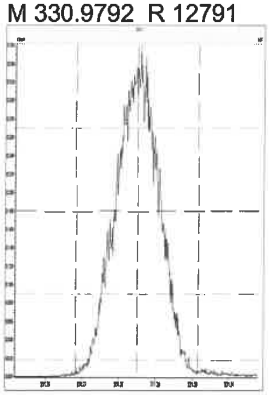

M 342.9792 R 12345

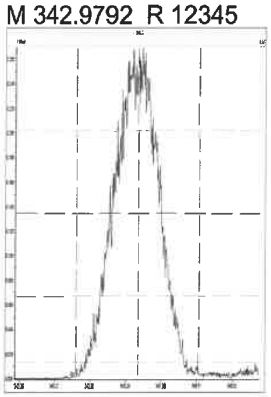

M 354.9792 R 13001

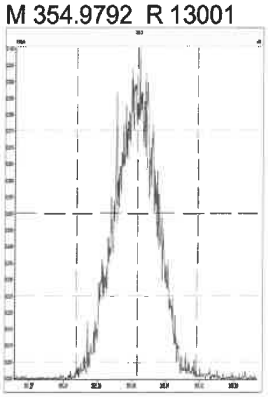

M 366.9792 R 13101

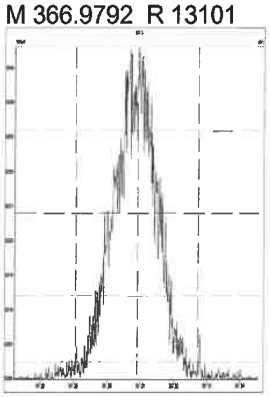

M 380.9760 R 13055

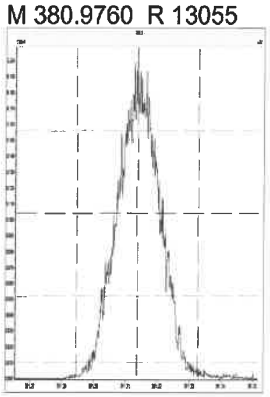

M 392.9760 R 13023

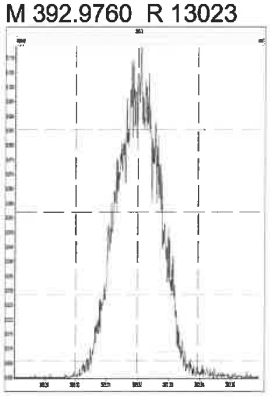

M 404.9760 R 13233

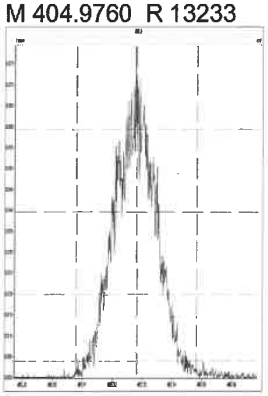

M 416.9760 R 14086

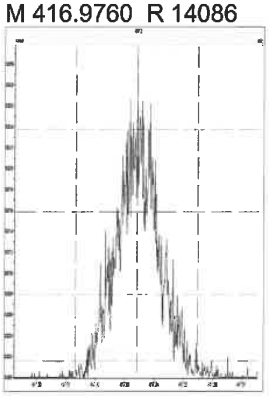

M 318.9792 R 12832

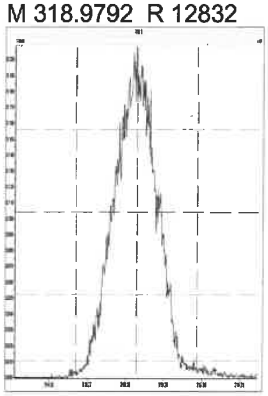

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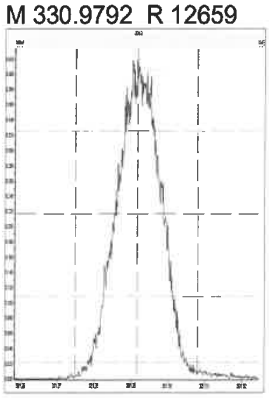

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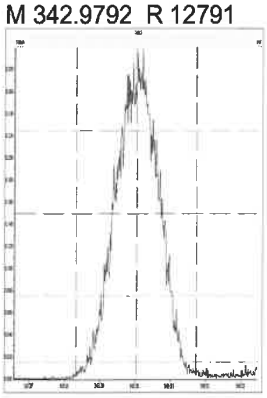

M 354.9792 R 13061

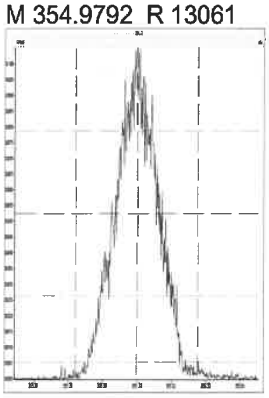

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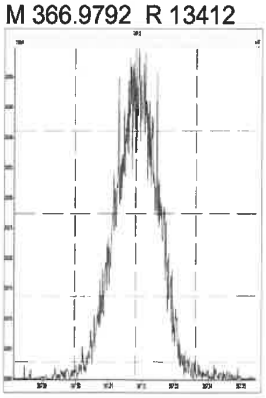

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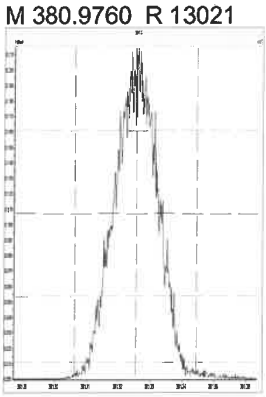

M 392.9760 R 13262

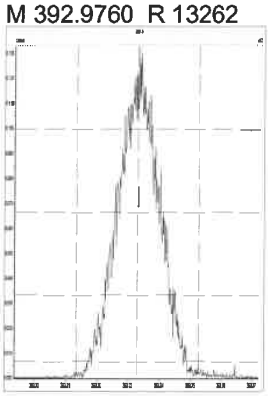

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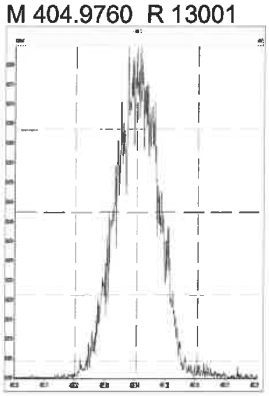

M 416.9760 R 13664

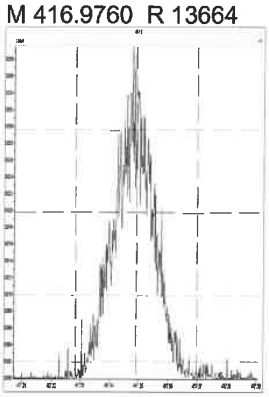

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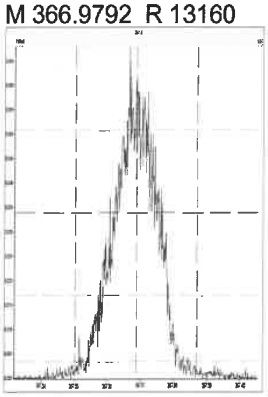

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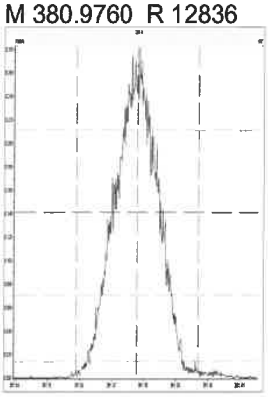

M 392.9760 R 12820

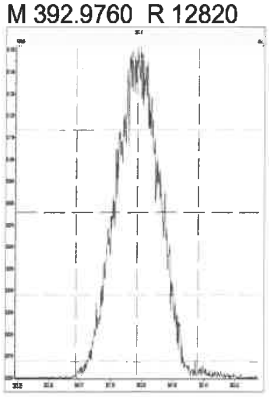

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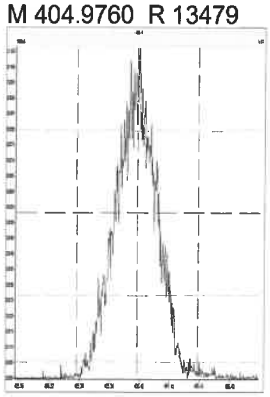

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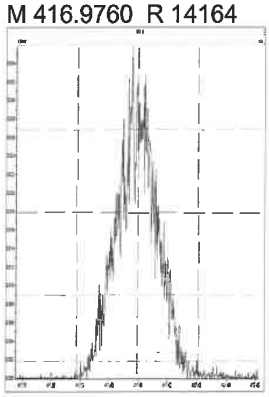

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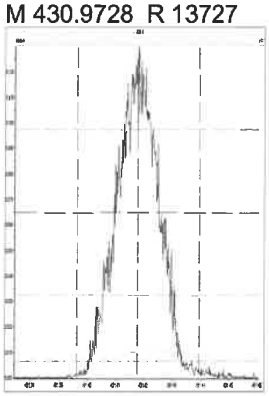

M 442.9728 R 13415

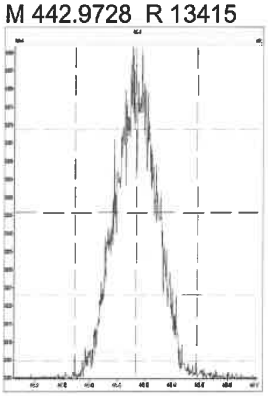

M 454.9728 R 13335

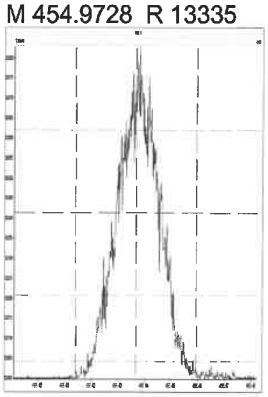

M 380.9760 R 13021

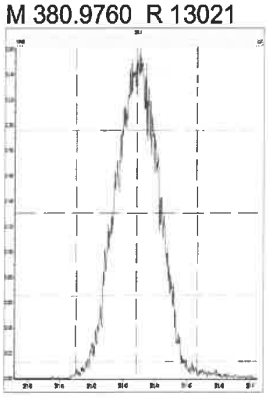

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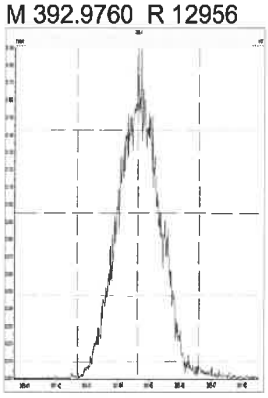

M 404.9760 R 13194

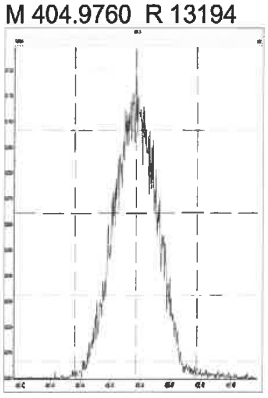

M 416.9760 R 13592

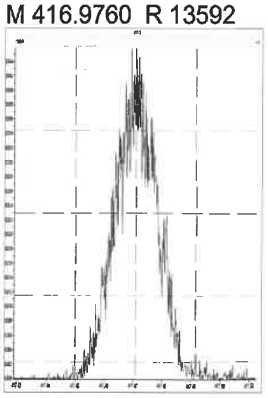

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M 430.9728 R 13192

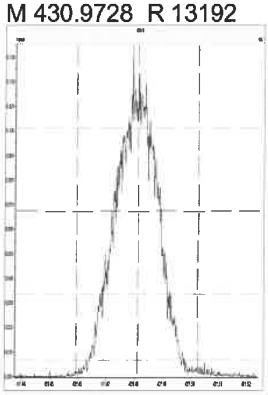

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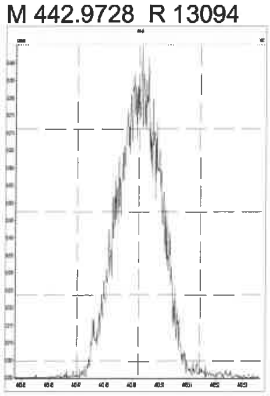

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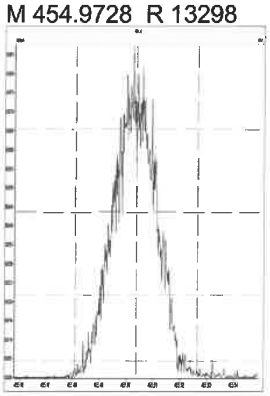

M 466.9728 R 15289

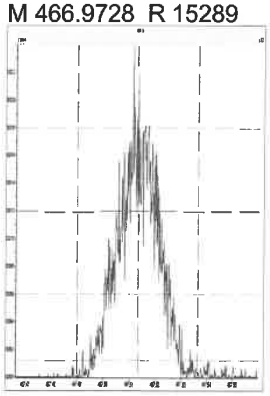

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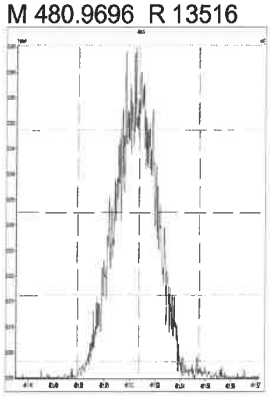

M 380.9760 R 12762

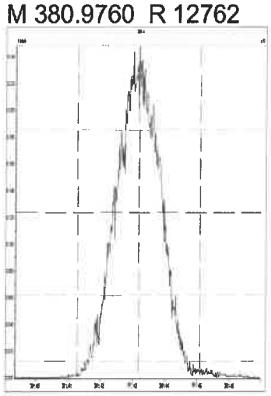

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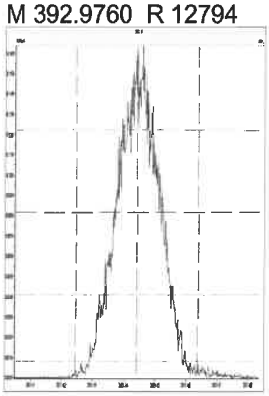

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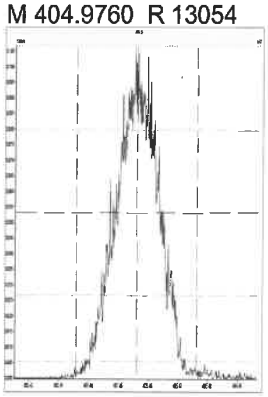

M 416.9760 R 13966

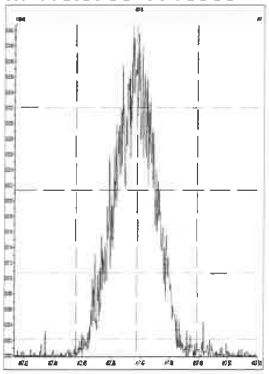

M 430.9728 R 13194

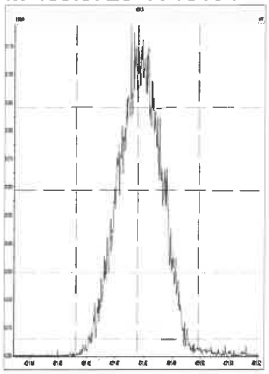

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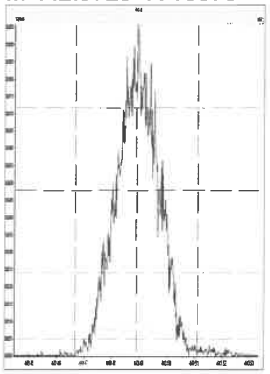

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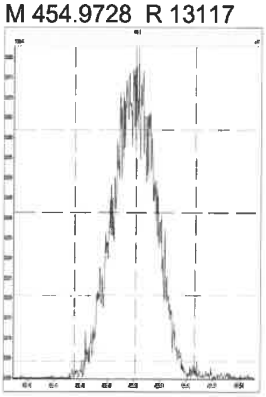

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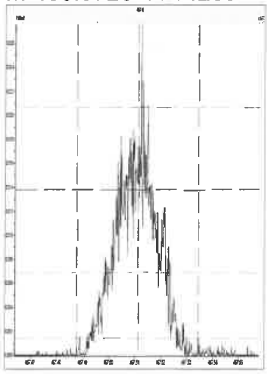

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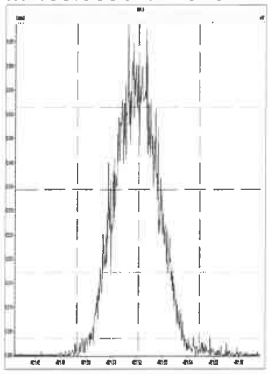

M 492.9696 R 13094

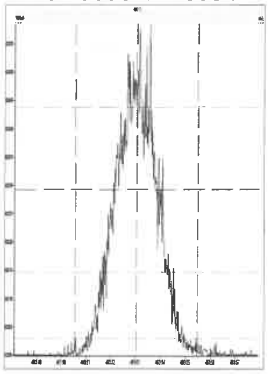

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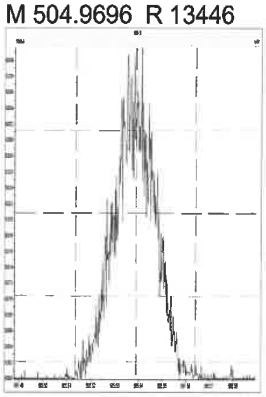

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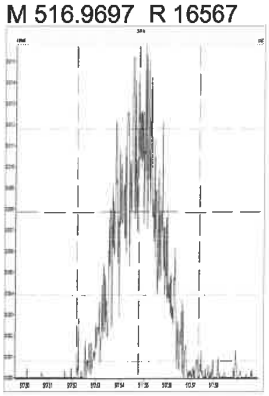

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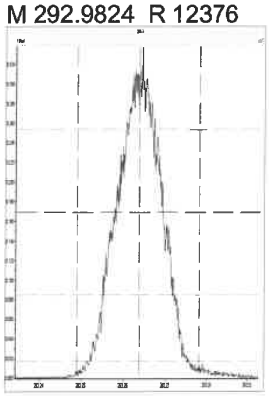

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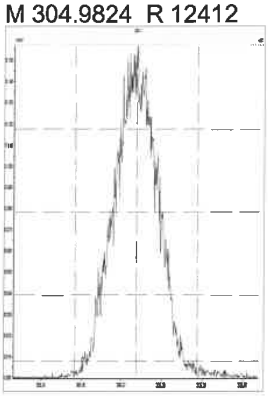

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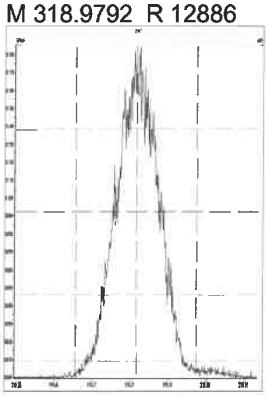

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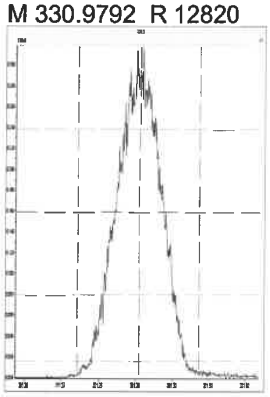

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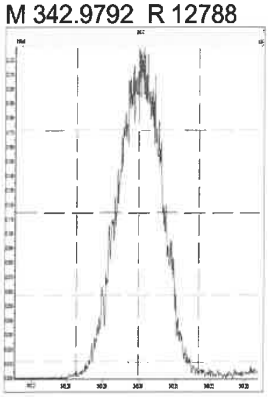

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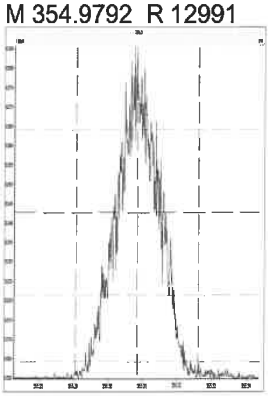

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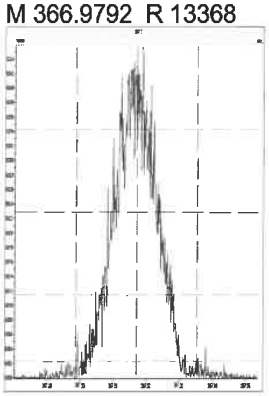

M 380.9760 R 12766

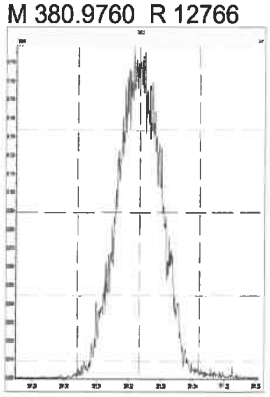

M 392.9760 R 13080

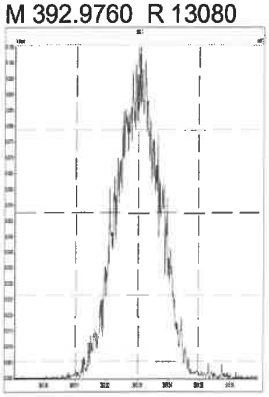

M 404.9760 R 13514

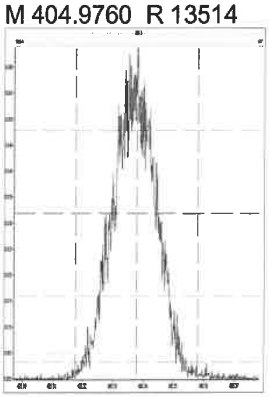

M 416.9760 R 14713

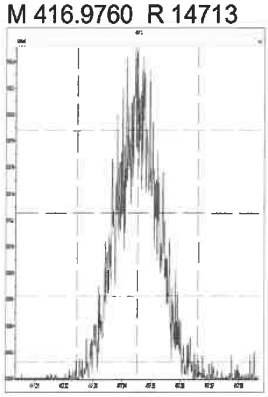

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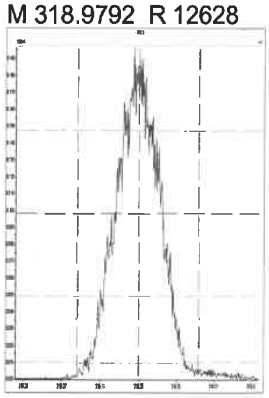

M 330.9792 R 12438

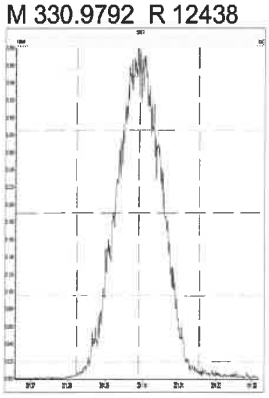

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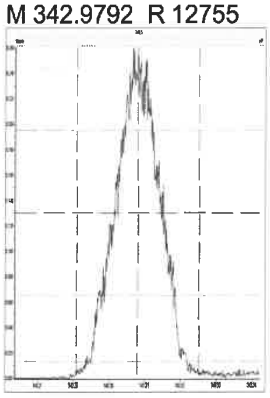

M 354.9792 R 12755

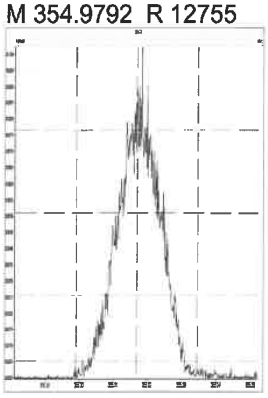

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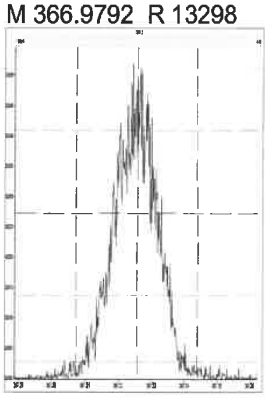

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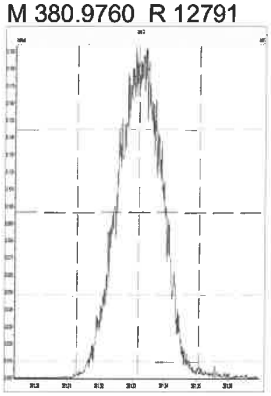

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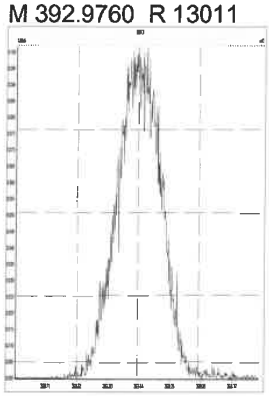

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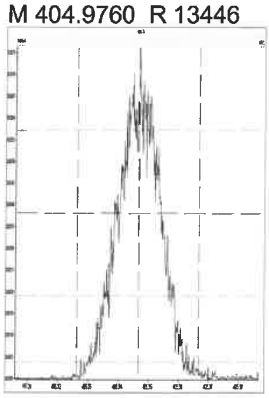

M 416.9760 R 13368

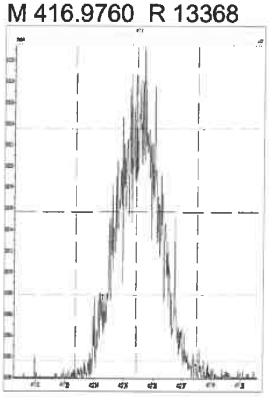

M 366.9792 R 12889

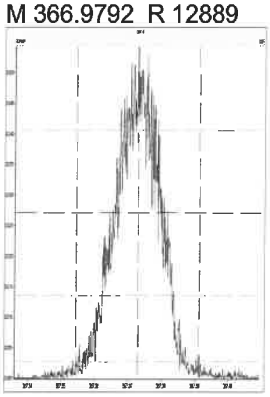

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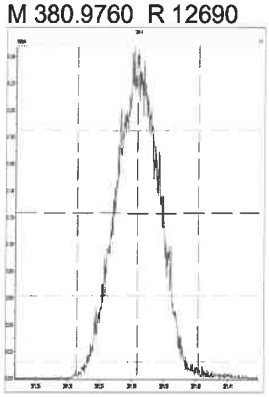

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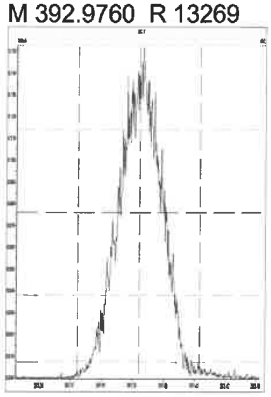

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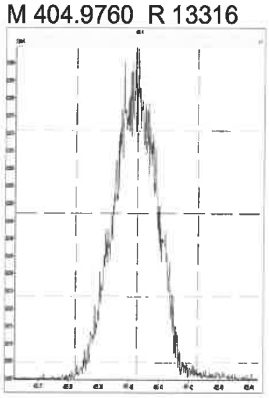

M 416.9760 R 13670

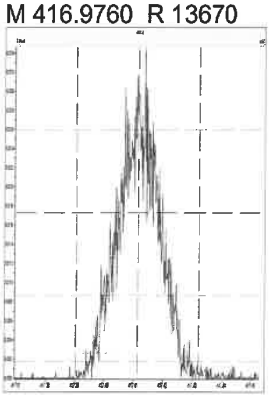

M 430.9728 R 13055

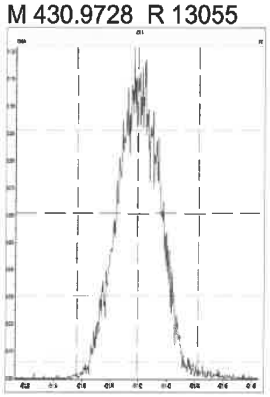

M 442.9728 R 13227

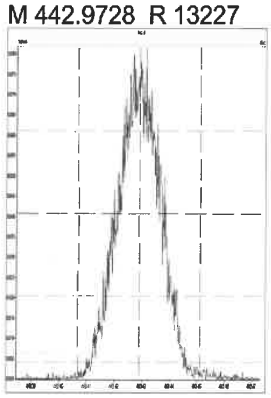

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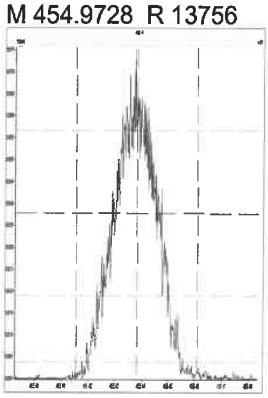

M 380.9760 R 12854

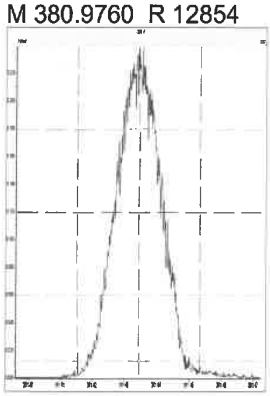

M 392.9760 R 12598

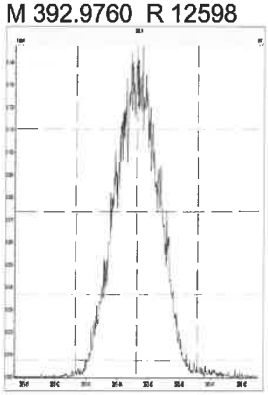

M 404.9760 R 12853

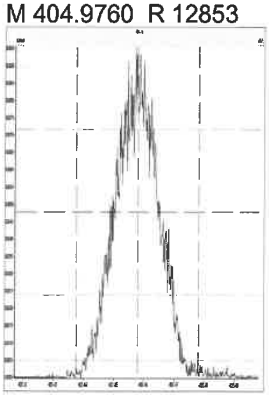

M 416.9760 R 13928

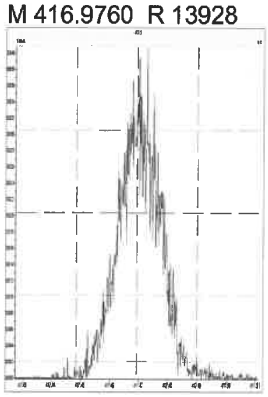

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Printed: Monday, July 26, 2021 16:26:55 Pacific Daylight Time

M 430.9728 R 13266

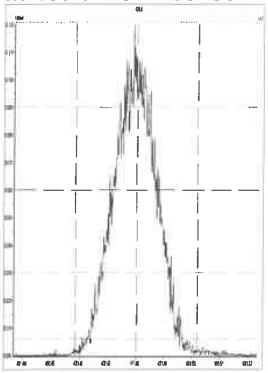

M 442.9728 R 13264

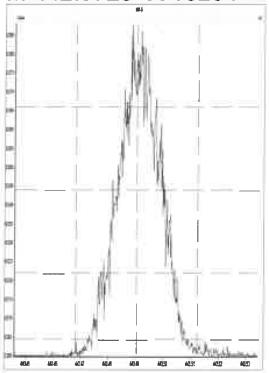

M 454.9728 R 13652

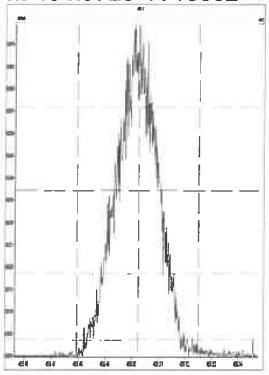

M 466.9728 R 14749

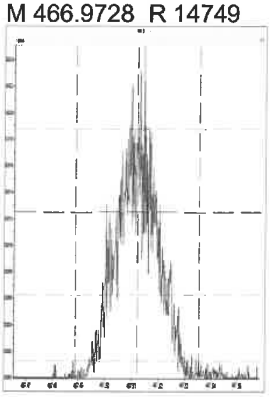

M 480.9696 R 13412

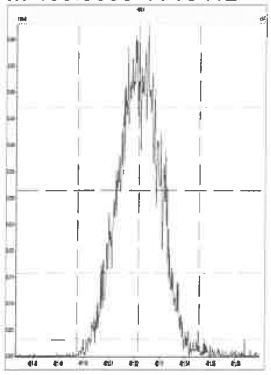

M 380.9760 R 12692

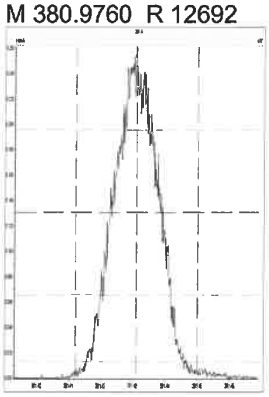

M 392.9760 R 13061

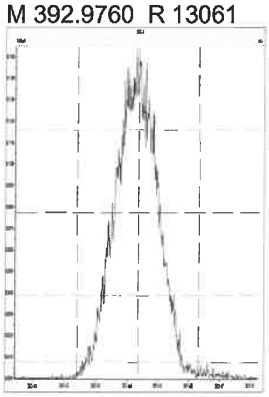

M 404.9760 R 12887

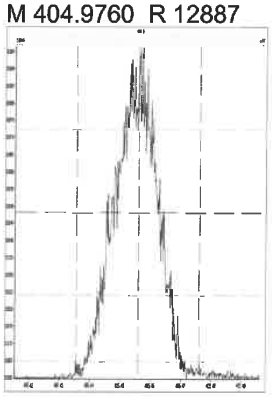

M 416.9760 R 13706

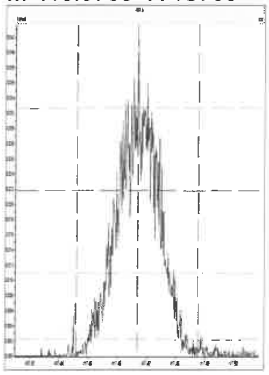

M 430.9728 R 12760

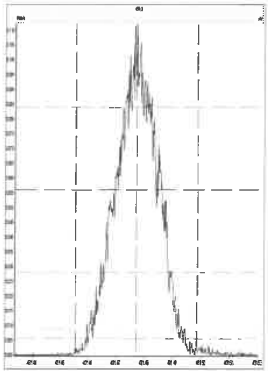

M 442.9728 R 13122

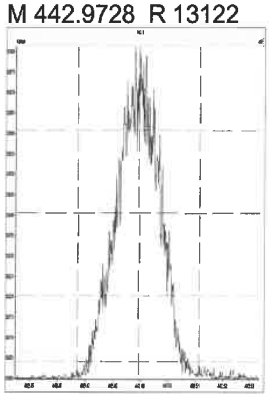

M 454.9728 R 13710

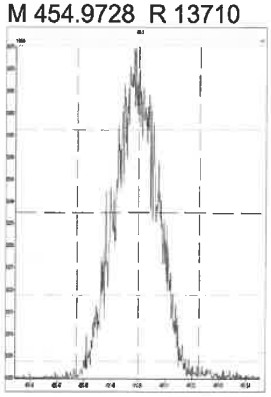

M 466.9728 R 14205

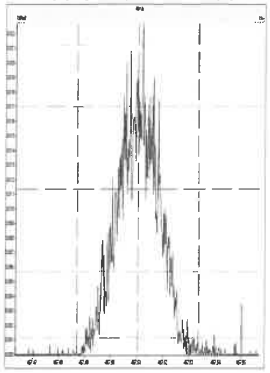

M 480.9696 R 13298

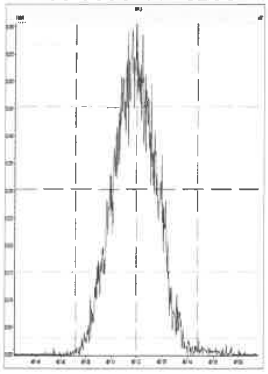

M 492.9696 R 12886

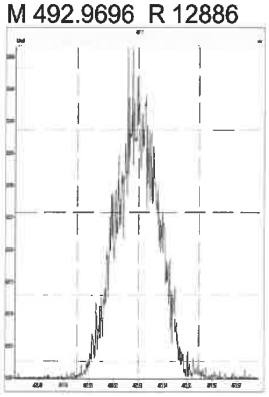

M 504.9696 R 13600

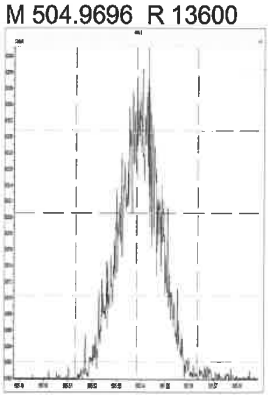

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M 516.9697 R 15872

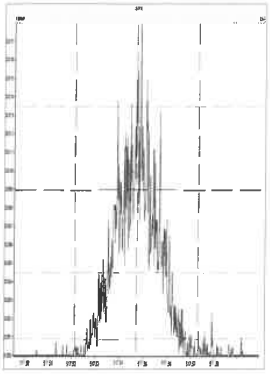

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	65685883	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	108384725	0.78	1.6249	101.5	101.5	0.1385	0.1385	102	
2,3,7,8-TCDF	17.628	557485	0.78	1.0239	0.5023	0.5023	0.009259	0.009259	100	
S Total TCDF					0.5023	0.5023	0.009259	0.009259		
D 13C-2,3,7,8-TCDD	18.338	59957723	0.80	0.8993	101.5	101.5	0.1222	0.1222	101	
$ 37Cl4-2,3,7,8-TCDD	18.338	318727		1.1071	0.4383	0.4383	0.006072	0.006072	87.65	
2,3,7,8-TCDD	18.354	376984	0.89	1.2541	0.5013	0.5013	0.0150	0.0150	100	M
S Total TCDD					0.5013	0.5013	0.0150	0.0150		
D 13C-1,2,3,7,8-PeCDF	22.749	78674290	1.60	1.2101	99.0	99.0	0.2282	0.2282	98.98	
1,2,3,7,8-PeCDF	22.776	2112140	1.63	1.0611	2.530	2.530	0.0220	0.0220	101	
D 13C-2,3,4,7,8-PeCDF	24.126	80591659	1.57	1.2395	99.0	99.0	0.2228	0.2228	98.99	
2,3,4,7,8-PeCDF	24.153	2096967	1.56	1.0184	2.555	2.555	0.0245	0.0245	102	
S Total PeCDF					5.085	5.085	0.0233	0.0233		
D 13C-1,2,3,7,8-PeCDD	24.862	49643581	1.62	0.7612	99.3	99.3	0.1197	0.1197	99.28	
1,2,3,7,8-PeCDD	24.889	1312779	1.42	1.0484	2.522	2.522	0.0218	0.0218	101	
S Total PeCDD					2.522	2.522	0.0218	0.0218		
D 13C-1,2,3,4,7,8-HxCDF	30.835	69484482	0.52	1.0837	100.4	100.4	0.5299	0.5299	100	
1,2,3,4,7,8-HxCDF	30.849	1949462	1.23	1.0851	2.586	2.586	0.0289	0.0289	103	
D 13C-1,2,3,6,7,8-HxCDF	30.995	73262388	0.52	1.1279	101.7	101.7	0.5091	0.5091	102	
1,2,3,6,7,8-HxCDF	31.022	2104086	1.18	1.1260	2.551	2.551	0.0273	0.0273	102	
D 13C-2,3,4,6,7,8-HxCDF	31.754	68885161	0.52	1.0637	101.4	101.4	0.5398	0.5398	101	
2,3,4,6,7,8-HxCDF	31.767	2104896	1.20	1.1675	2.617	2.617	0.0225	0.0225	105	
D 13C-1,2,3,7,8,9-HxCDF	32.512	62528954	0.51	0.9676	101.1	101.1	0.5935	0.5935	101	
1,2,3,7,8,9-HxCDF	32.526	1834100	1.21	1.1664	2.515	2.515	0.0244	0.0244	101	
S Total HxCDF					10.3	10.3	0.0258	0.0258		
* 13C-1,2,3,7,8,9-HxCDD	32.339	63892665	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	47363504	1.27	0.7334	101.1	101.1	0.5001	0.5001	101	
1,2,3,4,7,8-HxCDD	31.940	1300030	1.26	1.0640	2.580	2.580	0.0268	0.0268	103	
D 13C-1,2,3,6,7,8-HxCDD	32.033	56759108	1.25	0.8802	100.9	100.9	0.4167	0.4167	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	1460747	1.28	1.0001	2.573	2.573	0.0268	0.0268	103	
1,2,3,7,8,9-HxCDD	32.353	1503407	1.26	1.1325	2.550	2.550	0.0244	0.0244	102	
S Total HxCDD					7.703	7.703	0.0260	0.0260		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	51308225	0.44	0.7730	103.9	103.9	1.147	1.147	104	
1,2,3,4,6,7,8-HpCDF	33.924	1856599	1.05	1.4413	2.511	2.511	0.0321	0.0321	100	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44628352	0.44	0.7008	99.7	99.7	1.266	1.266	99.67	
1,2,3,4,7,8,9-HpCDF	35.017	1465634	1.06	1.3174	2.493	2.493	0.0442	0.0442	99.72	
S Total HpCDF					5.003	5.003	0.0381	0.0381		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	41876556	1.01	0.6472	101.3	101.3	0.6709	0.6709	101	
1,2,3,4,6,7,8-HpCDD	34.726	1164074	1.06	1.0943	2.540	2.540	0.0284	0.0284	102	
S Total HpCDD					2.540	2.540	0.0284	0.0284		
D 13C-OCDD	37.093	57018462	0.89	0.4472	199.6	199.6	0.2479	0.2479	99.79	
OCDF	37.201	1976175	0.91	1.4382	4.820	4.820	0.0196	0.0196	96.40	
OCDD	37.105	1569338	0.92	1.1070	4.973	4.973	0.0246	0.0246	99.45	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		29725607	7464659	4167	10417	1791		
333.9339	18.142	18.142	0		35960276	9003139	3074	7685	2929	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	47438761	11992473	9243	23107	1297		
317.9389	17.613	17.616	0	0.971	60945964	15328013	5578	13945	2748	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	244966	62557	418	1045	150		
305.8987	17.628	17.631	0	1.001	312519	74119	618	1545	120	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	26677109	6242710	4167	10417	1498		
333.9339	18.338	18.338	0	1.011	33280614	7789380	3074	7685	2534	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.011	318727	66577	443	1107	150		
2,3,7,8-TCDD											M
319.8965	18.354	18.357	0	1.001	177891	43427	698	1745	62		M
321.8936	18.354	18.357	0	1.001	199093	47894	356	890	135	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	48367116	8680931	10780	26950	805		
353.8970	22.749	22.754	0	1.254	30307174	5346402	7413	18532	721	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	1307686	232308	692	1730	336		
341.8567	22.762	22.779	-1	1.001	804454	137466	619	1547	222	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	49186157	7929286	10780	26950	736		
353.8970	24.126	24.129	0	1.330	31405502	5197836	7413	18532	701	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	1276283	202864	692	1730	293		
341.8567	24.153	24.156	0	1.001	820684	134634	619	1547	218	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	30684379	4744795	3870	9675	1226		
369.8919	24.862	24.865	0	1.370	18959202	2913489	2133	5332	1366	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	770345	123302	470	1175	262		
357.8516	24.889	24.892	0	1.001	542434	83964	231	577	363	1.42(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23885791	5080702	12413	31032	409		
385.8610	30.835	30.838	0	0.953	45598691	9653525	24179	60447	399	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.857	0	1.000	1073816	228005	1130	2825	202		
375.8178	30.849	30.857	0	1.000	875646	183719	720	1800	255	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	25163610	5186426	12413	31032	418		
385.8610	30.995	31.003	0	0.958	48098778	9847658	24179	60447	407	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.001	1138605	230252	1130	2825	204		
375.8178	31.008	31.022	-1	1.000	965481	194261	720	1800	270	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	23545536	6005512	12413	31032	484		
385.8610	31.754	31.756	0	0.982	45339625	11622590	24179	60447	481	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	1148495	290976	1130	2825	258		
375.8178	31.767	31.772	0	1.000	956401	245408	720	1800	341	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.512	32.523	-1	1.005	21115296	5525344	12413	31032	445		
385.8610	32.512	32.523	-1	1.005	41413658	10740911	24179	60447	444	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	1004237	260741	1130	2825	231		
375.8178	32.526	32.534	0	1.000	829863	215930	720	1800	300	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		35492157	8840472	14115	35287	626		
403.8529	32.339	32.342	0		28400508	7090007	9259	23147	766	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	26497467	7547113	14115	35287	535		
403.8529	31.927	31.929	0	0.987	20866037	5954906	9259	23147	643	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	725563	201392	885	2212	228		
391.8127	31.940	31.945	0	1.000	574467	160999	657	1642	245	1.26(1.05-1.43)	

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	31586686	7983088	14115	35287	566		
403.8529	32.033	32.033	0	0.991	25172422	6406461	9259	23147	692	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	819435	207367	885	2212	234		
391.8127	32.047	32.047	0	1.000	641312	163363	657	1642	249	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	837706	208716	885	2212	236		
391.8127	32.353	32.355	0	1.013	665701	168193	657	1642	256	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	15666898	4905580	16994	42485	289		
419.8220	33.912	33.914	0	1.049	35641327	11012481	39521	98802	279	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	949994	280926	1603	4007	175		
409.7789	33.924	33.926	0	1.000	906605	280503	1346	3365	208	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13532847	3927195	16994	42485	231		
419.8220	35.005	35.010	0	1.082	31095505	8744356	39521	98802	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	755406	231092	1603	4007	144		
409.7789	35.017	35.020	0	1.000	710228	201627	1346	3365	150	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	21029381	6108519	13979	34947	437		
437.8140	34.714	34.716	0	1.073	20847175	6052425	13690	34225	442	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	599401	178801	821	2052	218		
425.7737	34.726	34.726	0	1.000	564673	160703	693	1732	232	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26904388	6653832	3548	8870	1875		
471.7750	37.093	37.094	0	1.147	30114074	7334467	3515	8787	2087	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	941996	224700	300	750	749		
443.7399	37.189	37.199	-1	1.003	1034179	253612	487	1217	521	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	750544	177364	389	972	456		
459.7348	37.105	37.106	0	1.000	818794	206090	374	935	551	0.92(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.35
Area: 201476
Amount: 0.545465
Amount Units: pg/ul

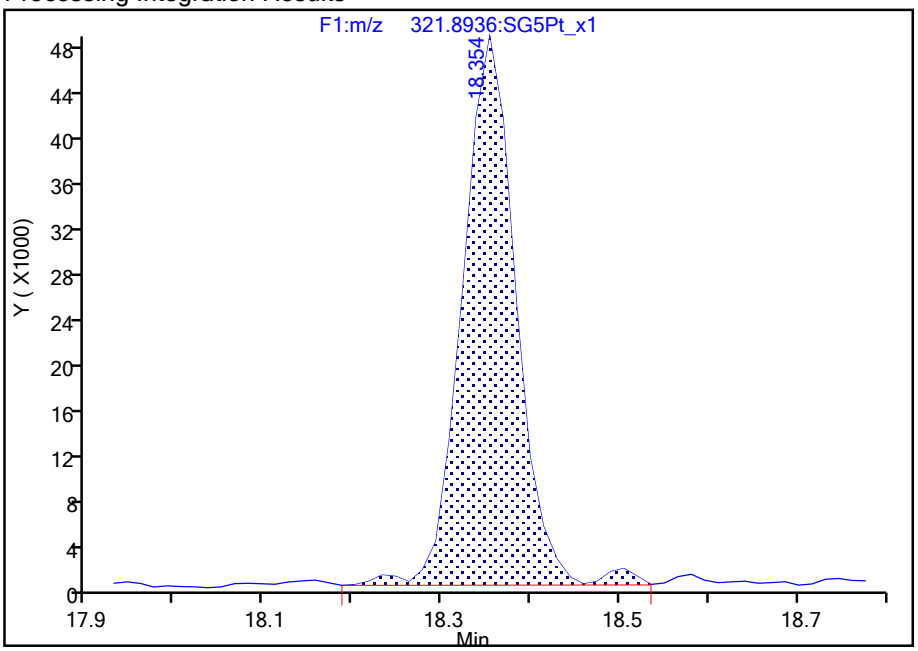

Manual Integration Results

RT: 18.35
Area: 199093
Amount: 0.501347
Amount Units: pg/ul

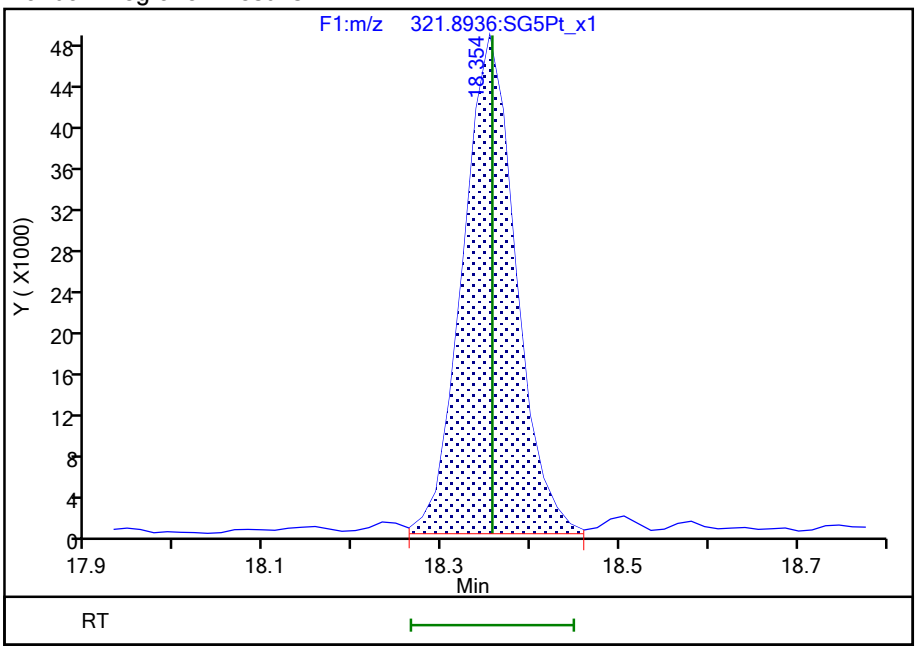

Reviewer: stephensk, 27-Jul-2021 08:15:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

Processing Integration Results

RT: 18.35
Area: 394678
Amount: 0.545465
Amount Units: pg/ul

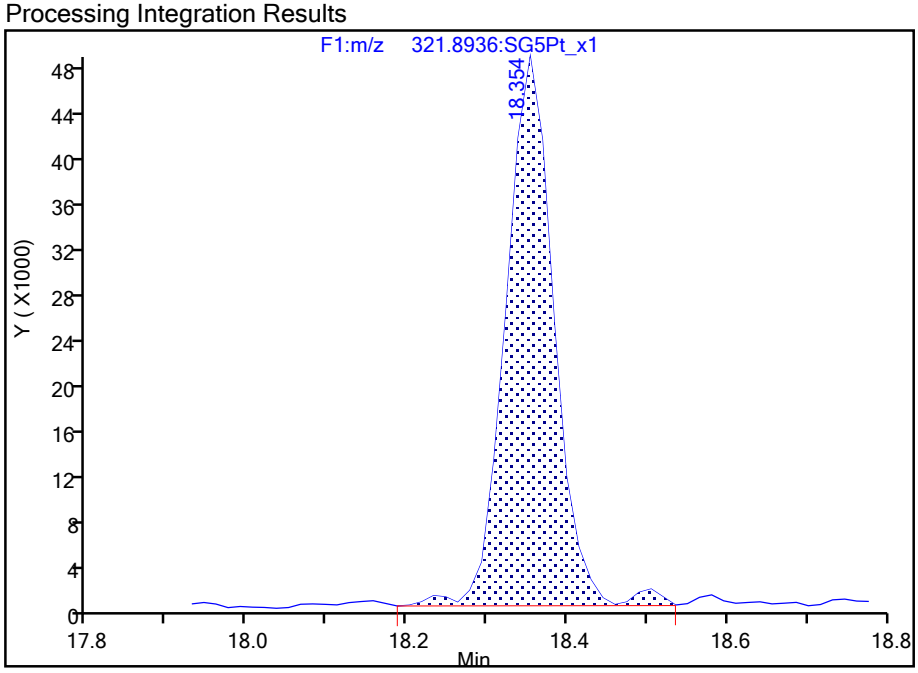

Manual Integration Results

RT: 18.35
Area: 376984
Amount: 0.501347
Amount Units: pg/ul
Reviewer: stephensk, 27-Jul-2021 08:15:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

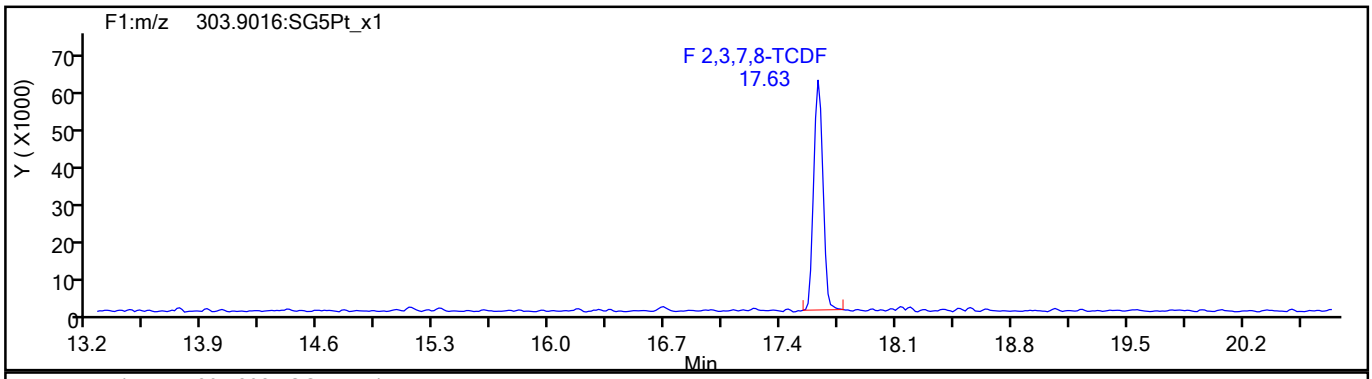

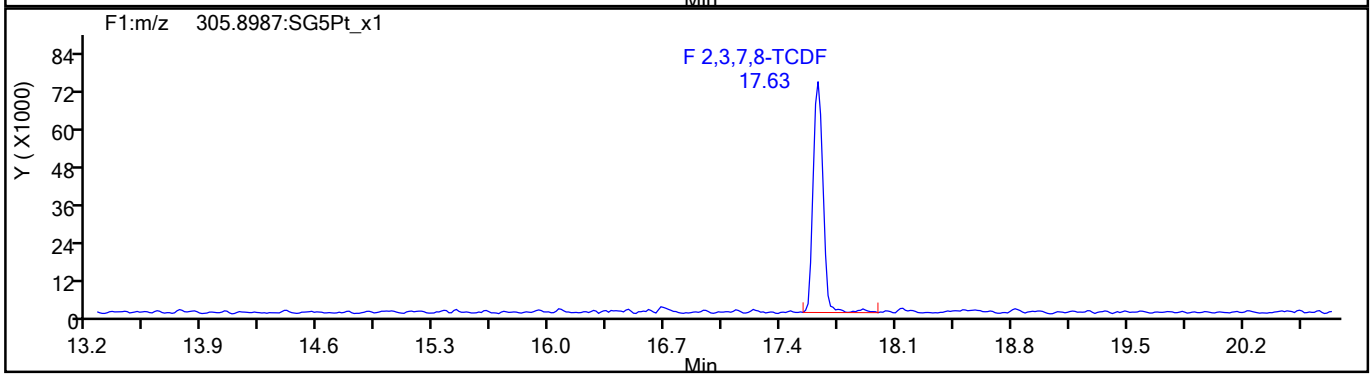

TCDF Standards

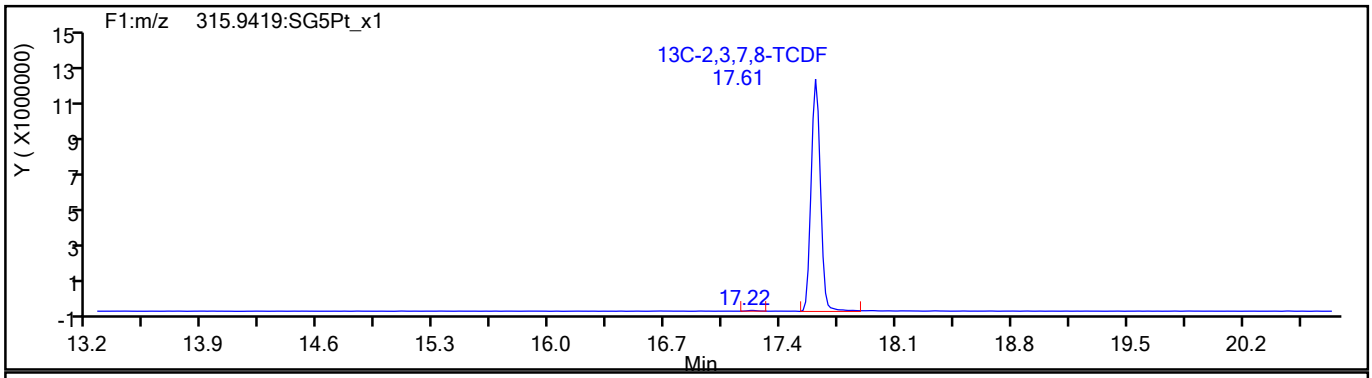

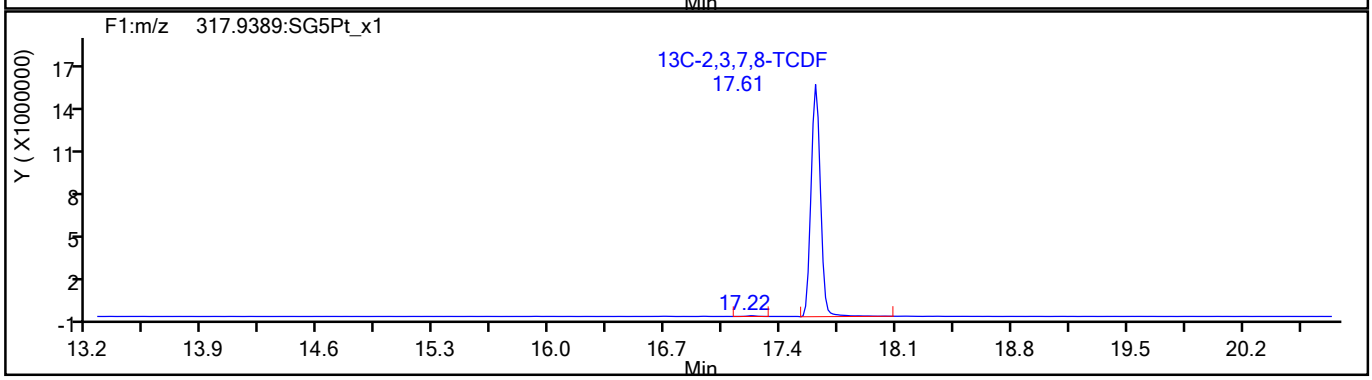

780207

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

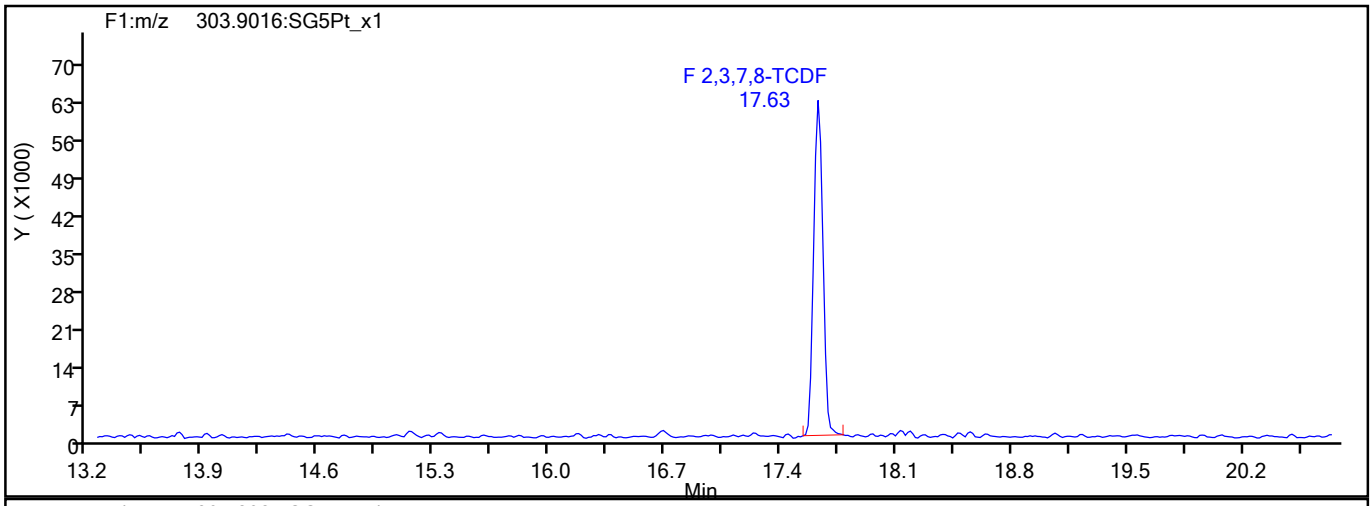

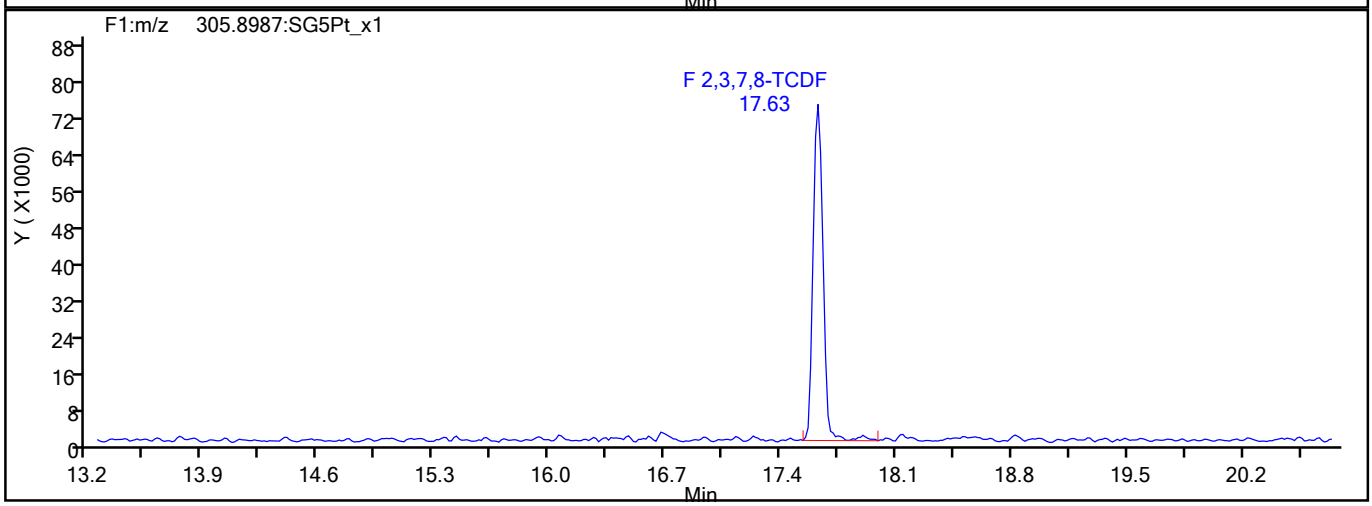

TCDF Interference Mass

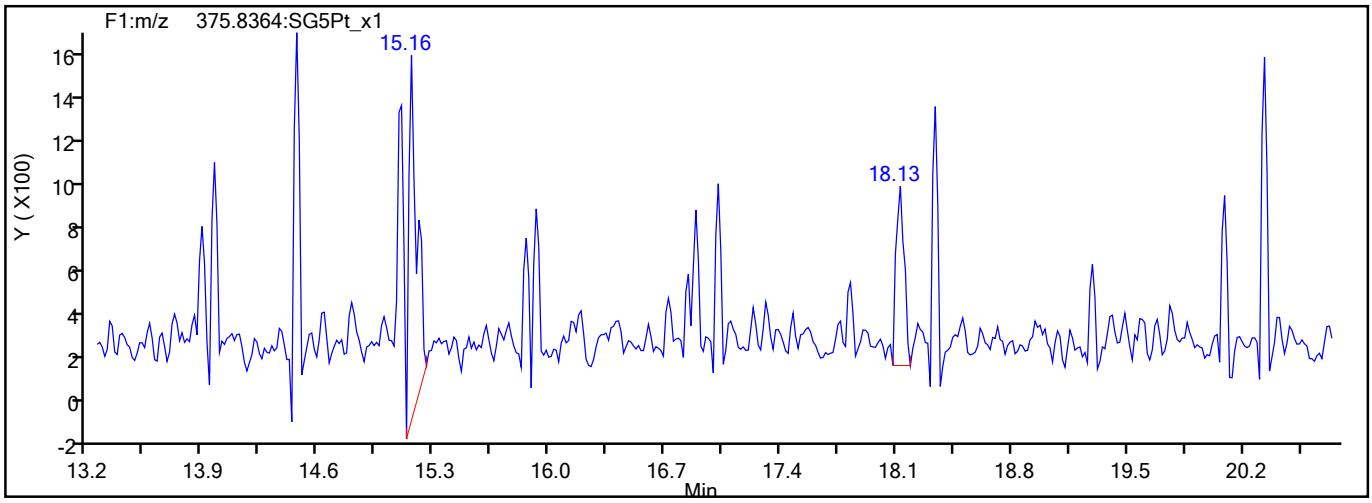

780208

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

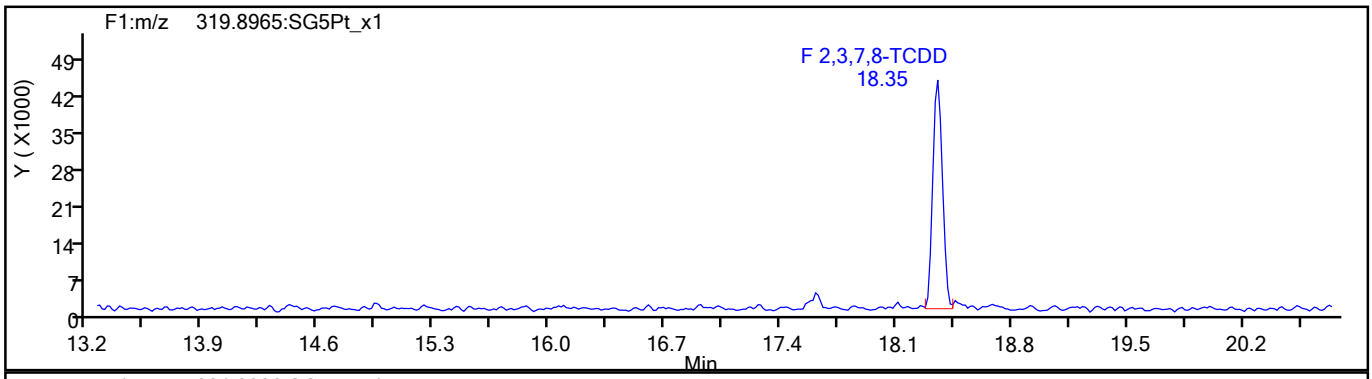

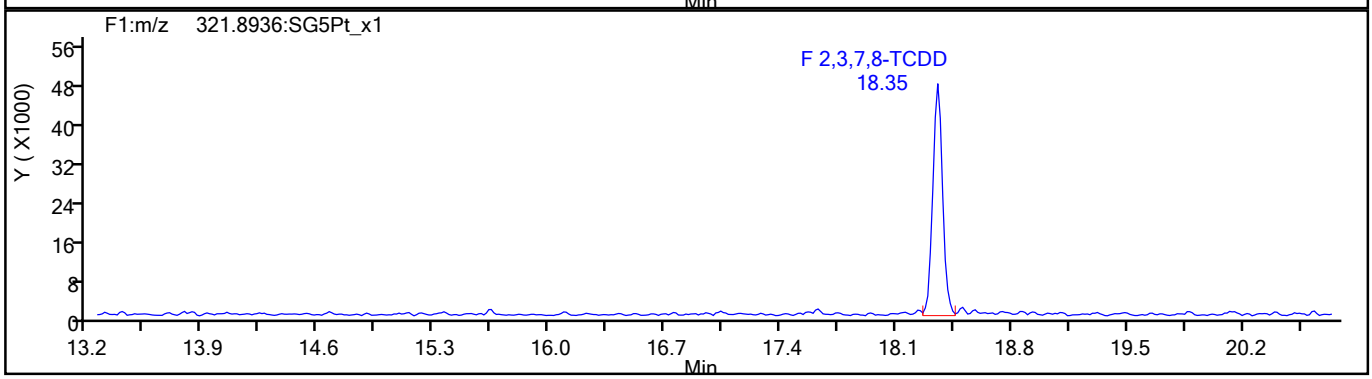

TCDD Standards

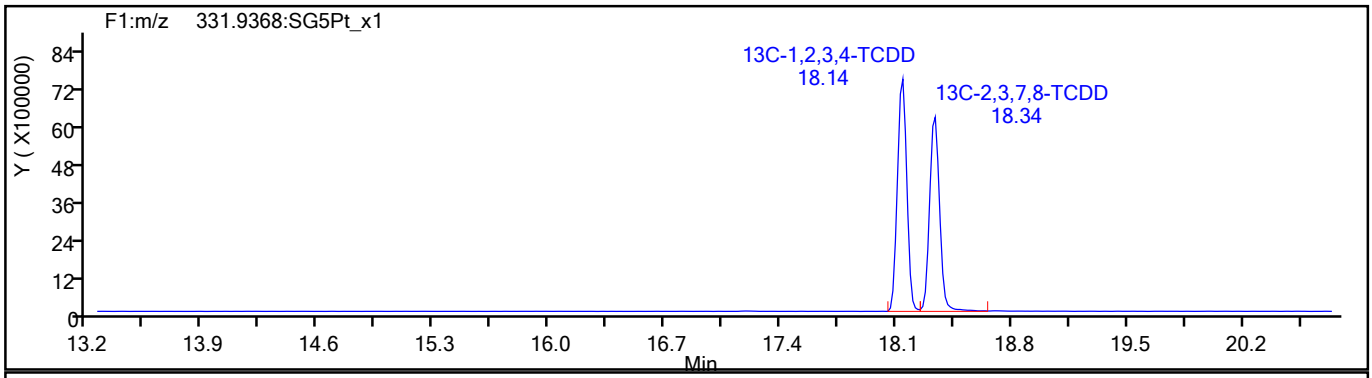

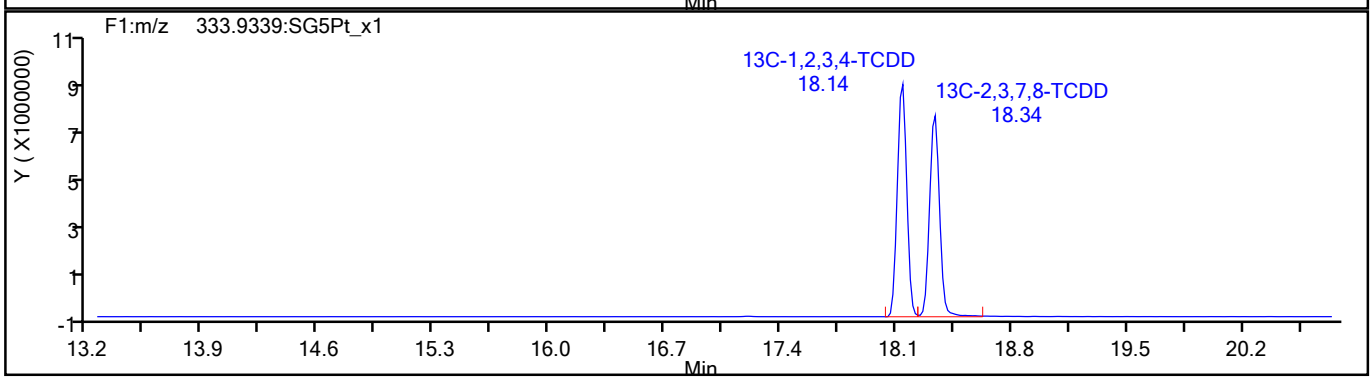

780209

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

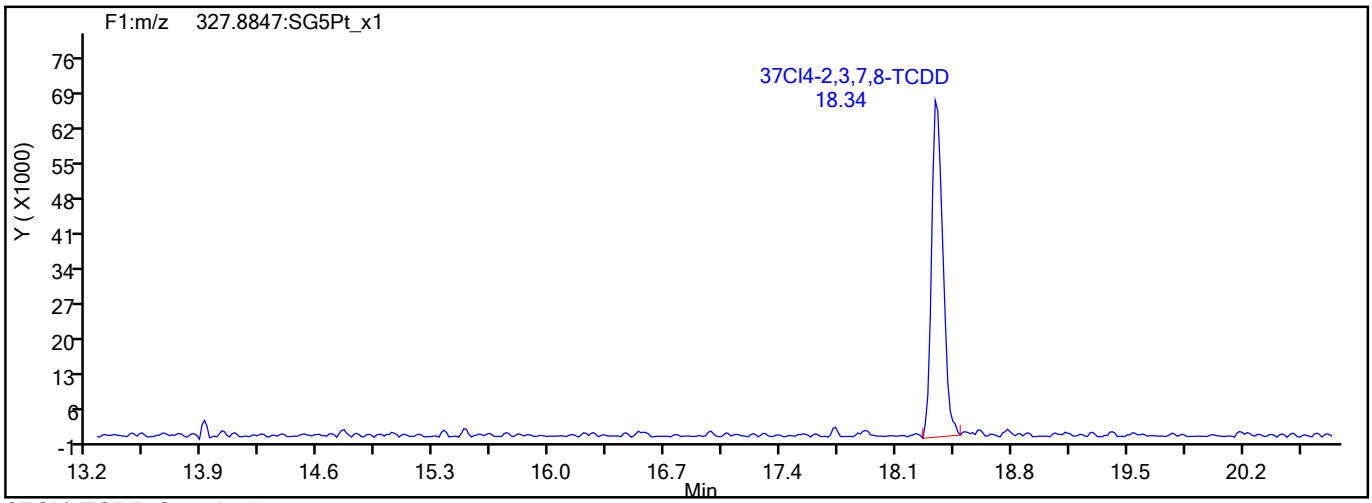

37Cl4-TCDD Standards

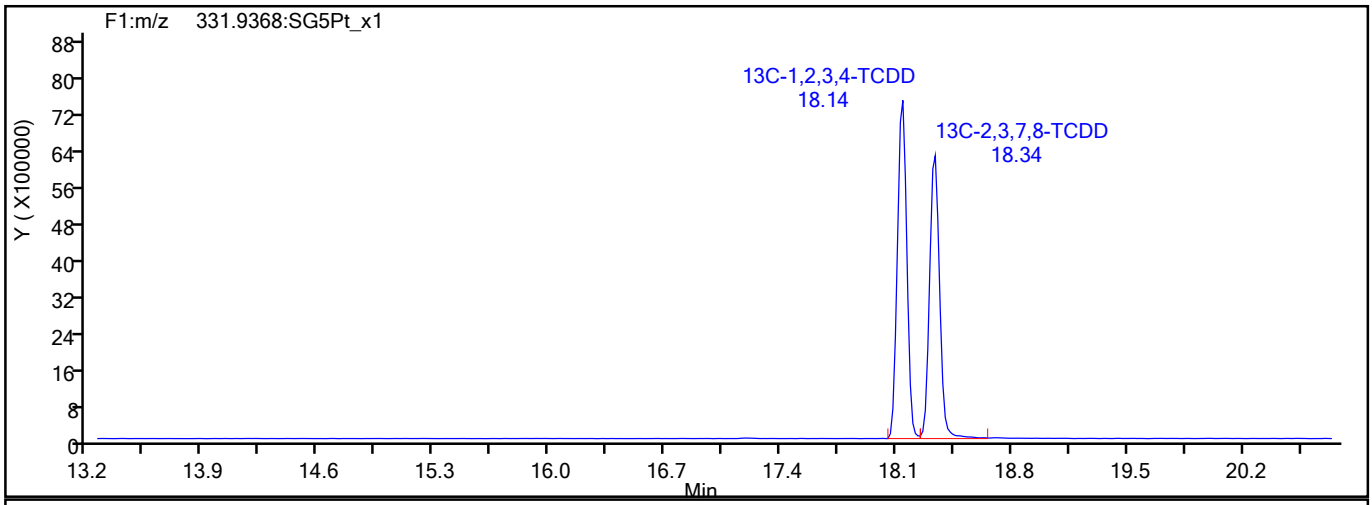

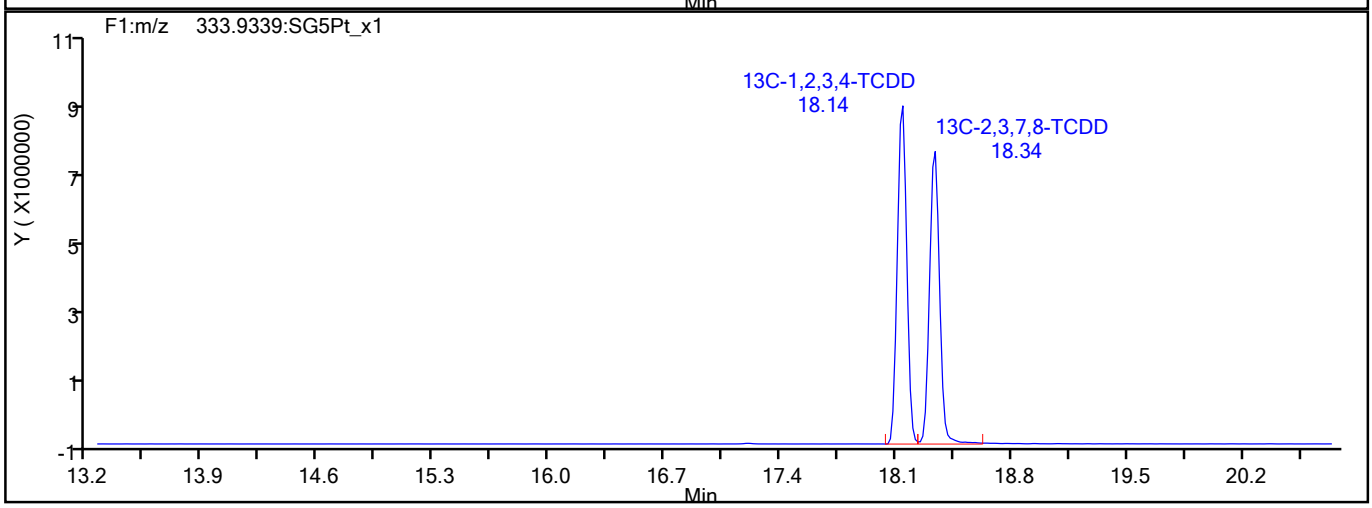

780210

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

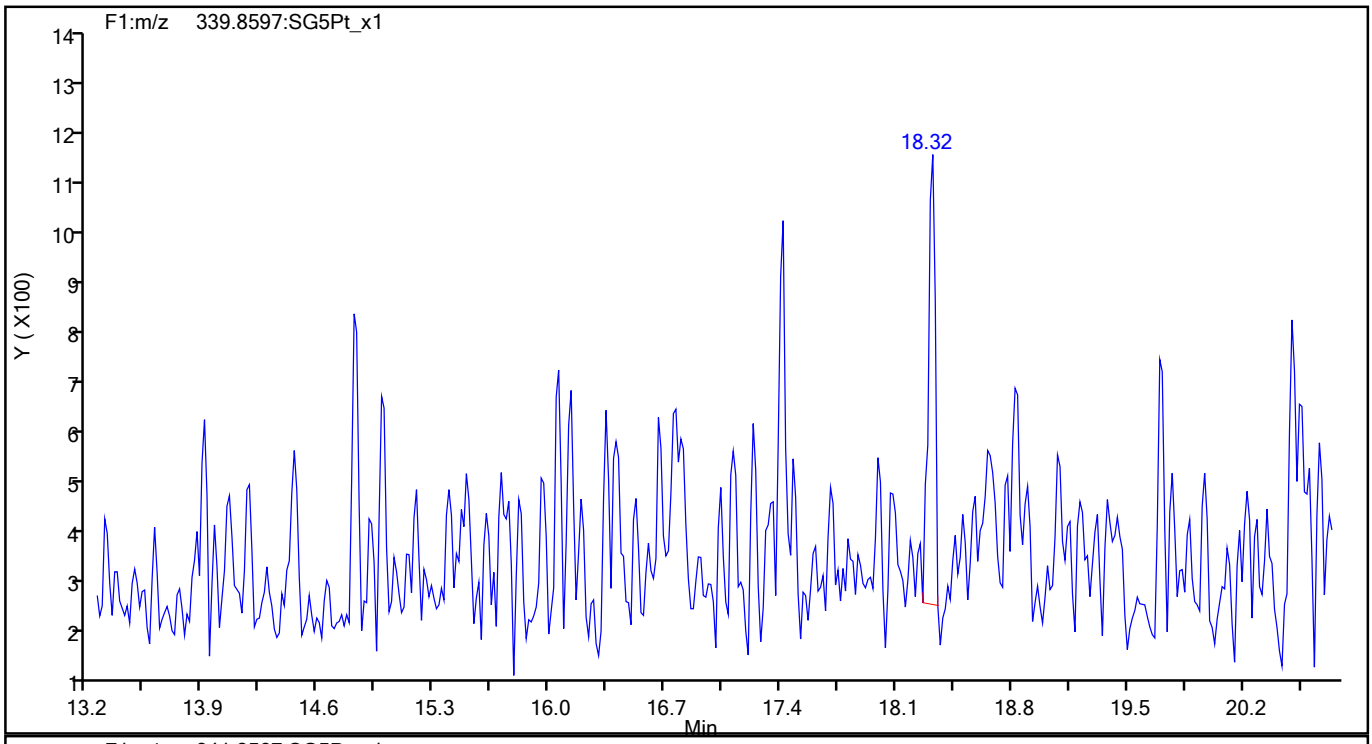

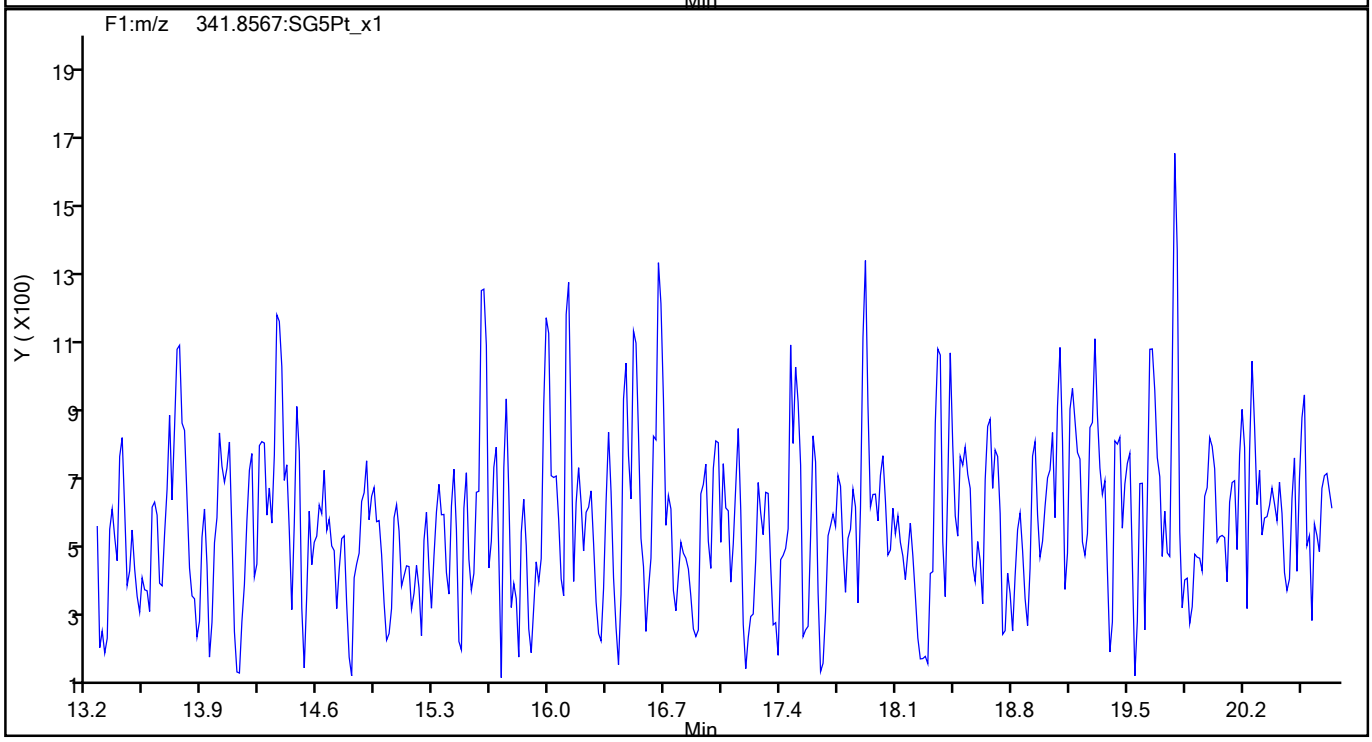

780211

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

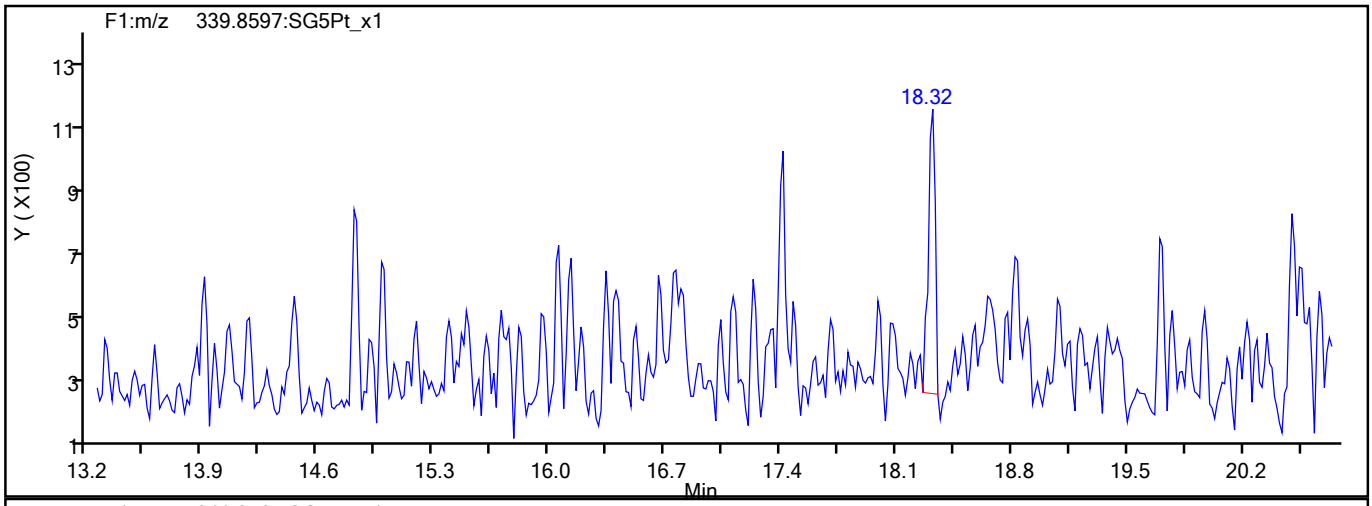

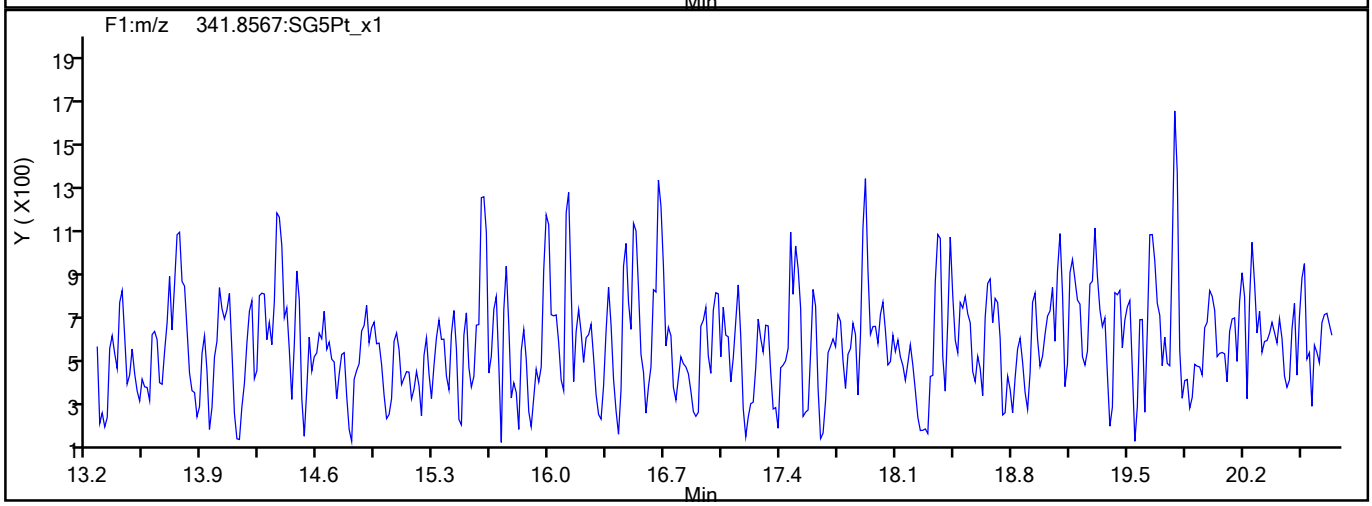

F1 PeCDFs Interference Mass

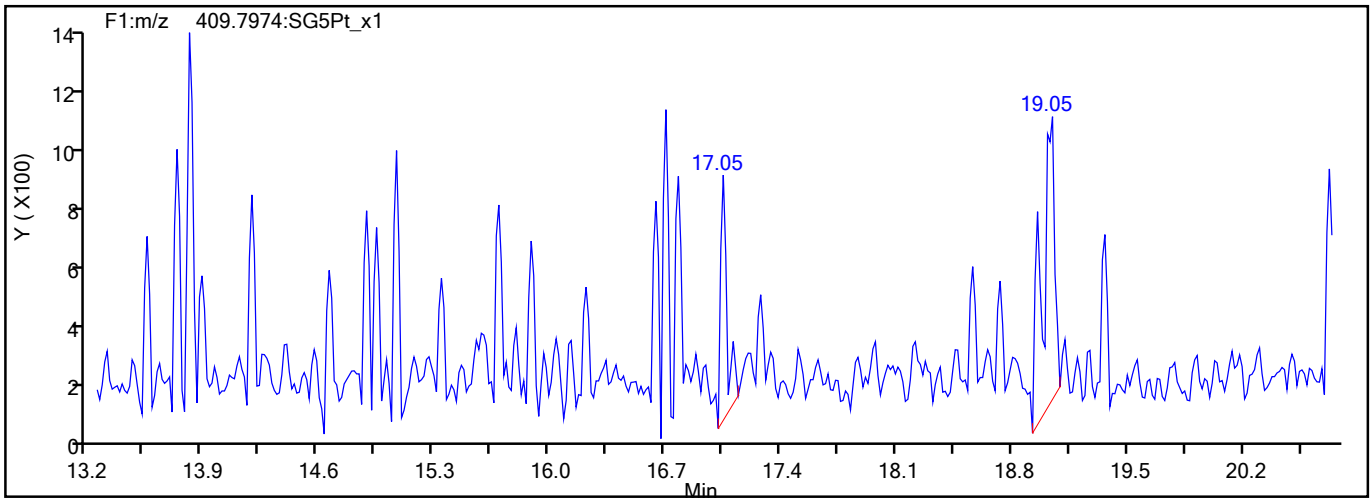

780212

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

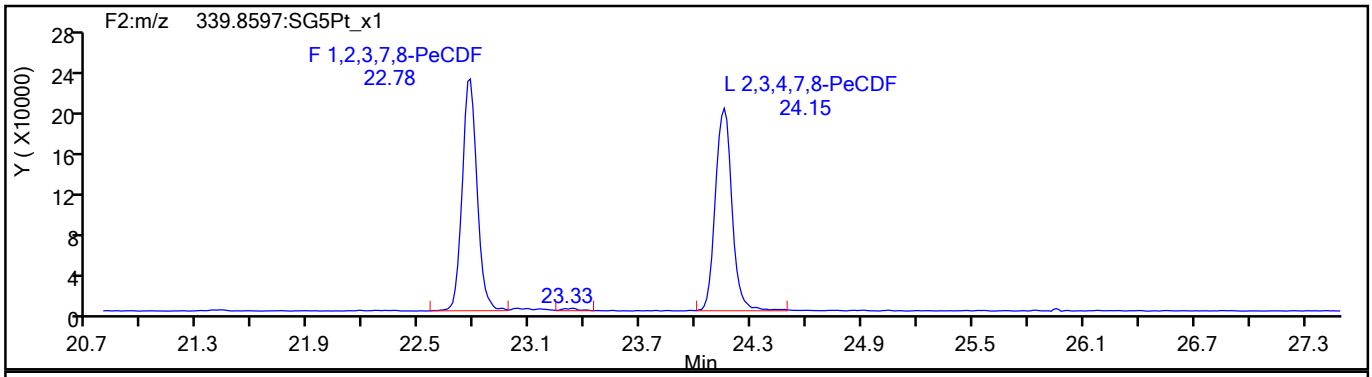

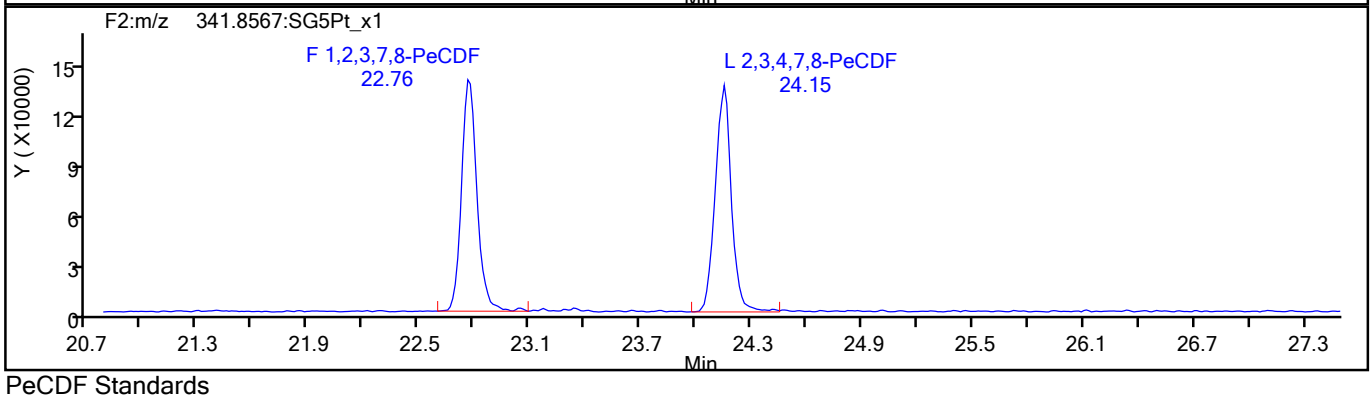

PeCDF Standards

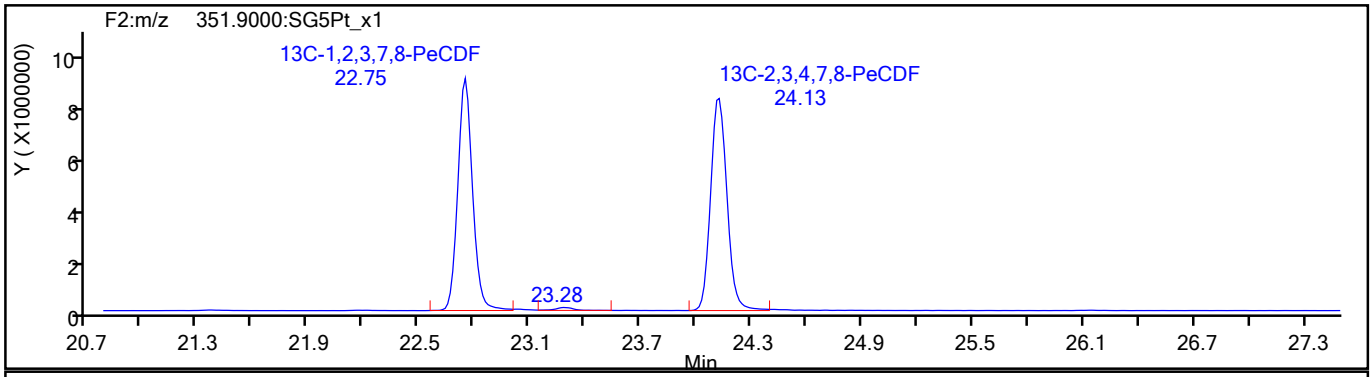

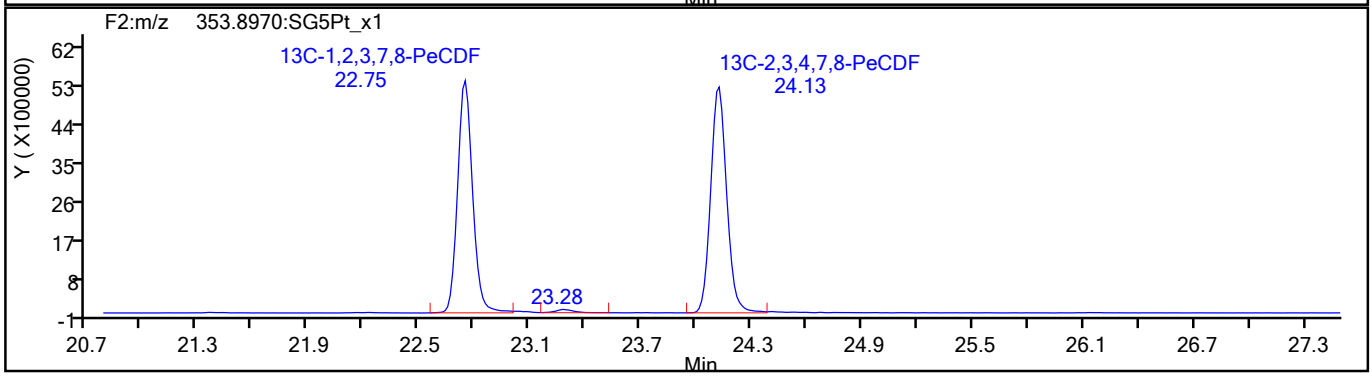

780213

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

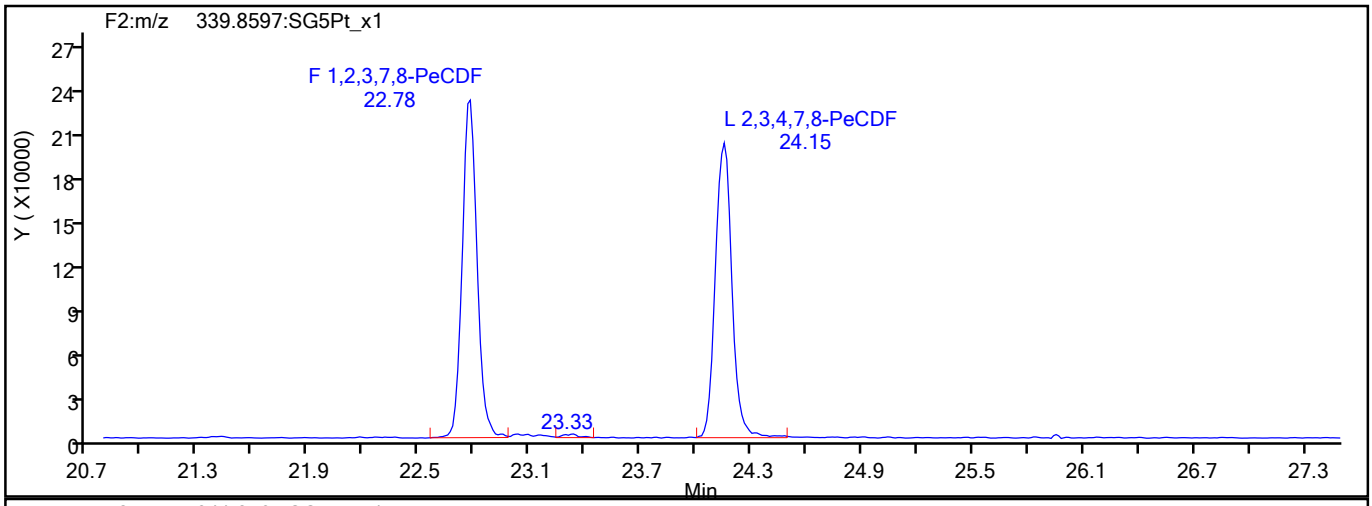

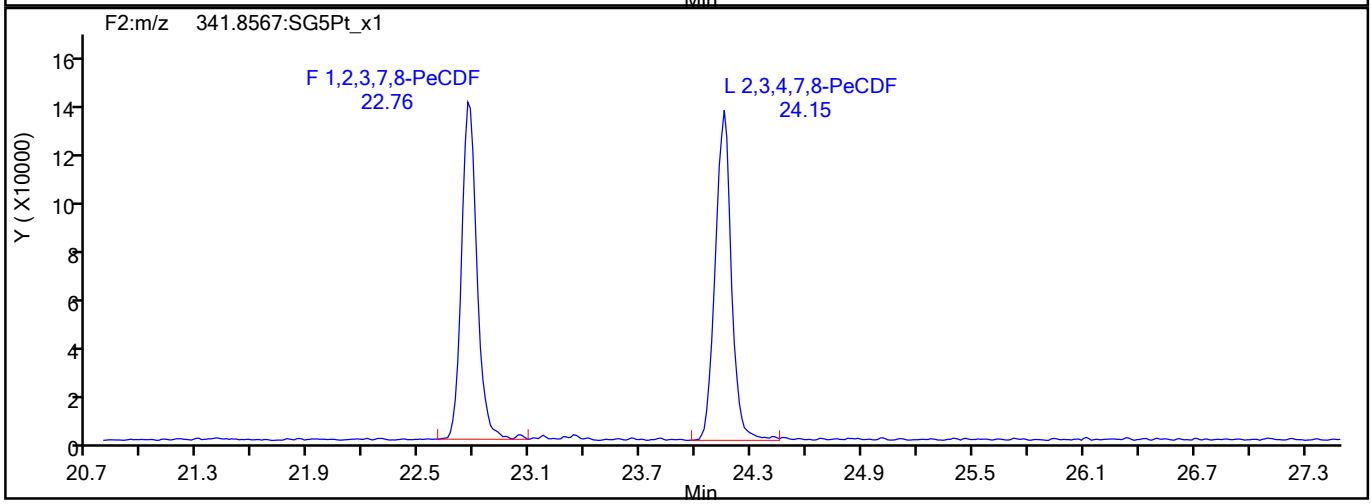

PeCDF Interference Mass

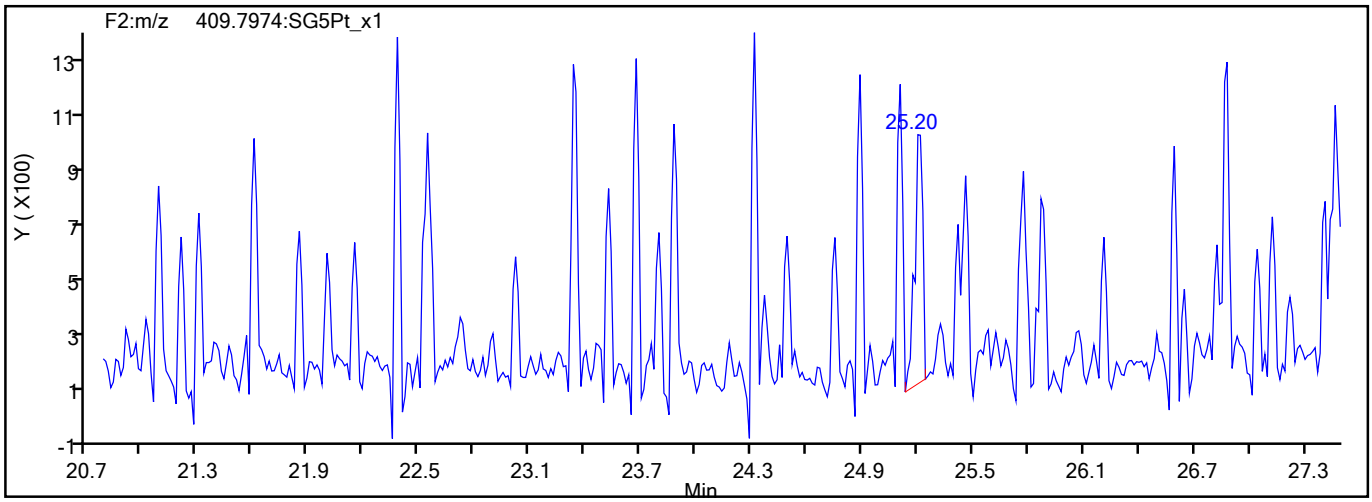

780214

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

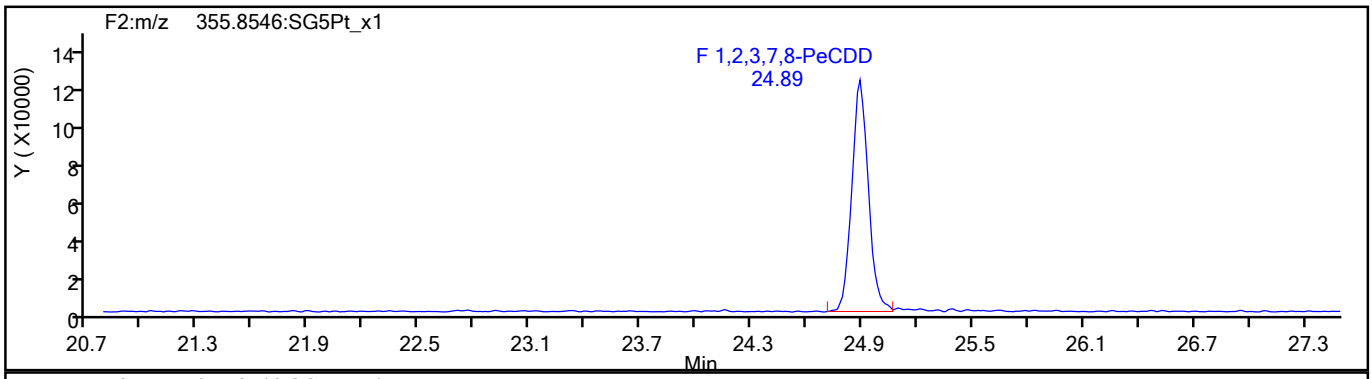

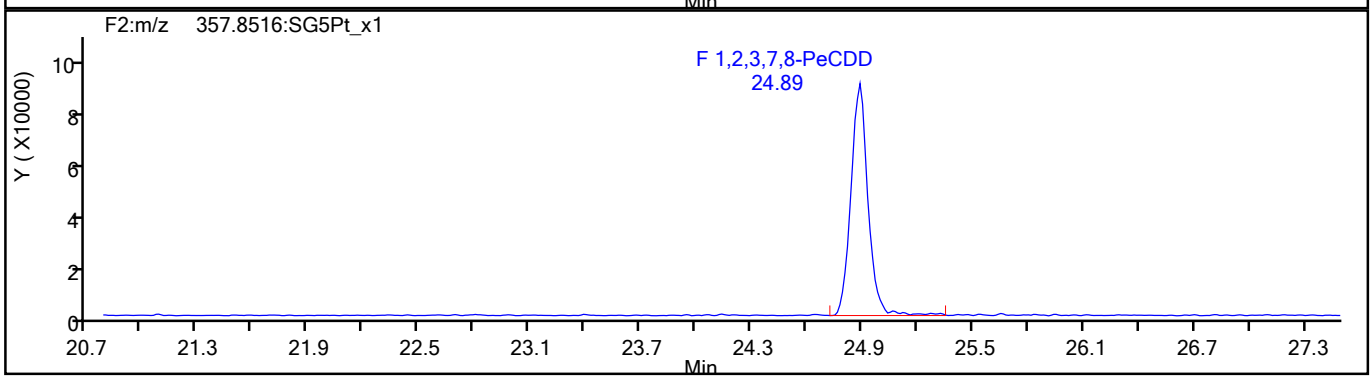

PeCDD Standards

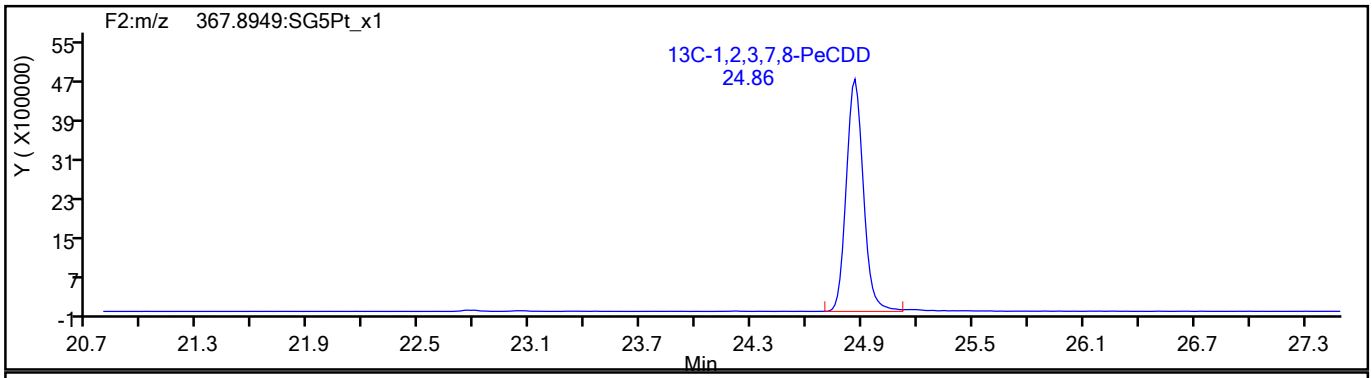

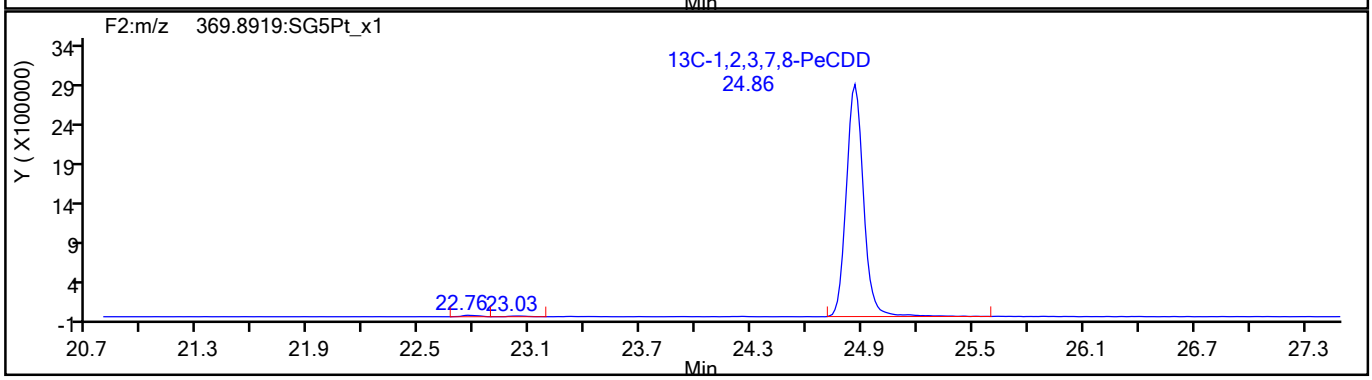

780215

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

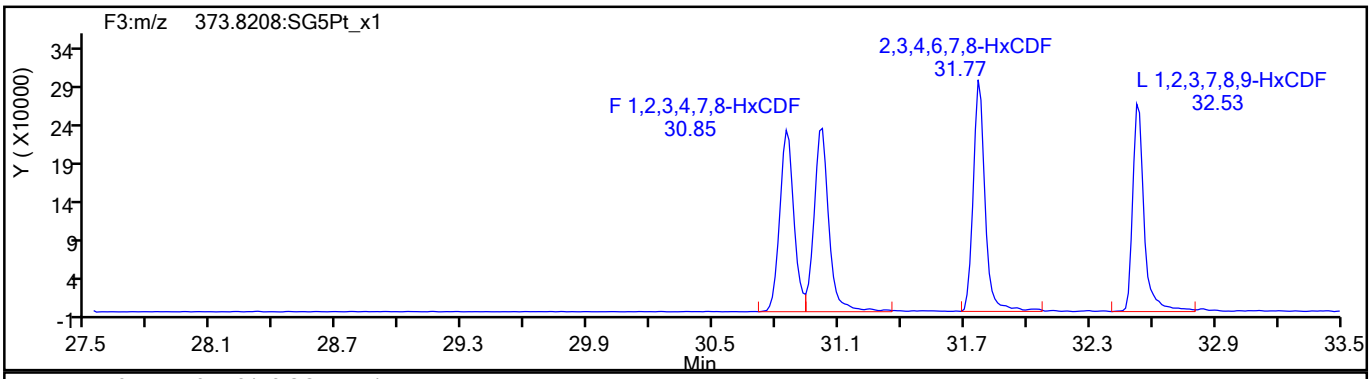

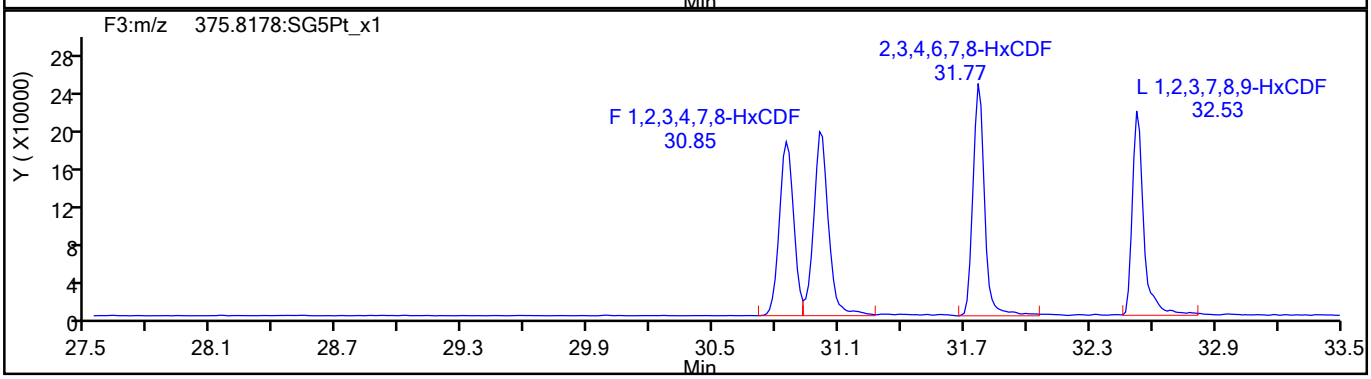

HxCDF Standards

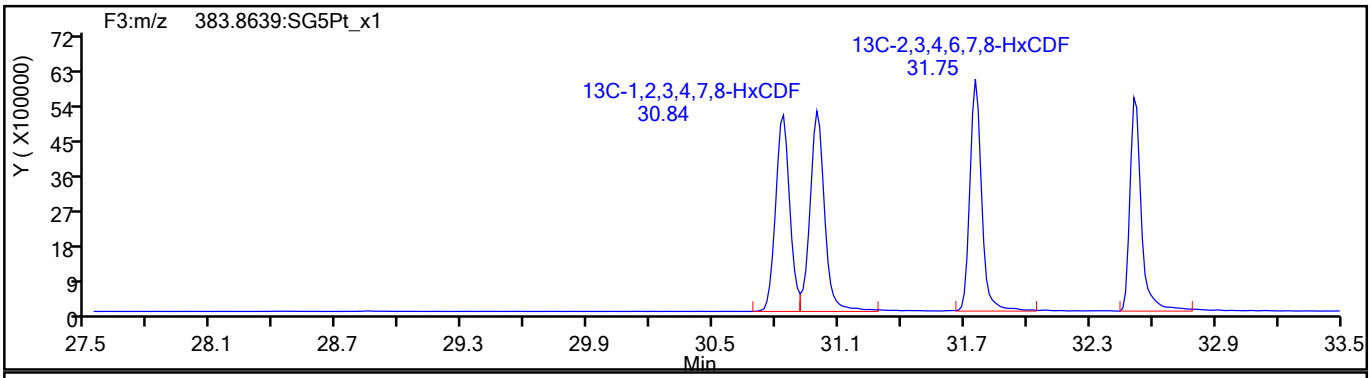

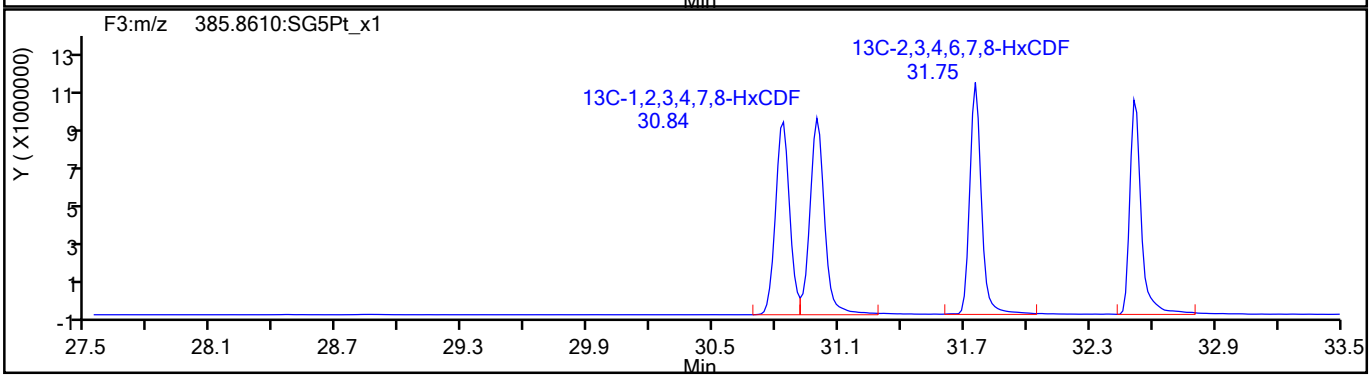

780216

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

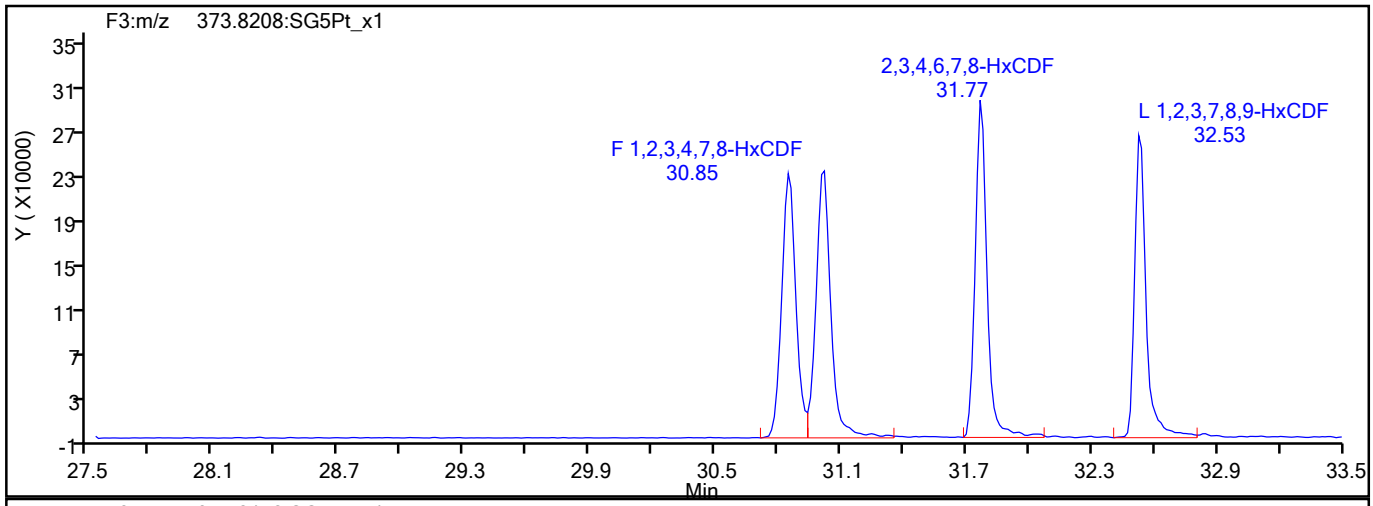

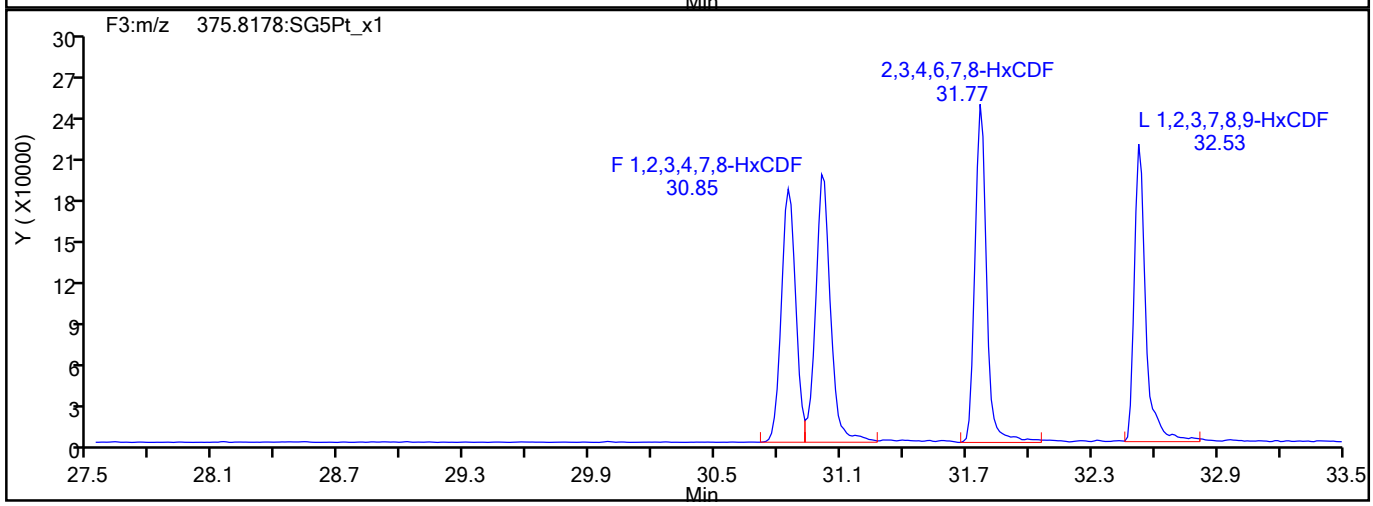

HxCDF Interference Mass

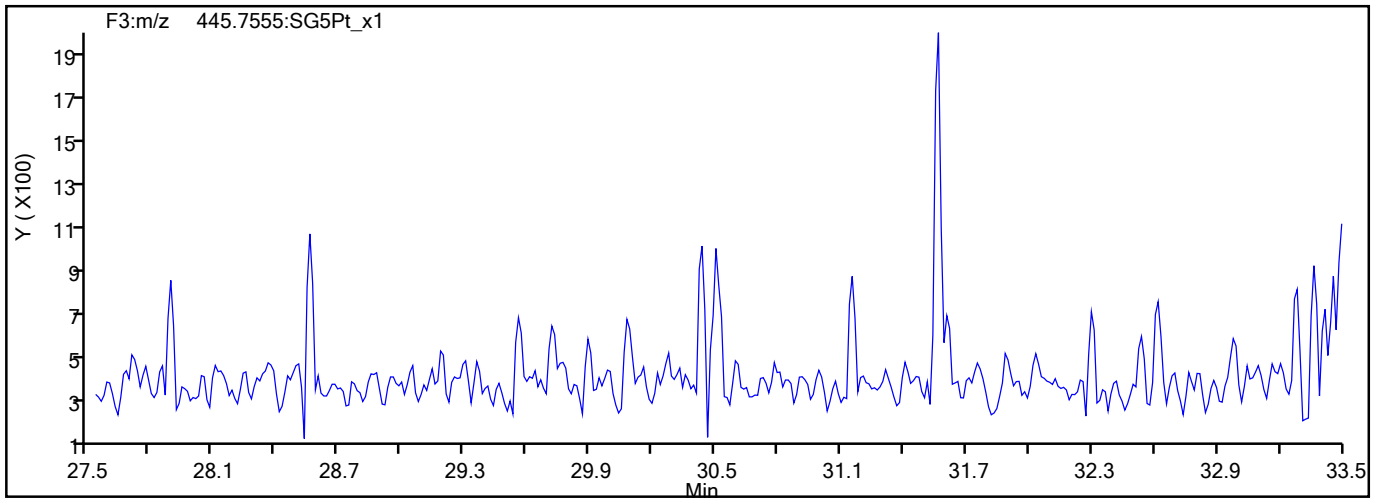

780217

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

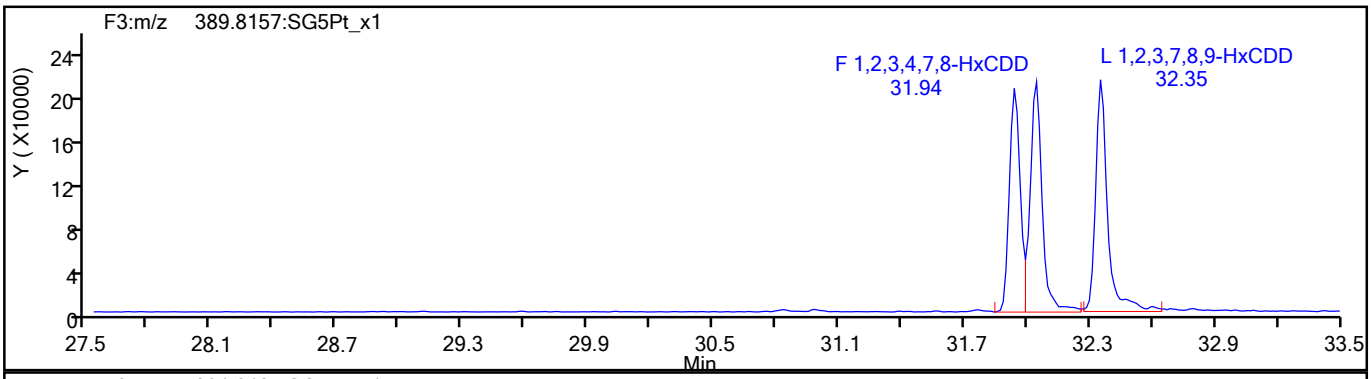

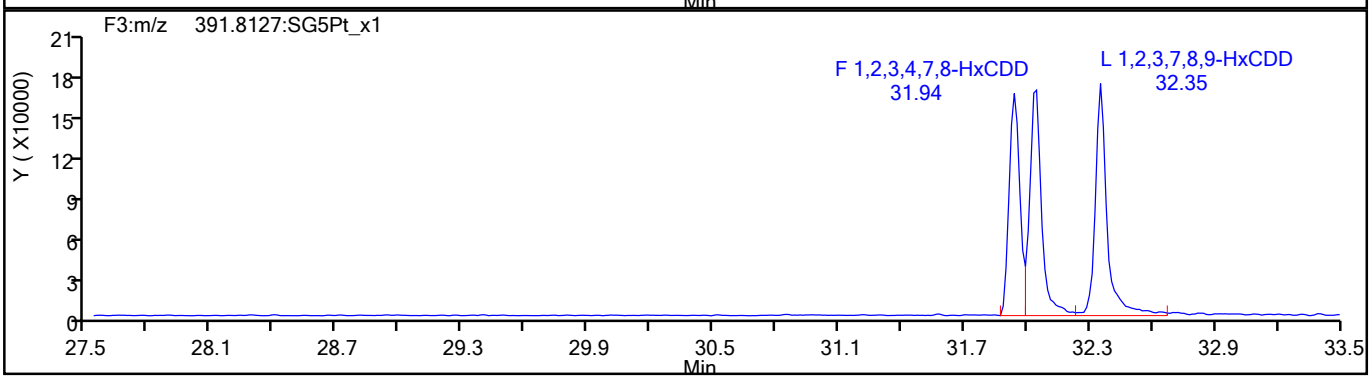

HxCDD Standards

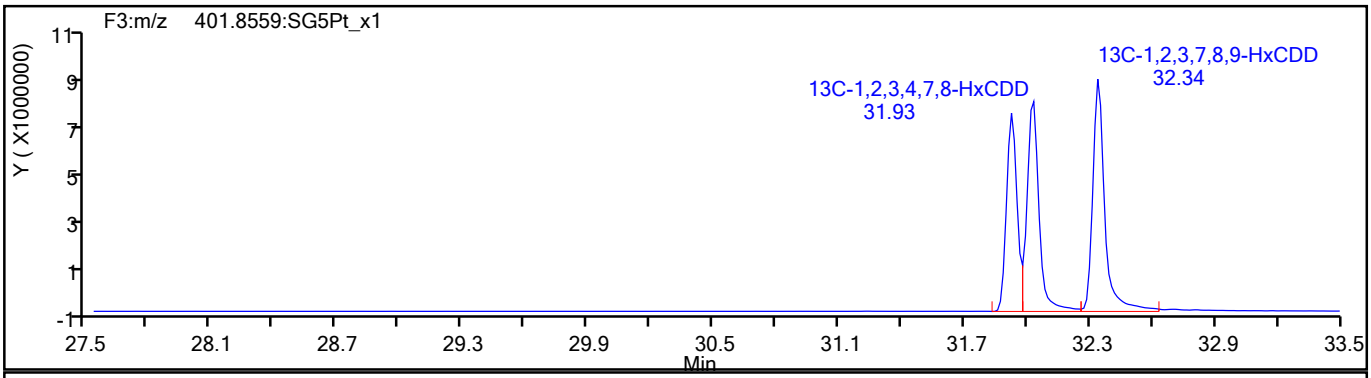

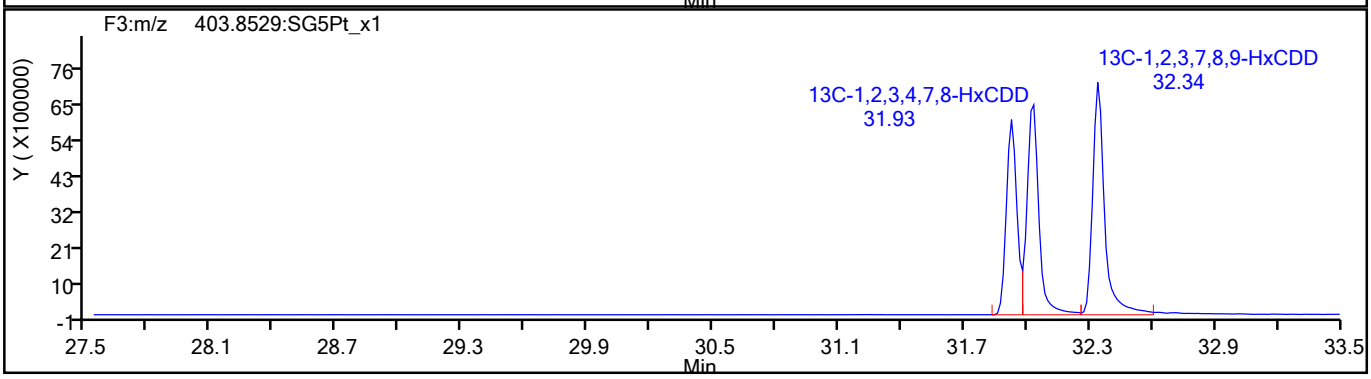

780218

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

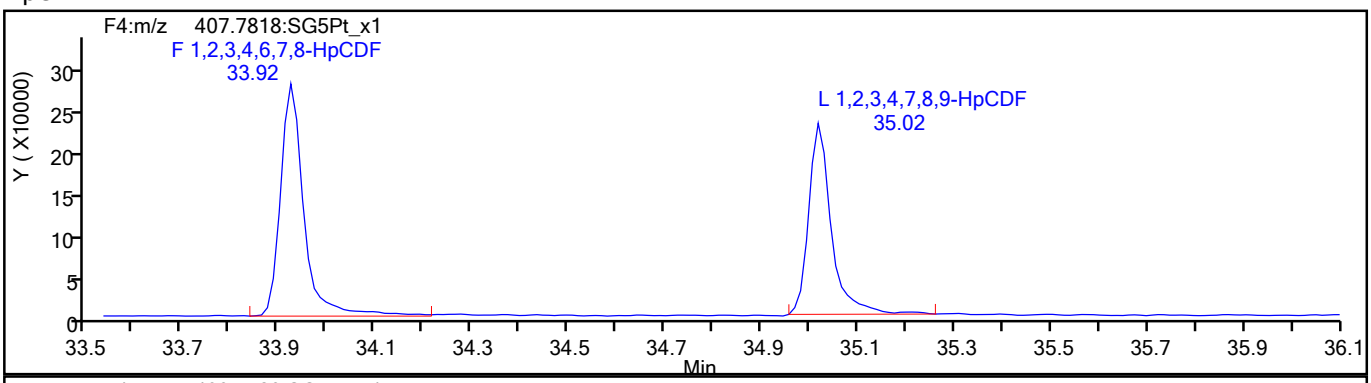

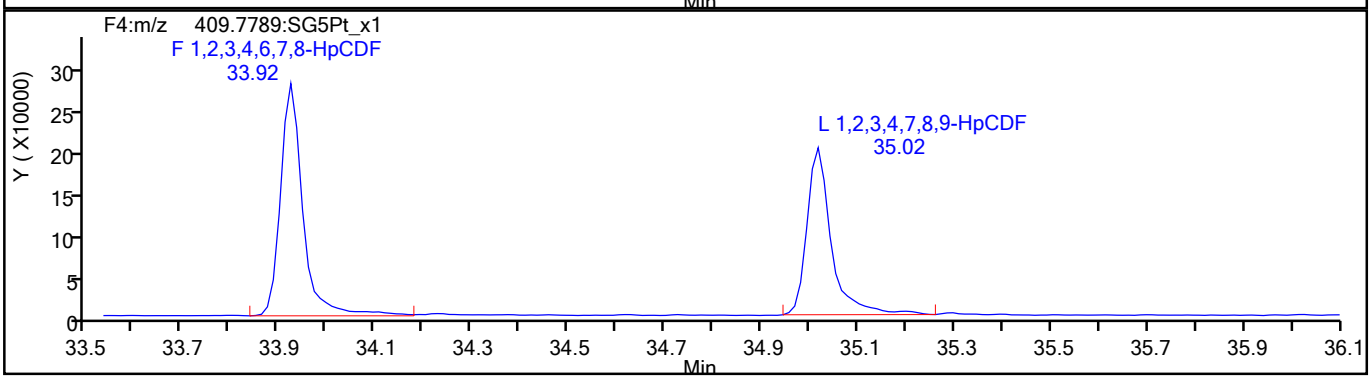

HpCDF Standards

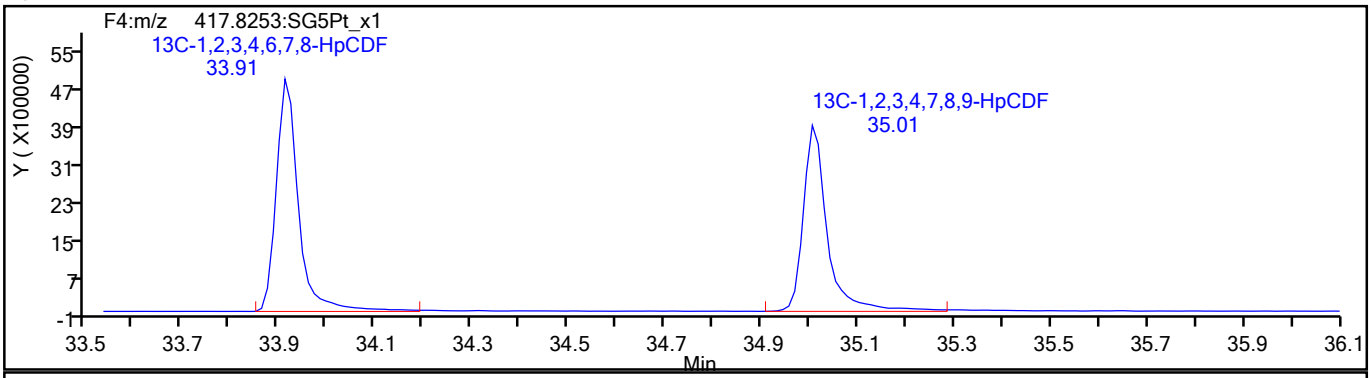

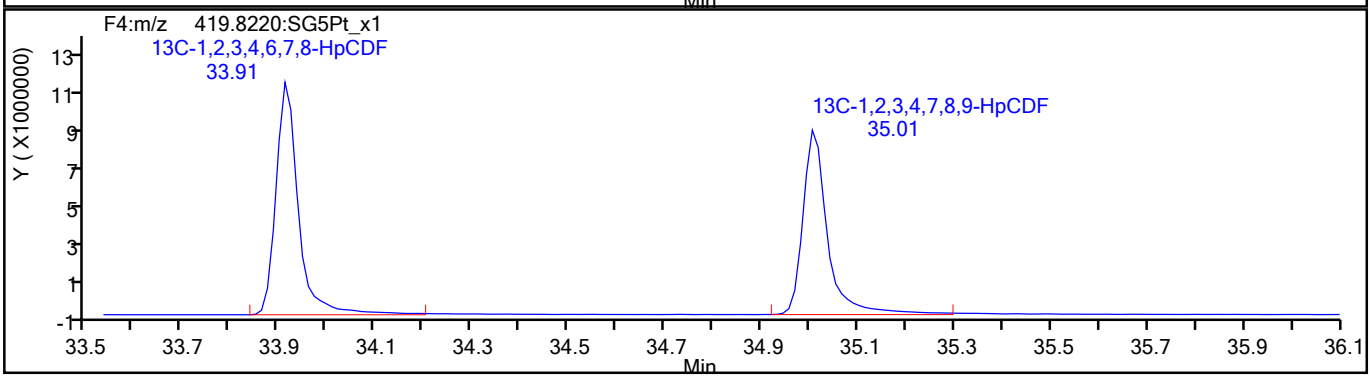

780219

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

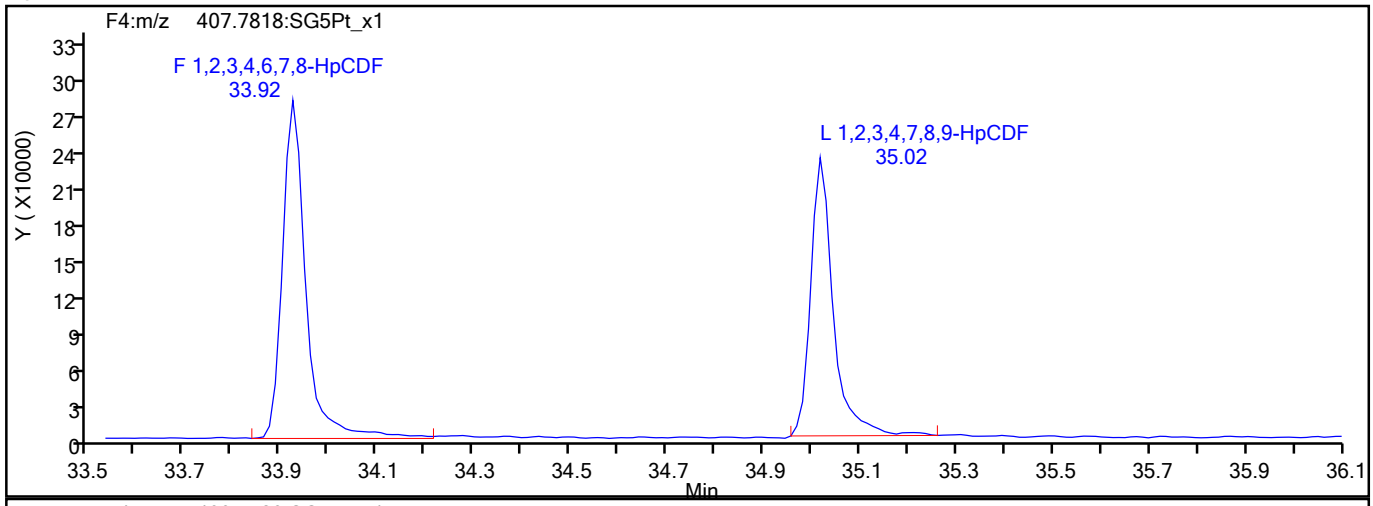

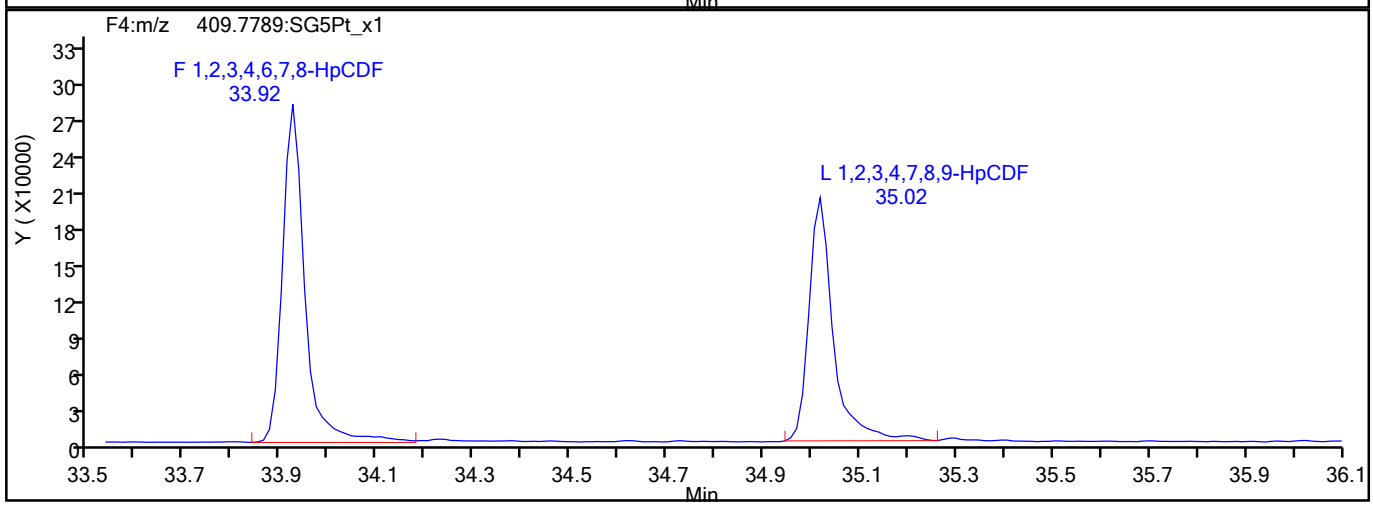

HpCDF Interference Mass

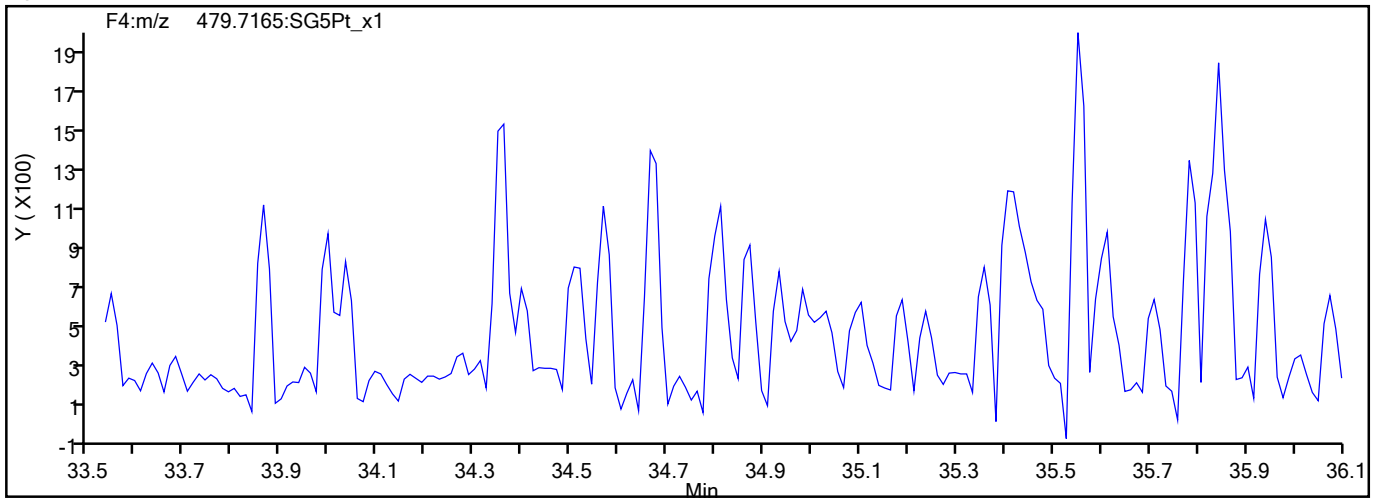

780220

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

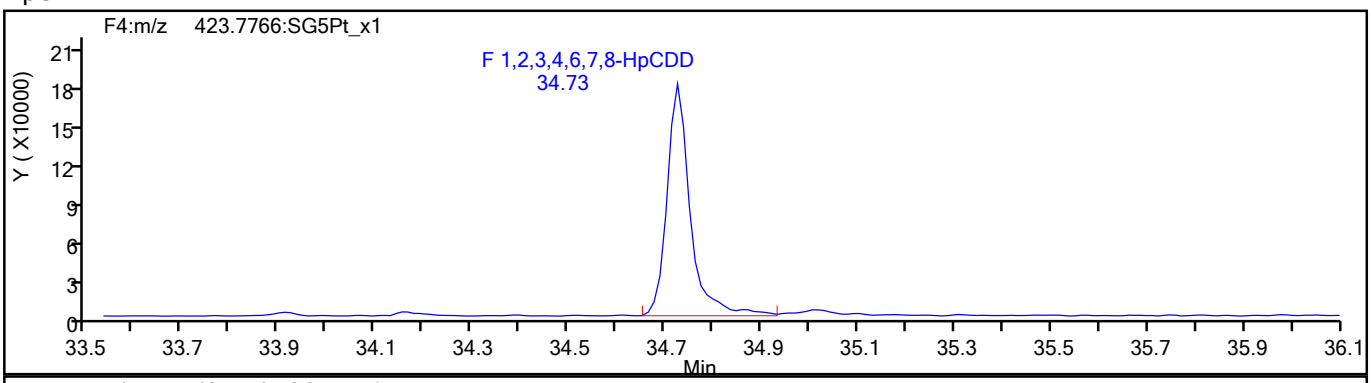

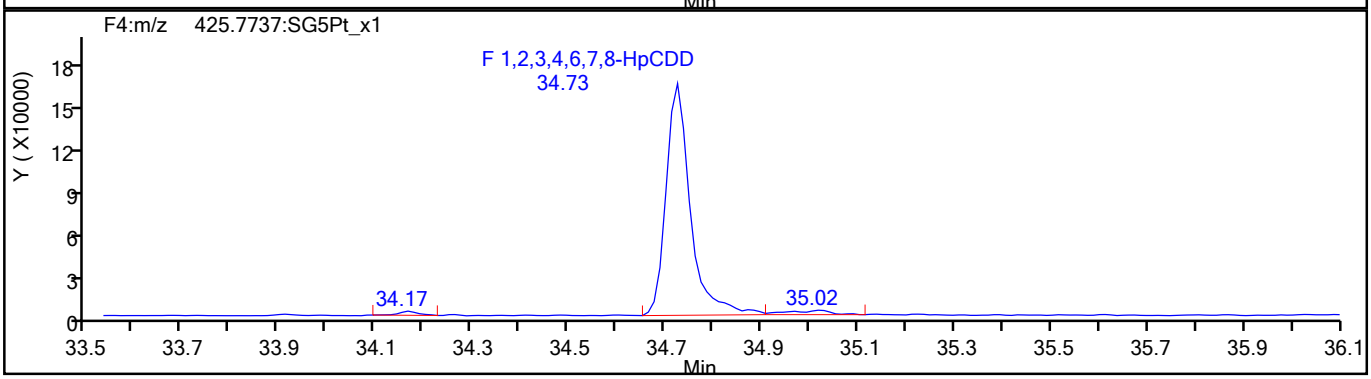

HpCDD Standards

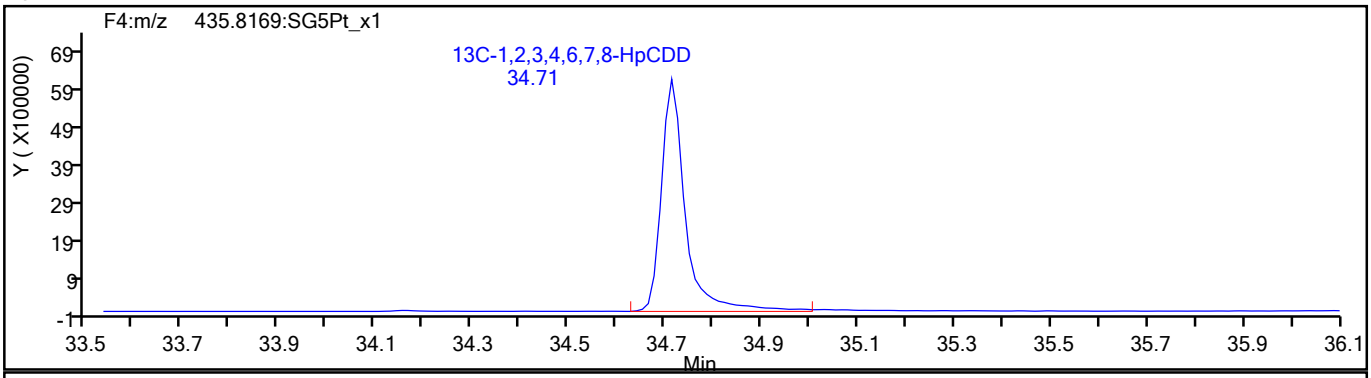

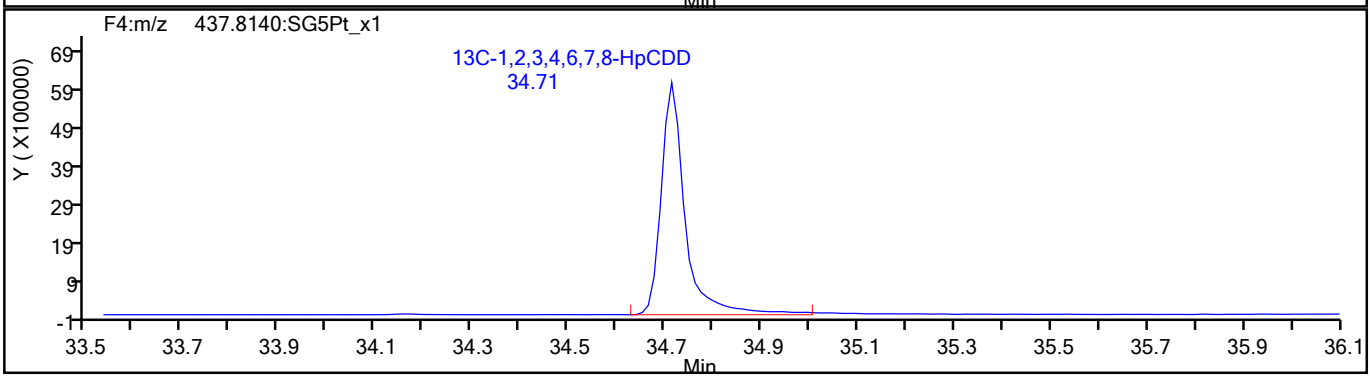

780221

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

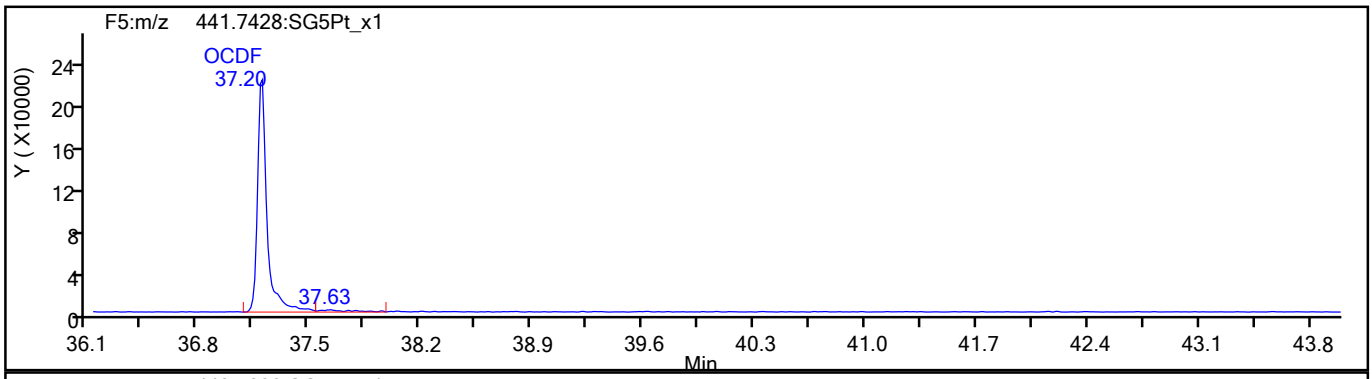

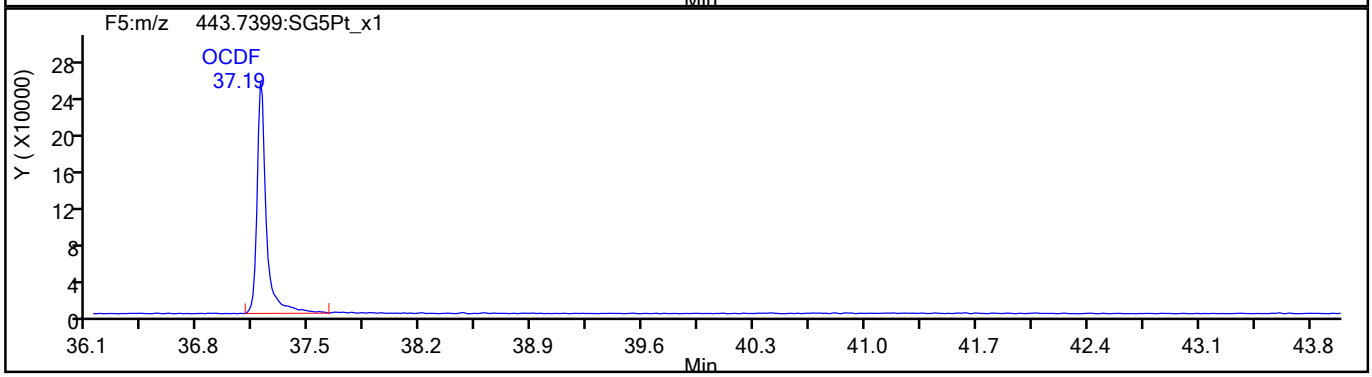

OCDF Standards

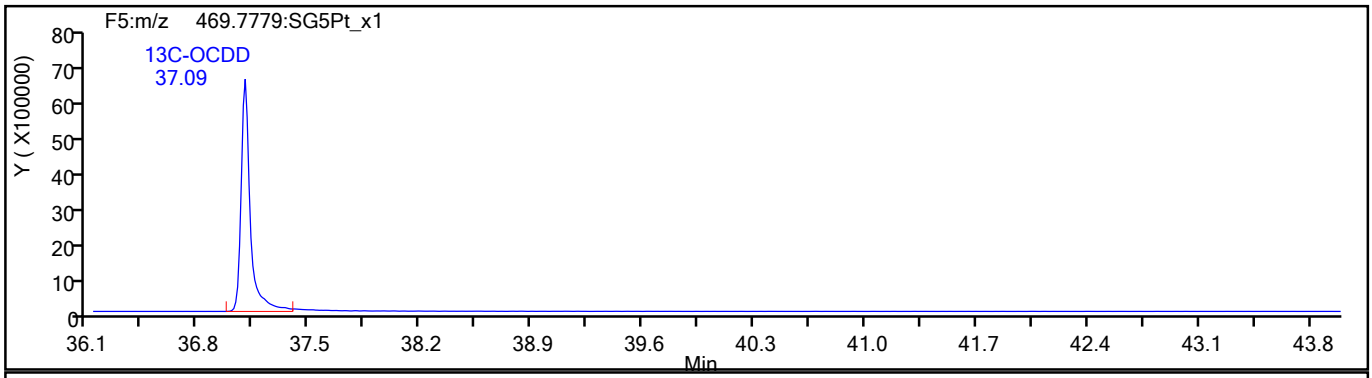

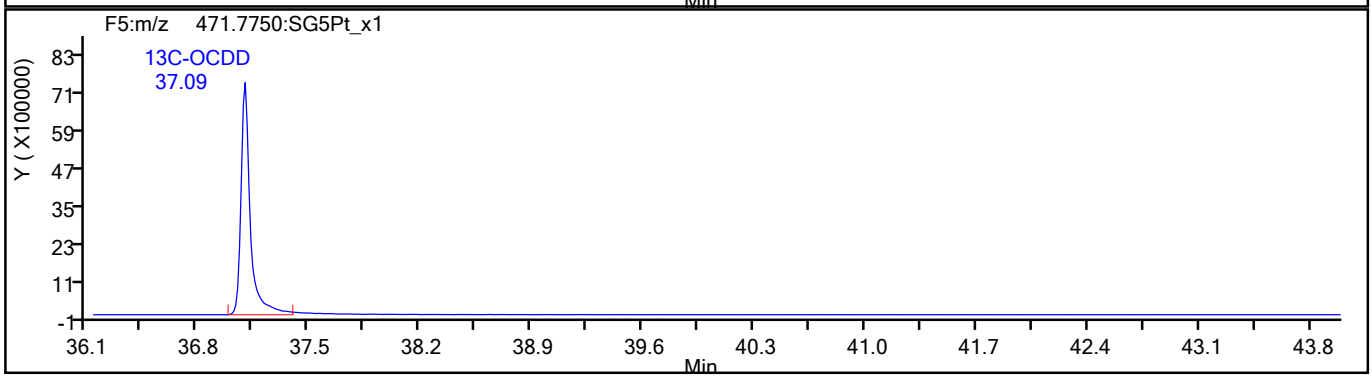

780222

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

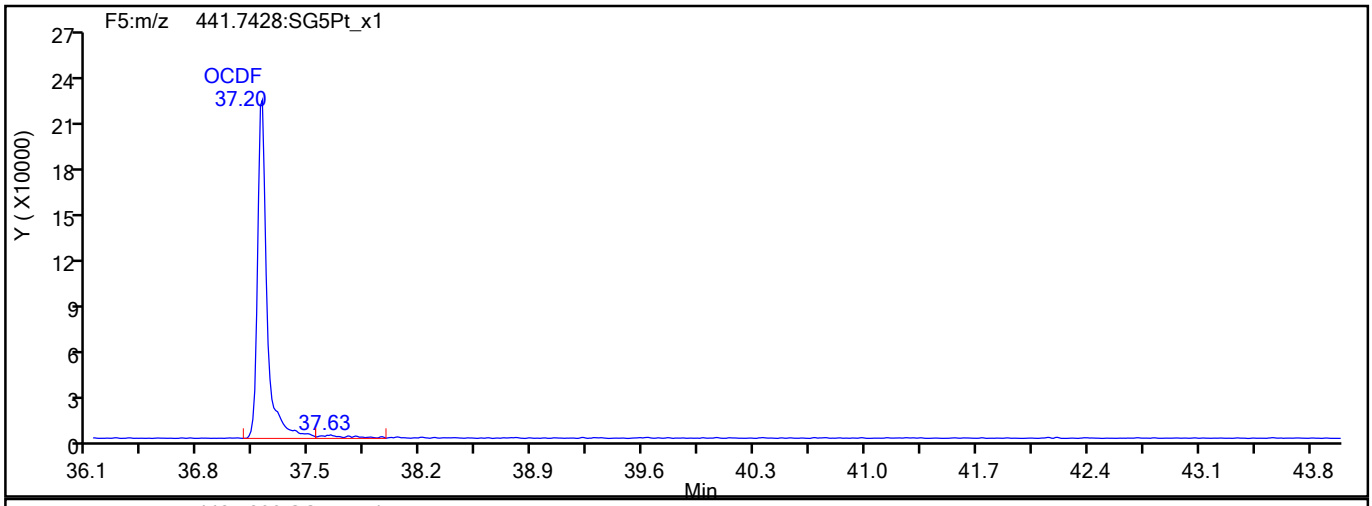

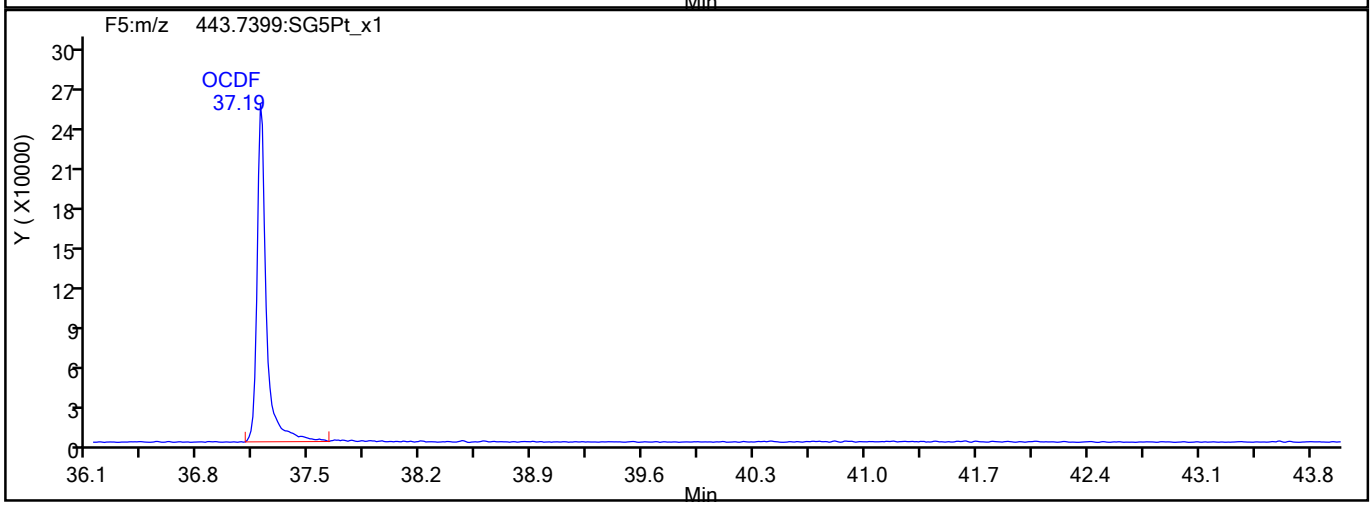

OCDF Interference Mass

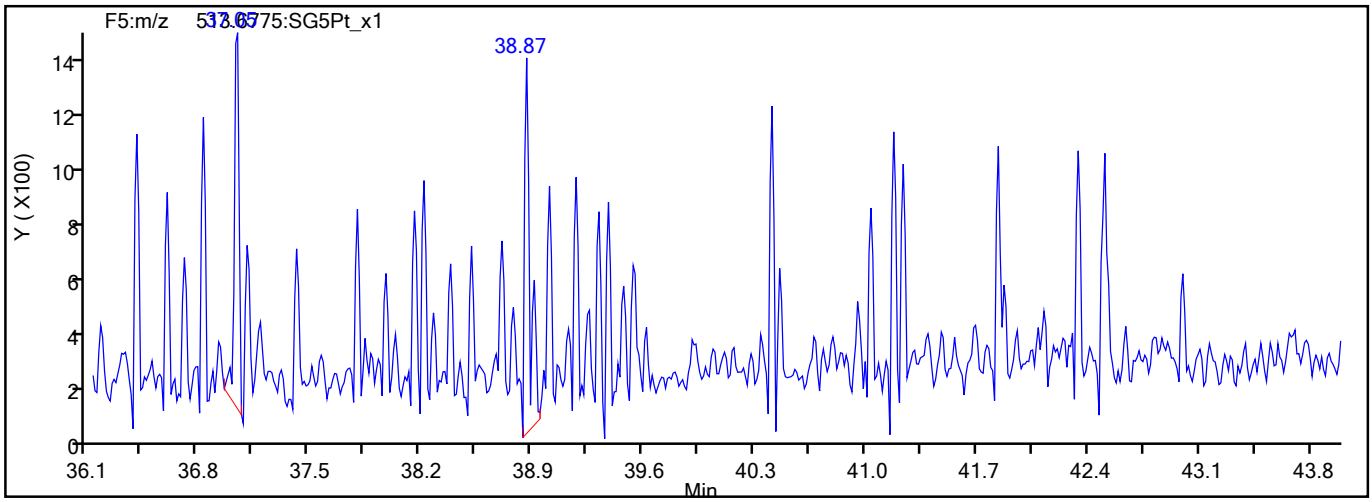

780223

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

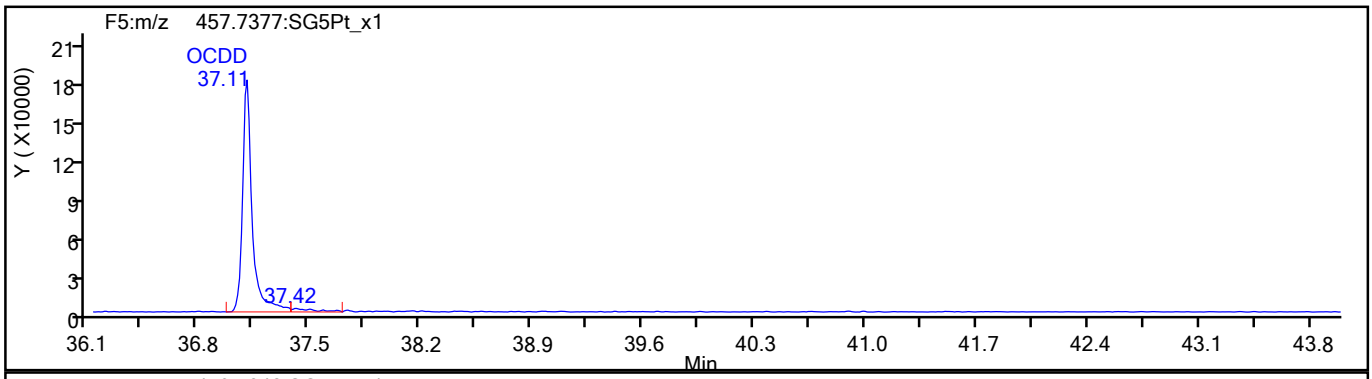

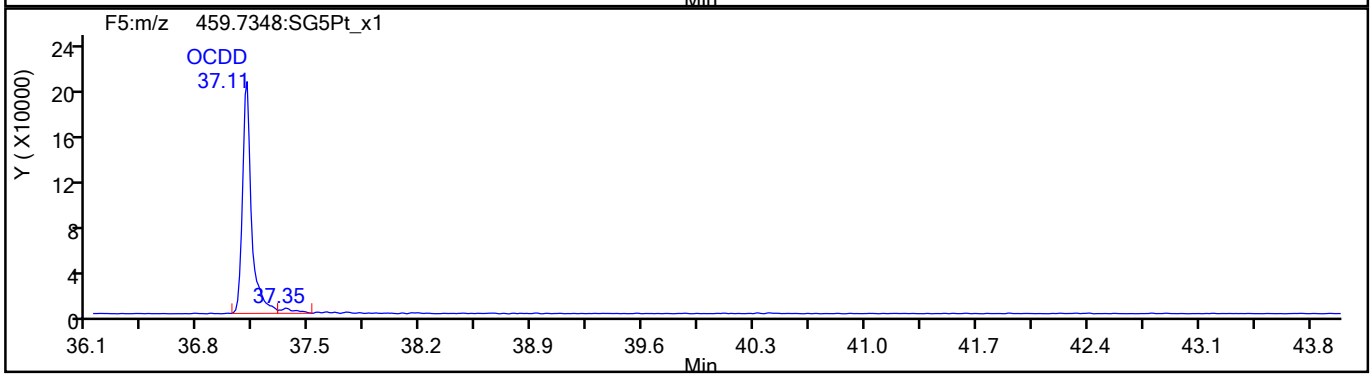

OCDD Standards

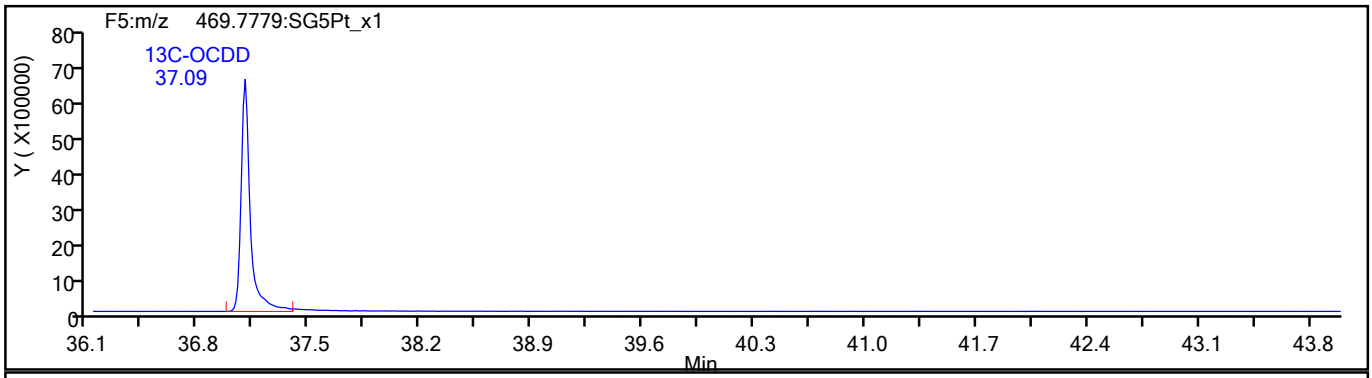

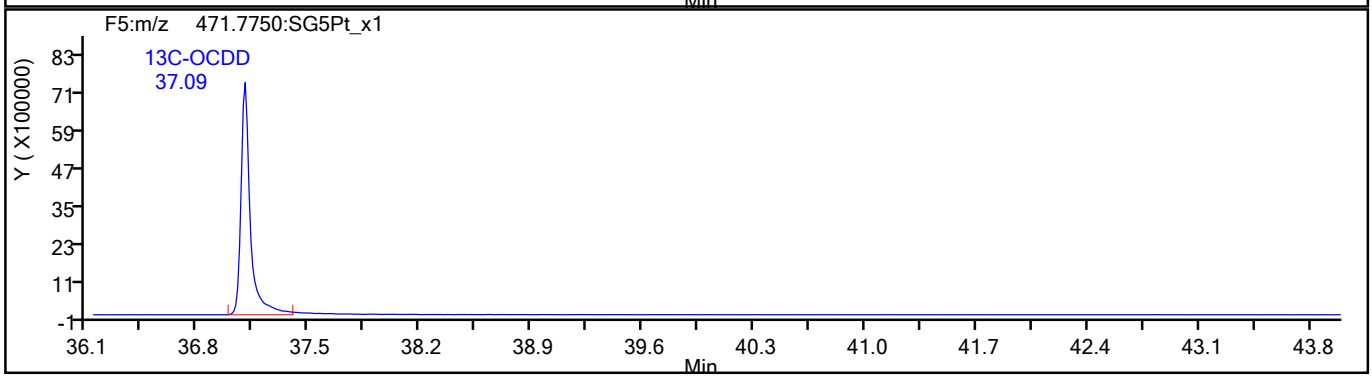

780224

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

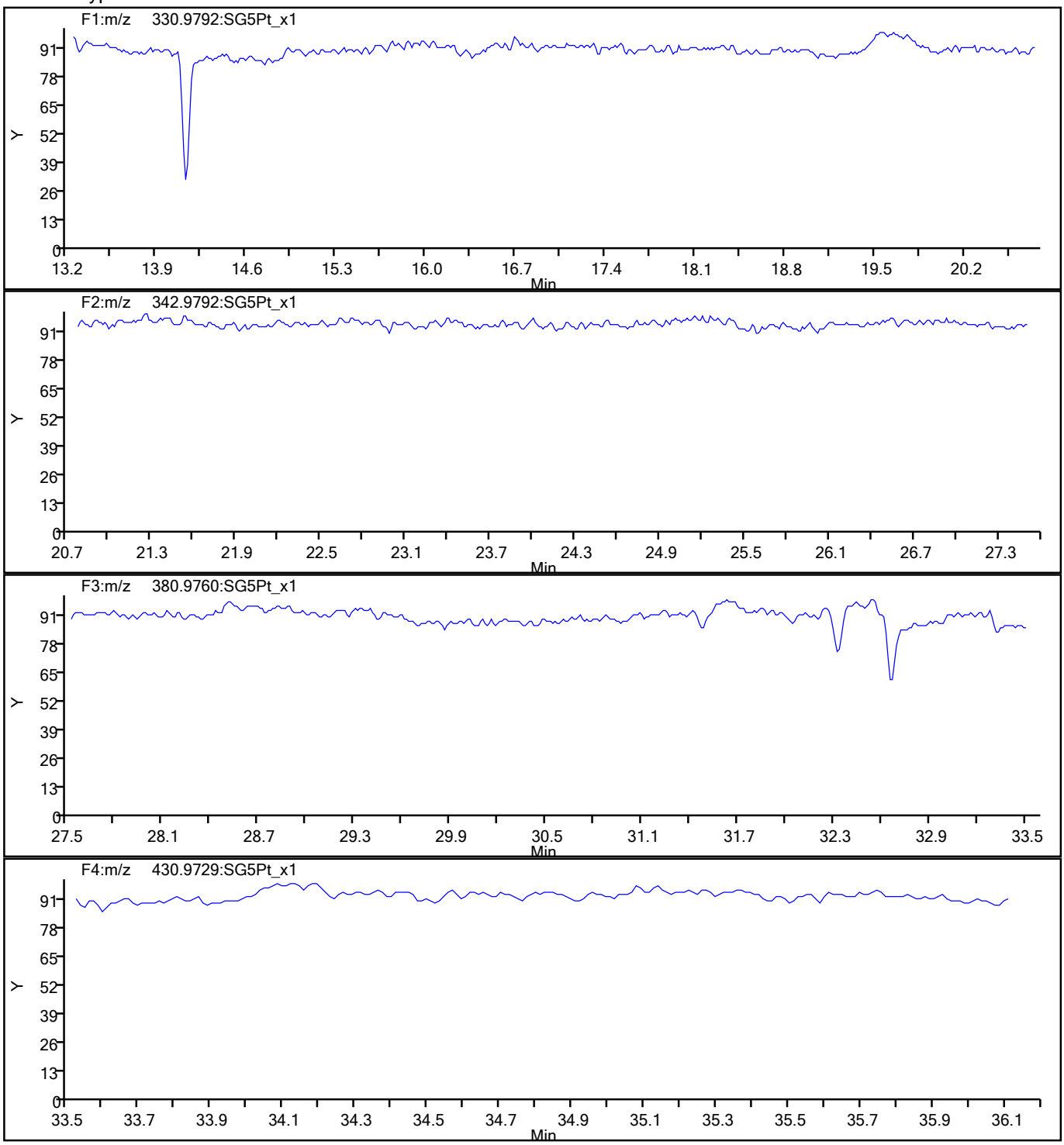

780225

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

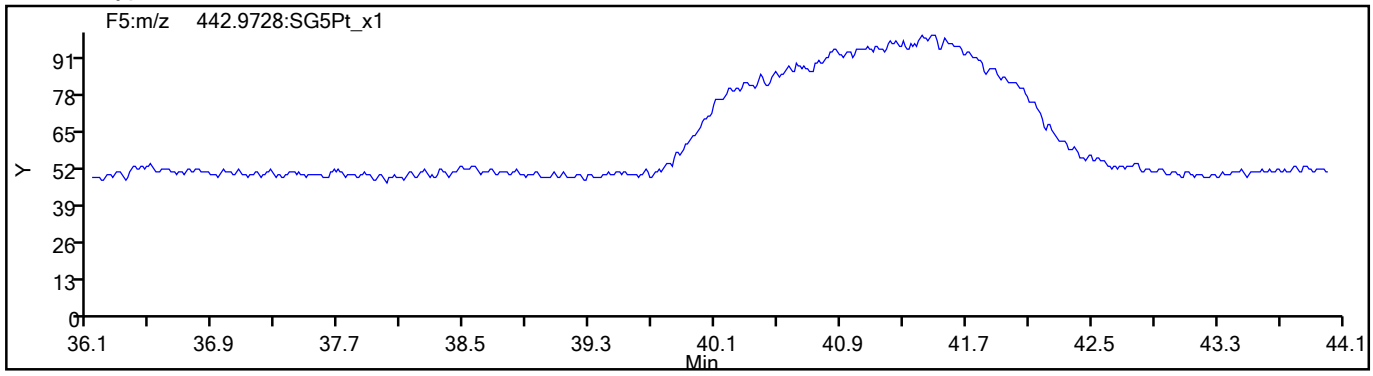

780226

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62853211	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	98246522	0.78	1.6249	96.2	96.2	0.1370	0.1370	96.20	
2,3,7,8-TCDF	17.628	1709191	0.74	1.0239	1.699	1.699	0.0115	0.0115	84.95	
S Total TCDF					1.699	1.699	0.0115	0.0115		
D 13C-2,3,7,8-TCDD	18.338	53975587	0.81	0.8993	95.5	95.5	0.1627	0.1627	95.49	
$ 37Cl4-2,3,7,8-TCDD	18.354	1231219		1.1071	1.769	1.769	0.009070	0.009070	88.47	
2,3,7,8-TCDD	18.354	1184284	0.77	1.2541	1.750	1.750	0.0187	0.0187	87.48	
S Total TCDD					1.750	1.750	0.0187	0.0187		
D 13C-1,2,3,7,8-PeCDF	22.749	72525655	1.59	1.2101	95.4	95.4	0.2163	0.2163	95.36	
1,2,3,7,8-PeCDF	22.776	6620354	1.62	1.0611	8.602	8.602	0.0369	0.0369	86.02	
D 13C-2,3,4,7,8-PeCDF	24.126	74944110	1.59	1.2395	96.2	96.2	0.2111	0.2111	96.20	a
2,3,4,7,8-PeCDF	24.153	6452410	1.61	1.0184	8.454	8.454	0.0398	0.0398	84.54	
S Total PeCDF					17.1	17.1	0.0383	0.0383		
D 13C-1,2,3,7,8-PeCDD	24.862	46721712	1.62	0.7612	97.7	97.7	0.1174	0.1174	97.65	
1,2,3,7,8-PeCDD	24.889	4219570	1.58	1.0484	8.614	8.614	0.0282	0.0282	86.14	
S Total PeCDD					8.614	8.614	0.0282	0.0282		
D 13C-1,2,3,4,7,8-HxCDF	30.835	65726932	0.51	1.0837	101.6	101.6	0.5284	0.5284	102	a
1,2,3,4,7,8-HxCDF	30.848	6041767	1.22	1.0851	8.471	8.471	0.0611	0.0611	84.71	
D 13C-1,2,3,6,7,8-HxCDF	30.995	68089005	0.53	1.1279	101.1	101.1	0.5077	0.5077	101	
1,2,3,6,7,8-HxCDF	31.021	6561860	1.24	1.1260	8.559	8.559	0.0596	0.0596	85.59	
D 13C-2,3,4,6,7,8-HxCDF	31.753	64406928	0.52	1.0637	101.4	101.4	0.5383	0.5383	101	
2,3,4,6,7,8-HxCDF	31.767	6352404	1.21	1.1675	8.448	8.448	0.0492	0.0492	84.48	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58828058	0.51	0.9676	101.8	101.8	0.5918	0.5918	102	
1,2,3,7,8,9-HxCDF	32.526	5963032	1.22	1.1664	8.691	8.691	0.0536	0.0536	86.91	
S Total HxCDF					34.2	34.2	0.0559	0.0559		
* 13C-1,2,3,7,8,9-HxCDD	32.339	59719891	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44877133	1.26	0.7334	102.5	102.5	0.4904	0.4904	102	a
1,2,3,4,7,8-HxCDD	31.940	3996910	1.25	1.0640	8.370	8.370	0.0541	0.0541	83.70	
D 13C-1,2,3,6,7,8-HxCDD	32.033	52974056	1.27	0.8802	100.8	100.8	0.4087	0.4087	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.046	4517909	1.28	1.0001	8.528	8.528	0.0541	0.0541	85.28	
1,2,3,7,8,9-HxCDD	32.353	4612548	1.27	1.1325	8.324	8.324	0.0492	0.0492	83.24	
S Total HxCDD					25.2	25.2	0.0525	0.0525		
D 13C-1,2,3,4,6,7,8-HpCDF	33.911	46691158	0.44	0.7730	101.1	101.1	1.219	1.219	101	
1,2,3,4,6,7,8-HpCDF	33.924	5795616	1.06	1.4413	8.612	8.612	0.0908	0.0908	86.12	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	42362179	0.44	0.7008	101.2	101.2	1.344	1.344	101	a
1,2,3,4,7,8,9-HpCDF	35.017	4773949	1.04	1.3174	8.554	8.554	0.1198	0.1198	85.54	
S Total HpCDF					17.2	17.2	0.1053	0.1053		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	38689128	1.01	0.6472	100.1	100.1	0.6644	0.6644	100	
1,2,3,4,6,7,8-HpCDD	34.725	3690749	1.06	1.0943	8.717	8.717	0.0588	0.0588	87.17	
S Total HpCDD					8.717	8.717	0.0588	0.0588		
D 13C-OCDD	37.093	52034518	0.88	0.4472	194.9	194.9	0.3057	0.3057	97.43	
OCDF	37.189	6198469	0.89	1.4382	16.6	16.6	0.0331	0.0331	82.83	
OCDD	37.105	5013385	0.90	1.1070	17.4	17.4	0.0477	0.0477	87.03	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28386456	7046087	6003	15007	1174		
333.9339	18.142	18.142	0		34466755	8558284	3128	7820	2736	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42972486	10763336	8679	21697	1240		
317.9389	17.613	17.616	0	0.971	55274036	13878642	5218	13045	2660	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	725190	178427	386	965	462		
305.8987	17.628	17.631	0	1.001	984001	248871	771	1927	323	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24153490	5697854	6003	15007	949		
333.9339	18.338	18.338	0	1.011	29822097	7031837	3128	7820	2248	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	1231219	295748	627	1567	472		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	516509	120344	727	1817	166		
321.8936	18.354	18.357	0	1.001	667775	162973	470	1175	347	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44514928	7853181	9659	24147	813		
353.8970	22.749	22.754	0	1.254	28010727	4960984	6675	16687	743	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	4089215	716349	1056	2640	678		
341.8567	22.776	22.779	0	1.001	2531139	446464	949	2372	470	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											a
351.9000	24.126	24.129	0	1.330	46033296	7621284	9659	24147	789		a
353.8970	24.126	24.129	0	1.330	28910814	4739818	6675	16687	710	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	3984657	653372	1056	2640	619		
341.8567	24.153	24.156	0	1.001	2467753	411895	949	2372	434	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28869986	4442492	3510	8775	1266		
369.8919	24.862	24.865	0	1.370	17851726	2719251	2068	5170	1315	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	2584600	398905	491	1227	812		
357.8516	24.889	24.892	0	1.001	1634970	246537	355	887	694	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											a
383.8639	30.835	30.838	0	0.953	22324815	4908430	11721	29302	419		a
385.8610	30.835	30.838	0	0.953	43402117	9487505	22146	55365	428	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.848	30.857	0	1.000	3322045	734549	2125	5312	346		
375.8178	30.848	30.857	0	1.000	2719722	584076	1696	4240	344	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	23443638	4852452	11721	29302	414		
385.8610	30.995	31.003	0	0.958	44645367	9390378	22146	55365	424	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.001	3628802	774738	2125	5312	365		
375.8178	31.021	31.022	0	1.001	2933058	621989	1696	4240	367	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.753	31.756	0	0.982	22116278	5724833	11721	29302	488		
385.8610	31.753	31.756	0	0.982	42290650	10891641	22146	55365	492	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	3476984	900887	2125	5312	424		
375.8178	31.767	31.772	0	1.000	2875420	748664	1696	4240	441	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	19952155	5224965	11721	29302	446		
385.8610	32.512	32.523	-1	1.005	38875903	10047992	22146	55365	454	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	3272570	870864	2125	5312	410		
375.8178	32.526	32.534	0	1.000	2690462	702575	1696	4240	414	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33208186	8207924	11753	29382	698		
403.8529	32.339	32.342	0		26511705	6578059	9521	23802	691	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	31.927	31.929	0	0.987	24991401	7247079	11753	29382	617		a
403.8529	31.927	31.929	0	0.987	19885732	5749736	9521	23802	604	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	2220855	634454	1798	4495	353		
391.8127	31.940	31.945	0	1.000	1776055	520388	1195	2987	435	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29637474	7731021	11753	29382	658		
403.8529	32.033	32.033	0	0.991	23336582	6105317	9521	23802	641	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.046	32.047	0	1.000	2539756	681391	1798	4495	379		
391.8127	32.046	32.047	0	1.000	1978153	525440	1195	2987	440	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	2578931	681238	1798	4495	379		
391.8127	32.353	32.355	0	1.013	2033617	530890	1195	2987	444	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.911	33.914	0	1.049	14324046	4548819	17096	42740	266		
419.8220	33.911	33.914	0	1.049	32367112	10373412	38619	96547	269	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	2984390	989226	3939	9847	251		
409.7789	33.924	33.926	0	1.000	2811226	912647	3871	9677	236	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											a
417.8253	35.005	35.010	0	1.082	12913204	3817815	17096	42740	223		a
419.8220	35.005	35.010	0	1.082	29448975	8551787	38619	96547	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	2430692	699814	3939	9847	178		
409.7789	35.017	35.020	0	1.000	2343257	686031	3871	9677	177	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19472945	5796031	12697	31742	456		
437.8140	34.714	34.716	0	1.073	19216183	5692167	12738	31845	447	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.725	34.726	0	1.000	1901971	557241	1605	4012	347		
425.7737	34.725	34.726	0	1.000	1788778	518346	1352	3380	383	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	24422535	6155132	2912	7280	2114		
471.7750	37.093	37.094	0	1.147	27611983	6845350	5172	12930	1324	0.88(0.76-1.02)	
OCDF											
441.7428	37.189	37.199	-1	1.003	2921445	715883	635	1587	1127		
443.7399	37.189	37.199	-1	1.003	3277024	845078	603	1507	1401	0.89(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	2373314	577341	633	1582	912		
459.7348	37.105	37.106	0	1.000	2640071	638330	739	1847	864	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.13

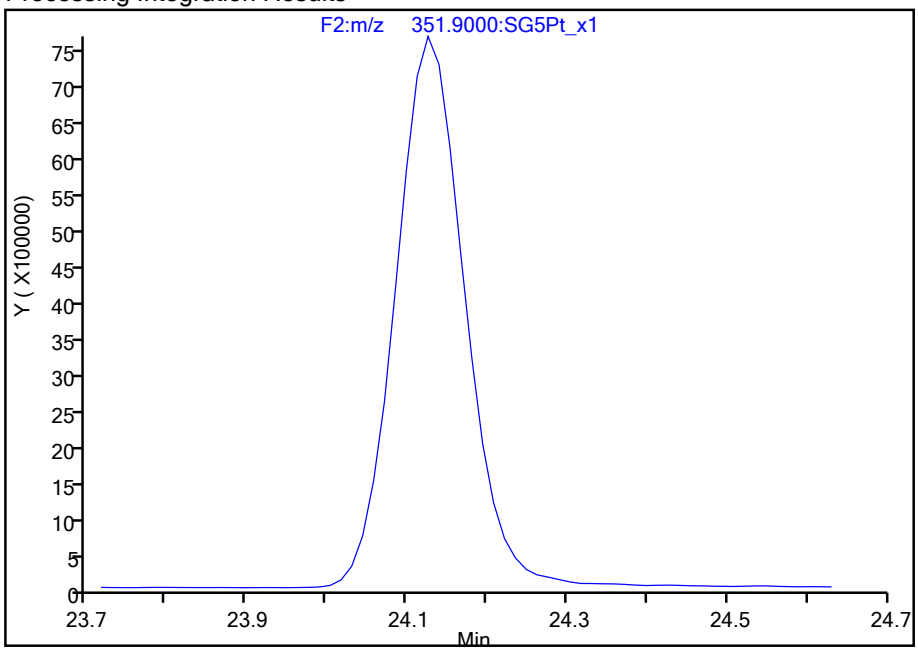

Manual Integration Results

RT: 24.13
Area: 46033296
Amount: 96.198549
Amount Units: pg/ul

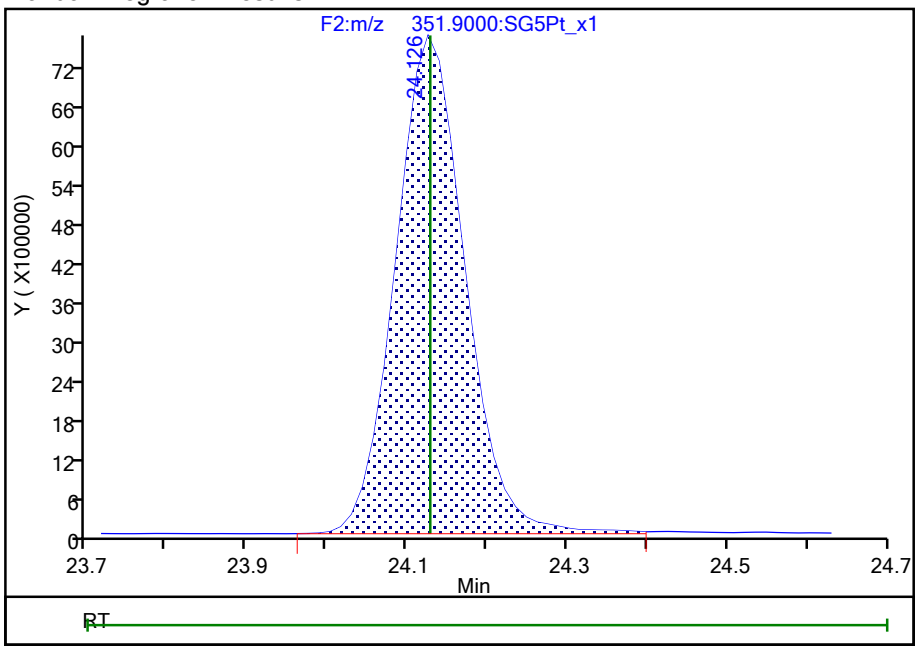

Reviewer: arghestanis, 26-Jul-2021 12:30:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

780232

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDF, CAS: 114423-98-2

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.84

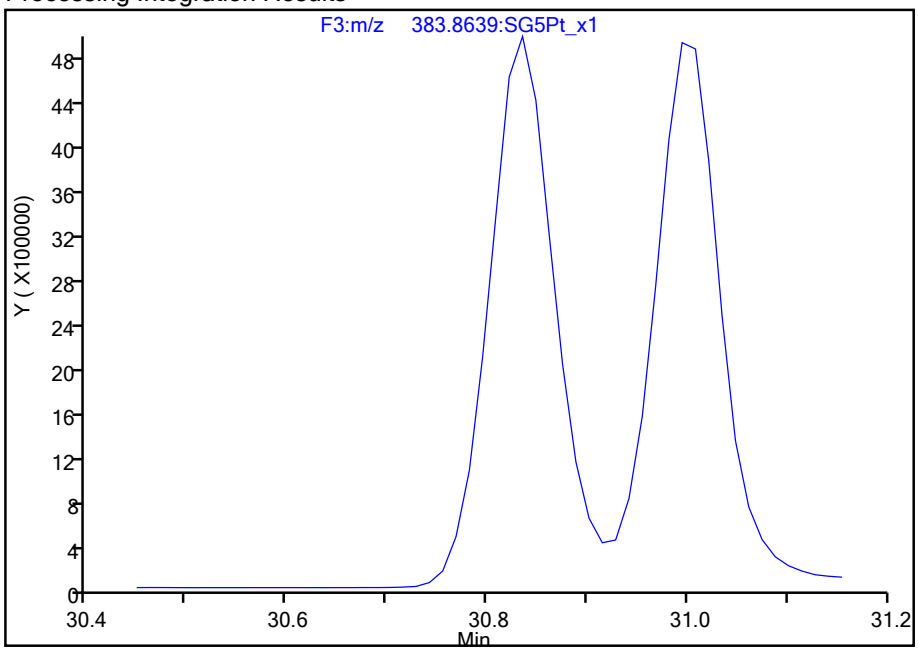

Manual Integration Results

RT: 30.84
Area: 22324815
Amount: 101.5622
Amount Units: pg/ul

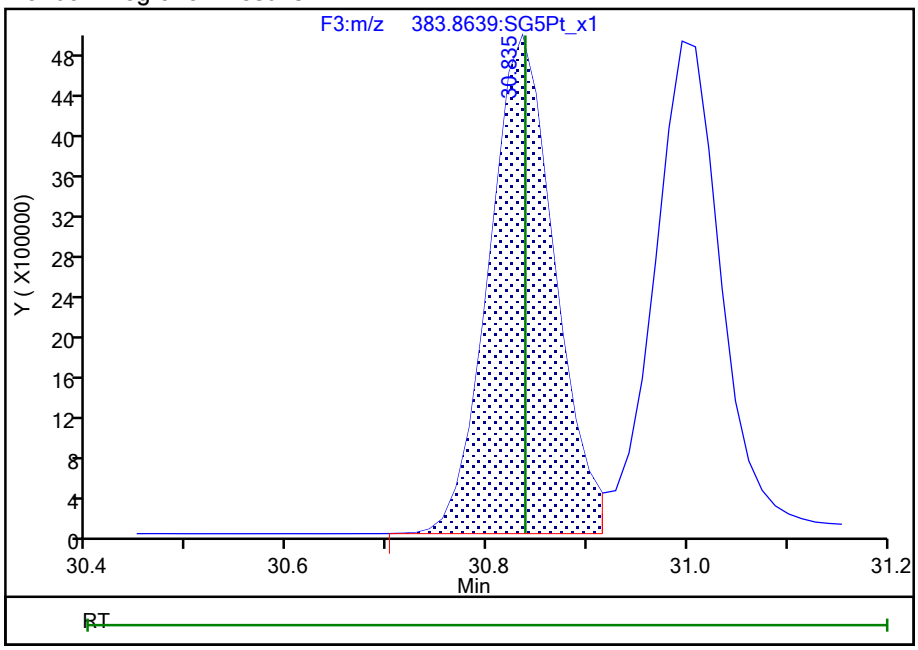

Reviewer: arghestanis, 26-Jul-2021 12:30:40
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.93

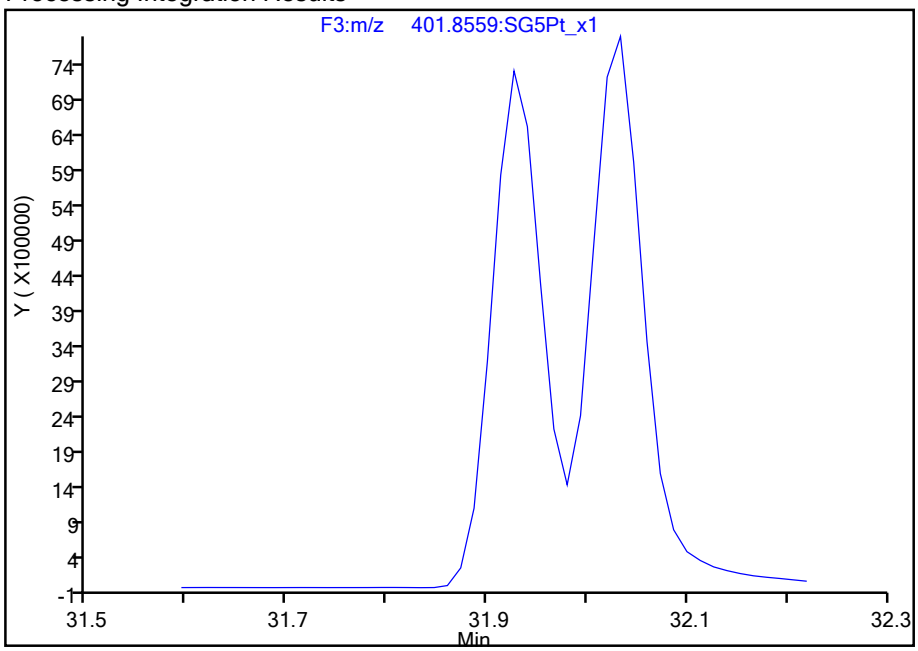

Manual Integration Results

RT: 31.93
Area: 24991401
Amount: 102.4585
Amount Units: pg/ul

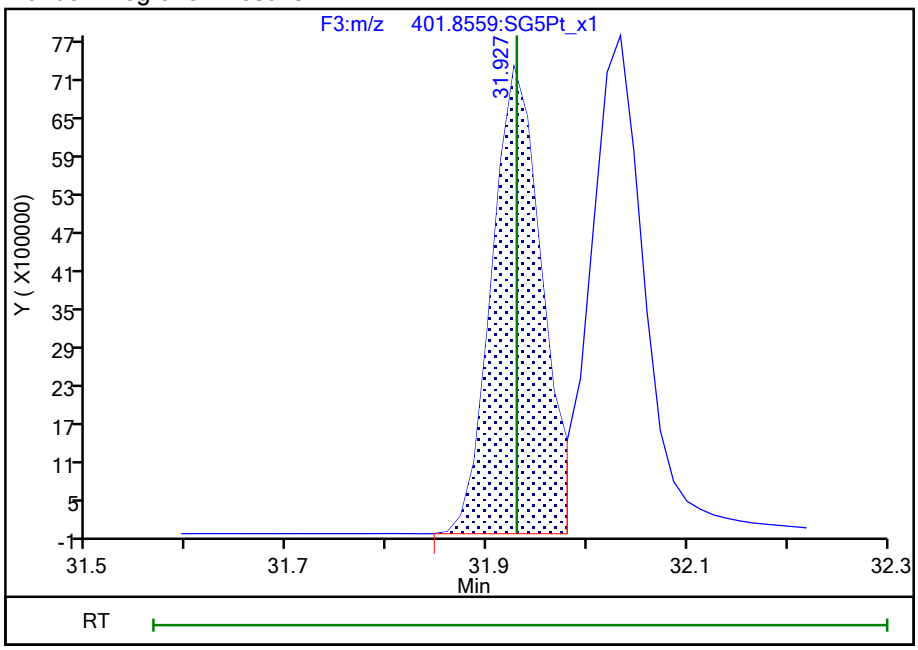

Reviewer: arghestanis, 26-Jul-2021 12:30:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.01

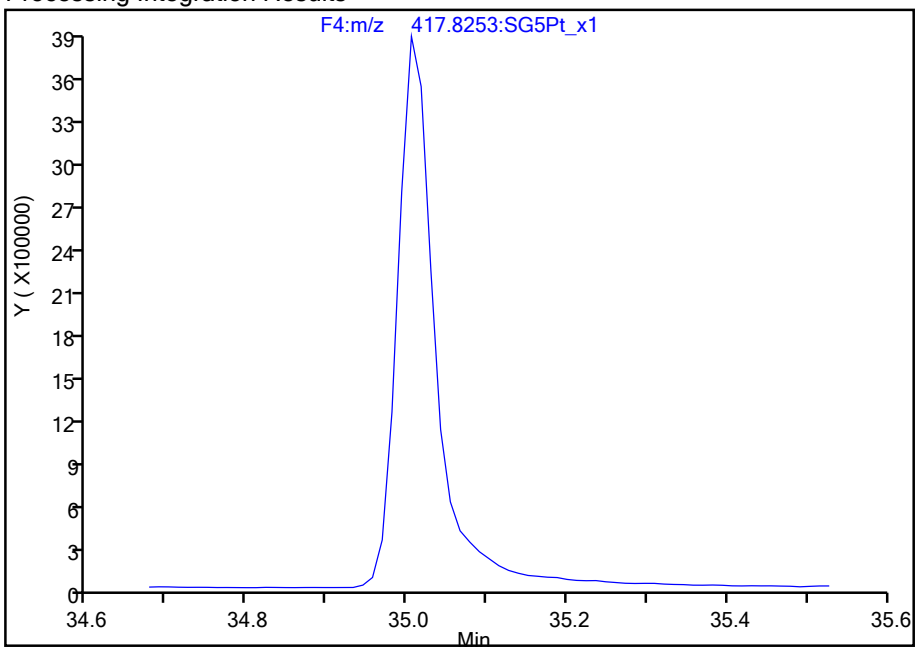

Manual Integration Results

RT: 35.01
Area: 12913204
Amount: 101.2180
Amount Units: pg/ul

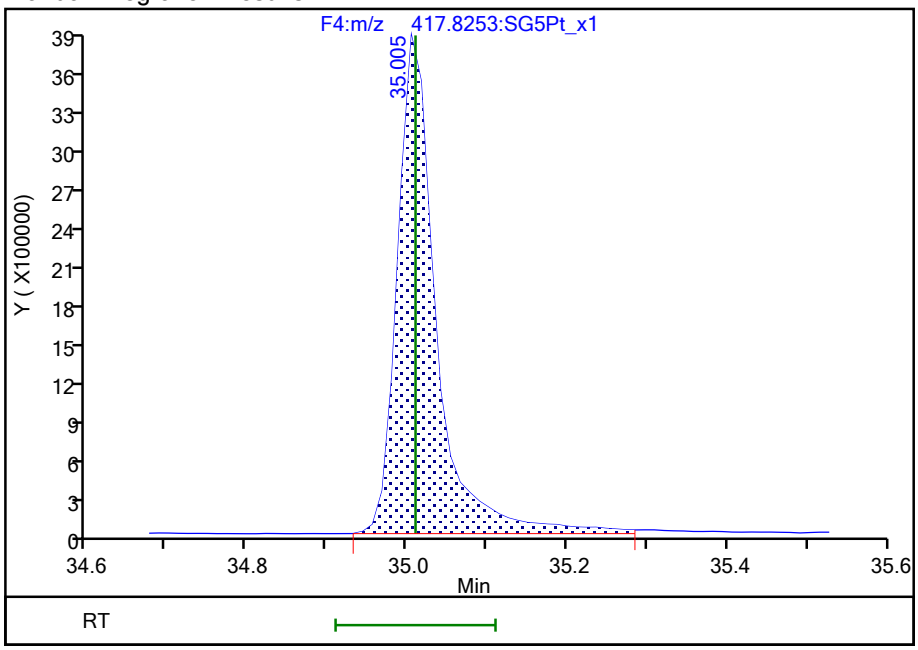

Reviewer: arghestanis, 26-Jul-2021 12:31:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

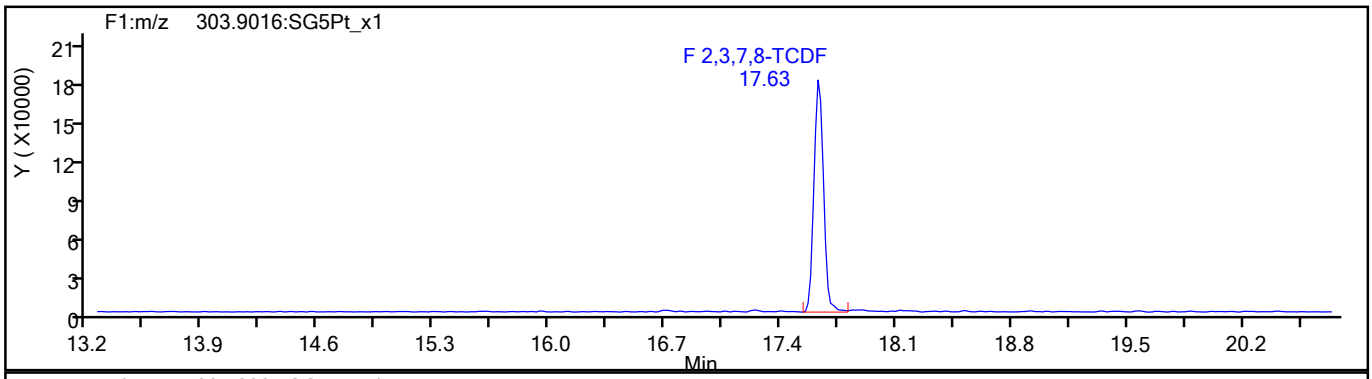

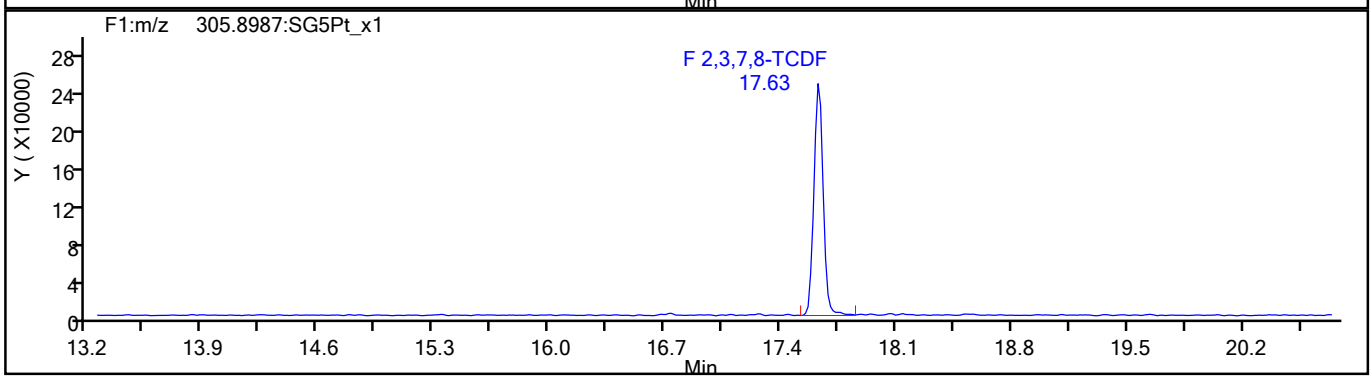

TCDF Standards

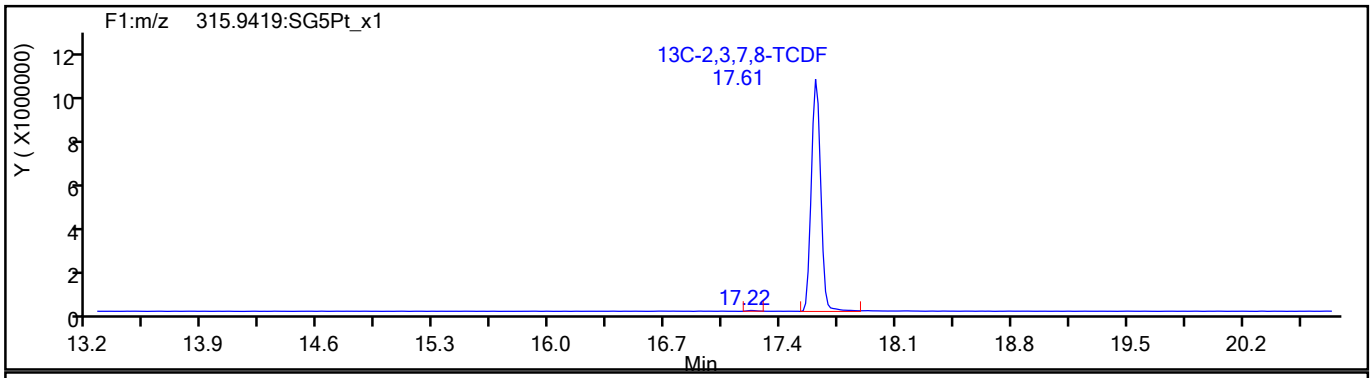

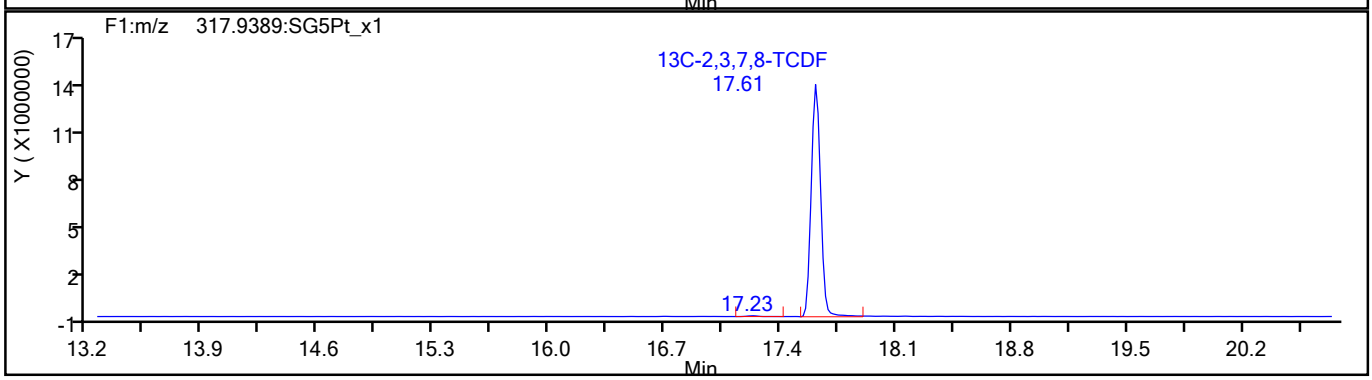

780236

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

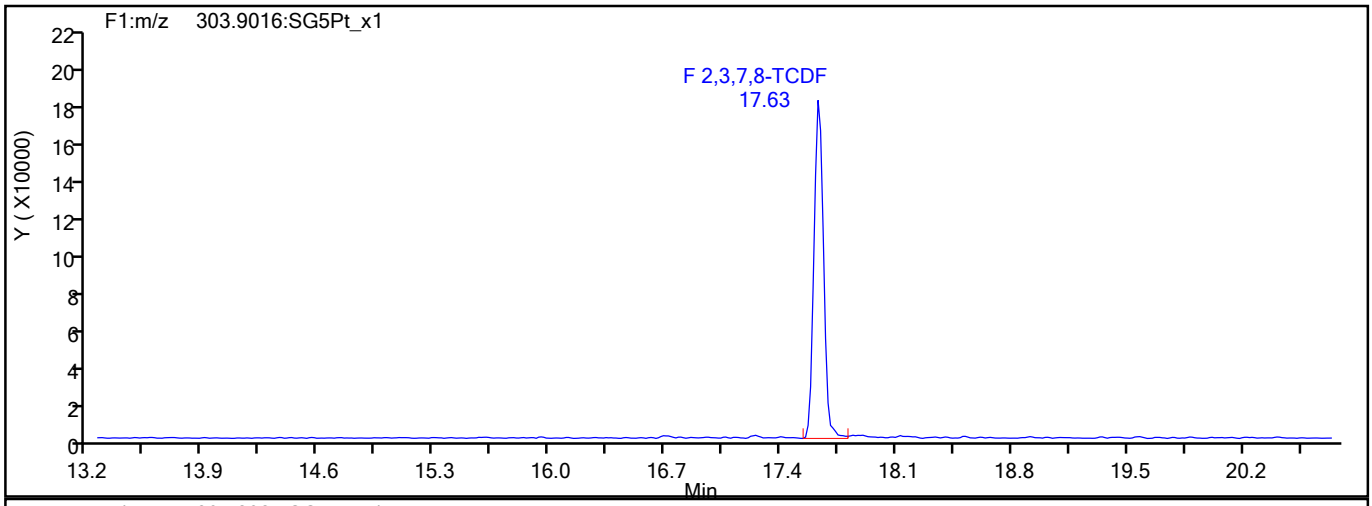

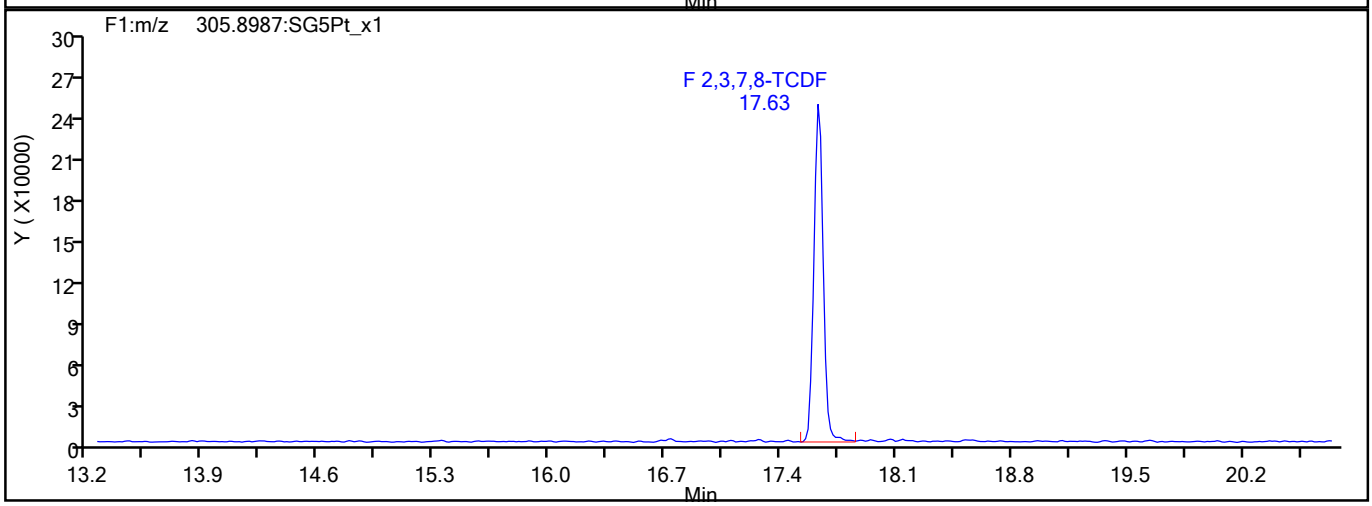

TCDF Interference Mass

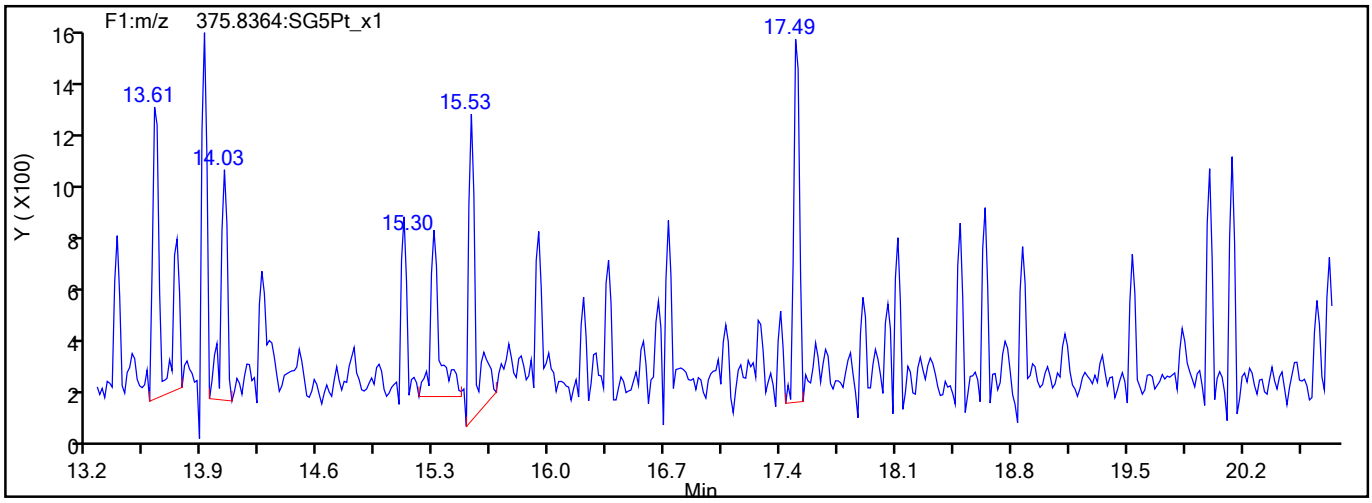

780237

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

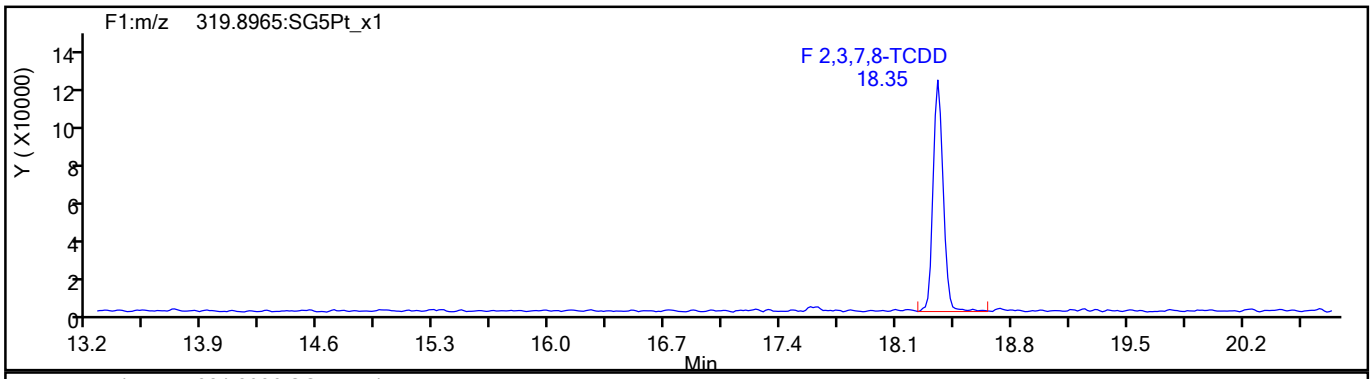

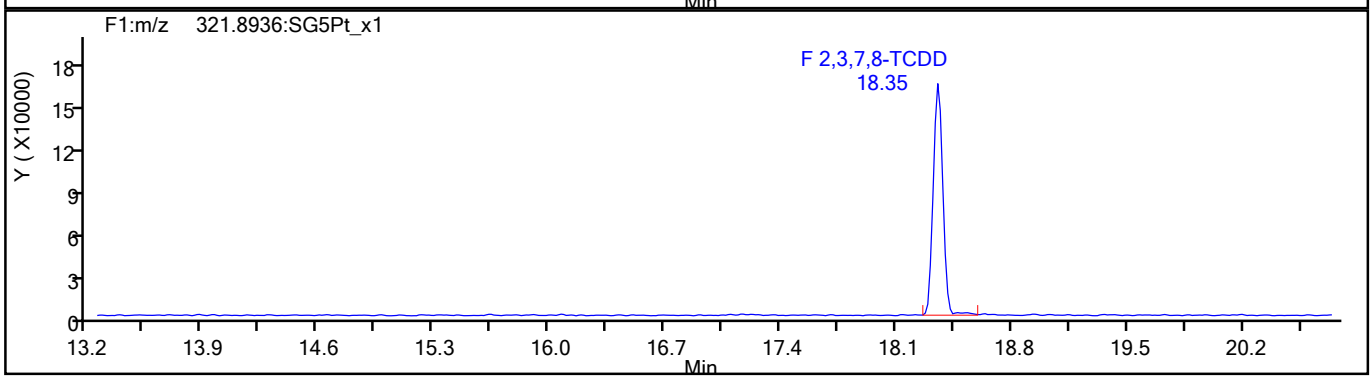

TCDD Standards

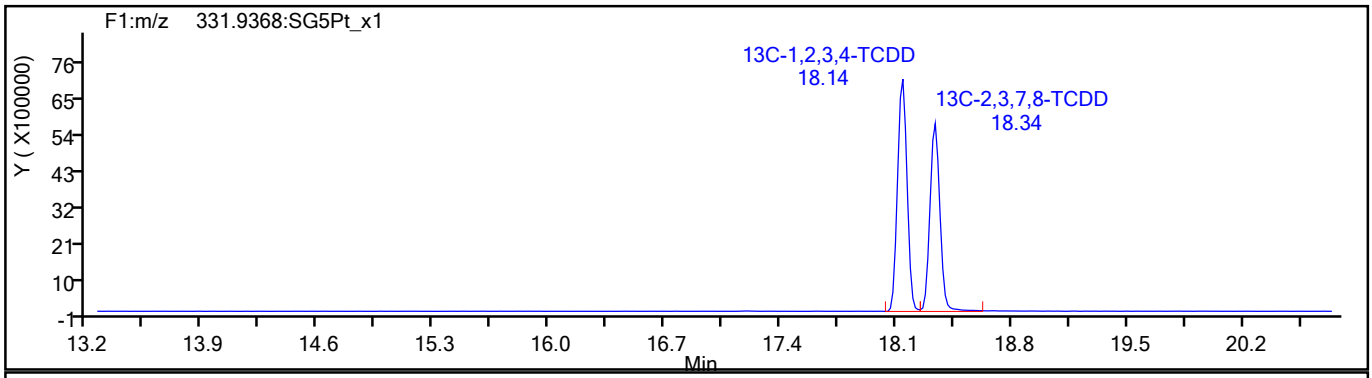

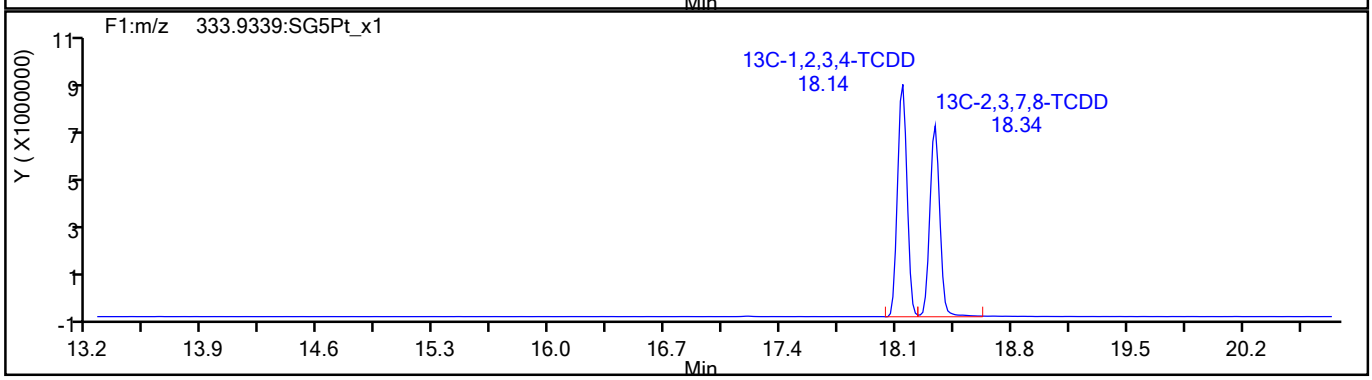

780238

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

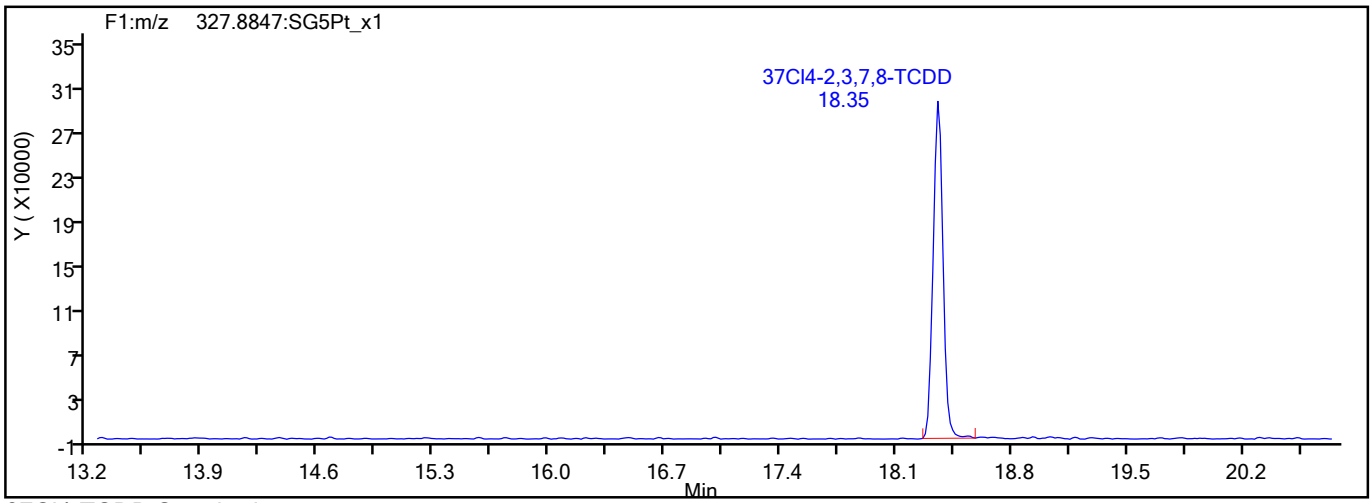

37Cl4-TCDD Standards

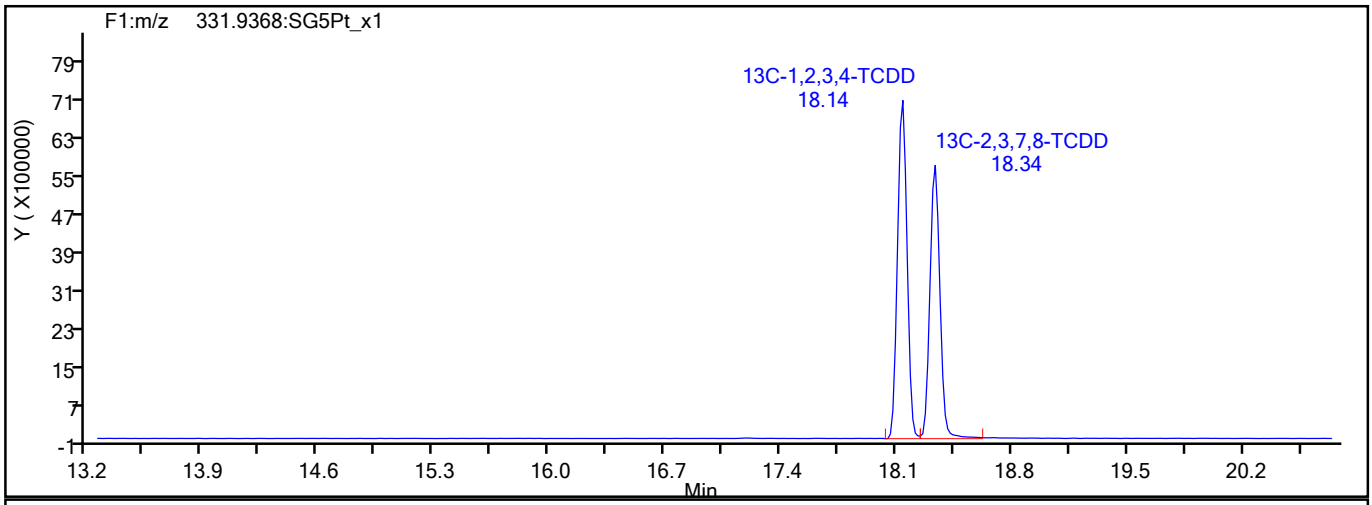

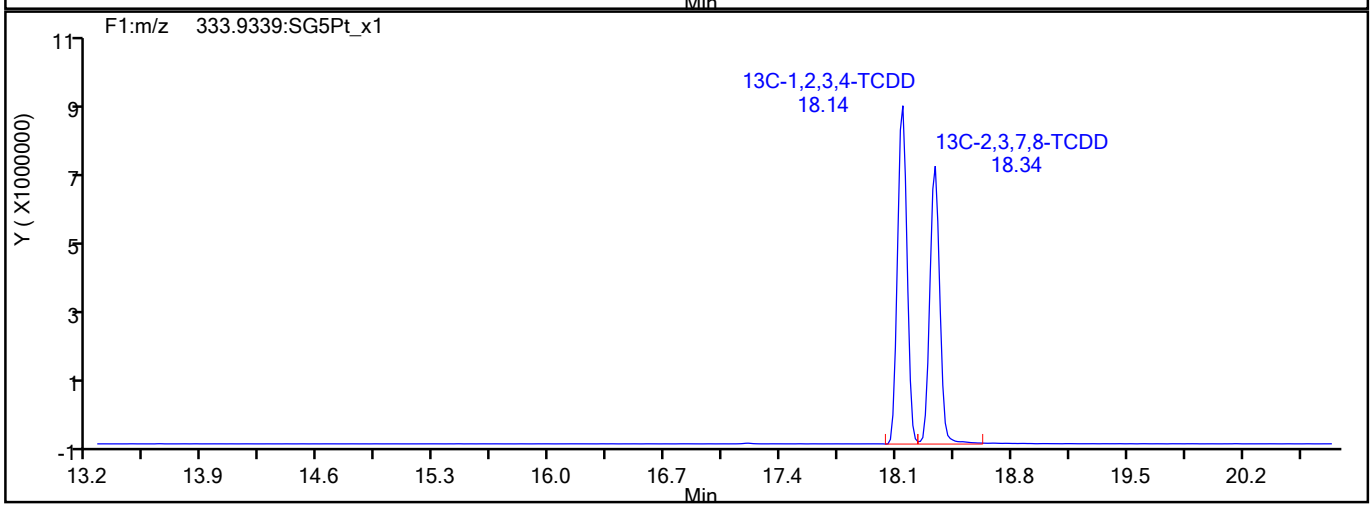

780239

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

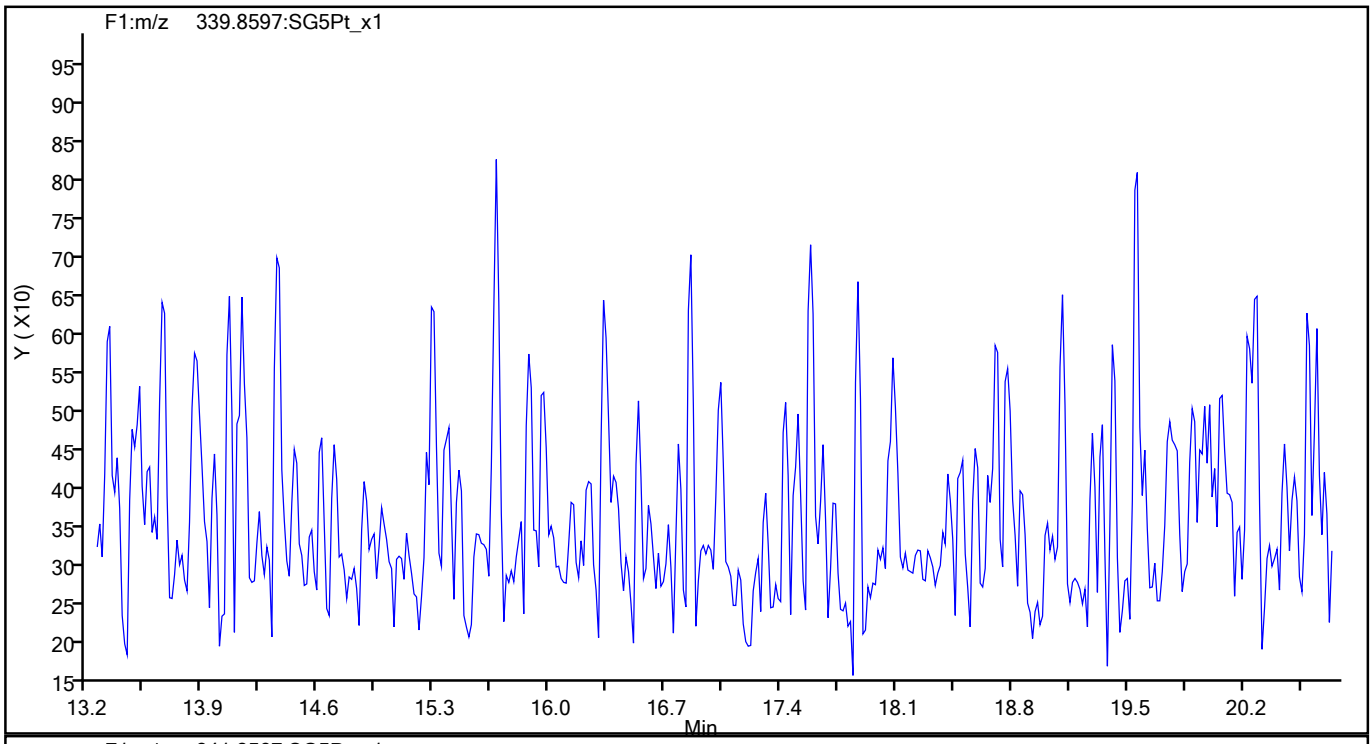

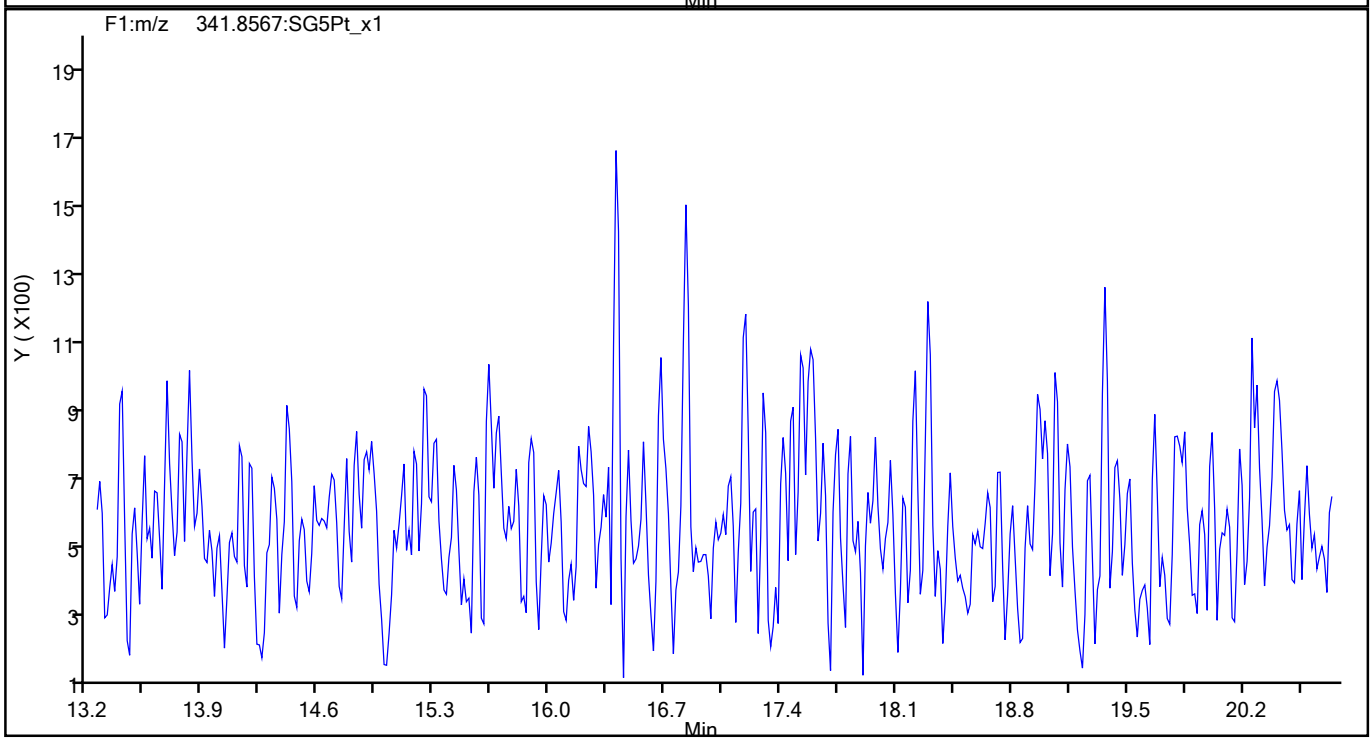

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

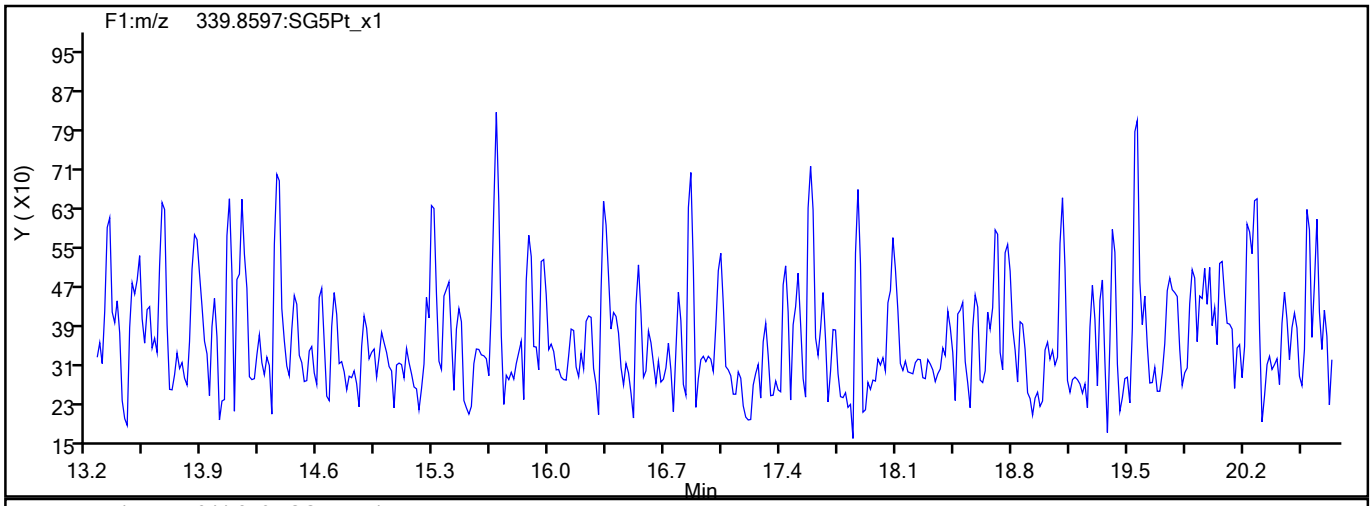

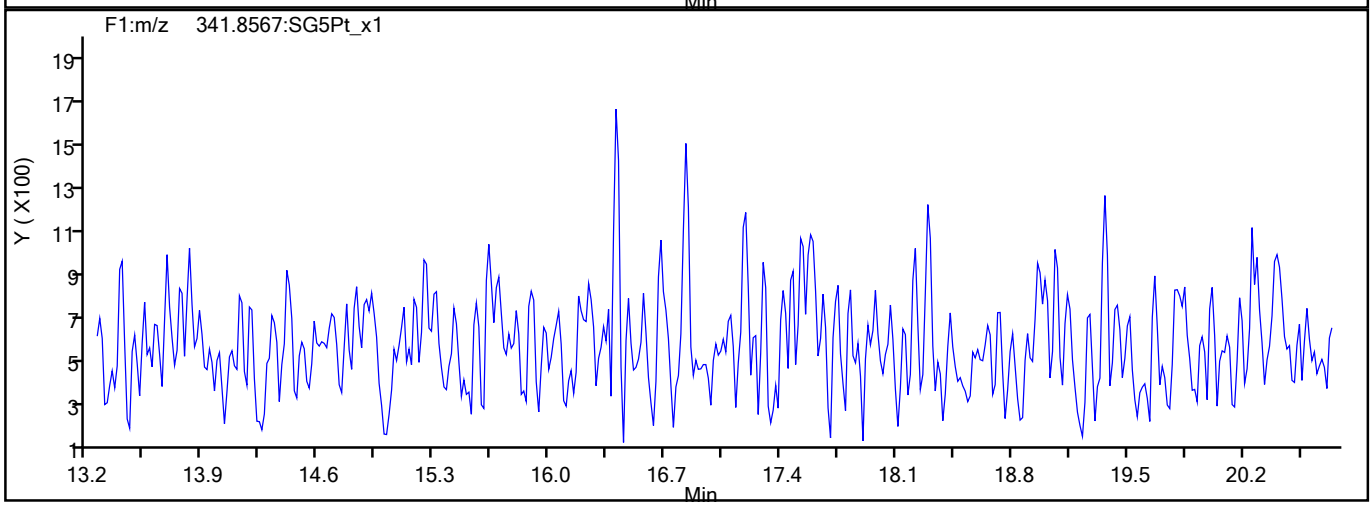

F1 PeCDFs Interference Mass

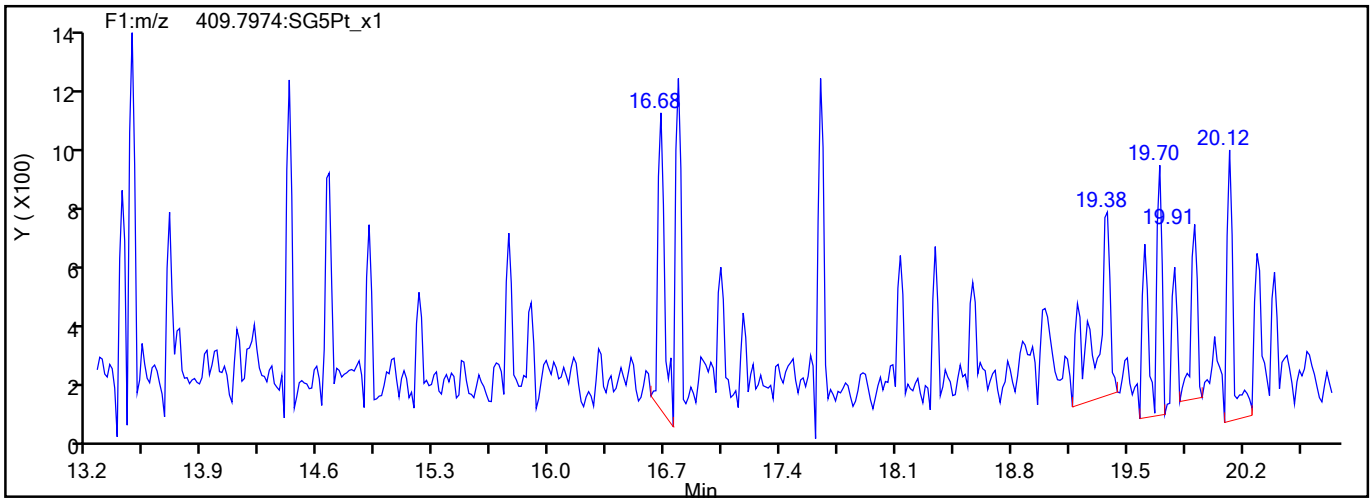

780241

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

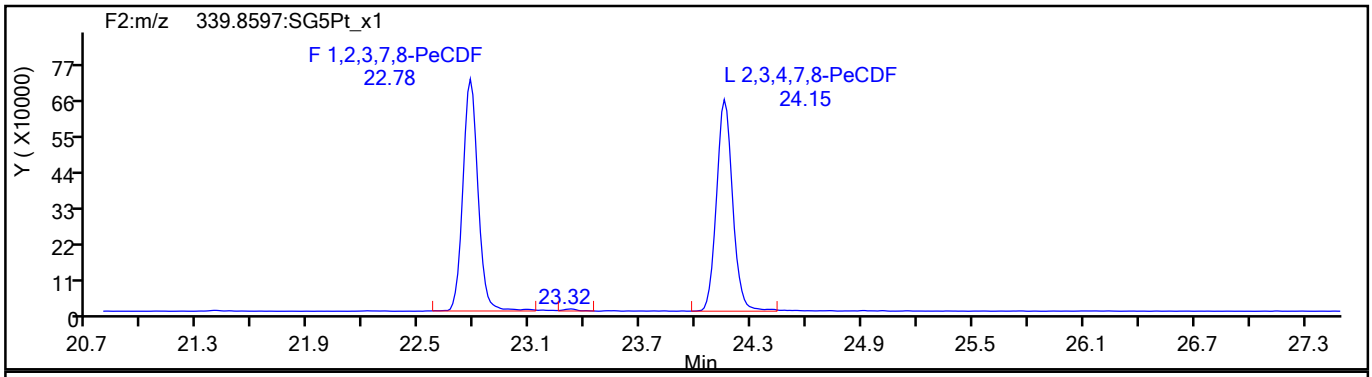

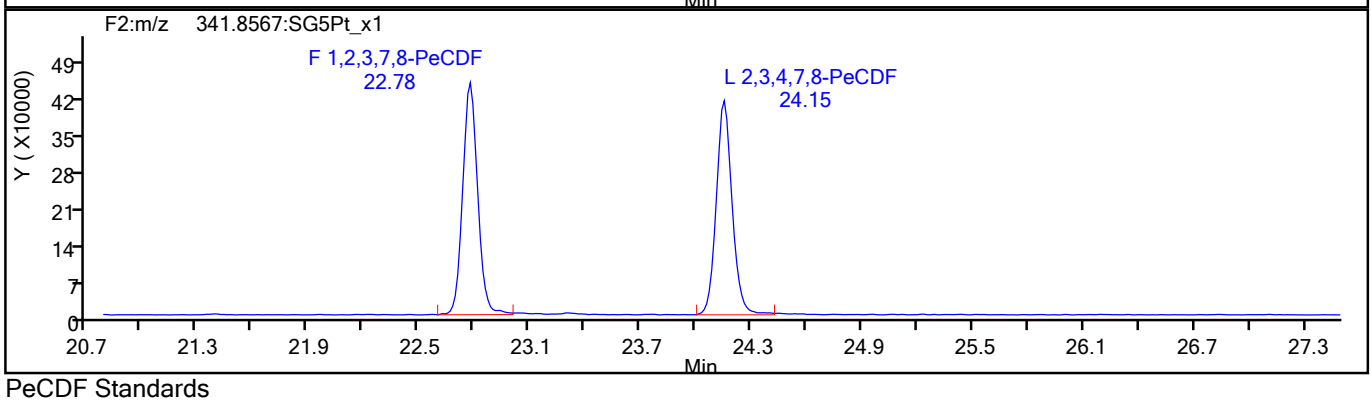

PeCDF Standards

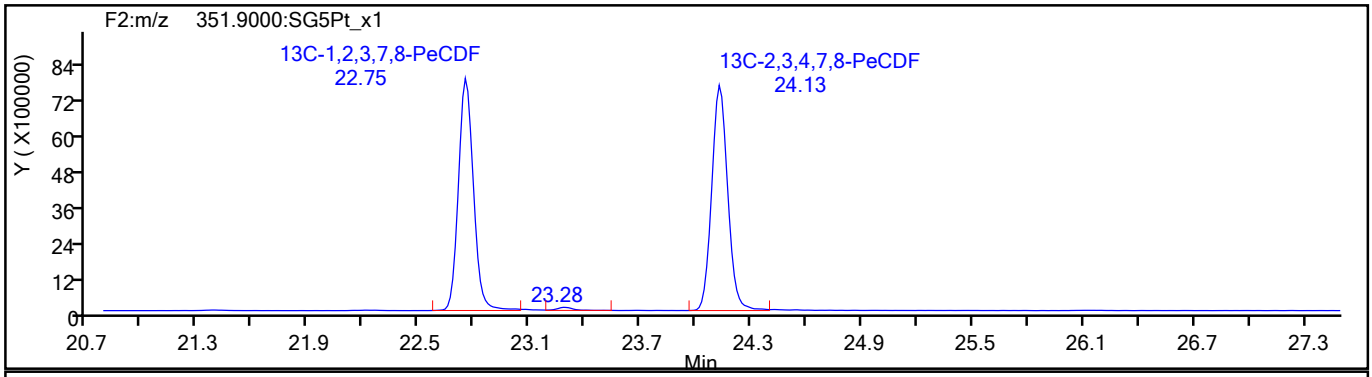

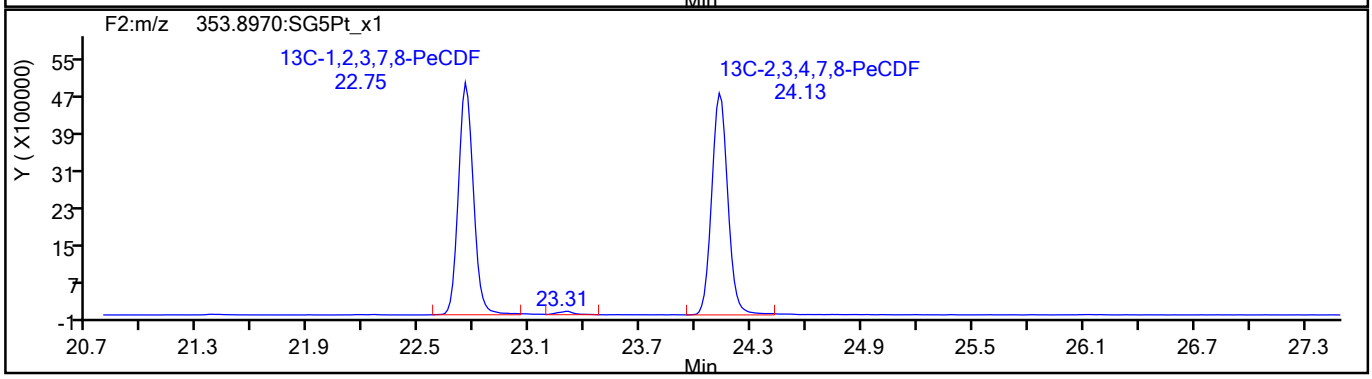

780242

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

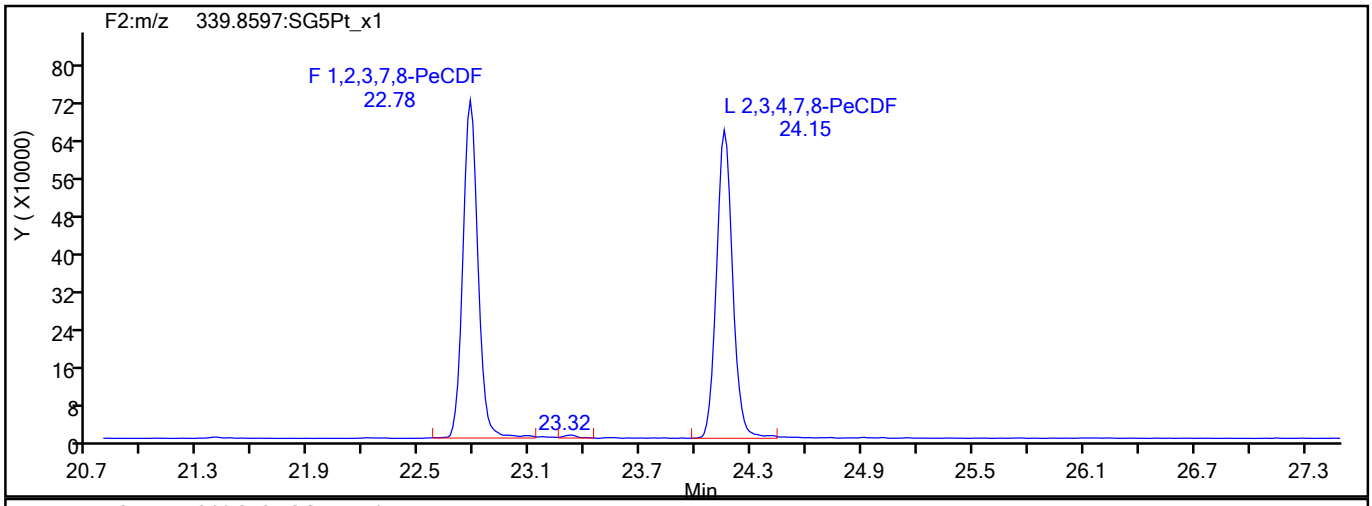

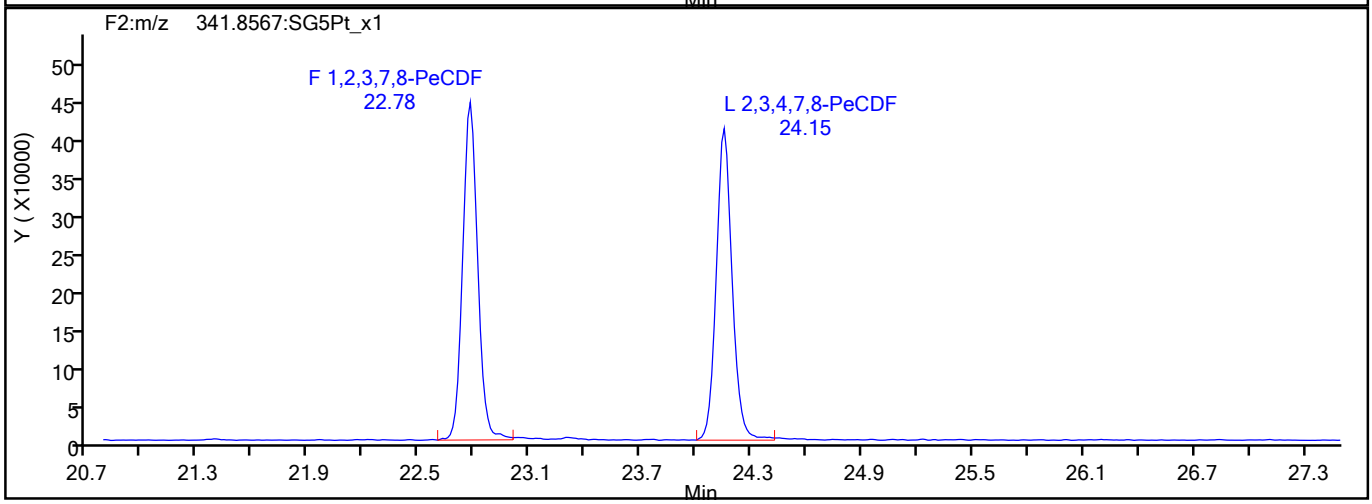

PeCDF Interference Mass

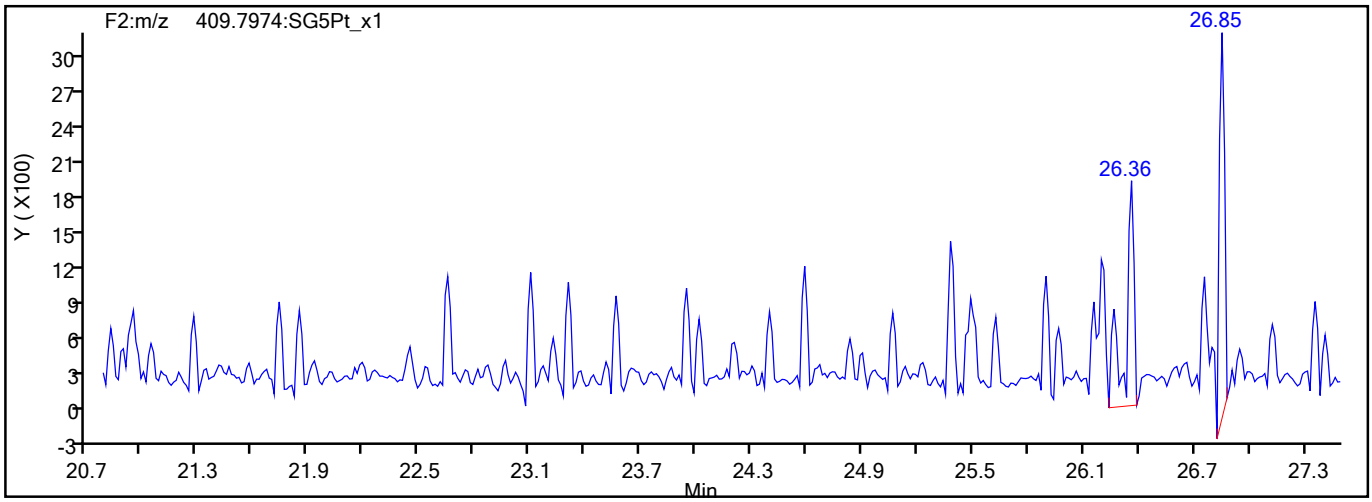

780243

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

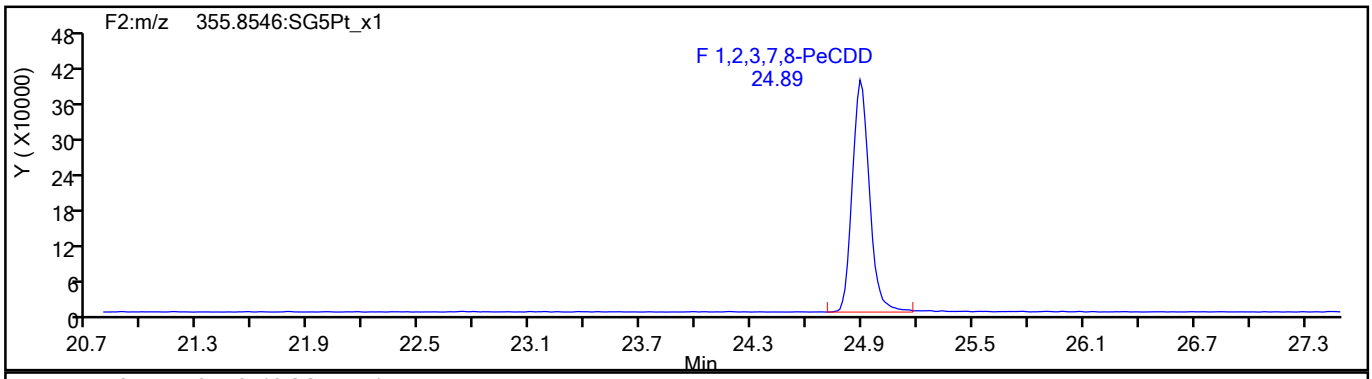

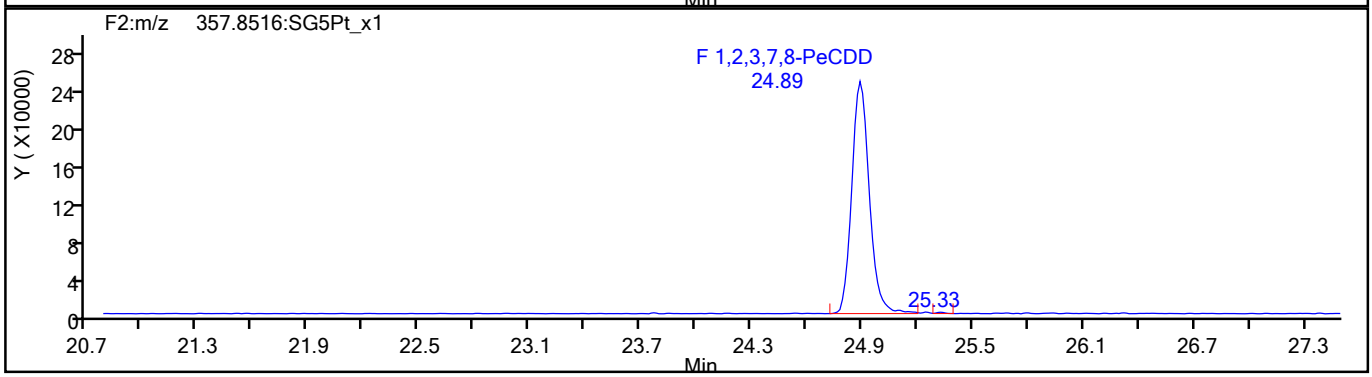

PeCDD Standards

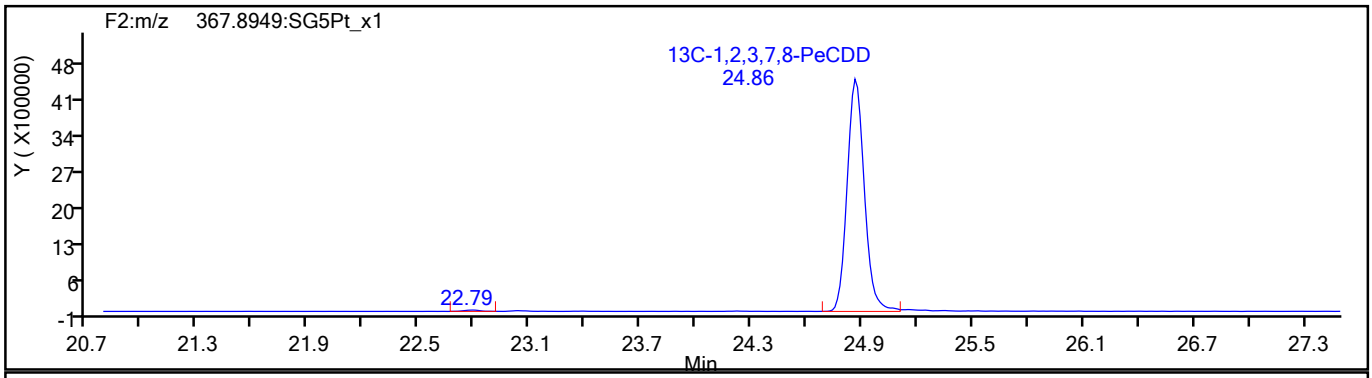

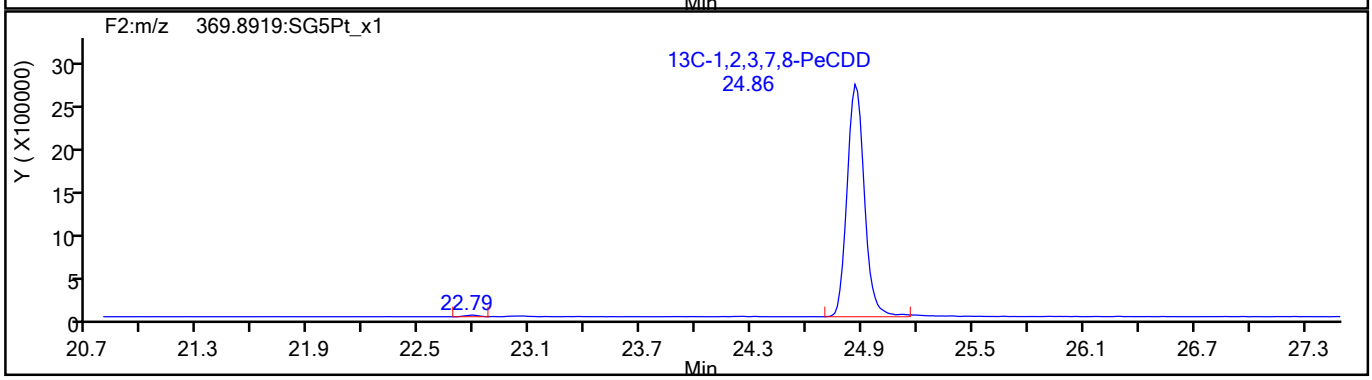

780244

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

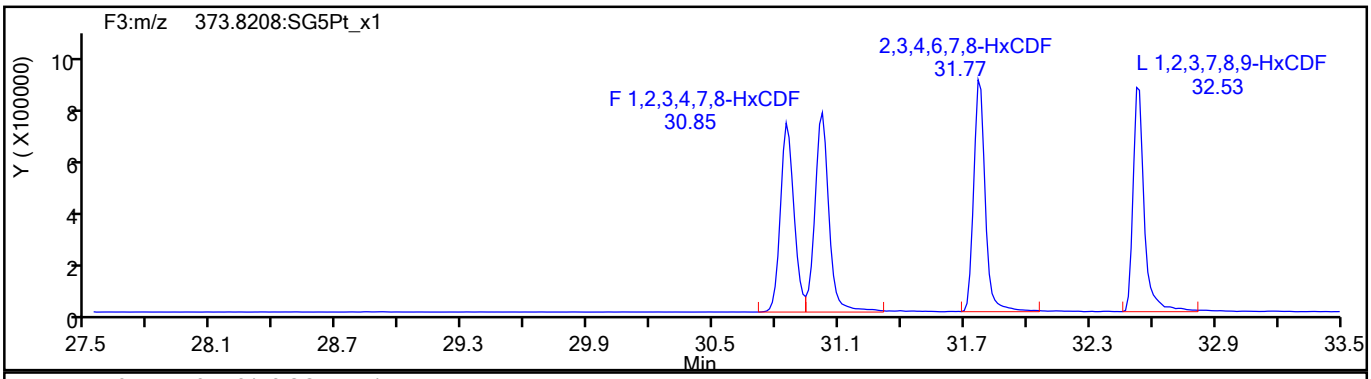

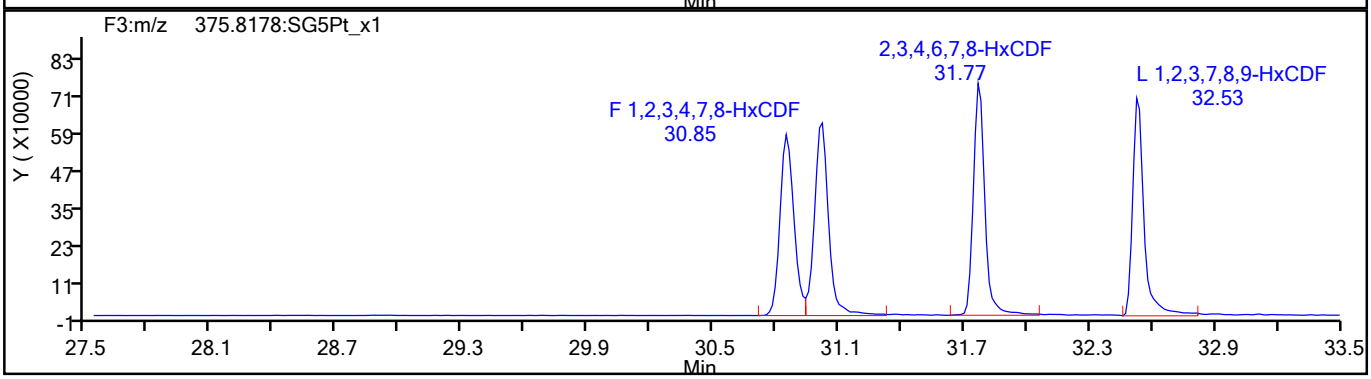

HxCDF Standards

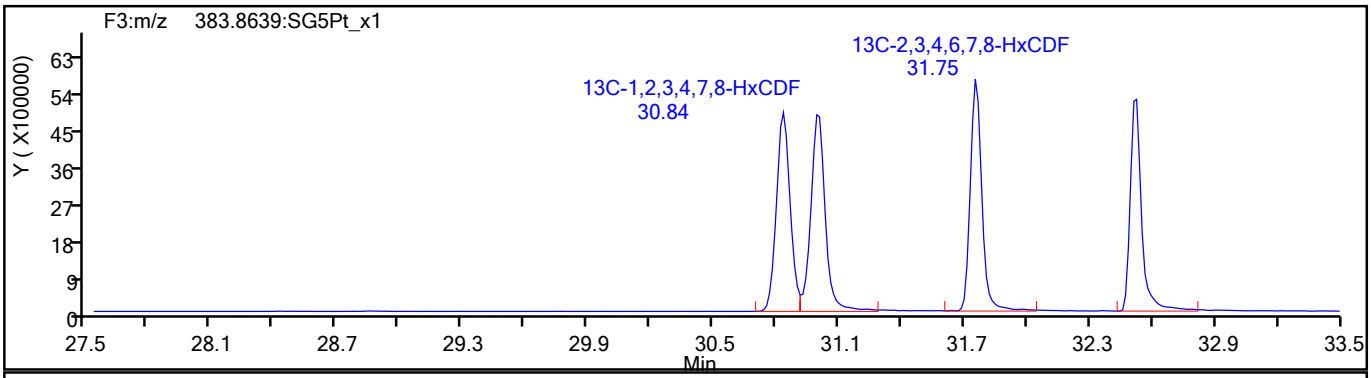

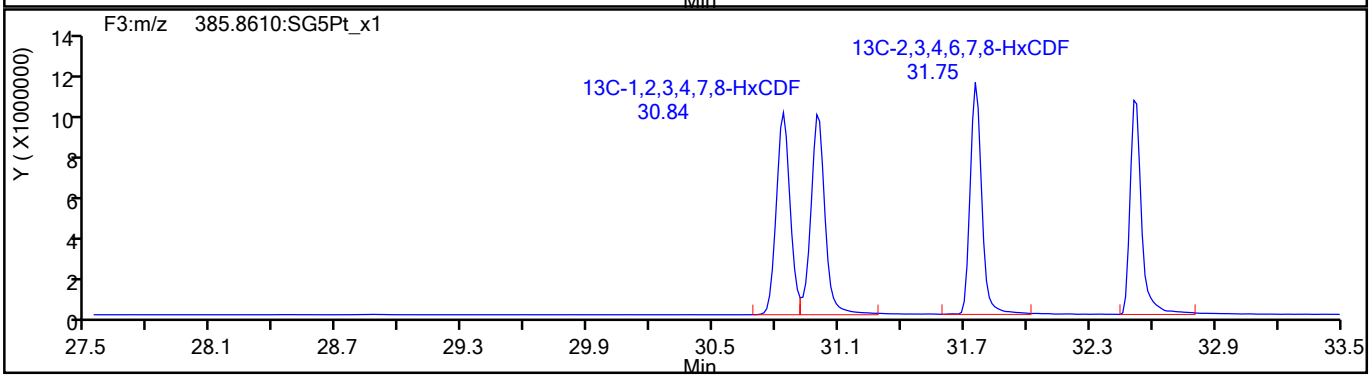

780245

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

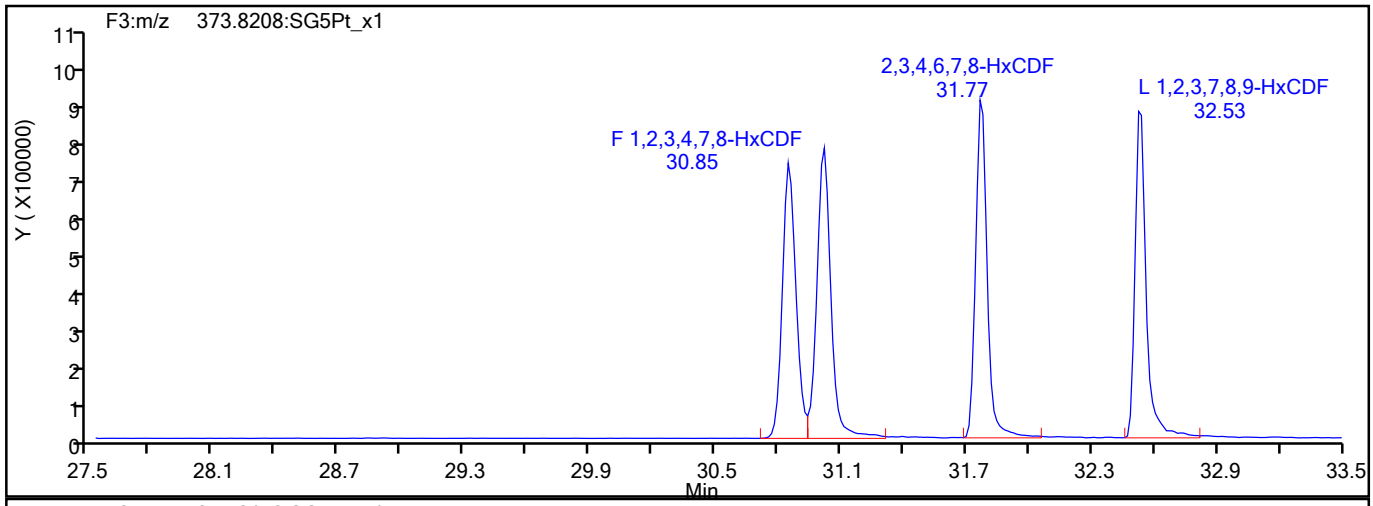

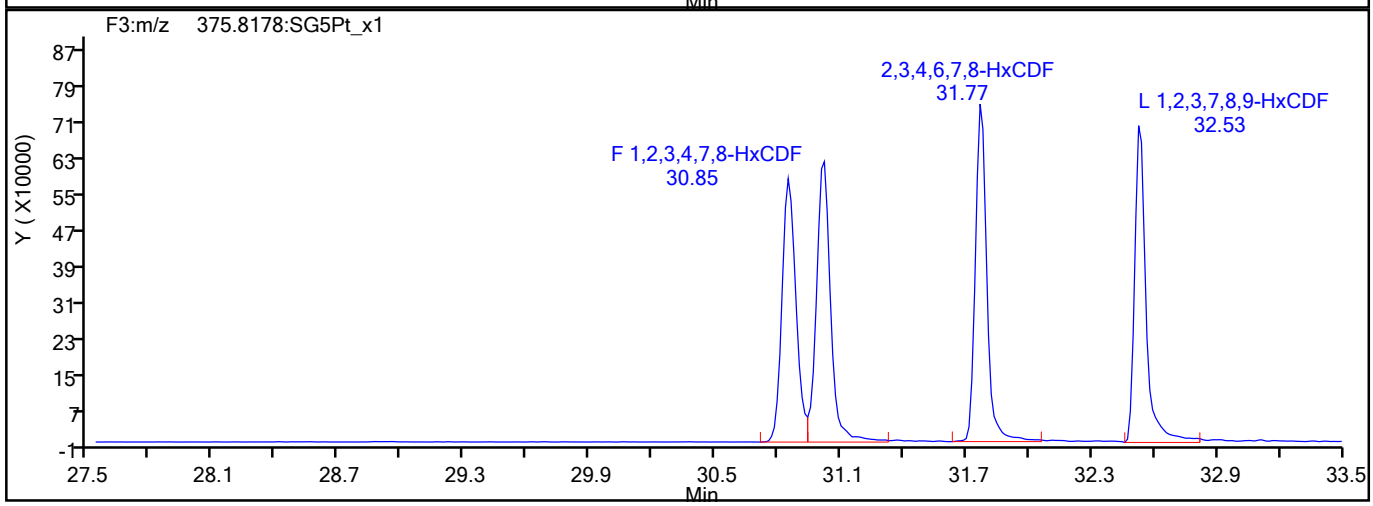

HxCDF Interference Mass

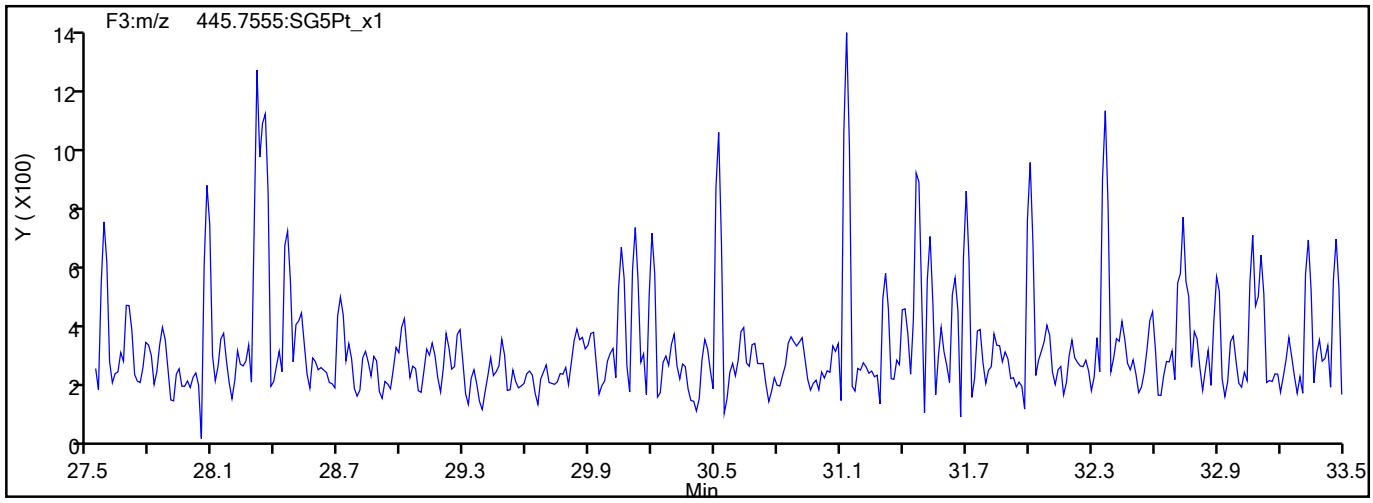

780246

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

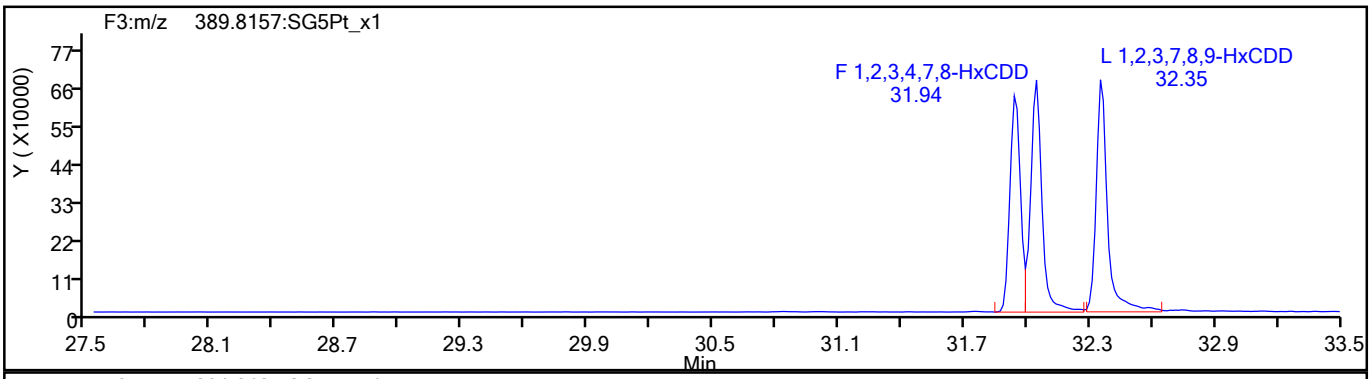

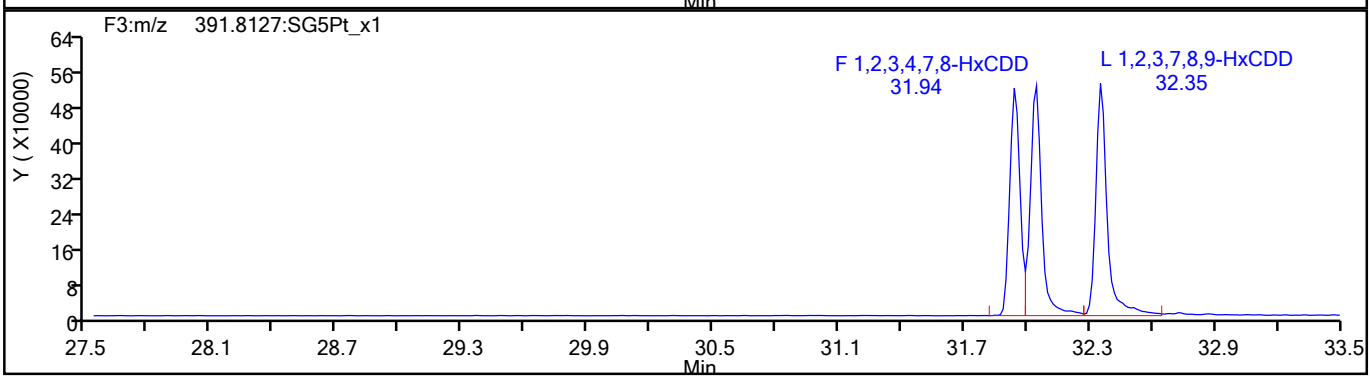

HxCDD Standards

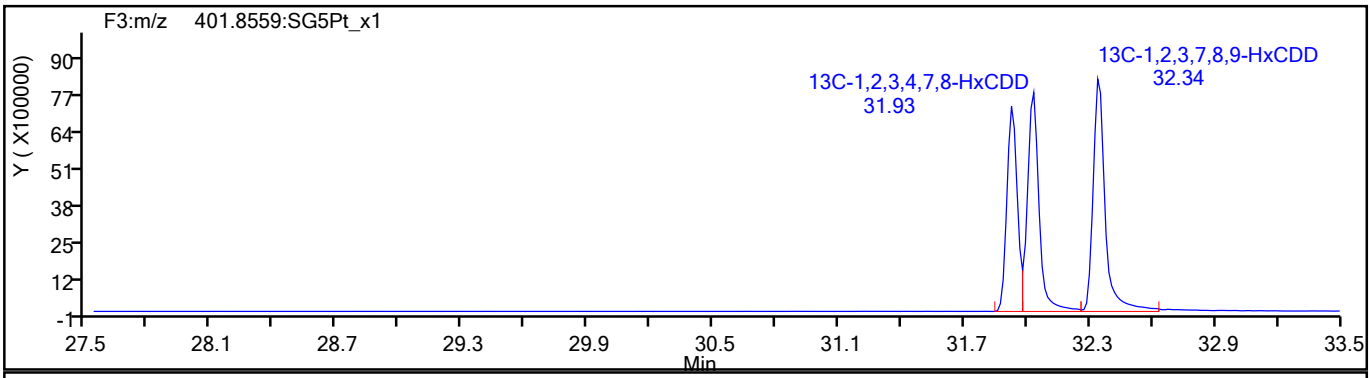

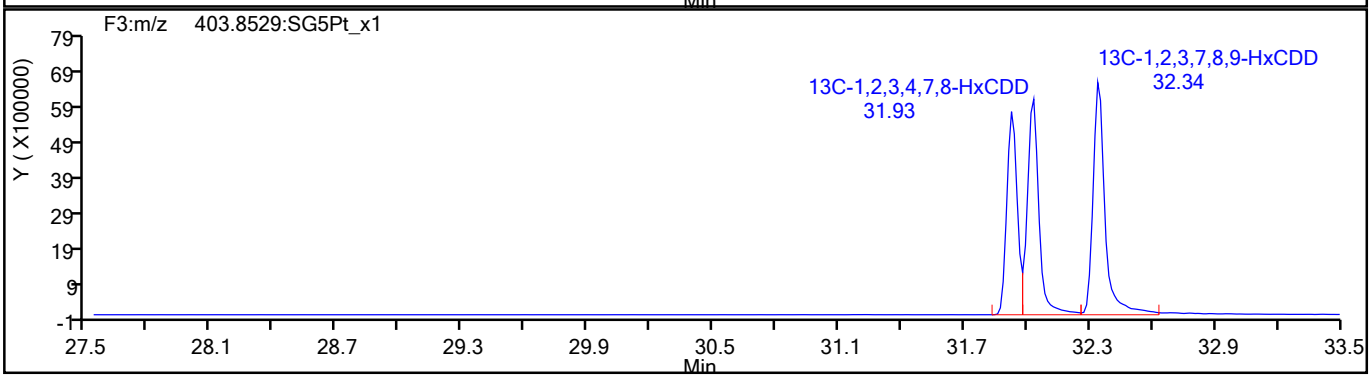

780247

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

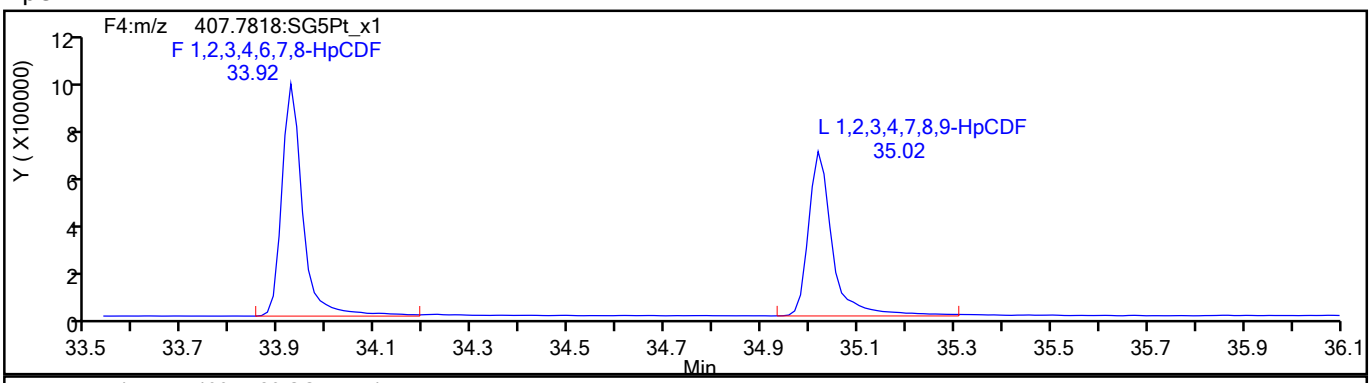

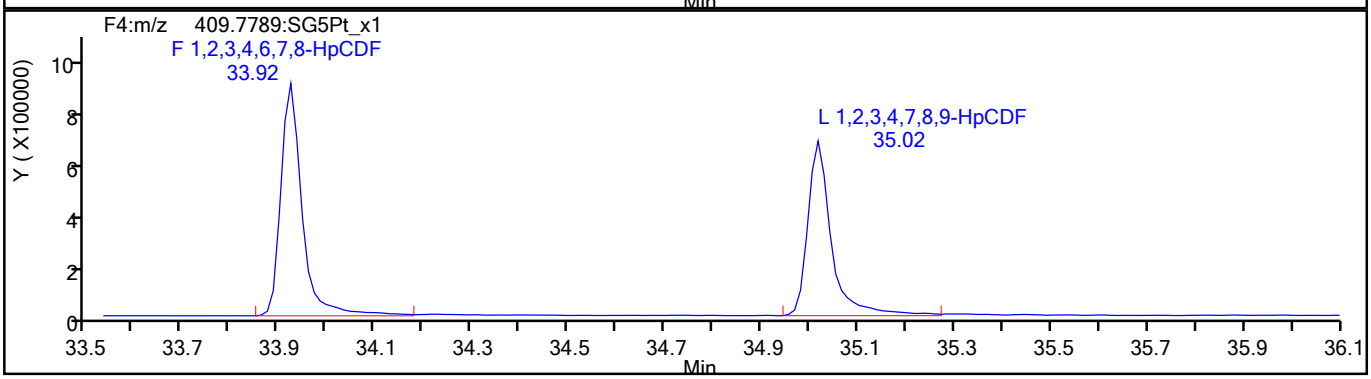

HpCDF Standards

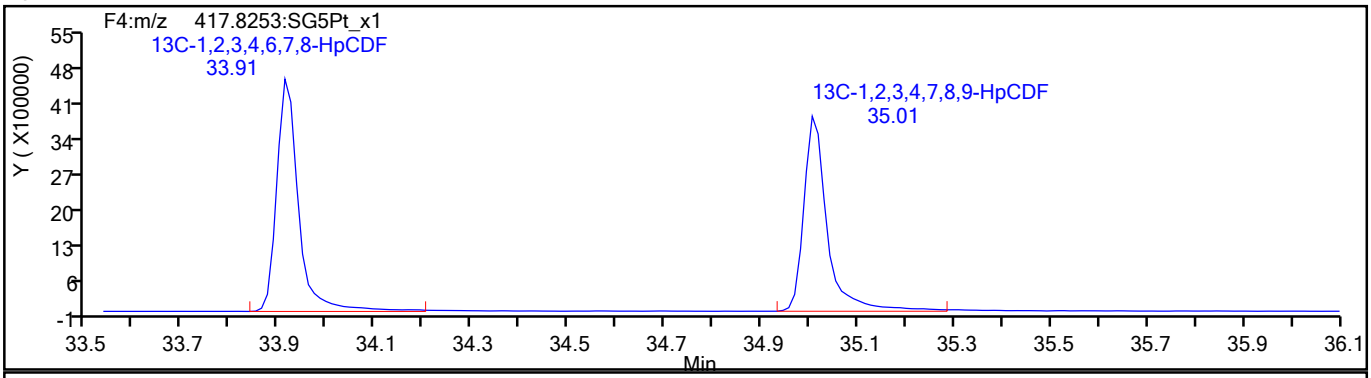

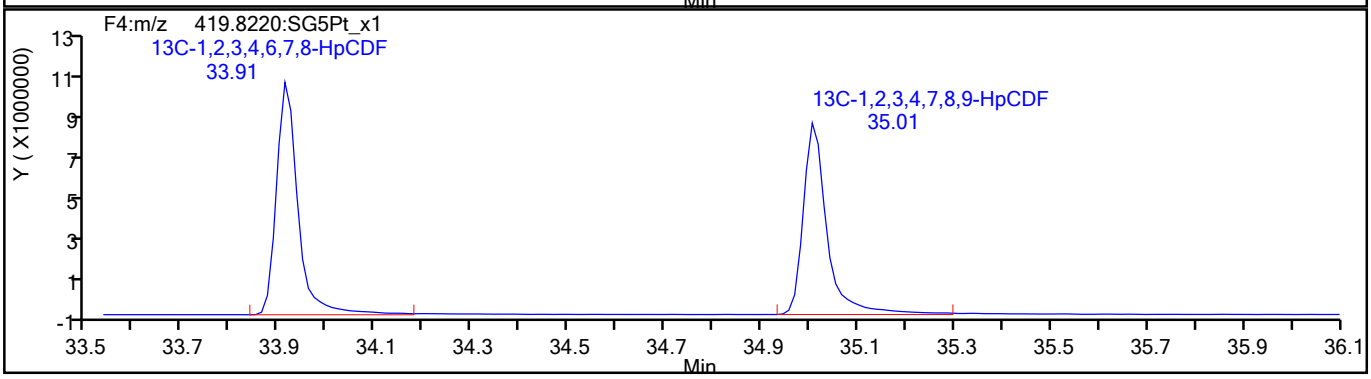

780248

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

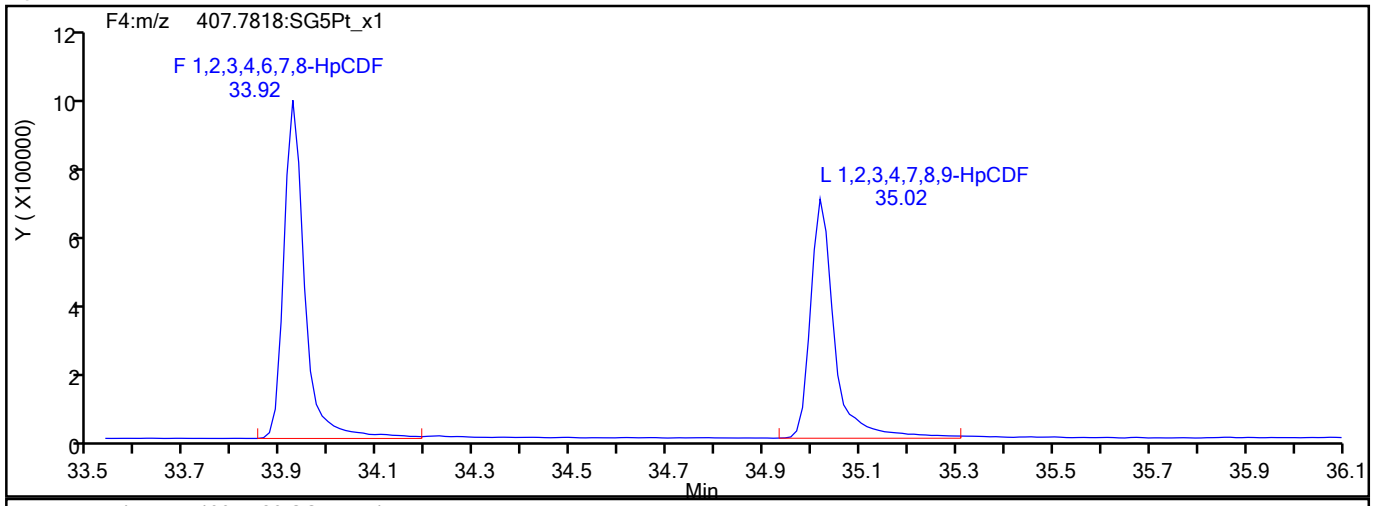

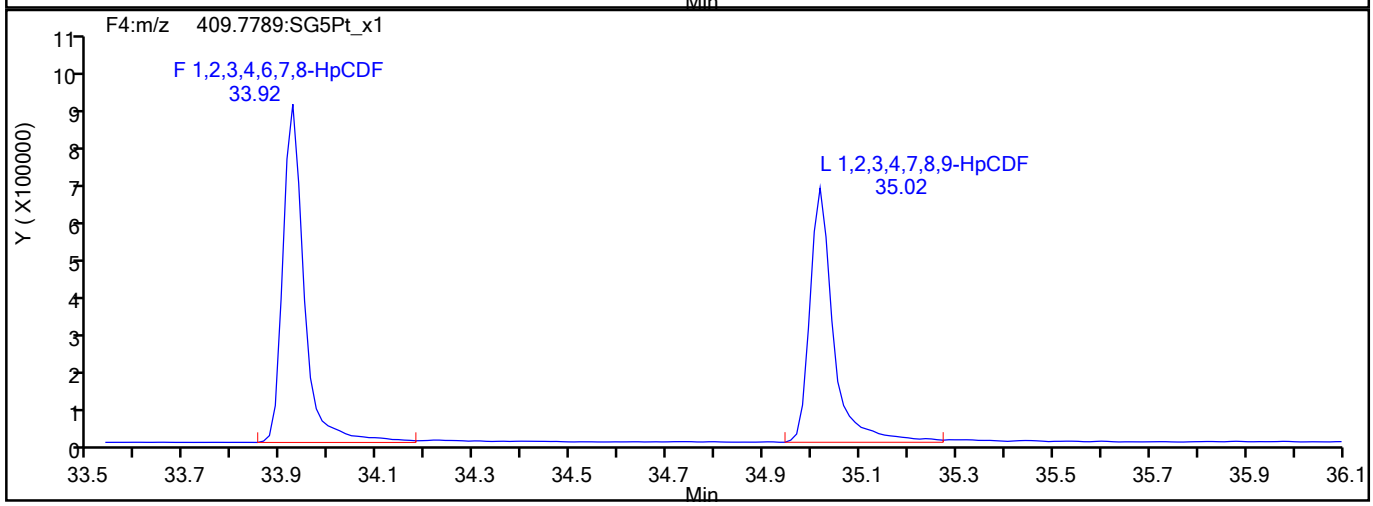

HpCDF Interference Mass

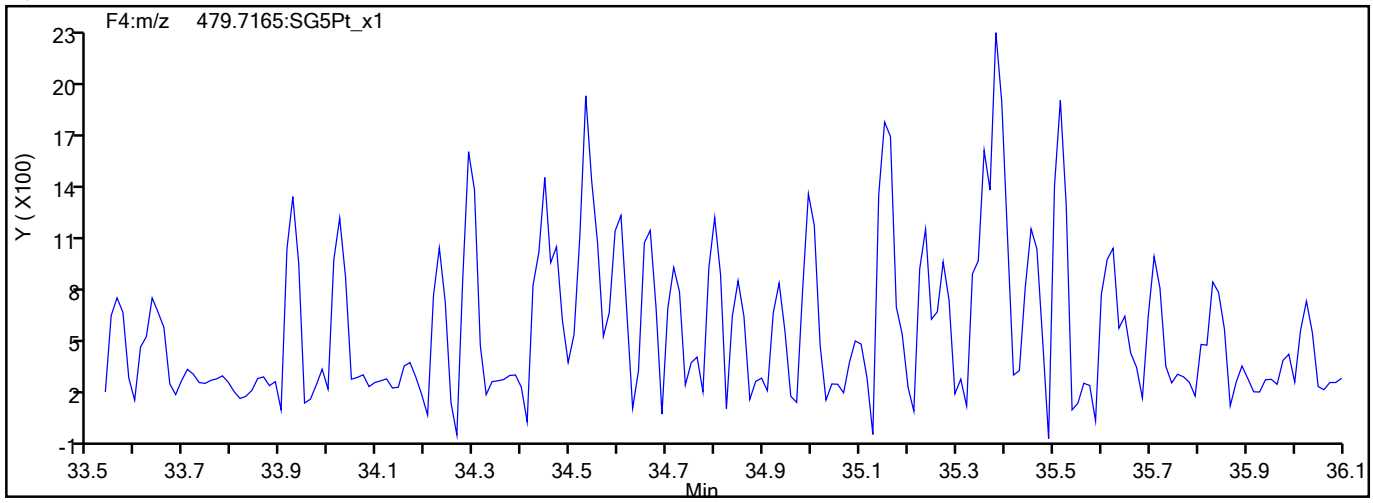

780249

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

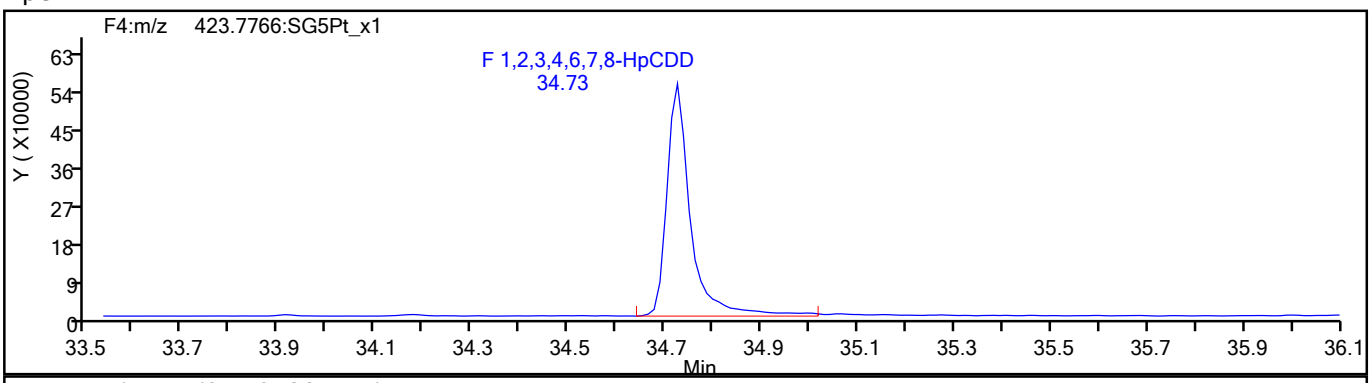

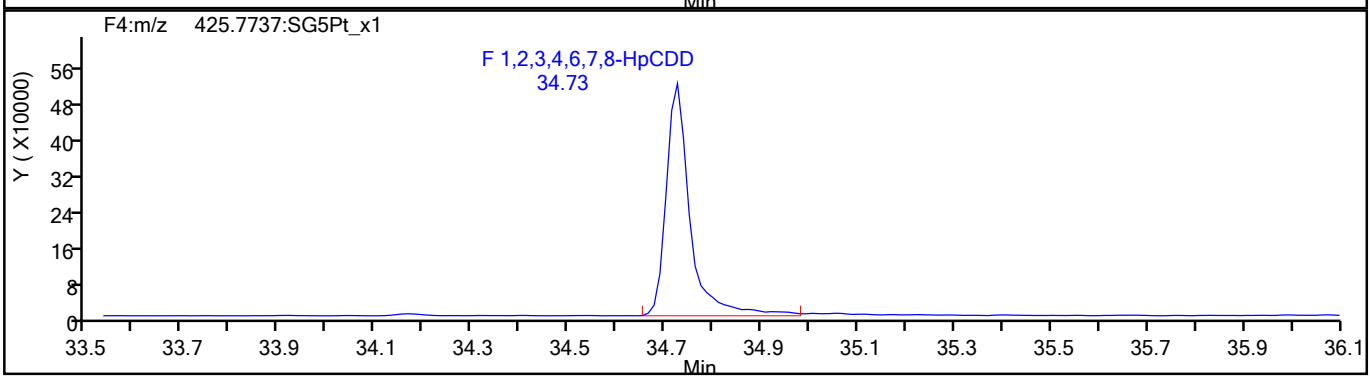

HpCDD Standards

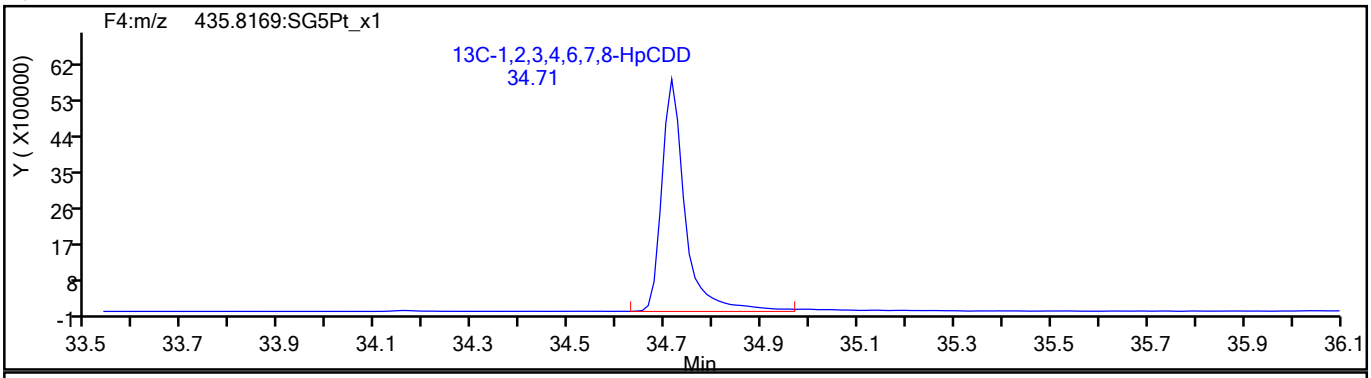

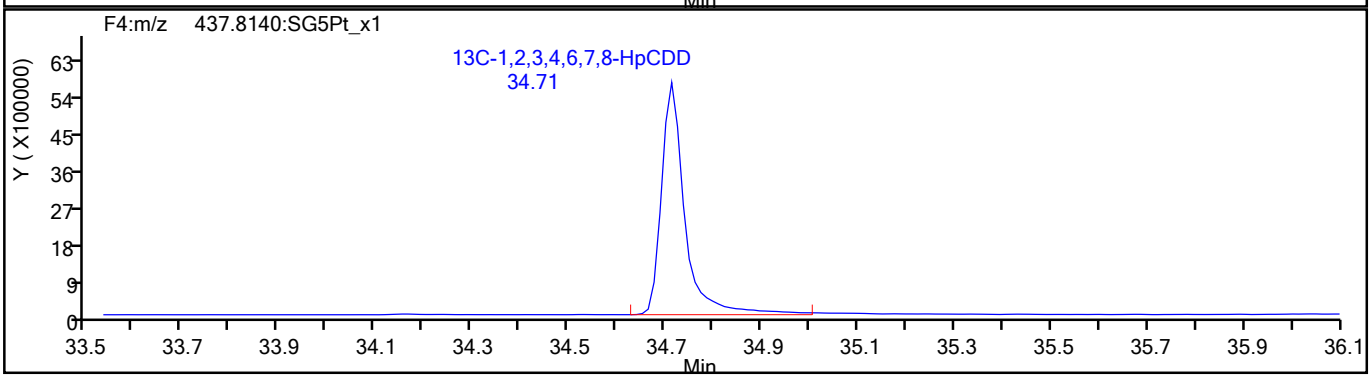

780250

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

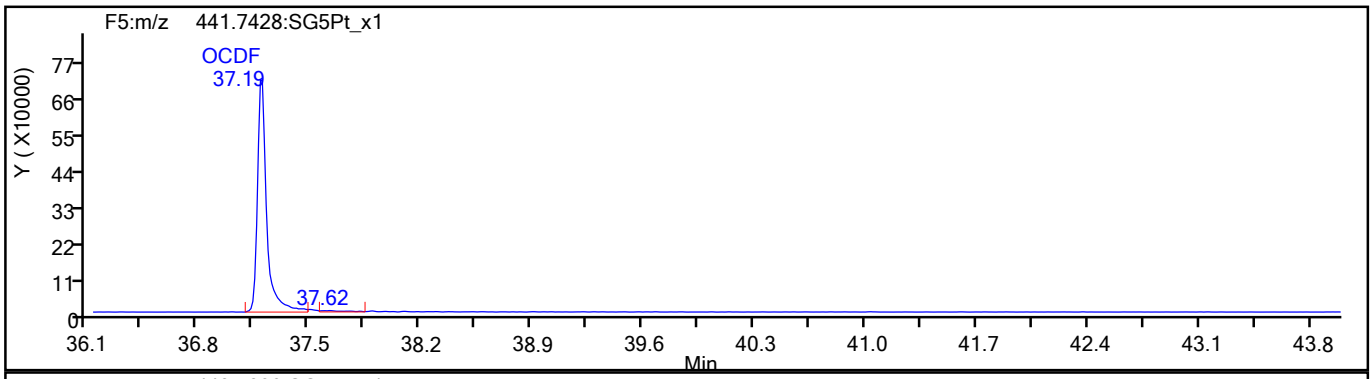

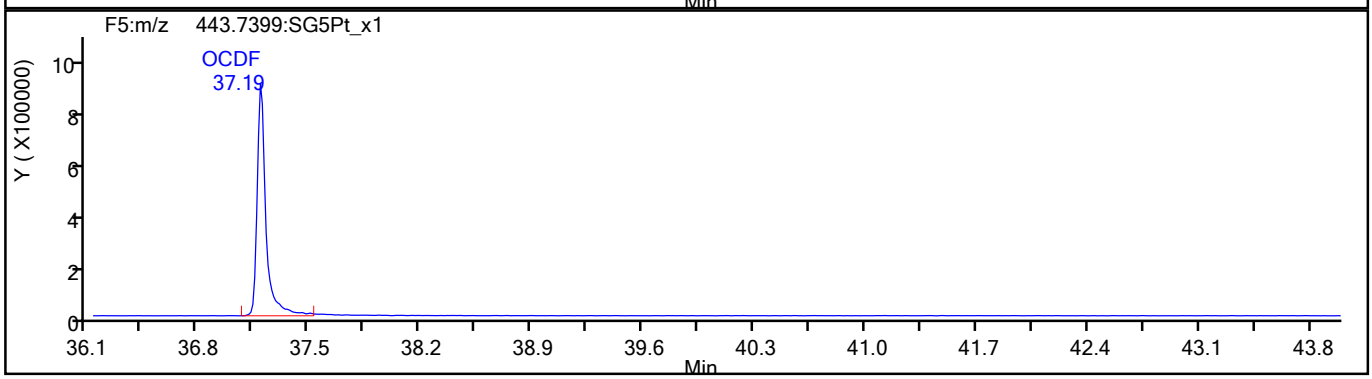

OCDF Standards

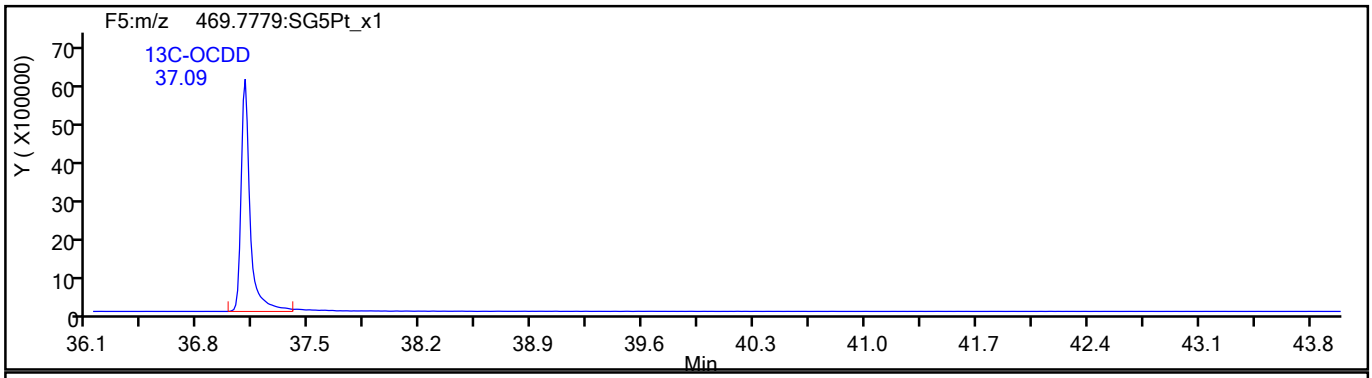

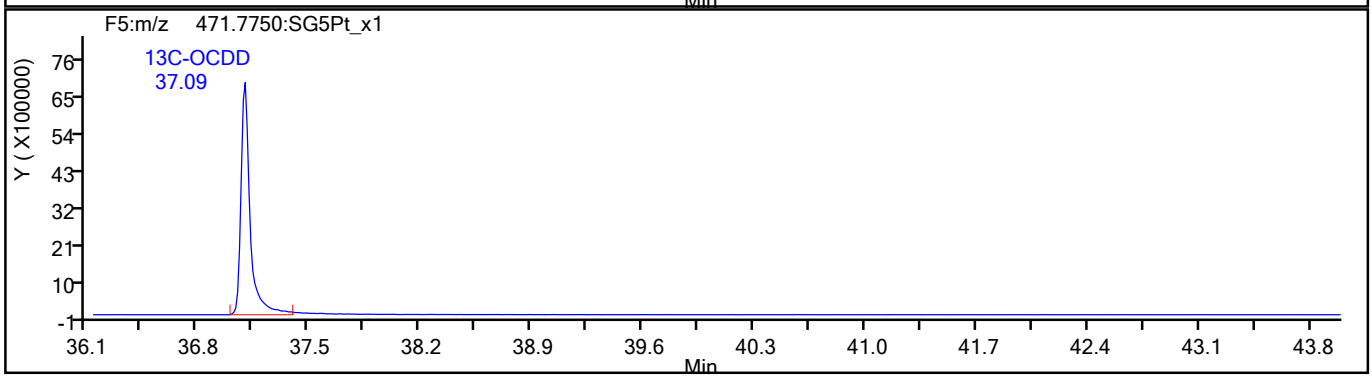

780251

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

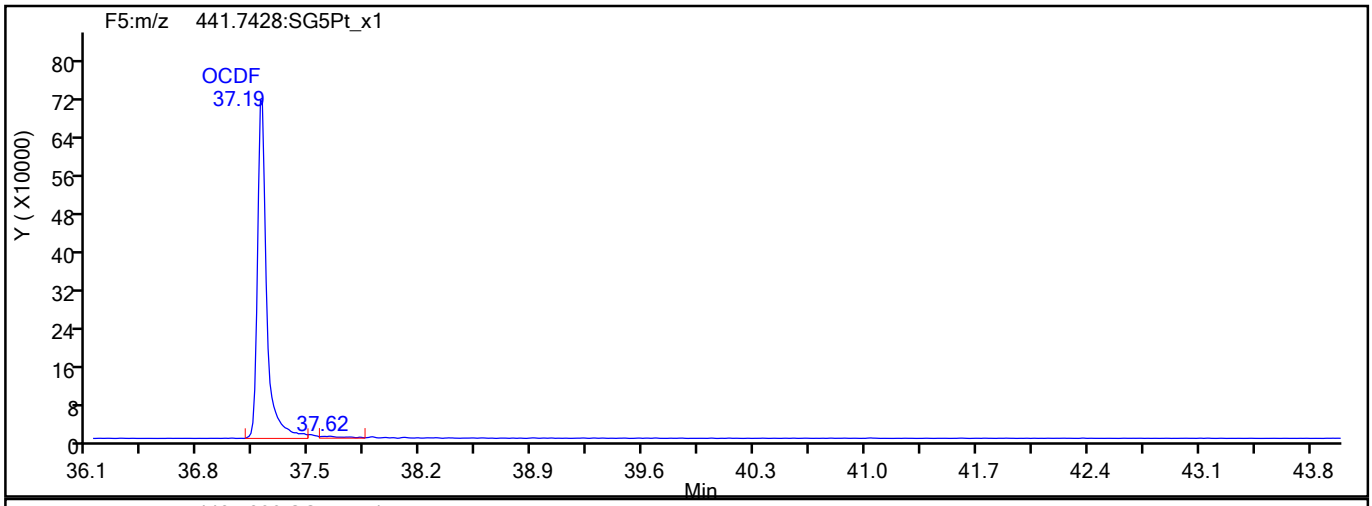

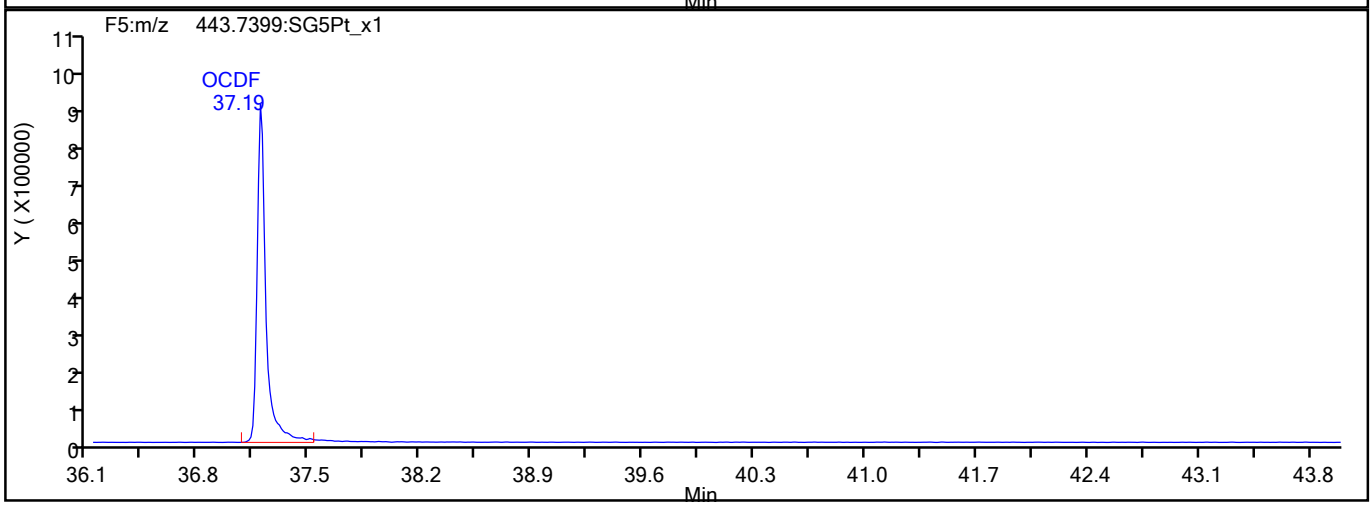

OCDF Interference Mass

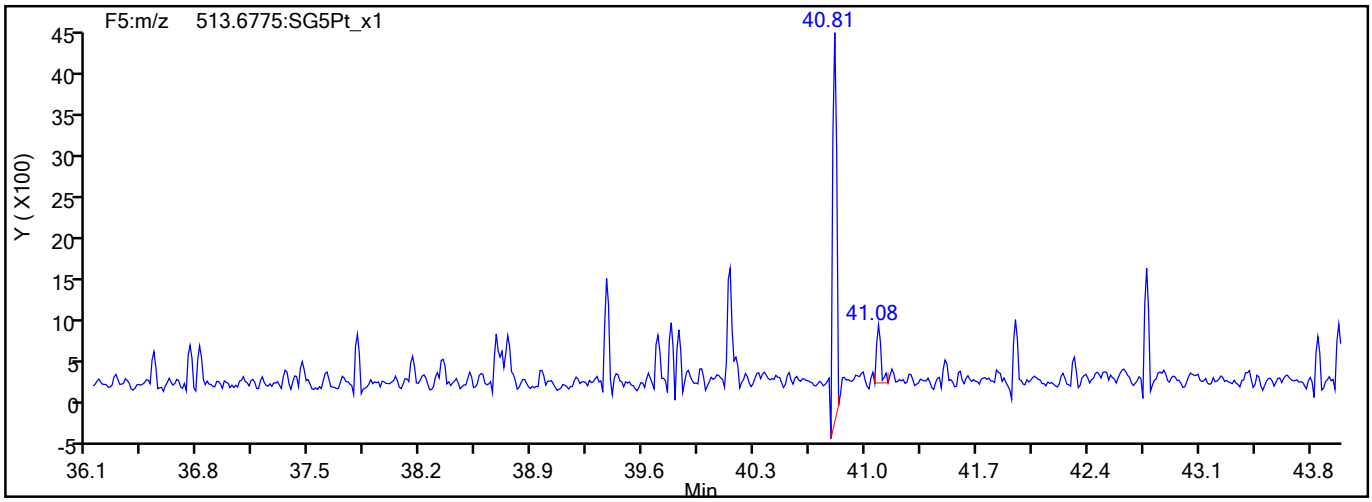

780252

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

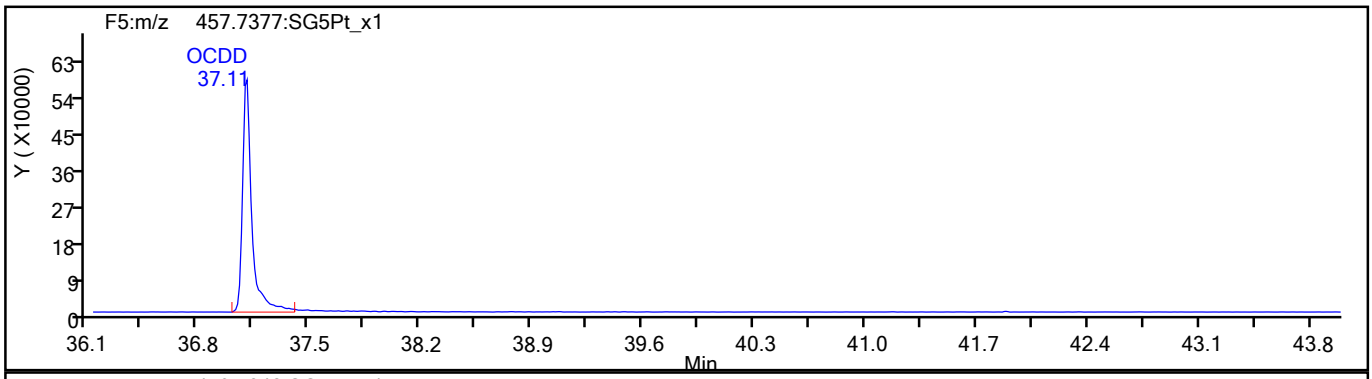

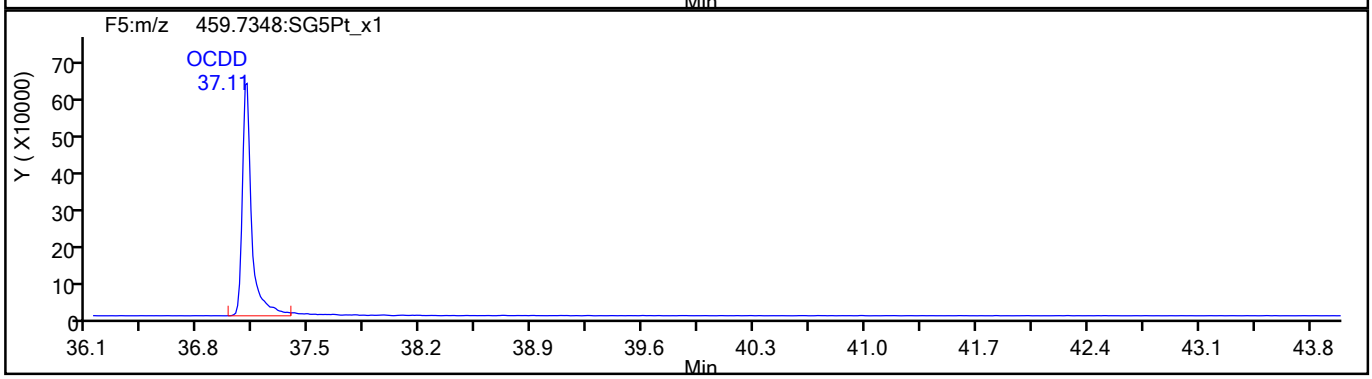

OCDD Standards

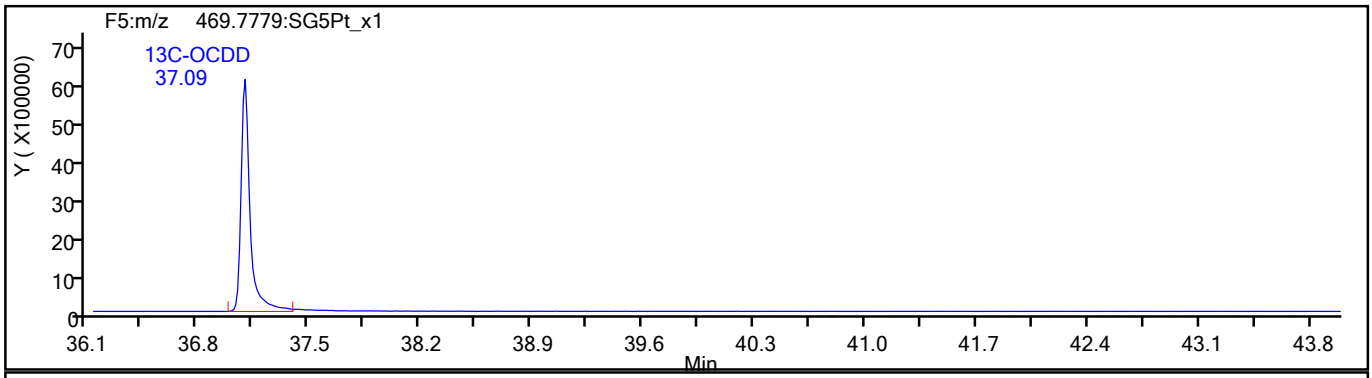

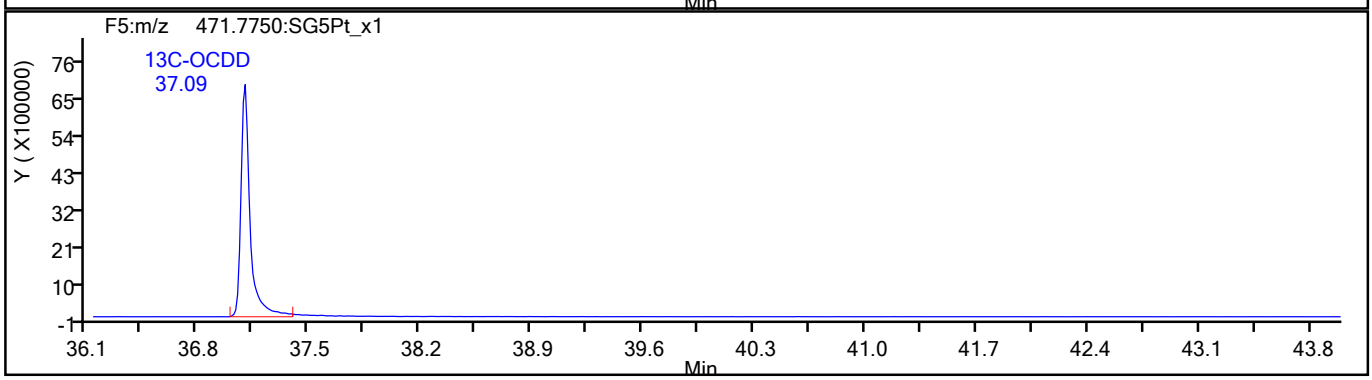

780253

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

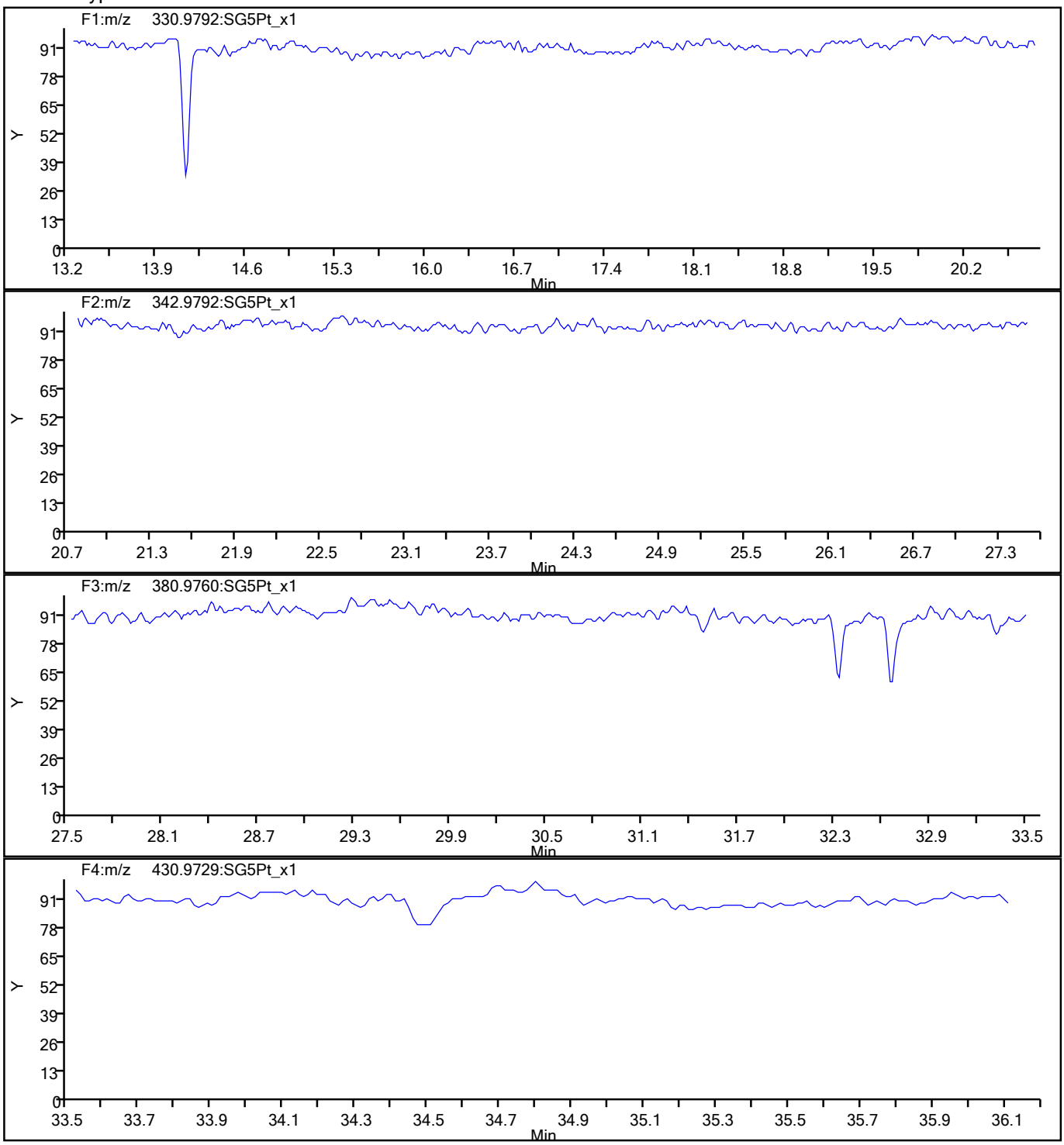

780254

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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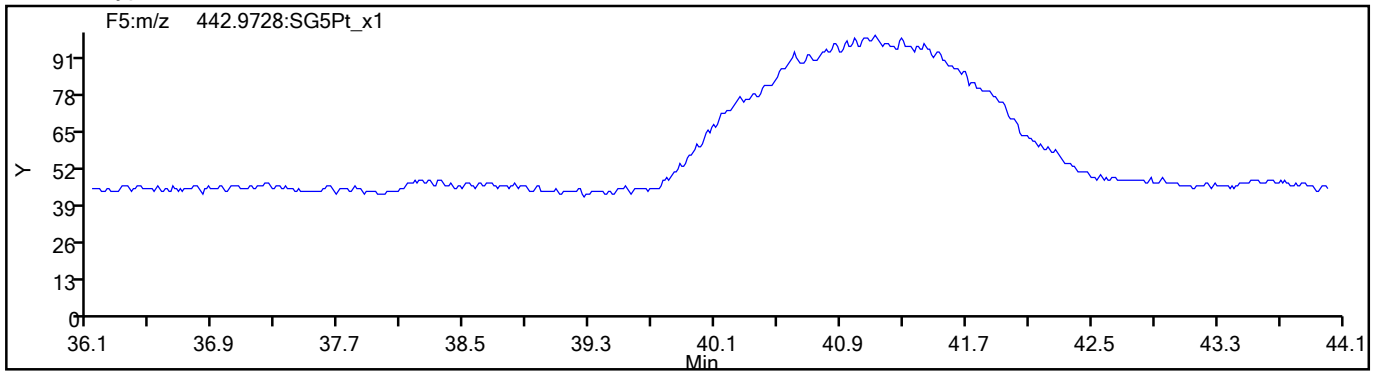

780255

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62635225	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	101724636	0.78	1.6249	99.9	99.9	0.2242	0.2242	99.95	
2,3,7,8-TCDF	17.643	10638776	0.78	1.0239	10.2	10.2	0.0283	0.0283	102	
S Total TCDF					10.2	10.2	0.0283	0.0283		
D 13C-2,3,7,8-TCDD	18.338	56155483	0.81	0.8993	99.7	99.7	0.1510	0.1510	99.69	
$ 37Cl4-2,3,7,8-TCDD	18.369	7339670		1.1071	10.6	10.6	0.0132	0.0132	106	
2,3,7,8-TCDD	18.369	7104238	0.76	1.2541	10.1	10.1	0.0224	0.0224	101	
S Total TCDD					10.1	10.1	0.0224	0.0224		
D 13C-1,2,3,7,8-PeCDF	22.762	76368219	1.58	1.2101	100.8	100.8	0.2109	0.2109	101	
1,2,3,7,8-PeCDF	22.789	41588176	1.62	1.0611	51.3	51.3	0.1508	0.1508	103	
D 13C-2,3,4,7,8-PeCDF	24.139	78214582	1.58	1.2395	100.7	100.7	0.2059	0.2059	101	
2,3,4,7,8-PeCDF	24.167	40928436	1.60	1.0184	51.4	51.4	0.1656	0.1656	103	
S Total PeCDF					102.7	102.7	0.1582	0.1582		
D 13C-1,2,3,7,8-PeCDD	24.876	47124414	1.60	0.7612	98.8	98.8	0.1214	0.1214	98.83	
1,2,3,7,8-PeCDD	24.903	25165054	1.62	1.0484	50.9	50.9	0.0669	0.0669	102	
S Total PeCDD					50.9	50.9	0.0669	0.0669		
D 13C-1,2,3,4,7,8-HxCDF	30.849	68075509	0.52	1.0837	98.8	98.8	0.4389	0.4389	98.79	
1,2,3,4,7,8-HxCDF	30.862	37525146	1.24	1.0851	50.8	50.8	0.2914	0.2914	102	
D 13C-1,2,3,6,7,8-HxCDF	31.009	70677463	0.52	1.1279	98.5	98.5	0.4217	0.4217	98.54	
1,2,3,6,7,8-HxCDF	31.022	40802767	1.21	1.1260	51.3	51.3	0.2729	0.2729	103	
D 13C-2,3,4,6,7,8-HxCDF	31.767	67028498	0.52	1.0637	99.1	99.1	0.4471	0.4471	99.10	
2,3,4,6,7,8-HxCDF	31.781	39741365	1.22	1.1675	50.8	50.8	0.2260	0.2260	102	
D 13C-1,2,3,7,8,9-HxCDF	32.526	60389284	0.52	0.9676	98.2	98.2	0.4916	0.4916	98.15	
1,2,3,7,8,9-HxCDF	32.540	35924190	1.21	1.1664	51.0	51.0	0.2363	0.2363	102	
S Total HxCDF					203.9	203.9	0.2566	0.2566		
* 13C-1,2,3,7,8,9-HxCDD	32.353	63588089	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.941	44039927	1.25	0.7334	94.4	94.4	0.3731	0.3731	94.43	
1,2,3,4,7,8-HxCDD	31.954	24891170	1.33	1.0640	53.1	53.1	0.1747	0.1747	106	
D 13C-1,2,3,6,7,8-HxCDD	32.034	55284532	1.26	0.8802	98.8	98.8	0.3109	0.3109	98.78	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	27953752	1.21	1.0001	50.6	50.6	0.1666	0.1666	101	
1,2,3,7,8,9-HxCDD	32.367	29794954	1.26	1.1325	53.0	53.0	0.1552	0.1552	106	
S Total HxCDD					156.7	156.7	0.1655	0.1655		
D 13C-1,2,3,4,6,7,8-HpCDF	33.924	47697671	0.44	0.7730	97.0	97.0	1.328	1.328	97.03	
1,2,3,4,6,7,8-HpCDF	33.937	35740964	1.05	1.4413	52.0	52.0	0.5190	0.5190	104	
D 13C-1,2,3,4,7,8,9-HpCDF	35.018	43238622	0.44	0.7008	97.0	97.0	1.465	1.465	97.03	
1,2,3,4,7,8,9-HpCDF	35.030	29450636	1.07	1.3174	51.7	51.7	0.6741	0.6741	103	
S Total HpCDF					103.7	103.7	0.5966	0.5966		
D 13C-1,2,3,4,6,7,8-HpCDD	34.726	40333717	1.03	0.6472	98.0	98.0	0.5563	0.5563	98.00	
1,2,3,4,6,7,8-HpCDD	34.726	22538791	1.03	1.0943	51.1	51.1	0.2539	0.2539	102	
S Total HpCDD					51.1	51.1	0.2539	0.2539		
D 13C-OCDD	37.094	54338243	0.87	0.4472	191.1	191.1	0.2612	0.2612	95.55	
OCDF	37.202	41147202	0.91	1.4382	105.3	105.3	0.1155	0.1155	105	
OCDD	37.106	31656667	0.89	1.1070	105.3	105.3	0.1572	0.1572	105	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28287778	7074314	3903	9757	1813		
333.9339	18.142	18.142	0		34347447	8672273	4653	11632	1864	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.616	1	0.972	44652675	10978931	8756	21890	1254		
317.9389	17.628	17.616	1	0.972	57071961	13787474	14192	35480	971	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.631	1	1.001	4665898	1145703	1759	4397	651		
305.8987	17.643	17.631	1	1.001	5972878	1458593	1111	2777	1313	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	25132336	5946858	3903	9757	1524		
333.9339	18.338	18.338	0	1.011	31023147	7337223	4653	11632	1577	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.369	18.354	1	1.012	7339670	1703834	921	2302	1850		
2,3,7,8-TCDD											
319.8965	18.369	18.357	1	1.002	3077636	720367	906	2265	795		
321.8936	18.369	18.357	1	1.002	4026602	947792	588	1470	1612	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46742521	8181774	9794	24485	835		
353.8970	22.762	22.754	0	1.255	29625698	5225925	6278	15695	832	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.789	22.779	1	1.001	25738852	4452039	5088	12720	875		
341.8567	22.789	22.779	1	1.001	15849324	2731041	3494	8735	782	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.139	24.129	1	1.331	47906018	7878060	9794	24485	804		
353.8970	24.139	24.129	1	1.331	30308564	4845446	6278	15695	772	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.167	24.156	1	1.001	25185293	4111601	5088	12720	808		
341.8567	24.167	24.156	1	1.001	15743143	2618923	3494	8735	750	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.876	24.865	1	1.371	29023498	4508866	3701	9252	1218		
369.8919	24.876	24.865	1	1.371	18100916	2812844	2121	5302	1326	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.903	24.892	1	1.001	15548746	2422000	1286	3215	1883		
357.8516	24.903	24.892	1	1.001	9616308	1489099	768	1920	1939	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.849	30.838	1	0.954	23323404	5008910	10853	27132	462		
385.8610	30.849	30.838	1	0.954	44752105	9511743	20971	52427	454	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.000	20753403	4584464	10058	25145	456		
375.8178	30.862	30.857	0	1.000	16771743	3729681	8311	20777	449	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.009	31.003	0	0.958	24213048	5206646	10853	27132	480		
385.8610	31.009	31.003	0	0.958	46464415	9739576	20971	52427	464	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	22352739	4771379	10058	25145	474		
375.8178	31.022	31.022	0	1.000	18450028	3943683	8311	20777	475	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.767	31.756	1	0.982	22835025	6015846	10853	27132	554		
385.8610	31.767	31.756	1	0.982	44193473	11391437	20971	52427	543	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.781	31.772	1	1.000	21800962	5788708	10058	25145	576		
375.8178	31.781	31.772	1	1.000	17940403	4765095	8311	20777	573	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.005	20681548	5801162	10853	27132	535		
385.8610	32.526	32.523	0	1.005	39707736	10862121	20971	52427	518	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.540	32.534	0	1.000	19691436	5514300	10058	25145	548		
375.8178	32.540	32.534	0	1.000	16232754	4594829	8311	20777	553	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.353	32.342	1		35642869	9349119	10403	26007	899		
403.8529	32.353	32.342	1		27945220	7378163	7908	19770	933	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.941	31.929	1	0.987	24473480	7240164	10403	26007	696		
403.8529	31.941	31.929	1	0.987	19566447	5775722	7908	19770	730	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.954	31.945	1	1.000	14220855	4121905	5566	13915	741		
391.8127	31.954	31.945	1	1.000	10670315	3199272	4114	10285	778	1.33(1.05-1.43)	

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.034	32.033	0	0.990	30876044	8117648	10403	26007	780		
403.8529	32.034	32.033	0	0.990	24408488	6404371	7908	19770	810	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	15327109	4211681	5566	13915	757		
391.8127	32.047	32.047	0	1.000	12626643	3343117	4114	10285	813	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.367	32.355	1	1.013	16583478	4368640	5566	13915	785		
391.8127	32.353	32.355	0	1.013	13211476	3519862	4114	10285	856	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.924	33.914	1	1.049	14460337	4683854	18083	45207	259		
419.8220	33.924	33.914	1	1.049	33237334	10568693	50629	126572	209	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.937	33.926	1	1.000	18301949	5790856	23497	58742	246		
409.7789	33.924	33.926	0	1.000	17439015	5585138	22139	55347	252	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.018	35.010	0	1.082	13111896	3936331	18083	45207	218		
419.8220	35.018	35.010	0	1.082	30126726	8910423	50629	126572	176	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.030	35.020	1	1.000	15206712	4448229	23497	58742	189		
409.7789	35.018	35.020	0	1.000	14243924	4117019	22139	55347	186	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.726	34.716	1	1.073	20474082	5927612	12552	31380	472		
437.8140	34.714	34.716	0	1.073	19859635	5735510	11540	28850	497	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	11412485	3410093	6511	16277	524		
425.7737	34.726	34.726	0	1.000	11126306	3358586	6451	16127	521	1.03(0.88-1.20)	
13C-OCDD											
469.7779	37.094	37.094	0	1.147	25234291	6398501	3020	7550	2119		
471.7750	37.094	37.094	0	1.147	29103952	7389026	4794	11985	1541	0.87(0.76-1.02)	
OCDF											
441.7428	37.202	37.199	0	1.003	19626693	5149784	2565	6412	2008		
443.7399	37.202	37.199	0	1.003	21520509	5563126	2015	5037	2761	0.91(0.76-1.02)	
OCDD											
457.7377	37.106	37.106	0	1.000	14916504	3846231	2276	5690	1690		
459.7348	37.106	37.106	0	1.000	16740163	4277323	2524	6310	1695	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

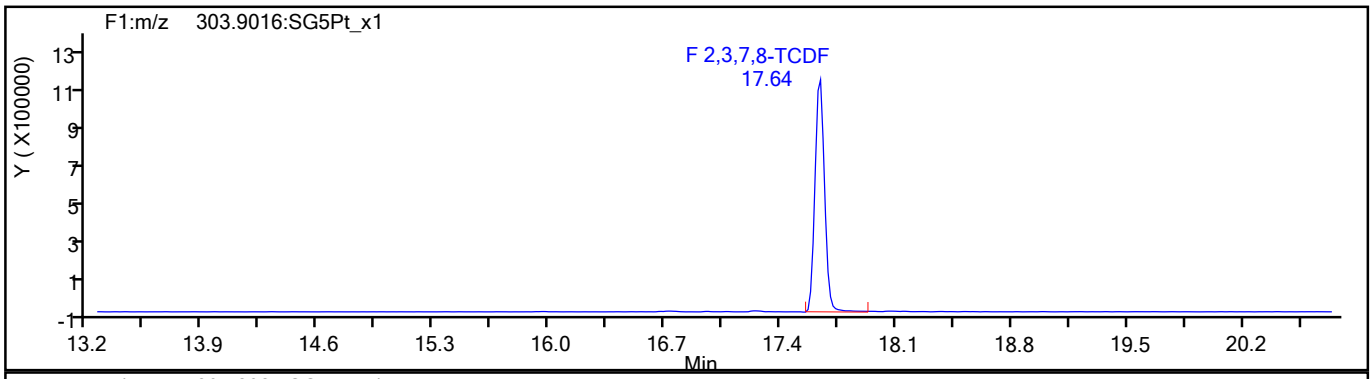

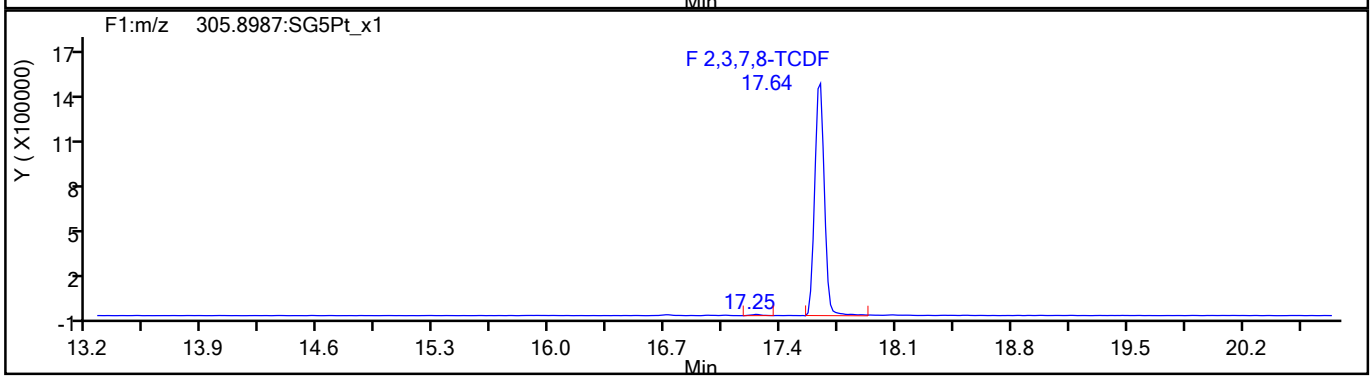

TCDF Standards

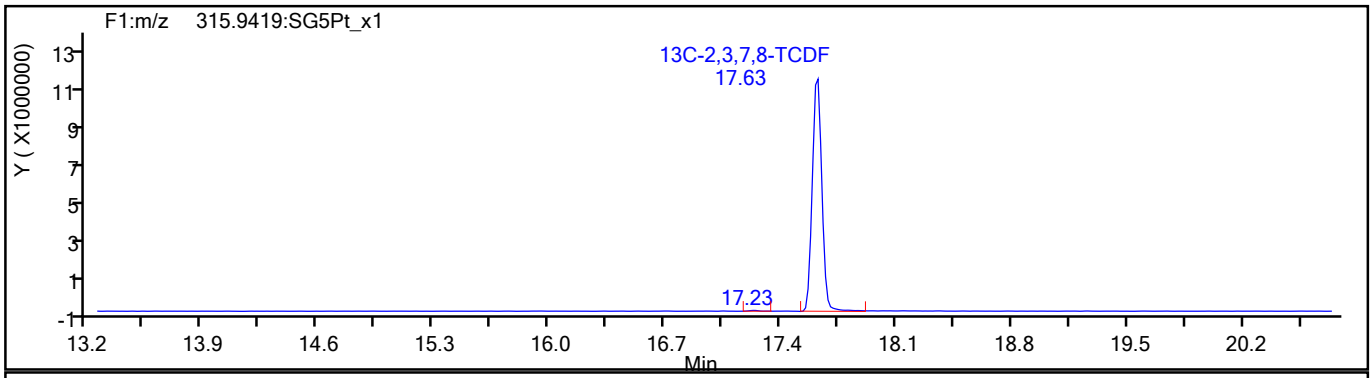

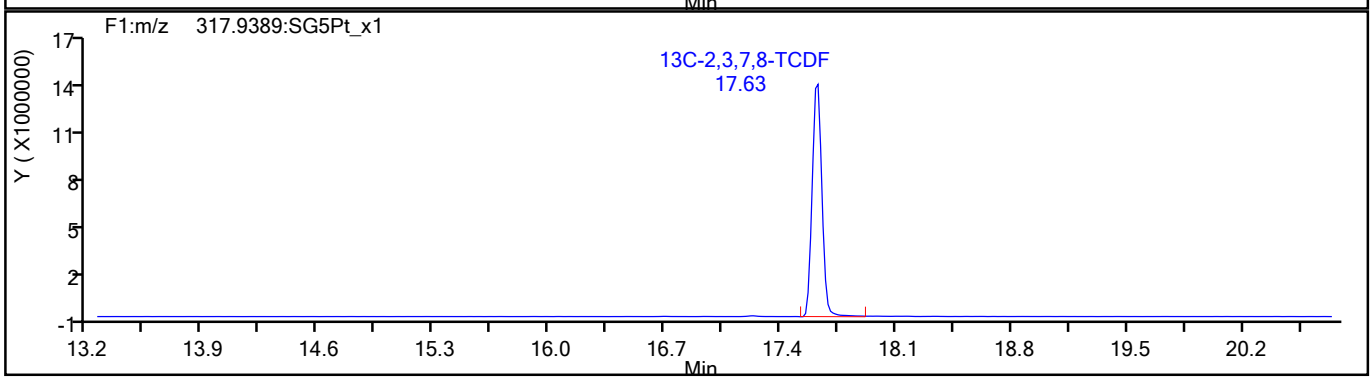

780261

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

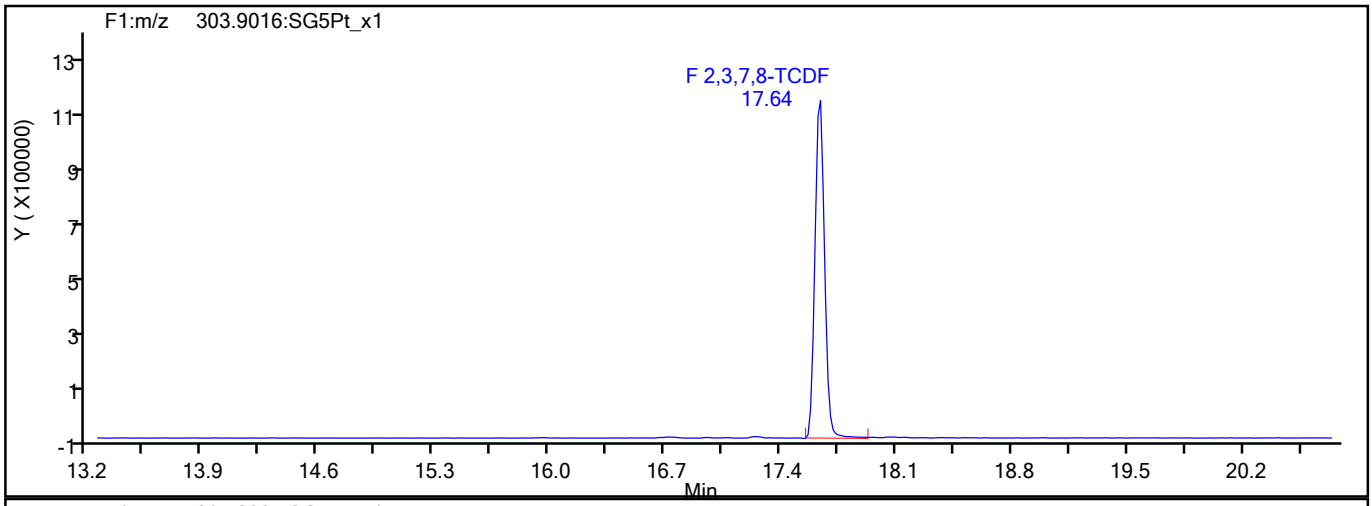

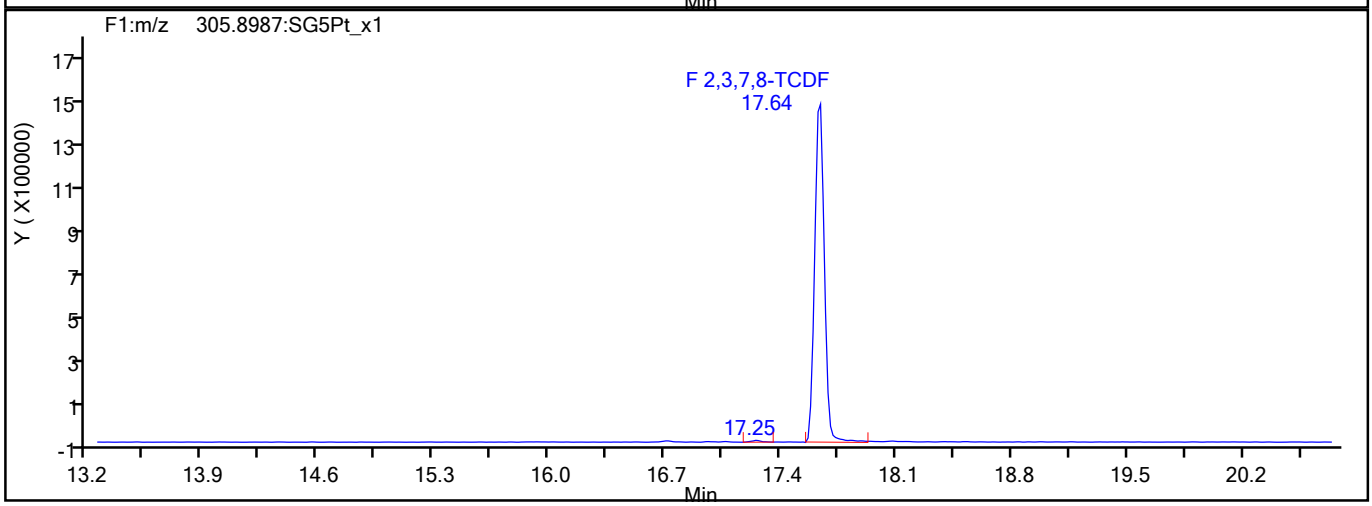

TCDF Interference Mass

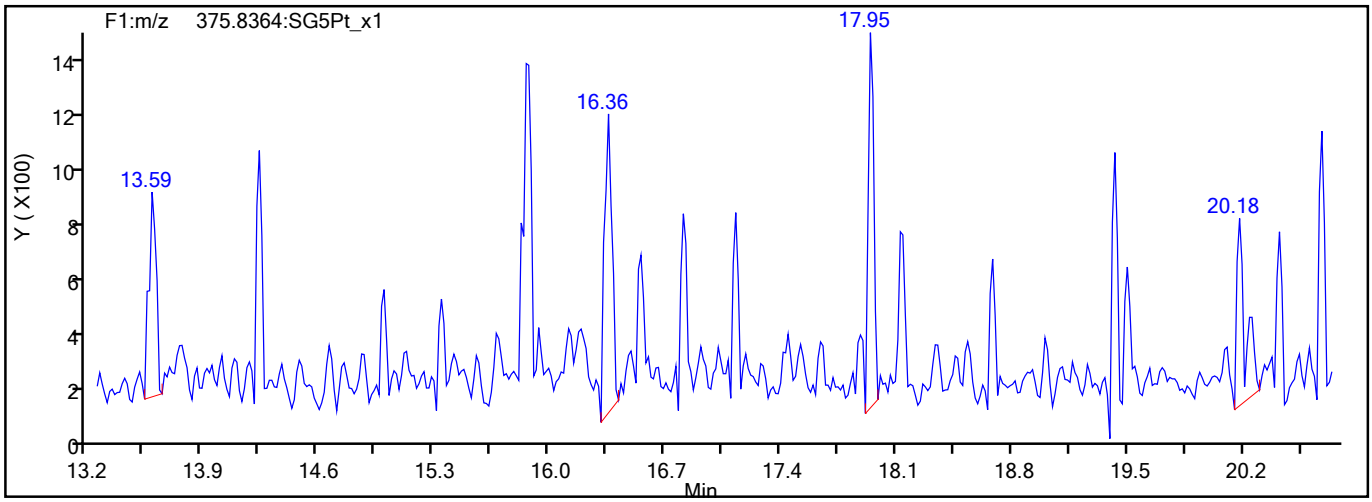

780262

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

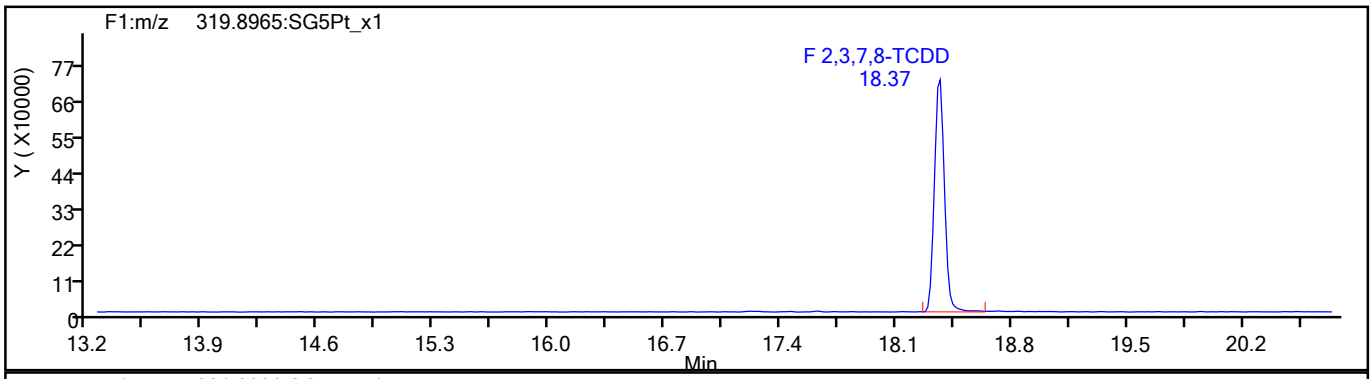

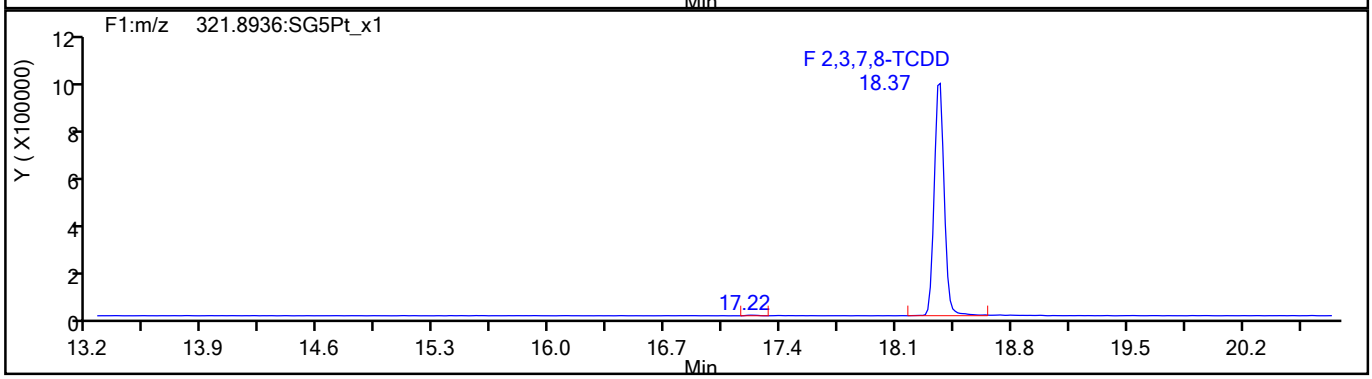

TCDD Standards

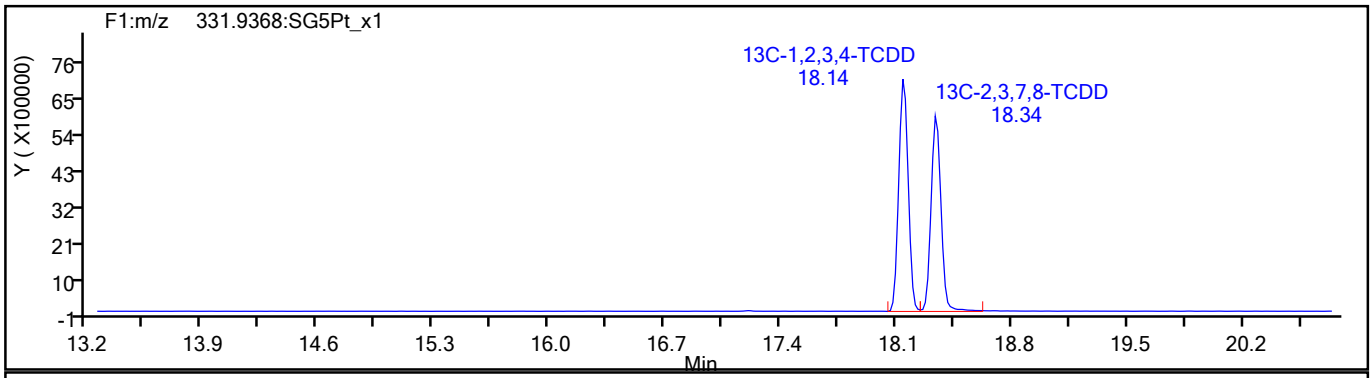

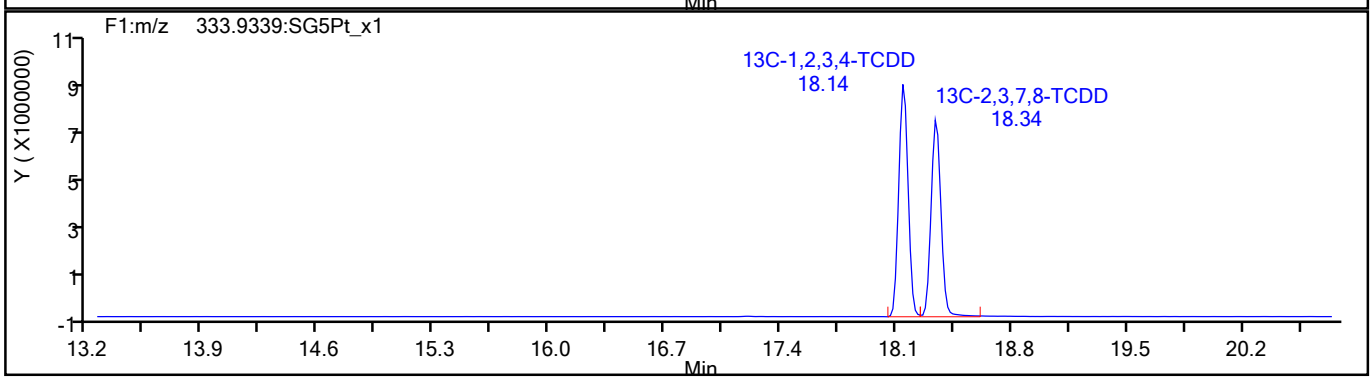

780263

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

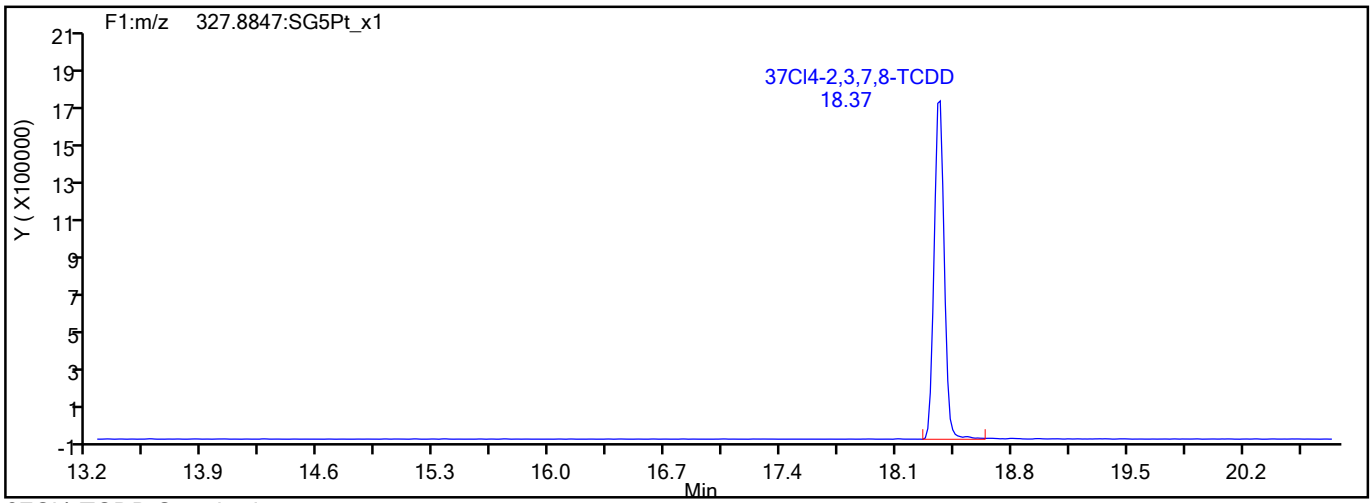

37Cl4-TCDD Standards

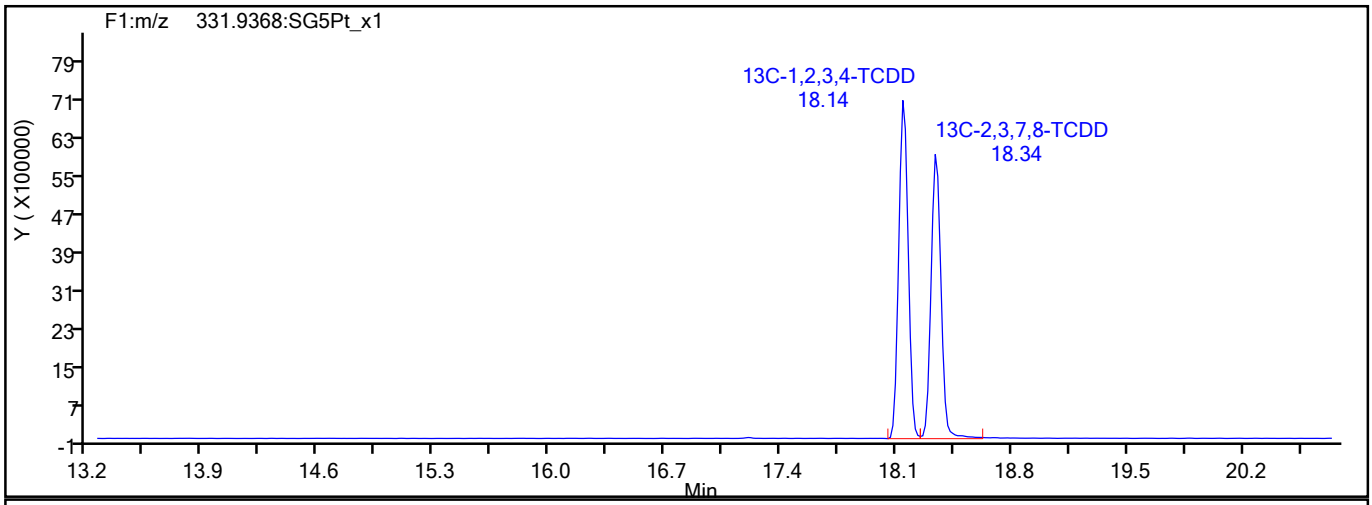

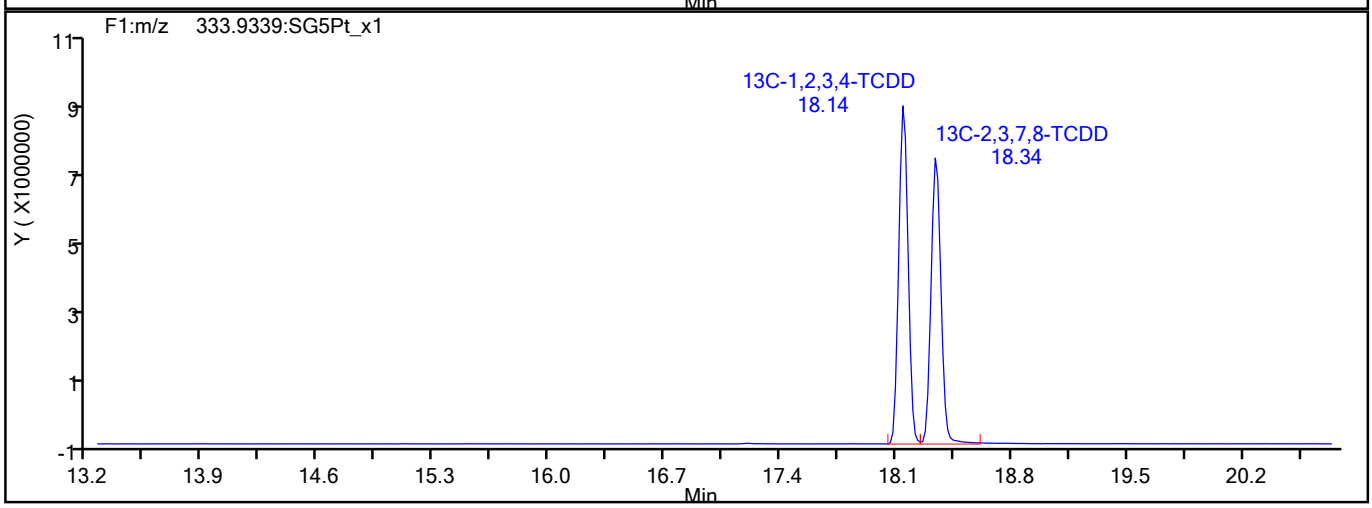

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

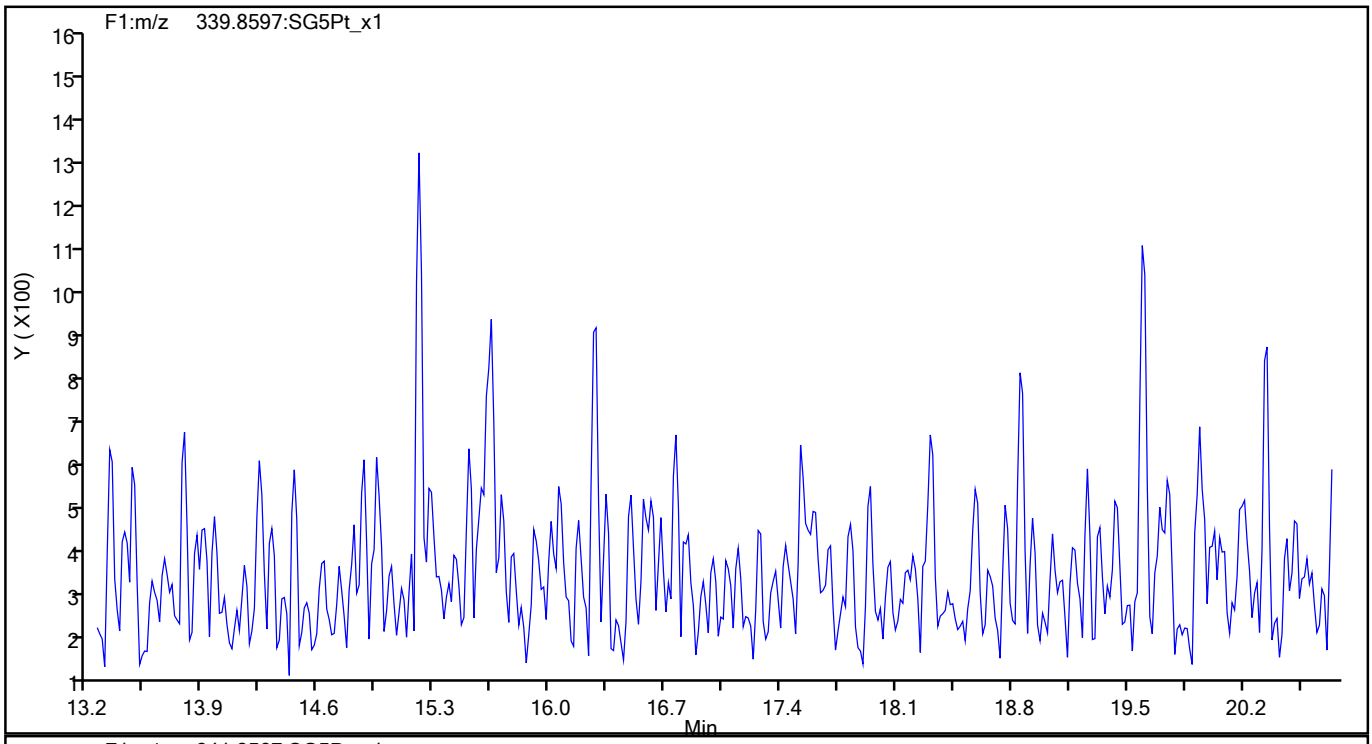

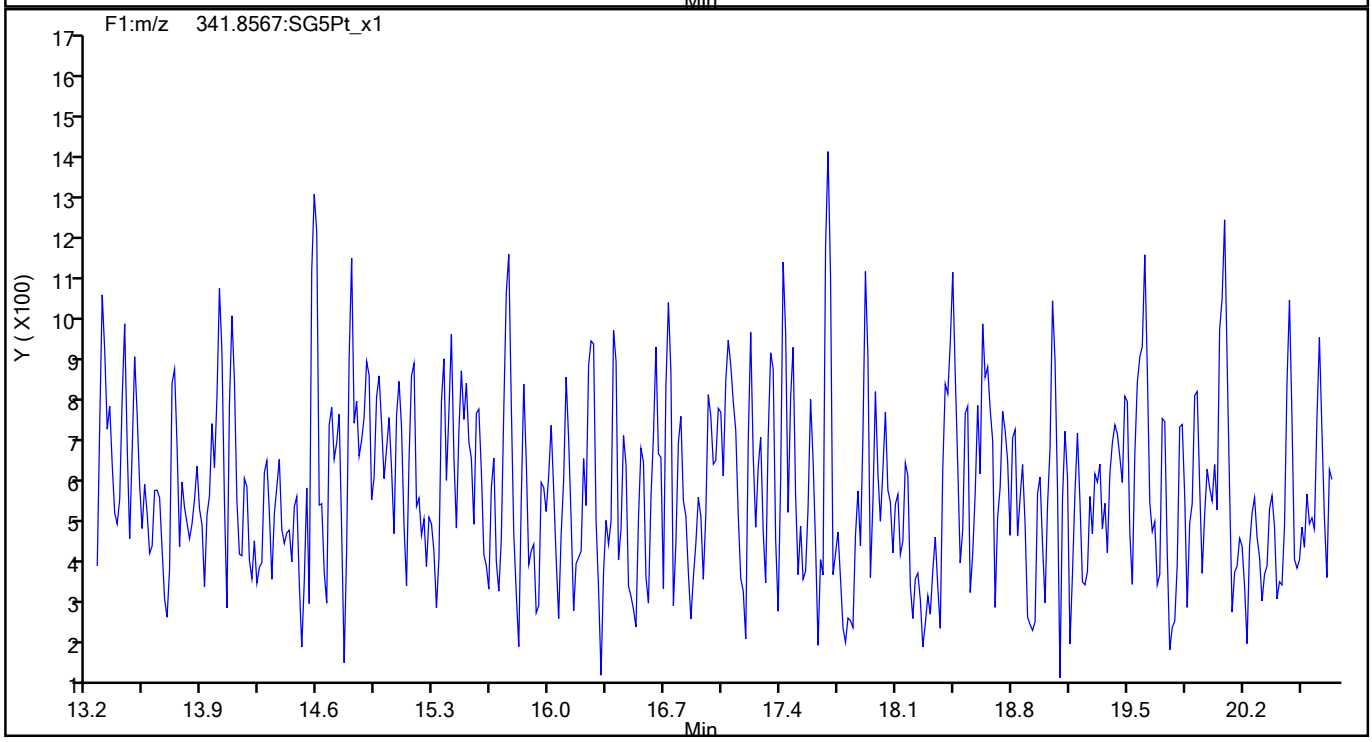

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

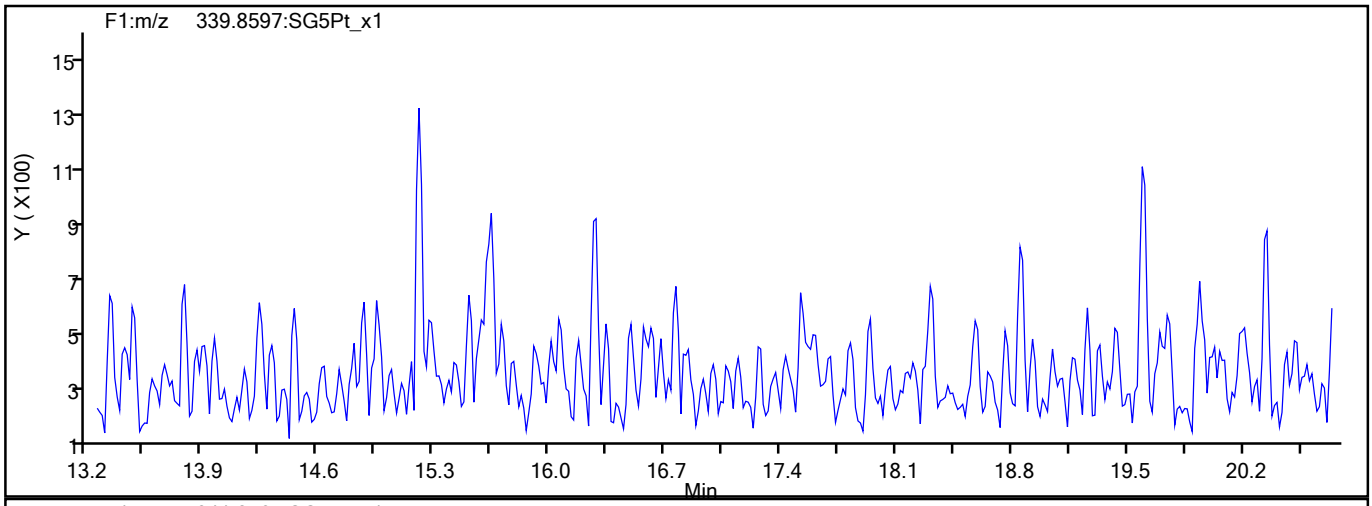

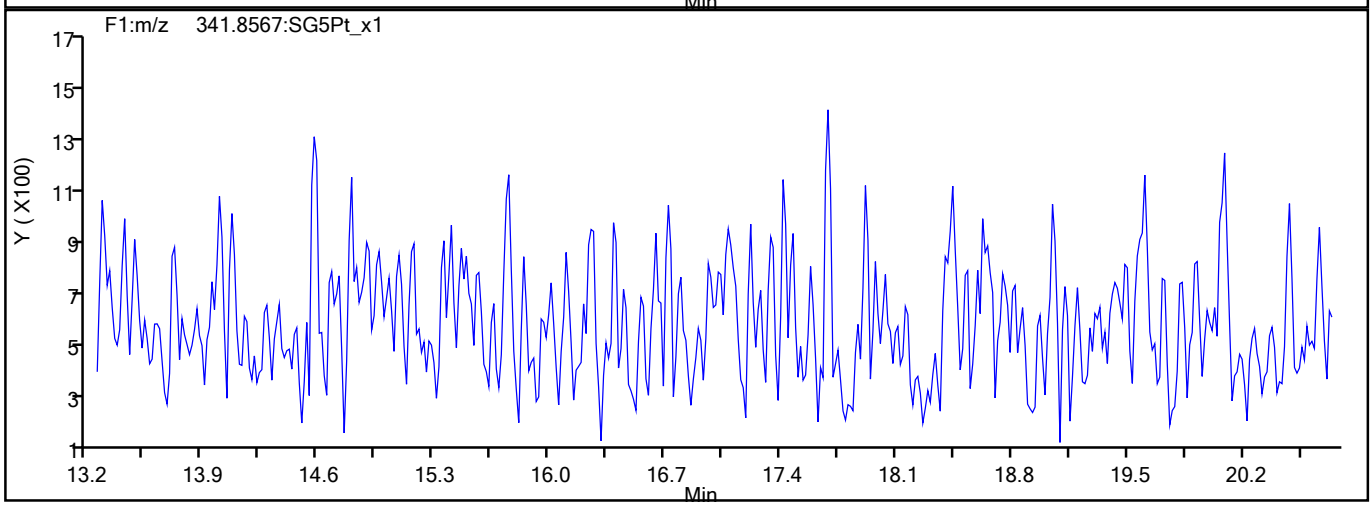

F1 PeCDFs Interference Mass

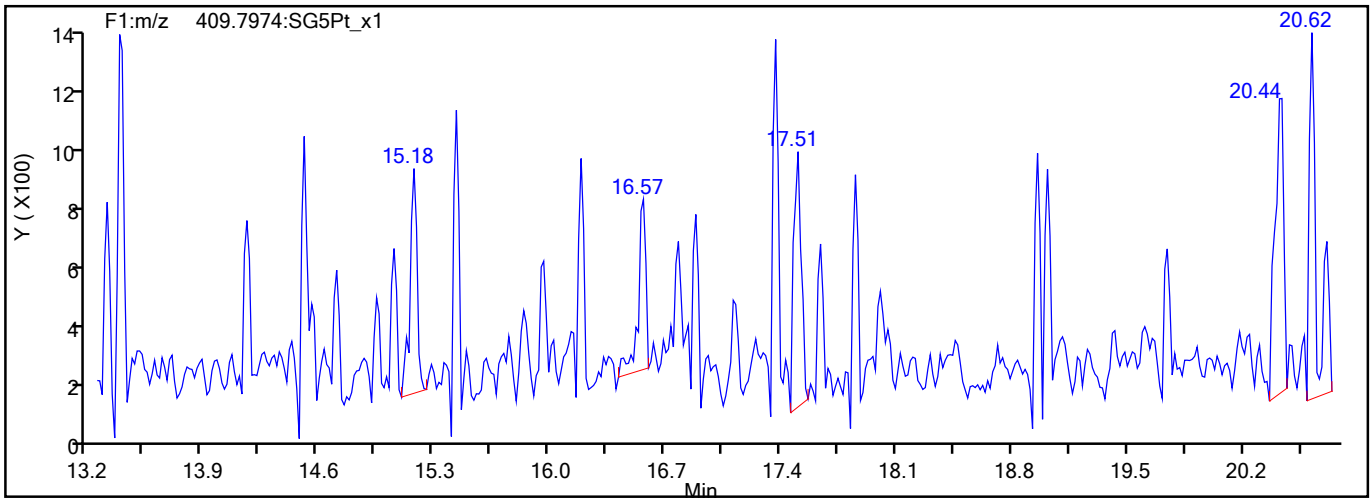

780266

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

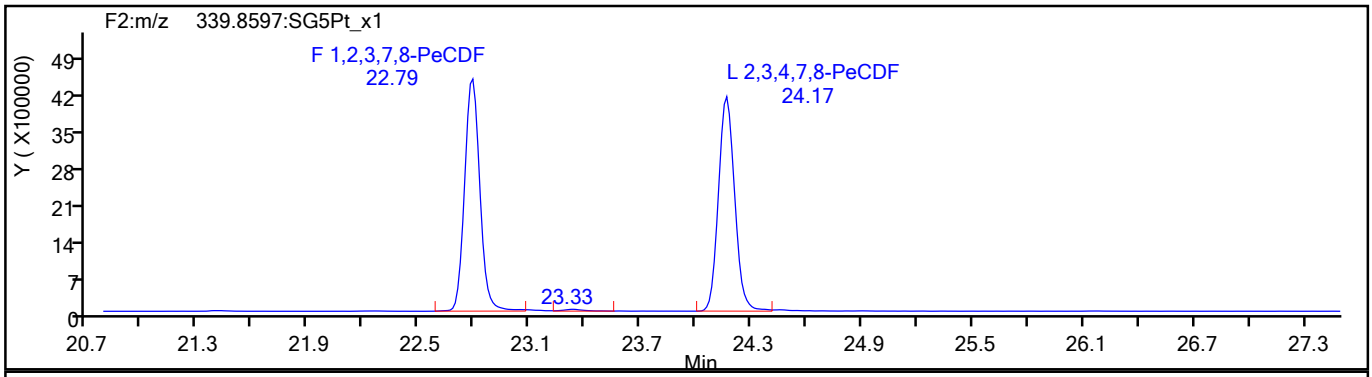

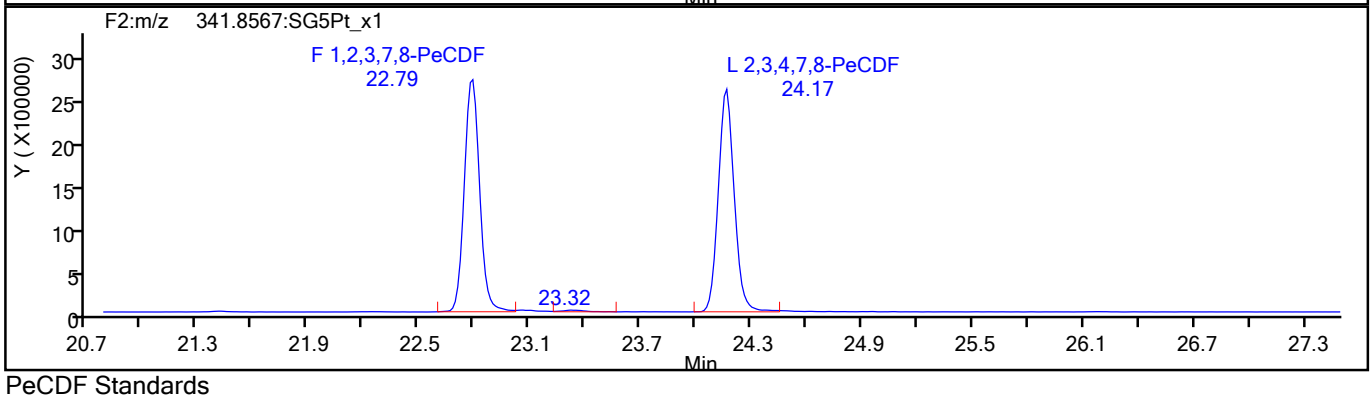

PeCDF Standards

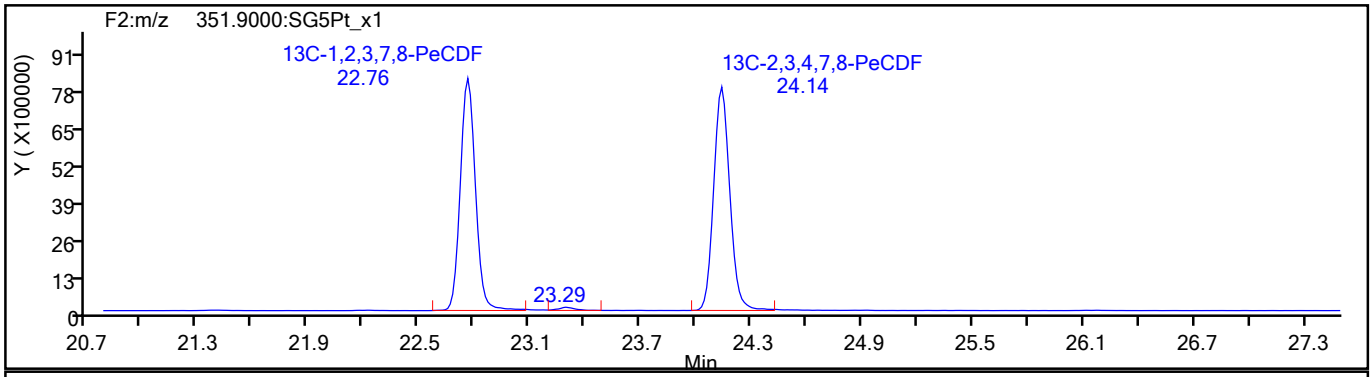

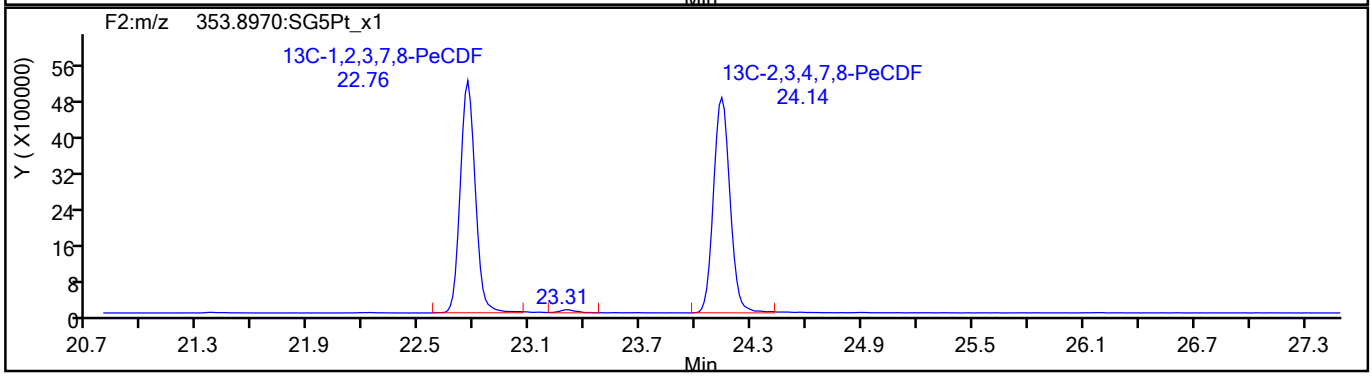

780267

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

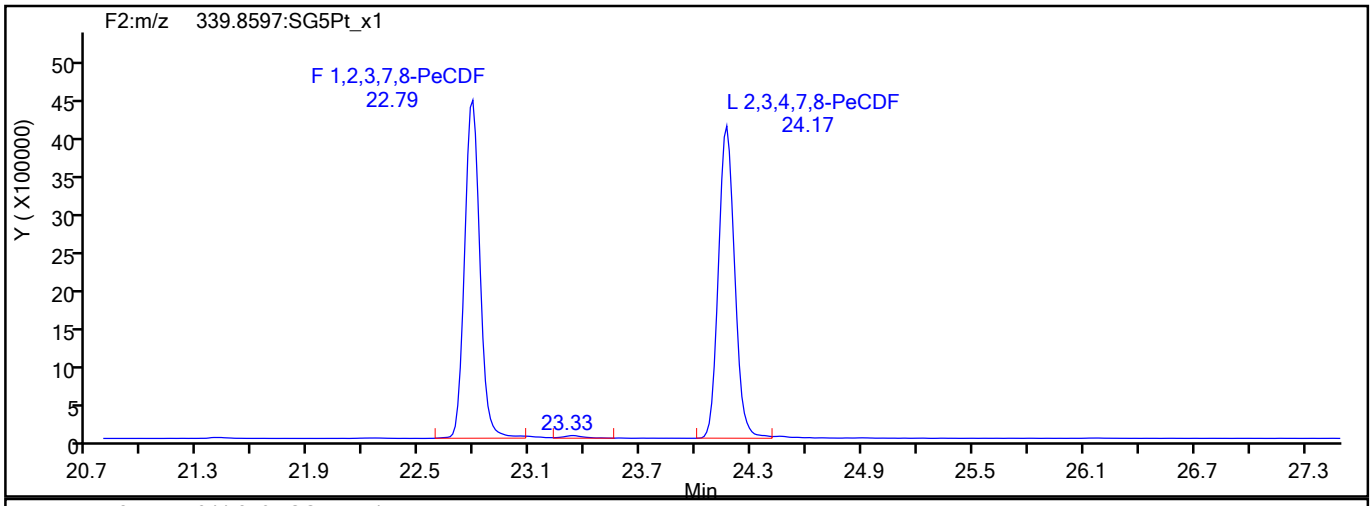

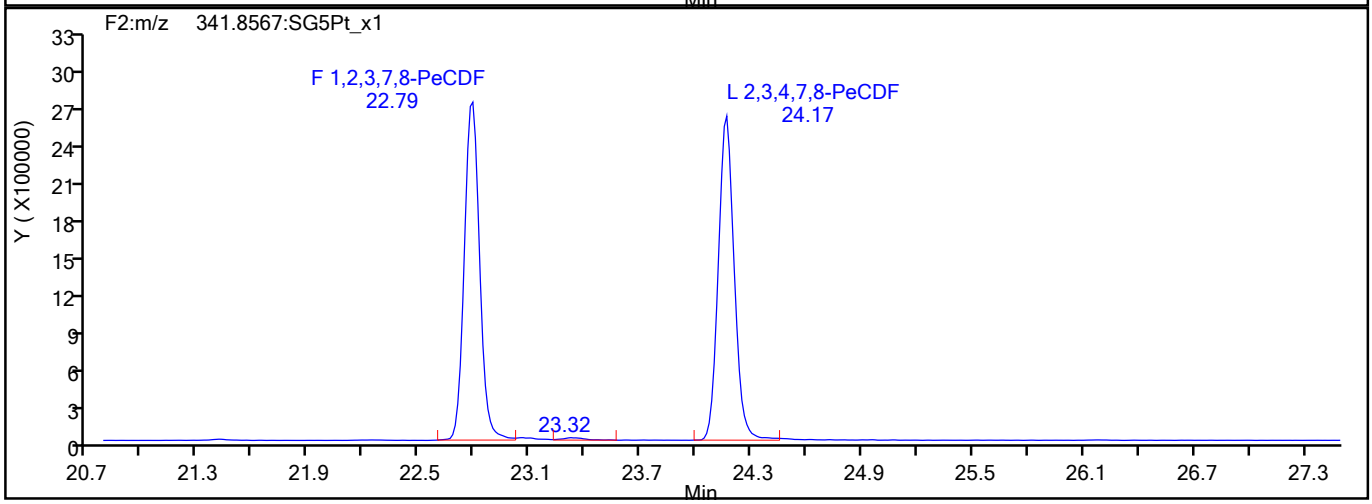

PeCDF Interference Mass

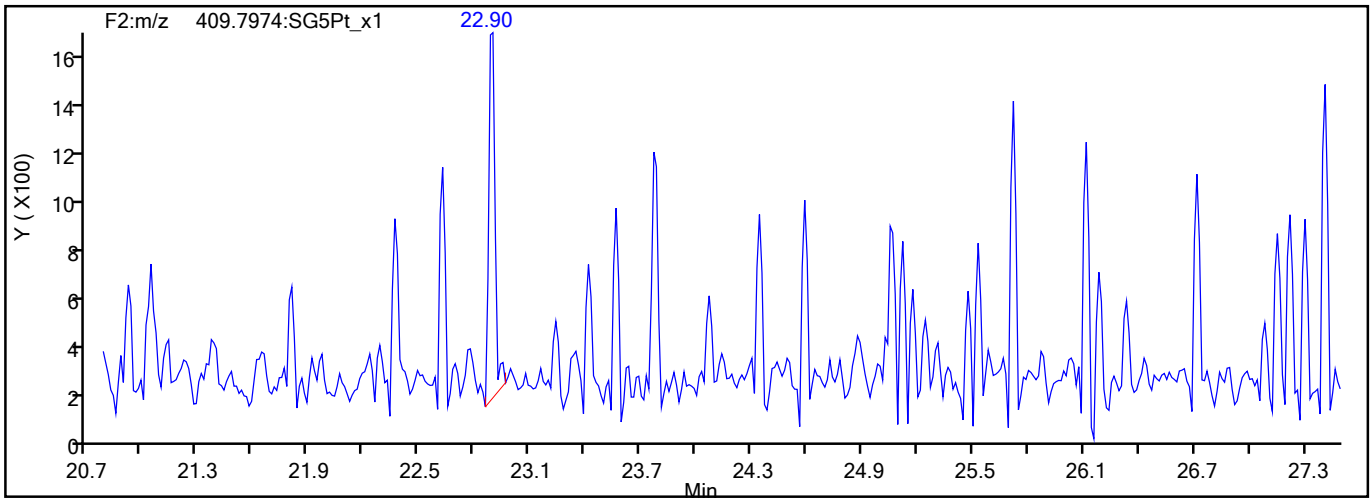

780268

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDD

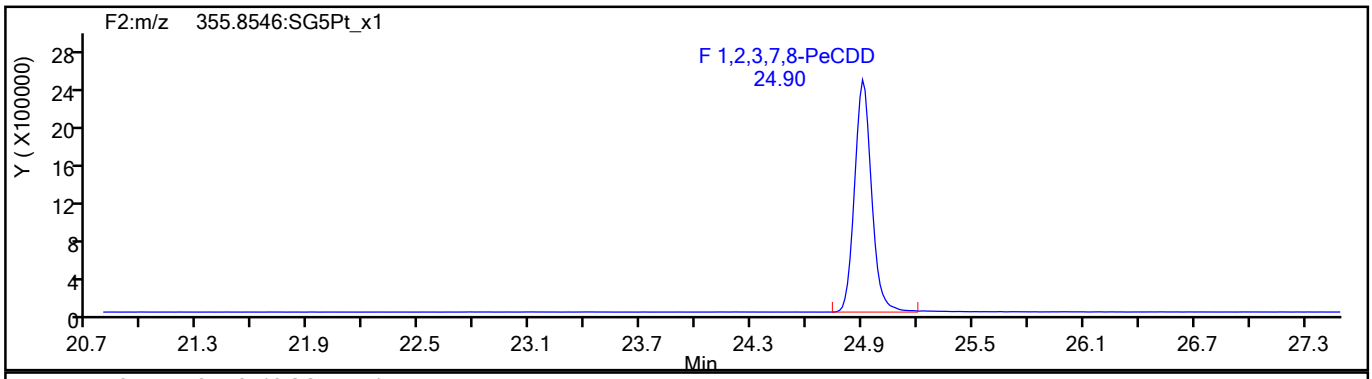

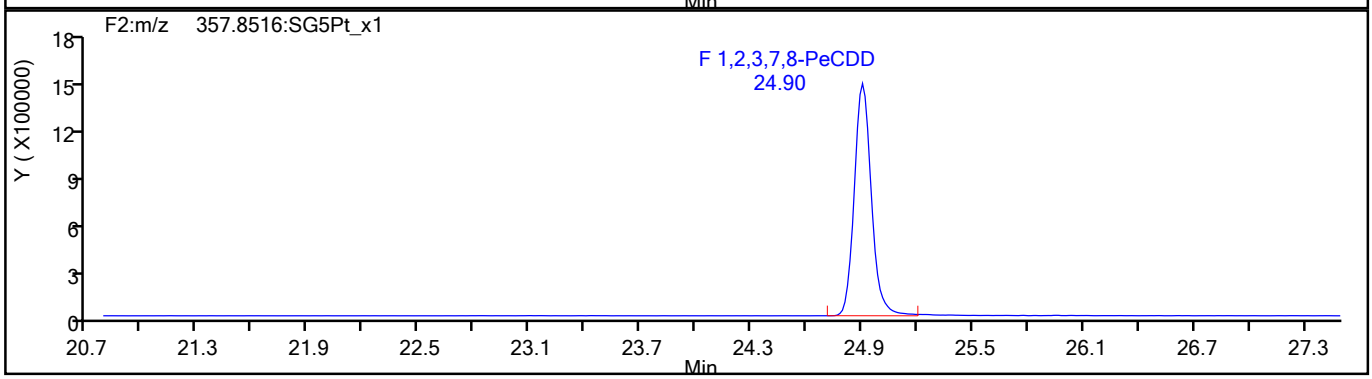

PeCDD Standards

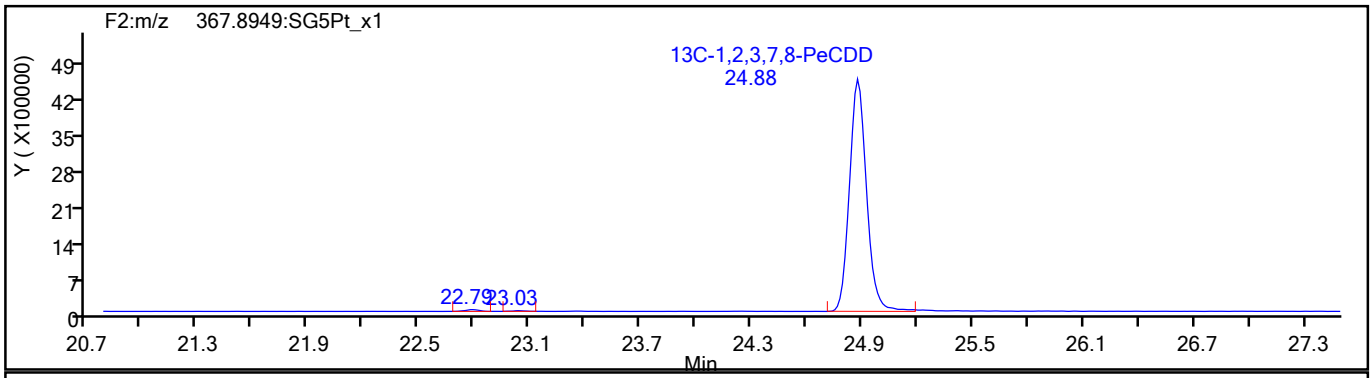

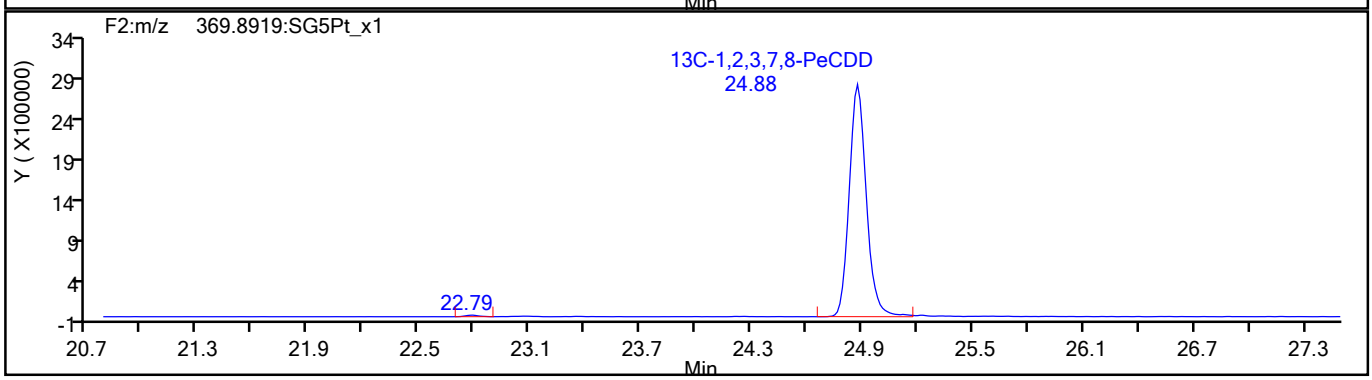

780269

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

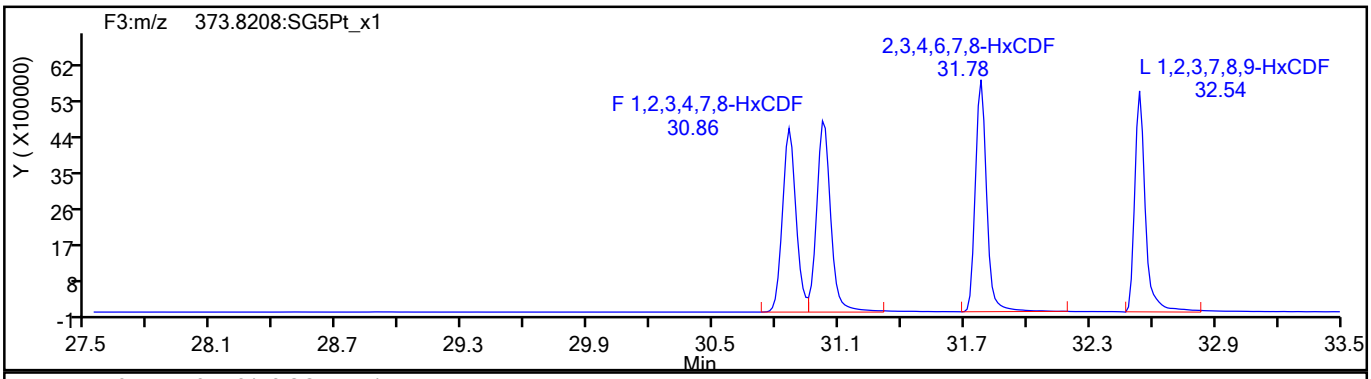

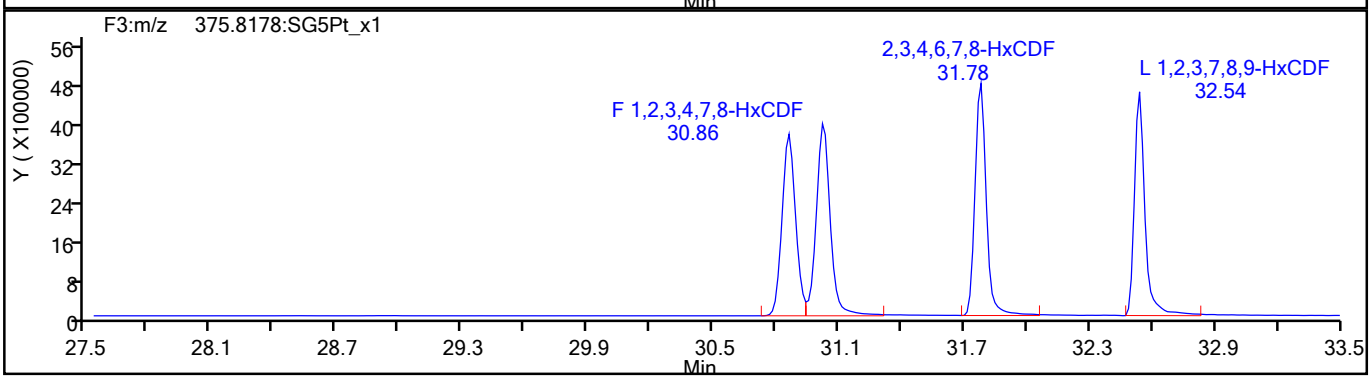

HxCDF Standards

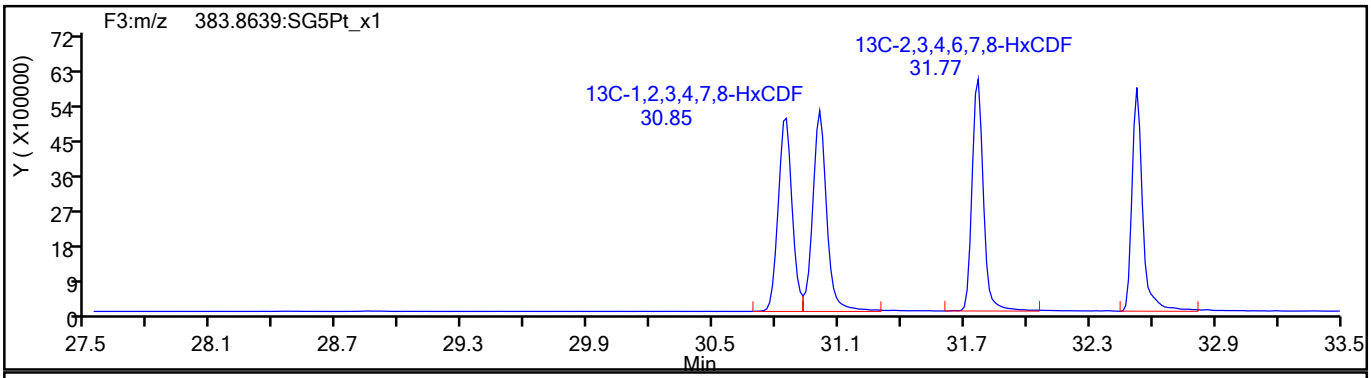

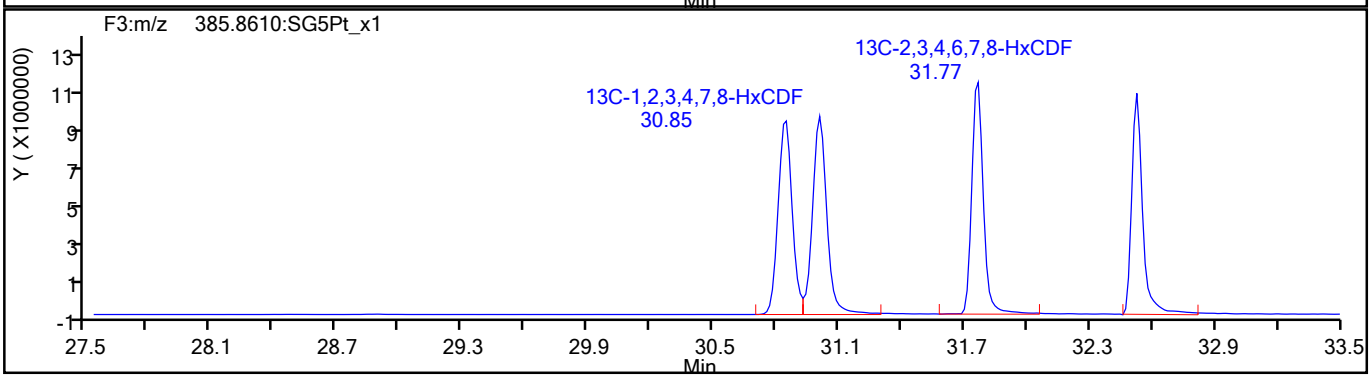

780270

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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HxCDF

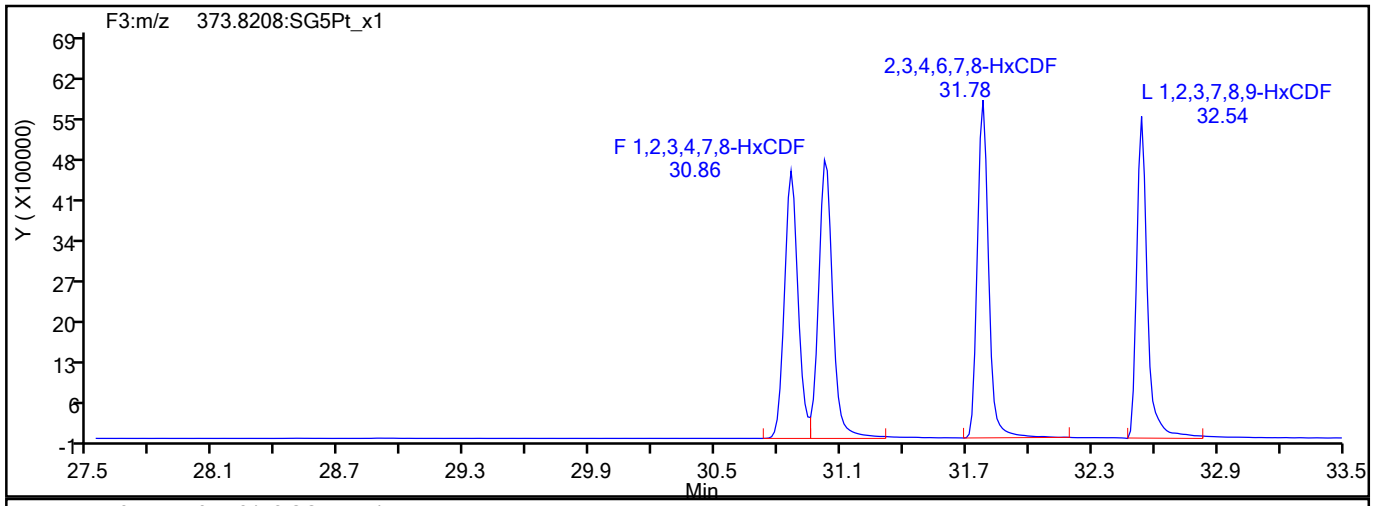

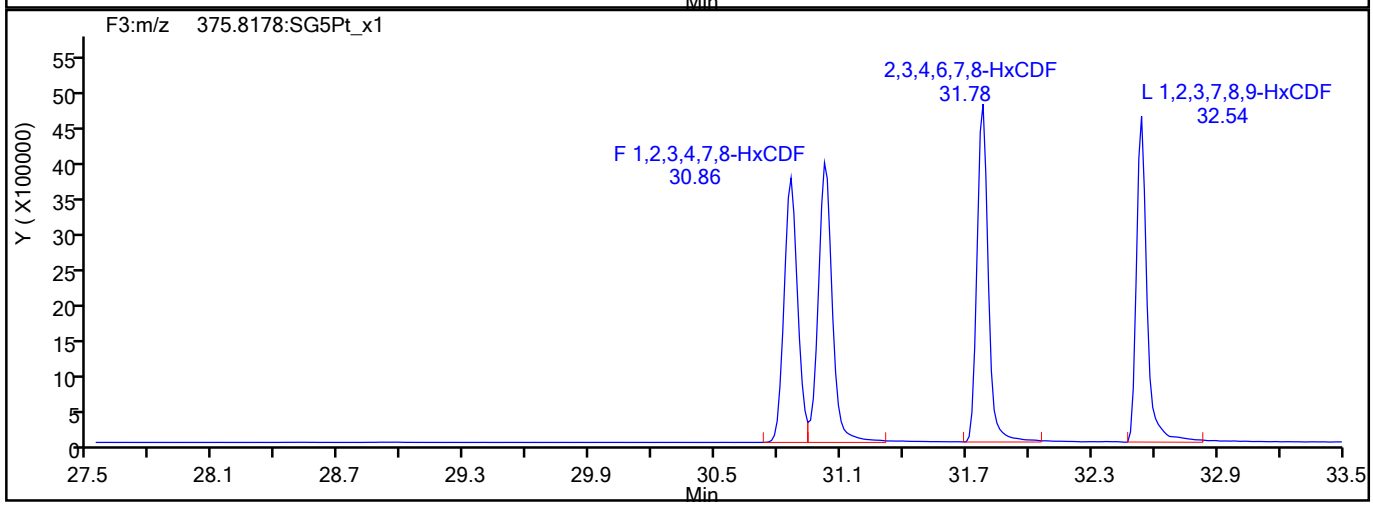

HxCDF Interference Mass

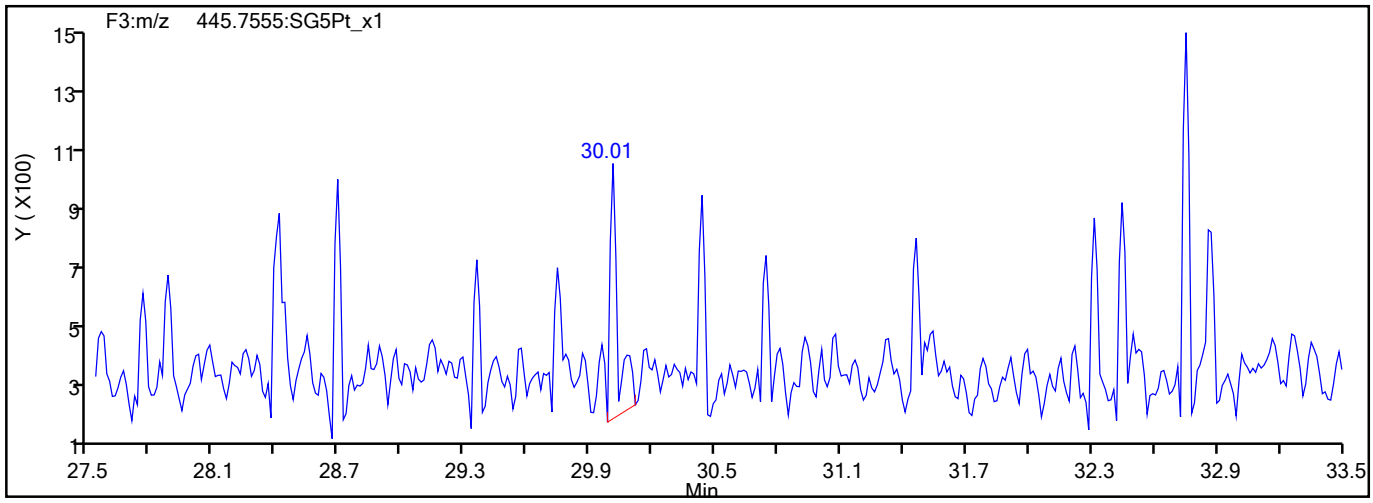

780271

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDD

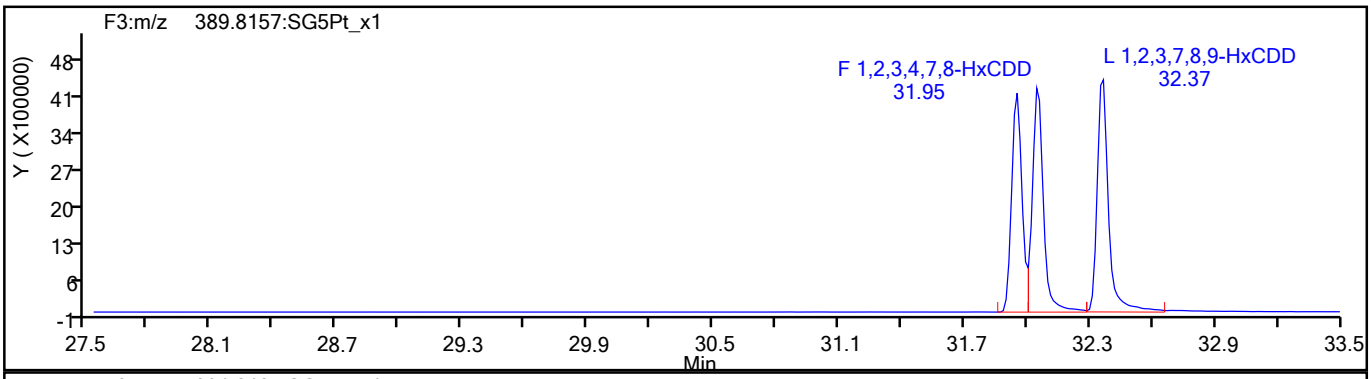

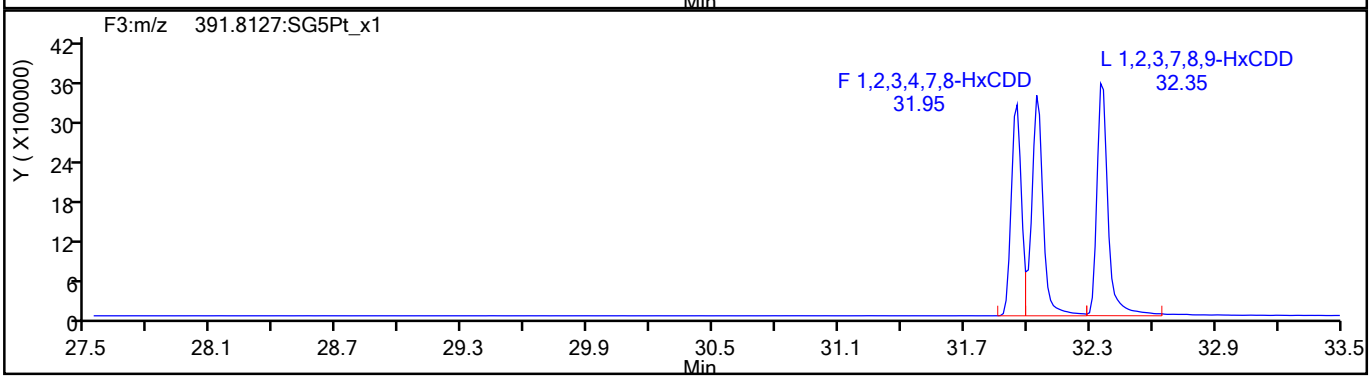

HxCDD Standards

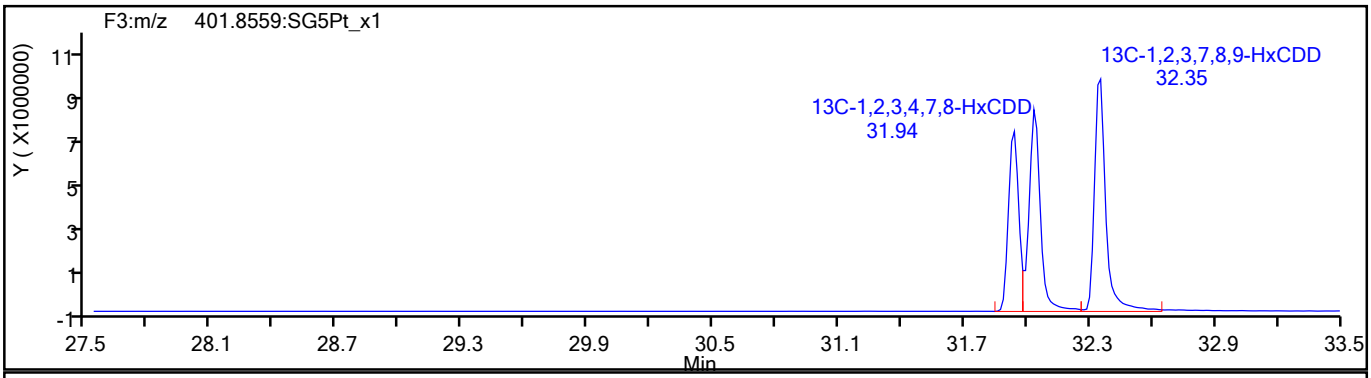

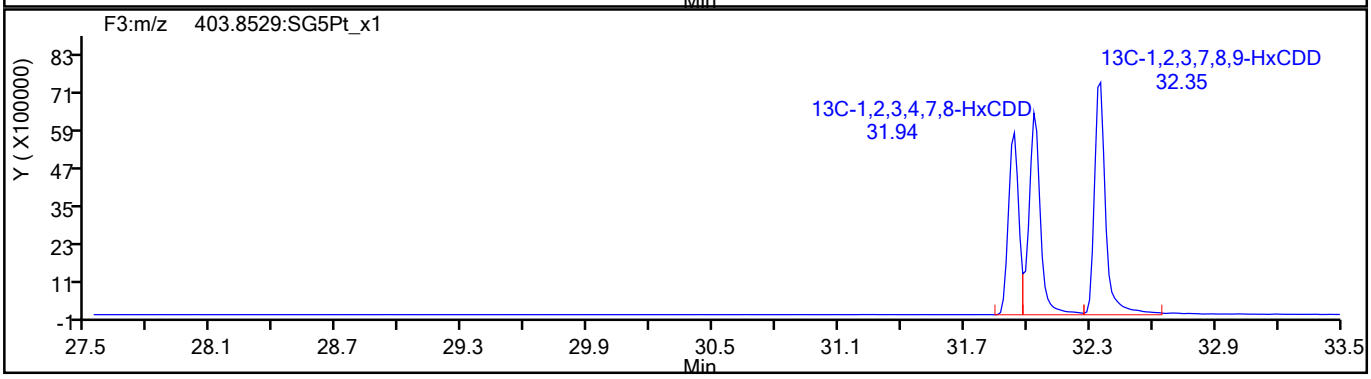

780272

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

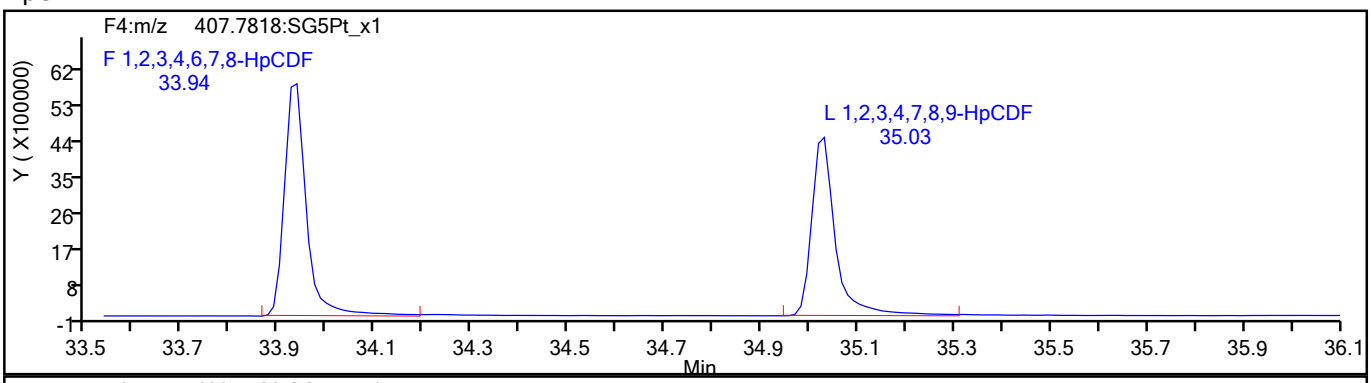

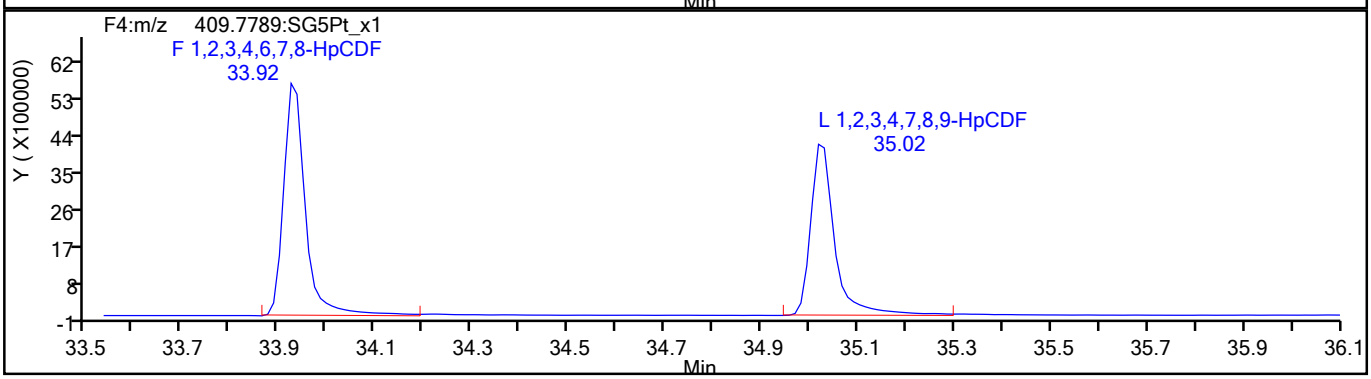

HpCDF Standards

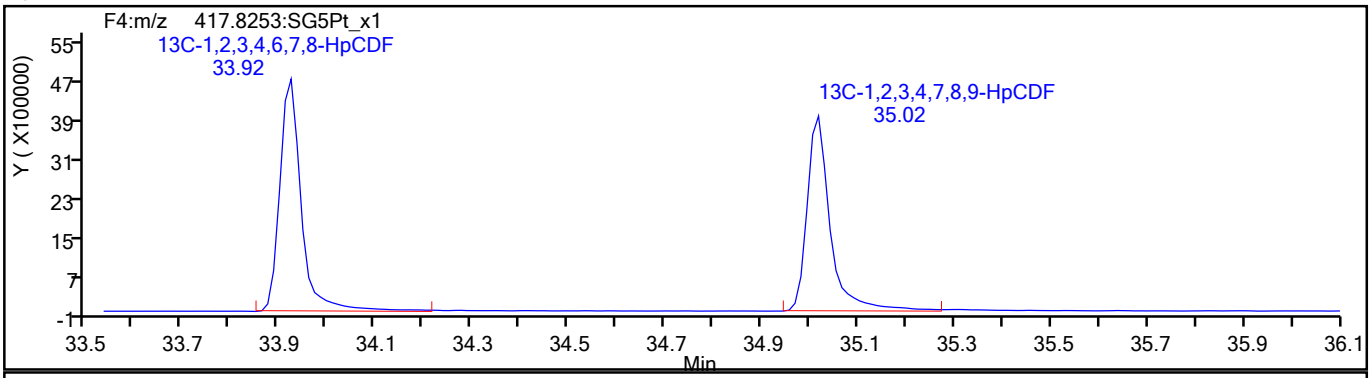

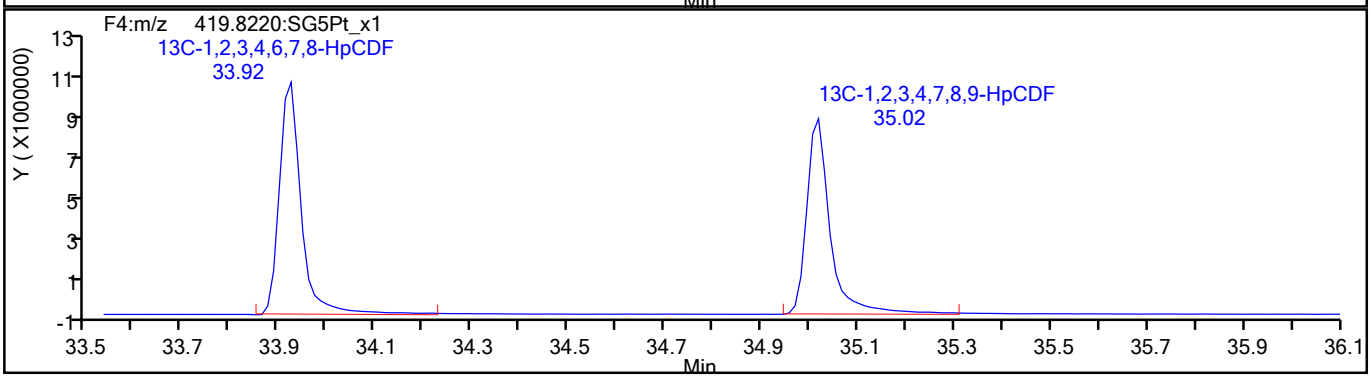

780273

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

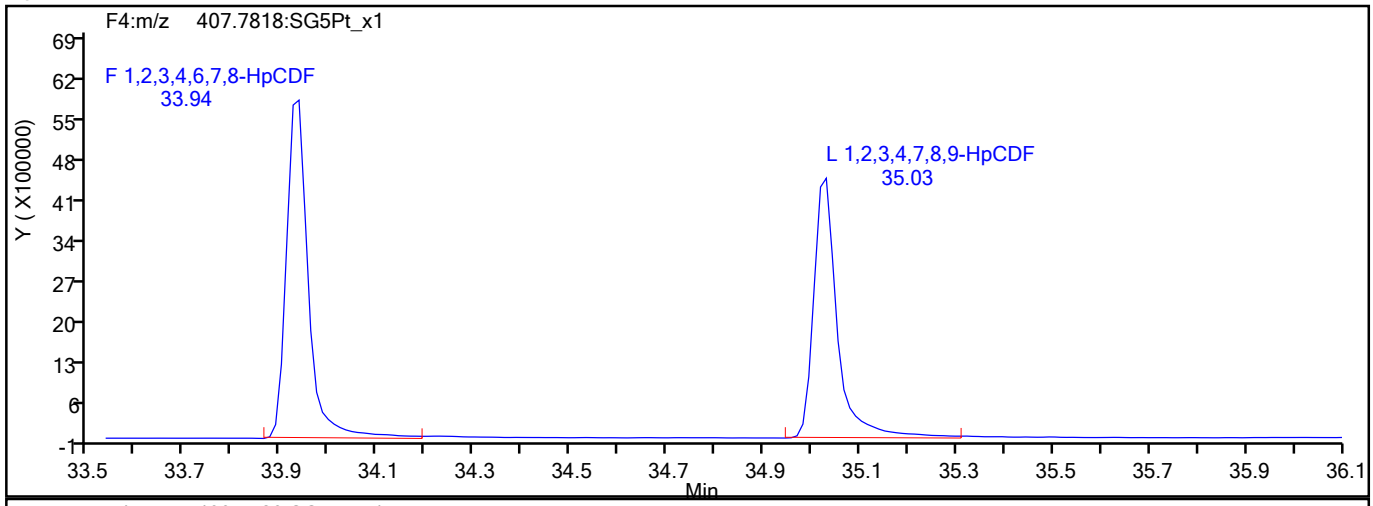

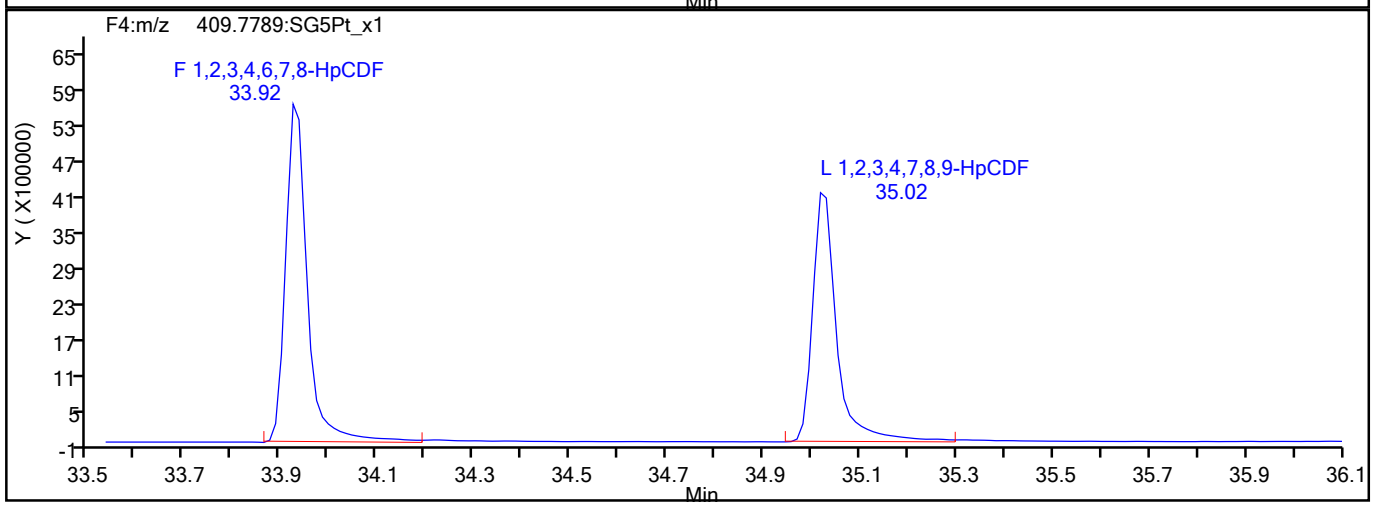

HpCDF Interference Mass

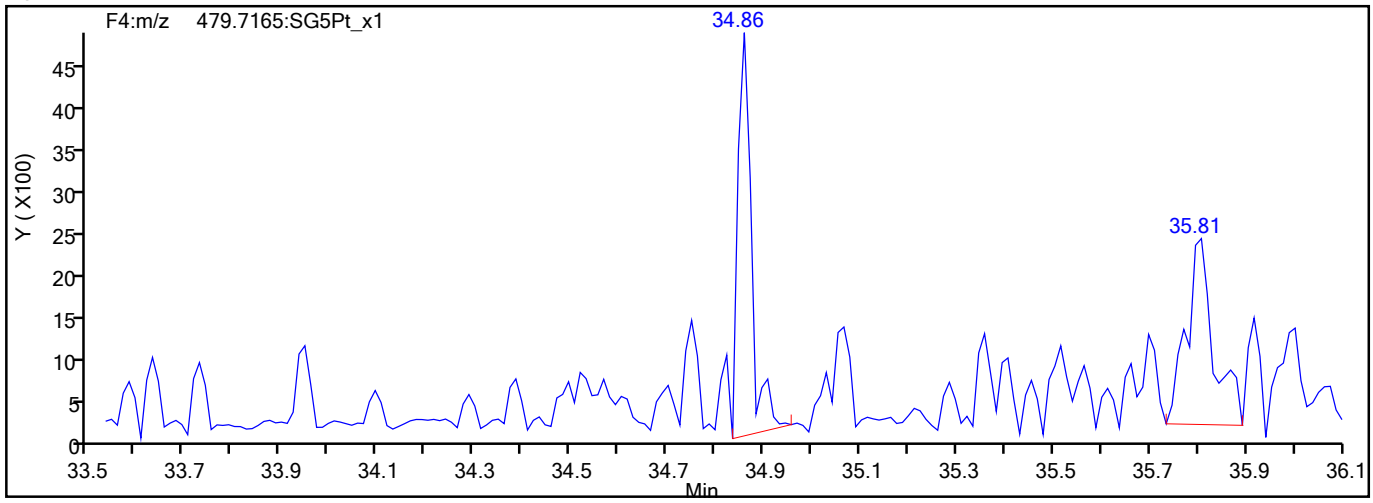

780274

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

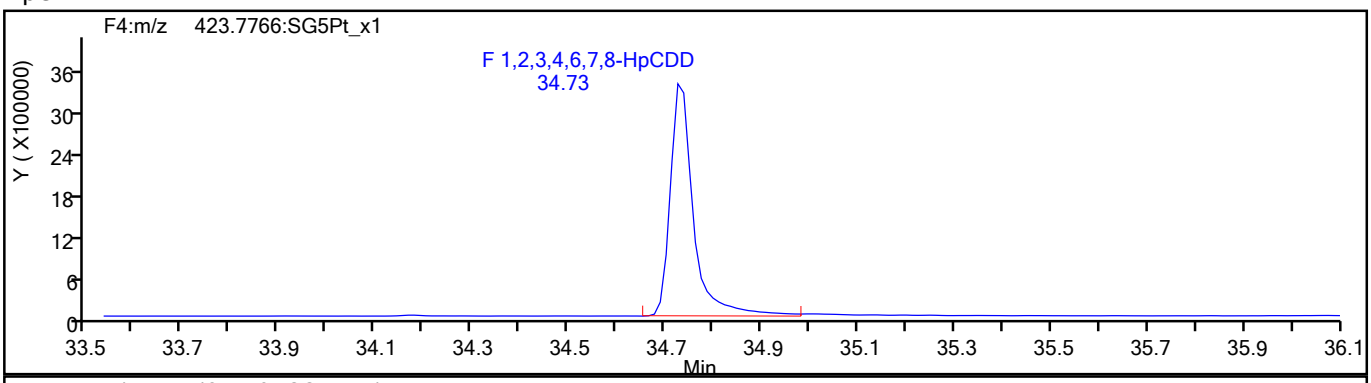

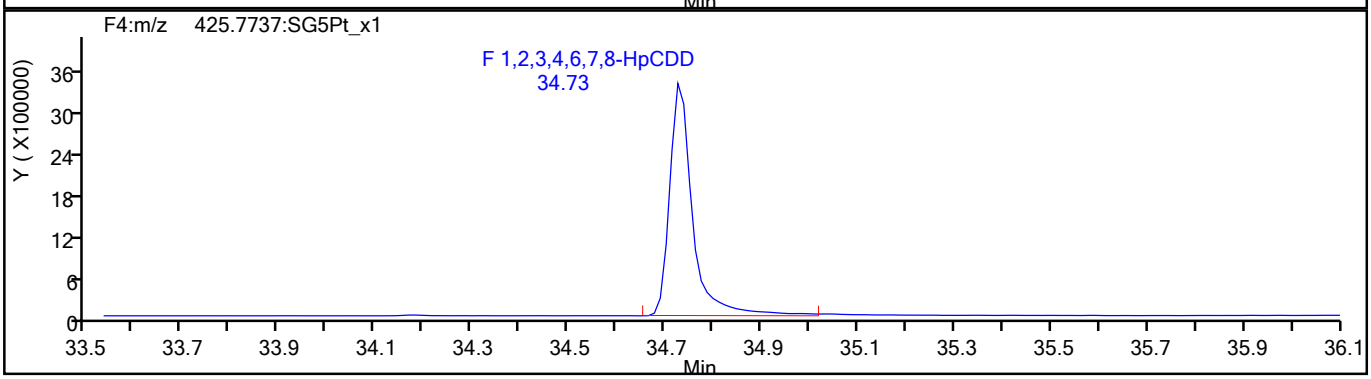

HpCDD Standards

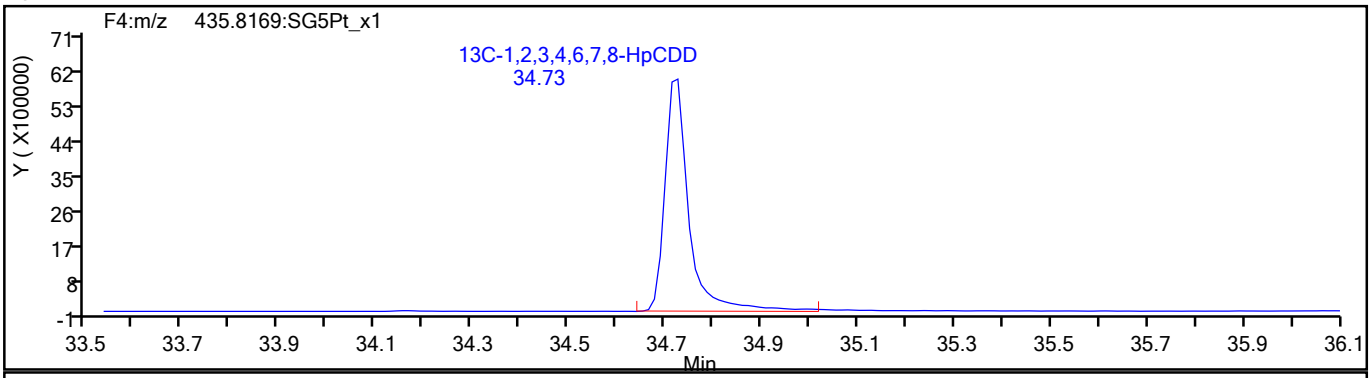

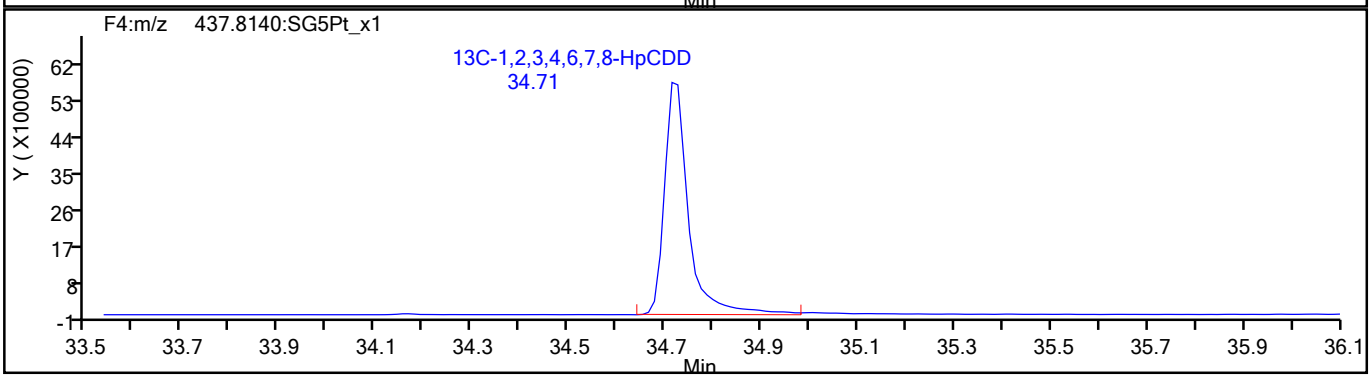

780275

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

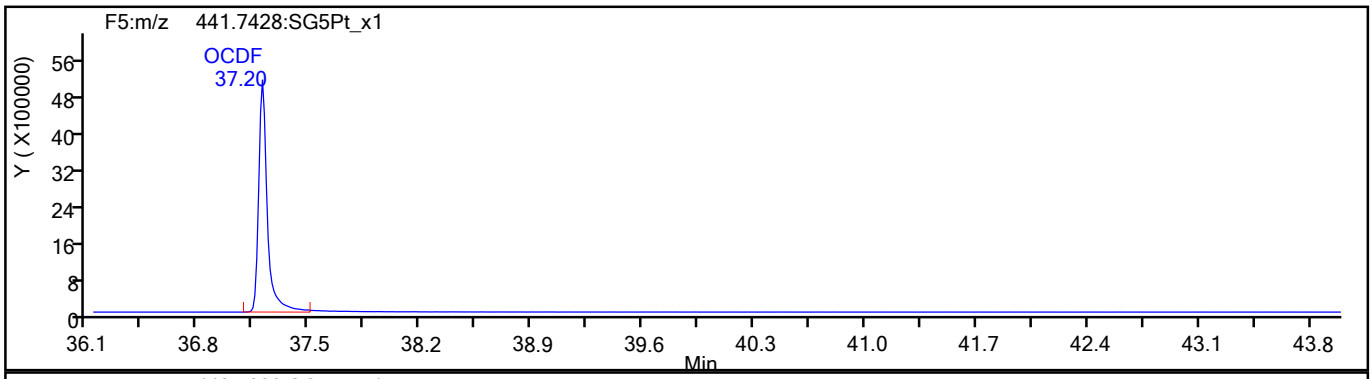

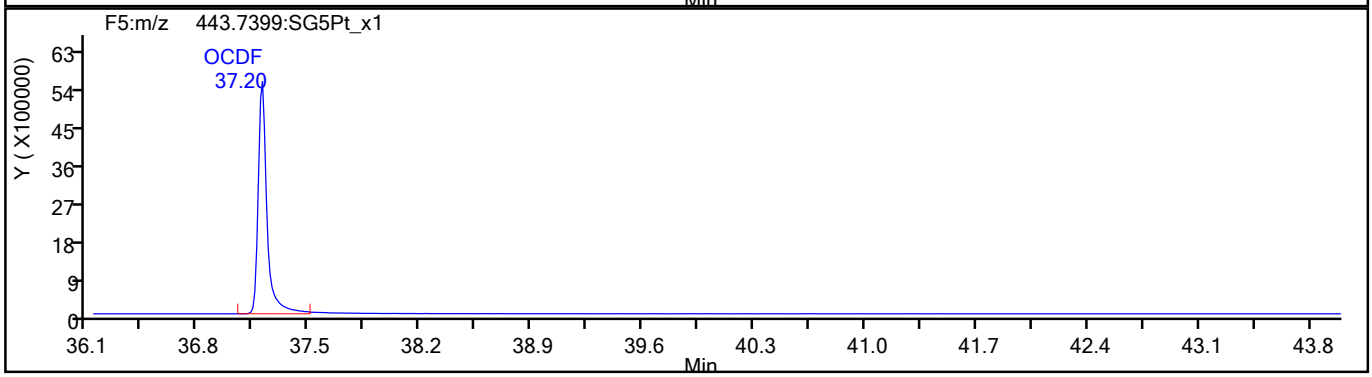

OCDF Standards

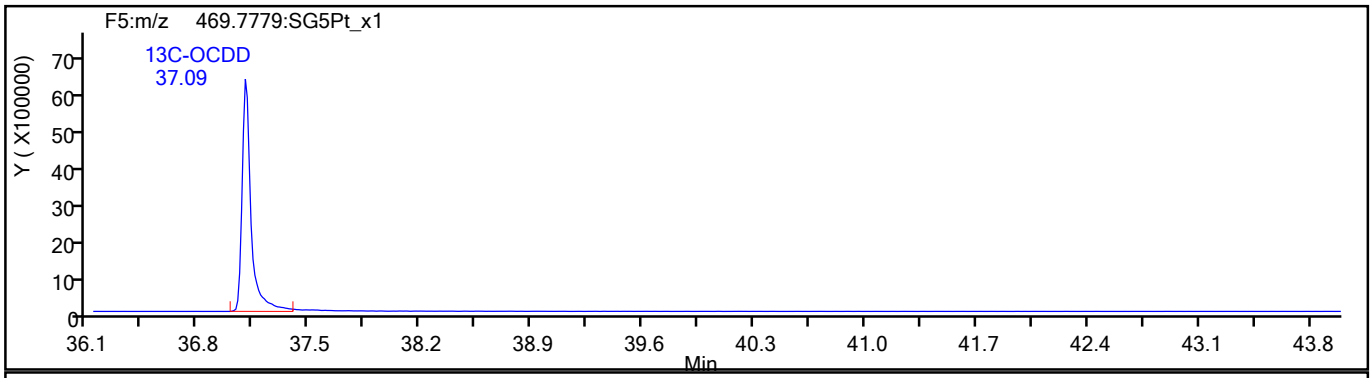

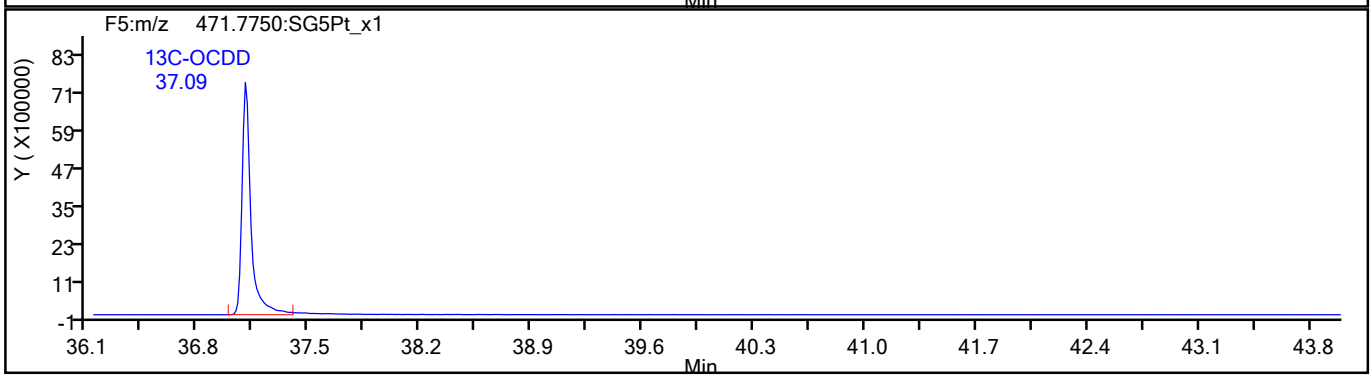

780276

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

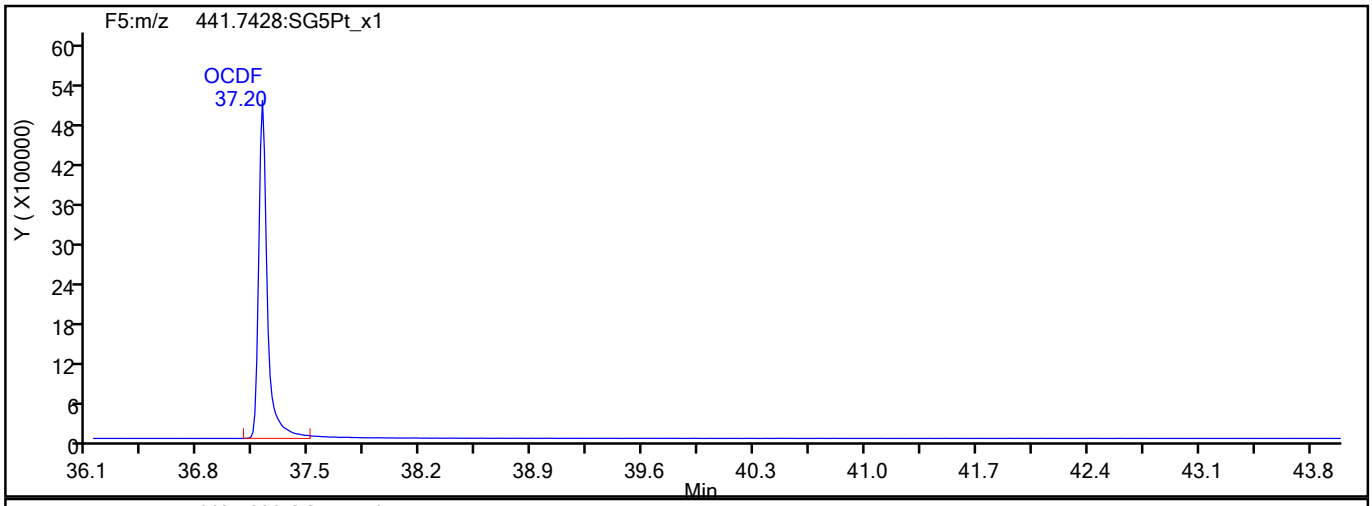

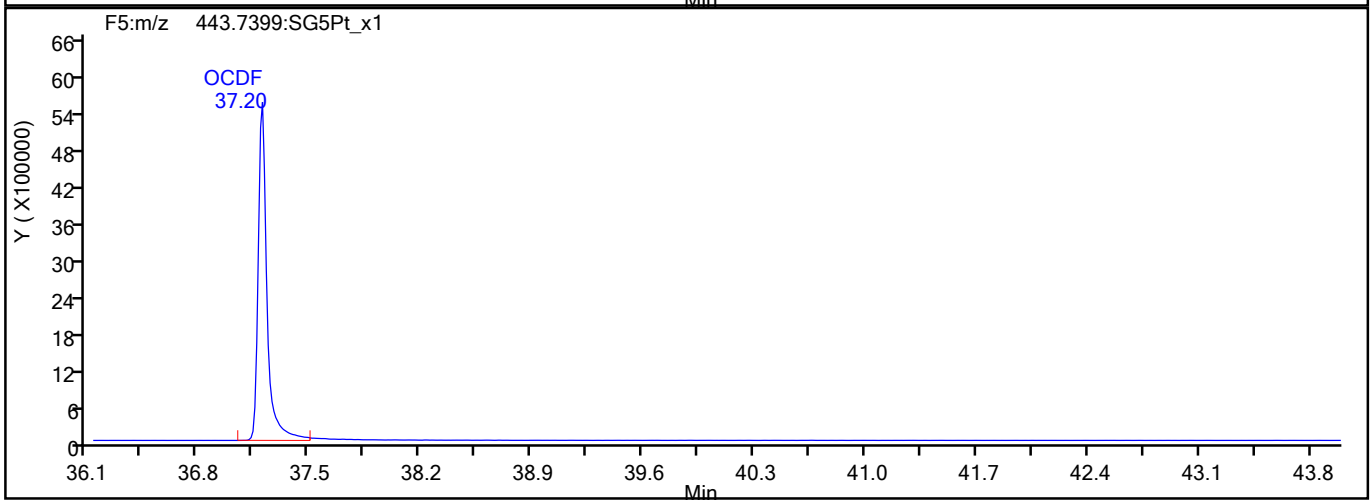

OCDF Interference Mass

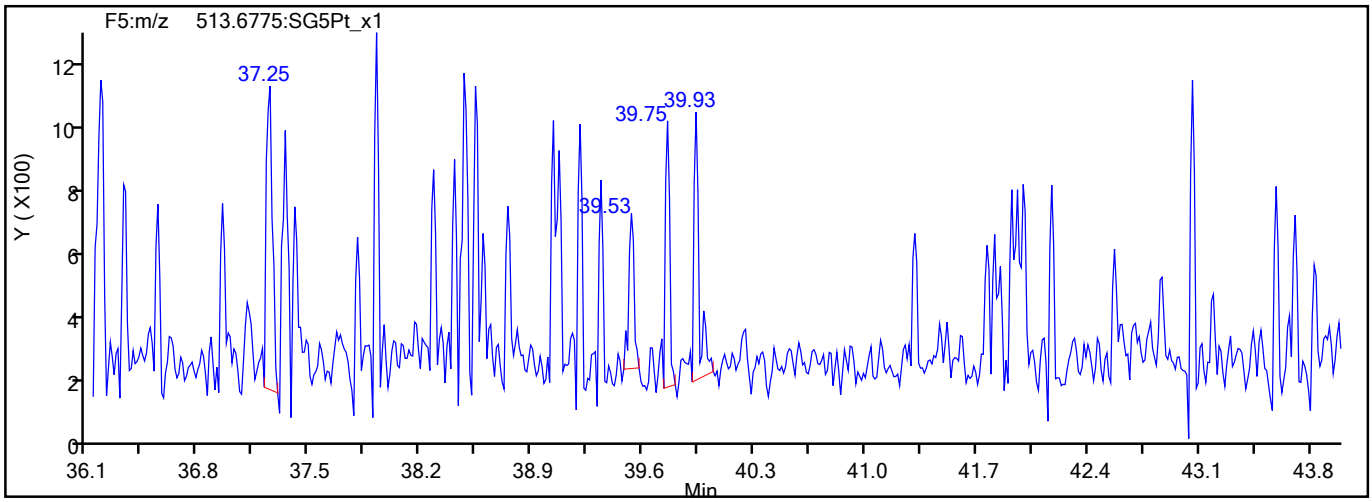

780277

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

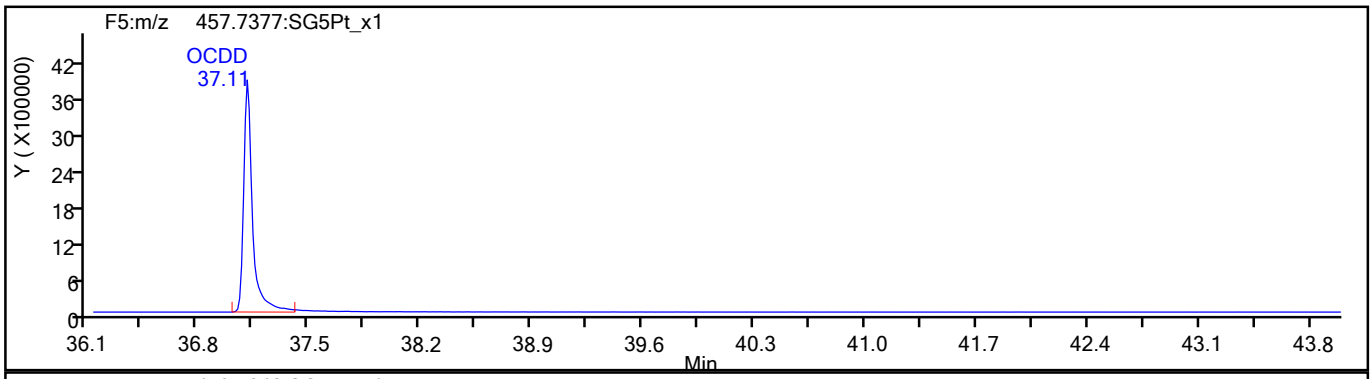

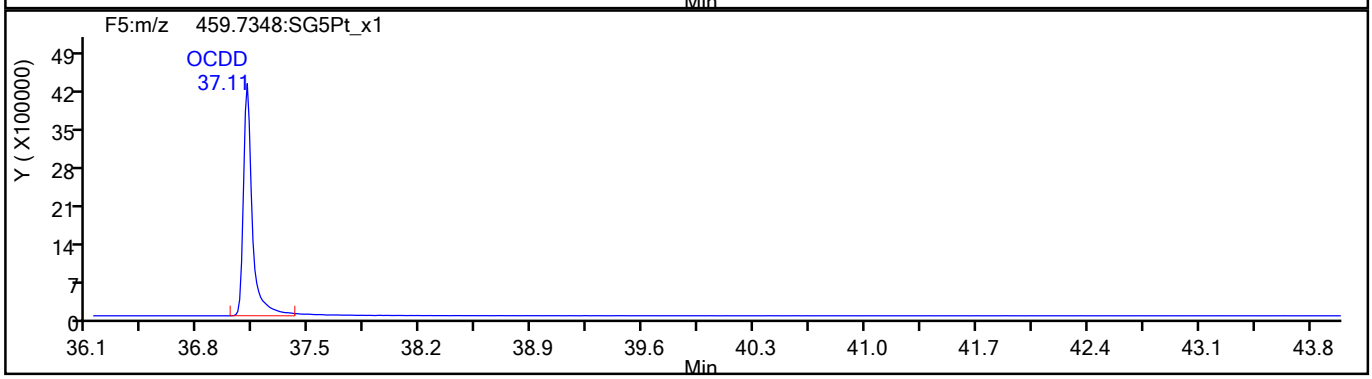

OCDD Standards

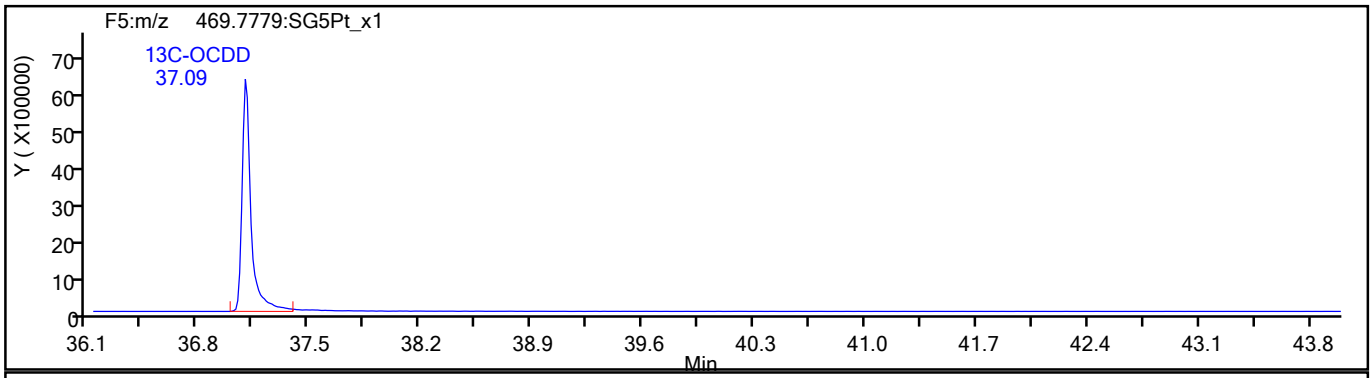

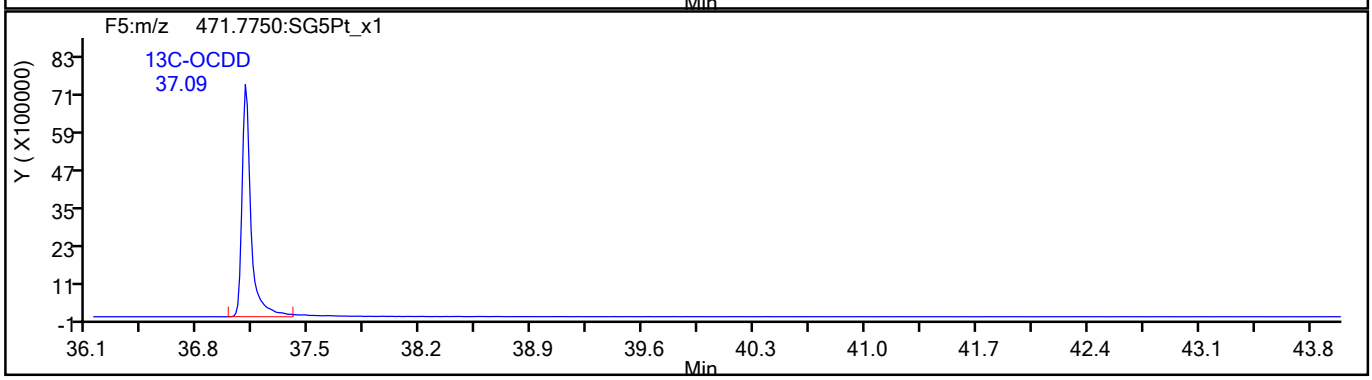

780278

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

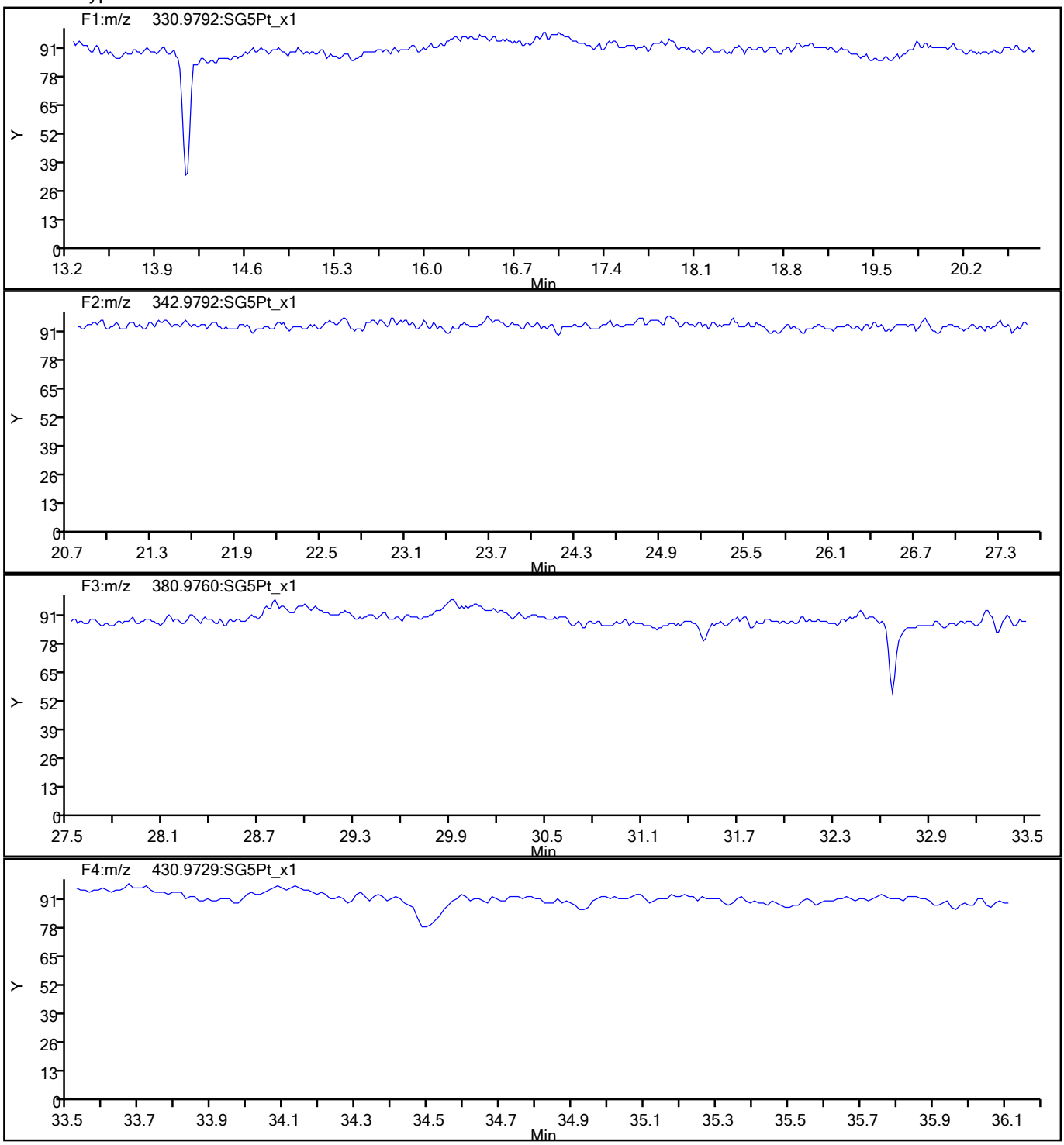

780279

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

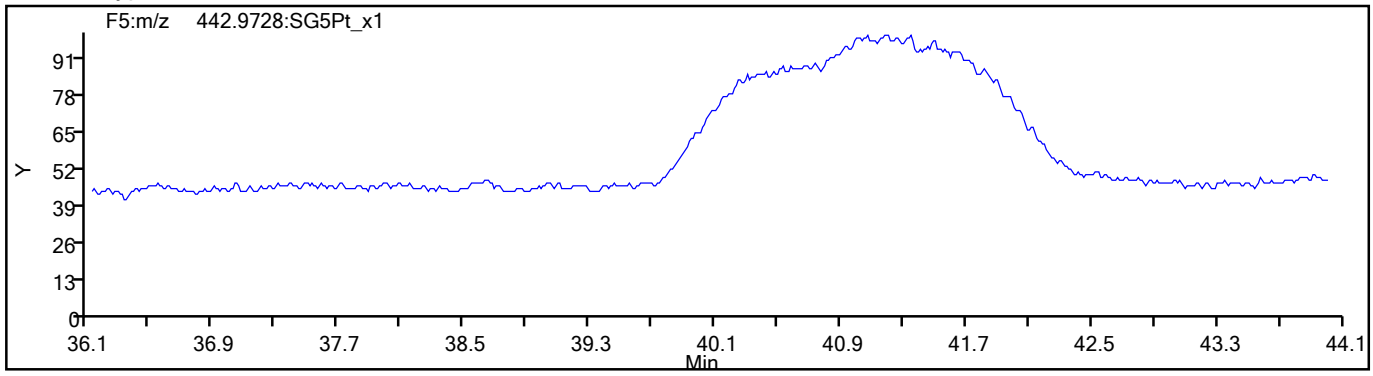

780280

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62046988	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	100332269	0.78	1.6249	99.5	99.5	0.1367	0.1367	99.52	
2,3,7,8-TCDF	17.628	44524782	0.76	1.0239	43.3	43.3	0.0503	0.0503	108	
S Total TCDF					43.3	43.3	0.0503	0.0503		
D 13C-2,3,7,8-TCDD	18.338	55471422	0.81	0.8993	99.4	99.4	0.1780	0.1780	99.41	
$ 37Cl4-2,3,7,8-TCDD	18.354	29474361		1.1071	42.9	42.9	0.0363	0.0363	107	
2,3,7,8-TCDD	18.354	29808948	0.78	1.2541	42.8	42.8	0.0471	0.0471	107	
S Total TCDD					42.8	42.8	0.0471	0.0471		
D 13C-1,2,3,7,8-PeCDF	22.762	75205597	1.60	1.2101	100.2	100.2	0.2087	0.2087	100	
1,2,3,7,8-PeCDF	22.776	171023920	1.60	1.0611	214.3	214.3	0.5904	0.5904	107	
D 13C-2,3,4,7,8-PeCDF	24.126	75259591	1.60	1.2395	97.9	97.9	0.2038	0.2038	97.86	
2,3,4,7,8-PeCDF	24.153	166805723	1.58	1.0184	217.6	217.6	0.6563	0.6563	109	
S Total PeCDF					431.9	431.9	0.6233	0.6233		
D 13C-1,2,3,7,8-PeCDD	24.862	46524396	1.64	0.7612	98.5	98.5	0.1093	0.1093	98.50	
1,2,3,7,8-PeCDD	24.889	105236005	1.57	1.0484	215.7	215.7	0.2317	0.2317	108	
S Total PeCDD					215.7	215.7	0.2317	0.2317		
D 13C-1,2,3,4,7,8-HxCDF	30.835	64951889	0.52	1.0837	95.7	95.7	0.4366	0.4366	95.70	
1,2,3,4,7,8-HxCDF	30.862	155057762	1.22	1.0851	220.0	220.0	1.165	1.165	110	
D 13C-1,2,3,6,7,8-HxCDF	31.008	70459920	0.52	1.1279	99.7	99.7	0.4194	0.4194	99.75	
1,2,3,6,7,8-HxCDF	31.022	168618976	1.23	1.1260	212.5	212.5	1.081	1.081	106	
D 13C-2,3,4,6,7,8-HxCDF	31.754	66145684	0.53	1.0637	99.3	99.3	0.4448	0.4448	99.29	
2,3,4,6,7,8-HxCDF	31.780	164241378	1.21	1.1675	212.7	212.7	0.8912	0.8912	106	
D 13C-1,2,3,7,8,9-HxCDF	32.526	59636084	0.52	0.9676	98.4	98.4	0.4890	0.4890	98.41	
1,2,3,7,8,9-HxCDF	32.539	148834491	1.23	1.1664	214.0	214.0	0.9364	0.9364	107	
S Total HxCDF					859.2	859.2	1.018	1.018		
* 13C-1,2,3,7,8,9-HxCDD	32.339	62627787	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44144841	1.25	0.7334	96.1	96.1	0.3745	0.3745	96.11	
1,2,3,4,7,8-HxCDD	31.953	103044220	1.27	1.0640	219.4	219.4	0.6488	0.6488	110	
D 13C-1,2,3,6,7,8-HxCDD	32.033	54392394	1.25	0.8802	98.7	98.7	0.3120	0.3120	98.67	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	118900298	1.28	1.0001	218.6	218.6	0.5965	0.5965	109	
1,2,3,7,8,9-HxCDD	32.353	122394998	1.26	1.1325	219.4	219.4	0.5651	0.5651	110	
S Total HxCDD					657.3	657.3	0.6034	0.6034		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	47752972	0.44	0.7730	98.6	98.6	1.001	1.001	98.64	
1,2,3,4,6,7,8-HpCDF	33.924	147892240	1.06	1.4413	214.9	214.9	2.024	2.024	107	
D 13C-1,2,3,4,7,8,9-HpCDF	35.017	42687625	0.44	0.7008	97.3	97.3	1.104	1.104	97.26	
1,2,3,4,7,8,9-HpCDF	35.017	123968724	1.06	1.3174	220.4	220.4	2.743	2.743	110	
S Total HpCDF					435.3	435.3	2.383	2.383		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	40442950	1.02	0.6472	99.8	99.8	0.5241	0.5241	99.77	
1,2,3,4,6,7,8-HpCDD	34.726	94435922	1.04	1.0943	213.4	213.4	0.9683	0.9683	107	
S Total HpCDD					213.4	213.4	0.9683	0.9683		
D 13C-OCDD	37.093	57303880	0.88	0.4472	204.6	204.6	0.2753	0.2753	102	
OCDF	37.201	181747068	0.91	1.4382	441.1	441.1	0.4159	0.4159	110	
OCDD	37.105	135570174	0.90	1.1070	427.4	427.4	0.4029	0.4029	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		27754917	7076779	4201	10502	1685		
333.9339	18.142	18.142	0		34292071	8691565	5896	14740	1474	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	43967601	10754823	8470	21175	1270		
317.9389	17.613	17.616	0	0.971	56364668	13840834	5538	13845	2499	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	19278962	4714580	2218	5545	2126		
305.8987	17.628	17.631	0	1.001	25245820	6261705	2854	7135	2194	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24807018	5848000	4201	10502	1392		
333.9339	18.338	18.338	0	1.011	30664404	7186127	5896	14740	1219	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	29474361	7040079	2537	6342	2775		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	13088265	3099418	1571	3927	1973		
321.8936	18.354	18.357	0	1.001	16720683	3961925	1508	3770	2627	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46265218	8069932	9479	23697	851		
353.8970	22.749	22.754	0	1.254	28940379	5072009	6452	16130	786	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	105236981	18677381	20013	50032	933		
341.8567	22.776	22.779	0	1.001	65786939	11693027	12919	32297	905	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46298187	7561650	9479	23697	798		
353.8970	24.126	24.129	0	1.330	28961404	4756017	6452	16130	737	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	102234081	17002363	20013	50032	850		
341.8567	24.153	24.156	0	1.001	64571642	10773383	12919	32297	834	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28884955	4397104	3175	7937	1385		
369.8919	24.862	24.865	0	1.370	17639441	2717935	2071	5177	1312	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	64347111	9837651	3945	9862	2494		
357.8516	24.889	24.892	0	1.001	40888894	6265054	2969	7422	2110	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	22237957	4900100	10775	26937	455		
385.8610	30.835	30.838	0	0.953	42713932	9213265	21190	52975	435	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	85201859	18424877	39257	98142	469		
375.8178	30.849	30.857	0	1.000	69855903	15011303	32096	80240	468	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	23996455	5001651	10775	26937	464		
385.8610	31.008	31.003	0	0.959	46463465	9659865	21190	52975	456	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	92842545	20075526	39257	98142	511		
375.8178	31.022	31.022	0	1.000	75776431	16178695	32096	80240	504	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	22792396	5861290	10775	26937	544		
385.8610	31.754	31.756	0	0.982	43353288	11282982	21190	52975	532	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.780	31.772	0	1.001	89865159	23412461	39257	98142	596		
375.8178	31.767	31.772	0	1.000	74376219	19191516	32096	80240	598	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20506438	5659225	10775	26937	525		
385.8610	32.526	32.523	0	1.006	39129646	10674002	21190	52975	504	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	82057134	22664755	39257	98142	577		
375.8178	32.539	32.534	0	1.000	66777357	17875439	32096	80240	557	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		34509982	9306847	9505	23762	979		
403.8529	32.339	32.342	0		28117805	7584182	9052	22630	838	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	24560847	6976899	9505	23762	734		
403.8529	31.927	31.929	0	0.987	19583994	5667072	9052	22630	626	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.953	31.945	0	1.001	57595942	16510469	19316	48290	855		
391.8127	31.940	31.945	0	1.000	45448278	13107381	15598	38995	840	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	30198617	8138784	9505	23762	856		
403.8529	32.033	32.033	0	0.991	24193777	6493948	9052	22630	717	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	66690137	17959920	19316	48290	930		
391.8127	32.047	32.047	0	1.000	52210161	14135061	15598	38995	906	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	68169382	18483699	19316	48290	957		
391.8127	32.353	32.355	0	1.013	54225616	14872863	15598	38995	954	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14610497	4589210	16388	40970	280		
419.8220	33.912	33.914	0	1.049	33142475	10497182	35883	89707	293	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	75936953	24520194	90693	226732	270		
409.7789	33.924	33.926	0	1.000	71955287	23549459	85368	213420	276	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.017	35.010	0	1.083	12971814	3739945	16388	40970	228		
419.8220	35.017	35.010	0	1.083	29715811	8442322	35883	89707	235	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	63647403	18553677	90693	226732	205		
409.7789	35.017	35.020	0	1.000	60321321	17850429	85368	213420	209	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	20381379	6053926	11567	28917	523		
437.8140	34.714	34.716	0	1.073	20061571	5957434	11351	28377	525	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	48165795	14539111	26079	65197	558		
425.7737	34.726	34.726	0	1.000	46270127	14041663	24831	62077	565	1.04(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26901378	6693523	3896	9740	1718		
471.7750	37.093	37.094	0	1.147	30402502	7661603	4420	11050	1733	0.88(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	86562223	22814939	9244	23110	2468		
443.7399	37.201	37.199	0	1.003	95184845	24785143	7929	19822	3126	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	64116469	16176091	6061	15152	2669		
459.7348	37.105	37.106	0	1.000	71453705	17977820	6746	16865	2665	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

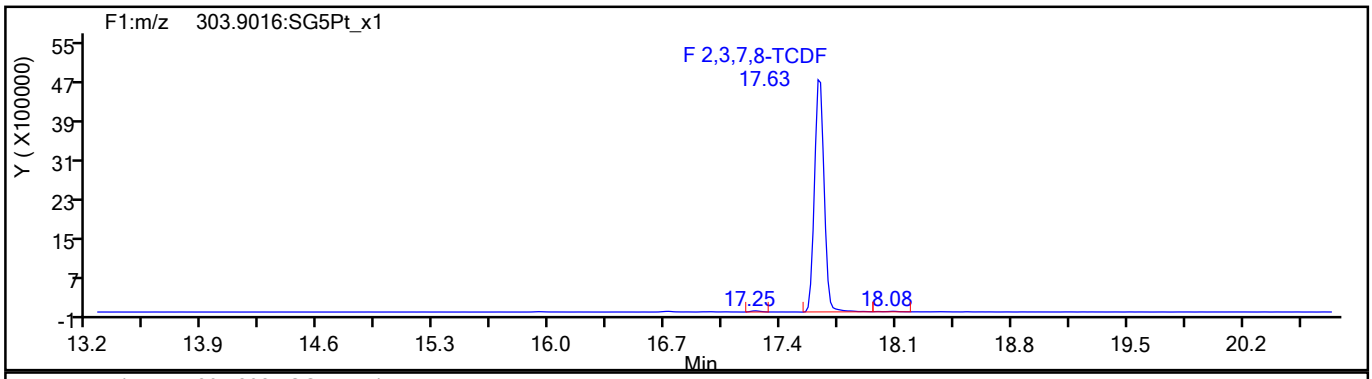

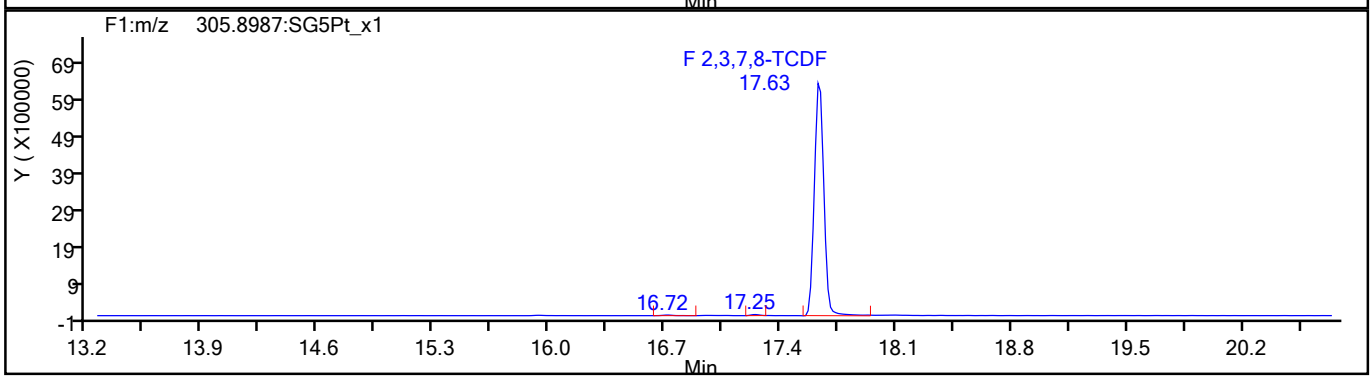

TCDF Standards

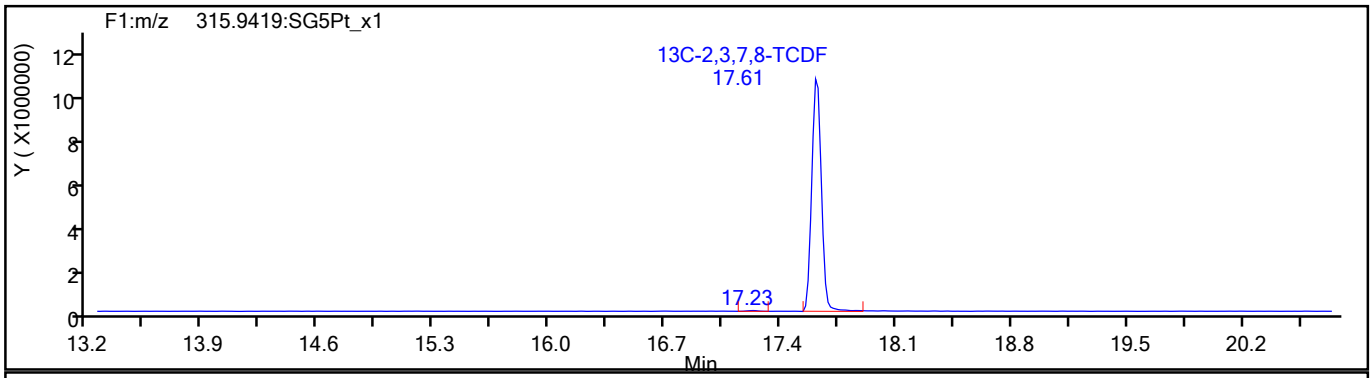

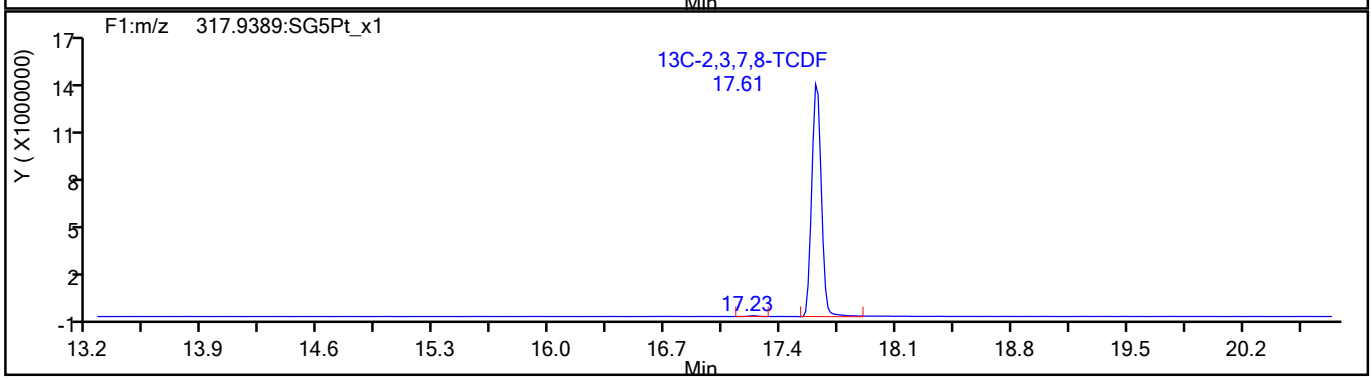

780286

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

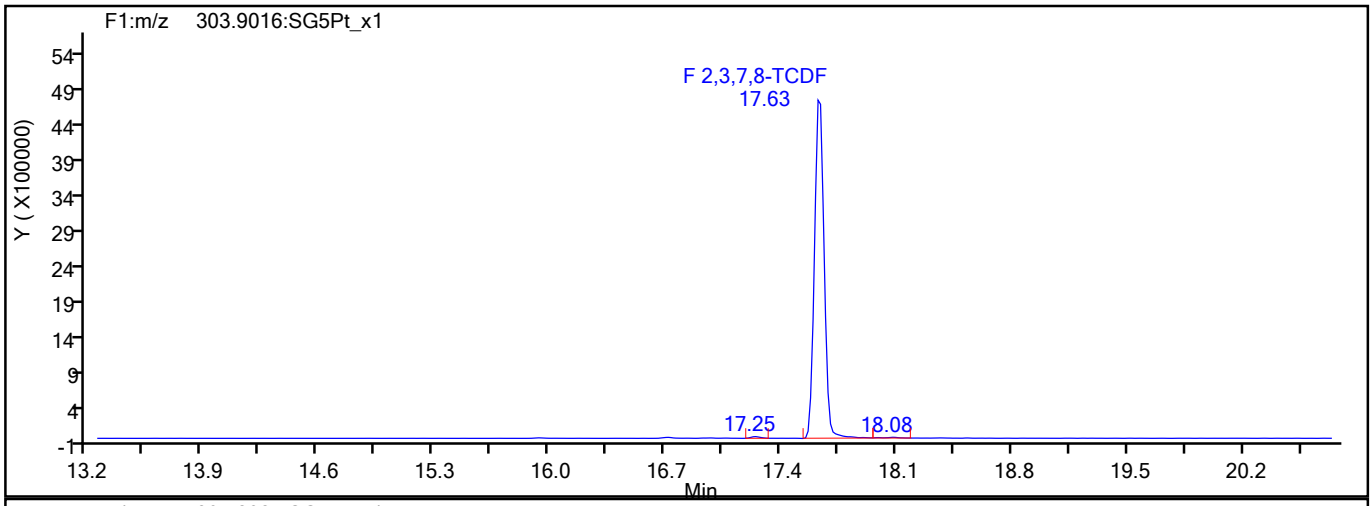

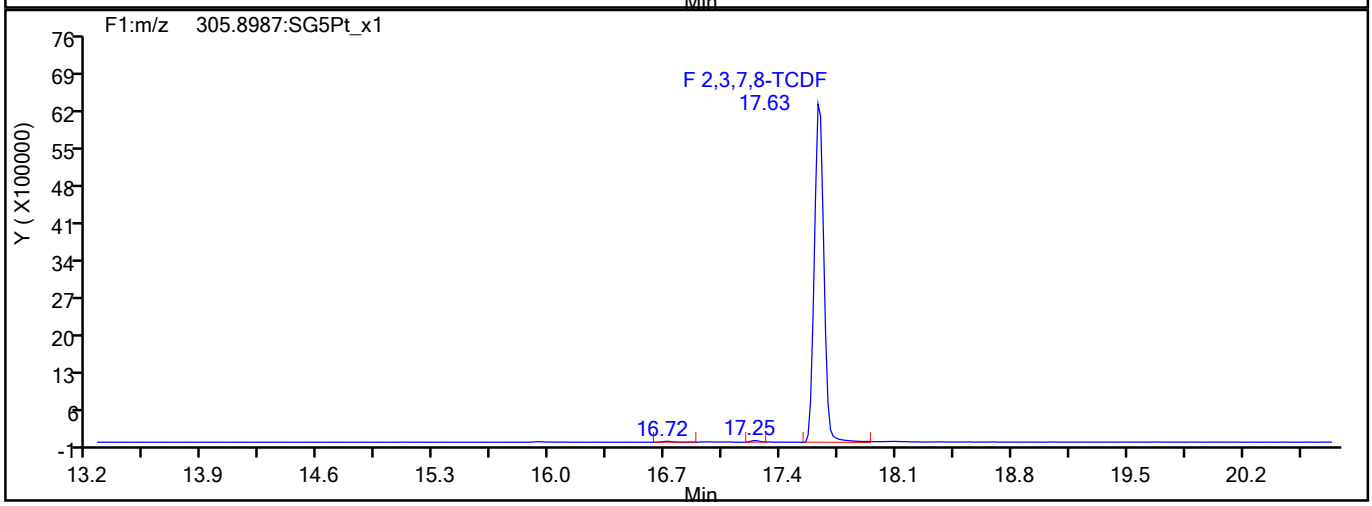

TCDF Interference Mass

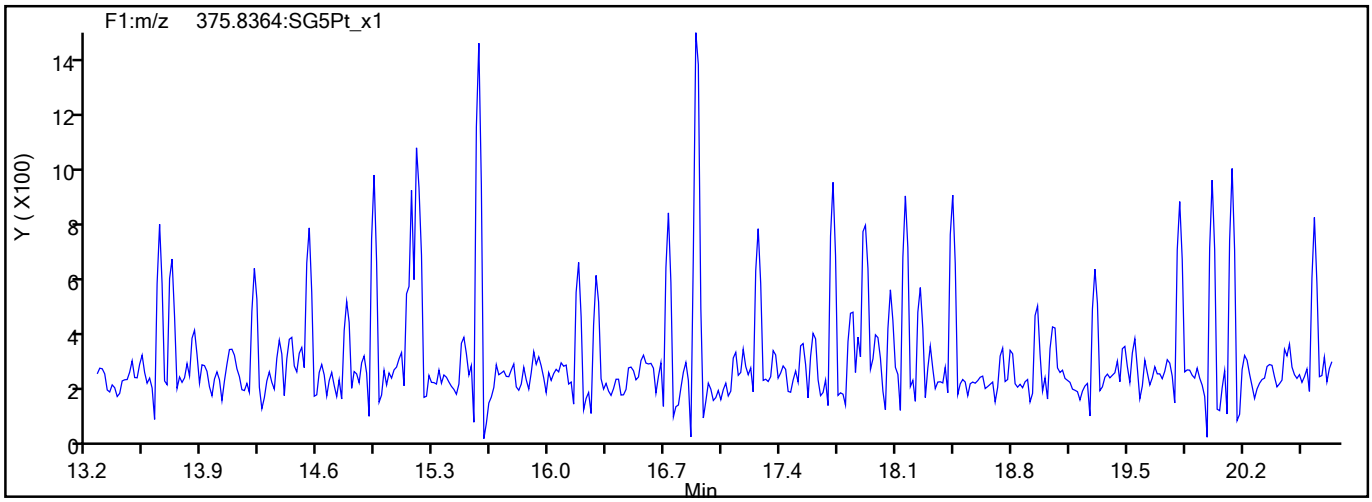

780287

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

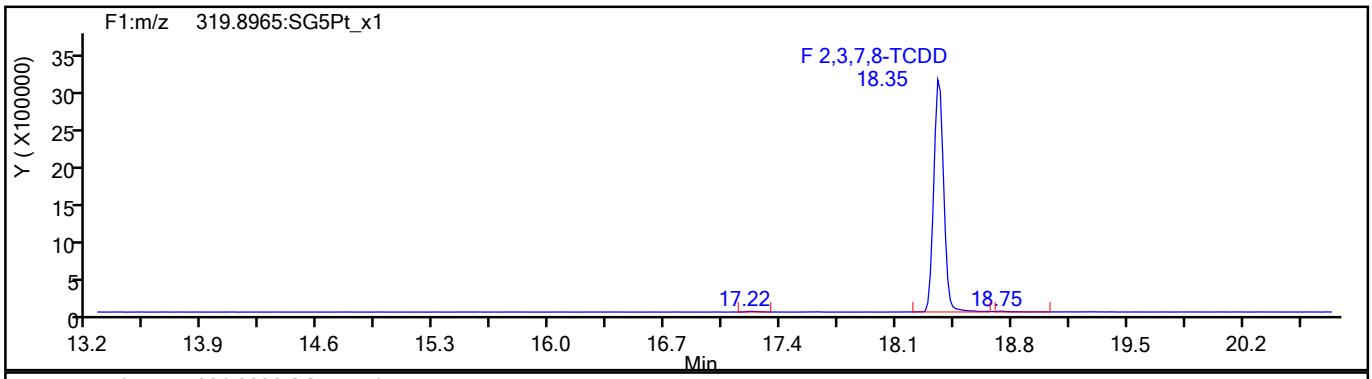

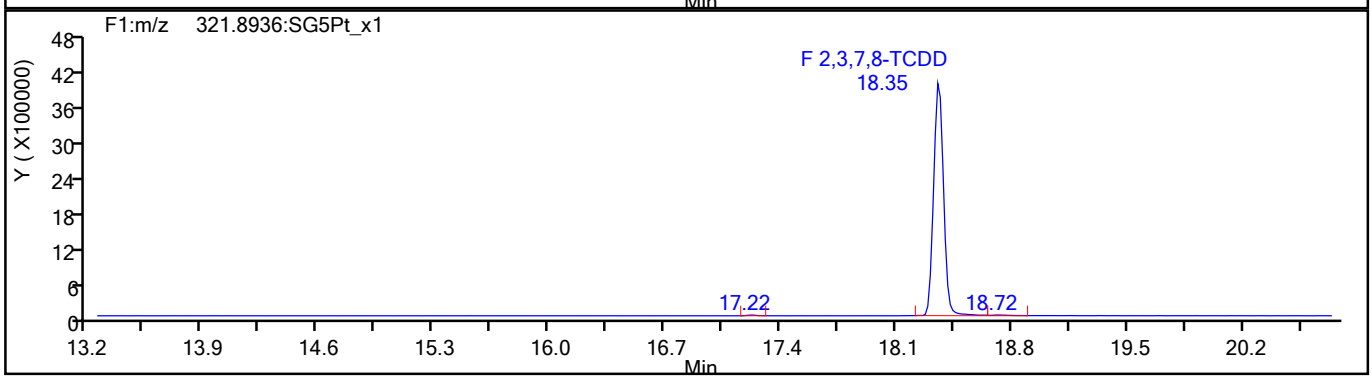

TCDD Standards

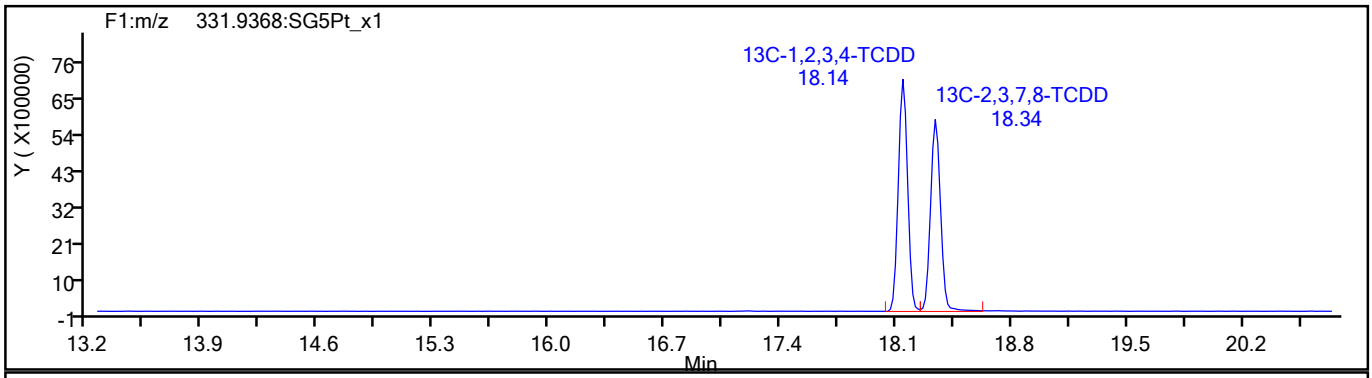

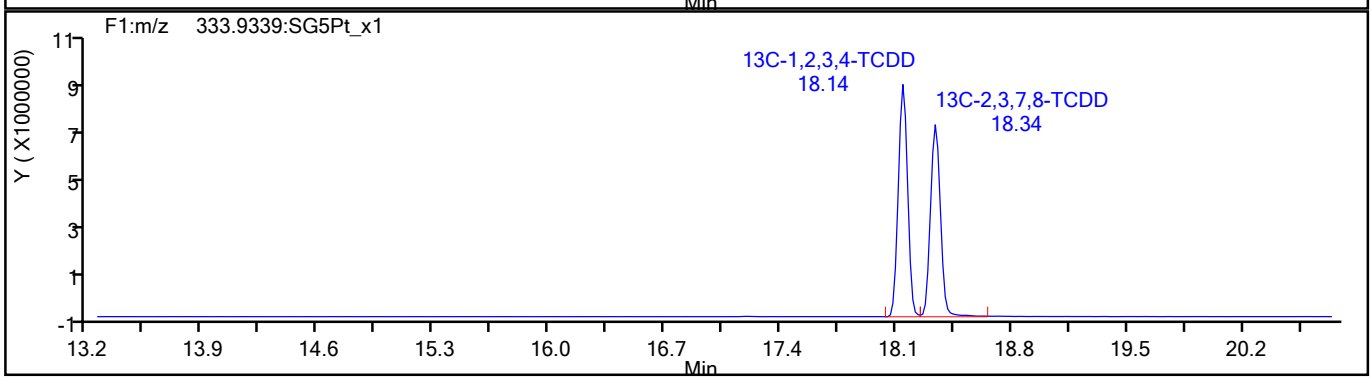

780288

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

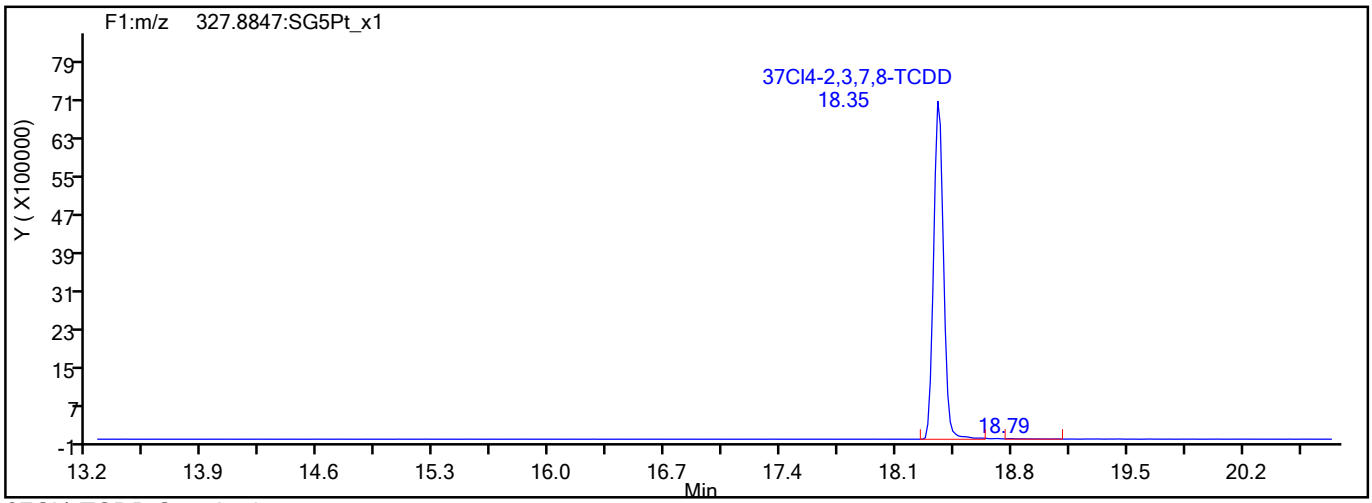

37Cl4-TCDD Standards

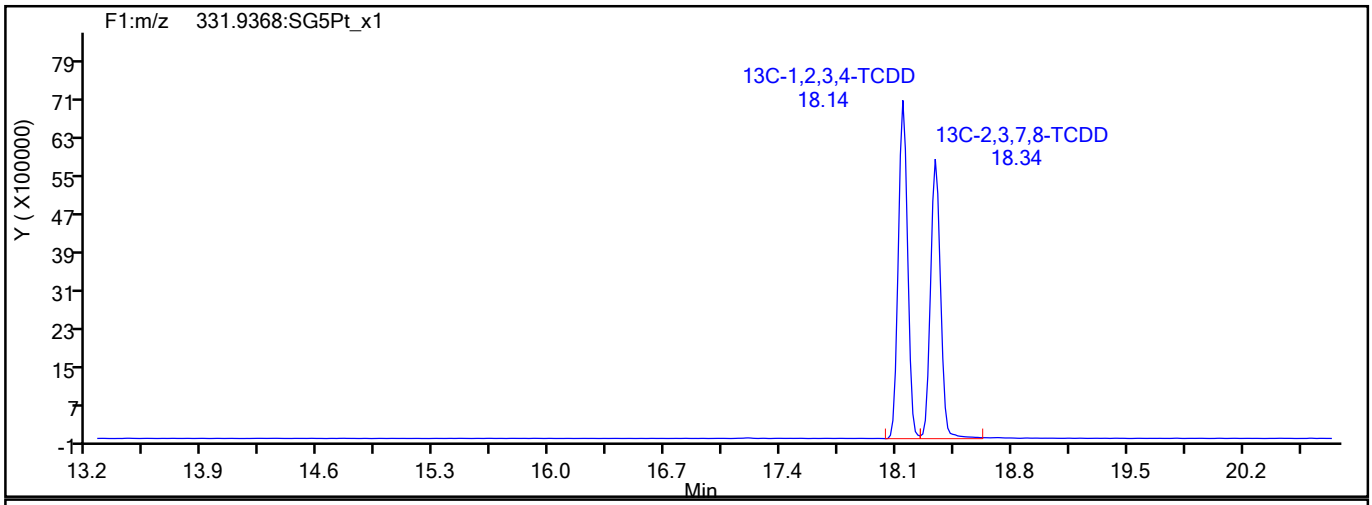

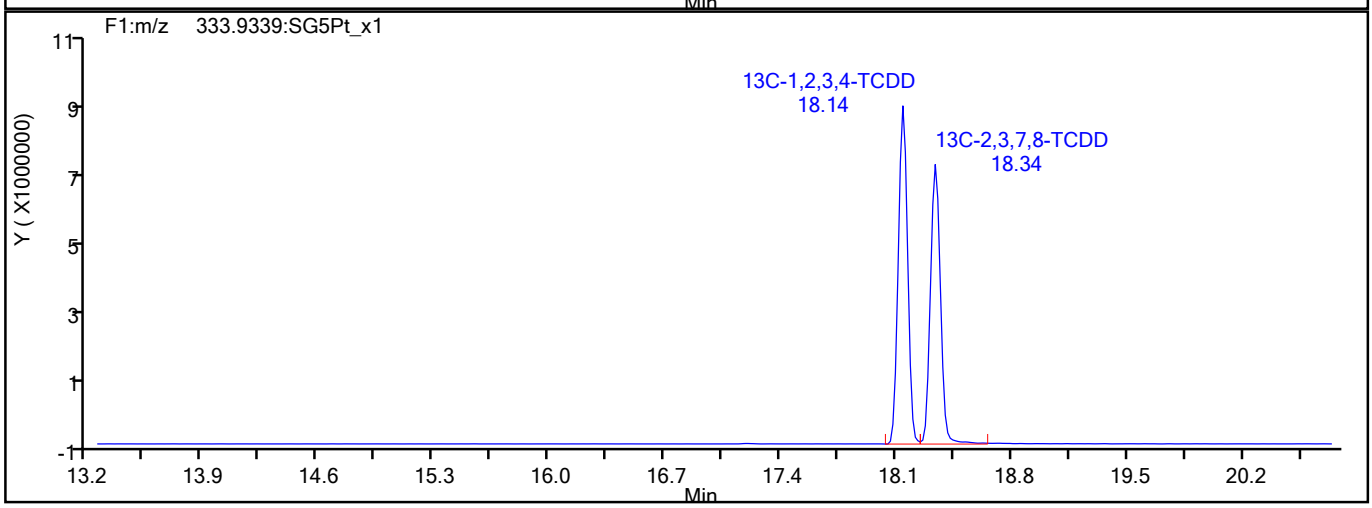

780289

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

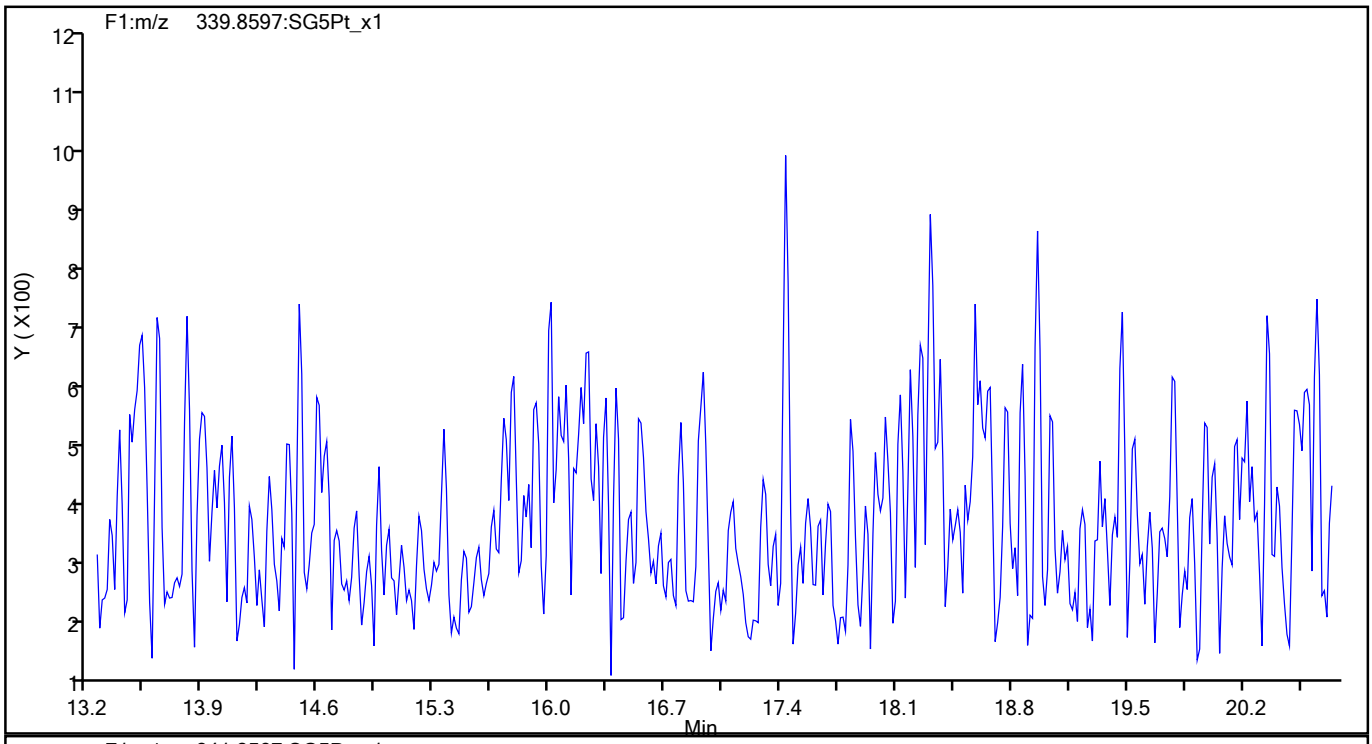

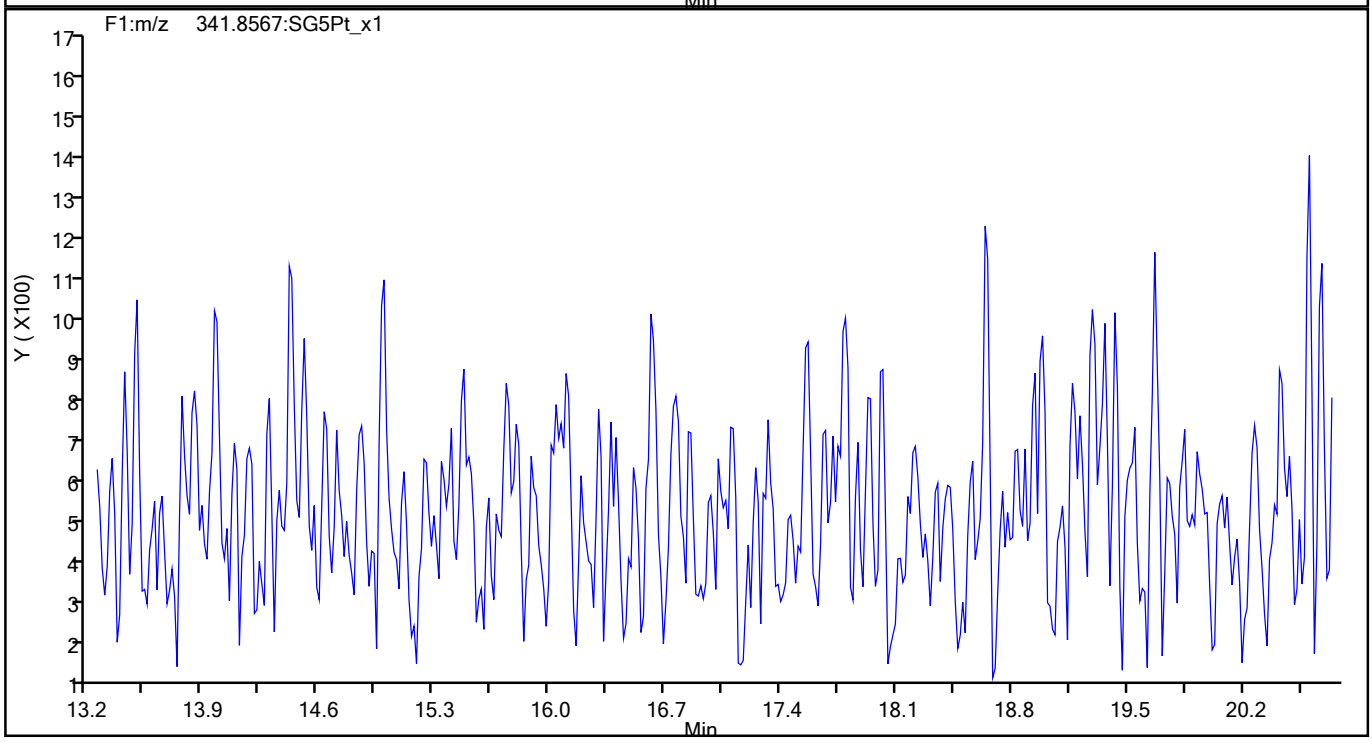

780290

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

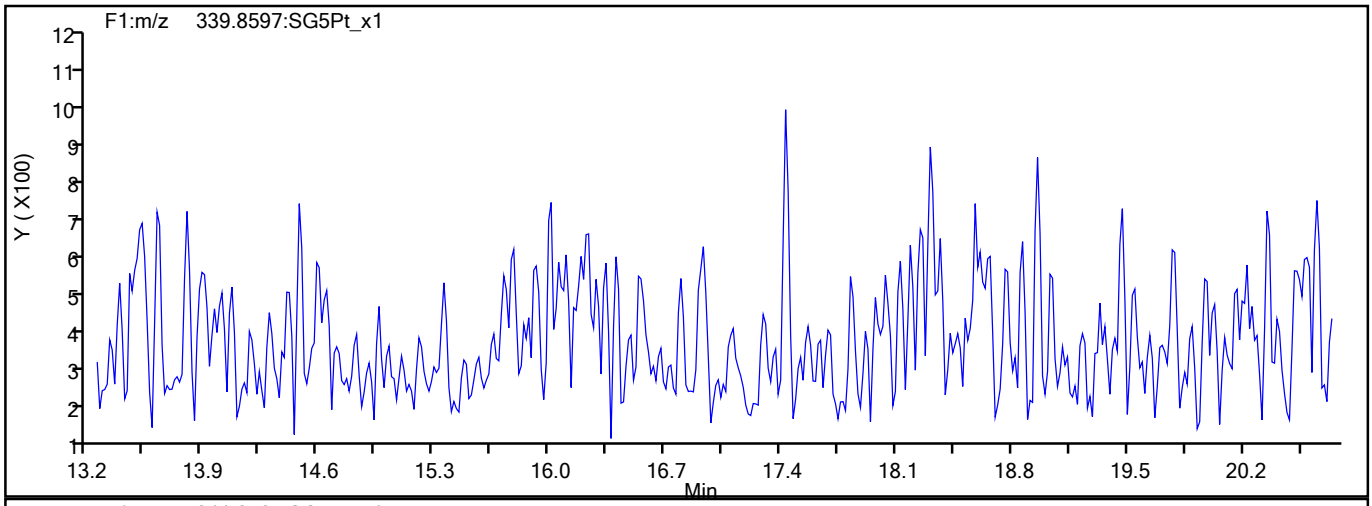

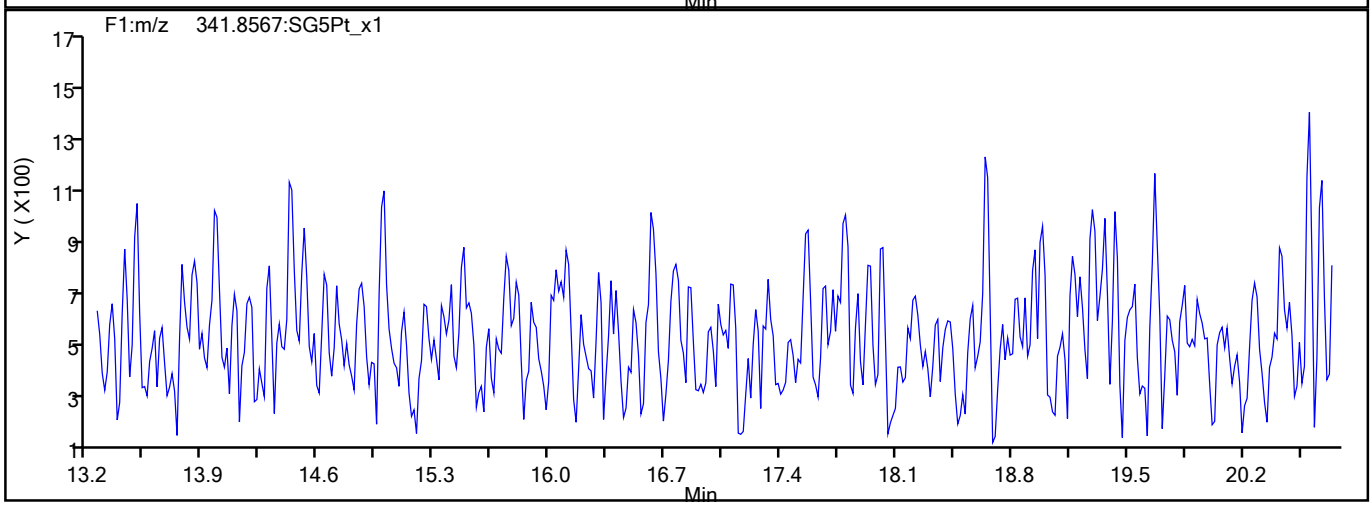

F1 PeCDFs Interference Mass

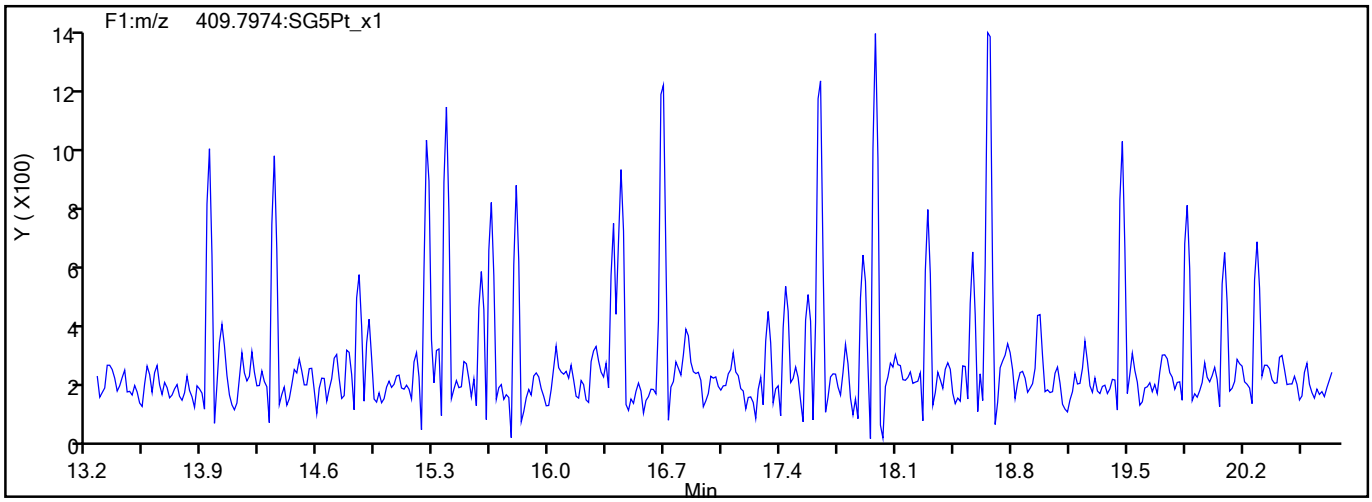

780291

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

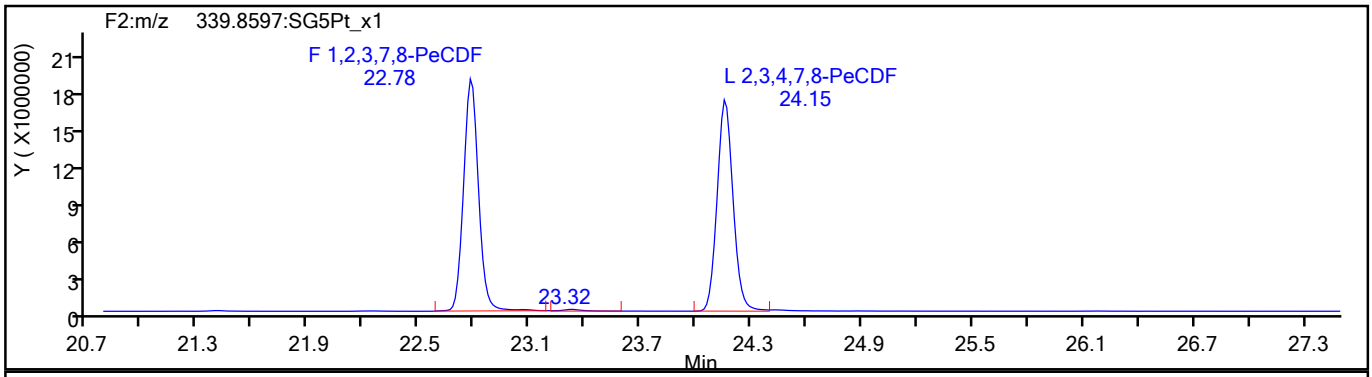

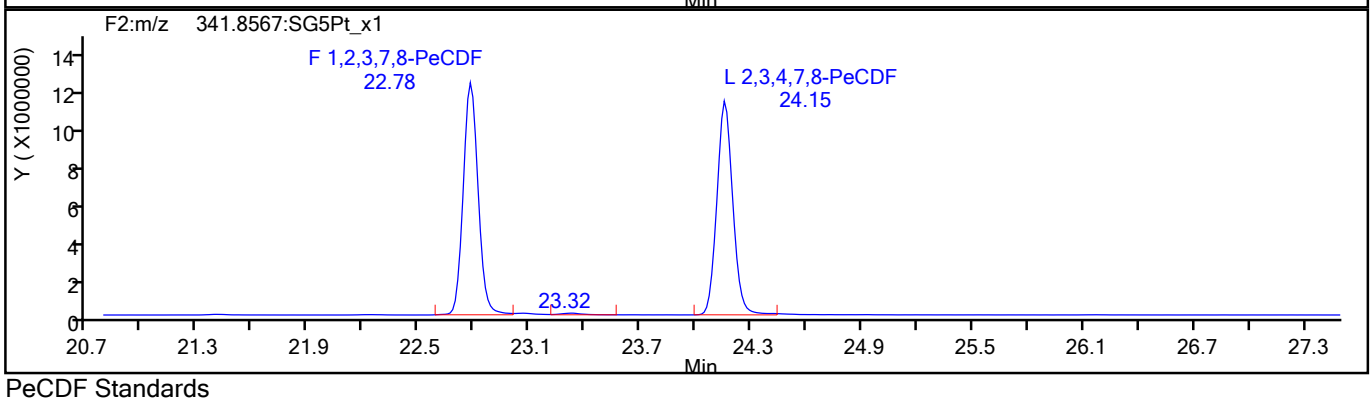

PeCDF Standards

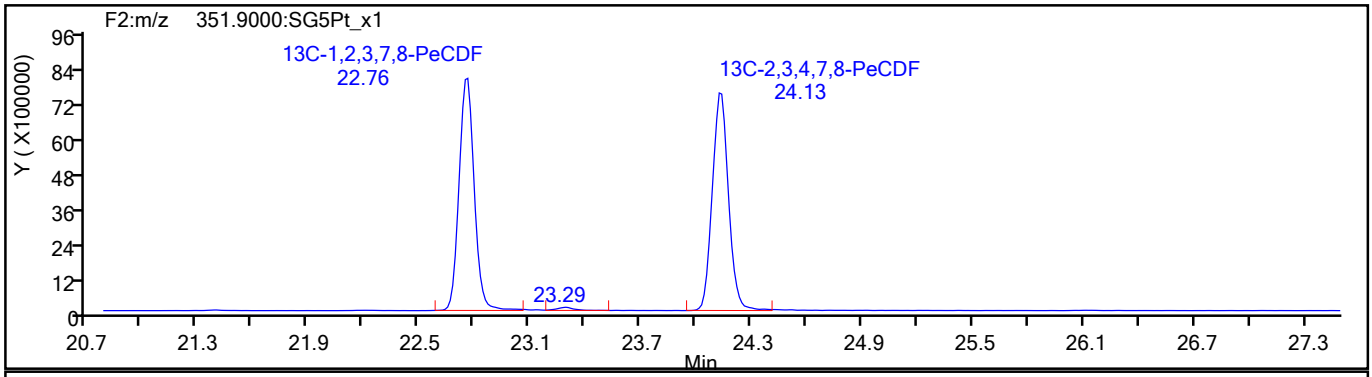

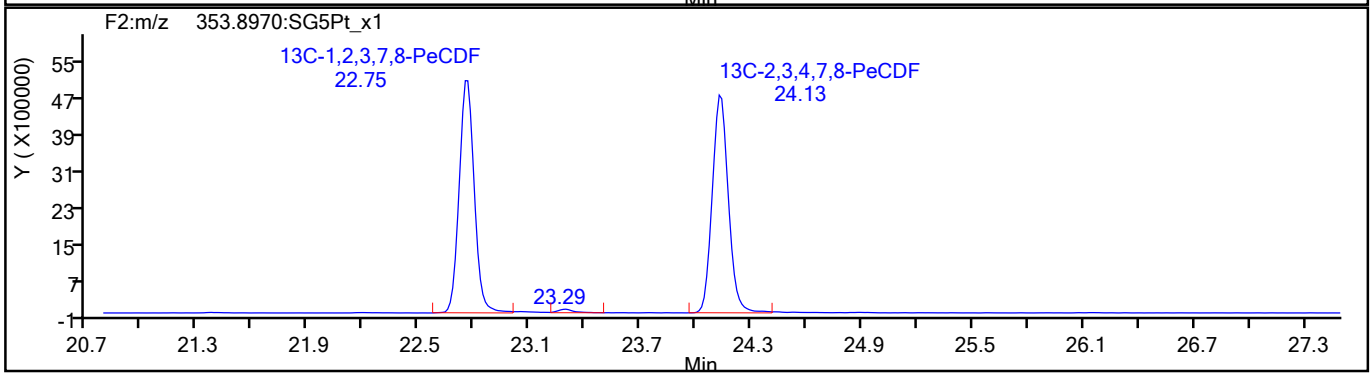

780292

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

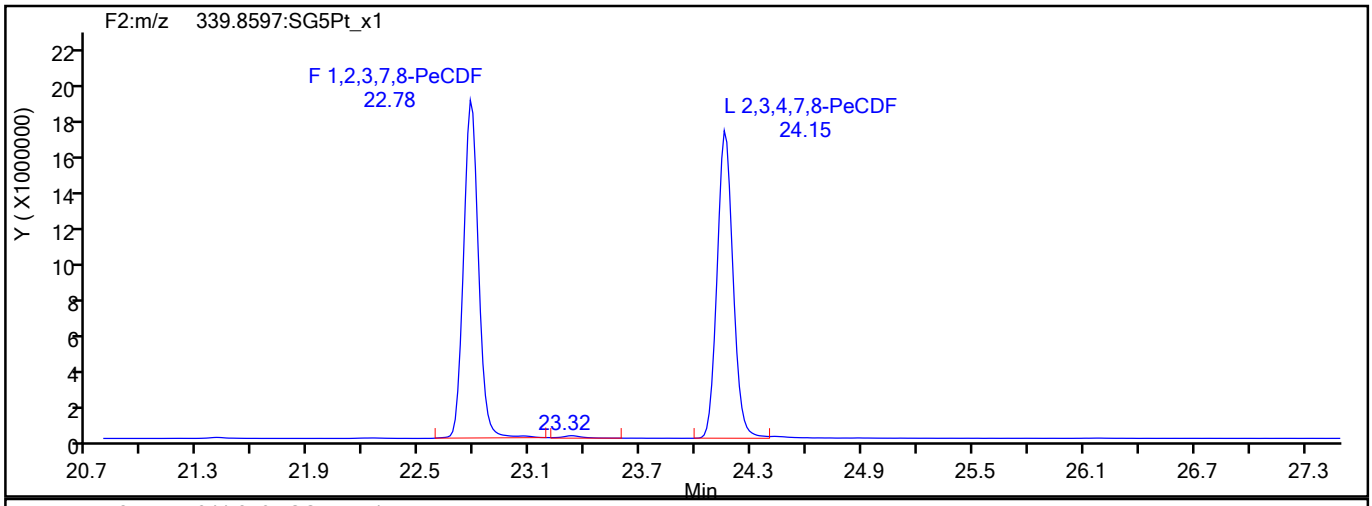

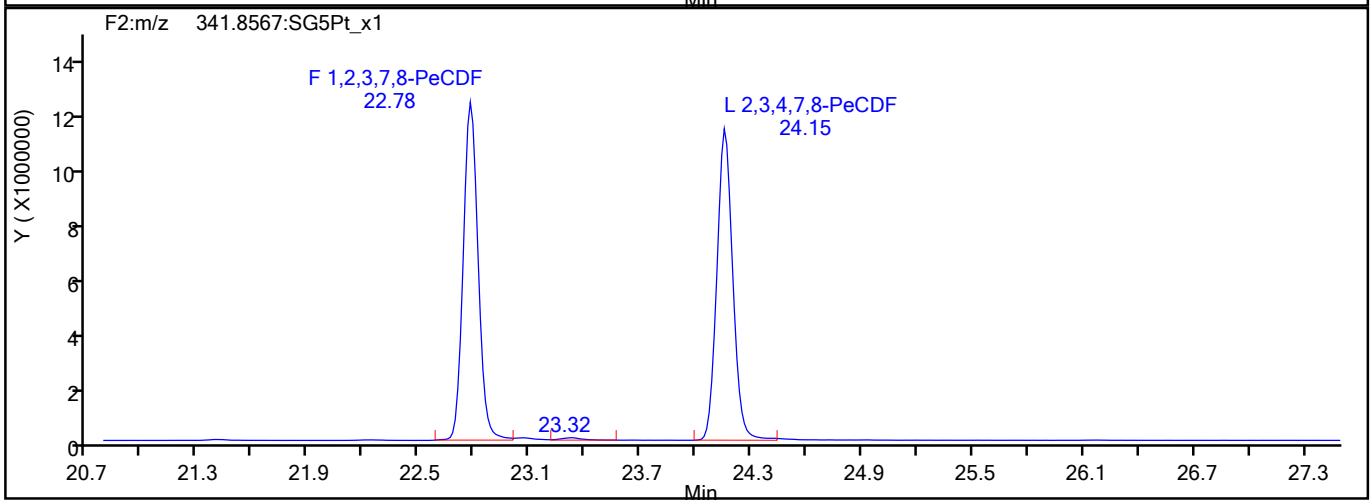

PeCDF Interference Mass

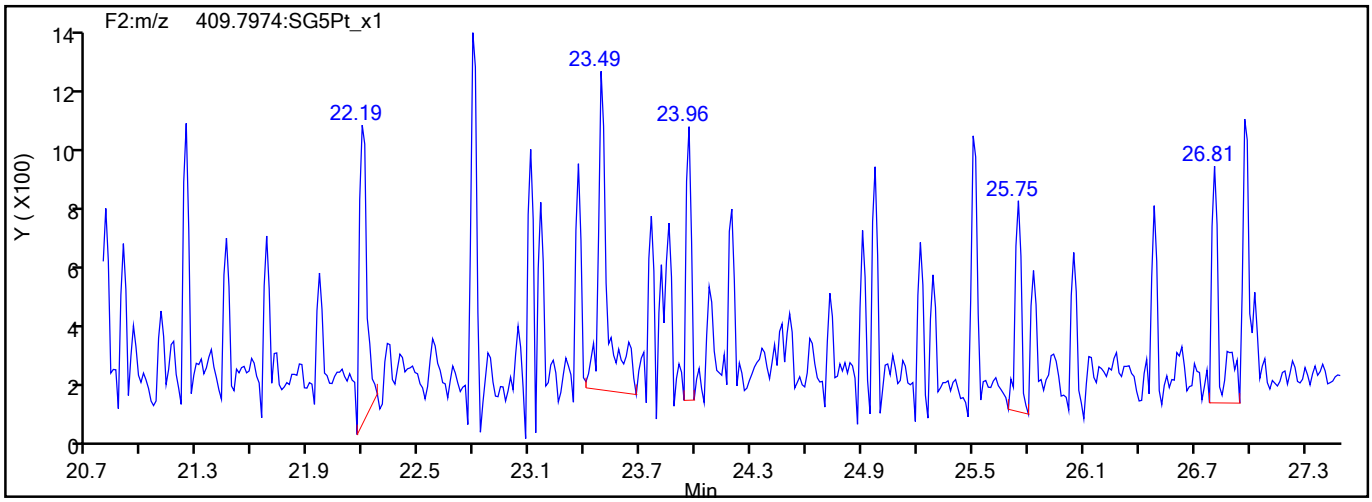

780293

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

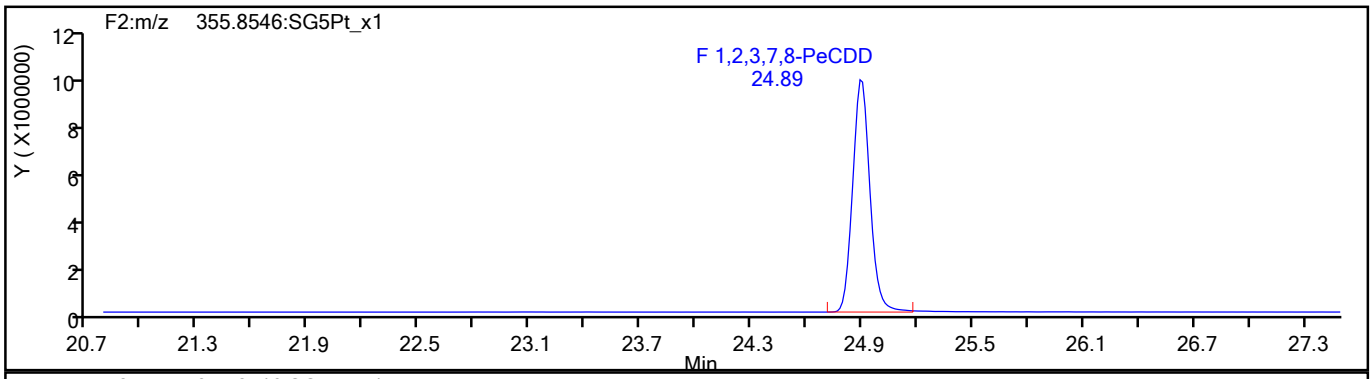

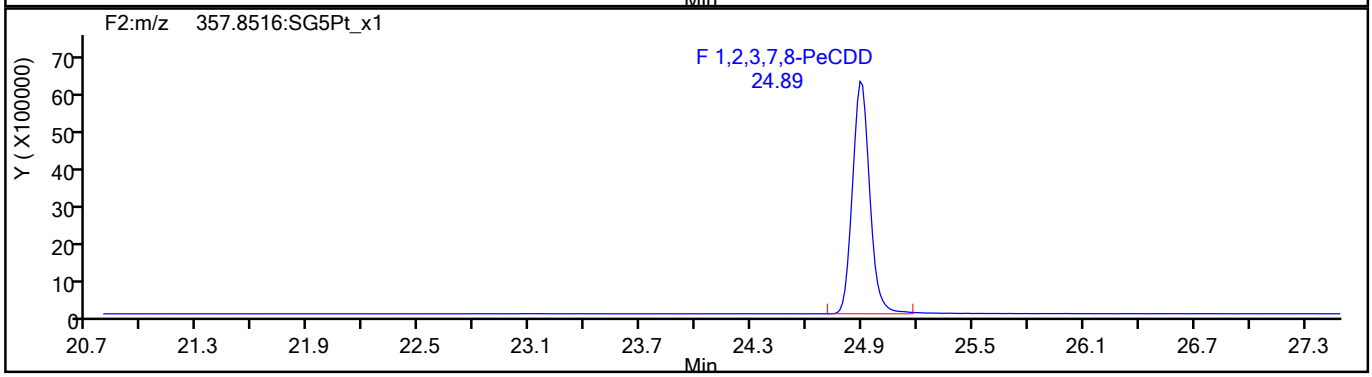

PeCDD Standards

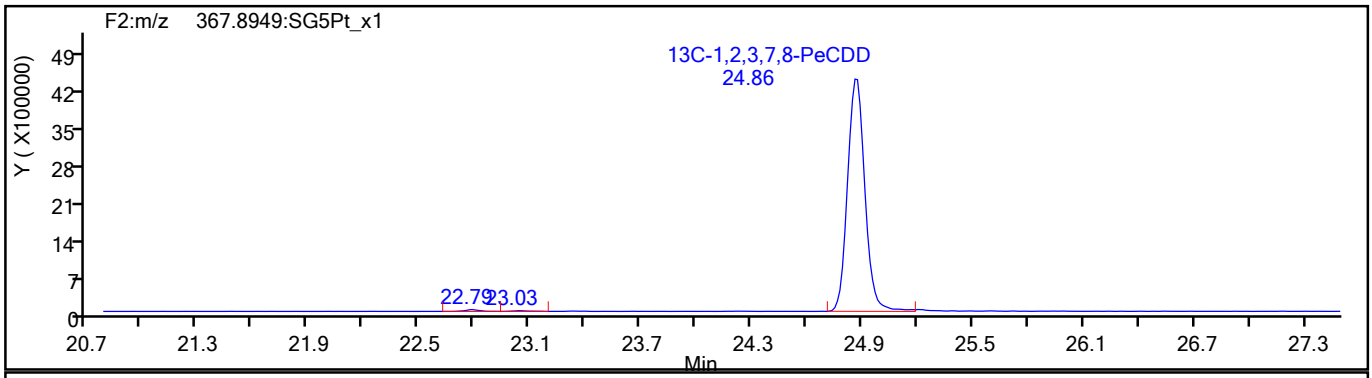

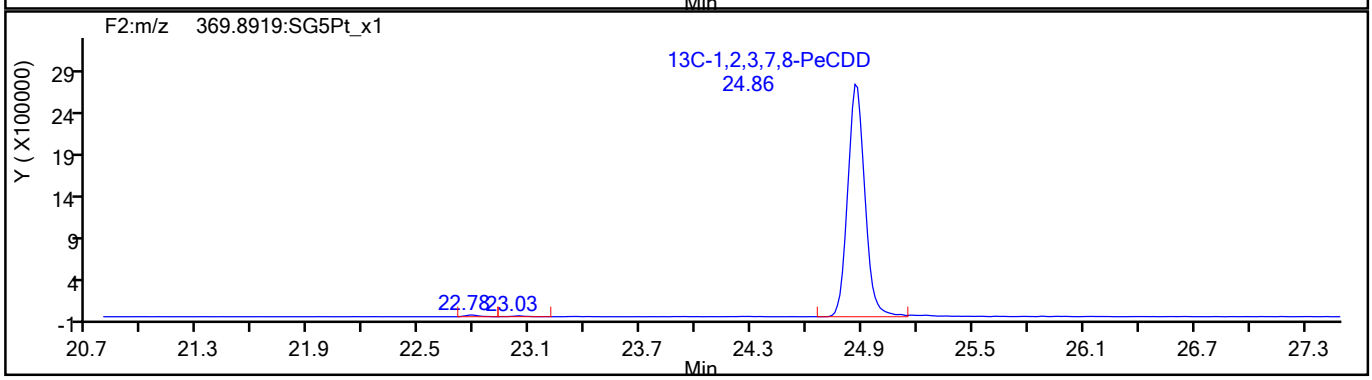

780294

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

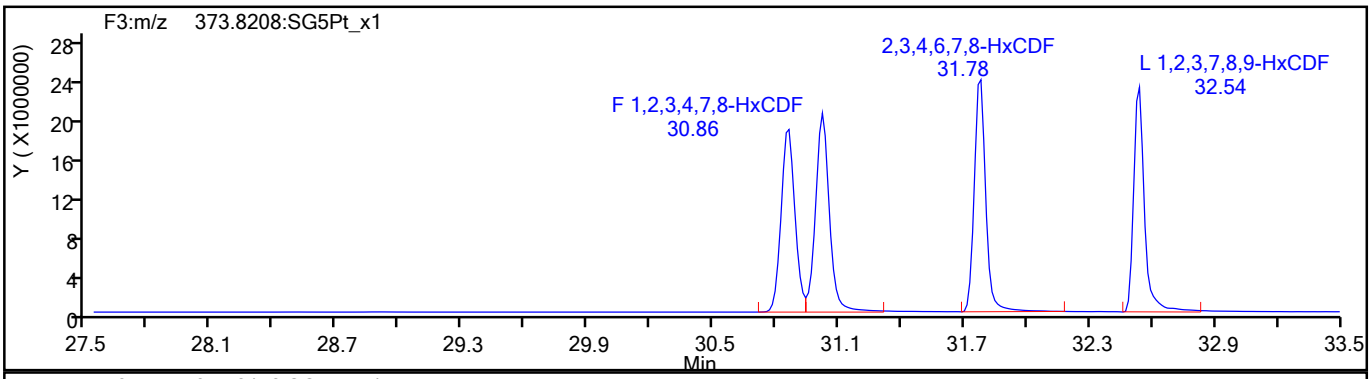

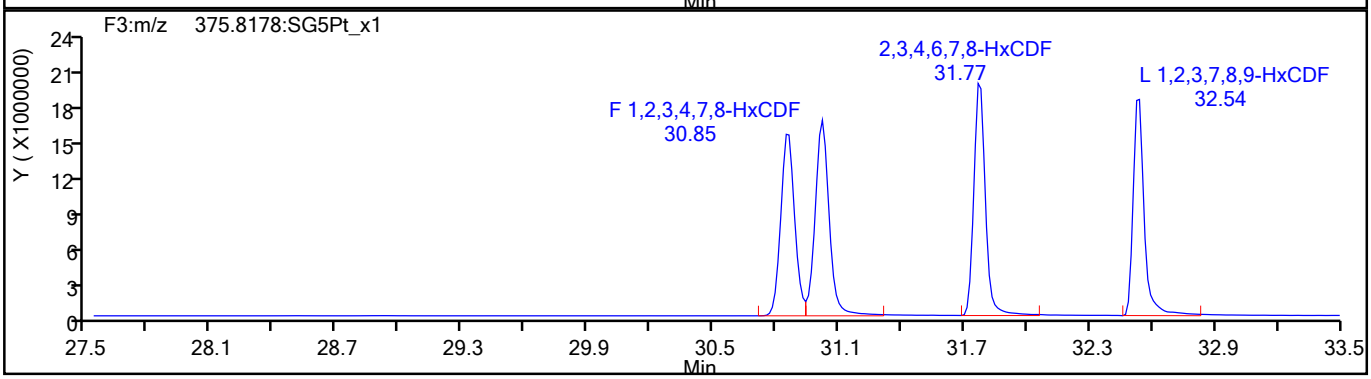

HxCDF Standards

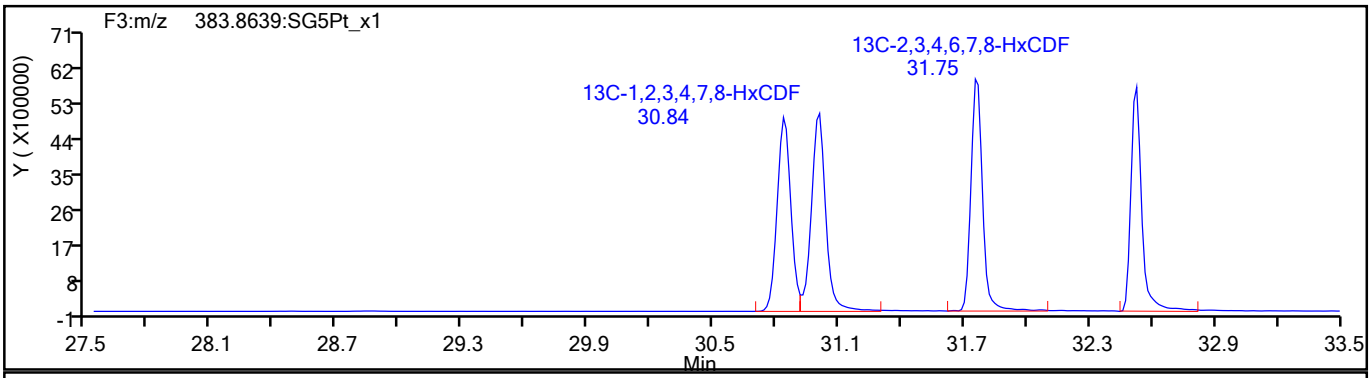

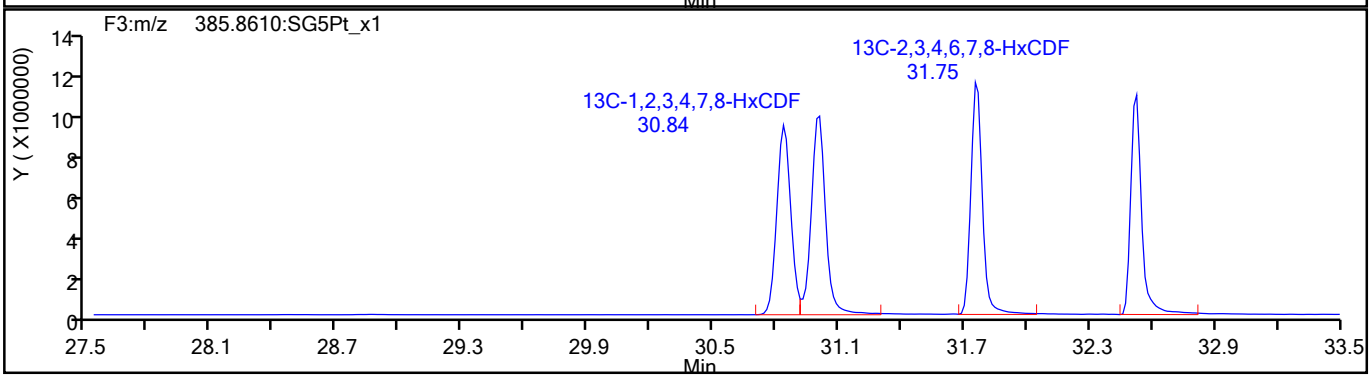

780295

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

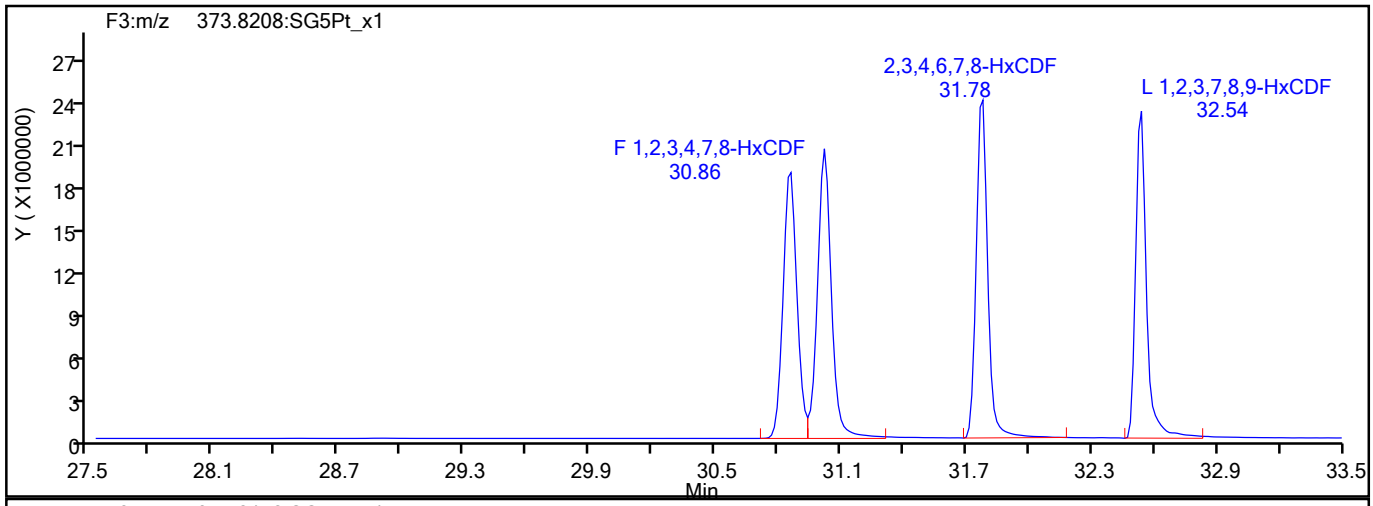

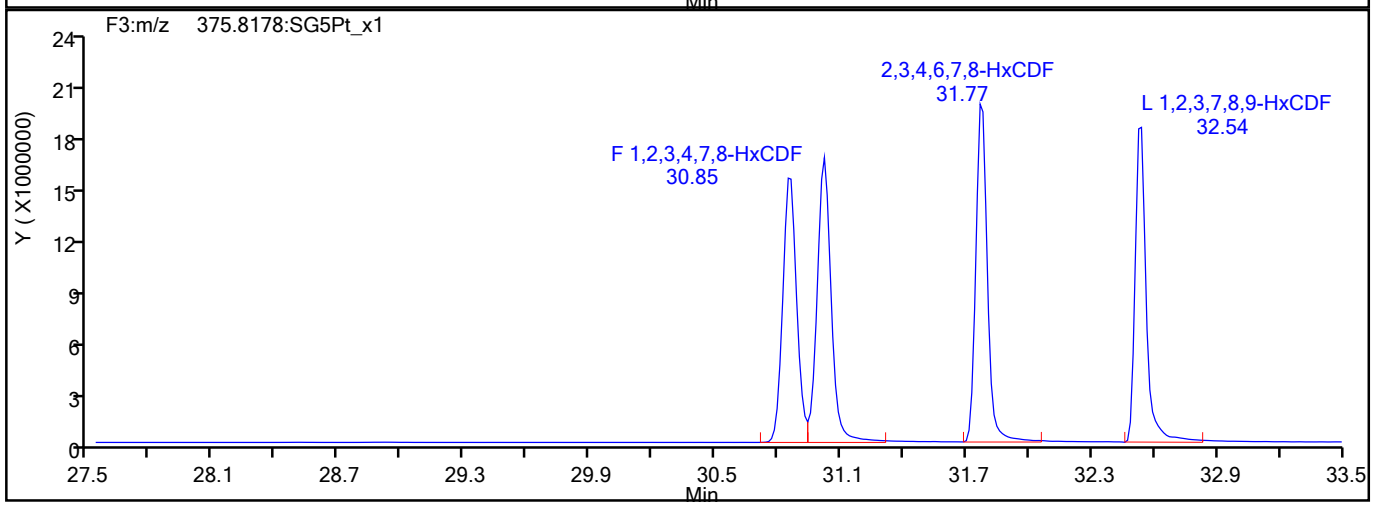

HxCDF Interference Mass

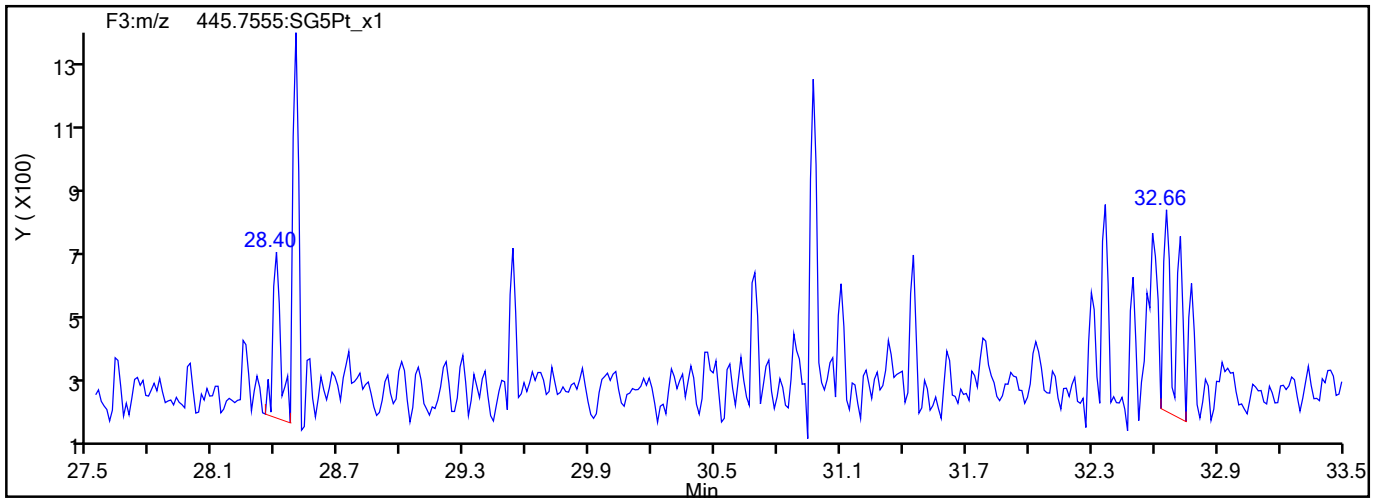

780296

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

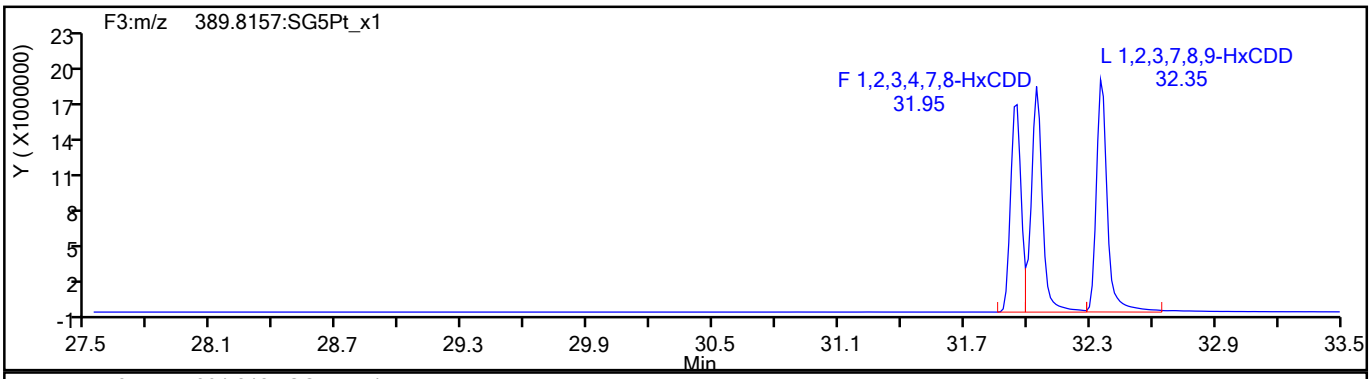

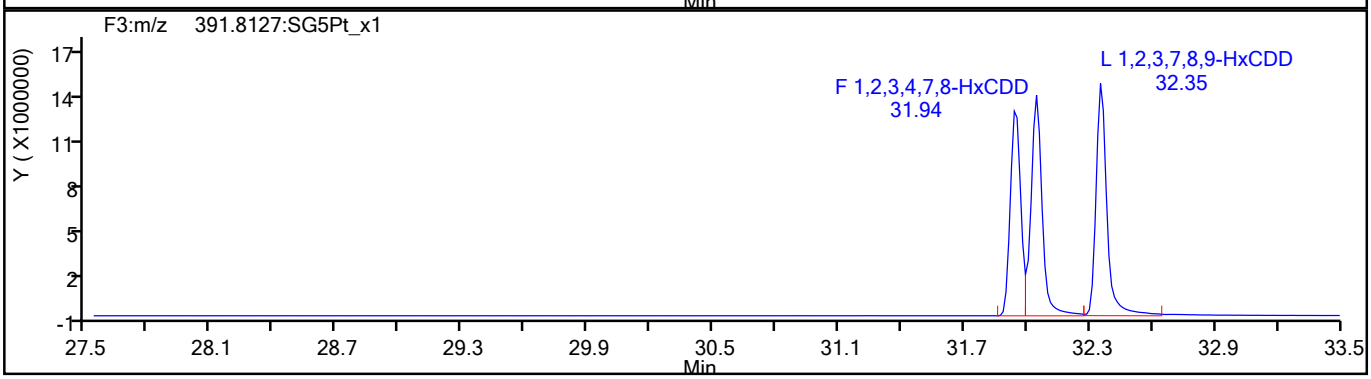

HxCDD Standards

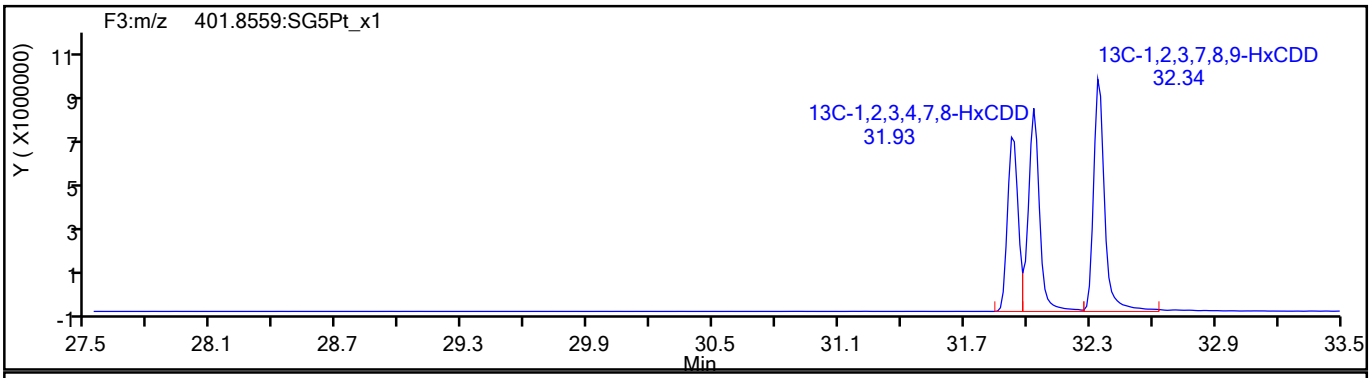

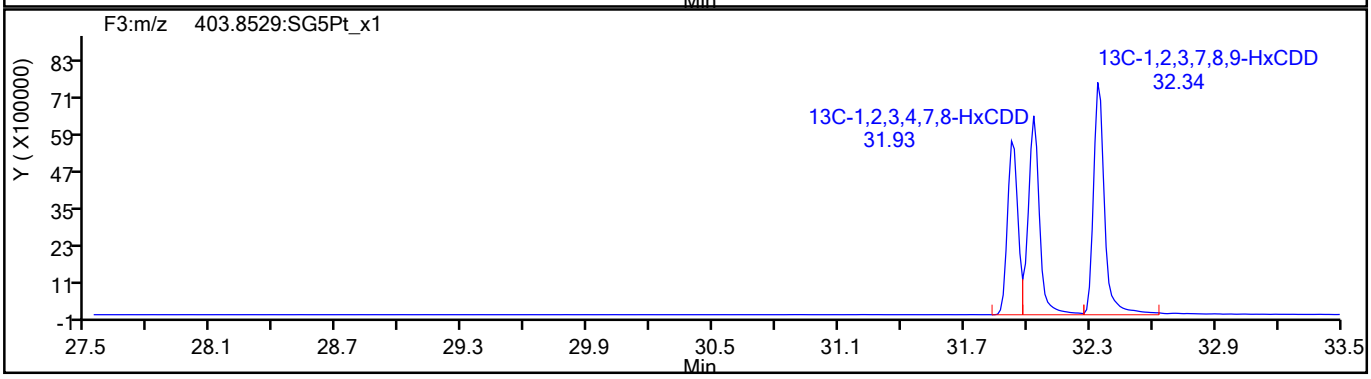

780297

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

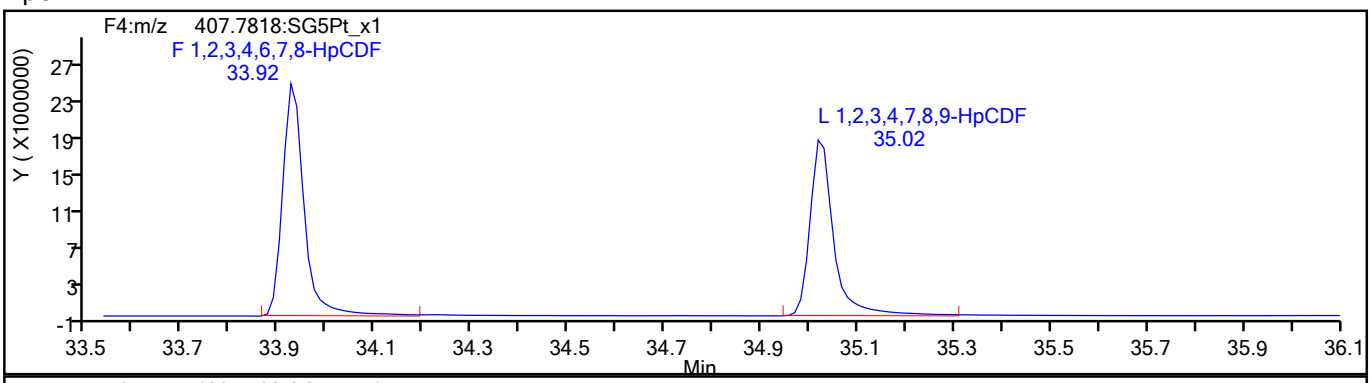

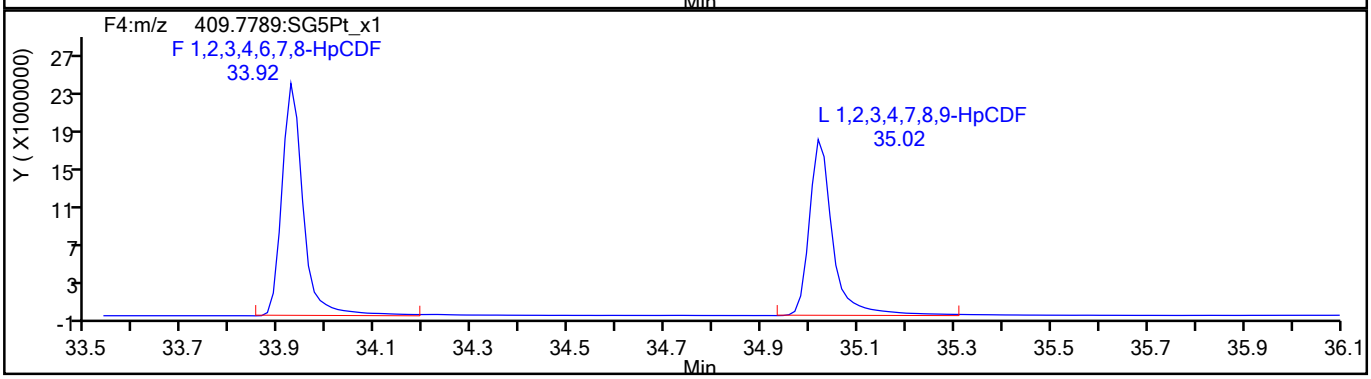

HpCDF Standards

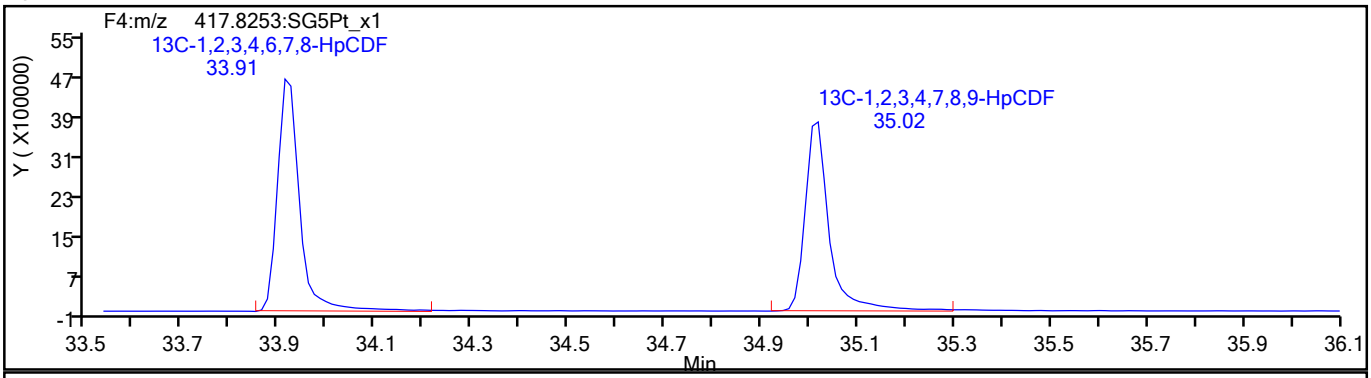

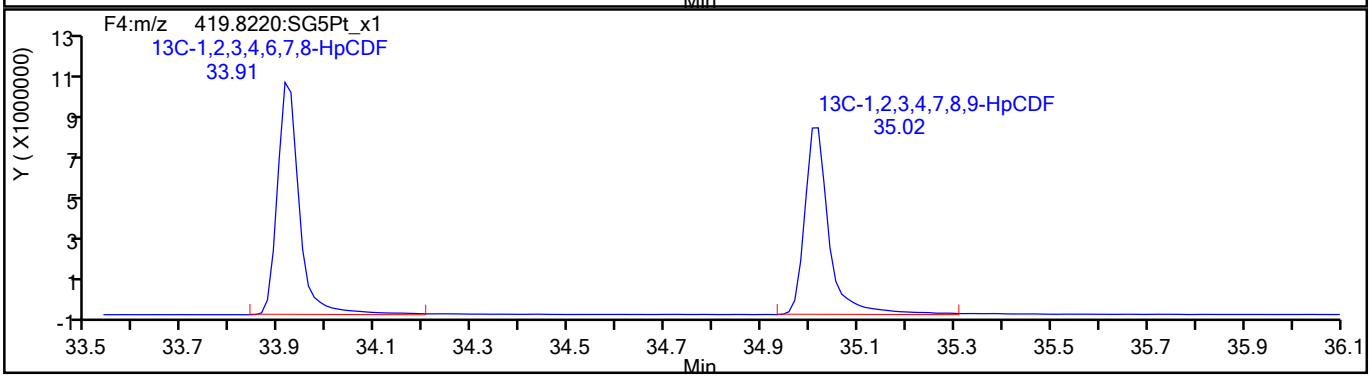

780298

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

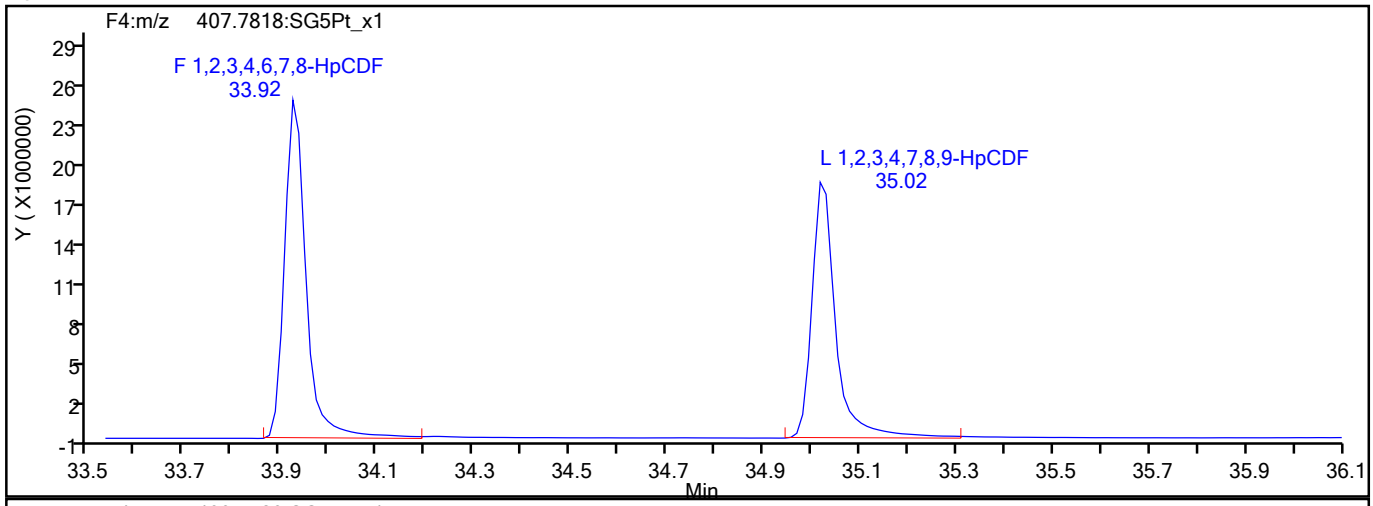

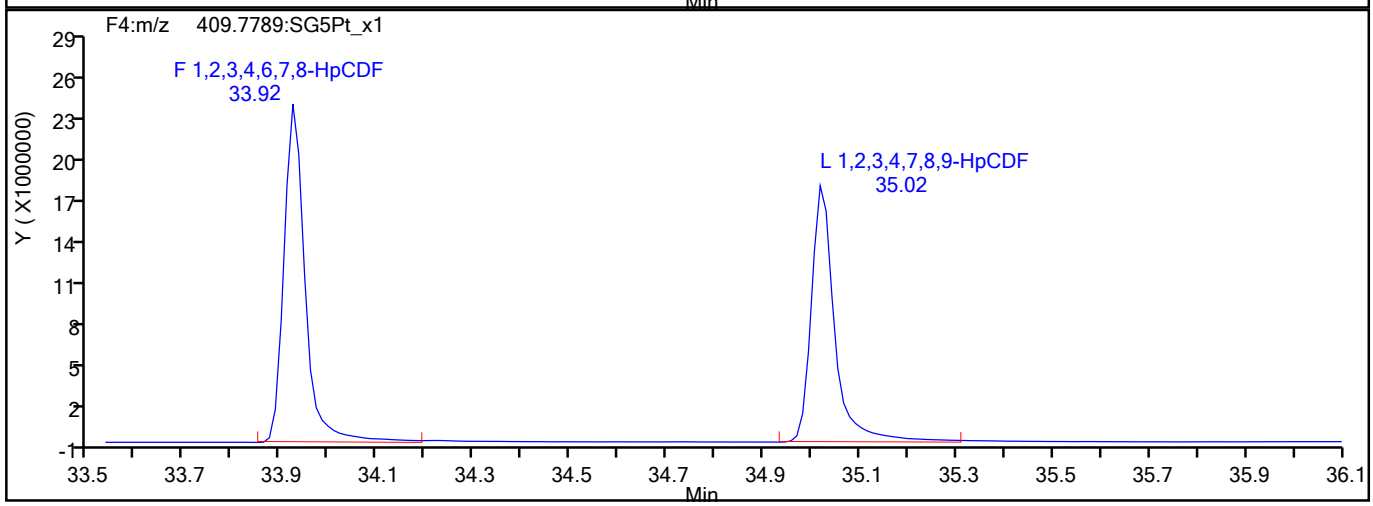

HpCDF Interference Mass

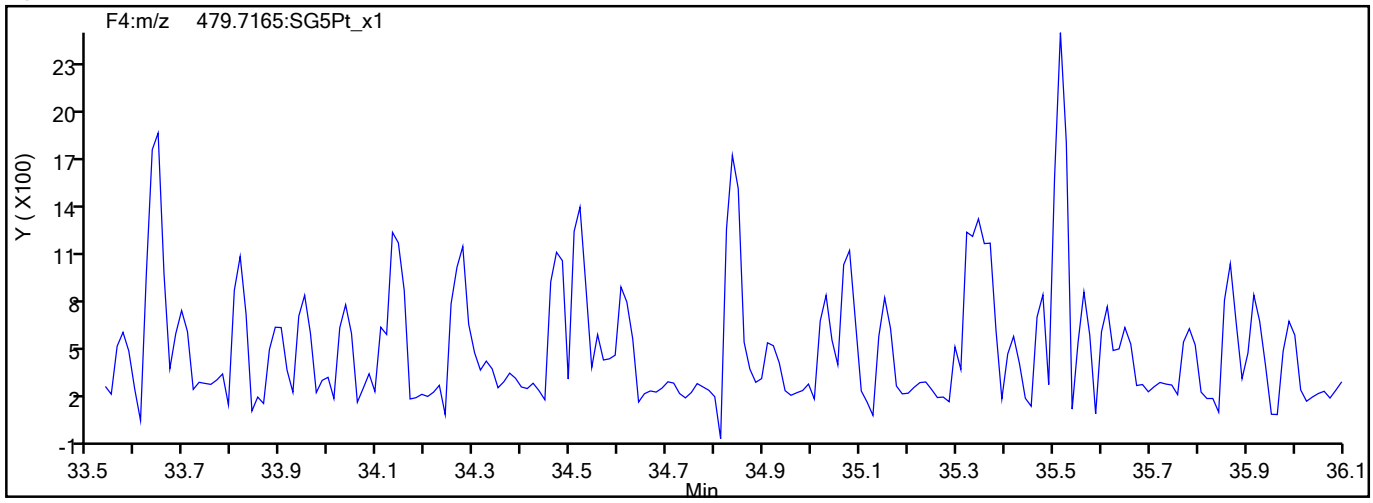

780299

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

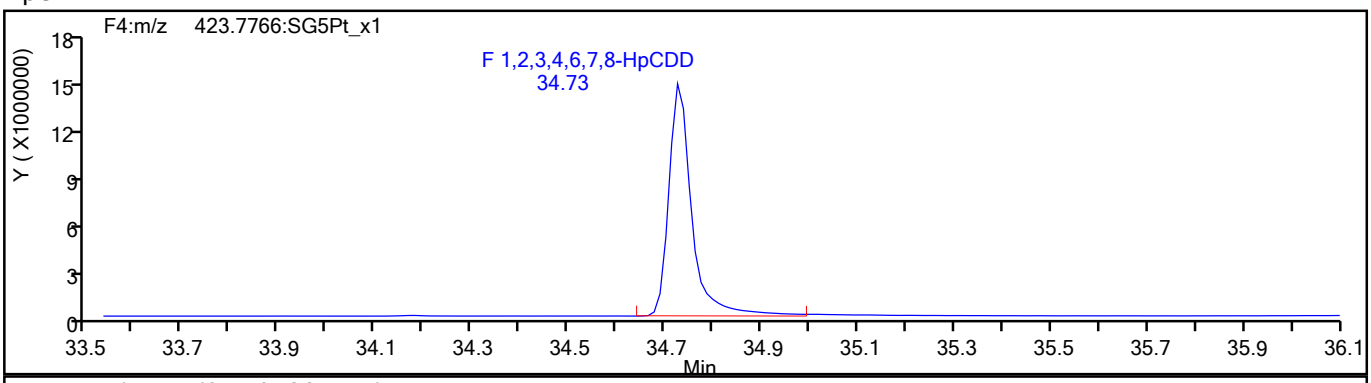

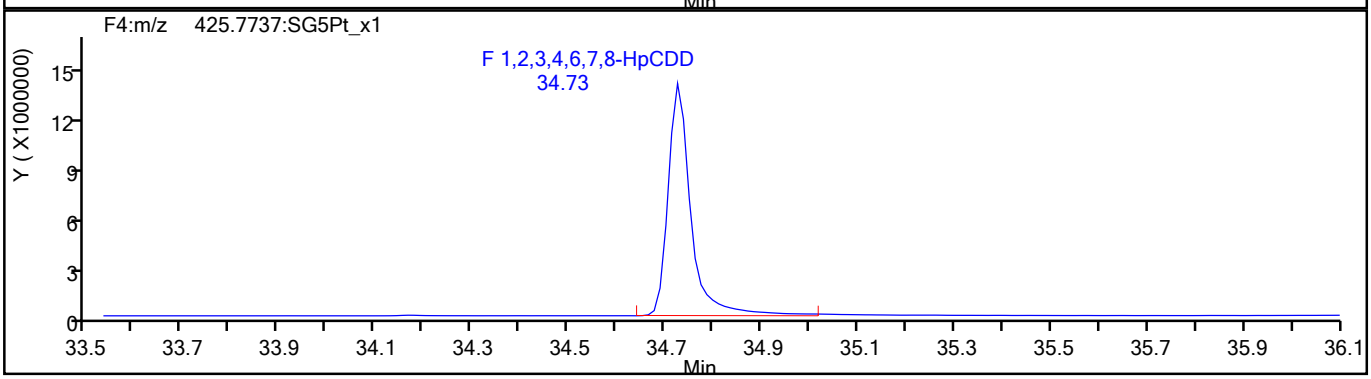

HpCDD Standards

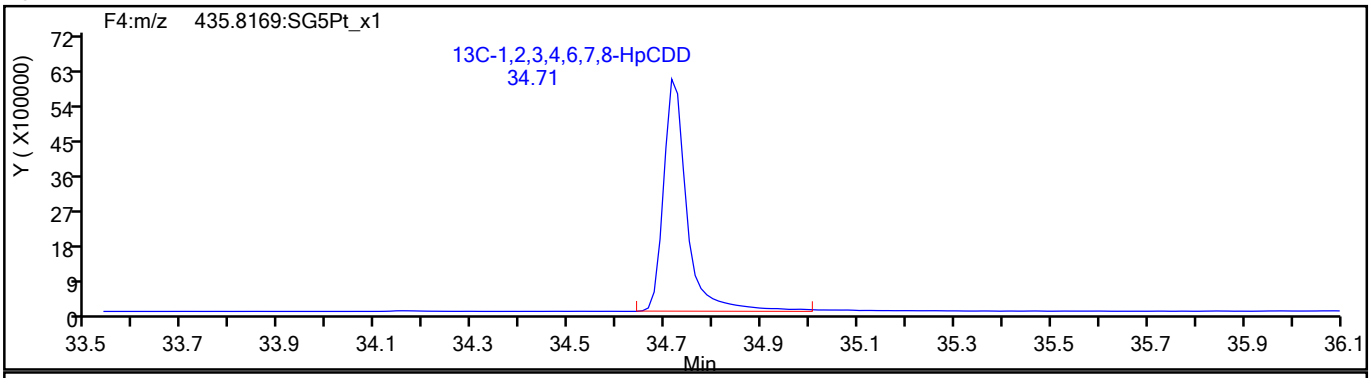

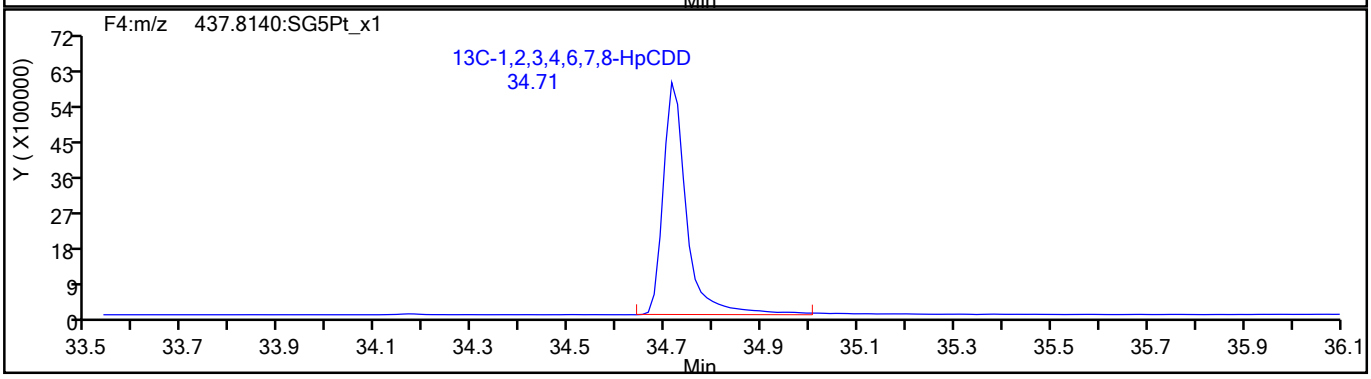

780300

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

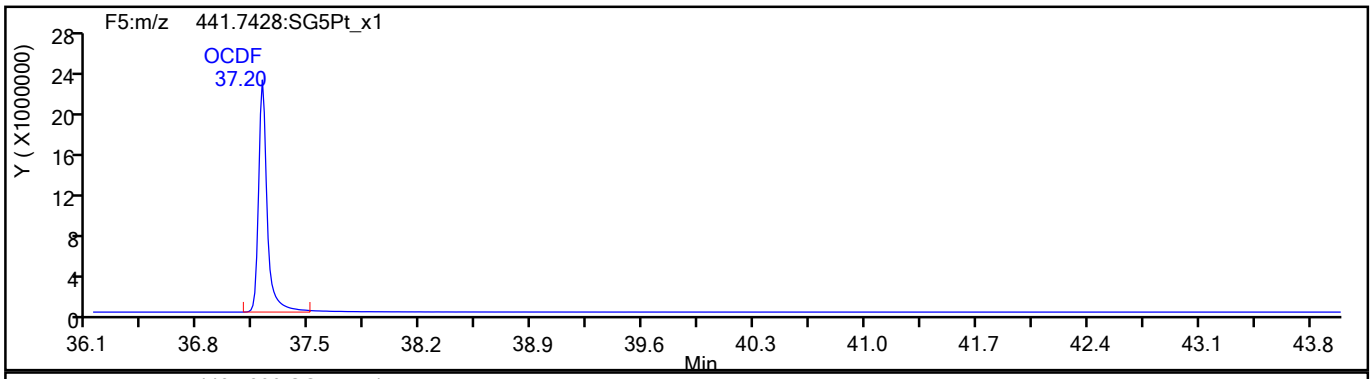

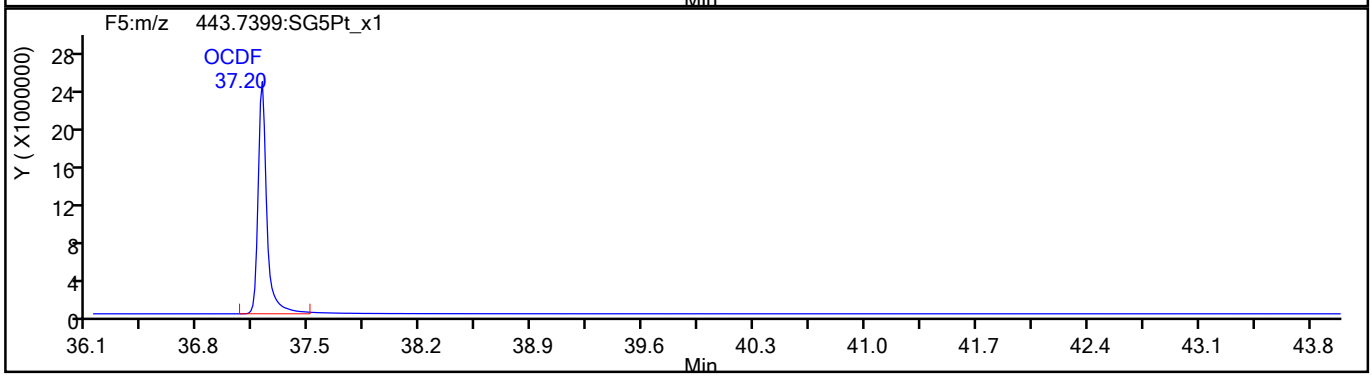

OCDF Standards

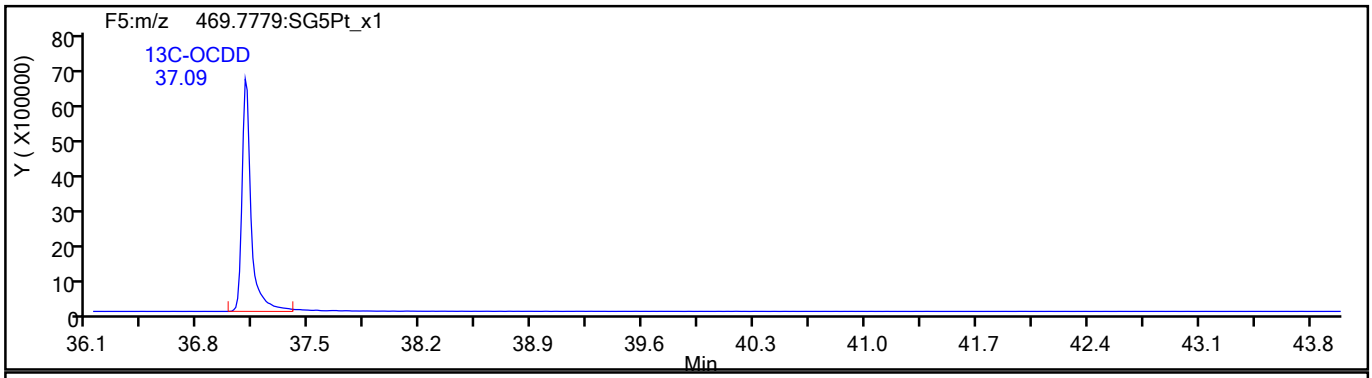

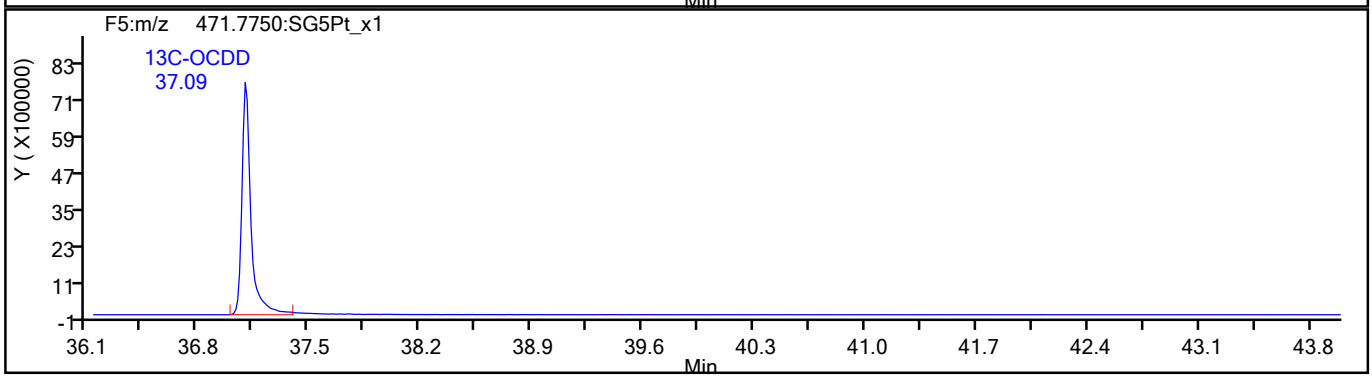

780301

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

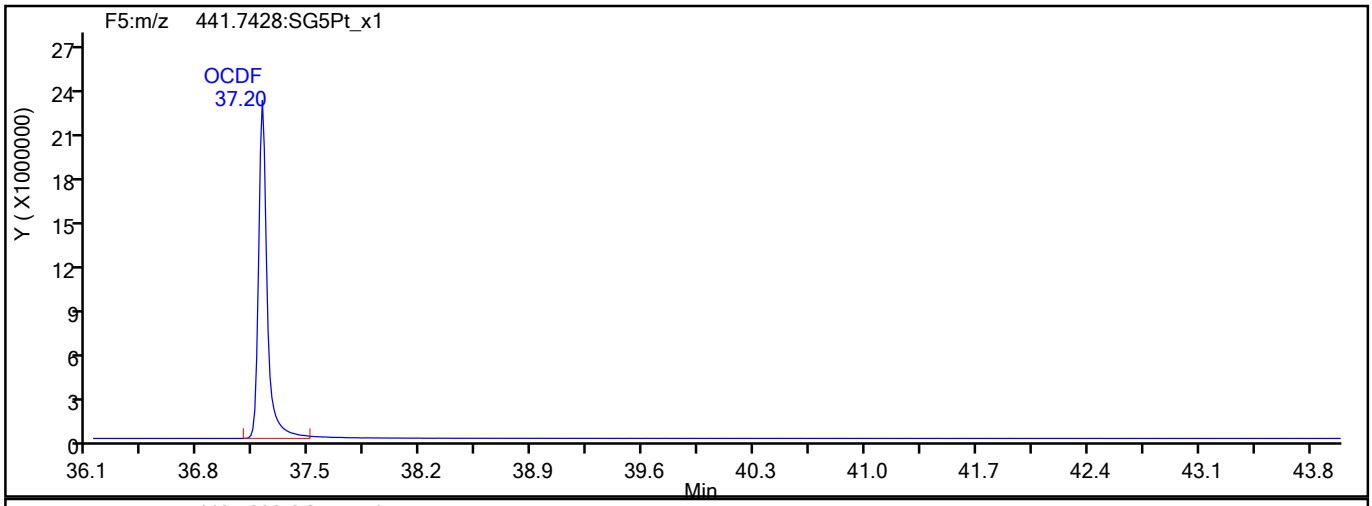

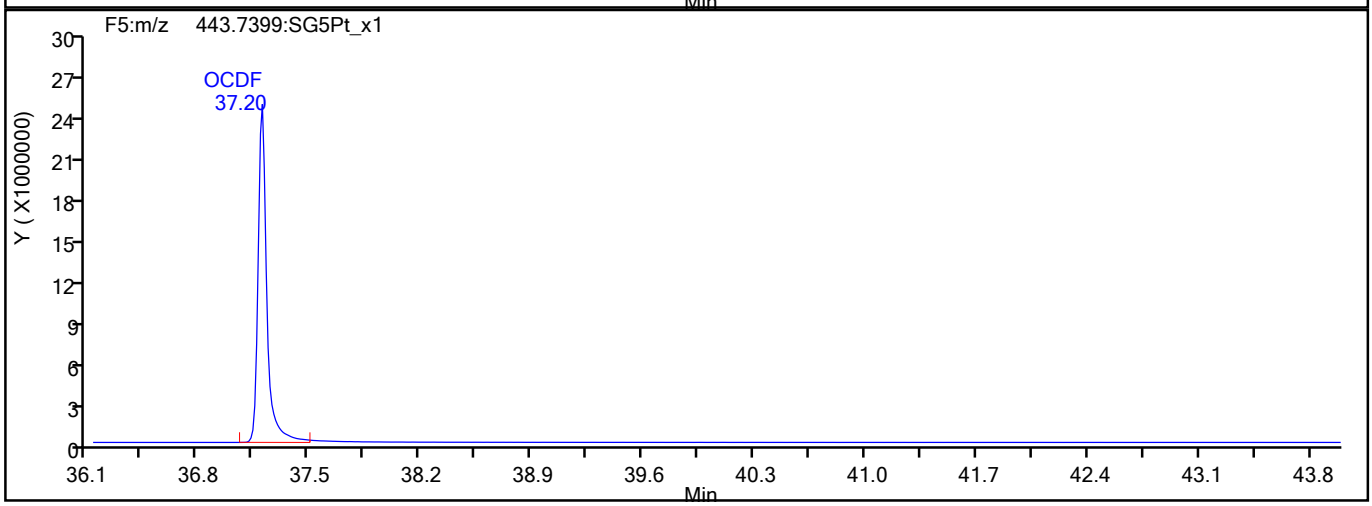

OCDF Interference Mass

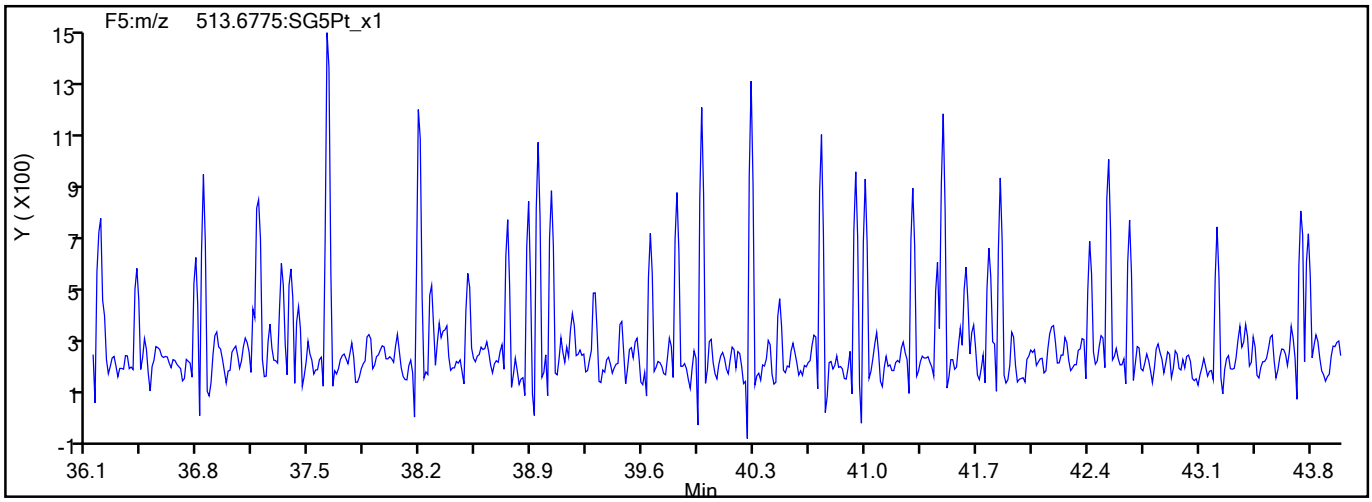

780302

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

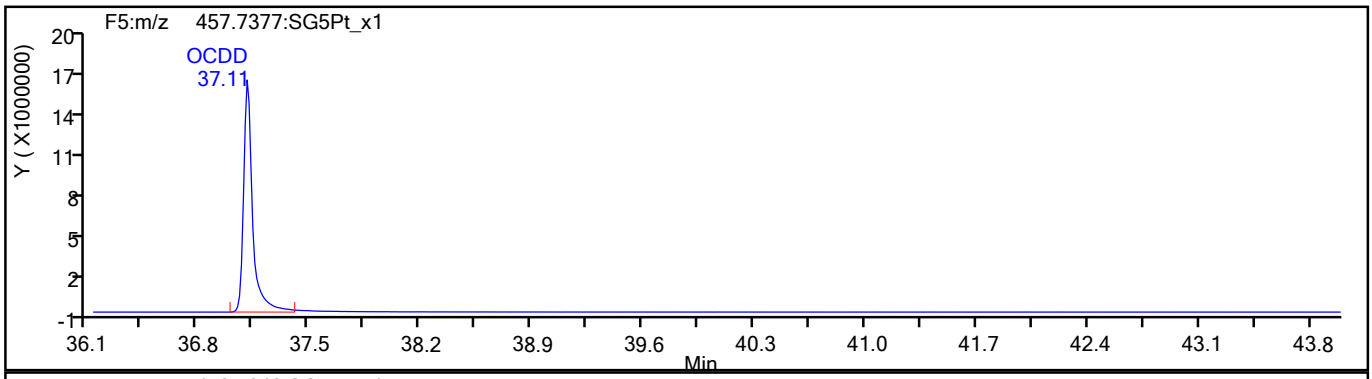

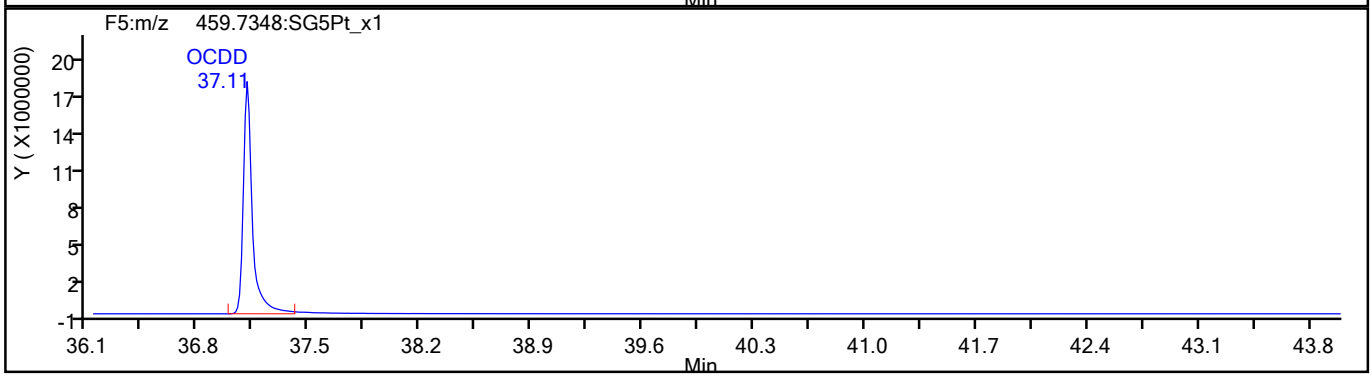

OCDD Standards

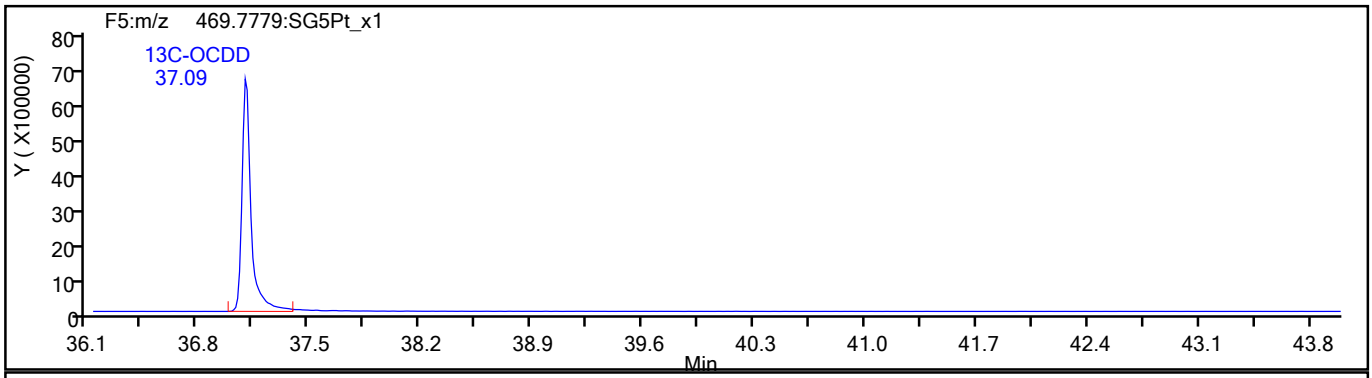

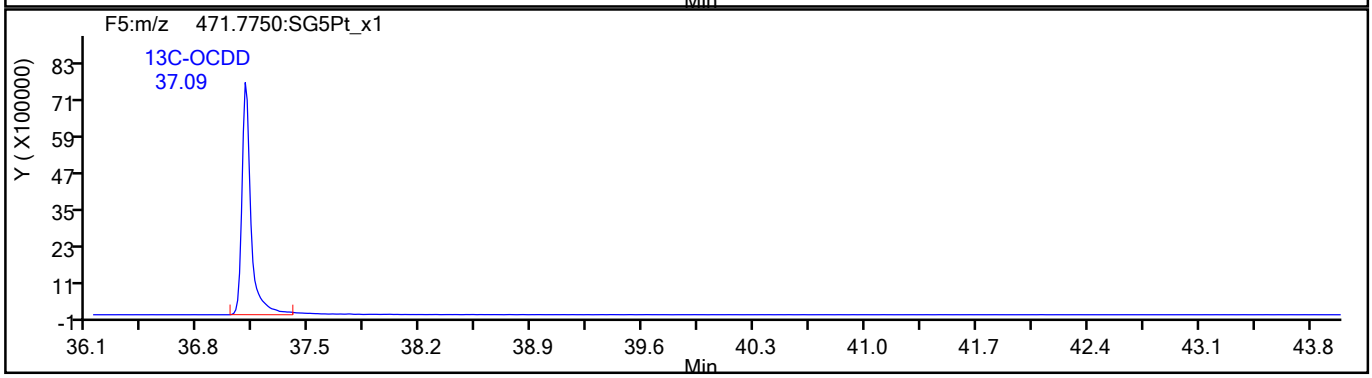

780303

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

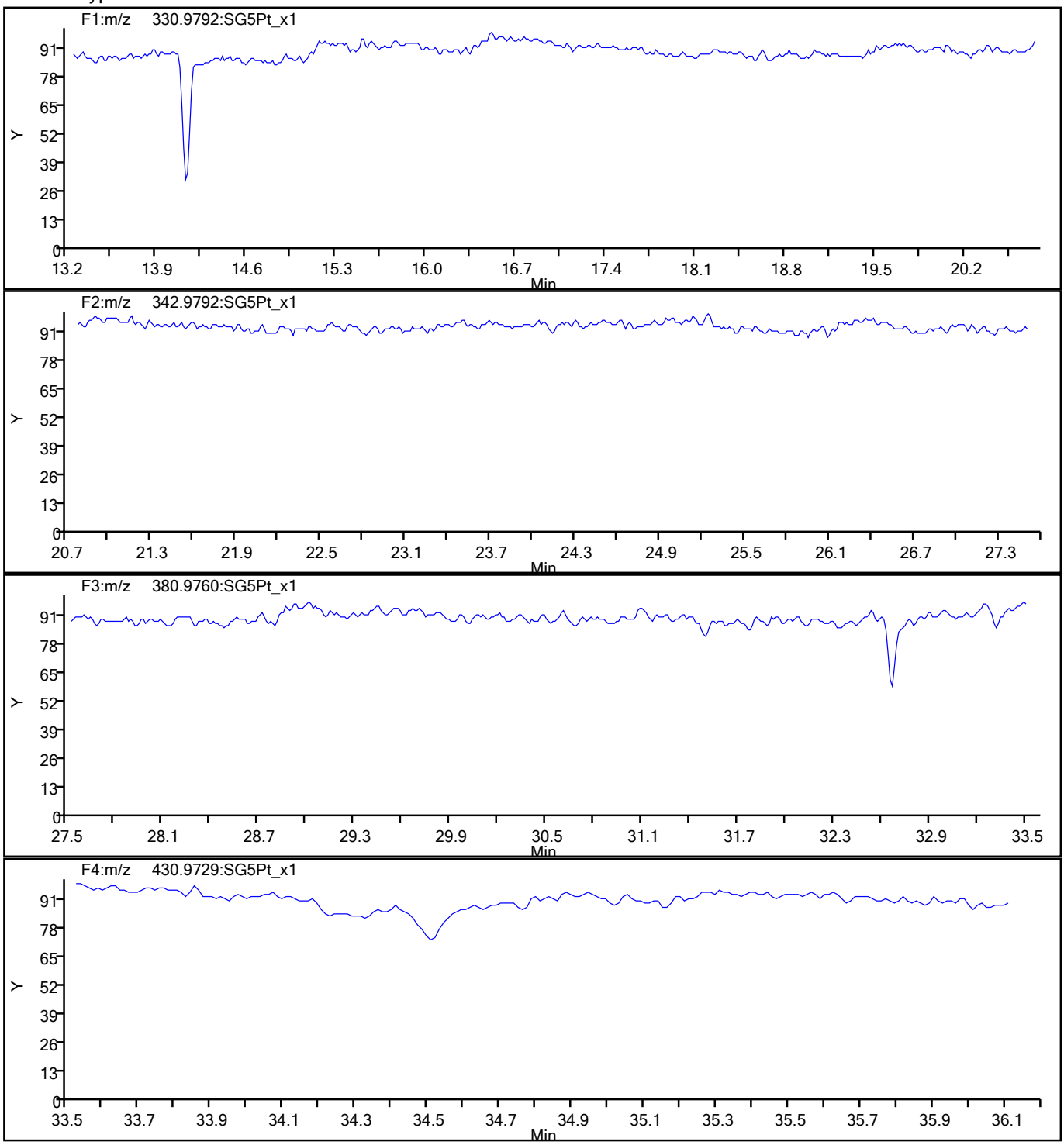

780304

Report Date: 27-Jul-2021 15:17:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

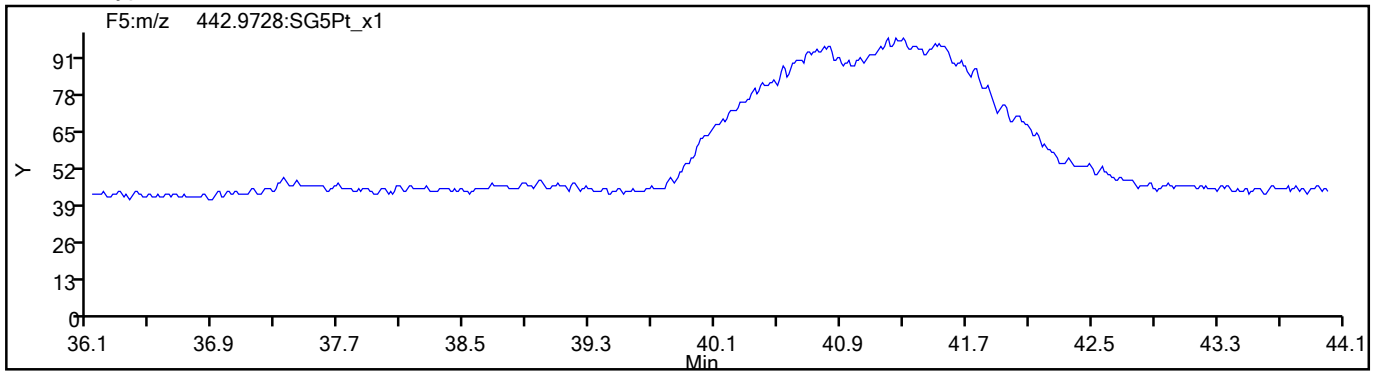

780305

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	57464333	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	95980421	0.79	1.6249	102.8	102.8	0.1660	0.1660	103	
2,3,7,8-TCDF	17.628	204575642	0.78	1.0239	208.2	208.2	0.2336	0.2336	104	
S Total TCDF					208.2	208.2	0.2336	0.2336		
D 13C-2,3,7,8-TCDD	18.338	53698206	0.83	0.8993	103.9	103.9	0.1396	0.1396	104	
$ 37Cl4-2,3,7,8-TCDD	18.354	140953034		1.1071	221.5	221.5	0.1318	0.1318	111	
2,3,7,8-TCDD	18.354	140421448	0.79	1.2541	208.5	208.5	0.1362	0.1362	104	
S Total TCDD					208.5	208.5	0.1362	0.1362		
D 13C-1,2,3,7,8-PeCDF	22.749	72829681	1.58	1.2101	104.7	104.7	0.2112	0.2112	105	
1,2,3,7,8-PeCDF	22.776	795873691	1.61	1.0611	1029.8	1029.8	2.482	2.482	103	
D 13C-2,3,4,7,8-PeCDF	24.126	75649463	1.61	1.2395	106.2	106.2	0.2062	0.2062	106	
2,3,4,7,8-PeCDF	24.153	783403837	1.59	1.0184	1016.8	1016.8	2.723	2.723	102	
S Total PeCDF					2046.7	2046.7	2.602	2.602		
D 13C-1,2,3,7,8-PeCDD	24.862	46251010	1.64	0.7612	105.7	105.7	0.1196	0.1196	106	
1,2,3,7,8-PeCDD	24.889	500555284	1.58	1.0484	1032.3	1032.3	0.8910	0.8910	103	
S Total PeCDD					1032.3	1032.3	0.8910	0.8910		
D 13C-1,2,3,4,7,8-HxCDF	30.835	67741189	0.53	1.0837	103.6	103.6	0.3784	0.3784	104	
1,2,3,4,7,8-HxCDF	30.862	737075796	1.21	1.0851	1002.7	1002.7	4.903	4.903	100	
D 13C-1,2,3,6,7,8-HxCDF	31.008	67363664	0.51	1.1279	99.0	99.0	0.3636	0.3636	98.97	
1,2,3,6,7,8-HxCDF	31.021	785709889	1.22	1.1260	1035.8	1035.8	4.873	4.873	104	
D 13C-2,3,4,6,7,8-HxCDF	31.754	63471184	0.52	1.0637	98.9	98.9	0.3855	0.3855	98.87	
2,3,4,6,7,8-HxCDF	31.767	762810877	1.21	1.1675	1029.4	1029.4	3.909	3.909	103	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58669892	0.52	0.9676	100.5	100.5	0.4238	0.4238	100	
1,2,3,7,8,9-HxCDF	32.539	708280047	1.22	1.1664	1035.0	1035.0	4.123	4.123	104	
S Total HxCDF					4103.0	4103.0	4.452	4.452		
* 13C-1,2,3,7,8,9-HxCDD	32.339	60348148	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	46886171	1.24	0.7334	105.9	105.9	0.3391	0.3391	106	
1,2,3,4,7,8-HxCDD	31.940	484857042	1.26	1.0640	971.9	971.9	2.786	2.786	97.19	
D 13C-1,2,3,6,7,8-HxCDD	32.033	53564396	1.27	0.8802	100.8	100.8	0.2826	0.2826	101	
1,2,3,6,7,8-HxCDD	32.047	543061818	1.27	1.0001	1013.8	1013.8	2.795	2.795	101	
1,2,3,7,8,9-HxCDD	32.353	563888565	1.26	1.1325	991.3	991.3	2.541	2.541	99.13	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDD					2977.0	2977.0	2.707	2.707		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	46328151	0.45	0.7730	99.3	99.3	0.9693	0.9693	99.31	
1,2,3,4,6,7,8-HpCDF	33.924	681312007	1.05	1.4413	1020.4	1020.4	8.187	8.187	102	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44333848	0.44	0.7008	104.8	104.8	1.069	1.069	105	
1,2,3,4,7,8,9-HpCDF	35.017	590555312	1.06	1.3174	1011.1	1011.1	10.5	10.5	101	
S Total HpCDF					2031.5	2031.5	9.356	9.356		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	39395832	1.02	0.6472	100.9	100.9	0.4739	0.4739	101	
1,2,3,4,6,7,8-HpCDD	34.726	441437476	1.05	1.0943	1024.0	1024.0	3.855	3.855	102	
S Total HpCDD					1024.0	1024.0	3.855	3.855		
D 13C-OCDD	37.093	56623863	0.89	0.4472	209.8	209.8	0.2327	0.2327	105	
OCDF	37.201	856685987	0.91	1.4382	2104.0	2104.0	1.905	1.905	105	
OCDD	37.105	635652839	0.90	1.1070	2028.1	2028.1	1.855	1.855	101	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		26125466	6597193	4577	11442	1441		
333.9339	18.142	18.142	0		31338867	7893522	2702	6755	2921	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42243137	10877420	7832	19580	1389		
317.9389	17.613	17.616	0	0.971	53737284	13863668	7802	19505	1777	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	89710432	22799700	10338	25845	2205		
305.8987	17.628	17.631	0	1.001	114865210	29189675	13335	33337	2189	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24360997	5757558	4577	11442	1258		
333.9339	18.338	18.338	0	1.011	29337209	6914283	2702	6755	2559	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	140953034	33738158	8459	21147	3988		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	62065087	14965631	3913	9782	3825		
321.8936	18.354	18.357	0	1.001	78356361	18744482	4747	11867	3949	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44649559	7939527	8573	21432	926		
353.8970	22.749	22.754	0	1.254	28180122	5062354	6242	15605	811	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	490871580	87021007	84135	210337	1034		
341.8567	22.776	22.779	0	1.001	305002111	54503599	52854	132135	1031	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46717935	7613965	8573	21432	888		
353.8970	24.126	24.129	0	1.330	28931528	4737188	6242	15605	759	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	480352978	79104825	84135	210337	940		
341.8567	24.153	24.156	0	1.001	303050859	50060127	52854	132135	947	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28720712	4433240	3087	7717	1436		
369.8919	24.862	24.865	0	1.370	17530298	2751802	2189	5472	1257	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	306292917	47311146	15348	38370	3083		
357.8516	24.889	24.892	0	1.001	194262367	30133208	11499	28747	2621	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23491874	5084915	9674	24185	526		
385.8610	30.835	30.838	0	0.953	44249315	9441190	17790	44475	531	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	404173144	87133654	170642	426605	511		
375.8178	30.848	30.857	0	1.000	332902652	71216591	138478	346195	514	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	22854682	4877346	9674	24185	504		
385.8610	31.008	31.003	0	0.959	44508982	9206926	17790	44475	518	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.000	431948071	93438031	170642	426605	548		
375.8178	31.021	31.022	0	1.000	353761818	76246532	138478	346195	551	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	21747421	5871662	9674	24185	607		
385.8610	31.754	31.756	0	0.982	41723763	11062051	17790	44475	622	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	417841952	110026703	170642	426605	645		
375.8178	31.767	31.772	0	1.000	344968925	92108448	138478	346195	665	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20172563	5575575	9674	24185	576		
385.8610	32.512	32.523	-1	1.005	38497329	10495423	17790	44475	590	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	388834443	107441652	170642	426605	630		
375.8178	32.526	32.534	0	1.000	319445604	89819128	138478	346195	649	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33485933	9289499	8951	22377	1038		
403.8529	32.339	32.342	0		26862215	7454274	7708	19270	967	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	25994948	7598983	8951	22377	849		
403.8529	31.927	31.929	0	0.987	20891223	6054958	7708	19270	786	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	270288224	77533273	86149	215372	900		
391.8127	31.940	31.945	0	1.000	214568818	61952830	75747	189367	818	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29946566	8106259	8951	22377	906		
403.8529	32.033	32.033	0	0.991	23617830	6373294	7708	19270	827	1.27(1.05-1.43)	

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	303387935	83103965	86149	215372	965		
391.8127	32.047	32.047	0	1.000	239673883	65565020	75747	189367	866	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	314172702	87971106	86149	215372	1021		
391.8127	32.353	32.355	0	1.013	249715863	70210414	75747	189367	927	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14282220	4787635	15981	39952	300		
419.8220	33.912	33.914	0	1.049	32045931	10687518	34202	85505	312	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	349397605	118035783	389676	974190	303		
409.7789	33.924	33.926	0	1.000	331914402	111658032	340706	851765	328	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13509696	4047534	15981	39952	253		
419.8220	35.005	35.010	0	1.082	30824152	9120201	34202	85505	267	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	303260617	91538482	389676	974190	235		
409.7789	35.017	35.020	0	1.000	287294695	87143866	340706	851765	256	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19890119	6131671	10444	26110	587		
437.8140	34.714	34.716	0	1.073	19505713	6051375	10100	25250	599	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	225857690	69087451	102453	256132	674		
425.7737	34.726	34.726	0	1.000	215579786	65898474	103127	257817	639	1.05(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26710485	6689918	2659	6647	2516		
471.7750	37.093	37.094	0	1.147	29913378	7452640	4311	10777	1729	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	409115360	108366645	37076	92690	2923		
443.7399	37.201	37.199	0	1.003	447570627	117808946	40434	101085	2914	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	300559615	76562352	27801	69502	2754		
459.7348	37.105	37.106	0	1.000	335093224	85854399	30277	75692	2836	0.90(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

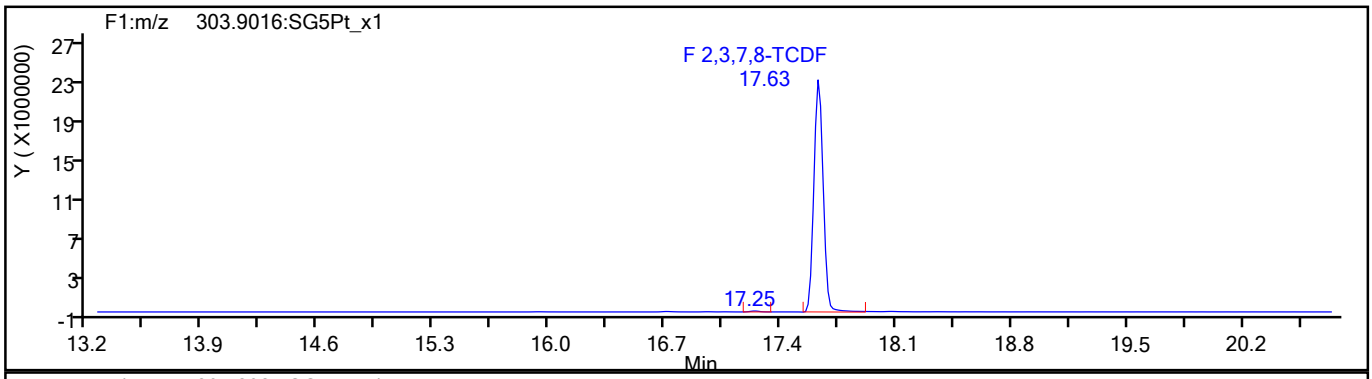

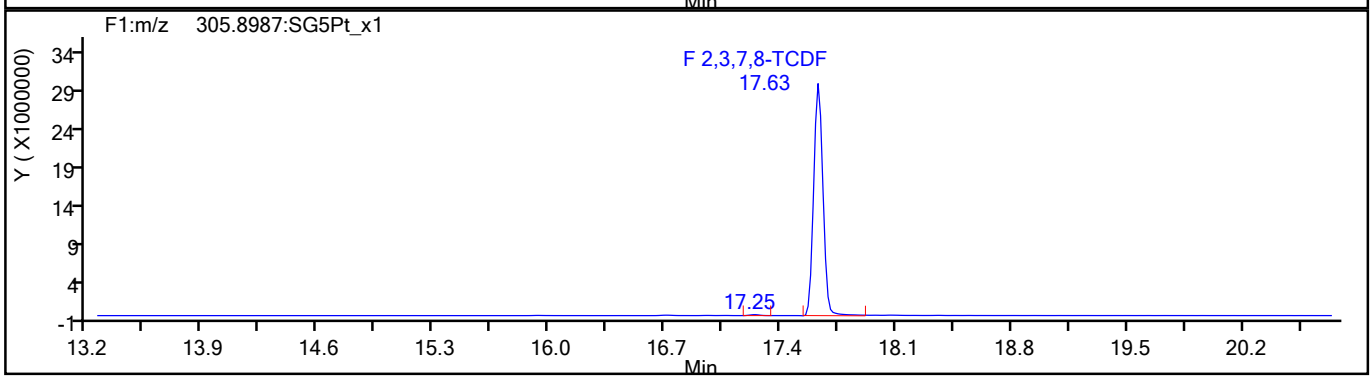

TCDF Standards

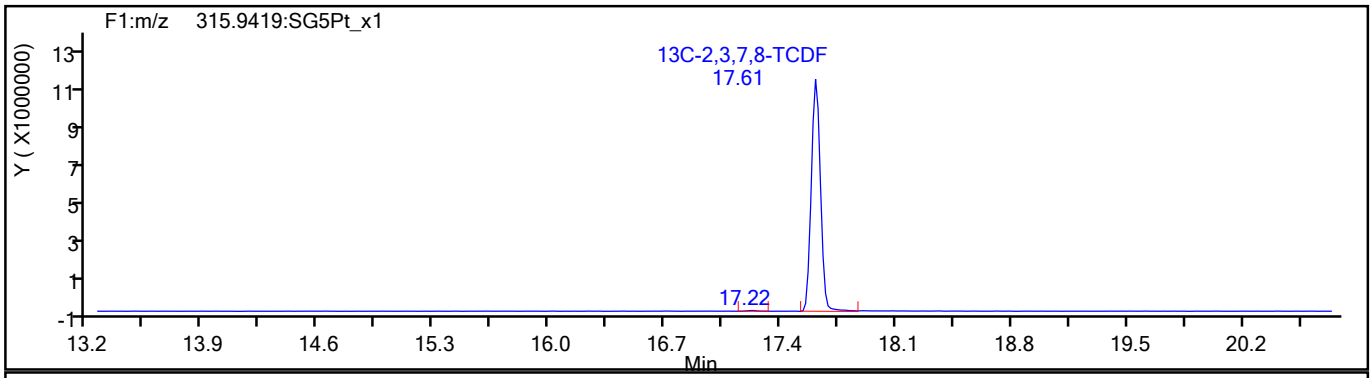

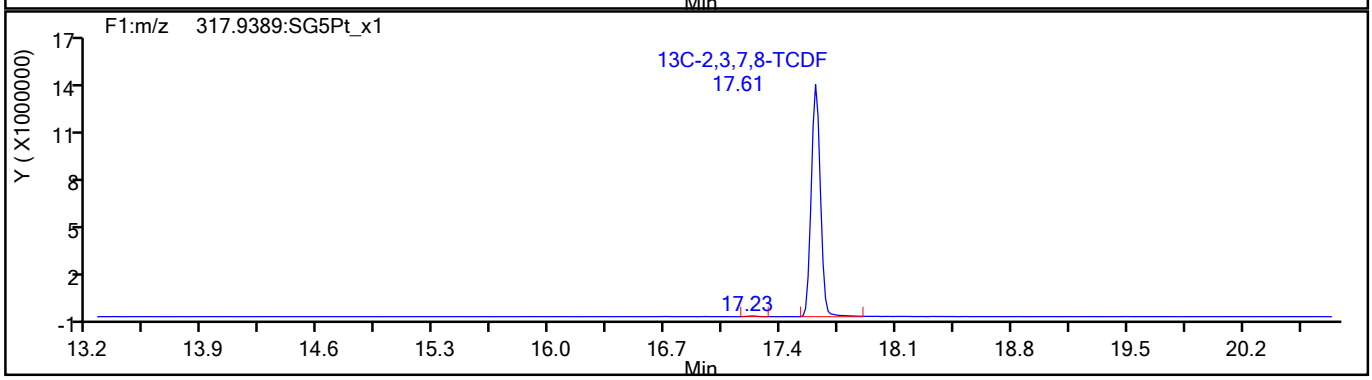

780311

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

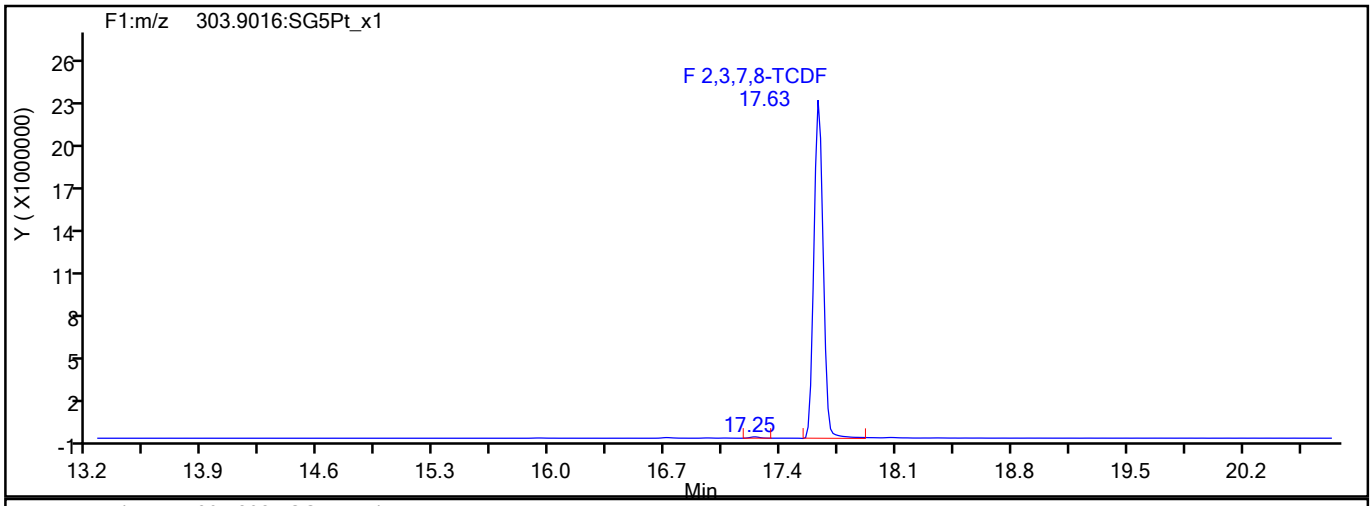

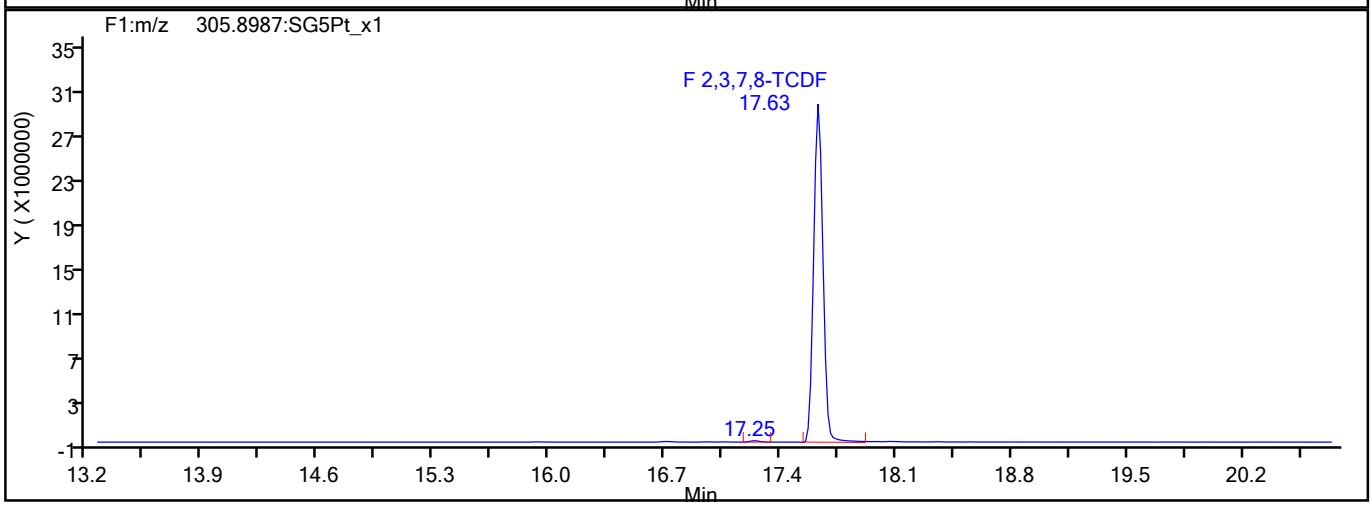

TCDF Interference Mass

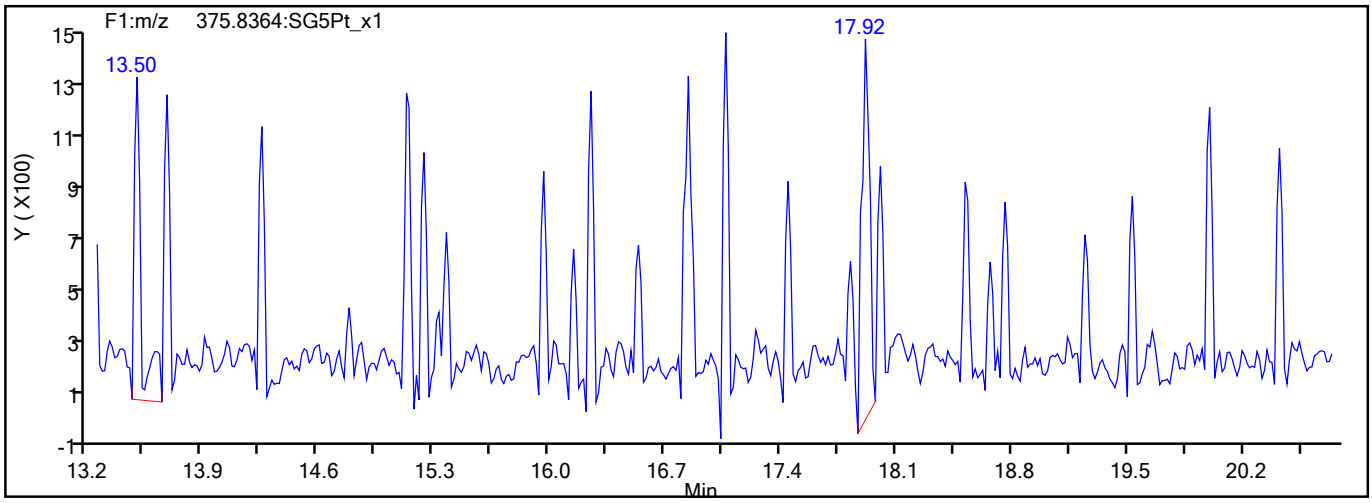

780312

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

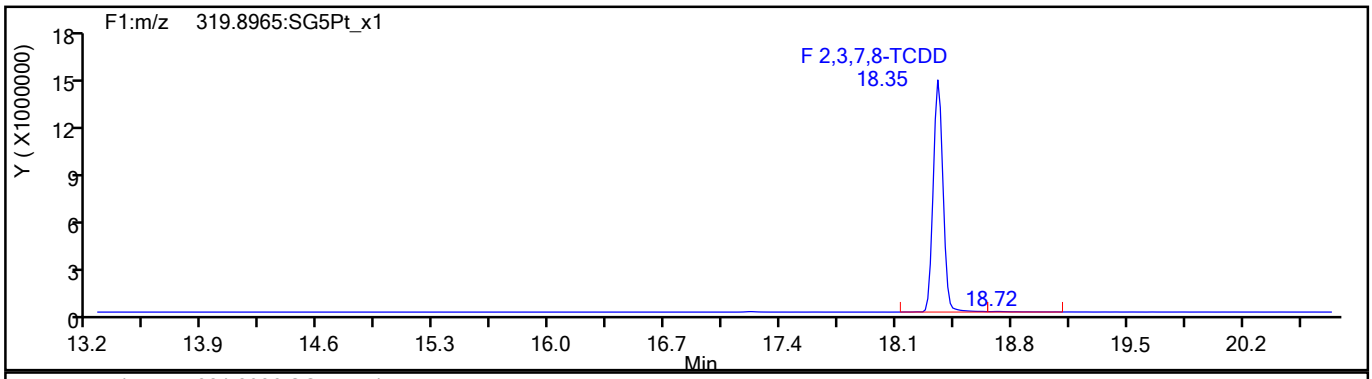

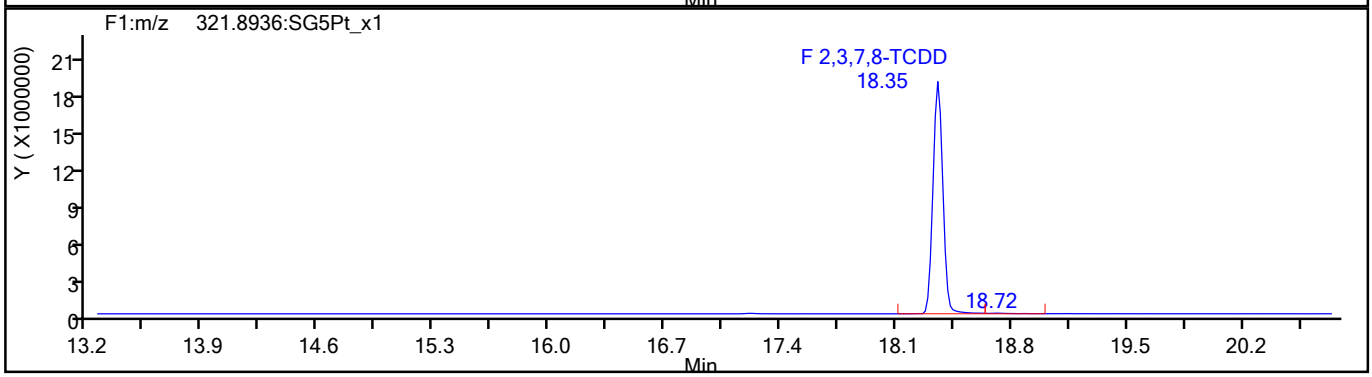

TCDD Standards

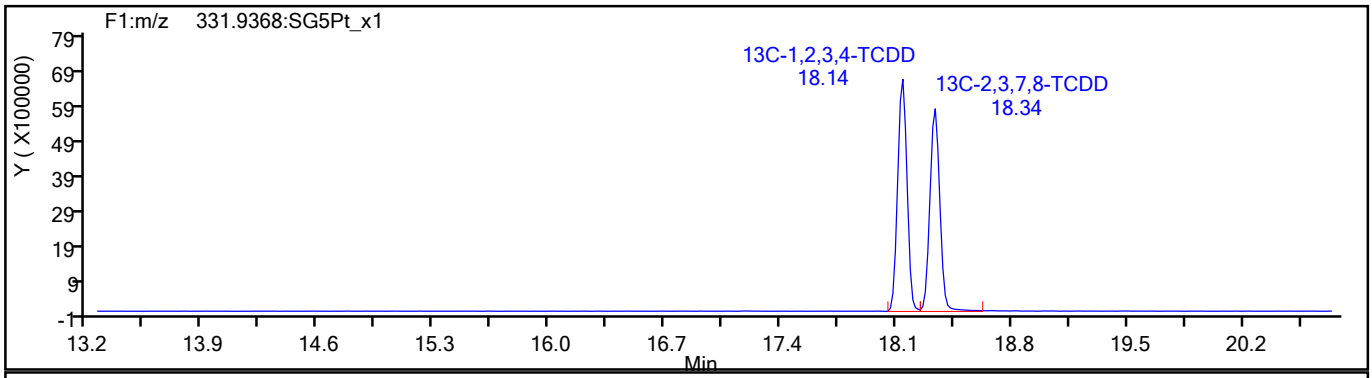

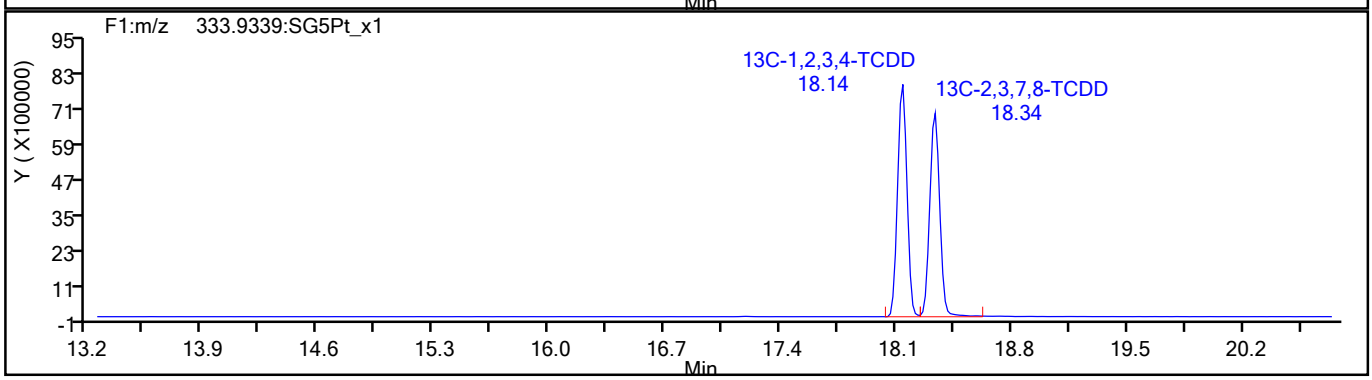

780313

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

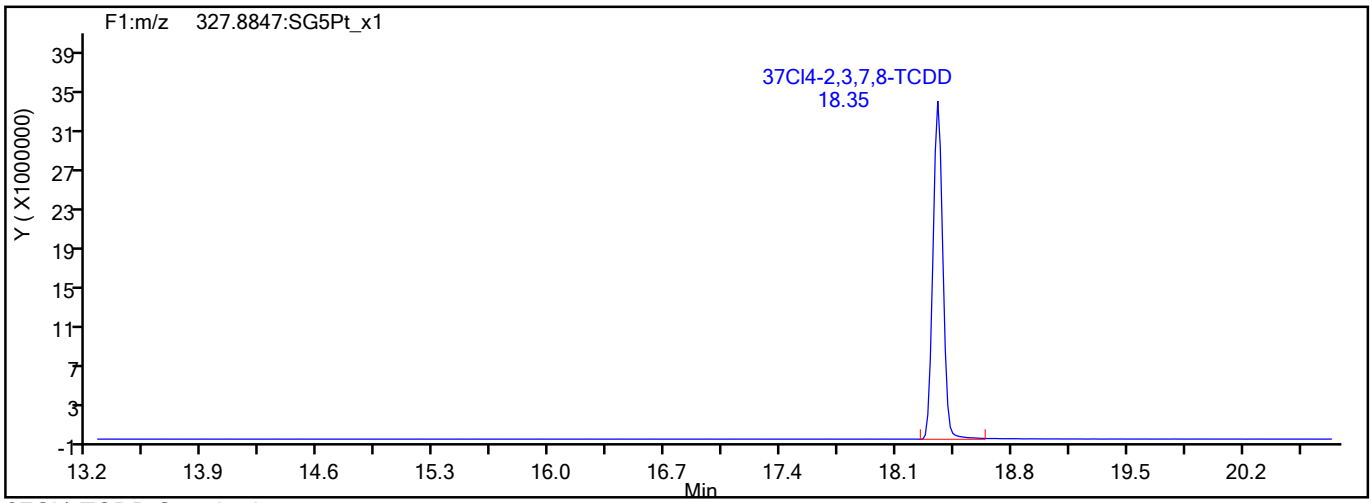

37Cl4-TCDD Standards

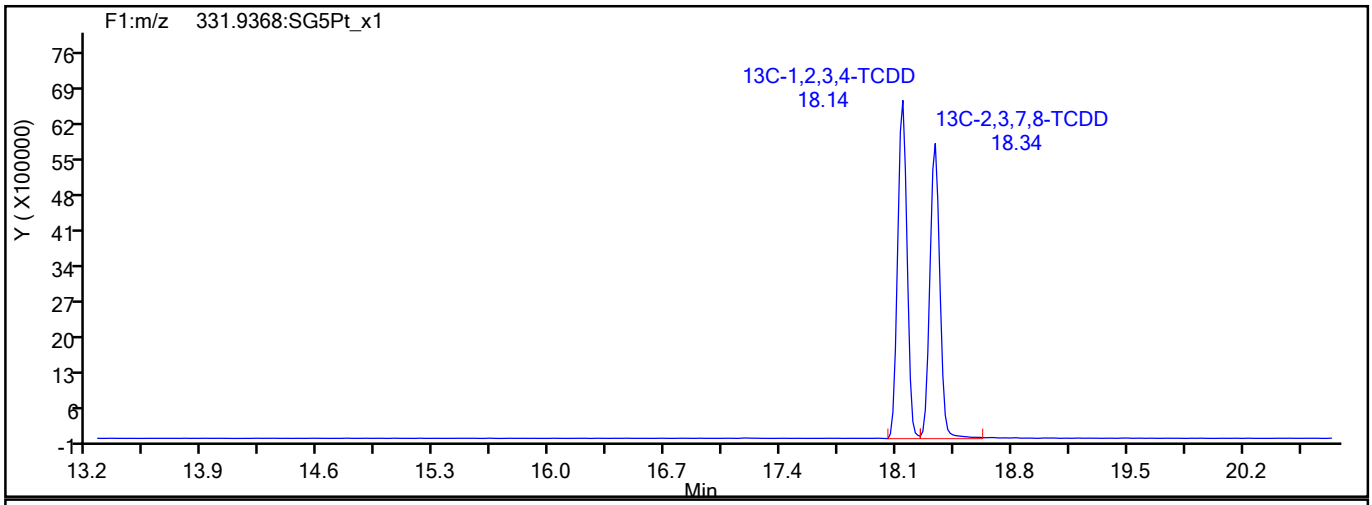

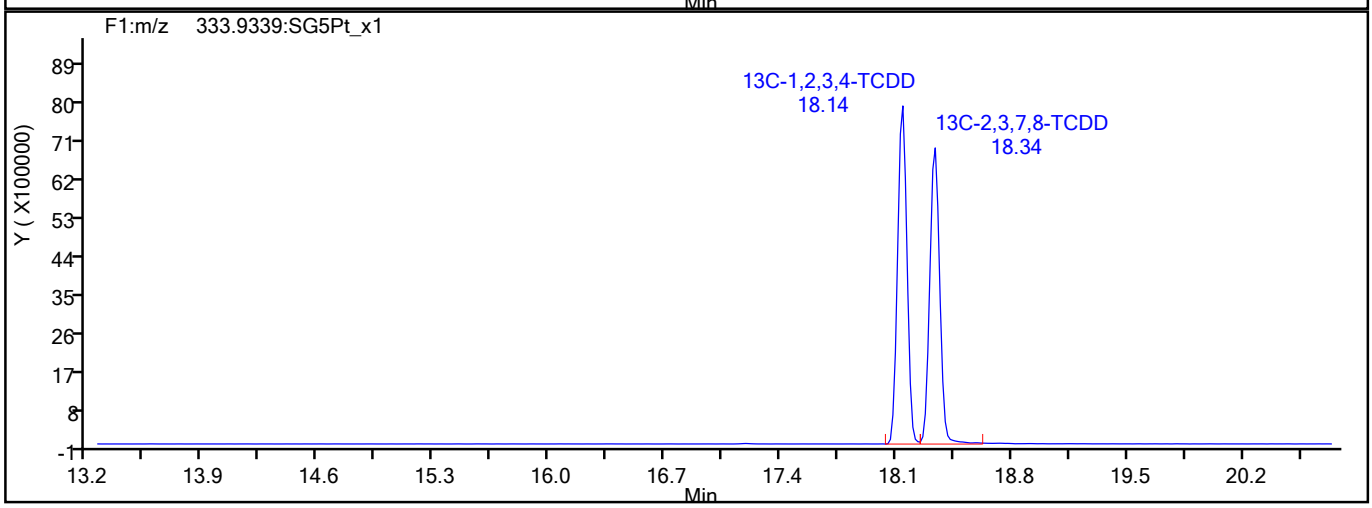

780314

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

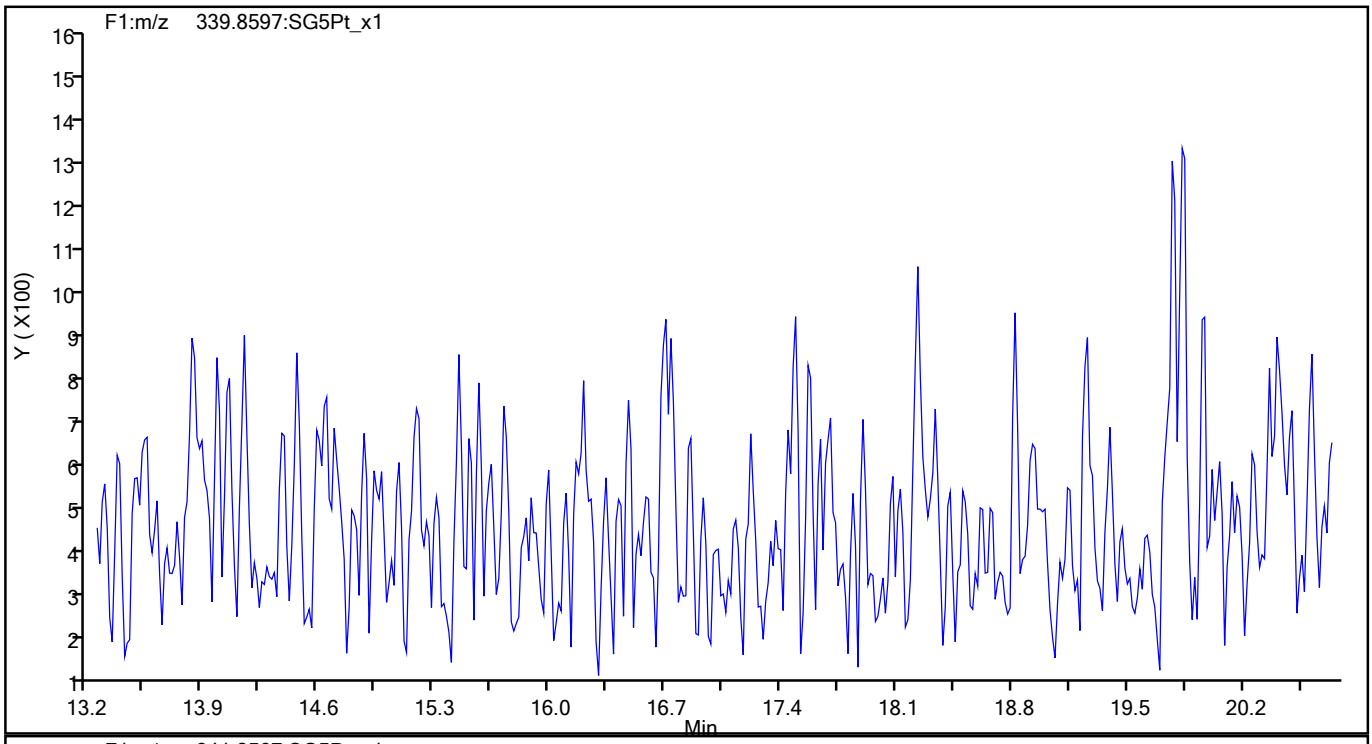

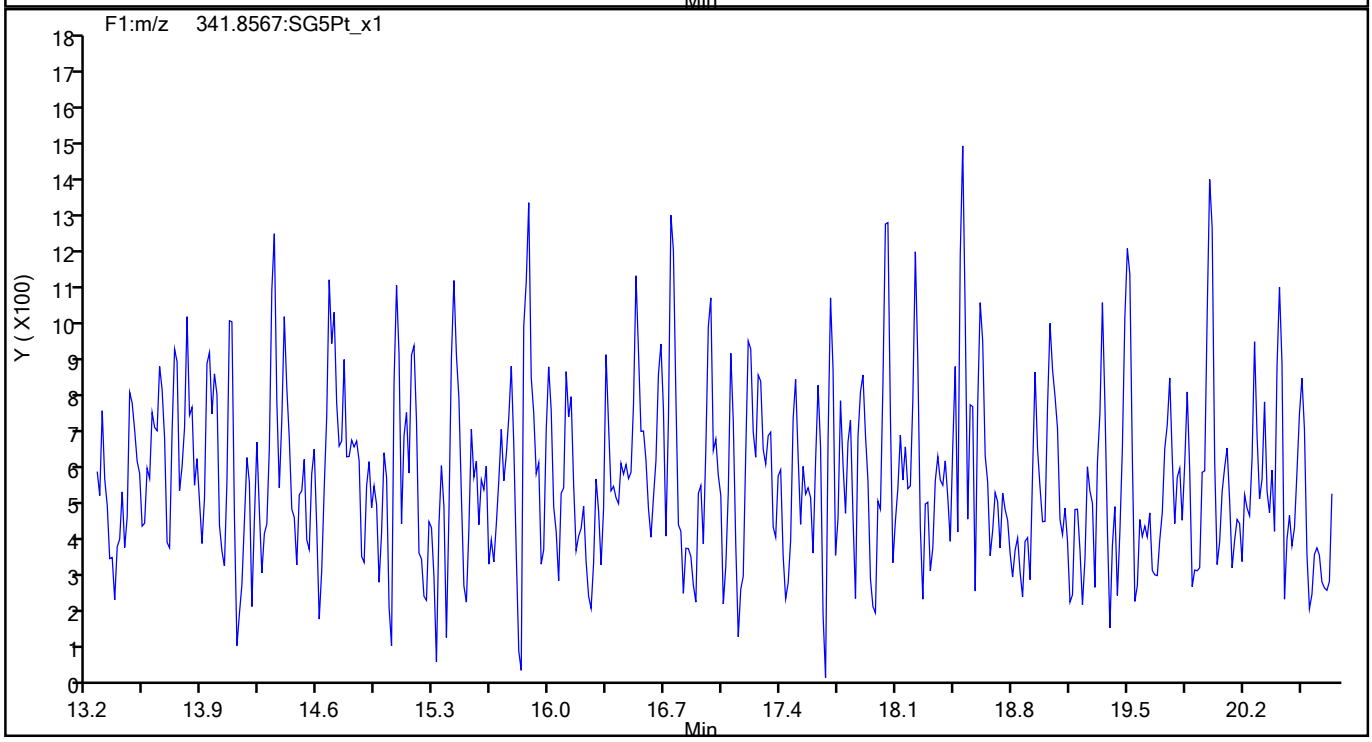

780315

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

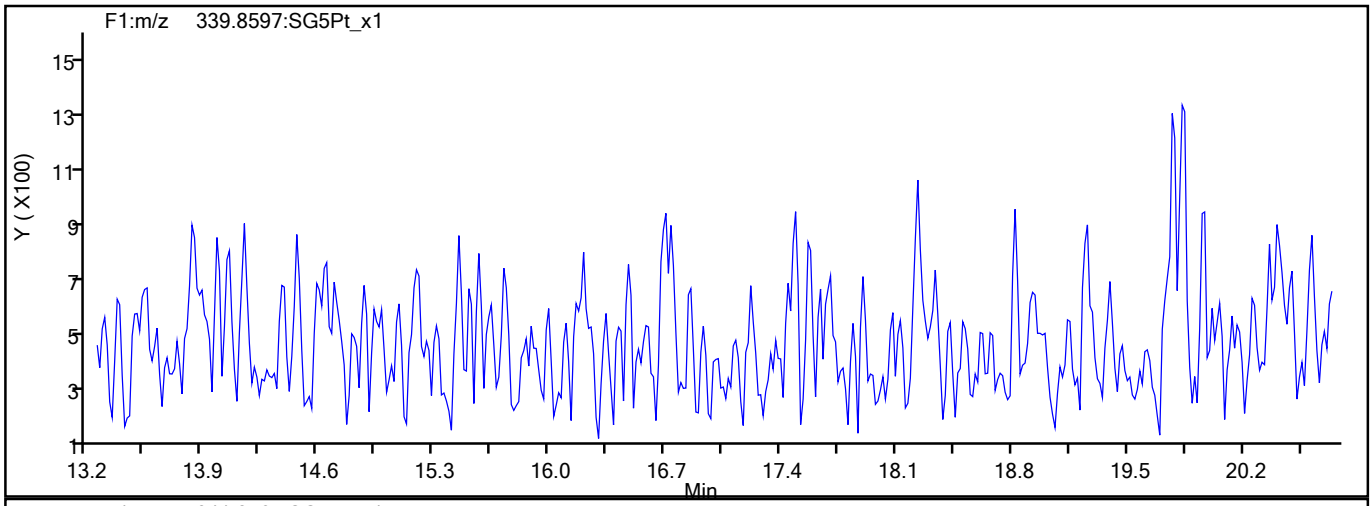

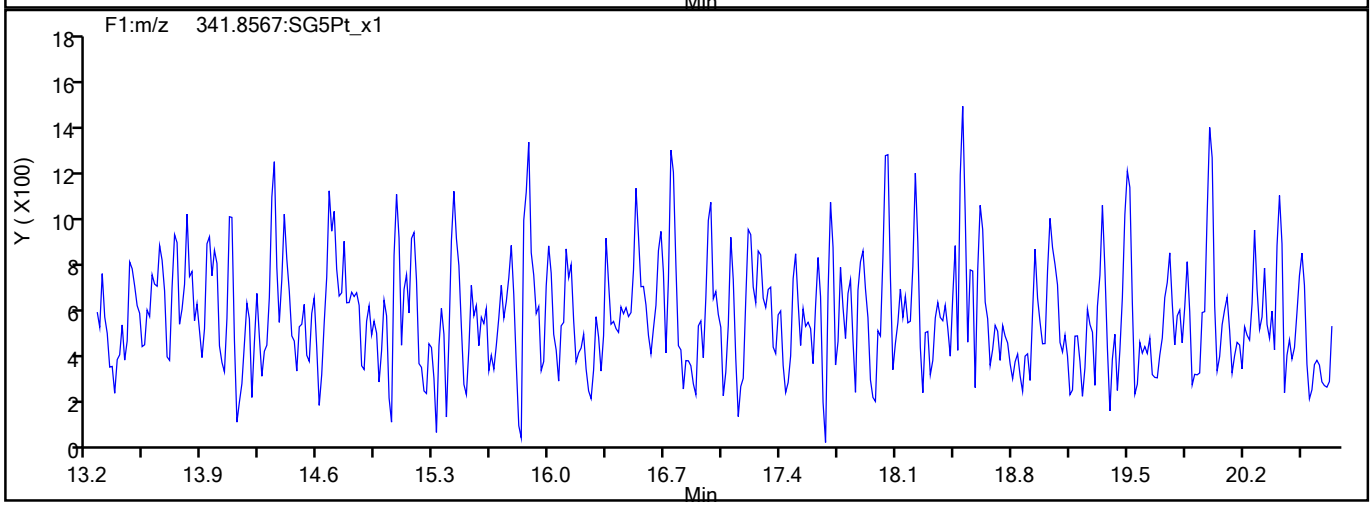

F1 PeCDFs Interference Mass

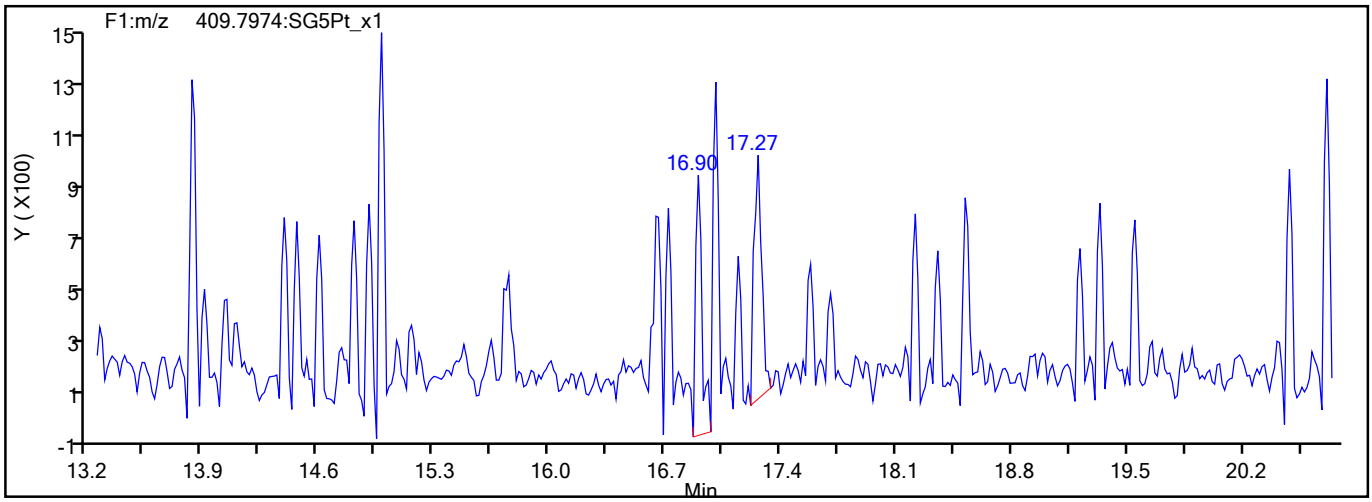

780316

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

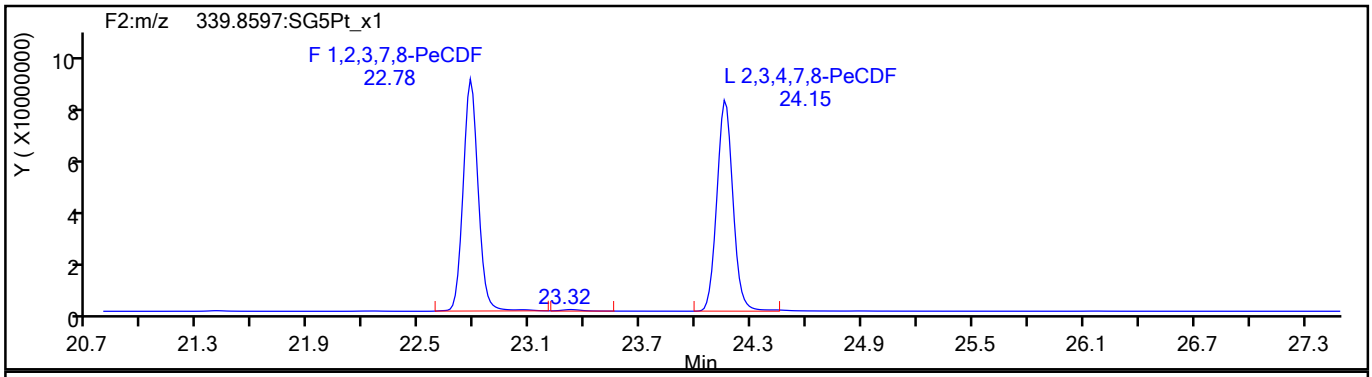

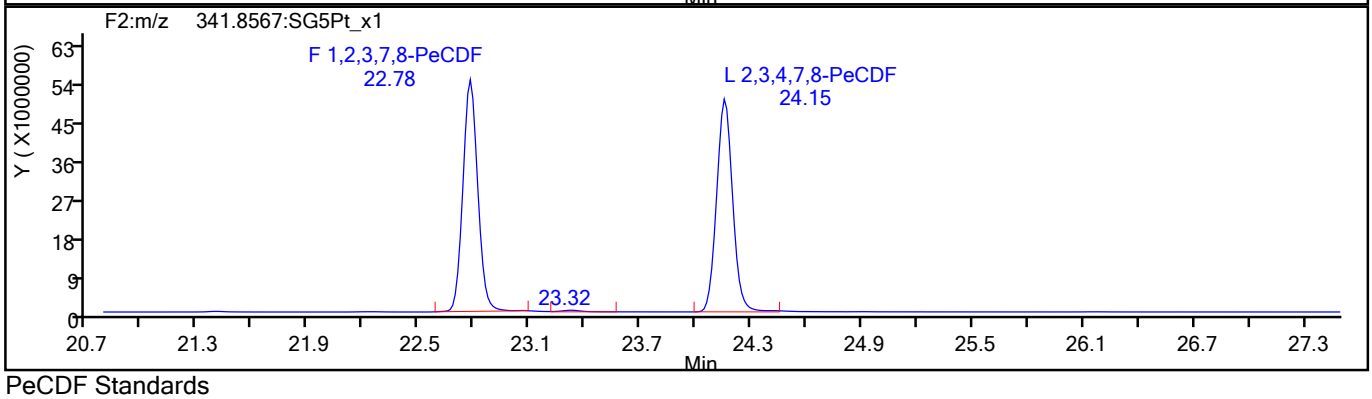

PeCDF Standards

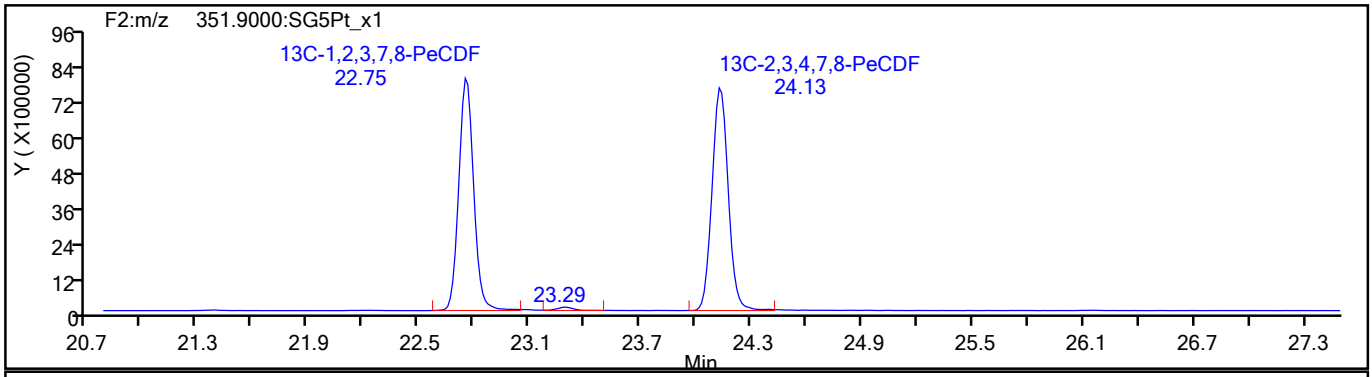

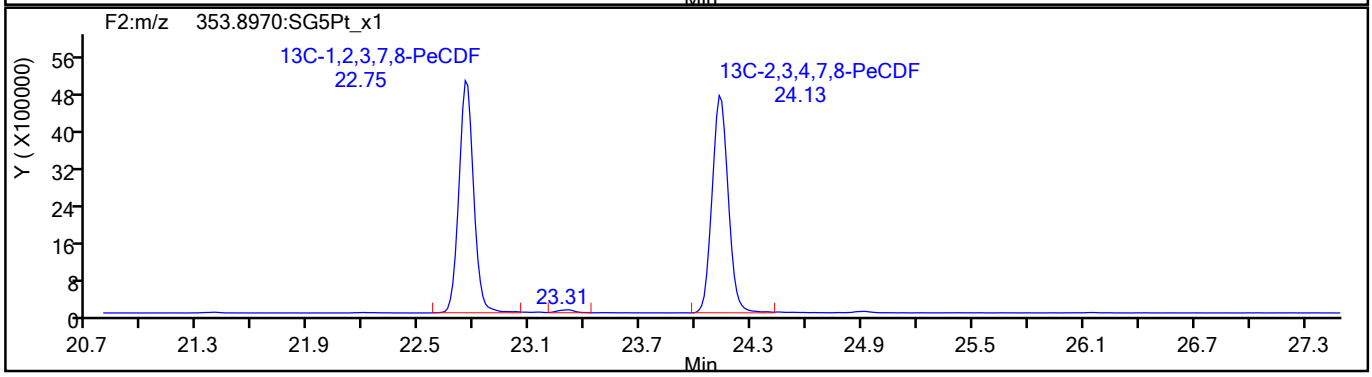

780317

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

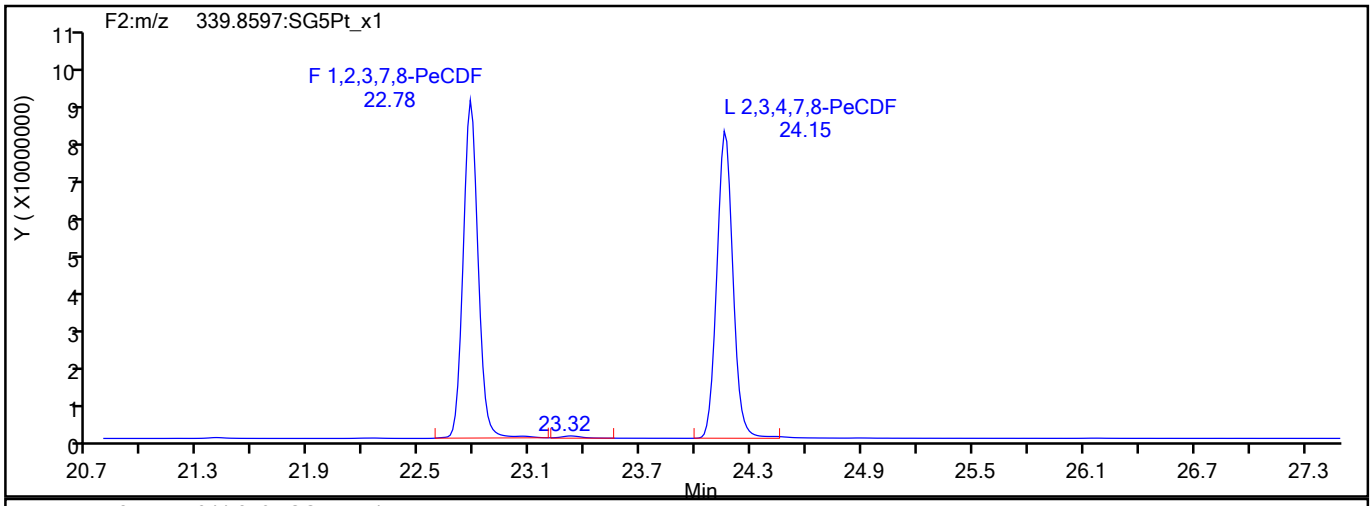

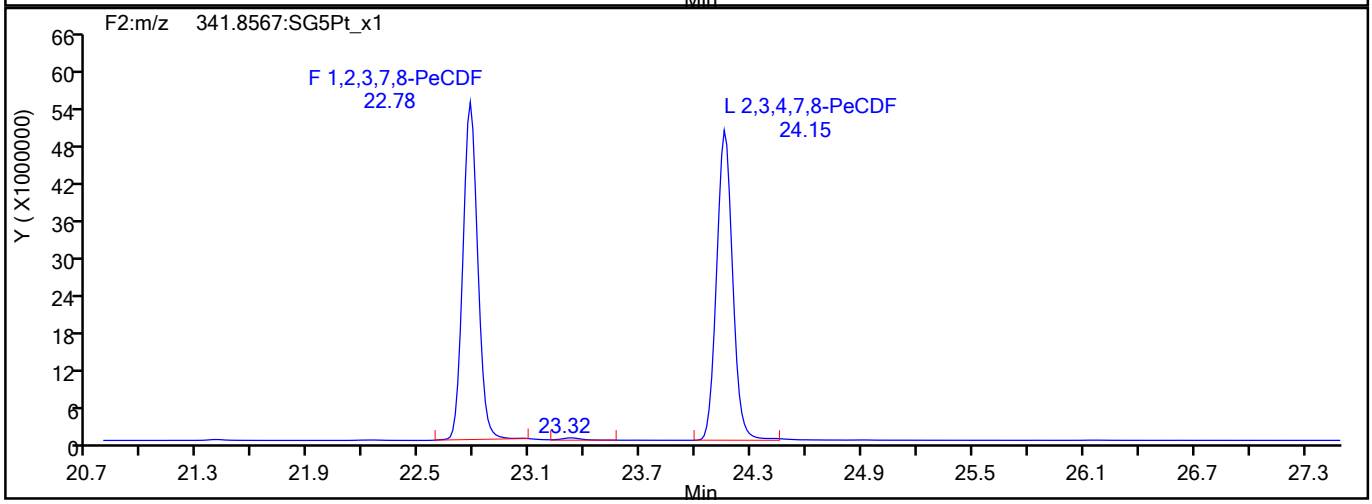

PeCDF Interference Mass

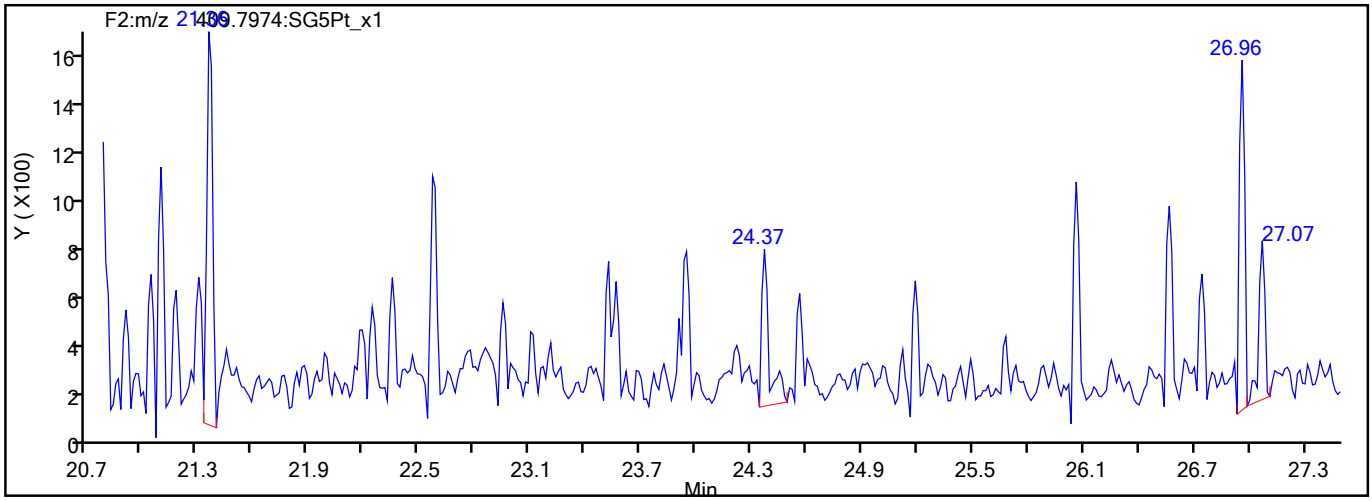

780318

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

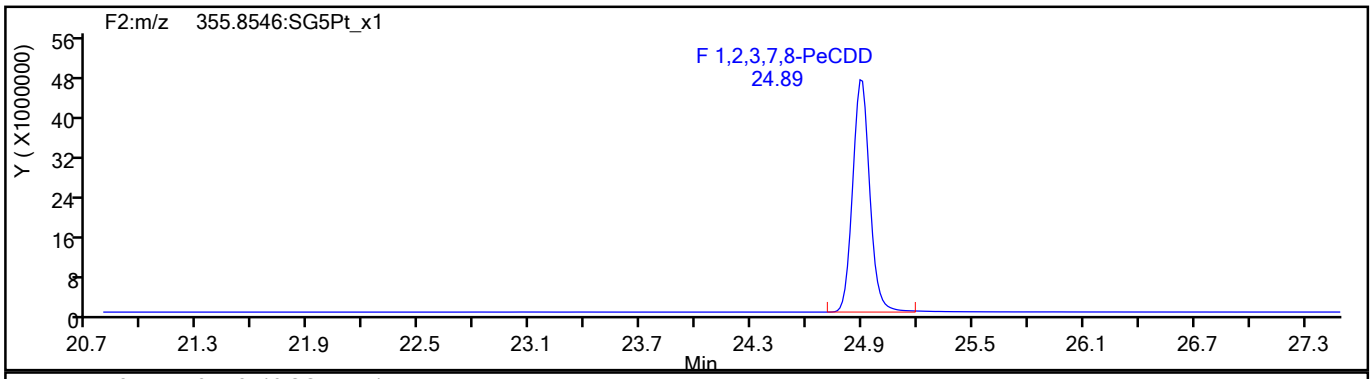

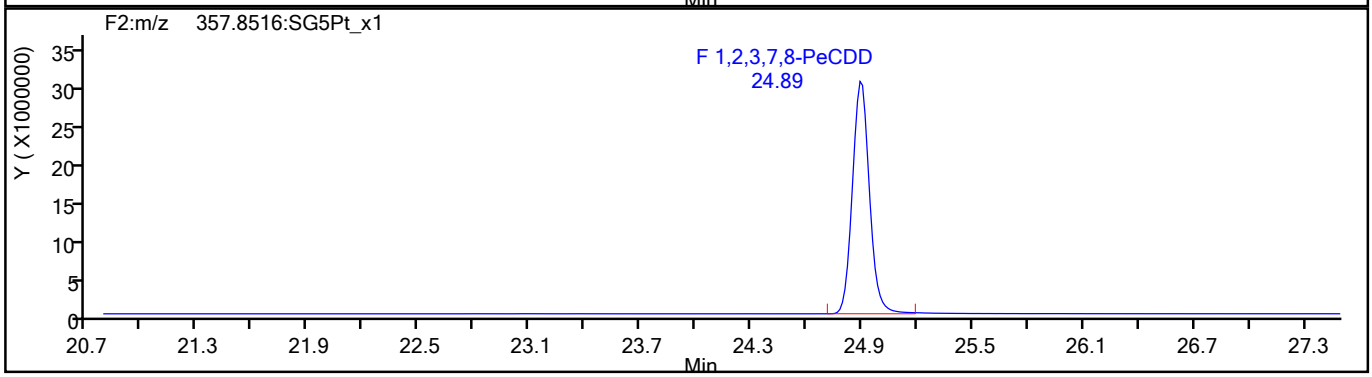

PeCDD Standards

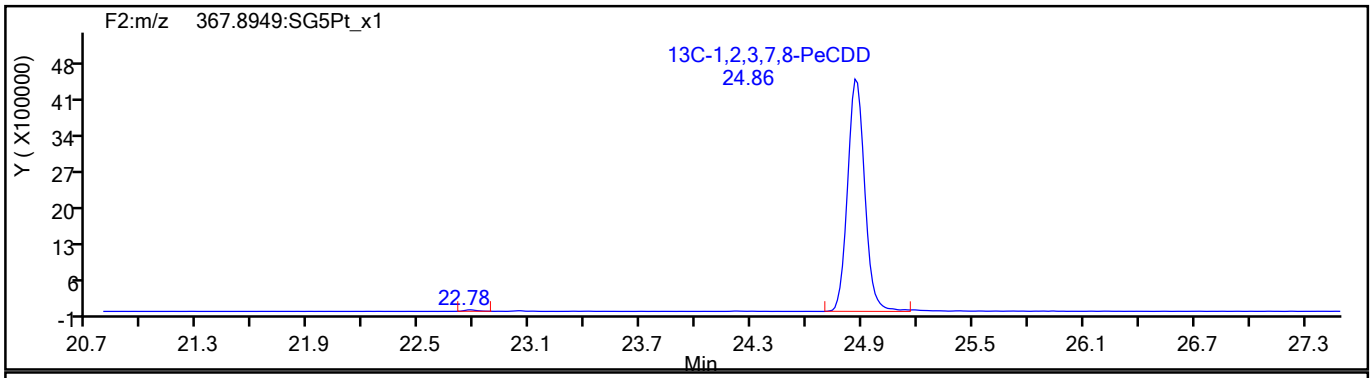

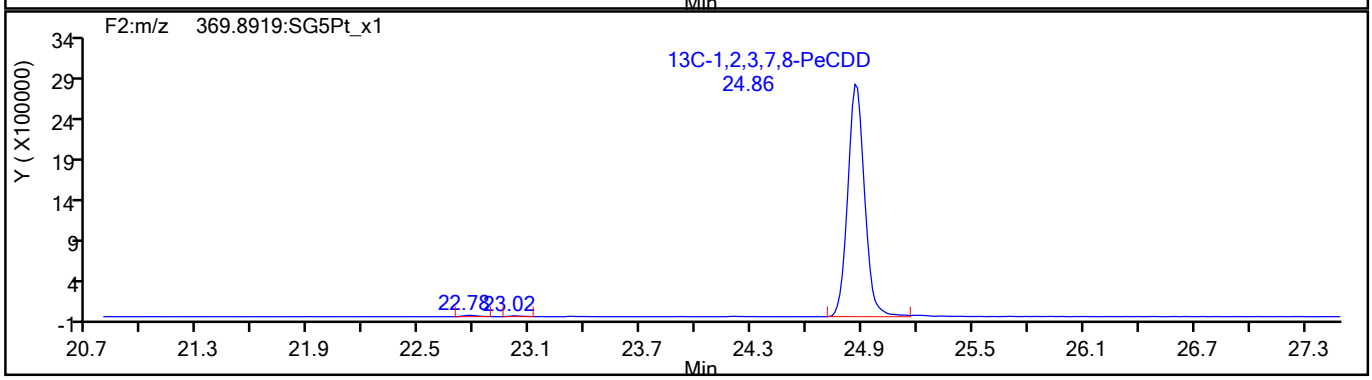

780319

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

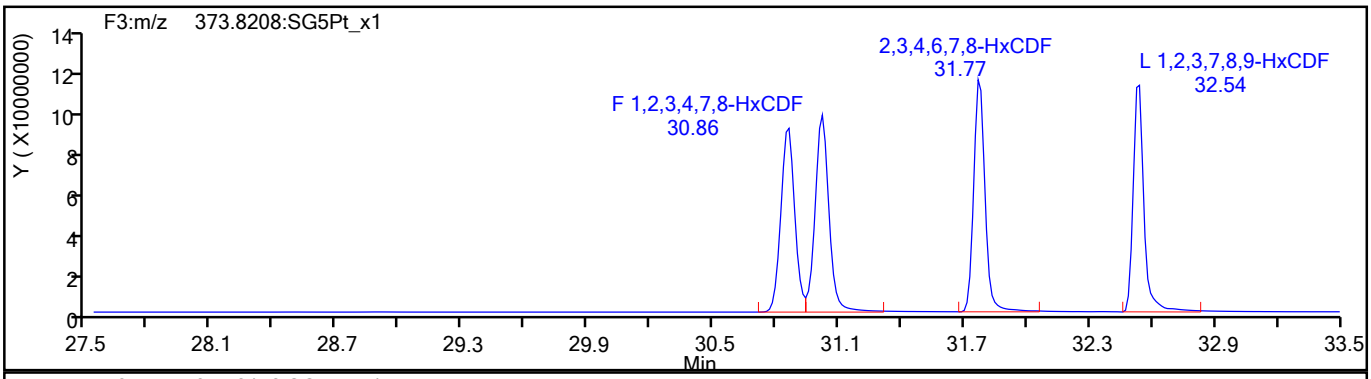

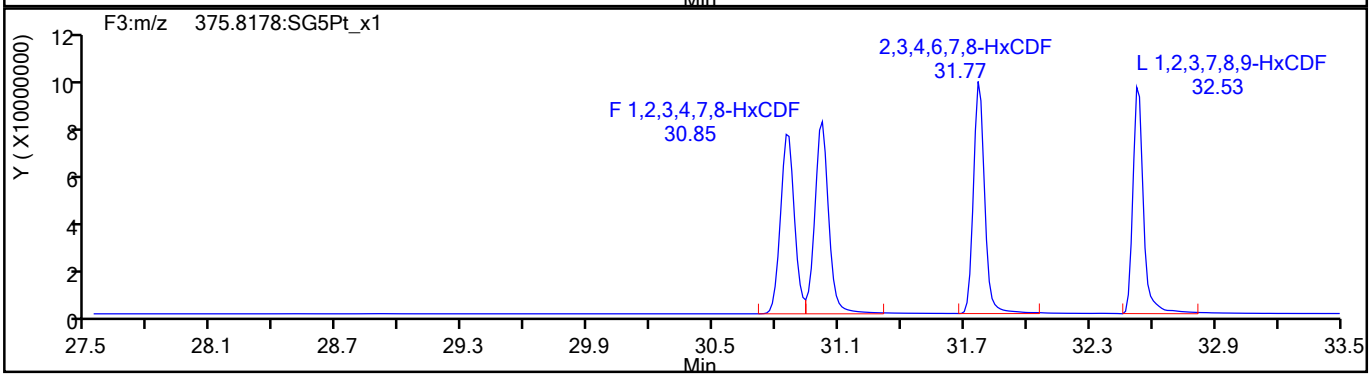

HxCDF Standards

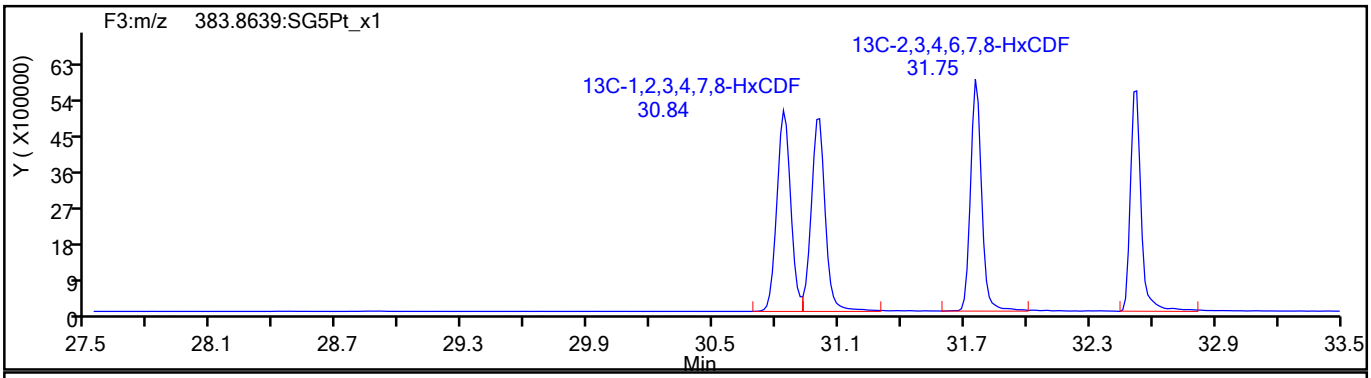

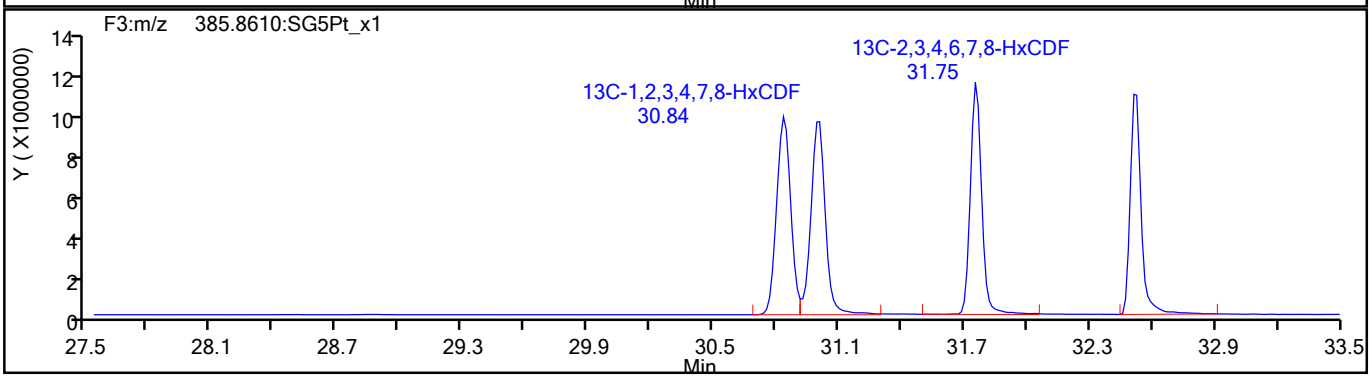

780320

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

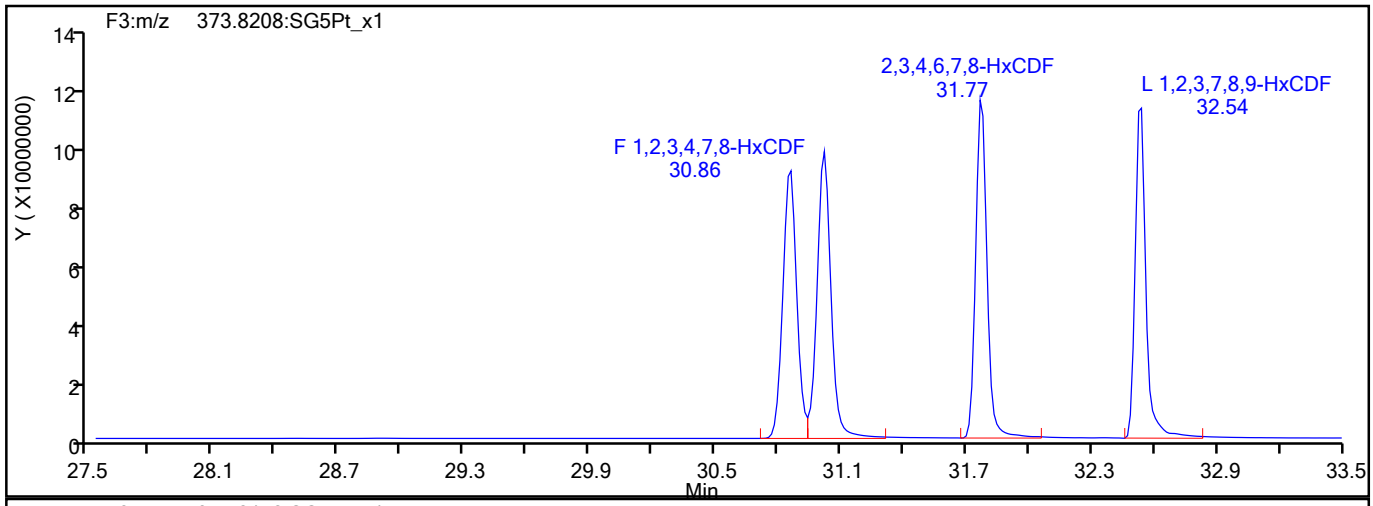

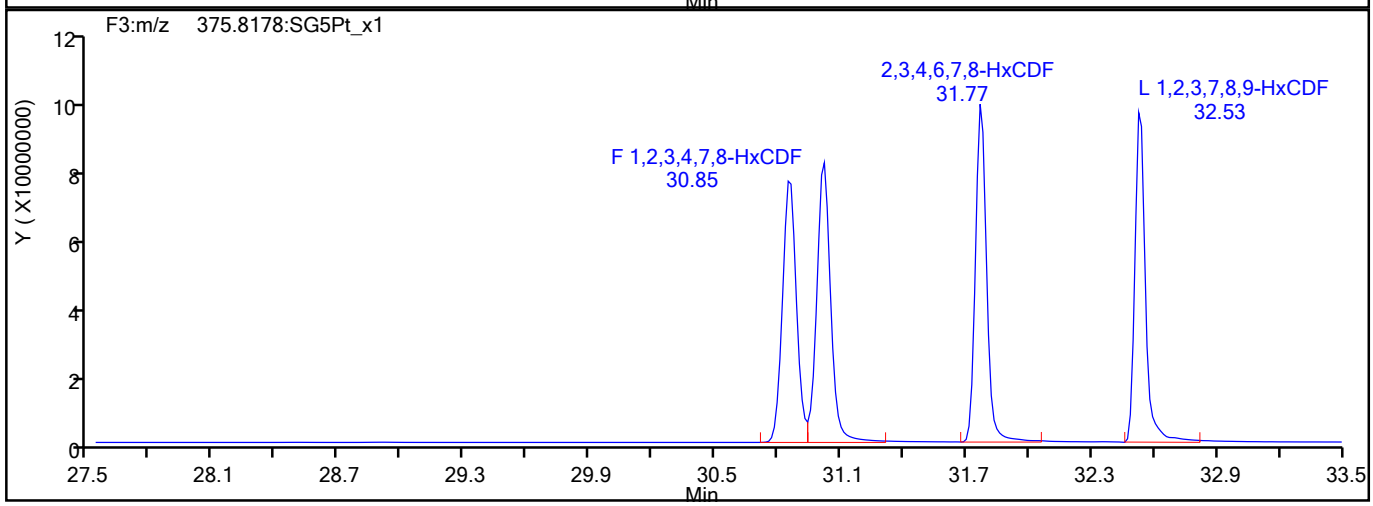

HxCDF Interference Mass

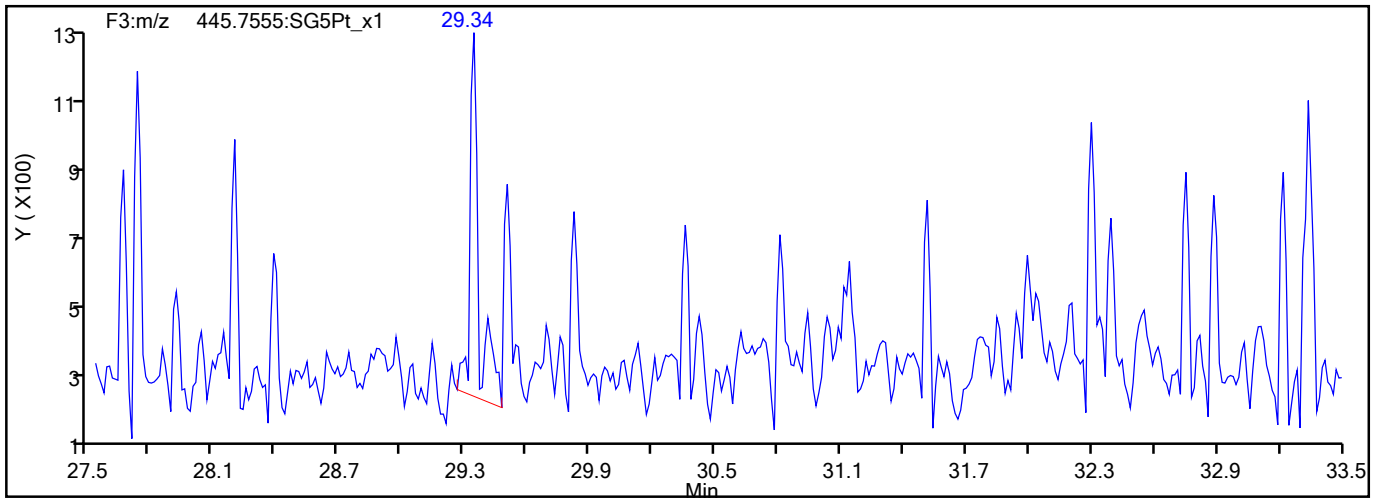

780321

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

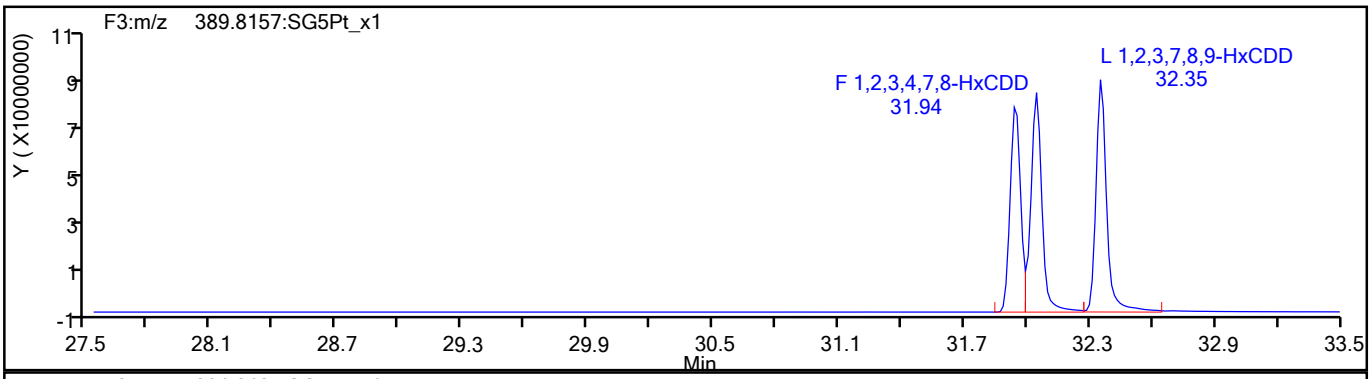

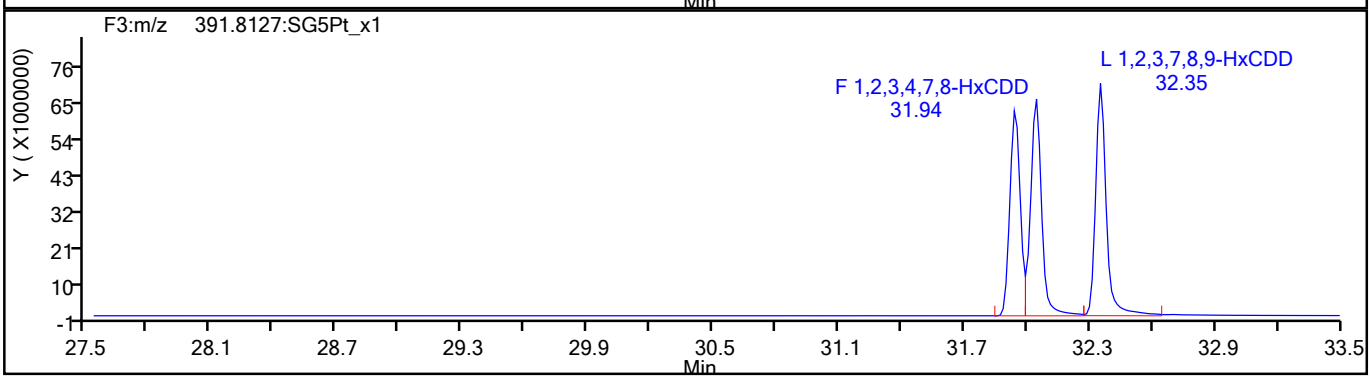

HxCDD Standards

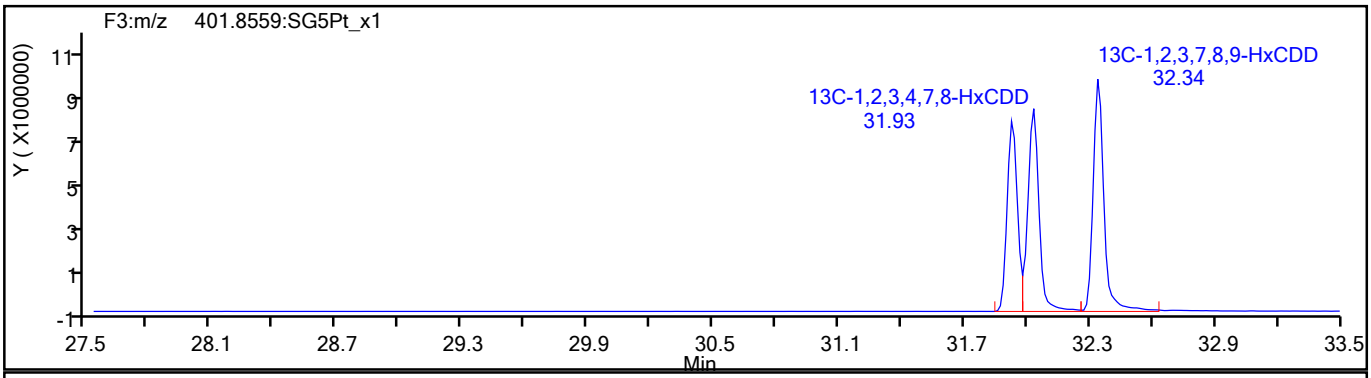

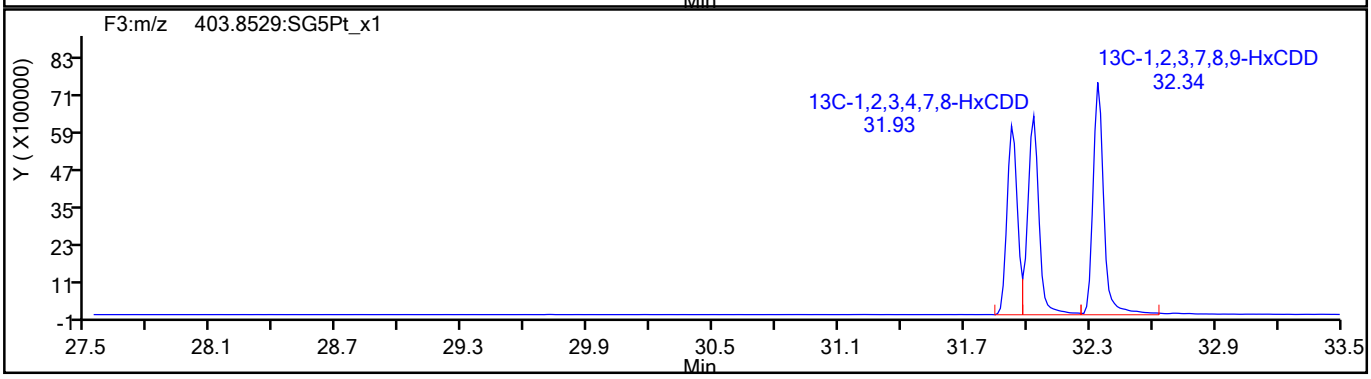

780322

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

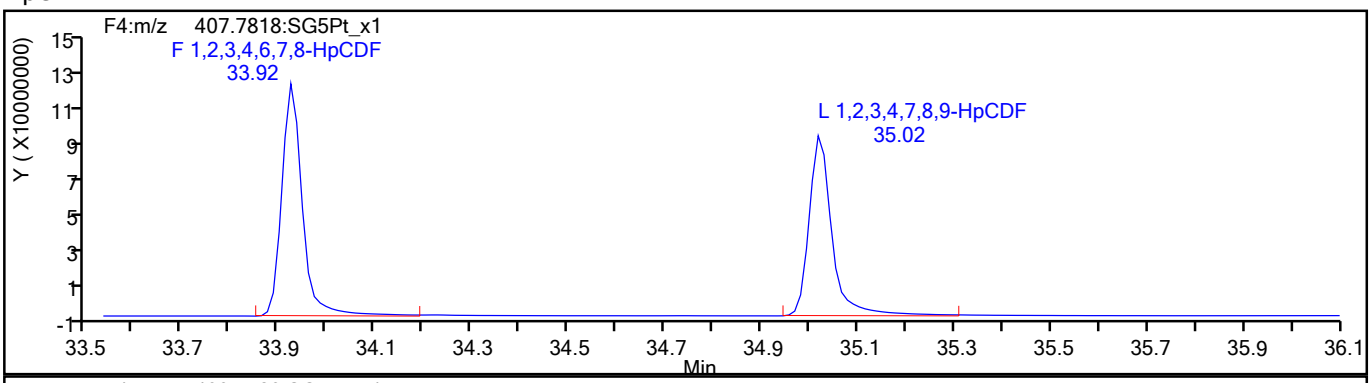

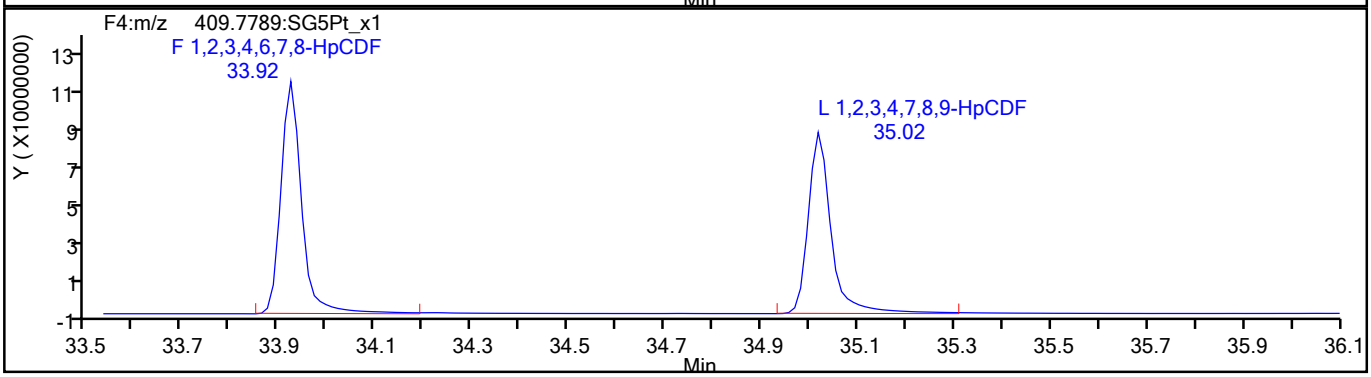

HpCDF Standards

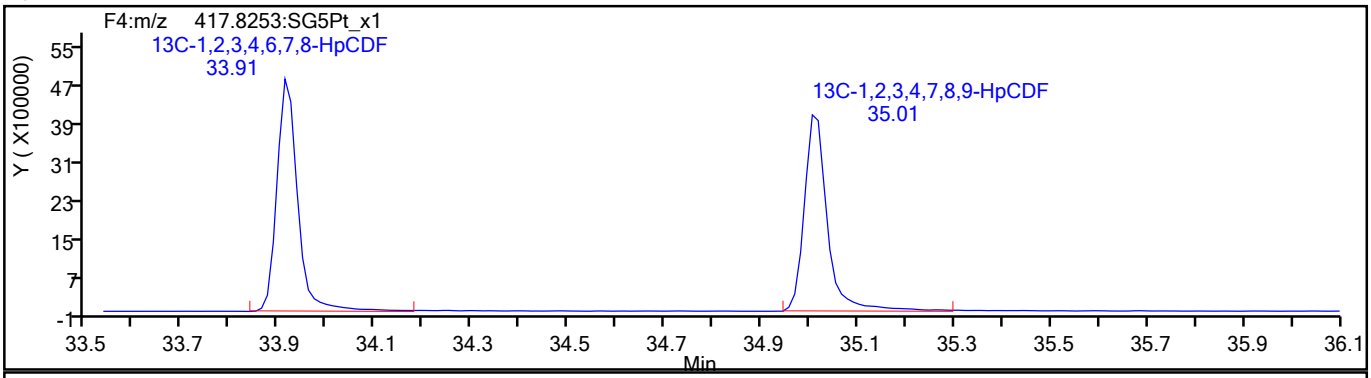

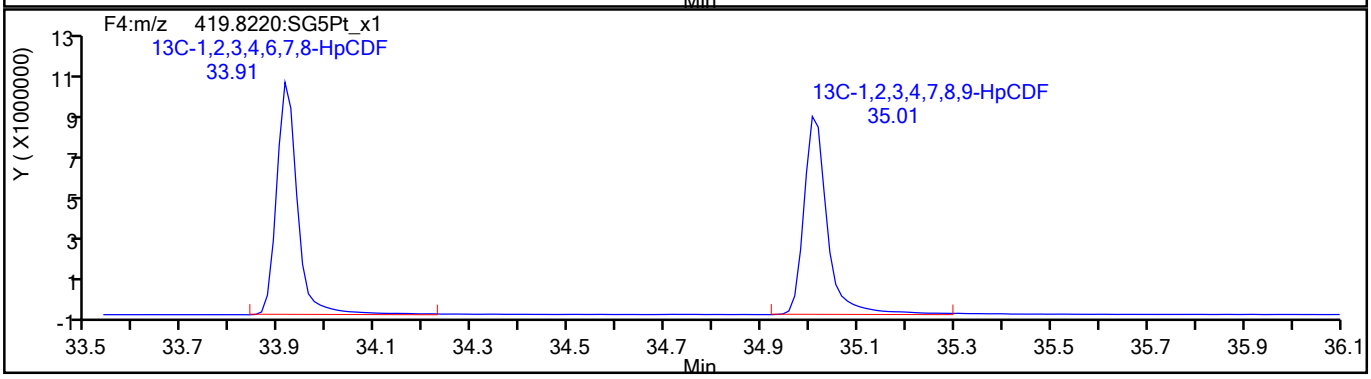

780323

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

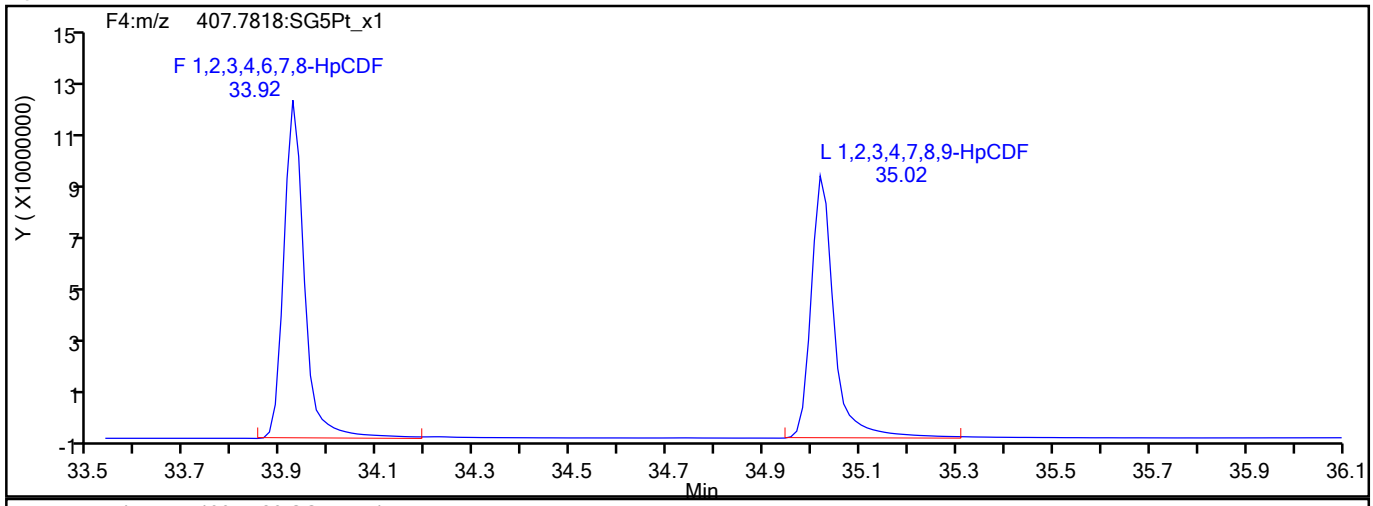

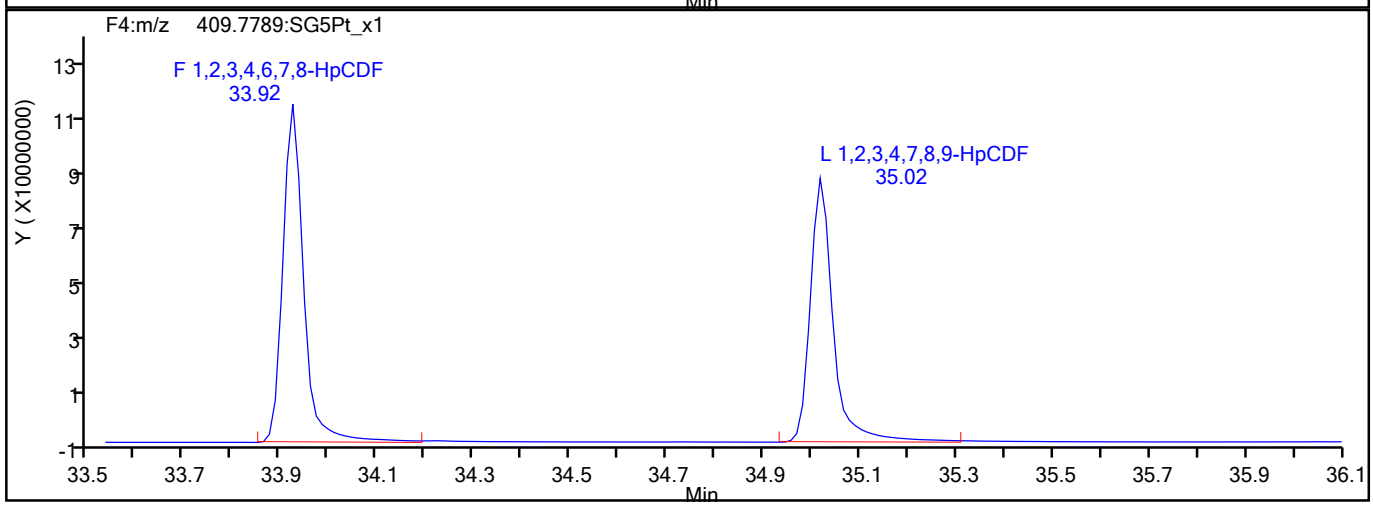

HpCDF Interference Mass

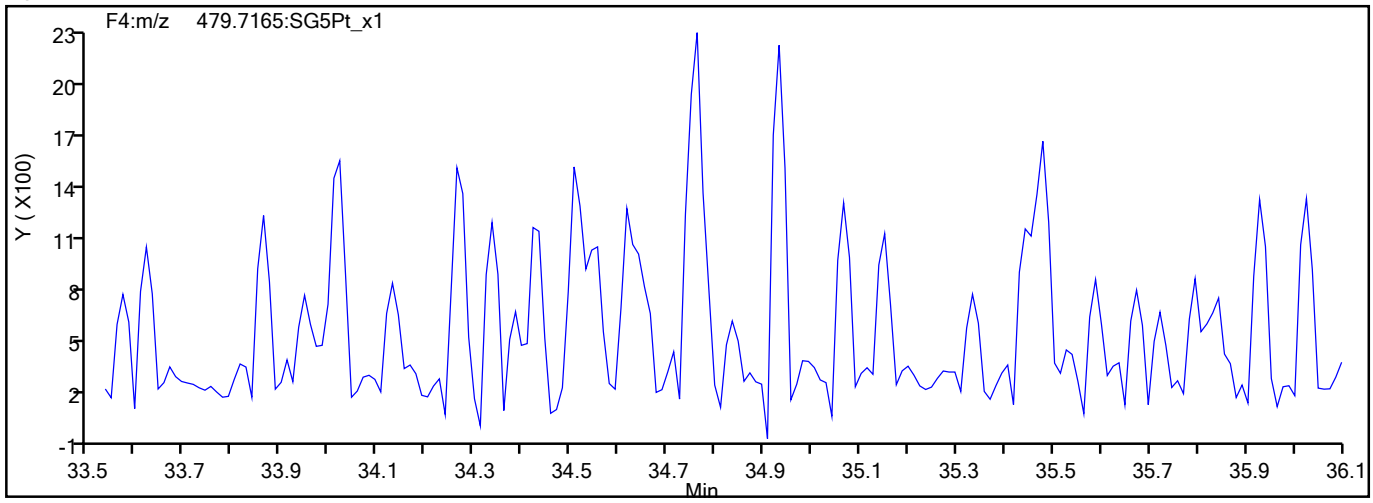

780324

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

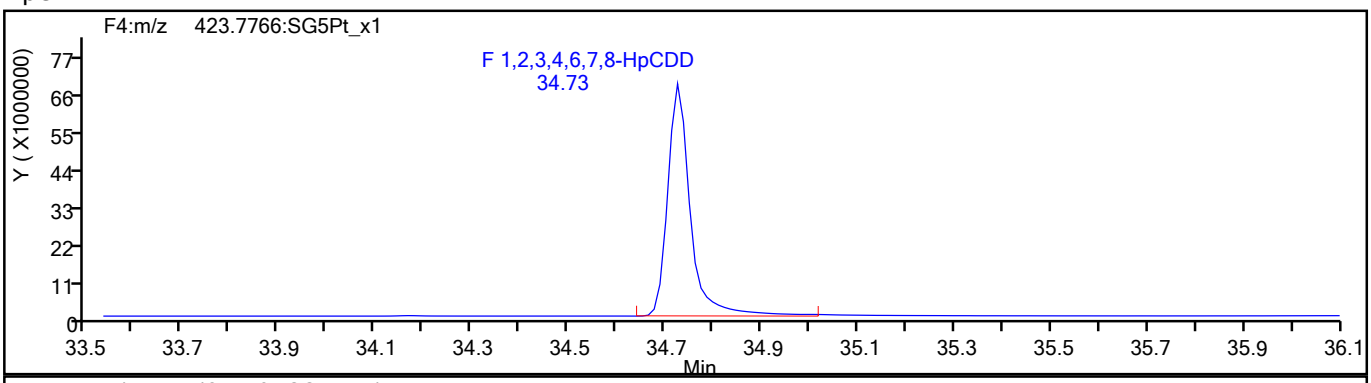

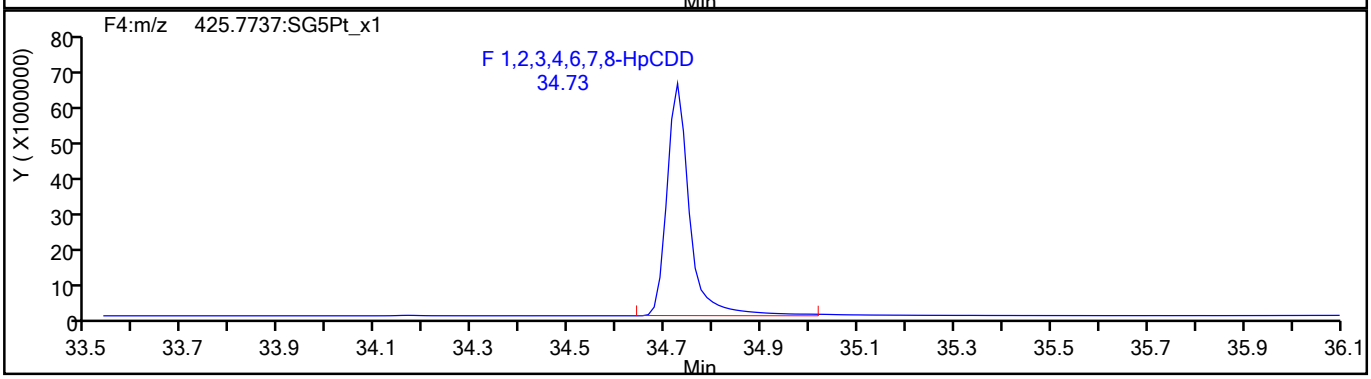

HpCDD Standards

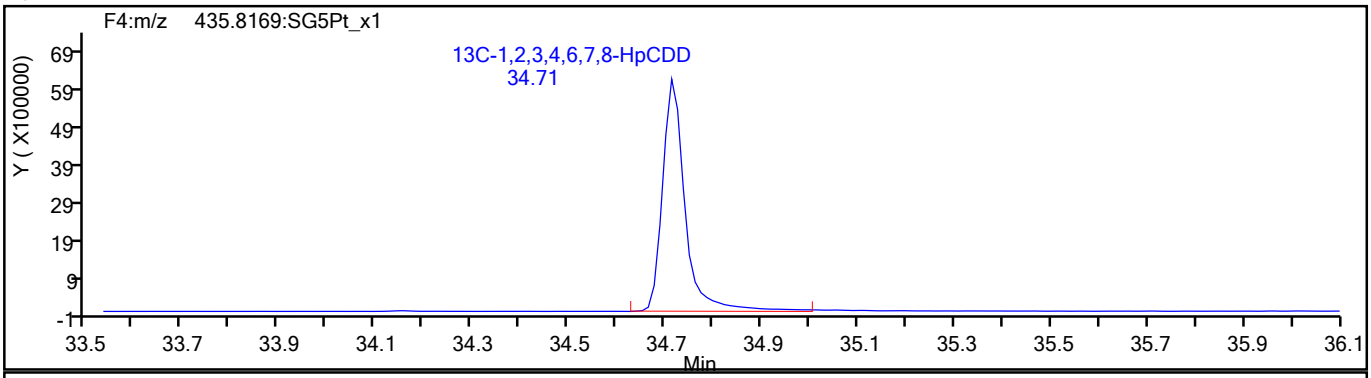

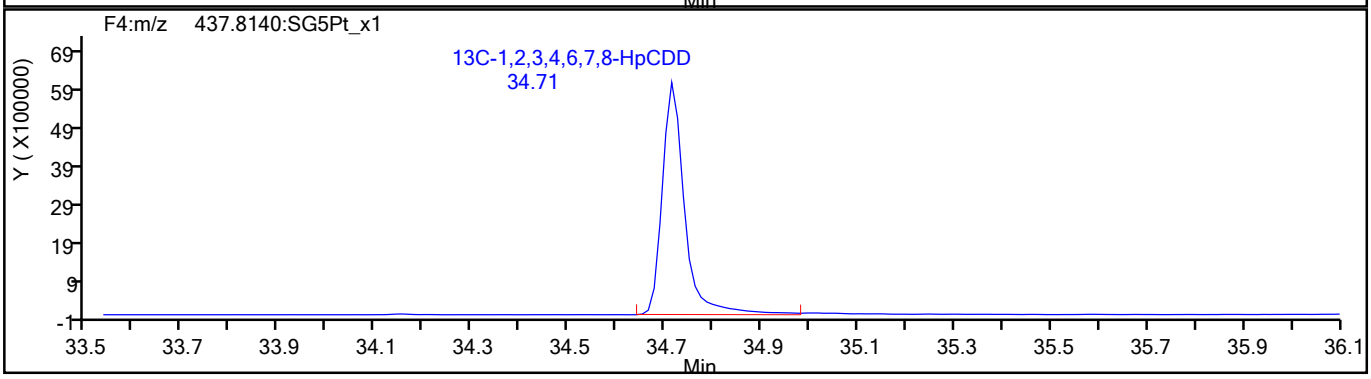

780325

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

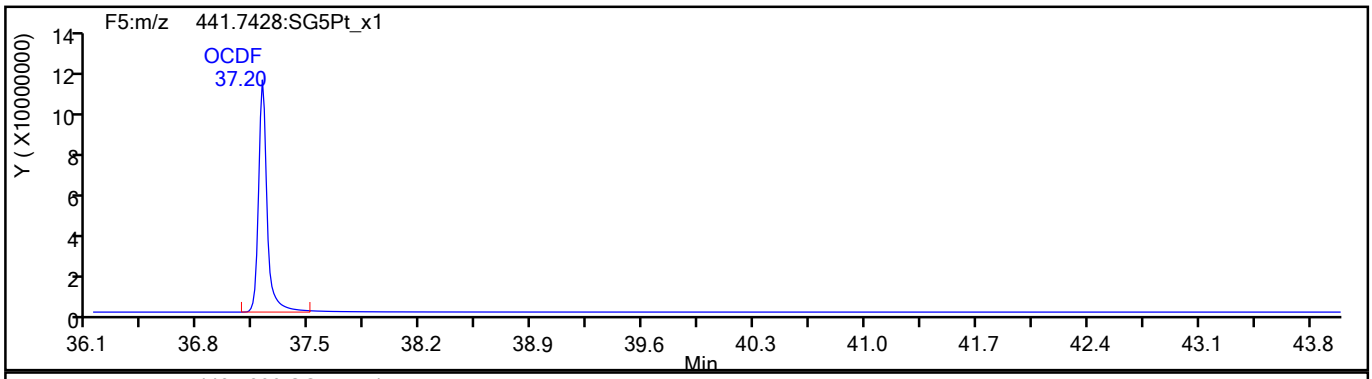

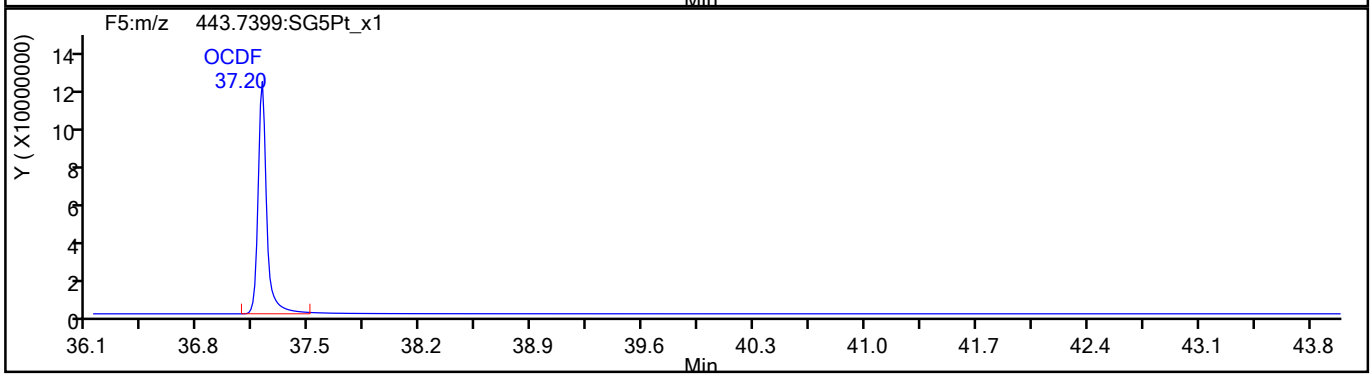

OCDF Standards

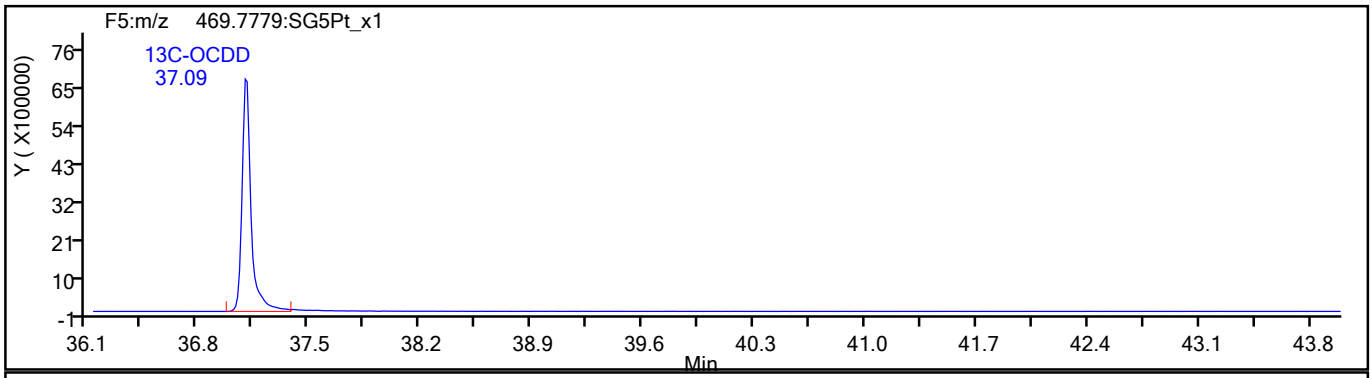

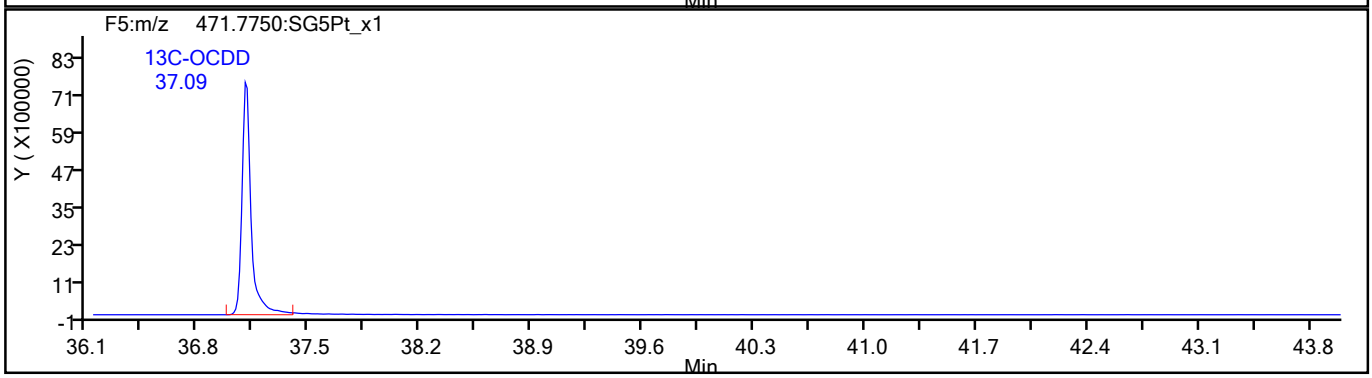

780326

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

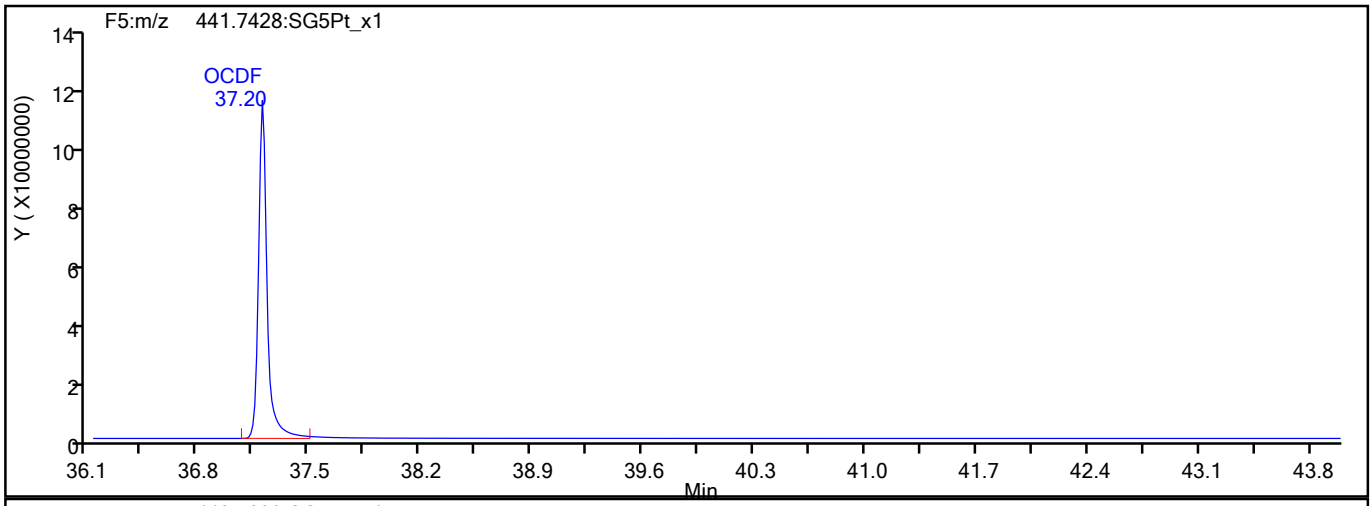

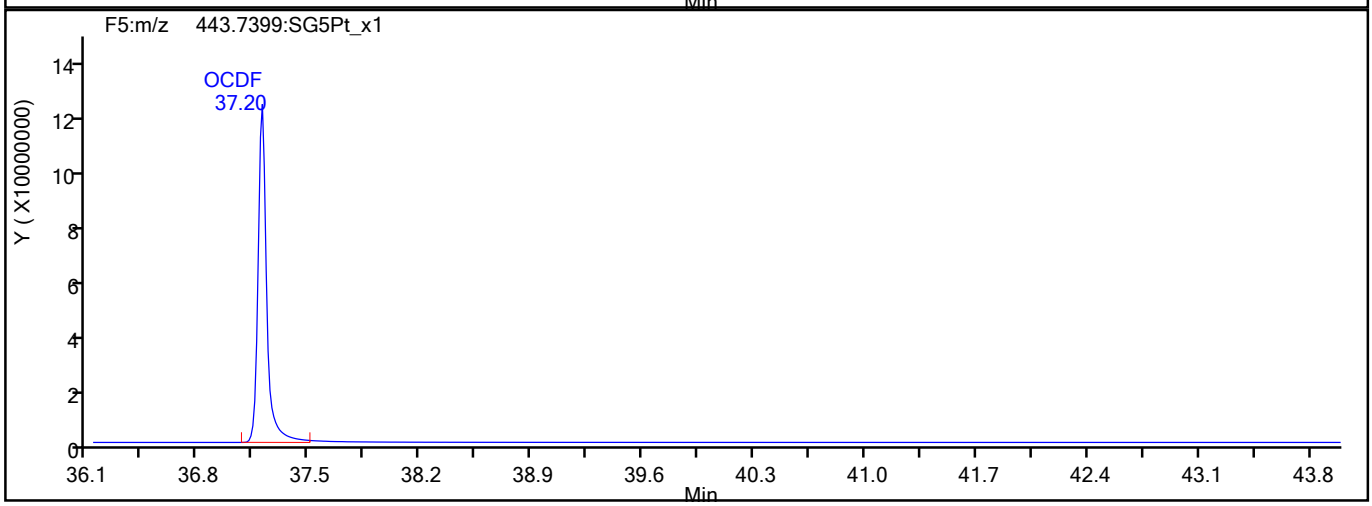

OCDF Interference Mass

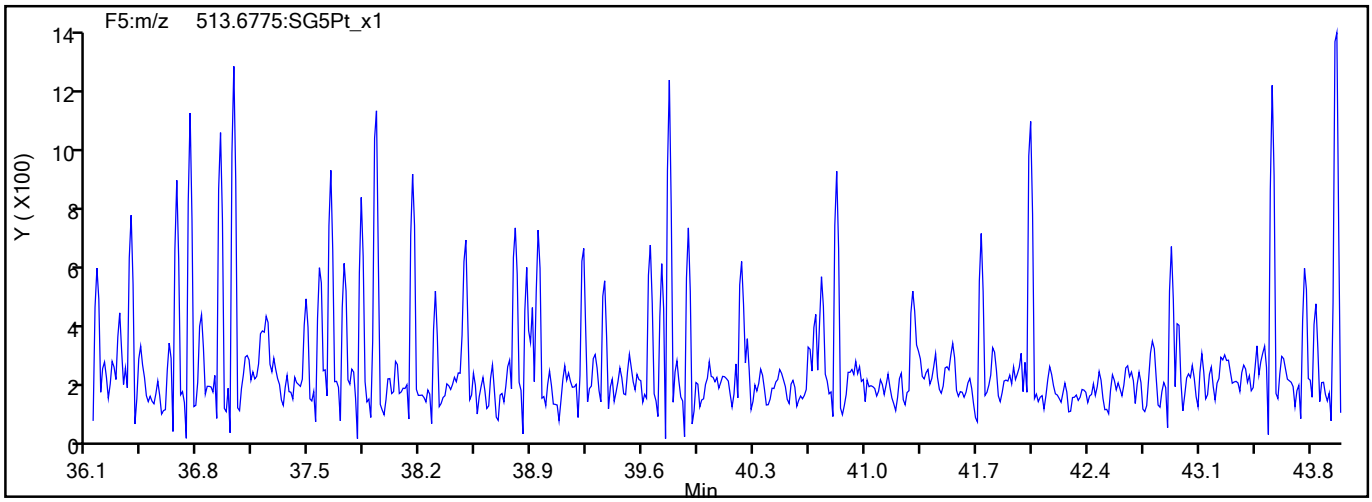

780327

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

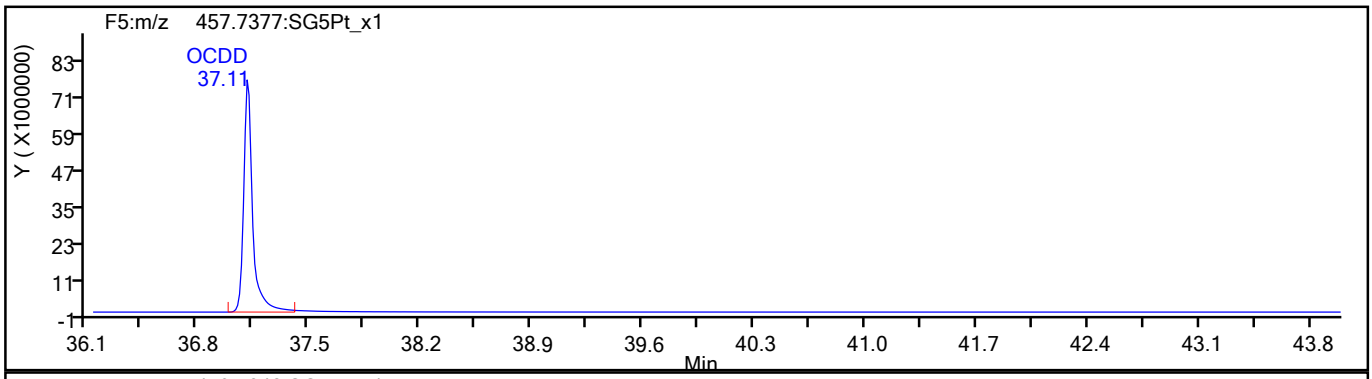

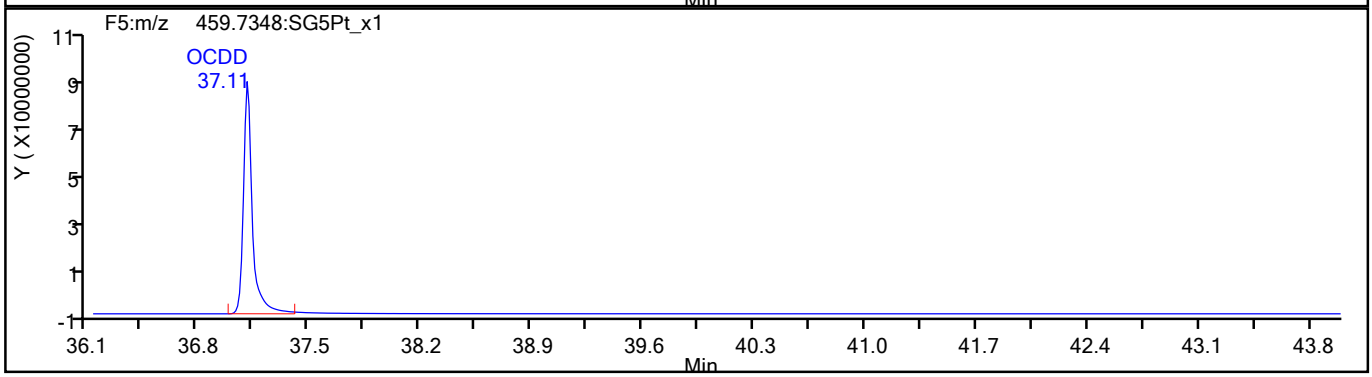

OCDD Standards

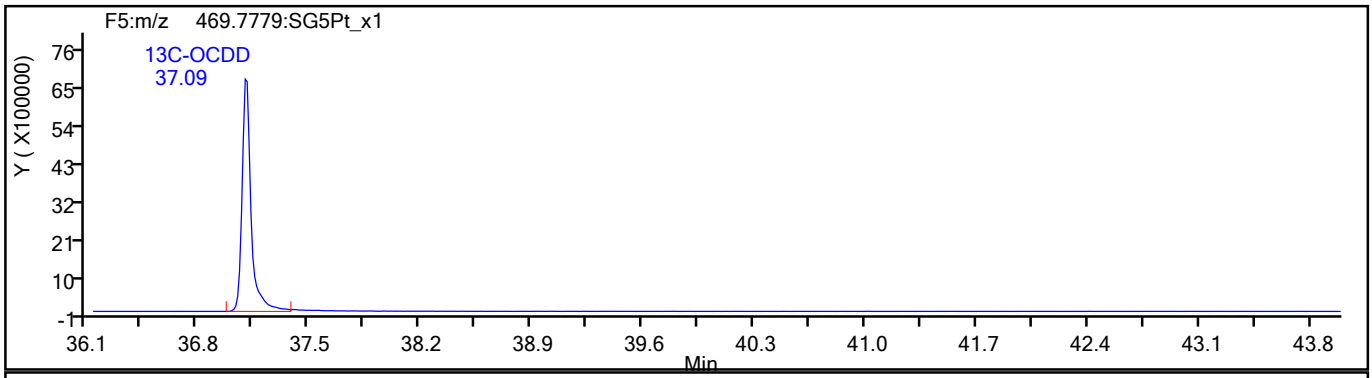

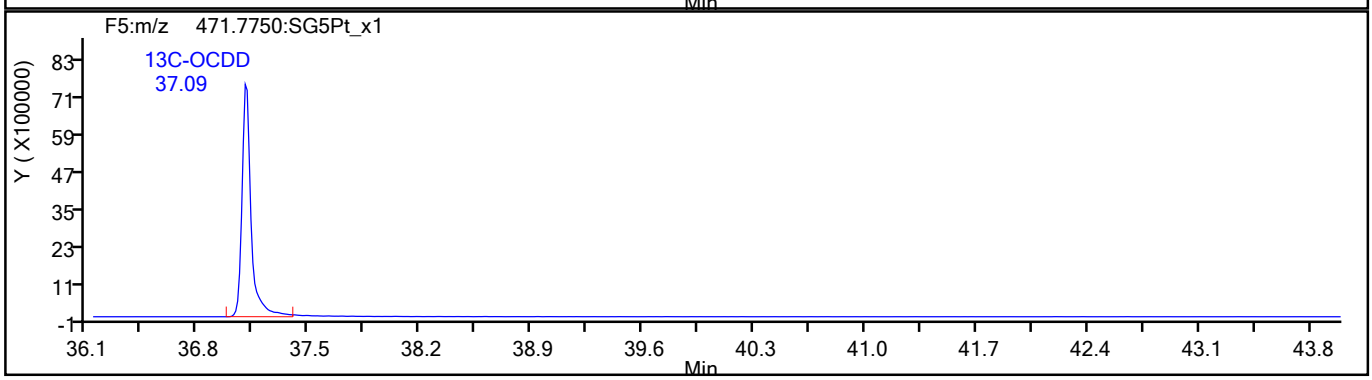

780328

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

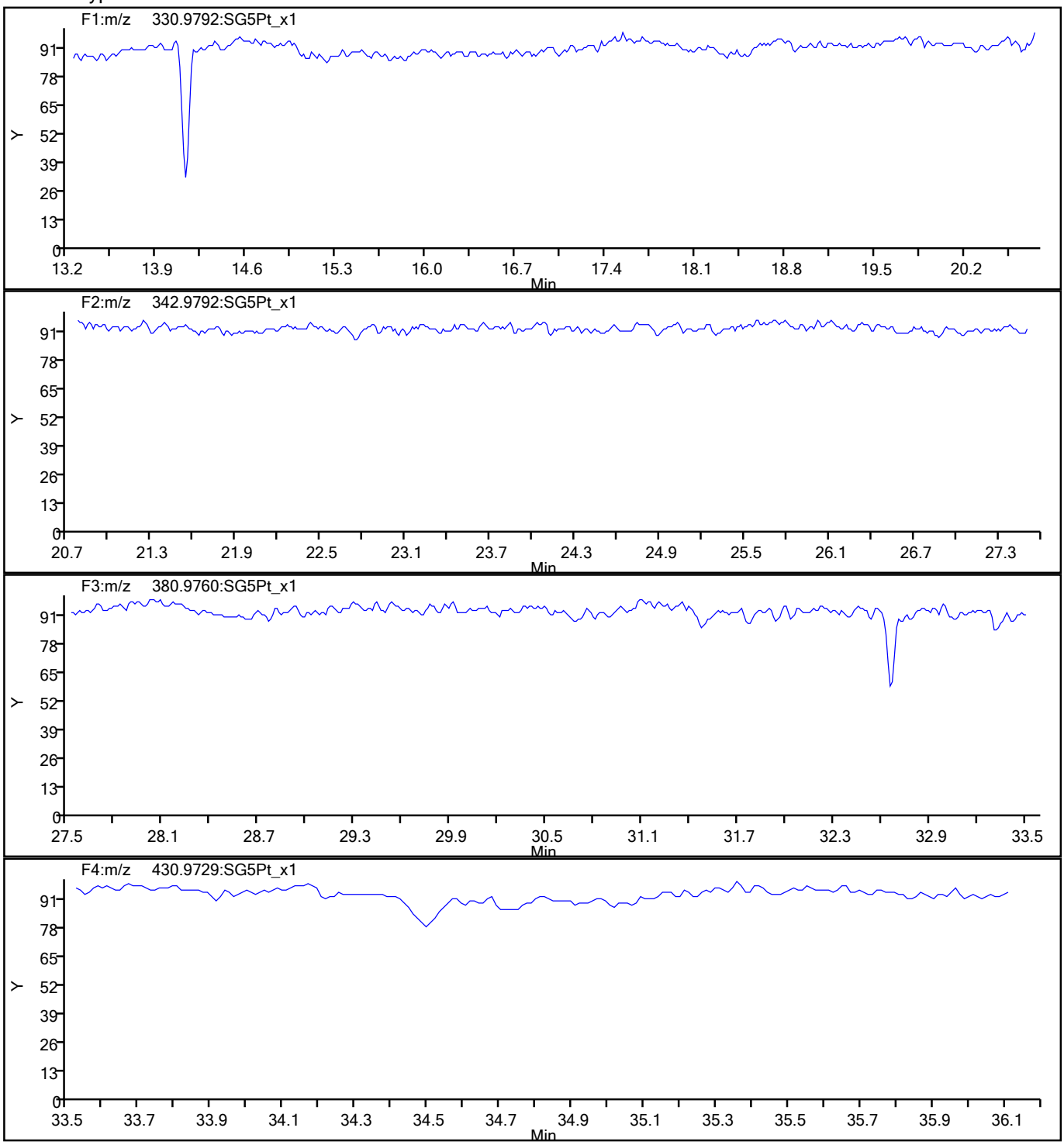

780329

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

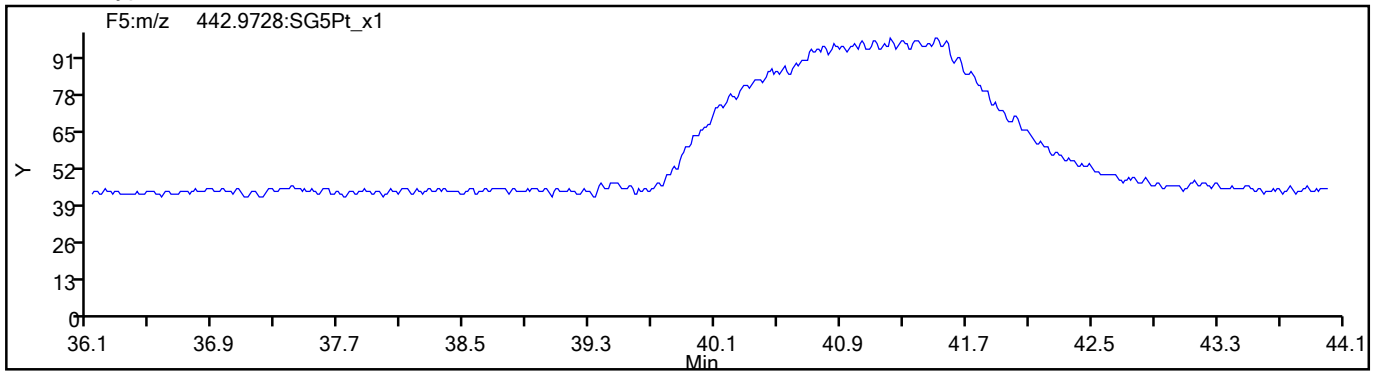

780330

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.094

Error Coefficients

Standard Error:	226000000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.779775	100.0	41876556.0	1.11191	Y
2	IC 320-510264/4	10.0	9.539499	100.0	38689128.0	0.95395	Y
3	IC 320-510264/5	50.0	55.880768	100.0	40333717.0	1.117615	Y
4	IC 320-510264/6	200.0	233.50404	100.0	40442950.0	1.16752	Y
5	IC 320-510264/7	1000.0	1120.518221	100.0	39395832.0	1.120518	Y

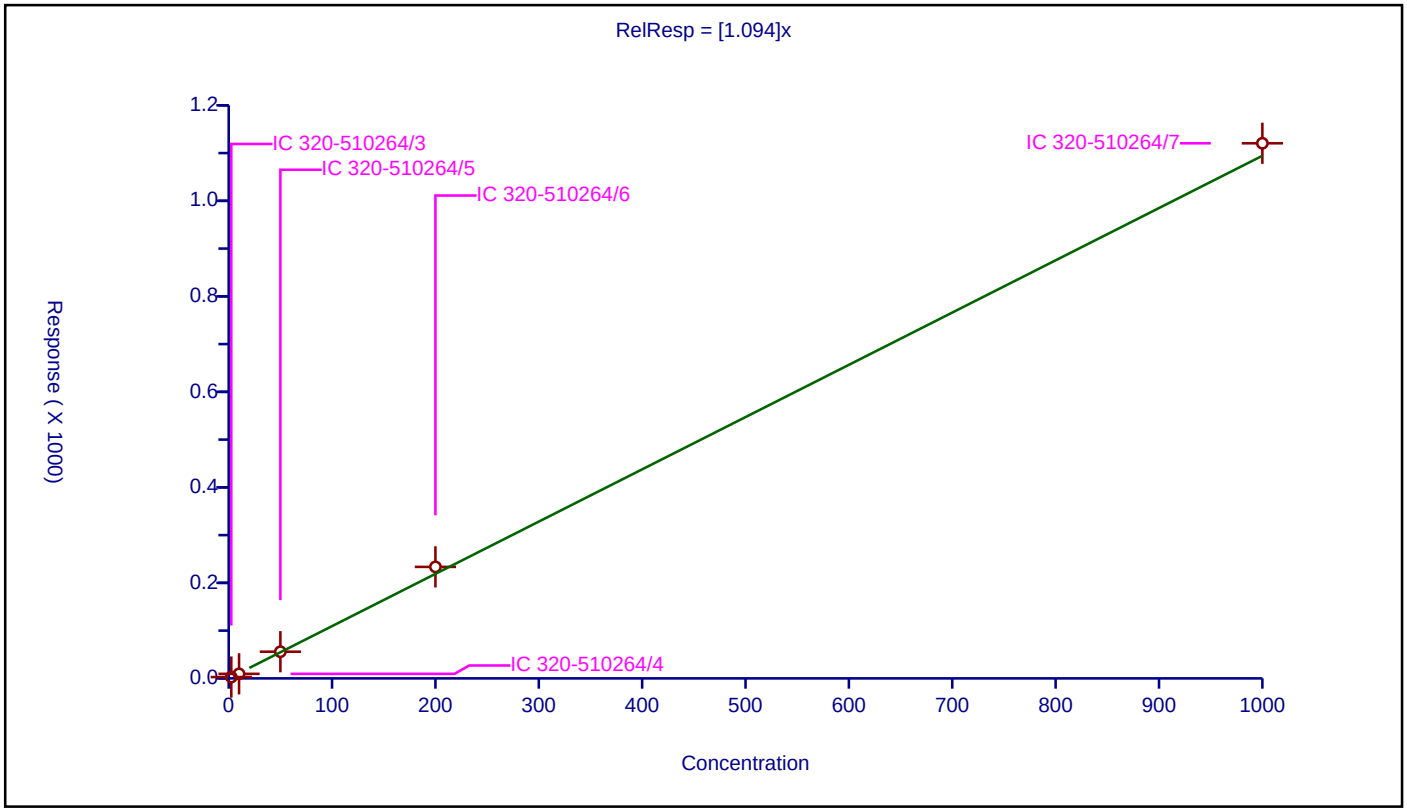

780331

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.441

Error Coefficients

Standard Error:	349000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.618521	100.0	51308225.0	1.447408	Y
2	IC 320-510264/4	10.0	12.412663	100.0	46691158.0	1.241266	Y
3	IC 320-510264/5	50.0	74.932304	100.0	47697671.0	1.498646	Y
4	IC 320-510264/6	200.0	309.702692	100.0	47752972.0	1.548513	Y
5	IC 320-510264/7	1000.0	1470.622057	100.0	46328151.0	1.470622	Y

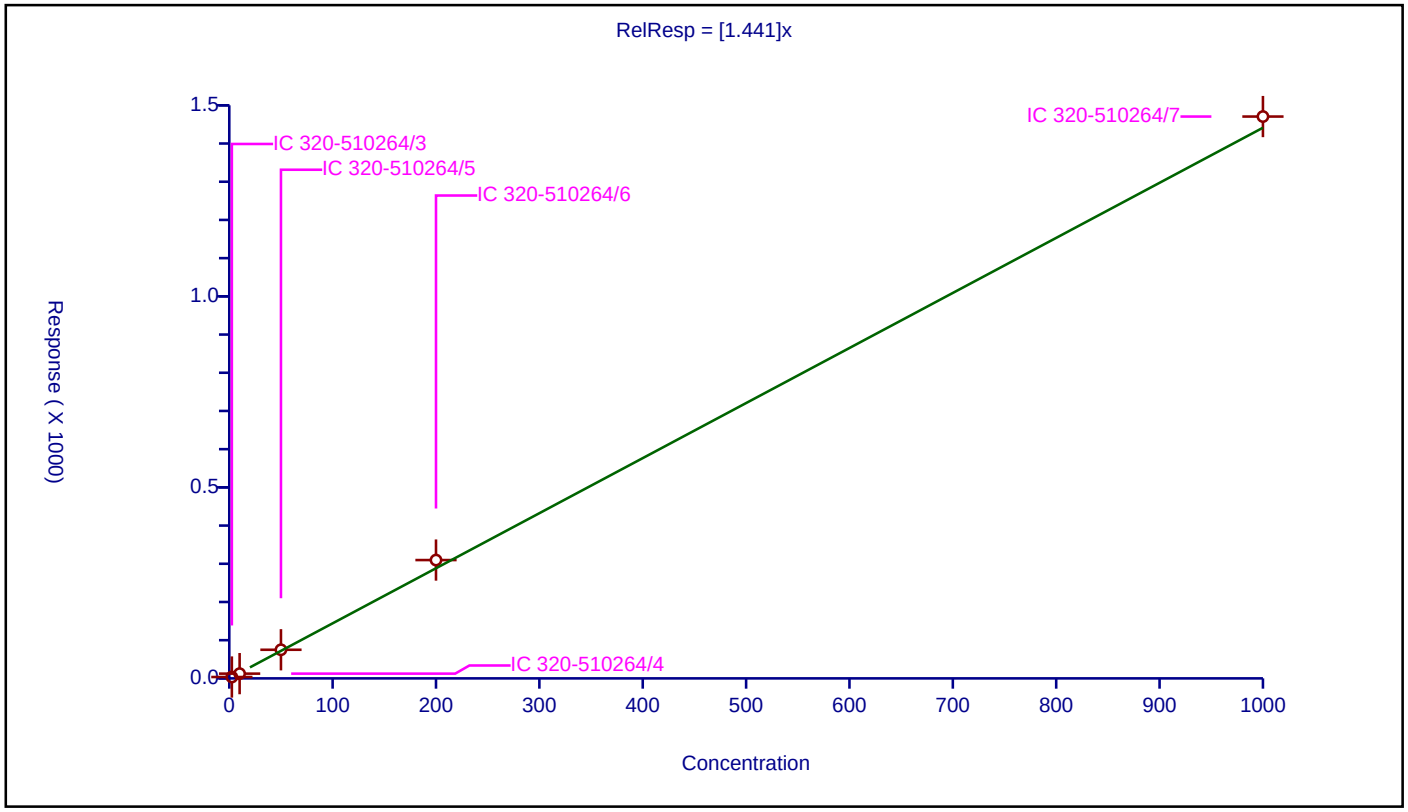

780332

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	302000000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.284087	100.0	44628352.0	1.313635	Y
2	IC 320-510264/4	10.0	11.269366	100.0	42362179.0	1.126937	Y
3	IC 320-510264/5	50.0	68.111875	100.0	43238622.0	1.362237	Y
4	IC 320-510264/6	200.0	290.409045	100.0	42687625.0	1.452045	Y
5	IC 320-510264/7	1000.0	1332.064187	100.0	44333848.0	1.332064	Y

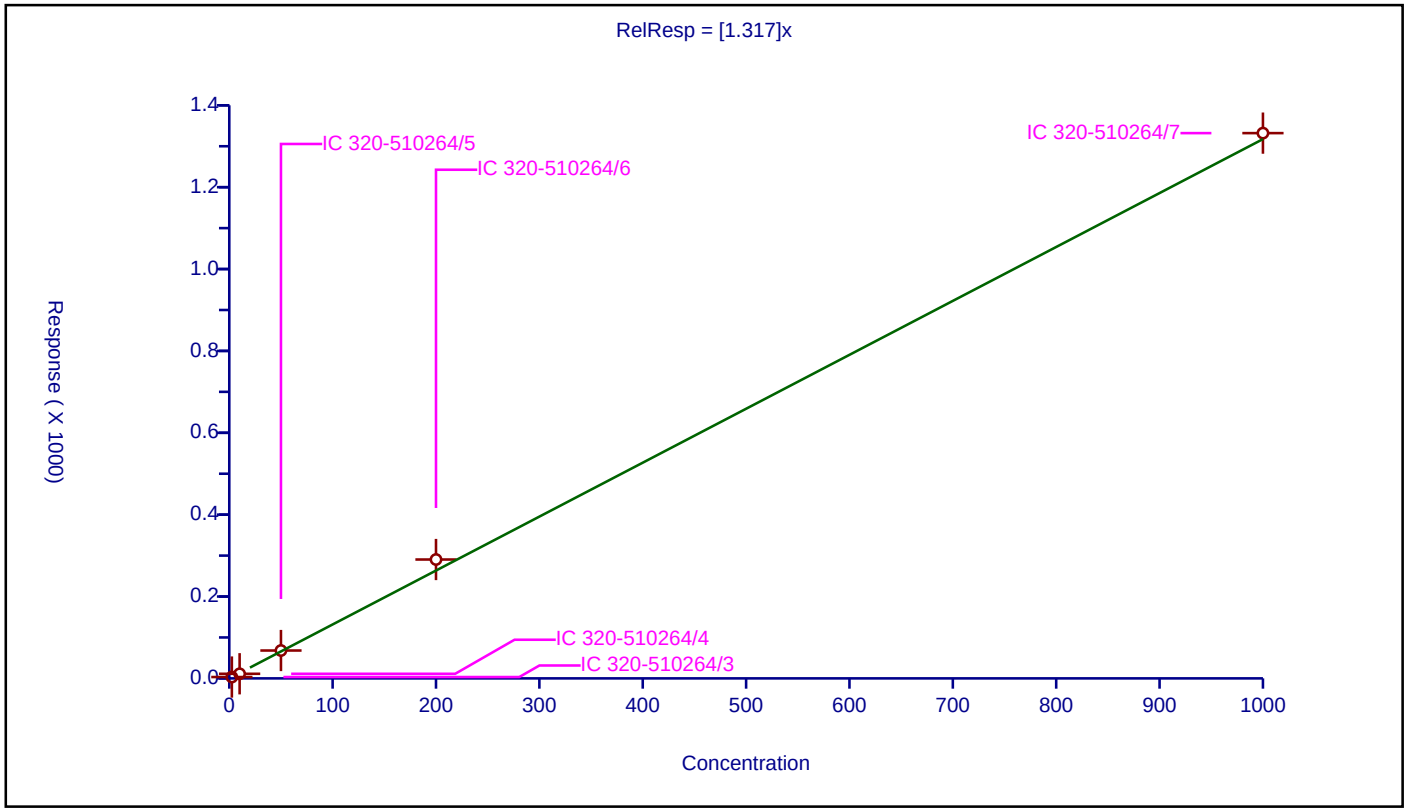

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	248000000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.744793	100.0	47363504.0	1.097917	Y
2	IC 320-510264/4	10.0	8.90634	100.0	44877133.0	0.890634	Y
3	IC 320-510264/5	50.0	56.519553	100.0	44039927.0	1.130391	Y
4	IC 320-510264/6	200.0	233.423018	100.0	44144841.0	1.167115	Y
5	IC 320-510264/7	1000.0	1034.115245	100.0	46886171.0	1.034115	Y

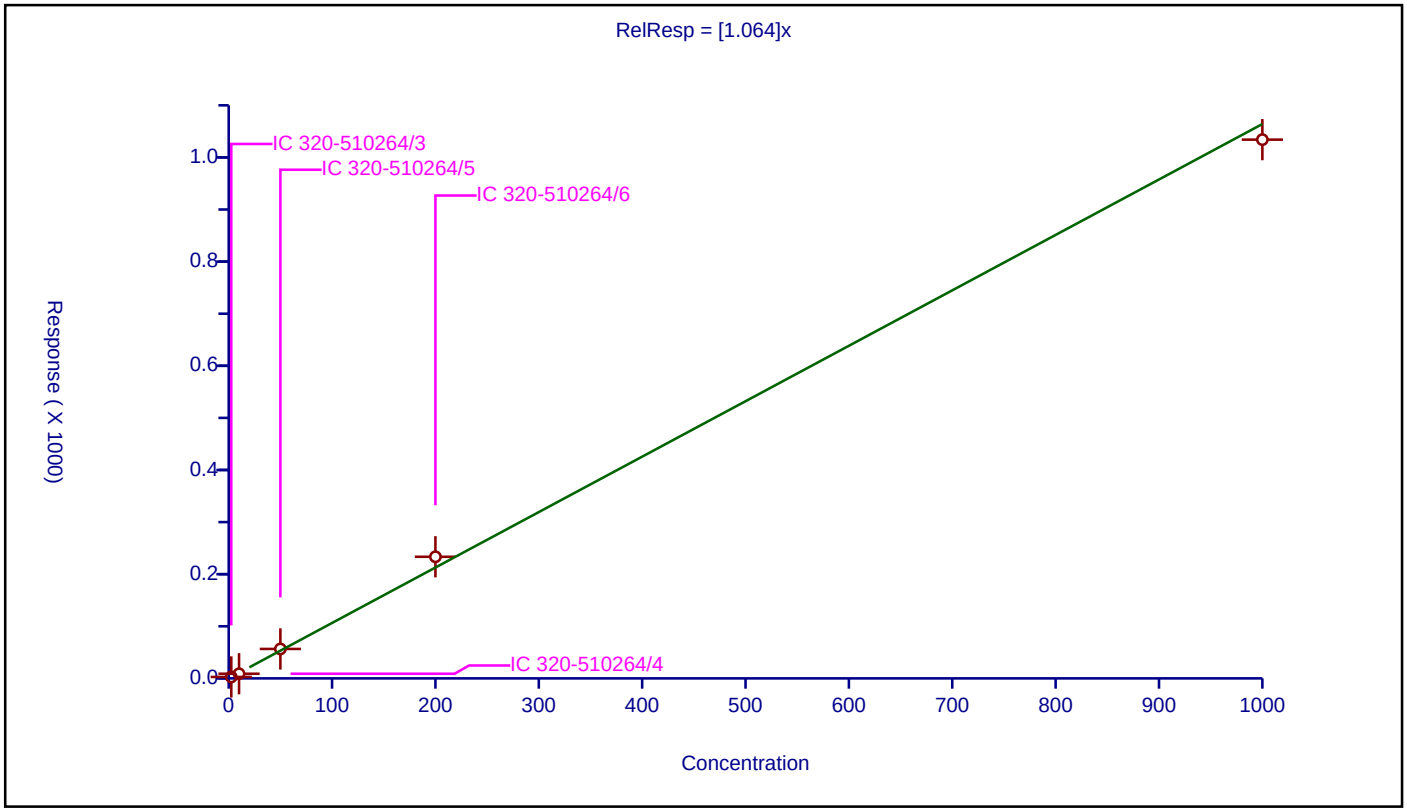

780334

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.085

Error Coefficients

Standard Error:	377000000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.805608	100.0	69484482.0	1.122243	Y
2	IC 320-510264/4	10.0	9.192224	100.0	65726932.0	0.919222	Y
3	IC 320-510264/5	50.0	55.122828	100.0	68075509.0	1.102457	Y
4	IC 320-510264/6	200.0	238.727102	100.0	64951889.0	1.193636	Y
5	IC 320-510264/7	1000.0	1088.07626	100.0	67741189.0	1.088076	Y

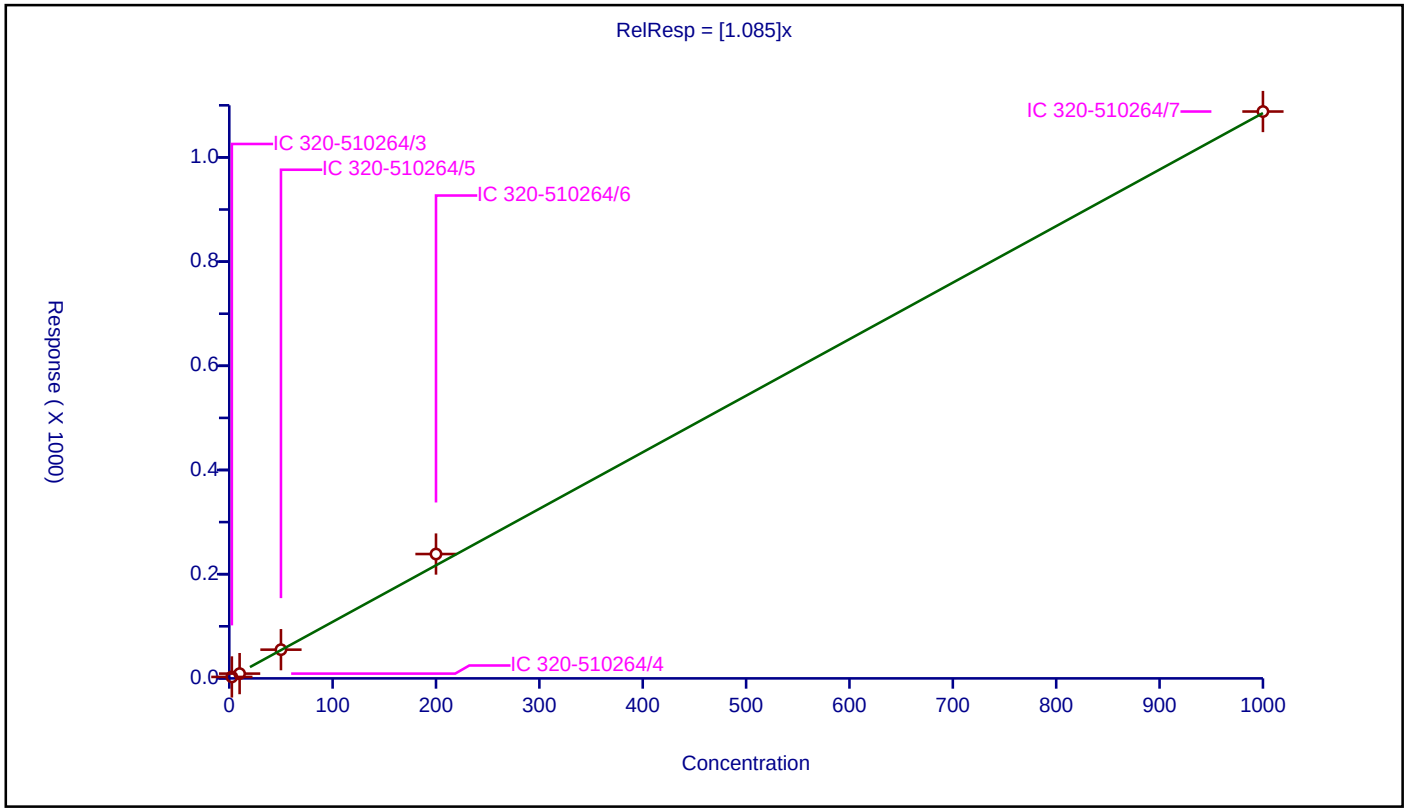

780335

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1

Error Coefficients

Standard Error:	278000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.57359	100.0	56759108.0	1.029436	Y
2	IC 320-510264/4	10.0	8.528531	100.0	52974056.0	0.852853	Y
3	IC 320-510264/5	50.0	50.563423	100.0	55284532.0	1.011268	Y
4	IC 320-510264/6	200.0	218.597288	100.0	54392394.0	1.092986	Y
5	IC 320-510264/7	1000.0	1013.848486	100.0	53564396.0	1.013848	Y

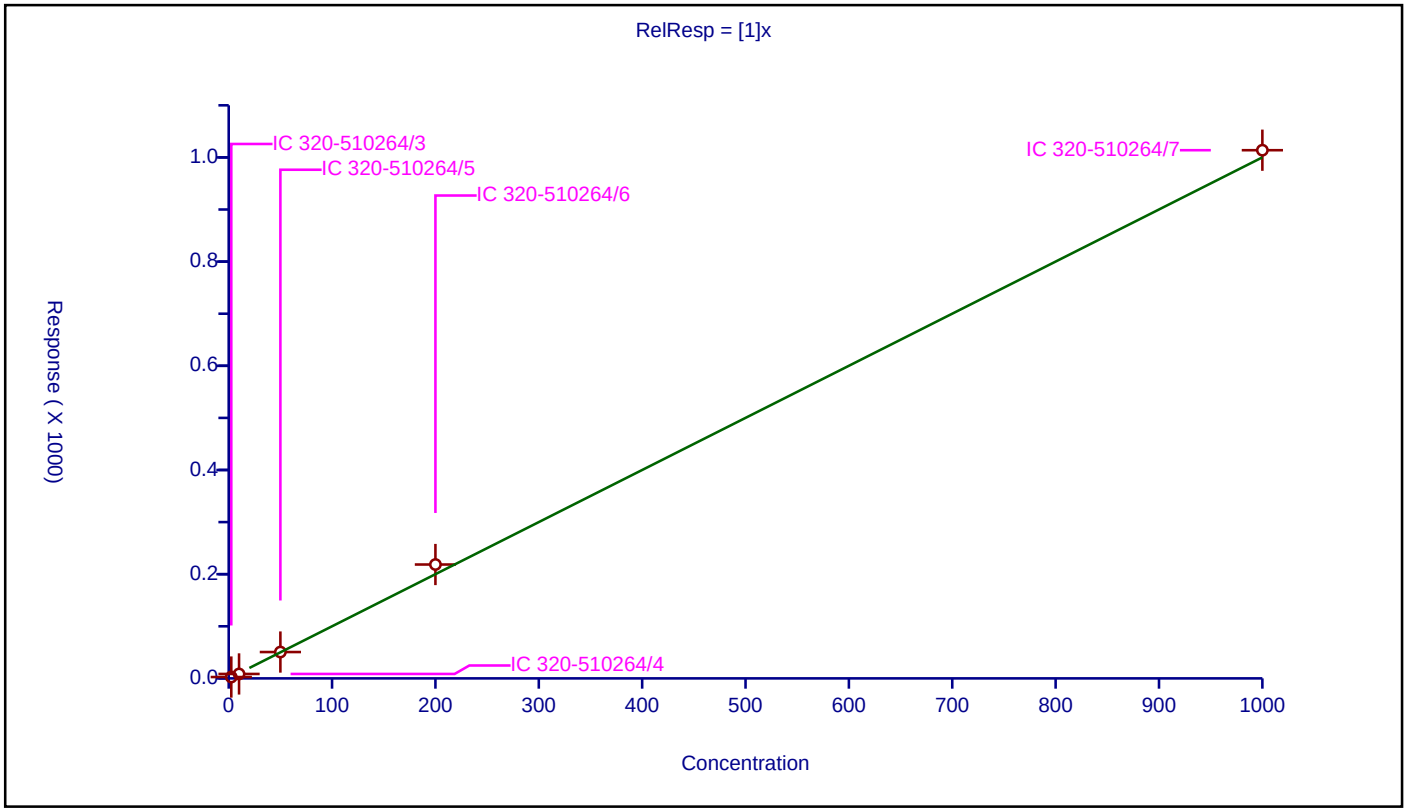

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.126

Error Coefficients

Standard Error:	402000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.871987	100.0	73262388.0	1.148795	Y
2	IC 320-510264/4	10.0	9.63718	100.0	68089005.0	0.963718	Y
3	IC 320-510264/5	50.0	57.730945	100.0	70677463.0	1.154619	Y
4	IC 320-510264/6	200.0	239.311904	100.0	70459920.0	1.19656	Y
5	IC 320-510264/7	1000.0	1166.370477	100.0	67363664.0	1.16637	Y

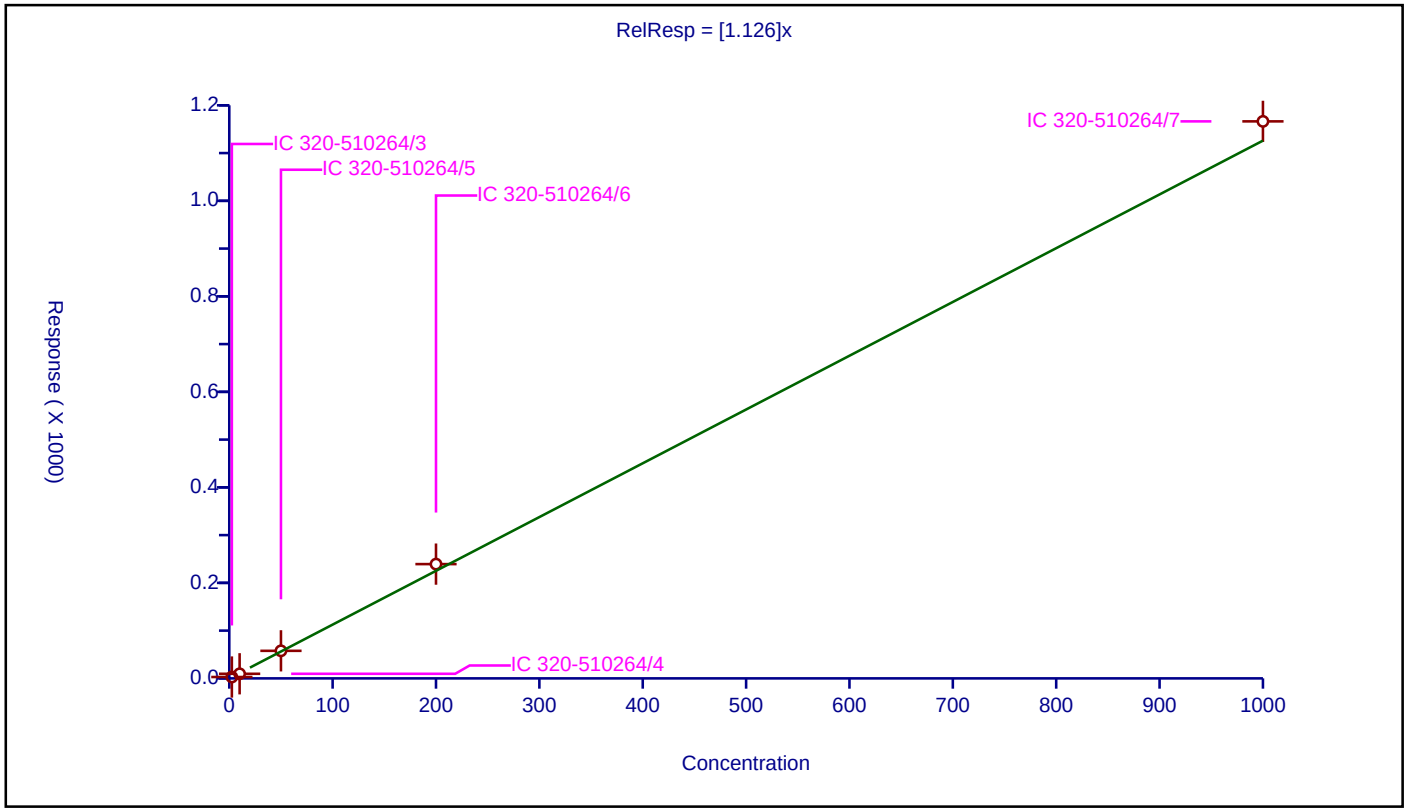

780337

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.248

Error Coefficients

Standard Error:	289000000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.174189	100.0	47363504.0	1.269675	Y
2	IC 320-510264/4	10.0	10.27817	100.0	44877133.0	1.027817	Y
3	IC 320-510264/5	50.0	67.654413	100.0	44039927.0	1.353088	Y
4	IC 320-510264/6	200.0	277.257762	100.0	44144841.0	1.386289	Y
5	IC 320-510264/7	1000.0	1202.675657	100.0	46886171.0	1.202676	Y

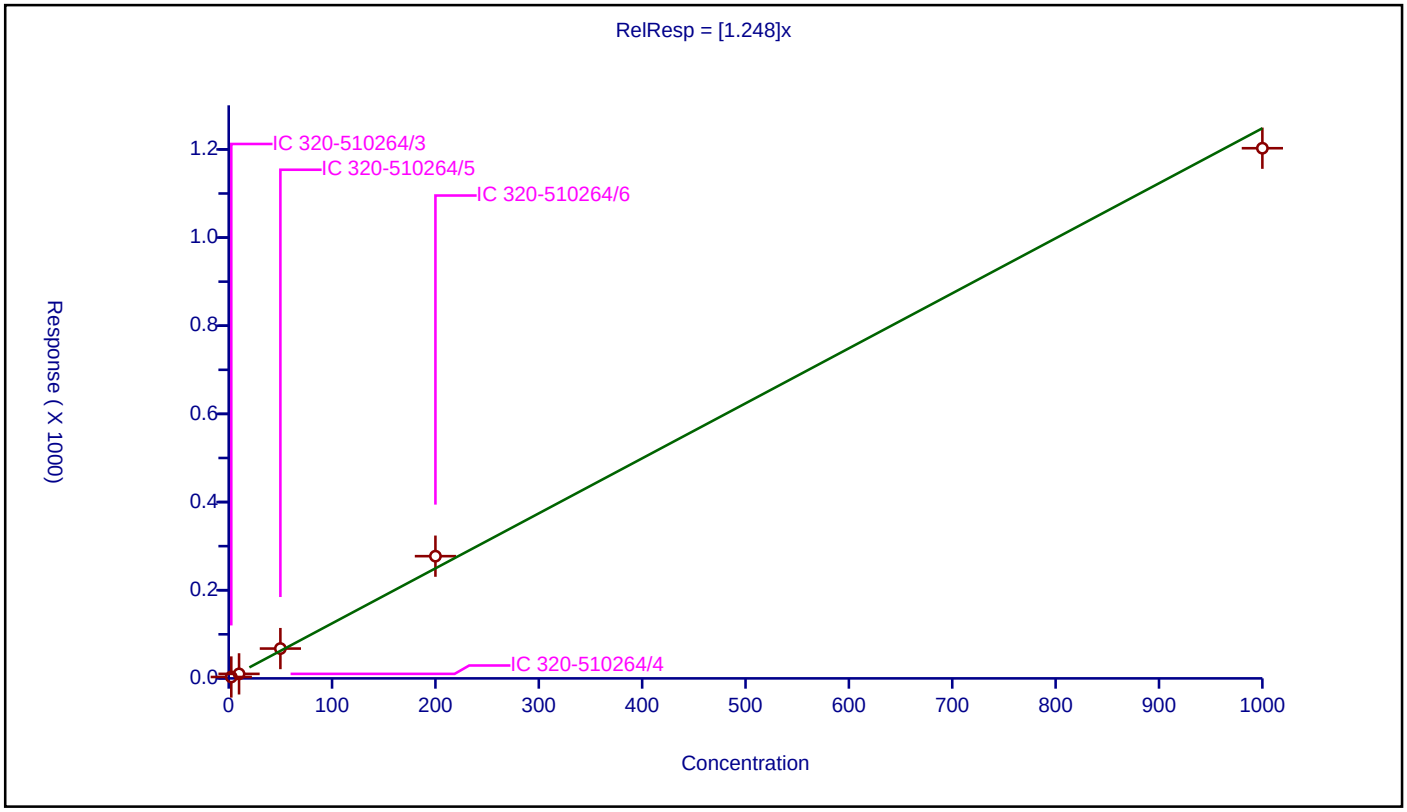

780338

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.166

Error Coefficients

Standard Error:	362000000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.933201	100.0	62528954.0	1.17328	Y
2	IC 320-510264/4	10.0	10.136374	100.0	58828058.0	1.013637	Y
3	IC 320-510264/5	50.0	59.48769	100.0	60389284.0	1.189754	Y
4	IC 320-510264/6	200.0	249.571201	100.0	59636084.0	1.247856	Y
5	IC 320-510264/7	1000.0	1207.229164	100.0	58669892.0	1.207229	Y

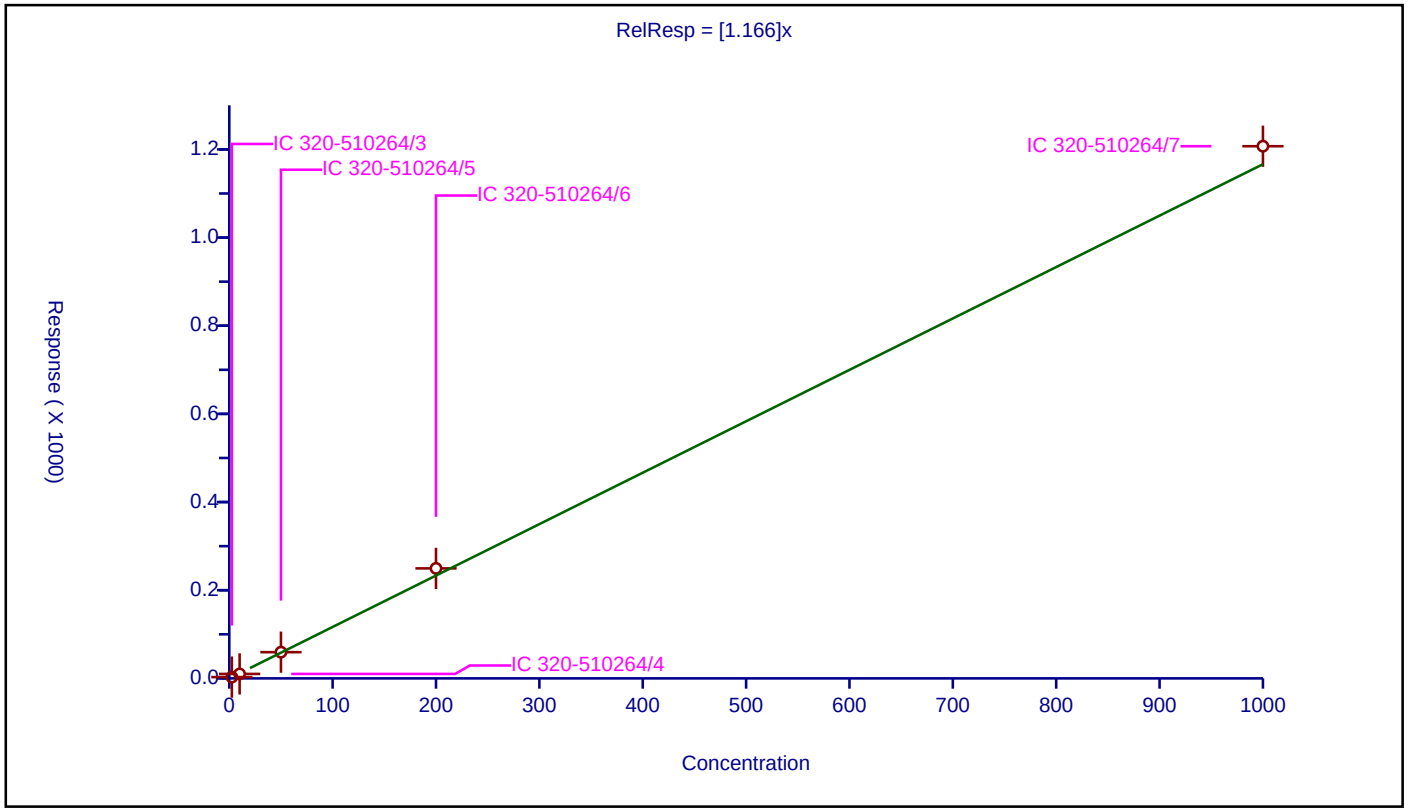

780339

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.048

Error Coefficients

Standard Error:	256000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.644408	100.0	49643581.0	1.057763	Y
2	IC 320-510264/4	10.0	9.031283	100.0	46721712.0	0.903128	Y
3	IC 320-510264/5	50.0	53.401309	100.0	47124414.0	1.068026	Y
4	IC 320-510264/6	200.0	226.195317	100.0	46524396.0	1.130977	Y
5	IC 320-510264/7	1000.0	1082.258061	100.0	46251010.0	1.082258	Y

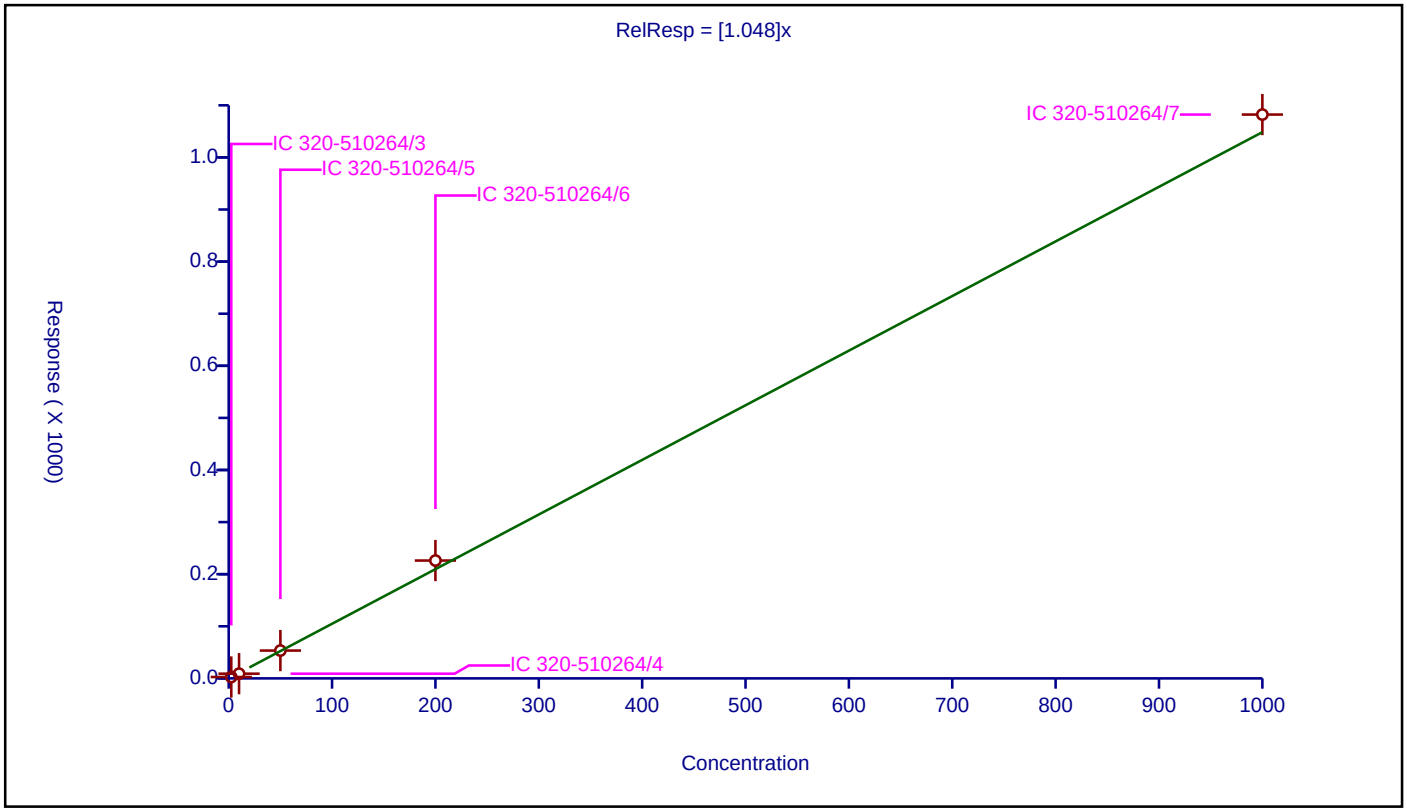

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	408000000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.684664	100.0	78674290.0	1.073865	Y
2	IC 320-510264/4	10.0	9.128293	100.0	72525655.0	0.912829	Y
3	IC 320-510264/5	50.0	54.457439	100.0	76368219.0	1.089149	Y
4	IC 320-510264/6	200.0	227.4085	100.0	75205597.0	1.137042	Y
5	IC 320-510264/7	1000.0	1092.787556	100.0	72829681.0	1.092788	Y

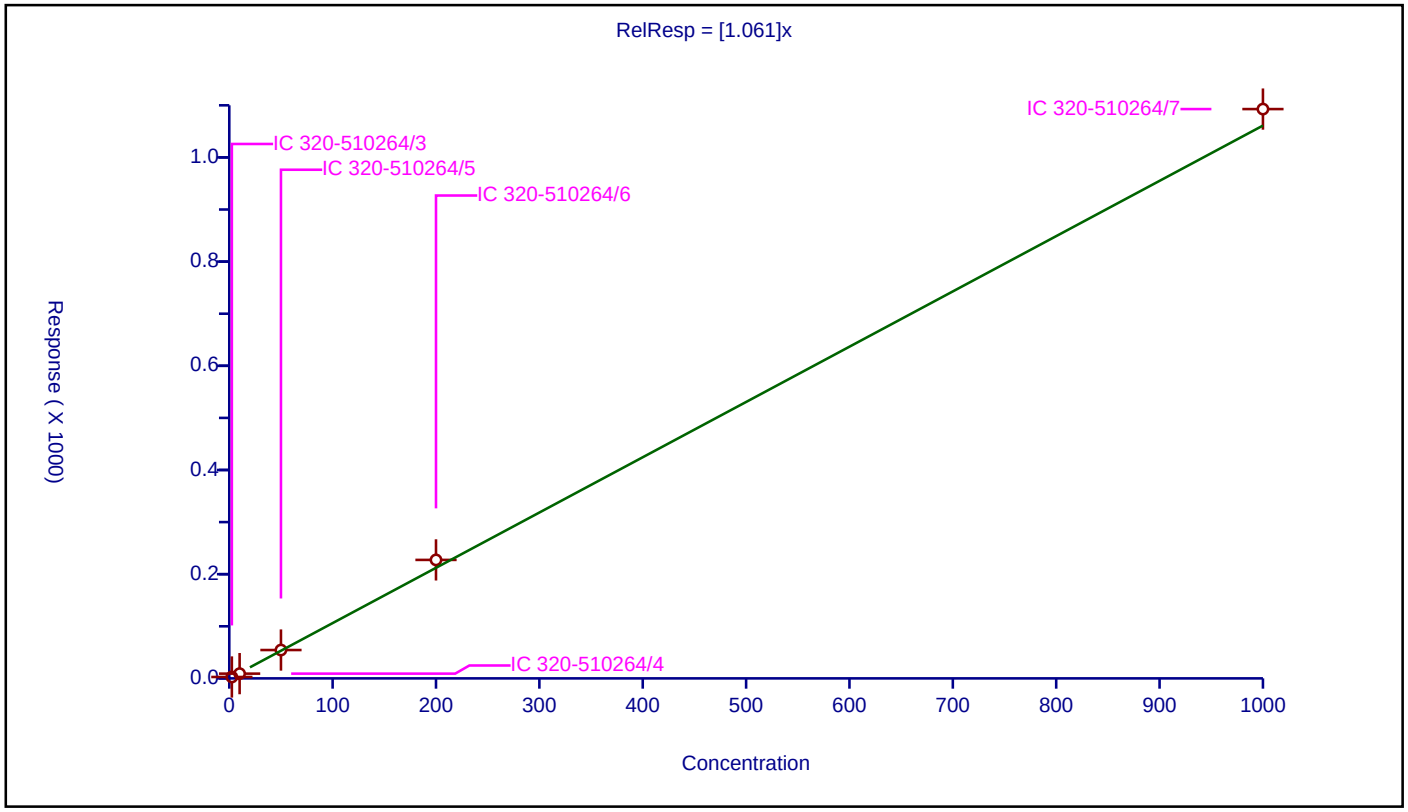

780341

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	391000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.05566	100.0	68885161.0	1.222264	Y
2	IC 320-510264/4	10.0	9.86292	100.0	64406928.0	0.986292	Y
3	IC 320-510264/5	50.0	59.290251	100.0	67028498.0	1.185805	Y
4	IC 320-510264/6	200.0	248.302486	100.0	66145684.0	1.241512	Y
5	IC 320-510264/7	1000.0	1201.822353	100.0	63471184.0	1.201822	Y

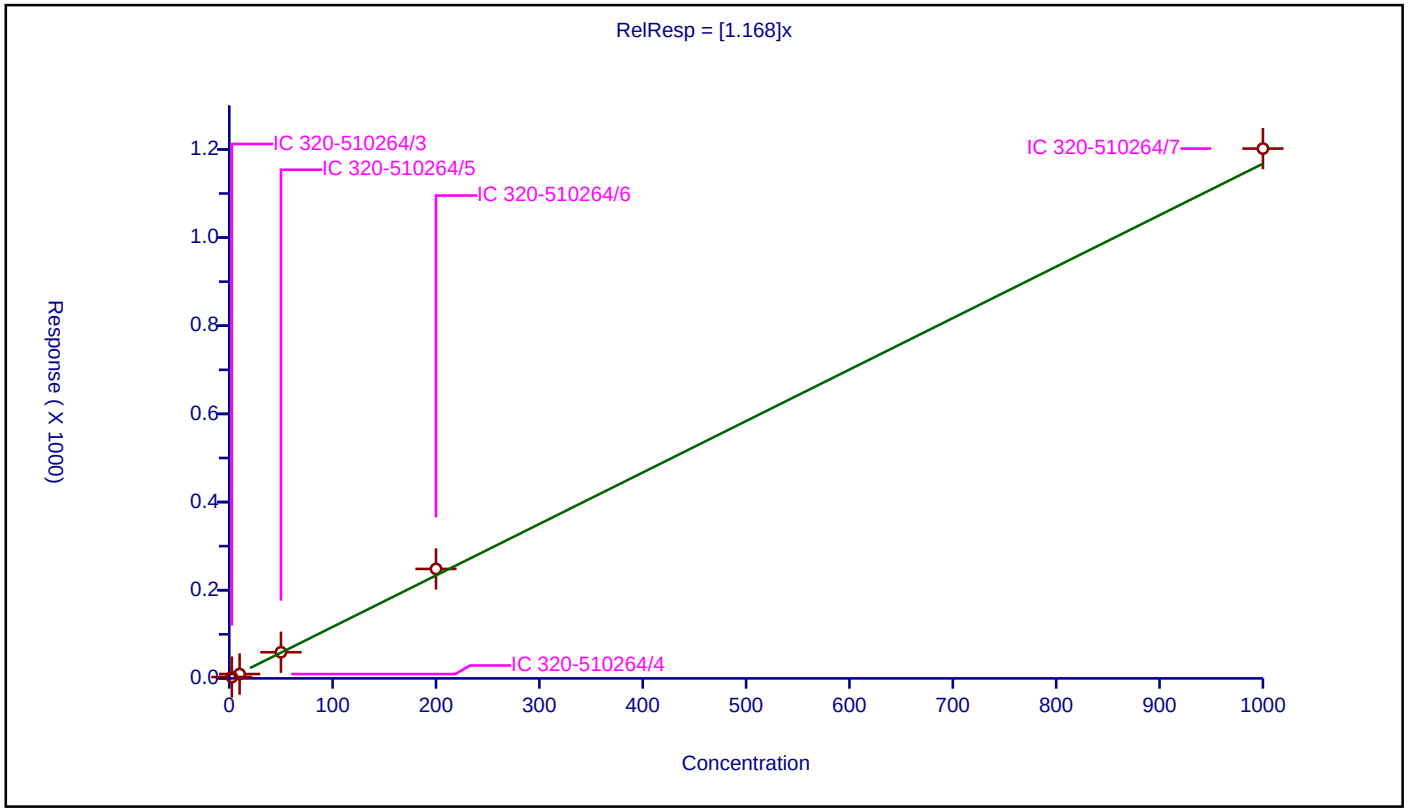

780342

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.018

Error Coefficients

Standard Error:	401000000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.601965	100.0	80591659.0	1.040786	Y
2	IC 320-510264/4	10.0	8.609629	100.0	74944110.0	0.860963	Y
3	IC 320-510264/5	50.0	52.328396	100.0	78214582.0	1.046568	Y
4	IC 320-510264/6	200.0	221.640486	100.0	75259591.0	1.108202	Y
5	IC 320-510264/7	1000.0	1035.570916	100.0	75649463.0	1.035571	Y

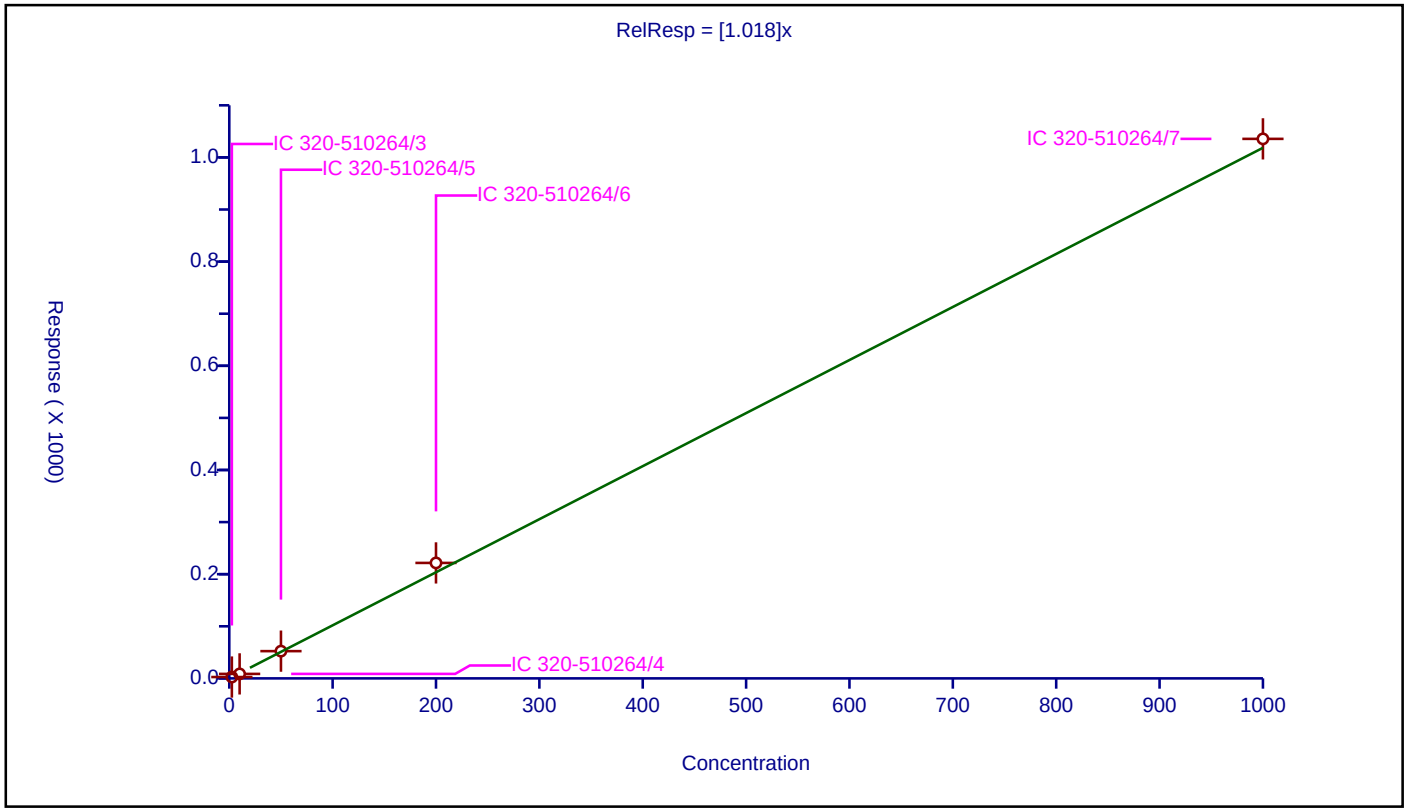

780343

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.254

Error Coefficients

Standard Error:	71900000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.62875	100.0	59957723.0	1.257499	Y
2	IC 320-510264/4	2.0	2.19411	100.0	53975587.0	1.097055	Y
3	IC 320-510264/5	10.0	12.651014	100.0	56155483.0	1.265101	Y
4	IC 320-510264/6	40.0	53.737487	100.0	55471422.0	1.343437	Y
5	IC 320-510264/7	200.0	261.501191	100.0	53698206.0	1.307506	Y

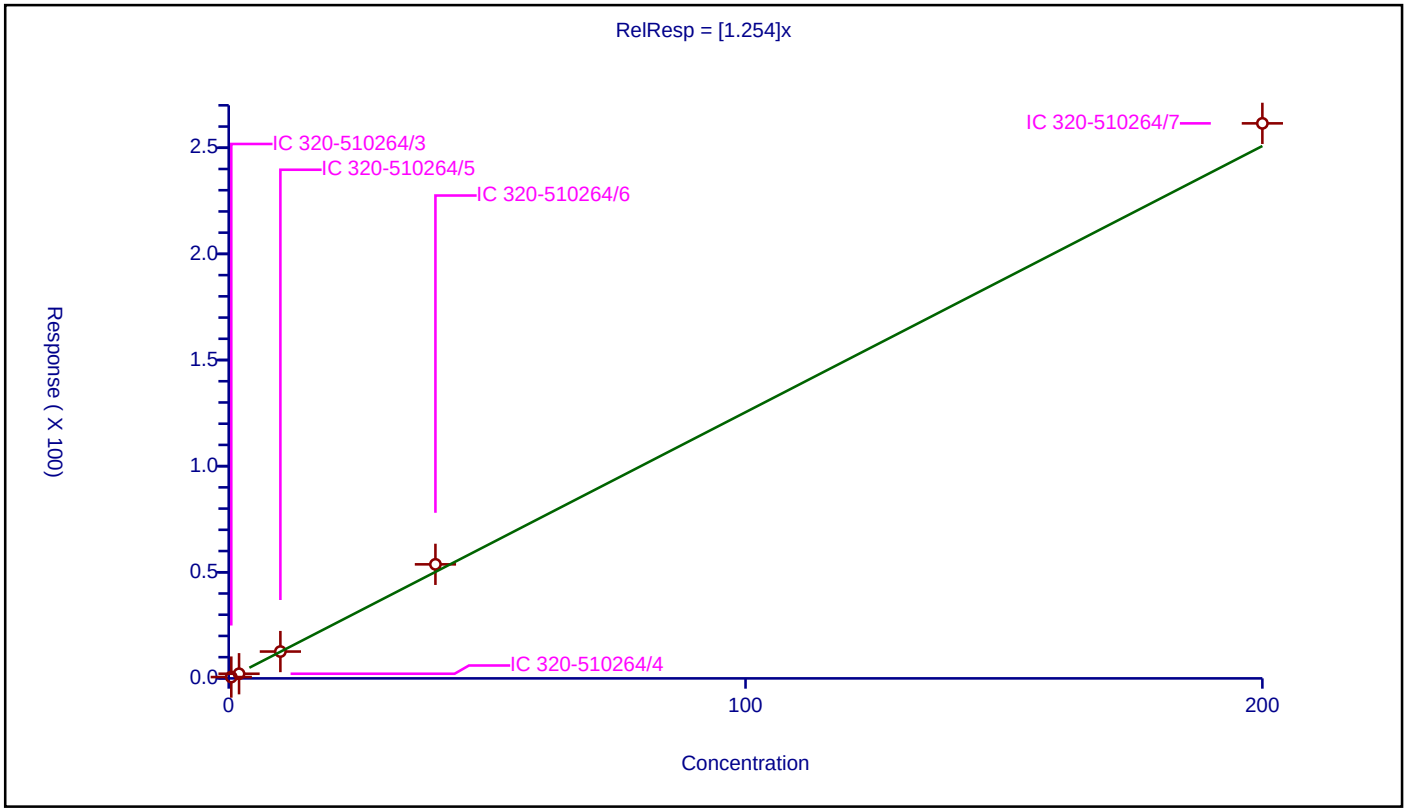

780344

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.024

Error Coefficients

Standard Error:	105000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.514358	100.0	108384725.0	1.028715	Y
2	IC 320-510264/4	2.0	1.739696	100.0	98246522.0	0.869848	Y
3	IC 320-510264/5	10.0	10.458407	100.0	101724636.0	1.045841	Y
4	IC 320-510264/6	40.0	44.37733	100.0	100332269.0	1.109433	Y
5	IC 320-510264/7	200.0	213.143097	100.0	95980421.0	1.065715	Y

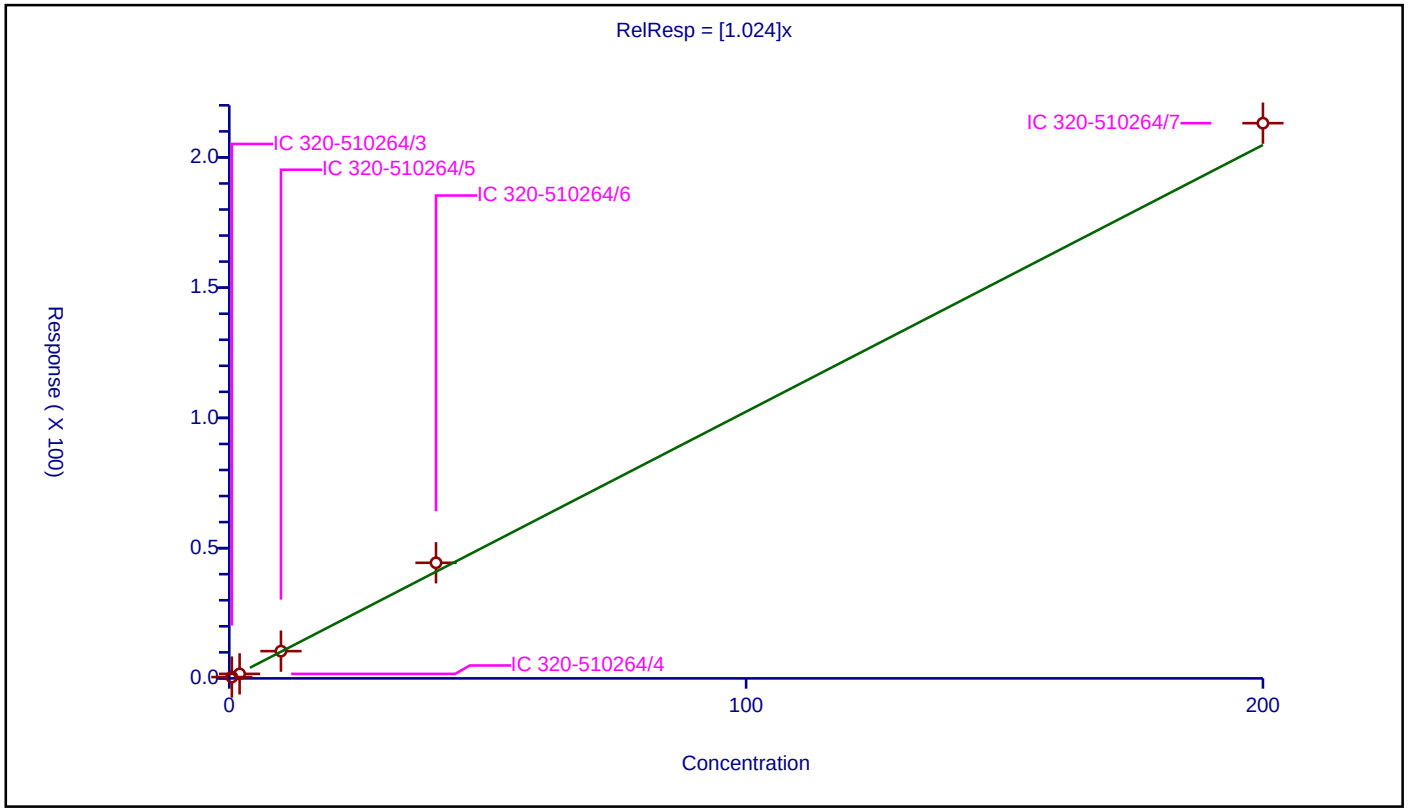

780345

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	72100000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.485229	100.0	65685883.0	0.970458	Y
2	IC 320-510264/4	2.0	1.95888	100.0	62853211.0	0.97944	Y
3	IC 320-510264/5	10.0	11.718119	100.0	62635225.0	1.171812	Y
4	IC 320-510264/6	40.0	47.503291	100.0	62046988.0	1.187582	Y
5	IC 320-510264/7	200.0	245.287862	100.0	57464333.0	1.226439	Y

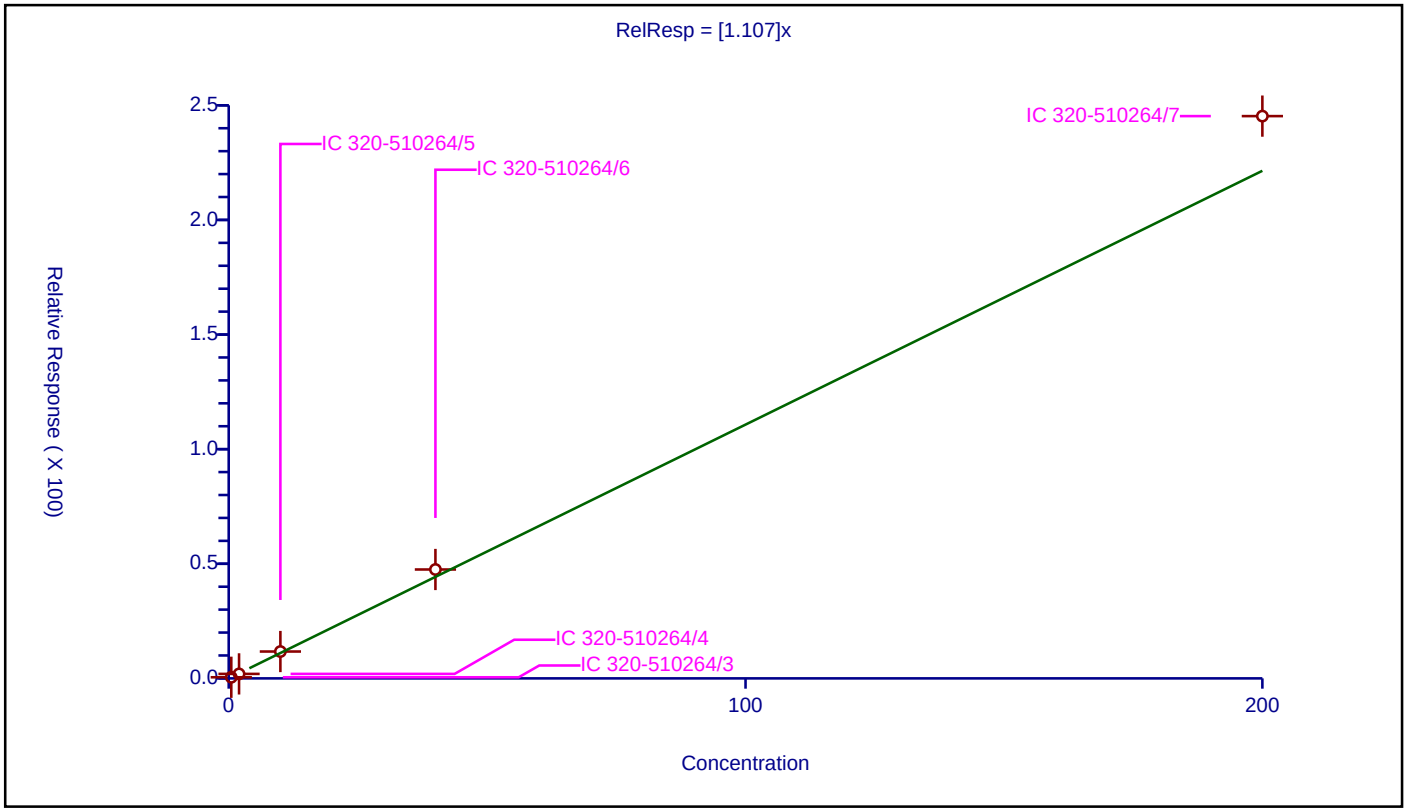

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	325000000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	5.504666	200.0	57018462.0	1.100933	Y
2	IC 320-510264/4	20.0	19.269459	200.0	52034518.0	0.963473	Y
3	IC 320-510264/5	100.0	116.51708	200.0	54338243.0	1.165171	Y
4	IC 320-510264/6	400.0	473.162285	200.0	57303880.0	1.182906	Y
5	IC 320-510264/7	2000.0	2245.176522	200.0	56623863.0	1.122588	Y

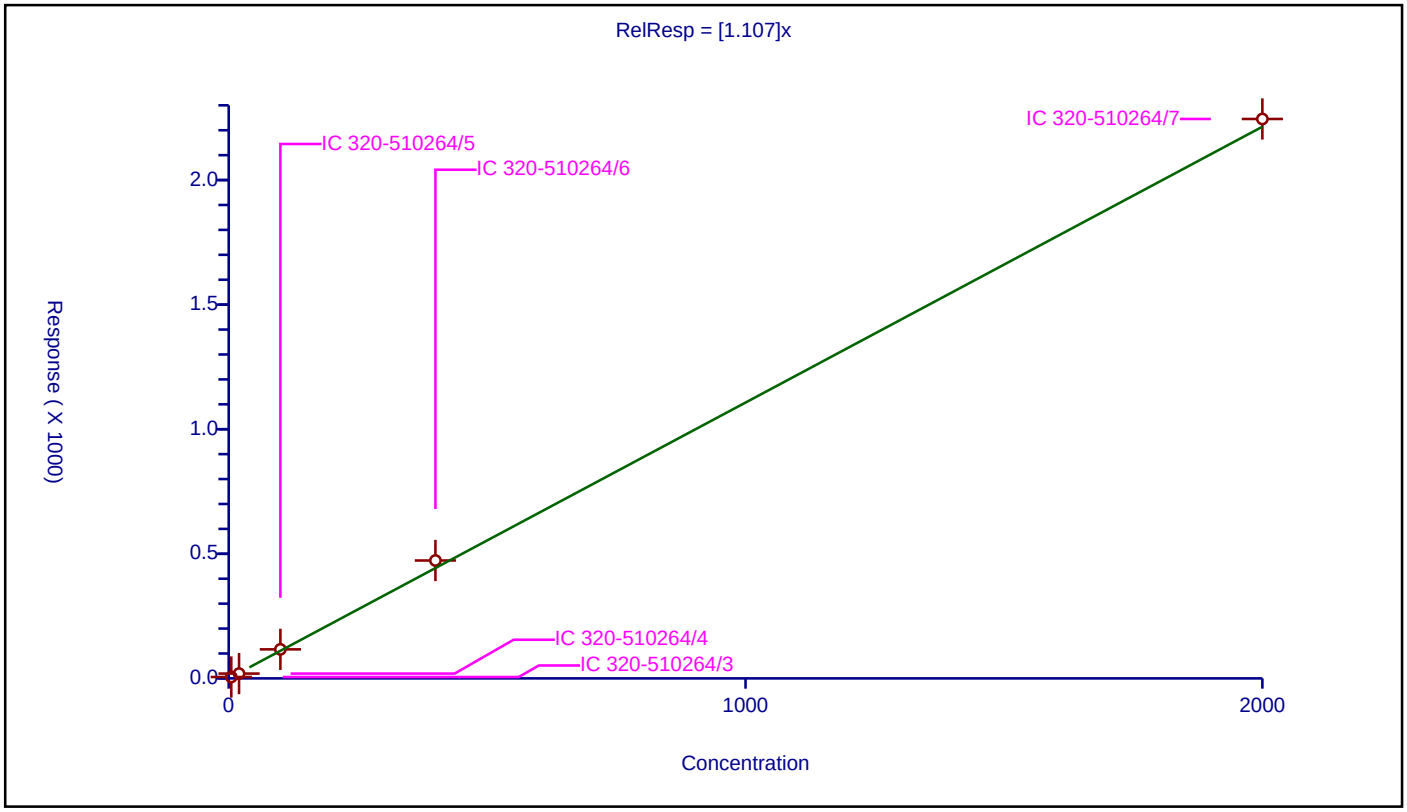

780347

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.438

Error Coefficients

Standard Error:	438000000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	6.931702	200.0	57018462.0	1.38634	Y
2	IC 320-510264/4	20.0	23.824451	200.0	52034518.0	1.191223	Y
3	IC 320-510264/5	100.0	151.448408	200.0	54338243.0	1.514484	Y
4	IC 320-510264/6	400.0	634.327267	200.0	57303880.0	1.585818	Y
5	IC 320-510264/7	2000.0	3025.883229	200.0	56623863.0	1.512942	Y

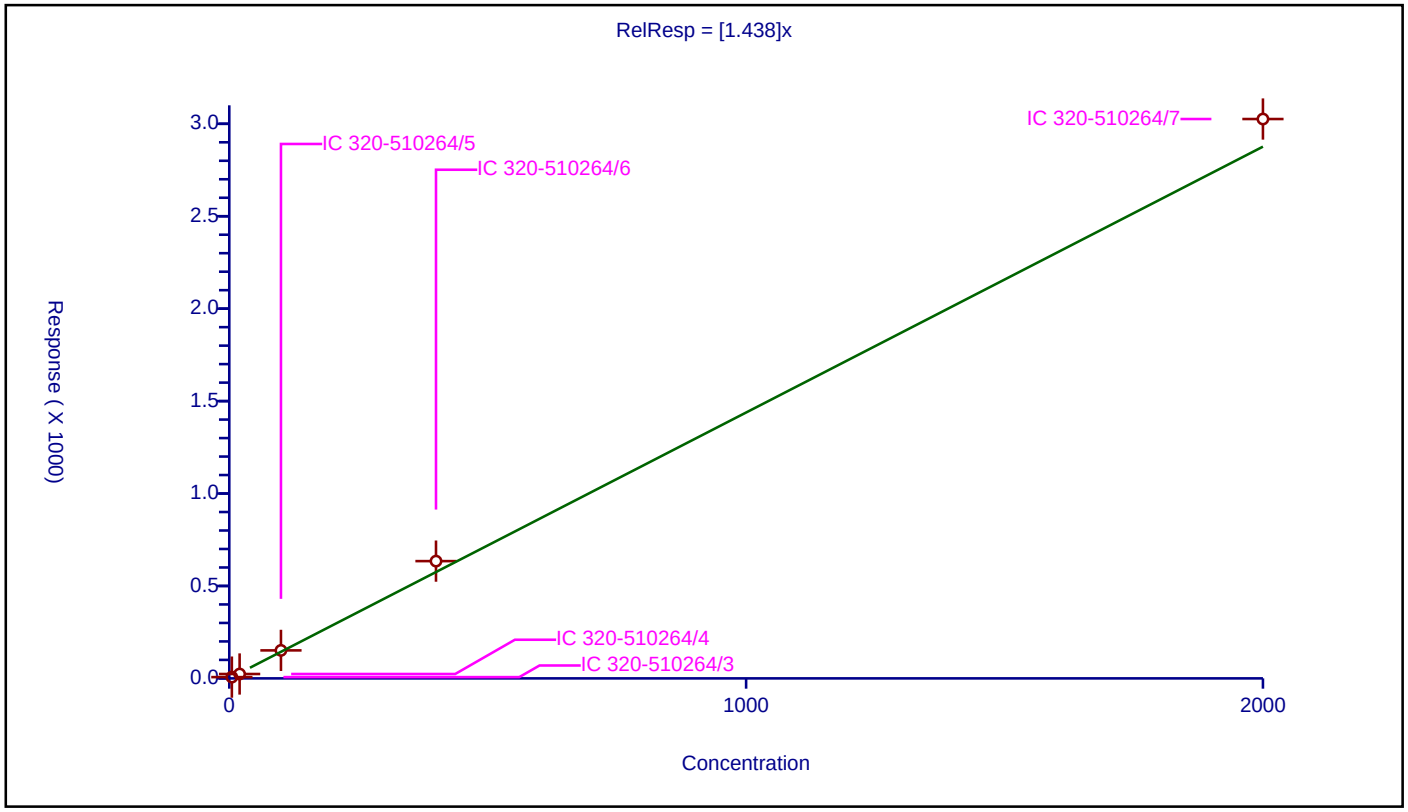

780348

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

780351

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

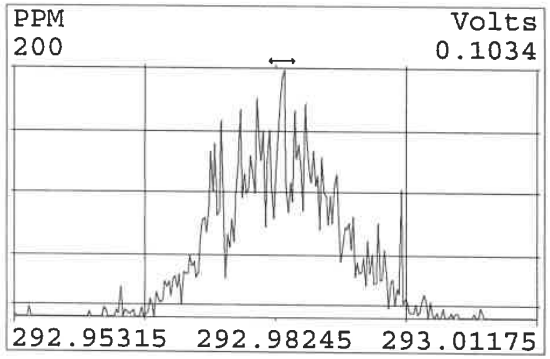

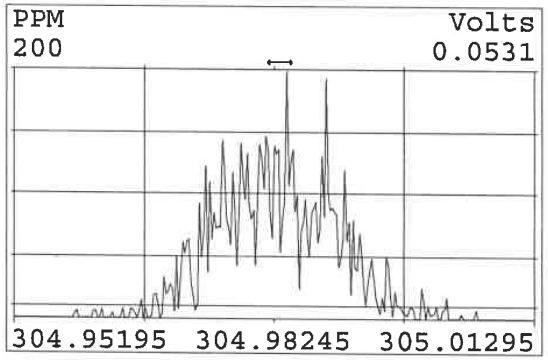

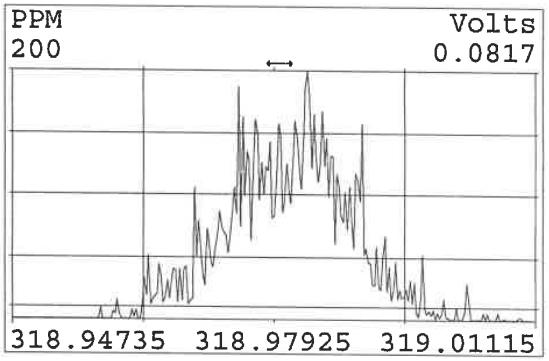

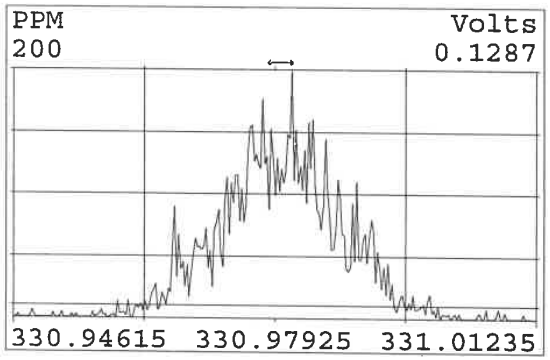

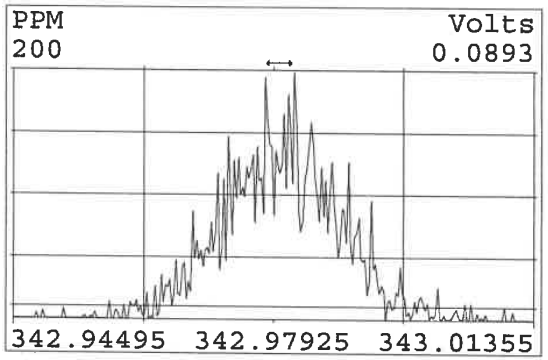

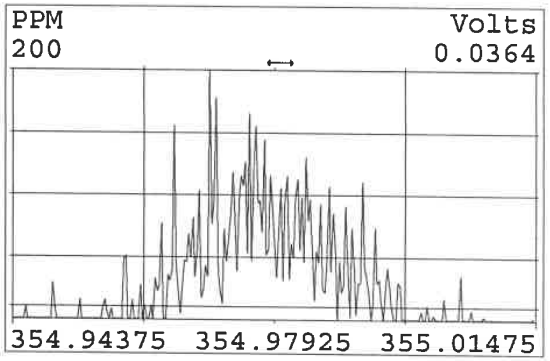

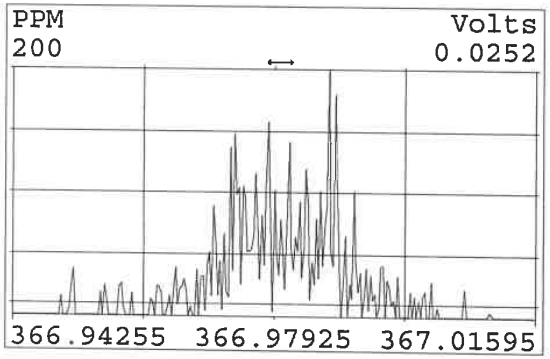

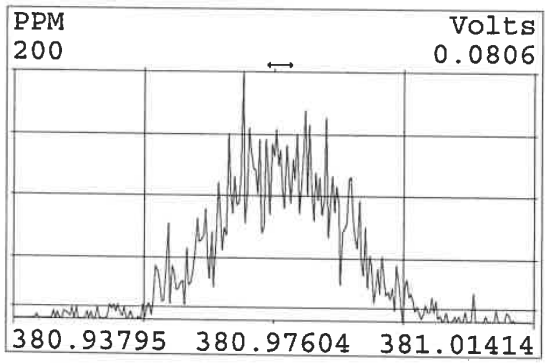

780352

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

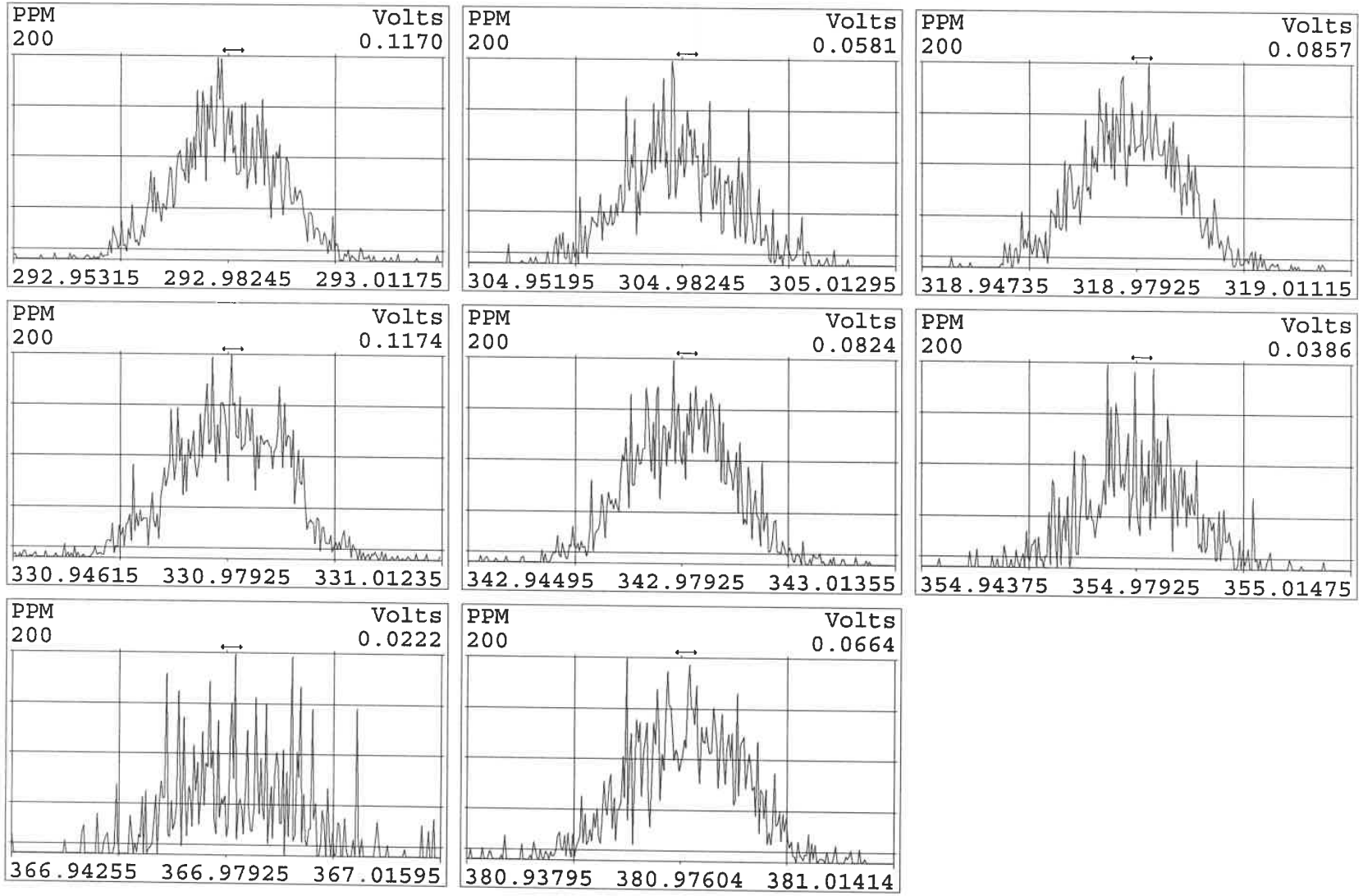

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

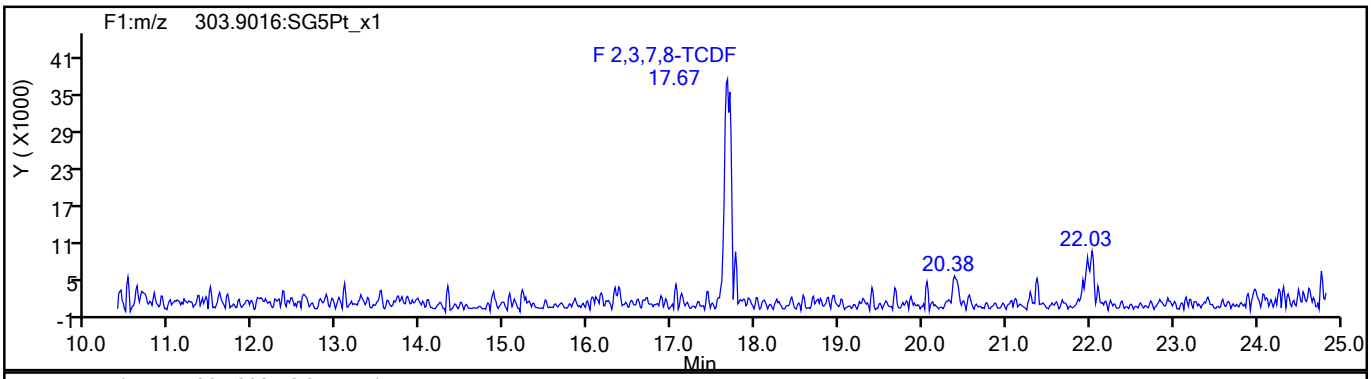

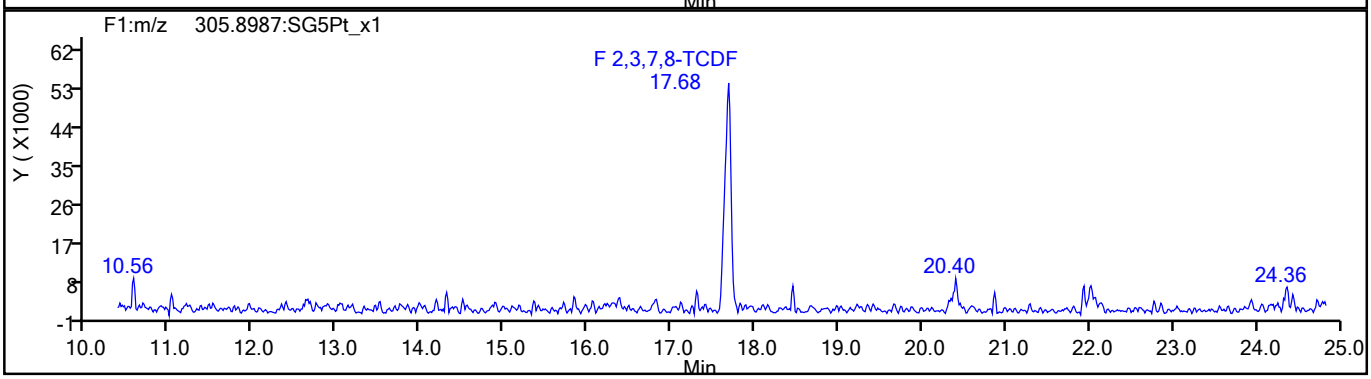

TCDF Standards

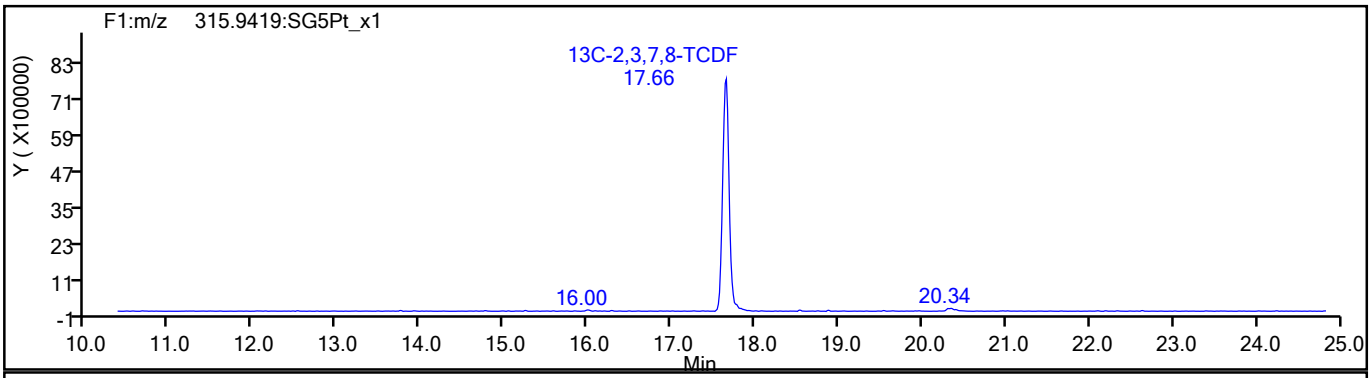

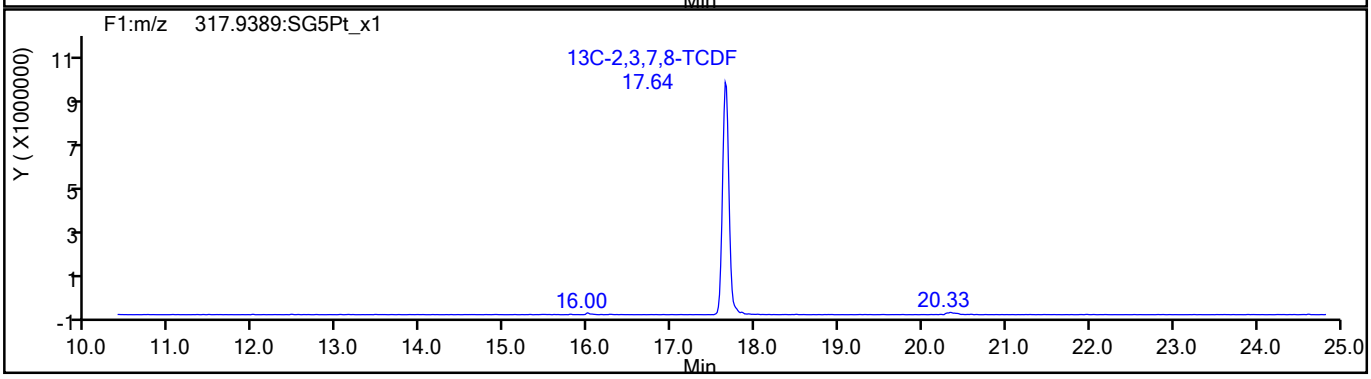

780356

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

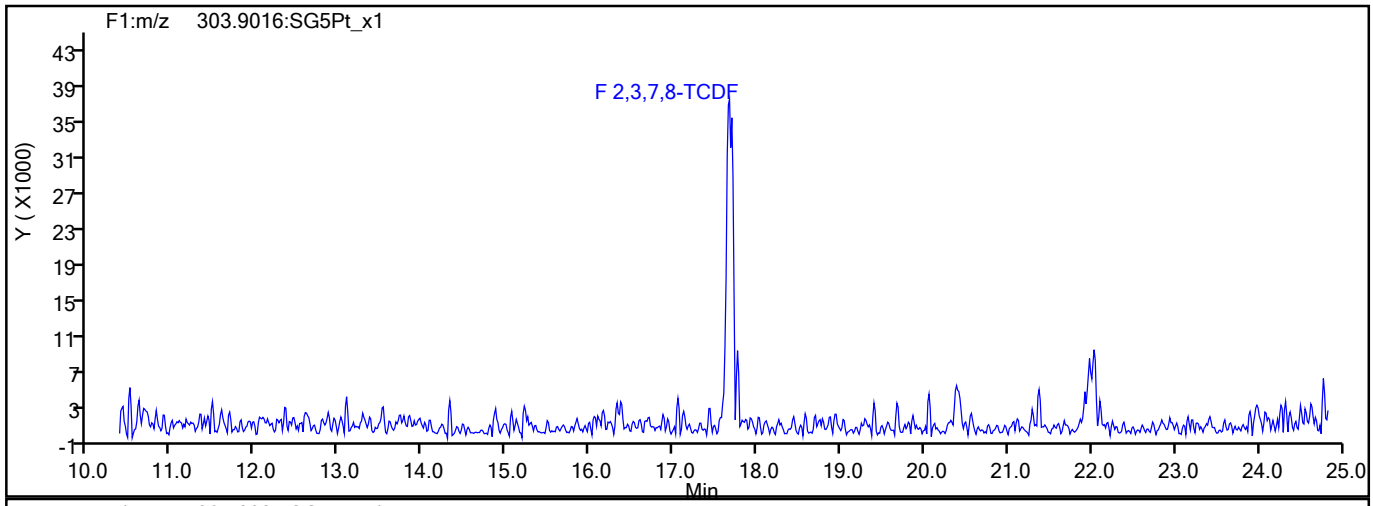

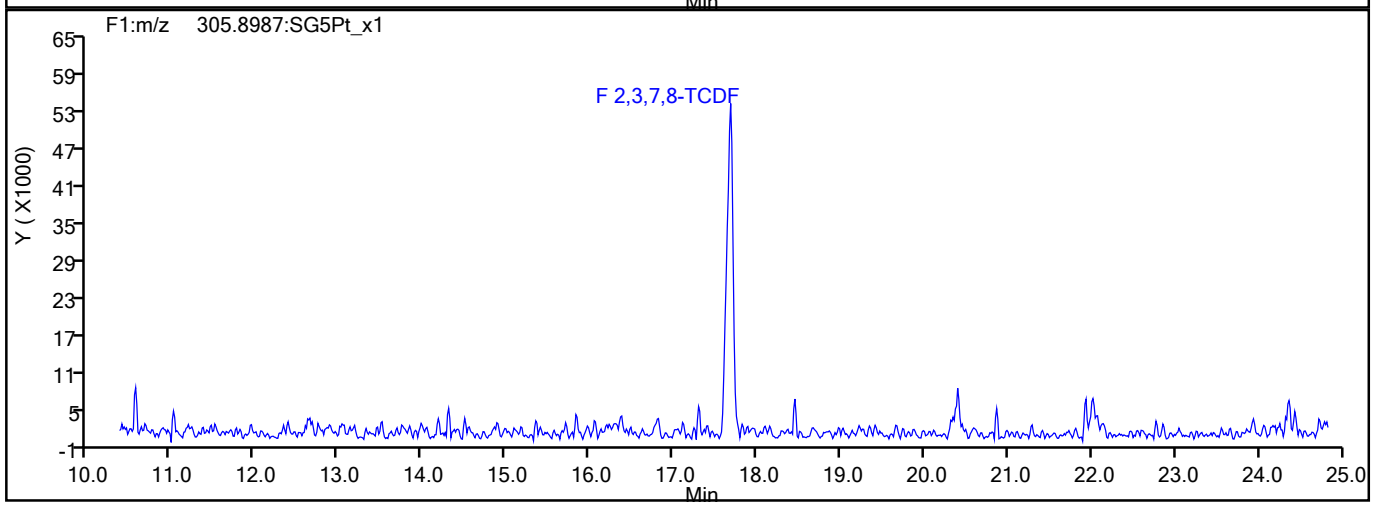

TCDF Interference Mass

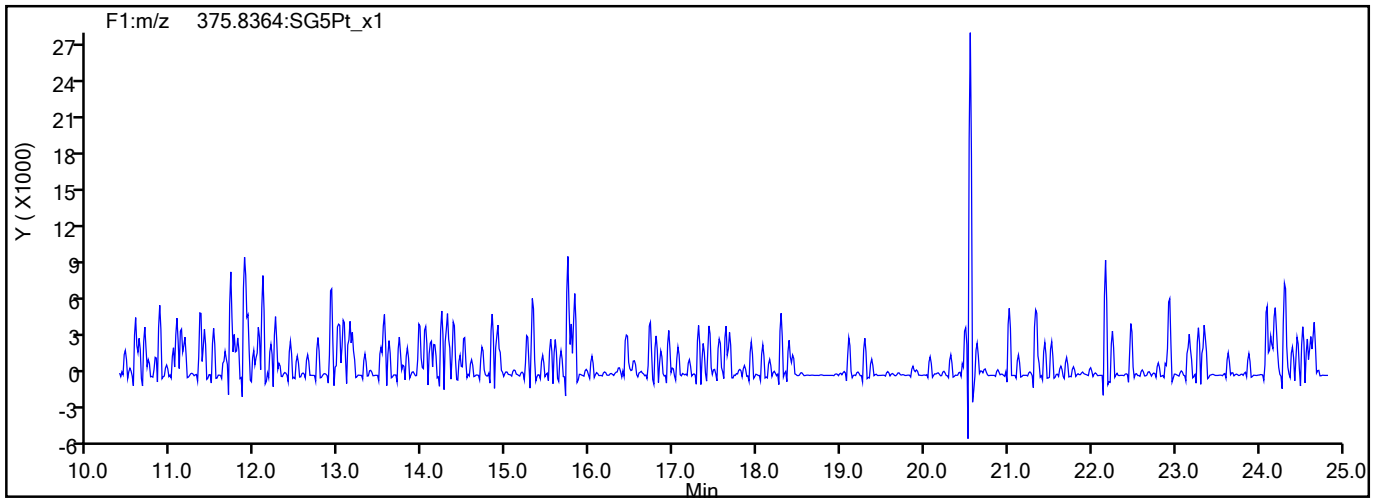

780357

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

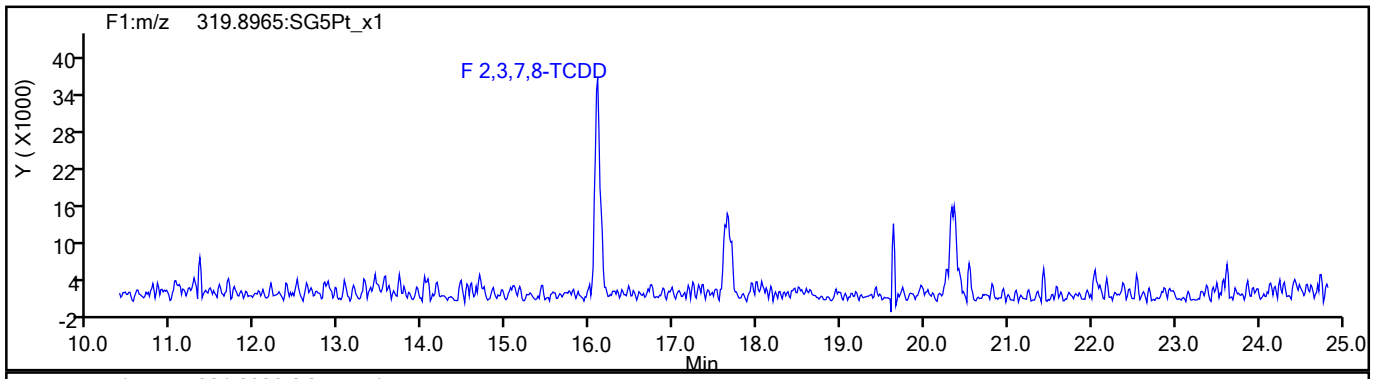

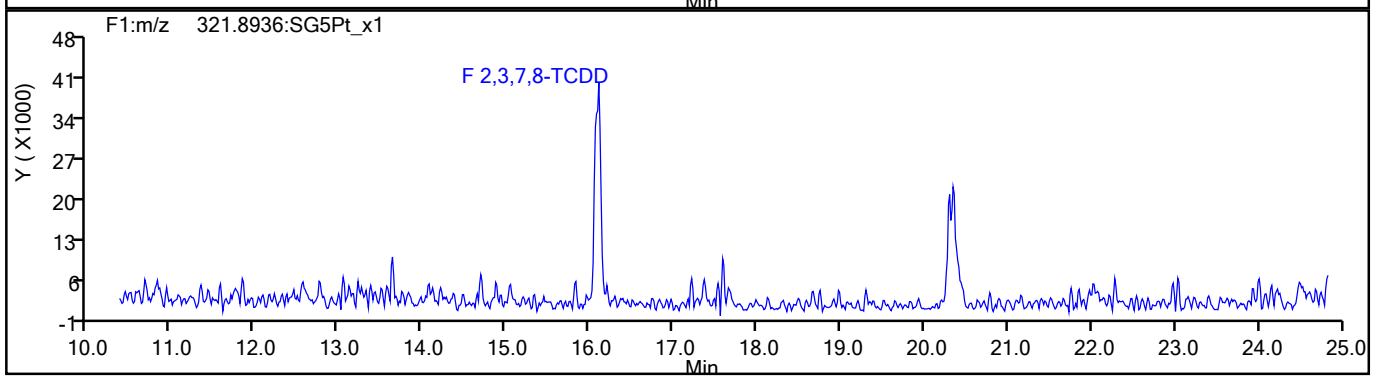

TCDD Standards

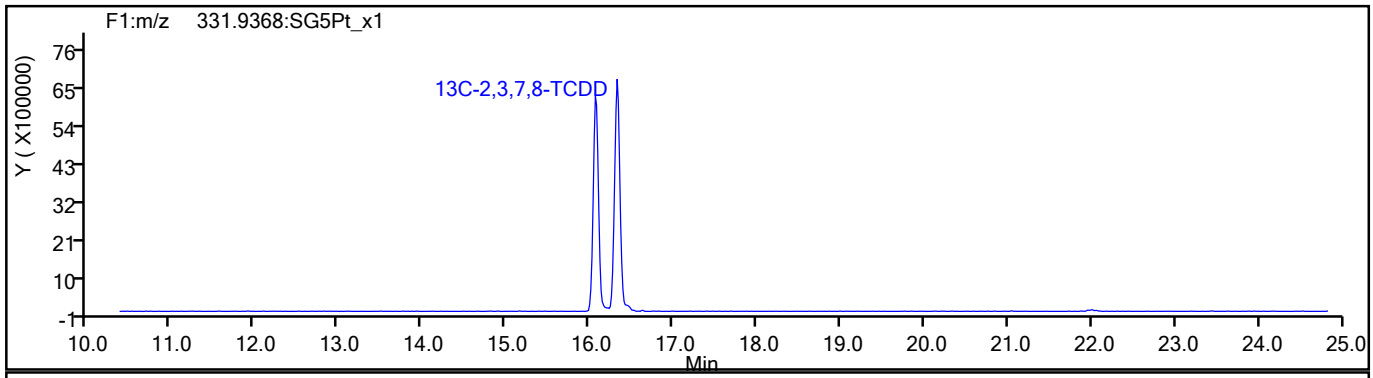

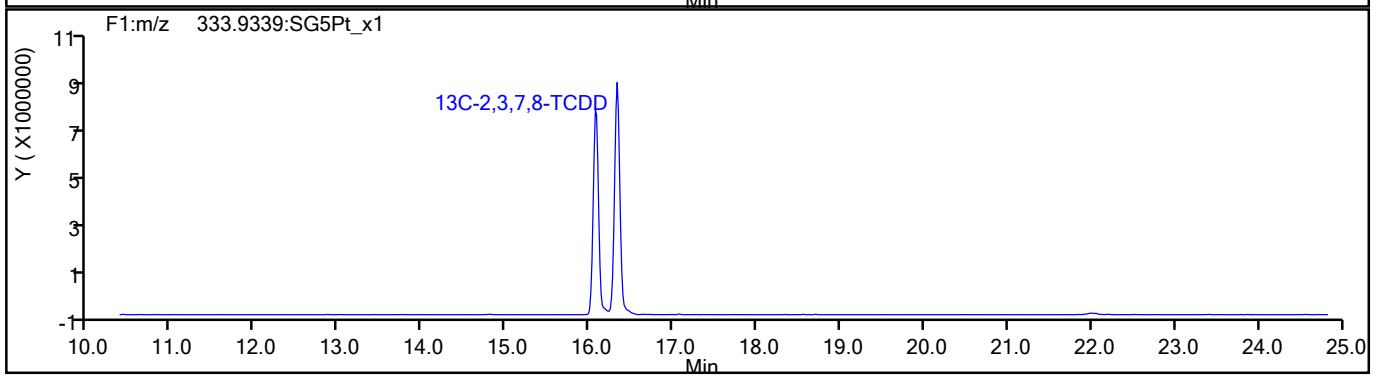

780358

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

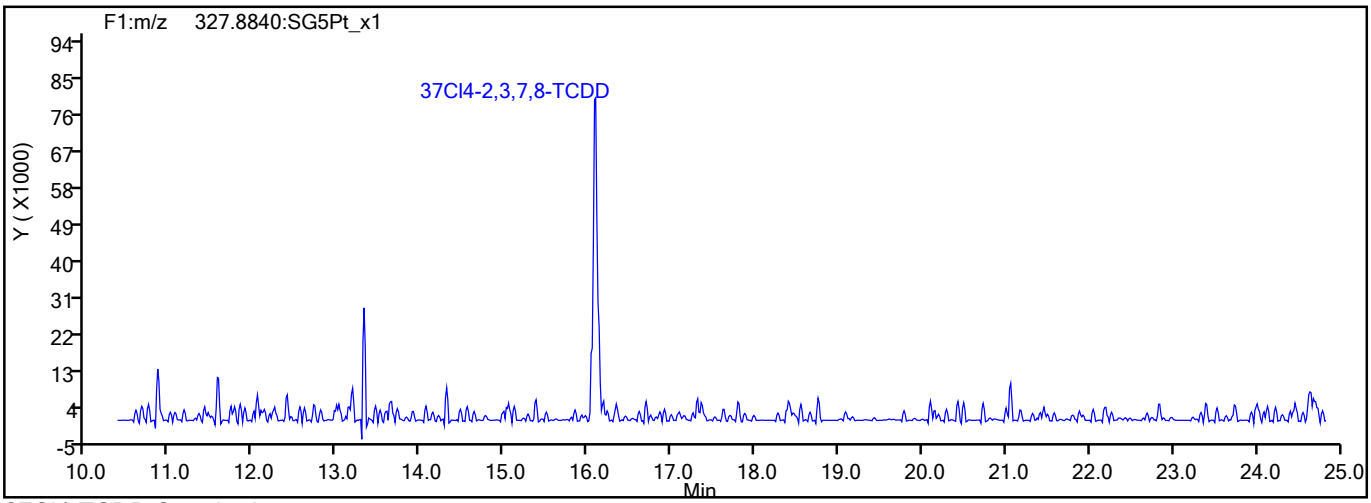

37Cl4-TCDD Standards

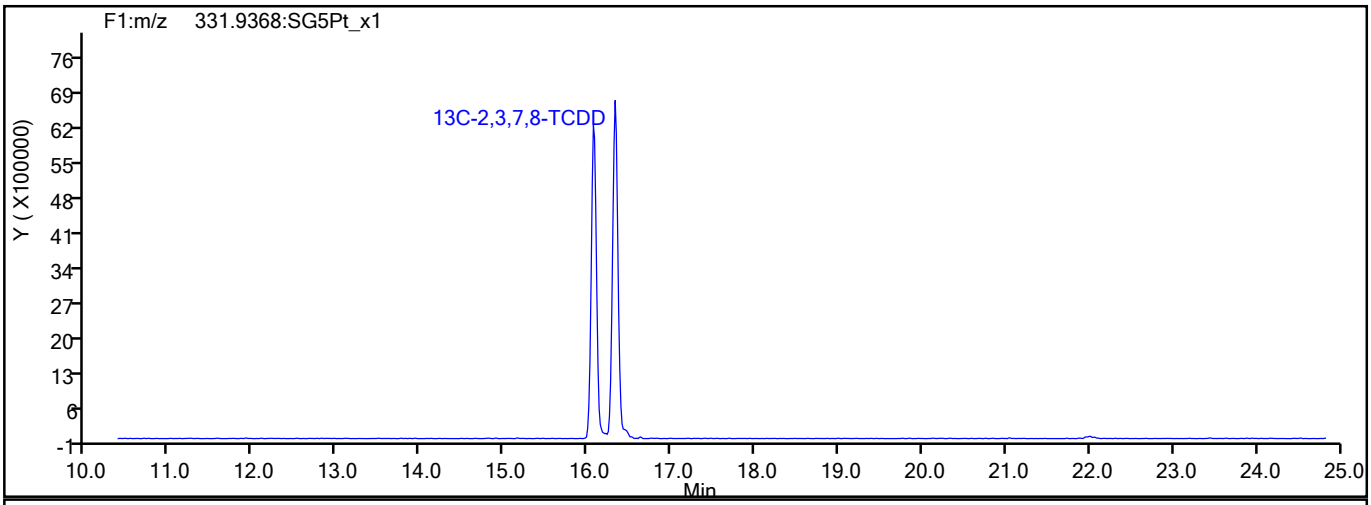

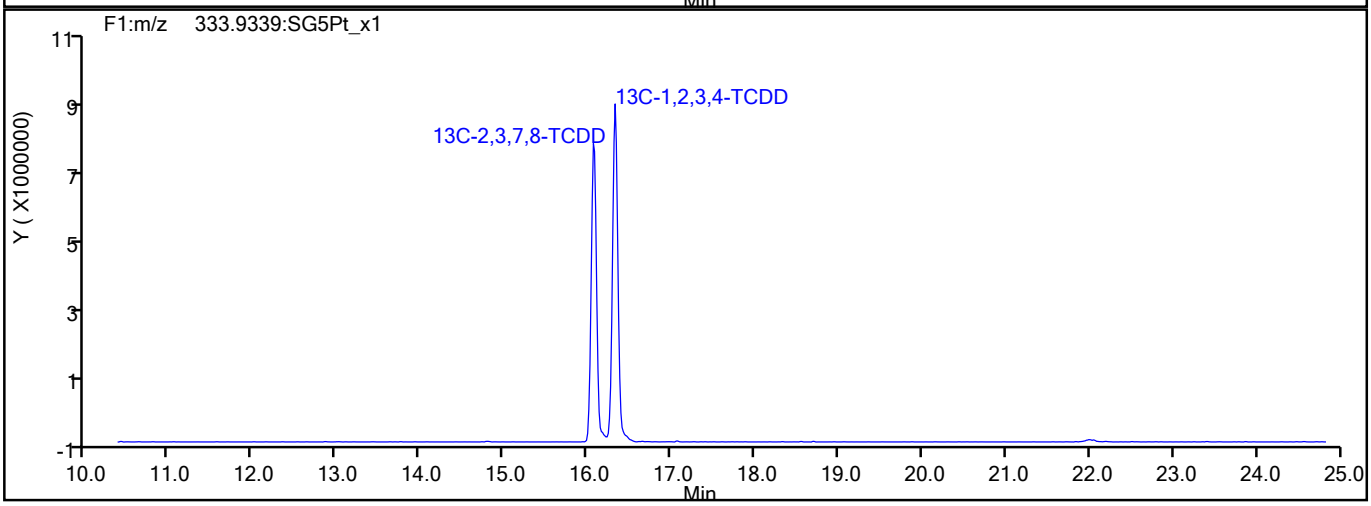

780359

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

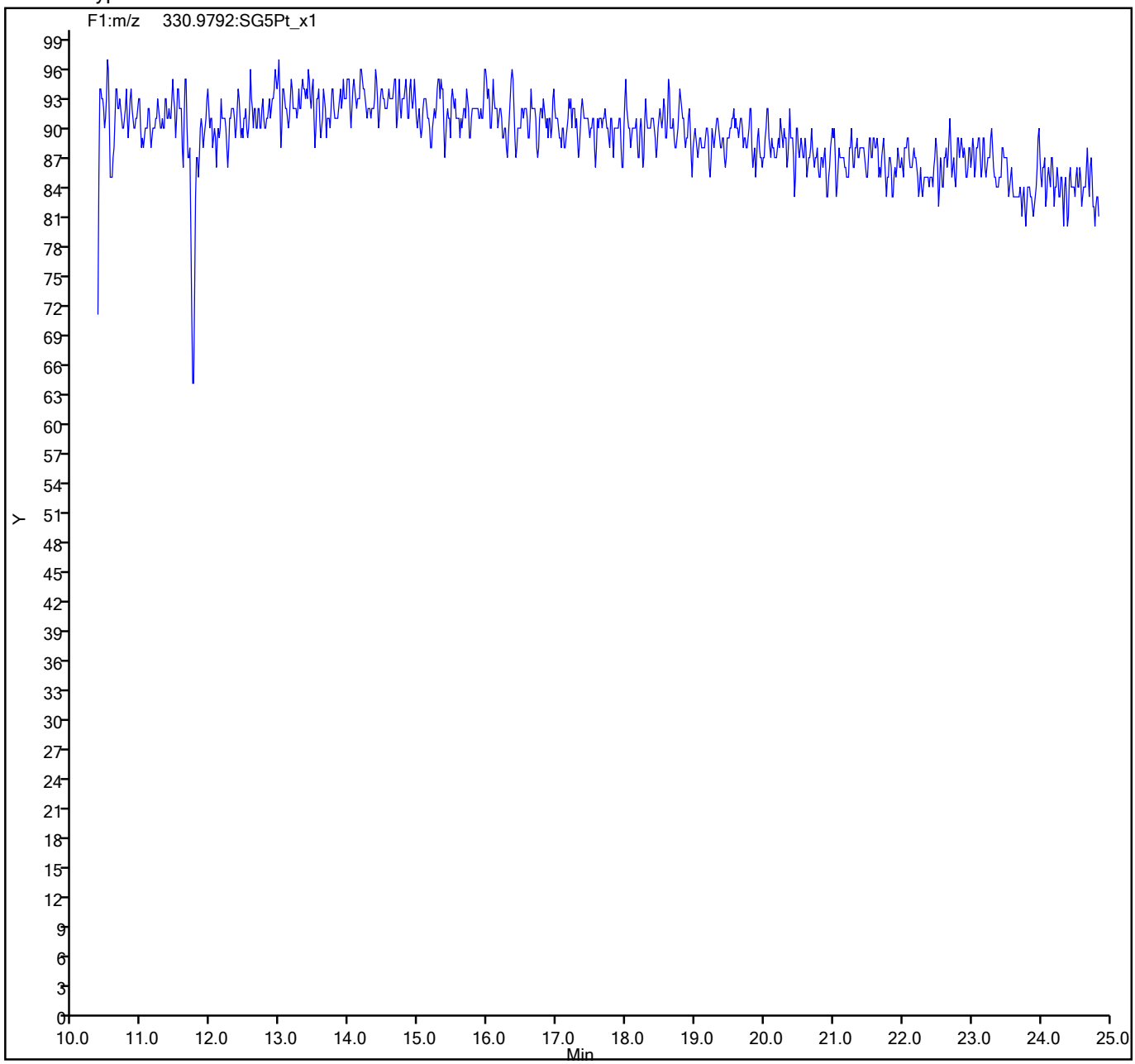

780360

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

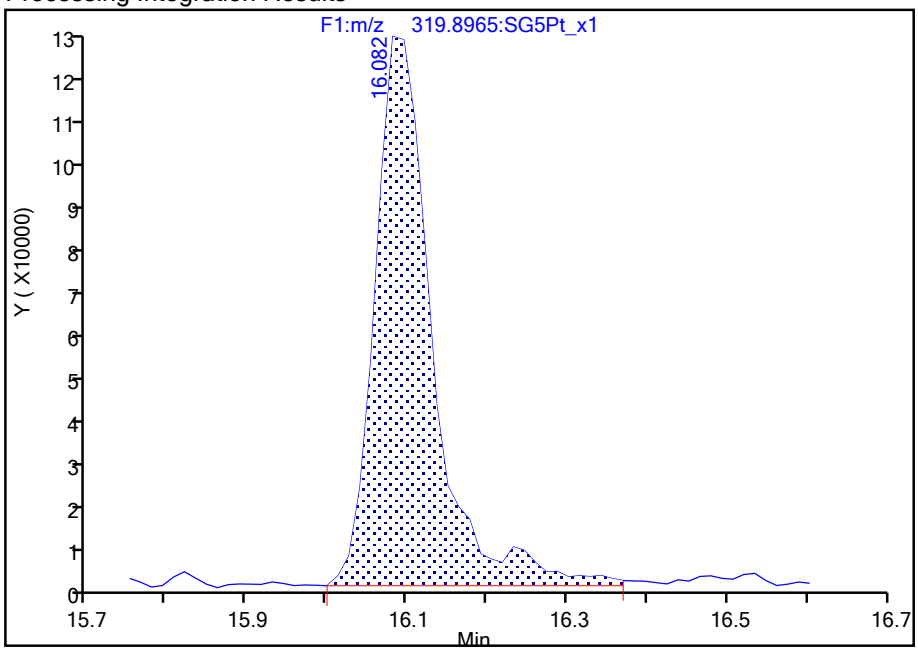

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

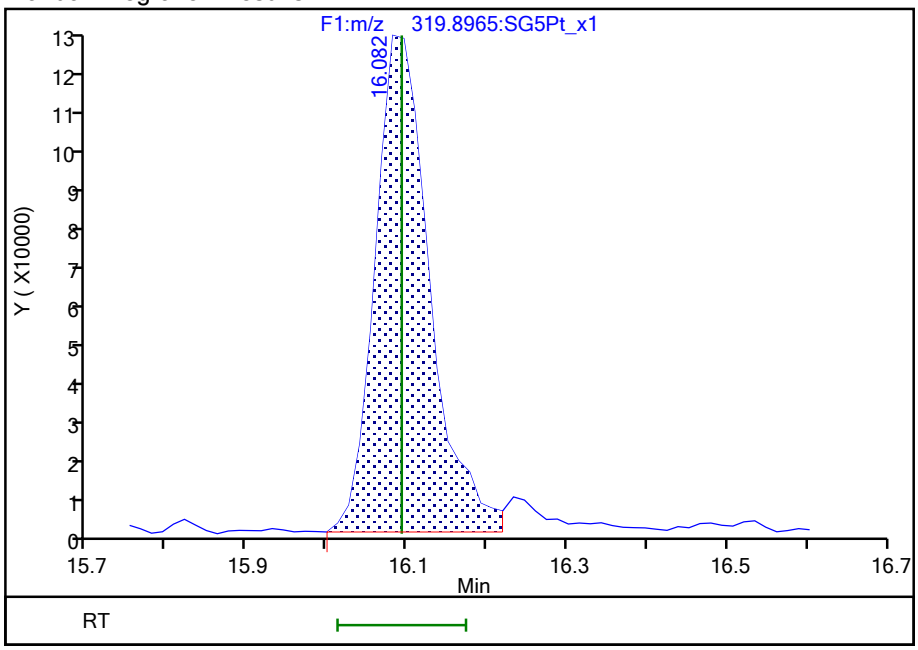

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

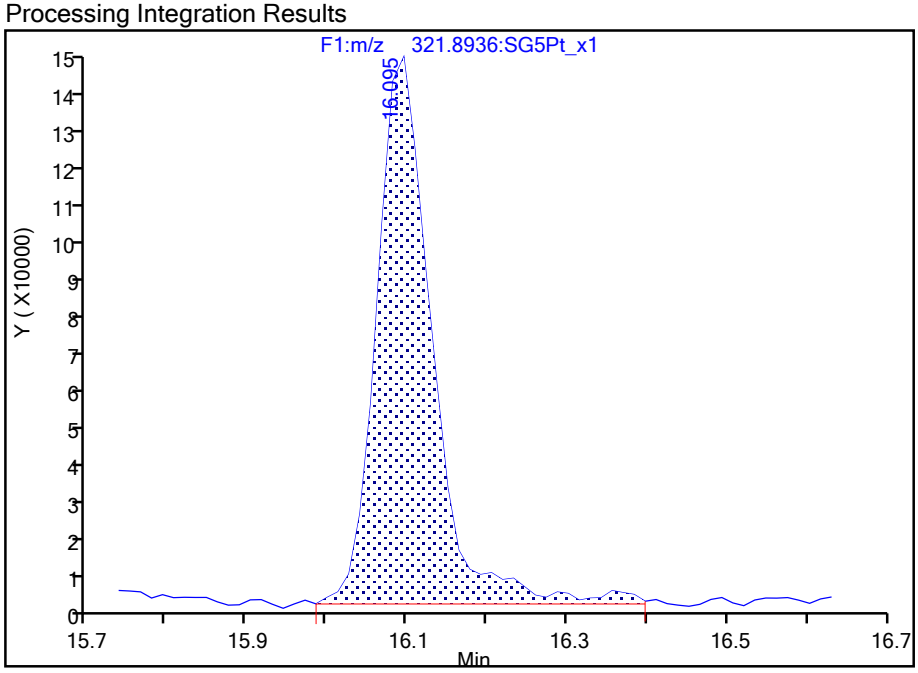

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

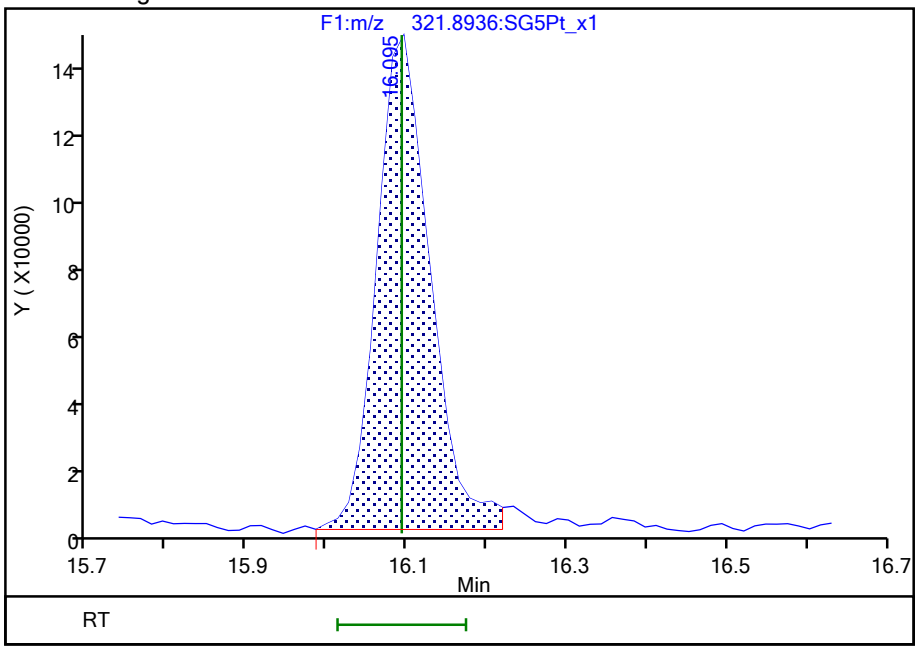

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

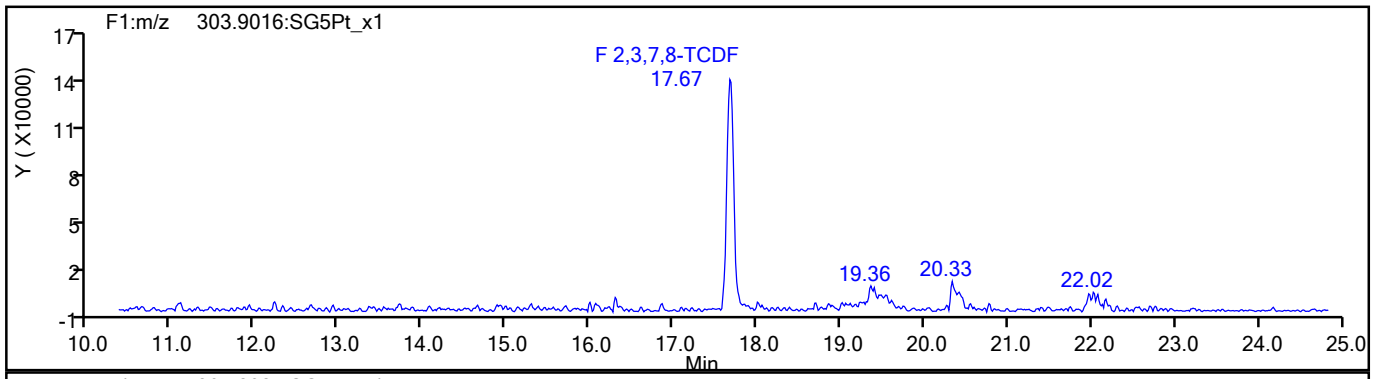

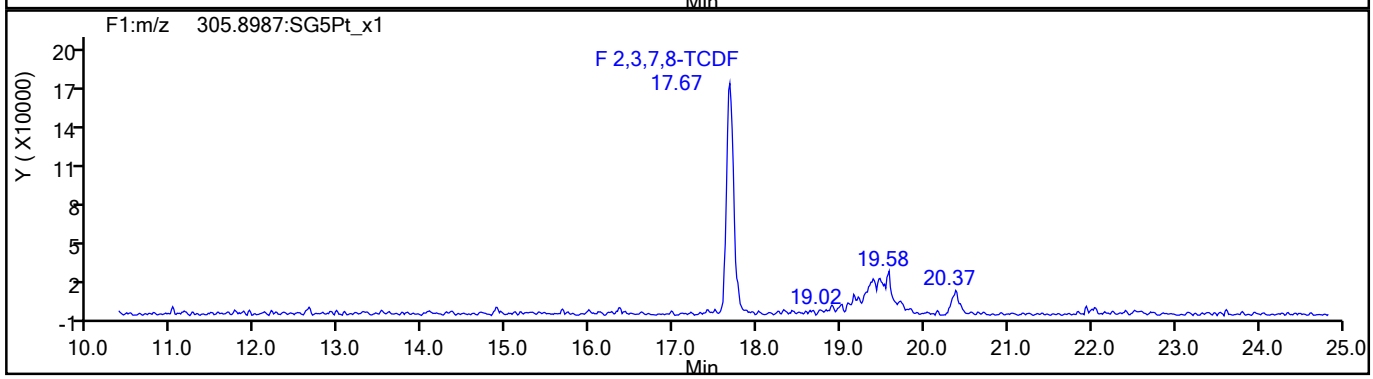

TCDF Standards

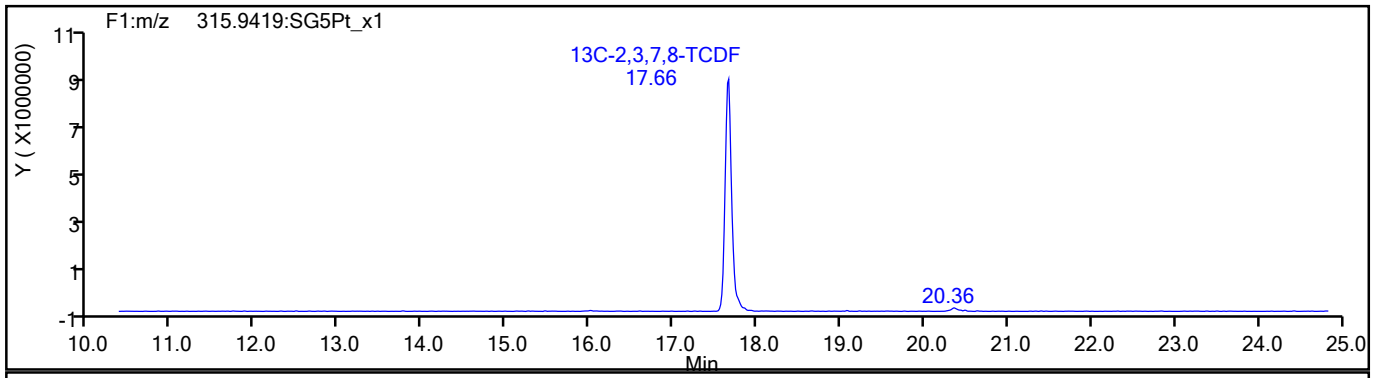

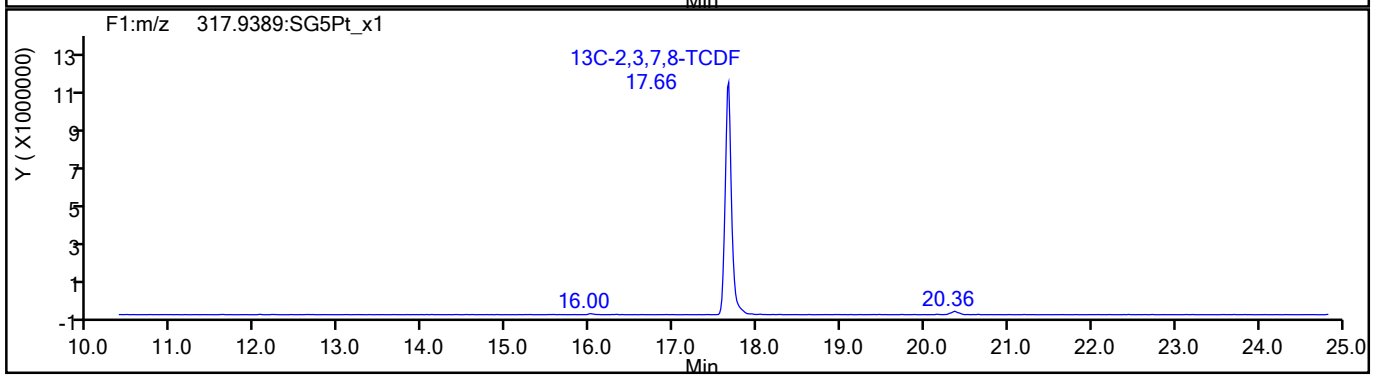

780365

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

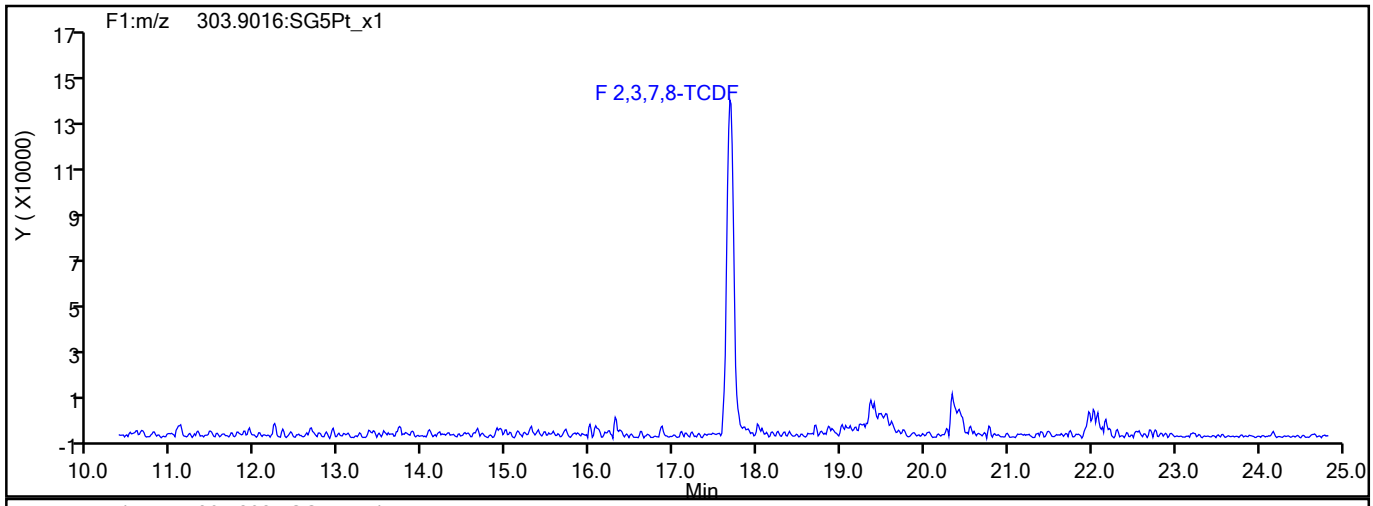

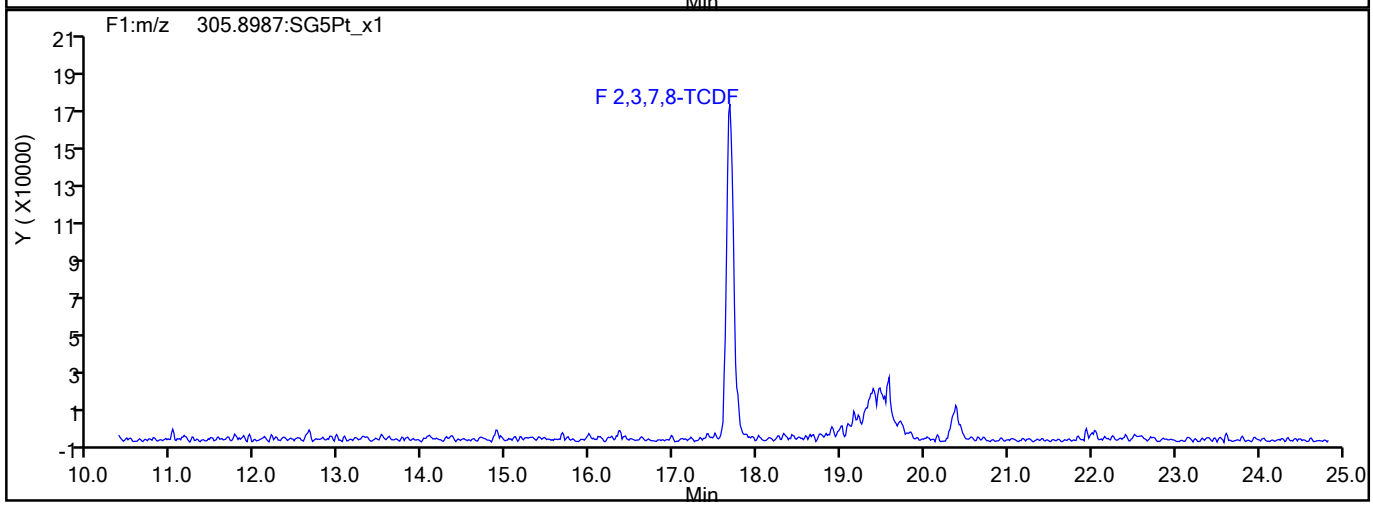

TCDF Interference Mass

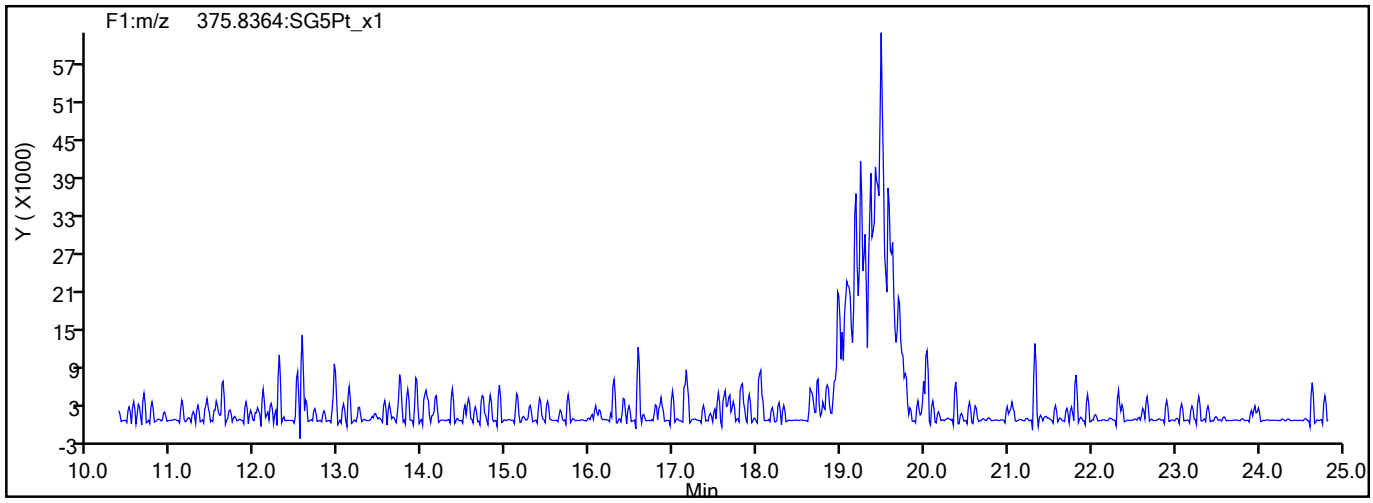

780366

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

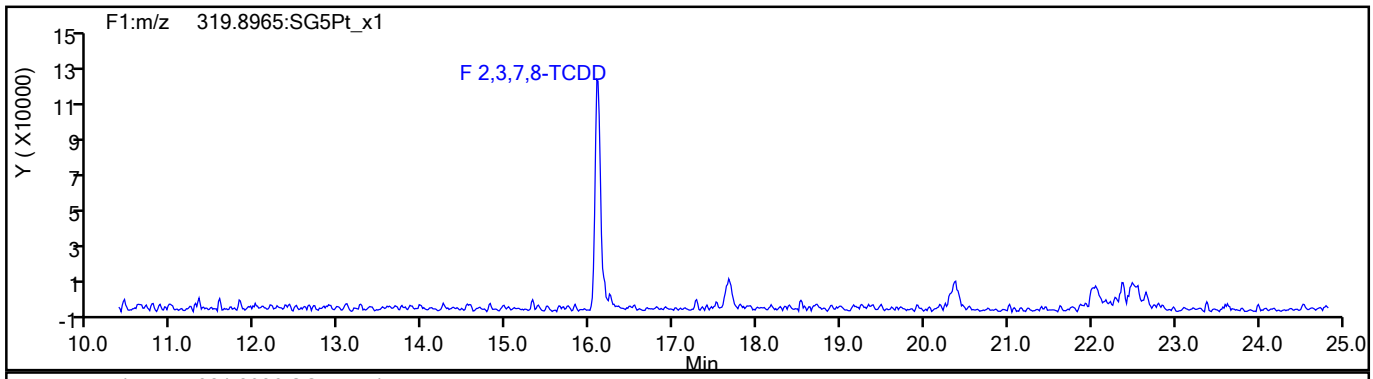

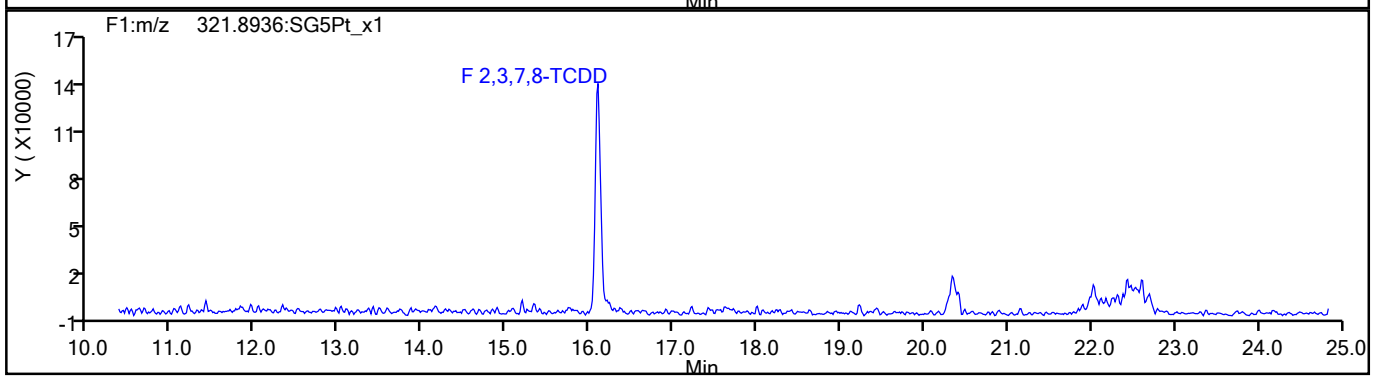

TCDD Standards

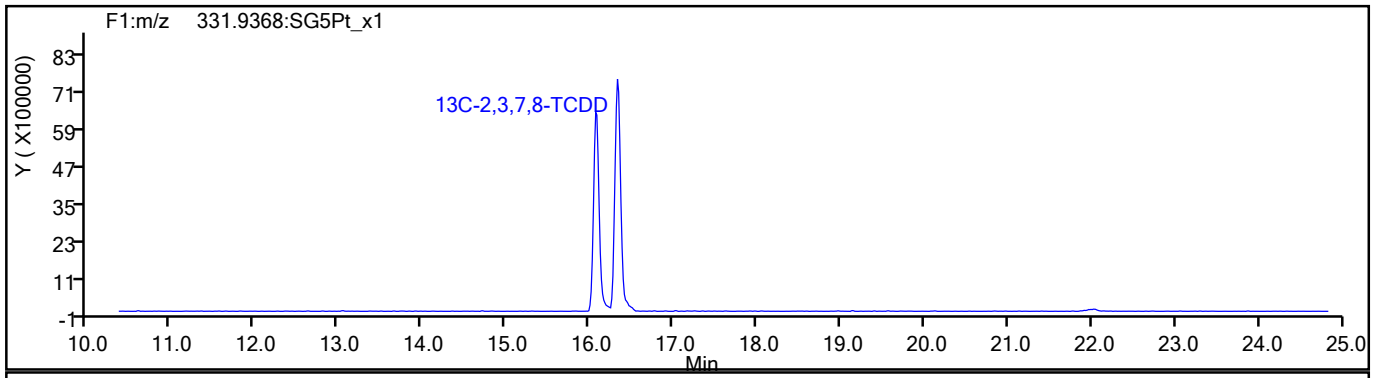

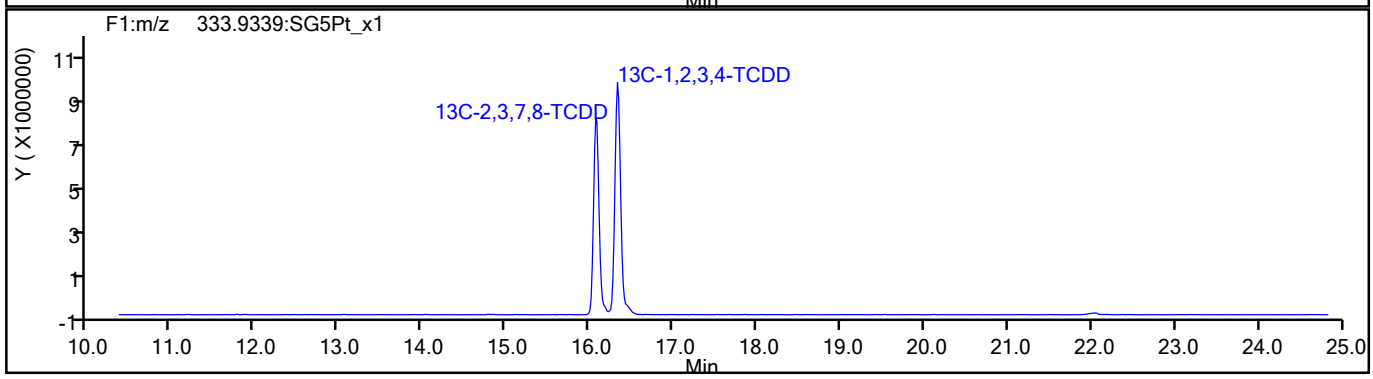

780367

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

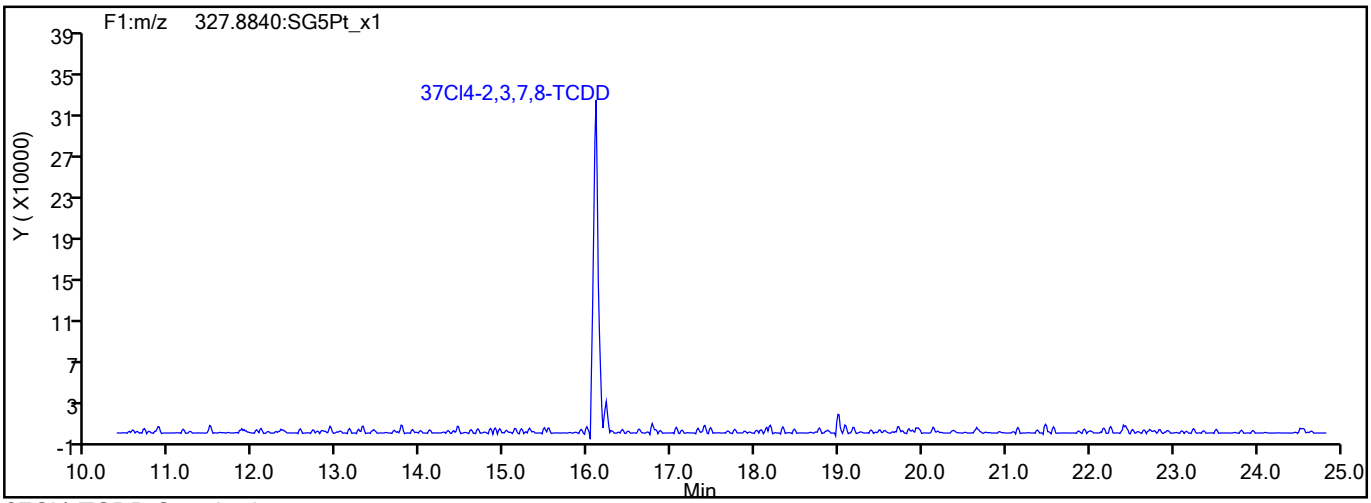

37Cl4-TCDD Standards

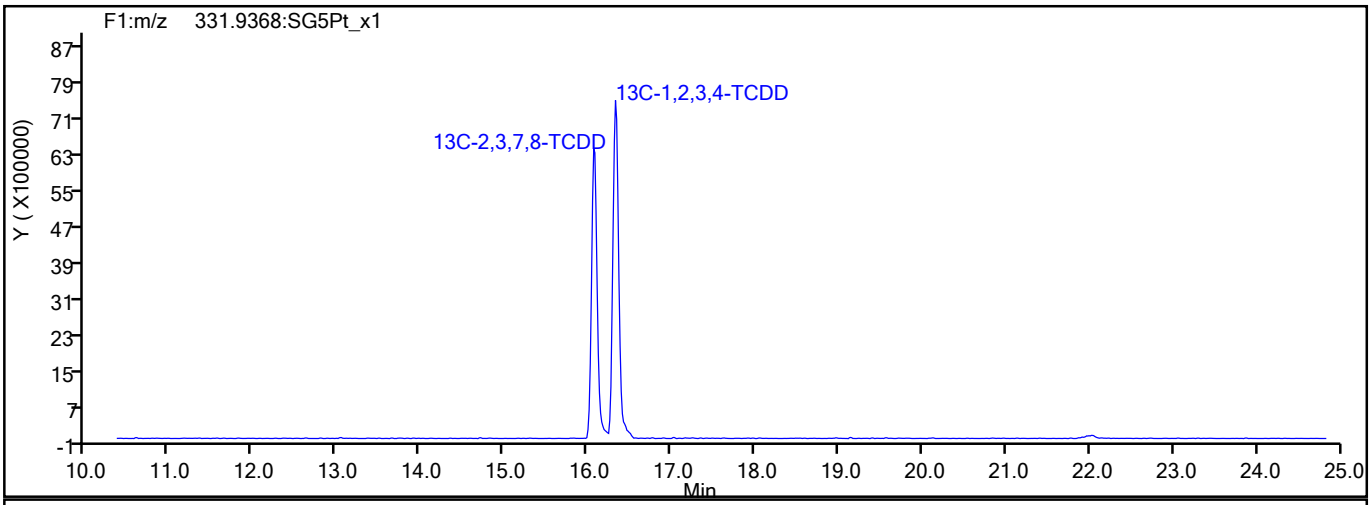

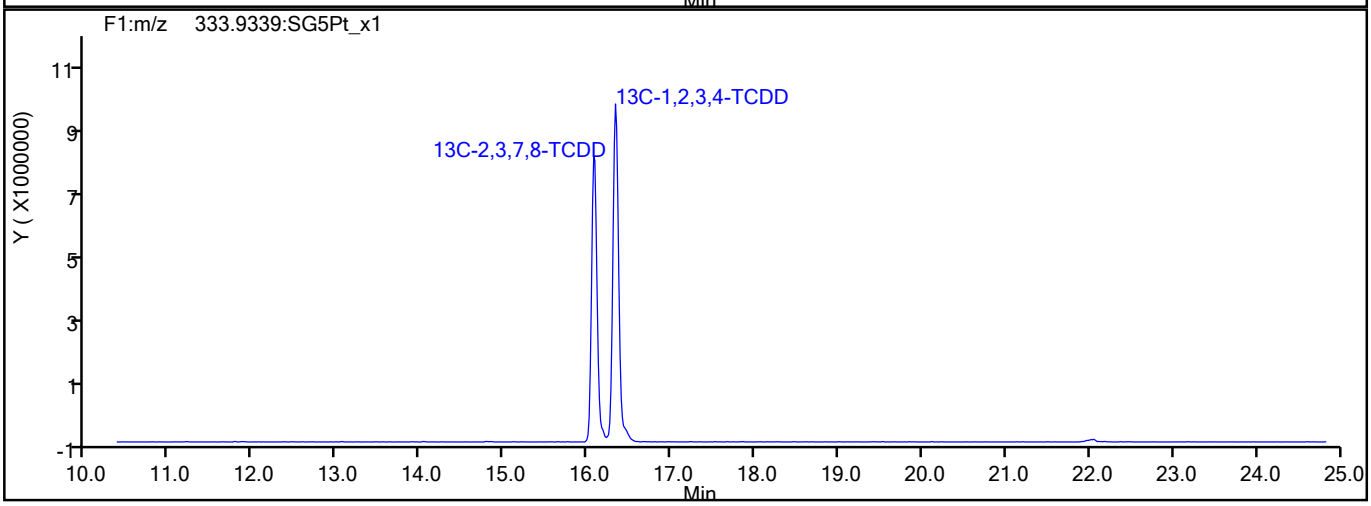

780368

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

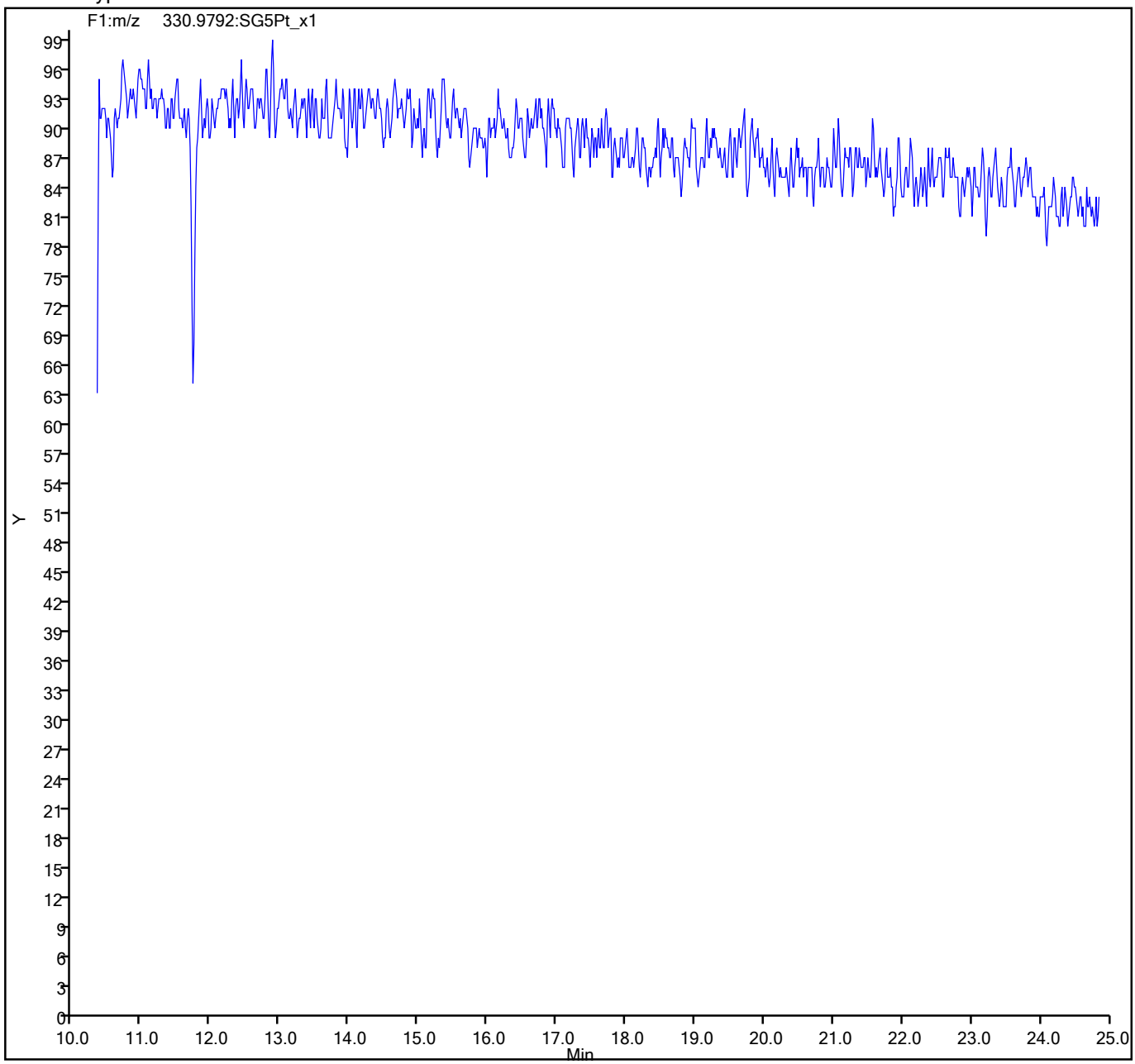

780369

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

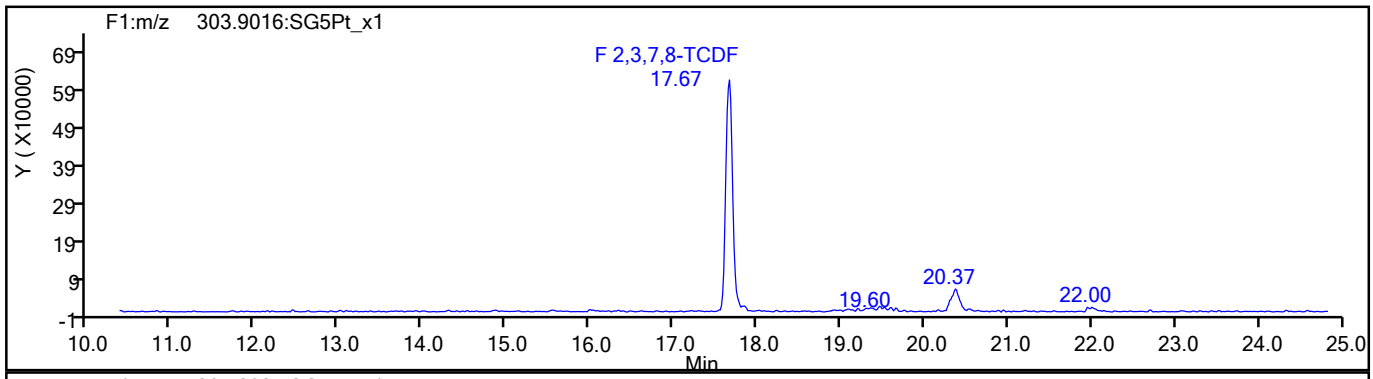

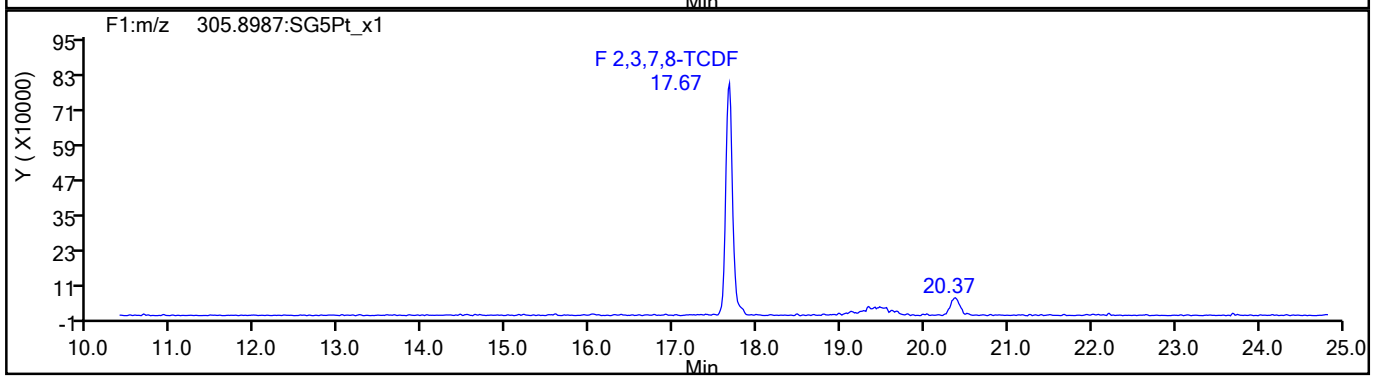

TCDF Standards

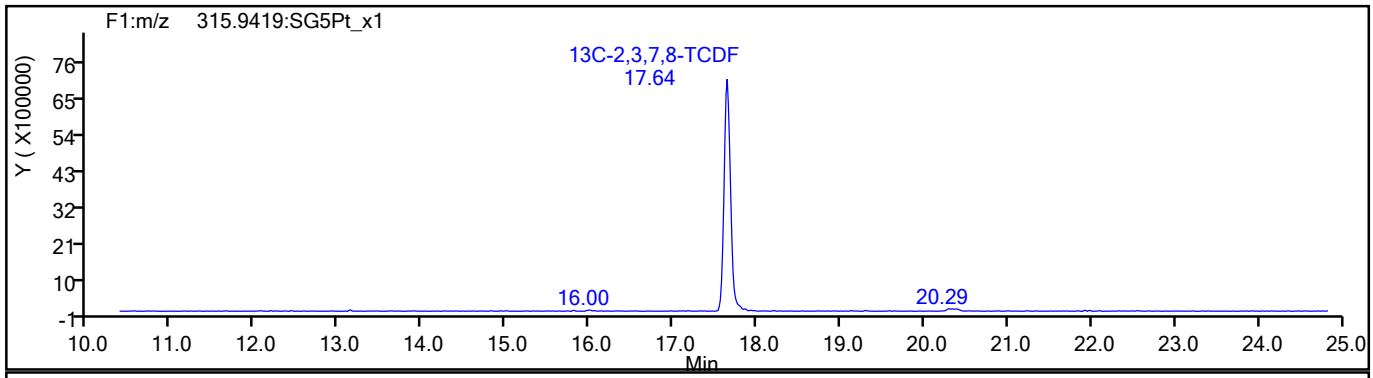

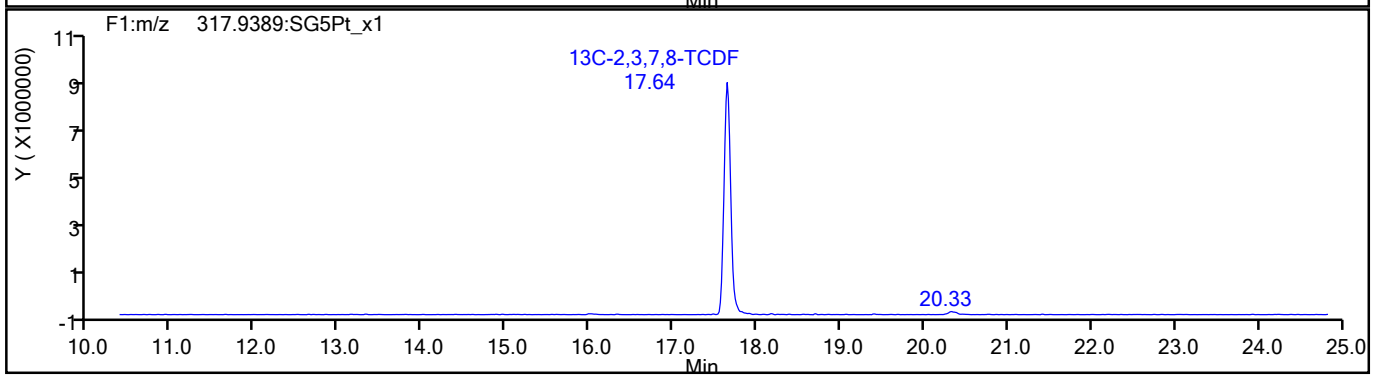

780372

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

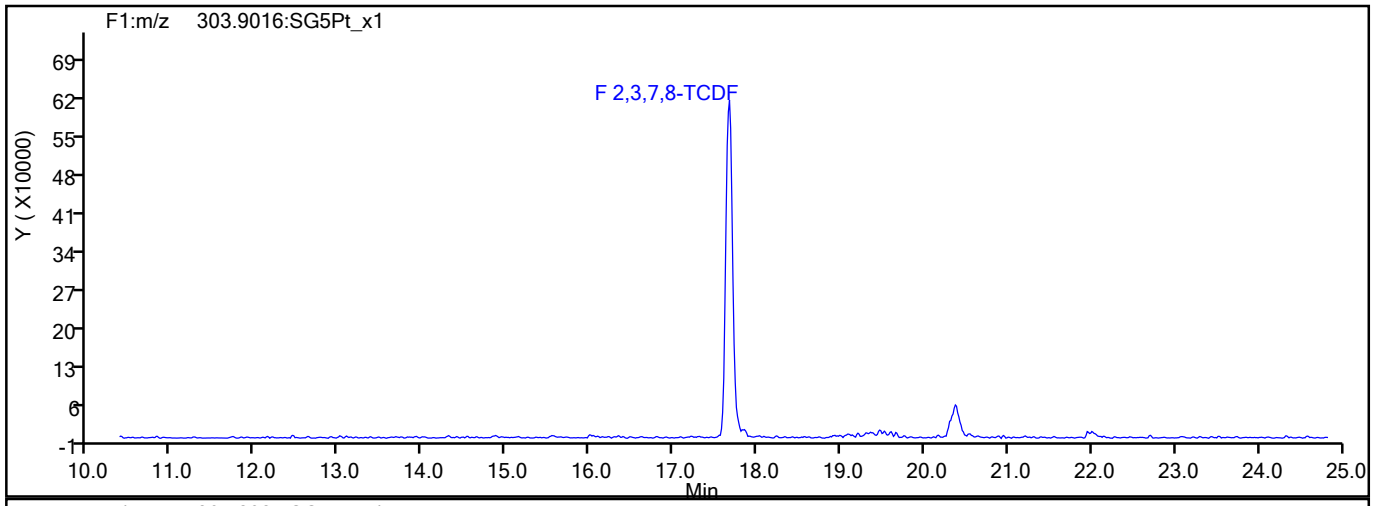

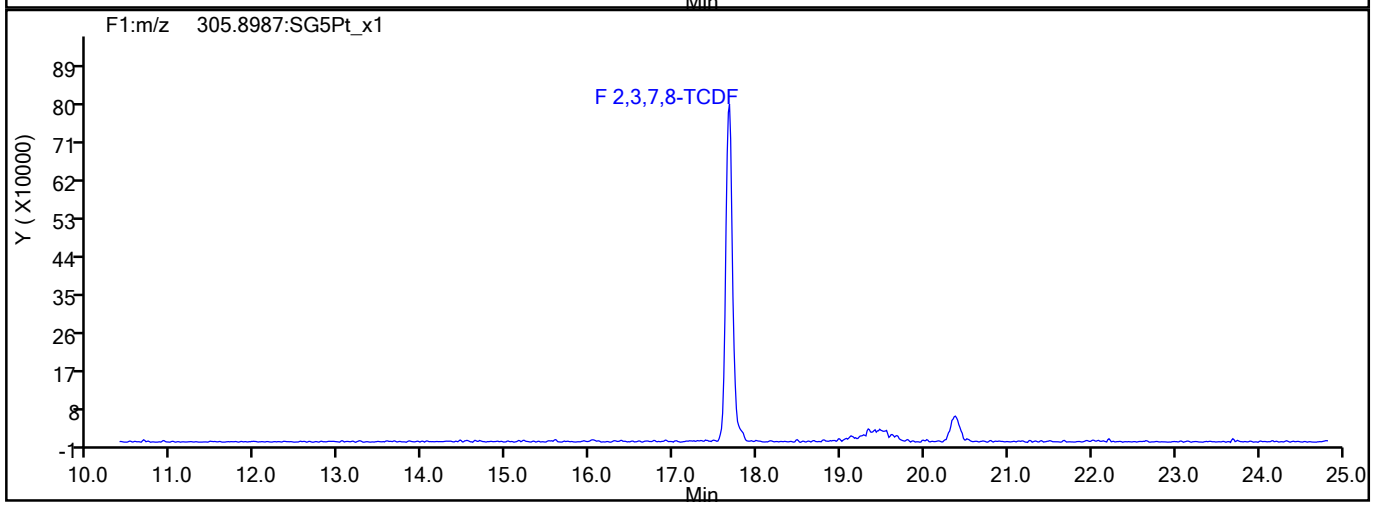

TCDF Interference Mass

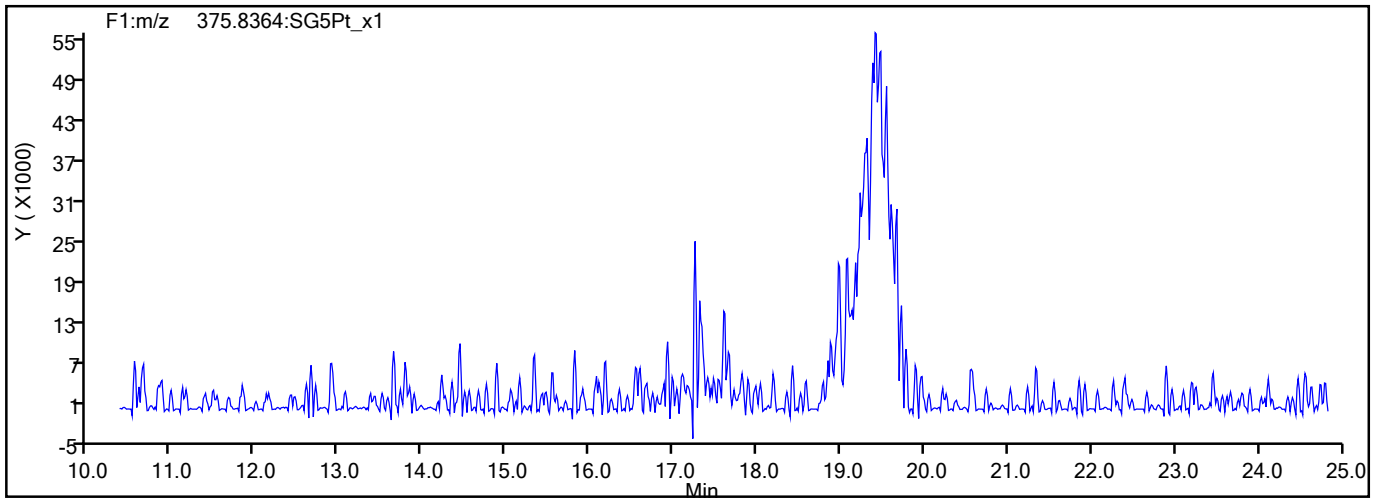

780373

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

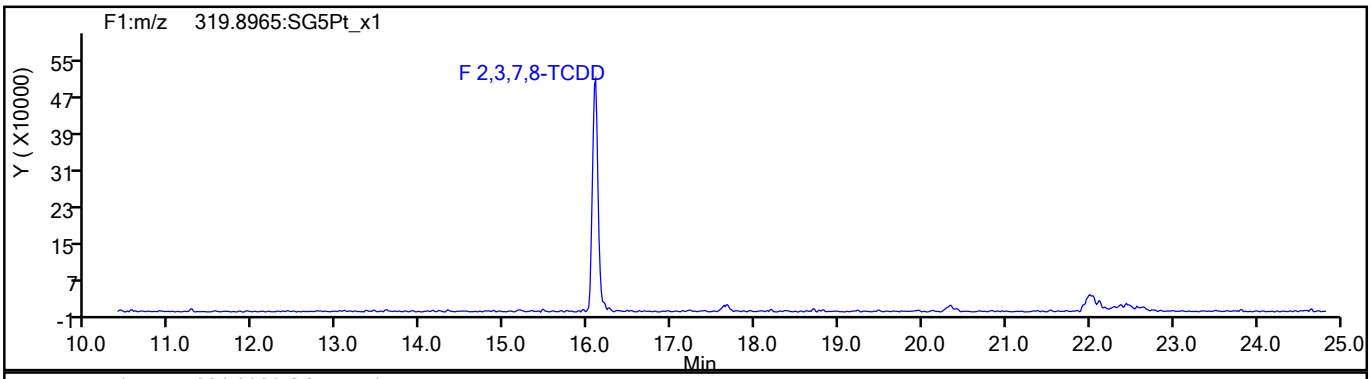

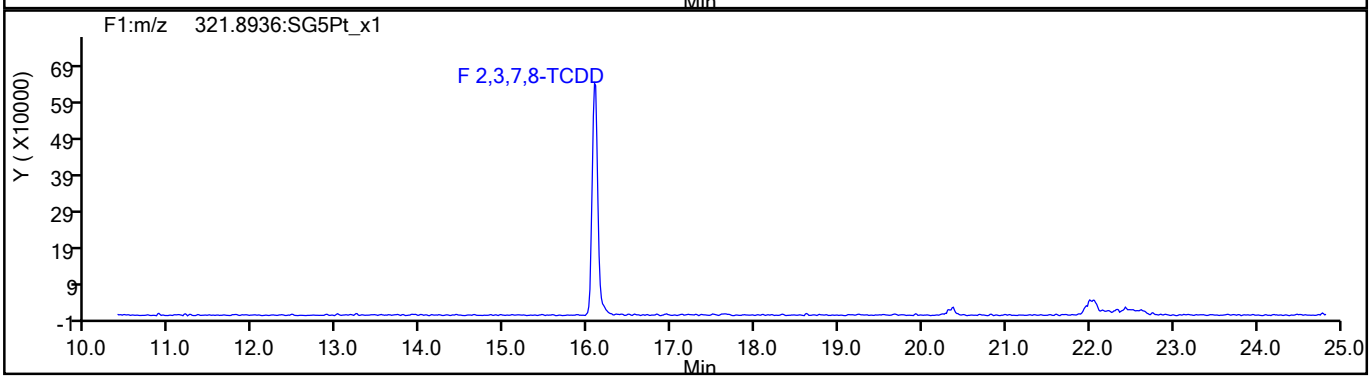

TCDD Standards

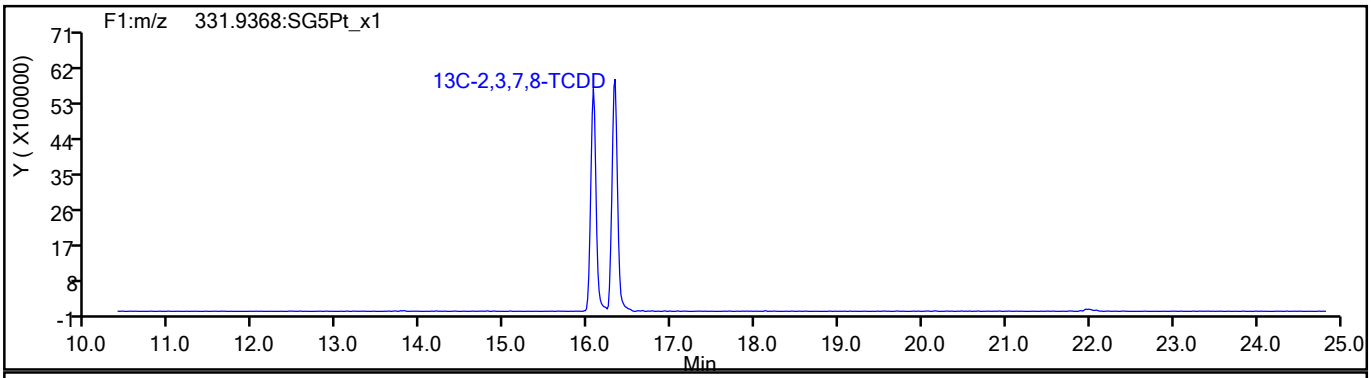

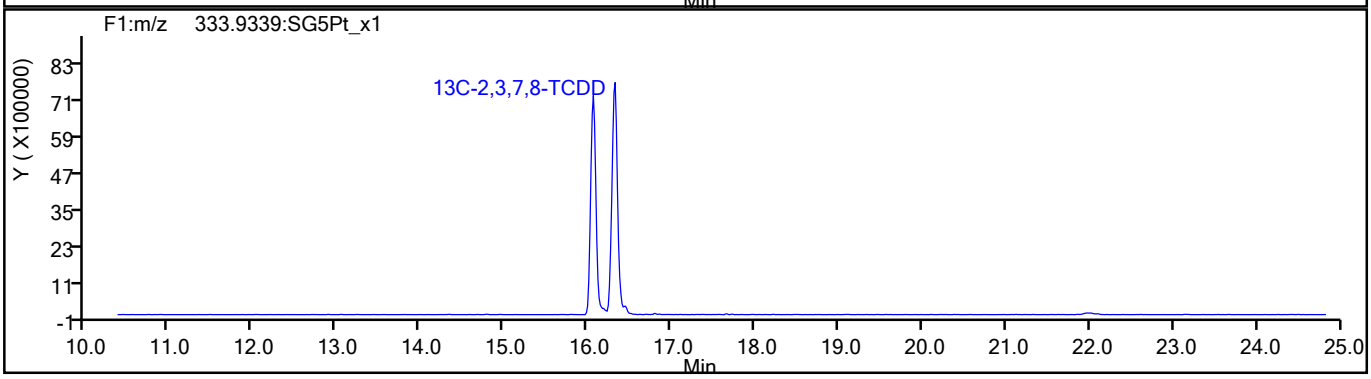

780374

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

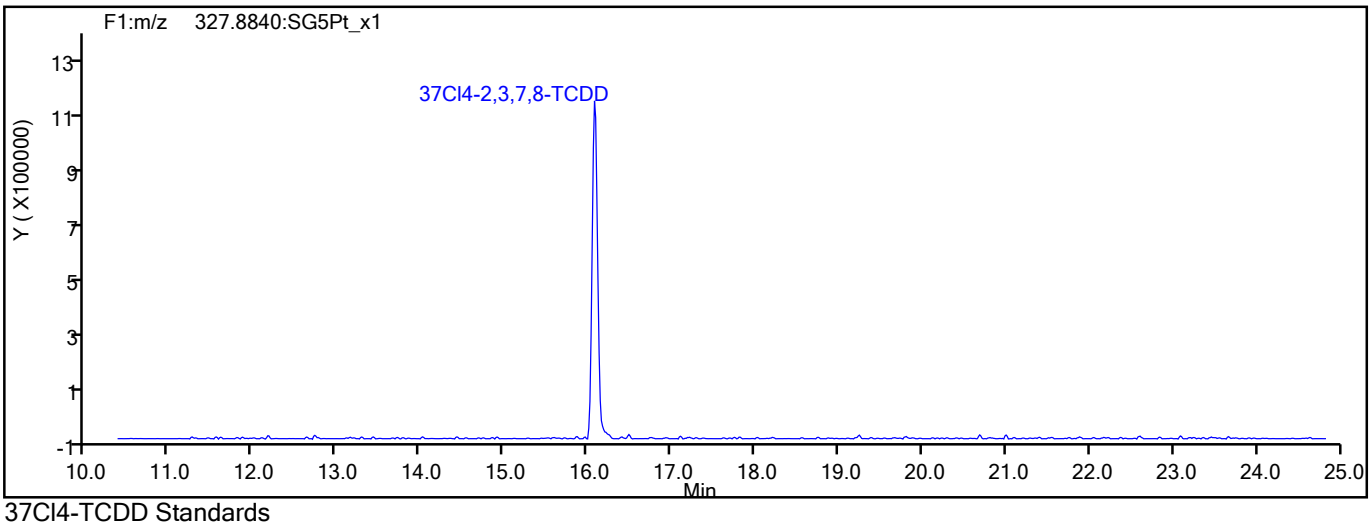

37Cl4-TCDD Standards

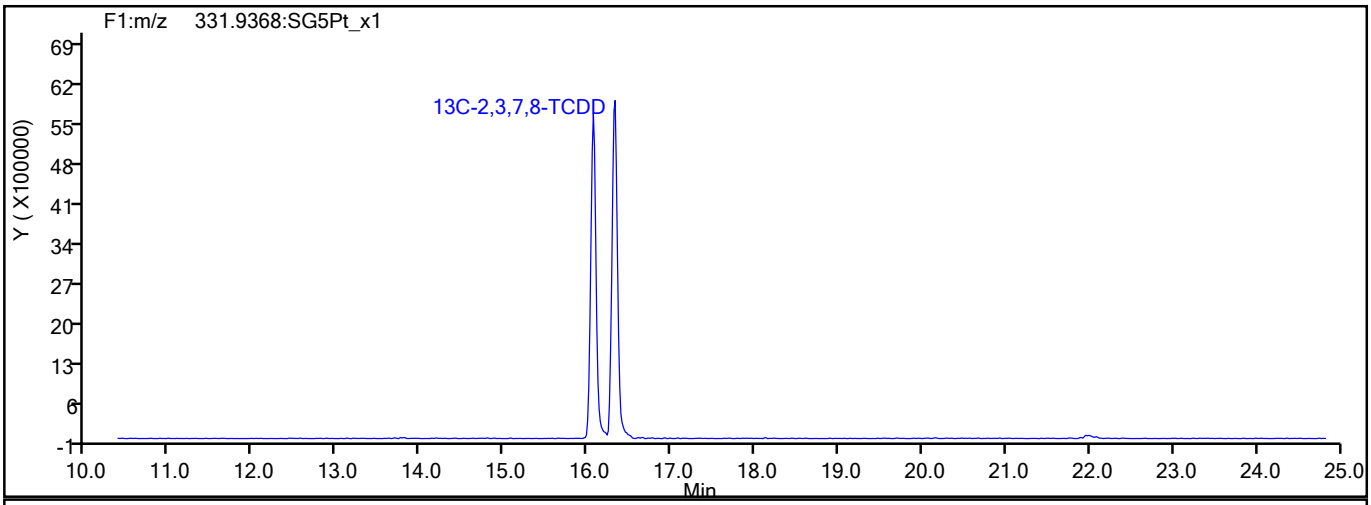

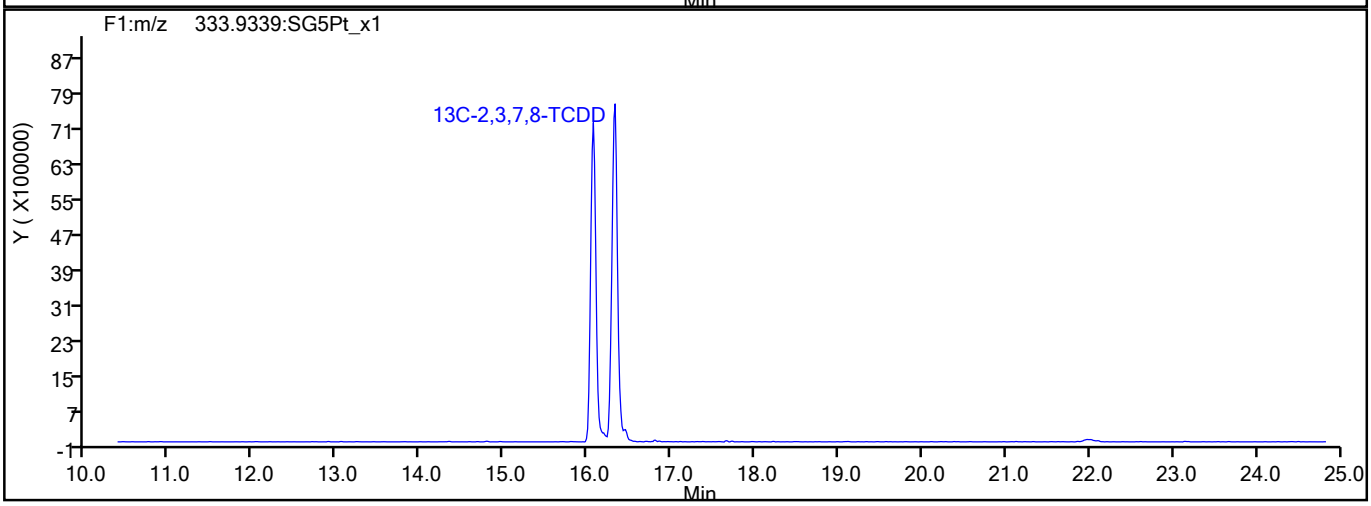

780375

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

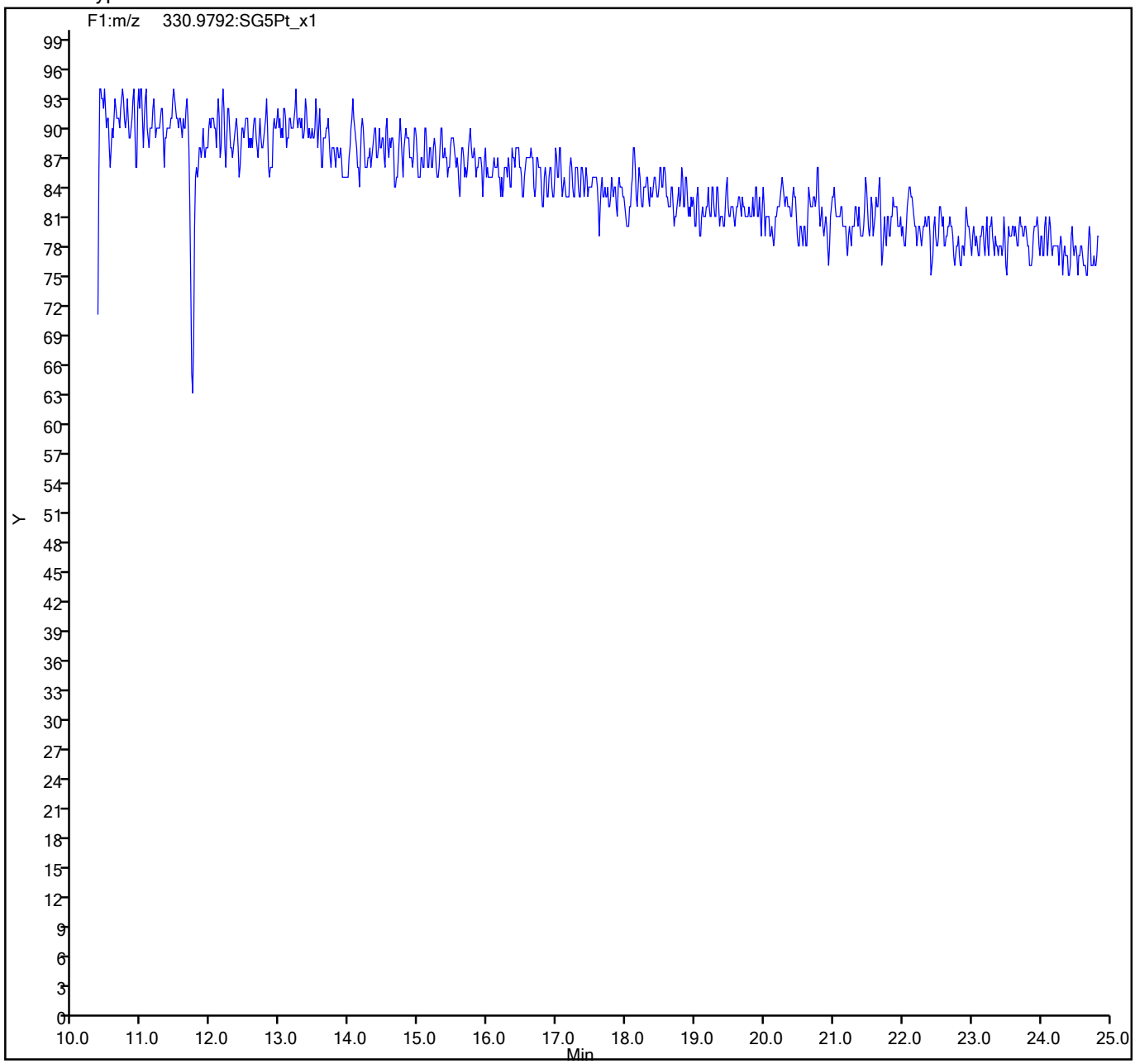

780376

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

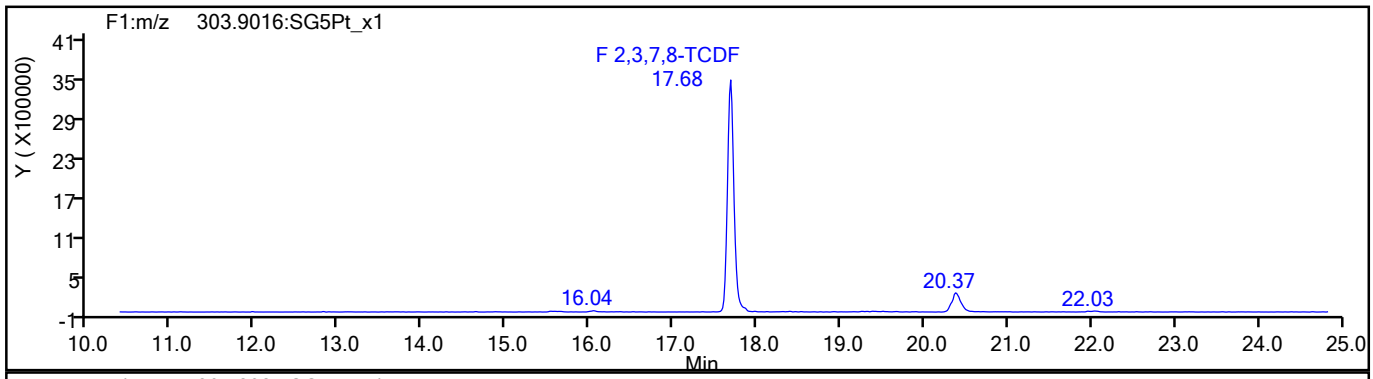

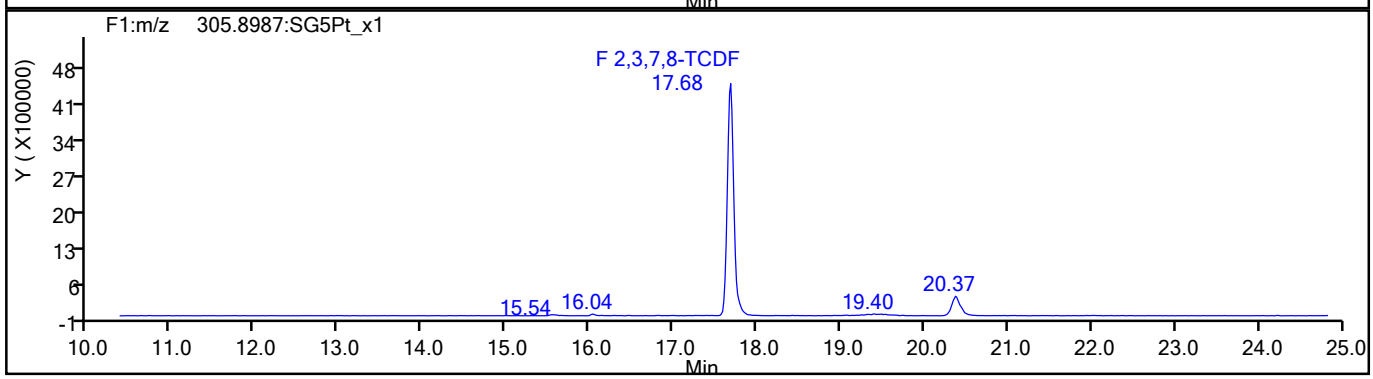

TCDF Standards

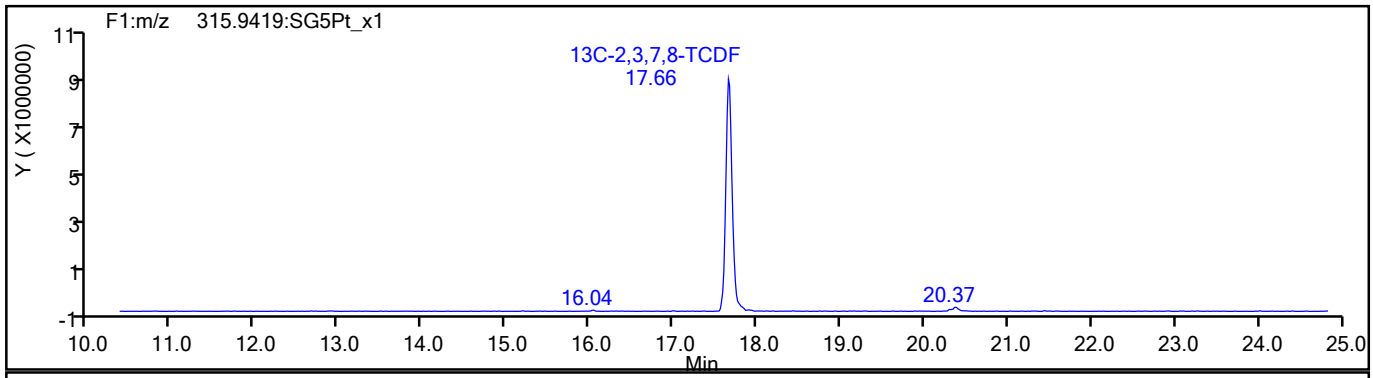

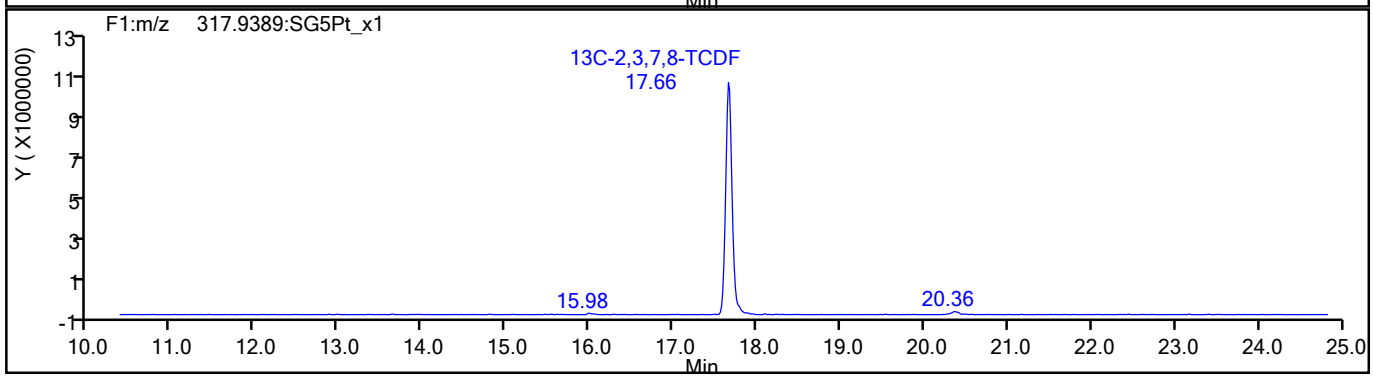

780379

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

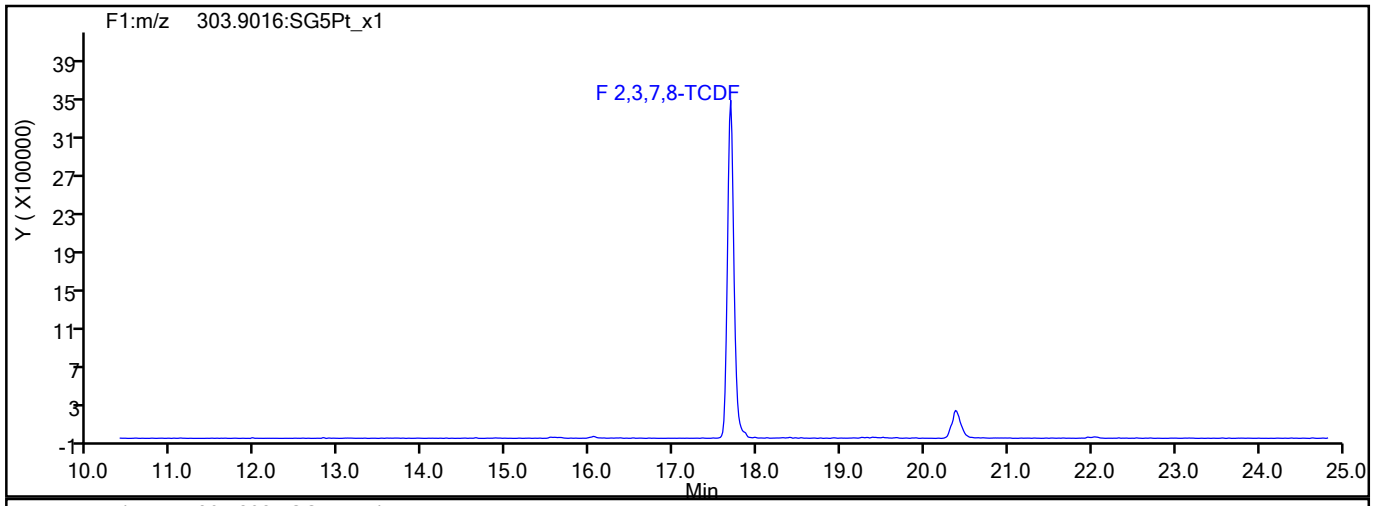

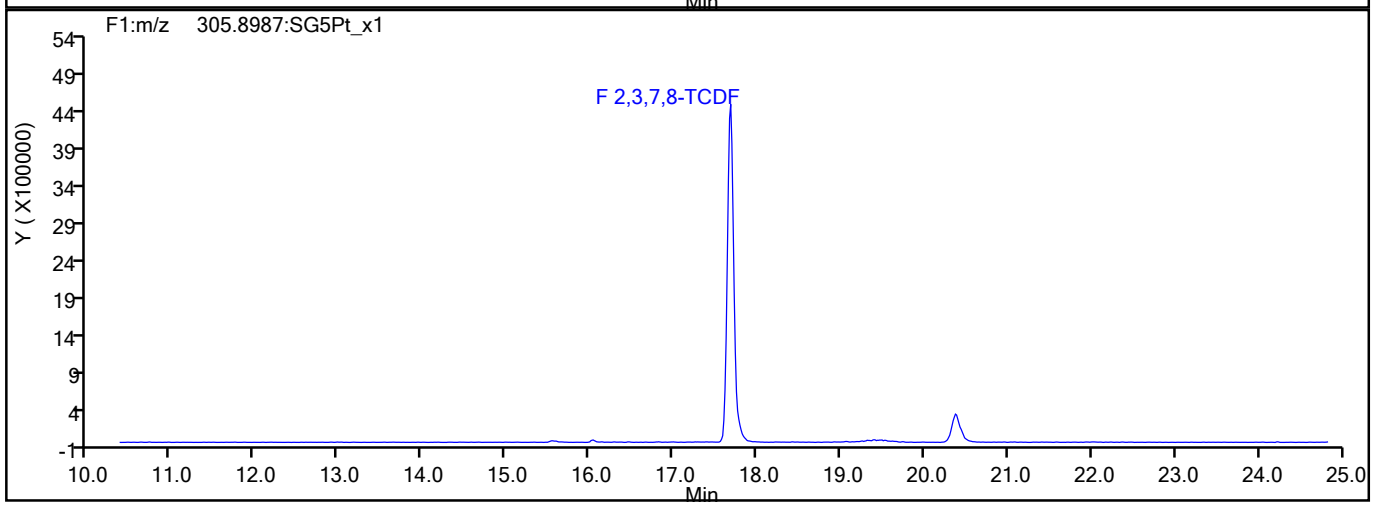

TCDF Interference Mass

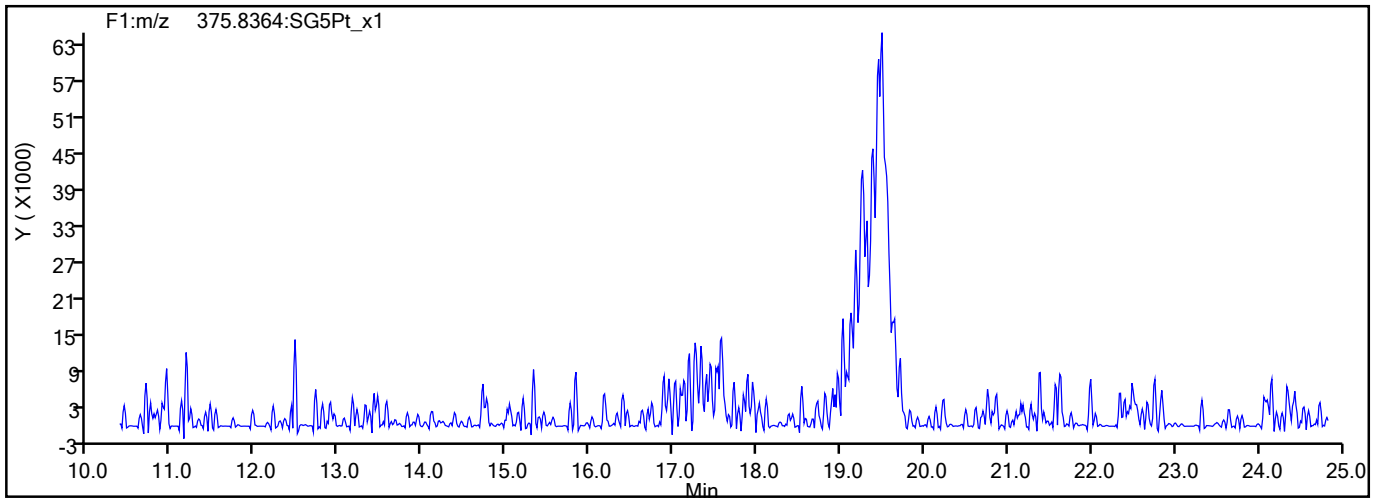

780380

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

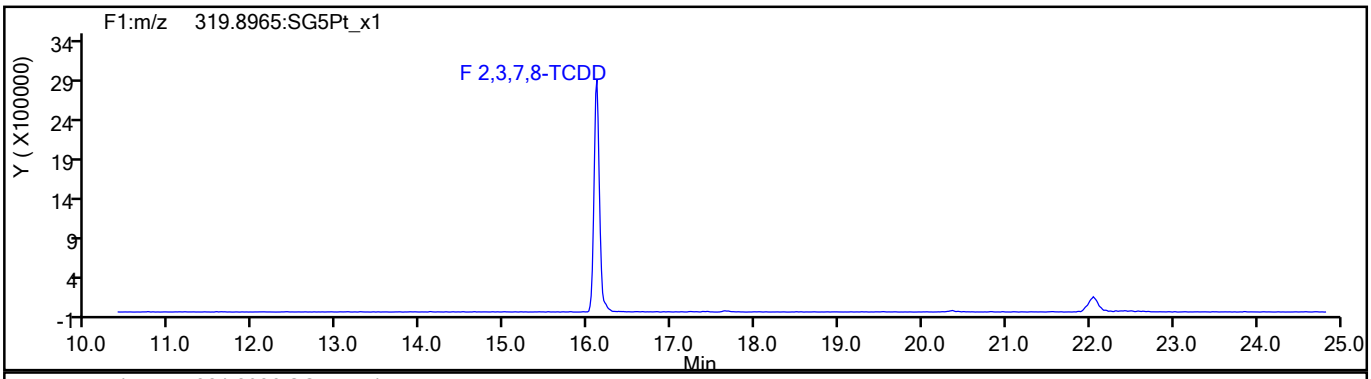

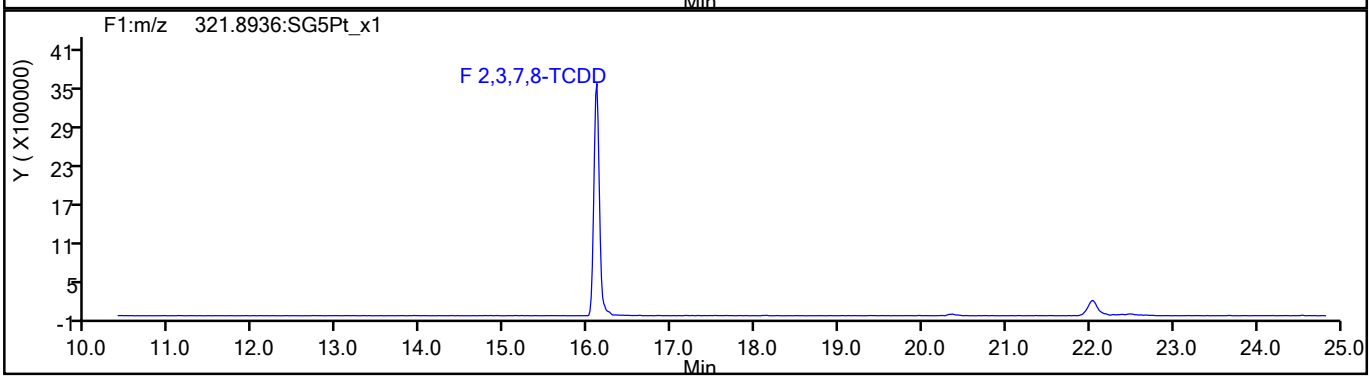

TCDD Standards

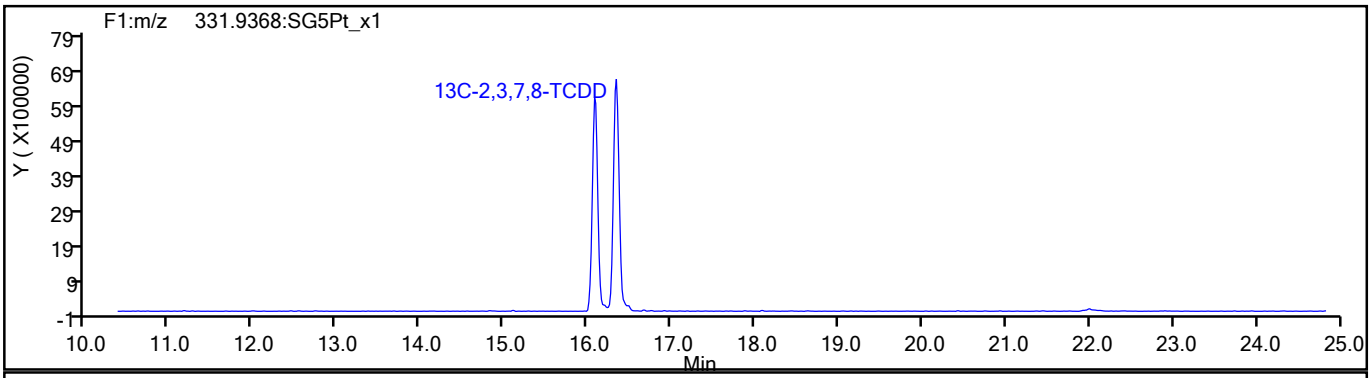

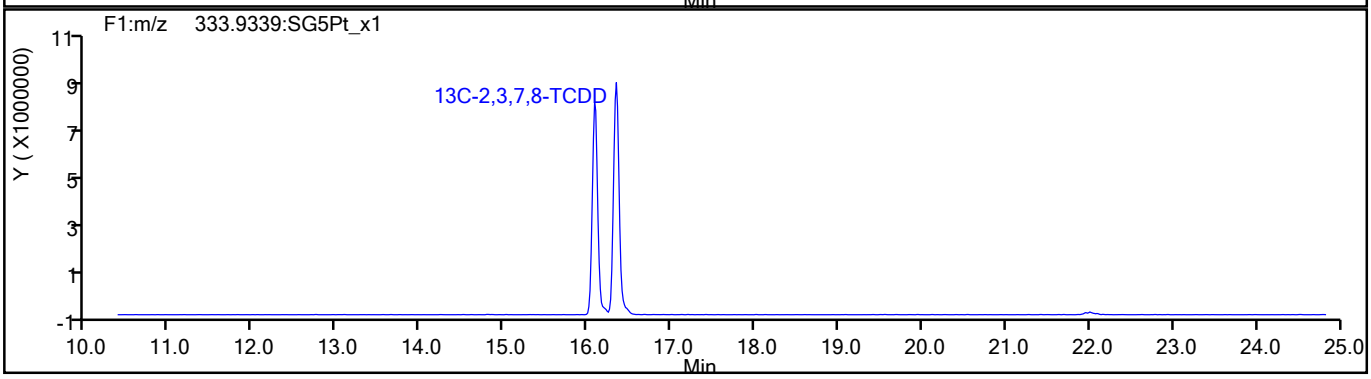

780381

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

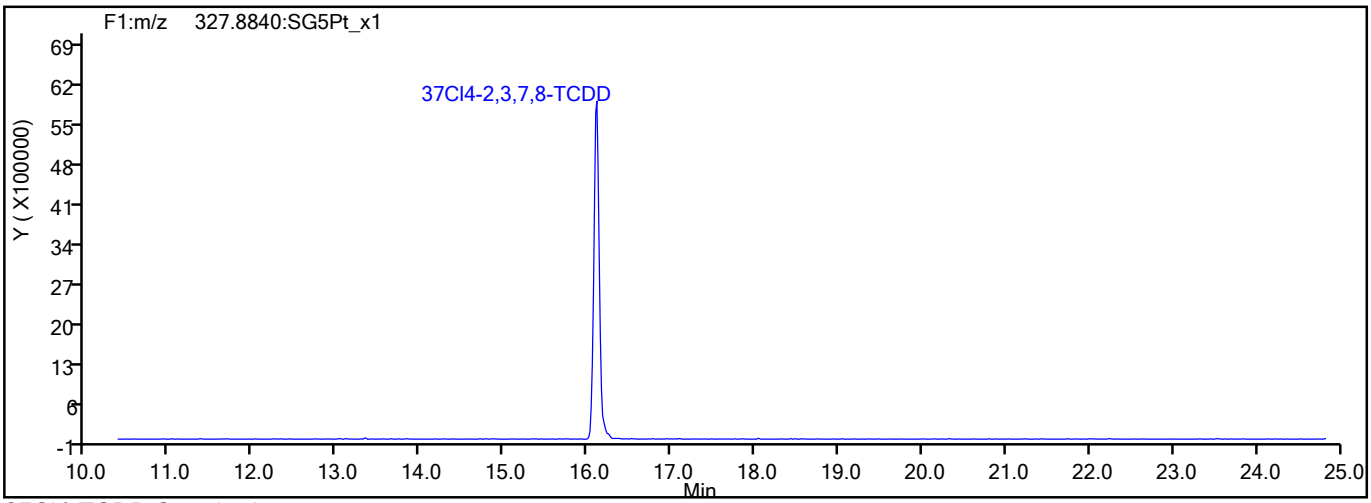

37Cl4-TCDD Standards

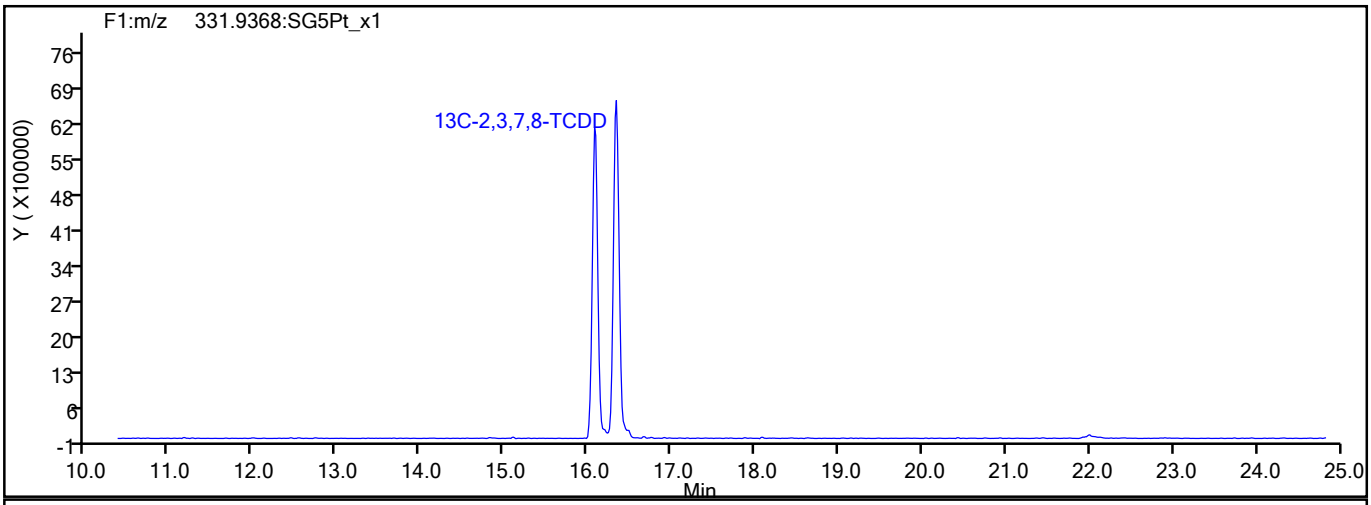

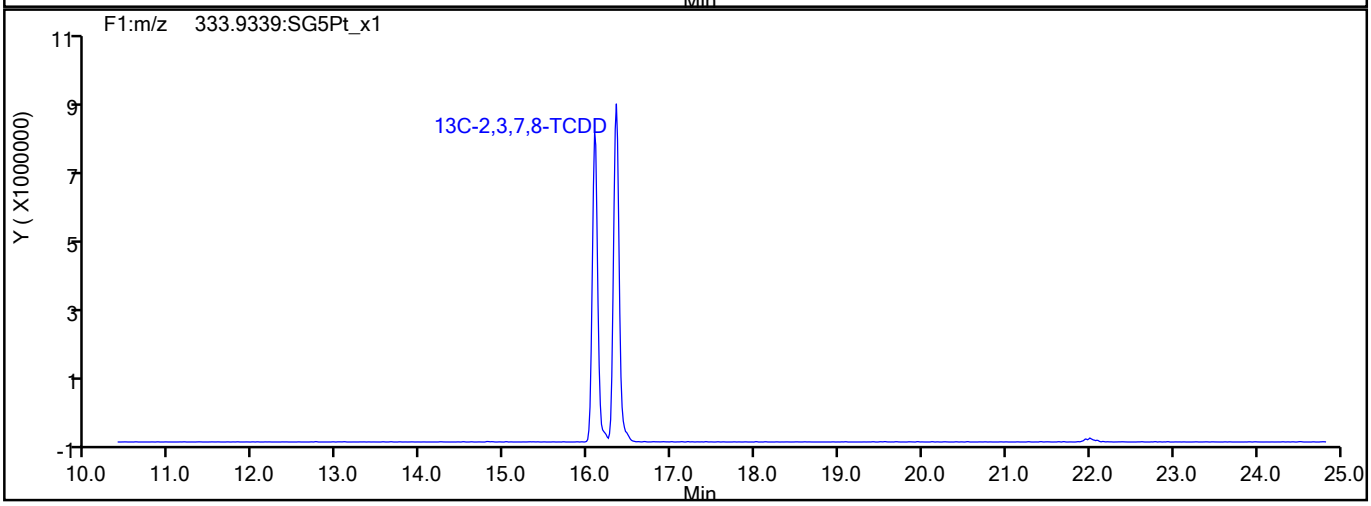

780382

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

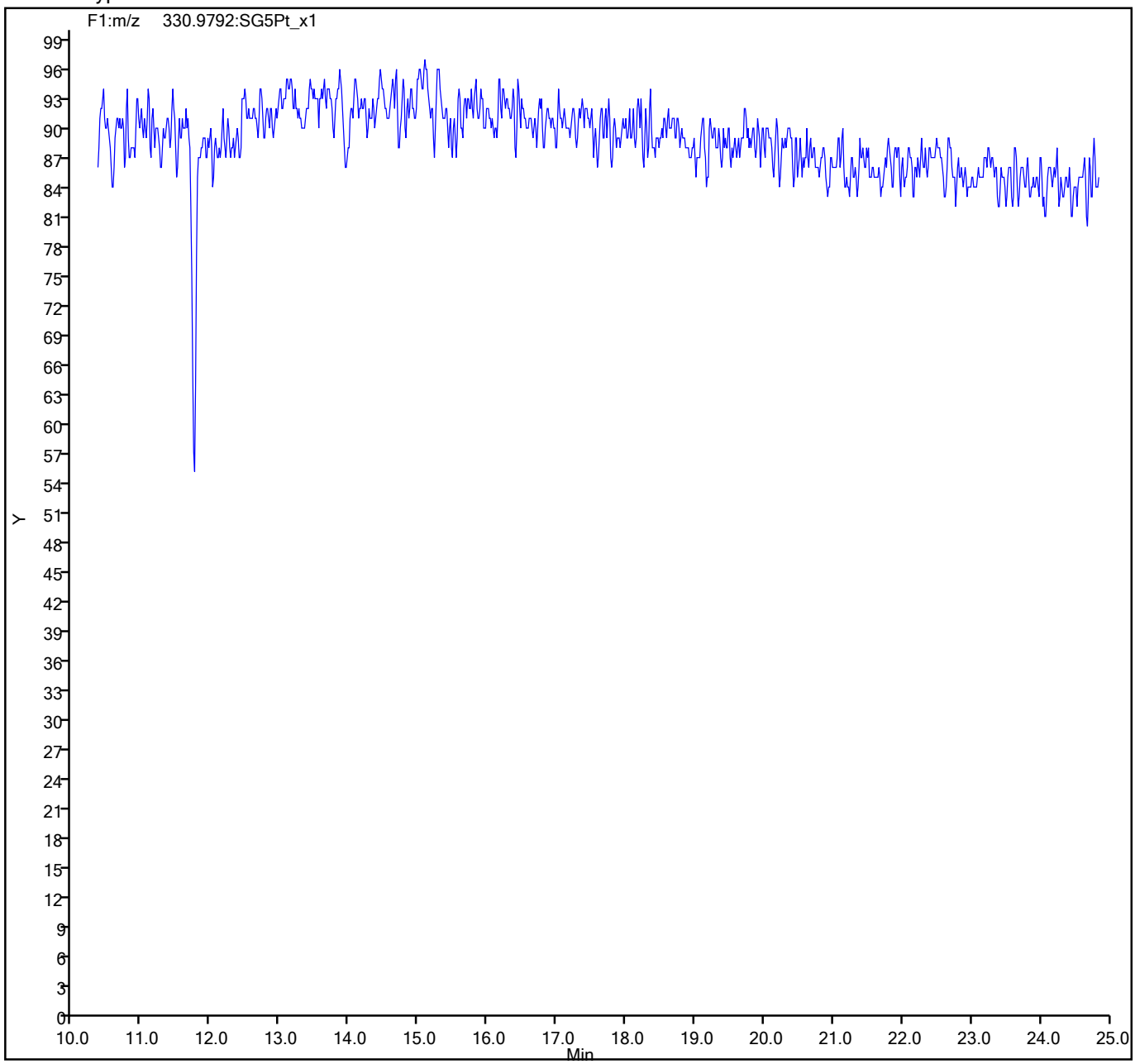

780383

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

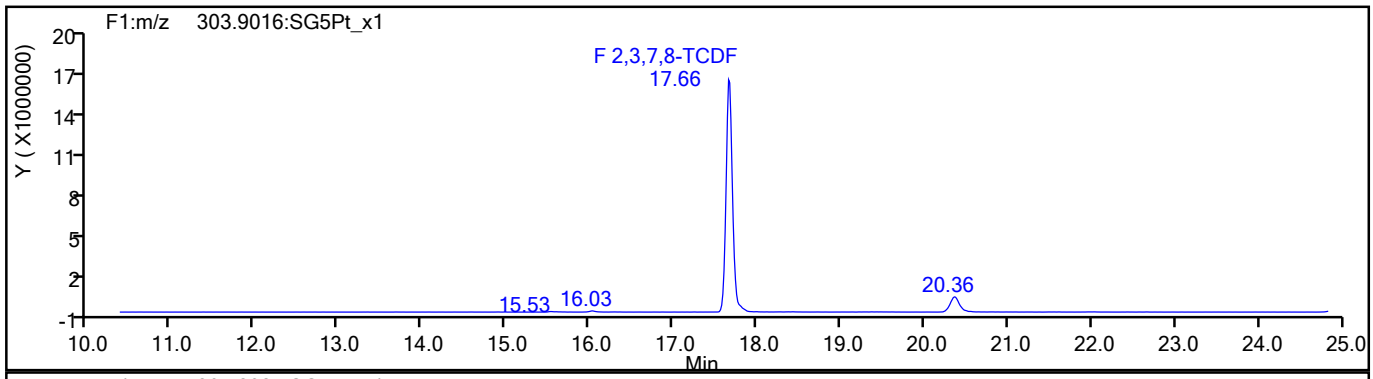

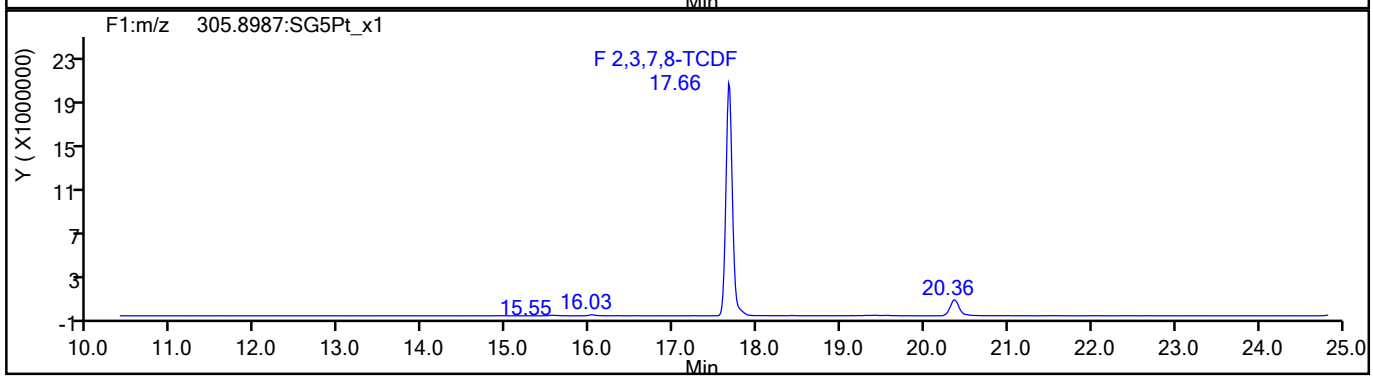

TCDF Standards

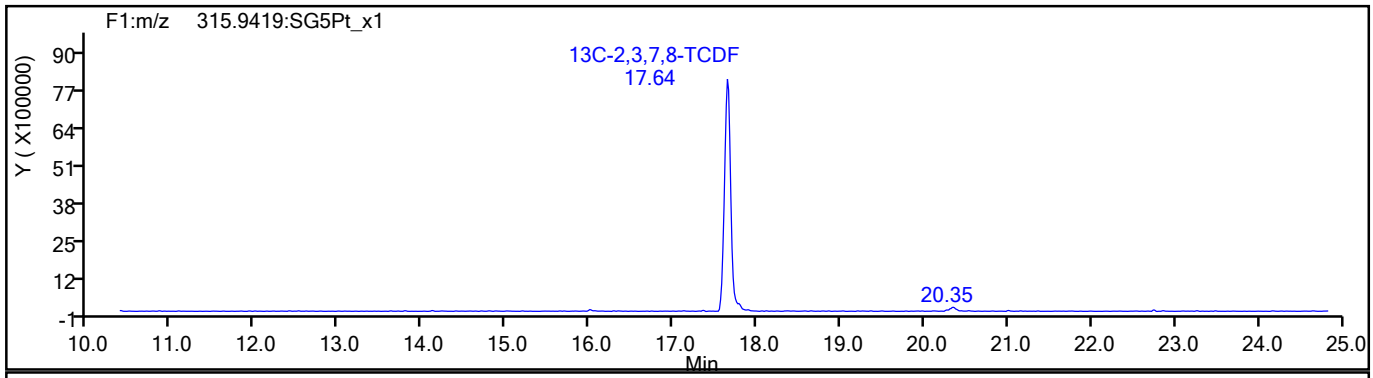

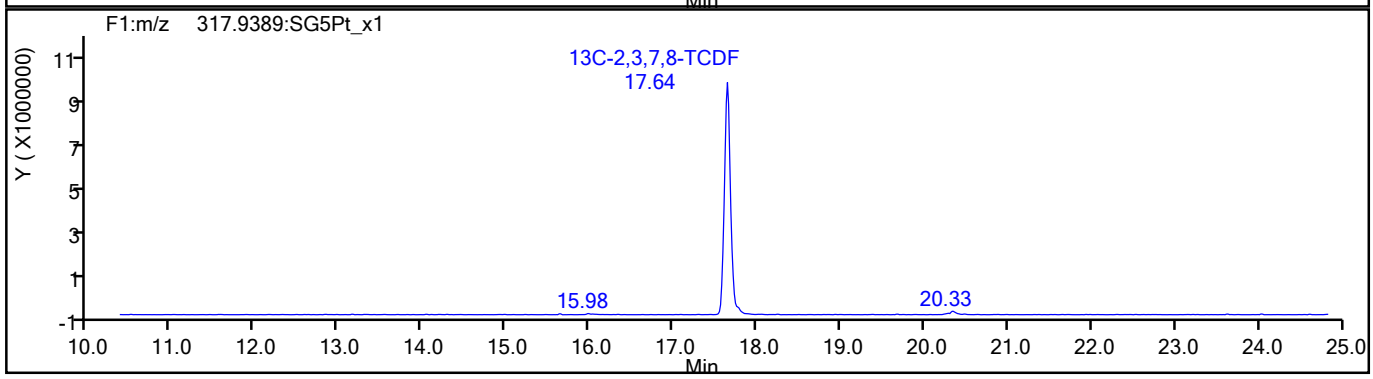

780386

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

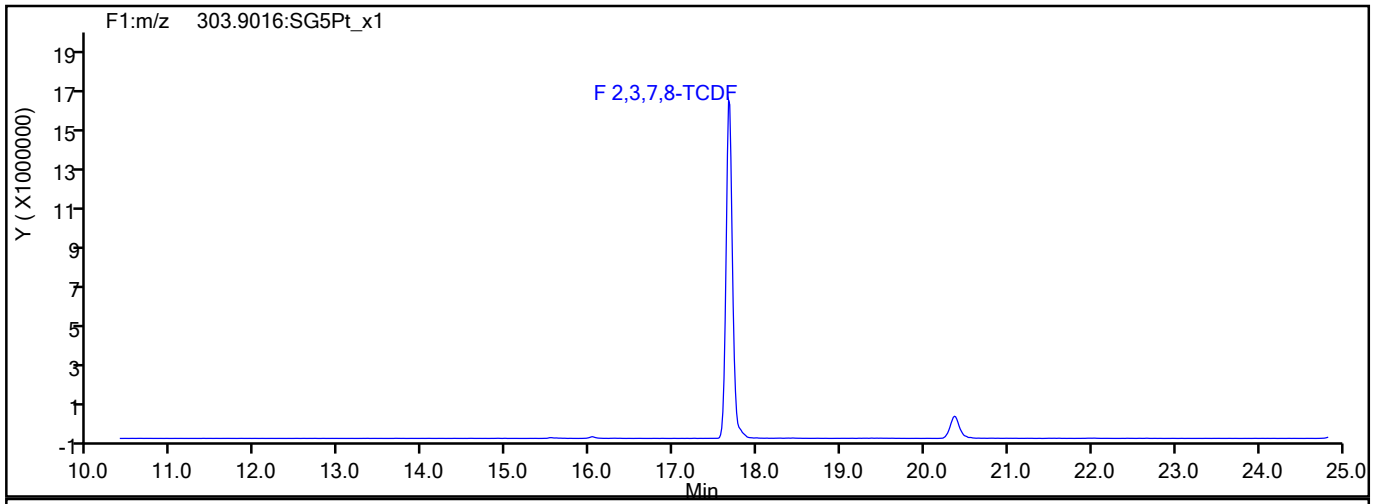

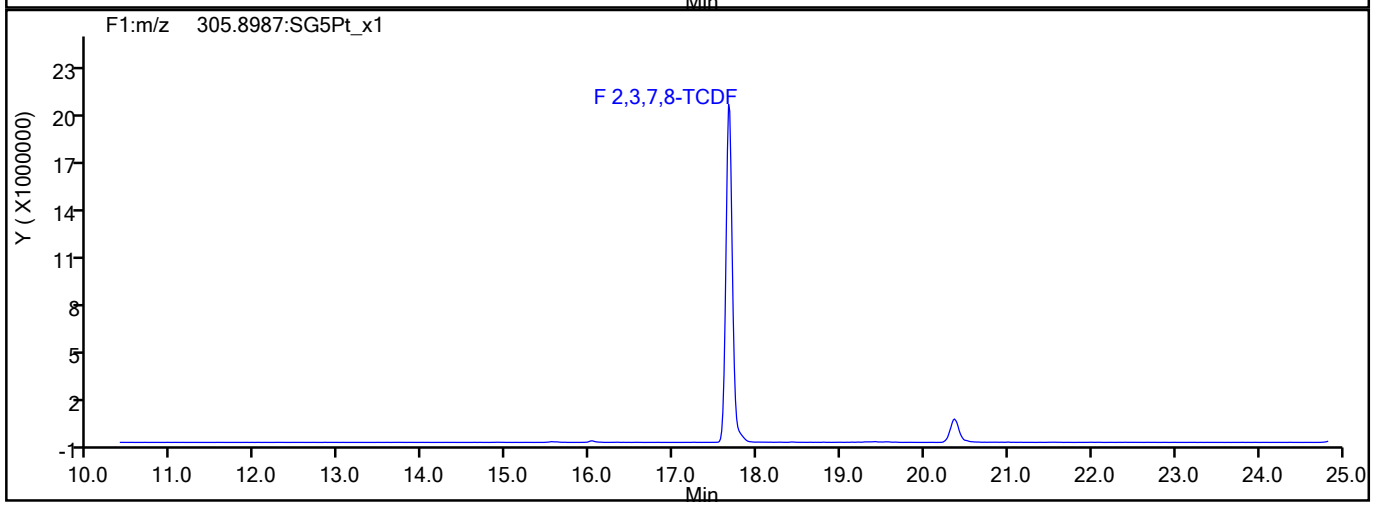

TCDF Interference Mass

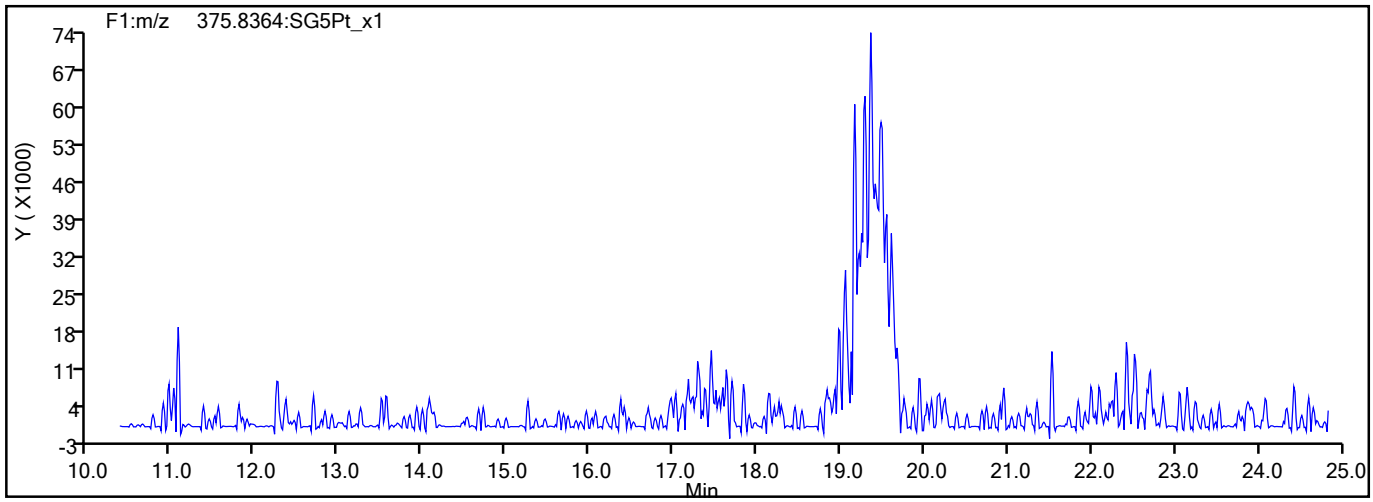

780387

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

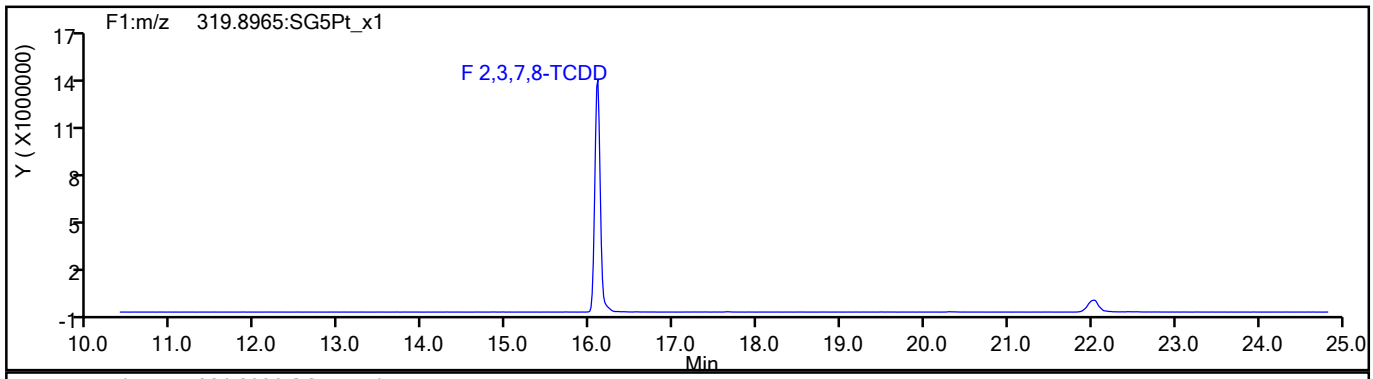

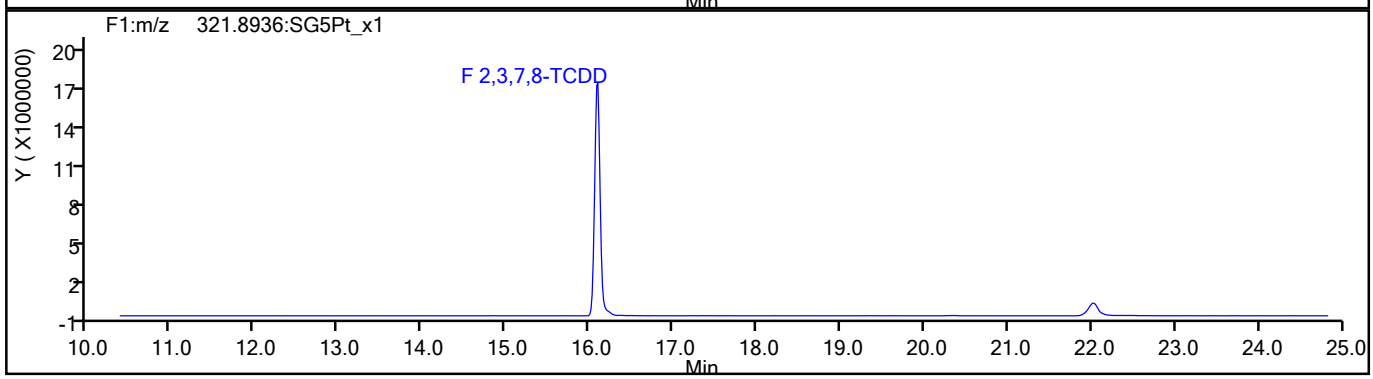

TCDD Standards

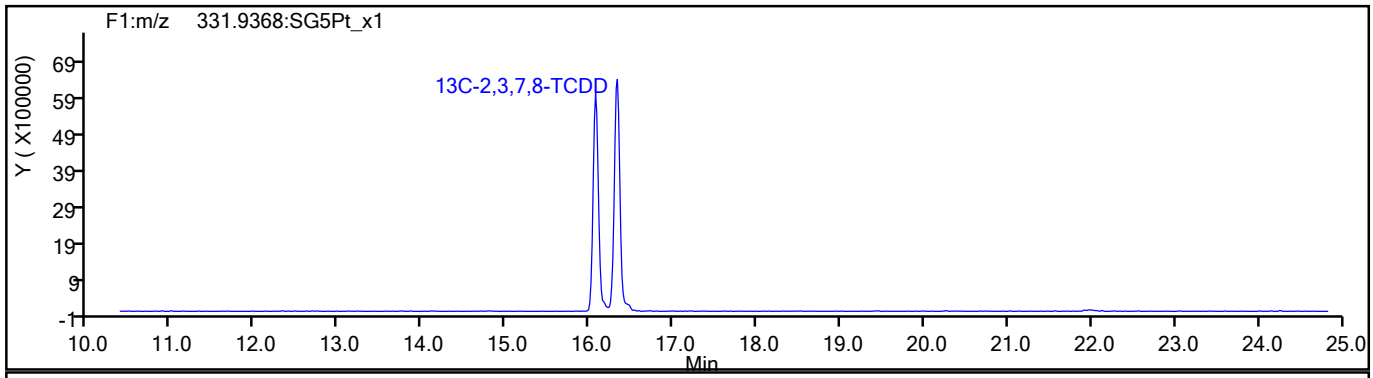

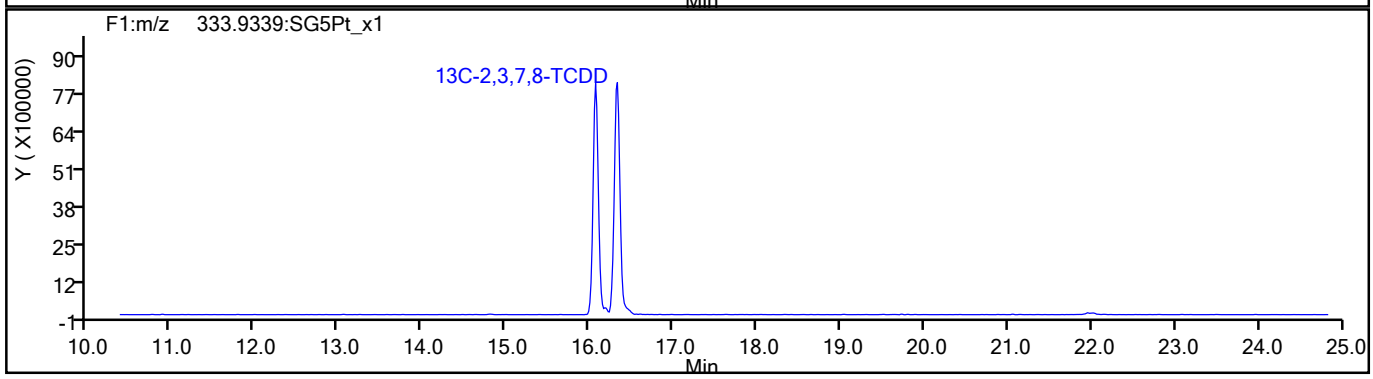

780388

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

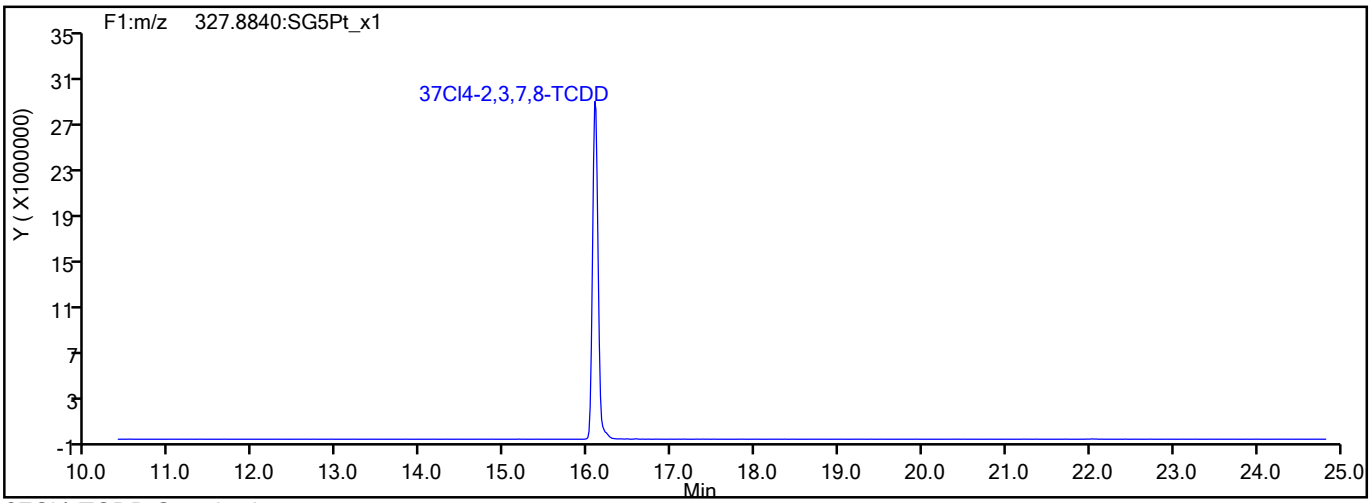

37Cl4-TCDD Standards

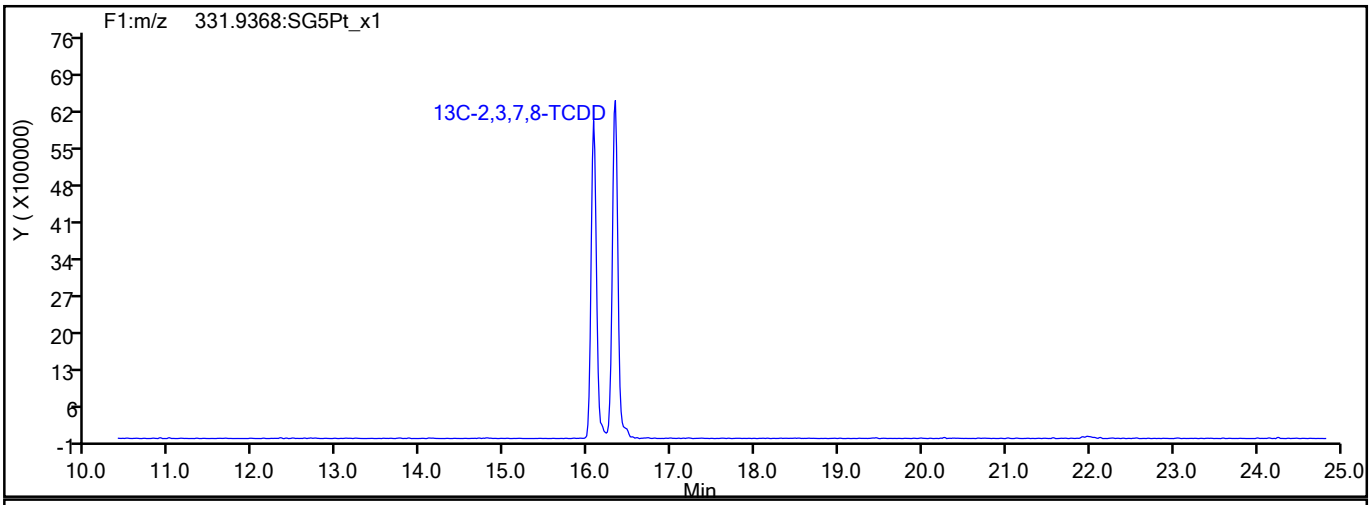

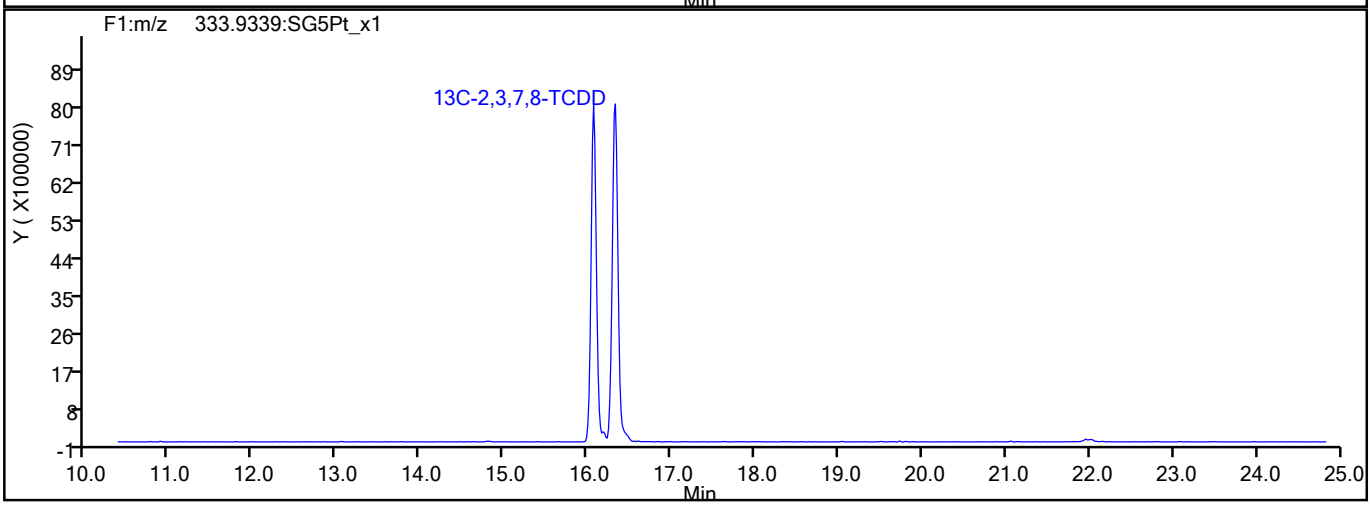

780389

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

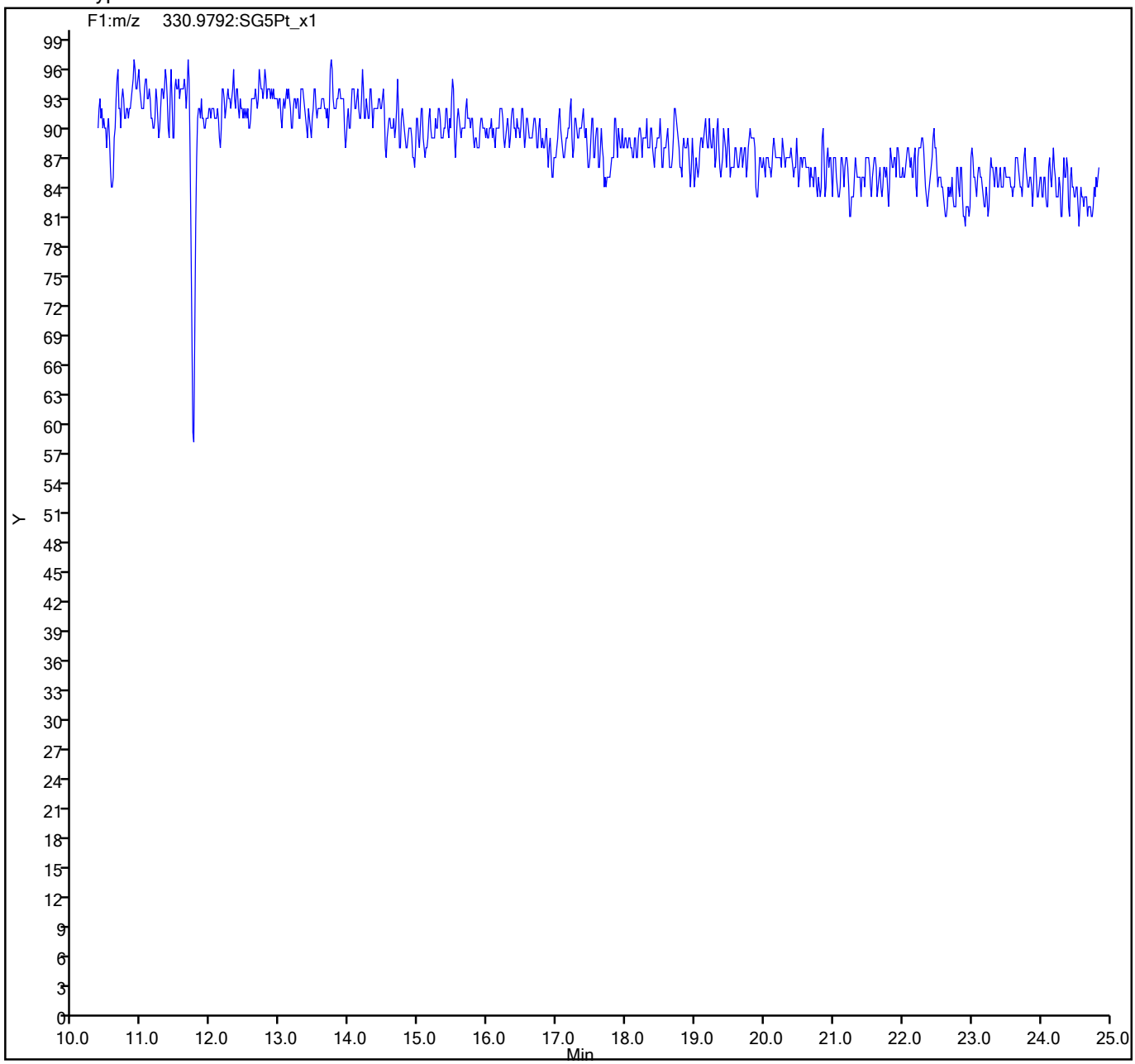

780390

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

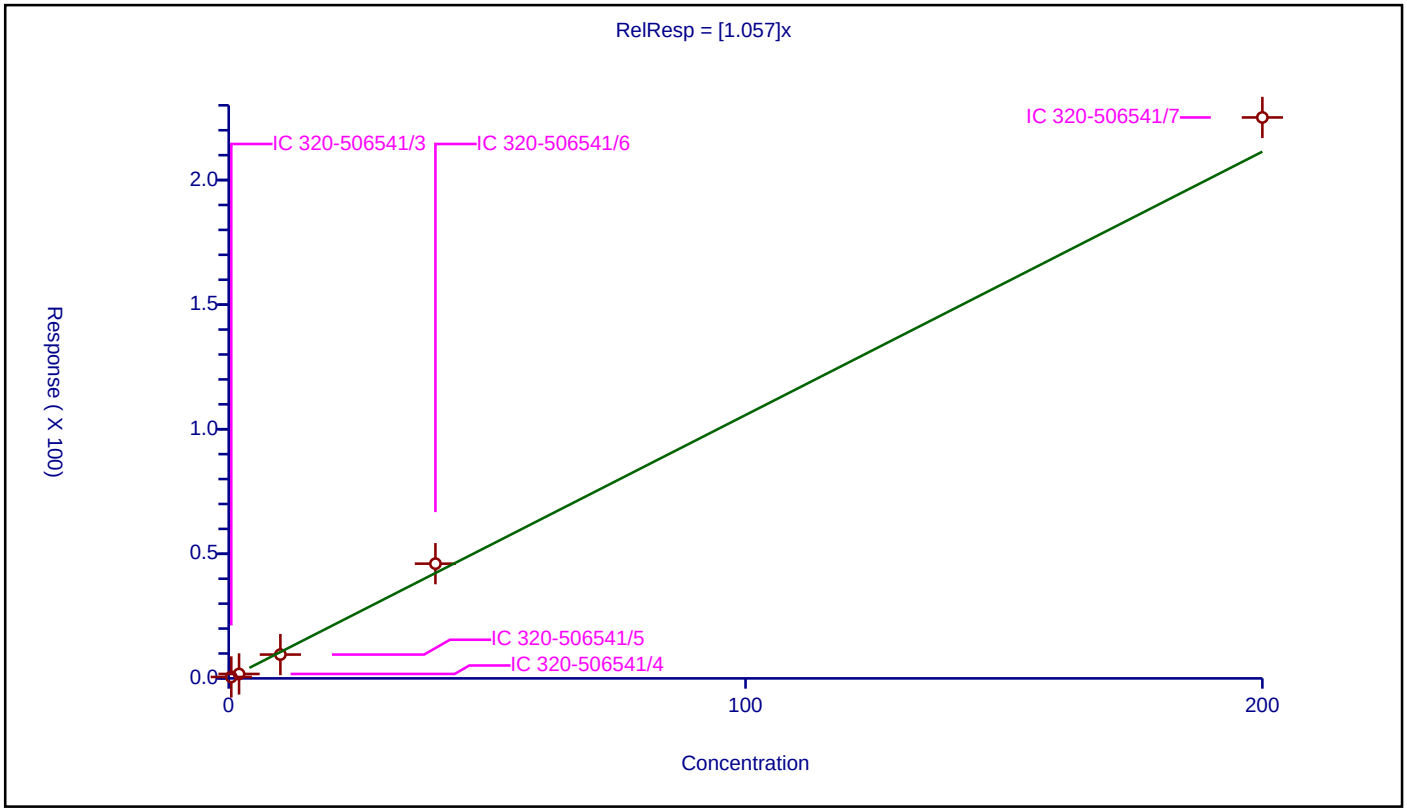

780391

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

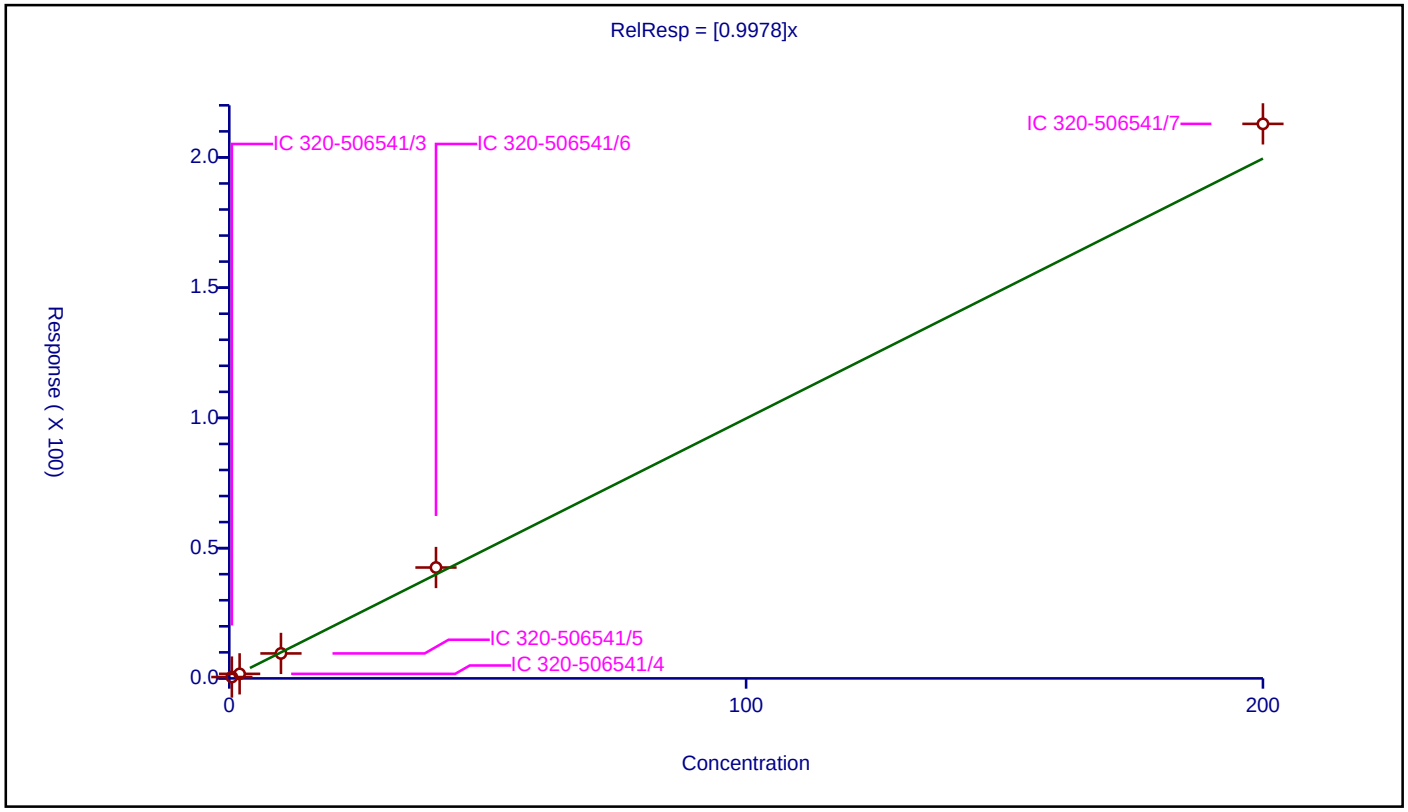

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

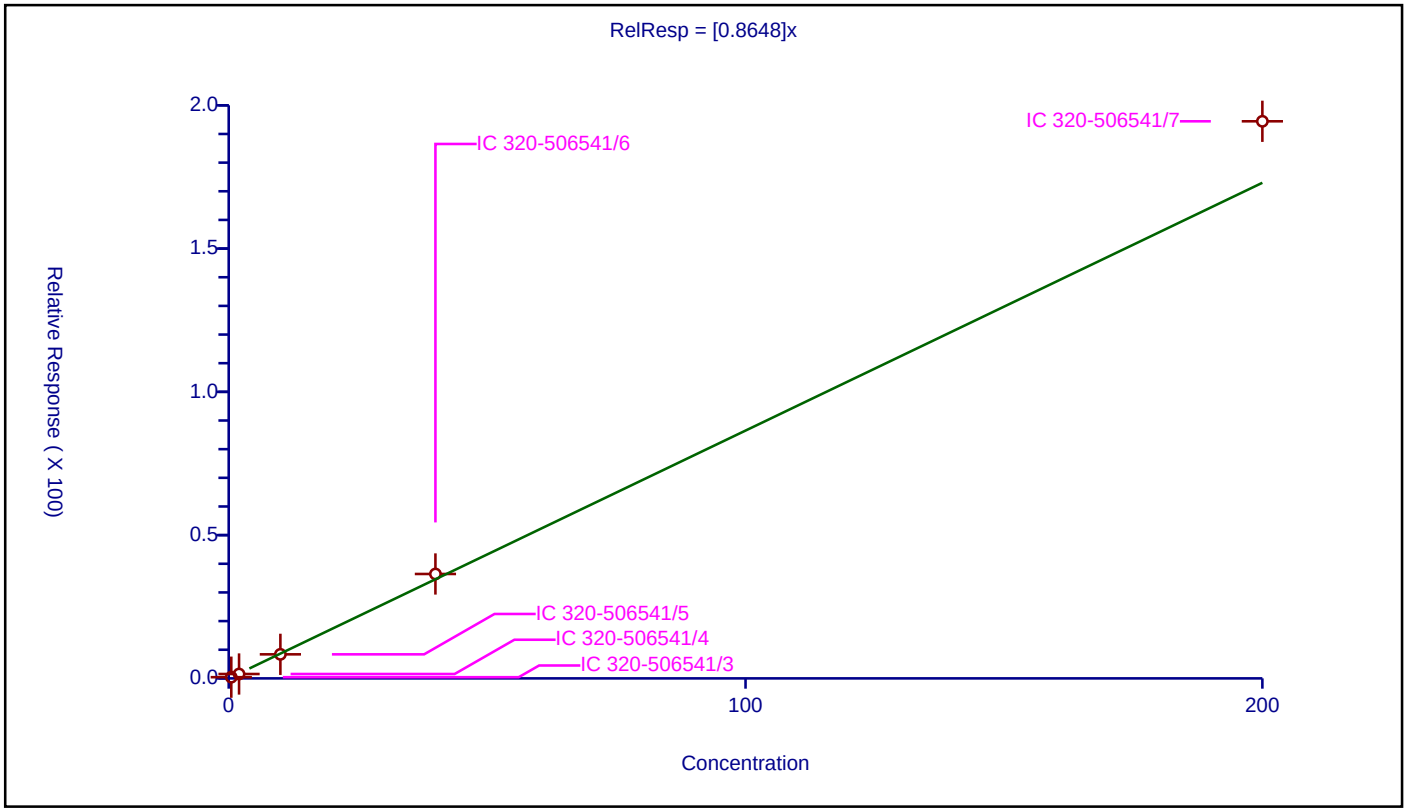

780393

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

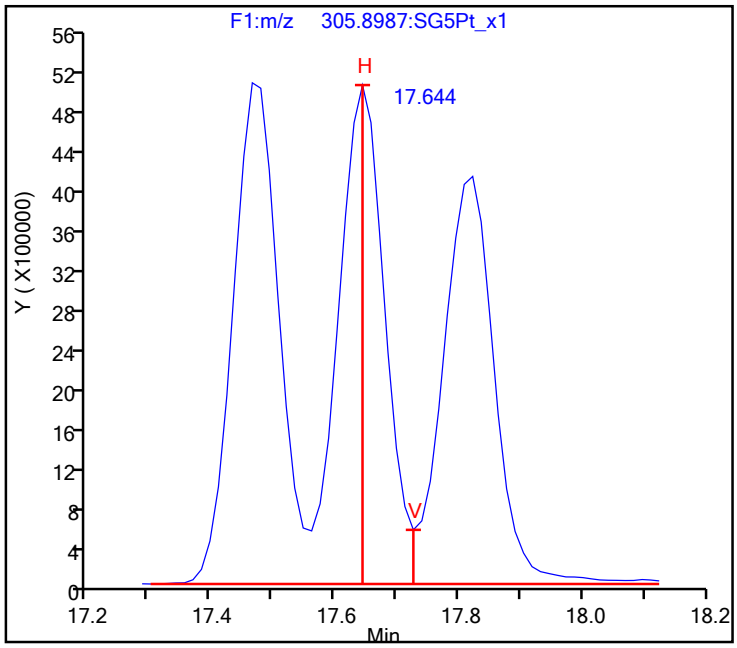

780395

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID (1): WDM 320-510264/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 07/26/2021 09:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.34	18

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d				
Injection Date:	26-Jul-2021 09:21:58	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 725696
H (Peak Height) = 4136533

%R = 18 <= 25
Passed

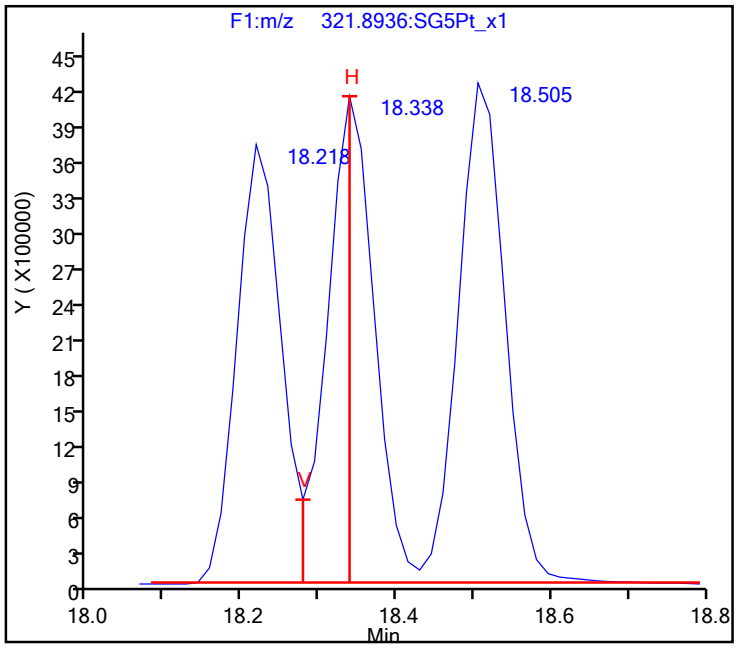

780397

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID (1): WDM 320-516836/2 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/14/2021 02:11

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.07	23

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d				
Injection Date:	14-Aug-2021 02:11:22	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	DB	ALS Bottle#:	1	Worklist Smp#:	2
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1558048
H (Peak Height) = 6795883

%R = 23 <= 25
Passed

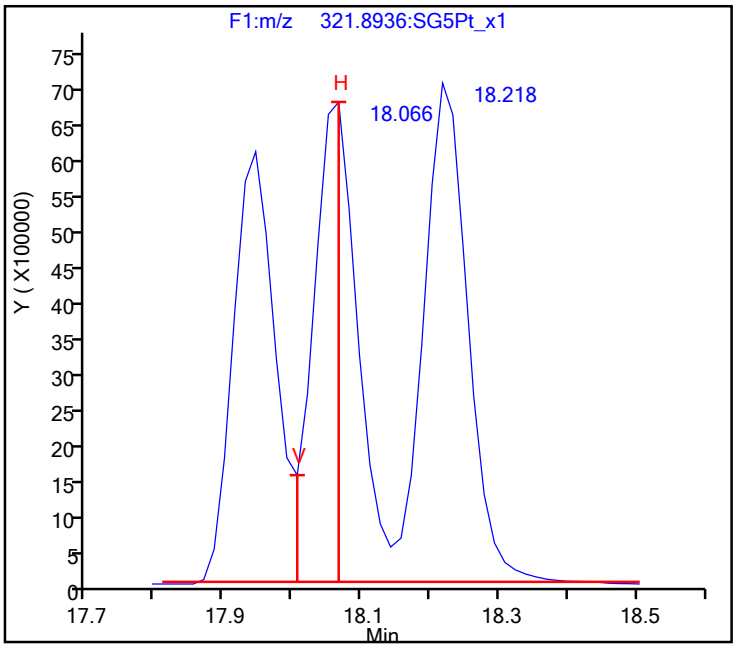

780399

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID (1): WDM 320-516846/16 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/14/2021 13:01

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.07	22

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d				
Injection Date:	14-Aug-2021 13:01:34	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	DB	ALS Bottle#:	1	Worklist Smp#:	16
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1403660
H (Peak Height) = 6293129

%R = 22 <= 25
Passed

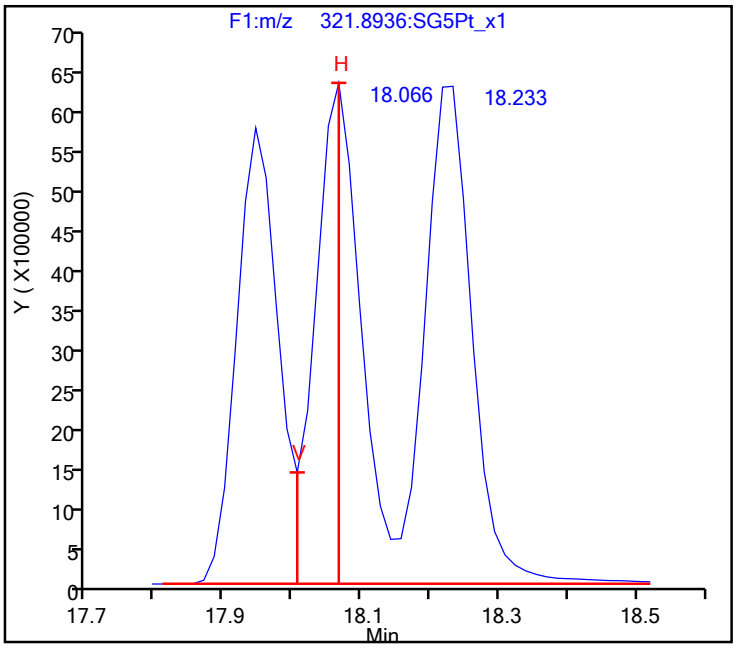

780401

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID (1): WDM 320-517241/2 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/18/2021 00:44

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.04	23

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d				
Injection Date:	18-Aug-2021 00:44:44	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	DB	ALS Bottle#:	1	Worklist Smp#:	2
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1116563
H (Peak Height) = 4804980

%R = 23 <= 25
Passed

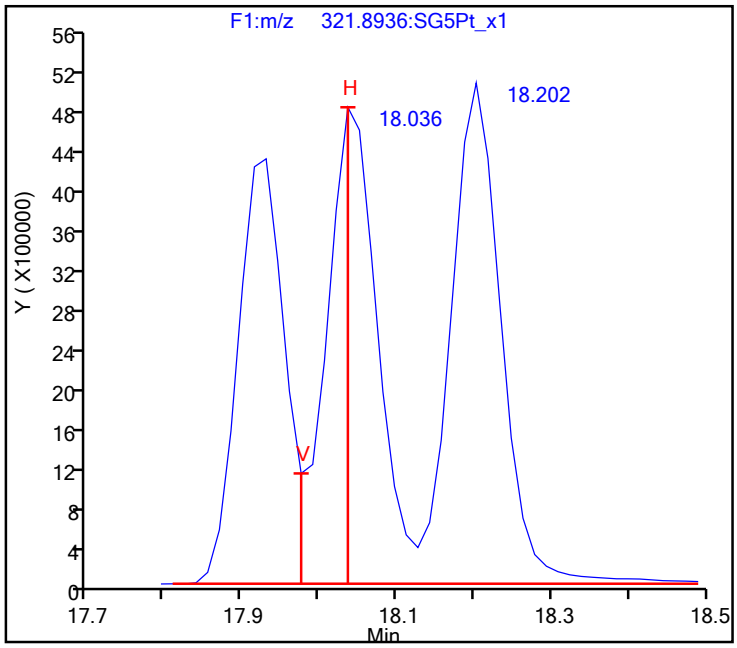

780403

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID (1): CPS 320-519540/2 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/24/2021 17:15

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.63	13

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_002.d				
Injection Date:	24-Aug-2021 17:15:17	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 538934
H (Peak Height) = 4306730

%R = 13 <= 25
Passed

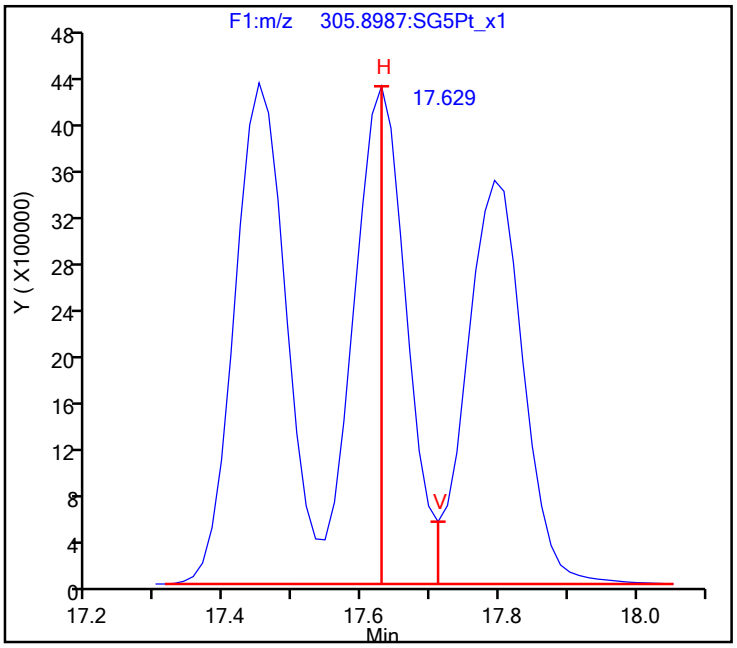

780405

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID (1): CPS 320-519744/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 12:59

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	14

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d				
Injection Date:	25-Aug-2021 12:59:07	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 447420
H (Peak Height) = 3303038

%R = 14 <= 25
Passed

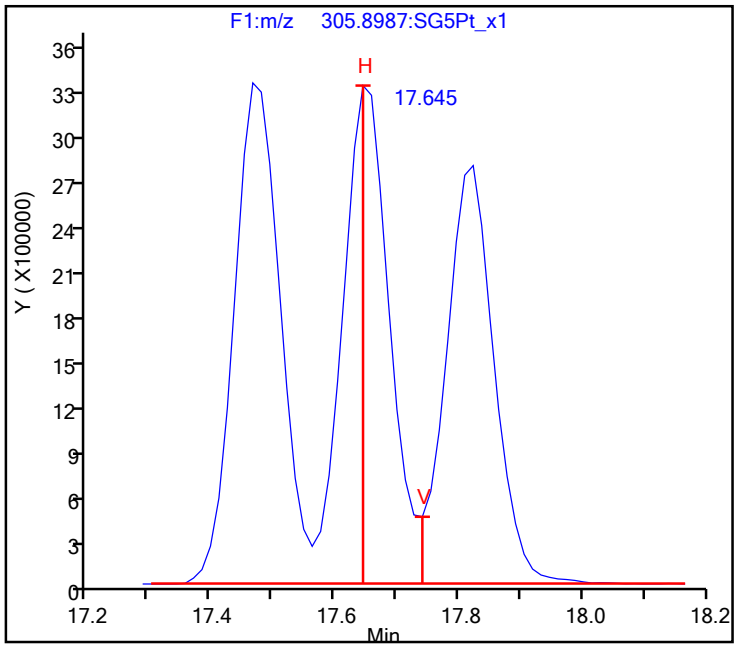

780407

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d				
Injection Date:	25-Aug-2021 12:59:07	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID: ICV 320-510264/9 Calibration Date: 07/26/2021 15:31

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 26JL2110D5_9.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.105		43.2	40.0	108	70-130
2,3,7,8-TCDD	AveID	1.254	1.380		44.0	40.0	110	70-130
1,2,3,7,8-PeCDF	AveID	1.061	1.081		204	200	102	70-130
2,3,4,7,8-PeCDF	AveID	1.018	1.151		226	200	113	70-130
1,2,3,7,8-PeCDD	AveID	1.048	1.044		199	200	100	70-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.128		208	200	104	70-130
1,2,3,6,7,8-HxCDF	AveID	1.126	1.227		218	200	109	70-130
2,3,4,6,7,8-HxCDF	AveID	1.168	1.283		220	200	110	70-130
1,2,3,4,7,8-HxCDD	AveID	1.064	1.151		216	200	108	70-130
1,2,3,6,7,8-HxCDD	AveID	1.000	1.082		216	200	108	70-130
1,2,3,7,8,9-HxCDD	AveID	1.133	1.182		209	200	104	70-130
1,2,3,7,8,9-HxCDF	AveID	1.166	1.200		206	200	103	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.576		219	200	109	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.167		213	200	107	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.373		209	200	104	70-130
OCDD	AveID	1.107	1.211		438	400	109	70-130
OCDF	AveID	1.438	1.574		438	400	109	70-130
13C-2,3,7,8-TCDF	Ave	1.625	1.611		99.2	100	99	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9123		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.236		102	100	102	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.300		105	100	105	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7764		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.089		101	100	101	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.093		96.9	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.036		97.4	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7216		98.4	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8697		98.8	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9447		97.6	100	98	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7492		96.9	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6354		98.2	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7065		101	100	101	77-129
13C-OCDD	Ave	0.4472	0.4464		200	200	100	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.177		42.5	40.0	106	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	55225241	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.598	88976883	0.79	1.6249	99.2	99.2	0.1479	0.1479	99.15	
2,3,7,8-TCDF	17.613	39324874	0.78	1.0239	43.2	43.2	0.0666	0.0666	108	
A Non-2,3,7,8-sub-TCDF	17.311	524958	0.77	1.0239	0.6411	0.5762	0.0666	0.3057		RQ
S Total TCDF					43.8	43.7	0.0666	0.0666		RQ
D 13C-2,3,7,8-TCDD	18.323	50383801	0.80	0.8993	101.4	101.4	0.1314	0.1314	101	
2,3,7,8-TCDD	18.338	27801852	0.78	1.2541	44.0	44.0	0.0443	0.0443	110	
$ 37Cl4-2,3,7,8-TCDD	18.338	26006351		1.1071	42.5	42.5	0.0388	0.0388	106	
A Non-2,3,7,8-sub-TCDD	17.772	551726	0.77	1.2541	0.8732	0.8732	0.0443	0.8732		
S Total TCDD					44.9	44.9	0.0443	0.0443		
D 13C-1,2,3,7,8-PeCDF	22.749	68252478	1.57	1.2101	102.1	102.1	0.2097	0.2097	102	
1,2,3,7,8-PeCDF	22.762	147560573	1.57	1.0611	203.7	203.7	0.7454	0.7454	102	
D 13C-2,3,4,7,8-PeCDF	24.126	71797373	1.60	1.2395	104.9	104.9	0.2047	0.2047	105	
2,3,4,7,8-PeCDF	24.153	165293469	1.59	1.0184	226.1	226.1	0.7930	0.7930	113	
A F1 PeCDFs	20.244						0.0162	0.0162		
A Non-2,3,7,8-sub-PeCDF	23.473	3443801	1.55	1.0398	4.730	4.730	0.7686	4.730		
S Total PeCDF					434.5	434.5	0.7692	0.7692		
D 13C-1,2,3,7,8-PeCDD	24.862	42878117	1.62	0.7612	102.0	102.0	0.1090	0.1090	102	
1,2,3,7,8-PeCDD	24.889	89555111	1.58	1.0484	199.2	199.2	0.2271	0.2271	99.61	
A Non-2,3,7,8-sub-PeCDD	23.744						0.2271	0.2271		
S Total PeCDD					199.2	199.2	0.2271	0.2271		
D 13C-1,2,3,4,7,8-HxCDF	30.836	62488487	0.52	1.0837	100.5	100.5	0.4386	0.4386	101	
1,2,3,4,7,8-HxCDF	30.849	141029922	1.22	1.0851	208.0	208.0	1.073	1.073	104	
D 13C-1,2,3,6,7,8-HxCDF	30.995	62719524	0.52	1.1279	96.9	96.9	0.4214	0.4214	96.91	
1,2,3,6,7,8-HxCDF	31.008	153925065	1.22	1.1260	218.0	218.0	1.035	1.035	109	
D 13C-2,3,4,6,7,8-HxCDF	31.754	59440166	0.52	1.0637	97.4	97.4	0.4468	0.4468	97.39	
2,3,4,6,7,8-HxCDF	31.767	152499923	1.22	1.1675	219.7	219.7	0.8510	0.8510	110	
D 13C-1,2,3,7,8,9-HxCDF	32.513	54205090	0.51	0.9676	97.6	97.6	0.4912	0.4912	97.64	
1,2,3,7,8,9-HxCDF	32.526	130040433	1.23	1.1664	205.7	205.7	0.8755	0.8755	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
A Non-2,3,7,8-sub-HxCDF	30.542						0.9509	0.9509		
S Total HxCDF					851.4	851.4	0.9587	0.9587		
* 13C-1,2,3,7,8,9-HxCDD	32.340	57376962	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	41405543	1.26	0.7334	98.4	98.4	0.3599	0.3599	98.39	
1,2,3,4,7,8-HxCDD	31.940	95311816	1.31	1.0640	216.3	216.3	0.7396	0.7396	108	
D 13C-1,2,3,6,7,8-HxCDD	32.020	49899921	1.25	0.8802	98.8	98.8	0.2999	0.2999	98.81	
1,2,3,6,7,8-HxCDD	32.034	107959577	1.21	1.0001	216.3	216.3	0.7456	0.7456	108	
1,2,3,7,8,9-HxCDD	32.340	107964188	1.26	1.1325	208.8	208.8	0.6762	0.6762	104	
A Non-2,3,7,8-sub-HxCDD	31.215						0.7187	0.7187		
S Total HxCDD					641.5	641.5	0.7205	0.7205		
1,2,3,4,6,7,8-HpCDF	33.912	135529943	1.05	1.4413	218.8	218.8	2.088	2.088	109	
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	42985413	0.44	0.7730	96.9	96.9	0.9749	0.9749	96.91	
D 13C-1,2,3,4,7,8,9-HpCDF	35.006	40537577	0.44	0.7008	100.8	100.8	1.075	1.075	101	
1,2,3,4,7,8,9-HpCDF	35.018	111348980	1.06	1.3174	208.5	208.5	2.580	2.580	104	
A Non-2,3,7,8-sub-HpCDF	34.458						2.314	2.314		
S Total HpCDF					427.3	427.3	2.334	2.334		
D 13C-1,2,3,4,6,7,8-HpCDD	34.702	36455330	1.02	0.6472	98.2	98.2	0.5132	0.5132	98.17	
1,2,3,4,6,7,8-HpCDD	34.714	85115851	1.05	1.0943	213.4	213.4	1.044	1.044	107	
A Non-2,3,7,8-sub-HpCDD	33.504						1.044	1.044		
S Total HpCDD					213.4	213.4	1.044	1.044		
D 13C-OCDD	37.082	51228940	0.89	0.4472	199.7	199.7	0.2232	0.2232	99.84	
OCDF	37.189	161294219	0.91	1.4382	437.9	437.9	0.4409	0.4409	109	
OCDD	37.094	124067491	0.90	1.1070	437.5	437.5	0.5859	0.5859	109	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.127	18.142	-1		24811260	6334063	3297	8242	1921		
333.9339	18.127	18.142	-1		30413981	7612051	3296	8240	2309	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	0.971	39276583	9941961	7868	19670	1264		
317.9389	17.598	17.598	0	0.971	49700300	12596795	5536	13840	2275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.613	17.628	-1	1.001	17265923	4373947	2358	5895	1855		
305.8987	17.613	17.628	-1	1.001	22058951	5573170	3788	9470	1471	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.933	17.311	-23	0.962	161517	37808	2358	5895	16		
	Empc Correction				121157	34090	2358	5895	14		
305.8987	16.933	17.311	-23	0.962	157347	44274	3788	9470	12	1.03(0.65-0.89)	
303.9016	17.235	17.311	-5	0.979	125955	28258	2358	5895	12		
	Empc Correction				107214	28155	2358	5895	12		
305.8987	17.220	17.311	-5	0.979	139240	36566	3788	9470	10	0.90(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.011	22418240	5434734	3297	8242	1648		
333.9339	18.323	18.323	0	1.011	27965561	6697610	3296	8240	2032	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.338	0	1.001	12170563	2933733	1303	3257	2252		
321.8936	18.338	18.338	0	1.001	15631289	3775919	1394	3485	2709	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.012	26006351	6295077	2398	5995	2625		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											
319.8965	18.233	17.772	28	0.995	239239	60004	1303	3257	46		
321.8936	18.233	17.772	28	0.995	312487	80578	1394	3485	58	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.749	0	1.255	41668599	7333690	8485	21212	864		
353.8970	22.749	22.749	0	1.255	26583879	4652625	5670	14175	821	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.762	22.776	-1	1.001	90206138	15696498	23147	57867	678		
341.8567	22.762	22.776	-1	1.001	57354435	10012296	14777	36942	678	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.126	0	1.331	44217600	7271382	8485	21212	857		
353.8970	24.126	24.126	0	1.331	27579773	4468756	5670	14175	788	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.153	0	1.001	101392394	16526277	23147	57867	714		
341.8567	24.153	24.153	0	1.001	63901075	10428415	14777	36942	706	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.244						338	845			
341.8567	20.244						462	1155			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.308	23.473	-10	1.025	2092429	352488	23147	57867	15		
341.8567	23.308	23.473	-10	1.025	1351372	223195	14777	36942	15	1.55(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.862	0	1.372	26514155	4045355	2631	6577	1538		
369.8919	24.862	24.862	0	1.372	16363962	2537743	2000	5000	1269	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.889	0	1.001	54803563	8416527	3860	9650	2180		
357.8516	24.889	24.889	0	1.001	34751548	5423049	2410	6025	2250	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.744						3860	9650			
357.8516	23.744						2410	6025			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.836	30.835	0	0.953	21423741	4602993	10138	25345	454		
385.8610	30.836	30.835	0	0.953	41064746	8805011	18904	47260	466	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.862	-1	1.000	77446041	17056861	34028	85070	501		
375.8178	30.849	30.862	-1	1.000	63583881	14029731	28421	71052	494	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.008	-1	0.958	21527343	4645676	10138	25345	458		
385.8610	30.995	31.008	-1	0.958	41192181	8744916	18904	47260	463	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.008	31.021	-1	1.000	84458486	18178004	34028	85070	534		
375.8178	31.008	31.021	-1	1.000	69466579	15063201	28421	71052	530	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.754	0	0.982	20418672	5425134	10138	25345	535		
385.8610	31.754	31.754	0	0.982	39021494	10287607	18904	47260	544	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.767	0	1.000	83657687	22340712	34028	85070	657		
375.8178	31.767	31.767	0	1.000	68842236	18269489	28421	71052	643	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.513	32.526	-1	1.005	18351639	5227320	10138	25345	516		
385.8610	32.513	32.526	-1	1.005	35853451	10061715	18904	47260	532	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.539	-1	1.000	71665418	20282625	34028	85070	596		
375.8178	32.526	32.539	-1	1.000	58375015	16239209	28421	71052	571	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.542						34028	85070			
375.8178	30.542						28421	71052			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.340	32.339	0		32156760	8544429	8352	20880	1023		
403.8529	32.326	32.339	-1		25220202	6731682	7778	19445	865	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.927	0	0.987	23052563	6987052	8352	20880	837		
403.8529	31.927	31.927	0	0.987	18352980	5468630	7778	19445	703	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.940	0	1.000	54057818	15589077	22398	55995	696		
391.8127	31.940	31.940	0	1.000	41253998	12285721	16811	42027	731	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.020	32.033	-1	0.990	27736555	7273068	8352	20880	871		
403.8529	32.020	32.033	-1	0.990	22163366	5871752	7778	19445	755	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.034	32.047	-1	1.000	59116629	16185483	22398	55995	723		
391.8127	32.034	32.047	-1	1.000	48842948	13061351	16811	42027	777	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.340	32.353	-1	1.013	60106510	15800454	22398	55995	705		
391.8127	32.340	32.353	-1	1.013	47857678	12979231	16811	42027	772	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	31.215						22398	55995			
391.8127	31.215						16811	42027			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.912	33.911	0	1.000	69518297	21985720	82461	206152	267		
409.7789	33.912	33.911	0	1.000	66011646	21358881	78734	196835	271	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.912	0	1.049	13138473	4149229	14216	35540	292		
419.8220	33.900	33.912	-1	1.048	29846940	9243997	31835	79587	290	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.006	35.005	0	1.082	12375038	3705586	14216	35540	261		
419.8220	35.006	35.005	0	1.082	28162539	8151296	31835	79587	256	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.018	35.005	1	1.000	57298984	16523888	82461	206152	200		
409.7789	35.006	35.005	0	1.000	54049996	15559126	78734	196835	198	1.06(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						82461	206152			
409.7789	34.458						78734	196835			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.702	34.714	-1	1.073	18400619	5331850	10315	25787	517		
437.8140	34.702	34.714	-1	1.073	18054711	5313047	9982	24955	532	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.714	0	1.000	43603241	12970820	24860	62150	522		
425.7737	34.714	34.714	0	1.000	41512610	12528364	23796	59490	526	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						24860	62150			
425.7737	33.504						23796	59490			
13C-OCDD											
469.7779	37.082	37.093	-1	1.147	24118371	6015882	2552	6380	2357		
471.7750	37.082	37.093	-1	1.147	27110569	6692443	3547	8867	1887	0.89(0.76-1.02)	
OCDF											
441.7428	37.189	37.201	-1	1.003	76746145	20468133	7616	19040	2688		
443.7399	37.189	37.201	-1	1.003	84548074	22394214	8501	21252	2634	0.91(0.76-1.02)	
OCDD											
457.7377	37.094	37.105	-1	1.000	58682484	14688537	7599	18997	1933		
459.7348	37.094	37.105	-1	1.000	65385007	16510536	8885	22212	1858	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	88976883	22538756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	88976883	22538756

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.933	161517	37808	157347	44274	0.3500	1.03	RQ
16.933	121157	34090	157347	44274	0.3057		Empc Correction
17.235	125955	28258	139240	36566	0.2911	0.90	RnQ
17.235	107214	28155	139240	36566	0.2705		Empc Correction
Signal Totals:							
	228371	62245	296587	80840			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	584059	146906				0.97	RQ
	524958	143085					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6411 = (584059 * 100.000) / (88976883 * 1.024)
Empc Amount: 0.5762 = (524958 * 100.000) / (88976883 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50383801	12132344

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50383801	12132344

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.233	239239	60004	312487	80578	0.8732	0.77	
Signal Totals:							
	239239	60004	312487	80578			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	551726	140582				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8732 = (551726 * 100.000) / (50383801 * 1.254)

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68252478	11986315
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71797373	11740138

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70024925	11863226

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
23.308	2092429	352488	1351372	223195	4.73	1.55	
Signal Totals:							
	2092429	352488	1351372	223195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3443801	575683				1.55	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.730 = (3443801 * 100.000) / (70024925 * 1.040)

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

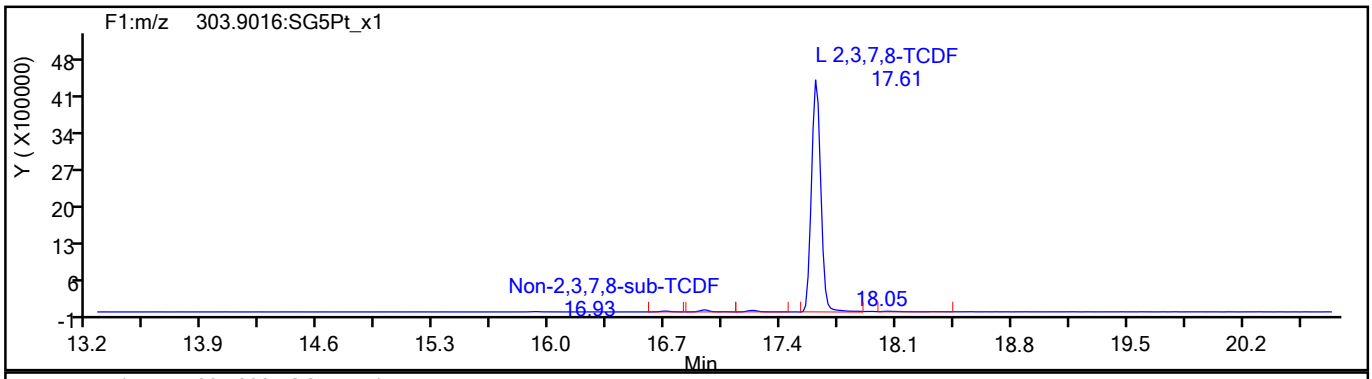

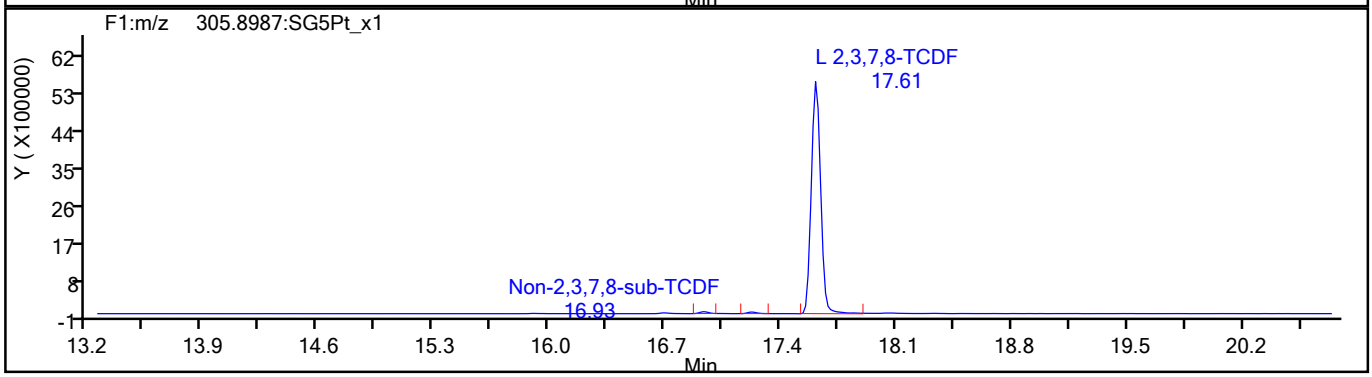

TCDF Standards

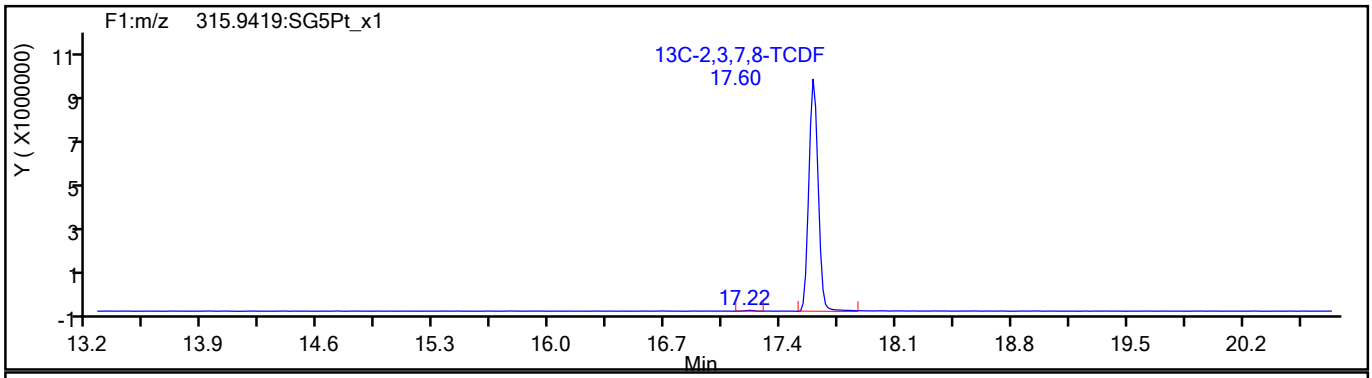

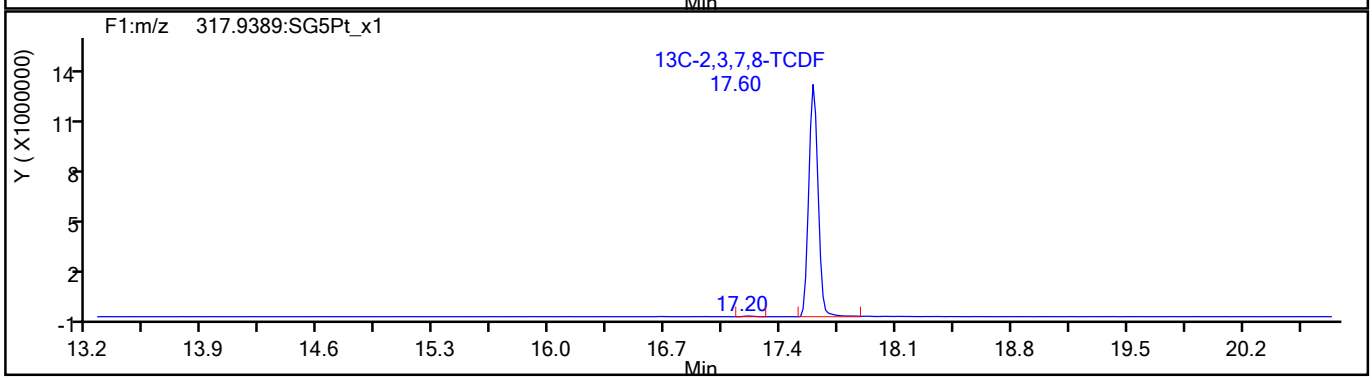

780419

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

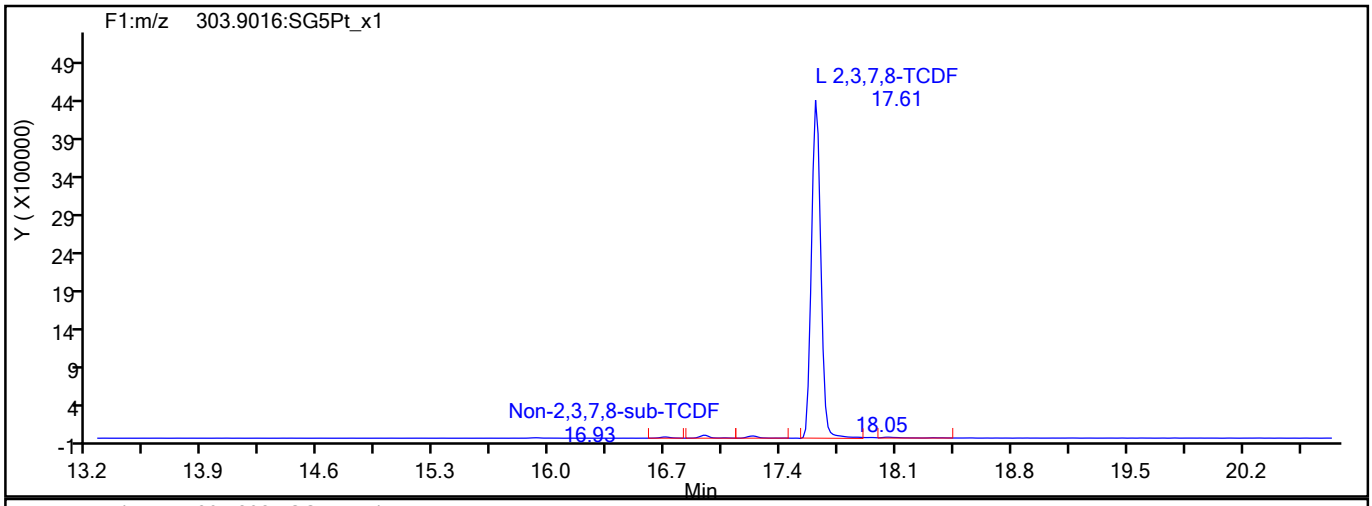

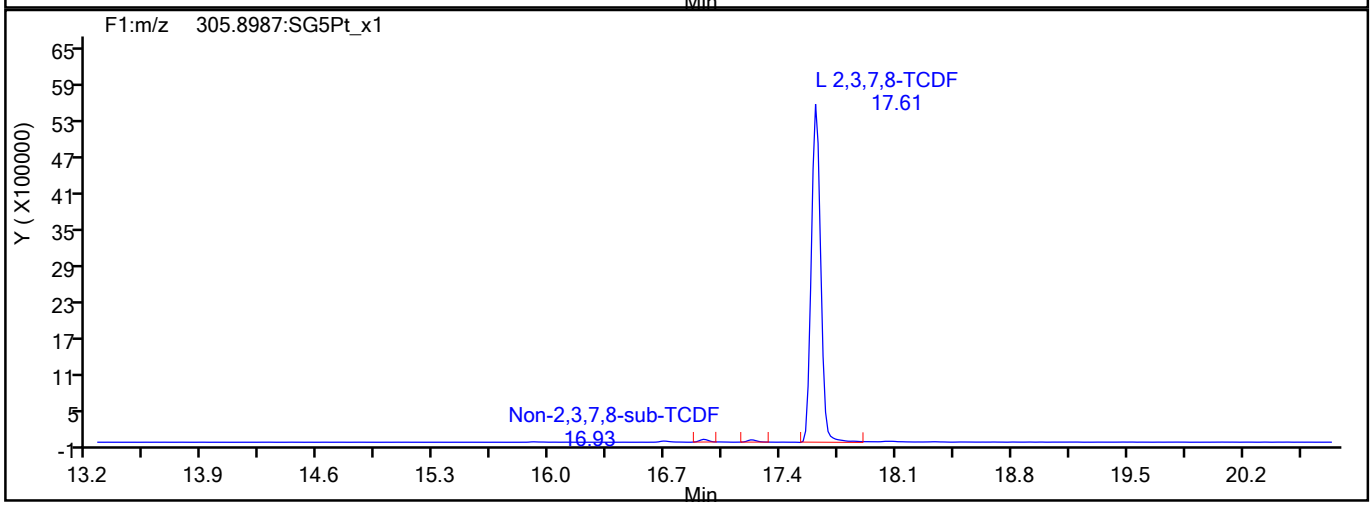

TCDF Interference Mass

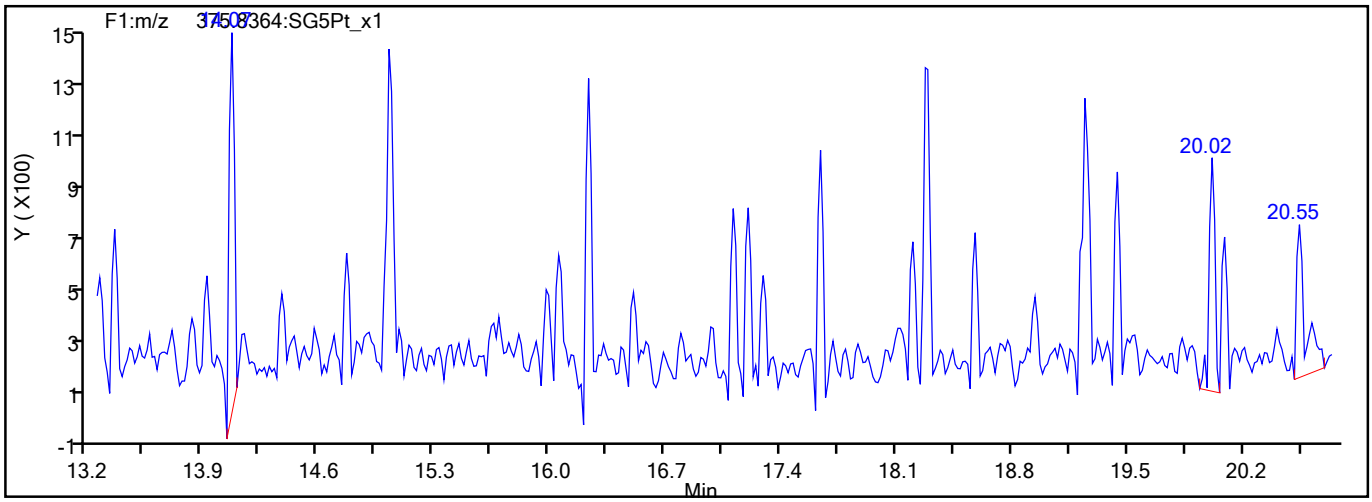

780420

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

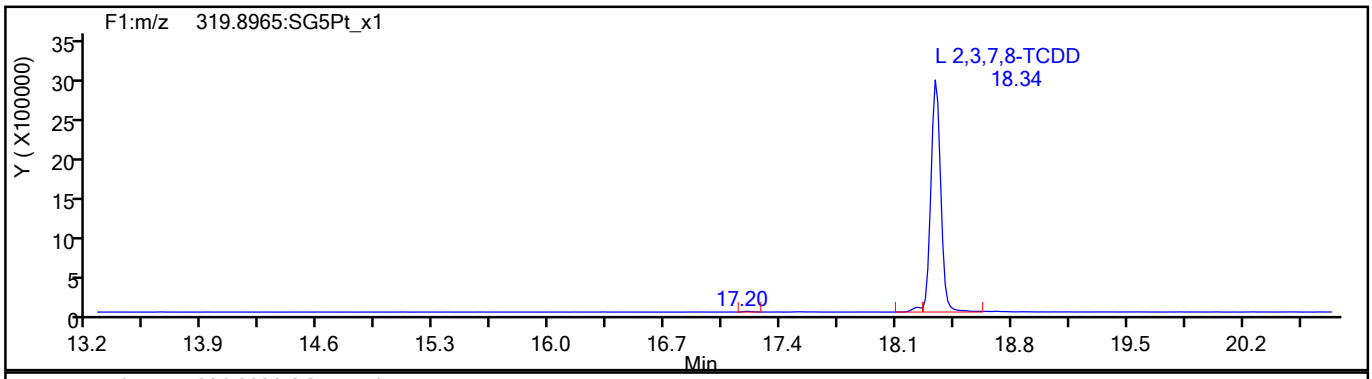

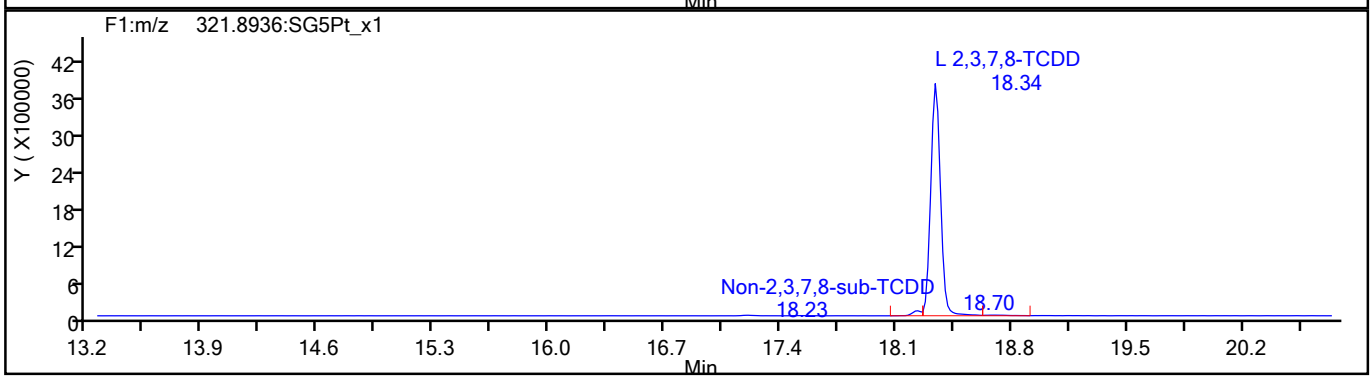

TCDD Standards

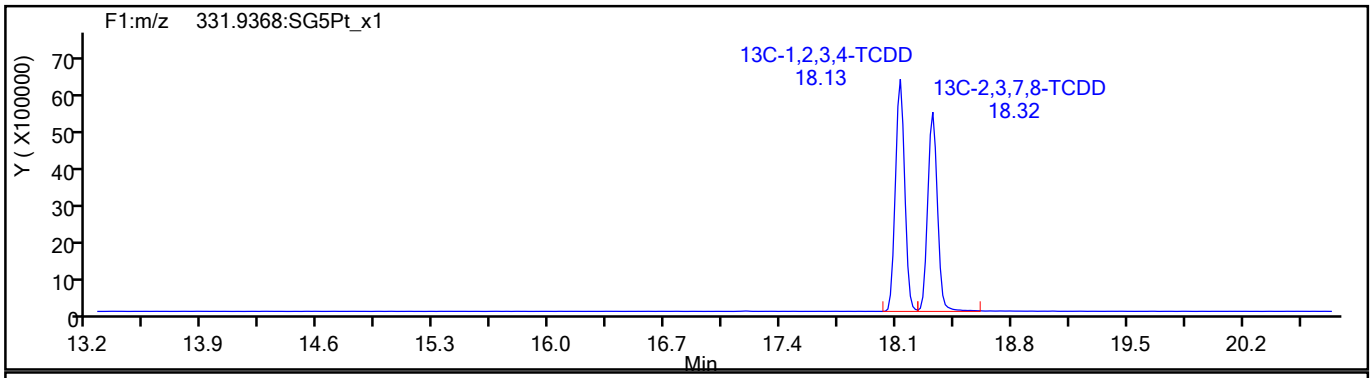

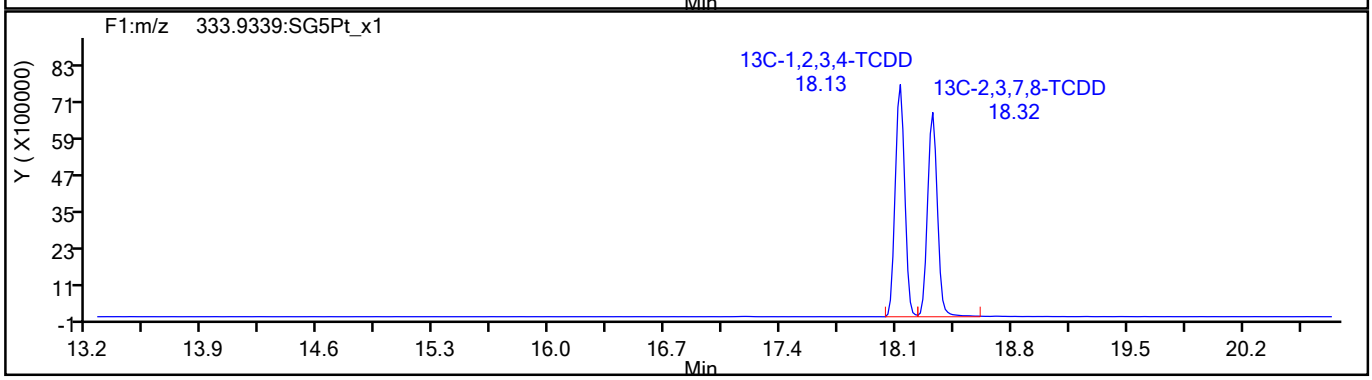

780421

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

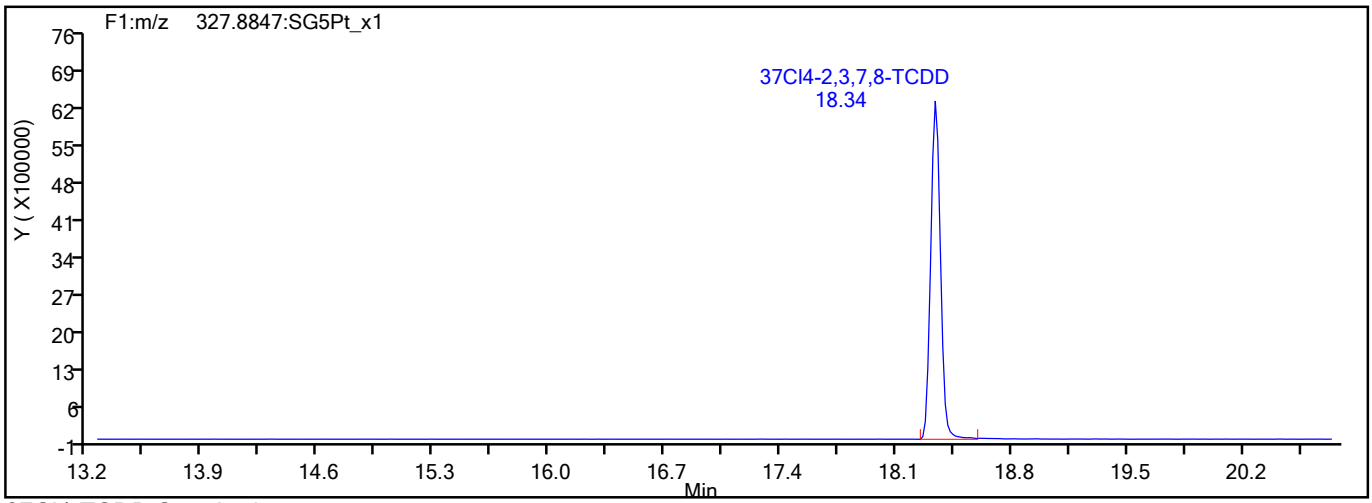

37Cl4-TCDD Standards

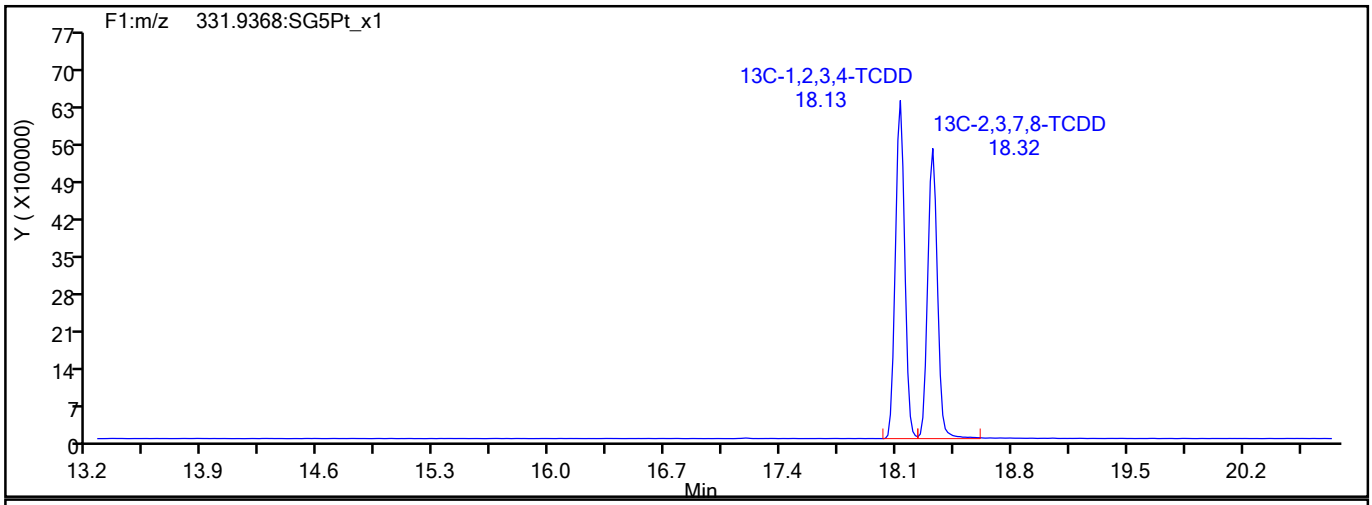

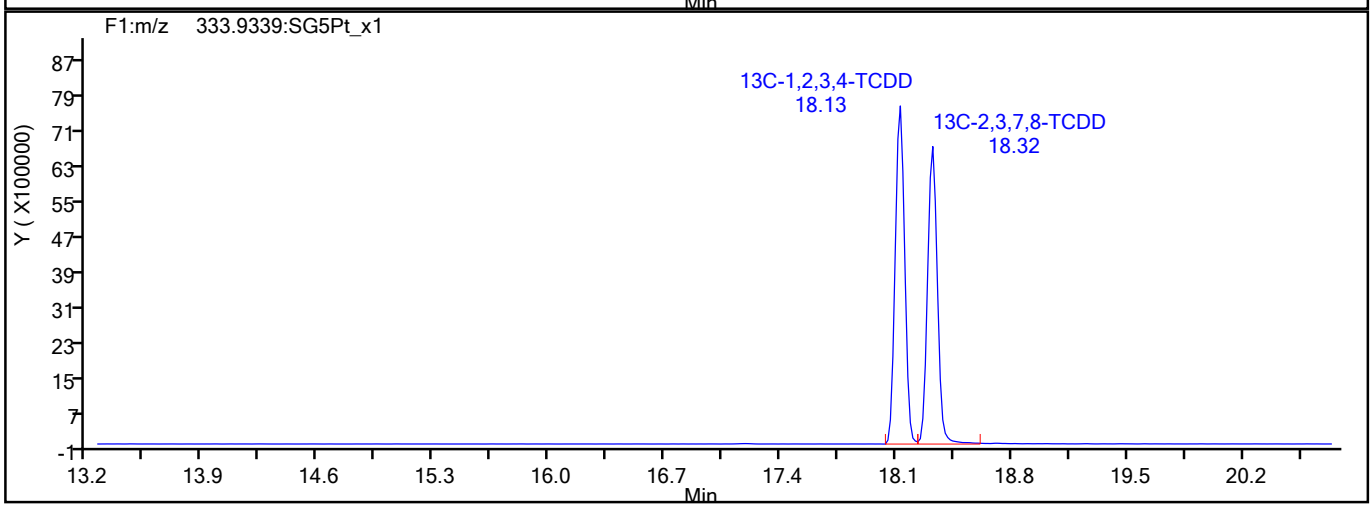

780422

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

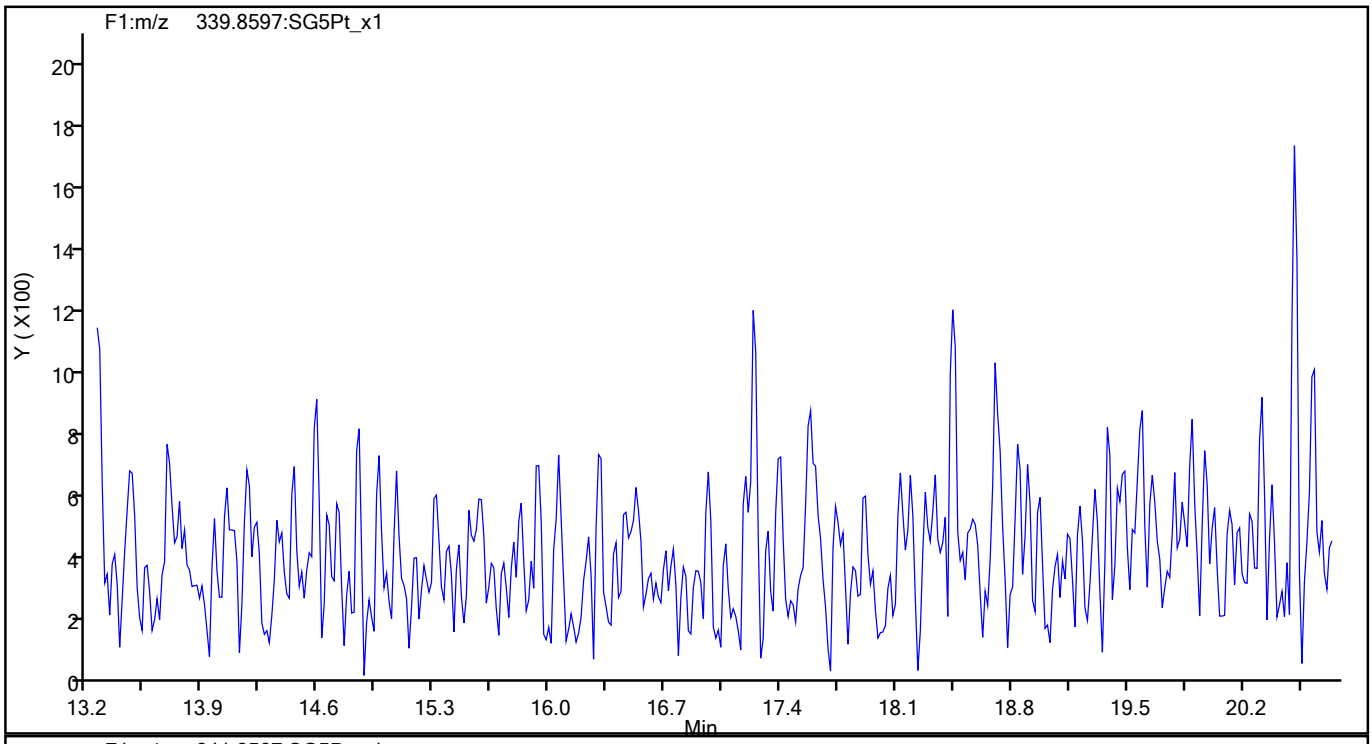

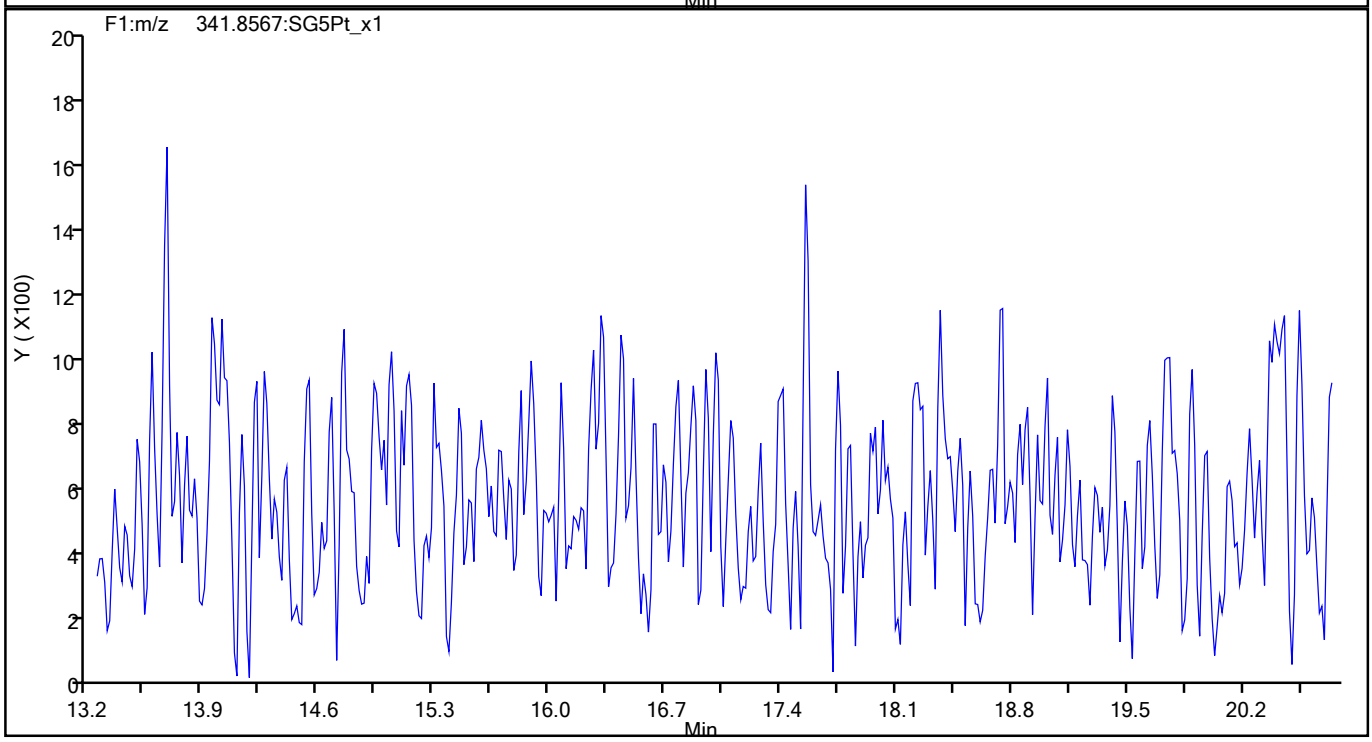

780423

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

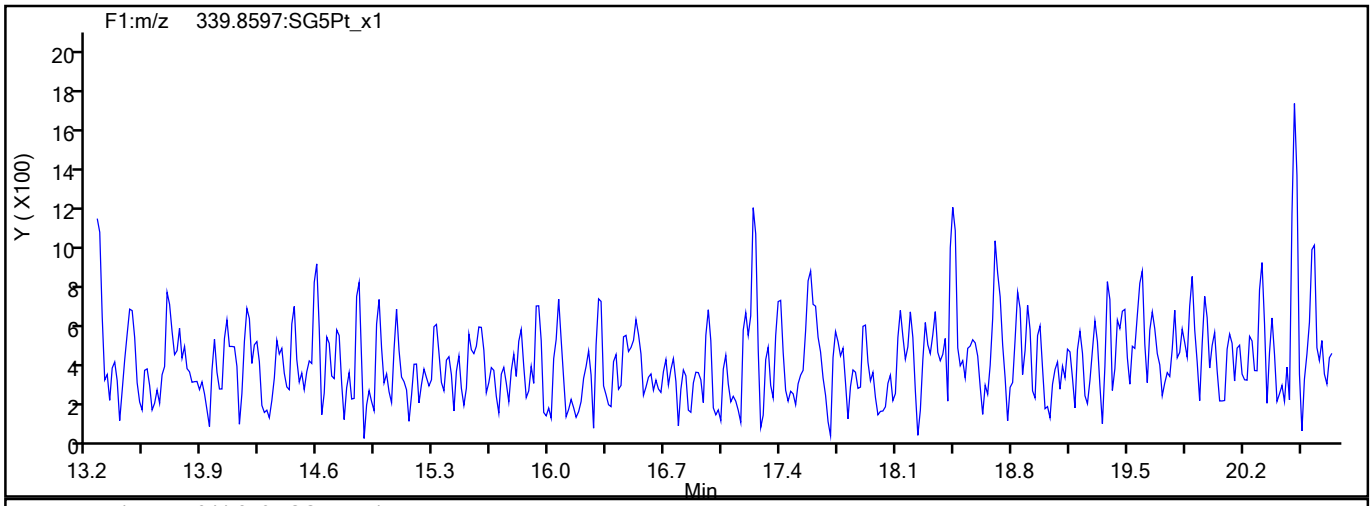

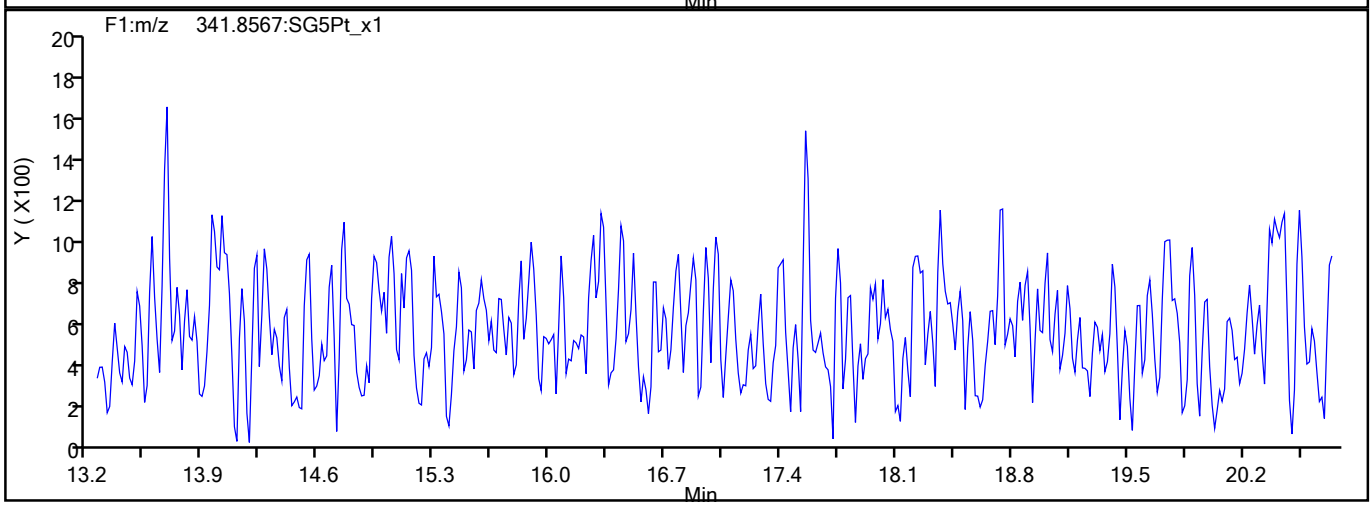

F1 PeCDFs Interference Mass

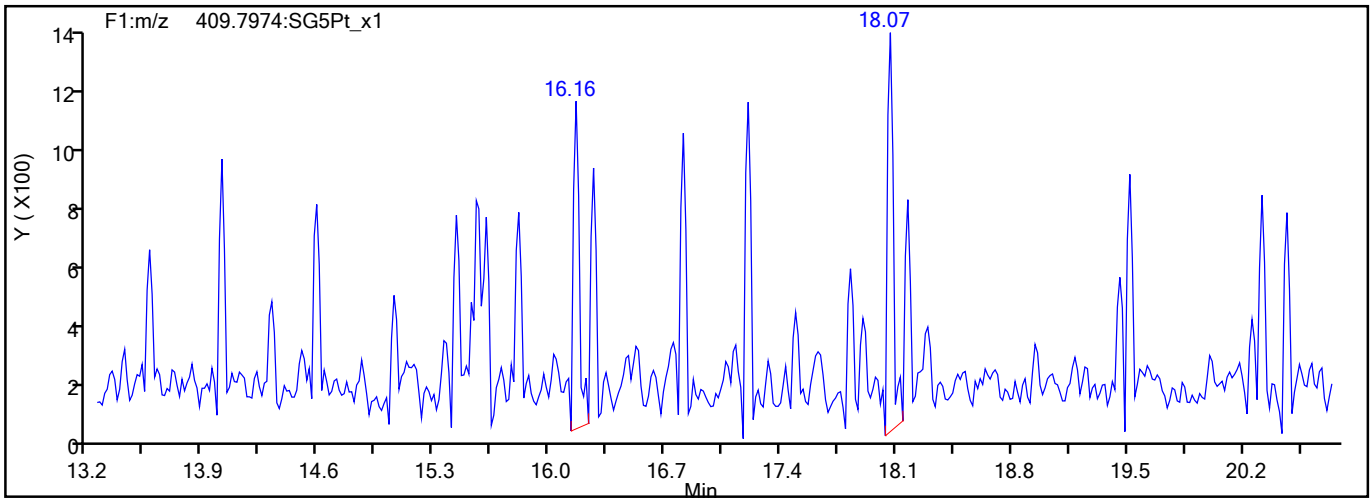

780424

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

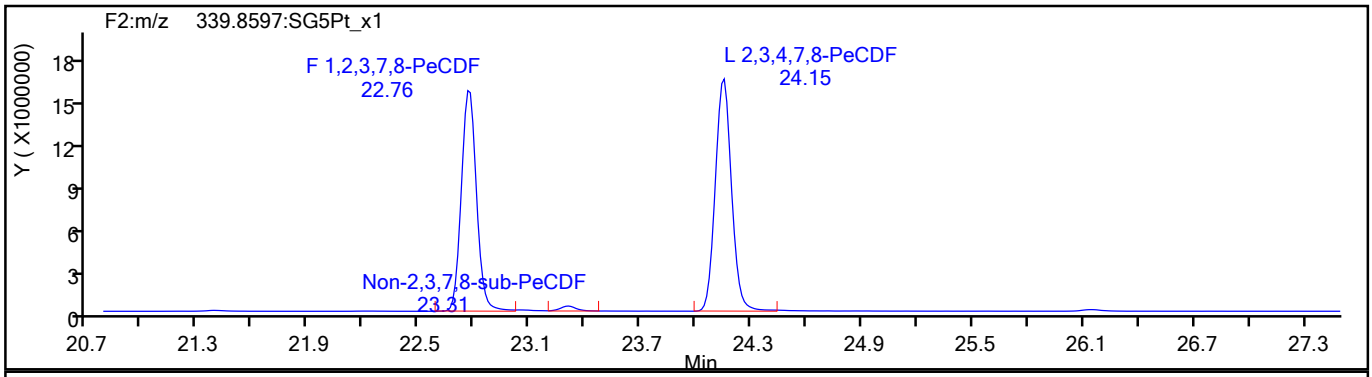

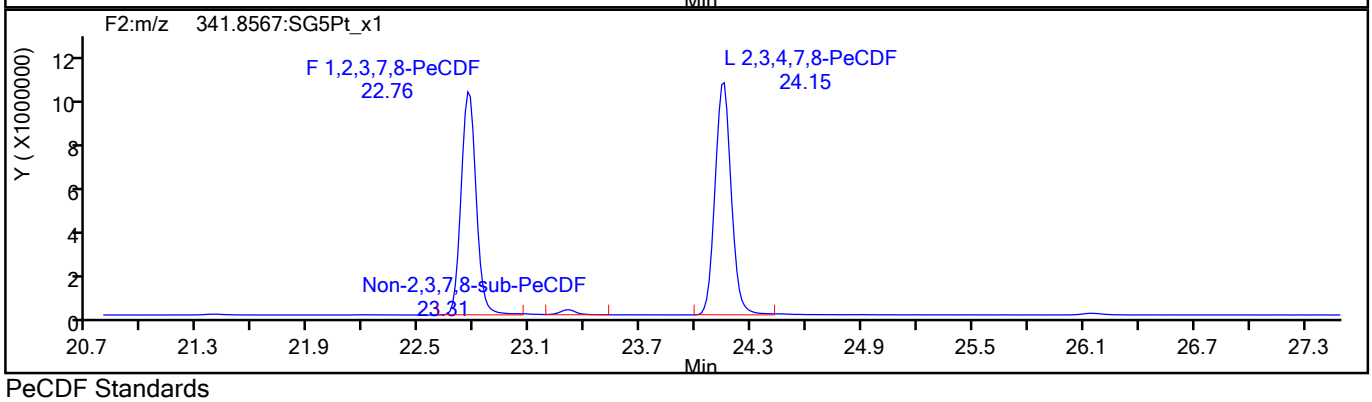

PeCDF Standards

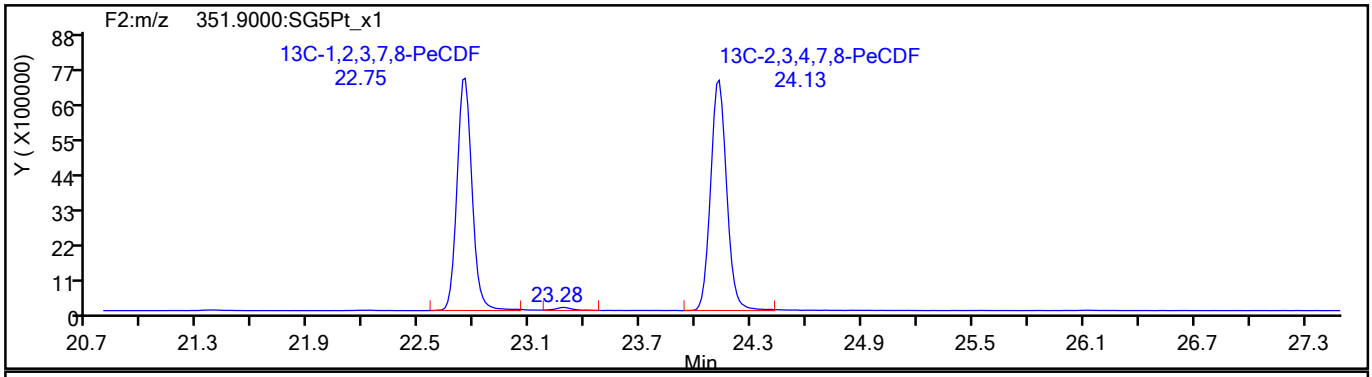

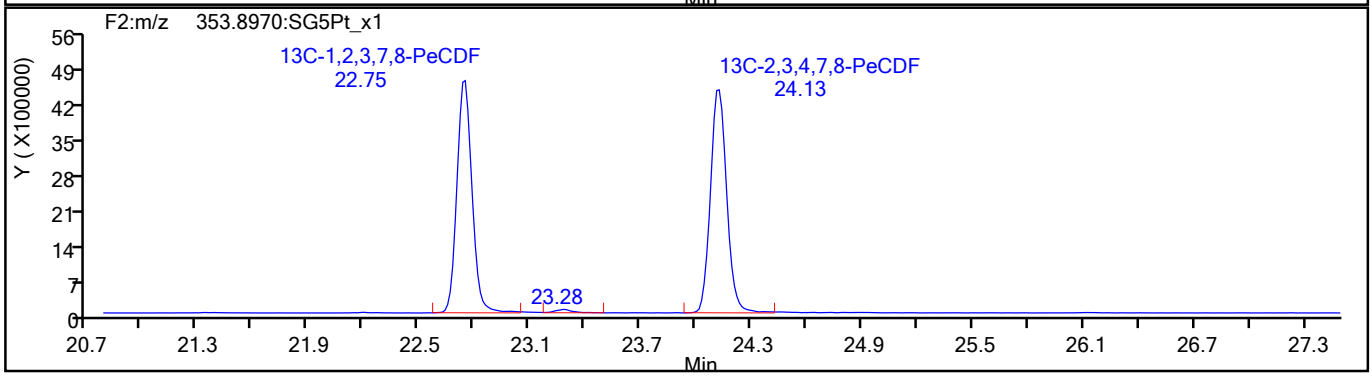

780425

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

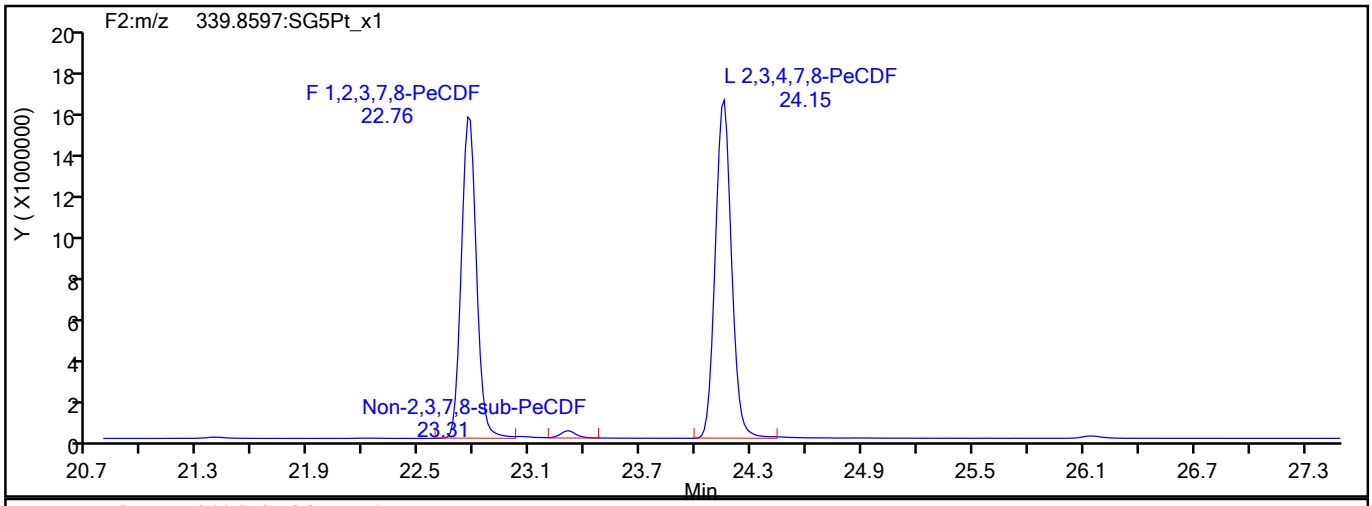

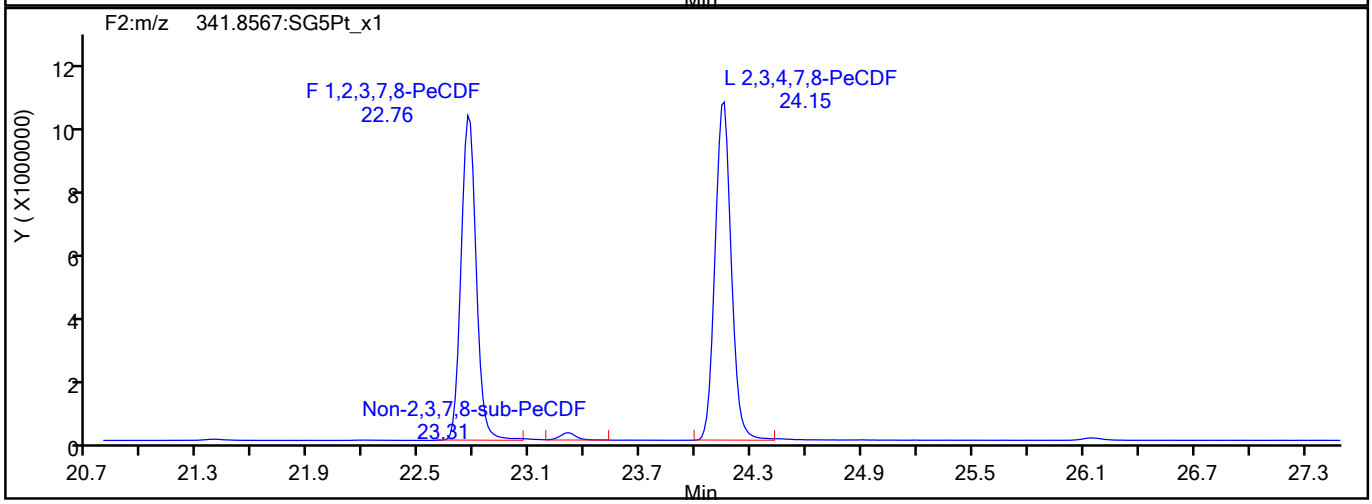

PeCDF Interference Mass

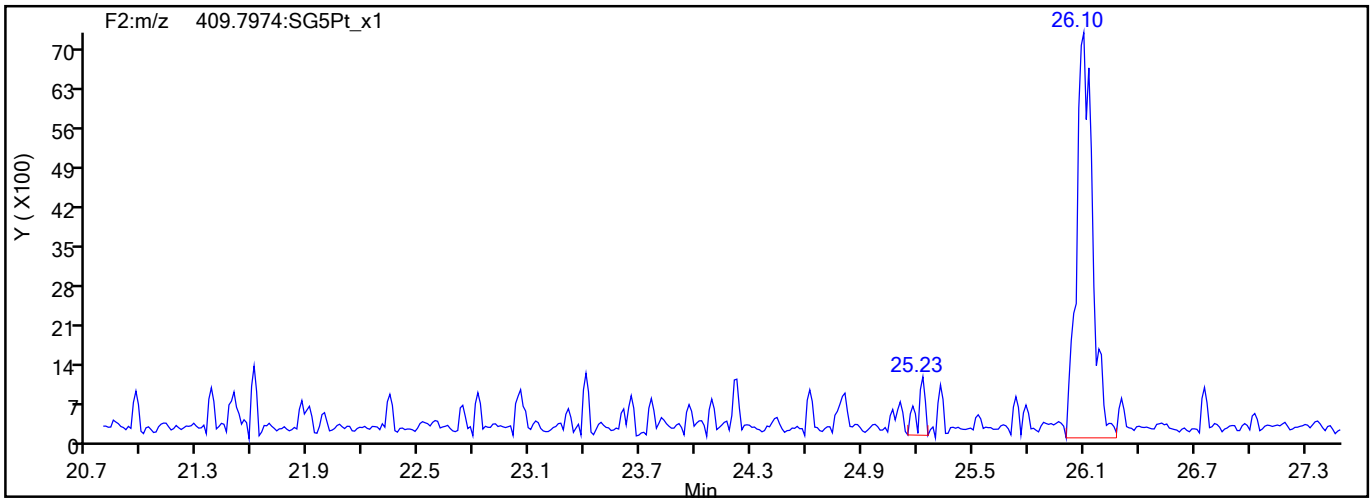

780426

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

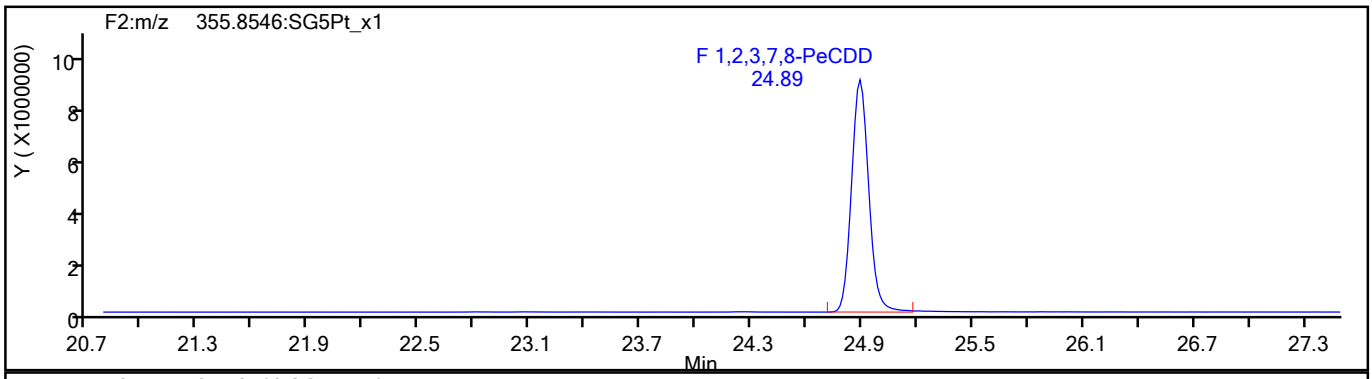

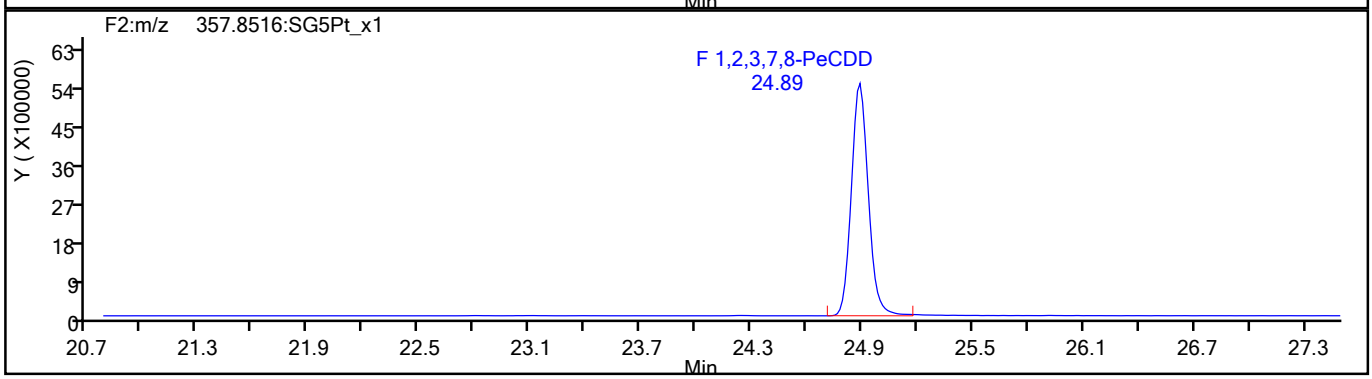

PeCDD Standards

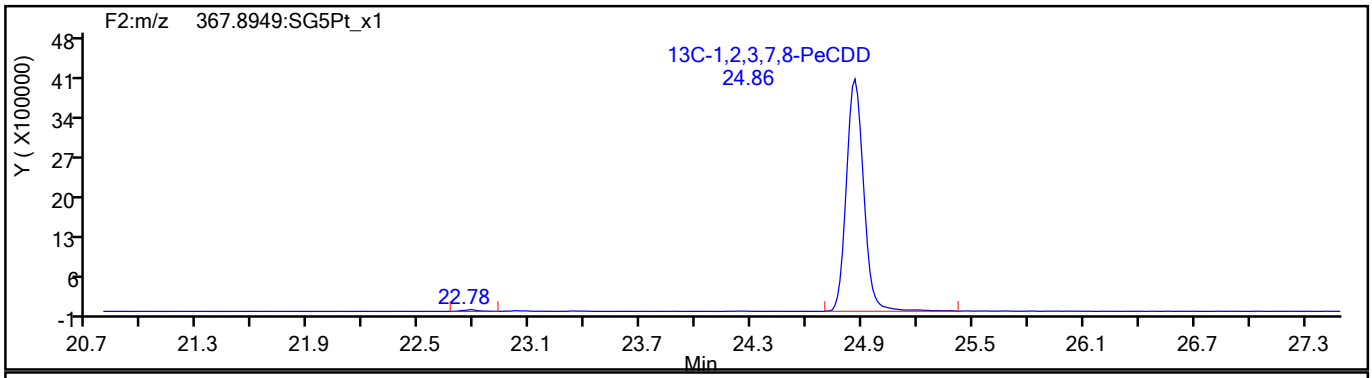

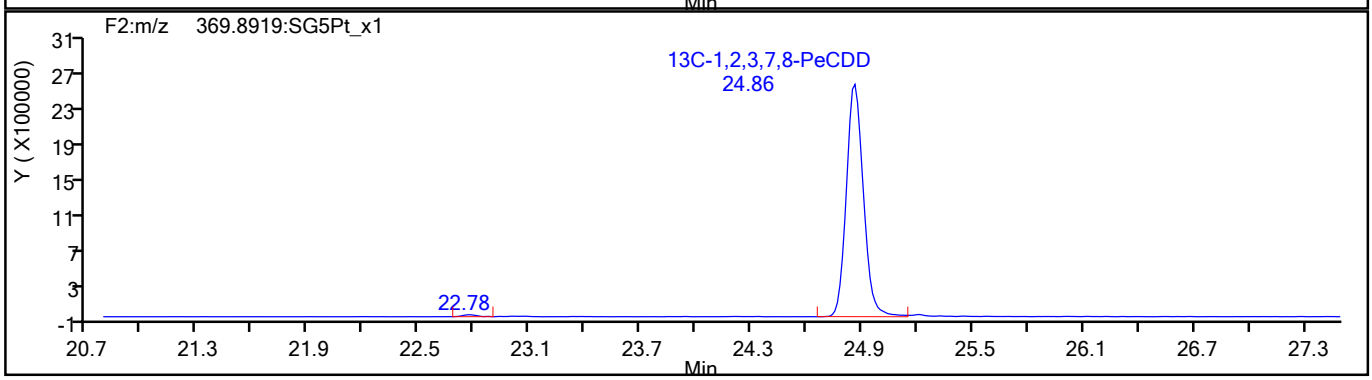

780427

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

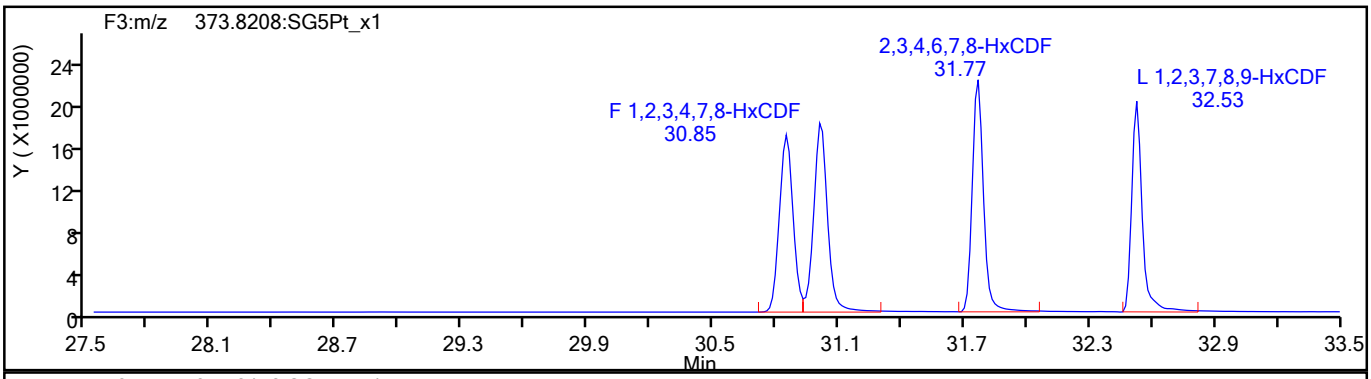

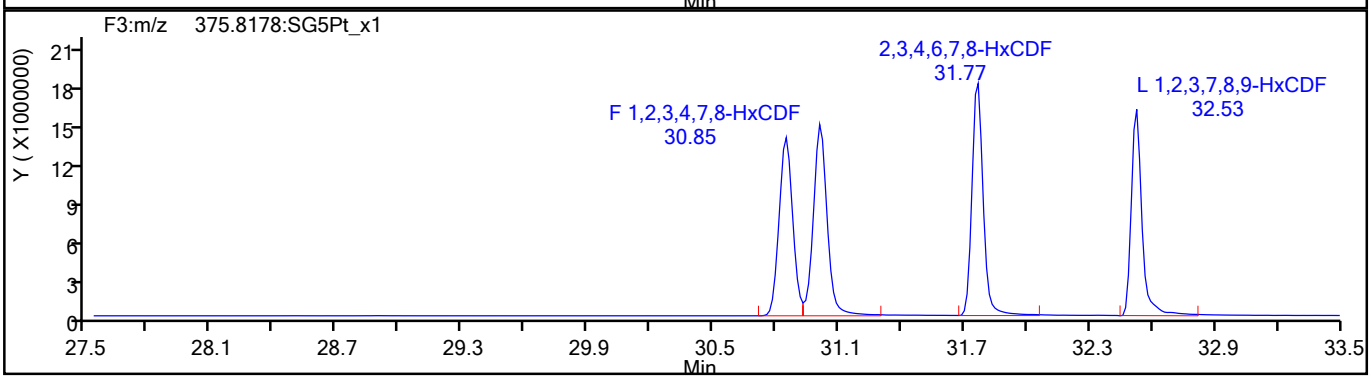

HxCDF Standards

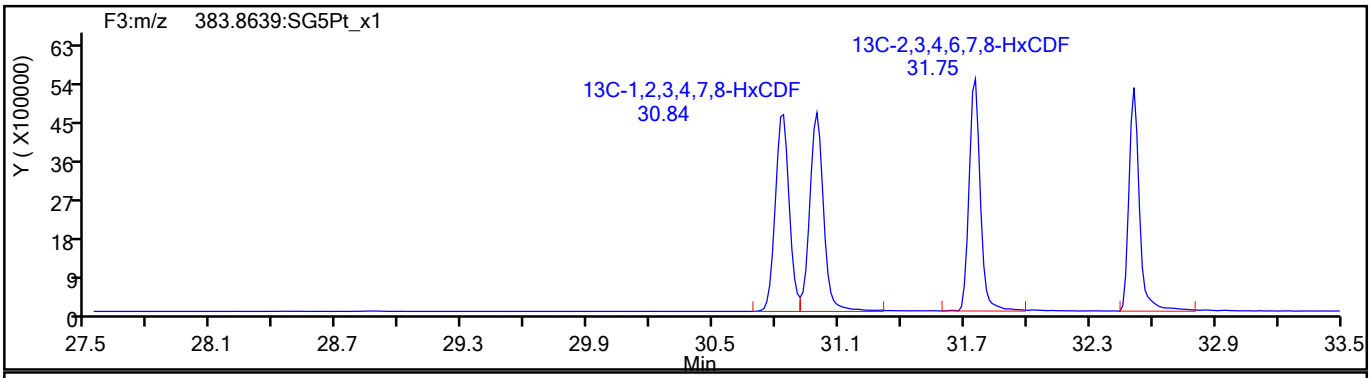

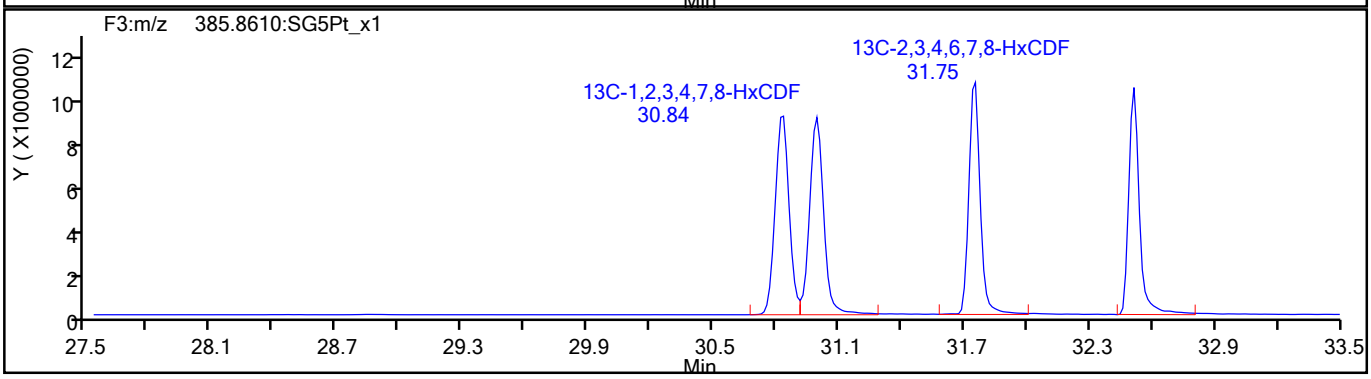

780428

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

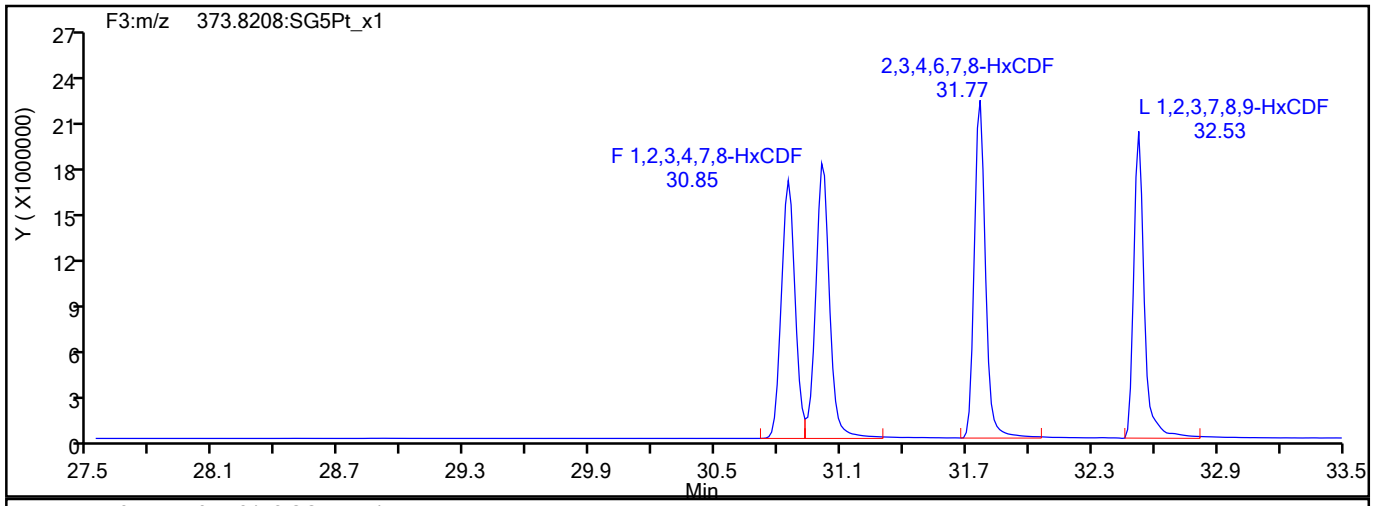

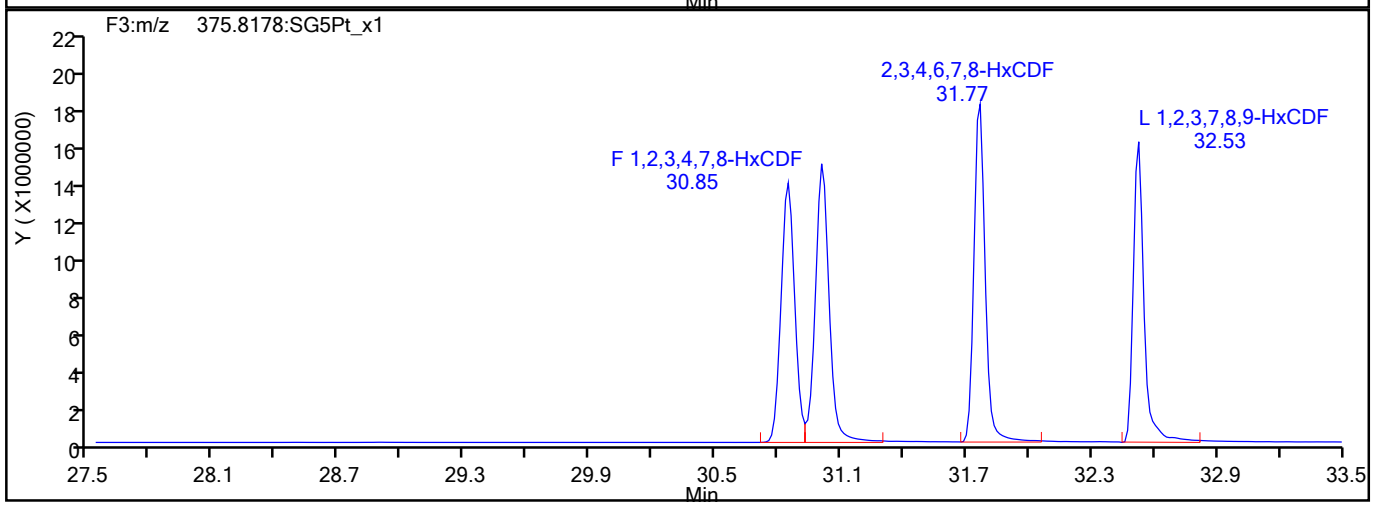

HxCDF Interference Mass

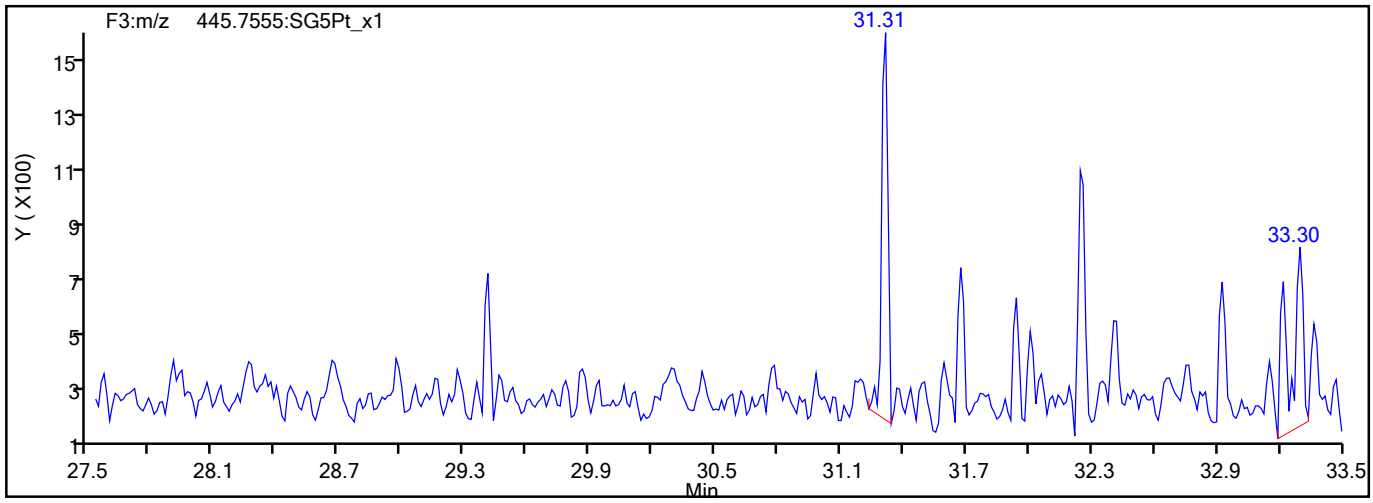

780429

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

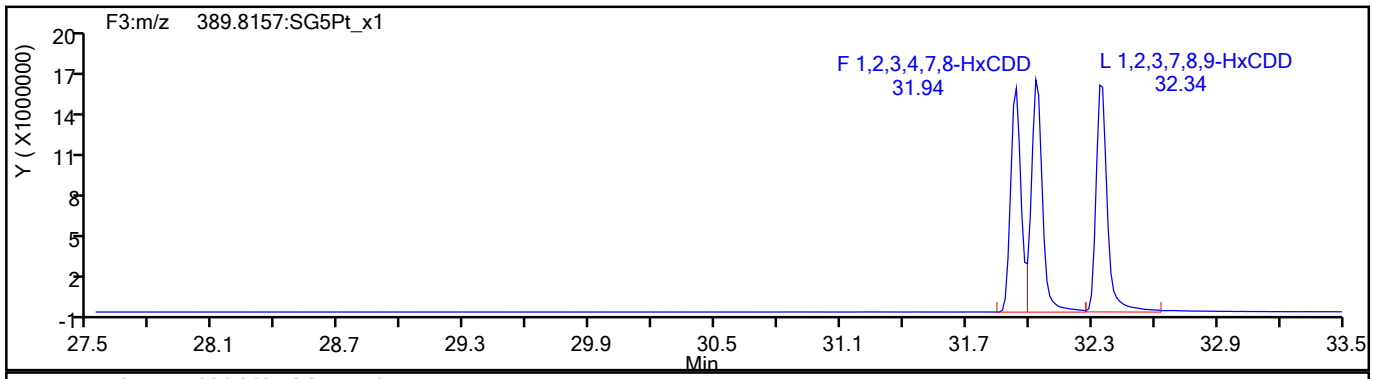

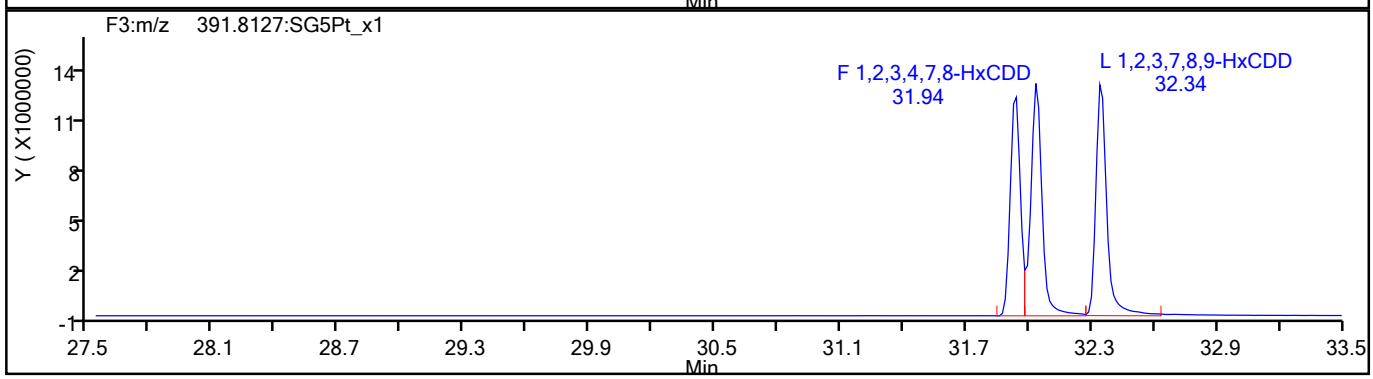

HxCDD Standards

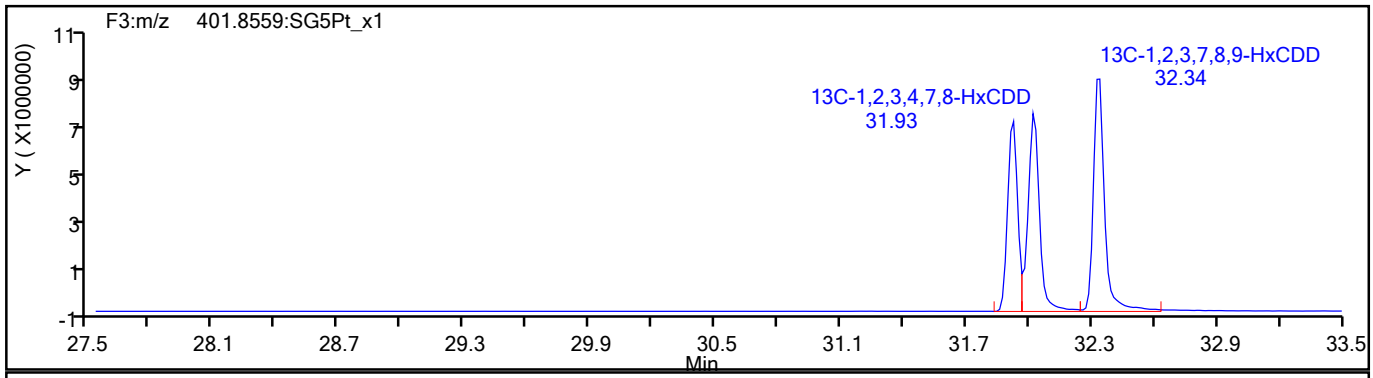

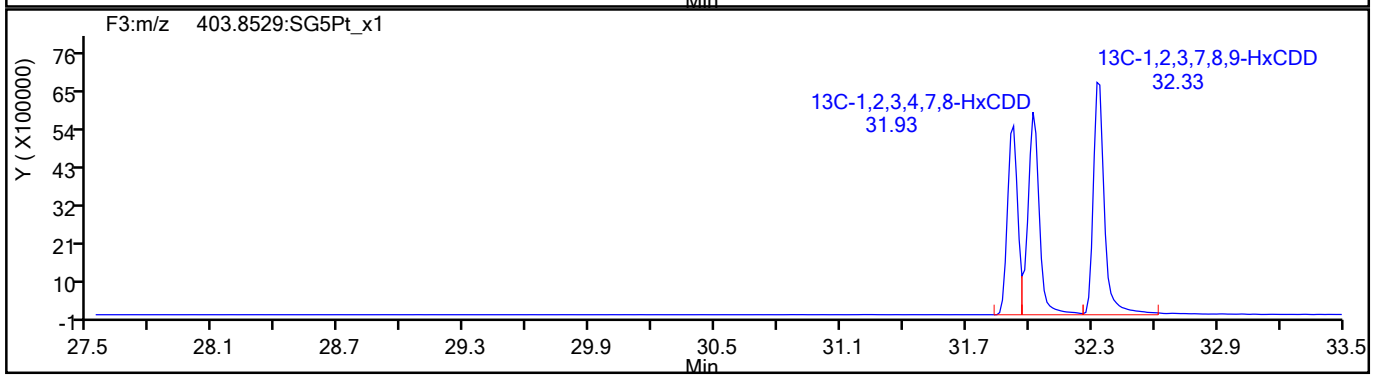

780430

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

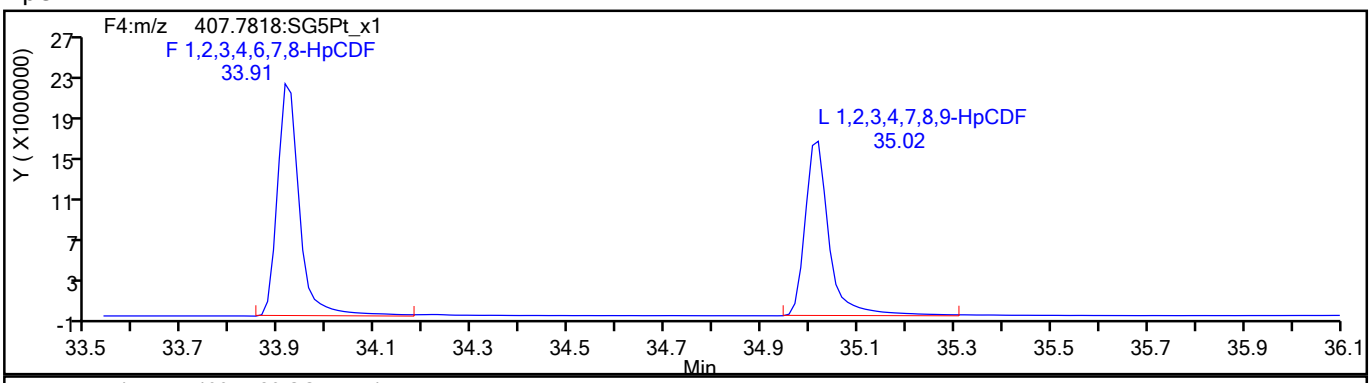

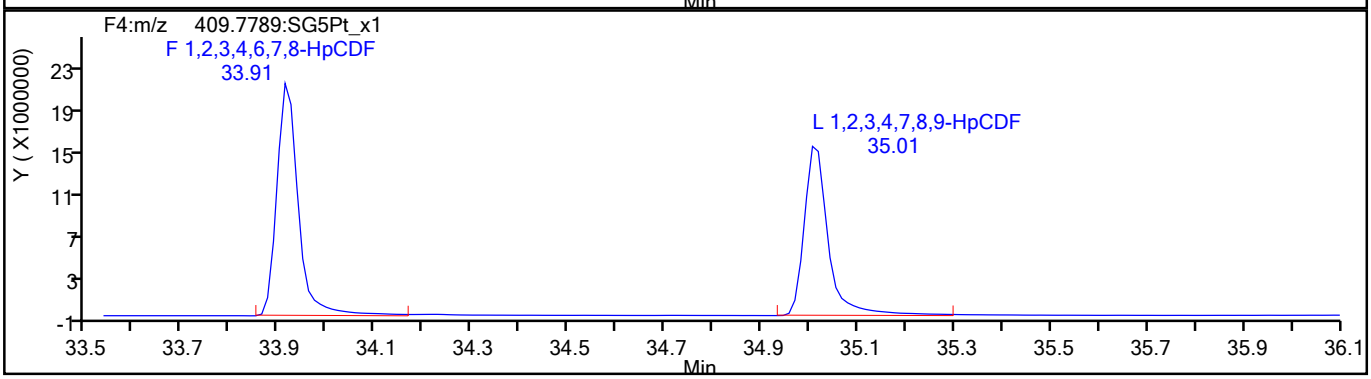

HpCDF Standards

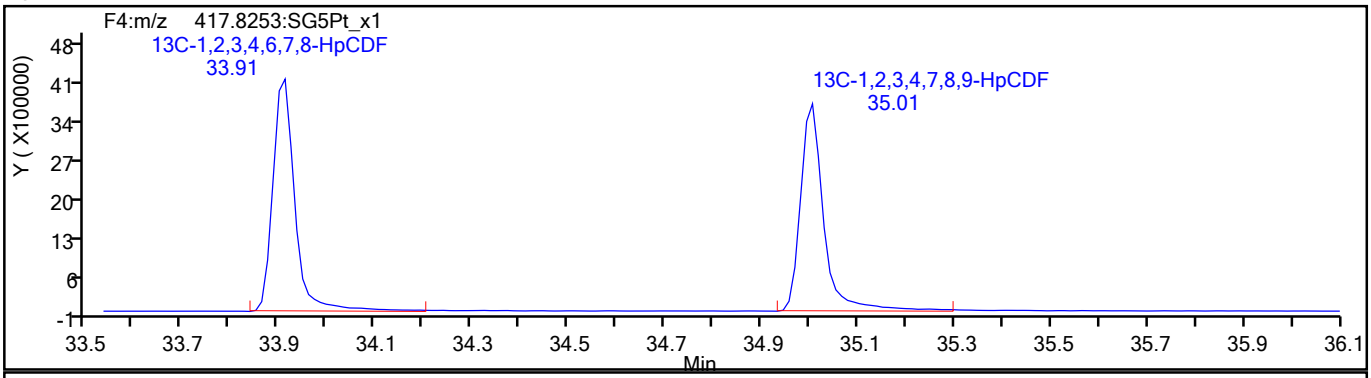

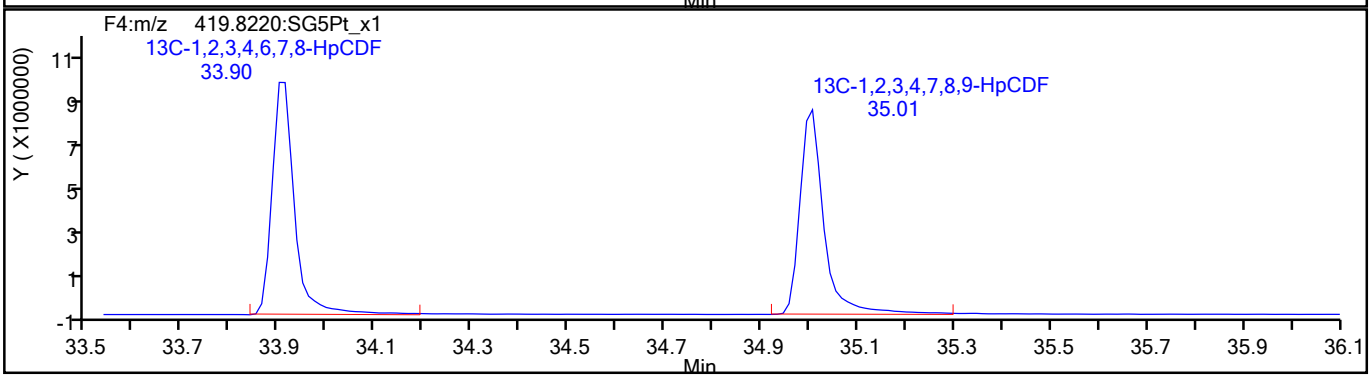

780431

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

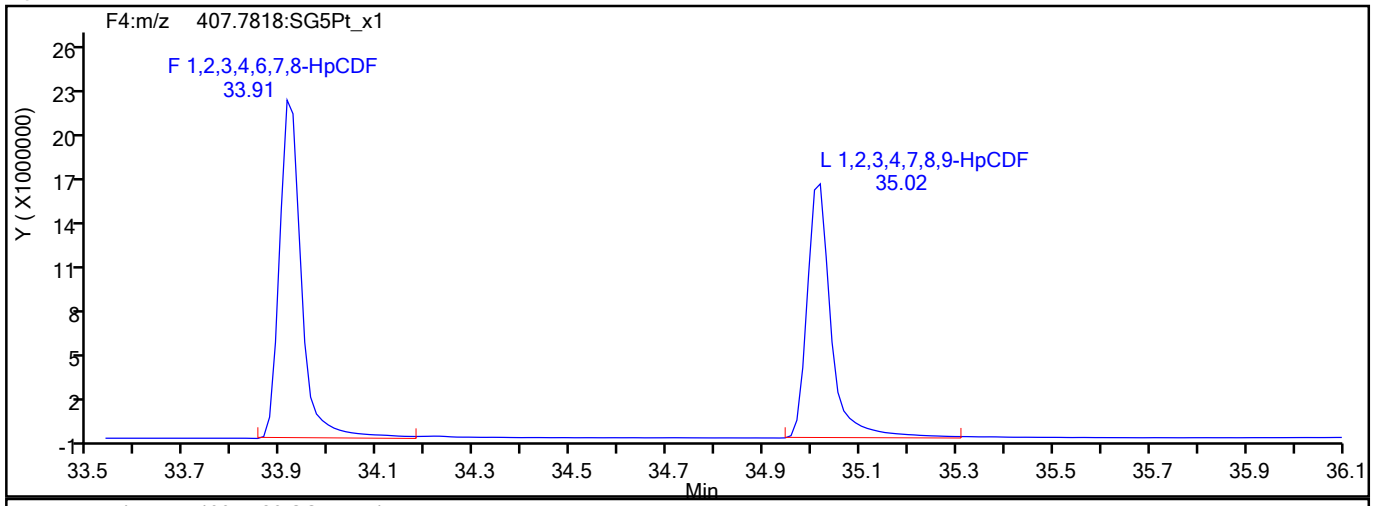

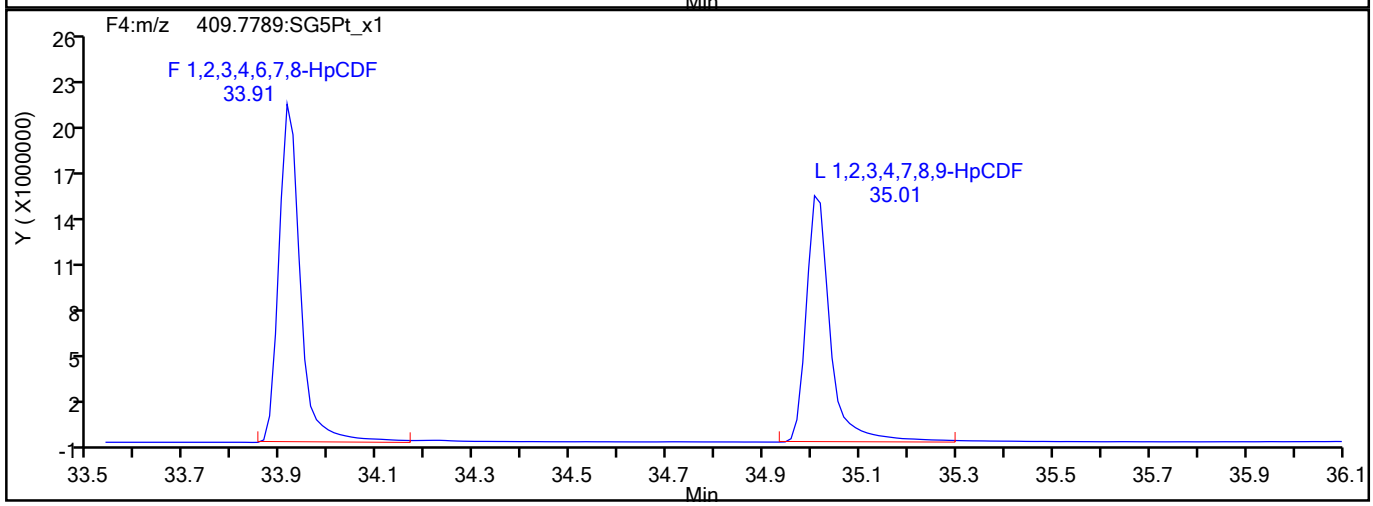

HpCDF Interference Mass

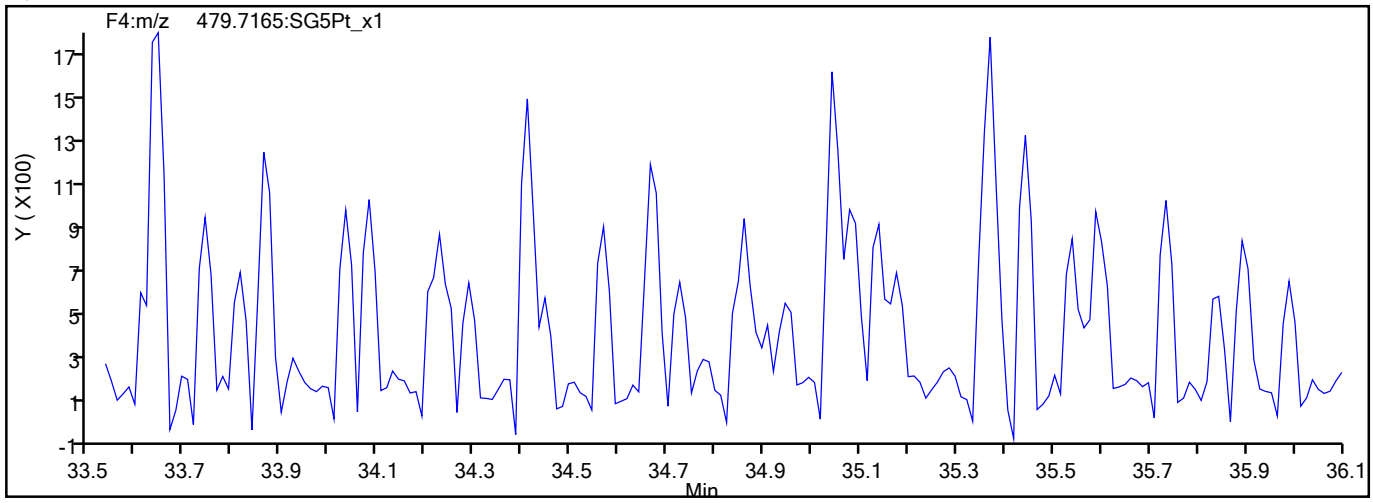

780432

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

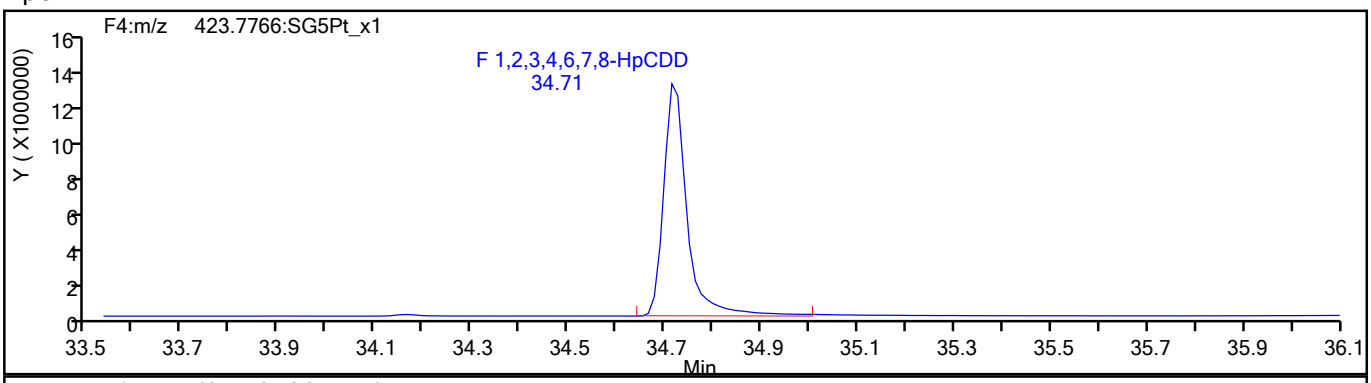

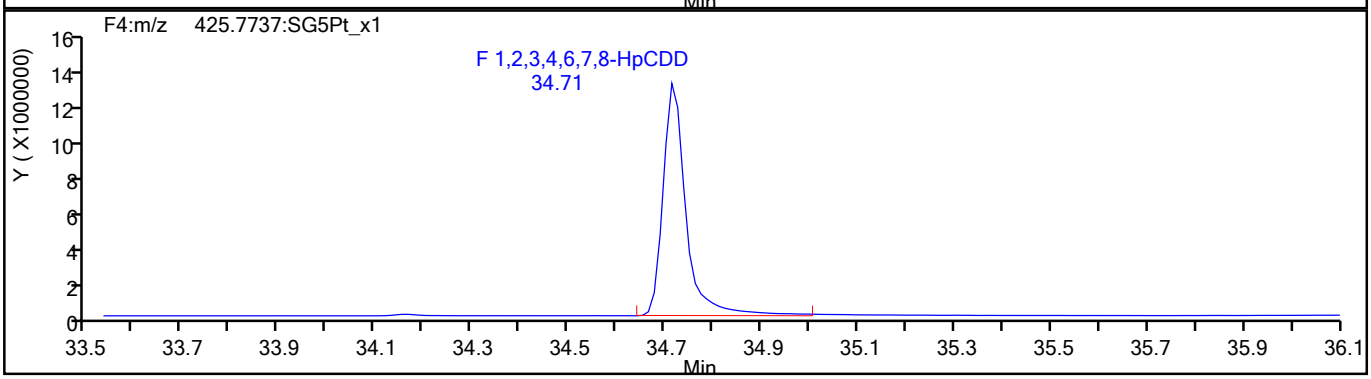

HpCDD Standards

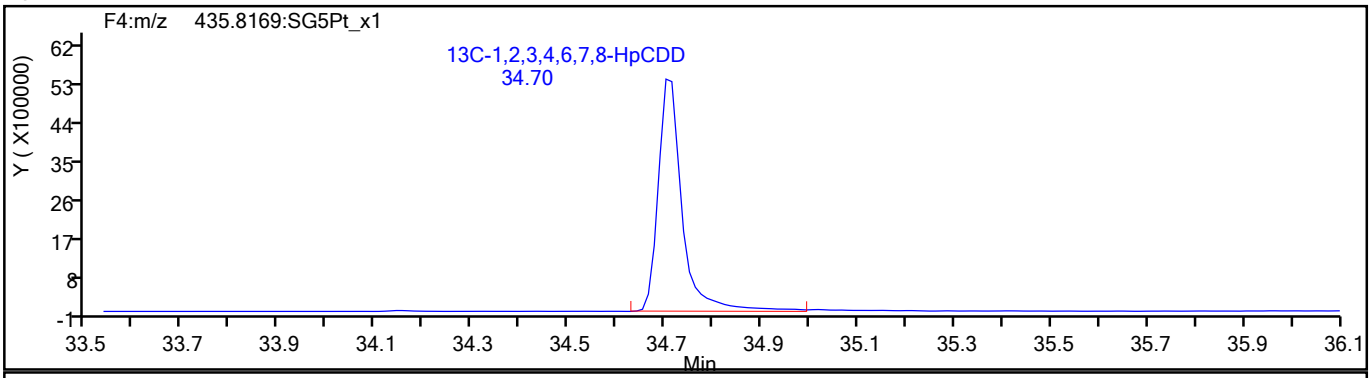

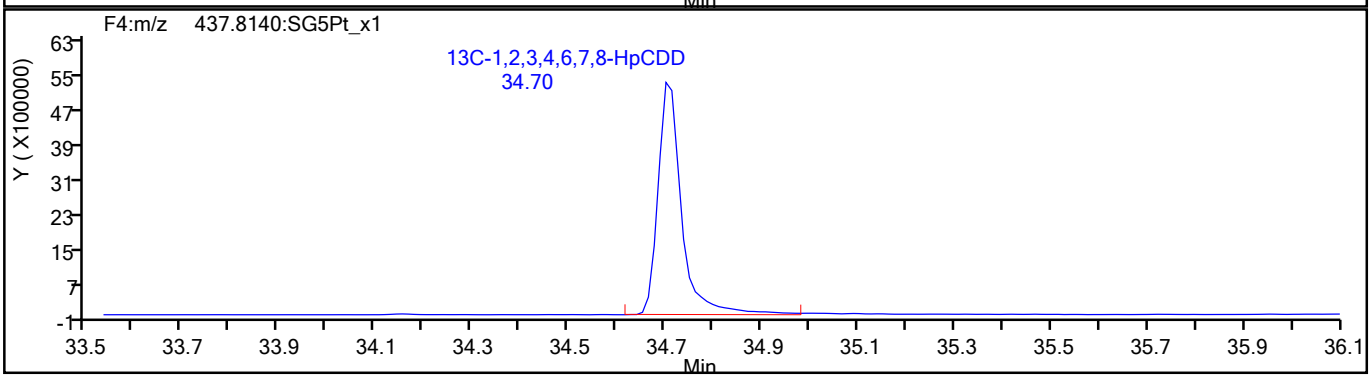

780433

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

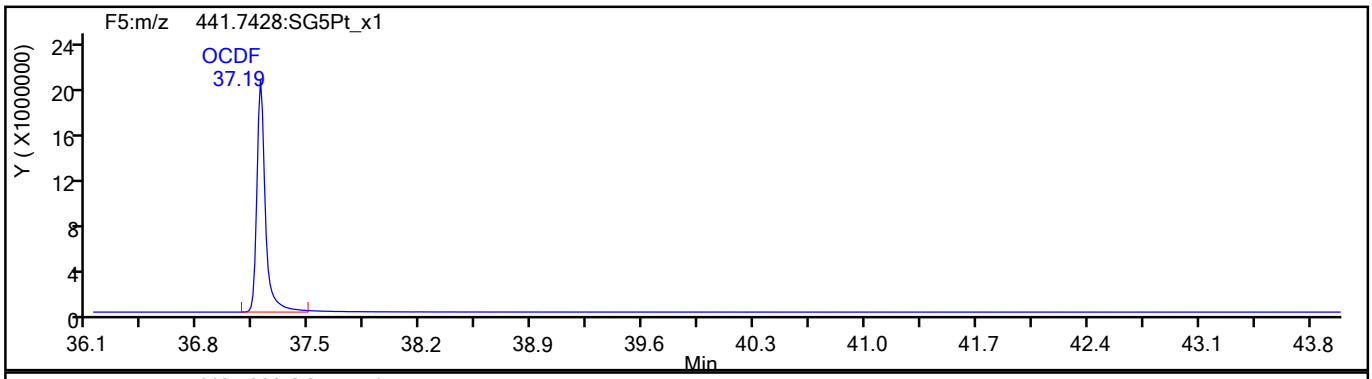

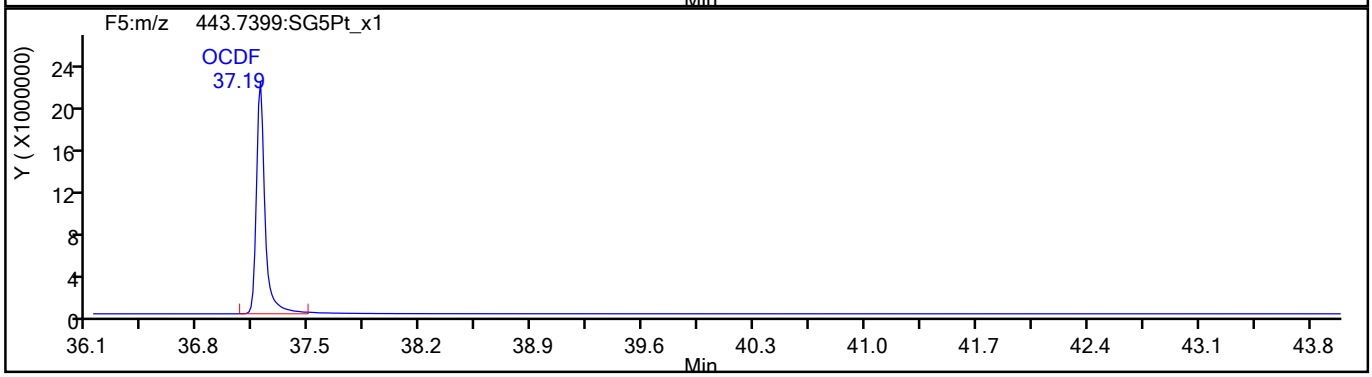

OCDF Standards

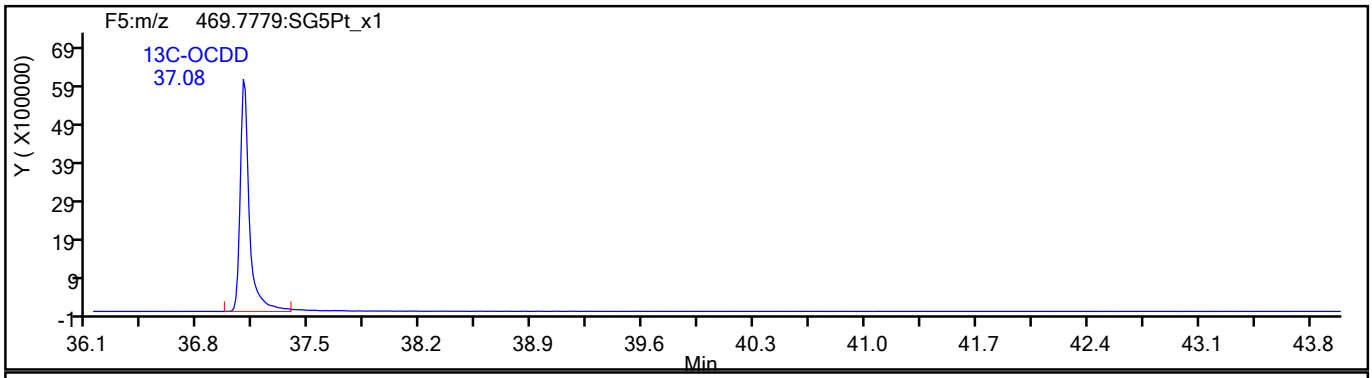

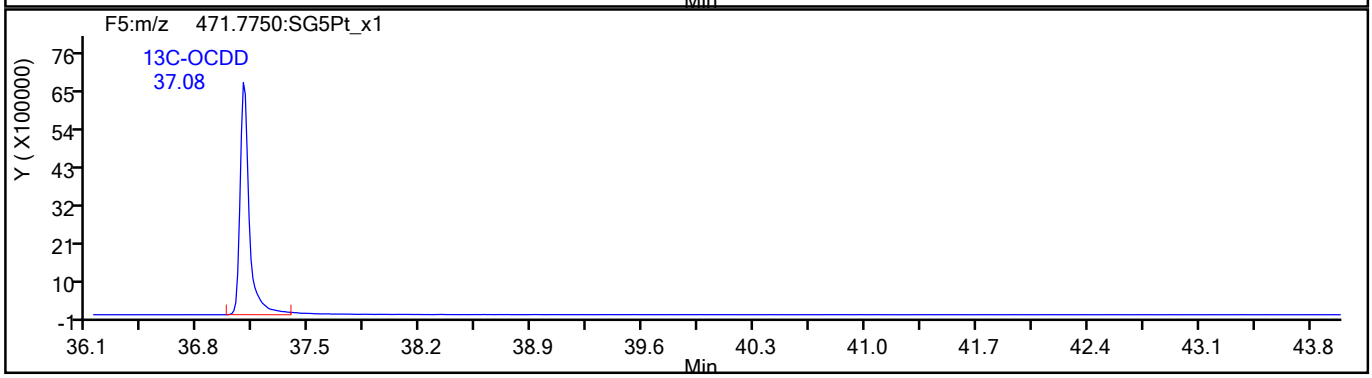

780434

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

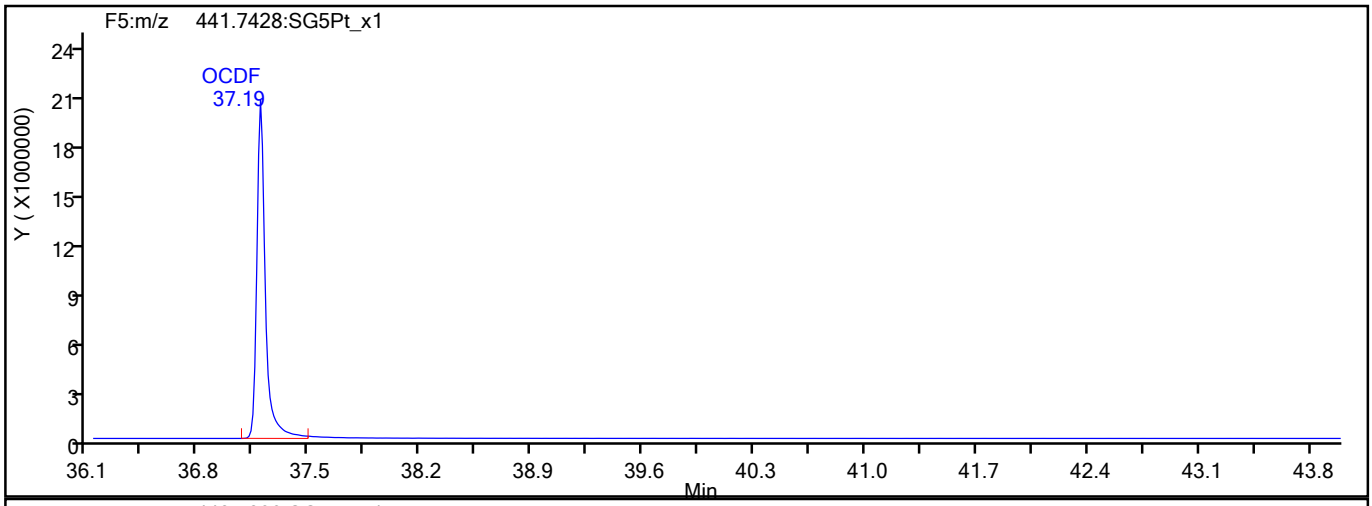

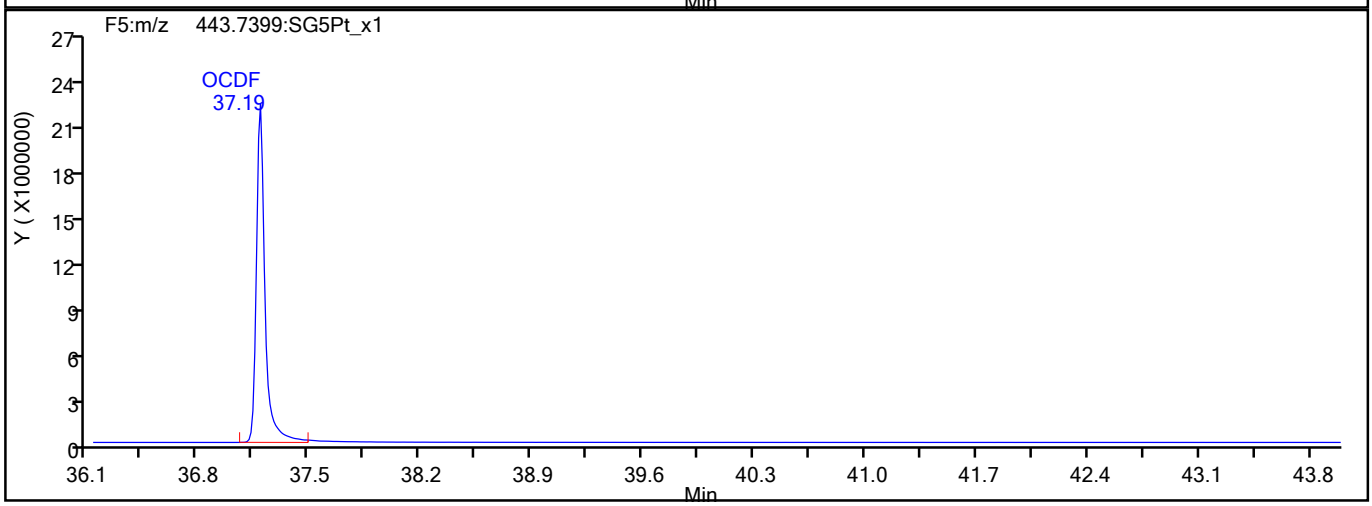

OCDF Interference Mass

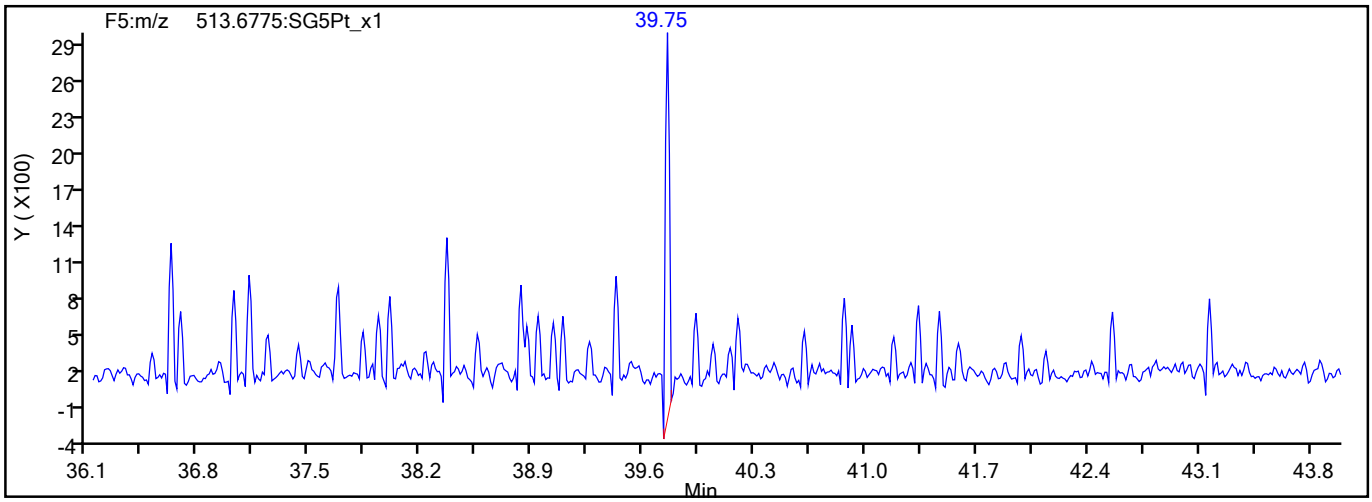

780435

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

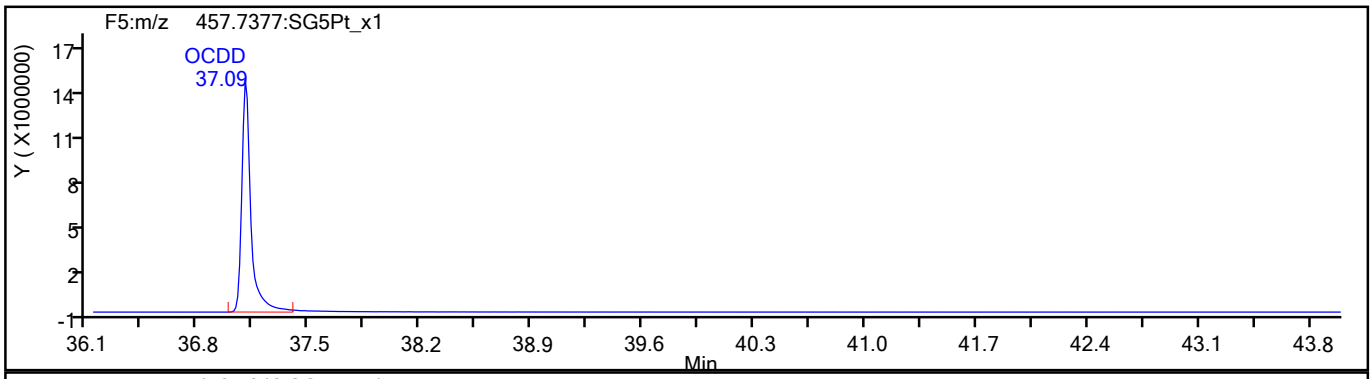

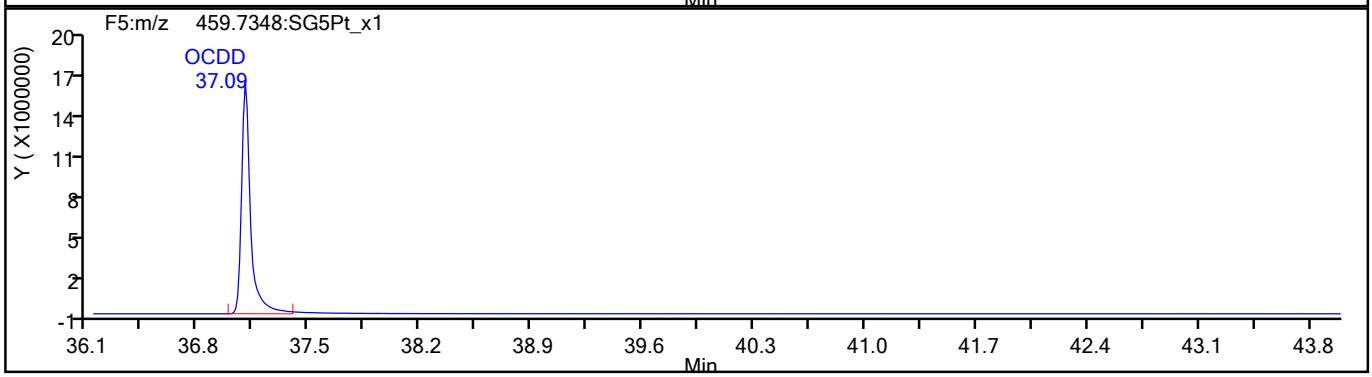

OCDD Standards

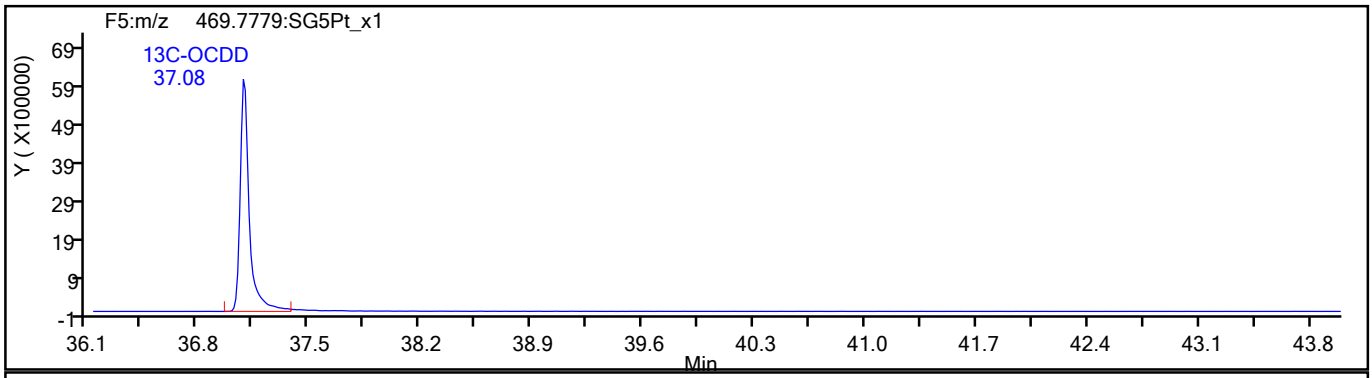

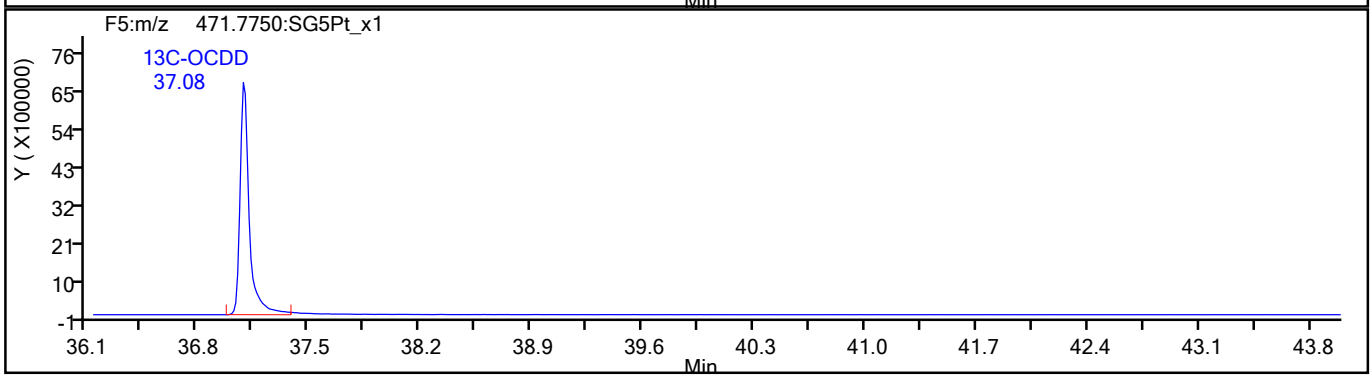

780436

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

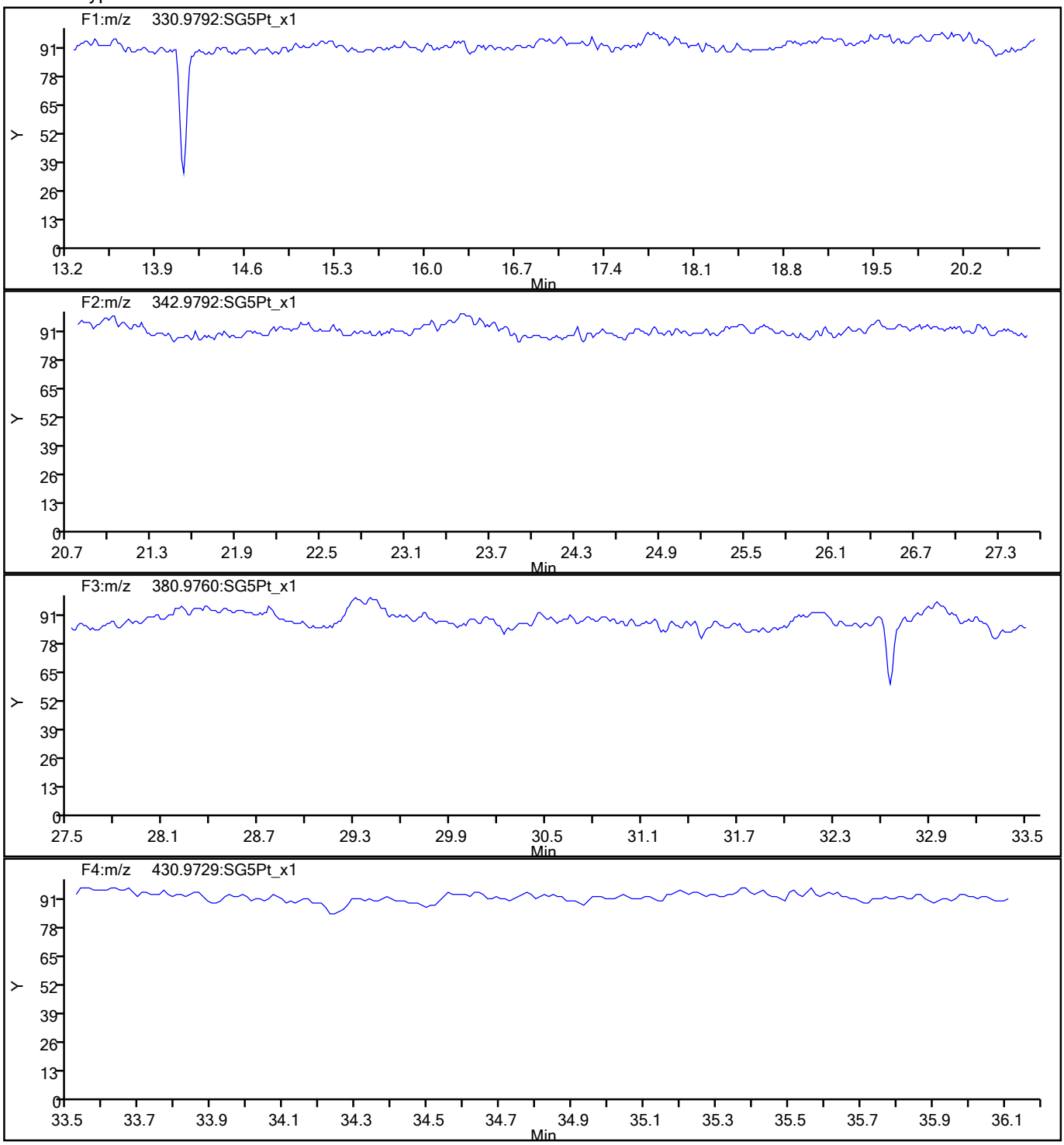

780437

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

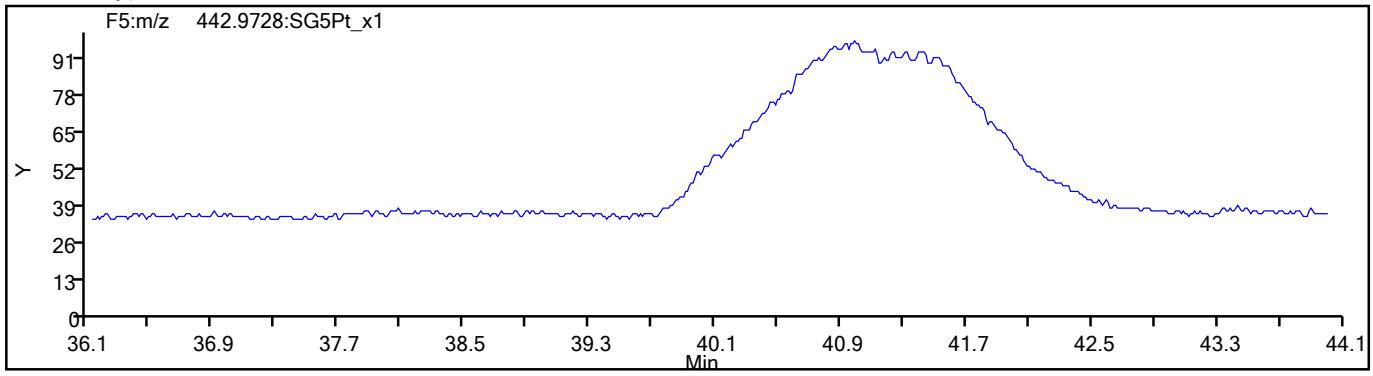

780438

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID: CCV 320-516836/1 Calibration Date: 08/14/2021 01:16

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 13AU2110D5_12.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.039		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.292		10.3	10.0	103	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.078		50.8	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.033		50.7	50.0	101	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.037		49.4	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.100		50.7	50.0	101	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.137		50.5	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.163		49.8	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.099		51.6	50.0	103	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.058		52.9	50.0	106	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.272		56.2	50.0	112	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.179		50.5	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.489		51.6	50.0	103	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.109		50.7	50.0	101	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.356		51.5	50.0	103	86-116
OCDD	AveID	1.107	1.134		102	100	102	79-126
OCDF	AveID	1.438	1.446		101	100	101	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.624		99.9	100	100	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9168		102	100	102	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.205		99.6	100	100	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.231		99.3	100	99	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7956		105	100	105	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	0.9927		91.6	100	92	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.014		89.9	100	90	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	0.9702		91.2	100	91	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.6883		93.8	100	94	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.7759		88.2	100	88	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.8918		92.2	100	92	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7469		96.6	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6560		101	100	101	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7013		100	100	100	77-129
13C-OCDD	Ave	0.4472	0.4817		215	200	108	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.243		11.2	10.0	112	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\13AU2110D5.SPL
Last Modified: Monday, August 16, 2021 14:27:40 Pacific Daylight Time
Printed: Monday, August 16, 2021 14:27:44 Pacific Daylight Time Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	13AU2110D5_1	CS-4 HRDXNL4_00099	CCV 081321	Tray01:2	Dioxin		DB
2	13AU2110D5_2	WDM HRDXNCP_00044	WDM 081321	Tray01:1	Dioxin		DB
3	13AU2110D5_3	mb 320-514953/1-a	mb 320-514953/1-a	Tray01:4	1613B/8290A/Water	D265	DB
4	13AU2110D5_4	lcs 320-514953/2-a	lcs 320-514953/2-a	Tray01:5	1613B/8290A/Water		DB
5	13AU2110D5_5	lcsd 320-514953/3-a	lcsd 320-514953/3-a	Tray01:6	1613B/8290A/Water		DB
6	13AU2110D5_6	320-76081-a-4-b	320-76081-a-4-b	Tray01:7	1613B/8290A/Water		DB
7	13AU2110D5_7	mb 320-514735/1-a	mb 320-514735/1-a	Tray01:8	1613B/8290A/Solid	D262	DB
8	13AU2110D5_8	lcs 320-514735/2-a	lcs 320-514735/2-a	Tray01:9	1613B/8290A/Solid		DB
9	13AU2110D5_9	lcsd 320-514735/3-a	lcsd 320-514735/3-a	Tray01:10	1613B/8290A/Solid		DB
10	13AU2110D5_10	320-76718-a-1-a	320-76718-a-1-a	Tray01:11	1613B/8290A/Solid		DB
11	13AU2110D5_11	SB Solvent Blank C-14	SB 081321	Tray01:3			DB
12	13AU2110D5_12	CS-4 HRDXNL4_00099	CCV 081321A	Tray01:2	Dioxin		DB
13	13AU2110D5_13	WDM HRDXNCP_00044	WDM 081321A	Tray01:1	Dioxin		DB
14	13AU2110D5_14	mb 320-512871/1-a	mb 320-512871/1-a	Tray01:15	1613B/Solid	D265	DB
15	13AU2110D5_15	lcs 320-512871/2-a	lcs 320-512871/2-a	Tray01:16	1613B/Solid		DB
16	13AU2110D5_16	lcsd 320-512871/3-a	lcsd 320-512871/3-a	Tray01:17	1613B/Solid		DB
17	13AU2110D5_17	320-76788-a-2-a	320-76788-a-2-a	Tray01:18	1613B/Solid		DB
18	13AU2110D5_18	320-76788-a-3-a	320-76788-a-3-a	Tray01:19	1613B/Solid		DB
19	13AU2110D5_19	320-76788-a-4-a	320-76788-a-4-a	Tray01:20	1613B/Solid		DB
20	13AU2110D5_20	320-76788-a-5-a	320-76788-a-5-a	Tray01:21	1613B/Solid		DB
21	13AU2110D5_21	320-76788-a-6-a	320-76788-a-6-a	Tray01:22	1613B/Solid		DB
22	13AU2110D5_22	320-76788-a-7-a	320-76788-a-7-a	Tray01:23	1613B/Solid		DB
23	13AU2110D5_23	320-76720-a-1-a 50X	320-76720-a-1-a 50X	Tray01:24	1613B/Solid		DB
24	13AU2110D5_24	320-76720-a-5-a 25X	320-76720-a-5-a 25X	Tray01:25	1613B/Solid		DB
25	13AU2110D5_25	320-76724-a-3-a 100X	320-76724-a-3-a 100X	Tray01:26	1613B/Solid		DB
26	13AU2110D5_26	SB Solvent Blank C-14	SB 081321A	Tray01:3			DB
27	13AU2110D5_27	WDM HRDXNCP_00044	WDM 081321B	Tray01:1	Dioxin		DB
28	13AU2110D5_28	CS-4 HRDXNL4_00099	CCV 081321B	Tray01:2	Dioxin		DB
29	13AU2110D5_29	320-76788-a-8-a	320-76788-a-8-a	Tray01:29	1613B/Solid	D265	DB
30	13AU2110D5_30	320-76788-a-9-a	320-76788-a-9-a	Tray01:30	1613B/Solid		DB
31	13AU2110D5_31	320-76788-a-13-a	320-76788-a-13-a	Tray01:31	1613B/Solid		DB
32	13AU2110D5_32	320-76788-a-15-a	320-76788-a-15-a	Tray01:32	1613B/Solid		DB
33	13AU2110D5_33	320-76788-a-16-a	320-76788-a-16-a	Tray01:33	1613B/Solid		DB
34	13AU2110D5_34	320-76788-a-17-a	320-76788-a-17-a	Tray01:34	1613B/Solid		DB
35	13AU2110D5_35	320-76788-a-18-a	320-76788-a-18-a	Tray01:35	1613B/Solid		DB
36	13AU2110D5_36	320-76788-a-19-a	320-76788-a-19-a	Tray01:36	1613B/Solid		DB
37	13AU2110D5_37	320-76788-a-20-a	320-76788-a-20-a	Tray01:37	1613B/Solid		DB
38	13AU2110D5_38	320-76788-a-21-a	320-76788-a-21-a	Tray01:38	1613B/Solid		DB
39	13AU2110D5_39	320-76788-a-1-a	320-76788-a-1-a	Tray01:39	1613B/Solid		DB
40	13AU2110D5_40	320-76788-a-14-a	320-76788-a-14-a	Tray01:40	1613B/Solid		DB
41	13AU2110D5_41	SB Solvent Blank C-14	SB 081321B	Tray01:3			DB
42	13AU2110D5_42	WDM HRDXNCP_00044	WDM 081321C	Tray01:1	Dioxin		DB
43	13AU2110D5_43	CS-4 HRDXNL4_00099	CCV 081321C	Tray01:2	Dioxin		DB
44	13AU2110D5_44	mb 320-513585/1-a	mb 320-513585/1-a	Tray01:43	1613B/Solid	D265	DB
45	13AU2110D5_45	lcs 320-513585/2-a	lcs 320-513585/2-a	Tray01:44	1613B/Solid		DB
46	13AU2110D5_46	320-76765-a-18-a	320-76765-a-18-a	Tray01:45	1613B/Solid		DB
47	13AU2110D5_47	320-76769-a-1-a	320-76769-a-1-a	Tray01:46	1613B/Solid		DB
48	13AU2110D5_48	320-76769-a-1-b ms	320-76769-a-1-b ms	Tray01:47	1613B/Solid		DB
49	13AU2110D5_49	320-76769-a-1-c msd	320-76769-a-1-c msd	Tray01:48	1613B/Solid		DB
50	13AU2110D5_50	320-76769-a-2-a	320-76769-a-2-a	Tray01:49	1613B/Solid		DB
51	13AU2110D5_51	320-76769-a-3-a	320-76769-a-3-a	Tray01:50	1613B/Solid		DB
52	13AU2110D5_52	320-76769-a-5-a	320-76769-a-5-a	Tray01:51	1613B/Solid		DB
53	13AU2110D5_53	320-76769-a-6-a	320-76769-a-6-a	Tray01:52	1613B/Solid		DB
54	13AU2110D5_54	320-76769-a-7-a	320-76769-a-7-a	Tray01:53	1613B/Solid		DB
55	13AU2110D5_55	320-76769-a-8-a	320-76769-a-8-a	Tray01:54	1613B/Solid		DB
56	13AU2110D5_56	SB Solvent Blank C-14	SB 081321C	Tray01:3			DB
57	13AU2110D5_57	WDM HRDXNCP_00044	WDM 081321D	Tray01:1	Dioxin		DB
58	13AU2110D5_58	CS-4 HRDXNL4_00099	CCV 081321D	Tray01:2	Dioxin		DB

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
59	13AU2110D5_59	320-76769-a-13-a	320-76769-a-13-a	Tray01:57	1613B/Solid	D265	DB
60	13AU2110D5_60	320-76769-a-15-a	320-76769-a-15-a	Tray01:58	1613B/Solid		DB
61	13AU2110D5_61	320-76769-a-16-a	320-76769-a-16-a	Tray01:59	1613B/Solid		DB
62	13AU2110D5_62	320-76769-a-17-a	320-76769-a-17-a	Tray01:60	1613B/Solid		DB
63	13AU2110D5_63	320-76769-a-18-a	320-76769-a-18-a	Tray01:61	1613B/Solid		DB
64	13AU2110D5_64	320-76769-a-19-a	320-76769-a-19-a	Tray01:62	1613B/Solid		DB
65	13AU2110D5_65	320-76769-a-20-a	320-76769-a-20-a	Tray01:63	1613B/Solid		DB
66	13AU2110D5_66	320-76769-a-25-a	320-76769-a-25-a	Tray01:64	1613B/Solid		DB
67	13AU2110D5_67	320-76769-a-26-a	320-76769-a-26-a	Tray01:65	1613B/Solid		DB
68	13AU2110D5_68	320-76769-a-28-a	320-76769-a-28-a	Tray01:66	1613B/Solid		DB
69	13AU2110D5_69	320-76769-a-14-a	320-76769-a-14-a	Tray01:67	1613B/Solid		DB
70	13AU2110D5_70	SB Solvent Blank C-14	SB 081321D	Tray01:3			DB

Logfile checked
08/16/21 SMA

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover

Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
---	---	C:\CHROM

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---

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M 292.9824 R 12026

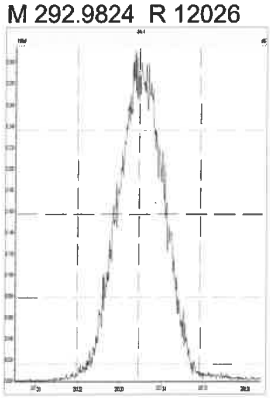

M 304.9824 R 11908

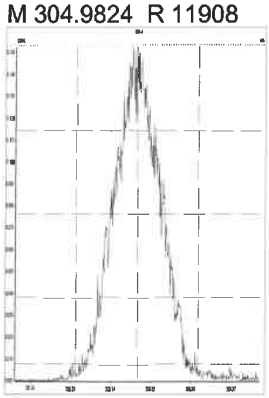

M 318.9792 R 12118

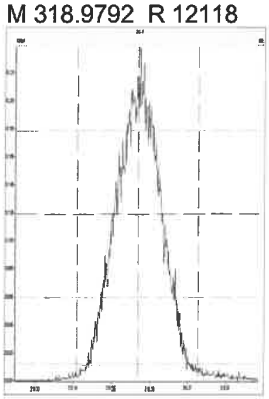

M 330.9792 R 11944

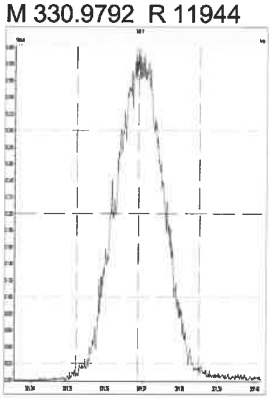

M 342.9792 R 11338

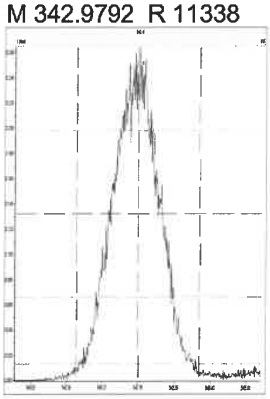

M 354.9792 R 11779

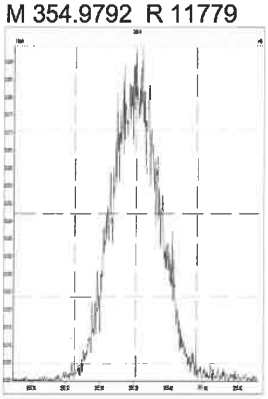

M 366.9792 R 12019

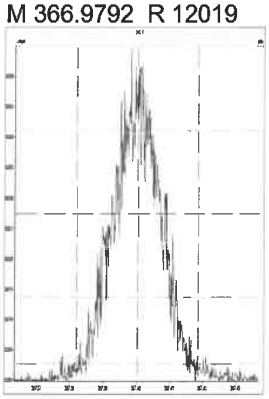

M 380.9760 R 10730

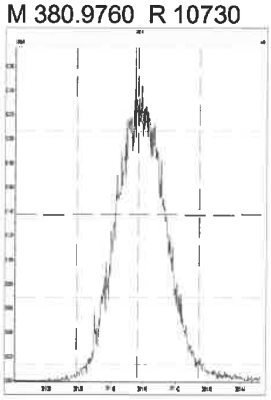

M 392.9760 R 11106

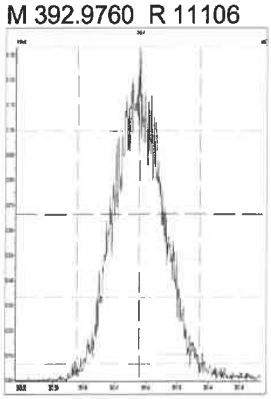

M 404.9760 R 10752

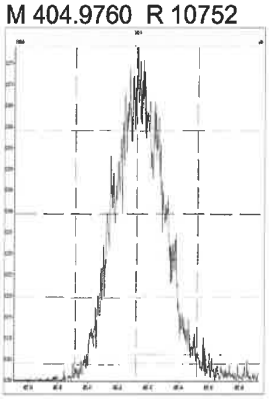

M 416.9760 R 12199

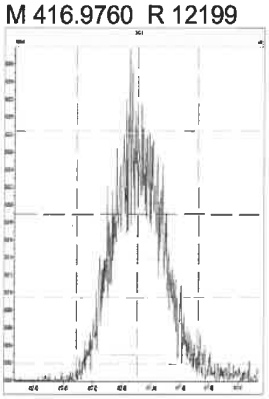

M 318.9792 R 11775

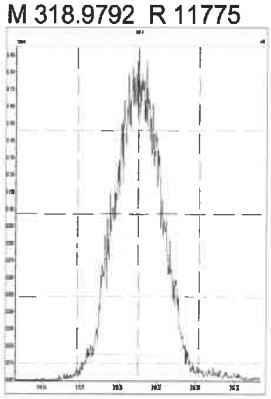

M 330.9792 R 11821

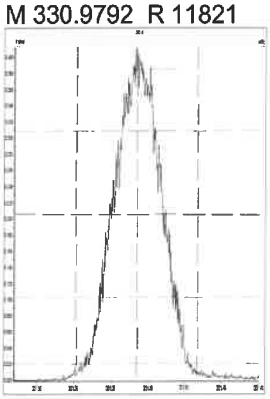

M 342.9792 R 12170

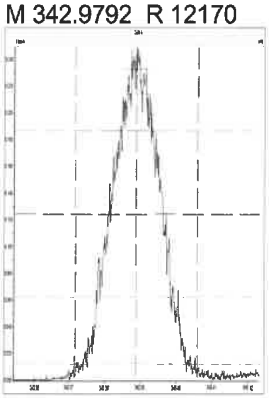

M 354.9792 R 12199

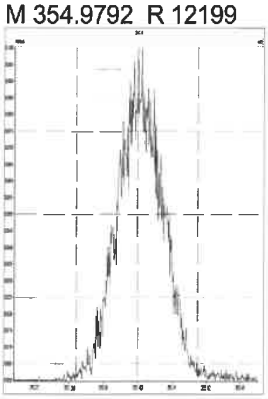

M 366.9792 R 12325

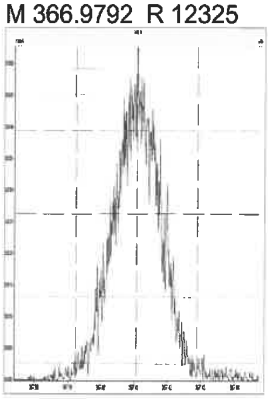

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M 380.9760 R 11369

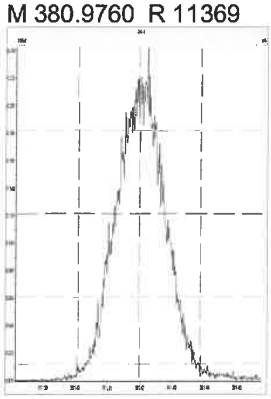

M 392.9760 R 11454

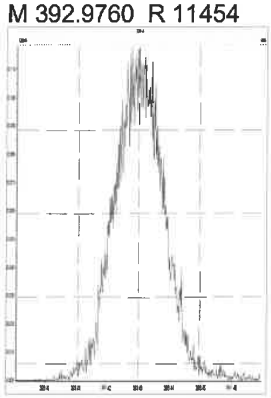

M 404.9760 R 11272

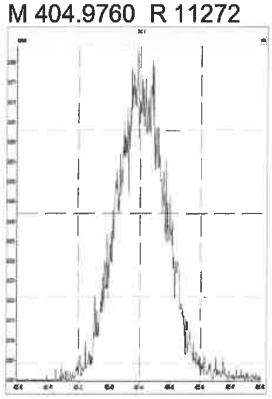

M 416.9760 R 12351

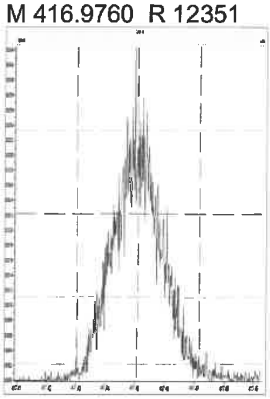

M 366.9792 R 11656

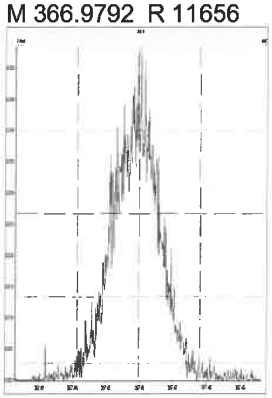

M 380.9760 R 11682

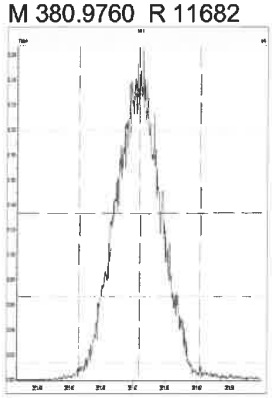

M 392.9760 R 12469

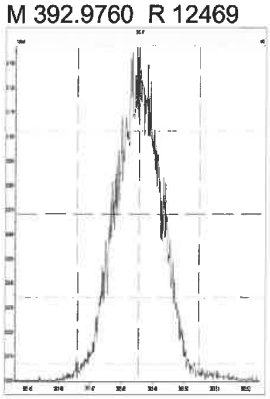

M 404.9760 R 12079

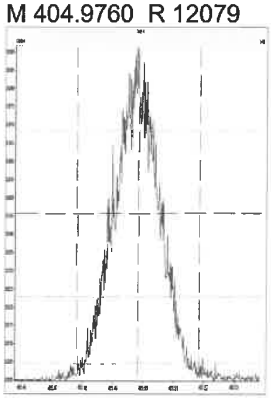

M 416.9760 R 12794

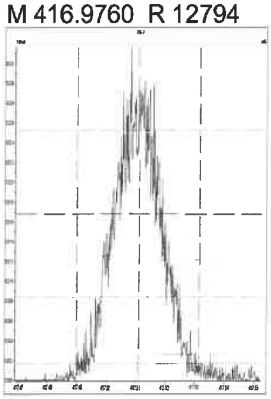

M 430.9728 R 11798

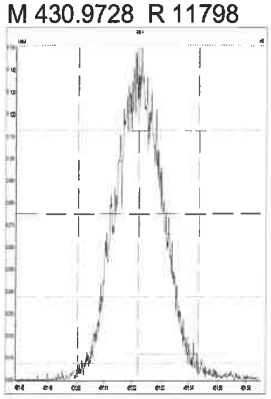

M 442.9728 R 12165

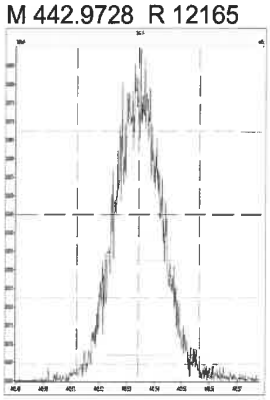

M 454.9728 R 11764

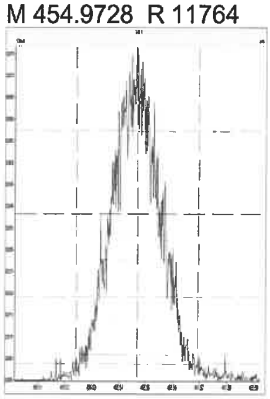

M 380.9760 R 11876

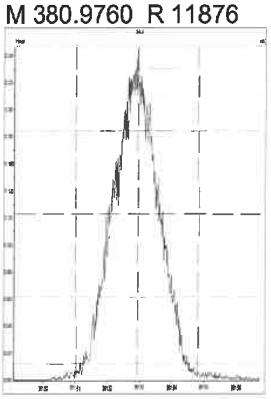

M 392.9760 R 12345

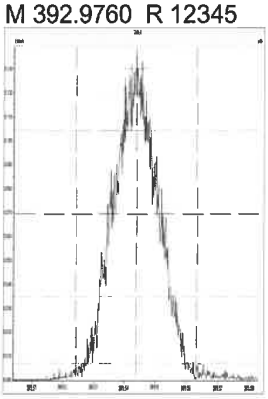

M 404.9760 R 12196

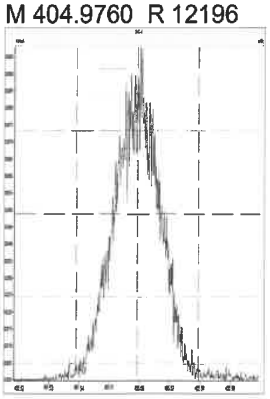

M 416.9760 R 12634

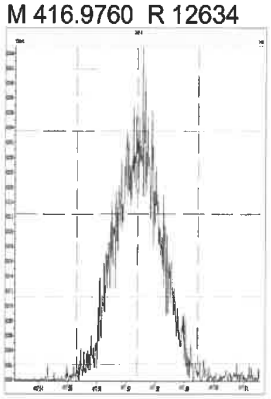

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M 430.9728 R 11655

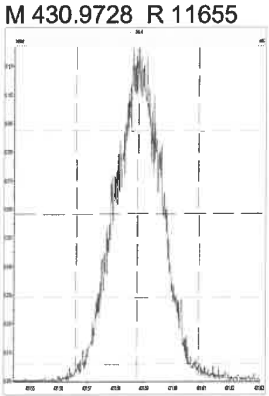

M 442.9728 R 11576

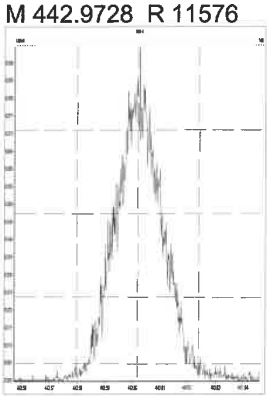

M 454.9728 R 11392

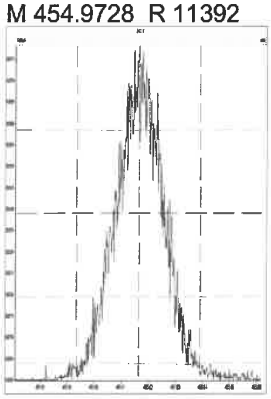

M 466.9728 R 13409

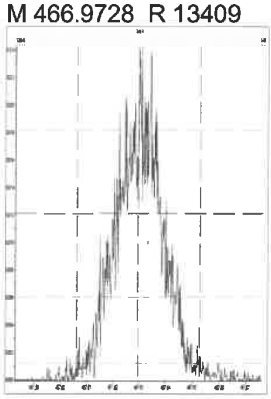

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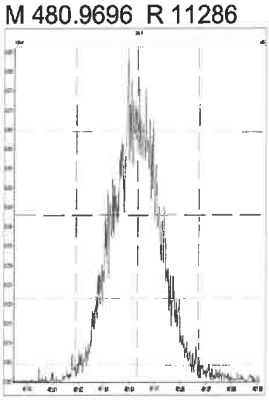

M 380.9760 R 12136

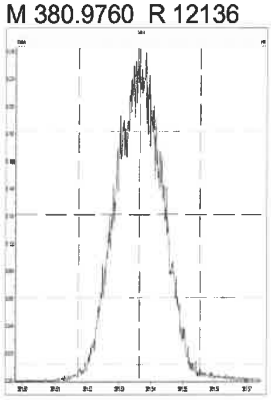

M 392.9760 R 12395

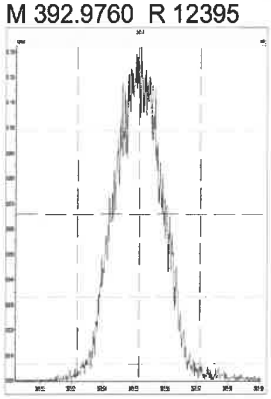

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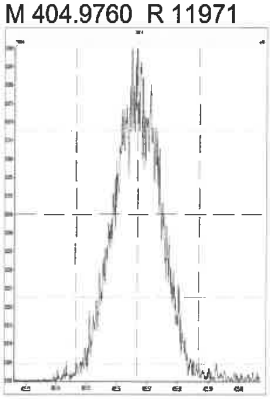

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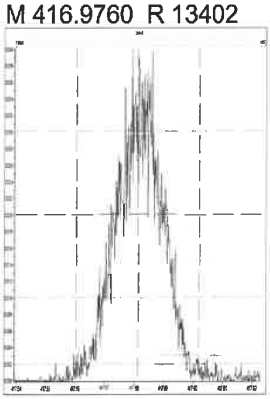

M 430.9728 R 12112

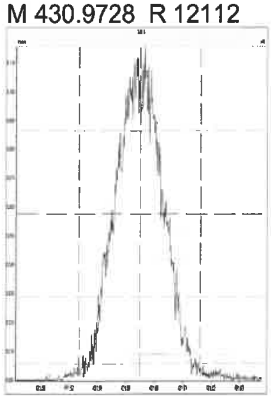

M 442.9728 R 12626

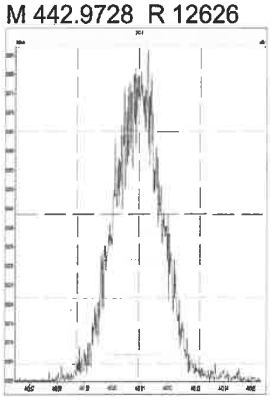

M 454.9728 R 11926

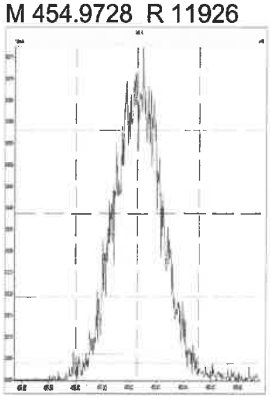

M 466.9728 R 12367

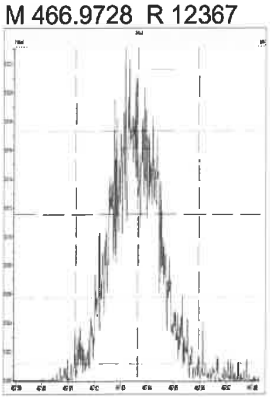

M 480.9696 R 11494

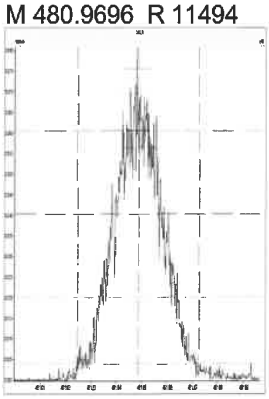

M 492.9696 R 10995

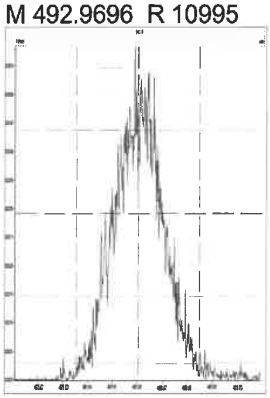

M 504.9696 R 11886

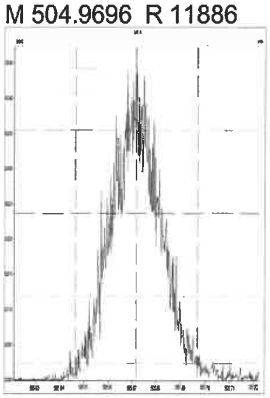

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M 516.9697 R 14005

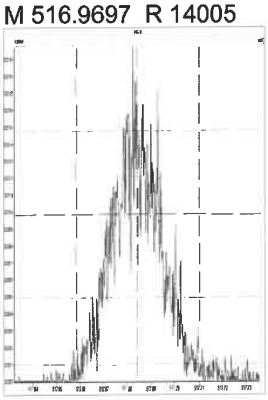

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M 292.9824 R 11904

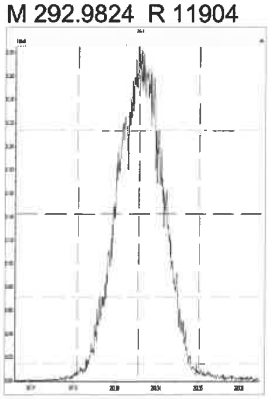

M 304.9824 R 12419

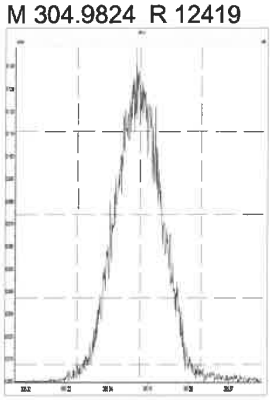

M 318.9792 R 12226

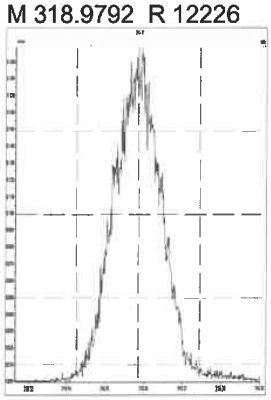

M 330.9792 R 11962

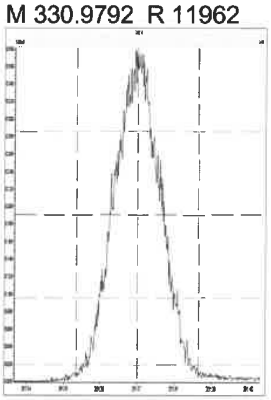

M 342.9792 R 11990

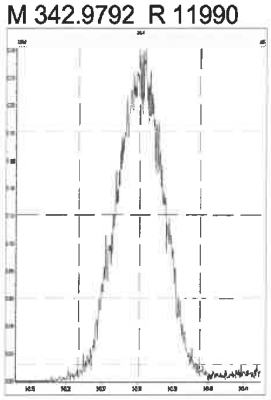

M 354.9792 R 11712

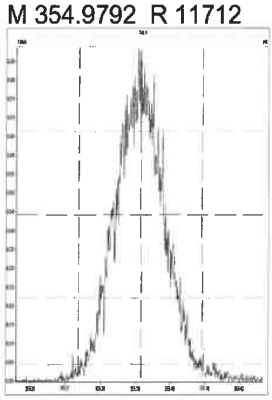

M 366.9792 R 12261

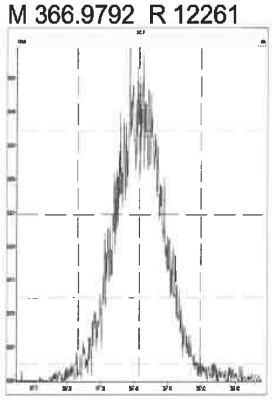

M 380.9760 R 11020

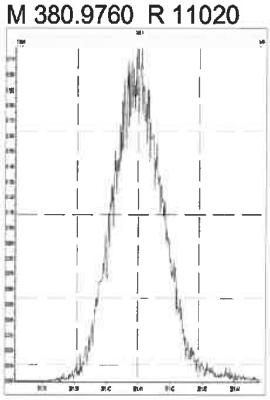

M 392.9760 R 10777

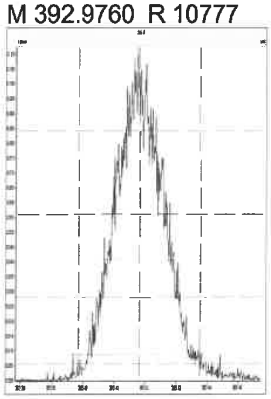

M 404.9760 R 11365

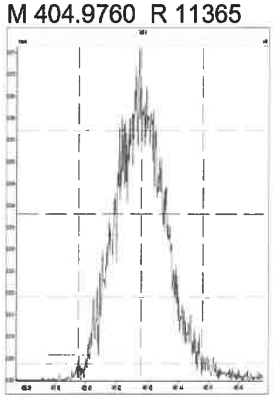

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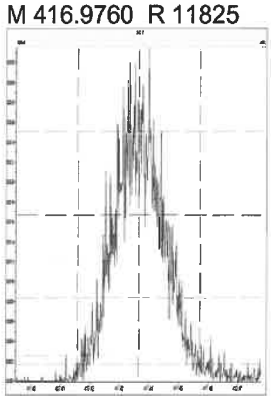

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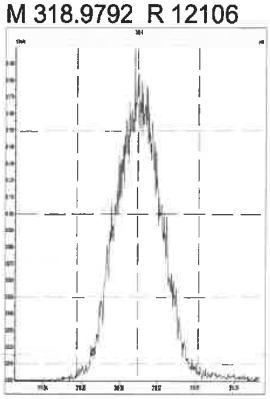

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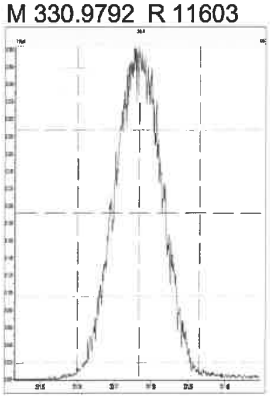

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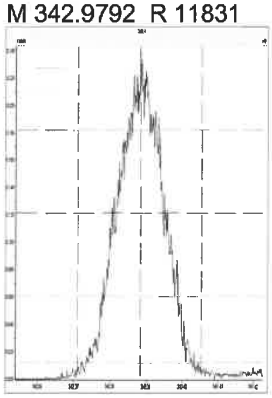

M 354.9792 R 11659

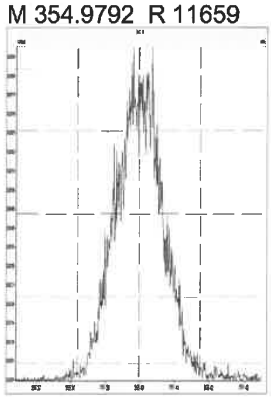

M 366.9792 R 12345

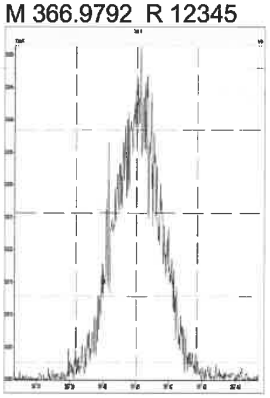

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M 380.9760 R 11441

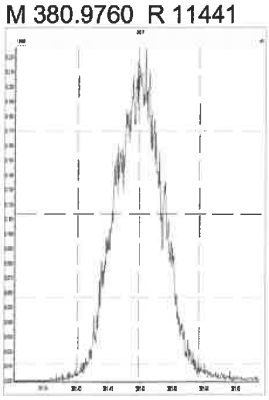

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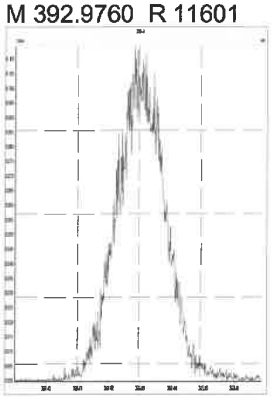

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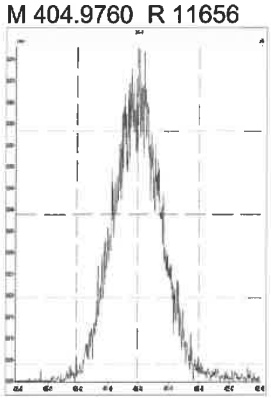

M 416.9760 R 12504

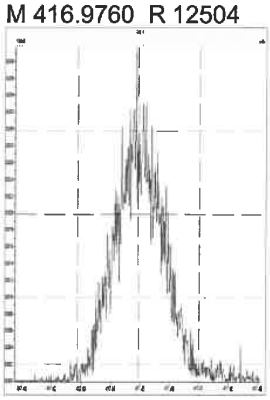

M 366.9792 R 12063

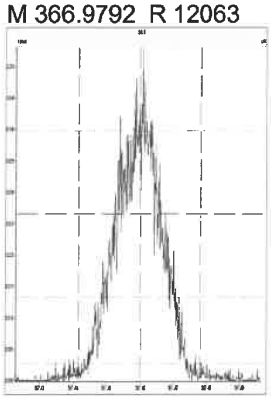

M 380.9760 R 11852

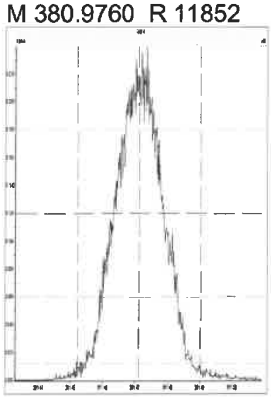

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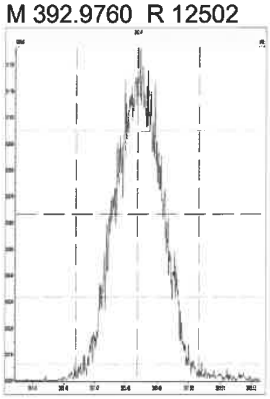

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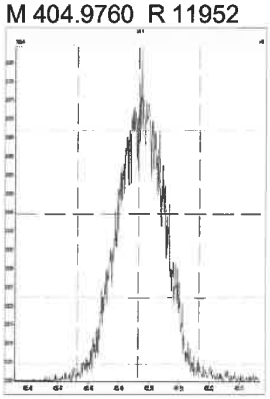

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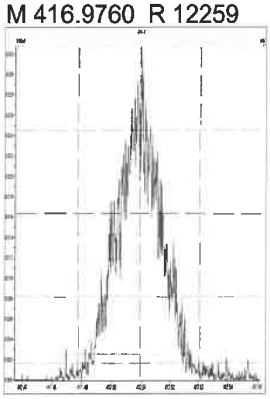

M 430.9728 R 11363

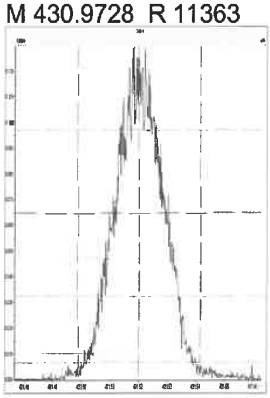

M 442.9728 R 11712

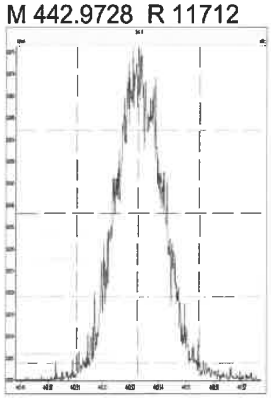

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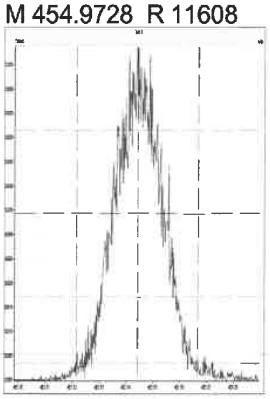

M 380.9760 R 11936

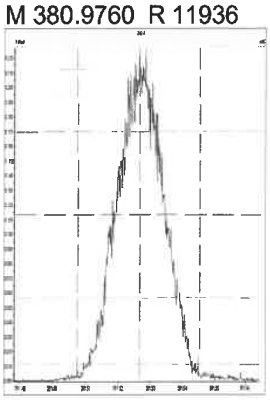

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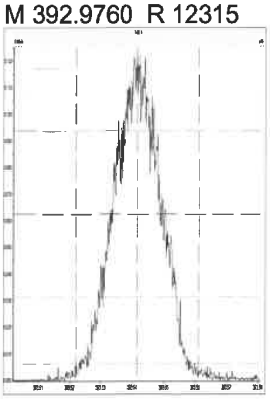

M 404.9760 R 12390

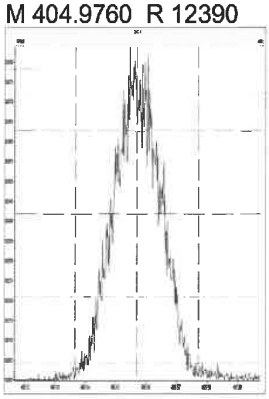

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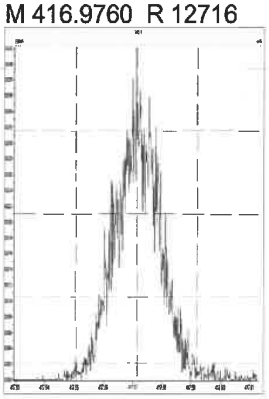

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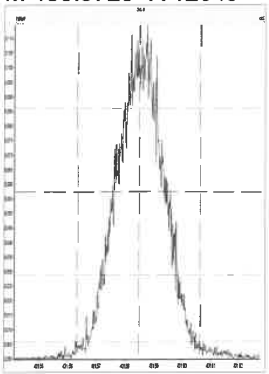

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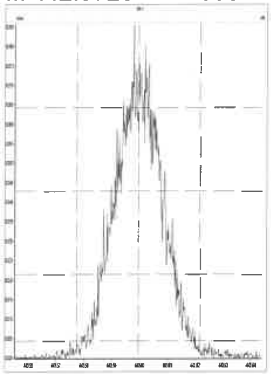

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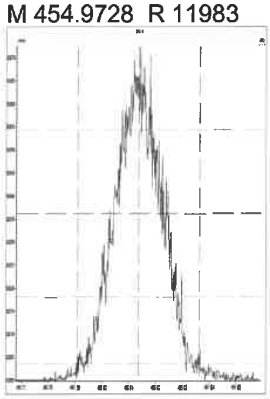

M 466.9728 R 12197

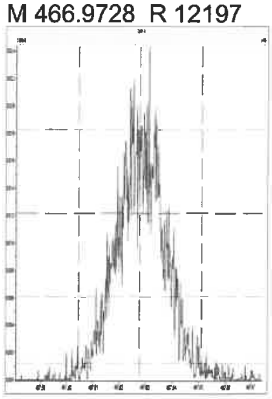

M 480.9696 R 11215

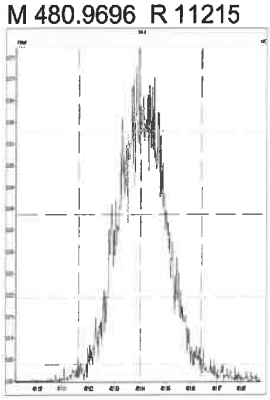

M 380.9760 R 11961

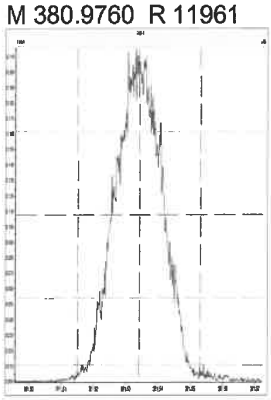

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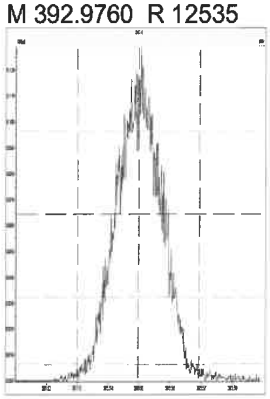

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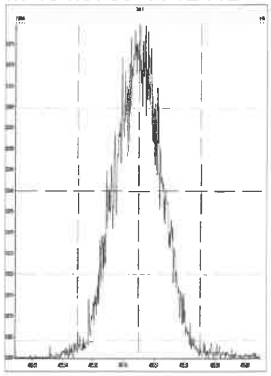

M 416.9760 R 12890

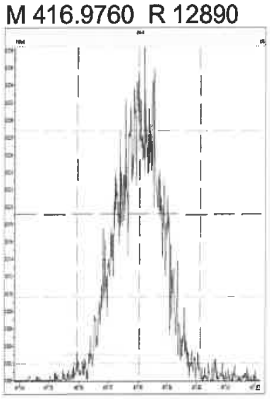

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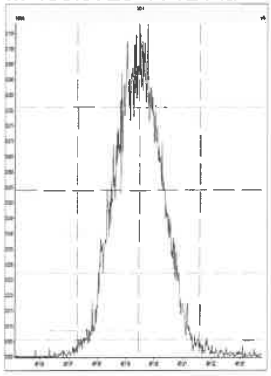

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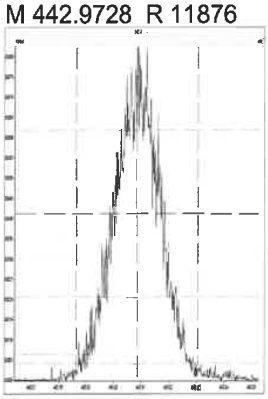

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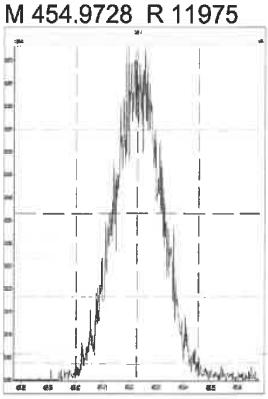

M 466.9728 R 12570

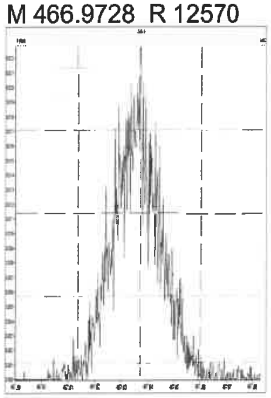

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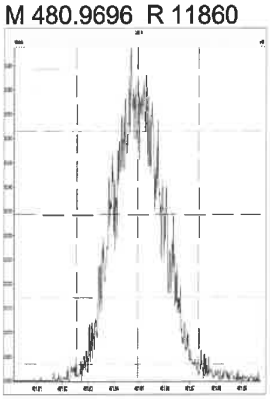

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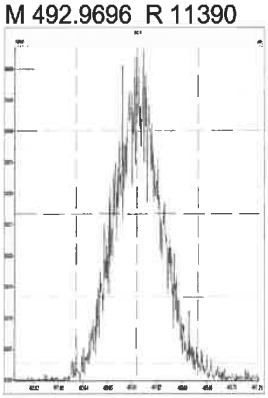

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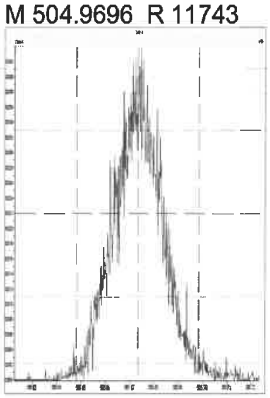

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M 516.9697 R 12288

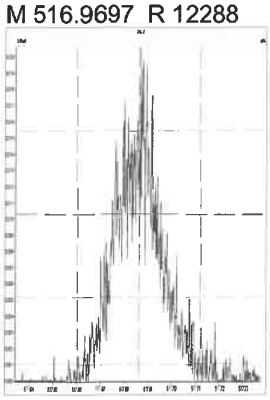

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M 292.9824 R 12515

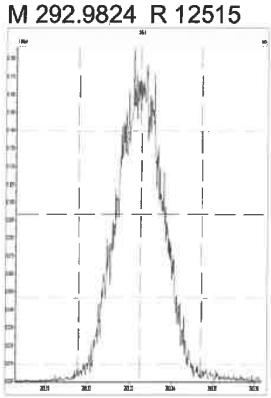

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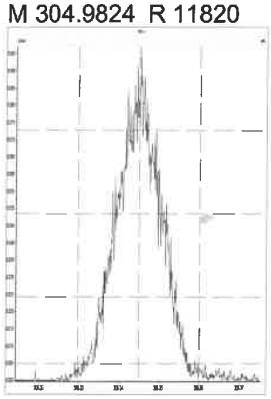

M 318.9792 R 12347

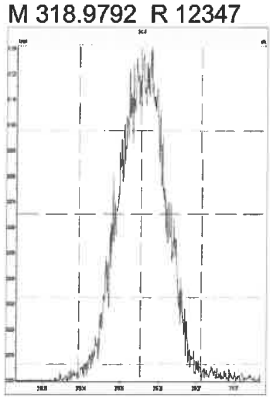

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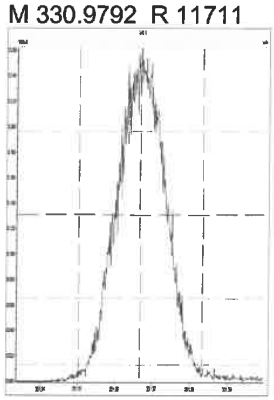

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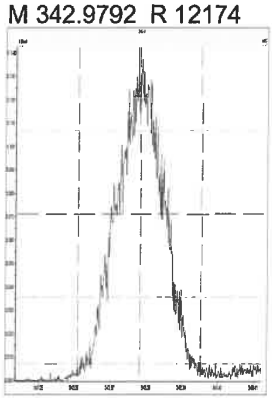

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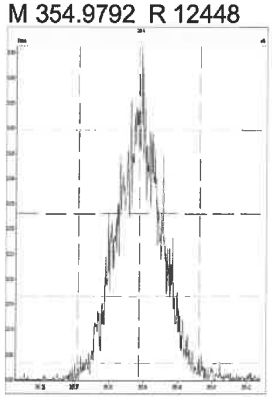

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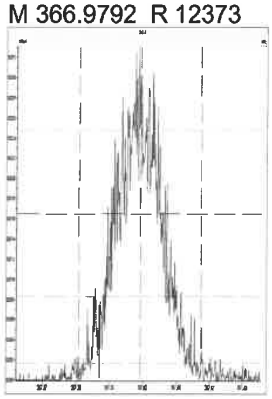

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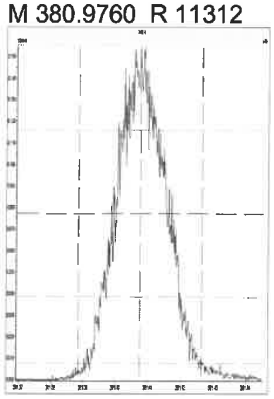

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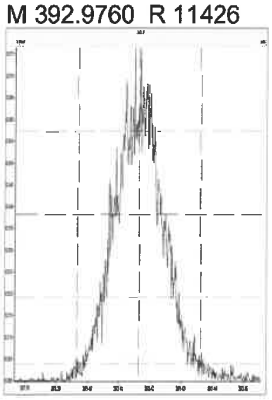

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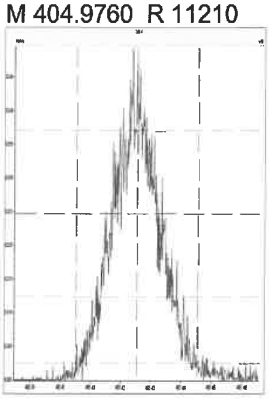

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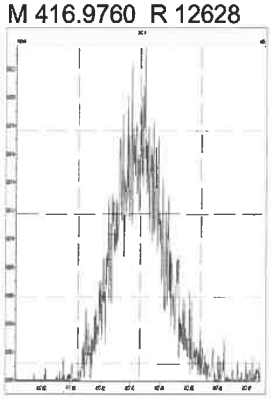

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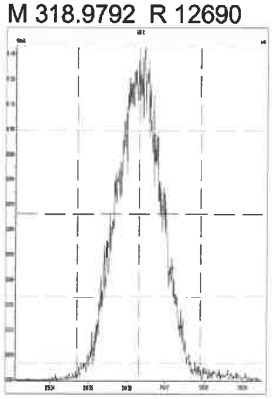

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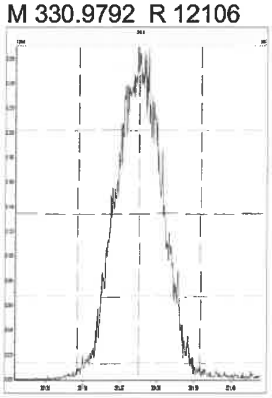

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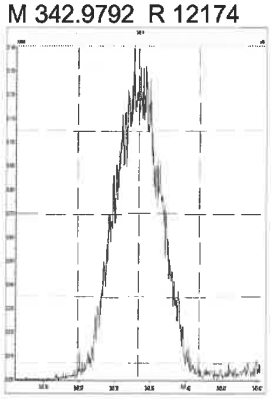

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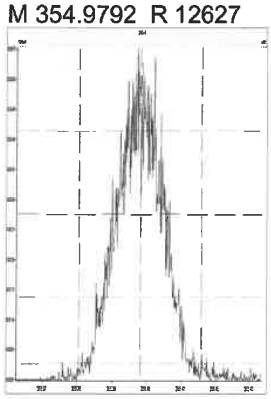

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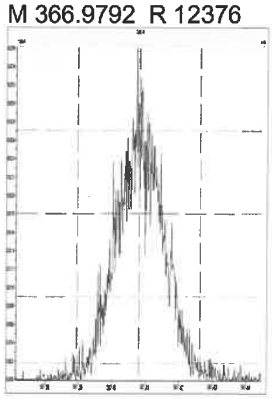

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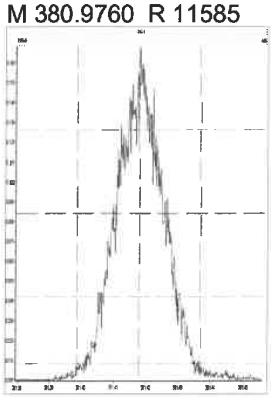

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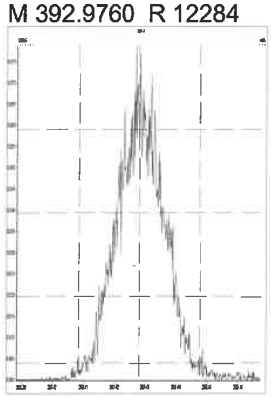

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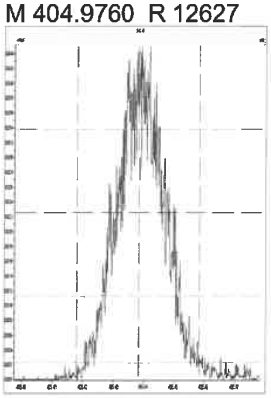

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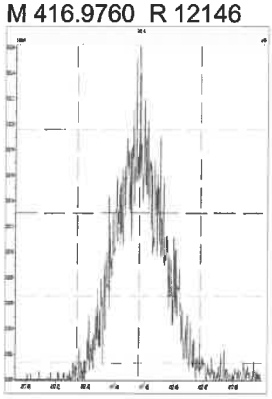

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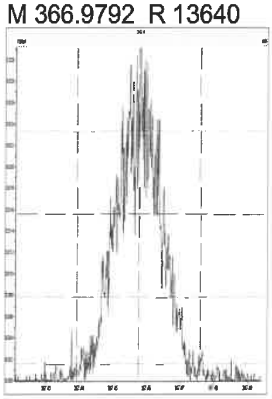

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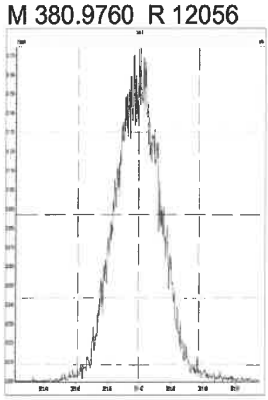

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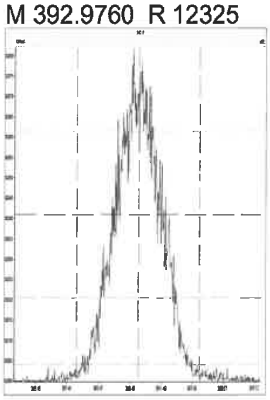

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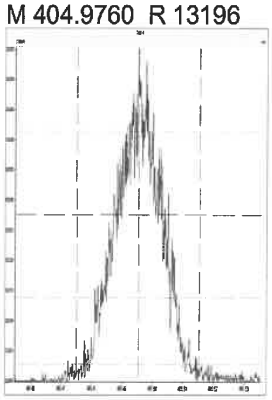

M 416.9760 R 12908

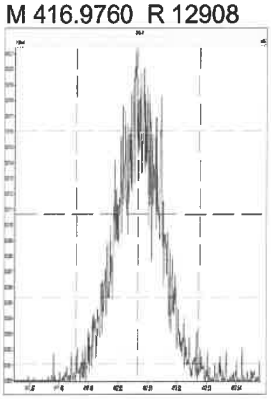

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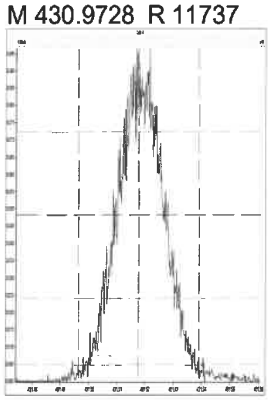

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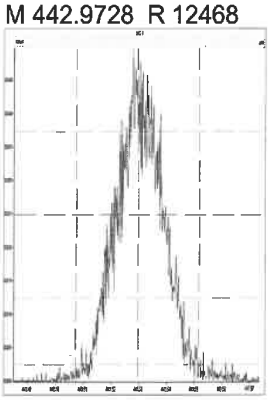

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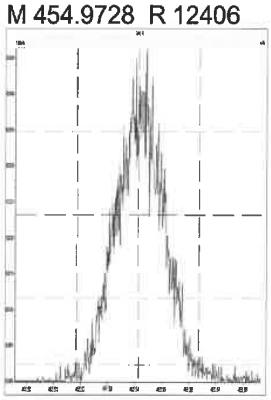

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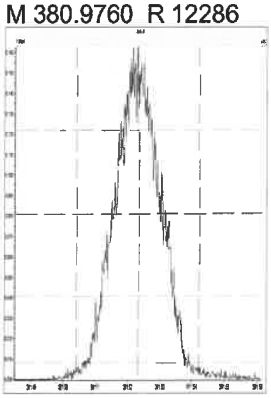

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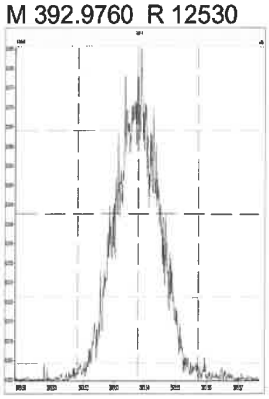

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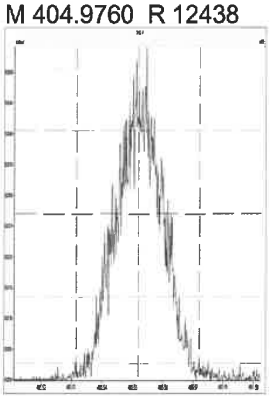

M 416.9760 R 13043

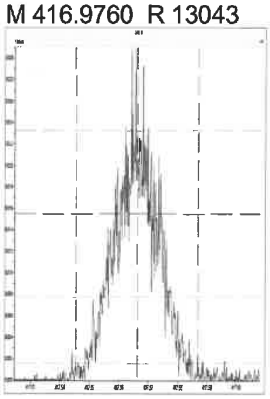

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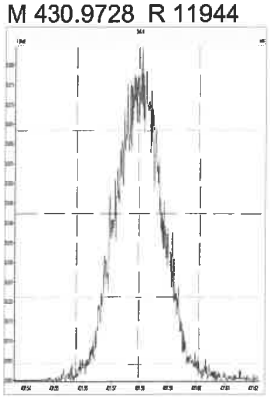

M 442.9728 R 12565

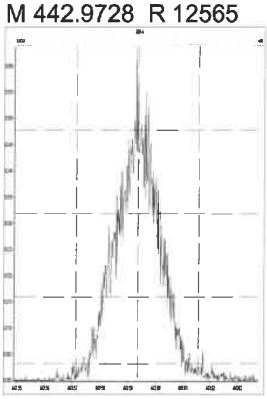

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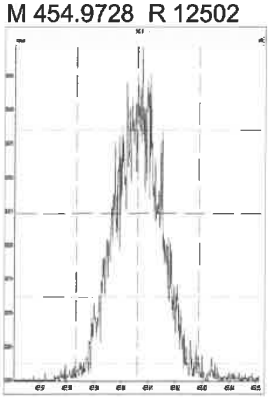

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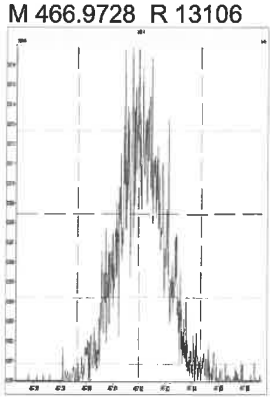

M 480.9696 R 12019

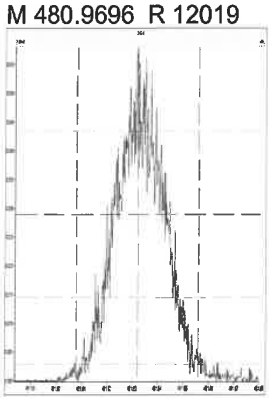

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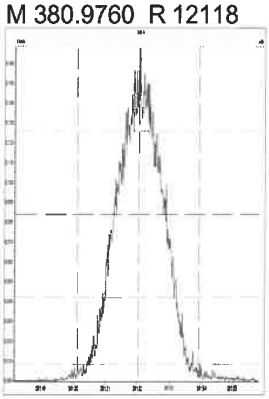

M 392.9760 R 12428

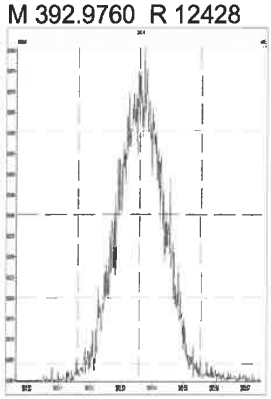

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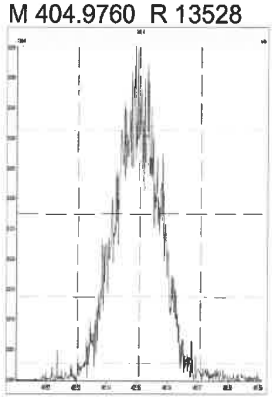

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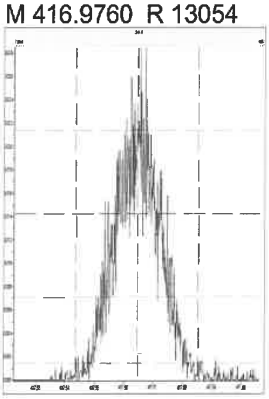

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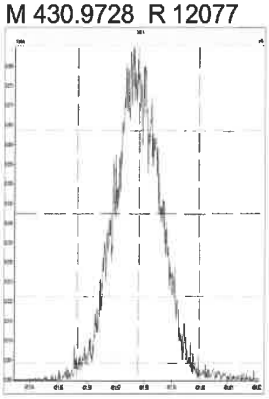

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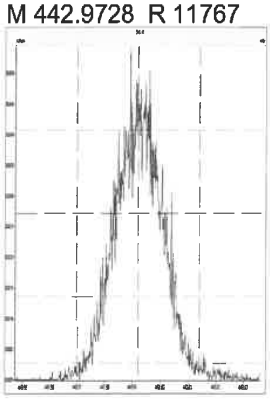

M 454.9728 R 12580

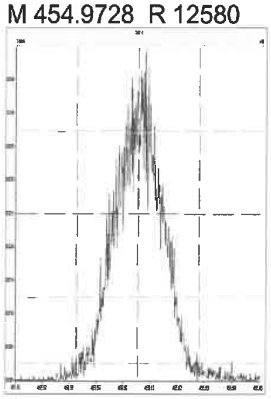

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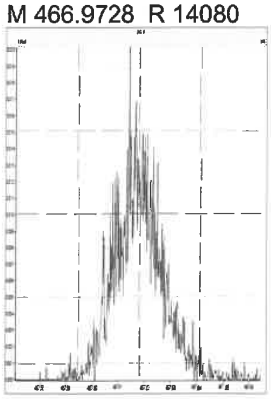

M 480.9696 R 11633

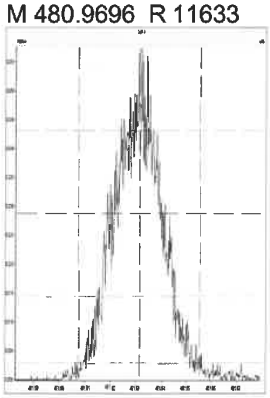

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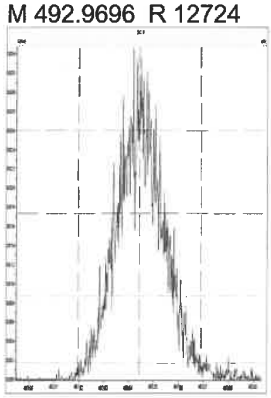

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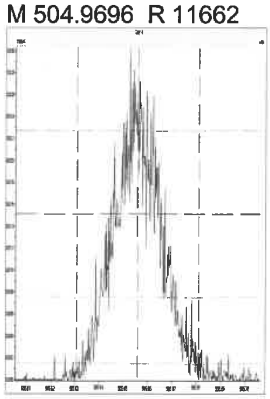

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M 516.9697_R 13687

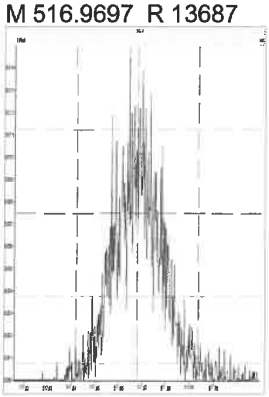

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M 292.9824 R 12548

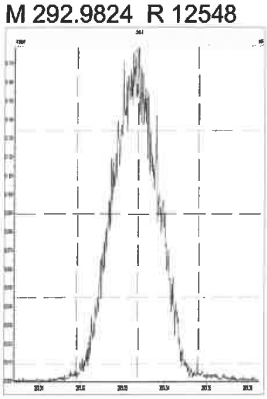

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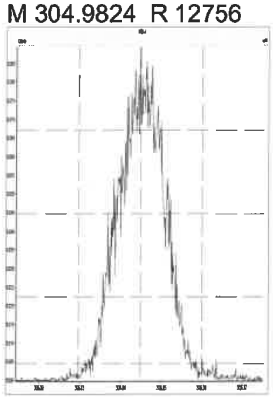

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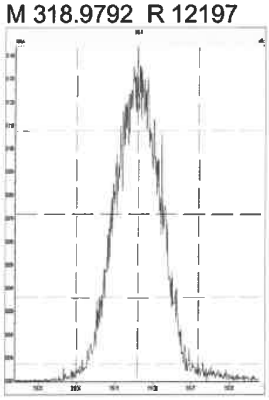

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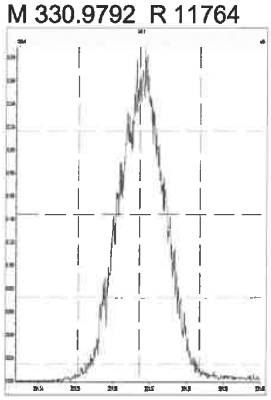

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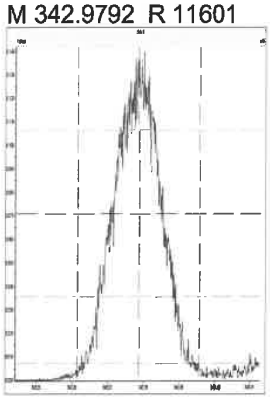

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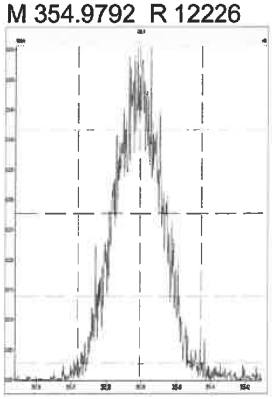

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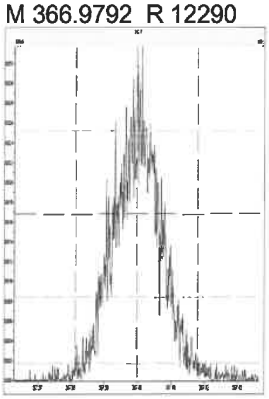

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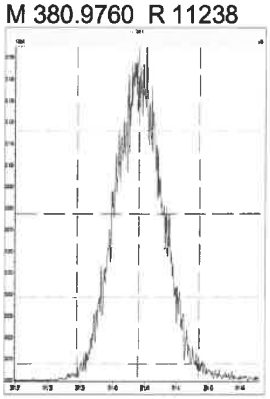

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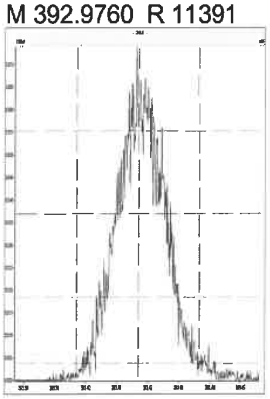

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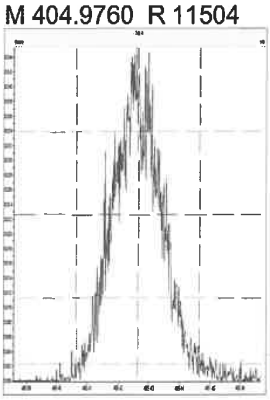

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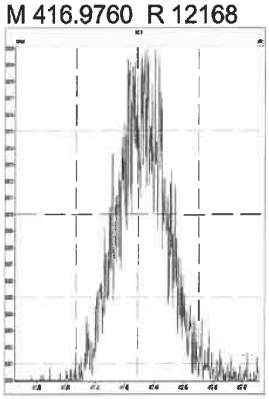

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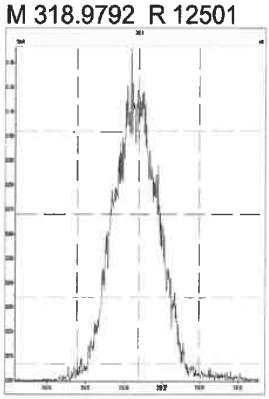

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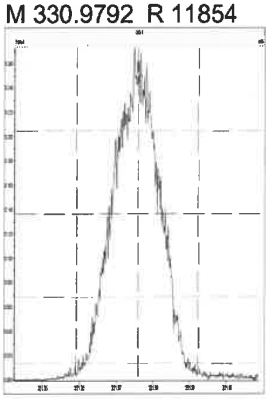

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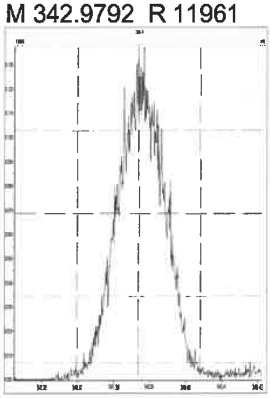

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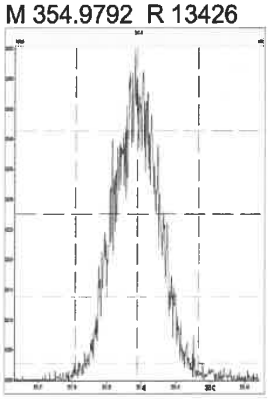

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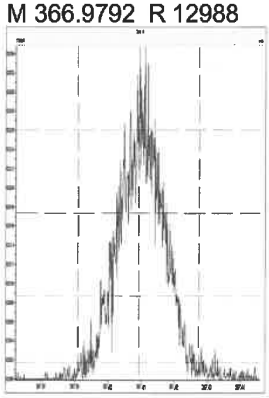

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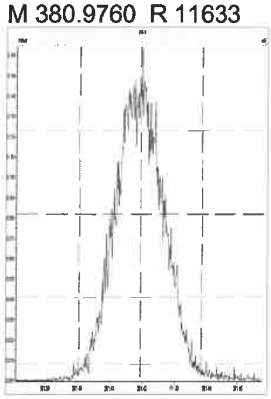

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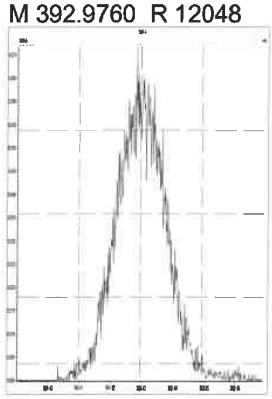

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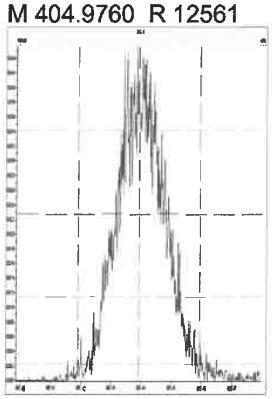

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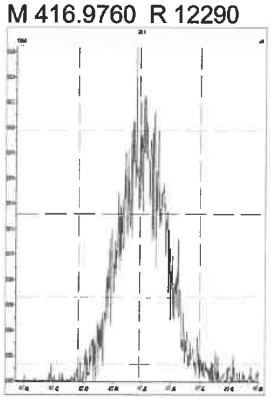

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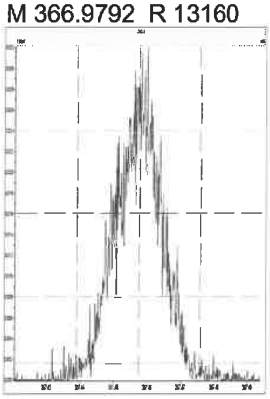

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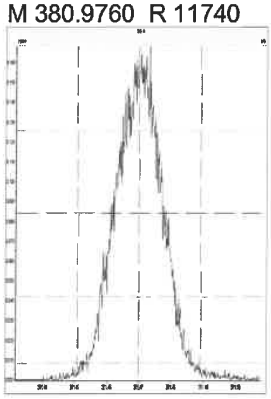

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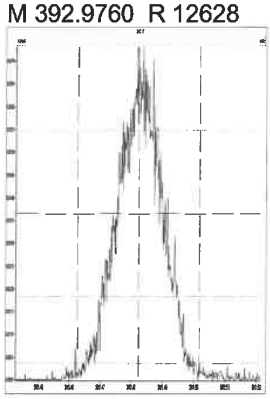

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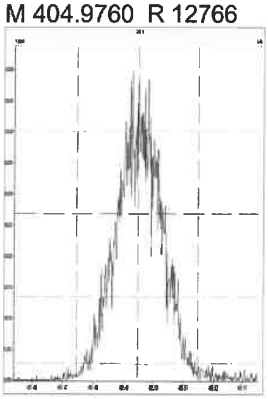

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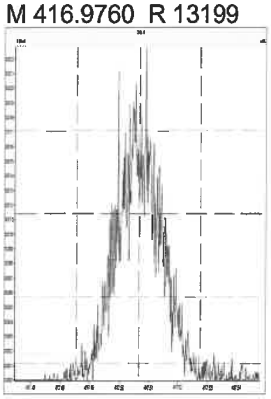

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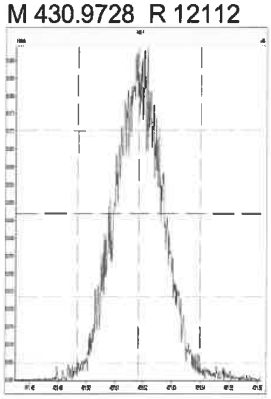

M 442.9728 R 12165

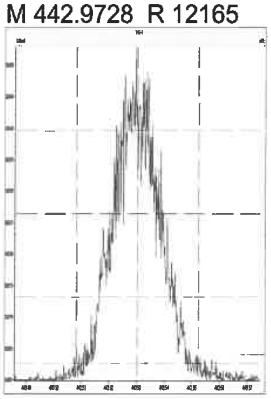

M 454.9728 R 11860

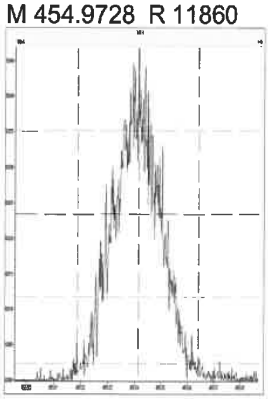

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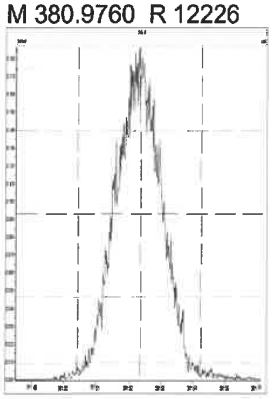

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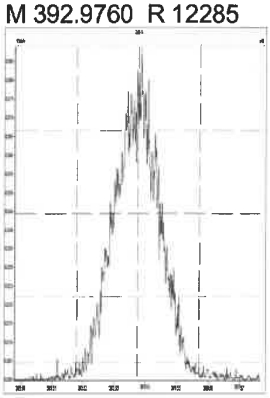

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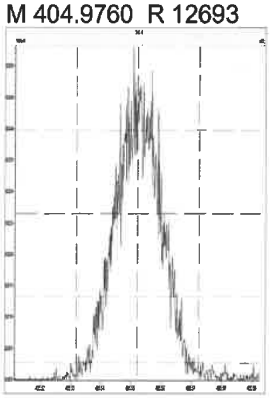

M 416.9760 R 13344

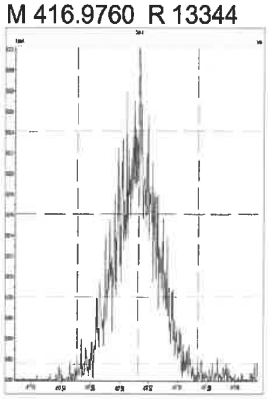

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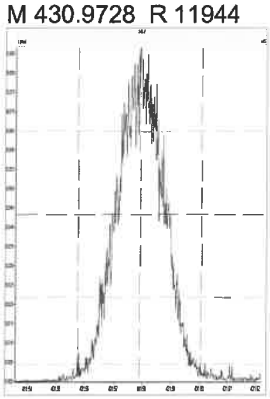

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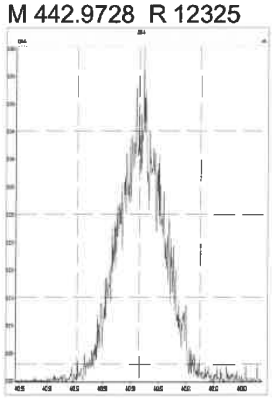

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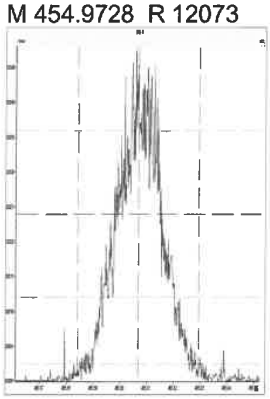

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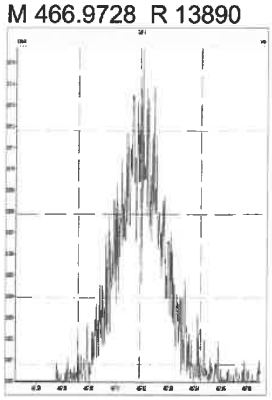

M 480.9696 R 11794

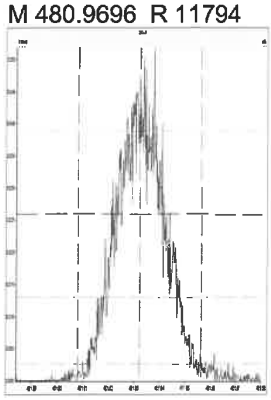

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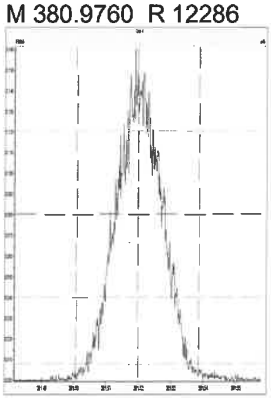

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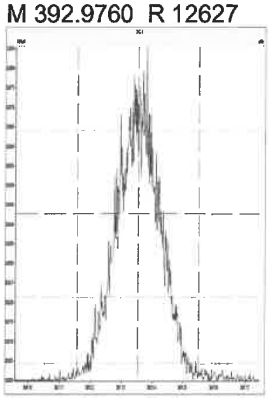

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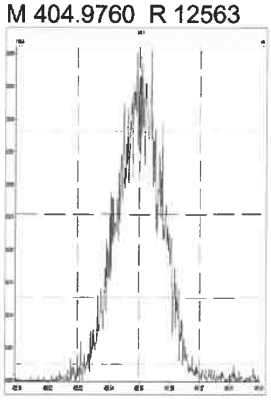

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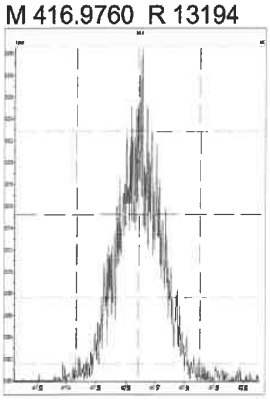

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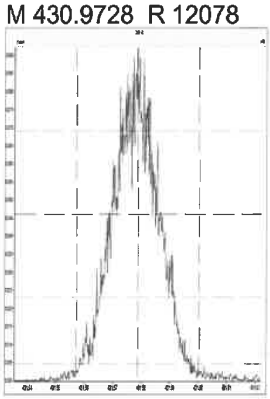

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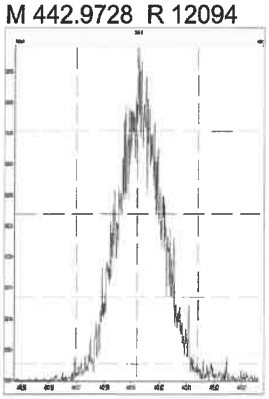

M 454.9728 R 12987

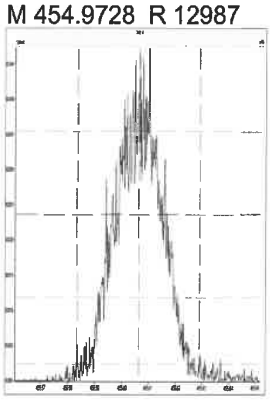

M 466.9728 R 13118

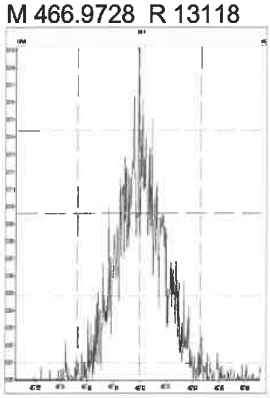

M 480.9696 R 11669

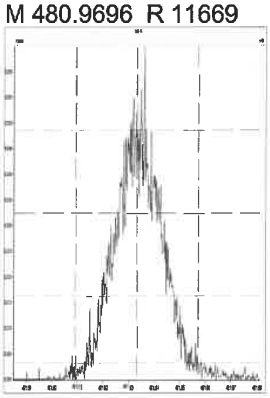

M 492.9696 R 11944

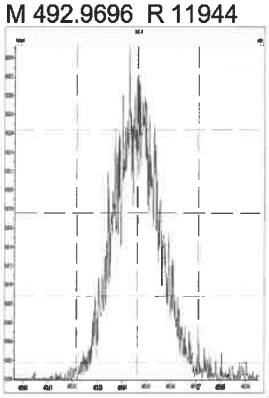

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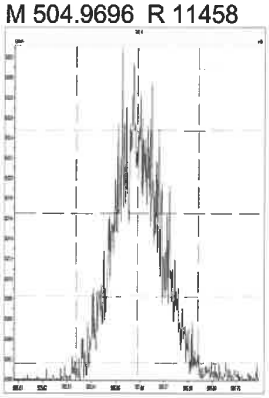

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M 516.9697 R 12954

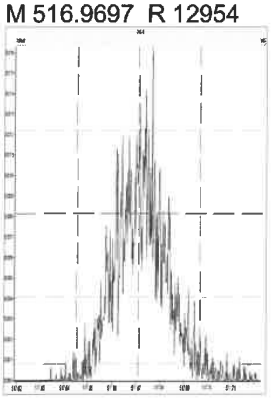

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M 292.9824 R 11338

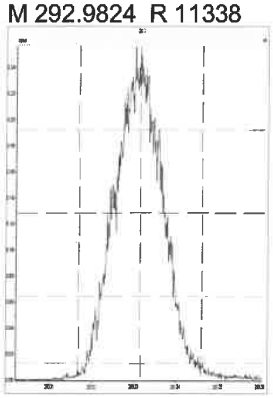

M 304.9824 R 11552

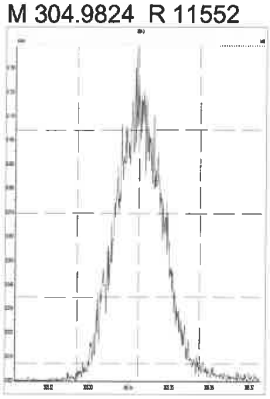

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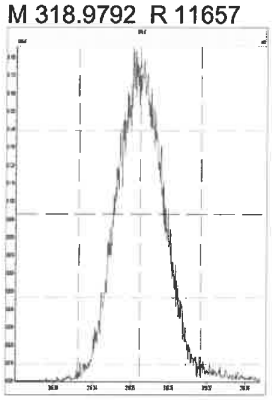

M 330.9792 R 11287

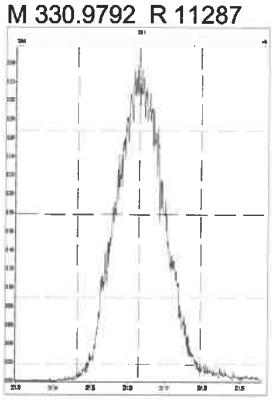

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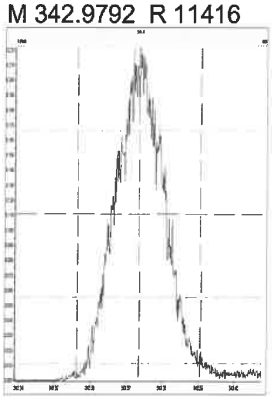

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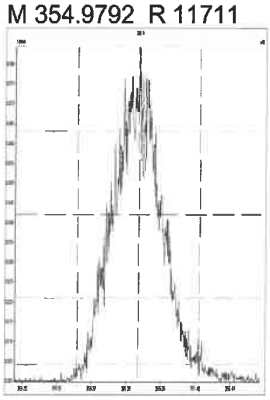

M 366.9792 R 12286

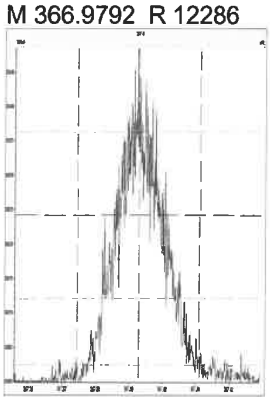

M 380.9760 R 10272

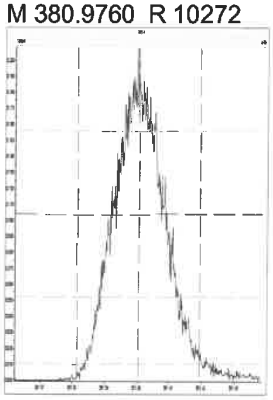

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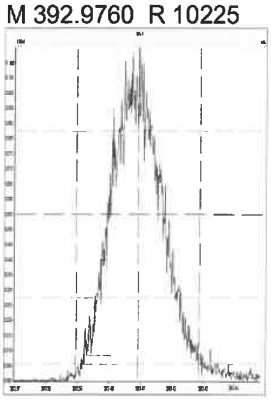

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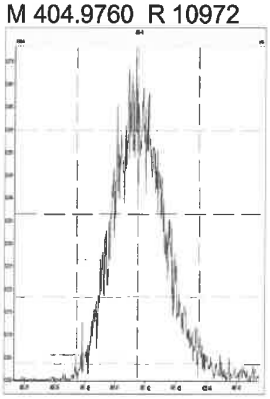

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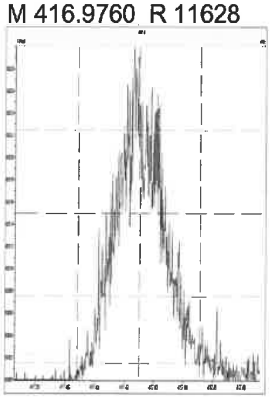

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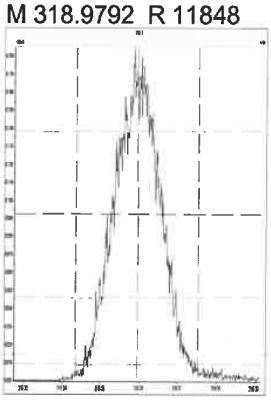

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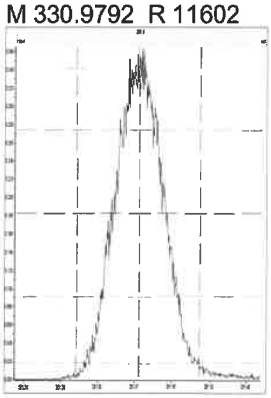

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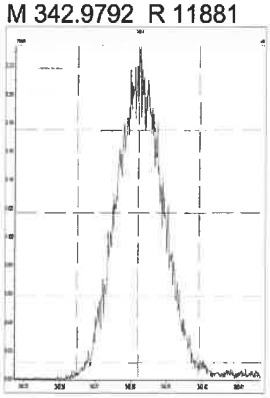

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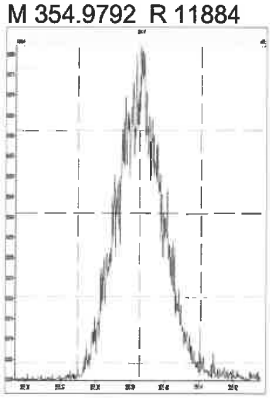

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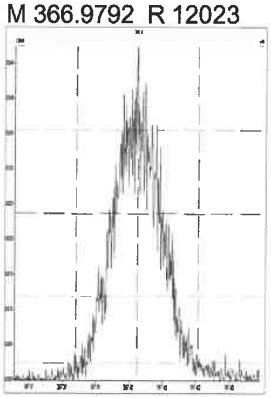

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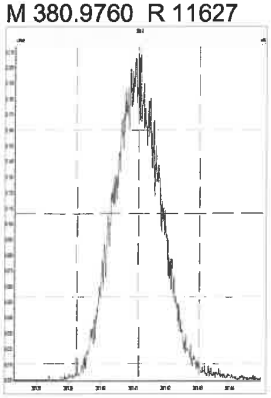

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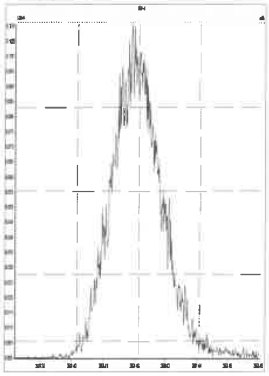

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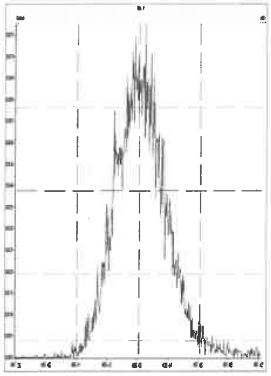

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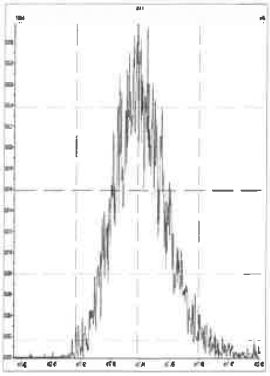

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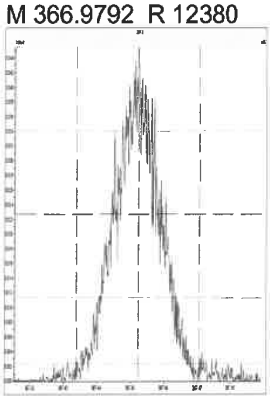

M 380.9760 R 11848

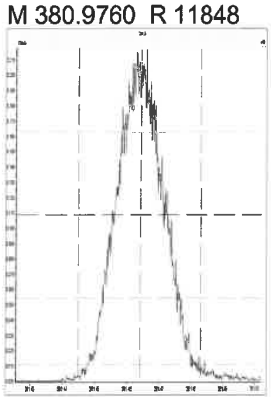

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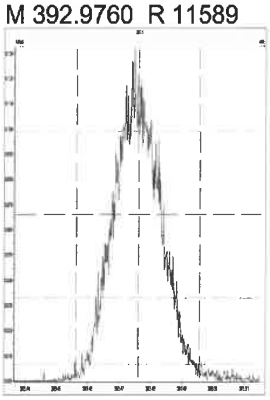

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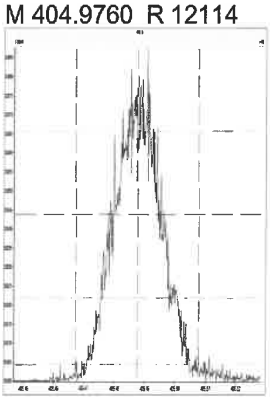

M 416.9760 R 12595

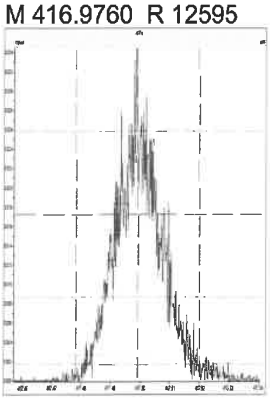

M 430.9728 R 11631

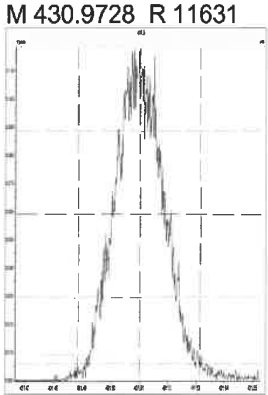

M 442.9728 R 11881

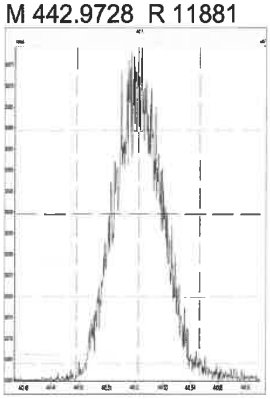

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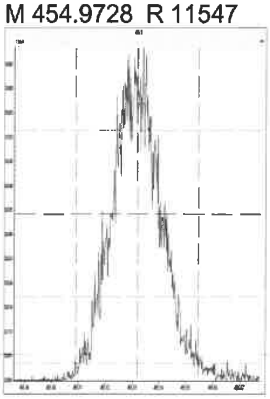

M 380.9760 R 11772

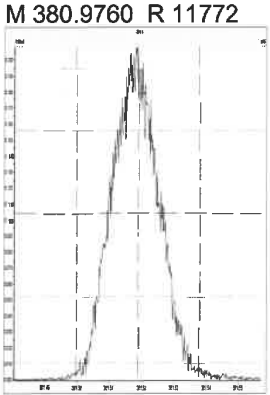

M 392.9760 R 12136

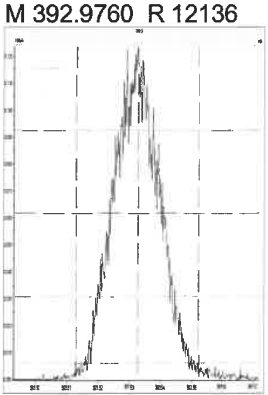

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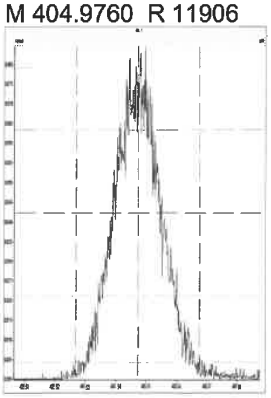

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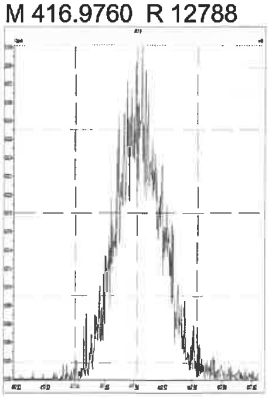

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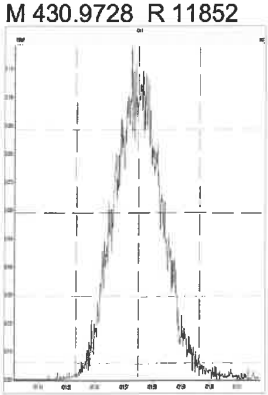

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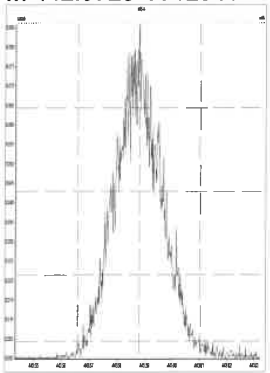

M 454.9728 R 12114

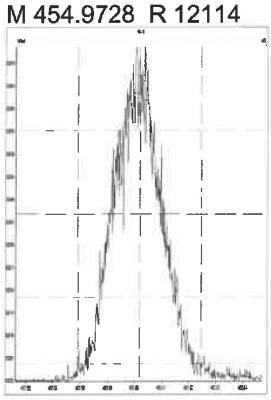

M 466.9728 R 13406

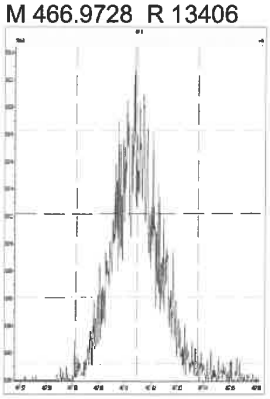

M 480.9696 R 11905

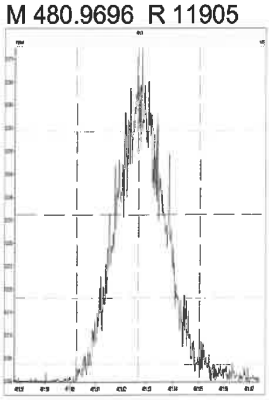

M 380.9760 R 11798

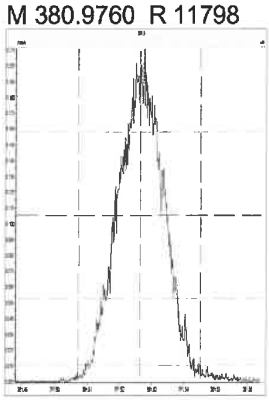

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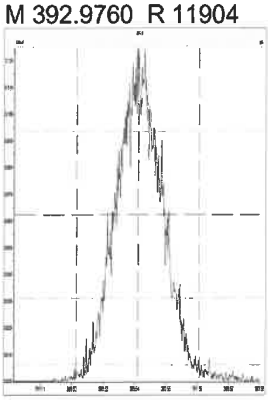

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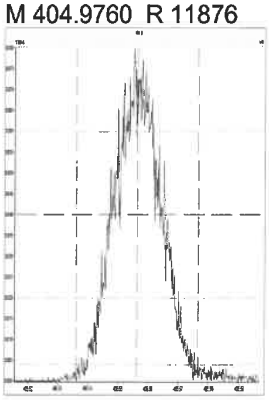

M 416.9760 R 12048

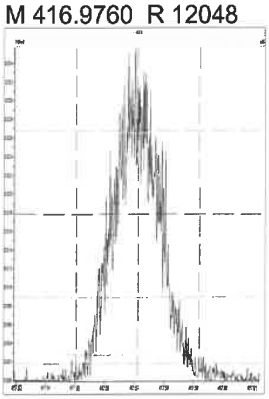

M 430.9728 R 11820

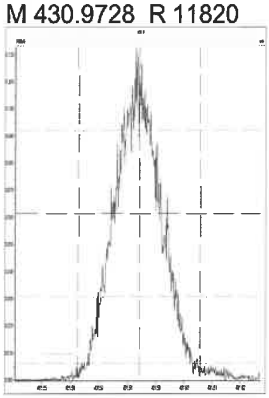

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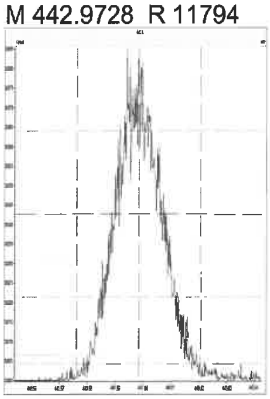

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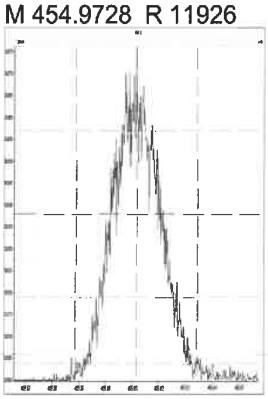

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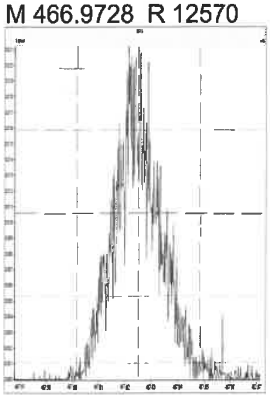

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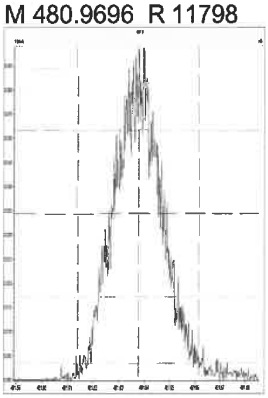

M 492.9696 R 11303

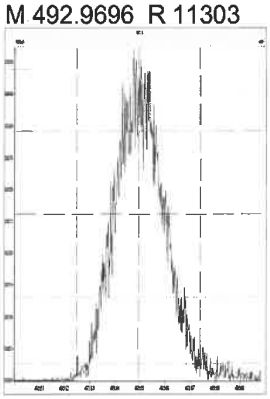

M 504.9696 R 11449

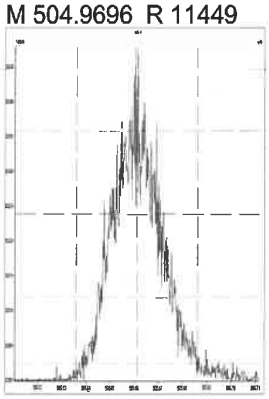

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Printed: Saturday, August 14, 2021 23:41:31 Pacific Daylight Time

M 516.9697 R 11508

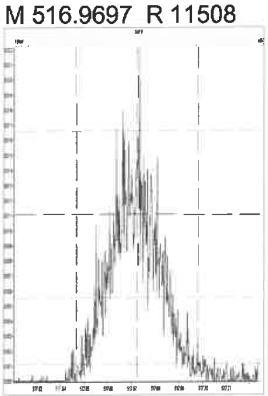

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 14-Aug-2021 01:16:15 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081321A CS-4 HRDXNL4_00099
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 11:47:28 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1665

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:32:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	129312120	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	209949347	0.77	1.6249	99.9	99.9	0.1655	0.1655	99.92	
2,3,7,8-TCDF	17.356	21812120	0.76	1.0239	10.1	10.1	0.0207	0.0207	101	
A Non-2,3,7,8-sub-TCDF	17.046						0.0207	0.0207		Rn
S Total TCDF					10.1	10.1	0.0207	0.0207		
D 13C-2,3,7,8-TCDD	18.051	118553919	0.81	0.8993	101.9	101.9	0.1441	0.1441	102	
2,3,7,8-TCDD	18.066	15318107	0.78	1.2541	10.3	10.3	0.0137	0.0137	103	
$ 37Cl4-2,3,7,8-TCDD	18.066	16073849		1.1071	11.2	11.2	0.0129	0.0129	112	
A Non-2,3,7,8-sub-TCDD	17.499						0.0137	0.0137		
S Total TCDD					10.3	10.3	0.0137	0.0137		
D 13C-1,2,3,7,8-PeCDF	22.367	155816801	1.58	1.2101	99.6	99.6	0.2217	0.2217	99.58	
1,2,3,7,8-PeCDF	22.381	83967041	1.59	1.0611	50.8	50.8	0.1552	0.1552	102	
D 13C-2,3,4,7,8-PeCDF	23.703	159188869	1.58	1.2395	99.3	99.3	0.2164	0.2164	99.32	
2,3,4,7,8-PeCDF	23.731	82255750	1.59	1.0184	50.7	50.7	0.1686	0.1686	101	
A F1 PeCDFs	20.093						0.006734	0.006734		
A Non-2,3,7,8-sub-PeCDF	23.241						0.1617	0.1617		n
S Total PeCDF					101.5	101.5	0.1619	0.1619		
D 13C-1,2,3,7,8-PeCDD	24.426	102878464	1.61	0.7612	104.5	104.5	0.1036	0.1036	105	
1,2,3,7,8-PeCDD	24.453	53334024	1.59	1.0484	49.4	49.4	0.0527	0.0527	98.89	
A Non-2,3,7,8-sub-PeCDD	23.355						0.0527	0.0527		
S Total PeCDD					49.4	49.4	0.0527	0.0527		
D 13C-1,2,3,4,7,8-HxCDF	30.503	129907161	0.52	1.0837	91.6	91.6	0.3668	0.3668	91.61	
1,2,3,4,7,8-HxCDF	30.516	71456543	1.22	1.0851	50.7	50.7	0.3029	0.3029	101	
D 13C-1,2,3,6,7,8-HxCDF	30.689	132708269	0.52	1.1279	89.9	89.9	0.3524	0.3524	89.91	
1,2,3,6,7,8-HxCDF	30.702	75422843	1.21	1.1260	50.5	50.5	0.2882	0.2882	101	
D 13C-2,3,4,6,7,8-HxCDF	31.514	126967010	0.52	1.0637	91.2	91.2	0.3736	0.3736	91.21	
2,3,4,6,7,8-HxCDF	31.528	73812262	1.20	1.1675	49.8	49.8	0.2230	0.2230	99.59	
D 13C-1,2,3,7,8,9-HxCDF	32.313	116710609	0.52	0.9676	92.2	92.2	0.4108	0.4108	92.17	
1,2,3,7,8,9-HxCDF	32.326	68796902	1.23	1.1664	50.5	50.5	0.2179	0.2179	101	
A Non-2,3,7,8-sub-HxCDF	30.210						0.2533	0.2533		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					201.5	201.5	0.2580	0.2580		
* 13C-1,2,3,7,8,9-HxCDD	32.126	130863874	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	90068855	1.24	0.7334	93.8	93.8	0.3053	0.3053	93.84	
1,2,3,4,7,8-HxCDD	31.714	49482646	1.25	1.0640	51.6	51.6	0.1770	0.1770	103	
D 13C-1,2,3,6,7,8-HxCDD	31.807	101538187	1.23	0.8802	88.2	88.2	0.2544	0.2544	88.15	
1,2,3,6,7,8-HxCDD	31.820	53714709	1.27	1.0001	52.9	52.9	0.1720	0.1720	106	
1,2,3,7,8,9-HxCDD	32.140	60942617	1.26	1.1325	56.2	56.2	0.1587	0.1587	112	
A Non-2,3,7,8-sub-HxCDD	30.882						0.1687	0.1687		
S Total HxCDD					160.7	160.7	0.1692	0.1692		
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	97742215	0.44	0.7730	96.6	96.6	0.9269	0.9269	96.62	
1,2,3,4,6,7,8-HpCDF	33.766	72749862	1.06	1.4413	51.6	51.6	0.4900	0.4900	103	
D 13C-1,2,3,4,7,8,9-HpCDF	34.835	91771207	0.44	0.7008	100.1	100.1	1.022	1.022	100	
1,2,3,4,7,8,9-HpCDF	34.847	62226856	1.05	1.3174	51.5	51.5	0.6817	0.6817	103	
A Non-2,3,7,8-sub-HpCDF	34.325						0.5732	0.5732		
S Total HpCDF					103.1	103.1	0.5859	0.5859		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	85846856	1.00	0.6472	101.4	101.4	0.4511	0.4511	101	
1,2,3,4,6,7,8-HpCDD	34.568	47595636	1.04	1.0943	50.7	50.7	0.2123	0.2123	101	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2123	0.2123		
S Total HpCDD					50.7	50.7	0.2123	0.2123		
D 13C-OCDD	36.914	126077242	0.88	0.4472	215.5	215.5	0.2821	0.2821	108	
OCDF	37.010	91129226	0.90	1.4382	100.5	100.5	0.0857	0.0857	101	
OCDD	36.926	71503748	0.89	1.1070	102.5	102.5	0.1137	0.1137	102	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 11:47:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 14-Aug-2021 01:16:15 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081321A CS-4 HRDXNL4_00099
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 11:47:28 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1665

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:32:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		58395123	14036444	6558	16395	2140		
333.9339	17.855	17.855	0		70916997	16873483	9470	23675	1782	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.971	91648792	21845730	14722	36805	1484		
317.9389	17.341	17.341	0	0.971	118300555	28118592	18523	46307	1518	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.001	9399773	2261722	1284	3210	1761		
305.8987	17.356	17.356	0	1.001	12412347	2982565	2947	7367	1012	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.978	17.038	-4	0.979	31302	9266	1284	3210	7		
305.8987	16.978	17.038	-4	0.979	58446	12445	2947	7367	4	0.54(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	53212652	11894023	6558	16395	1814		
333.9339	18.051	18.051	0	1.011	65341267	14442797	9470	23675	1525	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.001	6714327	1559119	972	2430	1604		
321.8936	18.066	18.066	0	1.001	8603780	1993624	836	2090	2385	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.066	0	1.012	16073849	3699633	1760	4400	2102		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.499						972	2430			
321.8936	17.499						836	2090			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	95429996	16010002	19831	49577	807		
353.8970	22.353	22.367	-1	1.252	60386805	10091352	13338	33345	757	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.381	22.381	0	1.001	51590571	8720094	10544	26360	827		
341.8567	22.381	22.381	0	1.001	32376470	5440612	6645	16612	819	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.328	97419719	15345434	19831	49577	774		
353.8970	23.703	23.703	0	1.328	61769150	9678869	13338	33345	726	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.731	23.731	0	1.001	50537064	7842318	10544	26360	744		
341.8567	23.731	23.731	0	1.001	31718686	4925044	6645	16612	741	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						214	535			
341.8567	20.093						502	1255			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.912	23.248	-20	1.024	495200	64236	10544	26360	6		
341.8567	22.899	23.248	-21	1.024	334354	38616	6645	16612	6	1.48(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.368	63438778	9407496	5439	13597	1730		
369.8919	24.426	24.426	0	1.368	39439686	5883010	4312	10780	1364	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453	24.453	0	1.001	32707944	4844875	2072	5180	2338		
357.8516	24.453	24.453	0	1.001	20626080	3080265	1305	3262	2360	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.355						2072	5180			
357.8516	23.355						1305	3262			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	44466025	8304954	19619	49047	423		
385.8610	30.503	30.503	0	0.949	85441136	15859370	36603	91507	433	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.516	30.516	0	1.000	39258152	7345845	17220	43050	427		
375.8178	30.516	30.516	0	1.000	32198391	6032482	14552	36380	415	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	45597475	8369339	19619	49047	427		
385.8610	30.689	30.689	0	0.955	87110794	16104546	36603	91507	440	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.702	30.702	0	1.000	41352688	7888121	17220	43050	458		
375.8178	30.702	30.702	0	1.000	34070155	6552292	14552	36380	450	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	43481457	10543293	19619	49047	537		
385.8610	31.514	31.514	0	0.981	83485553	19960512	36603	91507	545	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528	31.528	0	1.000	40299815	9990727	17220	43050	580		
375.8178	31.528	31.528	0	1.000	33512447	8174136	14552	36380	562	1.20(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.313	0	1.006	40110174	10828252	19619	49047	552		
385.8610	32.313	32.313	0	1.006	76600435	20431607	36603	91507	558	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.326	32.326	0	1.000	37945414	10060149	17220	43050	584		
375.8178	32.326	32.326	0	1.000	30851488	8225684	14552	36380	565	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.210						17220	43050			
375.8178	30.210						14552	36380			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.126	32.126	0		72212221	19469270	17689	44222	1101		
403.8529	32.126	32.126	0		58651653	15894926	13987	34967	1136	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.987	49935451	13161591	17689	44222	744		
403.8529	31.701	31.701	0	0.987	40133404	10523524	13987	34967	752	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.714	0	1.000	27537646	7477137	10326	25815	724		
391.8127	31.714	31.714	0	1.000	21945000	5824455	7517	18792	775	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	55932920	14302219	17689	44222	809		
403.8529	31.807	31.807	0	0.990	45605267	11635785	13987	34967	832	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.820	31.820	0	1.000	30052061	7776882	10326	25815	753		
391.8127	31.820	31.820	0	1.000	23662648	6035397	7517	18792	803	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.140	0	1.014	33965822	9165310	10326	25815	888		
391.8127	32.140	32.140	0	1.014	26976795	7320836	7517	18792	974	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						10326	25815			
391.8127	30.882						7517	18792			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.754	0	1.051	29870326	9870886	32903	82257	300		
419.8220	33.754	33.754	0	1.051	67871889	22240375	68458	171145	325	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.766	0	1.000	37355188	12186874	44358	110895	275		
409.7789	33.766	33.766	0	1.000	35394674	11373384	46353	115882	245	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.835	34.835	0	1.084	28039989	7790036	32903	82257	237		
419.8220	34.835	34.835	0	1.084	63731218	17460216	68458	171145	255	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.847	34.847	0	1.000	31919796	9047725	44358	110895	204		
409.7789	34.847	34.847	0	1.000	30307060	8658928	46353	115882	187	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						44358	110895			
409.7789	34.325						46353	115882			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.076	42818880	12508871	21493	53732	582		
437.8140	34.556	34.556	0	1.076	43027976	12275113	19804	49510	620	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	24297962	6938647	11690	29225	594		
425.7737	34.556	34.568	-1	1.000	23297674	6701285	11344	28360	591	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						11690	29225			
425.7737	34.301						11344	28360			
13C-OCDD											
469.7779	36.914	36.914	0	1.149	58863131	14692726	8051	20127	1825		
471.7750	36.914	36.914	0	1.149	67214111	16695558	9790	24475	1705	0.88(0.76-1.02)	
OCDF											
441.7428	37.010	37.010	0	1.003	43169146	10736843	3660	9150	2934		
443.7399	37.010	37.010	0	1.003	47960080	11909139	4080	10200	2919	0.90(0.76-1.02)	
OCDD											
457.7377	36.926	36.926	0	1.000	33693658	8382960	2845	7112	2947		
459.7348	36.926	36.926	0	1.000	37810090	9291558	5057	12642	1837	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

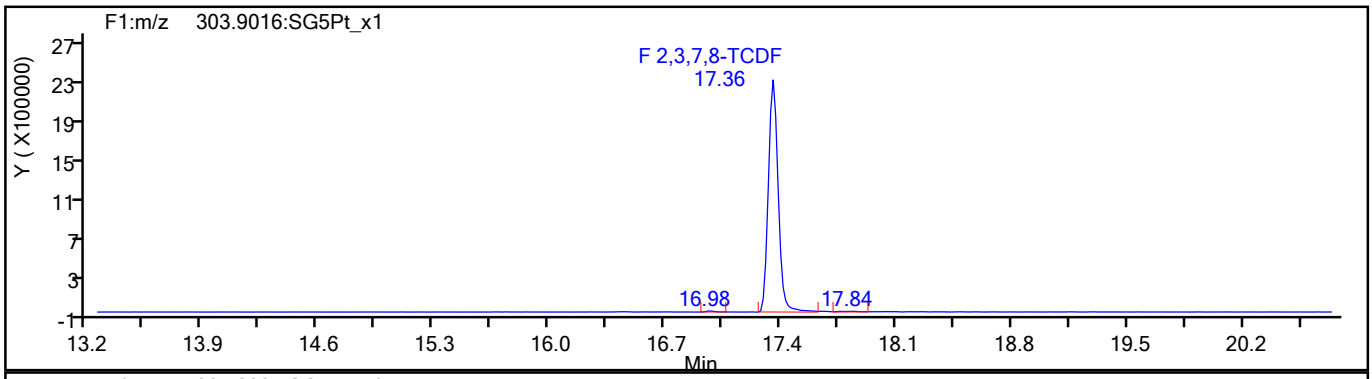

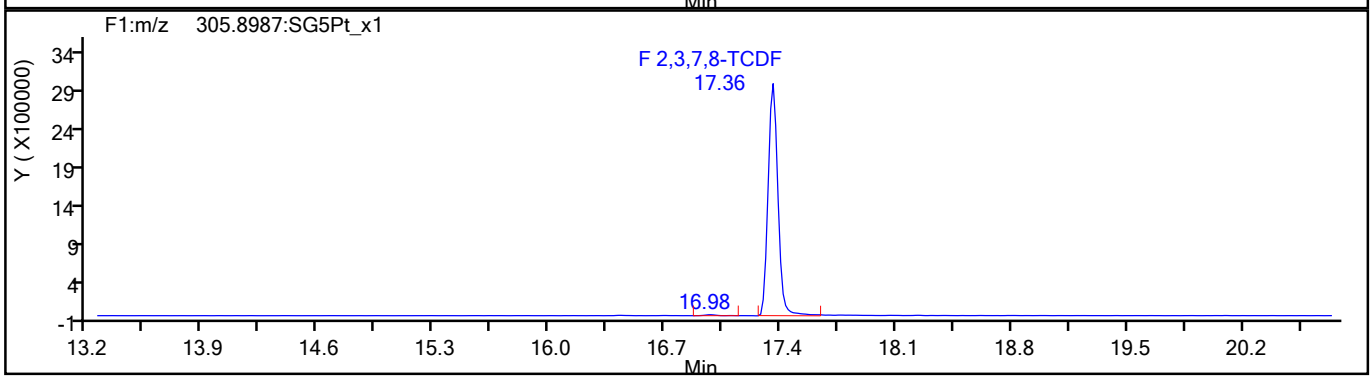

TCDF Standards

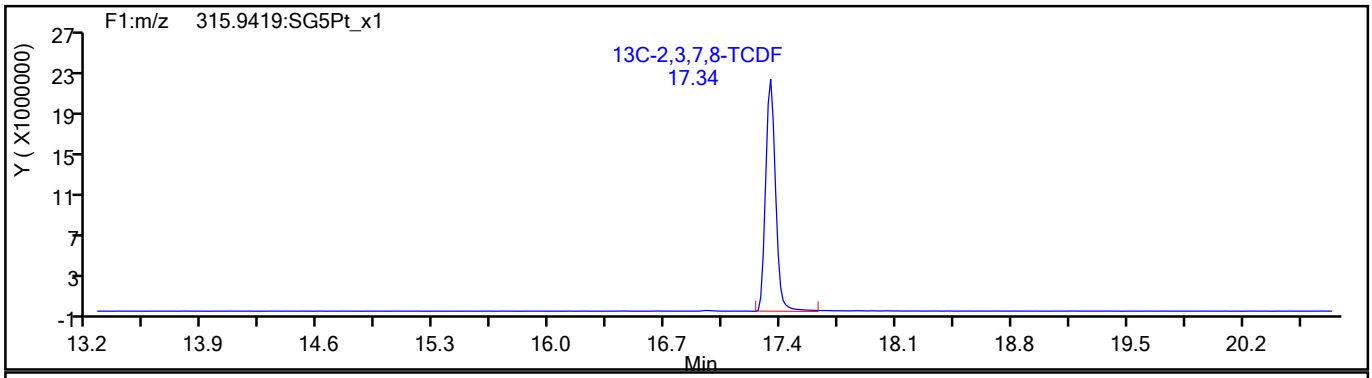

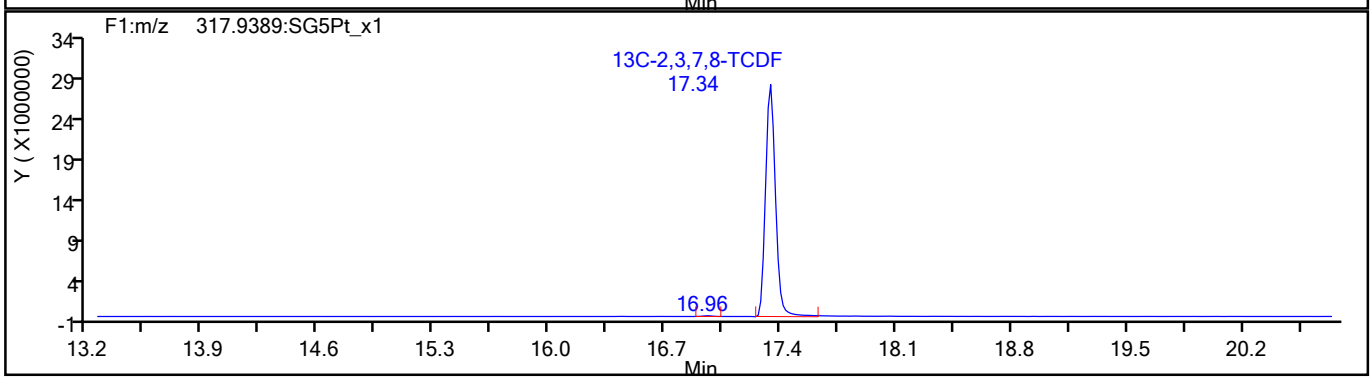

780472

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

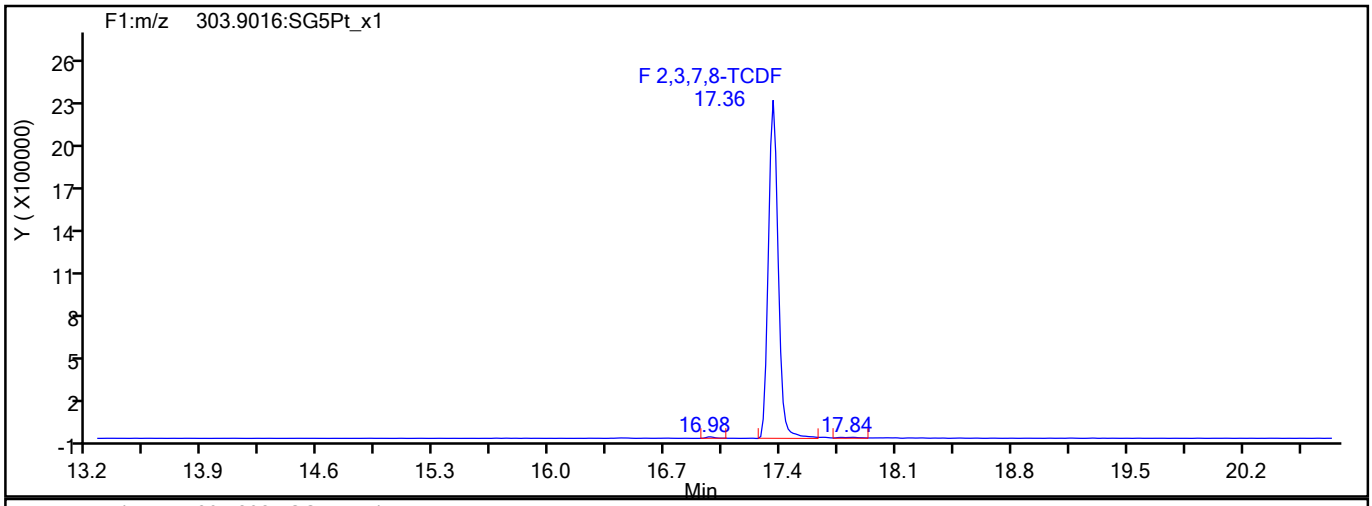

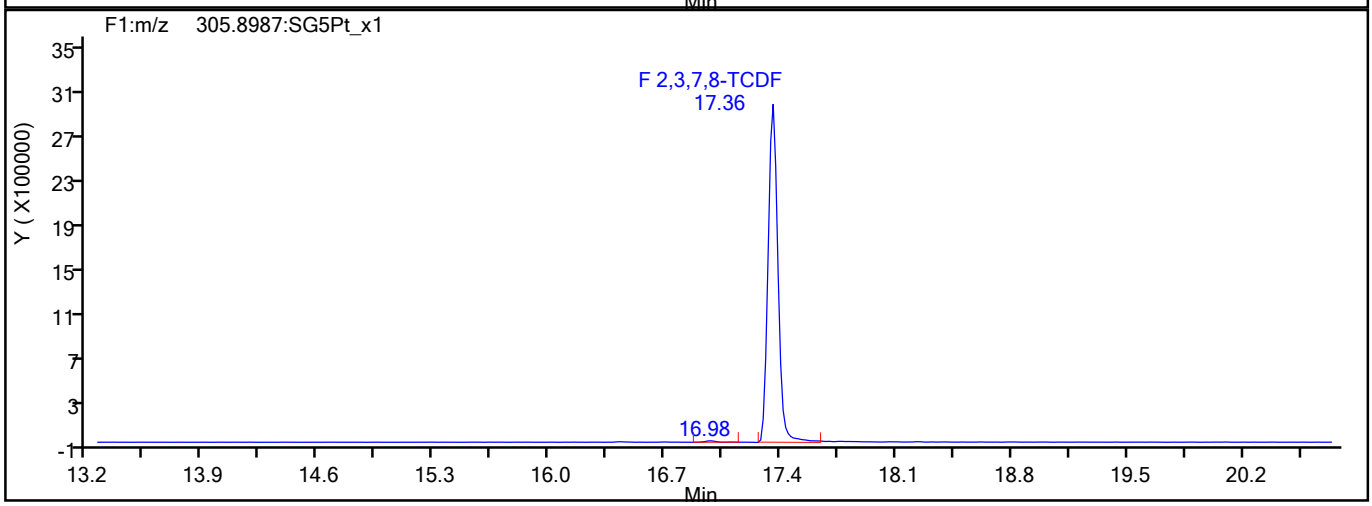

TCDF Interference Mass

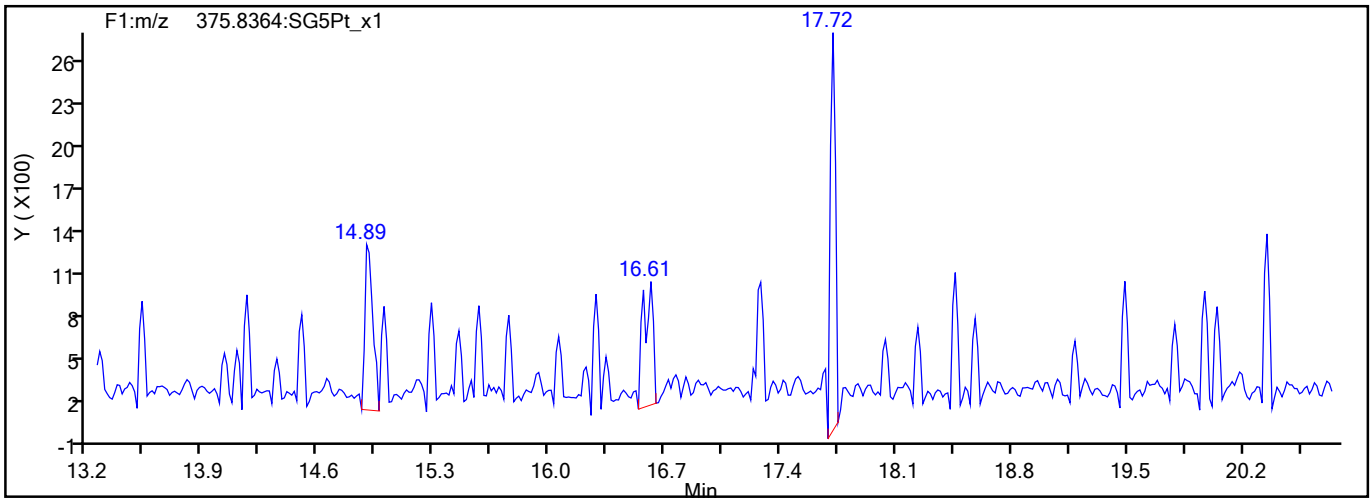

780473

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

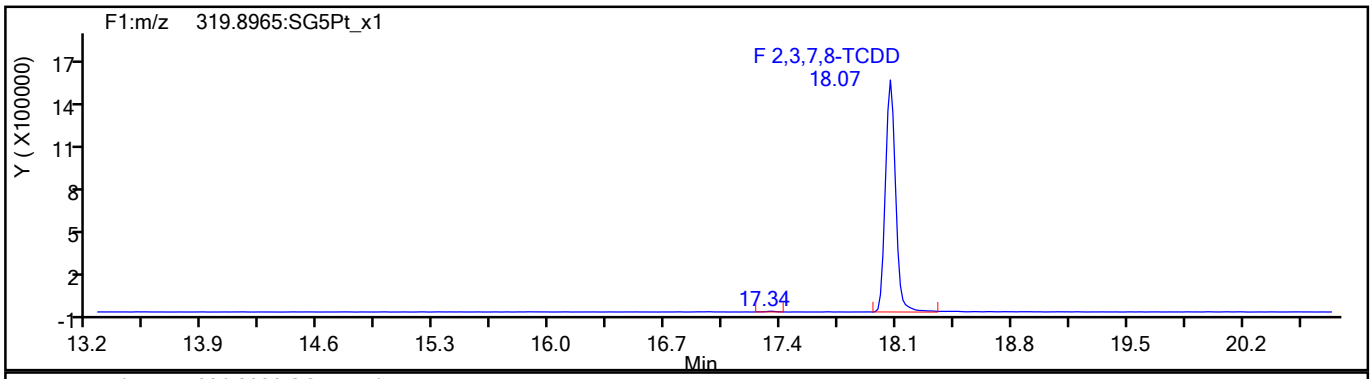

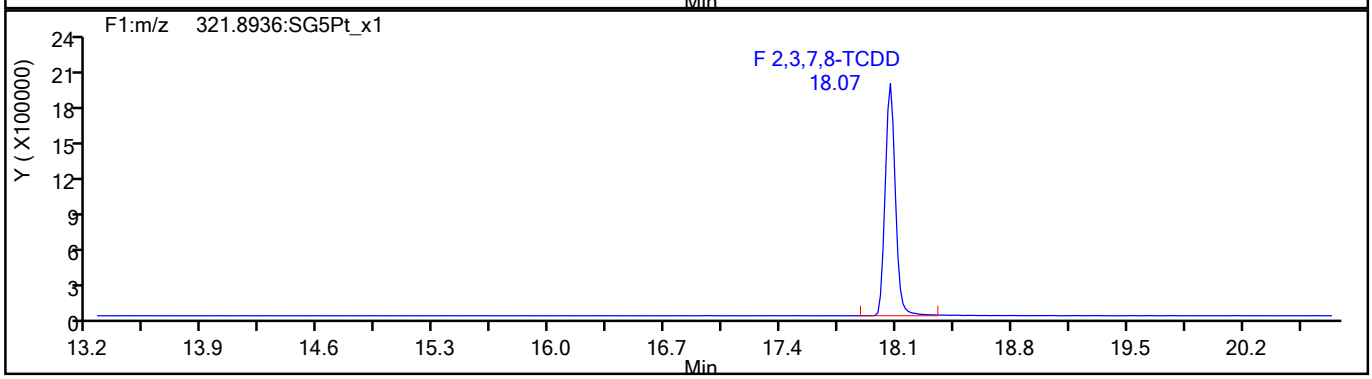

TCDD Standards

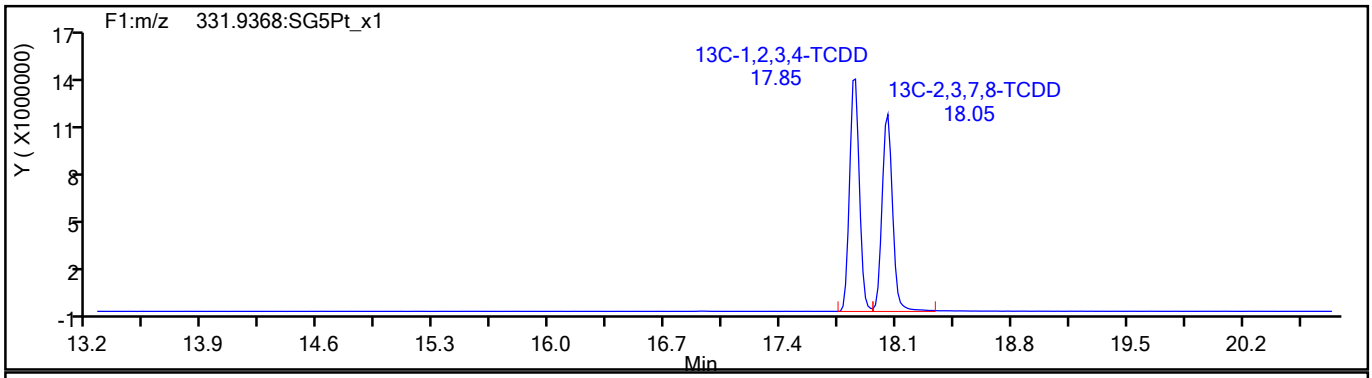

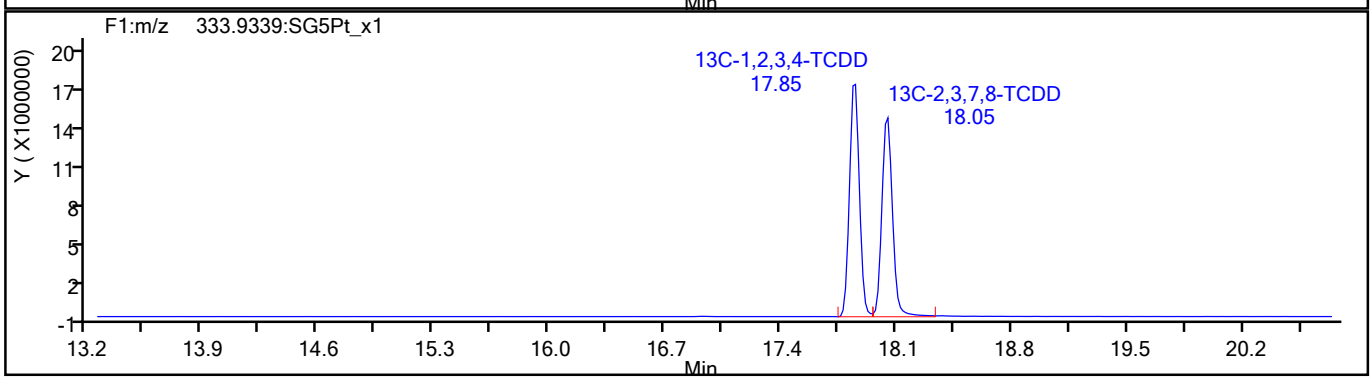

780474

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

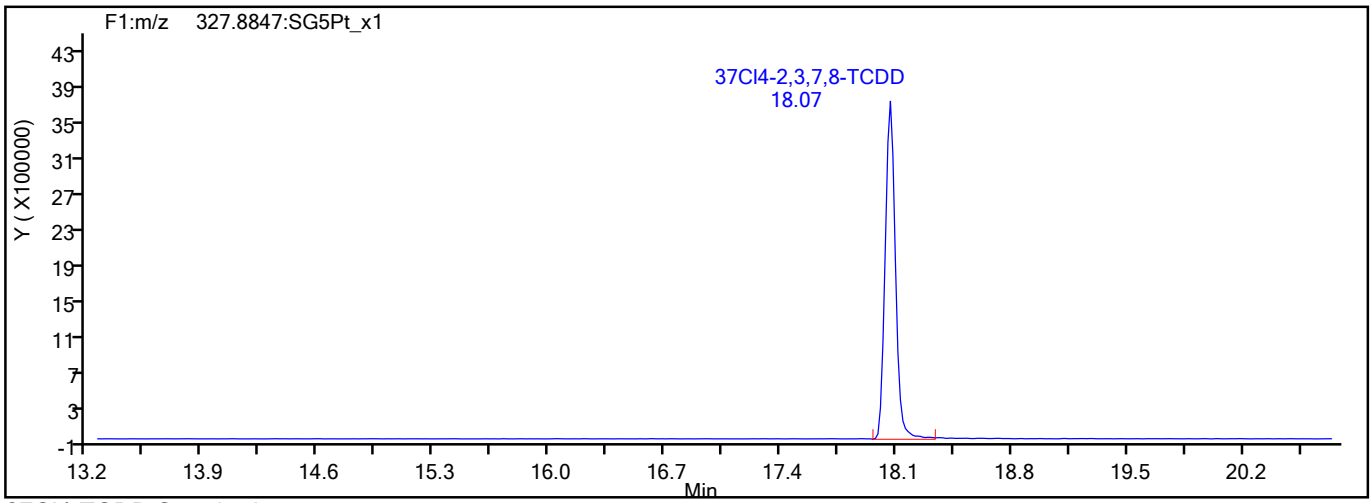

37Cl4-TCDD Standards

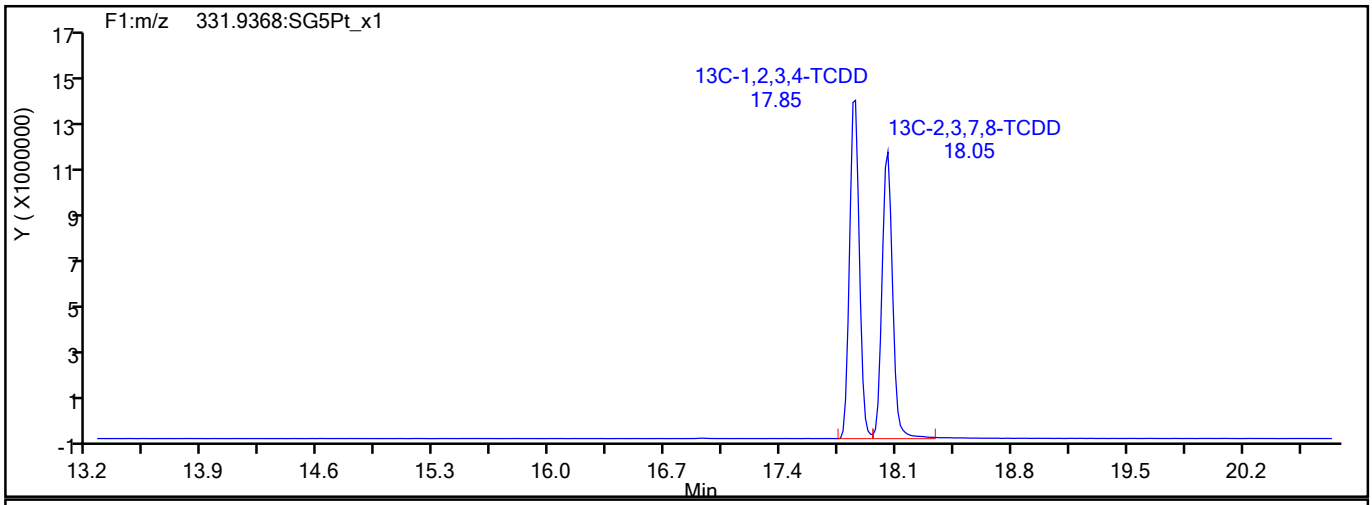

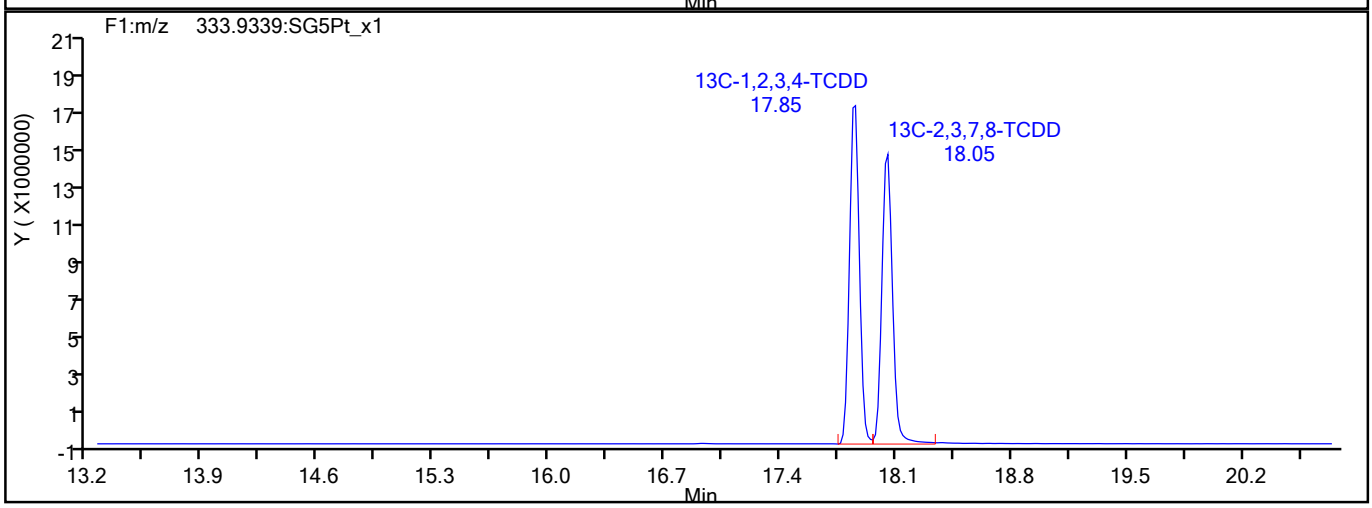

780475

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

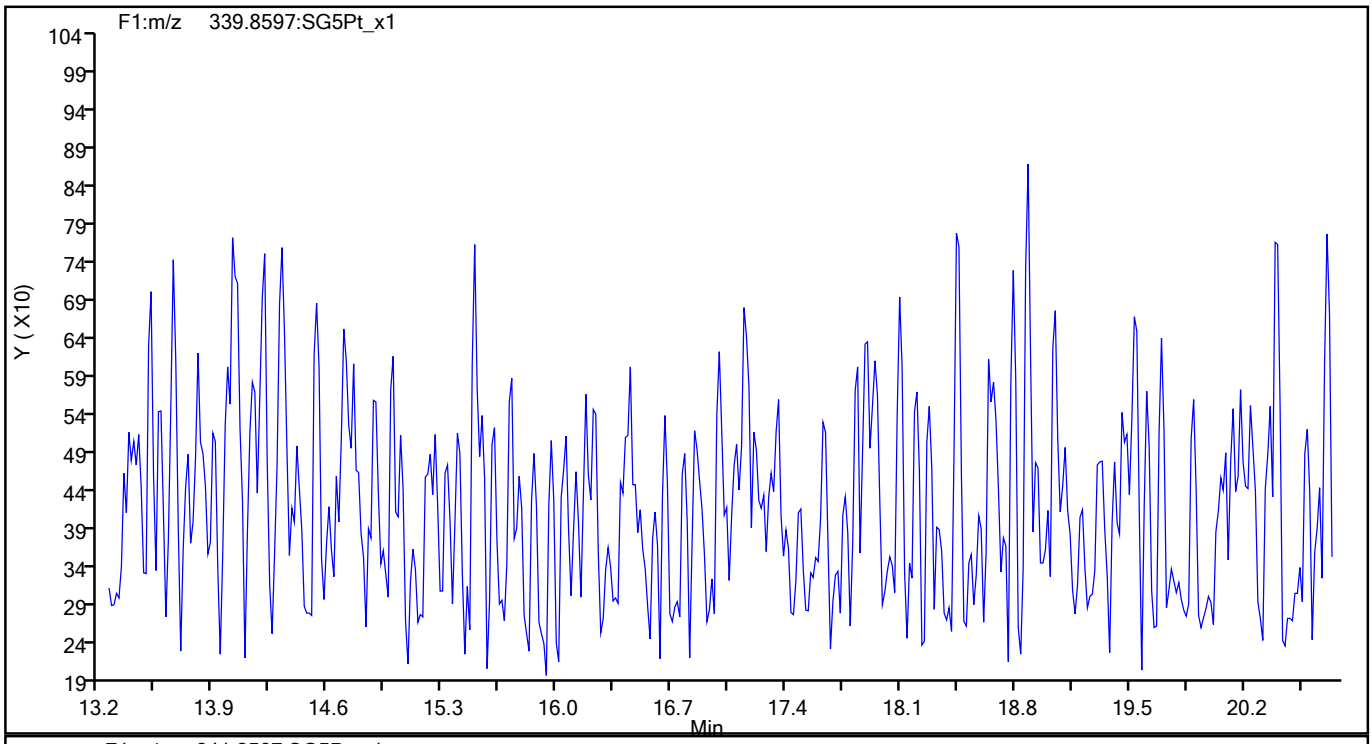

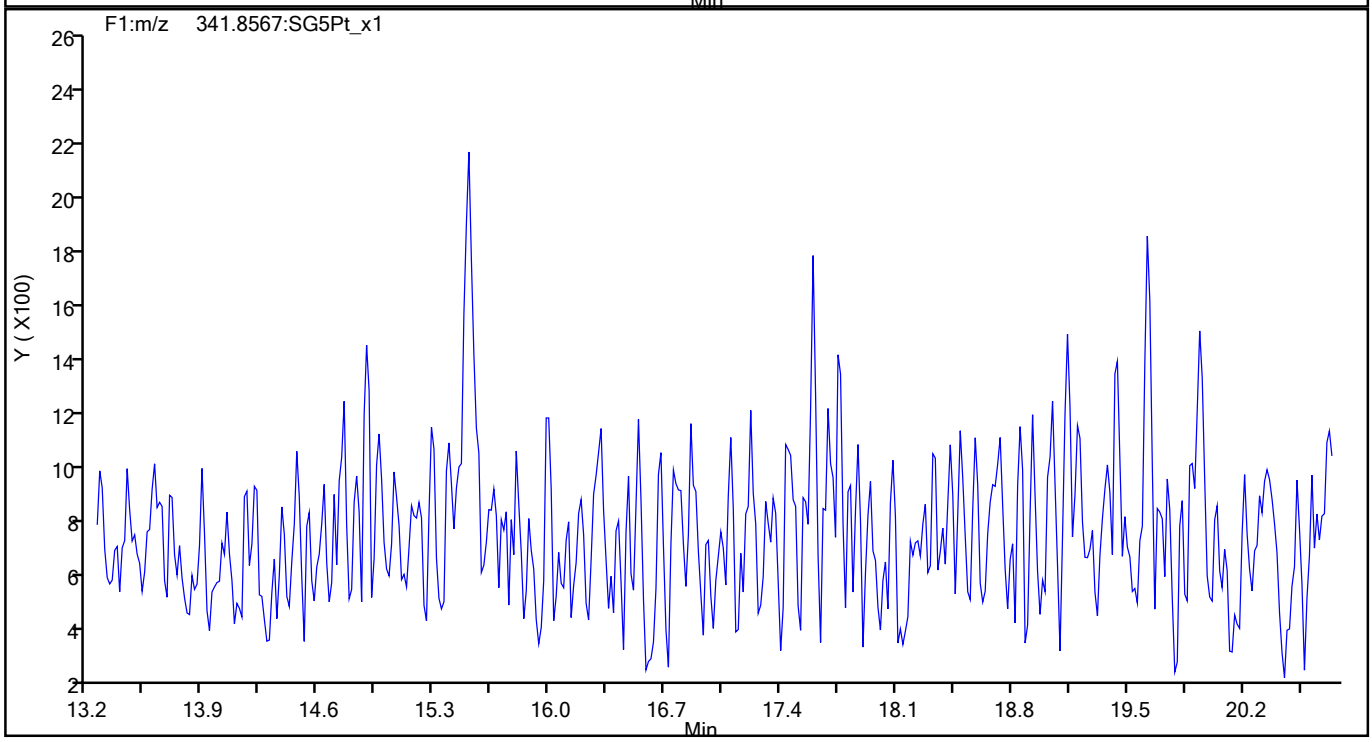

780476

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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Client ID:			
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F1 PeCDFs

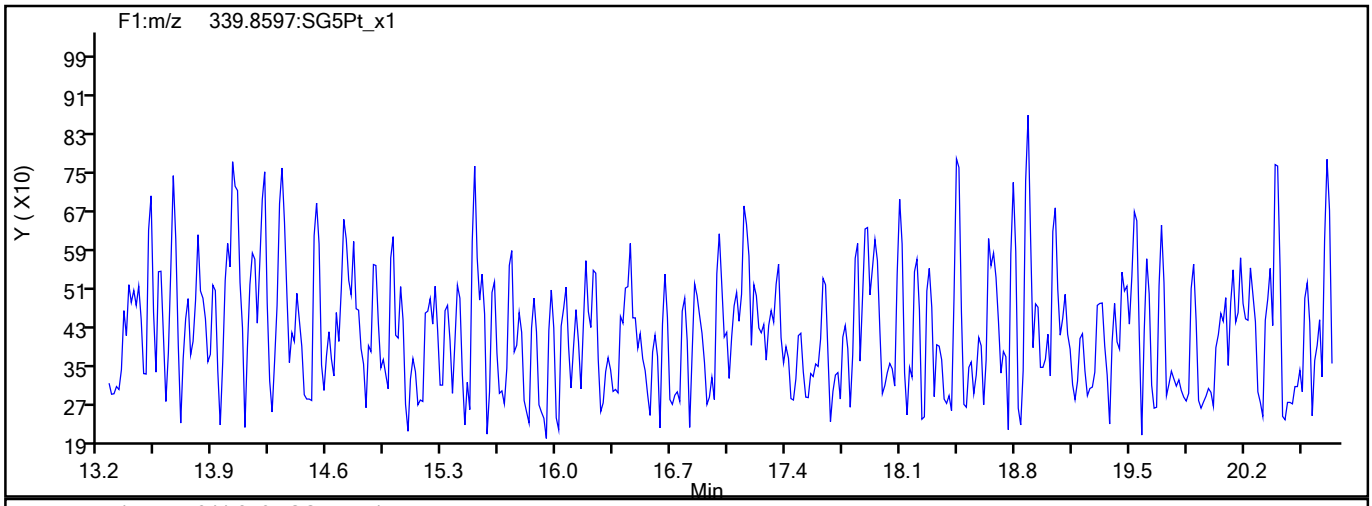

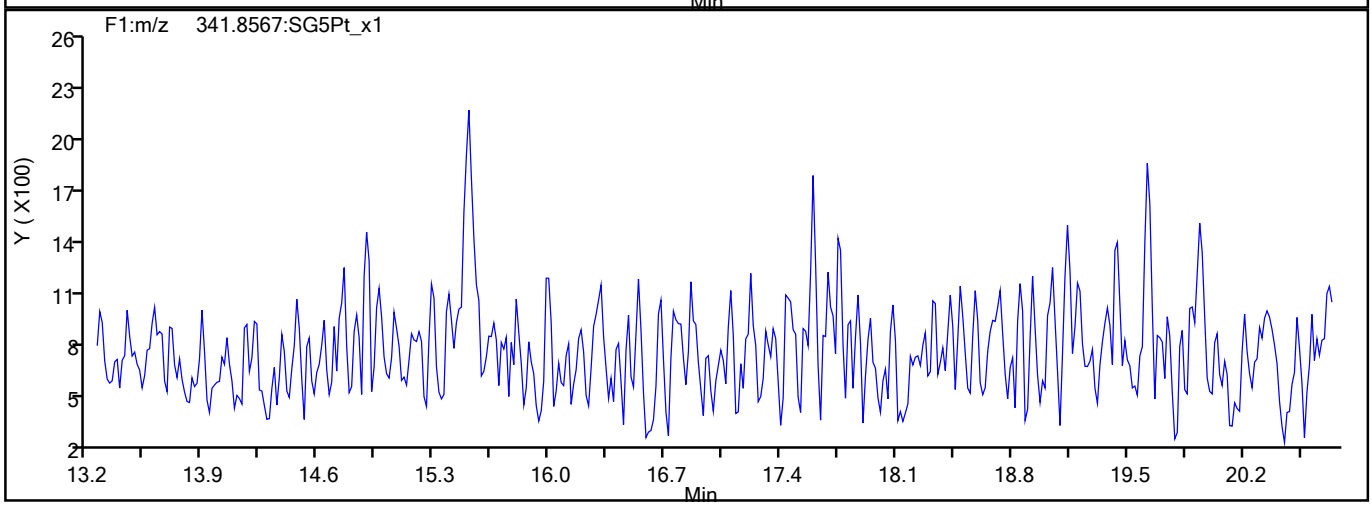

F1 PeCDFs Interference Mass

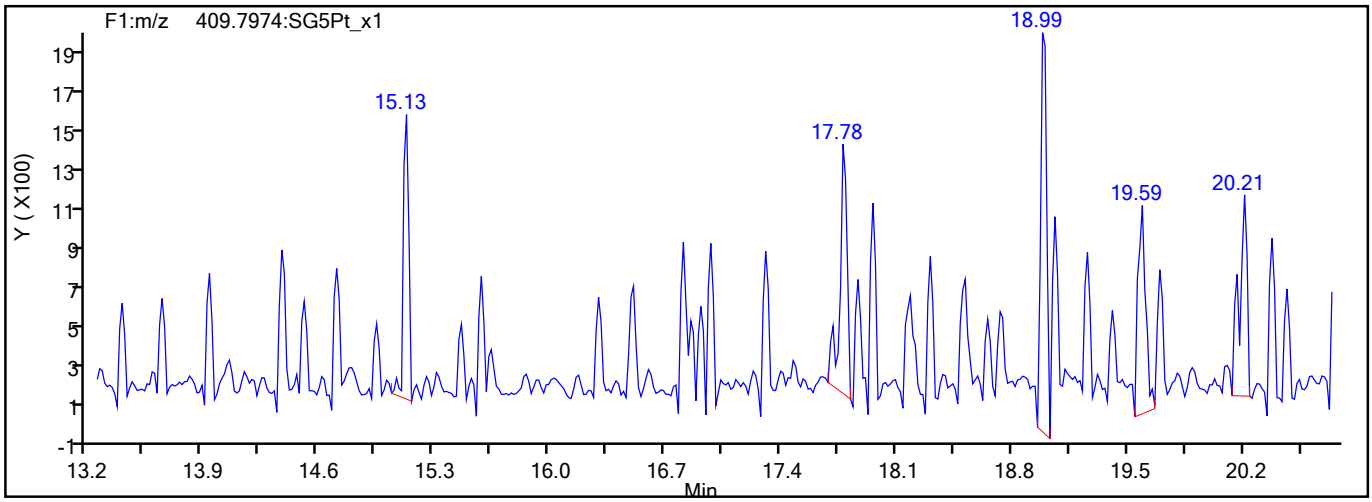

780477

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
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Instrument ID:	10D5	Operator ID:	DB
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Client ID:			
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PeCDF

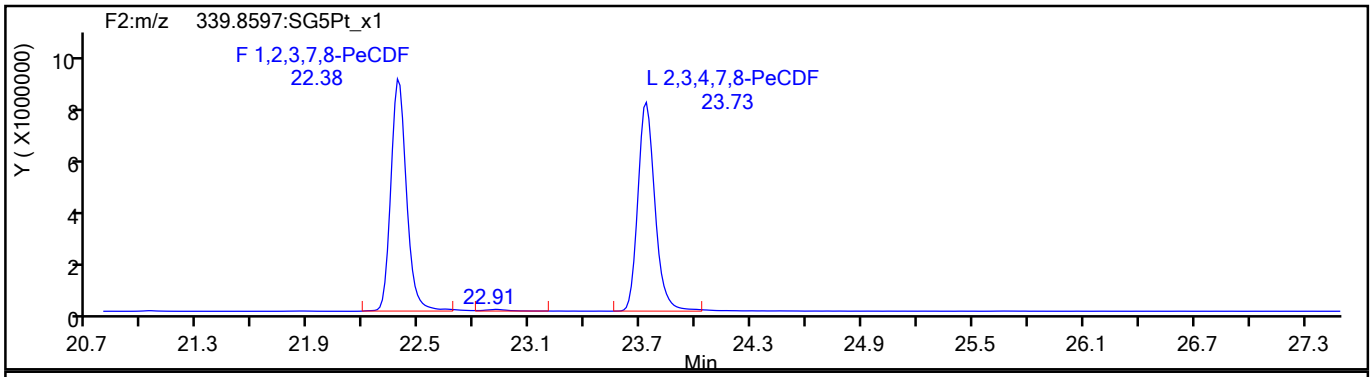

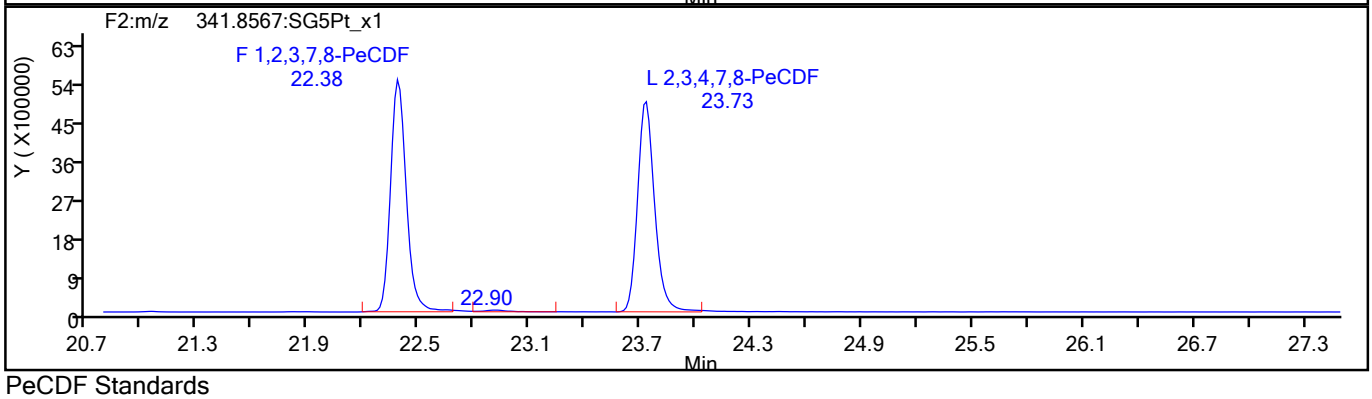

PeCDF Standards

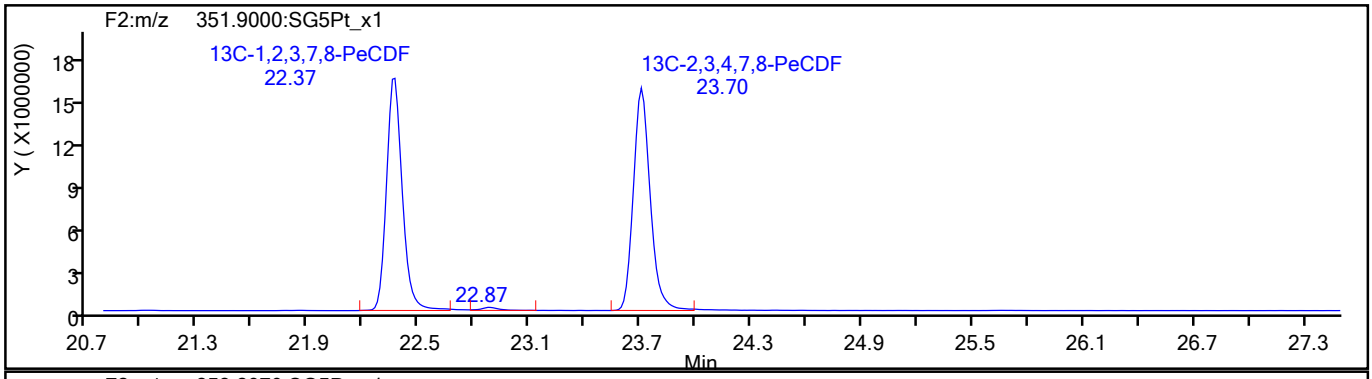

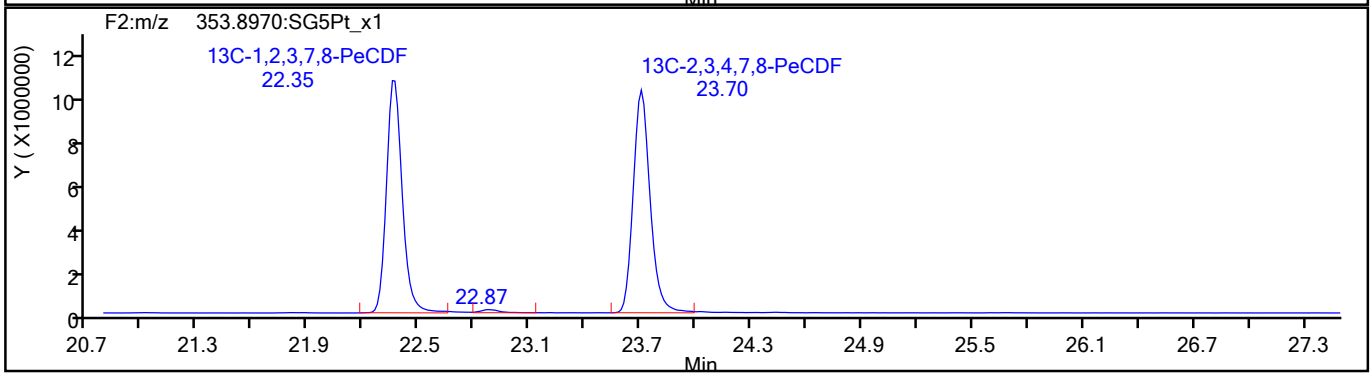

780478

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

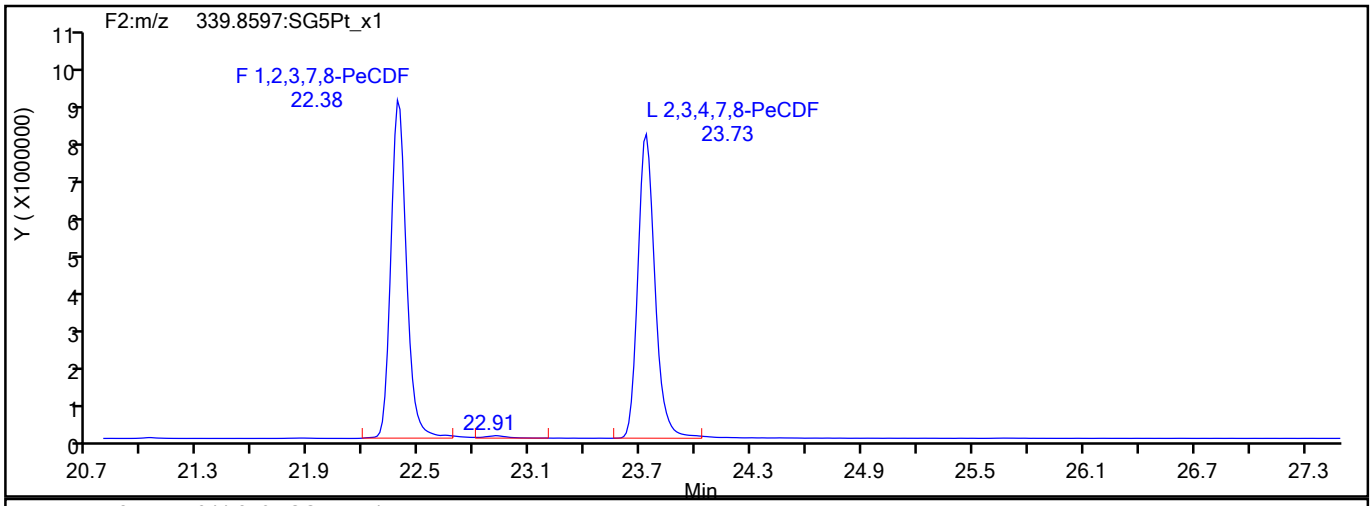

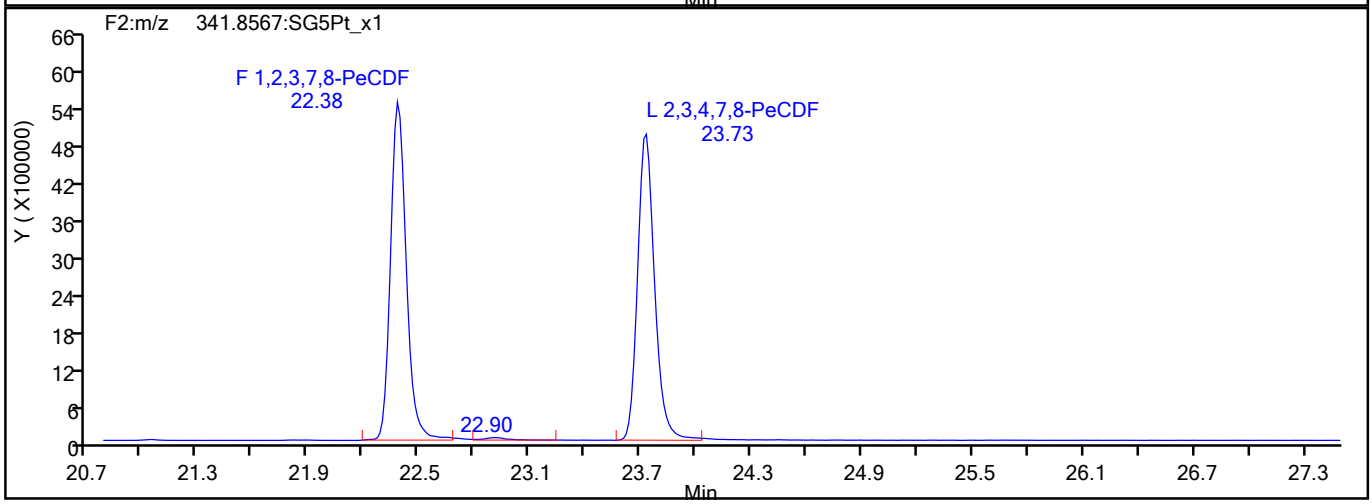

PeCDF Interference Mass

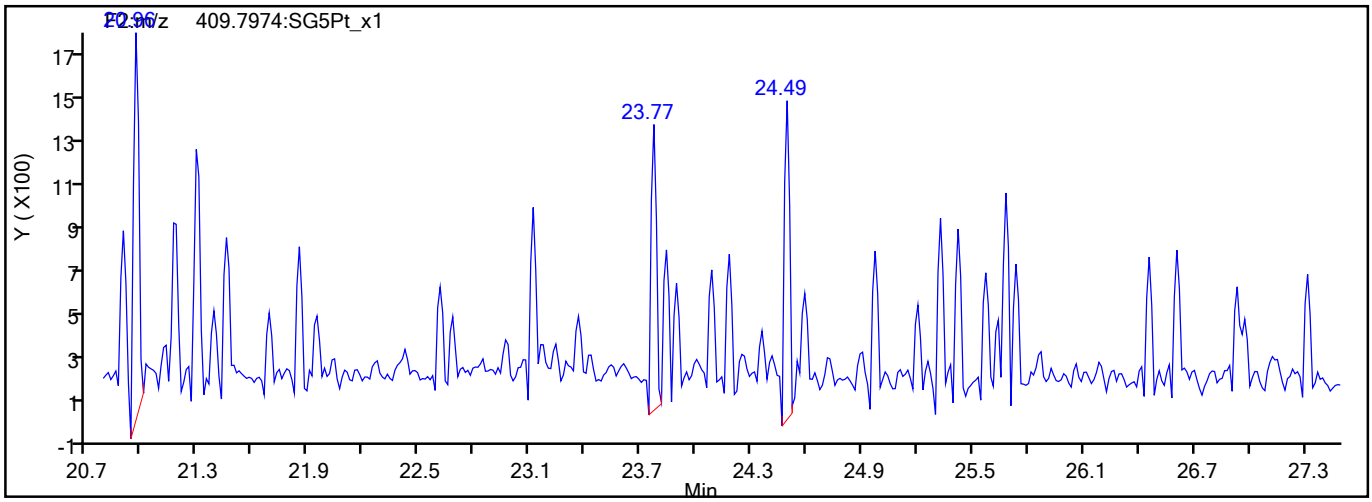

780479

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

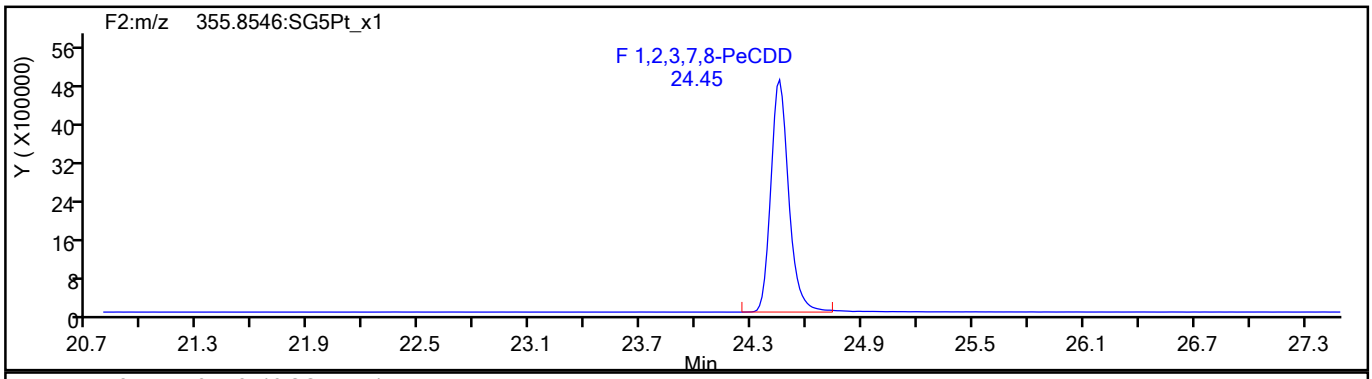

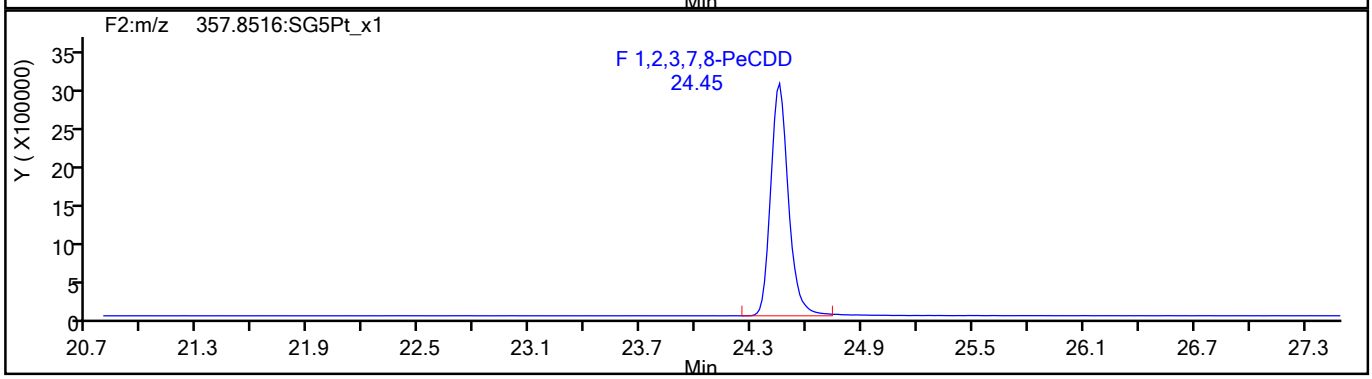

PeCDD Standards

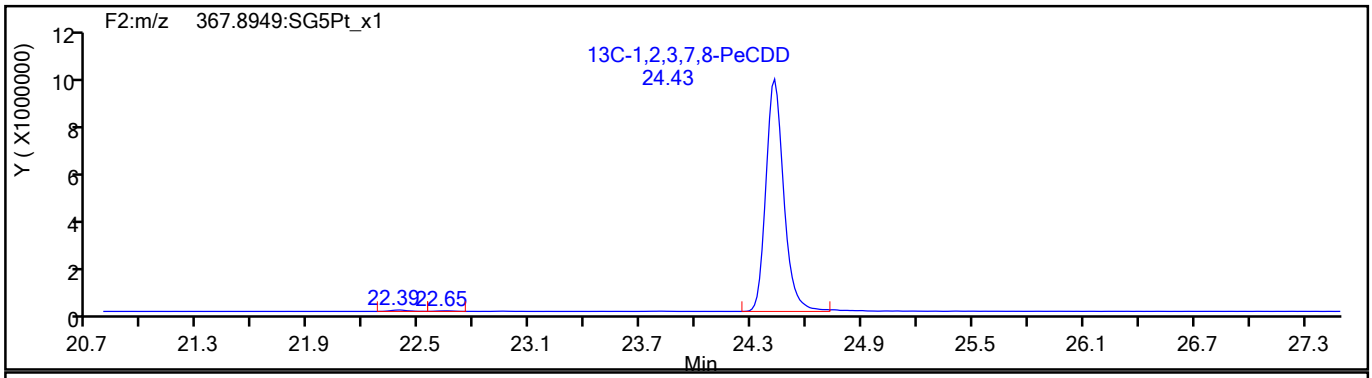

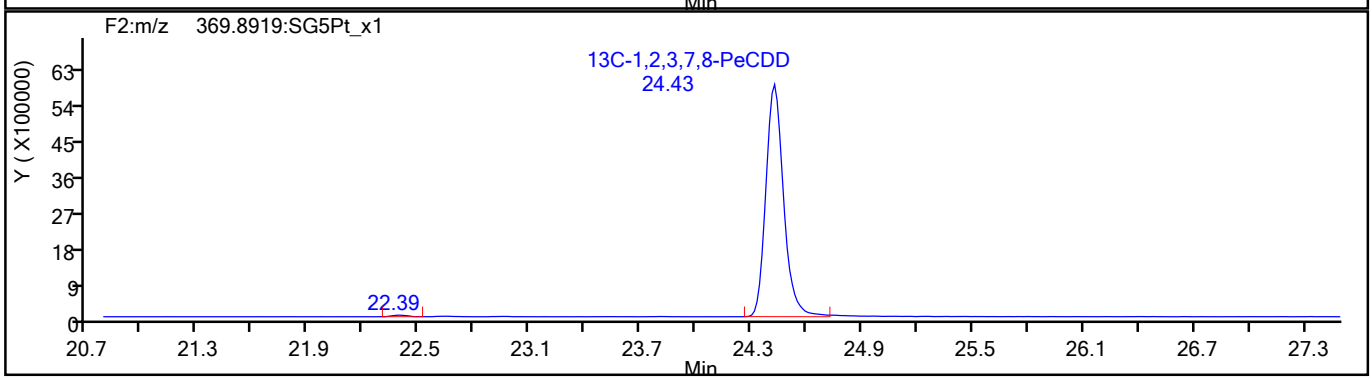

780480

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

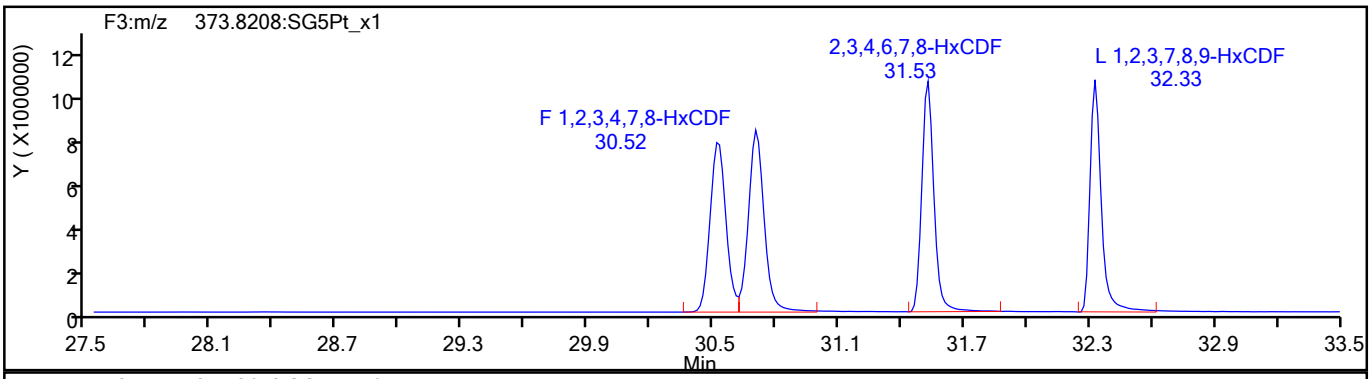

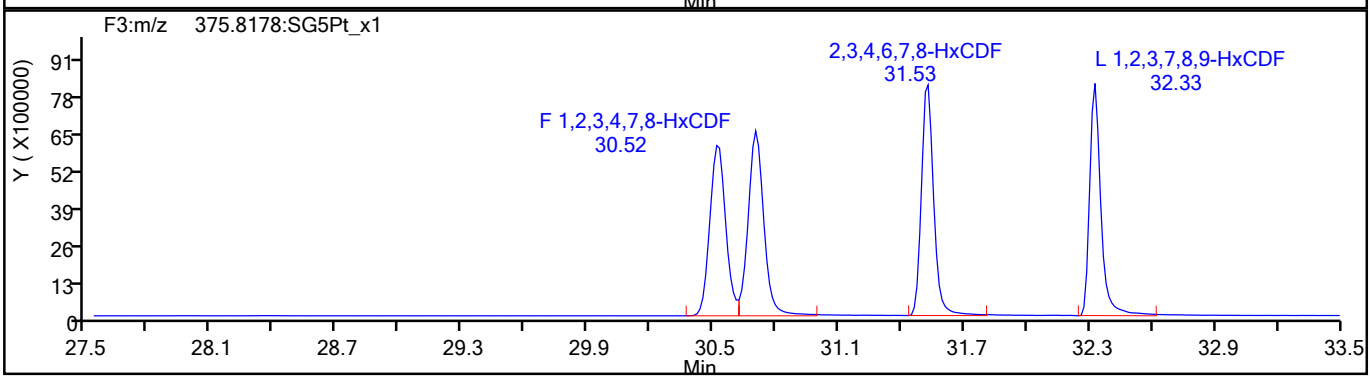

HxCDF Standards

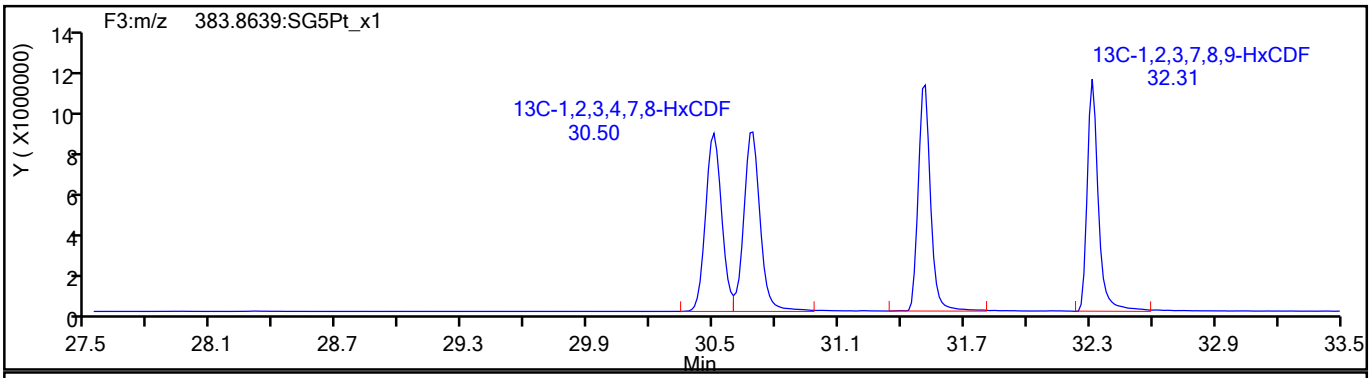

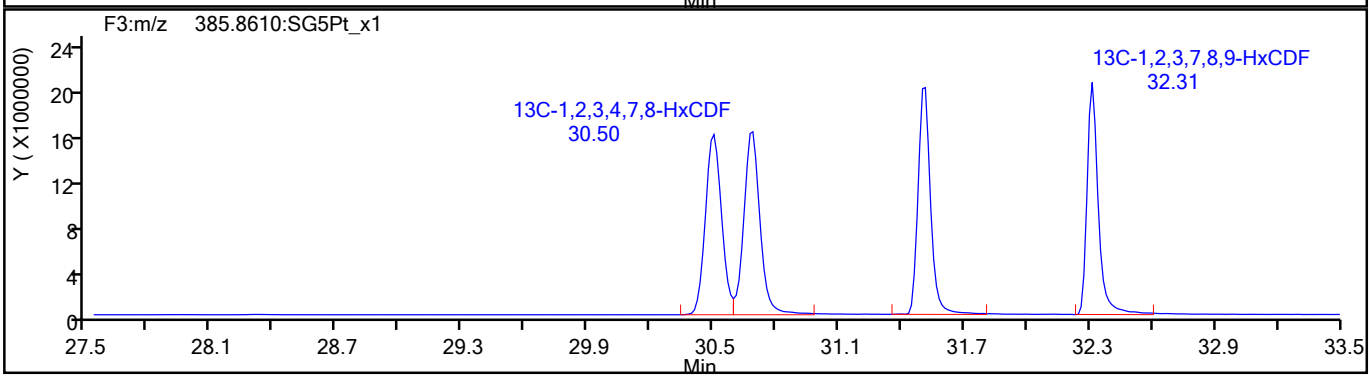

780481

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

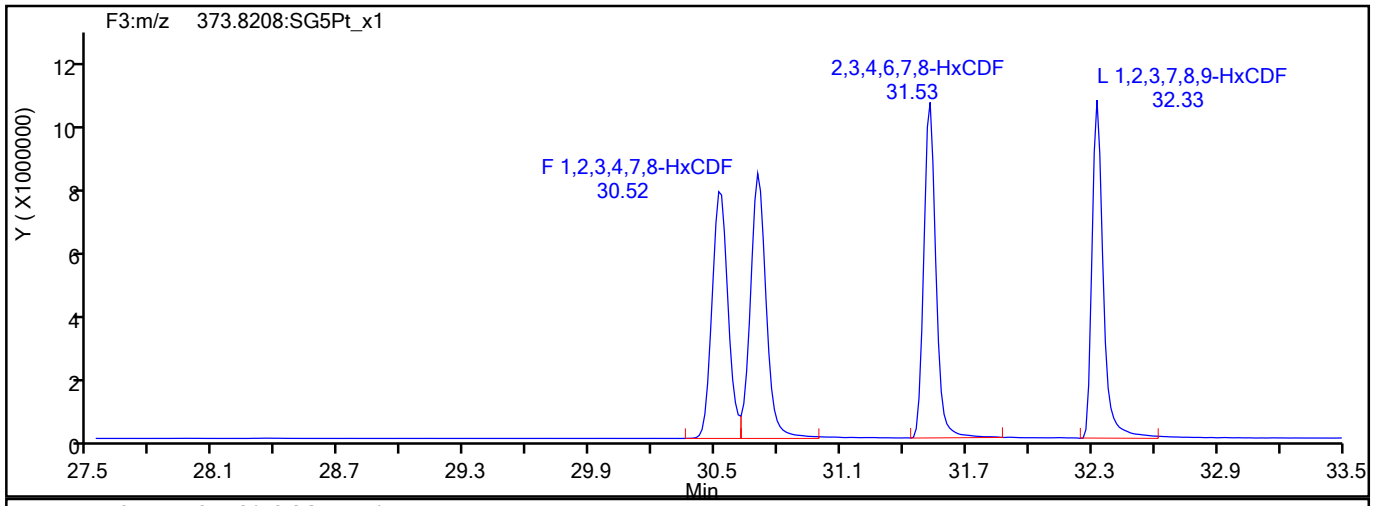

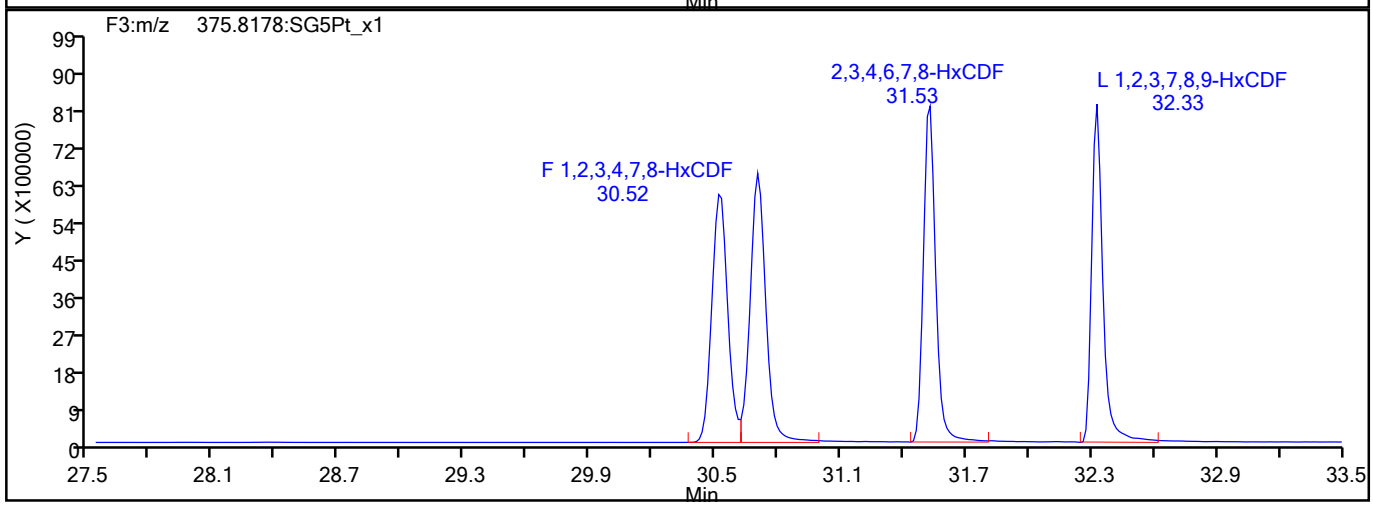

HxCDF Interference Mass

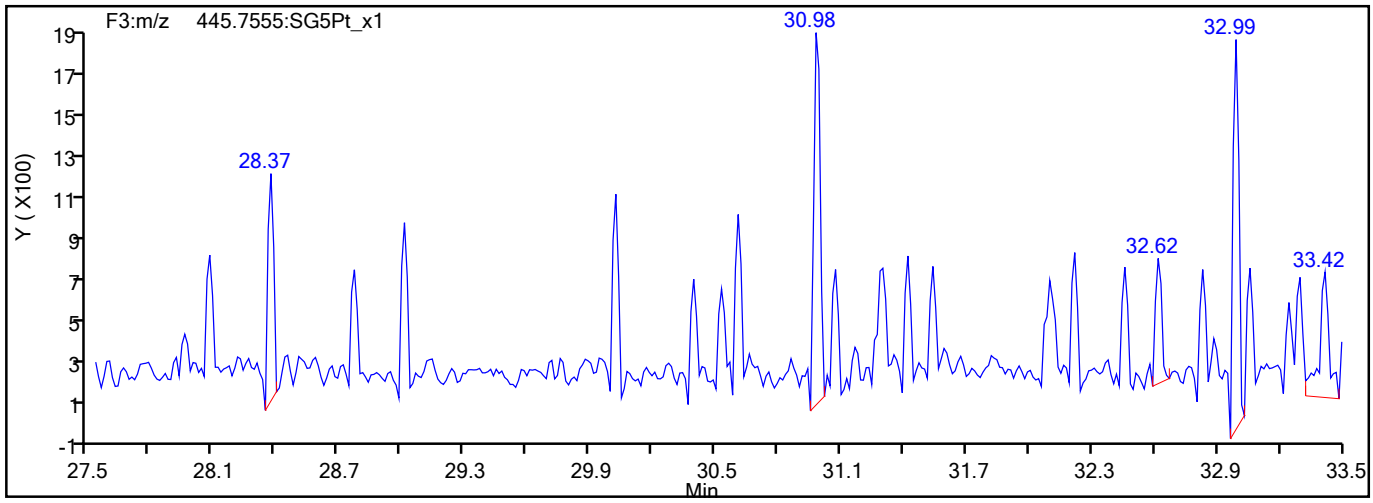

780482

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

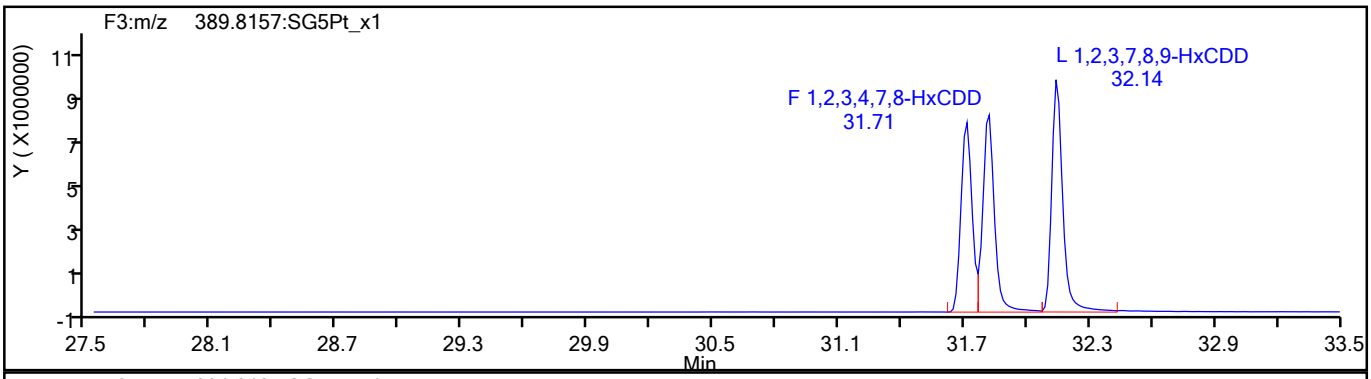

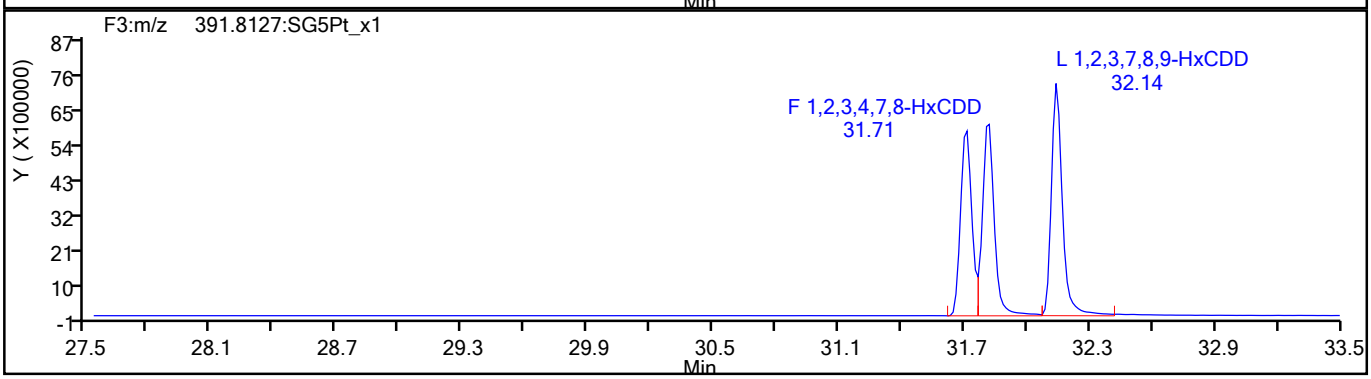

HxCDD Standards

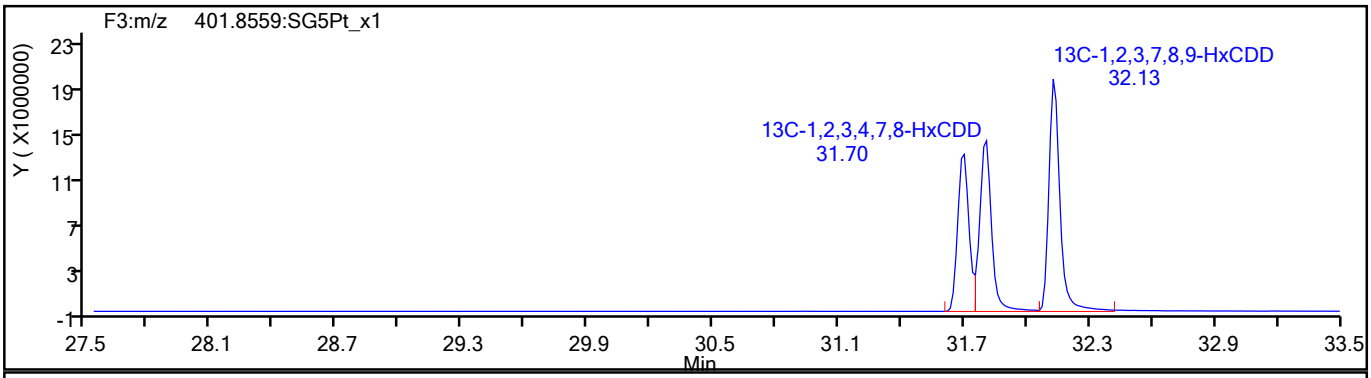

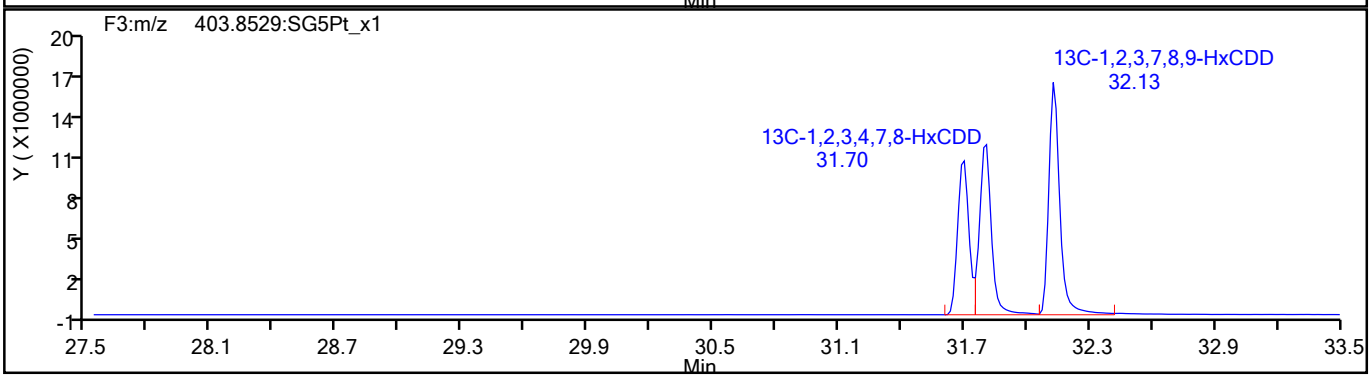

780483

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

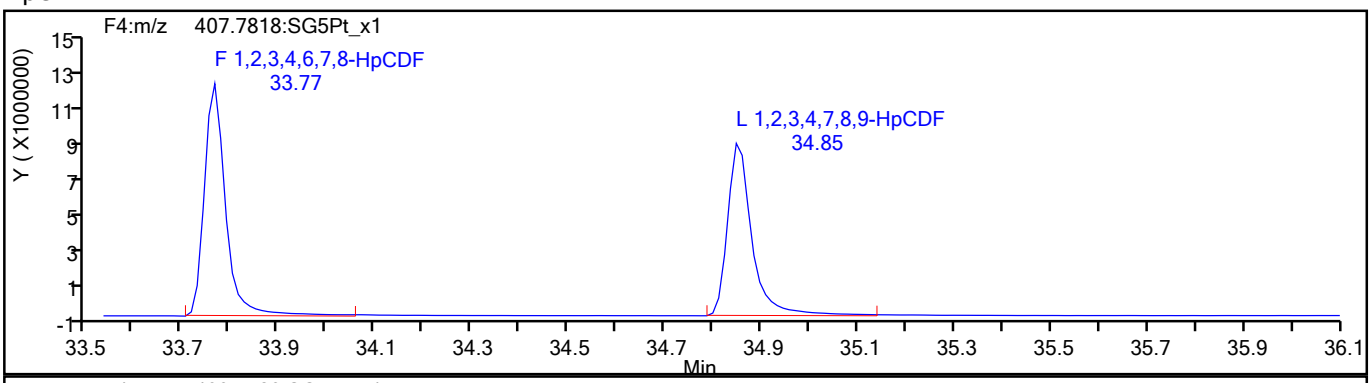

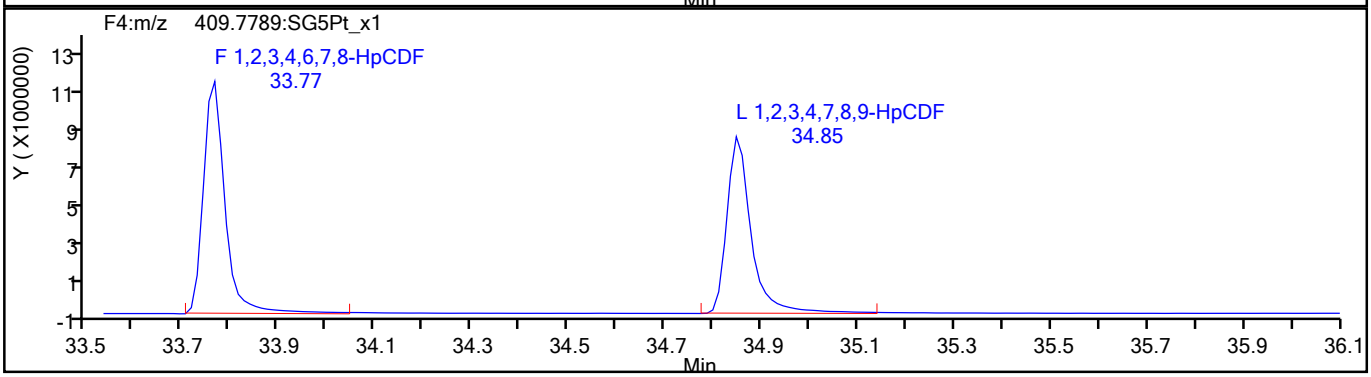

HpCDF Standards

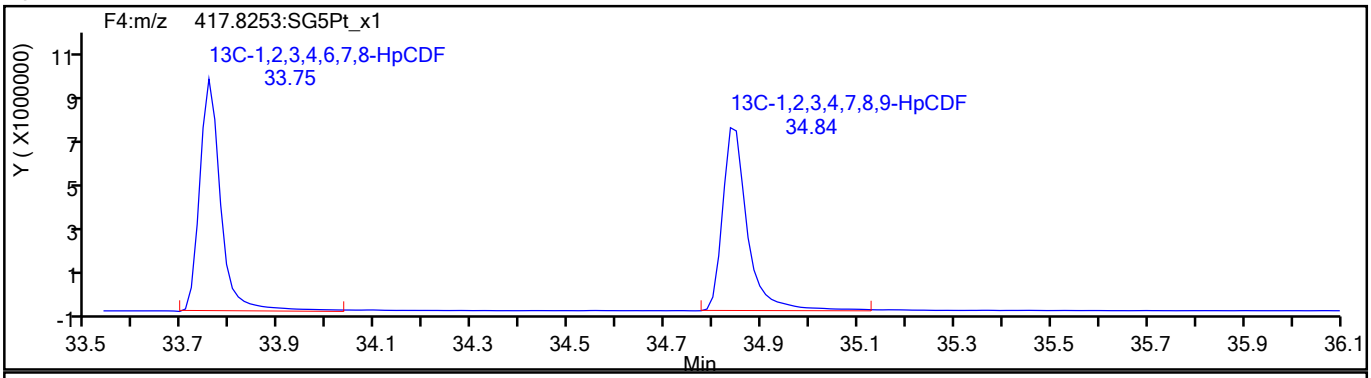

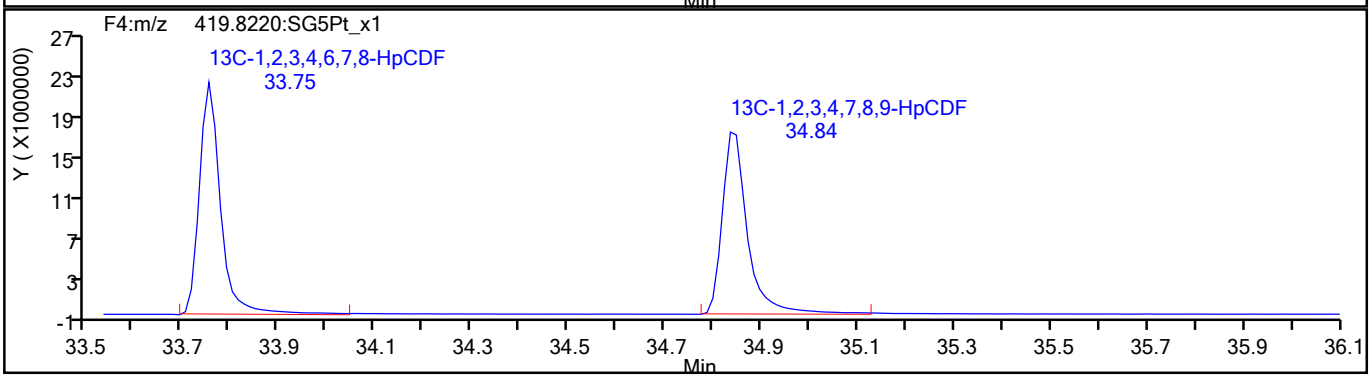

780484

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

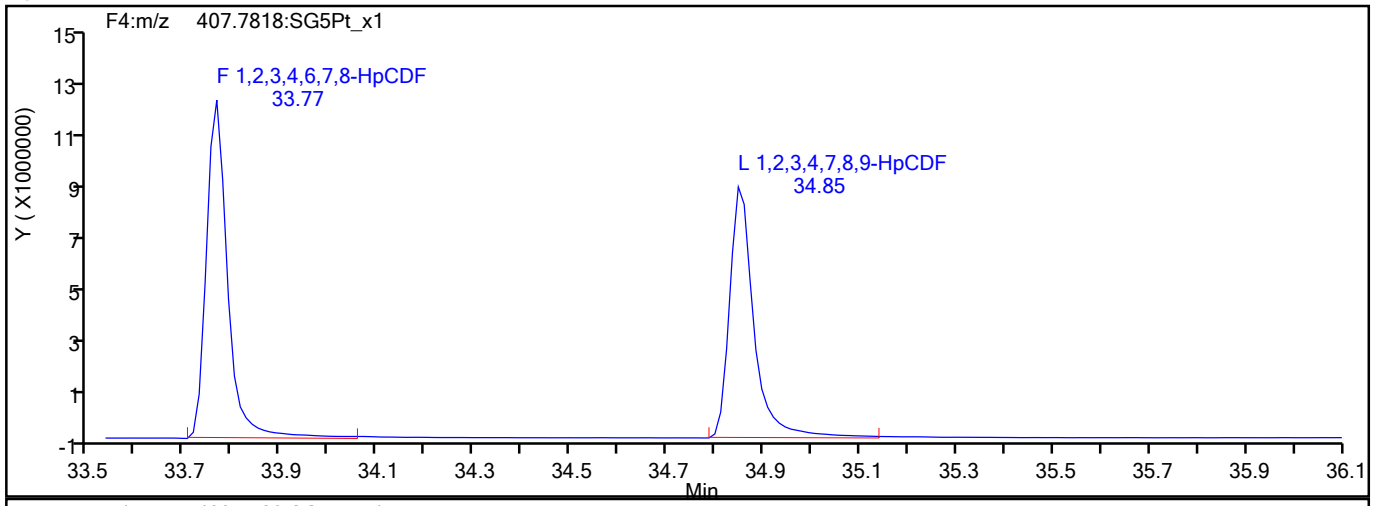

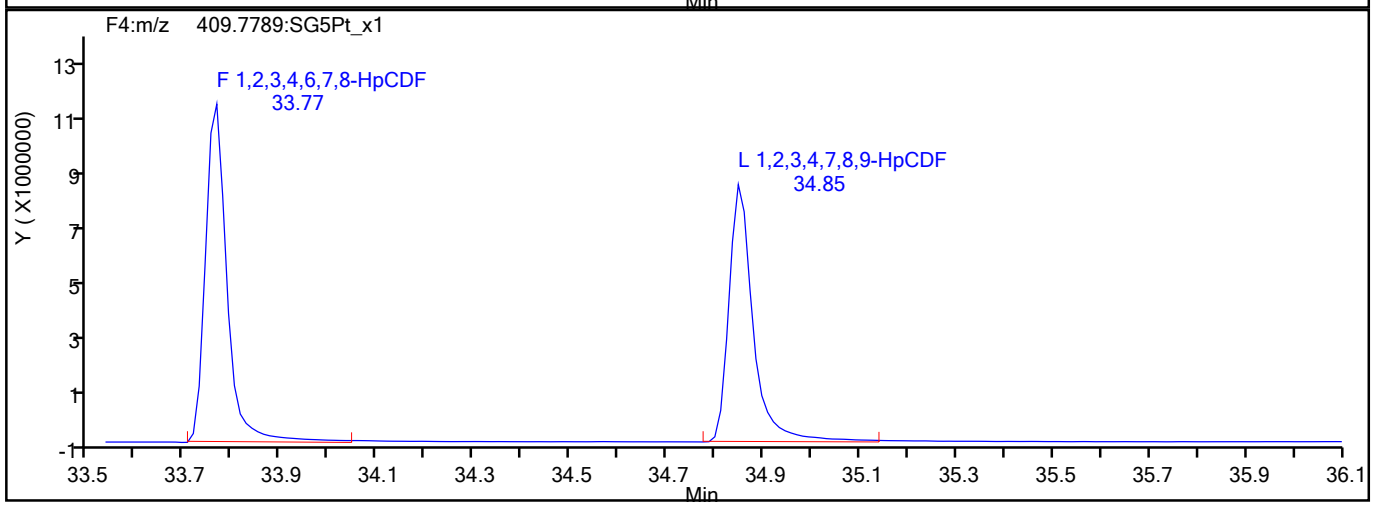

HpCDF Interference Mass

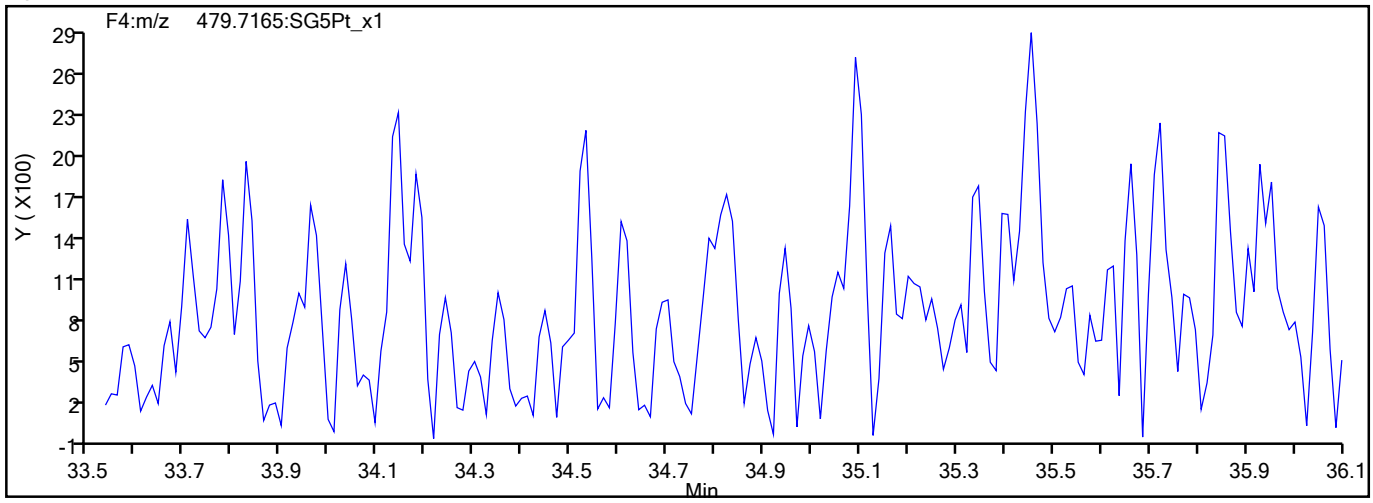

780485

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

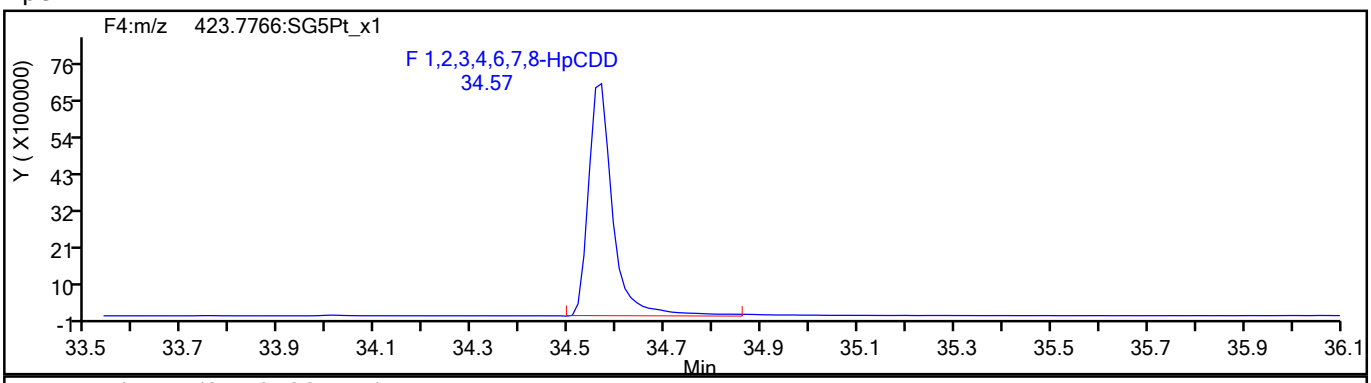

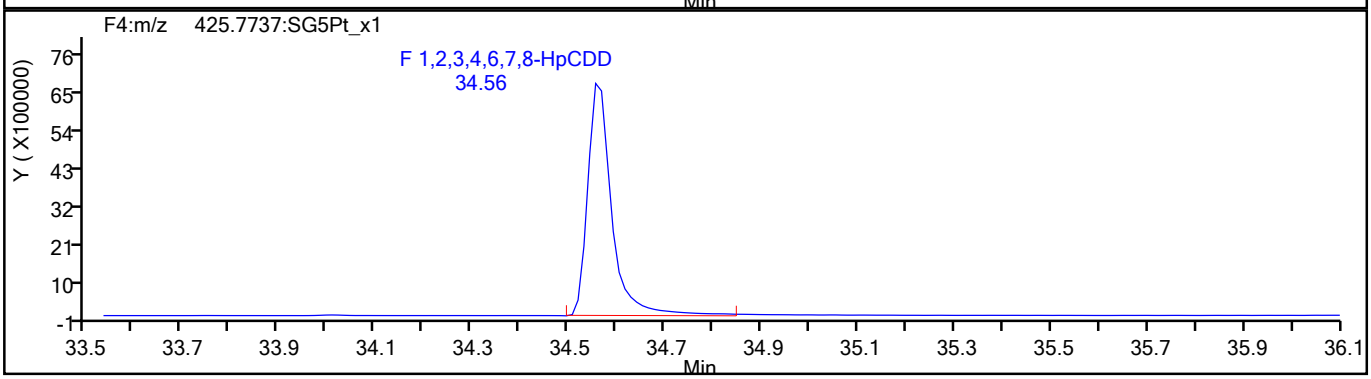

HpCDD Standards

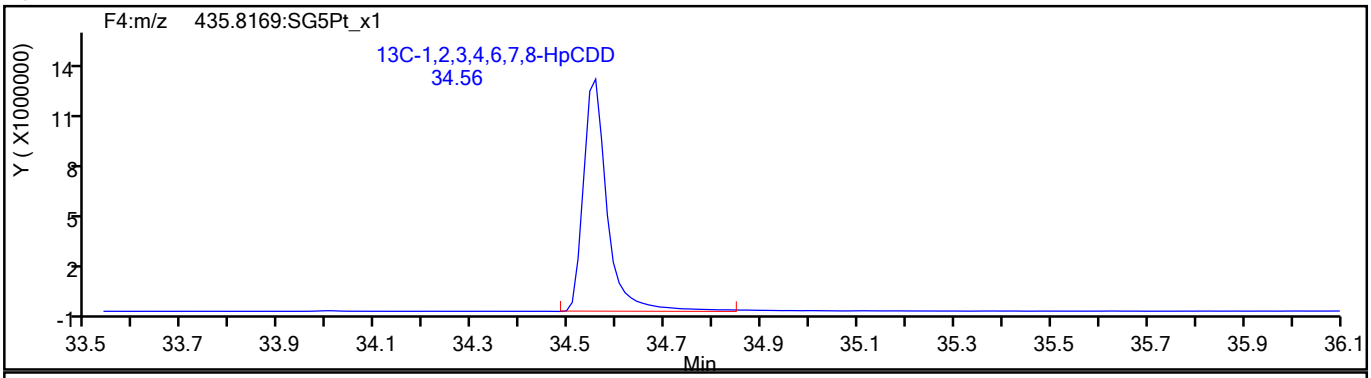

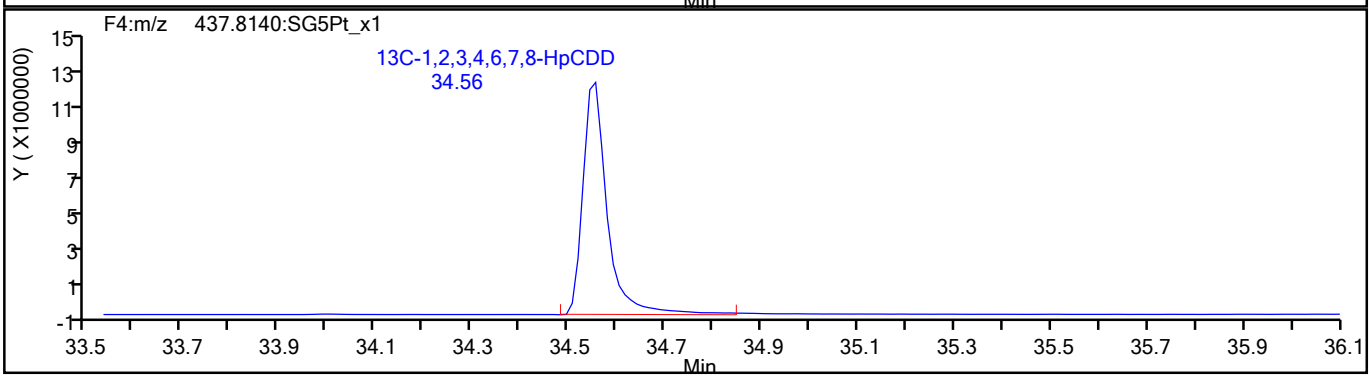

780486

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

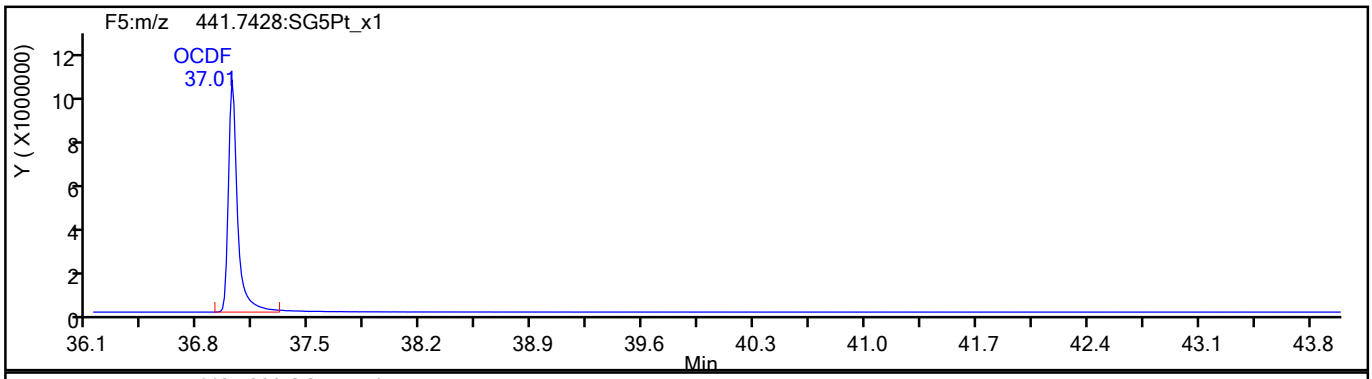

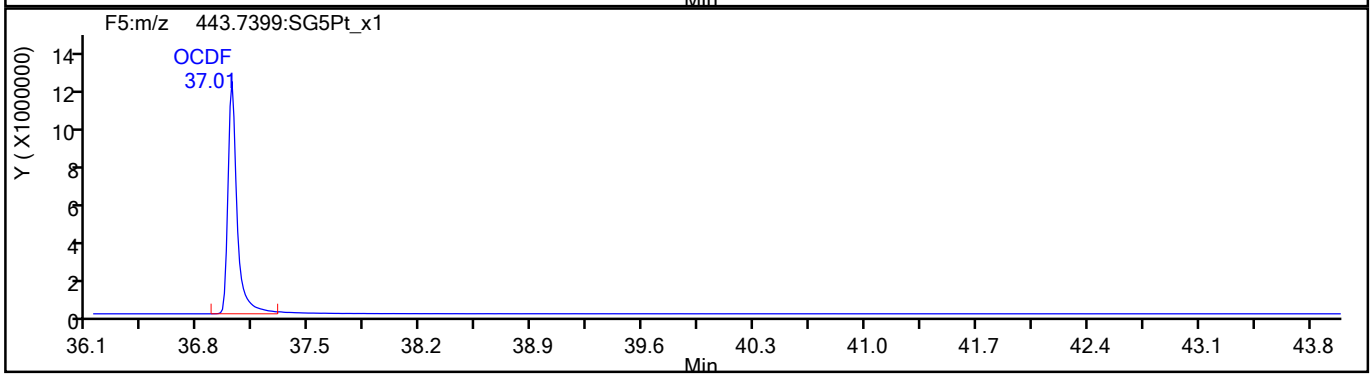

OCDF Standards

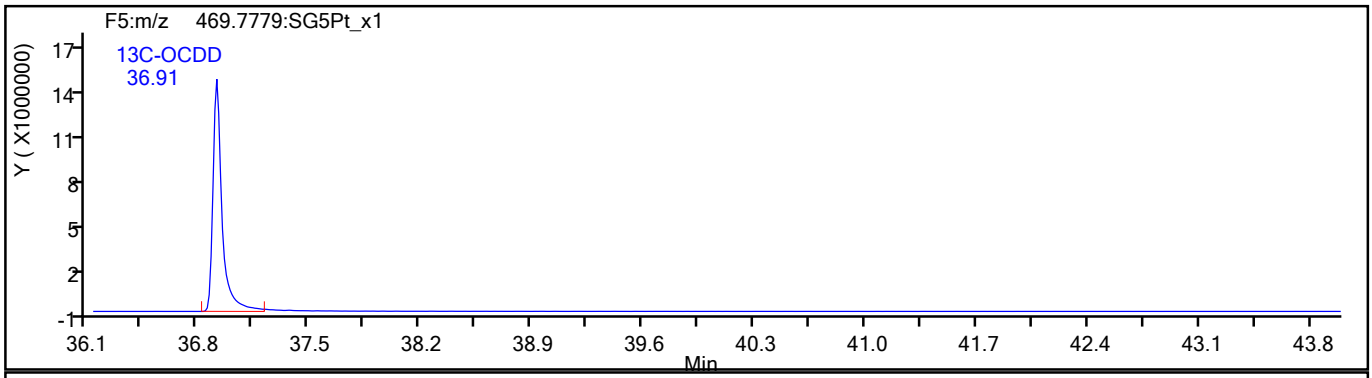

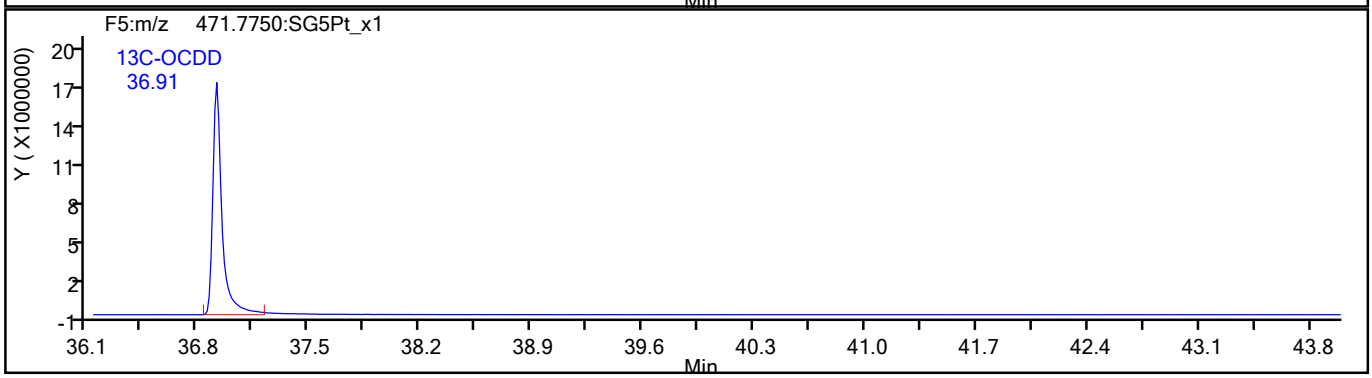

780487

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

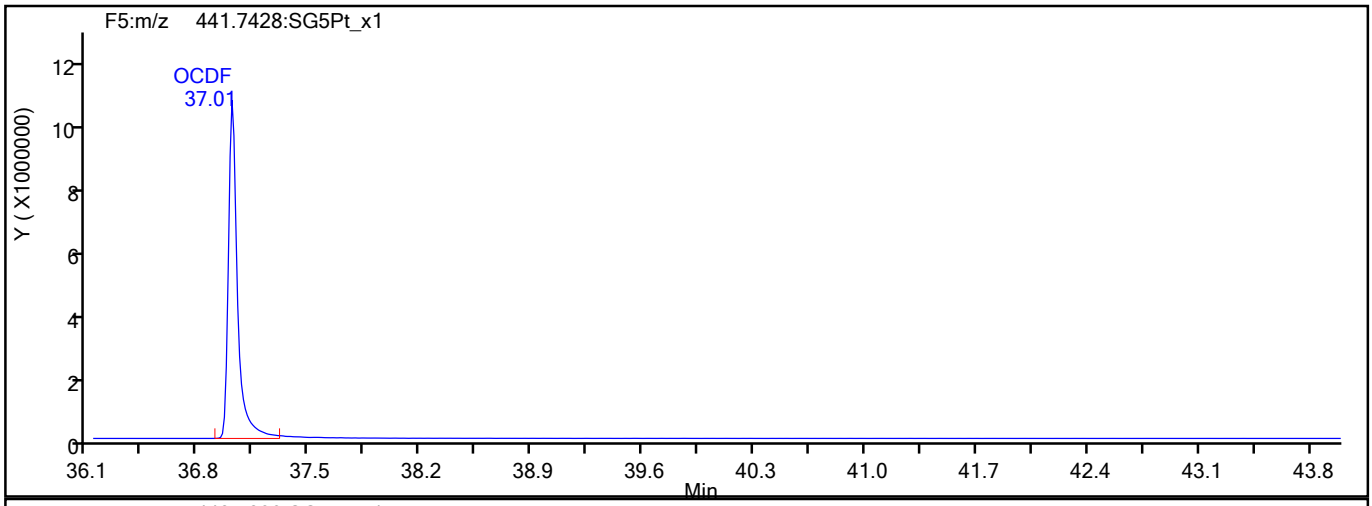

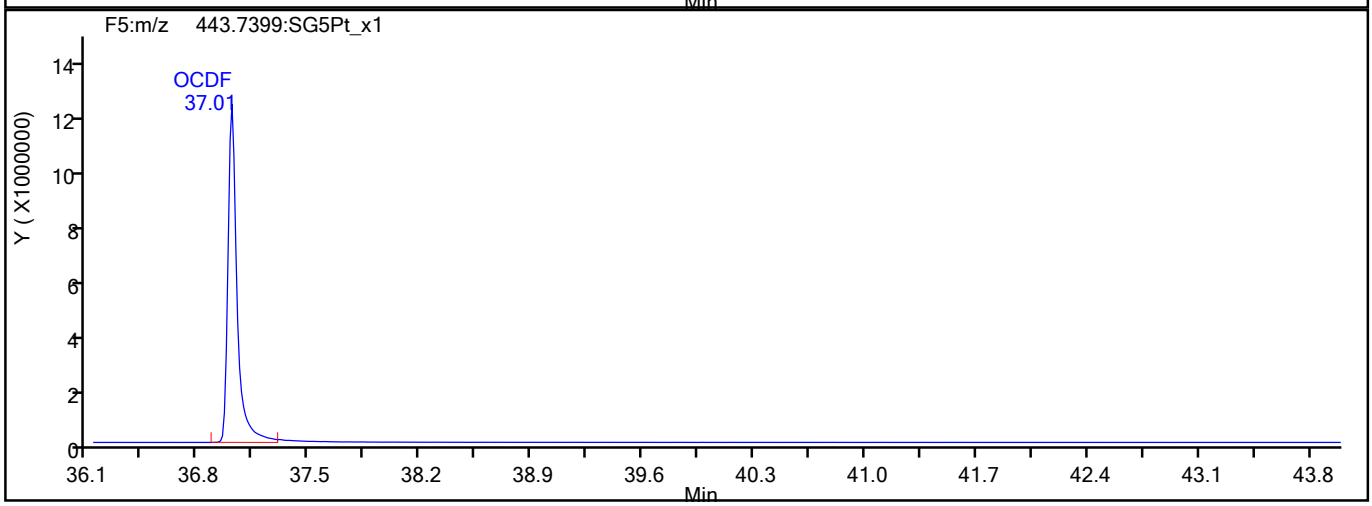

OCDF Interference Mass

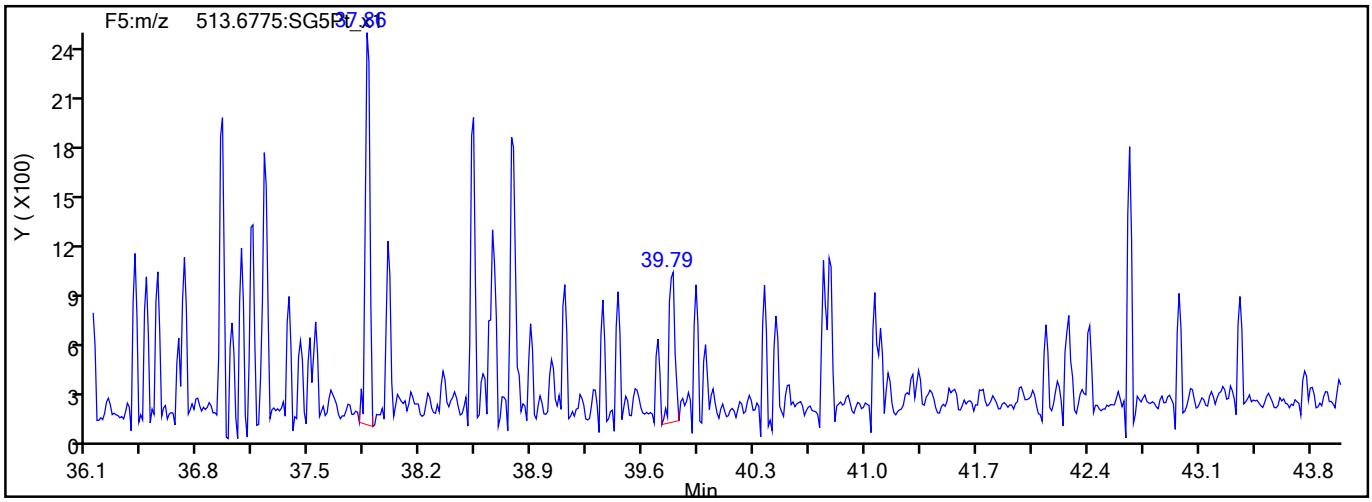

780488

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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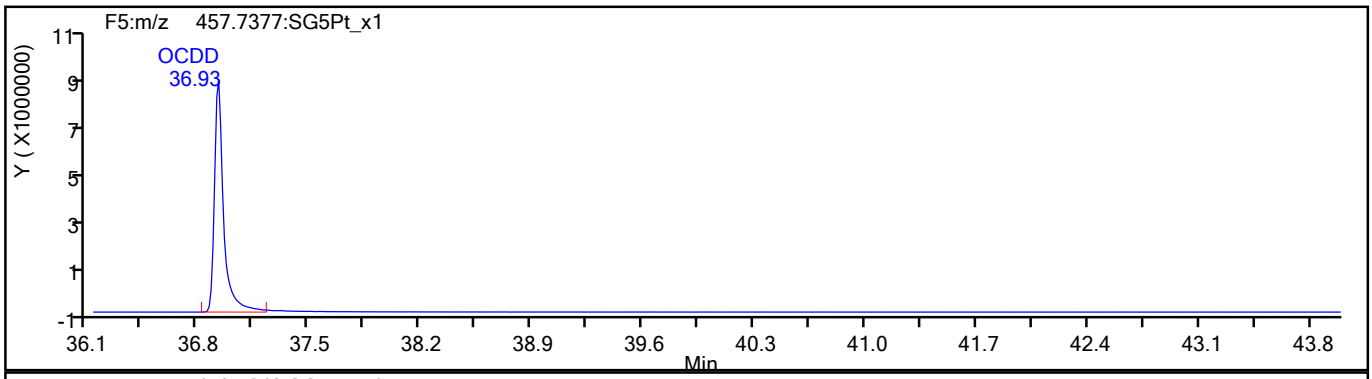

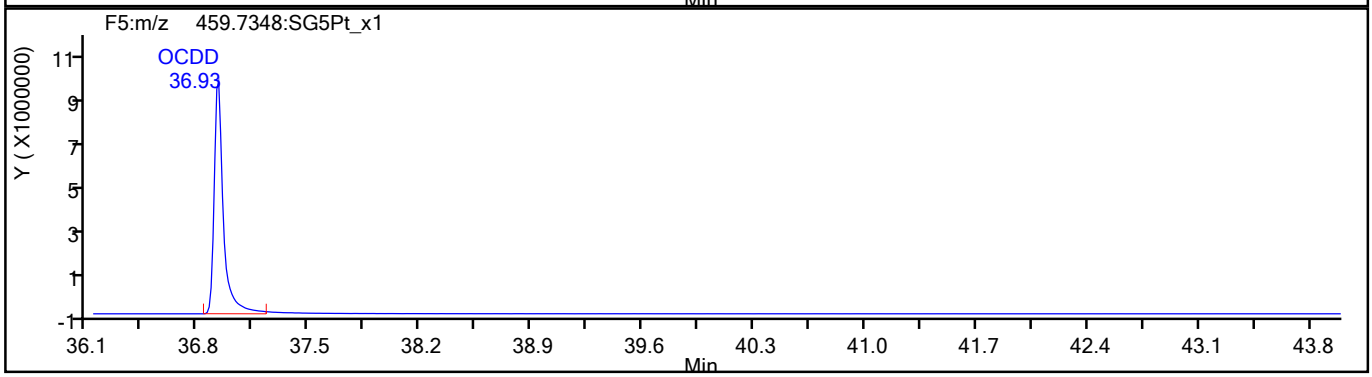

OCDD Standards

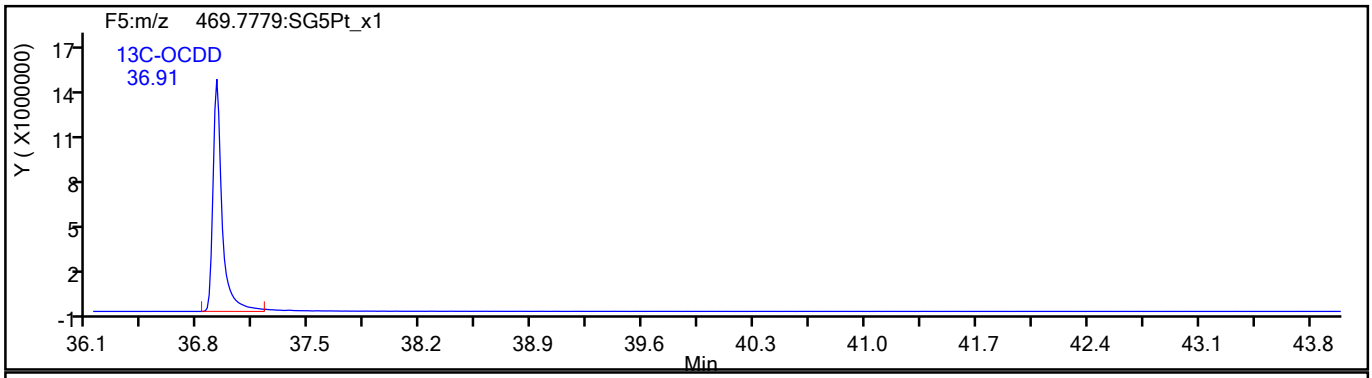

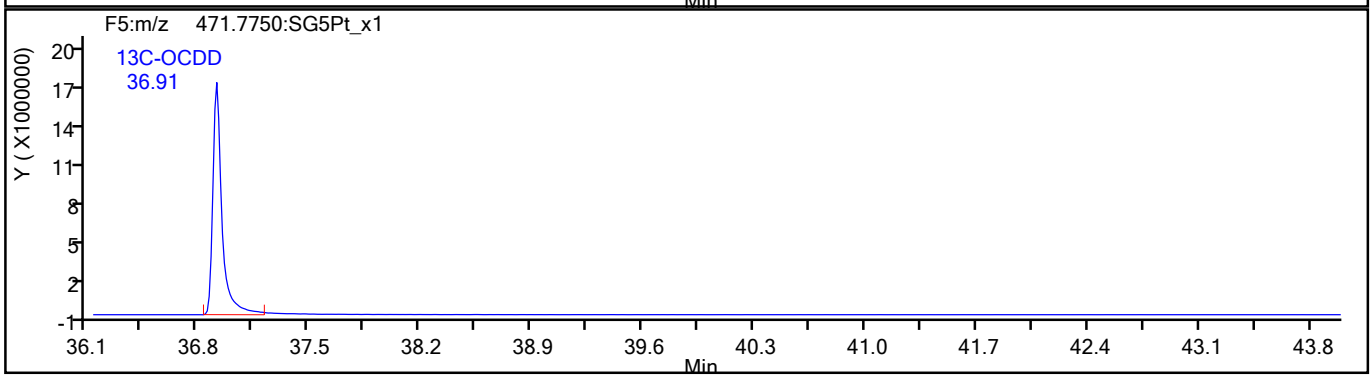

780489

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

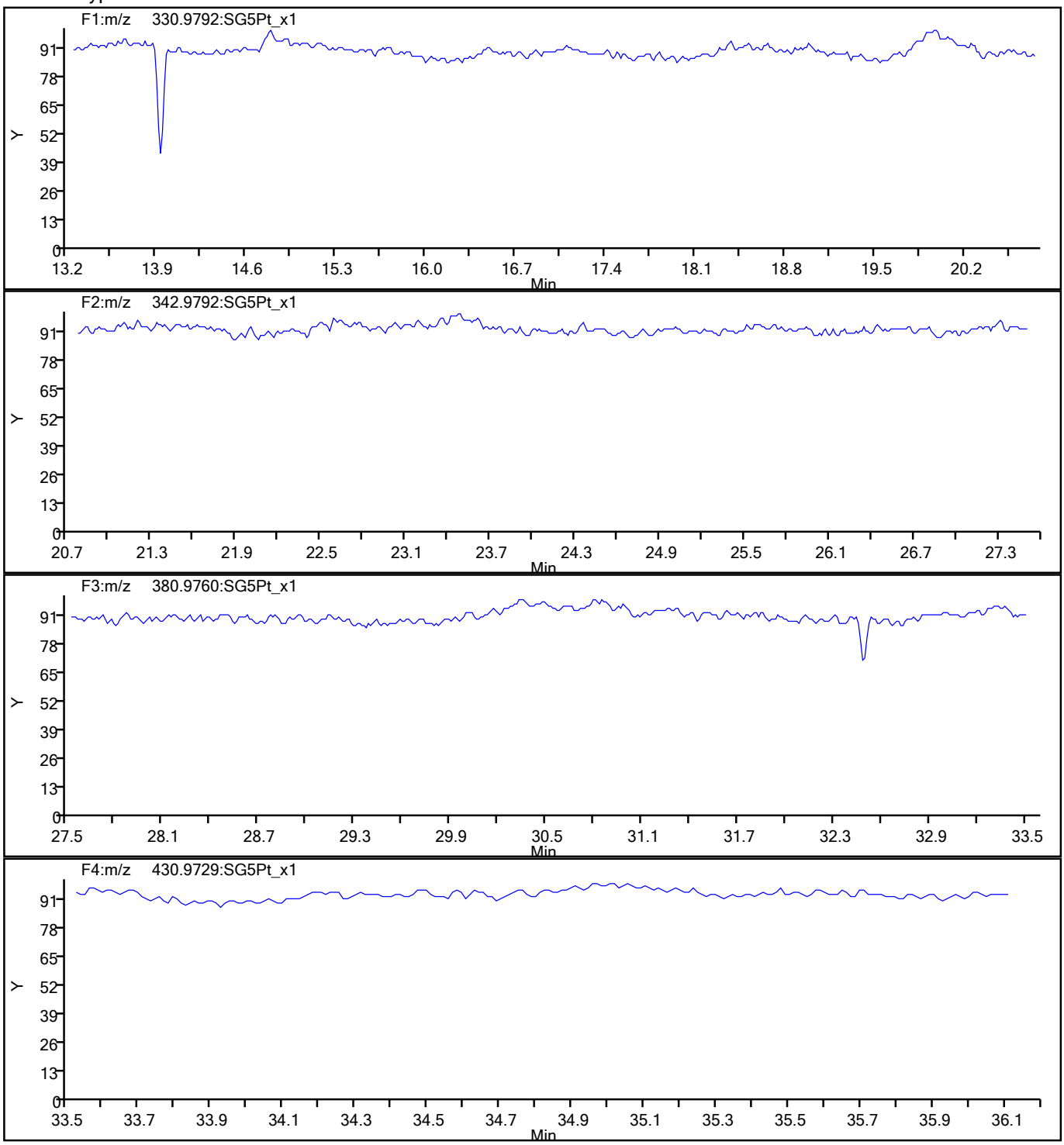

780490

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

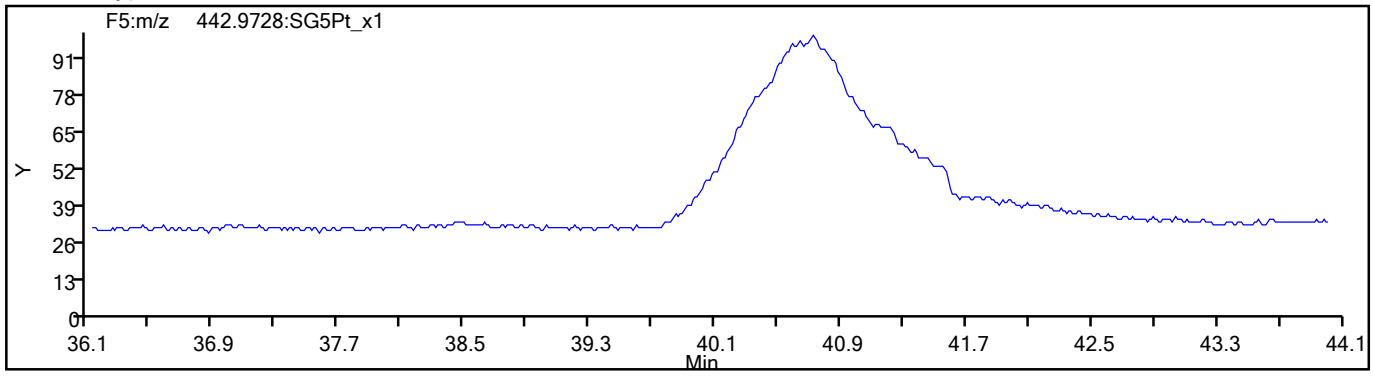

780491

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID: CCV 320-516846/17 Calibration Date: 08/14/2021 13:46

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 13AU2110D5_28.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.031		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.268		10.1	10.0	101	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.058		49.8	50.0	100	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.029		50.5	50.0	101	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.029		49.1	50.0	98	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.087		50.1	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.119		49.7	50.0	99	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.163		49.8	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.063		49.9	50.0	100	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.036		51.8	50.0	104	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.256		55.4	50.0	111	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.167		50.0	50.0	100	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.477		51.2	50.0	102	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.103		50.4	50.0	101	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.337		50.7	50.0	101	86-116
OCDD	AveID	1.107	1.135		103	100	103	79-126
OCDF	AveID	1.438	1.433		99.7	100	100	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.542		94.9	100	95	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9086		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.173		97.0	100	97	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.190		96.0	100	96	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7811		103	100	103	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	0.9366		86.4	100	86	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	0.9717		86.2	100	86	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	0.9300		87.4	100	87	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.6763		92.2	100	92	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.7812		88.8	100	89	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.8644		89.3	100	89	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7573		98.0	100	98	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6840		106	100	106	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7354		105	100	105	77-129
13C-OCDD	Ave	0.4472	0.5180		232	200	116	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.186		10.7	10.0	107	79-127

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	13AU2110D5_1	CS-4 HRDXNL4_00099	CCV 081321	Tray01:2	Dioxin		DB
2	13AU2110D5_2	WDM HRDXNCP_00044	WDM 081321	Tray01:1	Dioxin		DB
3	13AU2110D5_3	mb 320-514953/1-a	mb 320-514953/1-a	Tray01:4	1613B/8290A/Water	D265	DB
4	13AU2110D5_4	lcs 320-514953/2-a	lcs 320-514953/2-a	Tray01:5	1613B/8290A/Water		DB
5	13AU2110D5_5	lcsd 320-514953/3-a	lcsd 320-514953/3-a	Tray01:6	1613B/8290A/Water		DB
6	13AU2110D5_6	320-76081-a-4-b	320-76081-a-4-b	Tray01:7	1613B/8290A/Water		DB
7	13AU2110D5_7	mb 320-514735/1-a	mb 320-514735/1-a	Tray01:8	1613B/8290A/Solid	D262	DB
8	13AU2110D5_8	lcs 320-514735/2-a	lcs 320-514735/2-a	Tray01:9	1613B/8290A/Solid		DB
9	13AU2110D5_9	lcsd 320-514735/3-a	lcsd 320-514735/3-a	Tray01:10	1613B/8290A/Solid		DB
10	13AU2110D5_10	320-76718-a-1-a	320-76718-a-1-a	Tray01:11	1613B/8290A/Solid		DB
11	13AU2110D5_11	SB Solvent Blank C-14	SB 081321	Tray01:3			DB
12	13AU2110D5_12	CS-4 HRDXNL4_00099	CCV 081321A	Tray01:2	Dioxin		DB
13	13AU2110D5_13	WDM HRDXNCP_00044	WDM 081321A	Tray01:1	Dioxin		DB
14	13AU2110D5_14	mb 320-512871/1-a	mb 320-512871/1-a	Tray01:15	1613B/Solid	D265	DB
15	13AU2110D5_15	lcs 320-512871/2-a	lcs 320-512871/2-a	Tray01:16	1613B/Solid		DB
16	13AU2110D5_16	lcsd 320-512871/3-a	lcsd 320-512871/3-a	Tray01:17	1613B/Solid		DB
17	13AU2110D5_17	320-76788-a-2-a	320-76788-a-2-a	Tray01:18	1613B/Solid		DB
18	13AU2110D5_18	320-76788-a-3-a	320-76788-a-3-a	Tray01:19	1613B/Solid		DB
19	13AU2110D5_19	320-76788-a-4-a	320-76788-a-4-a	Tray01:20	1613B/Solid		DB
20	13AU2110D5_20	320-76788-a-5-a	320-76788-a-5-a	Tray01:21	1613B/Solid		DB
21	13AU2110D5_21	320-76788-a-6-a	320-76788-a-6-a	Tray01:22	1613B/Solid		DB
22	13AU2110D5_22	320-76788-a-7-a	320-76788-a-7-a	Tray01:23	1613B/Solid		DB
23	13AU2110D5_23	320-76720-a-1-a 50X	320-76720-a-1-a 50X	Tray01:24	1613B/Solid		DB
24	13AU2110D5_24	320-76720-a-5-a 25X	320-76720-a-5-a 25X	Tray01:25	1613B/Solid		DB
25	13AU2110D5_25	320-76724-a-3-a 100X	320-76724-a-3-a 100X	Tray01:26	1613B/Solid		DB
26	13AU2110D5_26	SB Solvent Blank C-14	SB 081321A	Tray01:3			DB
27	13AU2110D5_27	WDM HRDXNCP_00044	WDM 081321B	Tray01:1	Dioxin		DB
28	13AU2110D5_28	CS-4 HRDXNL4_00099	CCV 081321B	Tray01:2	Dioxin		DB
29	13AU2110D5_29	320-76788-a-8-a	320-76788-a-8-a	Tray01:29	1613B/Solid	D265	DB
30	13AU2110D5_30	320-76788-a-9-a	320-76788-a-9-a	Tray01:30	1613B/Solid		DB
31	13AU2110D5_31	320-76788-a-13-a	320-76788-a-13-a	Tray01:31	1613B/Solid		DB
32	13AU2110D5_32	320-76788-a-15-a	320-76788-a-15-a	Tray01:32	1613B/Solid		DB
33	13AU2110D5_33	320-76788-a-16-a	320-76788-a-16-a	Tray01:33	1613B/Solid		DB
34	13AU2110D5_34	320-76788-a-17-a	320-76788-a-17-a	Tray01:34	1613B/Solid		DB
35	13AU2110D5_35	320-76788-a-18-a	320-76788-a-18-a	Tray01:35	1613B/Solid		DB
36	13AU2110D5_36	320-76788-a-19-a	320-76788-a-19-a	Tray01:36	1613B/Solid		DB
37	13AU2110D5_37	320-76788-a-20-a	320-76788-a-20-a	Tray01:37	1613B/Solid		DB
38	13AU2110D5_38	320-76788-a-21-a	320-76788-a-21-a	Tray01:38	1613B/Solid		DB
39	13AU2110D5_39	320-76788-a-1-a	320-76788-a-1-a	Tray01:39	1613B/Solid		DB
40	13AU2110D5_40	320-76788-a-14-a	320-76788-a-14-a	Tray01:40	1613B/Solid		DB
41	13AU2110D5_41	SB Solvent Blank C-14	SB 081321B	Tray01:3			DB
42	13AU2110D5_42	WDM HRDXNCP_00044	WDM 081321C	Tray01:1	Dioxin		DB
43	13AU2110D5_43	CS-4 HRDXNL4_00099	CCV 081321C	Tray01:2	Dioxin		DB
44	13AU2110D5_44	mb 320-513585/1-a	mb 320-513585/1-a	Tray01:43	1613B/Solid	D265	DB
45	13AU2110D5_45	lcs 320-513585/2-a	lcs 320-513585/2-a	Tray01:44	1613B/Solid		DB
46	13AU2110D5_46	320-76765-a-18-a	320-76765-a-18-a	Tray01:45	1613B/Solid		DB
47	13AU2110D5_47	320-76769-a-1-a	320-76769-a-1-a	Tray01:46	1613B/Solid		DB
48	13AU2110D5_48	320-76769-a-1-b ms	320-76769-a-1-b ms	Tray01:47	1613B/Solid		DB
49	13AU2110D5_49	320-76769-a-1-c msd	320-76769-a-1-c msd	Tray01:48	1613B/Solid		DB
50	13AU2110D5_50	320-76769-a-2-a	320-76769-a-2-a	Tray01:49	1613B/Solid		DB
51	13AU2110D5_51	320-76769-a-3-a	320-76769-a-3-a	Tray01:50	1613B/Solid		DB
52	13AU2110D5_52	320-76769-a-5-a	320-76769-a-5-a	Tray01:51	1613B/Solid		DB
53	13AU2110D5_53	320-76769-a-6-a	320-76769-a-6-a	Tray01:52	1613B/Solid		DB
54	13AU2110D5_54	320-76769-a-7-a	320-76769-a-7-a	Tray01:53	1613B/Solid		DB
55	13AU2110D5_55	320-76769-a-8-a	320-76769-a-8-a	Tray01:54	1613B/Solid		DB
56	13AU2110D5_56	SB Solvent Blank C-14	SB 081321C	Tray01:3			DB
57	13AU2110D5_57	WDM HRDXNCP_00044	WDM 081321D	Tray01:1	Dioxin		DB
58	13AU2110D5_58	CS-4 HRDXNL4_00099	CCV 081321D	Tray01:2	Dioxin		DB

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
59	13AU2110D5_59	320-76769-a-13-a	320-76769-a-13-a	Tray01:57	1613B/Solid	D265	DB
60	13AU2110D5_60	320-76769-a-15-a	320-76769-a-15-a	Tray01:58	1613B/Solid		DB
61	13AU2110D5_61	320-76769-a-16-a	320-76769-a-16-a	Tray01:59	1613B/Solid		DB
62	13AU2110D5_62	320-76769-a-17-a	320-76769-a-17-a	Tray01:60	1613B/Solid		DB
63	13AU2110D5_63	320-76769-a-18-a	320-76769-a-18-a	Tray01:61	1613B/Solid		DB
64	13AU2110D5_64	320-76769-a-19-a	320-76769-a-19-a	Tray01:62	1613B/Solid		DB
65	13AU2110D5_65	320-76769-a-20-a	320-76769-a-20-a	Tray01:63	1613B/Solid		DB
66	13AU2110D5_66	320-76769-a-25-a	320-76769-a-25-a	Tray01:64	1613B/Solid		DB
67	13AU2110D5_67	320-76769-a-26-a	320-76769-a-26-a	Tray01:65	1613B/Solid		DB
68	13AU2110D5_68	320-76769-a-28-a	320-76769-a-28-a	Tray01:66	1613B/Solid		DB
69	13AU2110D5_69	320-76769-a-14-a	320-76769-a-14-a	Tray01:67	1613B/Solid		DB
70	13AU2110D5_70	SB Solvent Blank C-14	SB 081321D	Tray01:3			DB

Logfile checked
08/16/21 SMA

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
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1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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Process Options	Action On Error	s5
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
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Printed: Saturday, August 14, 2021 01:16:08 Pacific Daylight Time

M 292.9824 R 12026

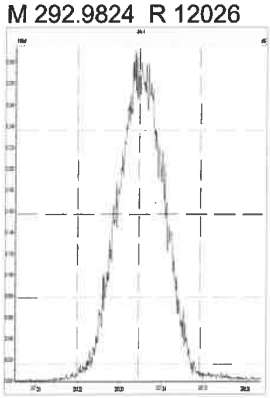

M 304.9824 R 11908

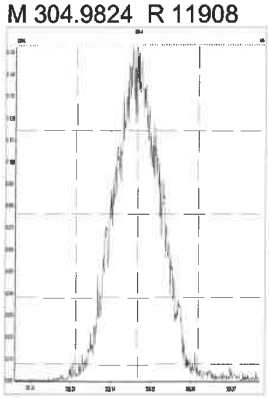

M 318.9792 R 12118

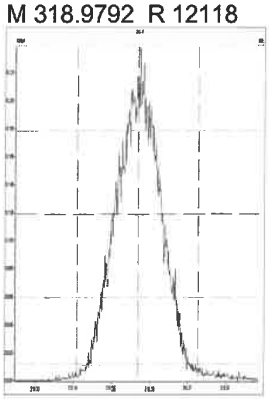

M 330.9792 R 11944

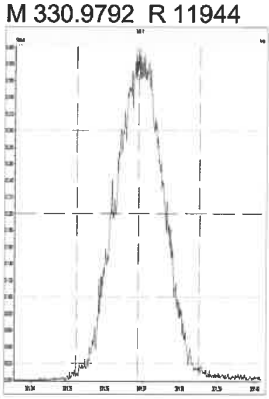

M 342.9792 R 11338

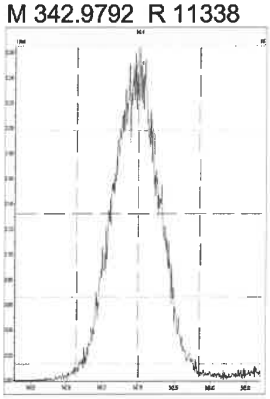

M 354.9792 R 11779

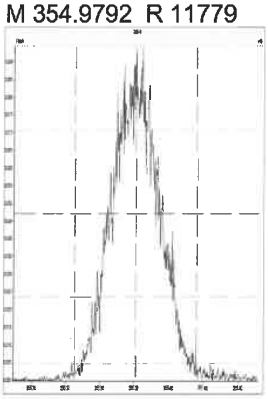

M 366.9792 R 12019

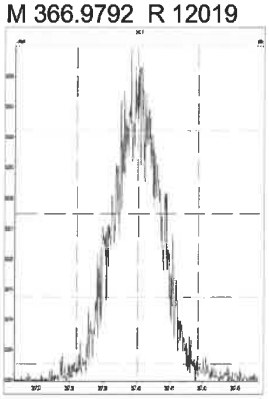

M 380.9760 R 10730

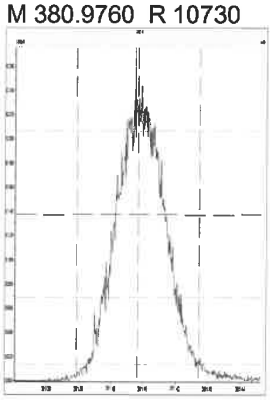

M 392.9760 R 11106

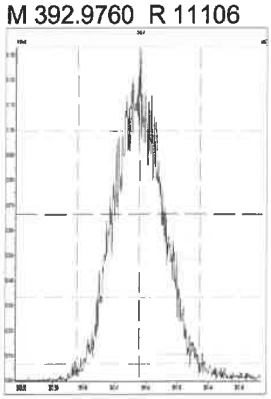

M 404.9760 R 10752

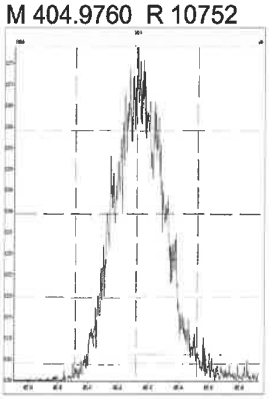

M 416.9760 R 12199

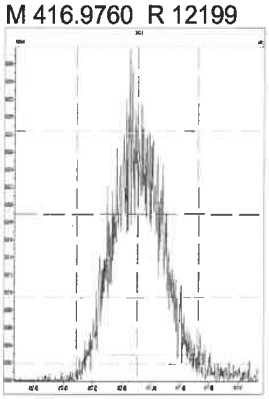

M 318.9792 R 11775

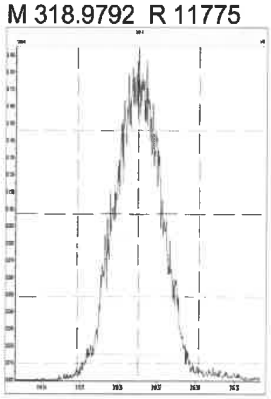

M 330.9792 R 11821

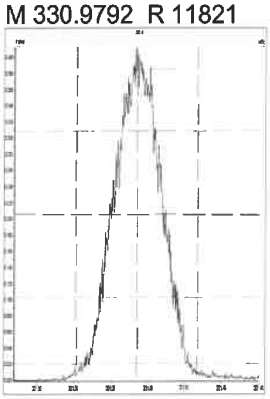

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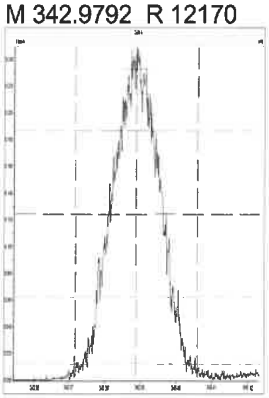

M 354.9792 R 12199

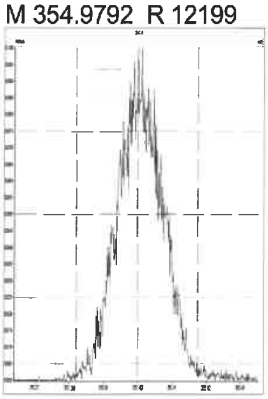

M 366.9792 R 12325

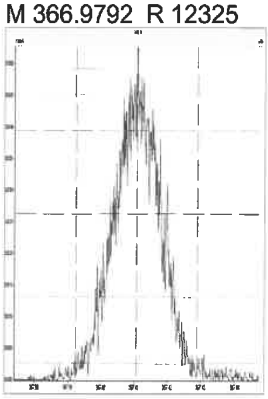

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M 380.9760 R 11369

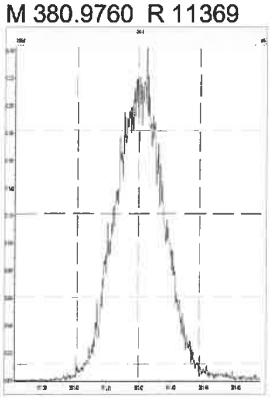

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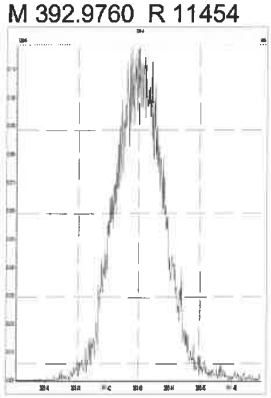

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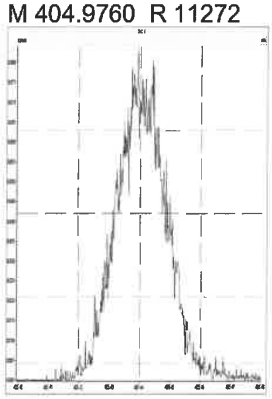

M 416.9760 R 12351

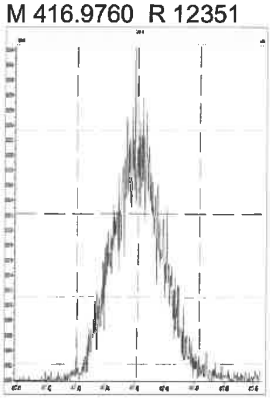

M 366.9792 R 11656

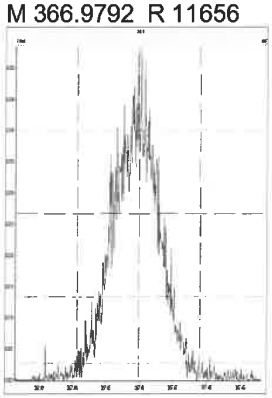

M 380.9760 R 11682

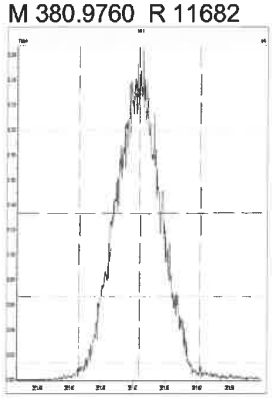

M 392.9760 R 12469

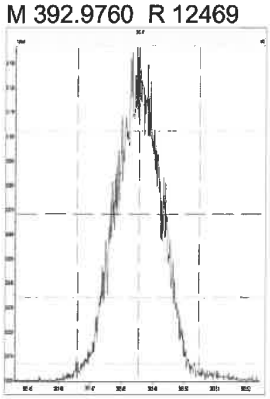

M 404.9760 R 12079

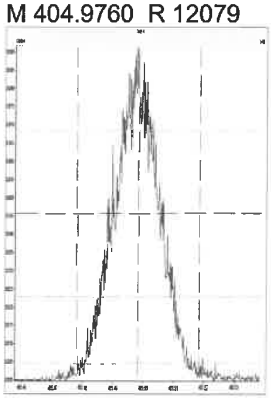

M 416.9760 R 12794

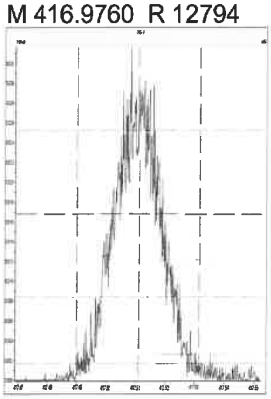

M 430.9728 R 11798

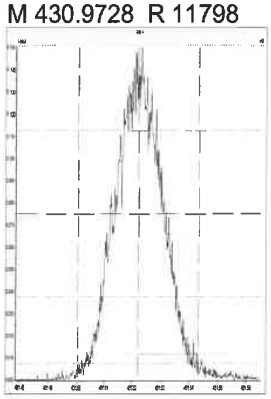

M 442.9728 R 12165

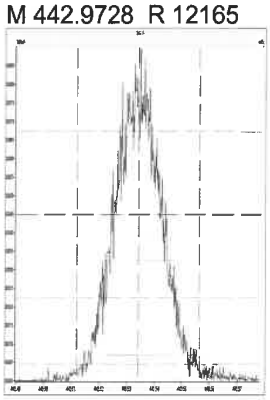

M 454.9728 R 11764

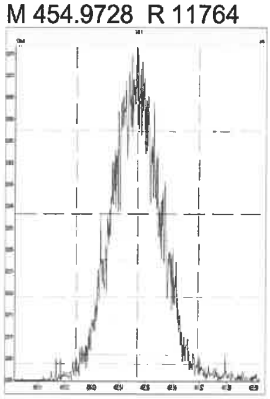

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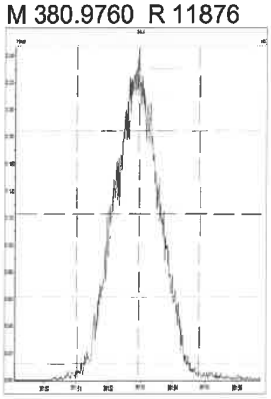

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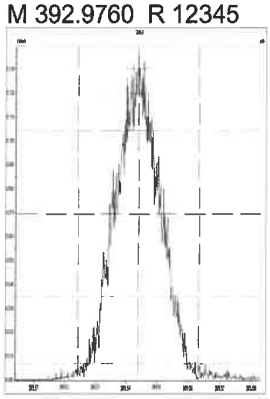

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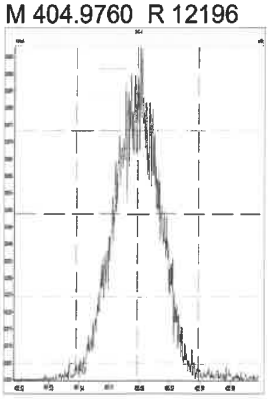

M 416.9760 R 12634

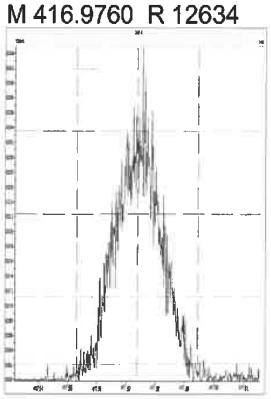

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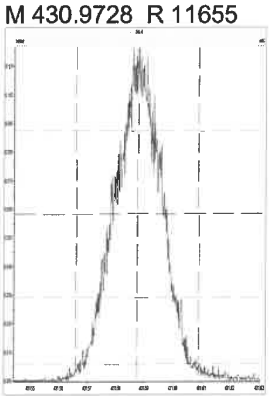

M 442.9728 R 11576

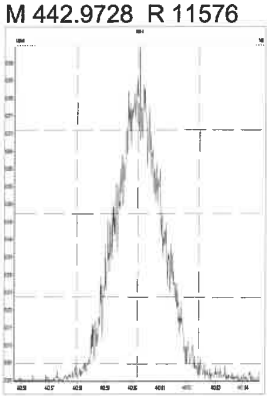

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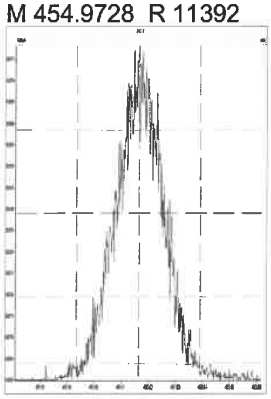

M 466.9728 R 13409

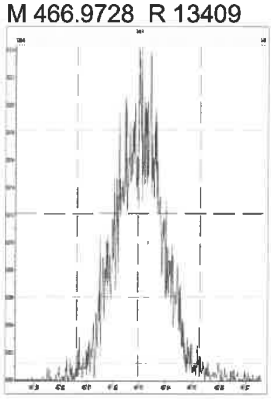

M 480.9696 R 11286

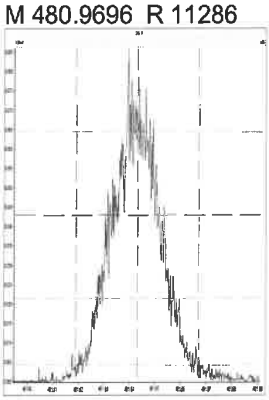

M 380.9760 R 12136

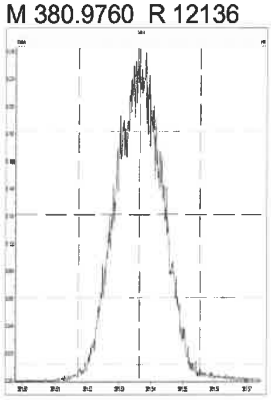

M 392.9760 R 12395

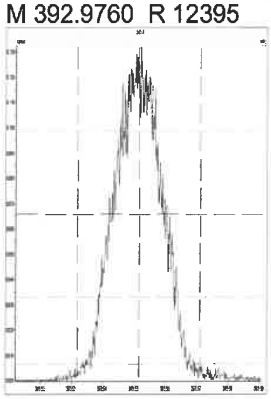

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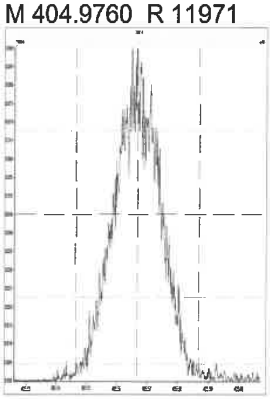

M 416.9760 R 13402

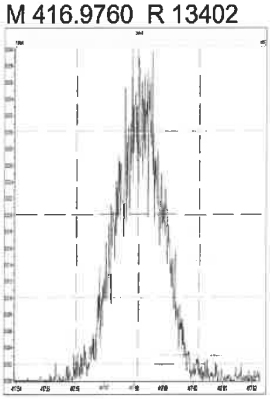

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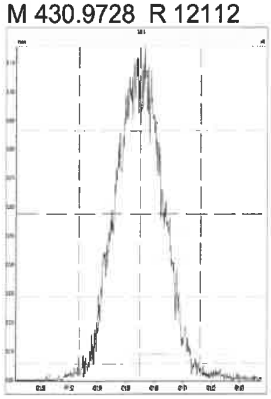

M 442.9728 R 12626

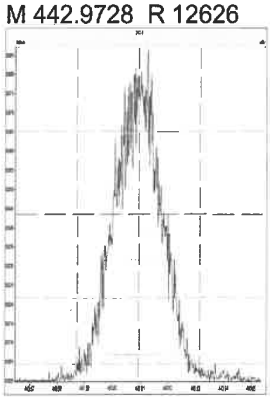

M 454.9728 R 11926

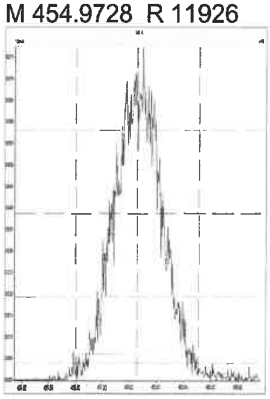

M 466.9728 R 12367

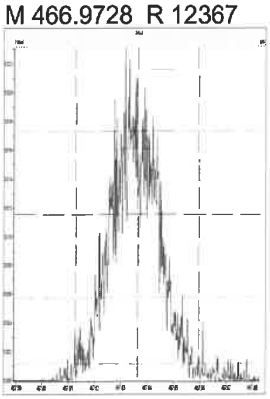

M 480.9696 R 11494

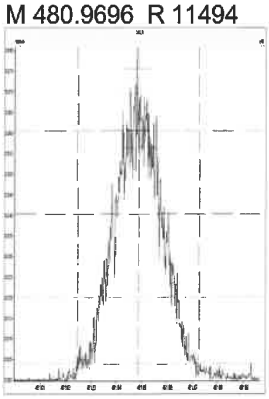

M 492.9696 R 10995

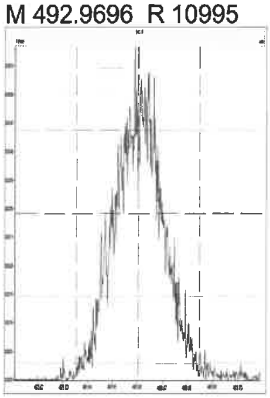

M 504.9696 R 11886

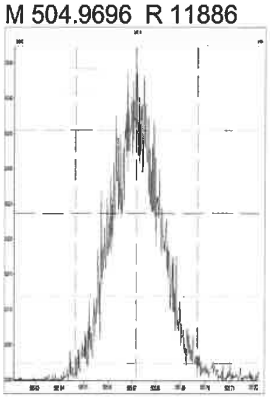

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M 516.9697 R 14005

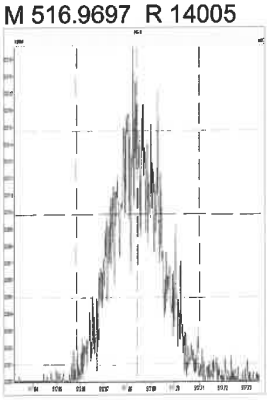

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M 292.9824 R 11904

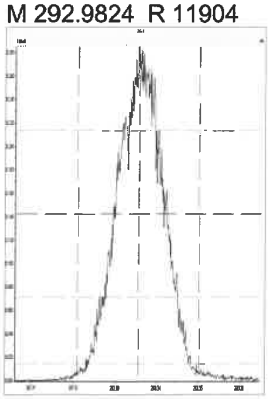

M 304.9824 R 12419

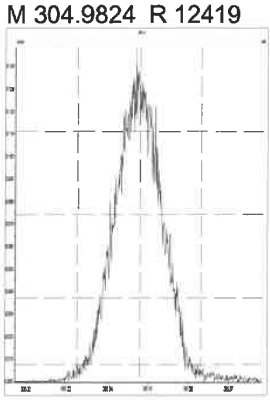

M 318.9792 R 12226

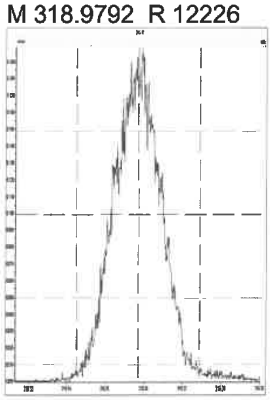

M 330.9792 R 11962

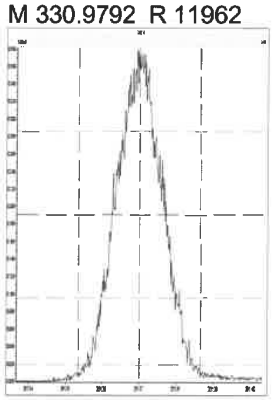

M 342.9792 R 11990

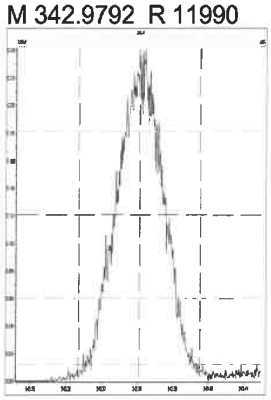

M 354.9792 R 11712

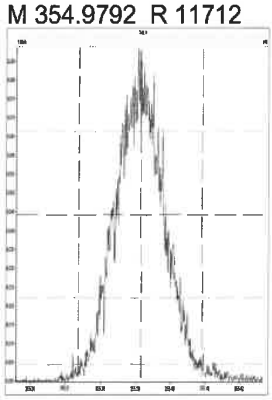

M 366.9792 R 12261

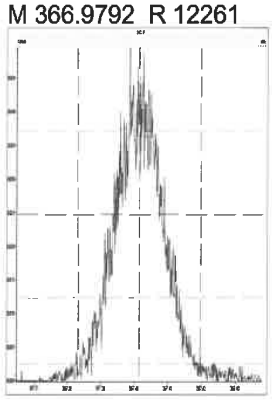

M 380.9760 R 11020

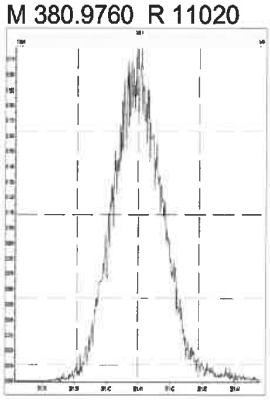

M 392.9760 R 10777

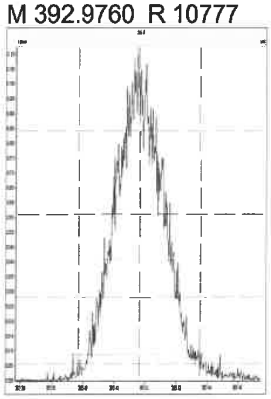

M 404.9760 R 11365

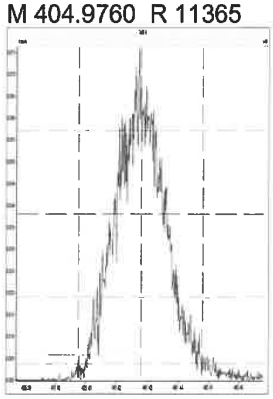

M 416.9760 R 11825

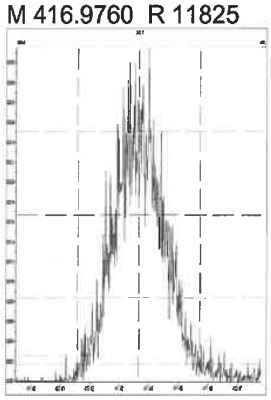

M 318.9792 R 12106

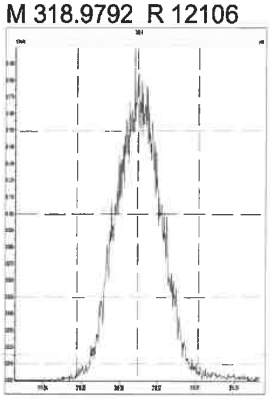

M 330.9792 R 11603

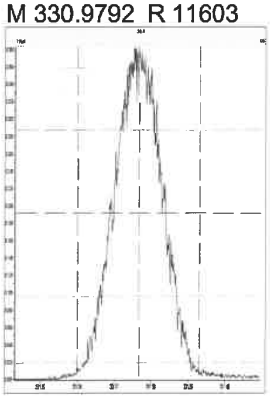

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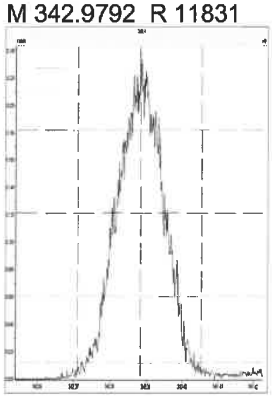

M 354.9792 R 11659

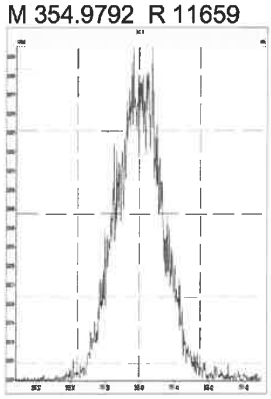

M 366.9792 R 12345

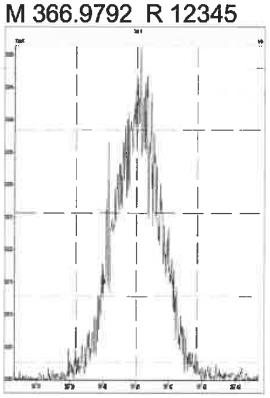

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M 380.9760 R 11441

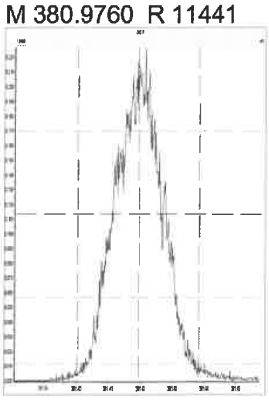

M 392.9760 R 11601

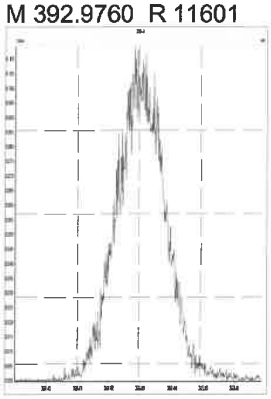

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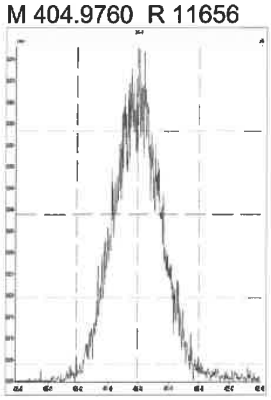

M 416.9760 R 12504

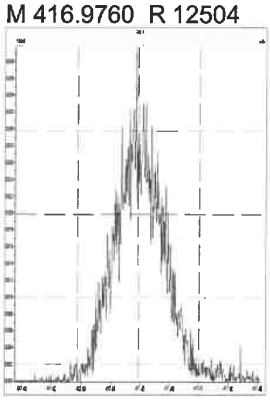

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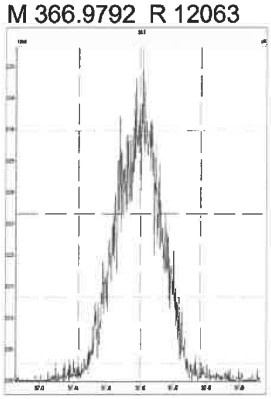

M 380.9760 R 11852

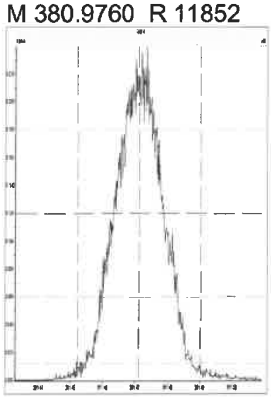

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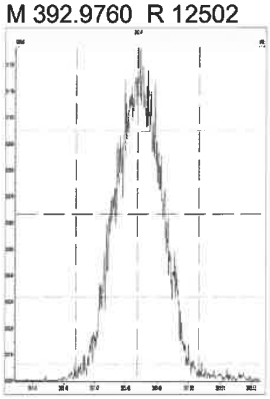

M 404.9760 R 11952

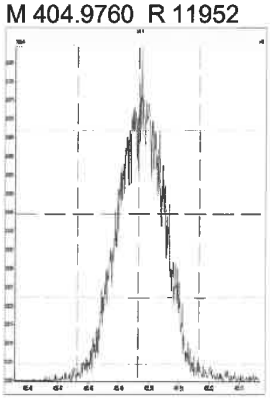

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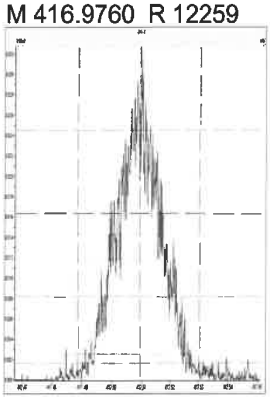

M 430.9728 R 11363

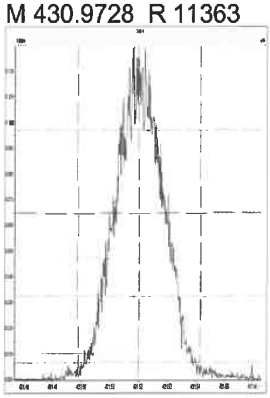

M 442.9728 R 11712

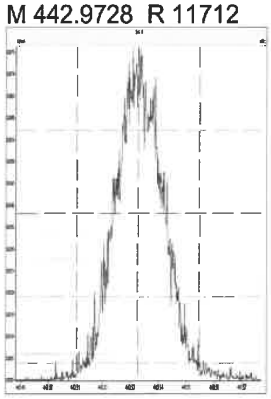

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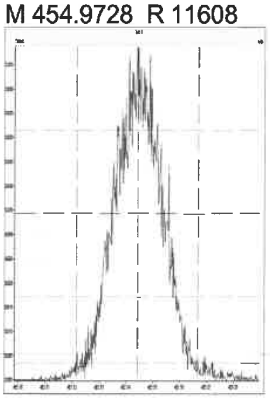

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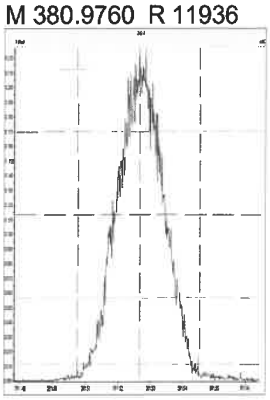

M 392.9760 R 12315

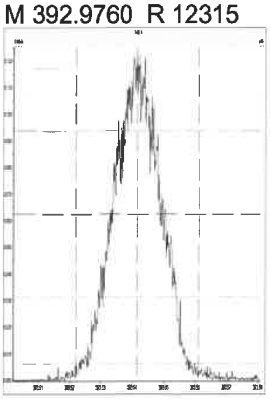

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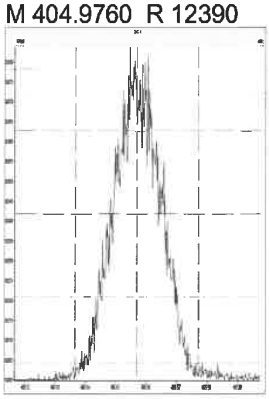

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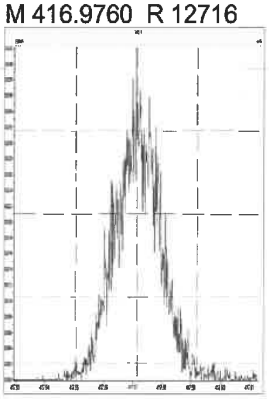

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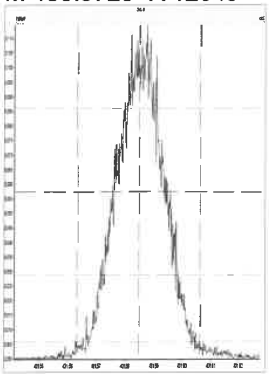

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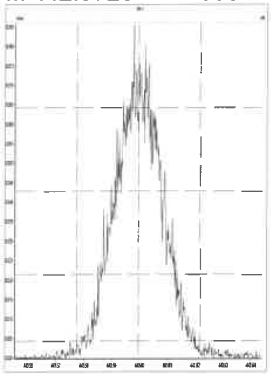

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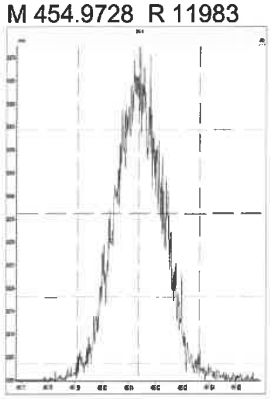

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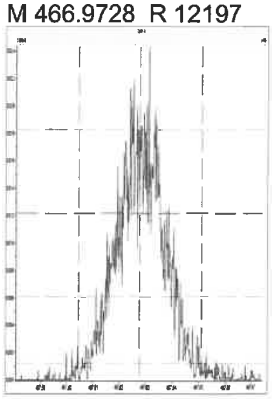

M 480.9696 R 11215

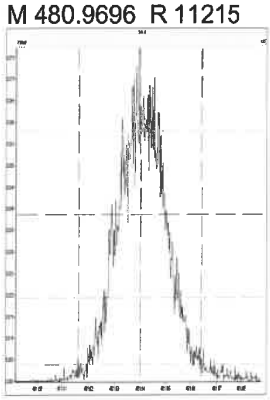

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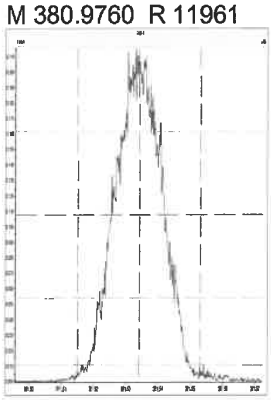

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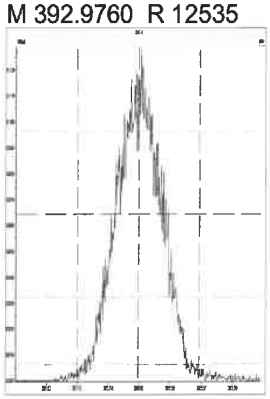

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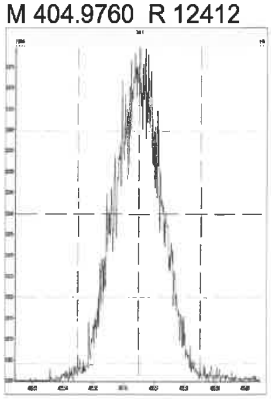

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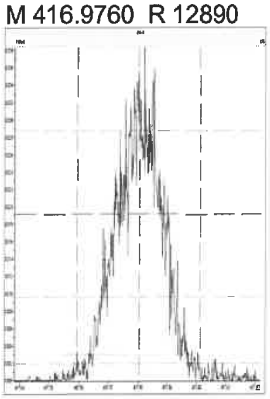

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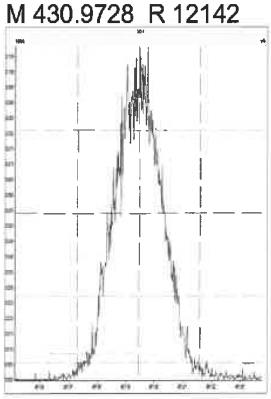

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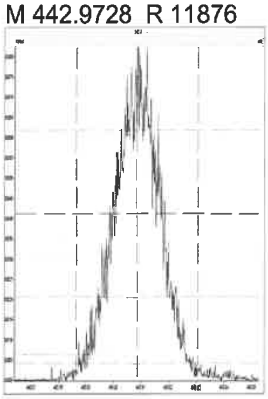

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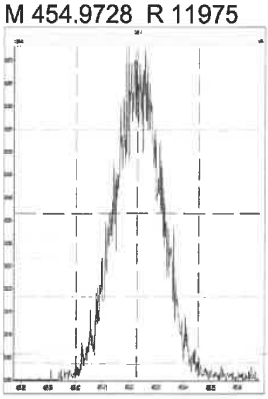

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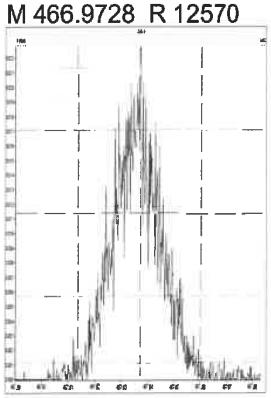

M 480.9696 R 11860

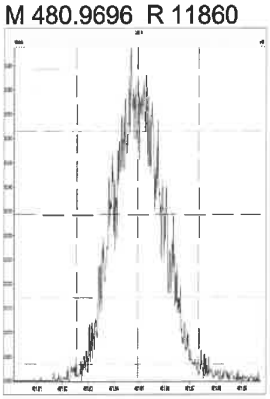

M 492.9696 R 11390

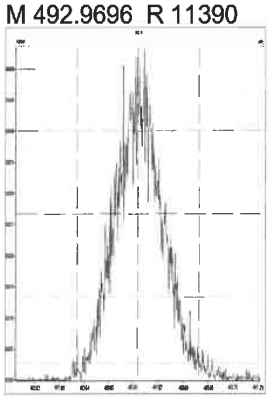

M 504.9696 R 11743

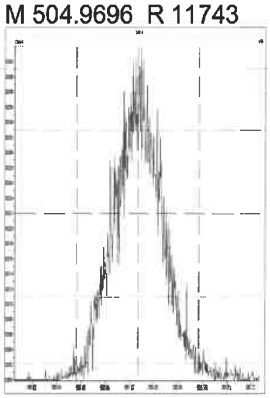

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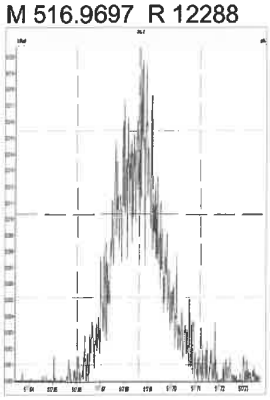

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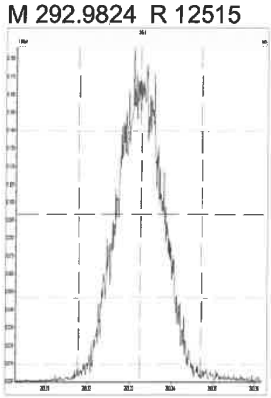

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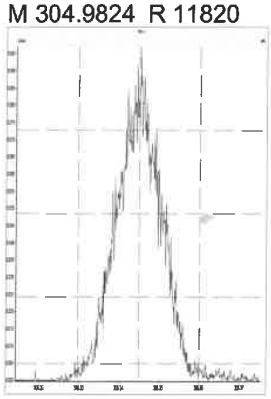

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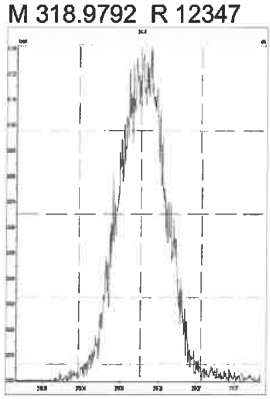

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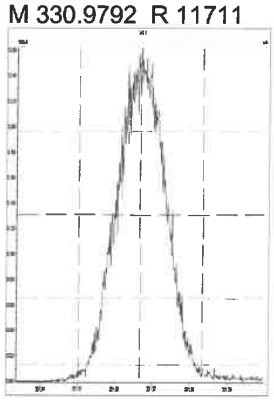

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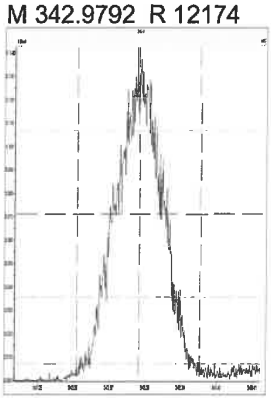

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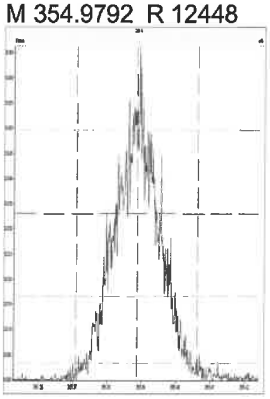

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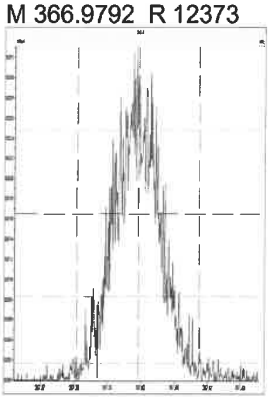

M 380.9760 R 11312

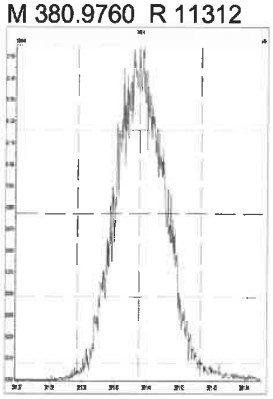

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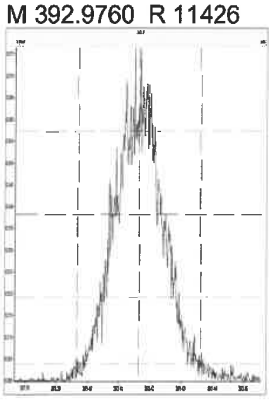

M 404.9760 R 11210

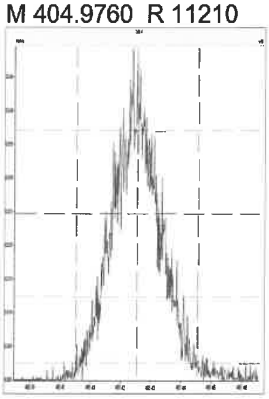

M 416.9760 R 12628

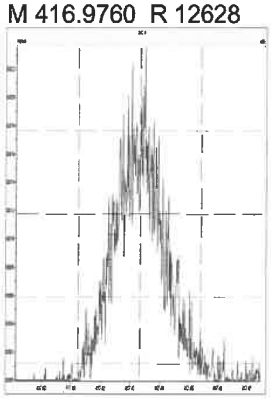

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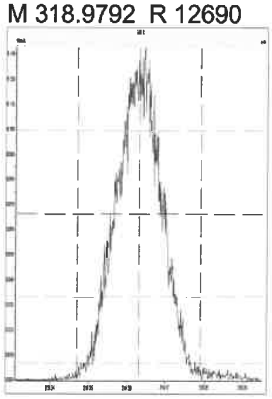

M 330.9792 R 12106

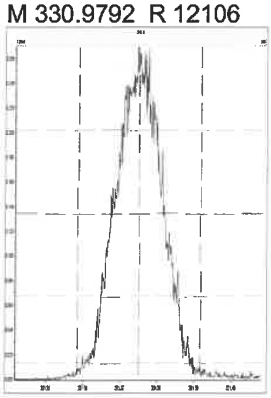

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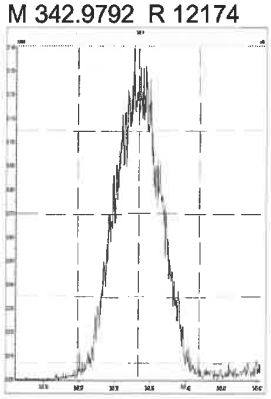

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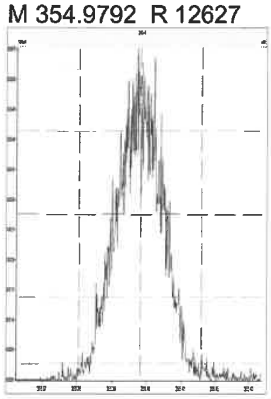

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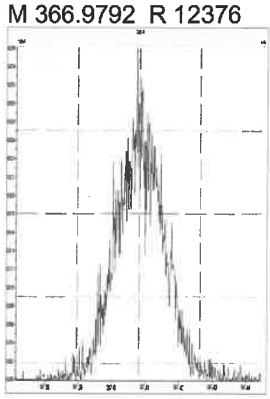

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M 380.9760 R 11585

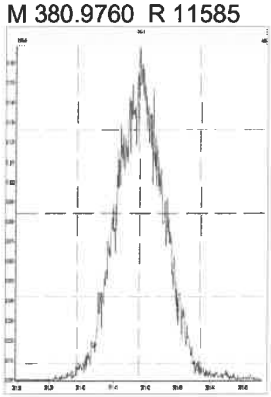

M 392.9760 R 12284

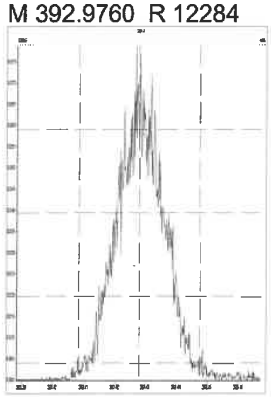

M 404.9760 R 12627

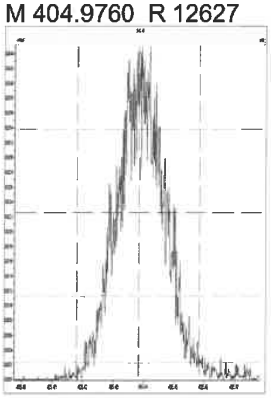

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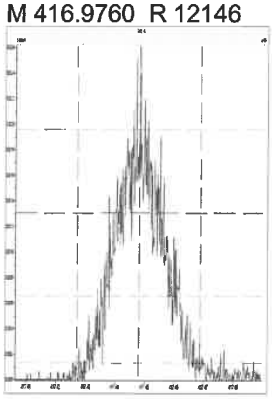

M 366.9792 R 13640

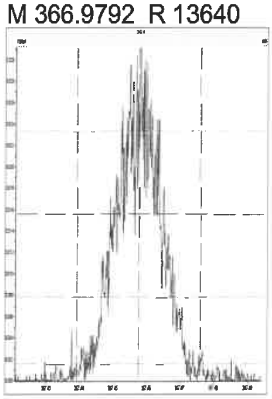

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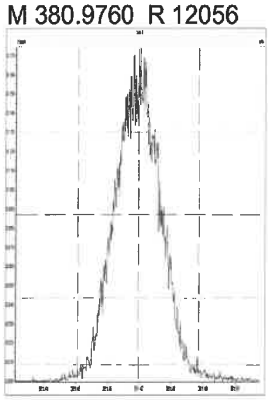

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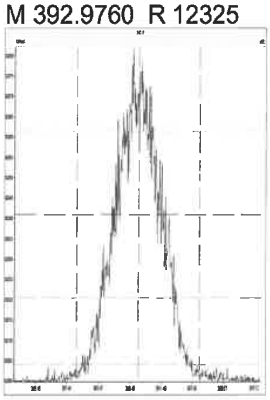

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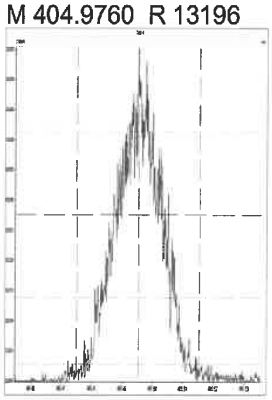

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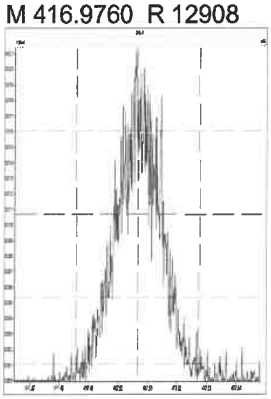

M 430.9728 R 11737

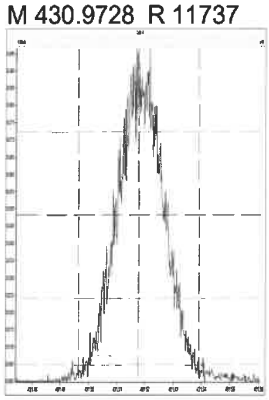

M 442.9728 R 12468

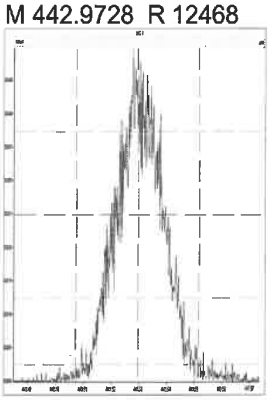

M 454.9728 R 12406

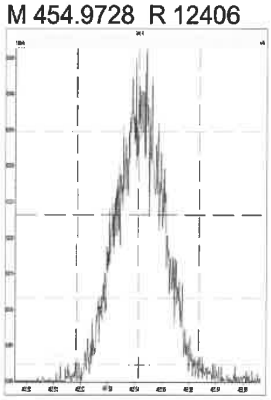

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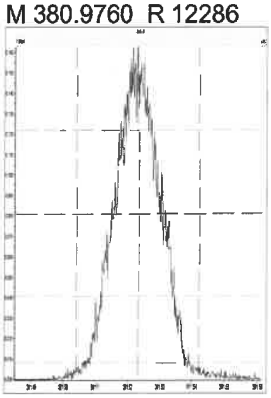

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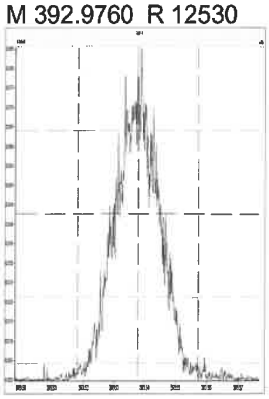

M 404.9760 R 12438

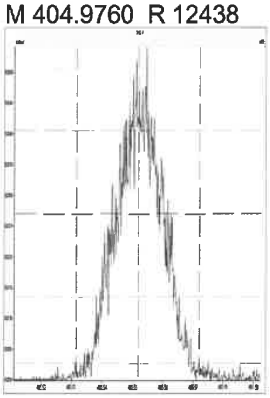

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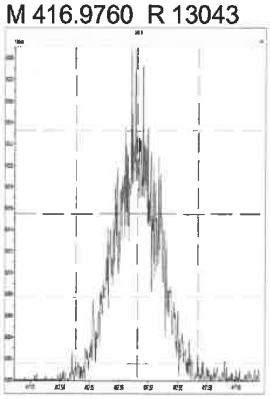

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M 430.9728 R 11944

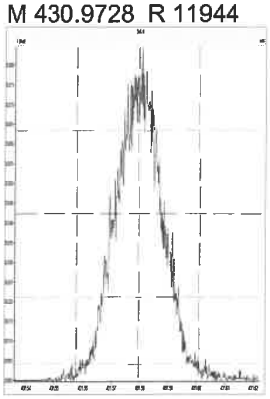

M 442.9728 R 12565

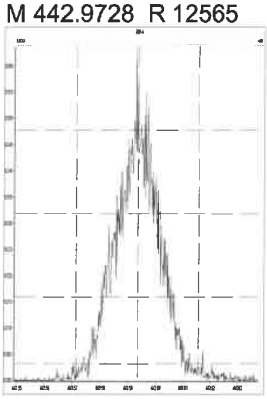

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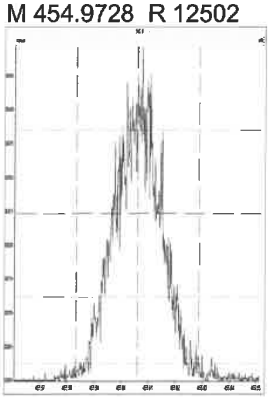

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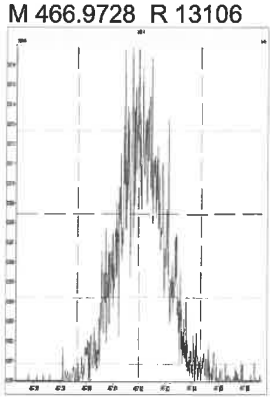

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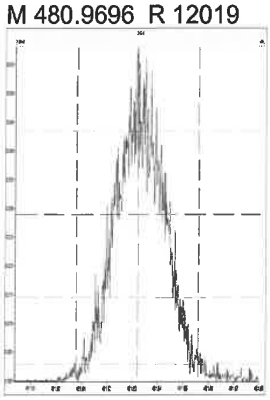

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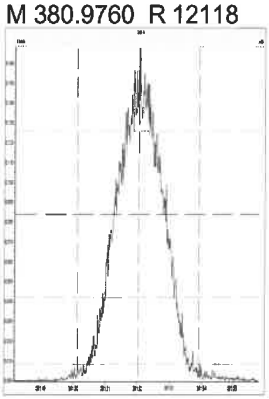

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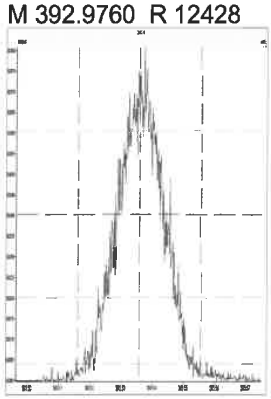

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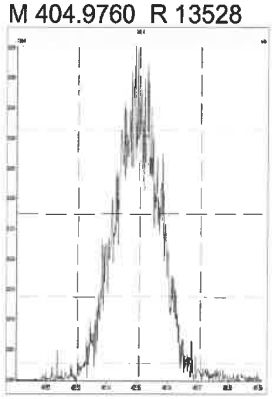

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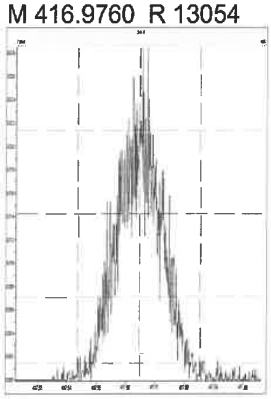

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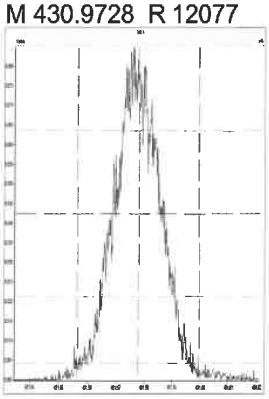

M 442.9728 R 11767

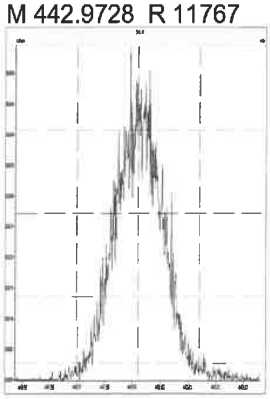

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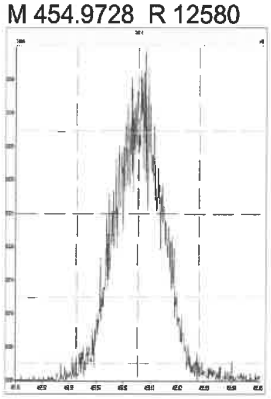

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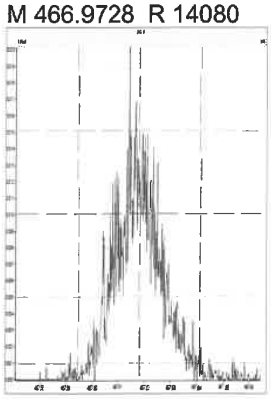

M 480.9696 R 11633

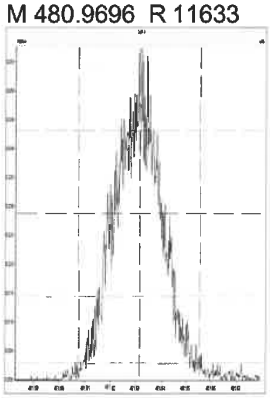

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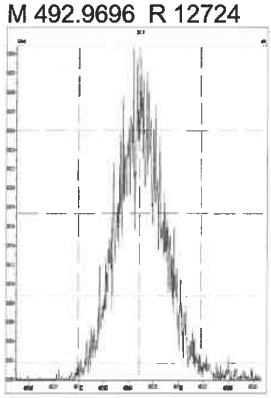

M 504.9696 R 11662

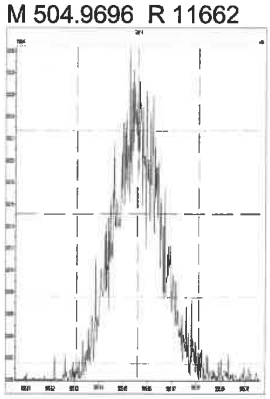

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M 516.9697_R 13687

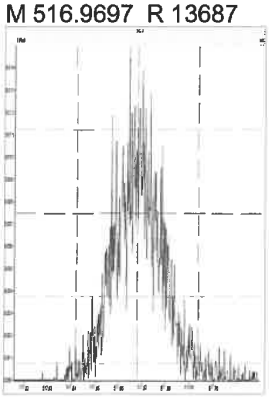

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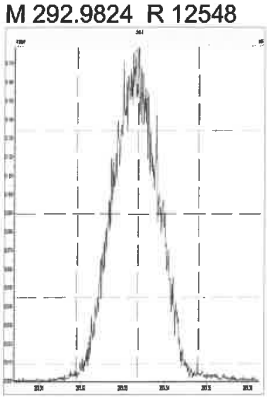

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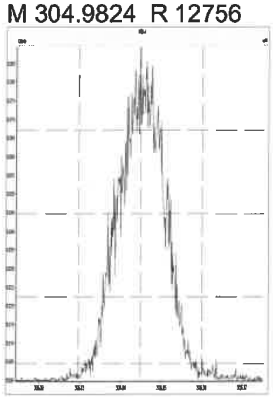

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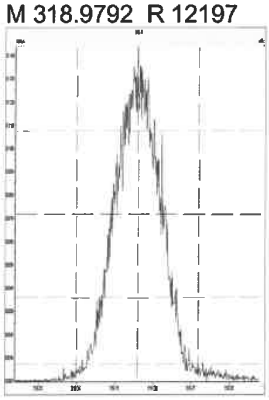

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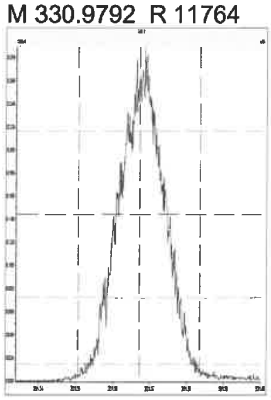

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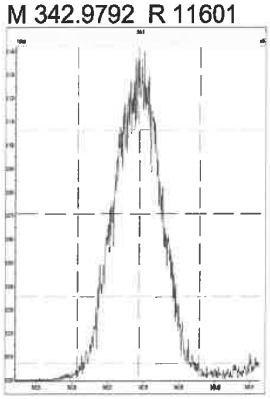

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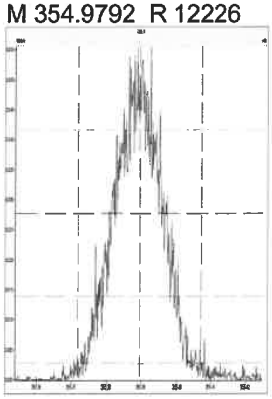

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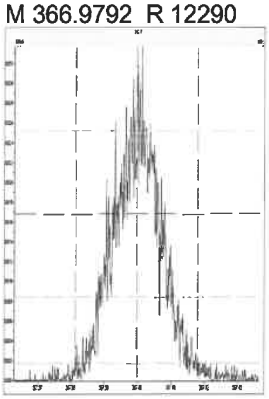

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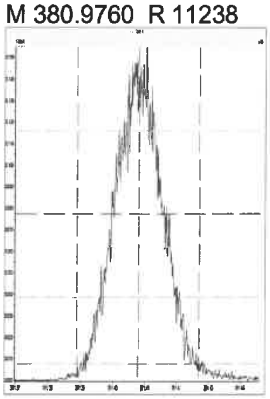

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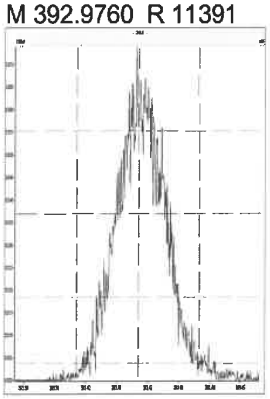

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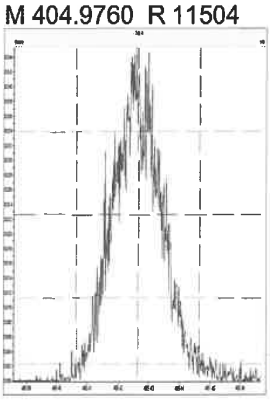

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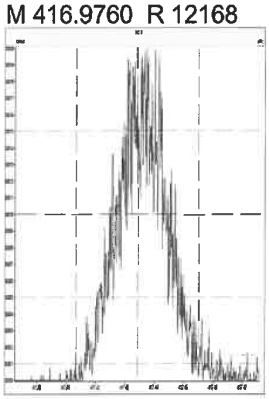

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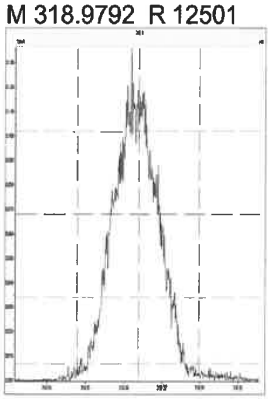

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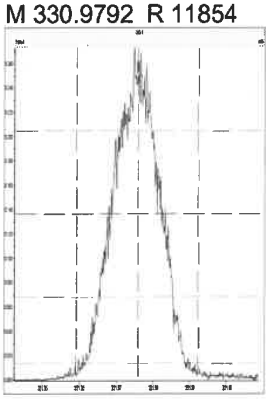

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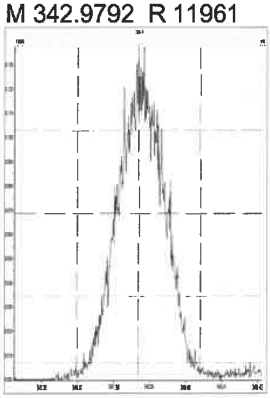

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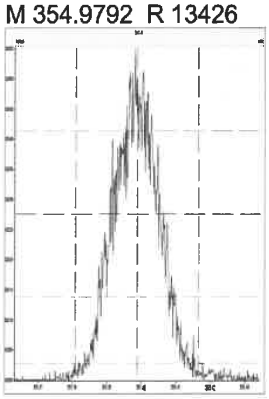

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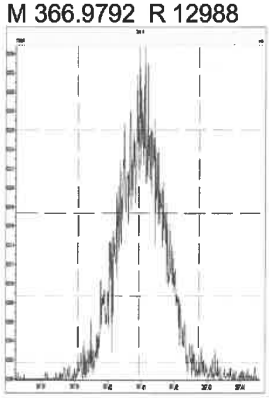

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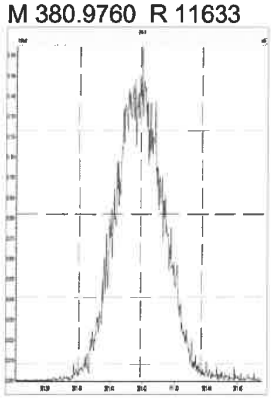

M 392.9760 R 12048

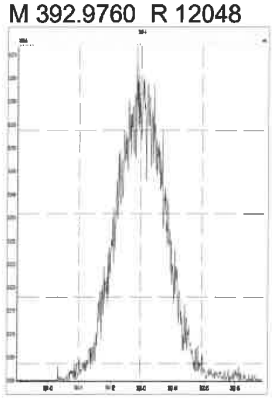

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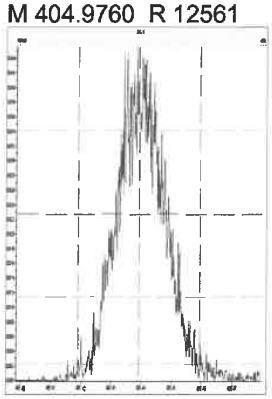

M 416.9760 R 12290

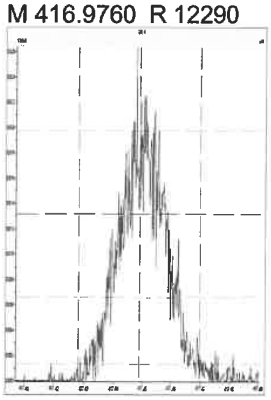

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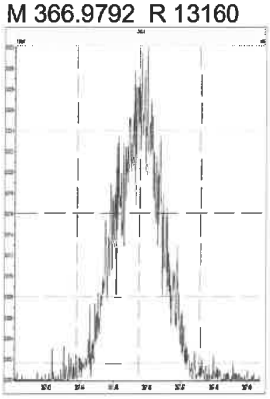

M 380.9760 R 11740

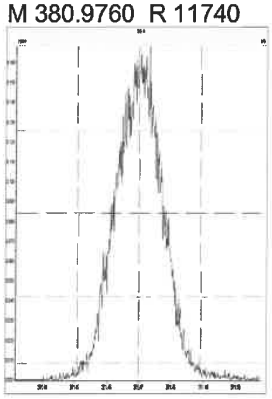

M 392.9760 R 12628

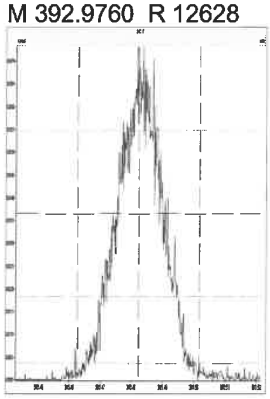

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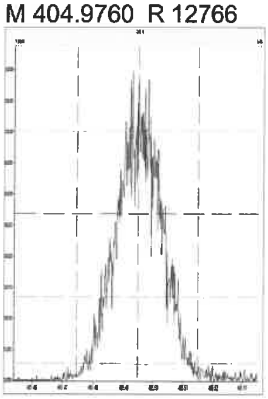

M 416.9760 R 13199

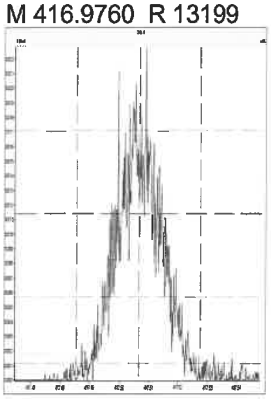

M 430.9728 R 12112

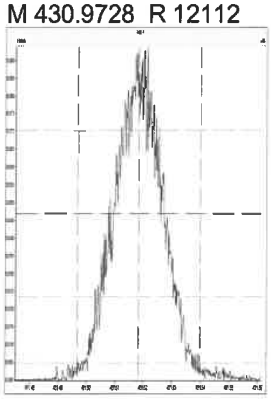

M 442.9728 R 12165

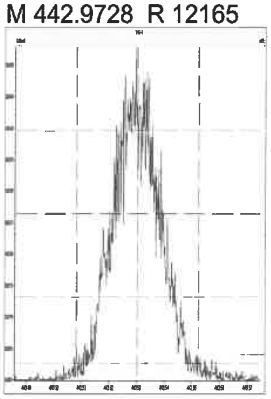

M 454.9728 R 11860

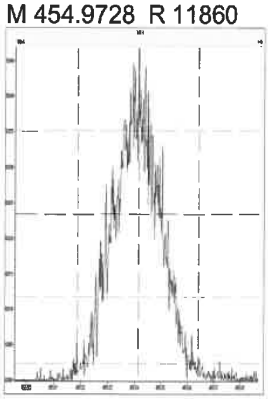

M 380.9760 R 12226

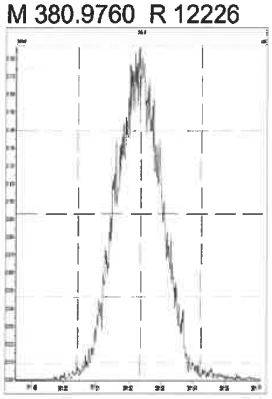

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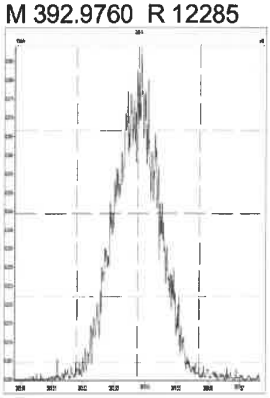

M 404.9760 R 12693

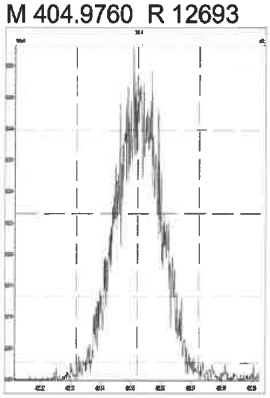

M 416.9760 R 13344

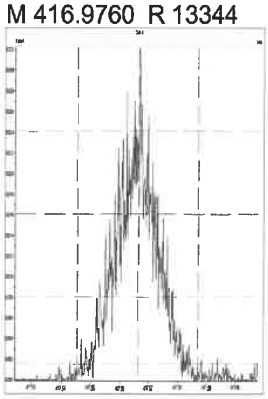

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M 430.9728 R 11944

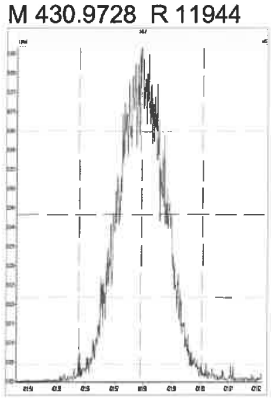

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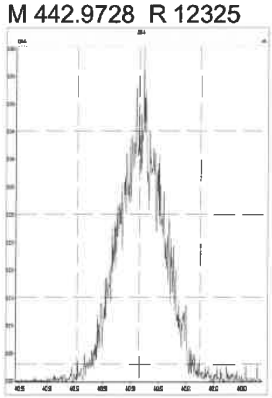

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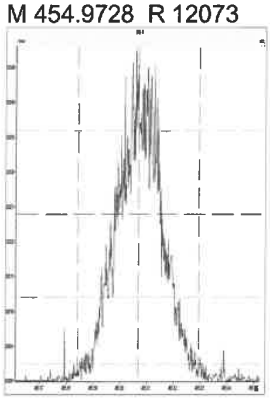

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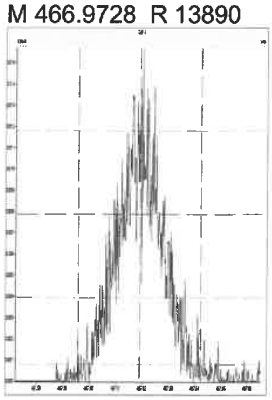

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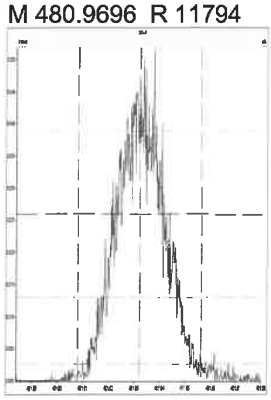

M 380.9760 R 12286

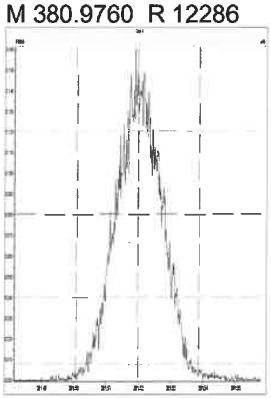

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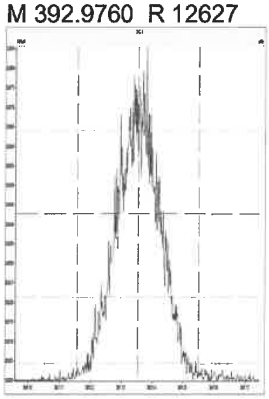

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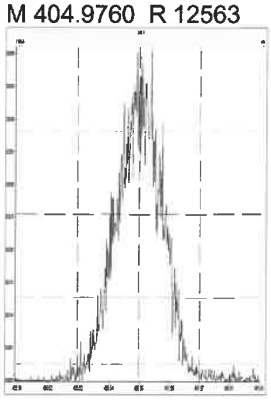

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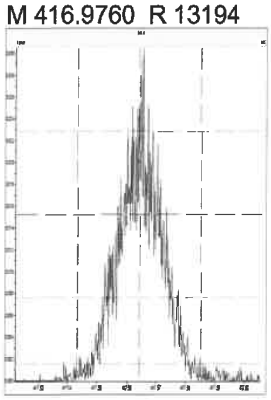

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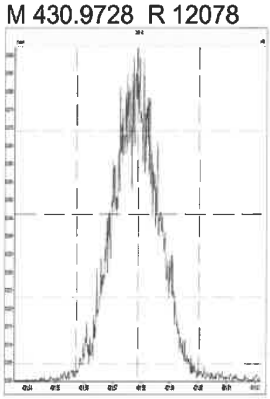

M 442.9728 R 12094

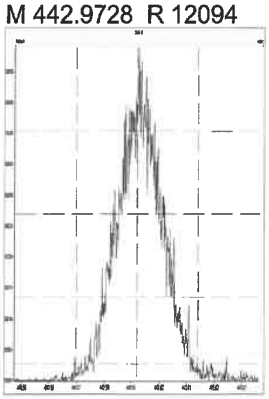

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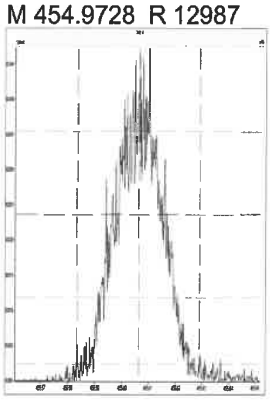

M 466.9728 R 13118

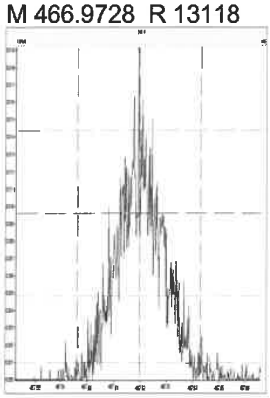

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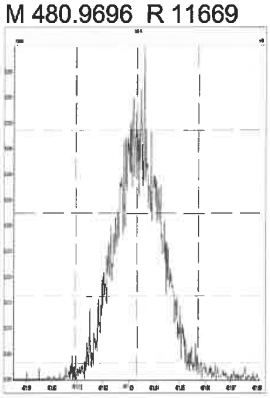

M 492.9696 R 11944

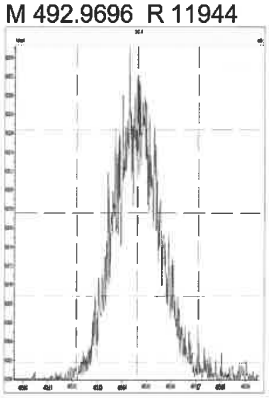

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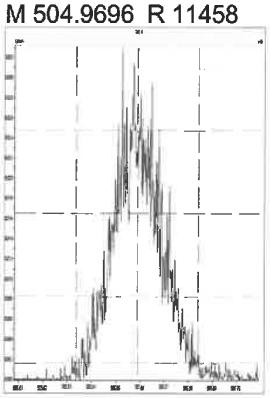

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M 516.9697 R 12954

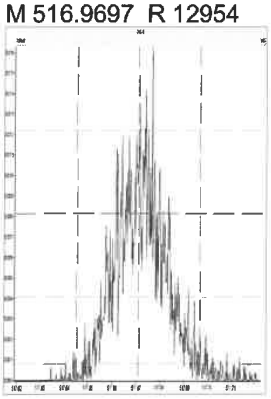

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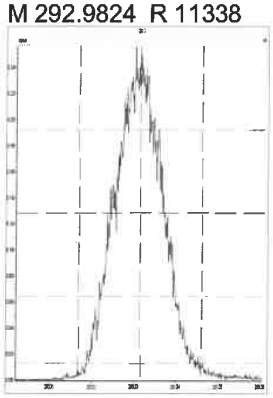

M 304.9824 R 11552

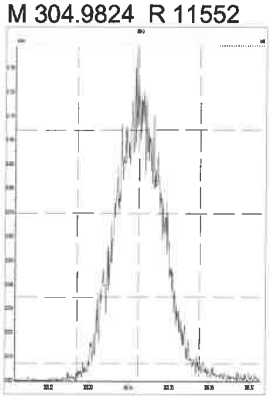

M 318.9792 R 11657

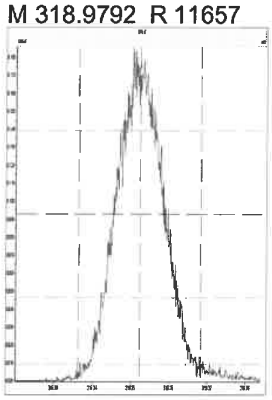

M 330.9792 R 11287

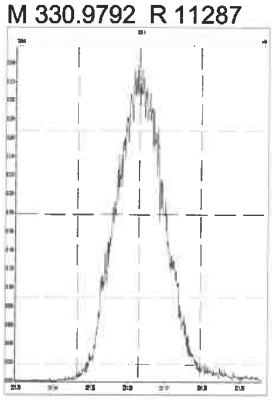

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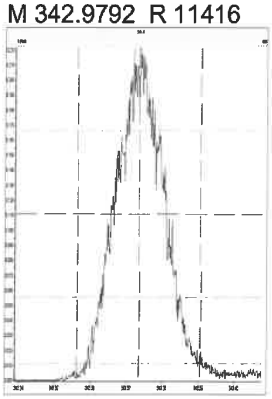

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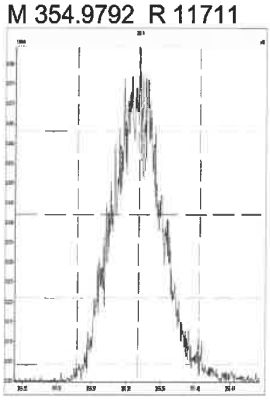

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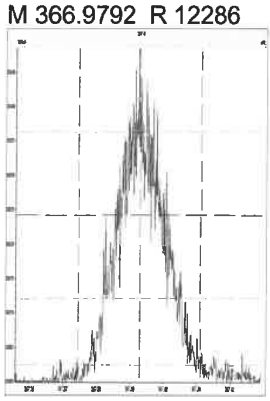

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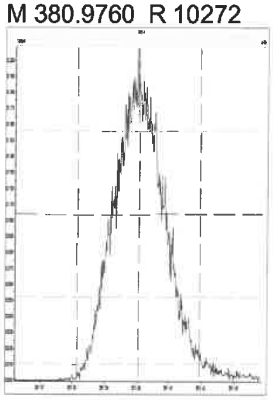

M 392.9760 R 10225

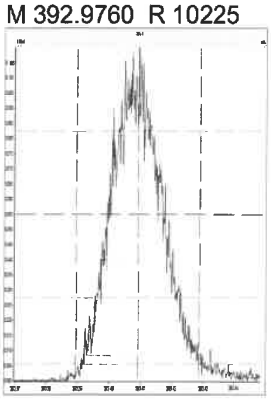

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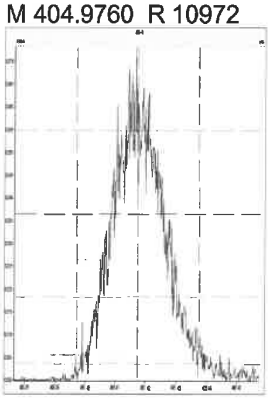

M 416.9760 R 11628

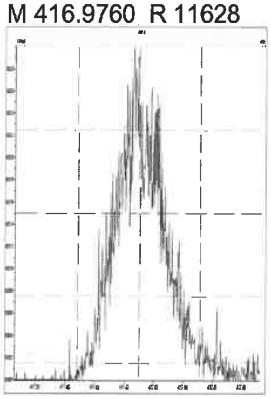

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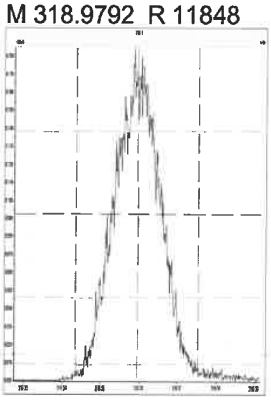

M 330.9792 R 11602

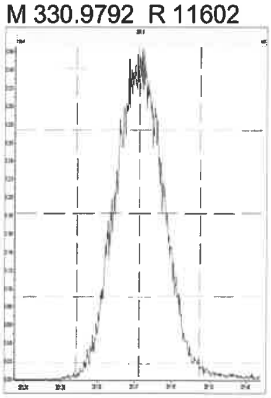

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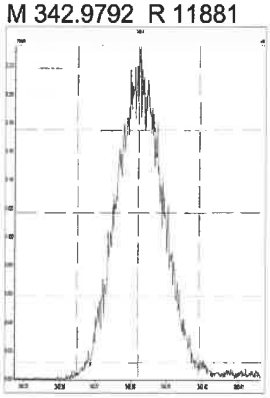

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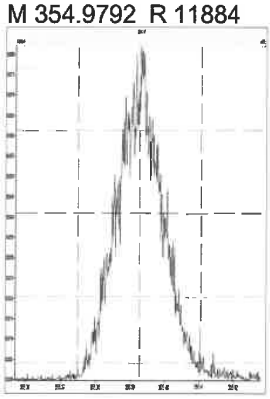

M 366.9792 R 12023

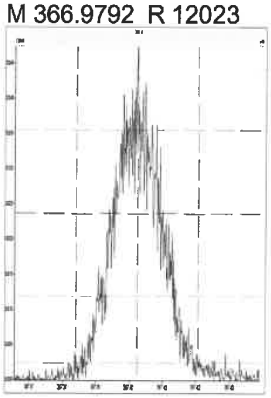

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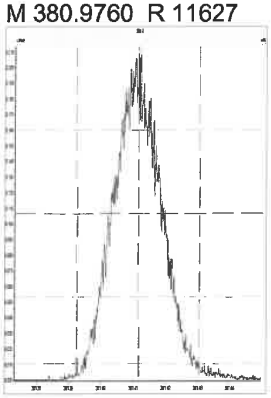

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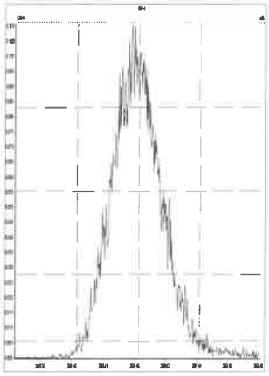

M 404.9760 R 11211

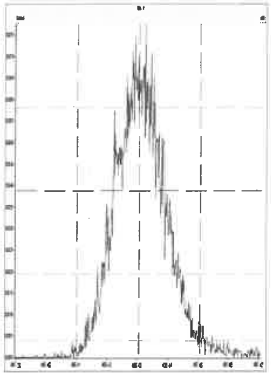

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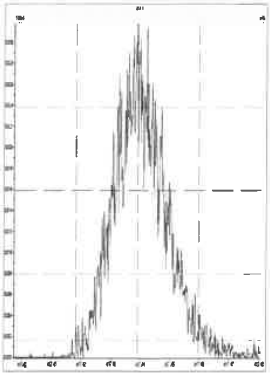

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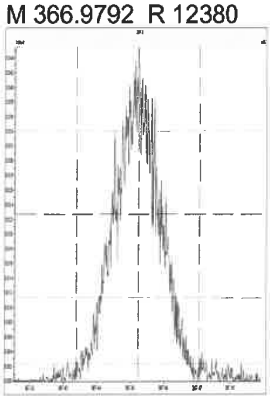

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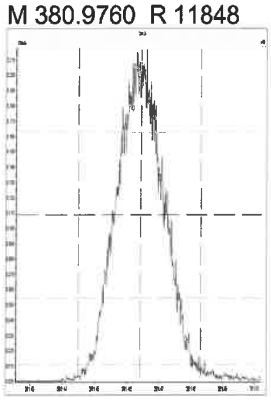

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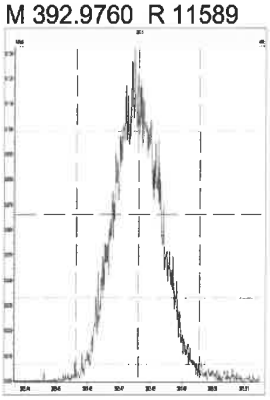

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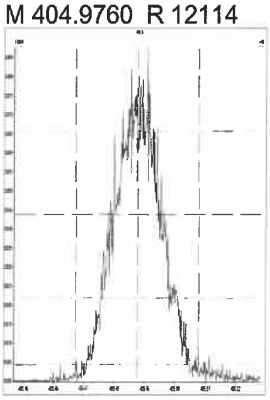

M 416.9760 R 12595

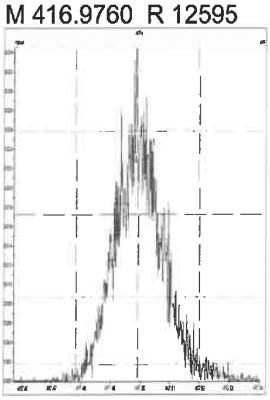

M 430.9728 R 11631

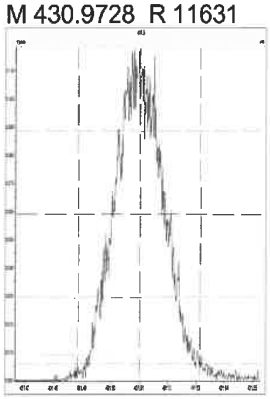

M 442.9728 R 11881

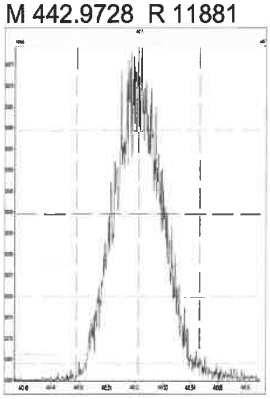

M 454.9728 R 11547

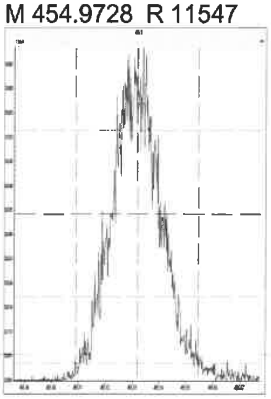

M 380.9760 R 11772

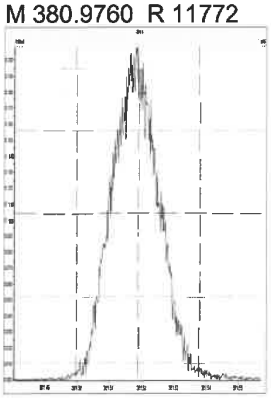

M 392.9760 R 12136

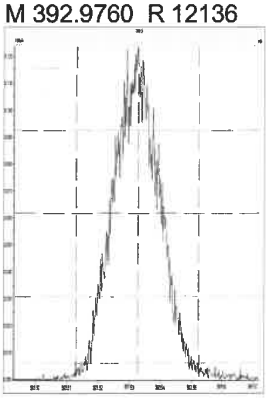

M 404.9760 R 11906

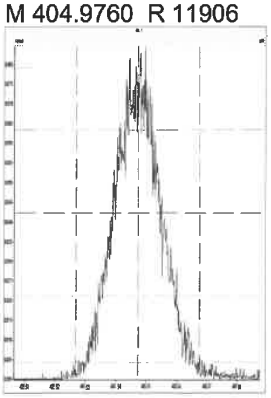

M 416.9760 R 12788

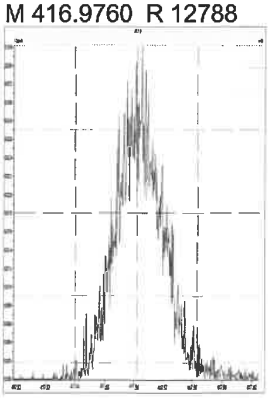

Printed: Saturday, August 14, 2021 23:41:31 Pacific Daylight Time

M 430.9728 R 11852

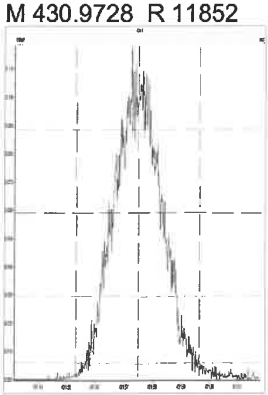

M 442.9728 R 12041

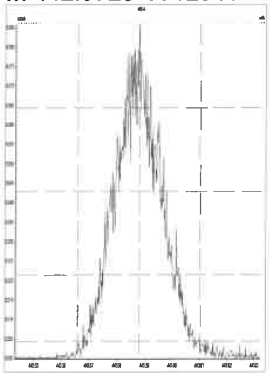

M 454.9728 R 12114

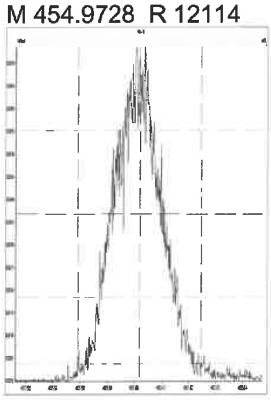

M 466.9728 R 13406

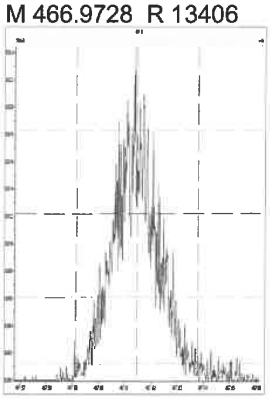

M 480.9696 R 11905

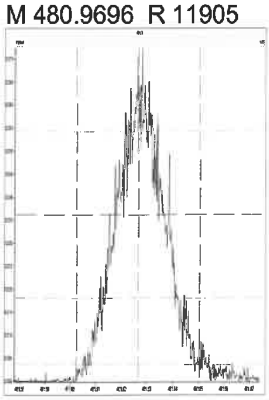

M 380.9760 R 11798

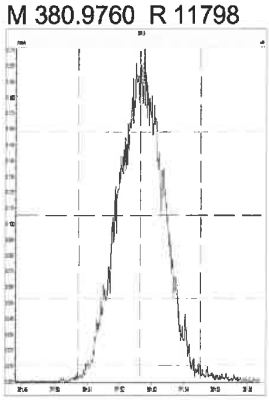

M 392.9760 R 11904

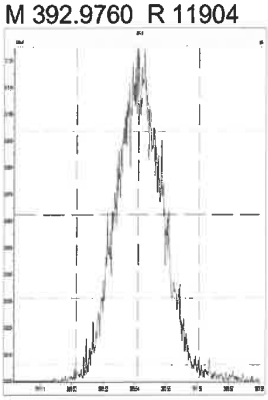

M 404.9760 R 11876

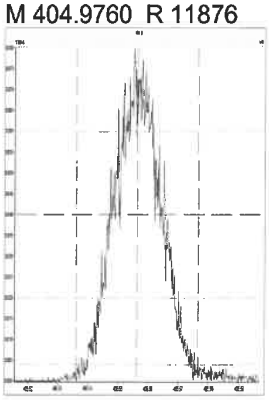

M 416.9760 R 12048

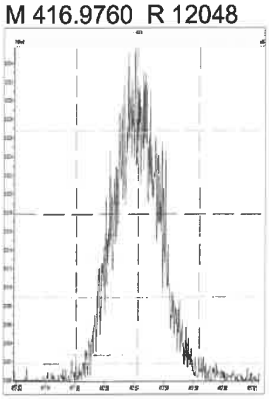

M 430.9728 R 11820

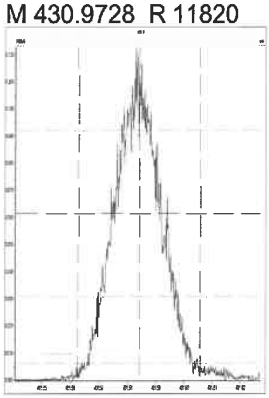

M 442.9728 R 11794

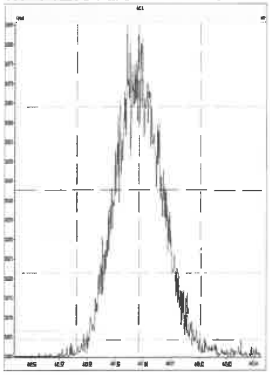

M 454.9728 R 11926

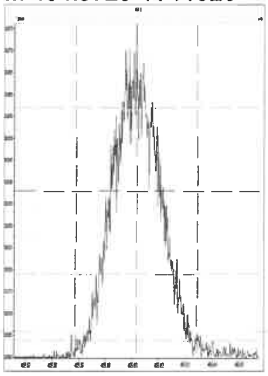

M 466.9728 R 12570

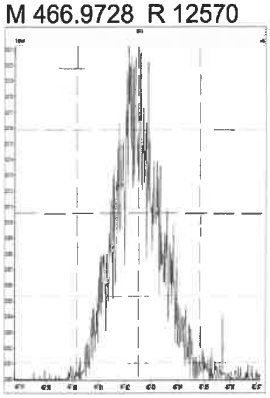

M 480.9696 R 11798

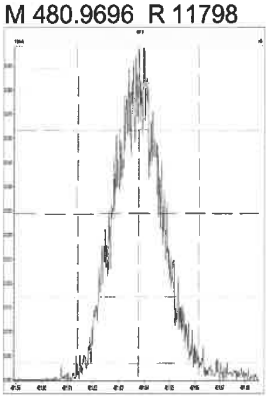

M 492.9696 R 11303

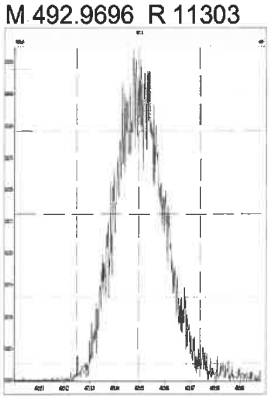

M 504.9696 R 11449

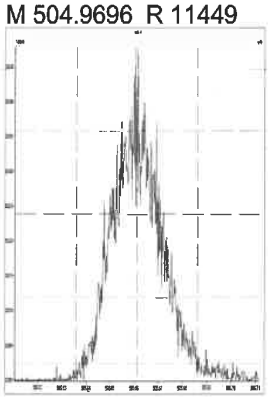

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Printed: Saturday, August 14, 2021 23:41:31 Pacific Daylight Time

M 516.9697 R 11508

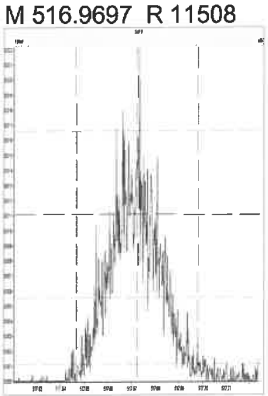

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 14-Aug-2021 13:46:37 ALS Bottle#: 2 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081321B CS-4 HRDXNL4_00099
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 14:21:40 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	94973338	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	146414364	0.77	1.6249	94.9	94.9	0.1559	0.1559	94.88	
2,3,7,8-TCDF	17.356	15100181	0.77	1.0239	10.1	10.1	0.0157	0.0157	101	
A Non-2,3,7,8-sub-TCDF	17.046						0.0157	0.0157		n
S Total TCDF					10.1	10.1	0.0157	0.0157		
D 13C-2,3,7,8-TCDD	18.051	86290028	0.82	0.8993	101.0	101.0	0.1511	0.1511	101	
2,3,7,8-TCDD	18.066	10941296	0.77	1.2541	10.1	10.1	0.0137	0.0137	101	
$ 37Cl4-2,3,7,8-TCDD	18.066	11262836		1.1071	10.7	10.7	0.0116	0.0116	107	
A Non-2,3,7,8-sub-TCDD	17.499						0.0137	0.0137		
S Total TCDD					10.1	10.1	0.0137	0.0137		
D 13C-1,2,3,7,8-PeCDF	22.367	111421448	1.56	1.2101	97.0	97.0	0.2306	0.2306	96.95	
1,2,3,7,8-PeCDF	22.380	58929429	1.60	1.0611	49.8	49.8	0.1653	0.1653	99.68	
D 13C-2,3,4,7,8-PeCDF	23.703	113022460	1.58	1.2395	96.0	96.0	0.2251	0.2251	96.01	
2,3,4,7,8-PeCDF	23.730	58165280	1.59	1.0184	50.5	50.5	0.1799	0.1799	101	
A F1 PeCDFs	20.093						0.006135	0.006135		
A Non-2,3,7,8-sub-PeCDF	23.241						0.1724	0.1724		n
S Total PeCDF					100.4	100.4	0.1726	0.1726		
D 13C-1,2,3,7,8-PeCDD	24.426	74186533	1.60	0.7612	102.6	102.6	0.0985	0.0985	103	
1,2,3,7,8-PeCDD	24.453	38168101	1.59	1.0484	49.1	49.1	0.0492	0.0492	98.14	
A Non-2,3,7,8-sub-PeCDD	23.349						0.0492	0.0492		
S Total PeCDD					49.1	49.1	0.0492	0.0492		
D 13C-1,2,3,4,7,8-HxCDF	30.503	91980391	0.53	1.0837	86.4	86.4	0.3748	0.3748	86.43	
1,2,3,4,7,8-HxCDF	30.529	49984654	1.22	1.0851	50.1	50.1	0.3074	0.3074	100	
D 13C-1,2,3,6,7,8-HxCDF	30.689	95424080	0.52	1.1279	86.2	86.2	0.3601	0.3601	86.15	
1,2,3,6,7,8-HxCDF	30.702	53388855	1.22	1.1260	49.7	49.7	0.2906	0.2906	99.38	
D 13C-2,3,4,6,7,8-HxCDF	31.514	91330263	0.53	1.0637	87.4	87.4	0.3818	0.3818	87.43	
2,3,4,6,7,8-HxCDF	31.528	53108059	1.21	1.1675	49.8	49.8	0.2250	0.2250	99.61	
D 13C-1,2,3,7,8,9-HxCDF	32.313	84888973	0.52	0.9676	89.3	89.3	0.4197	0.4197	89.34	
1,2,3,7,8,9-HxCDF	32.326	49512879	1.23	1.1664	50.0	50.0	0.2226	0.2226	100	
A Non-2,3,7,8-sub-HxCDF	30.197						0.2567	0.2567		
S Total HxCDF					199.6	199.6	0.2614	0.2614		

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.127	98202825	1.26	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	66413470	1.25	0.7334	92.2	92.2	0.3447	0.3447	92.21	
1,2,3,4,7,8-HxCDD	31.714	35295564	1.27	1.0640	49.9	49.9	0.2115	0.2115	99.89	
D 13C-1,2,3,6,7,8-HxCDD	31.807	76716318	1.26	0.8802	88.8	88.8	0.2873	0.2873	88.75	
1,2,3,6,7,8-HxCDD	31.820	39720408	1.27	1.0001	51.8	51.8	0.2100	0.2100	104	
1,2,3,7,8,9-HxCDD	32.140	44929178	1.28	1.1325	55.4	55.4	0.1918	0.1918	111	
A Non-2,3,7,8-sub-HxCDD	30.882						0.2039	0.2039		
S Total HxCDD					157.2	157.2	0.2044	0.2044		
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	74365712	0.43	0.7730	98.0	98.0	0.9633	0.9633	97.96	
1,2,3,4,6,7,8-HpCDF	33.766	54923491	1.04	1.4413	51.2	51.2	0.4272	0.4272	102	
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	72217204	0.43	0.7008	104.9	104.9	1.063	1.063	105	
1,2,3,4,7,8,9-HpCDF	34.860	48279681	1.05	1.3174	50.7	50.7	0.5578	0.5578	101	
A Non-2,3,7,8-sub-HpCDF	34.319						0.4858	0.4858		
S Total HpCDF					102.0	102.0	0.4925	0.4925		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	67166054	1.00	0.6472	105.7	105.7	0.5374	0.5374	106	
1,2,3,4,6,7,8-HpCDD	34.568	37049399	1.04	1.0943	50.4	50.4	0.2495	0.2495	101	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2495	0.2495		
S Total HpCDD					50.4	50.4	0.2495	0.2495		
D 13C-OCDD	36.914	101743967	0.88	0.4472	231.7	231.7	0.2010	0.2010	116	
OCDF	37.010	72915430	0.90	1.4382	99.7	99.7	0.0976	0.0976	99.66	
OCDD	36.926	57739715	0.89	1.1070	102.5	102.5	0.1212	0.1212	103	

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 14-Aug-2021 13:46:37 ALS Bottle#: 2 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081321B CS-4 HRDXNL4_00099
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 14:21:40 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		42762613	10256694	4671	11677	2196		
333.9339	17.855	17.855	0		52210725	12562739	7732	19330	1625	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.971	63734652	15176498	10905	27262	1392		
317.9389	17.341	17.341	0	0.971	82679712	19576474	12213	30532	1603	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.001	6577692	1566873	873	2182	1795		
305.8987	17.356	17.356	0	1.001	8522489	2007900	1356	3390	1481	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.963	17.046	-5	0.978	22767	6172	873	2182	7		
305.8987	16.978	17.046	-4	0.979	34749	8687	1356	3390	6	0.66(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	38806321	8806655	4671	11677	1885		
333.9339	18.051	18.051	0	1.011	47483707	10703402	7732	19330	1384	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.001	4769840	1108357	697	1742	1590		
321.8936	18.066	18.066	0	1.001	6171456	1402049	643	1607	2180	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.066	0	1.012	11262836	2577463	1176	2940	2192		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.499						697	1742			
321.8936	17.499						643	1607			
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	67825449	11217044	15080	37700	744		
353.8970	22.367	22.367	0	1.253	43595999	7122002	10390	25975	685	1.56(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.380	22.380	0	1.001	36250111	5931099	7639	19097	776		
341.8567	22.380	22.380	0	1.001	22679318	3732273	5232	13080	713	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.328	69214606	10664371	15080	37700	707		
353.8970	23.703	23.703	0	1.328	43807854	6897886	10390	25975	664	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.730	23.730	0	1.001	35722455	5526303	7639	19097	723		
341.8567	23.730	23.730	0	1.001	22442825	3461636	5232	13080	662	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						147	367			
341.8567	20.093						311	777			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.912	23.241	-20	1.024	334909	42127	7639	19097	6		
341.8567	22.912	23.241	-20	1.024	214294	27189	5232	13080	5	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.368	45657431	6598110	4093	10232	1612		
369.8919	24.426	24.426	0	1.368	28529102	4130483	2748	6870	1503	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453	24.453	0	1.001	23436954	3406075	1343	3357	2536		
357.8516	24.453	24.453	0	1.001	14731147	2125742	869	2172	2446	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.349						1343	3357			
357.8516	23.349						869	2172			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	31680924	6018295	14484	36210	416		
385.8610	30.503	30.503	0	0.949	60299467	11376572	27635	69087	412	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.001	27500145	5127033	12781	31952	401		
375.8178	30.529	30.529	0	1.001	22484509	4124532	10428	26070	396	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	32812682	6145561	14484	36210	424		
385.8610	30.689	30.689	0	0.955	62611398	11583324	27635	69087	419	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.702	30.702	0	1.000	29370233	5510176	12781	31952	431		
375.8178	30.702	30.702	0	1.000	24018622	4571981	10428	26070	438	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	31453354	7642624	14484	36210	528		
385.8610	31.514	31.514	0	0.981	59876909	14448427	27635	69087	523	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528	31.528	0	1.000	29092089	7191664	12781	31952	563		
375.8178	31.528	31.528	0	1.000	24015970	5969424	10428	26070	572	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.313	0	1.006	28928590	7592595	14484	36210	524		
385.8610	32.313	32.313	0	1.006	55960383	14760353	27635	69087	534	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.326	32.326	0	1.000	27306767	7075729	12781	31952	554		
375.8178	32.326	32.326	0	1.000	22206112	5835836	10428	26070	560	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						12781	31952			
375.8178	30.197						10428	26070			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.127	32.127	0		54724621	14379412	13046	32615	1102		
403.8529	32.127	32.127	0		43478204	11548142	13177	32942	876	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.987	36927663	9995543	13046	32615	766		
403.8529	31.701	31.701	0	0.987	29485807	8000276	13177	32942	607	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.714	0	1.000	19732306	5466547	8797	21992	621		
391.8127	31.714	31.714	0	1.000	15563258	4278550	7400	18500	578	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	42726119	10783509	13046	32615	827		
403.8529	31.807	31.807	0	0.990	33990199	8501178	13177	32942	645	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.820	31.820	0	1.000	22235915	5725544	8797	21992	651		
391.8127	31.820	31.820	0	1.000	17484493	4544453	7400	18500	614	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.140	0	1.014	25221793	6585900	8797	21992	749		
391.8127	32.140	32.140	0	1.014	19707385	5278564	7400	18500	713	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						8797	21992			
391.8127	30.882						7400	18500			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.754	0	1.051	22514407	7324502	24183	60457	303		
419.8220	33.754	33.754	0	1.051	51851305	16806552	53045	132612	317	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.766	0	1.000	28047664	9201400	29512	73780	312		
409.7789	33.766	33.766	0	1.000	26875827	8858287	29923	74807	296	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.085	21802338	6213714	24183	60457	257		
419.8220	34.847	34.847	0	1.085	50414866	14007010	53045	132612	264	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860	34.860	0	1.000	24765451	6829450	29512	73780	231		
409.7789	34.847	34.860	-1	1.000	23514230	6548523	29923	74807	219	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						29512	73780			
409.7789	34.319						29923	74807			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.076	33583674	10175591	16198	40495	628		
437.8140	34.556	34.556	0	1.076	33582380	10168153	19873	49682	512	1.00(0.88-1.20)	

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Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	18917383	5711865	10018	25045	570		
425.7737	34.568	34.568	0	1.000	18132016	5360181	12203	30507	439	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						10018	25045			
425.7737	34.301						12203	30507			
13C-OCDD											
469.7779	36.914	36.914	0	1.149	47645986	11732203	4788	11970	2450		
471.7750	36.914	36.914	0	1.149	54097981	13368797	4532	11330	2950	0.88(0.76-1.02)	
OCDF											
441.7428	37.010	37.010	0	1.003	34631106	8578586	3858	9645	2224		
443.7399	37.010	37.010	0	1.003	38284324	9626700	3187	7967	3021	0.90(0.76-1.02)	
OCDD											
457.7377	36.926	36.926	0	1.000	27189261	6903873	2805	7012	2461		
459.7348	36.926	36.926	0	1.000	30550454	7701604	3933	9832	1958	0.89(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

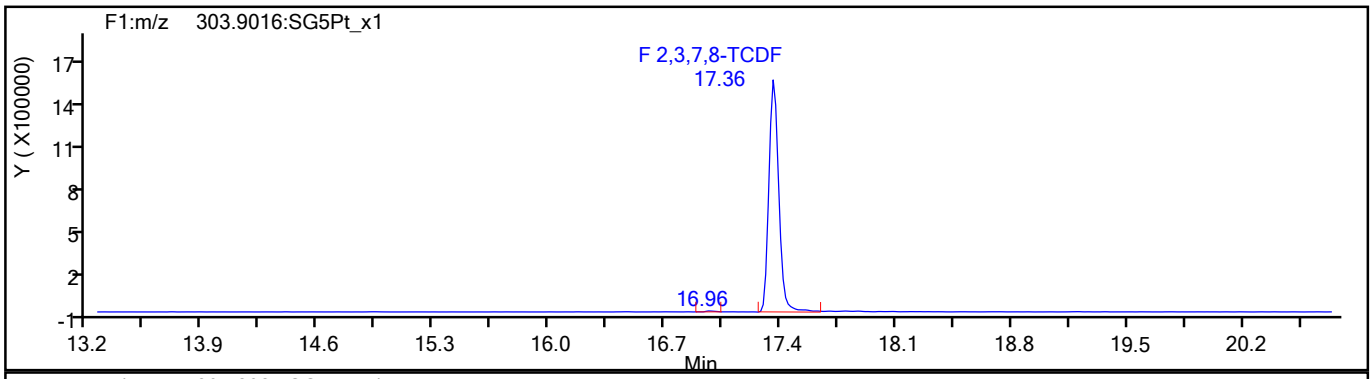

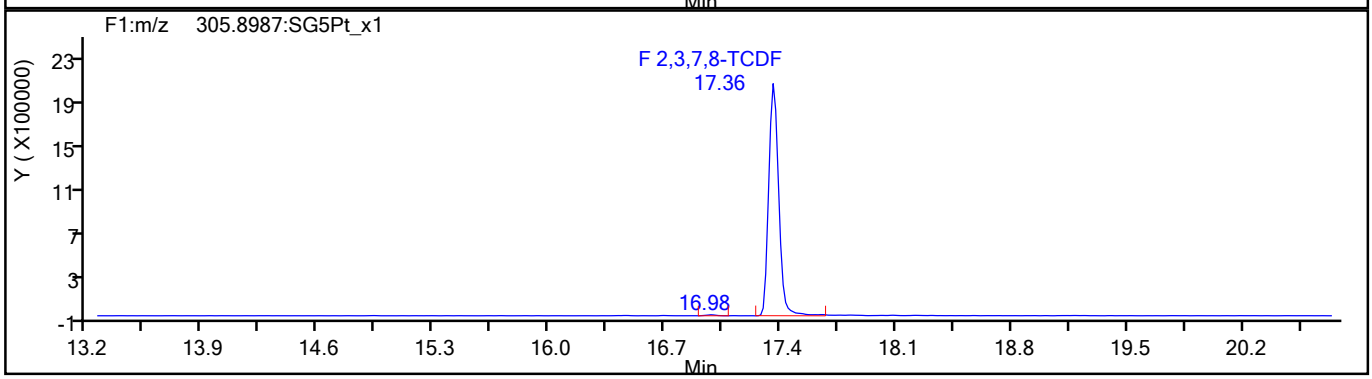

TCDF Standards

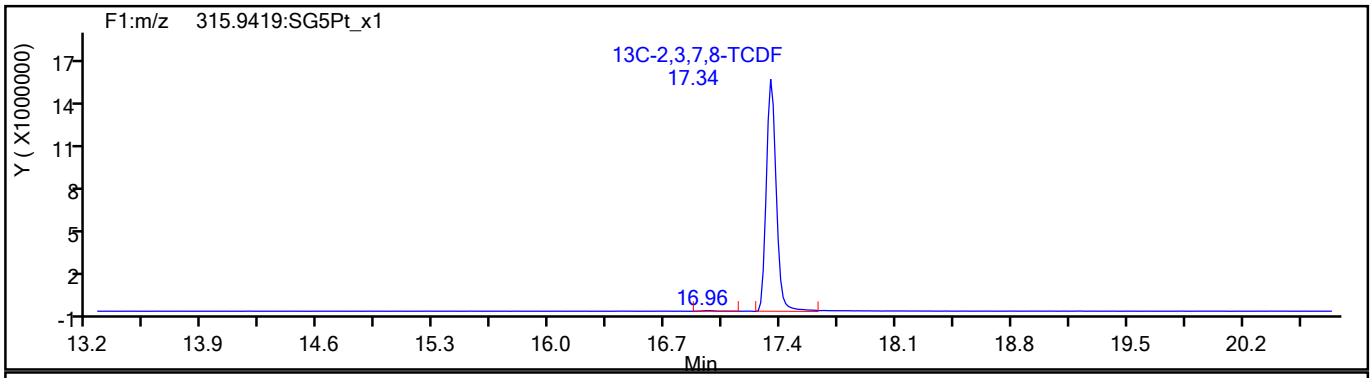

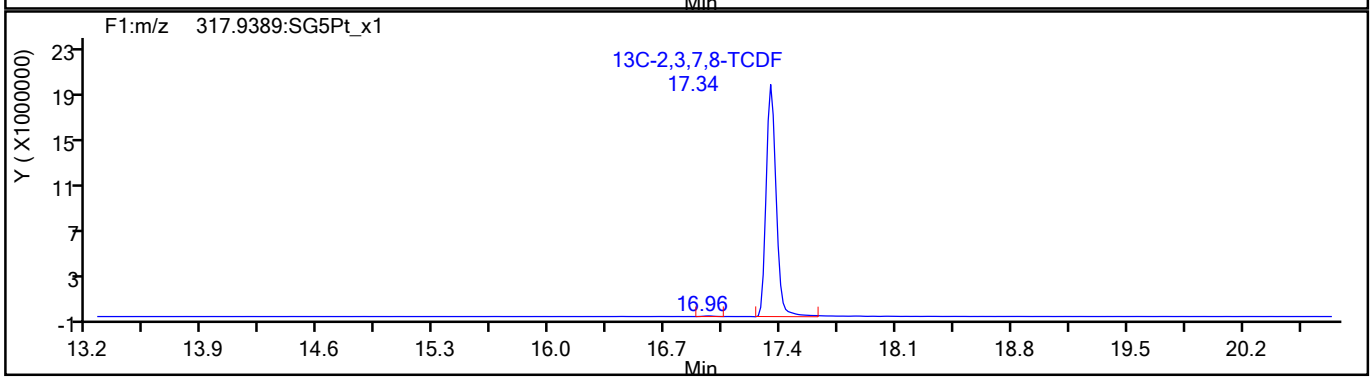

780525

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

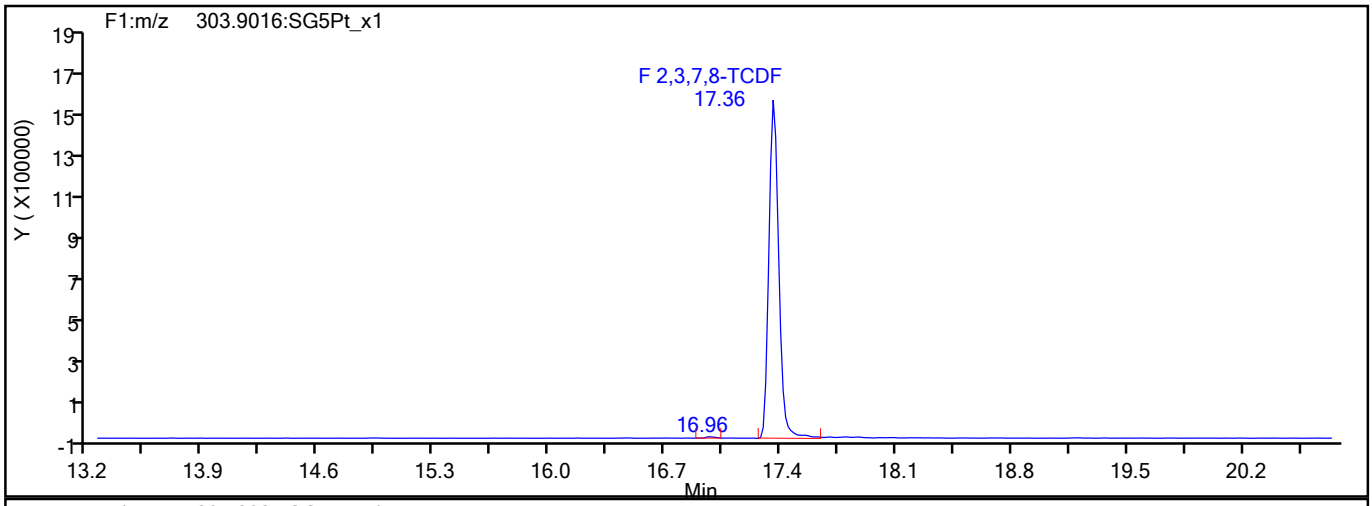

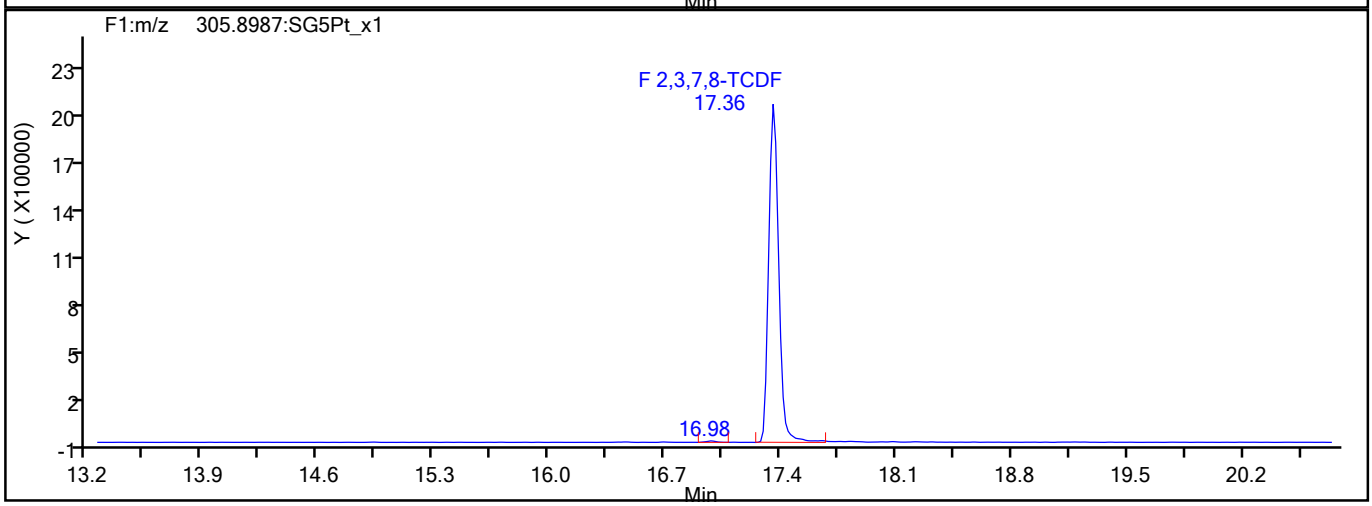

TCDF Interference Mass

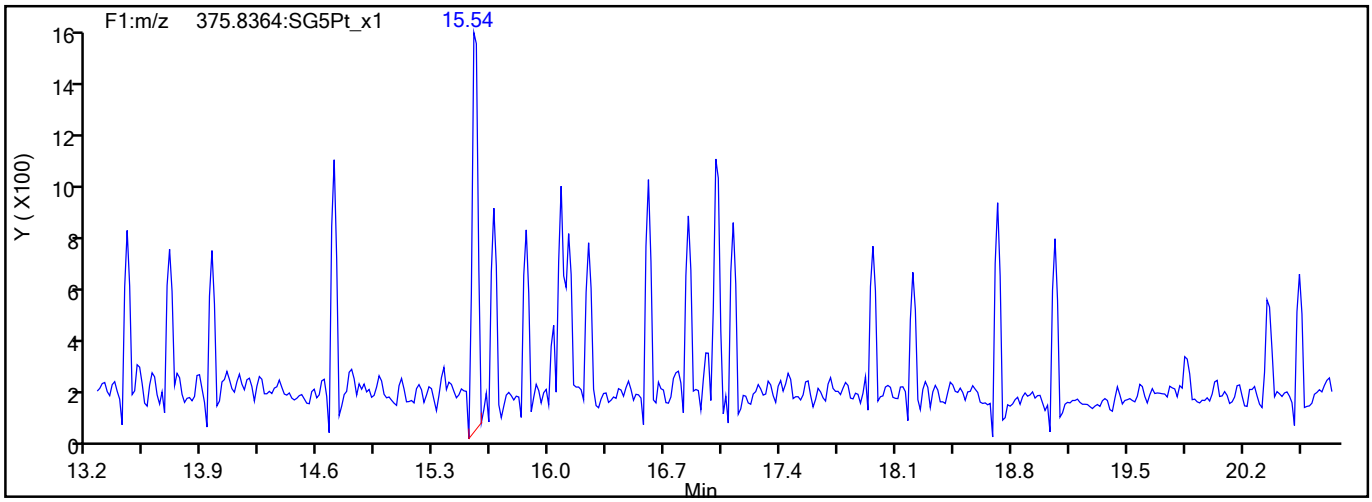

780526

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

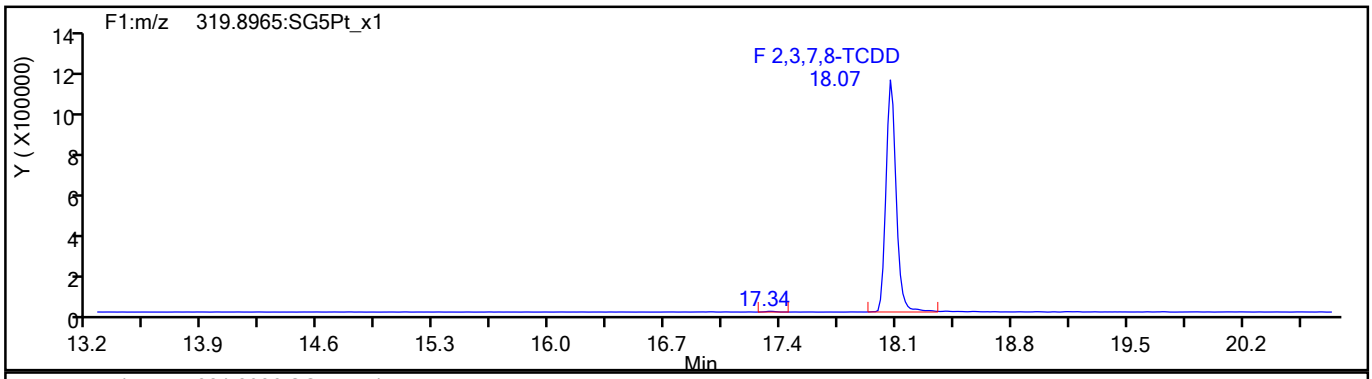

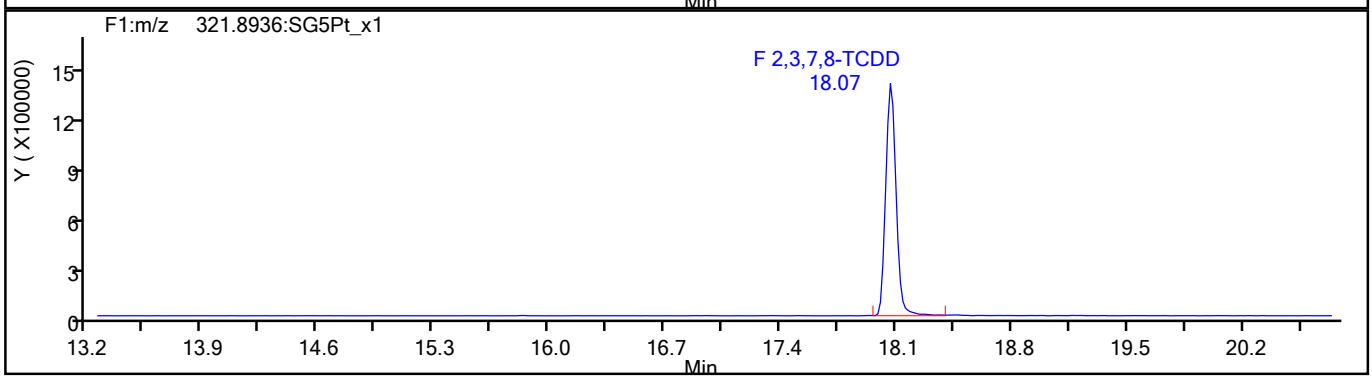

TCDD Standards

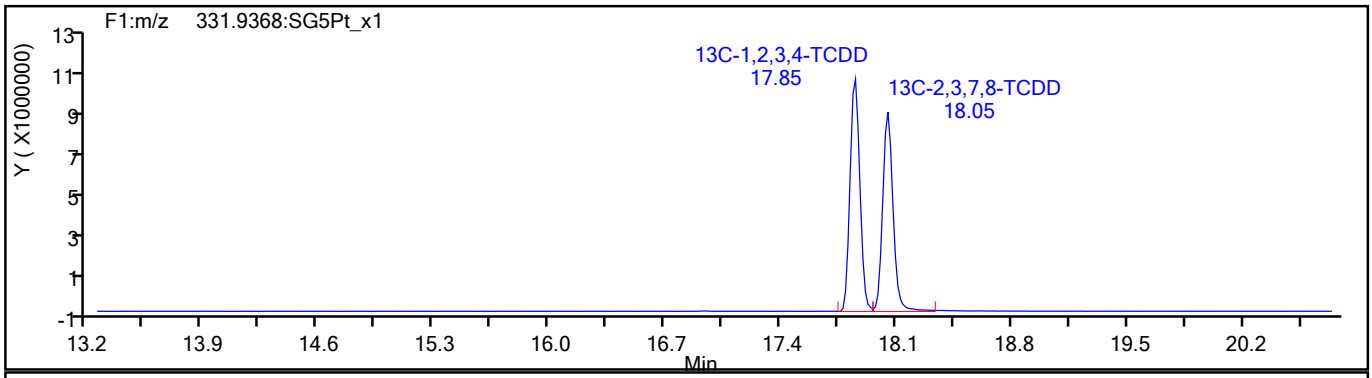

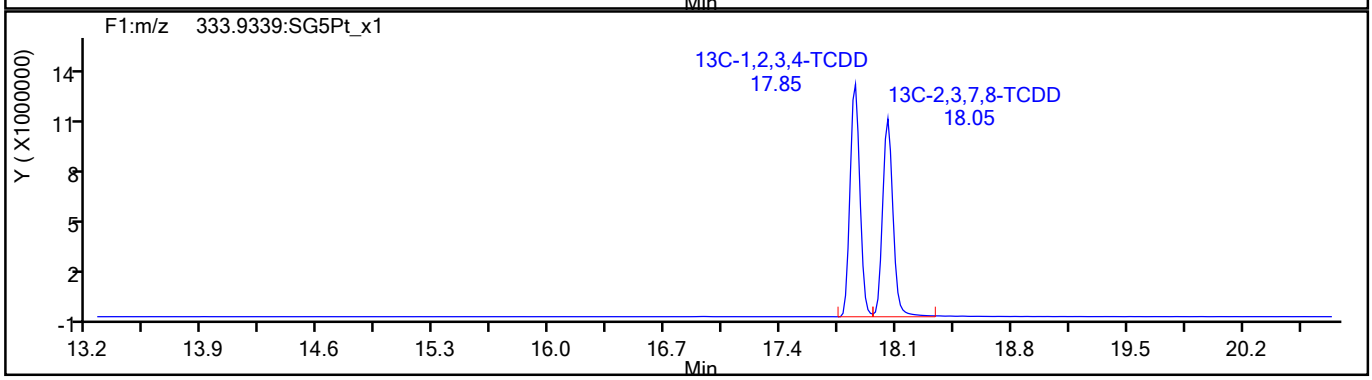

780527

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

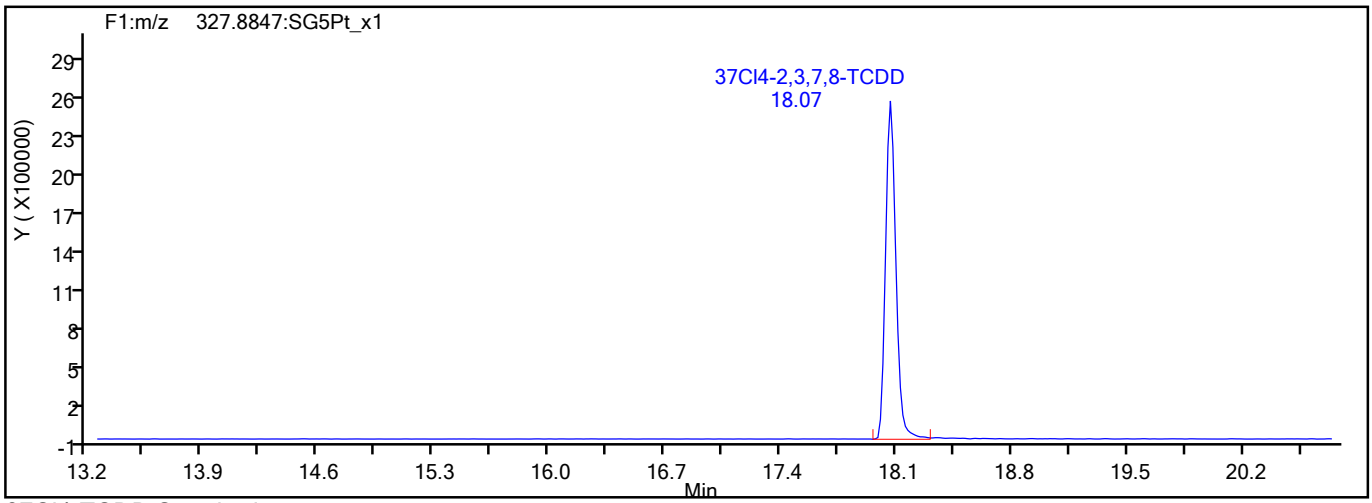

37Cl4-TCDD Standards

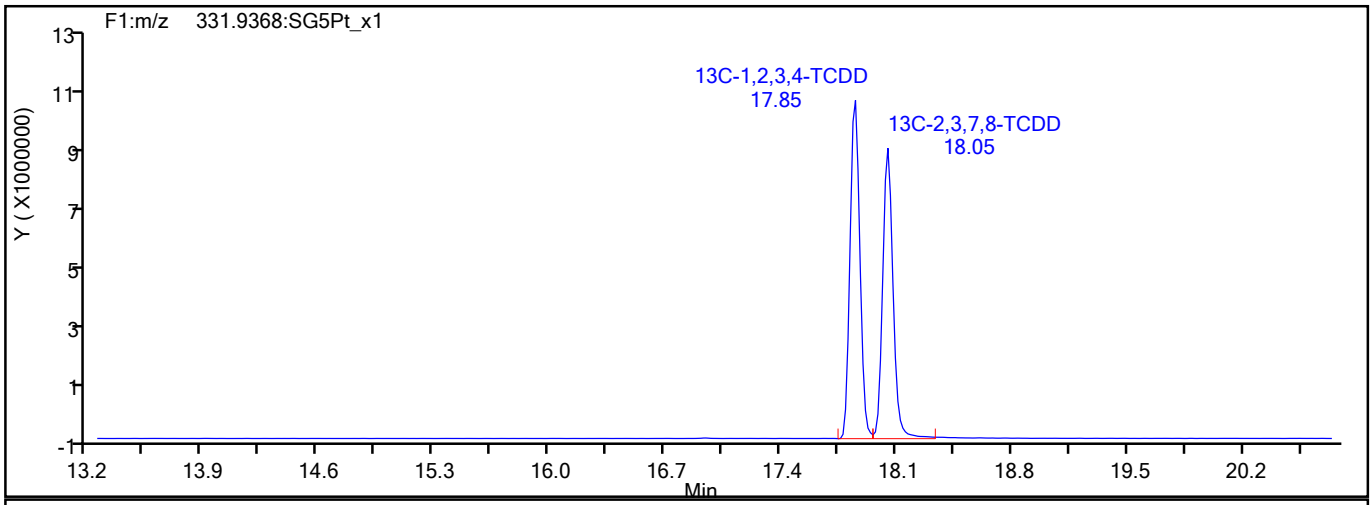

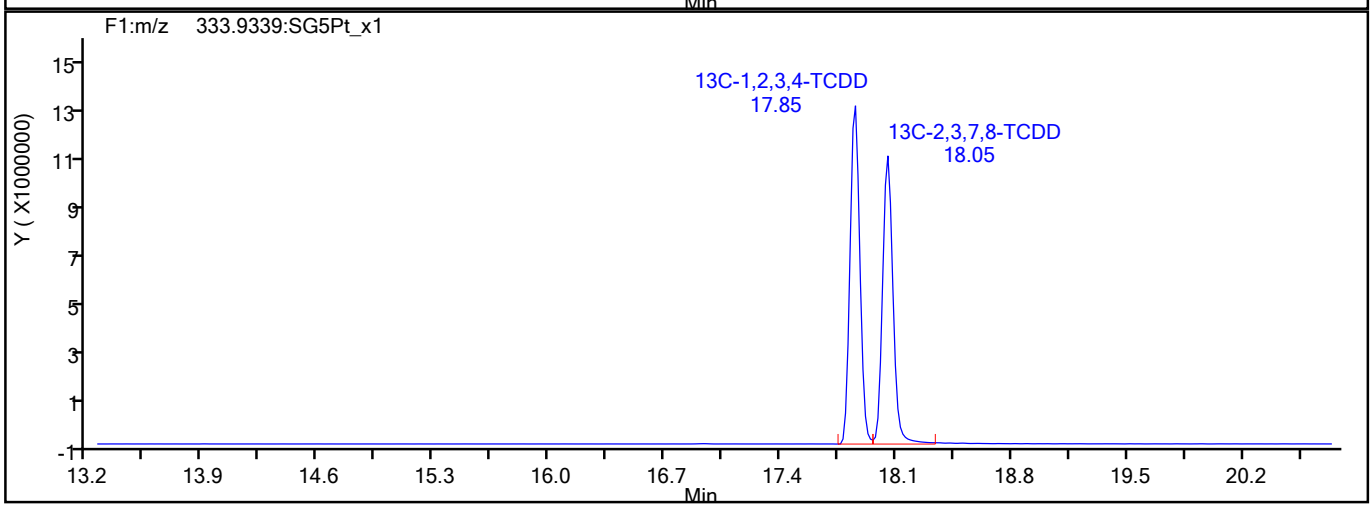

780528

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

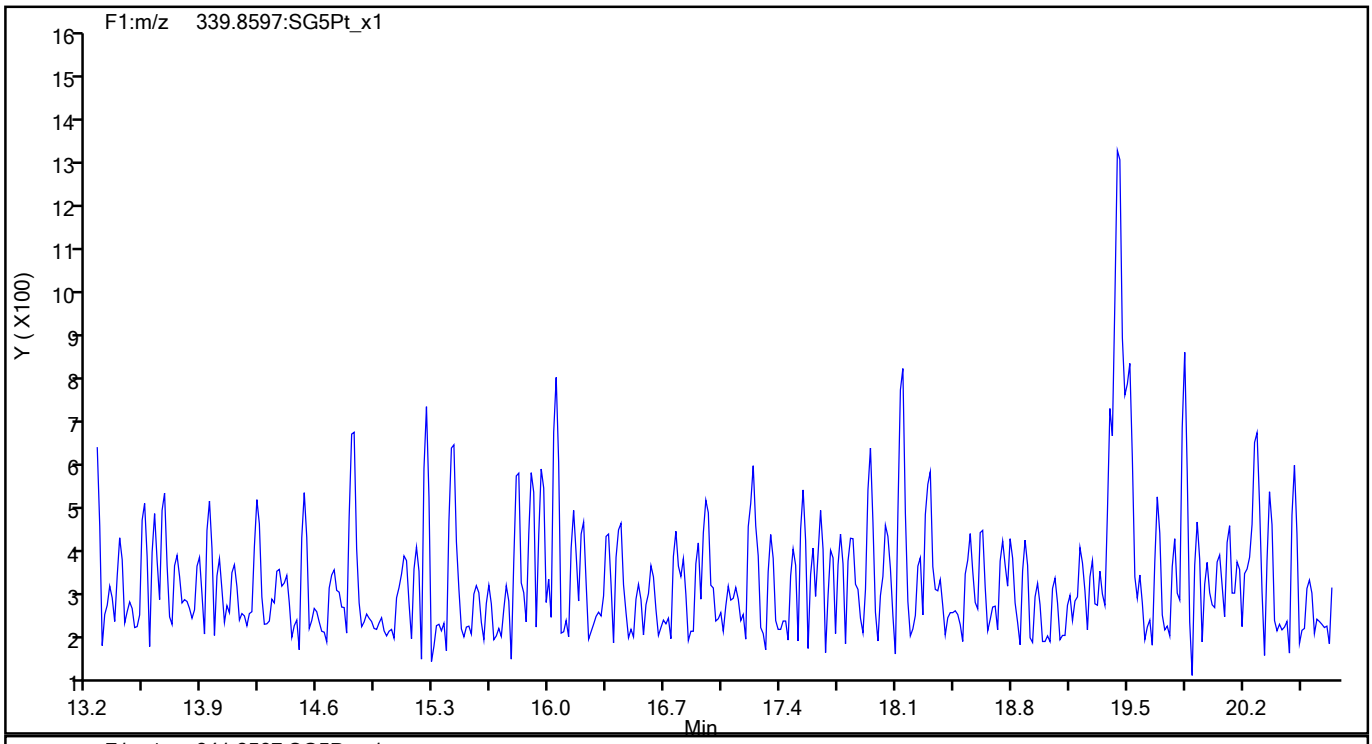

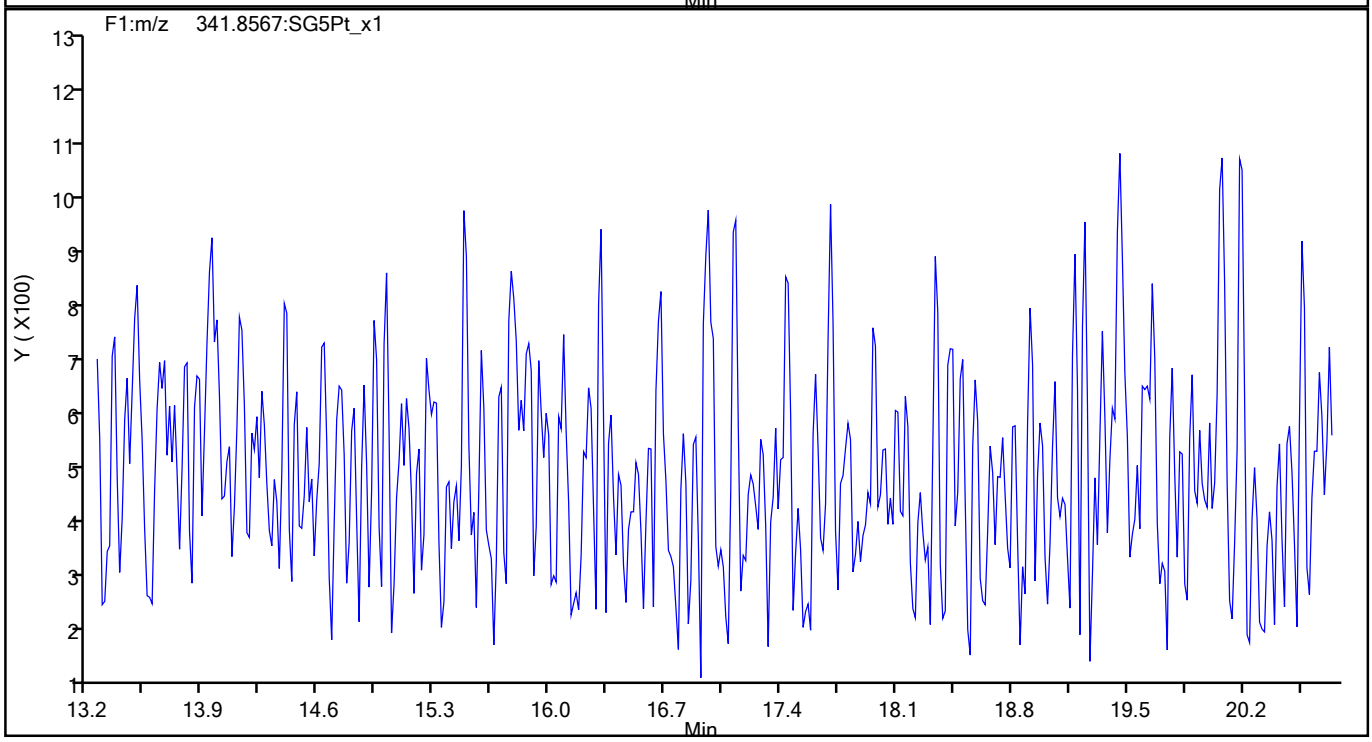

780529

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

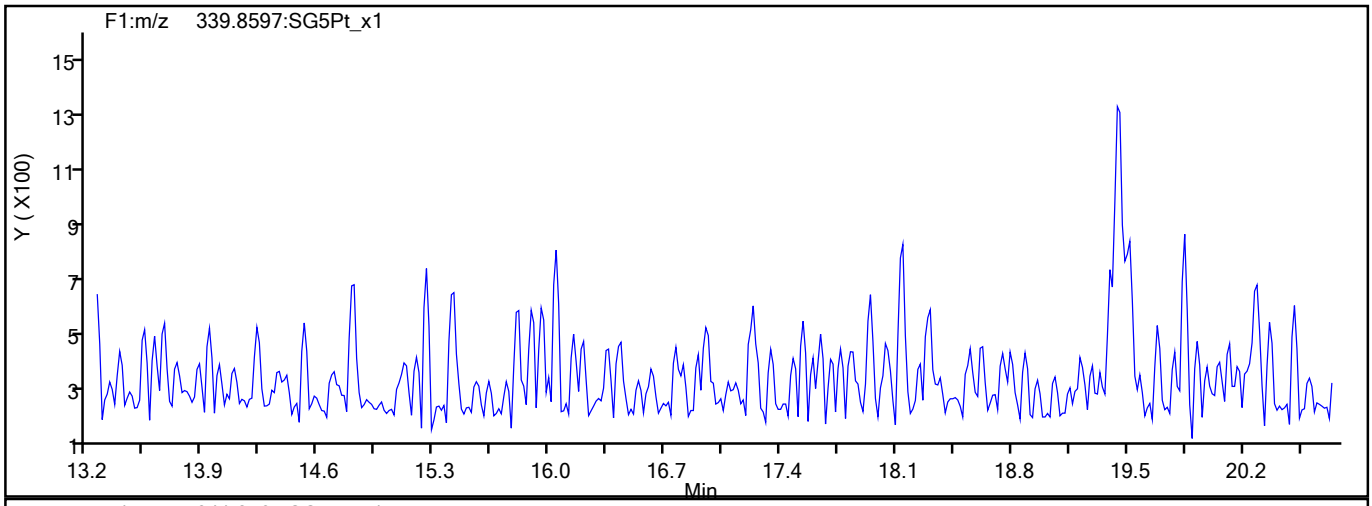

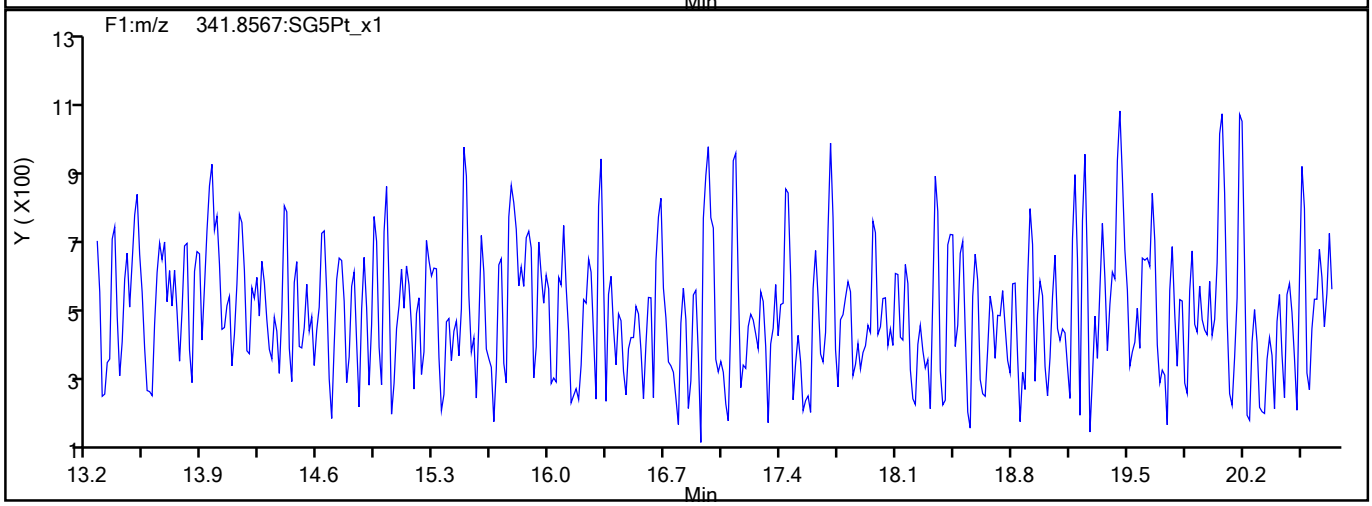

F1 PeCDFs Interference Mass

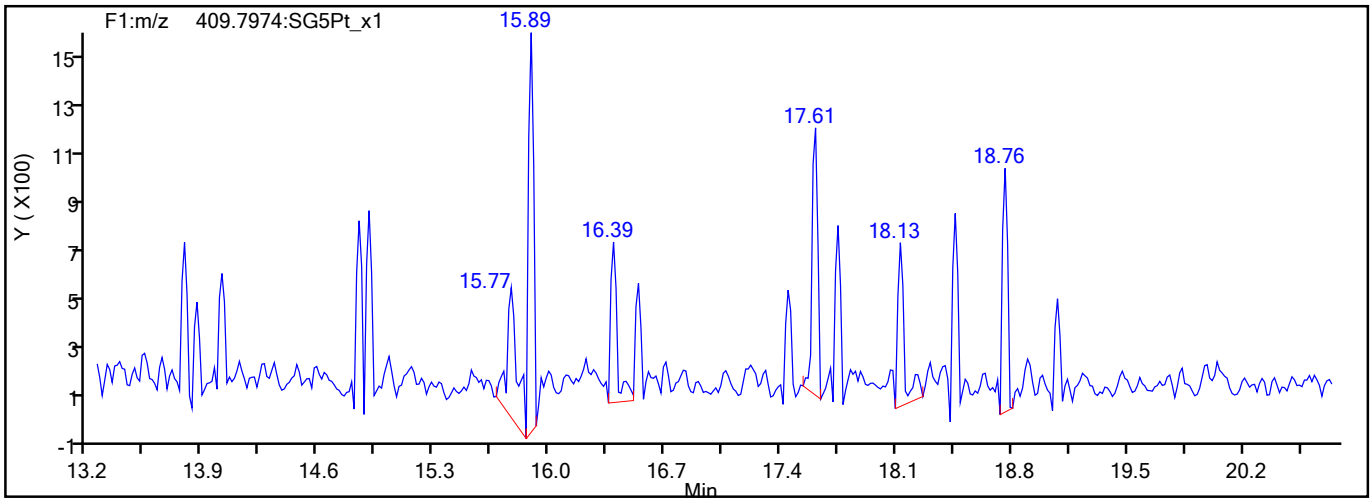

780530

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

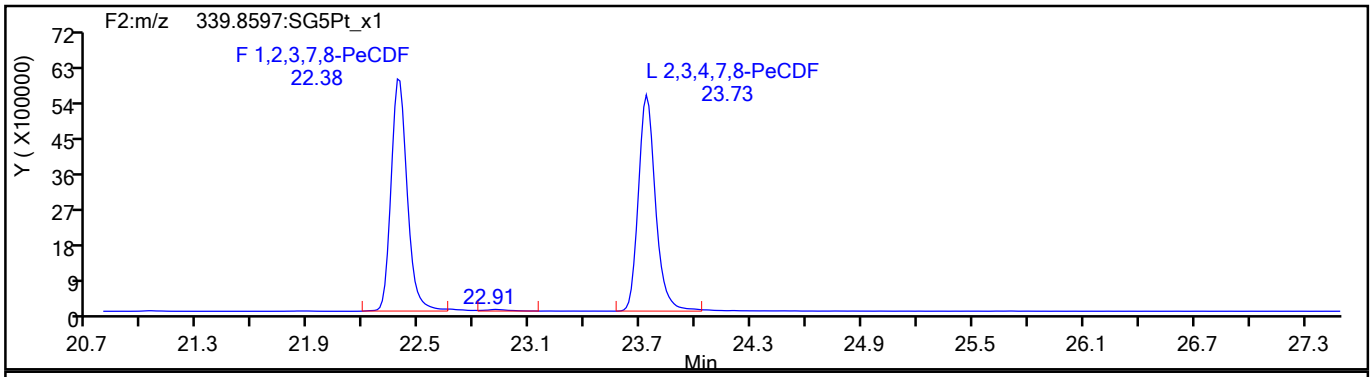

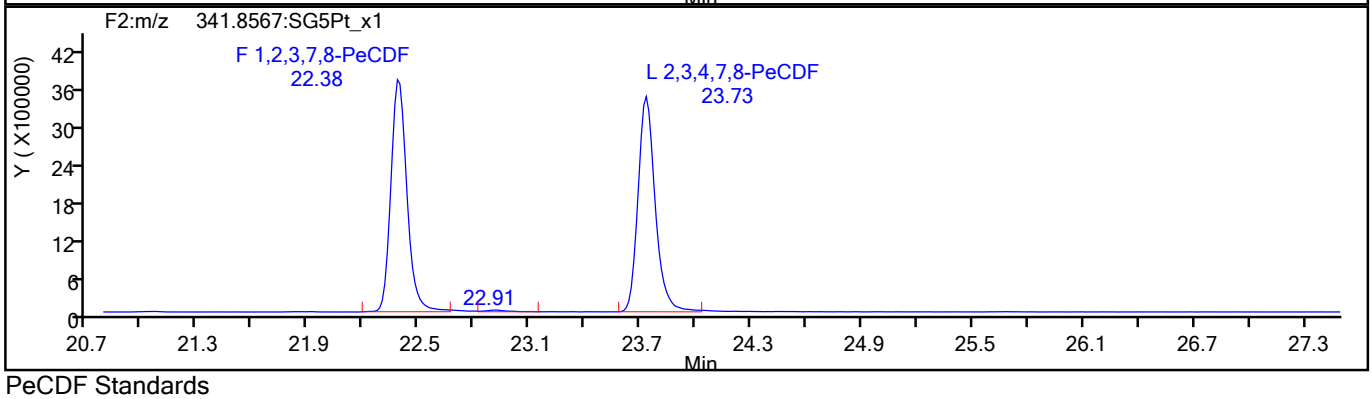

PeCDF Standards

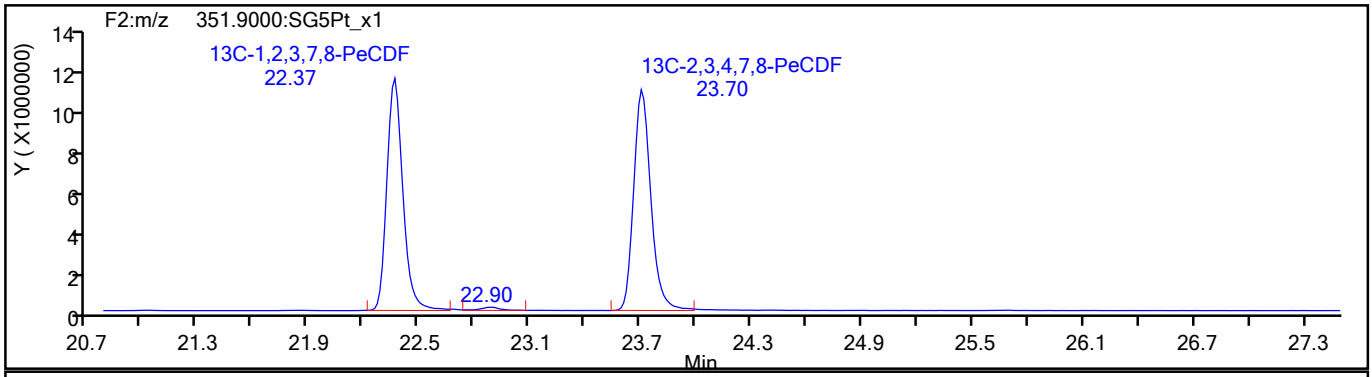

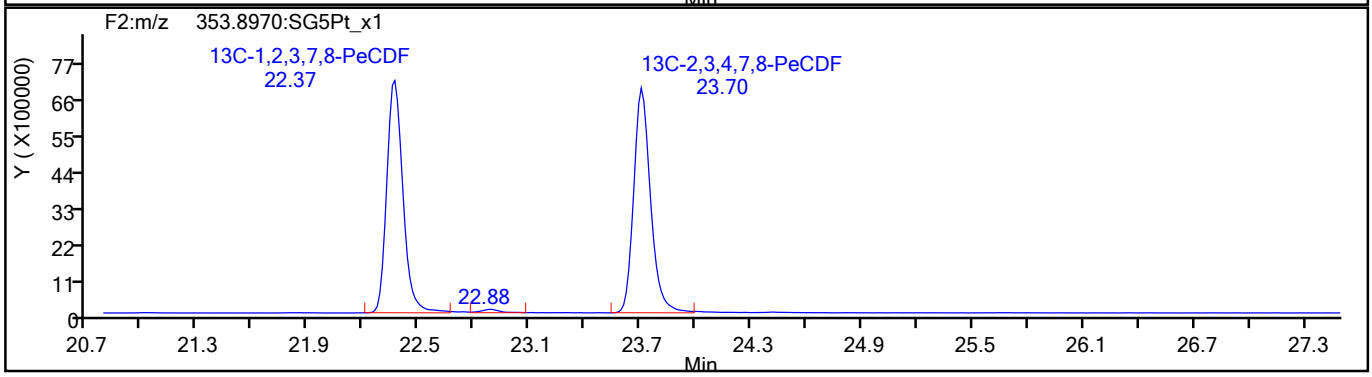

780531

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

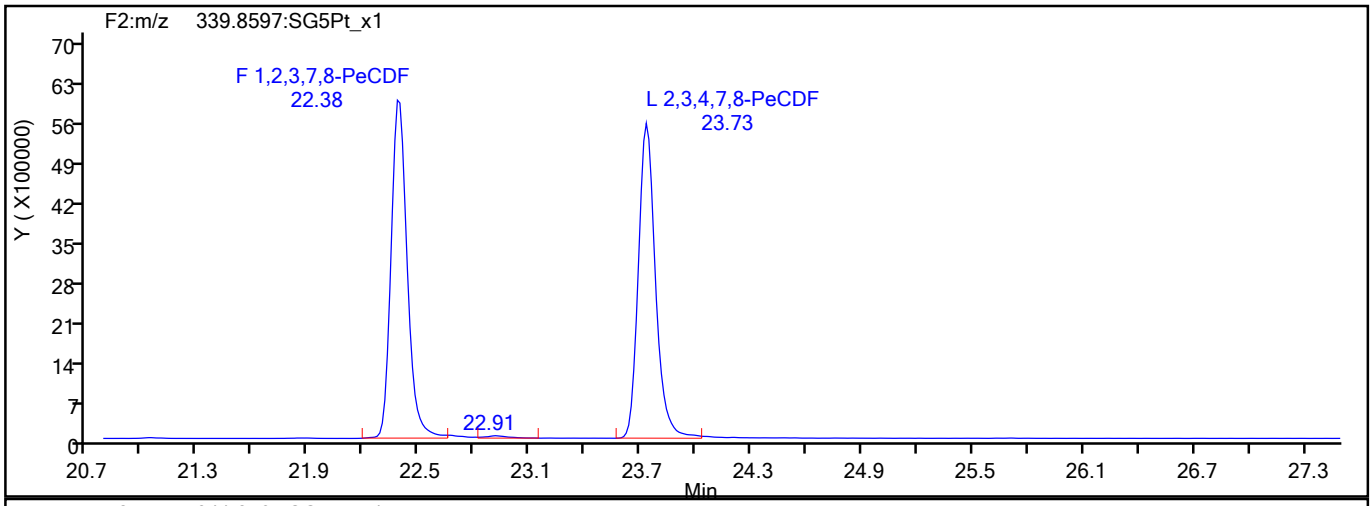

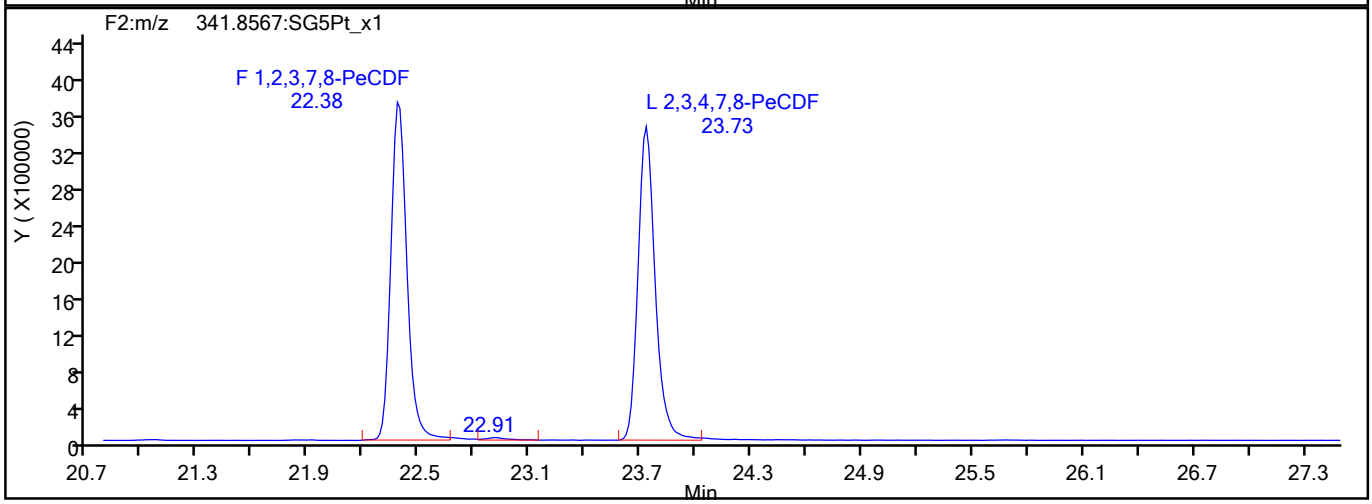

PeCDF Interference Mass

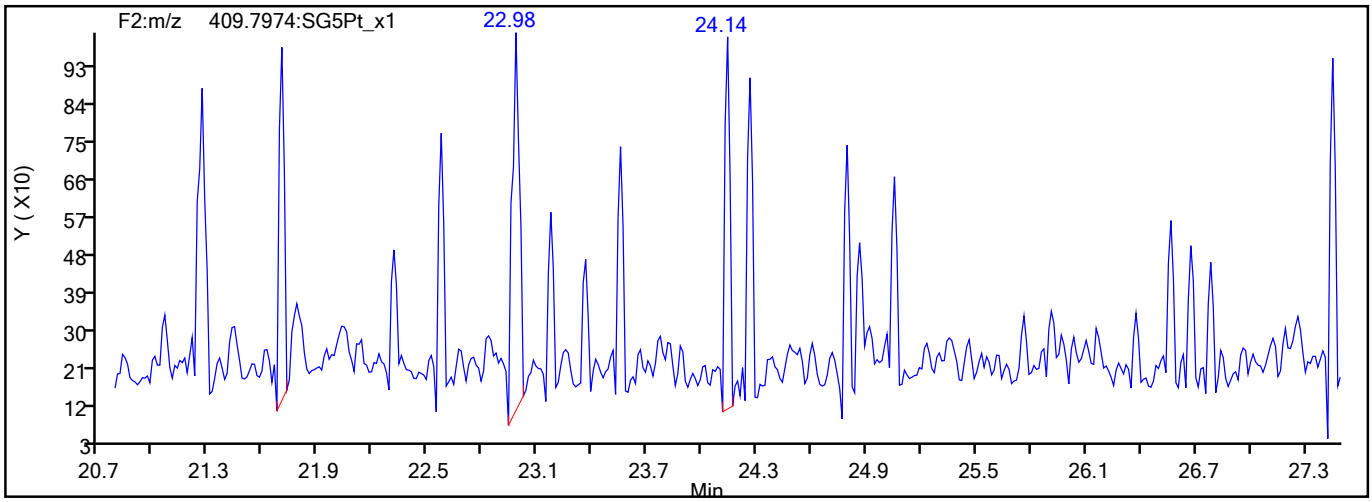

780532

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

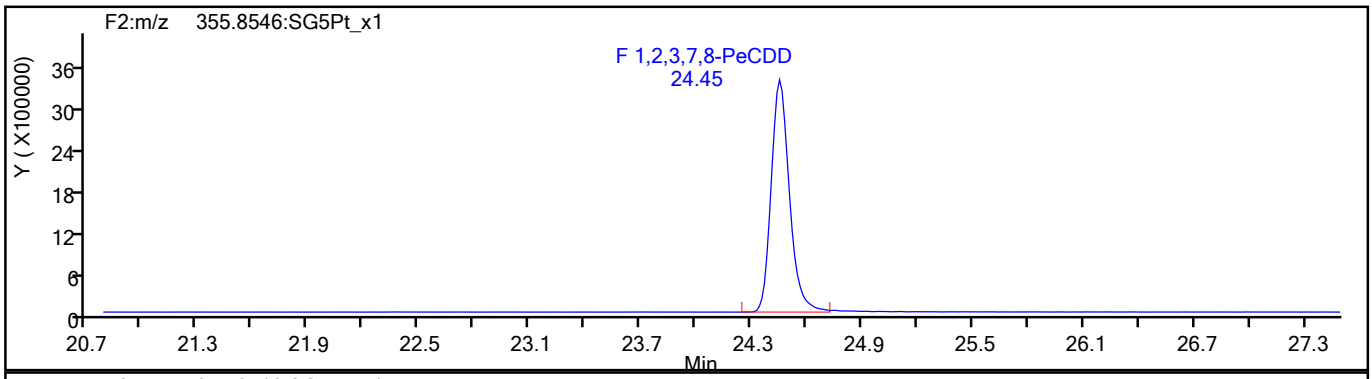

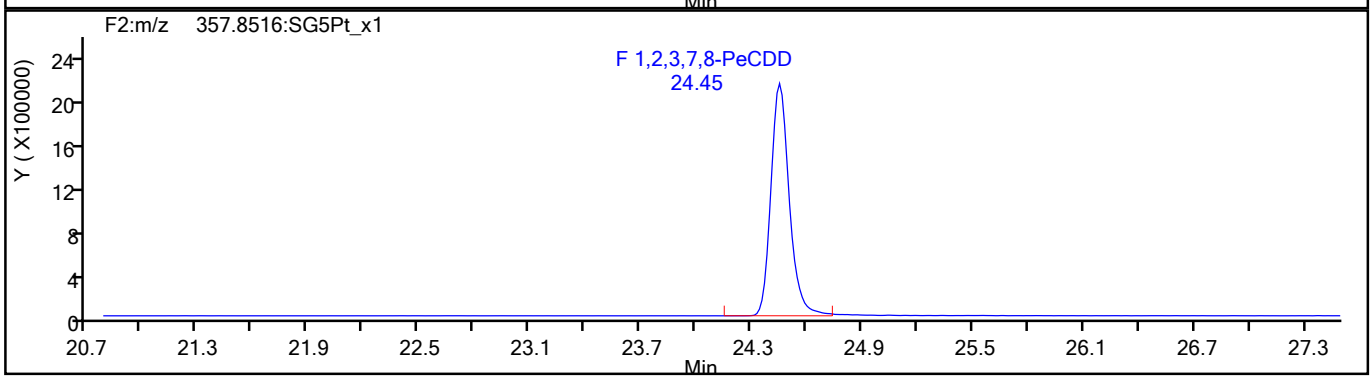

PeCDD Standards

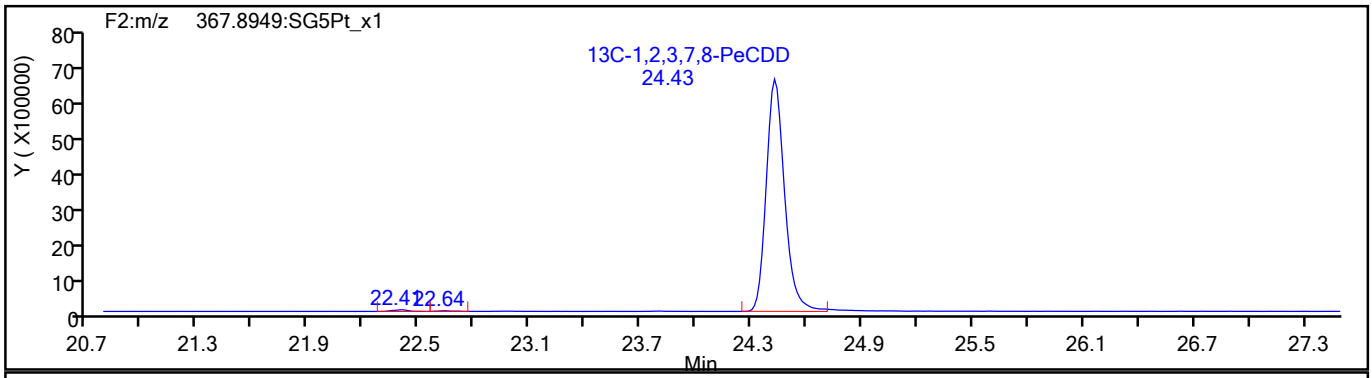

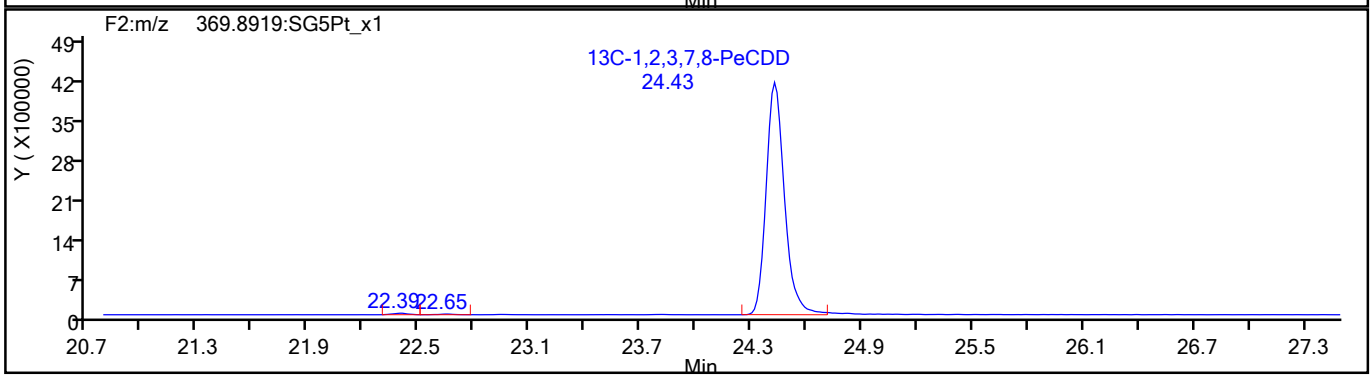

780533

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

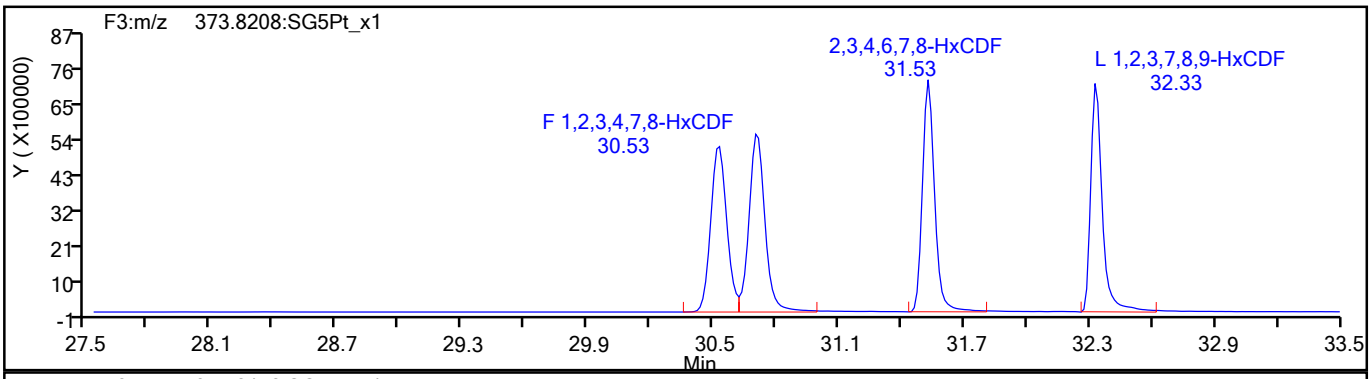

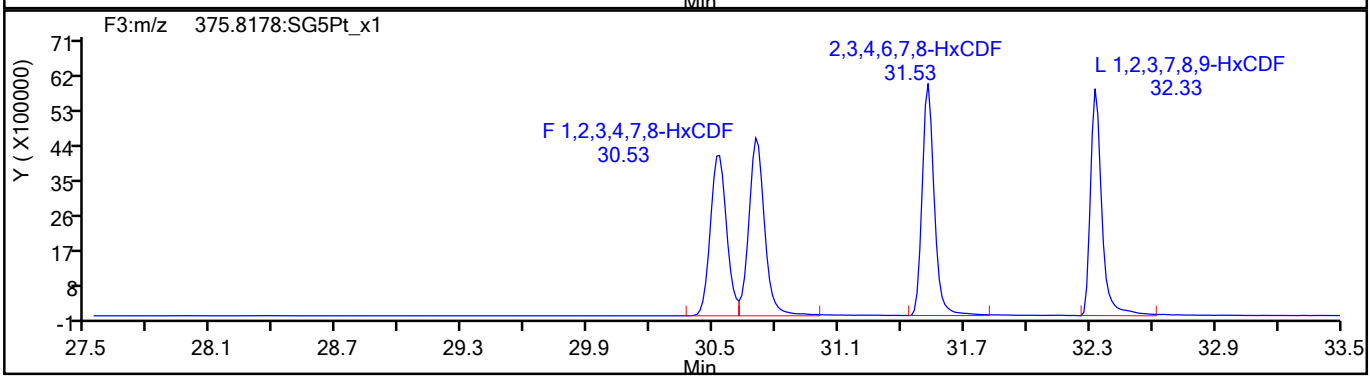

HxCDF Standards

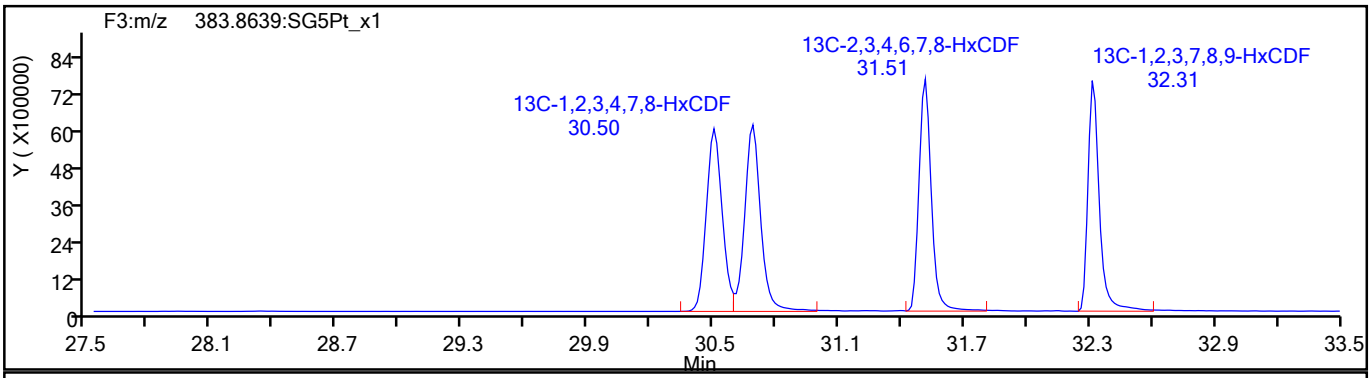

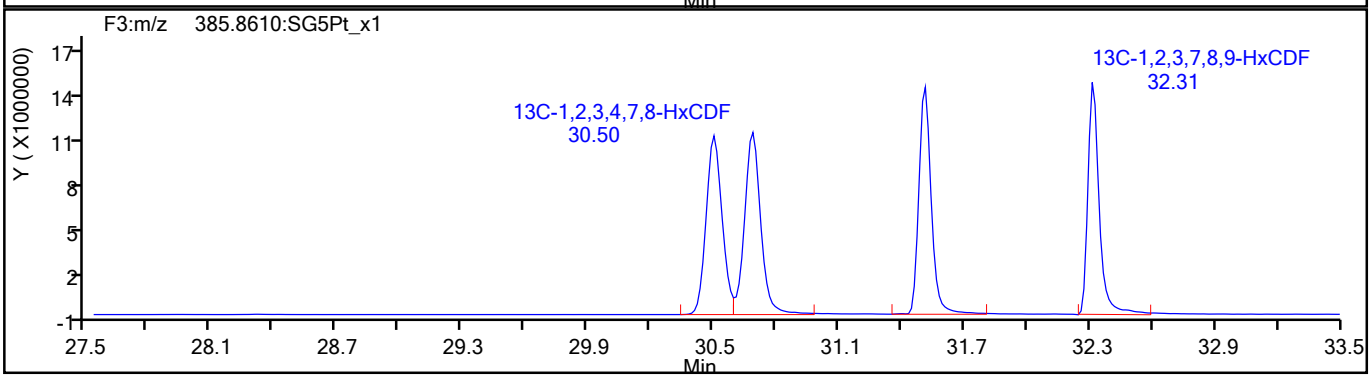

780534

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

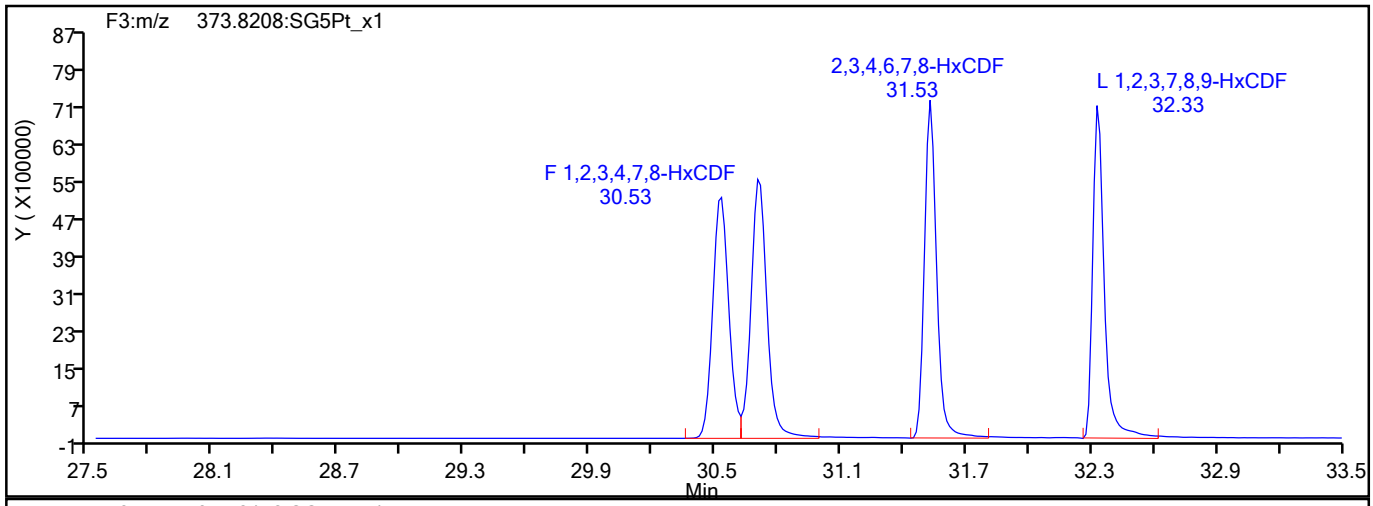

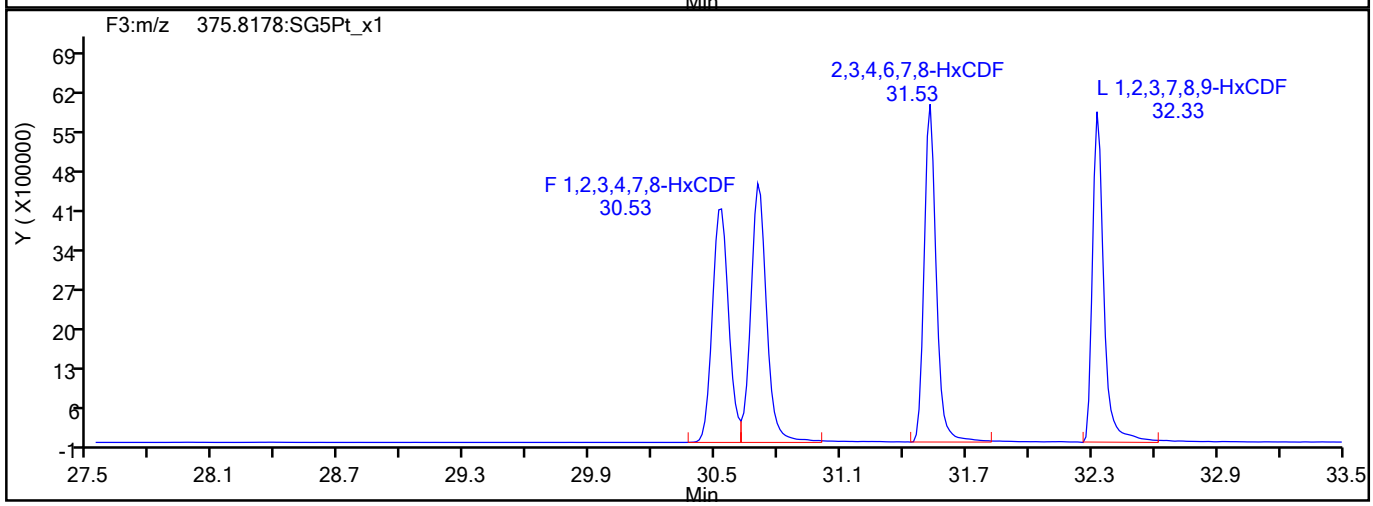

HxCDF Interference Mass

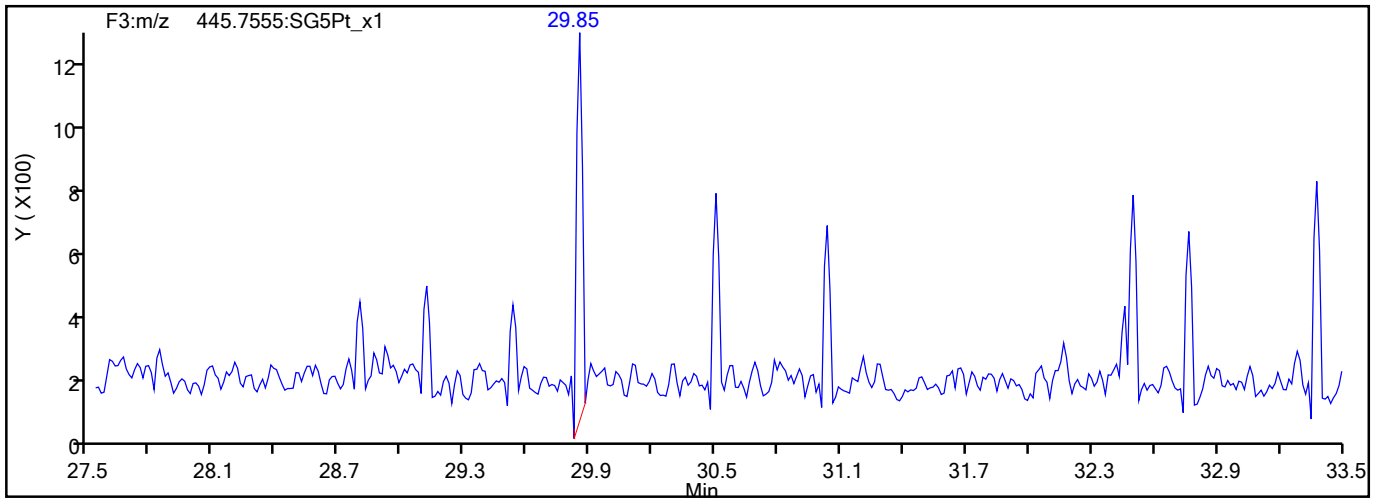

780535

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

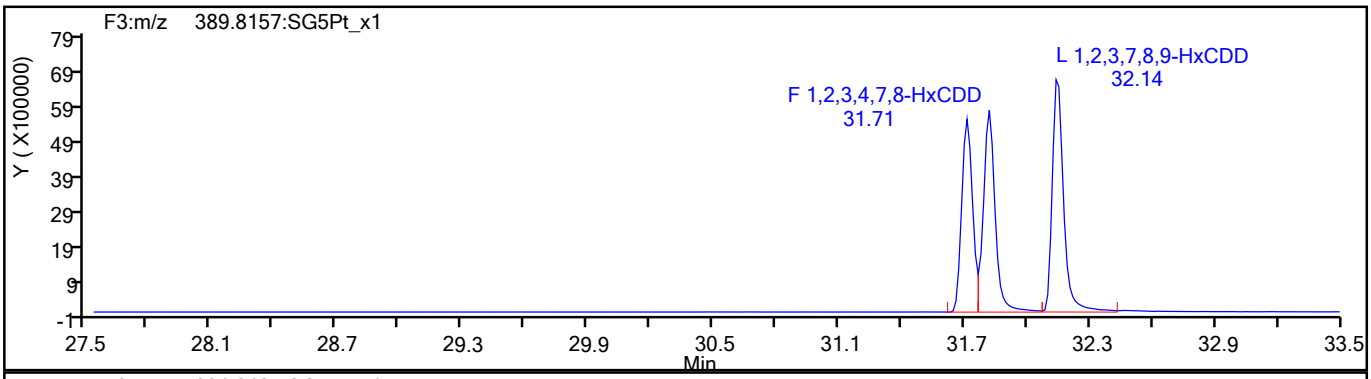

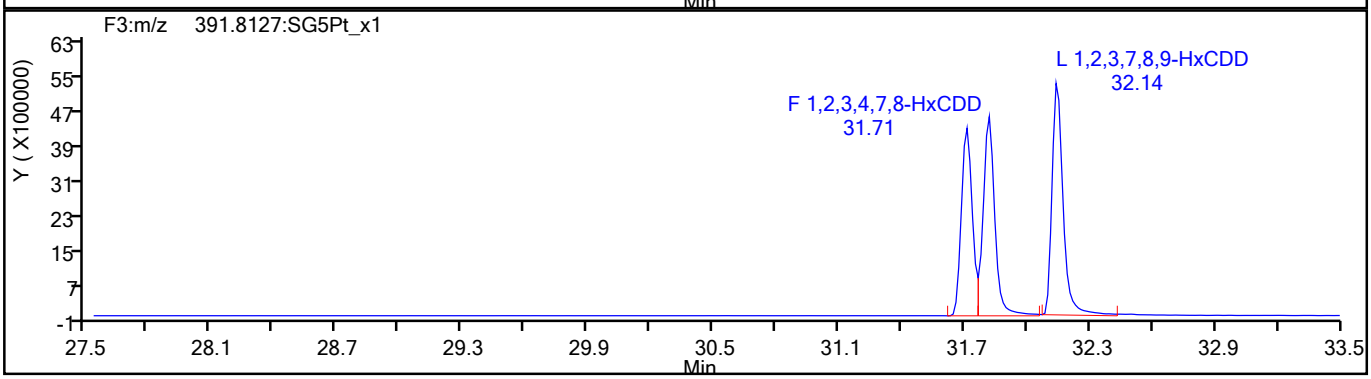

HxCDD Standards

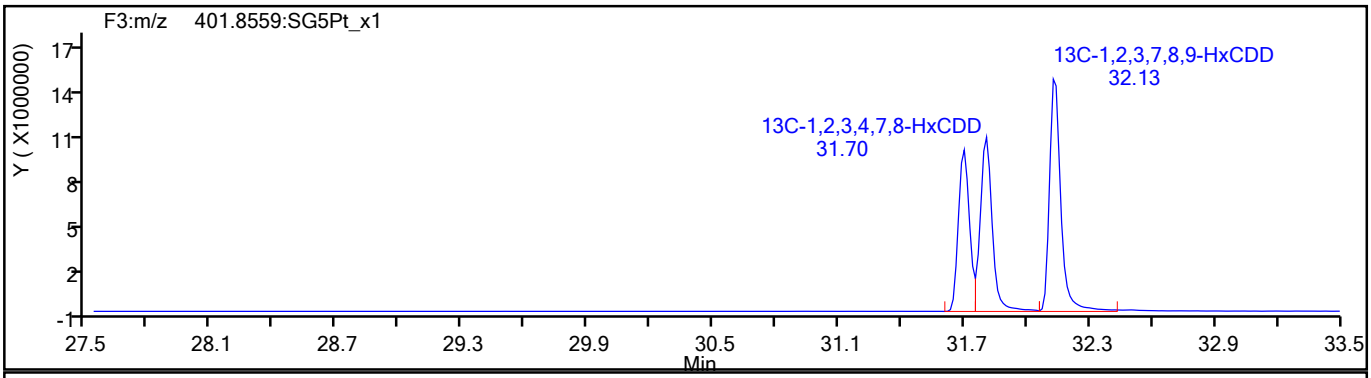

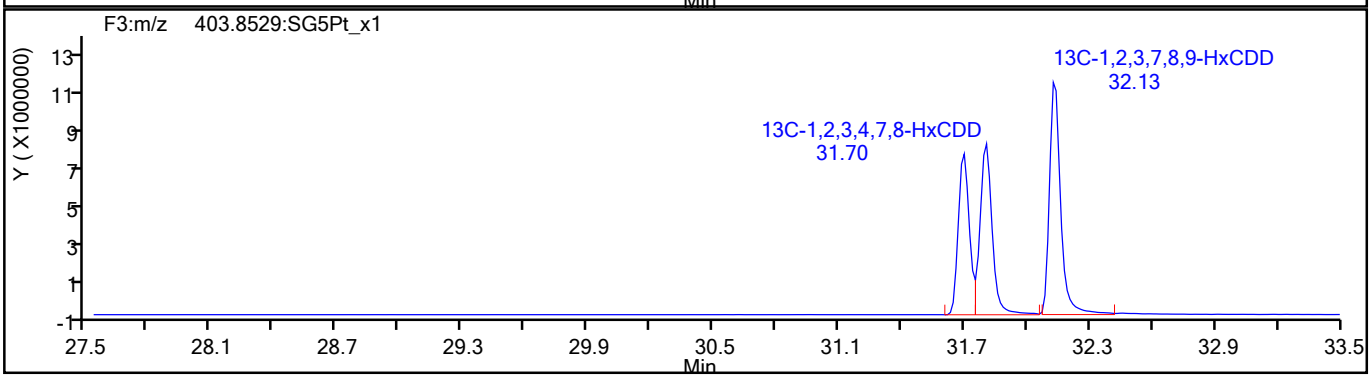

780536

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

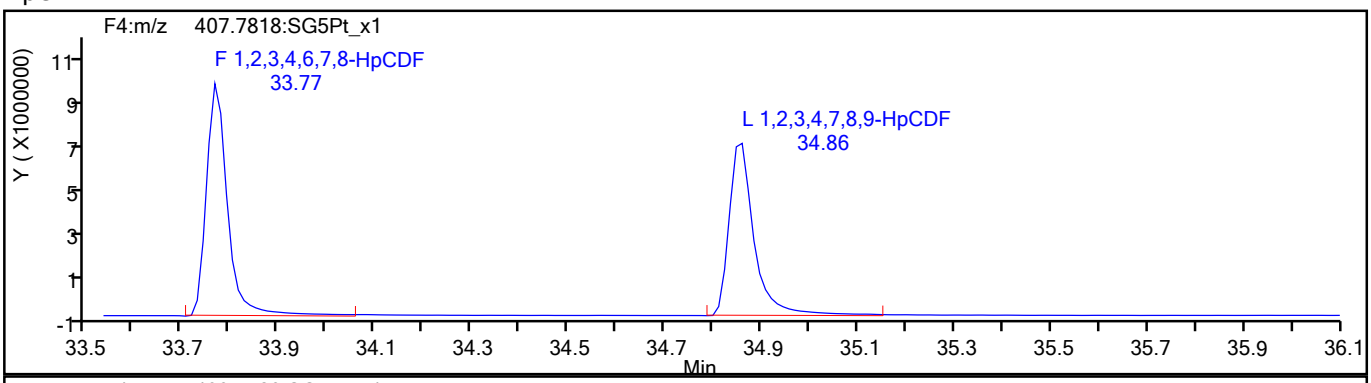

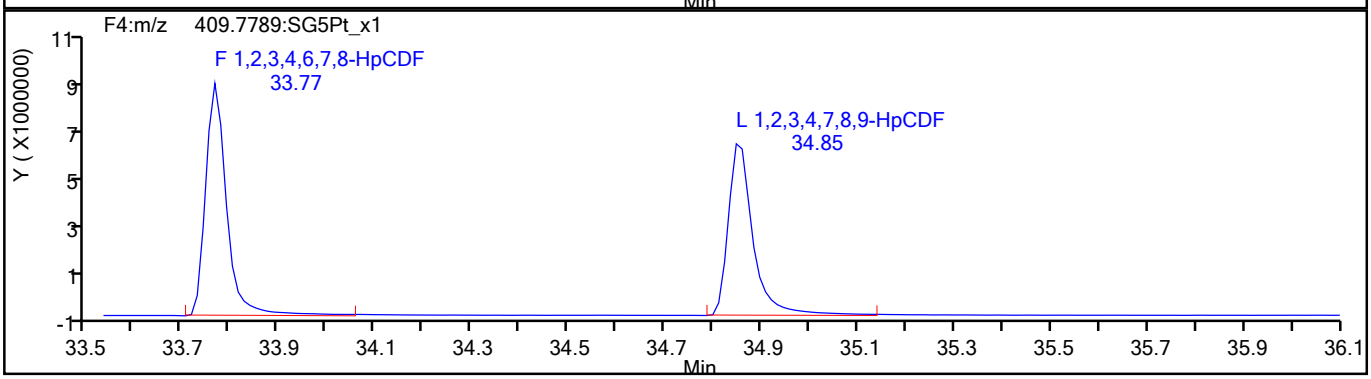

HpCDF Standards

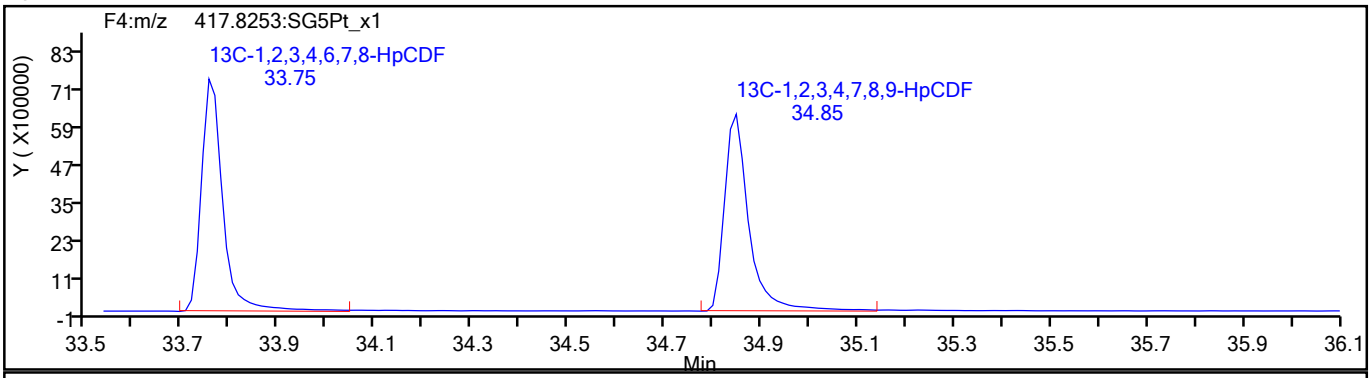

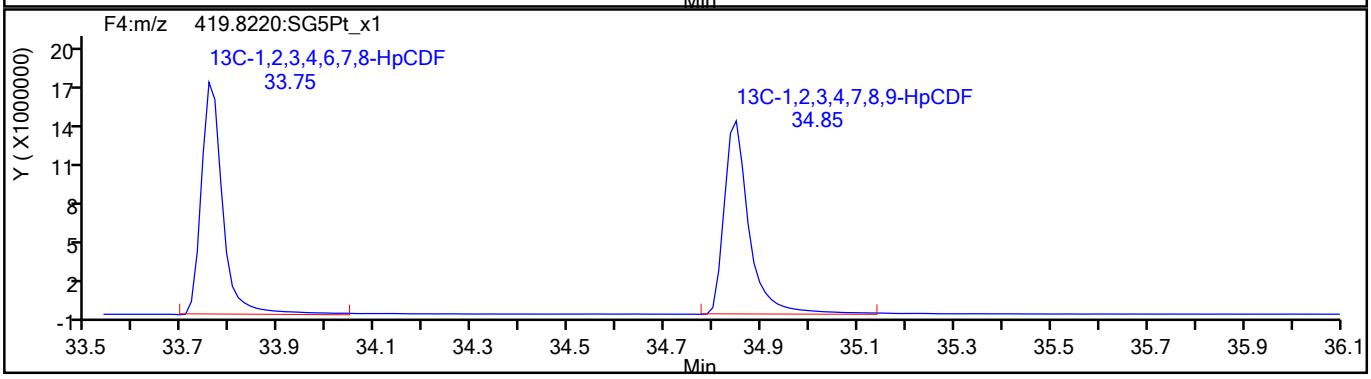

780537

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

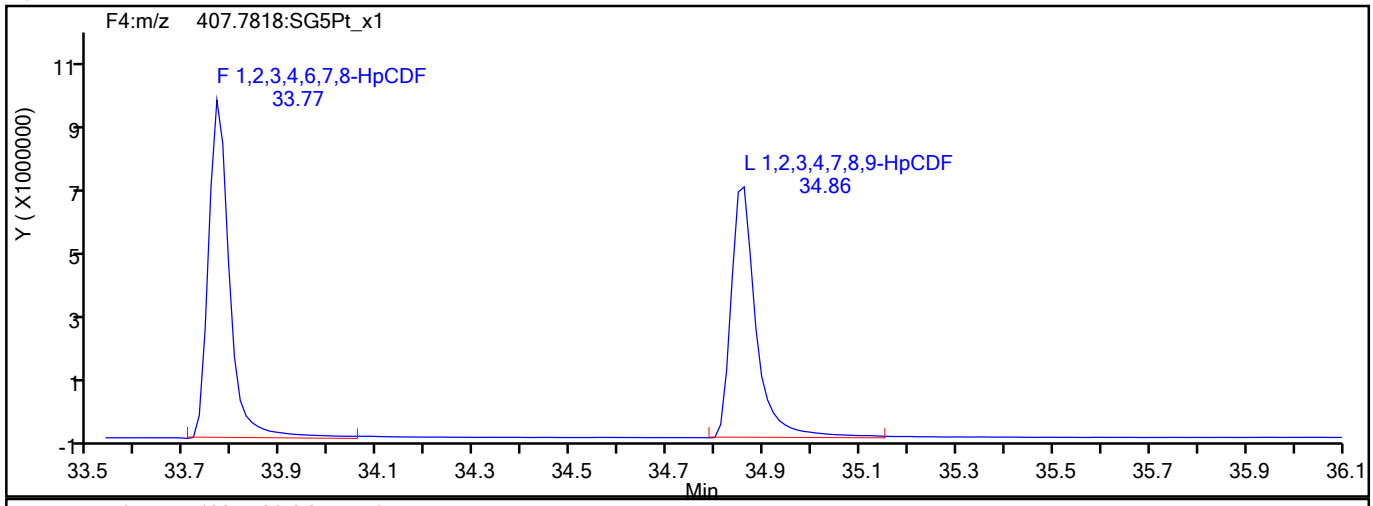

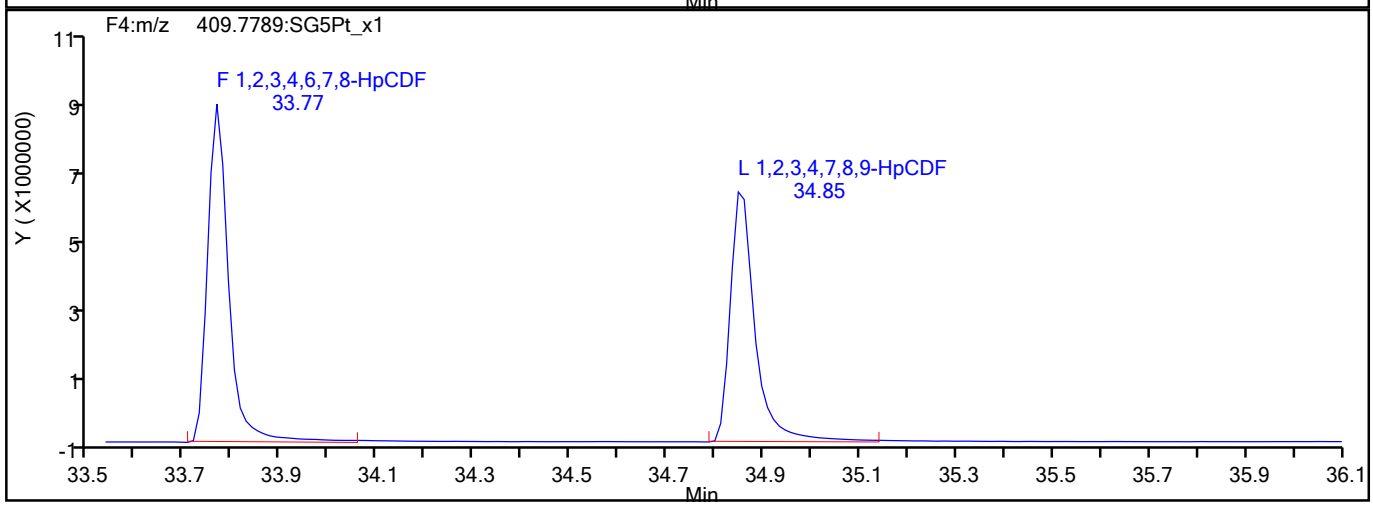

HpCDF Interference Mass

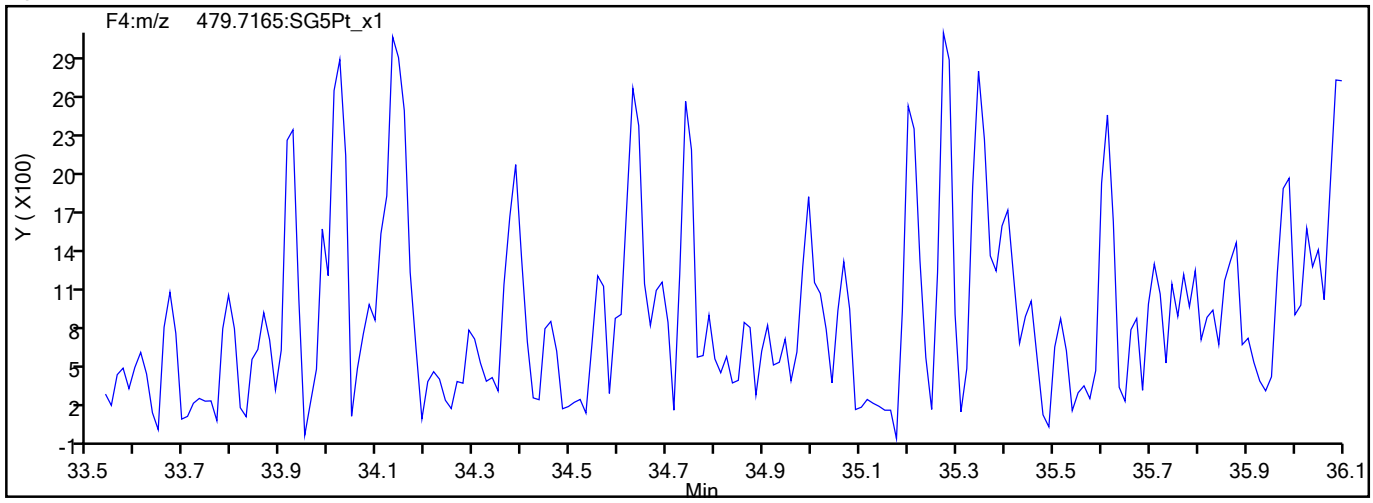

780538

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

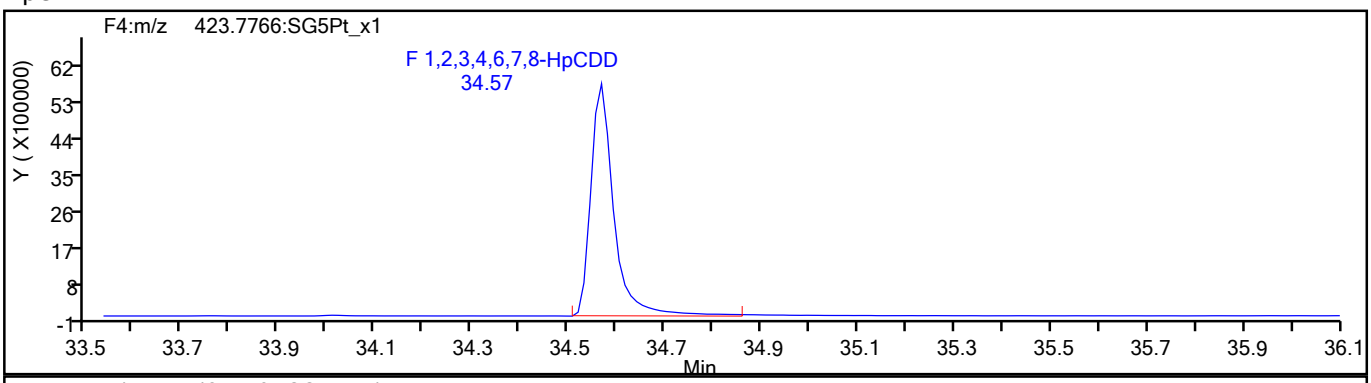

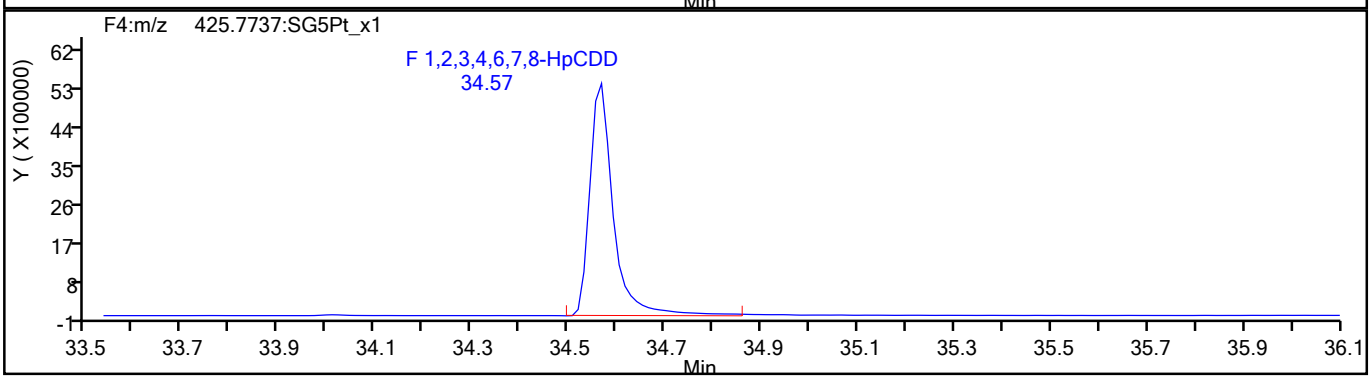

HpCDD Standards

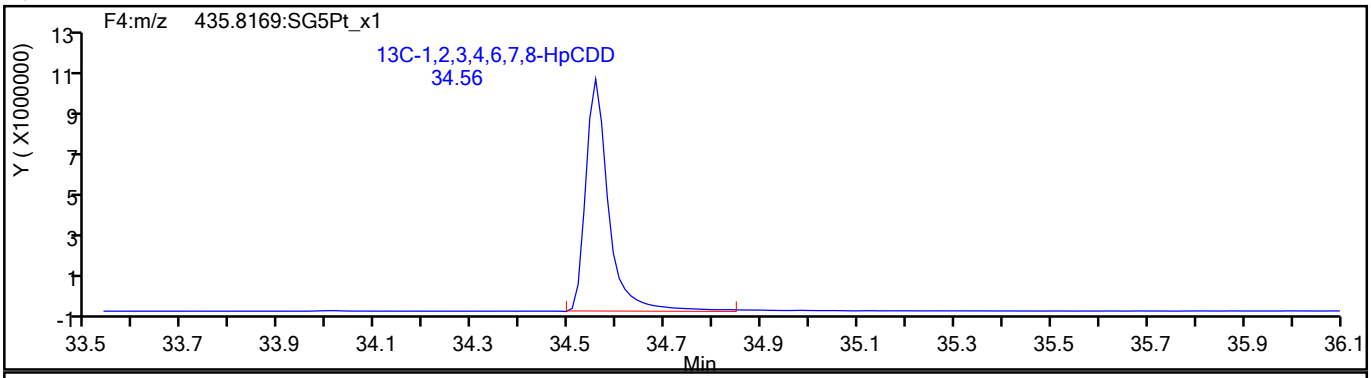

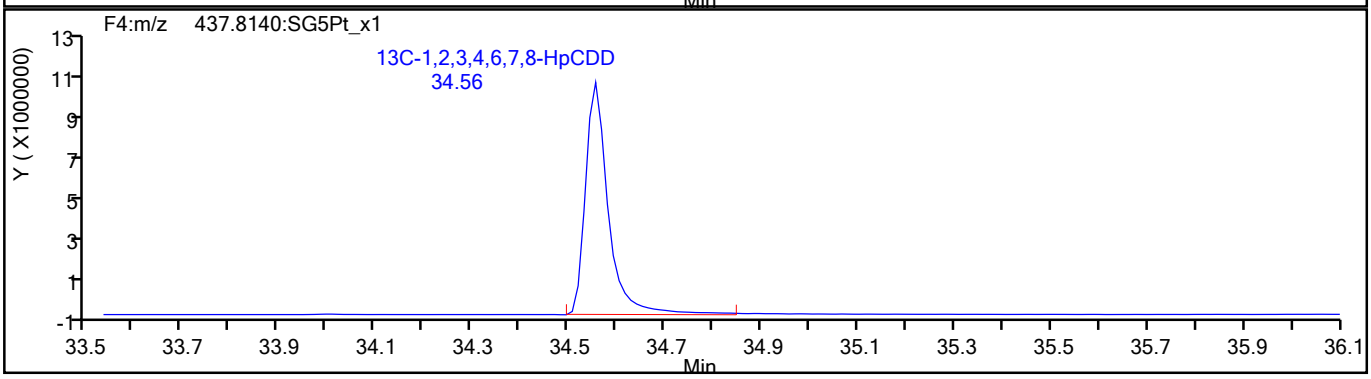

780539

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

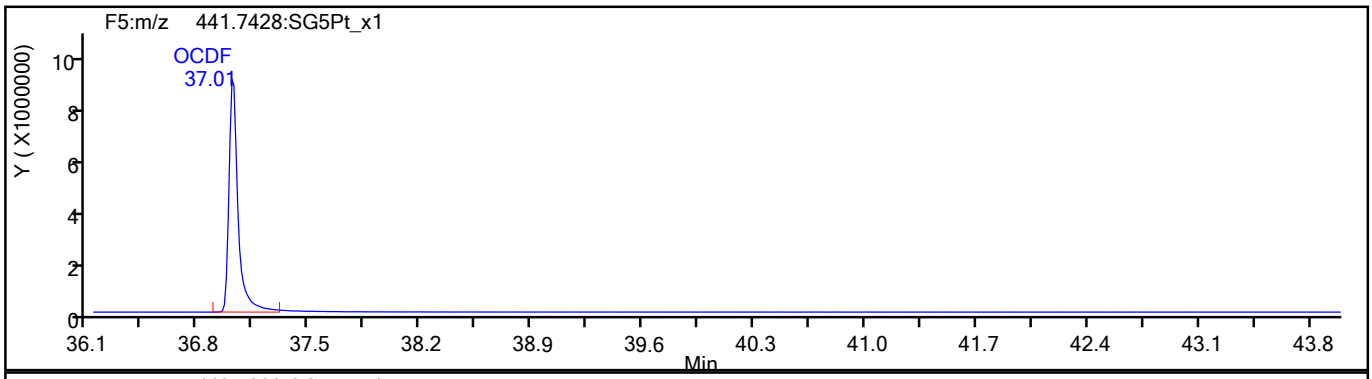

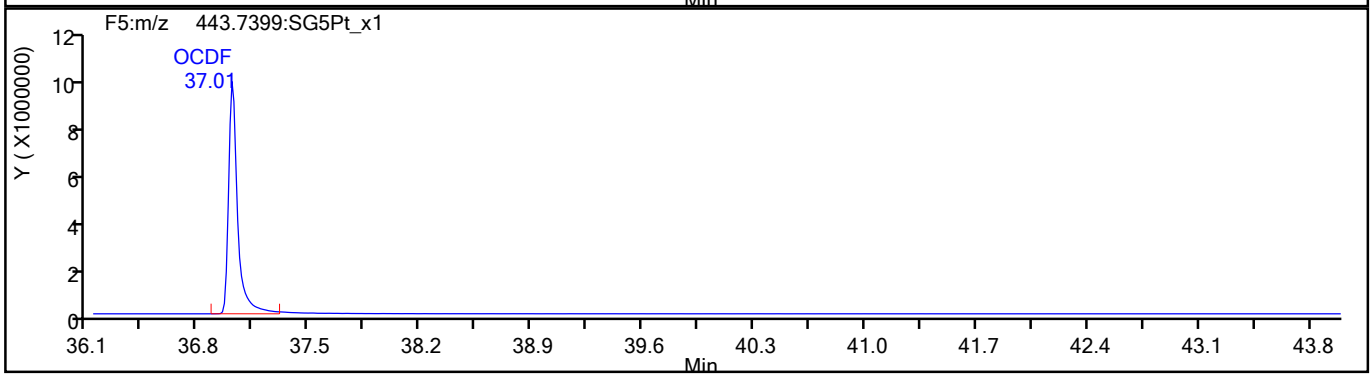

OCDF Standards

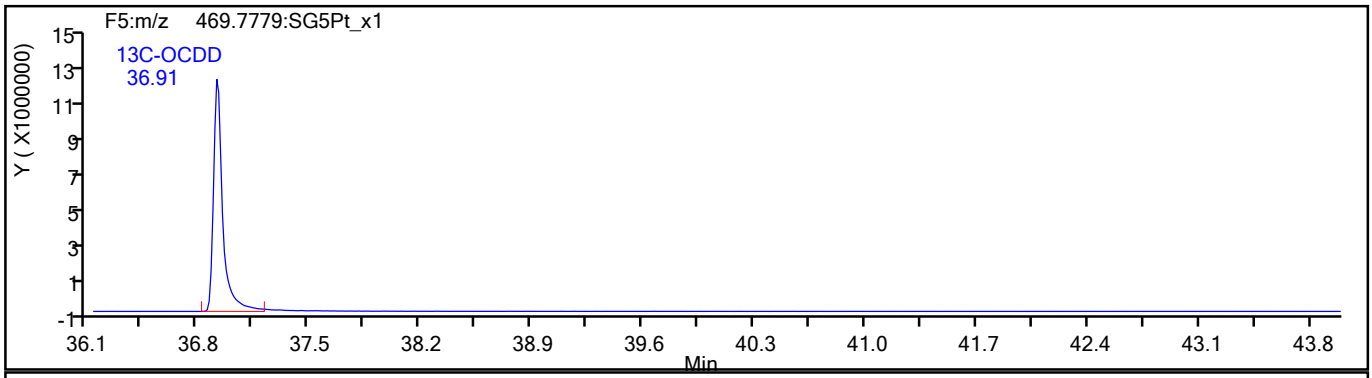

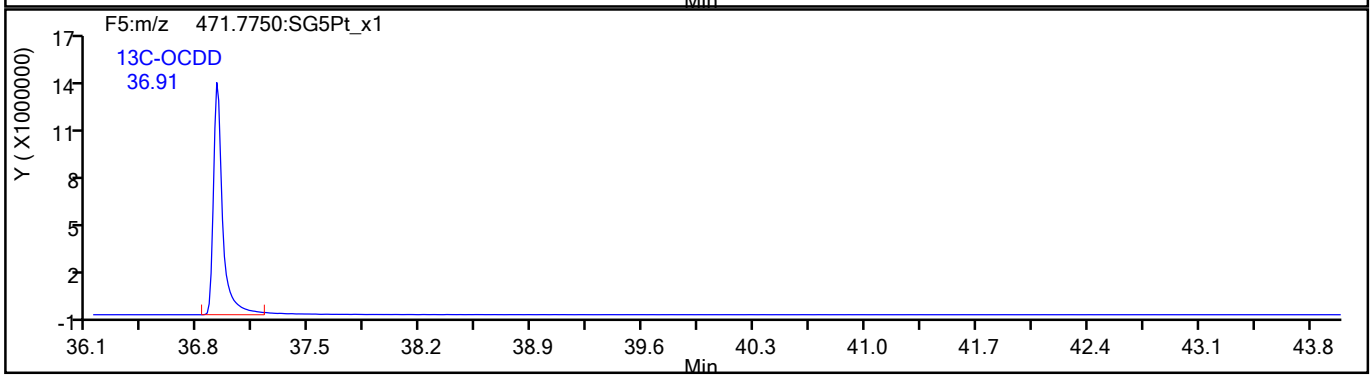

780540

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

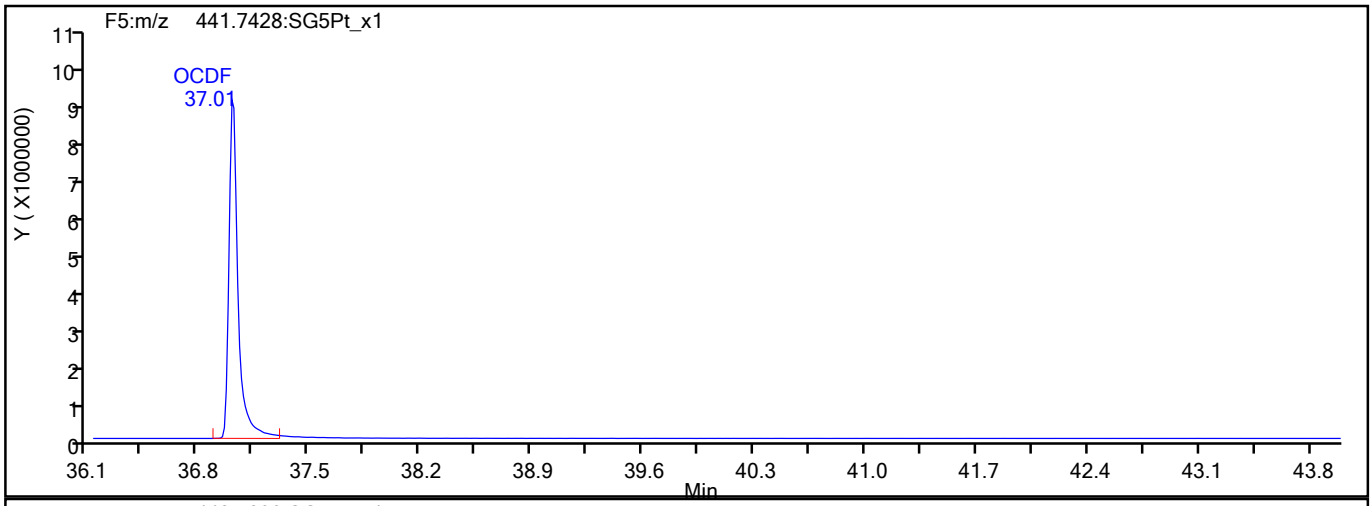

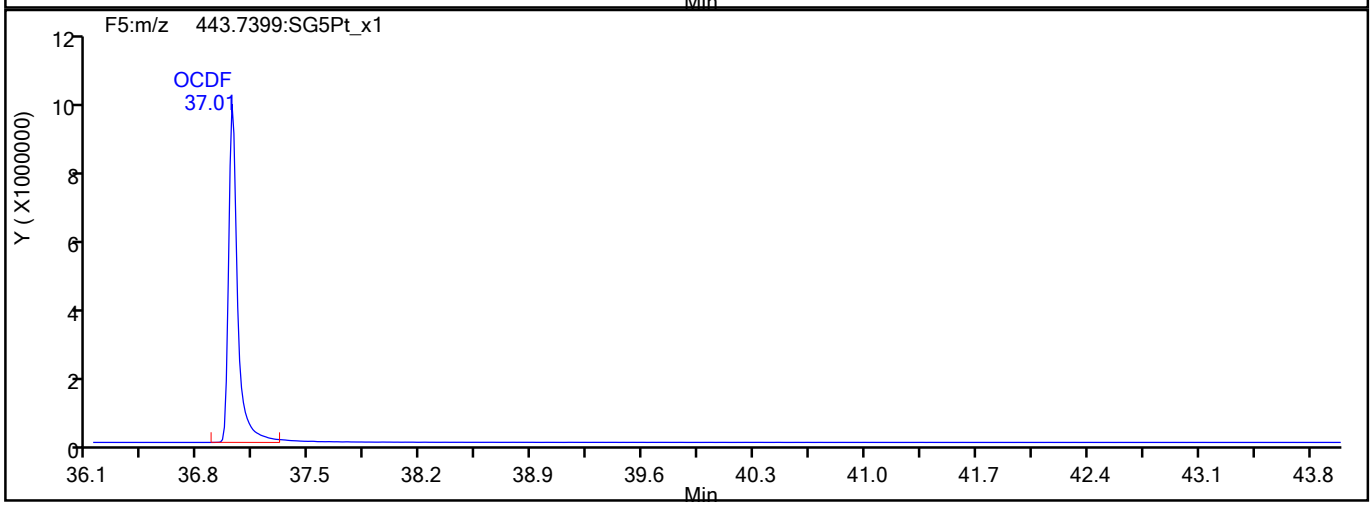

OCDF Interference Mass

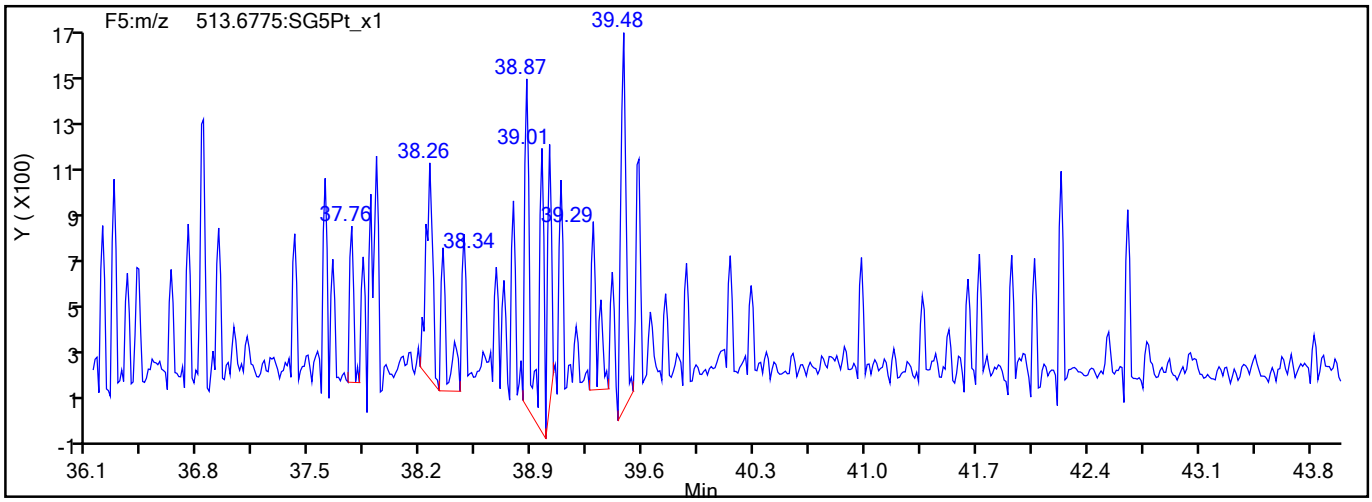

780541

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
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Instrument ID:	10D5	Operator ID:	DB
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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

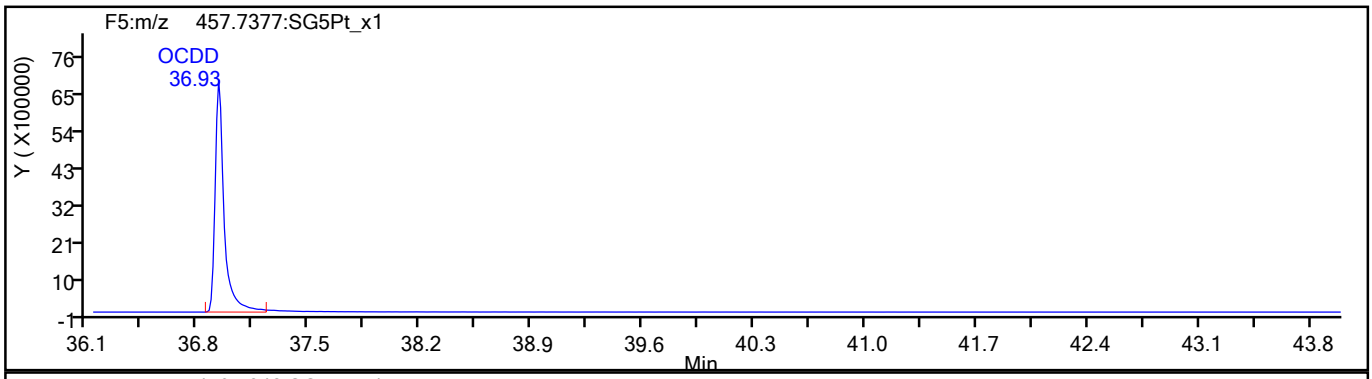

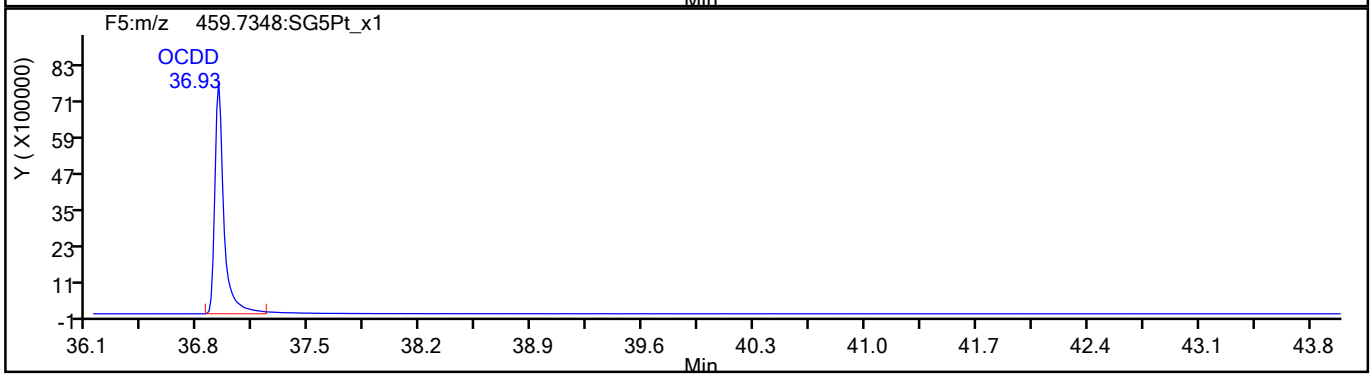

OCDD Standards

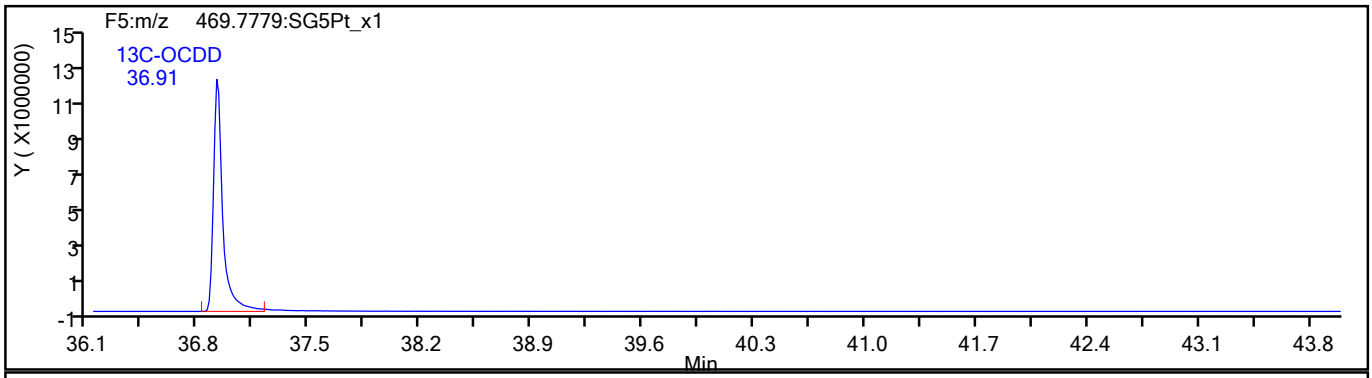

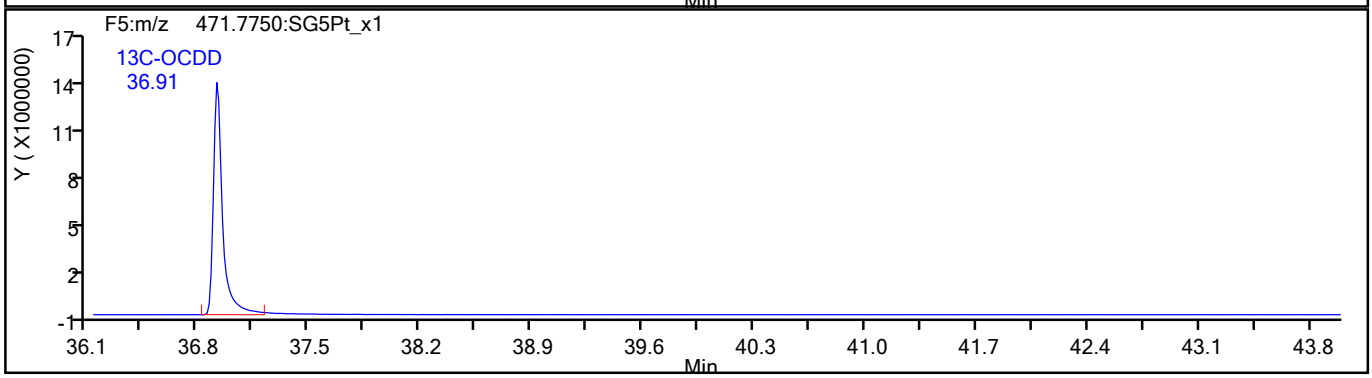

780542

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

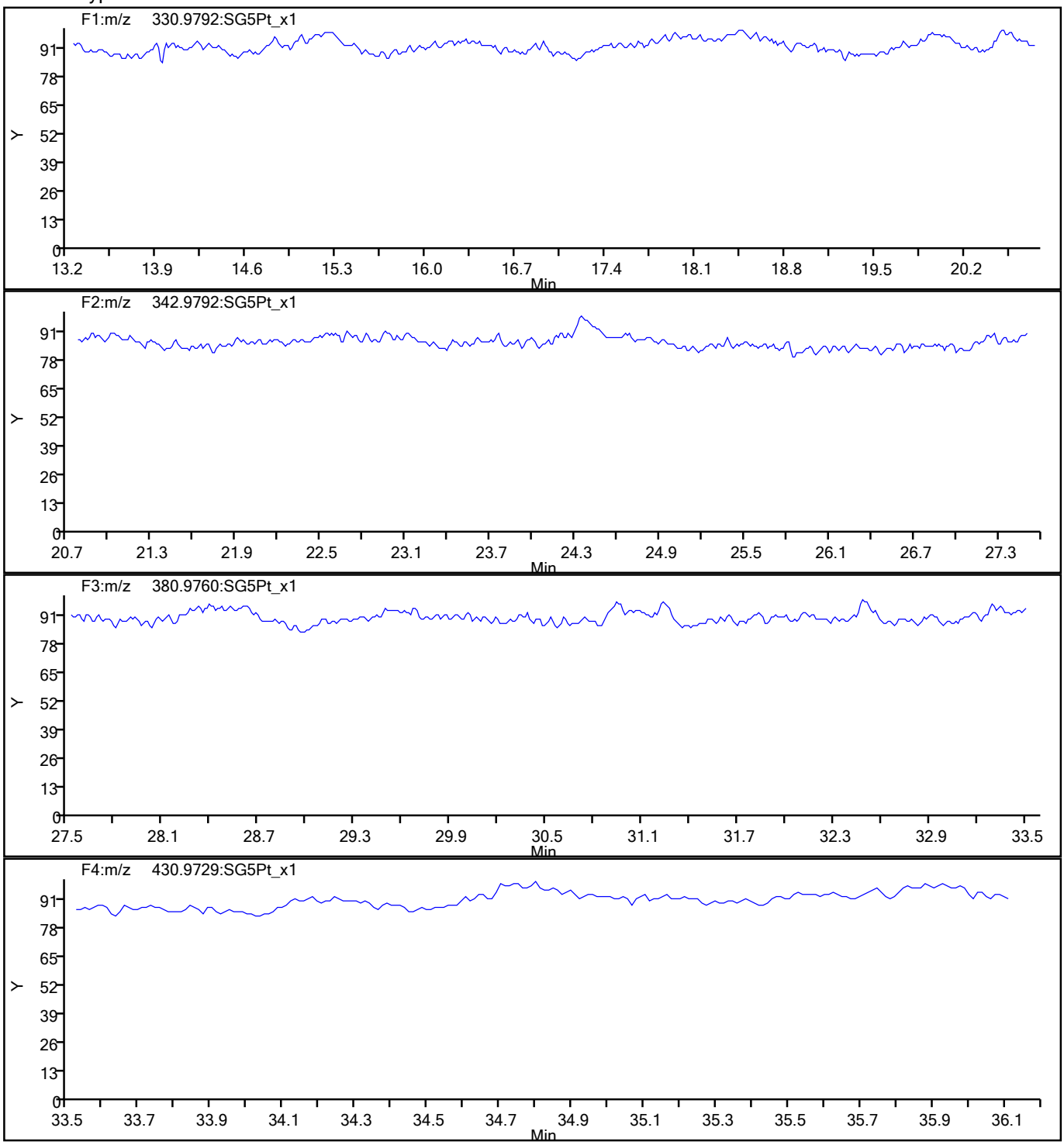

780543

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

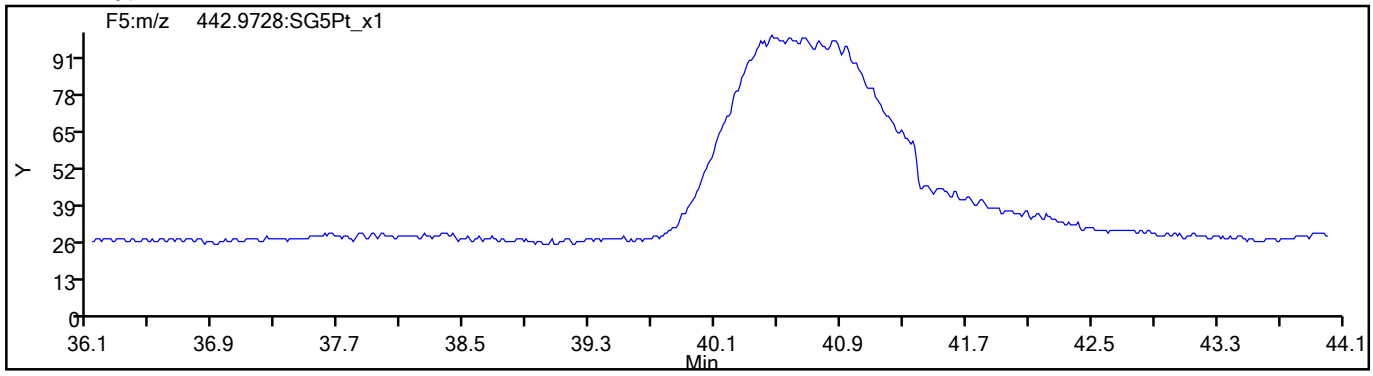

780544

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID: CCV 320-517241/1 Calibration Date: 08/17/2021 23:49

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 17AU21A10D5_12.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.033		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.247		9.95	10.0	99	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.053		49.6	50.0	99	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.019		50.0	50.0	100	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.030		49.1	50.0	98	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.072		49.4	50.0	99	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.138		50.5	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.158		49.6	50.0	99	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.059		49.8	50.0	100	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.019		51.0	50.0	102	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.102		48.6	50.0	97	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.164		49.9	50.0	100	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.467		50.9	50.0	102	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.091		49.8	50.0	100	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.348		51.1	50.0	102	86-116
OCDD	AveID	1.107	1.126		102	100	102	79-126
OCDF	AveID	1.438	1.420		98.7	100	99	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.559		95.9	100	96	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9192		102	100	102	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.183		97.8	100	98	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.210		97.6	100	98	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7904		104	100	104	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.056		97.4	100	97	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.107		98.2	100	98	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.033		97.1	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7484		102	100	102	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.9187		104	100	104	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9494		98.1	100	98	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.6957		90.0	100	90	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6026		93.1	100	93	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6013		85.8	100	86	77-129
13C-OCDD	Ave	0.4472	0.4266		191	200	95	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.200		10.8	10.0	108	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\17AU21A10D5.SPL
Last Modified: Wednesday, August 18, 2021 08:10:33 Pacific Daylight Time
Printed: Wednesday, August 18, 2021 08:11:40 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #
1	17AU21A10D5_1	WDM HRDXNCP_00044	WDM 081721	Tray01:1	Dioxin	
2	17AU21A10D5_2	CS-4 HRDXNL4_00099	CCV 081721A	Tray01:2	Dioxin	
3	17AU21A10D5_3	mb 320-511228/1-a	mb 320-511228/1-a	Tray01:4	8290/Solid	D259
4	17AU21A10D5_4	lcs 320-511228/2-a	lcs 320-511228/2-a	Tray01:5	8290/Solid	
5	17AU21A10D5_5	lcsd 320-511228/3-a	lcsd 320-511228/3-a	Tray01:6	8290/Solid	
6	17AU21A10D5_6	570-65362-b-1-a	570-65362-b-1-a	Tray01:7	8290/Solid	
7	17AU21A10D5_7	570-65362-b-3-a	570-65362-b-3-a	Tray01:8	8290/Solid	
8	17AU21A10D5_8	570-65362-b-8-a	570-65362-b-8-a	Tray01:9	8290/Solid	
9	17AU21A10D5_9	570-65362-b-10-a	570-65362-b-10-a	Tray01:10	8290/Solid	
10	17AU21A10D5_10	570-65362-b-13-a	570-65362-b-13-a	Tray01:11	8290/Solid	
11	17AU21A10D5_11	SB Solvent Blank C-14	SB 081721	Tray01:3		
12	17AU21A10D5_12	CS-4 HRDXNL4_00099	CCV 081721B	Tray01:2	Dioxin	
13	17AU21A10D5_13	WDM HRDXNCP_00044	WDM 081721A	Tray01:1	Dioxin	---
14	17AU21A10D5_14	MB 320-512941/1-A	MB 320-512941/1-A	Tray01:15	8290/Water	D262
15	17AU21A10D5_15	lcs 320-512941/2-a	lcs 320-512941/2-a	Tray01:16	8290/Water	---
16	17AU21A10D5_16	lcsd 320-512941/3-a	lcsd 320-512941/3-a	Tray01:17	8290/Water	
17	17AU21A10D5_17	570-65362-g-16-a	570-65362-g-16-a	Tray01:18	8290/Water	
18	17AU21A10D5_18	570-65362-g-17-a	570-65362-g-17-a	Tray01:19	8290/Water	
19	17AU21A10D5_19	320-76788-A-1-A X5	320-76788-A-1-A X5	Tray01:20	1613B/Solid	D265
20	17AU21A10D5_20	320-76788-A-13-A X5	320-76788-A-13-A X5	Tray01:21	1613B/Solid	
21	17AU21A10D5_21	320-76788-A-14-A X5	320-76788-A-14-A X5	Tray01:22	1613B/Solid	
22	17AU21A10D5_22	SB Solvent Blank C-14	SB 081721A	Tray01:3		
23	17AU21A10D5_23	mb 320-511228/1-a RI	mb 320-511228/1-a RI	Tray01:4	8290/Solid	D259
24	17AU21A10D5_24	CS-4 HRDXNL4_00099	CCV 081721C	Tray01:2	Dioxin	
25	17AU21A10D5_25	WDM HRDXNCP_00044	WDM 081721B	Tray01:1	Dioxin	---
26	17AU21A10D5_26	SB Solvent Blank C-14	SB 081721B	Tray01:3		
27	17AU21A10D5_27	QC DH28_00196 1A 20%	QC DH28_00196 1A 20%	Tray01:29	1613B/8290/QC	QC90 8-18-21 SMA
28	17AU21A10D5_28	QC DH28_00196 2A 65%	QC DH28_00196 2A 65%	Tray01:30	1613B/8290/QC	
29	17AU21A10D5_29	QC DH6535_00550 65%	QC DH6535_00550 65%	Tray01:31	1613B/8290/QC	
30	17AU21A10D5_30	QC DH6535_00551 65%	QC DH6535_00551 65%	Tray01:32	1613B/8290/QC	
31	17AU21A10D5_31	QC DH6535_00552 65%	QC DH6535_00552 65%	Tray01:33	1613B/8290/QC	
32	17AU21A10D5_32	320-76769-a-6-a	320-76769-a-6-a	Tray01:34	1613B/Solid	D265
33	17AU21A10D5_33	320-76769-a-16-a	320-76769-a-16-a	Tray01:35	1613B/Solid	---
34	17AU21A10D5_34	SB Solvent Blank C-14	SB 081721C	Tray01:3		
35	17AU21A10D5_35	CS-4 HRDXNL4_00099	CCV 081721D	Tray01:2	Dioxin	
36	17AU21A10D5_36	WDM HRDXNCP_00044	WDM 081721C	Tray01:1	Dioxin	---

logfile checked
08/18/21 SMA

780546

User	Sample Size	Units	MS File	Inlet File	Inject Volume	Process
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DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover

Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Tuesday, August 17, 2021 15:16:12 Pacific Daylight Time

M 292.9824 R 12559

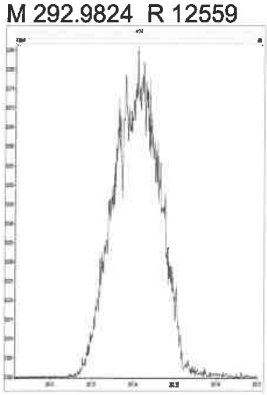

M 304.9824 R 12255

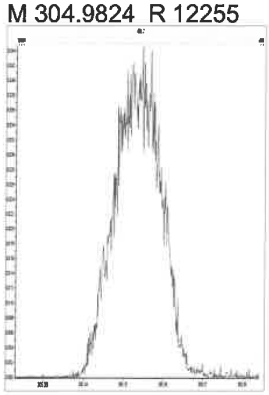

M 318.9792 R 12755

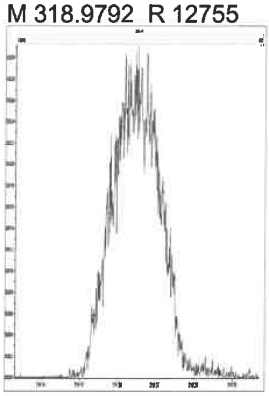

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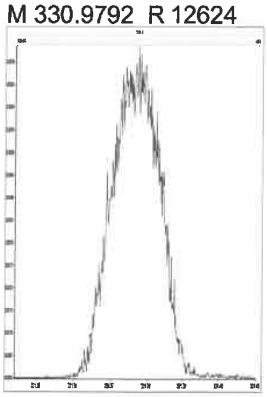

M 342.9792 R 11964

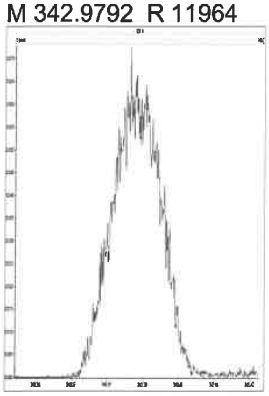

M 354.9792 R 11957

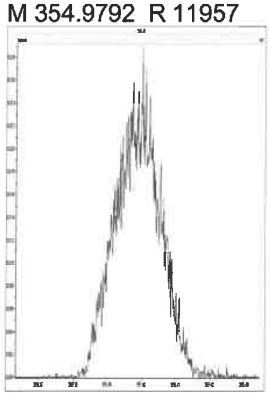

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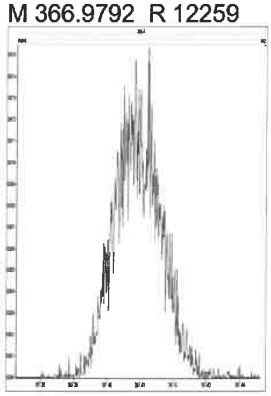

M 380.9760 R 11310

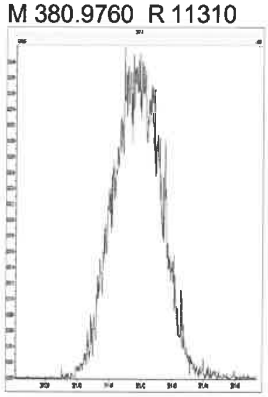

M 392.9760 R 11112

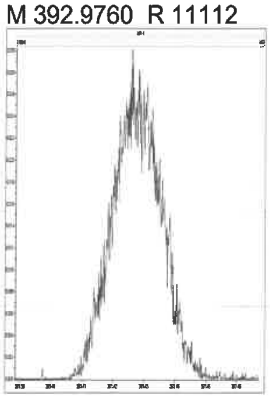

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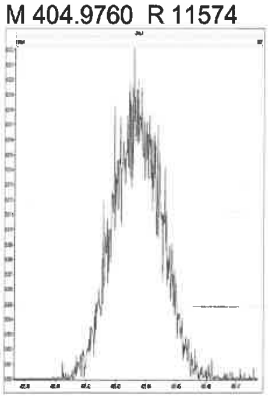

M 416.9760 R 12561

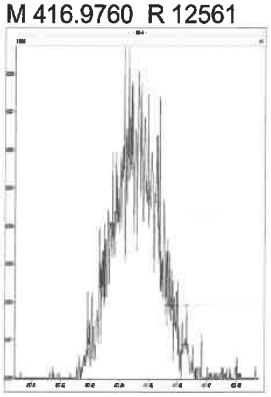

780549

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Tuesday, August 17, 2021 15:17:38 Pacific Daylight Time

M 318.9792 R 13158

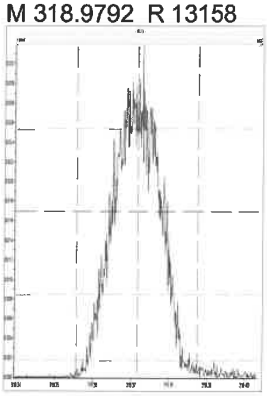

M 330.9792 R 13087

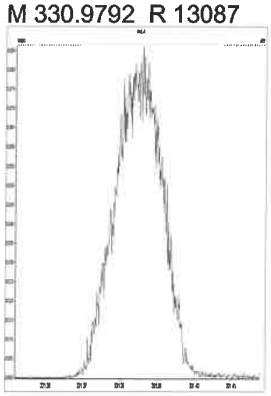

M 342.9792 R 12192

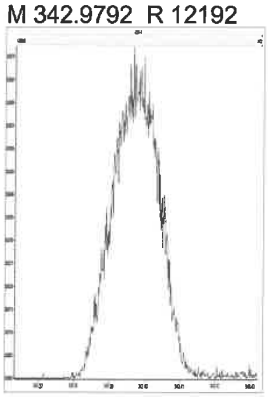

M 354.9792 R 12887

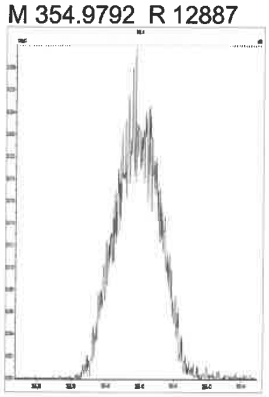

M 366.9792 R 12820

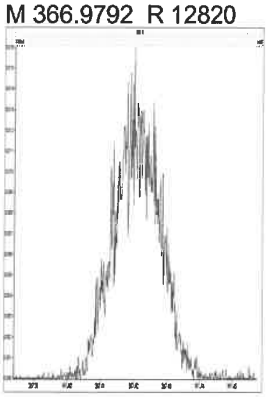

M 380.9760 R 12080

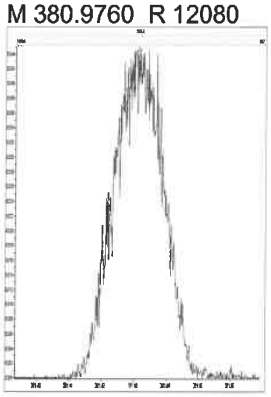

M 392.9760 R 11906

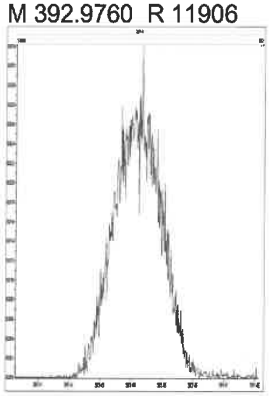

M 404.9760 R 11468

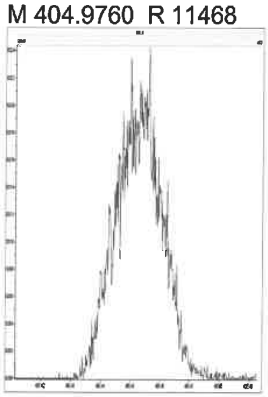

M 416.9760 R 12952

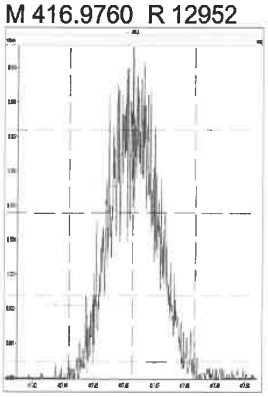

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Tuesday, August 17, 2021 15:18:23 Pacific Daylight Time

M 366.9792 R 12816

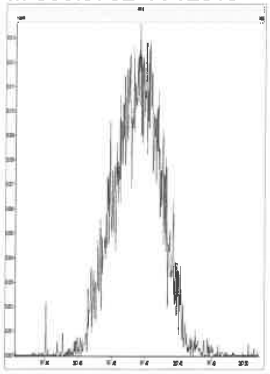

M 380.9760 R 12886

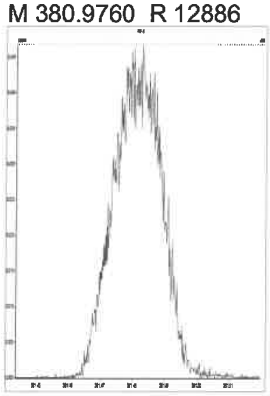

M 392.9760 R 12499

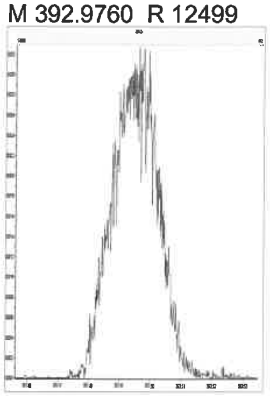

M 404.9760 R 12435

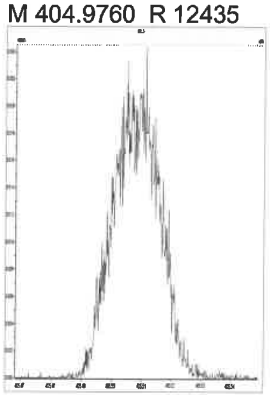

M 416.9760 R 13299

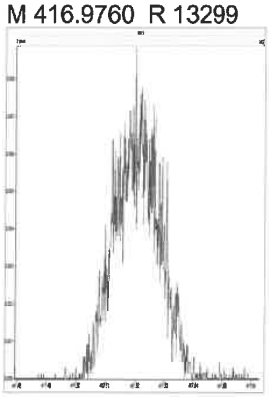

M 430.9728 R 12953

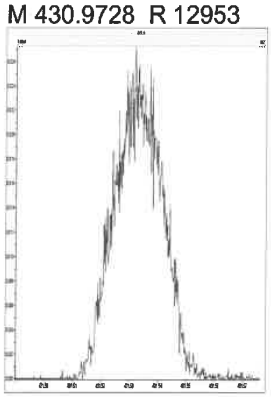

M 442.9728 R 12562

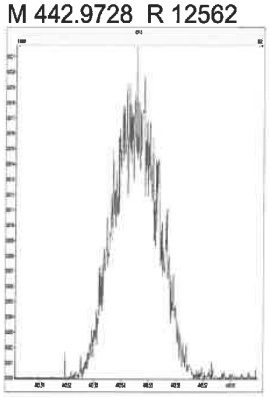

M 454.9728 R 12317

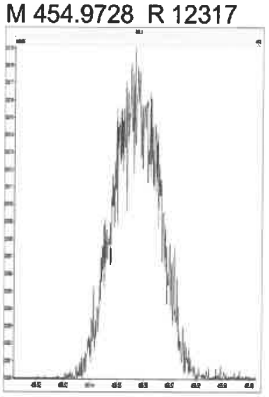

780551

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

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M 380.9760 R 12822

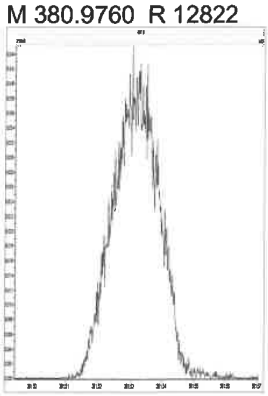

M 392.9760 R 12438

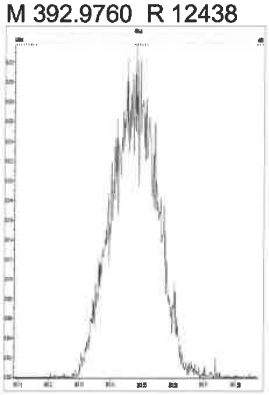

M 404.9760 R 12952

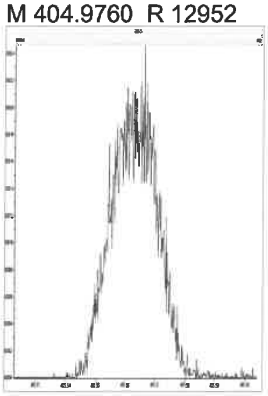

M 416.9760 R 13296

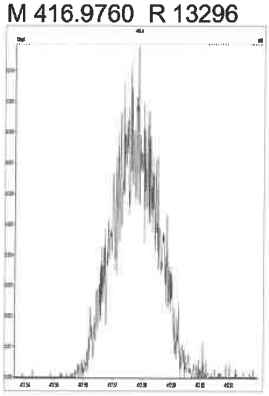

M 430.9728 R 13091

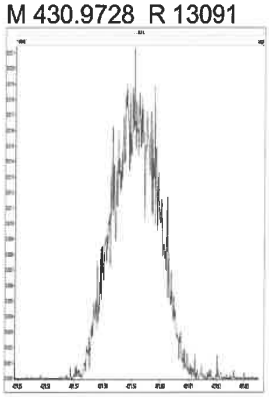

M 442.9728 R 12016

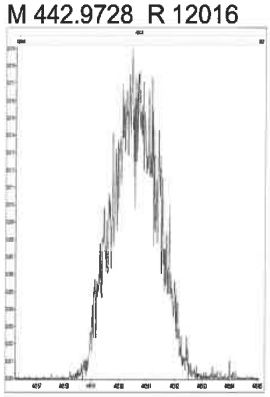

M 454.9728 R 13157

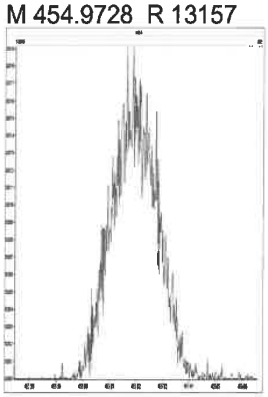

M 466.9728 R 13512

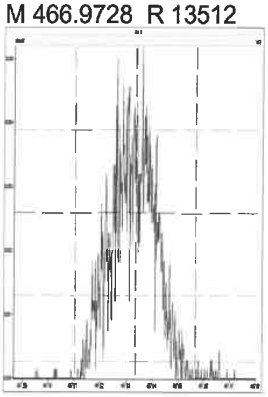

M 480.9696 R 12193

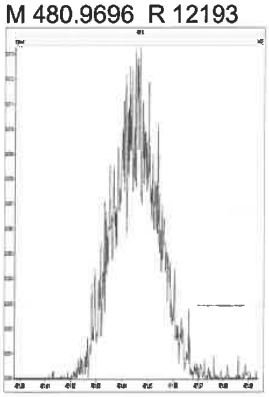

780552

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed: Tuesday, August 17, 2021 15:21:36 Pacific Daylight Time

M 380.9760 R 12196

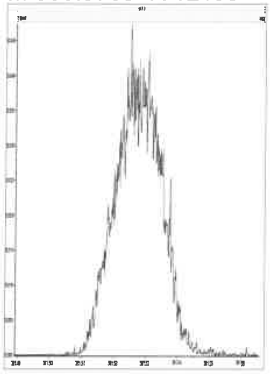

M 392.9760 R 12500

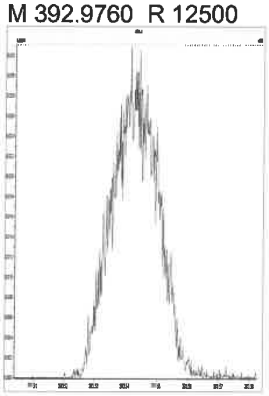

M 404.9760 R 12194

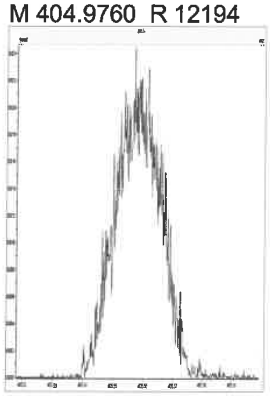

M 416.9760 R 13160

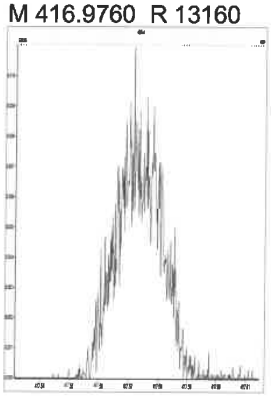

M 430.9728 R 12192

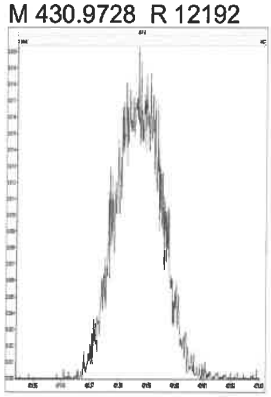

M 442.9728 R 12191

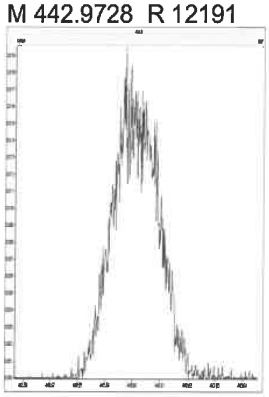

M 454.9728 R 12375

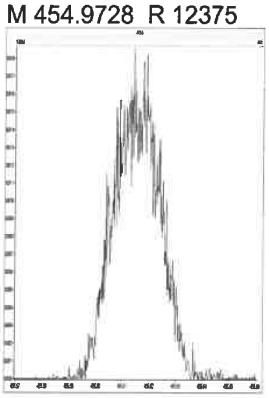

M 466.9728 R 14127

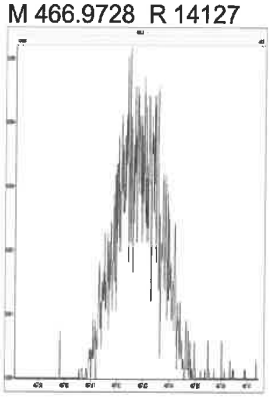

M 480.9696 R 12757

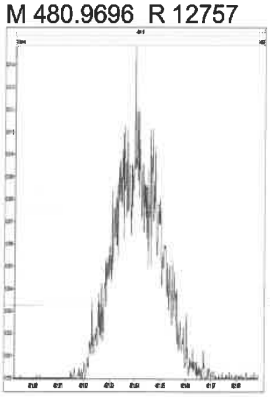

M 492.9696 R 12821

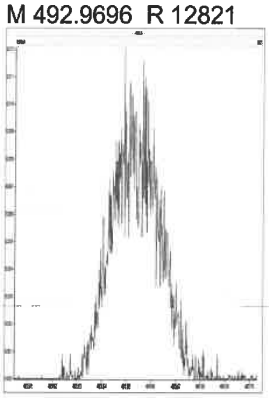

M 504.9696 R 12566

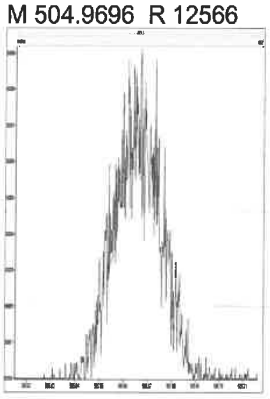

M 516.9697 R 13891

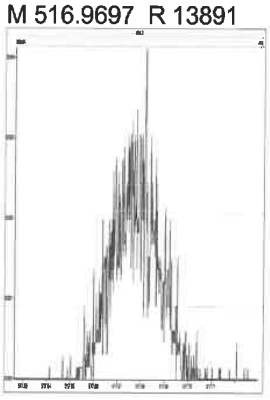

780553

Printed: Tuesday, August 17, 2021 23:49:28 Pacific Daylight Time

M 292.9824_R 12199

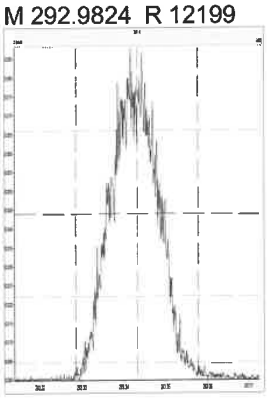

M 304.9824_R 12757

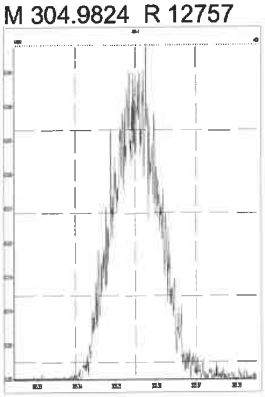

M 318.9792_R 12700

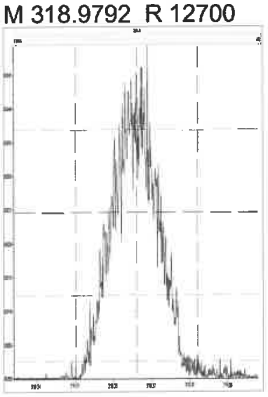

M 330.9792_R 12136

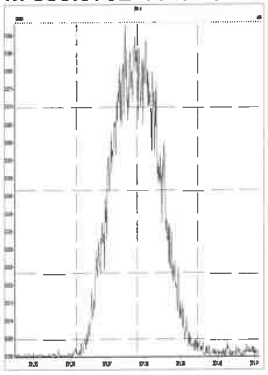

M 342.9792_R 12225

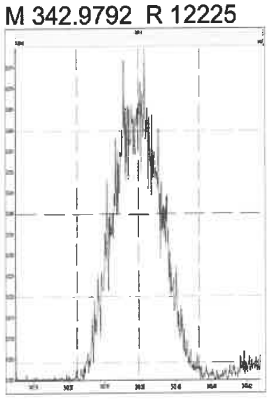

M 354.9792_R 12477

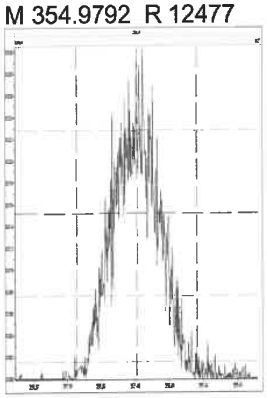

M 366.9792_R 14169

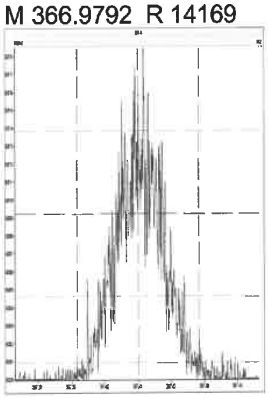

M 380.9760_R 11720

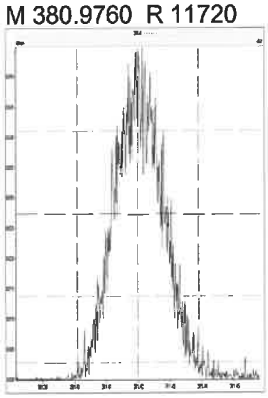

M 392.9760_R 11532

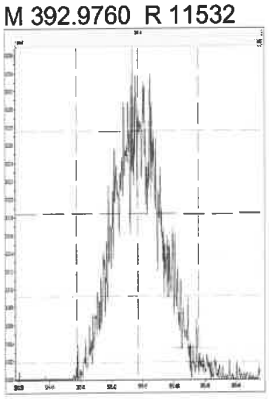

M 404.9760_R 11938

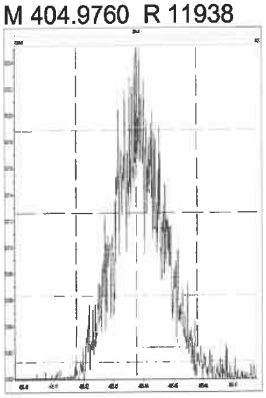

M 416.9760_R 12794

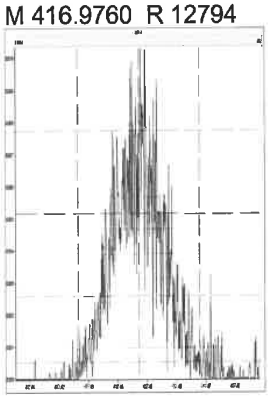

M 318.9792_R 12886

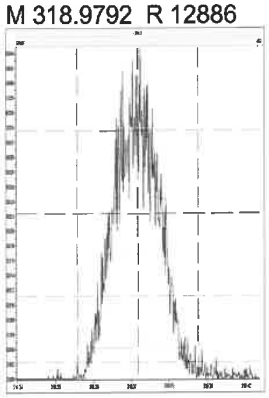

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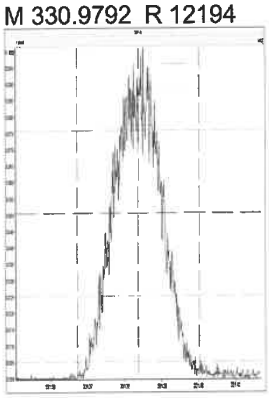

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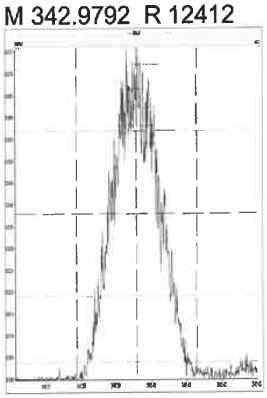

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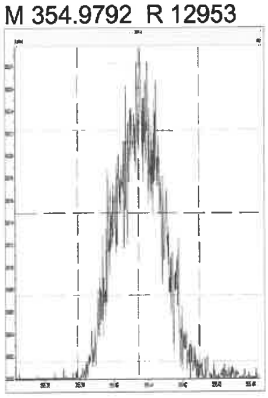

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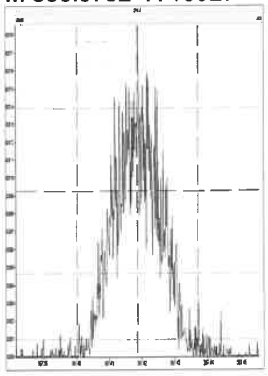

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M 380.9760 R 11821

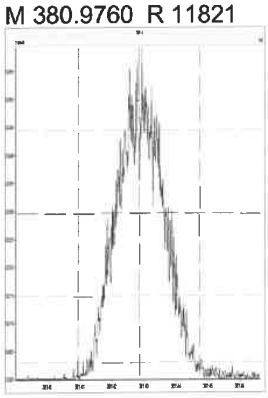

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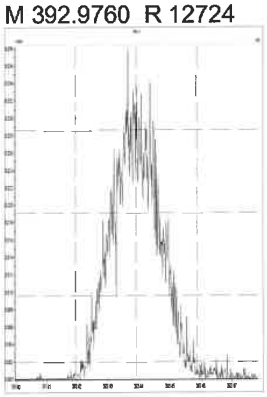

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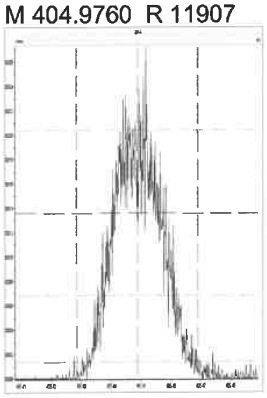

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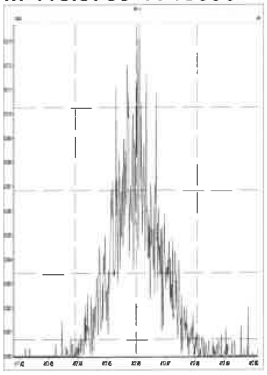

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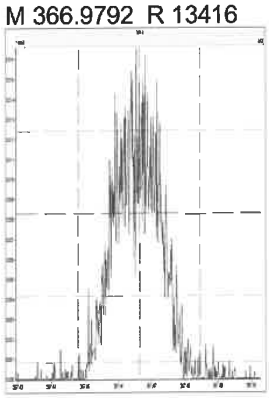

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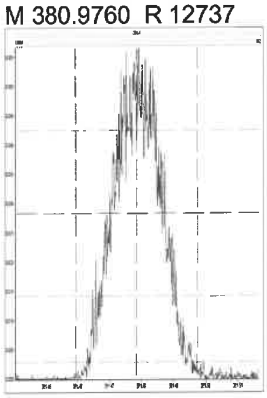

M 392.9760 R 12565

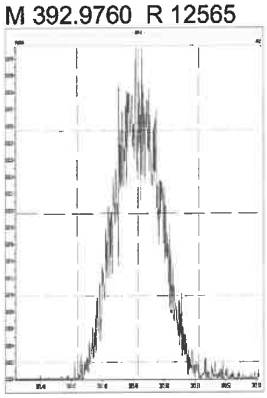

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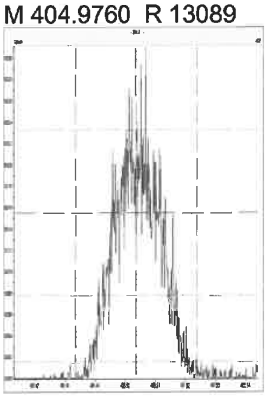

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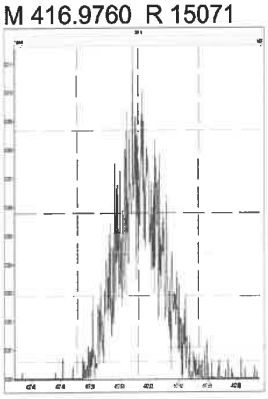

M 430.9728 R 12563

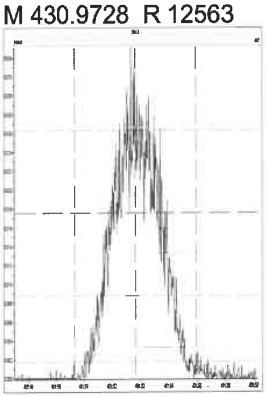

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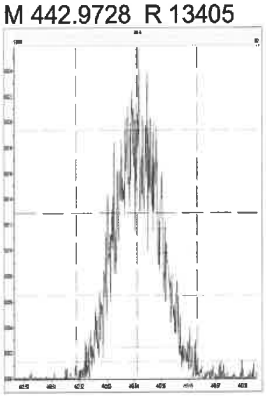

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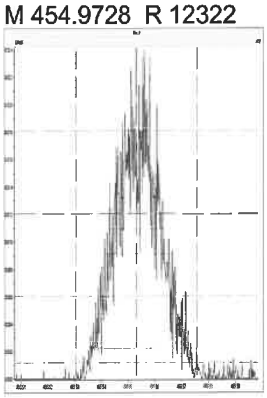

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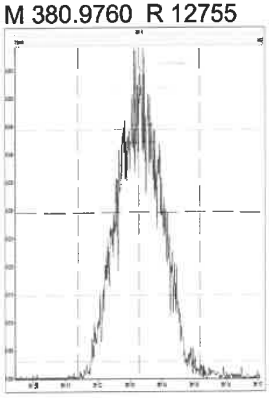

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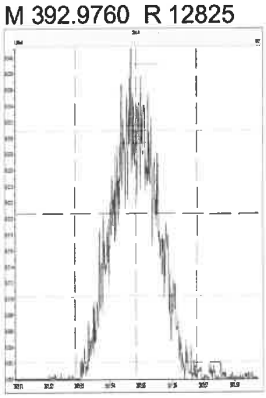

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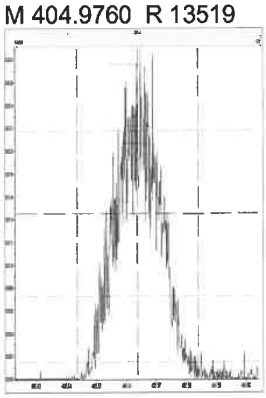

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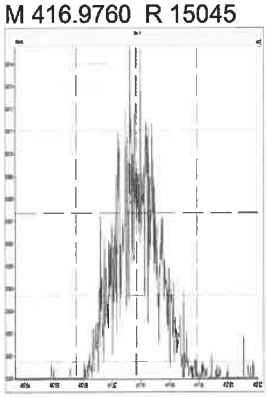

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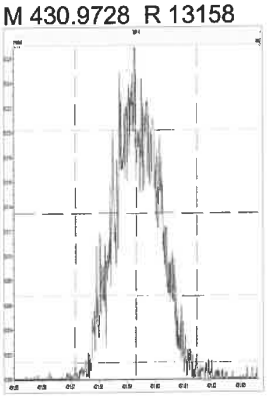

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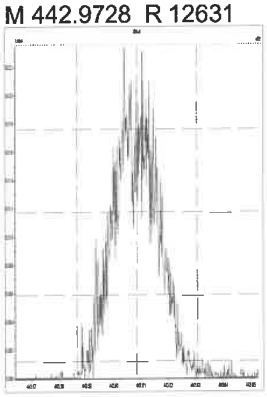

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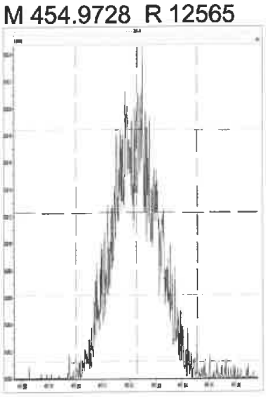

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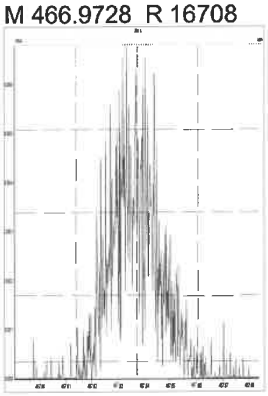

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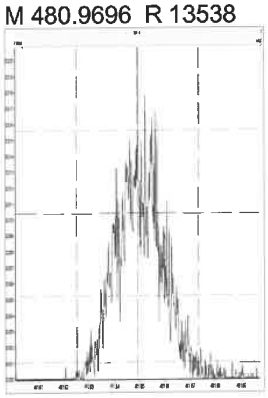

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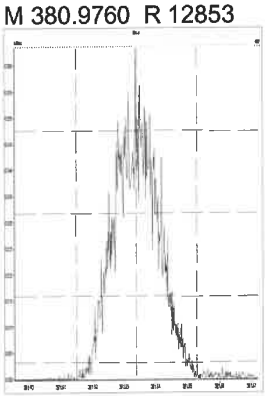

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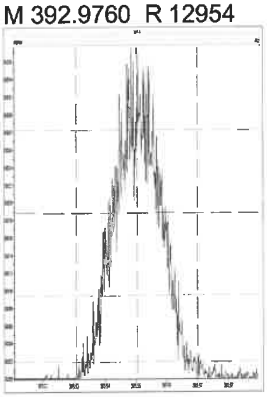

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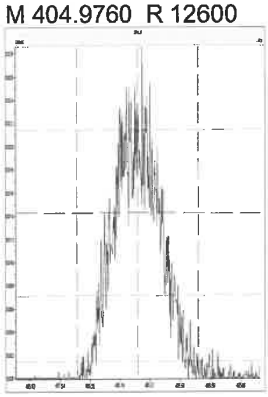

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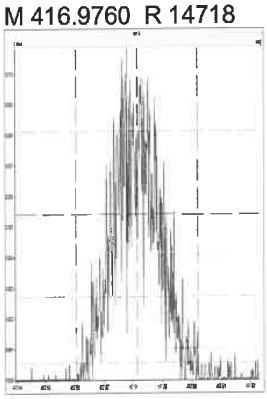

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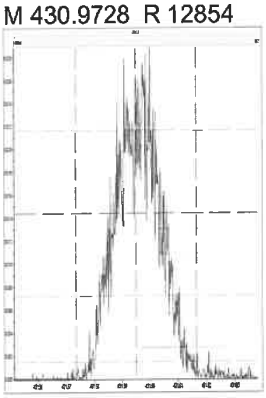

M 442.9728 R 13552

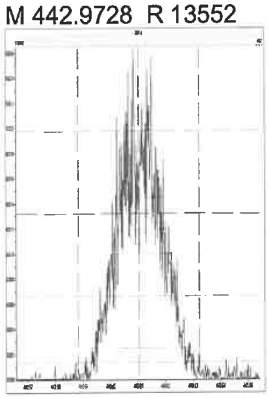

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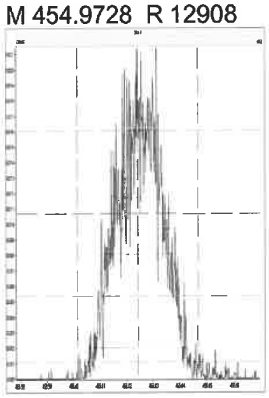

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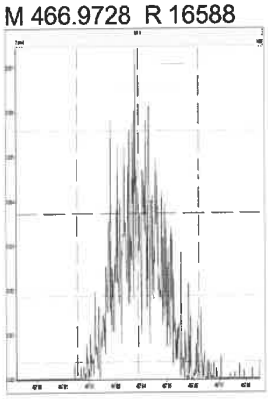

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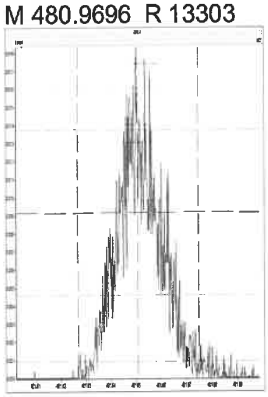

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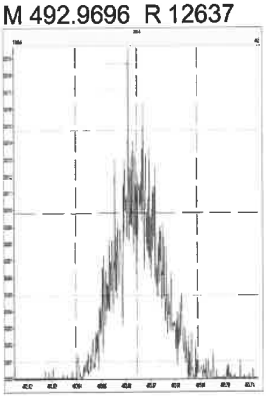

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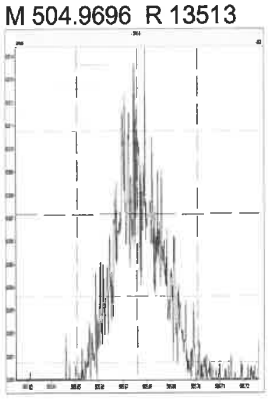

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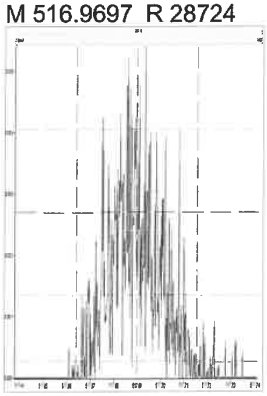

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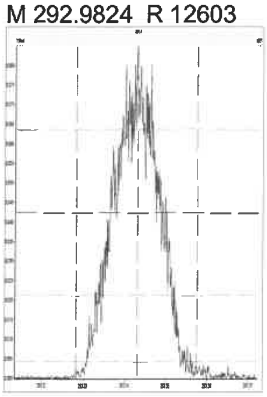

M 304.9824 R 13476

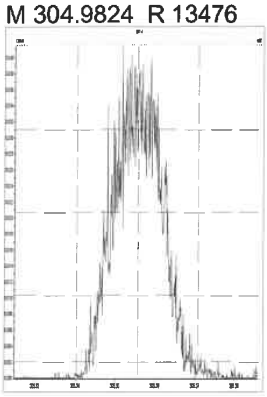

M 318.9792 R 12077

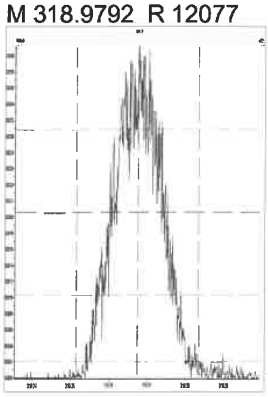

M 330.9792 R 12196

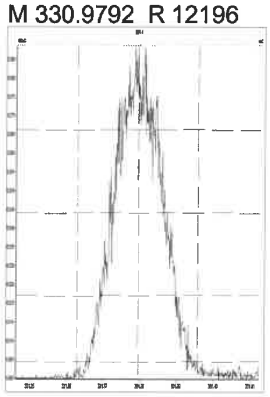

M 342.9792 R 11940

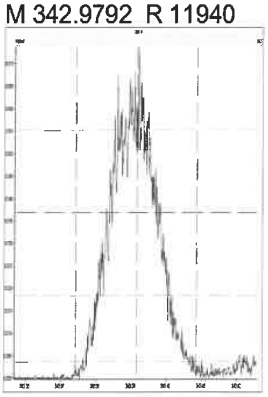

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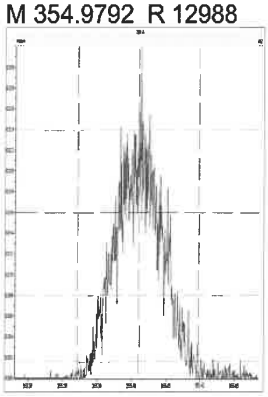

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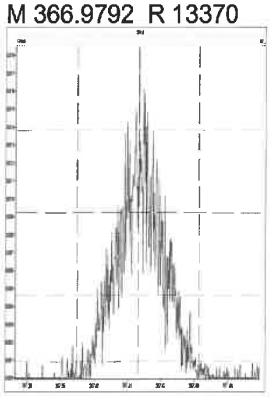

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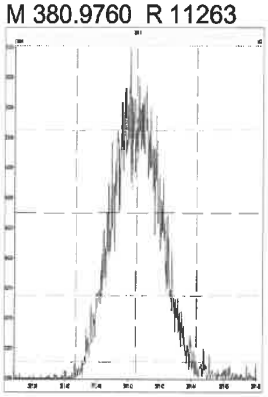

M 392.9760 R 12290

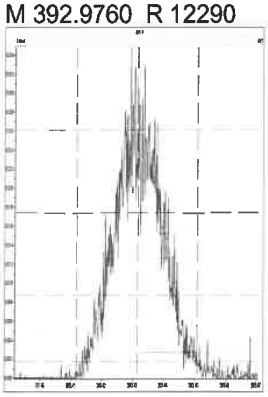

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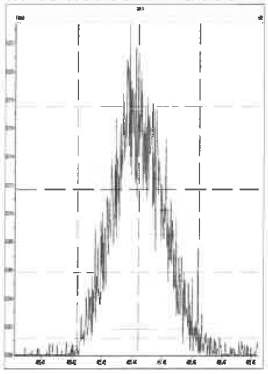

M 416.9760 R 14288

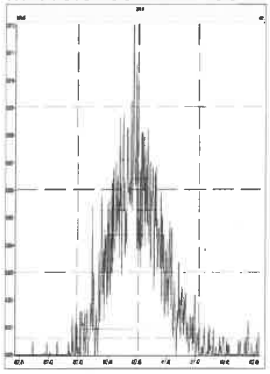

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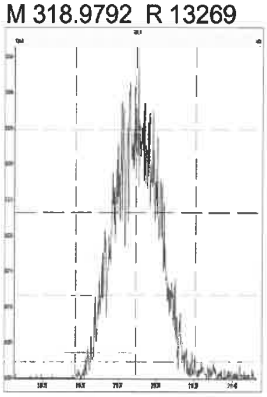

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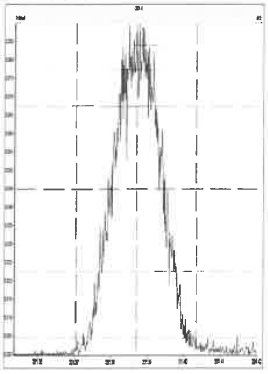

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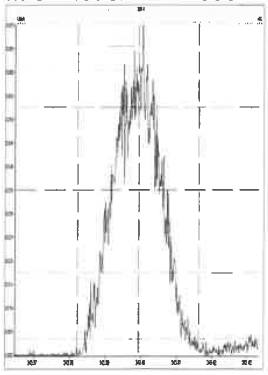

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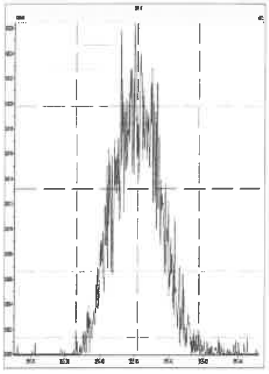

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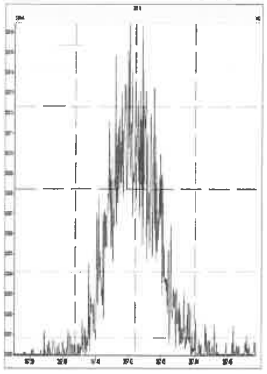

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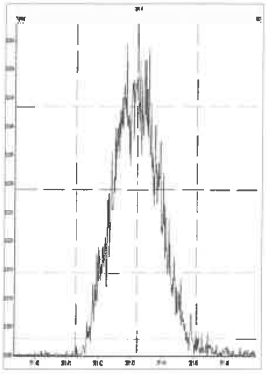

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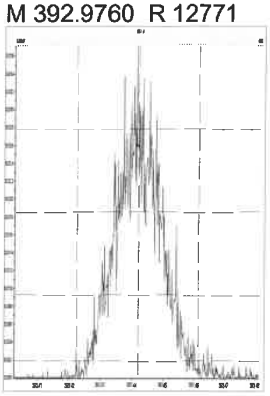

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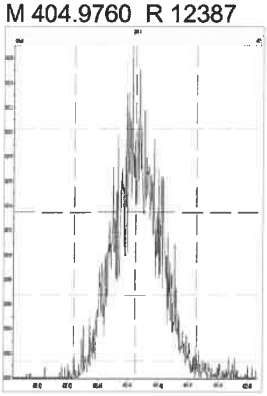

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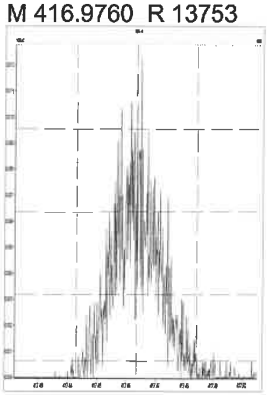

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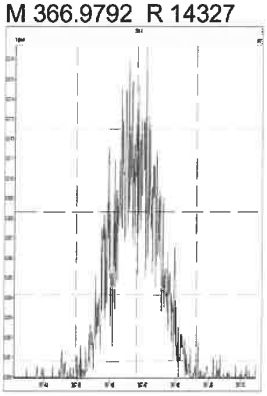

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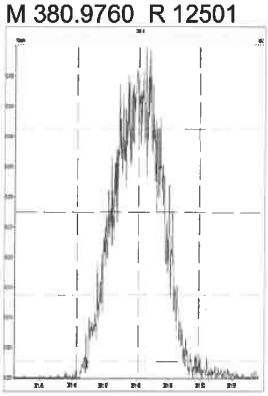

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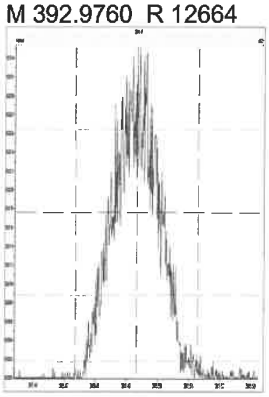

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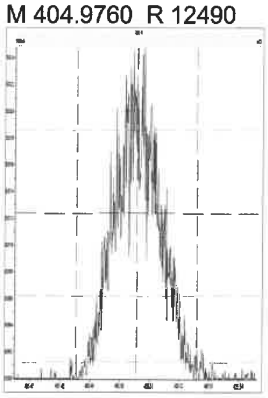

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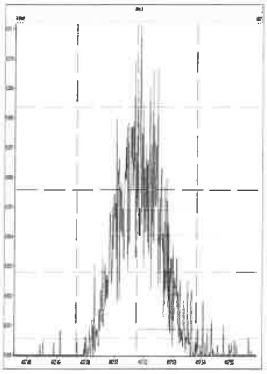

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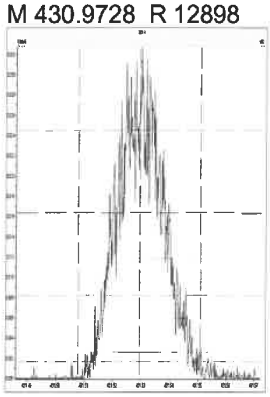

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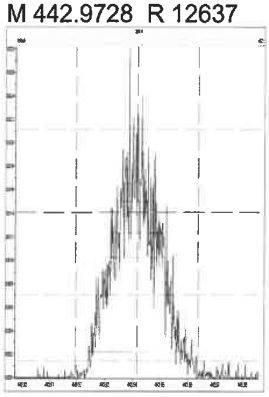

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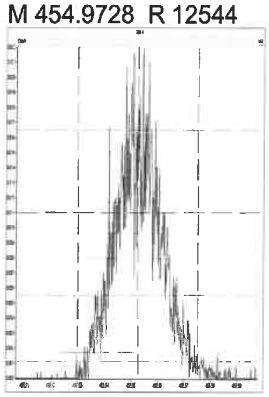

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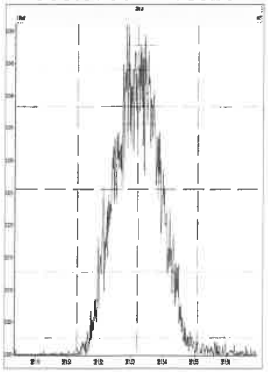

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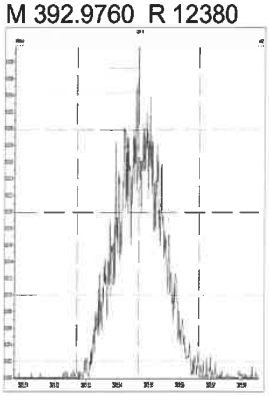

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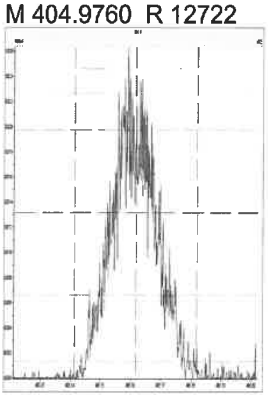

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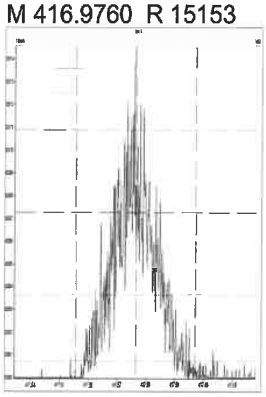

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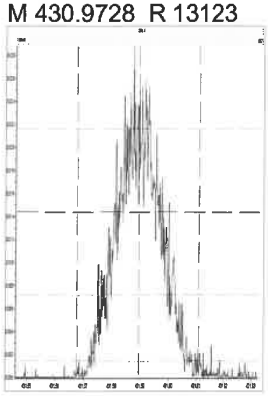

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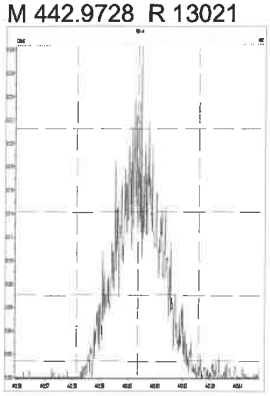

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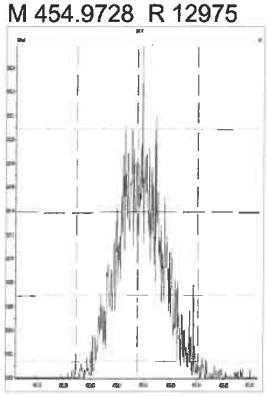

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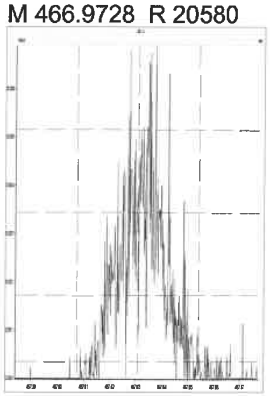

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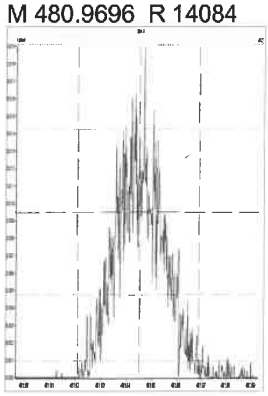

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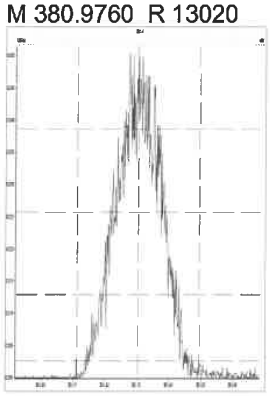

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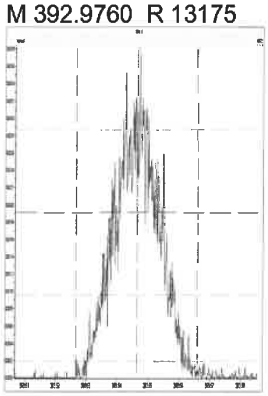

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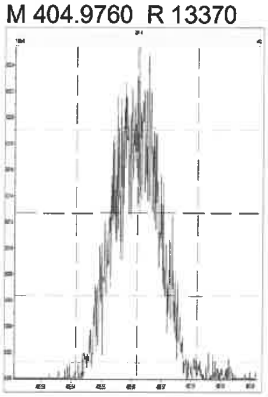

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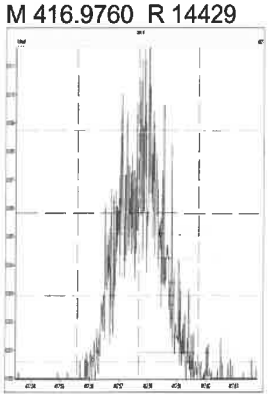

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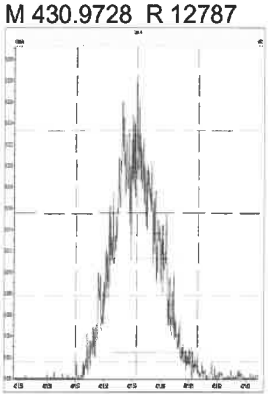

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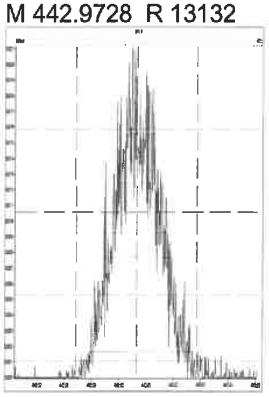

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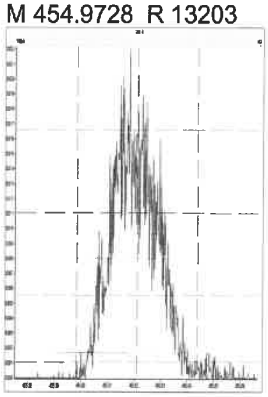

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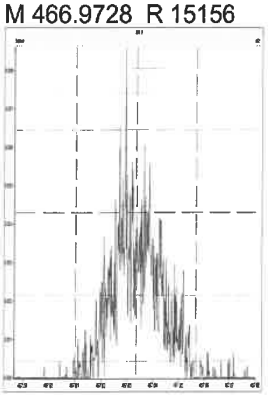

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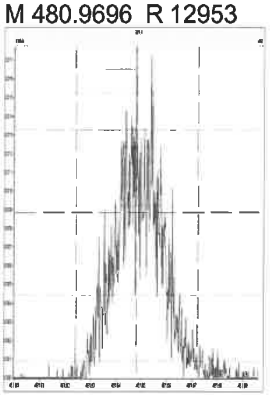

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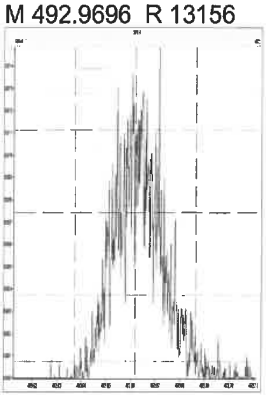

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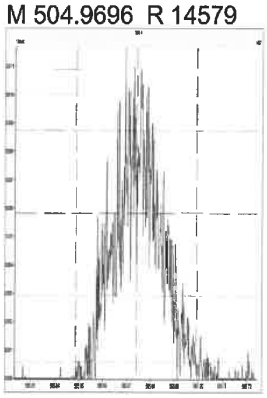

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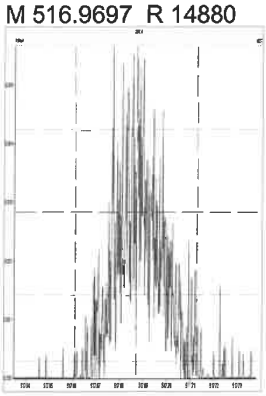

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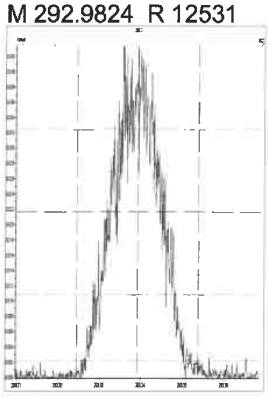

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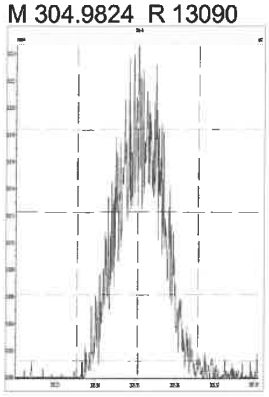

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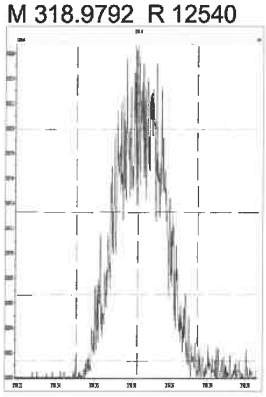

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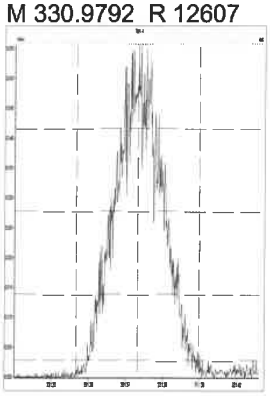

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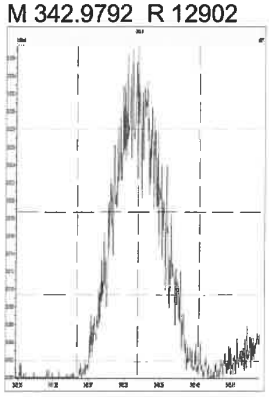

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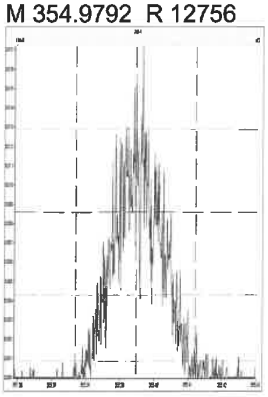

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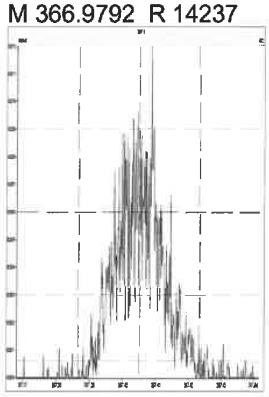

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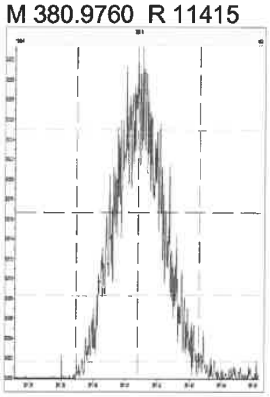

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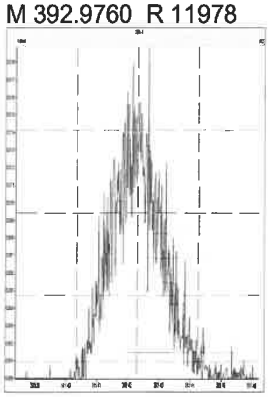

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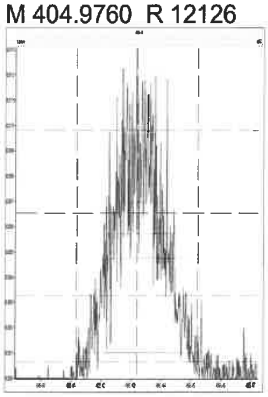

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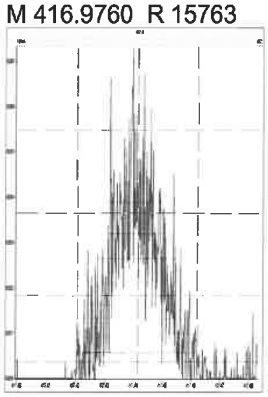

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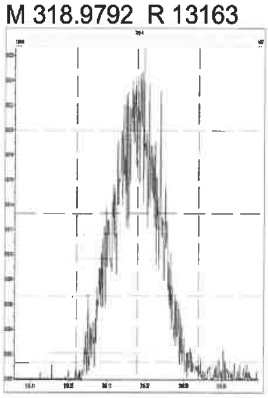

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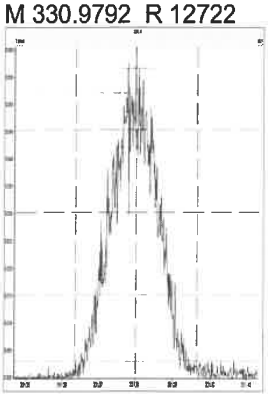

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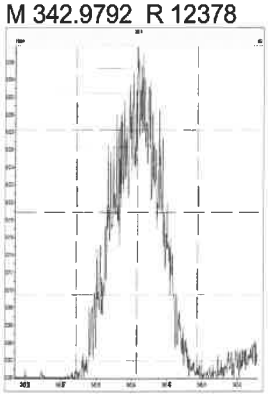

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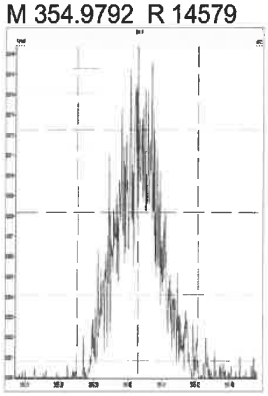

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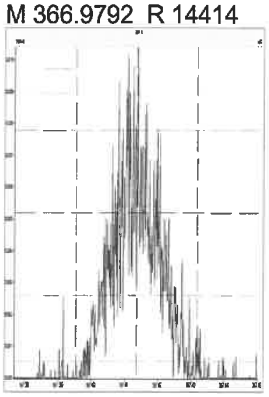

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M 380.9760 R 13337

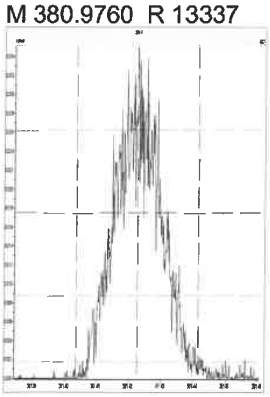

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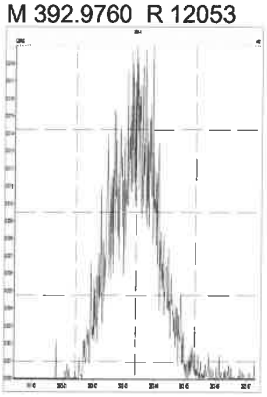

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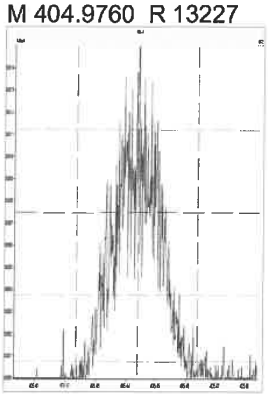

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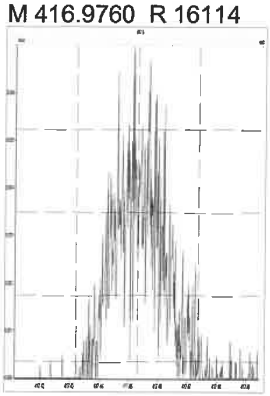

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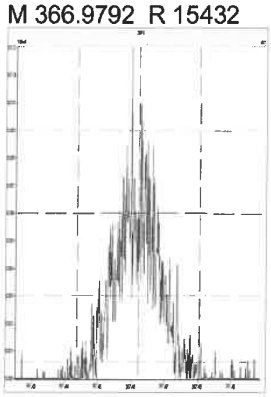

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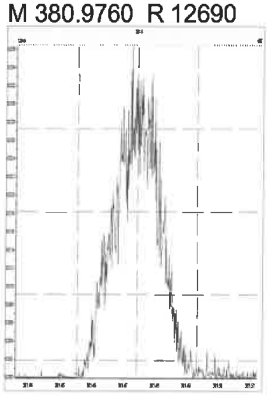

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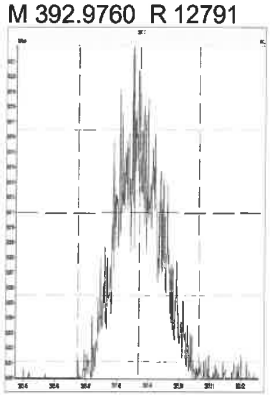

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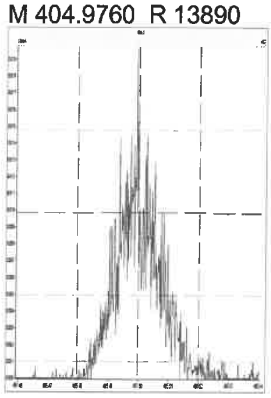

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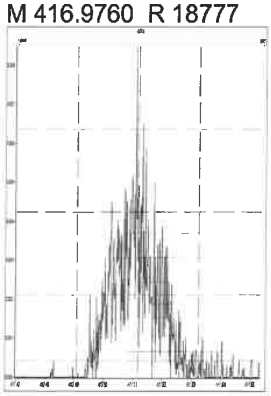

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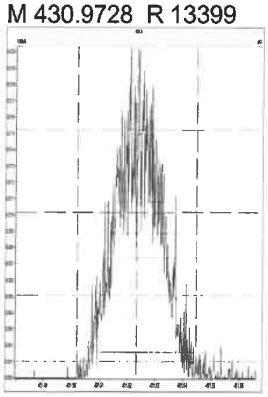

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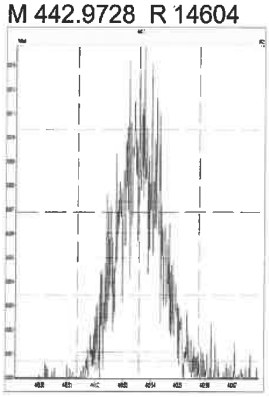

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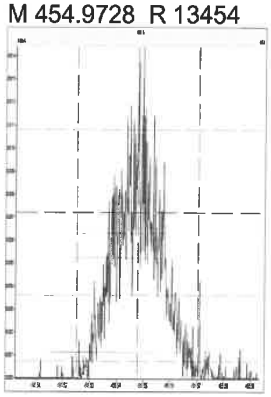

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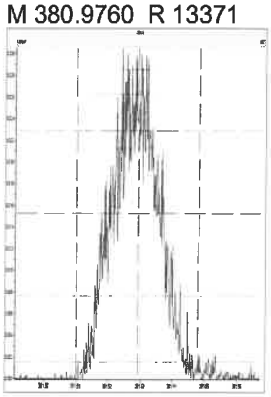

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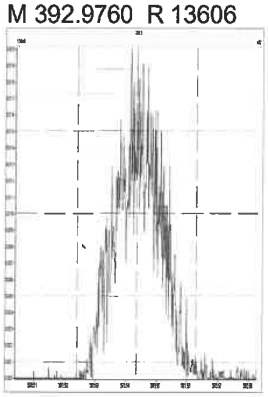

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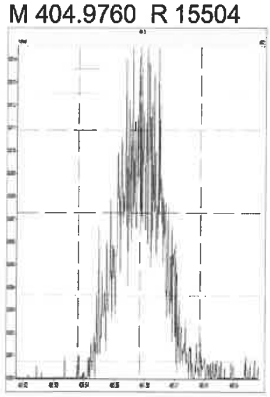

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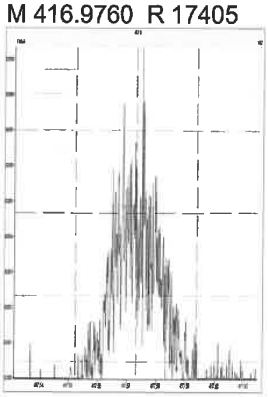

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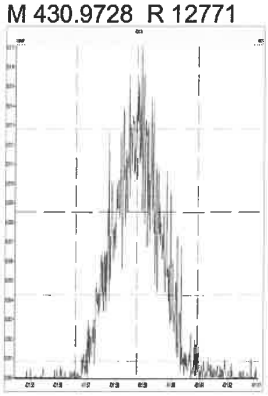

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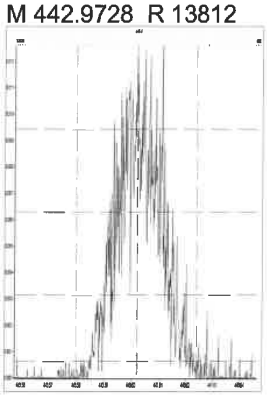

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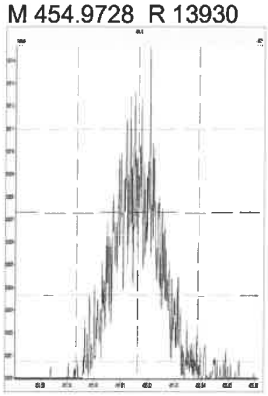

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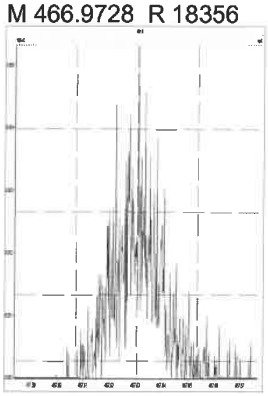

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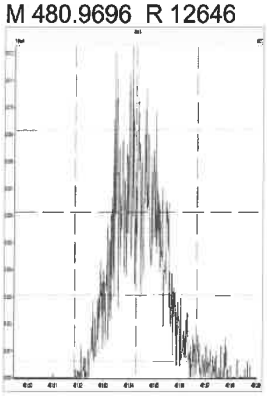

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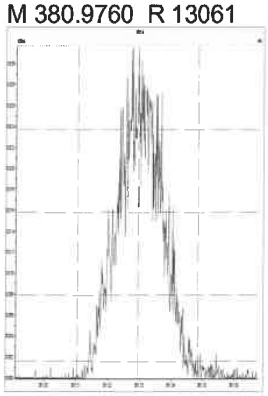

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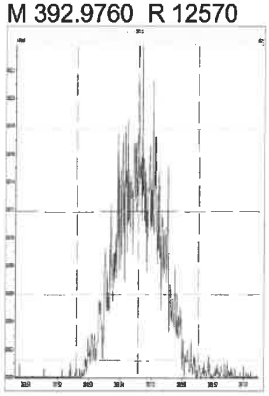

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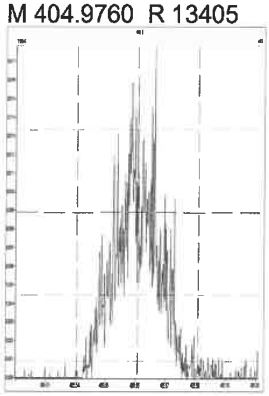

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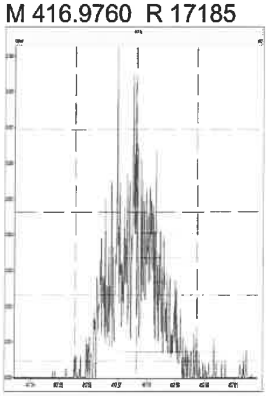

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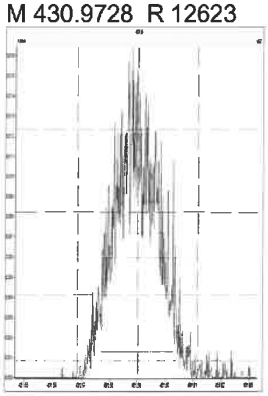

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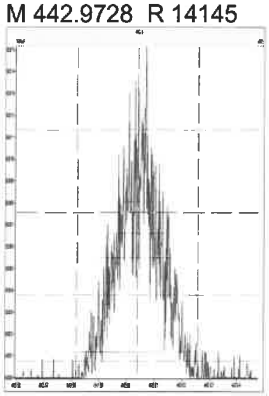

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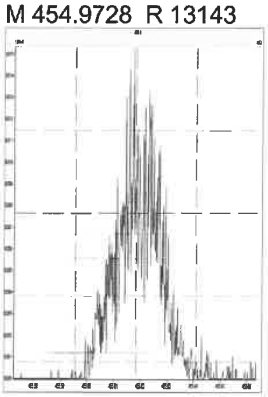

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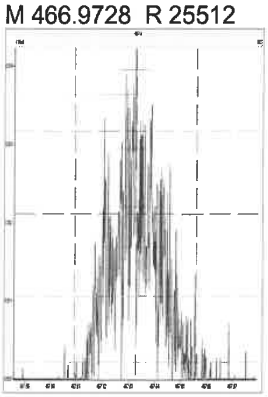

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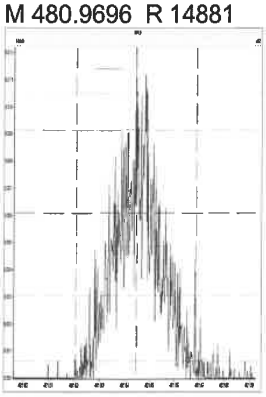

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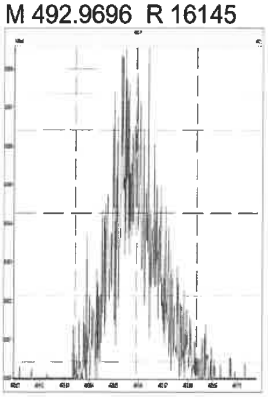

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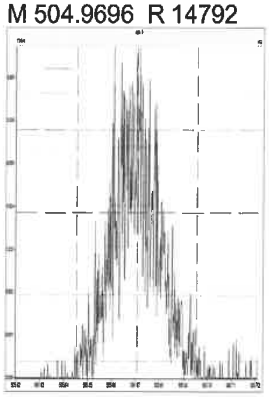

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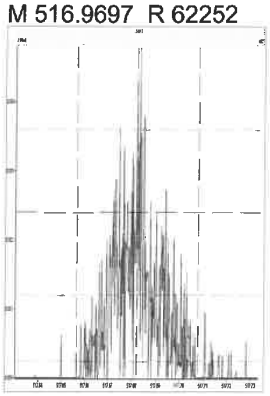

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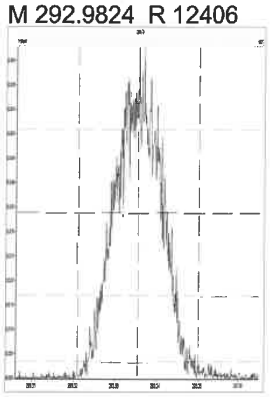

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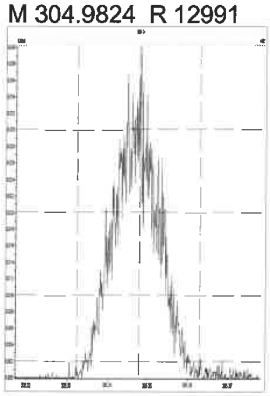

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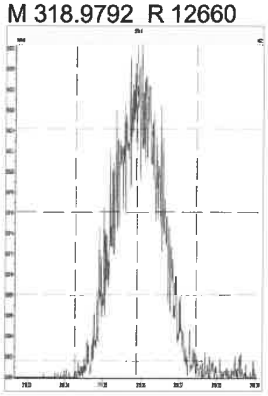

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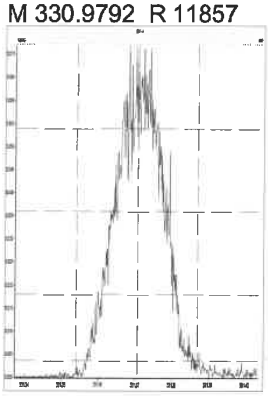

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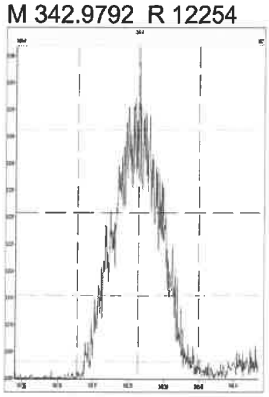

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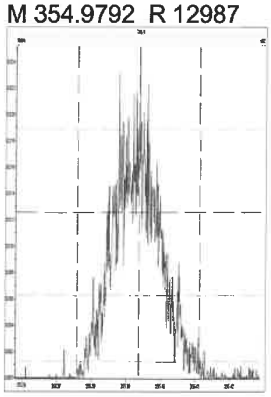

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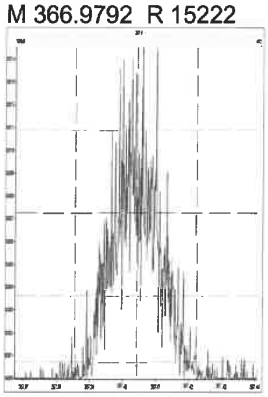

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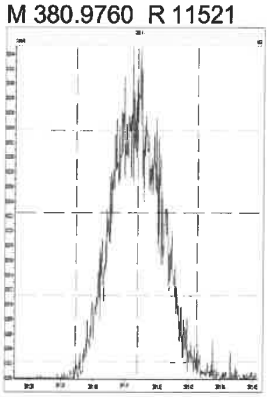

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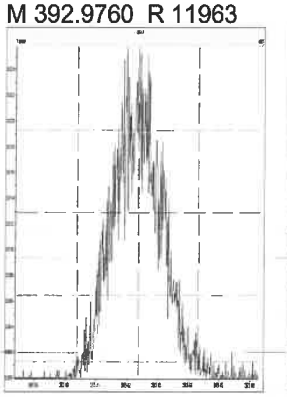

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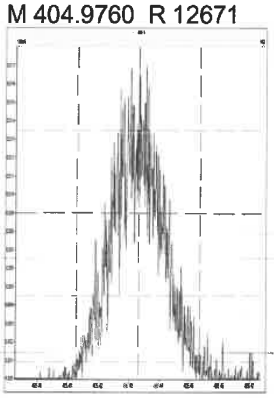

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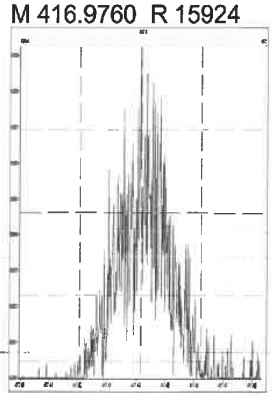

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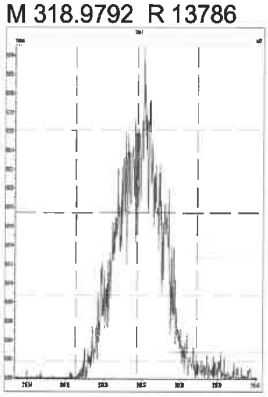

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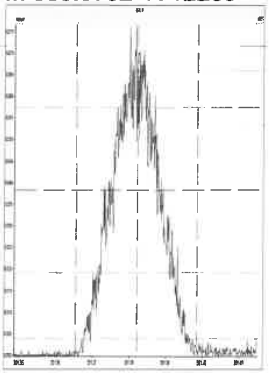

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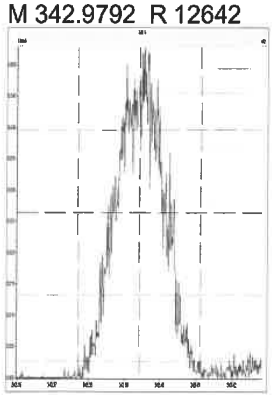

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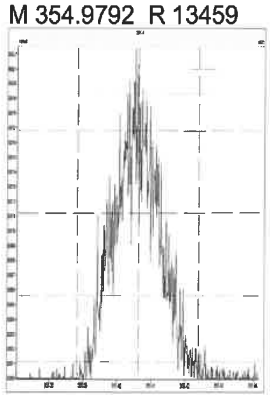

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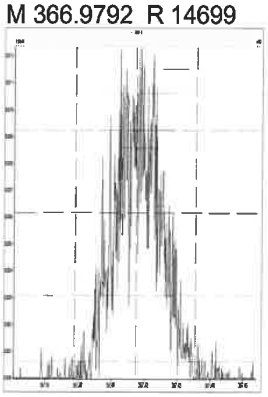

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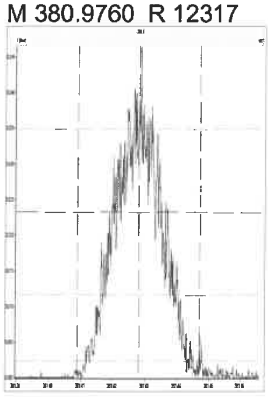

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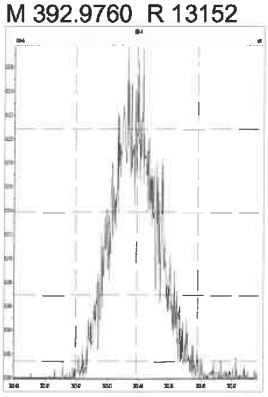

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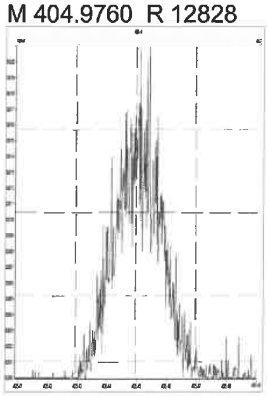

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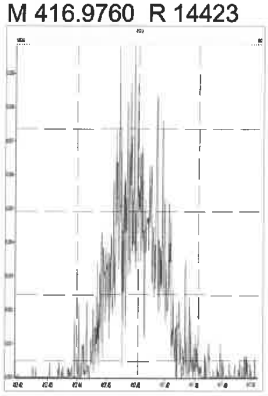

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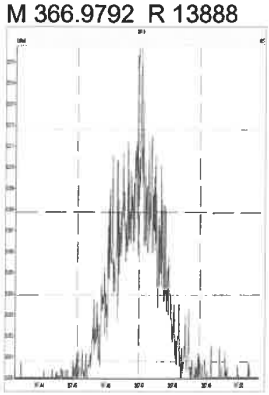

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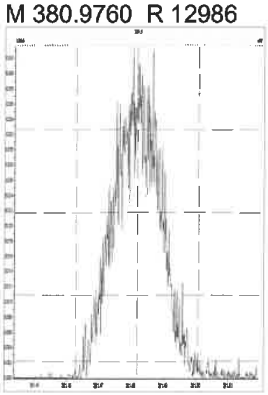

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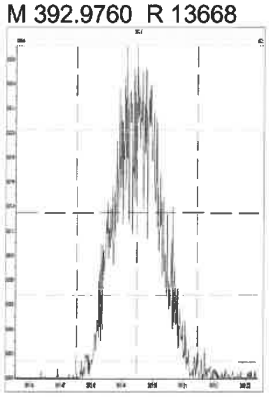

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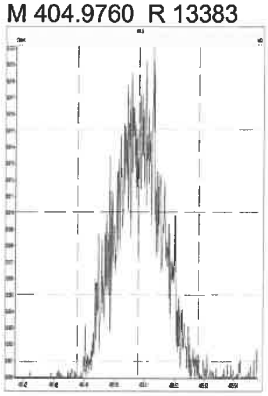

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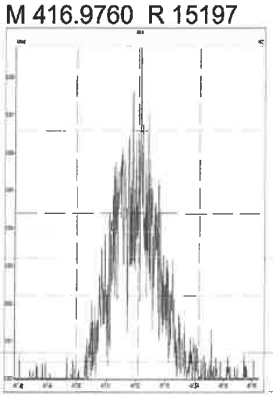

M 430.9728 R 13838

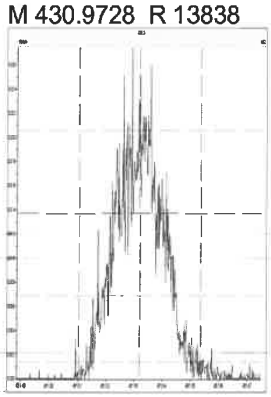

M 442.9728 R 14450

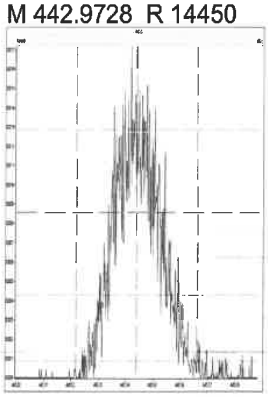

M 454.9728 R 12987

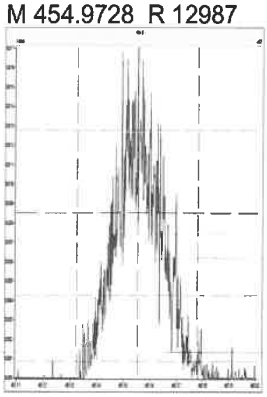

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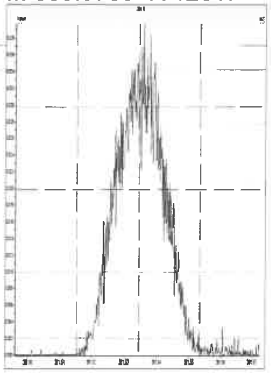

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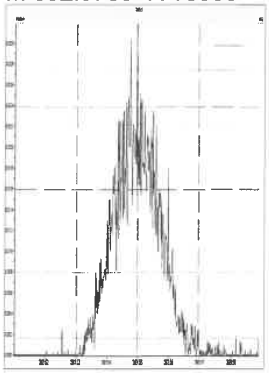

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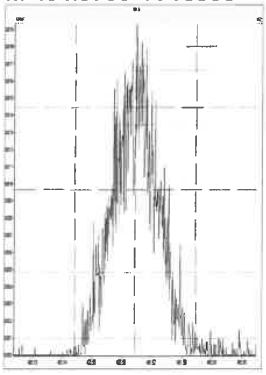

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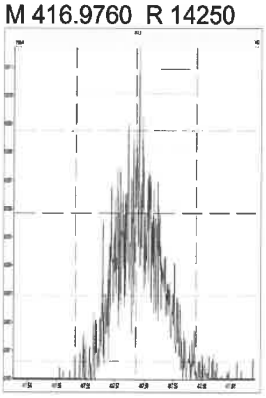

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M 430.9728 R 14183

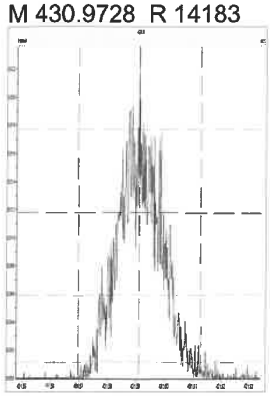

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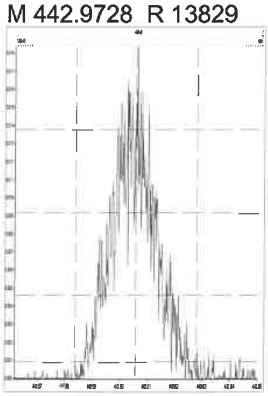

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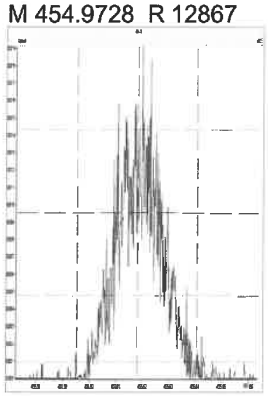

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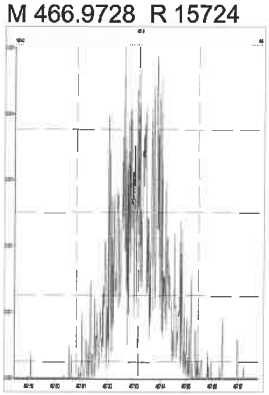

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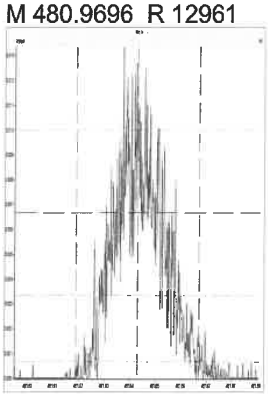

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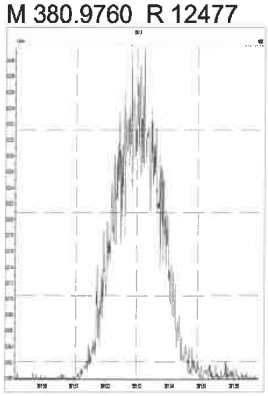

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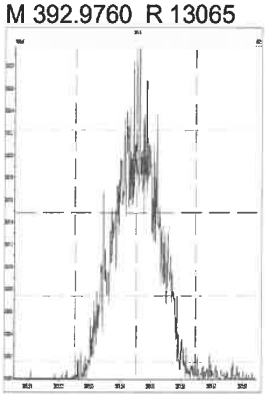

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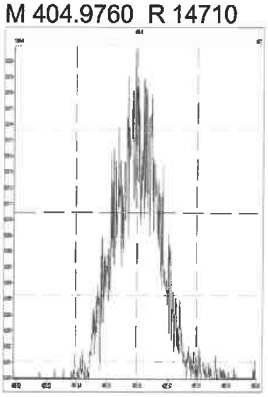

M 416.9760 R 14663

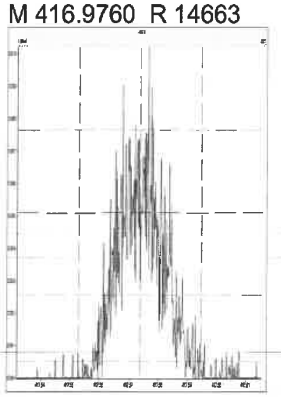

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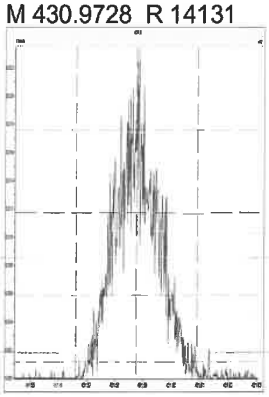

M 442.9728 R 13264

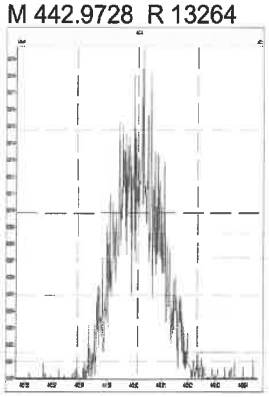

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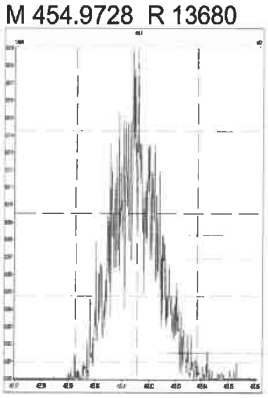

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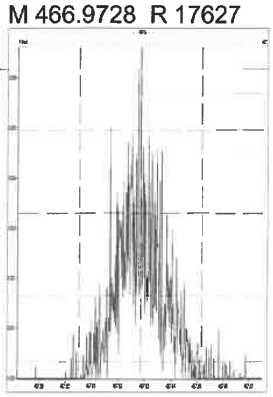

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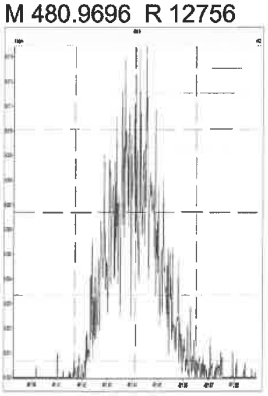

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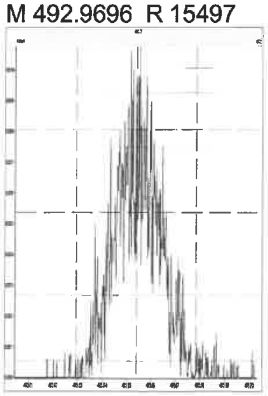

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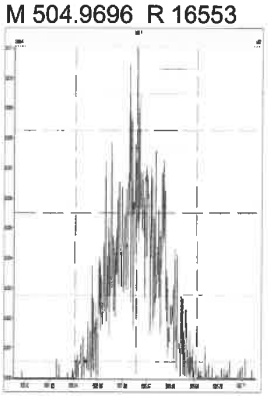

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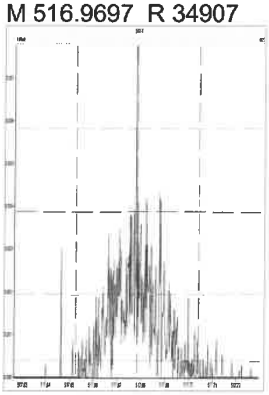

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M 292.9824 R 12438

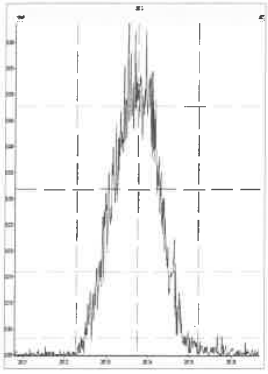

M 304.9824 R 12531

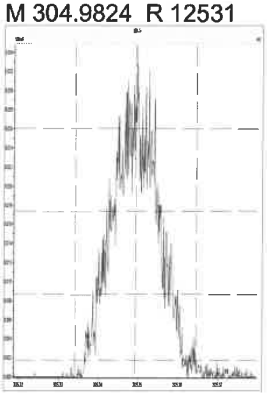

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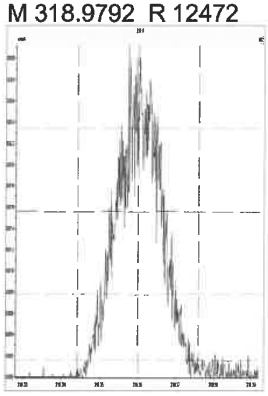

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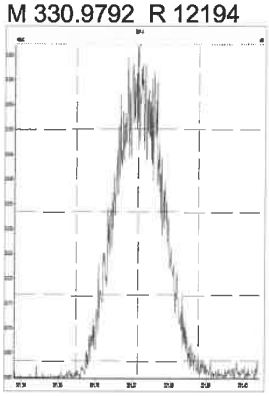

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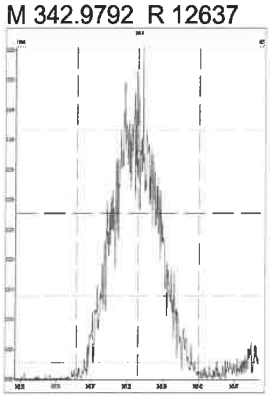

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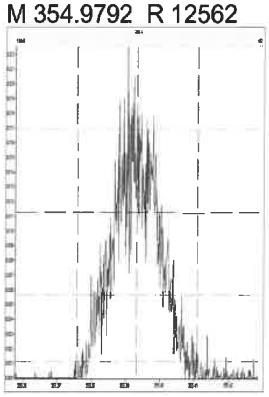

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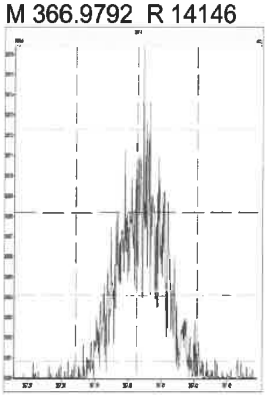

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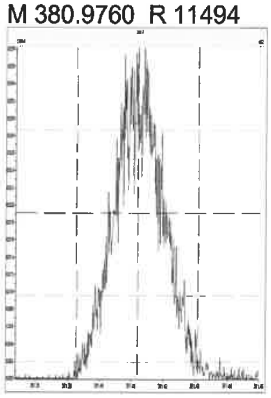

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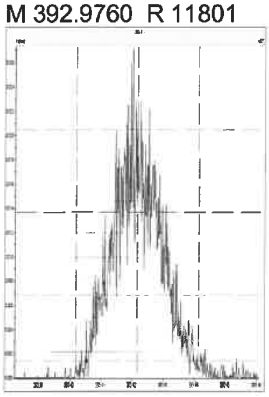

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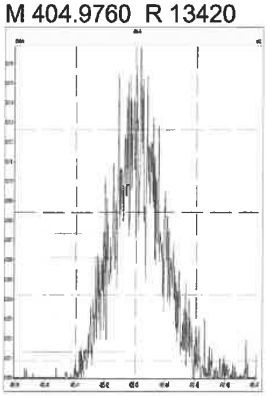

M 416.9760 R 16060

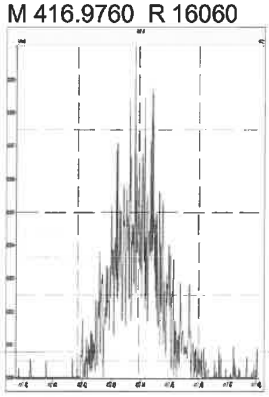

M 318.9792 R 12987

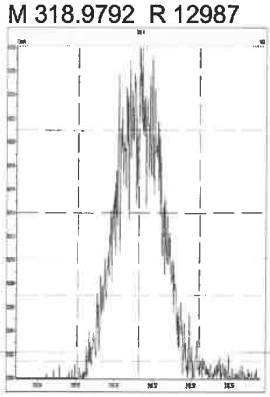

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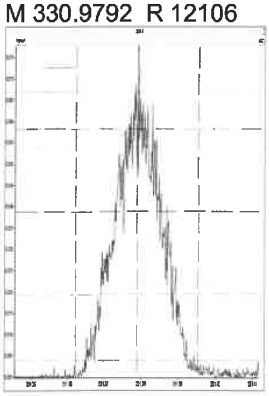

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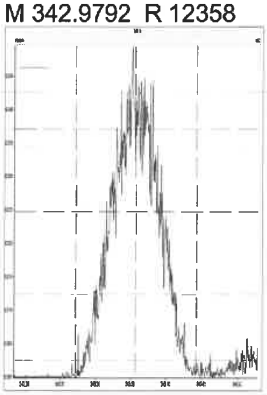

M 354.9792 R 13587

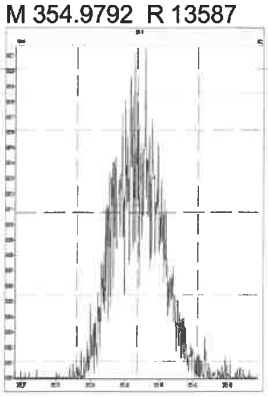

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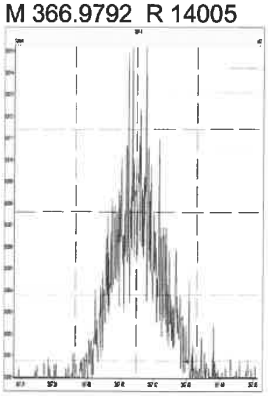

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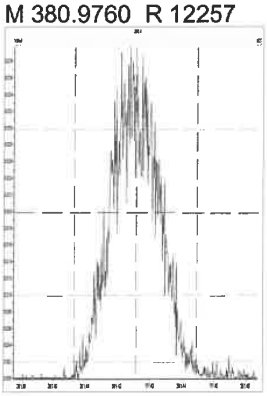

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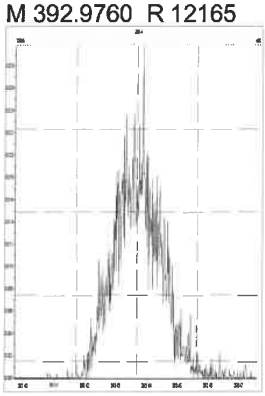

M 404.9760 R 12791

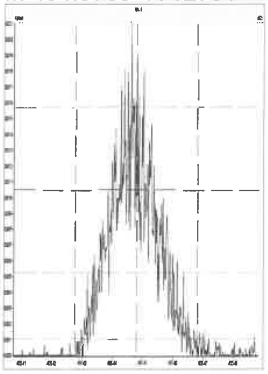

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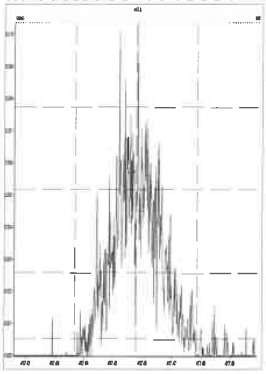

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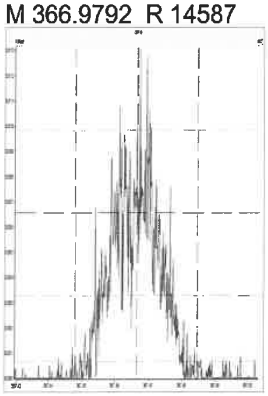

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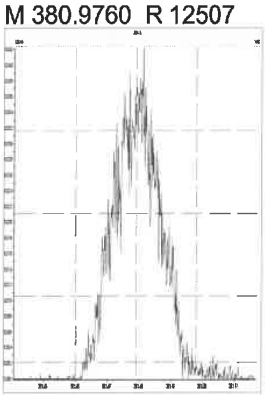

M 392.9760 R 13970

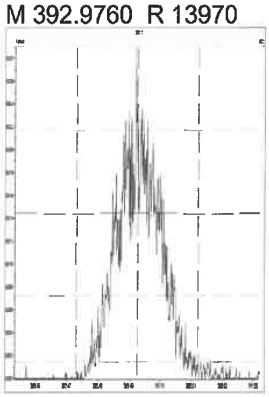

M 404.9760 R 13587

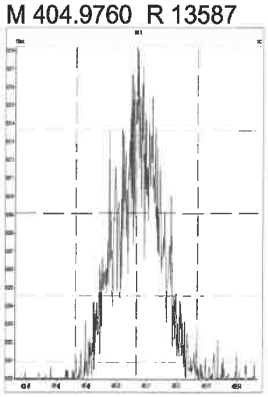

M 416.9760 R 14205

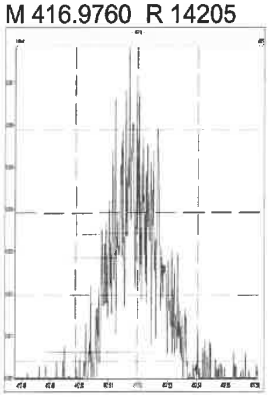

M 430.9728 R 13538

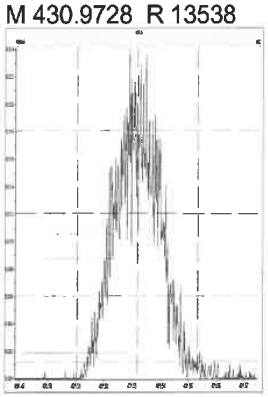

M 442.9728 R 12922

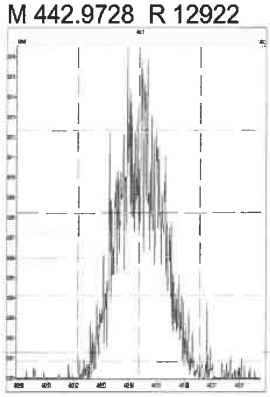

M 454.9728 R 13074

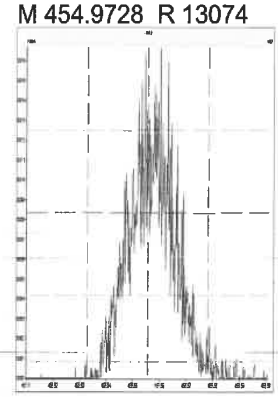

M 380.9760 R 12723

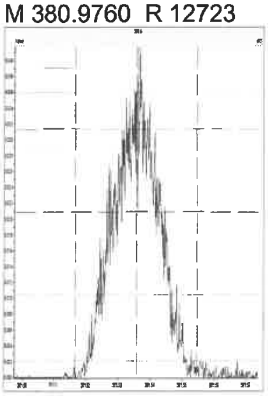

M 392.9760 R 12872

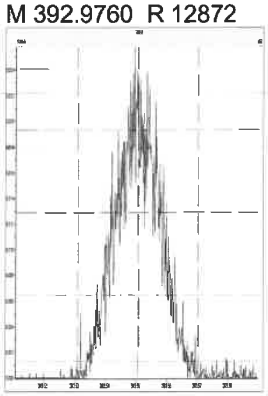

M 404.9760 R 13746

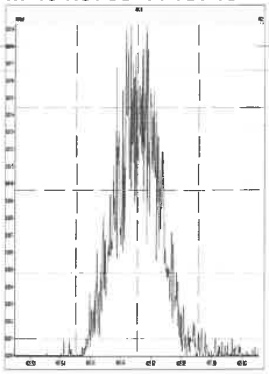

M 416.9760 R 14177

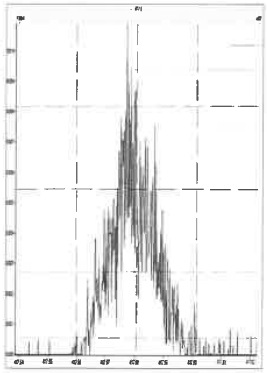

Printed: Wednesday, August 18, 2021 10:16:56 Pacific Daylight Time

M 430.9728 R 12887

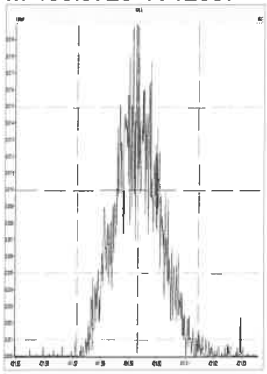

M 442.9728 R 13090

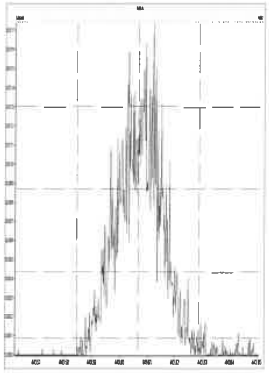

M 454.9728 R 12440

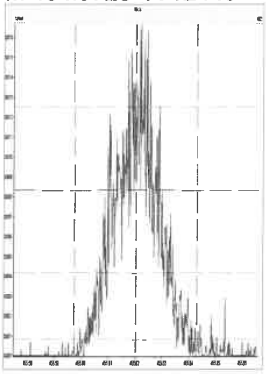

M 466.9728 R 15772

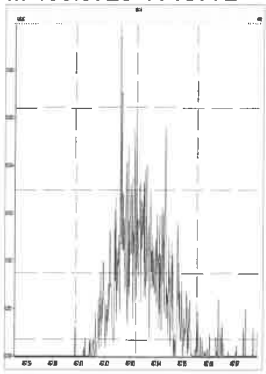

M 480.9696 R 14262

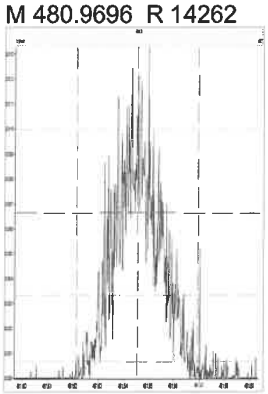

M 380.9760 R 13739

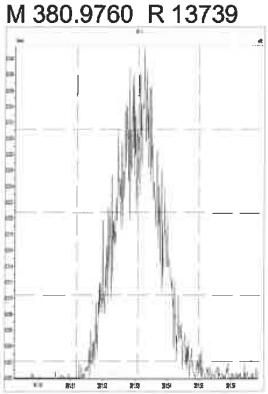

M 392.9760 R 13407

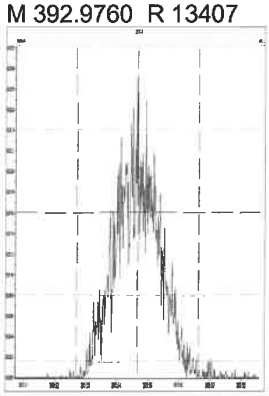

M 404.9760 R 13443

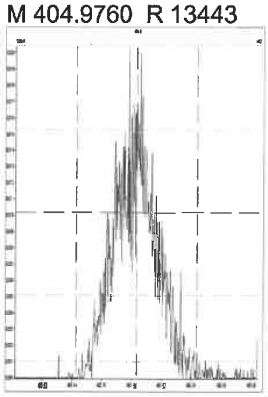

M 416.9760 R 17368

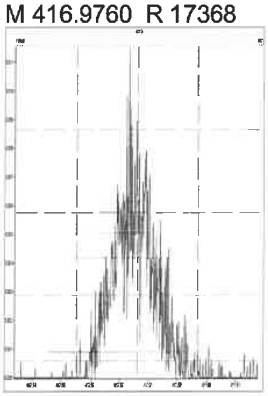

M 430.9728 R 12627

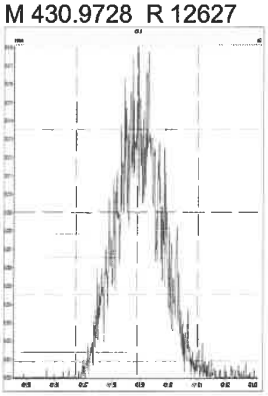

M 442.9728 R 13997

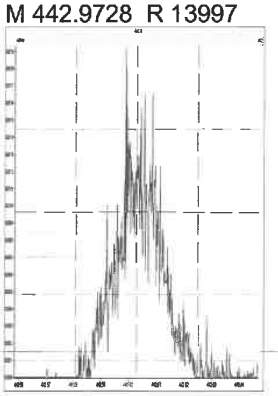

M 454.9728 R 14085

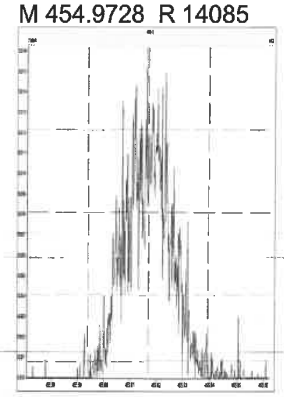

M 466.9728 R 20904

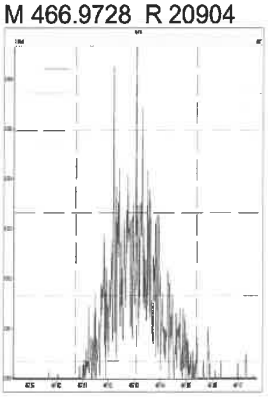

M 480.9696 R 14692

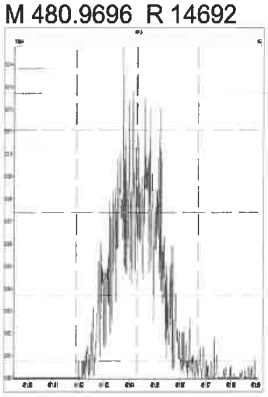

M 492.9696 R 16350

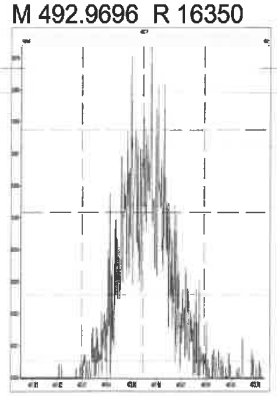

M 504.9696 R 15408

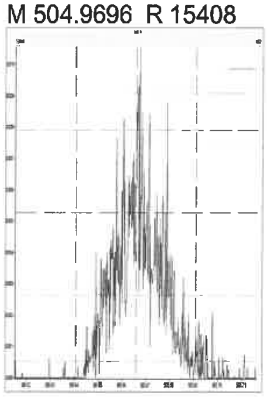

Printed: Wednesday, August 18, 2021 10:16:56 Pacific Daylight Time

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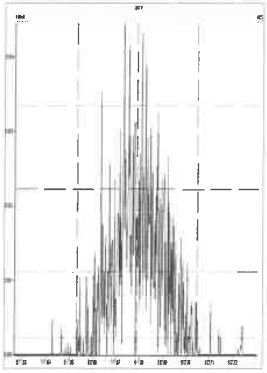

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_12.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Aug-2021 23:49:34 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081721B CS-4 HRDXNL4_00099
Misc. Info.: 17AU21A10D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:41:04 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1686

First Level Reviewer: arghestanis Date: 18-Aug-2021 11:17:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.825	92291009	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.326	143842019	0.78	1.6249	95.9	95.9	0.1476	0.1476	95.92	
2,3,7,8-TCDF	17.341	14852715	0.78	1.0239	10.1	10.1	0.0238	0.0238	101	
A Non-2,3,7,8-sub-TCDF	17.031						0.0238	0.0238		Rn
S Total TCDF					10.1	10.1	0.0238	0.0238		
D 13C-2,3,7,8-TCDD	18.021	84835857	0.81	0.8993	102.2	102.2	0.1465	0.1465	102	
2,3,7,8-TCDD	18.052	10581358	0.77	1.2541	9.945	9.945	0.0143	0.0143	99.45	
$ 37Cl4-2,3,7,8-TCDD	18.052	11076670		1.1071	10.8	10.8	0.0158	0.0158	108	
A Non-2,3,7,8-sub-TCDD	17.477						0.0143	0.0143		
S Total TCDD					9.945	9.945	0.0143	0.0143		
D 13C-1,2,3,7,8-PeCDF	22.326	109173016	1.59	1.2101	97.8	97.8	0.2570	0.2570	97.76	
1,2,3,7,8-PeCDF	22.353	57478684	1.59	1.0611	49.6	49.6	0.1761	0.1761	99.23	
D 13C-2,3,4,7,8-PeCDF	23.663	111703011	1.57	1.2395	97.6	97.6	0.2509	0.2509	97.65	
2,3,4,7,8-PeCDF	23.690	56922086	1.57	1.0184	50.0	50.0	0.1951	0.1951	100	
A F1 PeCDFs	20.077						0.003906	0.003906		
A Non-2,3,7,8-sub-PeCDF	23.221						0.1852	0.1852		
S Total PeCDF					99.7	99.7	0.1856	0.1856		
D 13C-1,2,3,7,8-PeCDD	24.385	72945512	1.60	0.7612	103.8	103.8	0.1244	0.1244	104	
1,2,3,7,8-PeCDD	24.413	37562576	1.59	1.0484	49.1	49.1	0.0619	0.0619	98.23	
A Non-2,3,7,8-sub-PeCDD	23.301						0.0619	0.0619		
S Total PeCDD					49.1	49.1	0.0619	0.0619		
D 13C-1,2,3,4,7,8-HxCDF	30.476	88194183	0.52	1.0837	97.4	97.4	0.5049	0.5049	97.44	
1,2,3,4,7,8-HxCDF	30.490	47257924	1.22	1.0851	49.4	49.4	0.3534	0.3534	98.76	
D 13C-1,2,3,6,7,8-HxCDF	30.649	92501224	0.52	1.1279	98.2	98.2	0.4851	0.4851	98.19	
1,2,3,6,7,8-HxCDF	30.676	52650372	1.21	1.1260	50.5	50.5	0.3188	0.3188	101	
D 13C-2,3,4,6,7,8-HxCDF	31.488	86308717	0.52	1.0637	97.1	97.1	0.5143	0.5143	97.14	
2,3,4,6,7,8-HxCDF	31.501	49968688	1.21	1.1675	49.6	49.6	0.2505	0.2505	99.17	
D 13C-1,2,3,7,8,9-HxCDF	32.300	79296726	0.52	0.9676	98.1	98.1	0.5654	0.5654	98.12	
1,2,3,7,8,9-HxCDF	32.313	46140978	1.23	1.1664	49.9	49.9	0.2595	0.2595	99.78	
A Non-2,3,7,8-sub-HxCDF	30.163						0.2905	0.2905		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					199.4	199.4	0.2955	0.2955		
* 13C-1,2,3,7,8,9-HxCDD	32.113	83526082	1.27	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.674	62513257	1.24	0.7334	102.0	102.0	0.4199	0.4199	102	
1,2,3,4,7,8-HxCDD	31.688	33093386	1.26	1.0640	49.8	49.8	0.2067	0.2067	99.50	
D 13C-1,2,3,6,7,8-HxCDD	31.781	76738671	1.26	0.8802	104.4	104.4	0.3499	0.3499	104	
1,2,3,6,7,8-HxCDD	31.794	39103823	1.28	1.0001	51.0	51.0	0.1997	0.1997	102	
1,2,3,7,8,9-HxCDD	32.127	38349077	1.23	1.1325	48.6	48.6	0.1849	0.1849	97.27	
A Non-2,3,7,8-sub-HxCDD	30.836						0.1965	0.1965		
S Total HxCDD					149.3	149.3	0.1971	0.1971		
D 13C-1,2,3,4,6,7,8-HpCDF	33.742	58106248	0.45	0.7730	90.0	90.0	1.185	1.185	89.99	
1,2,3,4,6,7,8-HpCDF	33.754	42607666	1.04	1.4413	50.9	50.9	0.5444	0.5444	102	
D 13C-1,2,3,4,7,8,9-HpCDF	34.823	50223751	0.45	0.7008	85.8	85.8	1.307	1.307	85.80	
1,2,3,4,7,8,9-HpCDF	34.835	33838931	1.05	1.3174	51.1	51.1	0.7776	0.7776	102	
A Non-2,3,7,8-sub-HpCDF	34.295						0.6442	0.6442		
S Total HpCDF					102.0	102.0	0.6610	0.6610		
D 13C-1,2,3,4,6,7,8-HpCDD	34.532	50334729	1.00	0.6472	93.1	93.1	0.5245	0.5245	93.11	
1,2,3,4,6,7,8-HpCDD	34.544	27451571	1.04	1.0943	49.8	49.8	0.2700	0.2700	99.68	
A Non-2,3,7,8-sub-HpCDD	34.271						0.2700	0.2700		
S Total HpCDD					49.8	49.8	0.2700	0.2700		
D 13C-OCDD	36.890	71270314	0.88	0.4472	190.8	190.8	0.2110	0.2110	95.41	
OCDF	36.986	50596062	0.90	1.4382	98.7	98.7	0.1162	0.1162	98.73	
OCDD	36.902	40124559	0.90	1.1070	101.7	101.7	0.1127	0.1127	102	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 11:41:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_12.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Aug-2021 23:49:34 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081721B CS-4 HRDXNL4_00099
Misc. Info.: 17AU21A10D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:41:04 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1686

First Level Reviewer: arghestanis Date: 18-Aug-2021 11:17:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.825	17.825	0		41669246	10128377	7065	17662	1434		
333.9339	17.825	17.825	0		50621763	12375460	4792	11980	2583	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.326	17.326	0	0.972	63097138	15410783	13227	33067	1165		
317.9389	17.326	17.326	0	0.972	80744881	19659385	8360	20900	2352	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.341	17.341	0	1.001	6517603	1582136	2200	5500	719		
305.8987	17.341	17.341	0	1.001	8335112	2015354	1221	3052	1651	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.963	17.031	-4	0.979	29020	7254	2200	5500	3		
305.8987	16.948	17.031	-5	0.978	45351	10810	1221	3052	9	0.64(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.021	18.021	0	1.011	38044760	8527948	7065	17662	1207		
333.9339	18.021	18.021	0	1.011	46791097	10457254	4792	11980	2182	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.052	18.052	0	1.002	4619030	1040177	696	1740	1495		
321.8936	18.052	18.052	0	1.002	5962328	1352705	664	1660	2037	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.052	18.052	0	1.013	11076670	2527331	1575	3937	1605		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.477						696	1740			
321.8936	17.477						664	1660			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.326	22.326	0	1.253	66968389	11404256	16778	41945	680		
353.8970	22.326	22.326	0	1.253	42204627	7252094	11221	28052	646	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.353	22.353	0	1.001	35294133	5983060	8393	20982	713		
341.8567	22.353	22.353	0	1.001	22184551	3761562	5550	13875	678	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.663	23.663	0	1.328	68278291	10720337	16778	41945	639		
353.8970	23.663	23.663	0	1.328	43424720	6821685	11221	28052	608	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.690	23.690	0	1.001	34802193	5455126	8393	20982	650		
341.8567	23.690	23.690	0	1.001	22119893	3451543	5550	13875	622	1.57(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.077						92	230			
341.8567	20.077						202	505			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.221						8393	20982			
341.8567	23.221						5550	13875			
13C-1,2,3,7,8-PeCDD											
367.8949	24.385	24.385	0	1.368	44849976	6565991	5834	14585	1125		
369.8919	24.385	24.385	0	1.368	28095536	4154522	2688	6720	1546	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.413	24.413	0	1.001	23037815	3378909	1704	4260	1983		
357.8516	24.413	24.413	0	1.001	14524761	2130312	1080	2700	1973	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.301						1704	4260			
357.8516	23.301						1080	2700			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.476	30.476	0	0.949	30177261	5507425	15761	39402	349		
385.8610	30.476	30.476	0	0.949	58016922	10394348	28985	72462	359	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.490	30.490	0	1.000	25960730	4864990	13474	33685	361		
375.8178	30.490	30.490	0	1.000	21297194	3987270	10918	27295	365	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.649	30.649	0	0.954	31791981	5791968	15761	39402	367		
385.8610	30.649	30.649	0	0.954	60709243	11197915	28985	72462	386	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.676	30.676	0	1.001	28844496	5333196	13474	33685	396		
375.8178	30.676	30.676	0	1.001	23805876	4377260	10918	27295	401	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.488	31.488	0	0.981	29404819	7133335	15761	39402	453		
385.8610	31.488	31.488	0	0.981	56903898	13718133	28985	72462	473	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.501	31.501	0	1.000	27385303	6614905	13474	33685	491		
375.8178	31.501	31.501	0	1.000	22583385	5505456	10918	27295	504	1.21(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.300	32.300	0	1.006	27025885	6904165	15761	39402	438		
385.8610	32.300	32.300	0	1.006	52270841	13243196	28985	72462	457	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.313	32.313	0	1.000	25440215	6481191	13474	33685	481		
375.8178	32.313	32.313	0	1.000	20700763	5250335	10918	27295	481	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.163						13474	33685			
375.8178	30.163						10918	27295			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.113	32.113	0		46723245	11409471	14285	35712	799		
403.8529	32.113	32.113	0		36802837	9037301	10904	27260	829	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.674	31.674	0	0.986	34557606	9375401	14285	35712	656		
403.8529	31.674	31.674	0	0.986	27955651	7672468	10904	27260	704	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.688	31.688	0	1.000	18452527	5068736	8173	20432	620		
391.8127	31.688	31.688	0	1.000	14640859	4041625	6827	17067	592	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.781	31.781	0	0.990	42728469	10477182	14285	35712	733		
403.8529	31.781	31.781	0	0.990	34010202	8298241	10904	27260	761	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.794	31.794	0	1.000	21955562	5232617	8173	20432	640		
391.8127	31.794	31.794	0	1.000	17148261	4170082	6827	17067	611	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.127	32.127	0	1.014	21174207	5454317	8173	20432	667		
391.8127	32.127	32.127	0	1.014	17174870	4358207	6827	17067	638	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.836						8173	20432			
391.8127	30.836						6827	17067			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.742	33.742	0	1.051	18005498	5587271	23868	59670	234		
419.8220	33.742	33.742	0	1.051	40100750	12103461	51021	127552	237	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.754	33.754	0	1.000	21710234	6579391	30897	77242	213		
409.7789	33.754	33.754	0	1.000	20897432	6244290	24626	61565	254	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.823	34.823	0	1.084	15531038	4210435	23868	59670	176		
419.8220	34.823	34.823	0	1.084	34692713	9339921	51021	127552	183	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.835	34.835	0	1.000	17297955	4652270	30897	77242	151		
409.7789	34.835	34.835	0	1.000	16540976	4383538	24626	61565	178	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.295						30897	77242			
409.7789	34.295						24626	61565			

Report Date: 18-Aug-2021 11:41:06 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_12.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.532	34.532	0	1.075	25168142	7069752	13352	33380	529		
437.8140	34.532	34.532	0	1.075	25166587	7200282	14411	36027	500	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.544	34.544	0	1.000	14009562	4015104	8460	21150	475		
425.7737	34.544	34.544	0	1.000	13442009	3876993	8404	21010	461	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.271						8460	21150			
425.7737	34.271						8404	21010			
13C-OCDD											
469.7779	36.890	36.890	0	1.149	33365743	7856864	3938	9845	1995		
471.7750	36.890	36.890	0	1.149	37904571	8770915	3780	9450	2320	0.88(0.76-1.02)	
OCDF											
441.7428	36.986	36.986	0	1.003	23977695	5801801	3046	7615	1905		
443.7399	36.986	36.986	0	1.003	26618367	6286339	2512	6280	2503	0.90(0.76-1.02)	
OCDD											
457.7377	36.902	36.902	0	1.000	18971936	4408686	1874	4685	2353		
459.7348	36.890	36.902	-1	1.000	21152623	4988422	2276	5690	2192	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_12.d		
Injection Date:	17-Aug-2021 23:49:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

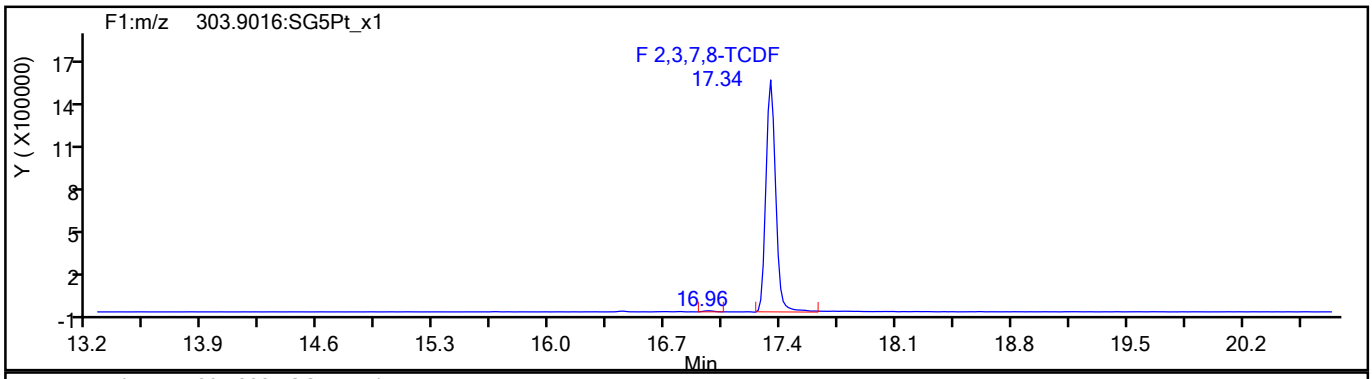

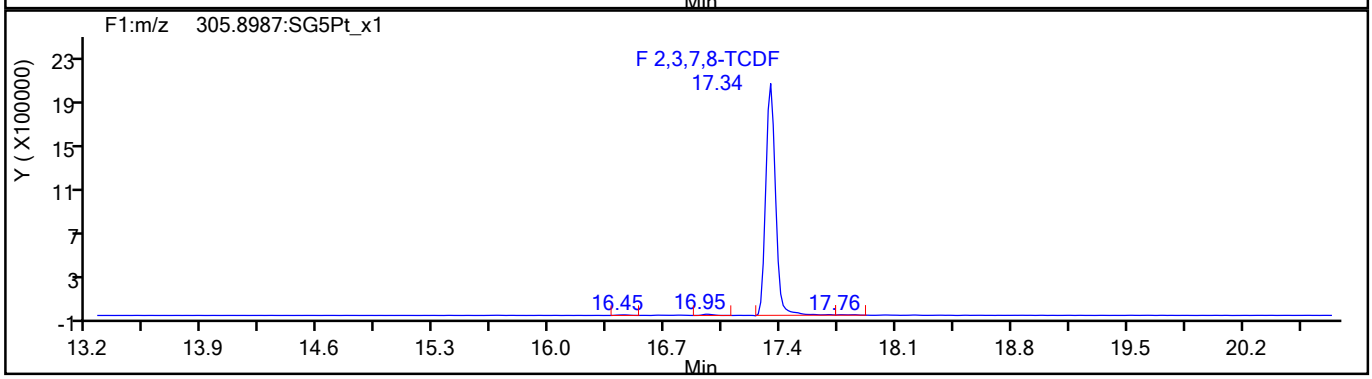

TCDF Standards

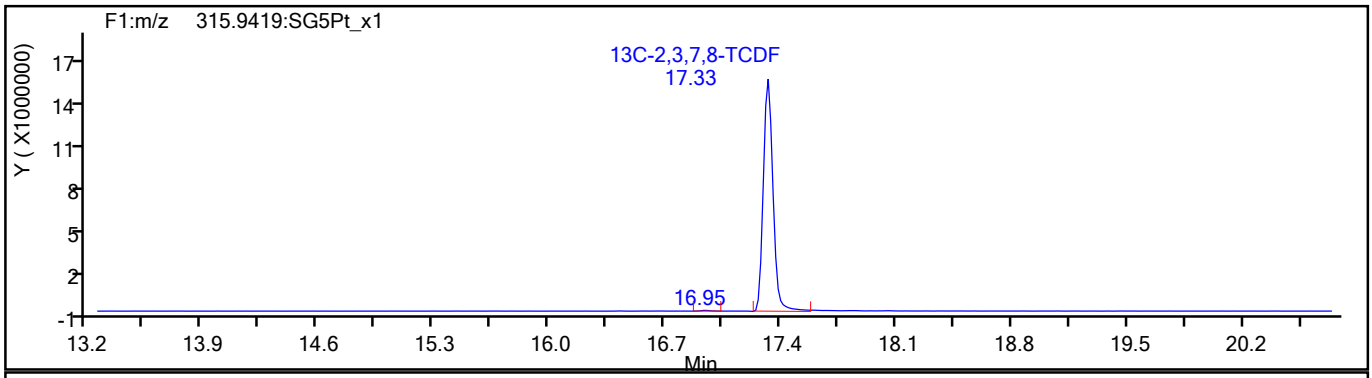

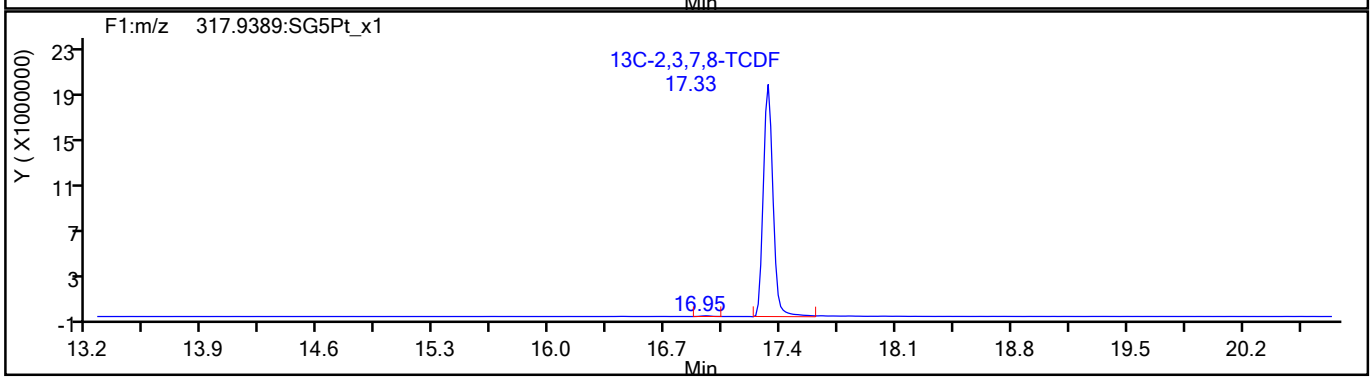

780580

Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	17-Aug-2021 23:49:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

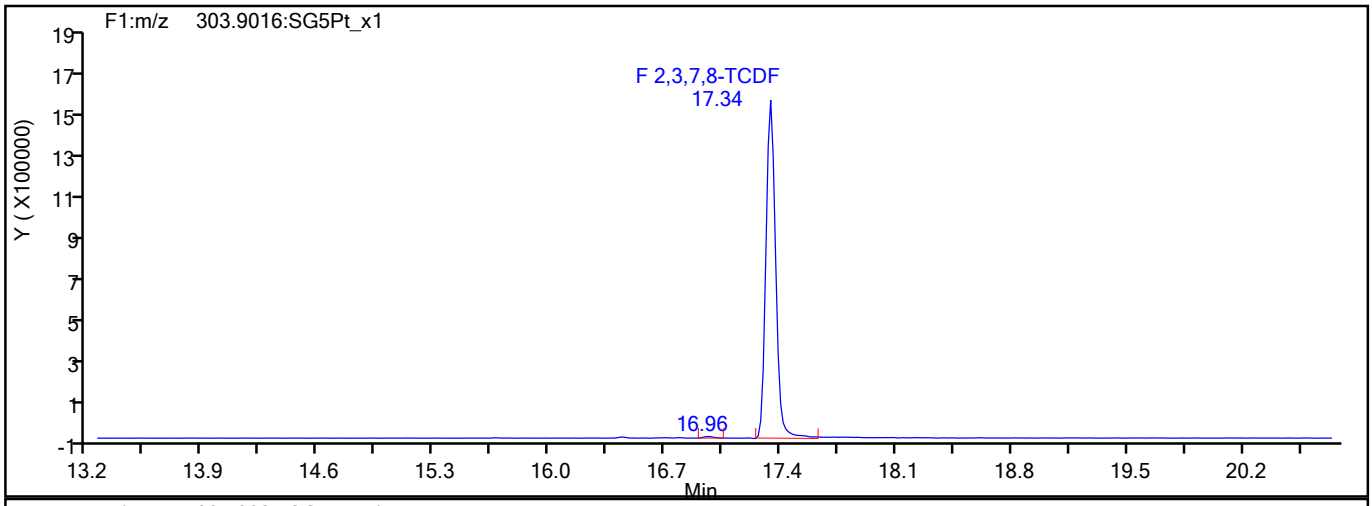

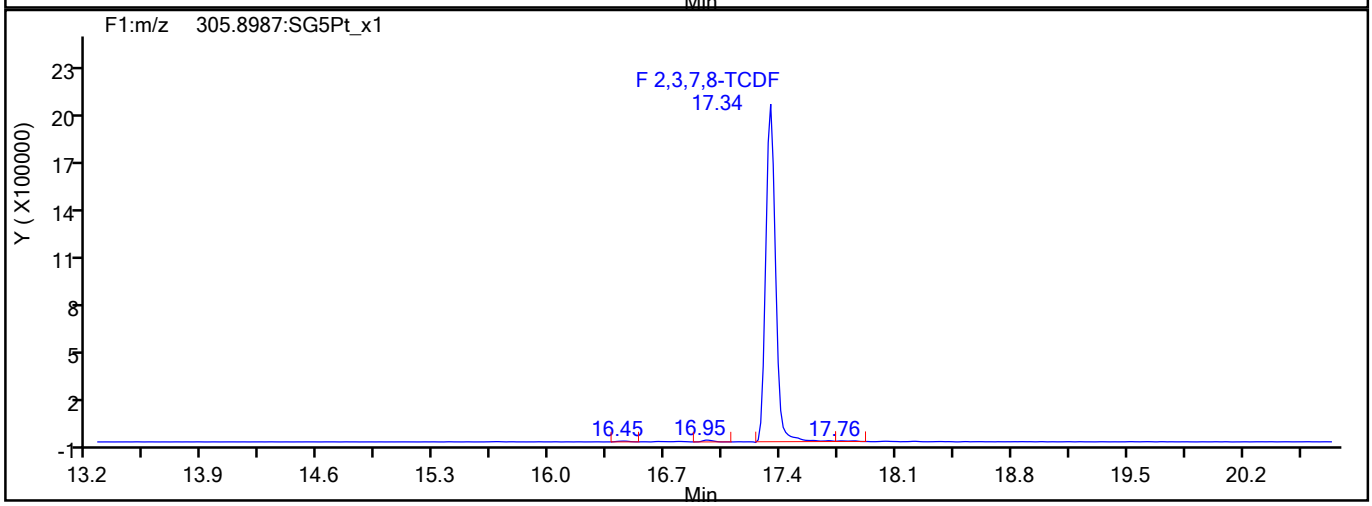

TCDF Interference Mass

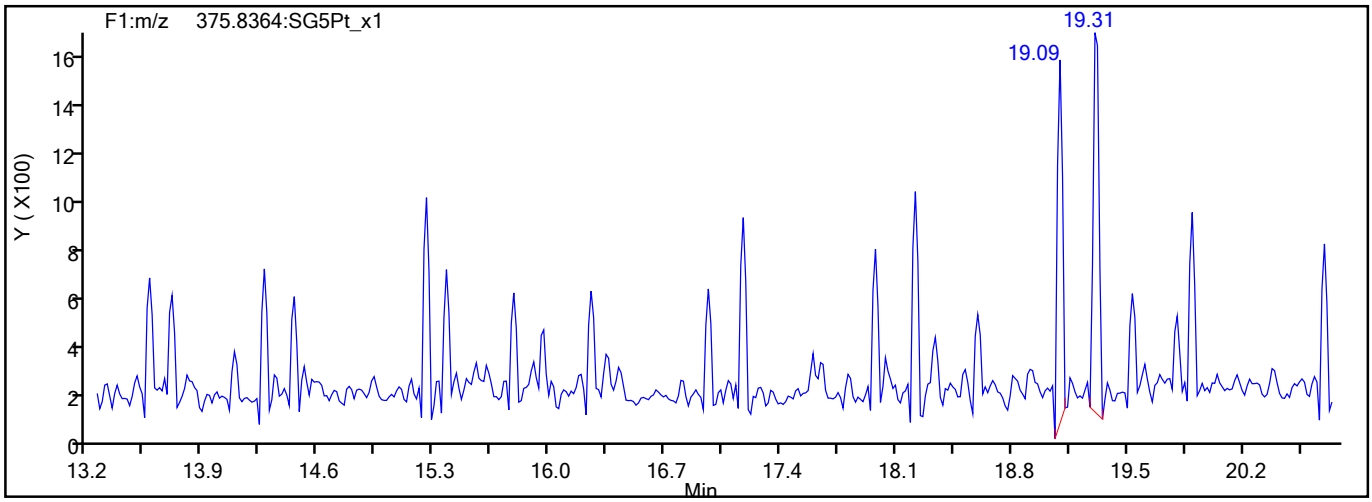

780581

Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_12.d		
Injection Date:	17-Aug-2021 23:49:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

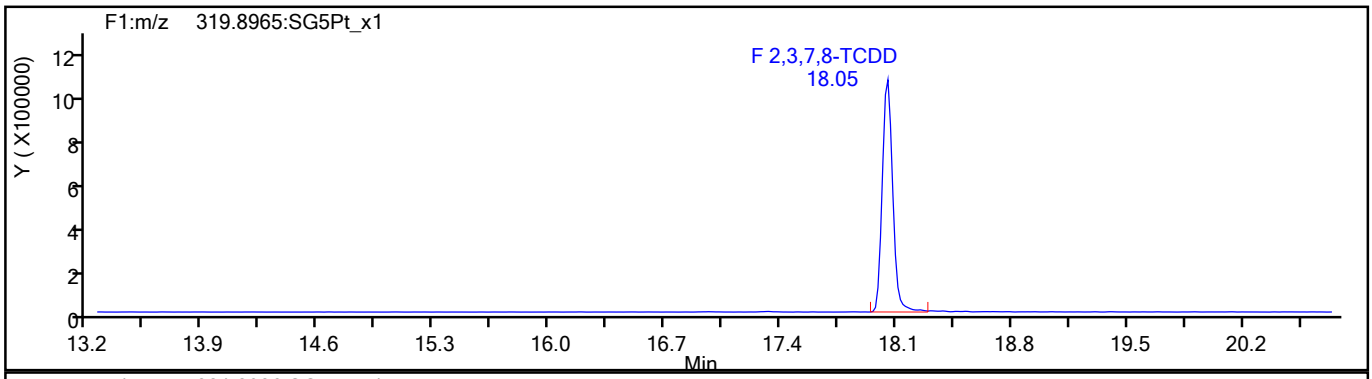

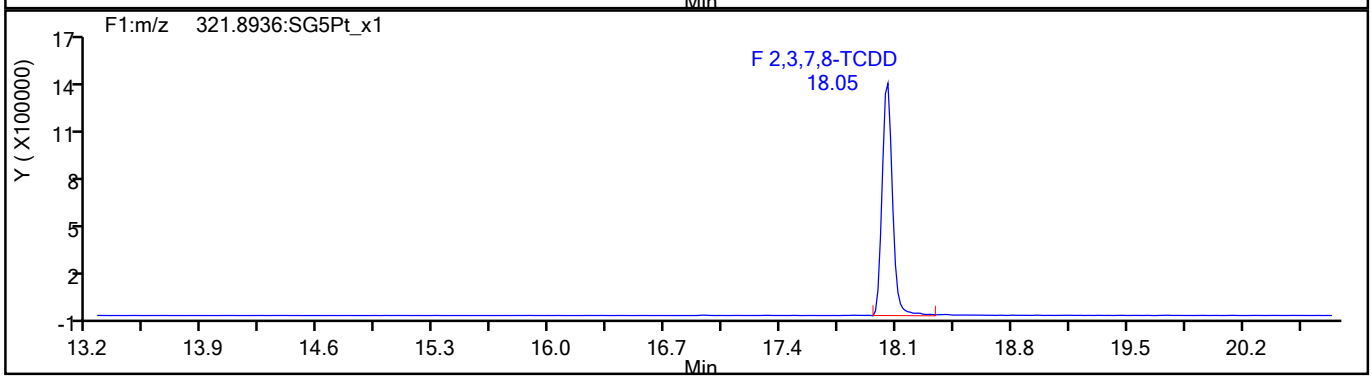

TCDD Standards

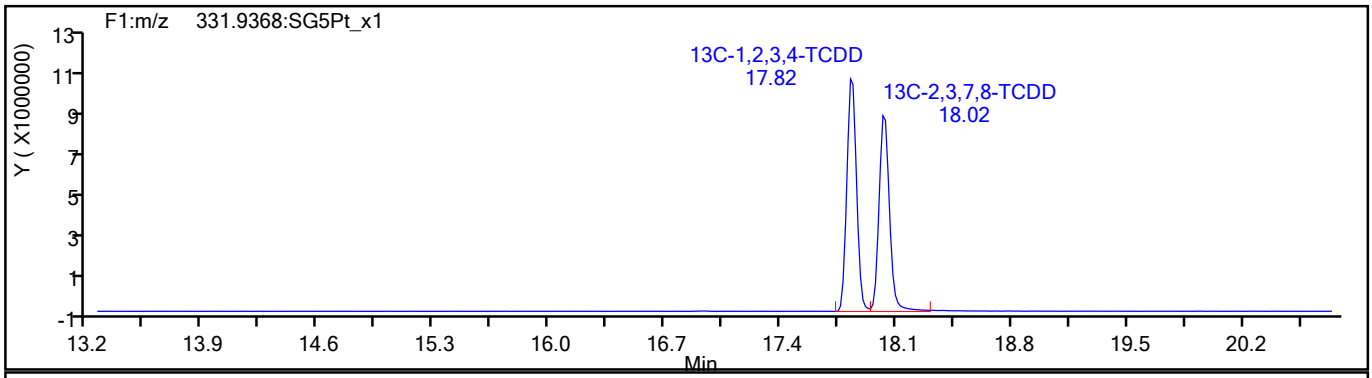

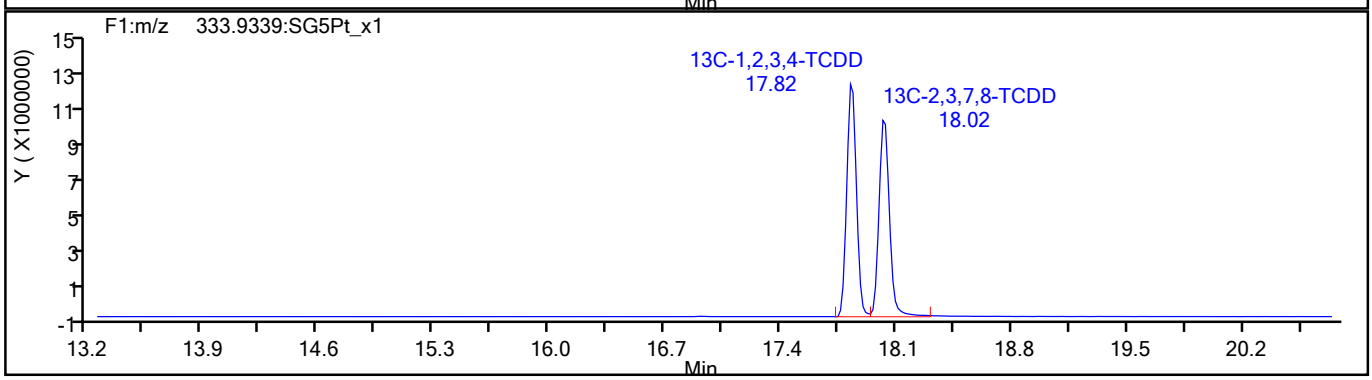

780582

Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_12.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

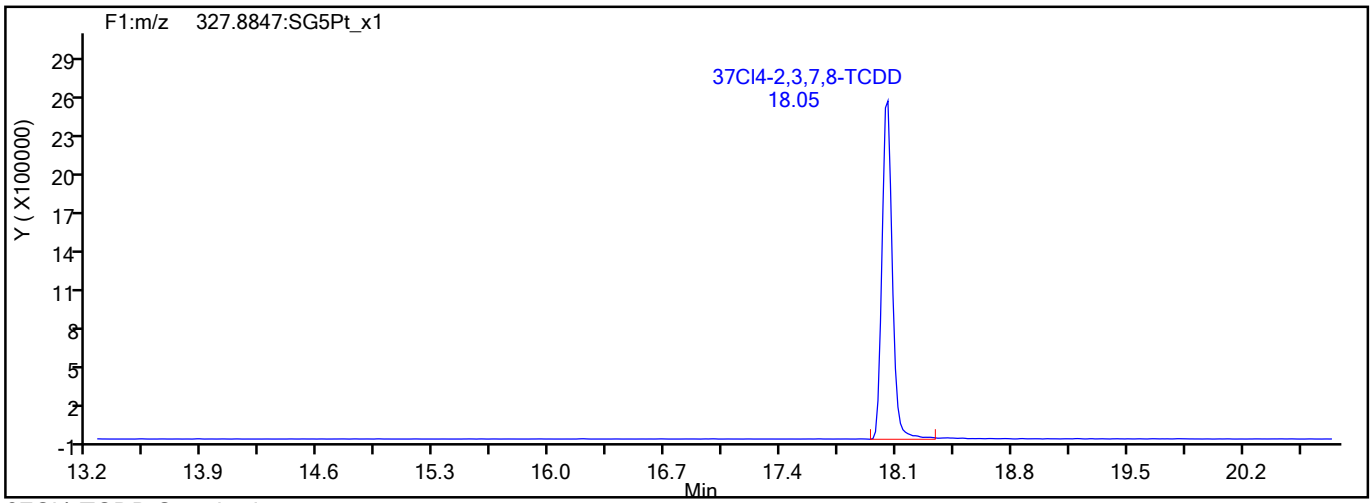

37Cl4-TCDD Standards

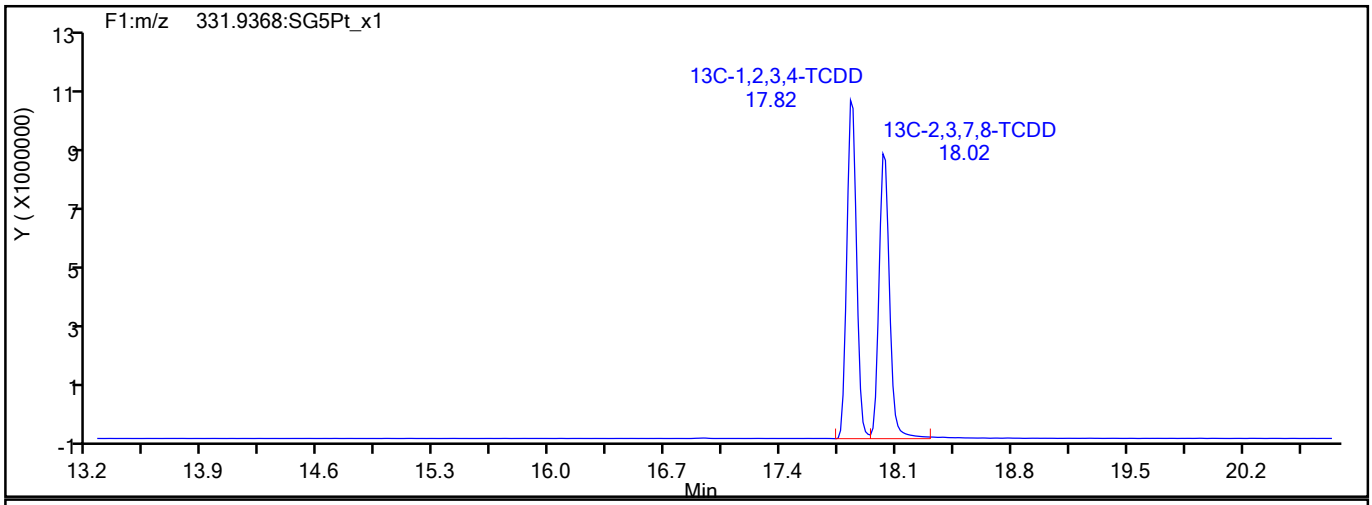

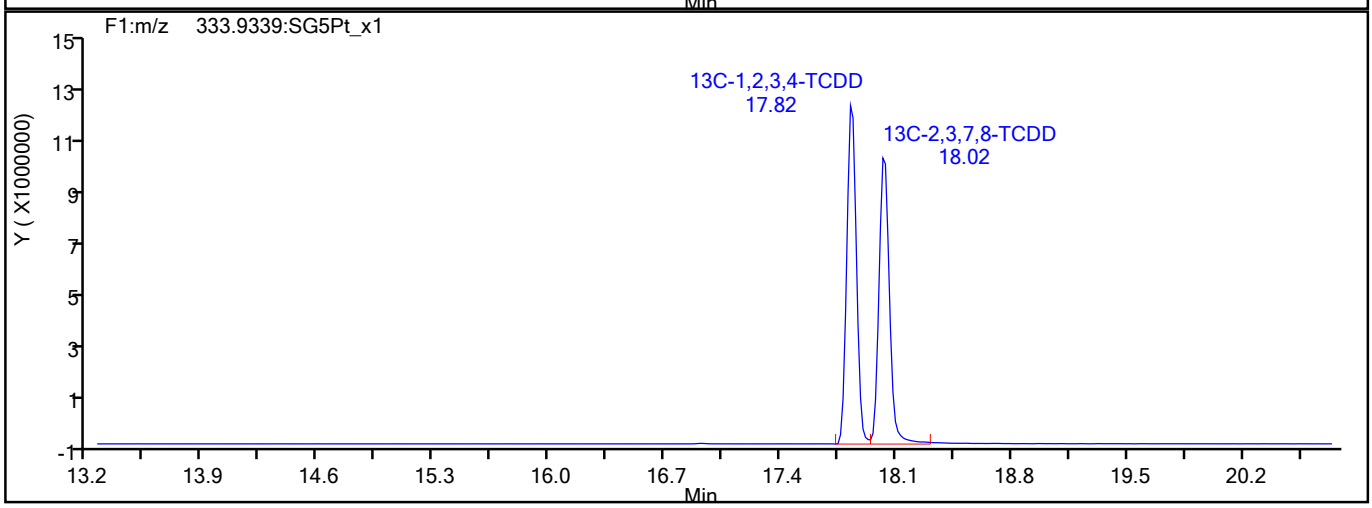

780583

Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

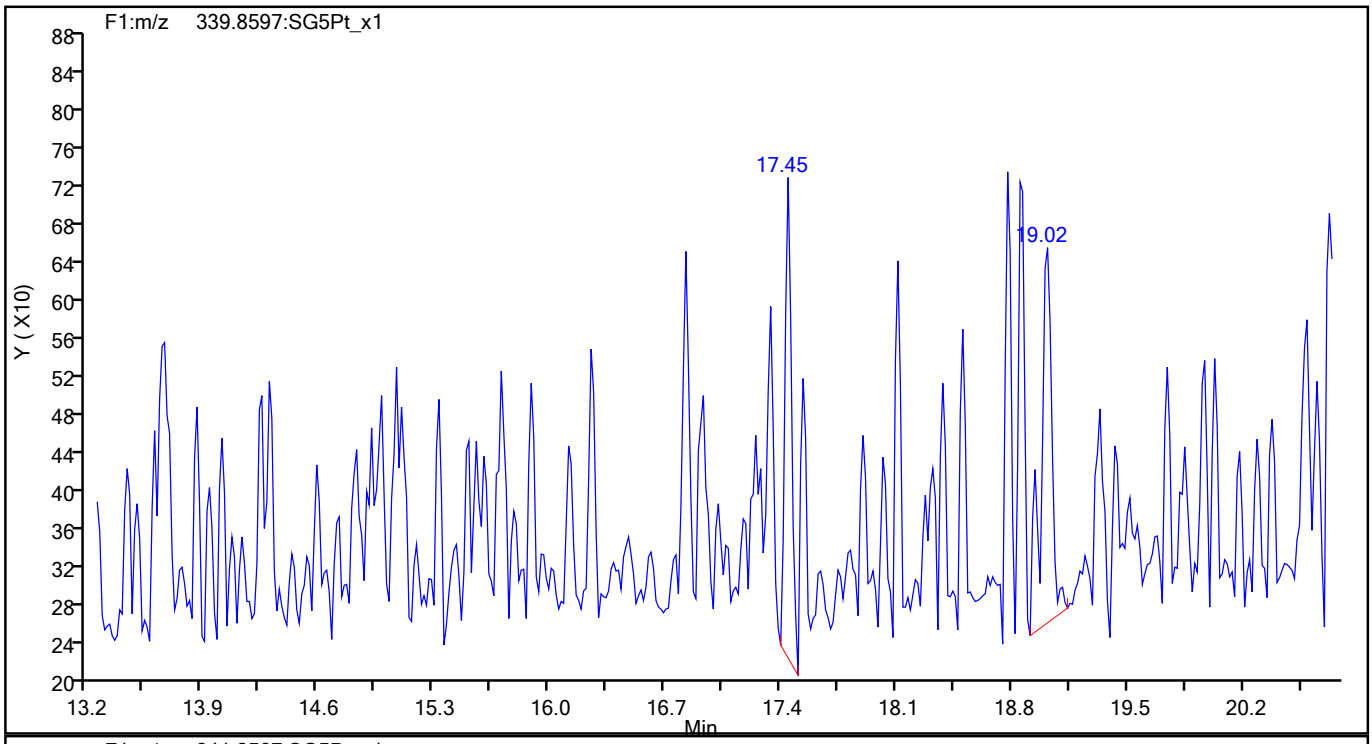

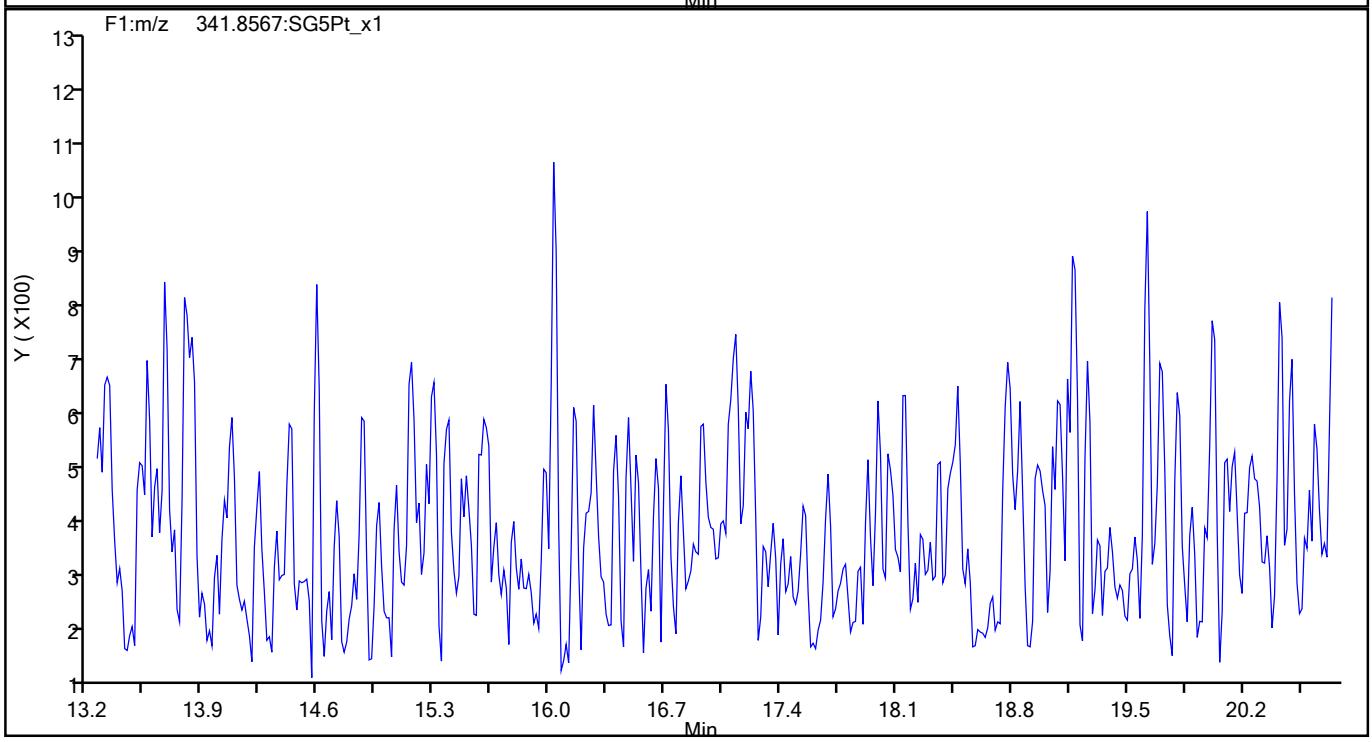

780584

Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

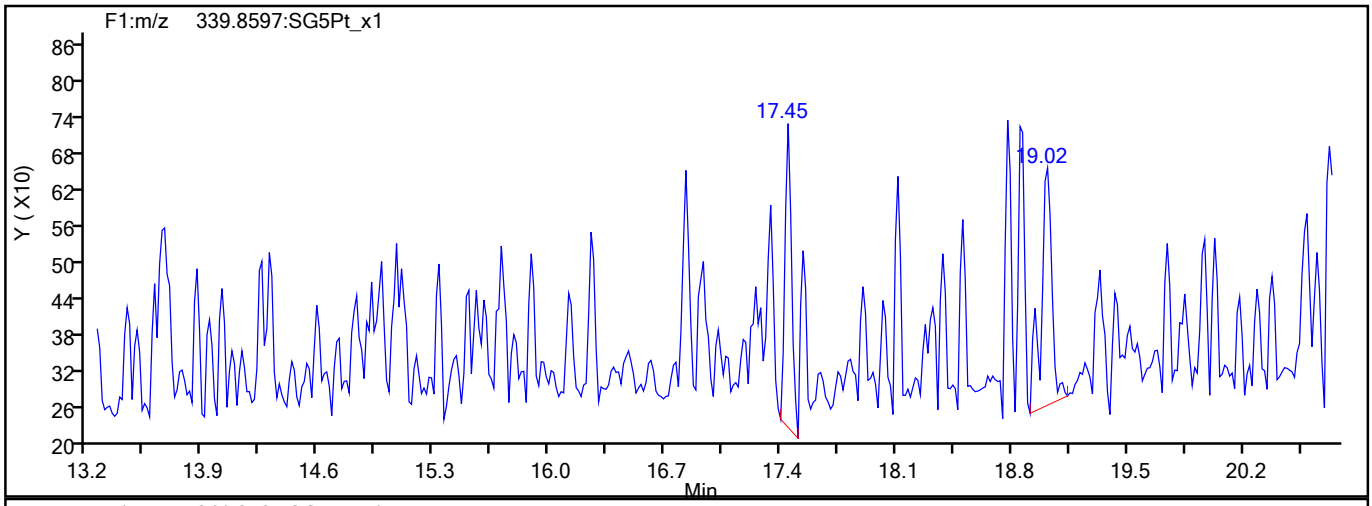

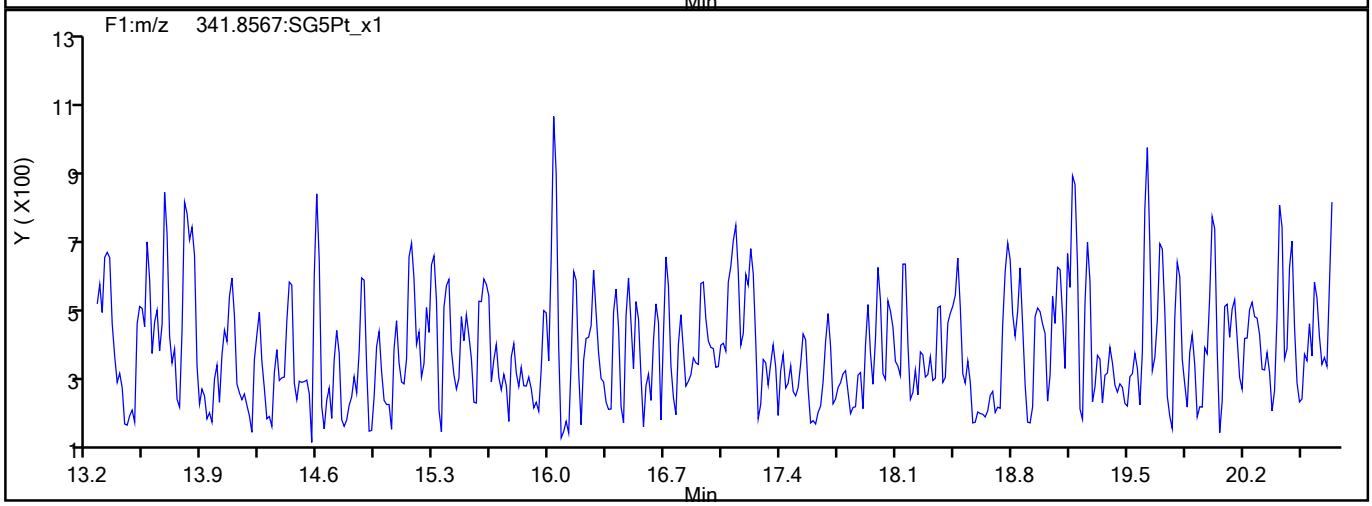

F1 PeCDFs Interference Mass

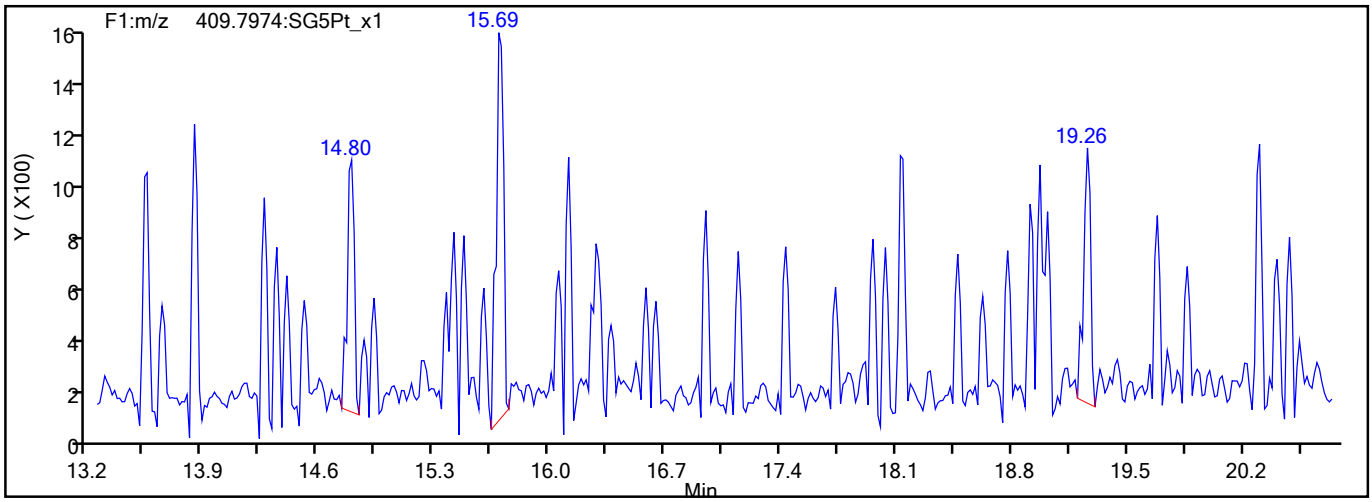

780585

Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

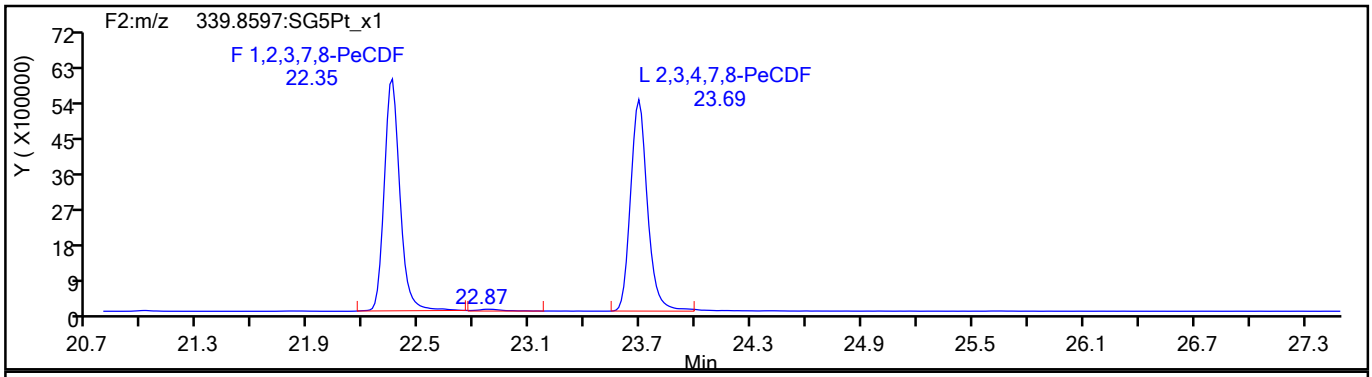

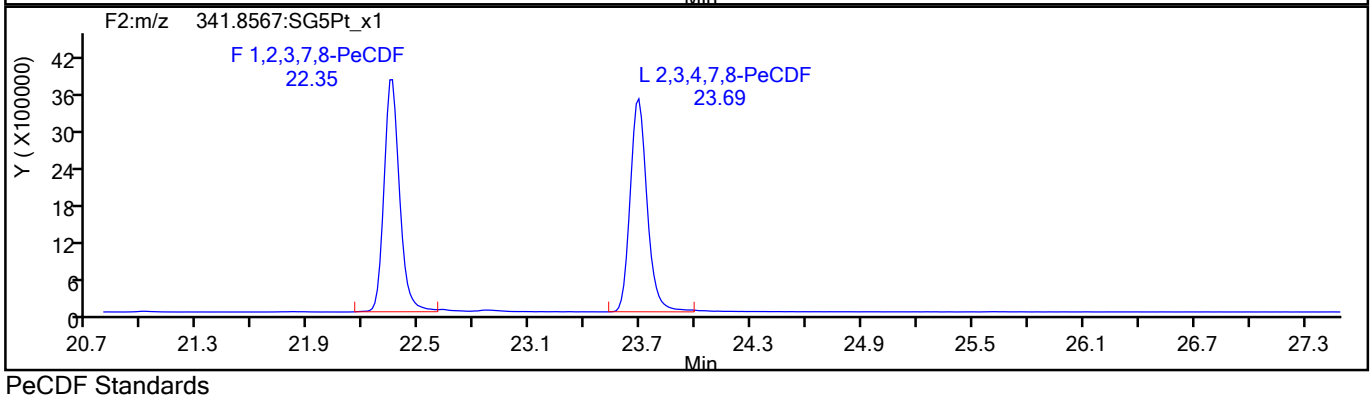

PeCDF Standards

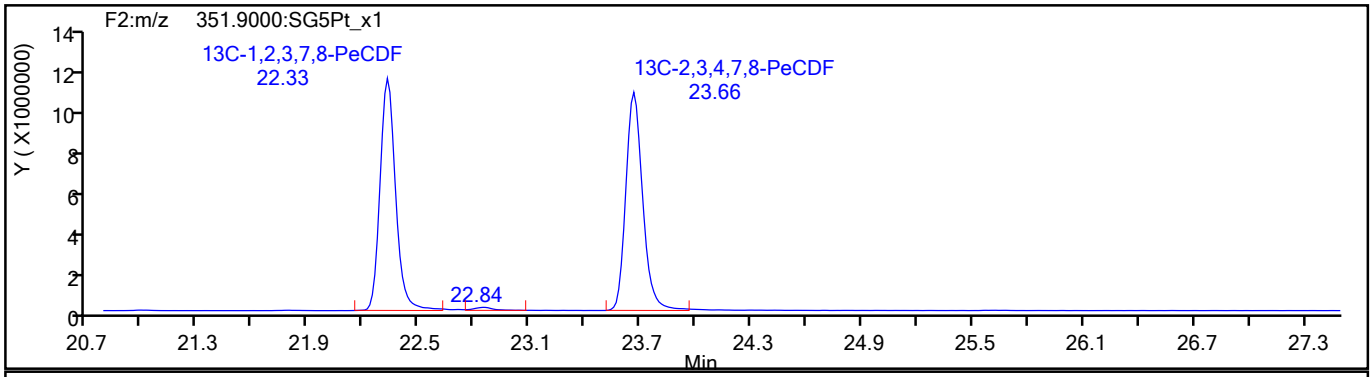

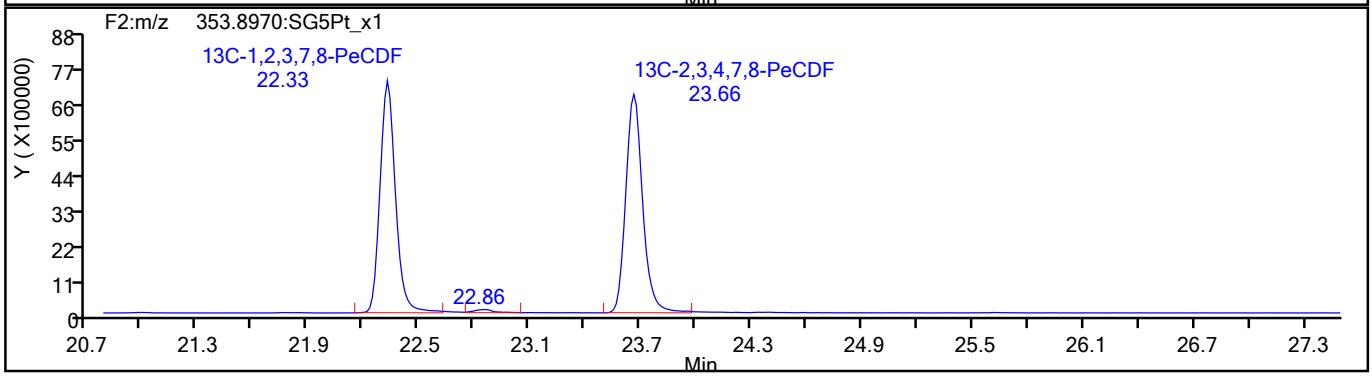

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Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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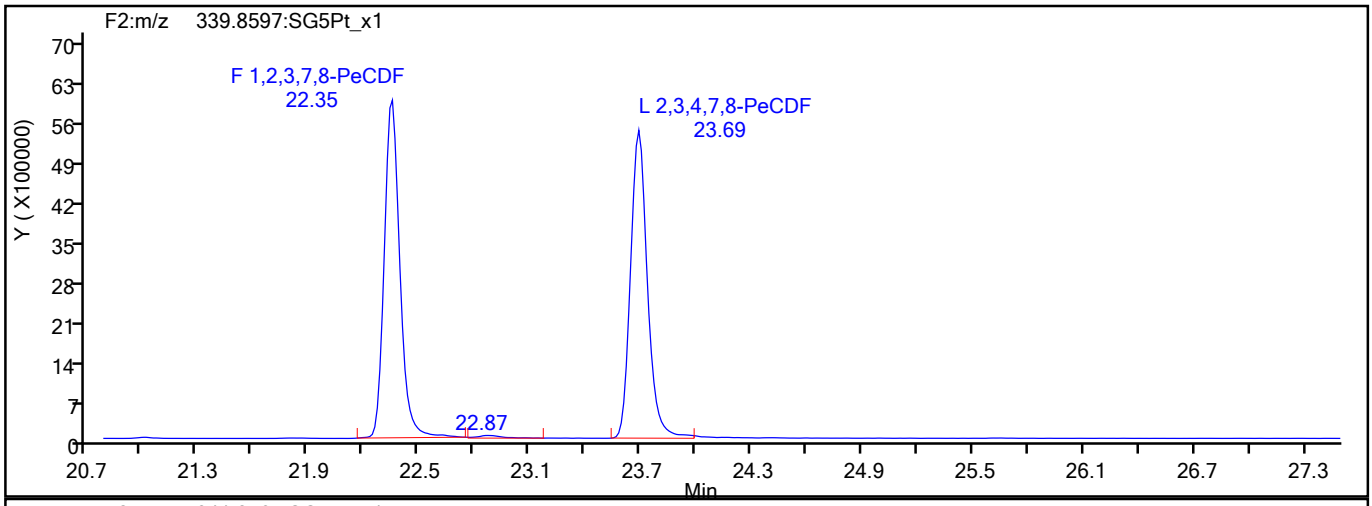

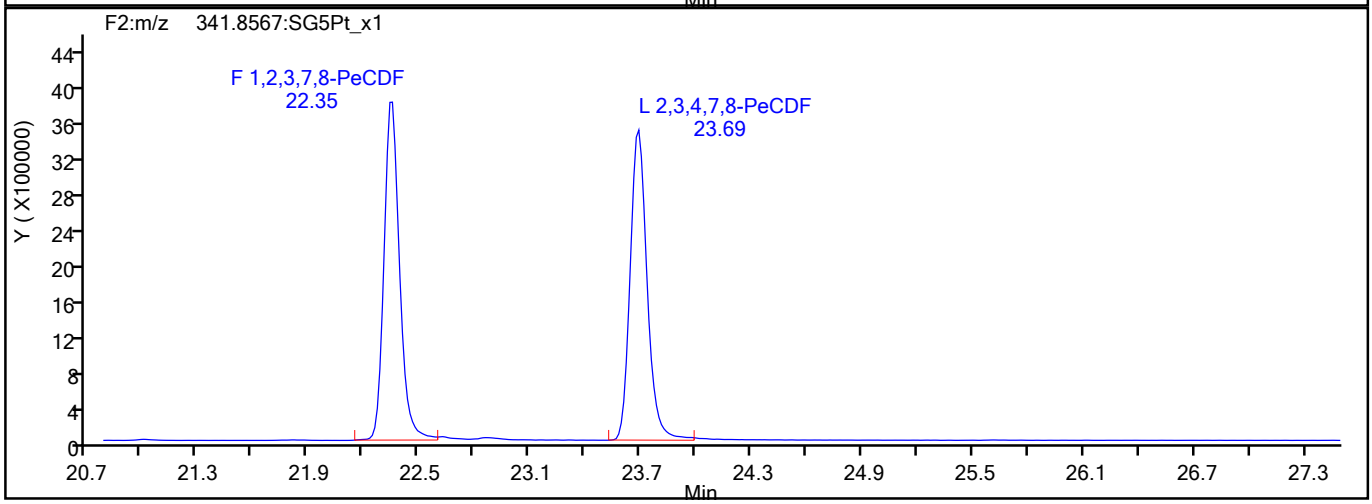

PeCDF Interference Mass

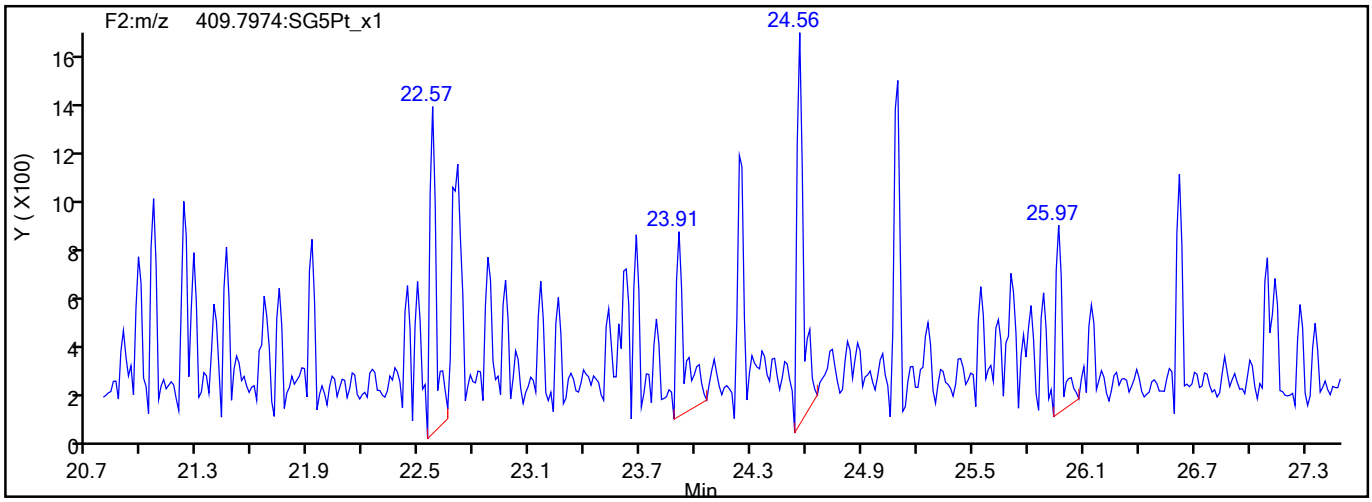

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Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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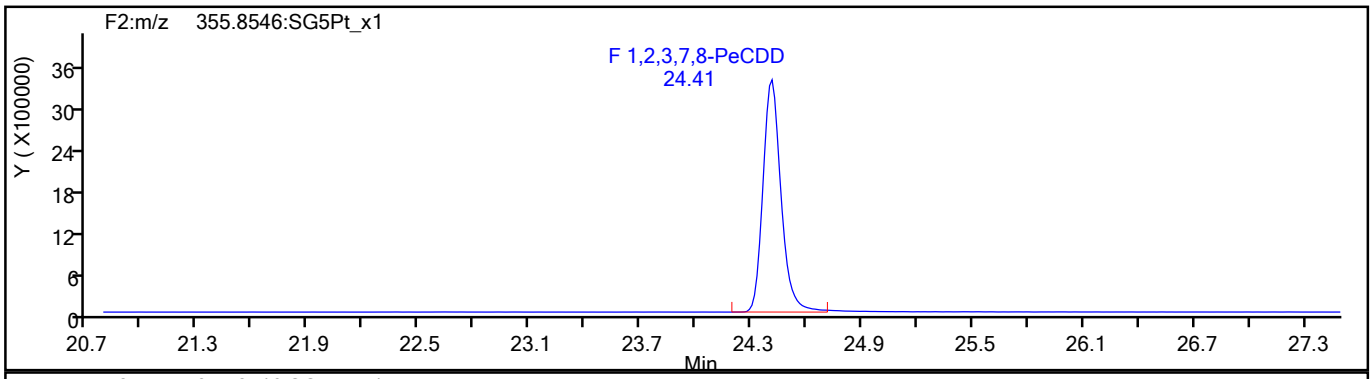

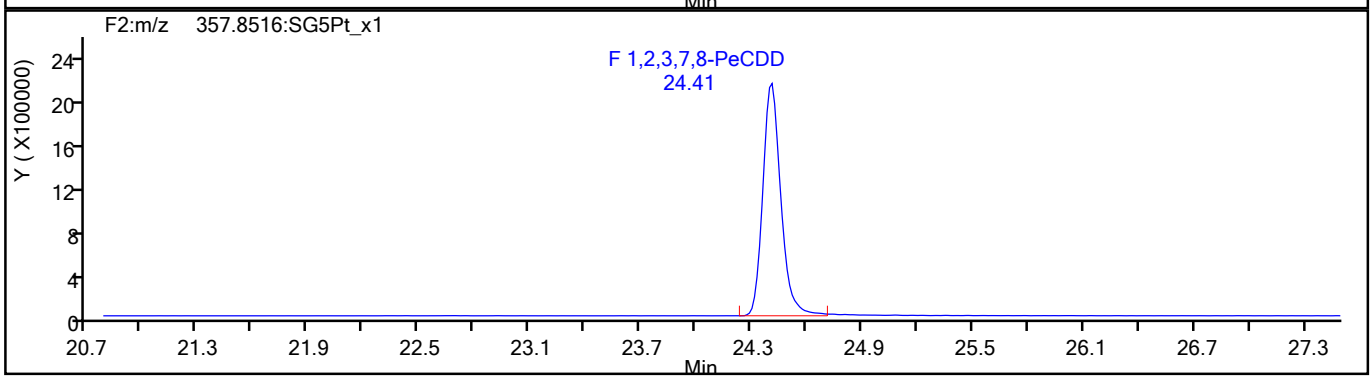

PeCDD Standards

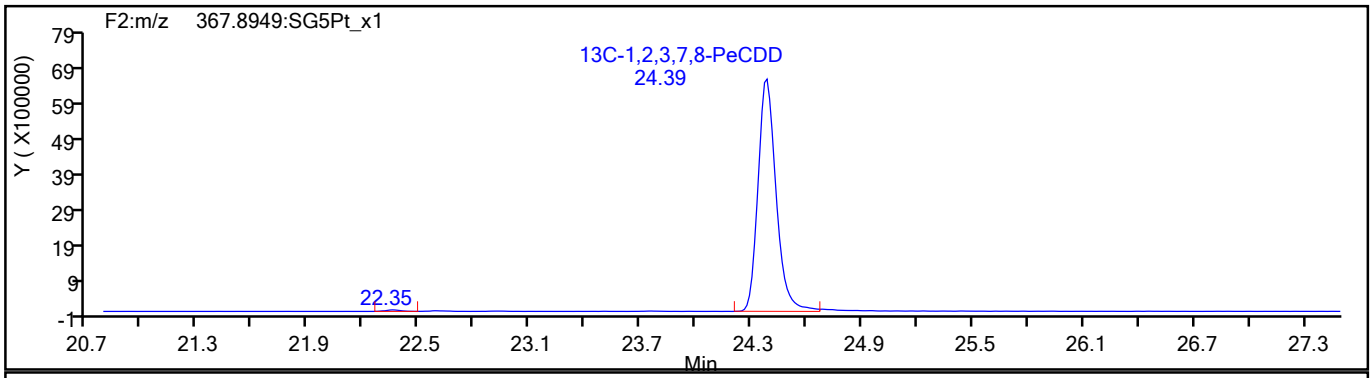

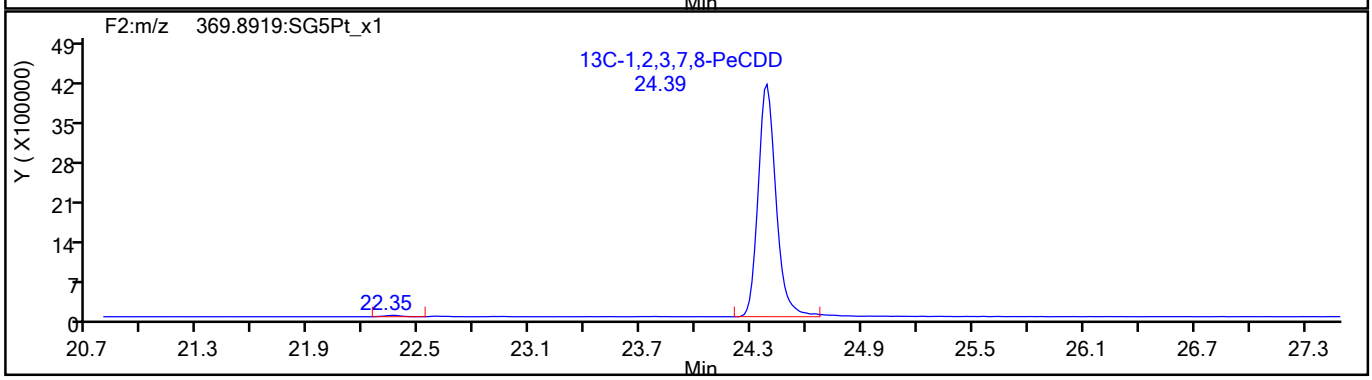

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Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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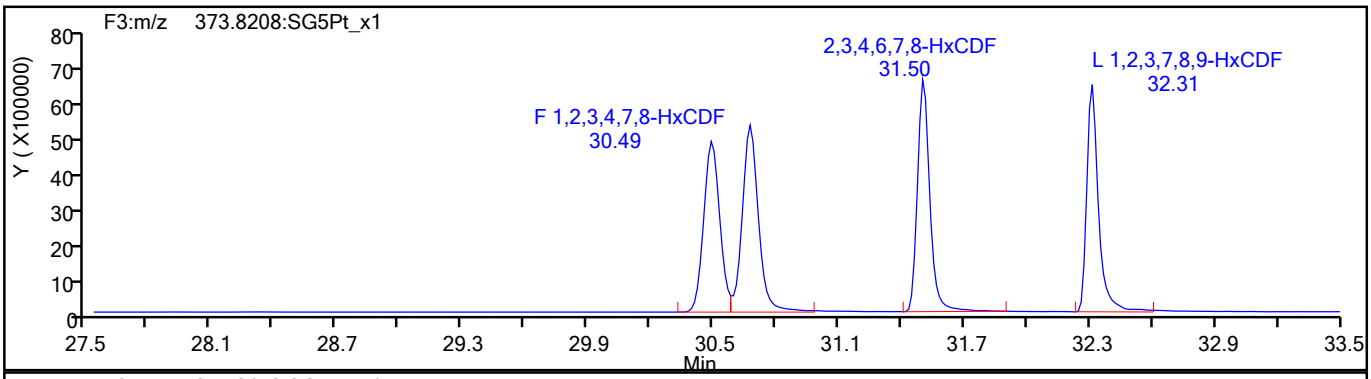

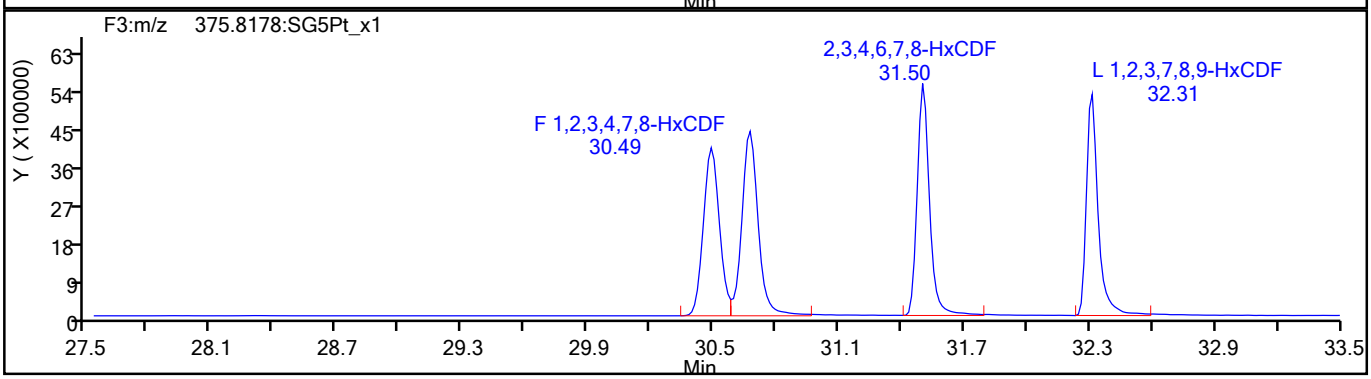

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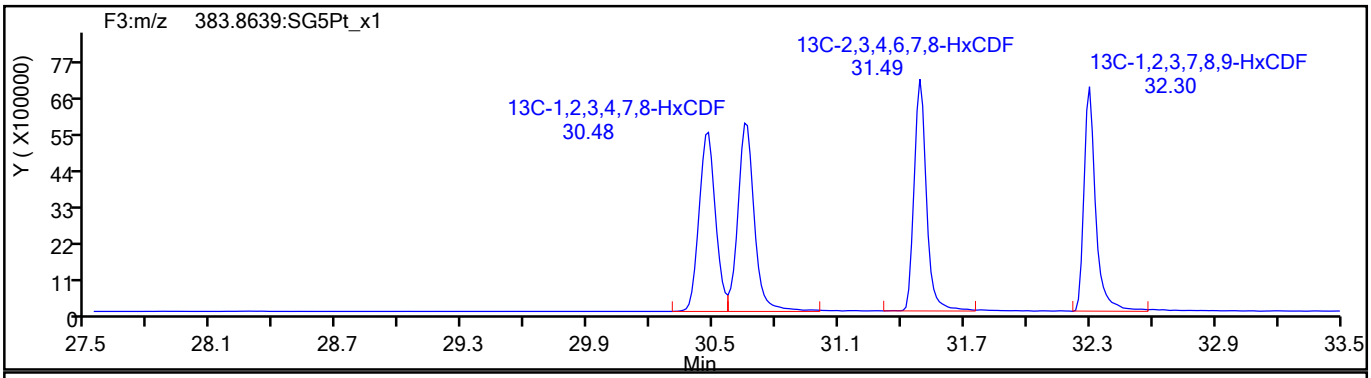

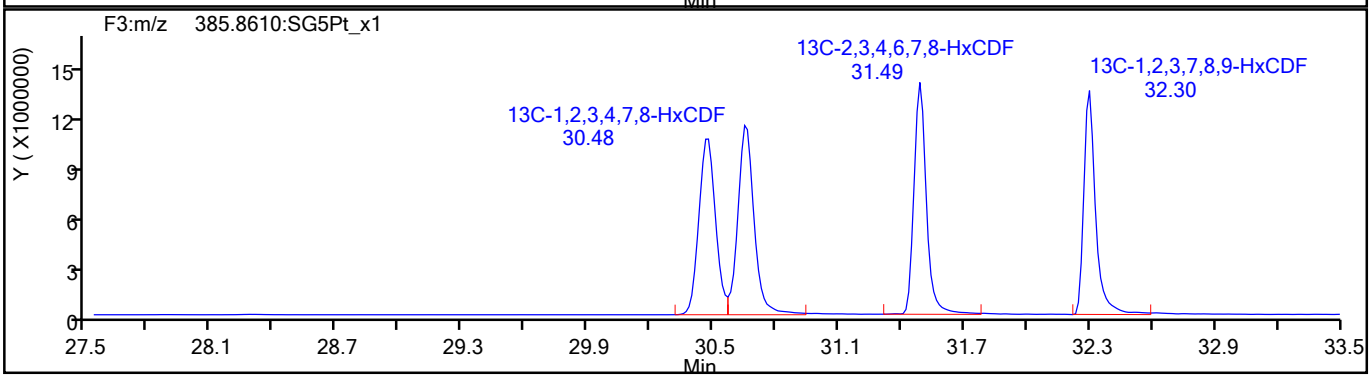

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Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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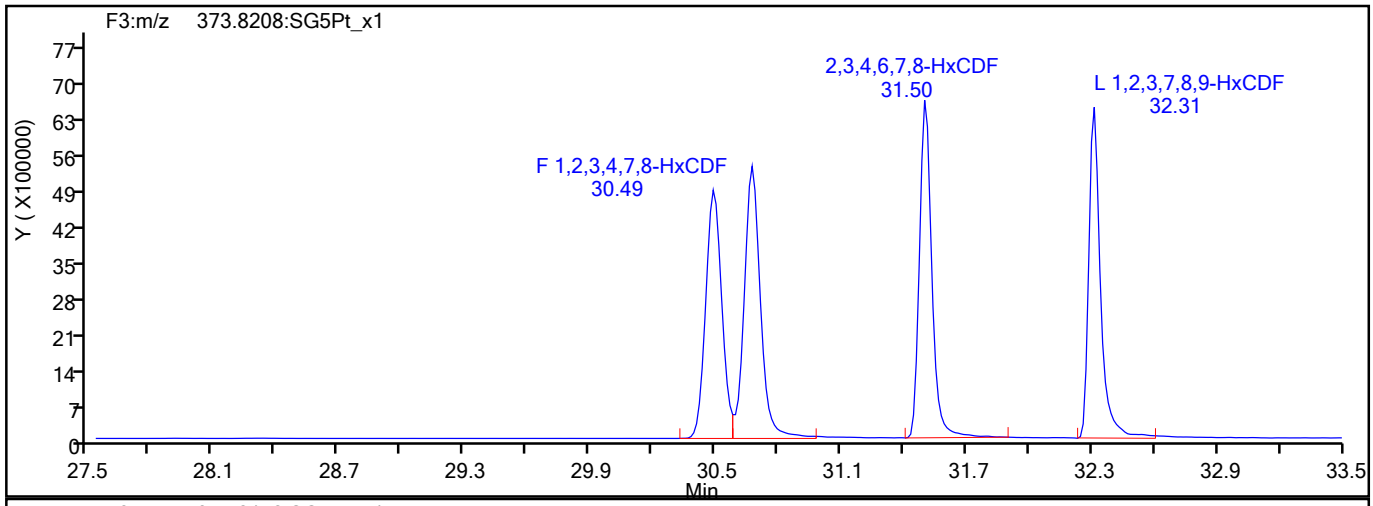

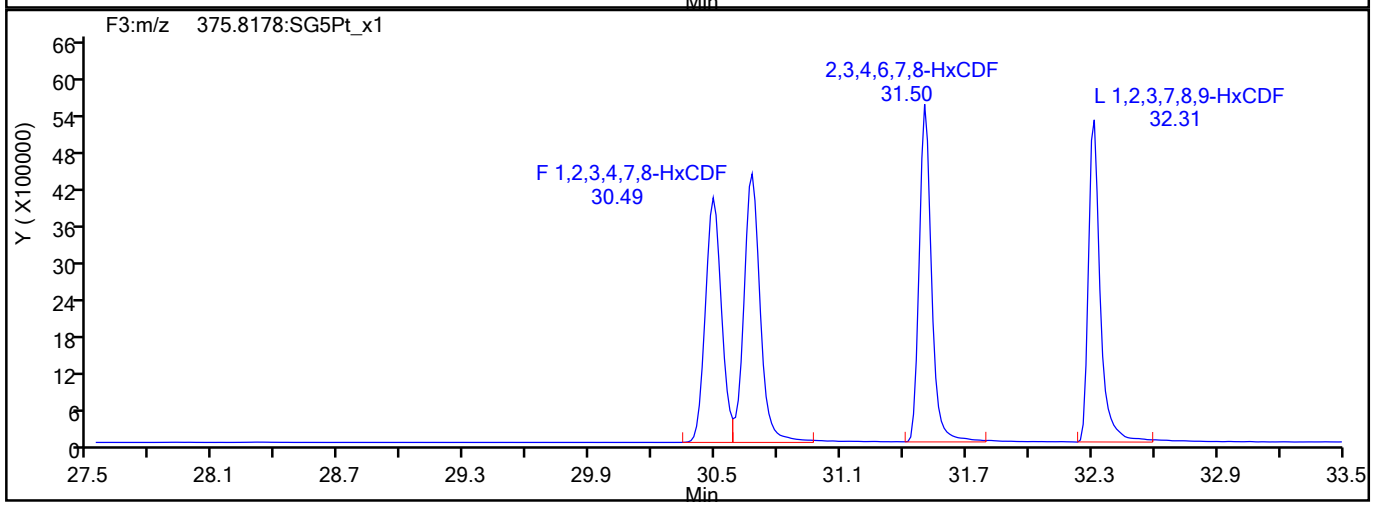

HxCDF Interference Mass

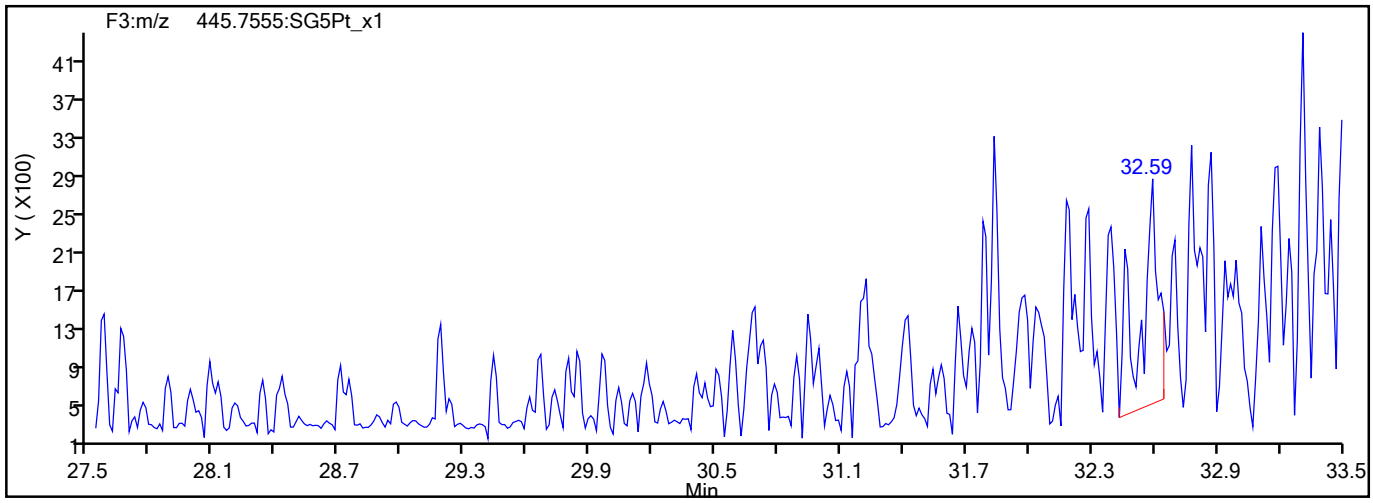

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Eurofins TestAmerica, Sacramento

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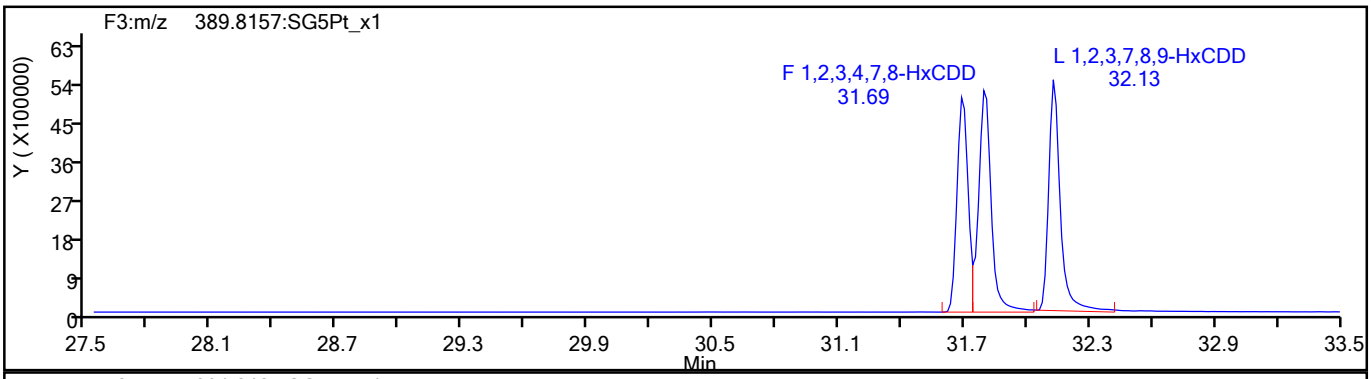

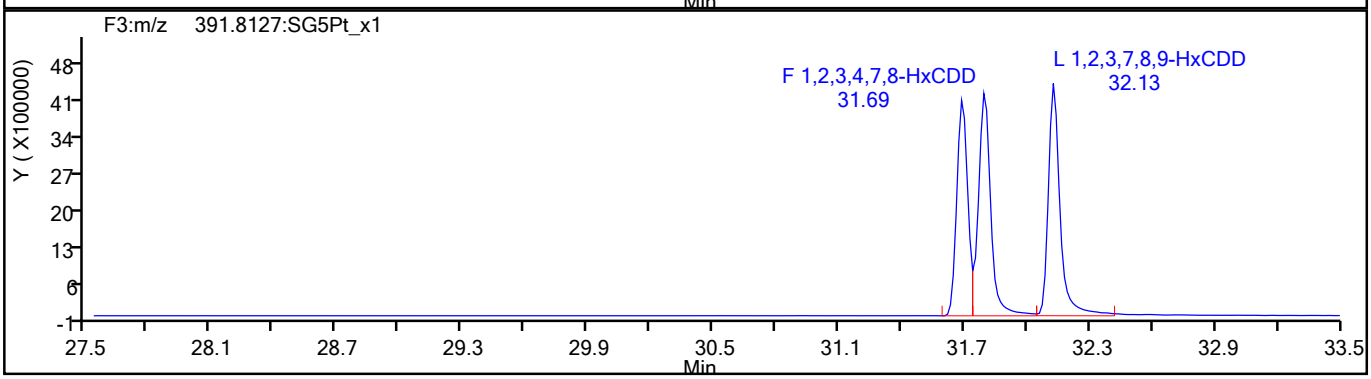

HxCDD Standards

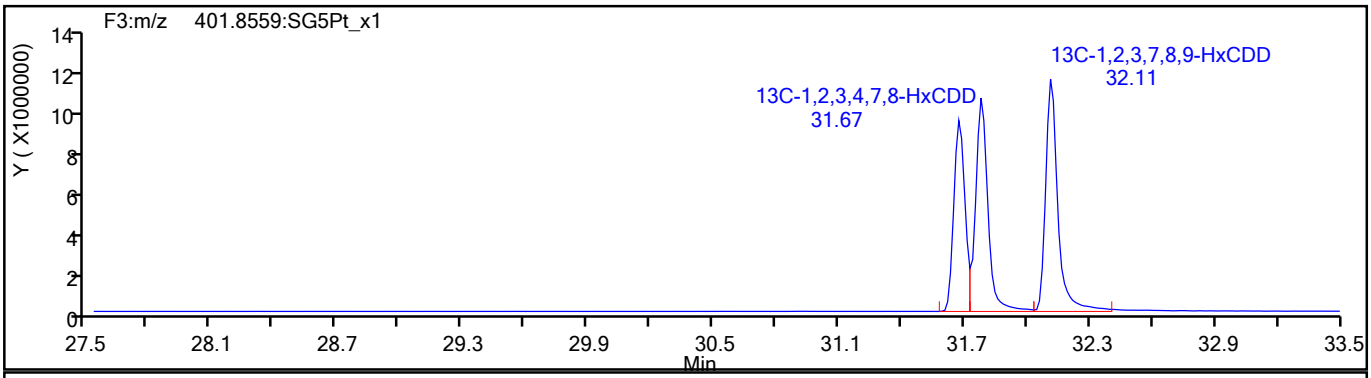

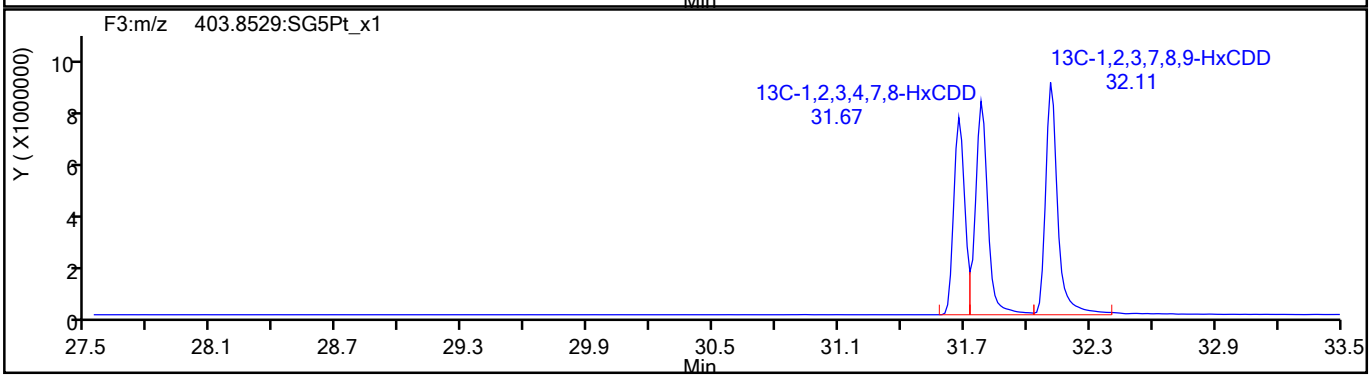

780591

Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

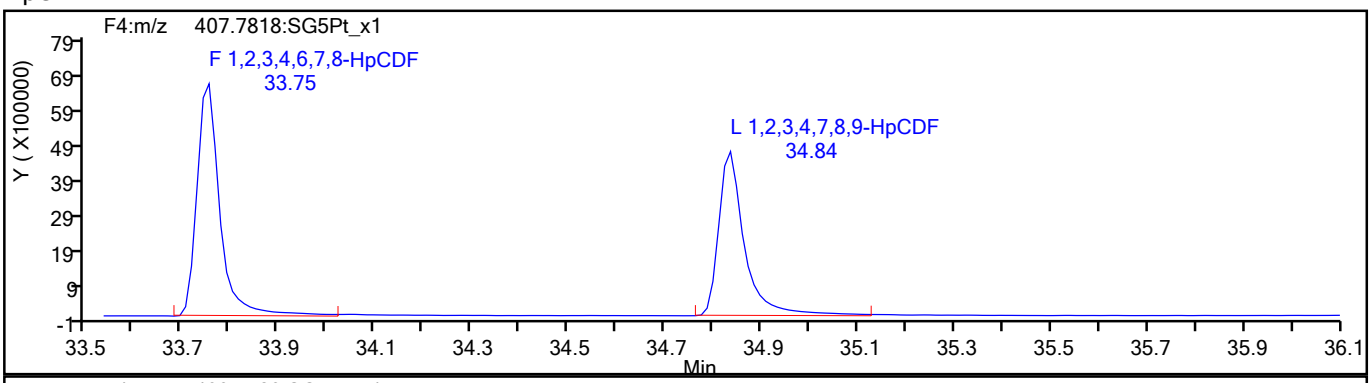

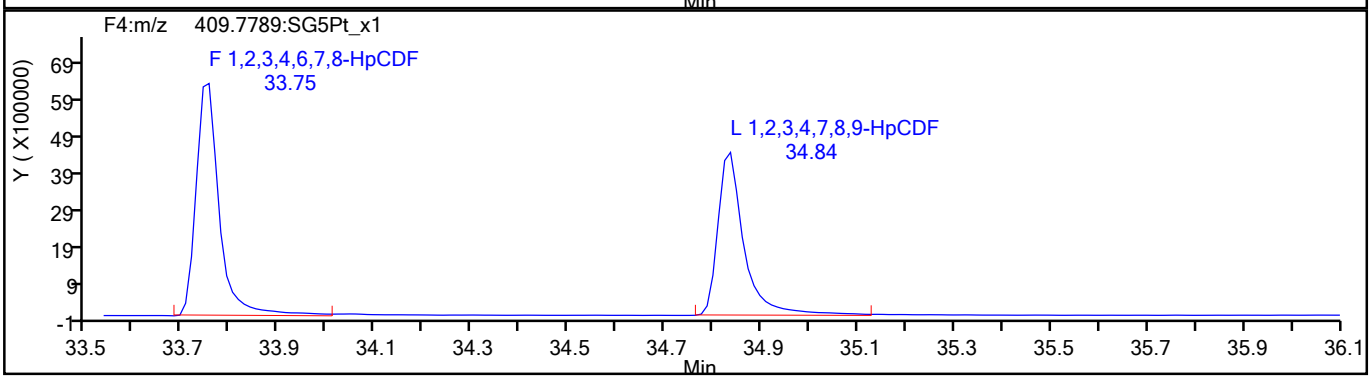

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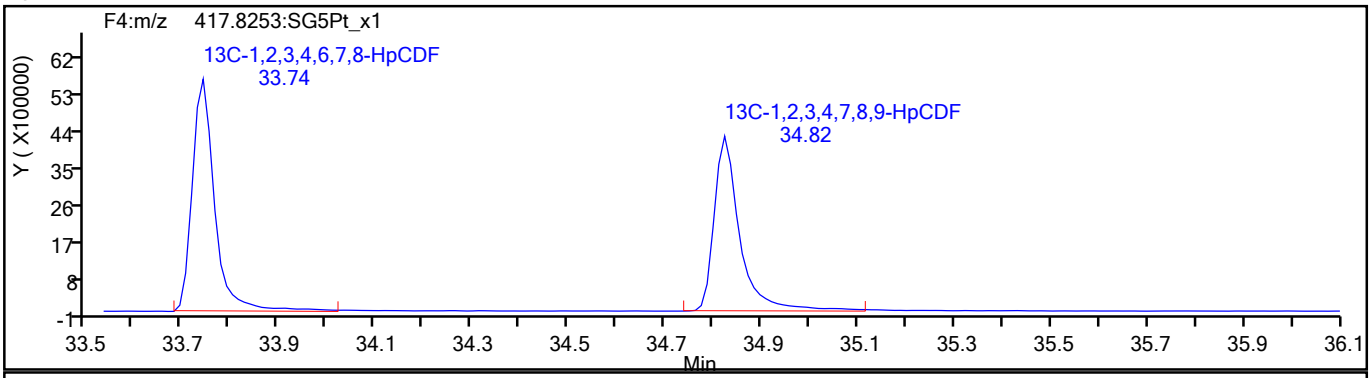

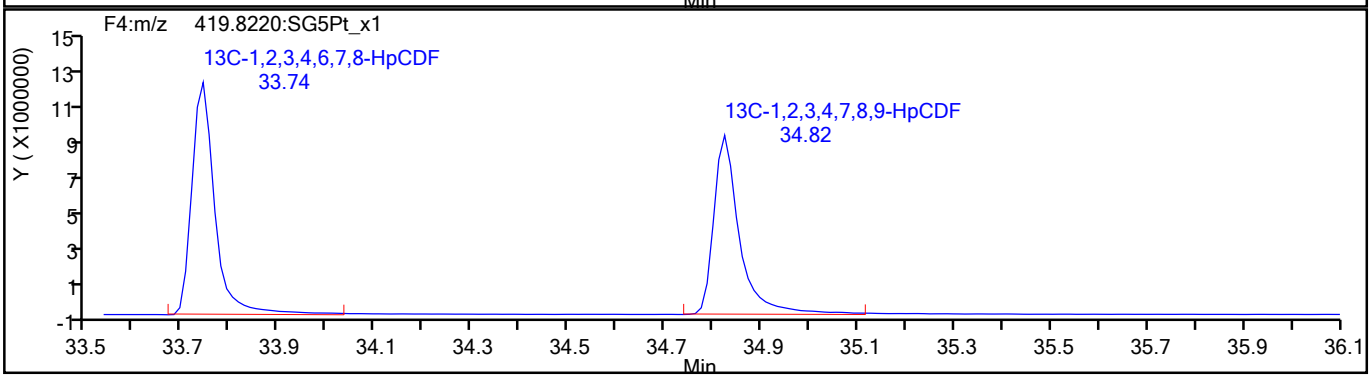

780592

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Eurofins TestAmerica, Sacramento

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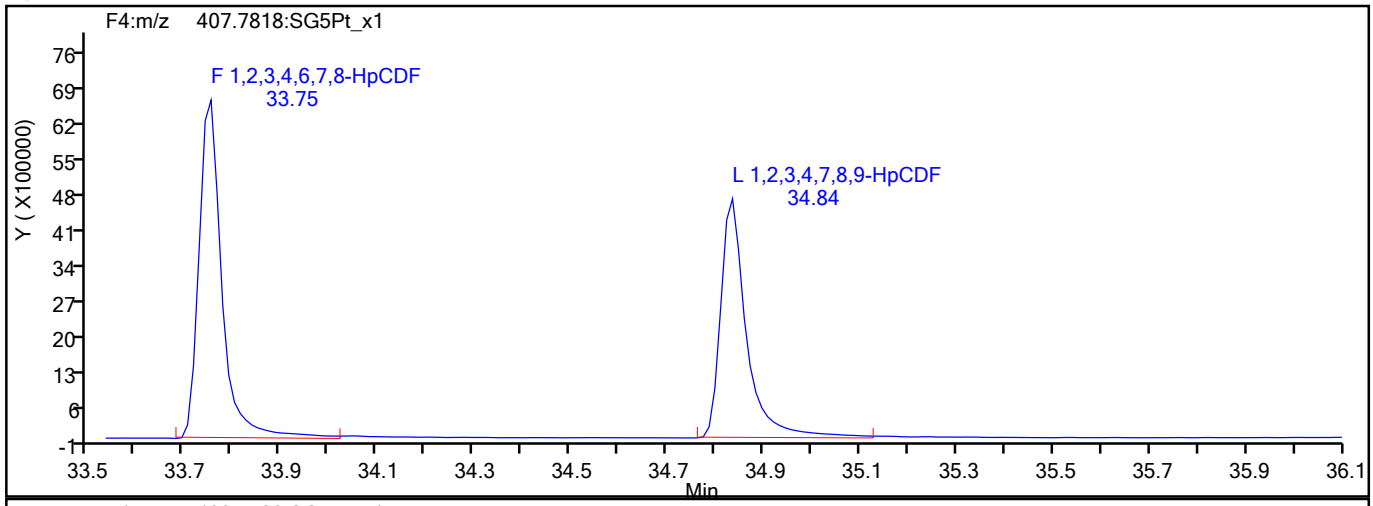

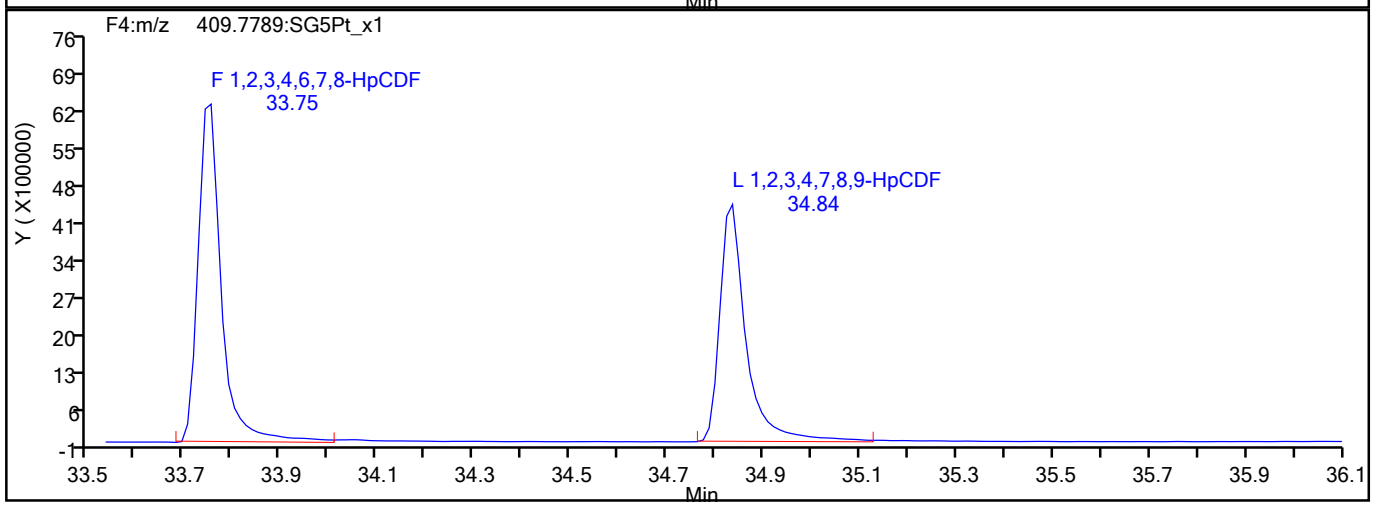

HpCDF Interference Mass

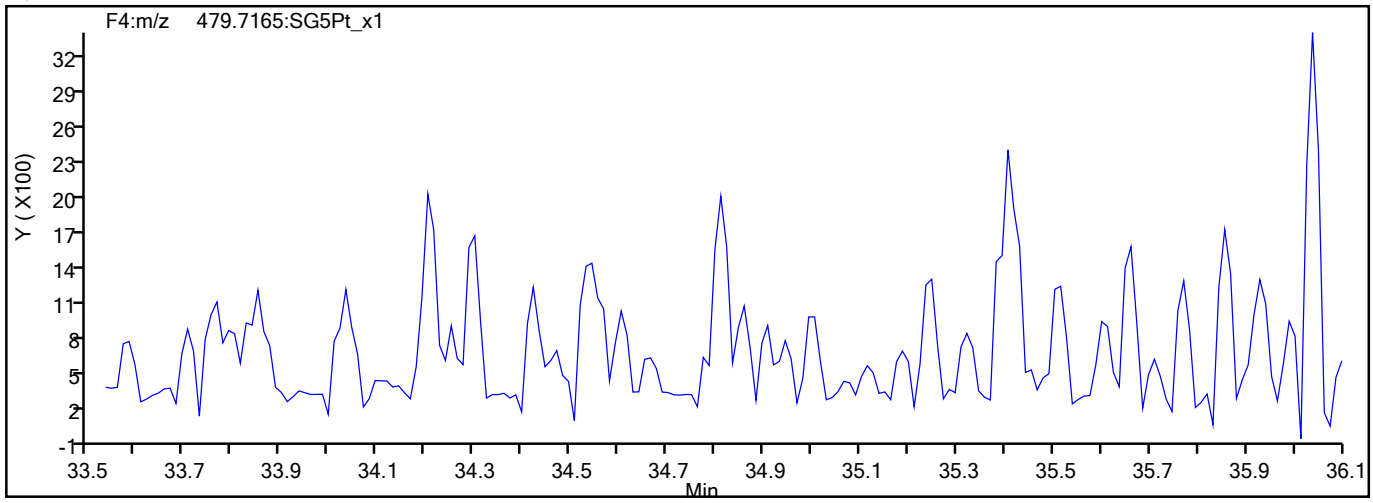

780593

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Eurofins TestAmerica, Sacramento

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HpCDD

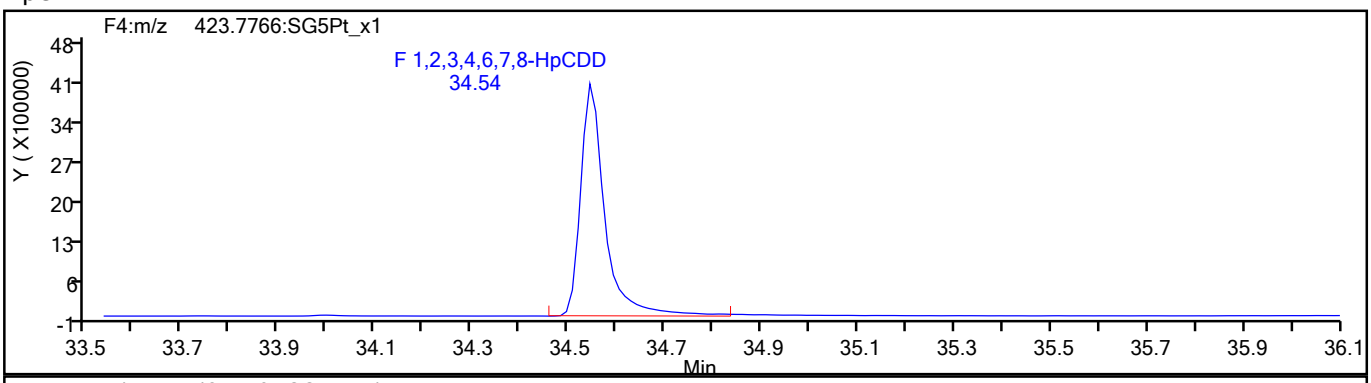

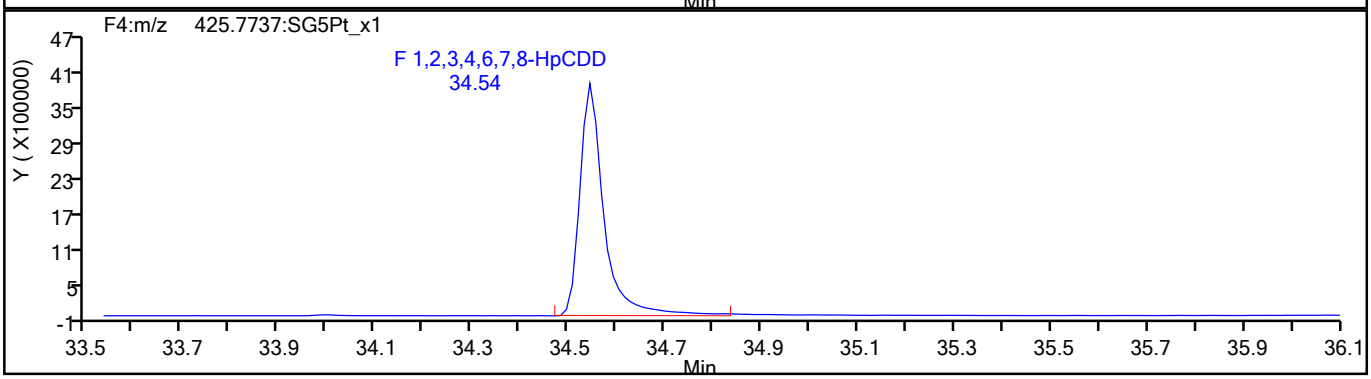

HpCDD Standards

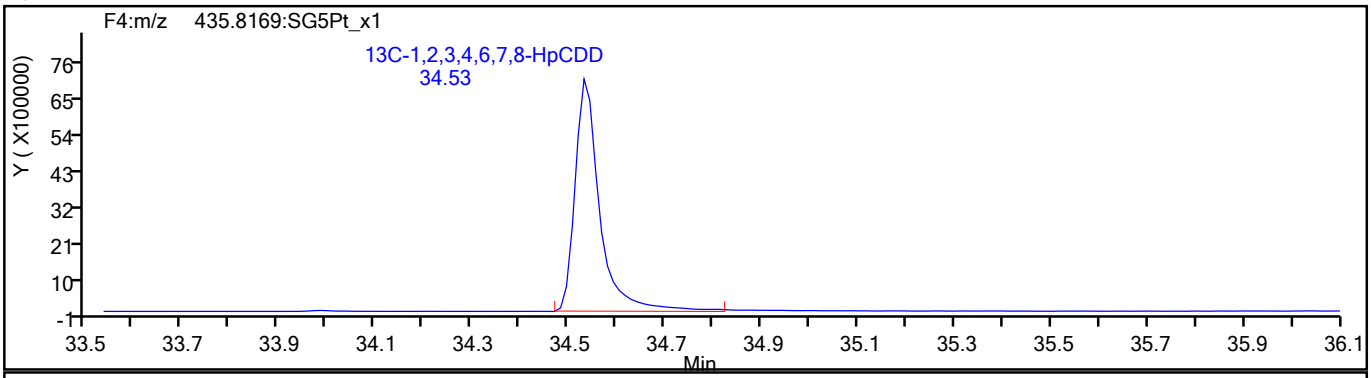

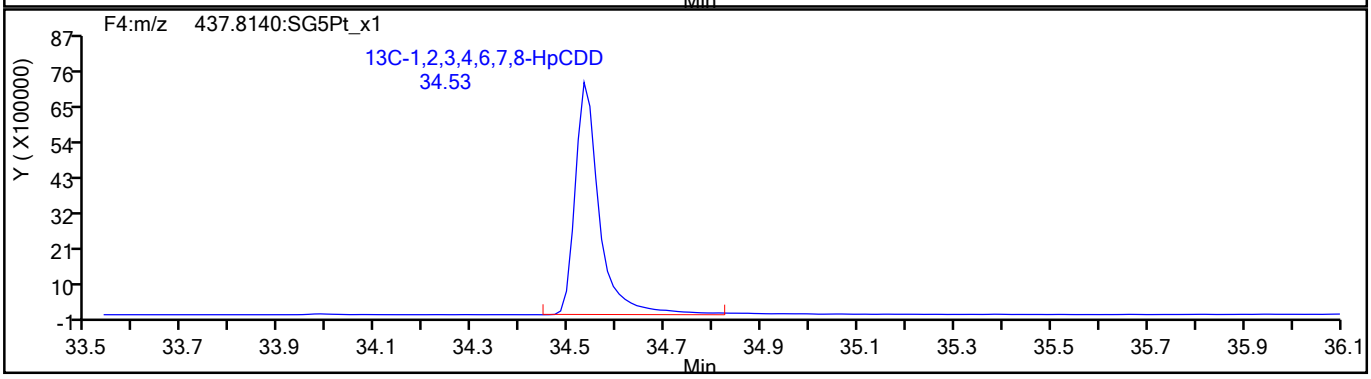

780594

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Eurofins TestAmerica, Sacramento

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OCDF

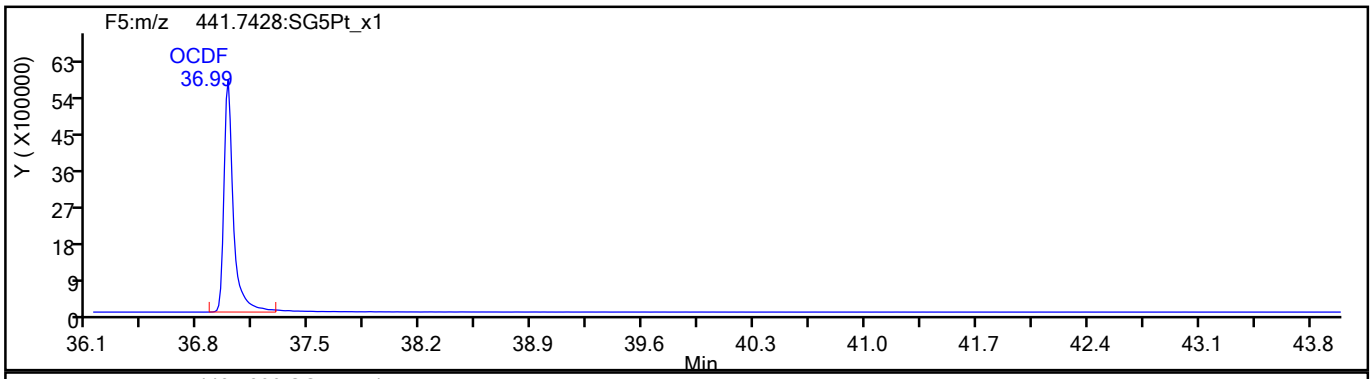

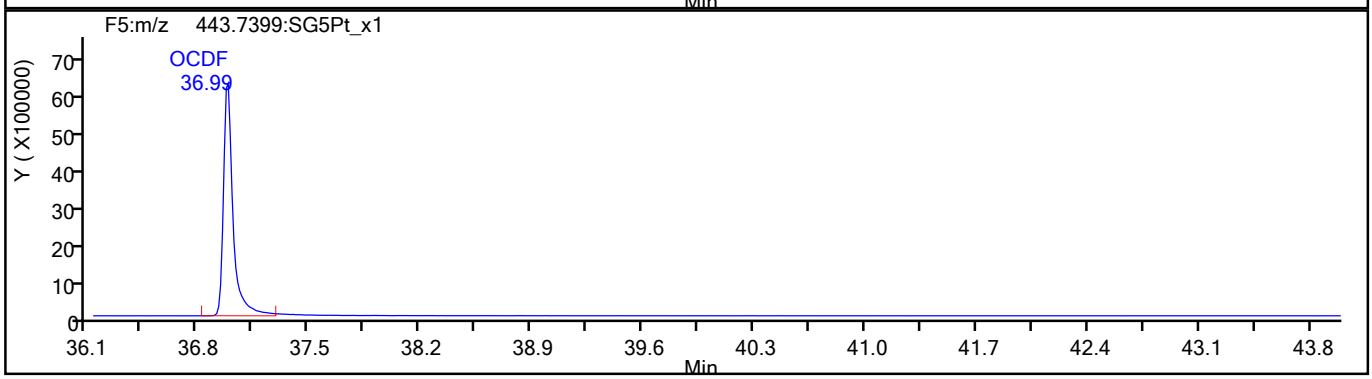

OCDF Standards

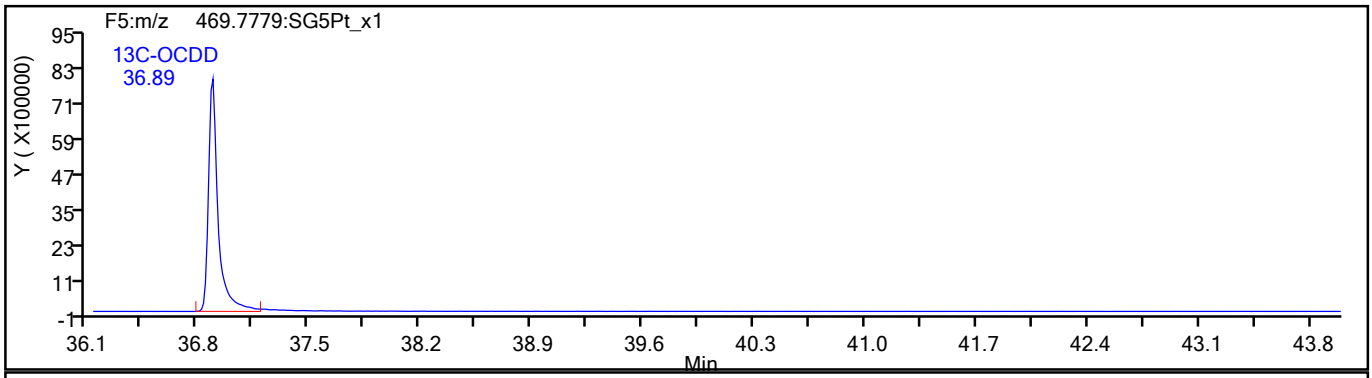

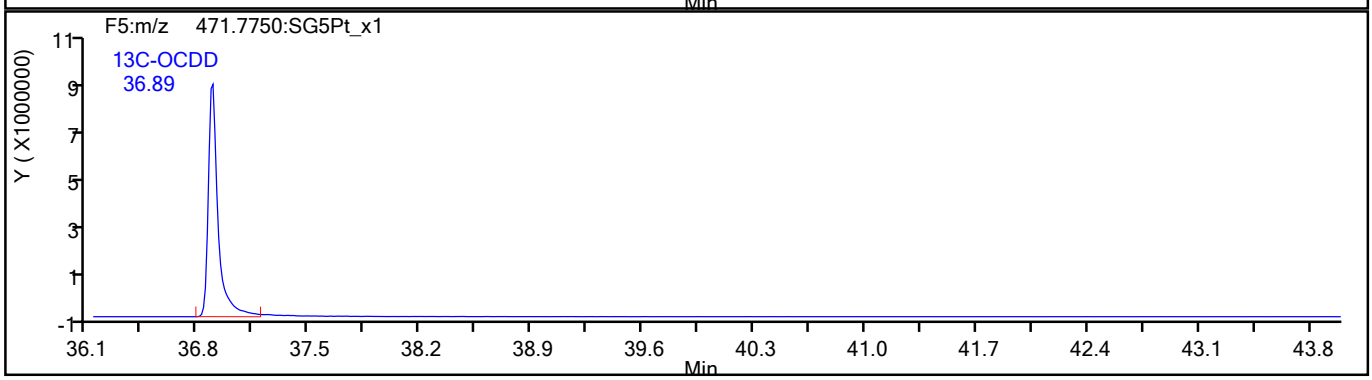

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Eurofins TestAmerica, Sacramento

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OCDF

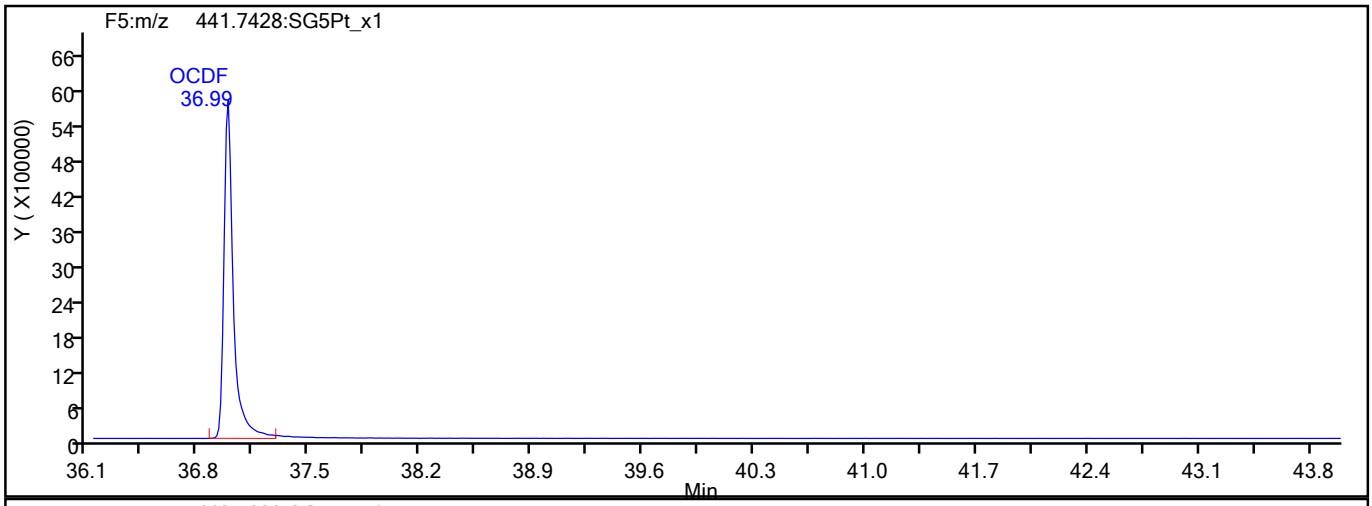

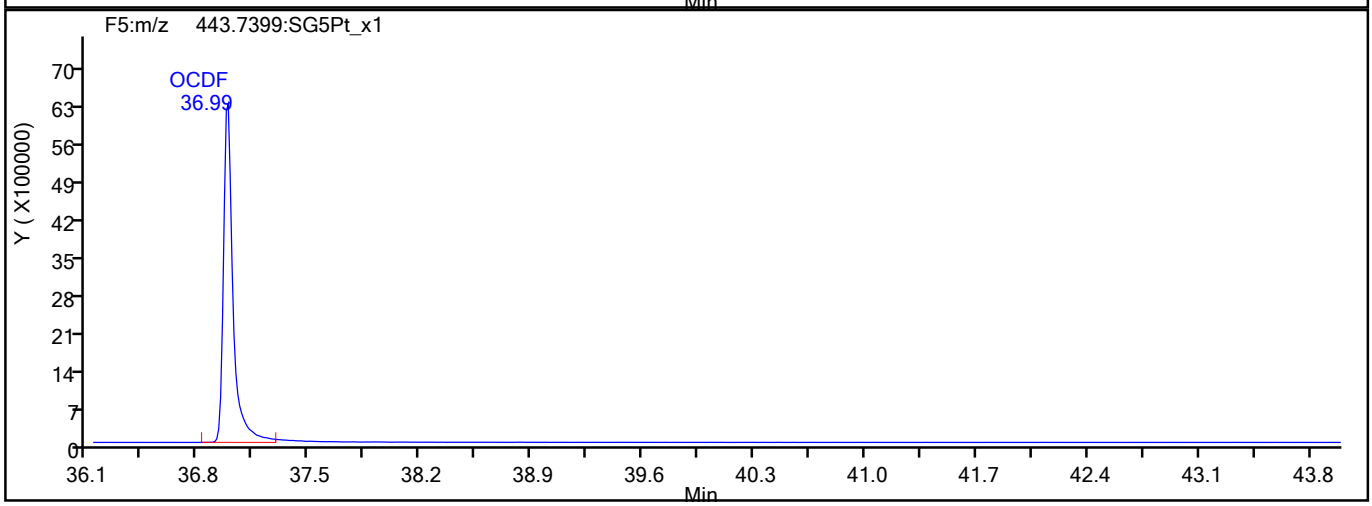

OCDF Interference Mass

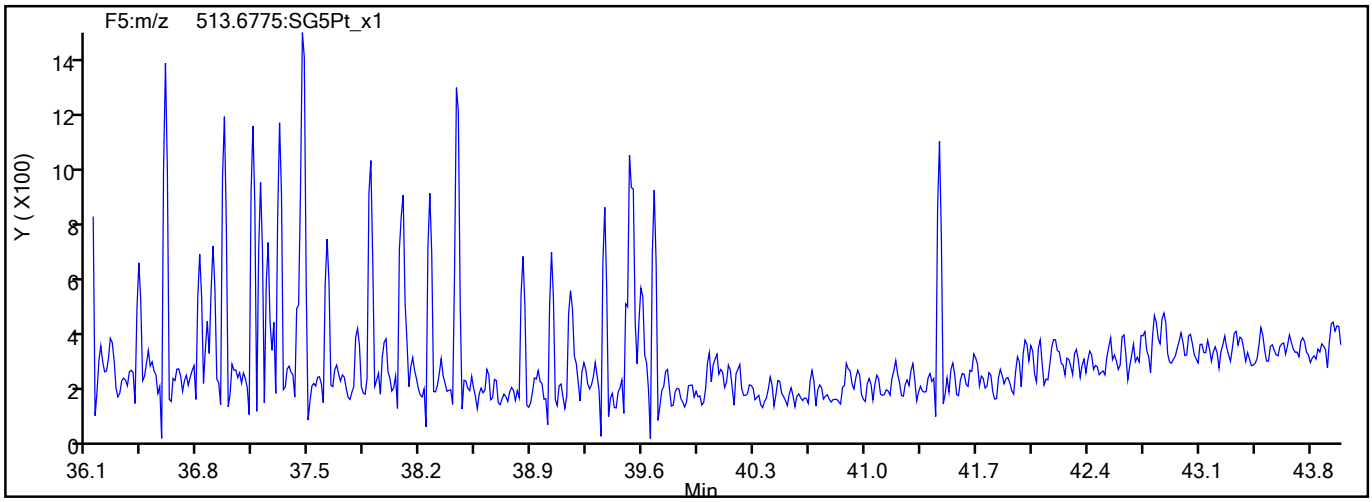

780596

Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_12.d		
Injection Date:	17-Aug-2021 23:49:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

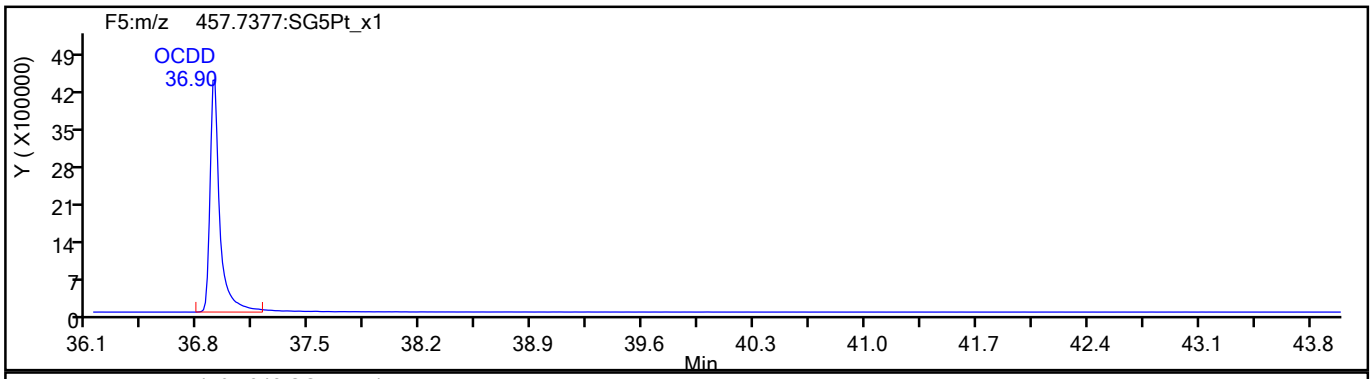

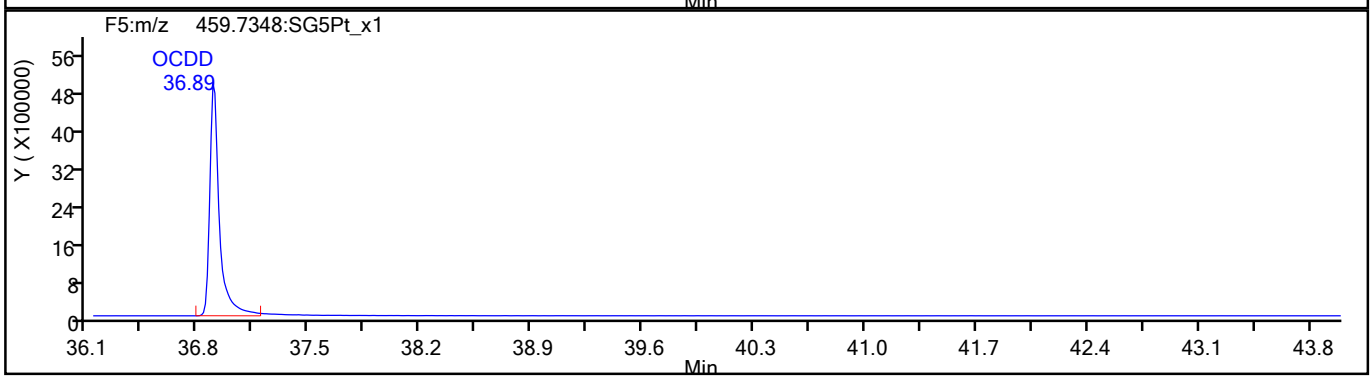

OCDD Standards

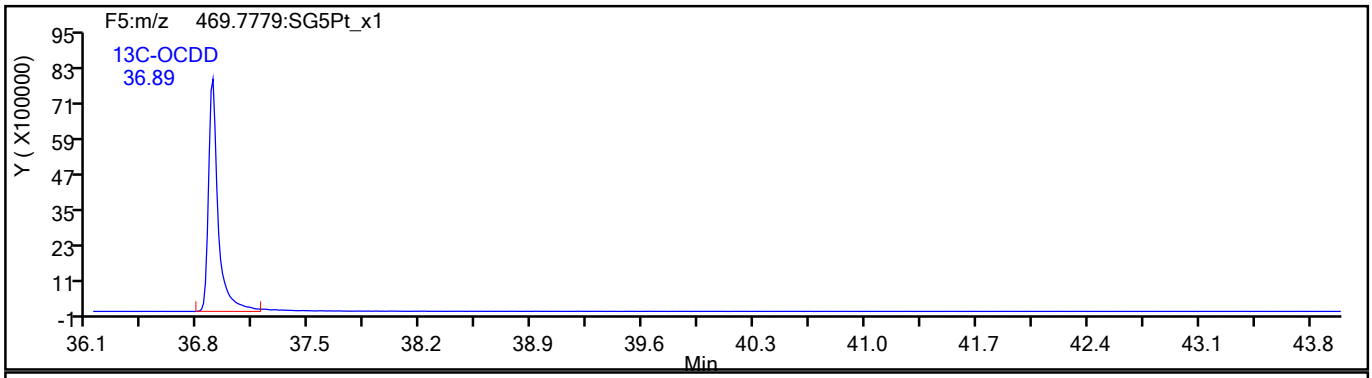

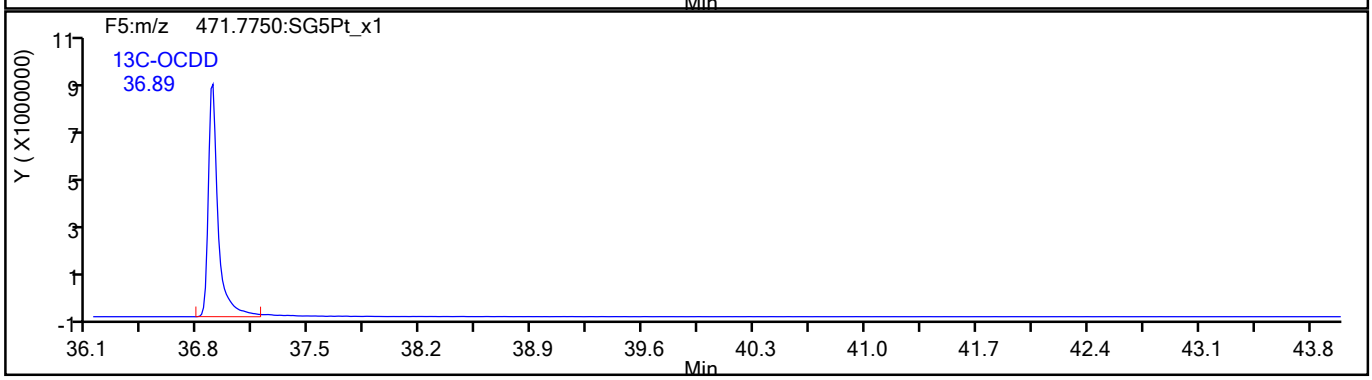

780597

Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_12.d		
Injection Date:	17-Aug-2021 23:49:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

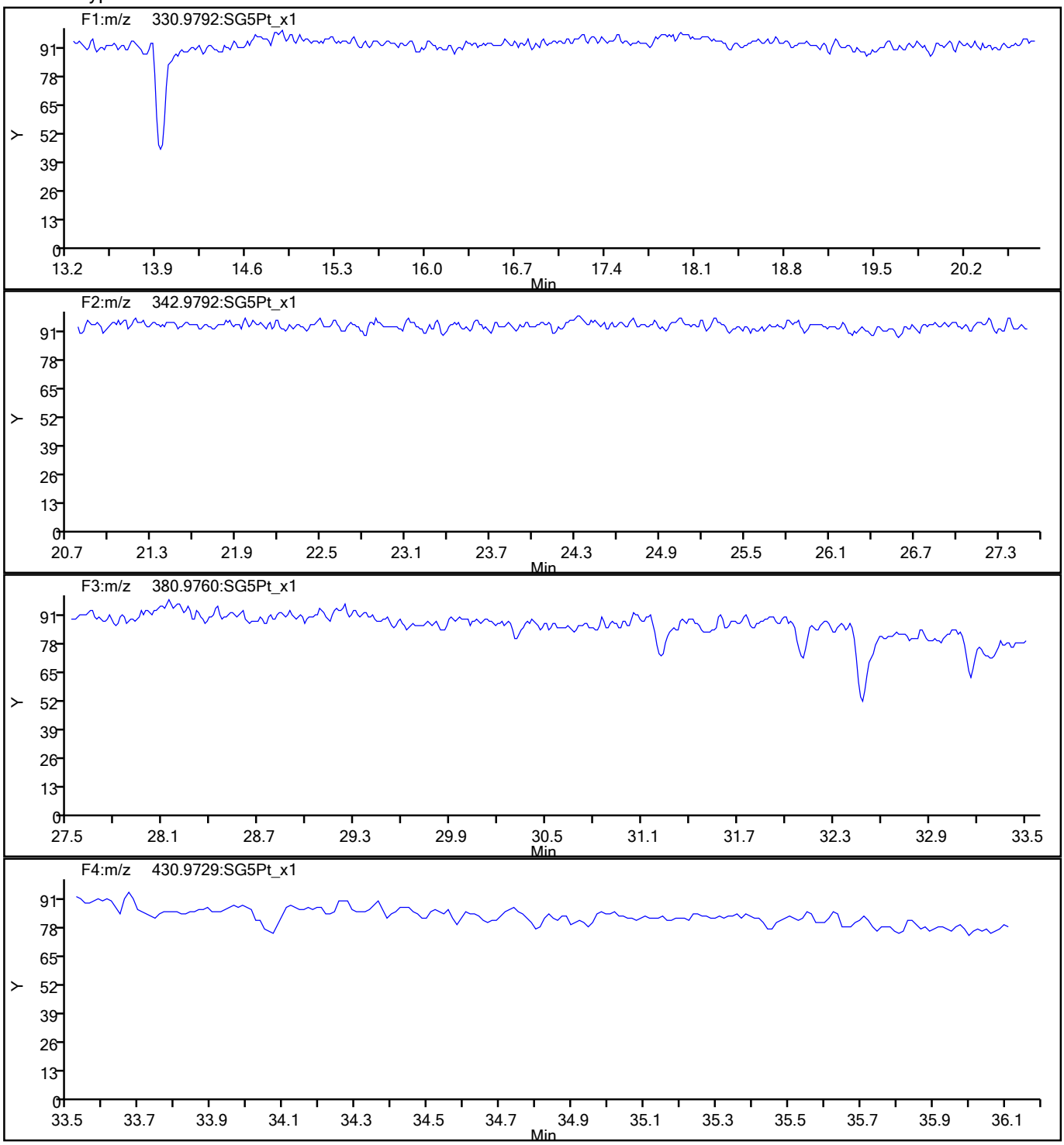

780598

Report Date: 18-Aug-2021 11:41:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_12.d		
Injection Date:	17-Aug-2021 23:49:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

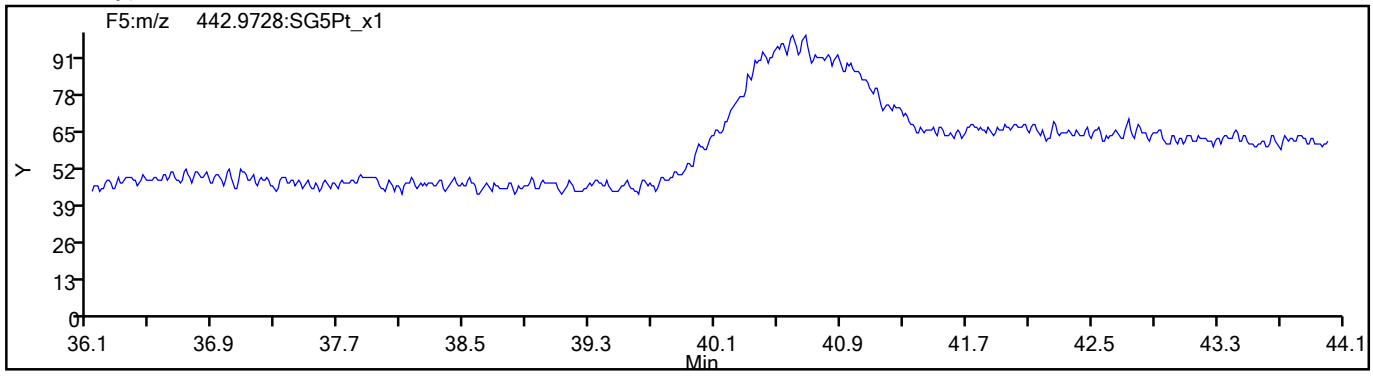

780599

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

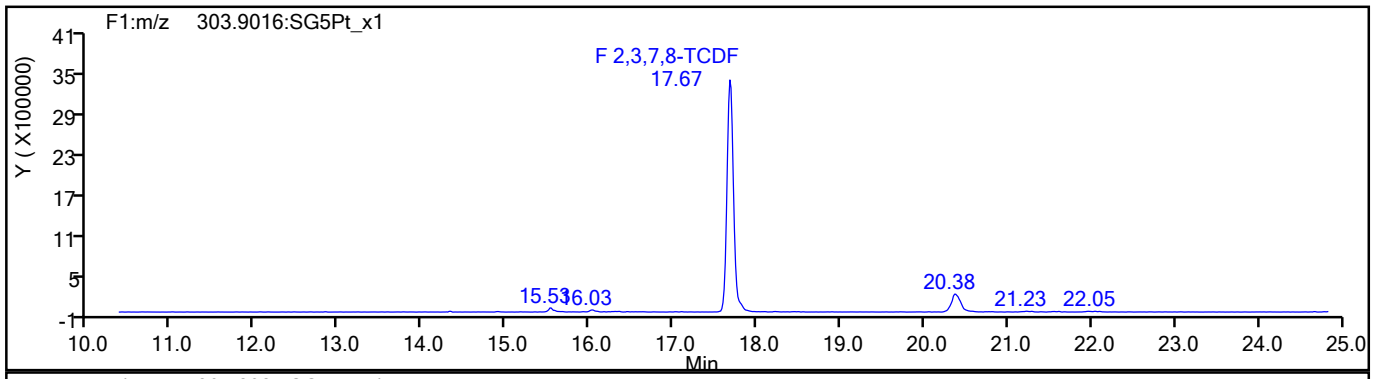

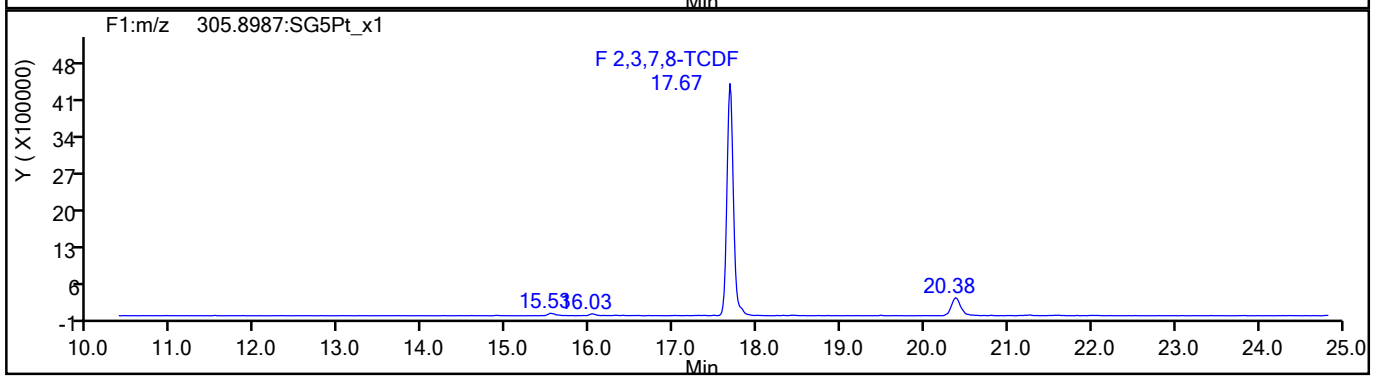

TCDF Standards

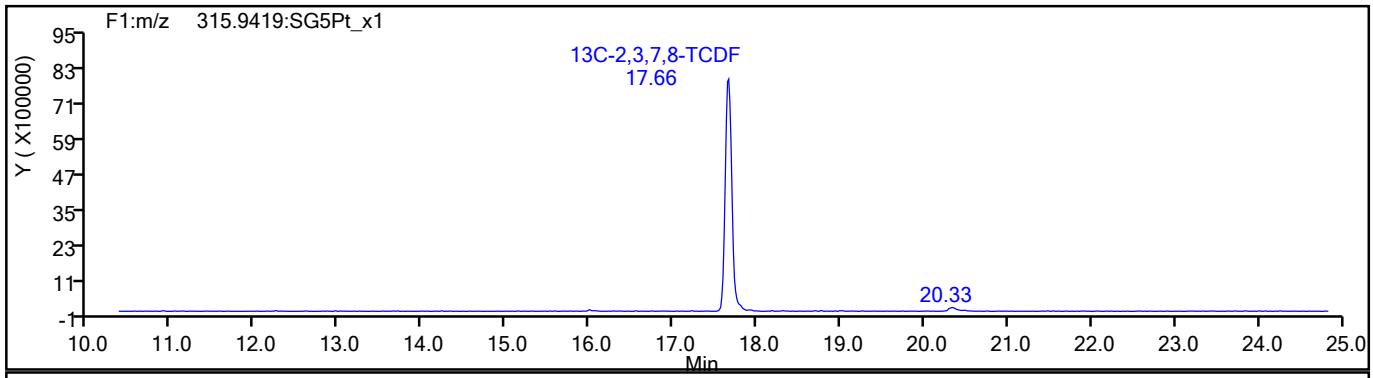

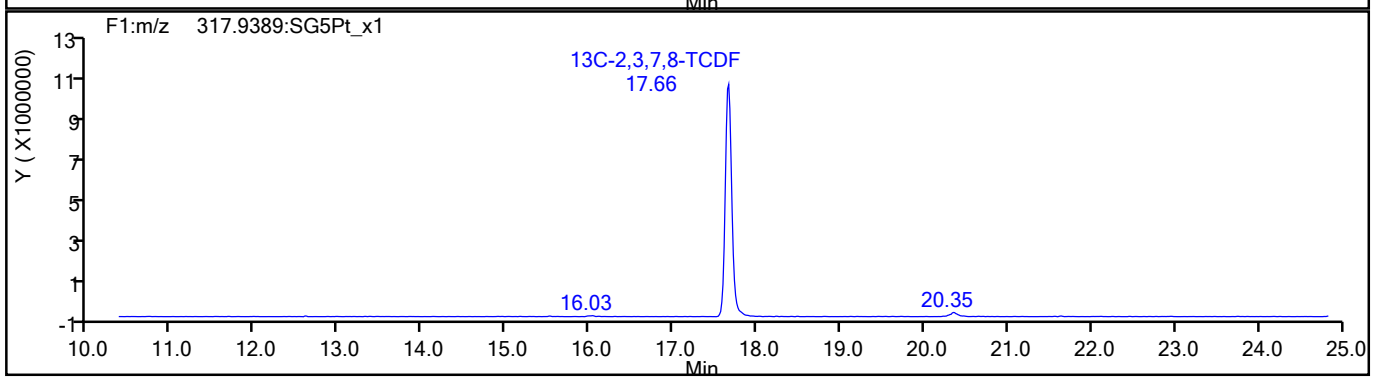

780603

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

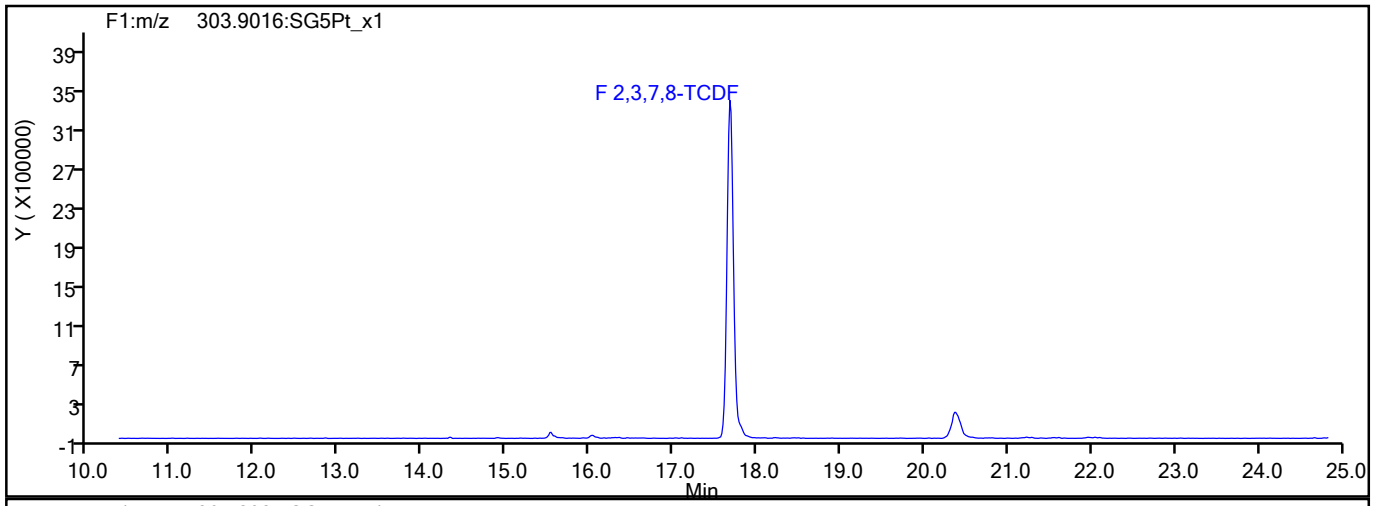

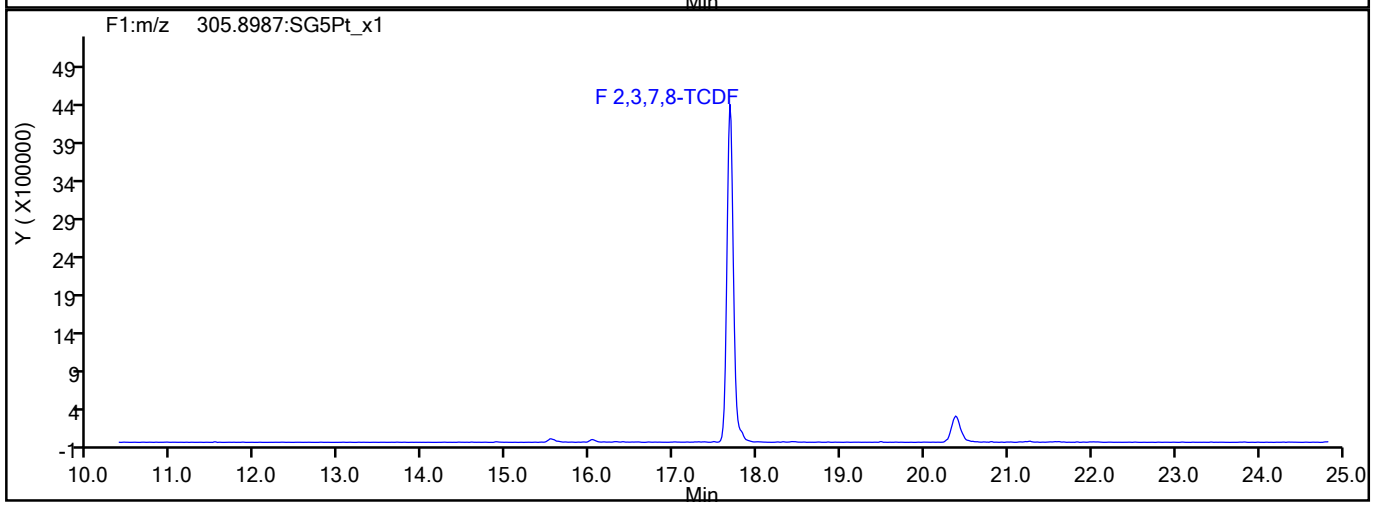

TCDF Interference Mass

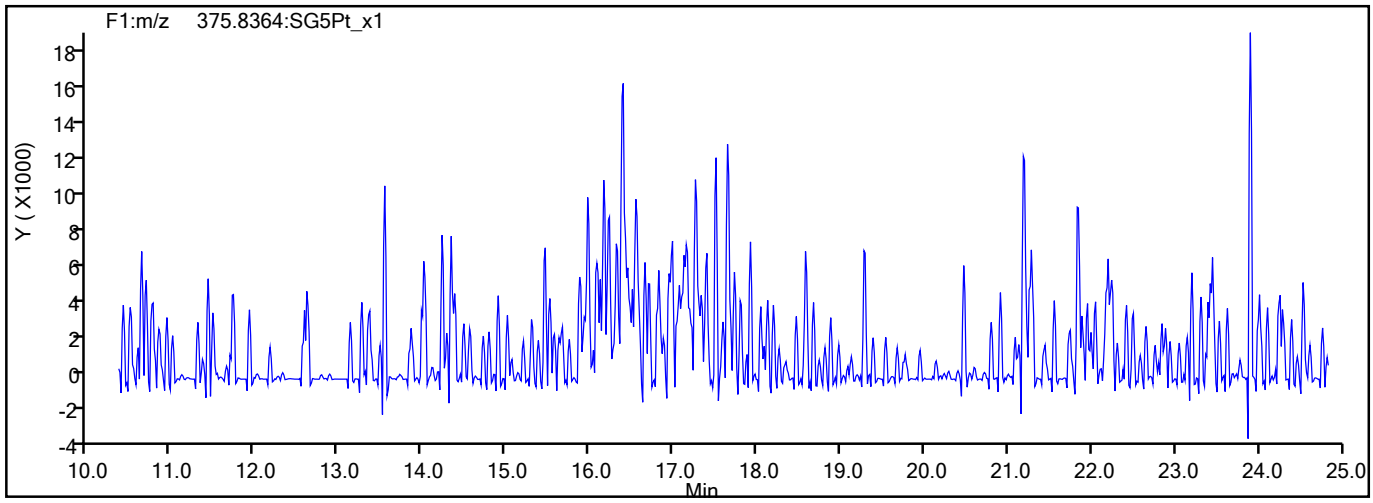

780604

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

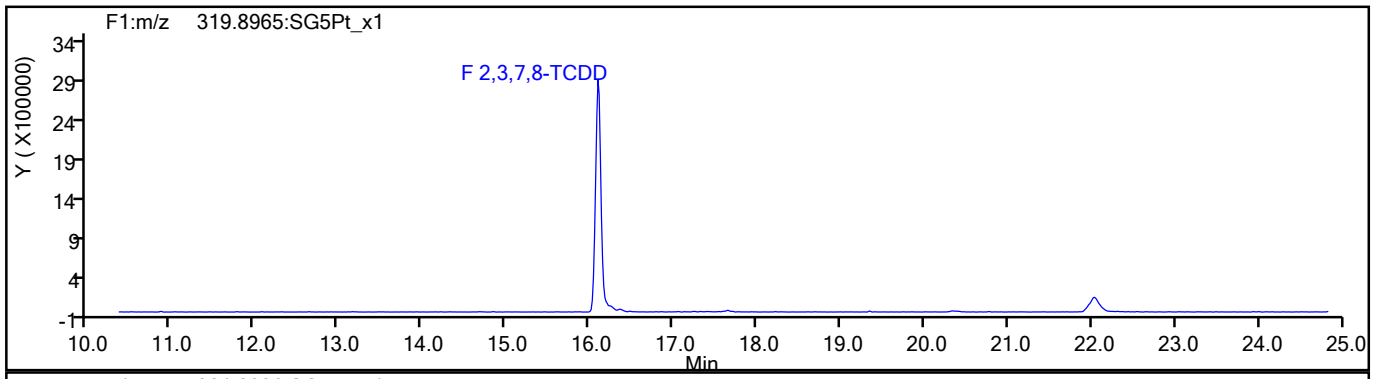

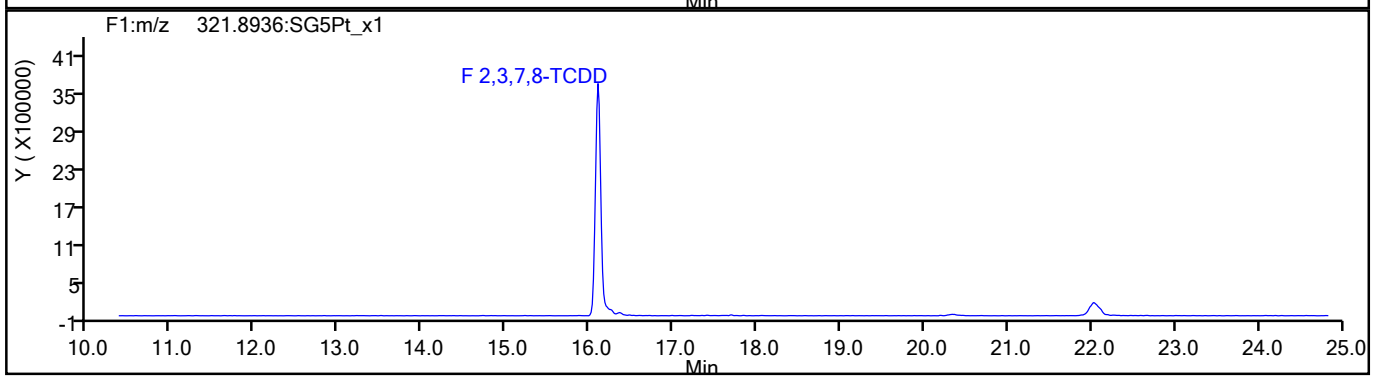

TCDD Standards

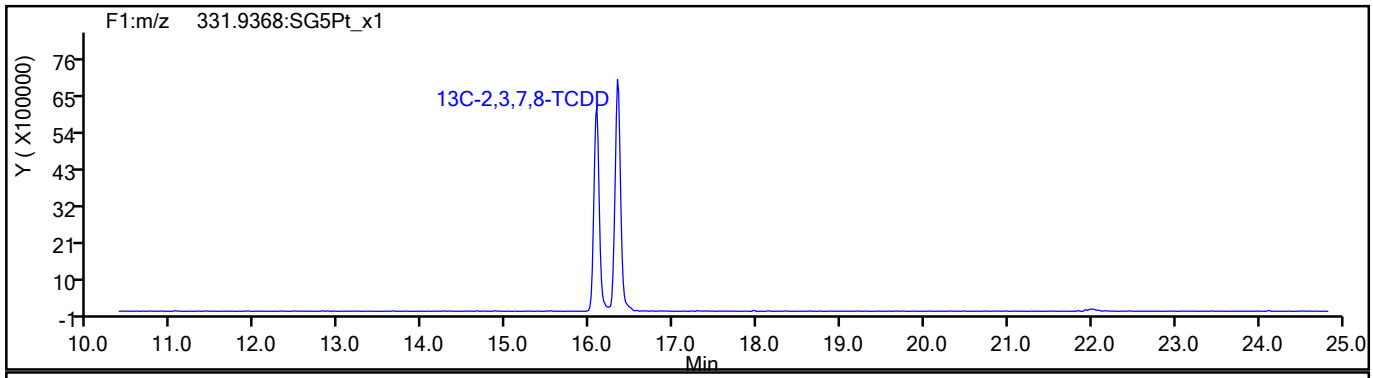

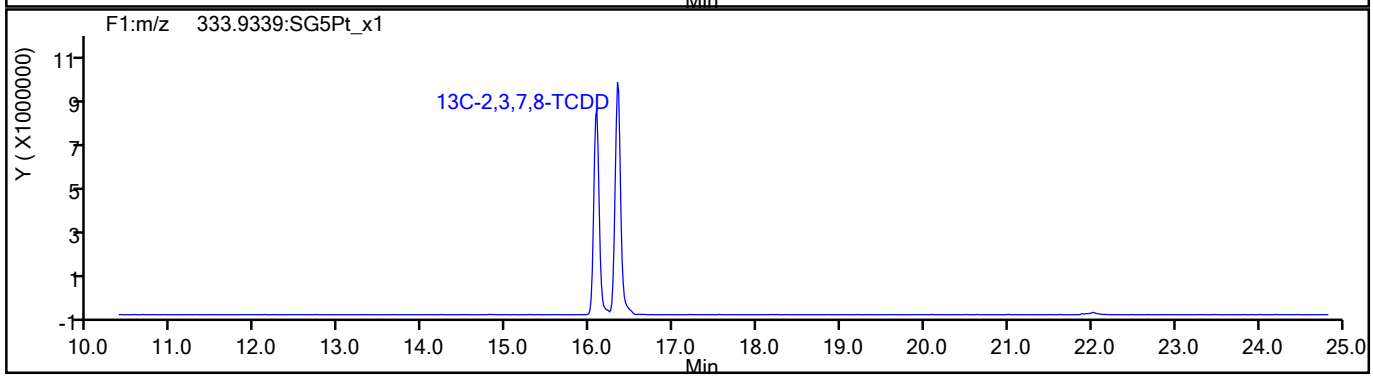

780605

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

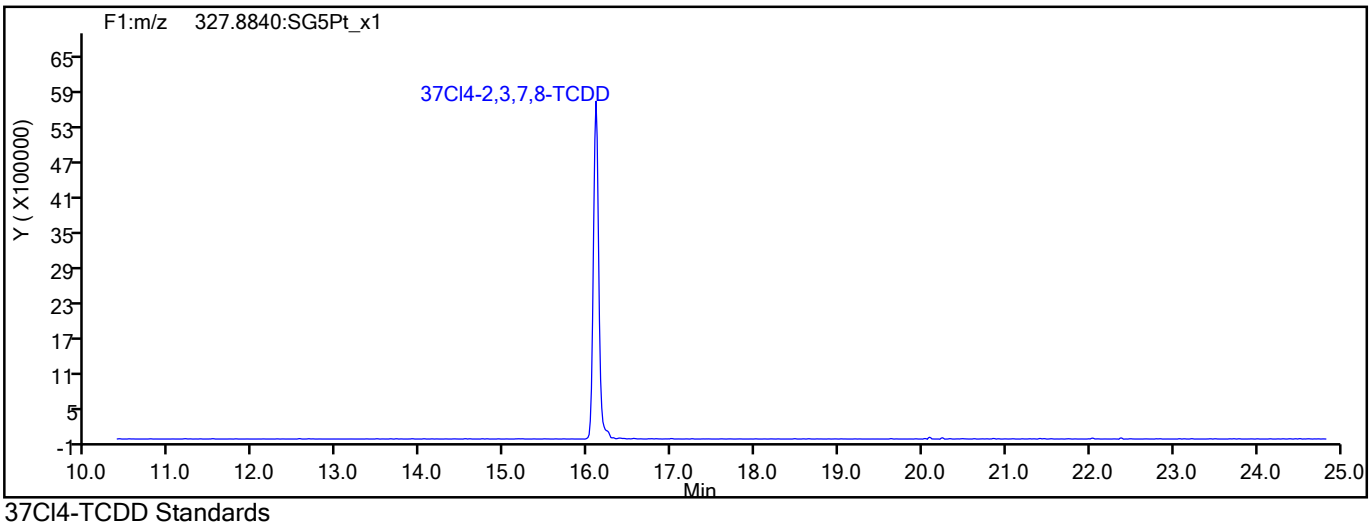

37Cl4-TCDD Standards

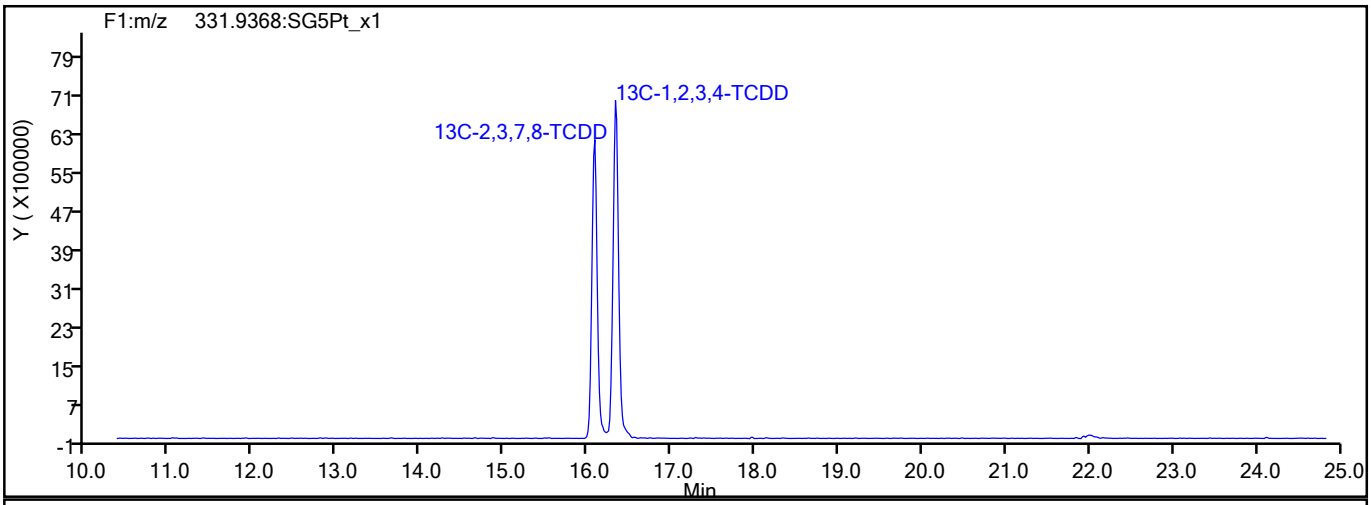

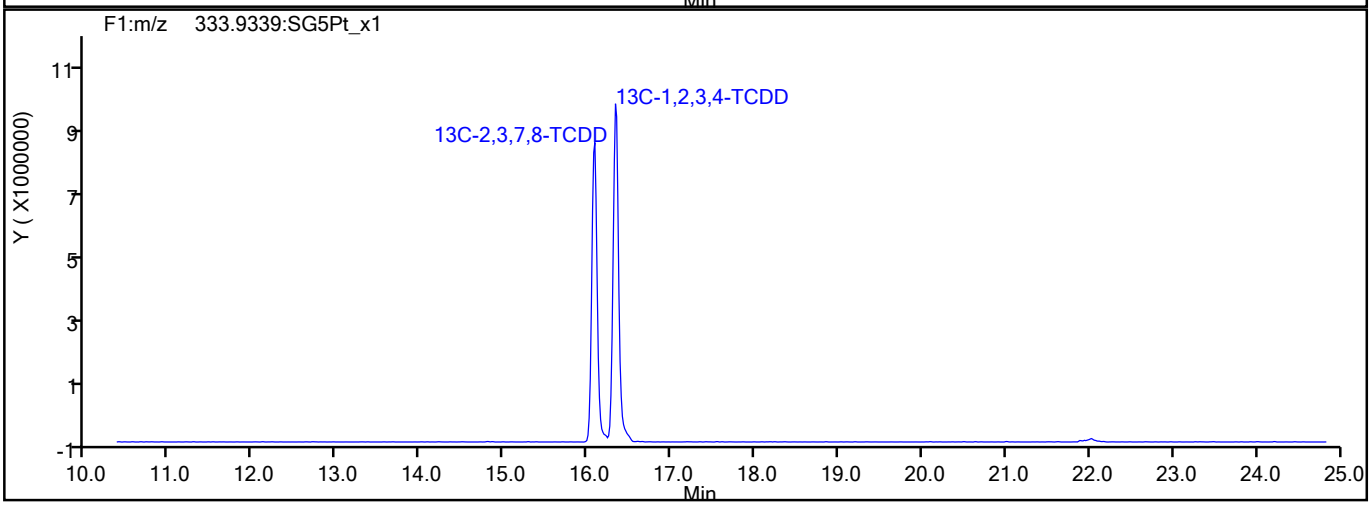

780606

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

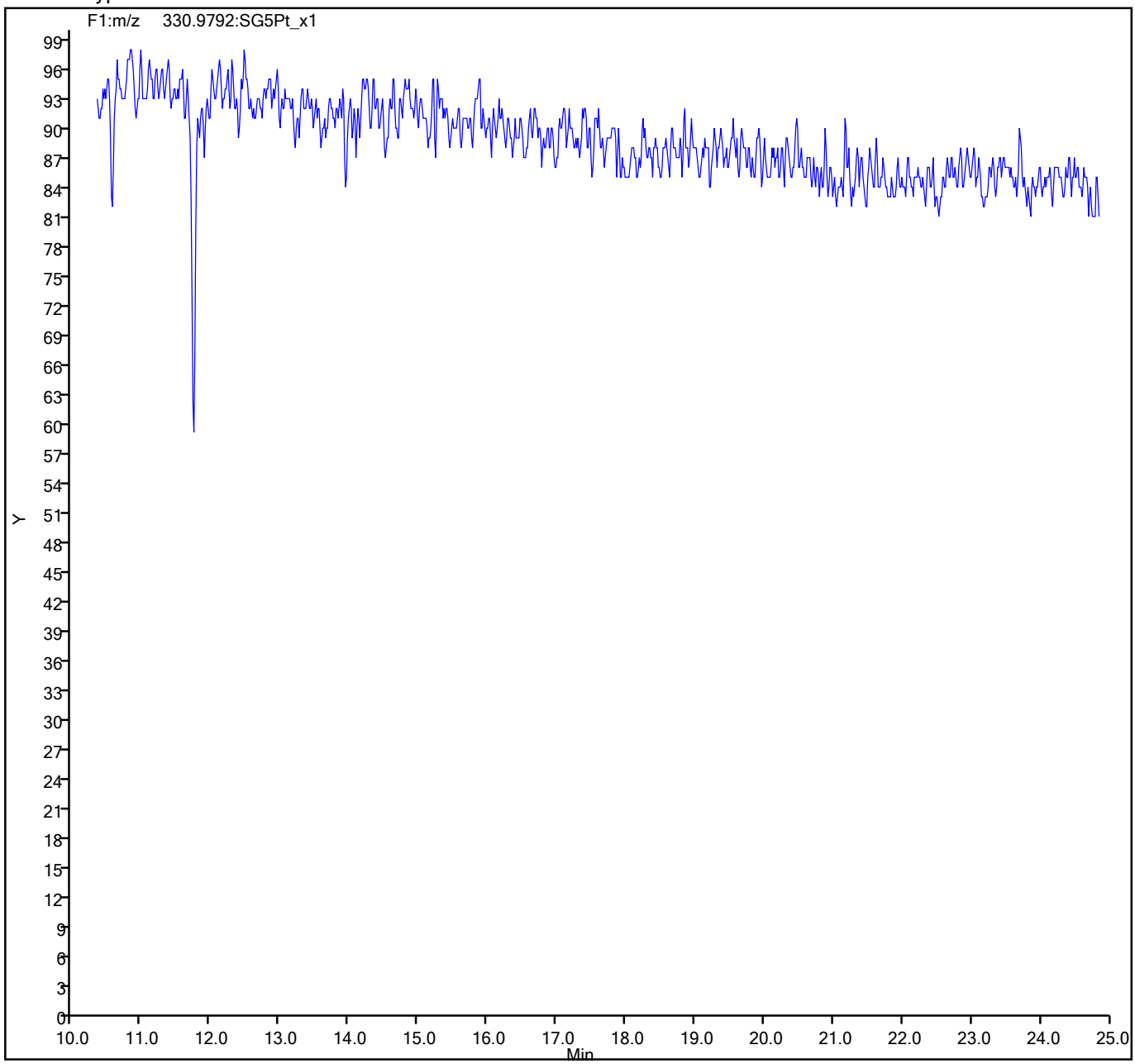

780607

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID: CCV 320-519540/1 Calibration Date: 08/24/2021 16:36

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 24AU21A11D2_001.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.019		9.64	10.0	96	78-129
2,3,7,8-TCDF	AveID	0.998	0.9386		9.41	10.0	94	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9428		108	100	108	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.512		113	100	113	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9238		10.7	10.0	107	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
24AU21A11D2	1	CCV 082421A	CCV CS-4 HRDXNL4_00100				1.00000	
24AU21A11D2	2	CPS 082421A	CPS HRDXNCP_00044				1.00000	
24AU21A11D2	3	SB 082421A	Solvent Blank C-14				1.00000	
24AU21A11D2	4	320-512871	320-76788-A-6-A	20	1613B/Solid	D265	10.00000	g
24AU21A11D2	5	320-512871	320-76788-A-7-A	20	1613B/Solid		10.00000	g
24AU21A11D2	6	320-512871	320-76788-A-8-A	20	1613B/Solid		10.00000	g
24AU21A11D2	7	320-512871	320-76788-A-17-A	20	1613B/Solid		10.00000	g
24AU21A11D2	8	320-512871	320-76788-A-18-A	20	1613B/Solid		10.00000	g
24AU21A11D2	9	320-512871	320-76788-A-3-A	20	1613B/Solid		10.00000	g
24AU21A11D2	10	320-512871	320-76788-A-4-A	20	1613B/Solid		10.00000	g
24AU21A11D2	11	320-512871	320-76788-A-5-A	20	1613B/Solid		10.00000	g
24AU21A11D2	12	320-512871	320-76788-A-16-A	20	1613B/Solid		10.00000	g
24AU21A11D2	13	320-512871	320-76788-A-20-A	20	1613B/Solid		10.00000	g
24AU21A11D2	14	320-512871	320-76788-A-15-A	20	1613B/Solid		10.00000	g
24AU21A11D2	15	320-512871	320-76788-A-19-A	20	1613B/Solid		10.00000	g
24AU21A11D2	16	320-512871	320-76788-A-2-A	20	1613B/Solid		10.00000	g
24AU21A11D2	17	320-513586	320-76769-A-29-A X5	20	1613B/Solid	D266	10.00000	g
24AU21A11D2	18						1.00000	
24AU21A11D2	19						1.00000	
24AU21A11D2	20						1.00000	
24AU21A11D2	21						1.00000	
24AU21A11D2	22						1.00000	
24AU21A11D2	23		KSS 08-24-21				1.00000	
24AU21A11D2	24						1.00000	

Logfile ✓'d
8/25/21 KSS

780609

Peak Locate Examination:24-AUG-2021:16:35 File:24AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

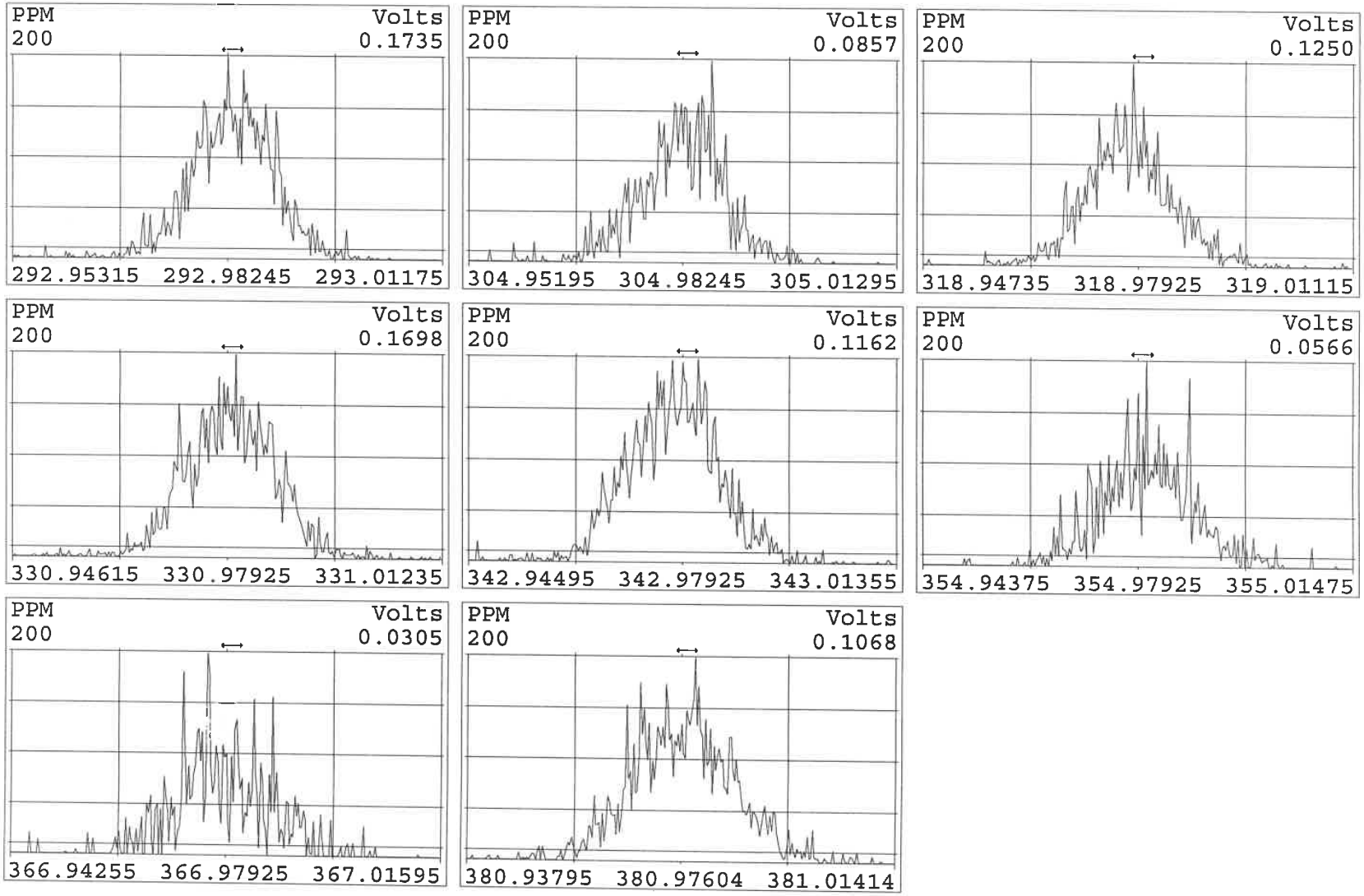

780610

Peak Locate Examination:25-AUG-2021:04:22 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

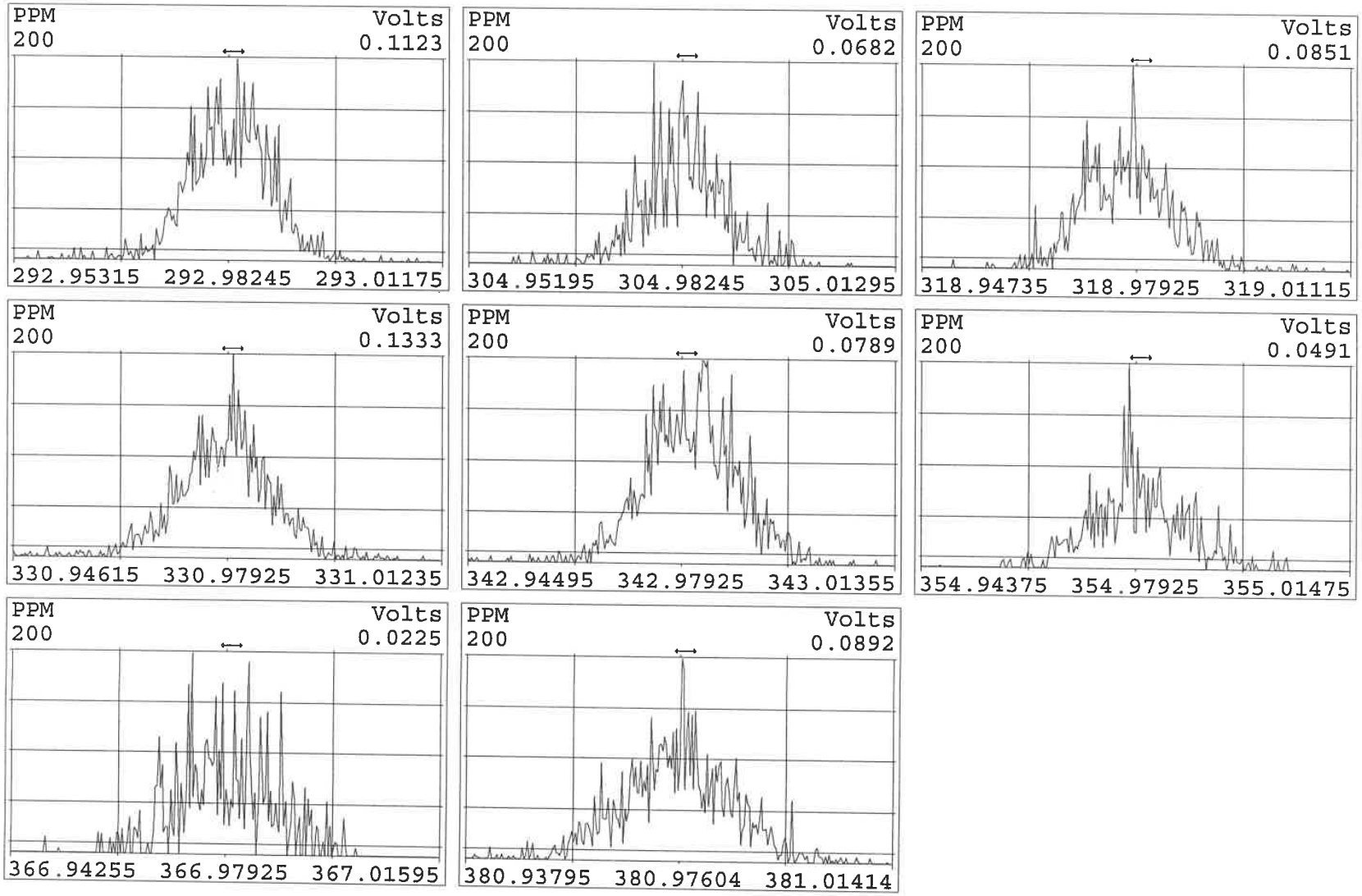

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 16:36:55 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:36 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:28:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.285	62164442	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.602	93993554	0.79	1.3327	113.5	113.5	0.2347	0.2347	113	
2,3,7,8-TCDF	17.615	8822131	0.80	0.9978	9.407	9.407	0.0645	0.0645	94.07	
D 13C-2,3,7,8-TCDD	16.052	58609320	0.76	0.8749	107.8	107.8	0.3549	0.3549	108	
$ 37Cl4-2,3,7,8-TCDD	16.065	5742602		0.8648	10.7	10.7	0.0611	0.0611	107	
2,3,7,8-TCDD	16.079	5974088	0.79	1.0570	9.643	9.643	0.0750	0.0750	96.43	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 16:36:55 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:36 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:28:19

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.285	16.285	0		27386484	5995388	11249	28122	533		
333.9339	16.285	16.285	0		34777958	7818738	5907	14767	1324	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.602	17.602	0	1.081	41369014	7786772	9867	24667	789		
317.9389	17.602	17.602	0	1.081	52624540	9852779	7415	18537	1329	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.615	17.615	0	1.001	3918661	676405	2326	5815	291		
305.8987	17.615	17.615	0	1.001	4903470	919978	2213	5532	416	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.052	16.052	0	0.986	25263151	5697892	11249	28122	507		
333.9339	16.052	16.052	0	0.986	33346169	7561143	5907	14767	1280	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.065	16.065	0	0.987	5742602	1293341	2920	7300	443		
2,3,7,8-TCDD											
319.8965	16.079	16.079	0	1.002	2629449	589599	1960	4900	301		
321.8936	16.065	16.079	-1	1.001	3344639	747193	2247	5617	333	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d		
Injection Date:	24-Aug-2021 16:36:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

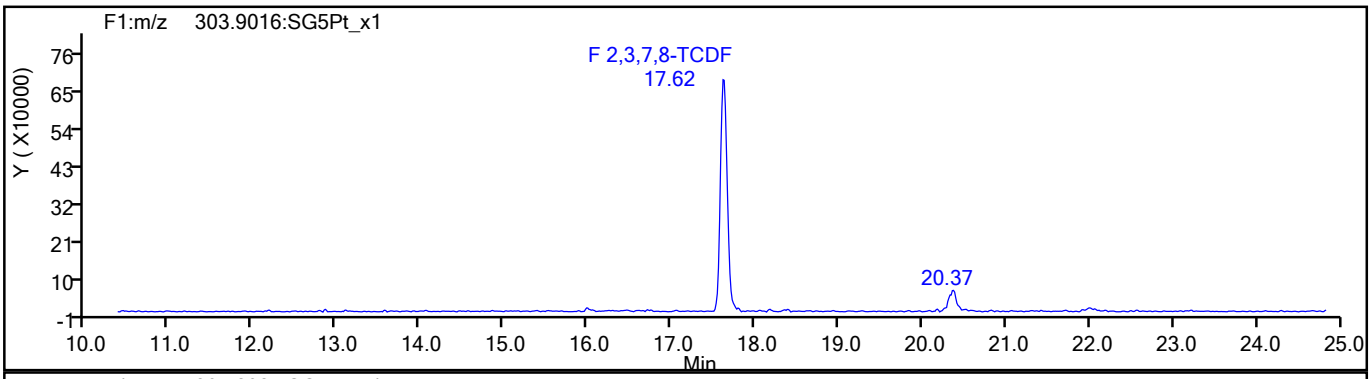

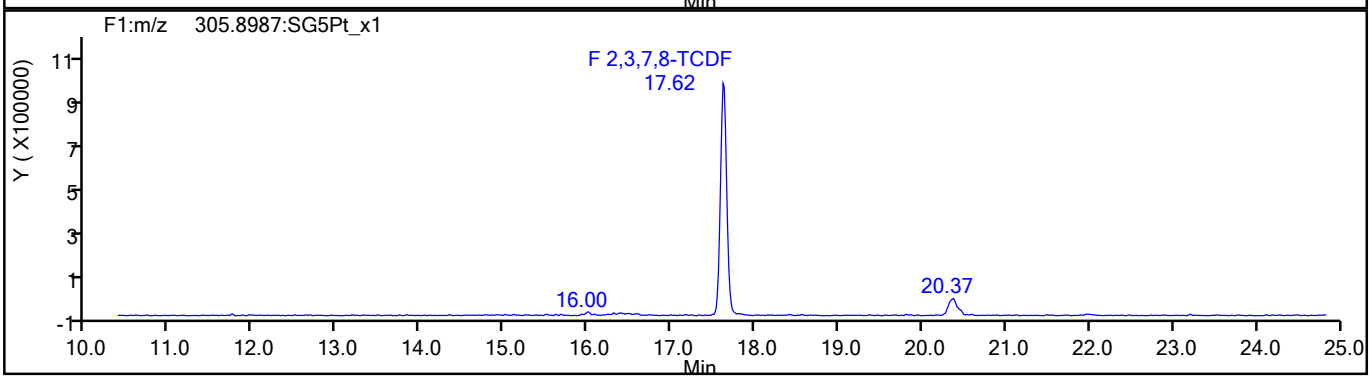

TCDF Standards

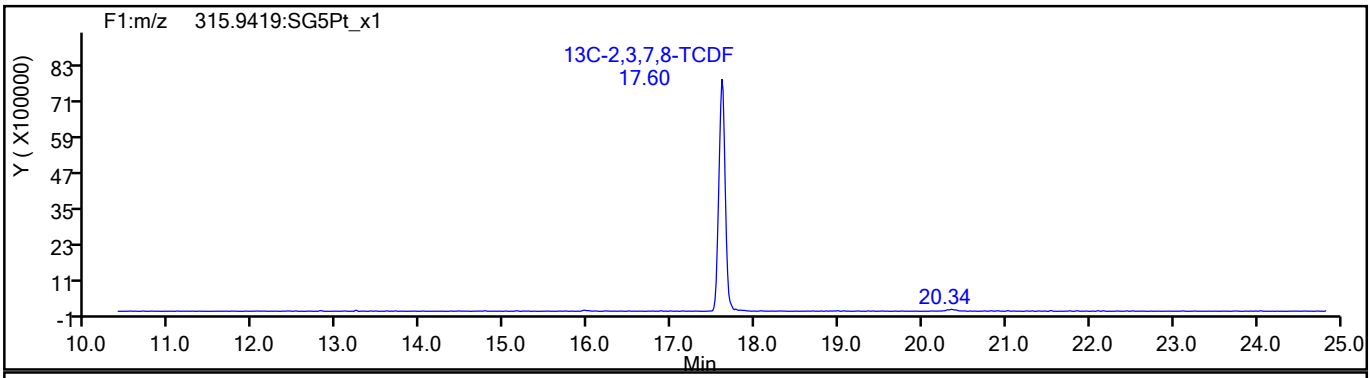

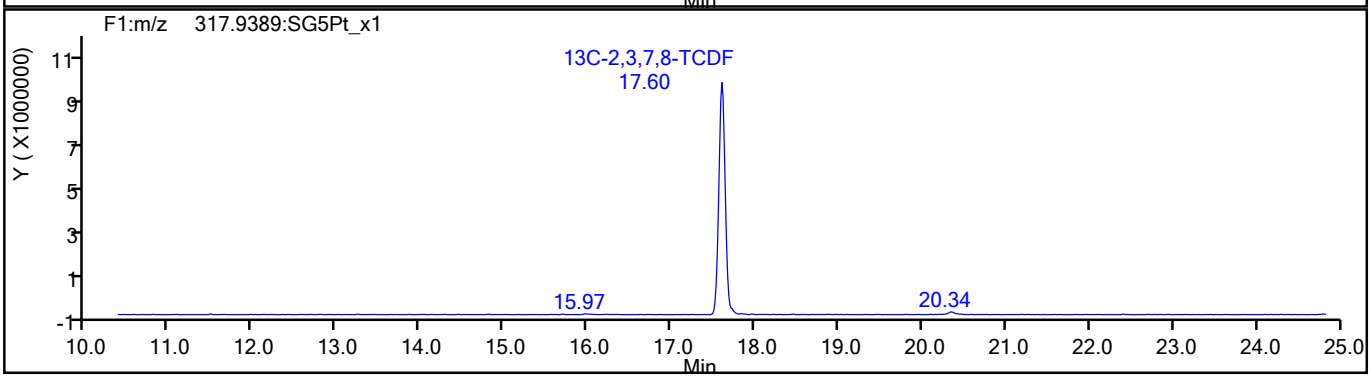

780614

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d		
Injection Date:	24-Aug-2021 16:36:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

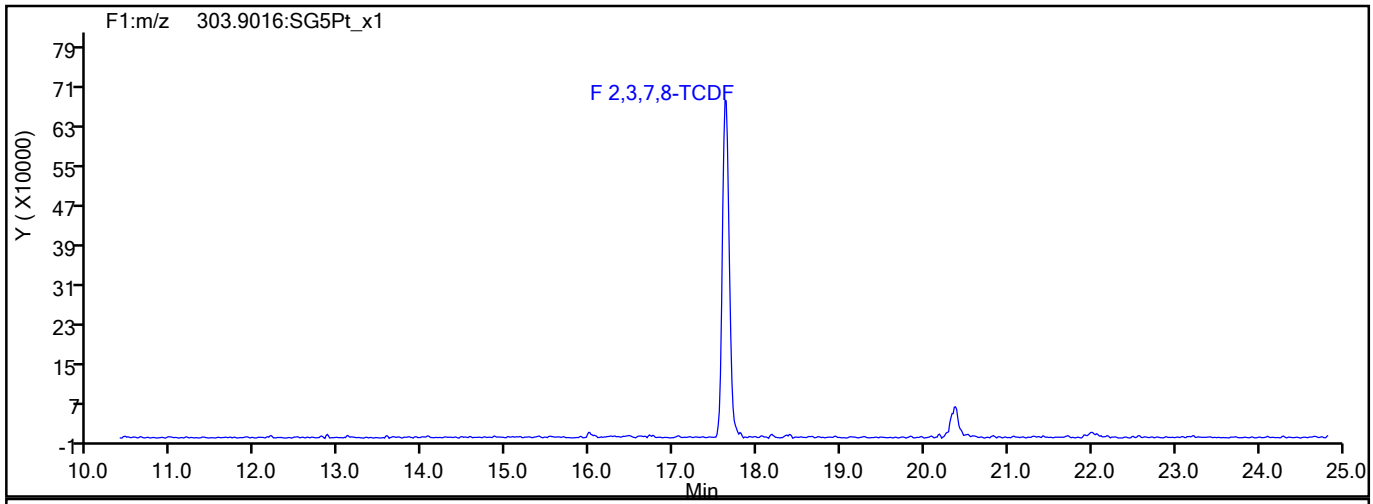

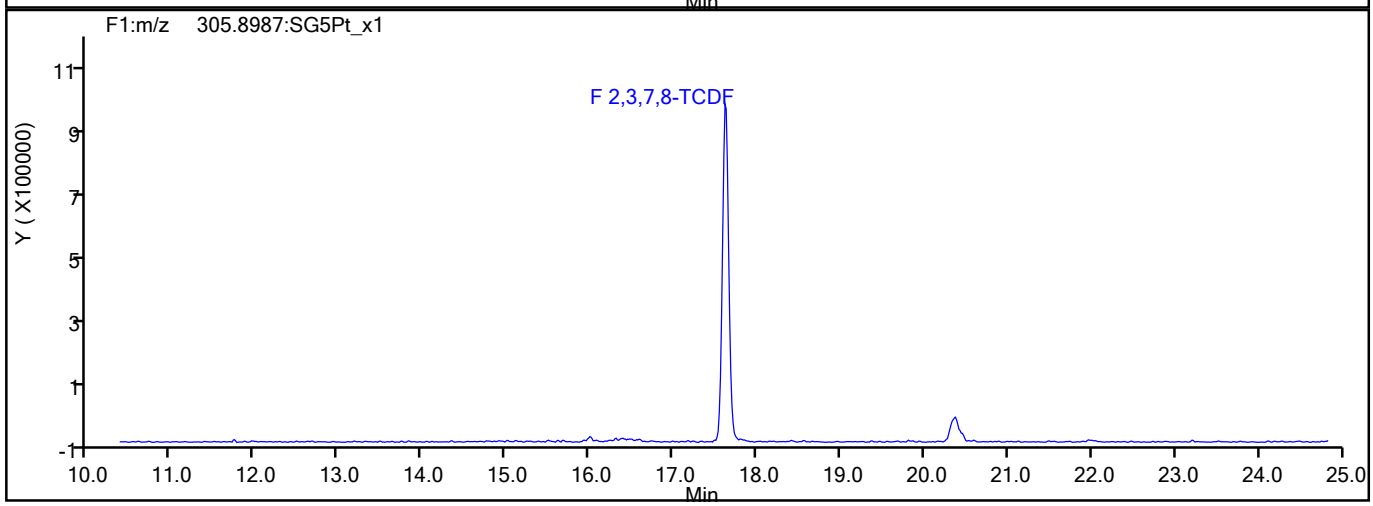

TCDF Interference Mass

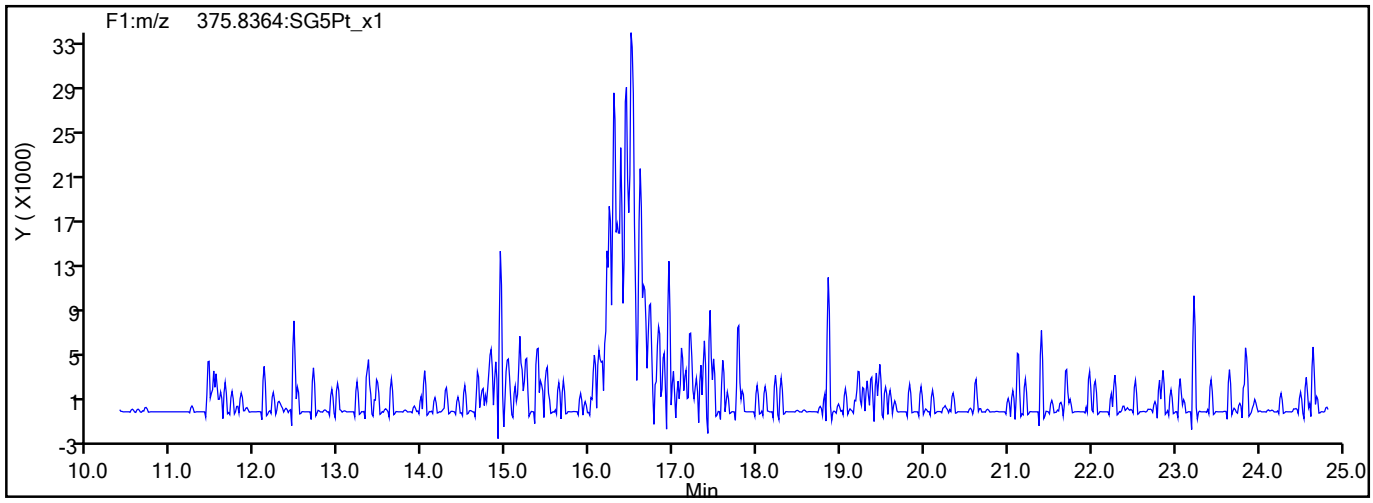

780615

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d		
Injection Date:	24-Aug-2021 16:36:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

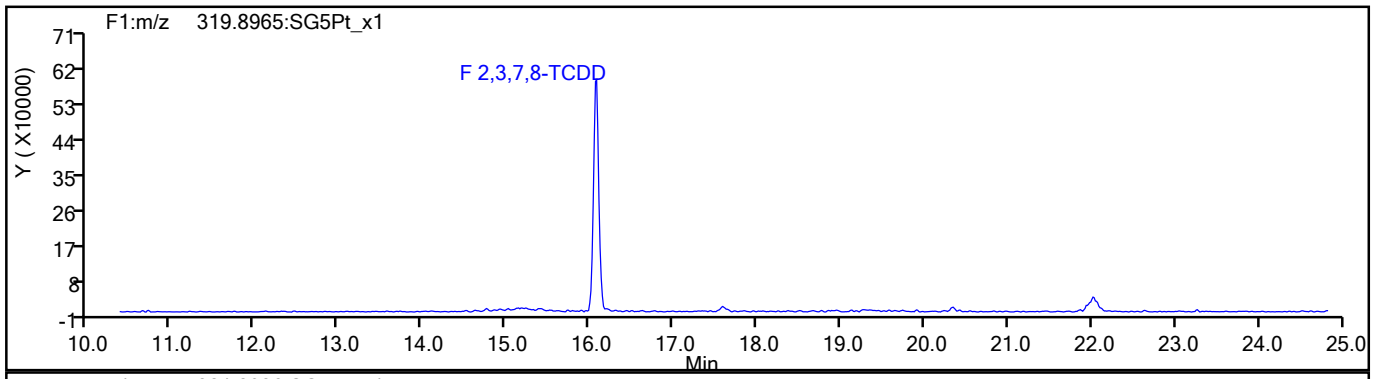

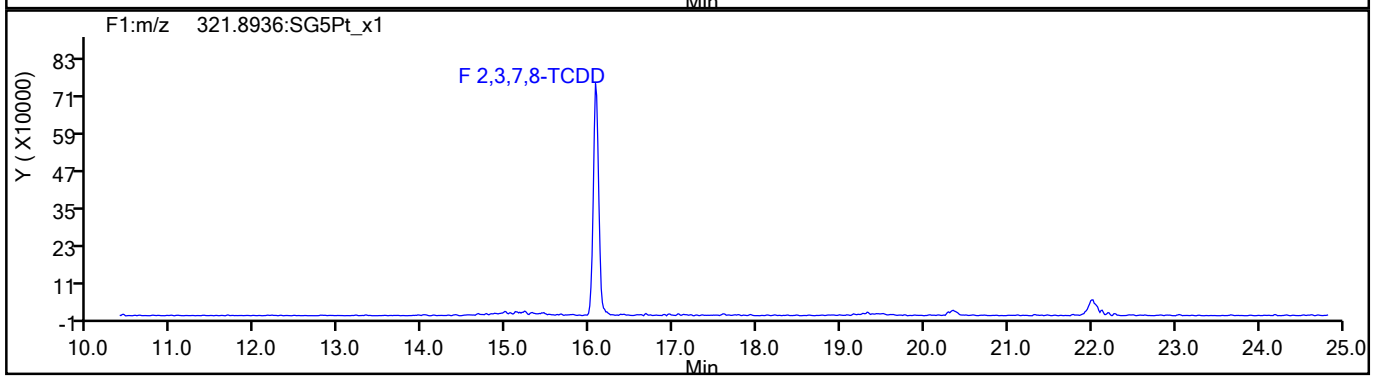

TCDD Standards

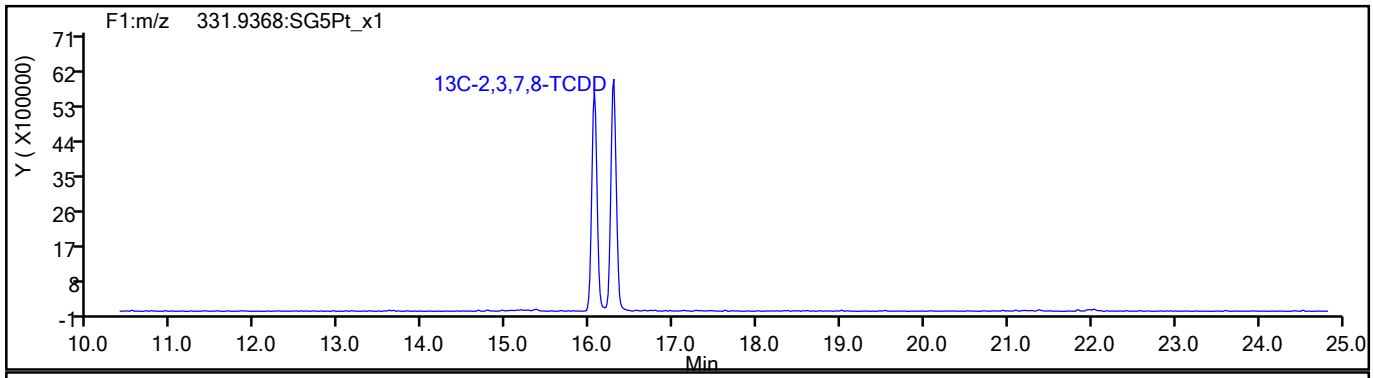

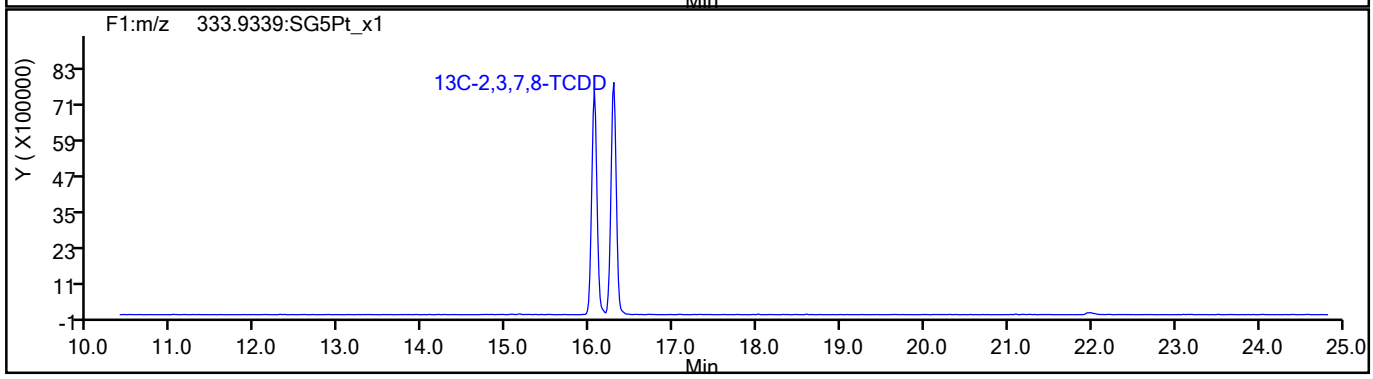

780616

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d		
Injection Date:	24-Aug-2021 16:36:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

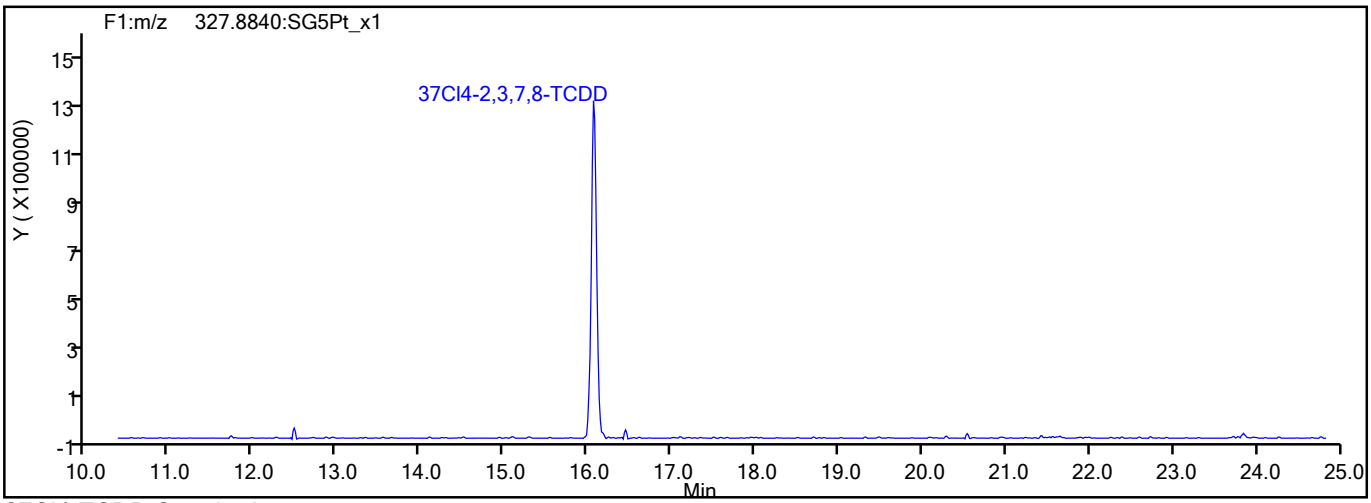

37Cl4-TCDD Standards

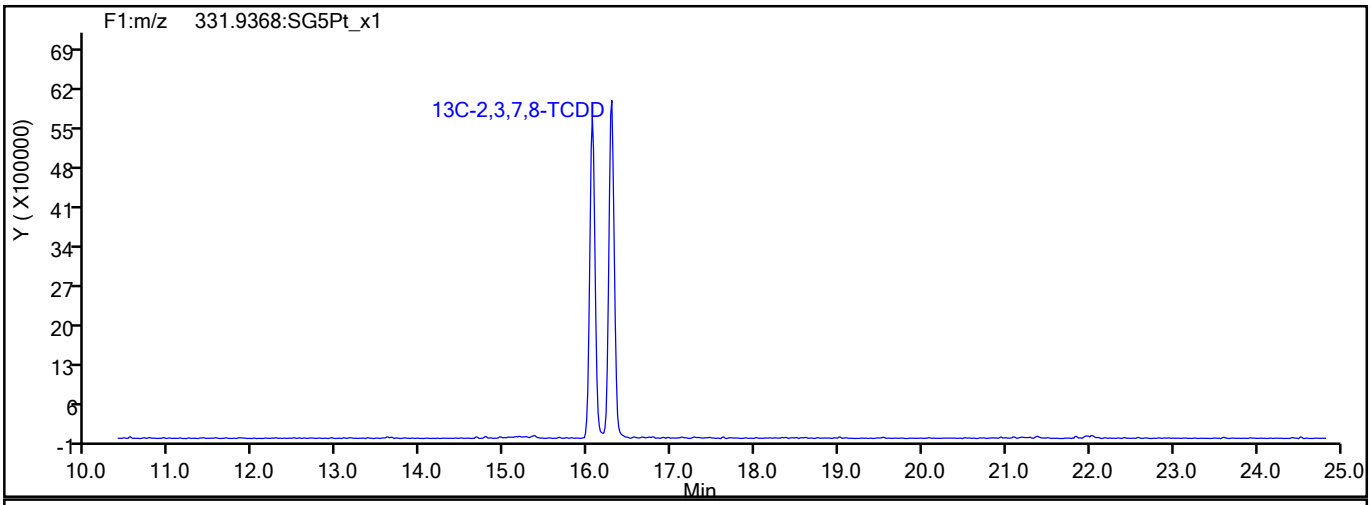

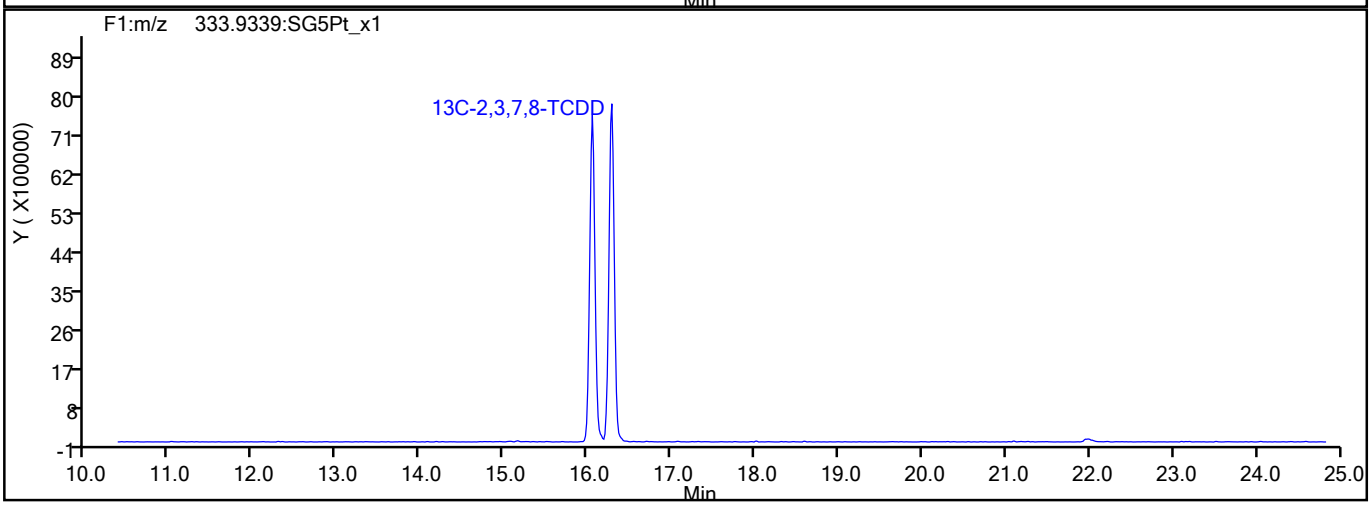

780617

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_001.d		
Injection Date:	24-Aug-2021 16:36:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

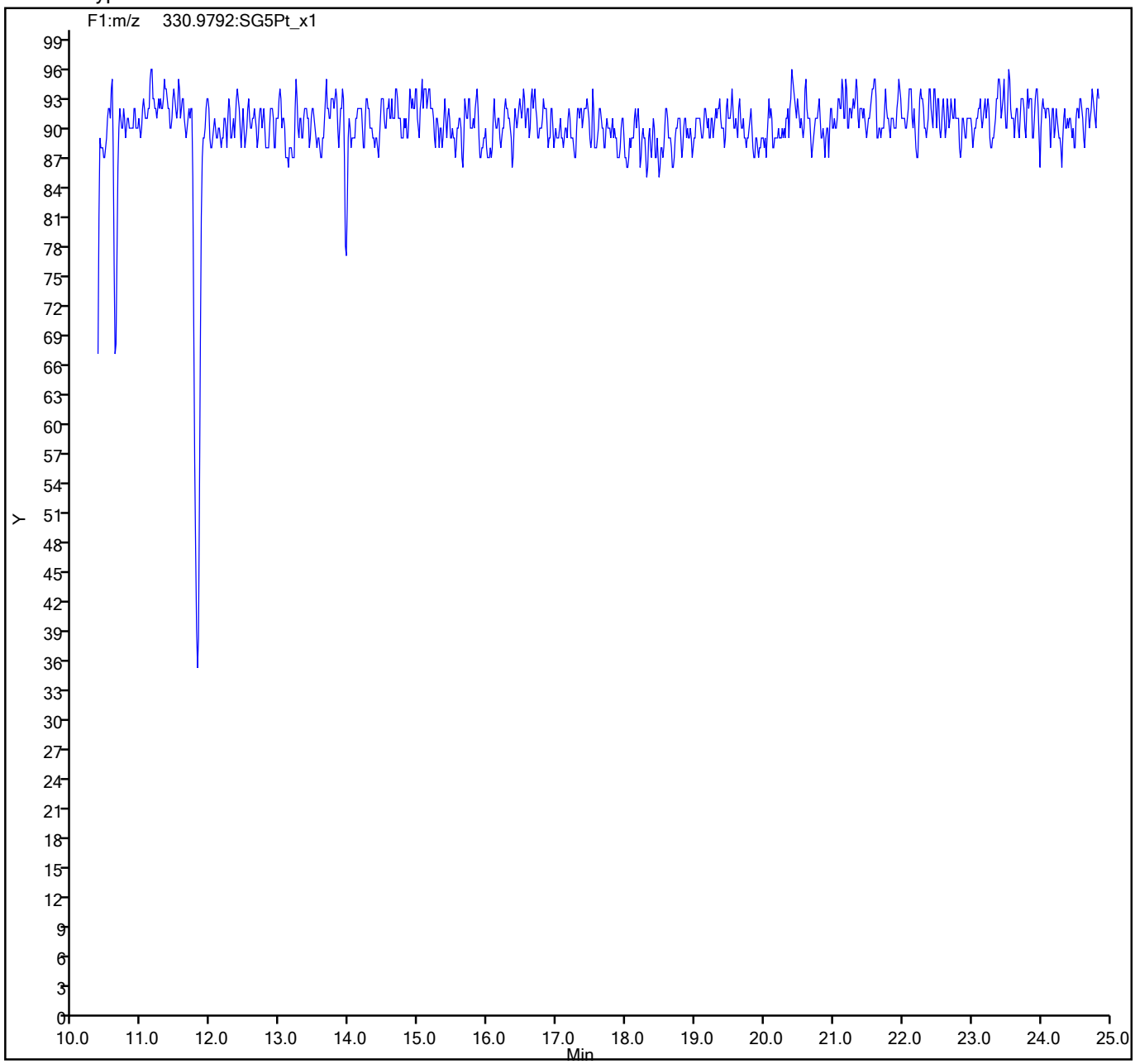

780618

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Lab Sample ID: CCV 320-519744/2 Calibration Date: 08/25/2021 13:37

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 25AU21A11D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.014		9.59	10.0	96	78-129
2,3,7,8-TCDF	AveID	0.998	0.9106		9.13	10.0	91	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9659		110	100	110	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.534		115	100	115	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9227		10.7	10.0	107	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
25AU21A11D2	1	CPS 082521A	CPS HRDXNCP_00044				1.00000	
25AU21A11D2	2	CCV 082521A	CCV CS-4 HRDXNL4_00100				1.00000	
25AU21A11D2	3	SB 082521A	Solvent Blank C-14				1.00000	
25AU21A11D2	4	320-513586	320-76887-A-8-A	20	1613B/Solid	D266	10.00000	g
25AU21A11D2	5	320-513586	320-76887-A-13-A	20	1613B/Solid		10.00000	g
25AU21A11D2	6	320-513586	320-76887-A-4-A	20	1613B/Solid		10.00000	g
25AU21A11D2	7	320-513586	320-76887-A-7-A	20	1613B/Solid		10.00000	g
25AU21A11D2	8	320-513586	320-76887-A-6-A	20	1613B/Solid		10.00000	g
25AU21A11D2	9	320-513586	320-76887-A-3-A	20	1613B/Solid		10.00000	g
25AU21A11D2	10	320-513586	320-76888-A-13-A	20	1613B/Solid		10.00000	g
25AU21A11D2	11	320-513586	320-76887-A-5-A	20	1613B/Solid		10.00000	g
25AU21A11D2	12	320-512871	320-76788-A-1-A X5	20	1613B/Solid	D265	10.00000	g
25AU21A11D2	13	320-512871	320-76788-A-13-A X5	20	1613B/Solid		10.00000	g
25AU21A11D2	14	320-512871	320-76788-A-14-A X5	20	1613B/Solid		10.00000	g
25AU21A11D2	15	320-513586	320-76887-A-2-A X10	20	1613B/Solid	D266	10.00000	g
25AU21A11D2	16	320-513586	320-76887-A-2-B MS X10	20	1613B/Solid		10.00000	g
25AU21A11D2	17	320-513586	320-76887-A-2-C MSD X10	20	1613B/Solid		10.00000	g
25AU21A11D2	18	320-513586	320-76887-A-1-A X10	20	1613B/Solid		10.00000	g
25AU21A11D2	19						1.00000	
25AU21A11D2	20						1.00000	
25AU21A11D2	21						1.00000	
25AU21A11D2	22						1.00000	
25AU21A11D2	23						1.00000	
25AU21A11D2	24		DB 08-25-21		Logfile ✓ id 8/26/21 WSS		1.00000	
25AU21A11D2	25						1.00000	

780620

Peak Locate Examination:25-AUG-2021:12:57 File:25AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

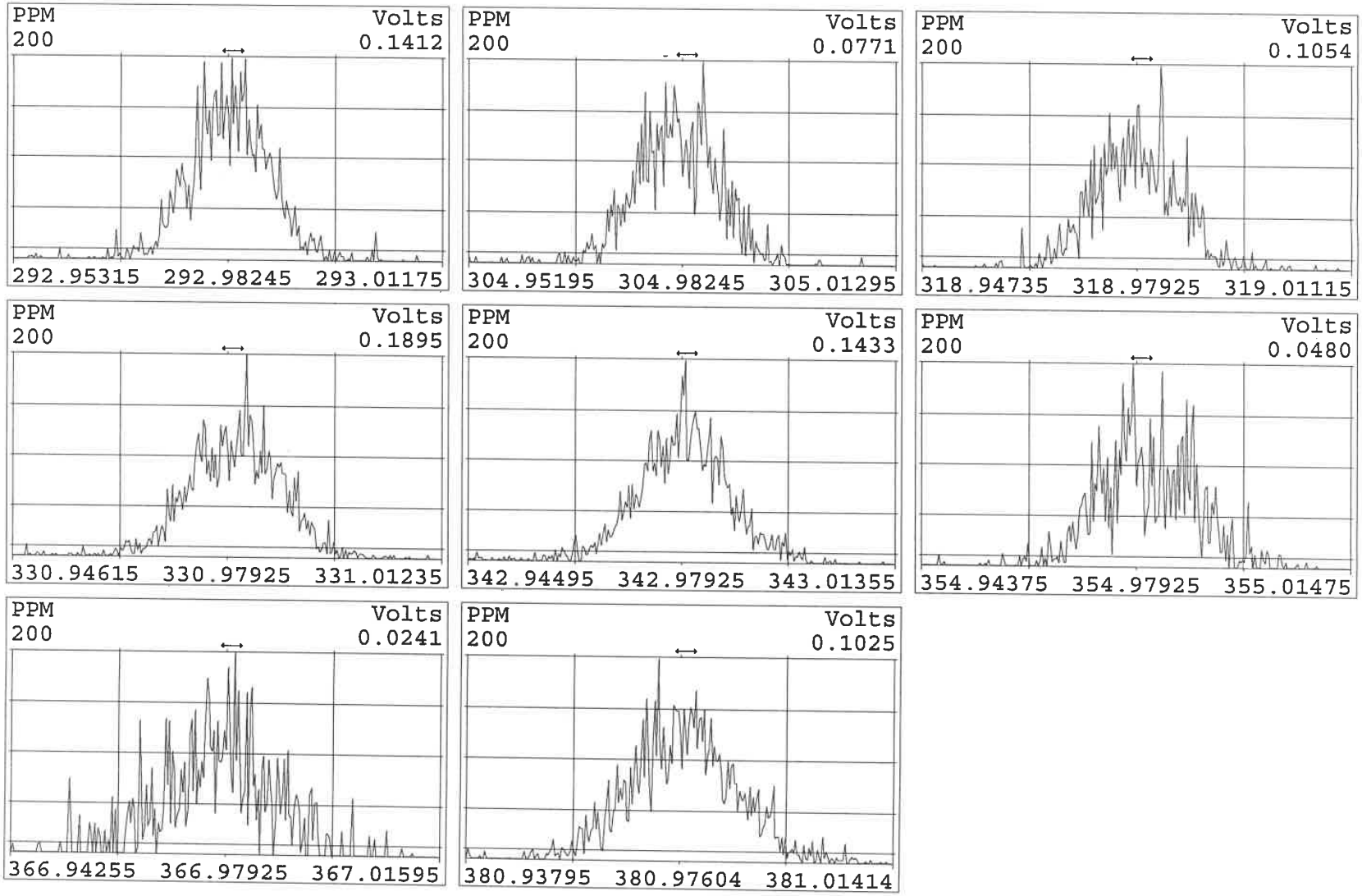

780621

Peak Locate Examination:26-AUG-2021:00:53 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

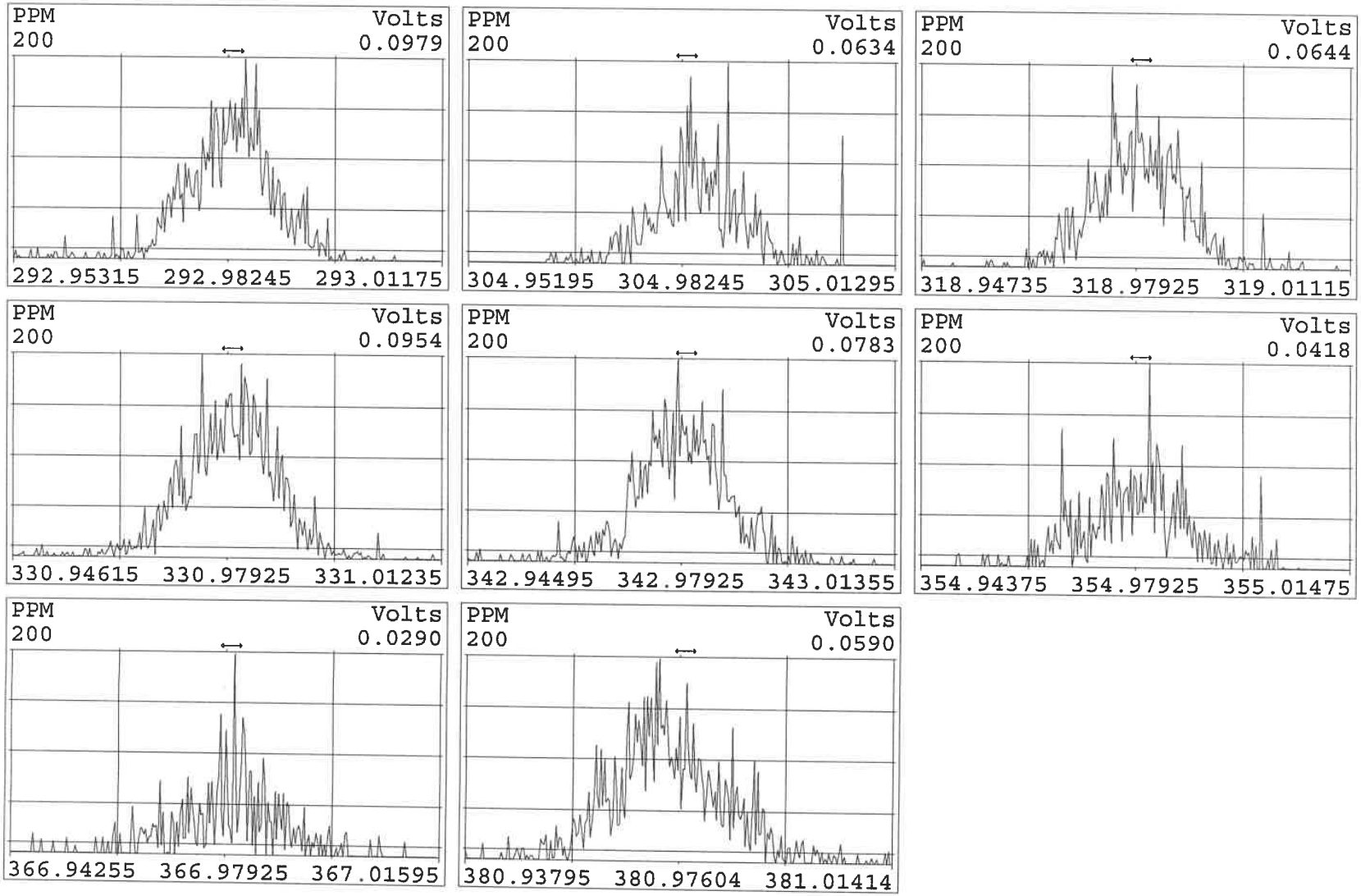

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 13:37:25 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:58:03

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	44613223	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	68447211	0.78	1.3327	115.1	115.1	0.4009	0.4009	115	
2,3,7,8-TCDF	17.628	6233038	0.76	0.9978	9.126	9.126	0.0456	0.0456	91.26	
D 13C-2,3,7,8-TCDD	16.065	43090707	0.78	0.8749	110.4	110.4	0.4999	0.4999	110	
2,3,7,8-TCDD	16.078	4369493	0.82	1.0570	9.593	9.593	0.0503	0.0503	95.93	
$ 37Cl4-2,3,7,8-TCDD	16.078	4116418		0.8648	10.7	10.7	0.0403	0.0403	107	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 13:37:25 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:58:03

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.298	16.298	0		19220204	4118470	10824	27060	380		
333.9339	16.298	16.298	0		25393019	5598505	6177	15442	906	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.081	30012344	5677395	10361	25902	548		
317.9389	17.615	17.615	0	1.081	38434867	7538958	10404	26010	725	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.628	0	1.001	2692252	497103	1141	2852	436		
305.8987	17.628	17.628	0	1.001	3540786	659047	1262	3155	522	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	0.986	18814987	4187657	10824	27060	387		
333.9339	16.065	16.065	0	0.986	24275720	5412651	6177	15442	876	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.078	16.078	0	1.001	1970068	437591	1166	2915	375		
321.8936	16.078	16.078	0	1.001	2399425	530002	877	2192	604	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.078	0	0.987	4116418	976537	1354	3385	721		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

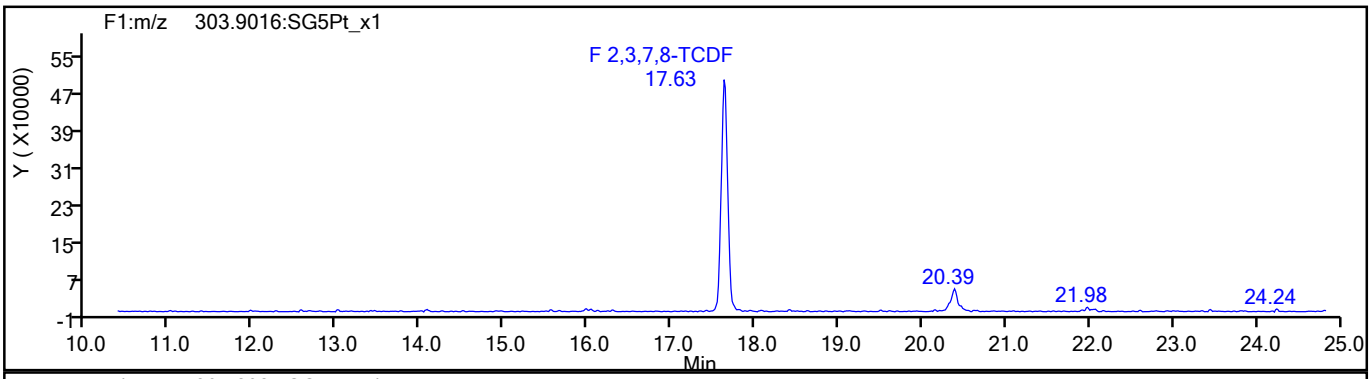

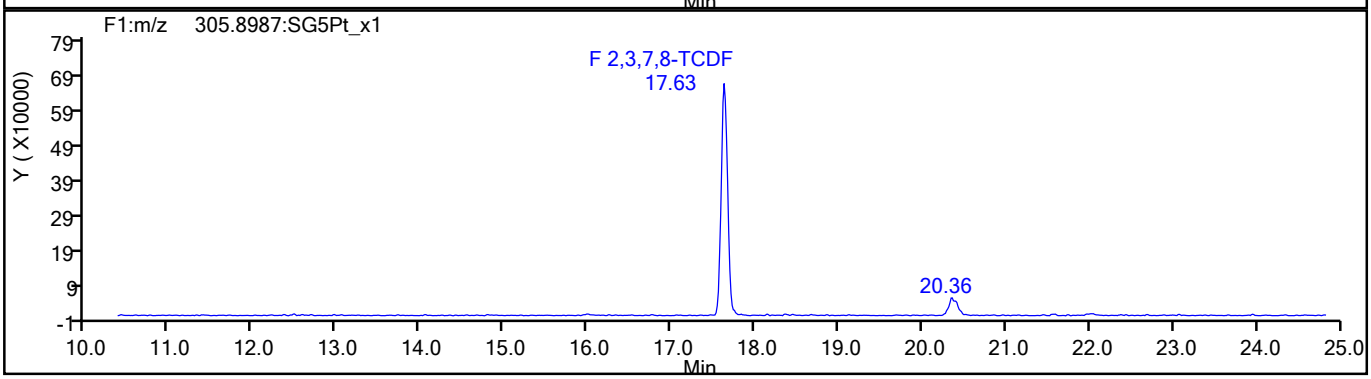

TCDF Standards

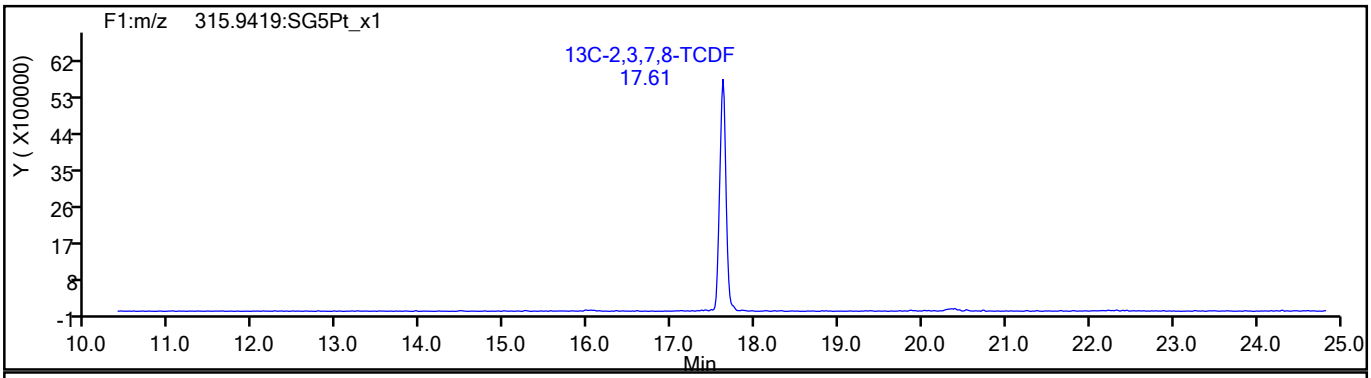

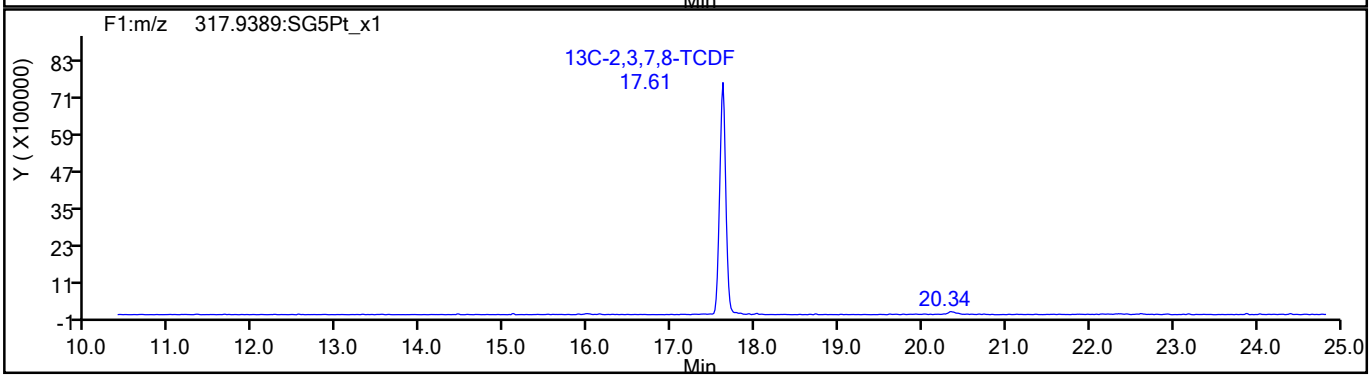

780625

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

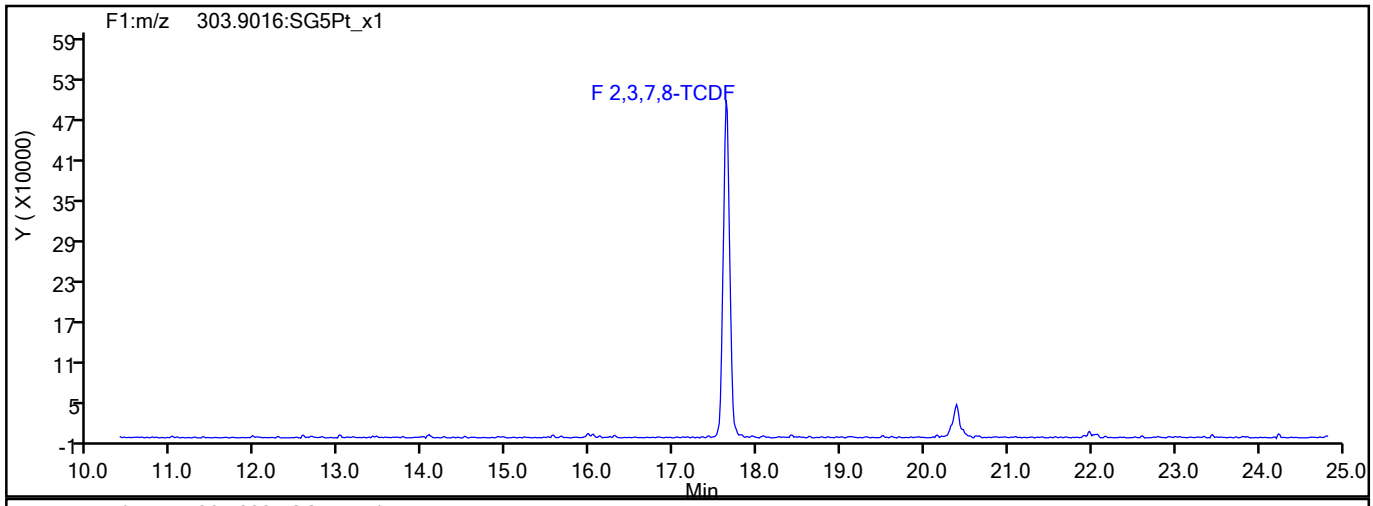

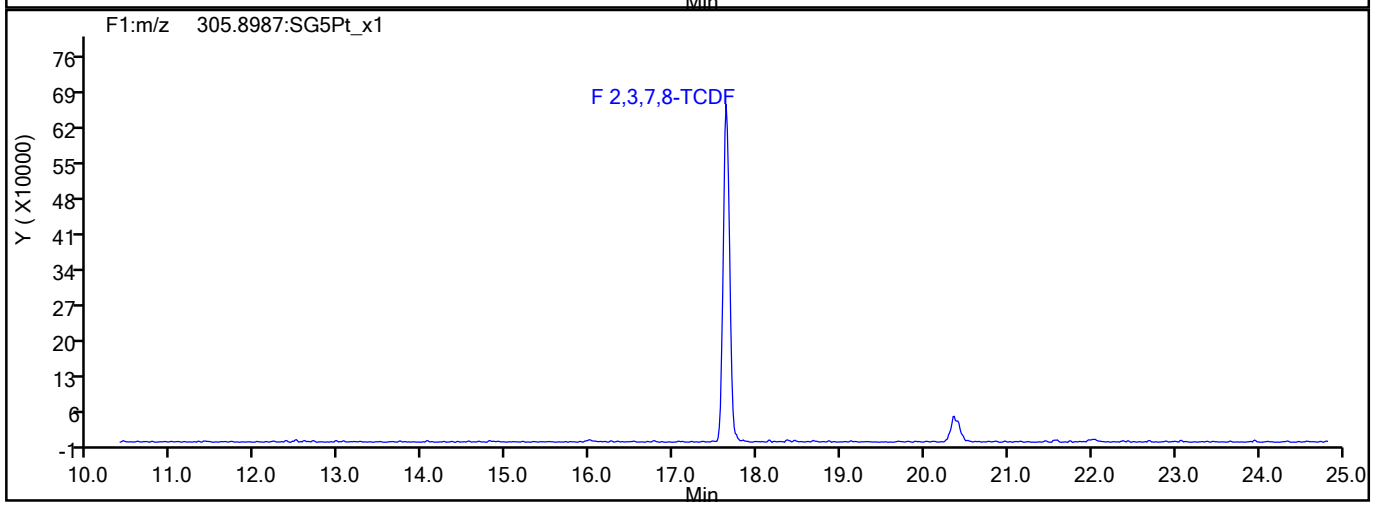

TCDF Interference Mass

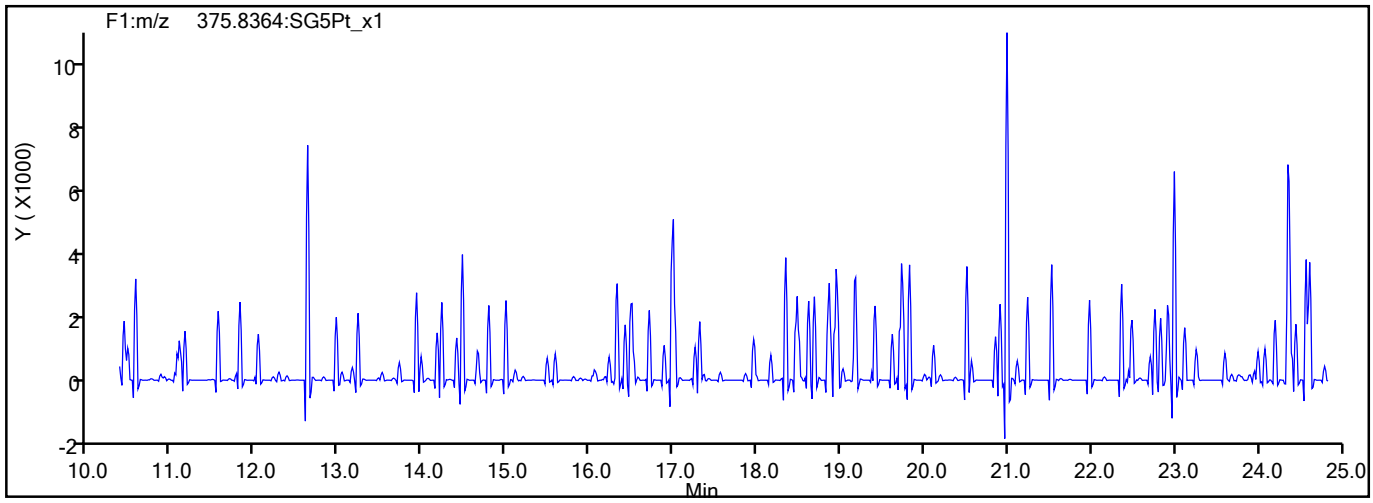

780626

Report Date: 26-Aug-2021 09:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

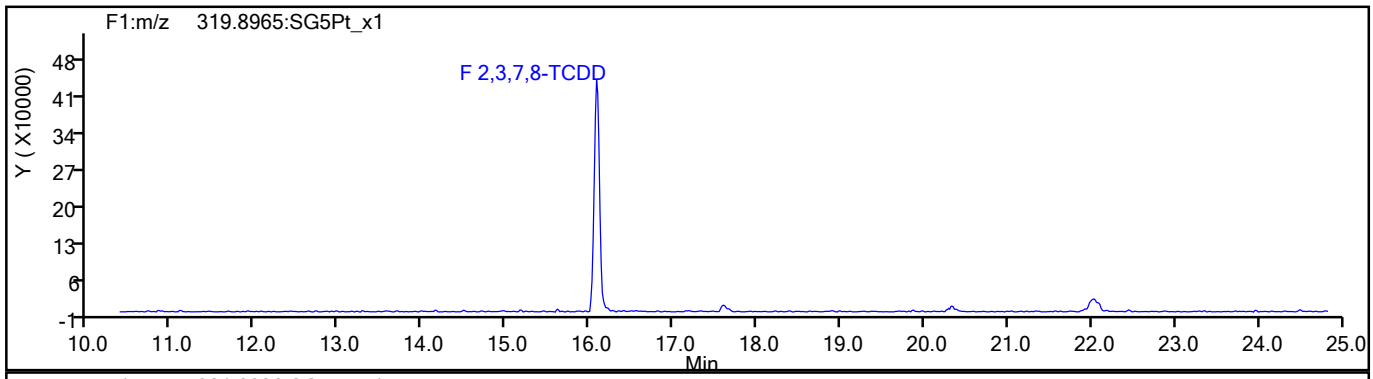

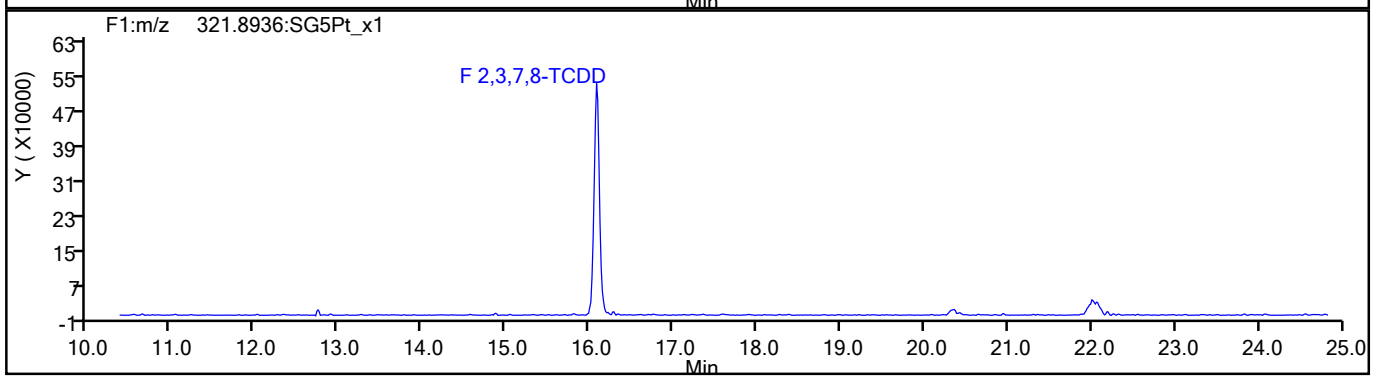

TCDD Standards

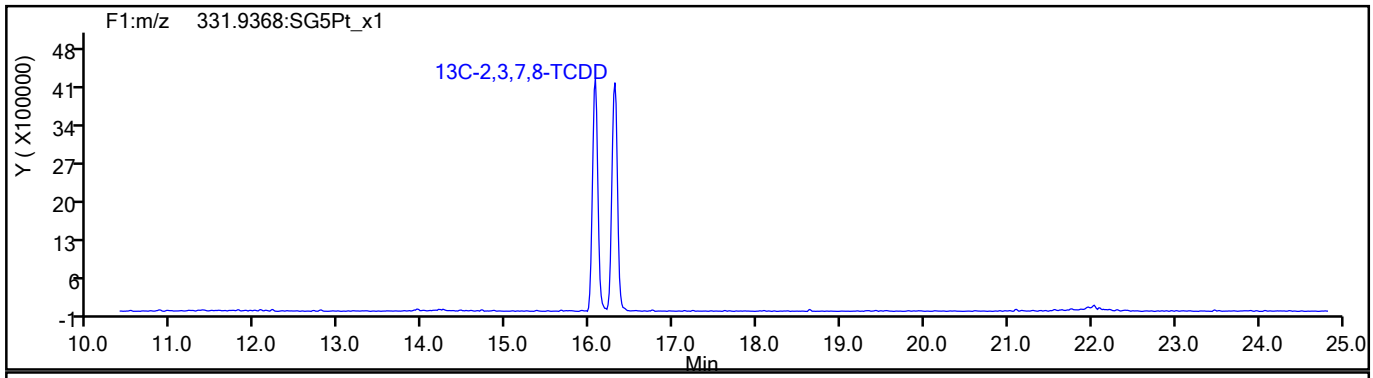

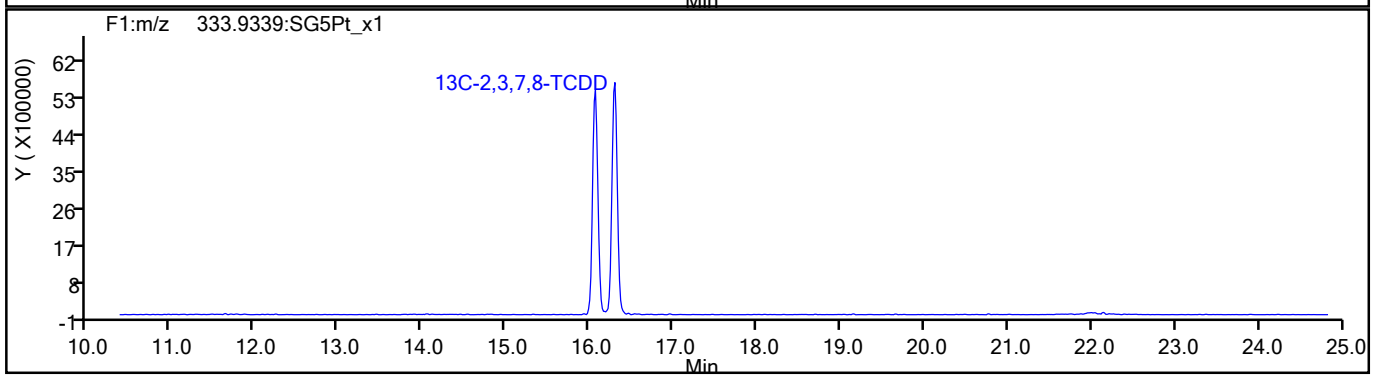

780627

Report Date: 26-Aug-2021 09:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

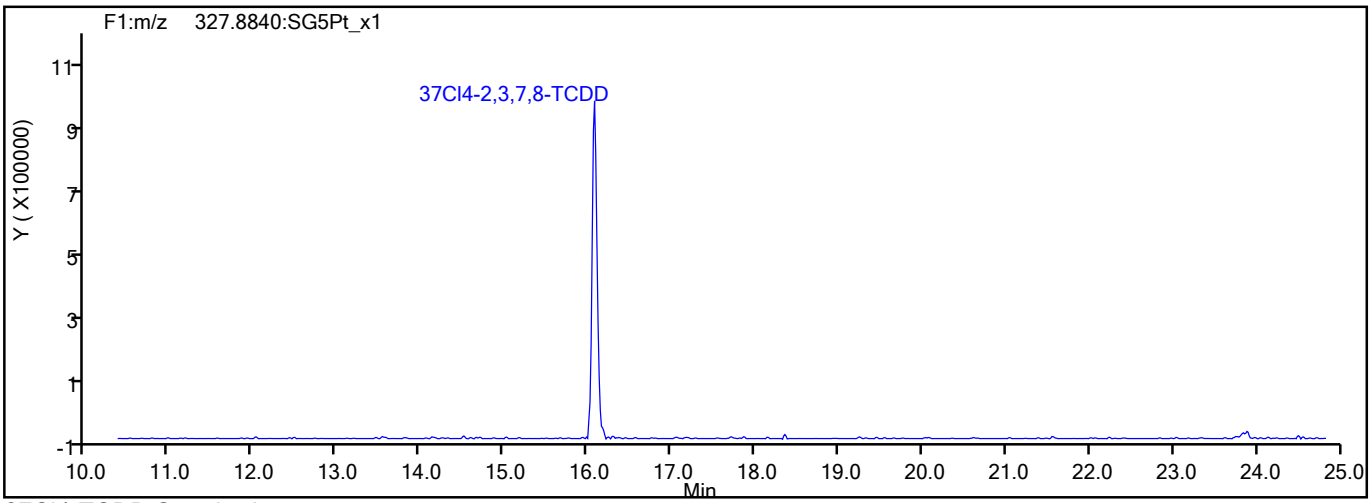

37Cl4-TCDD Standards

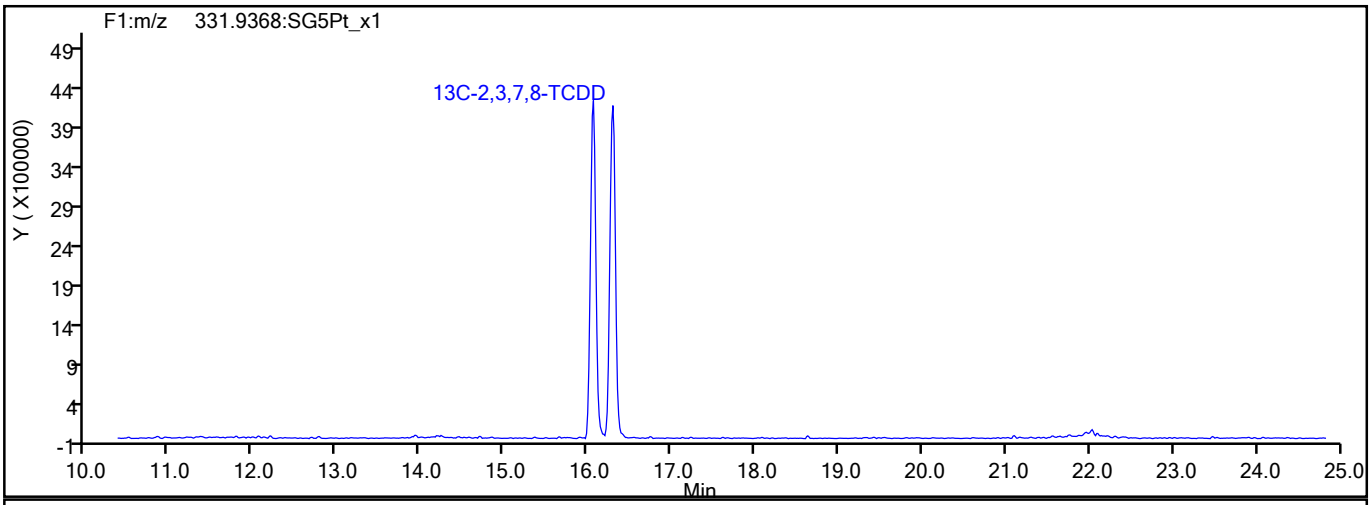

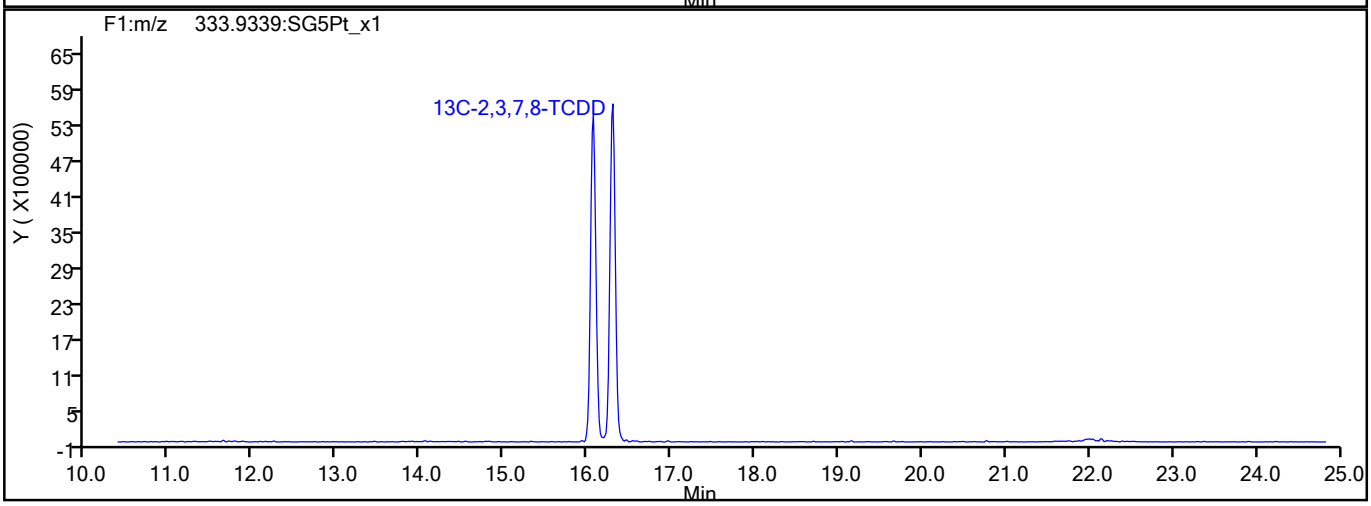

780628

Report Date: 26-Aug-2021 09:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

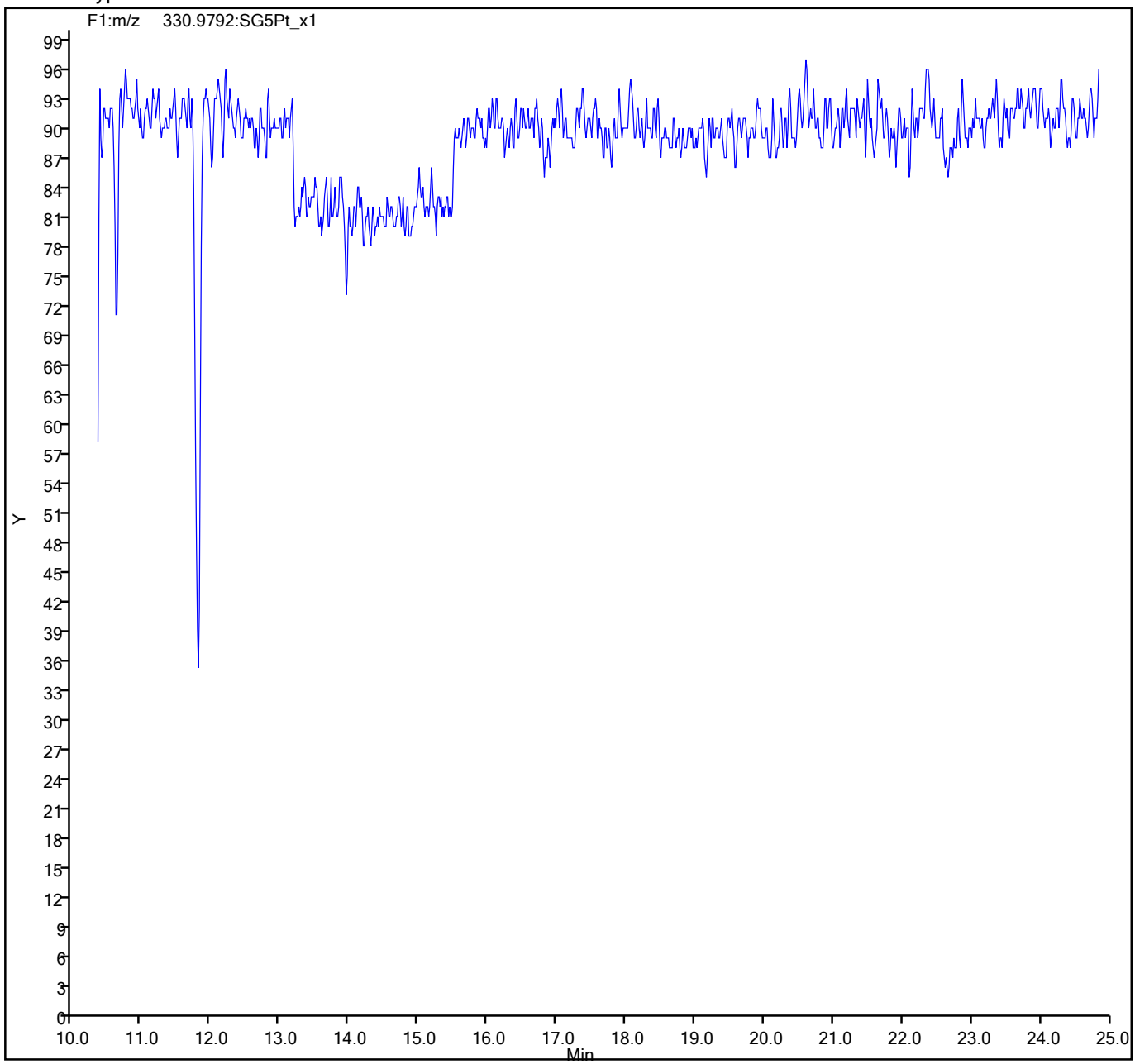

780629

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.598	43192451	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.628	95812265	0.77	1.0239	86.7	86.7	0.4368	0.4368		
A Non-2,3,7,8-sub-TCDF	17.311	141340622	0.77	1.0239	127.8	127.8	0.4368	50.4		
S Total TCDF					214.5	214.5	0.4368	0.4368		
D 13C-2,3,7,8-TCDD	18.323	22643725	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.338	31002300	0.78	1.2541	43.7	43.7	0.2199	0.2199		
A Non-2,3,7,8-sub-TCDD	17.772	120319254	0.78	1.2541	169.5	169.5	0.2199	46.0		
S Total TCDD					213.1	213.1	0.2199	0.2199		
A F1 PeCDFs	20.244	36548211	1.59	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.473	28699153	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.744	44367204	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.542	988216341	1.23	0.0000						
A Non-2,3,7,8-sub-HxCDF	30.542	1016402527	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	31.215	43254937	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.911	28490431	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	35.005	21744380	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.458						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.714	17168827	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.133	55744963	0.78							a
1,3,6,8-TCDD	16.071	32157911	0.78							a
2,3,4,7-TCDF	17.628	95812265	0.77							a
1,2,3,7-TCDD	18.218	26254918	0.77							a
1,2,3,9-TCDF	18.505	41465019	0.77							a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,9-TCDD	18.505	32677146	0.79							a
1,2,8,9-TCDD	19.472	12707183								a
1,2,8,9-TCDF	19.488	41982512	0.76							a
1,3,4,6,8-PeCDF	19.760	36548211	1.59							a
1,2,4,7,9-PeCDD	21.576	23369968	1.58							a
1,2,3,8,9-PeCDD	25.912	20997236	1.59							a
1,2,3,8,9-PeCDF	26.144	28026312	1.61							a
1,2,3,4,6,8-HxCDF	28.479	29886017	1.22							a
1,2,4,6,7,9-HxCDD	30.023	21768457	1.27							a
1,2,3,4,6,7-HxCDD	32.299	21486480	1.24							a
1,2,3,4,8,9-HxCDF	32.605	28186186	1.23							a
1,2,3,4,6,7,9-HpCDD	34.154						0.0	0.0		U

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	1.000	18796968	4666881	8168	20420	571		
317.9389	17.598	17.598	0	1.000	24395483	6066397	3473	8682	1747	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.002	41629702	9682578	19585	48962	494		
305.8987	17.628	17.631	0	1.002	54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.133	17.311	-130	0.860	24509538	7569037	19585	48962	386		
305.8987	15.133	17.311	-130	0.860	31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
303.9016	18.505	17.311	72	1.052	18061189	4195885	19585	48962	214		
305.8987	18.505	17.311	72	1.052	23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
303.9016	19.488	17.311	130	1.107	18098944	4035450	19585	48962	206		
305.8987	19.488	17.311	130	1.107	23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
303.9016	19.775	17.311	148	1.124	944774	152570	19585	48962	8		
305.8987	19.775	17.311	148	1.124	1203354	204203	28414	71035	7	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.000	10063481	2396990	3086	7715	777		
333.9339	18.323	18.323	0	1.000	12580244	3018588	1527	3817	1977	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.357	-1	1.001	13597515	3193209	6116	15290	522		
321.8936	18.338	18.357	-1	1.001	17404785	4135946	8817	22042	469	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	16.071	17.772	-102	0.877	14103074	4061475	6116	15290	664		
321.8936	16.071	17.772	-102	0.877	18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
319.8965	18.218	17.772	27	0.994	11446127	2829889	6116	15290	463		
321.8936	18.218	17.772	27	0.994	14808791	3726958	8817	22042	423	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	18.505	17.772	44	1.010	14439496	3301963	6116	15290	540		
321.8936	18.505	17.772	44	1.010	18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
319.8965	19.472	17.772	102	1.063	12707183	2751784	6116	15290	450		
321.8936	19.472	17.772	102	1.063	16522096	3661962	8817	22042	415	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.760	20.244	-29	1.000	22414023	4920048	649	1622	7581		
341.8567	19.760	20.244	-29	1.000	14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.344	23.473	-127	1.000	84191	14080	2633	6582	5		
341.8567	21.344	23.473	-127	1.000	53909	7615	1950	4875	4	1.56(1.32-1.78)	
339.8597	22.176	23.473	-78	1.000	88076	13805	2633	6582	5		
341.8567	22.190	23.473	-77	1.000	48170	9635	1950	4875	5	1.83(1.32-1.78)	
339.8597	22.749	23.473	-43	1.000	168309	20506	2633	6582	8		
341.8567	22.762	23.473	-43	1.000	82177	12827	1950	4875	7	2.05(1.32-1.78)	
339.8597	23.321	23.473	-9	1.000	142716	22963	2633	6582	9		
341.8567	23.321	23.473	-9	1.000	79356	11480	1950	4875	6	1.80(1.32-1.78)	
339.8597	26.144	23.473	160	1.000	17301746	2425915	2633	6582	921		
341.8567	26.144	23.473	160	1.000	10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.576	23.744	-130	1.000	14314296	2552271	2414	6035	1057		
357.8516	21.576	23.744	-130	1.000	9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
355.8546	25.912	23.744	130	1.000	12881489	1801570	2414	6035	746		
357.8516	25.912	23.744	130	1.000	8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	32.605	30.542	124	1.000	15534015	4607321	4603	11507	1001		
375.8178	32.605	30.542	124	1.000	12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.023	31.215	-71	1.000	12175655	1922535	6506	16265	296		
391.8127	30.023	31.215	-71	1.000	9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
389.8157	32.299	31.215	65	1.000	11903453	3254284	6506	16265	500		
391.8127	32.299	31.215	65	1.000	9583027	2649988	5715	14287	464	1.24(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.911	33.926	-1	1.000	14581587	4505694	20273	50682	222		
409.7789	33.911	33.926	-1	1.000	13908844	4348275	17441	43602	249	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.005	35.020	-1	1.000	11106344	3153936	20273	50682	156		
409.7789	35.005	35.020	-1	1.000	10638036	3040493	17441	43602	174	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						20273	50682			
409.7789	34.458						17441	43602			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.726	-1	1.000	8809155	2526480	13831	34577	183		
425.7737	34.714	34.726	-1	1.000	8359672	2427581	13744	34360	177	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						13831	34577			
425.7737	33.504						13744	34360			
1,3,6,8-TCDF											a
303.9016	15.133	15.133	0		24509538	7569037	19585	48962	386		a
305.8987	15.133	15.133	0		31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
1,3,6,8-TCDD											a
319.8965	16.071	16.071	0		14103074	4061475	6116	15290	664		a
321.8936	16.071	16.071	0		18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
2,3,4,7-TCDF											a
303.9016	17.628	17.628	0		41629702	9682578	19585	48962	494		a
305.8987	17.628	17.628	0		54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
1,2,3,7-TCDD											a
319.8965	18.218	18.218	0		11446127	2829889	6116	15290	463		a
321.8936	18.218	18.218	0		14808791	3726958	8817	22042	423	0.77(0.65-0.89)	
1,2,3,9-TCDF											a
303.9016	18.505	18.505	0		18061189	4195885	19585	48962	214		a
305.8987	18.505	18.505	0		23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
1,2,3,9-TCDD											a
319.8965	18.505	18.505	0		14439496	3301963	6116	15290	540		a
321.8936	18.505	18.505	0		18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
1,2,8,9-TCDD											a
319.8965	19.472	19.472	0		12707183	2751784	6116	15290	450		a
1,2,8,9-TCDF											a
303.9016	19.488	19.488	0		18098944	4035450	19585	48962	206		a
305.8987	19.488	19.488	0		23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
1,3,4,6,8-PeCDF											a
339.8597	19.760	19.760	0		22414023	4920048	649	1622	7581		a
341.8567	19.760	19.760	0		14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	21.576	21.576	0		14314296	2552271	2414	6035	1057		a
357.8516	21.576	21.576	0		9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											a
355.8546	25.912	25.912	0		12881489	1801570	2414	6035	746		a
357.8516	25.912	25.912	0		8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	26.144	26.144	0		17301746	2425915	2633	6582	921		a
341.8567	26.144	26.144	0		10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											a
373.8208	28.479	28.479	0		16406487	2121744	4603	11507	461		a
375.8178	28.479	28.479	0		13479530	1752621	3729	9322	470	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											a
389.8157	30.023	30.023	0		12175655	1922535	6506	16265	296		a
391.8127	30.023	30.023	0		9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											a
389.8157	32.299	32.299	0		11903453	3254284	6506	16265	500		a
391.8127	32.299	32.299	0		9583027	2649988	5715	14287	464	1.24(1.05-1.43)	

Report Date: 27-Jul-2021 15:09:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,8,9-HxCDF											a
373.8208	32.605	32.605	0		15534015	4607321	4603	11507	1001		a
375.8178	32.605	32.605	0		12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.154						13831	34577			
425.7737	34.154						13744	34360			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	43192451	10733278

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	43192451	10733278

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.133	24509538	7569037	31235425	9722736	50.4	0.78	
18.505	18061189	4195885	23403830	5509968	37.5	0.77	
19.488	18098944	4035450	23883568	5304928	38.0	0.76	
19.775	944774	152570	1203354	204203	1.94	0.79	
Signal Totals:	61614445	15952942	79726177	20741835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141340622	36694777				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 127.837 = (141340622 * 40.000) / (43192451 * 1.024)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	22643725	5415578

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	22643725	5415578

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.071	14103074	4061475	18054837	5166402	45.3	0.78	
18.218	11446127	2829889	14808791	3726958	37.0	0.77	
18.505	14439496	3301963	18237650	4248308	46.0	0.79	
19.472	12707183	2751784	16522096	3661962	41.2	0.77	
Signal Totals:							
	52695880	12945111	67623374	16803630			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	120319254	29748741				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 169.476 = (120319254 * 40.000) / (22643725 * 1.254)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

F1 PeCDFs, RT: 20.244

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.760	22414023	4920048	14134188	3116108		1.59	
Signal Totals:							
	22414023	4920048	14134188	3116108			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	36548211	8036156				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (36548211 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.344	84191	14080	53909	7615		1.56	
22.176	88076	13805	48170	9635		1.83	R
22.749	168309	20506	82177	12827		2.05	R
23.321	142716	22963	79356	11480		1.80	R
26.144	17301746	2425915	10724566	1530575		1.61	
Signal Totals:							
	17785038	2497269	10988178	1572132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28773216	4069401				1.62	RQ
	28699153	4064735					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (28773216 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (28699153 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.744

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.576	14314296	2552271	9055672	1599456		1.58	
25.912	12881489	1801570	8115747	1169053		1.59	
Signal Totals:							
	27195785	4353841	17171419	2768509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	44367204	7122350				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (44367204 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.542

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
32.605	15534015	4607321	12652171	3734547		1.23	
Signal Totals:							
	15534015	4607321	12652171	3734547			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	988216341	287497877				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (988216341 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 31.215

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.023	12175655	1922535	9592802	1497827		1.27	
32.299	11903453	3254284	9583027	2649988		1.24	
Signal Totals:							
	24079108	5176819	19175829	4147815			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43254937	9324634				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43254937 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

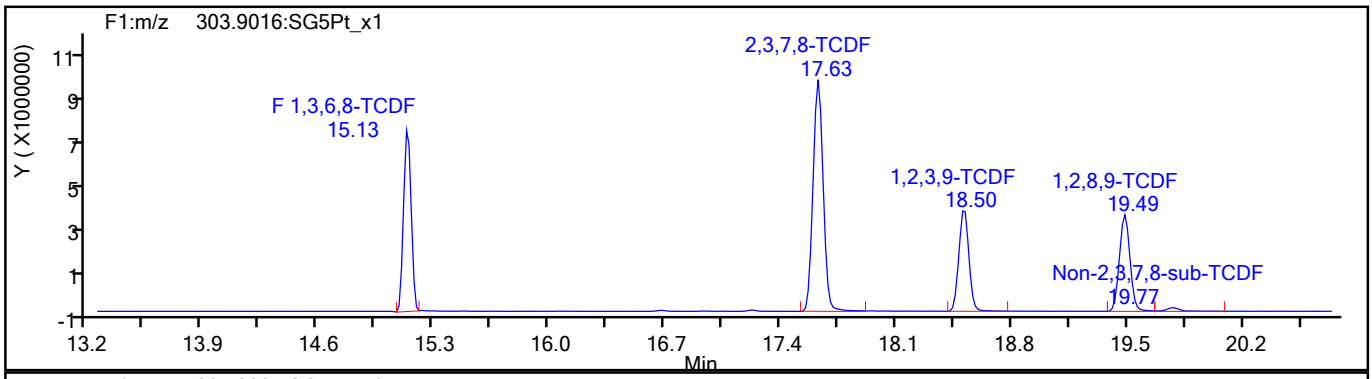

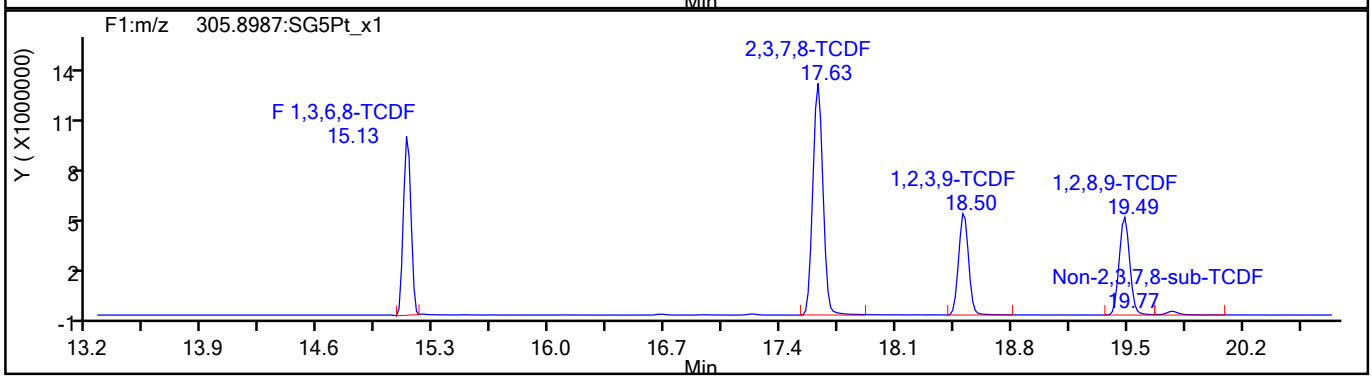

TCDF Standards

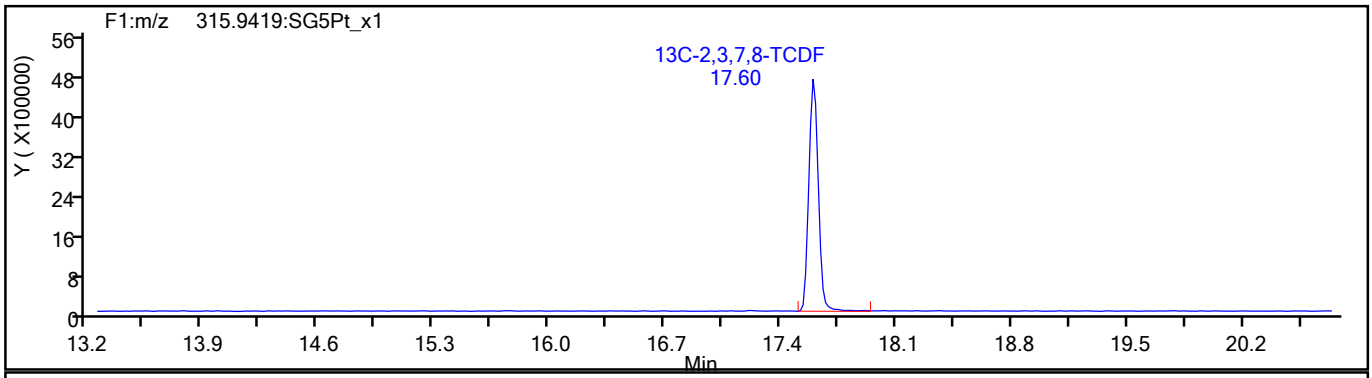

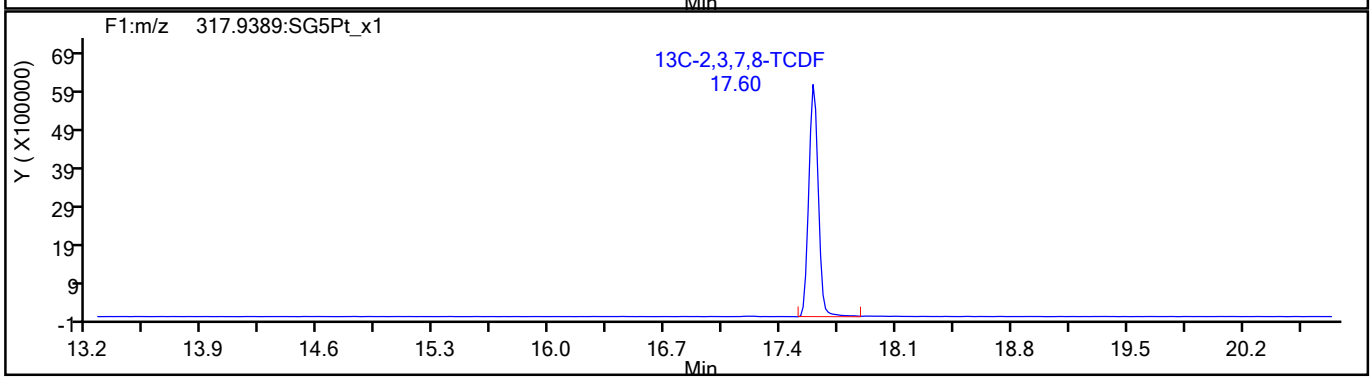

780644

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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TCDF

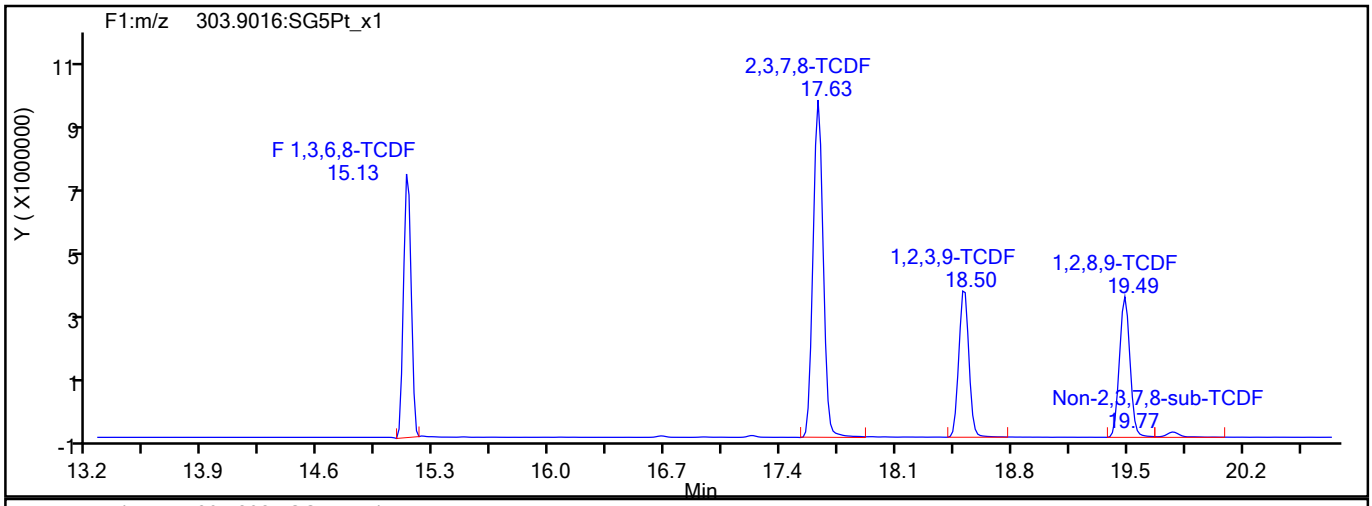

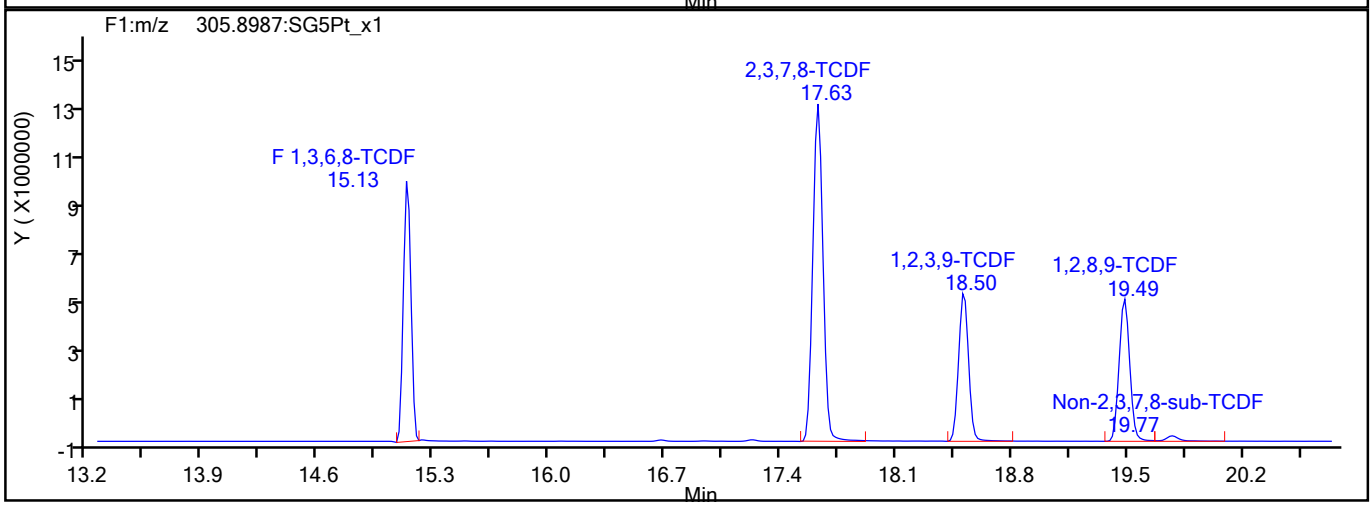

TCDF Interference Mass

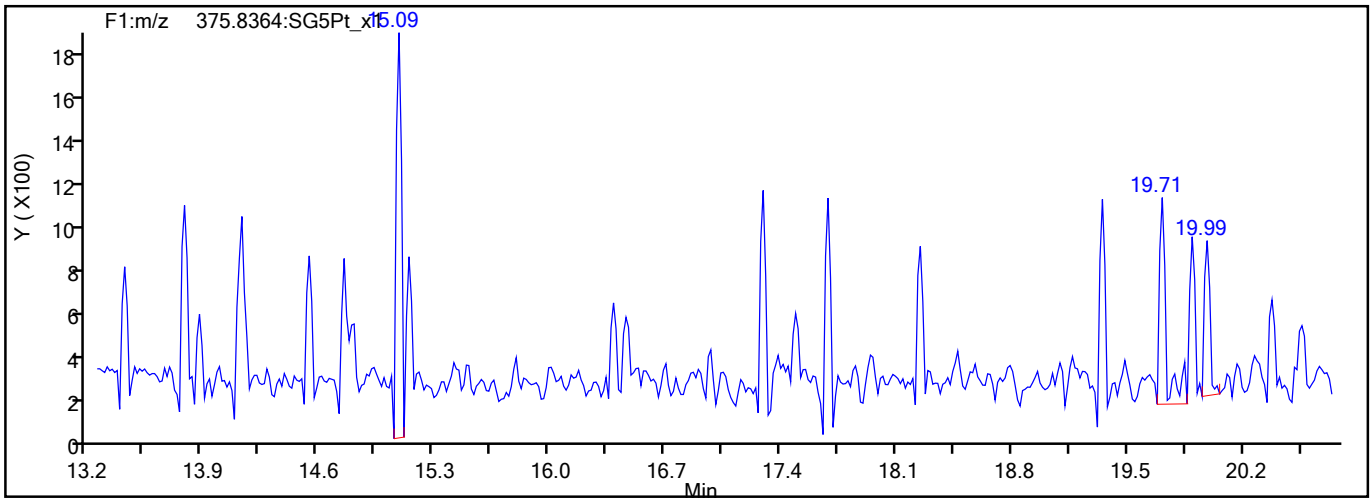

780645

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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TCDD

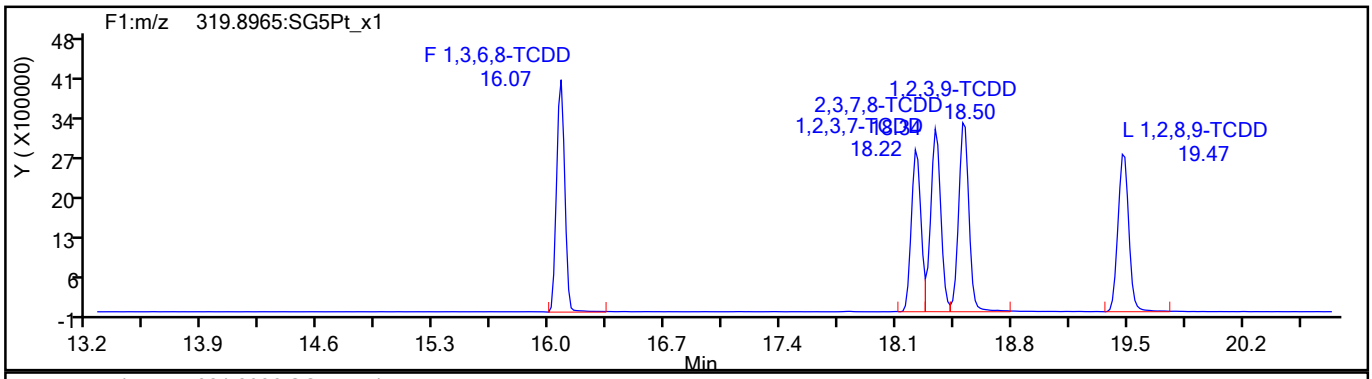

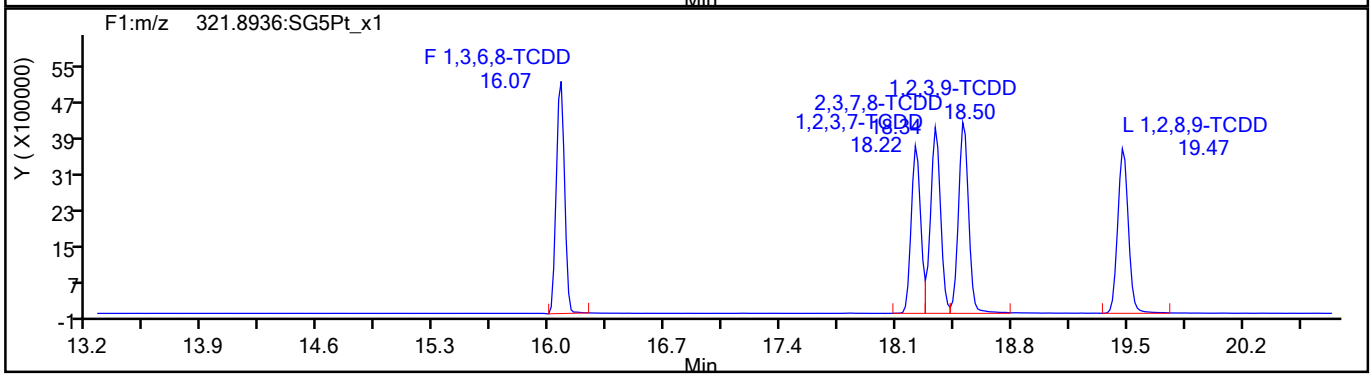

TCDD Standards

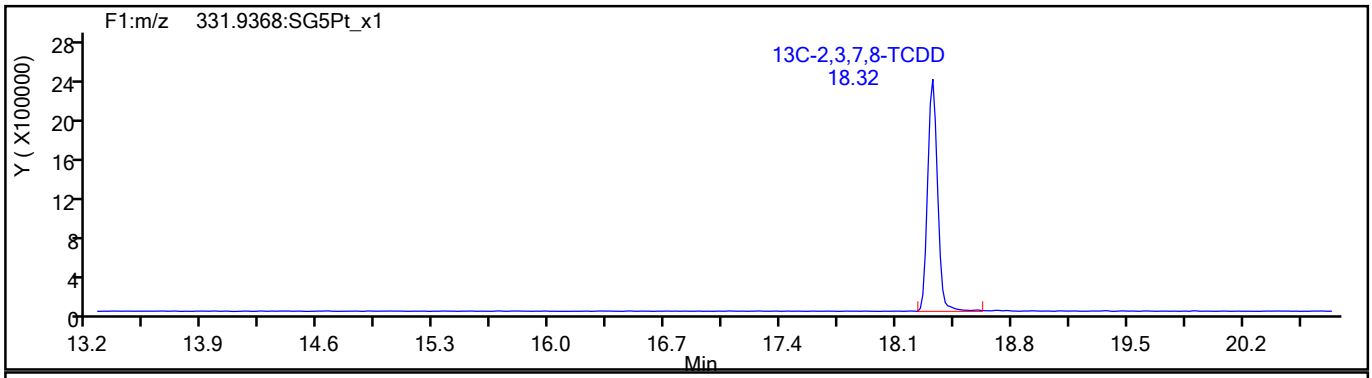

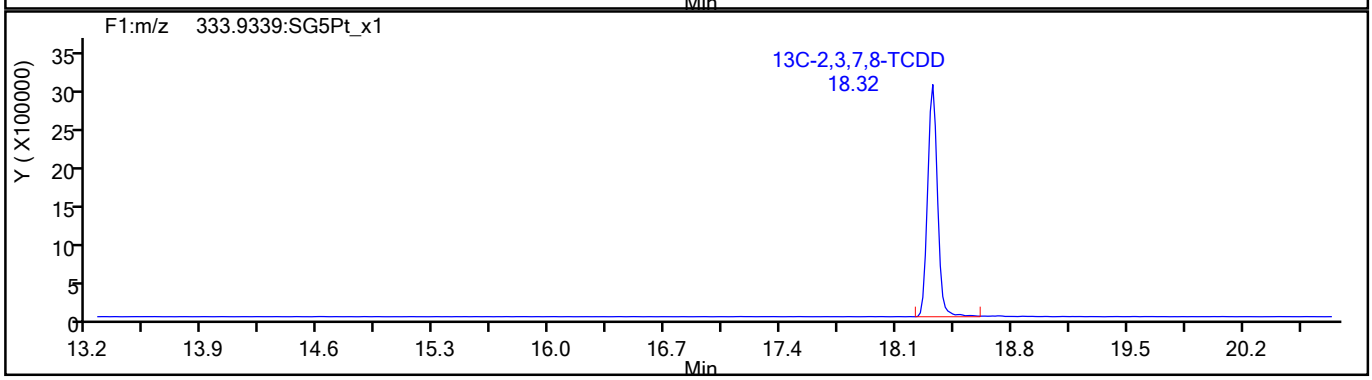

780646

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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37Cl4-TCDD

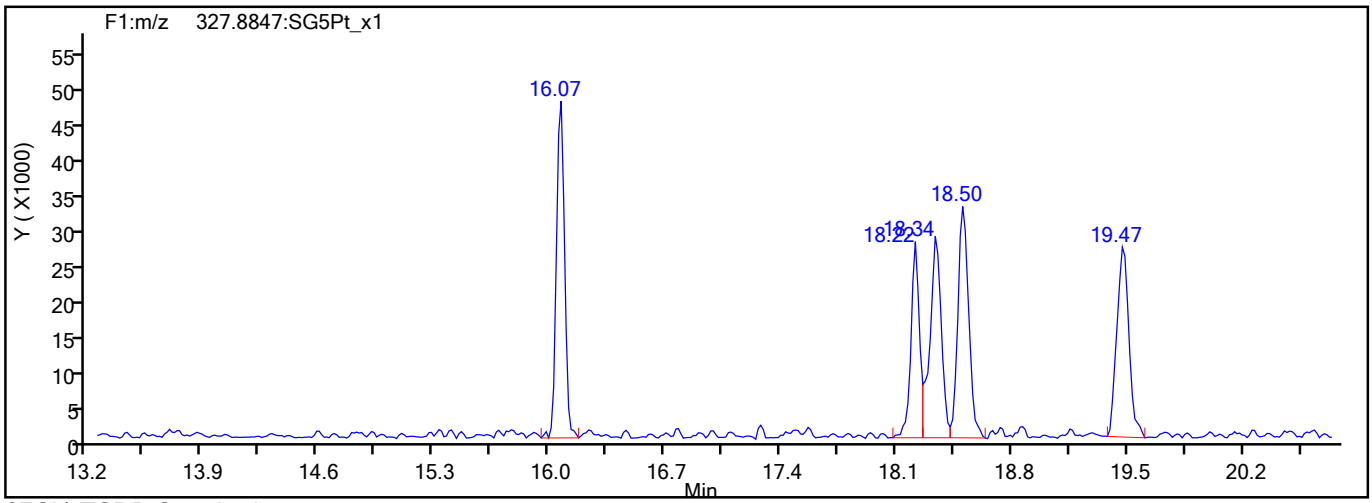

37Cl4-TCDD Standards

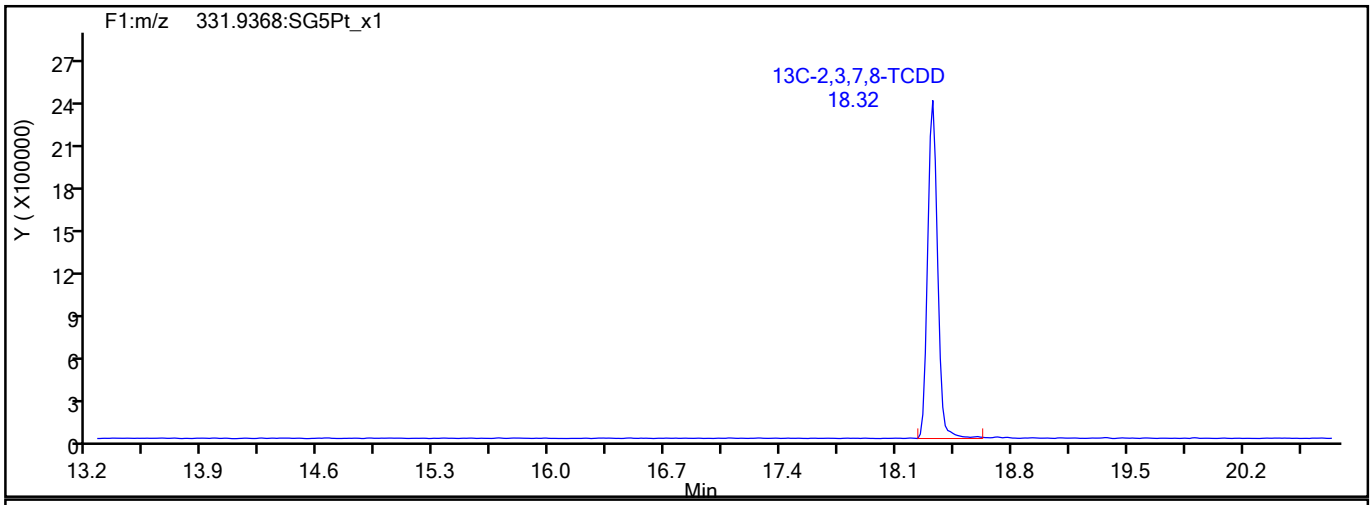

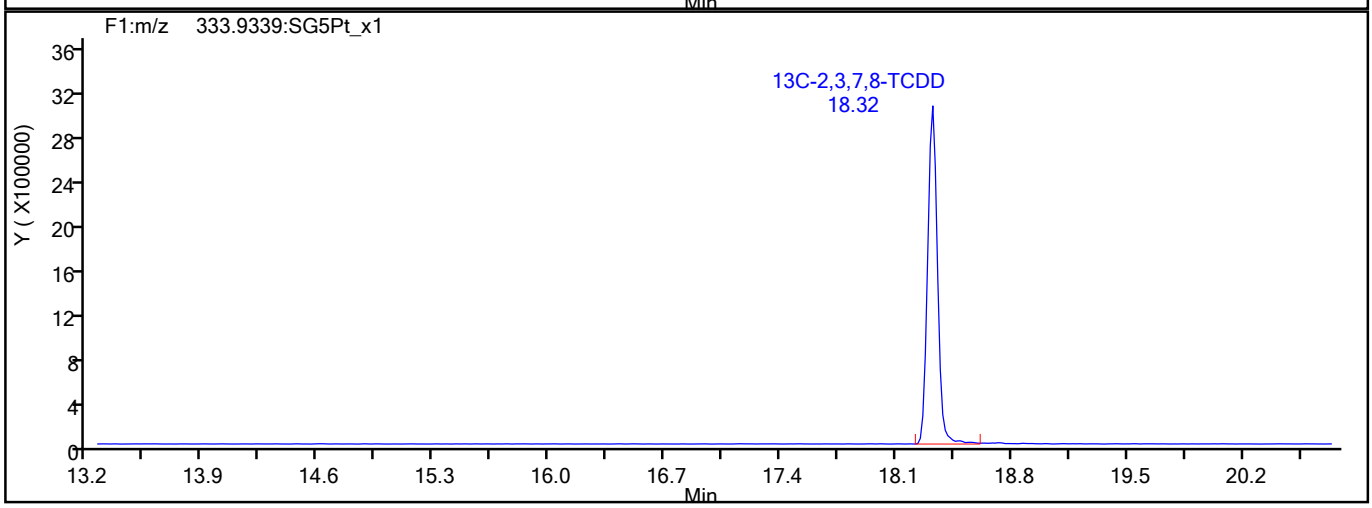

780647

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

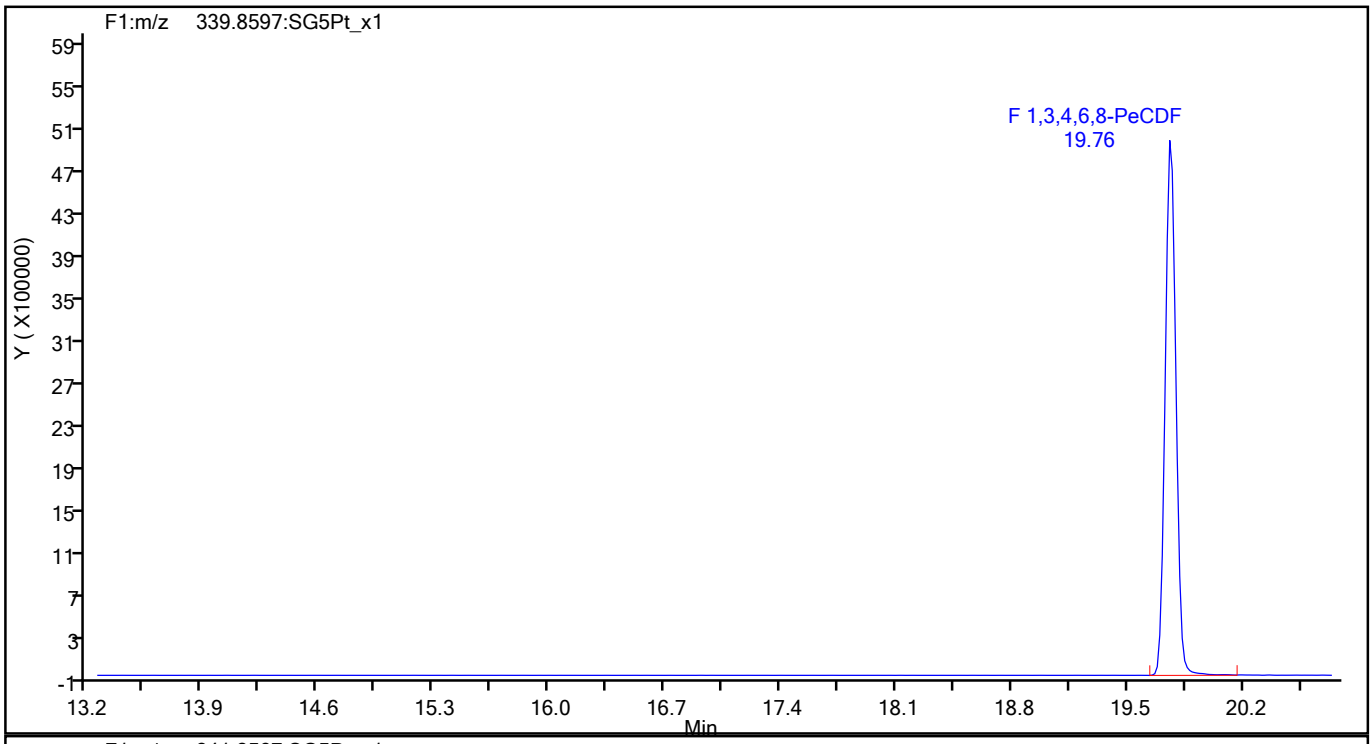

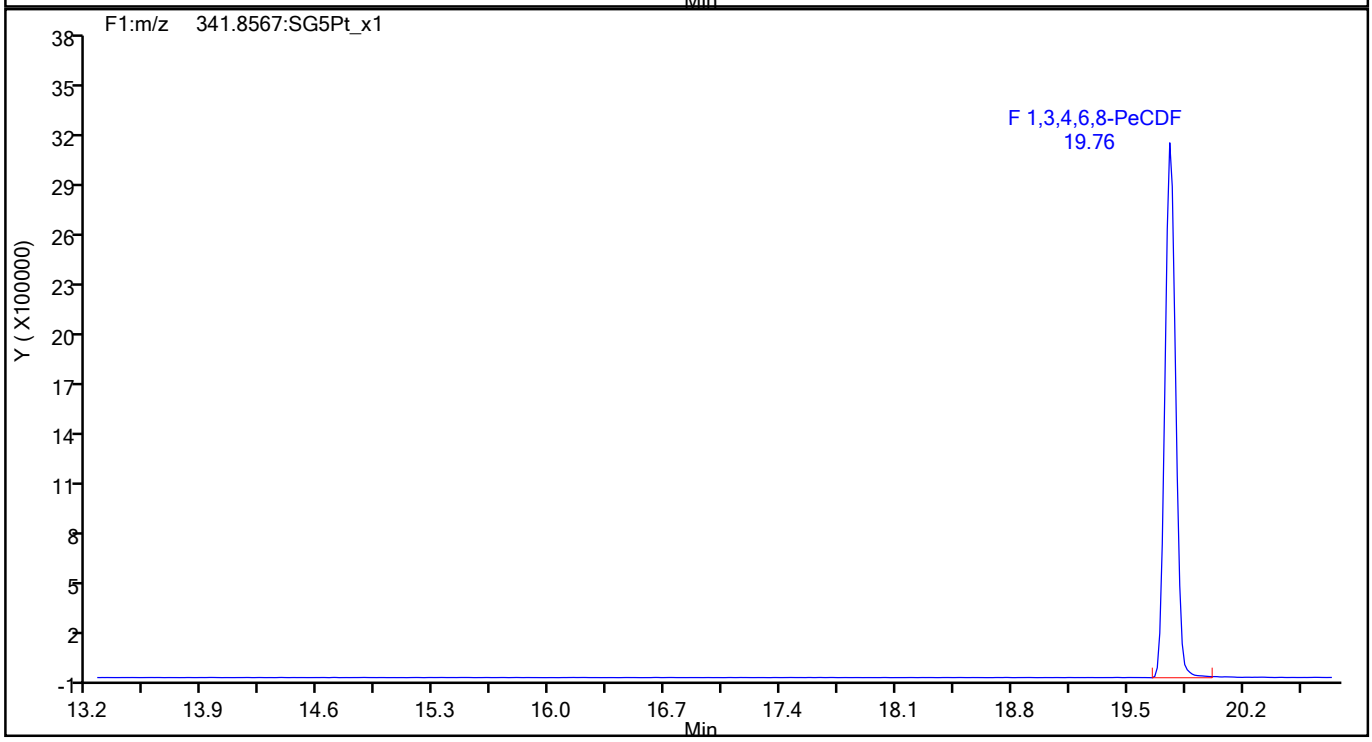

780648

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Eurofins TestAmerica, Sacramento

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F1 PeCDFs

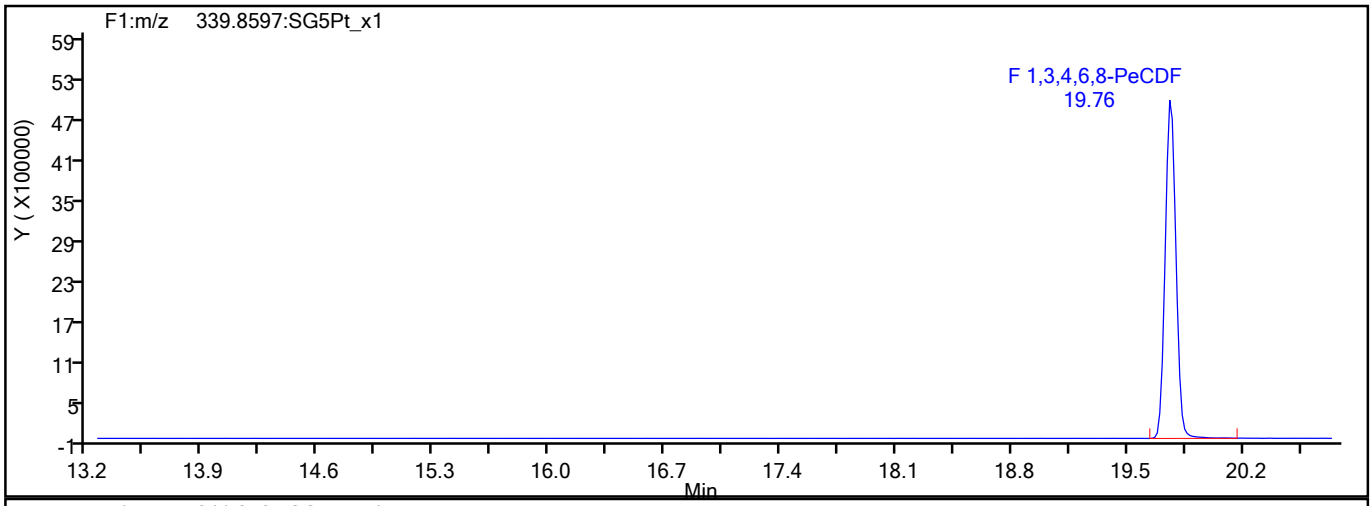

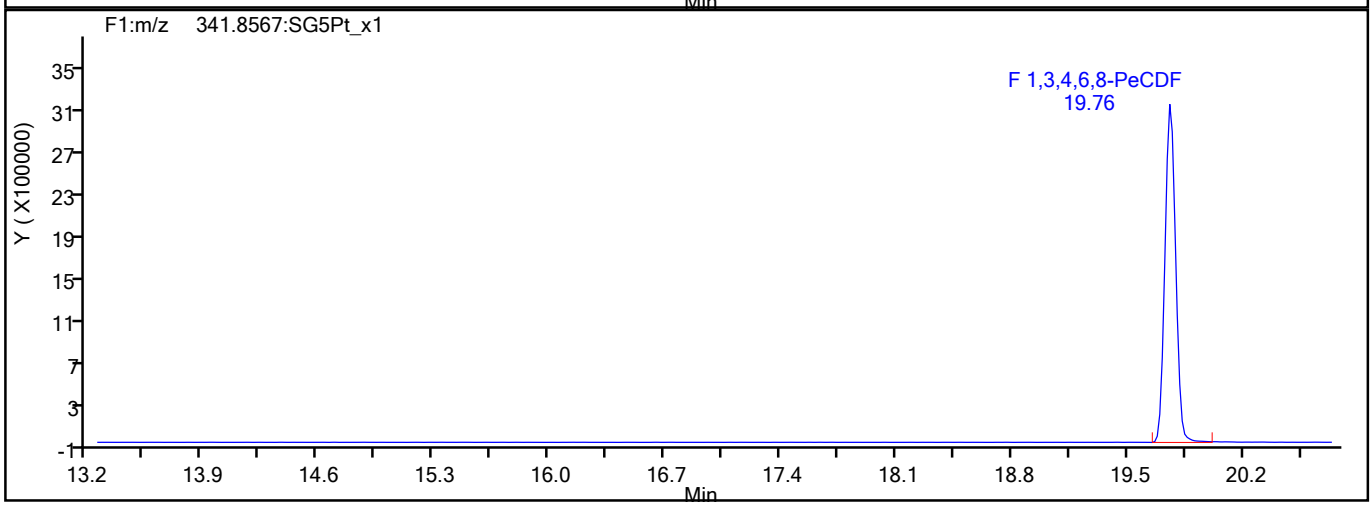

F1 PeCDFs Interference Mass

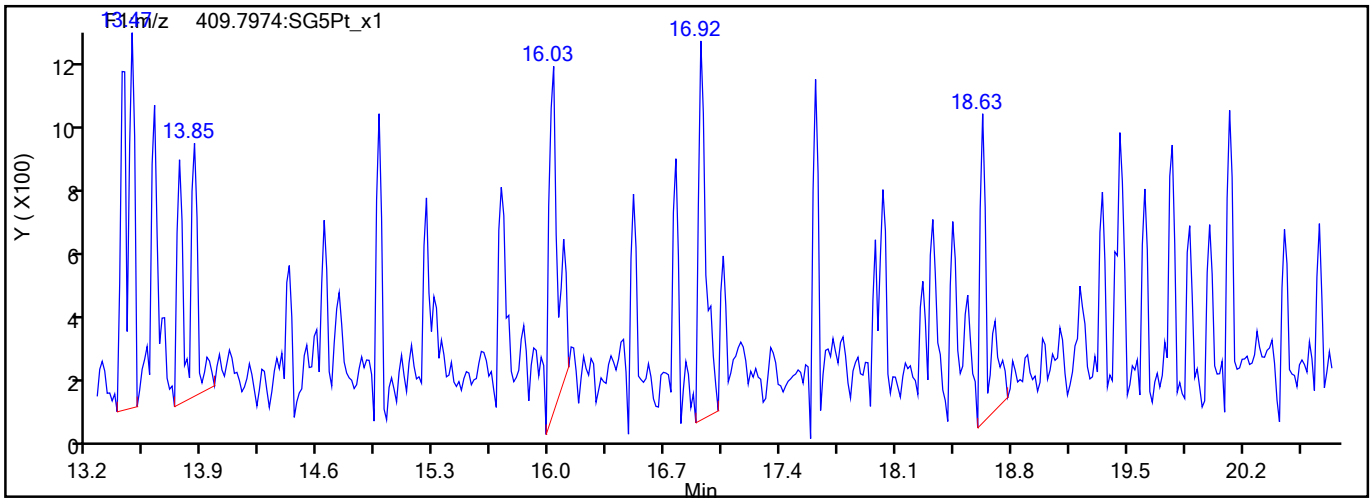

780649

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Eurofins TestAmerica, Sacramento

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PeCDF

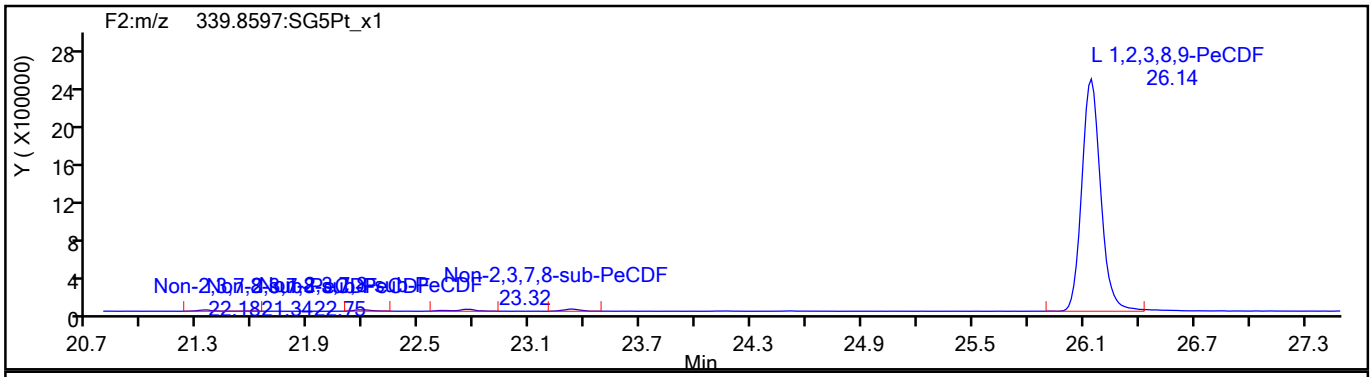

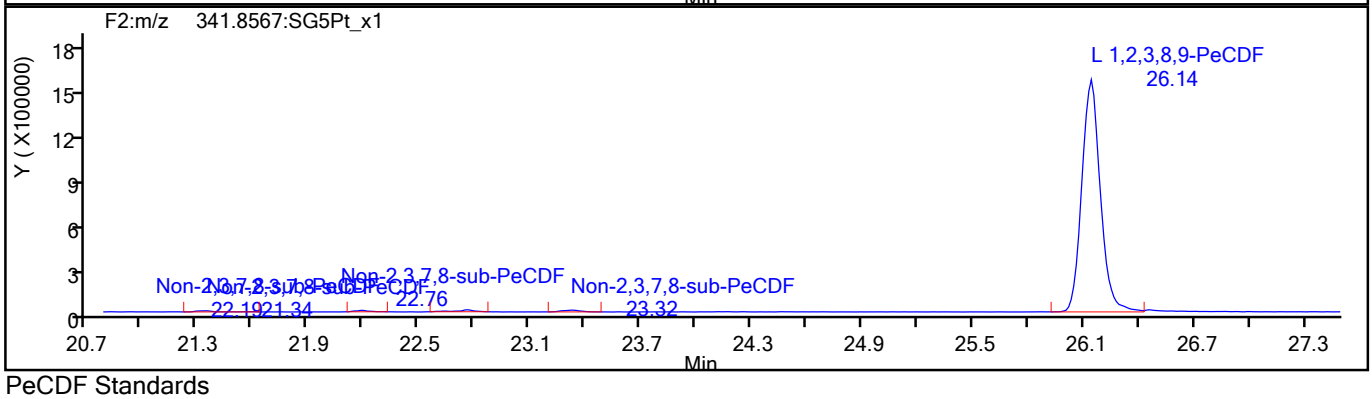

PeCDF Standards

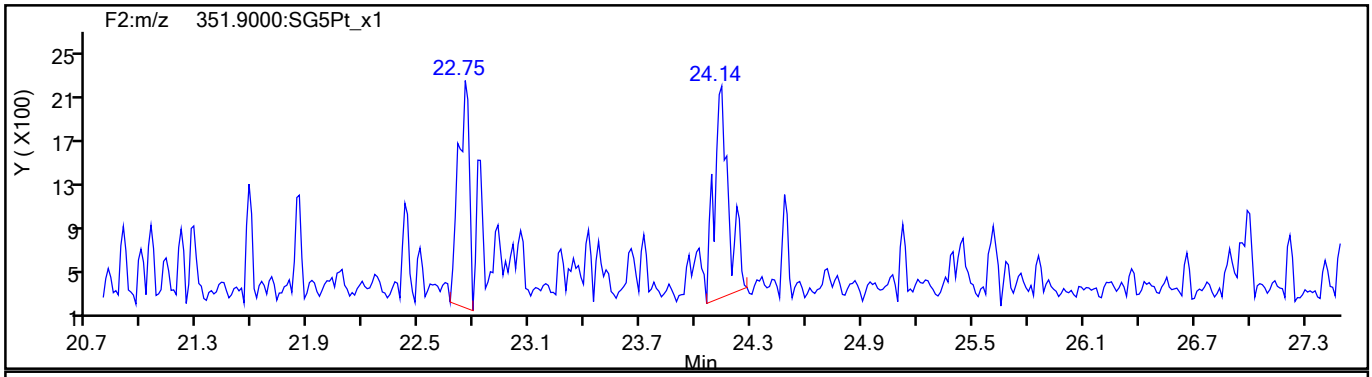

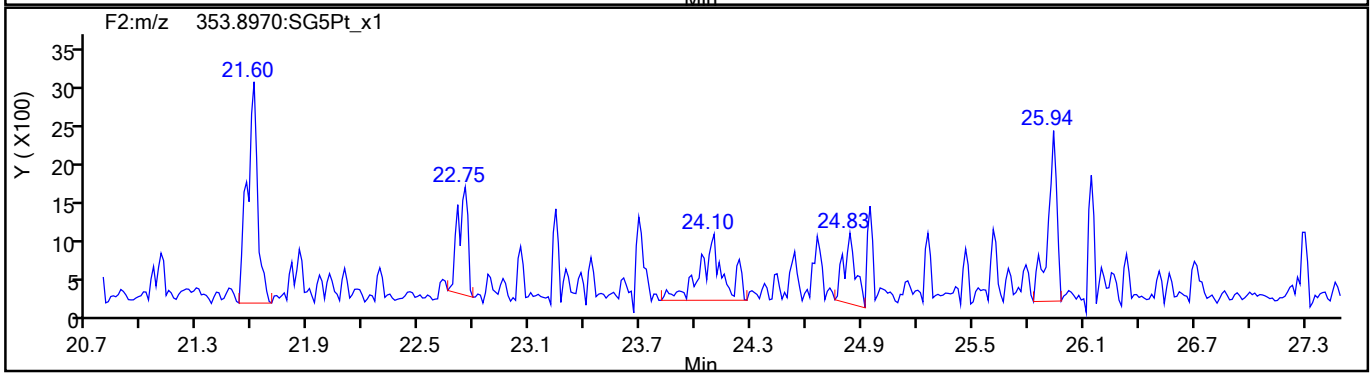

780650

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Eurofins TestAmerica, Sacramento

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PeCDF

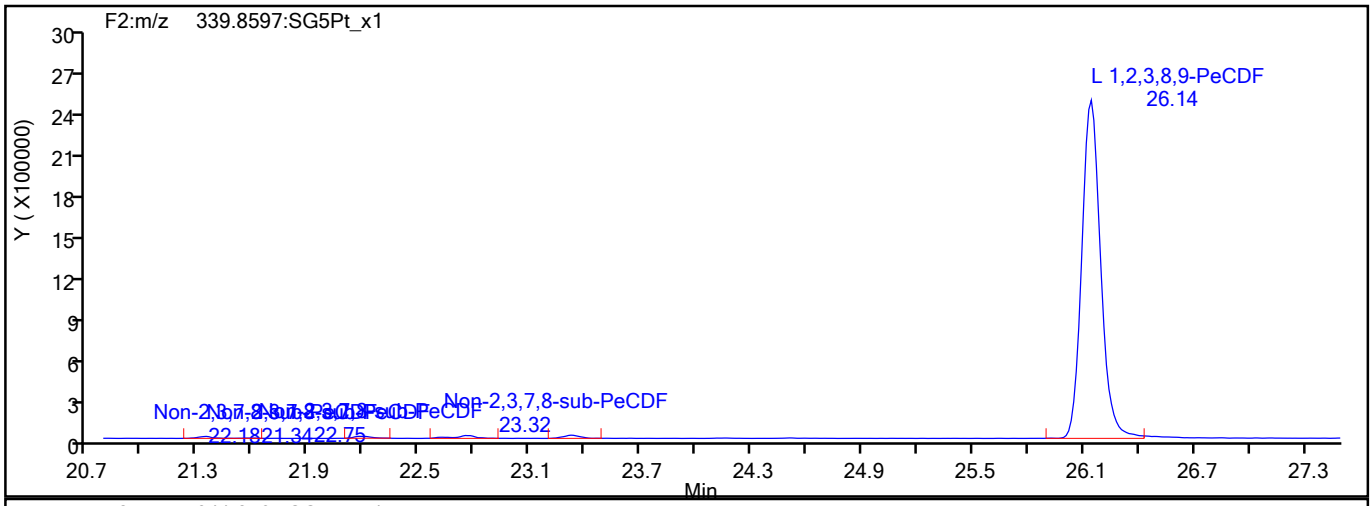

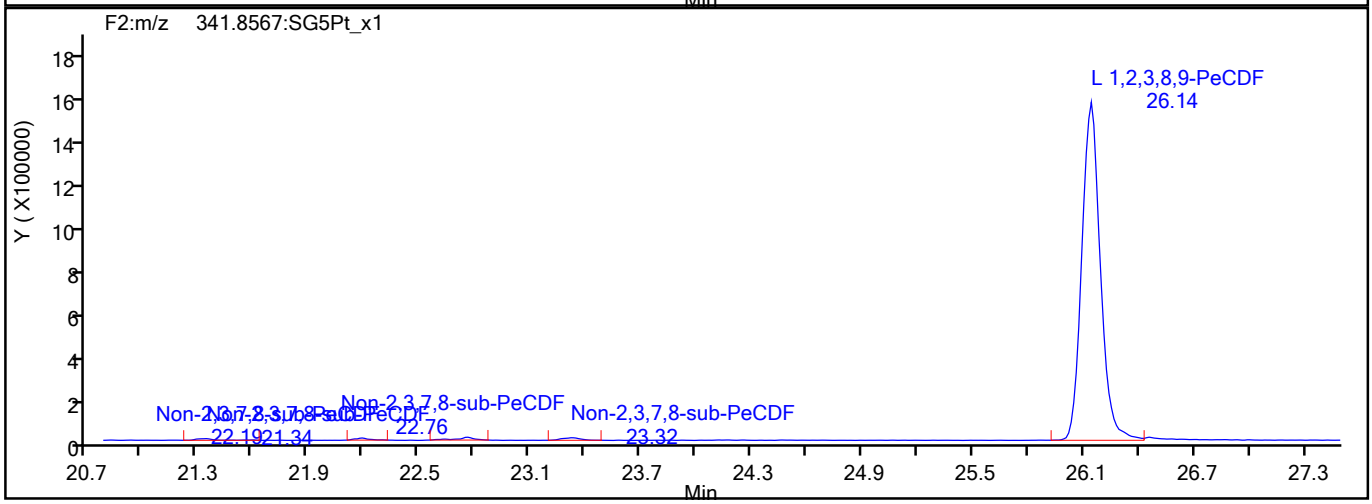

PeCDF Interference Mass

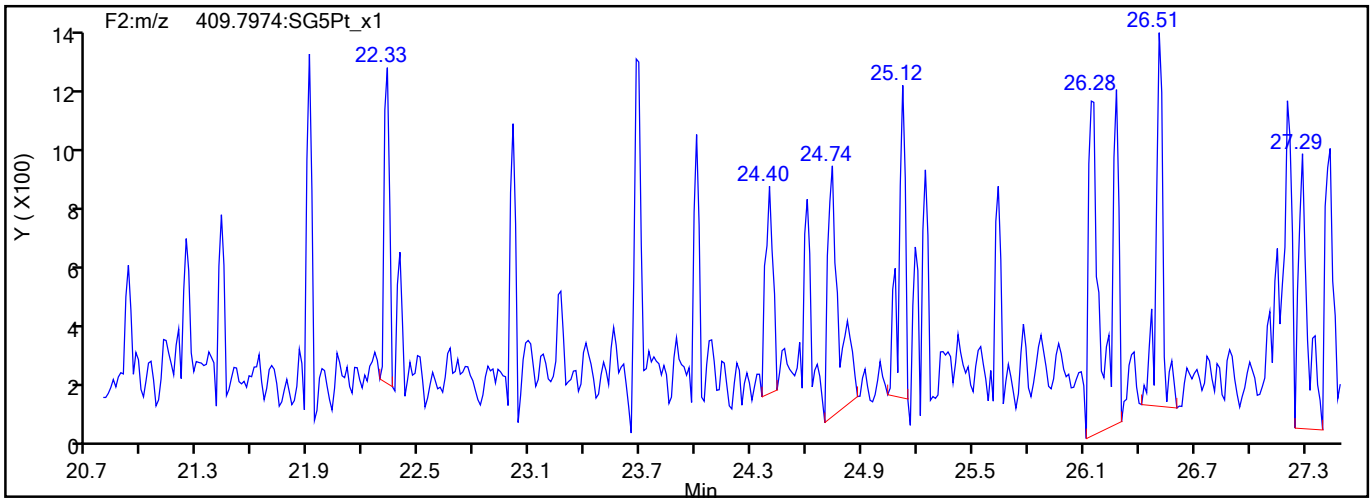

780651

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Eurofins TestAmerica, Sacramento

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PeCDD

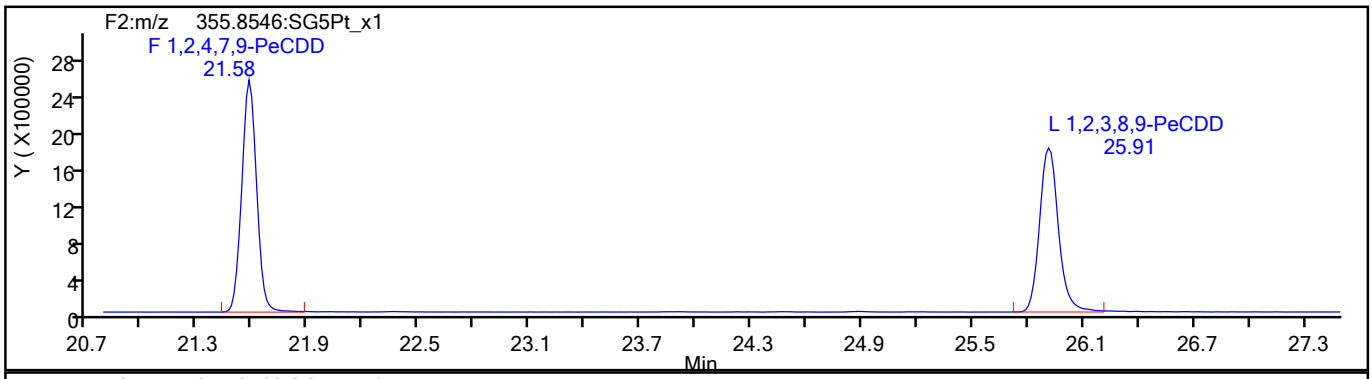

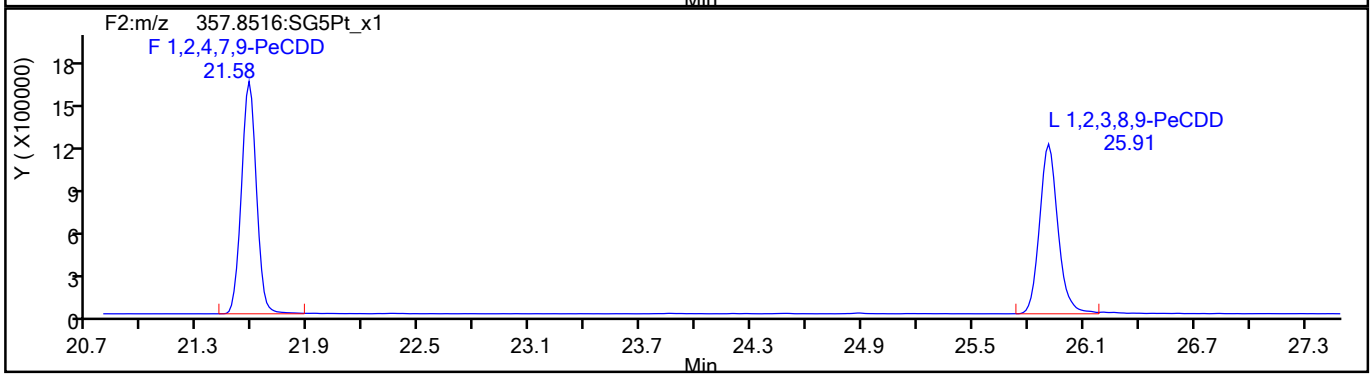

PeCDD Standards

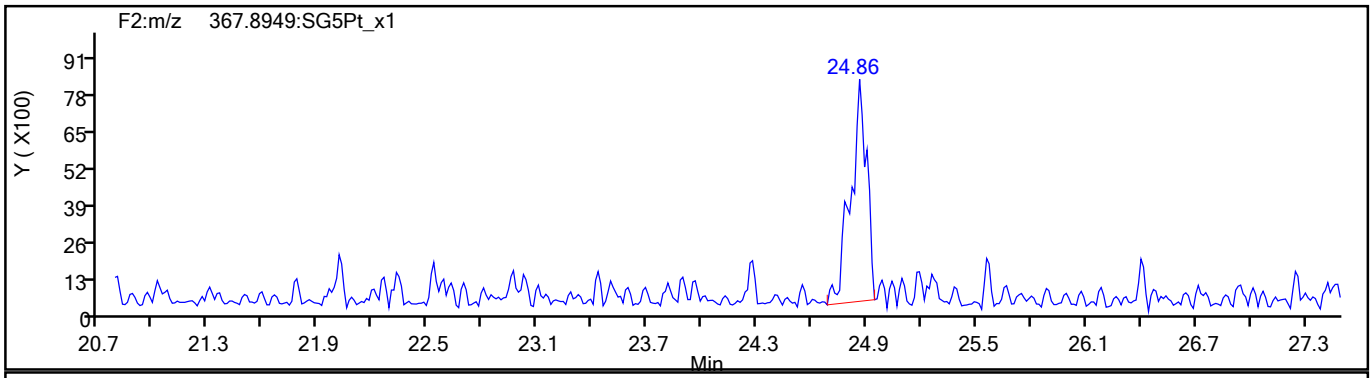

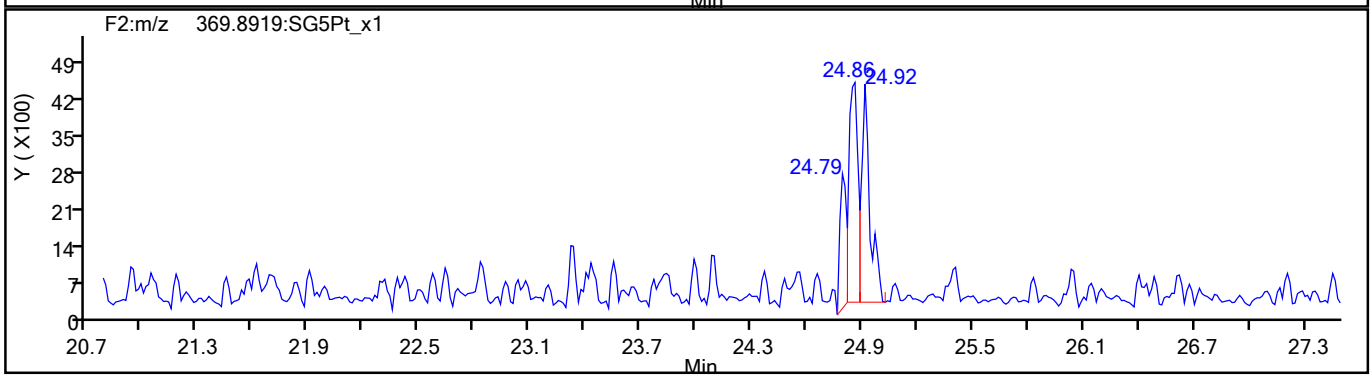

780652

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Eurofins TestAmerica, Sacramento

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HxCDF

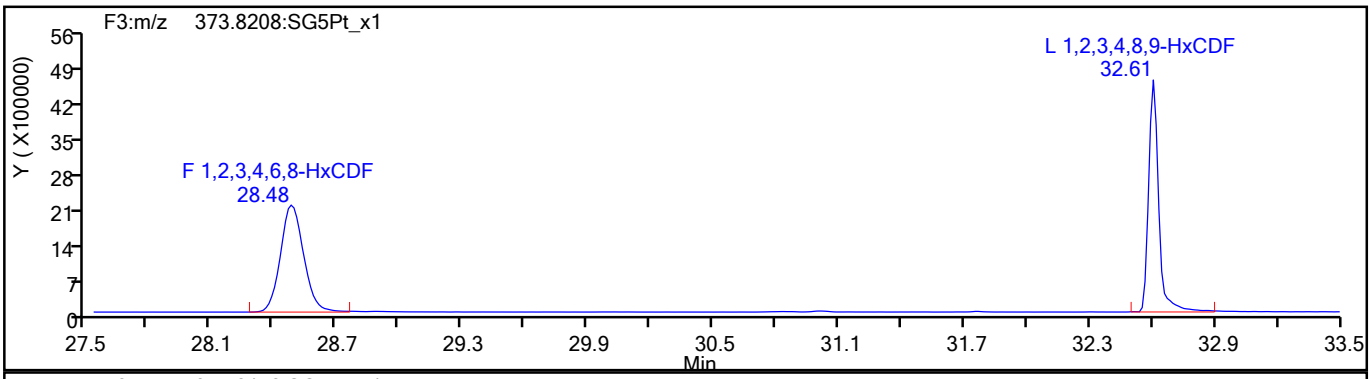

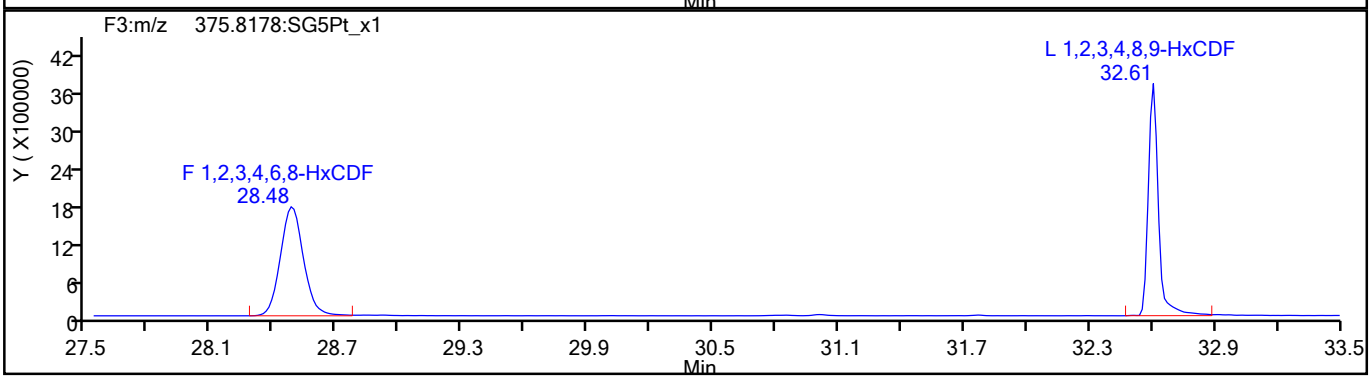

HxCDF Standards

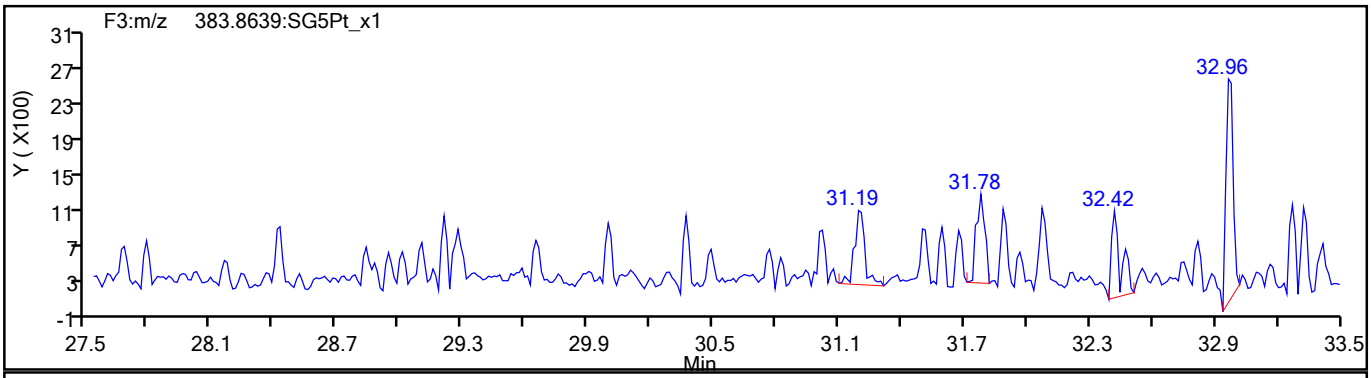

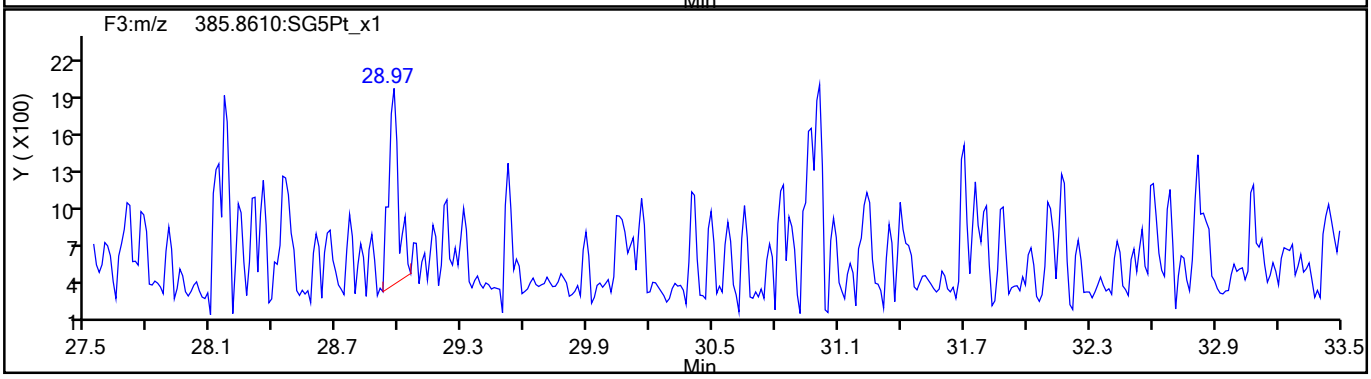

780653

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Eurofins TestAmerica, Sacramento

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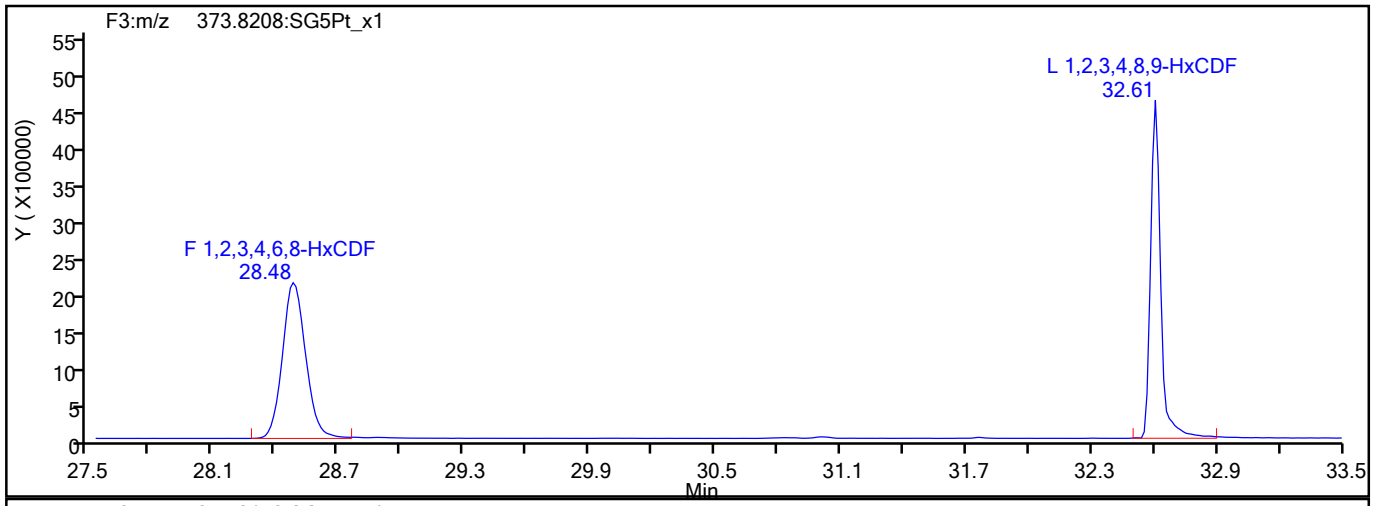

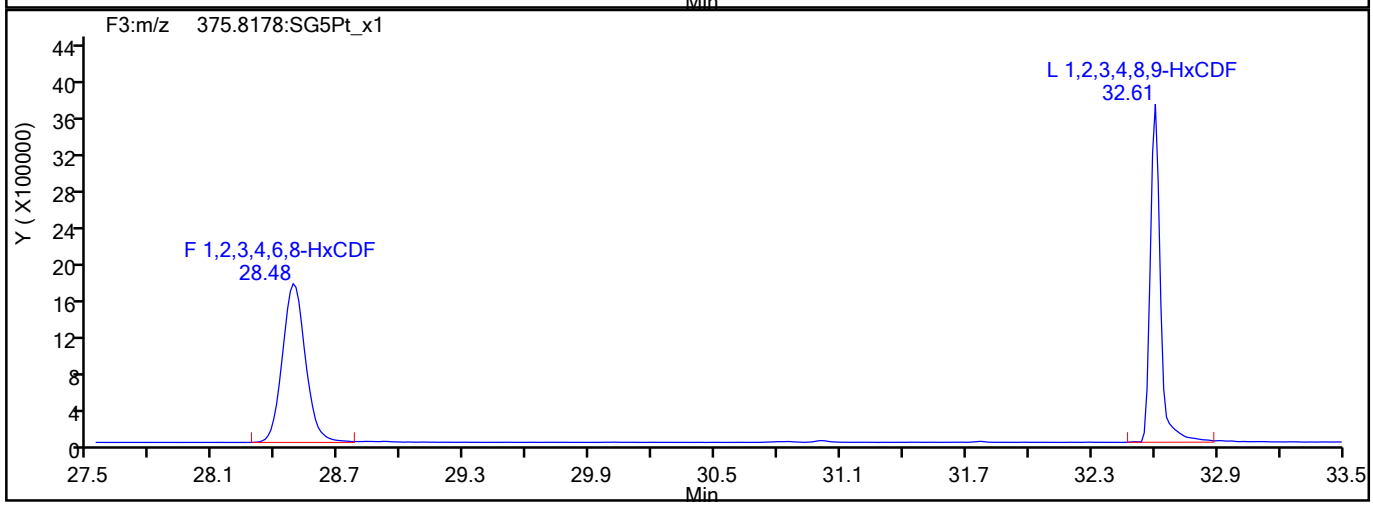

HxCDF Interference Mass

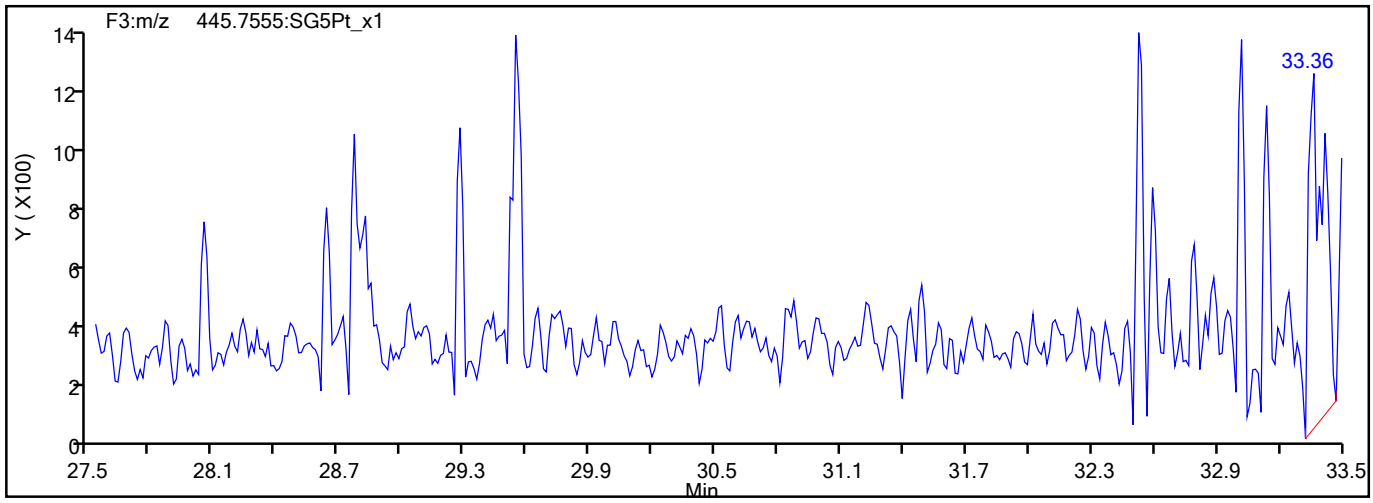

780654

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Eurofins TestAmerica, Sacramento

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HpCDF

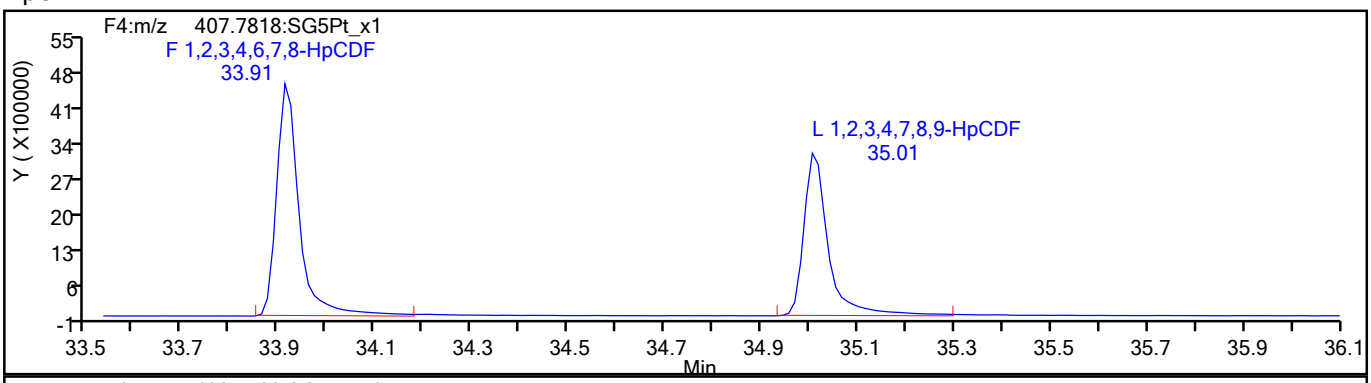

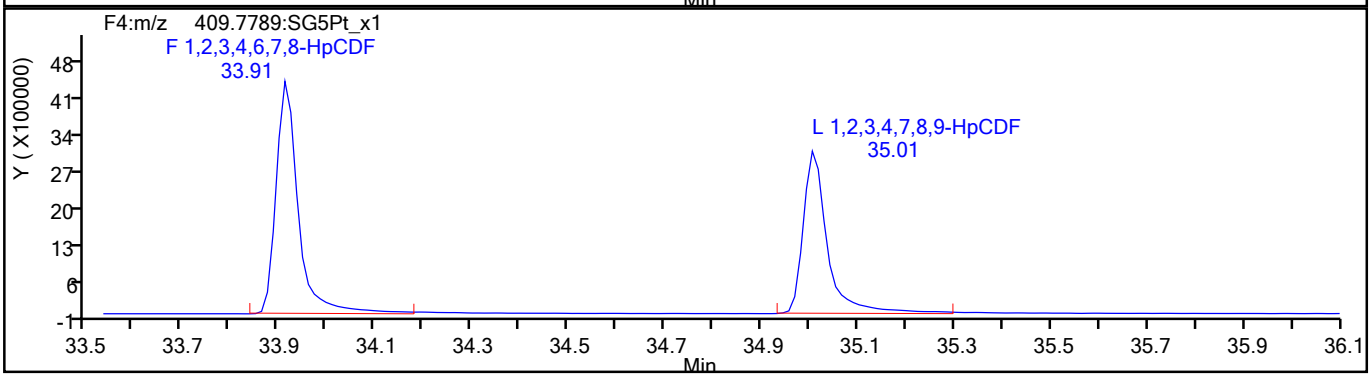

HpCDF Standards

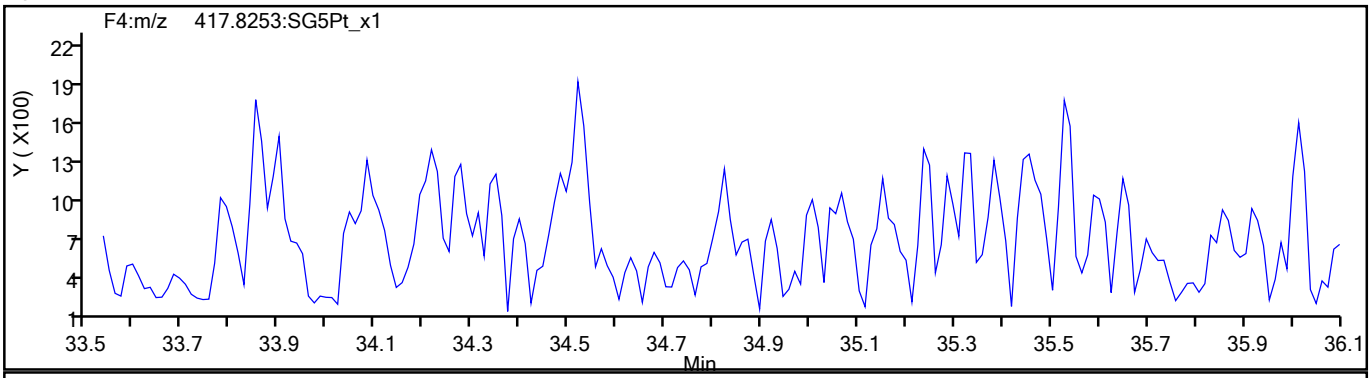

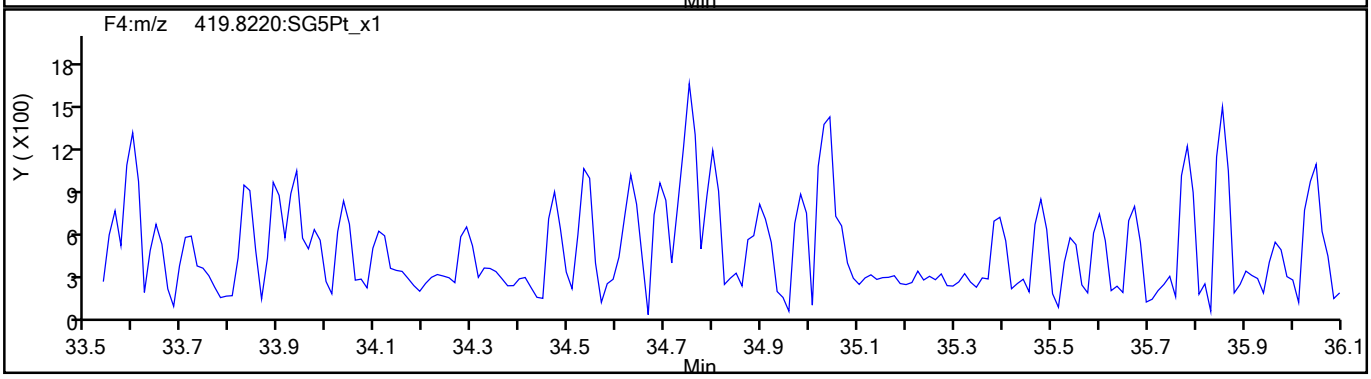

780655

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

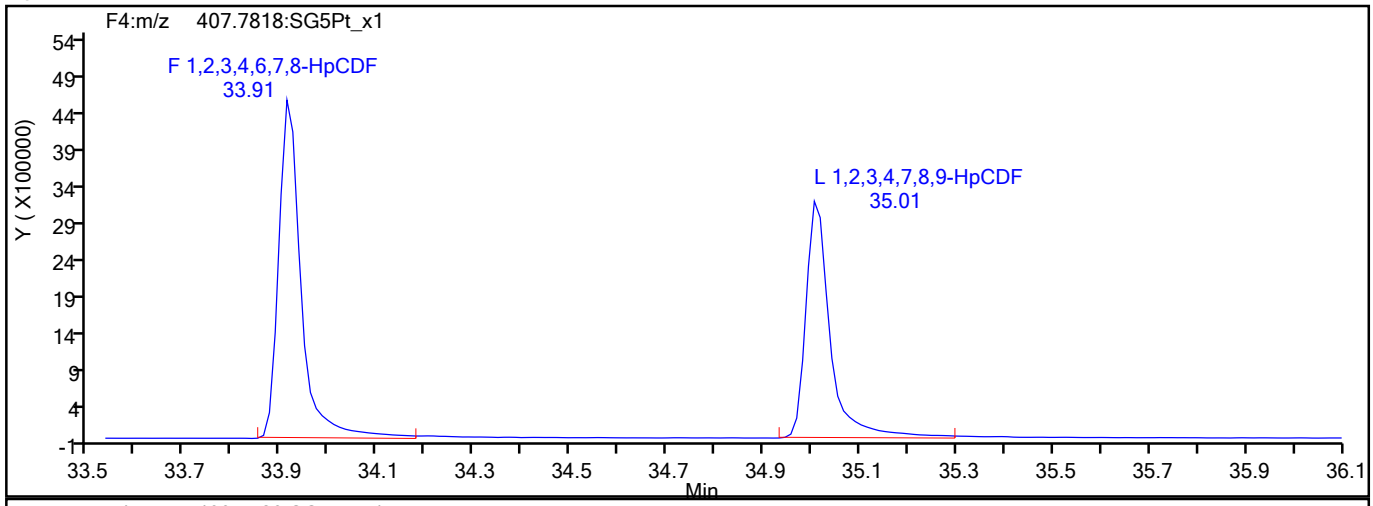

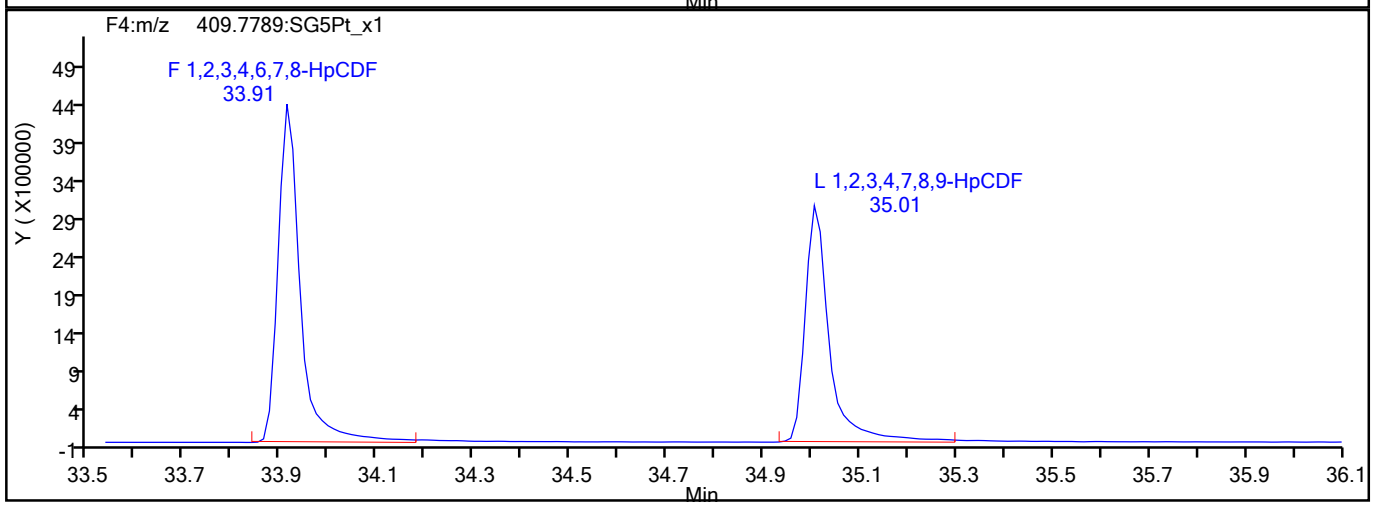

HpCDF Interference Mass

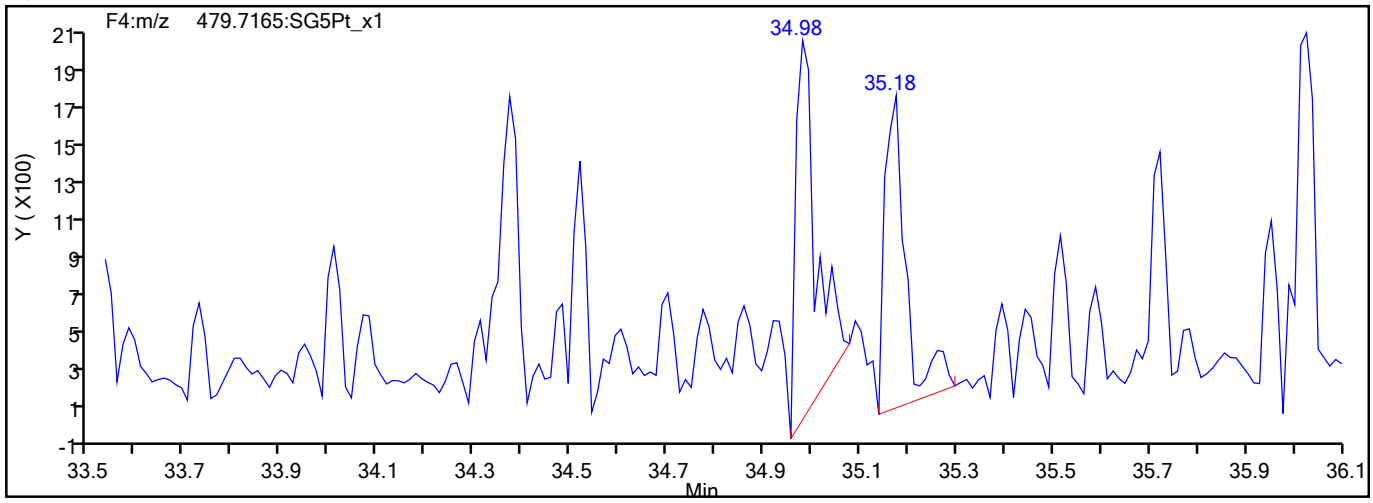

780656

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

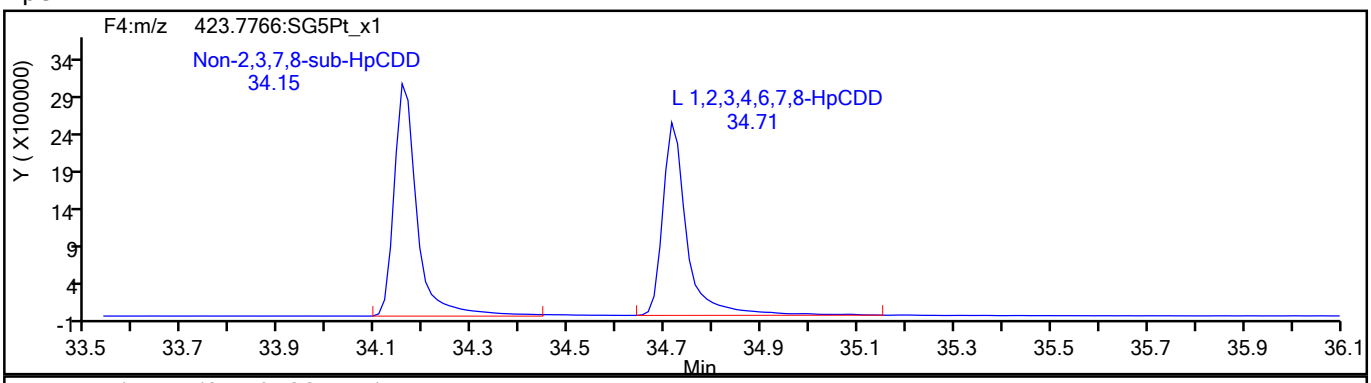

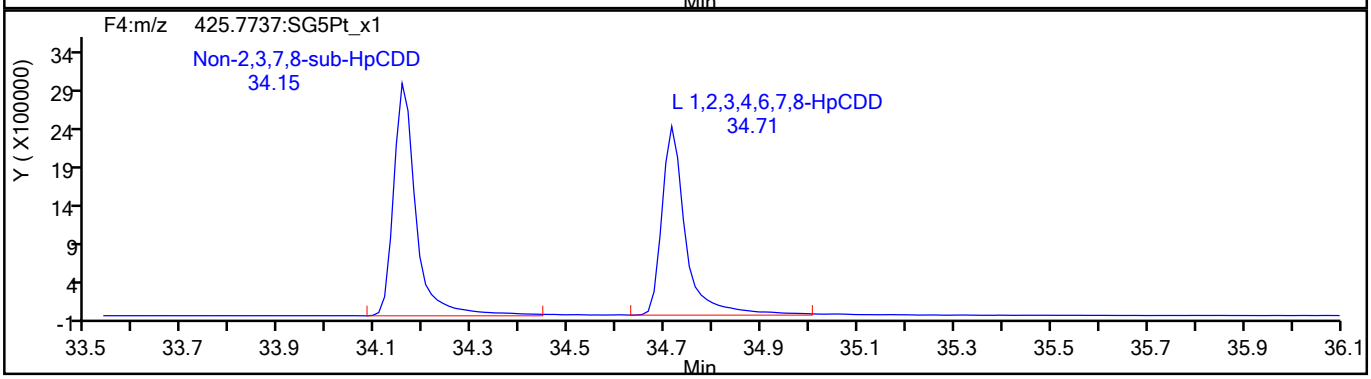

HpCDD Standards

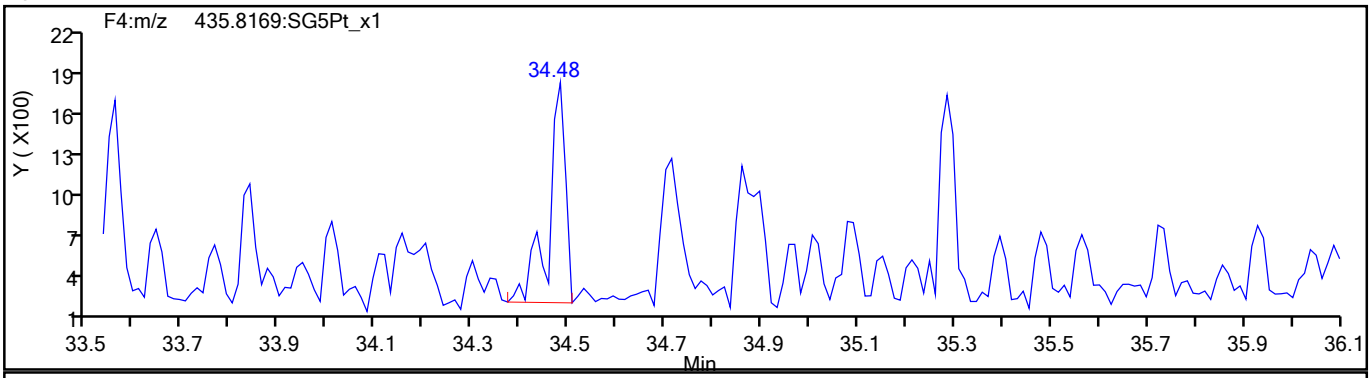

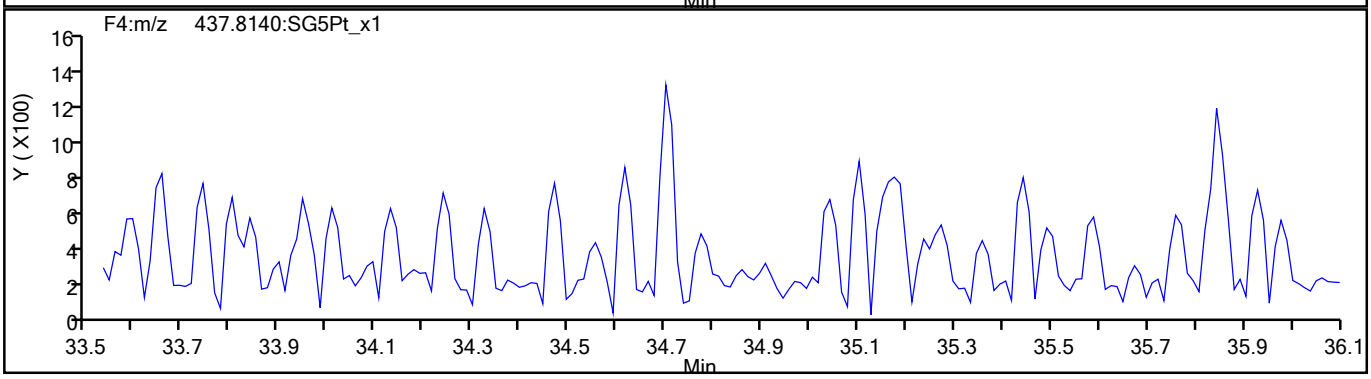

780657

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

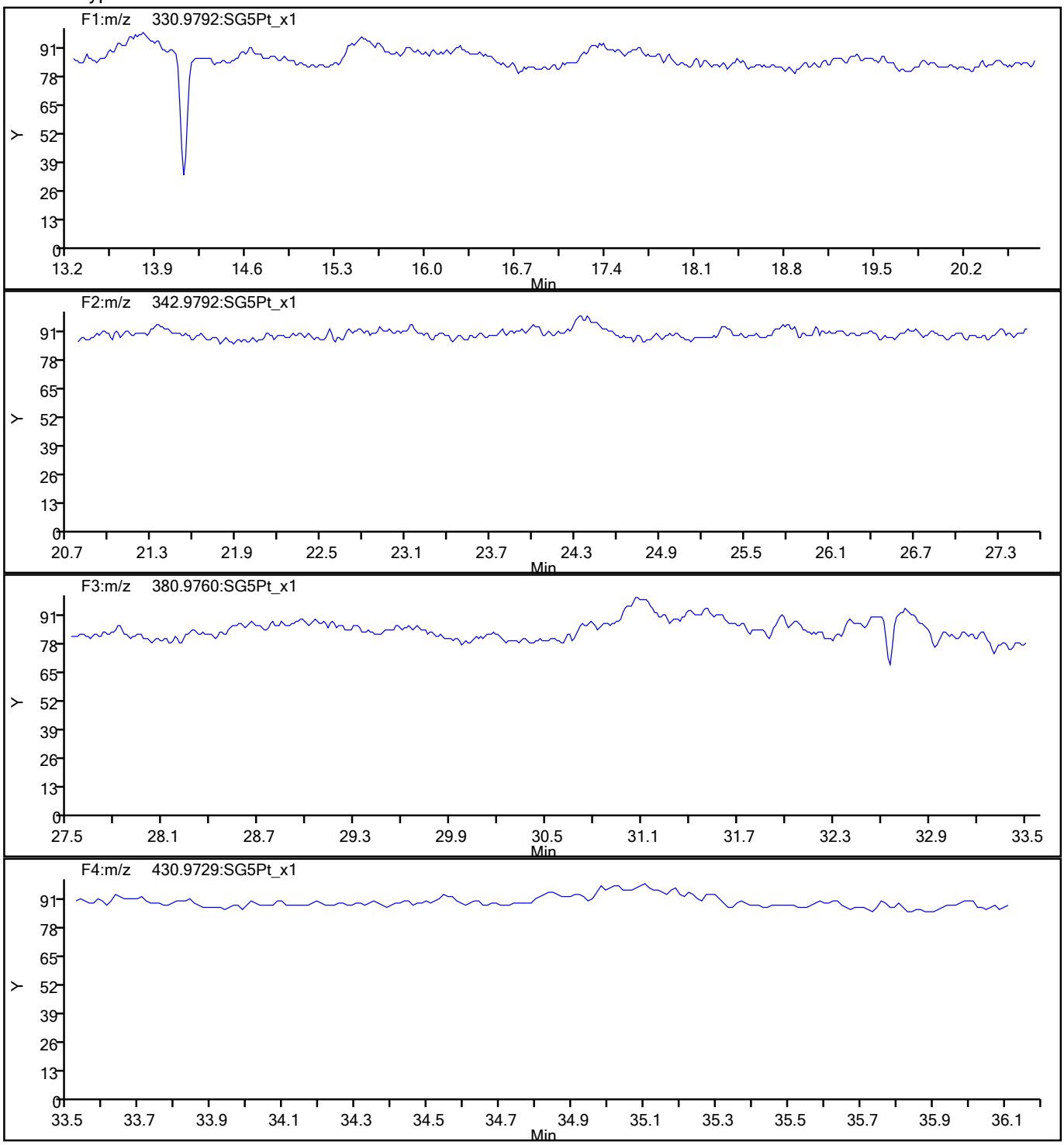

780658

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

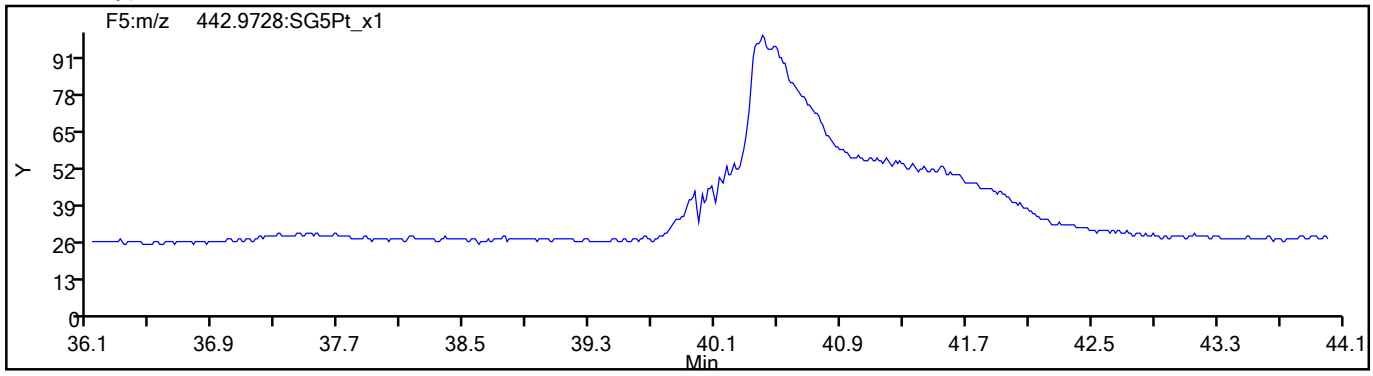

780659

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 14-Aug-2021 02:11:22 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081321A WDM HRDXNCP_00044
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 11:47:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1665

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:33:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.326	73847502	0.78	1.6249					0.00	
2,3,7,8-TCDF	17.356	160363741	0.77	1.0239	84.8	84.8	0.5491	0.5491		
A Non-2,3,7,8-sub-TCDF	17.038						0.5491	0.5491		
S Total TCDF					84.8	84.8	0.5491	0.5491		
D 13C-2,3,7,8-TCDD	18.036	38531367	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.066	53535563	0.78	1.2541	44.3	44.3	0.2604	0.2604		
A Non-2,3,7,8-sub-TCDD	17.499	46296934	0.77	1.2541	38.3	38.3	0.2604	38.3		
S Total TCDD					82.6	82.6	0.2604	0.2604		
A F1 PeCDFs	20.093						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	23.248	669707	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.355						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.210						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.882						0.0	0.0		
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.778	52446448	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	34.871	44429712	1.05	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.325						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.580	34141922	1.03	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.301						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.906	90335126	0.78							
1,3,6,8-TCDD	15.829	55571854	0.78							
2,3,4,7-TCDF	17.356	160363741	0.77							
1,2,3,7-TCDD	18.066	53545879	0.78							
1,2,3,9-TCDF	18.218	69282284	0.77							
1,2,3,9-TCDD	18.218	58005652	0.78							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.170	22388543								
1,2,8,9-TCDF	19.170	72952269	0.78							
1,3,4,6,8-PeCDF	19.458	63400218	1.58							
1,2,4,7,9-PeCDD	21.235	41260358	1.57							
1,2,3,8,9-PeCDD	25.476	38852460	1.58							
1,2,3,8,9-PeCDF	25.694	50742128	1.62							
1,2,3,4,6,8-HxCDF	27.987	51213051	1.22							
1,2,4,6,7,9-HxCDD	29.571	38269783	1.27							
1,2,3,4,6,7-HxCDD	32.113	39596232	1.26							
1,2,3,4,8,9-HxCDF	32.432	49722483	1.22							
1,2,3,4,6,7,9-HpCDD	34.021	38488182	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 14-Aug-2021 02:11:22 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081321A WDM HRDXNCP_00044
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 11:47:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1665

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:33:57

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.326	17.326	0	1.000	32306791	7484682	7281	18202	1028		
317.9389	17.326	17.326	0	1.000	41540711	9666692	4176	10440	2315	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.002	69582430	15360655	41874	104685	367		
305.8987	17.356	17.356	0	1.002	90781311	20354590	54553	136382	373	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.038						41874	104685			
305.8987	17.038						54553	136382			
13C-2,3,7,8-TCDD											
331.9368	18.036	18.036	0	1.000	17105354	3754762	2959	7397	1269		
333.9339	18.036	18.036	0	1.000	21426013	4767750	1967	4917	2424	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.002	23526054	5399948	10270	25675	526		
321.8936	18.066	18.066	0	1.002	30009509	6795438	17563	43907	387	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.945	17.499	27	0.995	20151434	4762208	10270	25675	464		
321.8936	17.945	17.499	27	0.995	26145500	6097888	17563	43907	347	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	20.093						1353	3382			
341.8567	20.093						1308	3270			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.835	23.248	-85	1.000	129682	21699	4687	11717	5		
341.8567	21.808	23.248	-86	1.000	46625	9163	3163	7907	3	2.78(1.32-1.78)	
339.8597	22.394	23.248	-51	1.000	187231	28396	4687	11717	6		
341.8567	22.408	23.248	-50	1.000	157893	19396	3163	7907	6	1.19(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	22.980	23.248	-16	1.000	140673	22145	4687	11717	5		
341.8567	22.967	23.248	-17	1.000	102116	14963	3163	7907	5	1.38(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.355						4949	12372			
357.8516	23.355						2474	6185			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.210						7916	19790			
375.8178	30.210						6284	15710			
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						12921	32302			
391.8127	30.882						10838	27095			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	26862677	8380905	35116	87790	239		
409.7789	33.778	33.778	0	1.000	25583771	7969158	33554	83885	238	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.871	34.871	0	1.000	22758244	5838044	35116	87790	166		
409.7789	34.859	34.871	-1	1.000	21671468	5546139	33554	83885	165	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						35116	87790			
409.7789	34.325						33554	83885			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	17302217	4819932	22672	56680	213		
425.7737	34.580	34.580	0	1.000	16839705	4651057	24704	61760	188	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						22672	56680			
425.7737	34.301						24704	61760			
1,3,6,8-TCDF											
303.9016	14.906	14.906	0		39532037	11747986	41874	104685	281		
305.8987	14.906	14.906	0		50803089	15184651	54553	136382	278	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.829	15.829	0		24269839	6753372	10270	25675	658		
321.8936	15.829	15.829	0		31302015	8737738	17563	43907	498	0.78(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.356	17.356	0		69582430	15360655	41874	104685	367		
305.8987	17.356	17.356	0		90781311	20354590	54553	136382	373	0.77(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.066	18.066	0		23533100	5400906	10270	25675	526		
321.8936	18.066	18.066	0		30012779	6795883	17563	43907	387	0.78(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	18.218	18.218	0		30083567	6676292	41874	104685	159		
305.8987	18.218	18.218	0		39198717	8737439	54553	136382	160	0.77(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.218	18.218	0		25410369	5397686	10270	25675	526		
321.8936	18.218	18.218	0		32595283	7061287	17563	43907	402	0.78(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.170	19.170	0		22388543	4650701	10270	25675	453		

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	19.170	19.170	0		32060222	6420841	41874	104685	153		
305.8987	19.170	19.170	0		40892047	8366824	54553	136382	153	0.78(0.65-0.89)	
1,3,4,6,8-PeCDF											
339.8597	19.458	19.458	0		38783312	7975300	1353	3382	5895		
341.8567	19.458	19.458	0		24616906	5101824	1308	3270	3900	1.58(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	21.235	21.235	0		25225934	4121951	4949	12372	833		
357.8516	21.235	21.235	0		16034424	2606151	2474	6185	1053	1.57(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	25.476	25.476	0		23811775	3111403	4949	12372	629		
357.8516	25.476	25.476	0		15040685	1969918	2474	6185	796	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	25.694	25.694	0		31341379	3975503	4687	11717	848		
341.8567	25.694	25.694	0		19400749	2459949	3163	7907	778	1.62(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	27.987	27.987	0		28143198	3288649	7916	19790	415		
375.8178	27.987	27.987	0		23069853	2694552	6284	15710	429	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.571	29.571	0		21410056	2443263	12921	32302	189		
391.8127	29.571	29.571	0		16859727	1895294	10838	27095	175	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8157	32.113	32.113	0		22078905	5734467	12921	32302	444		
391.8127	32.113	32.113	0		17517327	4572962	10838	27095	422	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.432	32.432	0		27301626	7074320	7916	19790	894		
375.8178	32.419	32.432	-1		22420857	5762049	6284	15710	917	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	34.021	34.021	0		19617048	5961023	22672	56680	263		
425.7737	34.021	34.021	0		18871134	5724936	24704	61760	232	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d
Lims ID: WDM
Client ID:
Inject. Date: 14-Aug-2021 02:11:22 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	38531367	8522512

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	38531367	8522512

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.945	20151434	4762208	26145500	6097888	38.3	0.77	
Signal Totals:							
	20151434	4762208	26145500	6097888			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	46296934	10860096				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 38.323 = (46296934 * 40.000) / (38531367 * 1.254)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d
Lims ID: WDM
Client ID:
Inject. Date: 14-Aug-2021 02:11:22 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDF, RT: 23.248

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.835	129682	21699	46625	9163		2.78	R
22.394	187231	28396	157893	19396		1.19	R
22.980	140673	22145	102116	14963		1.38	
Signal Totals:							
	457586	72240	306634	43522			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	764220	115762				1.49	RQ
	669707	107189					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (764220 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (669707 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

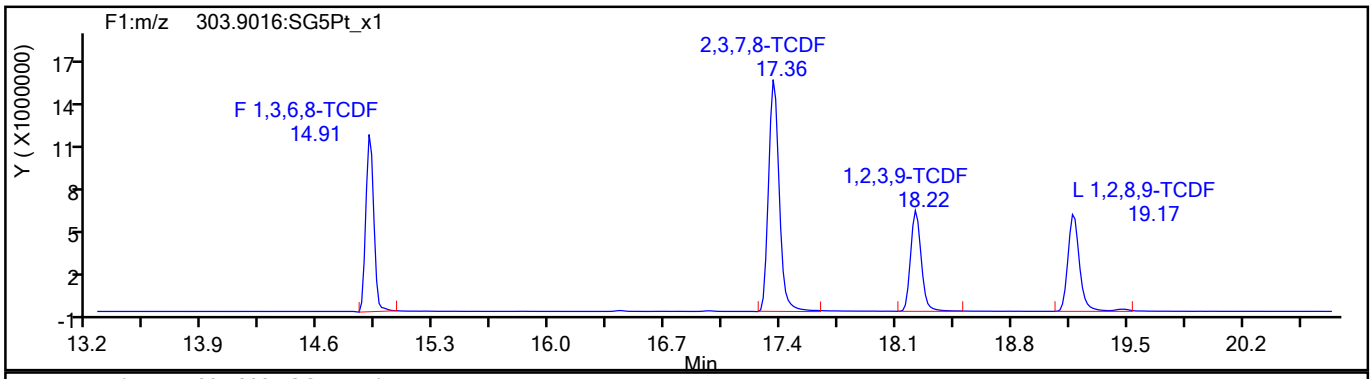

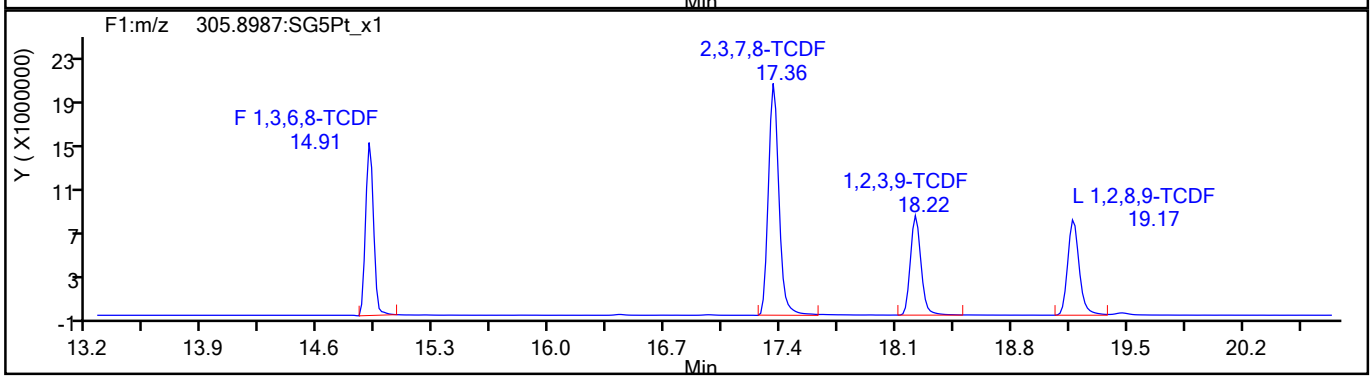

TCDF Standards

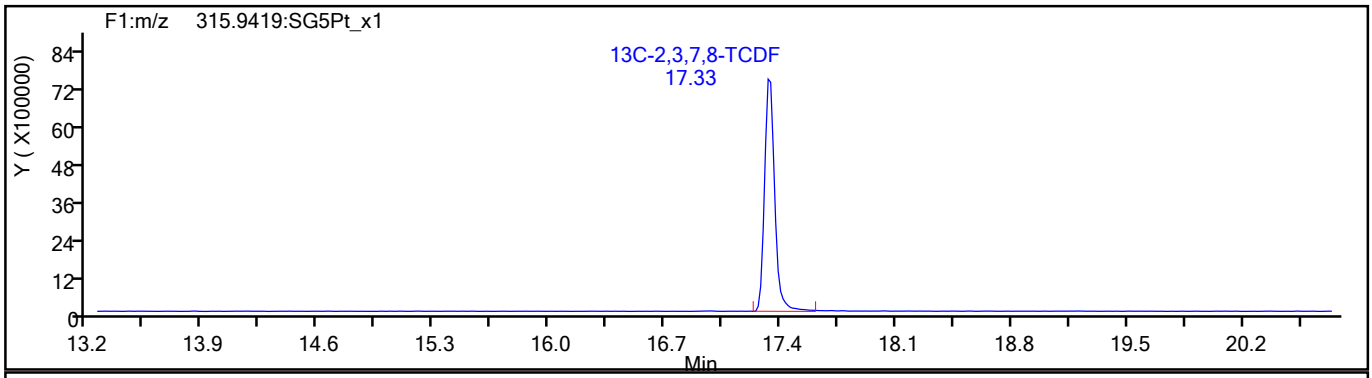

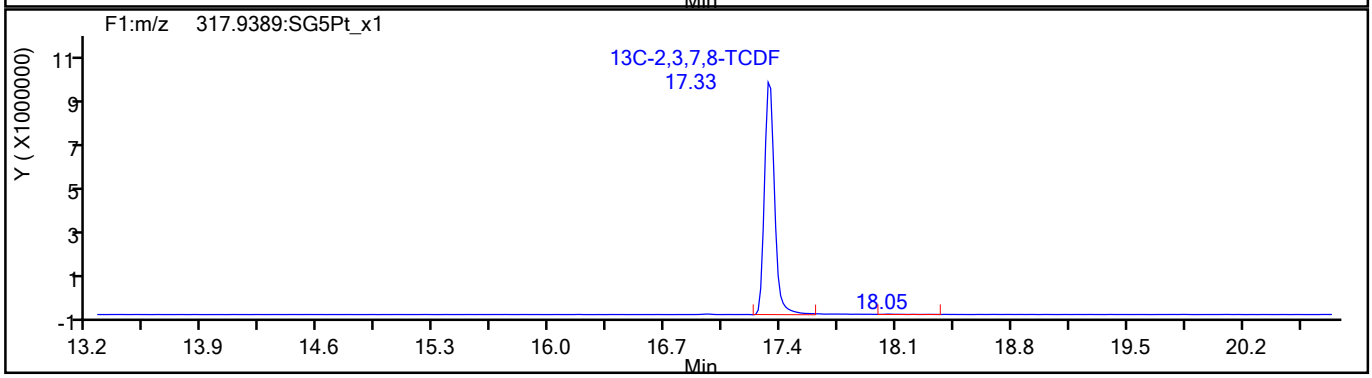

780667

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

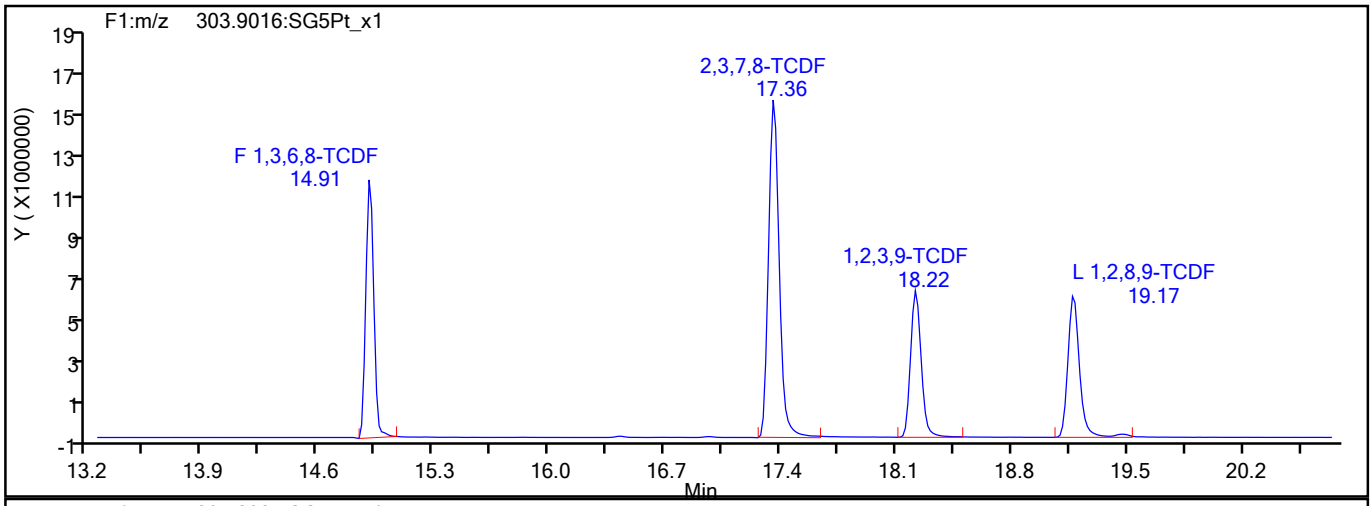

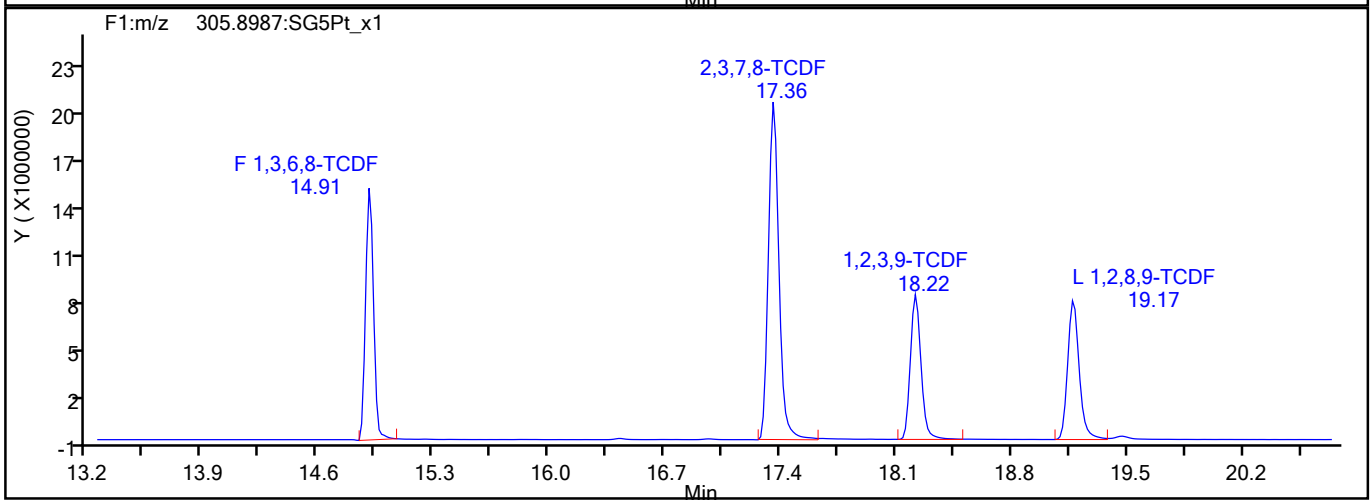

TCDF Interference Mass

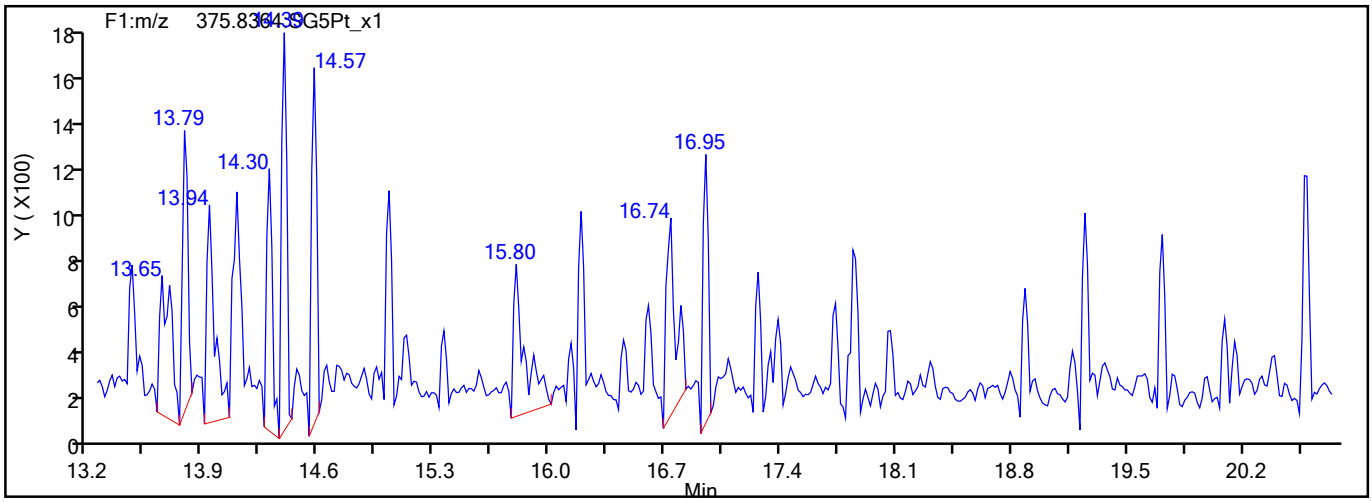

780668

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

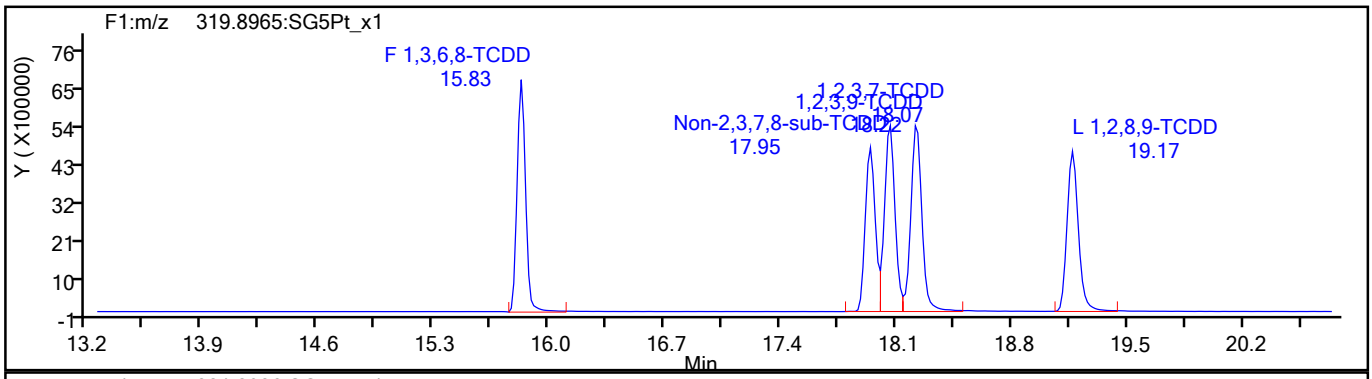

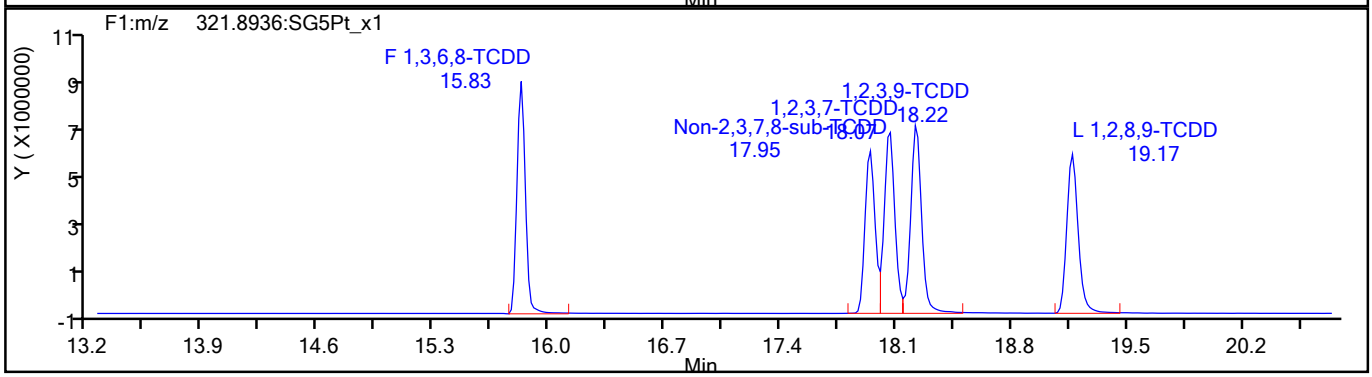

TCDD Standards

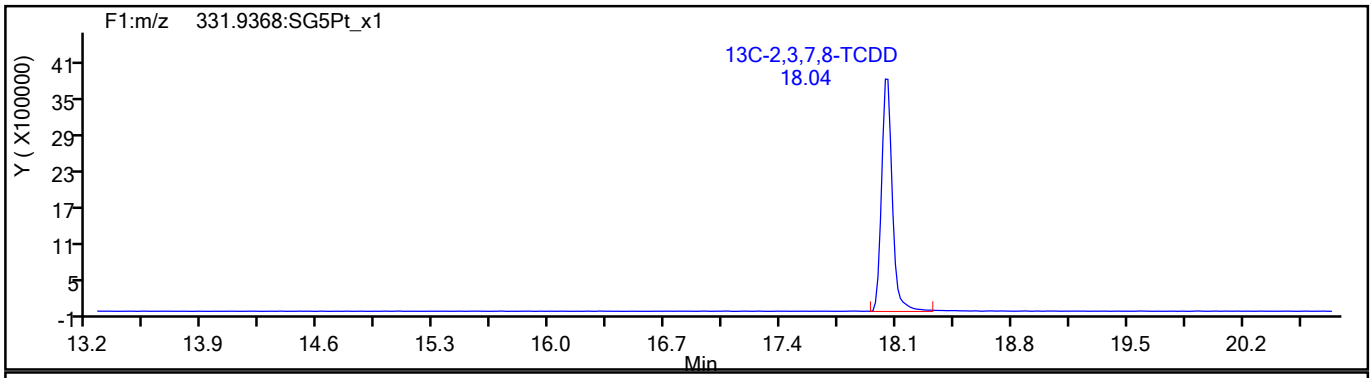

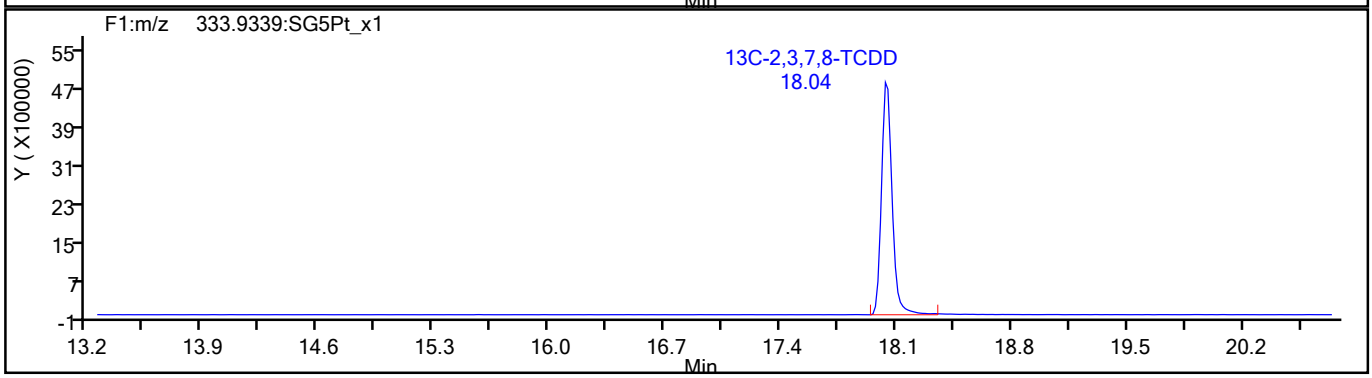

780669

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

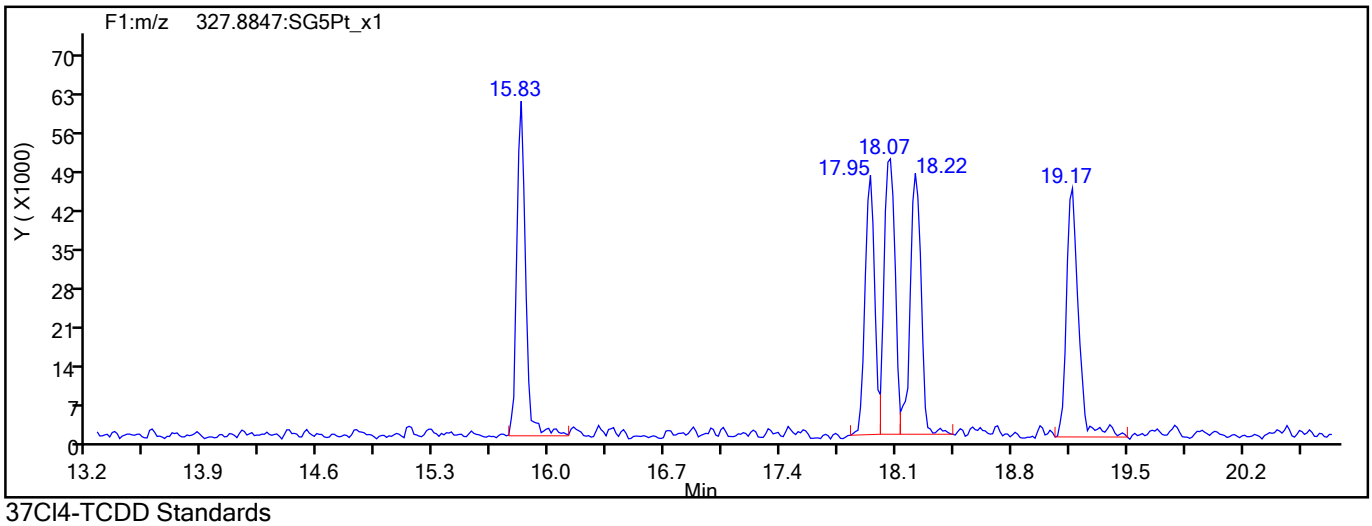

37Cl4-TCDD Standards

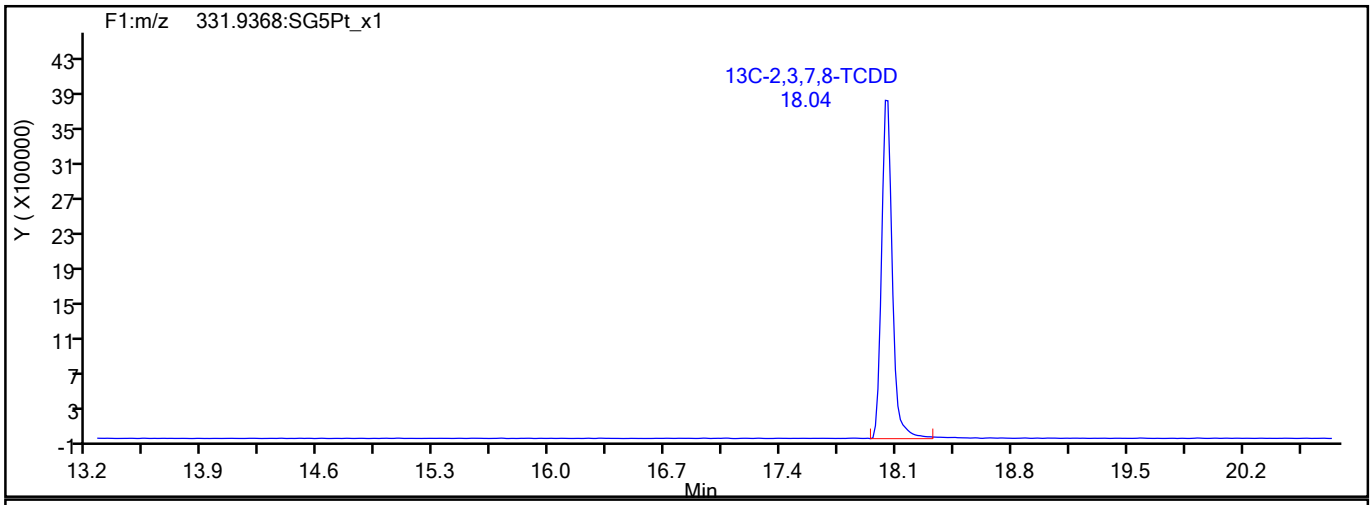

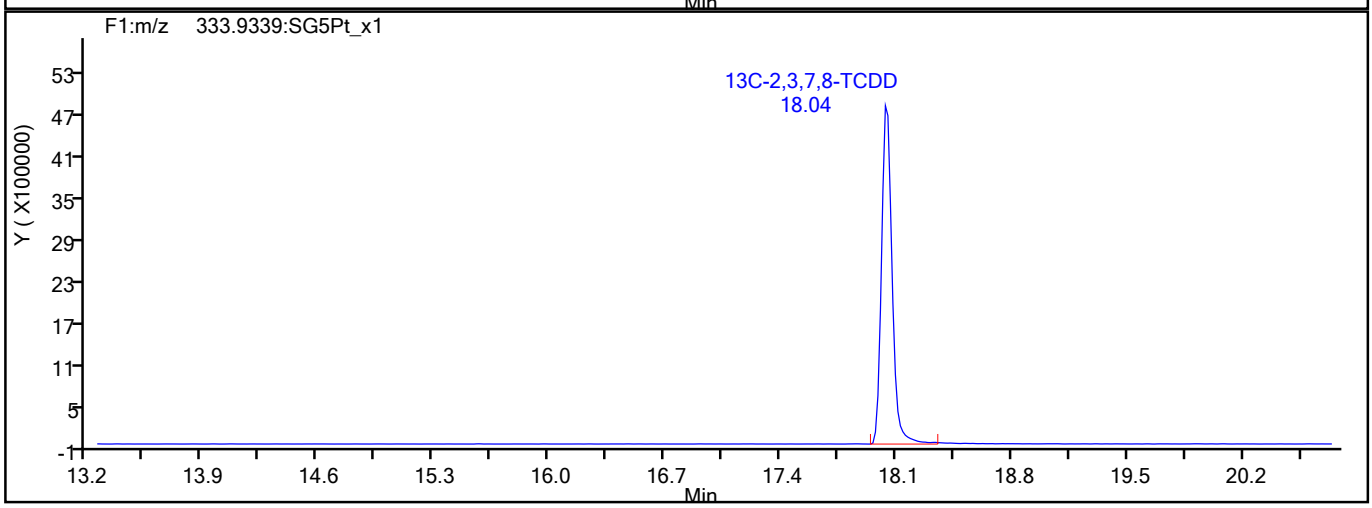

780670

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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F1 PeCDFs

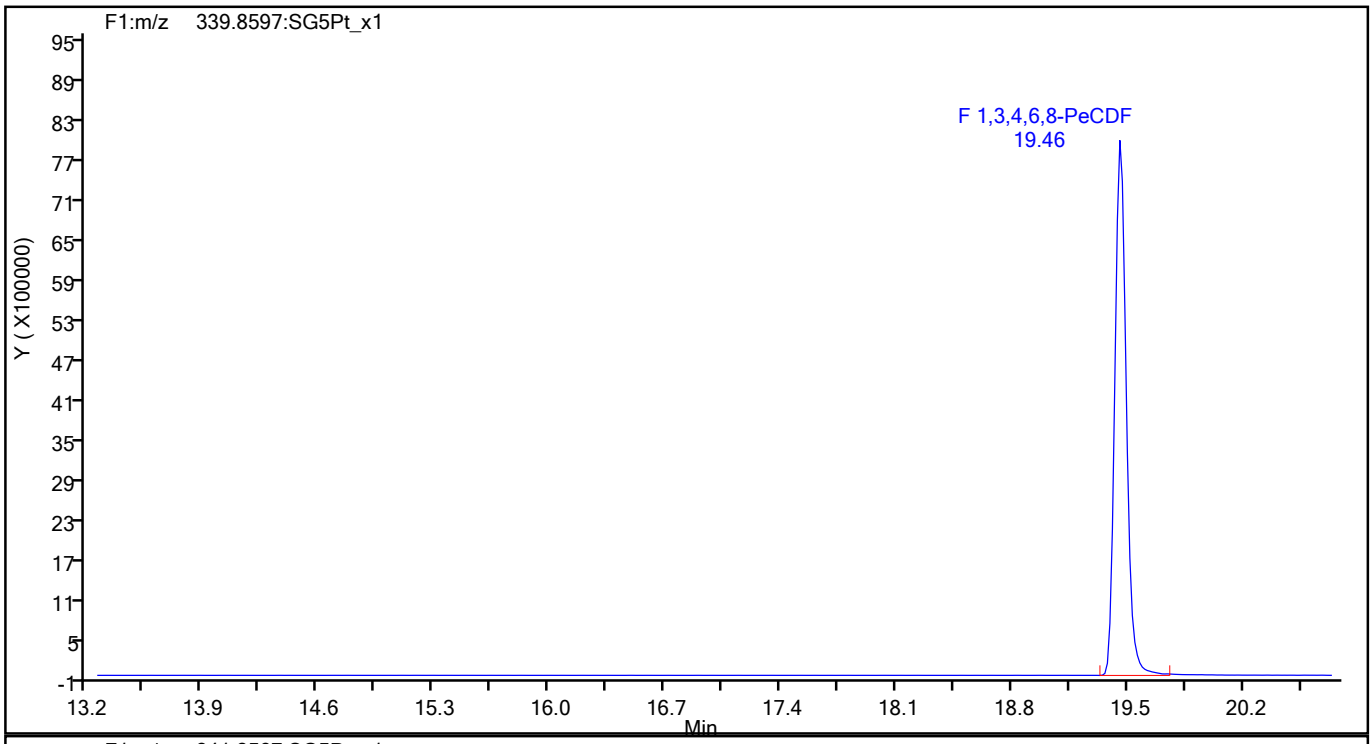

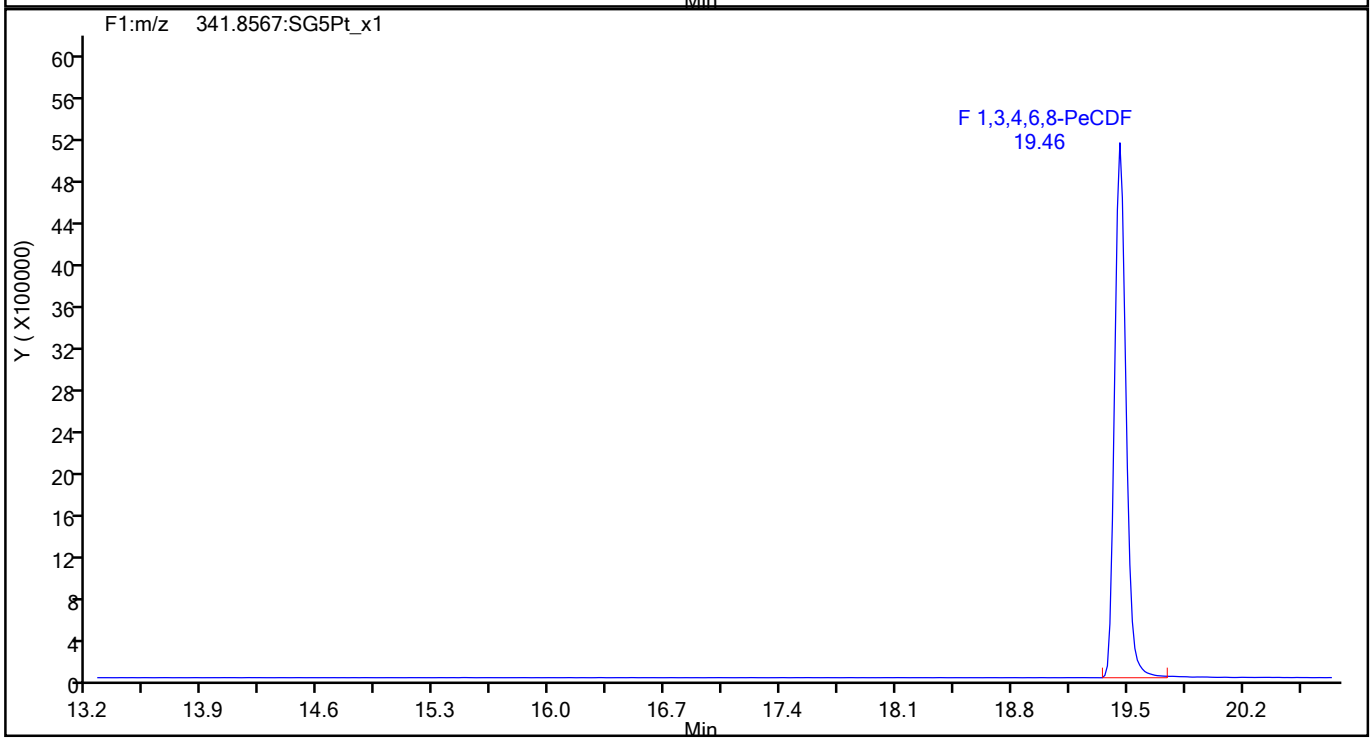

780671

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
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F1 PeCDFs

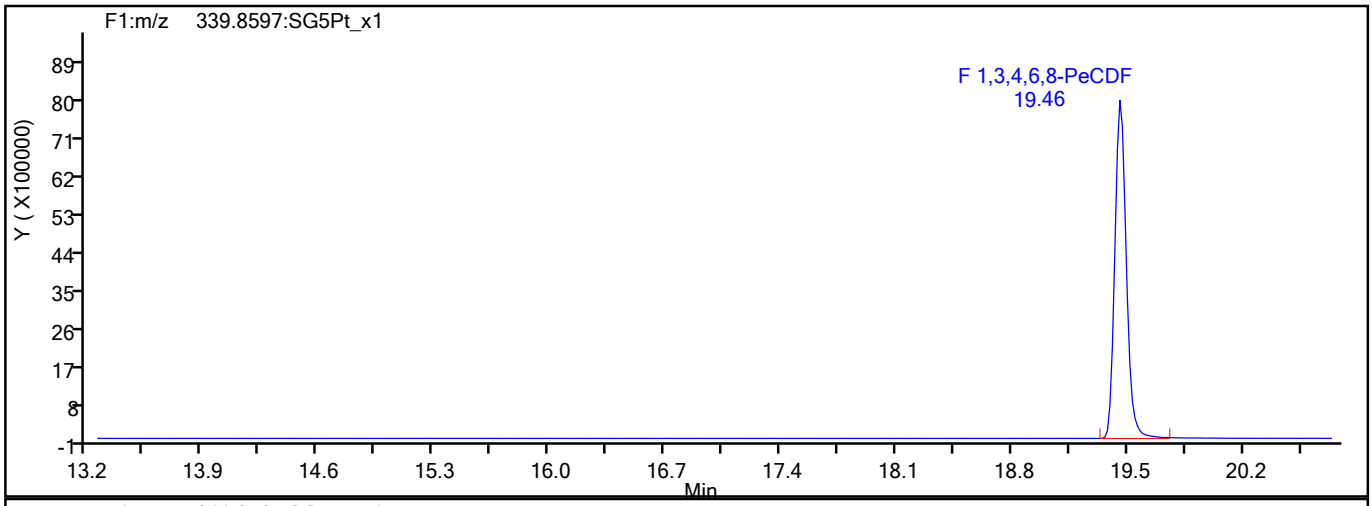

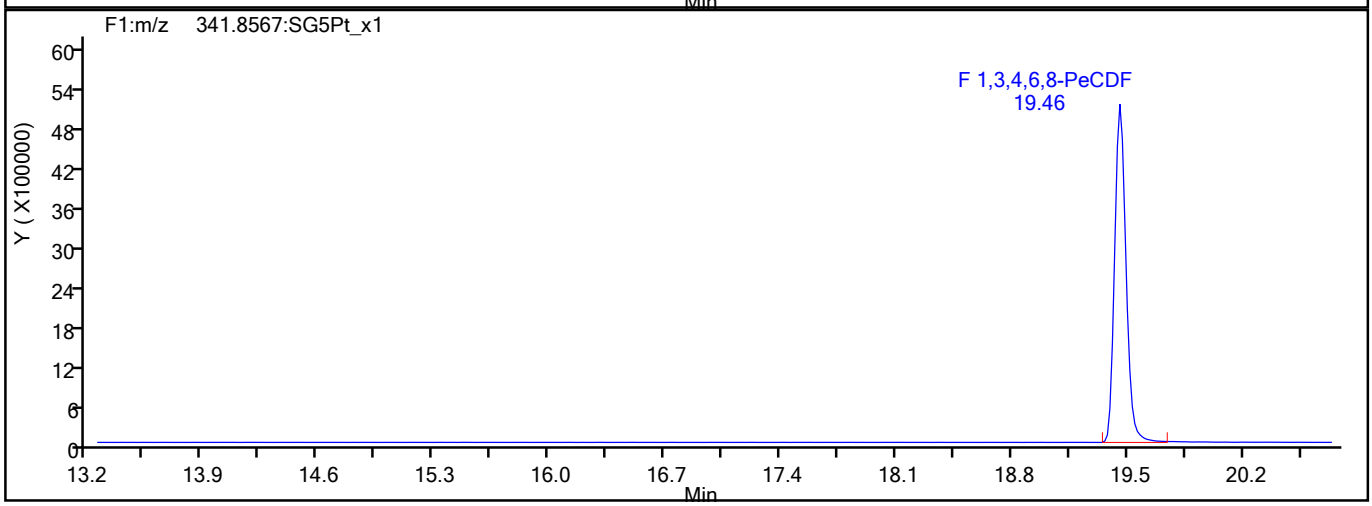

F1 PeCDFs Interference Mass

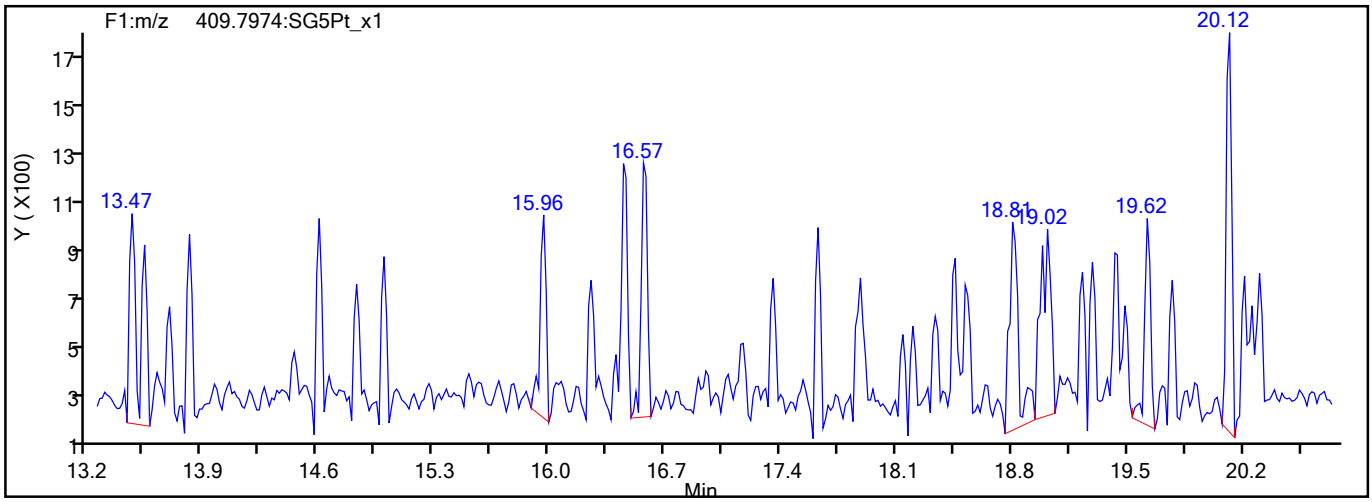

780672

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

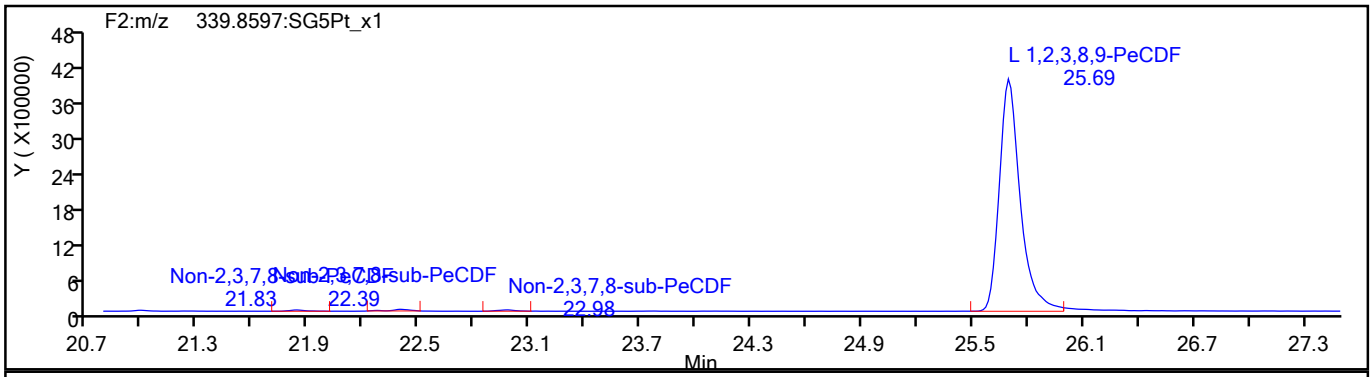

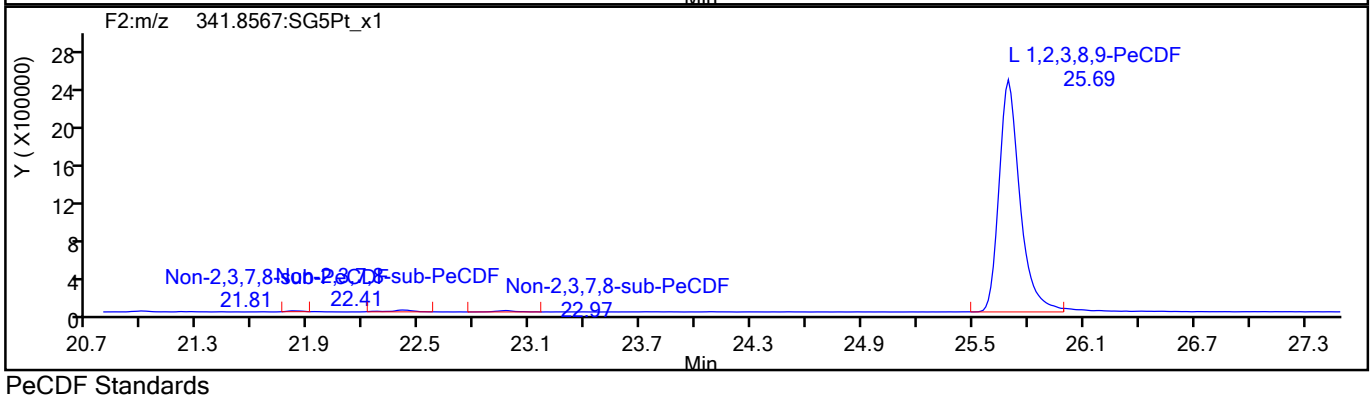

PeCDF Standards

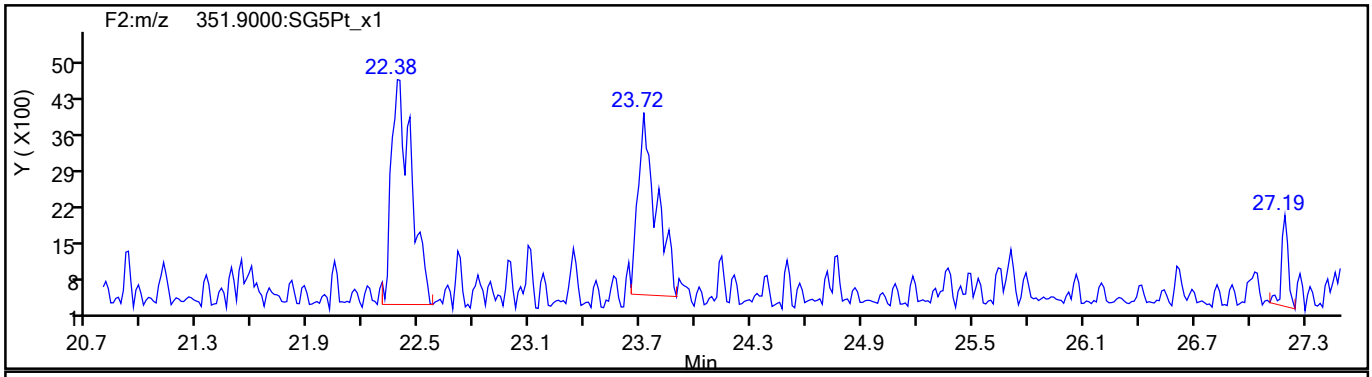

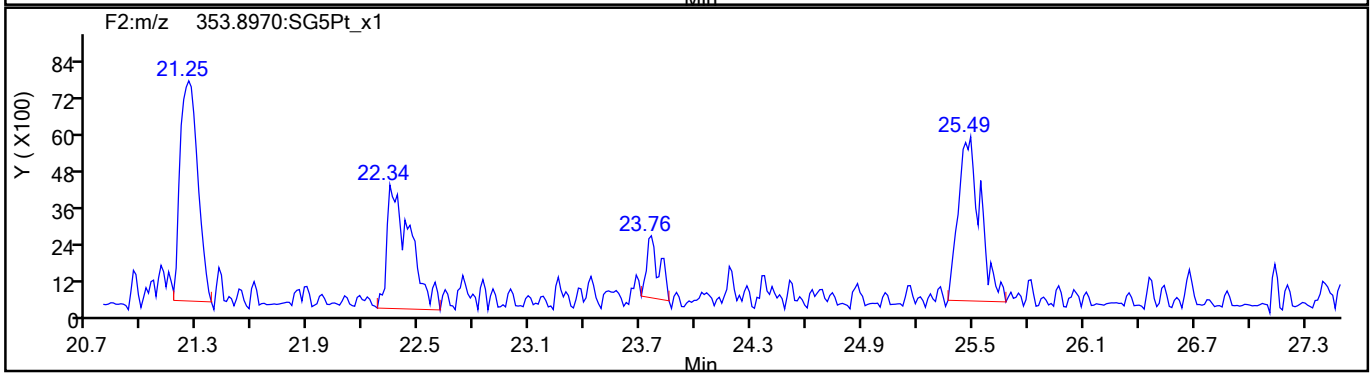

780673

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

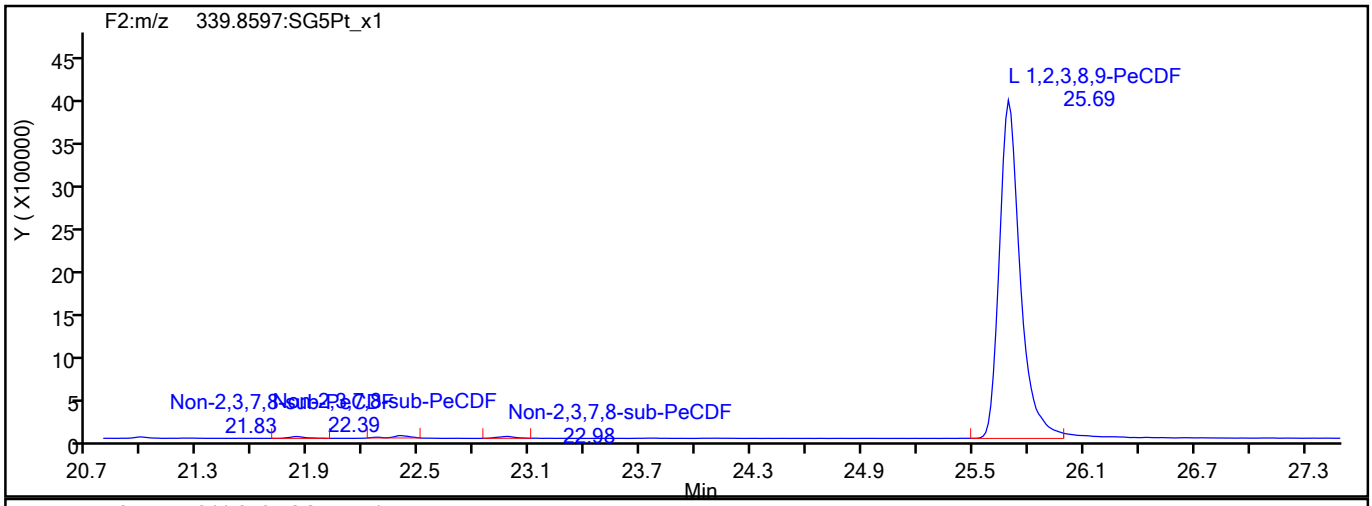

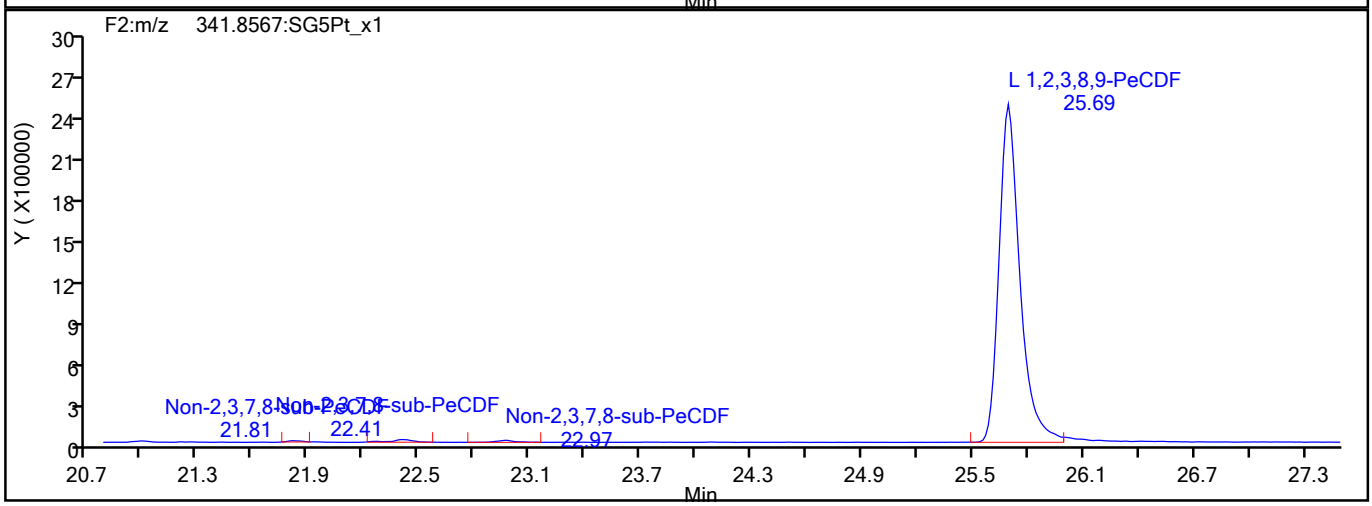

PeCDF Interference Mass

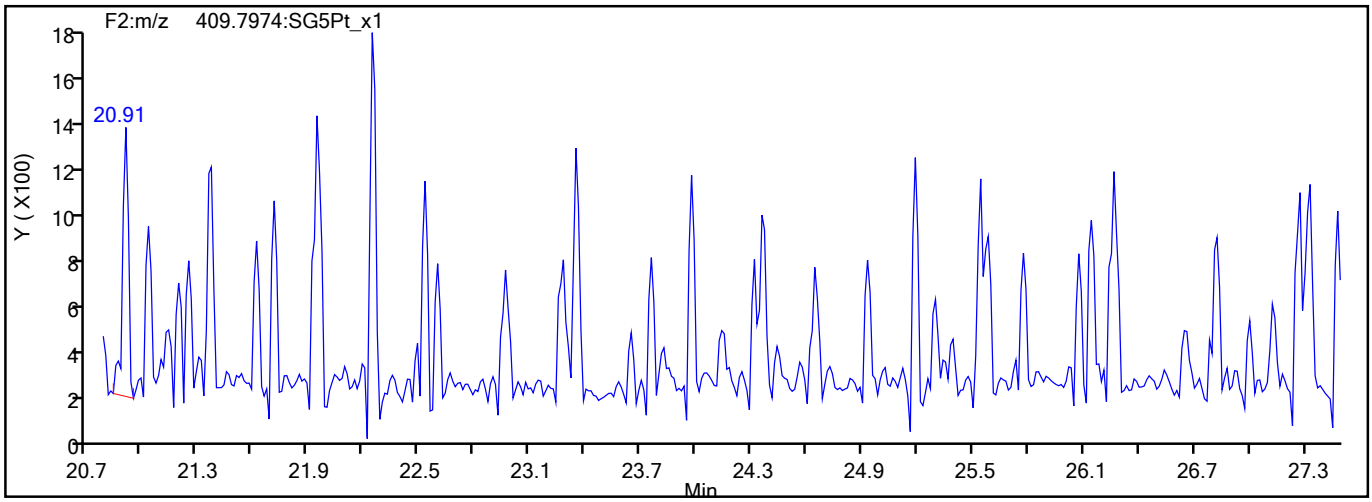

780674

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDD

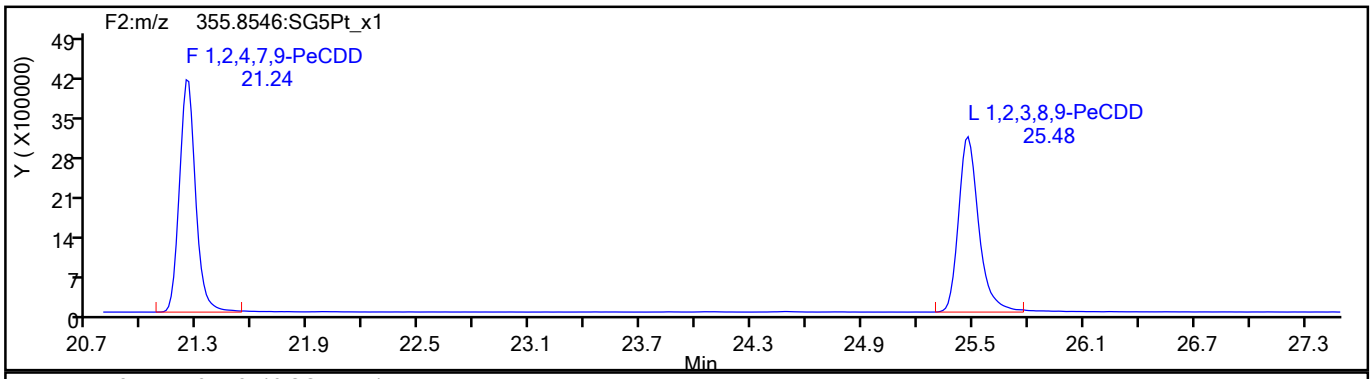

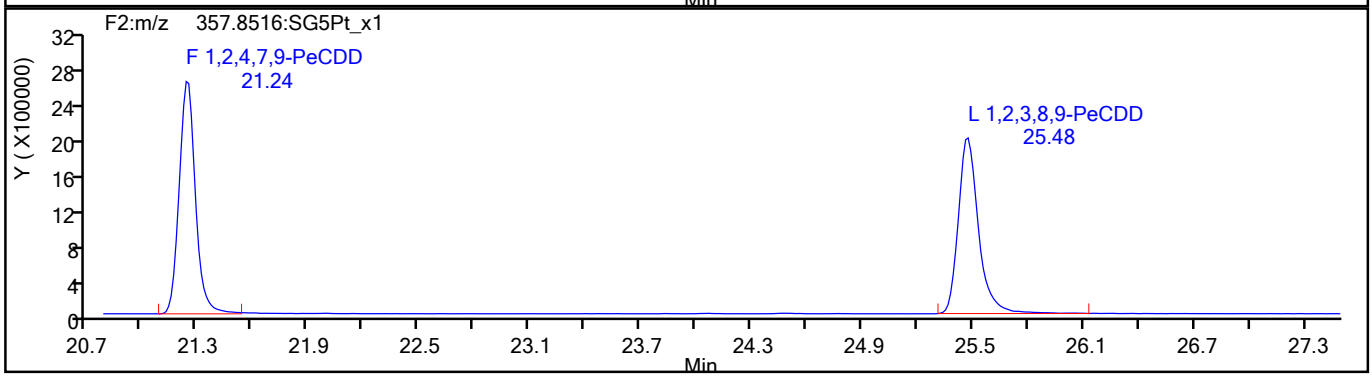

PeCDD Standards

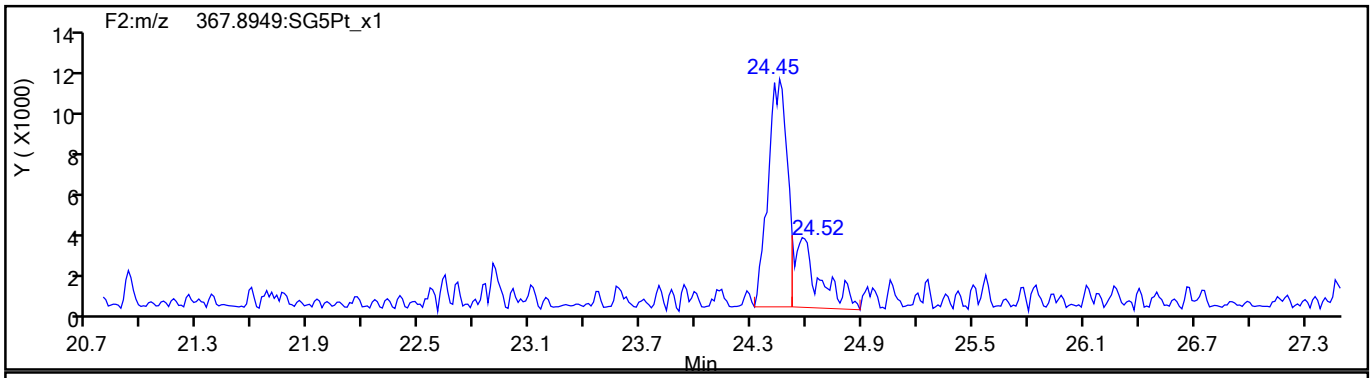

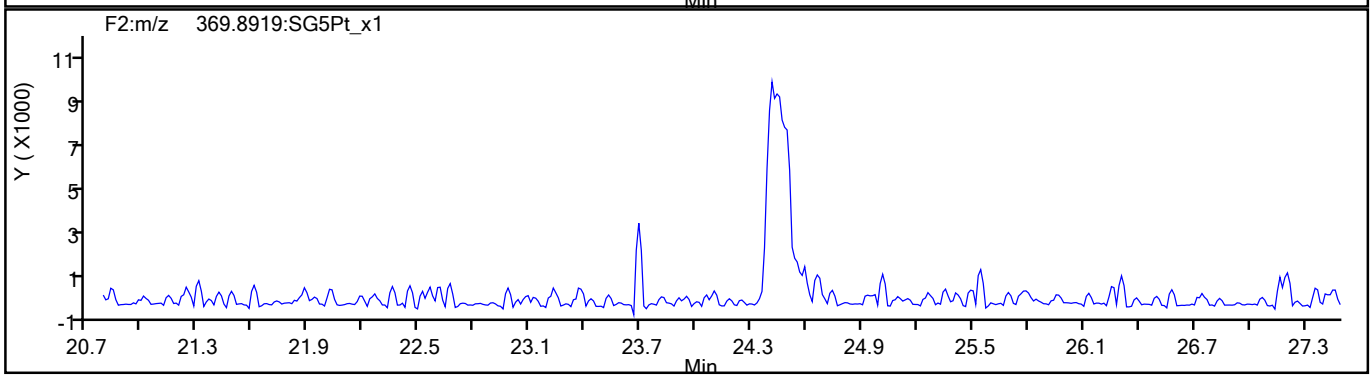

780675

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

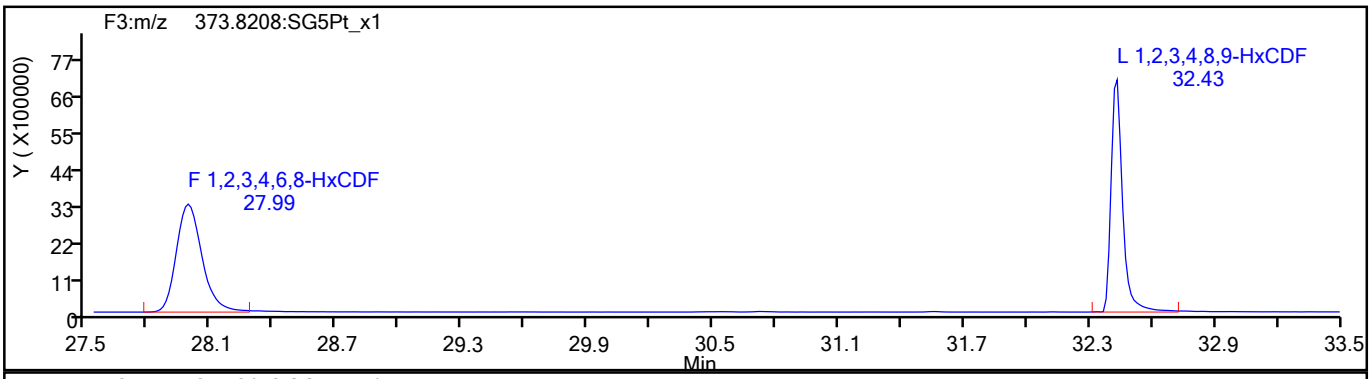

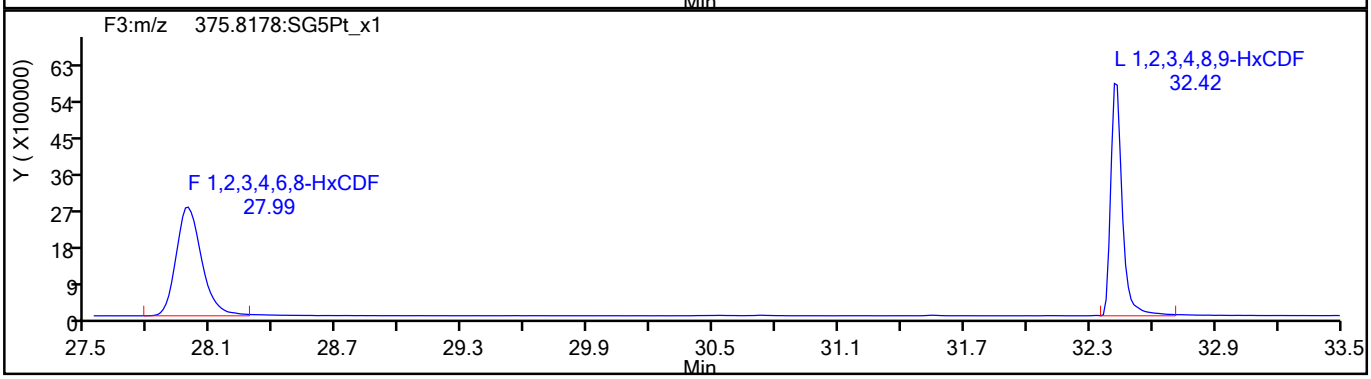

HxCDF Standards

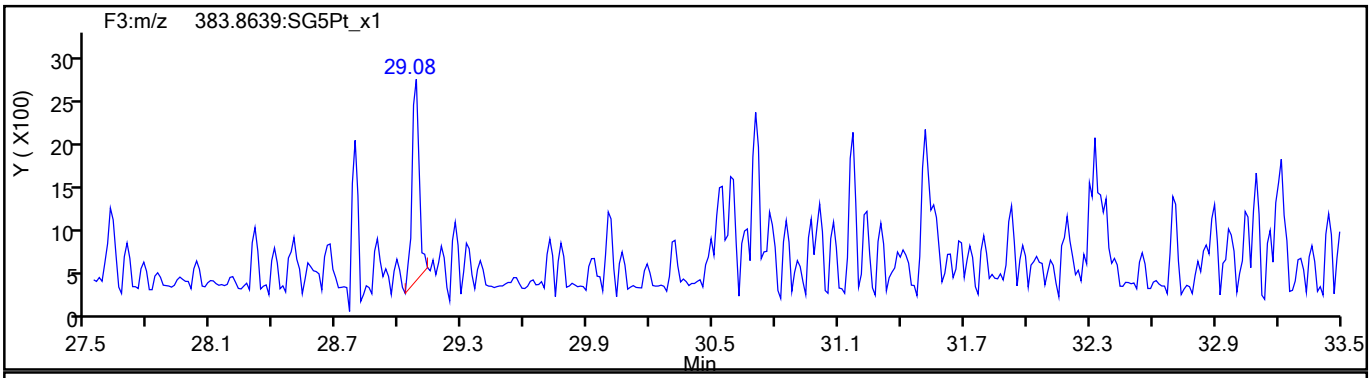

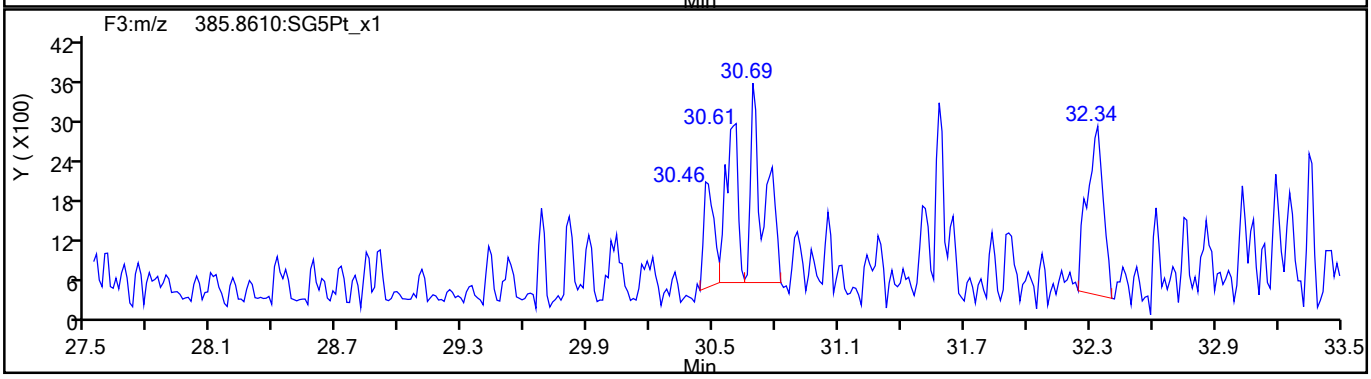

780676

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

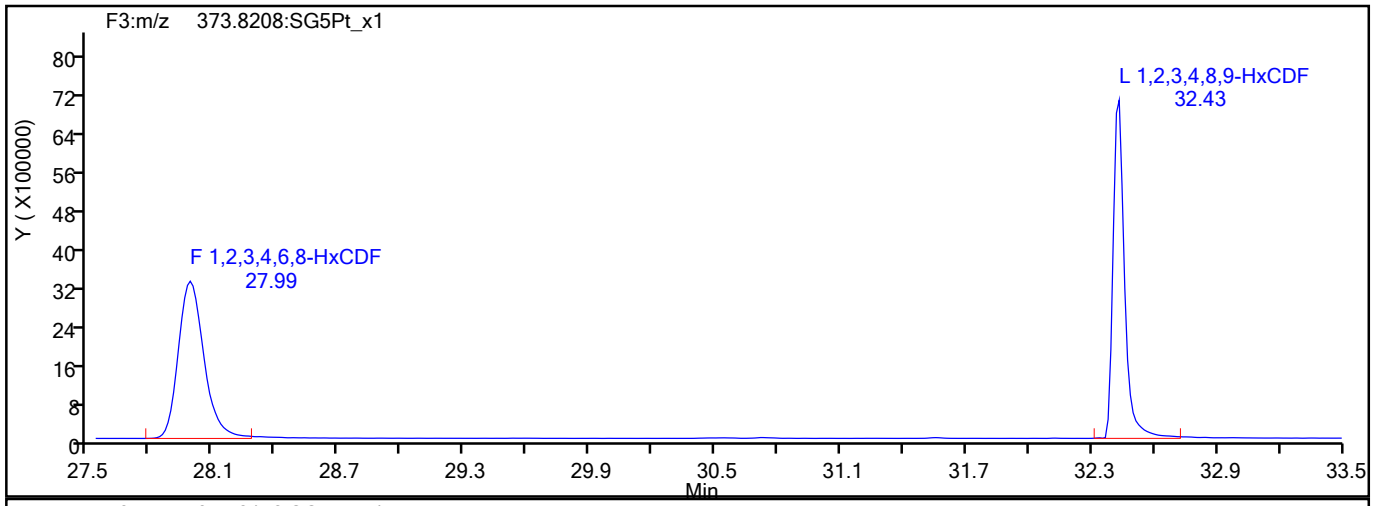

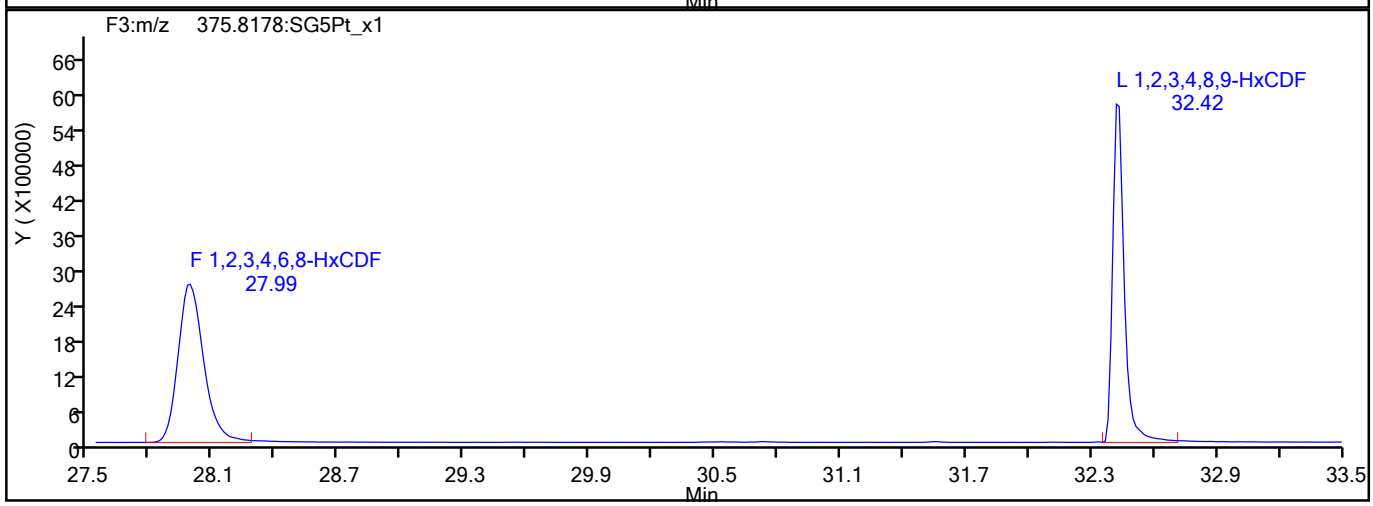

HxCDF Interference Mass

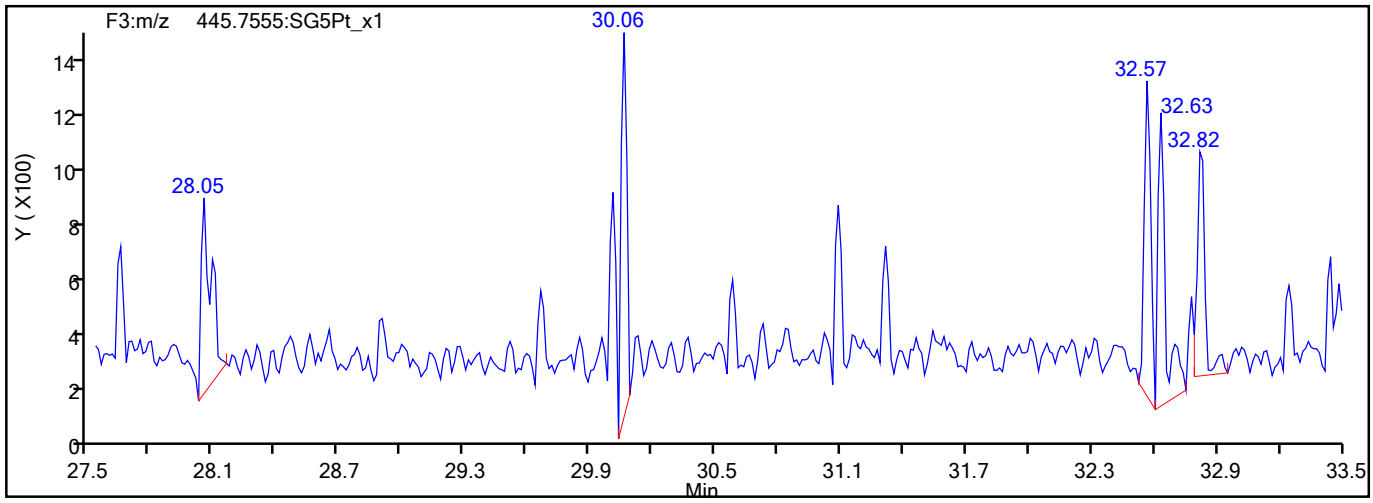

780677

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

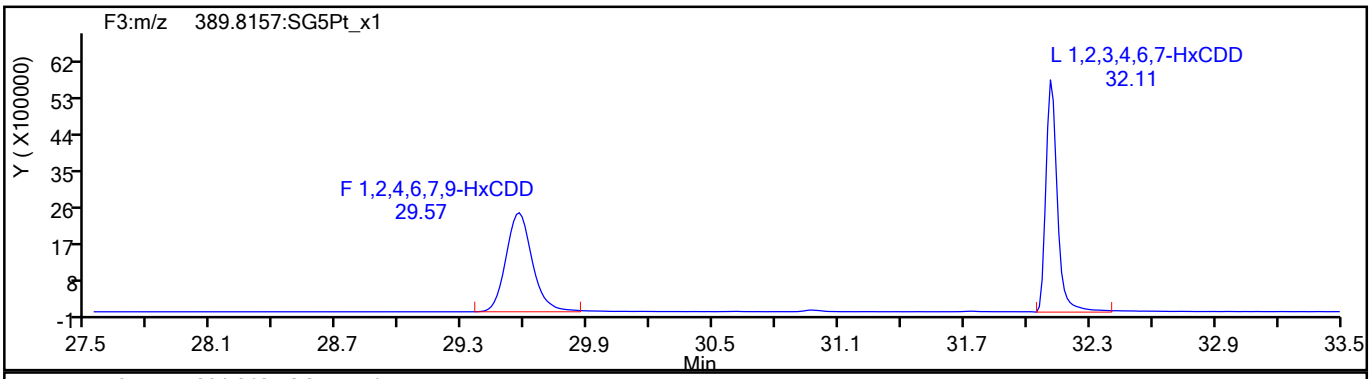

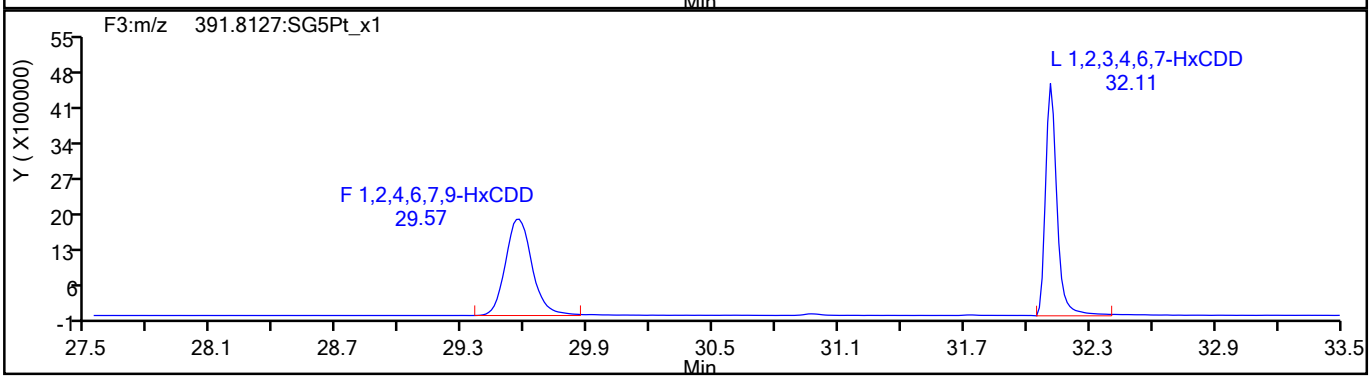

HxCDD Standards

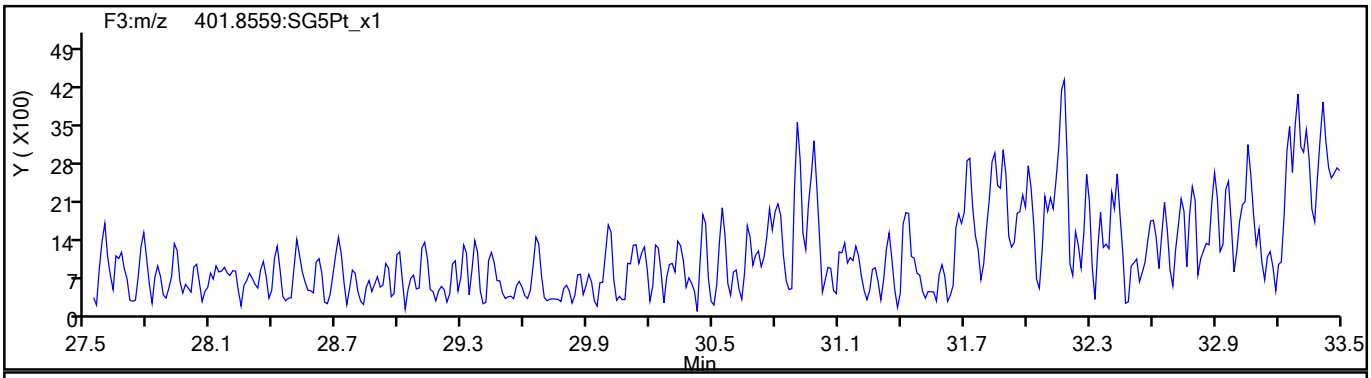

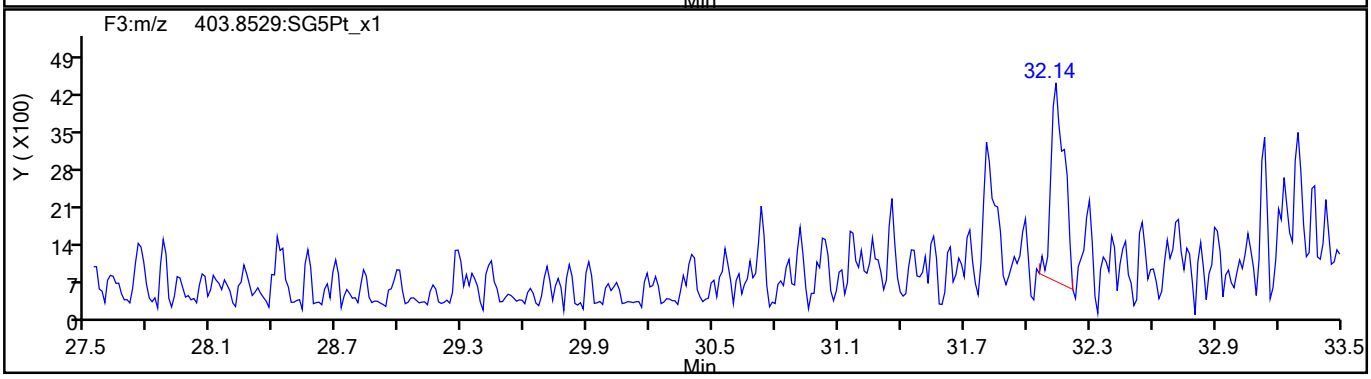

780678

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

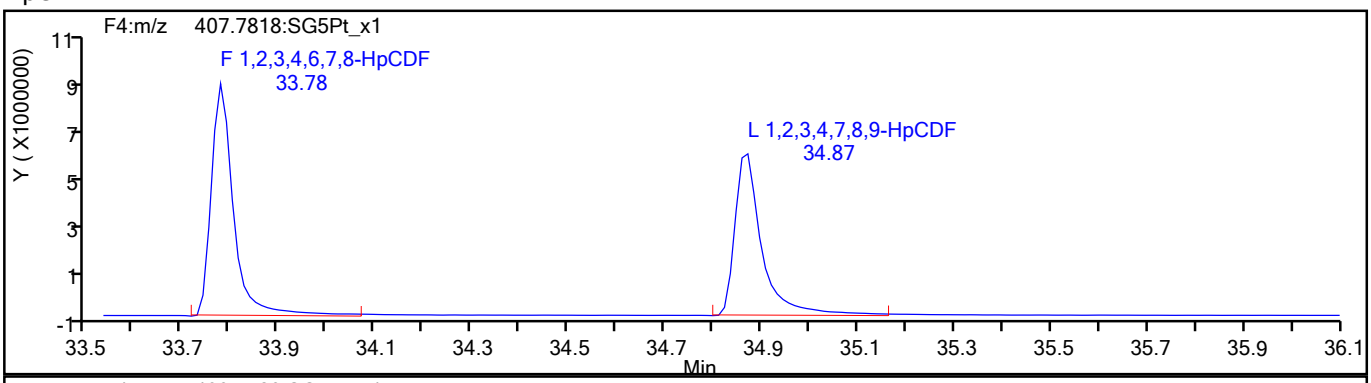

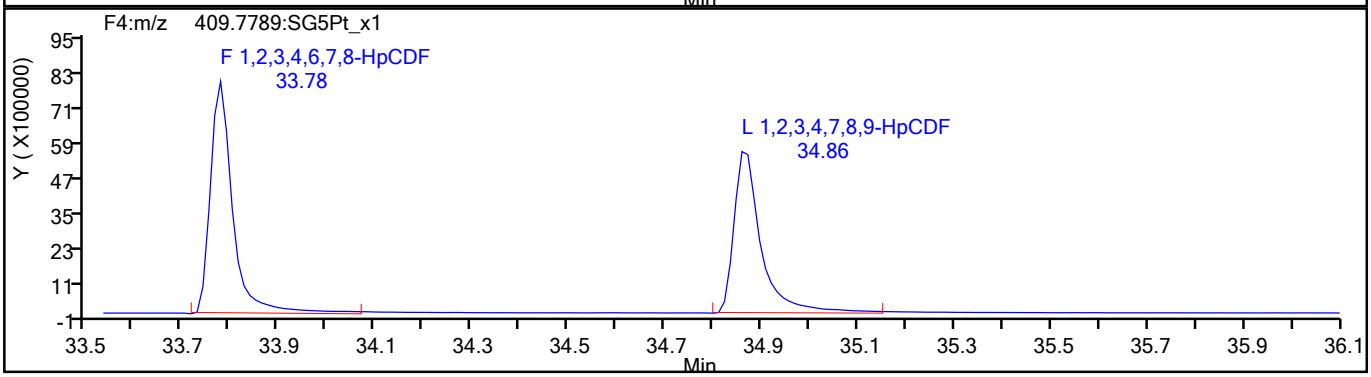

HpCDF Standards

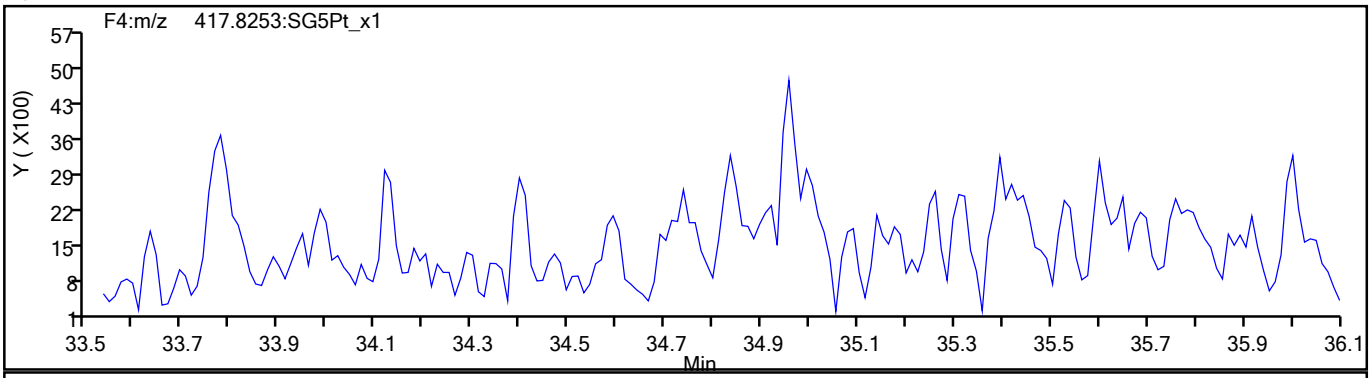

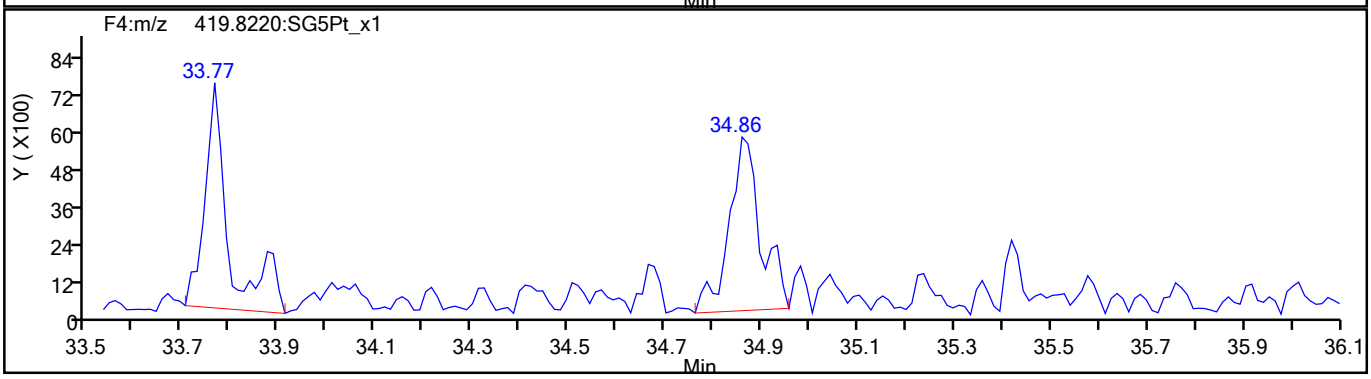

780679

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

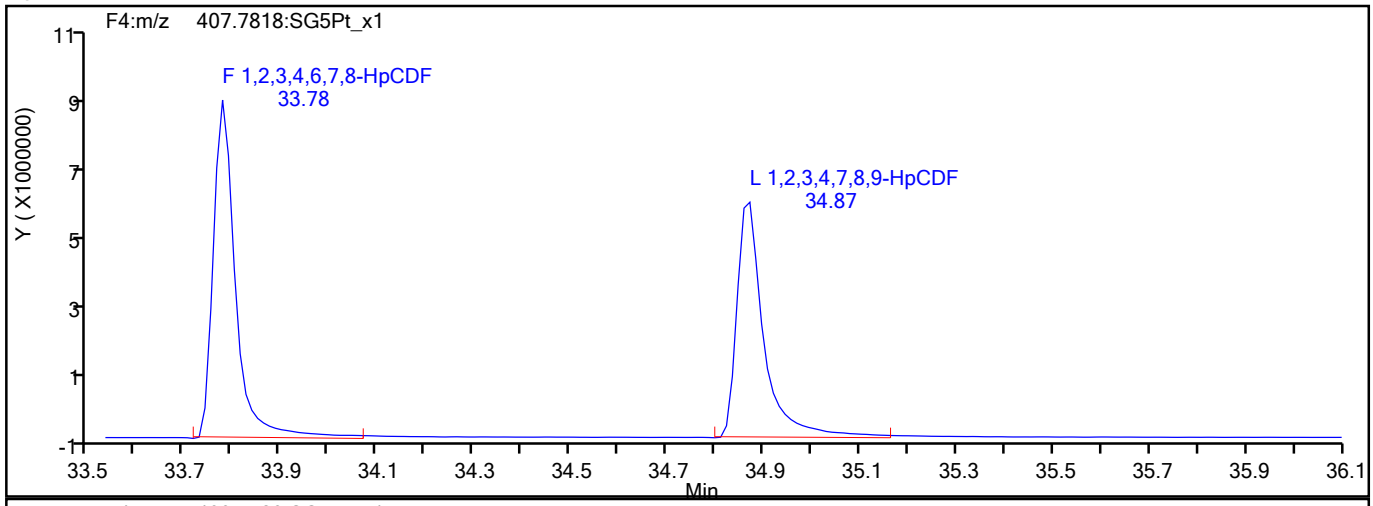

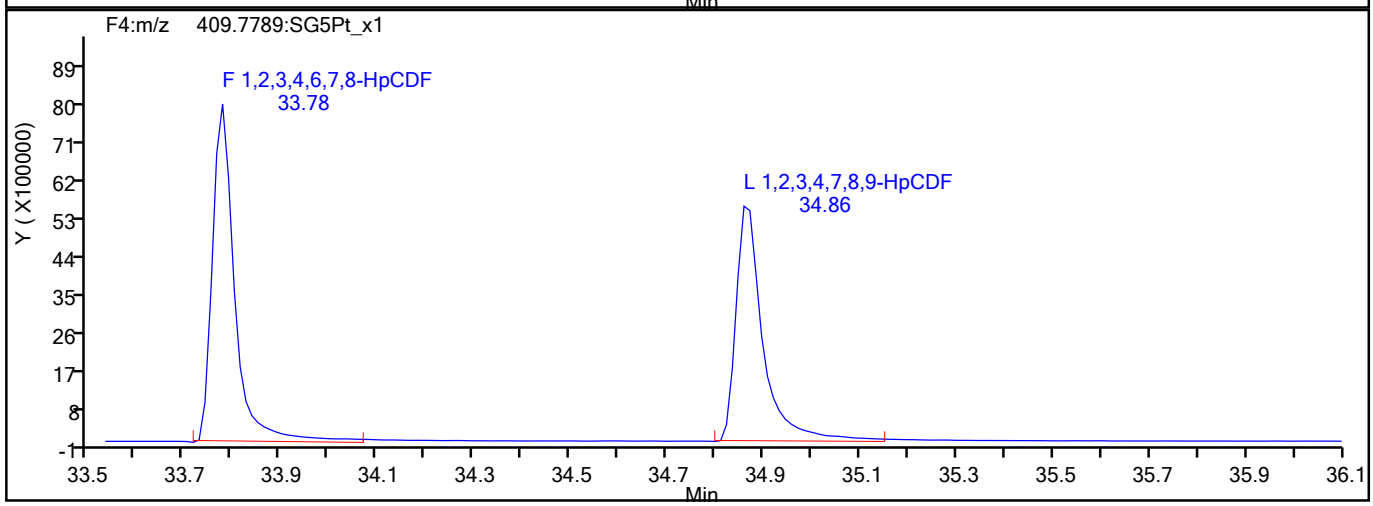

HpCDF Interference Mass

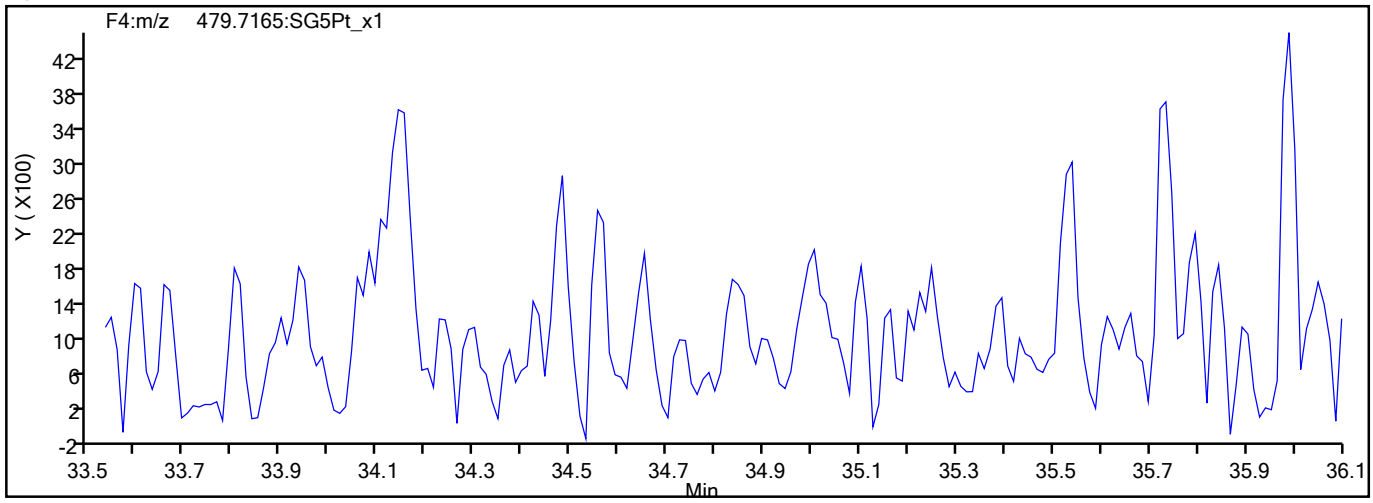

780680

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

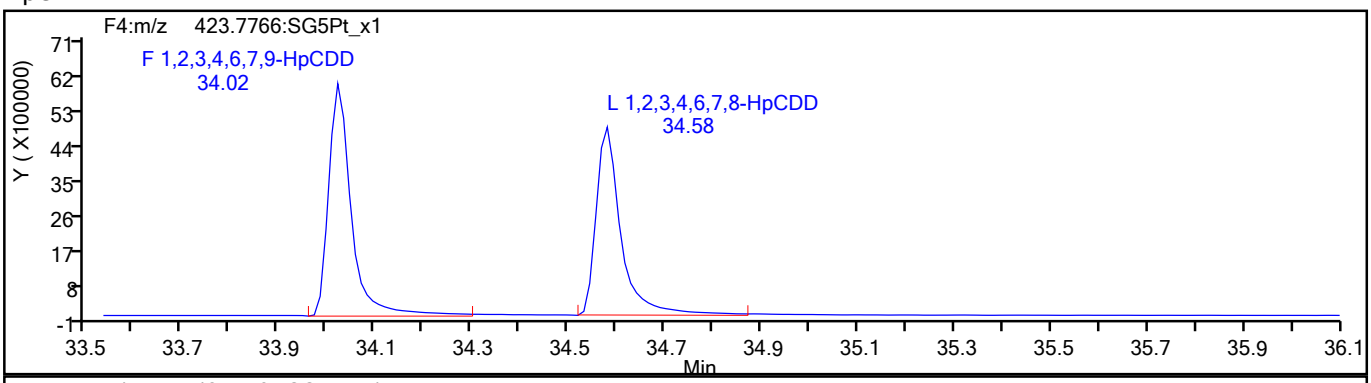

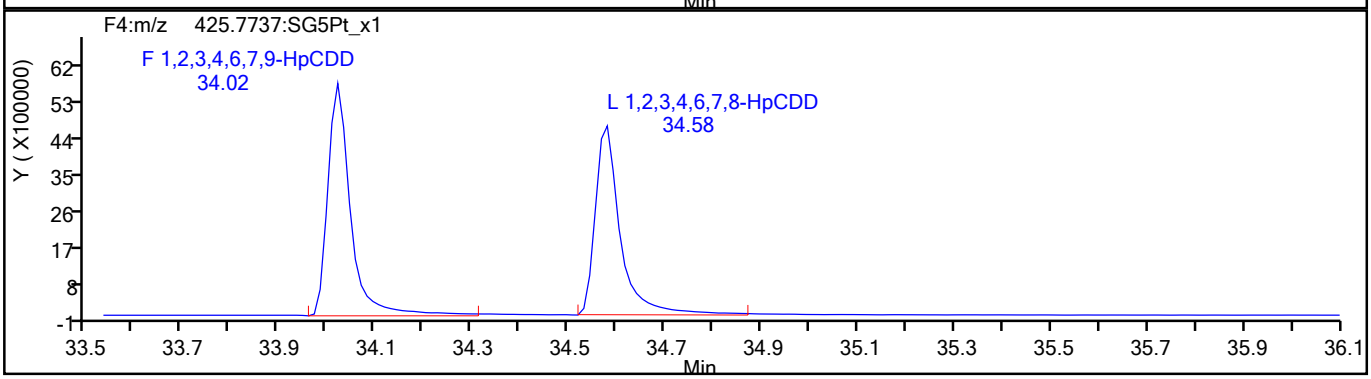

HpCDD Standards

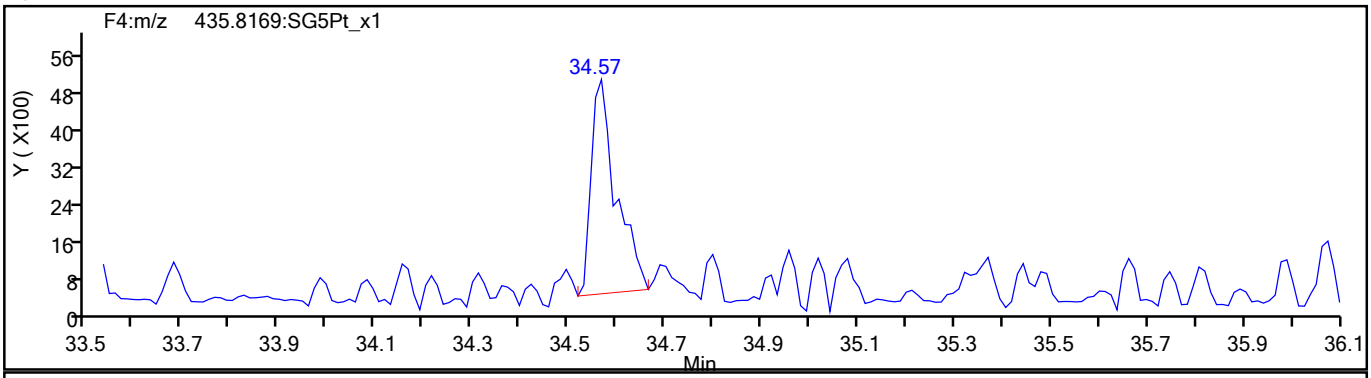

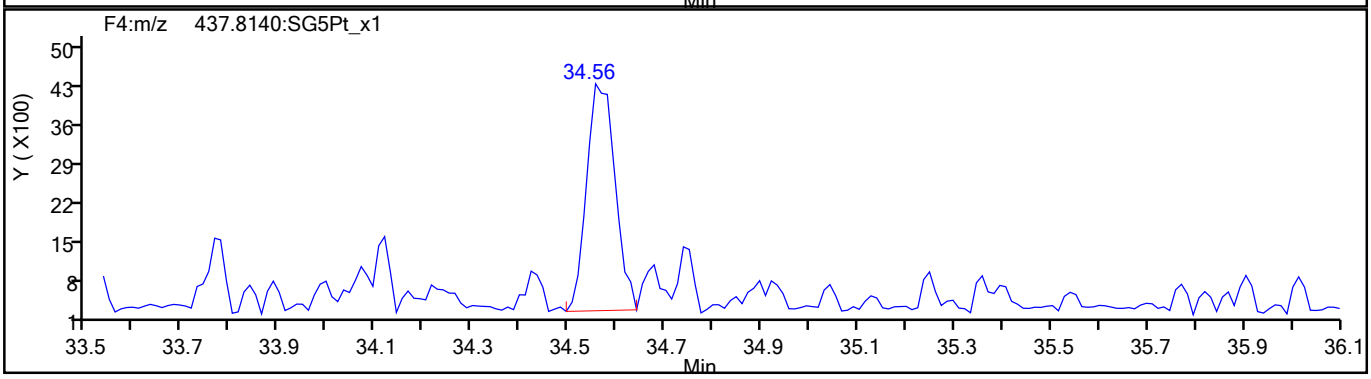

780681

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

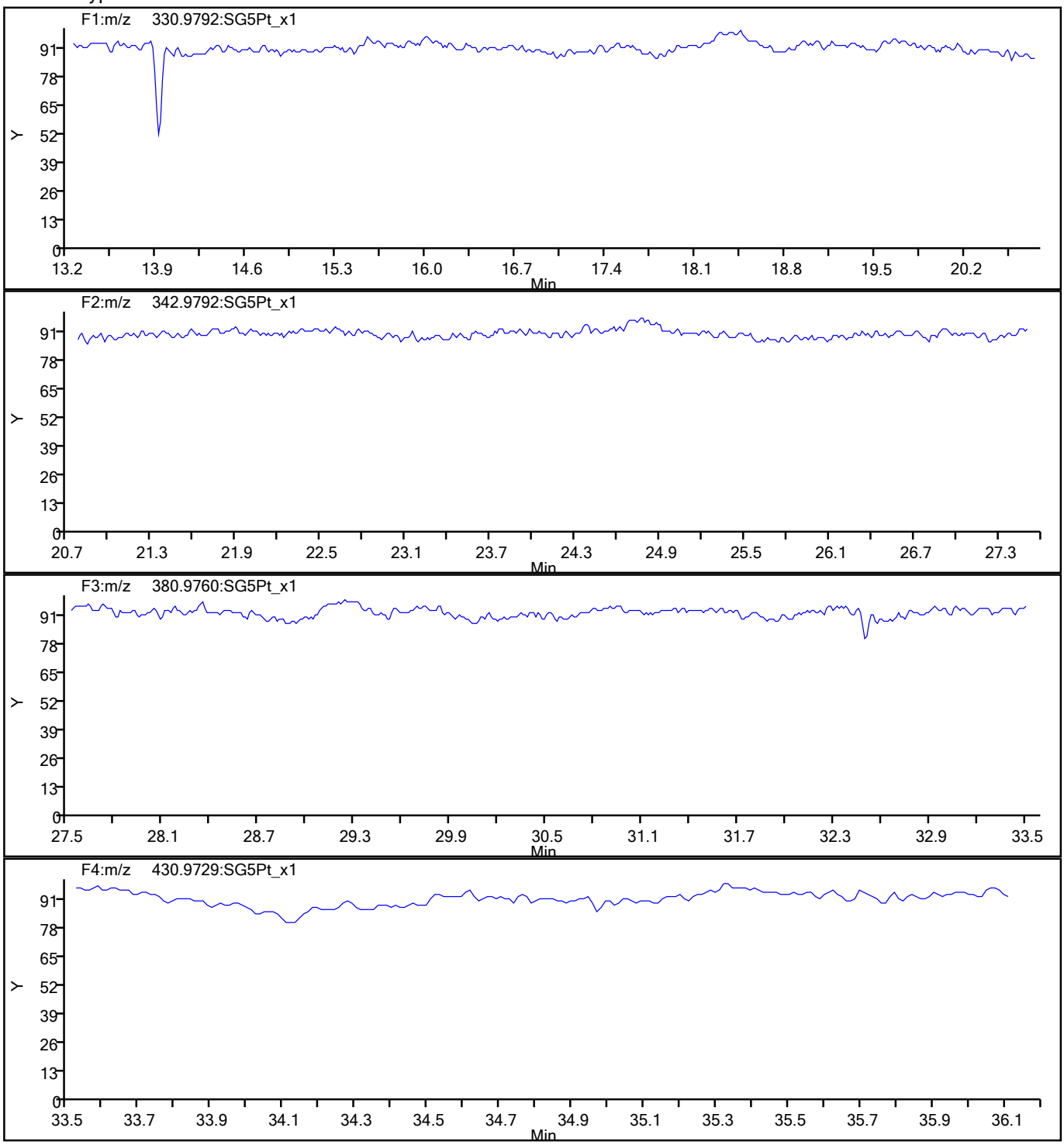

780682

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

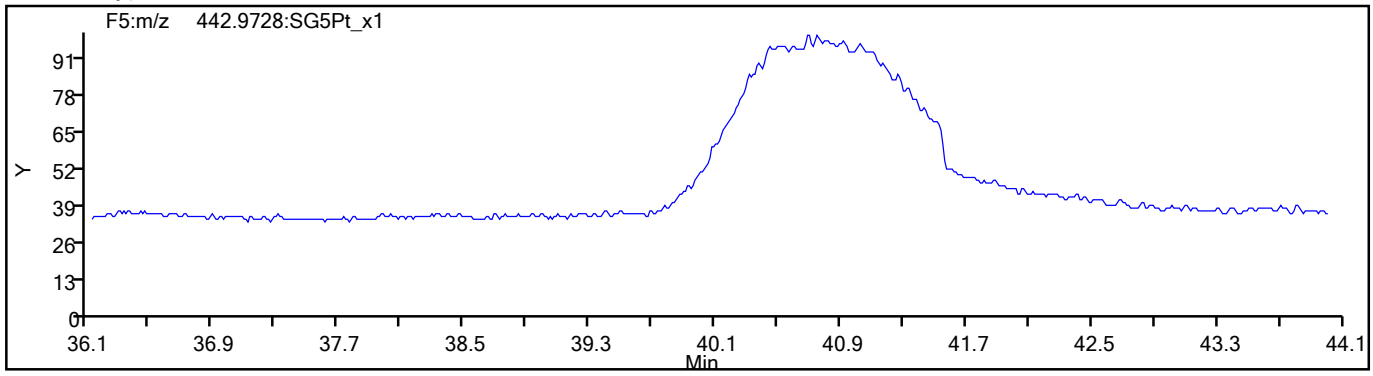

780683

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 14-Aug-2021 13:01:34 ALS Bottle#: 1 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081321B WDM HRDXNCP_00044
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 14:21:38 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

First Level Reviewer: bennettd Date: 17-Aug-2021 14:00:03

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.341	68167152	0.76	1.6249					0.00	
2,3,7,8-TCDF	17.371	148700443	0.77	1.0239	85.2	85.2	0.3440	0.3440		
A Non-2,3,7,8-sub-TCDF	17.046	2730174	0.77	1.0239	1.565	1.565	0.3440	1.565		
S Total TCDF					86.8	86.8	0.3440	0.3440		
D 13C-2,3,7,8-TCDD	18.051	35542207	0.81	0.8993					0.00	
2,3,7,8-TCDD	18.066	50292710	0.80	1.2541	45.1	45.1	0.2010	0.2010		
A Non-2,3,7,8-sub-TCDD	17.499	42172548	0.77	1.2541	37.8	37.8	0.2010	37.8		
S Total TCDD					83.0	83.0	0.2010	0.2010		
A F1 PeCDFs	20.093						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	23.241	547056	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.349						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.197						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.882						0.0	0.0		
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.778	46129709	1.04	1.4413						
1,2,3,4,7,8,9-HpCDF	34.860	38522805	1.05	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.319						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.580	29858843	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.301						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.922	86568973	0.78							
1,3,6,8-TCDD	15.829	51758906	0.77							
2,3,4,7-TCDF	17.371	148700443	0.77							
1,2,3,7-TCDD	18.066	50316659	0.80							
1,2,3,9-TCDF	18.218	64085928	0.78							
1,2,3,9-TCDD	18.233	53586022	0.77							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.170	20715994								
1,2,8,9-TCDF	19.170	66391892	0.77							
1,3,4,6,8-PeCDF	19.458	58277330	1.56							
1,2,4,7,9-PeCDD	21.235	36807404	1.59							
1,2,3,8,9-PeCDD	25.462	33620370	1.58							
1,2,3,8,9-PeCDF	25.681	44109012	1.61							
1,2,3,4,6,8-HxCDF	27.974	44030117	1.23							
1,2,4,6,7,9-HxCDD	29.558	32923172	1.27							
1,2,3,4,6,7-HxCDD	32.113	34370319	1.26							
1,2,3,4,8,9-HxCDF	32.419	43522805	1.22							
1,2,3,4,6,7,9-HpCDD	34.021	33605227	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 14-Aug-2021 13:01:34 ALS Bottle#: 1 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081321B WDM HRDXNCP_00044
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 14:21:38 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

First Level Reviewer: bennettd Date: 17-Aug-2021 14:00:03

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	1.000	29472871	7007652	5797	14492	1209		
317.9389	17.341	17.341	0	1.000	38694281	9088814	4758	11895	1910	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.371	0	1.002	64491750	13727010	22677	56692	605		
305.8987	17.356	17.371	-1	1.001	84208693	18034296	34018	85045	530	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	19.473	17.046	145	1.123	1185841	183437	22677	56692	8		
305.8987	19.473	17.046	145	1.123	1544333	238459	34018	85045	7	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.000	15931128	3550236	2494	6235	1424		
333.9339	18.051	18.051	0	1.000	19611079	4357268	1759	4397	2477	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.001	22289990	4906372	8204	20510	598		
321.8936	18.066	18.066	0	1.001	28002720	6291857	11728	29320	536	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.945	17.499	27	0.994	18341135	4362144	8204	20510	532		
321.8936	17.945	17.499	27	0.994	23831413	5728437	11728	29320	488	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	20.093						1911	4777			
341.8567	20.093						1991	4977			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.835	23.241	-84	1.000	100118	16941	3836	9590	4		
341.8567	21.835	23.241	-84	1.000	50071	9945	2668	6670	4	2.00(1.32-1.78)	
339.8597	22.408	23.241	-50	1.000	142317	23314	3836	9590	6		
341.8567	22.394	23.241	-51	1.000	148004	16497	2668	6670	6	0.96(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	22.967	23.241	-16	1.000	116621	16117	3836	9590	4		
341.8567	22.967	23.241	-16	1.000	68620	12135	2668	6670	5	1.70(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.349						4453	11132			
357.8516	23.349						2843	7107			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						6999	17497			
375.8178	30.197						5776	14440			
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						8629	21572			
391.8127	30.882						7844	19610			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	23557758	7348390	30828	77070	238		
409.7789	33.778	33.778	0	1.000	22571951	7029317	32630	81575	215	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860	34.860	0	1.000	19764901	5030404	30828	77070	163		
409.7789	34.860	34.860	0	1.000	18757904	4841578	32630	81575	148	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						30828	77070			
409.7789	34.319						32630	81575			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	15199194	4152682	20457	51142	203		
425.7737	34.580	34.580	0	1.000	14659649	3934184	22063	55157	178	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						20457	51142			
425.7737	34.301						22063	55157			
1,3,6,8-TCDF											
303.9016	14.922	14.922	0		37923277	11057094	22677	56692	488		
305.8987	14.922	14.922	0		48645696	14032270	34018	85045	412	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.829	15.829	0		22468325	5970585	8204	20510	728		
321.8936	15.829	15.829	0		29290581	7734132	11728	29320	659	0.77(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.371	17.371	0		64491750	13727010	22677	56692	605		
305.8987	17.356	17.371	-1		84208693	18034296	34018	85045	530	0.77(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.066	18.066	0		22304590	4908304	8204	20510	598		
321.8936	18.066	18.066	0		28012069	6293129	11728	29320	537	0.80(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	18.218	18.218	0		27989748	6088475	22677	56692	268		
305.8987	18.218	18.218	0		36096180	8009053	34018	85045	235	0.78(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.233	18.233	0		23262839	4925154	8204	20510	600		
321.8936	18.233	18.233	0		30323183	6250036	11728	29320	533	0.77(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.170	19.170	0		20715994	4224804	8204	20510	515		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	19.170	19.170	0		28791322	5790850	22677	56692	255		
305.8987	19.170	19.170	0		37600570	7606883	34018	85045	224	0.77(0.65-0.89)	
1,3,4,6,8-PeCDF											
339.8597	19.458	19.458	0		35543463	7416328	1911	4777	3881		
341.8567	19.458	19.458	0		22733867	4772277	1991	4977	2397	1.56(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	21.235	21.235	0		22587504	3672966	4453	11132	825		
357.8516	21.235	21.235	0		14219900	2311386	2843	7107	813	1.59(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	25.462	25.462	0		20590037	2683784	4453	11132	603		
357.8516	25.462	25.462	0		13030333	1703802	2843	7107	599	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	25.681	25.681	0		27195789	3331175	3836	9590	868		
341.8567	25.681	25.681	0		16913223	2046908	2668	6670	767	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	27.974	27.974	0		24244782	2848190	6999	17497	407		
375.8178	27.974	27.974	0		19785335	2341279	5776	14440	405	1.23(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.558	29.558	0		18447193	2061700	8629	21572	239		
391.8127	29.558	29.558	0		14475979	1636071	7844	19610	209	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8157	32.113	32.113	0		19136186	5044226	8629	21572	585		
391.8127	32.113	32.113	0		15234133	3993994	7844	19610	509	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.419	32.419	0		23931031	6046754	6999	17497	864		
375.8178	32.419	32.419	0		19591774	5065700	5776	14440	877	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	34.021	34.021	0		17156171	5215341	20457	51142	255		
425.7737	34.021	34.021	0		16449056	5010683	22063	55157	227	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d
Lims ID: WDM
Client ID:
Inject. Date: 14-Aug-2021 13:01:34 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 16

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	68167152	16096466

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	68167152	16096466

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.473	1185841	183437	1544333	238459	1.56	0.77	
Signal Totals:							
	1185841	183437	1544333	238459			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2730174	421896				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.565 = (2730174 * 40.000) / (68167152 * 1.024)

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d
Lims ID: WDM
Client ID:
Inject. Date: 14-Aug-2021 13:01:34 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 16

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	35542207	7907504

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	35542207	7907504

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.945	18341135	4362144	23831413	5728437	37.8	0.77	
Signal Totals:							
	18341135	4362144	23831413	5728437			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	42172548	10090581				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 37.845 = (42172548 * 40.000) / (35542207 * 1.254)

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d
Lims ID: WDM
Client ID:
Inject. Date: 14-Aug-2021 13:01:34 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 16

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.835	100118	16941	50071	9945		2.00	R
22.408	142317	23314	148004	16497		0.96	R
22.967	116621	16117	68620	12135		1.70	
Signal Totals:							
	359056	56372	266695	38577			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	625751	94949				1.35	RQ
	547056	91966					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (625751 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (547056 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

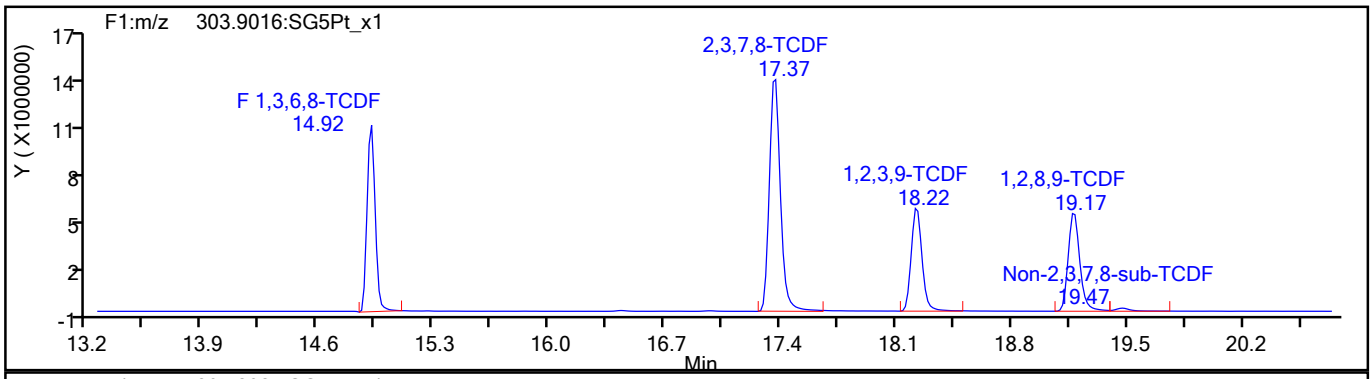

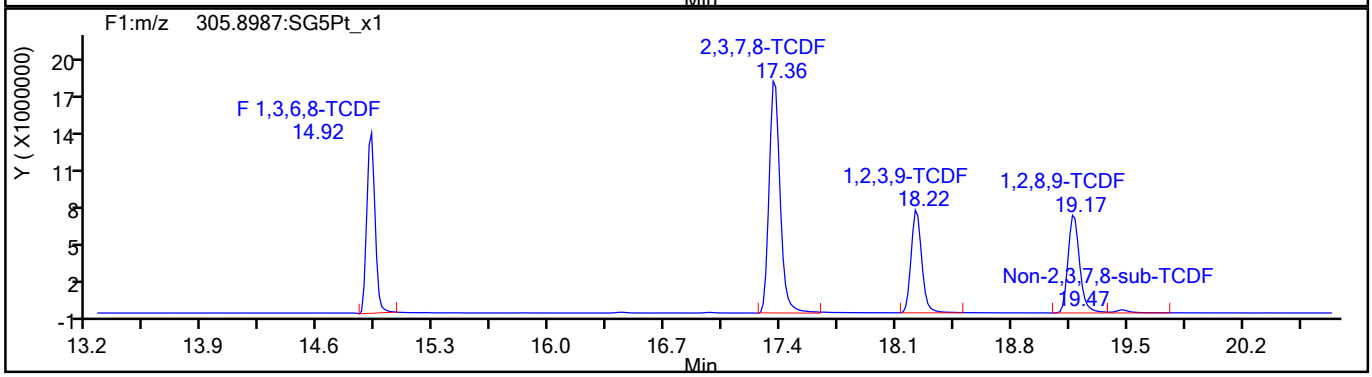

TCDF Standards

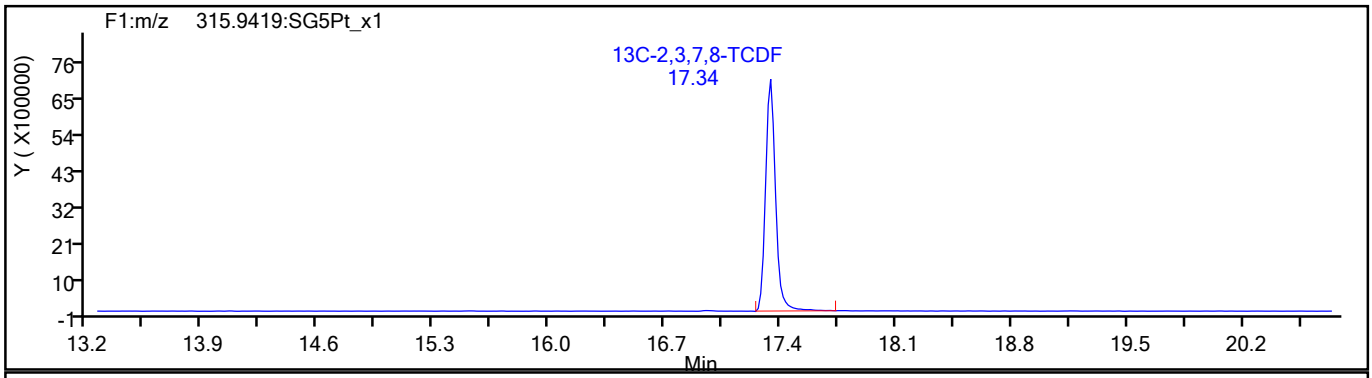

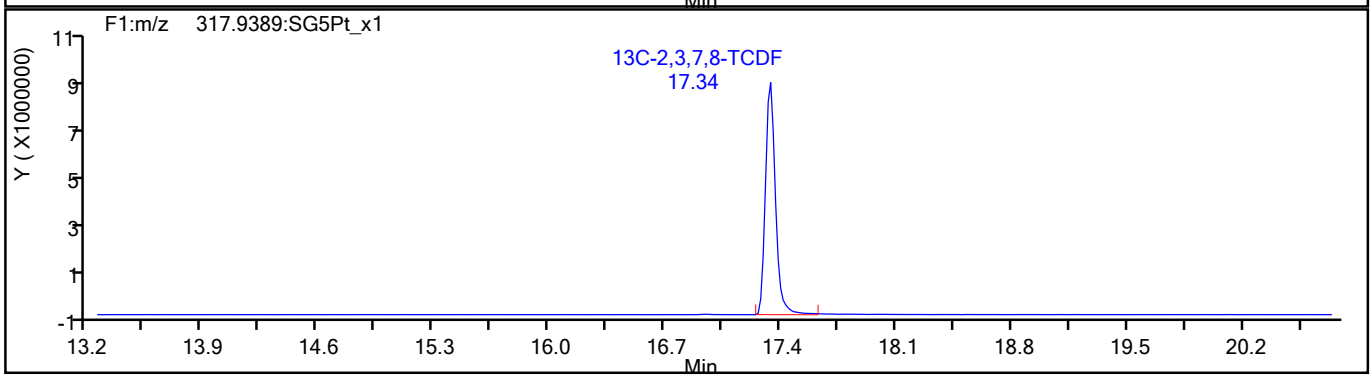

780692

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

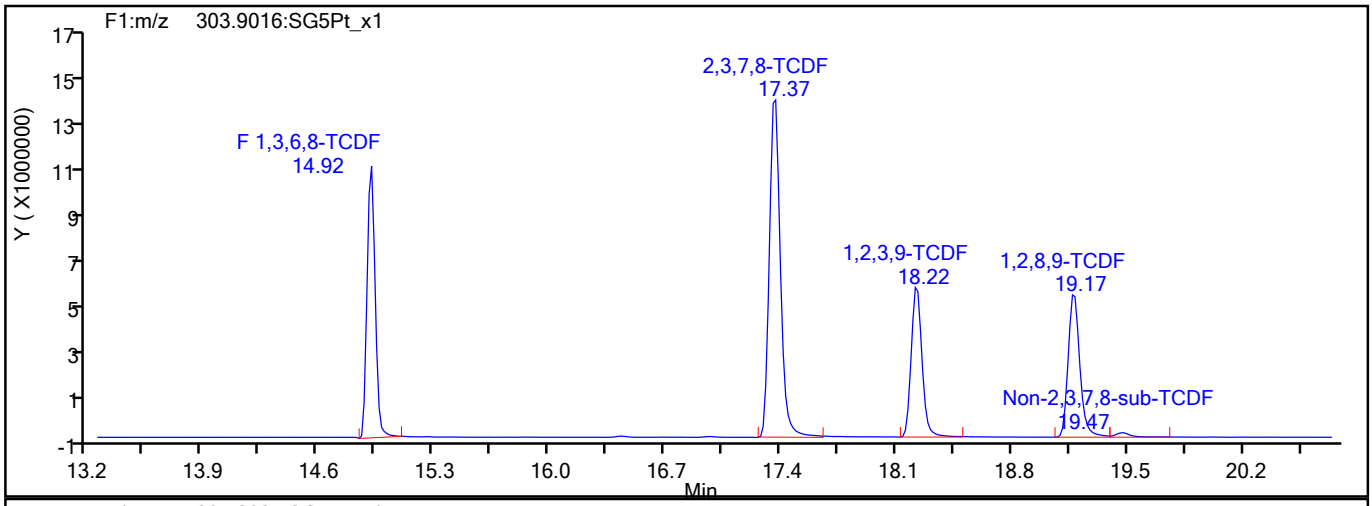

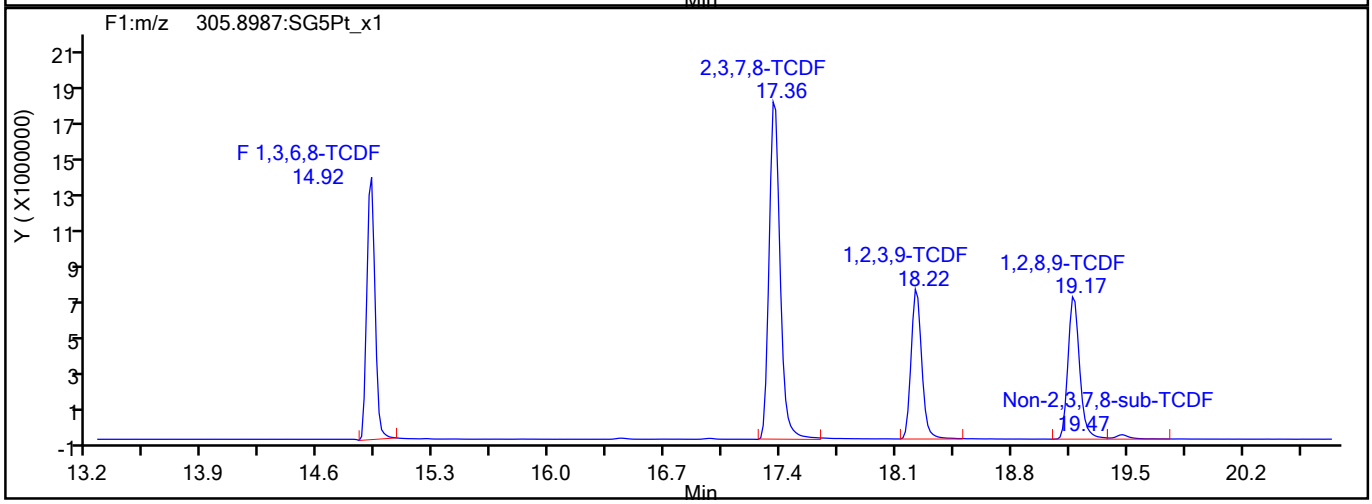

TCDF Interference Mass

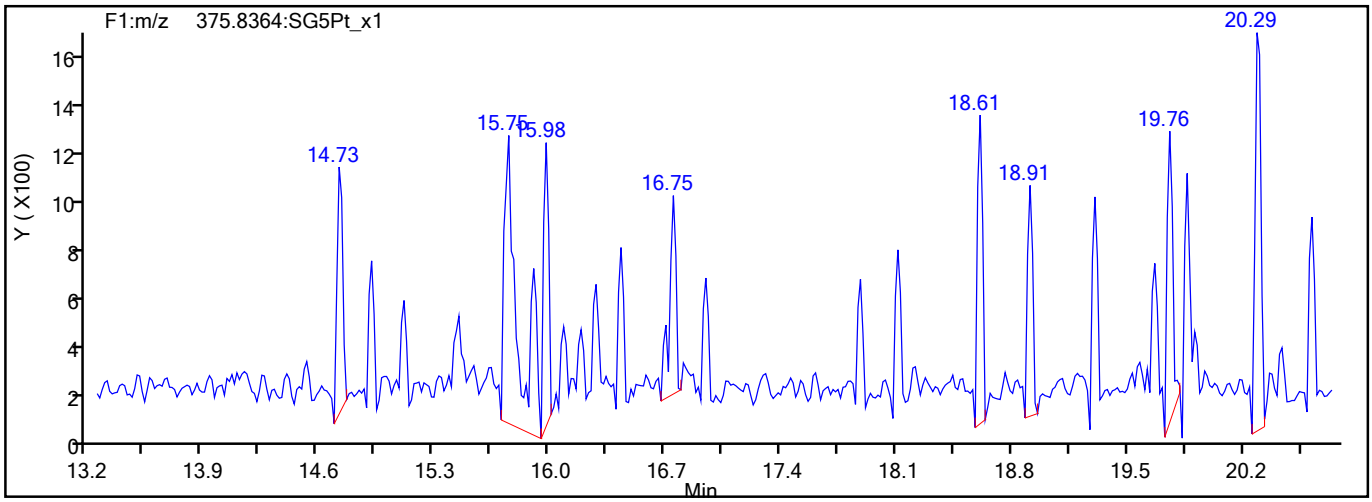

780693

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

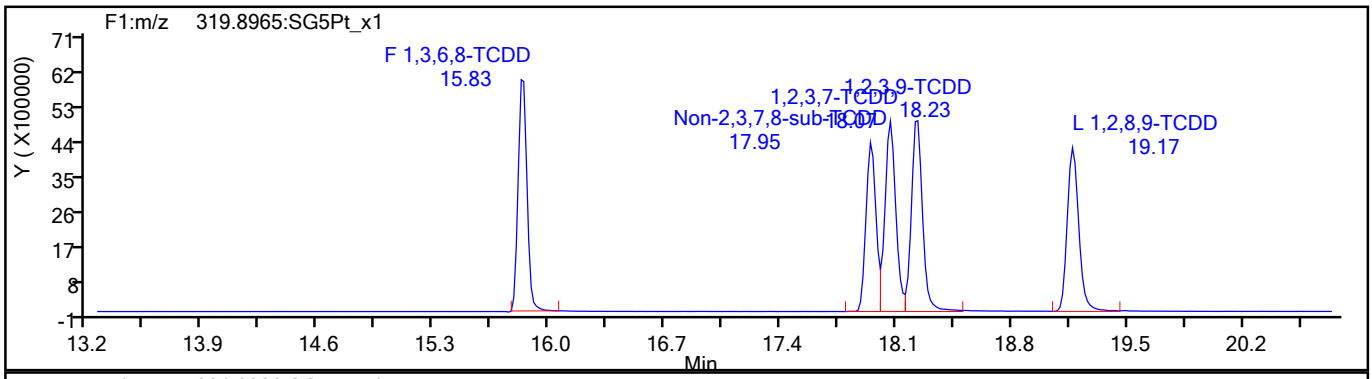

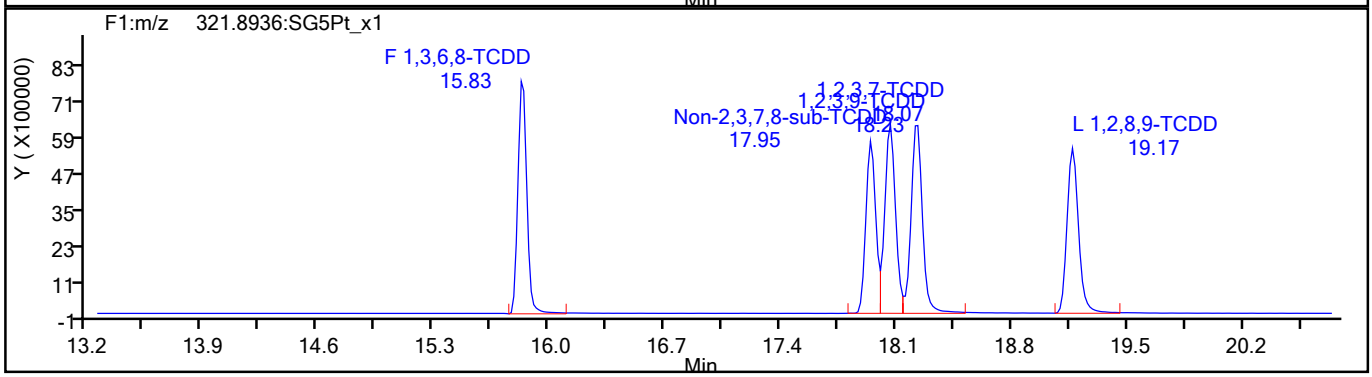

TCDD Standards

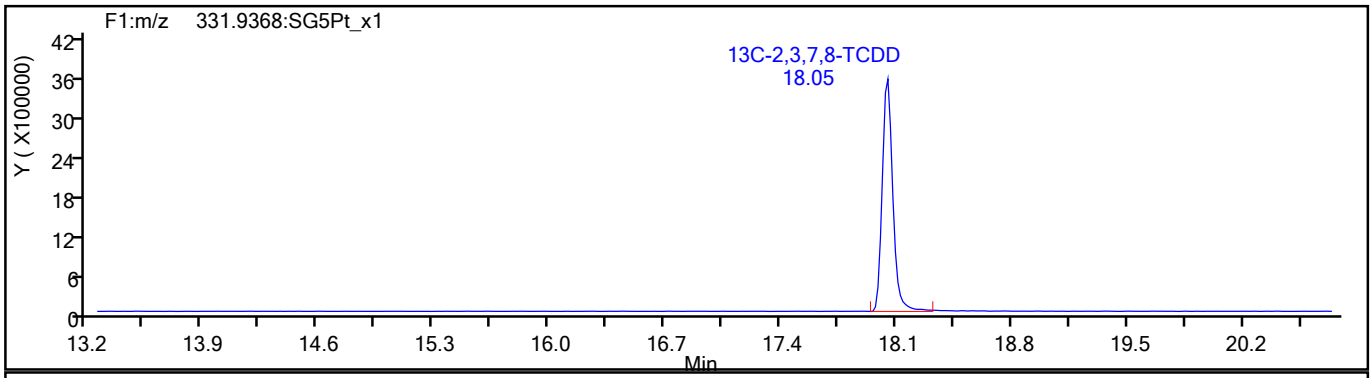

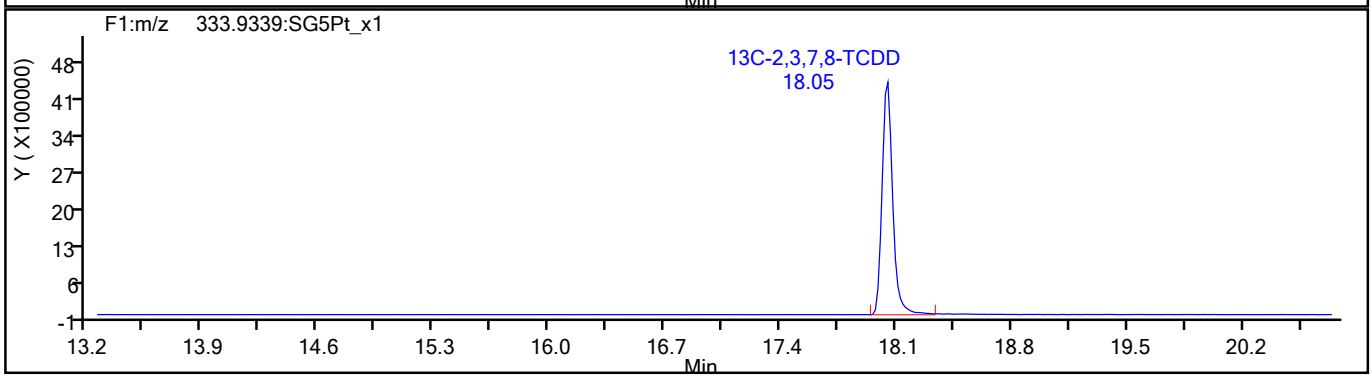

780694

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

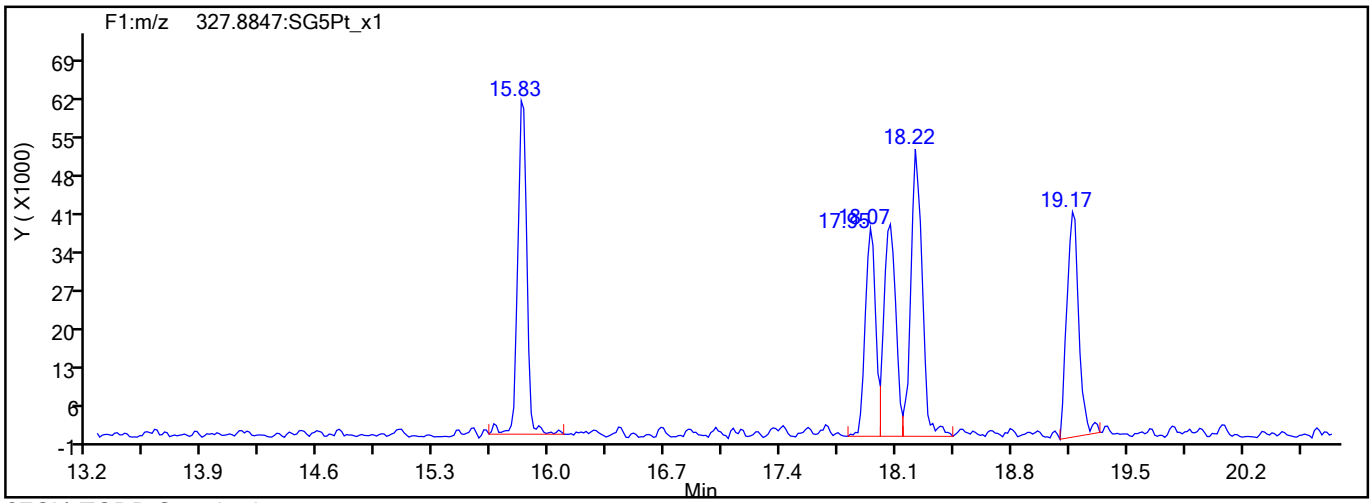

37Cl4-TCDD Standards

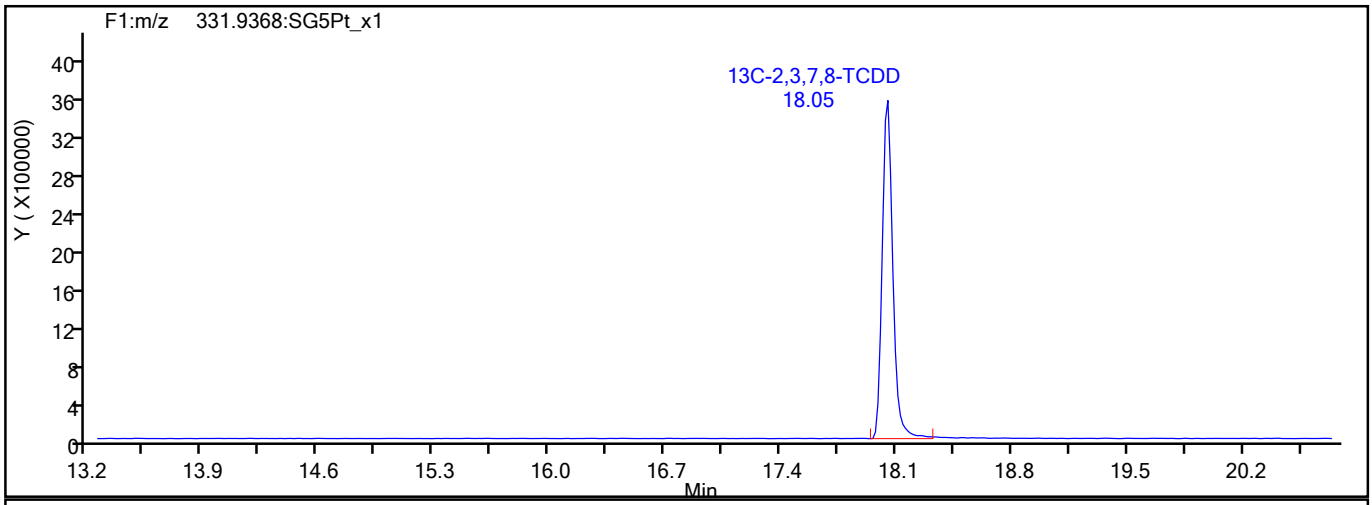

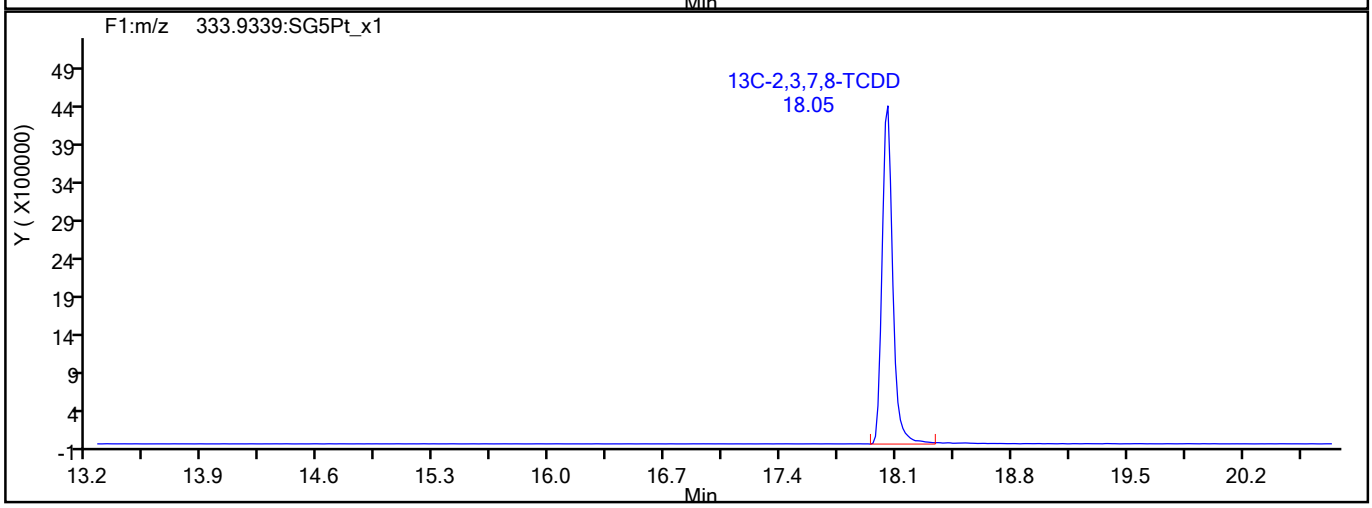

780695

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

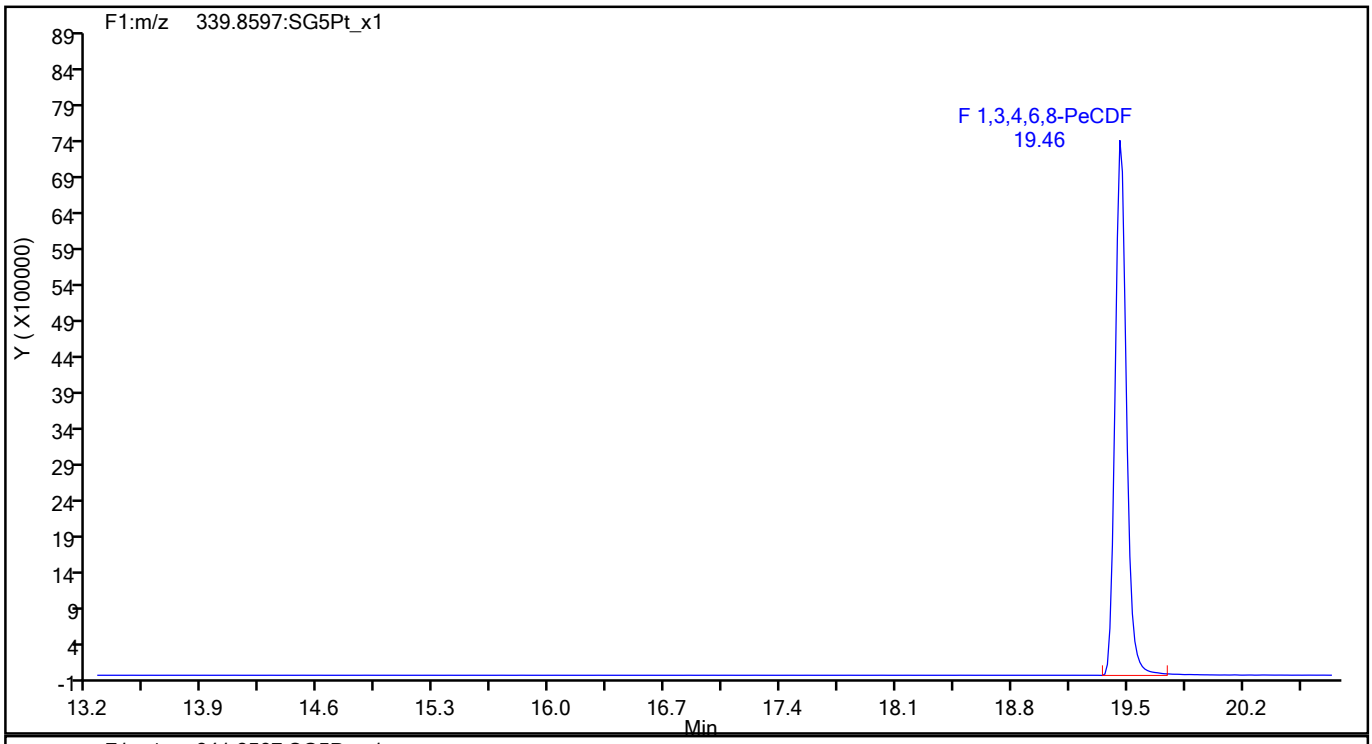

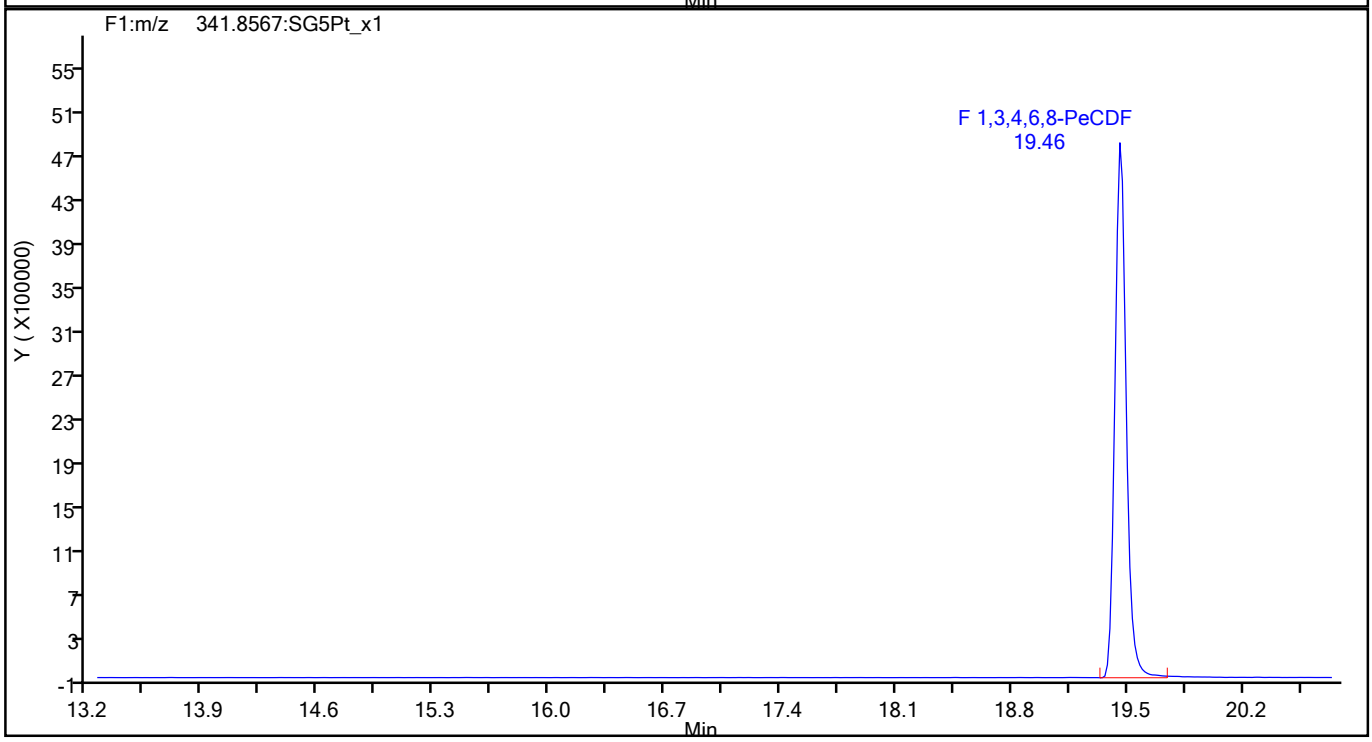

780696

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

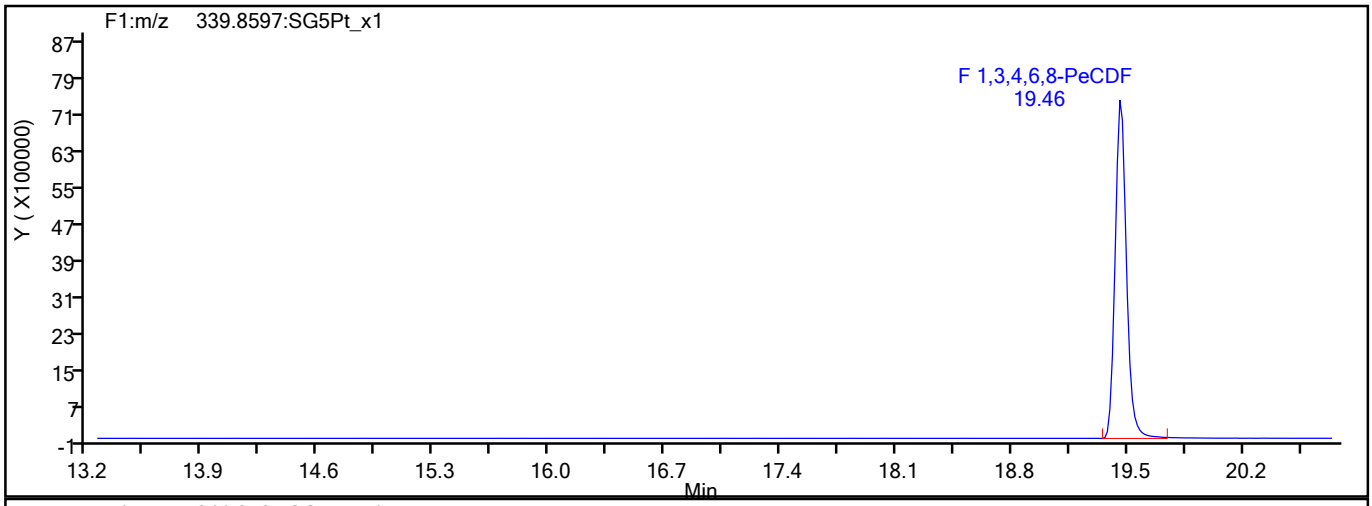

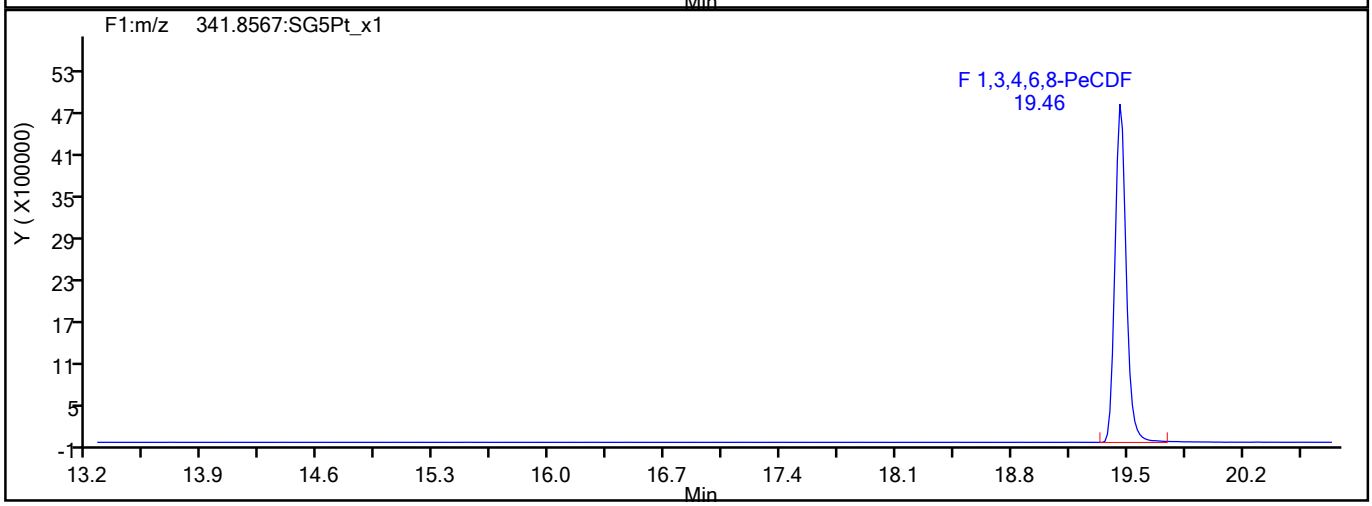

F1 PeCDFs Interference Mass

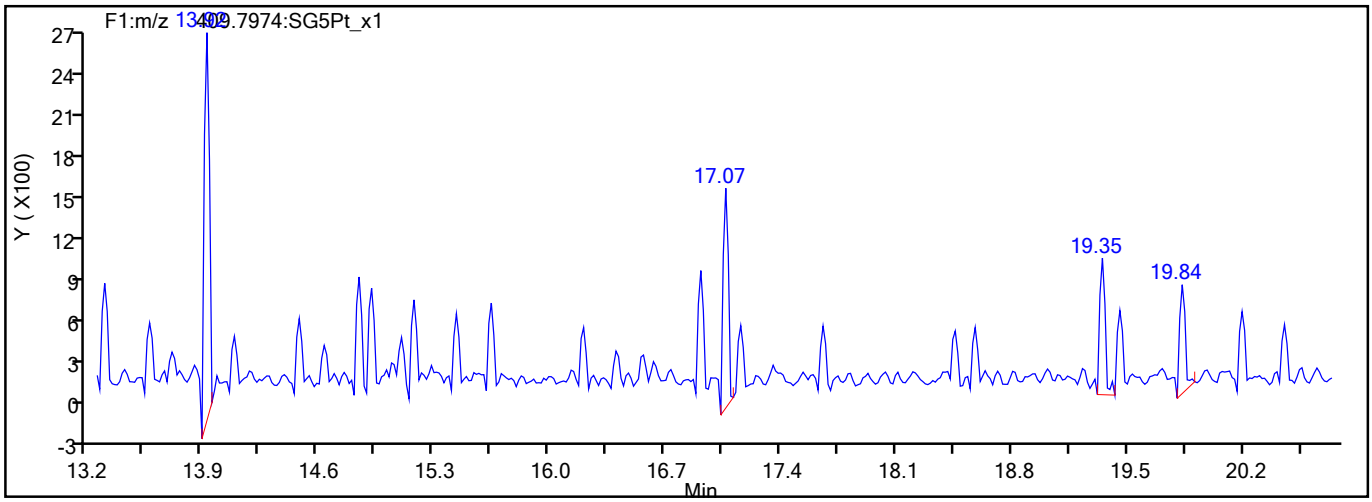

780697

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

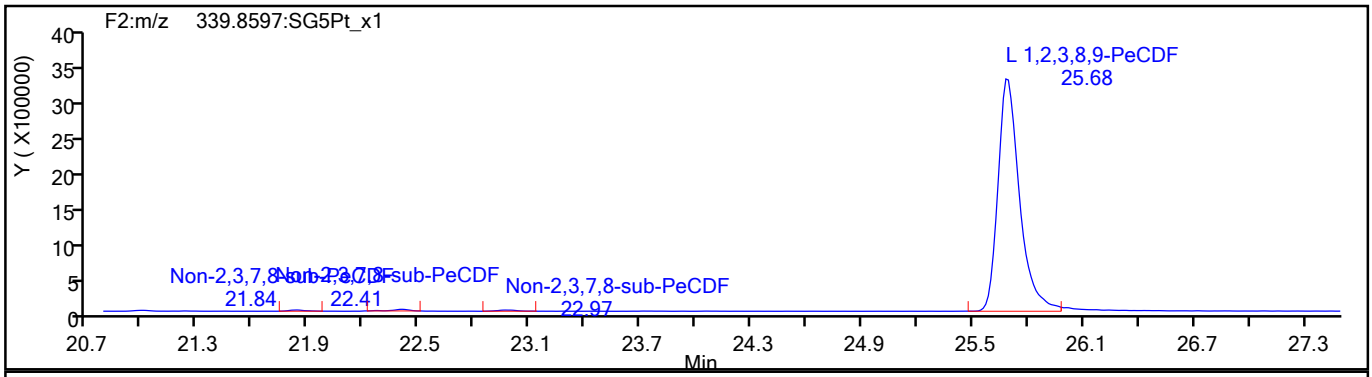

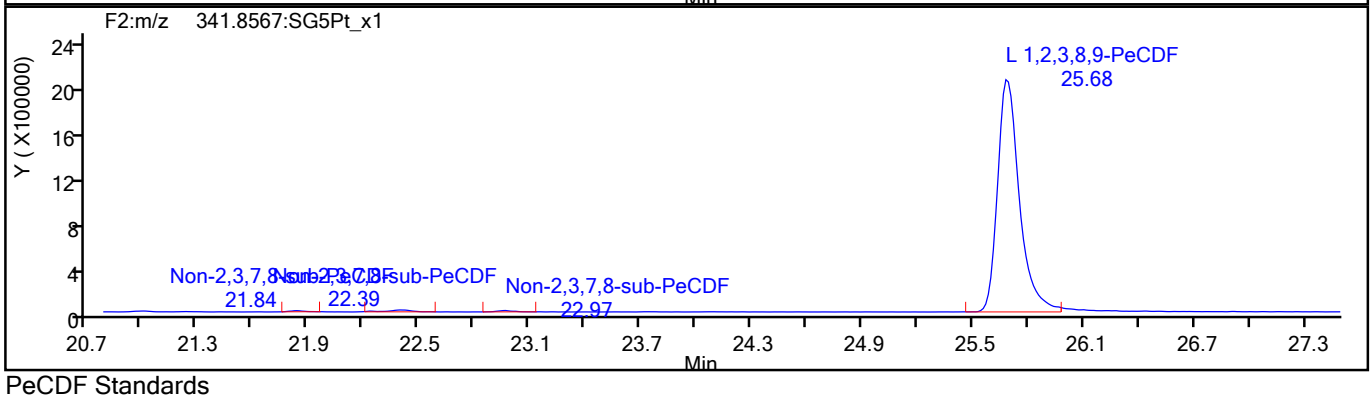

PeCDF Standards

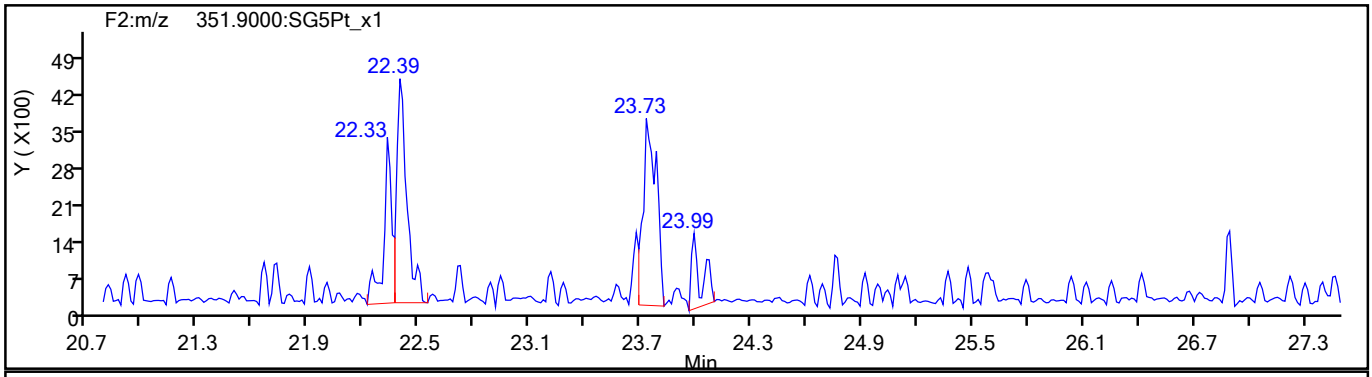

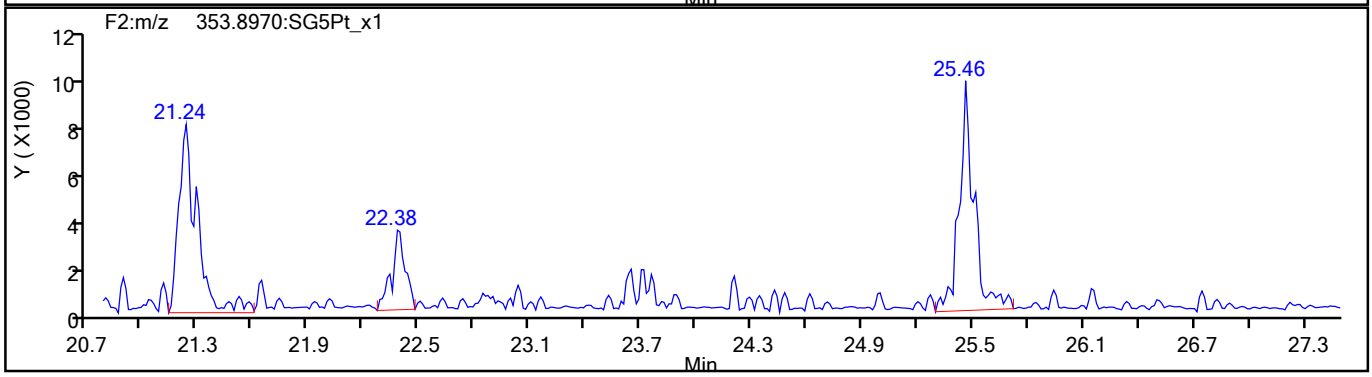

780698

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

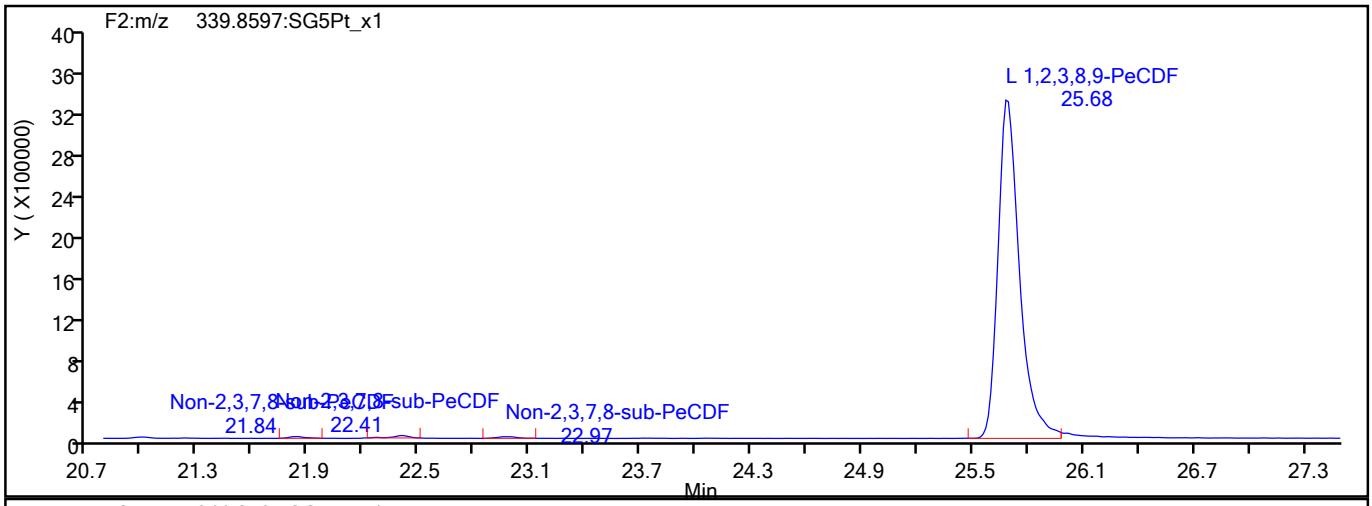

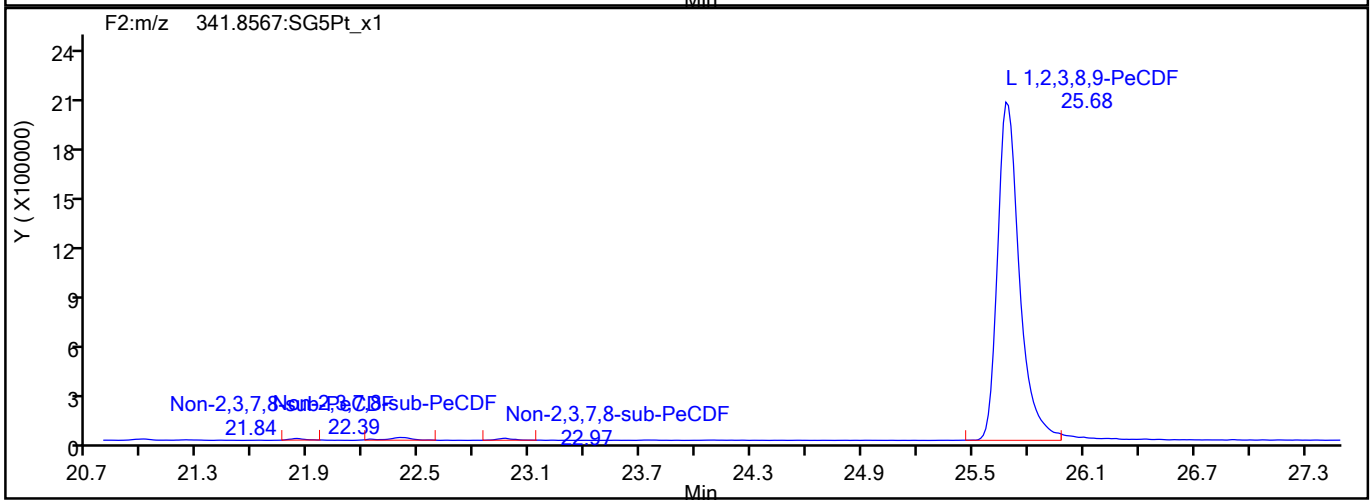

PeCDF Interference Mass

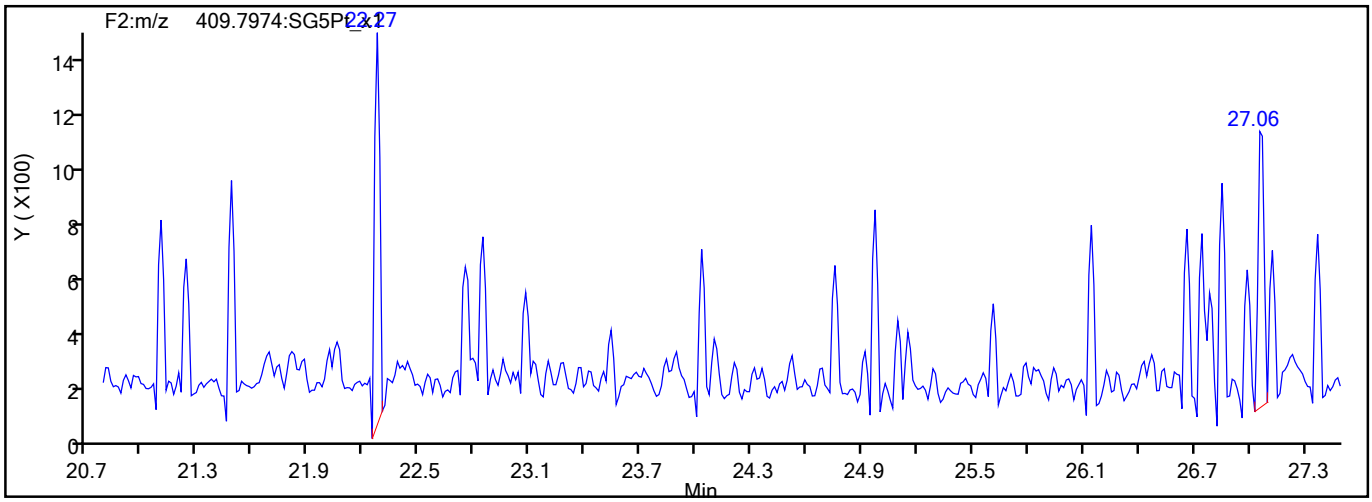

780699

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

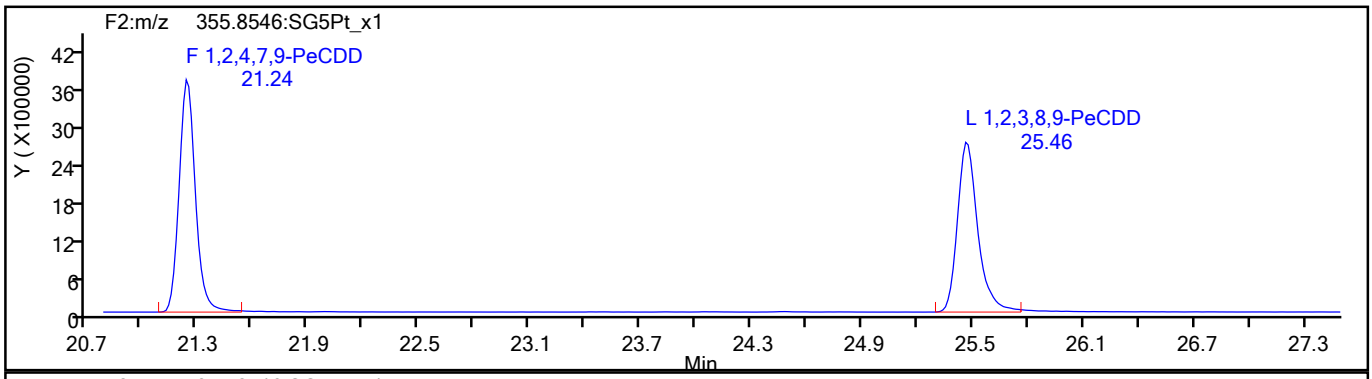

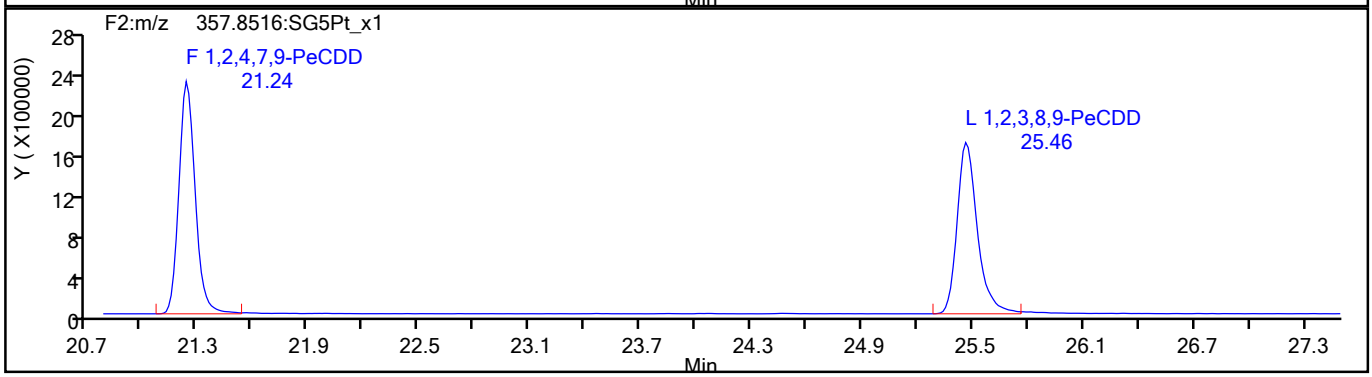

PeCDD Standards

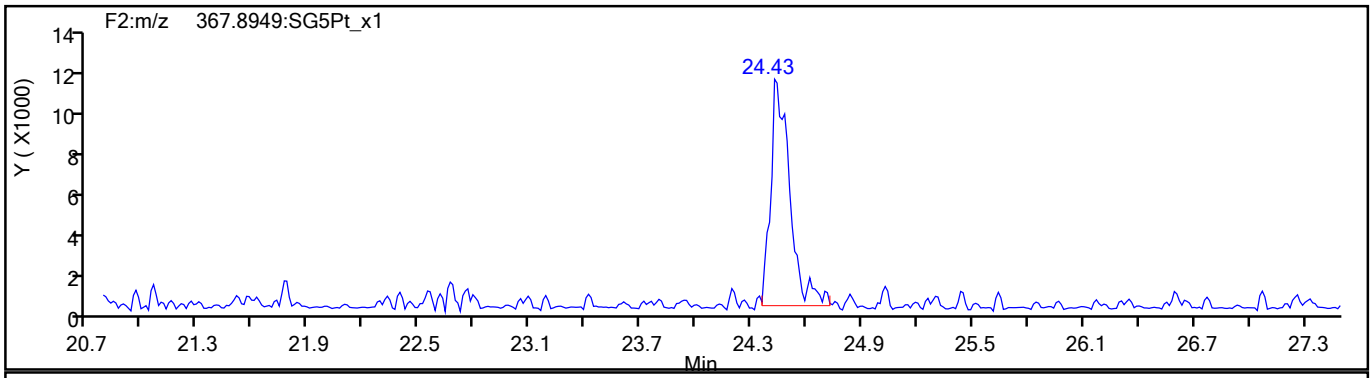

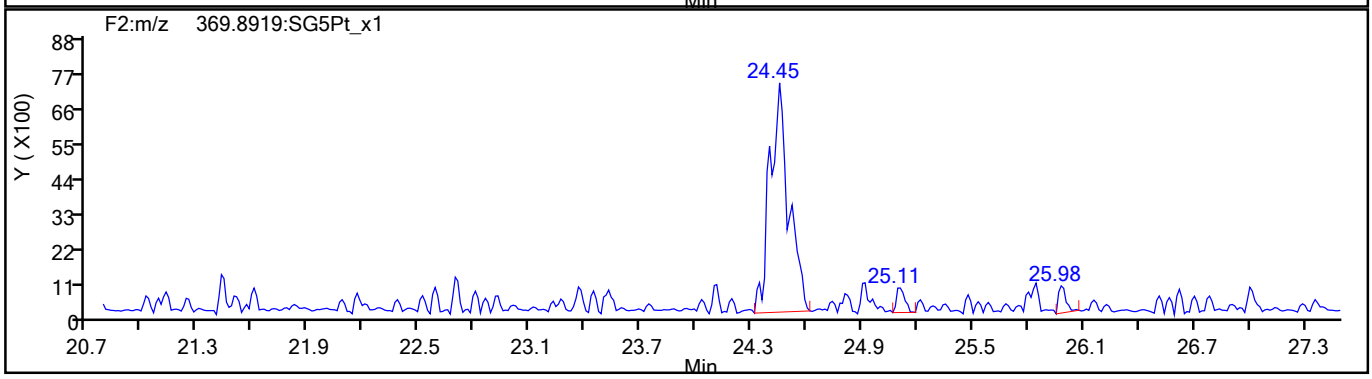

780700

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

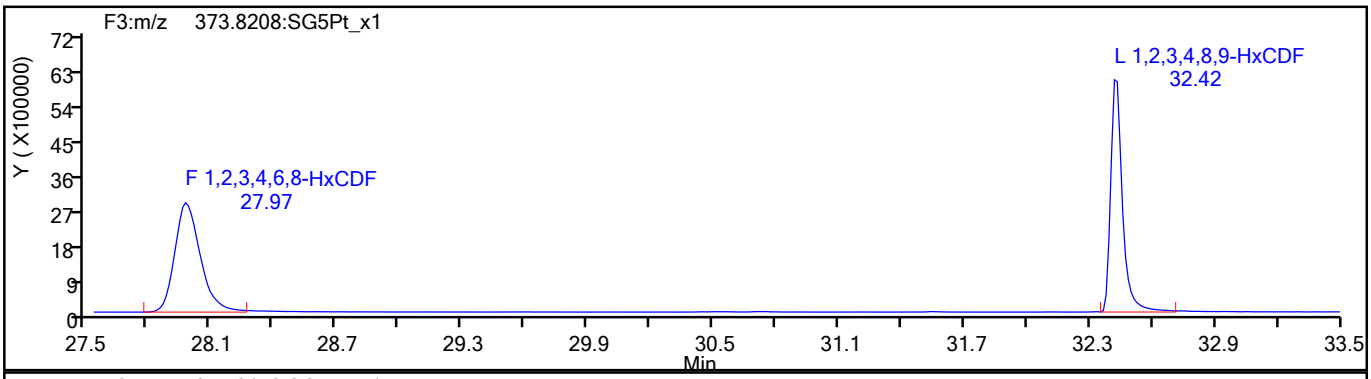

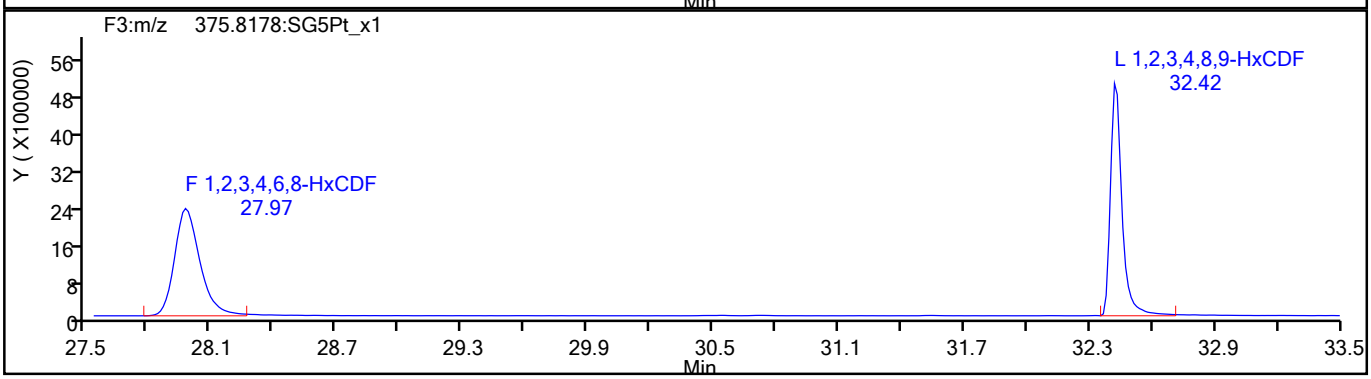

HxCDF Standards

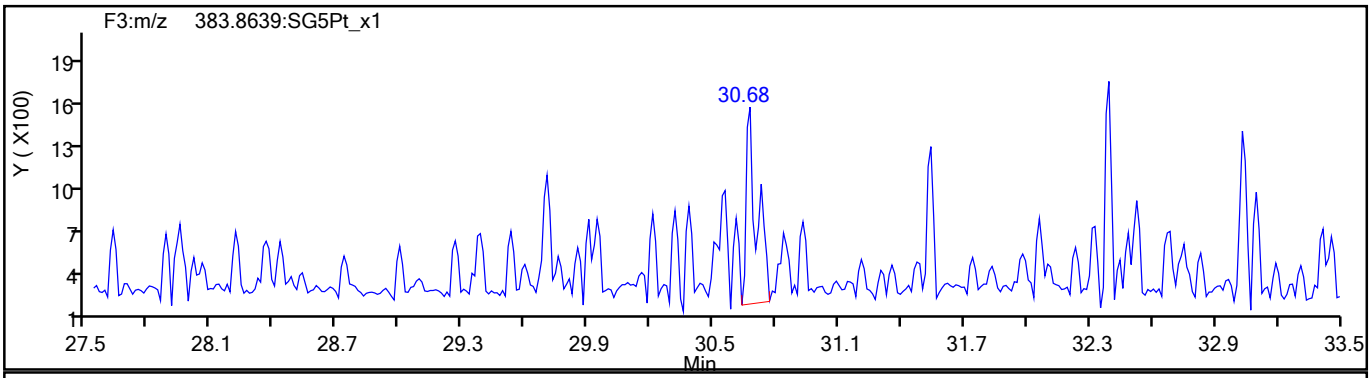

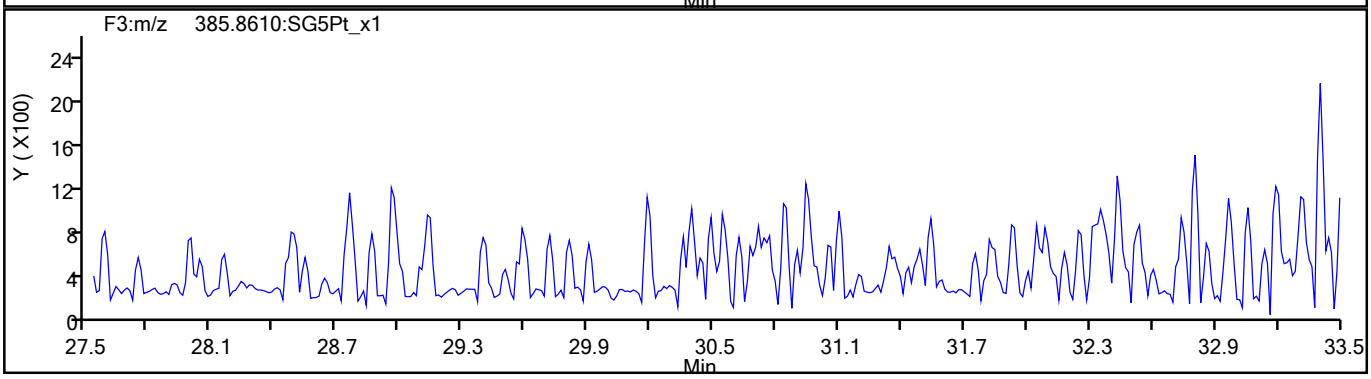

780701

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

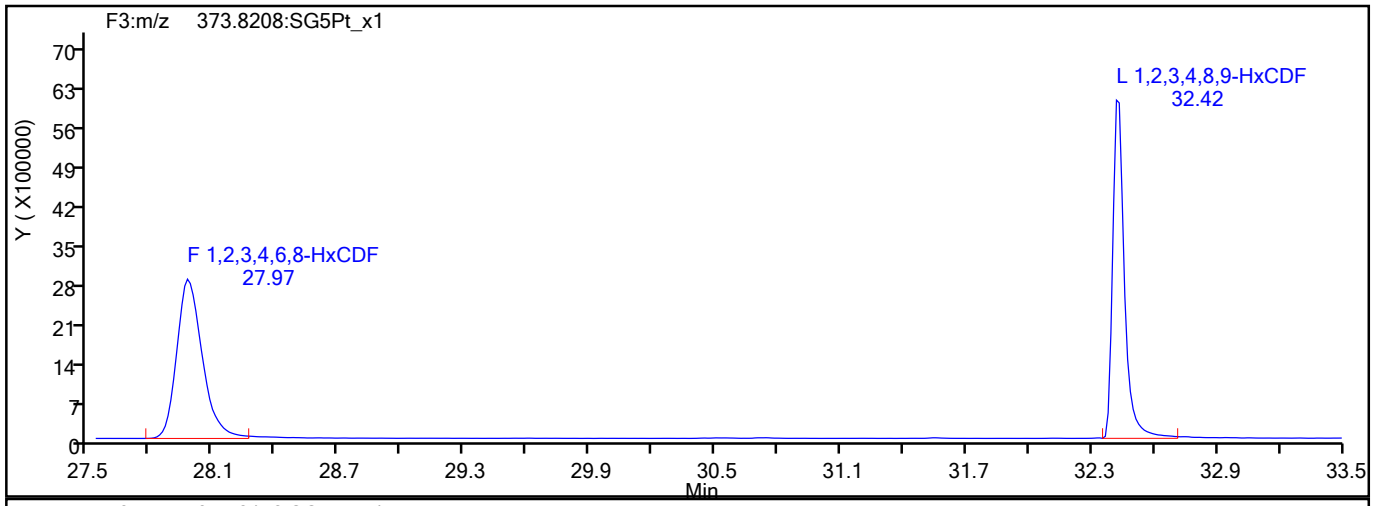

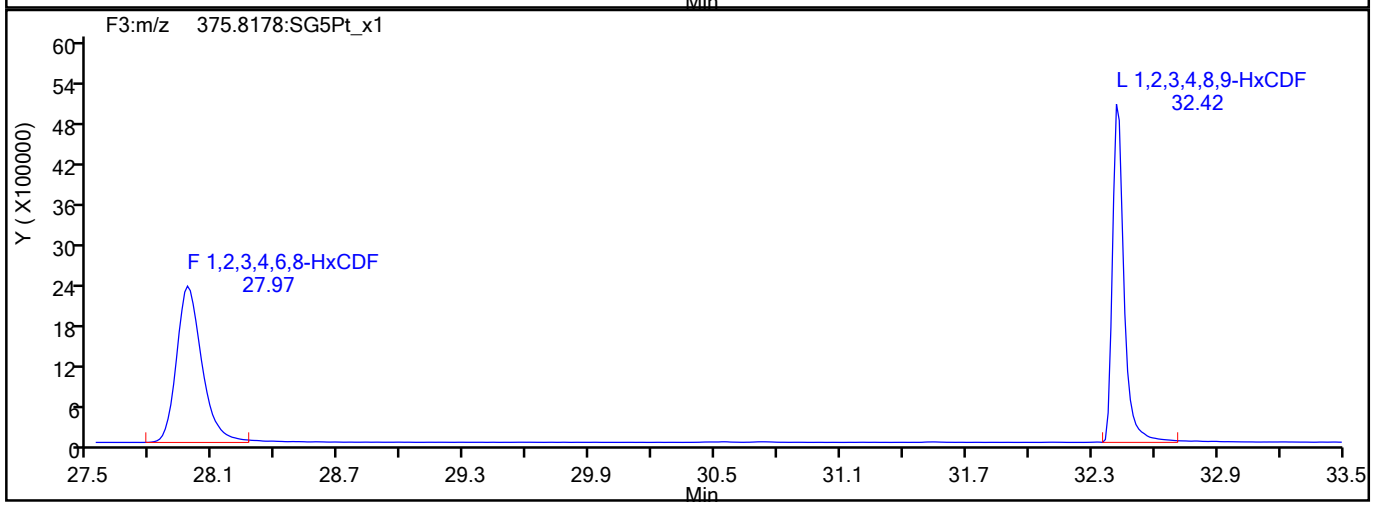

HxCDF Interference Mass

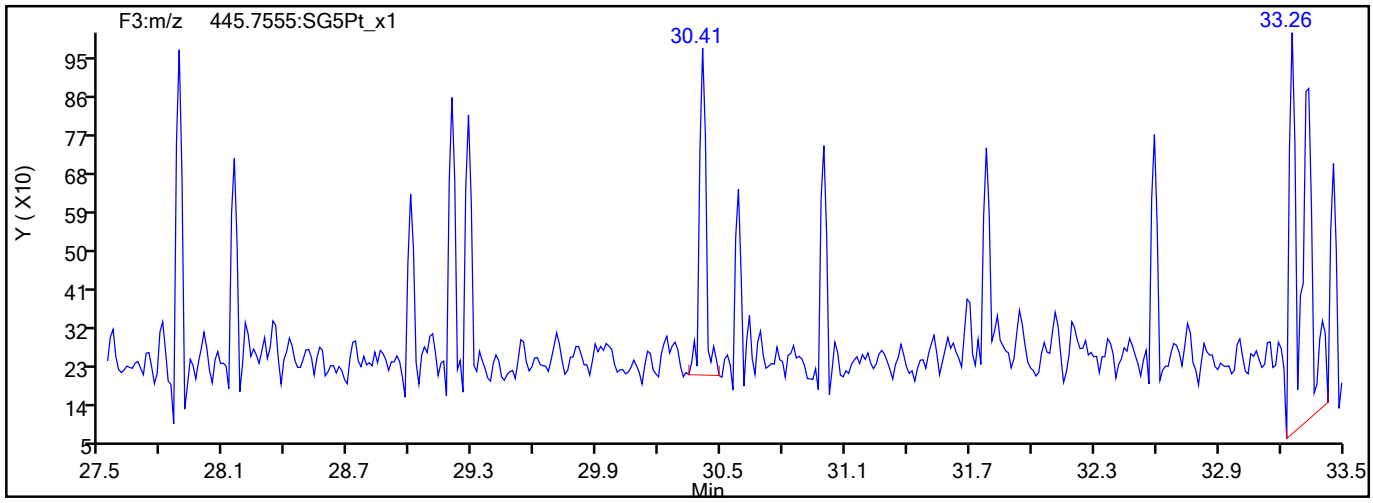

780702

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

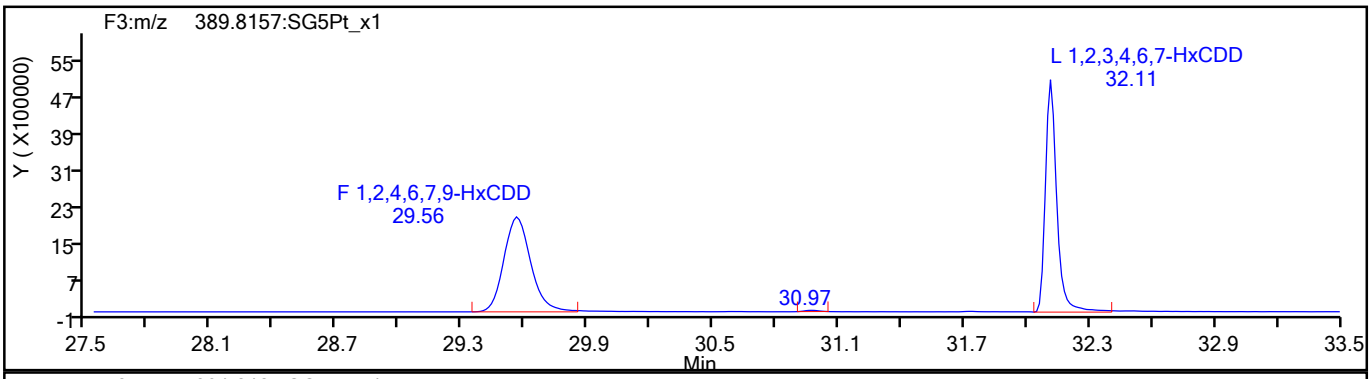

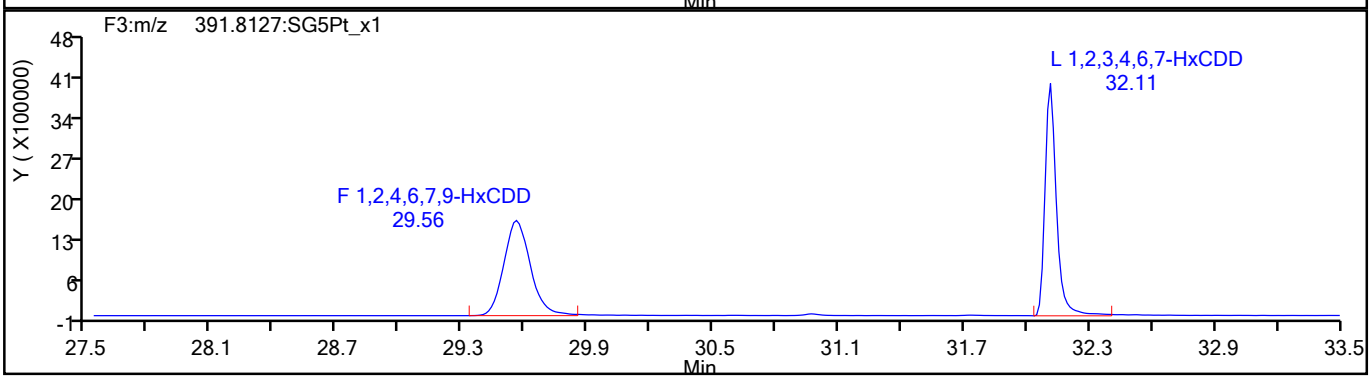

HxCDD Standards

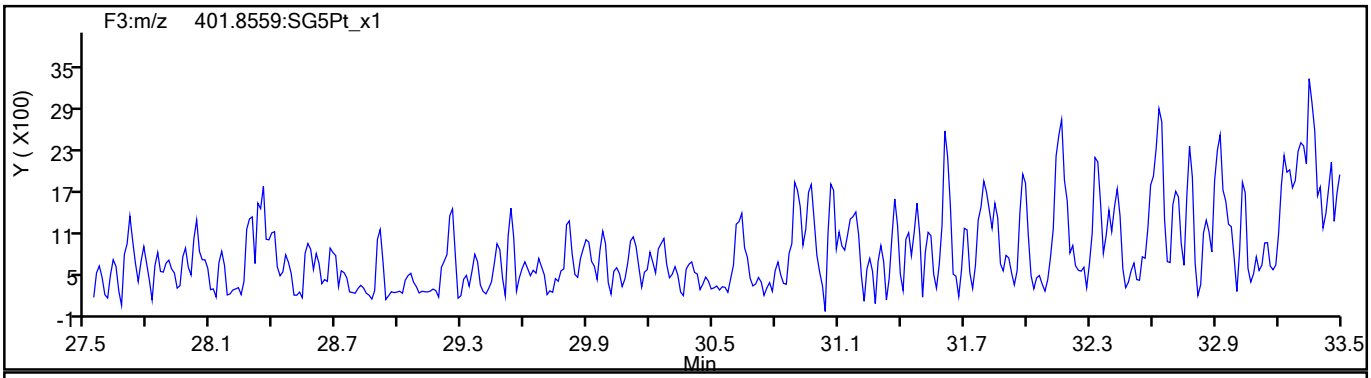

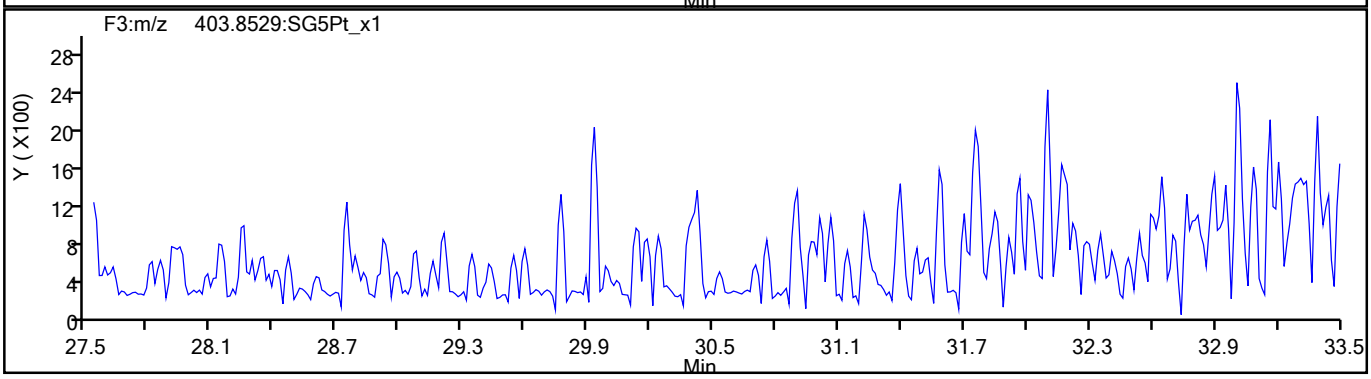

780703

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

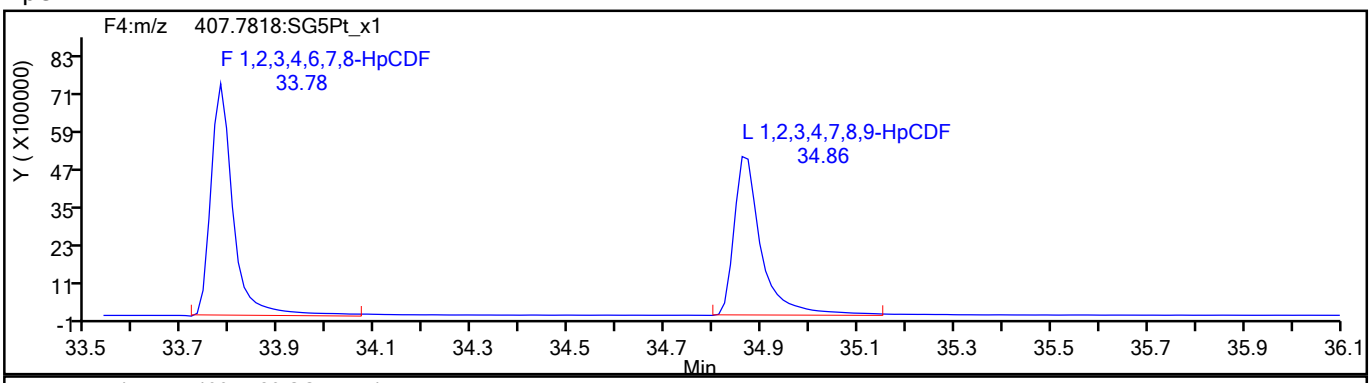

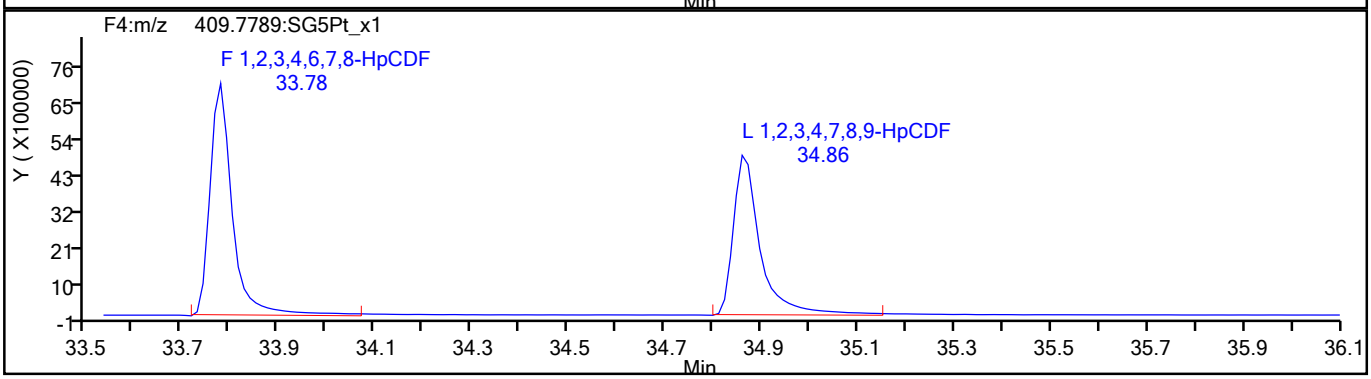

HpCDF Standards

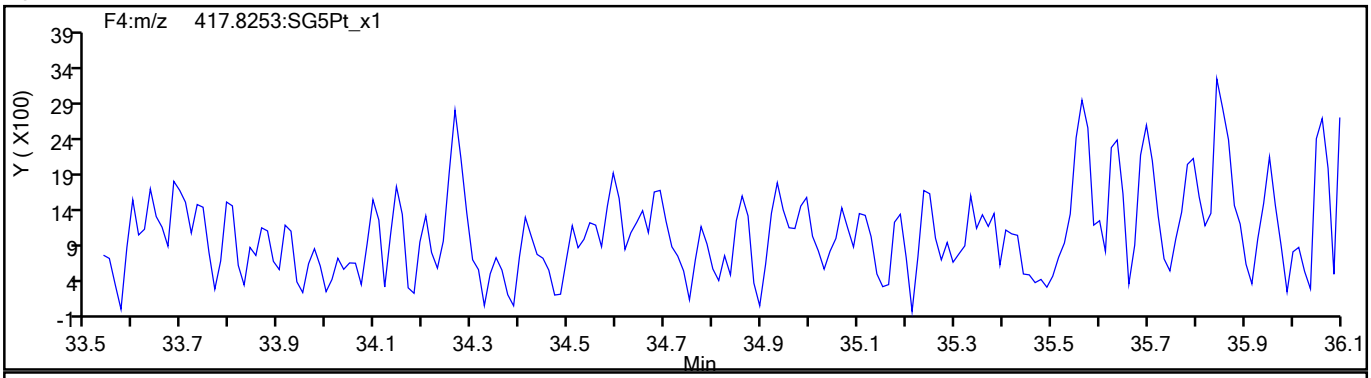

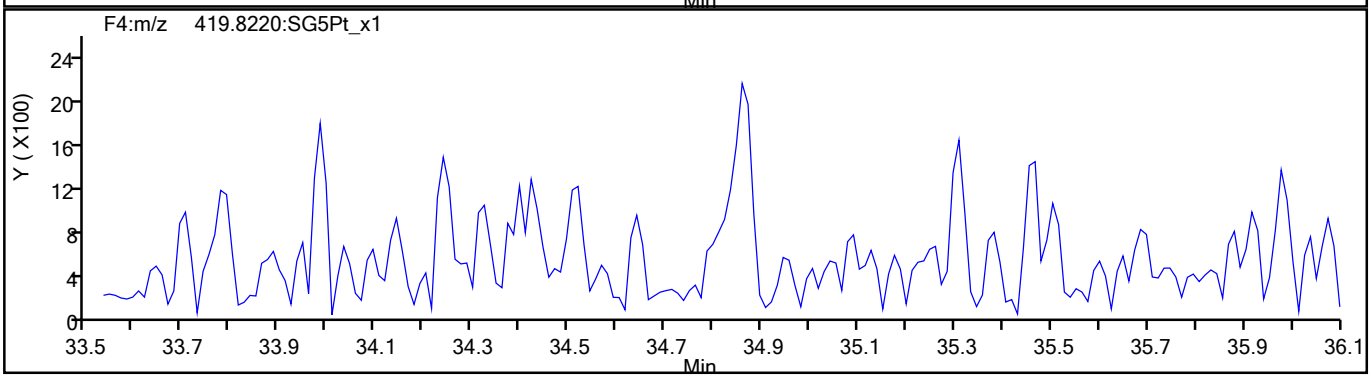

780704

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

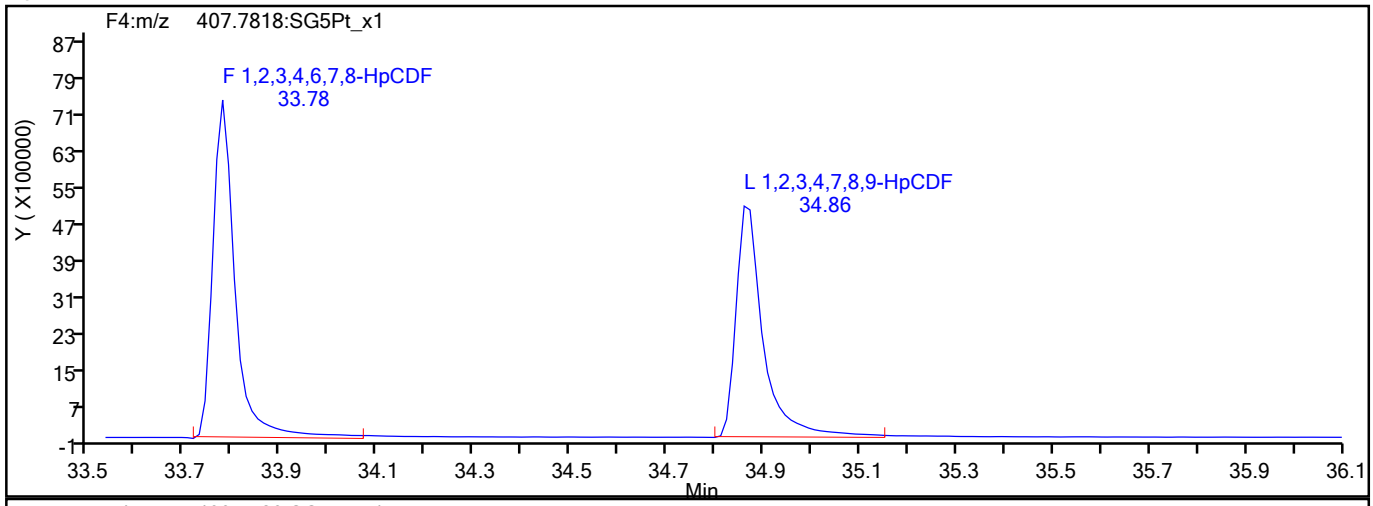

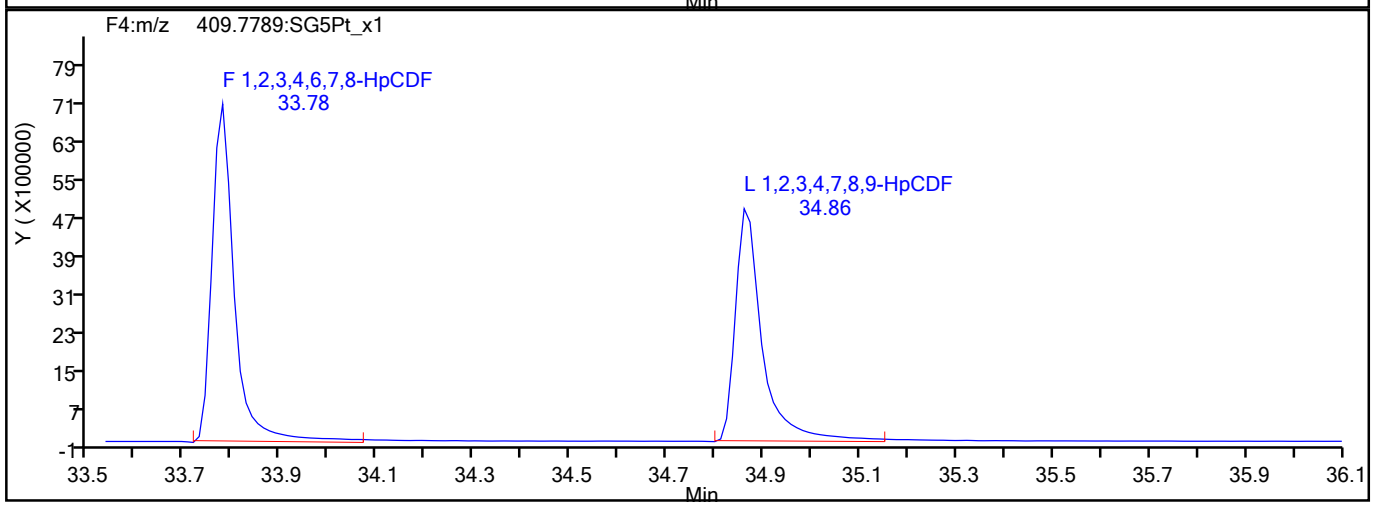

HpCDF Interference Mass

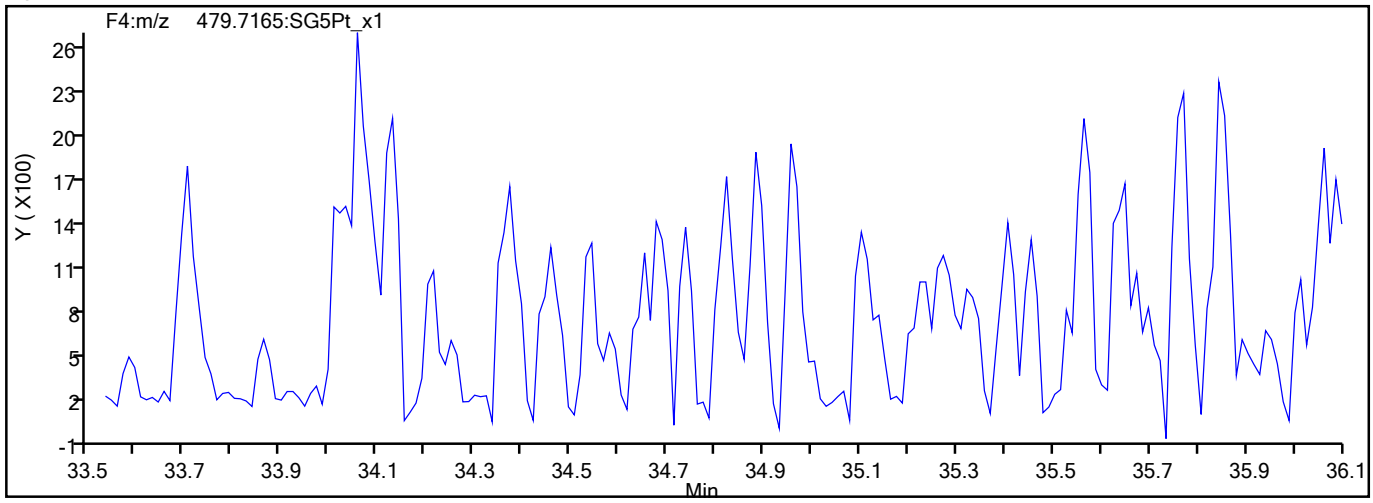

780705

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

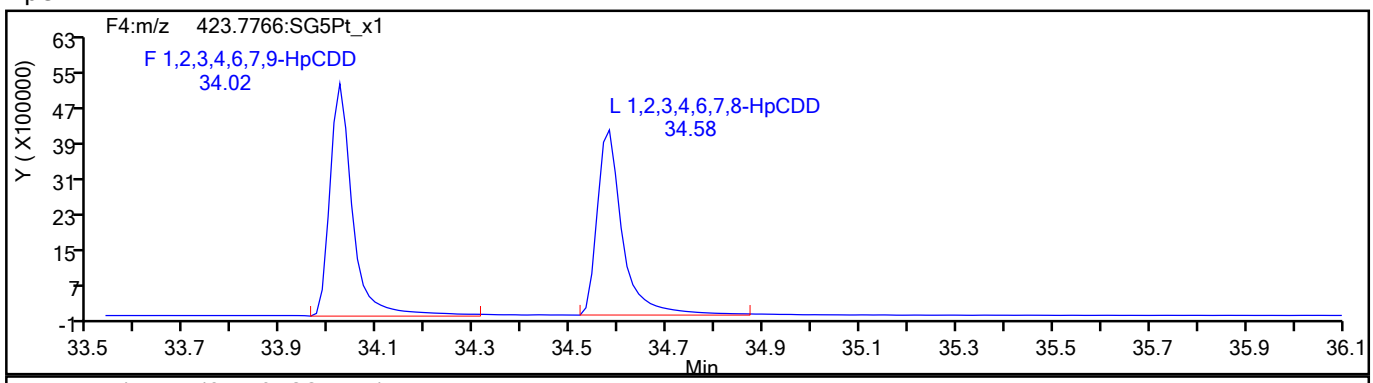

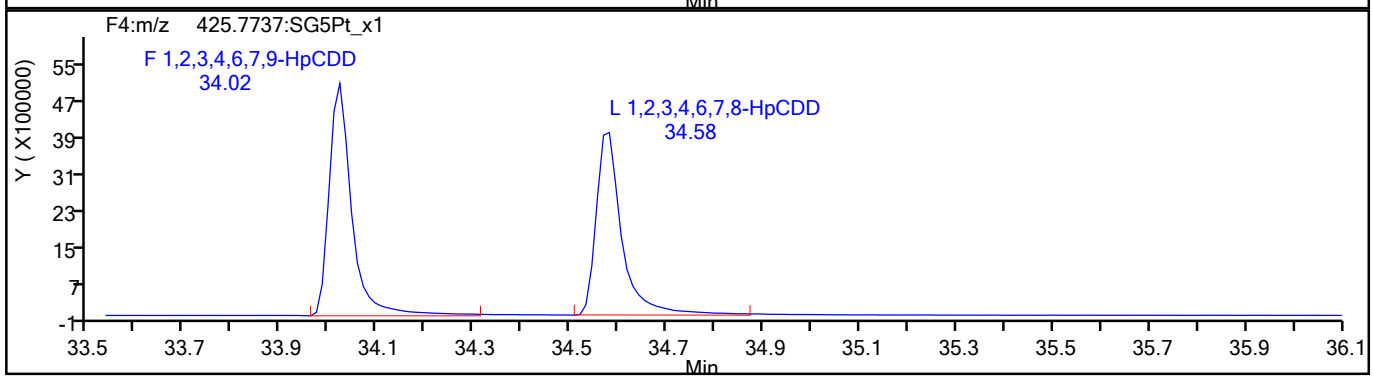

HpCDD Standards

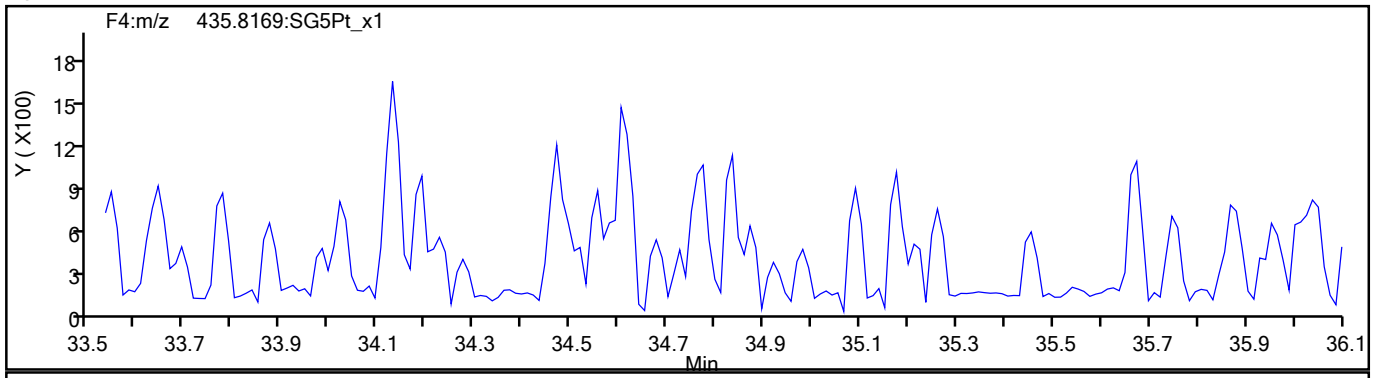

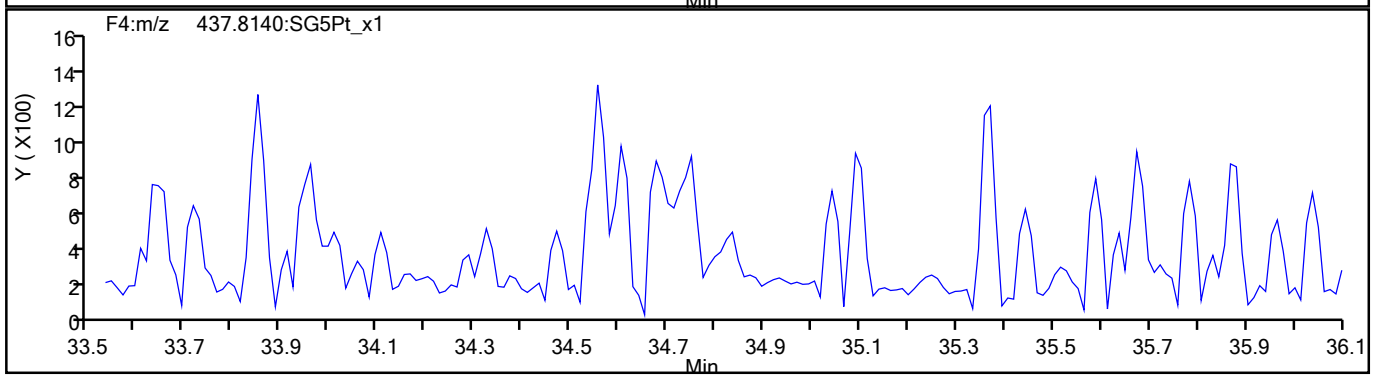

780706

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

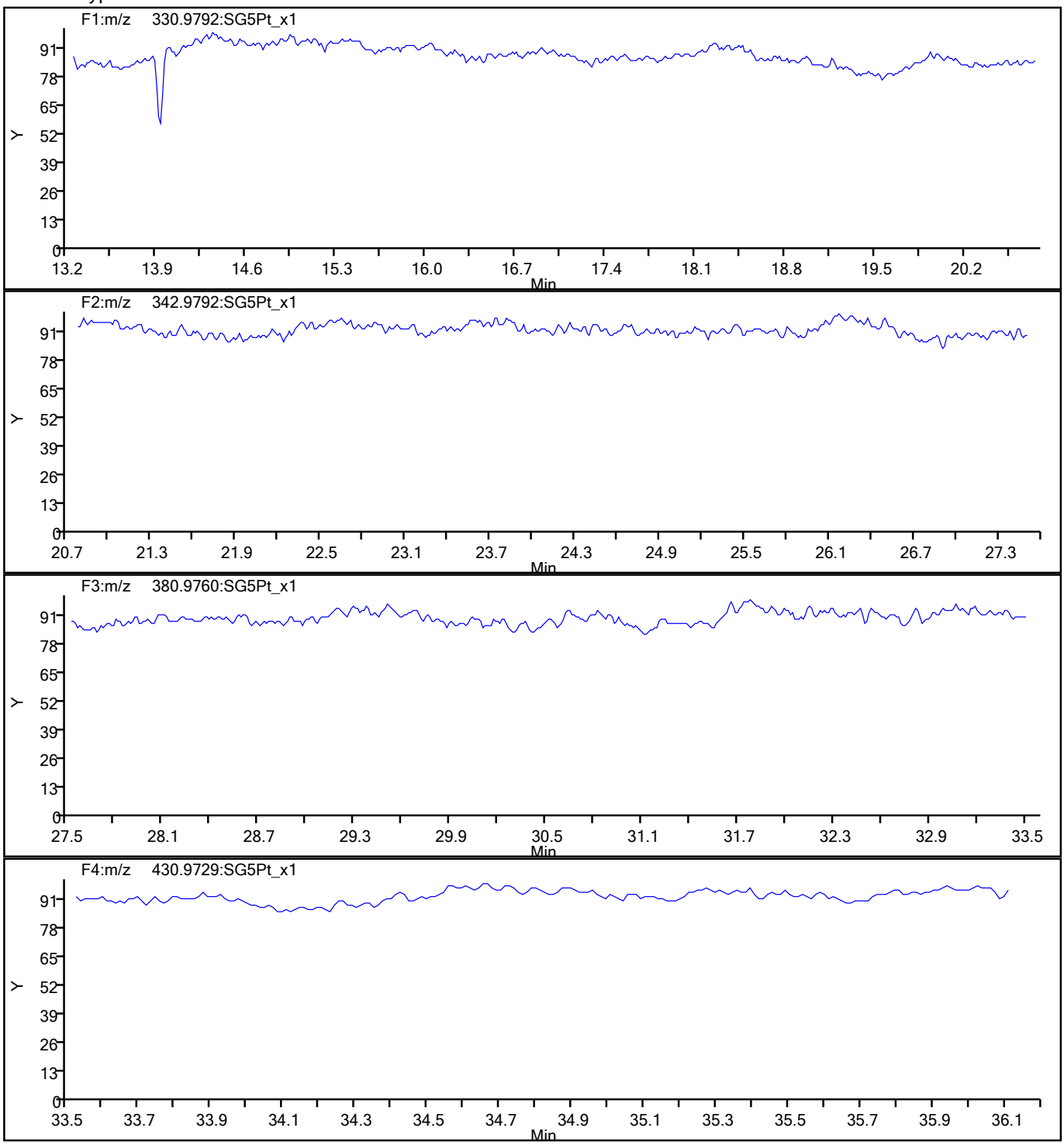

780707

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

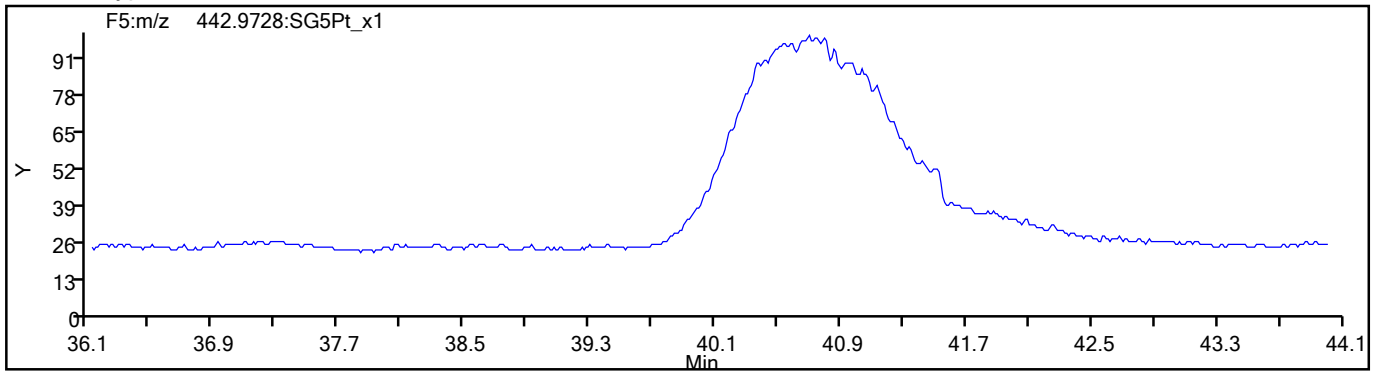

780708

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 00:44:44 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081721A WDM HRDXNCP_00044mb 320-512941/1-a
Misc. Info.: 17AU21A10D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:41:10 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1686

First Level Reviewer: arghestanis Date: 18-Aug-2021 11:20:12

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.310	51902295	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.341	111893418	0.78	1.0239	84.2	84.2	0.6228	0.6228		
A Non-2,3,7,8-sub-TCDF	17.031	2710297	0.74	1.0239	2.040	2.040	0.6228	2.040		
S Total TCDF					86.3	86.3	0.6228	0.6228		
D 13C-2,3,7,8-TCDD	18.021	27938445	0.83	0.8993					0.00	
2,3,7,8-TCDD	18.036	39221895	0.79	1.2541	44.8	44.8	0.1836	0.1836		
A Non-2,3,7,8-sub-TCDD	17.477	31401404	0.77	1.2541	35.8	35.8	0.1836	35.8		
S Total TCDD					80.6	80.6	0.1836	0.1836		
A F1 PeCDFs	20.077						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	23.221	405187	1.60	0.0000						
S Total PeCDF										
A Non-2,3,7,8-sub-PeCDD	23.301						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.163						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.836						0.0	0.0		
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.754	33030662	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	34.835	26395579	1.05	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.295						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.544	21150608	1.03	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.271						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.906	63708353	0.78							
1,3,6,8-TCDD	15.814	38669450	0.77							
2,3,4,7-TCDF	17.341	111893418	0.78							
1,2,3,7-TCDD	18.036	39236874	0.79							
1,2,3,9-TCDD	18.202	40812984	0.79							
1,2,3,9-TCDF	18.202	48732219	0.77							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.140	15820806								
1,2,8,9-TCDF	19.155	50076610	0.78							
1,3,4,6,8-PeCDF	19.427	45971015	1.56							
1,2,4,7,9-PeCDD	21.194	29257191	1.60							
1,2,3,8,9-PeCDD	25.408	26456917	1.59							
1,2,3,8,9-PeCDF	25.640	34410064	1.58							
1,2,3,4,6,8-HxCDF	27.920	33780069	1.20							
1,2,4,6,7,9-HxCDD	29.491	25468721	1.26							
1,2,3,4,6,7-HxCDD	32.087	27134741	1.26							
1,2,3,4,8,9-HxCDF	32.406	32633036	1.21							
1,2,3,4,6,7,9-HpCDD	33.997	22417762	1.04							

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 00:44:44 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081721A WDM HRDXNCP_00044mb 320-512941/1-a
Misc. Info.: 17AU21A10D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 11:41:10 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1686

First Level Reviewer: arghestanis Date: 18-Aug-2021 11:20:12

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.310	17.310	0	1.000	22649600	5212953	4469	11172	1166		
317.9389	17.310	17.310	0	1.000	29252695	6677239	5673	14182	1177	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.341	17.341	0	1.002	48939515	10839374	32923	82307	329		
305.8987	17.341	17.341	0	1.002	62953903	13910862	42894	107235	324	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	19.442	17.031	144	1.123	1149304	176707	32923	82307	5		
305.8987	19.442	17.031	144	1.123	1560993	225699	42894	107235	5	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.021	18.021	0	1.000	12670601	2883716	1609	4022	1792		
333.9339	18.021	18.021	0	1.000	15267844	3498057	1649	4122	2121	0.83(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.036	18.036	0	1.001	17366328	3742063	6373	15932	587		
321.8936	18.036	18.036	0	1.001	21855567	4803227	8321	20802	577	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.931	17.477	27	0.995	13703908	3399700	6373	15932	533		
321.8936	17.931	17.477	27	0.995	17697496	4285817	8321	20802	515	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	20.077						1731	4327			
341.8567	20.077						1232	3080			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.353	23.221	-52	1.000	146607	19235	3561	8902	5		
341.8567	22.353	23.221	-52	1.000	86086	11949	2160	5400	6	1.70(1.32-1.78)	
339.8597	22.926	23.221	-18	1.000	102794	15659	3561	8902	4		
341.8567	22.912	23.221	-18	1.000	69700	10530	2160	5400	5	1.47(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.301						3895	9737			
357.8516	23.301						2506	6265			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.163						6698	16745			
375.8178	30.163						5716	14290			
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.836						7130	17825			
391.8127	30.836						6540	16350			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.754	33.754	0	1.000	16886126	5086619	25972	64930	196		
409.7789	33.754	33.754	0	1.000	16144536	4817646	26677	66692	181	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.835	34.835	0	1.000	13497869	3365220	25972	64930	130		
409.7789	34.835	34.835	0	1.000	12897710	3235274	26677	66692	121	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.295						25972	64930			
409.7789	34.295						26677	66692			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.544	34.544	0	1.000	10728712	2812046	19635	49087	143		
425.7737	34.544	34.544	0	1.000	10421896	2782014	18980	47450	147	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.271						19635	49087			
425.7737	34.271						18980	47450			
1,3,6,8-TCDF											
303.9016	14.906	14.906	0		27953464	8482896	32923	82307	258		
305.8987	14.906	14.906	0		35754889	10862041	42894	107235	253	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.814	15.814	0		16854760	4601687	6373	15932	722		
321.8936	15.814	15.814	0		21814690	5996748	8321	20802	721	0.77(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.341	17.341	0		48939515	10839374	32923	82307	329		
305.8987	17.341	17.341	0		62953903	13910862	42894	107235	324	0.78(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.036	18.036	0		17368048	3742290	6373	15932	587		
321.8936	18.036	18.036	0		21868826	4804980	8321	20802	577	0.79(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.202	18.202	0		17950386	3946765	6373	15932	619		
321.8936	18.202	18.202	0		22862598	5050836	8321	20802	607	0.79(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	18.202	18.202	0		21266927	4803903	32923	82307	146		
305.8987	18.202	18.202	0		27465292	6213976	42894	107235	145	0.77(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.140	19.140	0		15820806	3341150	6373	15932	524		
1,2,8,9-TCDF											
303.9016	19.155	19.155	0		21936681	4497104	32923	82307	137		
305.8987	19.155	19.155	0		28139929	5718430	42894	107235	133	0.78(0.65-0.89)	

Report Date: 18-Aug-2021 11:41:12 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,3,4,6,8-PeCDF											
339.8597	19.427	19.427	0		27997533	5792273	1731	4327	3346		
341.8567	19.427	19.427	0		17973482	3743682	1232	3080	3039	1.56(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	21.194	21.194	0		18001852	3014397	3895	9737	774		
357.8516	21.194	21.194	0		11255339	1873904	2506	6265	748	1.60(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	25.408	25.408	0		16248567	2146600	3895	9737	551		
357.8516	25.408	25.408	0		10208350	1360608	2506	6265	543	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	25.640	25.640	0		21089041	2695180	3561	8902	757		
341.8567	25.640	25.640	0		13321023	1674939	2160	5400	775	1.58(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	27.920	27.920	0		18449652	2208105	6698	16745	330		
375.8178	27.920	27.920	0		15330417	1832275	5716	14290	321	1.20(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.491	29.491	0		14216693	1560199	7130	17825	219		
391.8127	29.491	29.491	0		11252028	1244710	6540	16350	190	1.26(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8157	32.087	32.087	0		15119126	3838721	7130	17825	538		
391.8127	32.087	32.087	0		12015615	3022965	6540	16350	462	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.406	32.406	0		17895869	4533473	6698	16745	677		
375.8178	32.393	32.406	-1		14737167	3791386	5716	14290	663	1.21(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.997	33.997	0		11446132	3459351	19635	49087	176		
425.7737	33.997	33.997	0		10971630	3253647	18980	47450	171	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 00:44:44 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 517241 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDF, RT: 17.031

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	51902295	11890192

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	51902295	11890192

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.442	1149304	176707	1560993	225699	2.04	0.74	
Signal Totals:							
	1149304	176707	1560993	225699			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2710297	402406				0.74	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.040 = (2710297 * 40.000) / (51902295 * 1.024)

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 00:44:44 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 517241 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDD, RT: 17.477

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	27938445	6381773

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	27938445	6381773

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.931	13703908	3399700	17697496	4285817	35.8	0.77	
Signal Totals:							
	13703908	3399700	17697496	4285817			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	31401404	7685517				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 35.848 = (31401404 * 40.000) / (27938445 * 1.254)

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 00:44:44 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 517241 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDF, RT: 23.221

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.353	146607	19235	86086	11949		1.70	
22.926	102794	15659	69700	10530		1.47	
Signal Totals:							
	249401	34894	155786	22479			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	405187	57373				1.60	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (405187 * 0.0) / (0 * 0.000)

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

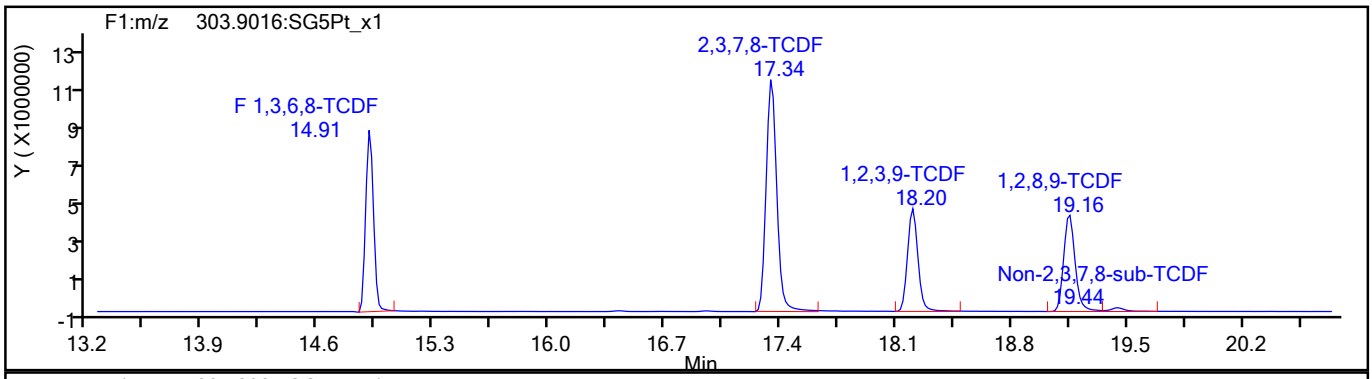

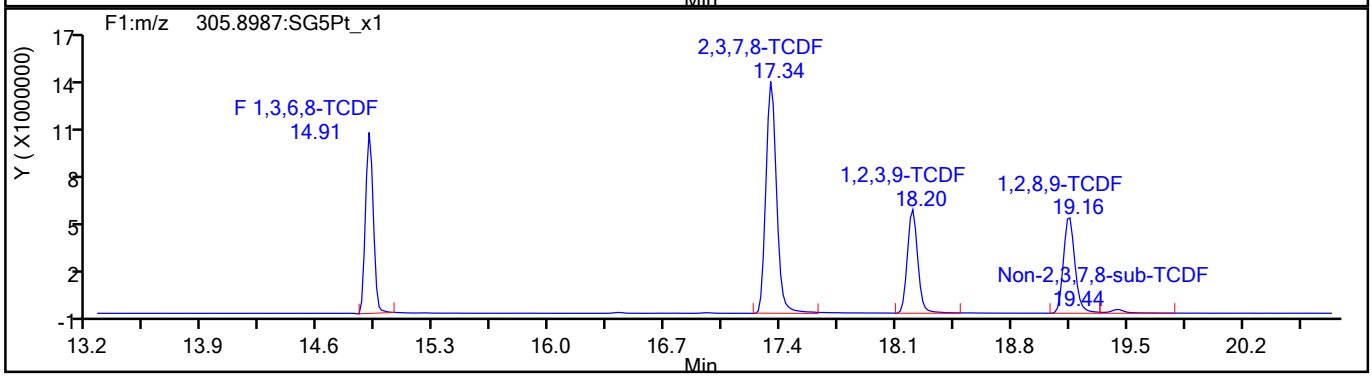

TCDF Standards

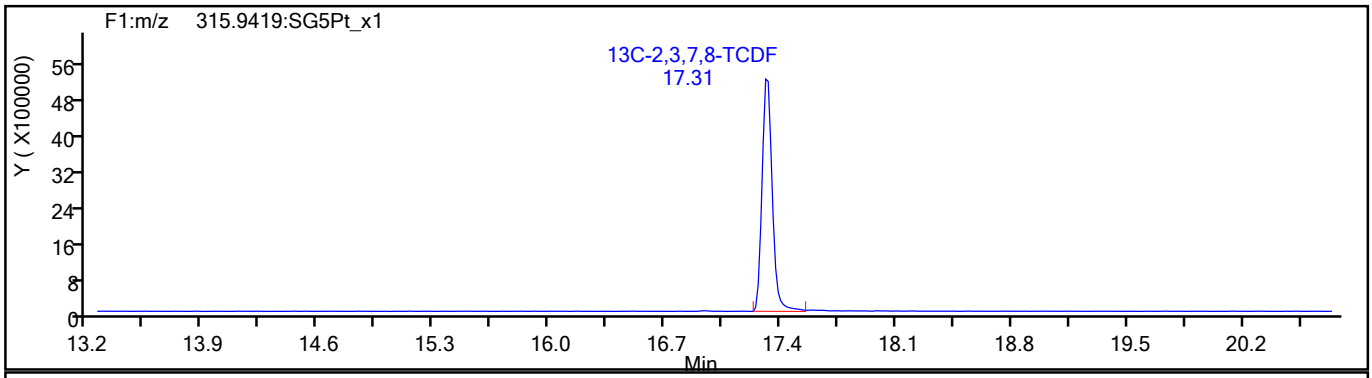

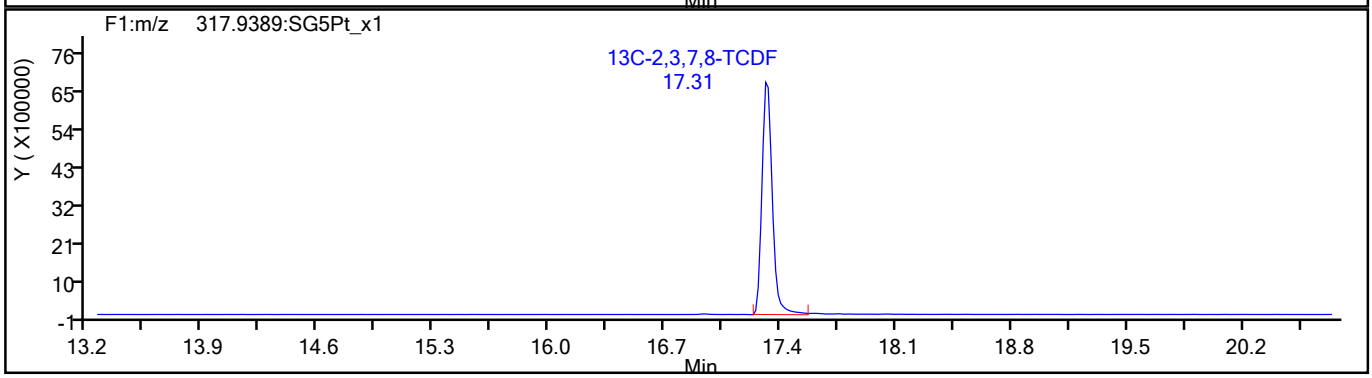

780717

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

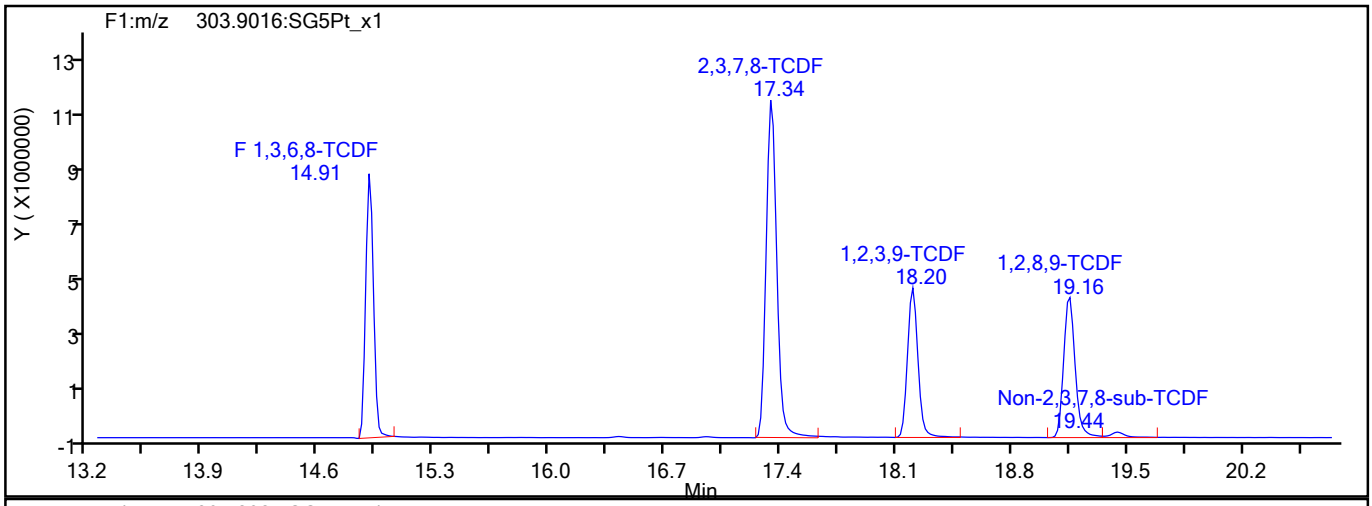

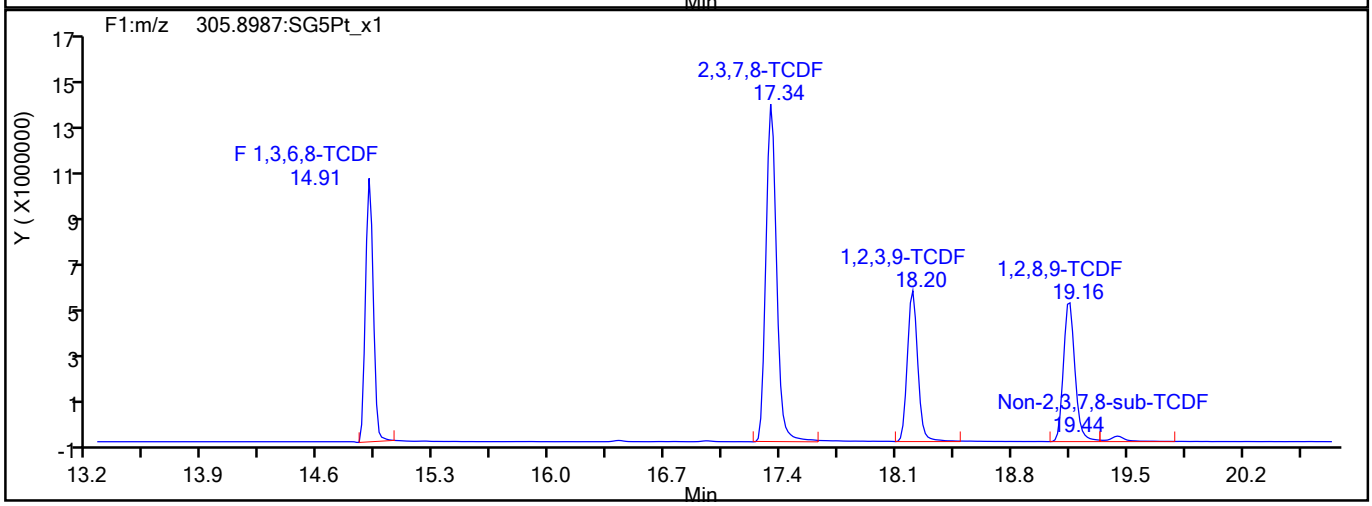

TCDF Interference Mass

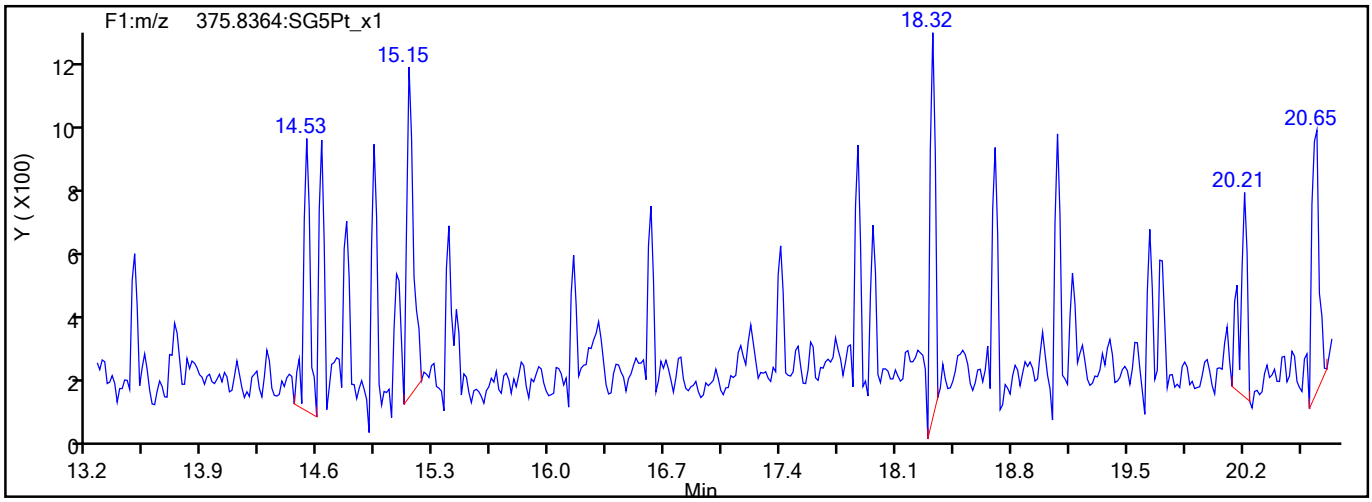

780718

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

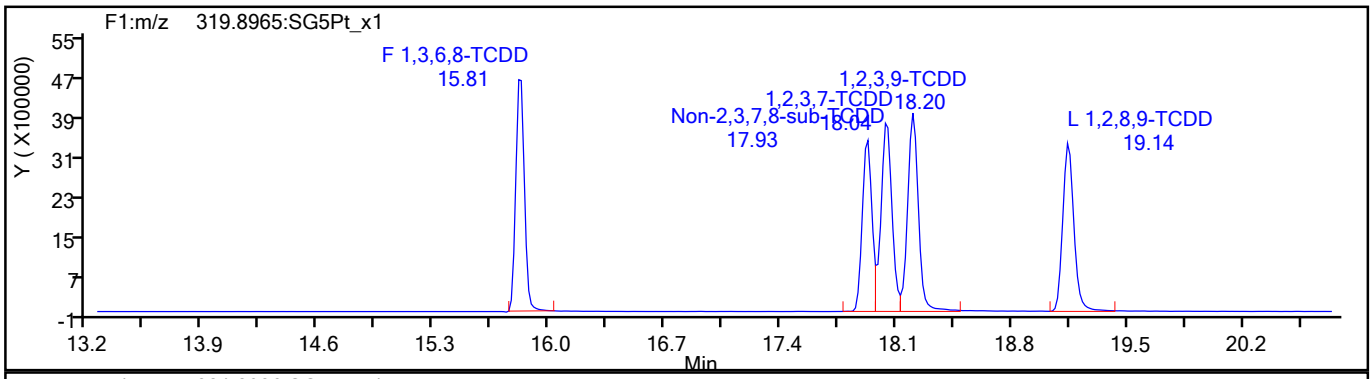

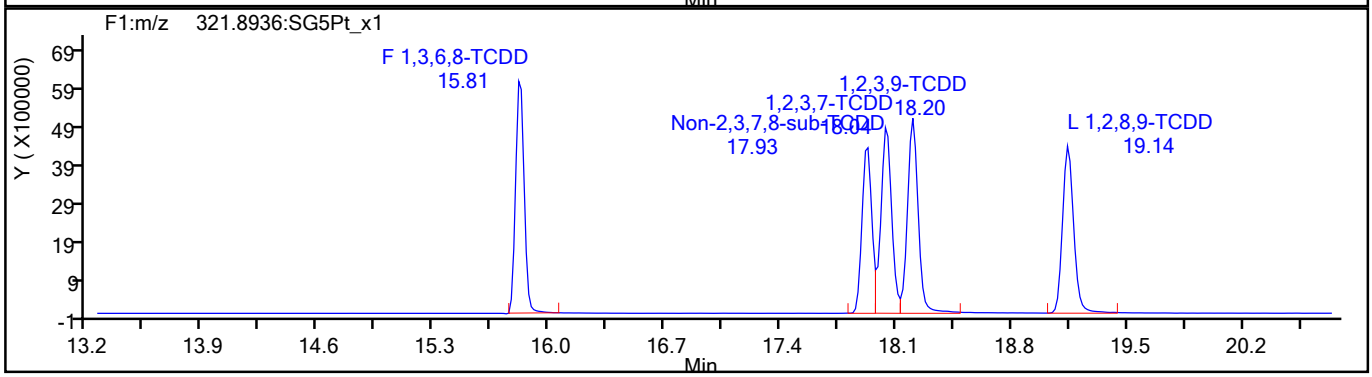

TCDD Standards

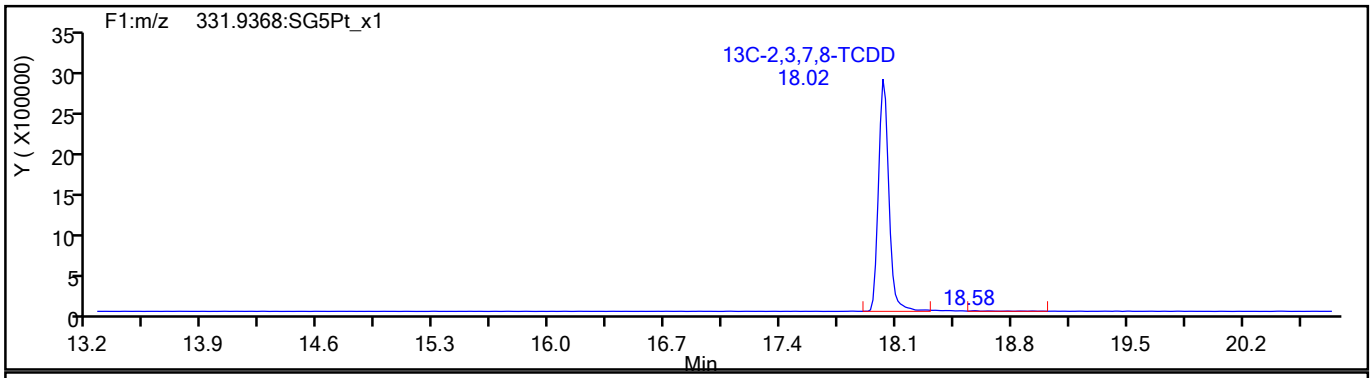

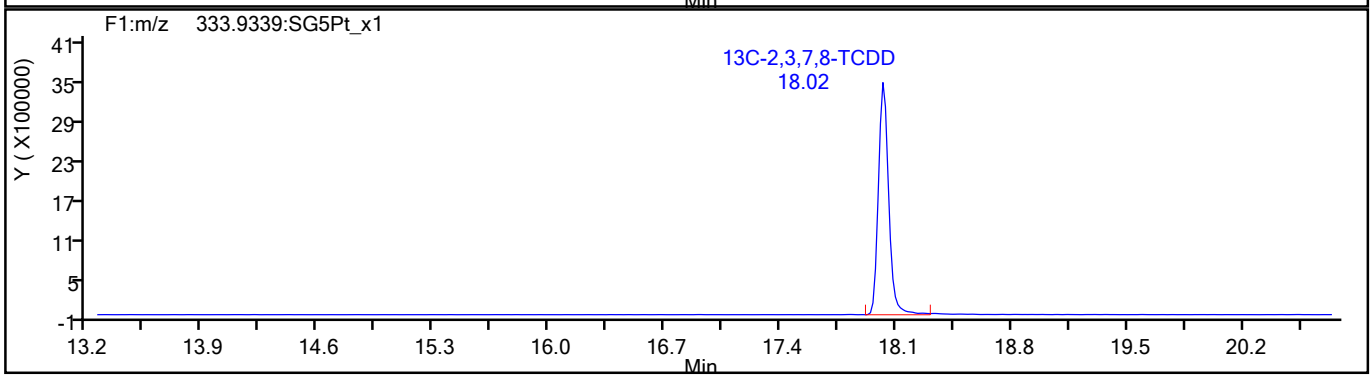

780719

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

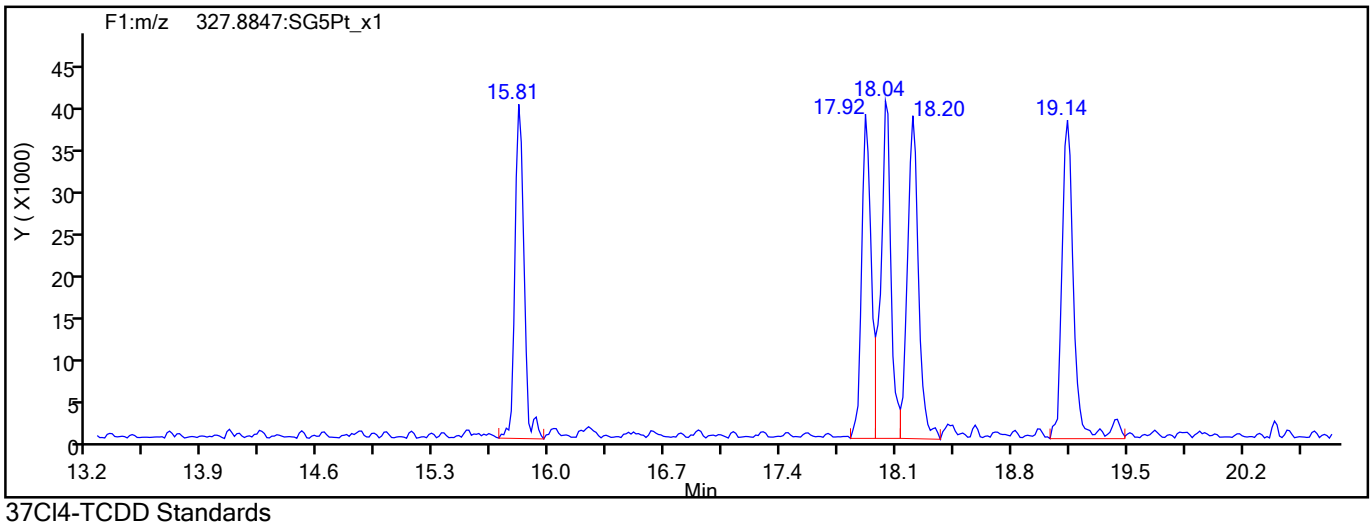

37Cl4-TCDD Standards

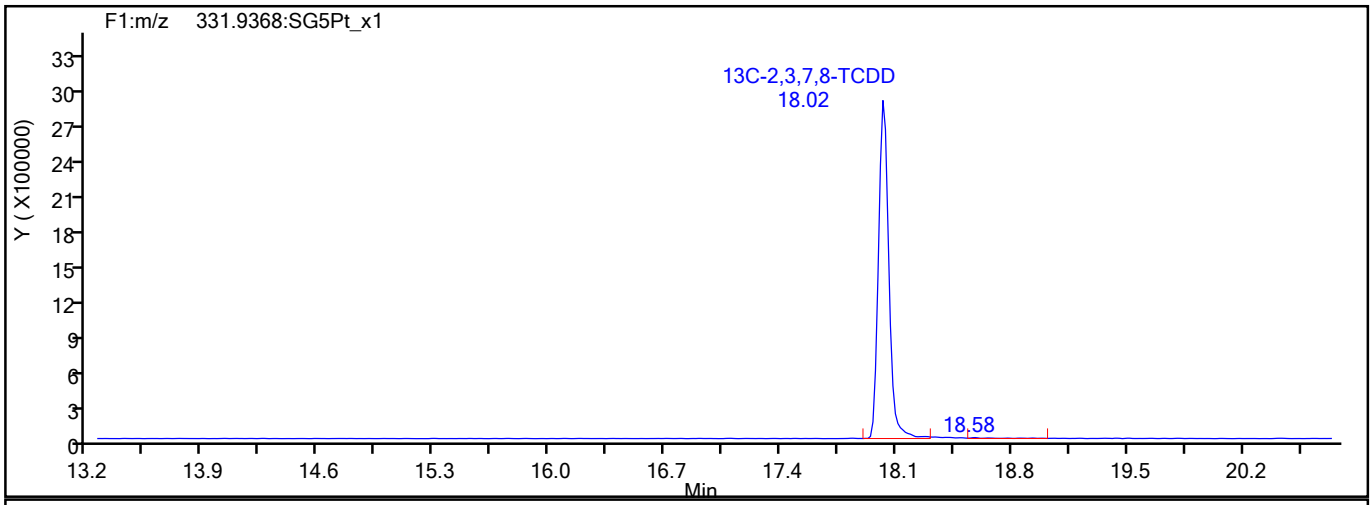

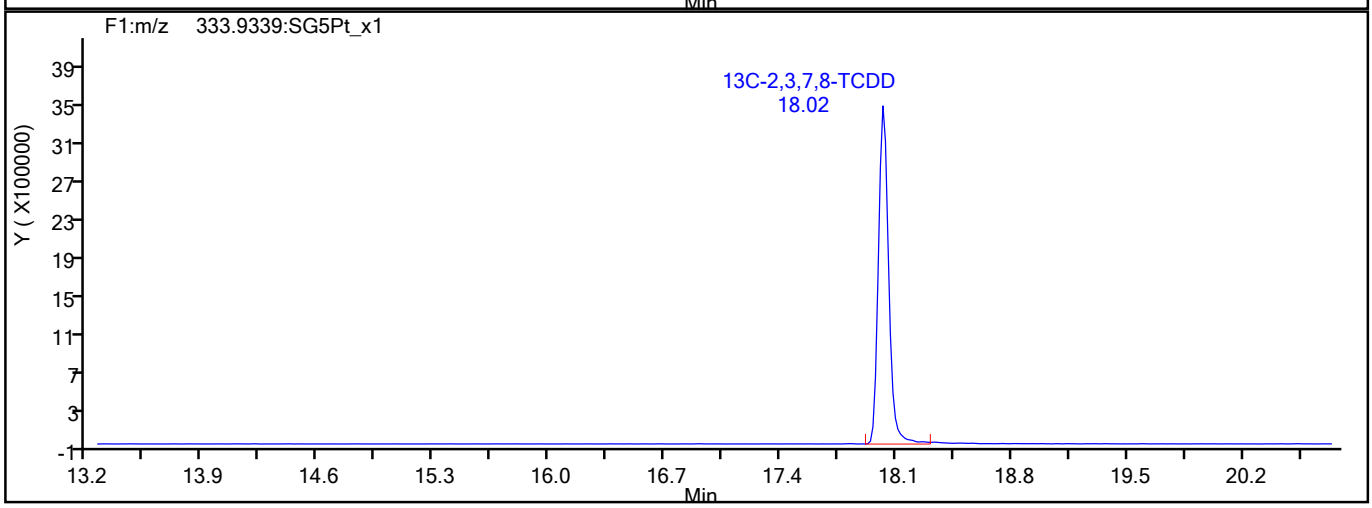

780720

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

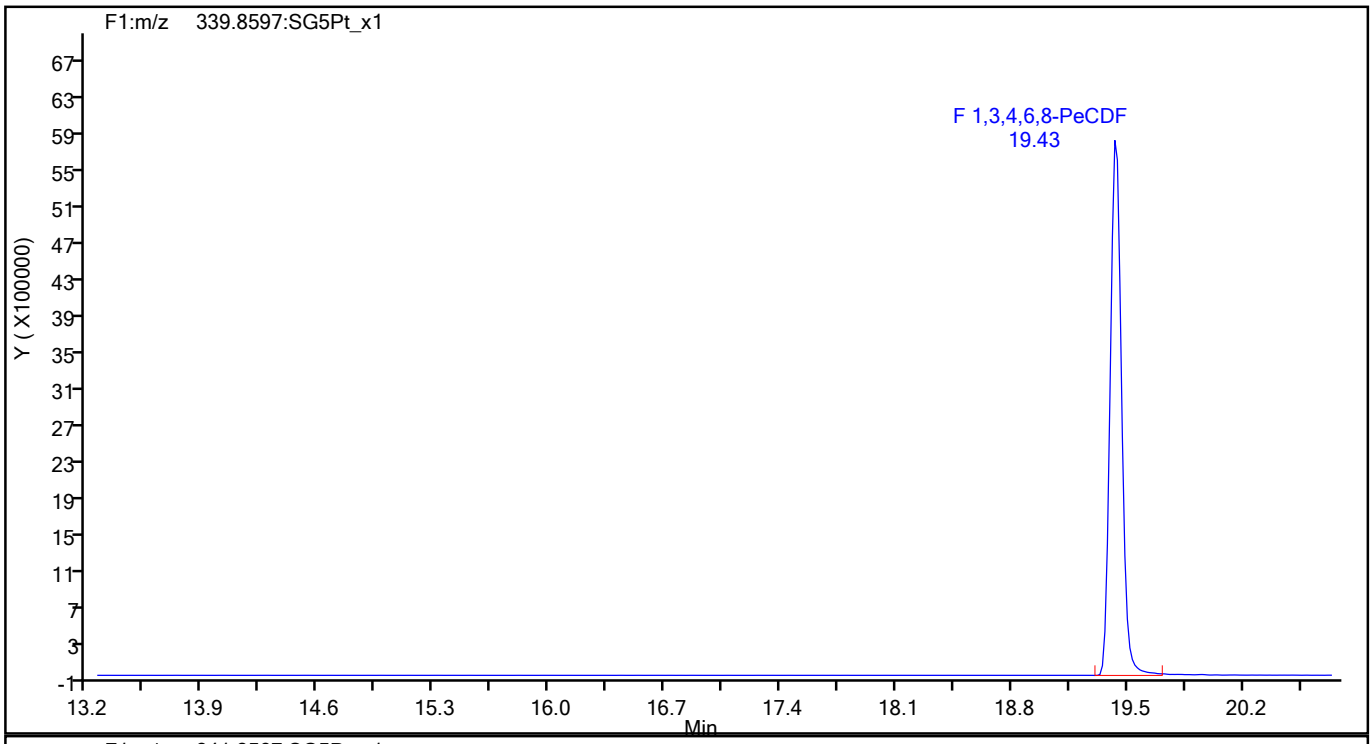

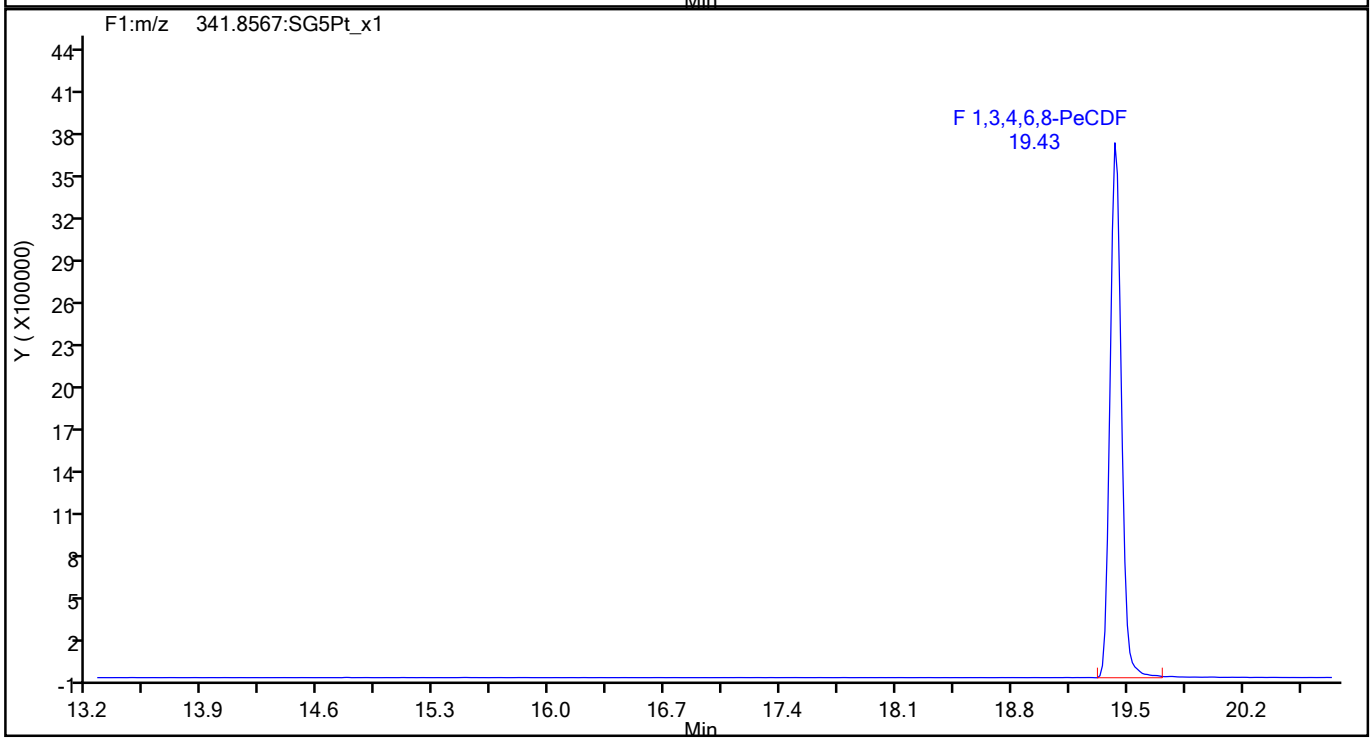

780721

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

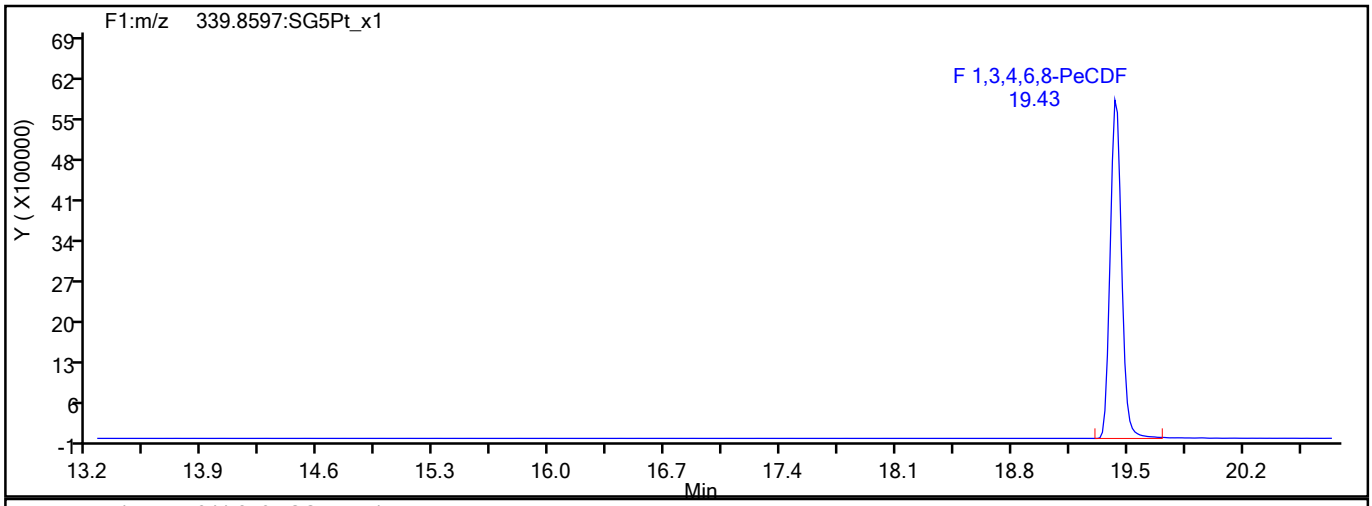

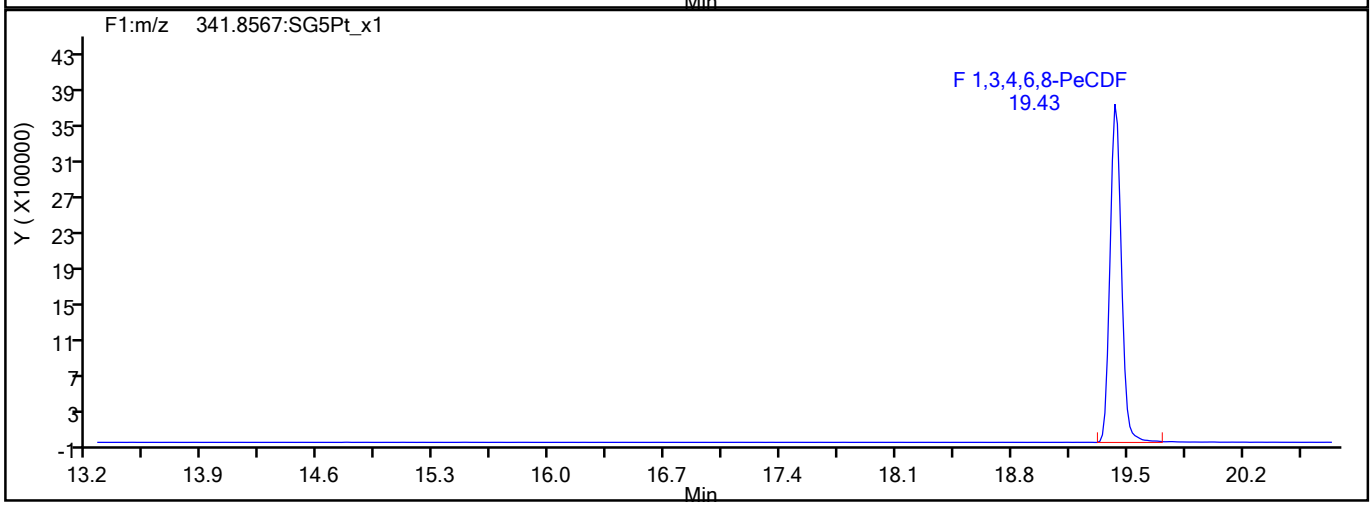

F1 PeCDFs Interference Mass

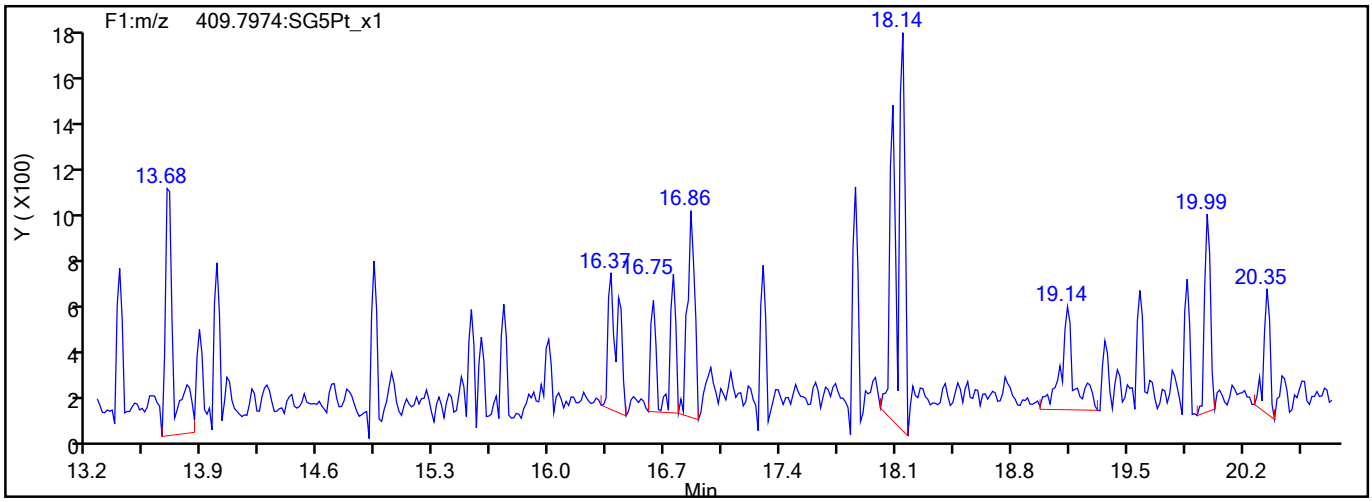

780722

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

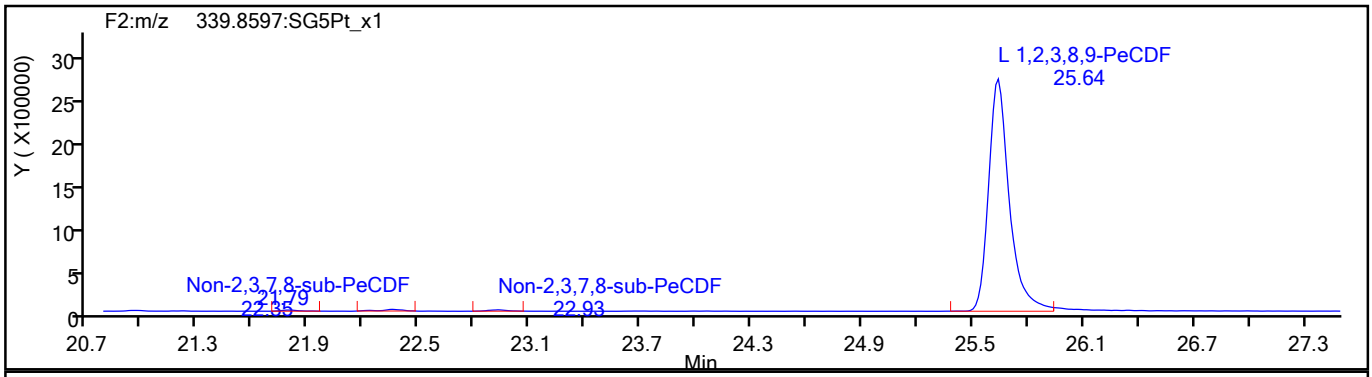

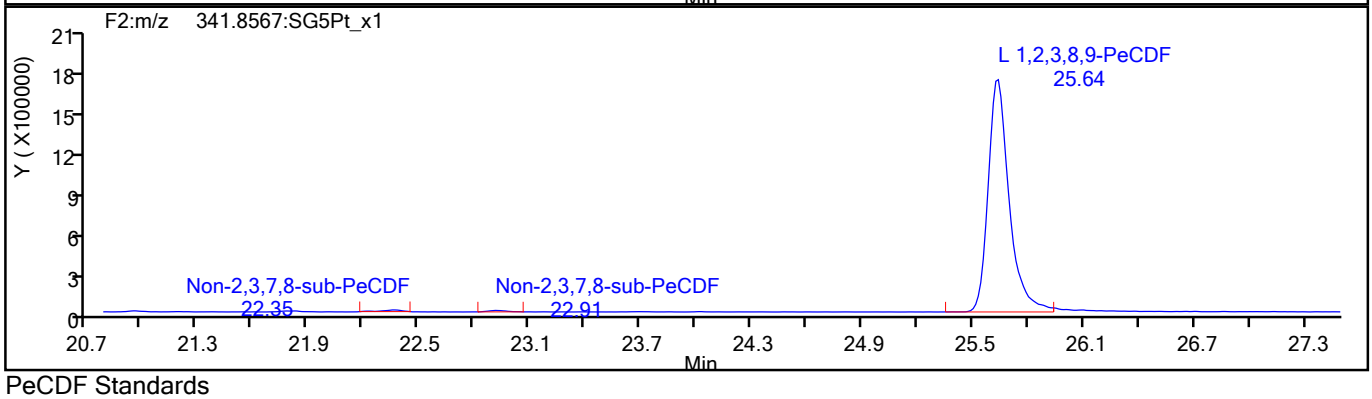

PeCDF Standards

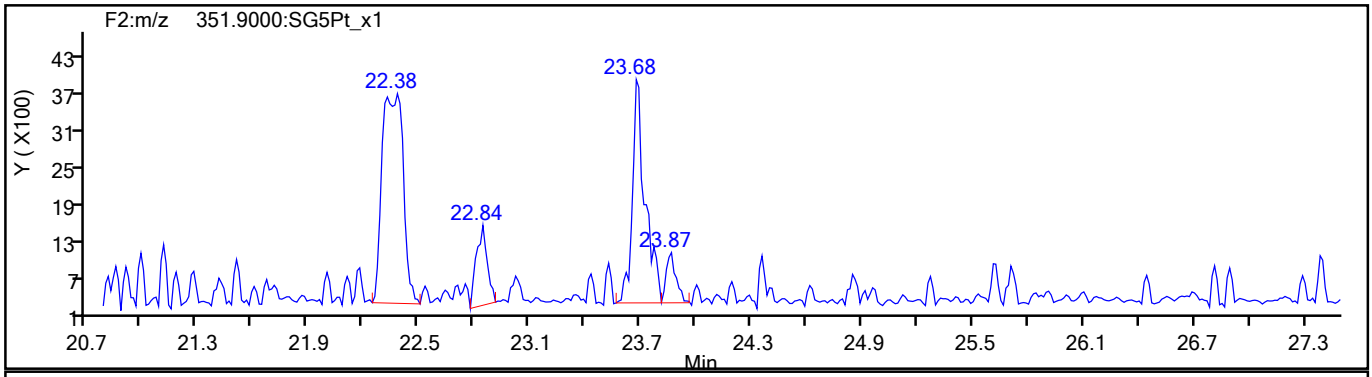

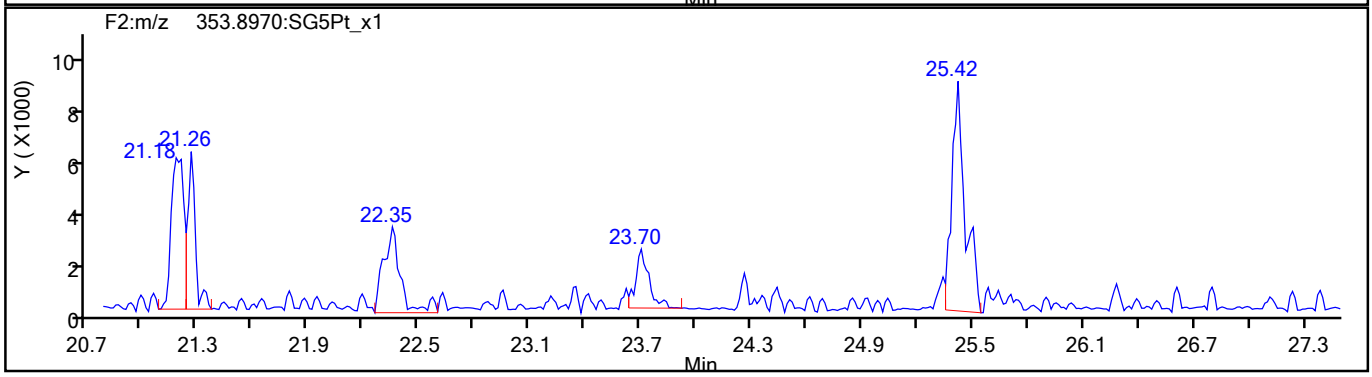

780723

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

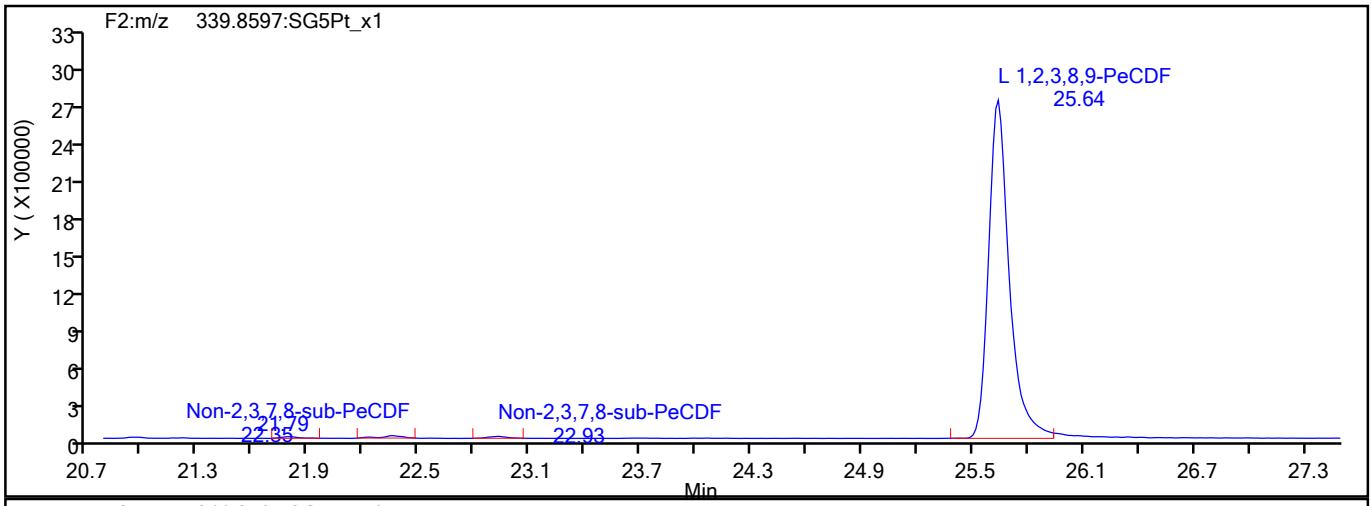

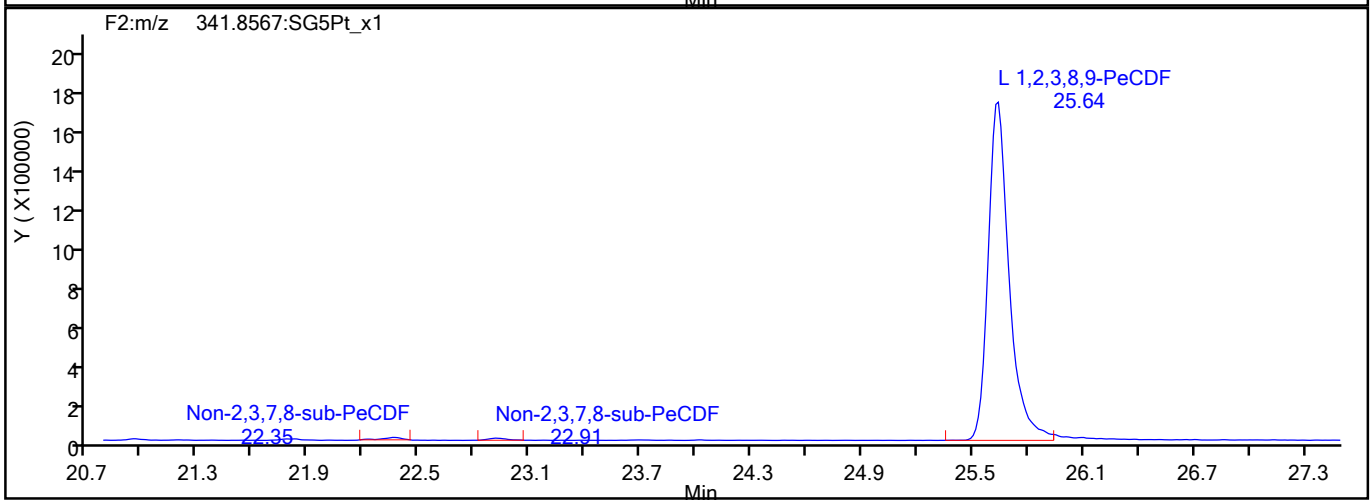

PeCDF Interference Mass

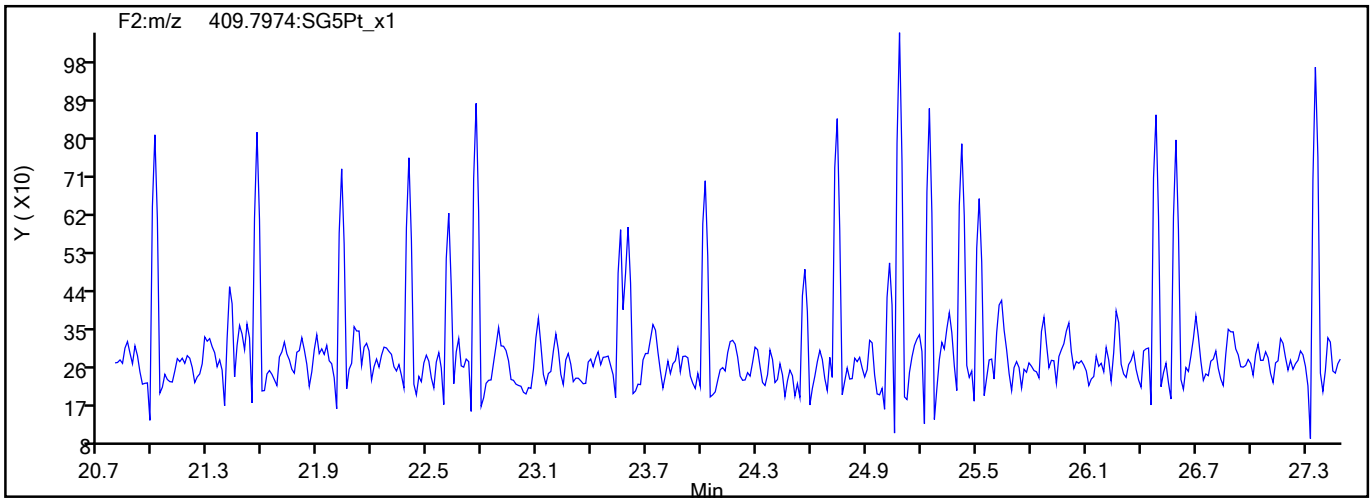

780724

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

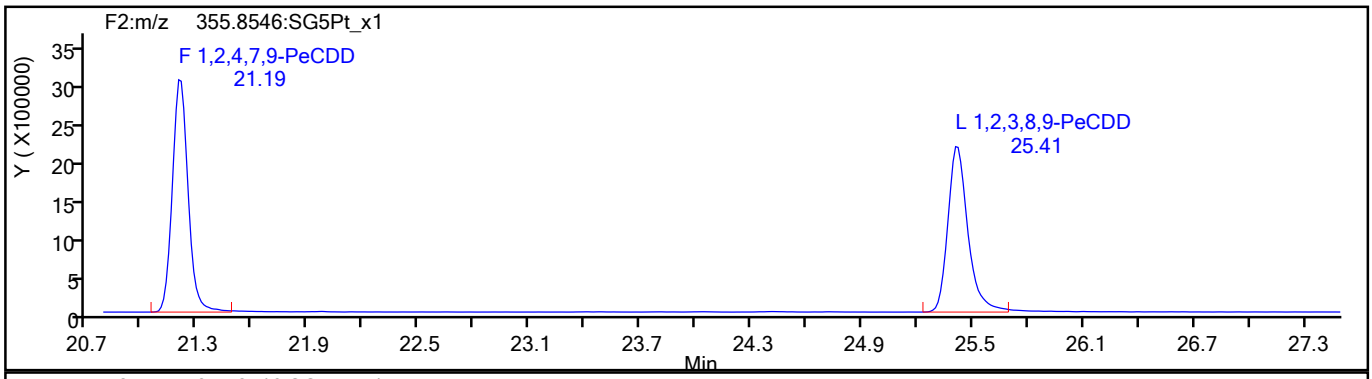

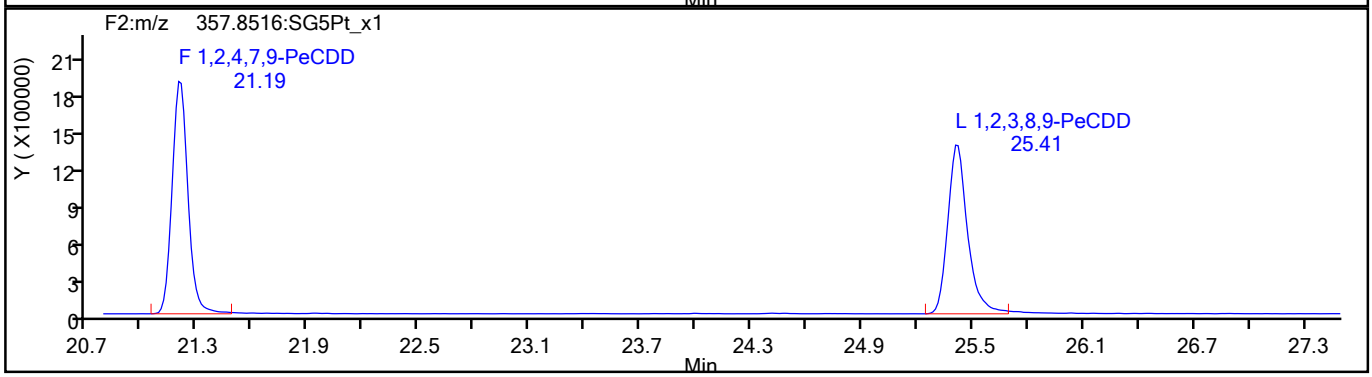

PeCDD Standards

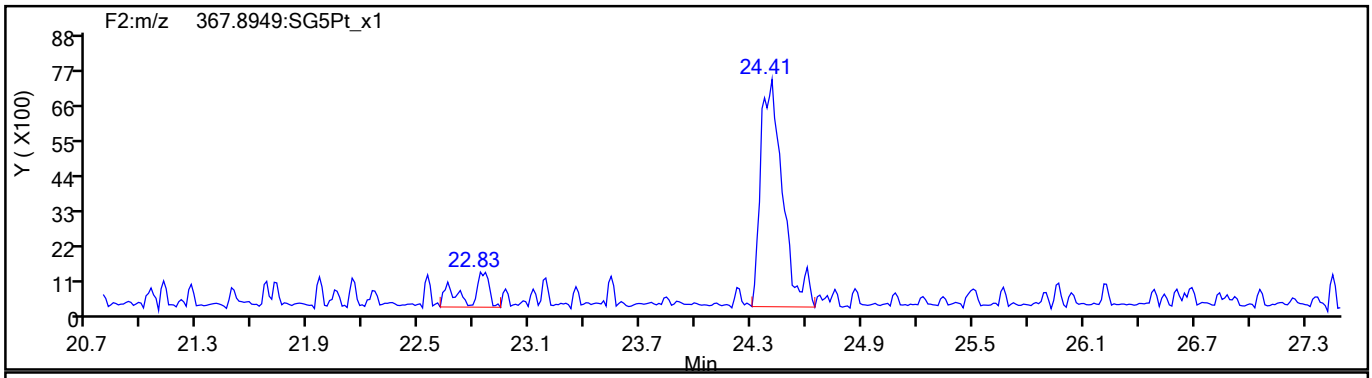

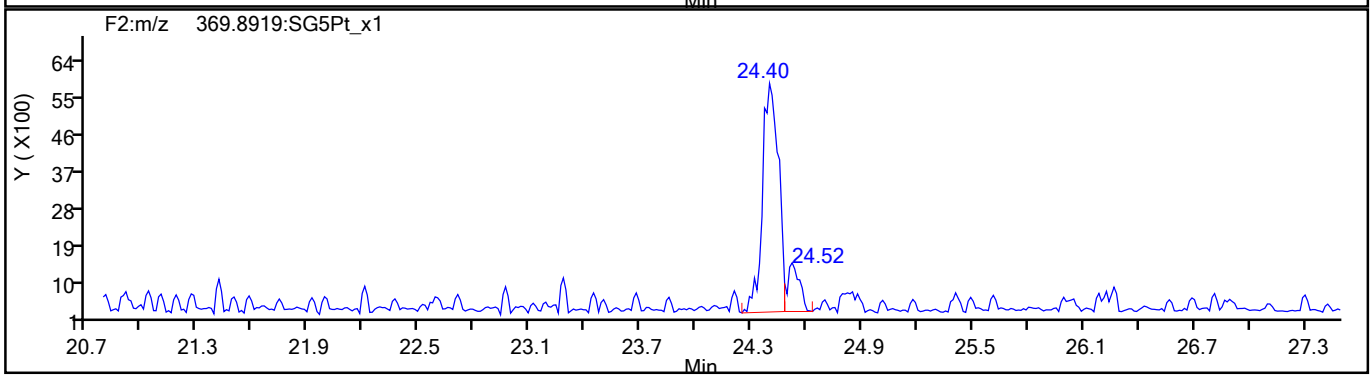

780725

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

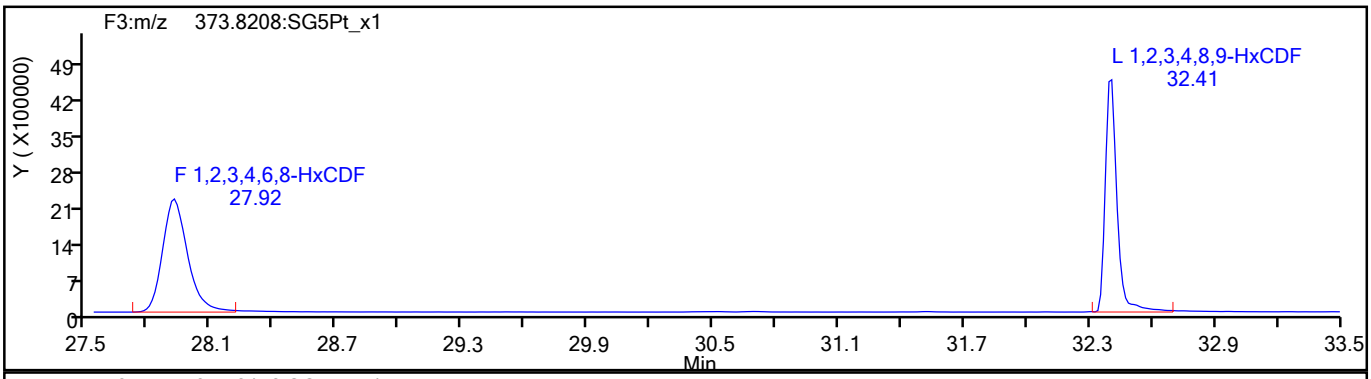

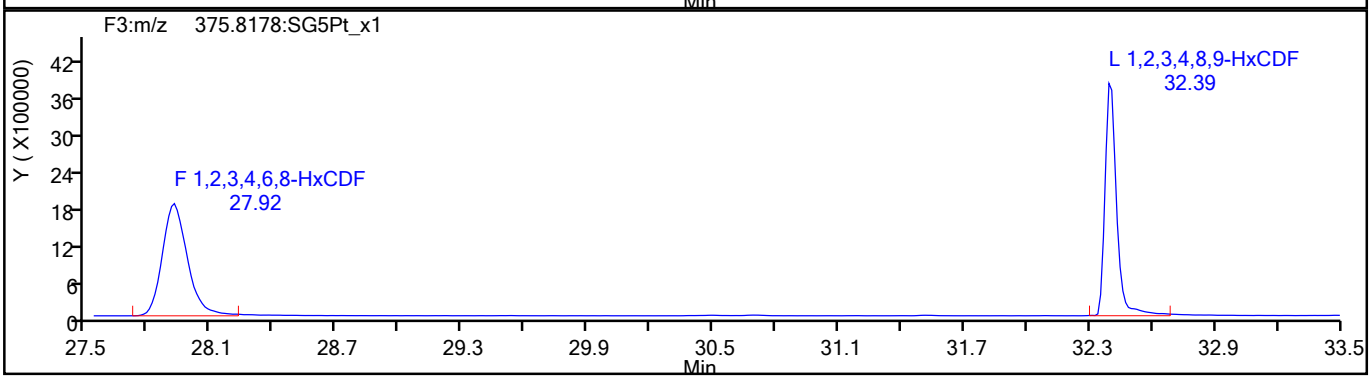

HxCDF Standards

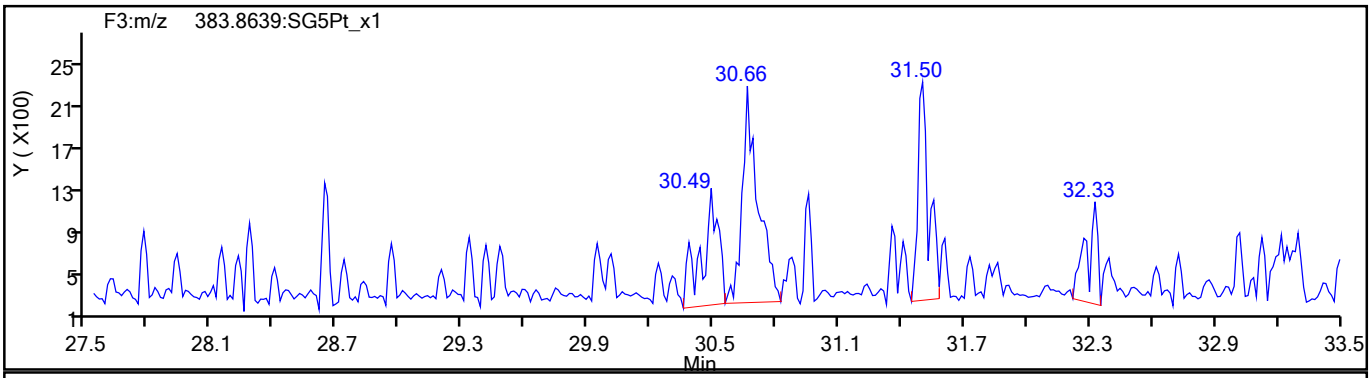

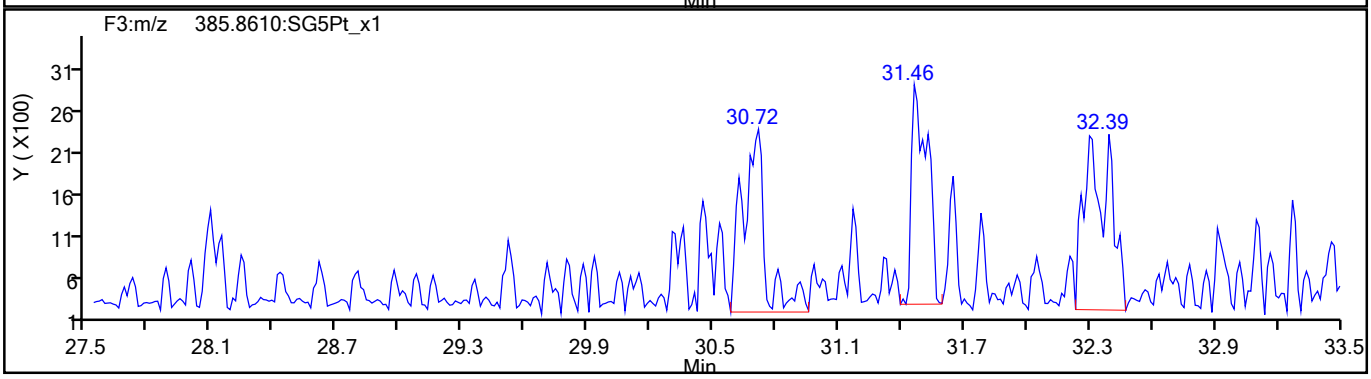

780726

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

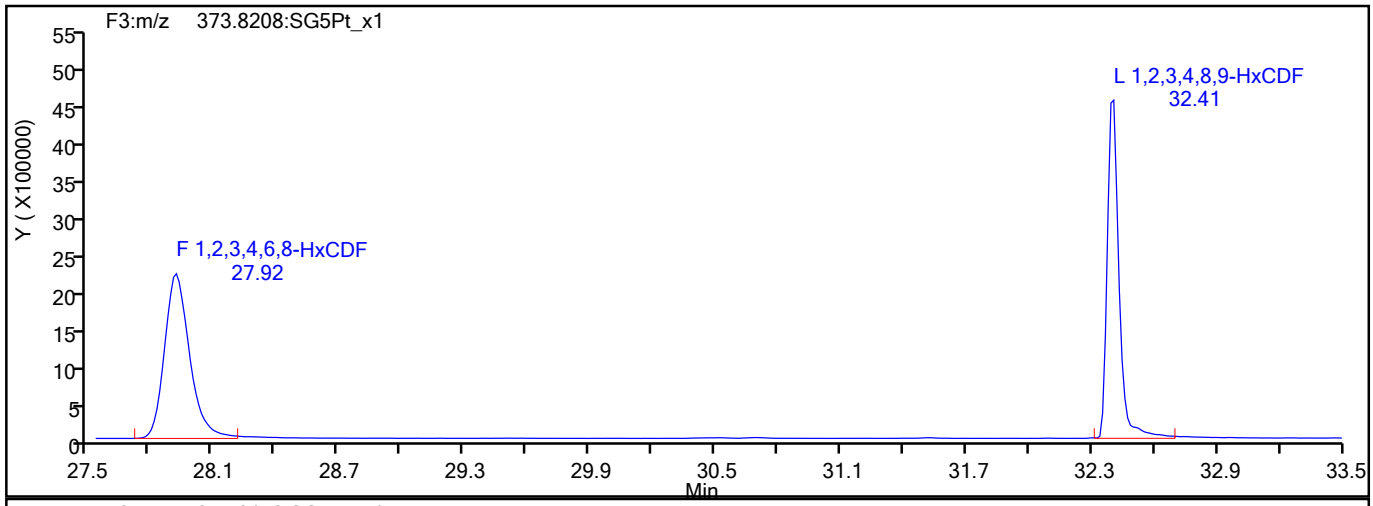

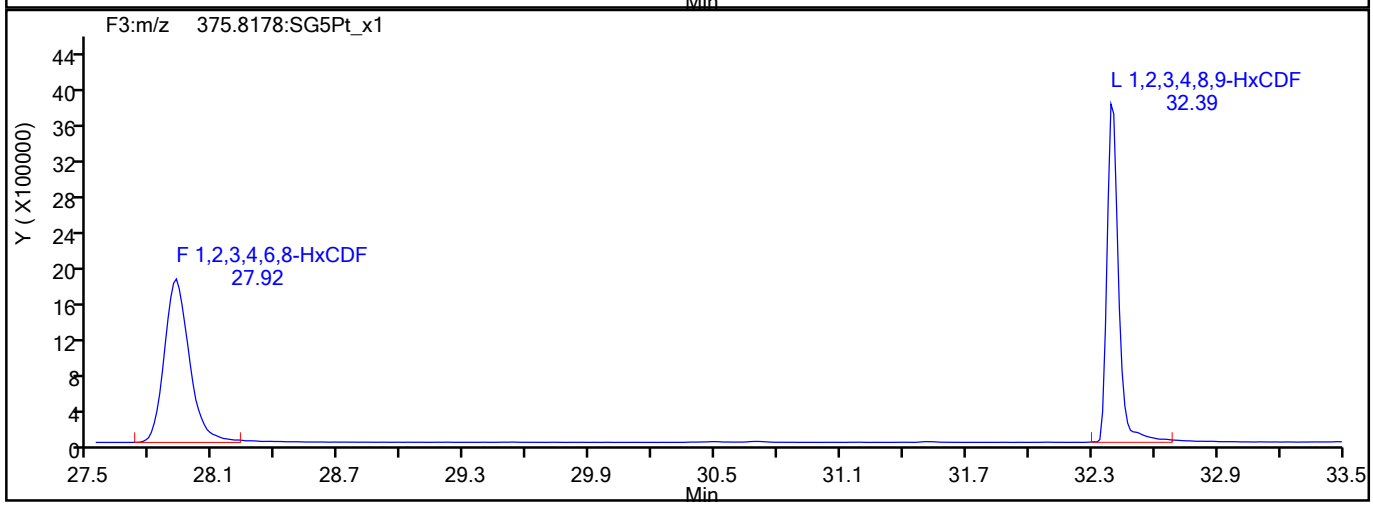

HxCDF Interference Mass

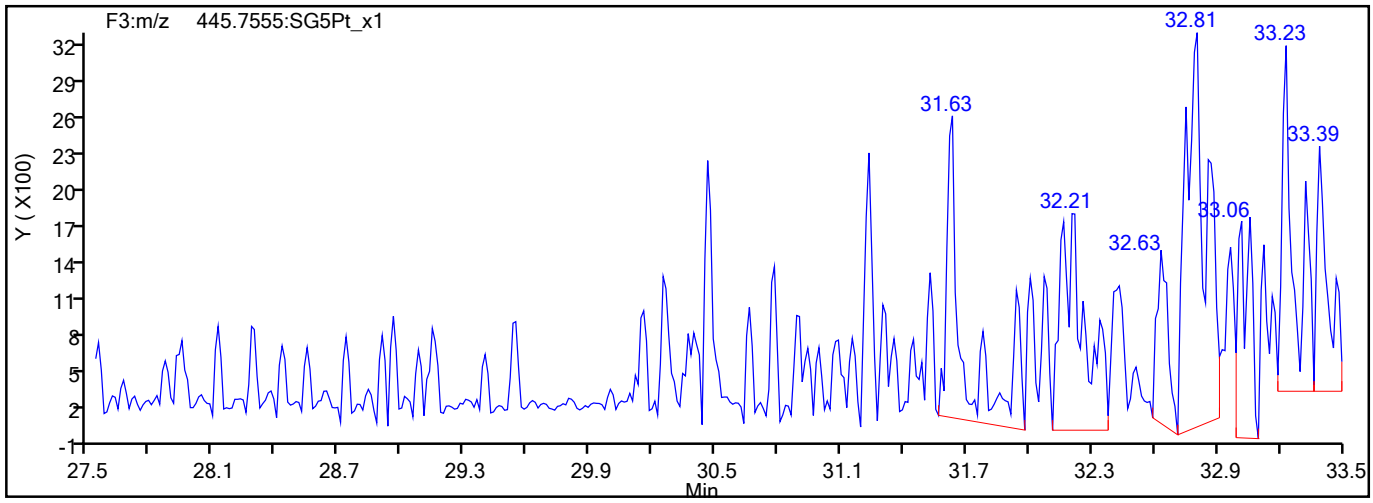

780727

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

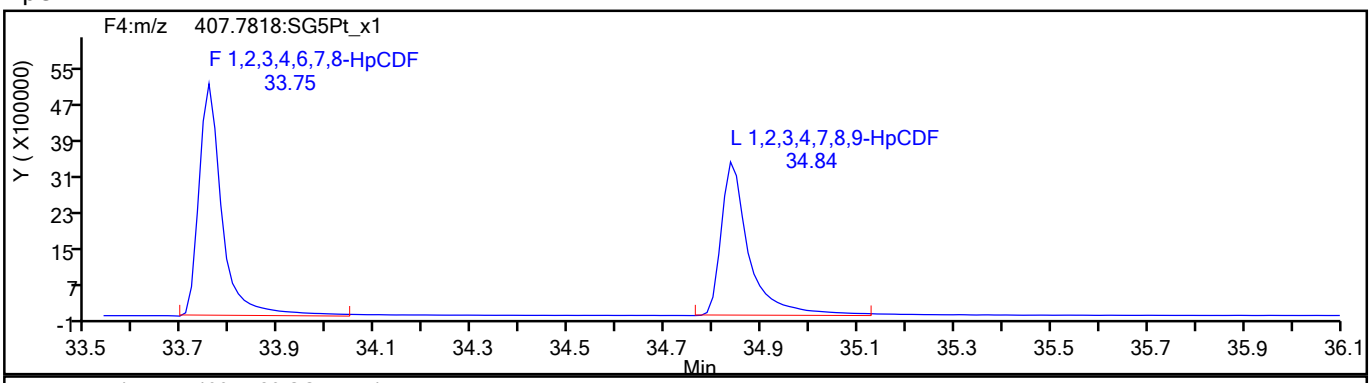

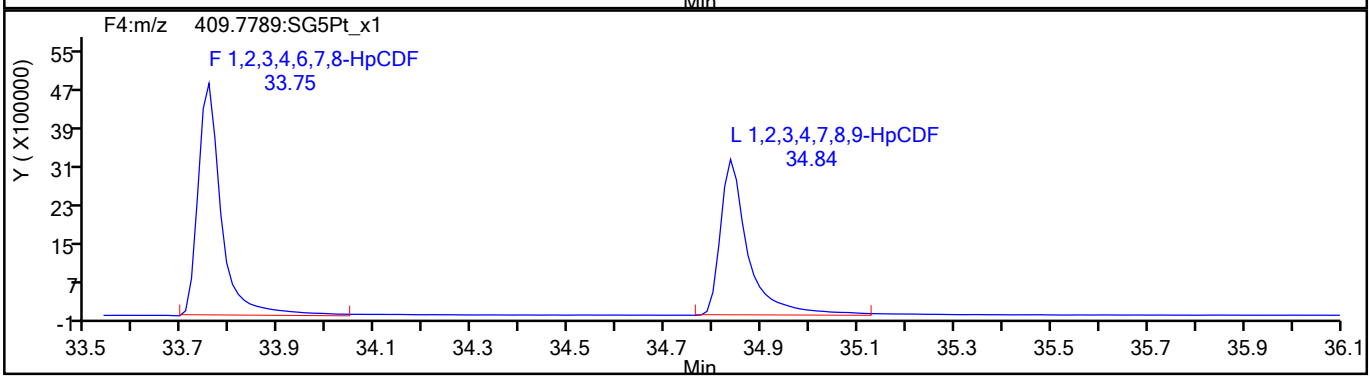

HpCDF Standards

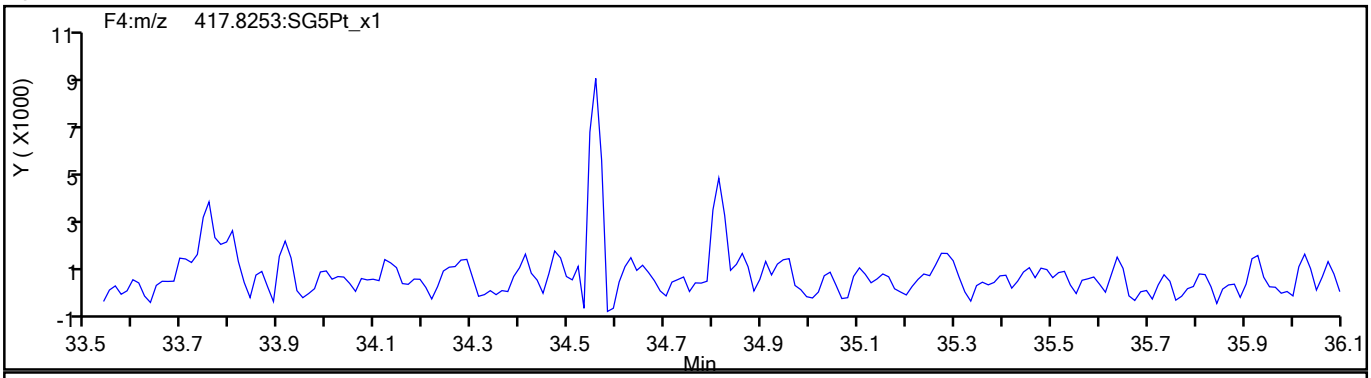

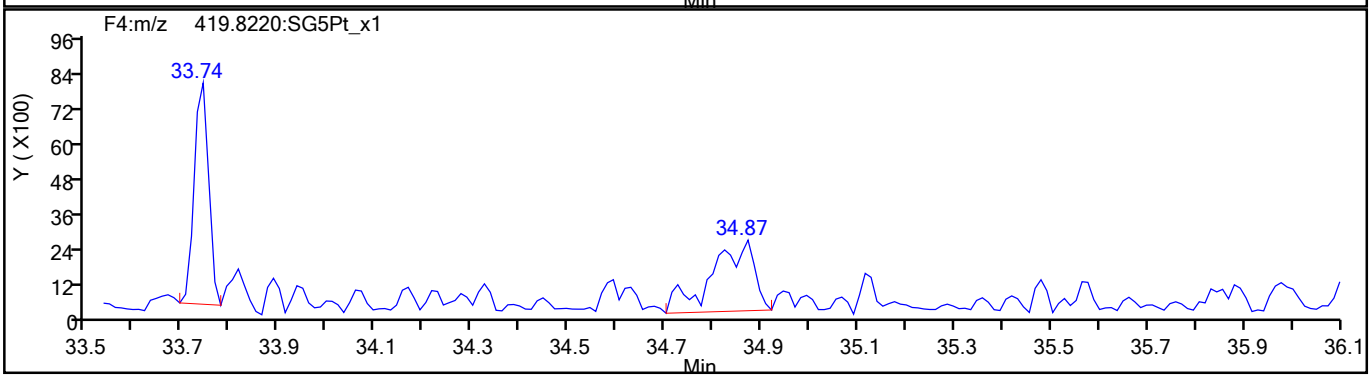

780728

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

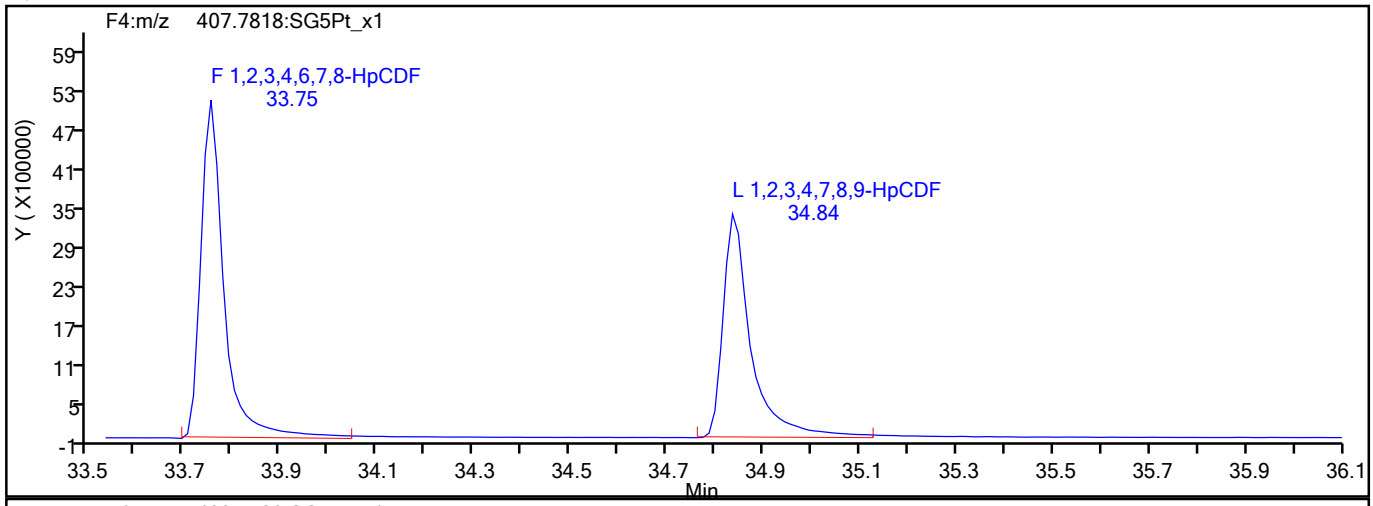

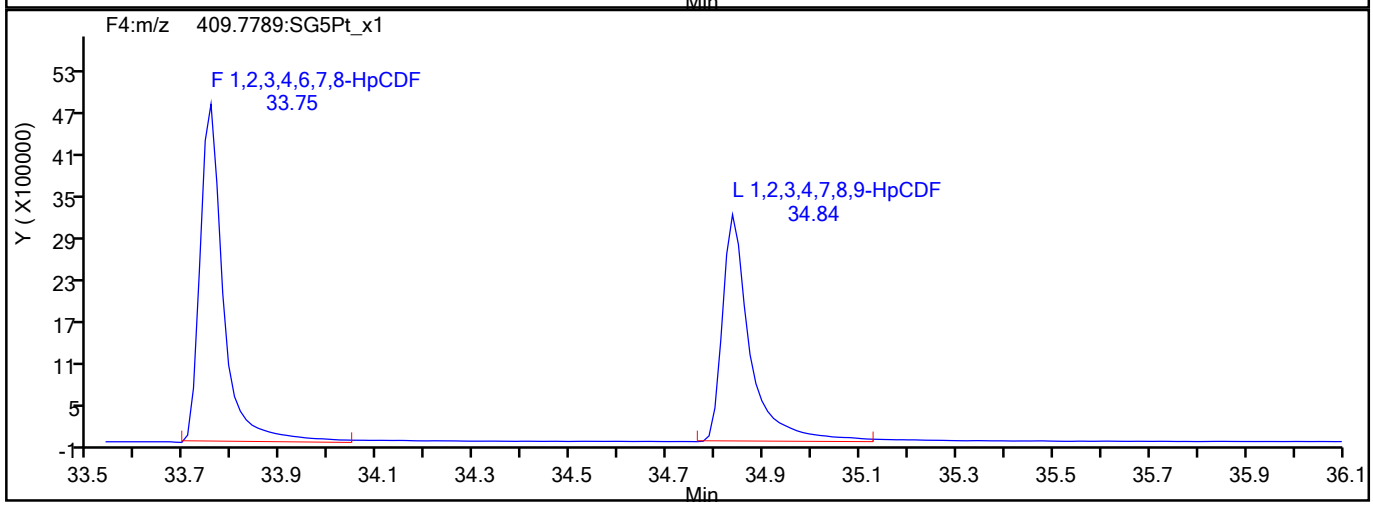

HpCDF Interference Mass

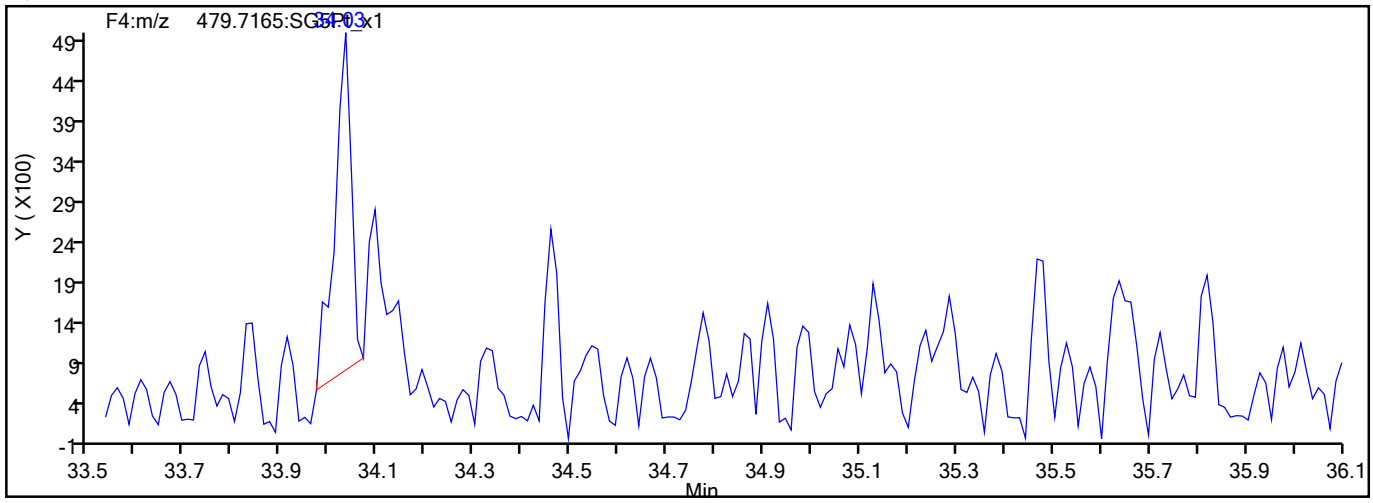

780729

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

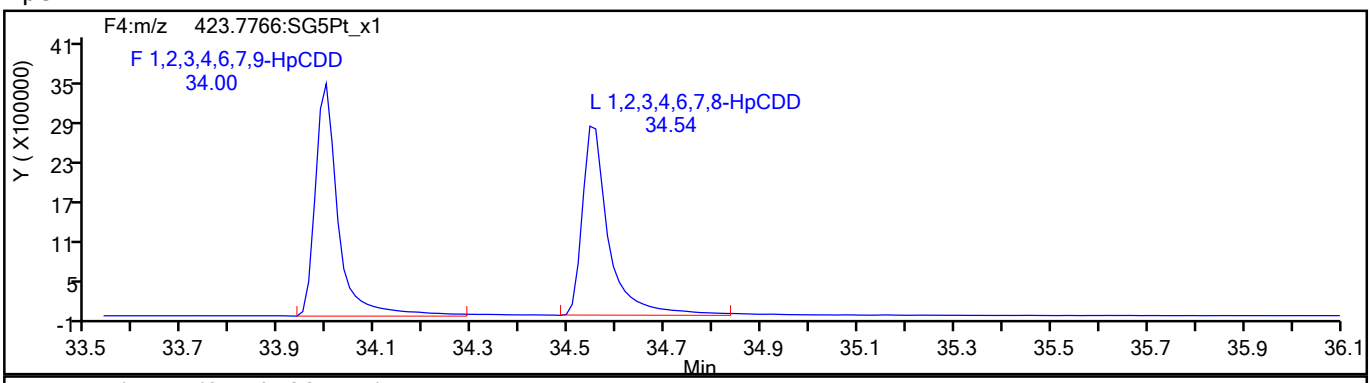

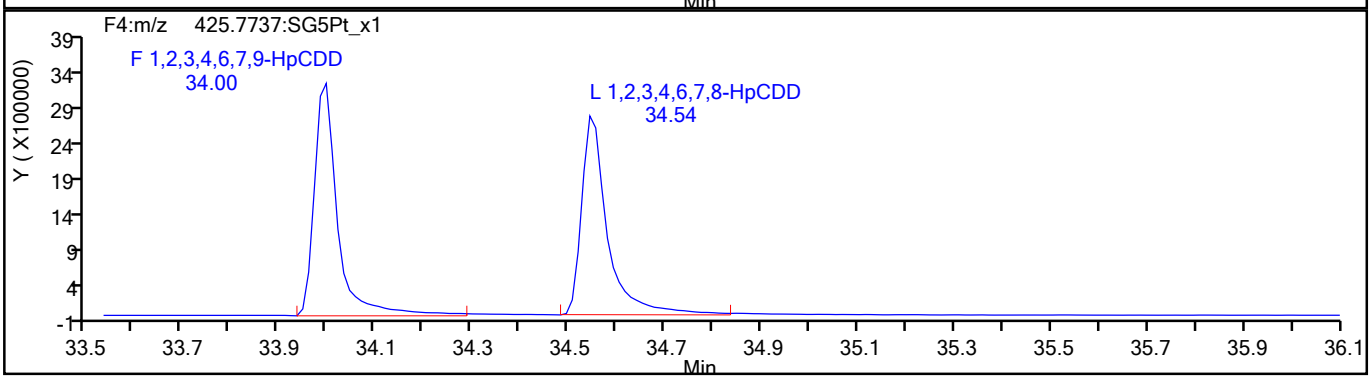

HpCDD Standards

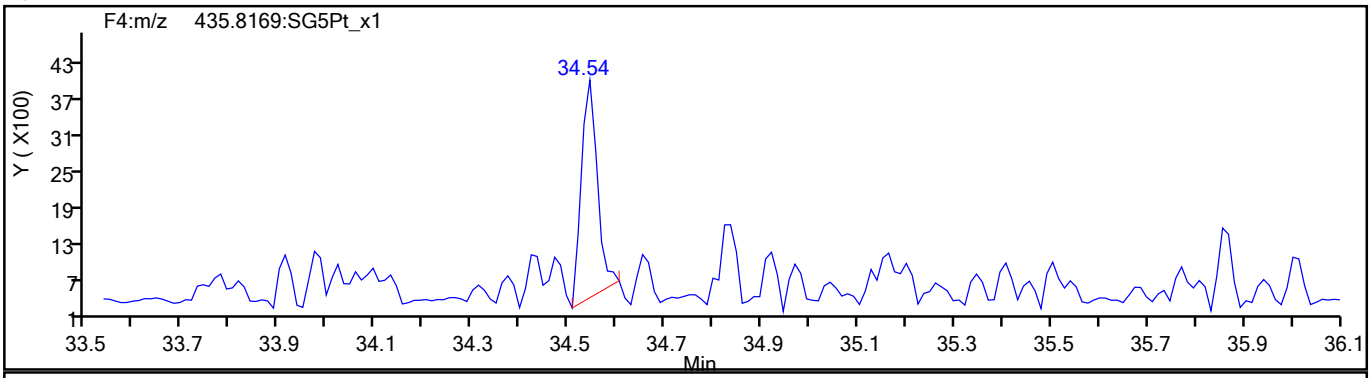

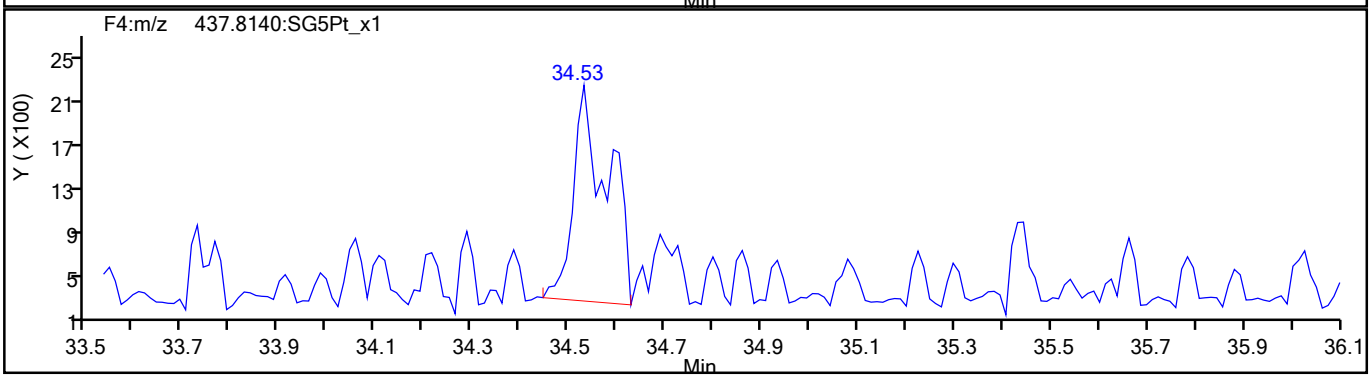

780730

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

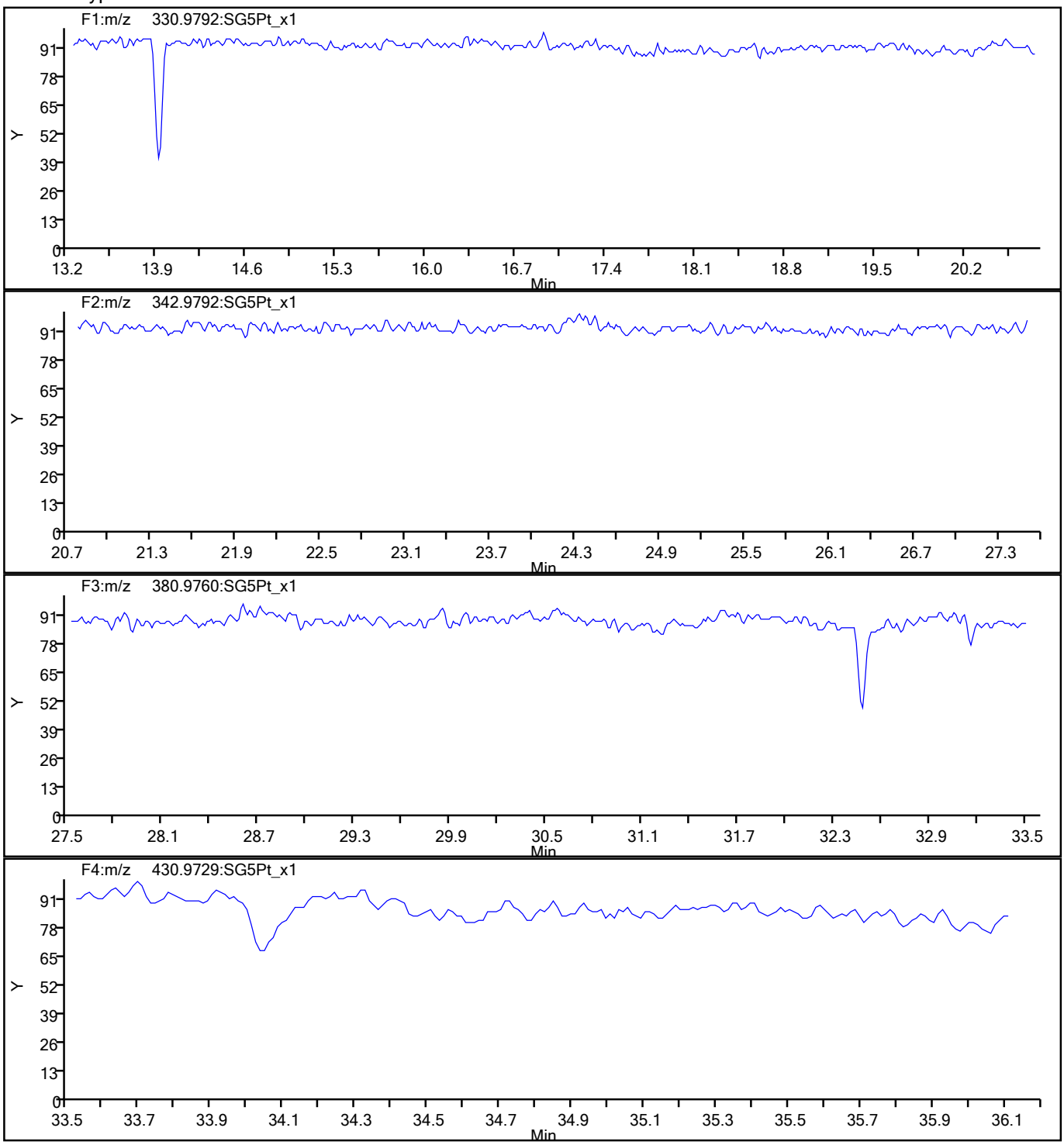

780731

Report Date: 18-Aug-2021 11:41:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210817-125176.b\17AU21A10D5_13.d		
Injection Date:	18-Aug-2021 00:44:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517241	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

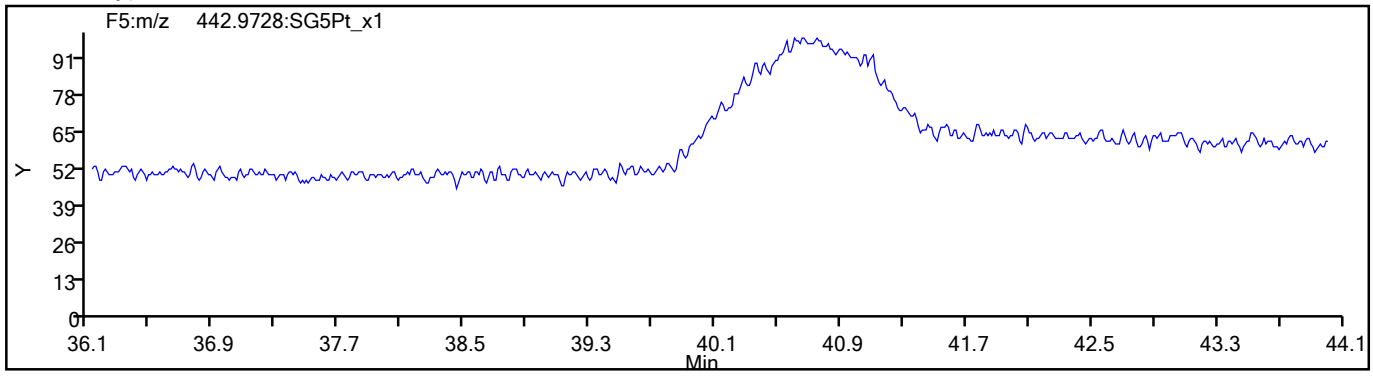

780732

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

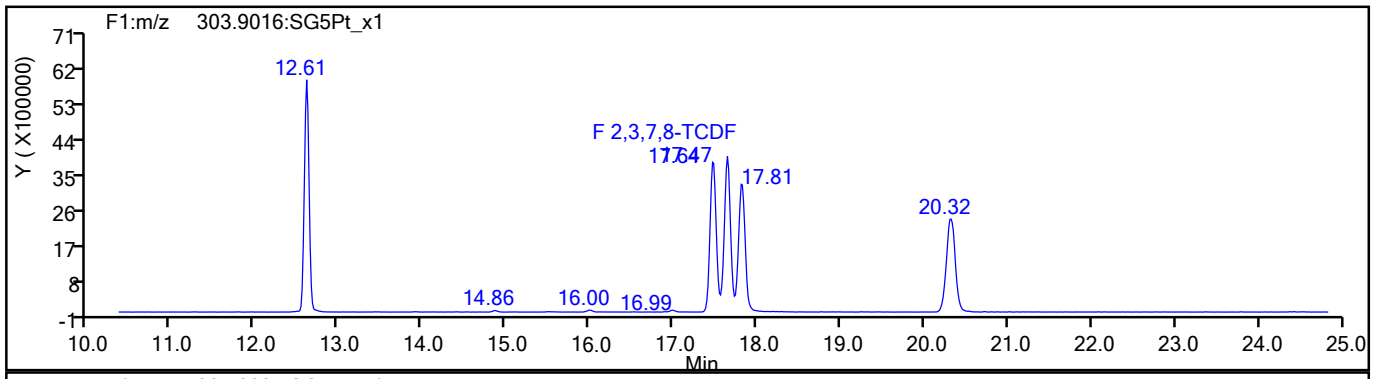

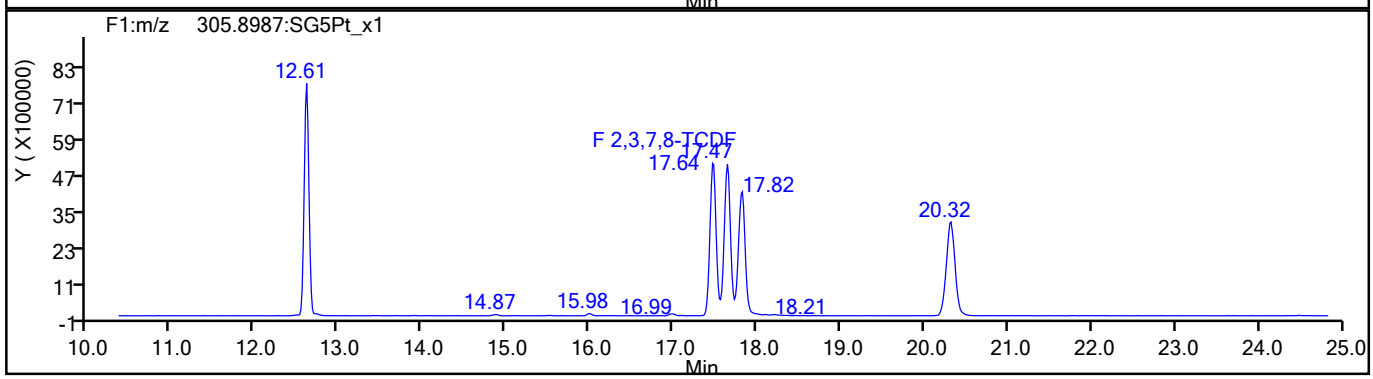

TCDF Standards

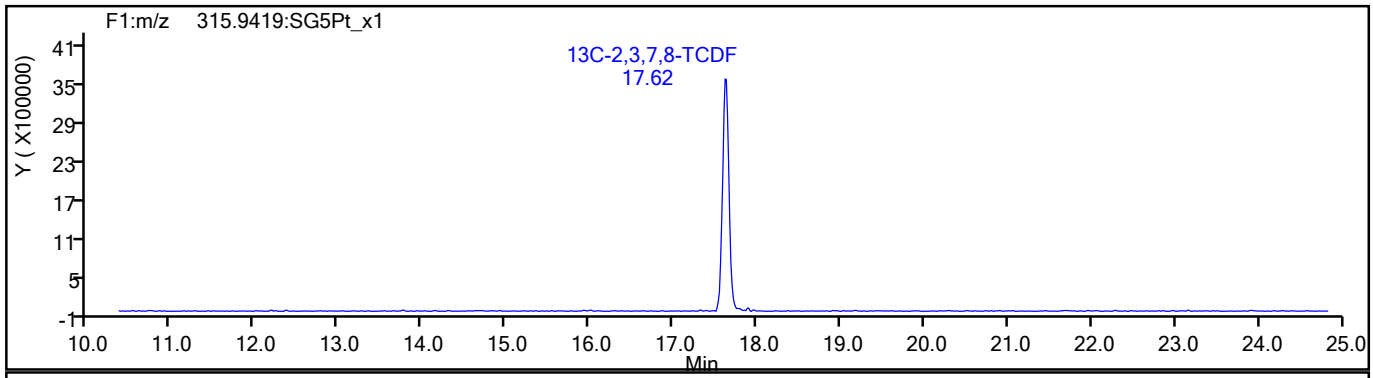

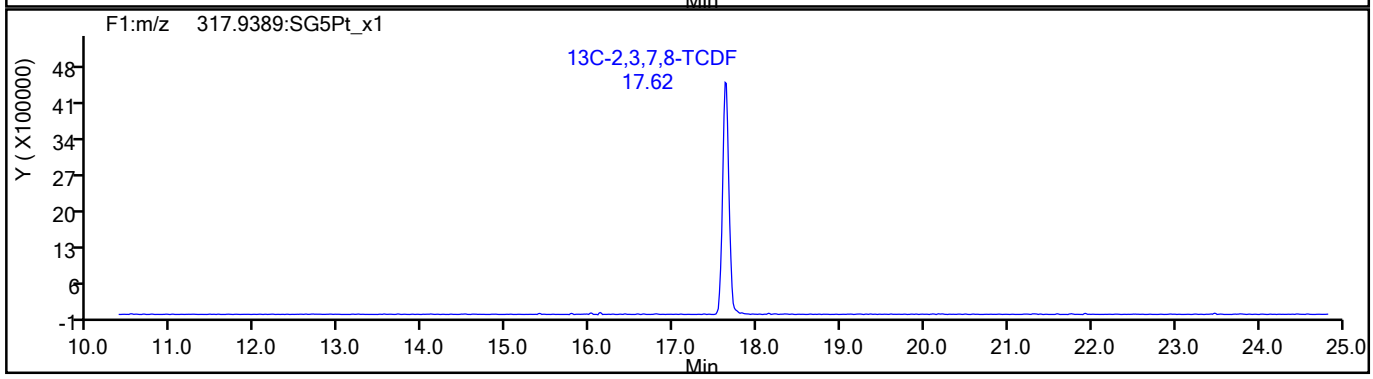

780735

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

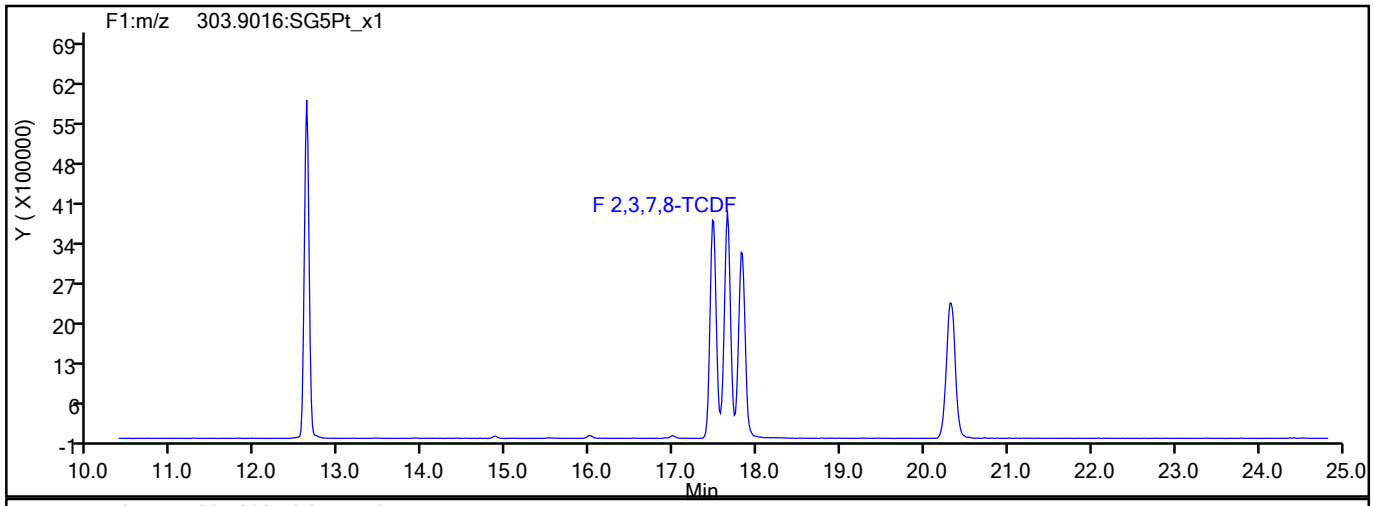

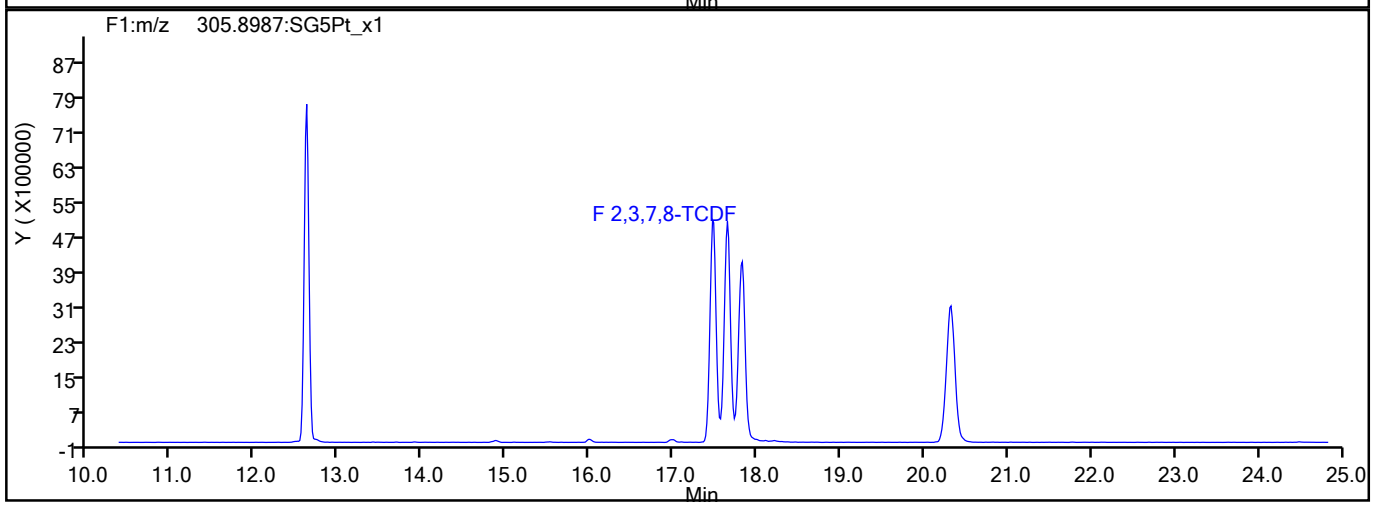

TCDF Interference Mass

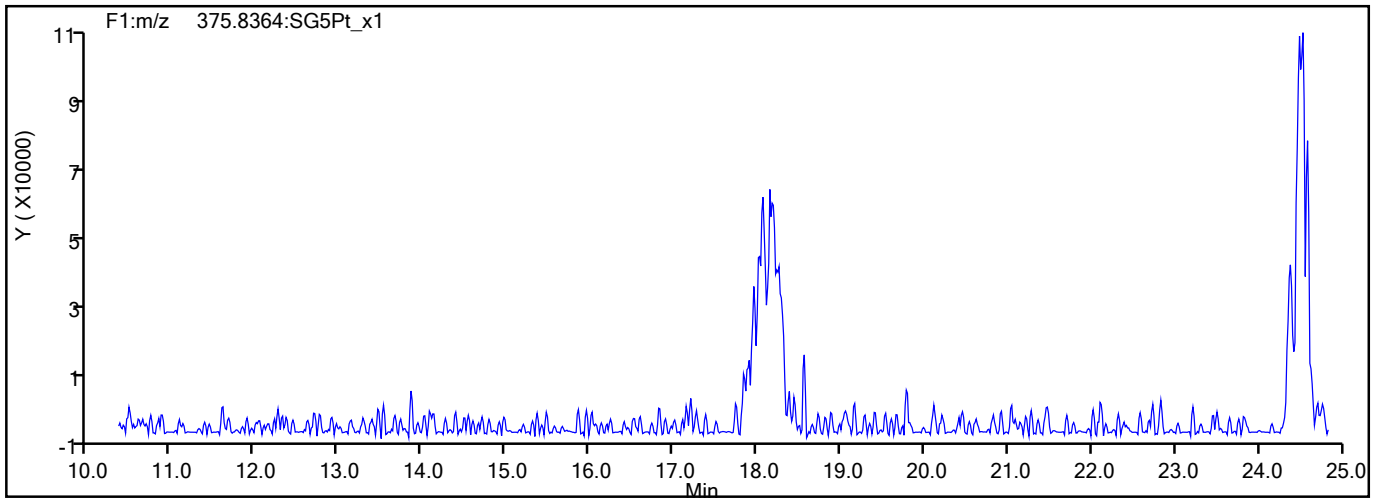

780736

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

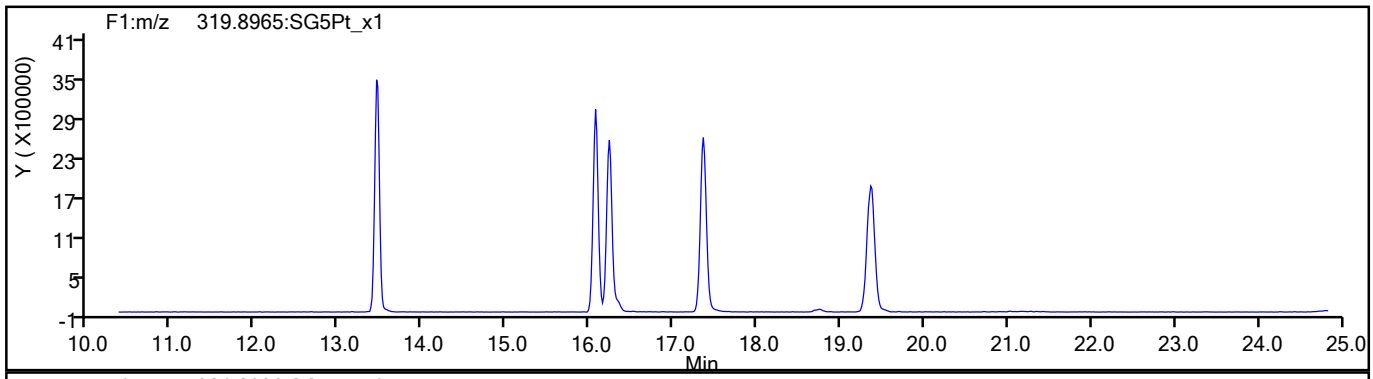

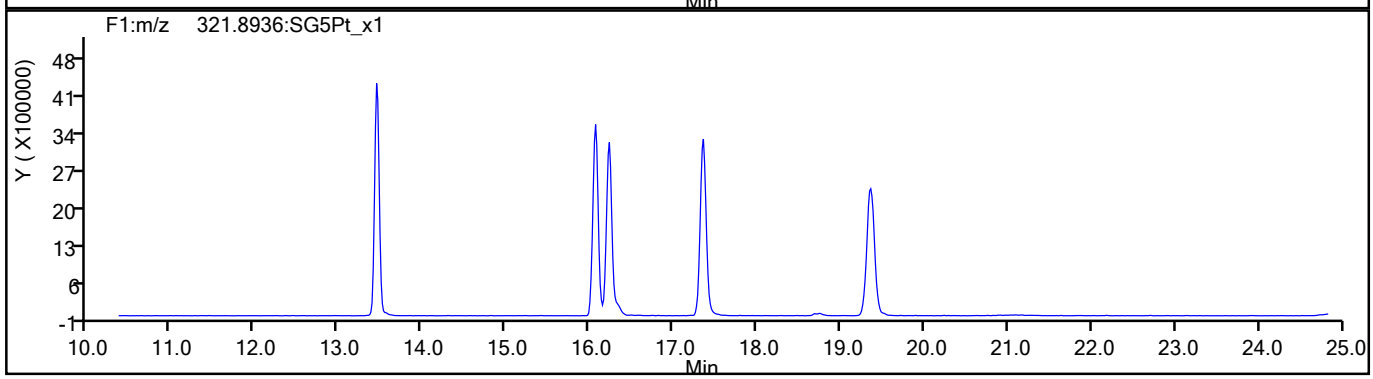

TCDD Standards

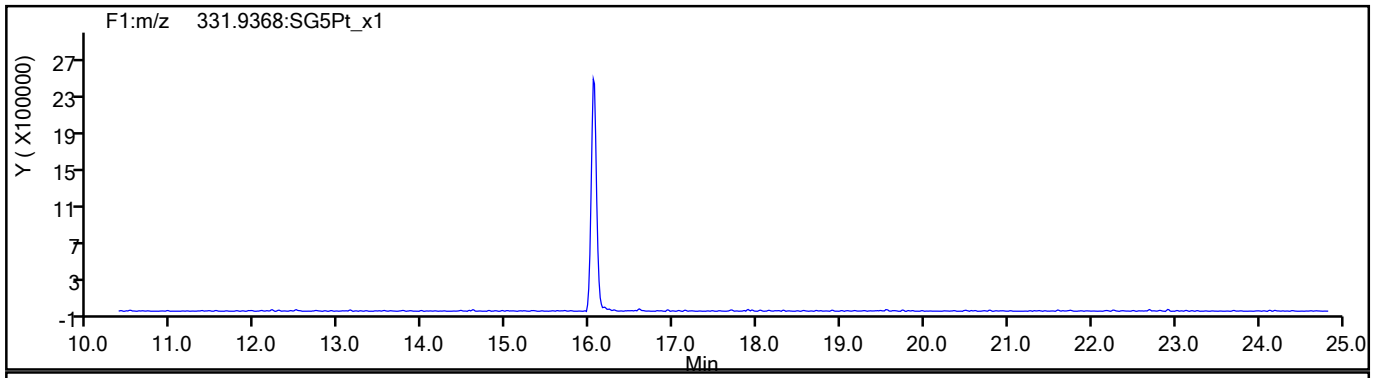

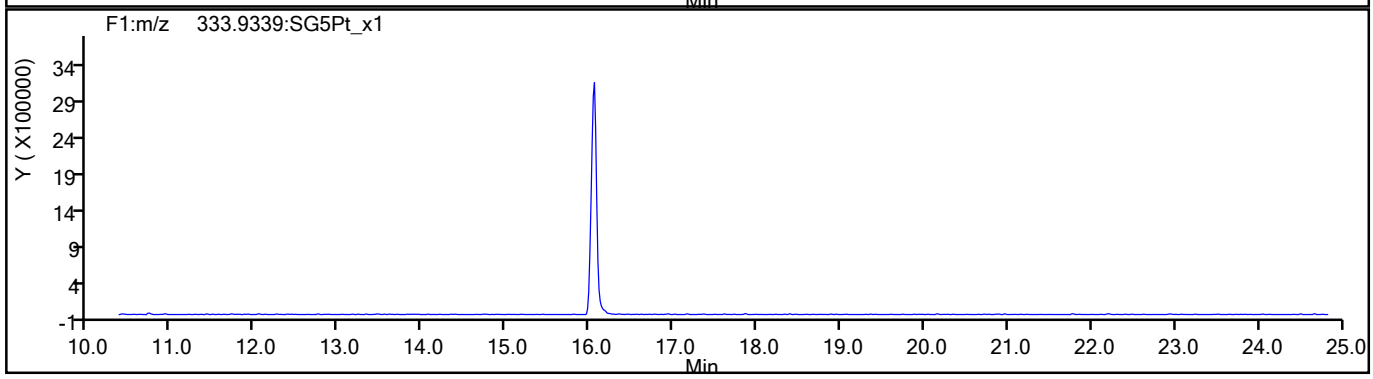

780737

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

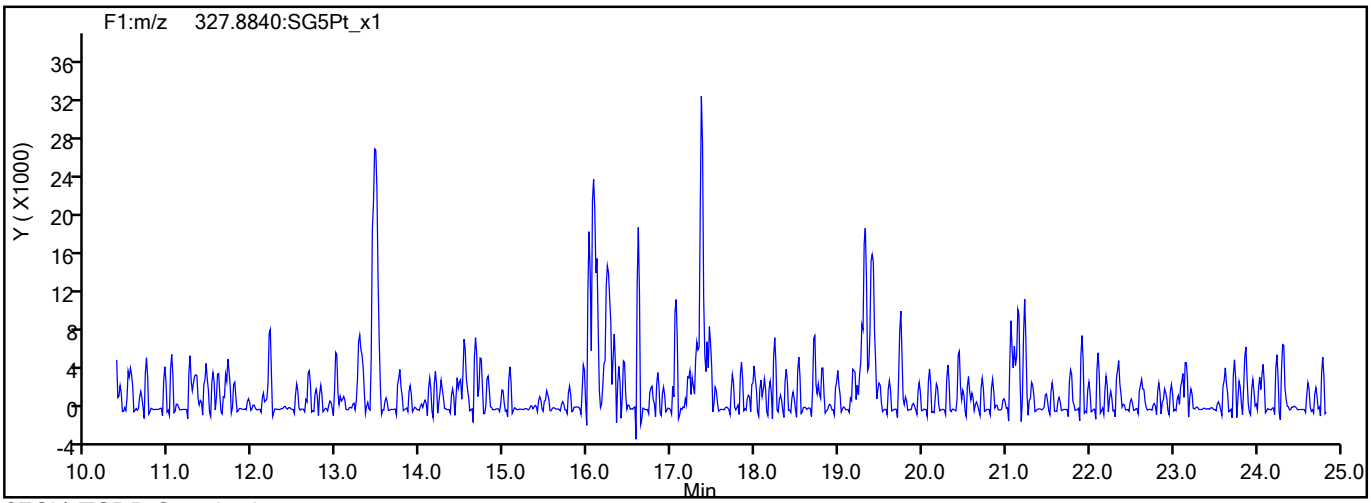

37Cl4-TCDD Standards

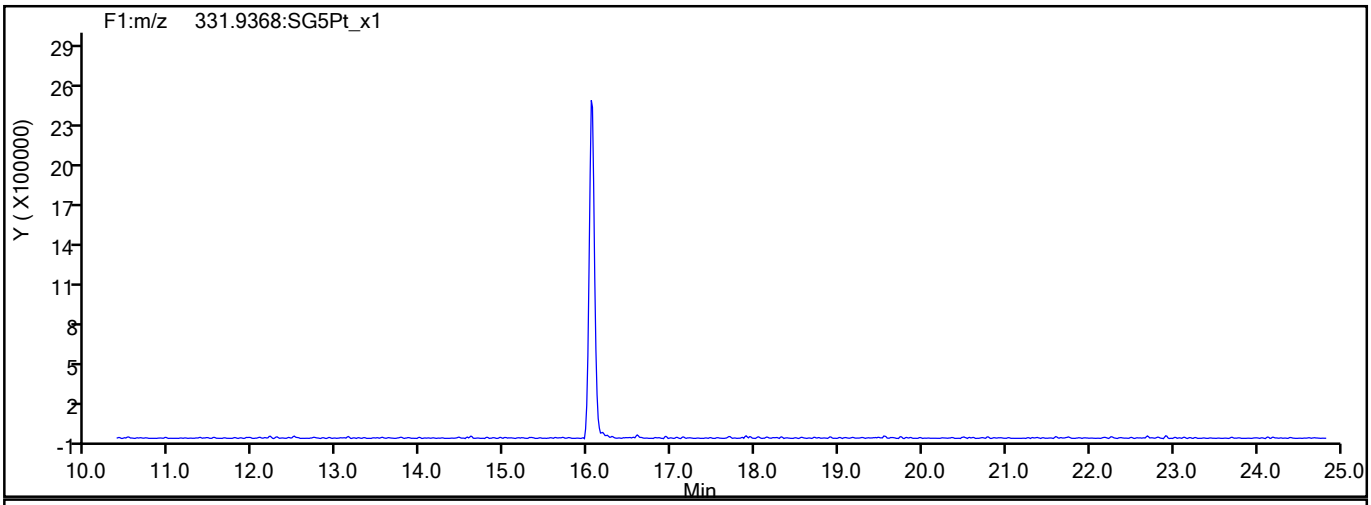

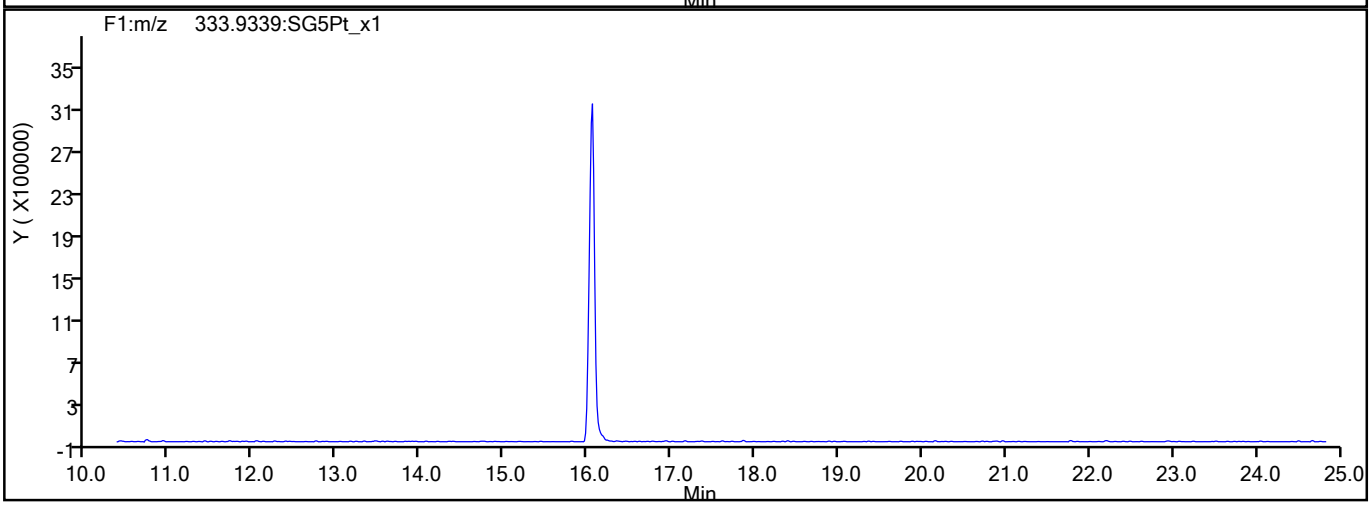

780738

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

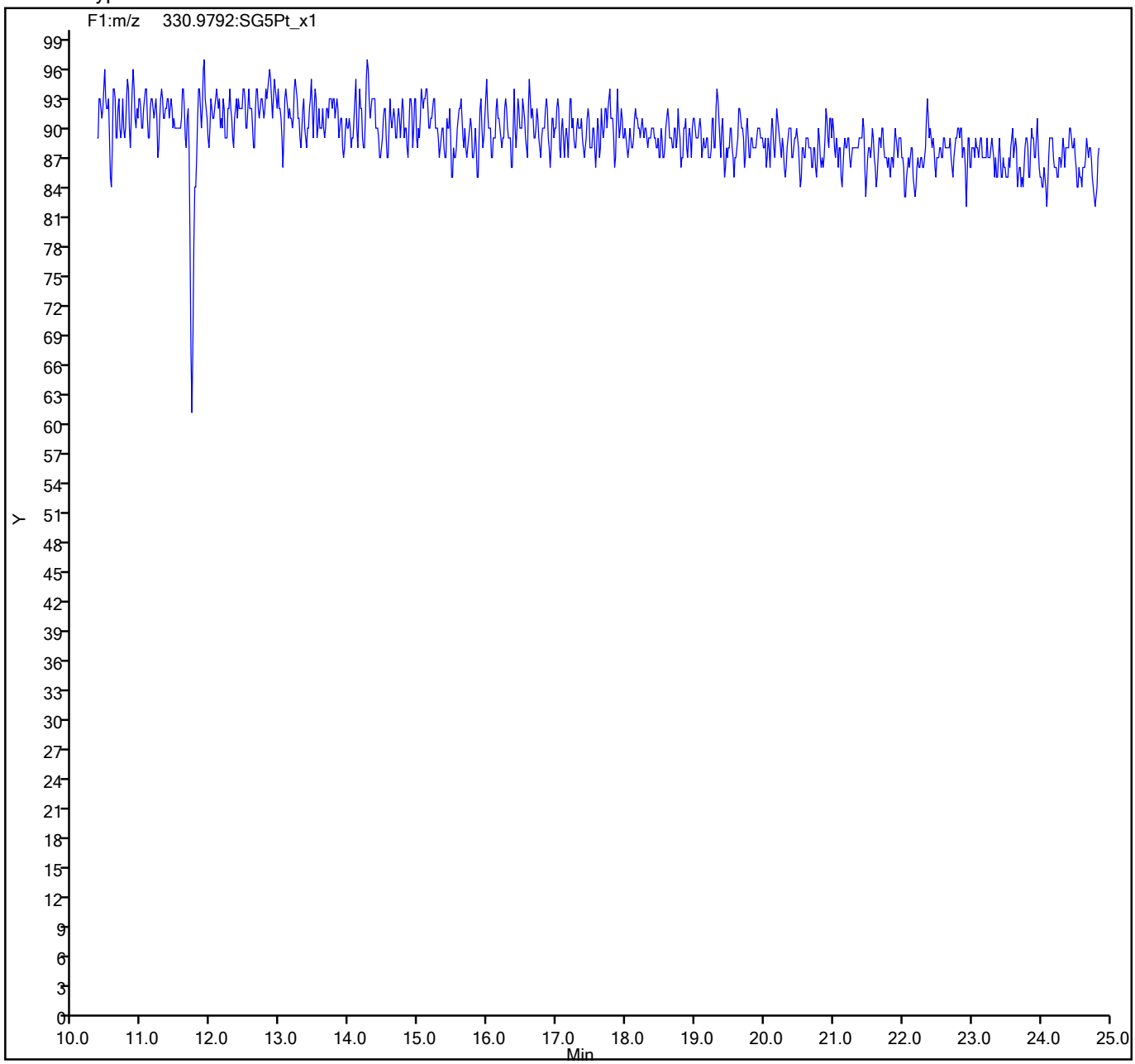

780739

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_002.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 17:15:17 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CPS HRDXNCP_00044
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:28:36

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.601	37621968	0.80	1.3327					0.00	
2,3,7,8-TCDF	17.629	40139106	0.78	0.9978	42.8	42.8	0.0953	0.0953		
D 13C-2,3,7,8-TCDD	16.051	21661624	0.77	0.8749					0.00	
2,3,7,8-TCDD	16.079	25852001	0.79	1.0570	45.2	45.2	0.1141	0.1141		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_002.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 17:15:17 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CPS HRDXNCP_00044
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 09:02:37 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1623

First Level Reviewer: stephensk Date: 25-Aug-2021 08:28:36

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.601	17.601	0	1.000	16695042	3096709	5941	14852	521		
317.9389	17.601	17.601	0	1.000	20926926	4019040	7015	17537	573	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.629	0	1.002	17601032	3370821	2976	7440	1133		
305.8987	17.629	17.629	0	1.002	22538074	4306913	3791	9477	1136	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.051	16.051	0	1.000	9450810	2154322	5959	14897	362		
333.9339	16.051	16.051	0	1.000	12210814	2712539	3431	8577	791	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.079	16.079	0	1.002	11435260	2568651	2865	7162	897		
321.8936	16.079	16.079	0	1.002	14416741	3306055	3006	7515	1100	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_002.d		
Injection Date:	24-Aug-2021 17:15:17	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

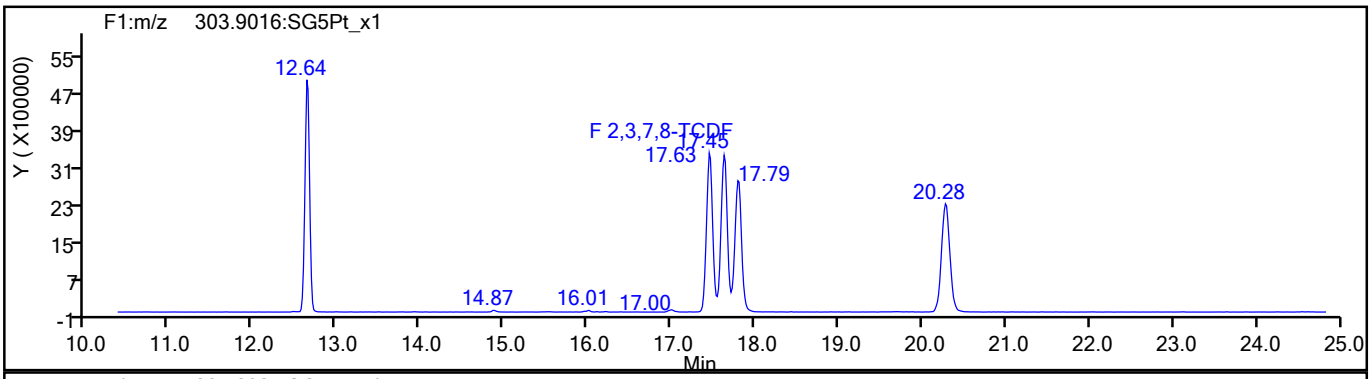

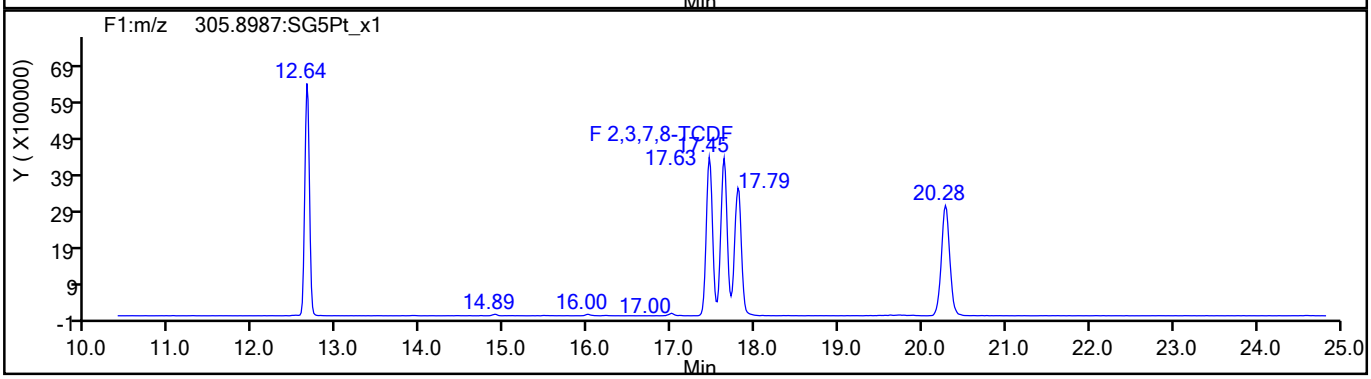

TCDF Standards

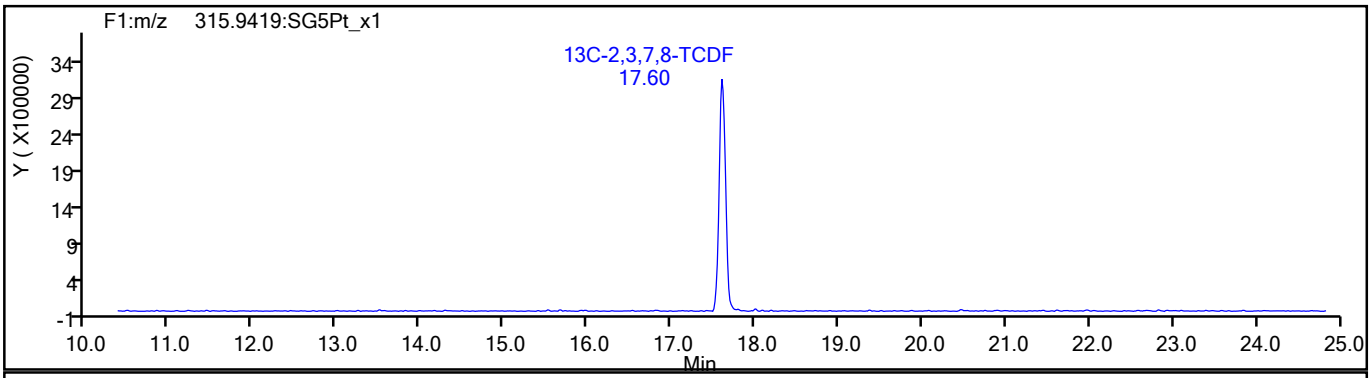

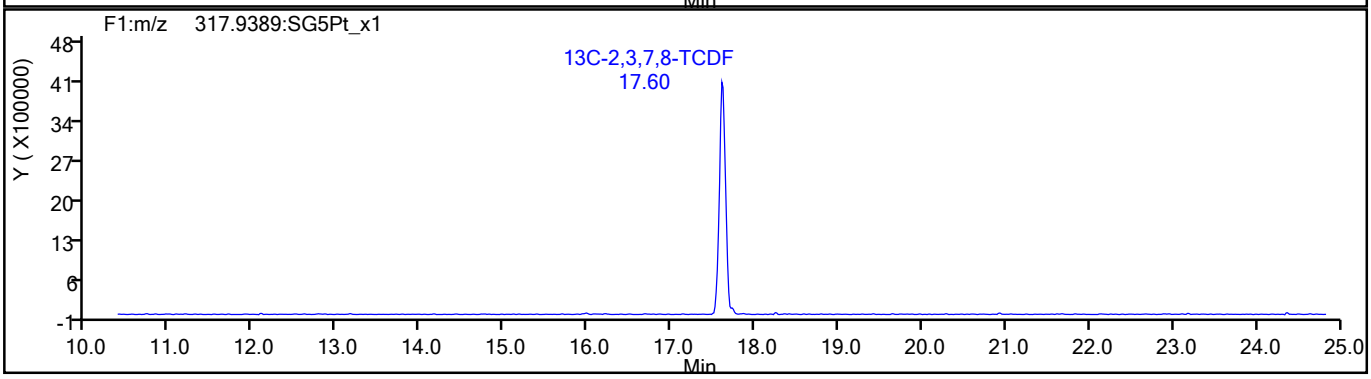

780742

Report Date: 25-Aug-2021 09:02:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_002.d		
Injection Date:	24-Aug-2021 17:15:17	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

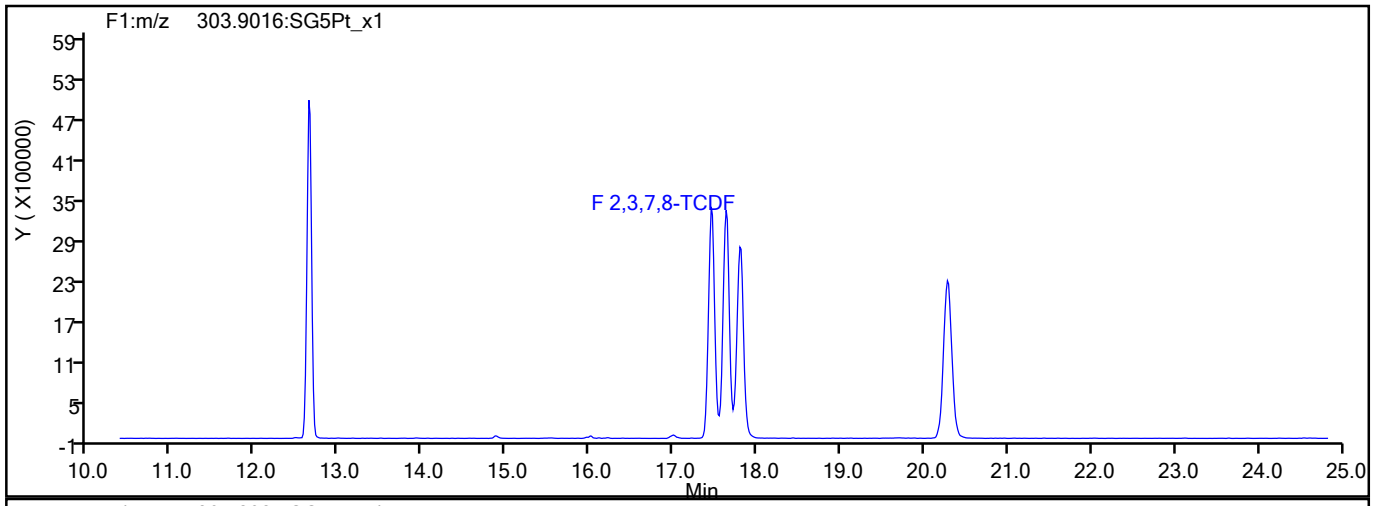

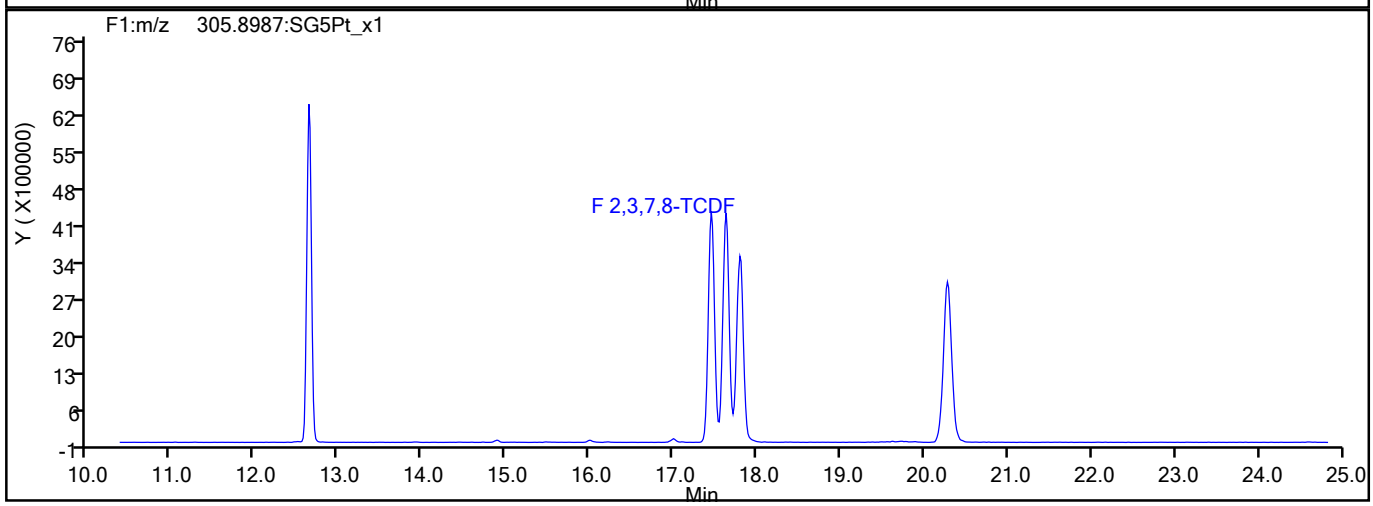

TCDF Interference Mass

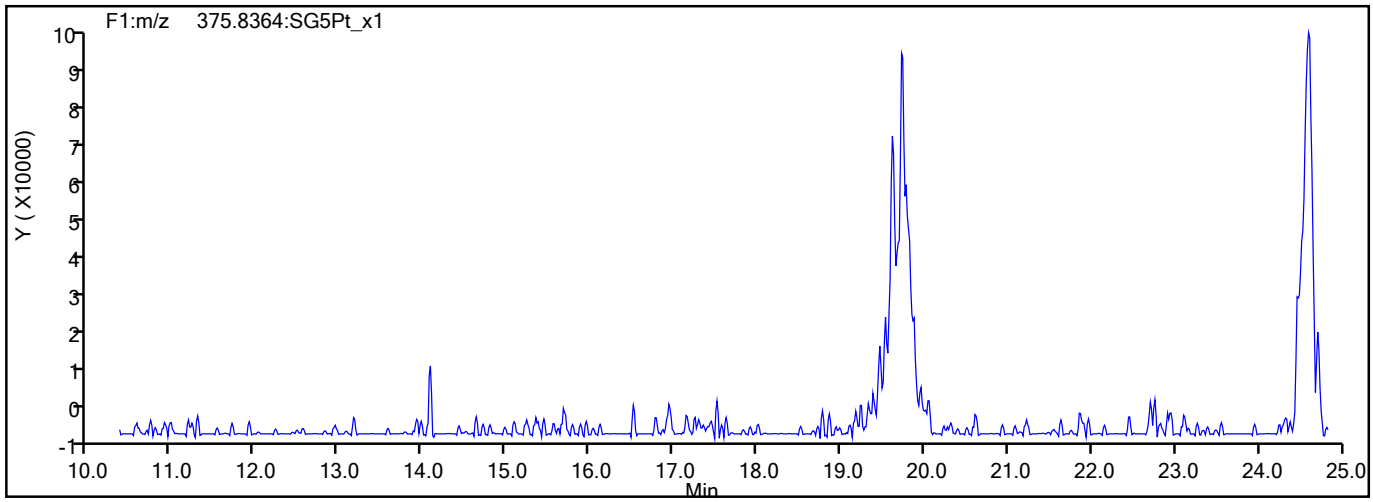

780743

Report Date: 25-Aug-2021 09:02:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125680.b\24AU21A11D2_002.d		
Injection Date:	24-Aug-2021 17:15:17	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519540	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

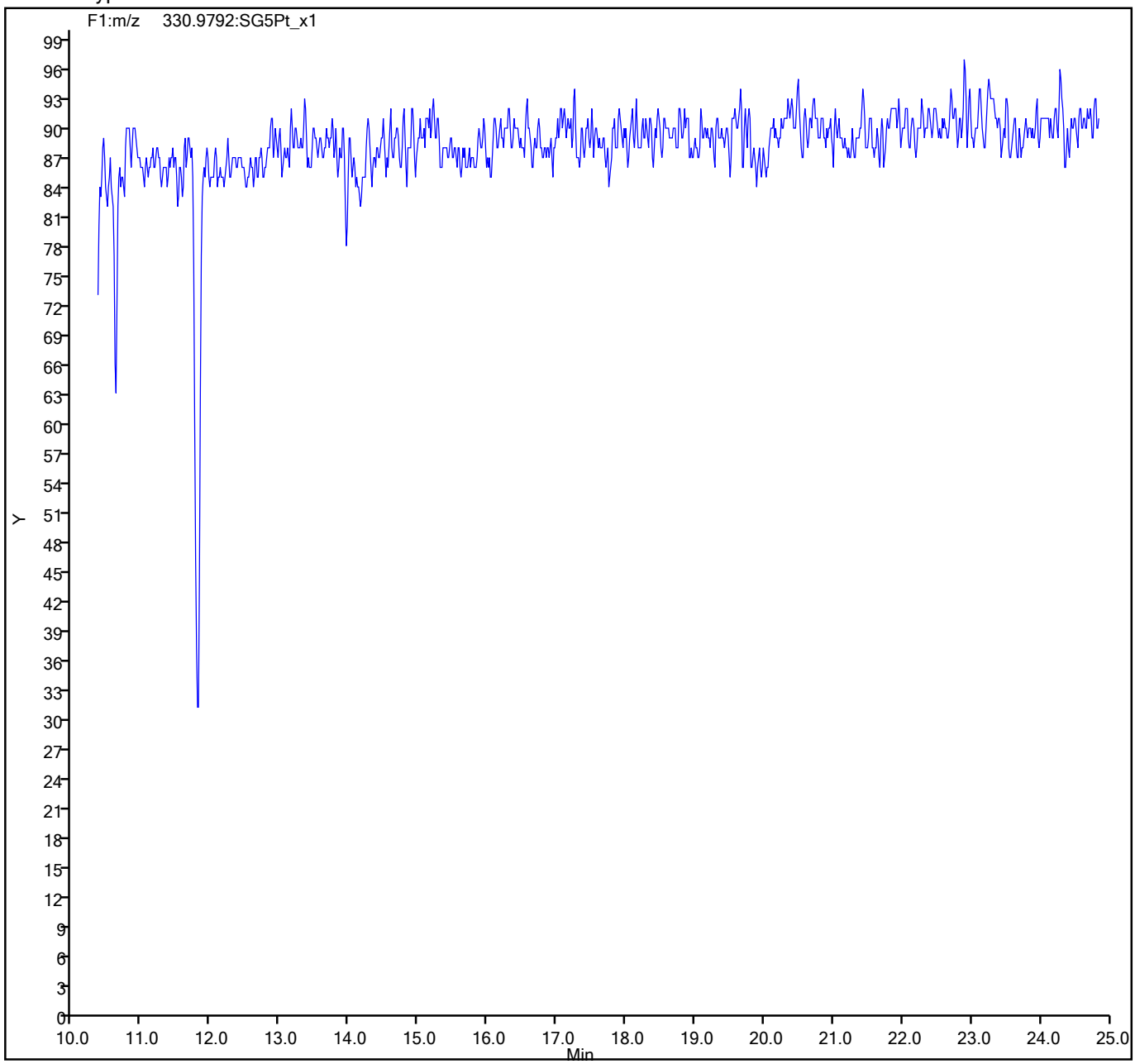

780744

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 12:59:07 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:33 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:56:58

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.631	29054878	0.79	1.3327					0.00	
2,3,7,8-TCDF	17.659	30793724	0.77	0.9978	42.5	42.5	0.0965	0.0965		
D 13C-2,3,7,8-TCDD	16.081	17349695	0.82	0.8749					0.00	
2,3,7,8-TCDD	16.095	19254291	0.78	1.0570	42.0	42.0	0.1075	0.1075		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 26-Aug-2021 09:30:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 12:59:07 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:33 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:56:58

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.631	17.631	0	1.000	12787012	2551981	13654	34135	187		
317.9389	17.631	17.631	0	1.000	16267866	3076922	11183	27957	275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.659	17.659	0	1.002	13417414	2552580	2769	6922	922		
305.8987	17.645	17.659	-1	1.001	17376310	3303374	2652	6630	1246	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.081	16.081	0	1.000	7825356	1694452	30090	75225	56		
333.9339	16.068	16.081	-1	1.000	9524339	2014028	12442	31105	162	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.095	16.095	0	1.001	8416026	1883087	1907	4767	987		
321.8936	16.095	16.095	0	1.001	10838265	2417244	2305	5762	1049	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

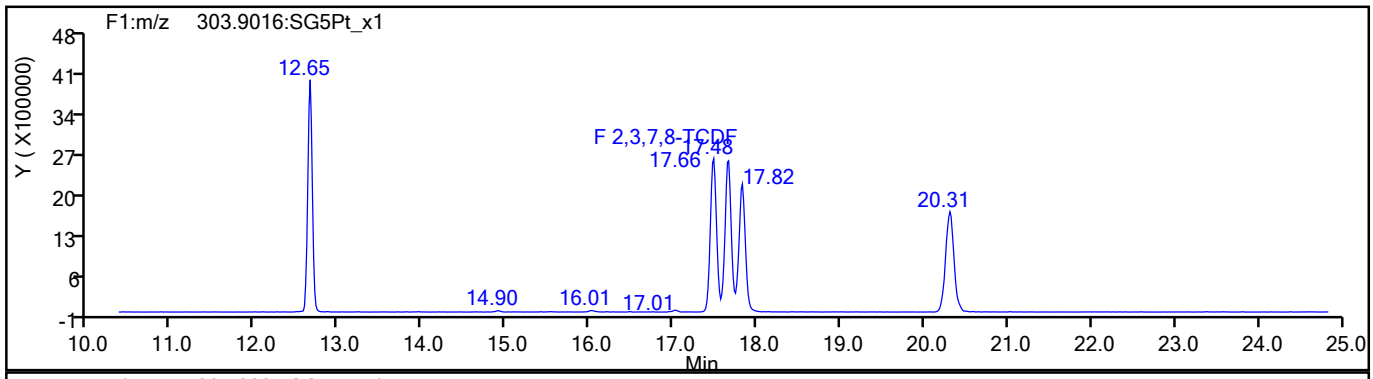

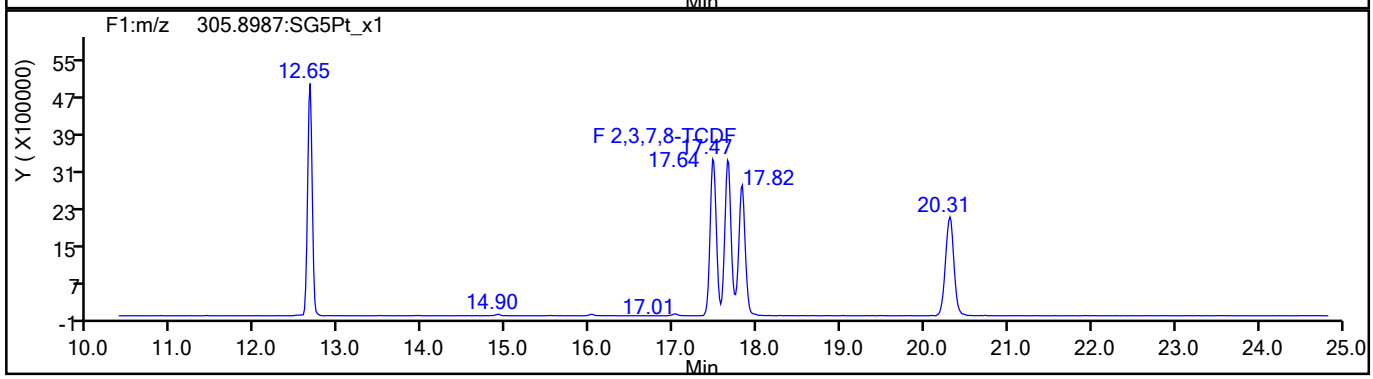

TCDF Standards

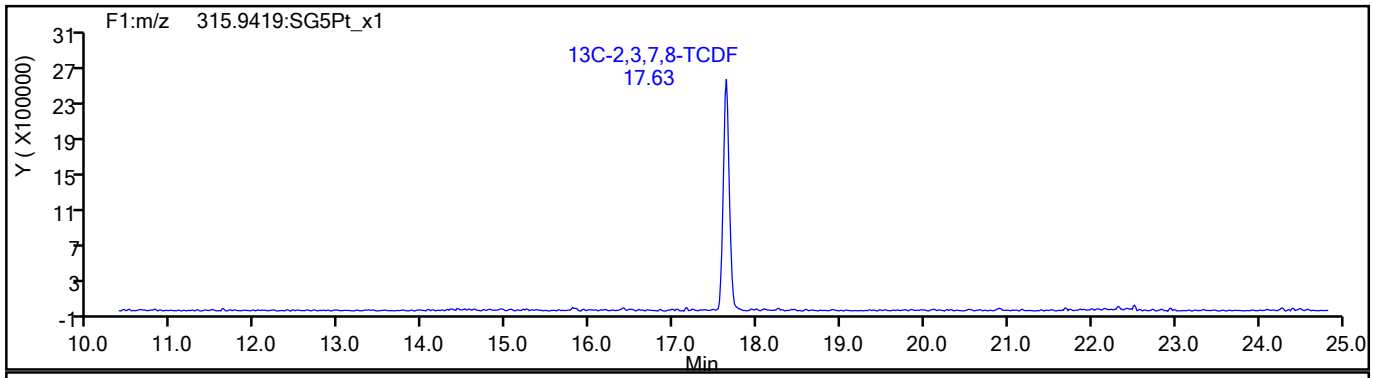

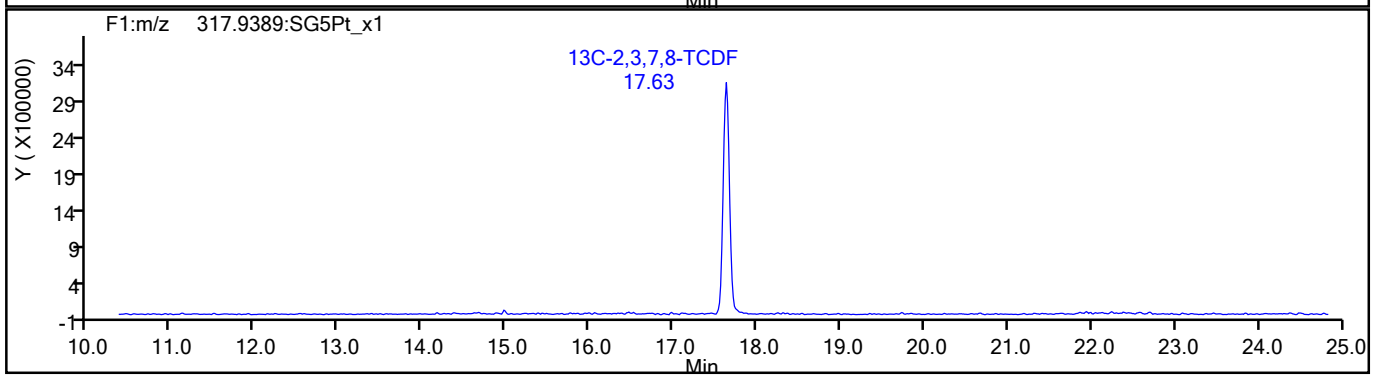

780747

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

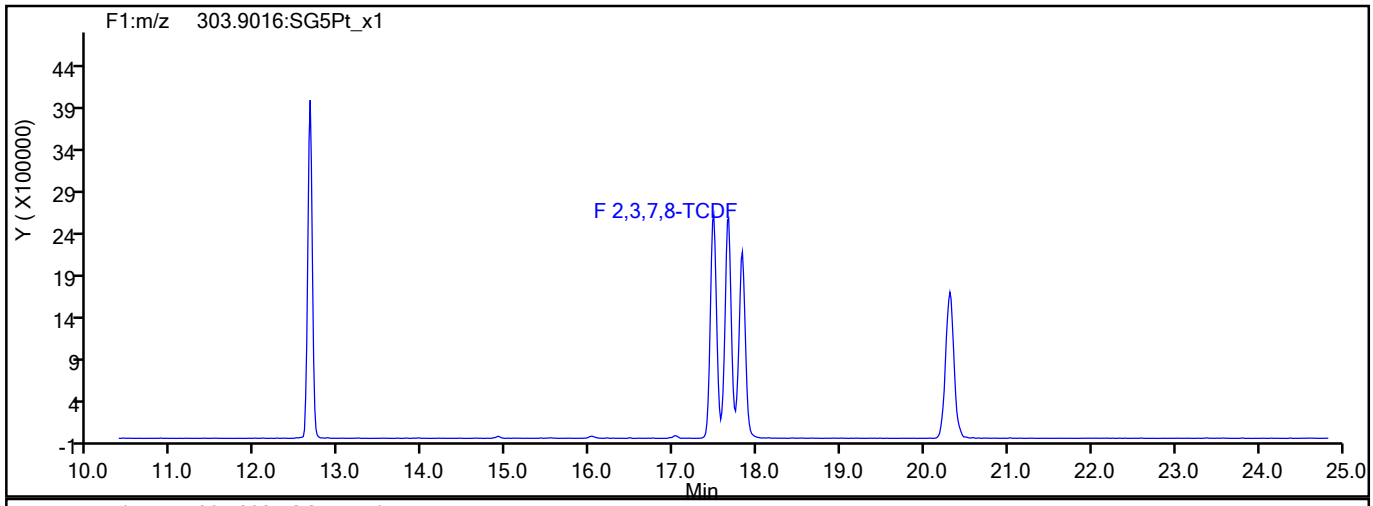

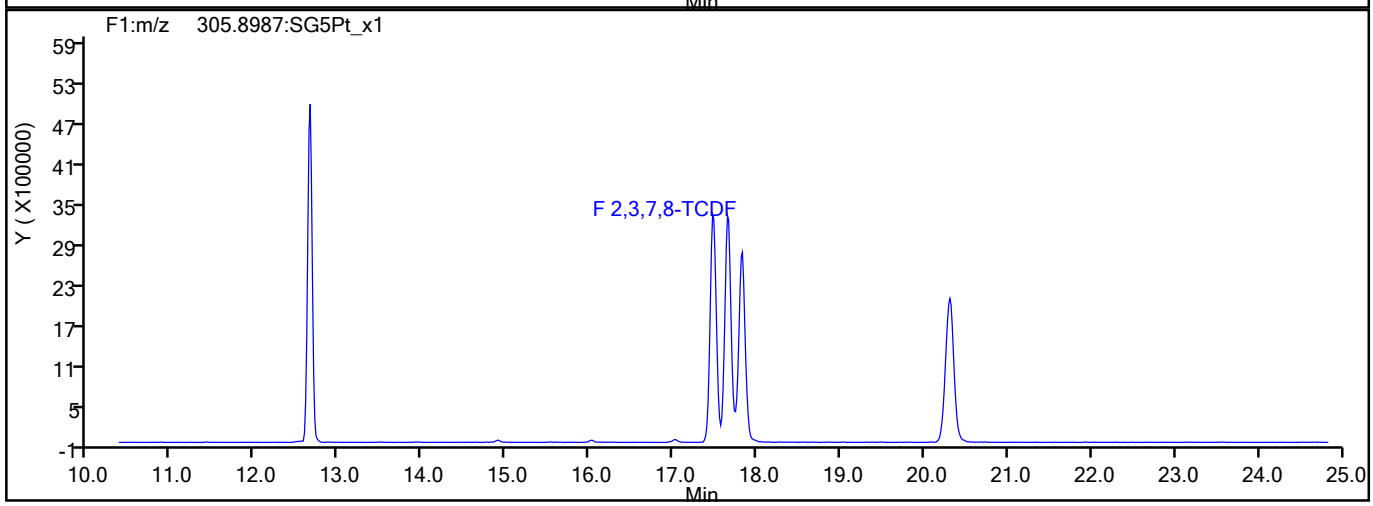

TCDF Interference Mass

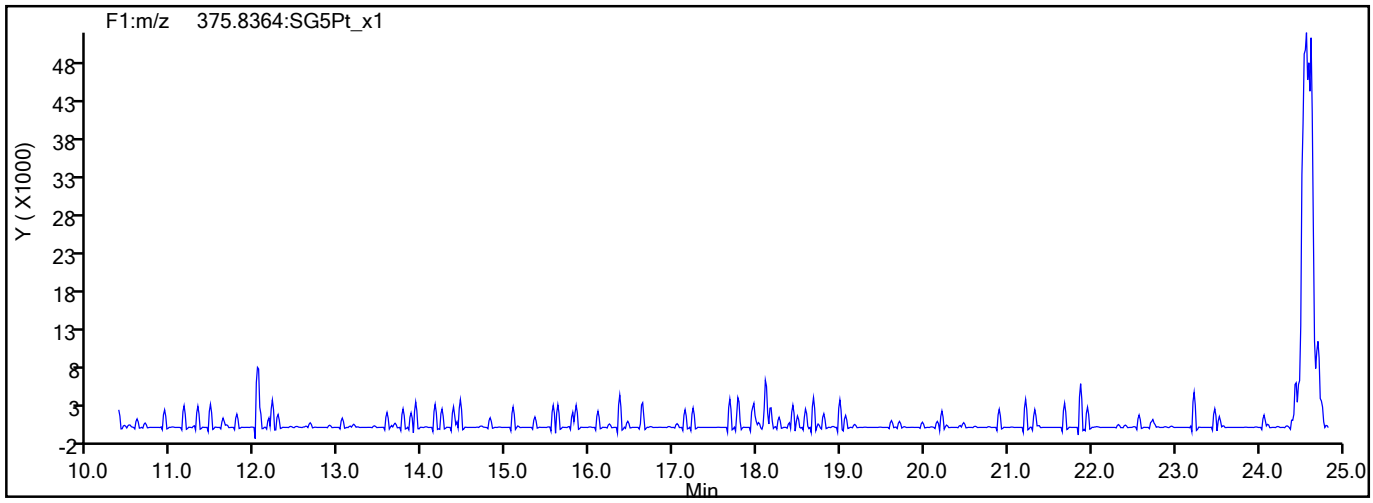

780748

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

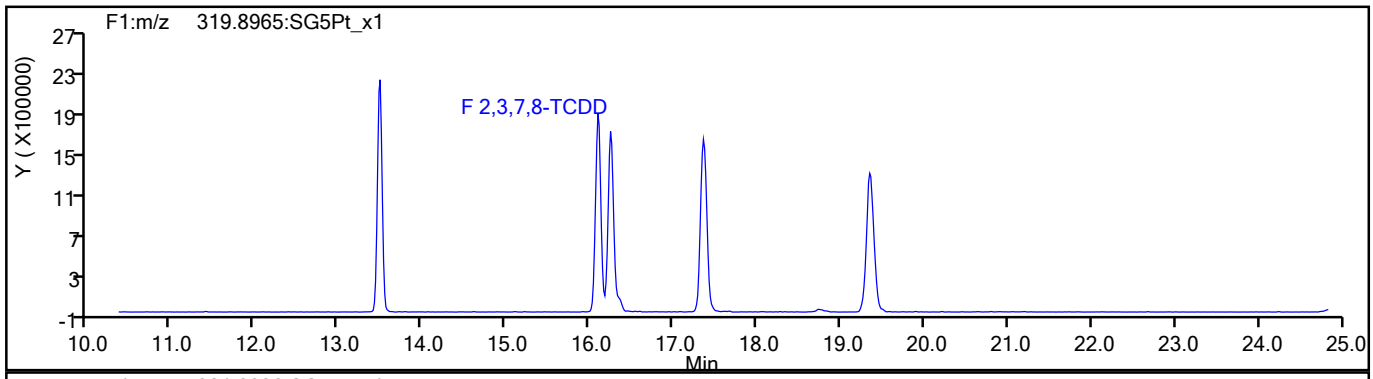

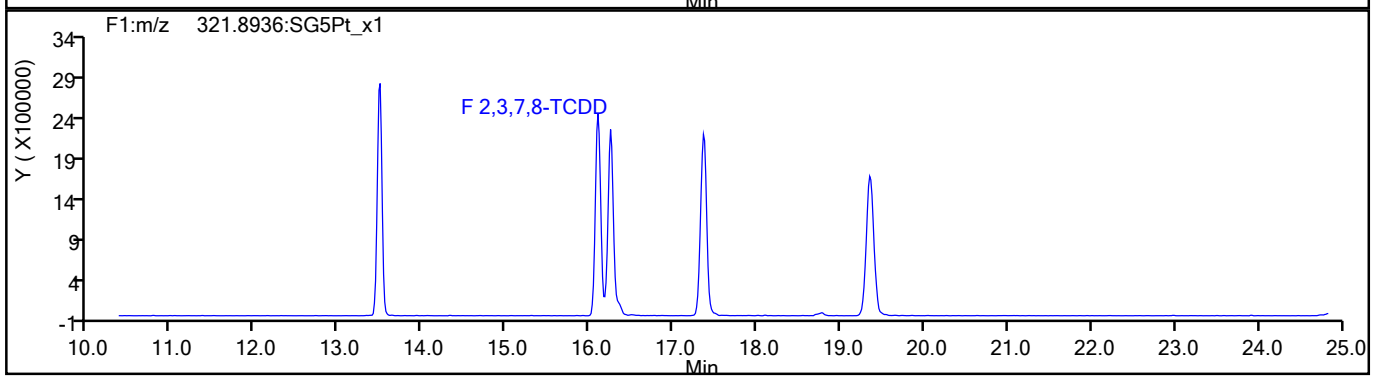

TCDD Standards

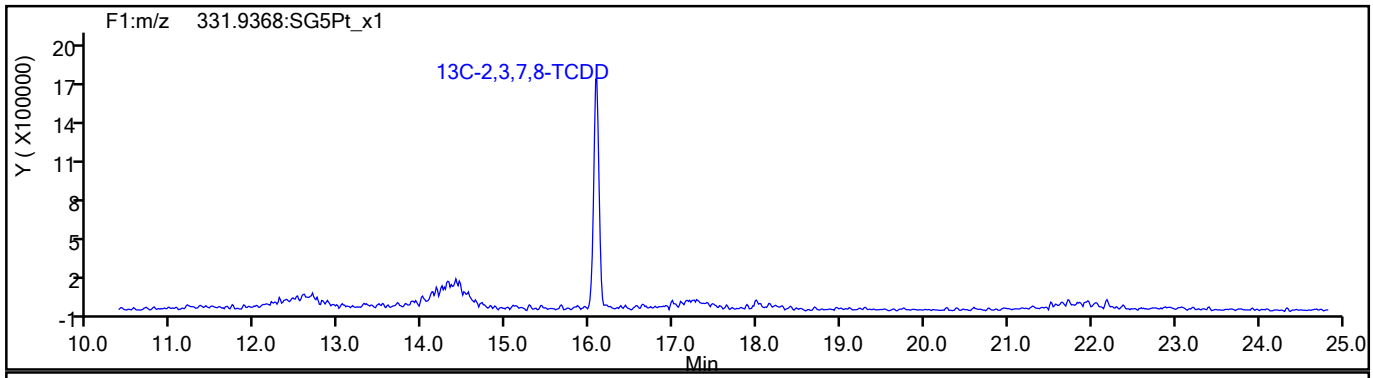

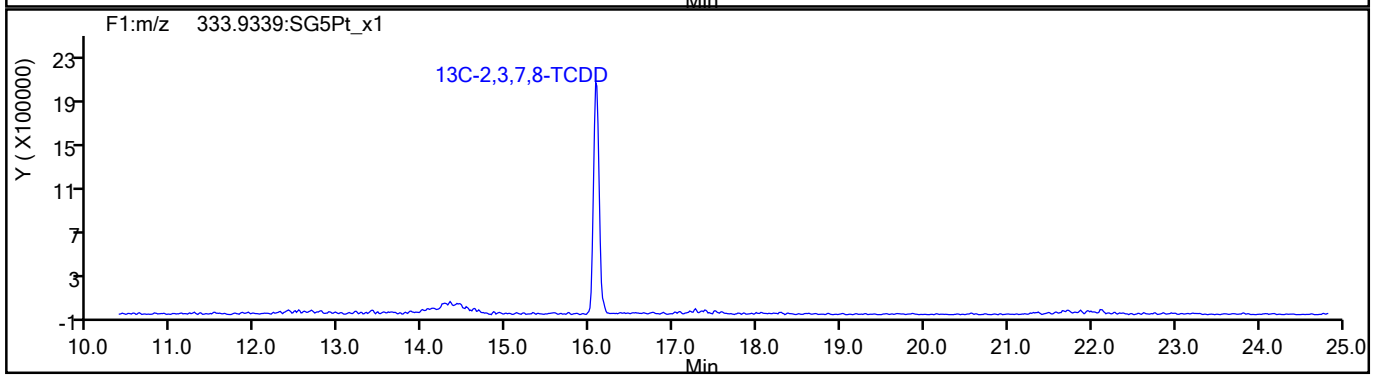

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

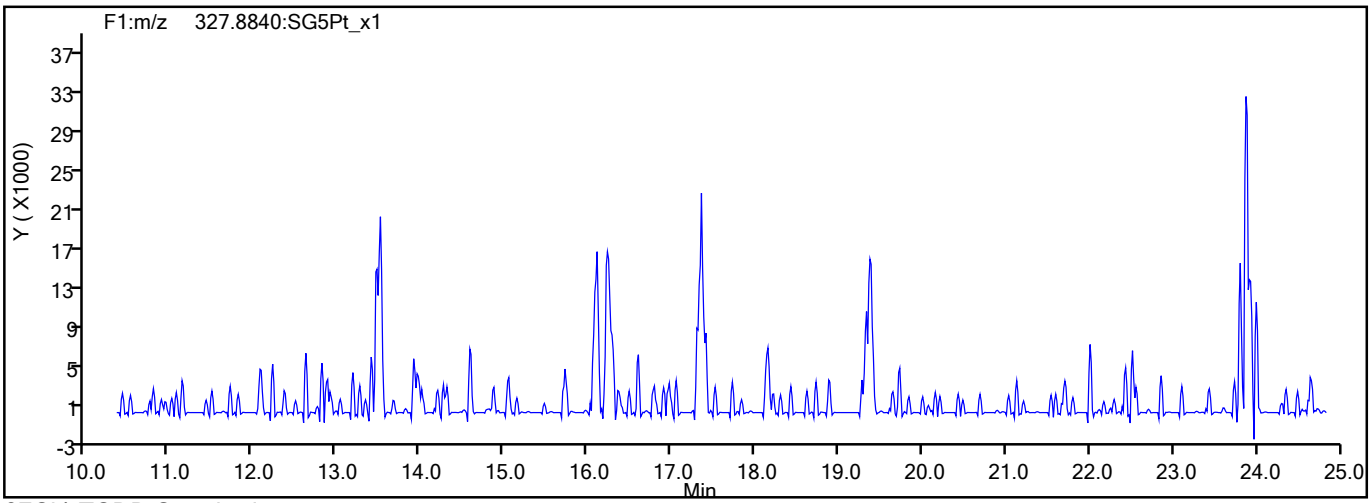

37Cl4-TCDD Standards

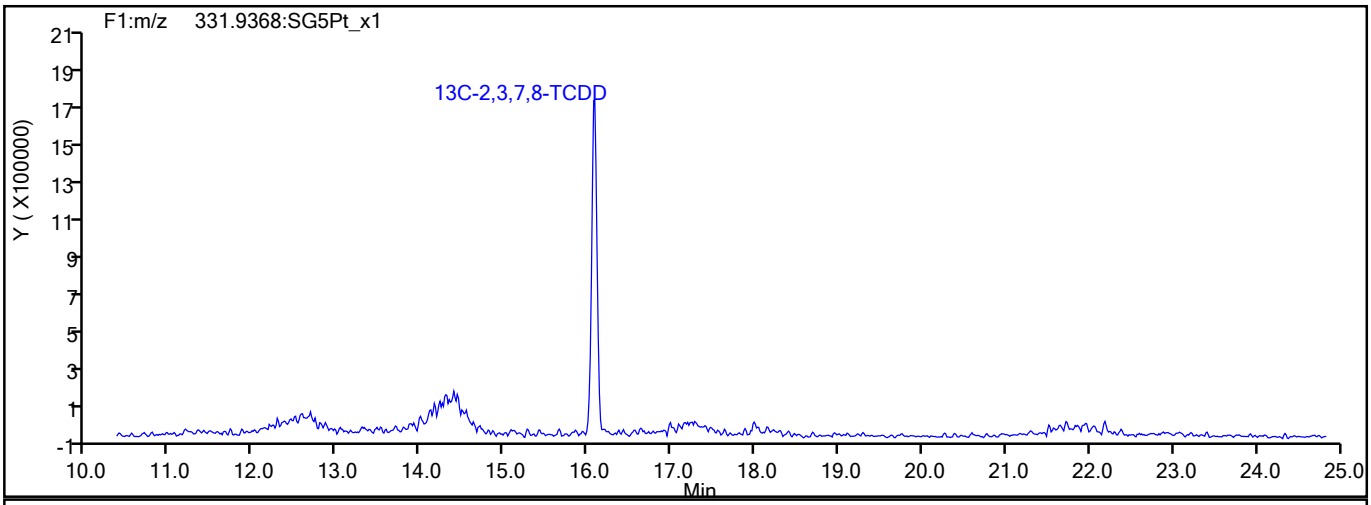

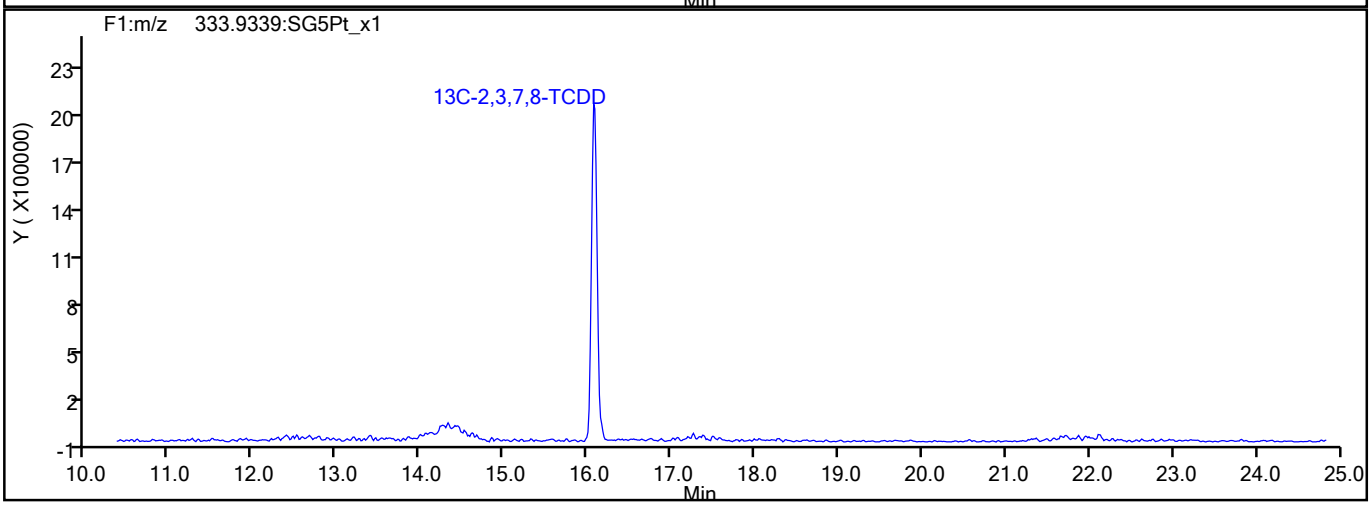

780750

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

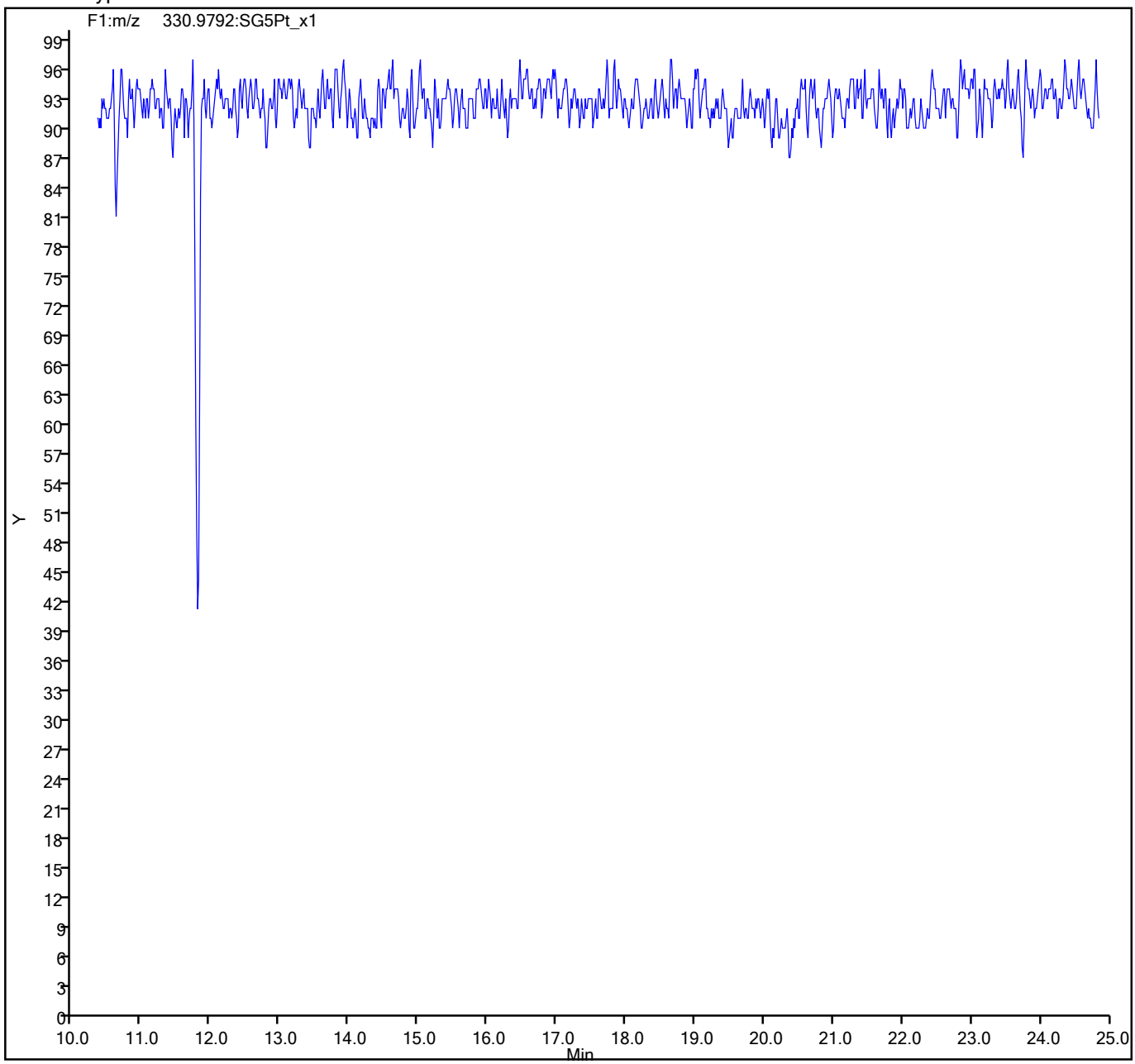

780751

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-512871/1-A
Matrix: Solid
Lab File ID: 13AU2110D5_14.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10(g)
Date Analyzed: 08/14/2021 02:56
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.0906	J	1.0	0.028
51207-31-9	2,3,7,8-TCDF	0.0905	J	1.0	0.017
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.035
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.028
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.029
39227-28-6	1,2,3,4,7,8-HxCDD	0.161	J	5.0	0.030
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.031
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.028
70648-26-9	1,2,3,4,7,8-HxCDF	0.0330	J	5.0	0.019
57117-44-9	1,2,3,6,7,8-HxCDF	0.0264	J	5.0	0.019
72918-21-9	1,2,3,7,8,9-HxCDF	0.0556	J	5.0	0.016
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.016
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.181	J	5.0	0.020
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.126	J	5.0	0.026
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.102	J	5.0	0.036
3268-87-9	OCDD	0.467	J	10	0.032
39001-02-0	OCDF	0.112	J	10	0.021
41903-57-5	Total TCDD	0.0906	J	1.0	0.028
30402-14-3	Total TCDF	0.183	J	1.0	0.017
36088-22-9	Total PeCDD	ND		5.0	0.039
30402-15-4	Total PeCDF	ND		5.0	0.029
34465-46-8	Total HxCDD	0.161	J	5.0	0.029
55684-94-1	Total HxCDF	0.115	J	5.0	0.017
37871-00-4	Total HpCDD	0.386	J	5.0	0.020
38998-75-3	Total HpCDF	0.228	J	5.0	0.031

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-512871/1-A

Matrix: Solid Lab File ID: 13AU2110D5_14.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/04/2021 07:15

Sample wt/vol: 10(g) Date Analyzed: 08/14/2021 02:56

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 516836 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	56		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	54		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	59		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	52		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	58		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	52		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	51		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	52		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	58		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	57		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	62		26-138
114423-97-1	13C-OCDD	60		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	81		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Sample Type: MB
Inject. Date: 14-Aug-2021 02:56:25 ALS Bottle#: 15 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-512871/1-a mb 320-512871/1-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 08:51:16 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:34:30

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	123792367	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	110736450	0.77	1.6249	55.1	55.1	0.0939	0.0939	55.05	
2,3,7,8-TCDF	17.371	51307	0.77	1.0239	0.0570	0.0453	0.008724	0.008724		RQ
A Non-2,3,7,8-sub-TCDF	17.046	52688	0.77	1.0239	0.0561	0.0465	0.008724	0.0161		RQM
S Total TCDF					0.1131	0.0917	0.008724	0.008724		RQ
D 13C-2,3,7,8-TCDD	18.066	63989425	0.82	0.8993	57.5	57.5	0.1189	0.1189	57.48	
2,3,7,8-TCDD	18.066	36365	0.77	1.2541	0.0967	0.0453	0.0142	0.0142		RQM
$ 37Cl4-2,3,7,8-TCDD	18.082	44252474		1.1071	32.3	32.3	0.0378	0.0378	80.72	
A Non-2,3,7,8-sub-TCDD	17.499						0.0142	0.0142		
S Total TCDD					0.0967	0.0453	0.0142	0.0142		RQ
D 13C-1,2,3,7,8-PeCDF	22.381	80658388	1.57	1.2101	53.8	53.8	0.1501	0.1501	53.85	
1,2,3,7,8-PeCDF	22.381						0.0140	0.0140		
D 13C-2,3,4,7,8-PeCDF	23.730	90620709	1.59	1.2395	59.1	59.1	0.1465	0.1465	59.06	
2,3,4,7,8-PeCDF	23.731						0.0144	0.0144		
A F1 PeCDFs	20.093						0.0137	0.0137		
A Non-2,3,7,8-sub-PeCDF	23.241						0.0142	0.0142		
S Total PeCDF							0.0144	0.0144		
D 13C-1,2,3,7,8-PeCDD	24.453	53239203	1.61	0.7612	56.5	56.5	0.0562	0.0562	56.50	
1,2,3,7,8-PeCDD	24.453						0.0175	0.0175		
A Non-2,3,7,8-sub-PeCDD	23.349						0.0175	0.0193		RQU
S Total PeCDD							0.0193	0.0193		
D 13C-1,2,3,4,7,8-HxCDF	30.516	75247294	0.52	1.0837	57.8	57.8	0.2533	0.2533	57.77	
1,2,3,4,7,8-HxCDF	30.542	13456	1.06	1.0851	0.0165	0.0165	0.009450	0.009450		M
D 13C-1,2,3,6,7,8-HxCDF	30.702	70394827	0.52	1.1279	51.9	51.9	0.2434	0.2434	51.93	
1,2,3,6,7,8-HxCDF	30.729	10475	1.24	1.1260	0.0150	0.0132	0.009682	0.009682		RQM
D 13C-2,3,4,6,7,8-HxCDF	31.528	65857014	0.53	1.0637	51.5	51.5	0.2581	0.2581	51.51	
2,3,4,6,7,8-HxCDF	31.528						0.007804	0.007804		
D 13C-1,2,3,7,8,9-HxCDF	32.326	59770504	0.52	0.9676	51.4	51.4	0.2837	0.2837	51.40	
1,2,3,7,8,9-HxCDF	32.353	19367	1.29	1.1664	0.0278	0.0278	0.008043	0.008043		M
A Non-2,3,7,8-sub-HxCDF	30.197						0.008680	0.008680		U
S Total HxCDF					0.0593	0.0575	0.008745	0.008745		RQ

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.140	120188967	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	50923109	1.25	0.7334	57.8	57.8	0.3104	0.3104	57.77	
1,2,3,4,7,8-HxCDD	31.727	43502	1.22	1.0640	0.0803	0.0803	0.0148	0.0148		M
D 13C-1,2,3,6,7,8-HxCDD	31.820	55358257	1.23	0.8802	52.3	52.3	0.2587	0.2587	52.33	
1,2,3,6,7,8-HxCDD	31.727						0.0156	0.0156		QMU
1,2,3,7,8,9-HxCDD	32.140						0.0138	0.0138		
A Non-2,3,7,8-sub-HxCDD	30.882						0.0147	0.0414		RQU
S Total HxCDD					0.0803	0.0803	0.0147	0.0147		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	52546913	0.43	0.7730	56.6	56.6	0.7170	0.7170	56.56	
1,2,3,4,6,7,8-HpCDF	33.790	47795	1.04	1.4413	0.0682	0.0631	0.0132	0.0132		RQ
D 13C-1,2,3,4,7,8,9-HpCDF	34.859	52048397	0.44	0.7008	61.8	61.8	0.7909	0.7909	61.79	
1,2,3,4,7,8,9-HpCDF	34.871	34810	0.97	1.3174	0.0508	0.0508	0.0178	0.0178		M
A Non-2,3,7,8-sub-HpCDF	34.319						0.0152	0.0152		
S Total HpCDF					0.1190	0.1139	0.0155	0.0155		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	45029316	1.00	0.6472	57.9	57.9	0.4021	0.4021	57.89	
1,2,3,4,6,7,8-HpCDD	34.580	44472	0.88	1.0943	0.0903	0.0903	0.0102	0.0102		M
A Non-2,3,7,8-sub-HpCDD	34.301	50568	1.10	1.0943	0.1026	0.1026	0.0102	0.1026		M
S Total HpCDD					0.1929	0.1929	0.0102	0.0102		
D 13C-OCDD	36.926	64373693	0.88	0.4472	119.8	119.8	0.1872	0.1872	59.89	
OCDF	37.022	25935	1.00	1.4382	0.0560	0.0560	0.0105	0.0105		M
OCDD	36.938	83113	0.82	1.1070	0.2333	0.2333	0.0158	0.0158		M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Sample Type: MB
Inject. Date: 14-Aug-2021 02:56:25 ALS Bottle#: 15 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-512871/1-a mb 320-512871/1-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 08:51:16 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:34:30

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		55592799	13398487	6529	16322	2052		
333.9339	17.870	17.855	1		68199568	16431962	6230	15575	2638	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.341	1	0.971	48300313	11587115	9363	23407	1238		
317.9389	17.356	17.341	1	0.971	62436137	14664874	8835	22087	1660	0.77(0.65-0.89)	
2,3,7,8-TCDF											RQ
303.9016	17.371	17.356	1	1.001	22320	4864	350	875	14		
305.8987	17.386	17.356	2	1.002	42276	9320	588	1470	16	0.53(0.65-0.89)	
	Empc Correction				28987	6316	588	1470	11		
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	16.993	17.046	-3	0.979	7893	1727	350	875	5		
305.8987	16.993	17.046	-3	0.979	12634	3178	588	1470	5	0.62(0.65-0.89)	
	Empc Correction				10250	2242	588	1470	4		
303.9016	17.870	17.046	49	1.030	14307	2543	350	875	7		M
	Empc Correction				7924	1905	350	875	5		
305.8987	17.870	17.046	49	1.030	10291	2475	588	1470	4	1.39(0.65-0.89)	
303.9016	18.293	17.046	75	1.054	9303	1842	350	875	5		
	Empc Correction				7104	1382	350	875	4		
305.8987	18.248	17.046	72	1.051	9226	1796	588	1470	3	1.01(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	28733713	6387614	6529	16322	978		
333.9339	18.066	18.051	1	1.011	35255712	7785291	6230	15575	1250	0.82(0.65-0.89)	
2,3,7,8-TCDD											RQM
319.8965	18.066	18.066	0	1.000	15820	4023	563	1407	7		M
321.8936	18.082	18.066	1	1.001	61793	14846	444	1110	33	0.26(0.65-0.89)	M
	Empc Correction				20545	5224	444	1110	12		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.066	1	1.012	44252474	10000230	4993	12482	2003		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.499						563	1407			
321.8936	17.499						444	1110			
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.252	49233820	8234140	13186	32965	624		
353.8970	22.381	22.367	1	1.252	31424568	5209775	8484	21210	614	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.380						245	612			
341.8567	22.380						555	1387			
13C-2,3,4,7,8-PeCDF											
351.9000	23.730	23.703	2	1.328	55569388	8319246	13186	32965	631		
353.8970	23.730	23.703	2	1.328	35051321	5317992	8484	21210	627	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.730						245	612			
341.8567	23.730						555	1387			
A F1 PeCDFs											
339.8597	20.093						246	615			
341.8567	20.093						528	1320			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.241						245	612			
341.8567	23.241						555	1387			
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.426	2	1.368	32852969	4687980	3053	7632	1536		
369.8919	24.453	24.426	2	1.368	20386234	2945437	2054	5135	1434	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453						403	1007			
357.8516	24.453						156	390			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	21.249	23.349	-126	0.869	6547	1548	403	1007	4		
357.8516	21.235	23.349	-127	0.868	6420	1325	156	390	8	1.02(1.32-1.78)	
	Empc Correction				4223	998	156	390	6		
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	25840700	4831951	12200	30500	396		
385.8610	30.516	30.503	1	0.949	49406594	9064143	22378	55945	405	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											M
373.8208	30.542	30.529	1	1.001	6916	1654	331	827	5		M
375.8178	30.529	30.529	0	1.000	6540	1117	239	597	5	1.06(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	24116523	4494534	12200	30500	368		
385.8610	30.702	30.689	1	0.955	46278304	8575846	22378	55945	383	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQM
373.8208	30.729	30.702	2	1.001	5799	1519	331	827	5		M
375.8178	30.742	30.702	2	1.001	6097	1093	239	597	5	0.95(1.05-1.43)	M
	Empc Correction				4676	1224	239	597	5		

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.528	31.514	1	0.981	22808219	5491712	12200	30500	450		
385.8610	31.528	31.514	1	0.981	43048795	10147684	22378	55945	453	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						331	827			
375.8178	31.528						239	597			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	20424010	5159805	12200	30500	423		
385.8610	32.326	32.313	1	1.006	39346494	10030578	22378	55945	448	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.353	32.326	2	1.001	10921	3198	331	827	10		M
375.8178	32.353	32.326	2	1.001	8446	2024	239	597	8	1.29(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.197						331	827			
375.8178	30.197						239	597			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		66463977	17359527	16736	41840	1037		
403.8529	32.140	32.127	1		53724990	14132400	11943	29857	1183	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.987	28248433	7463381	16736	41840	446		
403.8529	31.714	31.701	1	0.987	22674676	6025044	11943	29857	504	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.727	31.714	1	1.000	23898	6173	483	1207	13		M
391.8127	31.727	31.714	1	1.000	19604	6349	365	912	17	1.22(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.807	1	0.990	30582179	7487586	16736	41840	447		
403.8529	31.820	31.807	1	0.990	24776078	6092162	11943	29857	510	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											QMU
389.8157	31.820						483	1207			
391.8127	31.820						365	912			
1,2,3,7,8,9-HxCDD											
389.8157	32.140						483	1207			
391.8127	32.140						365	912			
A Non-2,3,7,8-sub-HxCDD											U
389.8157	30.542	30.882	-20	0.960	12968	2498	483	1207	5		
391.8127	30.542	30.882	-20	0.960	16131	1346	365	912	4	0.80(1.05-1.43)	
	Empc Correction				10458	2014	365	912	6		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	15886800	5014938	20989	52472	239		
419.8220	33.766	33.754	1	1.051	36660113	11559032	48831	122077	237	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQ
407.7818	33.790	33.766	1	1.001	28232	9783	917	2292	11		
	Empc Correction				24366	8481	917	2292	9		
409.7789	33.778	33.766	1	1.000	23429	8155	346	865	24	1.21(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.859	34.847	1	1.085	15946668	4152228	20989	52472	198		
419.8220	34.847	34.847	0	1.084	36101729	9336523	48831	122077	191	0.44(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.871	34.860	1	1.000	17181	4179	917	2292	5		M
409.7789	34.859	34.860	0	1.000	17629	4555	346	865	13	0.97(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						917	2292			
409.7789	34.319						346	865			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.556	1	1.076	22513980	6271364	16295	40737	385		
437.8140	34.568	34.556	1	1.076	22515336	6234152	16489	41222	378	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											M
423.7766	34.580	34.568	1	1.000	20807	6303	264	660	24		M
425.7737	34.568	34.568	0	1.000	23665	8000	295	737	27	0.88(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											M
423.7766	34.021	34.301	-17	0.984	26462	8684	264	660	33		M
425.7737	34.021	34.301	-17	0.984	24106	7557	295	737	26	1.10(0.88-1.20)	M
13C-OCDD											
469.7779	36.926	36.914	1	1.149	30180064	7085369	4545	11362	1559		
471.7750	36.926	36.914	1	1.149	34193629	7899325	5999	14997	1317	0.88(0.76-1.02)	
OCDF											M
441.7428	37.022	37.010	1	1.003	12972	3595	198	495	18		
443.7399	37.022	37.010	1	1.003	12963	4107	253	632	16	1.00(0.76-1.02)	M
OCDD											M
457.7377	36.938	36.926	1	1.000	37435	9081	248	620	37		M
459.7348	36.938	36.926	1	1.000	45678	9919	276	690	36	0.82(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Inject. Date: 14-Aug-2021 02:56:25 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 3

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	110736450	26251989

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	110736450	26251989

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.993	7893	1727	12634	3178	0.0181	0.62	RQ
16.993	7893	1727	10250	2242	0.0160		Empc Correction
17.870	14307	2543	10291	2475	0.0217	1.39	RQM
17.870	7924	1905	10291	2475	0.0161		Empc Correction
18.293	9303	1842	9226	1796	0.0163	1.01	RQ
18.293	7104	1382	9226	1796	0.0144		Empc Correction
Signal Totals:							
	22921	5014	29767	6513			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63654	13561				0.98	RQM
	52688	11527					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0561 = (63654 * 100.000) / (110736450 * 1.024)
Empc Amount: 0.0465 = (52688 * 100.000) / (110736450 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Inject. Date: 14-Aug-2021 02:56:25 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 3

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	53239203	7633417

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	53239203	7633417

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	6547	1548	6420	1325	0.0232	1.02	RQ
21.249	6547	1548	4223	998	0.0193		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Inject. Date: 14-Aug-2021 02:56:25 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	75247294	13896094
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	70394827	13070380
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	65857014	15639396
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	59770504	15190383

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	67817409	14449063

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Inject. Date: 14-Aug-2021 02:56:25 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	50923109	13488425
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	55358257	13579748
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	53140683	13534086

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.542	12968	2498	16131	1346	0.0514	0.80	RQ
30.542	12968	2498	10458	2014	0.0414		Empc Correction

Compound is Marked ND

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Inject. Date: 14-Aug-2021 02:56:25 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 3

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	45029316	12505516

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	45029316	12505516

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	26462	8684	24106	7557	0.1026	1.10	M
Signal Totals:							
	26462	8684	24106	7557			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	50568	16241				1.10	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1026 = (50568 * 100.000) / (45029316 * 1.094)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 17.870 Area = 18645

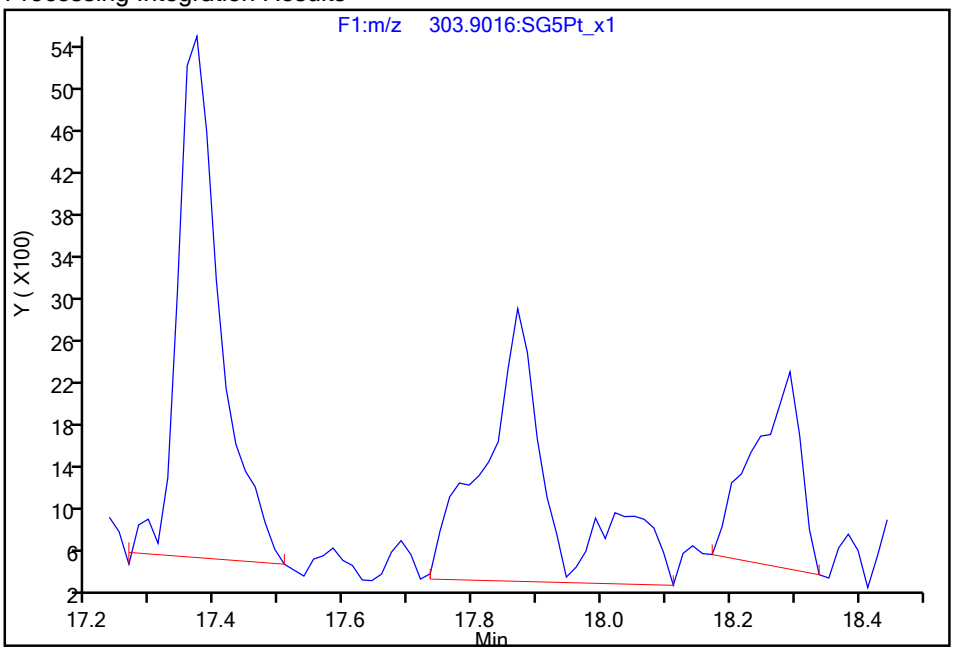

Manual Integration Results

RT = 17.870 Area = 14307 M

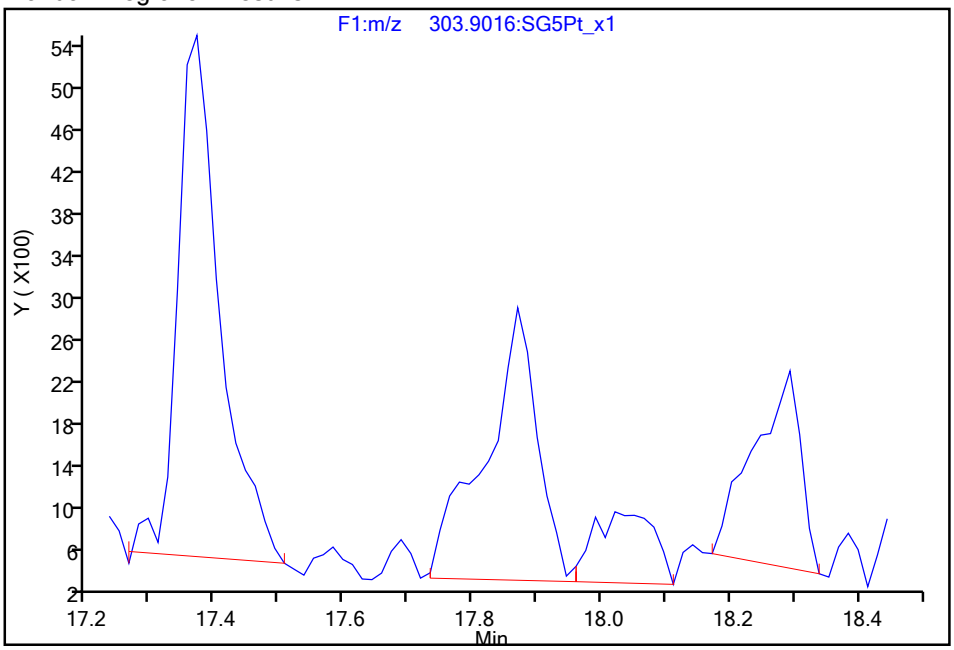

Reviewer: dadunj, 18-Aug-2021 08:48:43

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.07
Area: 15789
Amount: 0.107317
Amount Units: pg/ul

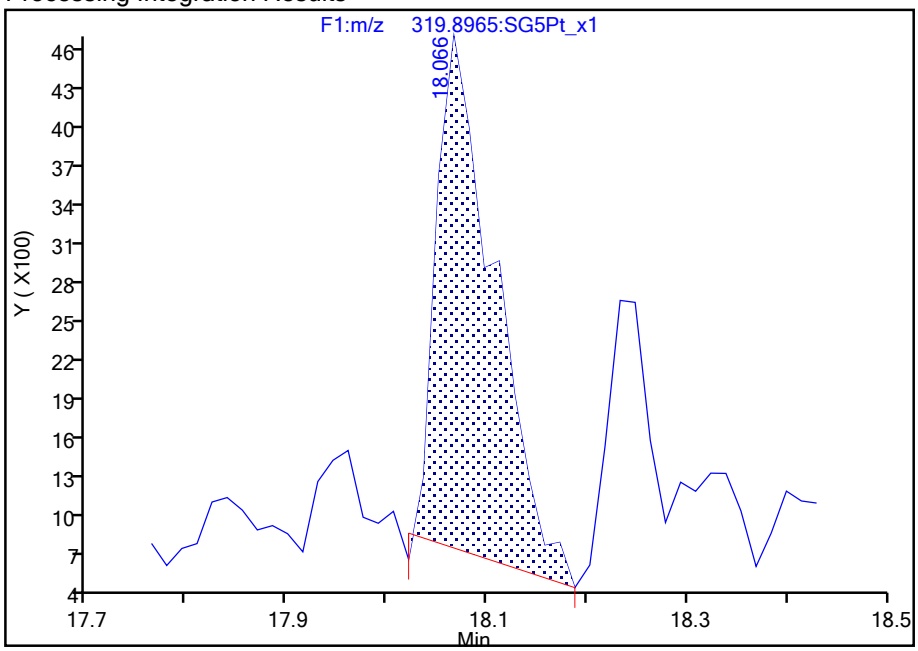

Manual Integration Results

RT: 18.07
Area: 15820
Amount: 0.096714
Amount Units: pg/ul

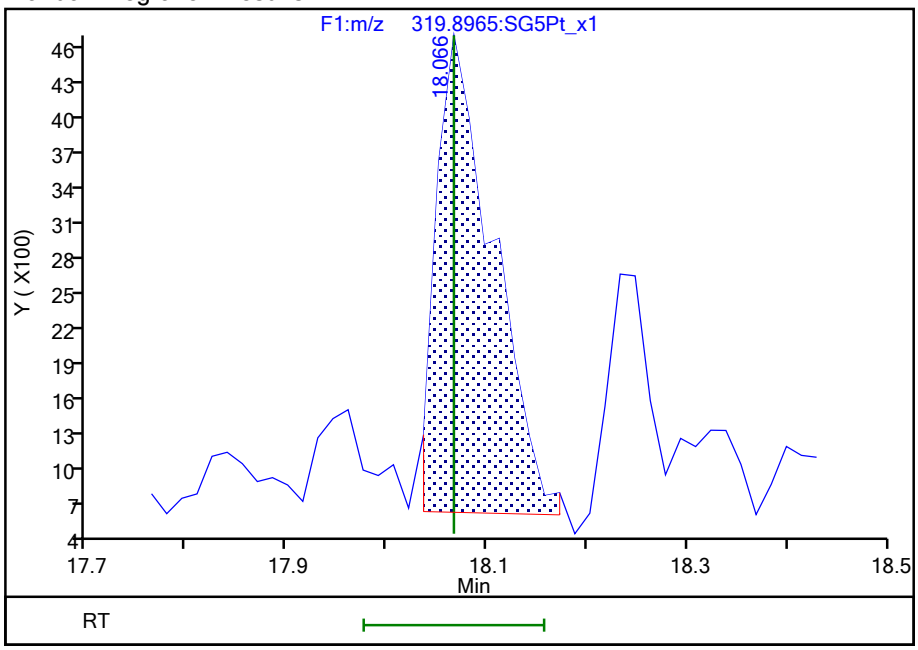

Reviewer: dadunj, 18-Aug-2021 08:49:10

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.08
Area: 70333
Amount: 0.107317
Amount Units: pg/ul

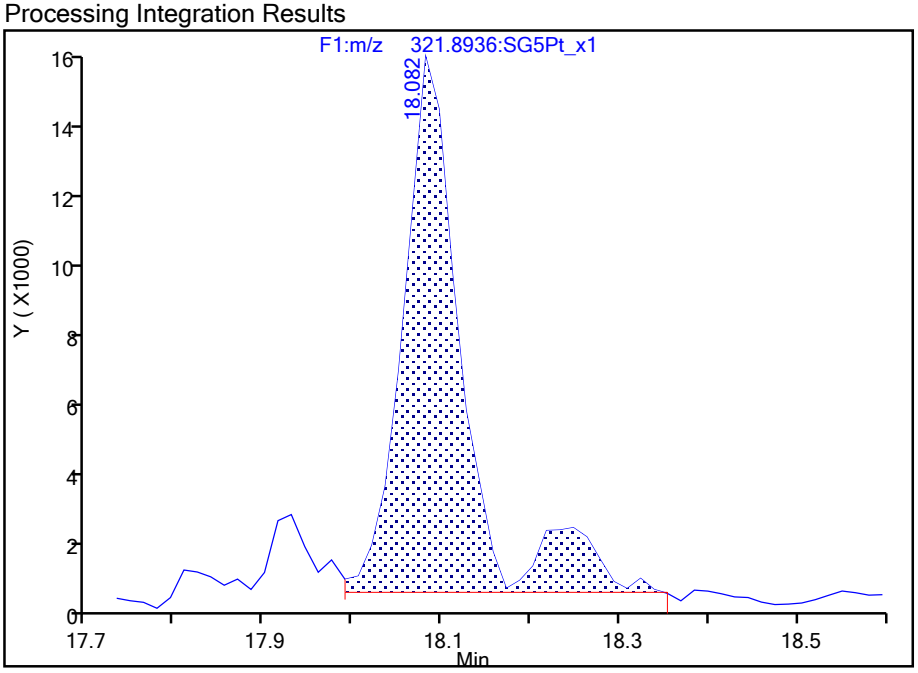

Manual Integration Results

RT: 18.08
Area: 61793
Amount: 0.096714
Amount Units: pg/ul

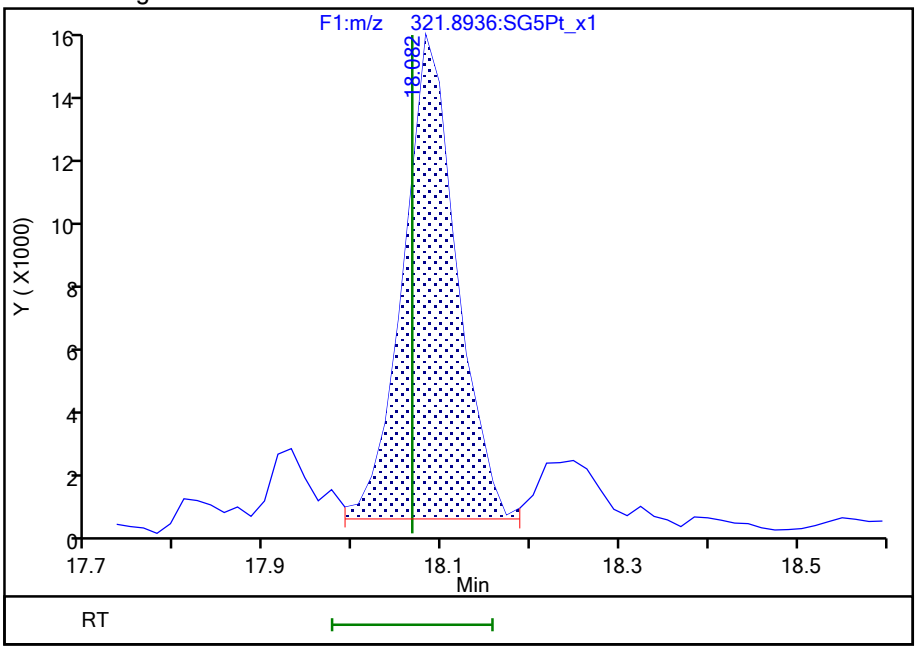

Reviewer: dadunj, 18-Aug-2021 08:49:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

RT: 30.54
Area: 6570
Amount: 0.016056
Amount Units: pg/ul

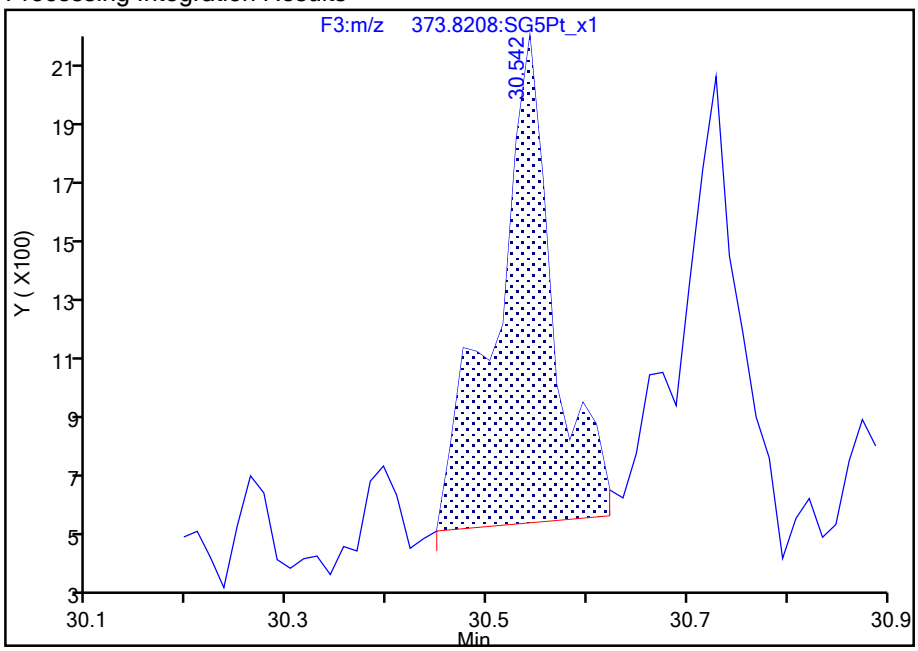

Manual Integration Results

RT: 30.54
Area: 6916
Amount: 0.016480
Amount Units: pg/ul

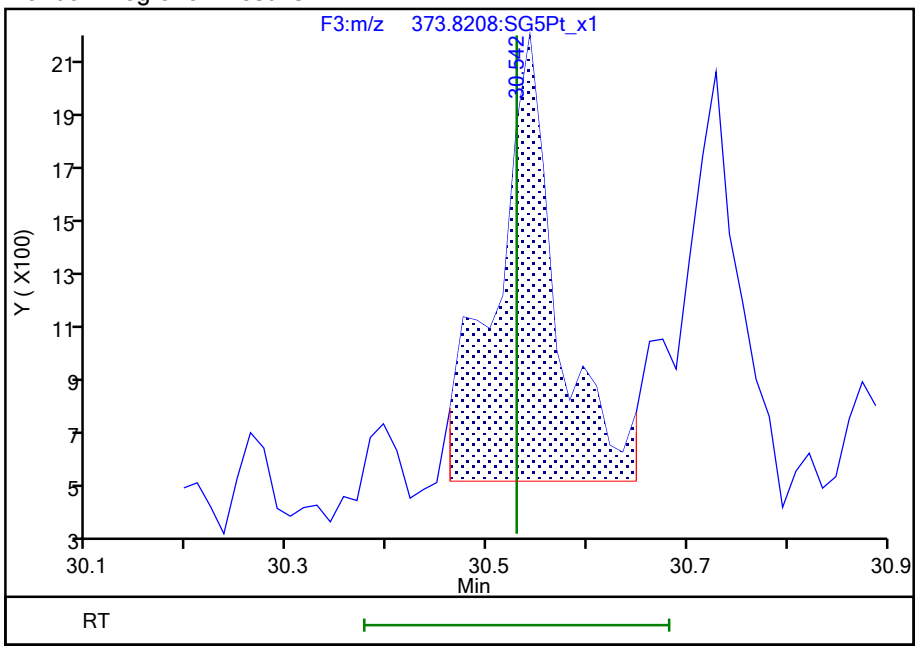

Reviewer: dadunj, 18-Aug-2021 08:49:51

Audit Action: Manually Integrated Audit Reason: Baseline

780769

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.73
Area: 5924
Amount: 0.015711
Amount Units: pg/ul

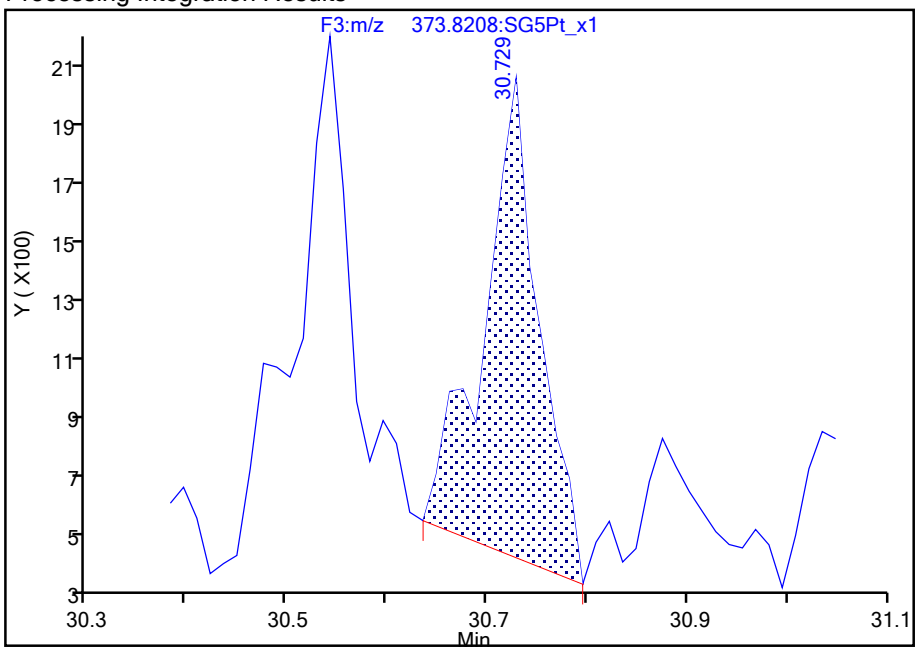

Manual Integration Results

RT: 30.73
Area: 5799
Amount: 0.015008
Amount Units: pg/ul

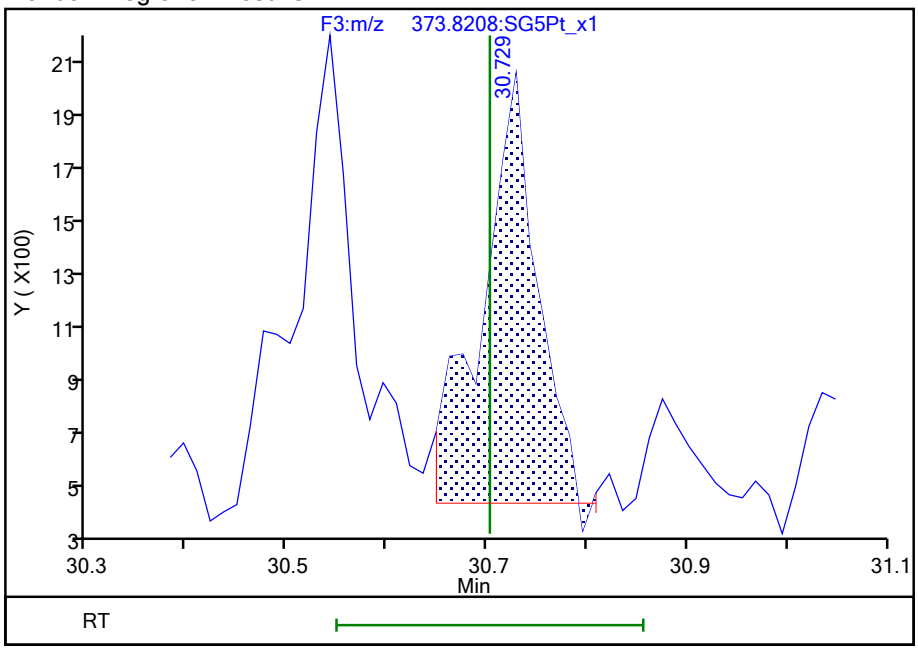

Reviewer: dadunj, 18-Aug-2021 08:49:51

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 30.74
Area: 6529
Amount: 0.015711
Amount Units: pg/ul

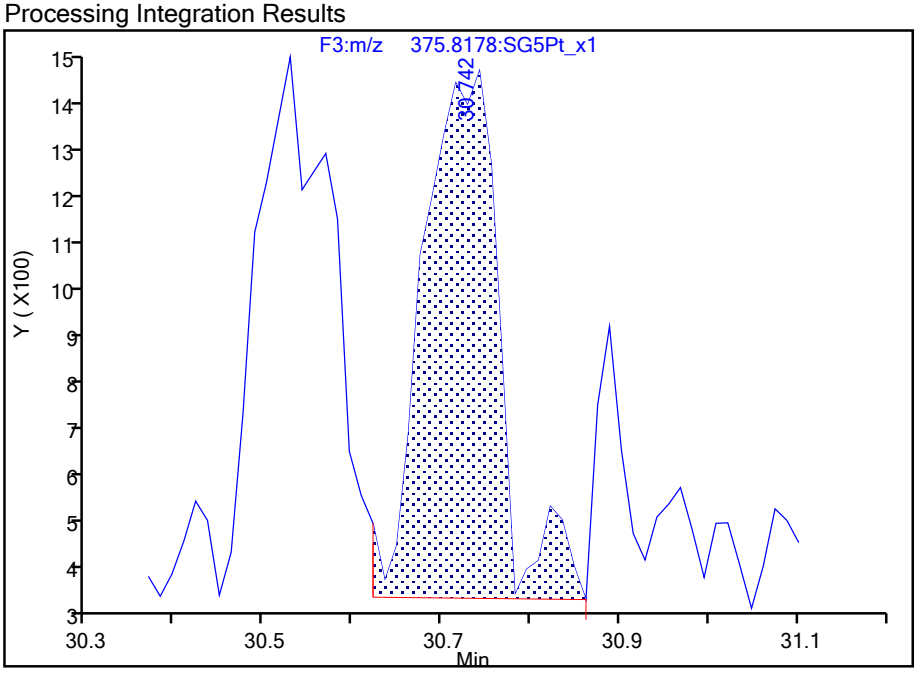

Manual Integration Results

RT: 30.74
Area: 6097
Amount: 0.015008
Amount Units: pg/ul

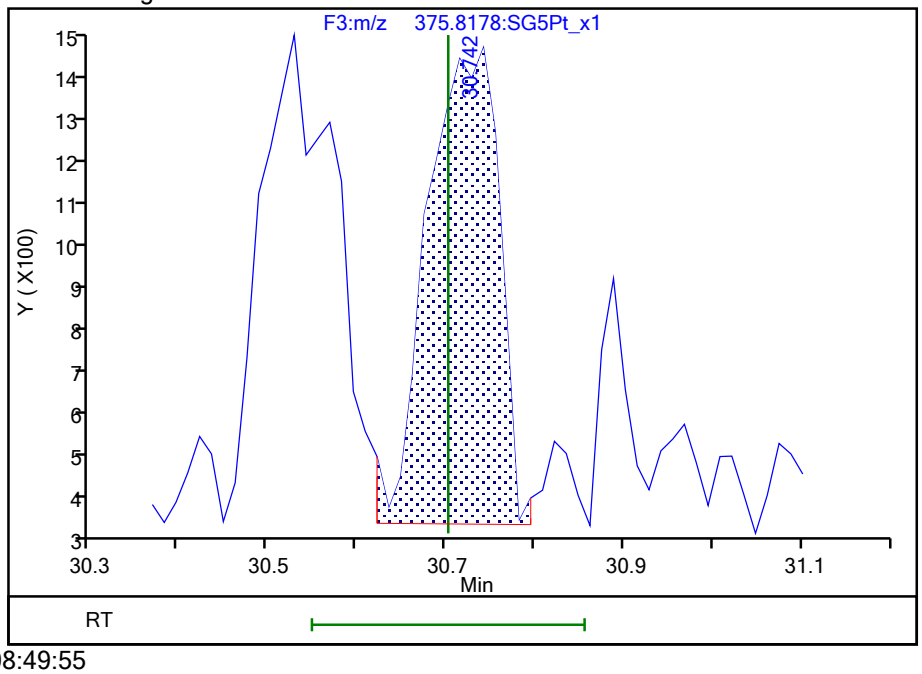

Reviewer: dadunj, 18-Aug-2021 08:49:55

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.35
Area: 17406
Amount: 0.049815
Amount Units: pg/ul

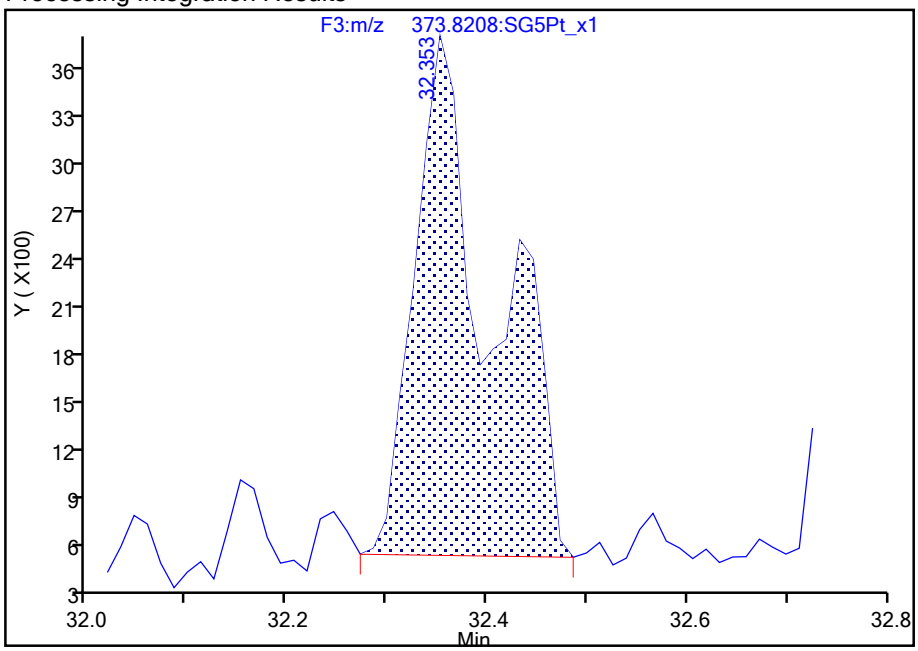

Manual Integration Results

RT: 32.35
Area: 10921
Amount: 0.027781
Amount Units: pg/ul

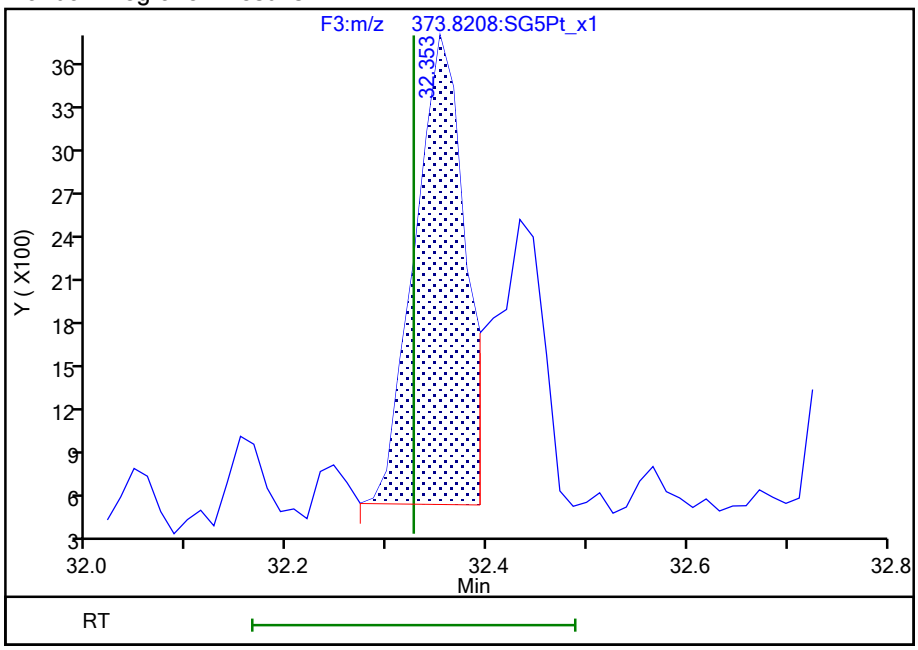

Reviewer: dadunj, 18-Aug-2021 08:50:04

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.35
Area: 17322
Amount: 0.049815
Amount Units: pg/ul

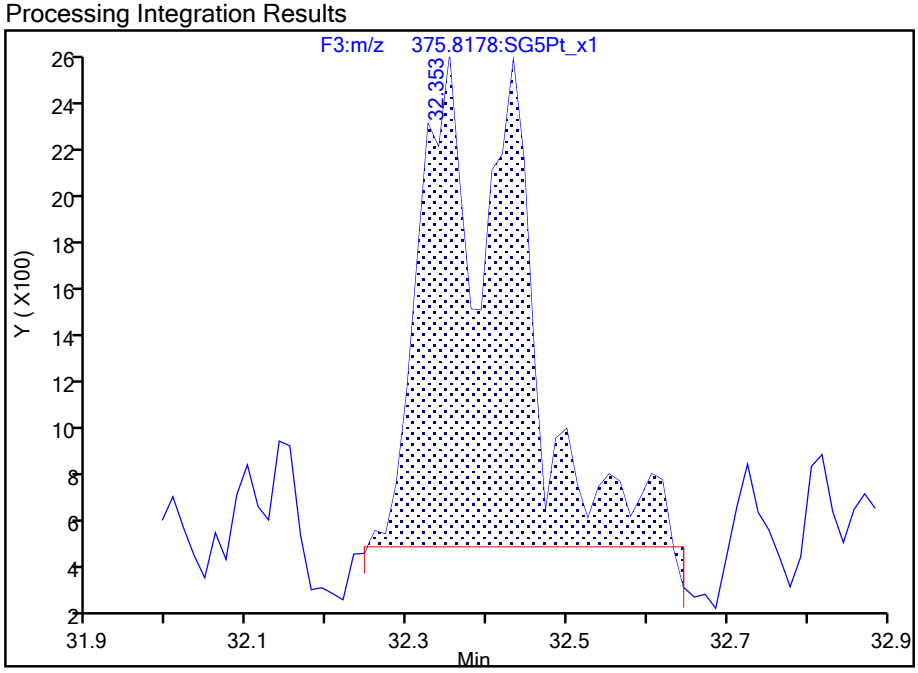

Manual Integration Results

RT: 32.35
Area: 8446
Amount: 0.027781
Amount Units: pg/ul

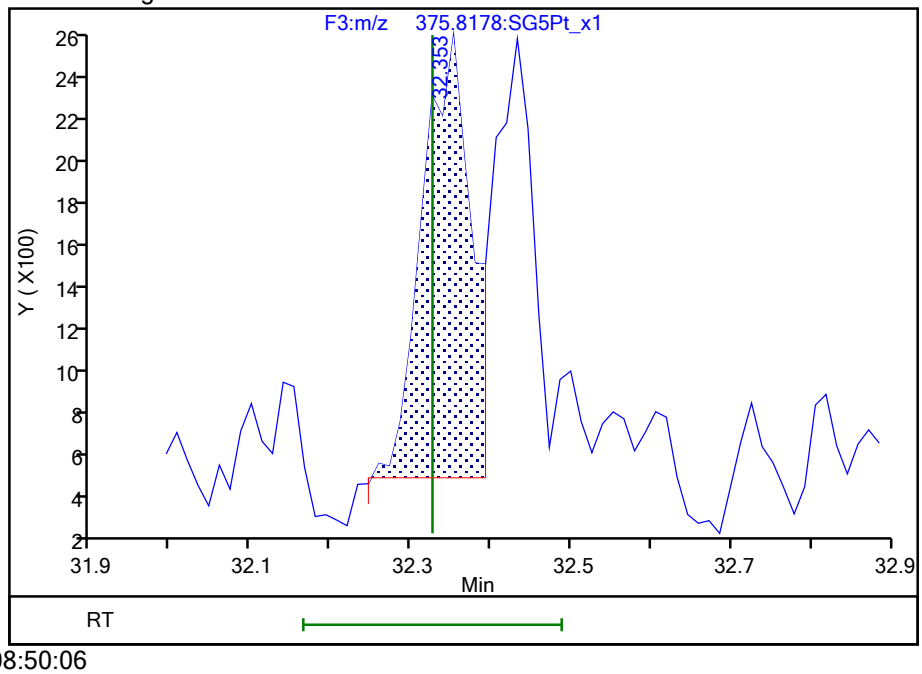

Reviewer: dadunj, 18-Aug-2021 08:50:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.73
Area: 36552
Amount: 0.115800
Amount Units: pg/ul

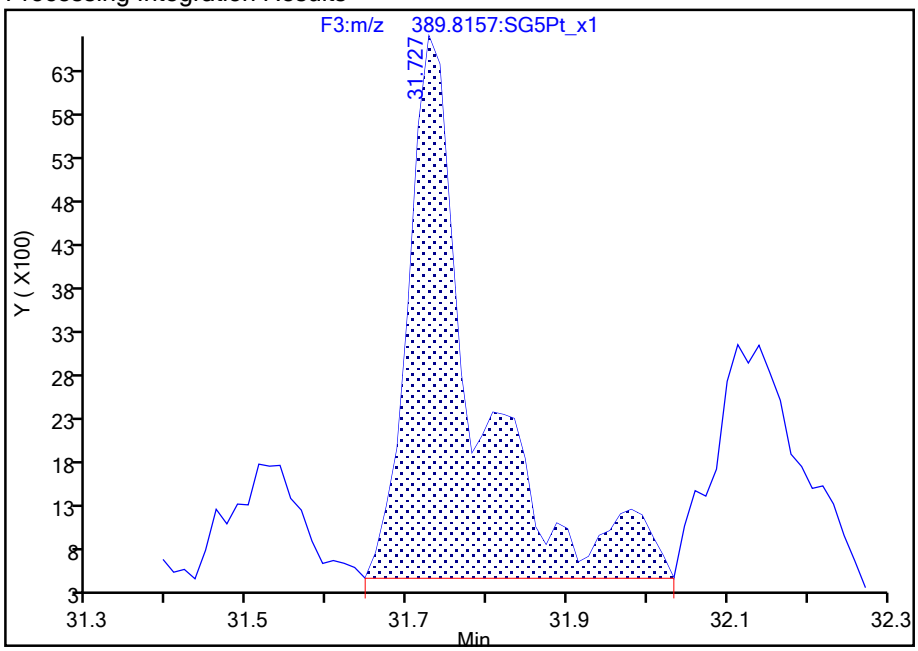

Manual Integration Results

RT: 31.73
Area: 23898
Amount: 0.080286
Amount Units: pg/ul

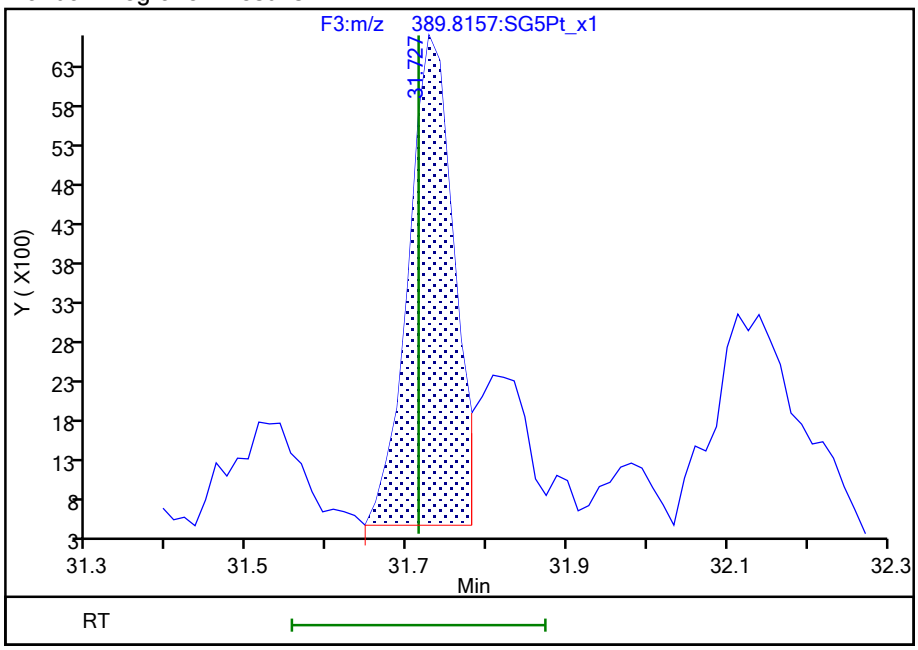

Reviewer: dadunj, 18-Aug-2021 08:50:16

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.73
Area: 26193
Amount: 0.115800
Amount Units: pg/ul

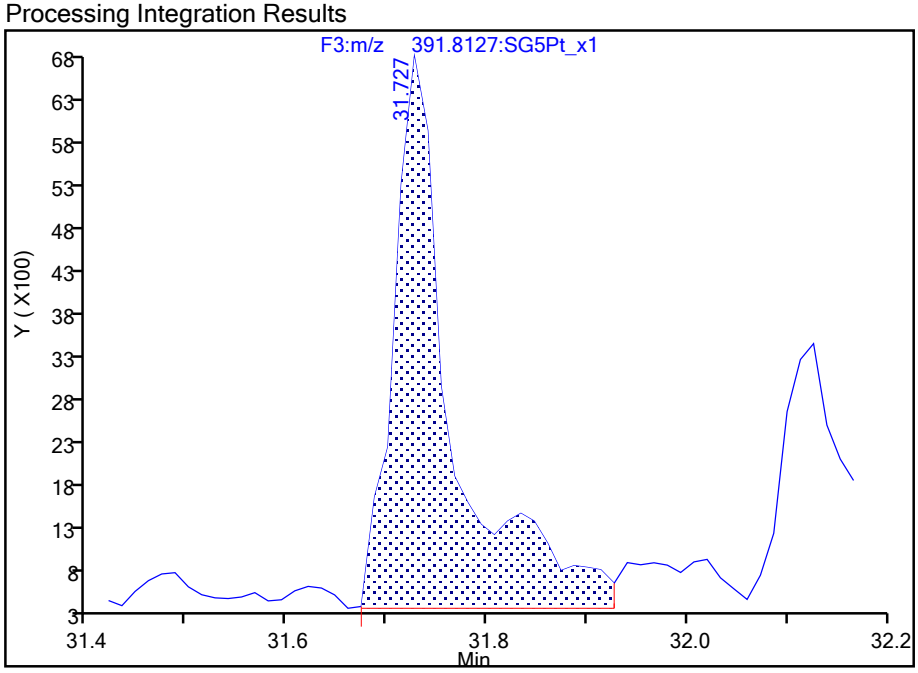

Manual Integration Results

RT: 31.73
Area: 19604
Amount: 0.080286
Amount Units: pg/ul

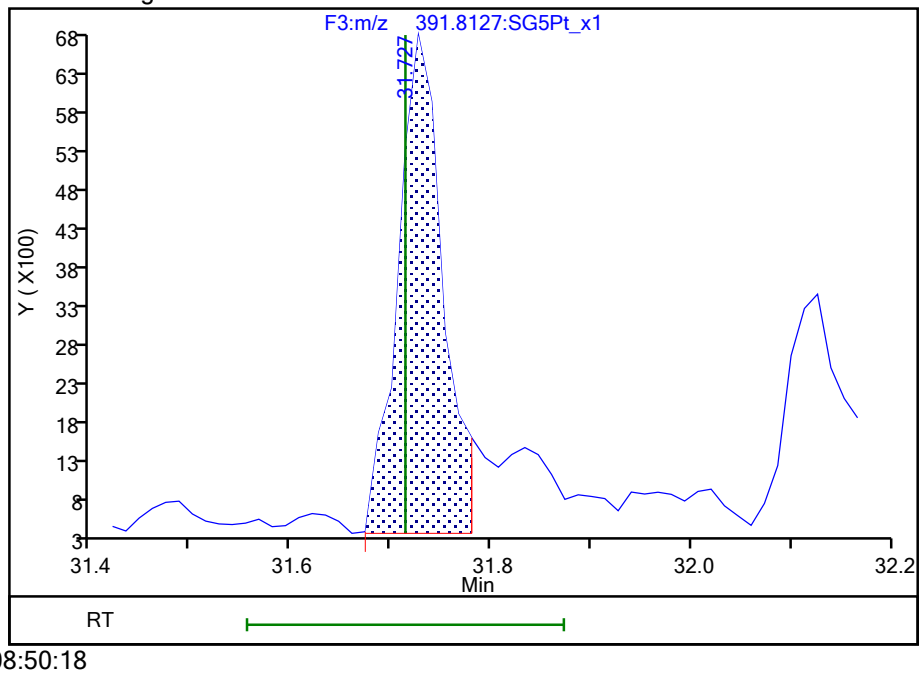

Reviewer: dadunj, 18-Aug-2021 08:50:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 34.87
Area: 19311
Amount: 0.053874
Amount Units: pg/ul

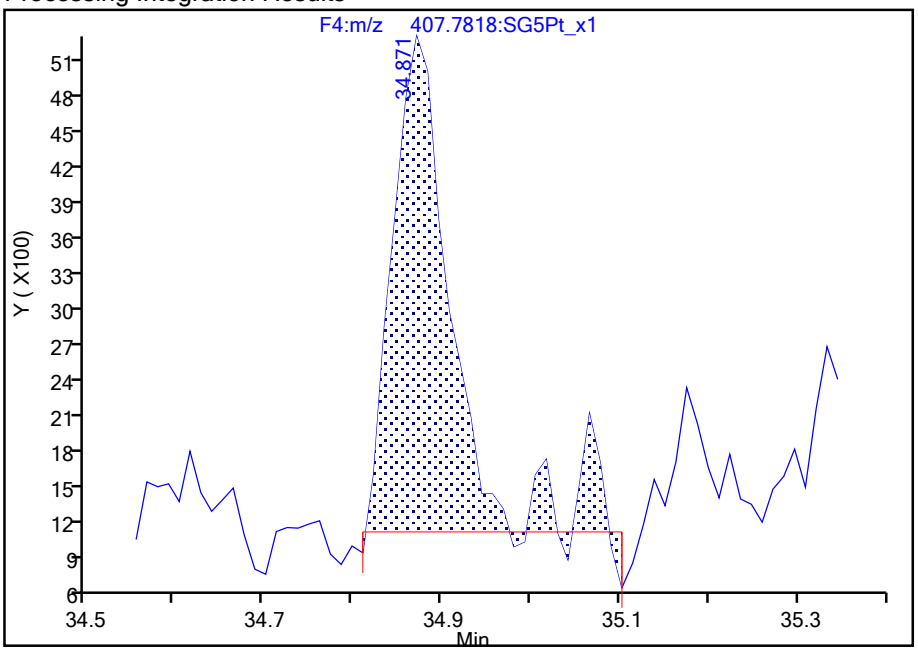

Manual Integration Results

RT: 34.87
Area: 17181
Amount: 0.050767
Amount Units: pg/ul

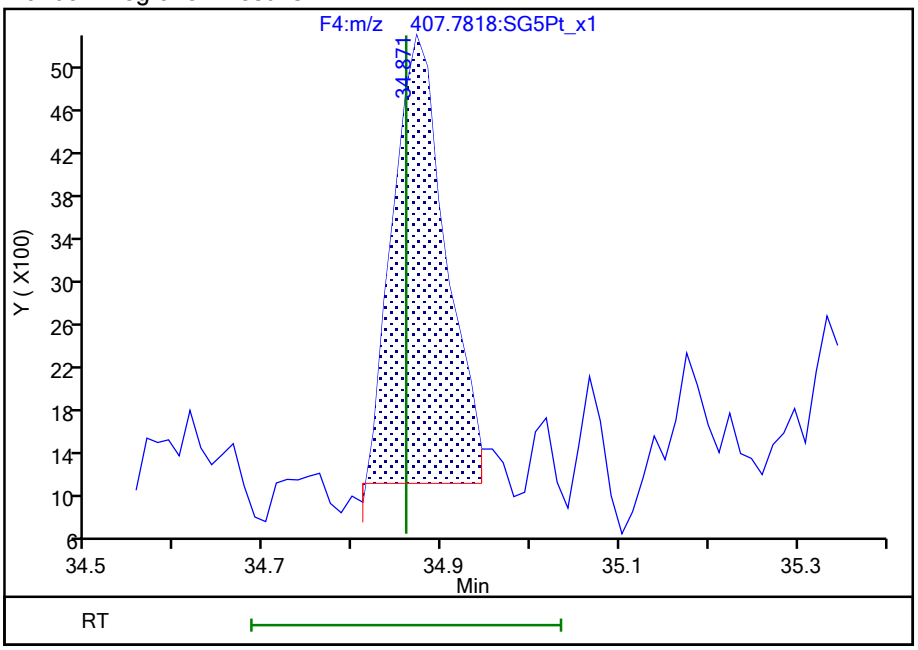

Reviewer: dadunj, 18-Aug-2021 08:50:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 34.57
Area: 28047
Amount: 0.103948
Amount Units: pg/ul

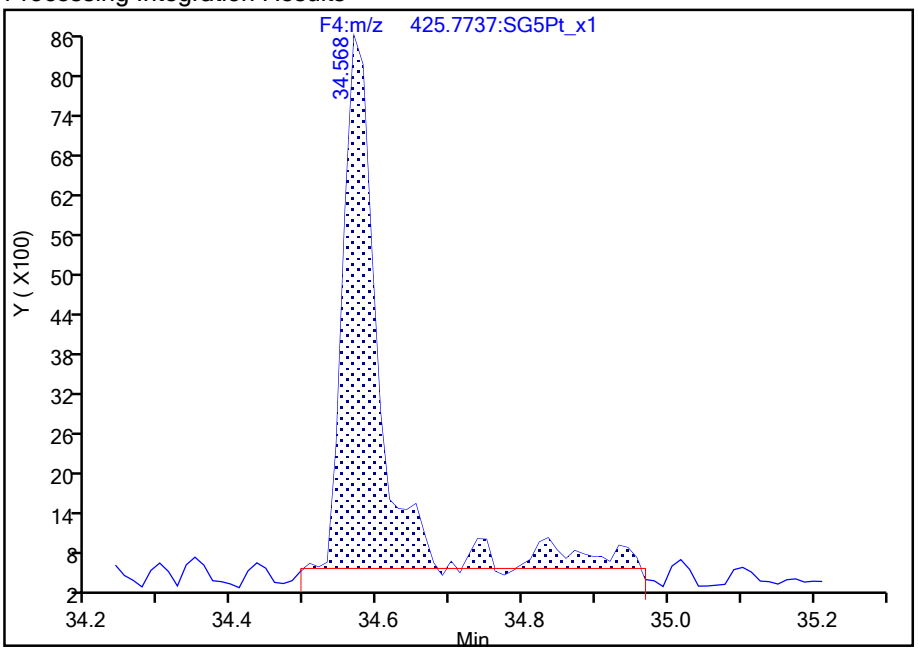

Manual Integration Results

RT: 34.57
Area: 23665
Amount: 0.090251
Amount Units: pg/ul

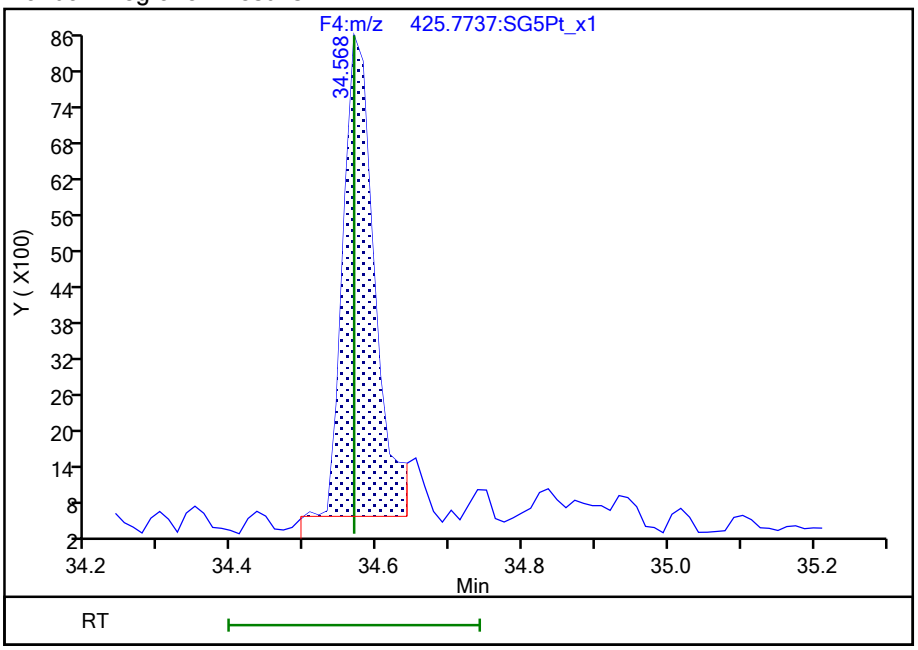

Reviewer: dadunj, 18-Aug-2021 08:50:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 34.58
Area: 23174
Amount: 0.103948
Amount Units: pg/ul

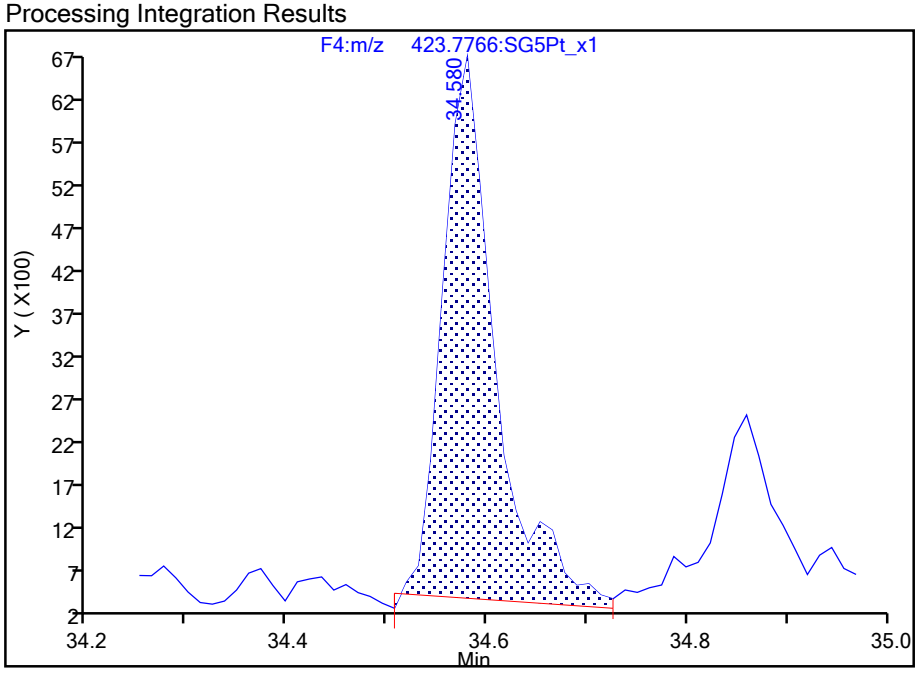

Manual Integration Results

RT: 34.58
Area: 20807
Amount: 0.090251
Amount Units: pg/ul

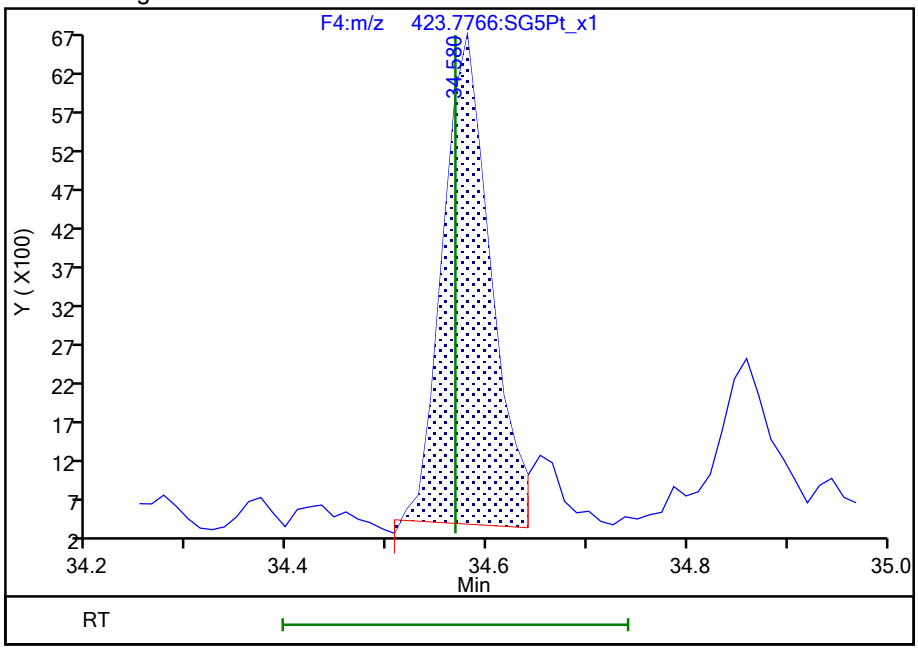

Reviewer: dadunj, 18-Aug-2021 08:50:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 1, m/z: 423.7766, RT: (33.99- 34.61)

Signal: 1

Processing Integration Results

RT = 34.021 Area = 38649

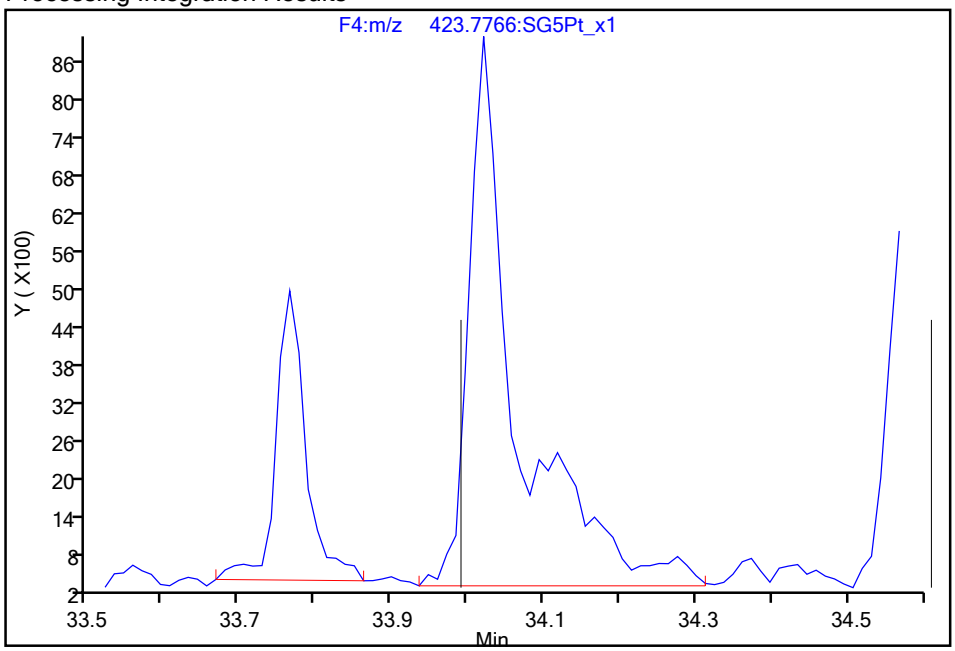

Manual Integration Results

RT = 34.021 Area = 26462 M

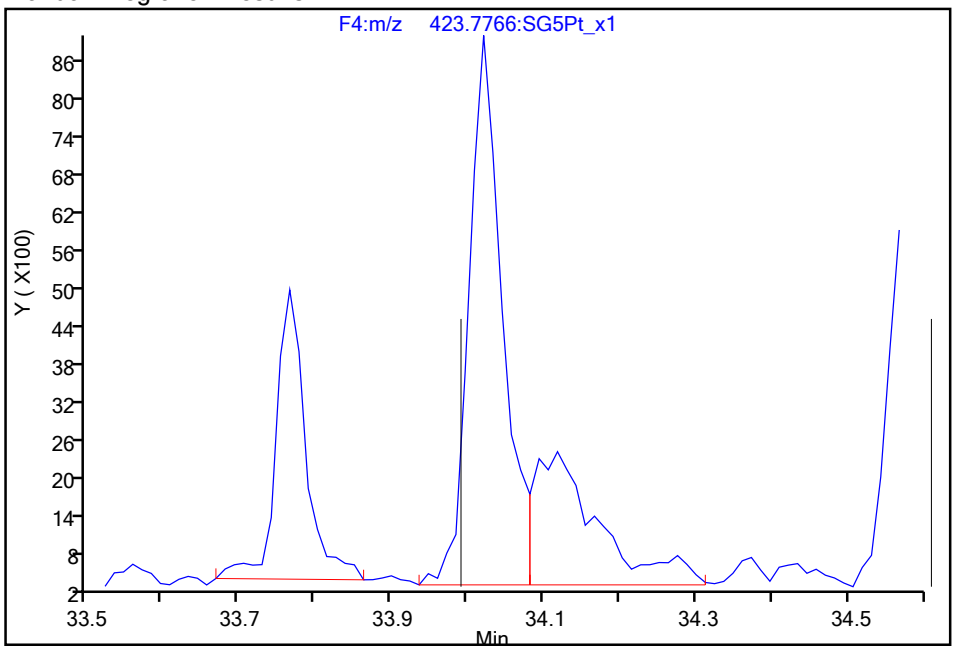

Reviewer: dadunj, 18-Aug-2021 08:50:38

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 2, m/z: 425.7737, RT: (33.99- 34.61)

Signal: 2

Processing Integration Results

RT = 34.021 Area = 27626

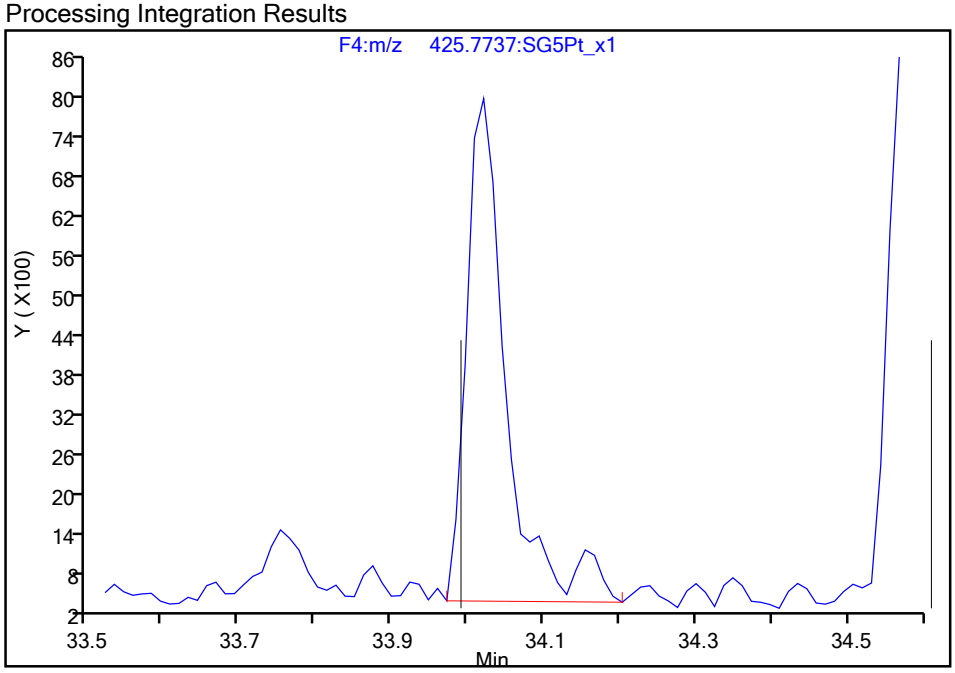

Manual Integration Results

RT = 34.021 Area = 24106 M

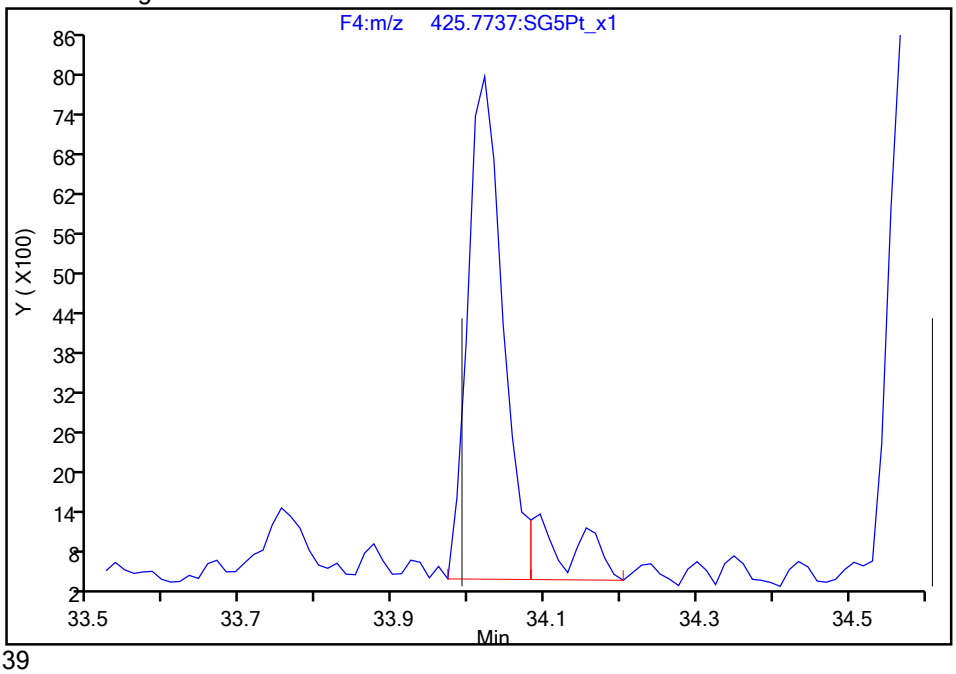

Reviewer: dadunj, 18-Aug-2021 08:50:39

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.02
Area: 13865
Amount: 0.057976
Amount Units: pg/ul

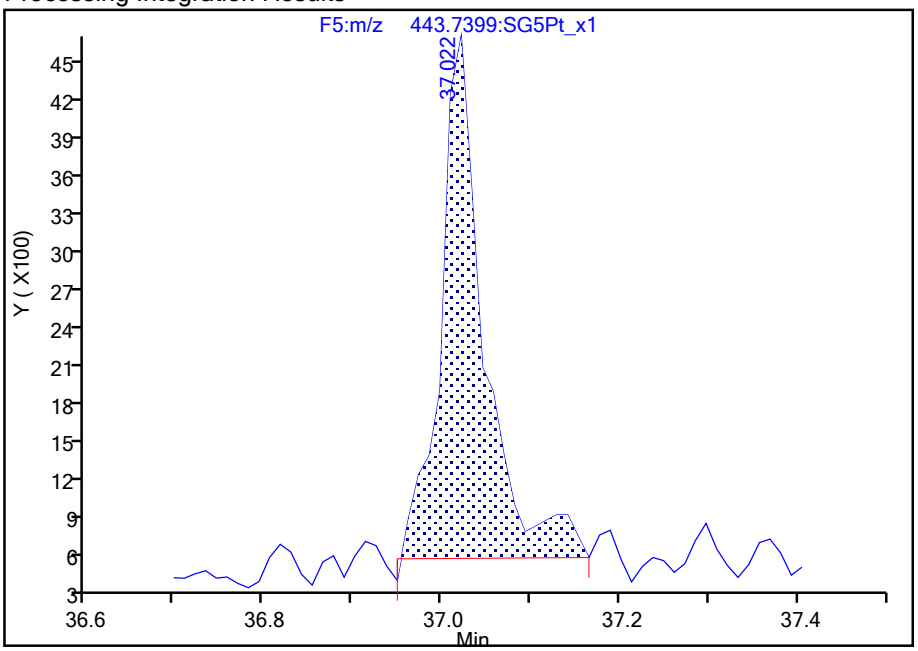

Manual Integration Results

RT: 37.02
Area: 12963
Amount: 0.056027
Amount Units: pg/ul

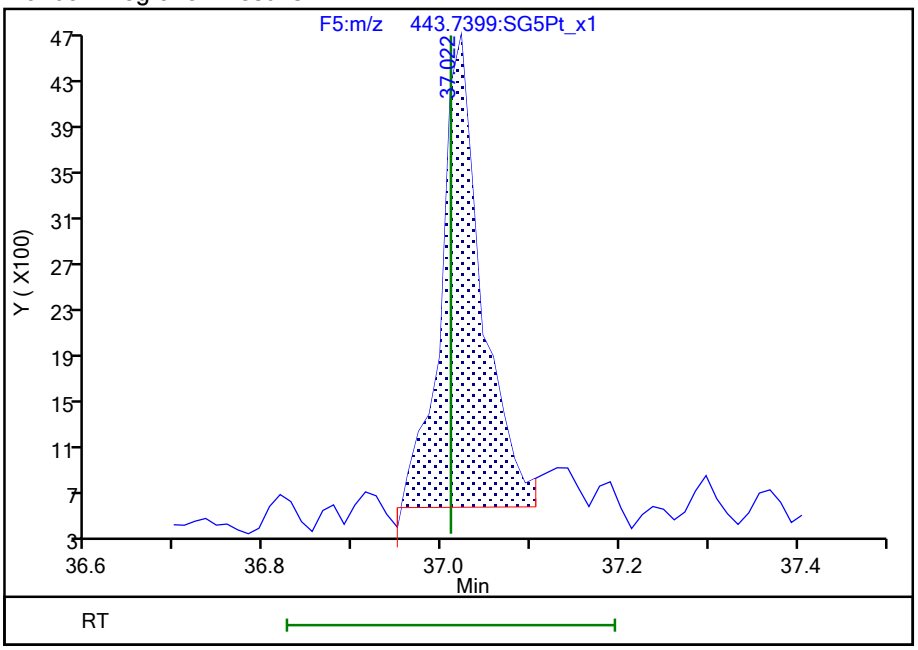

Reviewer: dadunj, 18-Aug-2021 08:50:45

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 36.94
Area: 44906
Amount: 0.254226
Amount Units: pg/ul

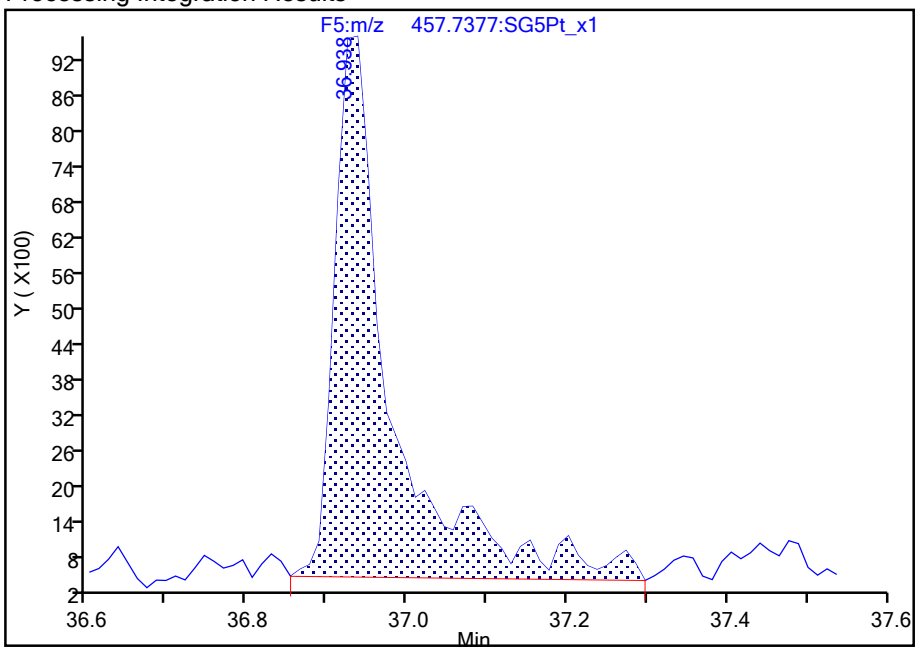

Manual Integration Results

RT: 36.94
Area: 37435
Amount: 0.233258
Amount Units: pg/ul

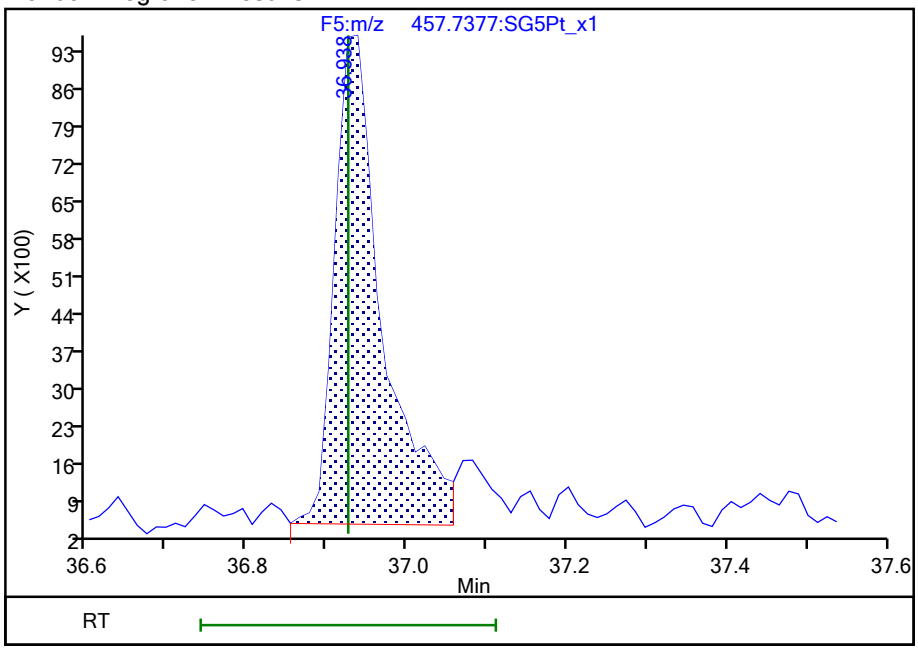

Reviewer: dadunj, 18-Aug-2021 08:50:49

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

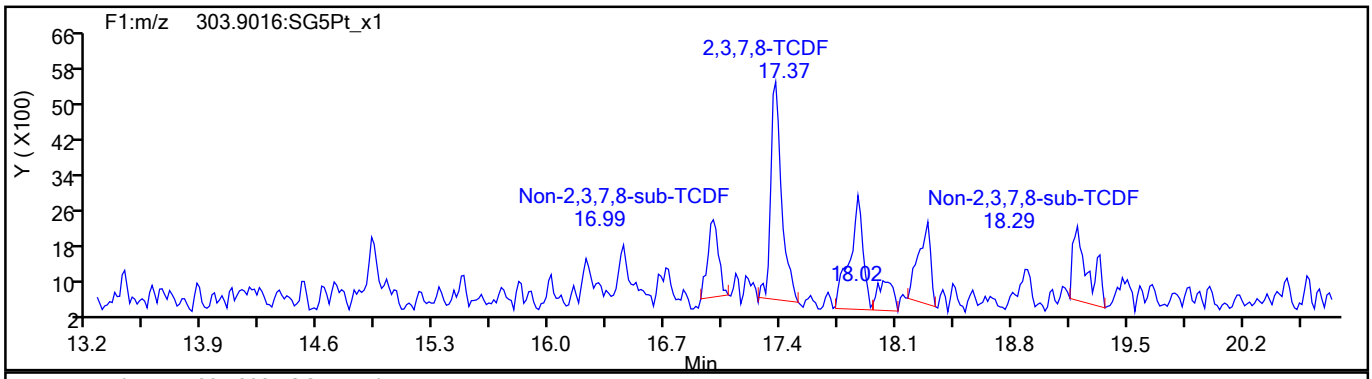

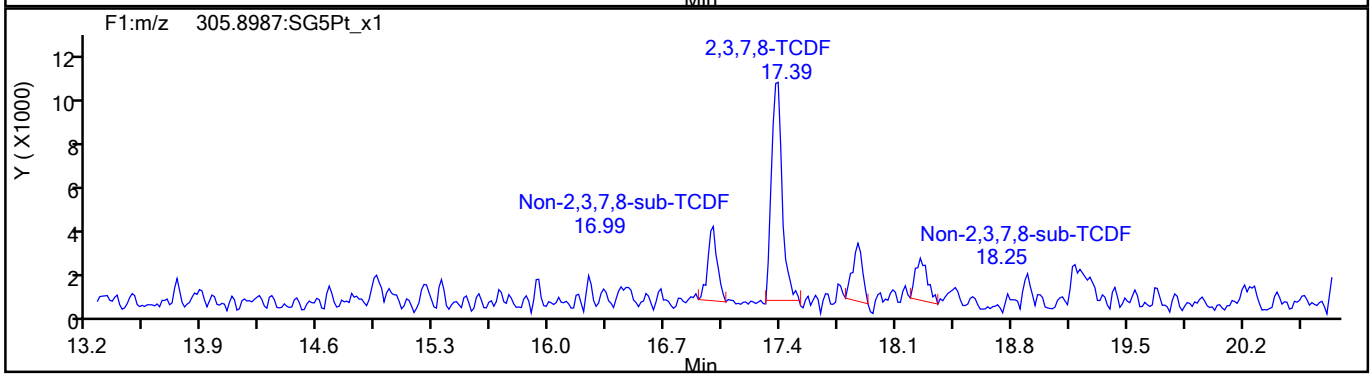

TCDF Standards

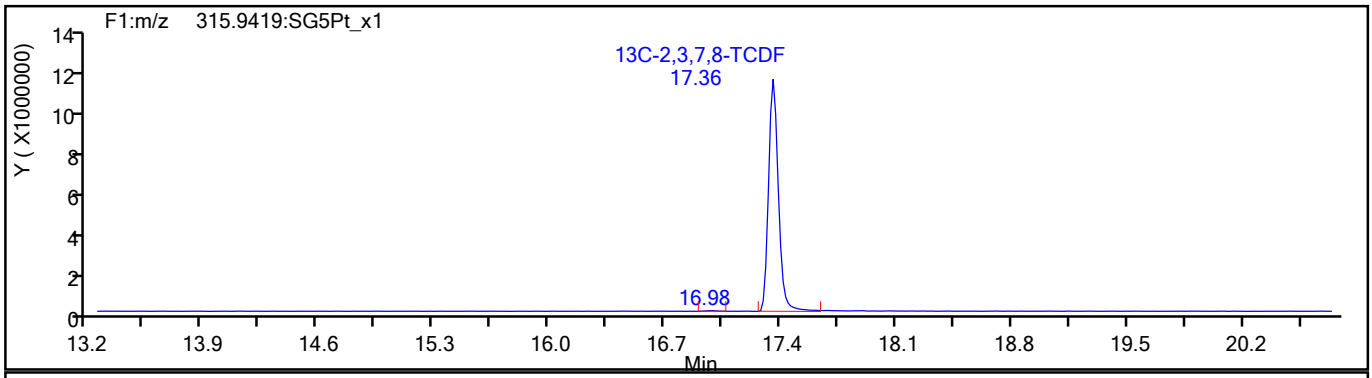

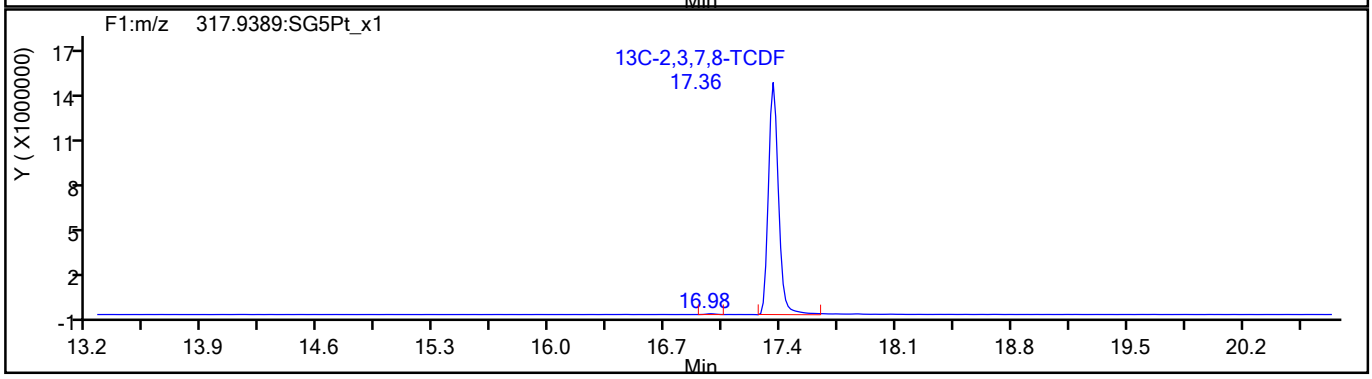

780783

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

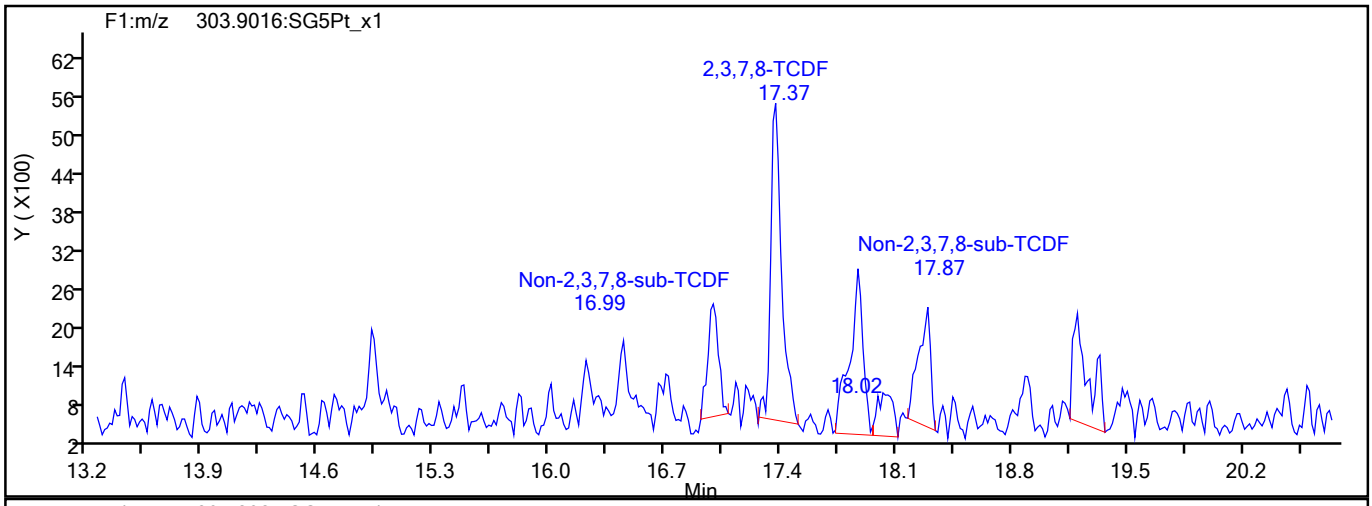

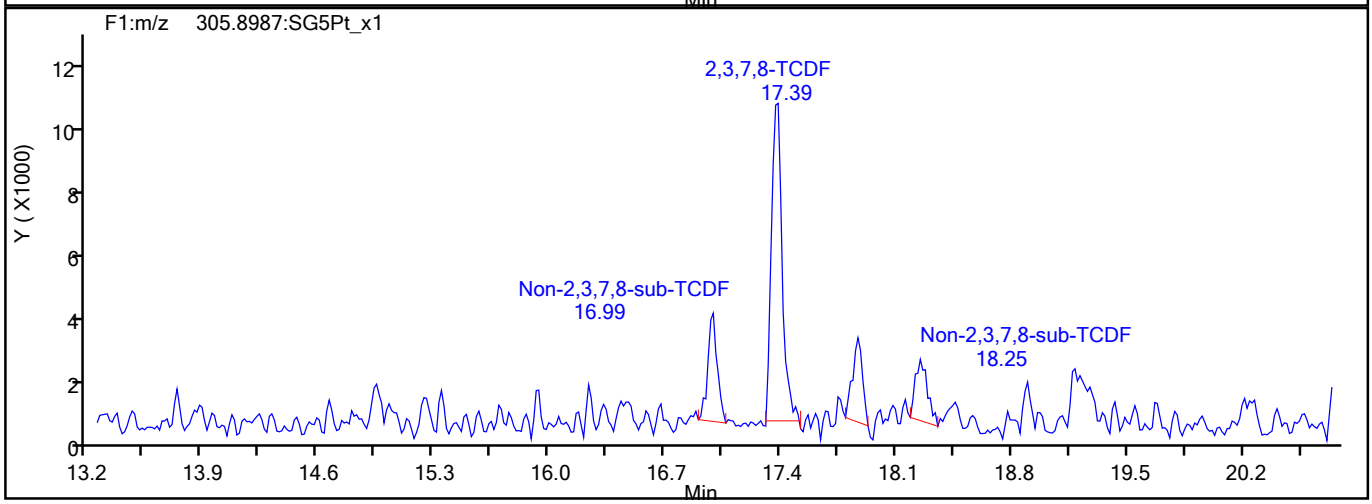

TCDF Interference Mass

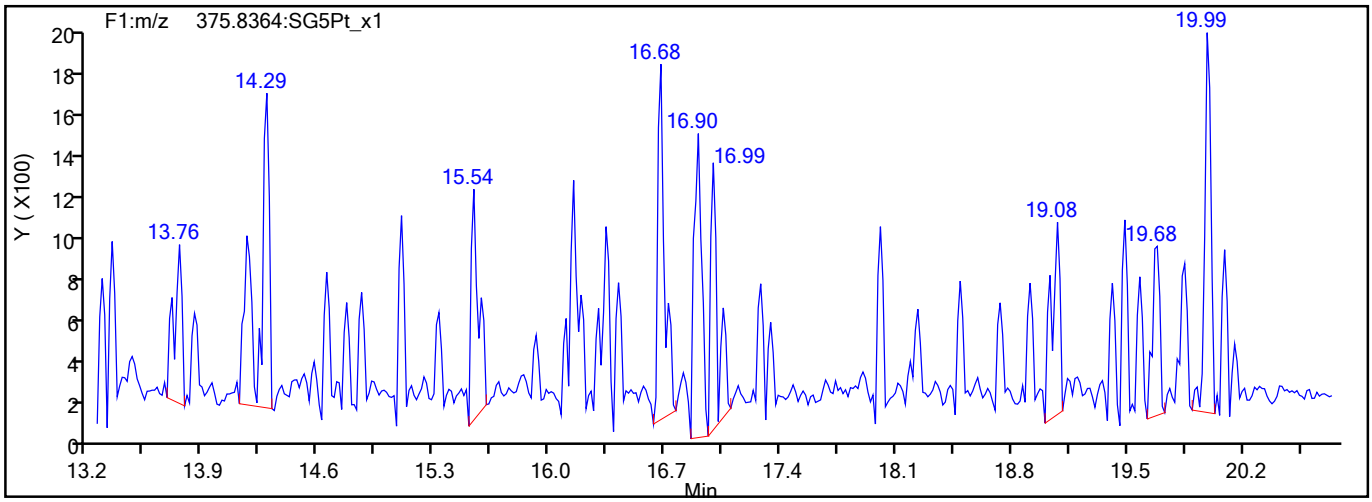

780784

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

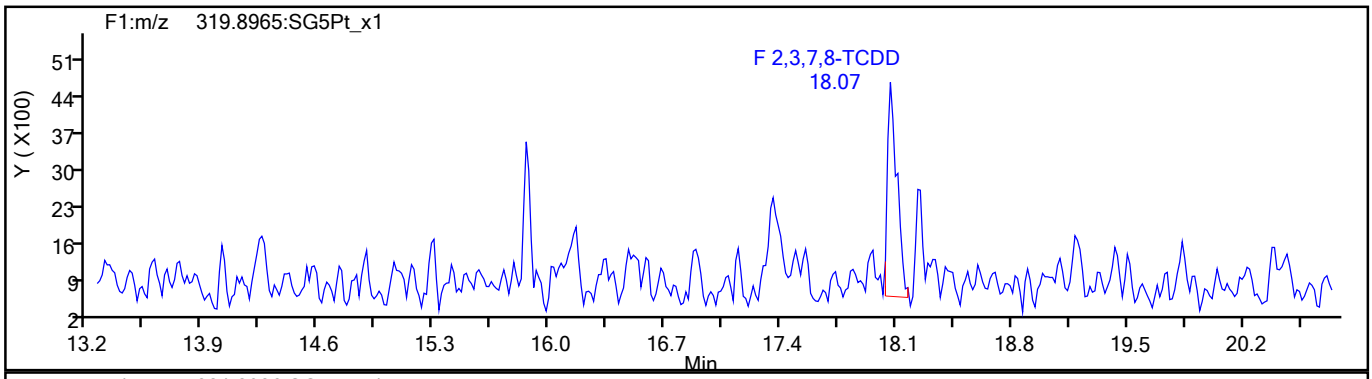

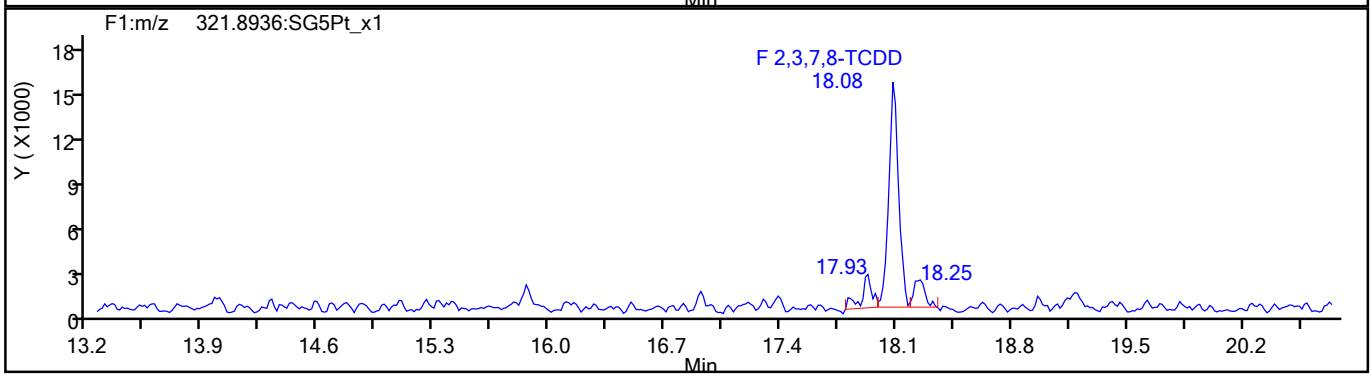

TCDD Standards

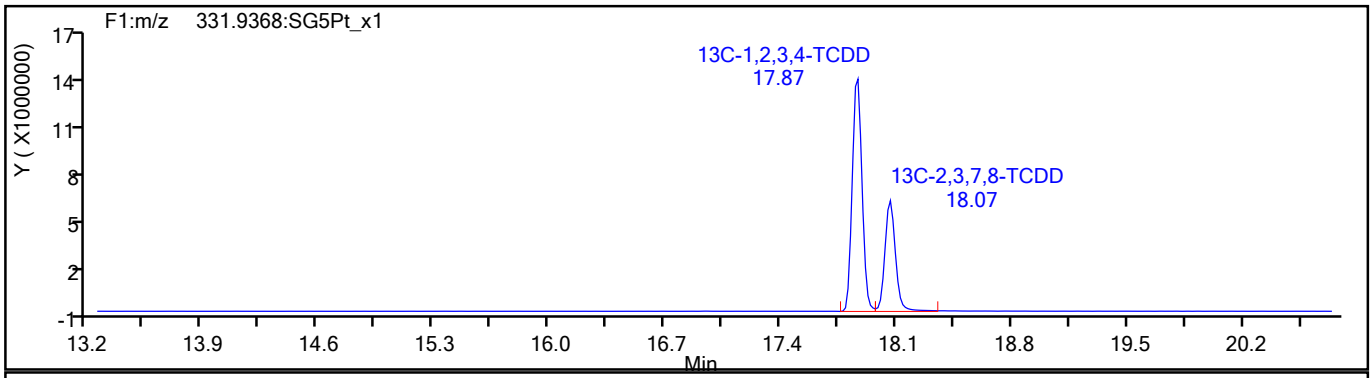

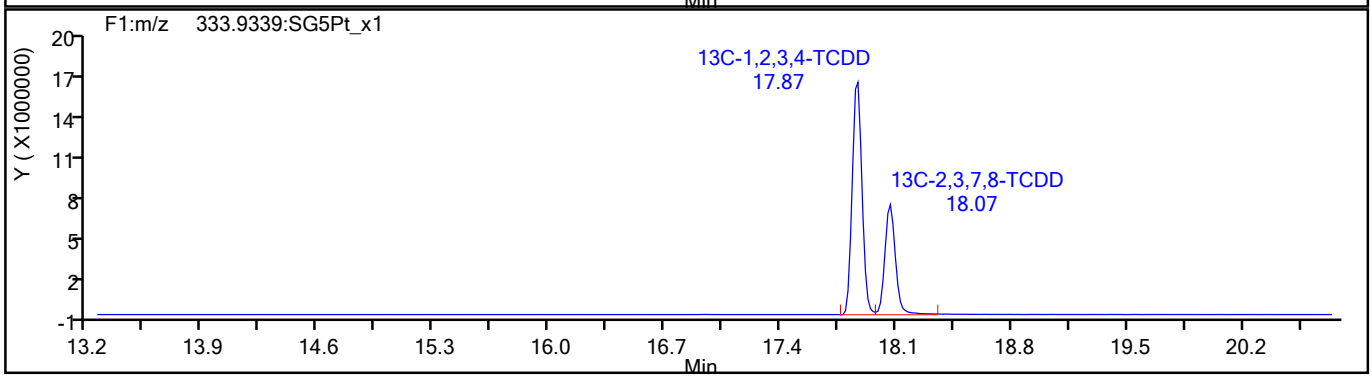

780785

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

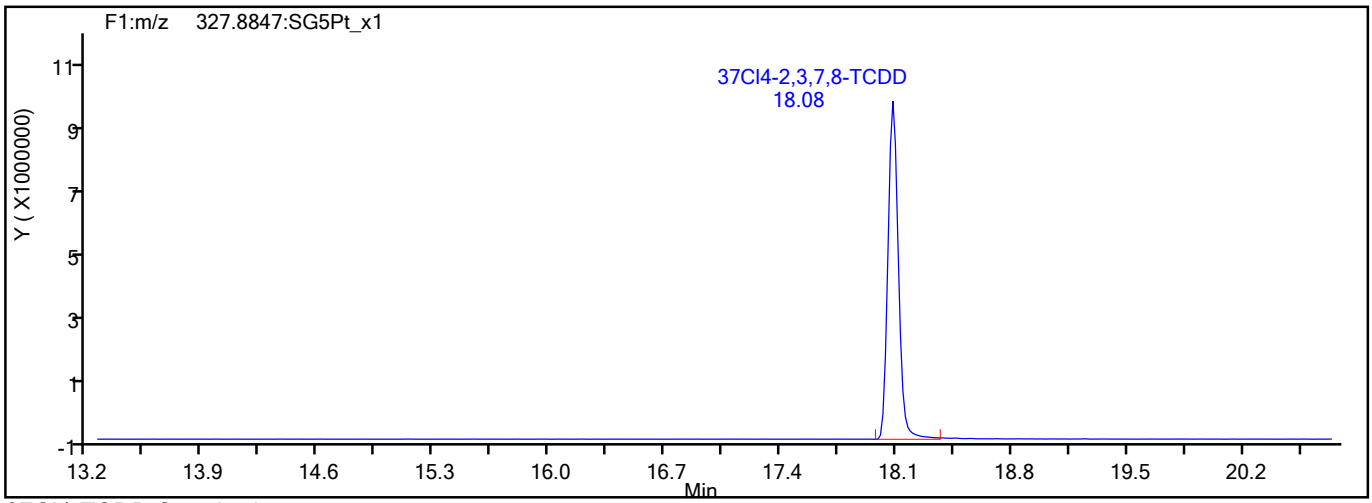

37Cl4-TCDD Standards

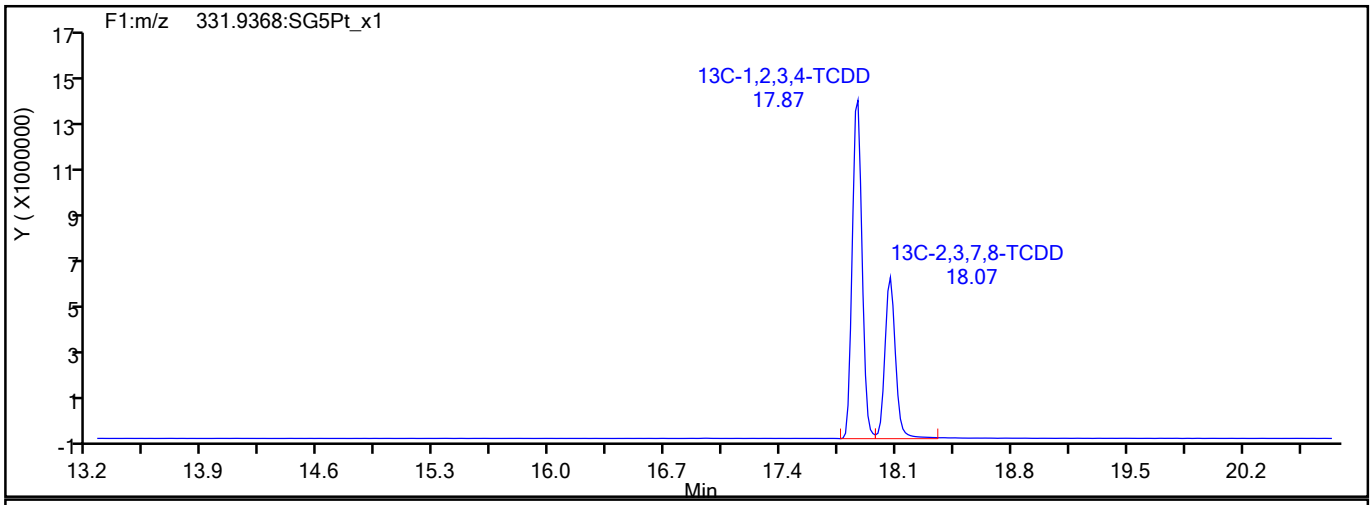

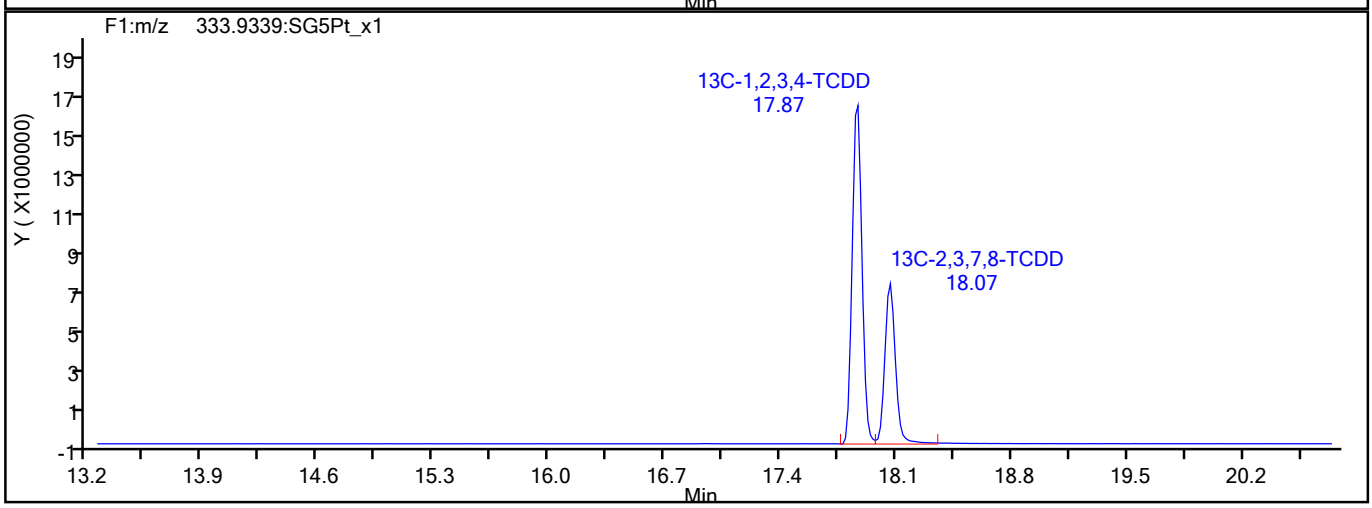

780786

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

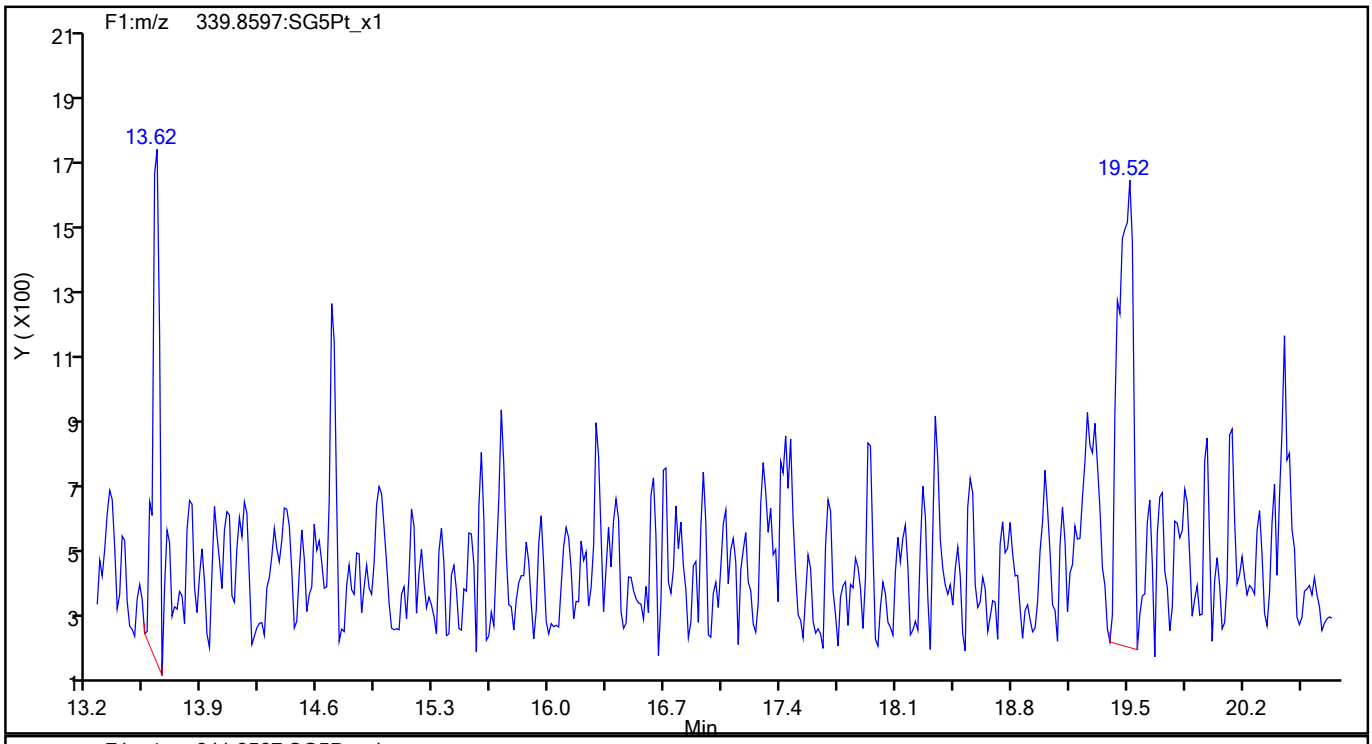

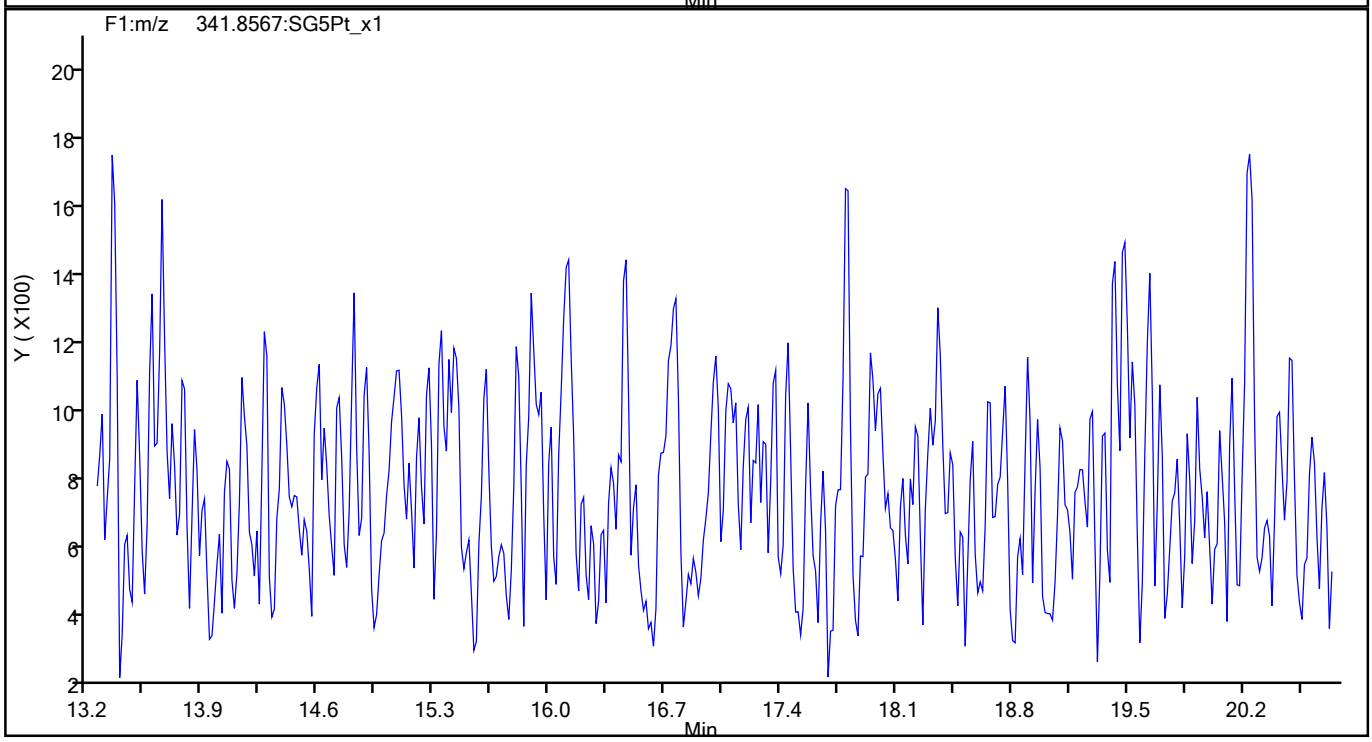

780787

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

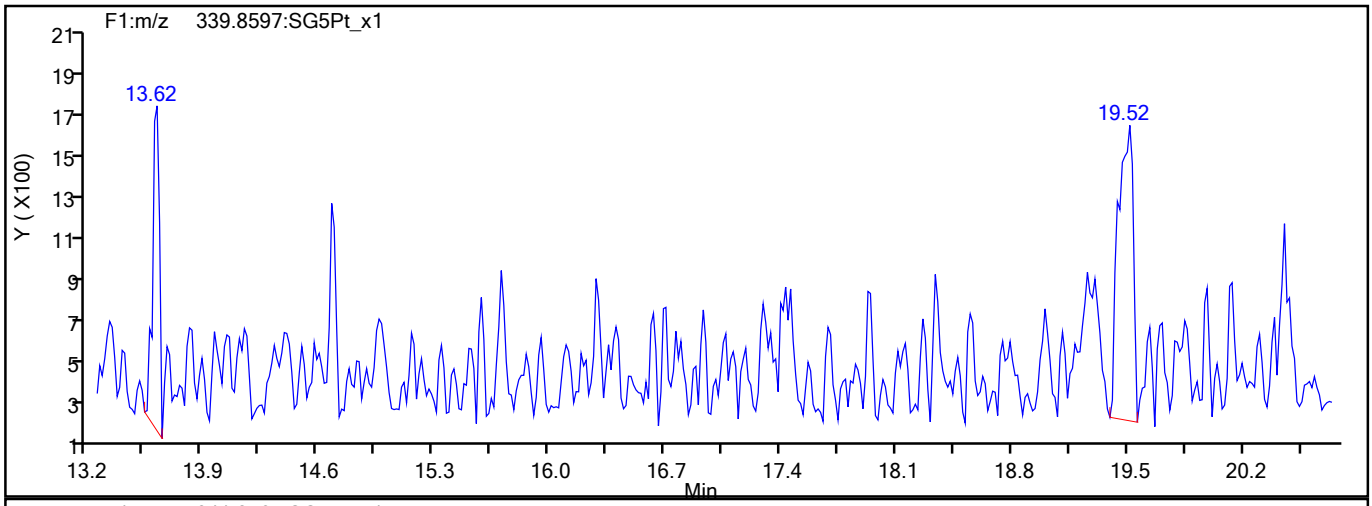

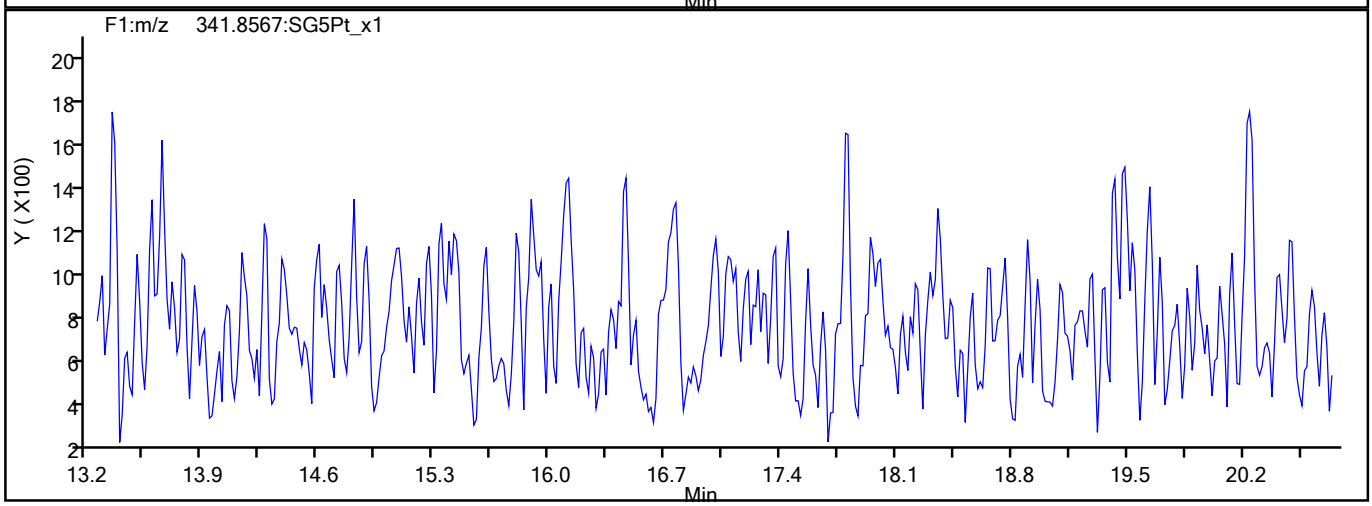

F1 PeCDFs Interference Mass

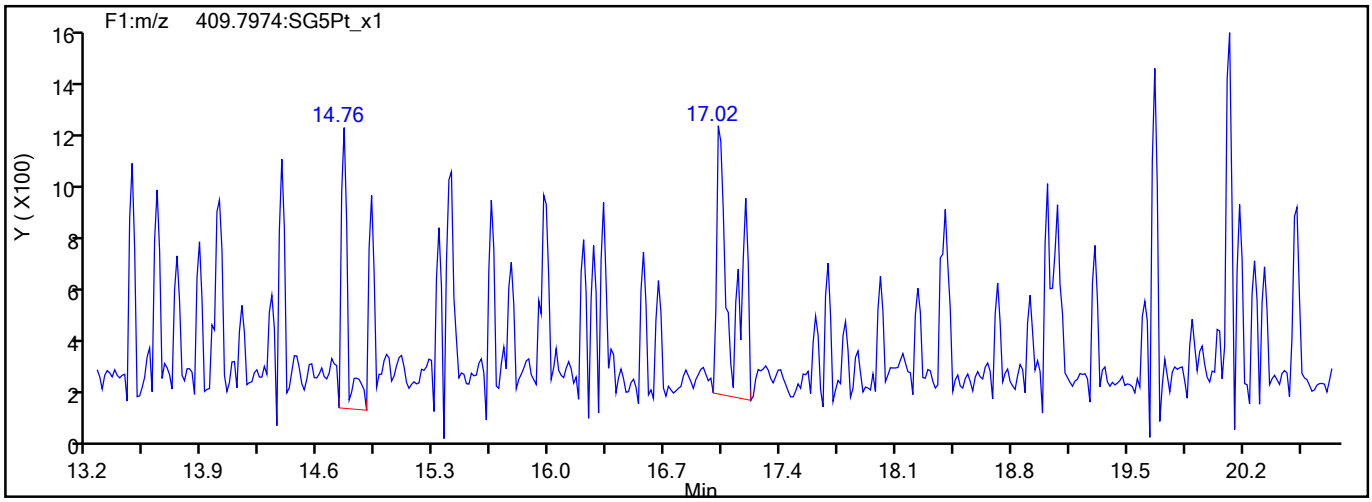

780788

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

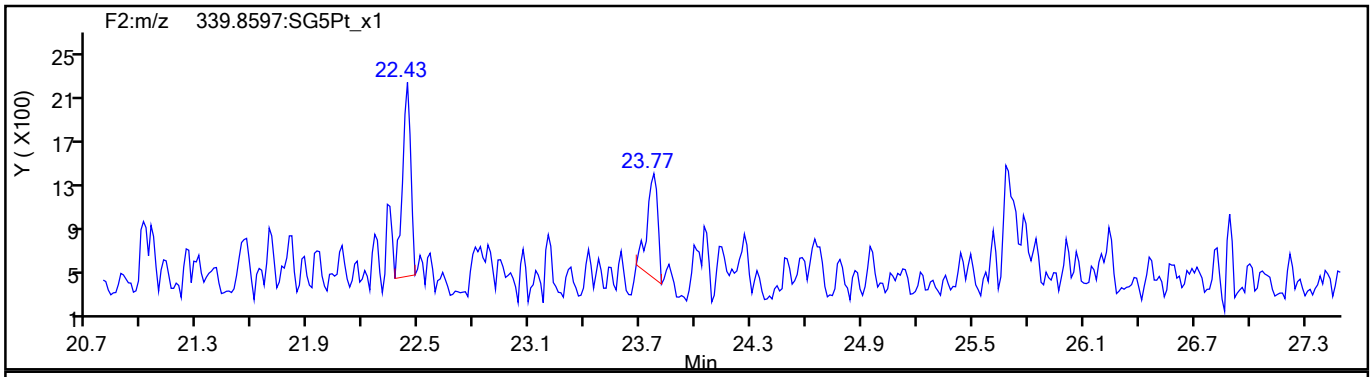

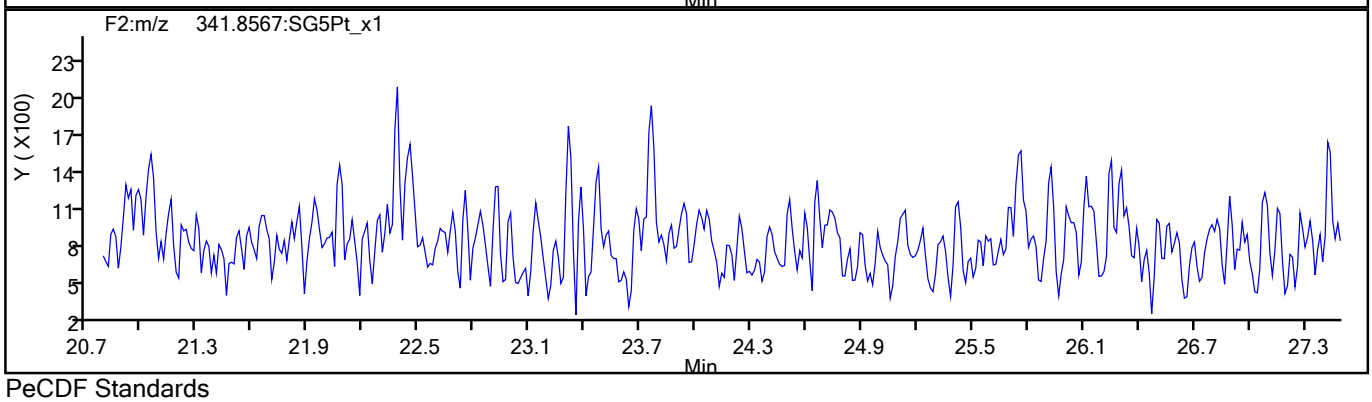

PeCDF Standards

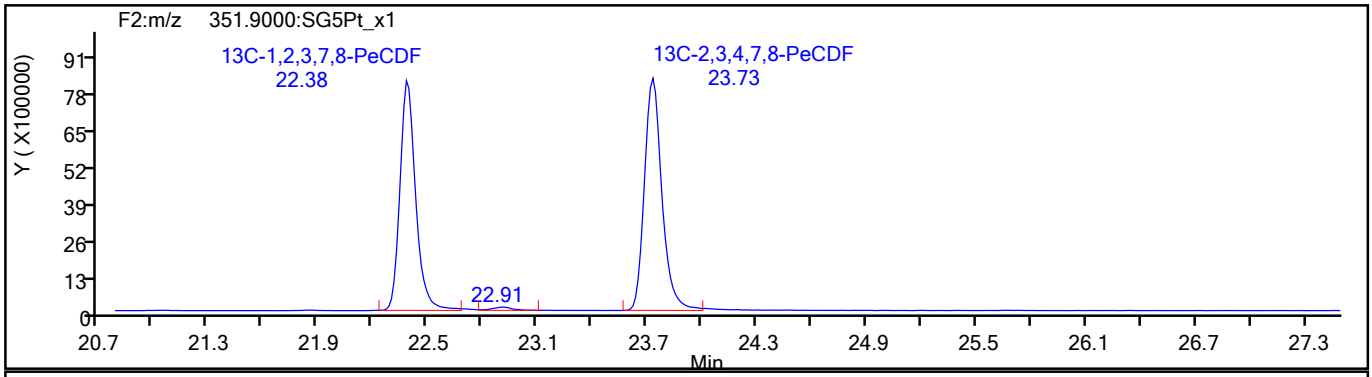

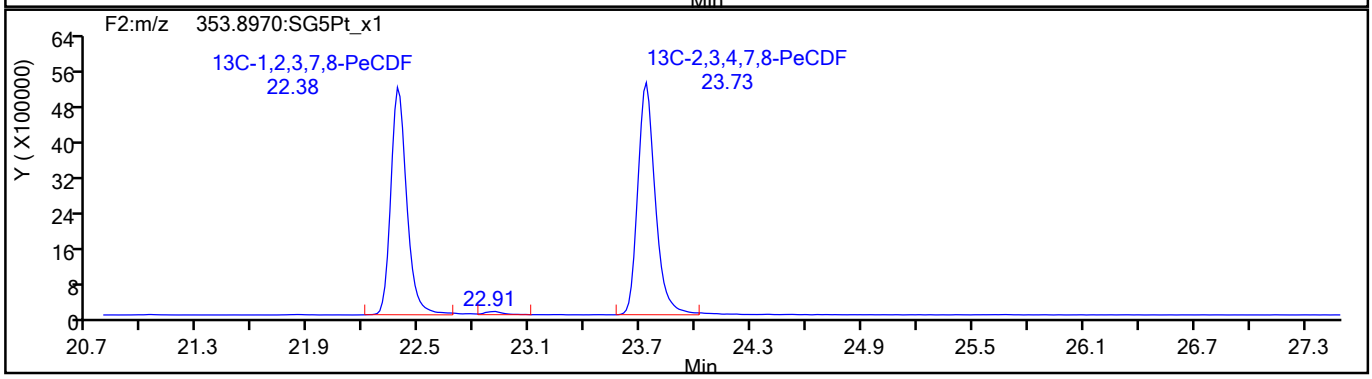

780789

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

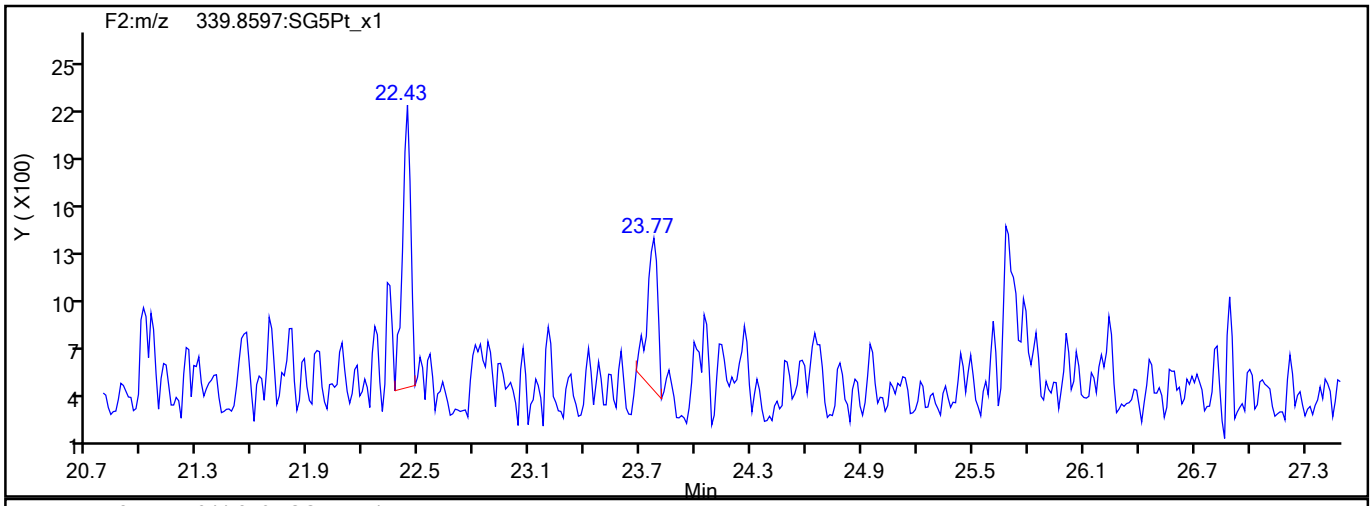

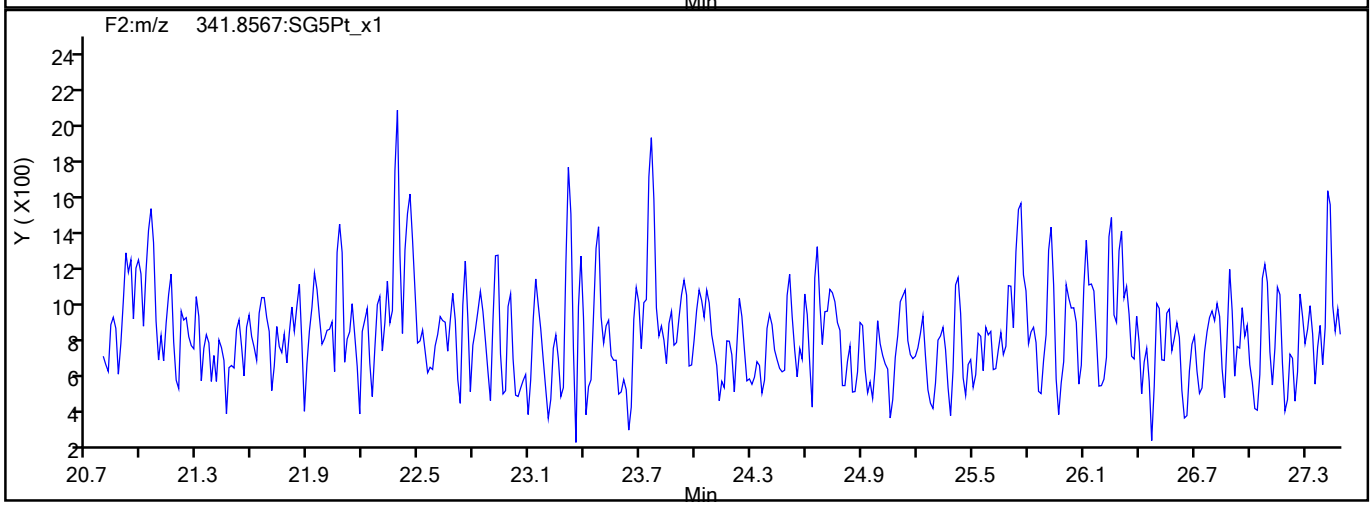

PeCDF Interference Mass

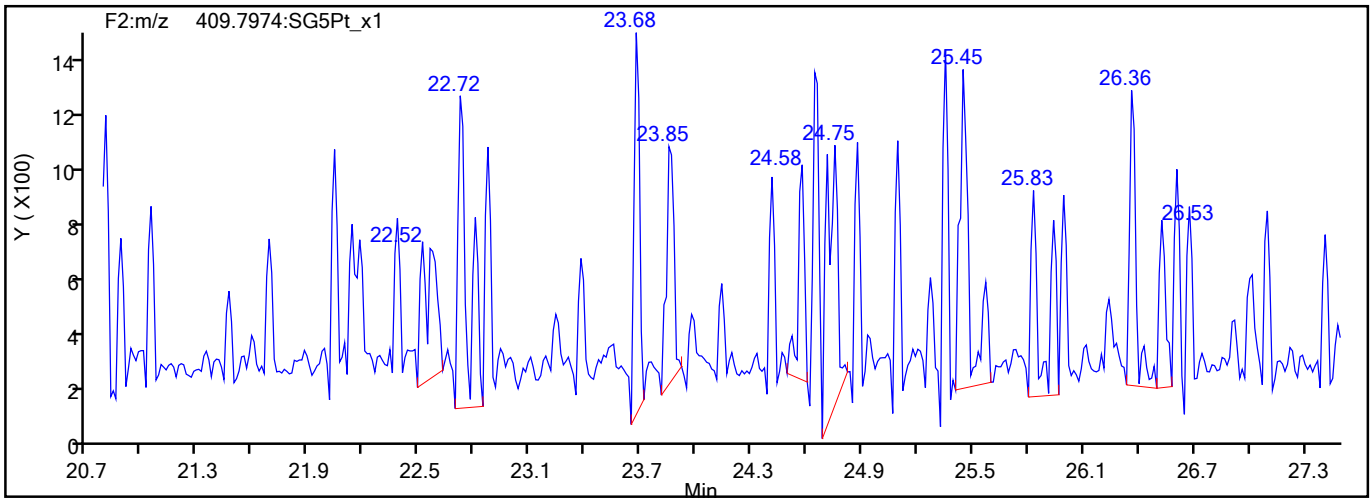

780790

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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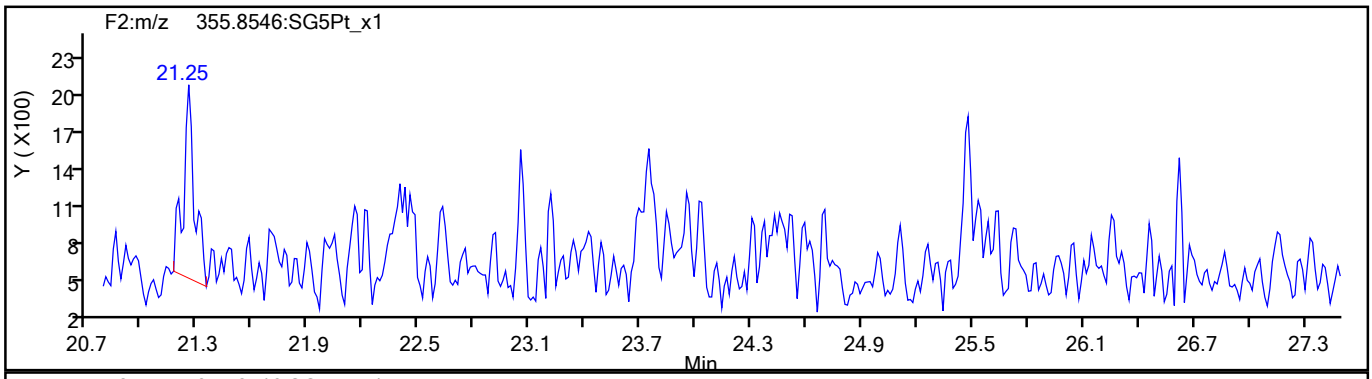

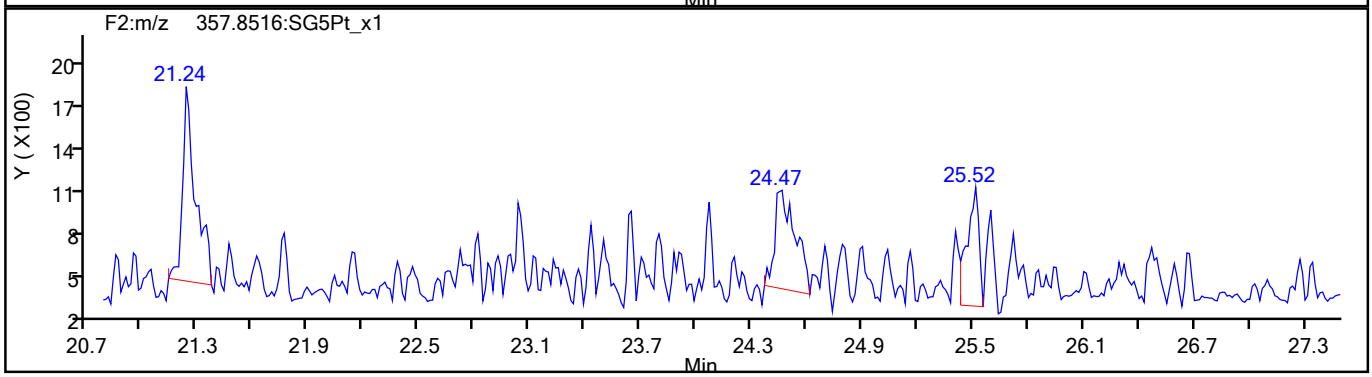

PeCDD Standards

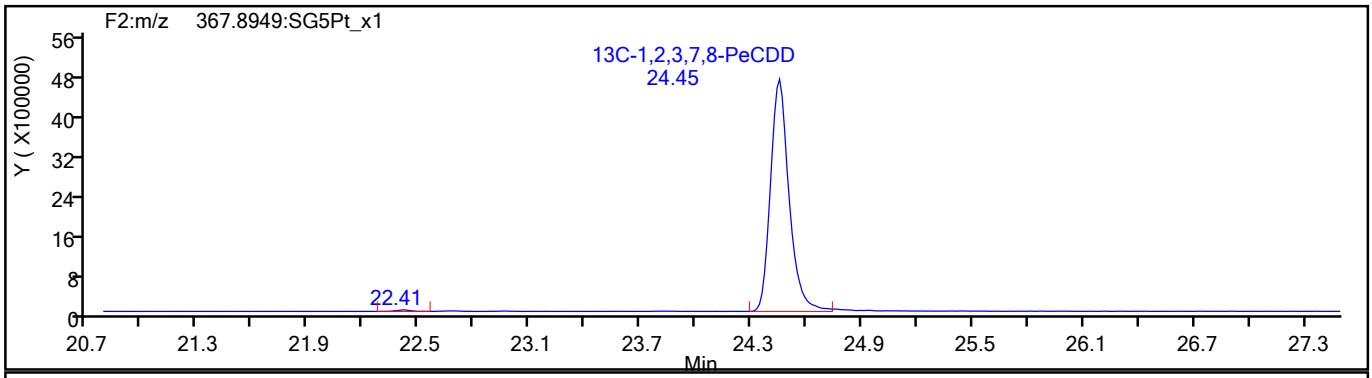

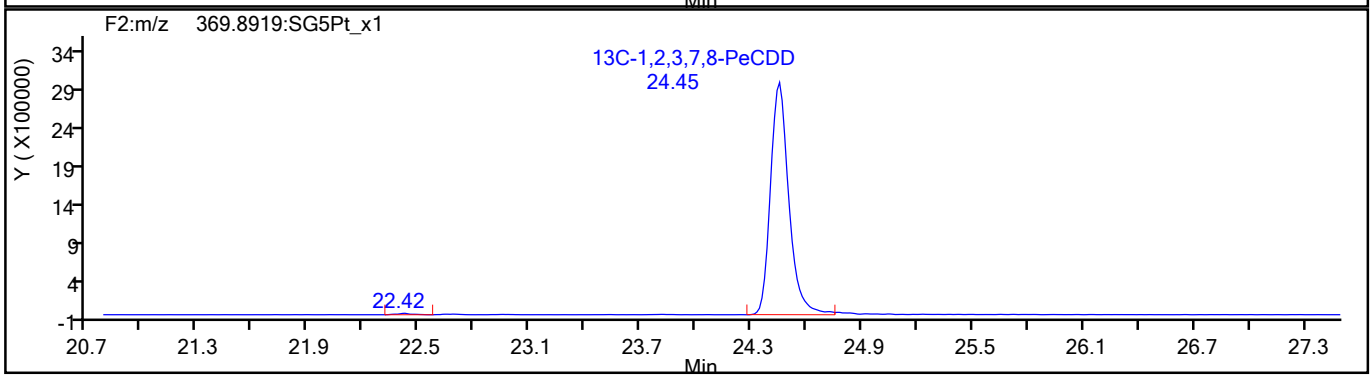

780791

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

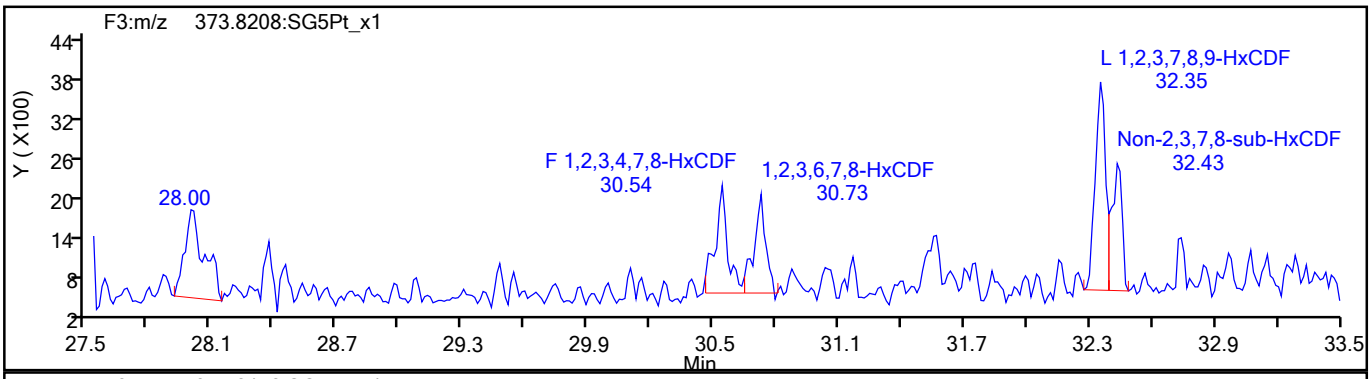

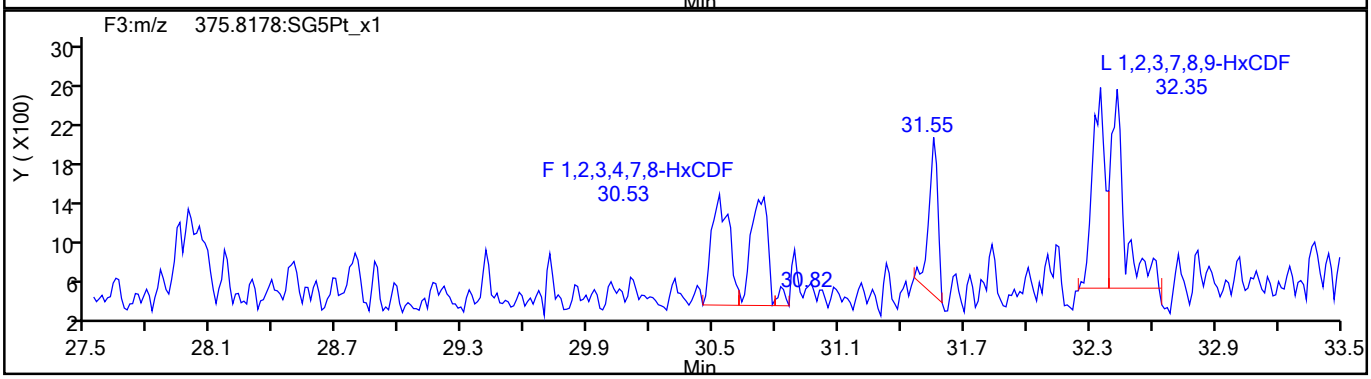

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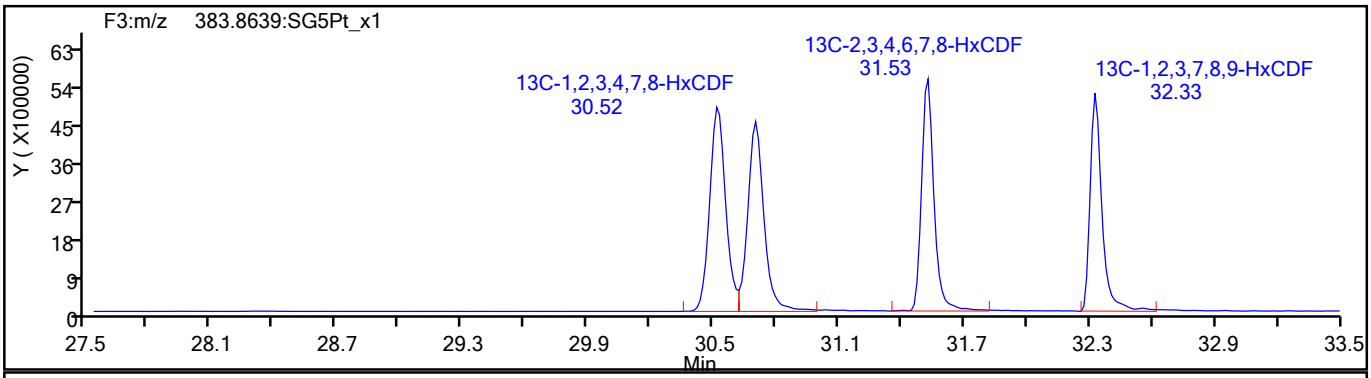

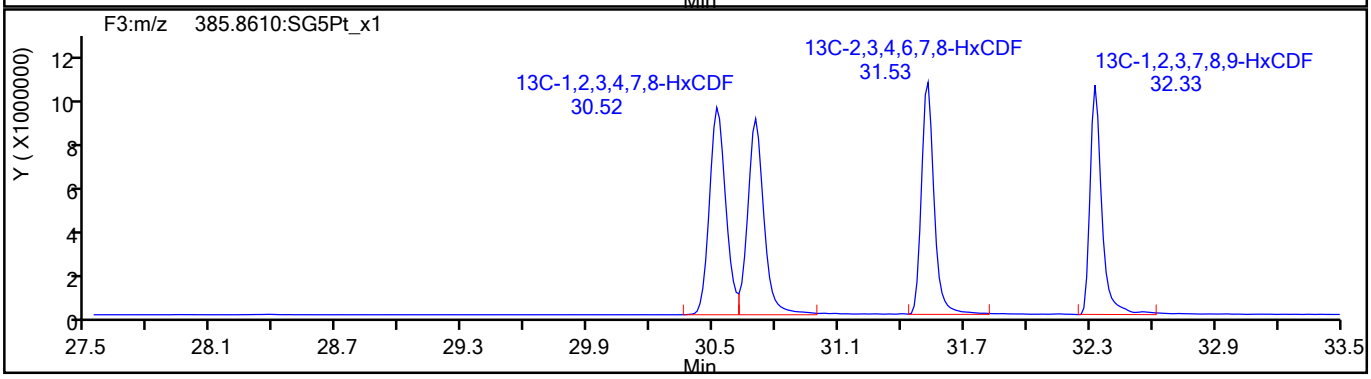

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Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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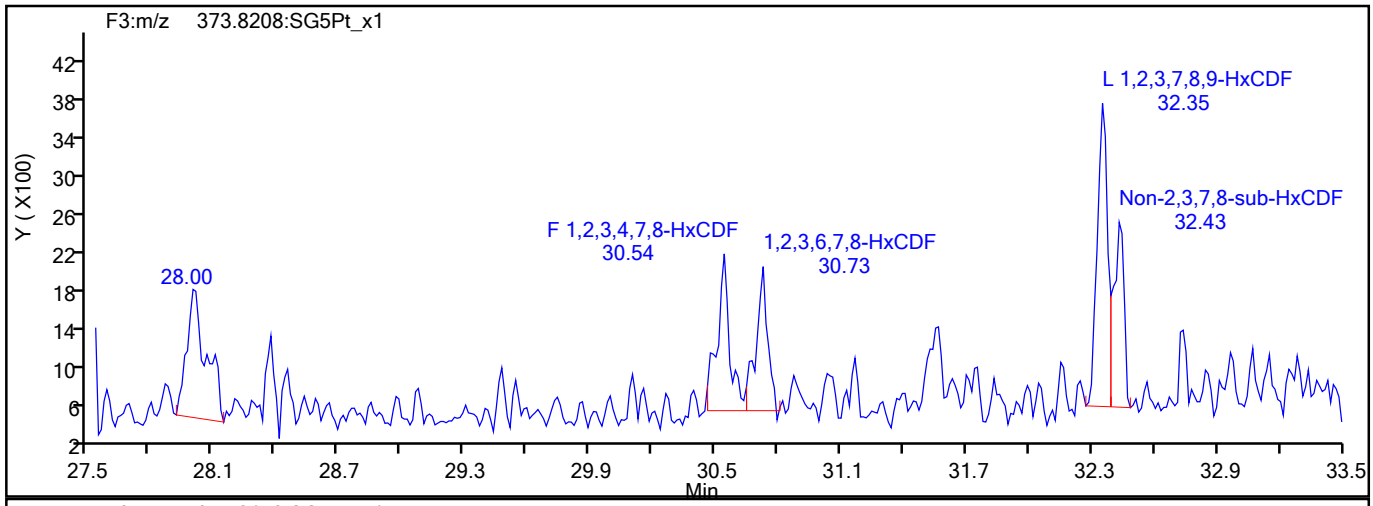

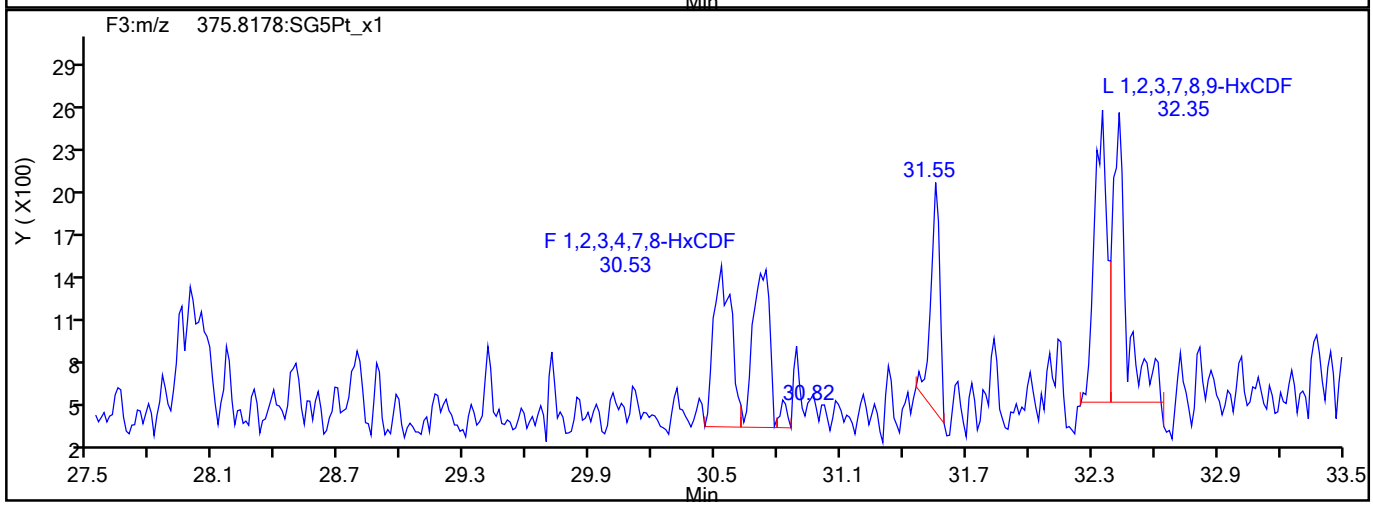

HxCDF Interference Mass

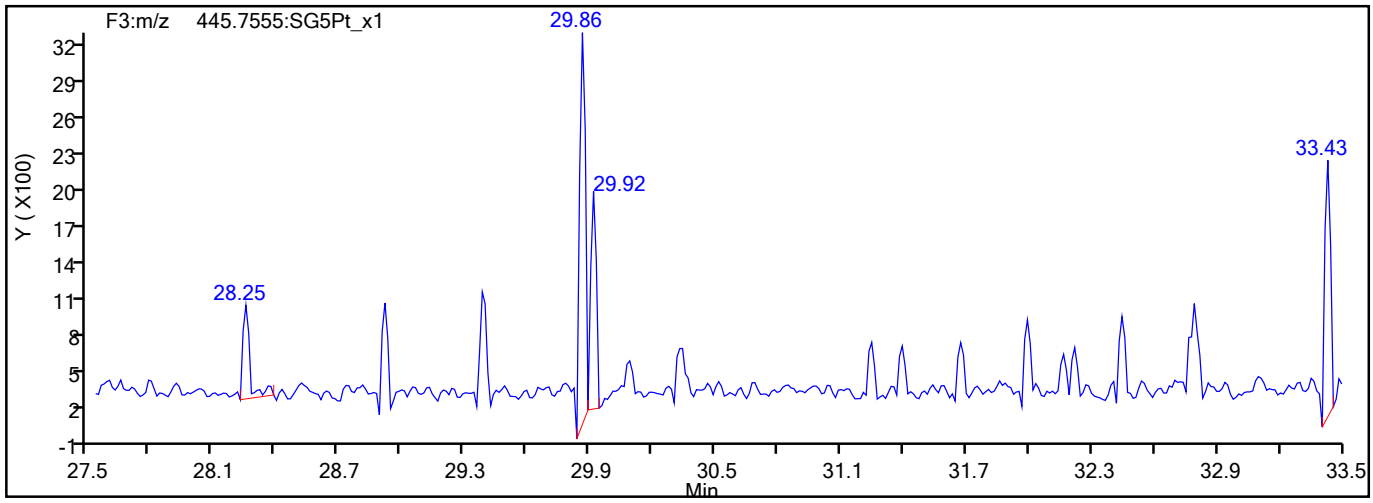

780793

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

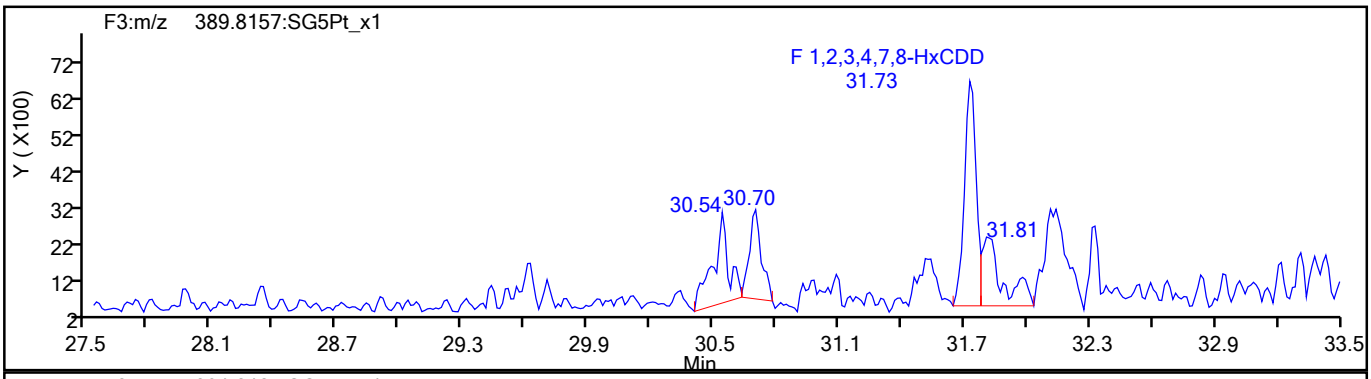

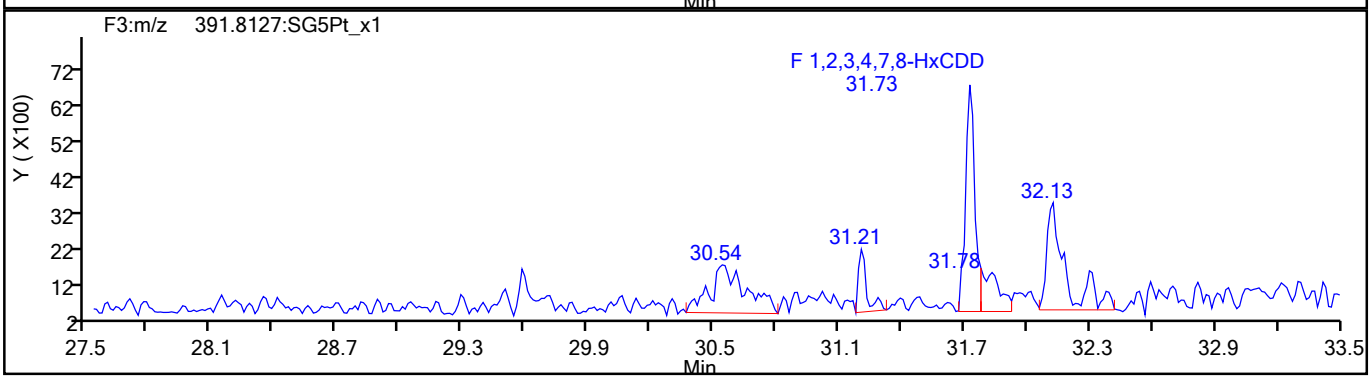

HxCDD Standards

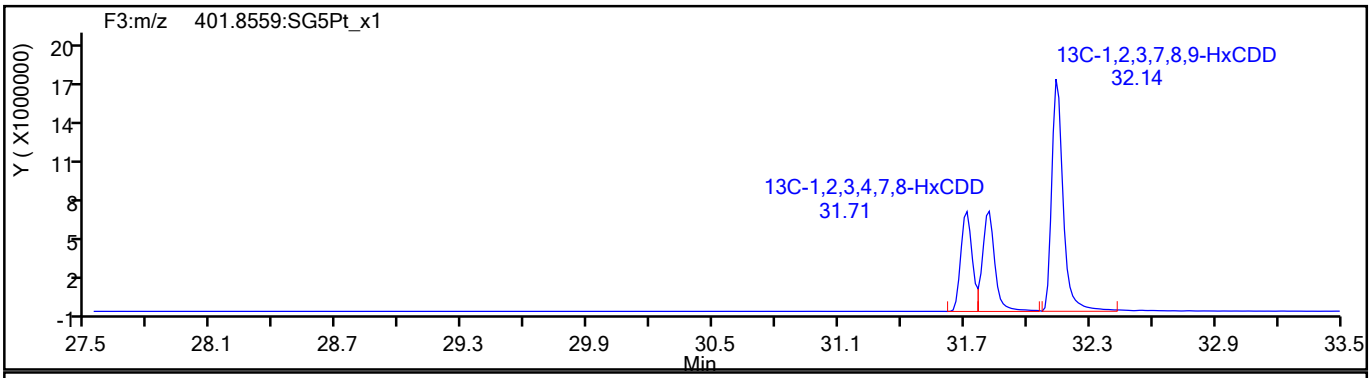

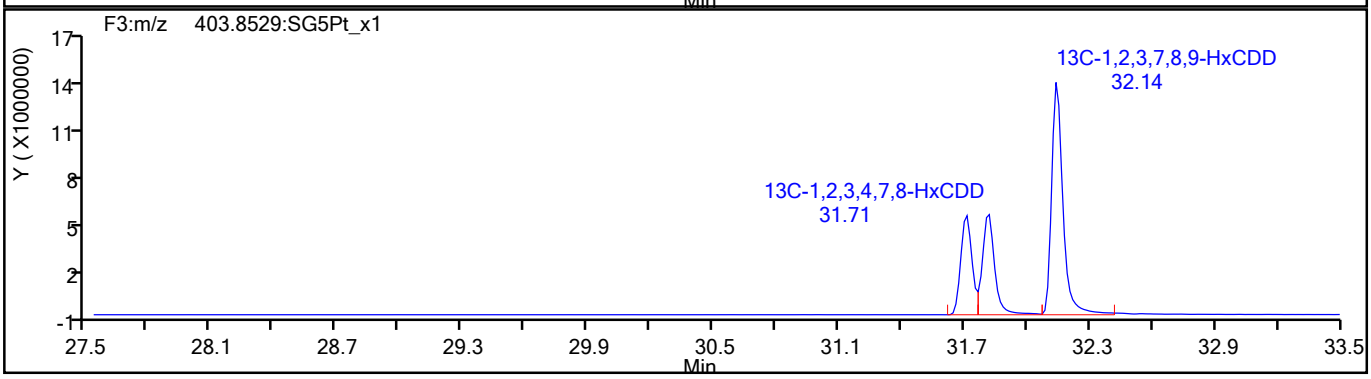

780794

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

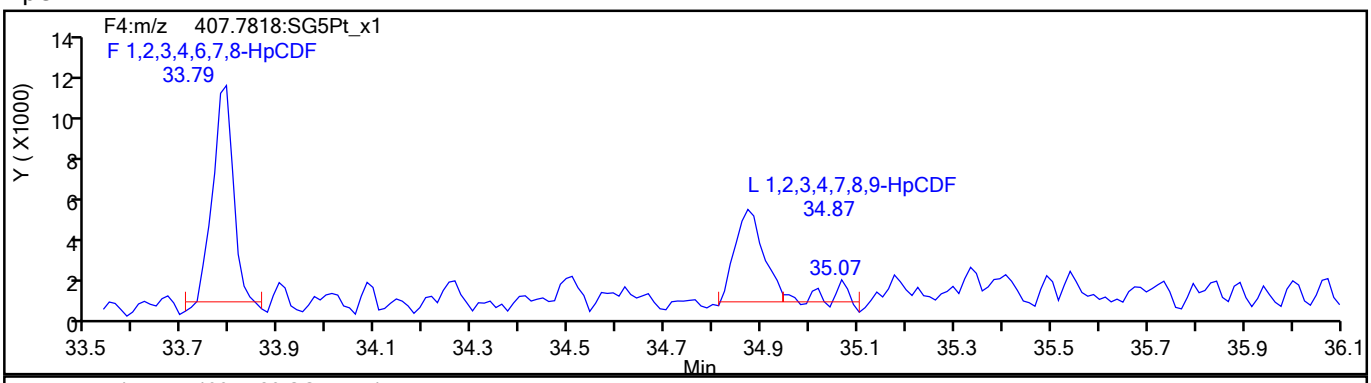

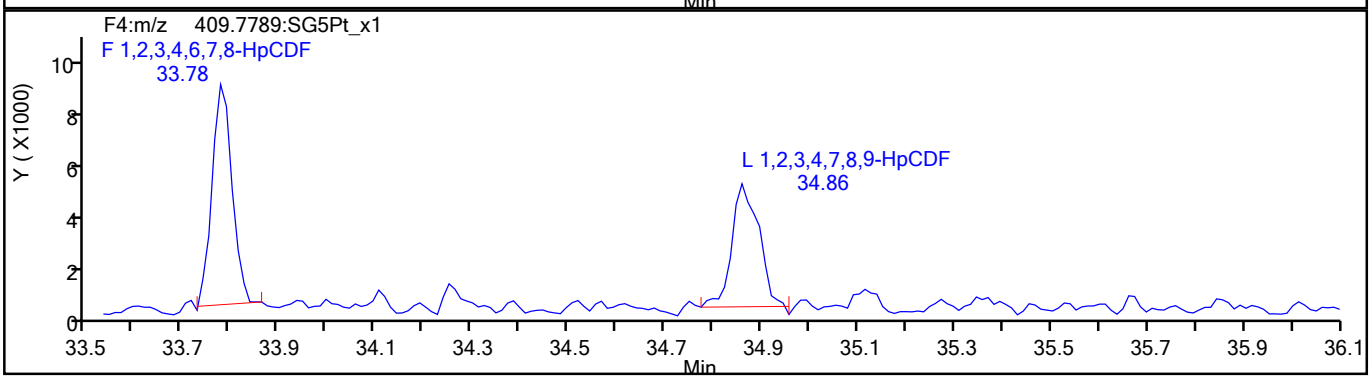

HpCDF Standards

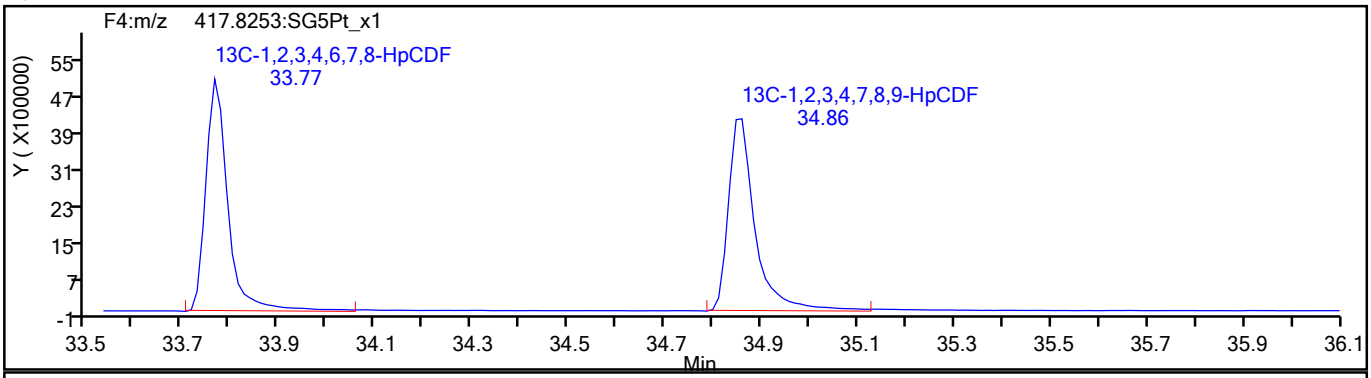

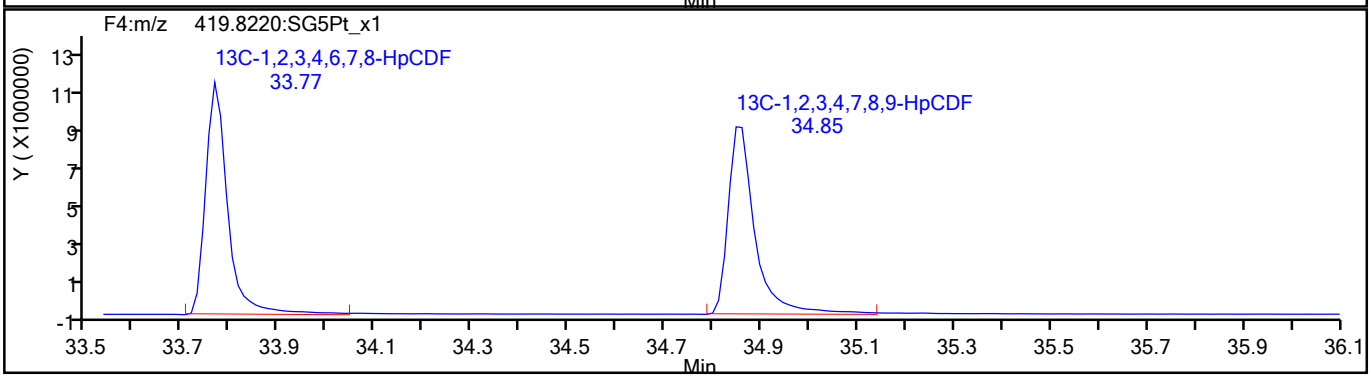

780795

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

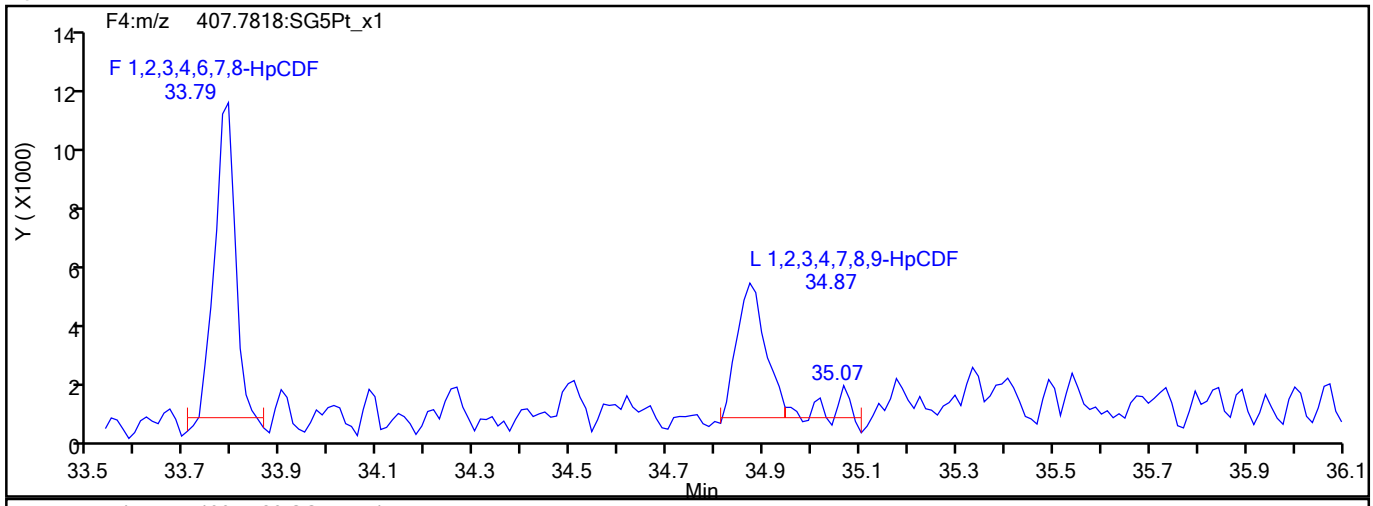

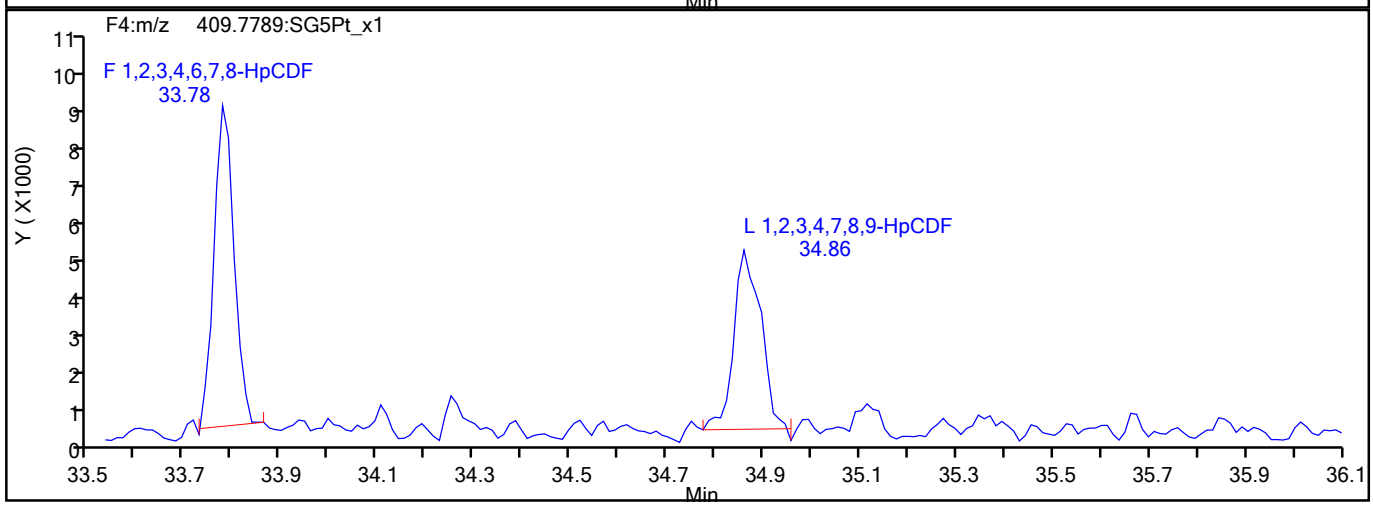

HpCDF Interference Mass

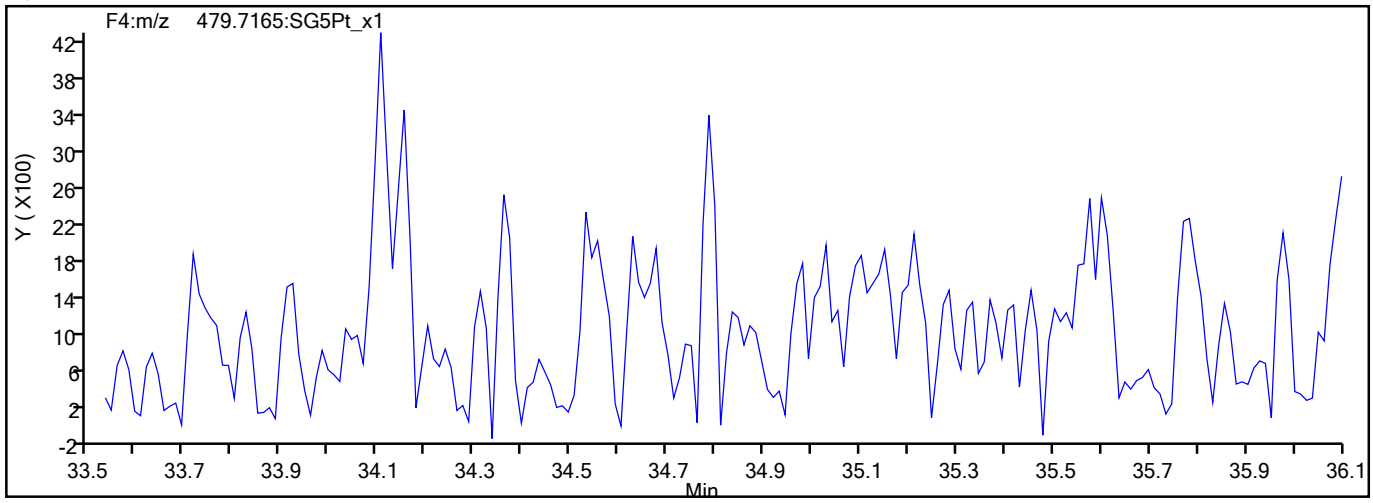

780796

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

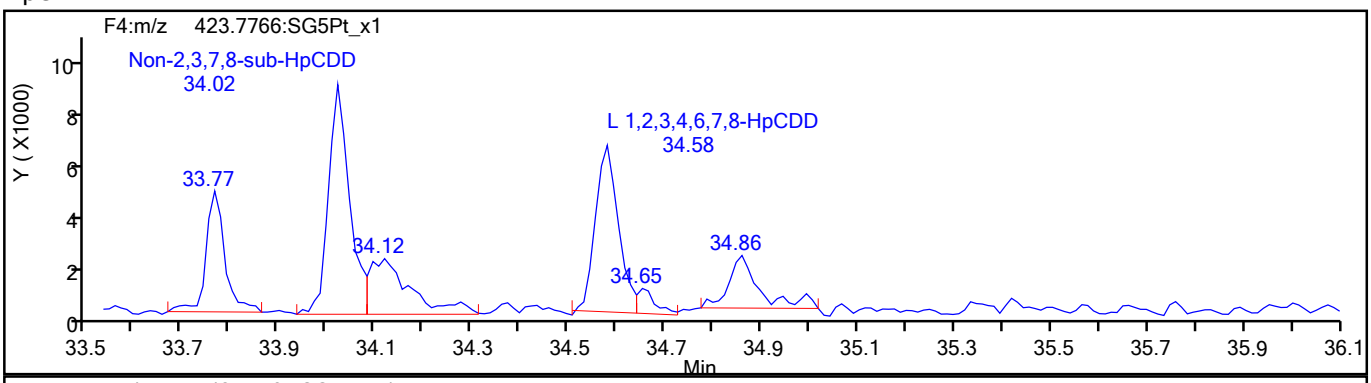

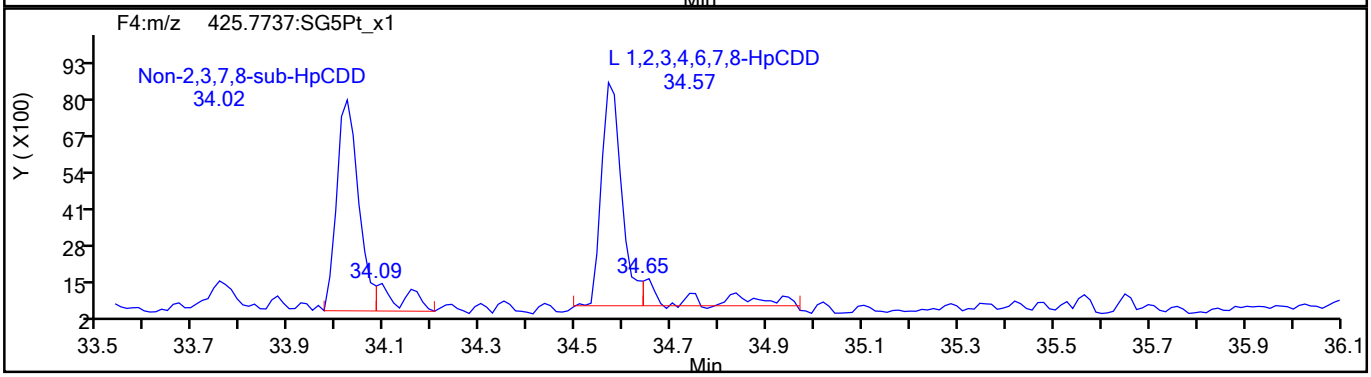

HpCDD Standards

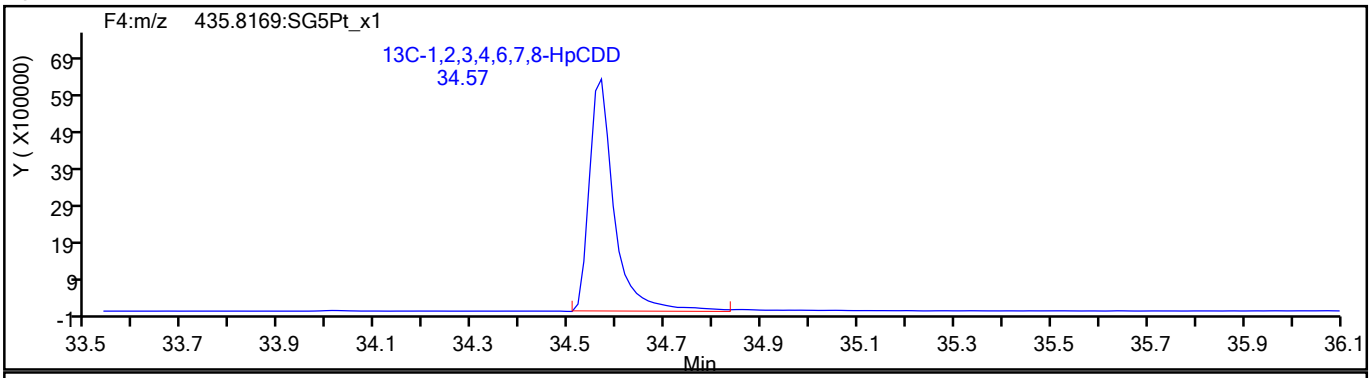

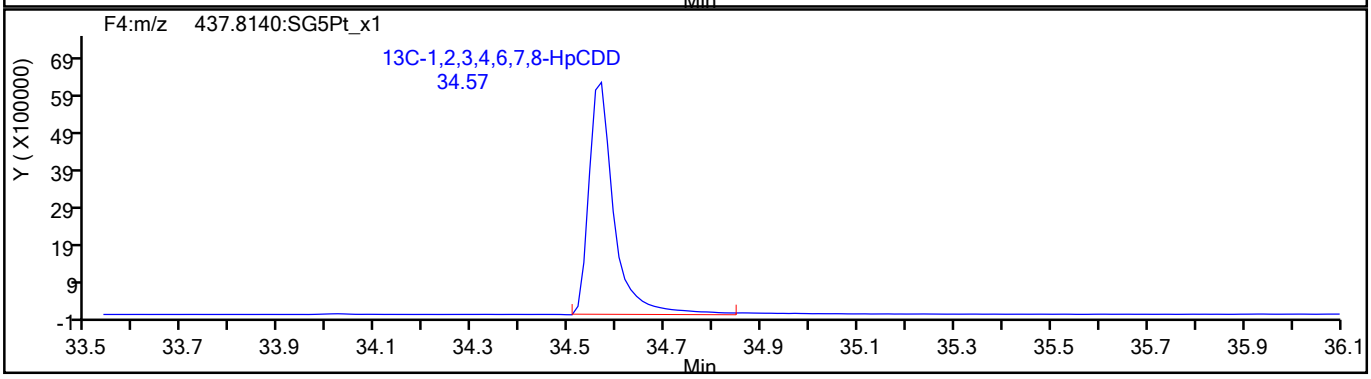

780797

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Eurofins TestAmerica, Sacramento

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OCDF

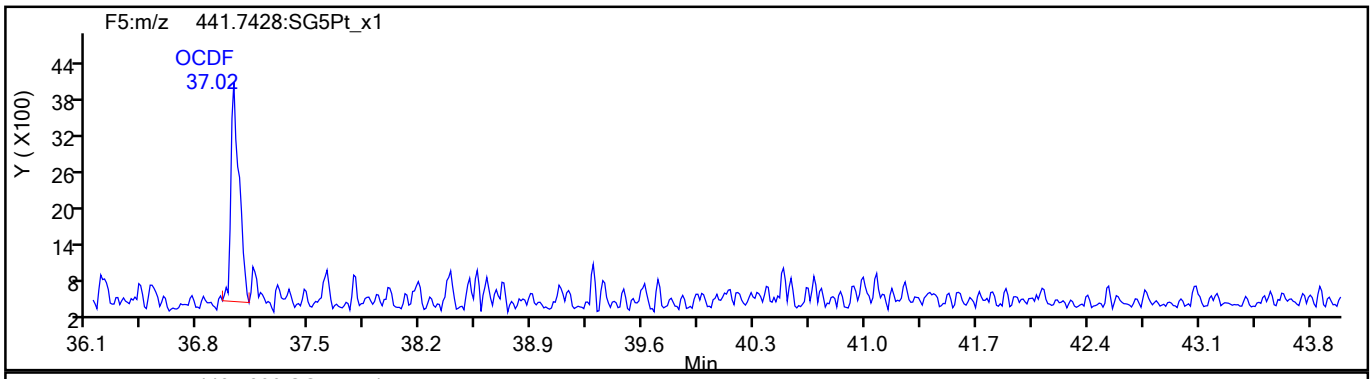

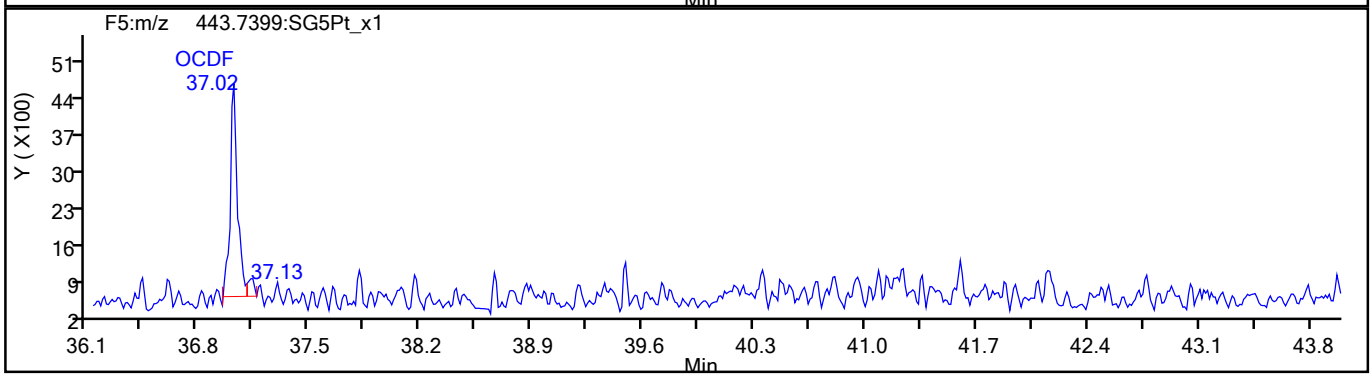

OCDF Standards

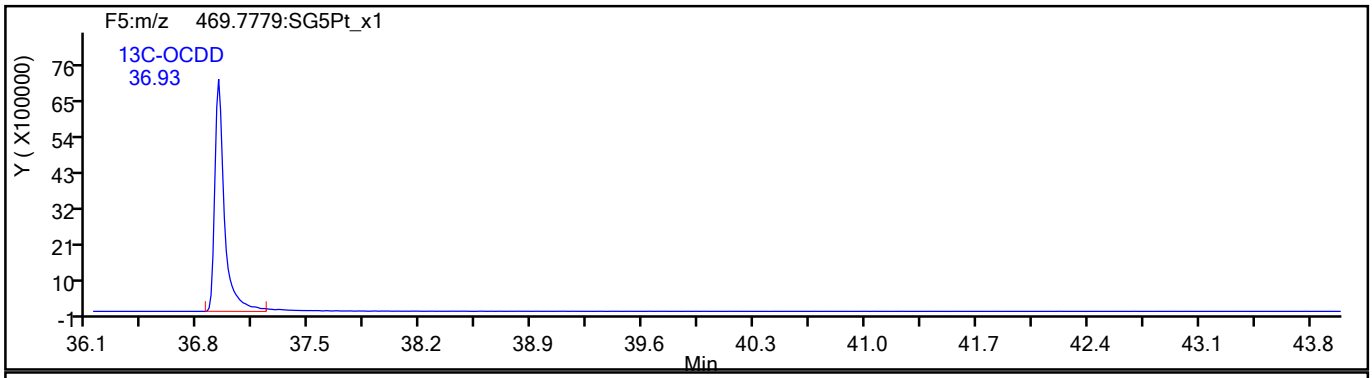

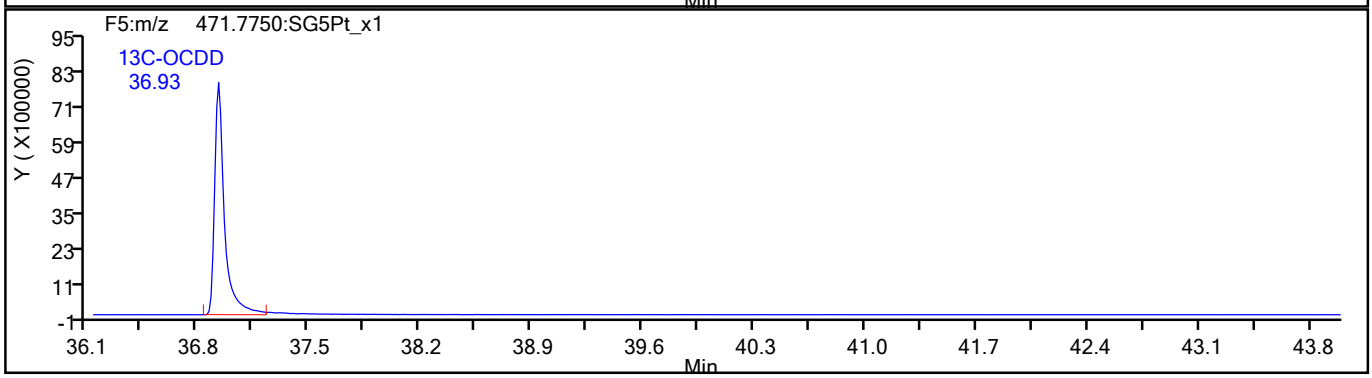

780798

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDF

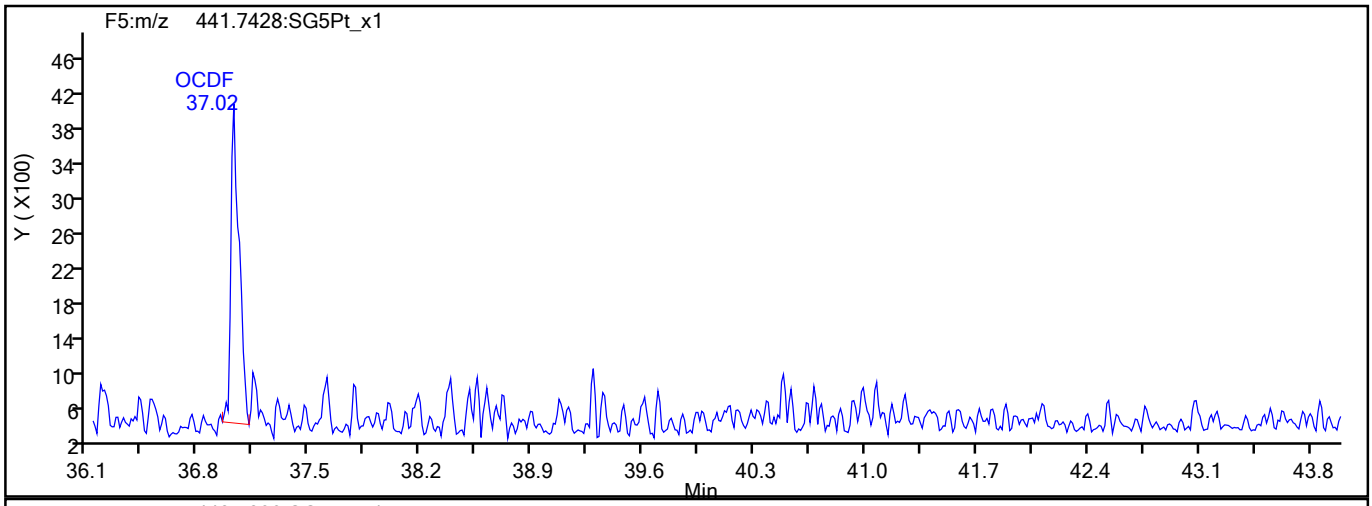

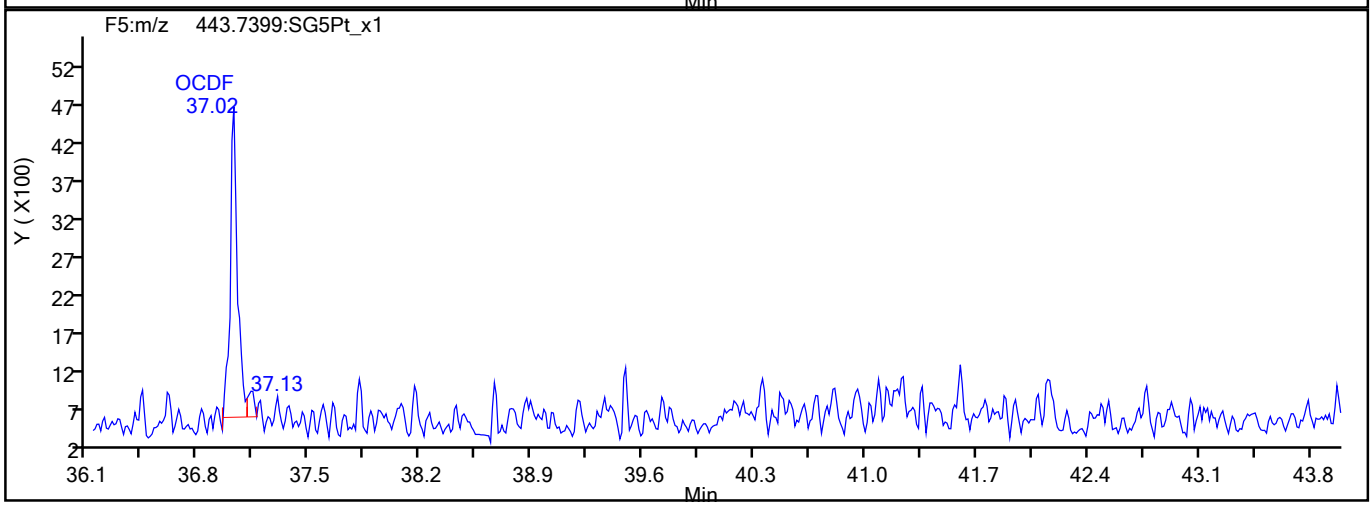

OCDF Interference Mass

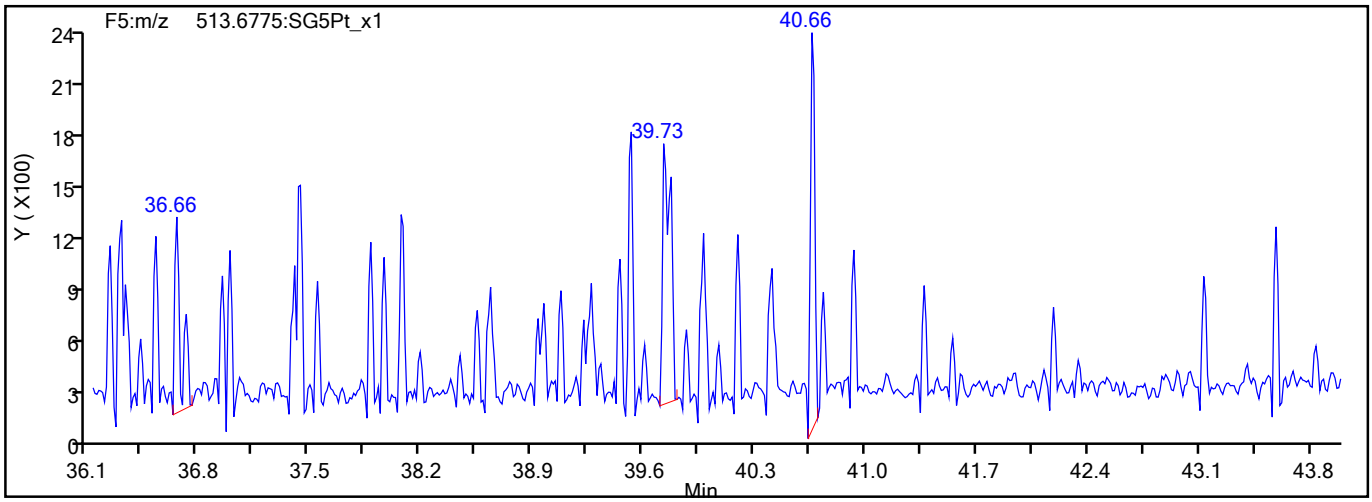

780799

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDD

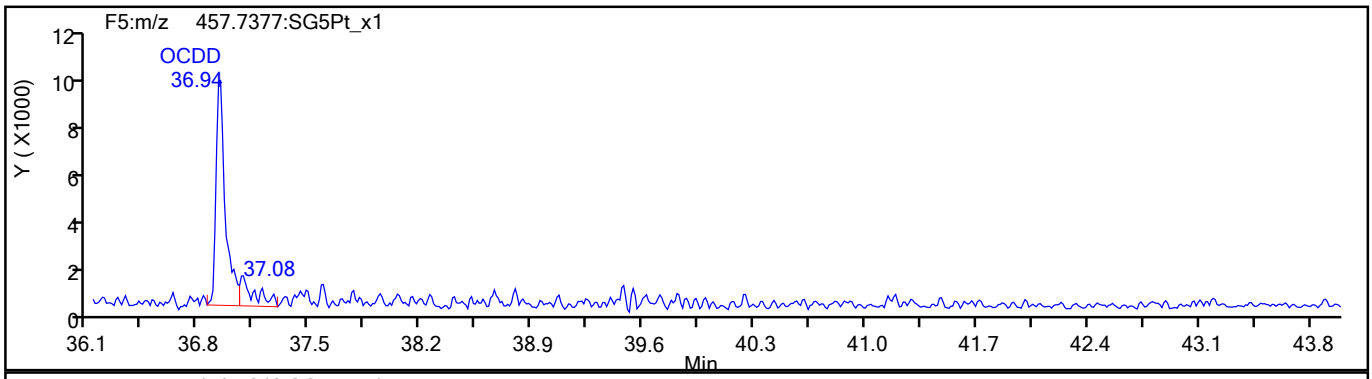

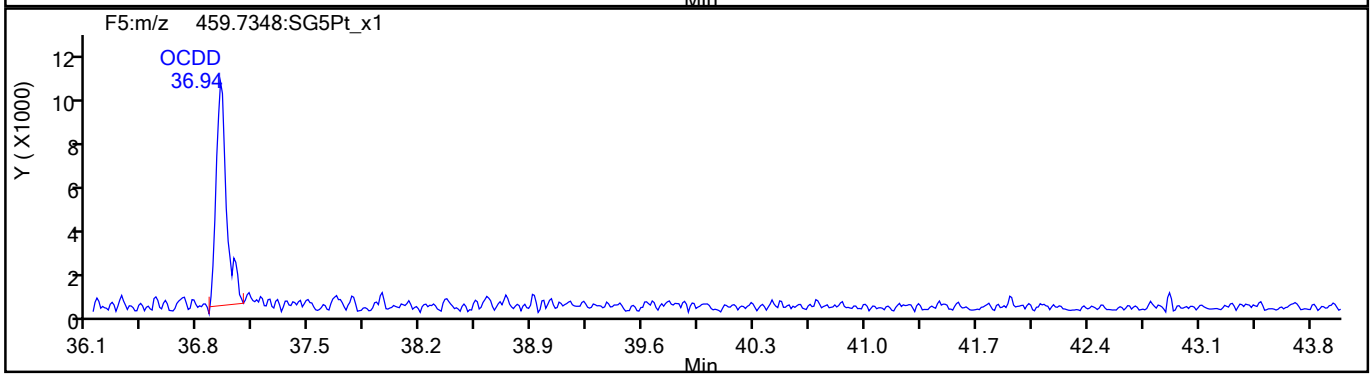

OCDD Standards

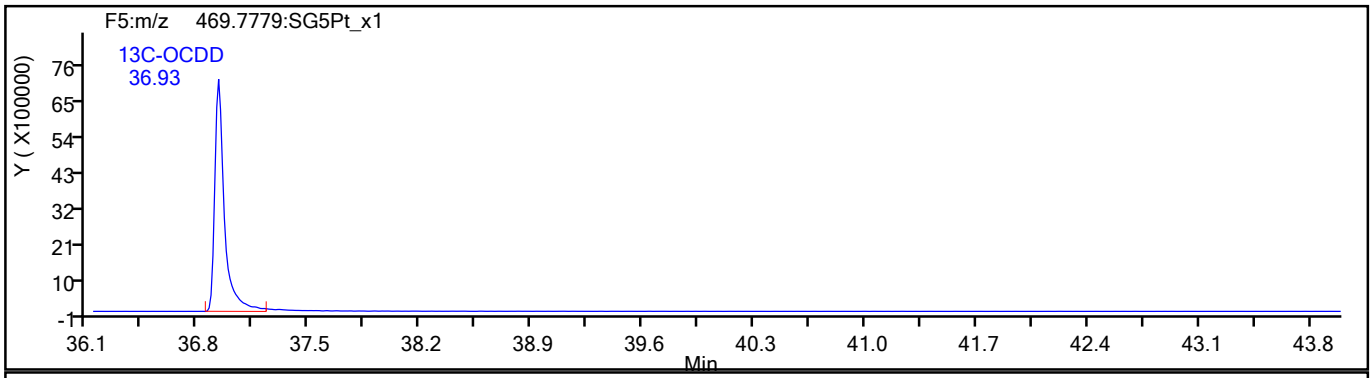

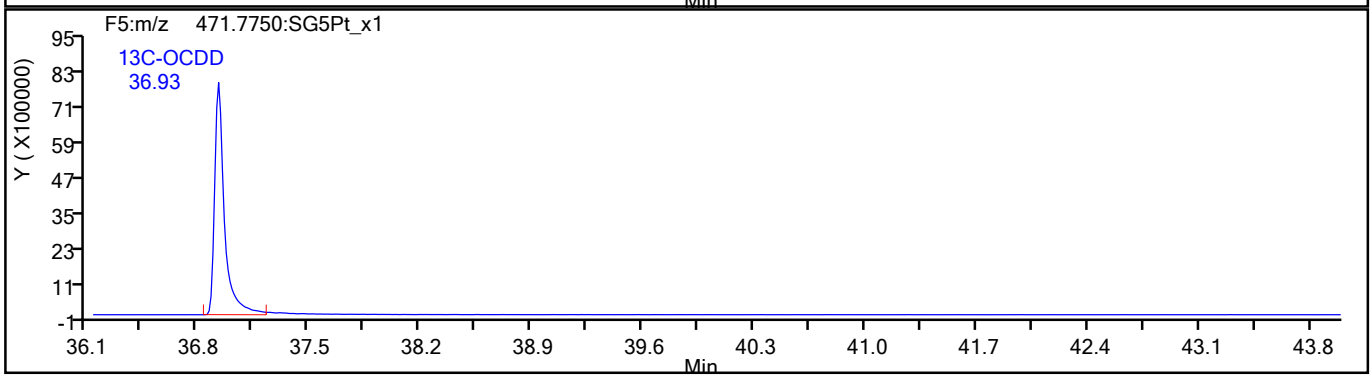

780800

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

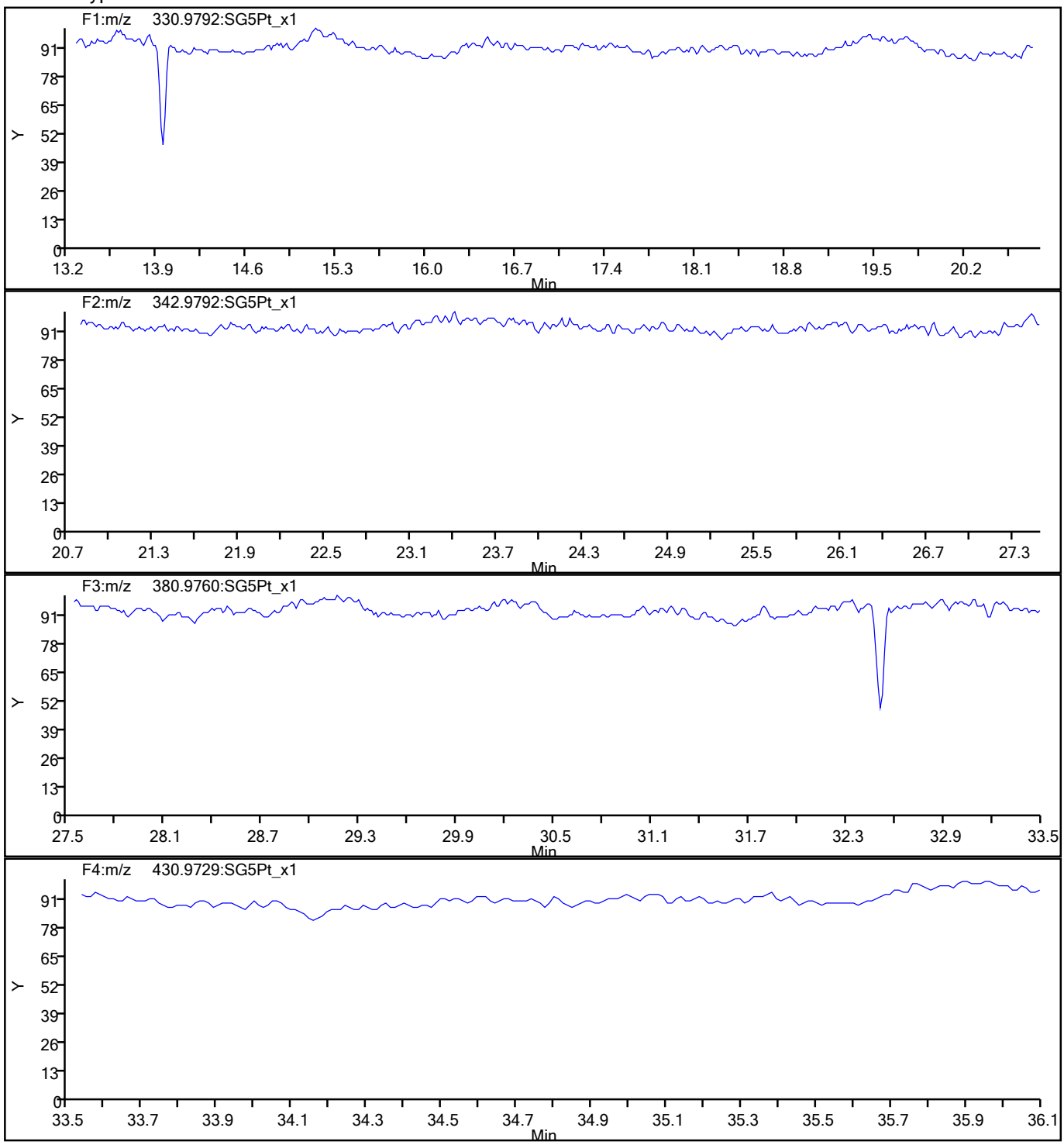

780801

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

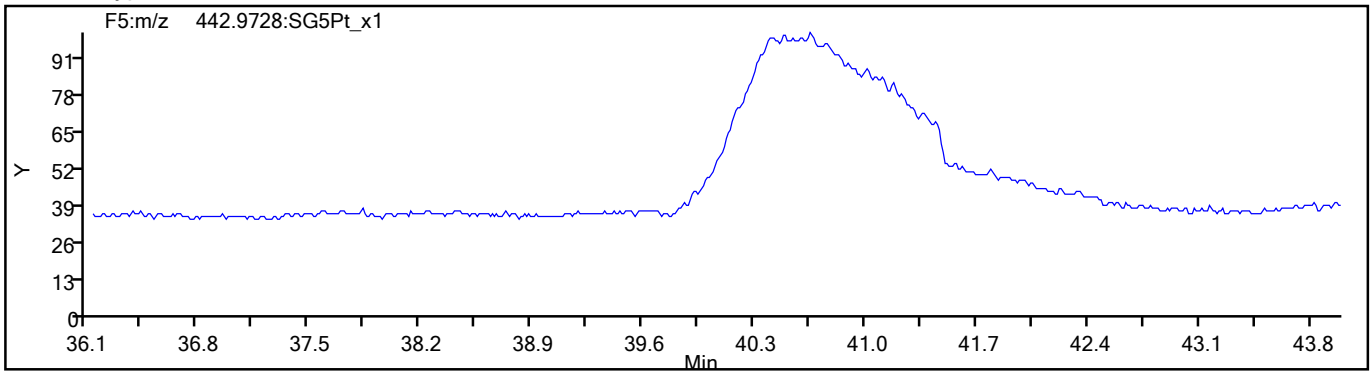

780802

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-512871/2-A
Matrix: Solid
Lab File ID: 13AU2110D5_15.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10(g)
Date Analyzed: 08/14/2021 03:41
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	19.5		1.0	0.044
51207-31-9	2,3,7,8-TCDF	20.7		1.0	0.046
40321-76-4	1,2,3,7,8-PeCDD	105		5.0	0.16
57117-41-6	1,2,3,7,8-PeCDF	105		5.0	0.39
57117-31-4	2,3,4,7,8-PeCDF	96.3		5.0	0.41
39227-28-6	1,2,3,4,7,8-HxCDD	95.0		5.0	0.41
57653-85-7	1,2,3,6,7,8-HxCDD	106		5.0	0.43
19408-74-3	1,2,3,7,8,9-HxCDD	107		5.0	0.38
70648-26-9	1,2,3,4,7,8-HxCDF	93.4		5.0	0.61
57117-44-9	1,2,3,6,7,8-HxCDF	105		5.0	0.62
72918-21-9	1,2,3,7,8,9-HxCDF	103		5.0	0.51
60851-34-5	2,3,4,6,7,8-HxCDF	104		5.0	0.51
35822-46-9	1,2,3,4,6,7,8-HpCDD	104		5.0	0.42
67562-39-4	1,2,3,4,6,7,8-HpCDF	106		5.0	0.99
55673-89-7	1,2,3,4,7,8,9-HpCDF	96.5		5.0	1.2
3268-87-9	OCDD	206		10	0.26
39001-02-0	OCDF	202		10	0.20
41903-57-5	Total TCDD	19.5		1.0	0.044
30402-14-3	Total TCDF	21.0		1.0	0.046
36088-22-9	Total PeCDD	105		5.0	0.16
30402-15-4	Total PeCDF	202		5.0	0.40
34465-46-8	Total HxCDD	308		5.0	0.41
55684-94-1	Total HxCDF	405		5.0	0.56
37871-00-4	Total HpCDD	104		5.0	0.42
38998-75-3	Total HpCDF	202		5.0	1.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-512871/2-A
Matrix: Solid
Lab File ID: 13AU2110D5_15.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10(g)
Date Analyzed: 08/14/2021 03:41
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		20-175
89059-46-1	13C-2,3,7,8-TCDF	56		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	57		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	56		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	59		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	53		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	59		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	53		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	53		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	60		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	58		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	66		20-186
114423-97-1	13C-OCDD	64		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	81		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d
Lims ID: LCS 320-512871/2-A
Client ID:
Sample Type: LCS
Inject. Date: 14-Aug-2021 03:41:25 ALS Bottle#: 16 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-512871/2-a lcs 320-512871/2-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 08:51:16 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:35:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	115231230	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	105553328	0.76	1.6249	56.4	56.4	0.1127	0.1127	56.37	
2,3,7,8-TCDF	17.371	11207688	0.75	1.0239	10.4	10.4	0.0232	0.0232	104	
A Non-2,3,7,8-sub-TCDF	17.046	140077	0.89	1.0239	0.1296	0.1296	0.0232	0.1296	0.00	
S Total TCDF					10.5	10.5	0.0232	0.0232		
D 13C-2,3,7,8-TCDD	18.066	61252097	0.81	0.8993	59.1	59.1	0.1143	0.1143	59.11	
2,3,7,8-TCDD	18.081	7488678	0.77	1.2541	9.749	9.749	0.0221	0.0221	97.49	
$ 37Cl4-2,3,7,8-TCDD	18.081	41195584		1.1071	32.3	32.3	0.0600	0.0600	80.73	
A Non-2,3,7,8-sub-TCDD	17.499						0.0221	0.0221		
S Total TCDD					9.749	9.749	0.0221	0.0221		
D 13C-1,2,3,7,8-PeCDF	22.381	77390797	1.58	1.2101	55.5	55.5	0.1432	0.1432	55.50	
1,2,3,7,8-PeCDF	22.408	43084338	1.61	1.0611	52.5	52.5	0.1930	0.1930	105	
D 13C-2,3,4,7,8-PeCDF	23.717	84091487	1.58	1.2395	58.9	58.9	0.1398	0.1398	58.88	
2,3,4,7,8-PeCDF	23.744	41232187	1.61	1.0184	48.1	48.1	0.2036	0.2036	96.29	
A F1 PeCDFs	20.093						0.0126	0.0126		
A Non-2,3,7,8-sub-PeCDF	23.241	456307	1.59	1.0398	0.5435	0.5435	0.1982	0.5435	0.00	
S Total PeCDF					101.2	101.2	0.1983	0.1983		
D 13C-1,2,3,7,8-PeCDD	24.440	49630526	1.60	0.7612	56.6	56.6	0.0680	0.0680	56.58	
1,2,3,7,8-PeCDD	24.467	27194407	1.59	1.0484	52.3	52.3	0.0775	0.0775	105	
A Non-2,3,7,8-sub-PeCDD	23.349						0.0775	0.0775		
S Total PeCDD					52.3	52.3	0.0775	0.0775		
D 13C-1,2,3,4,7,8-HxCDF	30.516	70184264	0.52	1.0837	58.9	58.9	0.2489	0.2489	58.89	
1,2,3,4,7,8-HxCDF	30.543	35549281	1.22	1.0851	46.7	46.7	0.3073	0.3073	93.36	
D 13C-1,2,3,6,7,8-HxCDF	30.702	65678666	0.52	1.1279	52.9	52.9	0.2391	0.2391	52.95	
1,2,3,6,7,8-HxCDF	30.716	38744685	1.21	1.1260	52.4	52.4	0.3112	0.3112	105	
D 13C-2,3,4,6,7,8-HxCDF	31.528	61844348	0.51	1.0637	52.9	52.9	0.2535	0.2535	52.87	
2,3,4,6,7,8-HxCDF	31.541	37591874	1.23	1.1675	52.1	52.1	0.2525	0.2525	104	
D 13C-1,2,3,7,8,9-HxCDF	32.326	56448795	0.52	0.9676	53.1	53.1	0.2787	0.2787	53.05	
1,2,3,7,8,9-HxCDF	32.340	33913078	1.23	1.1664	51.5	51.5	0.2572	0.2572	103	
A Non-2,3,7,8-sub-HxCDF	30.197						0.2799	0.2799		
S Total HxCDF					202.6	202.6	0.2821	0.2821		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.140	109972872	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	46921549	1.24	0.7334	58.2	58.2	0.3129	0.3129	58.17	
1,2,3,4,7,8-HxCDD	31.727	23722535	1.24	1.0640	47.5	47.5	0.2046	0.2046	95.03	
D 13C-1,2,3,6,7,8-HxCDD	31.820	51612353	1.23	0.8802	53.3	53.3	0.2607	0.2607	53.32	
1,2,3,6,7,8-HxCDD	31.834	27297748	1.28	1.0001	52.9	52.9	0.2159	0.2159	106	
1,2,3,7,8,9-HxCDD	32.153	29942026	1.29	1.1325	53.7	53.7	0.1914	0.1914	107	
A Non-2,3,7,8-sub-HxCDD	30.882						0.2035	0.2035		
S Total HxCDD					154.1	154.1	0.2040	0.2040		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	49580886	0.42	0.7730	58.3	58.3	0.6774	0.6774	58.32	
1,2,3,4,6,7,8-HpCDF	33.778	37796066	1.05	1.4413	52.9	52.9	0.4958	0.4958	106	
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	50883302	0.43	0.7008	66.0	66.0	0.7472	0.7472	66.02	
1,2,3,4,7,8,9-HpCDF	34.872	32351903	1.05	1.3174	48.3	48.3	0.6144	0.6144	96.53	
A Non-2,3,7,8-sub-HpCDF	34.319						0.5503	0.5503		
S Total HpCDF					101.2	101.2	0.5551	0.5551		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	42645983	1.00	0.6472	59.9	59.9	0.3155	0.3155	59.92	
1,2,3,4,6,7,8-HpCDD	34.580	24337835	1.04	1.0943	52.2	52.2	0.2110	0.2110	104	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2110	0.2110		
S Total HpCDD					52.2	52.2	0.2110	0.2110		
D 13C-OCDD	36.926	63077334	0.87	0.4472	128.3	128.3	0.1873	0.1873	64.14	
OCDF	37.022	45873571	0.90	1.4382	101.1	101.1	0.0988	0.0988	101	
OCDD	36.938	35965490	0.89	1.1070	103.0	103.0	0.1311	0.1311	103	

QC Flag Legend

Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d
Lims ID: LCS 320-512871/2-A
Client ID:
Sample Type: LCS
Inject. Date: 14-Aug-2021 03:41:25 ALS Bottle#: 16 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-512871/2-a lcs 320-512871/2-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 08:51:16 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:35:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		51853905	12330607	4733	11832	2605		
333.9339	17.870	17.855	1		63377325	15037575	6524	16310	2305	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.341	1	0.971	45689609	10782443	10842	27105	995		
317.9389	17.356	17.341	1	0.971	59863719	14211241	9208	23020	1543	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.356	1	1.001	4813232	1162961	1206	3015	964		
305.8987	17.371	17.356	1	1.001	6394456	1518492	1165	2912	1303	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.993	17.046	-3	0.979	65972	14005	1206	3015	12		
305.8987	16.993	17.046	-3	0.979	74105	16464	1165	2912	14	0.89(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	27416516	6062083	4733	11832	1281		
333.9339	18.066	18.051	1	1.011	33835581	7400821	6524	16310	1134	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.081	18.066	1	1.001	3251139	746582	770	1925	970		
321.8936	18.081	18.066	1	1.001	4237539	961034	722	1805	1331	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.081	18.066	1	1.012	41195584	9256836	7272	18180	1273		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.499						770	1925			
321.8936	17.499						722	1805			
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.252	47381376	7778559	11370	28425	684		
353.8970	22.381	22.367	1	1.252	30009421	4858529	7604	19010	639	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.408	22.380	2	1.001	26600700	4378314	6230	15575	703		
341.8567	22.408	22.380	2	1.001	16483638	2687423	4124	10310	652	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.327	51490230	7574336	11370	28425	666		
353.8970	23.717	23.703	1	1.327	32601257	4912381	7604	19010	646	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.744	23.730	1	1.001	25431555	3809626	6230	15575	611		
341.8567	23.744	23.730	1	1.001	15800632	2392982	4124	10310	580	1.61(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						193	482			
341.8567	20.093						464	1160			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.926	23.241	-19	1.024	279957	36990	6230	15575	6		
341.8567	22.926	23.241	-19	1.024	176350	23783	4124	10310	6	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.368	30539559	4231508	3175	7937	1333		
369.8919	24.440	24.426	1	1.368	19090967	2696195	2492	6230	1082	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.467	24.453	1	1.001	16694942	2386011	1394	3485	1712		
357.8516	24.467	24.453	1	1.001	10499465	1505884	858	2145	1755	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.349						1394	3485			
357.8516	23.349						858	2145			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	24031785	4415652	10735	26837	411		
385.8610	30.516	30.503	1	0.949	46152479	8532250	20368	50920	419	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.543	30.529	1	1.001	19519987	3669713	9417	23542	390		
375.8178	30.543	30.529	1	1.001	16029294	3004945	7853	19632	383	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	22414046	4193213	10735	26837	391		
385.8610	30.702	30.689	1	0.955	43264620	8126419	20368	50920	399	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.716	30.702	1	1.000	21244721	3920269	9417	23542	416		
375.8178	30.716	30.702	1	1.000	17499964	3297394	7853	19632	420	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.528	31.514	1	0.981	21004087	4975381	10735	26837	463		
385.8610	31.528	31.514	1	0.981	40840261	9669715	20368	50920	475	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.541	31.528	1	1.000	20766734	5080534	9417	23542	540		
375.8178	31.541	31.528	1	1.000	16825140	4097793	7853	19632	522	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	19362293	4977806	10735	26837	464		
385.8610	32.326	32.313	1	1.006	37086502	9414965	20368	50920	462	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.340	32.326	1	1.000	18692446	4750271	9417	23542	504		
375.8178	32.340	32.326	1	1.000	15220632	3903021	7853	19632	497	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						9417	23542			
375.8178	30.197						7853	19632			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		61025264	16068512	12879	32197	1248		
403.8529	32.140	32.127	1		48947608	12762634	13586	33965	939	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.987	25951077	7054678	12879	32197	548		
403.8529	31.714	31.701	1	0.987	20970472	5716444	13586	33965	421	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.727	31.714	1	1.000	13149700	3649582	5779	14447	632		
391.8127	31.727	31.714	1	1.000	10572835	2935500	5340	13350	550	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.807	1	0.990	28459630	7126523	12879	32197	553		
403.8529	31.820	31.807	1	0.990	23152723	5744575	13586	33965	423	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.834	31.820	1	1.000	15345401	3862293	5779	14447	668		
391.8127	31.834	31.820	1	1.000	11952347	2987819	5340	13350	560	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.140	1	1.014	16844530	4349054	5779	14447	753		
391.8127	32.153	32.140	1	1.014	13097496	3480143	5340	13350	652	1.29(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						5779	14447			
391.8127	30.882						5340	13350			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	14737136	4763194	17550	43875	271		
419.8220	33.766	33.754	1	1.051	34843750	10943116	42838	107095	255	0.42(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.766	1	1.000	19395705	6161268	22804	57010	270		
409.7789	33.778	33.766	1	1.000	18400361	5882333	22086	55215	266	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.847	1	1.085	15423004	4240492	17550	43875	242		
419.8220	34.860	34.847	1	1.085	35460298	9624824	42838	107095	225	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.860	1	1.000	16568462	4419421	22804	57010	194		
409.7789	34.860	34.860	0	1.000	15783441	4274456	22086	55215	194	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						22804	57010			
409.7789	34.319						22086	55215			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.556	1	1.076	21321662	6239773	12610	31525	495		
437.8140	34.568	34.556	1	1.076	21324321	6216415	10942	27355	568	1.00(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.568	1	1.000	12398120	3584249	5997	14992	598		
425.7737	34.580	34.568	1	1.000	11939715	3375269	5506	13765	613	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						5997	14992			
425.7737	34.301						5506	13765			
13C-OCDD											
469.7779	36.926	36.914	1	1.149	29393277	7160537	4446	11115	1611		
471.7750	36.926	36.914	1	1.149	33684057	8145317	5211	13027	1563	0.87(0.76-1.02)	
OCDF											
441.7428	37.022	37.010	1	1.003	21773786	5368569	1983	4957	2707		
443.7399	37.022	37.010	1	1.003	24099785	5933130	2368	5920	2506	0.90(0.76-1.02)	
OCDD											
457.7377	36.938	36.926	1	1.000	16982835	4084024	1811	4527	2255		
459.7348	36.938	36.926	1	1.000	18982655	4515668	2631	6577	1716	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d
Lims ID: LCS 320-512871/2-A
Client ID:
Inject. Date: 14-Aug-2021 03:41:25 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	105553328	24993684

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	105553328	24993684

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.993	65972	14005	74105	16464	0.1296	0.89	
Signal Totals:							
	65972	14005	74105	16464			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	140077	30469				0.89	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1296 = (140077 * 100.000) / (105553328 * 1.024)

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d
Lims ID: LCS 320-512871/2-A
Client ID:
Inject. Date: 14-Aug-2021 03:41:25 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 4

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	77390797	12637088
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	84091487	12486717

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	80741142	12561902

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.926	279957	36990	176350	23783	0.5435	1.59	
Signal Totals:							
	279957	36990	176350	23783			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	456307	60773				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5435 = (456307 * 100.000) / (80741142 * 1.040)

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

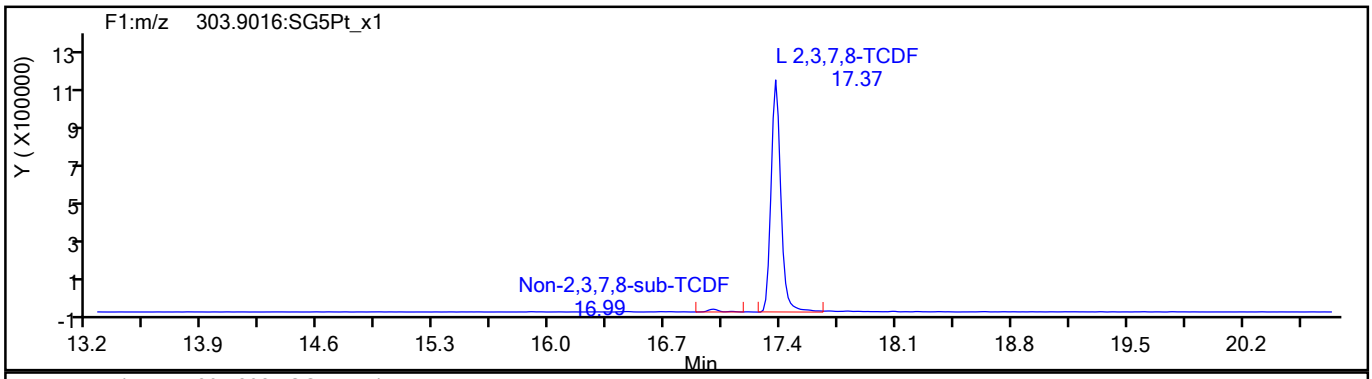

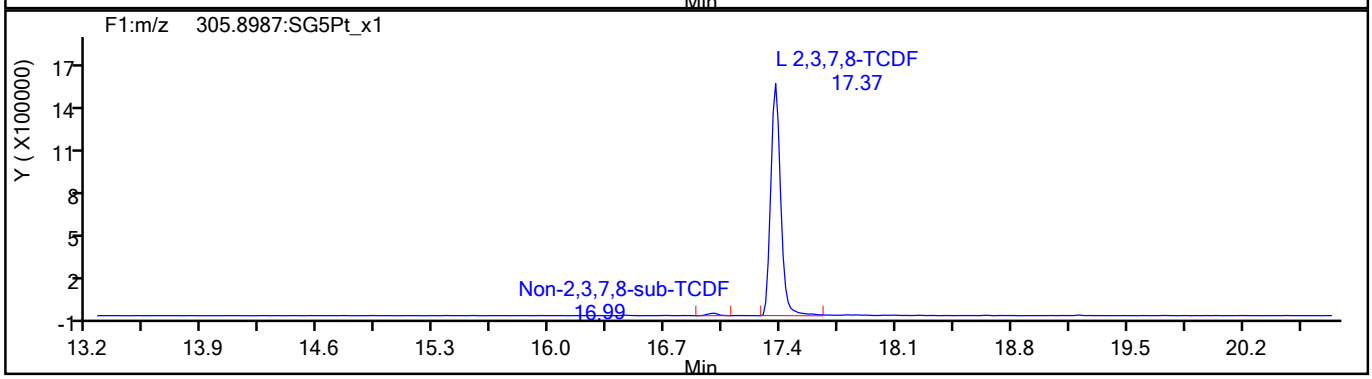

TCDF Standards

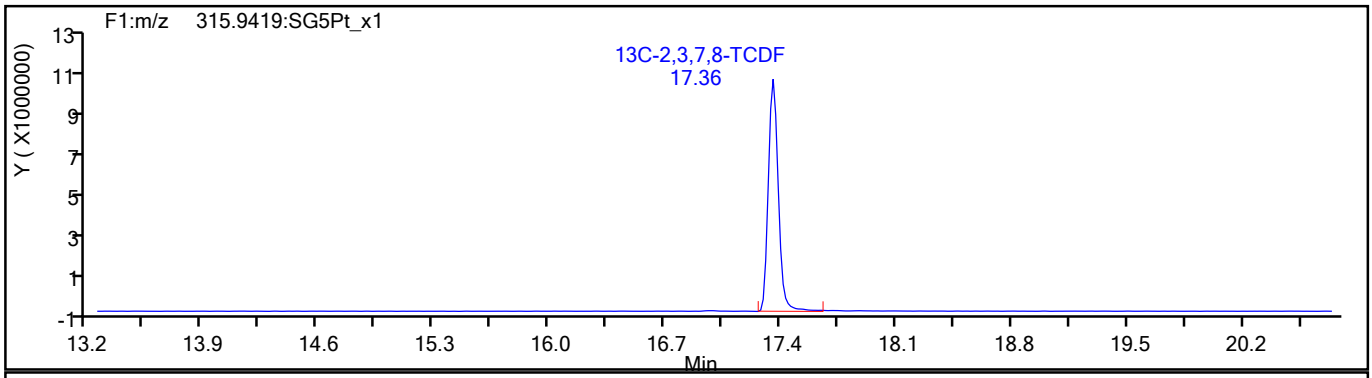

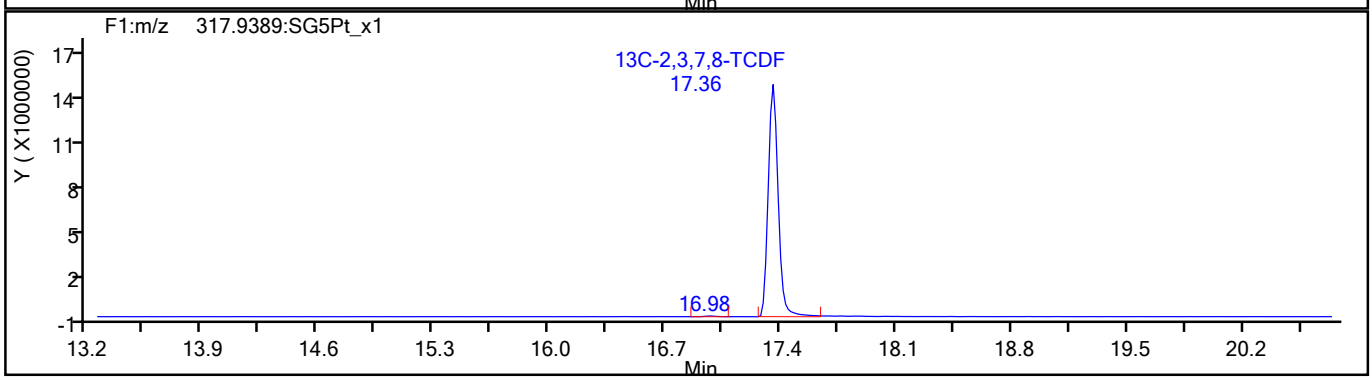

780813

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

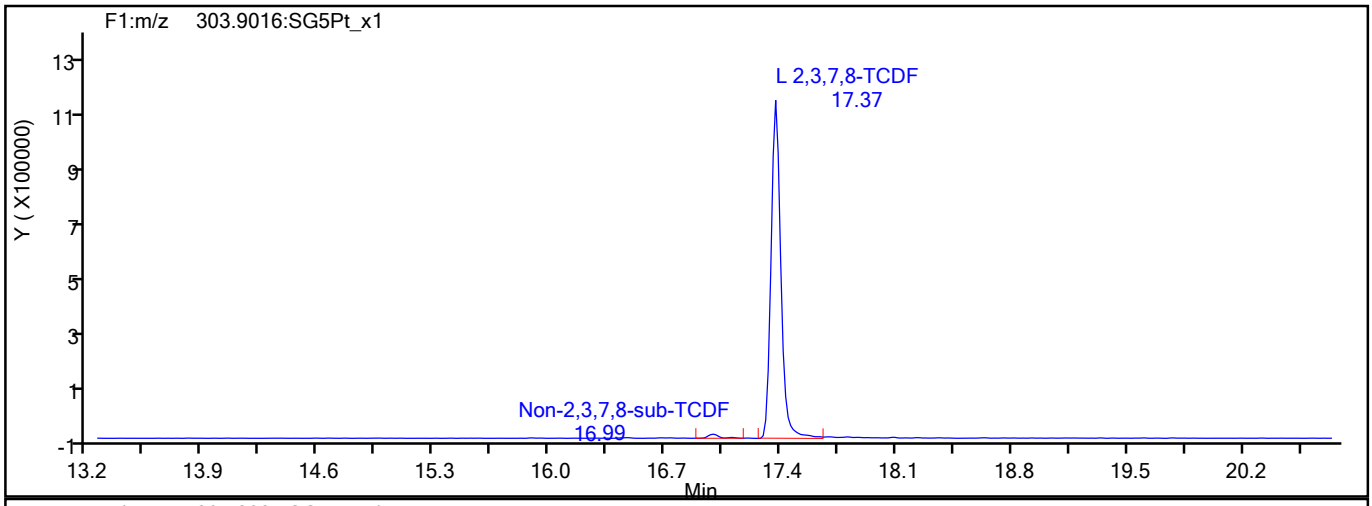

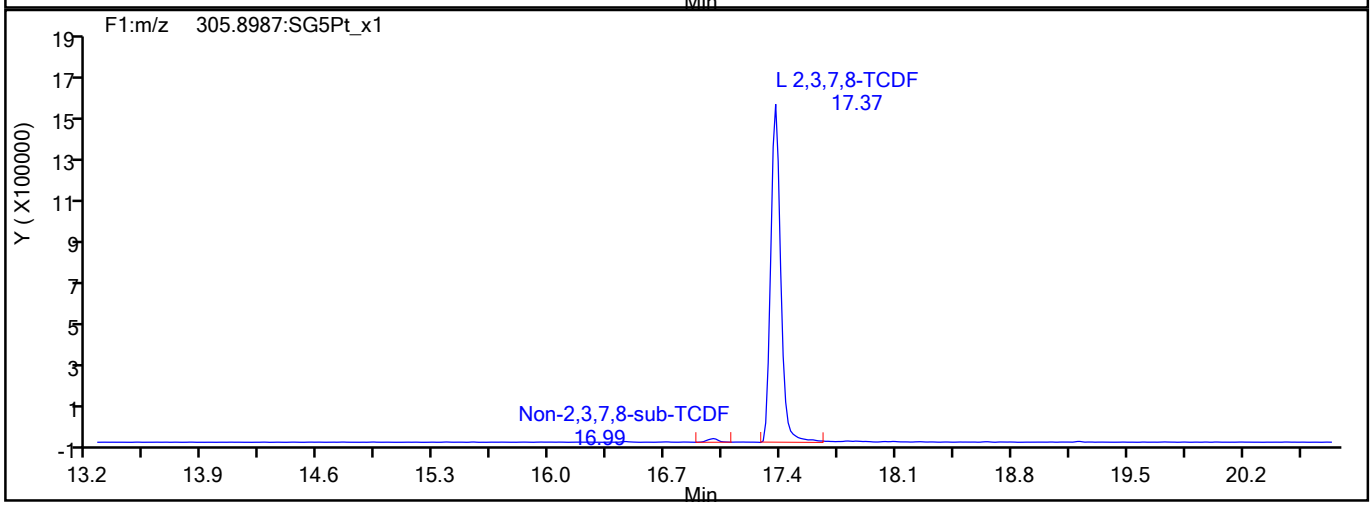

TCDF Interference Mass

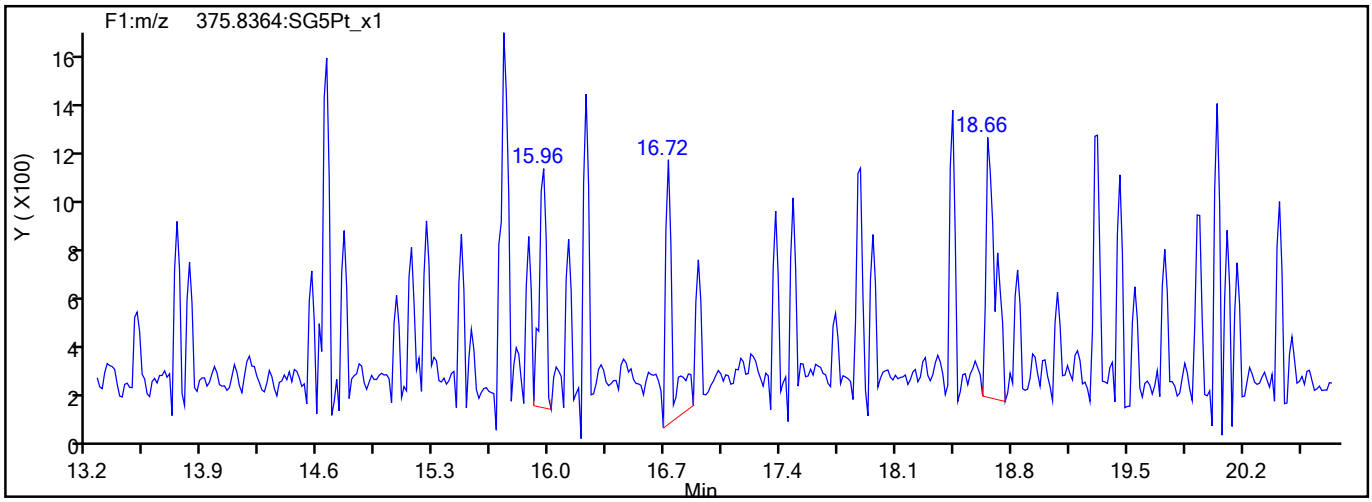

780814

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

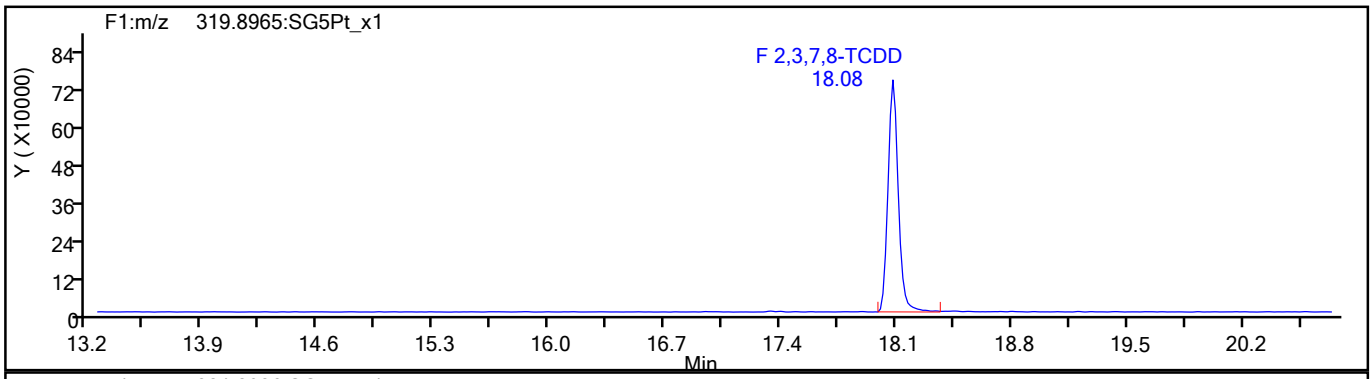

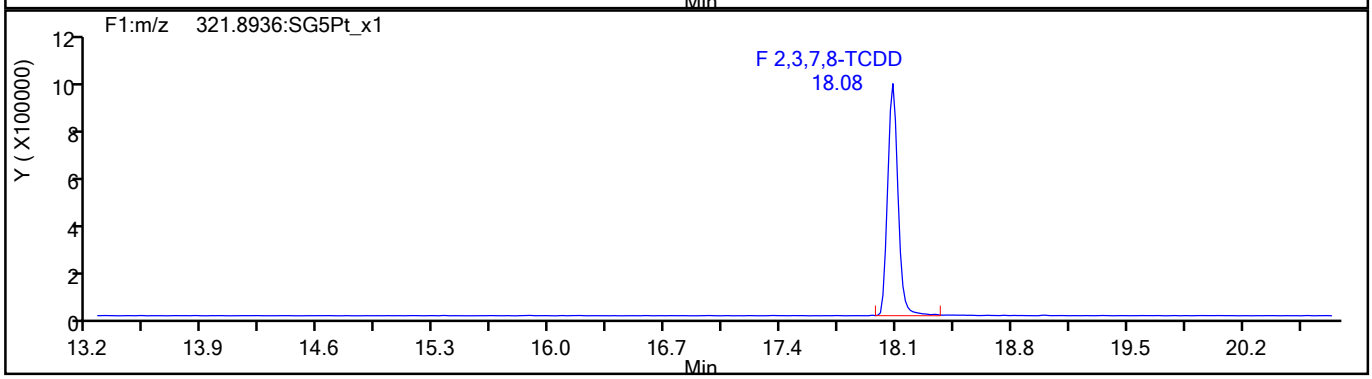

TCDD Standards

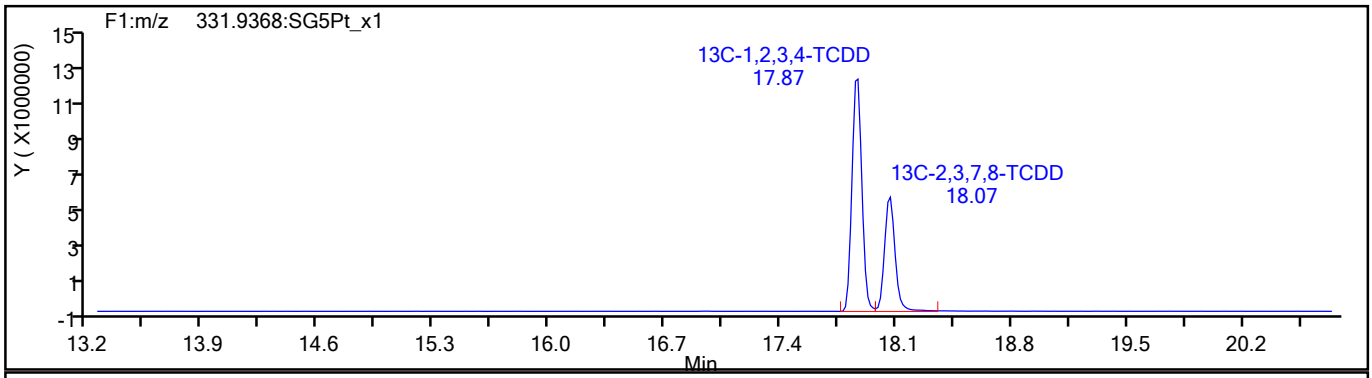

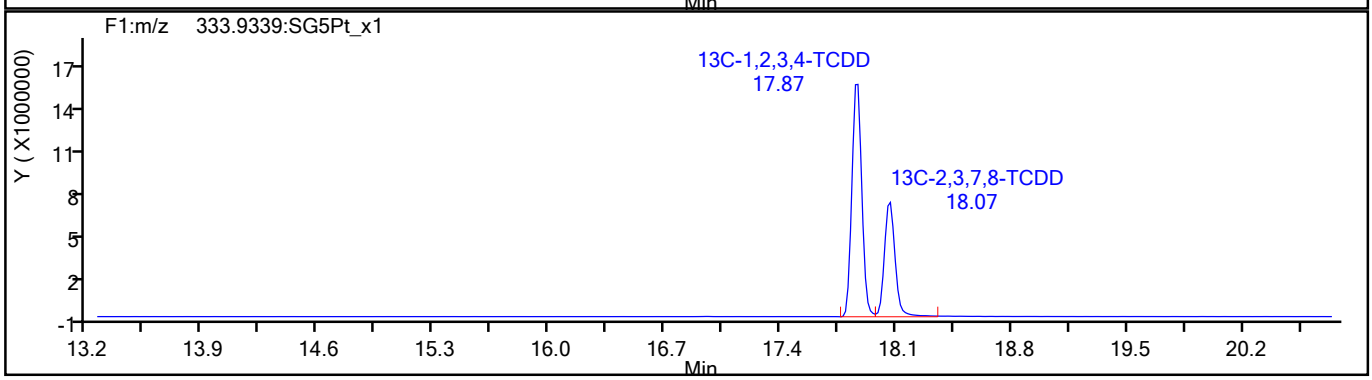

780815

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

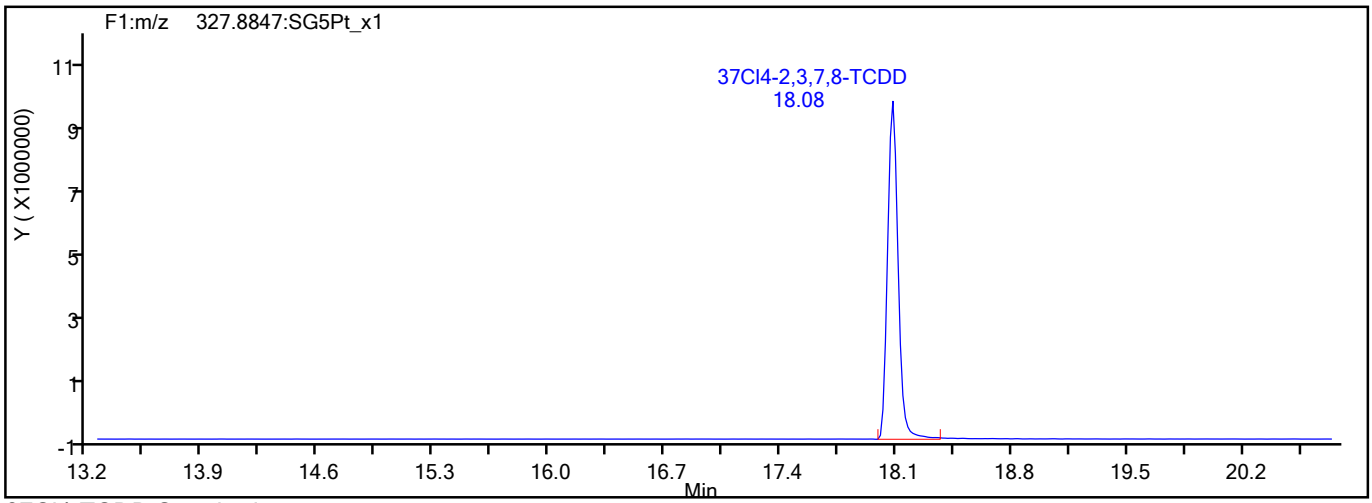

37Cl4-TCDD Standards

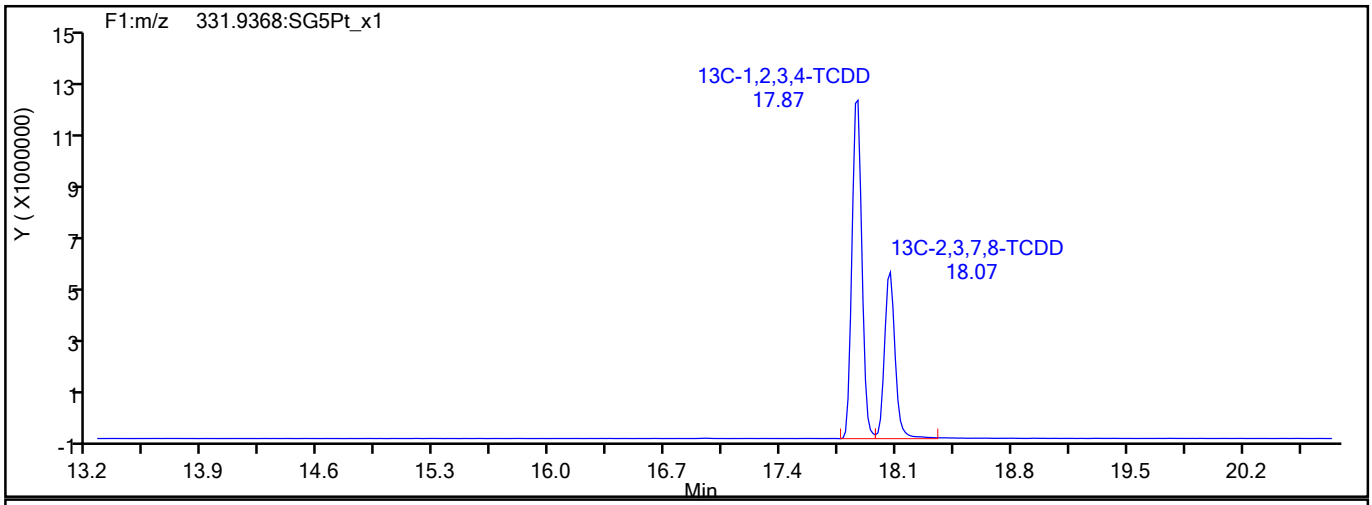

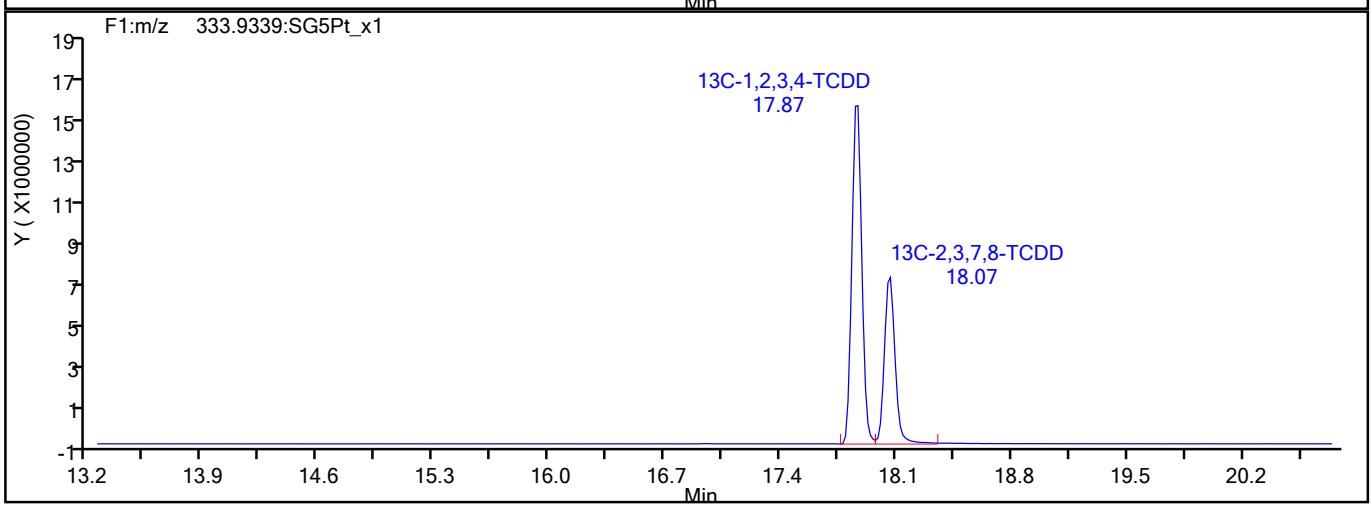

780816

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

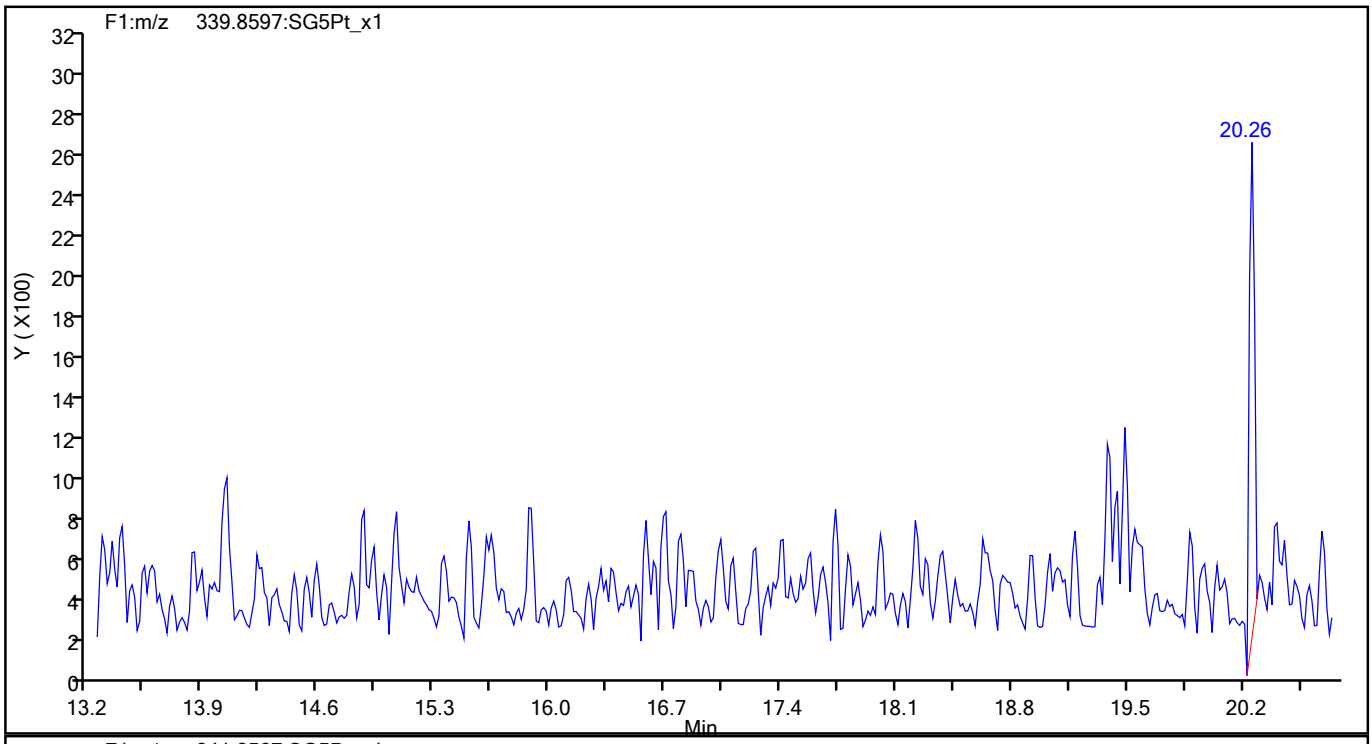

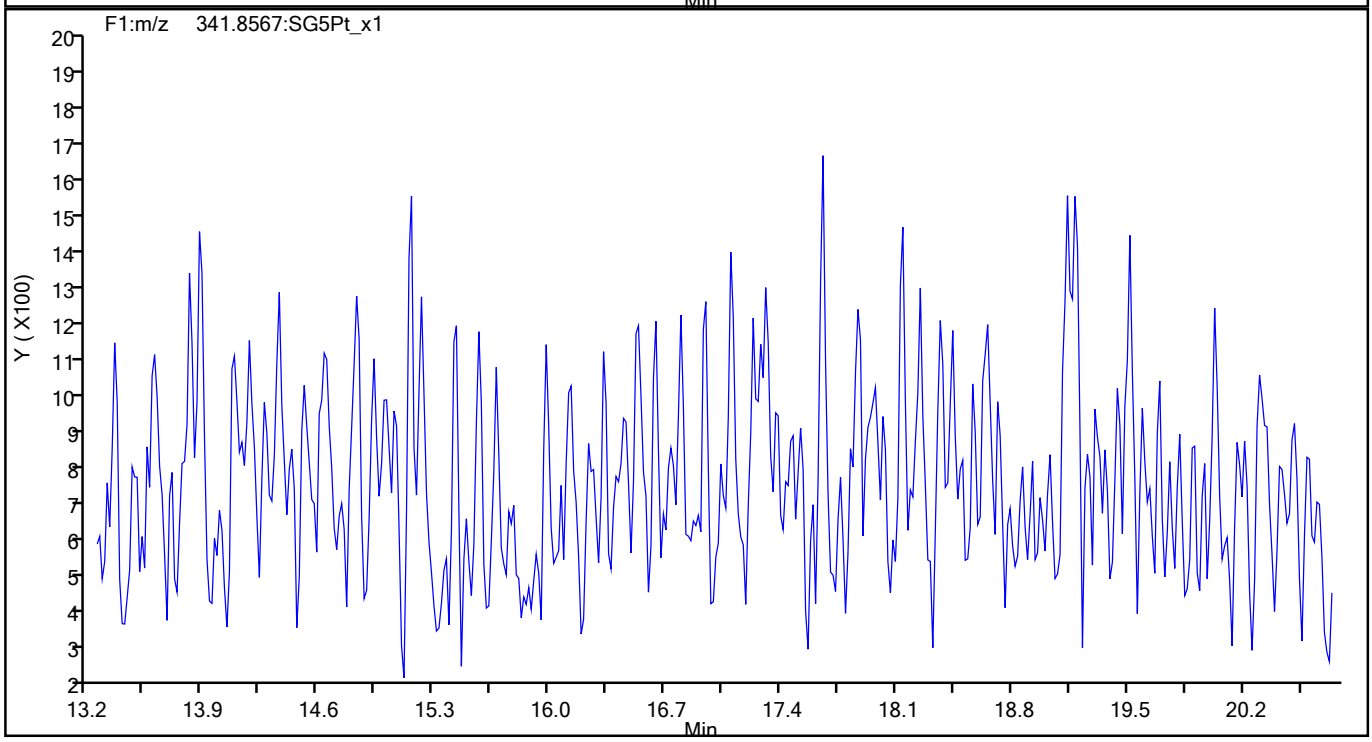

780817

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

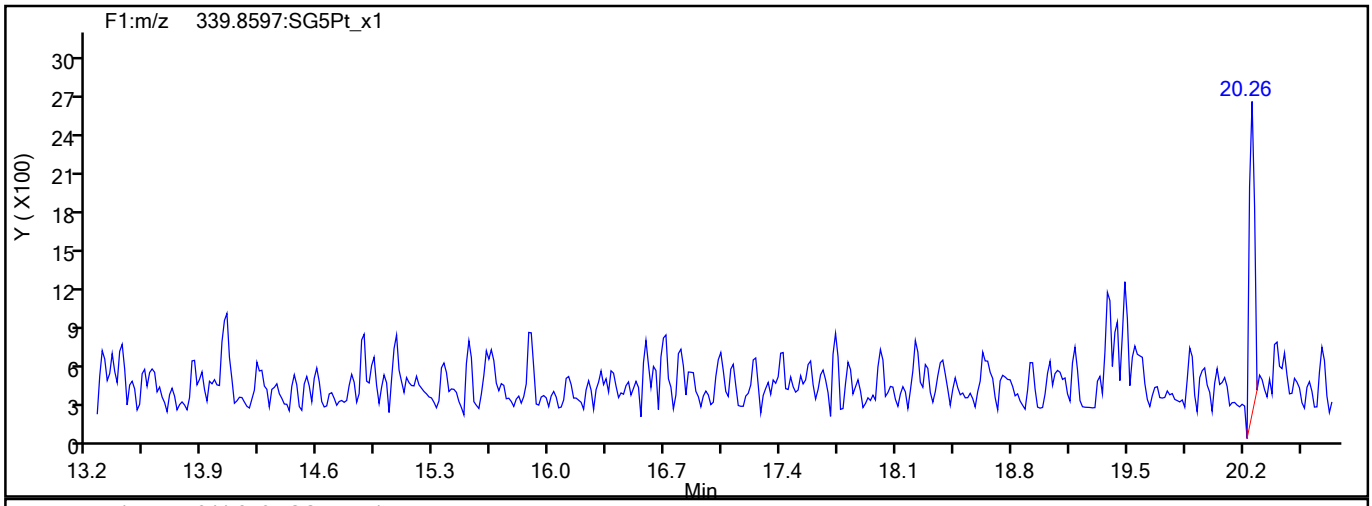

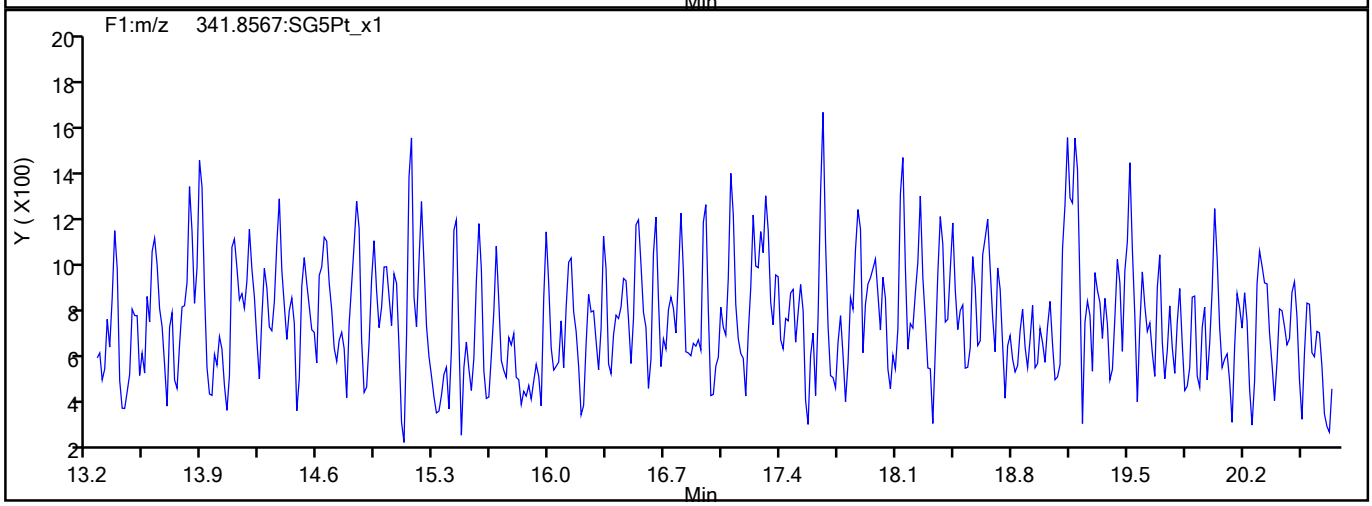

F1 PeCDFs Interference Mass

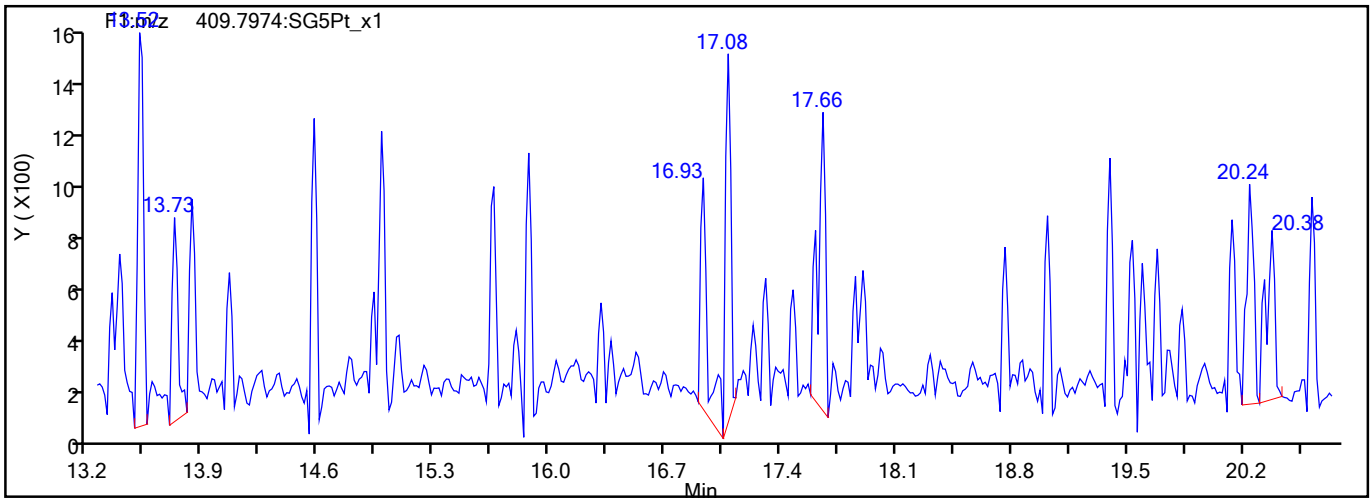

780818

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

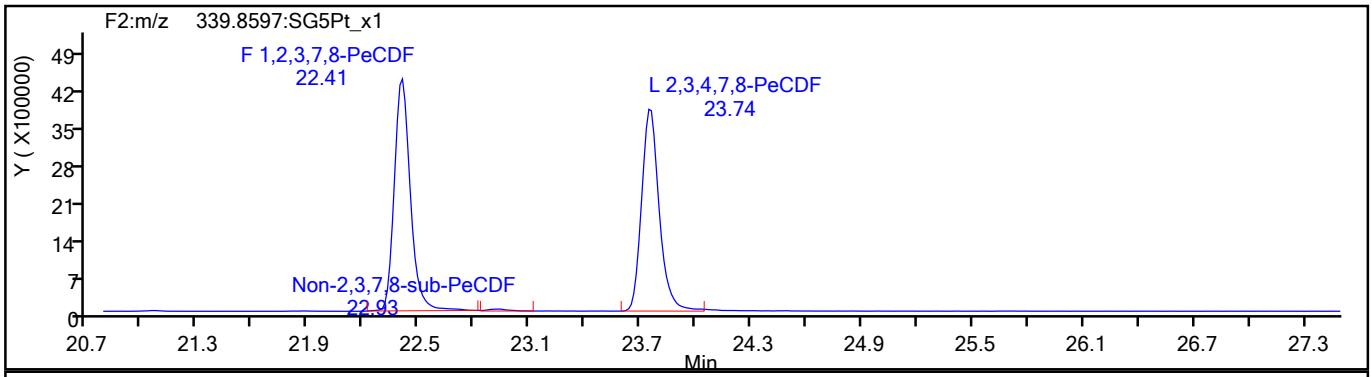

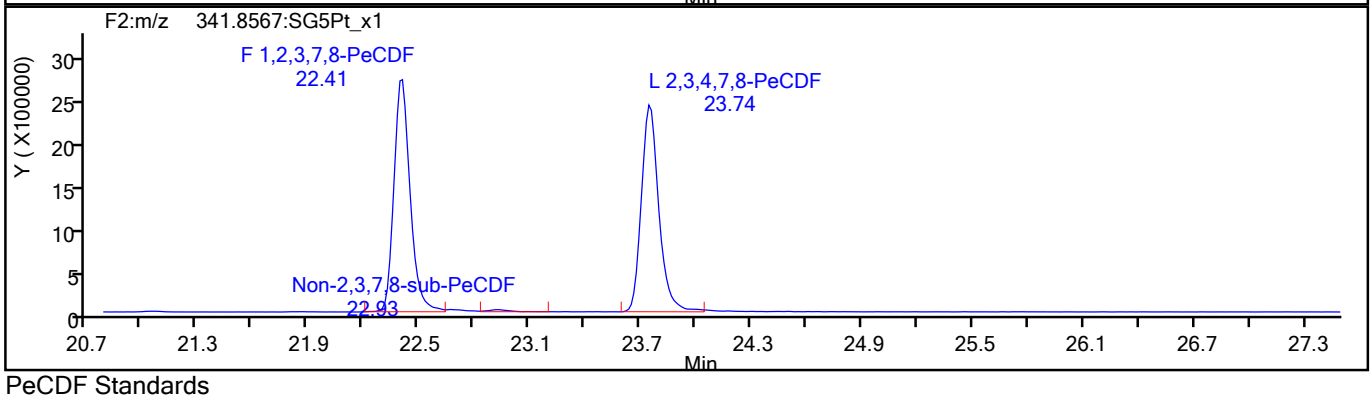

PeCDF Standards

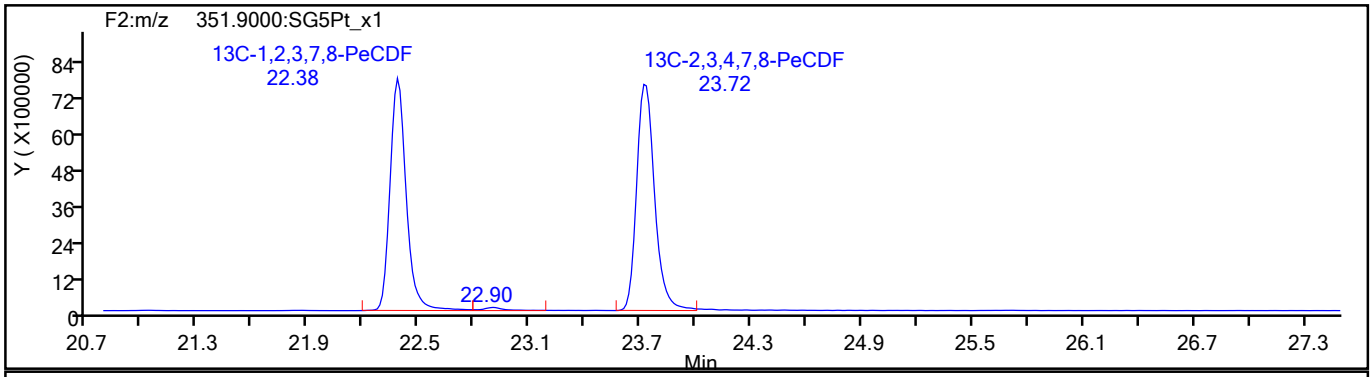

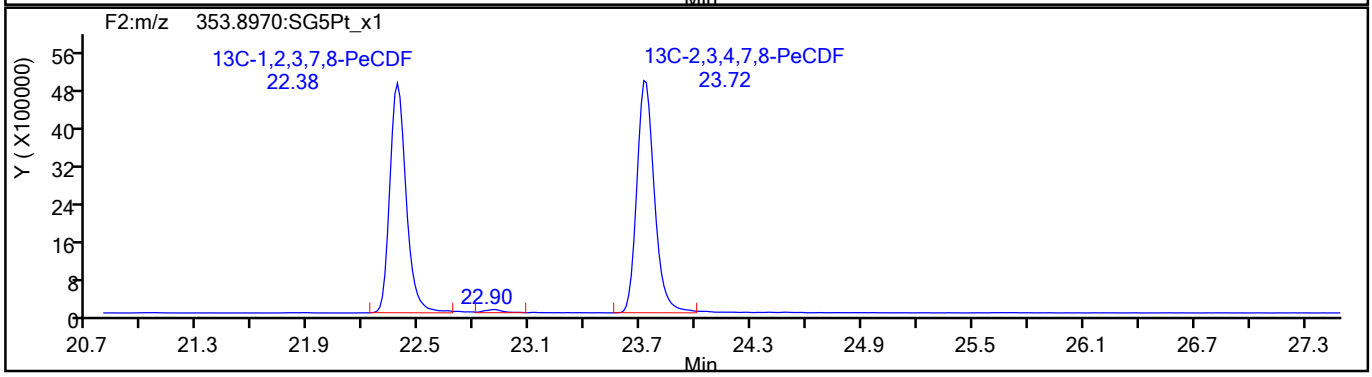

780819

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

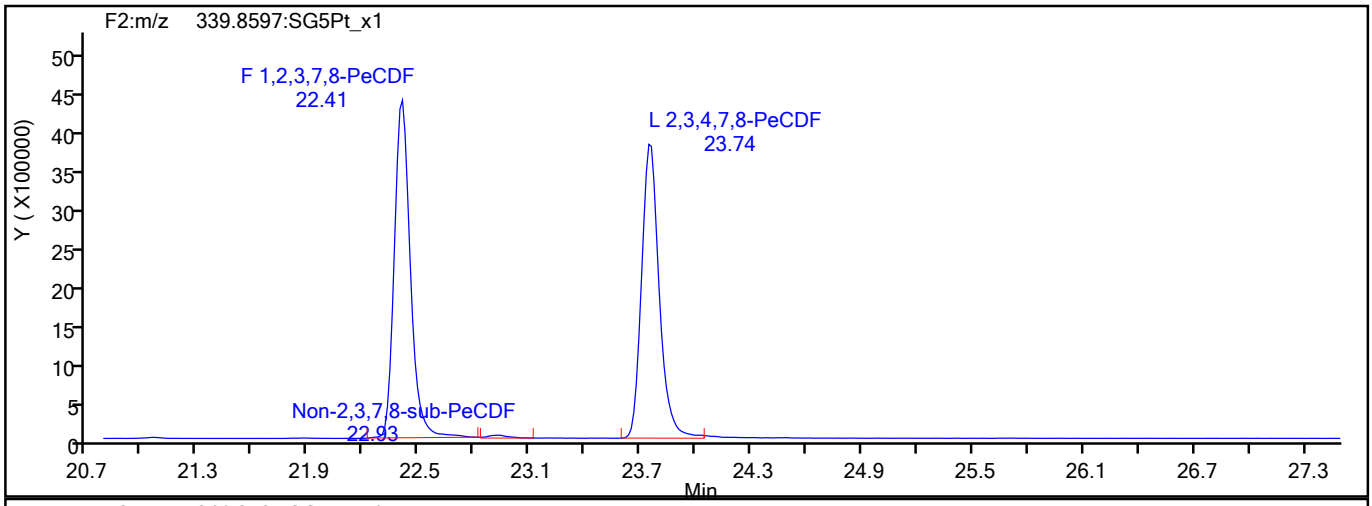

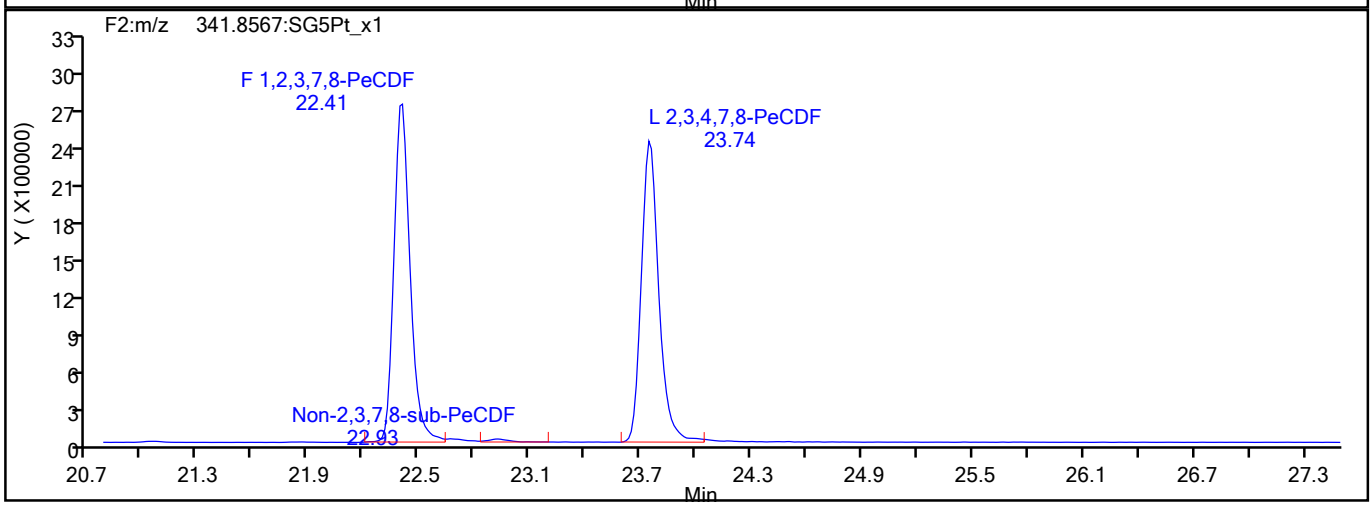

PeCDF Interference Mass

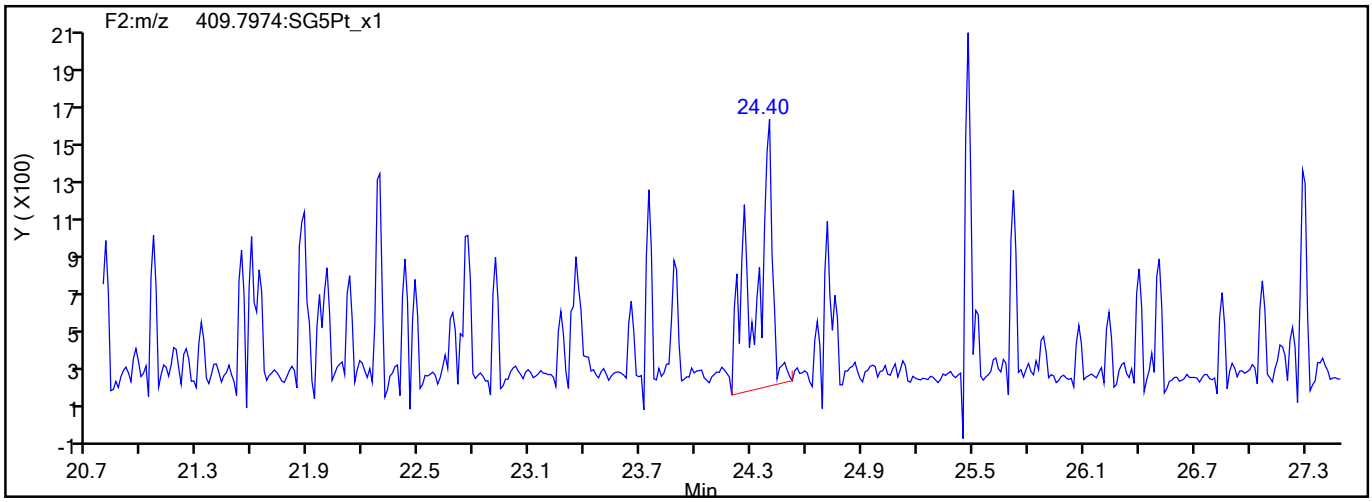

780820

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

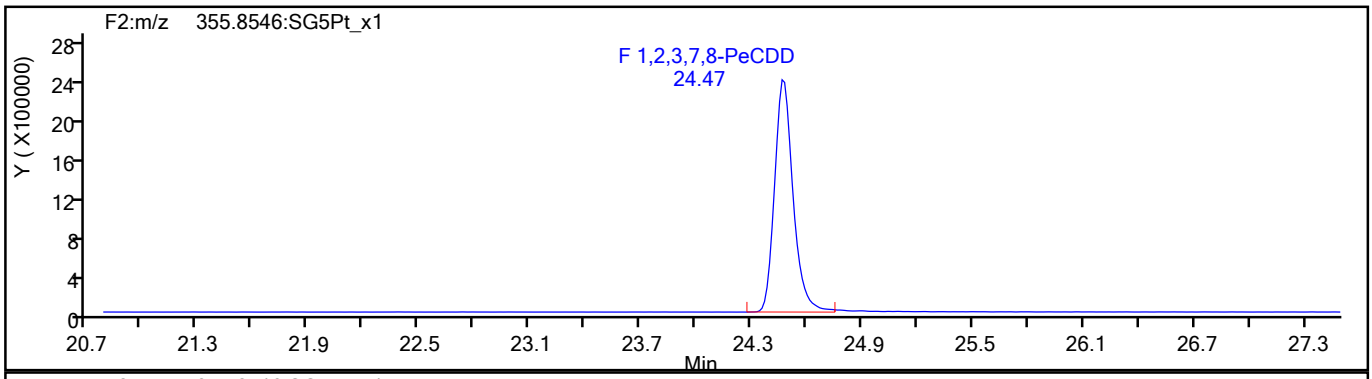

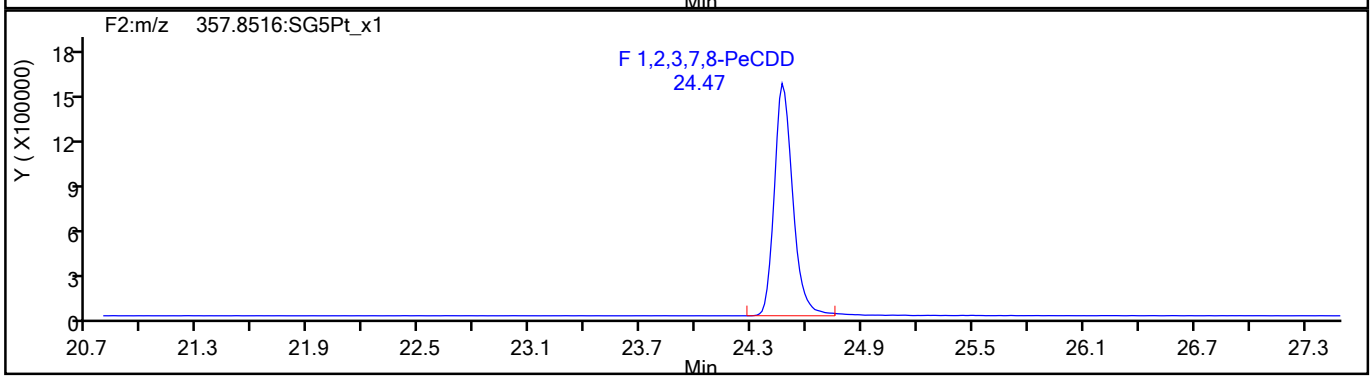

PeCDD Standards

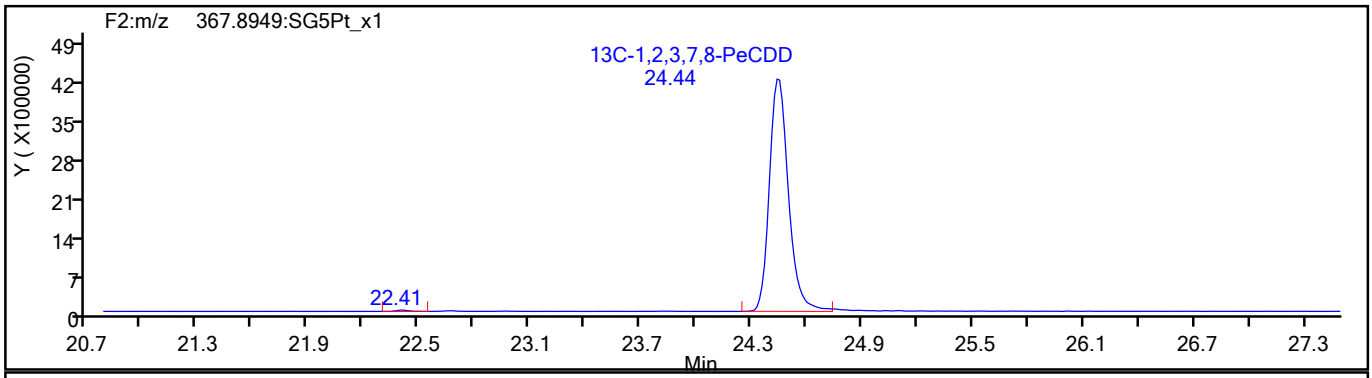

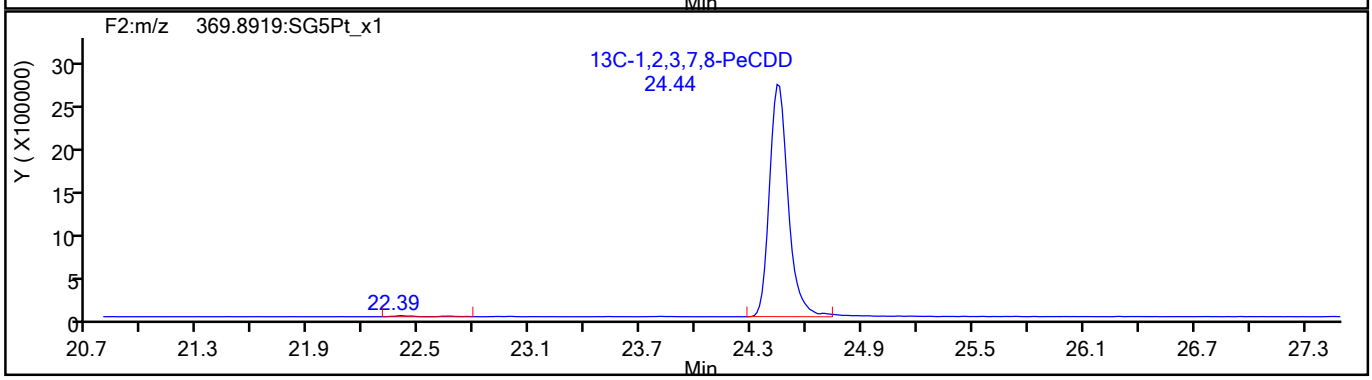

780821

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

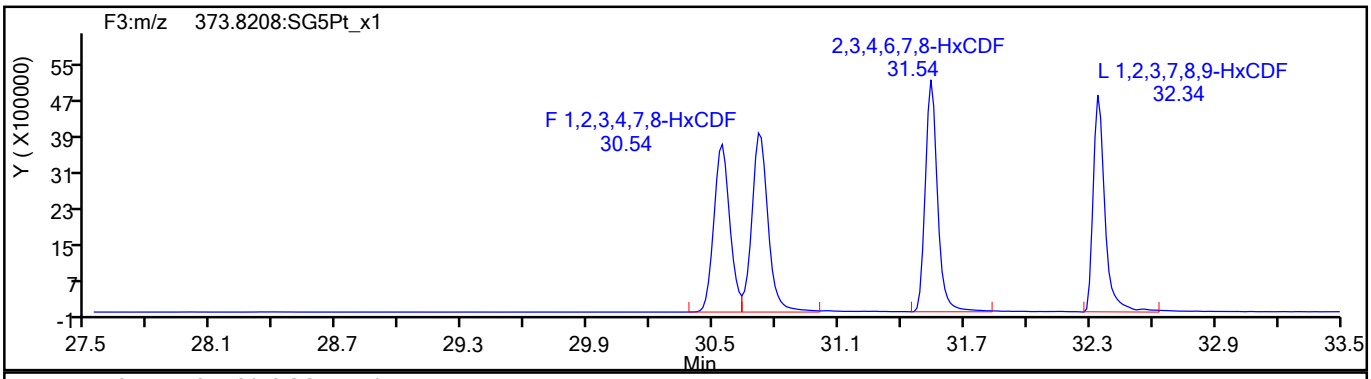

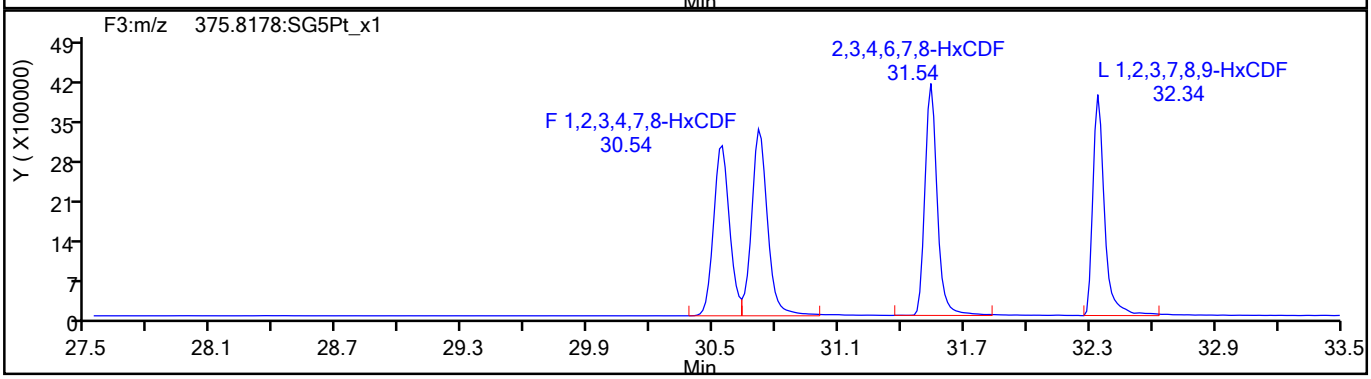

HxCDF Standards

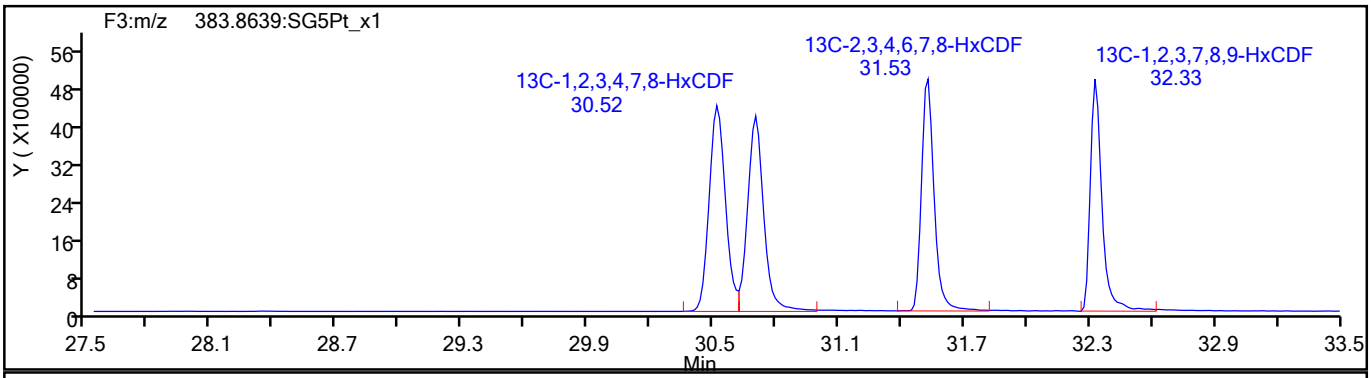

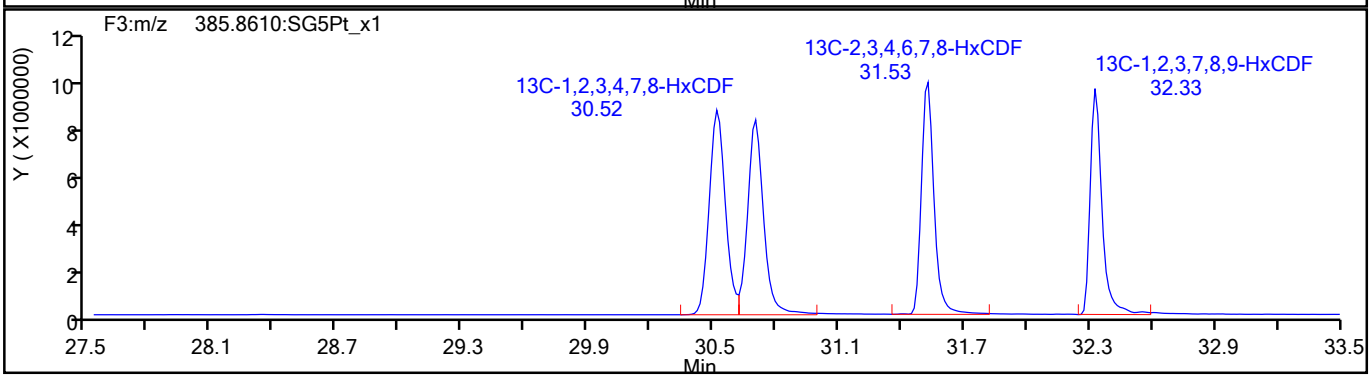

780822

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

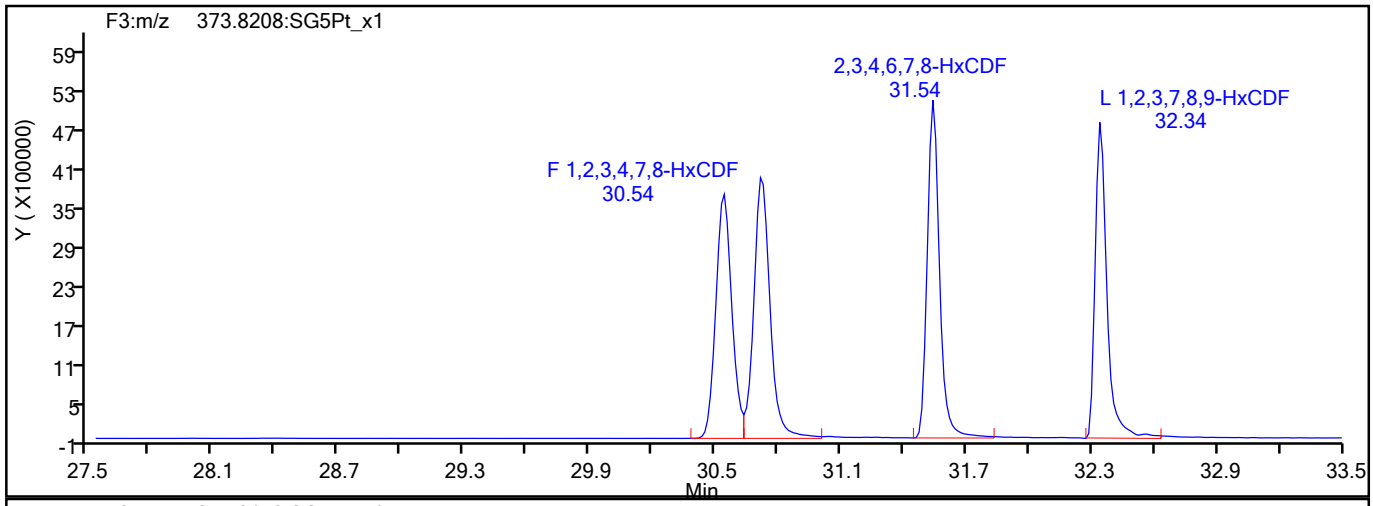

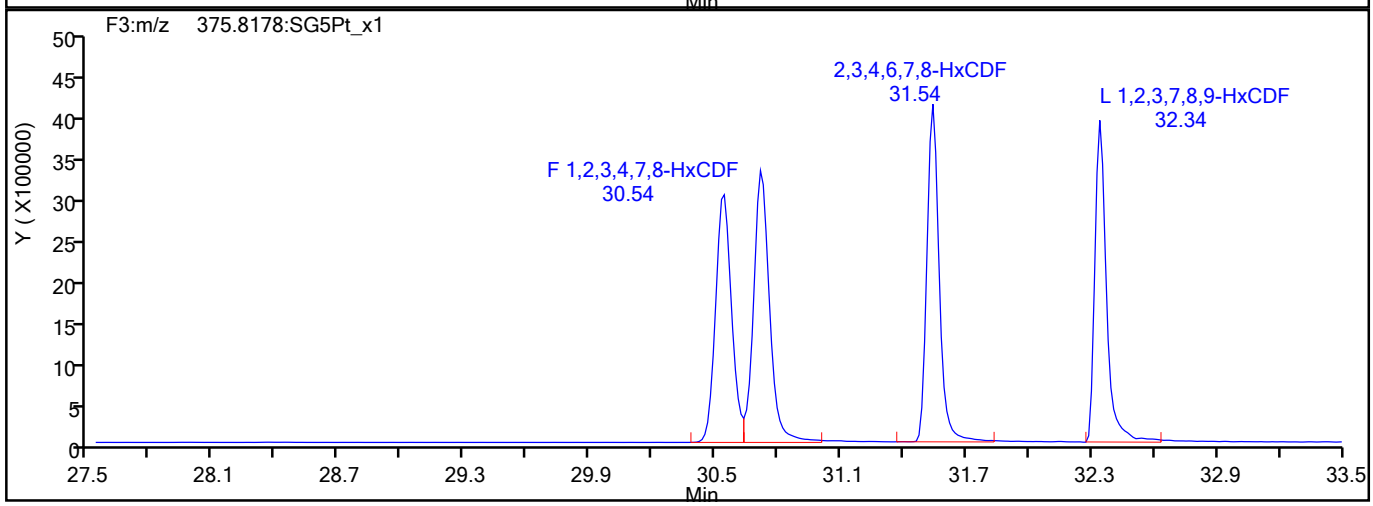

HxCDF Interference Mass

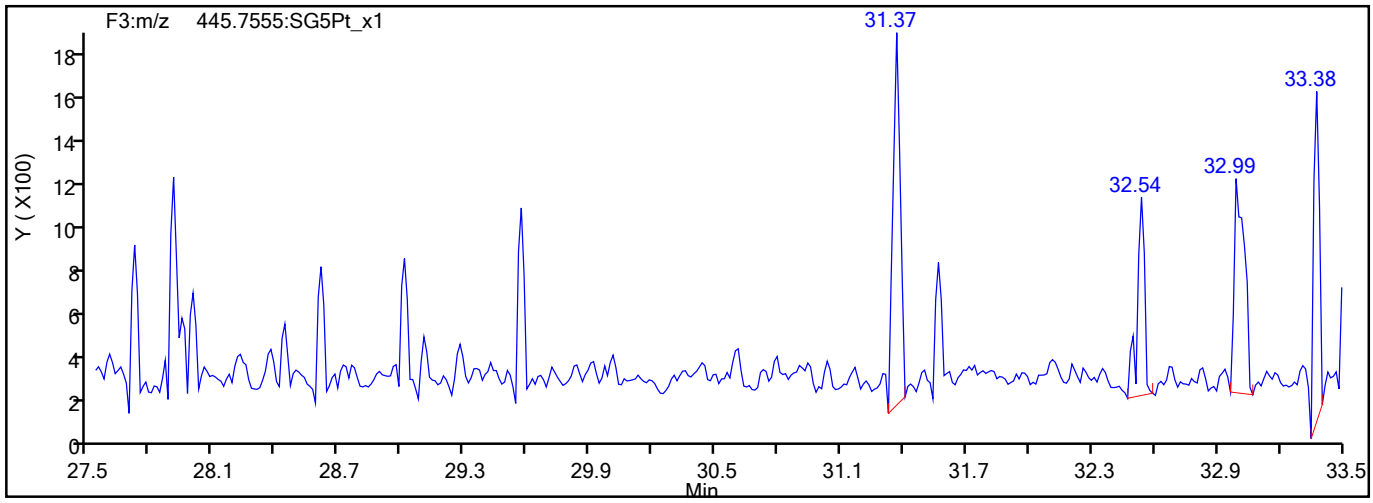

780823

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

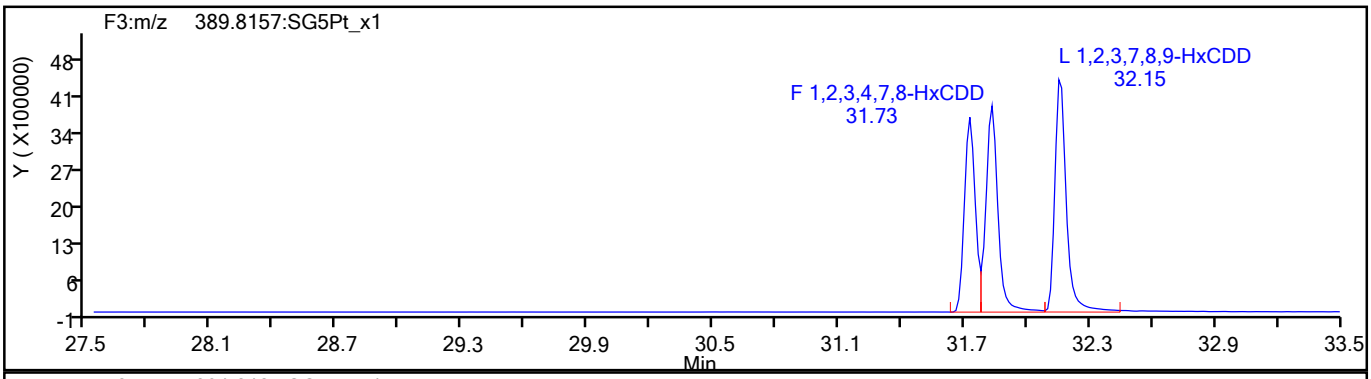

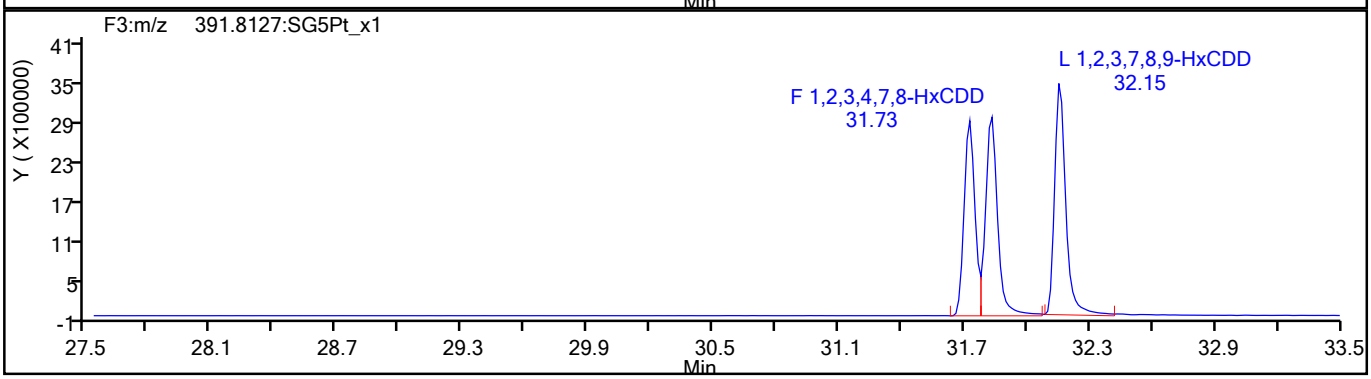

HxCDD Standards

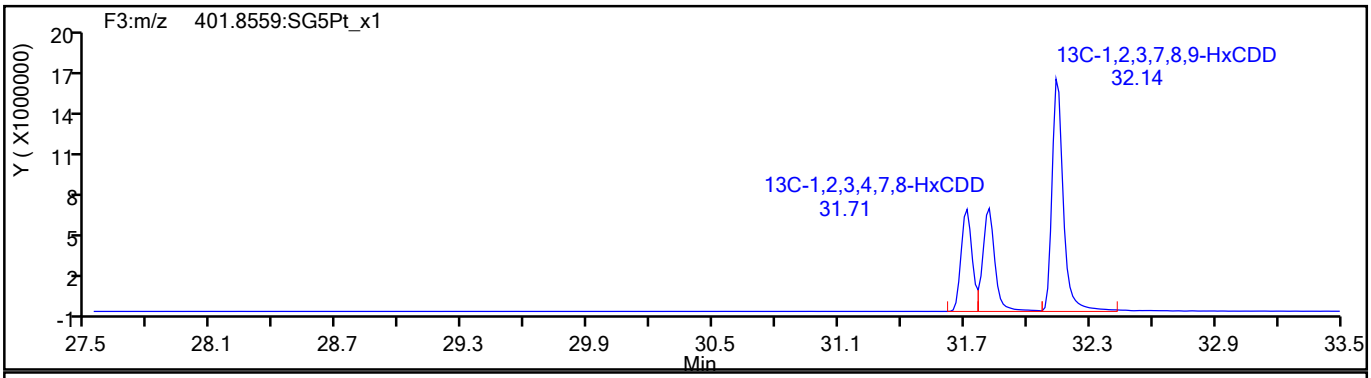

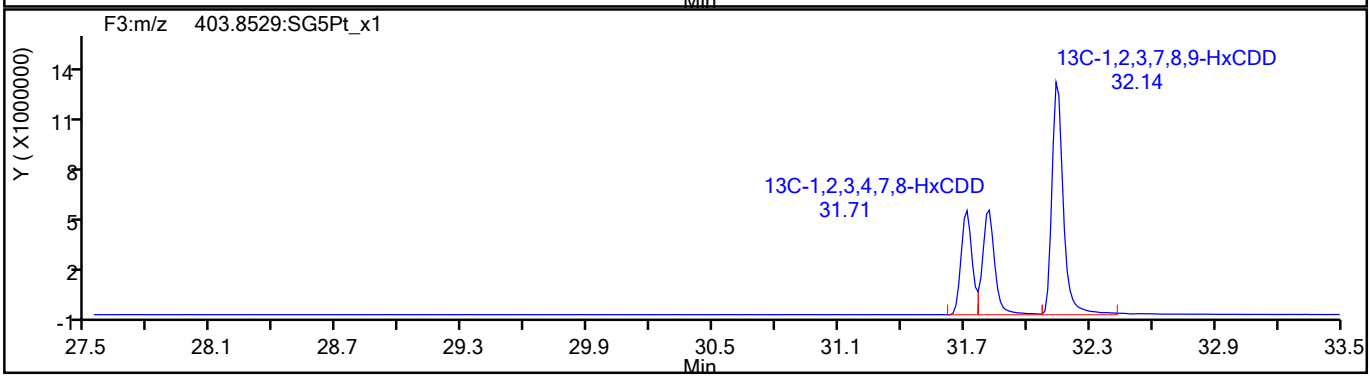

780824

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

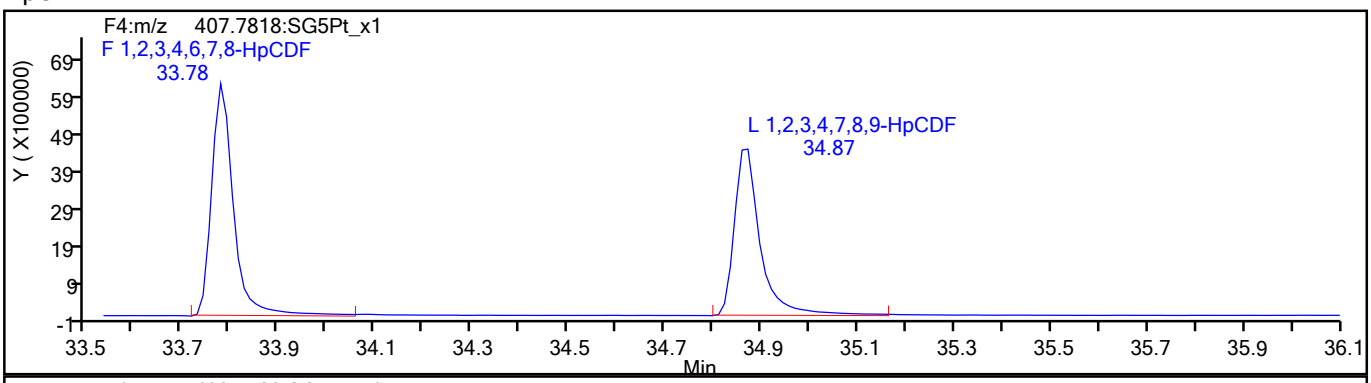

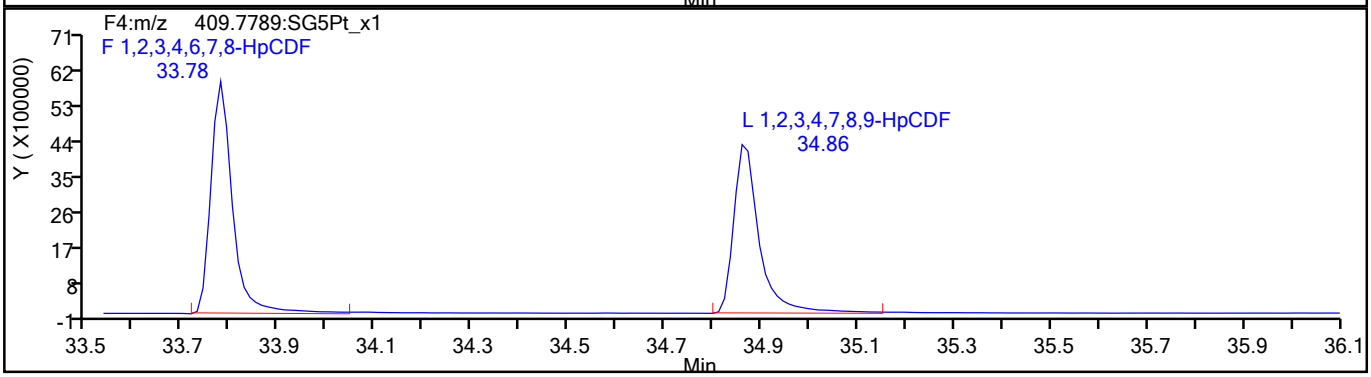

HpCDF Standards

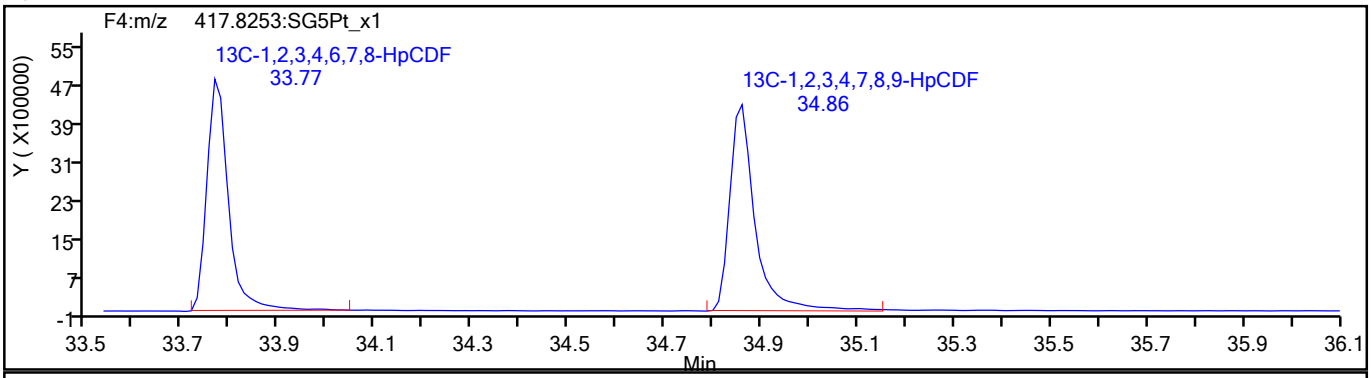

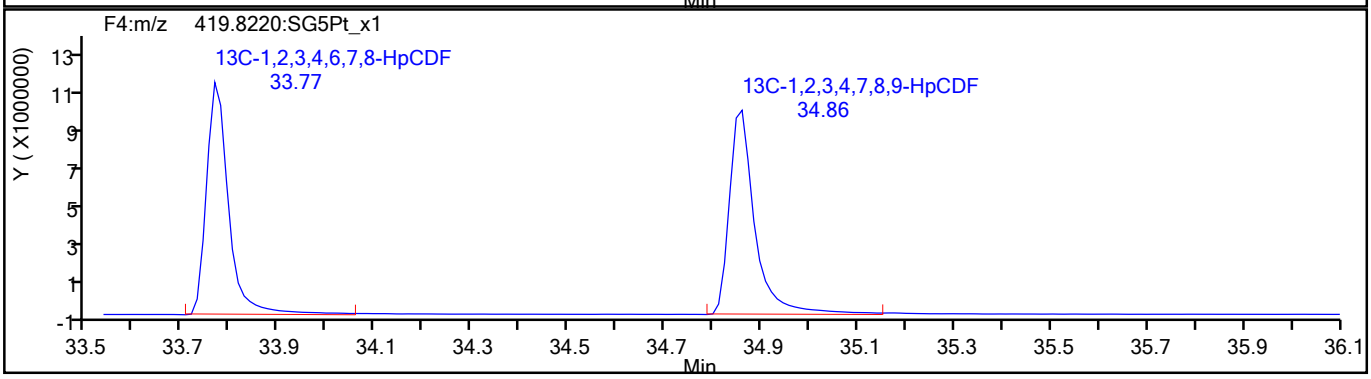

780825

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

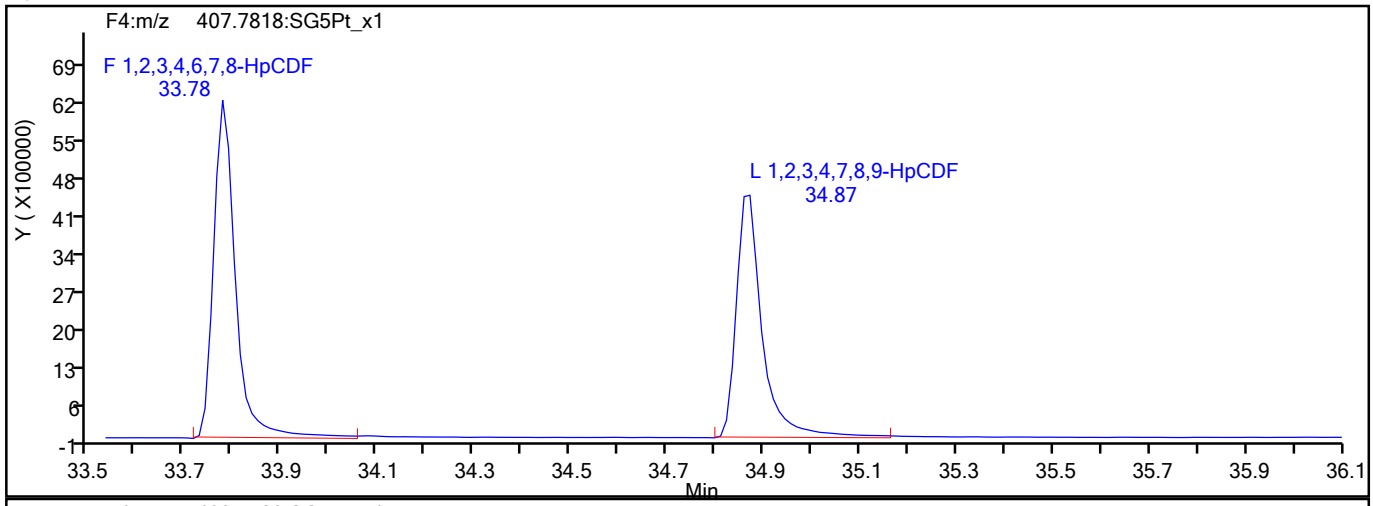

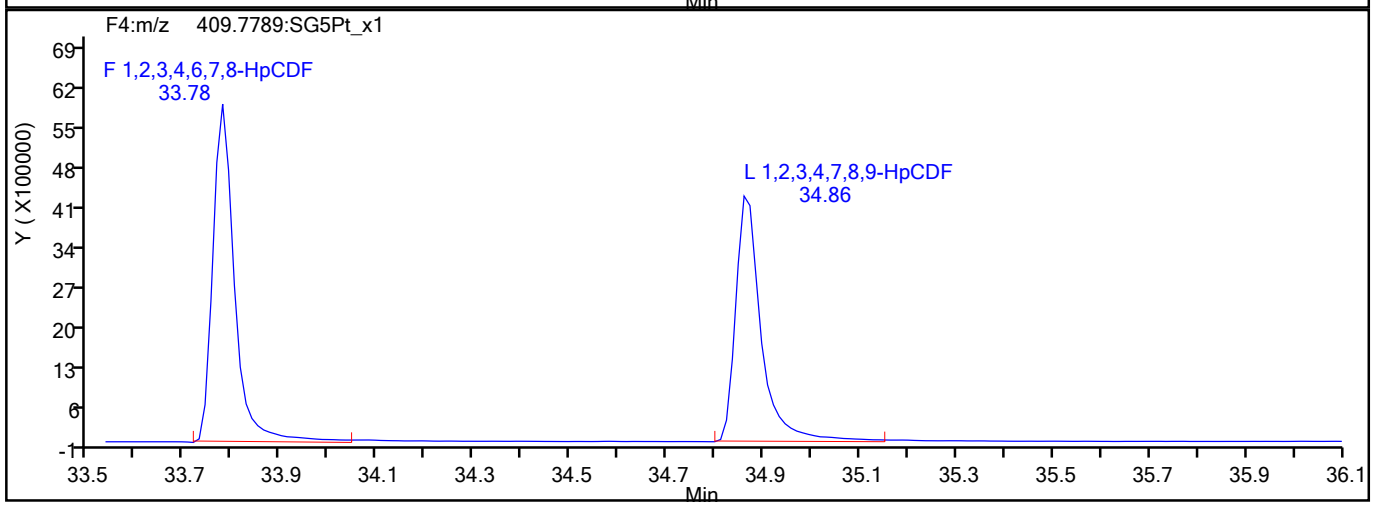

HpCDF Interference Mass

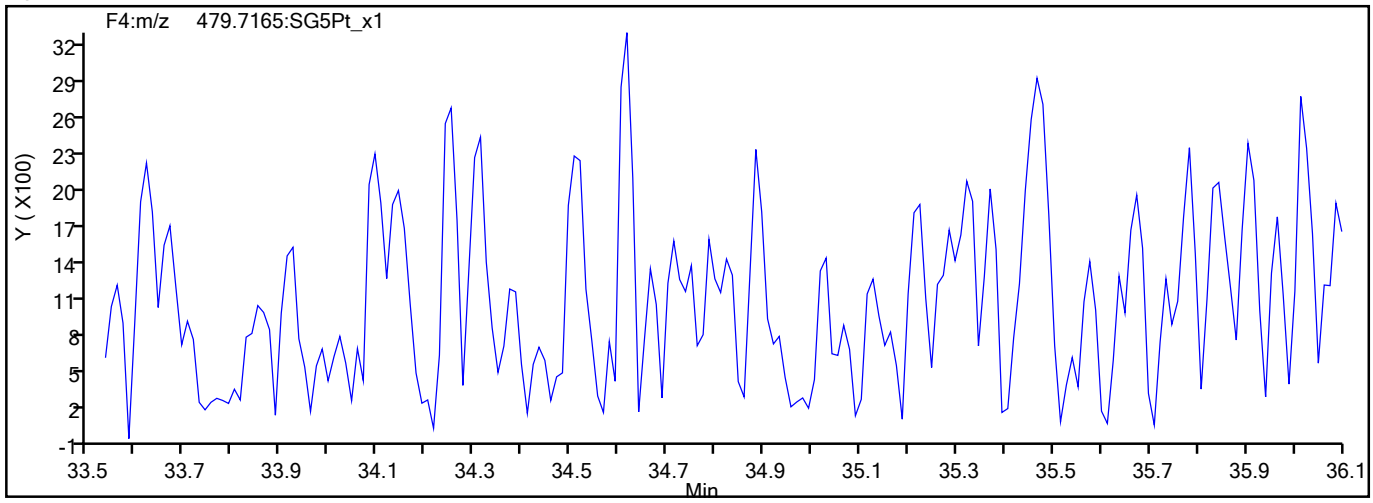

780826

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

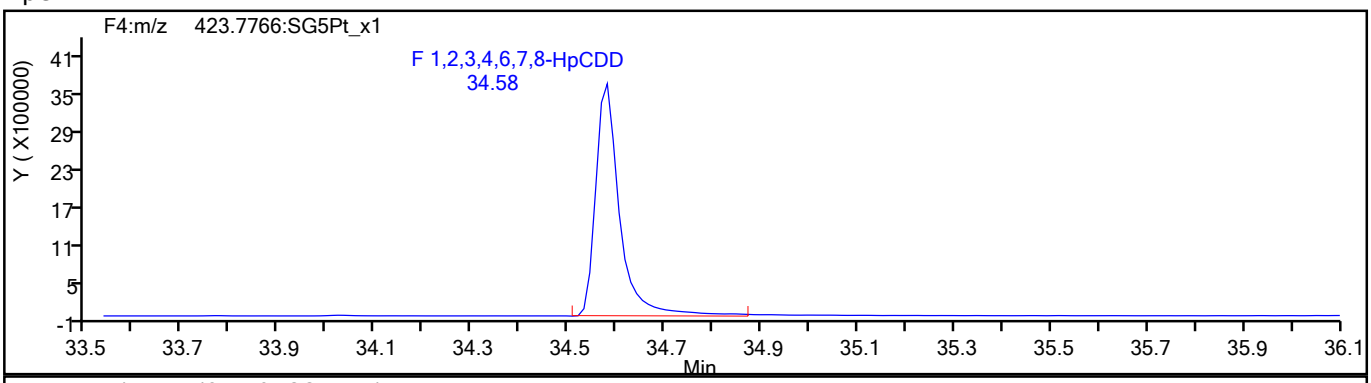

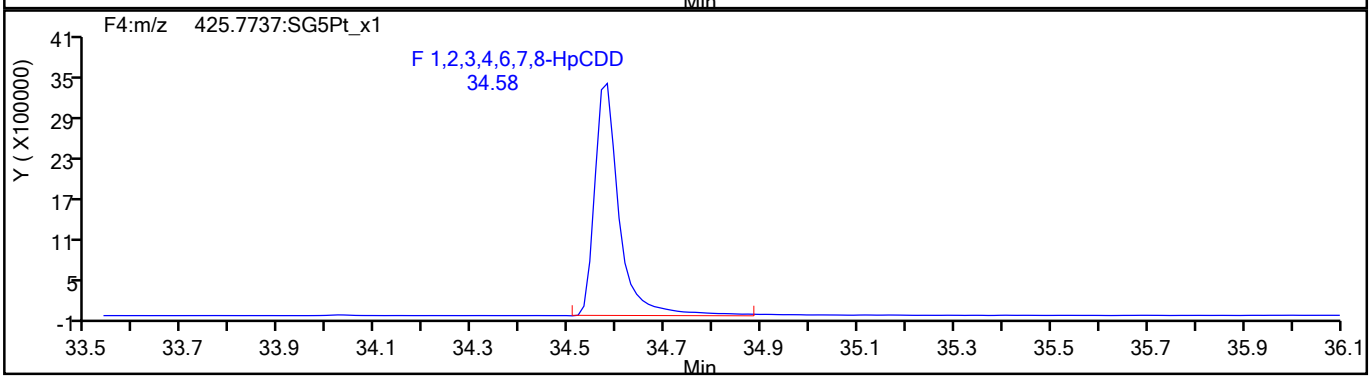

HpCDD Standards

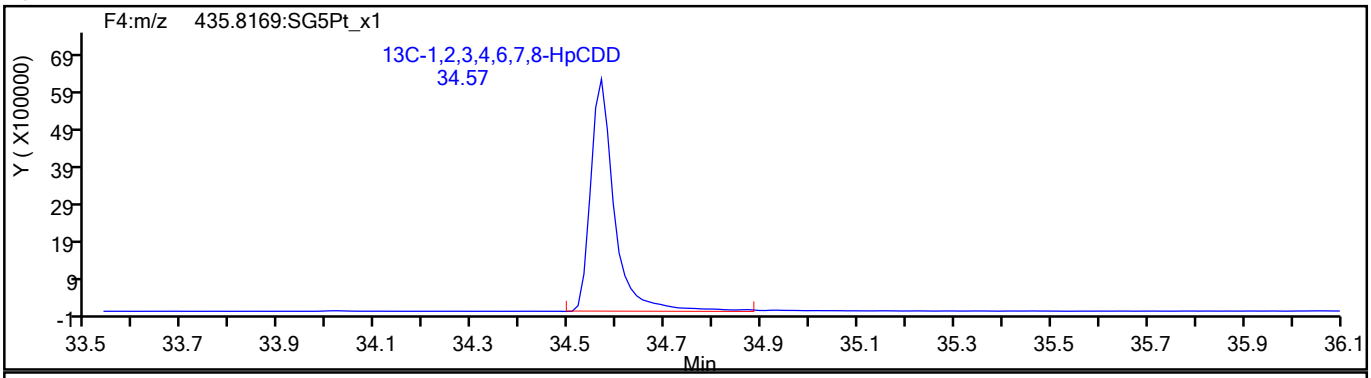

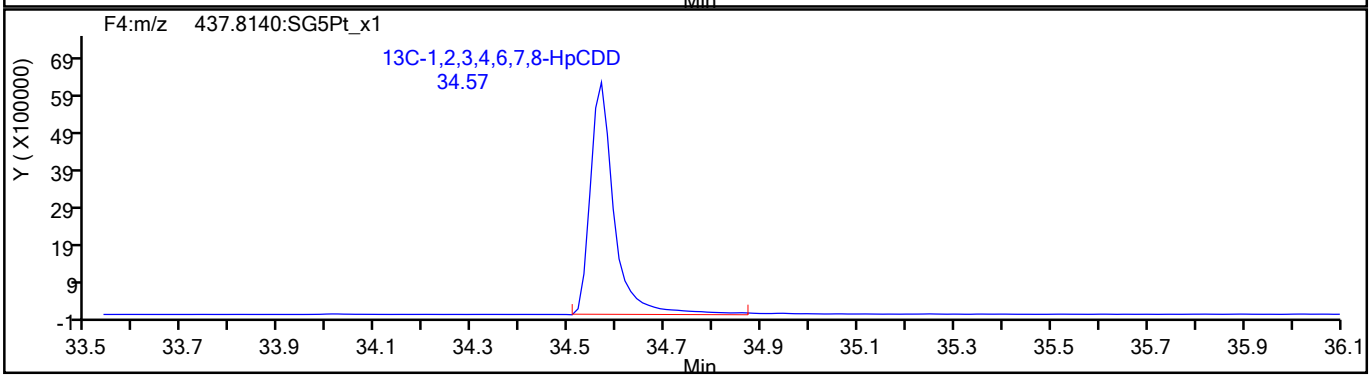

780827

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

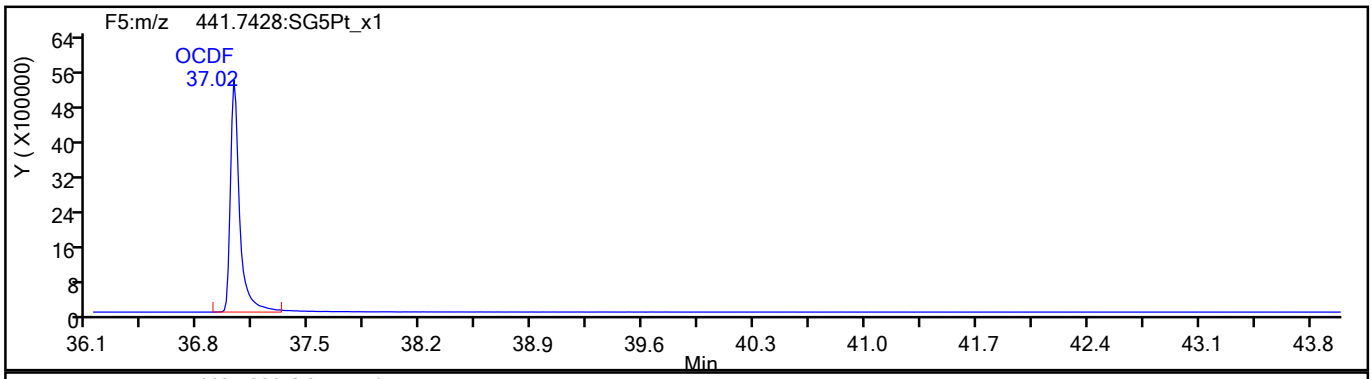

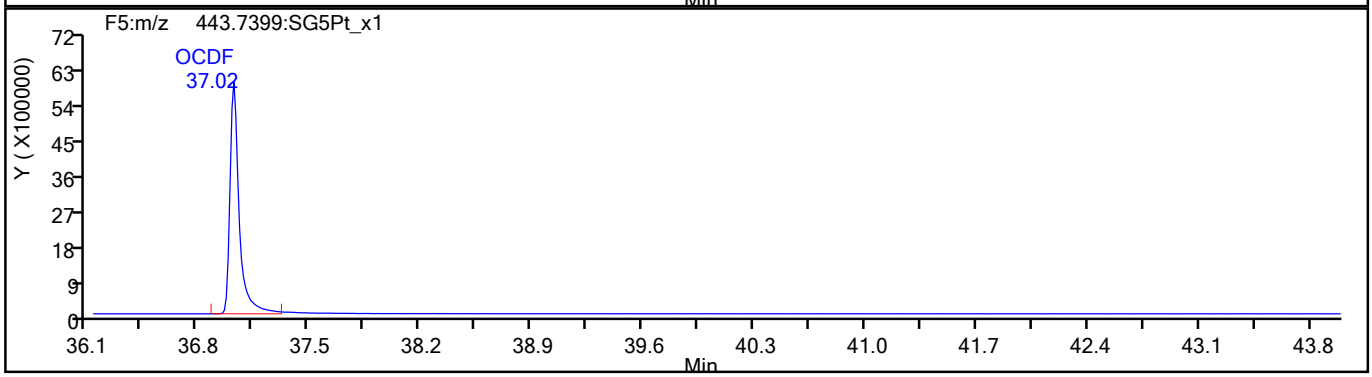

OCDF Standards

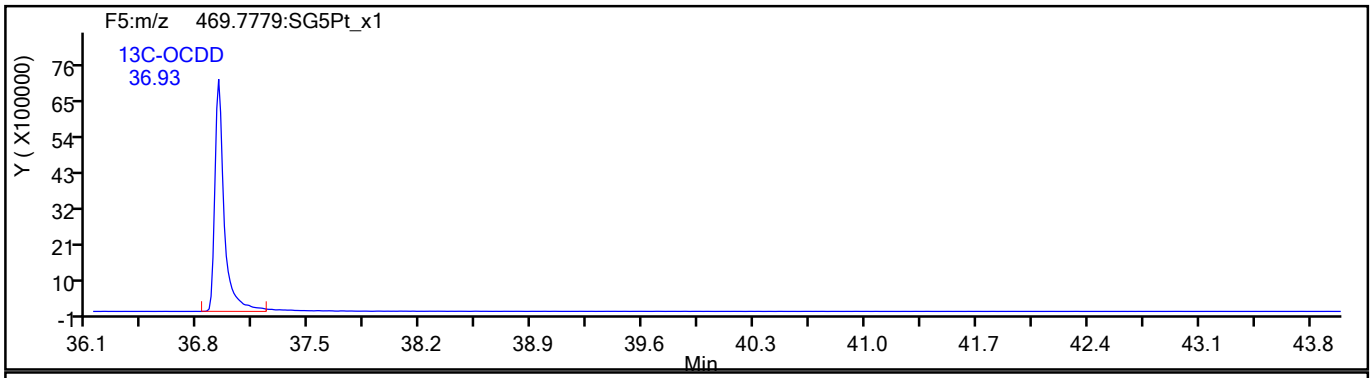

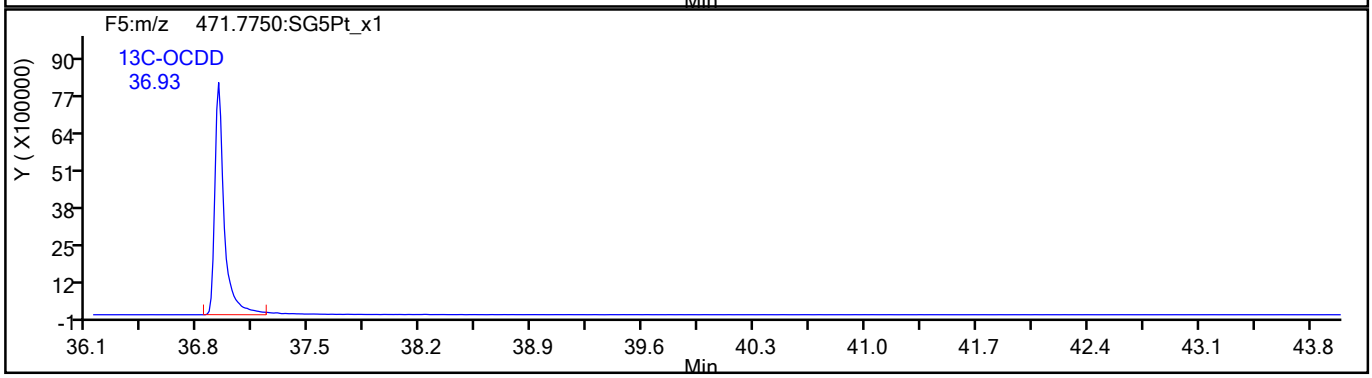

780828

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

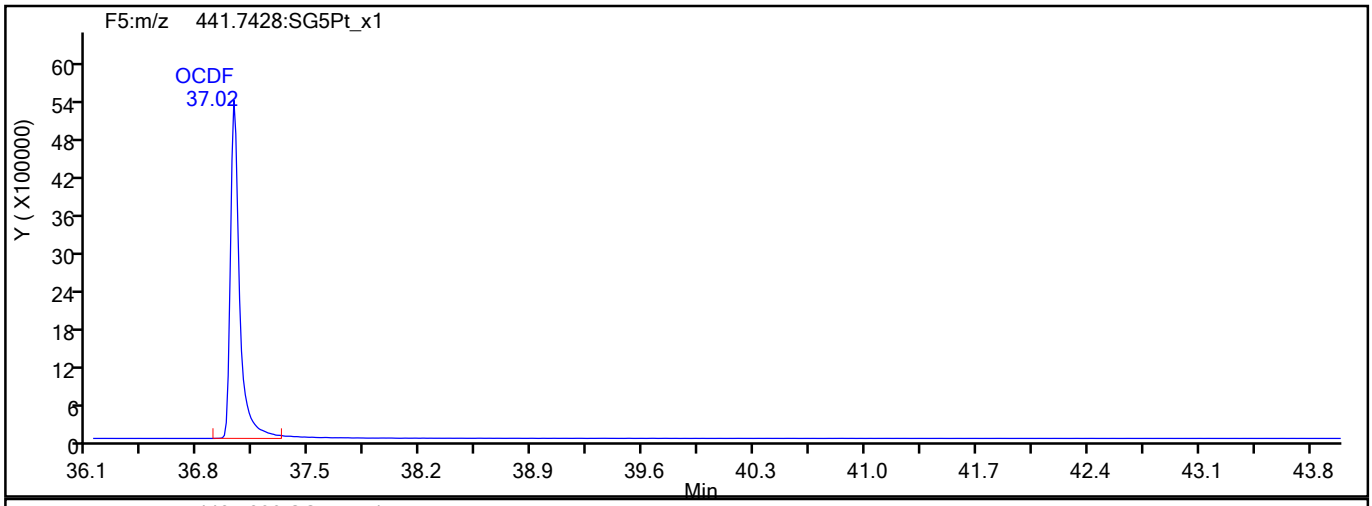

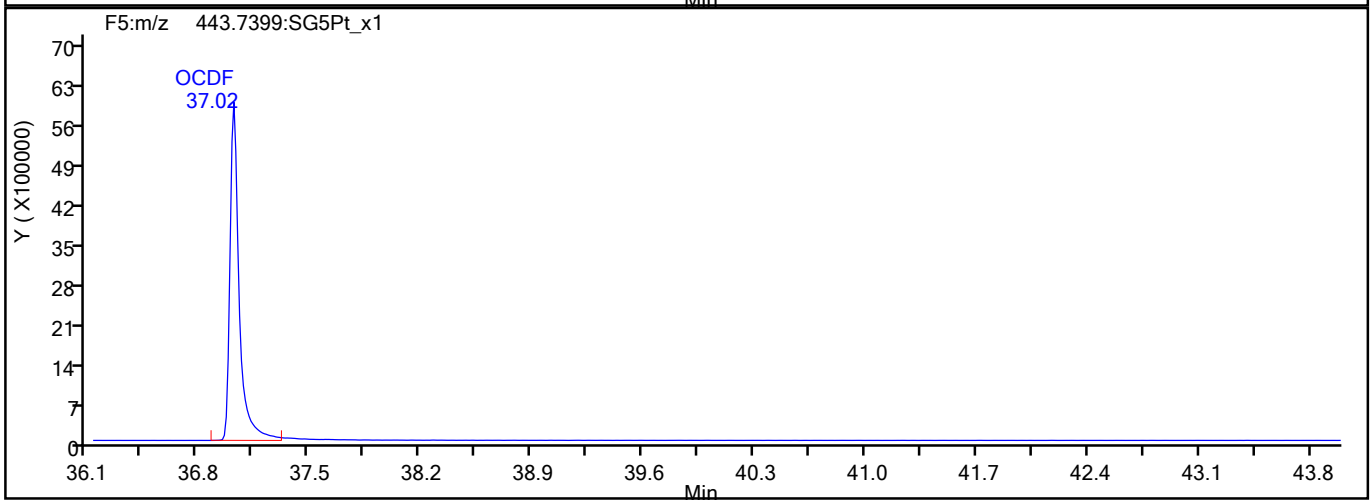

OCDF Interference Mass

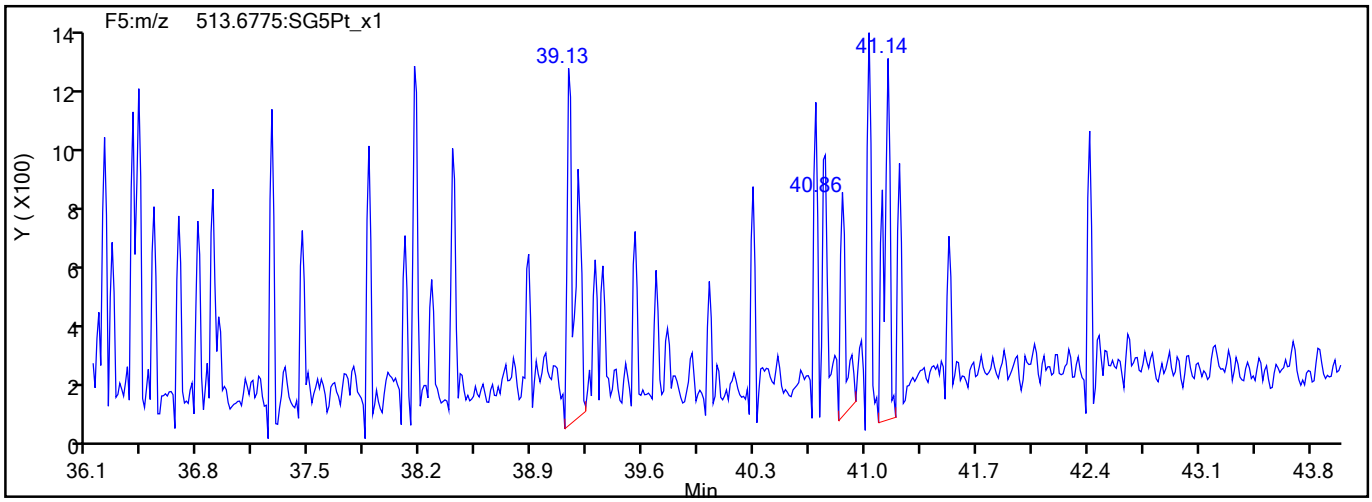

780829

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

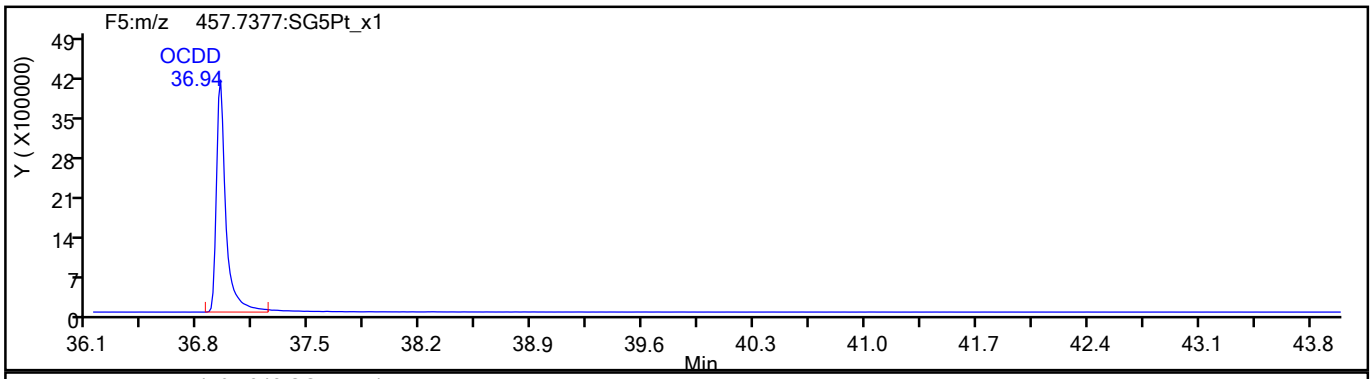

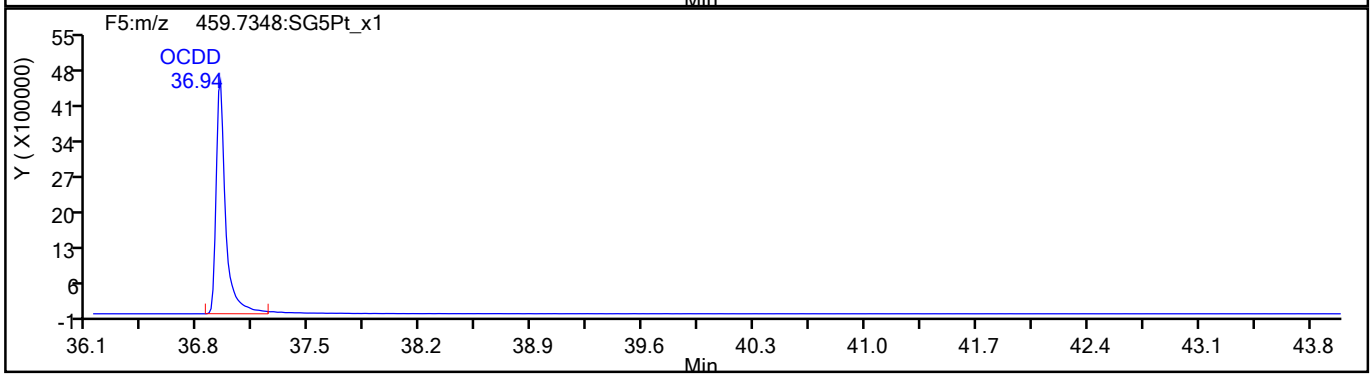

OCDD Standards

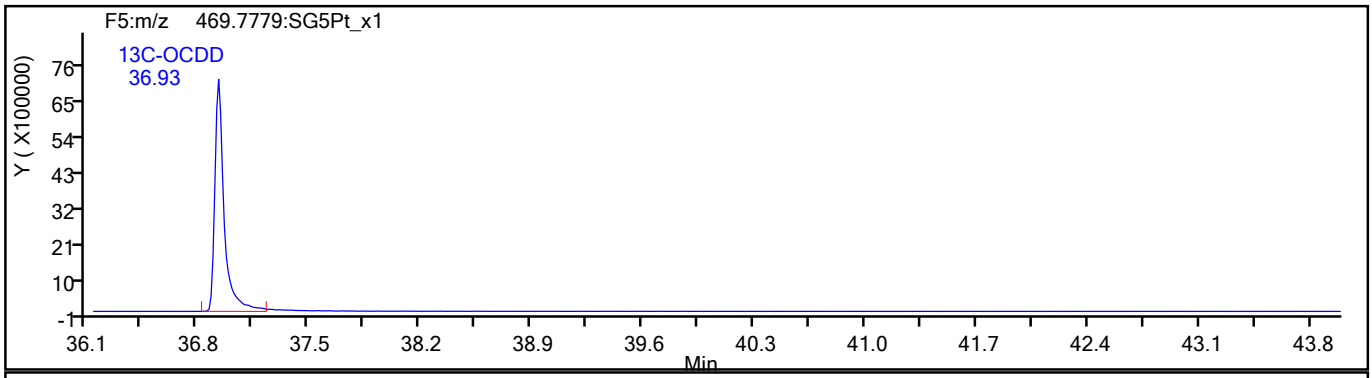

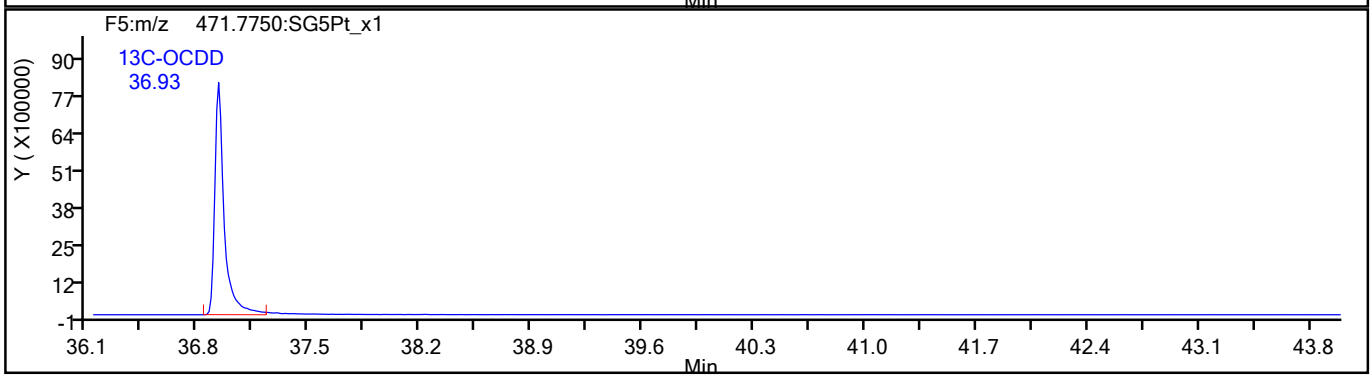

780830

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

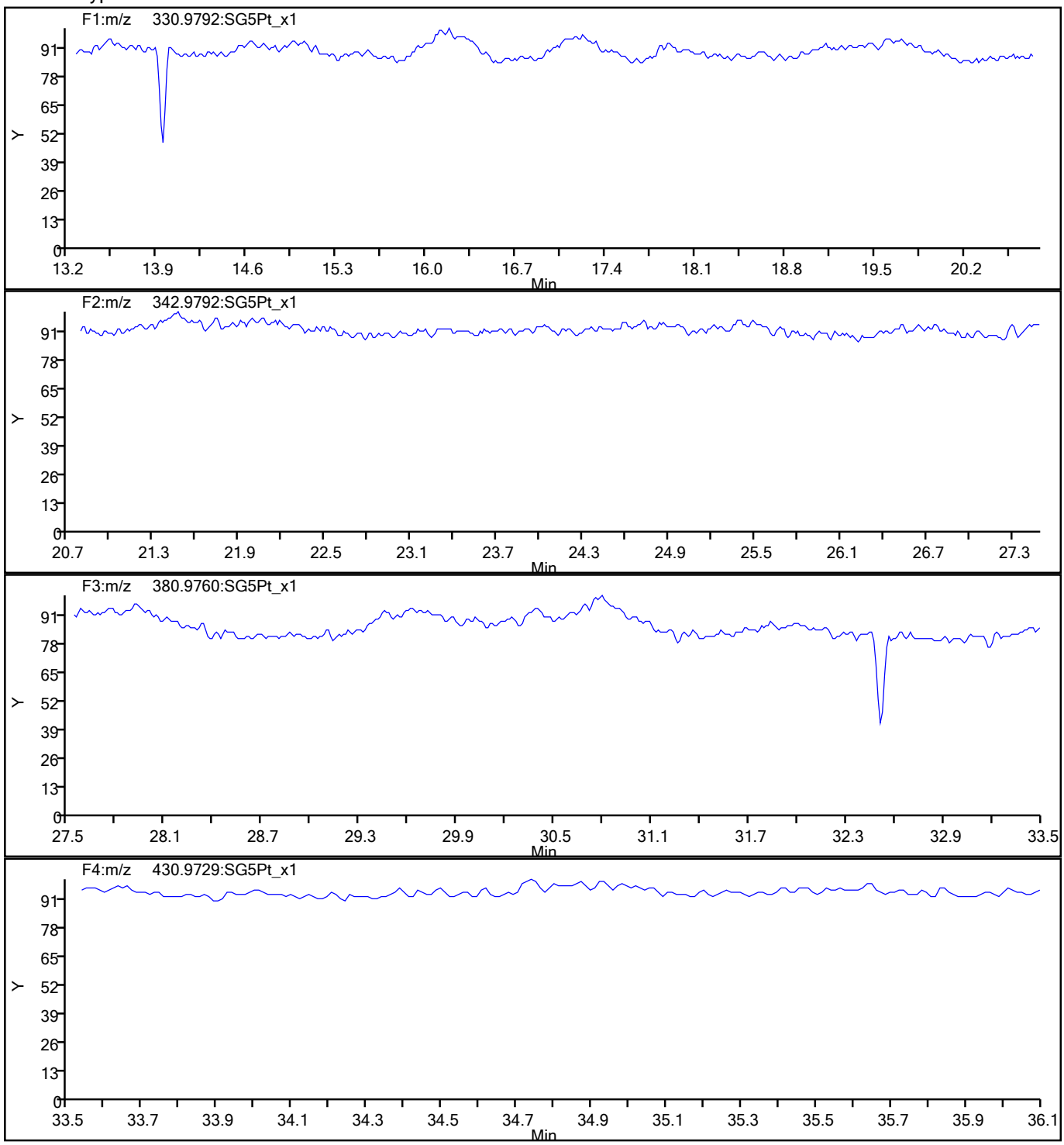

780831

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

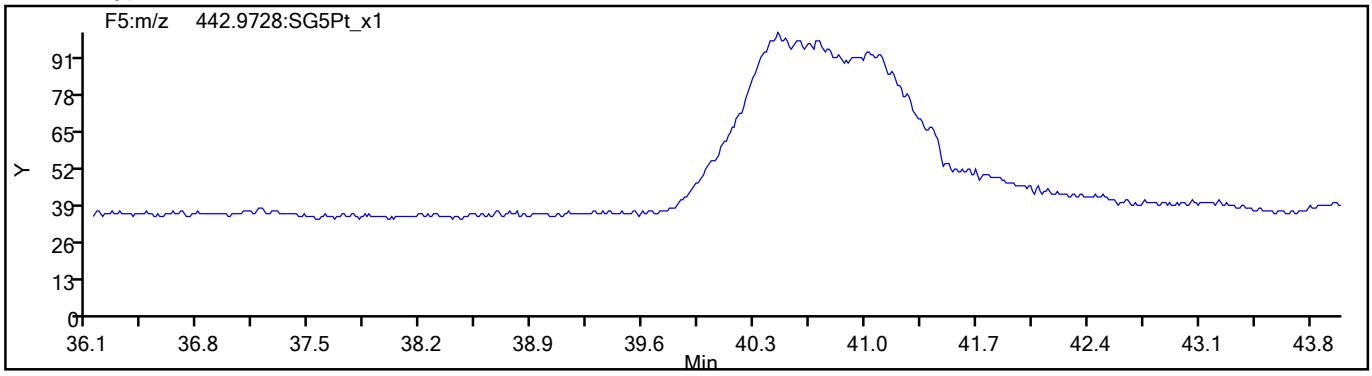

780832

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCSD 320-512871/3-A
Matrix: Solid
Lab File ID: 13AU2110D5_16.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10(g)
Date Analyzed: 08/14/2021 04:26
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	19.8		1.0	0.043
51207-31-9	2,3,7,8-TCDF	20.7		1.0	0.040
40321-76-4	1,2,3,7,8-PeCDD	105		5.0	0.14
57117-41-6	1,2,3,7,8-PeCDF	106		5.0	0.38
57117-31-4	2,3,4,7,8-PeCDF	97.0		5.0	0.38
39227-28-6	1,2,3,4,7,8-HxCDD	94.9		5.0	0.33
57653-85-7	1,2,3,6,7,8-HxCDD	105		5.0	0.34
19408-74-3	1,2,3,7,8,9-HxCDD	105		5.0	0.31
70648-26-9	1,2,3,4,7,8-HxCDF	95.3		5.0	0.64
57117-44-9	1,2,3,6,7,8-HxCDF	104		5.0	0.65
72918-21-9	1,2,3,7,8,9-HxCDF	103		5.0	0.52
60851-34-5	2,3,4,6,7,8-HxCDF	104		5.0	0.52
35822-46-9	1,2,3,4,6,7,8-HpCDD	106		5.0	0.53
67562-39-4	1,2,3,4,6,7,8-HpCDF	106		5.0	0.99
55673-89-7	1,2,3,4,7,8,9-HpCDF	97.7		5.0	1.2
3268-87-9	OCDD	207		10	0.20
39001-02-0	OCDF	205		10	0.19
41903-57-5	Total TCDD	19.8		1.0	0.043
30402-14-3	Total TCDF	20.9		1.0	0.040
36088-22-9	Total PeCDD	105		5.0	0.14
30402-15-4	Total PeCDF	204		5.0	0.38
34465-46-8	Total HxCDD	305		5.0	0.33
55684-94-1	Total HxCDF	406		5.0	0.58
37871-00-4	Total HpCDD	106		5.0	0.53
38998-75-3	Total HpCDF	204		5.0	1.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 320-512871/3-A

Matrix: Solid Lab File ID: 13AU2110D5_16.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/04/2021 07:15

Sample wt/vol: 10(g) Date Analyzed: 08/14/2021 04:26

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 516836 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	60		20-175
89059-46-1	13C-2,3,7,8-TCDF	57		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	58		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	56		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	62		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	61		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	60		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	55		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	54		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	55		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	60		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	59		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	65		20-186
114423-97-1	13C-OCDD	63		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	78		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d
Lims ID: LCSD 320-512871/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 14-Aug-2021 04:26:25 ALS Bottle#: 17 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-512871/3-a lcsd 320-512871/3-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 08:51:16 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:36:14

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	125492295	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	116077478	0.77	1.6249	56.9	56.9	0.1256	0.1256	56.92	
2,3,7,8-TCDF	17.371	12304854	0.75	1.0239	10.4	10.4	0.0198	0.0198	104	
A Non-2,3,7,8-sub-TCDF	17.046	99908	0.82	1.0239	0.0841	0.0841	0.0198	0.0841	0.00	
S Total TCDF					10.4	10.4	0.0198	0.0198		
D 13C-2,3,7,8-TCDD	18.066	67464070	0.81	0.8993	59.8	59.8	0.1536	0.1536	59.78	
2,3,7,8-TCDD	18.082	8386492	0.77	1.2541	9.912	9.912	0.0217	0.0217	99.12	
$ 37Cl4-2,3,7,8-TCDD	18.082	43588272		1.1071	31.4	31.4	0.0271	0.0271	78.43	
A Non-2,3,7,8-sub-TCDD	17.499						0.0217	0.0217		
S Total TCDD					9.912	9.912	0.0217	0.0217		
D 13C-1,2,3,7,8-PeCDF	22.381	85288463	1.57	1.2101	56.2	56.2	0.1402	0.1402	56.16	
1,2,3,7,8-PeCDF	22.408	47753683	1.60	1.0611	52.8	52.8	0.1880	0.1880	106	
D 13C-2,3,4,7,8-PeCDF	23.717	95700422	1.58	1.2395	61.5	61.5	0.1369	0.1369	61.53	
2,3,4,7,8-PeCDF	23.744	47279876	1.58	1.0184	48.5	48.5	0.1890	0.1890	97.02	
A F1 PeCDFs	20.093						0.0121	0.0121		
A Non-2,3,7,8-sub-PeCDF	23.241	541192	1.48	1.0398	0.5752	0.5752	0.1885	0.5752	0.00	
S Total PeCDF					101.9	101.9	0.1885	0.1885		
D 13C-1,2,3,7,8-PeCDD	24.440	55356202	1.58	0.7612	57.9	57.9	0.0589	0.0589	57.95	
1,2,3,7,8-PeCDD	24.467	30551495	1.58	1.0484	52.6	52.6	0.0713	0.0713	105	
A Non-2,3,7,8-sub-PeCDD	23.349						0.0713	0.0713		
S Total PeCDD					52.6	52.6	0.0713	0.0713		
D 13C-1,2,3,4,7,8-HxCDF	30.516	76972754	0.52	1.0837	59.7	59.7	0.2508	0.2508	59.69	
1,2,3,4,7,8-HxCDF	30.543	39813425	1.21	1.0851	47.7	47.7	0.3217	0.3217	95.33	
D 13C-1,2,3,6,7,8-HxCDF	30.702	73564129	0.53	1.1279	54.8	54.8	0.2409	0.2409	54.81	
1,2,3,6,7,8-HxCDF	30.716	42890832	1.22	1.1260	51.8	51.8	0.3271	0.3271	104	
D 13C-2,3,4,6,7,8-HxCDF	31.528	69185754	0.53	1.0637	54.7	54.7	0.2555	0.2555	54.66	
2,3,4,6,7,8-HxCDF	31.541	41994233	1.23	1.1675	52.0	52.0	0.2610	0.2610	104	
D 13C-1,2,3,7,8,9-HxCDF	32.326	62425470	0.52	0.9676	54.2	54.2	0.2809	0.2809	54.22	
1,2,3,7,8,9-HxCDF	32.340	37458289	1.23	1.1664	51.4	51.4	0.2588	0.2588	103	
A Non-2,3,7,8-sub-HxCDF	30.197						0.2892	0.2892		
S Total HxCDF					202.9	202.9	0.2921	0.2921		

Report Date: 18-Aug-2021 08:55:15 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.140	118995879	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	53321503	1.25	0.7334	61.1	61.1	0.2794	0.2794	61.10	
1,2,3,4,7,8-HxCDD	31.728	26923450	1.27	1.0640	47.5	47.5	0.1660	0.1660	94.91	
D 13C-1,2,3,6,7,8-HxCDD	31.821	58324196	1.27	0.8802	55.7	55.7	0.2329	0.2329	55.69	
1,2,3,6,7,8-HxCDD	31.834	30589200	1.27	1.0001	52.4	52.4	0.1703	0.1703	105	
1,2,3,7,8,9-HxCDD	32.153	33190384	1.26	1.1325	52.5	52.5	0.1531	0.1531	105	
A Non-2,3,7,8-sub-HxCDD	30.882						0.1628	0.1628		
S Total HxCDD					152.4	152.4	0.1632	0.1632		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	54676073	0.44	0.7730	59.4	59.4	0.6434	0.6434	59.44	
1,2,3,4,6,7,8-HpCDF	33.778	41708800	1.04	1.4413	52.9	52.9	0.4945	0.4945	106	
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	54392960	0.43	0.7008	65.2	65.2	0.7097	0.7097	65.22	
1,2,3,4,7,8,9-HpCDF	34.872	35017154	1.06	1.3174	48.9	48.9	0.6239	0.6239	97.74	
A Non-2,3,7,8-sub-HpCDF	34.319						0.5535	0.5535		
S Total HpCDF					101.8	101.8	0.5592	0.5592		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	45928232	1.01	0.6472	59.6	59.6	0.3161	0.3161	59.63	
1,2,3,4,6,7,8-HpCDD	34.580	26714369	1.04	1.0943	53.2	53.2	0.2646	0.2646	106	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2646	0.2646		
S Total HpCDD					53.2	53.2	0.2646	0.2646		
D 13C-OCDD	36.926	67205365	0.88	0.4472	126.3	126.3	0.1879	0.1879	63.15	
OCDF	37.022	49482768	0.90	1.4382	102.4	102.4	0.0931	0.0931	102	
OCDD	36.938	38530833	0.89	1.1070	103.6	103.6	0.1015	0.1015	104	

QC Flag Legend

Processing Flags

Report Date: 18-Aug-2021 08:55:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d
Lims ID: LCSD 320-512871/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 14-Aug-2021 04:26:25 ALS Bottle#: 17 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-512871/3-a lcsd 320-512871/3-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 08:51:16 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:36:14

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		56808907	13985759	7768	19420	1800		
333.9339	17.870	17.855	1		68683388	16938139	9322	23305	1817	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.341	1	0.971	50453228	11918399	10311	25777	1156		
317.9389	17.356	17.341	1	0.971	65624250	15476917	14927	37317	1037	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.356	1	1.001	5291557	1253834	1005	2512	1248		
305.8987	17.371	17.356	1	1.001	7013297	1659093	1217	3042	1363	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.993	17.046	-3	0.979	45157	10115	1005	2512	10		
305.8987	16.993	17.046	-3	0.979	54751	12625	1217	3042	10	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	30217426	6817087	7768	19420	878		
333.9339	18.066	18.051	1	1.011	37246644	8323073	9322	23305	893	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.082	18.066	1	1.001	3661266	828013	891	2227	929		
321.8936	18.082	18.066	1	1.001	4725226	1064111	755	1887	1409	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.066	1	1.012	43588272	9690944	3714	9285	2609		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.499						891	2227			
321.8936	17.499						755	1887			
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.252	52128768	8665610	12343	30857	702		
353.8970	22.381	22.367	1	1.252	33159695	5562718	8644	21610	644	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.408	22.380	2	1.001	29406526	4880013	6794	16985	718		
341.8567	22.408	22.380	2	1.001	18347157	3063434	4562	11405	672	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.327	58603684	9030941	12343	30857	732		
353.8970	23.717	23.703	1	1.327	37096738	5716812	8644	21610	661	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.744	23.730	1	1.001	28982914	4493092	6794	16985	661		
341.8567	23.744	23.730	1	1.001	18296962	2811530	4562	11405	616	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						211	527			
341.8567	20.093						519	1297			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.913	23.241	-20	1.024	322575	44438	6794	16985	7		
341.8567	22.926	23.241	-19	1.024	218617	27402	4562	11405	6	1.48(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.368	33910360	4987397	3332	8330	1497		
369.8919	24.440	24.426	1	1.368	21445842	3153147	2219	5547	1421	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.467	24.453	1	1.001	18703722	2734886	1480	3700	1848		
357.8516	24.467	24.453	1	1.001	11847773	1740273	953	2382	1826	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.349						1480	3700			
357.8516	23.349						953	2382			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	26328277	4872667	11802	29505	413		
385.8610	30.516	30.503	1	0.949	50644477	9128603	22052	55130	414	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.543	30.529	1	1.001	21782713	3980064	10708	26770	372		
375.8178	30.543	30.529	1	1.001	18030712	3298935	8840	22100	373	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	25374118	4626437	11802	29505	392		
385.8610	30.702	30.689	1	0.955	48190011	8643804	22052	55130	392	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.716	30.702	1	1.000	23547335	4392270	10708	26770	410		
375.8178	30.716	30.702	1	1.000	19343497	3603072	8840	22100	408	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.528	31.514	1	0.981	23854575	5509120	11802	29505	467		
385.8610	31.528	31.514	1	0.981	45331179	10525732	22052	55130	477	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.541	31.528	1	1.000	23138745	5600263	10708	26770	523		
375.8178	31.541	31.528	1	1.000	18855488	4518390	8840	22100	511	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	21293770	5549856	11802	29505	470		
385.8610	32.326	32.313	1	1.006	41131700	10641660	22052	55130	483	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.340	32.326	1	1.000	20647913	5328627	10708	26770	498		
375.8178	32.340	32.326	1	1.000	16810376	4376903	8840	22100	495	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						10708	26770			
375.8178	30.197						8840	22100			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		65646758	17106020	14383	35957	1189		
403.8529	32.140	32.127	1		53349121	14038816	11150	27875	1259	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.987	29630470	7708116	14383	35957	536		
403.8529	31.714	31.701	1	0.987	23691033	6109112	11150	27875	548	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.728	31.714	1	1.000	15040175	3995682	5475	13687	730		
391.8127	31.728	31.714	1	1.000	11883275	3128784	4288	10720	730	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.821	31.807	1	0.990	32596948	8028241	14383	35957	558		
403.8529	31.821	31.807	1	0.990	25727248	6298996	11150	27875	565	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.834	31.820	1	1.000	17095387	4289216	5475	13687	783		
391.8127	31.834	31.820	1	1.000	13493813	3352500	4288	10720	782	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.140	1	1.014	18472134	4759376	5475	13687	869		
391.8127	32.153	32.140	1	1.014	14718250	3823935	4288	10720	892	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						5475	13687			
391.8127	30.882						4288	10720			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	16643783	5143997	17294	43235	297		
419.8220	33.766	33.754	1	1.051	38032290	11767768	44671	111677	263	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.766	1	1.000	21302818	6751254	25807	64517	262		
409.7789	33.778	33.766	1	1.000	20405982	6512417	22408	56020	291	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.847	1	1.085	16468394	4520917	17294	43235	261		
419.8220	34.860	34.847	1	1.085	37924566	10144932	44671	111677	227	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.860	1	1.000	17977679	4765569	25807	64517	185		
409.7789	34.860	34.860	0	1.000	17039475	4607419	22408	56020	206	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						25807	64517			
409.7789	34.319						22408	56020			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.556	1	1.076	23037969	6582824	12043	30107	547		
437.8140	34.568	34.556	1	1.076	22890263	6485351	13447	33617	482	1.01(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.568	1	1.000	13614086	3882808	7601	19002	511		
425.7737	34.580	34.568	1	1.000	13100283	3685415	7537	18842	489	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						7601	19002			
425.7737	34.301						7537	18842			
13C-OCDD											
469.7779	36.926	36.914	1	1.149	31478175	7505121	4410	11025	1702		
471.7750	36.926	36.914	1	1.149	35727190	8538356	6057	15142	1410	0.88(0.76-1.02)	
OCDF											
441.7428	37.022	37.010	1	1.003	23477411	5546568	2115	5287	2622		
443.7399	37.022	37.010	1	1.003	26005357	6298651	2181	5452	2888	0.90(0.76-1.02)	
OCDD											
457.7377	36.938	36.926	1	1.000	18093928	4317133	1817	4542	2376		
459.7348	36.938	36.926	1	1.000	20436905	4909098	1789	4472	2744	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d
Lims ID: LCSD 320-512871/3-A
Client ID:
Inject. Date: 14-Aug-2021 04:26:25 Dil. Factor: 1.0000
Sample Type: LCSD, LCS Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	116077478	27395316

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	116077478	27395316

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.993	45157	10115	54751	12625	0.0841	0.82	
Signal Totals:							
	45157	10115	54751	12625			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	99908	22740				0.82	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0841 = (99908 * 100.000) / (116077478 * 1.024)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d
Lims ID: LCSD 320-512871/3-A
Client ID:
Inject. Date: 14-Aug-2021 04:26:25 Dil. Factor: 1.0000
Sample Type: LCSD, LCS Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 5

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	85288463	14228328
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	95700422	14747753

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	90494442	14488040

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.913	322575	44438	218617	27402	0.5752	1.48	
Signal Totals:							
	322575	44438	218617	27402			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	541192	71840				1.48	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5752 = (541192 * 100.000) / (90494442 * 1.040)

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

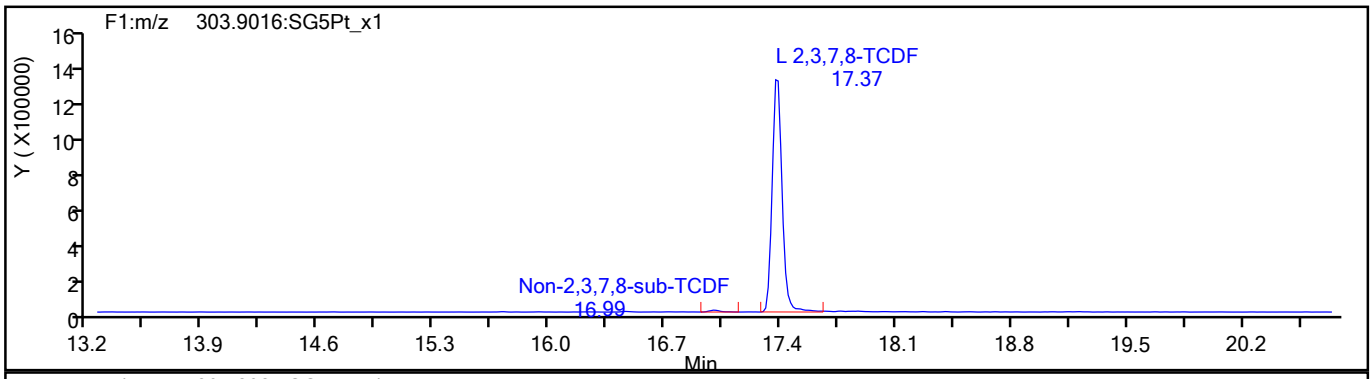

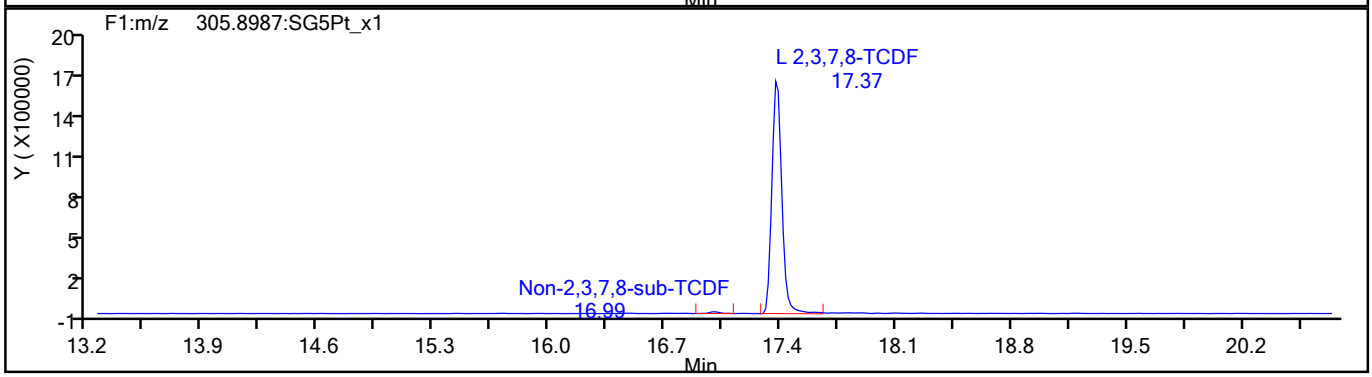

TCDF Standards

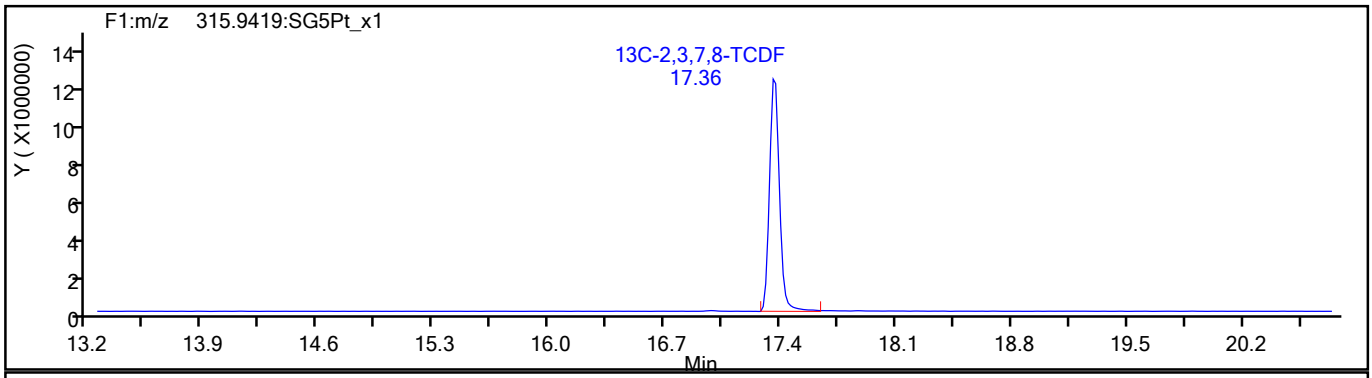

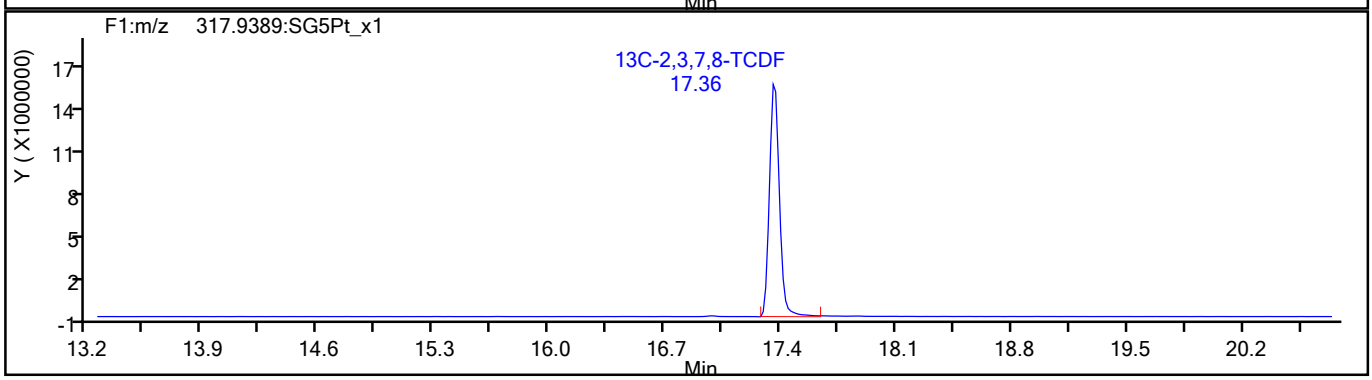

780843

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

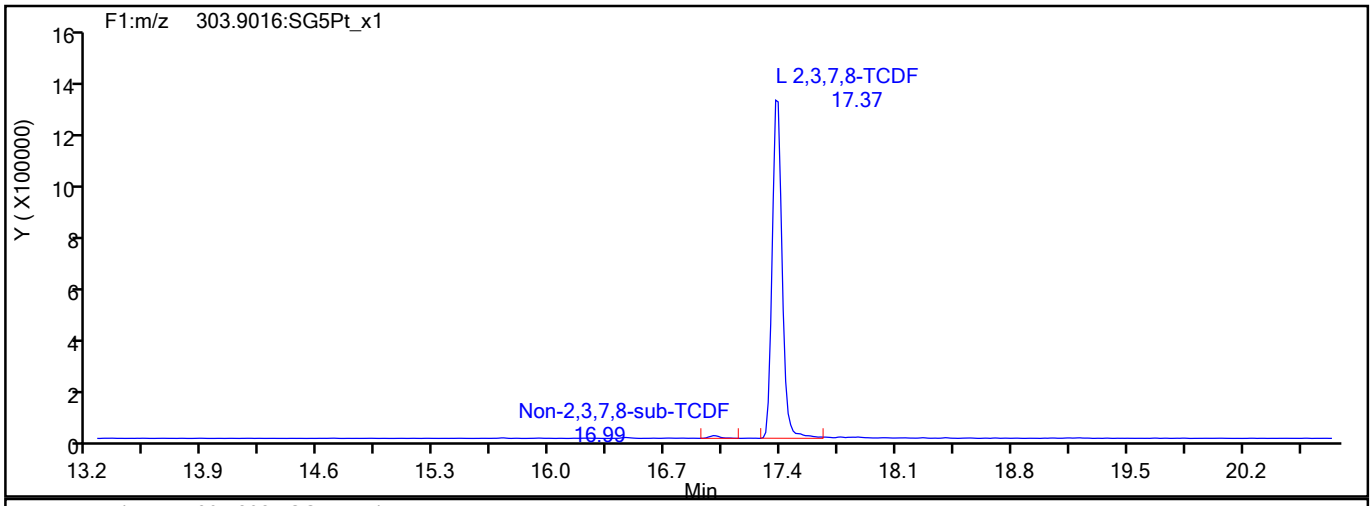

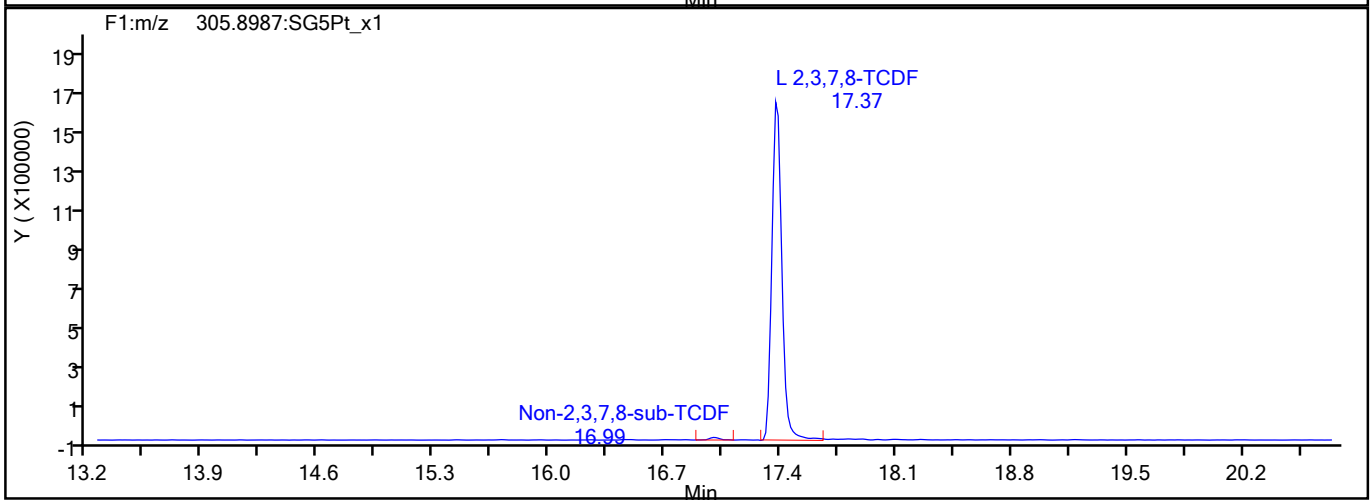

TCDF Interference Mass

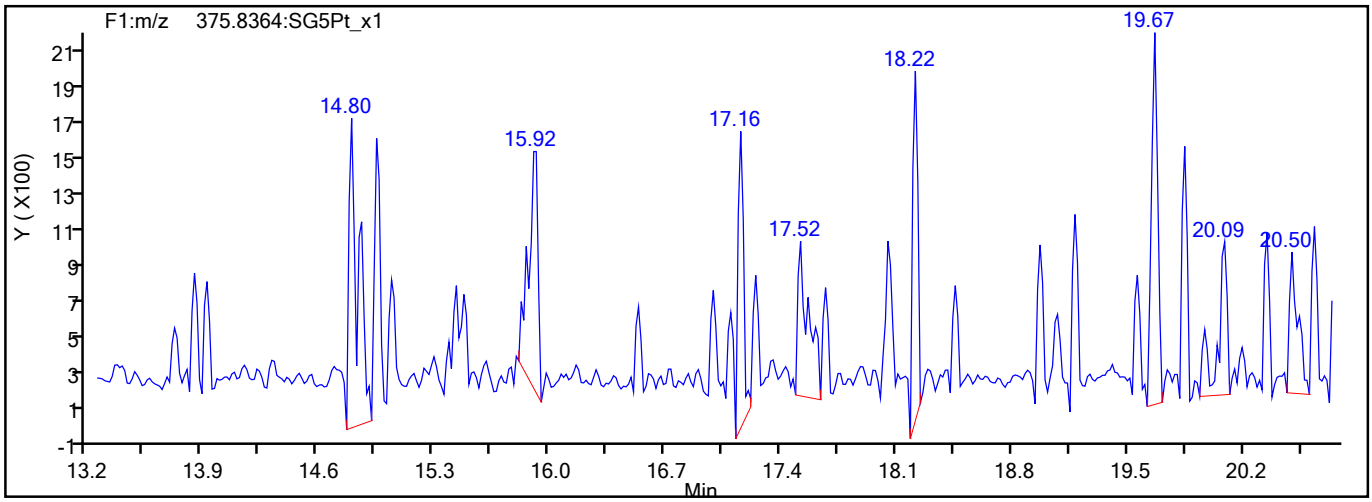

780844

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

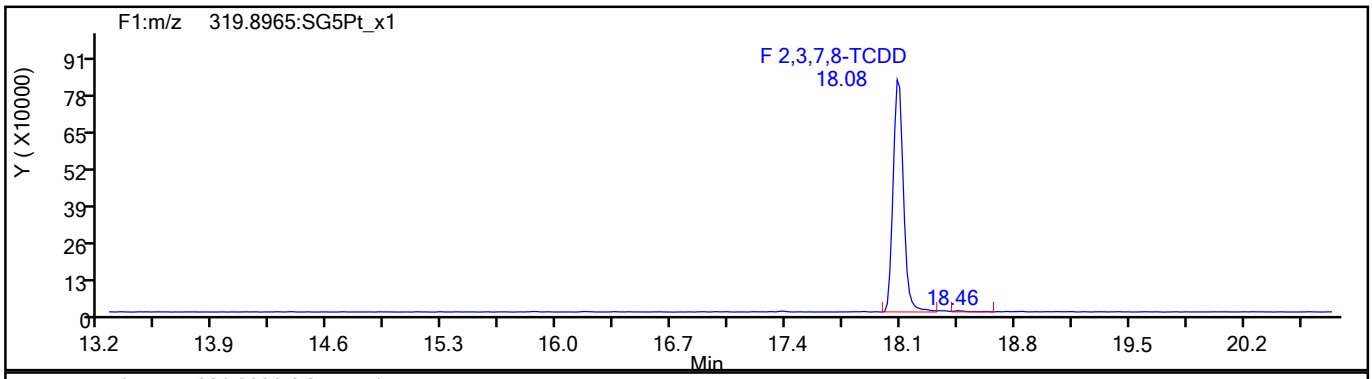

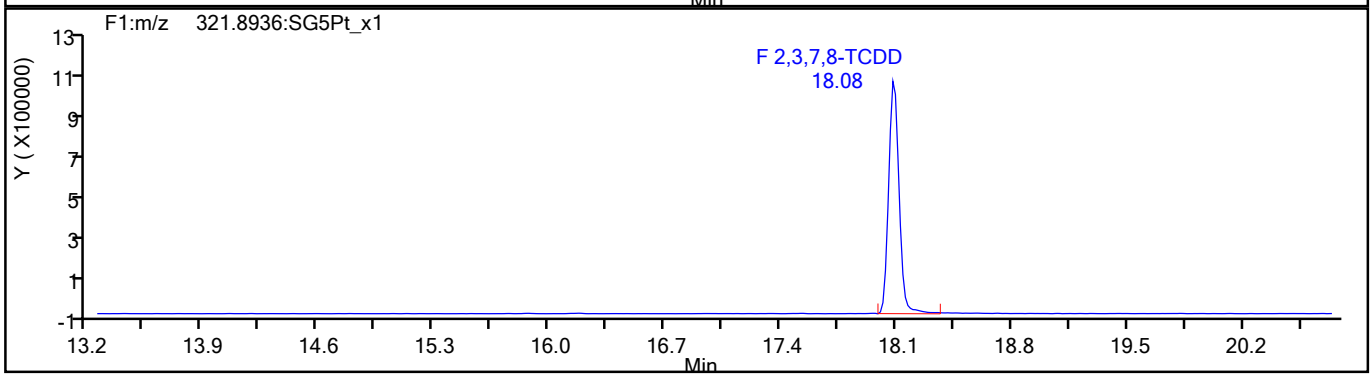

TCDD Standards

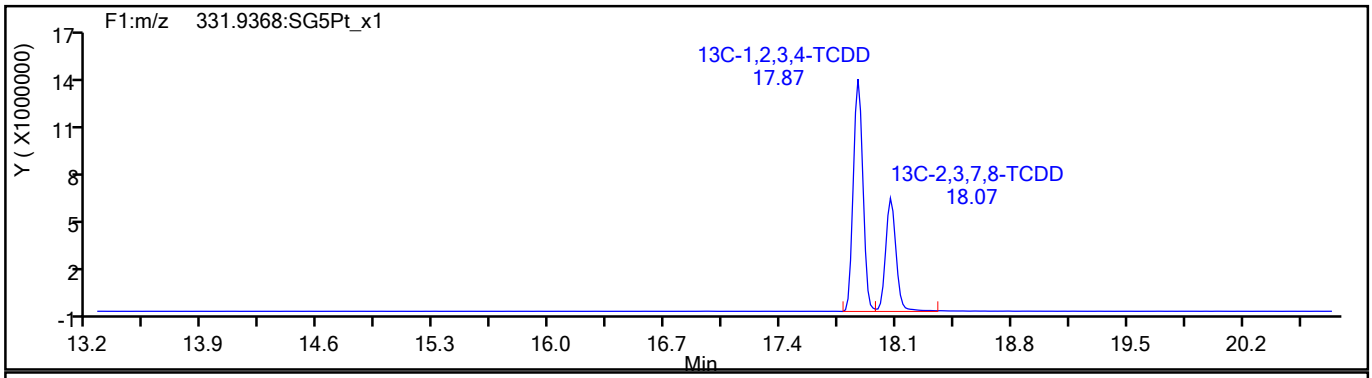

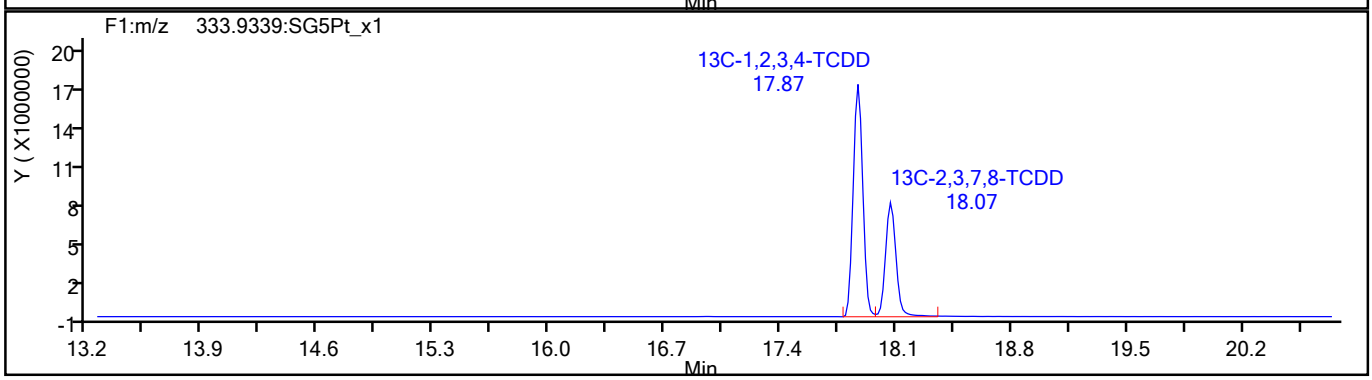

780845

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

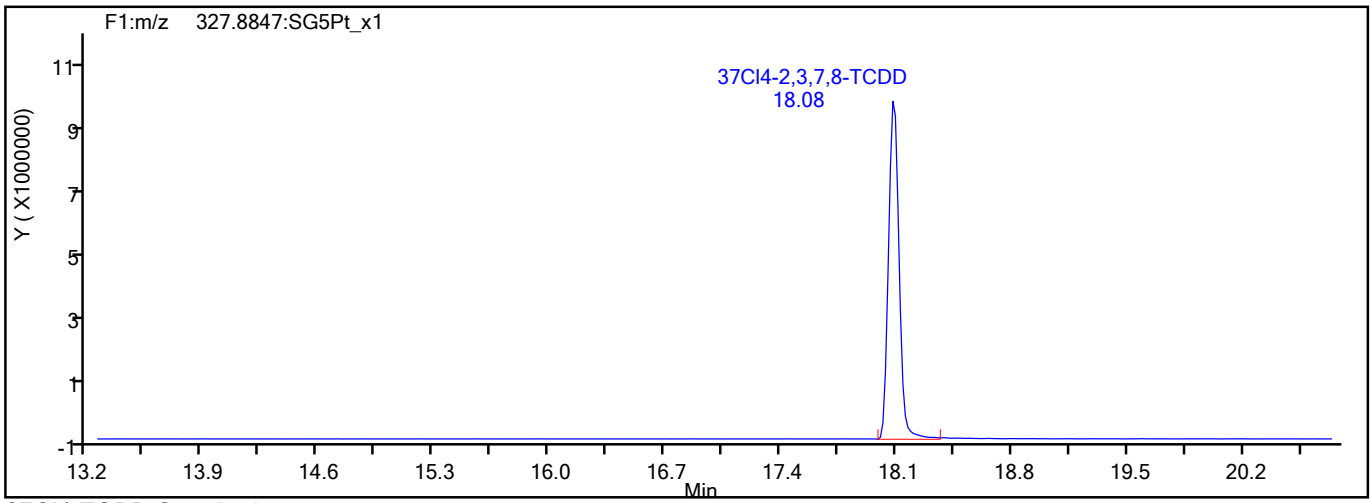

37Cl4-TCDD Standards

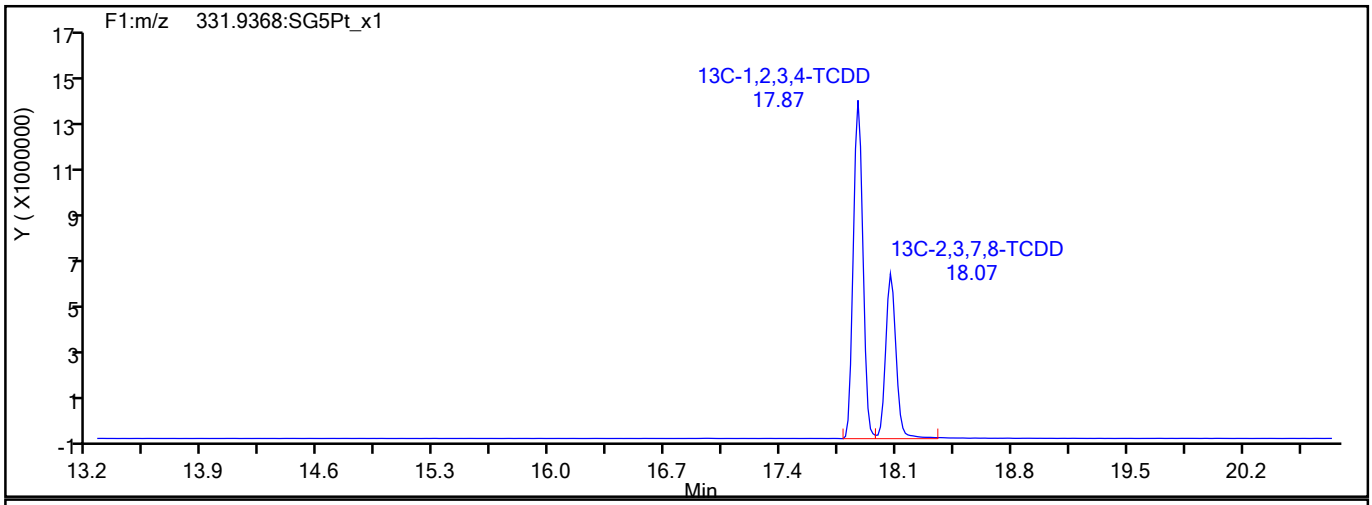

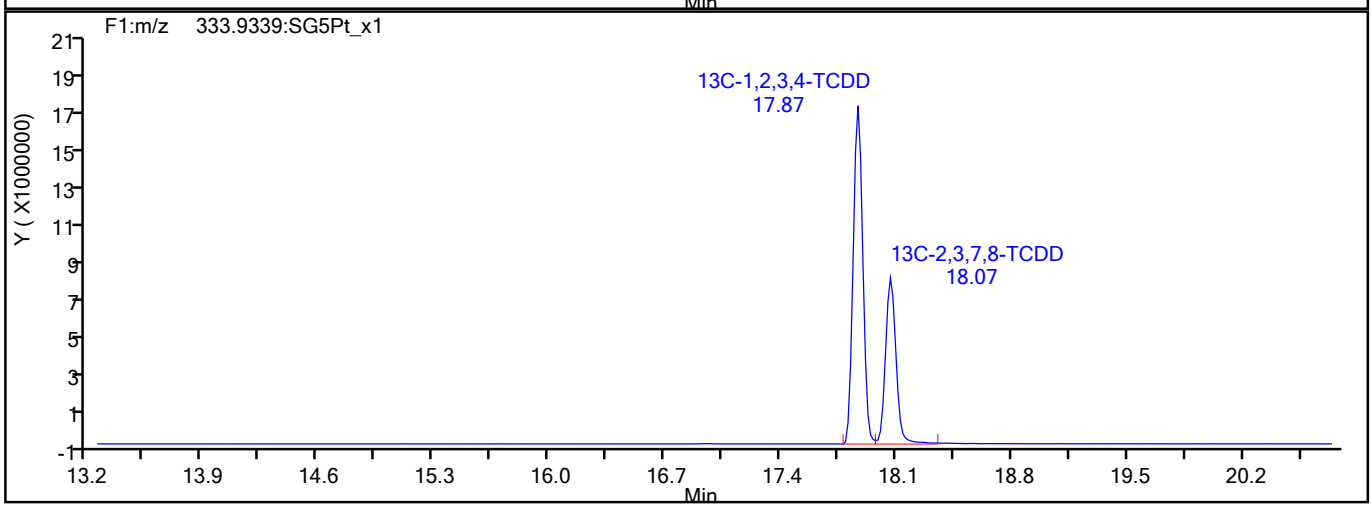

780846

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

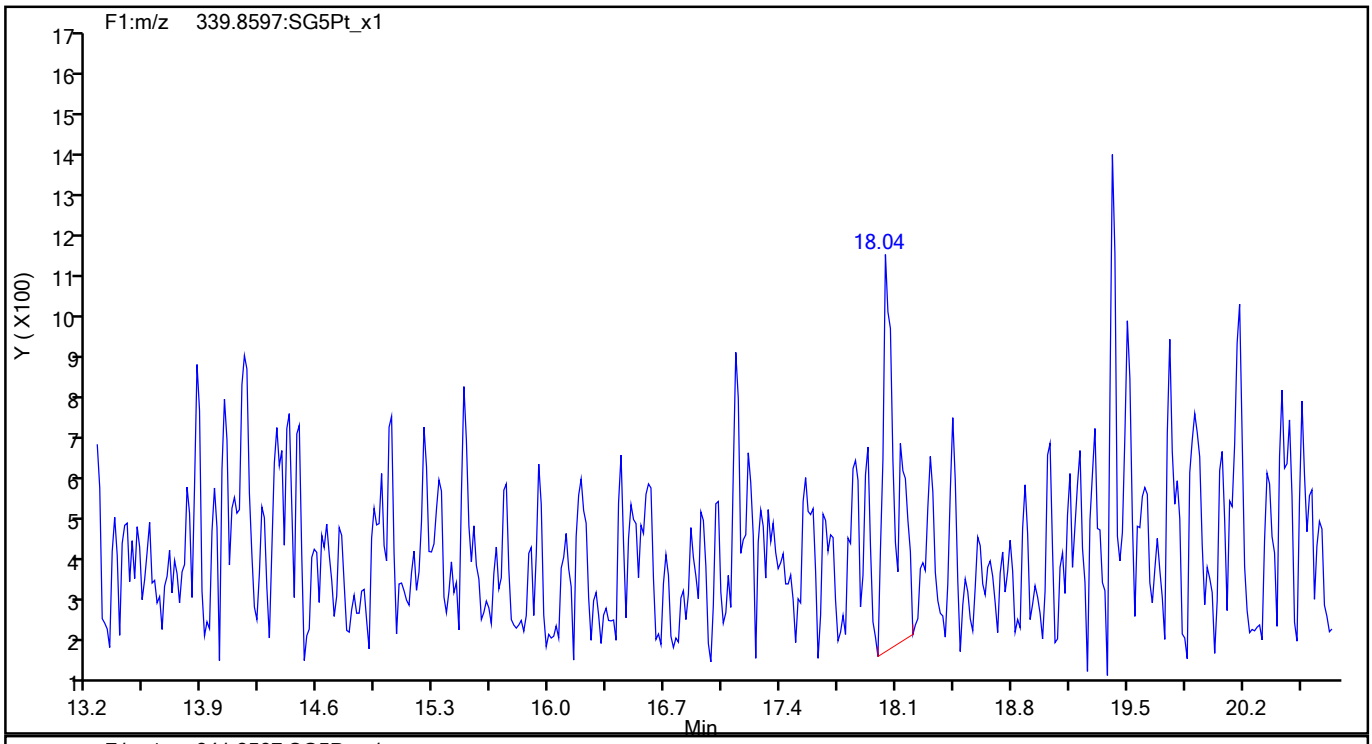

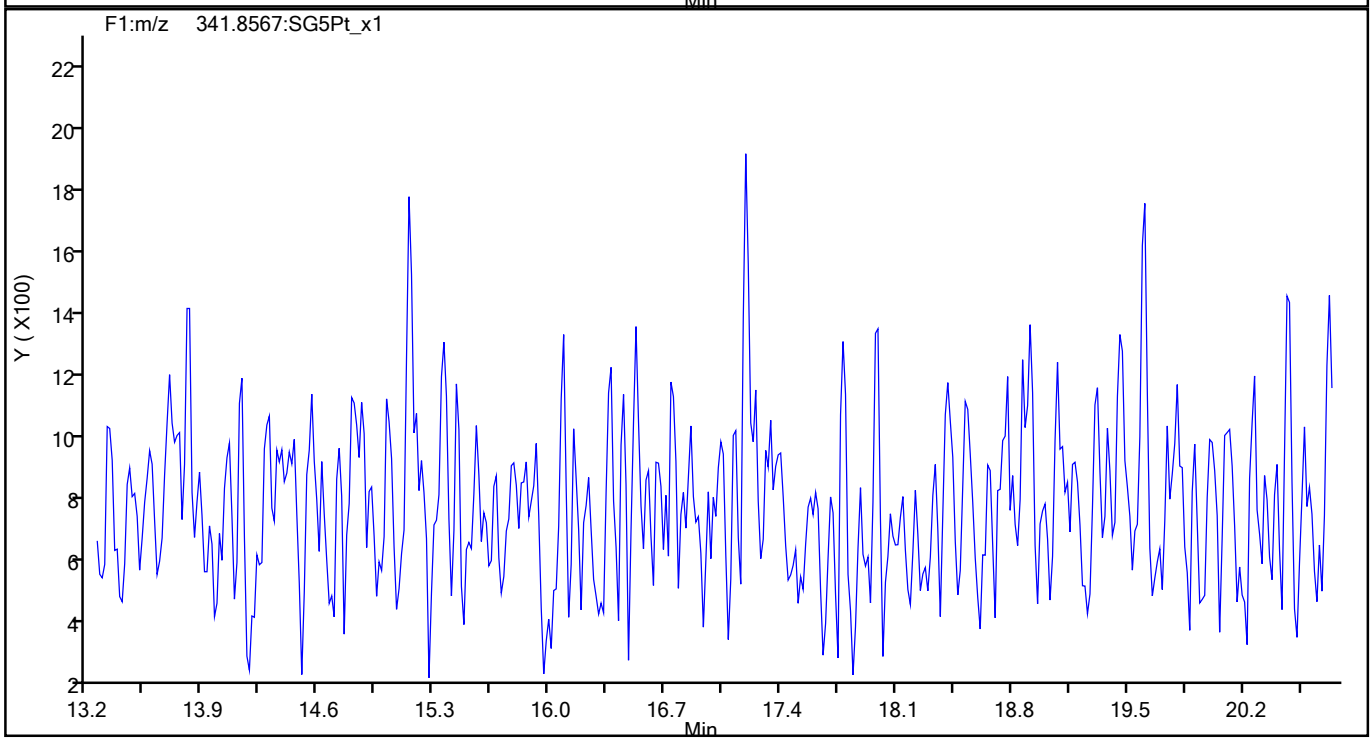

780847

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

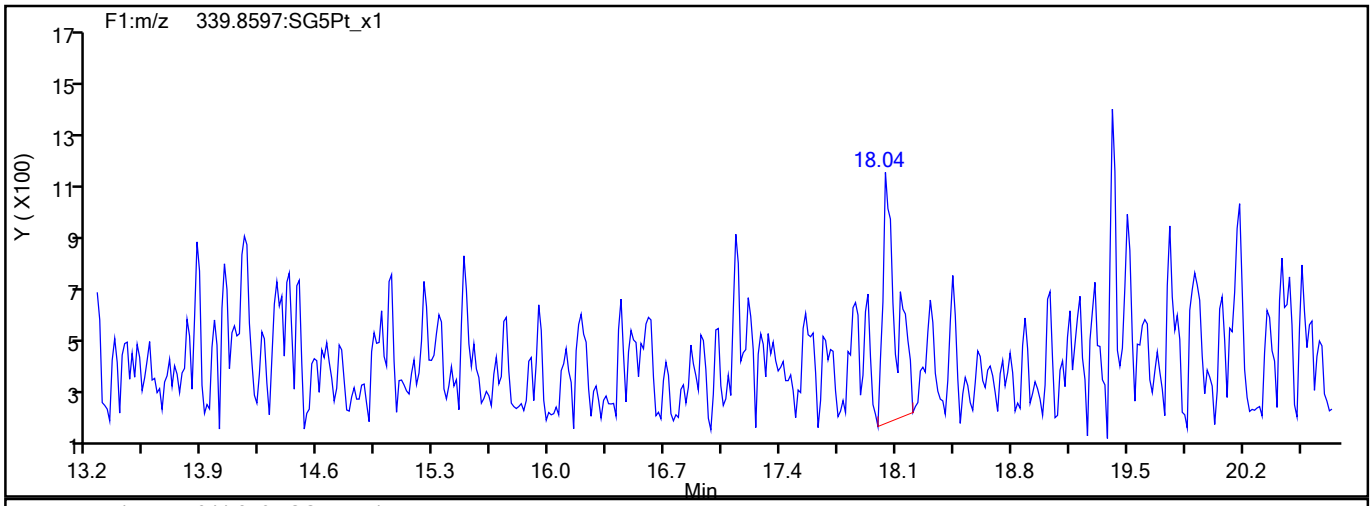

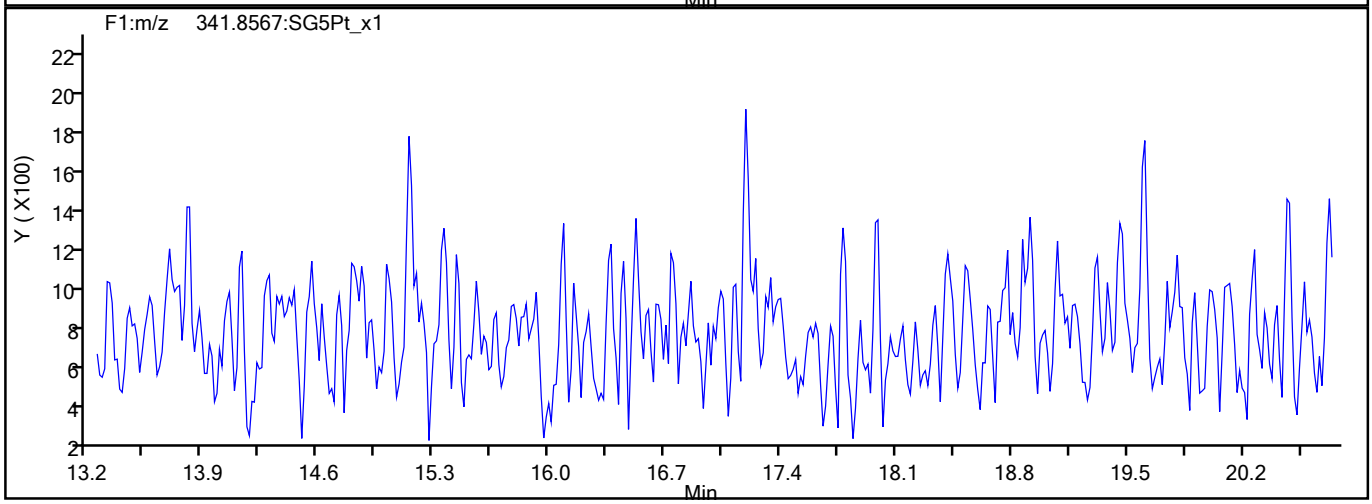

F1 PeCDFs Interference Mass

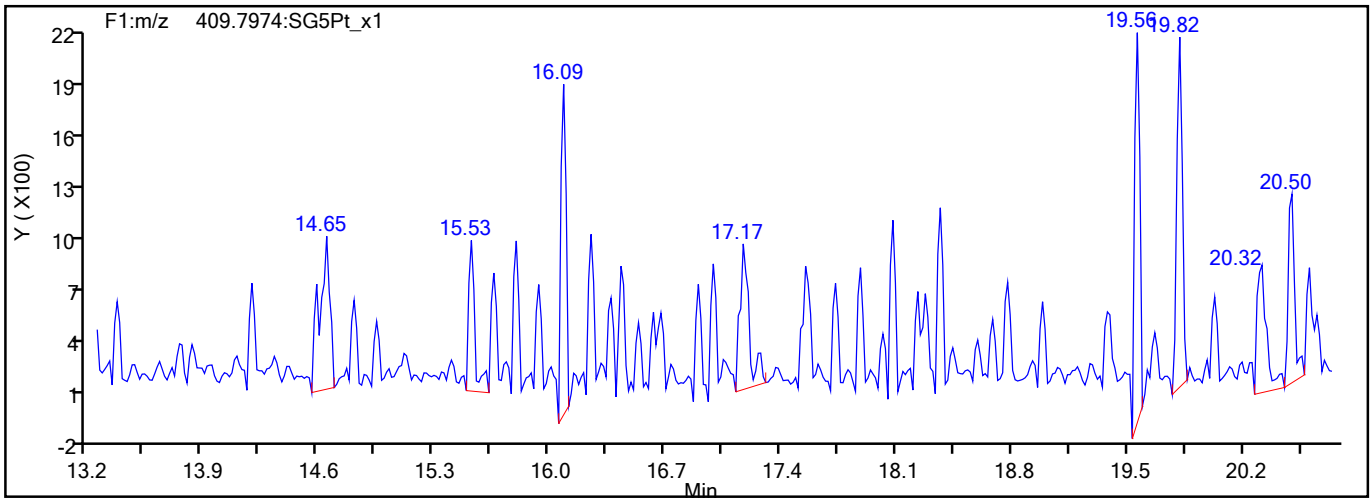

780848

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

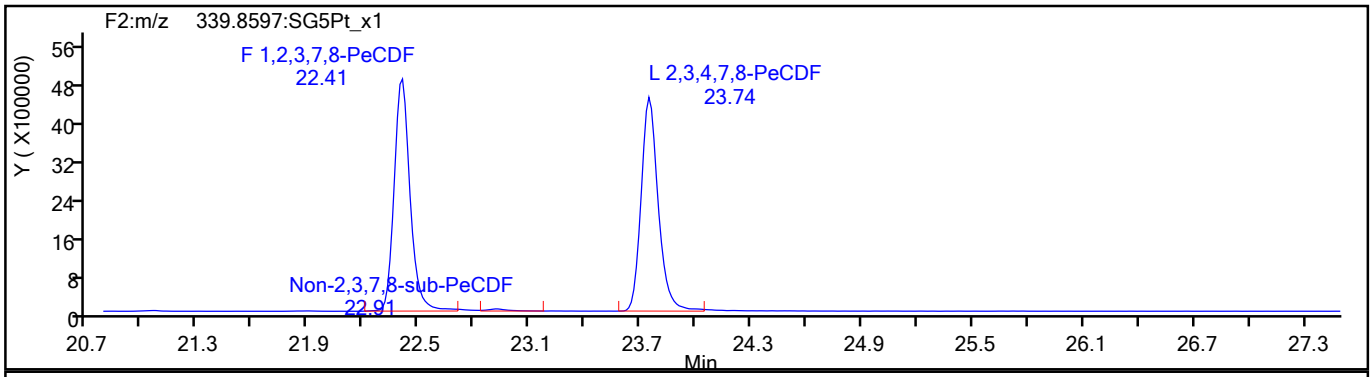

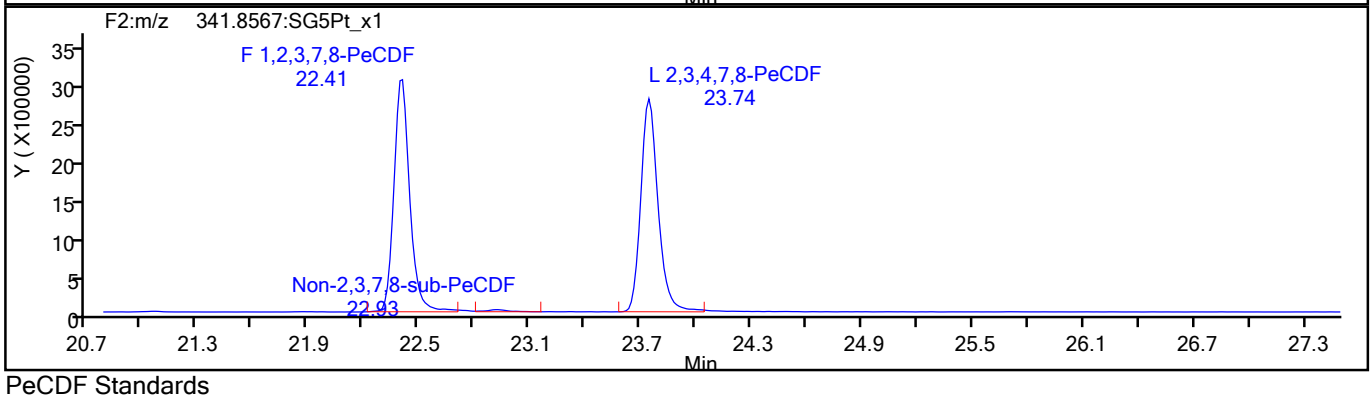

PeCDF Standards

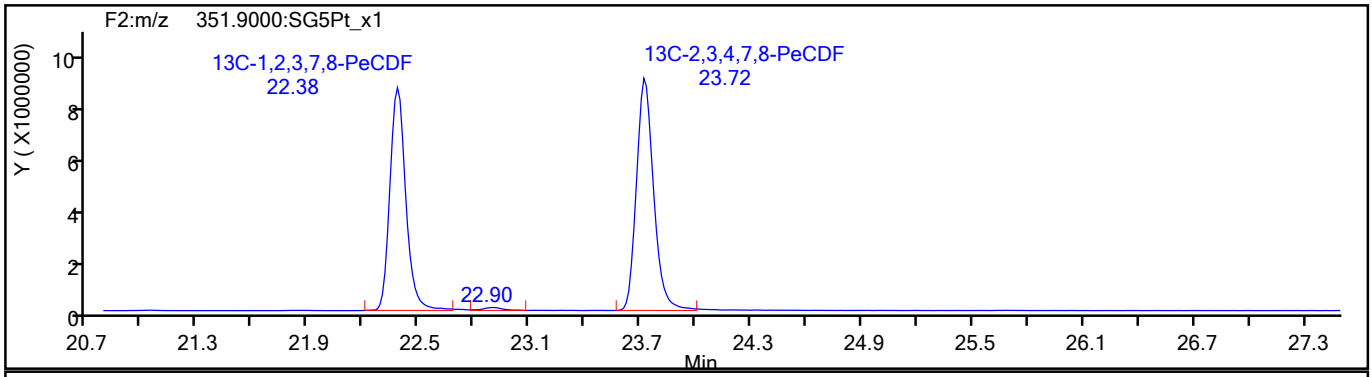

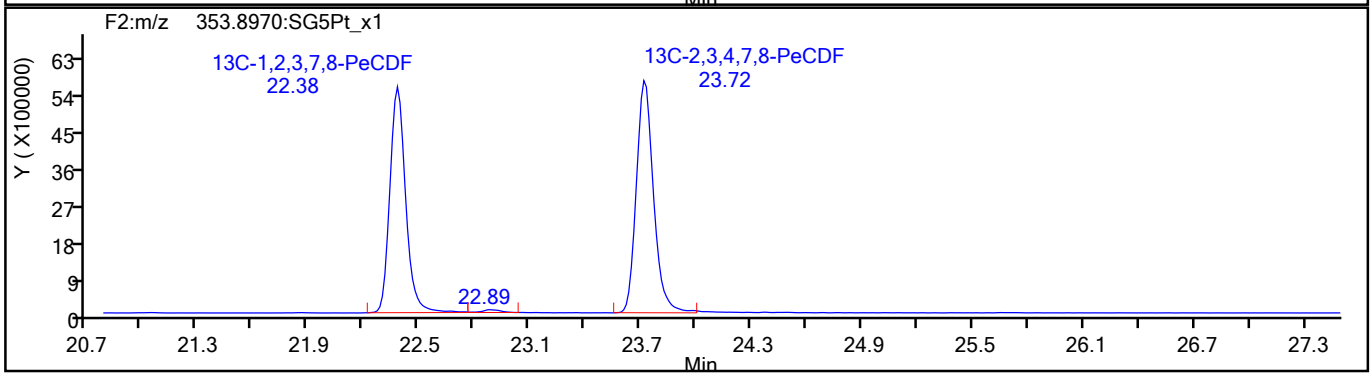

780849

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

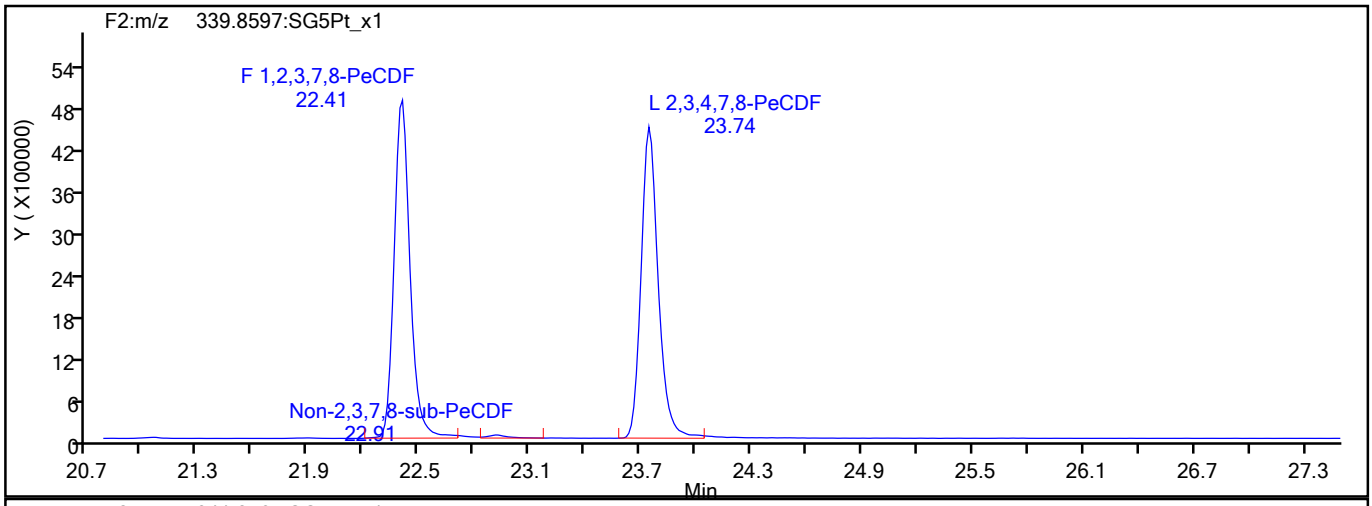

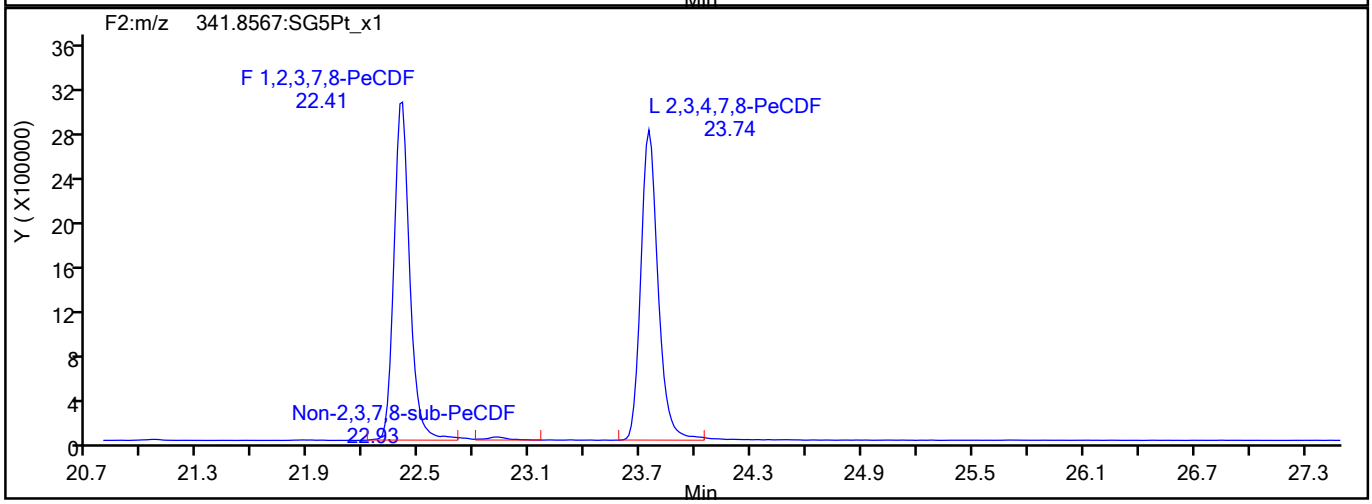

PeCDF Interference Mass

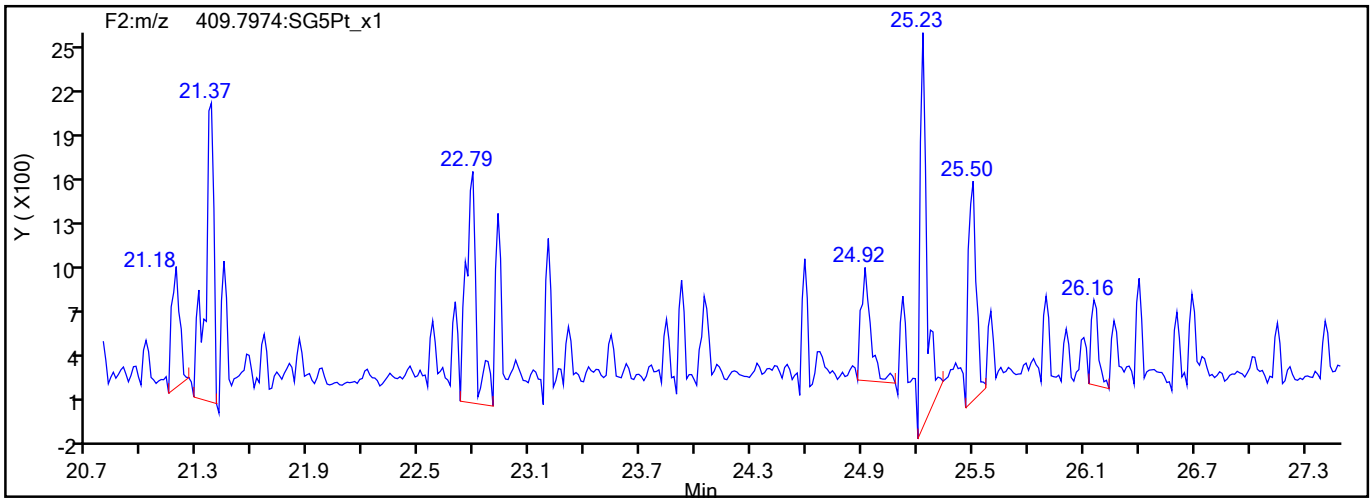

780850

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

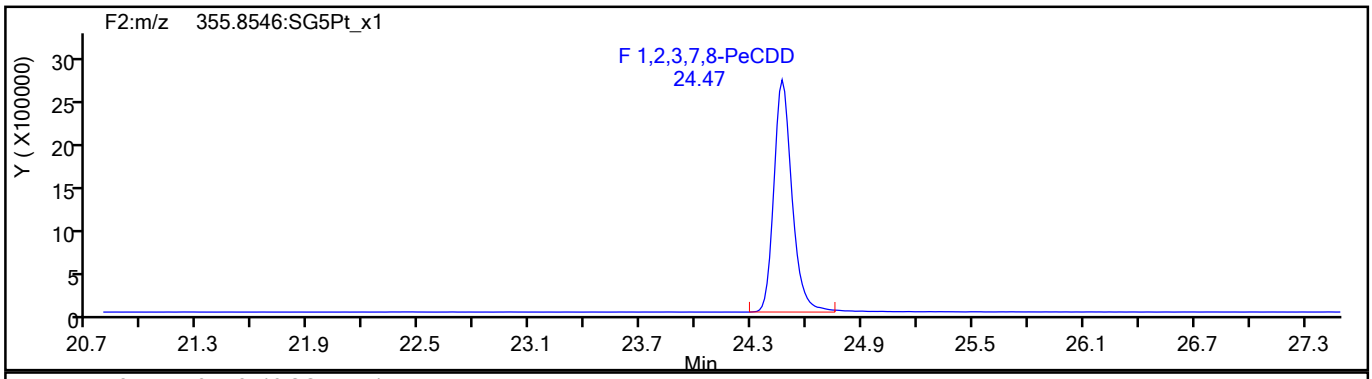

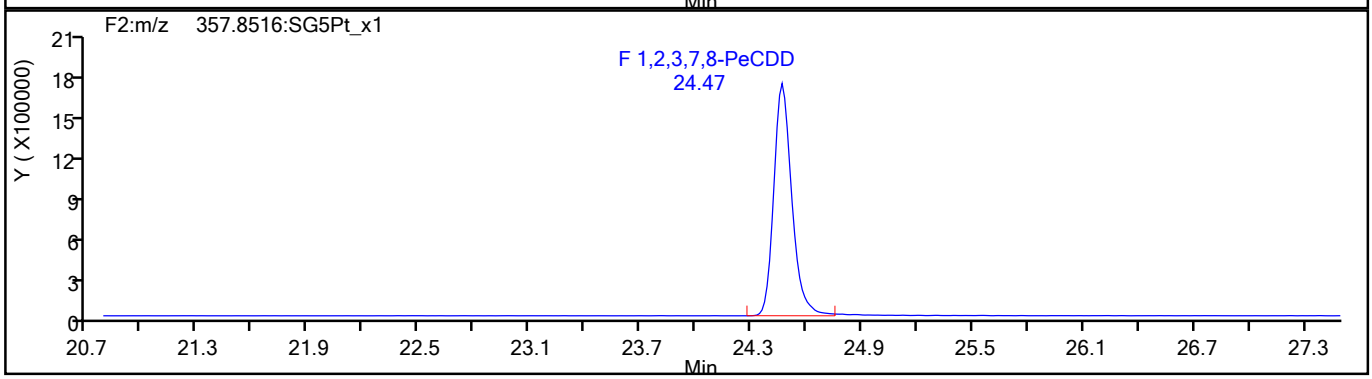

PeCDD Standards

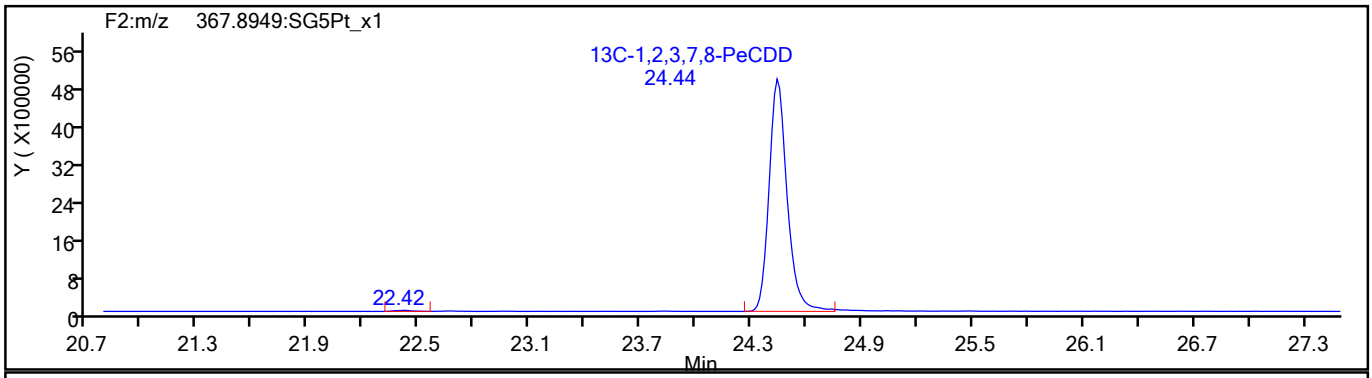

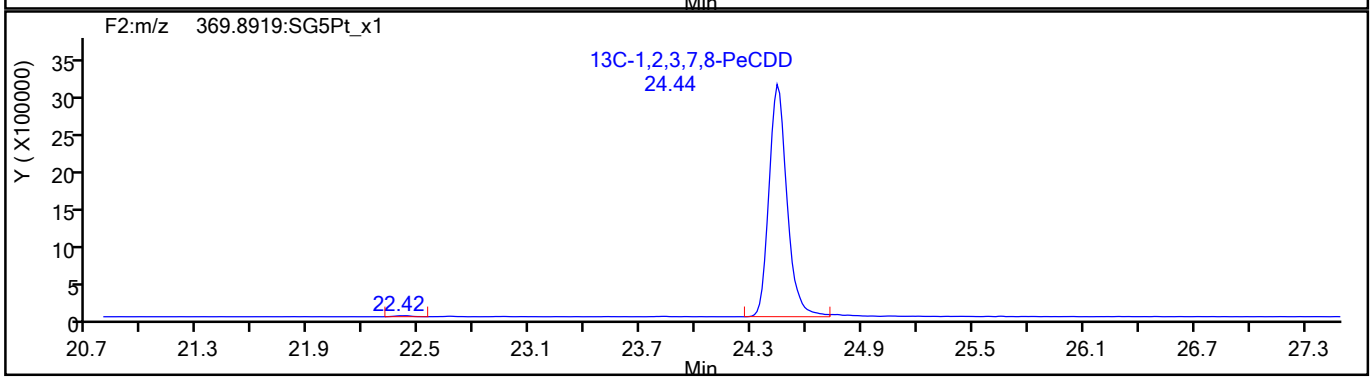

780851

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

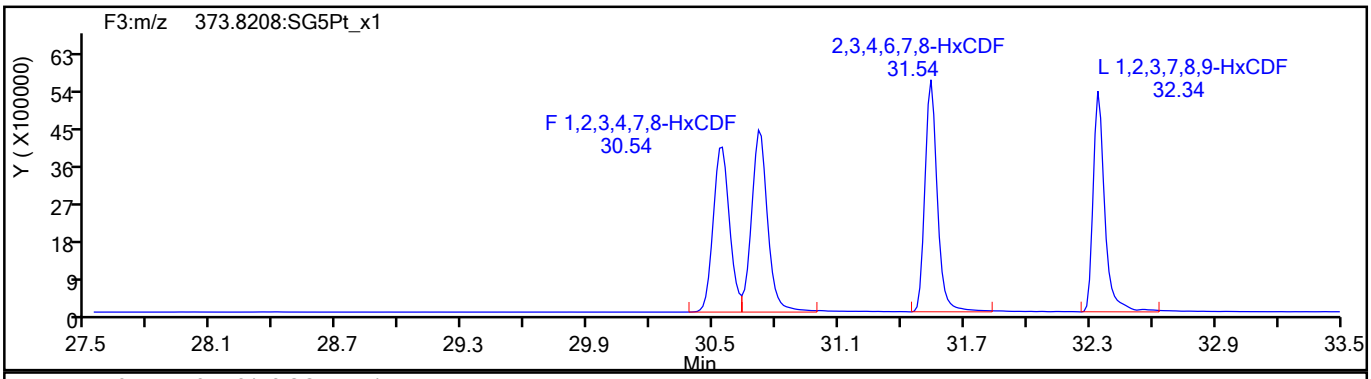

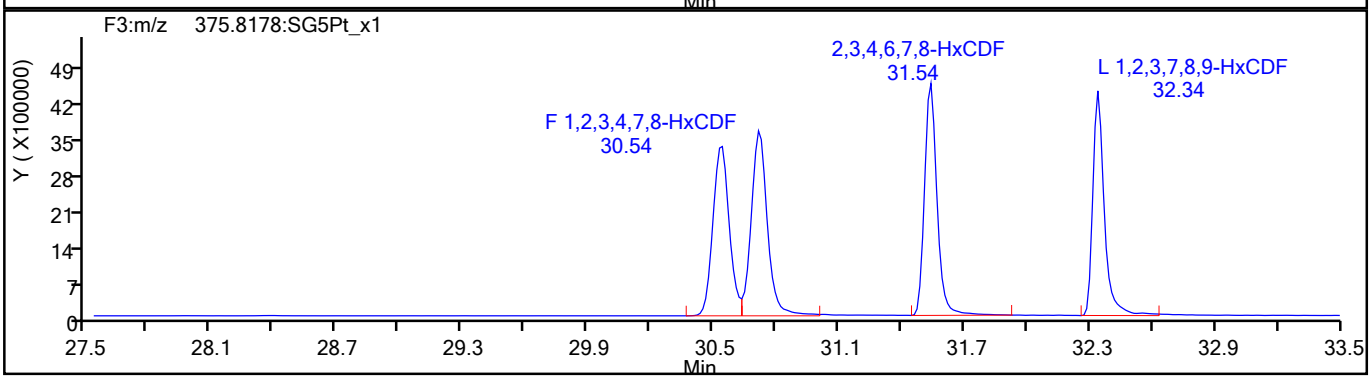

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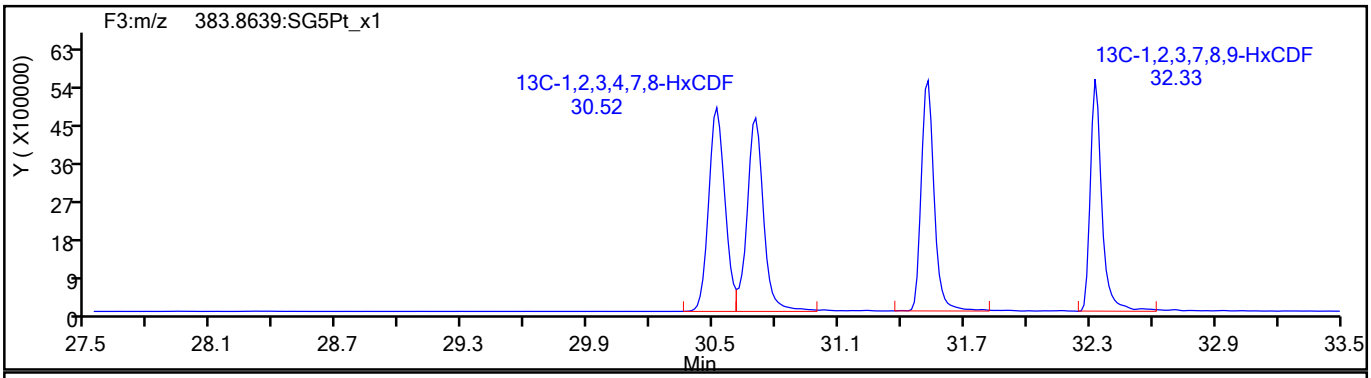

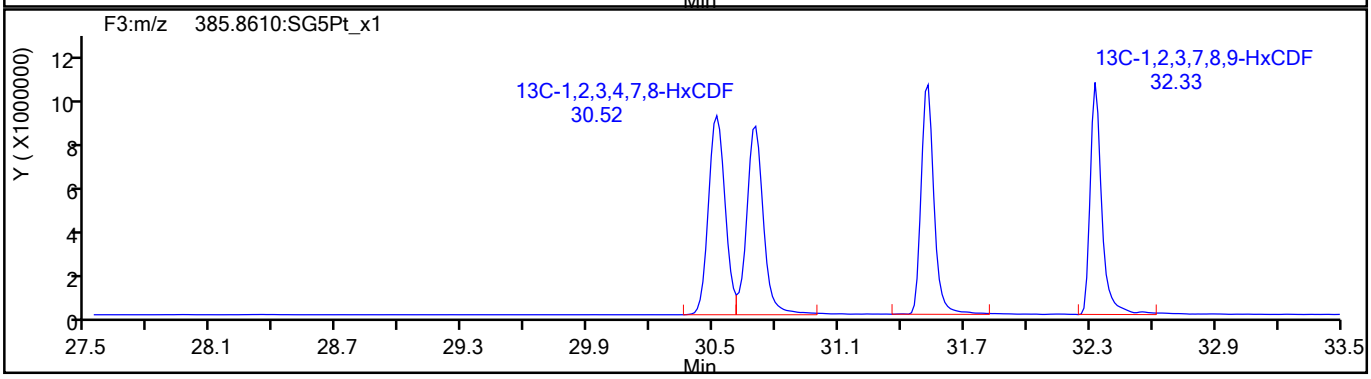

780852

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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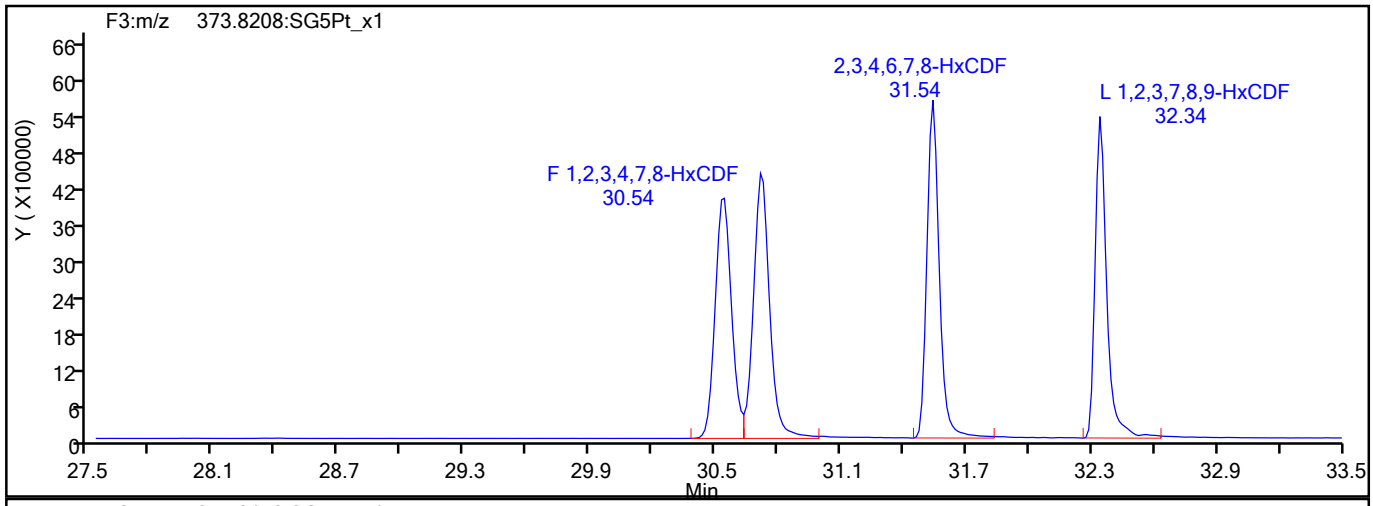

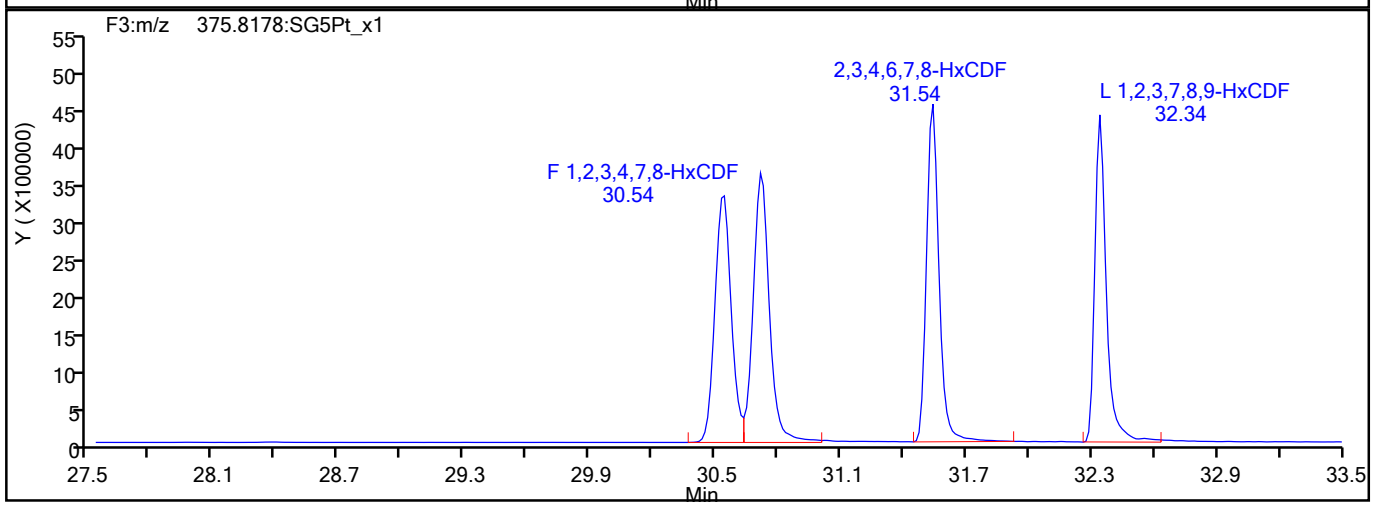

HxCDF Interference Mass

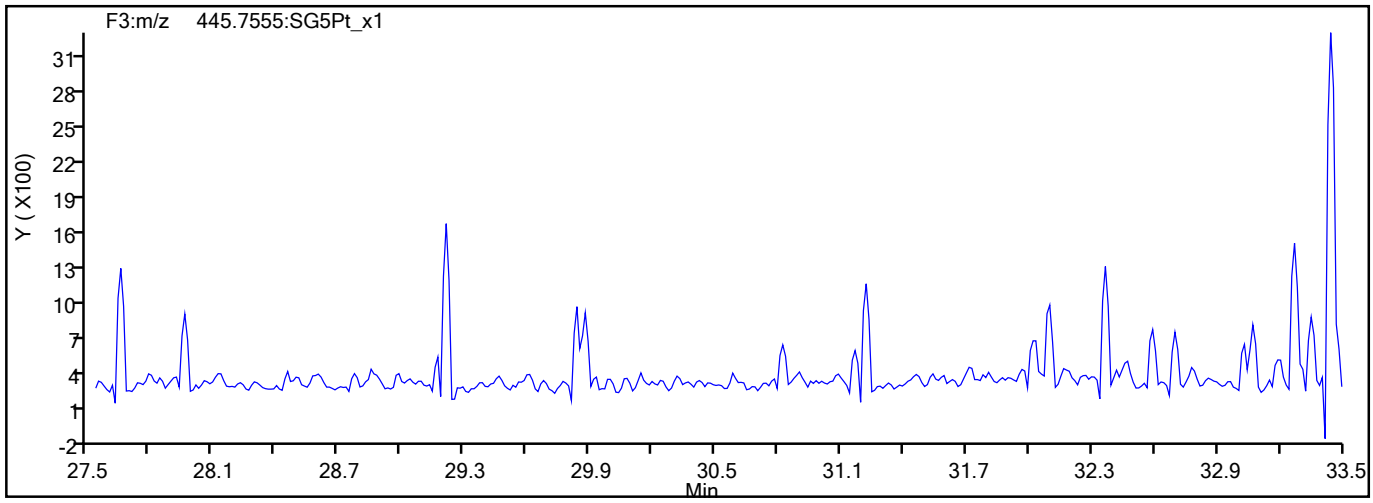

780853

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

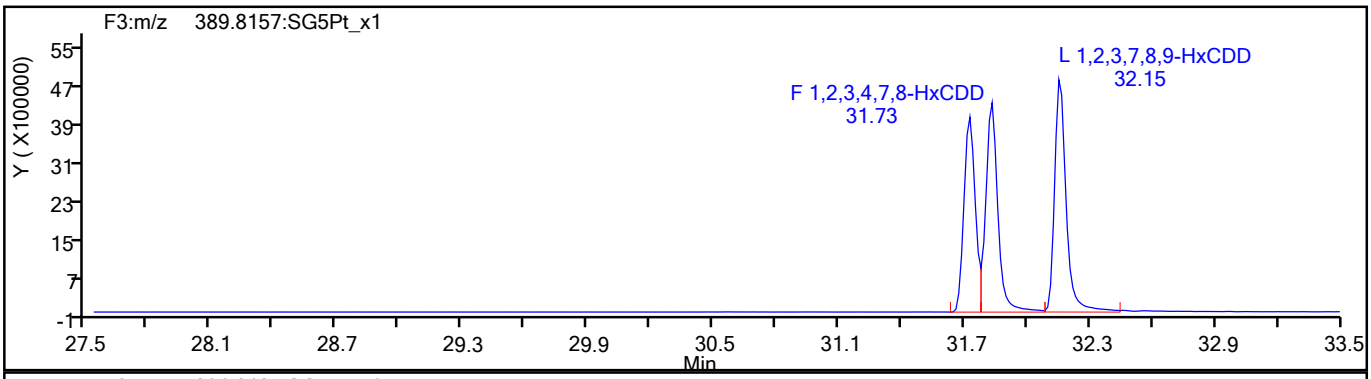

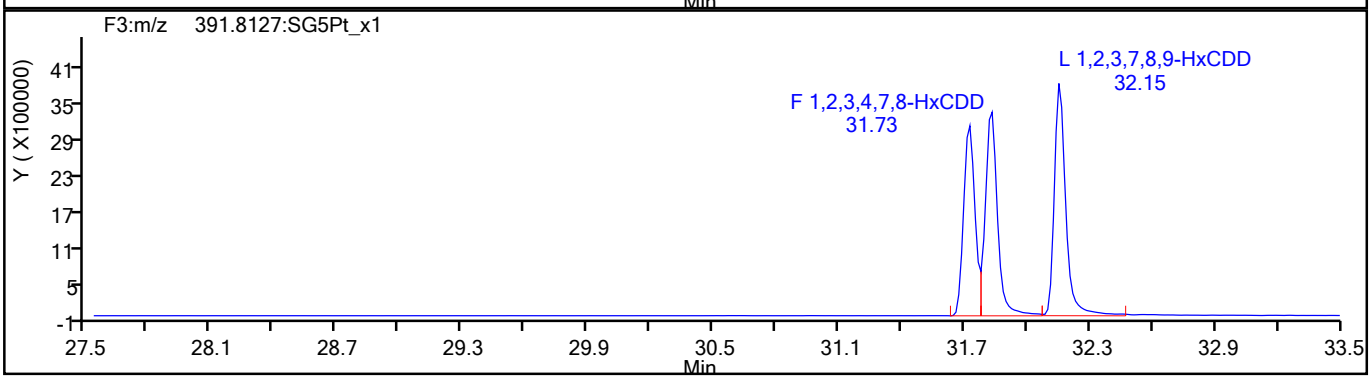

HxCDD Standards

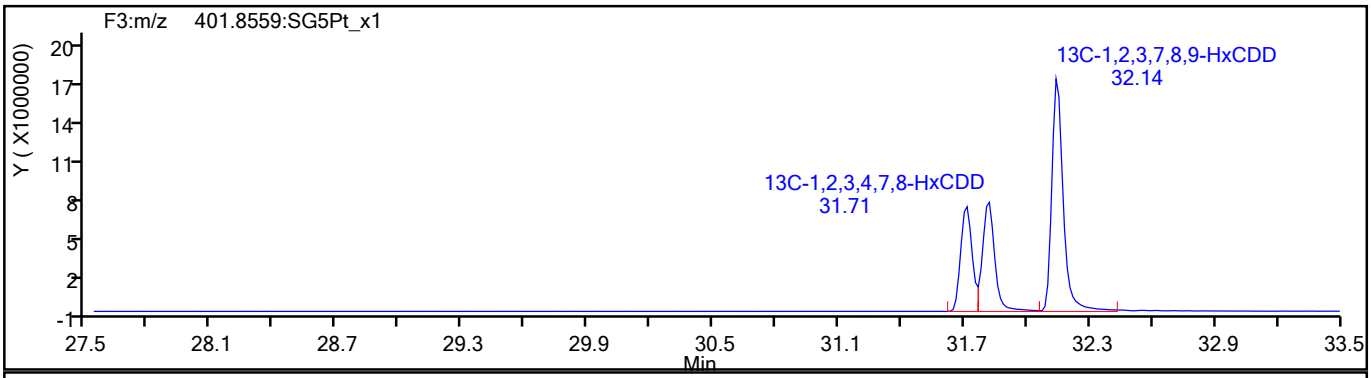

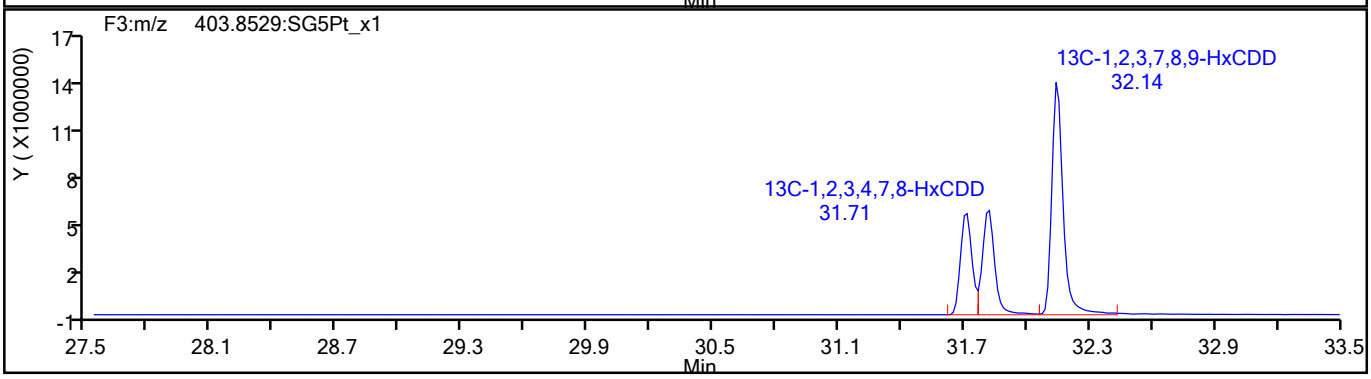

780854

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

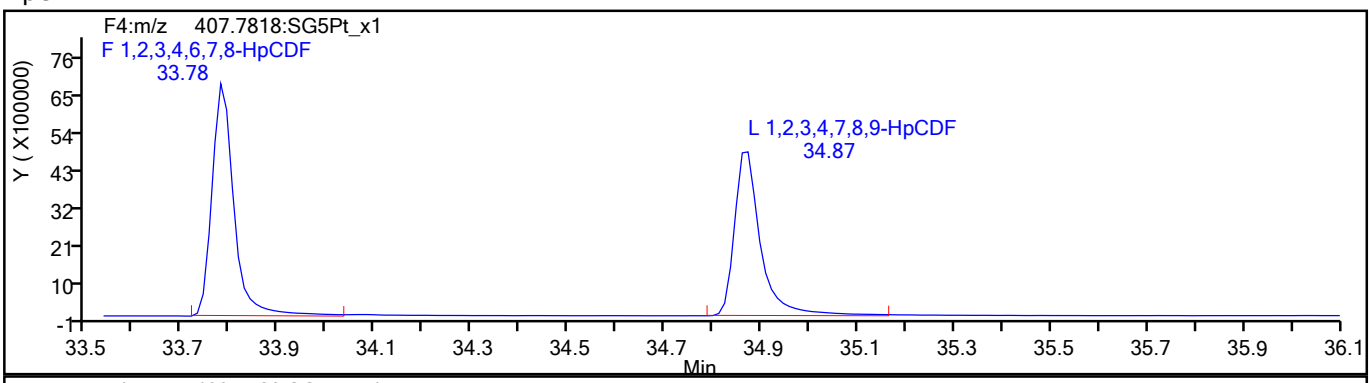

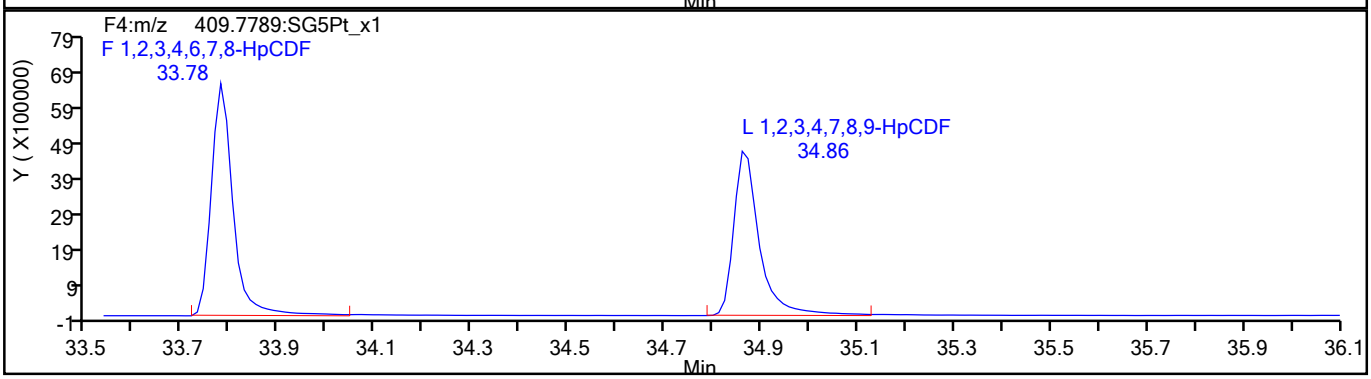

HpCDF Standards

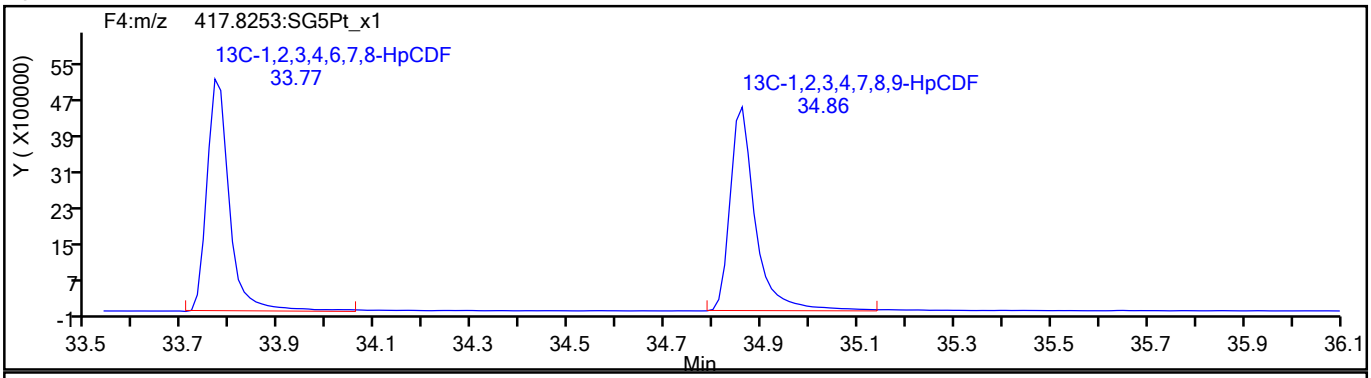

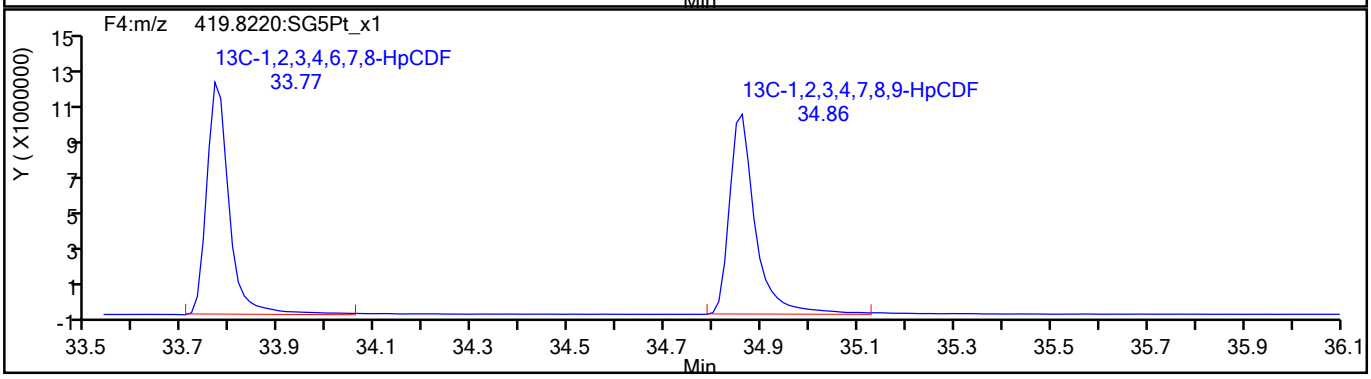

780855

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

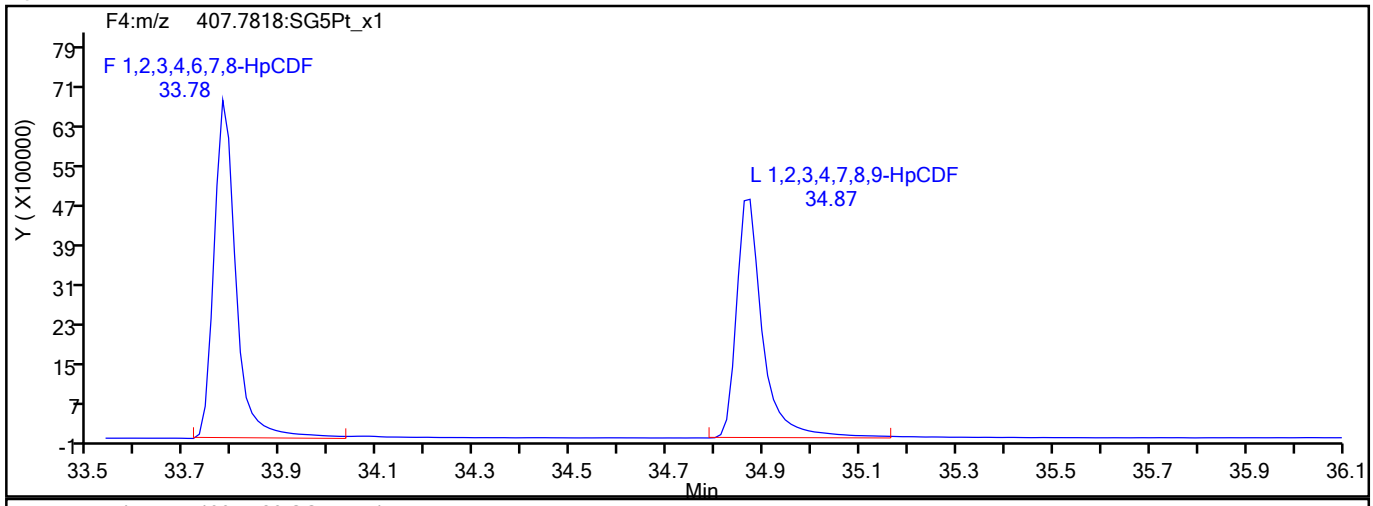

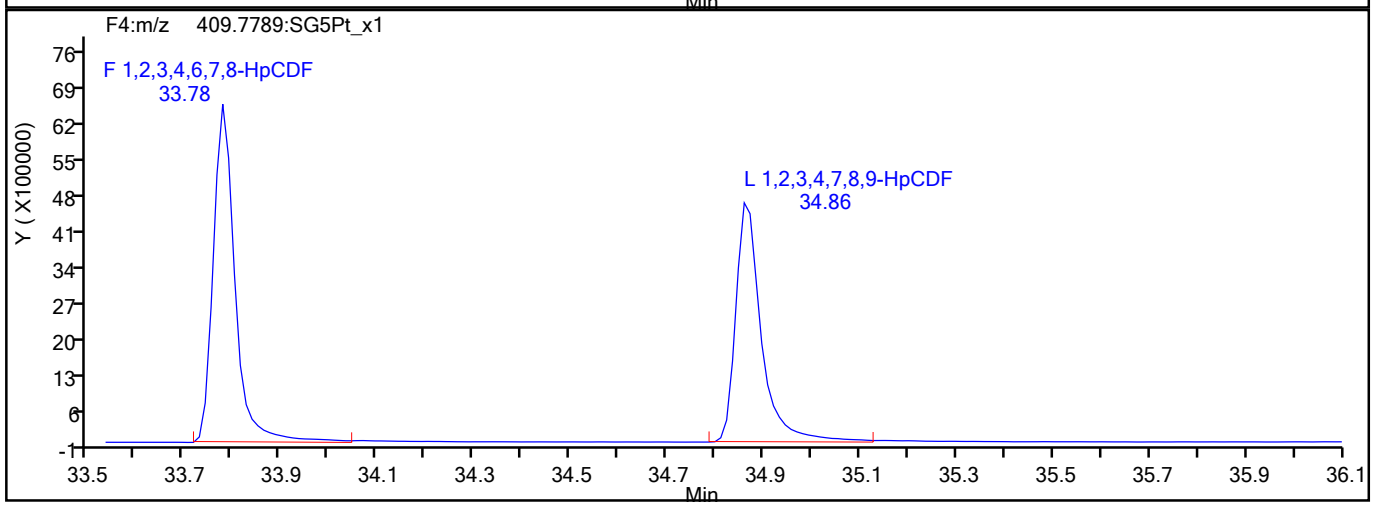

HpCDF Interference Mass

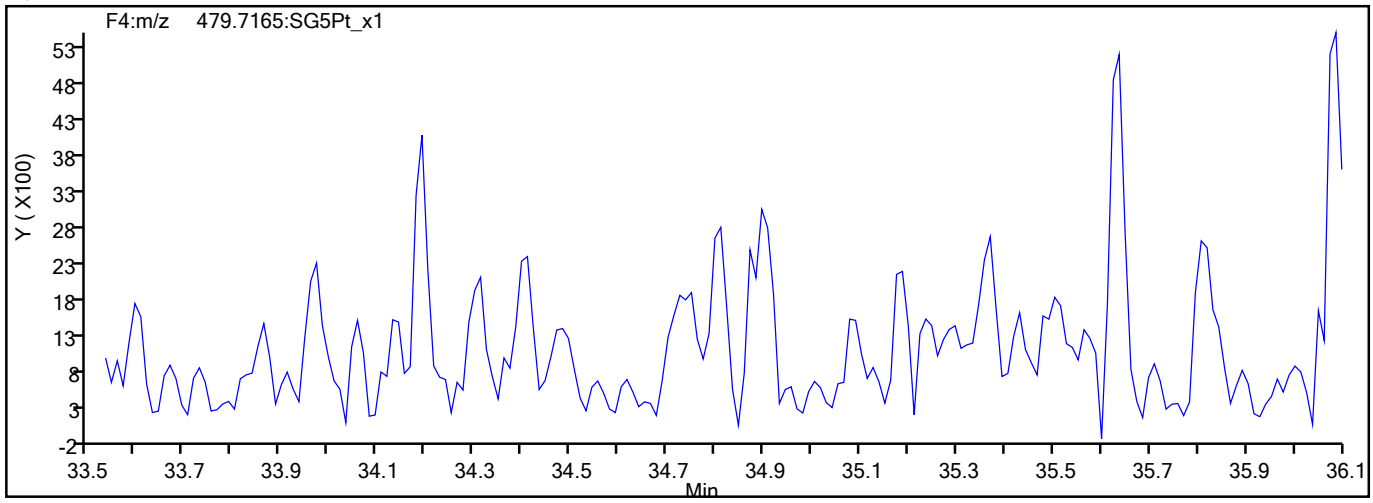

780856

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

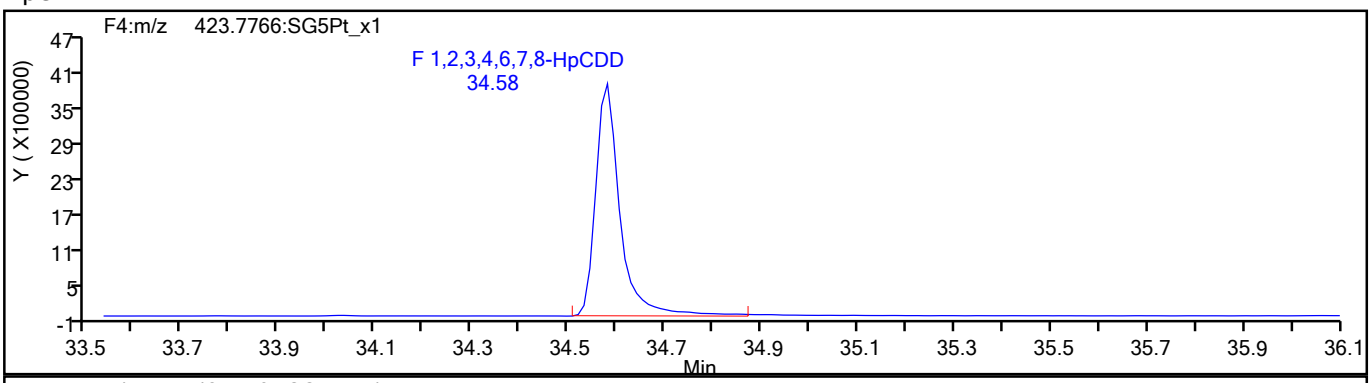

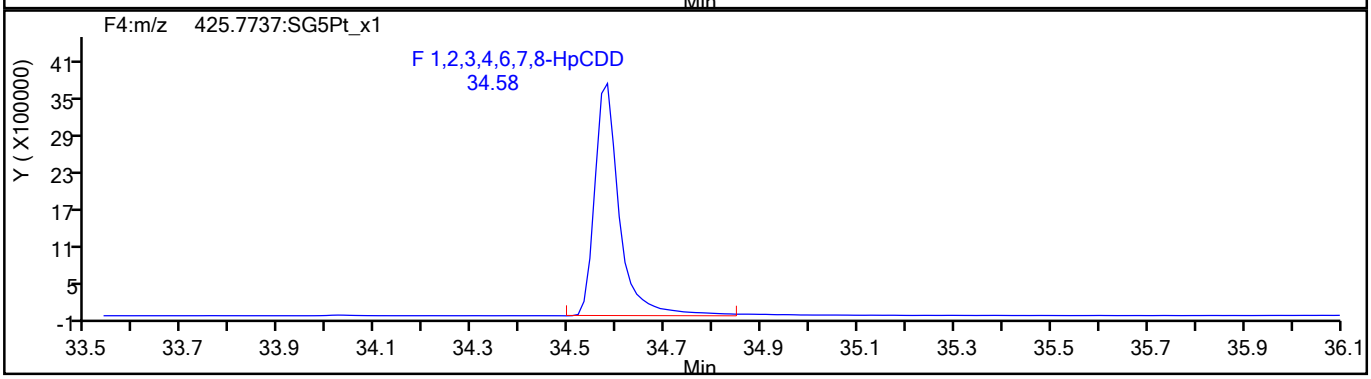

HpCDD Standards

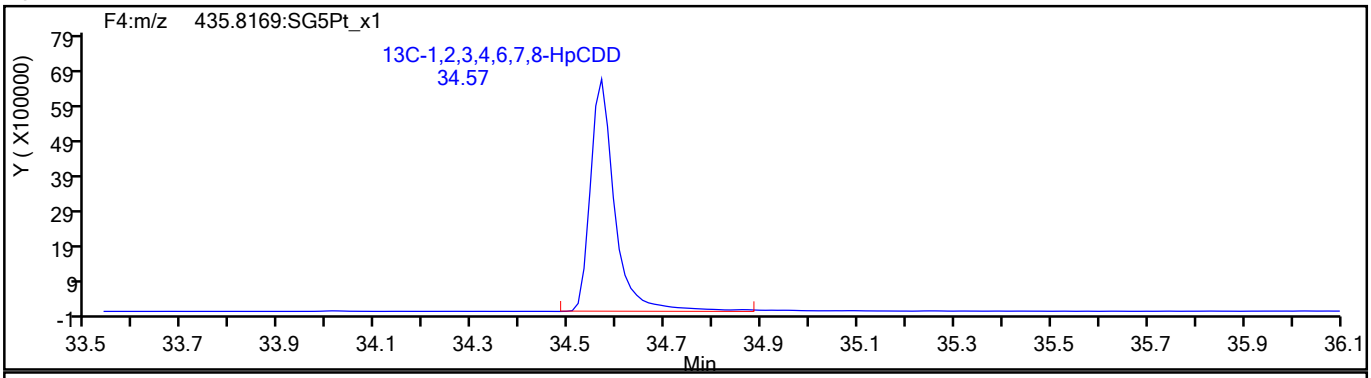

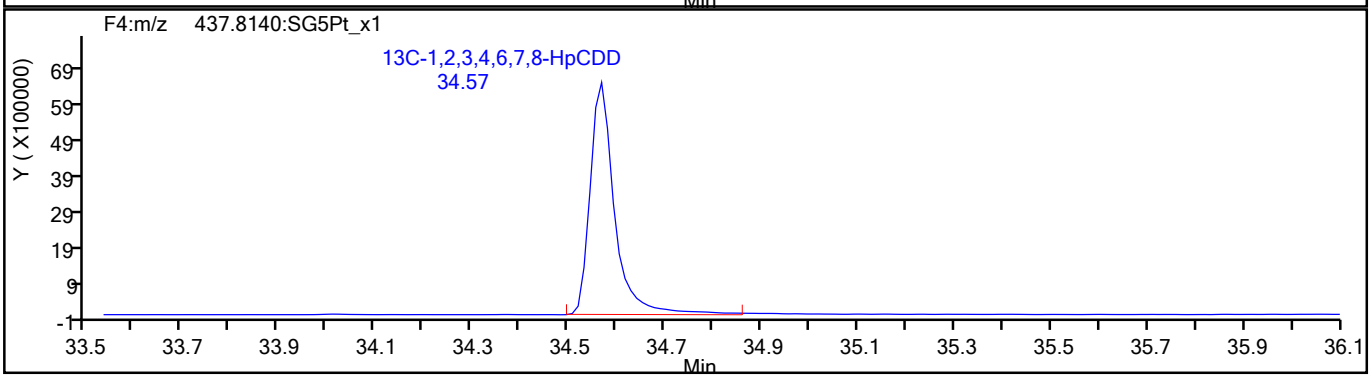

780857

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

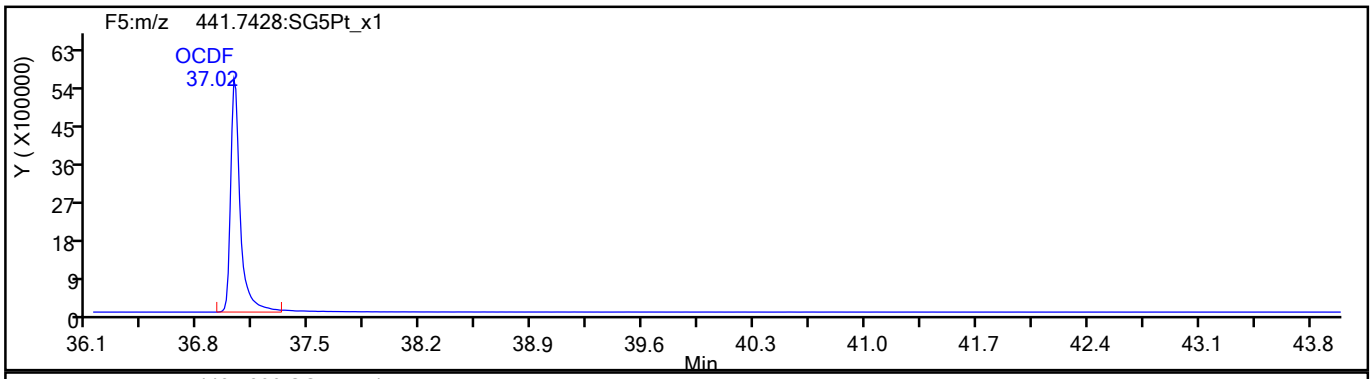

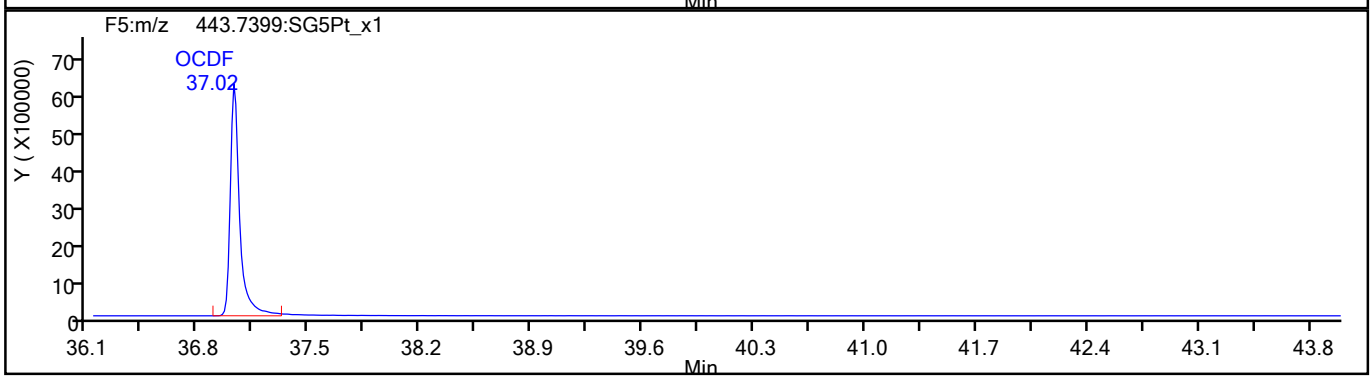

OCDF Standards

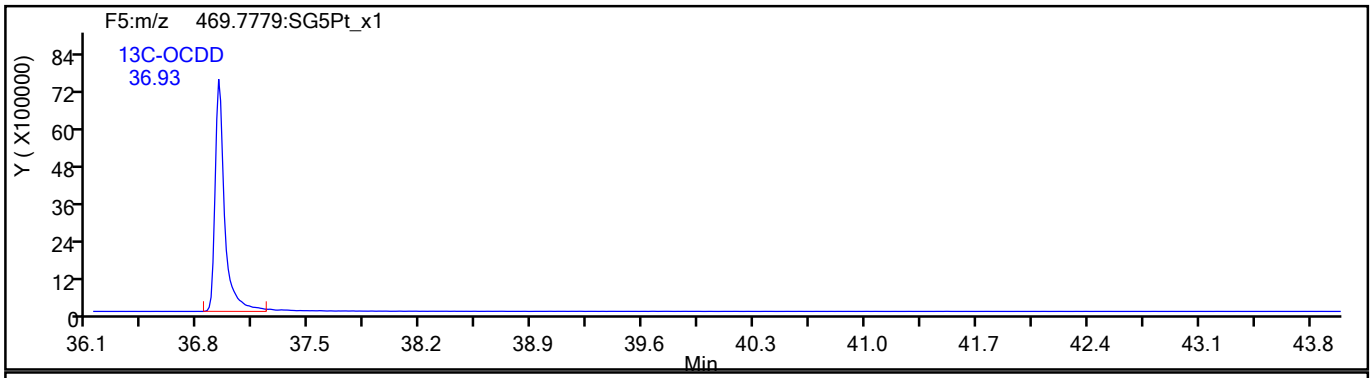

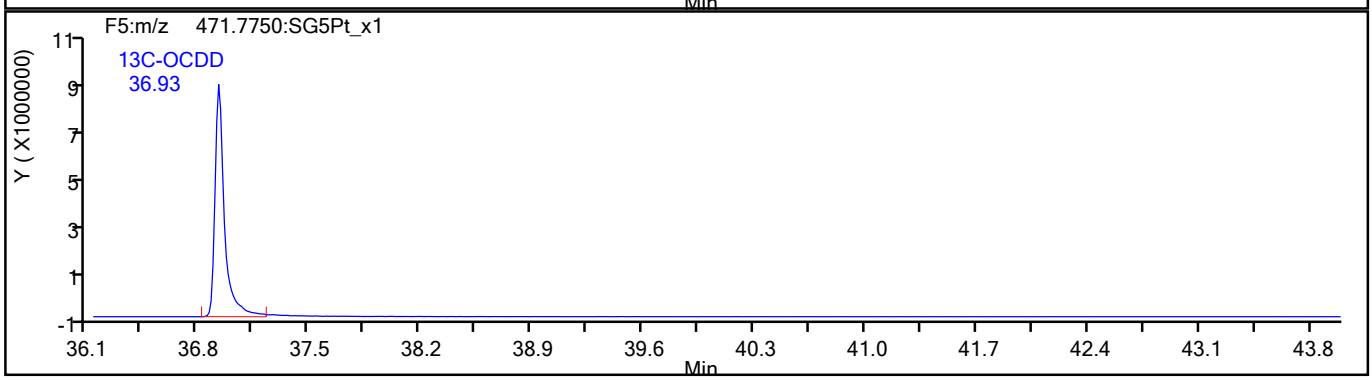

780858

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

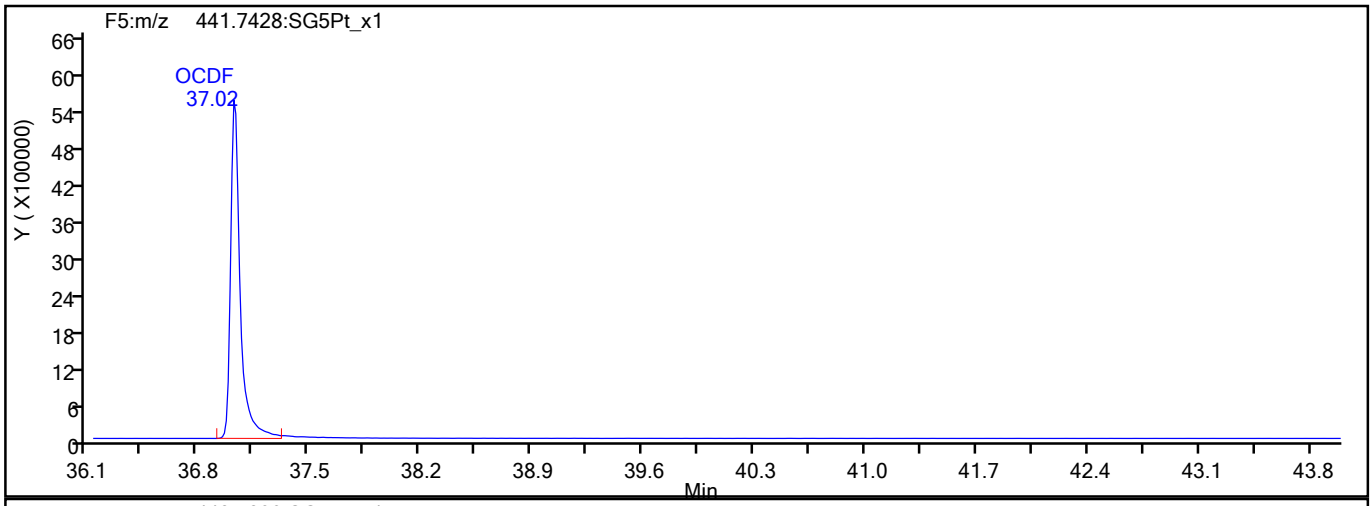

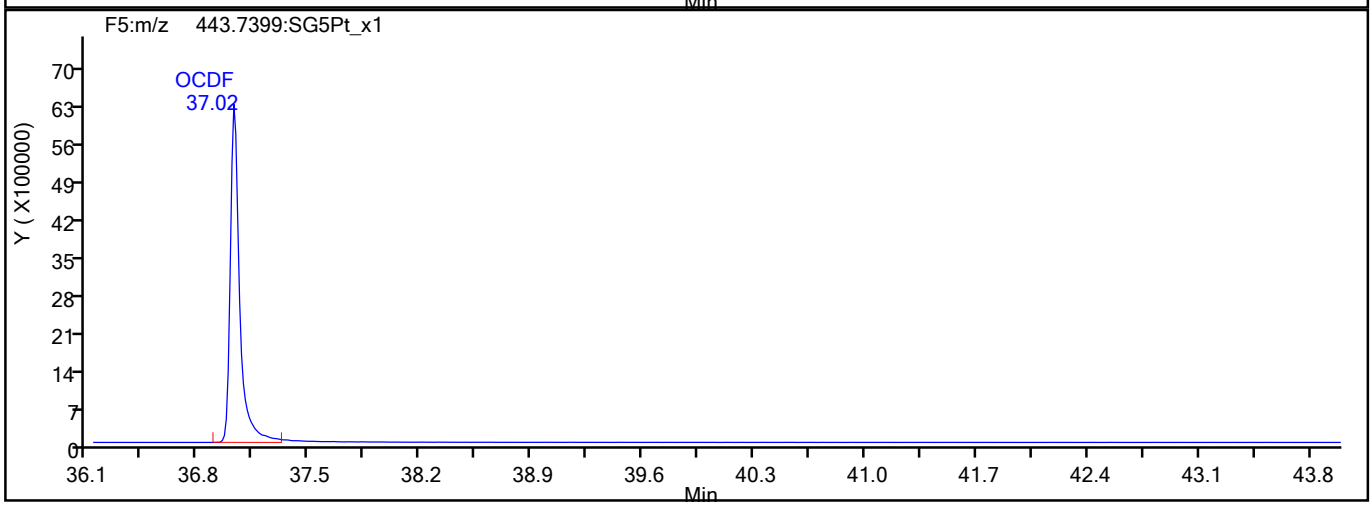

OCDF Interference Mass

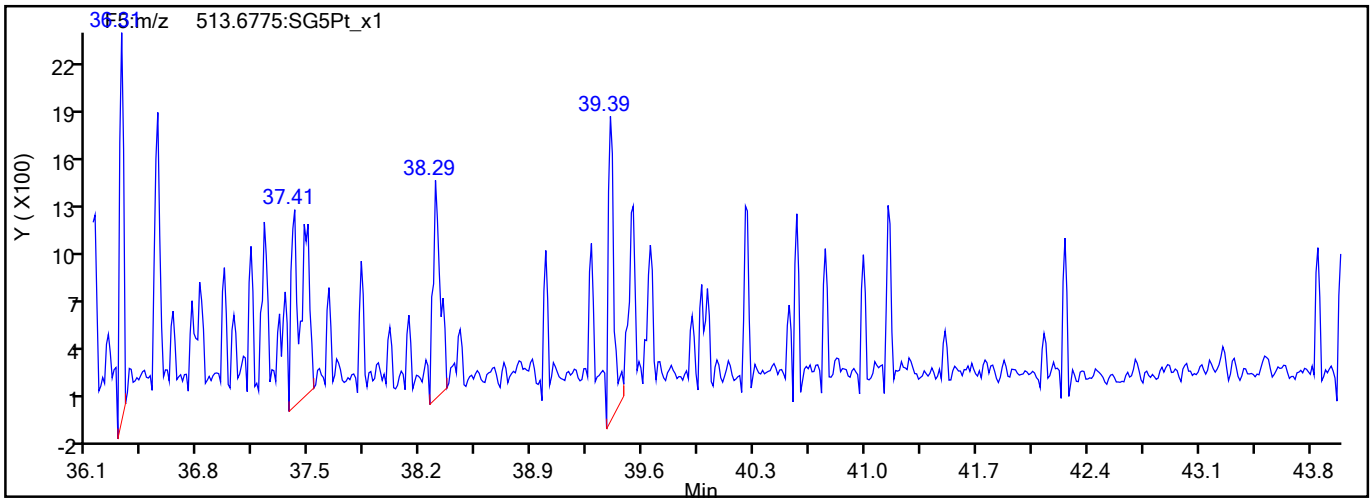

780859

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDD

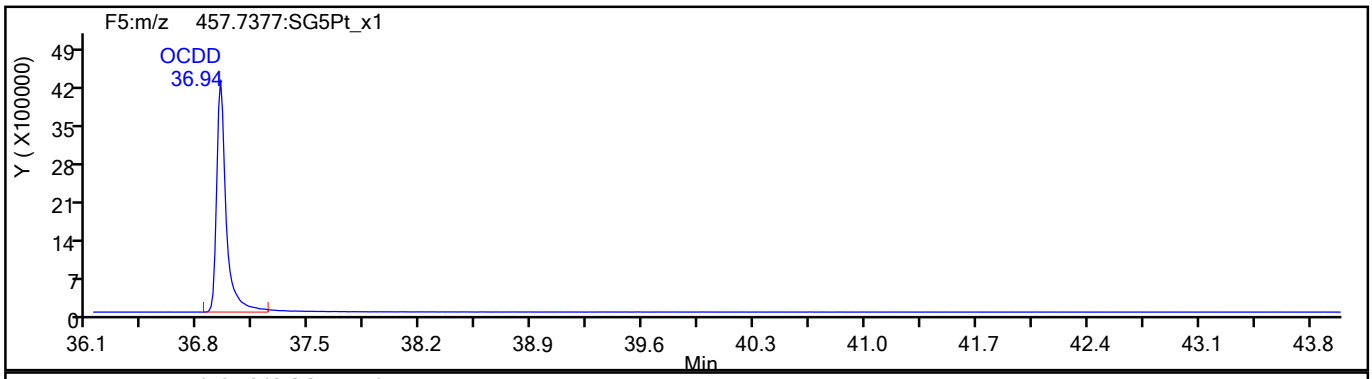

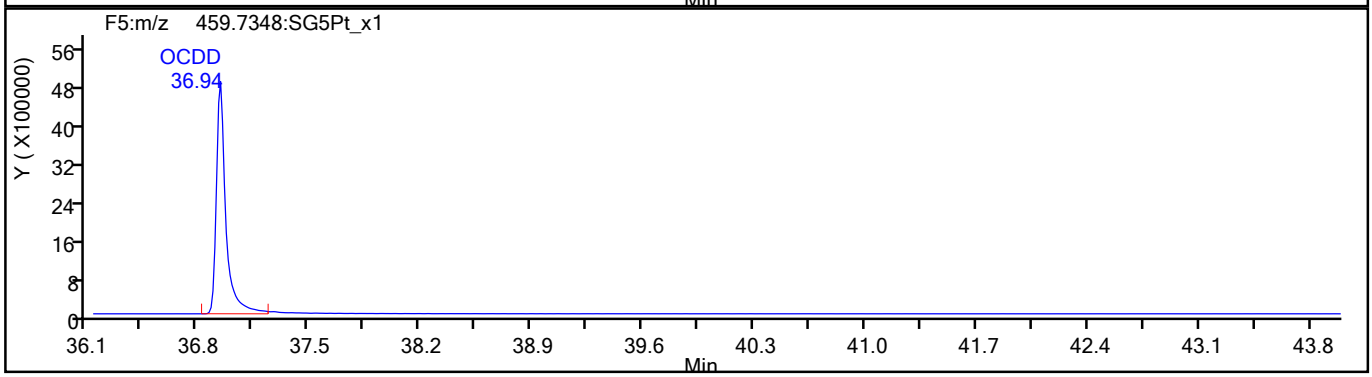

OCDD Standards

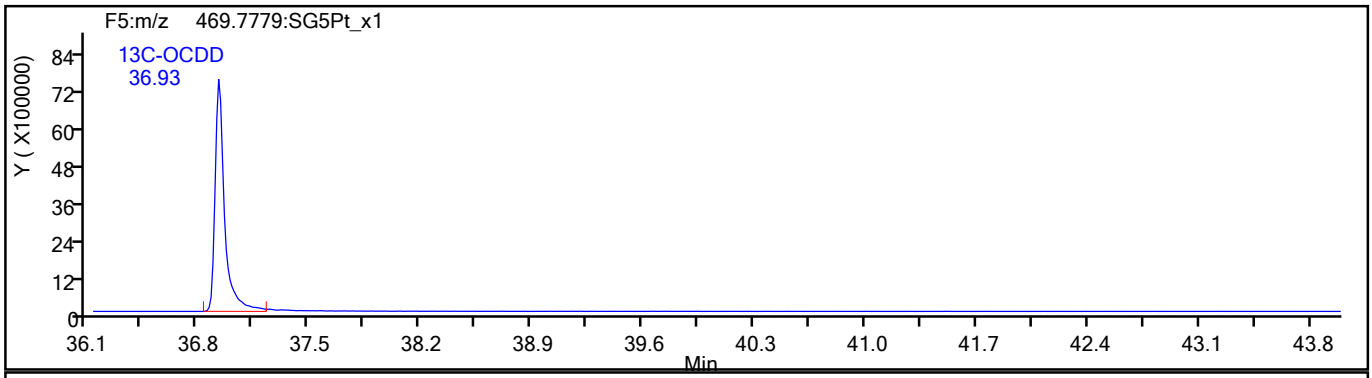

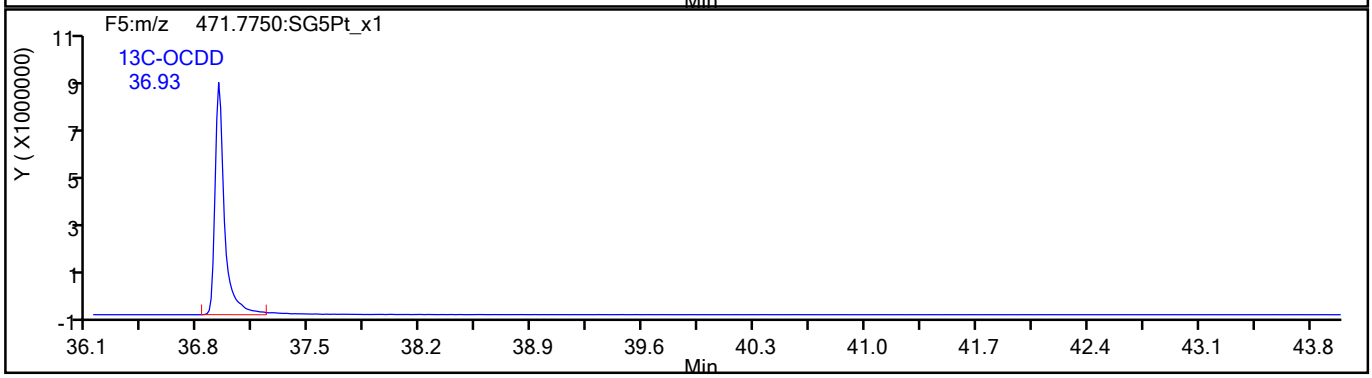

780860

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

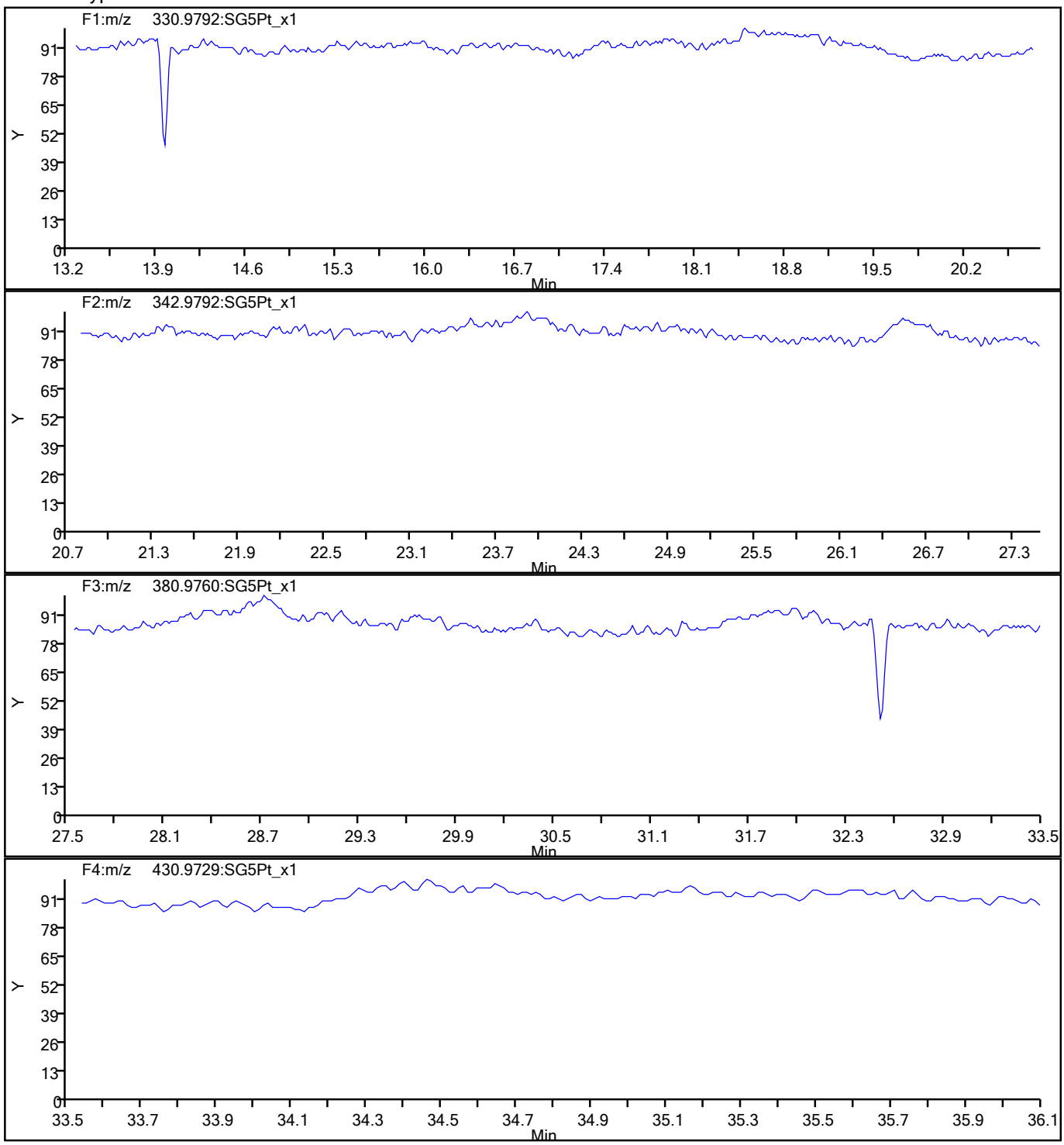

780861

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

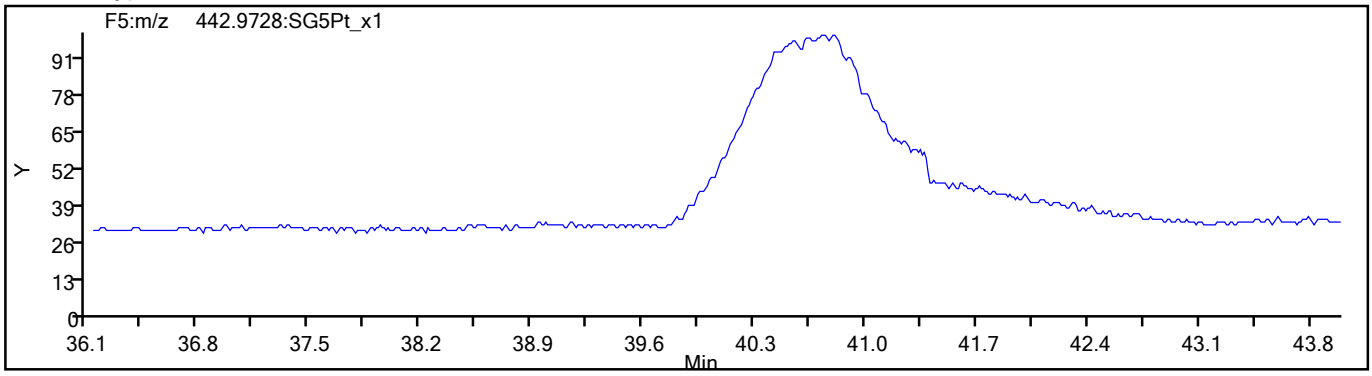

780862

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Start Date: 07/26/2021 09:21

Analysis Batch Number: 510264 End Date: 07/26/2021 15:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-510264/1		07/26/2021 09:21	1	26JL2110D5_1.d	DB-5 0.32(mm)
IC 320-510264/3		07/26/2021 10:51	1	26JL2110D5_3.d	DB-5 0.32(mm)
IC 320-510264/4		07/26/2021 11:36	1	26JL2110D5_4.d	DB-5 0.32(mm)
IC 320-510264/5		07/26/2021 12:21	1	26JL2110D5_5.d	DB-5 0.32(mm)
IC 320-510264/6		07/26/2021 13:06	1	26JL2110D5_6.d	DB-5 0.32(mm)
IC 320-510264/7		07/26/2021 13:51	1	26JL2110D5_7.d	DB-5 0.32(mm)
ICV 320-510264/9		07/26/2021 15:31	1	26JL2110D5_9.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/14/2021 01:16

Analysis Batch Number: 516836 End Date: 08/14/2021 12:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-516836/1		08/14/2021 01:16	1	13AU2110D5_12.d	DB-5 0.32(mm)
WDM 320-516836/2		08/14/2021 02:11	1	13AU2110D5_13.d	DB-5 0.32(mm)
MB 320-512871/1-A		08/14/2021 02:56	1	13AU2110D5_14.d	DB-5 0.32(mm)
LCS 320-512871/2-A		08/14/2021 03:41	1	13AU2110D5_15.d	DB-5 0.32(mm)
LCSD 320-512871/3-A		08/14/2021 04:26	1	13AU2110D5_16.d	DB-5 0.32(mm)
320-76788-2	11215702-072321-BN-SJ SB085 (2-4)	08/14/2021 05:11	1	13AU2110D5_17.d	DB-5 0.32(mm)
320-76788-3	11215702-072321-BN-SJ SB085 (4-6)	08/14/2021 05:56	1	13AU2110D5_18.d	DB-5 0.32(mm)
320-76788-4	11215702-072321-BN-SJ SB085 (6-8)	08/14/2021 06:41	1	13AU2110D5_19.d	DB-5 0.32(mm)
320-76788-5	11215702-072321-BN-SJ SB085 (8-10)	08/14/2021 07:26	1	13AU2110D5_20.d	DB-5 0.32(mm)
320-76788-6	11215702-072321-BN-SJ SB085 (10-12)	08/14/2021 08:11	1	13AU2110D5_21.d	DB-5 0.32(mm)
320-76788-7	11215702-072321-BN-SJ SB085 (12-14)	08/14/2021 08:56	1	13AU2110D5_22.d	DB-5 0.32(mm)
ZZZZZ		08/14/2021 09:41	50		DB-5 0.32(mm)
ZZZZZ		08/14/2021 10:26	25		DB-5 0.32(mm)
ZZZZZ		08/14/2021 11:11	100		DB-5 0.32(mm)
ZZZZZ		08/14/2021 12:06	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/14/2021 13:01

Analysis Batch Number: 516846 End Date: 08/14/2021 23:41

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-516846/16		08/14/2021 13:01	1	13AU2110D5_27.d	DB-5 0.32(mm)
CCV 320-516846/17		08/14/2021 13:46	1	13AU2110D5_28.d	DB-5 0.32(mm)
320-76788-8	11215702-072321-BN-SJ SB085 (14-16)	08/14/2021 14:31	1	13AU2110D5_29.d	DB-5 0.32(mm)
ZZZZZ		08/14/2021 15:16	1		DB-5 0.32(mm)
320-76788-13	11215702-072321-BN-SJ SB105 (0-2)	08/14/2021 16:01	1	13AU2110D5_31.d	DB-5 0.32(mm)
320-76788-15	11215702-072321-BN-SJ SB105 (4-6)	08/14/2021 16:46	1	13AU2110D5_32.d	DB-5 0.32(mm)
320-76788-16	11215702-072321-BN-SJ SB105 (6-8)	08/14/2021 17:31	1	13AU2110D5_33.d	DB-5 0.32(mm)
320-76788-17	11215702-072321-BN-SJ SB105 (8-10)	08/14/2021 18:16	1	13AU2110D5_34.d	DB-5 0.32(mm)
320-76788-18	11215702-072321-BN-SJ SB105 (10-12)	08/14/2021 19:01	1	13AU2110D5_35.d	DB-5 0.32(mm)
320-76788-19	11215702-072321-BN-SJ SB105 (12-14)	08/14/2021 19:46	1	13AU2110D5_36.d	DB-5 0.32(mm)
320-76788-20	11215702-072321-BN-SJ SB105 (14-16)	08/14/2021 20:31	1	13AU2110D5_37.d	DB-5 0.32(mm)
ZZZZZ		08/14/2021 21:16	1		DB-5 0.32(mm)
320-76788-1	11215702-072321-BN-SJ SB085 (0-2)	08/14/2021 22:01	1	13AU2110D5_39.d	DB-5 0.32(mm)
320-76788-14	11215702-072321-BN-SJ SB105 (2-4)	08/14/2021 22:46	1	13AU2110D5_40.d	DB-5 0.32(mm)
ZZZZZ		08/14/2021 23:41	1		DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/17/2021 23:49

Analysis Batch Number: 517241 End Date: 08/18/2021 07:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-517241/1		08/17/2021 23:49	1	17AU21A10D5_12.d	DB-5 0.32(mm)
WDM 320-517241/2		08/18/2021 00:44	1	17AU21A10D5_13.d	DB-5 0.32(mm)
320-76788-1 DL	11215702-072321-BN-SJ SB085 (0-2) DL	08/18/2021 05:14	5	17AU21A10D5_19.d	DB-5 0.32(mm)
320-76788-13 DL	11215702-072321-BN-SJ SB105 (0-2) DL	08/18/2021 05:59	5	17AU21A10D5_20.d	DB-5 0.32(mm)
320-76788-14 DL	11215702-072321-BN-SJ SB105 (2-4) DL	08/18/2021 06:44	5	17AU21A10D5_21.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 07:29	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/24/2021 16:36

Analysis Batch Number: 519540 End Date: 08/25/2021 02:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-519540/1		08/24/2021 16:36	1	24AU21A11D2_001.d	DB-225 0.32(mm)
CPS 320-519540/2		08/24/2021 17:15	1	24AU21A11D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/24/2021 17:53	1		DB-225 0.32(mm)
320-76788-6 RA	11215702-072321-BN-SJ SB085 (10-12) RA	08/24/2021 18:32	1	24AU21A11D2_004.d	DB-225 0.32(mm)
320-76788-7 RA	11215702-072321-BN-SJ SB085 (12-14) RA	08/24/2021 19:10	1	24AU21A11D2_005.d	DB-225 0.32(mm)
320-76788-8 RA	11215702-072321-BN-SJ SB085 (14-16) RA	08/24/2021 19:48	1	24AU21A11D2_006.d	DB-225 0.32(mm)
320-76788-17 RA	11215702-072321-BN-SJ SB105 (8-10) RA	08/24/2021 20:27	1	24AU21A11D2_007.d	DB-225 0.32(mm)
320-76788-18 RA	11215702-072321-BN-SJ SB105 (10-12) RA	08/24/2021 21:05	1	24AU21A11D2_008.d	DB-225 0.32(mm)
320-76788-3 RA	11215702-072321-BN-SJ SB085 (4-6) RA	08/24/2021 21:43	1	24AU21A11D2_009.d	DB-225 0.32(mm)
320-76788-4 RA	11215702-072321-BN-SJ SB085 (6-8) RA	08/24/2021 22:22	1	24AU21A11D2_010.d	DB-225 0.32(mm)
320-76788-5 RA	11215702-072321-BN-SJ SB085 (8-10) RA	08/24/2021 23:00	1	24AU21A11D2_011.d	DB-225 0.32(mm)
320-76788-16 RA	11215702-072321-BN-SJ SB105 (6-8) RA	08/24/2021 23:38	1	24AU21A11D2_012.d	DB-225 0.32(mm)
320-76788-20 RA	11215702-072321-BN-SJ SB105 (14-16) RA	08/25/2021 00:17	1	24AU21A11D2_013.d	DB-225 0.32(mm)
320-76788-15 RA	11215702-072321-BN-SJ SB105 (4-6) RA	08/25/2021 00:55	1	24AU21A11D2_014.d	DB-225 0.32(mm)
320-76788-19 RA	11215702-072321-BN-SJ SB105 (12-14) RA	08/25/2021 01:34	1	24AU21A11D2_015.d	DB-225 0.32(mm)
320-76788-2 RA	11215702-072321-BN-SJ SB085 (2-4) RA	08/25/2021 02:12	1	24AU21A11D2_016.d	DB-225 0.32(mm)
ZZZZZ		08/25/2021 02:50	5		DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/25/2021 12:59

Analysis Batch Number: 519744 End Date: 08/25/2021 23:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-519744/1		08/25/2021 12:59	1	25AU21A11D2_001.d	DB-225 0.32(mm)
CCV 320-519744/2		08/25/2021 13:37	1	25AU21A11D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/25/2021 14:15	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 14:54	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 15:32	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 16:10	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 16:48	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 17:27	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 18:05	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 18:43	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 19:22	1		DB-225 0.32(mm)
320-76788-1 RADL	11215702-072321-BN-SJ SB085 (0-2) RADL	08/25/2021 20:00	5	25AU21A11D2_012.d	DB-225 0.32(mm)
320-76788-13 RADL	11215702-072321-BN-SJ SB105 (0-2) RADL	08/25/2021 20:38	5	25AU21A11D2_013.d	DB-225 0.32(mm)
320-76788-14 RADL	11215702-072321-BN-SJ SB105 (2-4) RADL	08/25/2021 21:17	5	25AU21A11D2_014.d	DB-225 0.32(mm)
ZZZZZ		08/25/2021 21:55	10		DB-225 0.32(mm)
ZZZZZ		08/25/2021 22:33	10		DB-225 0.32(mm)
ZZZZZ		08/25/2021 23:11	10		DB-225 0.32(mm)
ZZZZZ		08/25/2021 23:50	10		DB-225 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76788-1

SDG No.:

Batch Number: 512871 Batch Start Date: 08/04/21 07:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/12/21 13:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-512871/1		HRMS-Sox, 1613B		10 g	20.0 uL	G-1	37/55	1	1 mL
LCS 320-512871/2		HRMS-Sox, 1613B		10 g	20.0 uL	G-2	30/48	1	1 mL
LCSD 320-512871/3		HRMS-Sox, 1613B		10 g	20.0 uL	G-3	82/105	3	1 mL
320-76788-A-1	11215702-072321-BN-SJSB085 (0-2)	HRMS-Sox, 1613B	T	9.73 g	20.0 uL	G-4	97/110	1	1 mL
320-76788-A-2	11215702-072321-BN-SJSB085 (2-4)	HRMS-Sox, 1613B	T	9.86 g	20.0 uL	G-5	91/71	3	1 mL
320-76788-A-3	11215702-072321-BN-SJSB085 (4-6)	HRMS-Sox, 1613B	T	10.66 g	20.0 uL	G-6	95/53	1	1 mL
320-76788-A-4	11215702-072321-BN-SJSB085 (6-8)	HRMS-Sox, 1613B	T	10.06 g	20.0 uL	H-1	106/69	3	1 mL
320-76788-A-5	11215702-072321-BN-SJSB085 (8-10)	HRMS-Sox, 1613B	T	9.72 g	20.0 uL	H-2	57/75	1	1 mL
320-76788-A-6	11215702-072321-BN-SJSB085 (10-12)	HRMS-Sox, 1613B	T	9.97 g	20.0 uL	H-3	5/39	3	1 mL
320-76788-A-7	11215702-072321-BN-SJSB085 (12-14)	HRMS-Sox, 1613B	T	9.84 g	20.0 uL	H-4	27/64	1	1 mL
320-76788-A-8	11215702-072321-BN-SJSB085 (14-16)	HRMS-Sox, 1613B	T	9.78 g	20.0 uL	H-5	66/3	3	1 mL
320-76788-A-13	11215702-072321-BN-SJSB105 (0-2)	HRMS-Sox, 1613B	T	10.13 g	20.0 uL	I-1	40/67	3	1 mL
320-76788-A-14	11215702-072321-BN-SJSB105 (2-4)	HRMS-Sox, 1613B	T	10.13 g	20.0 uL	I-2	23/24	1	1 mL
320-76788-A-15	11215702-072321-BN-SJSB105 (4-6)	HRMS-Sox, 1613B	T	10.30 g	20.0 uL	I-3	100/49	3	1 mL
320-76788-A-16	11215702-072321-BN-SJSB105 (6-8)	HRMS-Sox, 1613B	T	10.28 g	20.0 uL	I-4	55/31	1	1 mL
320-76788-A-17	11215702-072321-BN-SJSB105 (8-10)	HRMS-Sox, 1613B	T	10.90 g	20.0 uL	I-5	28/68	3	1 mL
320-76788-A-18	11215702-072321-BN-SJSB105 (10-12)	HRMS-Sox, 1613B	T	9.94 g	20.0 uL	I-6	54/22	1	1 mL
320-76788-A-19	11215702-072321-BN-SJSB105 (12-14)	HRMS-Sox, 1613B	T	10.06 g	20.0 uL	J-1	89/58	3	1 mL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76788-1

SDG No.:

Batch Number: 512871 Batch Start Date: 08/04/21 07:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/12/21 13:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
320-76788-A-20	11215702-072321-BN-SJSB105 (14-16)	HRMS-Sox, 1613B	T	9.83 g	20.0 uL	J-2	10/11	1	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-512871/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-512871/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
LCSD 320-512871/3		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76788-A-1	11215702-072321-BN-SJSB085 (0-2)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-2	11215702-072321-BN-SJSB085 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-3	11215702-072321-BN-SJSB085 (4-6)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-4	11215702-072321-BN-SJSB085 (6-8)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-5	11215702-072321-BN-SJSB085 (8-10)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-6	11215702-072321-BN-SJSB085 (10-12)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-7	11215702-072321-BN-SJSB085 (12-14)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-8	11215702-072321-BN-SJSB085 (14-16)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-13	11215702-072321-BN-SJSB105 (0-2)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-14	11215702-072321-BN-SJSB105 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-15	11215702-072321-BN-SJSB105 (4-6)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-16	11215702-072321-BN-SJSB105 (6-8)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-17	11215702-072321-BN-SJSB105 (8-10)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76788-1

SDG No.:

Batch Number: 512871 Batch Start Date: 08/04/21 07:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/12/21 13:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
320-76788-A-18	11215702-072321-BN-SJSB105 (10-12)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-19	11215702-072321-BN-SJSB105 (12-14)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-20	11215702-072321-BN-SJSB105 (14-16)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76788-1

SDG No.:

Batch Number: 512871 Batch Start Date: 08/04/21 07:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/12/21 13:00

Batch Notes	
20% DCM:Hexane ID	DH28_00193 mL
65% DCM:Hexane ID	DH6535_00545
Acid Silica Gel ID	SA5644_00731
Acid Alumina ID	Acid_Alumina_00018
Balance ID	QA-074
Sulfuric Acid Lot Number	H2SO4_00151
Hexane ID	Hexane_00287
IFB Clean Up	TGL 08/12/21
Na2SO4 ID	SodiumSulfate_00165
Option C Clean Up	GLB 08/12/21
Analyst ID - IDA Reagent Drop	FC 8/4/21 HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	TGL 08/04/21
Analyst ID - IS Reagent Drop	TGL 08/12/21 DB15270 HRDXNIS_00137 B 1/4 20.0 uL
Analyst ID - IS Reagent Drop Witness	FC 08/12/21
Analyst ID - SU Reagent Drop	GLB 08/12/21 HD05018 HRDXNSU_00255 B 3/5 1.0 mL
Analyst ID - SU Reagent Drop Witness	FC 08/12/21
Analyst ID - TA Reagent Drop	FC 8/4/21 DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	TGL 08/04/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/4/21 11:20
Soxhlet/Soxtherm Start	8/4/21 08:20
Storage Box ID	DXN -265
Toluene ID	Toluene_00109

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

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Sacramento
Dilution Report Form – HRMS Tests

Use this form for documenting dilutions. All dilutions are based on removing sample from the original extract, unless otherwise noted. The final volume for the dilutions listed is the sum of the solvent and the sample.

Attach the completed form to the original bench sheet, for archive with the lot data.

Table 1: How Dilutions Are Made

Dilution required	Amount of Solvent (µL) DXN Methods: 8290, 1613B, TO-9, EPA 23, EPA 0023A; Solvent (tetradecane C_{14}) PCB Methods: 1668A, 1668C; Solvent (dodecane C_{12})	Amount of sample (µl) to be added to solvent
2X	5.0	5.0
5X	8.0	2.0
10X	18.0	2.0
20X	38.0	2.0
25X	48.0	2.0
30X	58.0	2.0
40X	78.0	2.0
50X	98.0	2.0
100X	198.0	2.0

Sample Dilutions Made

Job Number	Sample ID	Dilution Made	Reagent (Solvent)/ IS ID*	Pipette/ Syringe ID	Analyst	Date
320-76788	A-1-A	5X	TETRADECANE_00015	10µl NA	DB	8/17/21
320-76788	A-2-A	5X	TETRADECANE_00015	10µl NA	DB	8/17/21
320-76788	A-13-A	5X	TETRADECANE_00015	10µl NA	DB	8/17/21
320-76788	A-14-A	5X	TETRADECANE_00015	10µl NA	DB	8/17/21
320-76788	A-15-A	5X	TETRADECANE_00015	10µl NA	DB	8/17/21
320-76788	A-19-A	5X	TETRADECANE_00015	10µl NA	DB	8/17/21

DB 8/17/21

*Log solvents into TALS, use TALS Reagent ID here; if adding IS, also input TALS Reagent ID for IS.

\\Tacorp\corp\QA\QA_Facilities\Sacramento-QA\Document-Management\Forms\Dilutions\QA-DIL-004 HRMS Dilutions.doc

QA-DIL-004 TGT 1/17/2020

780874

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-76788-1

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-072321-BN-SJSB085 (0-2)	320-76788-1
11215702-072321-BN-SJSB085 (2-4)	320-76788-2
11215702-072321-BN-SJSB085 (4-6)	320-76788-3
11215702-072321-BN-SJSB085 (6-8)	320-76788-4
11215702-072321-BN-SJSB085 (8-10)	320-76788-5
11215702-072321-BN-SJSB085 (10-12)	320-76788-6
11215702-072321-BN-SJSB085 (12-14)	320-76788-7
11215702-072321-BN-SJSB085 (14-16)	320-76788-8
11215702-072321-BN-SJSB105 (0-2)	320-76788-13
11215702-072321-BN-SJSB105 (2-4)	320-76788-14
11215702-072321-BN-SJSB105 (4-6)	320-76788-15
11215702-072321-BN-SJSB105 (6-8)	320-76788-16
11215702-072321-BN-SJSB105 (8-10)	320-76788-17
11215702-072321-BN-SJSB105 (10-12)	320-76788-18
11215702-072321-BN-SJSB105 (12-14)	320-76788-19
11215702-072321-BN-SJSB105 (14-16)	320-76788-20

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76788-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76788-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/29/2021 12:04 End Date: 07/29/2021 12:04

Lab Sample Id	D/F	Type	Time	Analytes																							
				% Sol	Moist																						
320-76788-1	1	T	12:04	X	X																						
320-76788-1 DU	1	T	12:04	X	X																						
320-76788-2	1	T	12:04	X	X																						
320-76788-3	1	T	12:04	X	X																						
320-76788-4	1	T	12:04	X	X																						
320-76788-5	1	T	12:04	X	X																						
320-76788-6	1	T	12:04	X	X																						
320-76788-7	1	T	12:04	X	X																						
320-76788-8	1	T	12:04	X	X																						
ZZZZZZ			12:04																								
320-76788-13	1	T	12:04	X	X																						
320-76788-14	1	T	12:04	X	X																						
320-76788-15	1	T	12:04	X	X																						
320-76788-16	1	T	12:04	X	X																						
320-76788-17	1	T	12:04	X	X																						
320-76788-18	1	T	12:04	X	X																						
320-76788-19	1	T	12:04	X	X																						
320-76788-20	1	T	12:04	X	X																						
ZZZZZZ			12:04																								

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76788-1

SDG No.:

Batch Number: 511309 Batch Start Date: 07/29/21 12:04 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 07/30/21 08:54

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76788-A-1	11215702-072321-BN-SJSB085 (0-2)	D 2216	T	1	1.00 g	6.58 g	3.28 g	59.1397849462366 %	40.8602150537634 %
320-76788-A-1 DU	11215702-072321-BN-SJSB085 (0-2)	D 2216	T	2	1.00 g	7.37 g	3.73 g	57.1428571428571 %	42.8571428571429 %
320-76788-A-2	11215702-072321-BN-SJSB085 (2-4)	D 2216	T	3	1.00 g	9.61 g	6.28 g	38.6759581881533 %	61.3240418118467 %
320-76788-A-3	11215702-072321-BN-SJSB085 (4-6)	D 2216	T	4	1.02 g	9.92 g	8.12 g	20.2247191011236 %	79.7752808988764 %
320-76788-A-4	11215702-072321-BN-SJSB085 (6-8)	D 2216	T	5	1.03 g	10.30 g	7.53 g	29.8813376483279 %	70.1186623516721 %
320-76788-A-5	11215702-072321-BN-SJSB085 (8-10)	D 2216	T	6	1.01 g	8.58 g	6.74 g	24.3064729194188 %	75.6935270805812 %
320-76788-A-6	11215702-072321-BN-SJSB085 (10-12)	D 2216	T	7	1.00 g	6.80 g	4.39 g	41.551724137931 %	58.448275862069 %
320-76788-A-7	11215702-072321-BN-SJSB085 (12-14)	D 2216	T	8	1.02 g	9.54 g	6.54 g	35.2112676056338 %	64.7887323943662 %
320-76788-A-8	11215702-072321-BN-SJSB085 (14-16)	D 2216	T	9	1.00 g	9.74 g	6.31 g	39.2448512585812 %	60.7551487414188 %
320-76788-A-13	11215702-072321-BN-SJSB105 (0-2)	D 2216	T	11	1.00 g	7.59 g	4.31 g	49.7723823975721 %	50.2276176024279 %
320-76788-A-14	11215702-072321-BN-SJSB105 (2-4)	D 2216	T	12	1.00 g	7.61 g	4.44 g	47.9576399394856 %	52.0423600605144 %
320-76788-A-15	11215702-072321-BN-SJSB105 (4-6)	D 2216	T	13	1.00 g	10.95 g	7.91 g	30.5527638190955 %	69.4472361809045 %
320-76788-A-16	11215702-072321-BN-SJSB105 (6-8)	D 2216	T	14	1.01 g	12.85 g	9.26 g	30.3209459459459 %	69.6790540540541 %
320-76788-A-17	11215702-072321-BN-SJSB105 (8-10)	D 2216	T	15	1.00 g	8.35 g	5.42 g	39.8639455782313 %	60.1360544217687 %
320-76788-A-18	11215702-072321-BN-SJSB105 (10-12)	D 2216	T	16	1.01 g	6.47 g	4.33 g	39.1941391941392 %	60.8058608058608 %
320-76788-A-19	11215702-072321-BN-SJSB105 (12-14)	D 2216	T	17	1.00 g	7.68 g	5.45 g	33.3832335329341 %	66.6167664670659 %
320-76788-A-20	11215702-072321-BN-SJSB105 (14-16)	D 2216	T	18	1.02 g	11.02 g	7.58 g	34.4 %	65.6 %

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76788-1

SDG No.:

Batch Number: 511309 Batch Start Date: 07/29/21 12:04 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 07/30/21 08:54

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	07/30/2021 08:00
Date and Time Samples out of Desiccator	07/30/2021 08:54
Date samples were placed in the oven	07/29/2021
Oven Temp In	111 Degrees C
Time samples were place in the oven	12:04
Date samples were removed from oven	07/30/2021
Oven Temp Out	111 Degrees C
Time Samples were removed from oven	08:00
Oven ID	Soil Prep #2
Thermometer ID	151969607

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-76788-1

Batch: 511309
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76788-A-1

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	59.1397849462366	%
Percent Solids	None	1	40.8602150537634	%

Lab Sample ID: 320-76788-A-1 DU

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	57.1428571428571	%
Percent Solids	None	1	42.8571428571429	%

Lab Sample ID: 320-76788-A-2

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	38.6759581881533	%
Percent Solids	None	1	61.3240418118467	%

Lab Sample ID: 320-76788-A-3

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	20.2247191011236	%
Percent Solids	None	1	79.7752808988764	%

Lab Sample ID: 320-76788-A-4

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	29.8813376483279	%
Percent Solids	None	1	70.1186623516721	%

Lab Sample ID: 320-76788-A-5

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	24.3064729194188	%
Percent Solids	None	1	75.6935270805812	%

Lab Sample ID: 320-76788-A-6

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	41.551724137931	%
Percent Solids	None	1	58.448275862069	%

Lab Sample ID: 320-76788-A-7

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	35.2112676056338	%
Percent Solids	None	1	64.7887323943662	%

Lab Sample ID: 320-76788-A-8

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	39.2448512585812	%
Percent Solids	None	1	60.7551487414188	%

Batch: 511309 (Continued)
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76788-A-13

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	49.7723823975721	%
Percent Solids	None	1	50.2276176024279	%

Lab Sample ID: 320-76788-A-14

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	47.9576399394856	%
Percent Solids	None	1	52.0423600605144	%

Lab Sample ID: 320-76788-A-15

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	30.5527638190955	%
Percent Solids	None	1	69.4472361809045	%

Lab Sample ID: 320-76788-A-16

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	30.3209459459459	%
Percent Solids	None	1	69.6790540540541	%

Lab Sample ID: 320-76788-A-17

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	39.8639455782313	%
Percent Solids	None	1	60.1360544217687	%

Lab Sample ID: 320-76788-A-18

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	39.1941391941392	%
Percent Solids	None	1	60.8058608058608	%

Lab Sample ID: 320-76788-A-19

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	33.3832335329341	%
Percent Solids	None	1	66.6167664670659	%

Lab Sample ID: 320-76788-A-20

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	34.4	%
Percent Solids	None	1	65.6	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 1 of 3
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

320-76788 Chain of Custody

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072321-BN-SJSB085 (0-2)	7-23-21	1100	G	S	N	N	X	X	X	1	
(2-4)		1105			N	N	X	X	X	1	
(4-6)		1110			N	N	X	X	X	1	
(6-8)		1115			N	N	X	X	X	1	
(8-10)		1120			N	N	X	X	X	1	
(10-12)		1125			N	N	X	X	X	1	
(12-14)		1130			N	N	X	X	X	1	
(14-16)		1135			N	N	X	X	X	1	
(16-18)		1140			N	N	X	X	X	1	Priority
(18-20)		1145			N	N	X	X	X	1	HOLD
(20-22)		1150			N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date:	Time:		Method of Shipment: FedEx	
Relinquished by: Breanna North	Date/Time: 7-26-21 1400	Company: GHD	Received by:	Date/Time: 7/27/21-945	Company: STASH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Yes / No	Custody Seal No.: 519356		Cooler Temperature(s) °C and Other Remarks: 4.7		

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

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Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 2 of 3
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072321-BN-SJSB085 (22-24)	7-23-21	1155	G	S	N	N	X	X	X	1	HOLD
11215702-072321-BN-SJSB105 (0-2)		1530			N	N	X	X	X	1	
(2-4)		1535			N	N	X	X	X	1	
(4-6)		1540			N	N	X	X	X	1	
(6-8)		1545			N	N	X	X	X	1	
(8-10)		1550			N	N	X	X	X	1	
(10-12)		1555			N	N	X	X	X	1	
(12-14)		1600			N	N	X	X	X	1	
(14-16)		1605			N	N	X	X	X	1	
(16-18)		1610			N	N	X	X	X	1	Priority
(18-20)		1615			N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:		Method of Shipment: FedEx	
Relinquished by: Breanna North	Date/Time: 7-26-21 1400	Company: GHD	Received by:	Date/Time: 7/27/21-945	Company: EMSLA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No (Yes circled) | Custody Seal No.: 151936

Cooler Temperature(s) °C and Other Remarks: 4.7

Ver: 01/16/2019

780888

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins

Client Information

Client Contact: Janie Smith
Company: GHD Services Inc.
Address: 5551 Corporate Boulevard Suite 200
City: Baton Rouge
State, Zip: LA, 70808
Phone: 225-292-9007(Tel)
Email: janie.smith@ghd.com
Project Name: SJRWP Supplemental Design Investigation
Site: San Jacinto Waste Pits

Sampler: Breanna North
Phone: 501-454-9966
Due Date Requested:
TAT Requested (days): 15 business days
PO #: Purchase Order Requested
WO #:
Project #: 11215702
SSOW#: 11215702-2021-001

Lab PM: Karen Dahl
E-Mail:
Carrier Tracking No(s):
COC No:
Page: 3 of 3
Job #:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072321-BN-SJSB105(20-22)	7-23-21	1620	G	S	N	N	X	X	X	1	HOLD
11215702-072321-BN-SJSB105(22-24)	7-23-21	1625	G	S	N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: FedEx

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Breanna North	7-26-21 1400		[signature]	7/27/21-945	EASL

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.: 1519356
Cooler Temperature(s) °C and Other Remarks: 4.7

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-76788-1

Login Number: 76788
List Number: 1
Creator: Cahill, Nicholas P

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1519356
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Job Number: 320-76788-2

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
8/24/2021 1:25 PM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
08/24/2021

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 320-76788-2
Project/Site: SJRWP Supplemental Design Investigation

Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
320-76788-2

Comments
No additional comments.

Receipt
The samples were received on 7/27/2021 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.7º C.

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

780894

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-2

Client Sample ID: 11215702-072321-BN-SJSB085 (16-18) — Lab Sample ID: 320-76788-9

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	5.2	B	1.7	0.21	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.39	J	8.3	0.20	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.58	J	8.3	0.084	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.31	J	8.3	0.088	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.82	J B	8.3	0.36	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.2	J	8.3	0.37	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.8	J	8.3	0.33	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.67	J B	8.3	0.059	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.27	J B	8.3	0.060	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.13	J B	8.3	0.051	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	51	B	8.3	1.3	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.28	J B q	8.3	0.057	pg/g	1	☼	1613B	Total/NA
OCDD	1300	B	17	1.6	pg/g	1	☼	1613B	Total/NA
OCDF	0.52	J B q	17	0.088	pg/g	1	☼	1613B	Total/NA
Total TCDD	12	B q	1.7	0.21	pg/g	1	☼	1613B	Total/NA
Total TCDF	29	B q	1.7	0.12	pg/g	1	☼	1613B	Total/NA
Total PeCDD	10	q	8.3	0.20	pg/g	1	☼	1613B	Total/NA
Total PeCDF	1.4	J q	8.3	0.086	pg/g	1	☼	1613B	Total/NA
Total HxCDD	43	B	8.3	0.36	pg/g	1	☼	1613B	Total/NA
Total HxCDF	1.1	J B	8.3	0.055	pg/g	1	☼	1613B	Total/NA
Total HpCDD	170	B	8.3	1.3	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.28	J B q	8.3	0.064	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	16	B	1.7	0.30	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072321-BN-SJSB105 (16-18) — Lab Sample ID: 320-76788-21

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	4.3	B	1.4	0.10	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.32	J	7.0	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.39	J	7.0	0.049	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.18	J q	7.0	0.050	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.76	J B	7.0	0.25	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.3	J	7.0	0.26	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.6	J	7.0	0.23	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.38	J B	7.0	0.035	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.14	J B q	7.0	0.035	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.11	J B	7.0	0.030	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	57	B	7.0	1.3	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.20	J B	7.0	0.037	pg/g	1	☼	1613B	Total/NA
OCDD	1400	B	14	1.6	pg/g	1	☼	1613B	Total/NA
OCDF	0.32	J B q	14	0.037	pg/g	1	☼	1613B	Total/NA
Total TCDD	11	B q	1.4	0.10	pg/g	1	☼	1613B	Total/NA
Total TCDF	27	B q	1.4	0.092	pg/g	1	☼	1613B	Total/NA
Total PeCDD	11		7.0	0.15	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.72	J q	7.0	0.049	pg/g	1	☼	1613B	Total/NA
Total HxCDD	51	B q	7.0	0.25	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.62	J B q	7.0	0.032	pg/g	1	☼	1613B	Total/NA
Total HpCDD	200	B	7.0	1.3	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.20	J B	7.0	0.043	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	14	B	1.4	0.46	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-2

Client Sample ID: 11215702-072321-BN-SJSB085 (16-18)

Lab Sample ID: 320-76788-9

Date Collected: 07/23/21 11:40
Matrix: Solid
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	38.8		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	61.2		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB085 (16-18)

Lab Sample ID: 320-76788-9

Date Collected: 07/23/21 11:40
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 61.2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	5.2	B	1.7	0.21	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
1,2,3,7,8-PeCDD	0.39	J	8.3	0.20	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
1,2,3,7,8-PeCDF	0.58	J	8.3	0.084	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
2,3,4,7,8-PeCDF	0.31	J	8.3	0.088	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
1,2,3,4,7,8-HxCDD	0.82	J B	8.3	0.36	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
1,2,3,6,7,8-HxCDD	1.2	J	8.3	0.37	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
1,2,3,7,8,9-HxCDD	2.8	J	8.3	0.33	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
1,2,3,4,7,8-HxCDF	0.67	J B	8.3	0.059	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
1,2,3,6,7,8-HxCDF	0.27	J B	8.3	0.060	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
1,2,3,7,8,9-HxCDF	0.13	J B	8.3	0.051	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
2,3,4,6,7,8-HxCDF	ND		8.3	0.048	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
1,2,3,4,6,7,8-HpCDD	51	B	8.3	1.3	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
1,2,3,4,6,7,8-HpCDF	0.28	J B q	8.3	0.057	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
1,2,3,4,7,8,9-HpCDF	ND		8.3	0.071	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
OCDD	1300	B	17	1.6	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
OCDF	0.52	J B q	17	0.088	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
Total TCDD	12	B q	1.7	0.21	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
Total TCDF	29	B q	1.7	0.12	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
Total PeCDD	10	q	8.3	0.20	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
Total PeCDF	1.4	J q	8.3	0.086	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
Total HxCDD	43	B	8.3	0.36	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
Total HxCDF	1.1	J B	8.3	0.055	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
Total HpCDD	170	B	8.3	1.3	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1
Total HpCDF	0.28	J B q	8.3	0.064	pg/g	☼	08/04/21 07:15	08/14/21 15:16	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*55*		*25 - 164*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-2,3,7,8-TCDF	*52*		*24 - 169*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-1,2,3,7,8-PeCDD	*55*		*25 - 181*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-1,2,3,7,8-PeCDF	*51*		*24 - 185*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-2,3,4,7,8-PeCDF	*55*		*21 - 178*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-1,2,3,4,7,8-HxCDD	*56*		*32 - 141*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-1,2,3,6,7,8-HxCDD	*54*		*28 - 130*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-1,2,3,4,7,8-HxCDF	*54*		*26 - 152*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-1,2,3,6,7,8-HxCDF	*50*		*26 - 123*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-1,2,3,7,8,9-HxCDF	*50*		*29 - 147*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-2,3,4,6,7,8-HxCDF	*49*		*28 - 136*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*58*		*23 - 140*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*57*		*28 - 143*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*63*		*26 - 138*	*08/04/21 07:15*	*08/14/21 15:16*	*1*
13C-OCDD	*64*		*17 - 157*	*08/04/21 07:15*	*08/14/21 15:16*	*1*

Client Sample ID: 11215702-072321-BN-SJSB085 (16-18) Lab Sample ID: 320-76788-9

Date Collected: 07/23/21 11:40 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 61.2**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	72		35 - 197	08/04/21 07:15	08/14/21 15:16	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	16	B	1.7	0.30	pg/g	☼	08/04/21 07:15	08/23/21 17:29	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	59		24 - 169	08/04/21 07:15	08/23/21 17:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	71		35 - 197	08/04/21 07:15	08/23/21 17:29	1

Client Sample ID: 11215702-072321-BN-SJSB105 (16-18) Lab Sample ID: 320-76788-21

Date Collected: 07/23/21 16:10 **Matrix: Solid**
Date Received: 07/27/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	32.7		0.1	0.1	%			07/29/21 12:04	1
Percent Solids	67.3		0.1	0.1	%			07/29/21 12:04	1

Client Sample ID: 11215702-072321-BN-SJSB105 (16-18) Lab Sample ID: 320-76788-21

Date Collected: 07/23/21 16:10 **Matrix: Solid**
Date Received: 07/27/21 09:45 **Percent Solids: 67.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	4.3	B	1.4	0.10	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
1,2,3,7,8-PeCDD	0.32	J	7.0	0.15	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
1,2,3,7,8-PeCDF	0.39	J	7.0	0.049	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
2,3,4,7,8-PeCDF	0.18	J q	7.0	0.050	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
1,2,3,4,7,8-HxCDD	0.76	J B	7.0	0.25	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
1,2,3,6,7,8-HxCDD	1.3	J	7.0	0.26	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
1,2,3,7,8,9-HxCDD	3.6	J	7.0	0.23	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
1,2,3,4,7,8-HxCDF	0.38	J B	7.0	0.035	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
1,2,3,6,7,8-HxCDF	0.14	J B q	7.0	0.035	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
1,2,3,7,8,9-HxCDF	0.11	J B	7.0	0.030	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
2,3,4,6,7,8-HxCDF	ND		7.0	0.029	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
1,2,3,4,6,7,8-HpCDD	57	B	7.0	1.3	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
1,2,3,4,6,7,8-HpCDF	0.20	J B	7.0	0.037	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
1,2,3,4,7,8,9-HpCDF	ND		7.0	0.049	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
OCDD	1400	B	14	1.6	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
OCDF	0.32	J B q	14	0.037	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
Total TCDD	11	B q	1.4	0.10	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
Total TCDF	27	B q	1.4	0.092	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
Total PeCDD	11		7.0	0.15	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
Total PeCDF	0.72	J q	7.0	0.049	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
Total HxCDD	51	B q	7.0	0.25	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
Total HxCDF	0.62	J B q	7.0	0.032	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
Total HpCDD	200	B	7.0	1.3	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1
Total HpCDF	0.20	J B	7.0	0.043	pg/g	☼	08/04/21 07:15	08/14/21 21:16	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-2

Client Sample ID: 11215702-072321-BN-SJSB105 (16-18)

Lab Sample ID: 320-76788-21

Date Collected: 07/23/21 16:10
Date Received: 07/27/21 09:45

Matrix: Solid
Percent Solids: 67.3

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*63*		*25 - 164*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-2,3,7,8-TCDF	*58*		*24 - 169*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-1,2,3,7,8-PeCDD	*63*		*25 - 181*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-1,2,3,7,8-PeCDF	*58*		*24 - 185*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-2,3,4,7,8-PeCDF	*63*		*21 - 178*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-1,2,3,4,7,8-HxCDD	*67*		*32 - 141*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-1,2,3,6,7,8-HxCDD	*61*		*28 - 130*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-1,2,3,4,7,8-HxCDF	*65*		*26 - 152*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-1,2,3,6,7,8-HxCDF	*59*		*26 - 123*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-1,2,3,7,8,9-HxCDF	*57*		*29 - 147*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-2,3,4,6,7,8-HxCDF	*59*		*28 - 136*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*65*		*23 - 140*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*64*		*28 - 143*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*72*		*26 - 138*	*08/04/21 07:15*	*08/14/21 21:16*	*1*
13C-OCDD	*74*		*17 - 157*	*08/04/21 07:15*	*08/14/21 21:16*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*79*		*35 - 197*	*08/04/21 07:15*	*08/14/21 21:16*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**14**	**B**	1.4	0.46	pg/g	☼	08/04/21 07:15	08/23/21 12:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*57*		*24 - 169*	*08/04/21 07:15*	*08/23/21 12:05*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*79*		*35 - 197*	*08/04/21 07:15*	*08/23/21 12:05*	*1*

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-2

Client Sample ID: 11215702-072321-BN-SJSB085 (16-18) — Lab Sample ID: 320-76788-9

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	5.2	B	1.7	0.21	pg/g	1	5.2	1613B
1,2,3,7,8-PeCDD	0.39	J	8.3	0.20	pg/g	1	0.39	1613B
1,2,3,7,8-PeCDF	0.58	J	8.3	0.084	pg/g	0.03	0.017	1613B
2,3,4,7,8-PeCDF	0.31	J	8.3	0.088	pg/g	0.3	0.093	1613B
1,2,3,4,7,8-HxCDD	0.82	J B	8.3	0.36	pg/g	0.1	0.082	1613B
1,2,3,6,7,8-HxCDD	1.2	J	8.3	0.37	pg/g	0.1	0.12	1613B
1,2,3,7,8,9-HxCDD	2.8	J	8.3	0.33	pg/g	0.1	0.28	1613B
1,2,3,4,7,8-HxCDF	0.67	J B	8.3	0.059	pg/g	0.1	0.067	1613B
1,2,3,6,7,8-HxCDF	0.27	J B	8.3	0.060	pg/g	0.1	0.027	1613B
1,2,3,7,8,9-HxCDF	0.13	J B	8.3	0.051	pg/g	0.1	0.013	1613B
2,3,4,6,7,8-HxCDF	ND		8.3	0.048	pg/g	0.1	0.0024	1613B
1,2,3,4,6,7,8-HpCDD	51	B	8.3	1.3	pg/g	0.01	0.51	1613B
1,2,3,4,6,7,8-HpCDF	0.28	J B q	8.3	0.057	pg/g	0.01	0.0028	1613B
1,2,3,4,7,8,9-HpCDF	ND		8.3	0.071	pg/g	0.01	0.00036	1613B
OCDD	1300	B	17	1.6	pg/g	0.0003	0.39	1613B
OCDF	0.52	J B q	17	0.088	pg/g	0.0003	0.00016	1613B
2,3,7,8-TCDF - RA	16	B	1.7	0.30	pg/g	0.1	1.6	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		8.8	TEQ

Client Sample ID: 11215702-072321-BN-SJSB105 (16-18) — Lab Sample ID: 320-76788-21

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	4.3	B	1.4	0.10	pg/g	1	4.3	1613B
1,2,3,7,8-PeCDD	0.32	J	7.0	0.15	pg/g	1	0.32	1613B
1,2,3,7,8-PeCDF	0.39	J	7.0	0.049	pg/g	0.03	0.012	1613B
2,3,4,7,8-PeCDF	0.18	J q	7.0	0.050	pg/g	0.3	0.054	1613B
1,2,3,4,7,8-HxCDD	0.76	J B	7.0	0.25	pg/g	0.1	0.076	1613B
1,2,3,6,7,8-HxCDD	1.3	J	7.0	0.26	pg/g	0.1	0.13	1613B
1,2,3,7,8,9-HxCDD	3.6	J	7.0	0.23	pg/g	0.1	0.36	1613B
1,2,3,4,7,8-HxCDF	0.38	J B	7.0	0.035	pg/g	0.1	0.038	1613B
1,2,3,6,7,8-HxCDF	0.14	J B q	7.0	0.035	pg/g	0.1	0.014	1613B
1,2,3,7,8,9-HxCDF	0.11	J B	7.0	0.030	pg/g	0.1	0.011	1613B
2,3,4,6,7,8-HxCDF	ND		7.0	0.029	pg/g	0.1	0.0015	1613B
1,2,3,4,6,7,8-HpCDD	57	B	7.0	1.3	pg/g	0.01	0.57	1613B
1,2,3,4,6,7,8-HpCDF	0.20	J B	7.0	0.037	pg/g	0.01	0.0020	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.0	0.049	pg/g	0.01	0.00025	1613B
OCDD	1400	B	14	1.6	pg/g	0.0003	0.42	1613B
OCDF	0.32	J B q	14	0.037	pg/g	0.0003	0.000096	1613B
2,3,7,8-TCDF - RA	14	B	1.4	0.46	pg/g	0.1	1.4	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Job ID: 320-76788-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072321-BN-SJSB105 (16-18) (Continued)

Lab Sample ID: 320-76788-21

						WHO 2005 ND = ½ EDL		
Analyte	**Result**	**Qualifier**	**NONE**	**NONE**	**Unit**	**TEF**	**TEQ**	**Method**
Total Dioxin/Furan TEQ					pg/g		7.7	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-76788-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-76788-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**37TCDD (35-197)**							
320-76788-9	11215702-072321-BN-SJSB085	72							
320-76788-9 - RA	11215702-072321-BN-SJSB085 (16-18)	71							
320-76788-21	11215702-072321-BN-SJSB105 (16-18)	79							
320-76788-21 - RA	11215702-072321-BN-SJSB105 (16-18)	79							
MB 320-512871/1-A	Method Blank	81							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**37TCDD (31-191)**							
LCS 320-512871/2-A	Lab Control Sample	81							
LCSD 320-512871/3-A	Lab Control Sample Dup	78							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76788-9	11215702-072321-BN-SJSB085	55	52	55	51	55	56	54	54
320-76788-9 - RA	11215702-072321-BN-SJSB085 (16-18)		59						
320-76788-21	11215702-072321-BN-SJSB105 (16-18)	63	58	63	58	63	67	61	65
320-76788-21 - RA	11215702-072321-BN-SJSB105 (16-18)		57						
MB 320-512871/1-A	Method Blank	57	55	56	54	59	58	52	58

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76788-9	11215702-072321-BN-SJSB085	50	50	49	58	57	63	64
320-76788-9 - RA	11215702-072321-BN-SJSB085 (16-18)							
320-76788-21	11215702-072321-BN-SJSB105 (16-18)	59	57	59	65	64	72	74
320-76788-21 - RA	11215702-072321-BN-SJSB105 (16-18)							
MB 320-512871/1-A	Method Blank	52	51	52	58	57	62	60

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-512871/2-A	Lab Control Sample	59	56	57	56	59	58	53	59
LCSD 320-512871/3-A	Lab Control Sample Dup	60	57	58	56	62	61	56	60

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-512871/2-A	Lab Control Sample	53	53	53	60	58	66	64
LCSD 320-512871/3-A	Lab Control Sample Dup	55	54	55	60	59	65	63

Surrogate Legend

Isotope Dilution Summary

Client: GHD Services Inc.
Job ID: 320-76788-2
Project/Site: SJRWP Supplemental Design Investigation

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-512871/1-A
Matrix: Solid
Analysis Batch: 516836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 512871

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.0906	J q	1.0	0.028	pg/g		08/04/21 07:15	08/14/21 02:56	1
2,3,7,8-TCDF	0.0905	J q	1.0	0.017	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,7,8-PeCDD	ND		5.0	0.035	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,7,8-PeCDF	ND		5.0	0.028	pg/g		08/04/21 07:15	08/14/21 02:56	1
2,3,4,7,8-PeCDF	ND		5.0	0.029	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,4,7,8-HxCDD	0.161	J	5.0	0.030	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.031	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.028	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,4,7,8-HxCDF	0.0330	J	5.0	0.019	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,6,7,8-HxCDF	0.0264	J q	5.0	0.019	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,7,8,9-HxCDF	0.0556	J	5.0	0.016	pg/g		08/04/21 07:15	08/14/21 02:56	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.016	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,4,6,7,8-HpCDD	0.181	J	5.0	0.020	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,4,6,7,8-HpCDF	0.126	J q	5.0	0.026	pg/g		08/04/21 07:15	08/14/21 02:56	1
1,2,3,4,7,8,9-HpCDF	0.102	J	5.0	0.036	pg/g		08/04/21 07:15	08/14/21 02:56	1
OCDD	0.467	J	10	0.032	pg/g		08/04/21 07:15	08/14/21 02:56	1
OCDF	0.112	J	10	0.021	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total TCDD	0.0906	J q	1.0	0.028	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total TCDF	0.183	J q	1.0	0.017	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total PeCDD	ND		5.0	0.039	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total PeCDF	ND		5.0	0.029	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total HxCDD	0.161	J	5.0	0.029	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total HxCDF	0.115	J q	5.0	0.017	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total HpCDD	0.386	J	5.0	0.020	pg/g		08/04/21 07:15	08/14/21 02:56	1
Total HpCDF	0.228	J q	5.0	0.031	pg/g		08/04/21 07:15	08/14/21 02:56	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*57*		*25 - 164*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-2,3,7,8-TCDF	*55*		*24 - 169*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,7,8-PeCDD	*56*		*25 - 181*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,7,8-PeCDF	*54*		*24 - 185*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-2,3,4,7,8-PeCDF	*59*		*21 - 178*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,4,7,8-HxCDD	*58*		*32 - 141*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*52*		*28 - 130*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*58*		*26 - 152*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,6,7,8-HxCDF	*52*		*26 - 123*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,7,8,9-HxCDF	*51*		*29 - 147*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-2,3,4,6,7,8-HxCDF	*52*		*28 - 136*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*58*		*23 - 140*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*57*		*28 - 143*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*62*		*26 - 138*	*08/04/21 07:15*	*08/14/21 02:56*	*1*
13C-OCDD	*60*		*17 - 157*	*08/04/21 07:15*	*08/14/21 02:56*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*81*		*35 - 197*	*08/04/21 07:15*	*08/14/21 02:56*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-512871/2-A
Client Sample ID: Lab Control Sample
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 516836
Prep Batch: 512871

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	19.5		pg/g		97	67 - 158
2,3,7,8-TCDF	20.0	20.7		pg/g		104	75 - 158
1,2,3,7,8-PeCDD	100	105		pg/g		105	70 - 142
1,2,3,7,8-PeCDF	100	105		pg/g		105	80 - 134
2,3,4,7,8-PeCDF	100	96.3		pg/g		96	68 - 160
1,2,3,4,7,8-HxCDD	100	95.0		pg/g		95	70 - 164
1,2,3,6,7,8-HxCDD	100	106		pg/g		106	76 - 134
1,2,3,7,8,9-HxCDD	100	107		pg/g		107	64 - 162
1,2,3,4,7,8-HxCDF	100	93.4		pg/g		93	72 - 134
1,2,3,6,7,8-HxCDF	100	105		pg/g		105	84 - 130
1,2,3,7,8,9-HxCDF	100	103		pg/g		103	78 - 130
2,3,4,6,7,8-HxCDF	100	104		pg/g		104	70 - 156
1,2,3,4,6,7,8-HpCDD	100	104		pg/g		104	70 - 140
1,2,3,4,6,7,8-HpCDF	100	106		pg/g		106	82 - 122
1,2,3,4,7,8,9-HpCDF	100	96.5		pg/g		97	78 - 138
OCDD	200	206		pg/g		103	78 - 144
OCDF	200	202		pg/g		101	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*59*		*20 - 175*
13C-2,3,7,8-TCDF	*56*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*57*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*56*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*59*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*58*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*53*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*59*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*53*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*53*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*53*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*60*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*58*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*66*		*20 - 186*
13C-OCDD	*64*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*81*		*31 - 191*

Lab Sample ID: LCSD 320-512871/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 516836
Prep Batch: 512871

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	20.0	19.8		pg/g		99	67 - 158	2	50
2,3,7,8-TCDF	20.0	20.7		pg/g		104	75 - 158	0	50
1,2,3,7,8-PeCDD	100	105		pg/g		105	70 - 142	1	50
1,2,3,7,8-PeCDF	100	106		pg/g		106	80 - 134	1	50
2,3,4,7,8-PeCDF	100	97.0		pg/g		97	68 - 160	1	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-512871/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 516836 **Prep Batch: 512871**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,7,8-HxCDD			100	94.9		pg/g		95	70 - 164	0	50
1,2,3,6,7,8-HxCDD			100	105		pg/g		105	76 - 134	1	50
1,2,3,7,8,9-HxCDD			100	105		pg/g		105	64 - 162	2	50
1,2,3,4,7,8-HxCDF			100	95.3		pg/g		95	72 - 134	2	50
1,2,3,6,7,8-HxCDF			100	104		pg/g		104	84 - 130	1	50
1,2,3,7,8,9-HxCDF			100	103		pg/g		103	78 - 130	0	50
2,3,4,6,7,8-HxCDF			100	104		pg/g		104	70 - 156	0	50
1,2,3,4,6,7,8-HpCDD			100	106		pg/g		106	70 - 140	2	50
1,2,3,4,6,7,8-HpCDF			100	106		pg/g		106	82 - 122	0	50
1,2,3,4,7,8,9-HpCDF			100	97.7		pg/g		98	78 - 138	1	50
OCDD			200	207		pg/g		104	78 - 144	1	50
OCDF			200	205		pg/g		102	63 - 170	1	50

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*60*		*20 - 175*
13C-2,3,7,8-TCDF	*57*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*58*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*56*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*62*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*61*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*56*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*60*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*55*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*54*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*55*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*60*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*59*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*65*		*20 - 186*
13C-OCDD	*63*		*13 - 199*

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*78*		*31 - 191*

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-76788-A-1 DU **Client Sample ID: Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 511309

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	59.1			57.1		%				3	20
Percent Solids	40.9			42.9		%				5	20

QC Association Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-2

Specialty Organics

Prep Batch: 512871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-9	11215702-072321-BN-SJSB085 (16-18)	Total/NA	Solid	HRMS-Sox	
320-76788-9 - RA	11215702-072321-BN-SJSB085 (16-18)	Total/NA	Solid	HRMS-Sox	
320-76788-21	11215702-072321-BN-SJSB105 (16-18)	Total/NA	Solid	HRMS-Sox	
320-76788-21 - RA	11215702-072321-BN-SJSB105 (16-18)	Total/NA	Solid	HRMS-Sox	
MB 320-512871/1-A	Method Blank	Total/NA	Solid	HRMS-Sox	
LCS 320-512871/2-A	Lab Control Sample	Total/NA	Solid	HRMS-Sox	
LCSD 320-512871/3-A	Lab Control Sample Dup	Total/NA	Solid	HRMS-Sox	

Analysis Batch: 516836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-512871/1-A	Method Blank	Total/NA	Solid	1613B	512871
LCS 320-512871/2-A	Lab Control Sample	Total/NA	Solid	1613B	512871
LCSD 320-512871/3-A	Lab Control Sample Dup	Total/NA	Solid	1613B	512871

Analysis Batch: 516846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-9	11215702-072321-BN-SJSB085 (16-18)	Total/NA	Solid	1613B	512871
320-76788-21	11215702-072321-BN-SJSB105 (16-18)	Total/NA	Solid	1613B	512871

Analysis Batch: 518958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-21 - RA	11215702-072321-BN-SJSB105 (16-18)	Total/NA	Solid	1613B	512871

Analysis Batch: 518979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-9 - RA	11215702-072321-BN-SJSB085 (16-18)	Total/NA	Solid	1613B	512871

General Chemistry

Analysis Batch: 511309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76788-9	11215702-072321-BN-SJSB085 (16-18)	Total/NA	Solid	D 2216	
320-76788-21	11215702-072321-BN-SJSB105 (16-18)	Total/NA	Solid	D 2216	
320-76788-A-1 DU	Duplicate	Total/NA	Solid	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Job ID: 320-76788-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072321-BN-SJSB085 (16-18)
Lab Sample ID: 320-76788-9

Date Collected: 07/23/21 11:40
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB085 (16-18)
Lab Sample ID: 320-76788-9

Date Collected: 07/23/21 11:40
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 61.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516846	08/14/21 15:16	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/23/21 17:29	DB	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (16-18)
Lab Sample ID: 320-76788-21

Date Collected: 07/23/21 16:10
Matrix: Solid
Date Received: 07/27/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511309	07/29/21 12:04	TCS	TAL SAC

Client Sample ID: 11215702-072321-BN-SJSB105 (16-18)
Lab Sample ID: 320-76788-21

Date Collected: 07/23/21 16:10
Matrix: Solid
Date Received: 07/27/21 09:45
Percent Solids: 67.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B		1	516846	08/14/21 21:16	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		512871	08/04/21 07:15	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518958	08/23/21 12:05	DB	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-76788-2
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Solid	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Solid	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Solid	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Solid	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Solid	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Solid	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Solid	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Solid	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Solid	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Solid	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Solid	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Solid	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Solid	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Solid	2,3,7,8-TCDD
1613B	HRMS-Sox	Solid	2,3,7,8-TCDF
1613B	HRMS-Sox	Solid	OCDD
1613B	HRMS-Sox	Solid	OCDF
1613B	HRMS-Sox	Solid	Total HpCDD
1613B	HRMS-Sox	Solid	Total HpCDF
1613B	HRMS-Sox	Solid	Total HxCDD
1613B	HRMS-Sox	Solid	Total HxCDF
1613B	HRMS-Sox	Solid	Total PeCDD
1613B	HRMS-Sox	Solid	Total PeCDF
1613B	HRMS-Sox	Solid	Total TCDD
1613B	HRMS-Sox	Solid	Total TCDF
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids
TEQ		Solid	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-2

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76788-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76788-9	11215702-072321-BN-SJSB085 (16-18)	Solid	07/23/21 11:40	07/27/21 09:45
320-76788-21	11215702-072321-BN-SJSB105 (16-18)	Solid	07/23/21 16:10	07/27/21 09:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: WDM 320-510264/1 Client Sample ID:

Date Analyzed: 07/26/21 09:21 Lab File ID: 26JL2110D5_1.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,6,8-TCDF	15.13	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,6,8-TCDD	16.07	Peak assignment corrected	arghestanis	07/26/21 12:21
2,3,4,7-TCDF	17.63	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,7-TCDD	18.22	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDD	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDF	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,8,9-TCDD	19.47	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,8,9-TCDF	19.49	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,4,6,8-PeCDF	19.76	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,4,7,9-PeCDD	21.58	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDD	25.91	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDF	26.14	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,8-HxCDF	28.48	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,4,6,7,9-HxCDD	30.02	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,7-HxCDD	32.30	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,3,4,8,9-HxCDF	32.61	Peak assignment corrected	arghestanis	07/26/21 12:23

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: IC 320-510264/3 Client Sample ID:

Date Analyzed: 07/26/21 10:51 Lab File ID: 26JL2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.35	Invalid Compound ID	stephensk	07/27/21 08:15

Lab Sample ID: IC 320-510264/4 Client Sample ID:

Date Analyzed: 07/26/21 11:36 Lab File ID: 26JL2110D5_4.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,4,7,8-PeCDF	24.13	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDF	30.84	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDD	31.93	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8,9-HpCDF	35.01	Peak assignment corrected	arghestanis	07/26/21 12:31

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516836

Lab Sample ID: MB 320-512871/1-A Client Sample ID:

Date Analyzed: 08/14/21 02:56 Lab File ID: 13AU2110D5_14.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/18/21 08:50
2,3,7,8-TCDD	18.07	Split Peak	dadunj	08/18/21 08:49
1,2,3,4,7,8-HxCDF	30.54	Baseline	dadunj	08/18/21 08:49
1,2,3,6,7,8-HxCDF	30.73	Baseline	dadunj	08/18/21 08:49
1,2,3,4,7,8-HxCDD	31.73	Split Peak	dadunj	08/18/21 08:50
1,2,3,7,8,9-HxCDF	32.35	Split Peak	dadunj	08/18/21 08:50
1,2,3,4,6,7,8-HpCDD	34.58	Split Peak	dadunj	08/18/21 08:50
1,2,3,4,7,8,9-HpCDF	34.87	Split Peak	dadunj	08/18/21 08:50
OCDD	36.94	Split Peak	dadunj	08/18/21 08:50
OCDF	37.02	Split Peak	dadunj	08/18/21 08:50

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 516846

Lab Sample ID: 320-76788-9 Client Sample ID: 11215702-072321-BN-SJSB085 (16-18)

Date Analyzed: 08/14/21 15:16 Lab File ID: 13AU2110D5_30.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.07	Split Peak	dadunj	08/18/21 09:37
1,2,3,7,8-PeCDF	22.39	Split Peak	dadunj	08/18/21 09:37
2,3,4,7,8-PeCDF	23.72	Split Peak	dadunj	08/18/21 09:37
1,2,3,7,8,9-HxCDF	32.34	Split Peak	dadunj	08/18/21 09:38
1,2,3,4,6,7,8-HpCDF	33.77	Split Peak	dadunj	08/18/21 09:38
OCDF	37.01	Split Peak	dadunj	08/18/21 09:39

Lab Sample ID: 320-76788-21 Client Sample ID: 11215702-072321-BN-SJSB105 (16-18)

Date Analyzed: 08/14/21 21:16 Lab File ID: 13AU2110D5_38.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.38	Split Peak	dadunj	08/18/21 10:06
2,3,4,7,8-PeCDF	23.72	Split Peak	dadunj	08/18/21 10:06
1,2,3,6,7,8-HxCDF	30.69	Split Peak	dadunj	08/18/21 10:06
1,2,3,7,8,9-HxCDF	32.33	Split Peak	dadunj	08/18/21 10:06
OCDF	37.01	Split Peak	dadunj	08/18/21 10:06

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 518958

Lab Sample ID: 320-76788-21 RA Client Sample ID: 11215702-072321-BN-SJSB105 (16-18) RA

Date Analyzed: 08/23/21 12:05 Lab File ID: 23AU2111D2_005.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.65	Incomplete Integration	bennettd	08/23/21 15:45

1613B

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76788-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 518979

Lab Sample ID: 320-76788-9 RA Client Sample ID: 11215702-072321-BN-SJSB085 (16-18) RA

Date Analyzed: 08/23/21 17:29 Lab File ID: 23AU21A11D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.66	Peak Tail	bennettd	08/24/21 09:13

1613B

780919

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
...HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL

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REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30	CIL, Lot ER09031903			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

780939

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

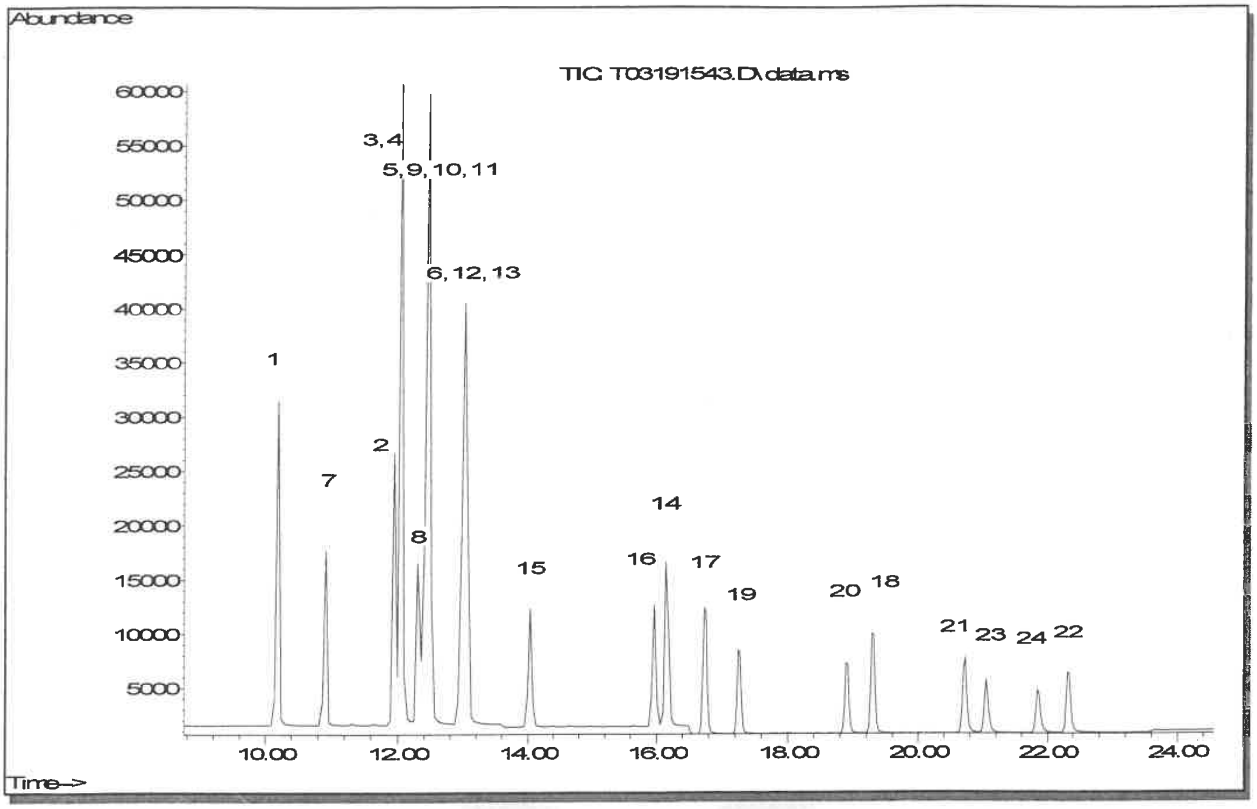

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

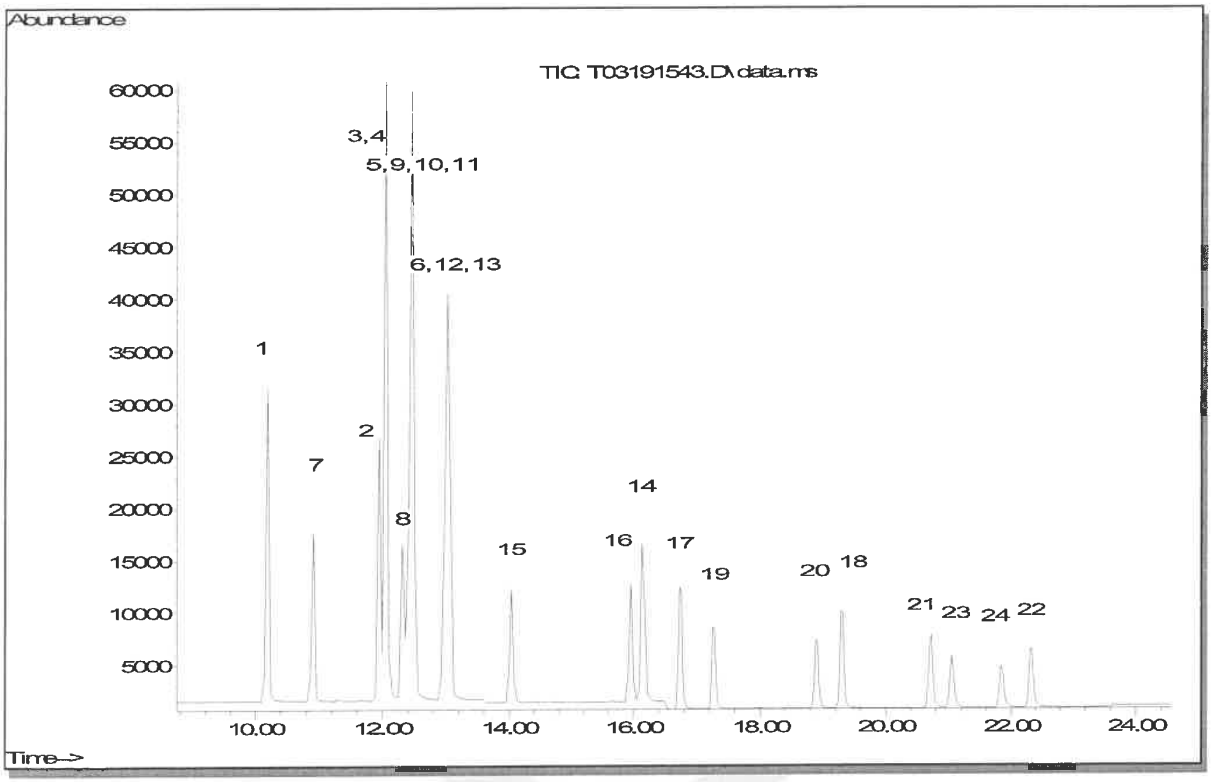

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r: 3/30/20

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

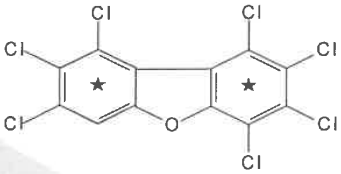

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

780953

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

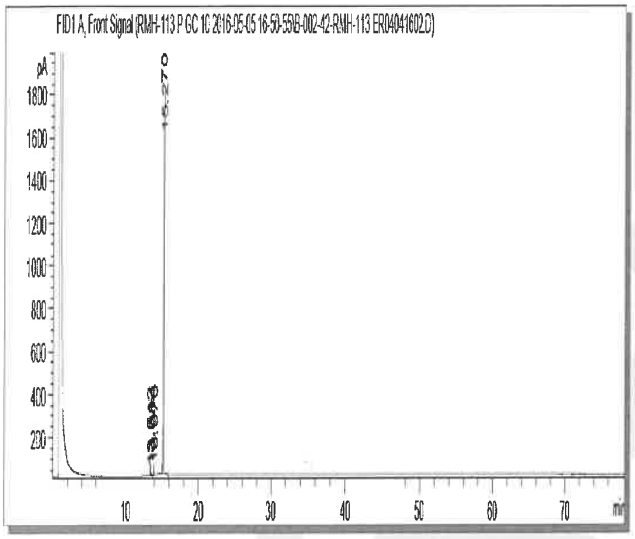

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

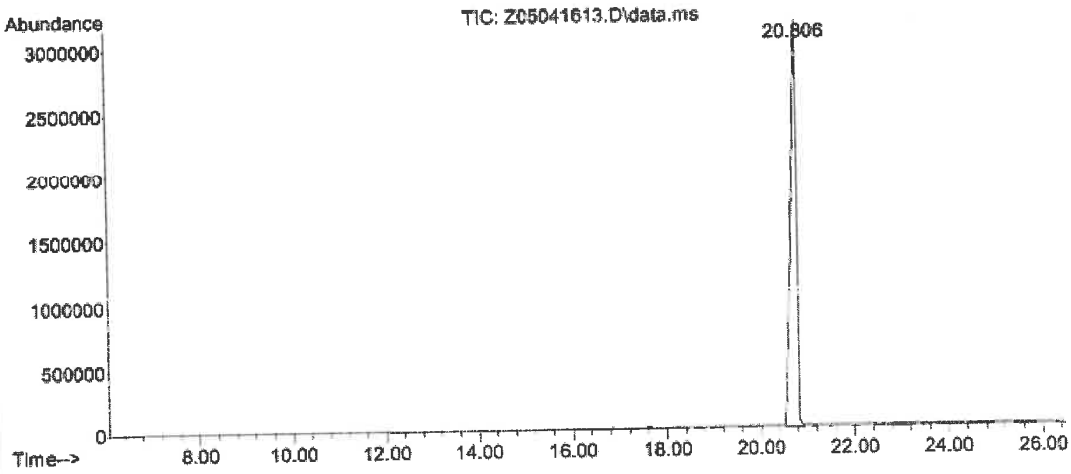

Mass Spectrum

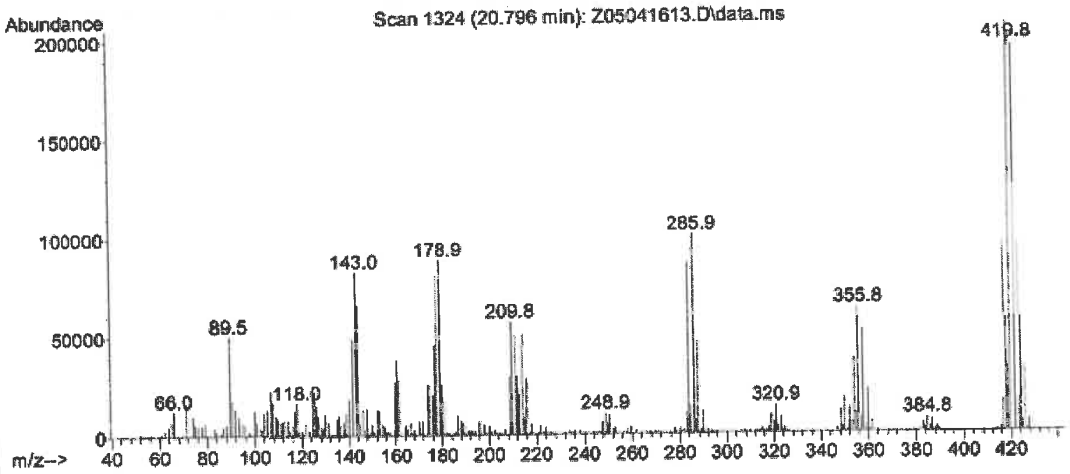

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 [illegible]

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

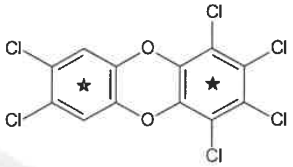

Catalog Number:	ED-946
Solution Lot:	ER04211601
Expiration Date:	June 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

780960

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

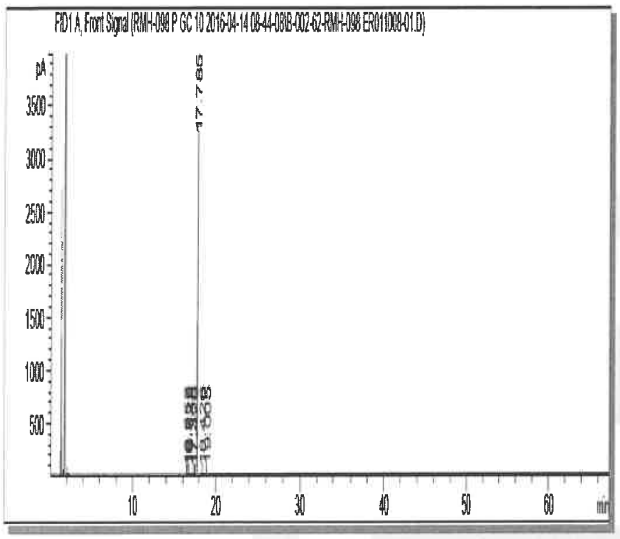

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument:	GC#10
Sample Name:	ER011008-01
Acquired:	April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

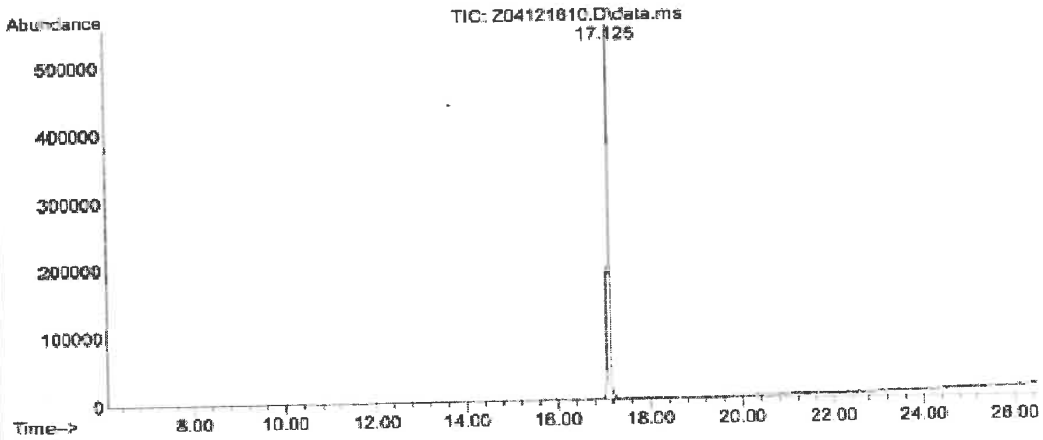

Mass Spectrum

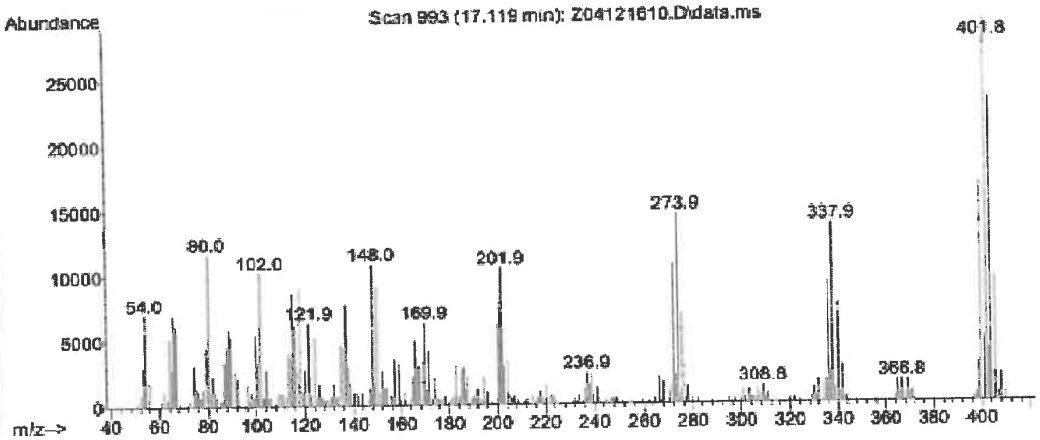

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

Cerilliant®
Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

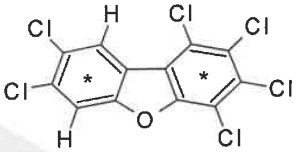

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

780965

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot:	ER11281601

Chemical Formula:	$^{13}C_{12}Cl_6H_2O$
CAS Number:	114423-98-2
Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

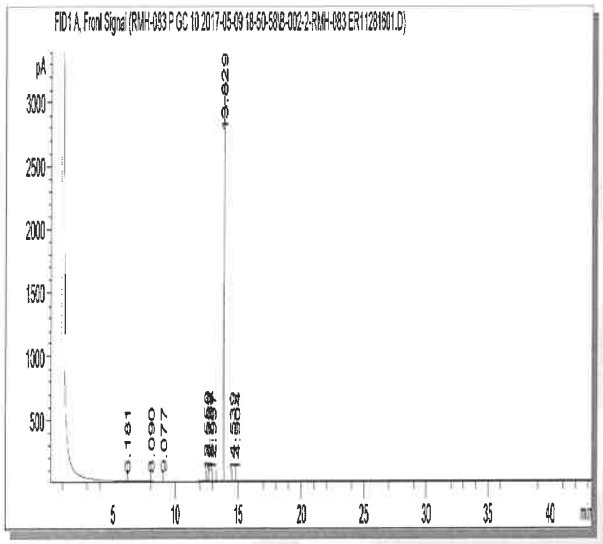

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

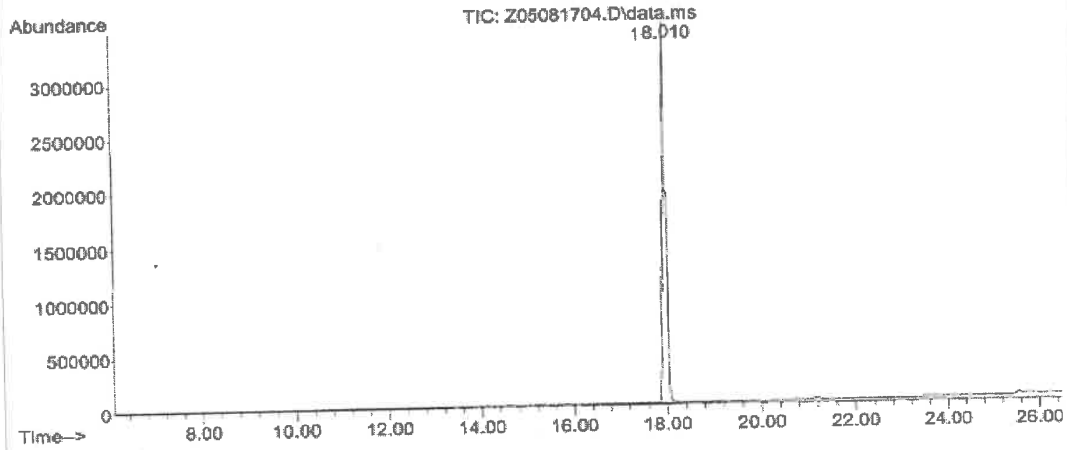

Mass Spectrum

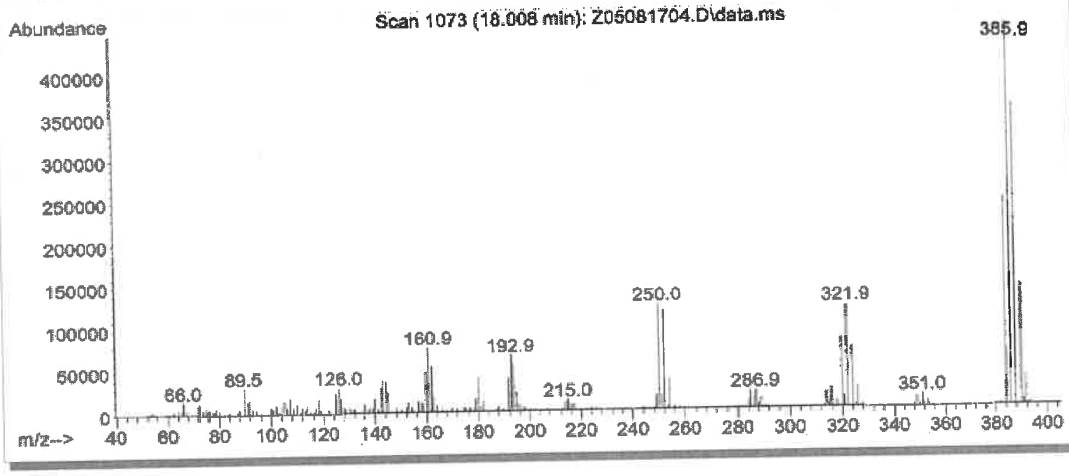

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

Cerilliant
Analytical Reference Standards
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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

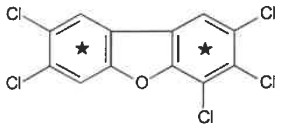

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

780970

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

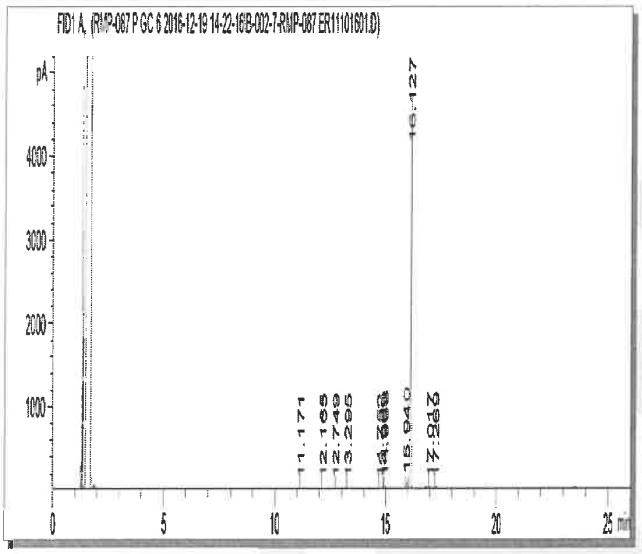

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

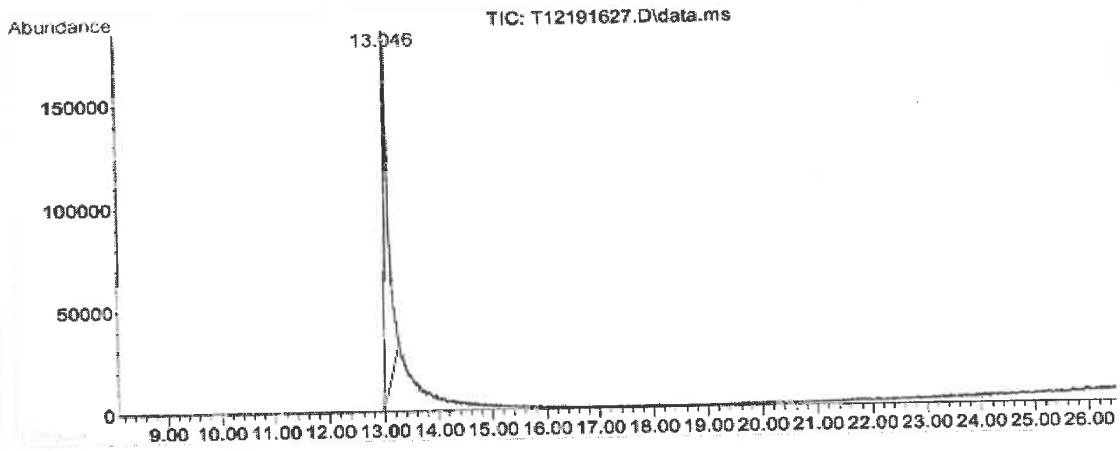

Mass Spectrum

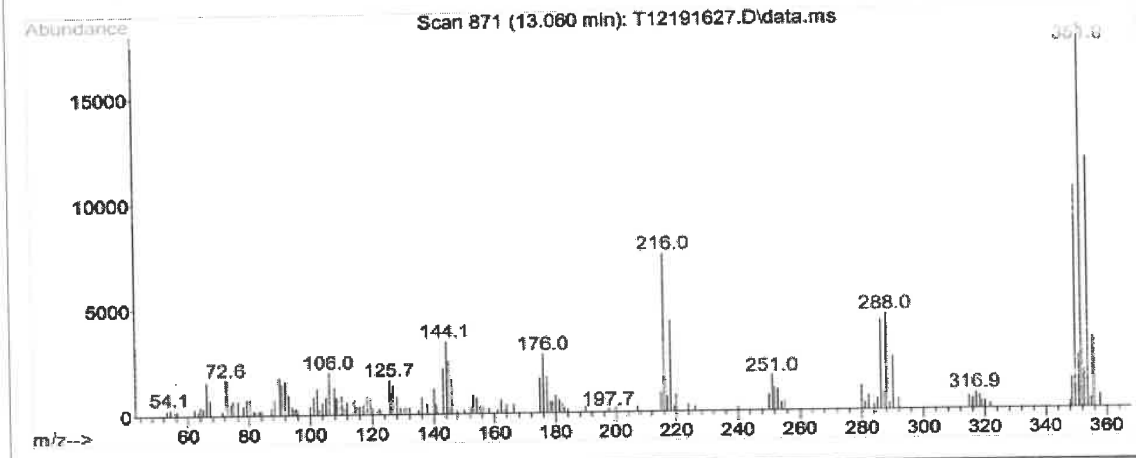

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

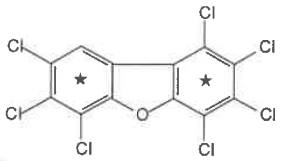

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

780975

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER020507-02

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-84-8
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

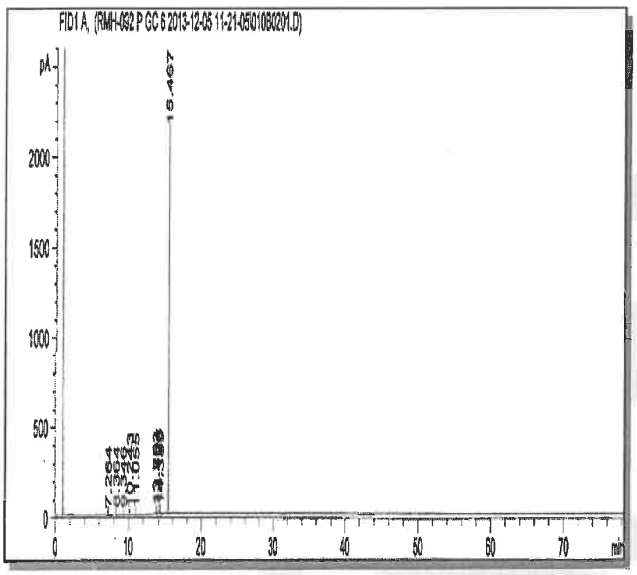

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Data File Name: RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument: GC#6
Sample Name: ER020507-02
Acquired: December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

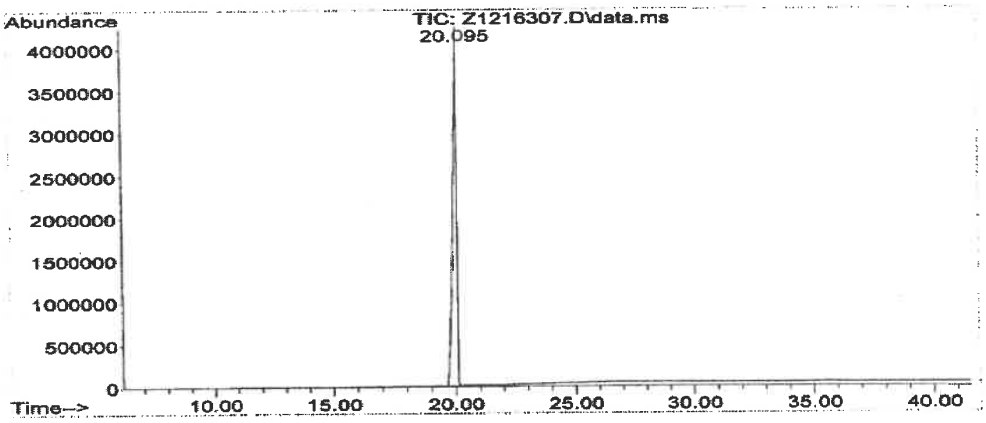

Mass Spectrum

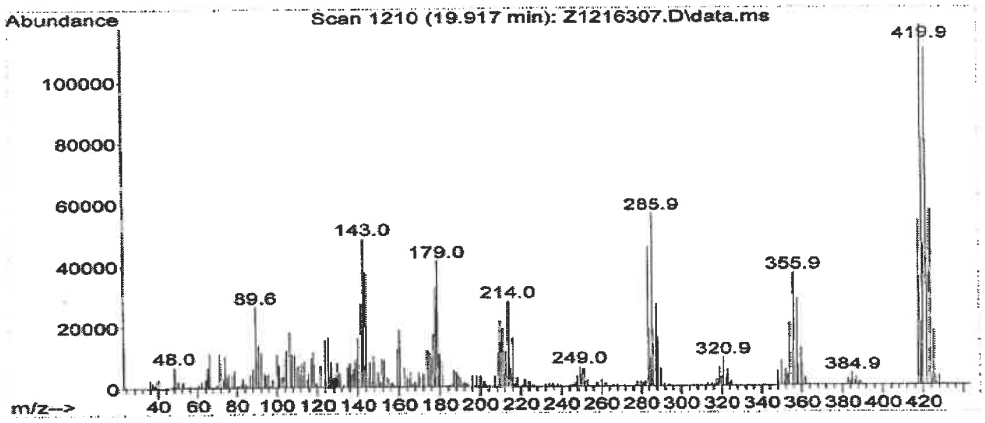

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

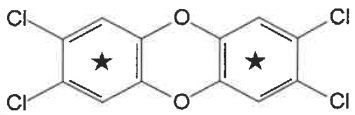

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

780982

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

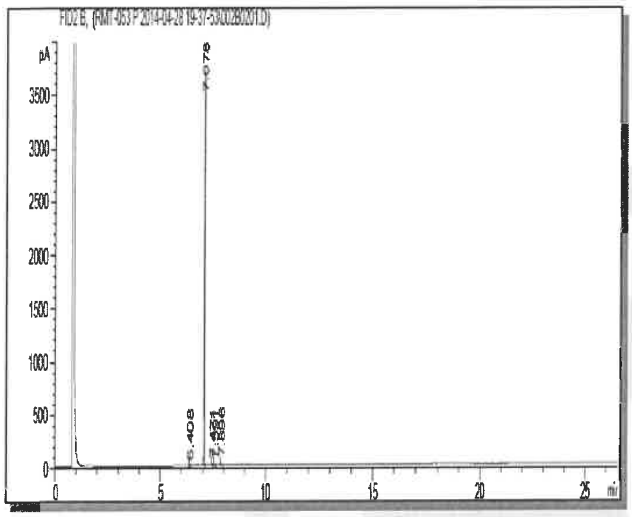

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

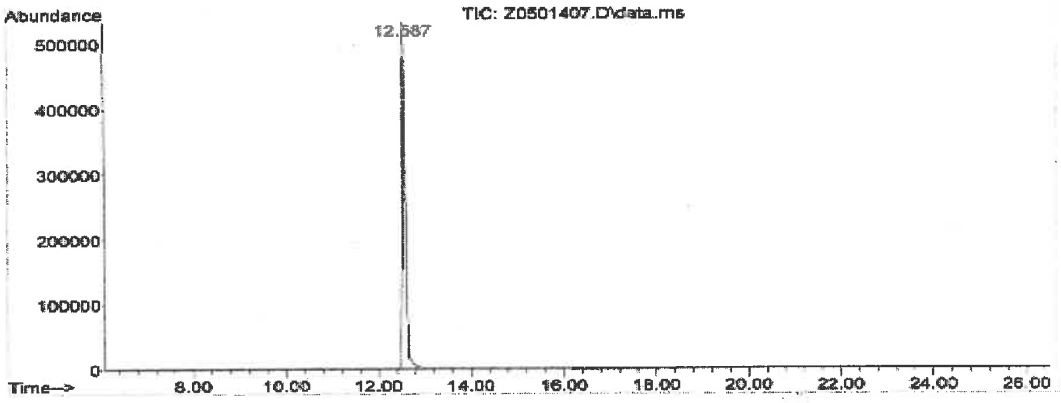

Mass Spectrum

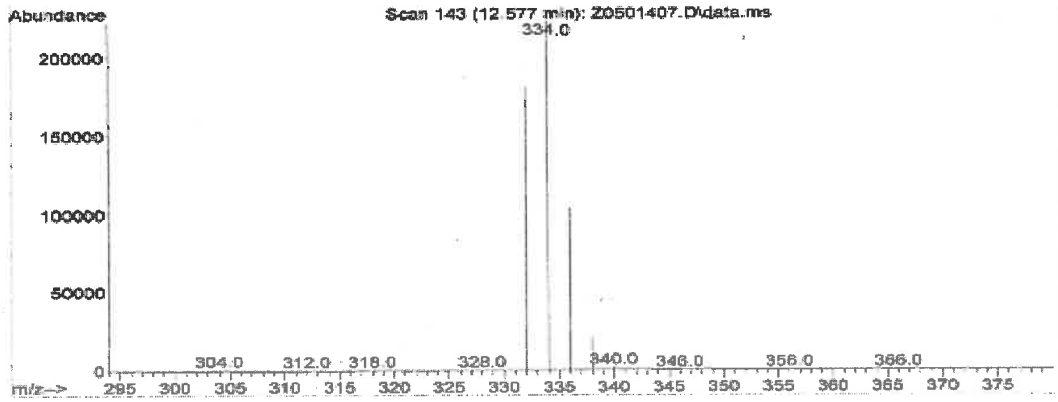

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

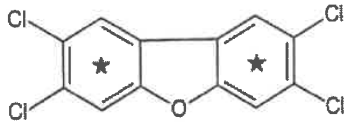

Catalog Number:	EF-904
Solution Lot:	ER09131601
Expiration Date:	September 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

780987

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/FID

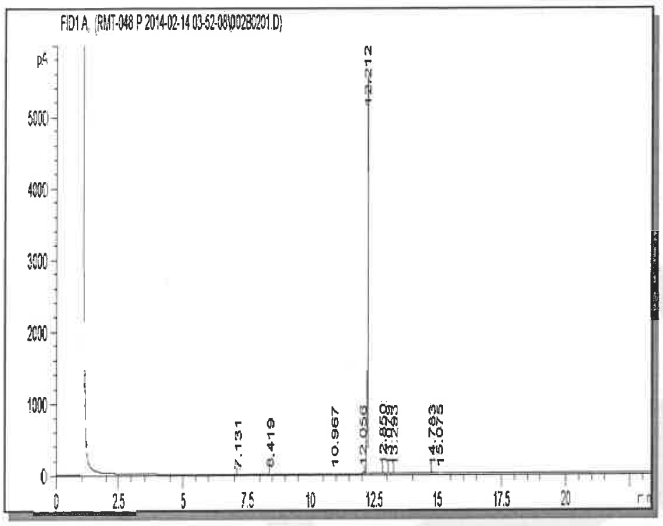

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

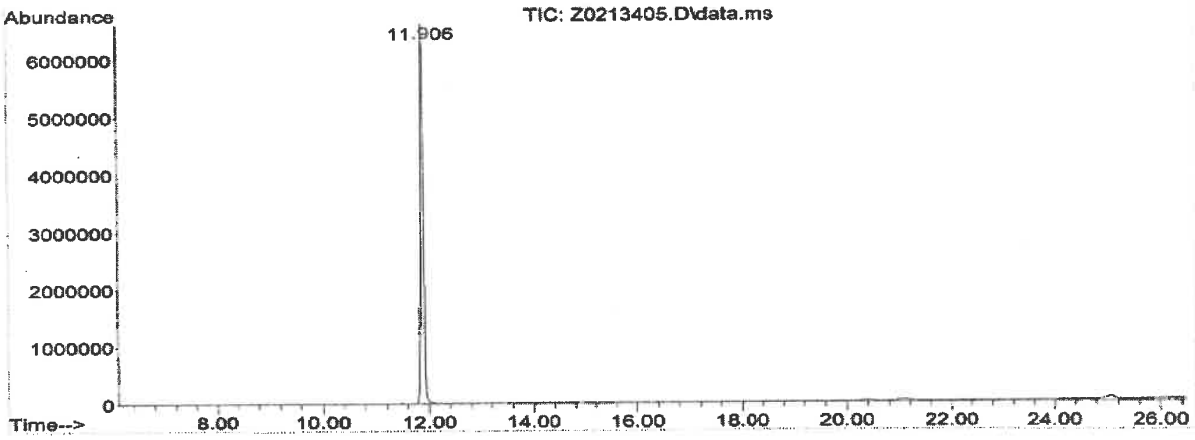

Mass Spectrum

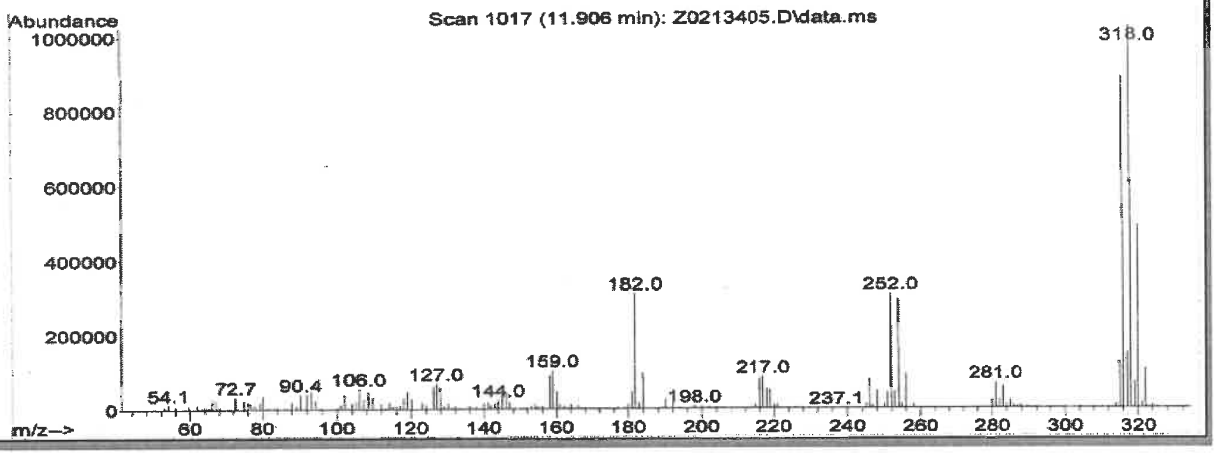

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Reagent

HRDXNIDA_00443

Rev'ed 10-19-20

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

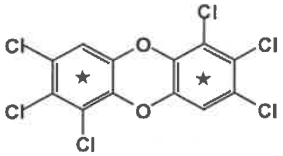

Catalog Number:	ED-966
Solution Lot:	ER03151801
Expiration Date:	March 2028
Solvent:	n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

780992

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

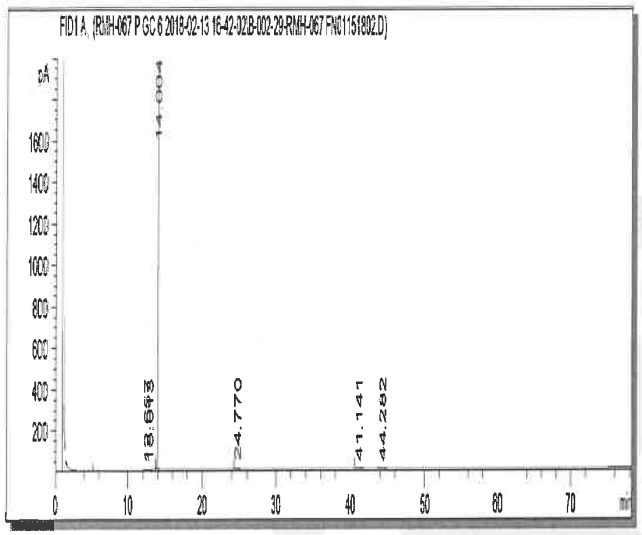

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

```
Compound Name          : 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number             : FN01151802
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Mon Mar 05 10:17:33 2018
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

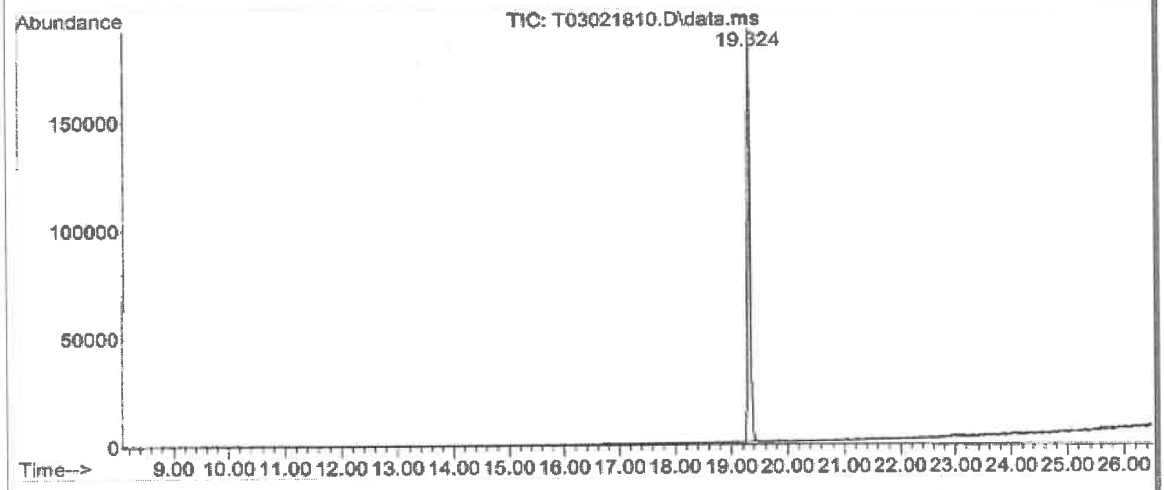

Mass Spectrum

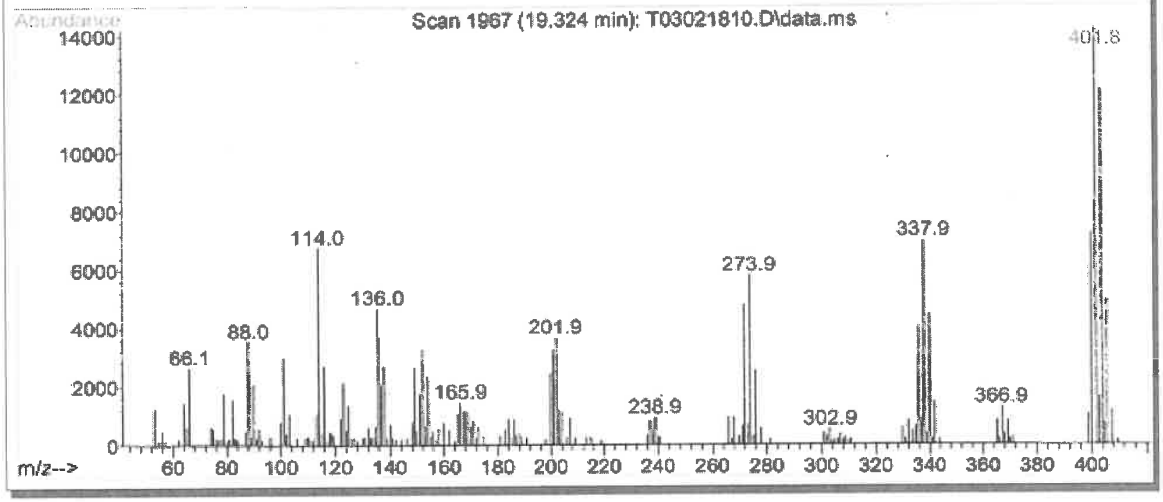

Reagent

HRDXNIDA_00457

r: 1/18/21 SW

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

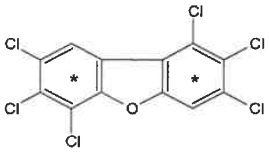

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

780997

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

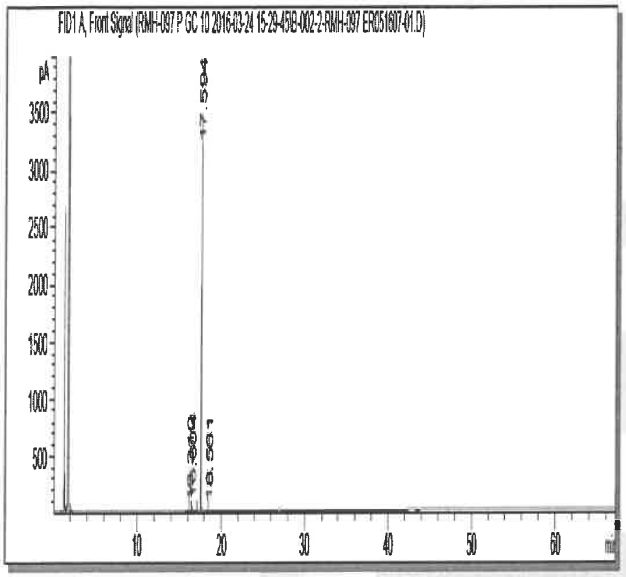

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

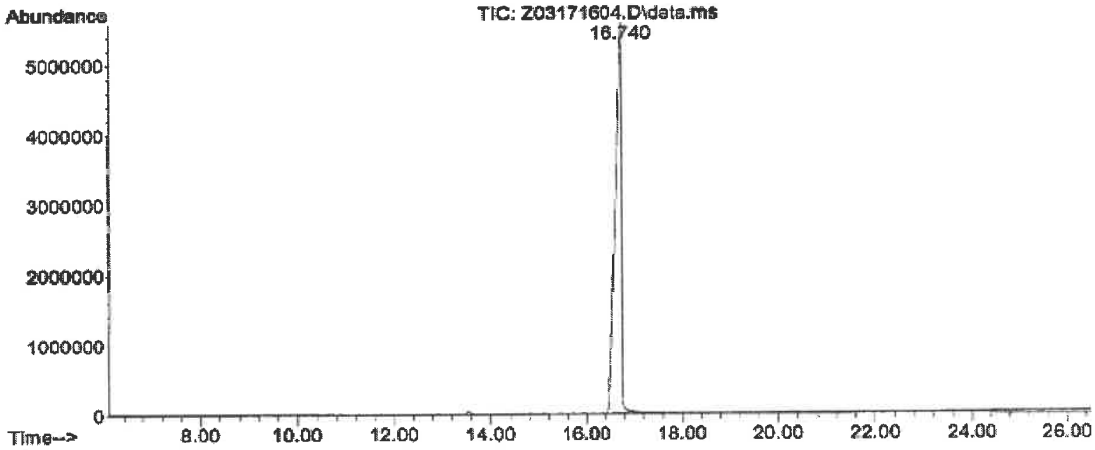

Mass Spectrum

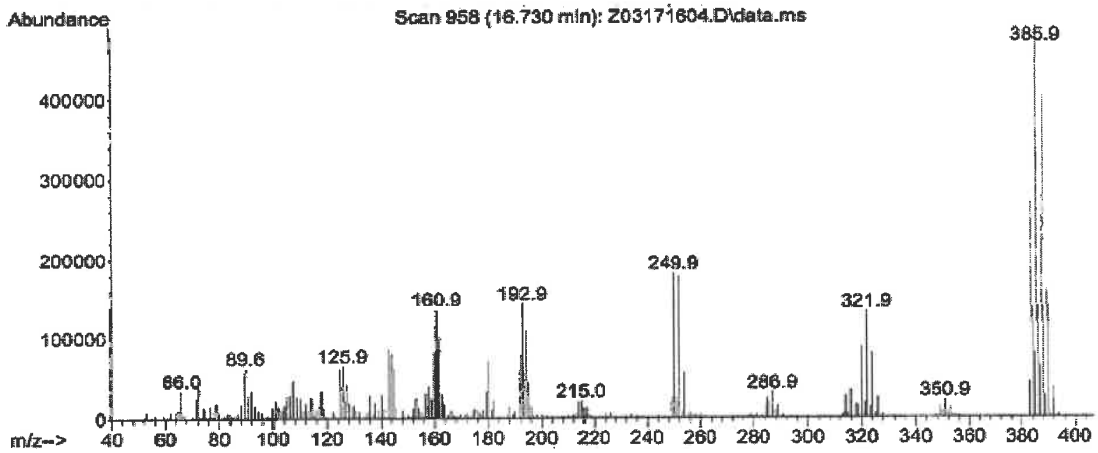

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

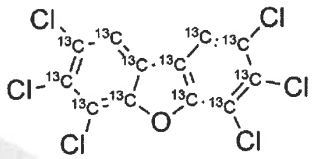

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

781004

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER09051801

Chemical Formula: $^{13}C_{12}H_2Cl_6O$
CAS Number: 116843-05-1
Molecular Weight: 386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

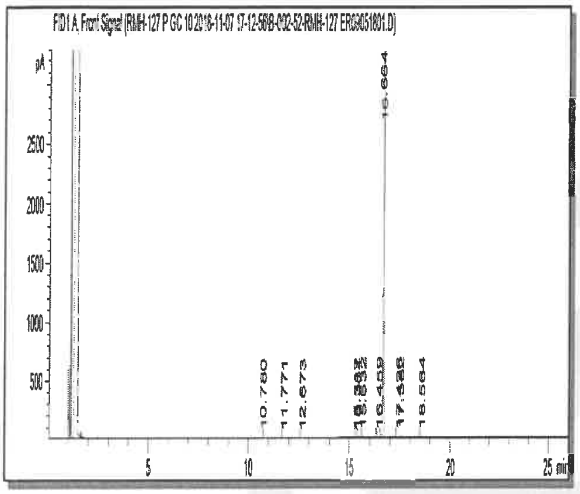

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

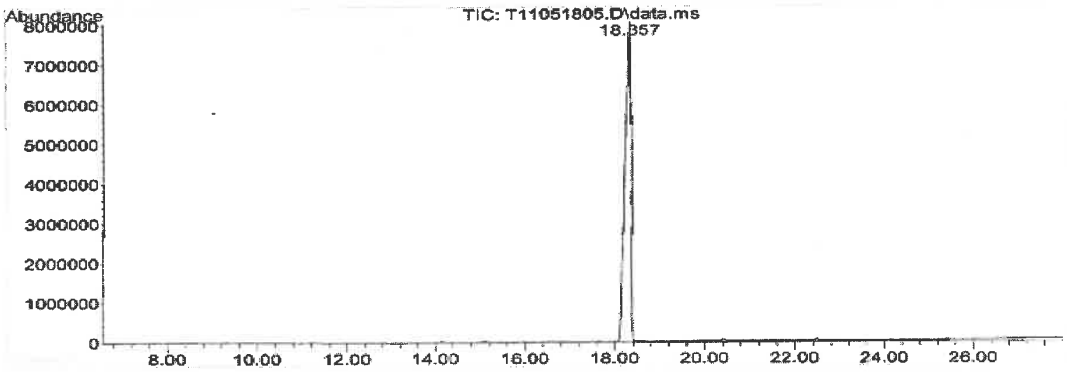

Mass Spectrum

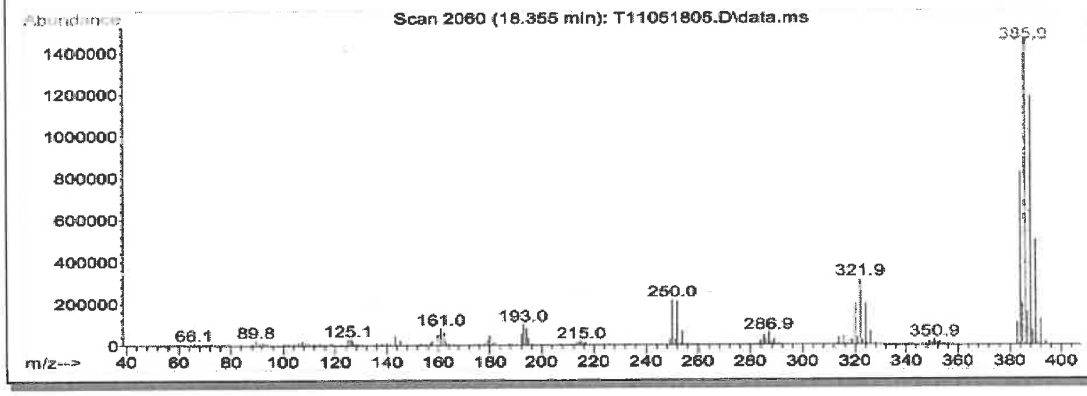

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

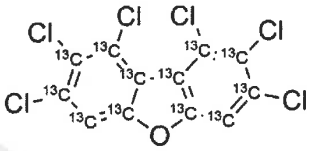

Catalog Number:	EF-986
Solution Lot:	ER01062016
Expiration Date:	January 2030
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

781011

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

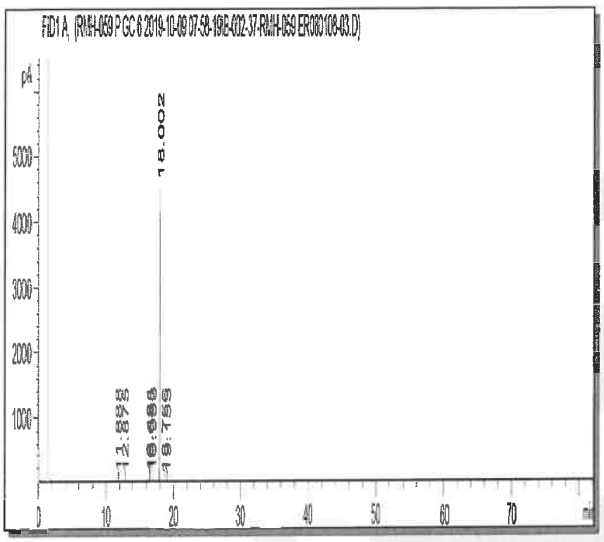

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

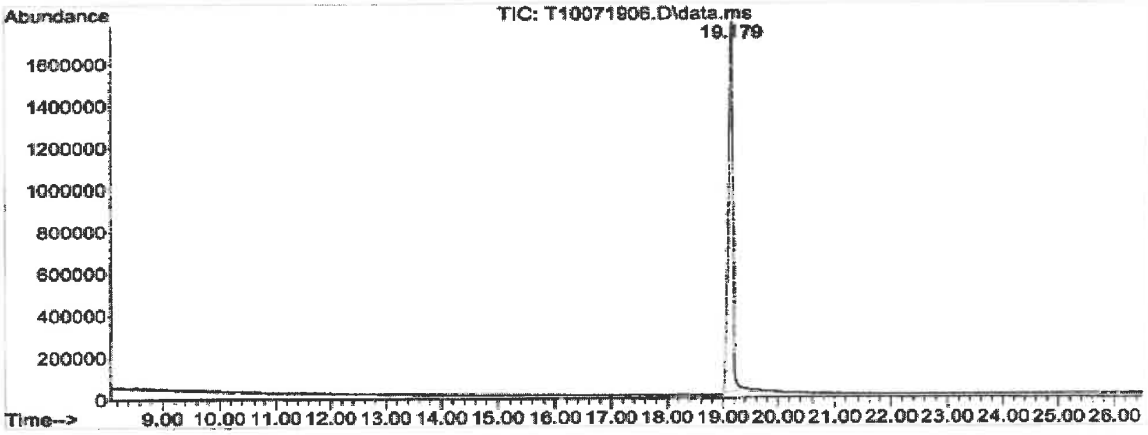

Mass Spectrum

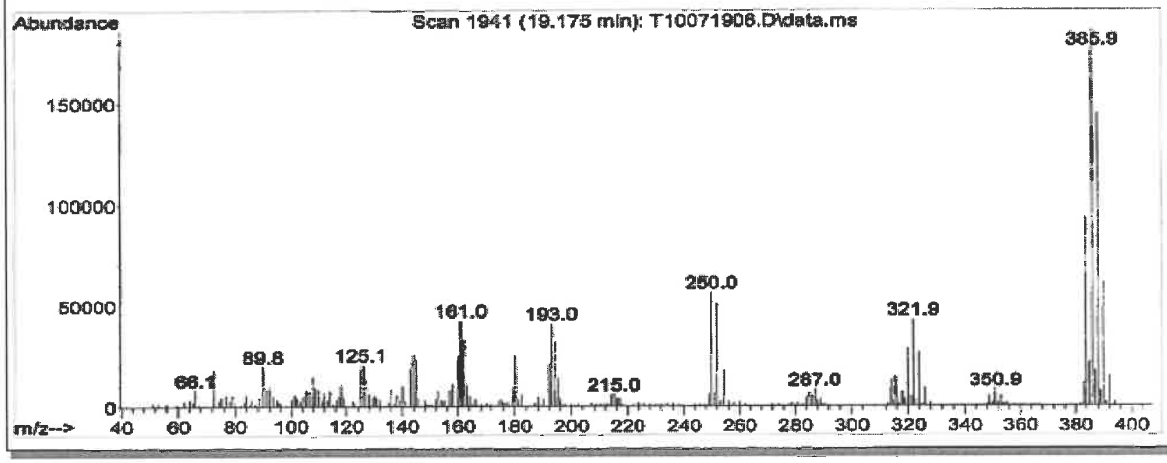

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH® company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

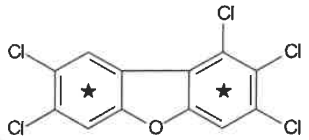

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O$
Compound Lot:	ER090110-01	**CAS Number:**	109719-77-9
		Molecular Weight:	352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

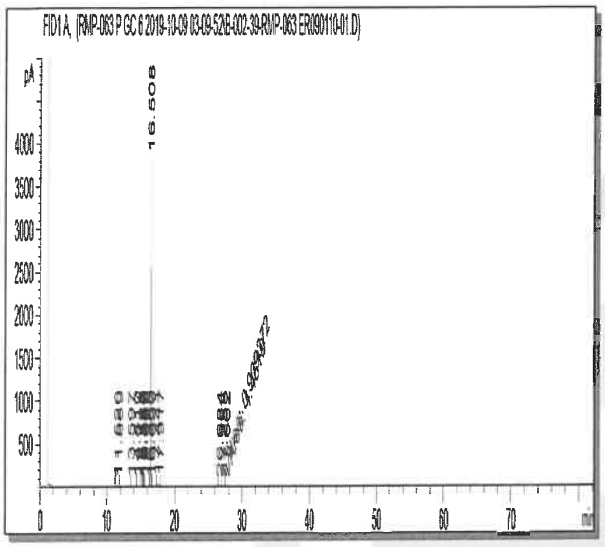

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Sample Name: ER090110-01
Acquired: October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

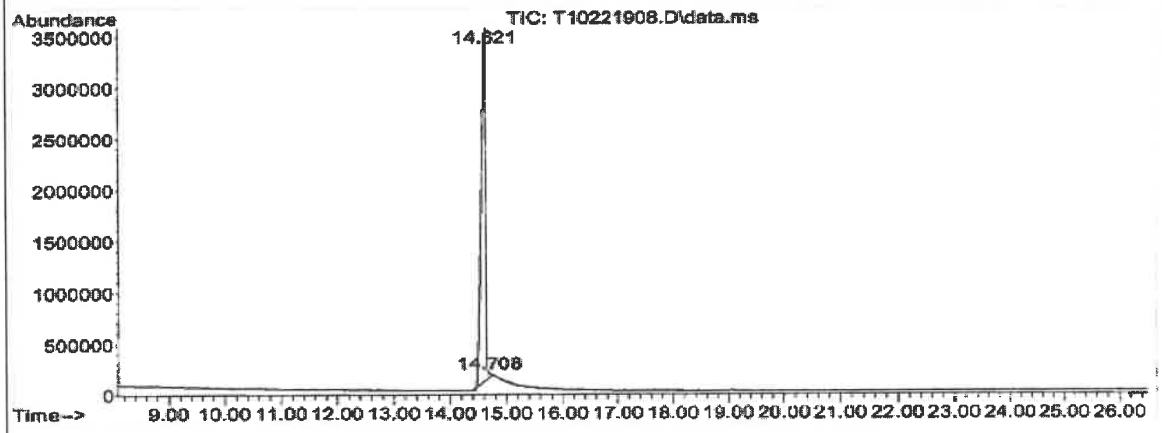

Mass Spectrum

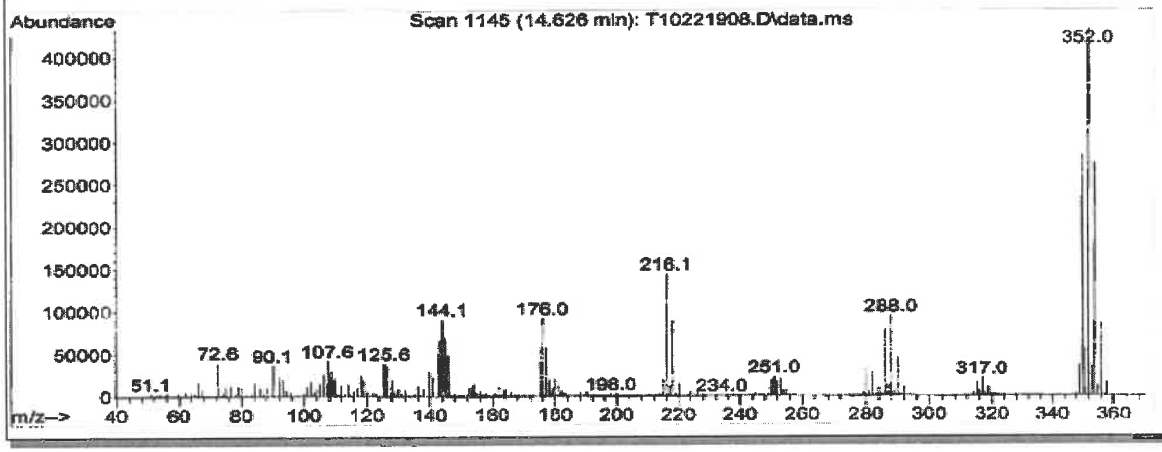

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

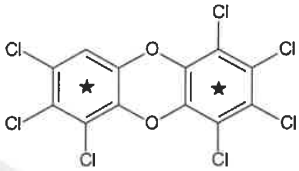

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

781025

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	0.999

Neat Material Data

Compound Name:	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}HCl_7O_2$
Compound Lot:	ER100110-01	**CAS Number:**	109719-83-7
		Molecular Weight:	437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

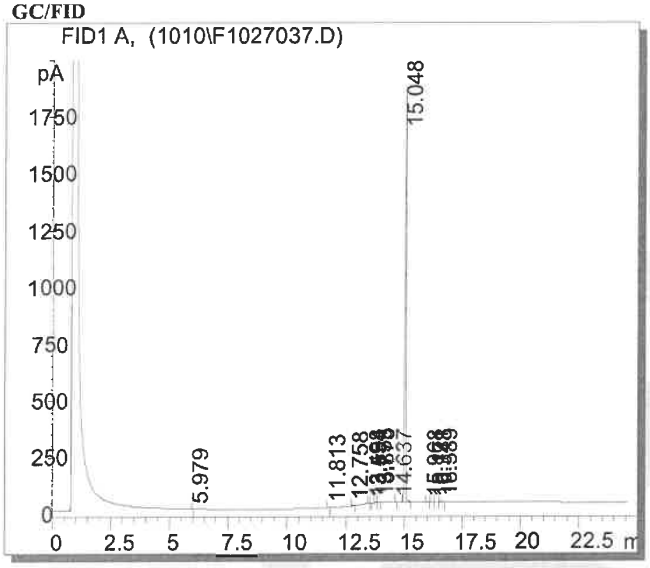

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

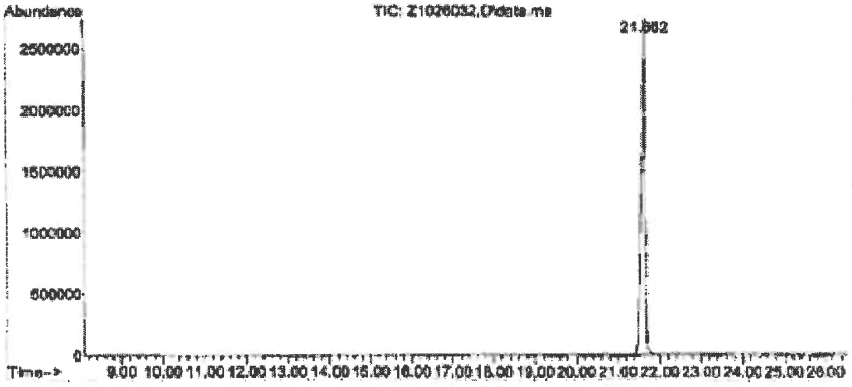

Mass Spectrum

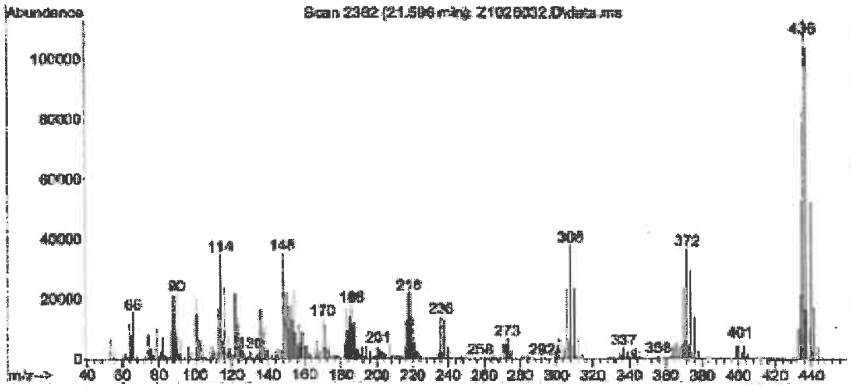

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
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CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

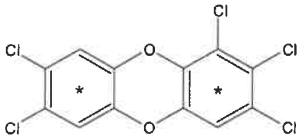

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

781030

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O_2$
Compound Lot:	ER06241403	**CAS Number:**	109719-79-1
		Molecular Weight:	368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

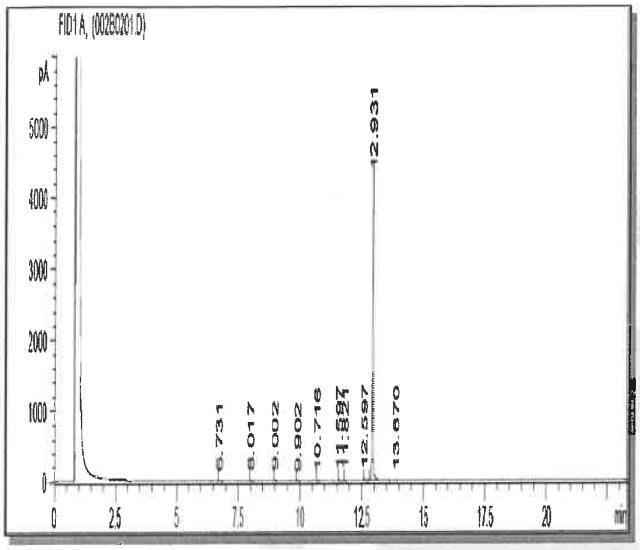

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

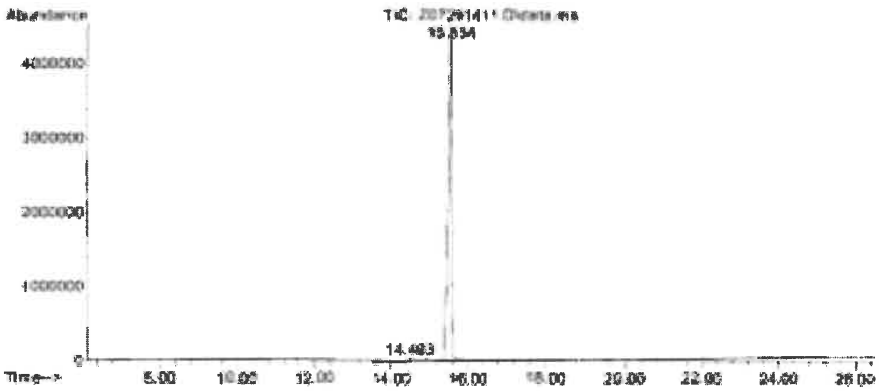

Mass Spectrum

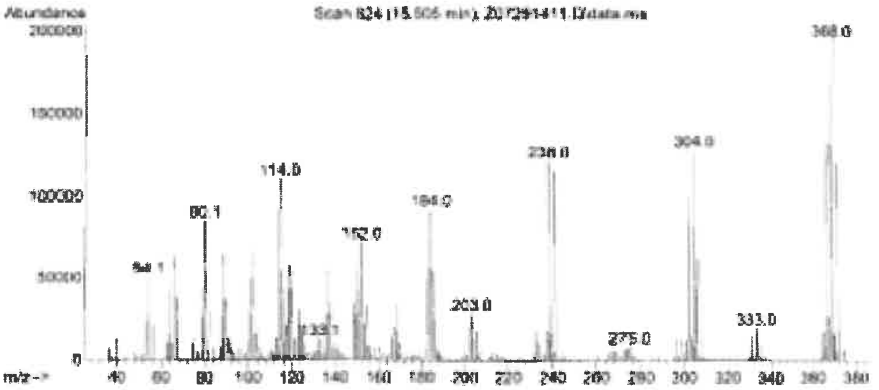

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

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Certificate of Analysis

ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

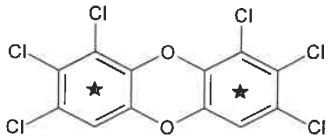

Catalog Number: ED-996
Solution Lot: ER08221601
Expiration Date: September 2026
Solvent: n-Nonane:Toluene (80:20)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

781037

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

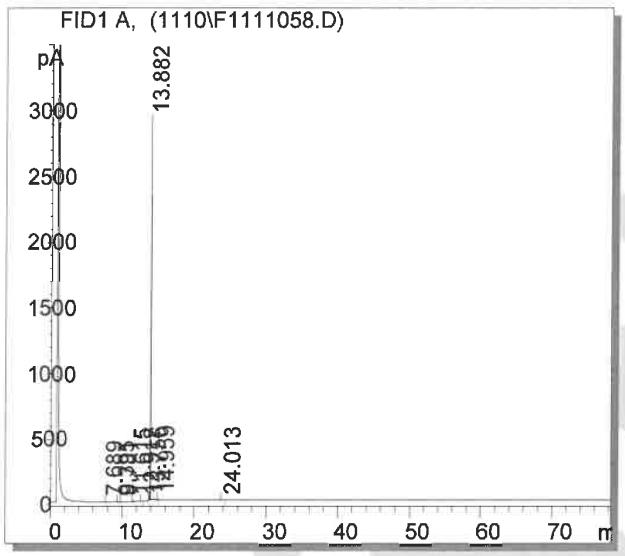

Column: DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-column
Detector Temp: 325°C

Data File Name: S:\GC\GC6\2010\1110\F1111058.D
Instrument: GC#6
Sample Name: ER110510-01
Acquired: November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

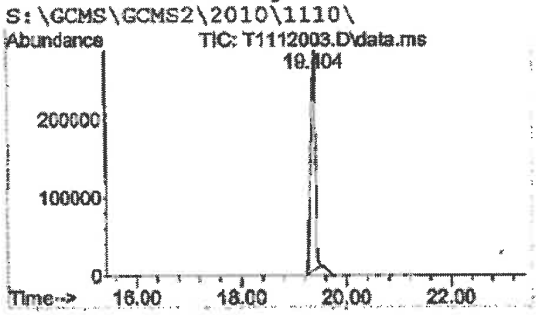

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

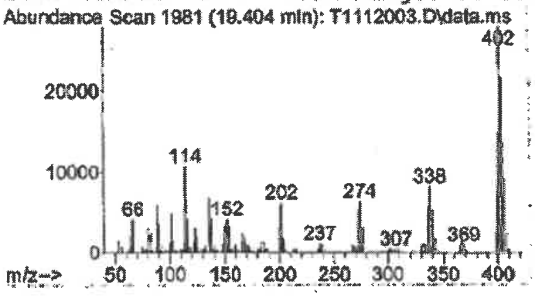

SIM Ion Chromatogram 1

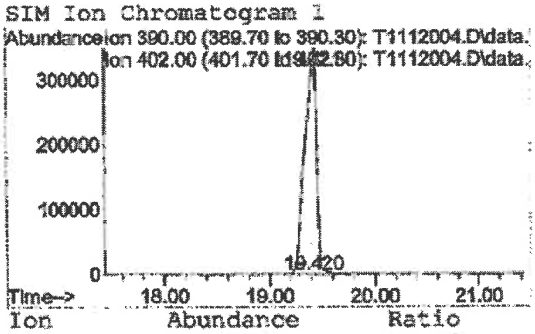

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

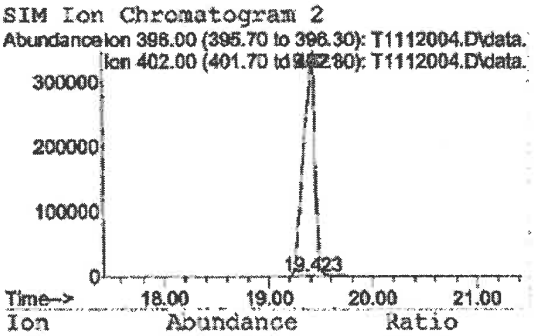

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

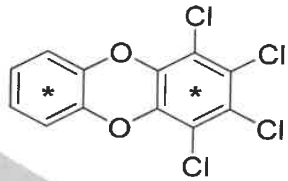

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 13194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

781044

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

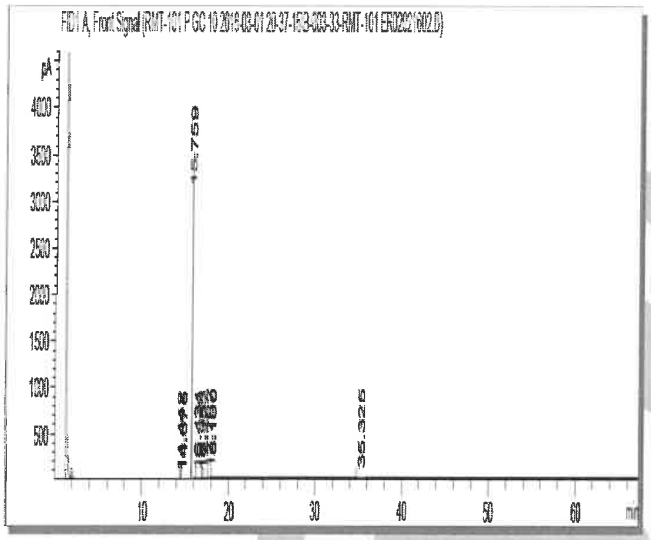

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

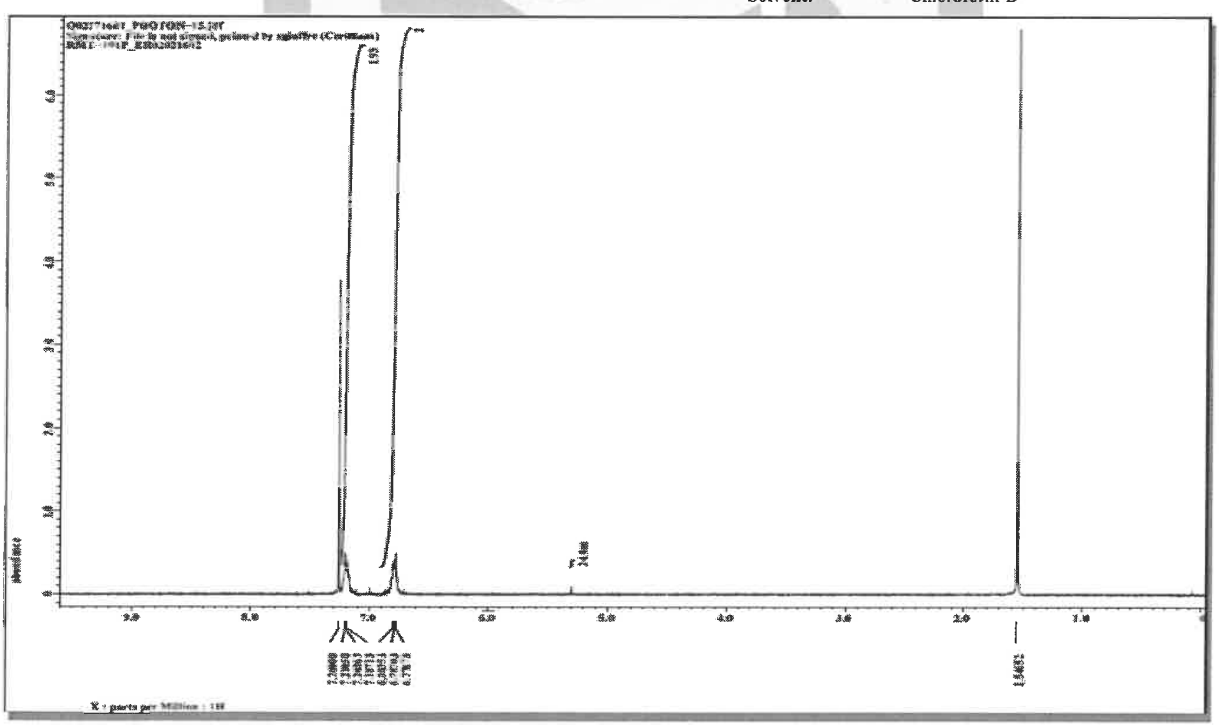

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER02021602
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Fri Feb 19 12:55:12 2016
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

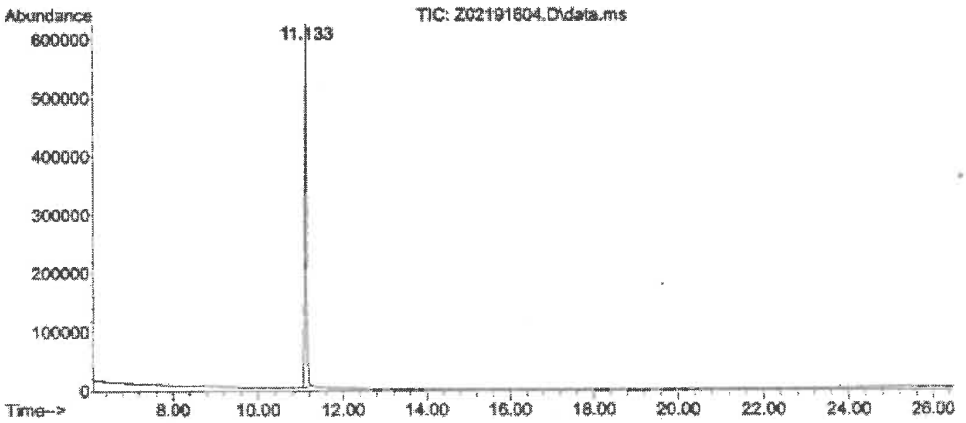

Mass Spectrum

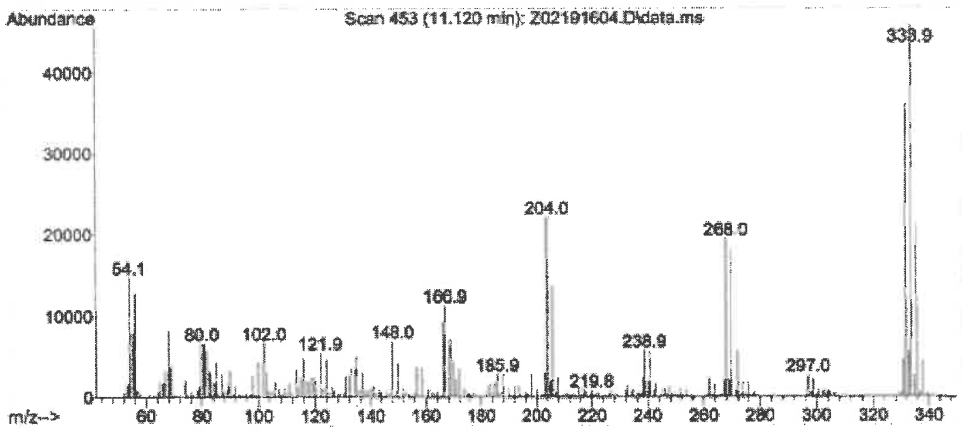

Reagent

HRDXNTA_00108

(2)

P: 4ba/19 SKJ

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

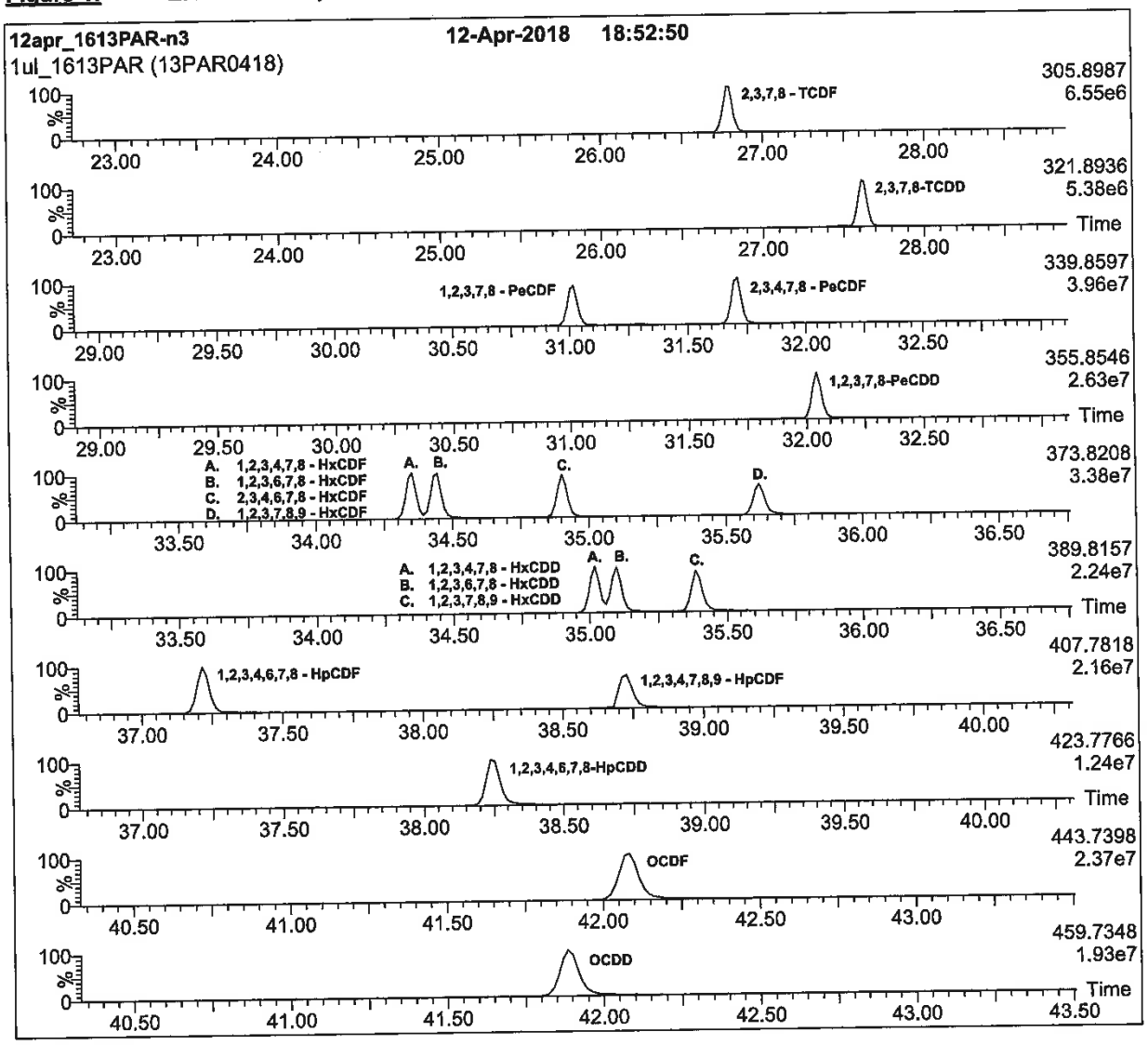

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

(3)

P: 4/3dic SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number: EDF-7999-10X
Solution Lot: ER02241602
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

781054

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/ECD
Column:	DB-5ms, 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min, 200°C to 300°C at 4°C/min hold 3 min
Injector Temp:	Cool on-column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397.1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386.6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0.8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0.7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

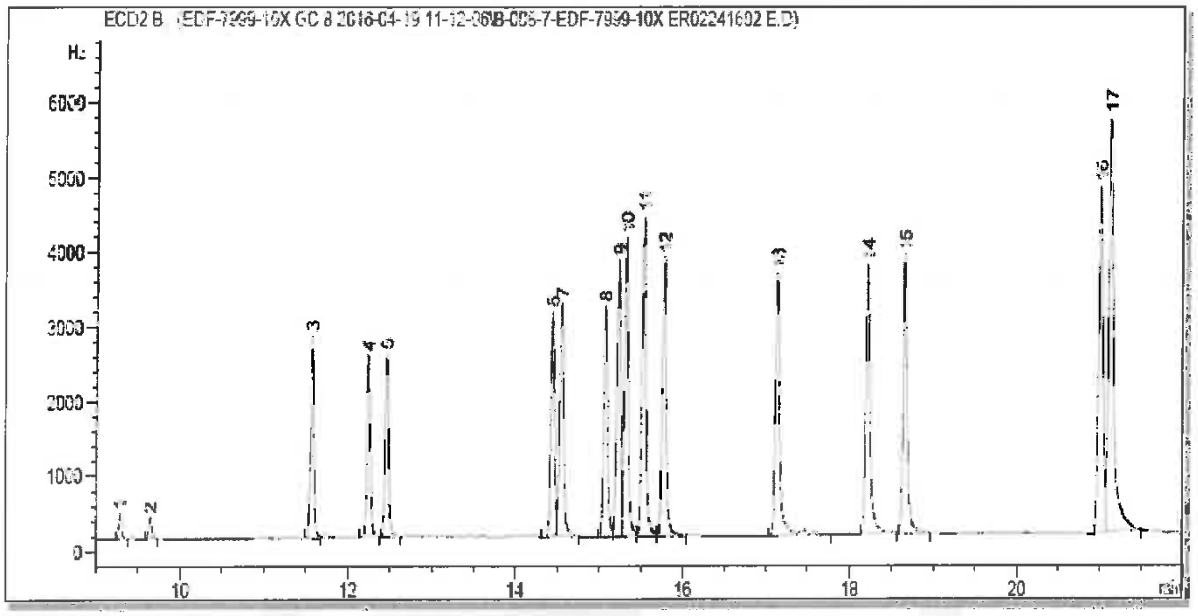

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Method 1613 PAR Stock Solution

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

781059

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

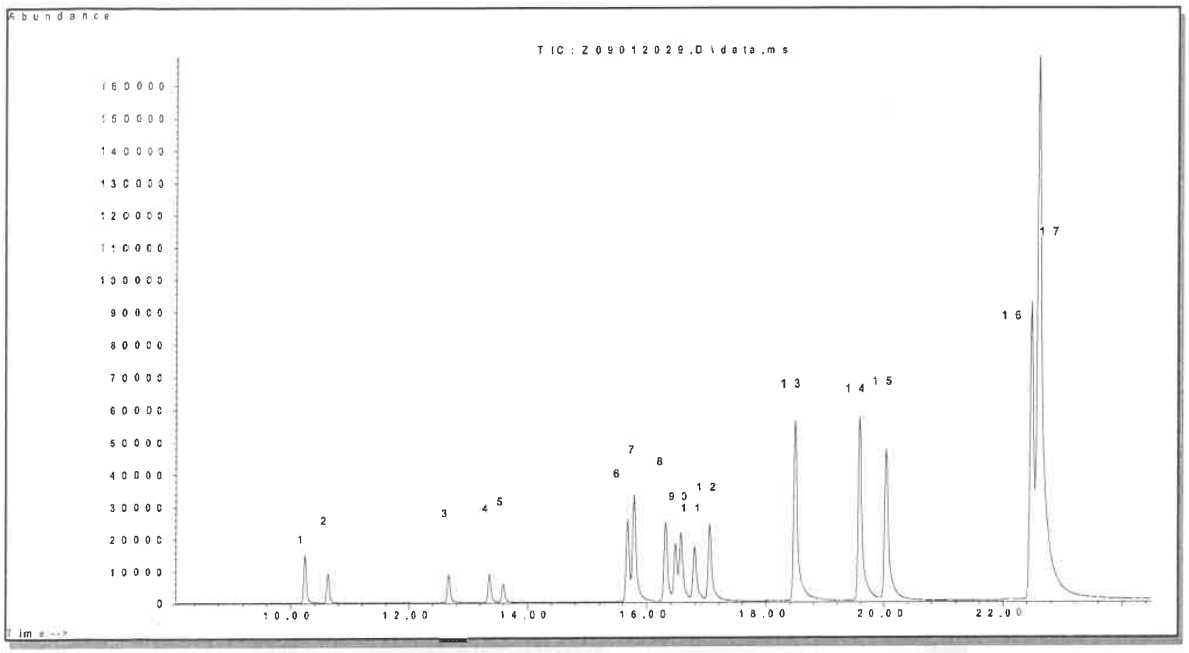

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-512871/2-A	56	59	81	56	59	57	59	53
	LCSD 320-512871/3-A	57	60	78	56	62	58	60	55

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-512871/2-A	53	58	53	53	58	60	66	64
	LCSD 320-512871/3-A	55	61	56	54	59	60	65	63

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-072321-BN -SJSB085 (16-18) RA	320-76788-9 RA	59	71
11215702-072321-BN -SJSB105 (16-18) RA	320-76788-21 RA	57	79

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-072321-BN -SJSB085 (16-18)	320-76788-9	52	55	72	51	55	55	54	50
11215702-072321-BN -SJSB105 (16-18)	320-76788-21	58	63	79	58	63	63	65	59
	MB 320-512871/1-A	55	57	81	54	59	56	58	52

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072321-BN -SJSB085 (16-18)	320-76788-9	49	56	54	50	57	58	63	64
11215702-072321-BN -SJSB105 (16-18)	320-76788-21	59	67	61	57	64	65	72	74
	MB 320-512871/1-A	52	58	52	51	57	58	62	60

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Matrix: Solid Level: Low Lab File ID: 13AU2110D5_15.d

Lab ID: LCS 320-512871/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	19.5	97	67-158	
2,3,7,8-TCDF	20.0	20.7	104	75-158	
1,2,3,7,8-PeCDD	100	105	105	70-142	
1,2,3,7,8-PeCDF	100	105	105	80-134	
2,3,4,7,8-PeCDF	100	96.3	96	68-160	
1,2,3,4,7,8-HxCDD	100	95.0	95	70-164	
1,2,3,6,7,8-HxCDD	100	106	106	76-134	
1,2,3,7,8,9-HxCDD	100	107	107	64-162	
1,2,3,4,7,8-HxCDF	100	93.4	93	72-134	
1,2,3,6,7,8-HxCDF	100	105	105	84-130	
1,2,3,7,8,9-HxCDF	100	103	103	78-130	
2,3,4,6,7,8-HxCDF	100	104	104	70-156	
1,2,3,4,6,7,8-HpCDD	100	104	104	70-140	
1,2,3,4,6,7,8-HpCDF	100	106	106	82-122	
1,2,3,4,7,8,9-HpCDF	100	96.5	97	78-138	
OCDD	200	206	103	78-144	
OCDF	200	202	101	63-170	
13C-2,3,7,8-TCDD	200	118	59	20-175	
13C-2,3,7,8-TCDF	200	113	56	22-152	
13C-1,2,3,7,8-PeCDD	200	113	57	21-227	
13C-1,2,3,7,8-PeCDF	200	111	56	21-192	
13C-2,3,4,7,8-PeCDF	200	118	59	13-328	
13C-1,2,3,4,7,8-HxCDD	200	116	58	21-193	
13C-1,2,3,6,7,8-HxCDD	200	107	53	25-163	
13C-1,2,3,4,7,8-HxCDF	200	118	59	19-202	
13C-1,2,3,6,7,8-HxCDF	200	106	53	21-159	
13C-1,2,3,7,8,9-HxCDF	200	106	53	17-205	
13C-2,3,4,6,7,8-HxCDF	200	106	53	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	120	60	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	117	58	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	132	66	20-186	
13C-OCDD	400	257	64	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Matrix: Solid Level: Low Lab File ID: 13AU2110D5_16.d

Lab ID: LCSD 320-512871/3-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCSD CONCENTRATION (pg/g)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	19.8	99	2	50	67-158	
2,3,7,8-TCDF	20.0	20.7	104	0	50	75-158	
1,2,3,7,8-PeCDD	100	105	105	1	50	70-142	
1,2,3,7,8-PeCDF	100	106	106	1	50	80-134	
2,3,4,7,8-PeCDF	100	97.0	97	1	50	68-160	
1,2,3,4,7,8-HxCDD	100	94.9	95	0	50	70-164	
1,2,3,6,7,8-HxCDD	100	105	105	1	50	76-134	
1,2,3,7,8,9-HxCDD	100	105	105	2	50	64-162	
1,2,3,4,7,8-HxCDF	100	95.3	95	2	50	72-134	
1,2,3,6,7,8-HxCDF	100	104	104	1	50	84-130	
1,2,3,7,8,9-HxCDF	100	103	103	0	50	78-130	
2,3,4,6,7,8-HxCDF	100	104	104	0	50	70-156	
1,2,3,4,6,7,8-HpCDD	100	106	106	2	50	70-140	
1,2,3,4,6,7,8-HpCDF	100	106	106	0	50	82-122	
1,2,3,4,7,8,9-HpCDF	100	97.7	98	1	50	78-138	
OCDD	200	207	104	1	50	78-144	
OCDF	200	205	102	1	50	63-170	
13C-2,3,7,8-TCDD	200	120	60			20-175	
13C-2,3,7,8-TCDF	200	114	57			22-152	
13C-1,2,3,7,8-PeCDD	200	116	58			21-227	
13C-1,2,3,7,8-PeCDF	200	112	56			21-192	
13C-2,3,4,7,8-PeCDF	200	123	62			13-328	
13C-1,2,3,4,7,8-HxCDD	200	122	61			21-193	
13C-1,2,3,6,7,8-HxCDD	200	111	56			25-163	
13C-1,2,3,4,7,8-HxCDF	200	119	60			19-202	
13C-1,2,3,6,7,8-HxCDF	200	110	55			21-159	
13C-1,2,3,7,8,9-HxCDF	200	108	54			17-205	
13C-2,3,4,6,7,8-HxCDF	200	109	55			22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	119	60			26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	119	59			21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	130	65			20-186	
13C-OCDD	400	253	63			13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab File ID: 13AU2110D5_14.d Lab Sample ID: MB 320-512871/1-A

Matrix: Solid Date Extracted: 08/04/2021 07:15

Instrument ID: 10D5 Date Analyzed: 08/14/2021 02:56

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-512871/2-A	13AU2110D5_15.d	08/14/2021 03:41
	LCSD 320-512871/3-A	13AU2110D5_16.d	08/14/2021 04:26
11215702-072321-BN-SJSB085 (16-18)	320-76788-9	13AU2110D5_30.d	08/14/2021 15:16
11215702-072321-BN-SJSB105 (16-18)	320-76788-21	13AU2110D5_38.d	08/14/2021 21:16
11215702-072321-BN-SJSB105 (16-18) RA	320-76788-21 RA	23AU2111D2_005.d	08/23/2021 12:05
11215702-072321-BN-SJSB085 (16-18) RA	320-76788-9 RA	23AU21A11D2_004.d	08/23/2021 17:29

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-2
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (16-18)
Lab Sample ID: 320-76788-9
Matrix: Solid
Lab File ID: 13AU2110D5_30.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:40
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.78(g)
Date Analyzed: 08/14/2021 15:16
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	5.2	B	1.7	0.21
40321-76-4	1,2,3,7,8-PeCDD	0.39	J	8.3	0.20
57117-41-6	1,2,3,7,8-PeCDF	0.58	J	8.3	0.084
57117-31-4	2,3,4,7,8-PeCDF	0.31	J	8.3	0.088
39227-28-6	1,2,3,4,7,8-HxCDD	0.82	J B	8.3	0.36
57653-85-7	1,2,3,6,7,8-HxCDD	1.2	J	8.3	0.37
19408-74-3	1,2,3,7,8,9-HxCDD	2.8	J	8.3	0.33
70648-26-9	1,2,3,4,7,8-HxCDF	0.67	J B	8.3	0.059
57117-44-9	1,2,3,6,7,8-HxCDF	0.27	J B	8.3	0.060
72918-21-9	1,2,3,7,8,9-HxCDF	0.13	J B	8.3	0.051
60851-34-5	2,3,4,6,7,8-HxCDF	ND		8.3	0.048
35822-46-9	1,2,3,4,6,7,8-HpCDD	51	B	8.3	1.3
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.28	J B q	8.3	0.057
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		8.3	0.071
3268-87-9	OCDD	1300	B	17	1.6
39001-02-0	OCDF	0.52	J B q	17	0.088
41903-57-5	Total TCDD	12	B q	1.7	0.21
30402-14-3	Total TCDF	29	B q	1.7	0.12
36088-22-9	Total PeCDD	10	q	8.3	0.20
30402-15-4	Total PeCDF	1.4	J q	8.3	0.086
34465-46-8	Total HxCDD	43	B	8.3	0.36
55684-94-1	Total HxCDF	1.1	J B	8.3	0.055
37871-00-4	Total HpCDD	170	B	8.3	1.3
38998-75-3	Total HpCDF	0.28	J B q	8.3	0.064

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-2
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (16-18)
Lab Sample ID: 320-76788-9
Matrix: Solid
Lab File ID: 13AU2110D5_30.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:40
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.78(g)
Date Analyzed: 08/14/2021 15:16
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	55		25-164
89059-46-1	13C-2,3,7,8-TCDF	52		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	55		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	51		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	55		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	56		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	54		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	50		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	50		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	49		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	58		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	57		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	63		26-138
114423-97-1	13C-OCDD	64		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d
Lims ID: 320-76788-A-9-A
Client ID: 11215702-072321-BN-SJSB085 (16-18)
Sample Type: Client
Inject. Date: 14-Aug-2021 15:16:35 ALS Bottle#: 30 Worklist Smp#: 19
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-9-a 320-76788-a-9-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 07:36:24 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: krenns Date: 18-Aug-2021 07:36:24

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	63775818	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	53466853	0.76	1.6249	51.6	51.6	0.1510	0.1510	51.59	
2,3,7,8-TCDF	17.356	2642459	0.76	1.0239	4.827	4.827	0.0359	0.0359		
A Non-2,3,7,8-sub-TCDF	17.046	2055197	0.77	1.0239	3.873	3.754	0.0359	2.188		RQ
S Total TCDF					8.700	8.581	0.0359	0.0359		RQ
D 13C-2,3,7,8-TCDD	18.051	31808292	0.78	0.8993	55.5	55.5	0.1622	0.1622	55.46	
2,3,7,8-TCDD	18.066	615233	0.76	1.2541	1.542	1.542	0.0642	0.0642		M
$ 37Cl4-2,3,7,8-TCDD	18.066	20260601		1.1071	28.7	28.7	0.0373	0.0373	71.74	
A Non-2,3,7,8-sub-TCDD	17.499	838844	0.77	1.2541	2.123	2.103	0.0642	0.8396		RQMa
S Total TCDD					3.666	3.645	0.0642	0.0642		RQ
D 13C-1,2,3,7,8-PeCDF	22.367	39437281	1.60	1.2101	51.1	51.1	0.1284	0.1284	51.10	
1,2,3,7,8-PeCDF	22.394	72432	1.34	1.0611	0.1731	0.1731	0.0251	0.0251		M
D 13C-2,3,4,7,8-PeCDF	23.717	43670430	1.57	1.2395	55.2	55.2	0.1253	0.1253	55.24	
2,3,4,7,8-PeCDF	23.717	41396	1.54	1.0184	0.0931	0.0931	0.0265	0.0265		M
A F1 PeCDFs	20.093						0.0251	0.0251		
A Non-2,3,7,8-sub-PeCDF	23.241	64271	1.55	1.0398	0.1575	0.1488	0.0258	0.0870		RQ
S Total PeCDF					0.4237	0.4149	0.0258	0.0258		RQ
D 13C-1,2,3,7,8-PeCDD	24.440	26787589	1.63	0.7612	55.2	55.2	0.0779	0.0779	55.18	
1,2,3,7,8-PeCDD	24.494	32420	1.33	1.0484	0.1154	0.1154	0.0606	0.0606		
A Non-2,3,7,8-sub-PeCDD	23.349	838496	1.55	1.0484	3.022	2.986	0.0606	1.453		RQMa
S Total PeCDD					3.138	3.101	0.0606	0.0606		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.503	37298282	0.52	1.0837	53.6	53.6	0.3245	0.3245	53.59	
1,2,3,4,7,8-HxCDF	30.529	81389	1.18	1.0851	0.2011	0.2011	0.0177	0.0177		
D 13C-1,2,3,6,7,8-HxCDF	30.689	35952814	0.51	1.1279	49.6	49.6	0.3118	0.3118	49.63	
1,2,3,6,7,8-HxCDF	30.689	33184	1.20	1.1260	0.0820	0.0820	0.0181	0.0181		
D 13C-2,3,4,6,7,8-HxCDF	31.514	33797494	0.51	1.0637	49.5	49.5	0.3306	0.3306	49.47	
2,3,4,6,7,8-HxCDF	31.528						0.0145	0.0145		
D 13C-1,2,3,7,8,9-HxCDF	32.313	30972777	0.51	0.9676	49.8	49.8	0.3634	0.3634	49.84	
1,2,3,7,8,9-HxCDF	32.340	13788	1.08	1.1664	0.0382	0.0382	0.0152	0.0152		M
A Non-2,3,7,8-sub-HxCDF	30.197						0.0163	0.0163		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.3212	0.3212	0.0164	0.0164		
* 13C-1,2,3,7,8,9-HxCDD	32.140	64230807	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	26242783	1.26	0.7334	55.7	55.7	0.3613	0.3613	55.71	
1,2,3,4,7,8-HxCDD	31.714	68458	1.22	1.0640	0.2452	0.2452	0.1091	0.1091		
D 13C-1,2,3,6,7,8-HxCDD	31.808	30765227	1.24	0.8802	54.4	54.4	0.3011	0.3011	54.42	
1,2,3,6,7,8-HxCDD	31.821	112976	1.25	1.0001	0.3672	0.3672	0.1111	0.1111		
1,2,3,7,8,9-HxCDD	32.153	273459	1.27	1.1325	0.8471	0.8471	0.1003	0.1003		
A Non-2,3,7,8-sub-HxCDD	30.882	3485432	1.25	1.0655	11.5	11.5	0.1066	8.375		
S Total HxCDD					12.9	12.9	0.1068	0.1068		
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	28410509	0.43	0.7730	57.2	57.2	0.7775	0.7775	57.22	
1,2,3,4,6,7,8-HpCDF	33.766	34663	1.04	1.4413	0.1025	0.0847	0.0170	0.0170		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	34.848	28553773	0.43	0.7008	63.4	63.4	0.8576	0.8576	63.43	
1,2,3,4,7,8,9-HpCDF	34.860						0.0213	0.0213		
A Non-2,3,7,8-sub-HpCDF	34.319						0.0189	0.0189		
S Total HpCDF					0.1025	0.0847	0.0191	0.0191		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	24097094	0.97	0.6472	58.0	58.0	0.3875	0.3875	57.96	
1,2,3,4,6,7,8-HpCDD	34.568	4032134	1.03	1.0943	15.3	15.3	0.3842	0.3842		
A Non-2,3,7,8-sub-HpCDD	34.301	9134370	1.03	1.0943	34.6	34.6	0.3842	34.6		
S Total HpCDD					49.9	49.9	0.3842	0.3842		
D 13C-OCDD	36.914	36995425	0.86	0.4472	128.8	128.8	0.2231	0.2231	64.40	
OCDF	37.010	41307	0.89	1.4382	0.1722	0.1553	0.0263	0.0263		RQM
OCDD	36.926	77324973	0.89	1.1070	377.6	377.6	0.4877	0.4877		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d
Lims ID: 320-76788-A-9-A
Client ID: 11215702-072321-BN-SJSB085 (16-18)
Sample Type: Client
Inject. Date: 14-Aug-2021 15:16:35 ALS Bottle#: 30 Worklist Smp#: 19
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-9-a 320-76788-a-9-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 07:36:24 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: krenns Date: 18-Aug-2021 07:36:24

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		28637472	7094990	3939	9847	1801		
333.9339	17.855	17.855	0		35138346	8657606	5253	13132	1648	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.971	23006784	5484418	10077	25192	544		
317.9389	17.341	17.341	0	0.971	30460069	7284479	5386	13465	1352	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.001	1137012	252384	780	1950	324		
305.8987	17.356	17.356	0	1.001	1505447	332169	1100	2750	302	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	15.420	17.046	-97	0.889	39413	10605	780	1950	14		
305.8987	15.436	17.046	-96	0.890	51748	14258	1100	2750	13	0.76(0.65-0.89)	
303.9016	15.950	17.046	-66	0.920	31443	6988	780	1950	9		
	Empc Correction				22268	6383	780	1950	8		
305.8987	15.950	17.046	-66	0.920	28920	8290	1100	2750	8	1.09(0.65-0.89)	
303.9016	16.237	17.046	-48	0.936	43501	10213	780	1950	13		
	Empc Correction				37348	8991	780	1950	12		
305.8987	16.222	17.046	-49	0.935	48504	11677	1100	2750	11	0.90(0.65-0.89)	
303.9016	16.464	17.046	-35	0.949	51427	13130	780	1950	17		
305.8987	16.449	17.046	-36	0.949	58474	15264	1100	2750	14	0.88(0.65-0.89)	
303.9016	16.706	17.046	-20	0.963	42120	11992	780	1950	15		
305.8987	16.691	17.046	-21	0.963	76710	15769	1100	2750	14	0.55(0.65-0.89)	
	Empc Correction				54701	15574	1100	2750	14		
303.9016	16.978	17.046	-4	0.979	482147	125379	780	1950	161		
305.8987	16.978	17.046	-4	0.979	715455	169722	1100	2750	154	0.67(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.794	17.046	45	1.026	90544	20951	780	1950	27		
305.8987	17.794	17.046	45	1.026	145171	23073	1100	2750	21	0.62(0.65-0.89)	
	Empc Correction				117589	27209	1100	2750	25		
303.9016	19.185	17.046	128	1.106	98960	18224	780	1950	23		
305.8987	19.170	17.046	127	1.106	115579	23347	1100	2750	21	0.86(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	13939904	3158359	3939	9847	802		
333.9339	18.051	18.051	0	1.011	17868388	4062555	5253	13132	773	0.78(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	18.066	18.066	0	1.001	264895	62677	1276	3190	49		M
321.8936	18.066	18.066	0	1.001	350338	79297	1048	2620	76	0.76(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.066	0	1.012	20260601	4628562	2599	6497	1781		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	16.131	17.499	-82	0.894	44087	12209	1276	3190	10		
321.8936	16.131	17.499	-82	0.894	58609	15405	1048	2620	15	0.75(0.65-0.89)	
319.8965	16.373	17.499	-67	0.907	39424	9059	1276	3190	7		
321.8936	16.373	17.499	-67	0.907	45135	11646	1048	2620	11	0.87(0.65-0.89)	
319.8965	16.917	17.499	-35	0.937	152314	37998	1276	3190	30		
321.8936	16.917	17.499	-35	0.937	182612	47235	1048	2620	45	0.83(0.65-0.89)	
319.8965	17.824	17.499	19	0.987	64492	17595	1276	3190	14		M
321.8936	17.824	17.499	19	0.987	84024	22104	1048	2620	21	0.77(0.65-0.89)	
319.8965	17.961	17.499	28	0.995	46273	11093	1276	3190	9		M
321.8936	17.945	17.499	27	0.994	53033	11564	1048	2620	11	0.87(0.65-0.89)	
319.8965	18.429	17.499	56	1.021	29948	6829	1276	3190	5		
321.8936	18.414	17.499	55	1.020	47058	10619	1048	2620	10	0.64(0.65-0.89)	
	Empc Correction				38893	8868	1048	2620	8		
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	24283008	3994701	5375	13437	743		
353.8970	22.367	22.367	0	1.253	15154273	2560691	4412	11030	580	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.394	22.380	1	1.001	41496	7442	236	590	32		M
341.8567	22.381	22.380	0	1.001	30936	4772	463	1157	10	1.34(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.328	26667379	3959202	5375	13437	737		
353.8970	23.717	23.703	1	1.328	17003051	2521332	4412	11030	571	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	23.717	23.730	-1	1.000	25098	3756	236	590	16		
341.8567	23.730	23.730	0	1.001	16298	2485	463	1157	5	1.54(1.32-1.78)	M
A F1 PeCDFs											
339.8597	20.093						235	587			
341.8567	20.093						446	1115			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.071	23.241	-130	0.942	22840	4488	236	590	19		
341.8567	21.058	23.241	-131	0.941	18529	2707	463	1157	6	1.23(1.32-1.78)	
	Empc Correction				14735	2895	463	1157	6		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	22.885	23.241	-21	1.023	15309	2190	236	590	9		
341.8567	22.926	23.241	-19	1.025	11387	1847	463	1157	4	1.34(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.369	16584989	2309818	2215	5537	1043		
369.8919	24.440	24.426	1	1.369	10202600	1410614	1522	3805	927	1.63(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.494	24.453	2	1.002	18493	3321	645	1612	5		
357.8516	24.440	24.453	-1	1.000	13927	2857	300	750	10	1.33(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQMa
355.8546	21.249	23.349	-126	0.869	107618	17874	645	1612	28		
357.8516	21.221	23.349	-127	0.868	62987	11273	300	750	38	1.71(1.32-1.78)	
355.8546	21.985	23.349	-82	0.900	247713	46255	645	1612	72		
357.8516	21.985	23.349	-82	0.900	160399	27518	300	750	92	1.54(1.32-1.78)	
355.8546	22.640	23.349	-42	0.926	37144	5365	645	1612	8		M
	Empc Correction				26833	5249	645	1612	8		
357.8516	22.694	23.349	-39	0.929	17312	3387	300	750	11	2.15(1.32-1.78)	M
355.8546	23.472	23.349	7	0.960	131221	17659	645	1612	27		M
357.8516	23.472	23.349	7	0.960	84413	11446	300	750	38	1.55(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	12696569	2353208	7550	18875	312		
385.8610	30.503	30.503	0	0.949	24601713	4436508	14313	35782	310	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.001	43979	6767	314	785	22		
375.8178	30.516	30.529	-1	1.000	37410	6715	208	520	32	1.18(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	12129177	2207551	7550	18875	292		
385.8610	30.689	30.689	0	0.955	23823637	4202925	14313	35782	294	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.689	30.702	-1	1.000	18078	3282	314	785	10		
375.8178	30.716	30.702	1	1.001	15106	2698	208	520	13	1.20(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	11402876	2631070	7550	18875	348		
385.8610	31.514	31.514	0	0.981	22394618	5079449	14313	35782	355	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						314	785			
375.8178	31.528						208	520			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.313	0	1.005	10505506	2476816	7550	18875	328		
385.8610	32.313	32.313	0	1.005	20467271	4862132	14313	35782	340	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.340	32.326	1	1.001	7171	2061	314	785	7		M
375.8178	32.340	32.326	1	1.001	6617	2058	208	520	10	1.08(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.197						314	785			
375.8178	30.197						208	520			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		35686442	8680892	8713	21782	996		
403.8529	32.140	32.127	1		28544365	6862144	7762	19405	884	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.986	14631143	3938827	8713	21782	452		
403.8529	31.701	31.701	0	0.986	11611640	3096761	7762	19405	399	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.714	0	1.000	37604	11108	1892	4730	6		
391.8127	31.714	31.714	0	1.000	30854	8579	1376	3440	6	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.808	31.807	0	0.990	17035683	4063118	8713	21782	466		
403.8529	31.808	31.807	0	0.990	13729544	3292806	7762	19405	424	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.821	31.820	0	1.000	62848	17307	1892	4730	9		
391.8127	31.821	31.820	0	1.000	50128	14710	1376	3440	11	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.140	1	1.014	153182	29491	1892	4730	16		
391.8127	32.140	32.140	0	1.014	120277	26051	1376	3440	19	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.558	30.882	-79	0.929	1412050	160032	1892	4730	85		
391.8127	29.558	30.882	-79	0.929	1131781	123317	1376	3440	90	1.25(1.05-1.43)	
389.8157	30.955	30.882	4	0.973	470285	90243	1892	4730	48		
391.8127	30.955	30.882	4	0.973	378510	71196	1376	3440	52	1.24(1.05-1.43)	
389.8157	31.168	30.882	17	0.980	51978	8866	1892	4730	5		
391.8127	31.155	30.882	16	0.979	40828	8280	1376	3440	6	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.754	0	1.050	8547118	2572436	12017	30042	214		
419.8220	33.754	33.754	0	1.050	19863391	6051735	25349	63372	239	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7818	33.766	33.766	0	1.000	24964	8161	640	1600	13		M
	Empc Correction				17671	6475	640	1600	10		
409.7789	33.766	33.766	0	1.000	16992	6226	205	512	30	1.47(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.848	34.847	0	1.084	8551837	2268881	12017	30042	189		
419.8220	34.848	34.847	0	1.084	20001936	5275190	25349	63372	208	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860						640	1600			
409.7789	34.860						205	512			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						640	1600			
409.7789	34.319						205	512			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.075	11891920	3342545	6219	15547	537		
437.8140	34.556	34.556	0	1.075	12205174	3368605	9375	23437	359	0.97(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	2048915	575621	5663	14157	102		
425.7737	34.568	34.568	0	1.000	1983219	535741	5623	14057	95	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.009	34.301	-17	0.984	4627464	1353644	5663	14157	239		
425.7737	34.009	34.301	-17	0.984	4506906	1331494	5623	14057	237	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.914	0	1.149	17092466	4150260	3001	7502	1383		
471.7750	36.914	36.914	0	1.149	19902959	4796273	3201	8002	1498	0.86(0.76-1.02)	
OCDF											RQM
441.7428	37.010	37.010	0	1.003	23943	6504	238	595	27		M
	Empc Correction				19451	4796	238	595	20		
443.7399	37.010	37.010	0	1.003	21856	5389	439	1097	12	1.10(0.76-1.02)	M
OCDD											
457.7377	36.926	36.926	0	1.000	36459284	8769313	5359	13397	1636		
459.7348	36.926	36.926	0	1.000	40865689	9751089	4302	10755	2267	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d
Lims ID: 320-76788-A-9-A
Client ID: 11215702-072321-BN-SJSB085 (16-18)
Inject. Date: 14-Aug-2021 15:16:35 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 19

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	53466853	12768897

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	53466853	12768897

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.420	39413	10605	51748	14258	0.1665	0.76	
15.950	31443	6988	28920	8290	0.1103	1.09	RQ
15.950	22268	6383	28920	8290	0.0935		Empc Correction
16.237	43501	10213	48504	11677	0.1681	0.90	RQ
16.237	37348	8991	48504	11677	0.1568		Empc Correction
16.464	51427	13130	58474	15264	0.2007	0.88	
16.706	42120	11992	76710	15769	0.2171	0.55	RQ
16.706	42120	11992	54701	15574	0.1769		Empc Correction
16.978	482147	125379	715455	169722	2.19	0.67	
17.794	90544	20951	145171	23073	0.4306	0.62	RQ
17.794	90544	20951	117589	27209	0.3802		Empc Correction
19.185	98960	18224	115579	23347	0.3919	0.86	
Signal Totals:							
	864227	215655	1190970	285341			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2120116	498882				0.71	RQ
	2055197	500996					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.873 = (2120116 * 100.000) / (53466853 * 1.024)
Empc Amount: 3.754 = (2055197 * 100.000) / (53466853 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Lims ID:	320-76788-A-9-A		
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Inject. Date:	14-Aug-2021 15:16:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	19

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	31808292	7220914

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	31808292	7220914

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.131	44087	12209	58609	15405	0.2574	0.75	
16.373	39424	9059	45135	11646	0.2120	0.87	
16.917	152314	37998	182612	47235	0.8396	0.83	
17.824	64492	17595	84024	22104	0.3723	0.77	Ma
17.961	46273	11093	53033	11564	0.2489	0.87	Ma
18.429	29948	6829	47058	10619	0.1930	0.64	RQ
18.429	29948	6829	38893	8868	0.1726		Empc Correction
Signal Totals:							
	376538	94783	462306	116822			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	847009	213356				0.80	RQMa
	838844	211605					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.123 = (847009 * 100.000) / (31808292 * 1.254)

Empc Amount: 2.103 = (838844 * 100.000) / (31808292 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Lims ID:	320-76788-A-9-A		
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Inject. Date:	14-Aug-2021 15:16:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	19

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	39437281	6555392
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	43670430	6480534

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	41553855	6517963

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.071	22840	4488	18529	2707	0.0957	1.23	RQ
21.071	22840	4488	14735	2895	0.0870		Empc Correction
22.885	15309	2190	11387	1847	0.0618	1.34	
Signal Totals:							
	38149	6678	26122	4742			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	68065	11232				1.28	RQ
	64271	11420					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1575 = (68065 * 100.000) / (41553855 * 1.040)
Empc Amount: 0.1488 = (64271 * 100.000) / (41553855 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Lims ID:	320-76788-A-9-A		
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Inject. Date:	14-Aug-2021 15:16:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	19

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	26787589	3720432

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	26787589	3720432

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	107618	17874	62987	11273	0.6075	1.71	
21.985	247713	46255	160399	27518	1.45	1.54	
22.640	37144	5365	17312	3387	0.1939	2.15	RQM
22.640	26833	5249	17312	3387	0.1572		Empc Correction
23.472	131221	17659	84413	11446	0.7678	1.55	Ma
Signal Totals:							
	513385	87037	325111	53624			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	848807	140777				1.61	RQMa
	838496	140661					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.022 = (848807 * 100.000) / (26787589 * 1.048)

Empc Amount: 2.986 = (838496 * 100.000) / (26787589 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d
Lims ID: 320-76788-A-9-A
Client ID: 11215702-072321-BN-SJSB085 (16-18)
Inject. Date: 14-Aug-2021 15:16:35 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 19

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	37298282	6789716
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	35952814	6410476
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	33797494	7710519
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	30972777	7338948

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	34505341	7062414

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Lims ID:	320-76788-A-9-A		
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Inject. Date:	14-Aug-2021 15:16:35	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	19

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	26242783	7035588
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	30765227	7355924
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	28504005	7195756

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.558	1412050	160032	1131781	123317	8.38	1.25	
30.955	470285	90243	378510	71196	2.79	1.24	
31.168	51978	8866	40828	8280	0.3056	1.27	
Signal Totals:							
	1934313	259141	1551119	202793			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3485432	461934				1.25	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 11.476 = (3485432 * 100.000) / (28504005 * 1.066)

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d
Lims ID: 320-76788-A-9-A
Client ID: 11215702-072321-BN-SJSB085 (16-18)
Inject. Date: 14-Aug-2021 15:16:35 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 19

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	24097094	6711150

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	24097094	6711150

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.009	4627464	1353644	4506906	1331494	34.6	1.03	
Signal Totals:							
	4627464	1353644	4506906	1331494			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9134370	2685138				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 34.640 = (9134370 * 100.000) / (24097094 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.07
Area: 375660
Amount: 2.163513
Amount Units: pg/ul

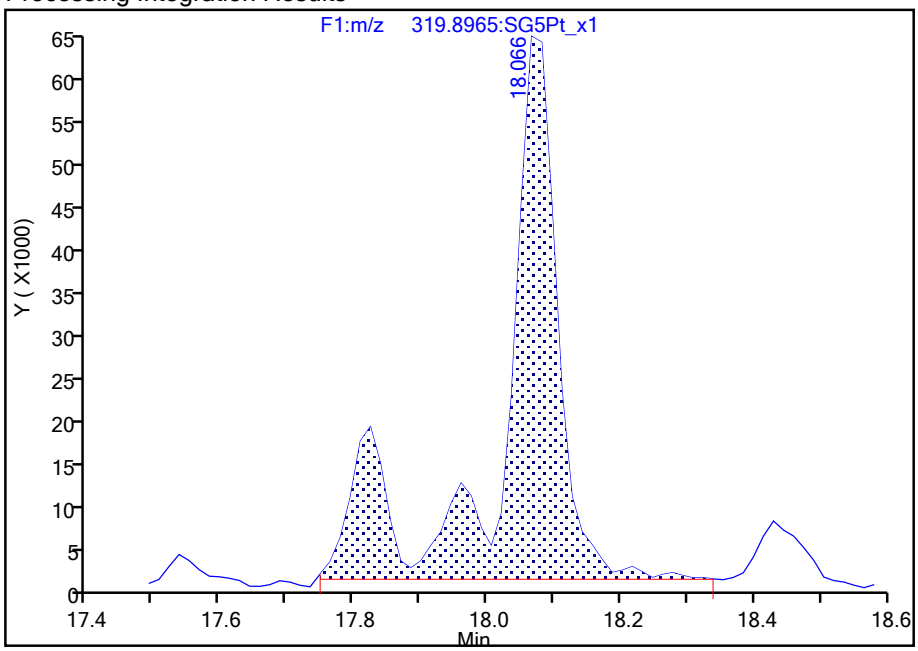

Manual Integration Results

RT: 18.07
Area: 264895
Amount: 1.542269
Amount Units: pg/ul

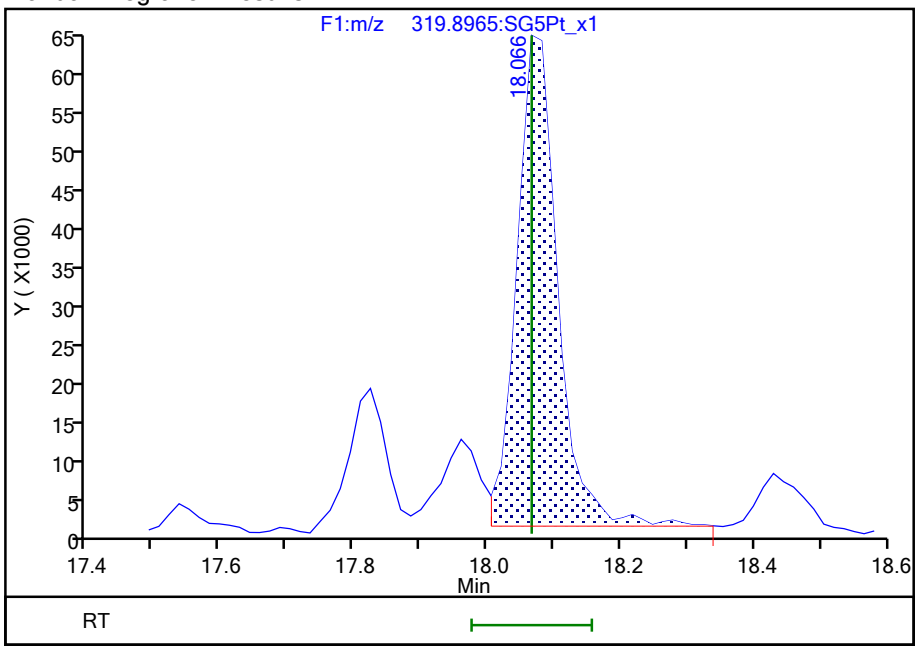

Reviewer: dadunj, 18-Aug-2021 09:37:07

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.07
Area: 487396
Amount: 2.163513
Amount Units: pg/ul

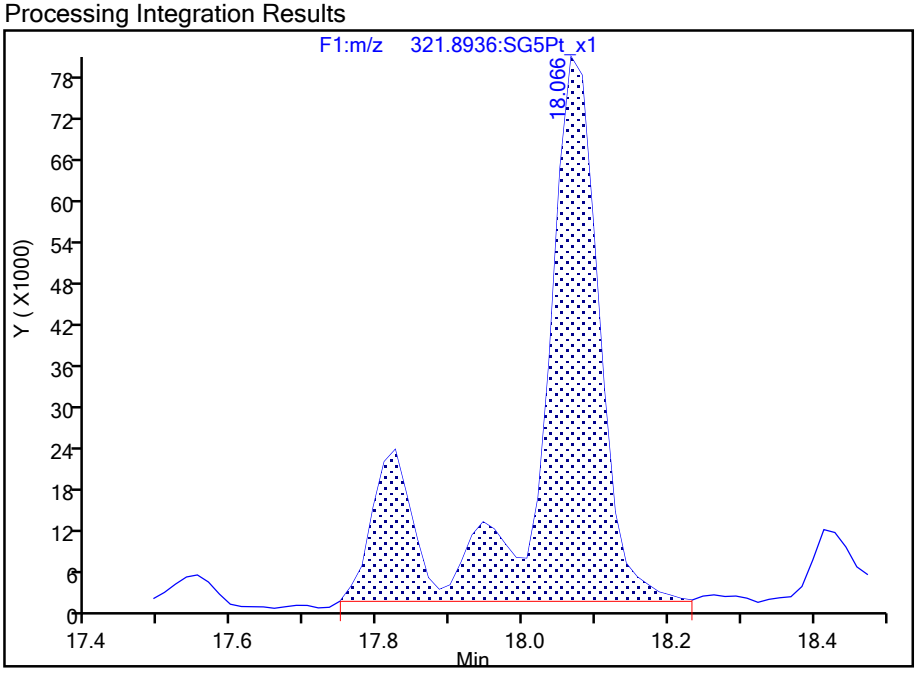

Manual Integration Results

RT: 18.07
Area: 350338
Amount: 1.542269
Amount Units: pg/ul

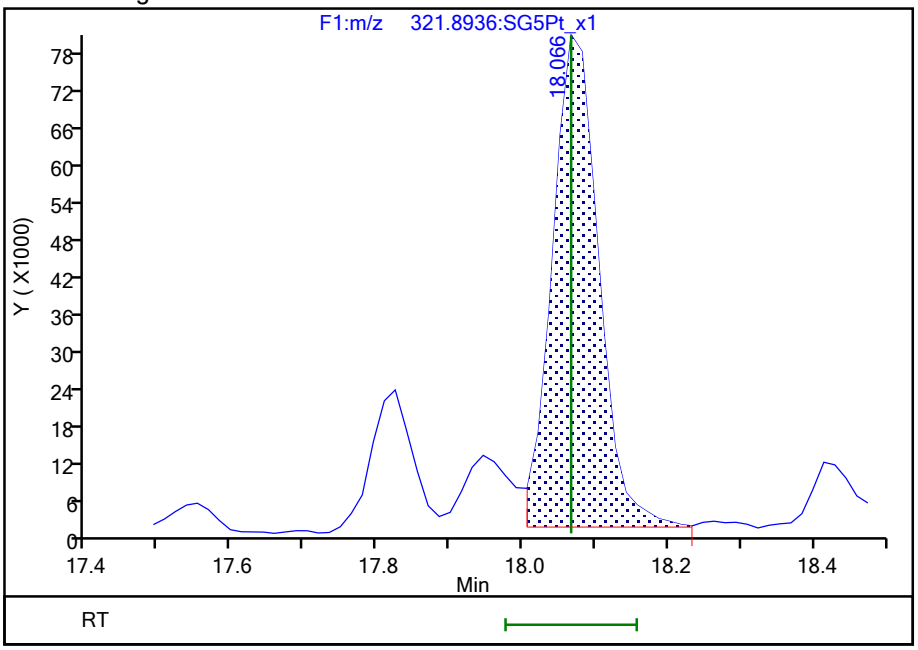

Reviewer: dadunj, 18-Aug-2021 09:37:09

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.80- 19.20)

Signal: 1

Processing Integration Results

Not Detected
RT: 15.80- 19.20

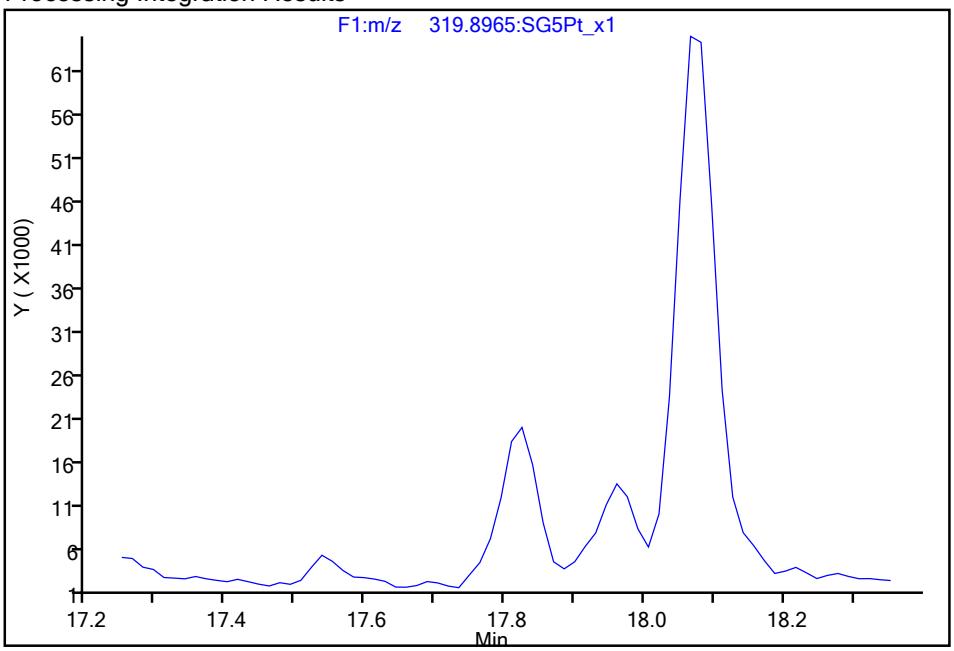

Manual Integration Results

RT = 17.824 Area = 64492 M

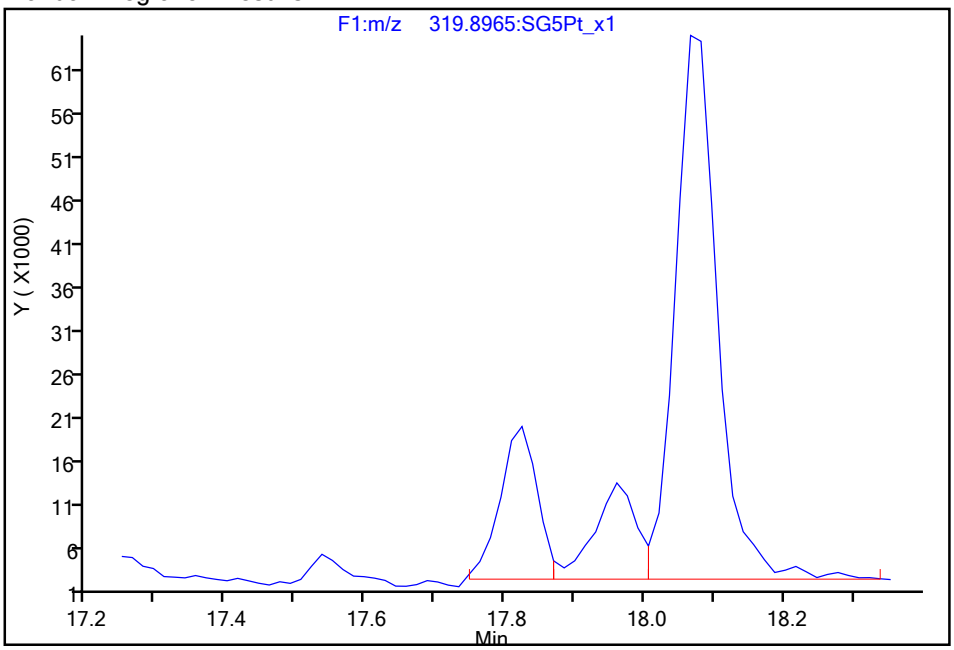

Reviewer: krenns, 18-Aug-2021 07:35:42

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.80- 19.20)

Signal: 1

Processing Integration Results

Not Detected
RT: 15.80- 19.20

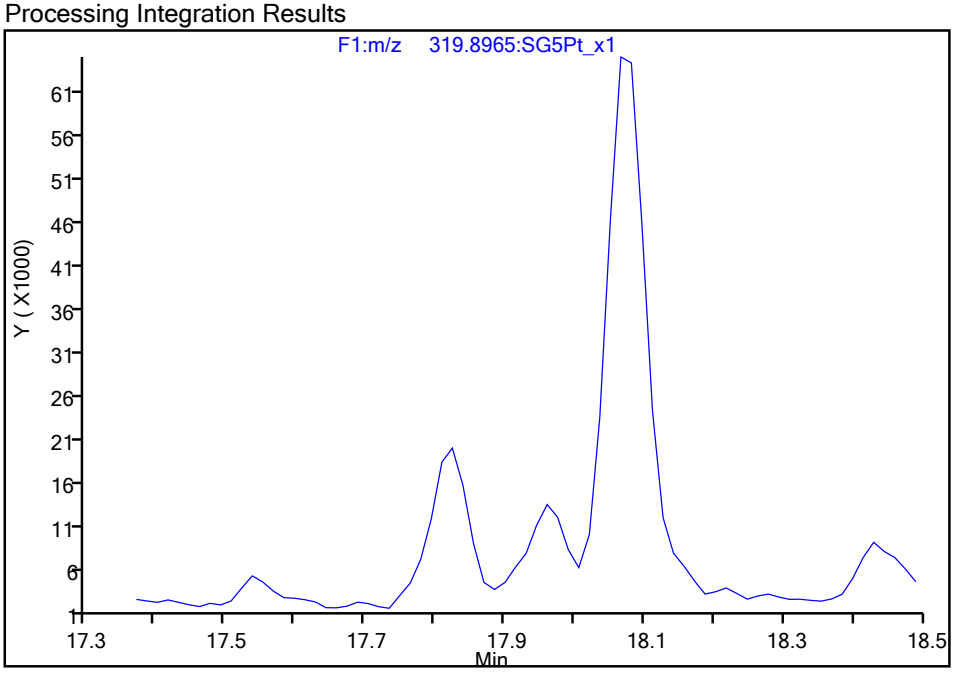

Manual Integration Results

RT = 17.961 Area = 46273 M

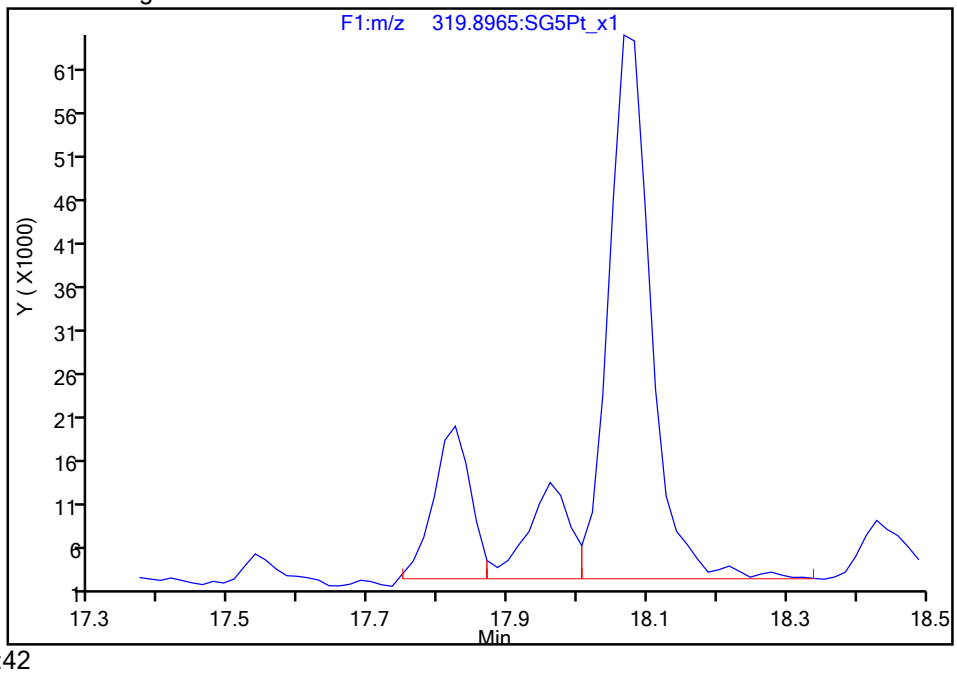

Reviewer: krenns, 18-Aug-2021 07:35:42
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

781094

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Not Detected
Expected RT: 22.38

Processing Integration Results

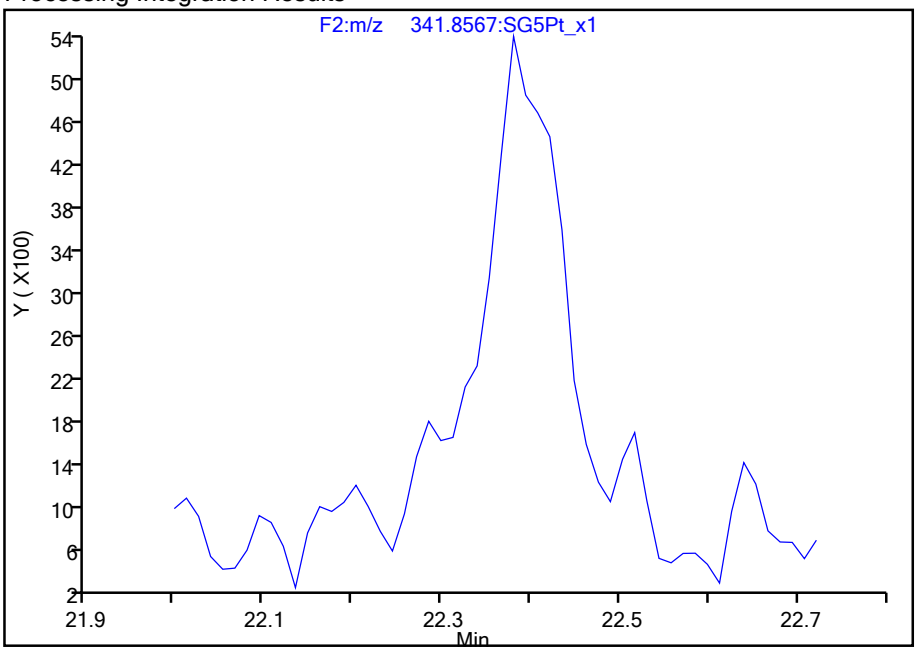

Manual Integration Results

RT: 22.38
Area: 30936
Amount: 0.173082
Amount Units: pg/ul

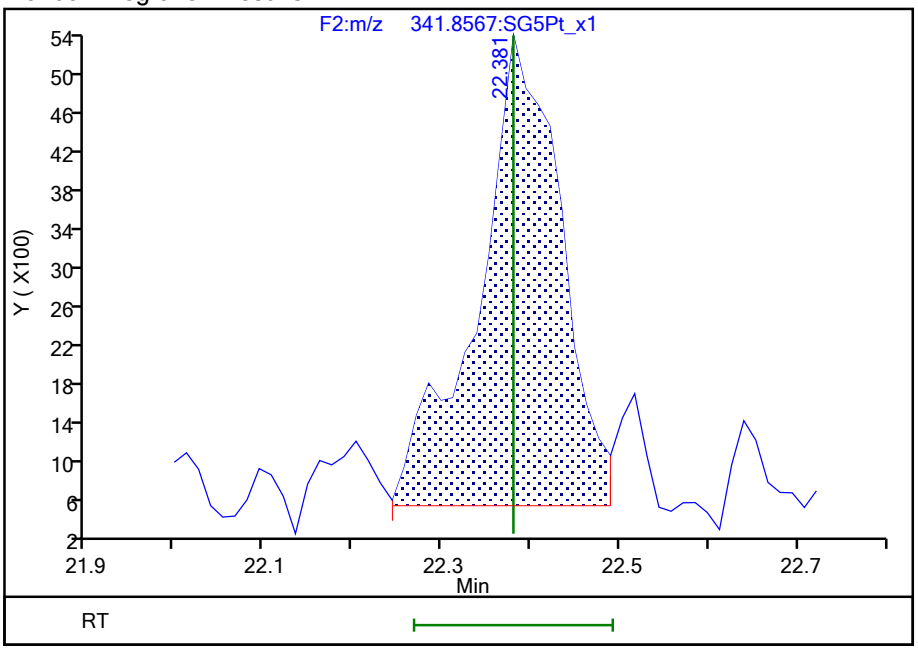

Reviewer: dadunj, 18-Aug-2021 09:37:47
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Not Detected
Expected RT: 22.38

Processing Integration Results

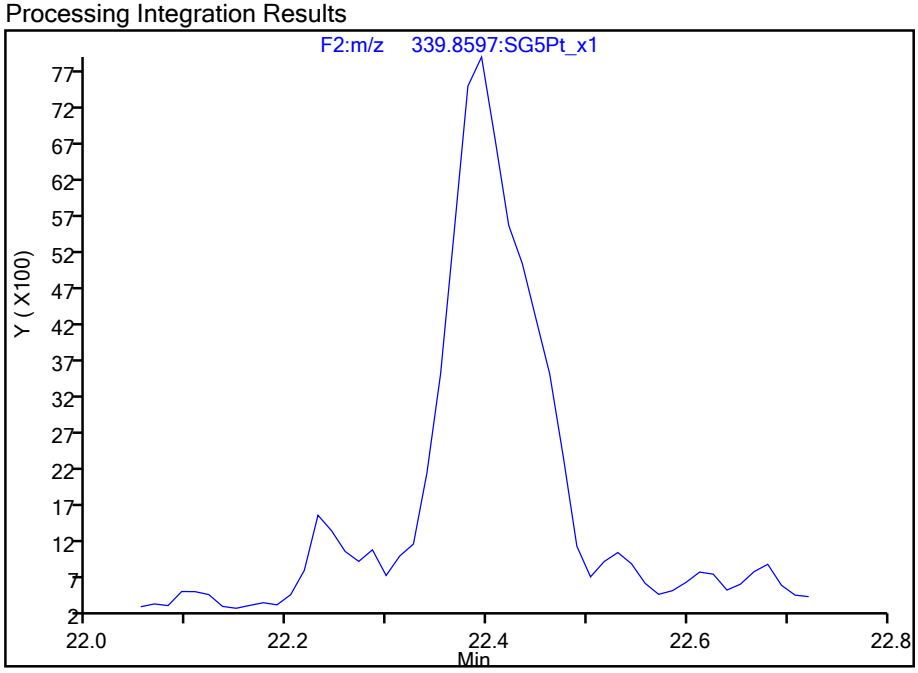

Manual Integration Results

RT: 22.39
Area: 41496
Amount: 0.173082
Amount Units: pg/ul

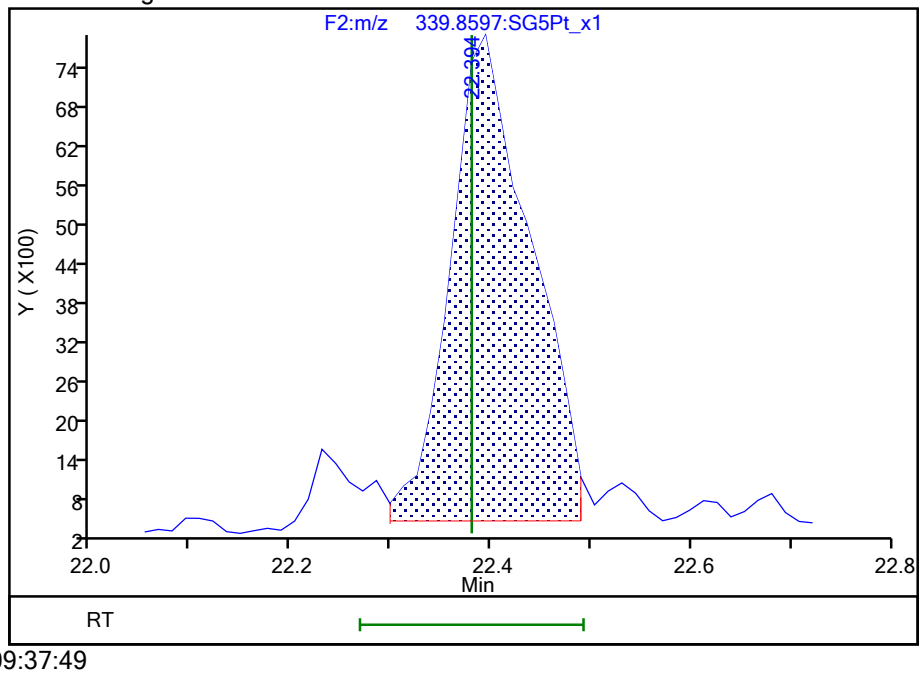

Reviewer: dadunj, 18-Aug-2021 09:37:49
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

781096

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.73
Area: 18696
Amount: 0.098469
Amount Units: pg/ul

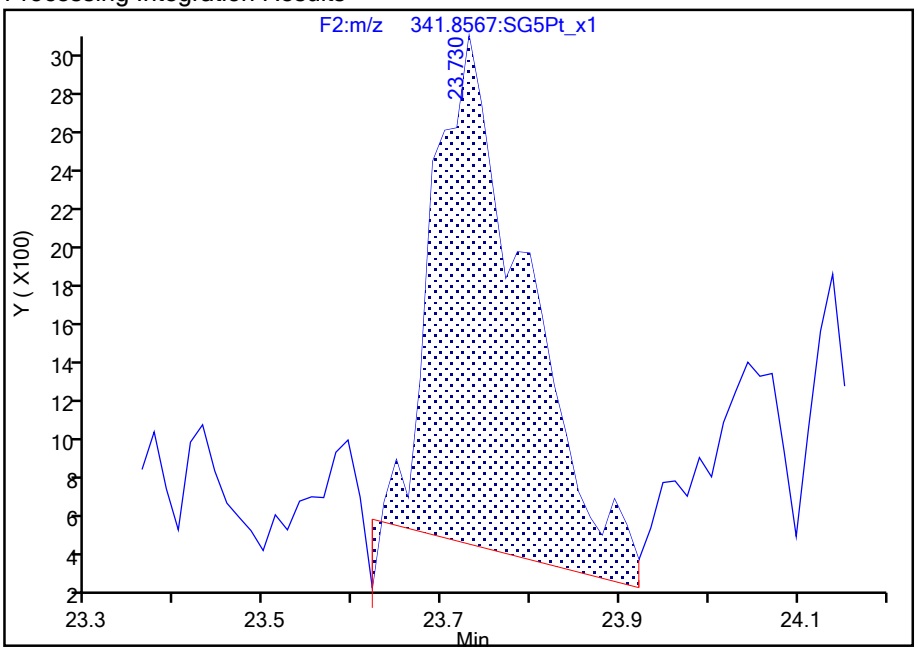

Manual Integration Results

RT: 23.73
Area: 16298
Amount: 0.093078
Amount Units: pg/ul

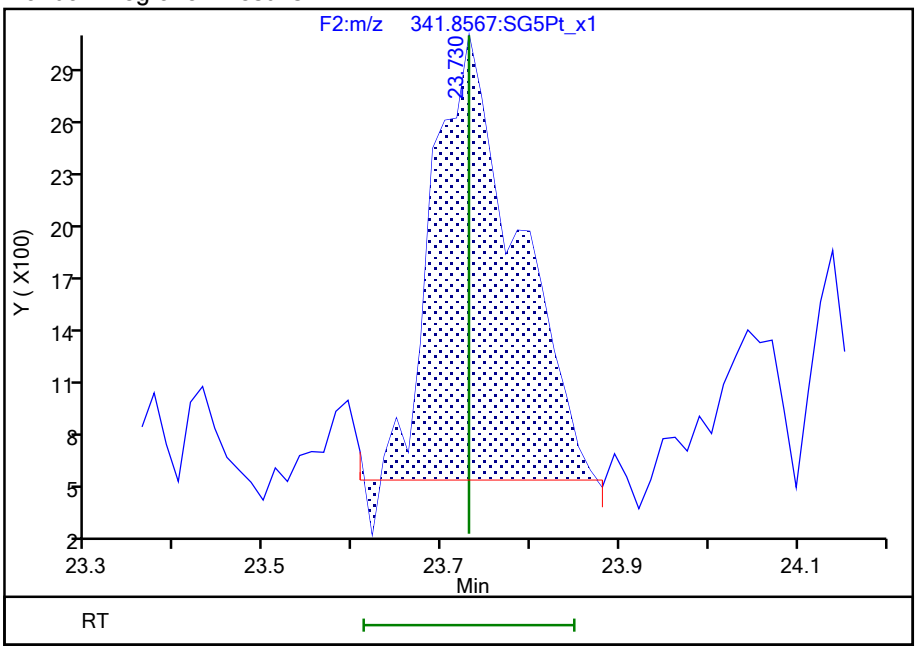

Reviewer: dadunj, 18-Aug-2021 09:37:55

Audit Action: Manually Integrated Audit Reason: Split Peak

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.21- 25.49)

Signal: 1

Processing Integration Results

RT = 22.640 Area = 40662

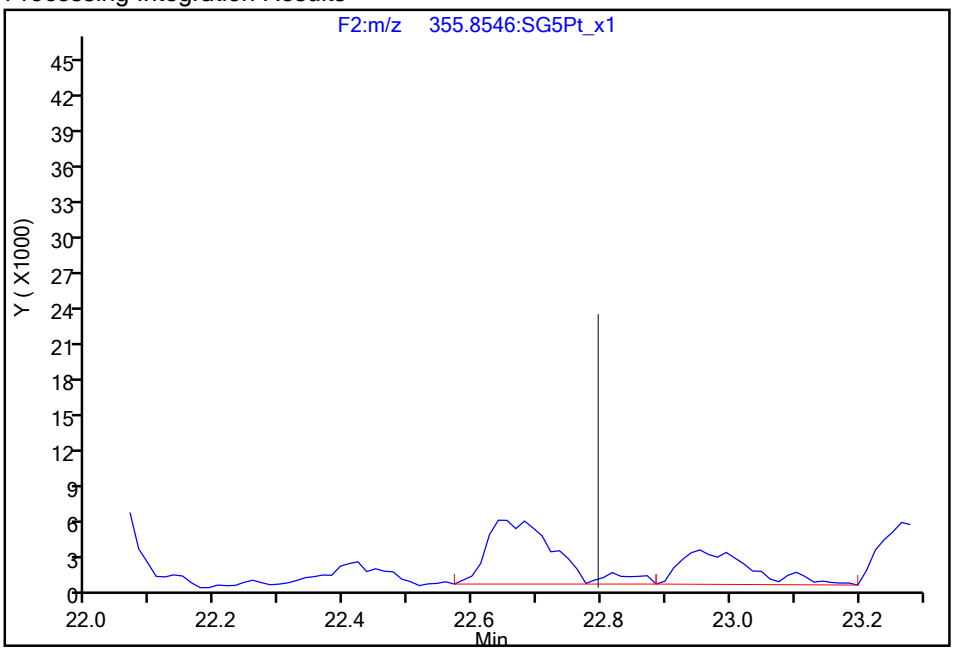

Manual Integration Results

RT = 22.640 Area = 37144 M

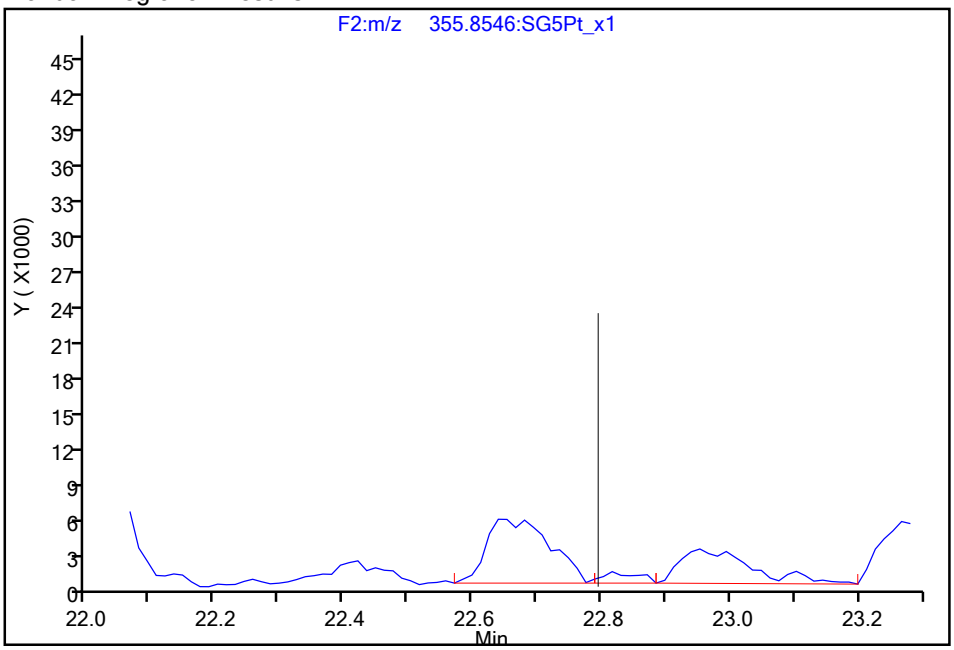

Reviewer: dadunj, 18-Aug-2021 09:38:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.21- 25.49)

Signal: 2

Processing Integration Results

RT = 22.694 Area = 21016

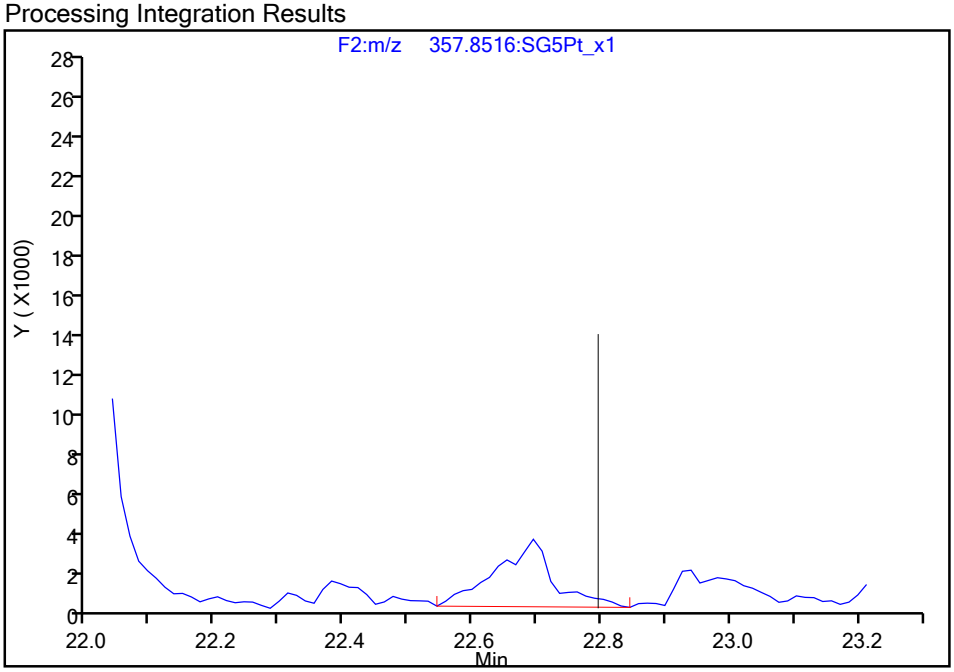

Manual Integration Results

RT = 22.694 Area = 17312 M

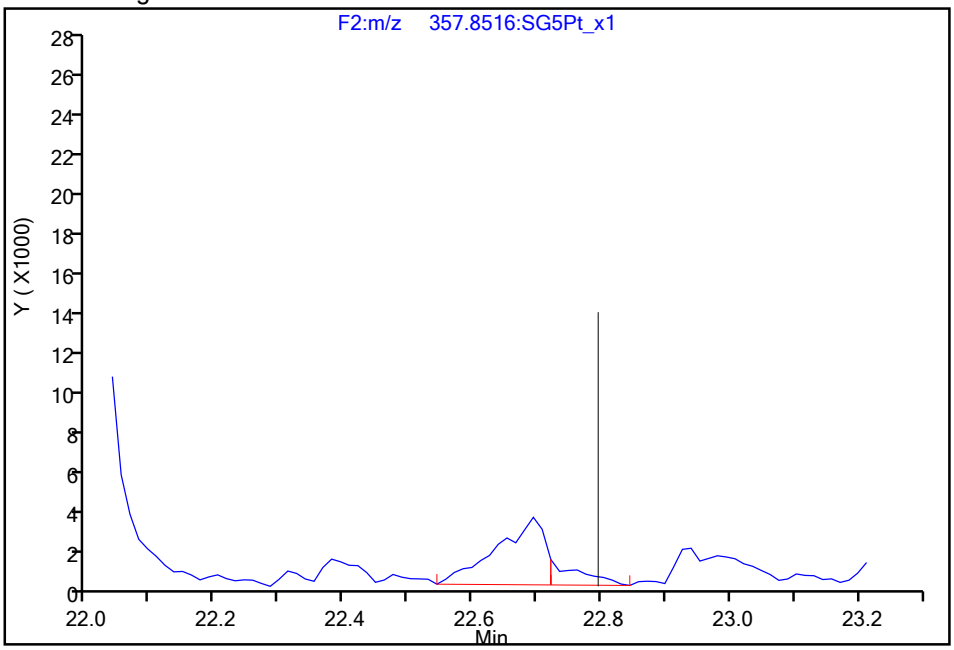

Reviewer: dadunj, 18-Aug-2021 09:38:32

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.21- 25.49)

Signal: 1

Processing Integration Results

RT = 23.472 Area = 148758

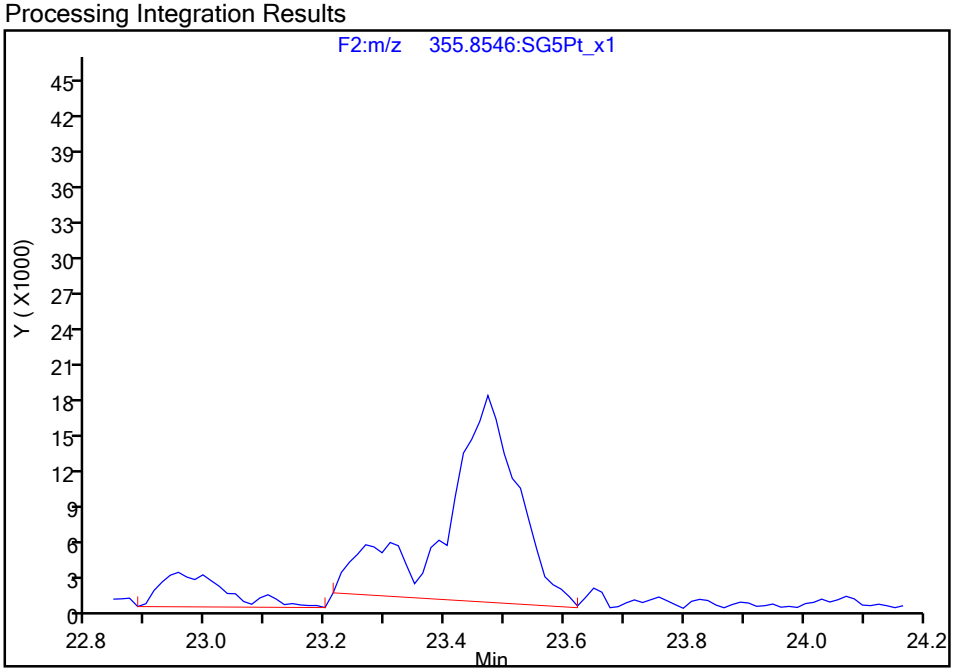

Manual Integration Results

RT = 23.472 Area = 131221 M

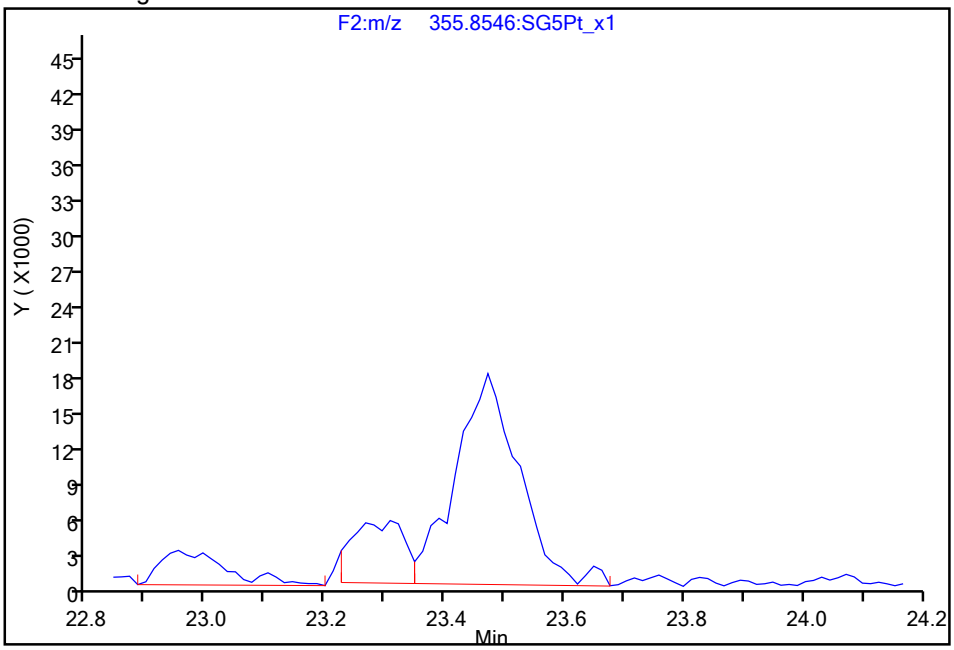

Reviewer: dadunj, 18-Aug-2021 09:38:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.34
Area: 12522
Amount: 0.061016
Amount Units: pg/ul

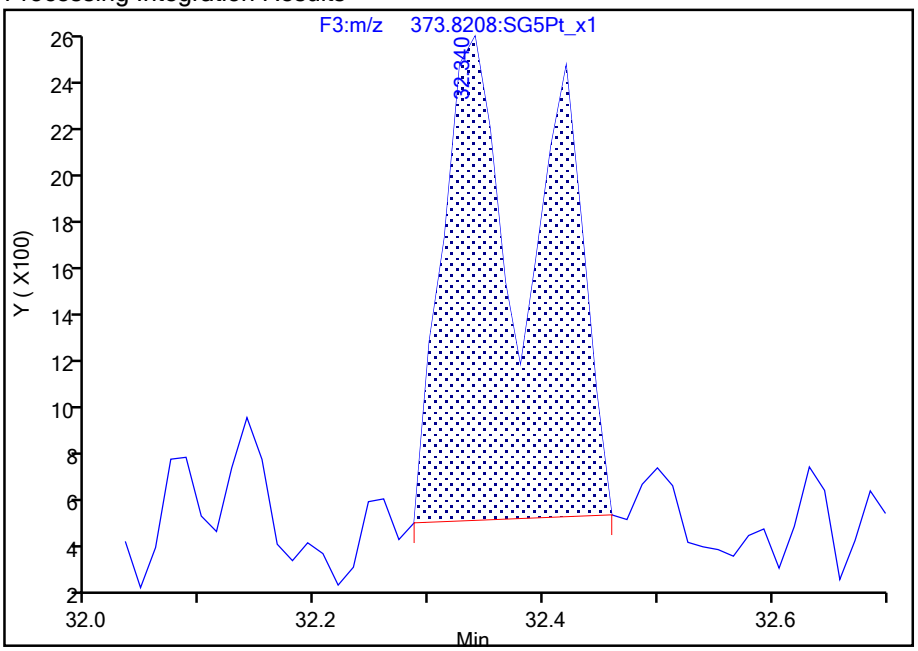

Manual Integration Results

RT: 32.34
Area: 7171
Amount: 0.038167
Amount Units: pg/ul

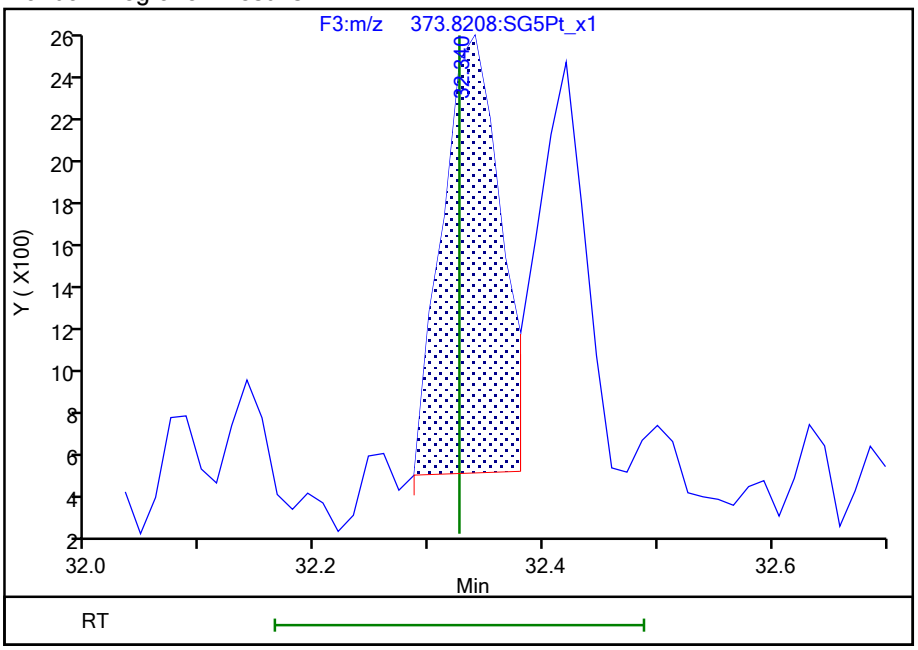

Reviewer: dadunj, 18-Aug-2021 09:38:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.34
Area: 9520
Amount: 0.061016
Amount Units: pg/ul

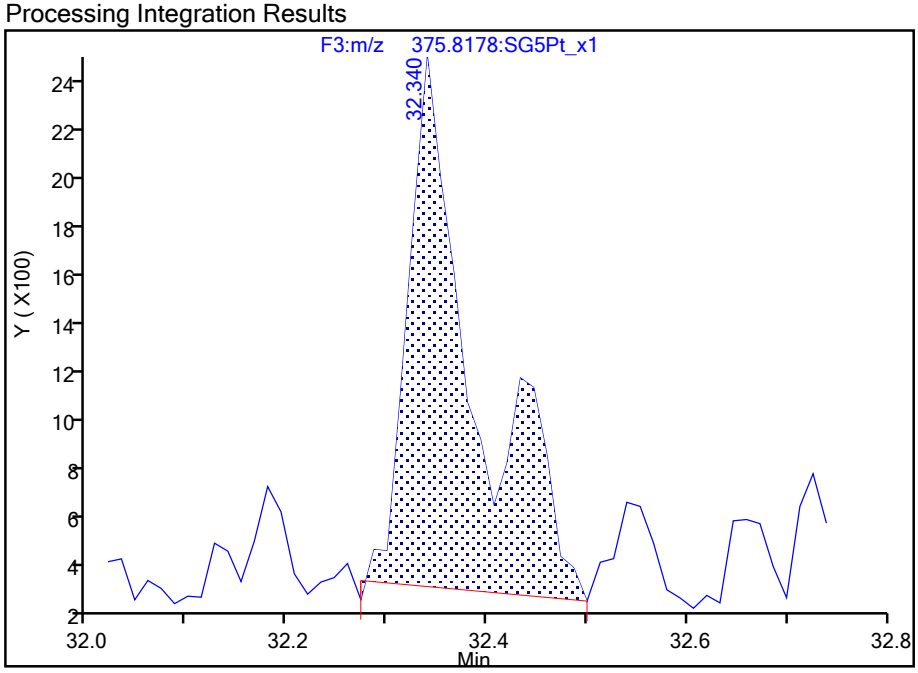

Manual Integration Results

RT: 32.34
Area: 6617
Amount: 0.038167
Amount Units: pg/ul

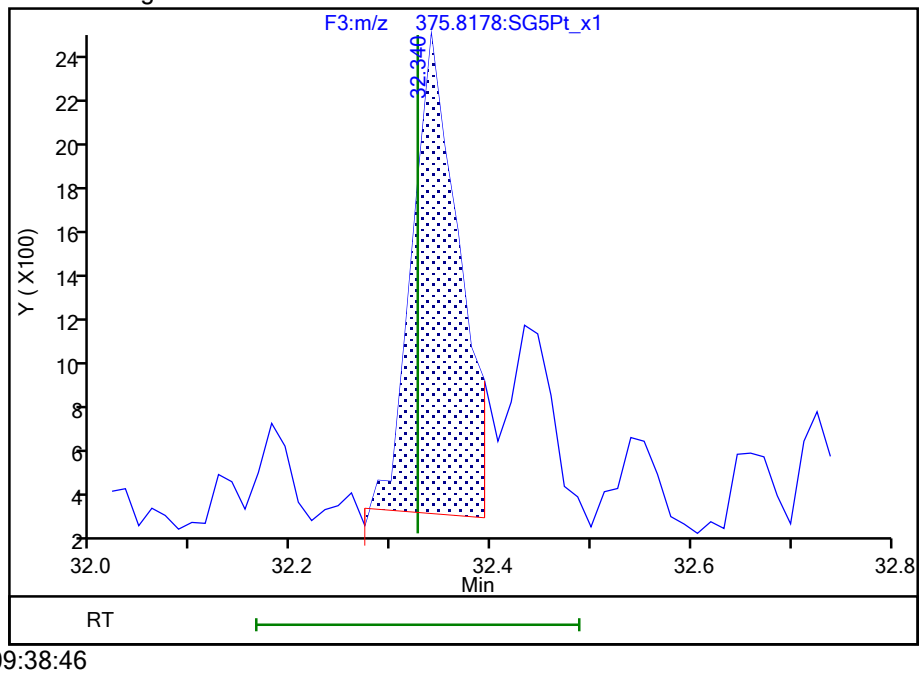

Reviewer: dadunj, 18-Aug-2021 09:38:46

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.77
Area: 24576
Amount: 0.101515
Amount Units: pg/ul

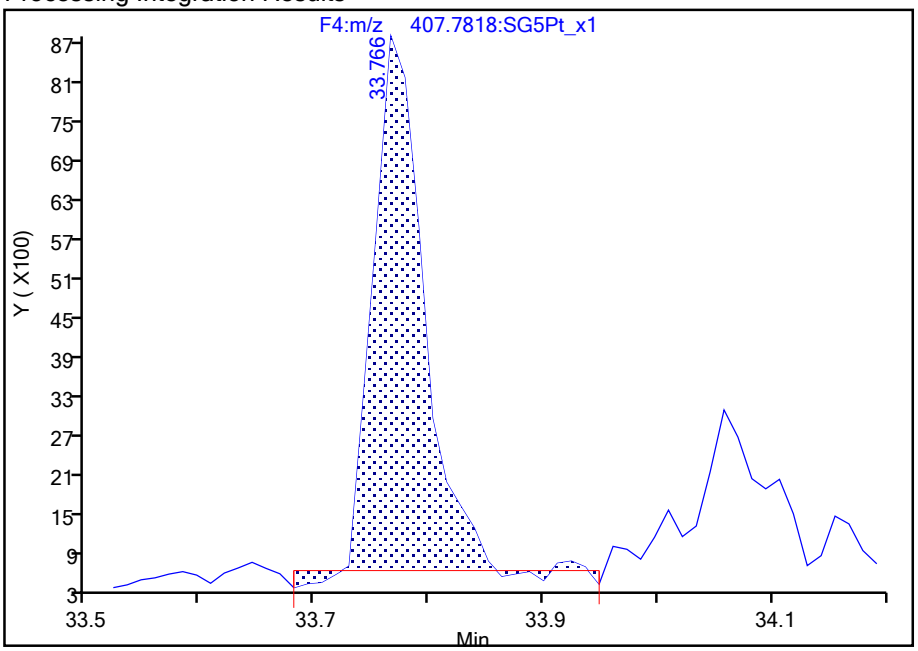

Manual Integration Results

RT: 33.77
Area: 24964
Amount: 0.102462
Amount Units: pg/ul

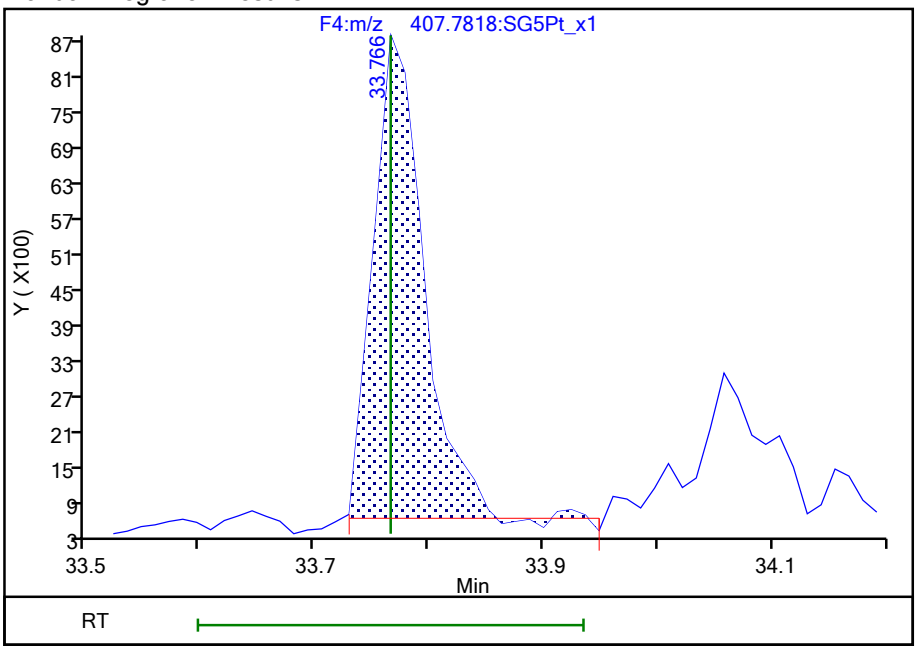

Reviewer: dadunj, 18-Aug-2021 09:38:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.01
Area: 34329
Amount: 0.269067
Amount Units: pg/ul

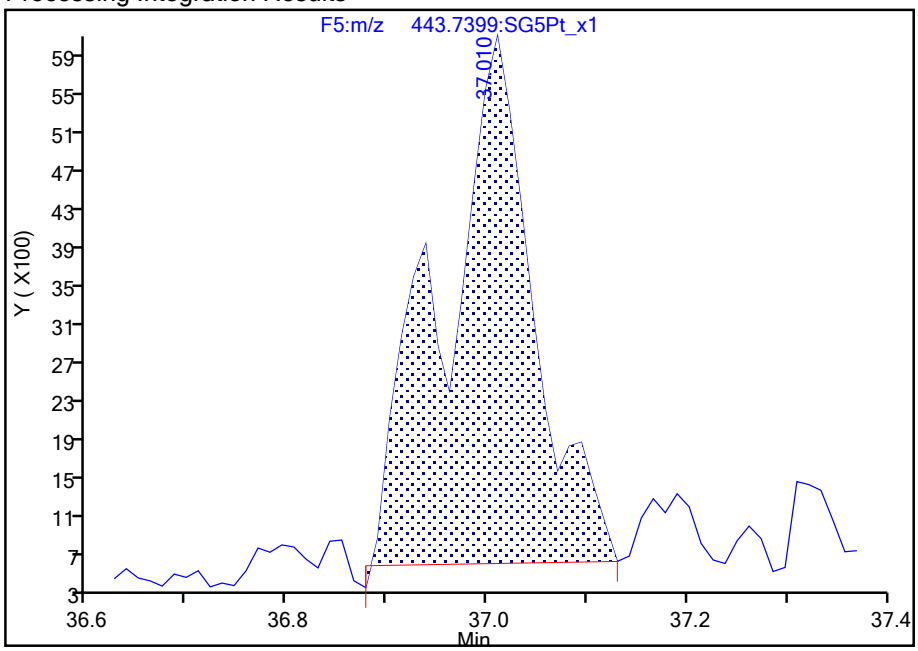

Manual Integration Results

RT: 37.01
Area: 21856
Amount: 0.172159
Amount Units: pg/ul

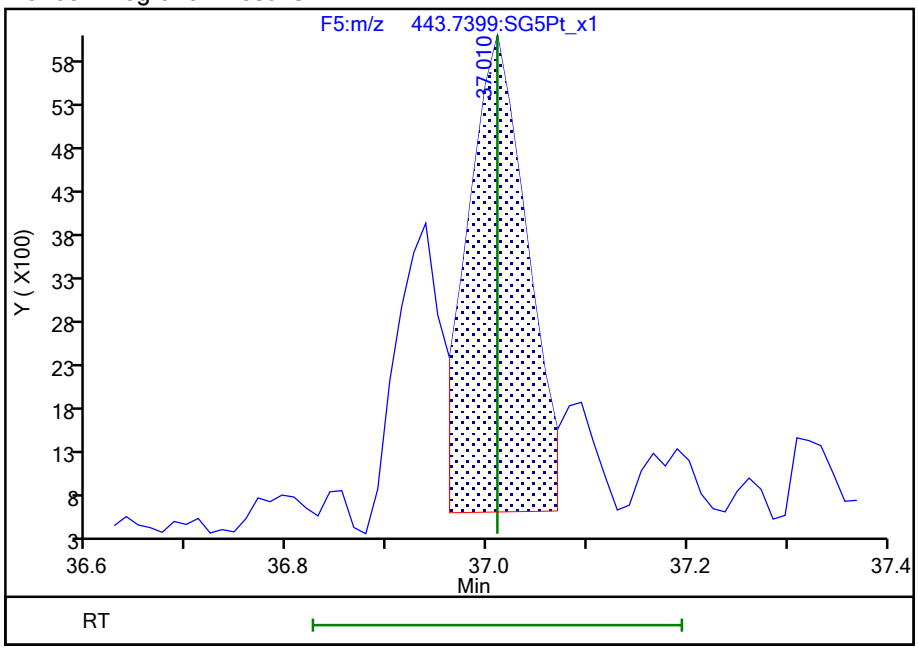

Reviewer: dadunj, 18-Aug-2021 09:39:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d				
Injection Date:	14-Aug-2021 15:16:35	Instrument ID:	10D5		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:	DB	ALS Bottle#:	30	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 37.01
Area: 37250
Amount: 0.269067
Amount Units: pg/ul

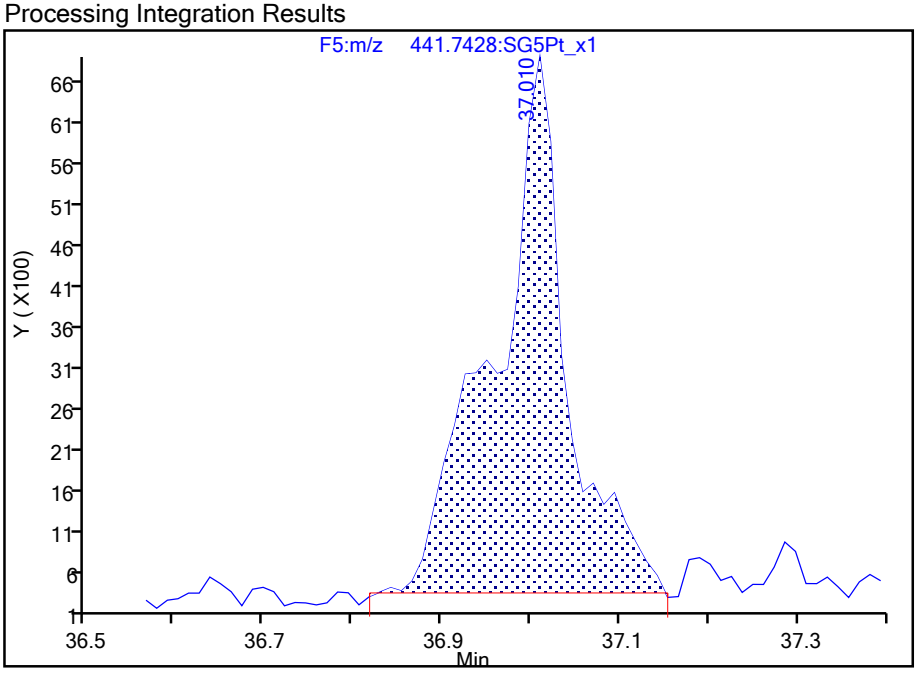

Manual Integration Results

RT: 37.01
Area: 23943
Amount: 0.172159
Amount Units: pg/ul

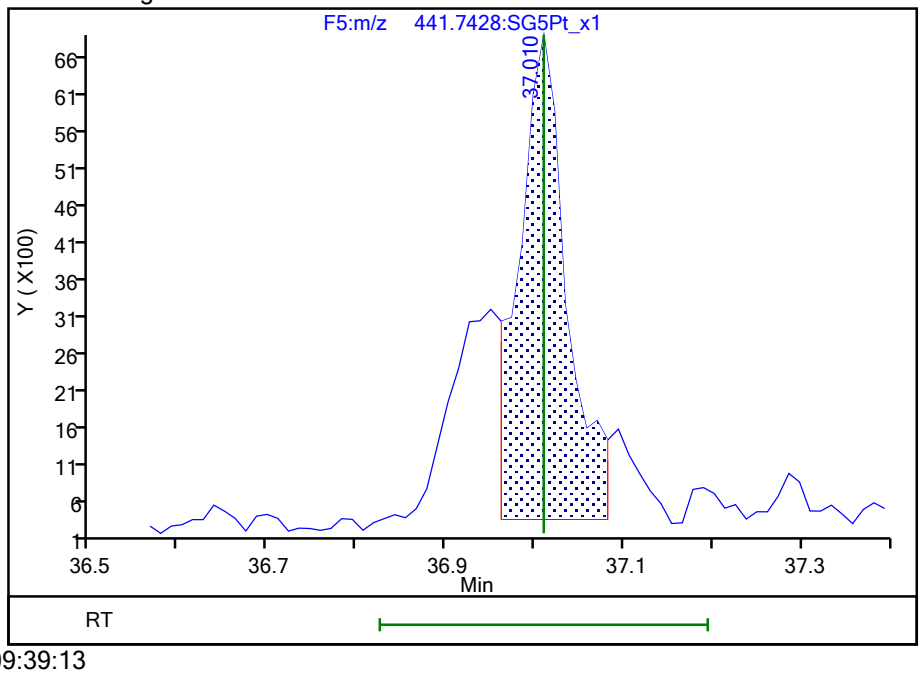

Reviewer: dadunj, 18-Aug-2021 09:39:13
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

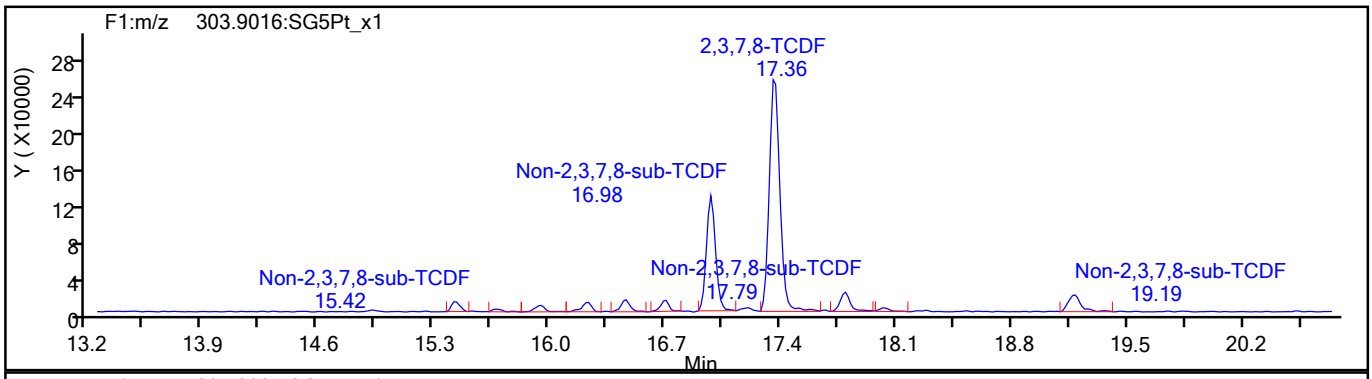

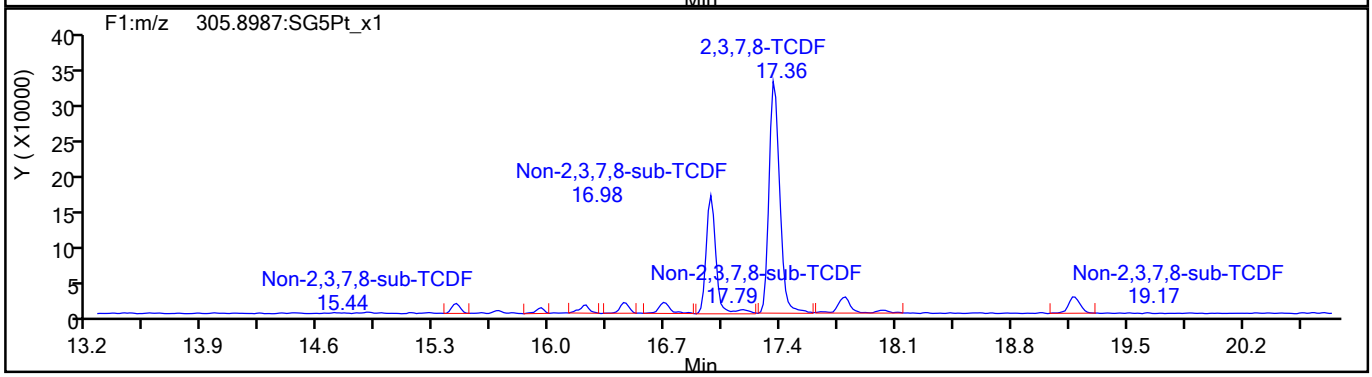

TCDF Standards

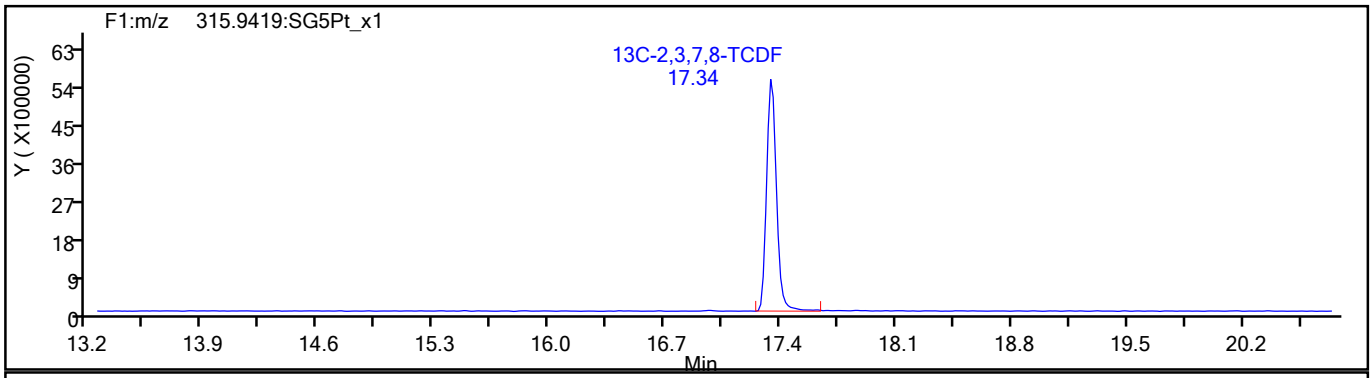

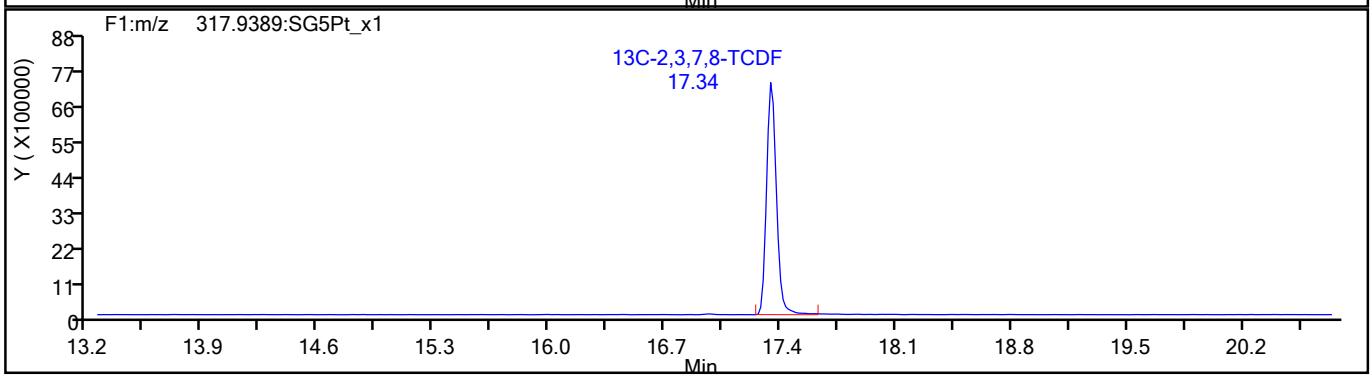

781106

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

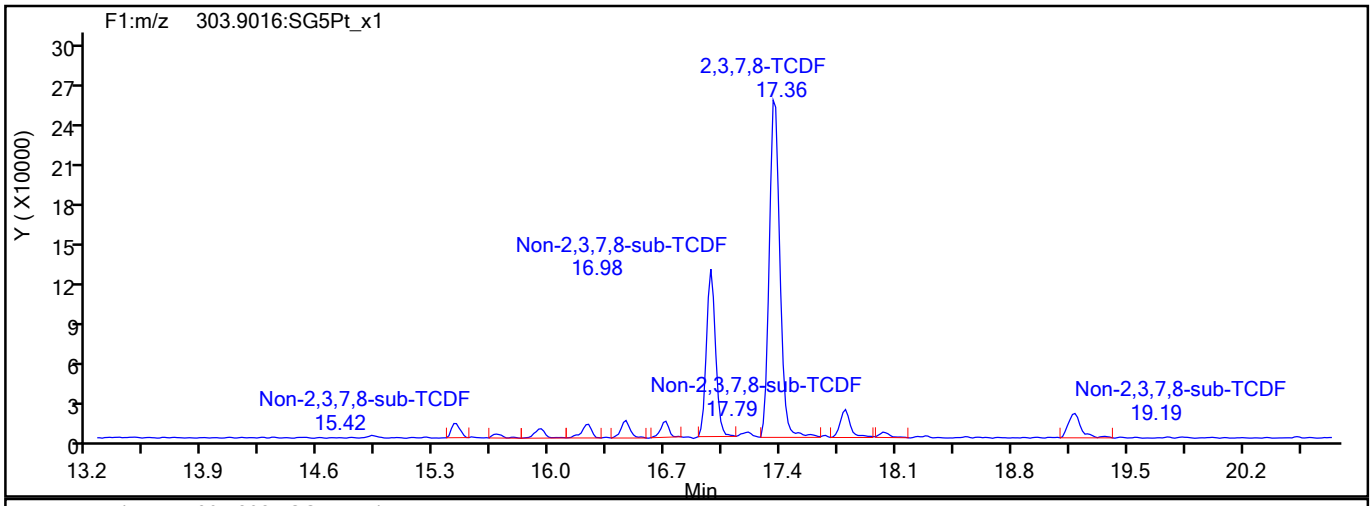

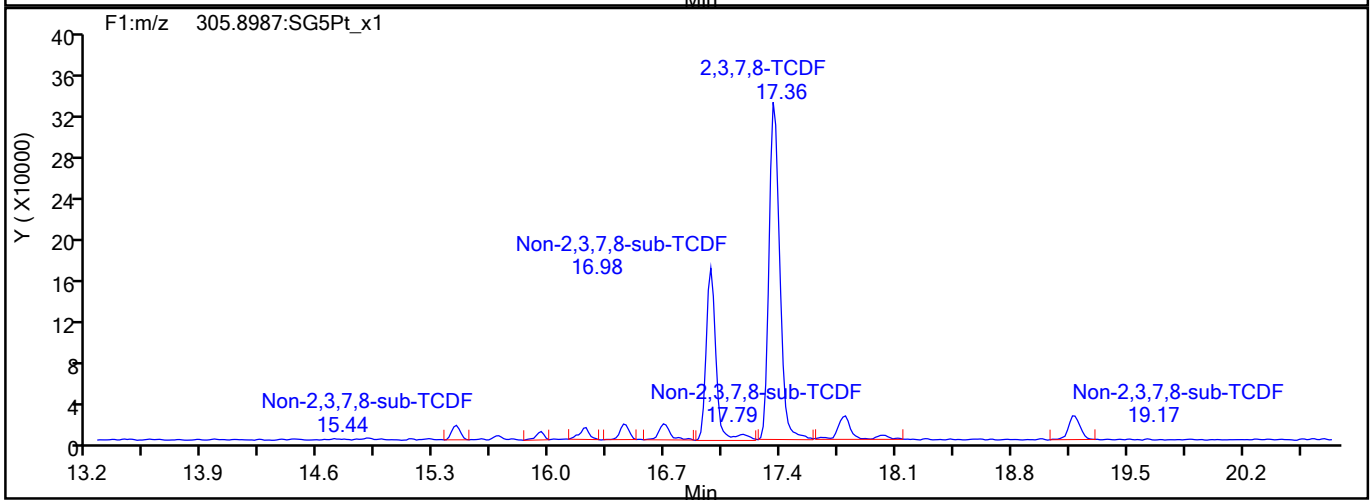

TCDF Interference Mass

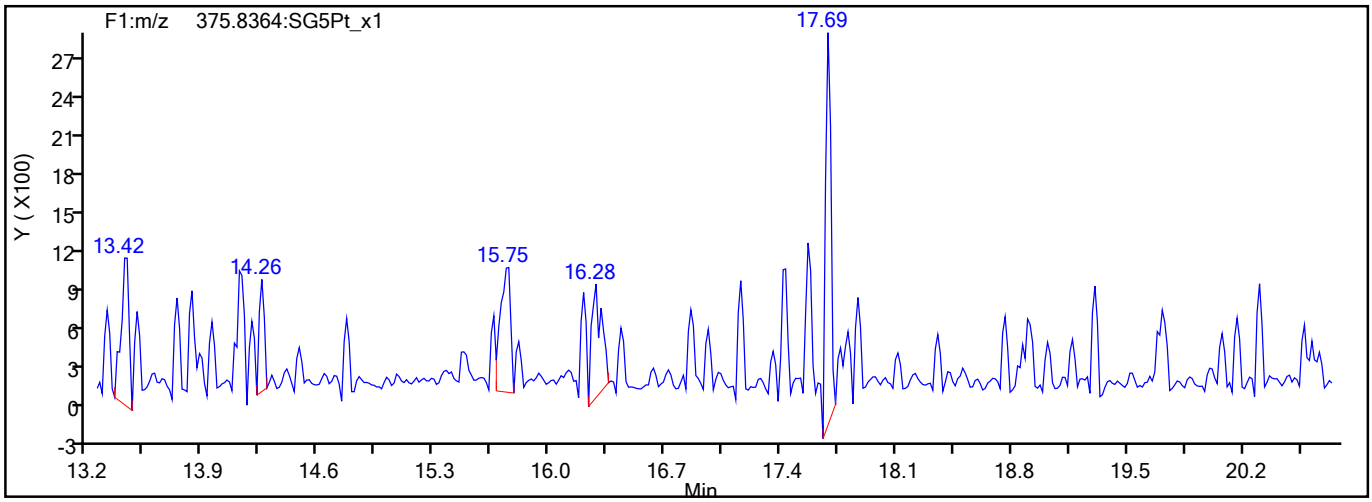

781107

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

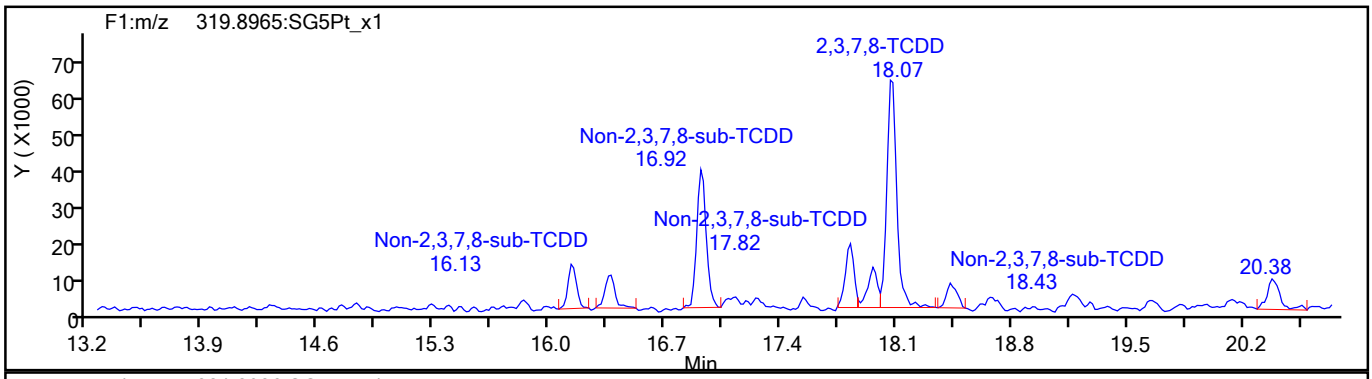

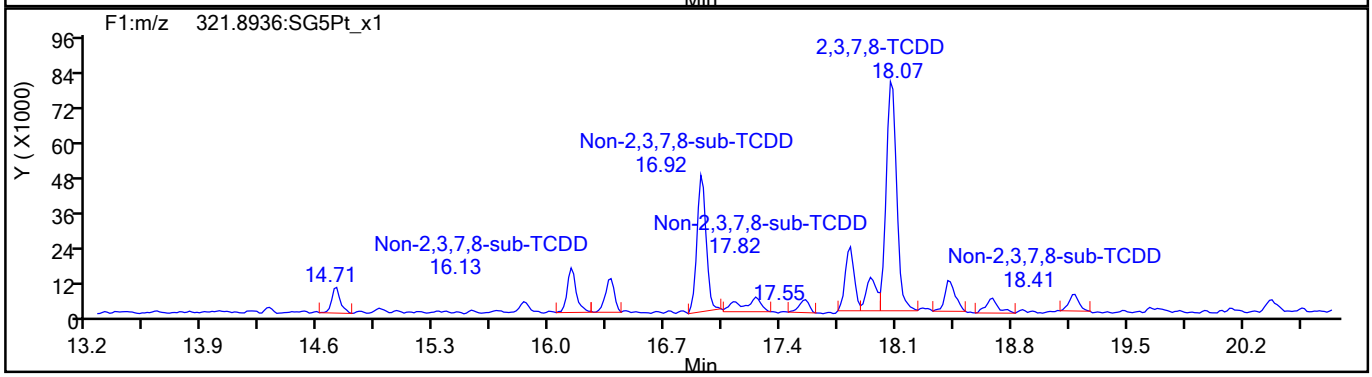

TCDD Standards

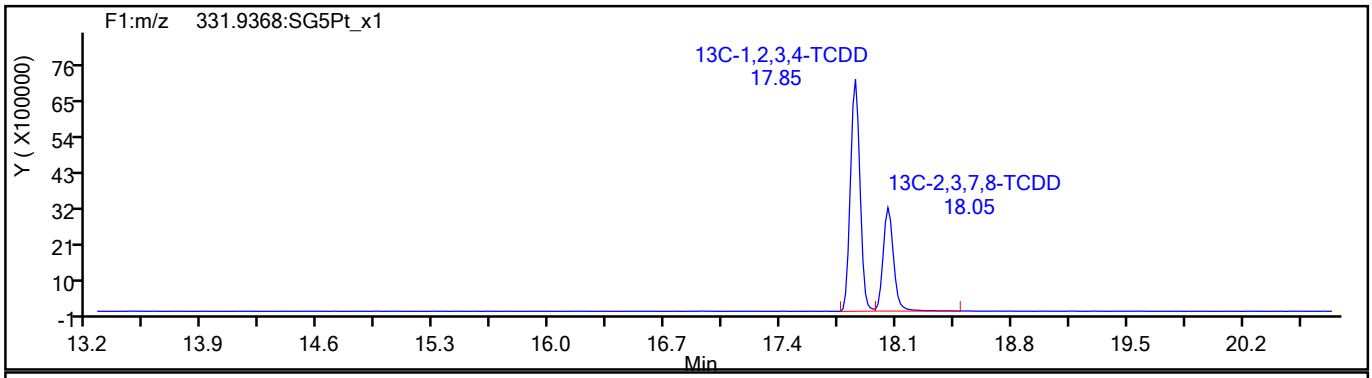

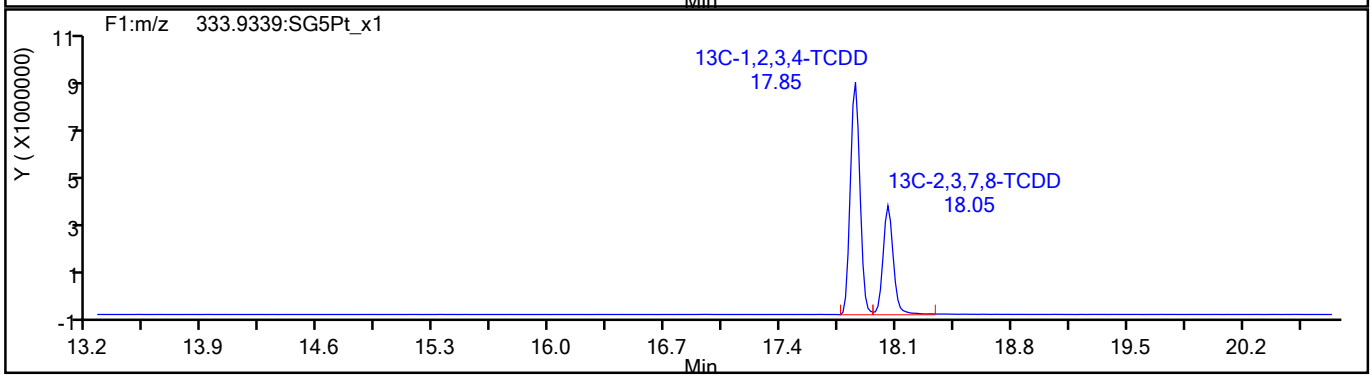

781108

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

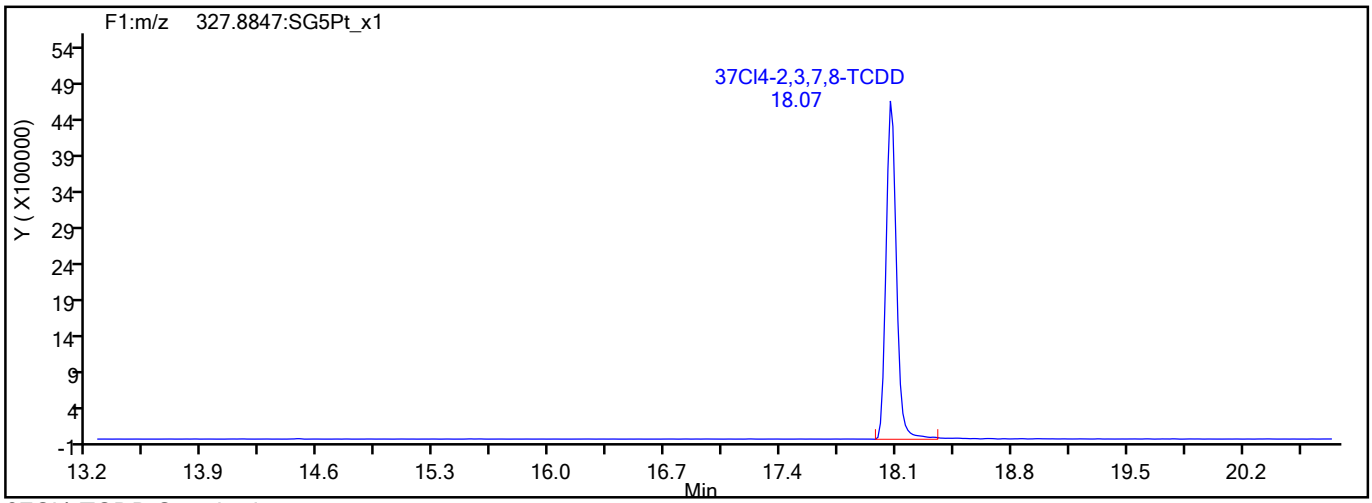

37Cl4-TCDD Standards

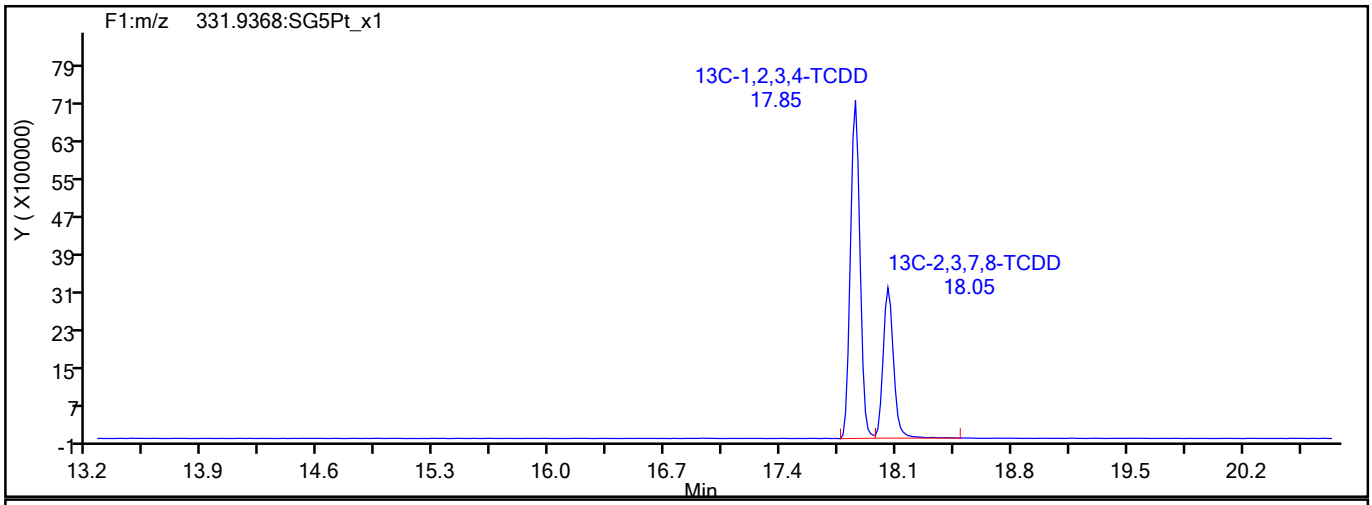

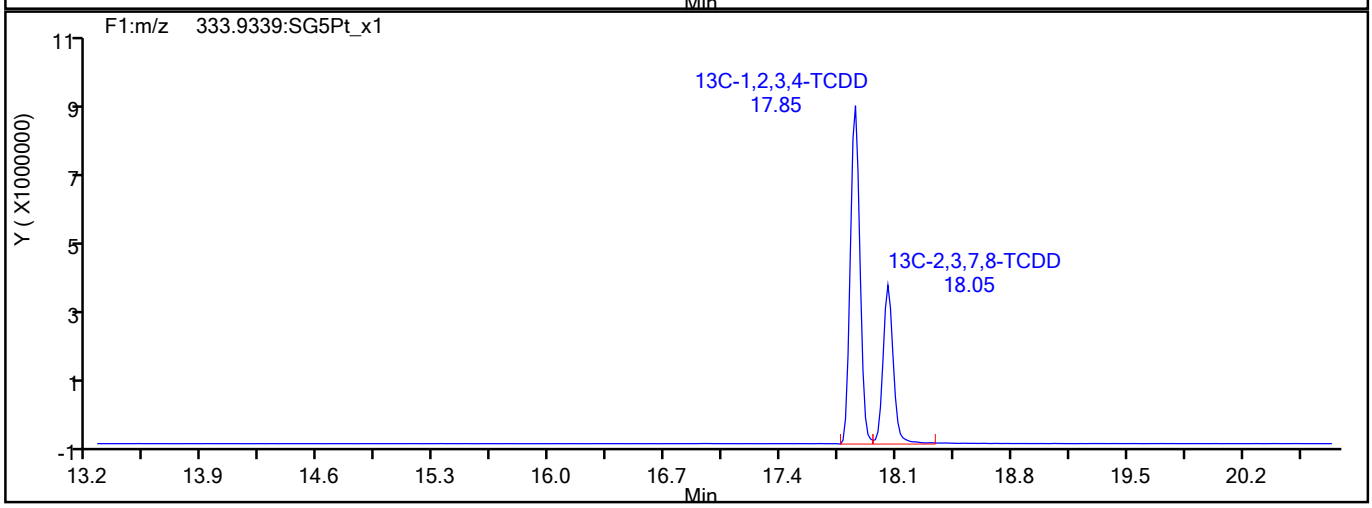

781109

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

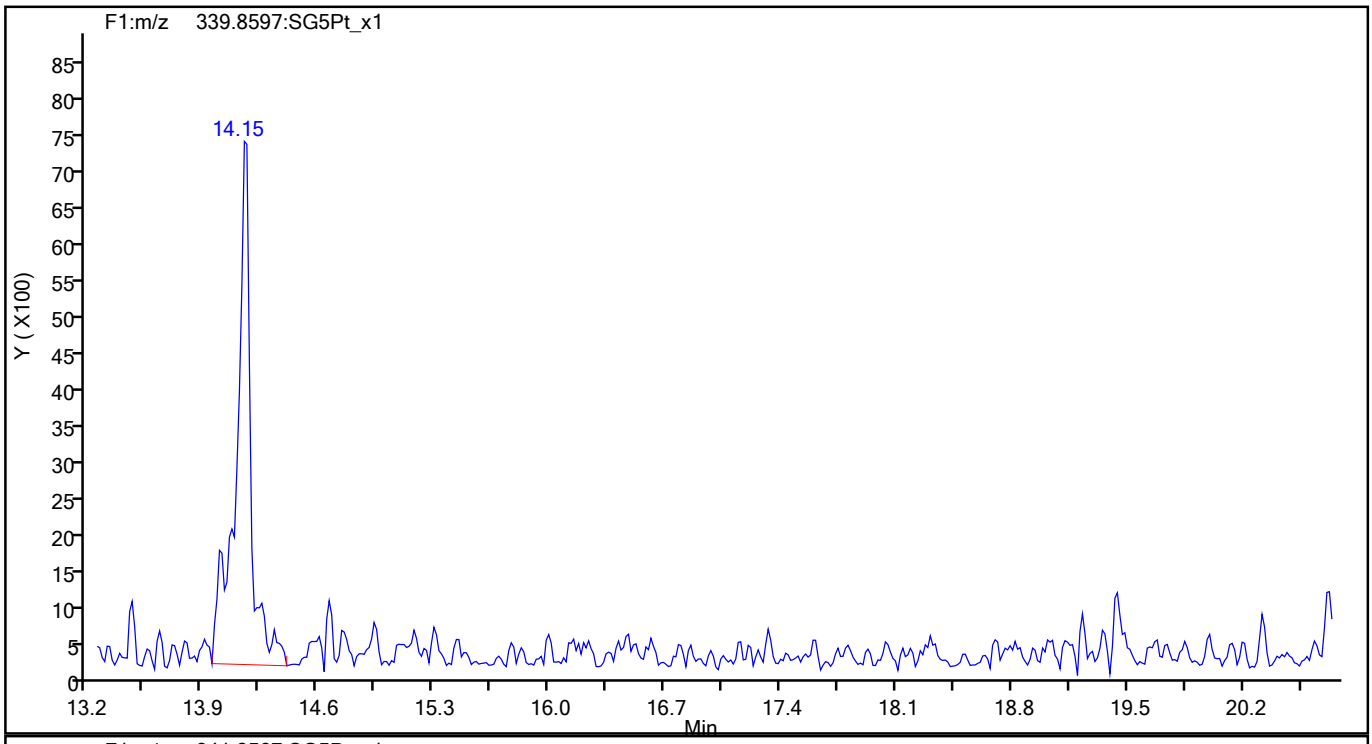

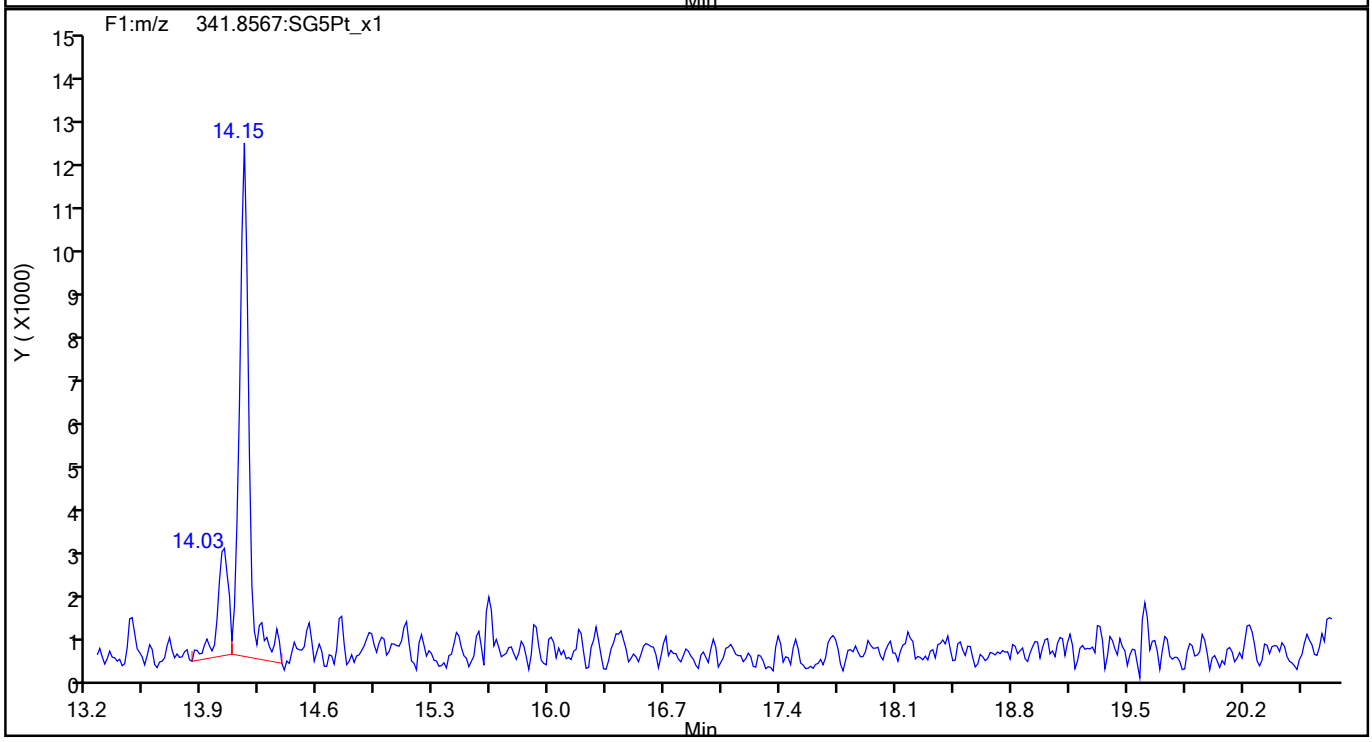

781110

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

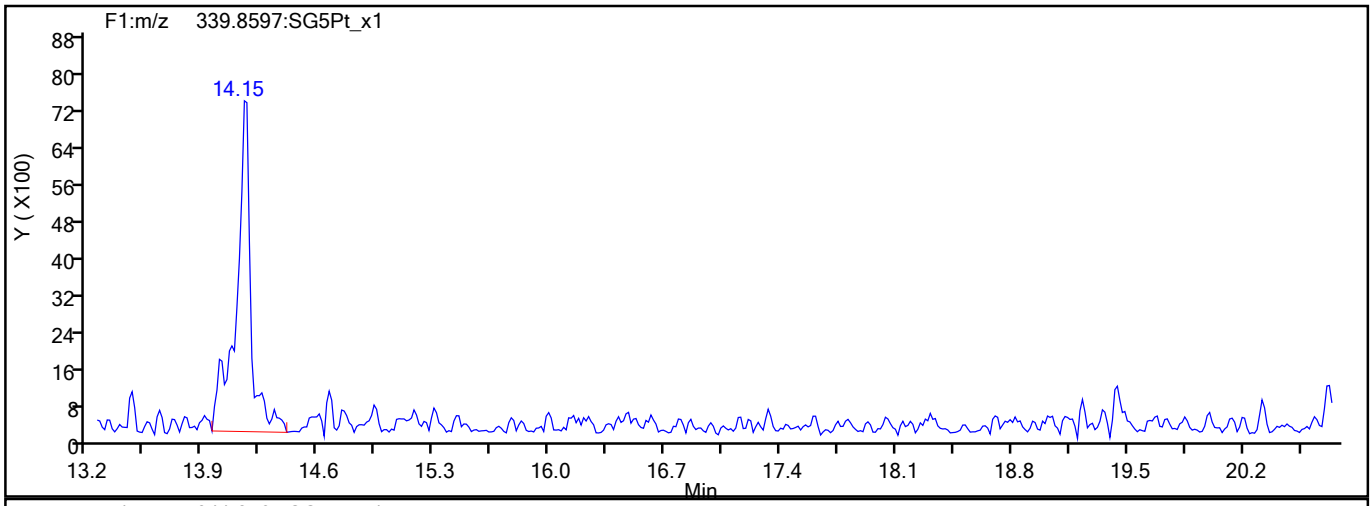

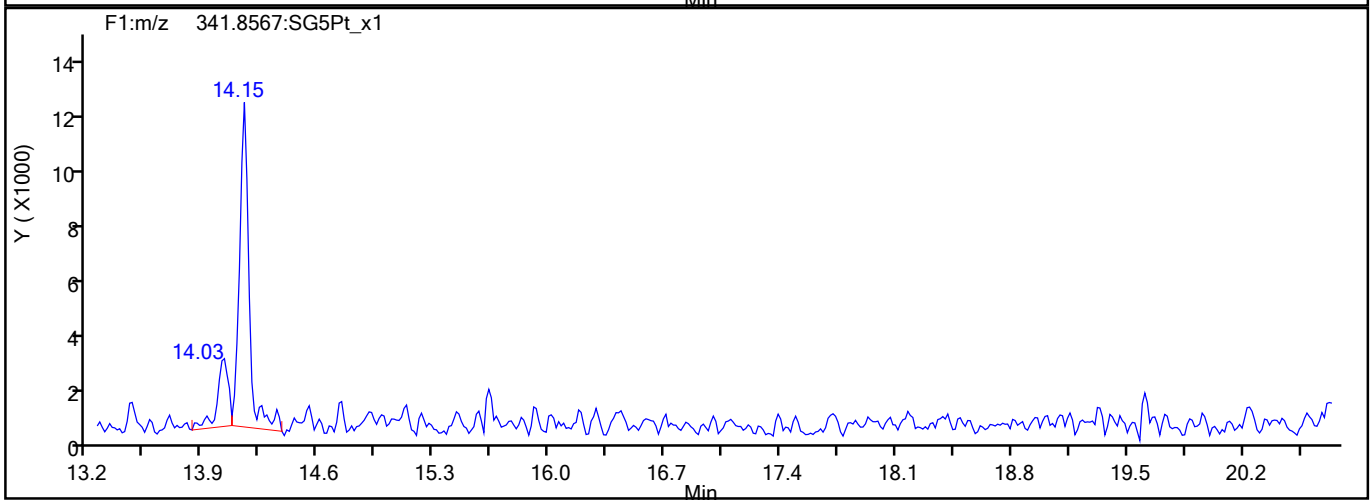

F1 PeCDFs Interference Mass

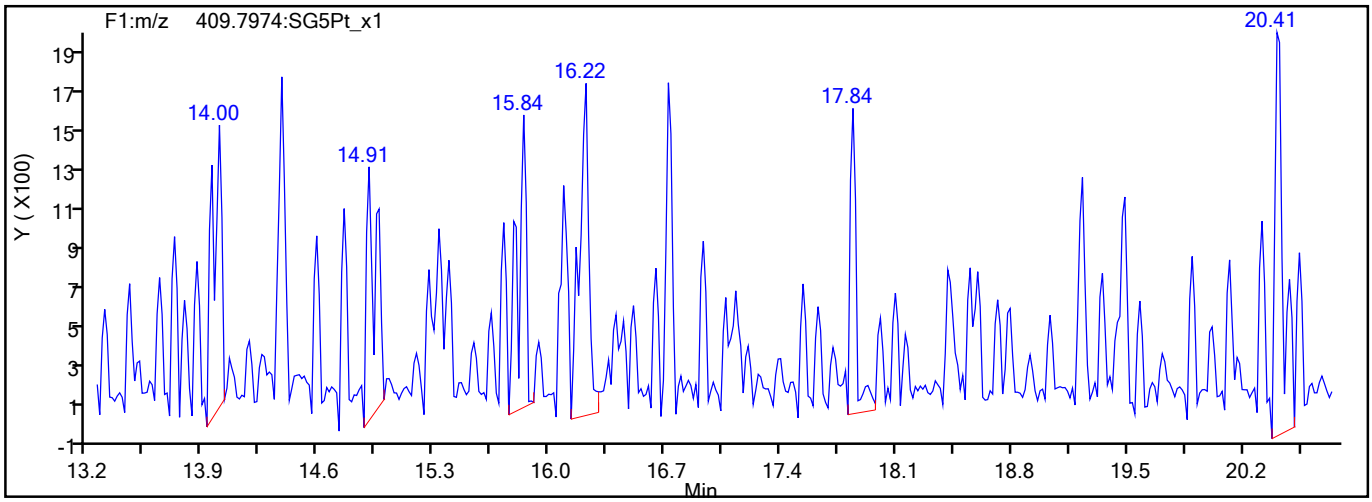

781111

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

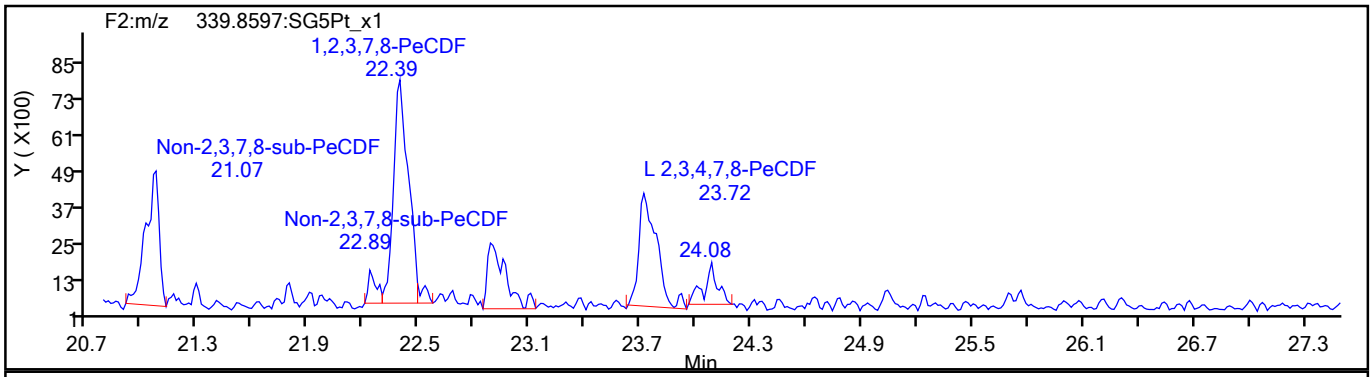

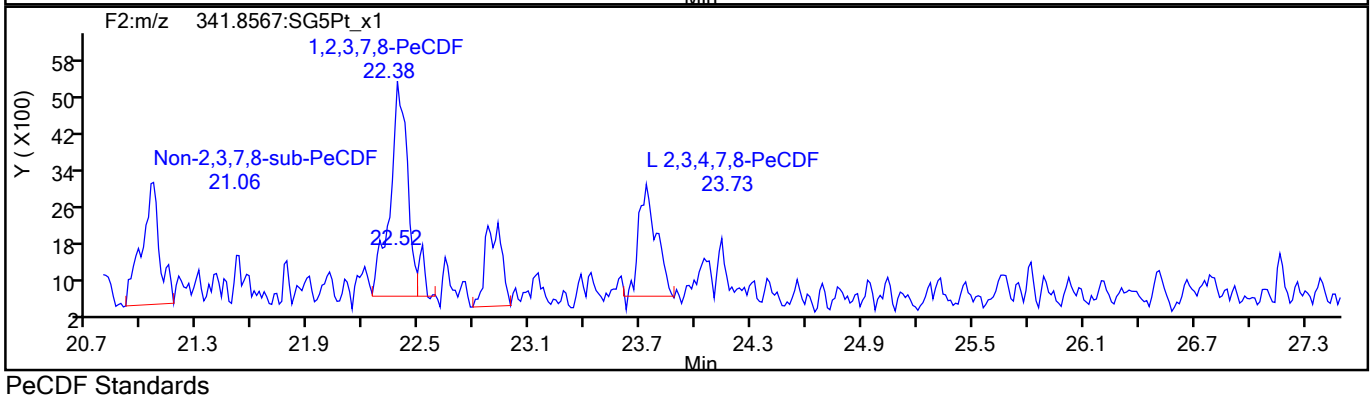

PeCDF Standards

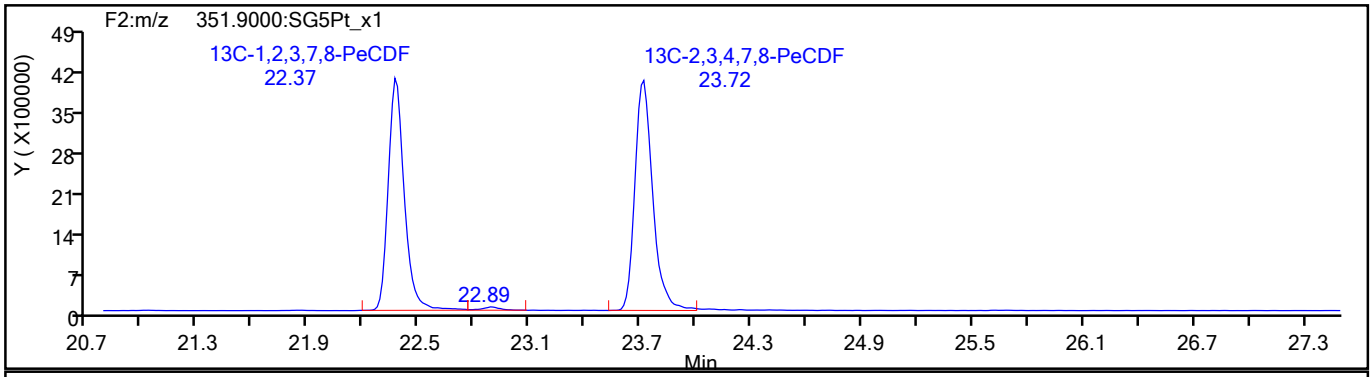

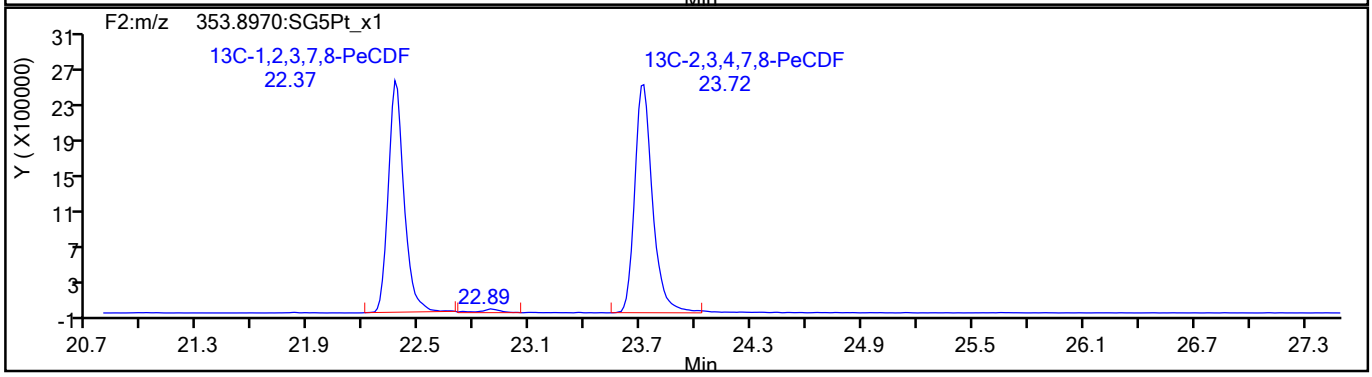

781112

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

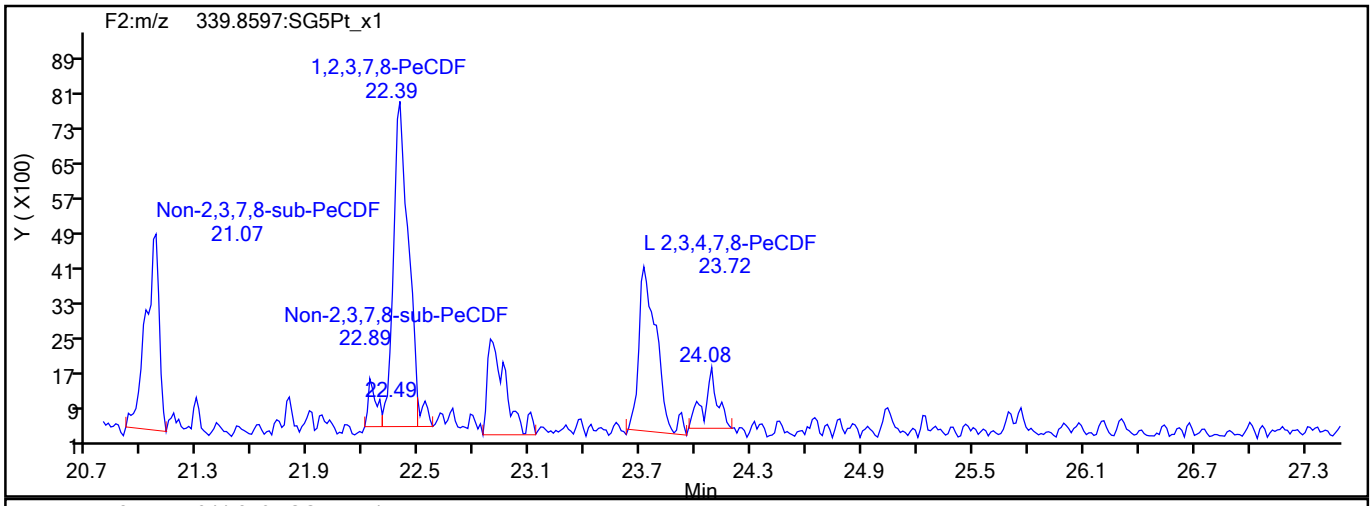

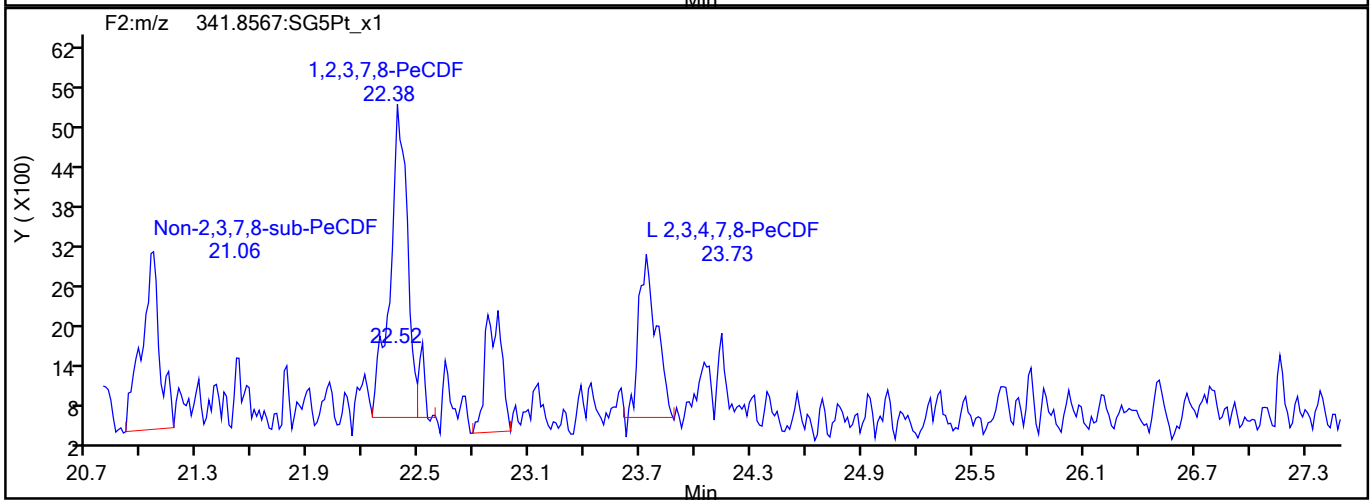

PeCDF Interference Mass

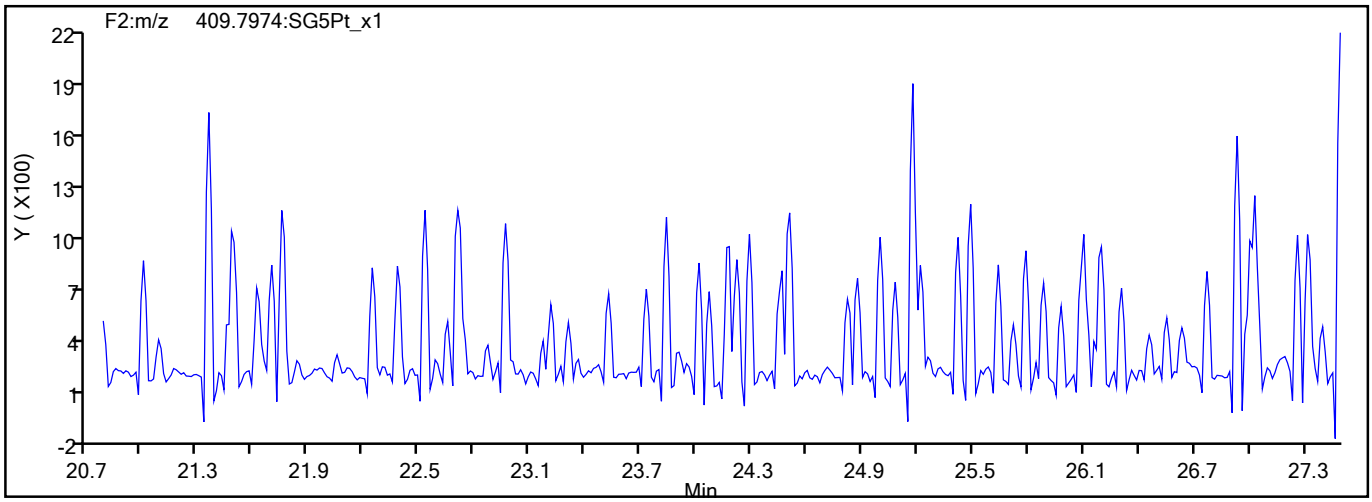

781113

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

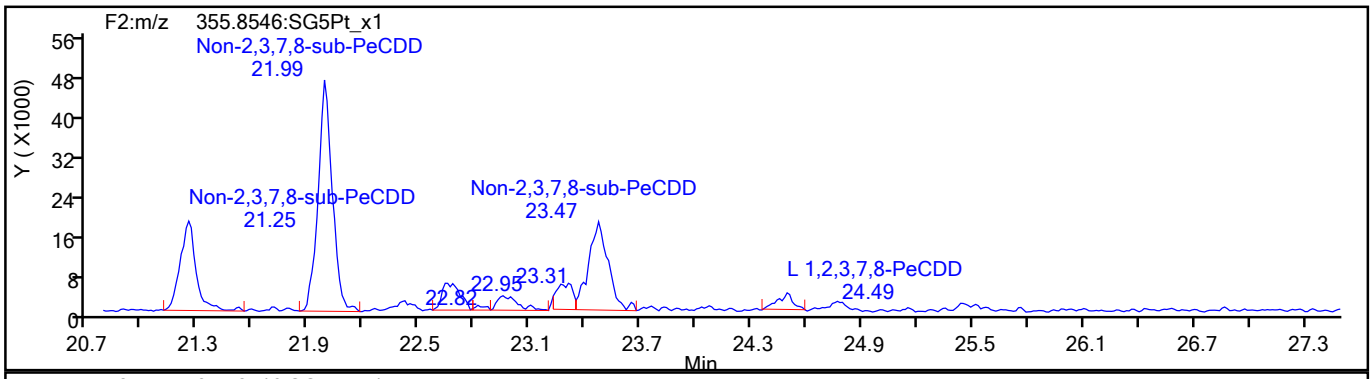

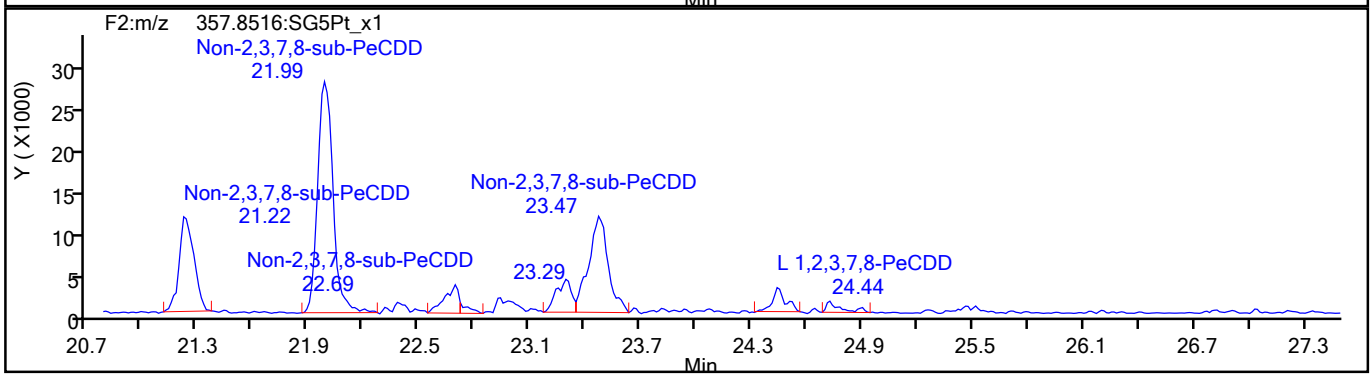

PeCDD Standards

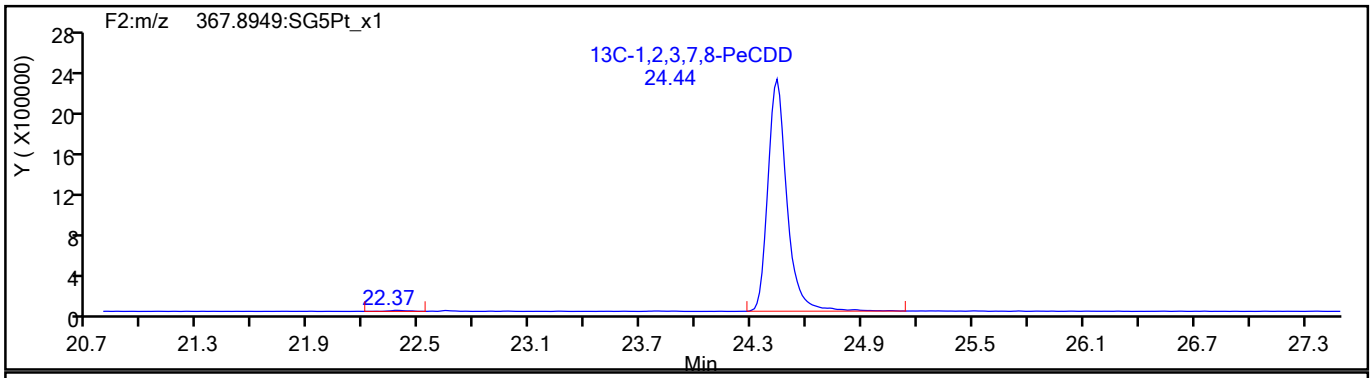

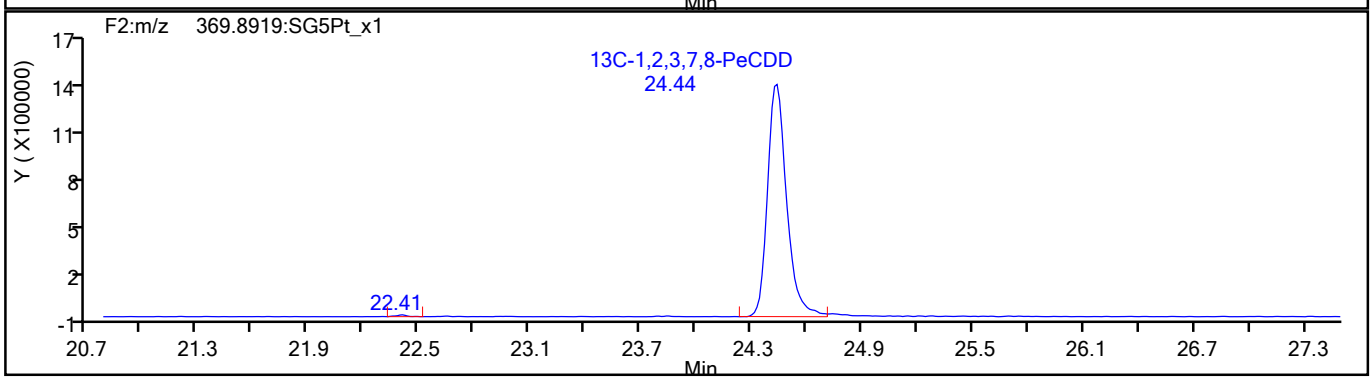

781114

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

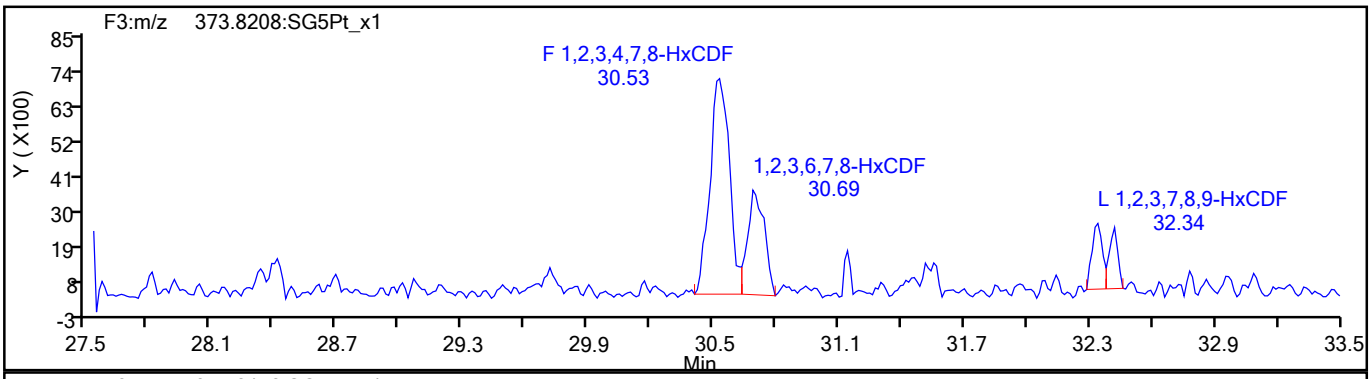

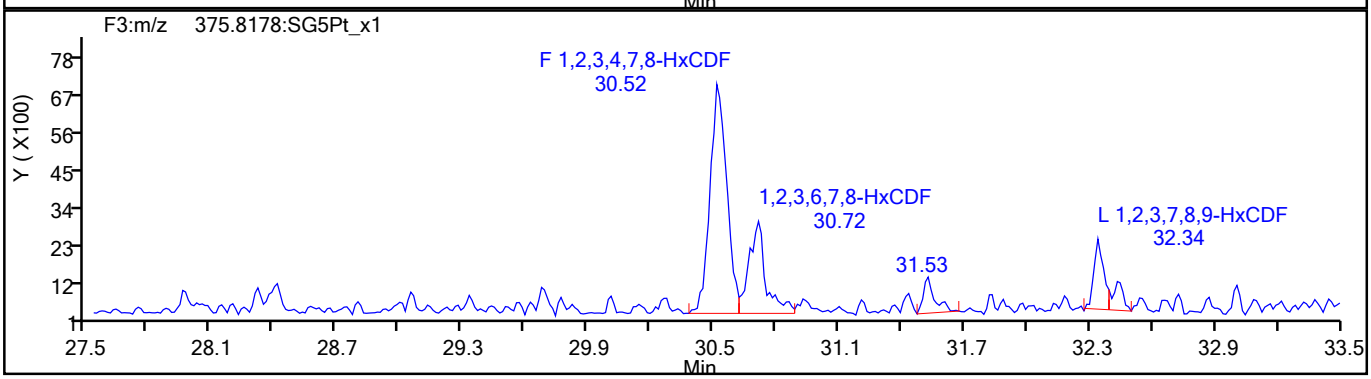

HxCDF Standards

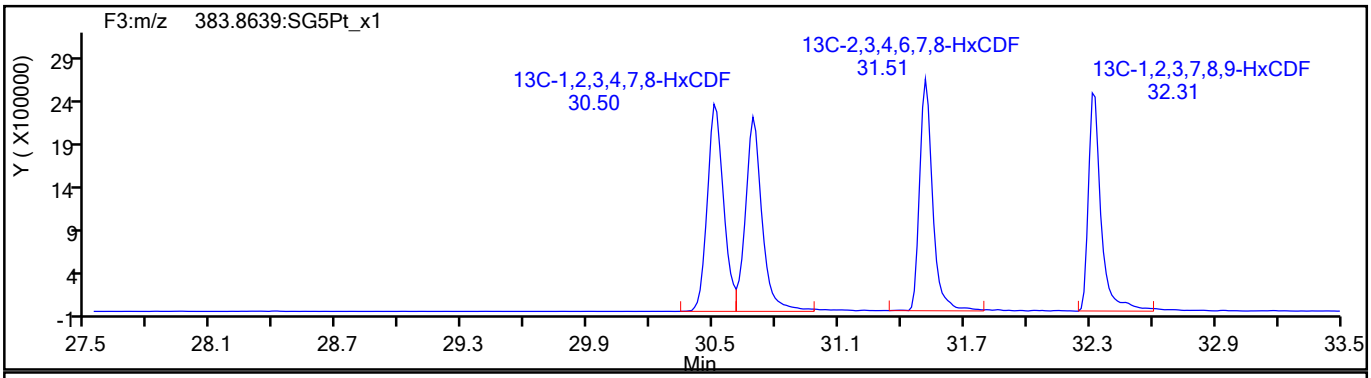

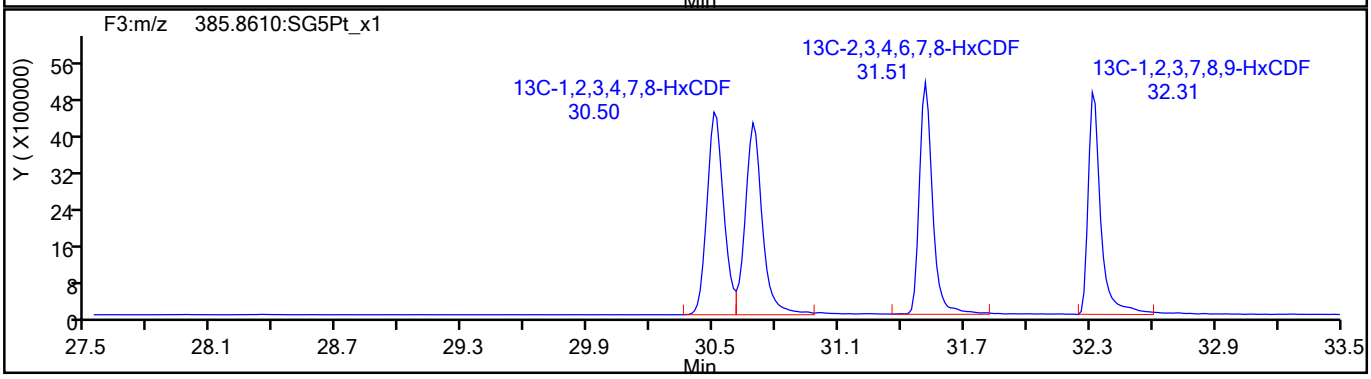

781115

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

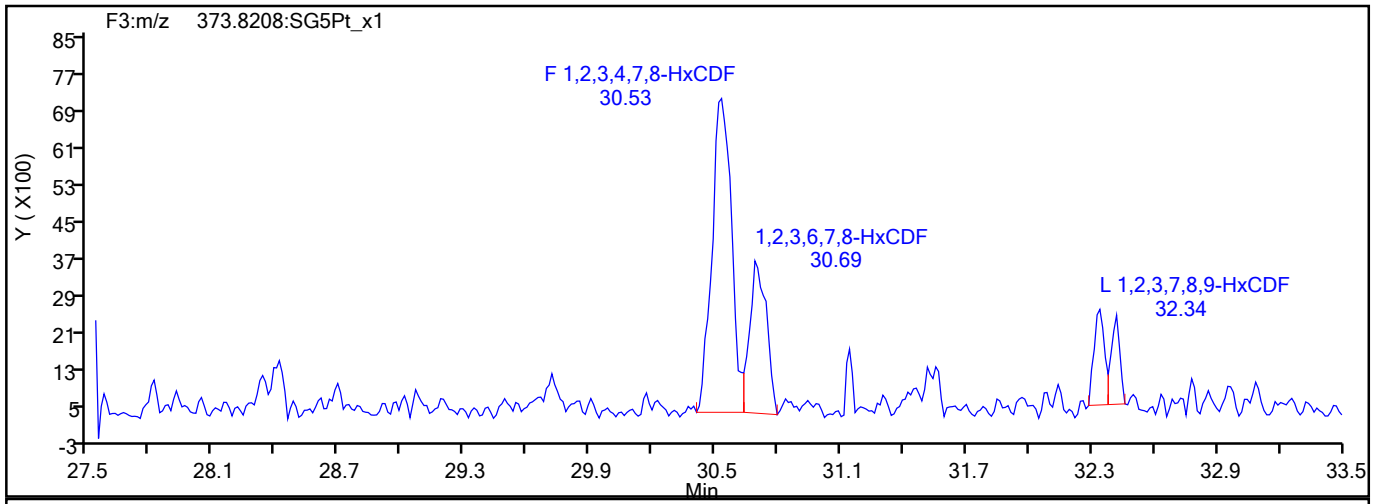

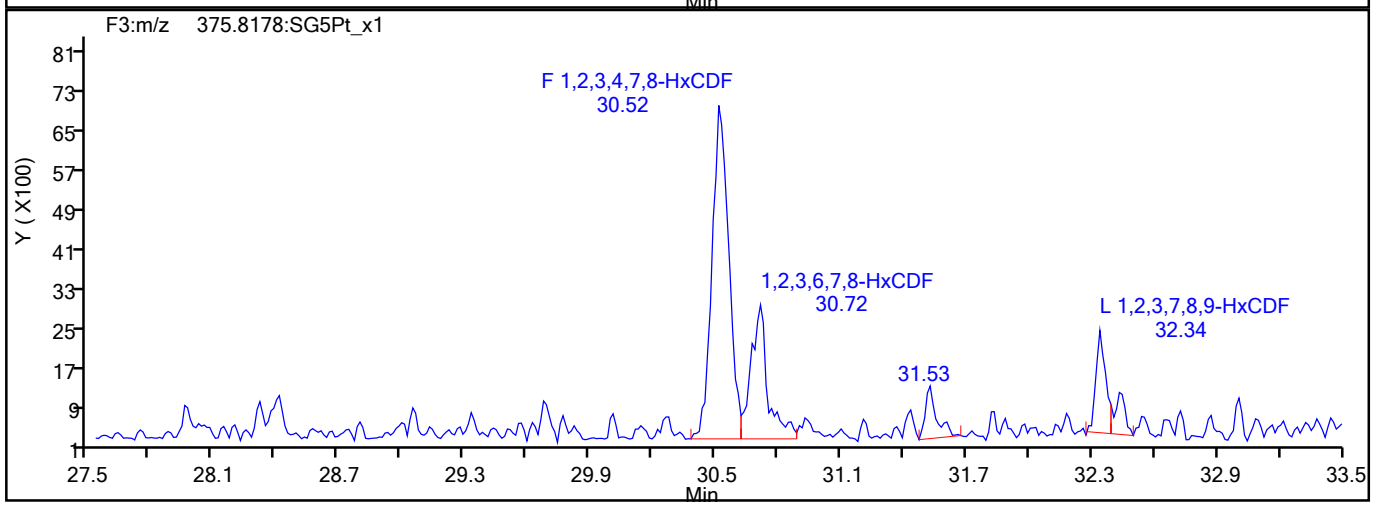

HxCDF Interference Mass

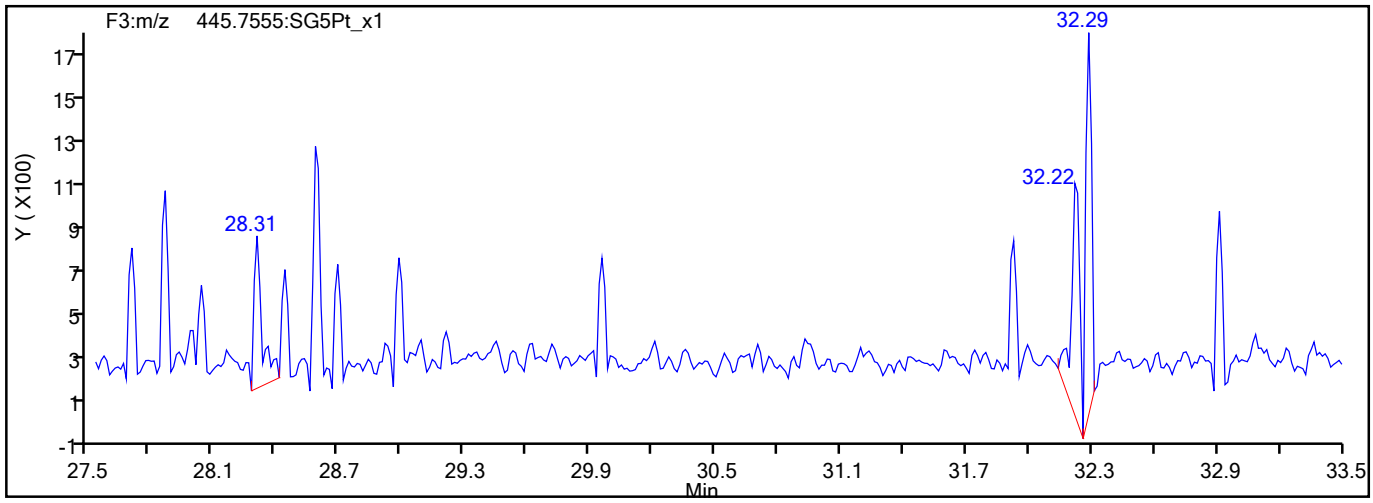

781116

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

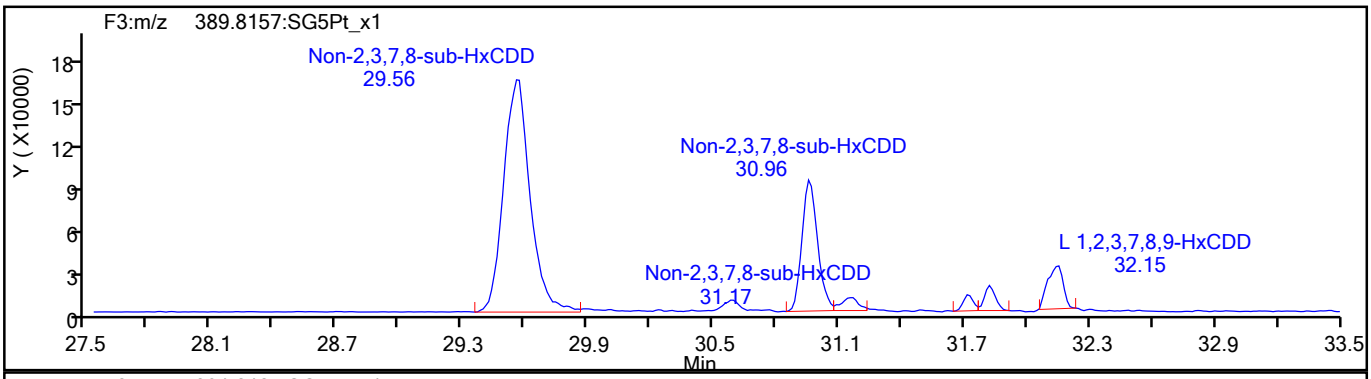

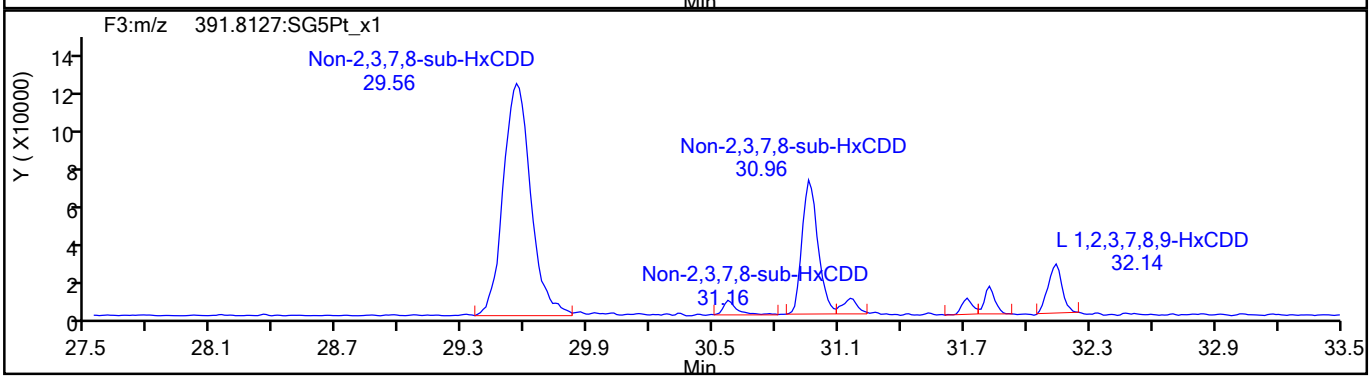

HxCDD Standards

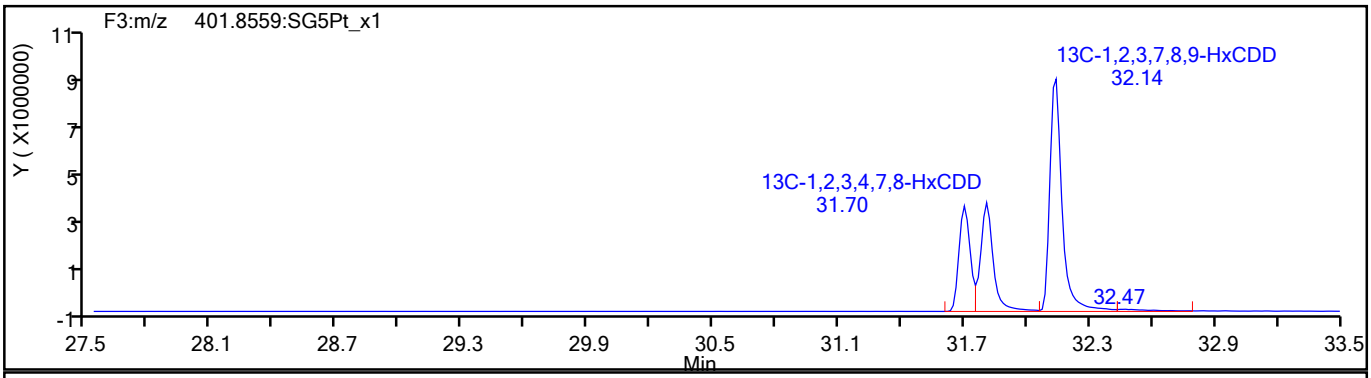

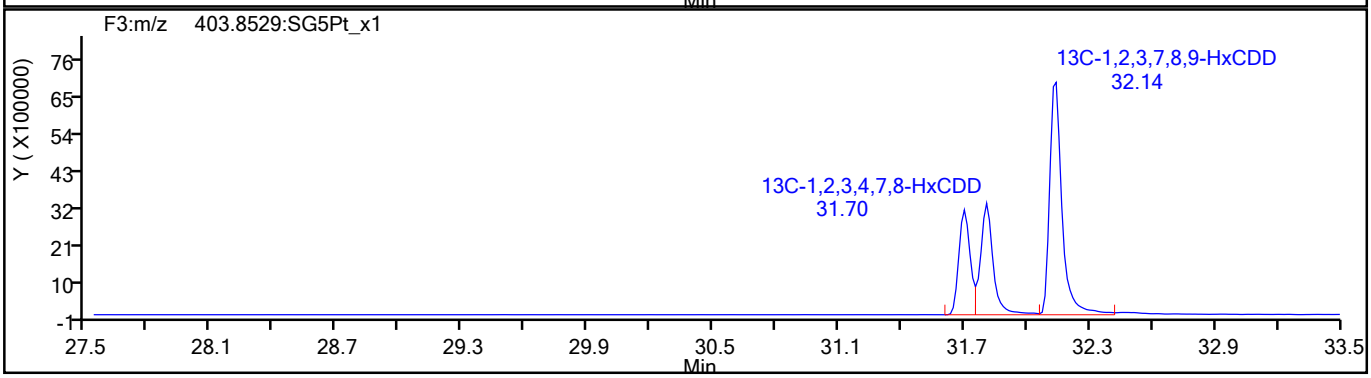

781117

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

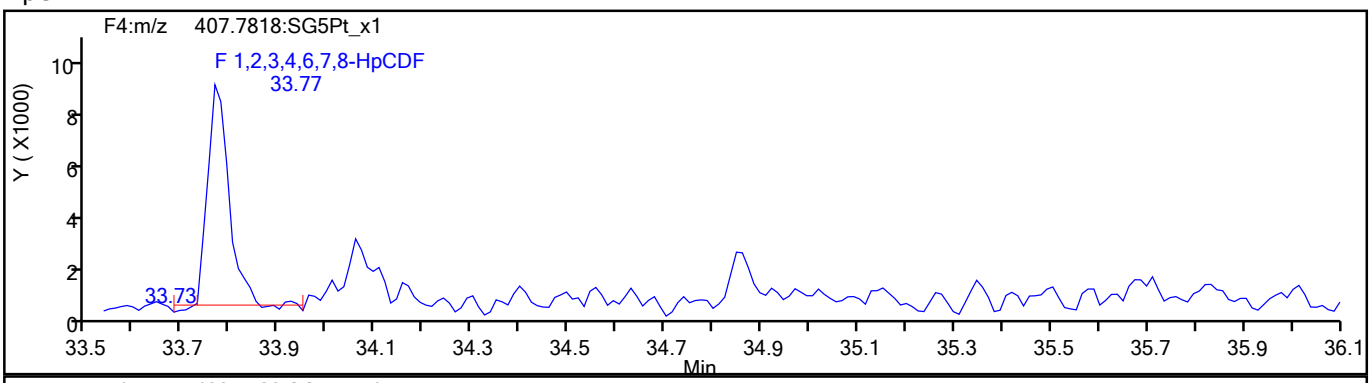

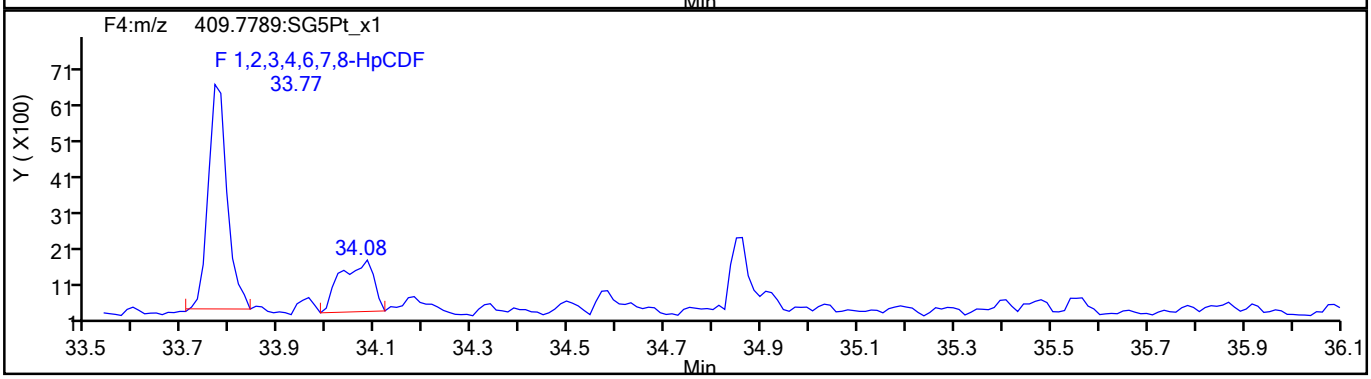

HpCDF Standards

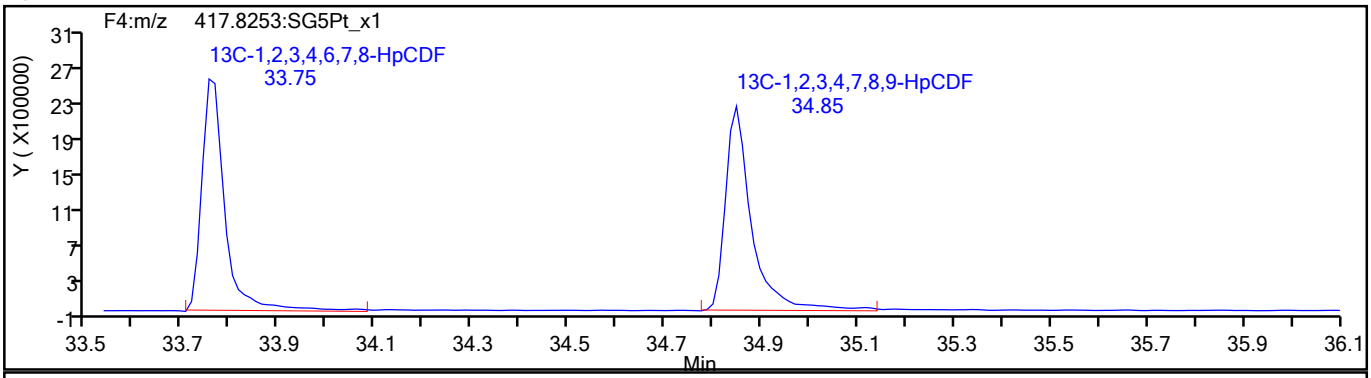

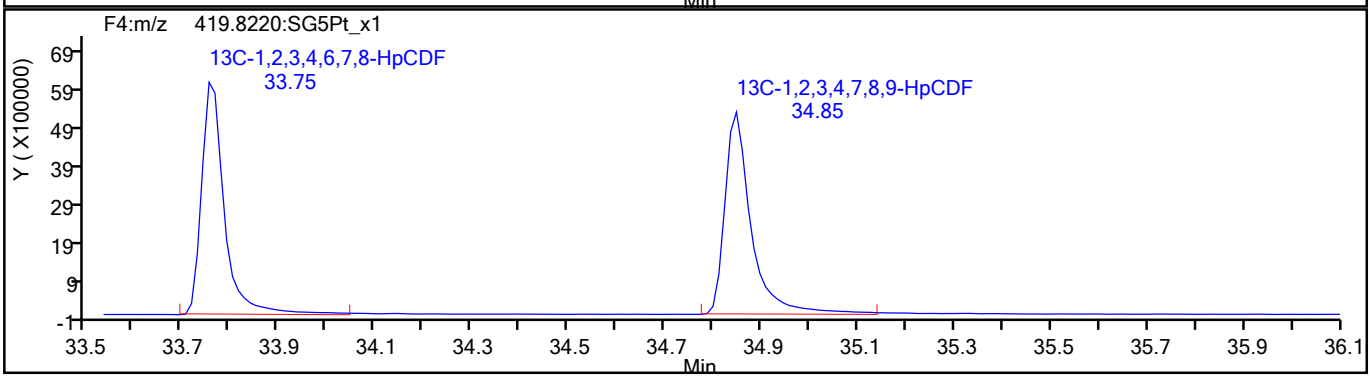

781118

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

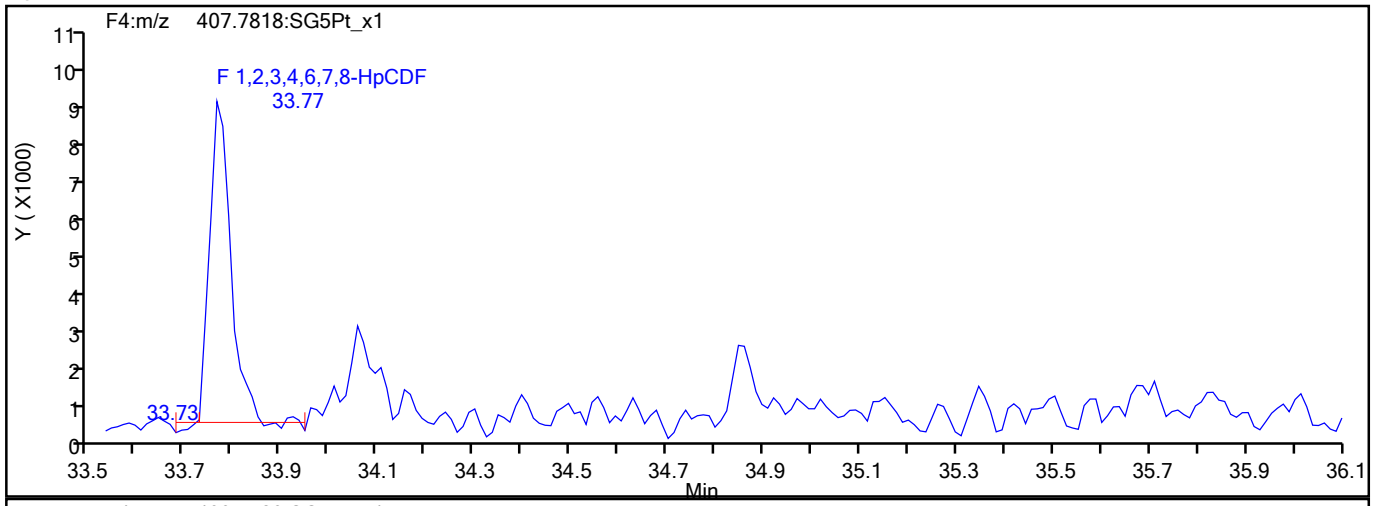

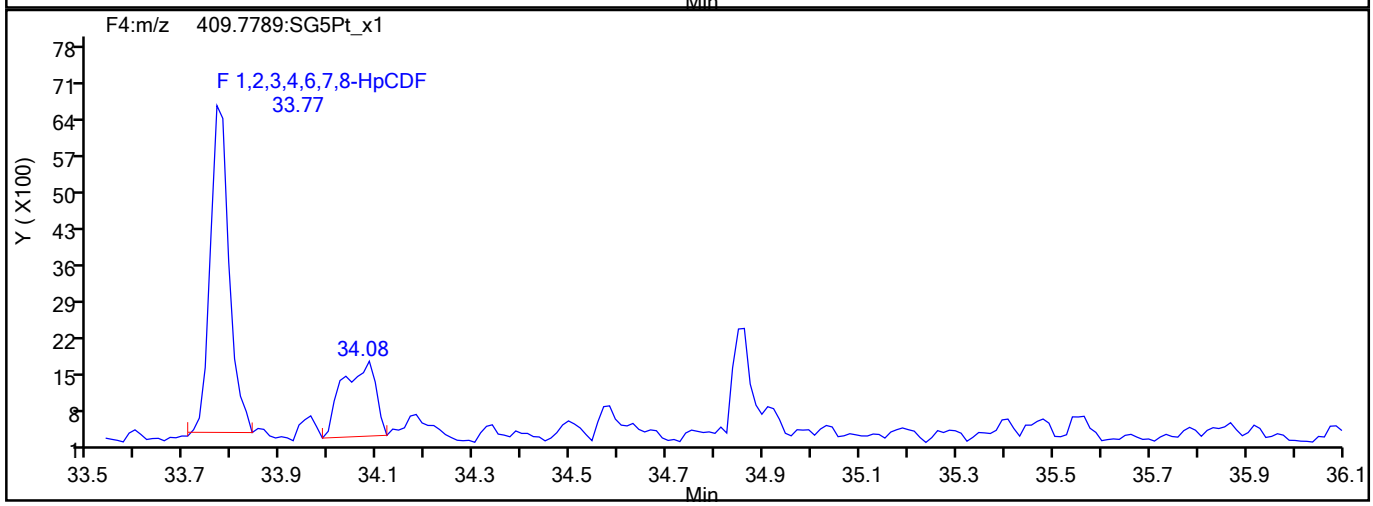

HpCDF Interference Mass

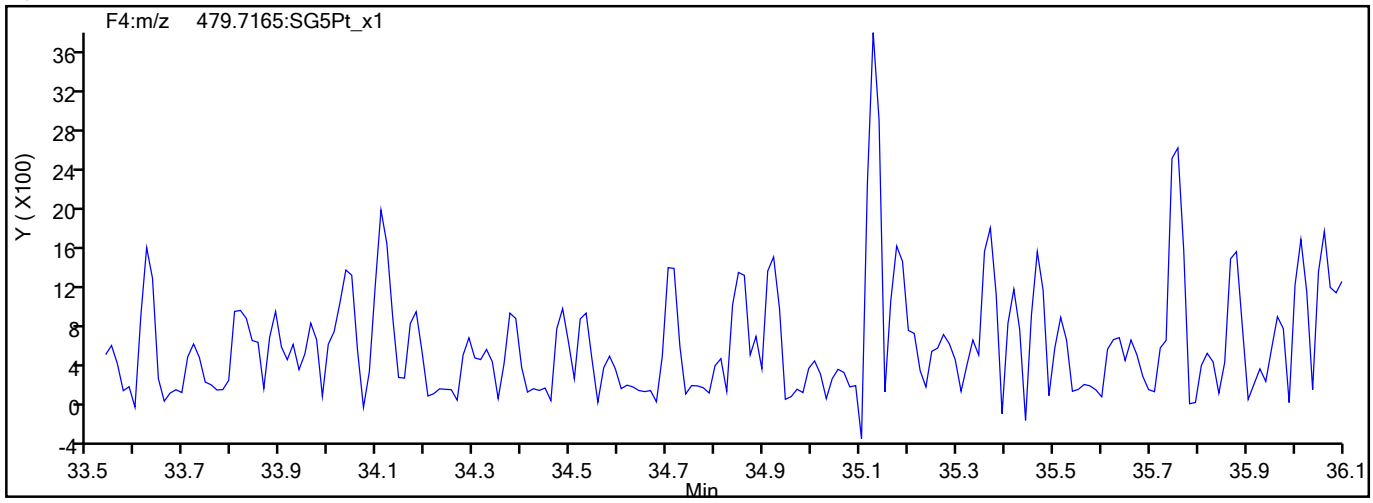

781119

Report Date: 18-Aug-2021 07:36:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

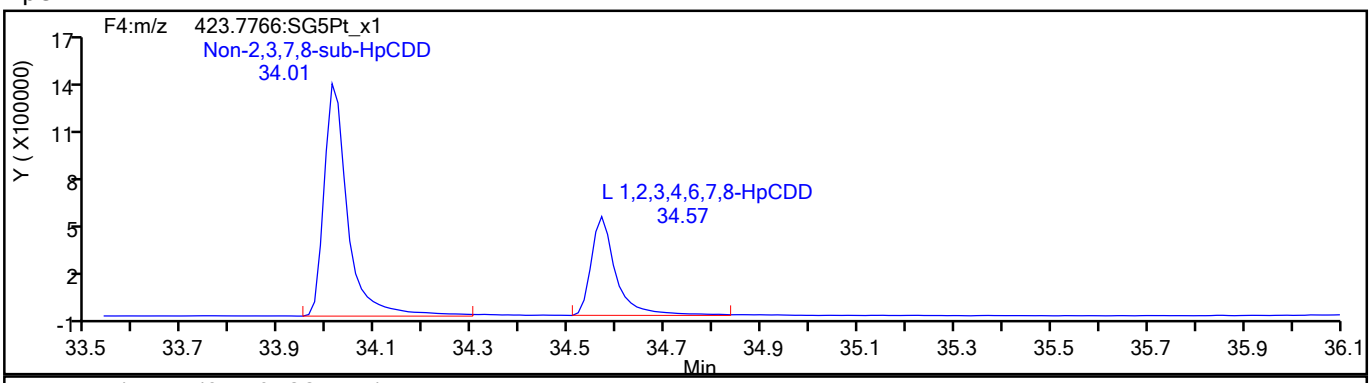

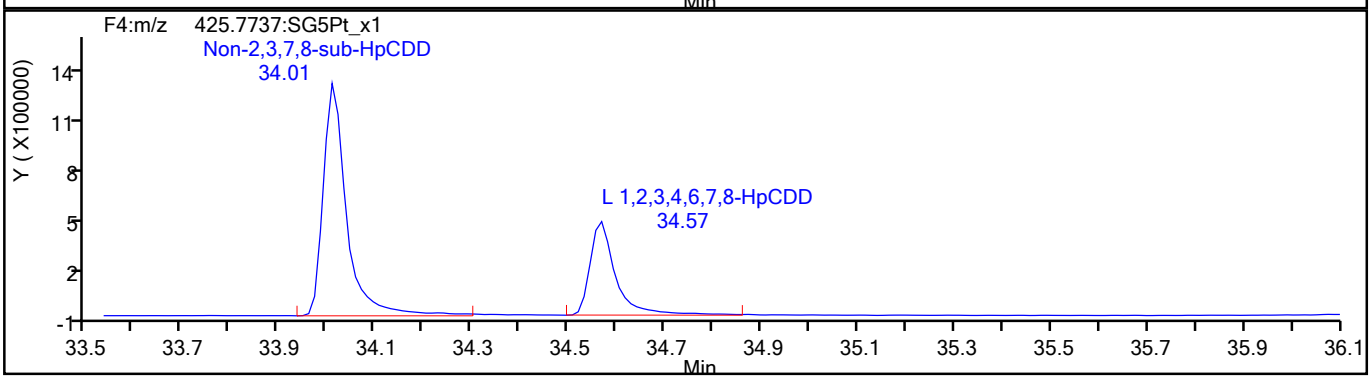

HpCDD Standards

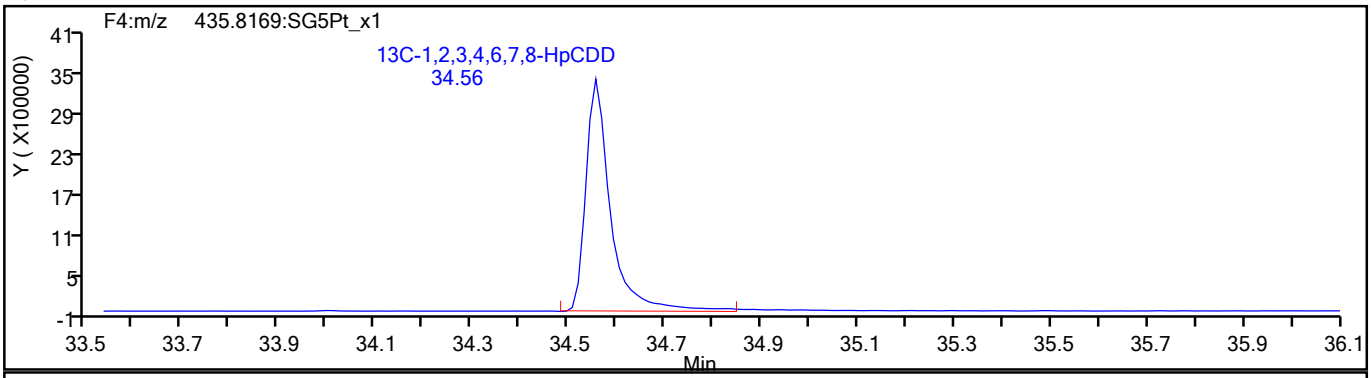

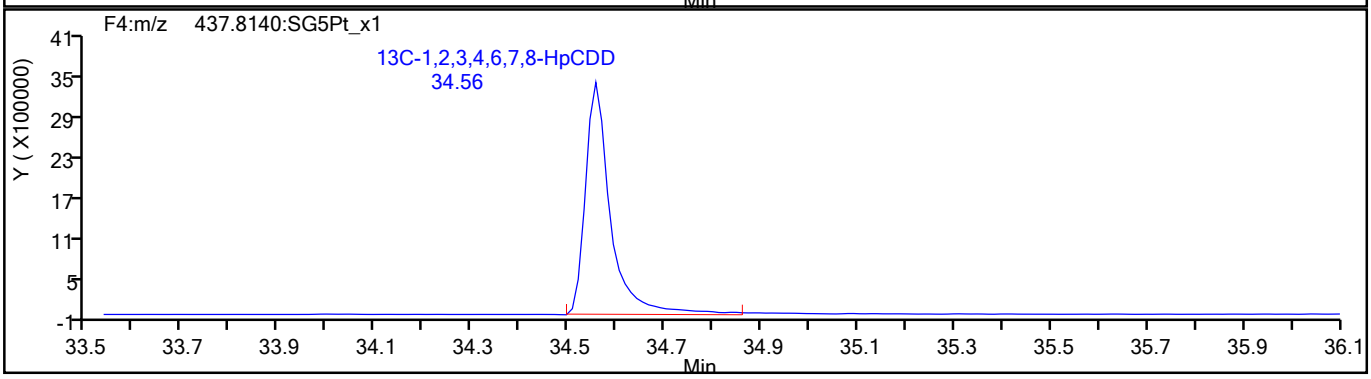

781120

Report Date: 18-Aug-2021 07:36:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

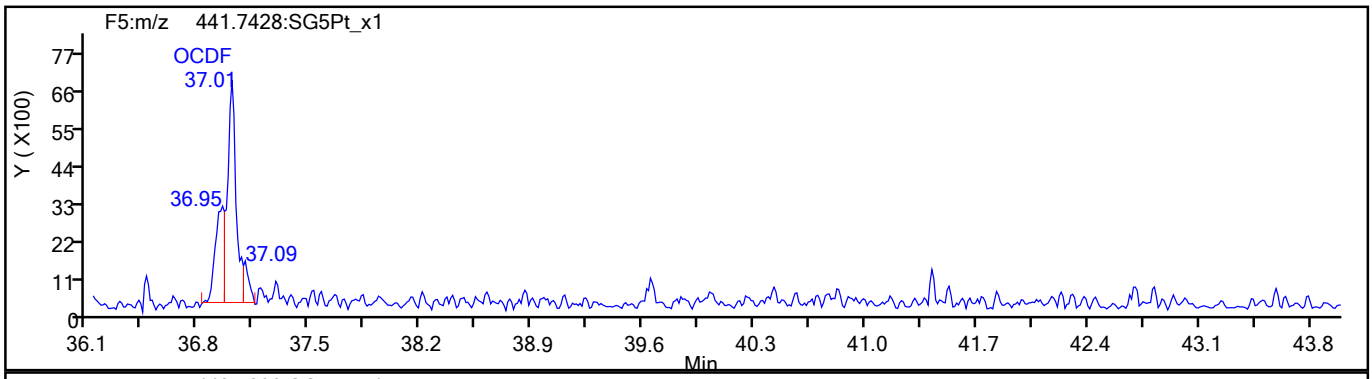

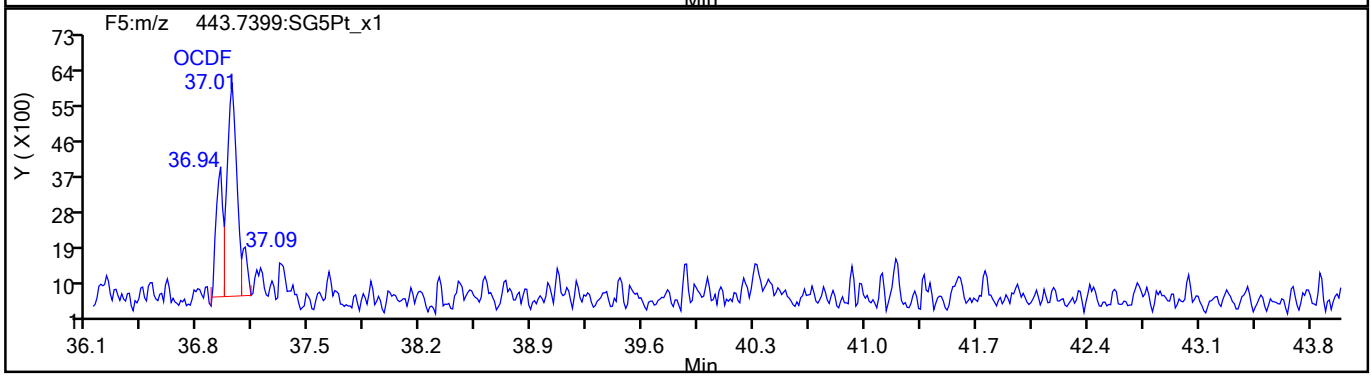

OCDF Standards

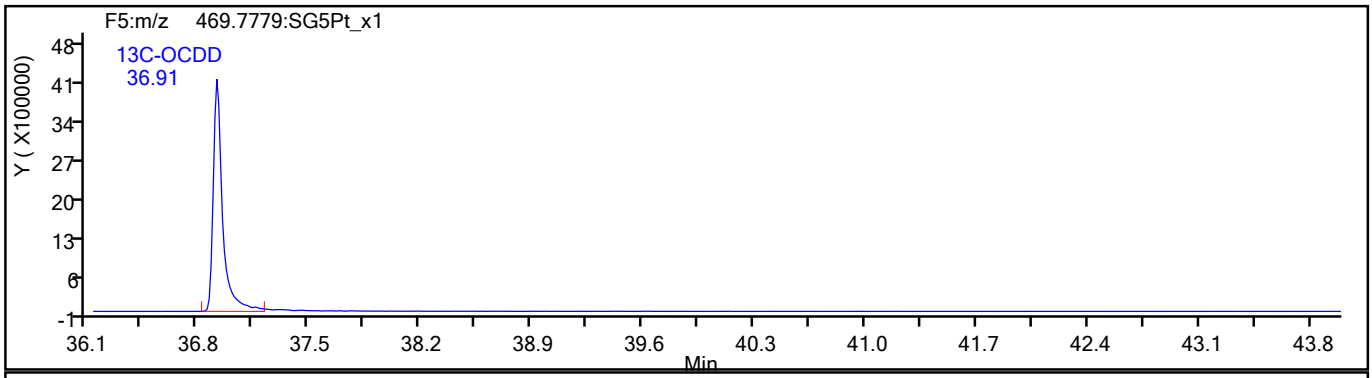

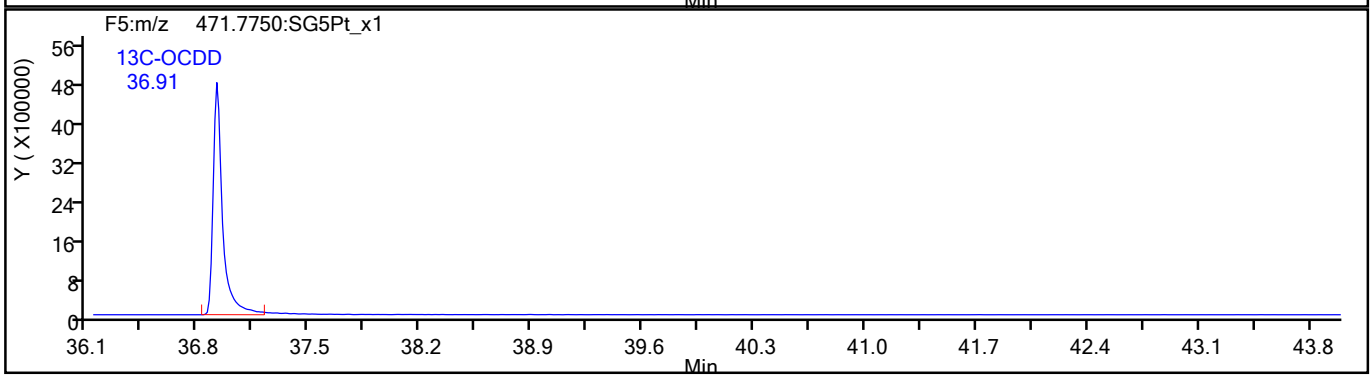

781121

Report Date: 18-Aug-2021 07:36:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

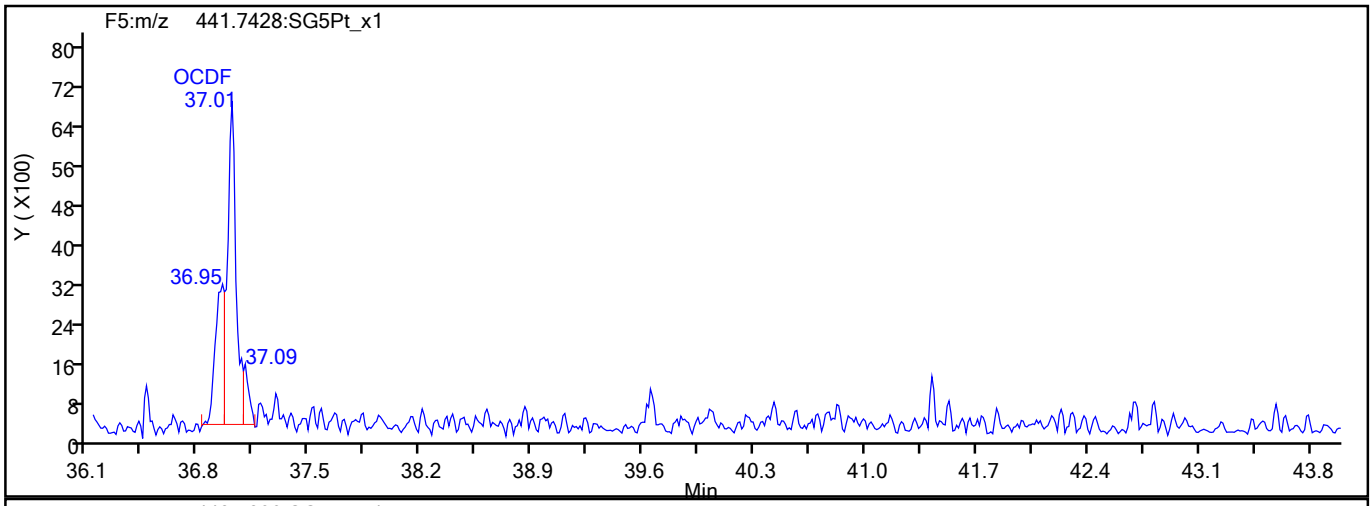

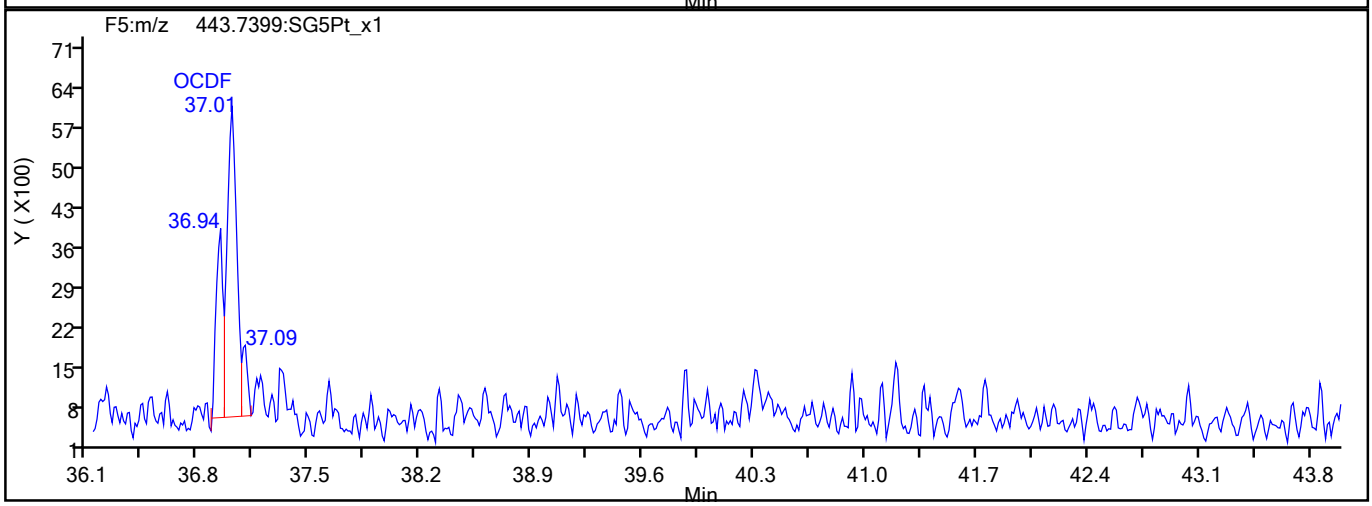

OCDF Interference Mass

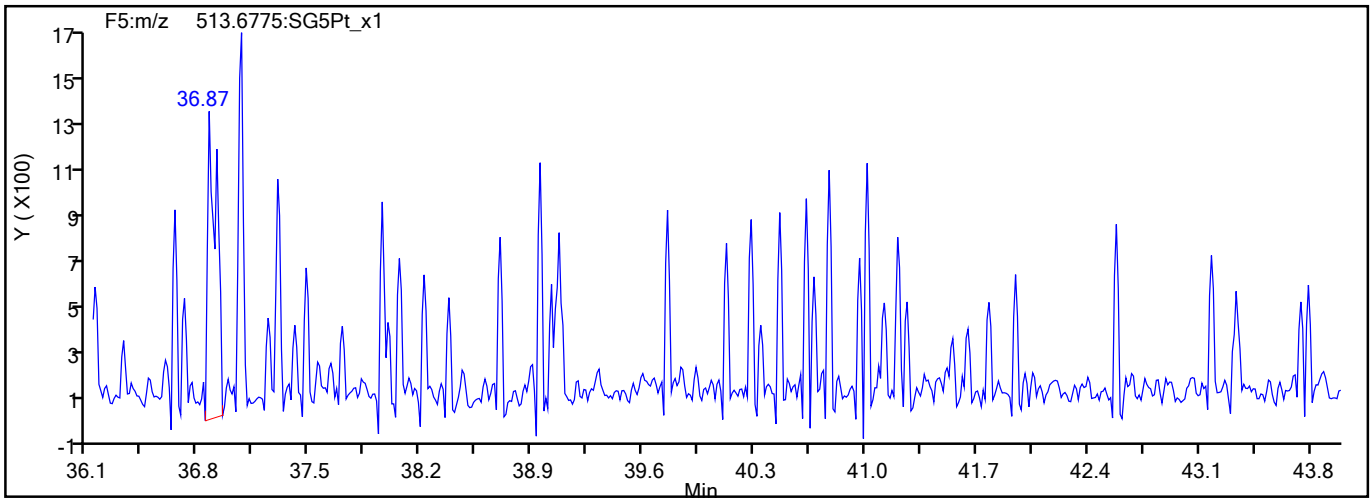

781122

Report Date: 18-Aug-2021 07:36:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

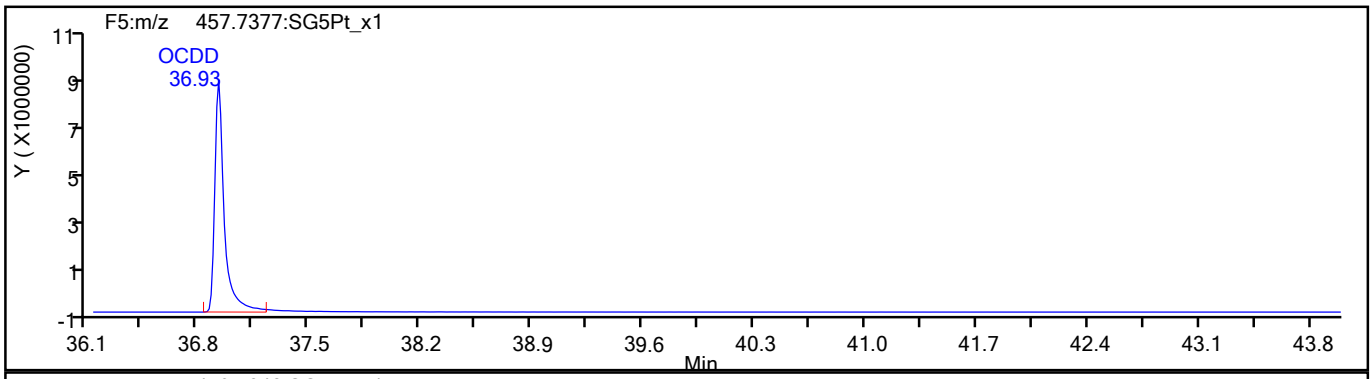

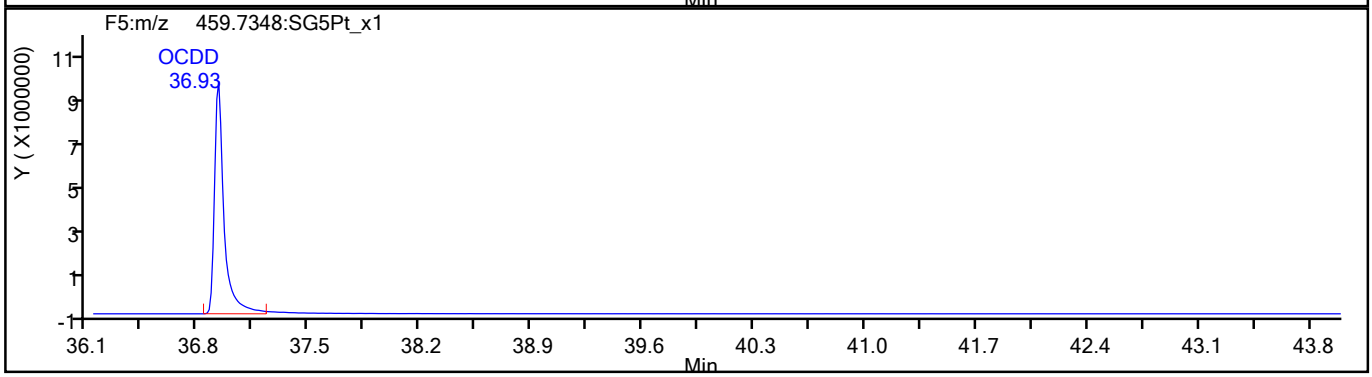

OCDD Standards

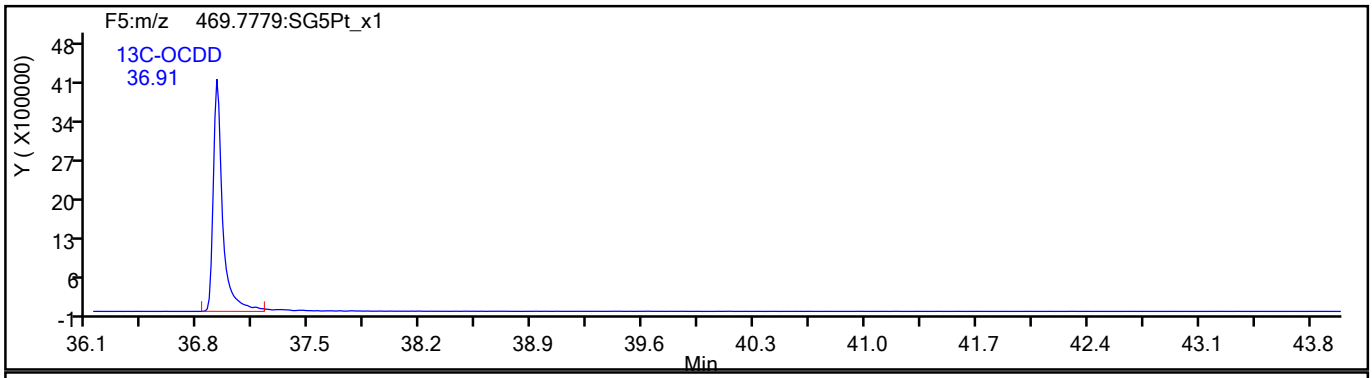

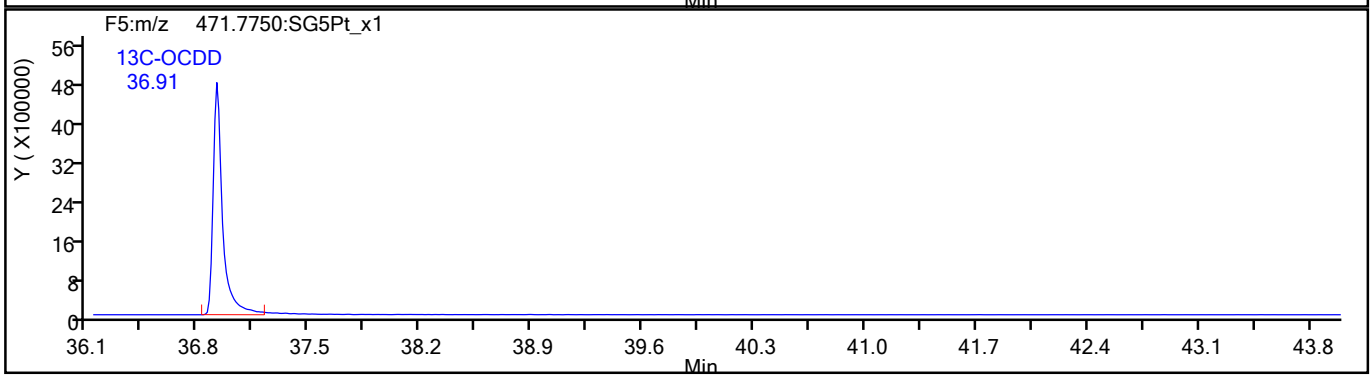

781123

Report Date: 18-Aug-2021 07:36:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

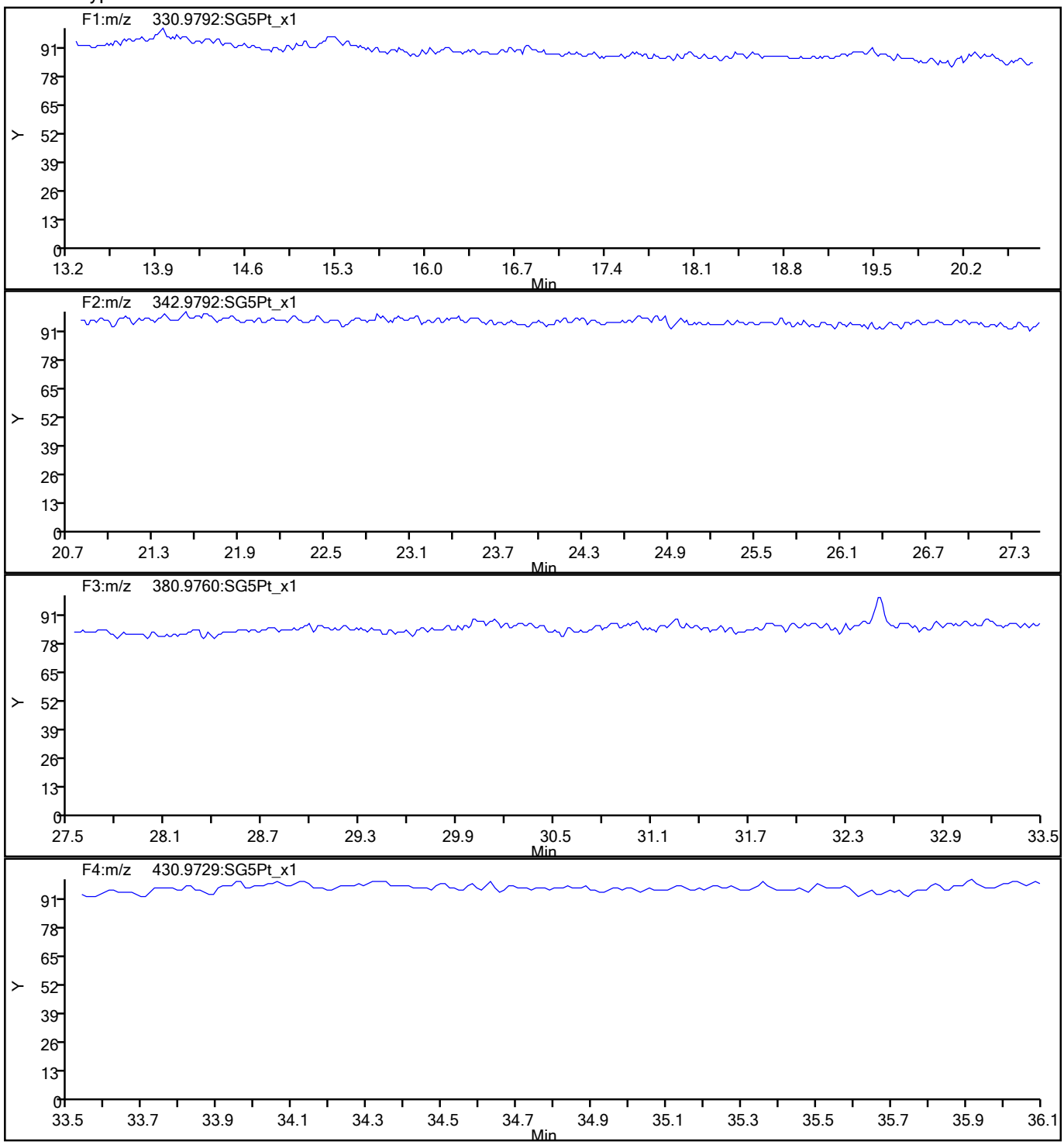

781124

Report Date: 18-Aug-2021 07:36:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_30.d		
Injection Date:	14-Aug-2021 15:16:35	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	516846	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

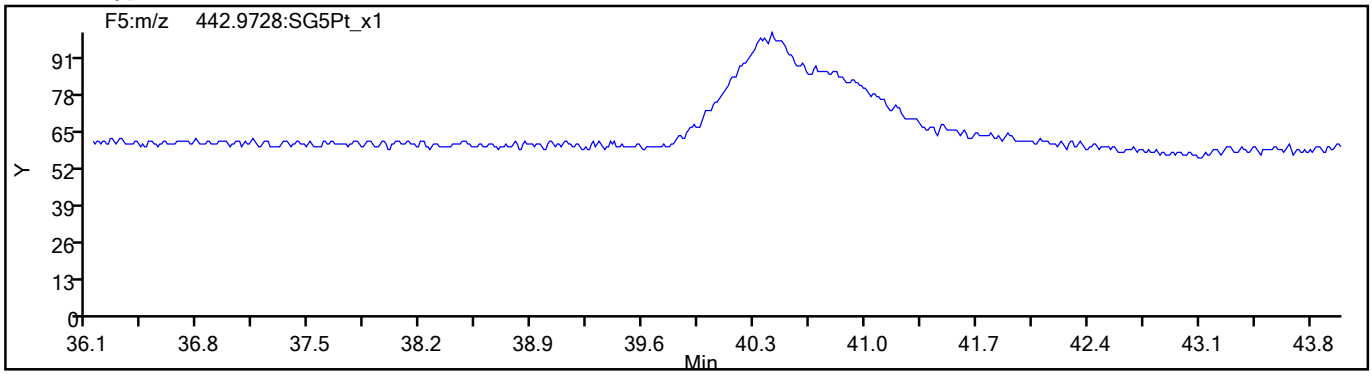

781125

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-2
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB085 (16-18) RA
Lab Sample ID: 320-76788-9 RA
Matrix: Solid
Lab File ID: 23AU21A11D2_004.d
Analysis Method: 1613B
Date Collected: 07/23/2021 11:40
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 9.78(g)
Date Analyzed: 08/23/2021 17:29
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	16	B	1.7	0.30

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	59		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	71		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_004.d
Lims ID: 320-76788-A-9-A
Client ID: 11215702-072321-BN-SJSB085 (16-18)
Sample Type: Client
Inject. Date: 23-Aug-2021 17:29:23 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-9-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:14:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	49755448	0.74	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	39122926	0.79	1.3327	59.0	59.0	0.2938	0.2938	59.00	
2,3,7,8-TCDF	17.657	1815764	0.74	0.9978	4.651	4.651	0.0889	0.0889		M
D 13C-2,3,7,8-TCDD	16.094	24964071	0.74	0.8749	57.3	57.3	0.5553	0.5553	57.35	
2,3,7,8-TCDD	16.107	465513	0.88	1.0570	1.764	1.764	0.1005	0.1005		
$ 37Cl4-2,3,7,8-TCDD	16.107	12254264		0.8648	28.5	28.5	0.0817	0.0817	71.20	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_004.d
Lims ID: 320-76788-A-9-A
Client ID: 11215702-072321-BN-SJSB085 (16-18)
Sample Type: Client
Inject. Date: 23-Aug-2021 17:29:23 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-9-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:14:05

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.298	2		21097767	4353072	12021	30052	362		
333.9339	16.327	16.298	2		28657681	6291818	8665	21662	726	0.74(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.615	2	1.081	17235455	3226256	8987	22467	359		
317.9389	17.630	17.615	1	1.080	21887471	3948524	7685	19212	514	0.79(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.657	17.643	1	1.001	773728	131411	1113	2782	118		M
305.8987	17.657	17.643	1	1.001	1042036	195344	1434	3585	136	0.74(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.094	16.065	2	0.986	10635706	2438457	12021	30052	203		
333.9339	16.094	16.065	2	0.986	14328365	3138570	8665	21662	362	0.74(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.107	16.079	2	1.001	218422	40085	1384	3460	29		
321.8936	16.107	16.079	2	1.001	247091	51627	987	2467	52	0.88(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.107	16.093	1	0.987	12254264	2704385	3007	7517	899		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_004.d				
Injection Date:	23-Aug-2021 17:29:23	Instrument ID:	11D2		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.66
Area: 1056818
Amount: 4.736259
Amount Units: pg/ul

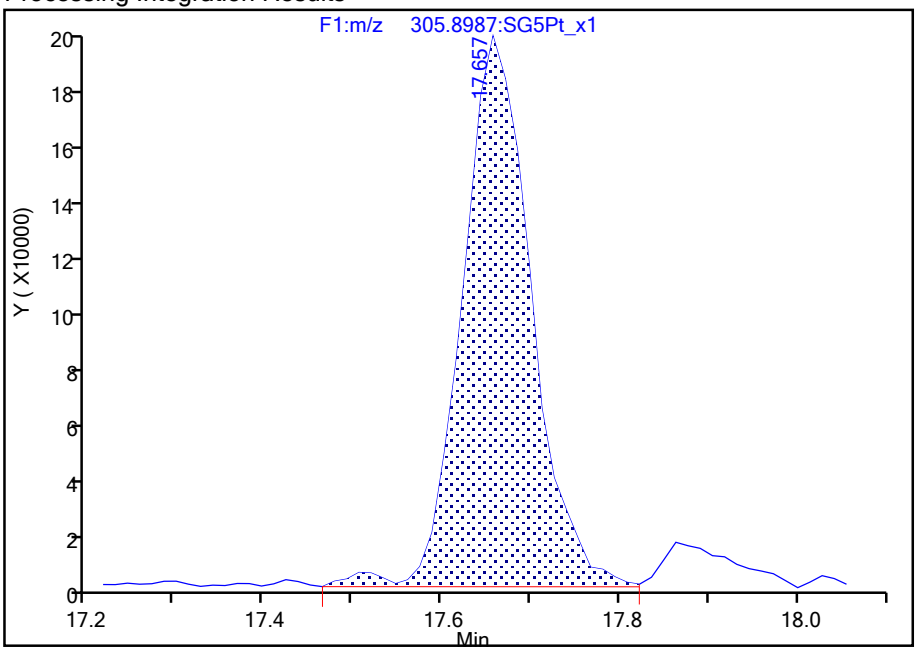

Manual Integration Results

RT: 17.66
Area: 1042036
Amount: 4.651378
Amount Units: pg/ul

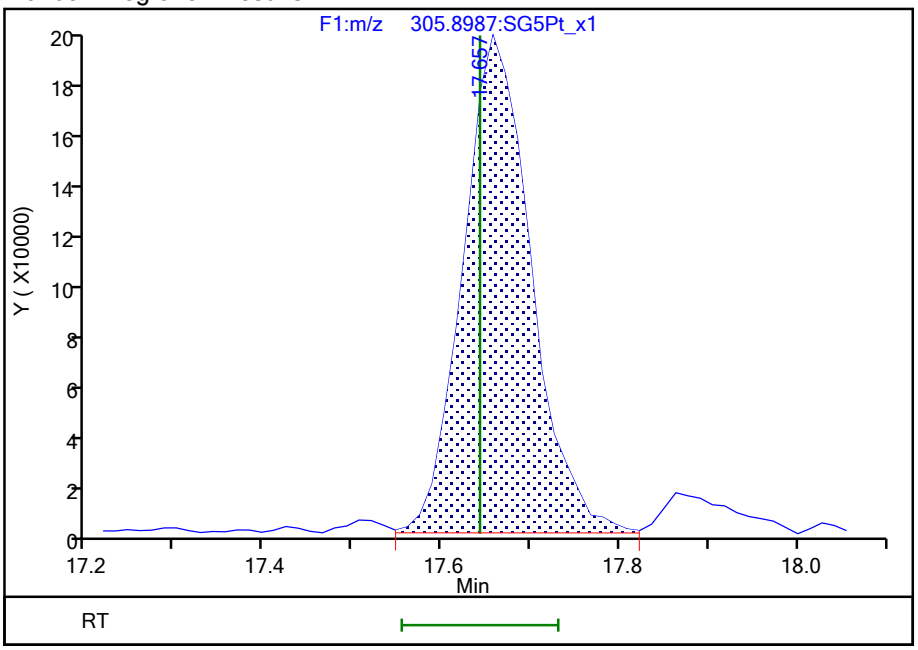

Reviewer: bennettd, 24-Aug-2021 09:13:48

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_004.d				
Injection Date:	23-Aug-2021 17:29:23	Instrument ID:	11D2		
Lims ID:	320-76788-A-9-A	Lab Sample ID:	320-76788-9		
Client ID:	11215702-072321-BN-SJSB085 (16-18)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.66
Area: 792081
Amount: 4.736259
Amount Units: pg/ul

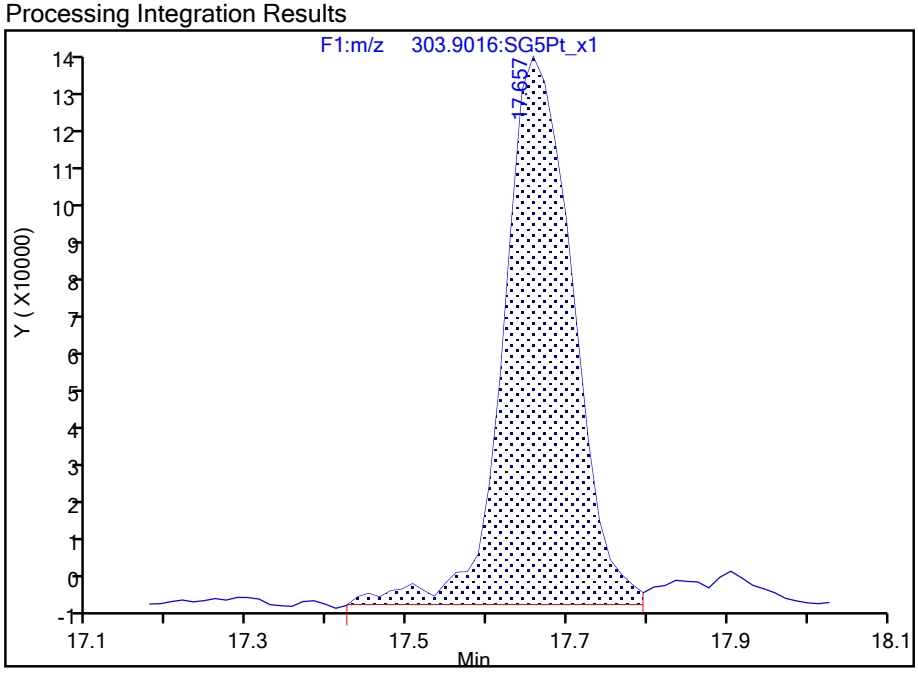

Manual Integration Results

RT: 17.66
Area: 773728
Amount: 4.651378
Amount Units: pg/ul

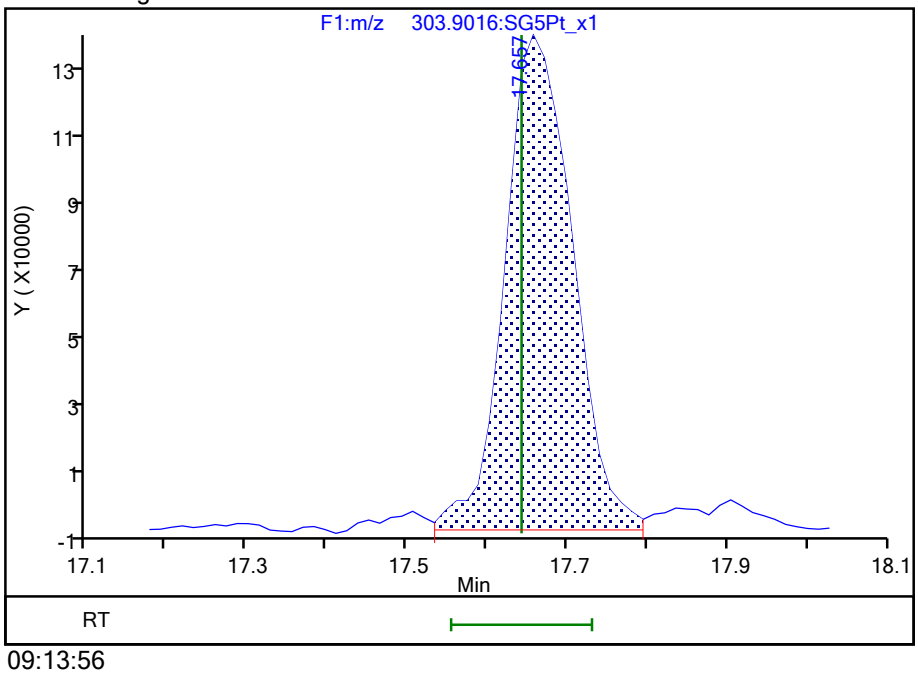

Reviewer: bennettd, 24-Aug-2021 09:13:56

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 24-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_004.d		
Injection Date:	23-Aug-2021 17:29:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	518979	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

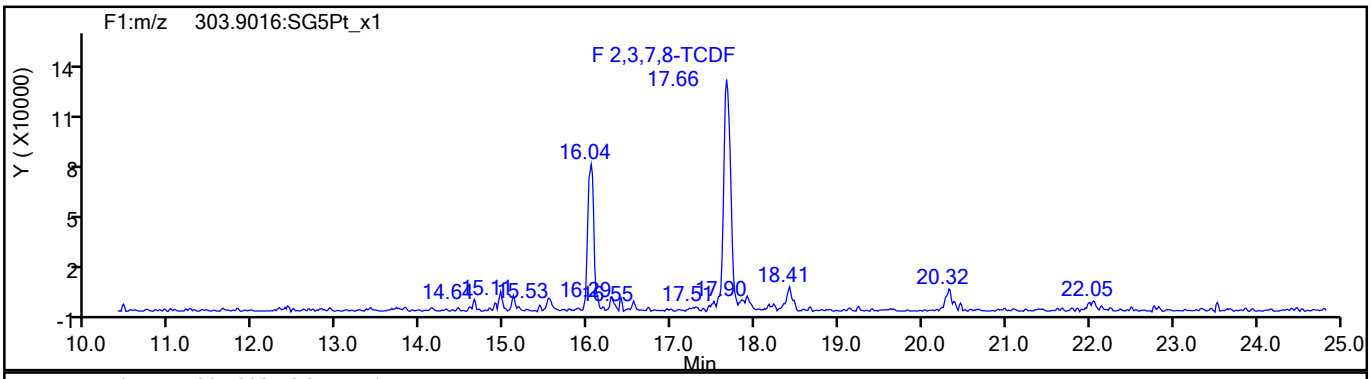

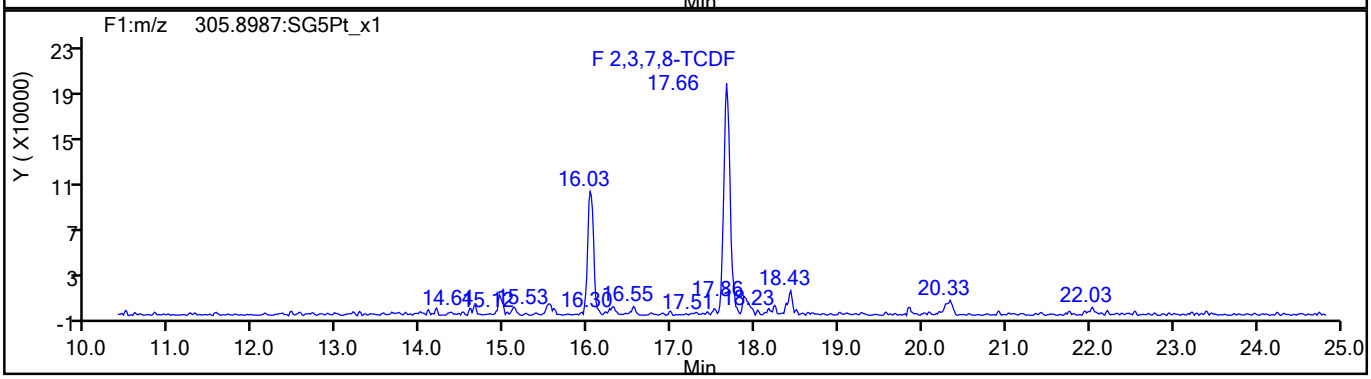

TCDF Standards

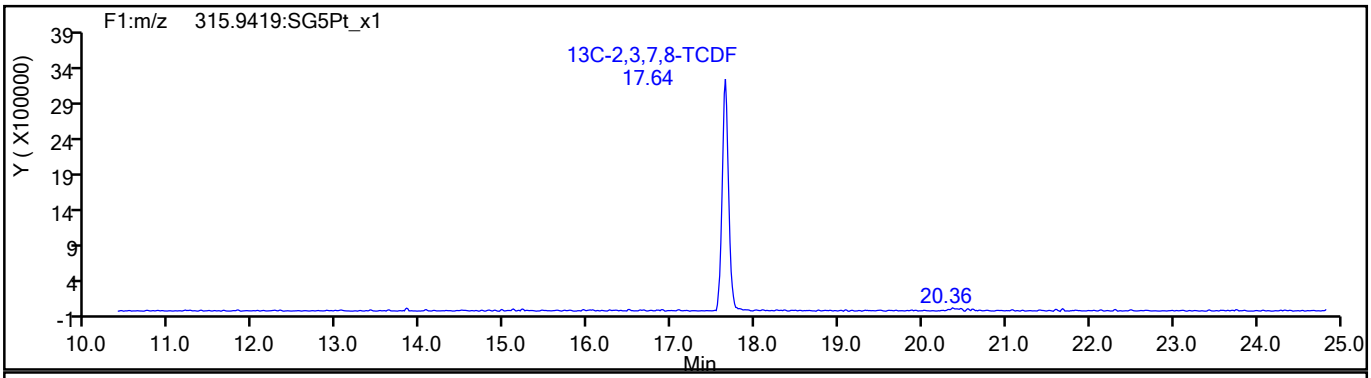

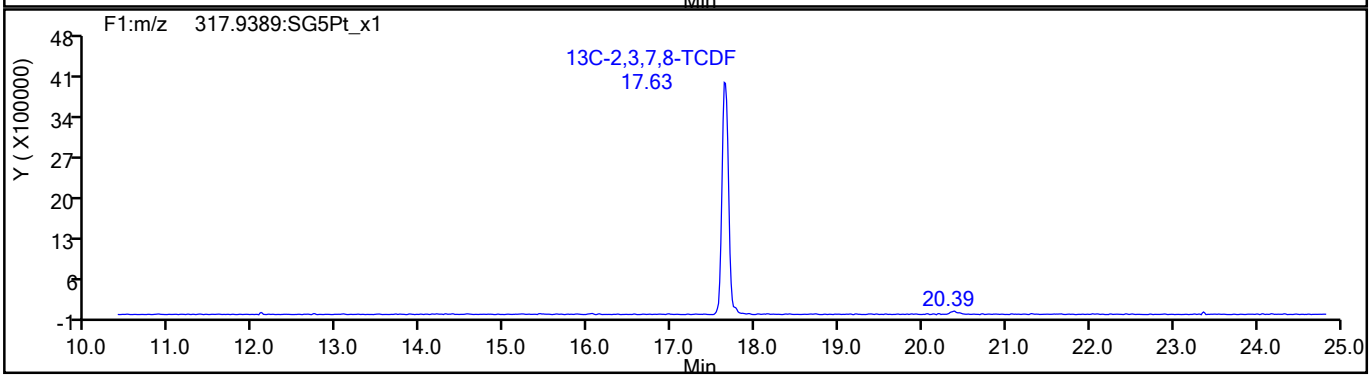

781131

Report Date: 24-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_004.d		
Injection Date:	23-Aug-2021 17:29:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	518979	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

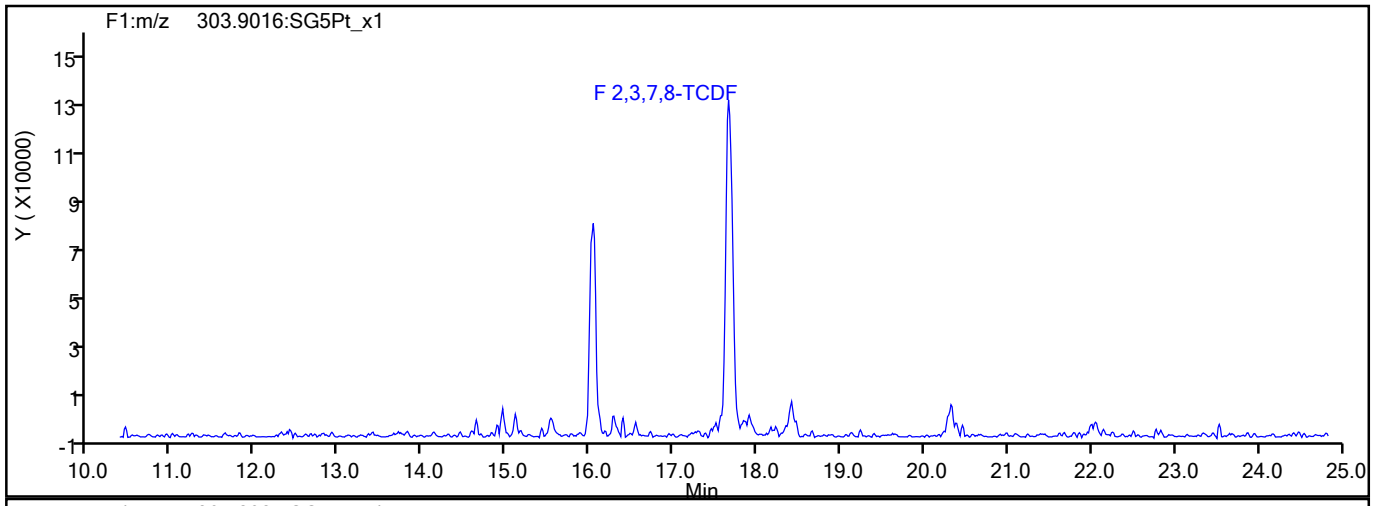

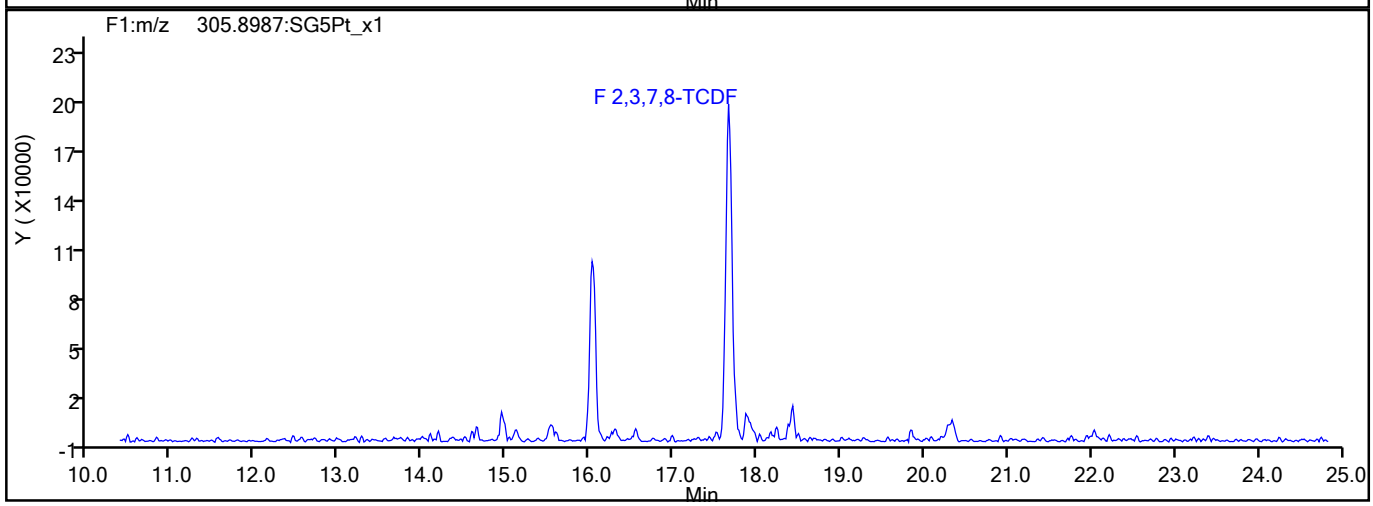

TCDF Interference Mass

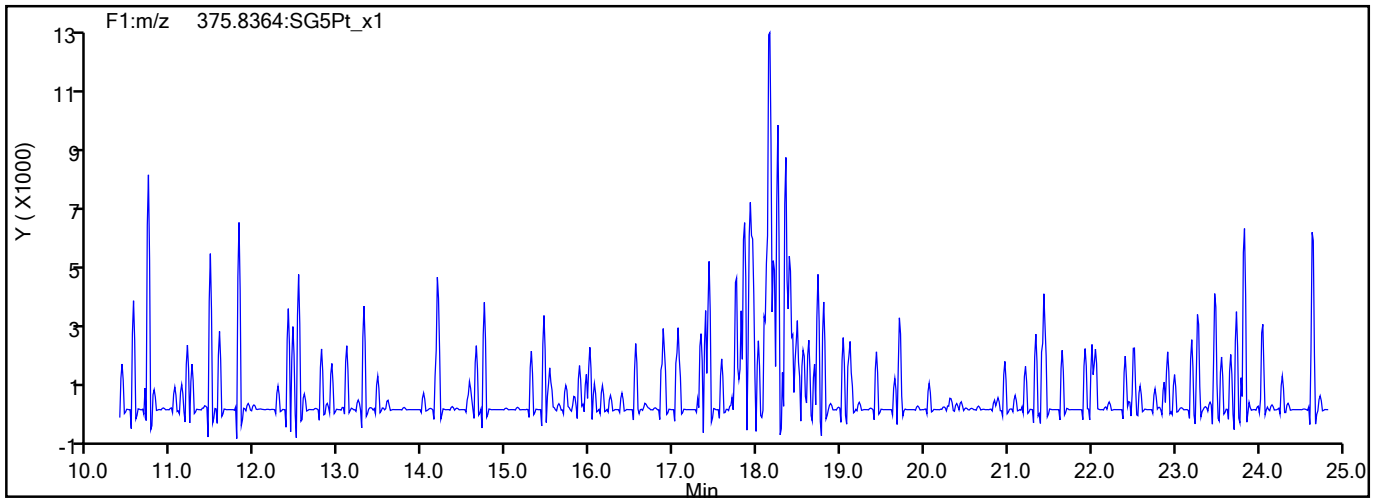

781132

Report Date: 24-Aug-2021 09:19:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_004.d		
Injection Date:	23-Aug-2021 17:29:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	518979	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

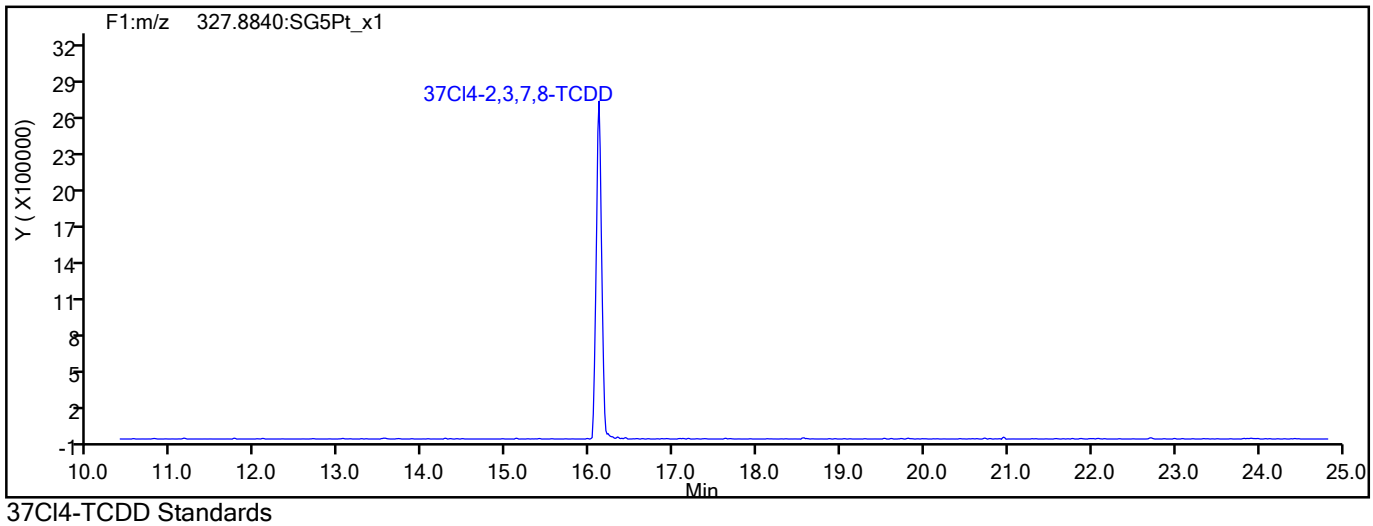

37Cl4-TCDD Standards

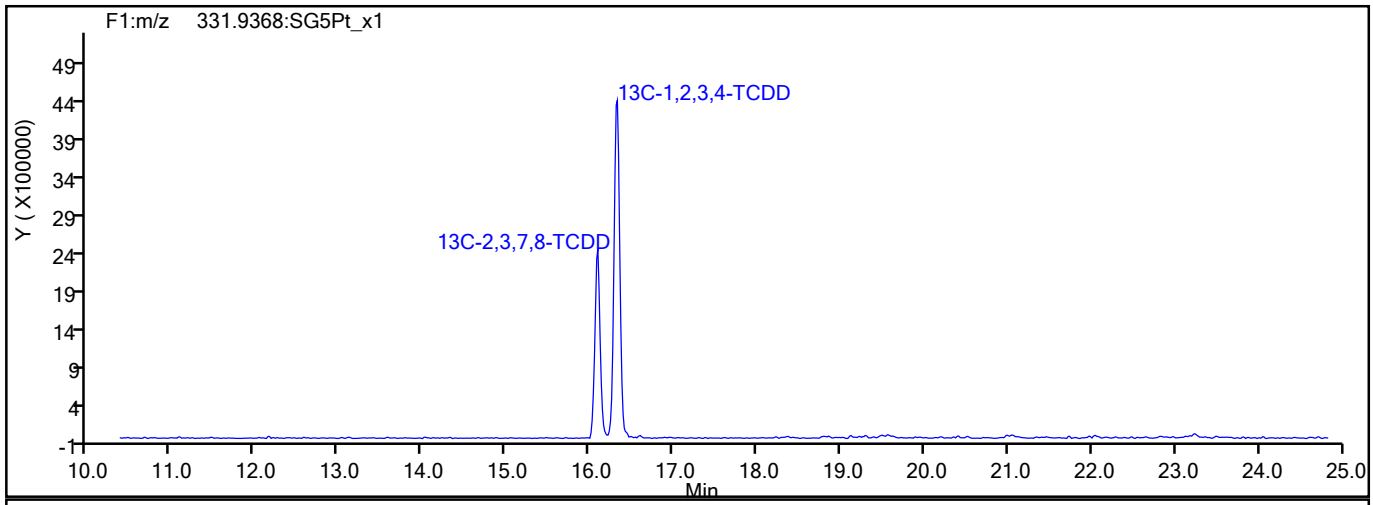

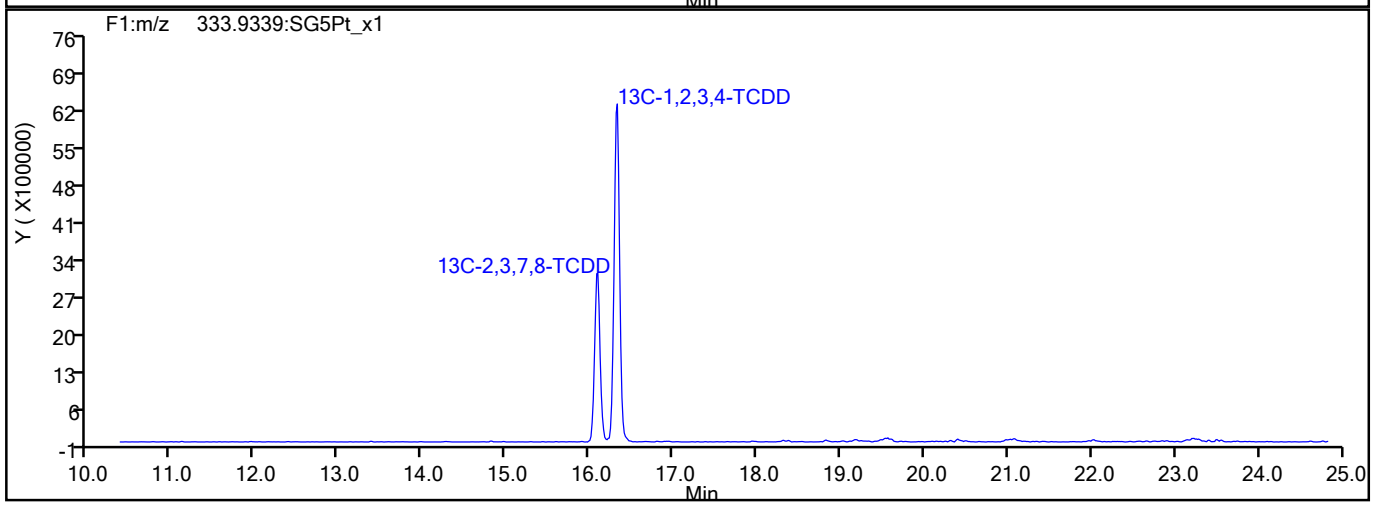

781133

Report Date: 24-Aug-2021 09:19:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_004.d		
Injection Date:	23-Aug-2021 17:29:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB085 (16-18)		
Worklist#:	518979	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

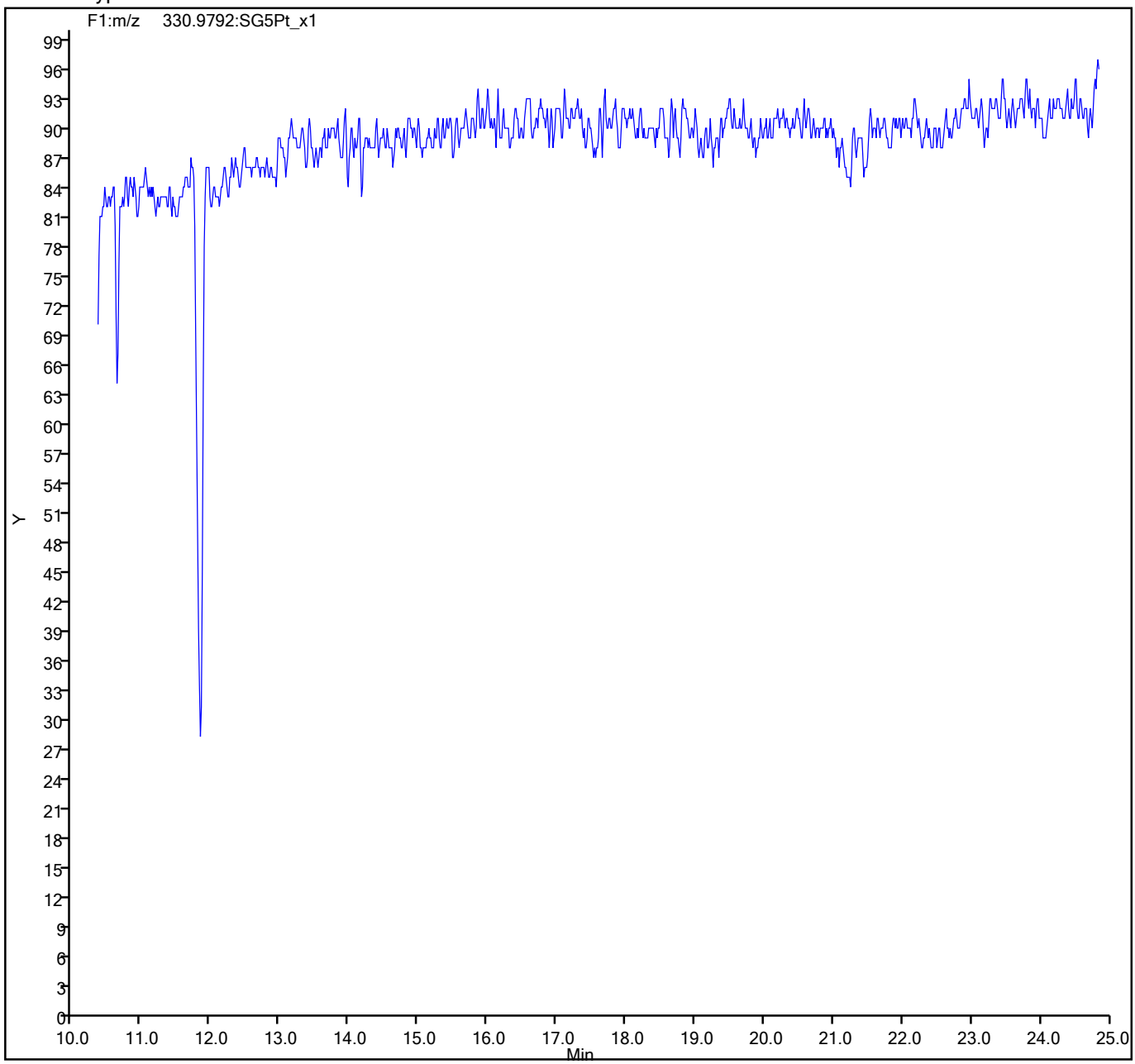

781134

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-2
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (16-18)
Lab Sample ID: 320-76788-21
Matrix: Solid
Lab File ID: 13AU2110D5_38.d
Analysis Method: 1613B
Date Collected: 07/23/2021 16:10
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.63(g)
Date Analyzed: 08/14/2021 21:16
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 32.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	4.3	B	1.4	0.10
40321-76-4	1,2,3,7,8-PeCDD	0.32	J	7.0	0.15
57117-41-6	1,2,3,7,8-PeCDF	0.39	J	7.0	0.049
57117-31-4	2,3,4,7,8-PeCDF	0.18	J q	7.0	0.050
39227-28-6	1,2,3,4,7,8-HxCDD	0.76	J B	7.0	0.25
57653-85-7	1,2,3,6,7,8-HxCDD	1.3	J	7.0	0.26
19408-74-3	1,2,3,7,8,9-HxCDD	3.6	J	7.0	0.23
70648-26-9	1,2,3,4,7,8-HxCDF	0.38	J B	7.0	0.035
57117-44-9	1,2,3,6,7,8-HxCDF	0.14	J B q	7.0	0.035
72918-21-9	1,2,3,7,8,9-HxCDF	0.11	J B	7.0	0.030
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.0	0.029
35822-46-9	1,2,3,4,6,7,8-HpCDD	57	B	7.0	1.3
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.20	J B	7.0	0.037
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.0	0.049
3268-87-9	OCDD	1400	B	14	1.6
39001-02-0	OCDF	0.32	J B q	14	0.037
41903-57-5	Total TCDD	11	B q	1.4	0.10
30402-14-3	Total TCDF	27	B q	1.4	0.092
36088-22-9	Total PeCDD	11		7.0	0.15
30402-15-4	Total PeCDF	0.72	J q	7.0	0.049
34465-46-8	Total HxCDD	51	B q	7.0	0.25
55684-94-1	Total HxCDF	0.62	J B q	7.0	0.032
37871-00-4	Total HpCDD	200	B	7.0	1.3
38998-75-3	Total HpCDF	0.20	J B	7.0	0.043

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-2
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (16-18)
Lab Sample ID: 320-76788-21
Matrix: Solid
Lab File ID: 13AU2110D5_38.d
Analysis Method: 1613B
Date Collected: 07/23/2021 16:10
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.63(g)
Date Analyzed: 08/14/2021 21:16
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 32.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516846
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	63		25-164
89059-46-1	13C-2,3,7,8-TCDF	58		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	63		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	58		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	63		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	67		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	61		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	65		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	59		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	57		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	59		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	65		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	64		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	72		26-138
114423-97-1	13C-OCDD	74		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	79		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d
Lims ID: 320-76788-A-21-A
Client ID: 11215702-072321-BN-SJSB105 (16-18)
Sample Type: Client
Inject. Date: 14-Aug-2021 21:16:32 ALS Bottle#: 38 Worklist Smp#: 27
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-21-a 320-76788-a-21-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:07:21 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 10:07:21

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	96048622	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	90344177	0.77	1.6249	57.9	57.9	0.0924	0.0924	57.89	
2,3,7,8-TCDF	17.356	5198740	0.78	1.0239	5.620	5.620	0.0329	0.0329		
A Non-2,3,7,8-sub-TCDF	17.046	3844370	0.77	1.0239	4.205	4.156	0.0329	2.436		RQMa
S Total TCDF					9.825	9.776	0.0329	0.0329		RQ
D 13C-2,3,7,8-TCDD	18.052	54034073	0.79	0.8993	62.6	62.6	0.1006	0.1006	62.56	
2,3,7,8-TCDD	18.067	1041233	0.76	1.2541	1.537	1.537	0.0368	0.0368		
$ 37Cl4-2,3,7,8-TCDD	18.067	33815358		1.1071	31.8	31.8	0.0651	0.0651	79.50	
A Non-2,3,7,8-sub-TCDD	17.499	1712604	0.77	1.2541	2.558	2.527	0.0368	0.7331		RQMa
S Total TCDD					4.094	4.064	0.0368	0.0368		RQ
D 13C-1,2,3,7,8-PeCDF	22.353	67610409	1.57	1.2101	58.2	58.2	0.1606	0.1606	58.17	
1,2,3,7,8-PeCDF	22.381	100764	1.37	1.0611	0.1404	0.1404	0.0174	0.0174		M
D 13C-2,3,4,7,8-PeCDF	23.703	75505214	1.57	1.2395	63.4	63.4	0.1568	0.1568	63.42	
2,3,4,7,8-PeCDF	23.717	50650	1.55	1.0184	0.0802	0.0659	0.0178	0.0178		RQM
A F1 PeCDFs	20.093						0.0184	0.0184		
A Non-2,3,7,8-sub-PeCDF	23.241	37380	1.55	1.0398	0.0555	0.0502	0.0176	0.0502		RQ
S Total PeCDF					0.2762	0.2566	0.0176	0.0176		RQ
D 13C-1,2,3,7,8-PeCDD	24.413	46204710	1.58	0.7612	63.2	63.2	0.0664	0.0664	63.19	
1,2,3,7,8-PeCDD	24.440	56298	1.35	1.0484	0.1162	0.1162	0.0543	0.0543		
A Non-2,3,7,8-sub-PeCDD	23.349	1781506	1.58	1.0484	3.678	3.678	0.0543	1.425		
S Total PeCDD					3.794	3.794	0.0543	0.0543		
D 13C-1,2,3,4,7,8-HxCDF	30.503	63137710	0.52	1.0837	64.5	64.5	0.3357	0.3357	64.55	
1,2,3,4,7,8-HxCDF	30.529	94005	1.08	1.0851	0.1372	0.1372	0.0126	0.0126		
D 13C-1,2,3,6,7,8-HxCDF	30.676	60382931	0.52	1.1279	59.3	59.3	0.3225	0.3225	59.31	
1,2,3,6,7,8-HxCDF	30.689	32864	1.24	1.1260	0.0548	0.0483	0.0125	0.0125		RQM
D 13C-2,3,4,6,7,8-HxCDF	31.501	56626975	0.51	1.0637	59.0	59.0	0.3420	0.3420	58.98	
2,3,4,6,7,8-HxCDF	31.528						0.0102	0.0102		
D 13C-1,2,3,7,8,9-HxCDF	32.313	50137383	0.51	0.9676	57.4	57.4	0.3759	0.3759	57.41	
1,2,3,7,8,9-HxCDF	32.326	22147	1.34	1.1664	0.0379	0.0379	0.0106	0.0106		M
A Non-2,3,7,8-sub-HxCDF	30.197						0.0114	0.0114		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.2299	0.2234	0.0115	0.0115		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.127	90262822	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.688	44236099	1.26	0.7334	66.8	66.8	0.3440	0.3440	66.82	
1,2,3,4,7,8-HxCDD	31.701	127247	1.08	1.0640	0.2703	0.2703	0.0899	0.0899		
D 13C-1,2,3,6,7,8-HxCDD	31.794	48076755	1.24	0.8802	60.5	60.5	0.2866	0.2866	60.51	
1,2,3,6,7,8-HxCDD	31.807	219739	1.13	1.0001	0.4570	0.4570	0.0938	0.0938		
1,2,3,7,8,9-HxCDD	32.140	678539	1.19	1.1325	1.298	1.298	0.0837	0.0837		
A Non-2,3,7,8-sub-HxCDD	30.882	8001816	1.24	1.0655	16.4	16.3	0.0889	11.8		RQ
S Total HxCDD					18.4	18.3	0.0891	0.0891		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	44892939	0.43	0.7730	64.3	64.3	0.8031	0.8031	64.34	
1,2,3,4,6,7,8-HpCDF	33.766	45749	1.15	1.4413	0.0707	0.0707	0.0133	0.0133		
D 13C-1,2,3,4,7,8,9-HpCDF	34.848	45847015	0.43	0.7008	72.5	72.5	0.8859	0.8859	72.48	
1,2,3,4,7,8,9-HpCDF	34.860						0.0177	0.0177		
A Non-2,3,7,8-sub-HpCDF	34.319						0.0152	0.0152		
S Total HpCDF					0.0707	0.0707	0.0155	0.0155		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	38175384	0.97	0.6472	65.3	65.3	0.3266	0.3266	65.35	
1,2,3,4,6,7,8-HpCDD	34.556	8526894	1.04	1.0943	20.4	20.4	0.4799	0.4799		
A Non-2,3,7,8-sub-HpCDD	34.301	21219257	1.05	1.0943	50.8	50.8	0.4799	50.8		
S Total HpCDD					71.2	71.2	0.4799	0.4799		
D 13C-OCDD	36.914	59698438	0.88	0.4472	147.9	147.9	0.2028	0.2028	73.96	
OCDF	37.010	48882	0.89	1.4382	0.1266	0.1139	0.0133	0.0133		RQM
OCDD	36.926	163753518	0.90	1.1070	495.6	495.6	0.5638	0.5638		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d
Lims ID: 320-76788-A-21-A
Client ID: 11215702-072321-BN-SJSB105 (16-18)
Sample Type: Client
Inject. Date: 14-Aug-2021 21:16:32 ALS Bottle#: 38 Worklist Smp#: 27
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-a-21-a 320-76788-a-21-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 10:07:21 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: dadunj Date: 18-Aug-2021 10:07:21

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		42992240	10505874	4410	11025	2382		
333.9339	17.855	17.855	0		53056382	13152052	4152	10380	3168	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.971	39394566	9539584	8269	20672	1154		
317.9389	17.341	17.341	0	0.971	50949611	12320764	5936	14840	2076	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.001	2284808	522803	1334	3335	392		
305.8987	17.356	17.356	0	1.001	2913932	682834	1615	4037	423	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	15.436	17.046	-96	0.890	33898	9848	1334	3335	7		
305.8987	15.436	17.046	-96	0.890	43085	12850	1615	4037	8	0.79(0.65-0.89)	
303.9016	15.950	17.046	-66	0.920	37191	10128	1334	3335	8		
305.8987	15.950	17.046	-66	0.920	54899	14217	1615	4037	9	0.68(0.65-0.89)	
303.9016	16.222	17.046	-49	0.935	65350	13727	1334	3335	10		M
305.8987	16.222	17.046	-49	0.935	90458	19209	1615	4037	12	0.72(0.65-0.89)	
303.9016	16.449	17.046	-36	0.949	72786	17568	1334	3335	13		
305.8987	16.449	17.046	-36	0.949	90747	21434	1615	4037	13	0.80(0.65-0.89)	M
303.9016	16.691	17.046	-21	0.963	98658	21154	1334	3335	16		
305.8987	16.691	17.046	-21	0.963	129288	28695	1615	4037	18	0.76(0.65-0.89)	
303.9016	16.978	17.046	-4	0.979	1011848	257464	1334	3335	193		
305.8987	16.978	17.046	-4	0.979	1241547	304285	1615	4037	188	0.81(0.65-0.89)	
303.9016	17.190	17.046	9	0.991	58902	10789	1334	3335	8		
	Empc Correction				49808	12889	1334	3335	10		
305.8987	17.190	17.046	9	0.991	64686	16739	1615	4037	10	0.91(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.779	17.046	44	1.025	180117	37374	1334	3335	28		
	Empc Correction				154294	33534	1334	3335	25		
305.8987	17.795	17.046	45	1.026	200383	43551	1615	4037	27	0.90(0.65-0.89)	
303.9016	18.021	17.046	58	1.039	39474	8267	1334	3335	6		
	Empc Correction				28937	6563	1334	3335	5		
305.8987	18.021	17.046	58	1.039	37581	8524	1615	4037	5	1.05(0.65-0.89)	
303.9016	19.185	17.046	128	1.106	148902	30069	1334	3335	23		
305.8987	19.170	17.046	127	1.106	190024	40504	1615	4037	25	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.052	18.051	0	1.011	23827558	5528398	4410	11025	1254		
333.9339	18.052	18.051	0	1.011	30206515	6830117	4152	10380	1645	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.067	18.066	0	1.001	448141	101457	1230	3075	82		
321.8936	18.067	18.066	0	1.001	593092	134637	1049	2622	128	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.067	18.066	0	1.012	33815358	7847211	6820	17050	1151		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	16.131	17.499	-82	0.894	49367	12271	1230	3075	10		
321.8936	16.131	17.499	-82	0.894	62290	14351	1049	2622	14	0.79(0.65-0.89)	
319.8965	16.358	17.499	-68	0.906	52720	15174	1230	3075	12		
321.8936	16.373	17.499	-67	0.907	71117	17829	1049	2622	17	0.74(0.65-0.89)	
319.8965	16.917	17.499	-35	0.937	215965	54804	1230	3075	45		
321.8936	16.917	17.499	-35	0.937	280797	68587	1049	2622	65	0.77(0.65-0.89)	
319.8965	17.552	17.499	3	0.972	25855	7174	1230	3075	6		
321.8936	17.538	17.499	2	0.972	42935	9933	1049	2622	9	0.60(0.65-0.89)	
	Empc Correction				33577	9316	1049	2622	9		
319.8965	17.825	17.499	19	0.987	127011	32358	1230	3075	26		
321.8936	17.809	17.499	19	0.987	144606	38136	1049	2622	36	0.88(0.65-0.89)	
319.8965	17.961	17.499	28	0.995	156199	36536	1230	3075	30		M
321.8936	17.946	17.499	27	0.994	207121	51352	1049	2622	49	0.75(0.65-0.89)	
319.8965	18.430	17.499	56	1.021	60724	16047	1230	3075	13		
321.8936	18.430	17.499	56	1.021	85742	16914	1049	2622	16	0.71(0.65-0.89)	
319.8965	18.671	17.499	70	1.034	18543	6234	1230	3075	5		
321.8936	18.671	17.499	70	1.034	24730	6702	1049	2622	6	0.75(0.65-0.89)	
319.8965	19.155	17.499	99	1.061	53063	11306	1230	3075	9		
	Empc Correction				41867	7944	1230	3075	6		
321.8936	19.170	17.499	100	1.062	54373	10317	1049	2622	10	0.98(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.353	22.367	-1	1.252	41312232	6780886	10962	27405	619		
353.8970	22.353	22.367	-1	1.252	26298177	4387422	7429	18572	591	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.381	22.380	0	1.001	58292	10925	323	807	34		M
341.8567	22.367	22.380	-1	1.001	42472	7678	500	1250	15	1.37(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.328	46127515	6904385	10962	27405	630		
353.8970	23.703	23.703	0	1.328	29377699	4422112	7429	18572	595	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											RQM
339.8597	23.717	23.730	-1	1.001	41838	7388	323	807	23		
	Empc Correction				30787	5192	323	807	16		
341.8567	23.717	23.730	-1	1.001	19863	3350	500	1250	7	2.11(1.32-1.78)	M
A F1 PeCDFs											
339.8597	20.093						313	782			
341.8567	20.093						546	1365			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.017	23.241	-133	0.940	26652	4604	323	807	14		
	Empc Correction				22721	4778	323	807	15		
341.8567	21.017	23.241	-133	0.940	14659	3083	500	1250	6	1.82(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.413	24.426	-1	1.367	28295182	3979416	2568	6420	1550		
369.8919	24.413	24.426	-1	1.367	17909528	2488395	2213	5532	1124	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.440	24.453	-1	1.001	32375	5421	777	1942	7		
357.8516	24.453	24.453	0	1.002	23923	4874	695	1737	7	1.35(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.235	23.349	-127	0.870	185743	32006	777	1942	41		
357.8516	21.235	23.349	-127	0.870	131652	20932	695	1737	30	1.41(1.32-1.78)	
355.8546	21.972	23.349	-82	0.900	423483	75231	777	1942	97		
357.8516	21.972	23.349	-82	0.900	266975	45382	695	1737	65	1.59(1.32-1.78)	
355.8546	22.667	23.349	-41	0.928	59568	10033	777	1942	13		
357.8516	22.653	23.349	-42	0.928	37824	5461	695	1737	8	1.57(1.32-1.78)	
355.8546	22.940	23.349	-24	0.940	32331	5945	777	1942	8		
357.8516	22.967	23.349	-23	0.941	21654	4198	695	1737	6	1.49(1.32-1.78)	
355.8546	23.253	23.349	-6	0.953	109035	18669	777	1942	24		
357.8516	23.281	23.349	-4	0.954	65299	11533	695	1737	17	1.67(1.32-1.78)	
355.8546	23.458	23.349	7	0.961	280177	34491	777	1942	44		
357.8516	23.444	23.349	6	0.960	167765	23745	695	1737	34	1.67(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	21569635	3778811	10672	26680	354		
385.8610	30.490	30.503	-1	0.949	41568075	7260186	21435	53587	339	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.001	48741	8875	335	837	26		
375.8178	30.516	30.529	-1	1.000	45264	9616	271	677	35	1.08(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.676	30.689	-1	0.955	20601099	3667449	10672	26680	344		
385.8610	30.676	30.689	-1	0.955	39781832	7093048	21435	53587	331	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQM
373.8208	30.689	30.702	-1	1.000	18193	2802	335	837	8		
375.8178	30.702	30.702	0	1.001	19088	3471	271	677	13	0.95(1.05-1.43)	M
	Empc Correction				14671	2259	271	677	8		
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.501	31.514	-1	0.981	19148369	4268309	10672	26680	400		
385.8610	31.501	31.514	-1	0.981	37478606	8443087	21435	53587	394	0.51(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.528						335	837			
375.8178	31.528						271	677			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.313	0	1.006	16945560	4128988	10672	26680	387		
385.8610	32.313	32.313	0	1.006	33191823	8098283	21435	53587	378	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.326	32.326	0	1.000	12669	3466	335	837	10		M
375.8178	32.326	32.326	0	1.000	9478	2889	271	677	11	1.34(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.197						335	837			
375.8178	30.197						271	677			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.127	32.127	0		50128515	12253875	12120	30300	1011		
403.8529	32.127	32.127	0		40134307	9812270	10148	25370	967	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.688	31.701	-1	0.986	24629638	6224377	12120	30300	514		
403.8529	31.688	31.701	-1	0.986	19606461	4949972	10148	25370	488	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.701	31.714	-1	1.000	66154	18336	3105	7762	6		
391.8127	31.701	31.714	-1	1.000	61093	18164	1171	2927	16	1.08(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.794	31.807	-1	0.990	26618647	6249409	12120	30300	516		
403.8529	31.794	31.807	-1	0.990	21458108	5143653	10148	25370	507	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.807	31.820	-1	1.000	116383	29298	3105	7762	9		
391.8127	31.807	31.820	-1	1.000	103356	24384	1171	2927	21	1.13(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.140	0	1.014	368443	66773	3105	7762	22		
391.8127	32.127	32.140	-1	1.014	310096	52122	1171	2927	45	1.19(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.545	30.882	-80	0.929	3225778	342802	3105	7762	110		
391.8127	29.531	30.882	-81	0.929	2561949	275328	1171	2927	235	1.26(1.05-1.43)	
389.8157	30.556	30.882	-20	0.961	63906	13314	3105	7762	4		
391.8127	30.569	30.882	-19	0.961	70700	13434	1171	2927	11	0.90(1.05-1.43)	
	Empc Correction				51537	10737	1171	2927	9		
389.8157	30.955	30.882	4	0.974	1071225	209353	3105	7762	67		
391.8127	30.955	30.882	4	0.974	855142	164697	1171	2927	141	1.25(1.05-1.43)	
389.8157	31.142	30.882	16	0.979	95369	19548	3105	7762	6		
391.8127	31.155	30.882	16	0.980	111079	20967	1171	2927	18	0.86(1.05-1.43)	
	Empc Correction				76910	15764	1171	2927	13		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.754	0	1.051	13477402	4329286	16354	40885	265		
419.8220	33.754	33.754	0	1.051	31415537	9883342	38442	96105	257	0.43(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.766	0	1.000	24484	9294	755	1887	12		
409.7789	33.766	33.766	0	1.000	21265	6581	332	830	20	1.15(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.848	34.847	0	1.085	13821158	3509842	16354	40885	215		
419.8220	34.835	34.847	-1	1.084	32025857	8142646	38442	96105	212	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860						755	1887			
409.7789	34.860						332	830			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						755	1887			
409.7789	34.319						332	830			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.076	18820874	5148552	9227	23067	558		
437.8140	34.556	34.556	0	1.076	19354510	5204530	9433	23582	552	0.97(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.556	34.568	-1	1.000	4357200	1183624	11665	29162	101		
425.7737	34.556	34.568	-1	1.000	4169694	1142732	10084	25210	113	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.009	34.301	-17	0.984	10853292	3262418	11665	29162	280		
425.7737	34.009	34.301	-17	0.984	10365965	3106862	10084	25210	308	1.05(0.88-1.20)	
13C-OCDD											
469.7779	36.914	36.914	0	1.149	27981198	6744404	3838	9595	1757		
471.7750	36.914	36.914	0	1.149	31717240	7632525	4167	10417	1832	0.88(0.76-1.02)	
OCDF											RQM
441.7428	37.010	37.010	0	1.003	28503	6256	213	532	29		M
	Empc Correction				23018	5497	213	532	26		
443.7399	37.010	37.010	0	1.003	25864	6177	335	837	18	1.10(0.76-1.02)	M
OCDD											
457.7377	36.926	36.926	0	1.000	77423602	18306734	9863	24657	1856		
459.7348	36.914	36.926	-1	1.000	86329916	20489395	8083	20207	2535	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d
Lims ID: 320-76788-A-21-A
Client ID: 11215702-072321-BN-SJSB105 (16-18)
Inject. Date: 14-Aug-2021 21:16:32 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 27

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	90344177	21860348

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	90344177	21860348

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.436	33898	9848	43085	12850	0.0832	0.79	
15.950	37191	10128	54899	14217	0.0996	0.68	
16.222	65350	13727	90458	19209	0.1684	0.72	Ma
16.449	72786	17568	90747	21434	0.1768	0.80	M
16.691	98658	21154	129288	28695	0.2464	0.76	
16.978	1011848	257464	1241547	304285	2.44	0.81	
17.190	58902	10789	64686	16739	0.1336	0.91	RQ
17.190	49808	12889	64686	16739	0.1238		Empc Correction
17.779	180117	37374	200383	43551	0.4113	0.90	RQ
17.779	154294	33534	200383	43551	0.3834		Empc Correction
18.021	39474	8267	37581	8524	0.0833	1.05	RQ
18.021	28937	6563	37581	8524	0.0719		Empc Correction
19.185	148902	30069	190024	40504	0.3664	0.78	
Signal Totals:							
	1701672	412944	2142698	510008			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3889824	926396				0.82	RQMa
	3844370	922952					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.205 = (3889824 * 100.000) / (90344177 * 1.024)
Empc Amount: 4.156 = (3844370 * 100.000) / (90344177 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d
Lims ID: 320-76788-A-21-A
Client ID: 11215702-072321-BN-SJSB105 (16-18)
Inject. Date: 14-Aug-2021 21:16:32 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 27

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	54034073	12358515

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	54034073	12358515

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.131	49367	12271	62290	14351	0.1648	0.79	
16.358	52720	15174	71117	17829	0.1827	0.74	
16.917	215965	54804	280797	68587	0.7331	0.77	
17.552	25855	7174	42935	9933	0.1015	0.60	RQ
17.552	25855	7174	33577	9316	0.0877		Empc Correction
17.825	127011	32358	144606	38136	0.4008	0.88	
17.961	156199	36536	207121	51352	0.5361	0.75	Ma
18.430	60724	16047	85742	16914	0.2161	0.71	
18.671	18543	6234	24730	6702	0.0639	0.75	
19.155	53063	11306	54373	10317	0.1585	0.98	RQ
19.155	41867	7944	54373	10317	0.1420		Empc Correction
Signal Totals:							
	748251	188542	964353	233504			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1733158	426025				0.78	RQMa
	1712604	422046					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.558 = (1733158 * 100.000) / (54034073 * 1.254)
Empc Amount: 2.527 = (1712604 * 100.000) / (54034073 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d
Lims ID: 320-76788-A-21-A
Client ID: 11215702-072321-BN-SJSB105 (16-18)
Inject. Date: 14-Aug-2021 21:16:32 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 27

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	67610409	11168308
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	75505214	11326497

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	71557811	11247402

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.017	26652	4604	14659	3083	0.0555	1.82	RQ
21.017	22721	4778	14659	3083	0.0502		Empc Correction
Signal Totals:							
	22721	4778	14659	3083			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	41311	7687				1.82	RQ
	37380	7861					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0555 = (41311 * 100.000) / (71557811 * 1.040)
Empc Amount: 0.0502 = (37380 * 100.000) / (71557811 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d
Lims ID: 320-76788-A-21-A
Client ID: 11215702-072321-BN-SJSB105 (16-18)
Inject. Date: 14-Aug-2021 21:16:32 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 27

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	46204710	6467811

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	46204710	6467811

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.235	185743	32006	131652	20932	0.6552	1.41	
21.972	423483	75231	266975	45382	1.43	1.59	
22.667	59568	10033	37824	5461	0.2010	1.57	
22.940	32331	5945	21654	4198	0.1114	1.49	
23.253	109035	18669	65299	11533	0.3599	1.67	
23.458	280177	34491	167765	23745	0.9247	1.67	
Signal Totals:							
	1090337	176375	691169	111251			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1781506	287626				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.678 = (1781506 * 100.000) / (46204710 * 1.048)

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Lims ID:	320-76788-A-21-A		
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Inject. Date:	14-Aug-2021 21:16:32	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	516846	Lims Sample ID:	27

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	63137710	11038997
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	60382931	10760497
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	56626975	12711396
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	50137383	12227271

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	57571249	11684540

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d
Lims ID: 320-76788-A-21-A
Client ID: 11215702-072321-BN-SJSB105 (16-18)
Inject. Date: 14-Aug-2021 21:16:32 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 27

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	44236099	11174349
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	48076755	11393062
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	46156427	11283705

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.545	3225778	342802	2561949	275328	11.8	1.26	
30.556	63906	13314	70700	13434	0.2737	0.90	RQ
30.556	63906	13314	51537	10737	0.2347		Empc Correction
30.955	1071225	209353	855142	164697	3.92	1.25	
31.142	95369	19548	111079	20967	0.4198	0.86	RQ
31.142	95369	19548	76910	15764	0.3503		Empc Correction
Signal Totals:							
	4456278	585017	3545538	466526			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8055148	1059443				1.24	RQ
	8001816	1051543					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 16.378 = (8055148 * 100.000) / (46156427 * 1.066)
Empc Amount: 16.270 = (8001816 * 100.000) / (46156427 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d
Lims ID: 320-76788-A-21-A
Client ID: 11215702-072321-BN-SJSB105 (16-18)
Inject. Date: 14-Aug-2021 21:16:32 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 27

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	38175384	10353082

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	38175384	10353082

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.009	10853292	3262418	10365965	3106862	50.8	1.05	
Signal Totals:							
	10853292	3262418	10365965	3106862			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	21219257	6369280				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 50.794 = (21219257 * 100.000) / (38175384 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d				
Injection Date:	14-Aug-2021 21:16:32	Instrument ID:	10D5		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:	DB	ALS Bottle#:	38	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 16.222 Area = 65350

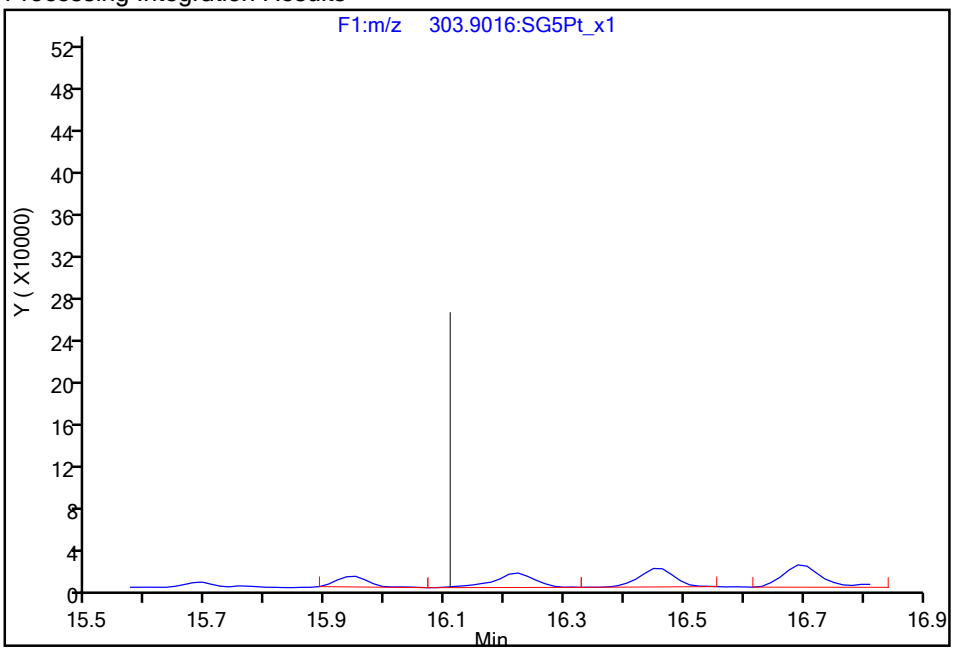

Manual Integration Results

RT = 16.222 Area = 65350

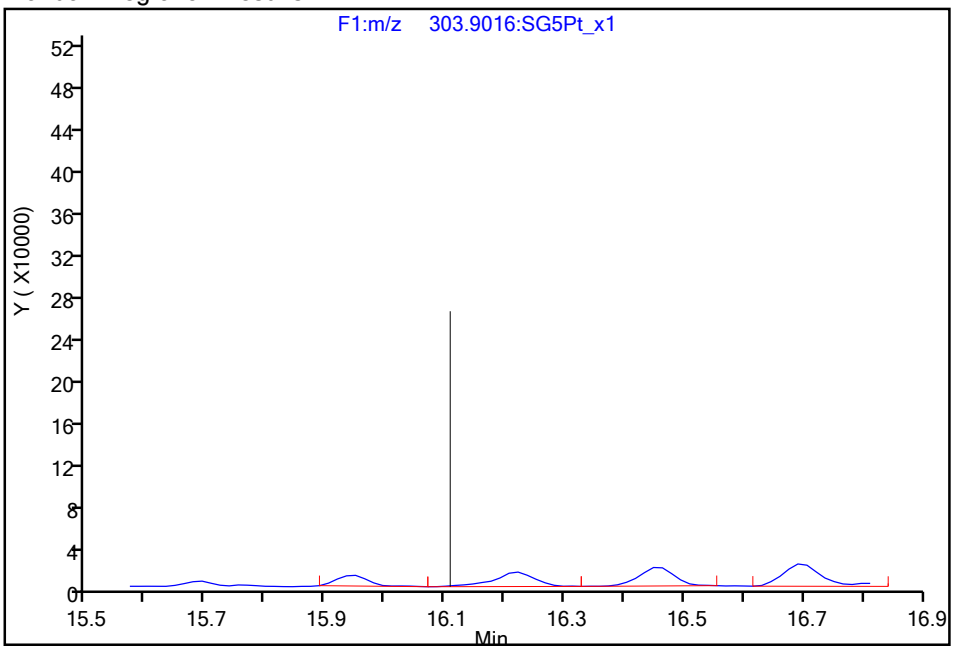

Reviewer: dadunj, 18-Aug-2021 10:04:52

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d				
Injection Date:	14-Aug-2021 21:16:32	Instrument ID:	10D5		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:	DB	ALS Bottle#:	38	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.89- 19.20)

Signal: 2

Processing Integration Results

RT = 16.434 Area = 42490

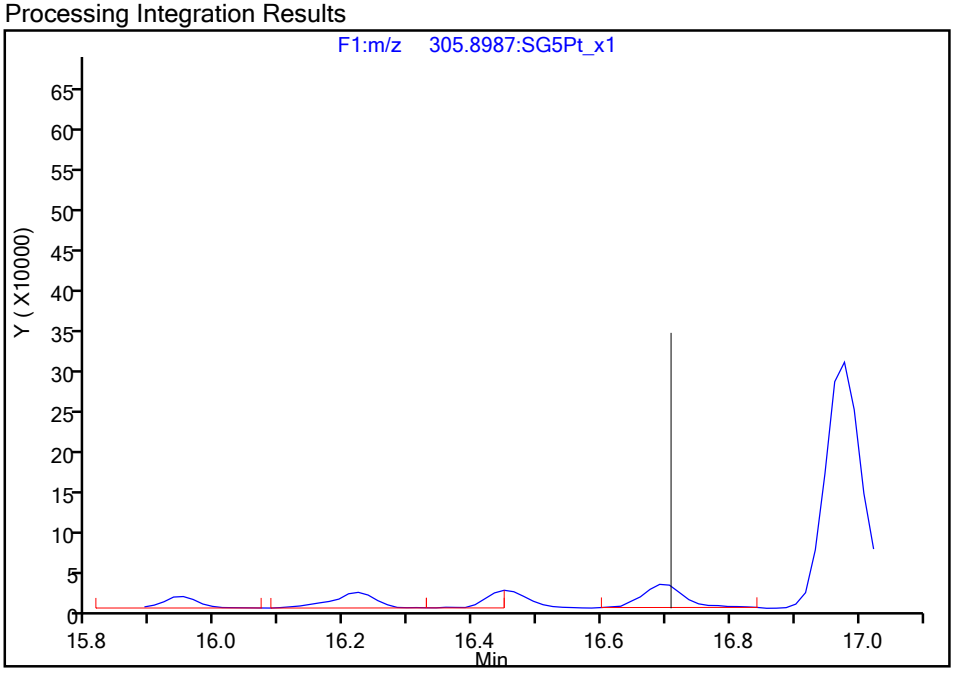

Manual Integration Results

RT = 16.449 Area = 90747 M

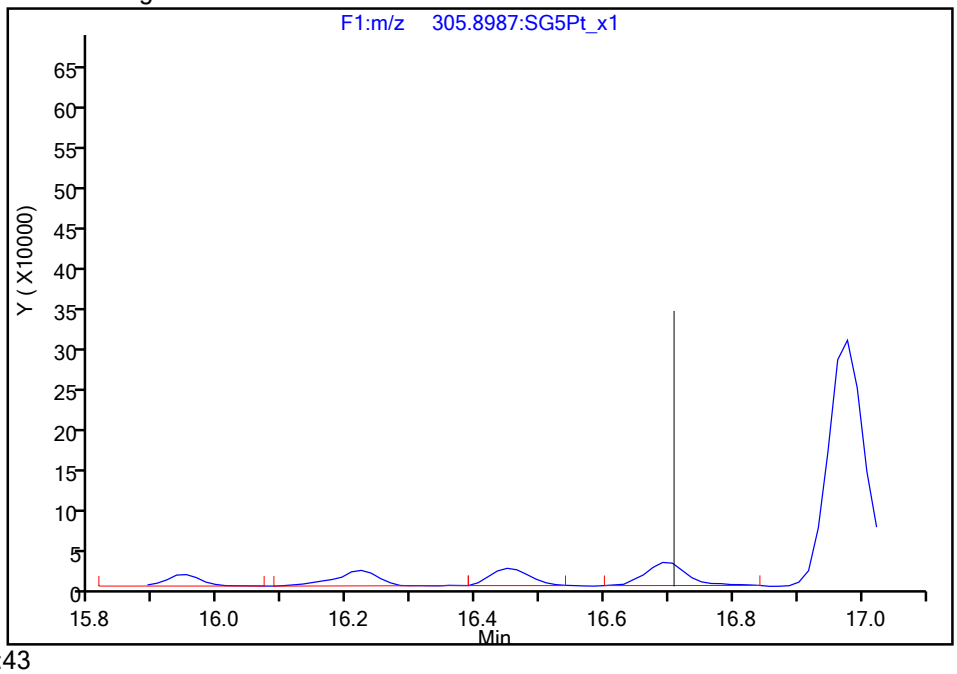

Reviewer: dadunj, 18-Aug-2021 10:04:43

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d				
Injection Date:	14-Aug-2021 21:16:32	Instrument ID:	10D5		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:	DB	ALS Bottle#:	38	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.80- 19.20)

Signal: 1

Processing Integration Results

Not Detected
RT: 15.80- 19.20

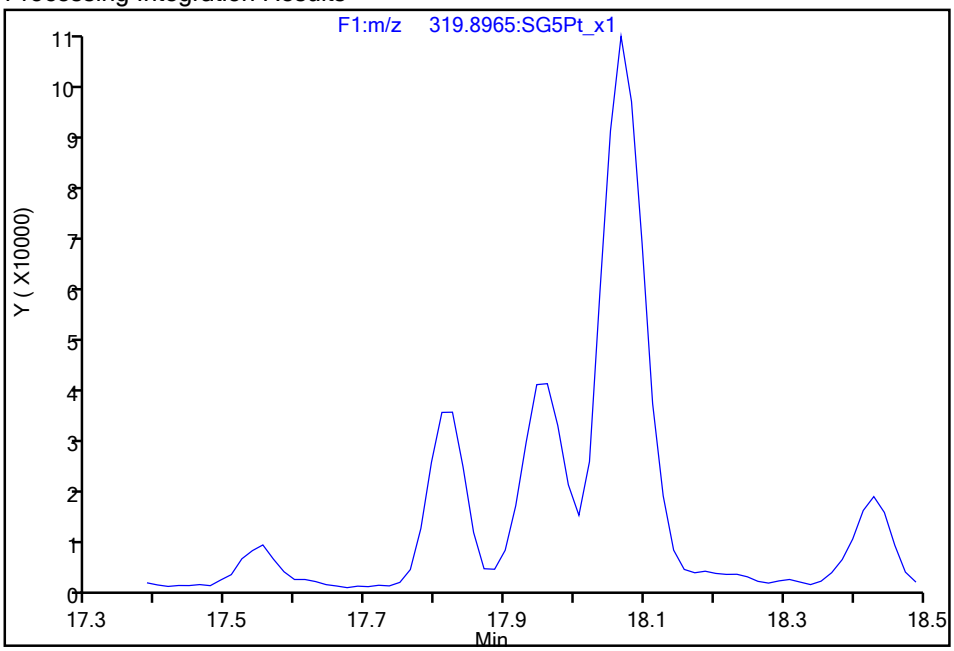

Manual Integration Results

RT = 17.961 Area = 156199 M

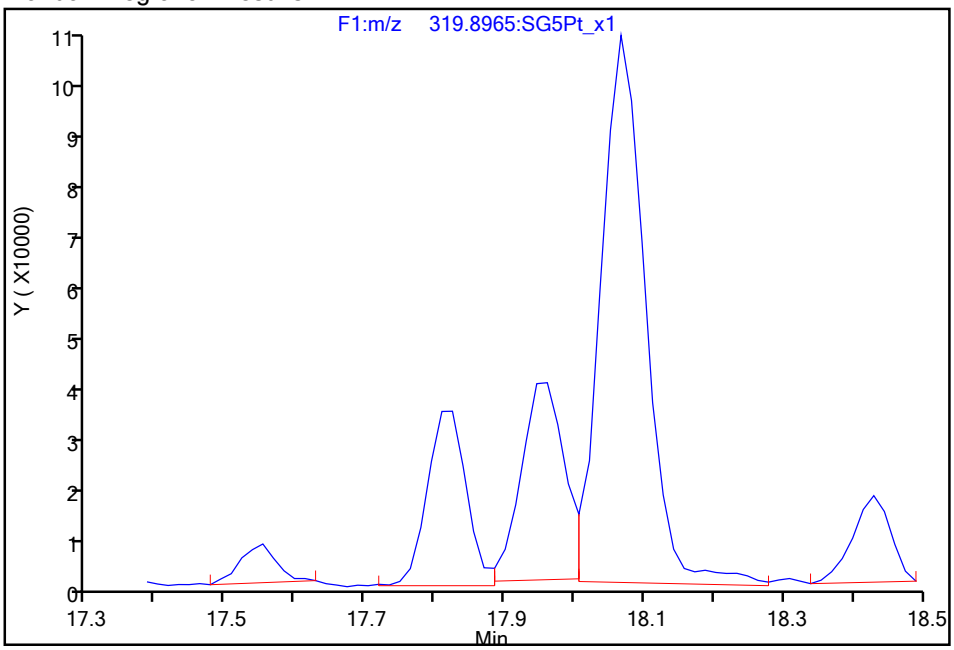

Reviewer: dadunj, 18-Aug-2021 10:05:37

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d				
Injection Date:	14-Aug-2021 21:16:32	Instrument ID:	10D5		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:	DB	ALS Bottle#:	38	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.37
Area: 42852
Amount: 0.149984
Amount Units: pg/ul

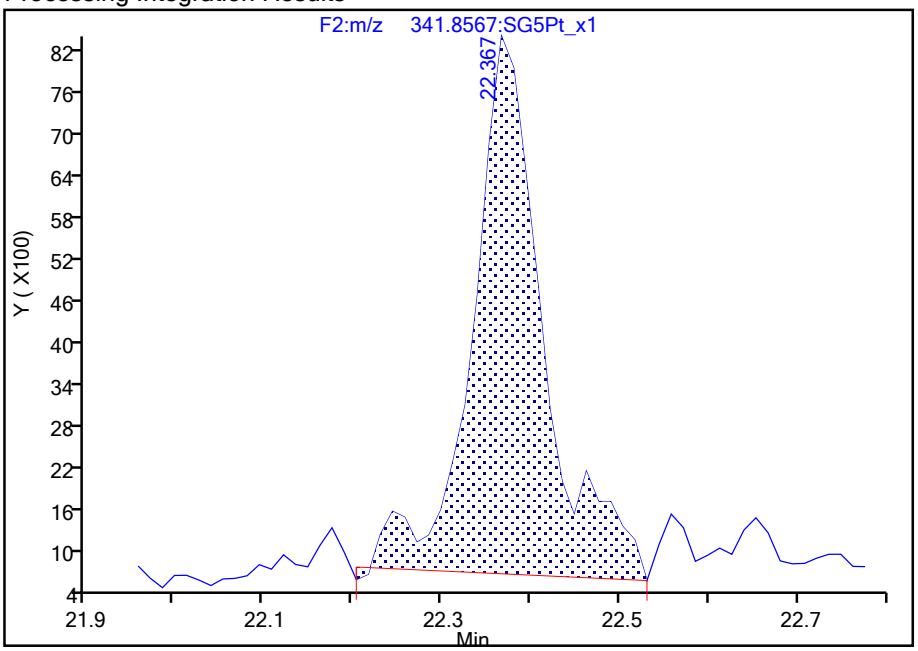

Manual Integration Results

RT: 22.37
Area: 42472
Amount: 0.140450
Amount Units: pg/ul

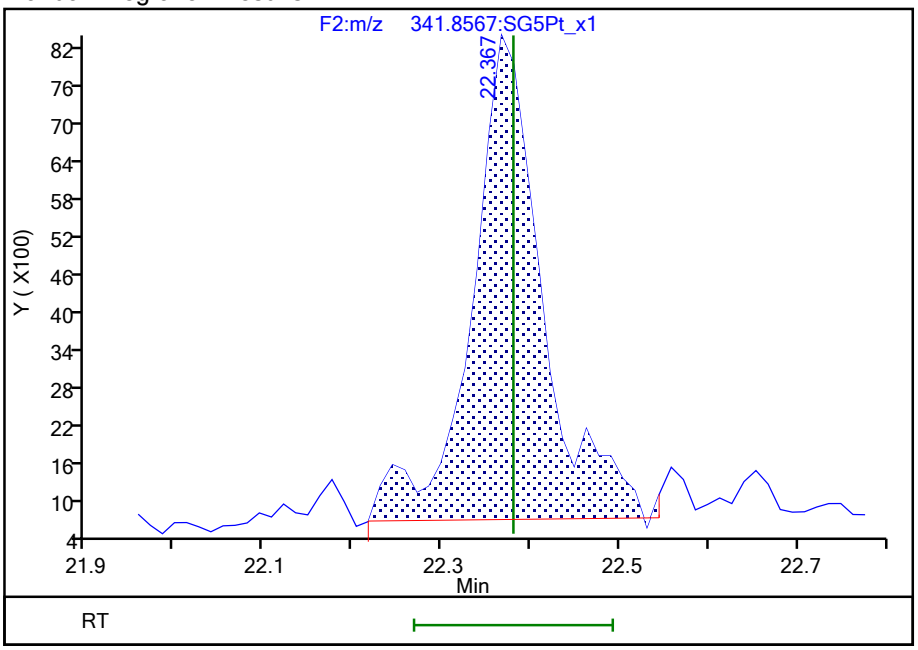

Reviewer: dadunj, 18-Aug-2021 10:06:00

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d				
Injection Date:	14-Aug-2021 21:16:32	Instrument ID:	10D5		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:	DB	ALS Bottle#:	38	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.38
Area: 64752
Amount: 0.149984
Amount Units: pg/ul

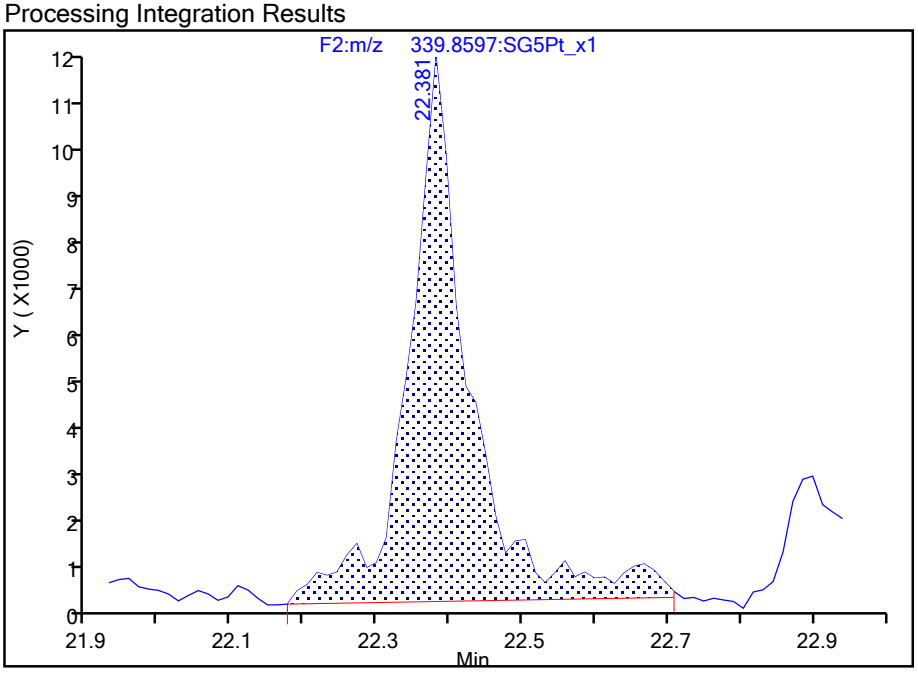

Manual Integration Results

RT: 22.38
Area: 58292
Amount: 0.140450
Amount Units: pg/ul

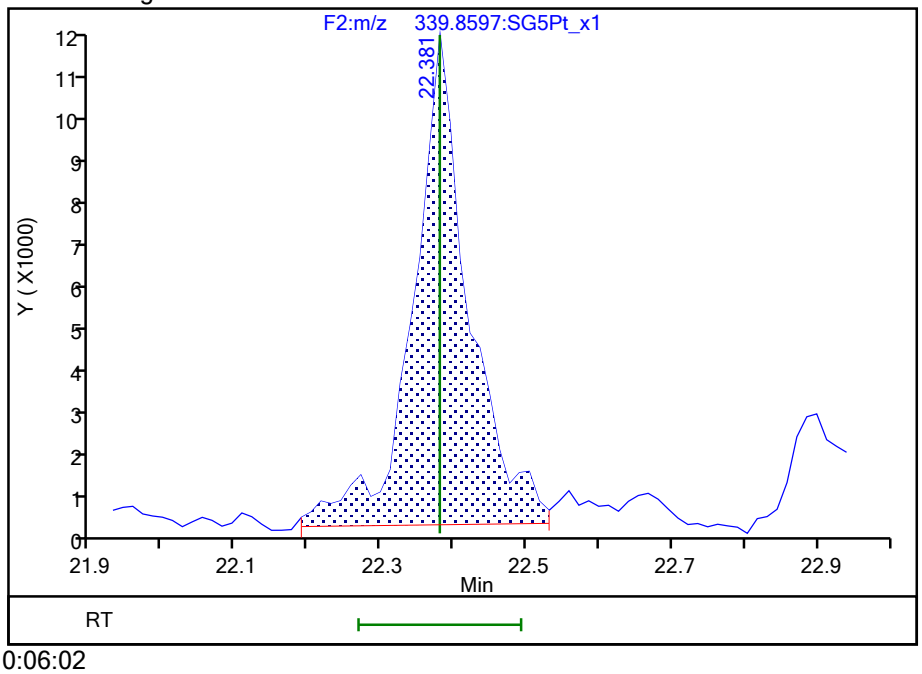

Reviewer: dadunj, 18-Aug-2021 10:06:02
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d				
Injection Date:	14-Aug-2021 21:16:32	Instrument ID:	10D5		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:	DB	ALS Bottle#:	38	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.72
Area: 27902
Amount: 0.090694
Amount Units: pg/ul

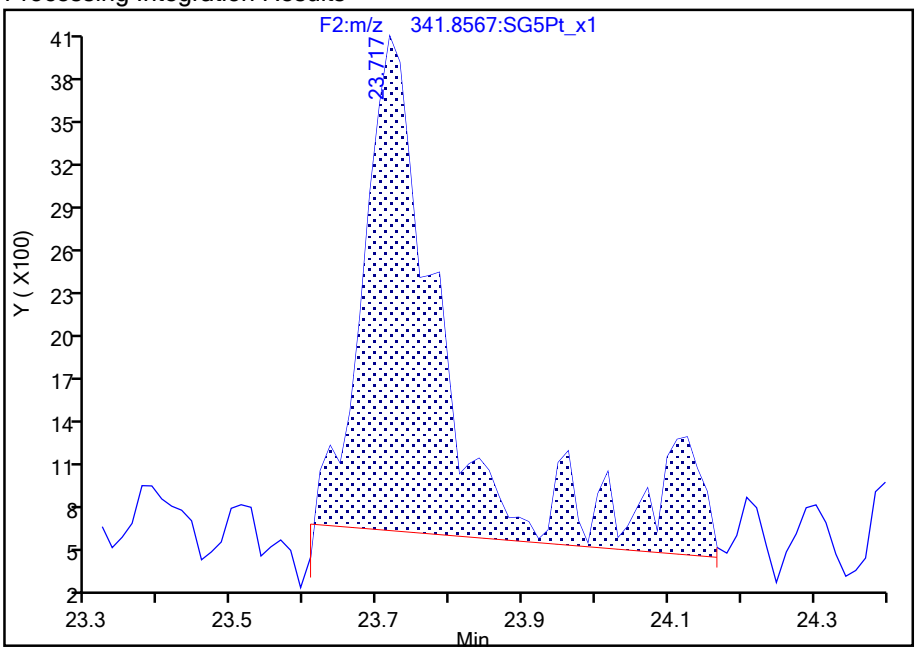

Manual Integration Results

RT: 23.72
Area: 19863
Amount: 0.080240
Amount Units: pg/ul

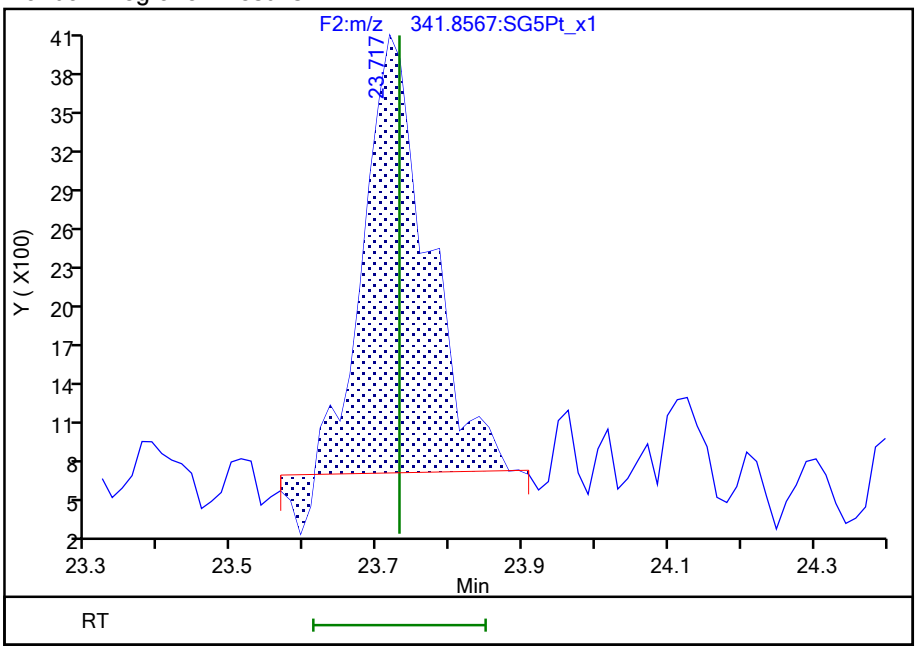

Reviewer: dadunj, 18-Aug-2021 10:06:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d				
Injection Date:	14-Aug-2021 21:16:32	Instrument ID:	10D5		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:	DB	ALS Bottle#:	38	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 30.70
Area: 22042
Amount: 0.059176
Amount Units: pg/ul

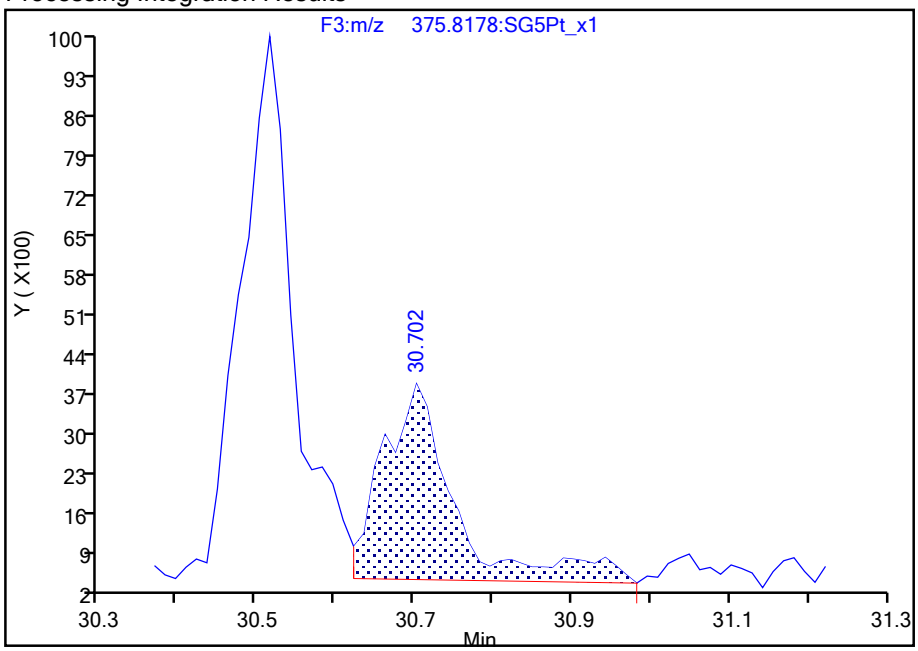

Manual Integration Results

RT: 30.70
Area: 19088
Amount: 0.054832
Amount Units: pg/ul

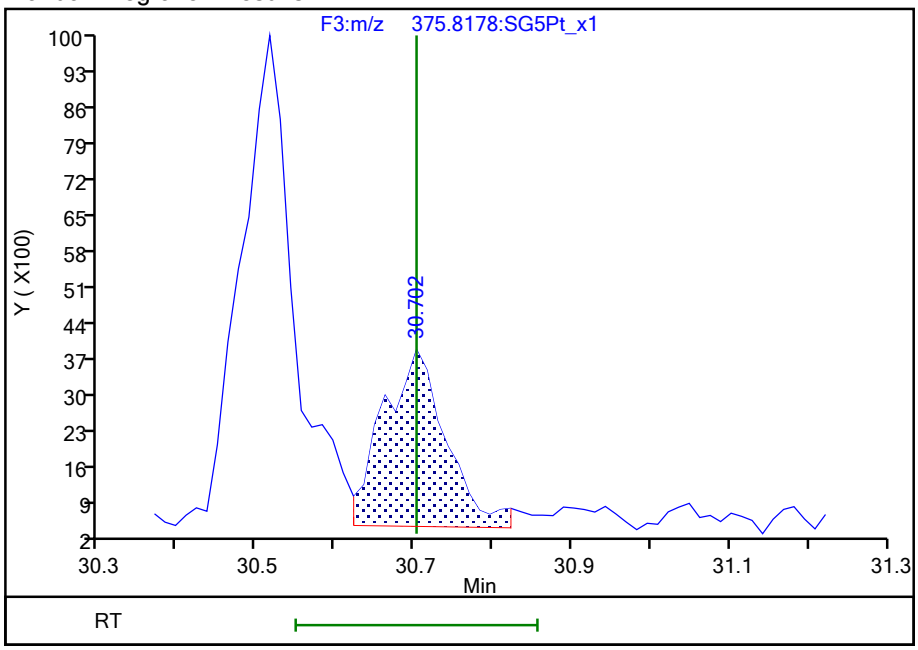

Reviewer: dadunj, 18-Aug-2021 10:06:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d				
Injection Date:	14-Aug-2021 21:16:32	Instrument ID:	10D5		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:	DB	ALS Bottle#:	38	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.33
Area: 17637
Amount: 0.055831
Amount Units: pg/ul

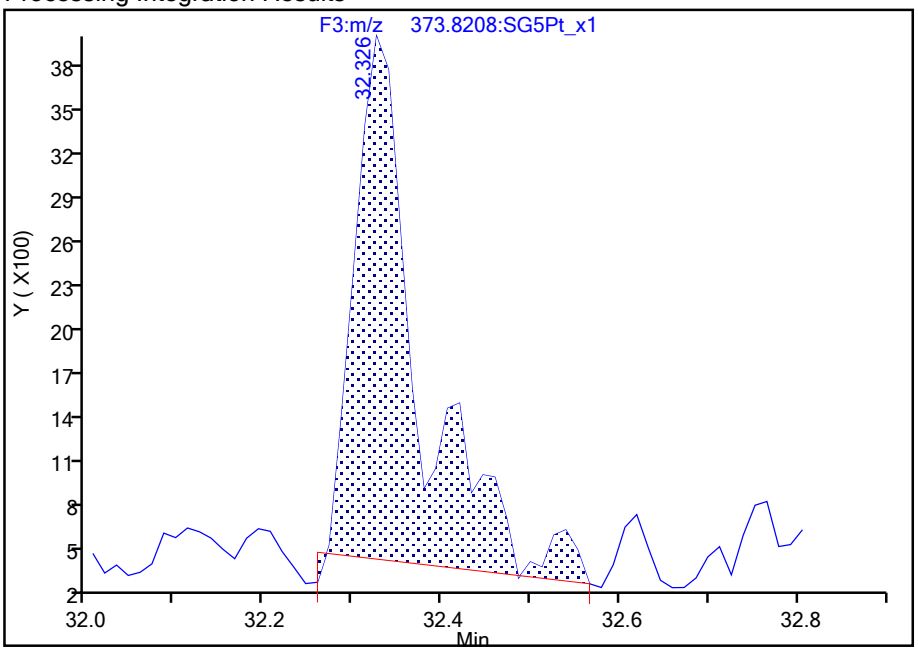

Manual Integration Results

RT: 32.33
Area: 12669
Amount: 0.037872
Amount Units: pg/ul

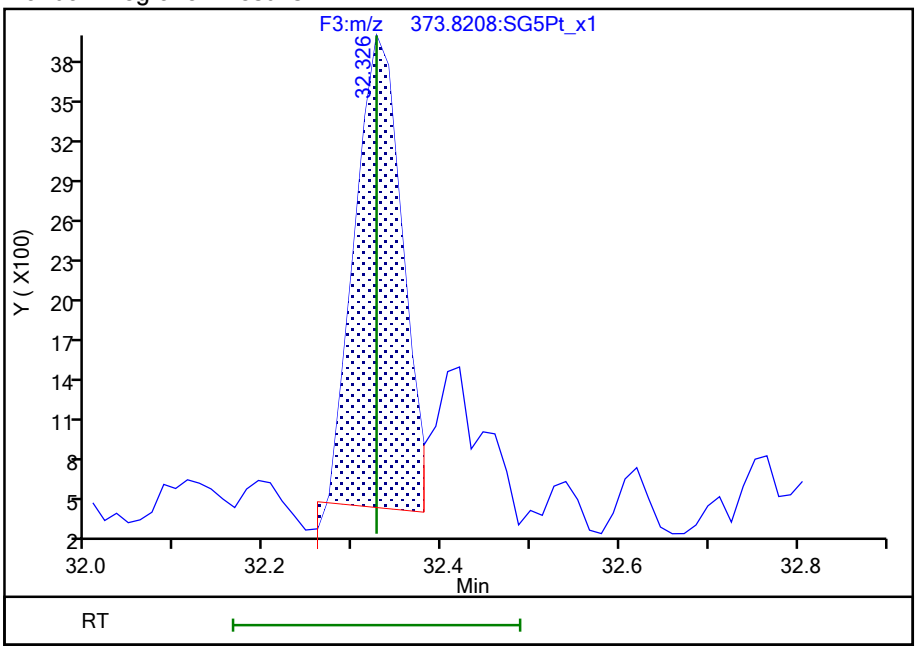

Reviewer: dadunj, 18-Aug-2021 10:06:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d				
Injection Date:	14-Aug-2021 21:16:32	Instrument ID:	10D5		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:	DB	ALS Bottle#:	38	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.33
Area: 15012
Amount: 0.055831
Amount Units: pg/ul

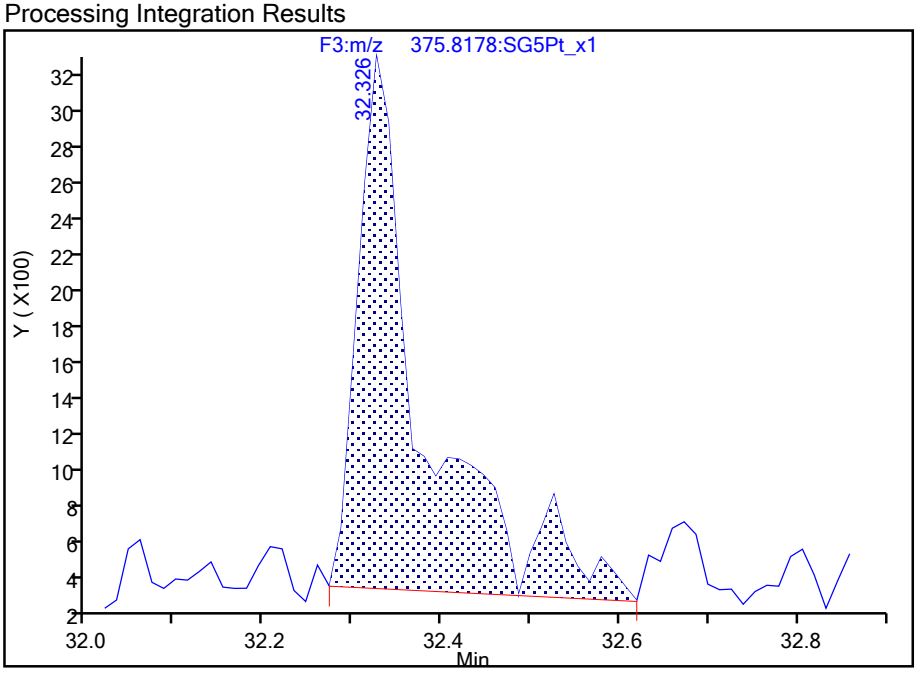

Manual Integration Results

RT: 32.33
Area: 9478
Amount: 0.037872
Amount Units: pg/ul

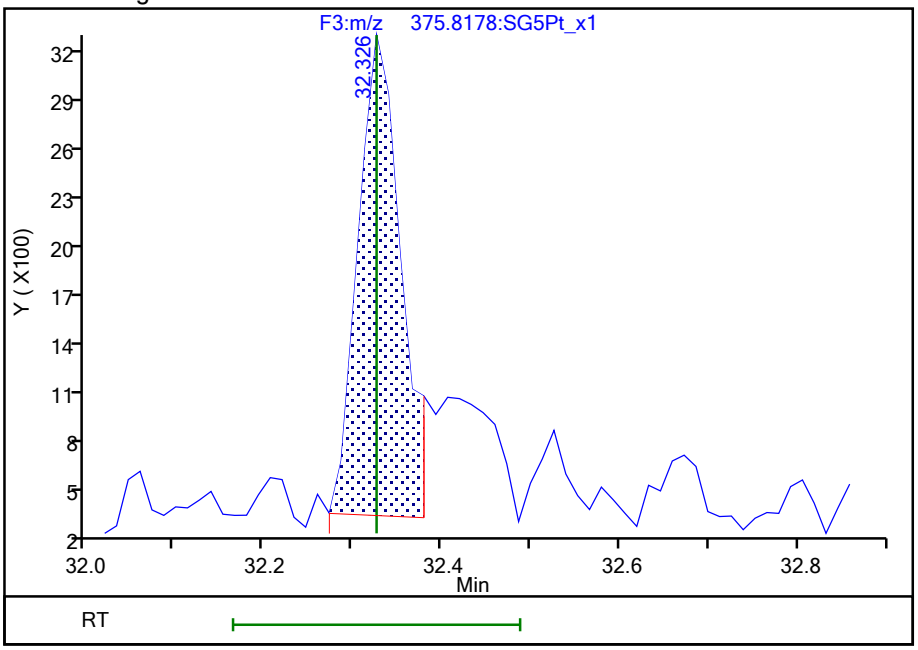

Reviewer: dadunj, 18-Aug-2021 10:06:27
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

781161

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d				
Injection Date:	14-Aug-2021 21:16:32	Instrument ID:	10D5		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:	DB	ALS Bottle#:	38	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.94
Area: 61664
Amount: 0.311631
Amount Units: pg/ul

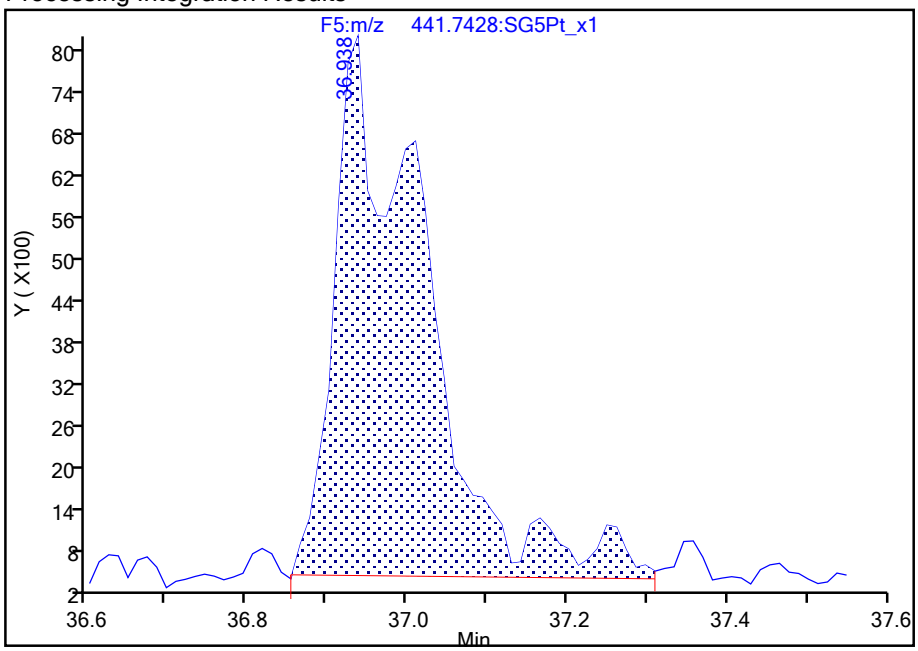

Manual Integration Results

RT: 37.01
Area: 28503
Amount: 0.126647
Amount Units: pg/ul

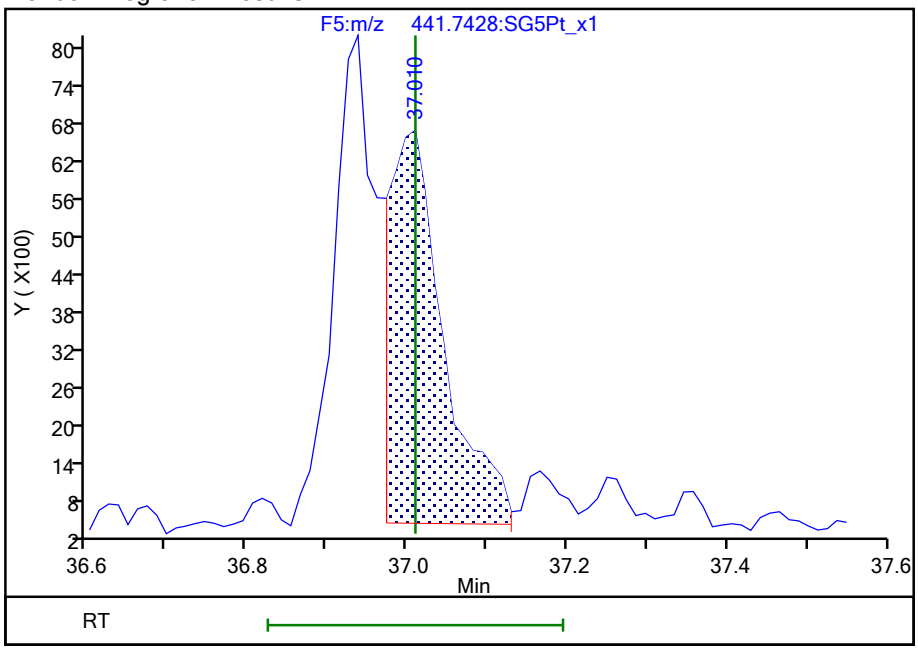

Reviewer: dadunj, 18-Aug-2021 10:06:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d				
Injection Date:	14-Aug-2021 21:16:32	Instrument ID:	10D5		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:	DB	ALS Bottle#:	38	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.93
Area: 72113
Amount: 0.311631
Amount Units: pg/ul

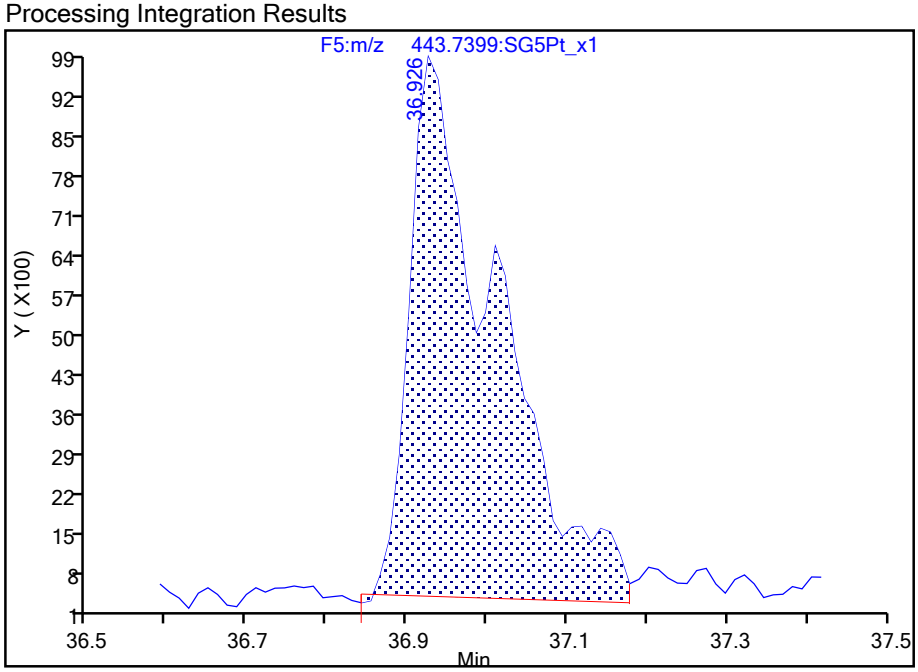

Manual Integration Results

RT: 37.01
Area: 25864
Amount: 0.126647
Amount Units: pg/ul

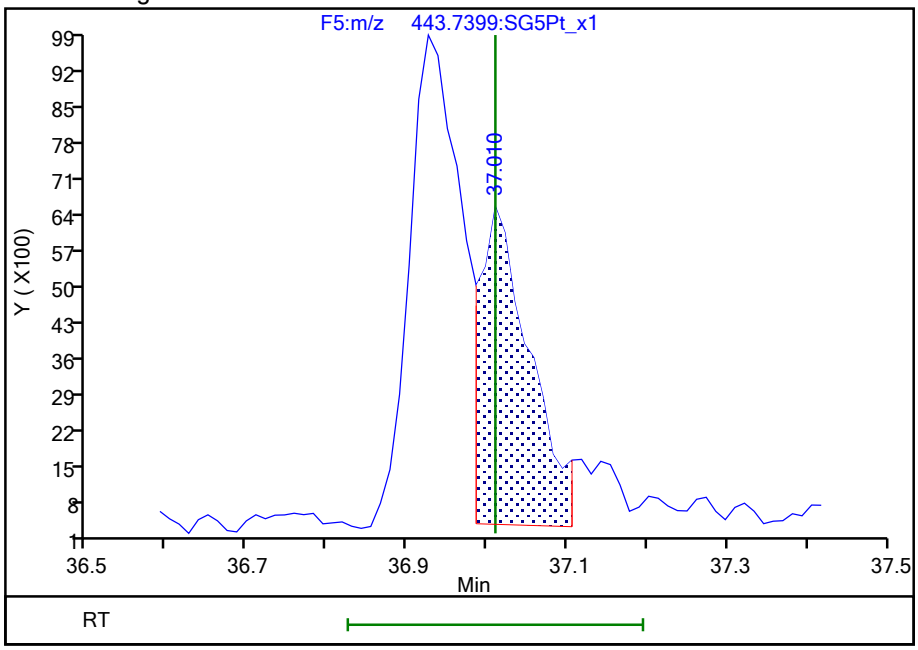

Reviewer: dadunj, 18-Aug-2021 10:06:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

781163

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

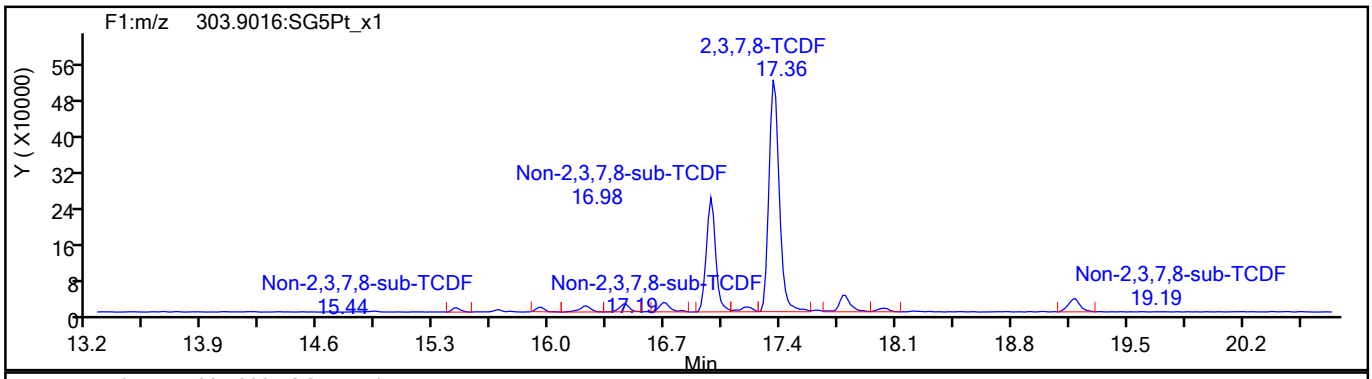

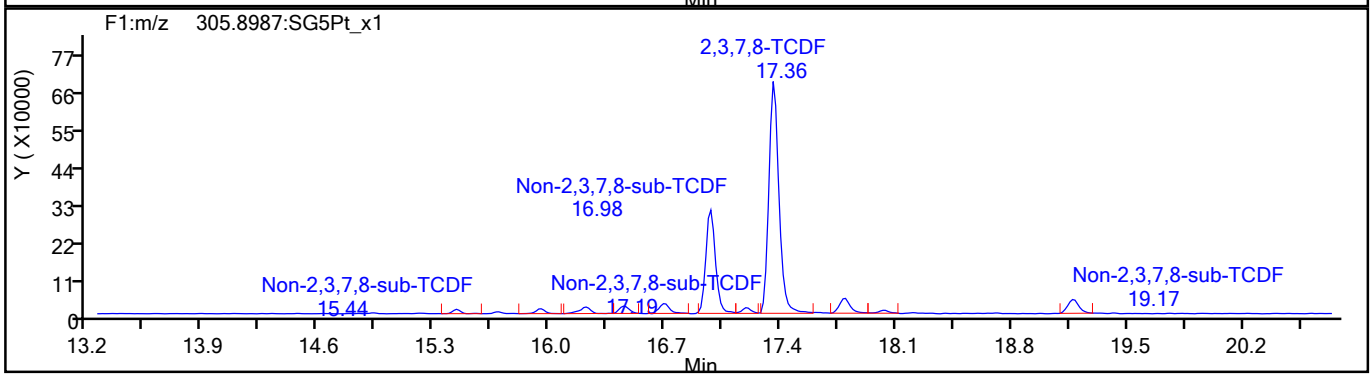

TCDF Standards

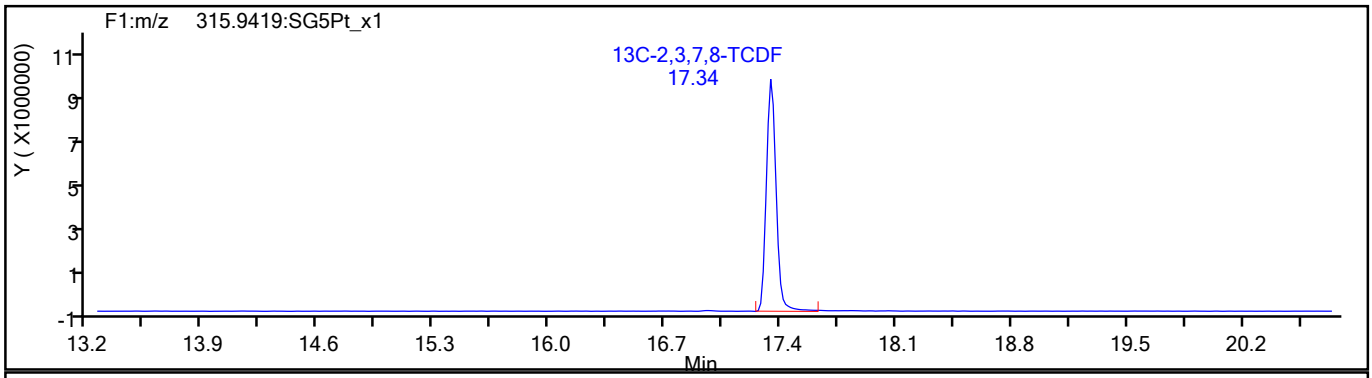

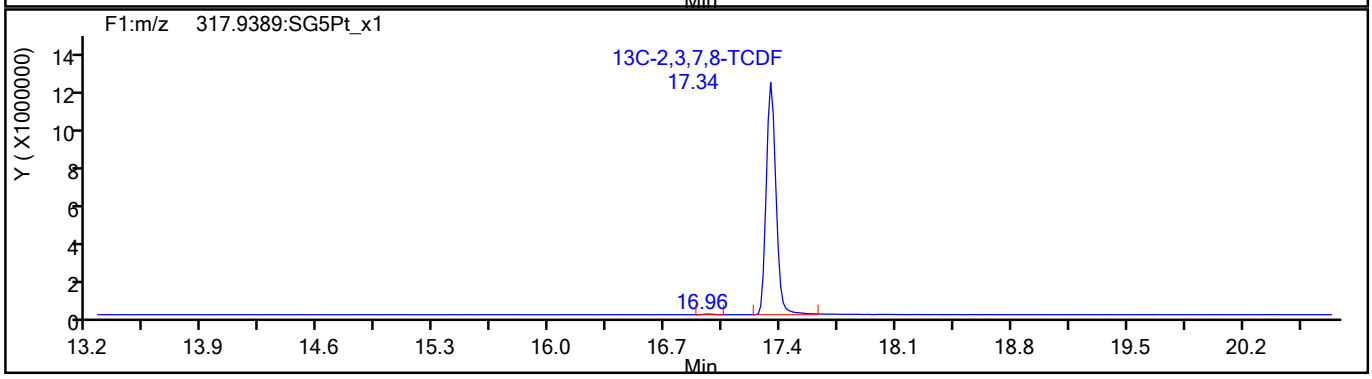

781164

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

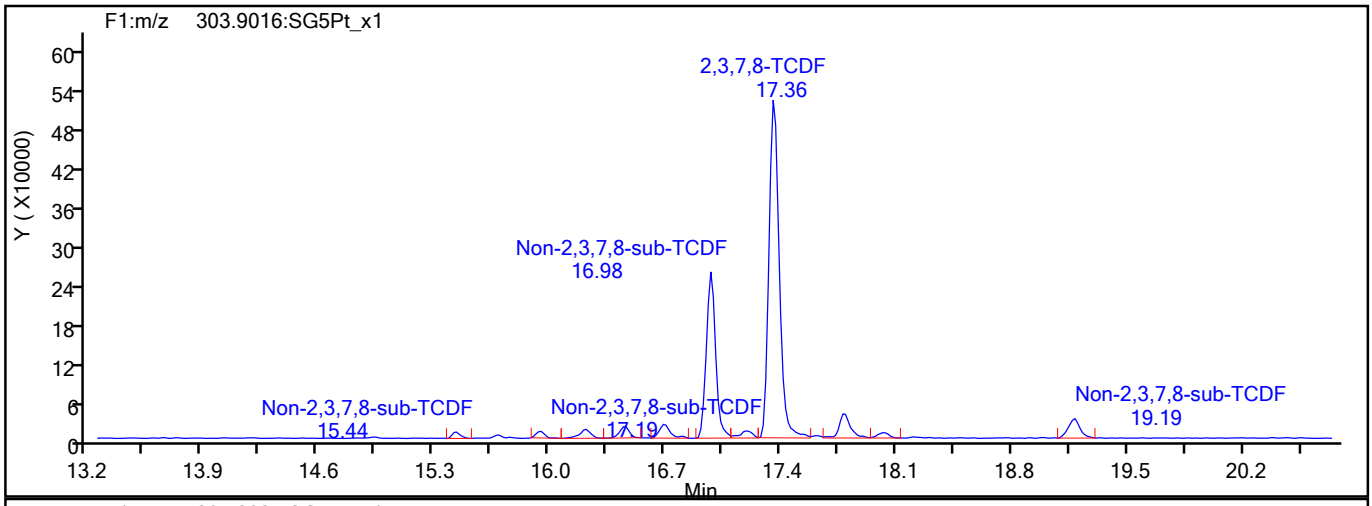

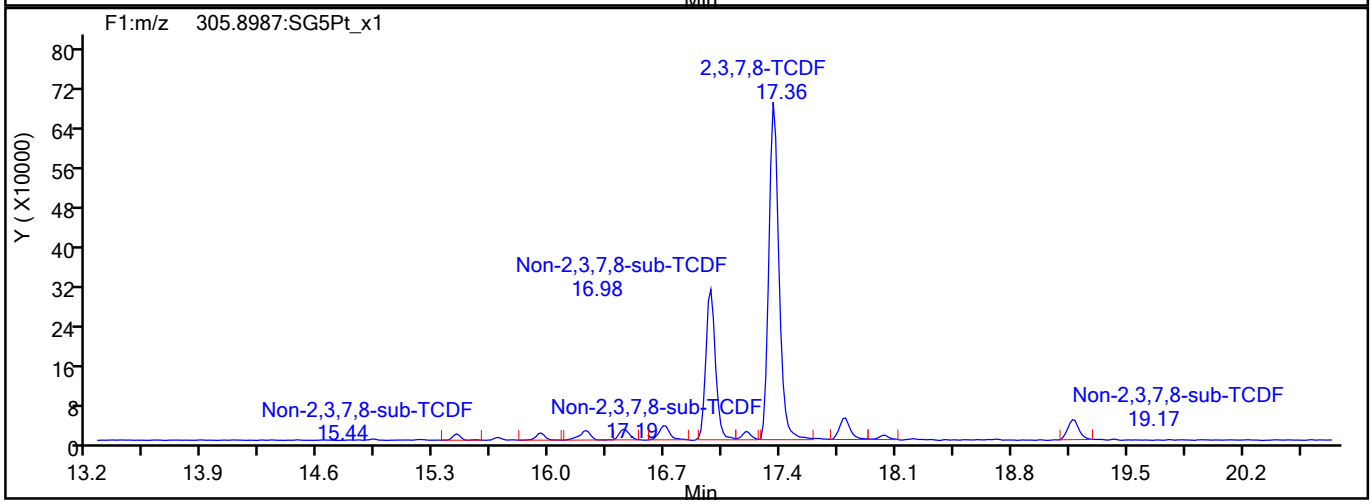

TCDF Interference Mass

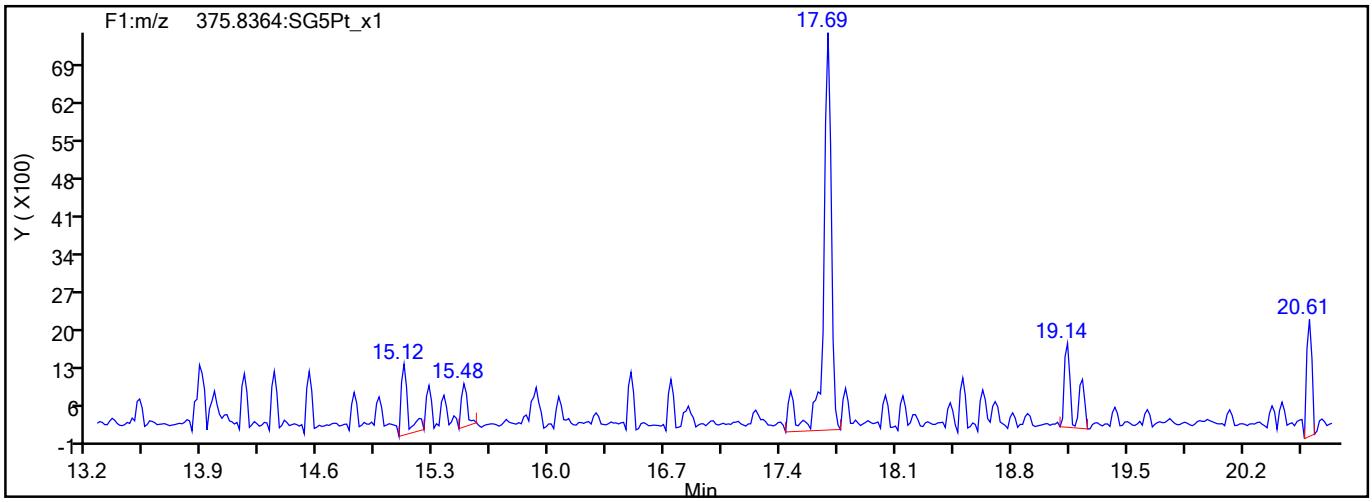

781165

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

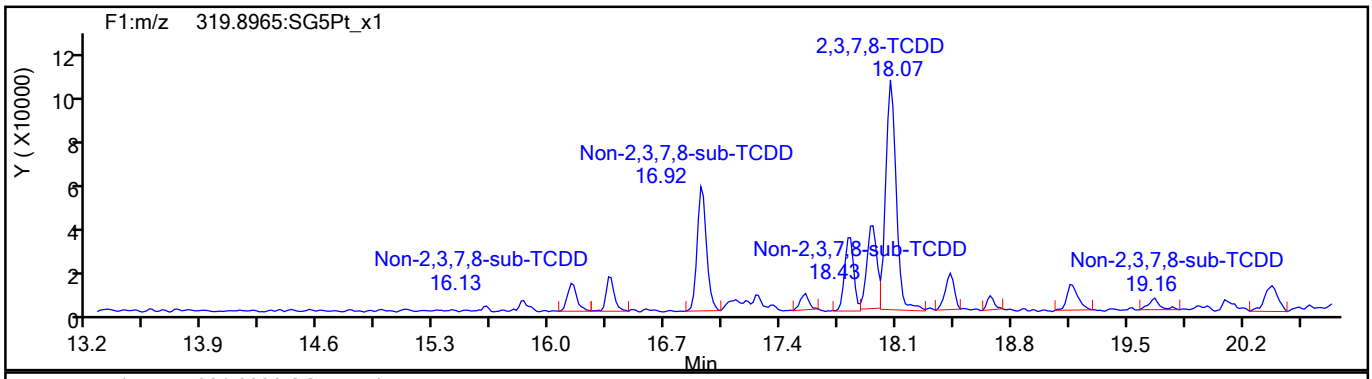

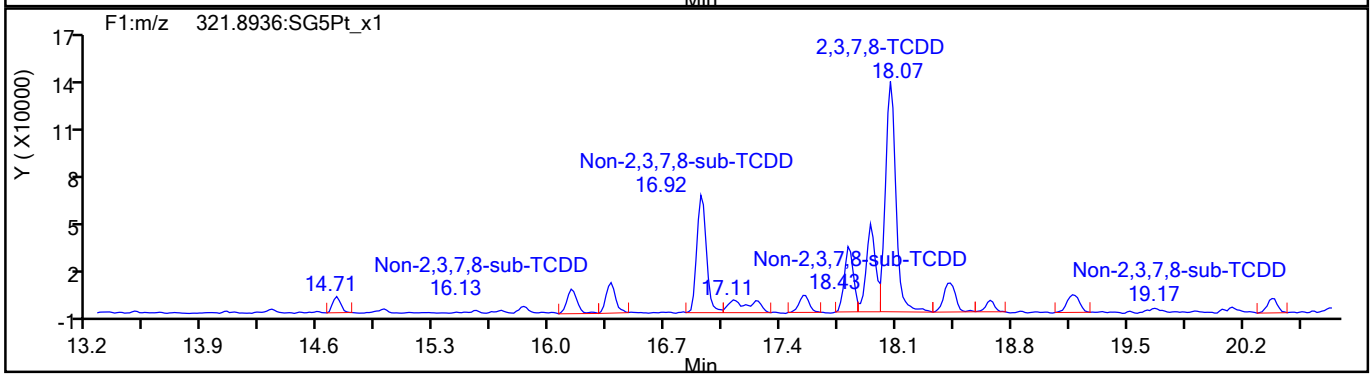

TCDD Standards

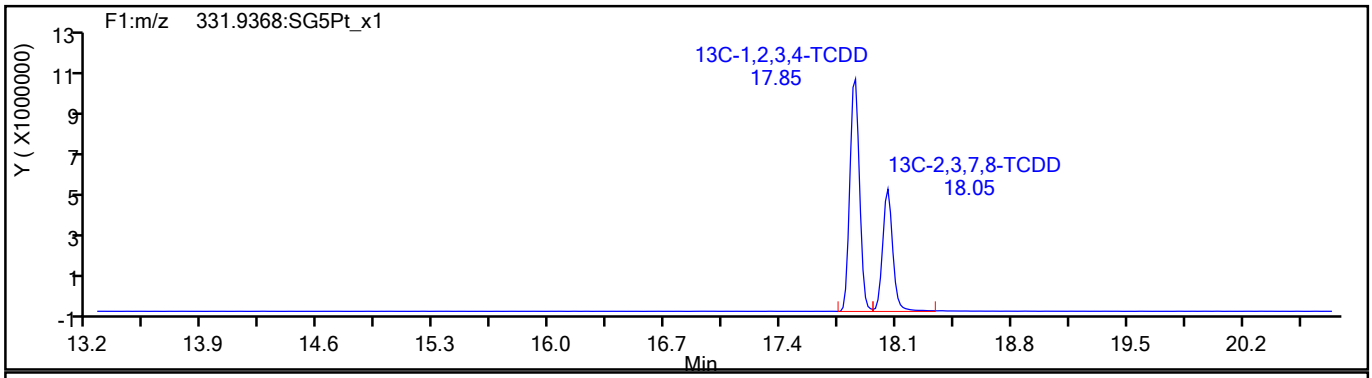

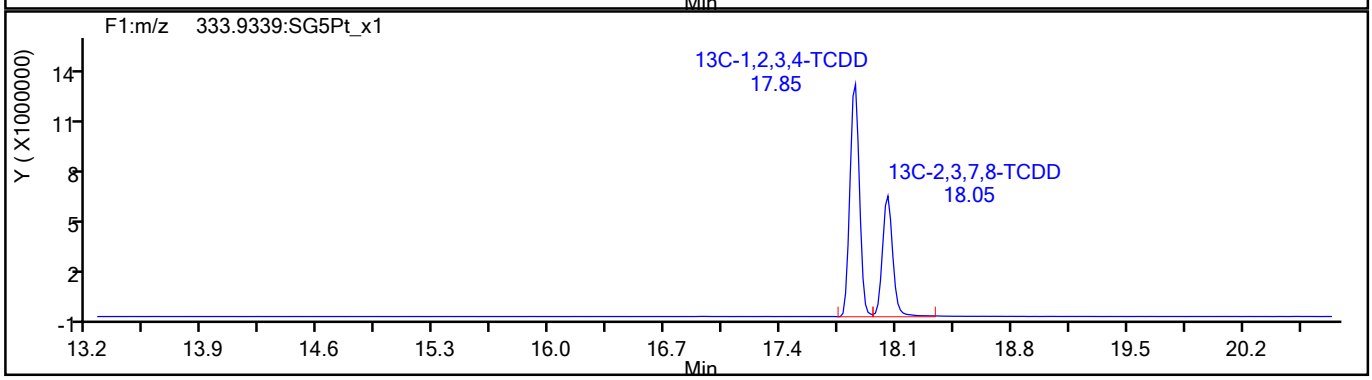

781166

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

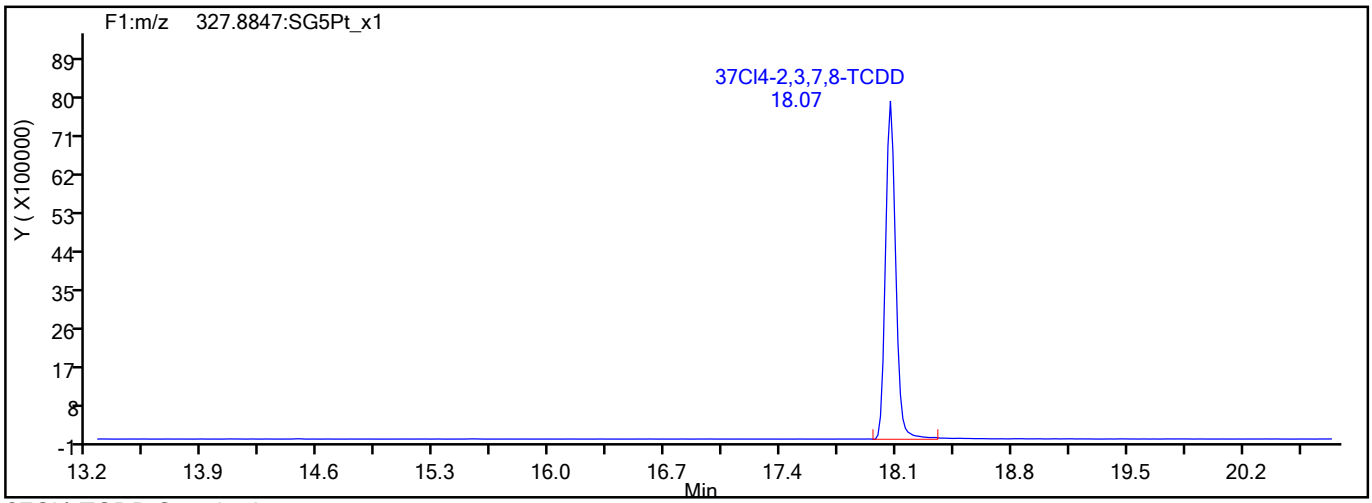

37Cl4-TCDD Standards

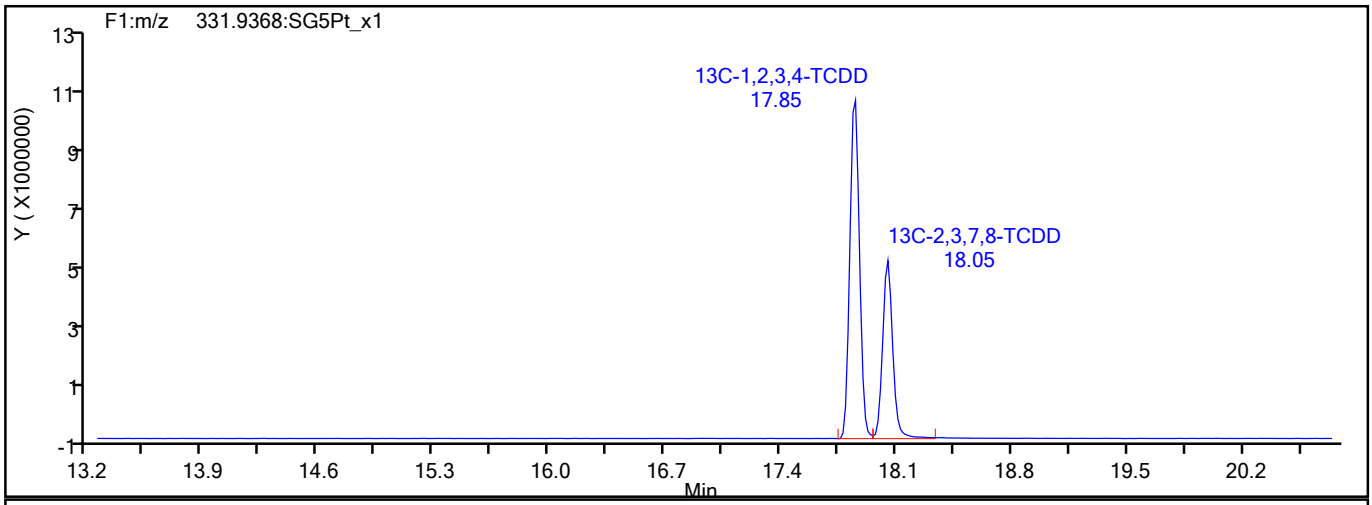

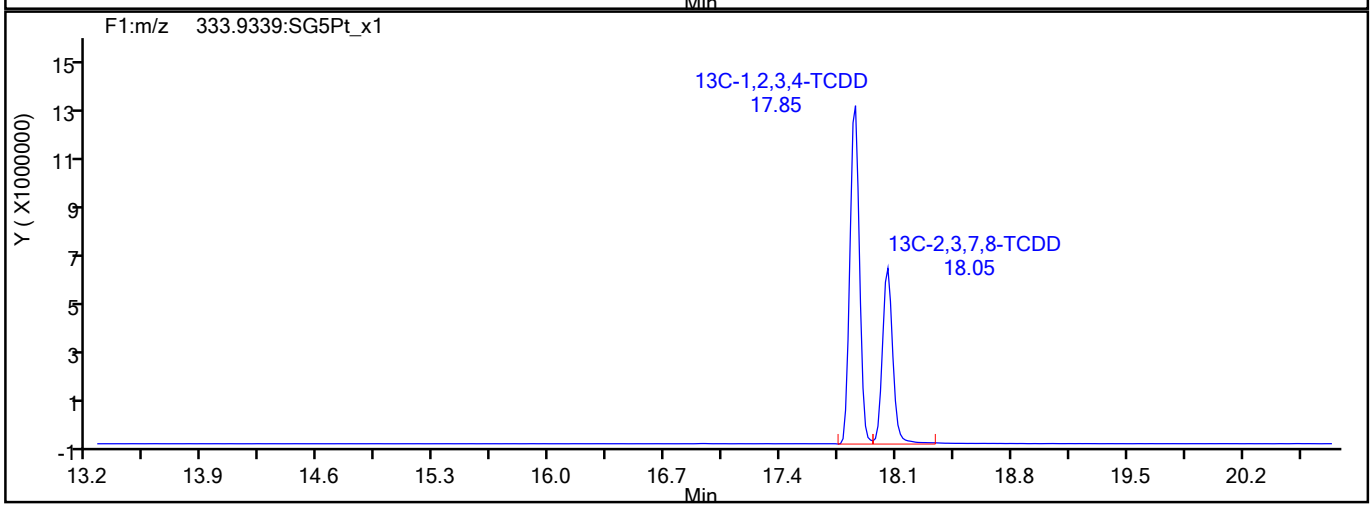

781167

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

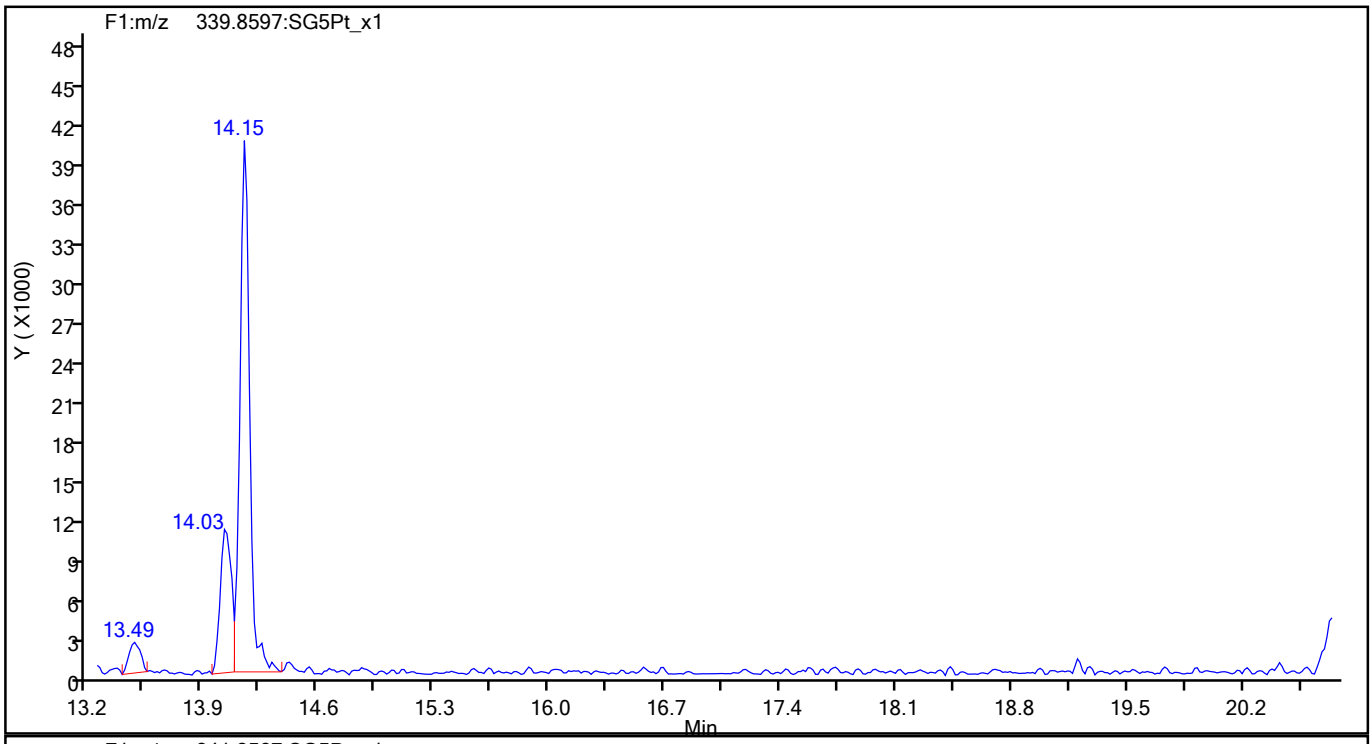

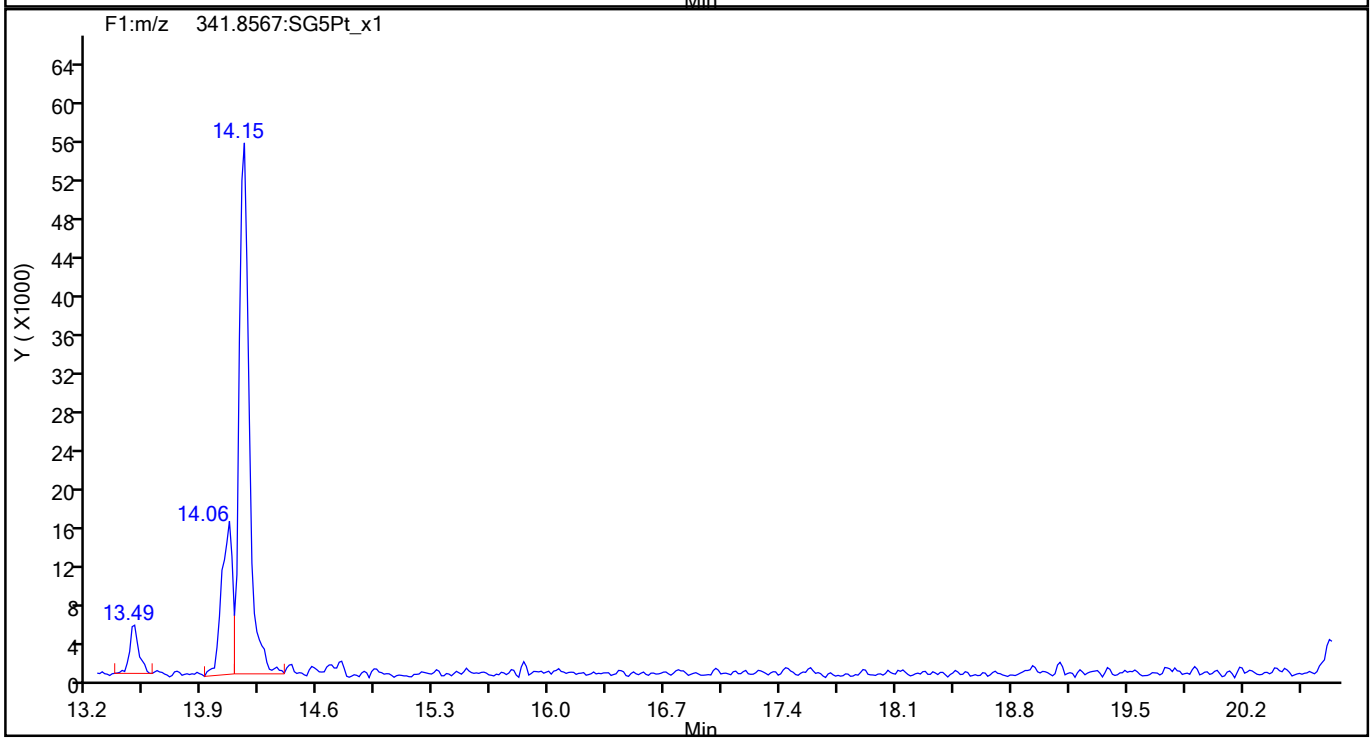

781168

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

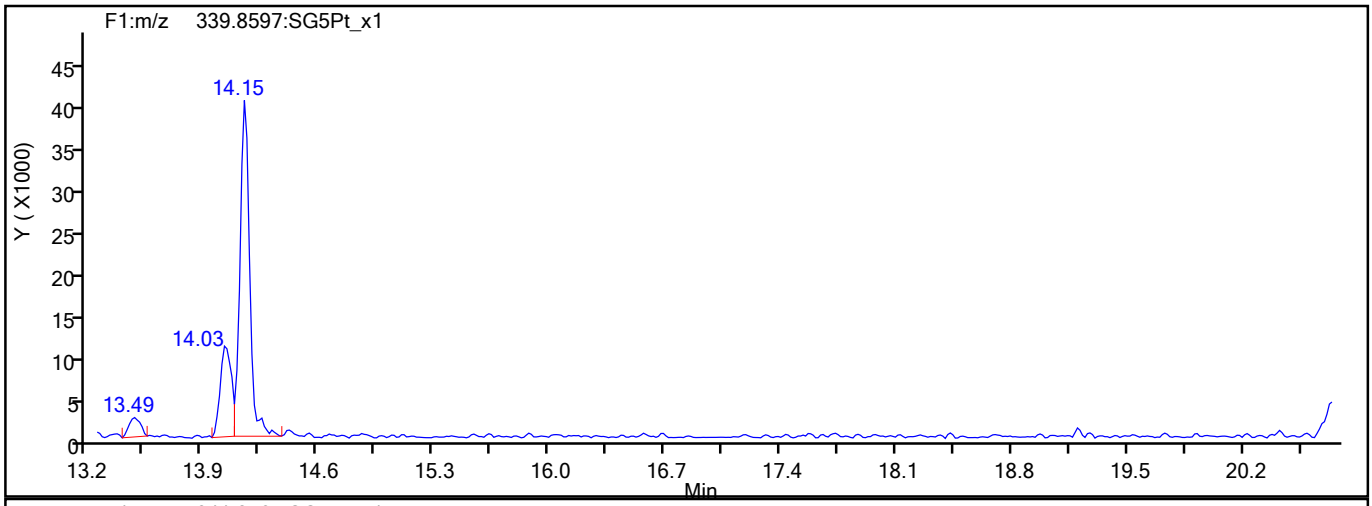

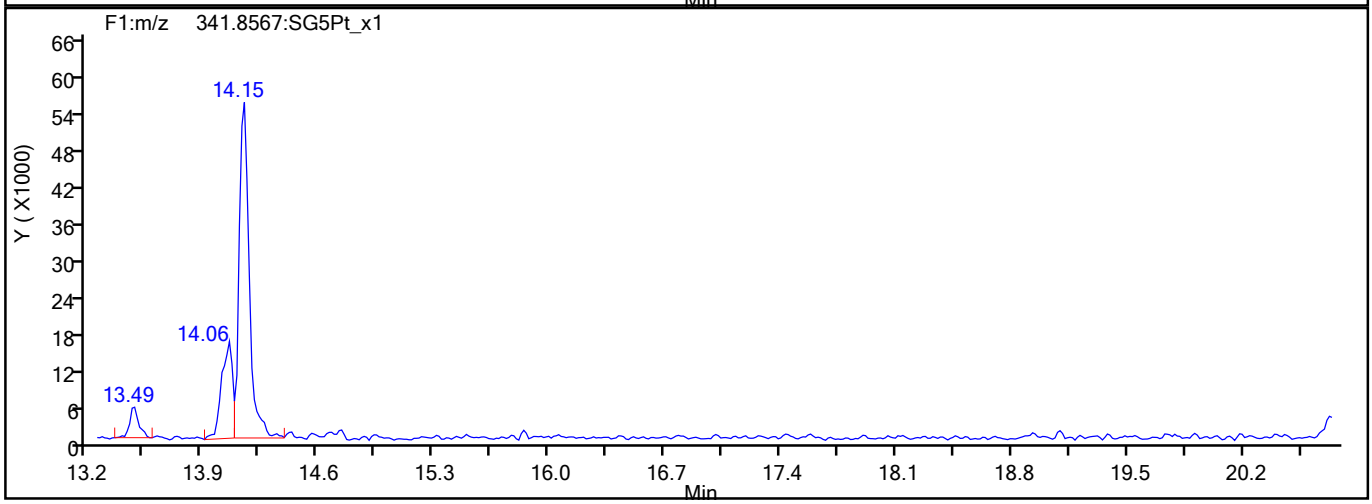

F1 PeCDFs Interference Mass

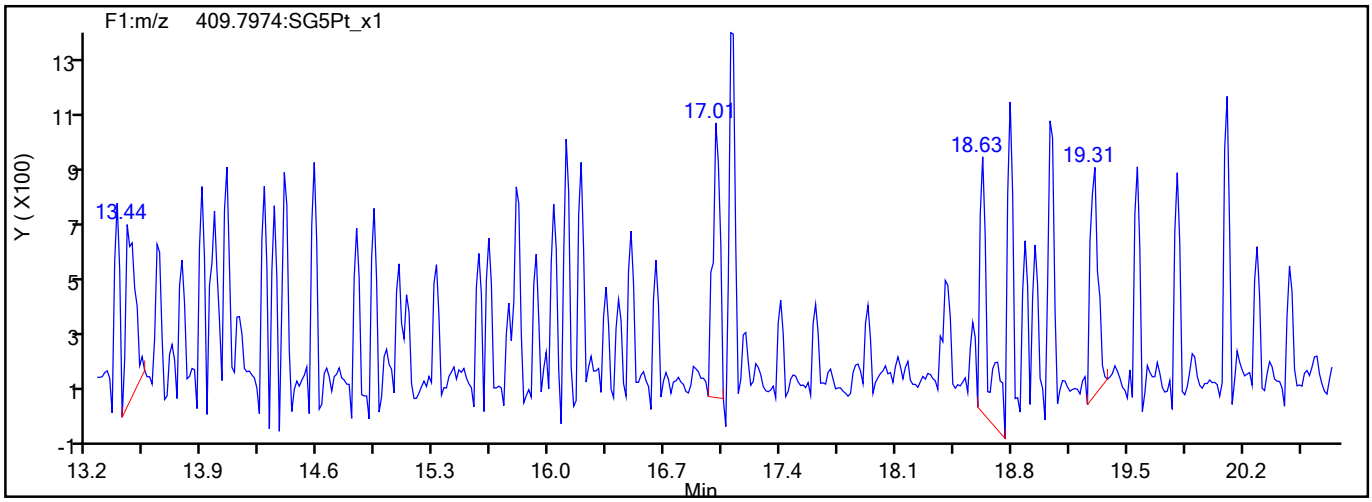

781169

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

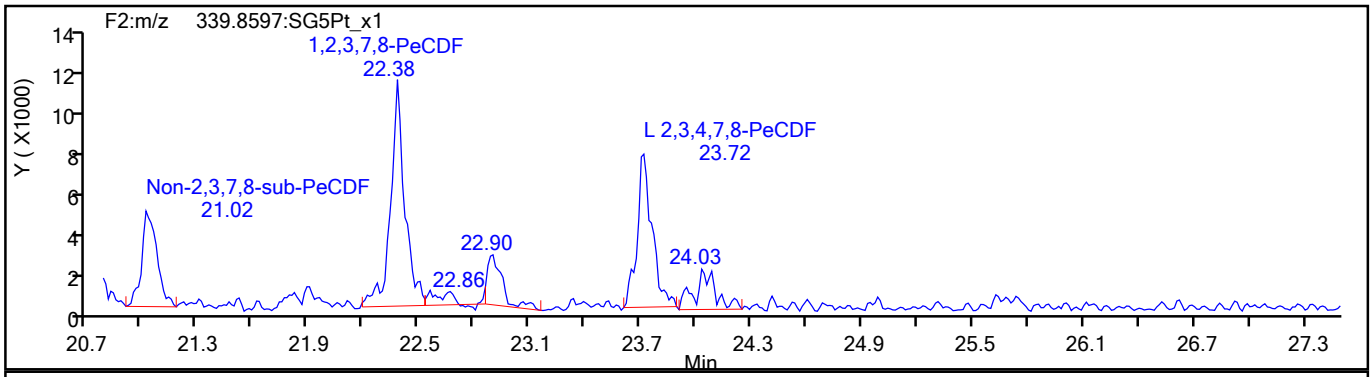

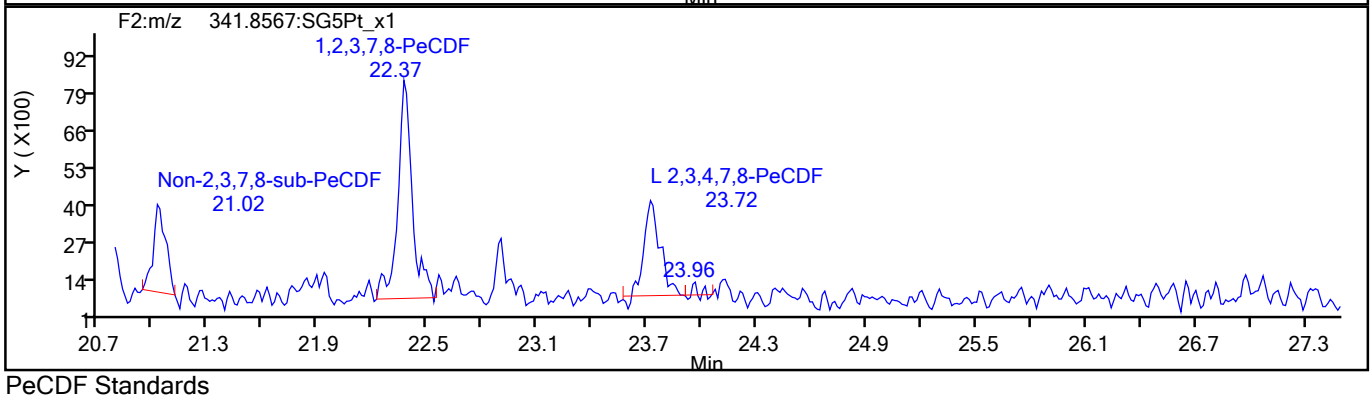

PeCDF Standards

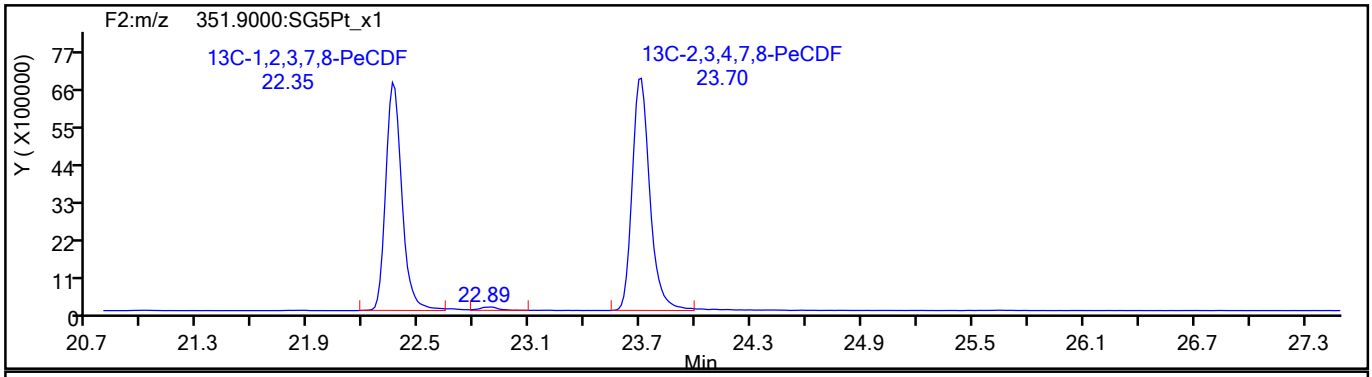

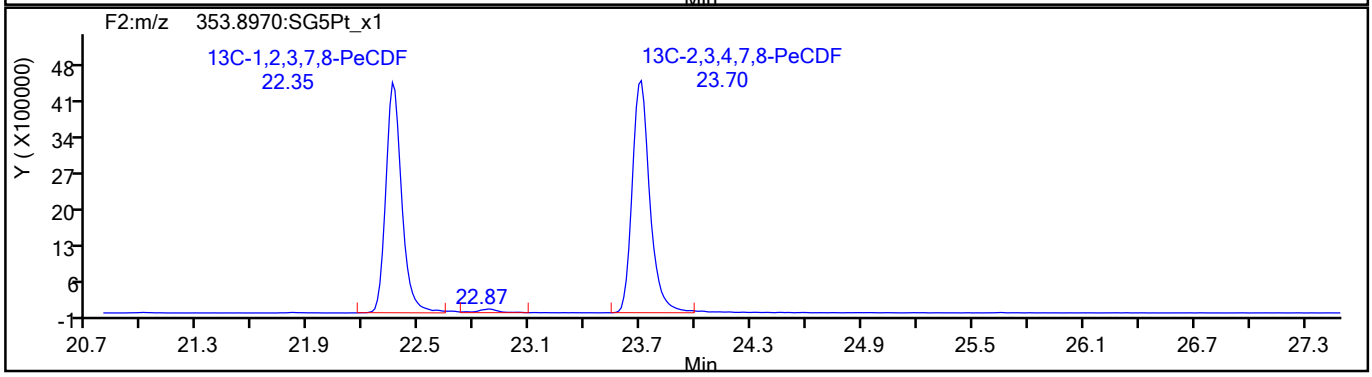

781170

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

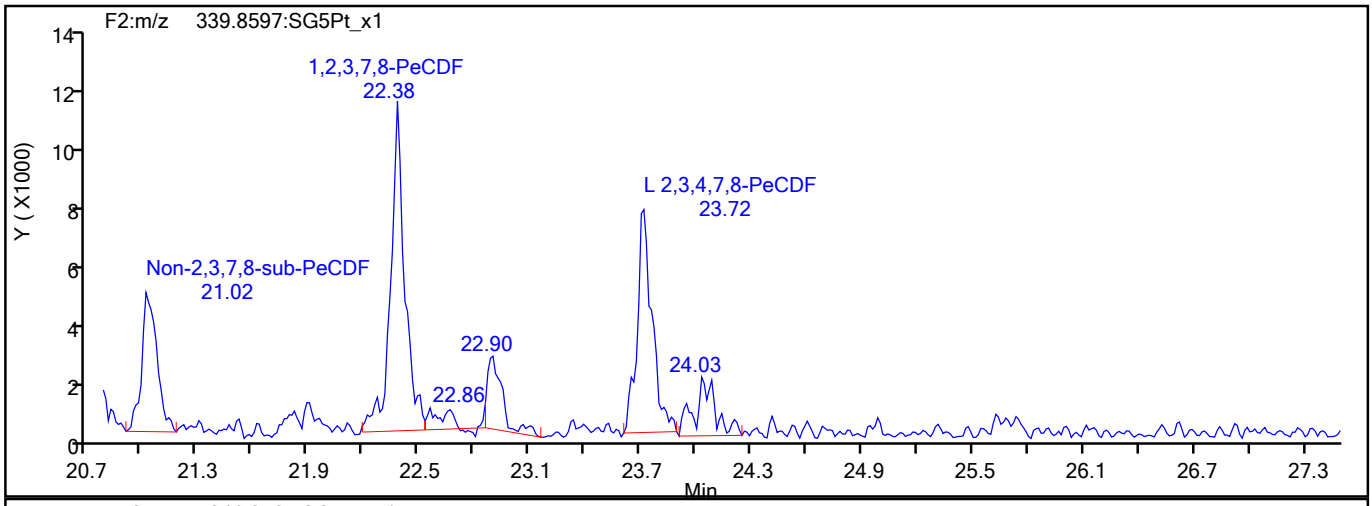

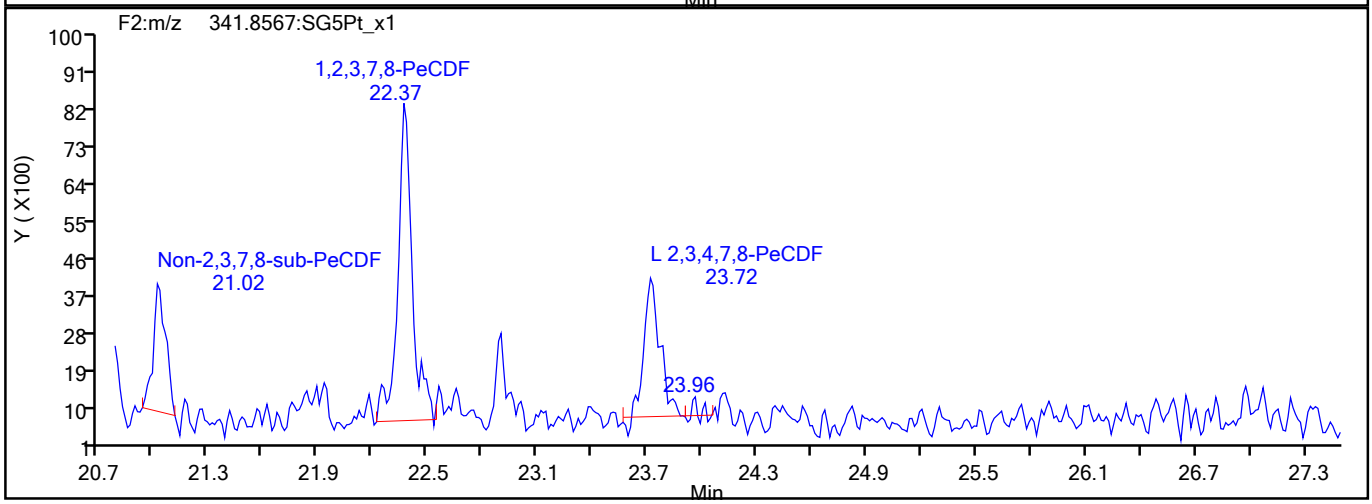

PeCDF Interference Mass

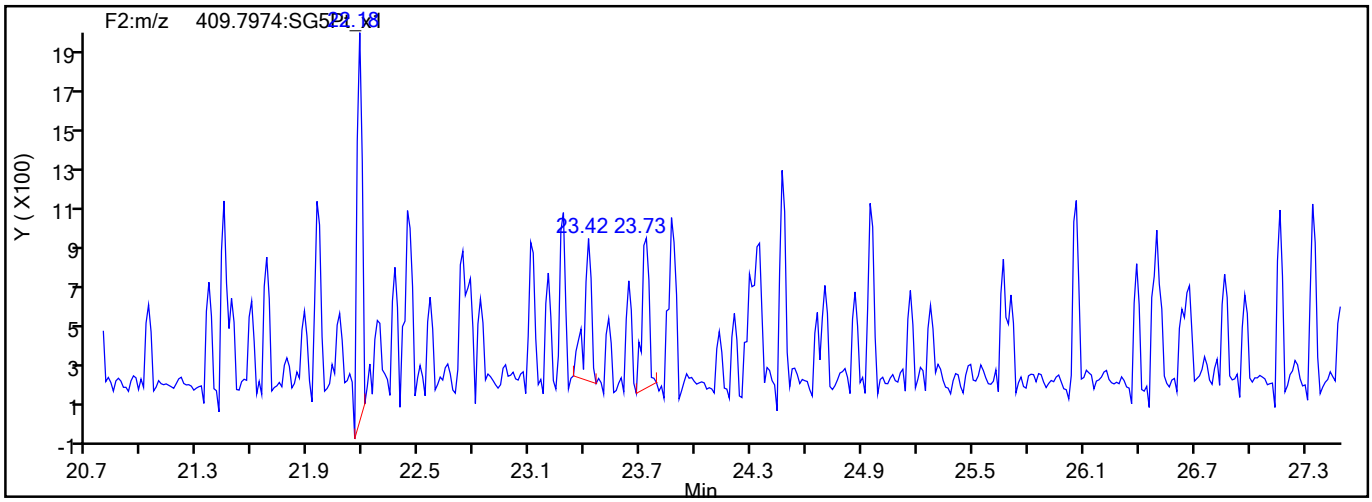

781171

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

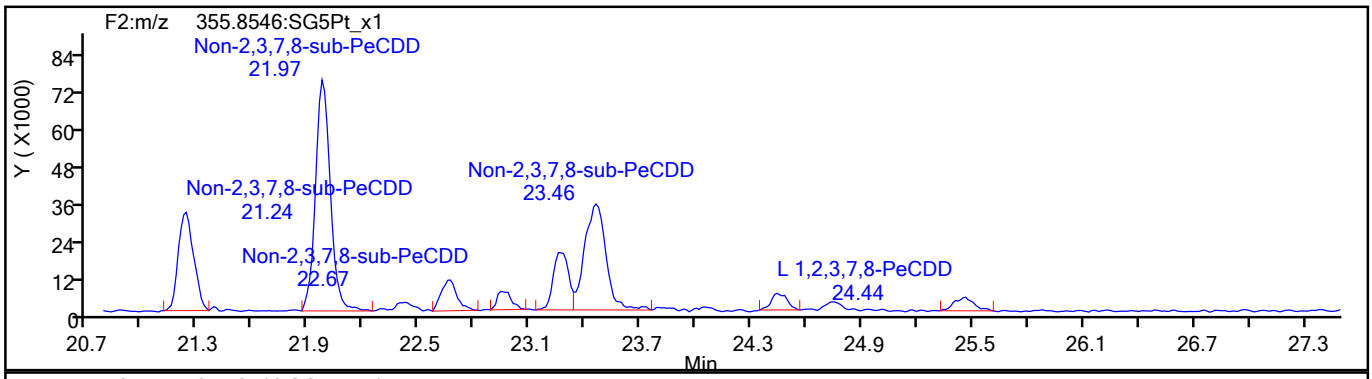

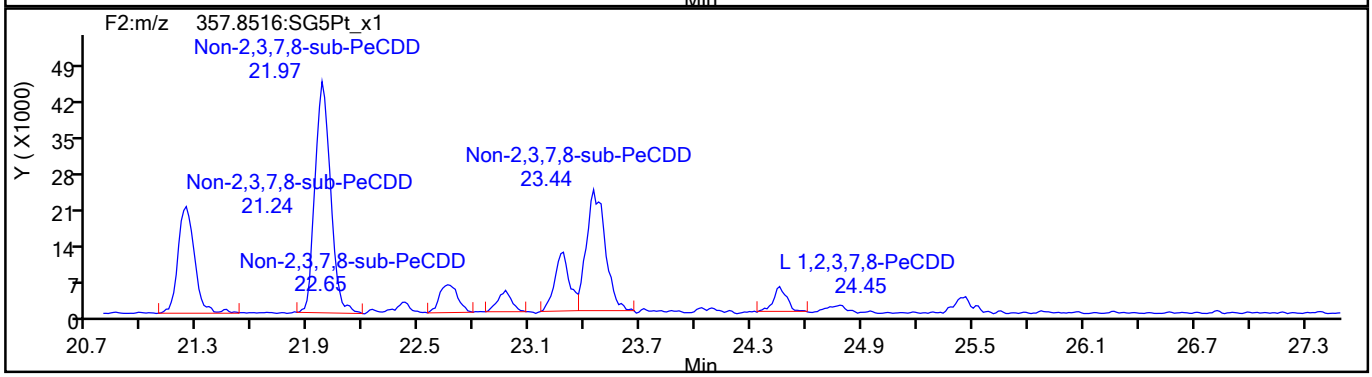

PeCDD Standards

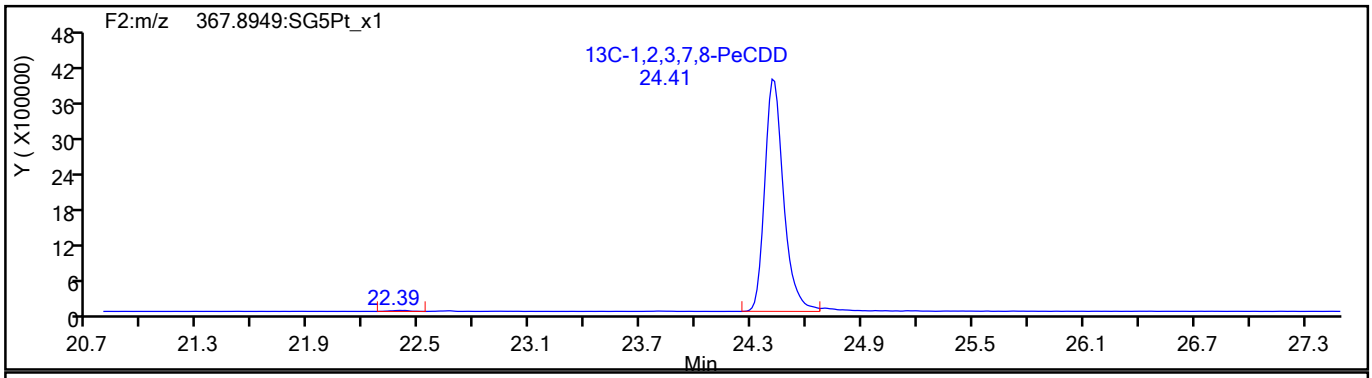

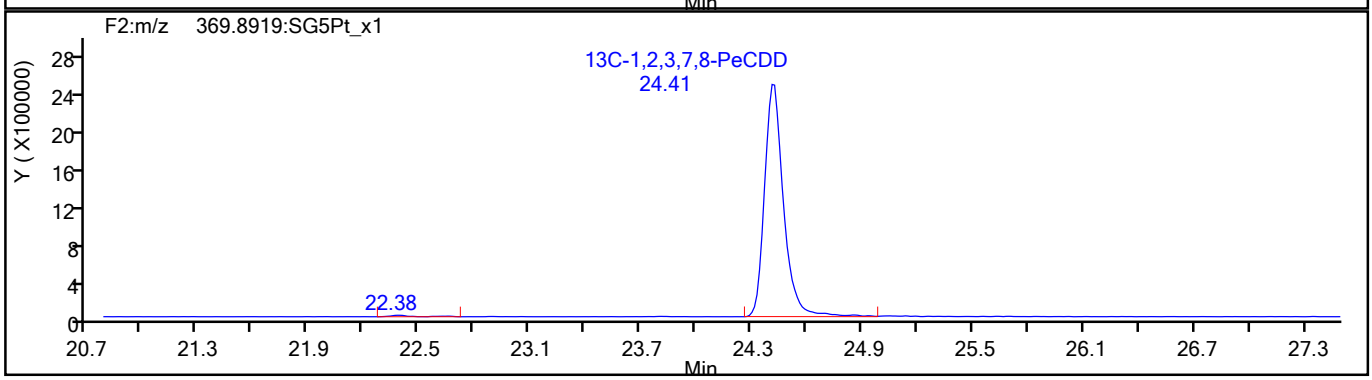

781172

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

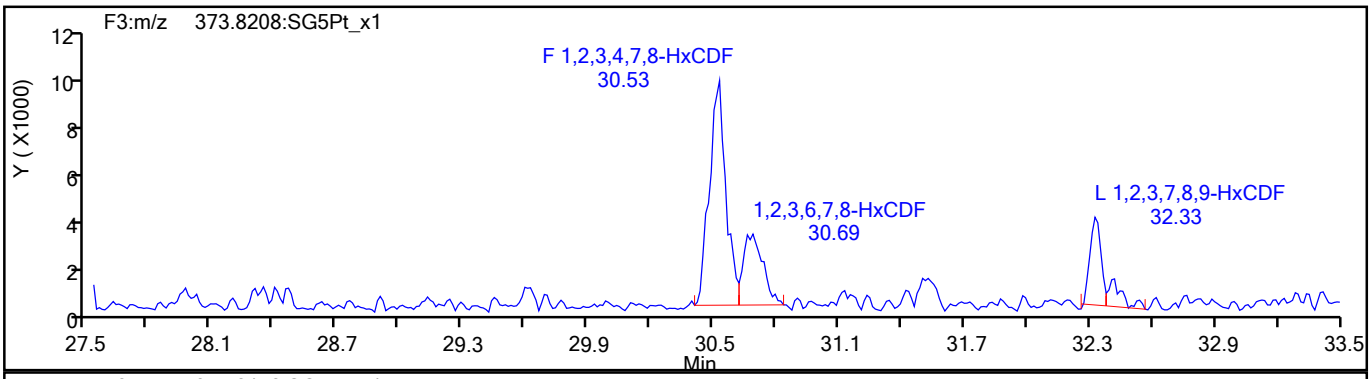

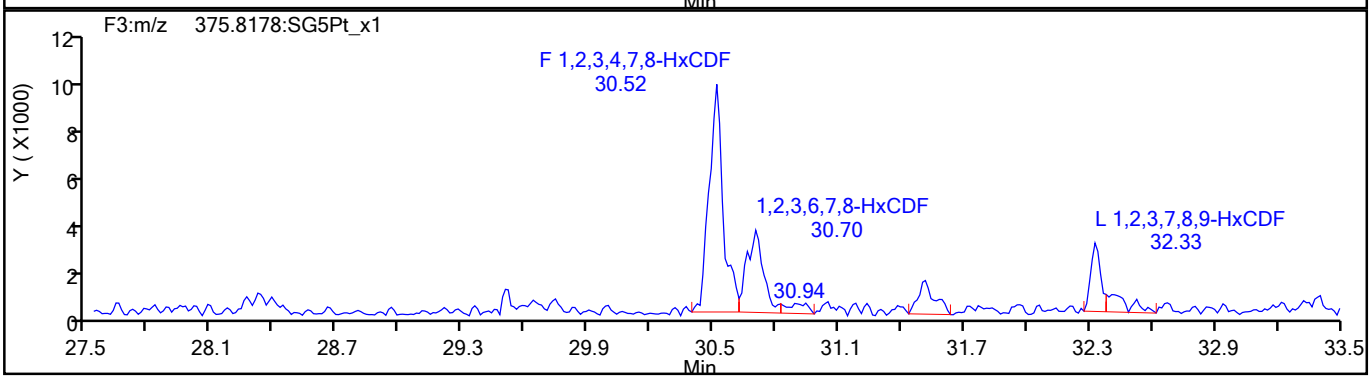

HxCDF Standards

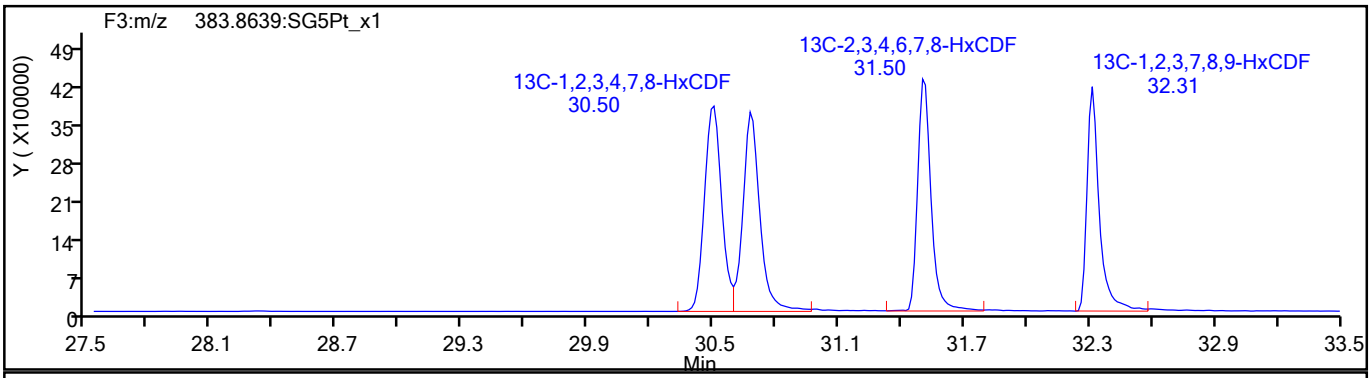

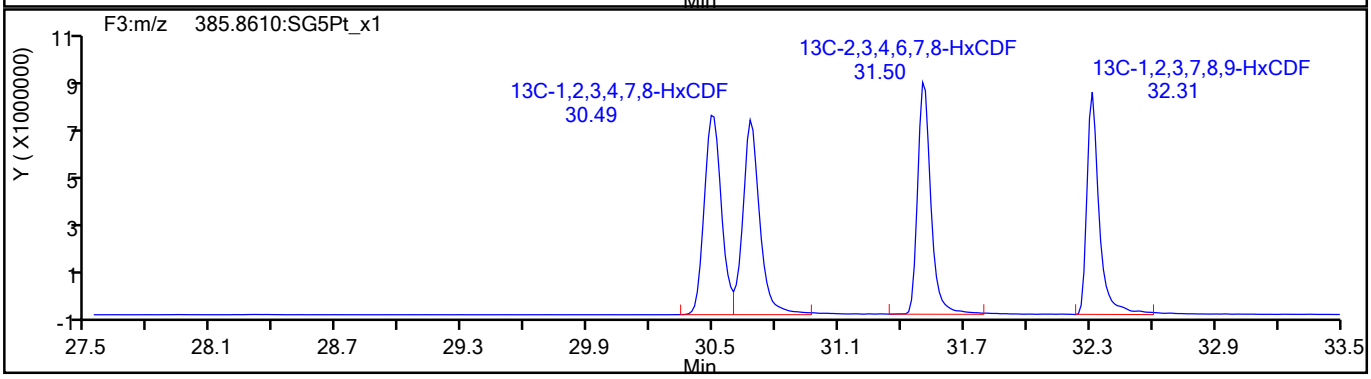

781173

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

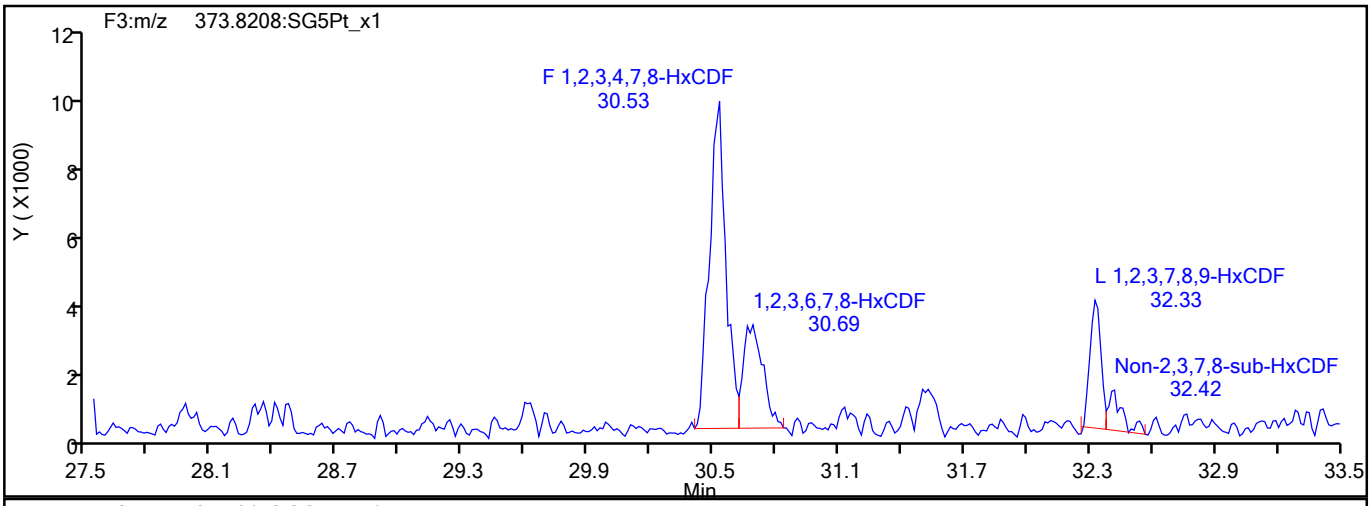

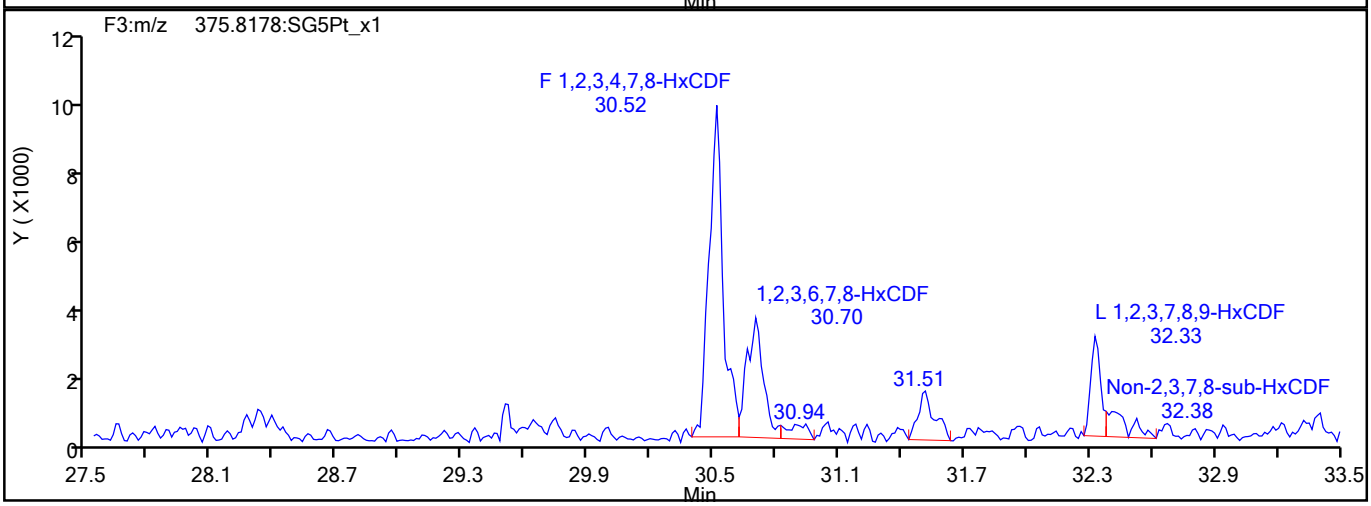

HxCDF Interference Mass

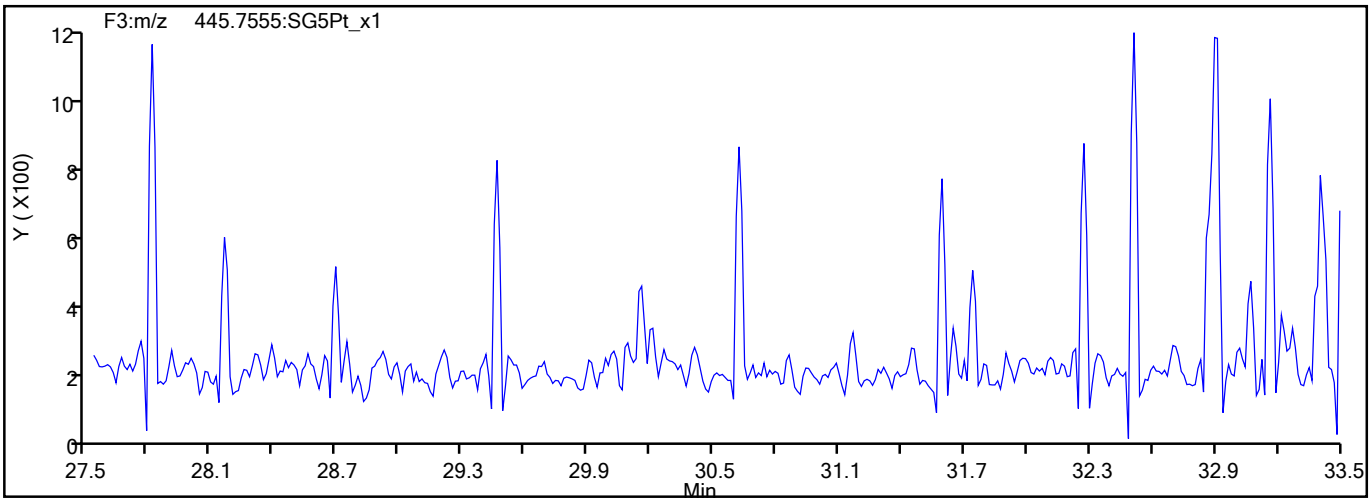

781174

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

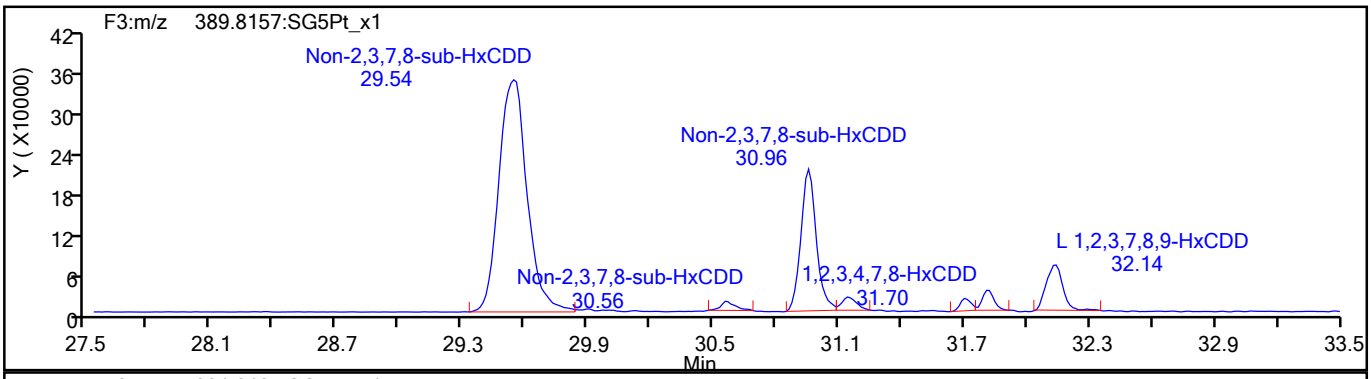

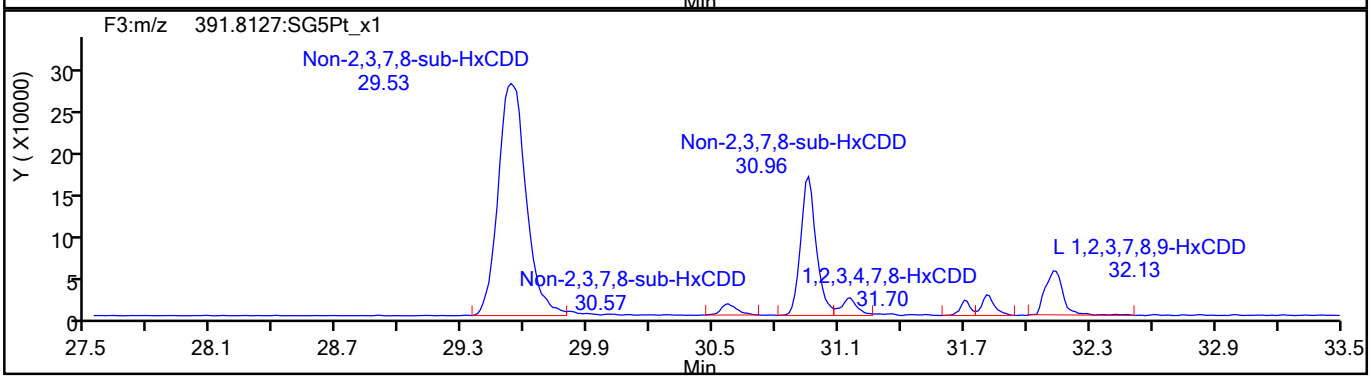

HxCDD Standards

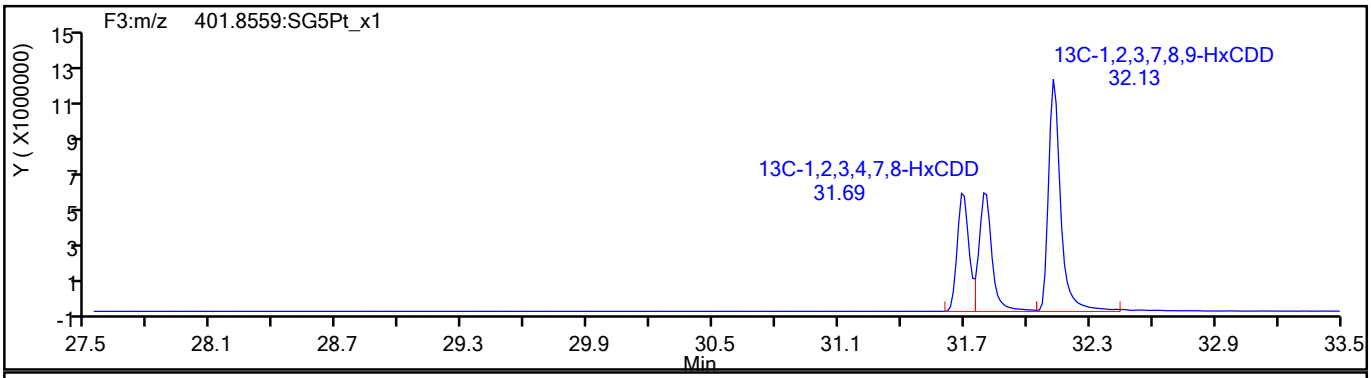

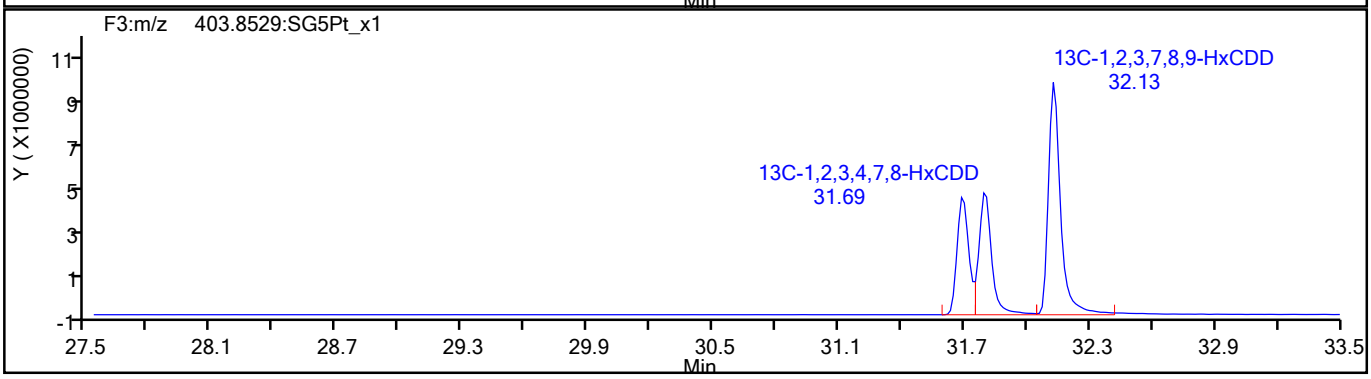

781175

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

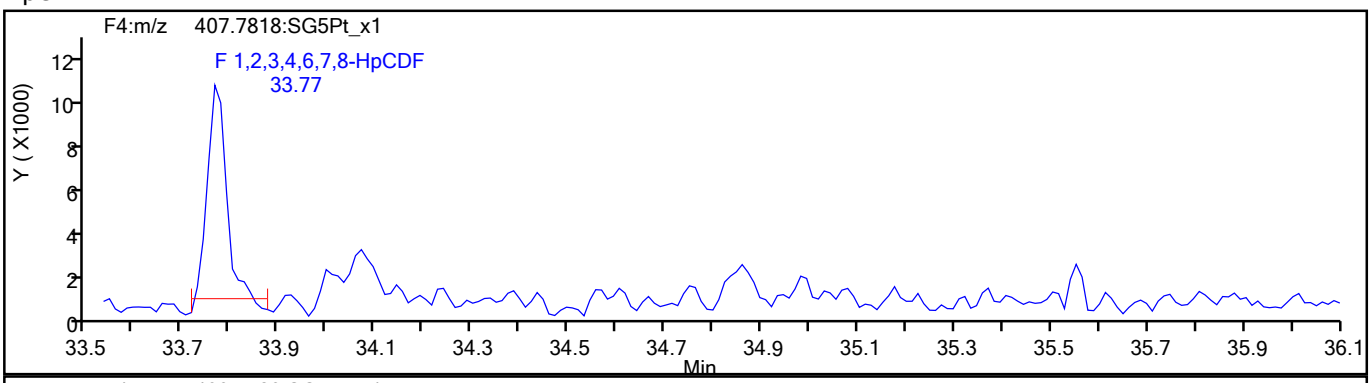

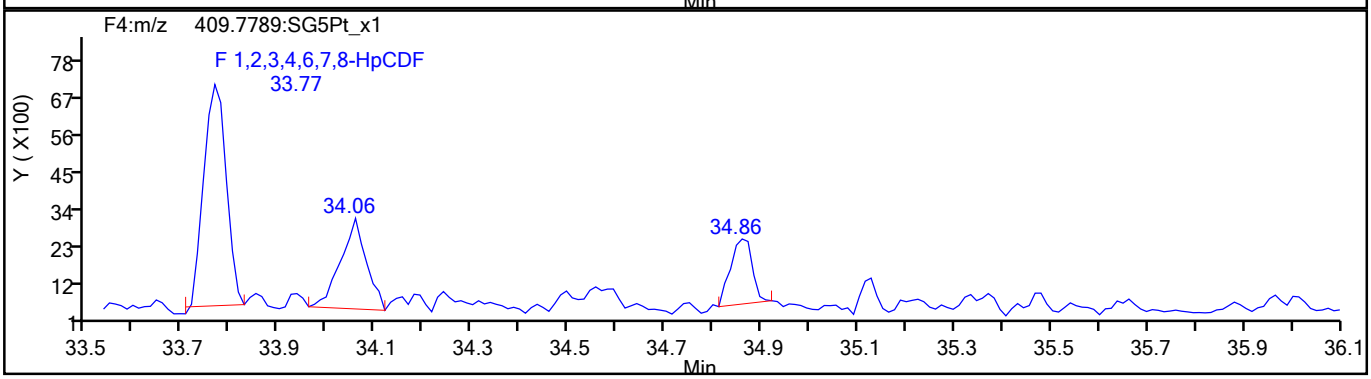

HpCDF Standards

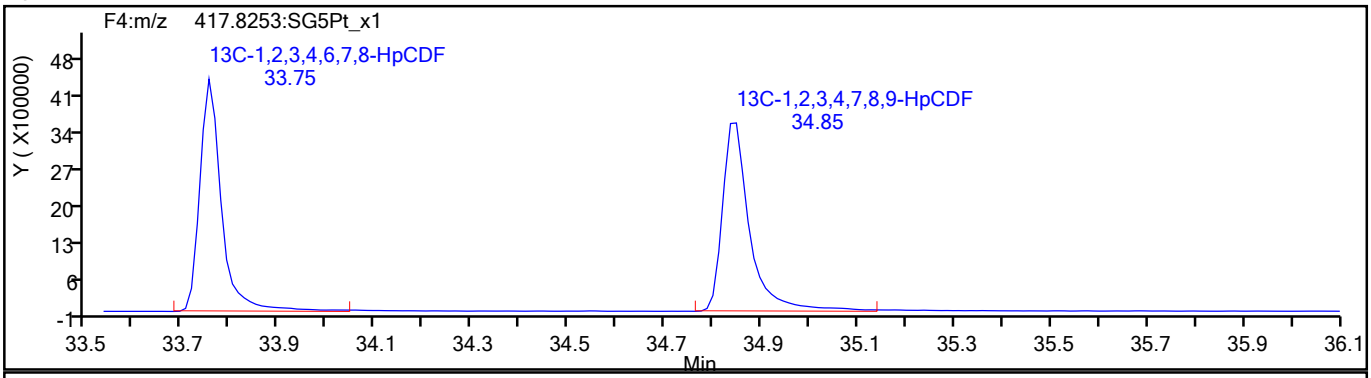

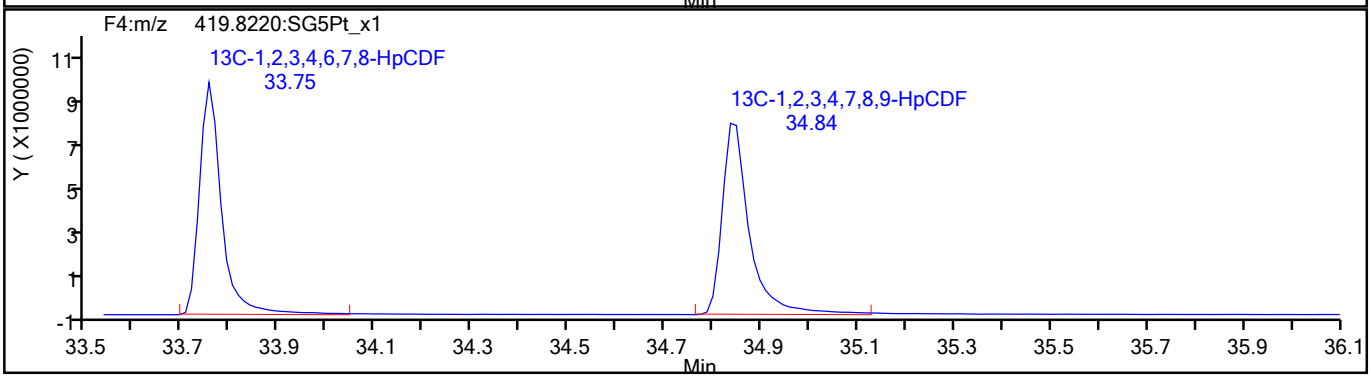

781176

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

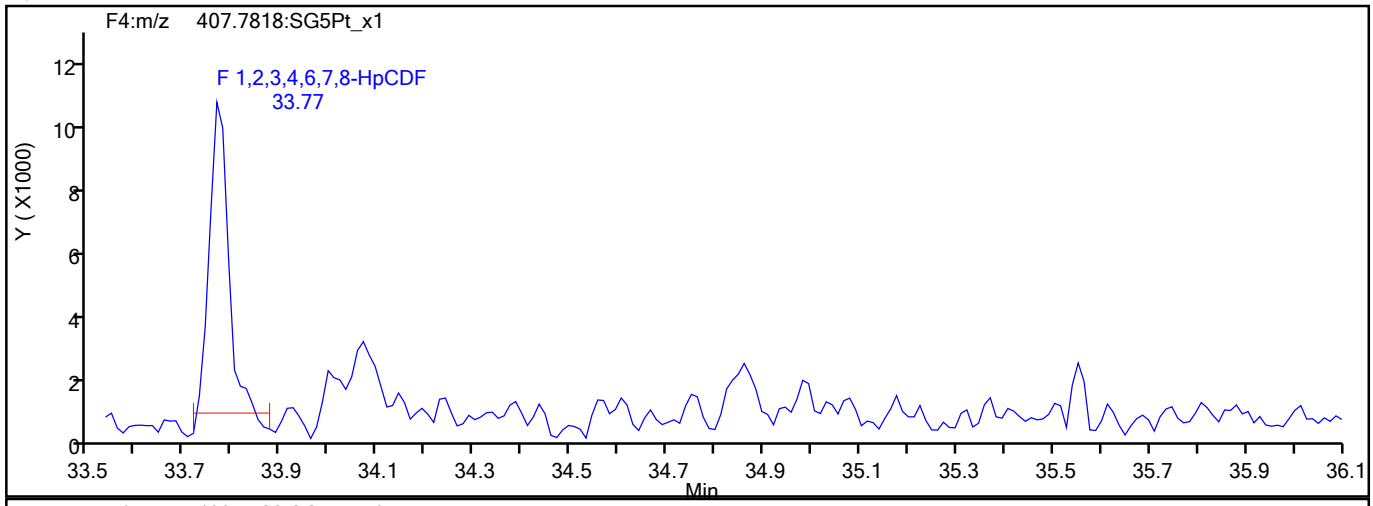

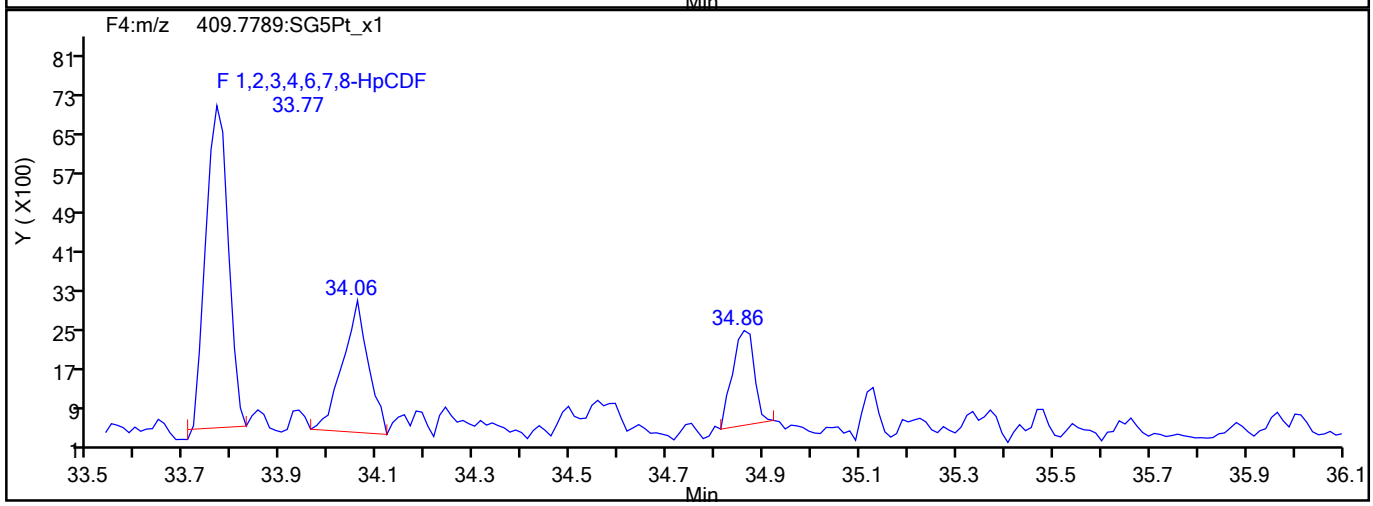

HpCDF Interference Mass

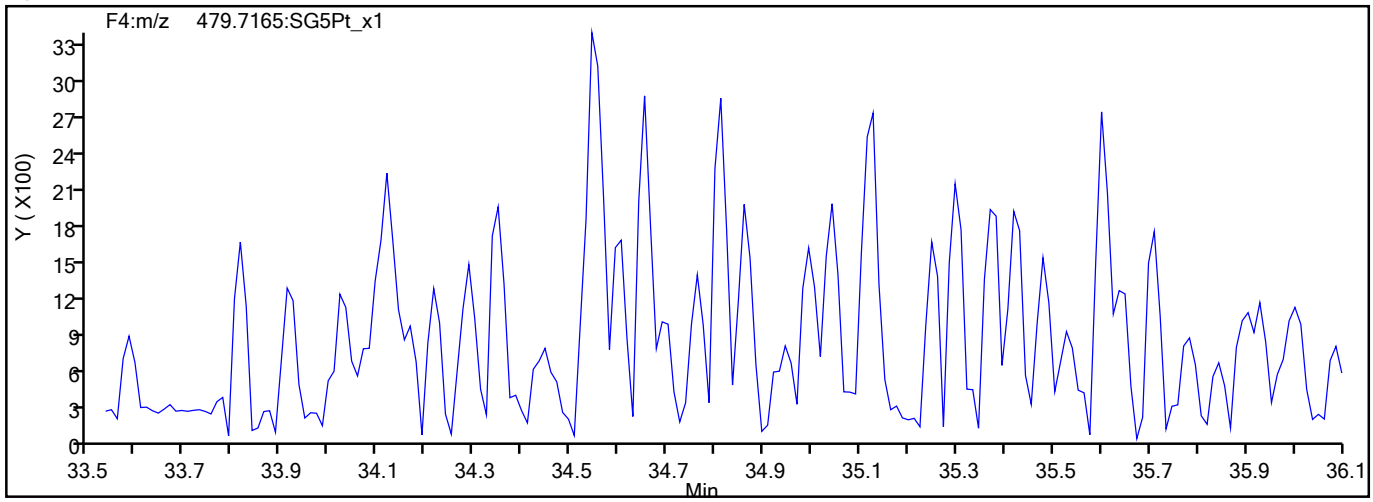

781177

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

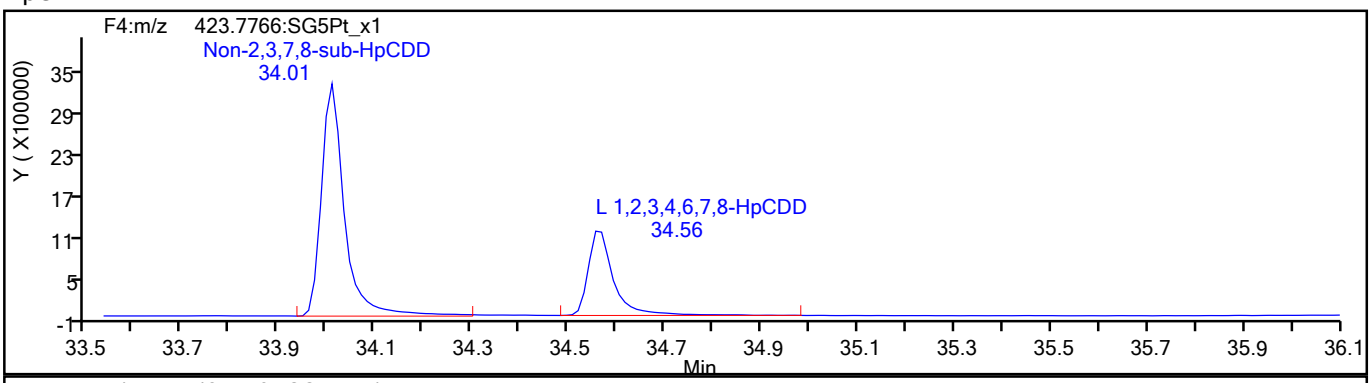

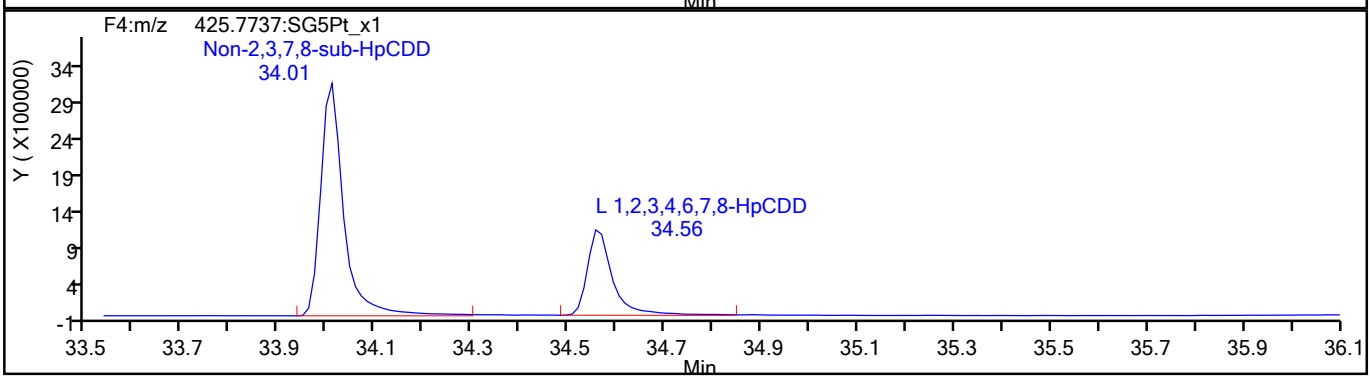

HpCDD Standards

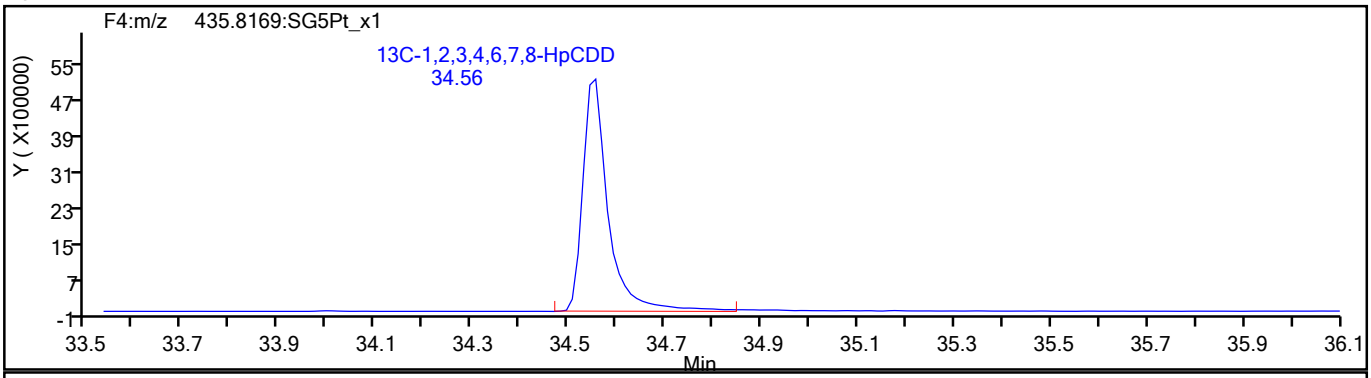

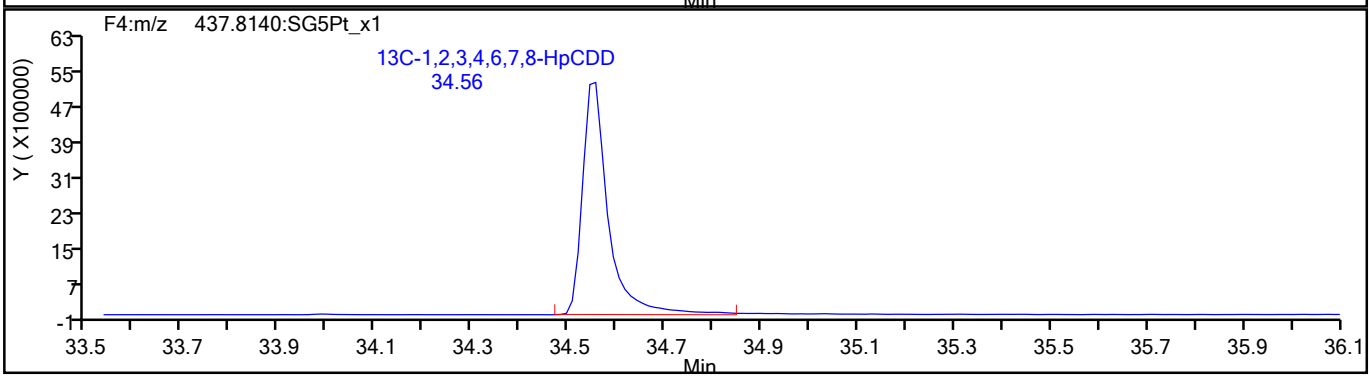

781178

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

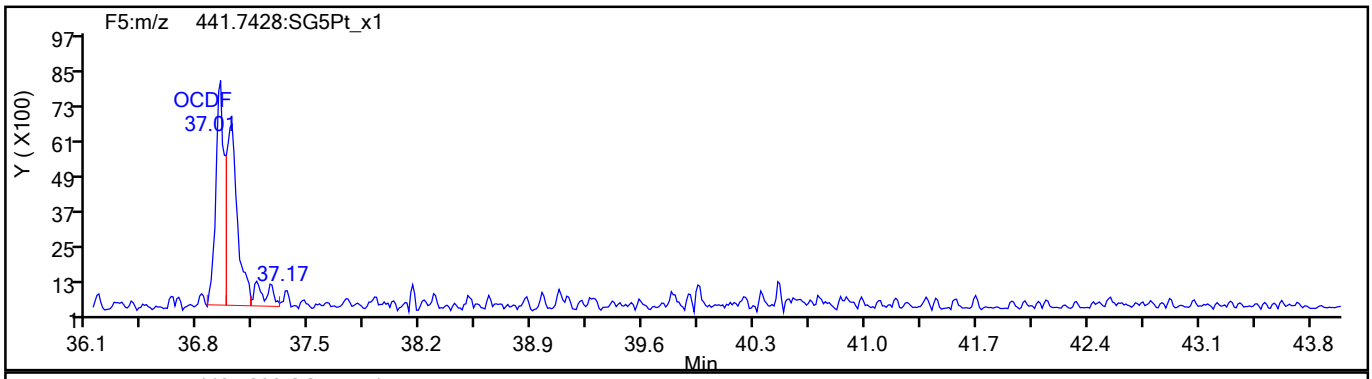

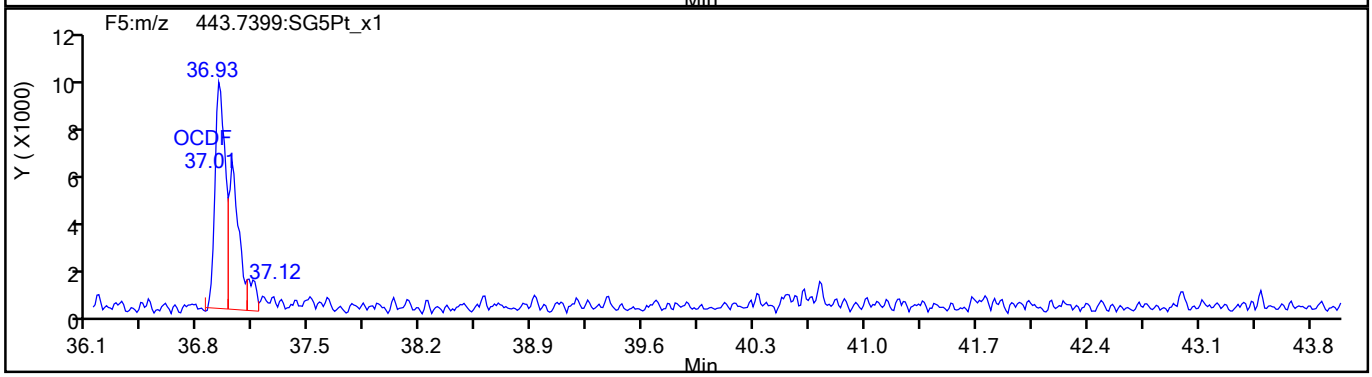

OCDF Standards

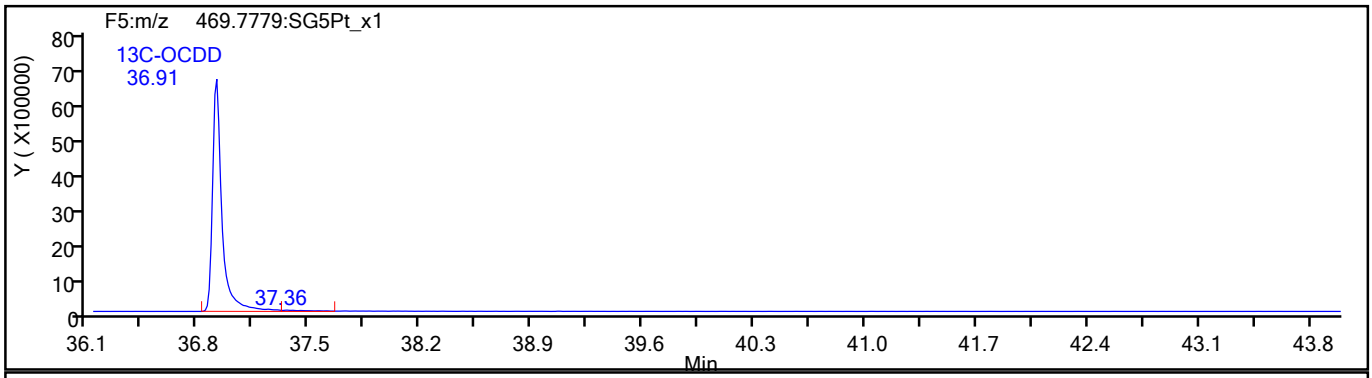

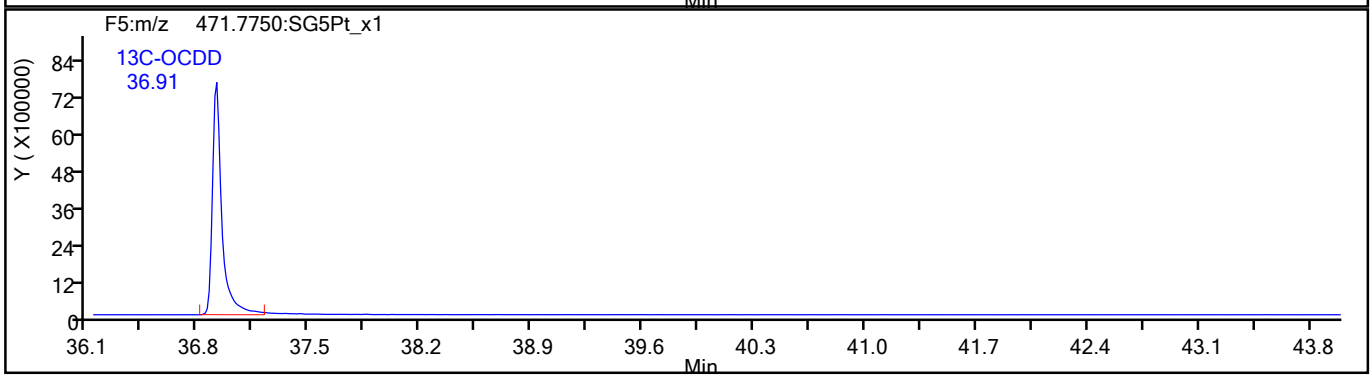

781179

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

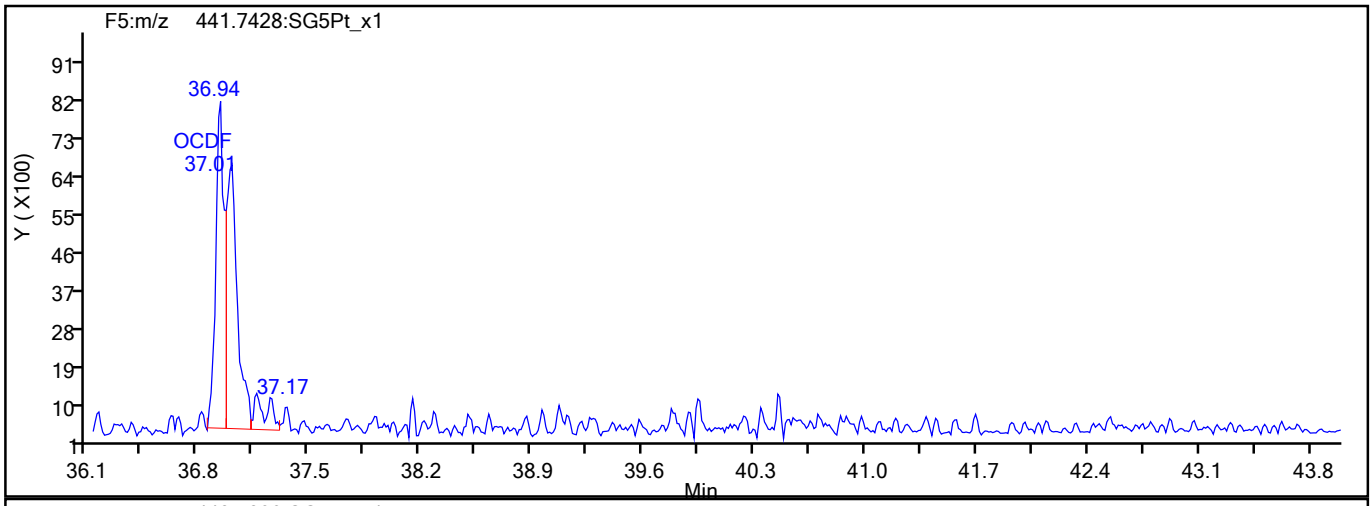

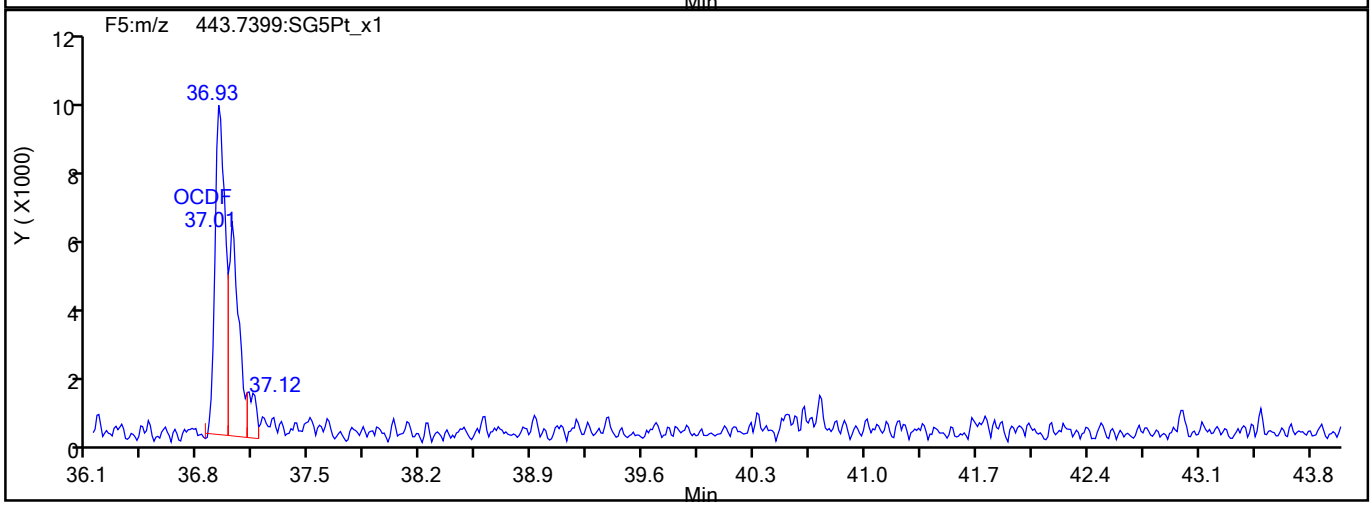

OCDF Interference Mass

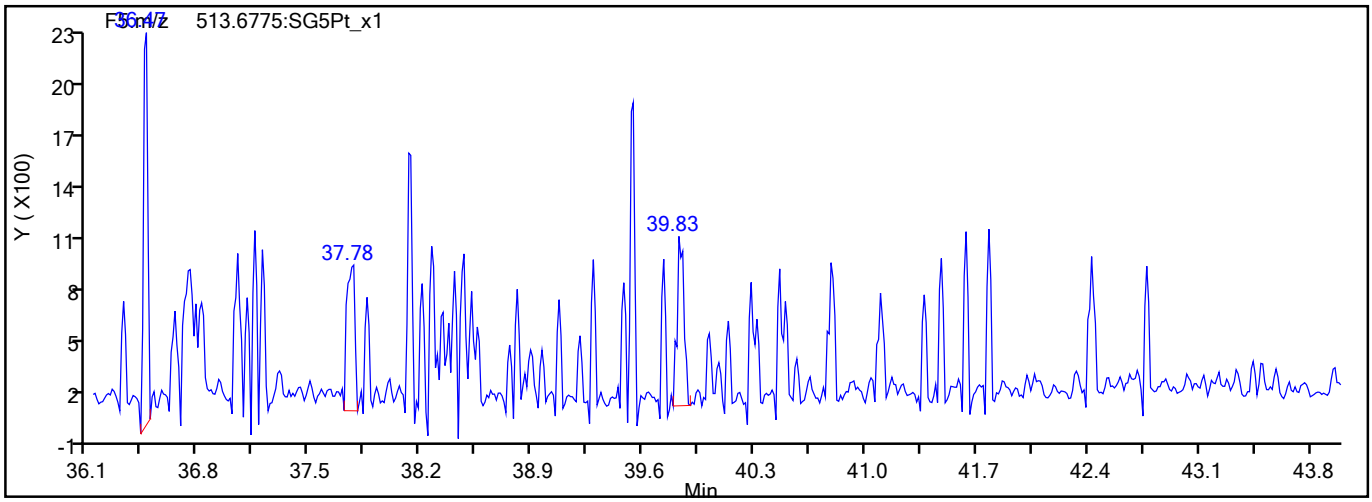

781180

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

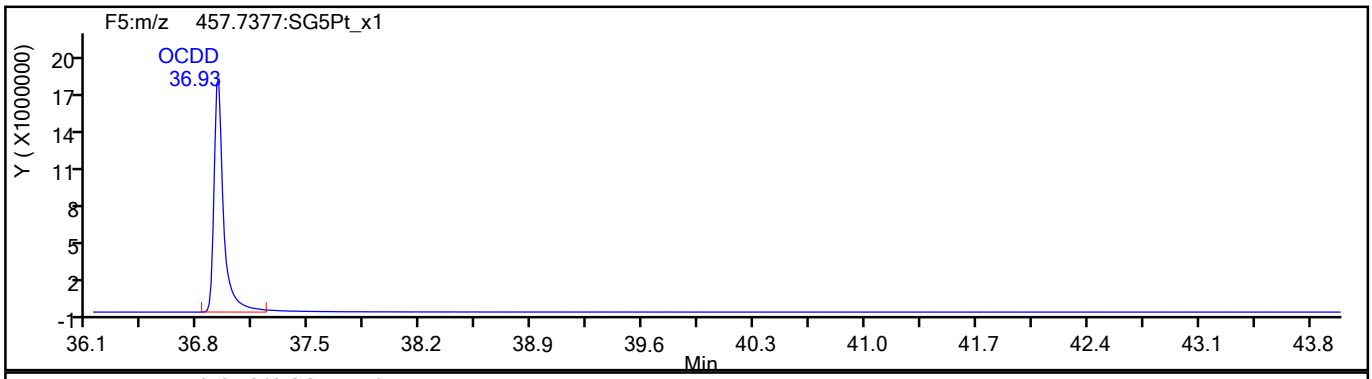

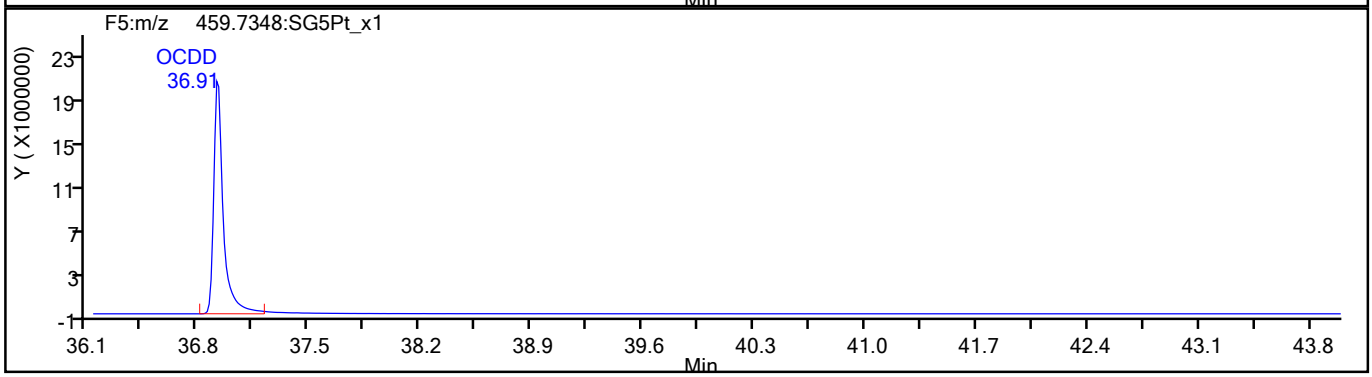

OCDD Standards

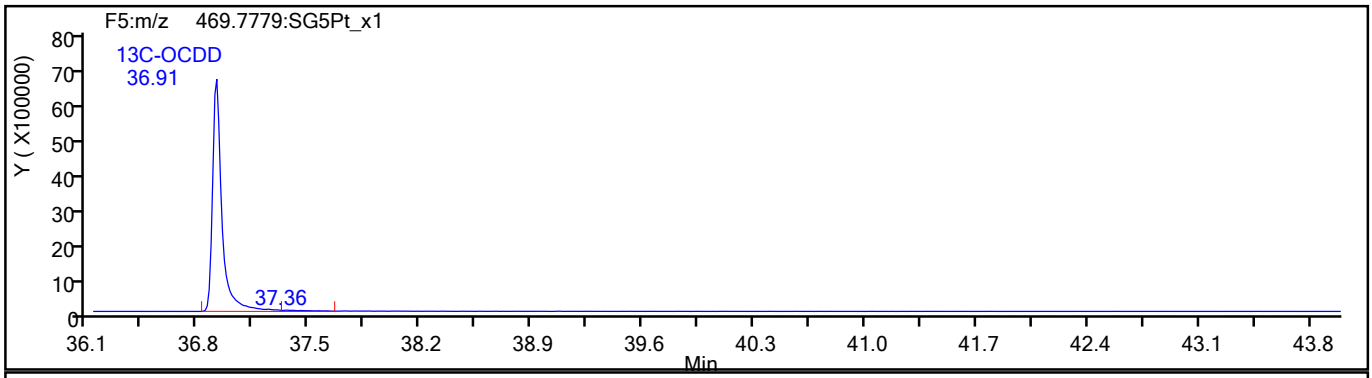

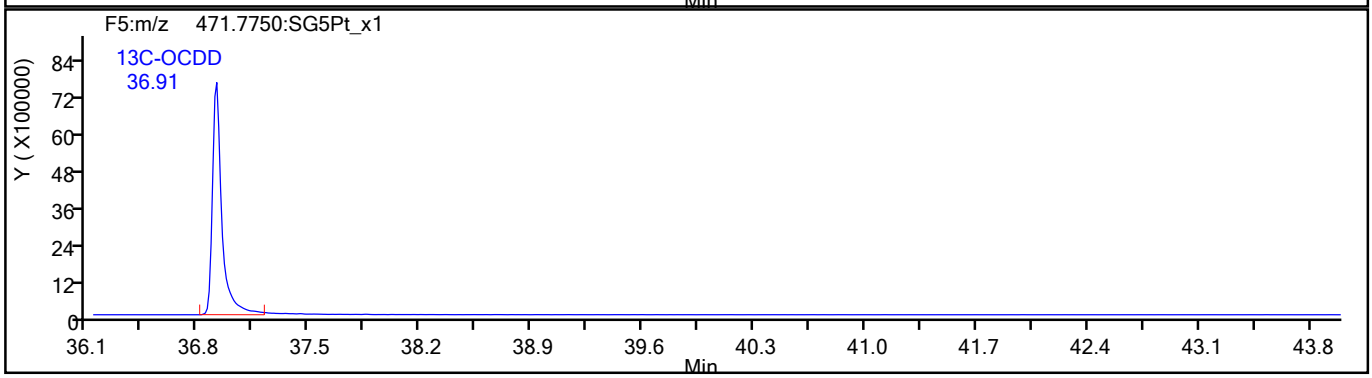

781181

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

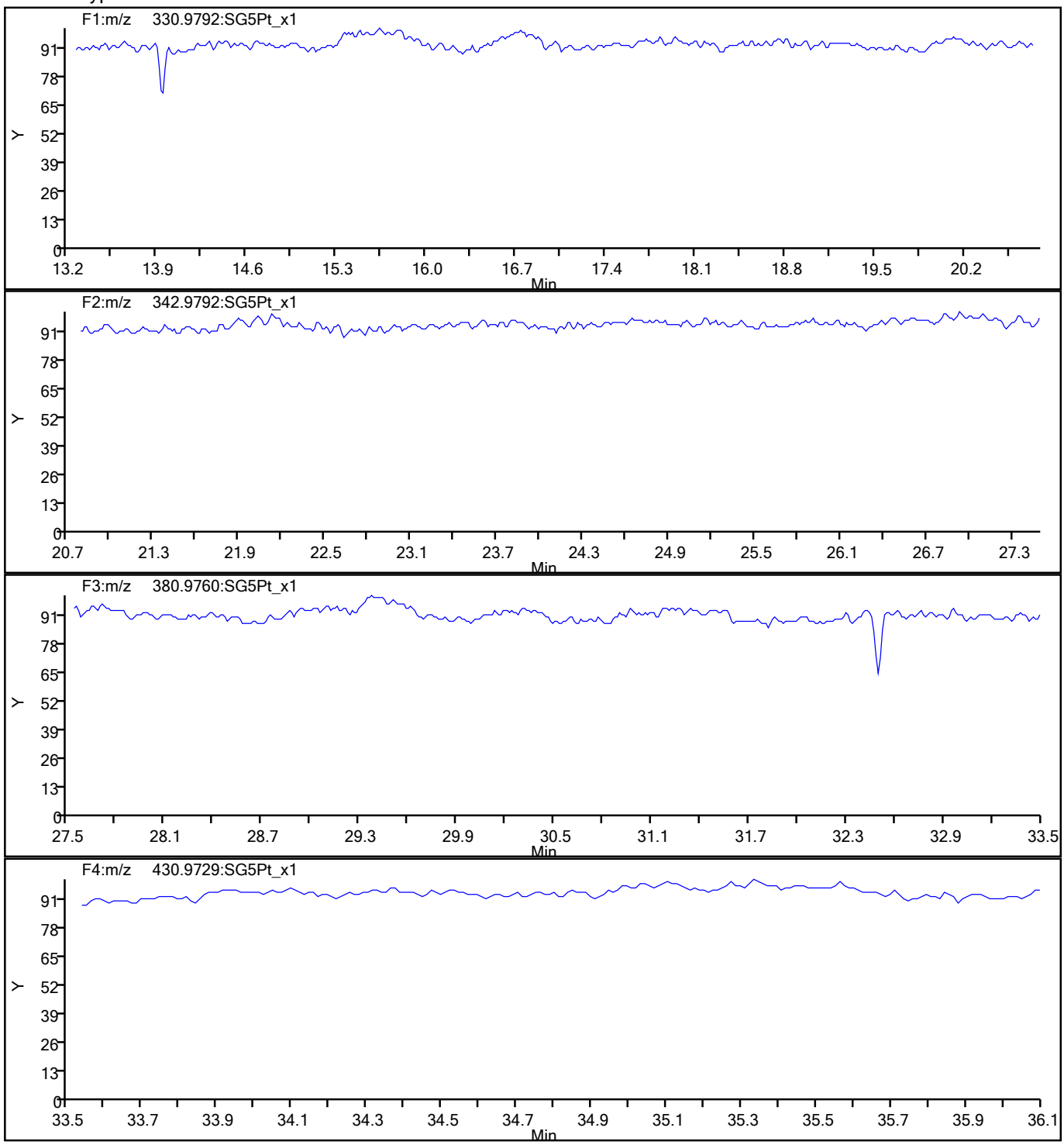

781182

Report Date: 18-Aug-2021 10:07:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_38.d		
Injection Date:	14-Aug-2021 21:16:32	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	516846	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

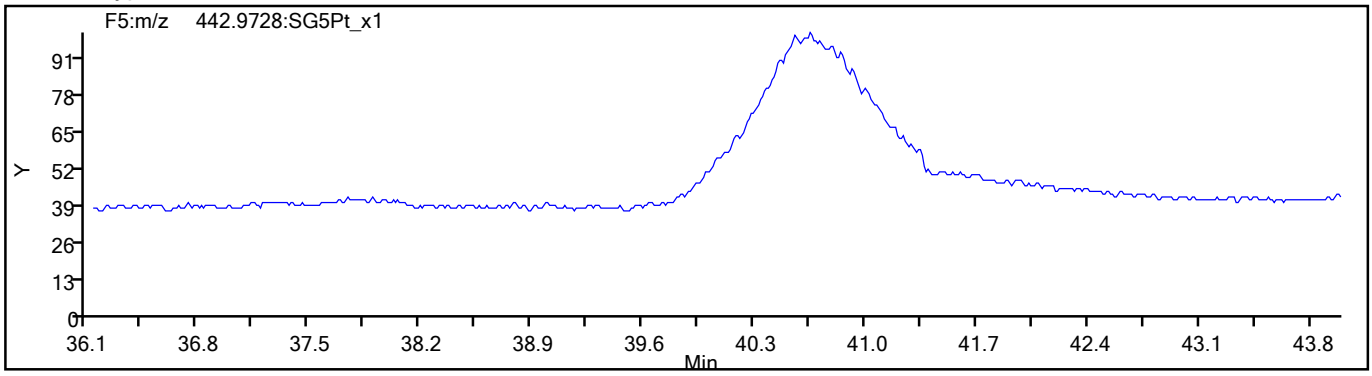

781183

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-2
SDG No.:
Client Sample ID: 11215702-072321-BN-SJSB105 (16-18) RA
Lab Sample ID: 320-76788-21 RA
Matrix: Solid
Lab File ID: 23AU2111D2_005.d
Analysis Method: 1613B
Date Collected: 07/23/2021 16:10
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10.63(g)
Date Analyzed: 08/23/2021 12:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 32.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518958
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	14	B	1.4	0.46

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	57		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	79		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_005.d
Lims ID: 320-76788-A-21-A
Client ID: 11215702-072321-BN-SJSB105 (16-18)
Sample Type: Client
Inject. Date: 23-Aug-2021 12:05:26 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-21-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:45:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.315	17121900	0.80	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.645	12966163	0.80	1.3327	56.8	56.8	0.4550	0.4550	56.82	
2,3,7,8-TCDF	17.645	659385	0.68	0.9978	5.097	5.097	0.1636	0.1636		M
D 13C-2,3,7,8-TCDD	16.082	8870118	0.79	0.8749	59.2	59.2	0.8226	0.8226	59.21	
2,3,7,8-TCDD	16.095	161612	0.77	1.0570	2.028	1.724	0.1978	0.1978		RQ
$ 37Cl4-2,3,7,8-TCDD	16.095	4700012		0.8648	31.7	31.7	0.0942	0.0942	79.35	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_005.d
Lims ID: 320-76788-A-21-A
Client ID: 11215702-072321-BN-SJSB105 (16-18)
Sample Type: Client
Inject. Date: 23-Aug-2021 12:05:26 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76788-A-21-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:45:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.315	16.312	0		7601744	1714582	5821	14552	295		
333.9339	16.315	16.312	0		9520156	2026702	4949	12372	410	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.645	17.615	2	1.082	5779797	1079866	4964	12410	218		
317.9389	17.632	17.615	1	1.081	7186366	1342965	4110	10275	327	0.80(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.645	17.643	0	1.000	267980	49576	599	1497	83		M
305.8987	17.645	17.643	0	1.000	391405	66384	983	2457	68	0.68(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.082	16.065	1	0.986	3922770	850546	5821	14552	146		
333.9339	16.082	16.065	1	0.986	4947348	1057929	4949	12372	214	0.79(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.095	16.093	0	1.001	70306	13925	989	2472	14		
321.8936	16.109	16.093	1	1.002	119806	31746	607	1517	52	0.59(0.65-0.89)	
	Empc Correction				91306	18084	607	1517	30		
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.093	0	0.987	4700012	1020045	1219	3047	837		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_005.d				
Injection Date:	23-Aug-2021 12:05:26	Instrument ID:	11D2		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.65
Area: 394402
Amount: 5.023209
Amount Units: pg/ul

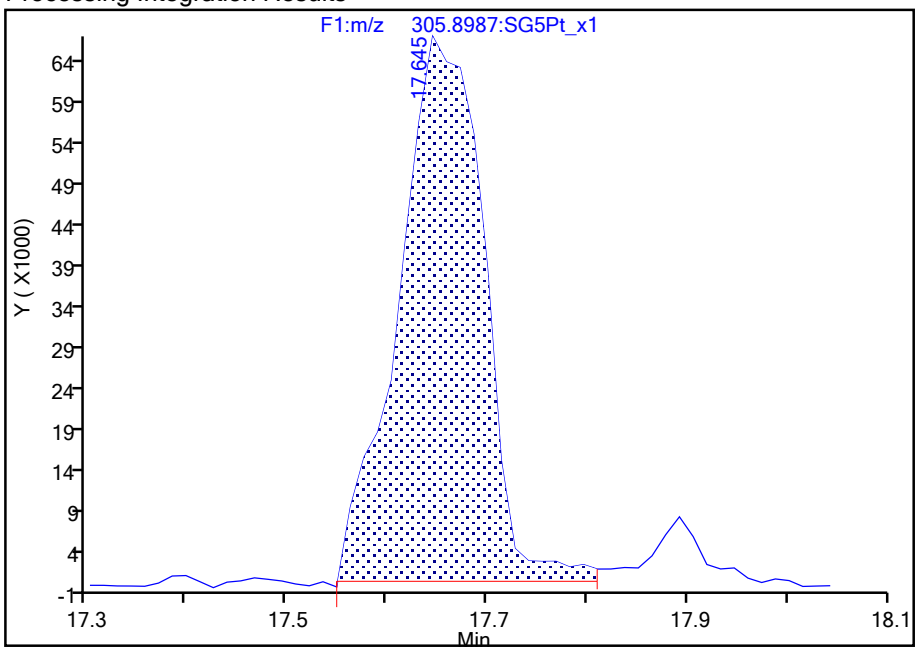

Manual Integration Results

RT: 17.65
Area: 391405
Amount: 5.096607
Amount Units: pg/ul

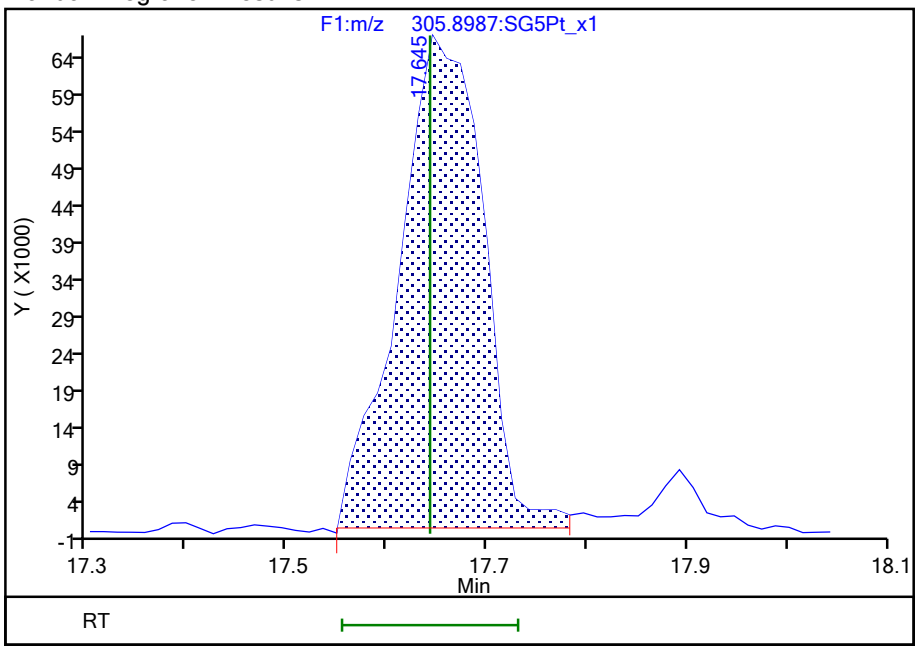

Reviewer: bennettd, 23-Aug-2021 15:45:02

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_005.d				
Injection Date:	23-Aug-2021 12:05:26	Instrument ID:	11D2		
Lims ID:	320-76788-A-21-A	Lab Sample ID:	320-76788-21		
Client ID:	11215702-072321-BN-SJSB105 (16-18)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.65
Area: 255487
Amount: 5.023209
Amount Units: pg/ul

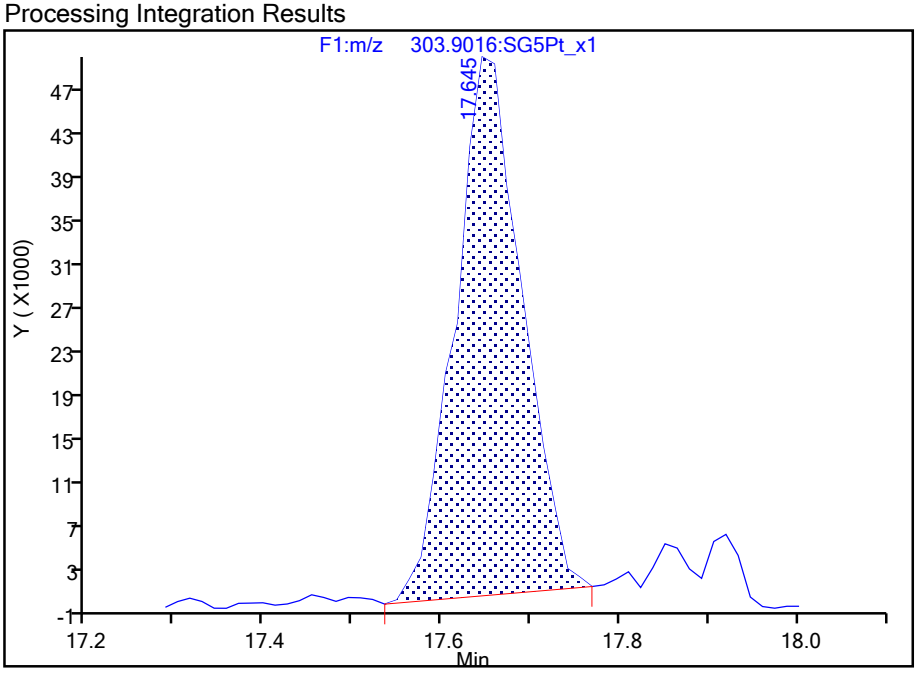

Manual Integration Results

RT: 17.65
Area: 267980
Amount: 5.096607
Amount Units: pg/ul

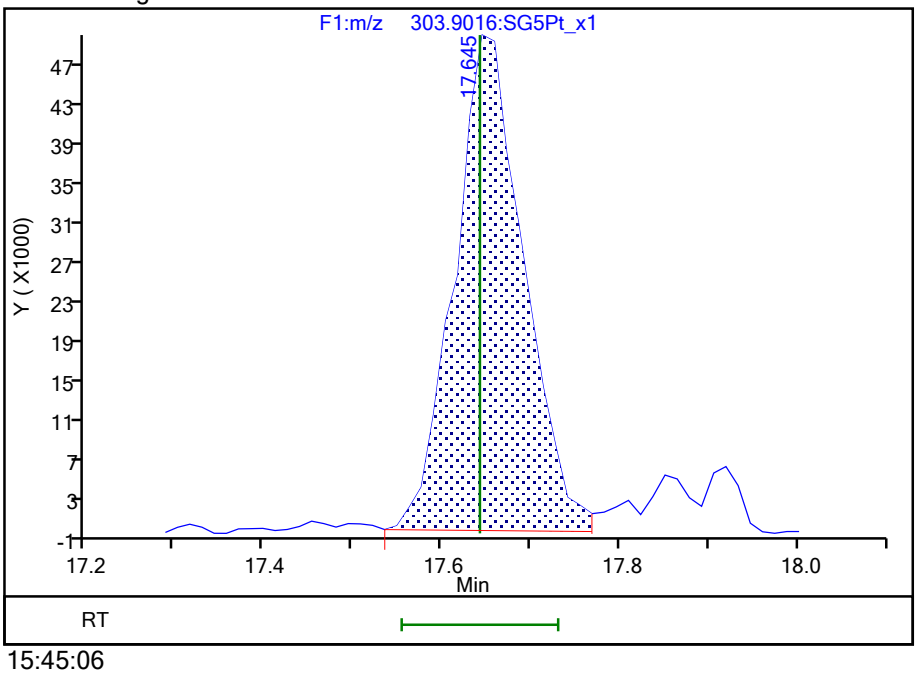

Reviewer: bennettd, 23-Aug-2021 15:45:06

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

781188

Report Date: 23-Aug-2021 15:56:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_005.d		
Injection Date:	23-Aug-2021 12:05:26	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	518958	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

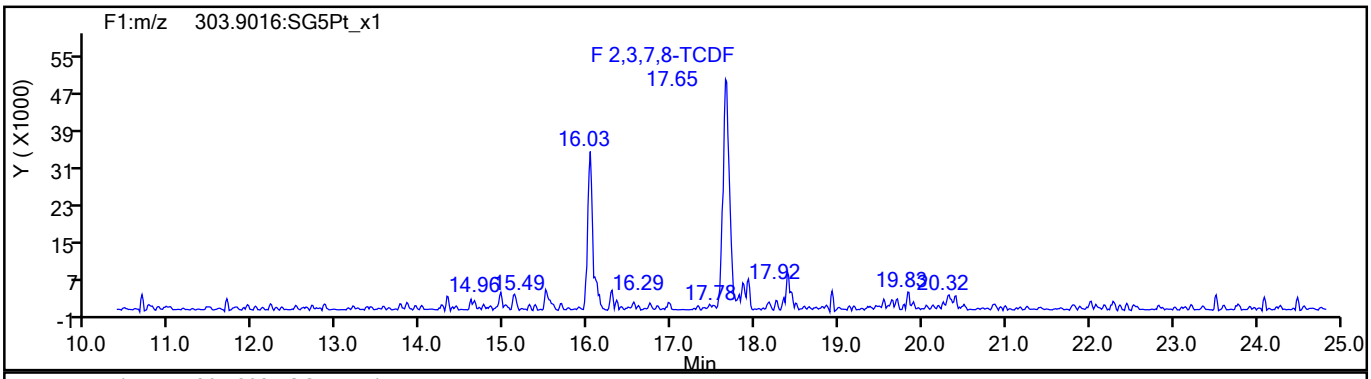

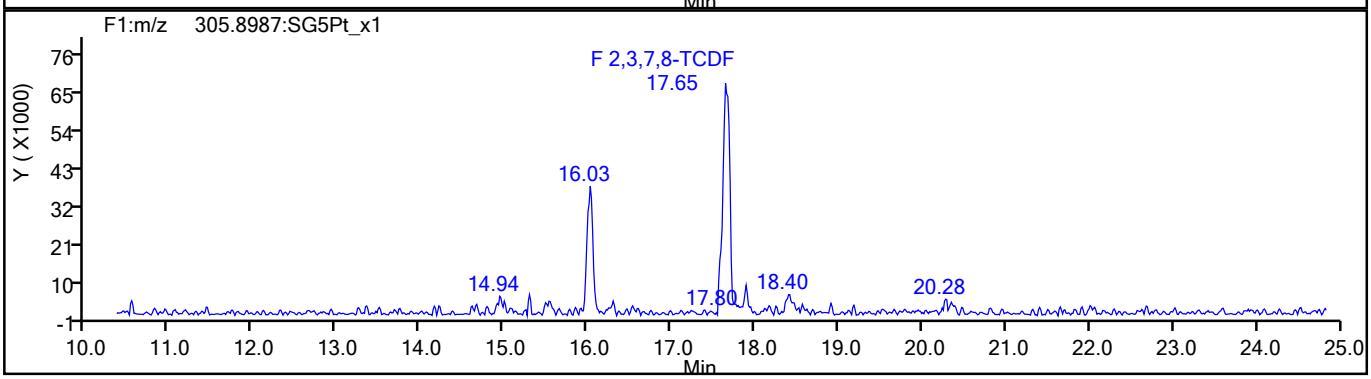

TCDF Standards

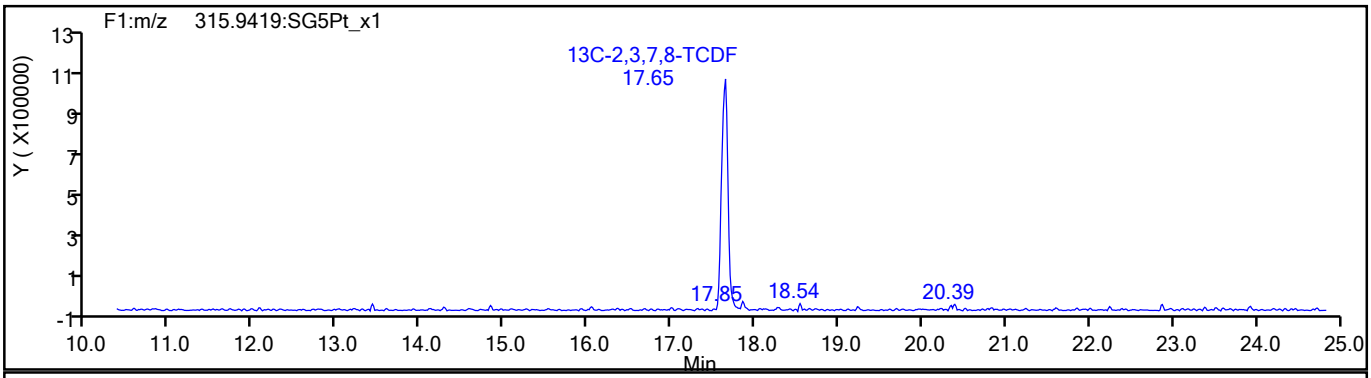

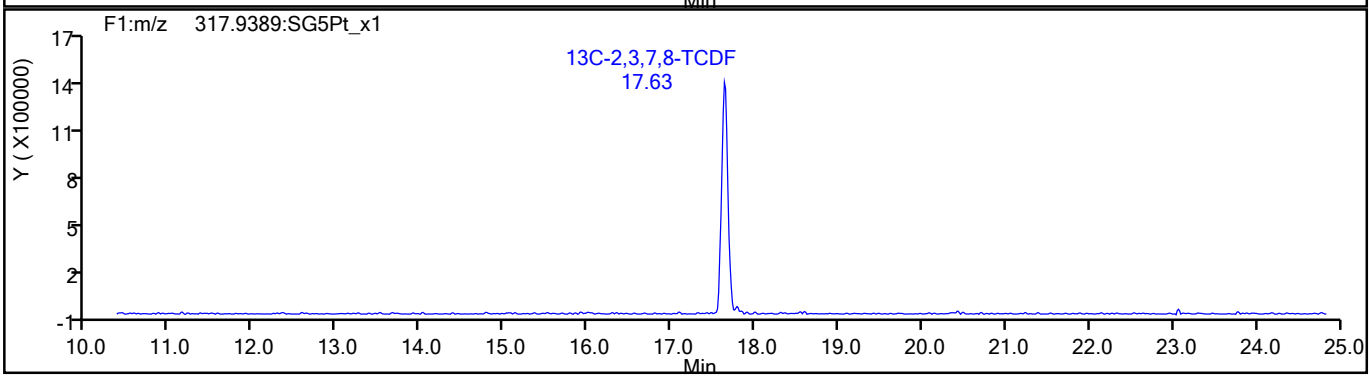

781189

Report Date: 23-Aug-2021 15:56:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_005.d		
Injection Date:	23-Aug-2021 12:05:26	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	518958	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

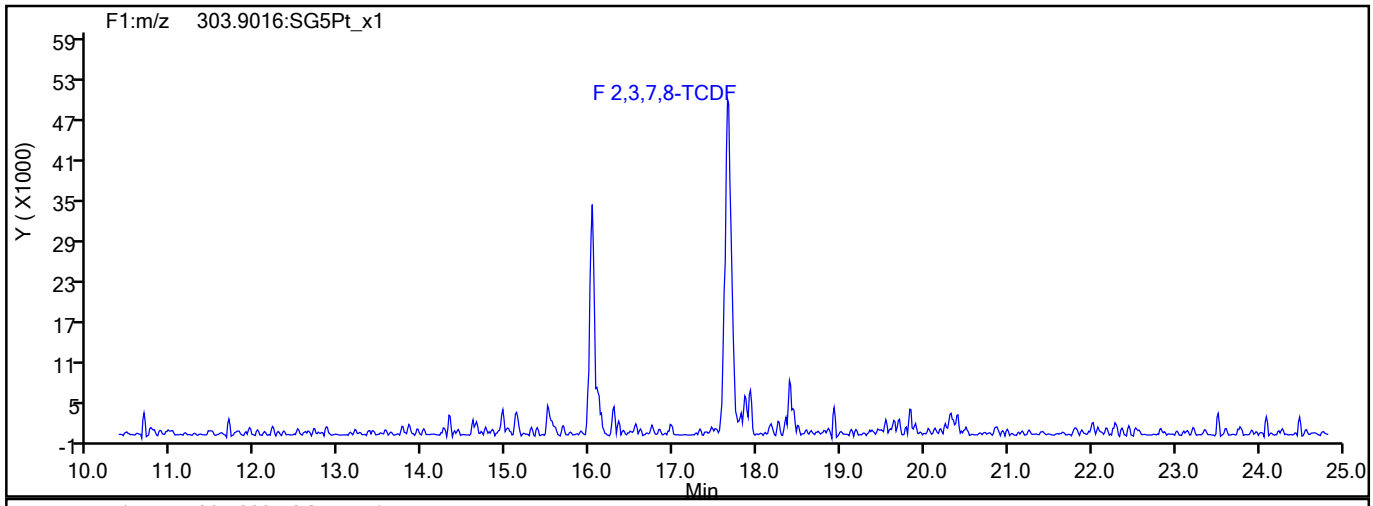

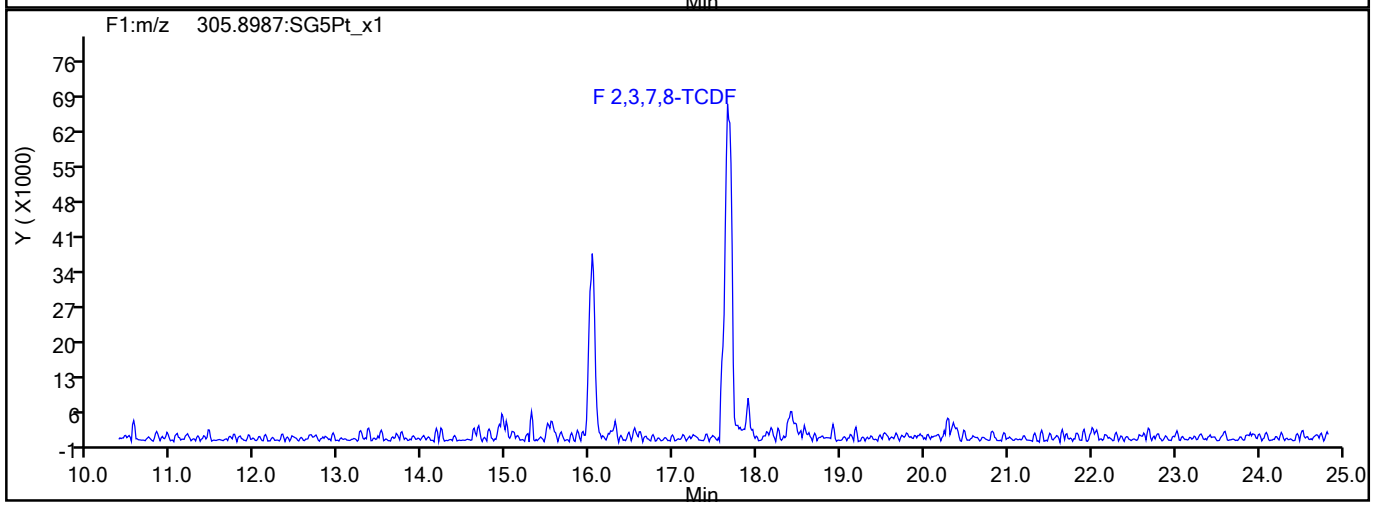

TCDF Interference Mass

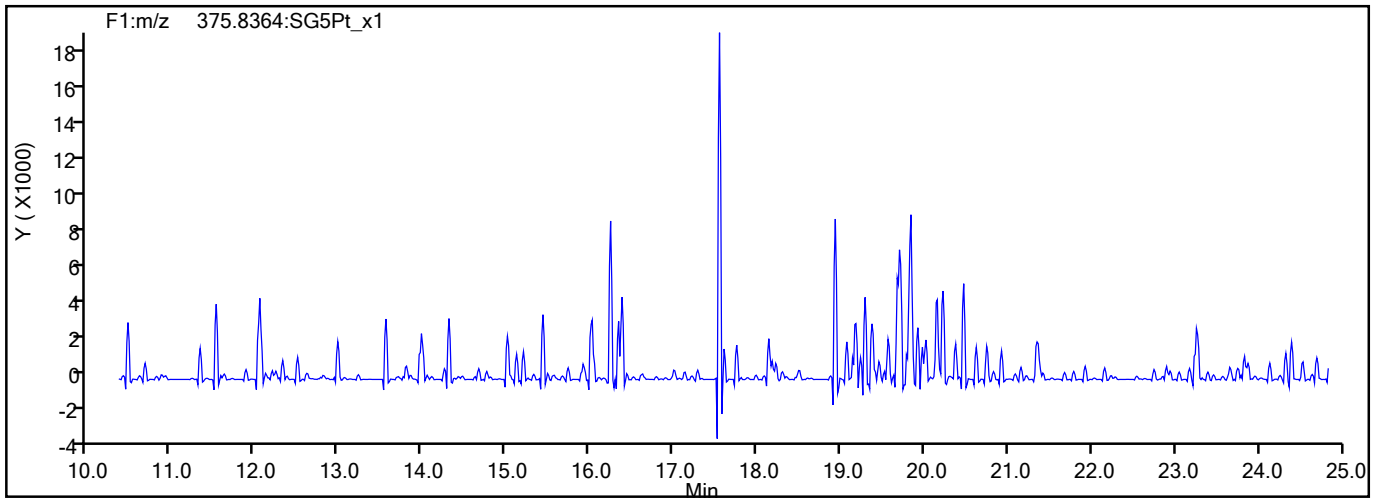

781190

Report Date: 23-Aug-2021 15:56:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_005.d		
Injection Date:	23-Aug-2021 12:05:26	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	518958	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

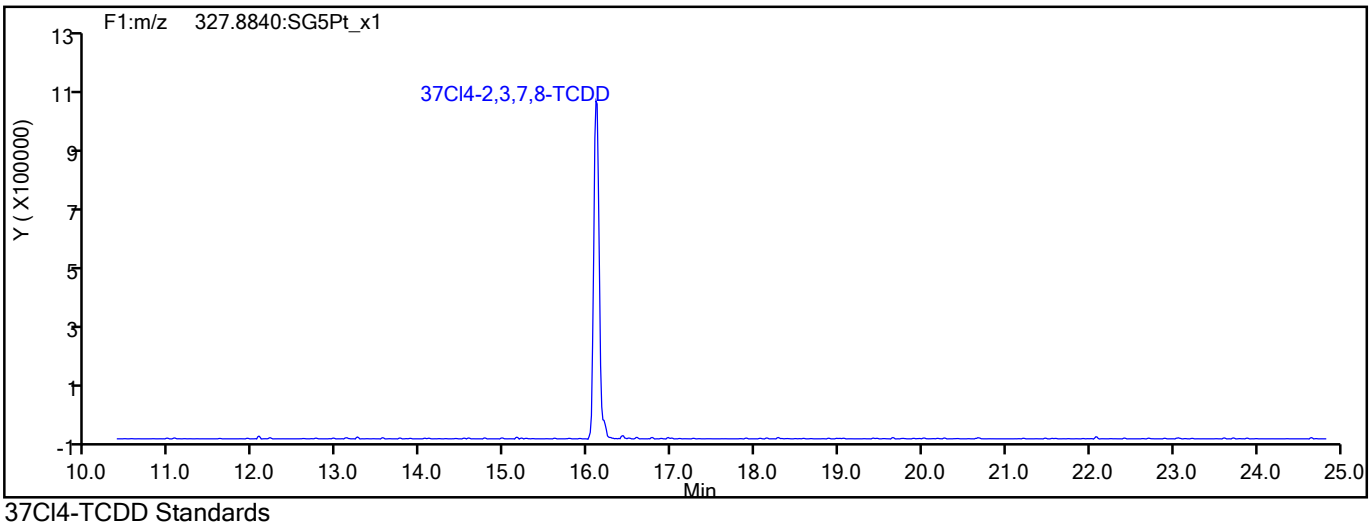

37Cl4-TCDD Standards

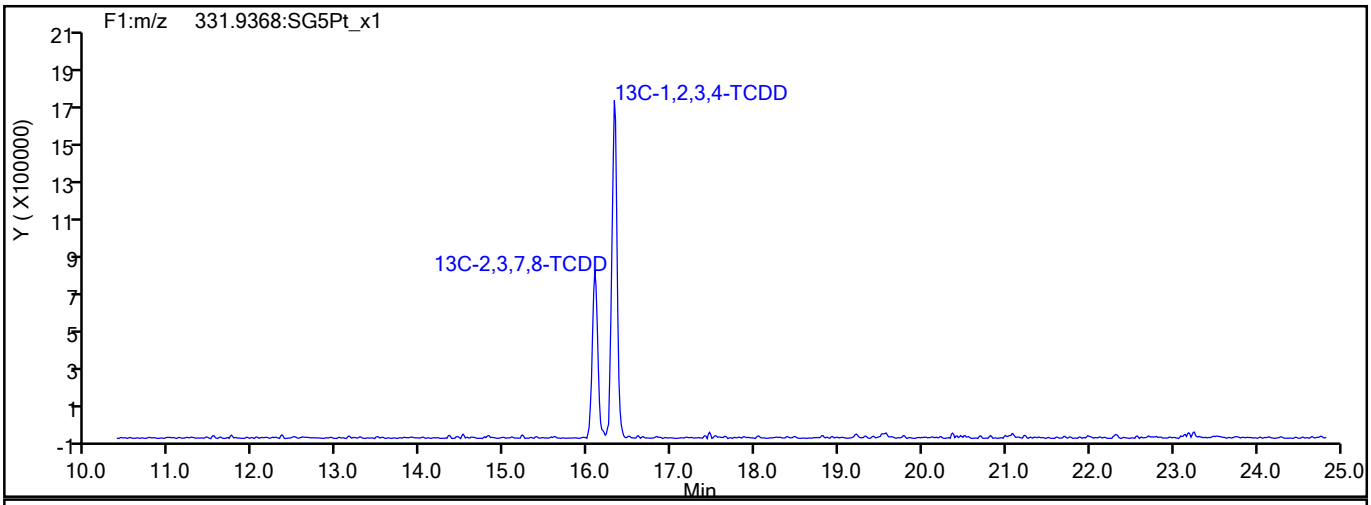

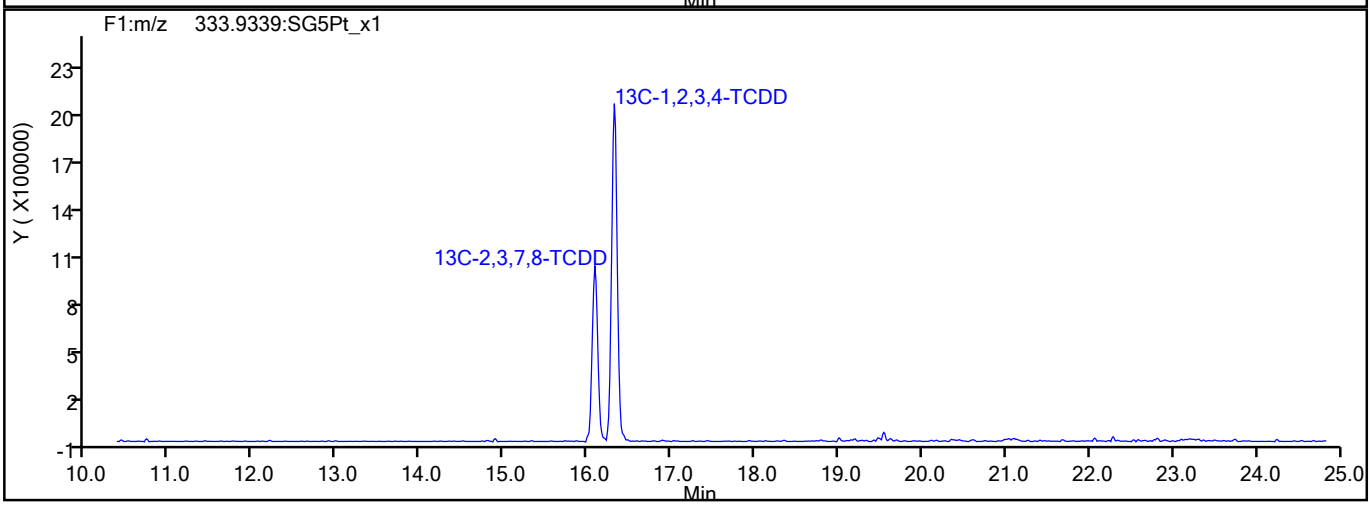

781191

Report Date: 23-Aug-2021 15:56:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_005.d		
Injection Date:	23-Aug-2021 12:05:26	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072321-BN-SJSB105 (16-18)		
Worklist#:	518958	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

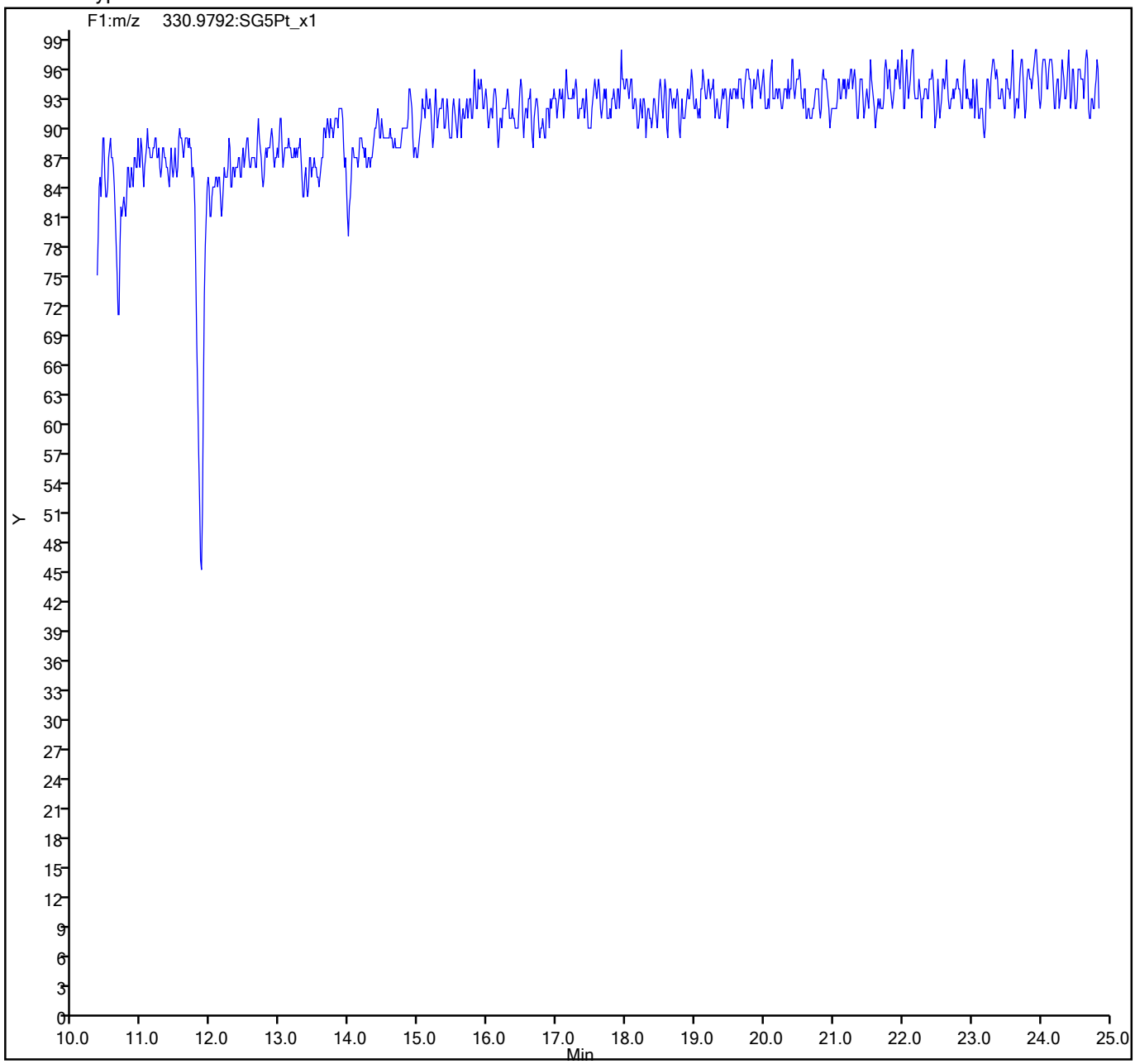

781192

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.0287	0.8698	1.0458	1.1094	1.0657	AveID		1.0239				8.9		20.0			
2,3,7,8-TCDD	1.2575	1.0971	1.2651	1.3434	1.3075	AveID		1.2541				7.5		20.0			
1,2,3,7,8-PeCDF	1.0739	0.9128	1.0891	1.1370	1.0928	AveID		1.0611				8.1		20.0			
2,3,4,7,8-PeCDF	1.0408	0.8610	1.0466	1.1082	1.0356	AveID		1.0184				9.1		20.0			
1,2,3,7,8-PeCDD	1.0578	0.9031	1.0680	1.1310	1.0823	AveID		1.0484				8.2		20.0			
1,2,3,4,7,8-HxCDF	1.1222	0.9192	1.1025	1.1936	1.0881	AveID		1.0851				9.3		20.0			
1,2,3,6,7,8-HxCDF	1.1488	0.9637	1.1546	1.1966	1.1664	AveID		1.1260				8.2		20.0			
2,3,4,6,7,8-HxCDF	1.2223	0.9863	1.1858	1.2415	1.2018	AveID		1.1675				8.9		20.0			
1,2,3,4,7,8-HxCDD	1.0979	0.8906	1.1304	1.1671	1.0341	AveID		1.0640				10.2		20.0			
1,2,3,6,7,8-HxCDD	1.0294	0.8529	1.0113	1.0930	1.0138	AveID		1.0001				8.9		20.0			
1,2,3,7,8,9-HxCDD	1.1551	0.9428	1.1999	1.2421	1.1227	AveID		1.1325				10.2		20.0			
1,2,3,7,8,9-HxCDF	1.1733	1.0136	1.1898	1.2479	1.2072	AveID		1.1664				7.7		20.0			
1,2,3,4,6,7,8-HpCDF	1.4474	1.2413	1.4986	1.5485	1.4706	AveID		1.4413				8.2		20.0			
1,2,3,4,6,7,8-HpCDD	1.1119	0.9539	1.1176	1.1675	1.1205	AveID		1.0943				7.5		20.0			
1,2,3,4,7,8,9-HpCDF	1.3136	1.1269	1.3622	1.4520	1.3321	AveID		1.3174				9.0		20.0			
OCDD	1.1009	0.9635	1.1652	1.1829	1.1226	AveID		1.1070				7.8		20.0			
OCDF	1.3863	1.1912	1.5145	1.5858	1.5129	AveID		1.4382				10.8		20.0			
13C-2,3,7,8-TCDF	1.6500	1.5631	1.6241	1.6170	1.6703	Ave		1.6249				2.5		35.0			
13C-2,3,7,8-TCDD	0.9128	0.8588	0.8965	0.8940	0.9345	Ave		0.8993				3.1		35.0			
13C-1,2,3,7,8-PeCDF	1.1977	1.1539	1.2193	1.2121	1.2674	Ave		1.2101				3.4		35.0			
13C-2,3,4,7,8-PeCDF	1.2269	1.1924	1.2487	1.2129	1.3165	Ave		1.2395				3.8		35.0			
13C-1,2,3,7,8-PeCDD	0.7558	0.7433	0.7524	0.7498	0.8049	Ave		0.7612				3.3		35.0			
13C-1,2,3,4,7,8-HxCDF	1.0875	1.1006	1.0706	1.0371	1.1225	Ave		1.0837				3.0		35.0			
13C-1,2,3,6,7,8-HxCDF	1.1466	1.1401	1.1115	1.1251	1.1163	Ave		1.1279				1.3		35.0			
13C-2,3,4,6,7,8-HxCDF	1.0781	1.0785	1.0541	1.0562	1.0518	Ave		1.0637				1.3		35.0			
13C-1,2,3,4,7,8-HxCDD	0.7413	0.7515	0.6926	0.7049	0.7769	Ave		0.7334				4.7		35.0			
13C-1,2,3,6,7,8-HxCDD	0.8884	0.8870	0.8694	0.8685	0.8876	Ave		0.8802				1.2		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9787	0.9851	0.9497	0.9522	0.9722	Ave		0.9676				1.6		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.8030	0.7818	0.7501	0.7625	0.7677	Ave		0.7730				2.6		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6554	0.6478	0.6343	0.6458	0.6528	Ave		0.6472				1.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6985	0.7093	0.6800	0.6816	0.7346	Ave		0.7008				3.2		35.0			
13C-OCDD	0.4462	0.4357	0.4273	0.4575	0.4691	Ave		0.4472				3.7		35.0			
37Cl4-2,3,7,8-TCDD	0.9705	0.9794	1.1718	1.1876	1.2264	Ave		1.1071				11.1					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	557485	1709191	10638776	44524782	204575642	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	376984	1184284	7104238	29808948	140421448	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	2112140	6620354	41588176	171023920	795873691	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	2096967	6452410	40928436	166805723	783403837	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	1312779	4219570	25165054	105236005	500555284	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	1949462	6041767	37525146	155057762	737075796	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	2104086	6561860	40802767	168618976	785709889	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	2104896	6352404	39741365	164241378	762810877	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	1300030	3996910	24891170	103044220	484857042	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	1460747	4517909	27953752	118900298	543061818	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	1503407	4612548	29794954	122394998	563888565	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	1834100	5963032	35924190	148834491	708280047	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	1856599	5795616	35740964	147892240	681312007	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	1164074	3690749	22538791	94435922	441437476	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	1465634	4773949	29450636	123968724	590555312	2.50	10.0	50.0	200	1000
OCDD		AveID	1569338	5013385	31656667	135570174	635652839	5.00	20.0	100	400	2000
OCDF		AveID	1976175	6198469	41147202	181747068	856685987	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	108384725	98246522	101724636	100332269	95980421	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	59957723	53975587	56155483	55471422	53698206	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	78674290	72525655	76368219	75205597	72829681	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	80591659	74944110	78214582	75259591	75649463	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	49643581	46721712	47124414	46524396	46251010	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	69484482	65726932	68075509	64951889	67741189	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	73262388	68089005	70677463	70459920	67363664	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	68885161	64406928	67028498	66145684	63471184	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	47363504	44877133	44039927	44144841	46886171	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	56759108	52974056	55284532	54392394	53564396	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	62528954	58828058	60389284	59636084	58669892	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	51308225	46691158	47697671	47752972	46328151	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	41876556	38689128	40333717	40442950	39395832	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	44628352	42362179	43238622	42687625	44333848	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	57018462	52034518	54338243	57303880	56623863	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	318727	1231219	7339670	29474361	140953034	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\26JL2110D5.SPL
Last Modified: Monday, July 26, 2021 16:58:03 Pacific Daylight Time
Printed: Tuesday, July 27, 2021 07:40:45 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	26JL2110D5_1	WDM HRDXNCP_00042	WDM 072621	Tray01:1	Dioxin		SMA
2	26JL2110D5_2	SB Solvent Blank C-14	SB 072621	Tray01:3			SMA
3	26JL2110D5_3	CS-2 HRDXNL2_00032	IC 072621	Tray01:4	Dioxin		SMA
4	26JL2110D5_4	CS-3 HRDXNL3_00029	IC 072621A	Tray01:5	Dioxin		SMA
5	26JL2110D5_5	CS-4 HRDXNL4_00099	IC 072621B	Tray01:2	Dioxin		SMA
6	26JL2110D5_6	CS-5 HRDXNL5_00032	IC 072621C	Tray01:6	Dioxin		SMA
7	26JL2110D5_7	CS-6 HRDXNL6_00028	IC 072621D	Tray01:7	Dioxin		SMA
8	26JL2110D5_8	SB Solvent Blank C-14	SB 072621A	Tray01:3			SMA
9	26JL2110D5_9	ICV HRDXNIC_00047	ICV 072621	Tray01:8	Dioxin		SMA
10	26JL2110D5_10	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS
11	26JL2110D5_11	WDM HRDXNCP_00042	WDM 031621C	Tray01:1	Dioxin		KSS
12	26JL2110D5_12	SB Solvent Blank C-14	SB 072621B	Tray01:3			KSS
13	26JL2110D5_13	mb 320-508015/1-a	mb 320-508015/1-a	Tray01:9	1613B/8290/Water	D255	KSS
14	26JL2110D5_14	lcs 320-508015/2-a	lcs 320-508015/2-a	Tray01:10	1613B/8290/Water		KSS
15	26JL2110D5_15	lcsd 320-508015/3-a	lcsd 320-508015/3-a	Tray01:11	1613B/8290/Water		KSS
16	26JL2110D5_16	320-76081-a-3-c	320-76081-a-3-c	Tray01:12	1613B/8290/Water		KSS
17	26JL2110D5_17	SB Solvent Blank C-14	SB 072621C	Tray01:3			KSS
18	26JL2110D5_18	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS

LOGFILE CHECKED
DB 7/27/21

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:18:21 Pacific Daylight Time

M 292.9824 R 12499

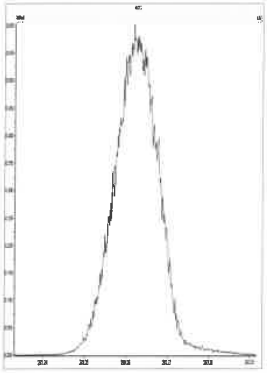

M 304.9824 R 12752

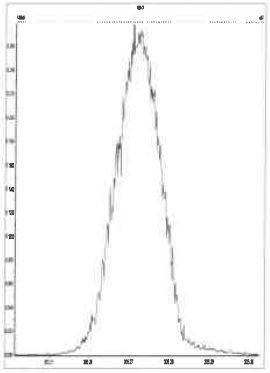

M 318.9792 R 13230

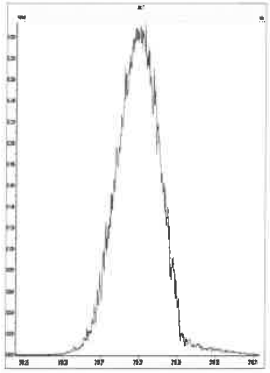

M 330.9792 R 12691

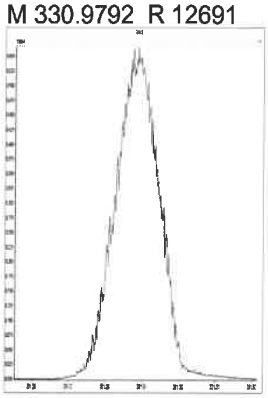

M 342.9792 R 12885

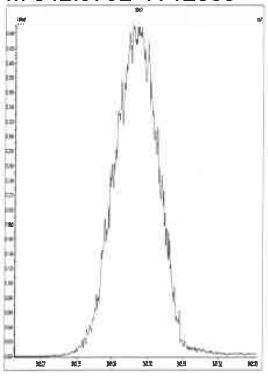

M 354.9792 R 12138

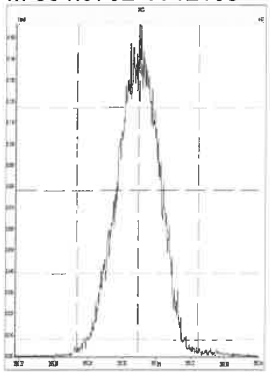

M 366.9792 R 13090

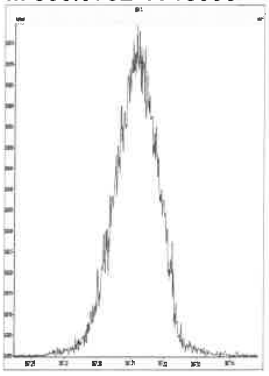

M 380.9760 R 12562

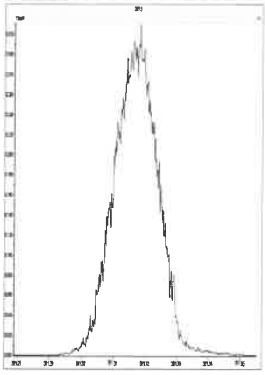

M 392.9760 R 12753

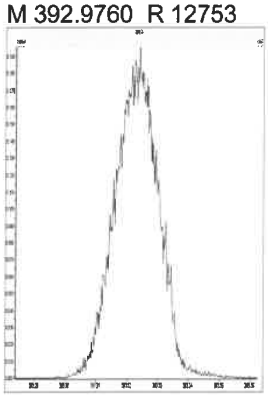

M 404.9760 R 12137

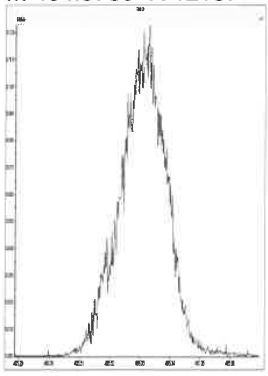

M 416.9760 R 12563

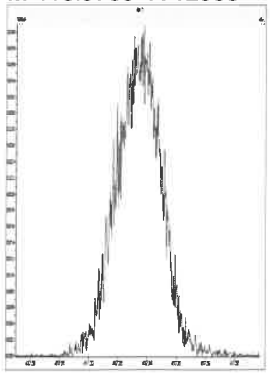

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:04 Pacific Daylight Time

M 318.9792 R 13300

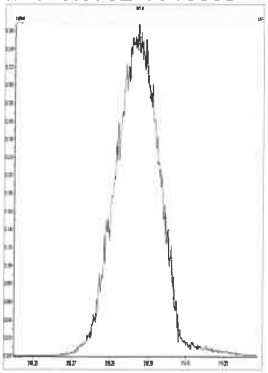

M 330.9792 R 12691

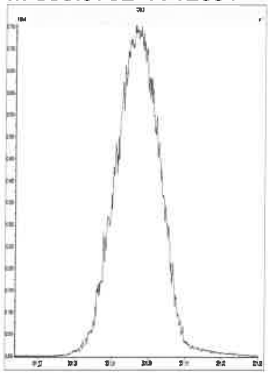

M 342.9792 R 12499

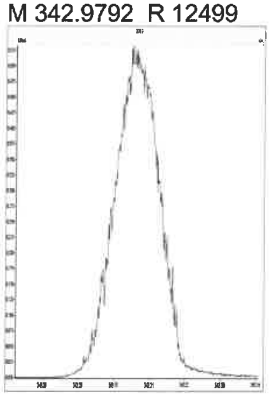

M 354.9792 R 12374

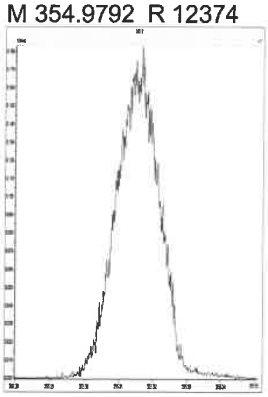

M 366.9792 R 12691

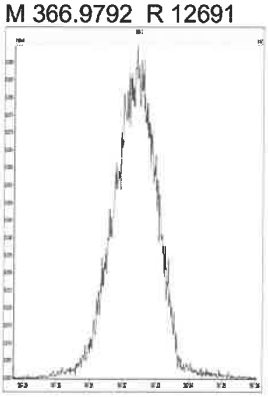

M 380.9760 R 12690

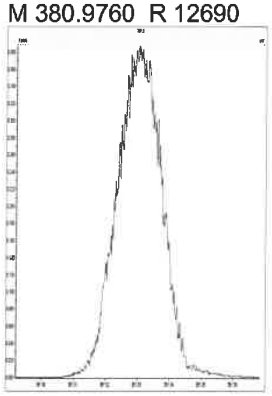

M 392.9760 R 12885

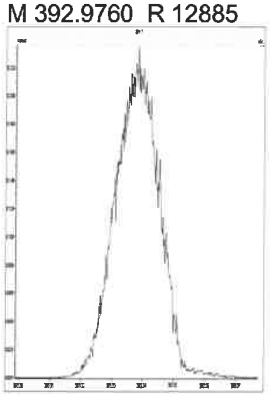

M 404.9760 R 12817

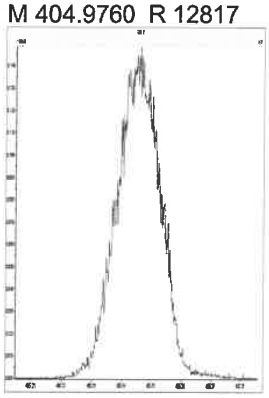

M 416.9760 R 12954

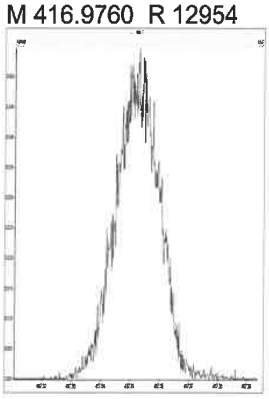

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:43 Pacific Daylight Time

M 366.9792 R 12440

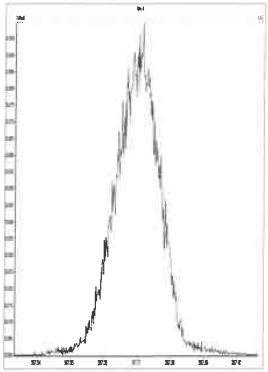

M 380.9760 R 12955

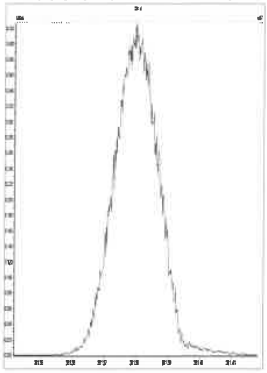

M 392.9760 R 12690

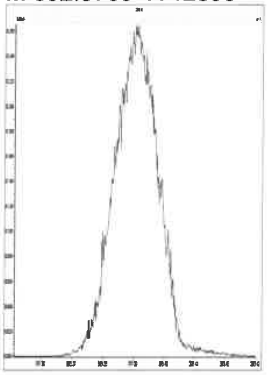

M 404.9760 R 12957

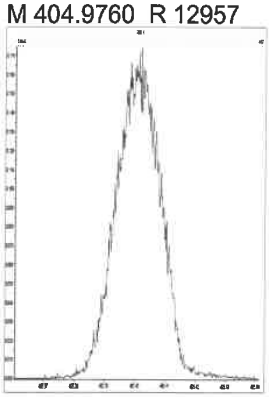

M 416.9760 R 13516

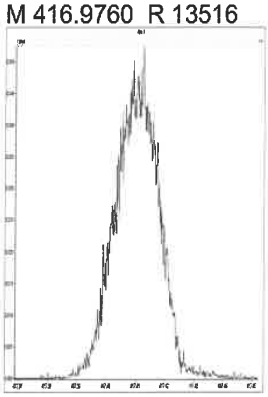

M 430.9728 R 12564

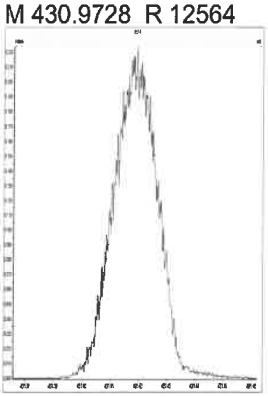

M 442.9728 R 12953

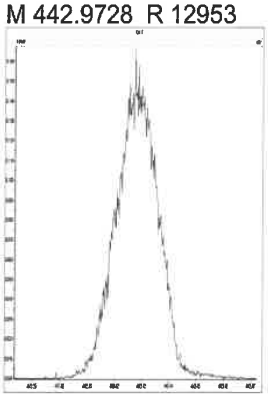

M 454.9728 R 13226

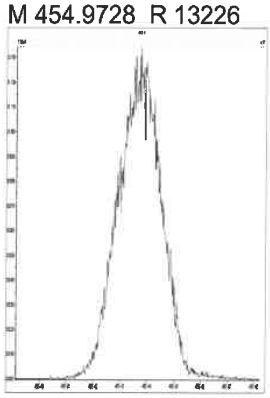

781201

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:20:01 Pacific Daylight Time

M 380.9760 R 12885

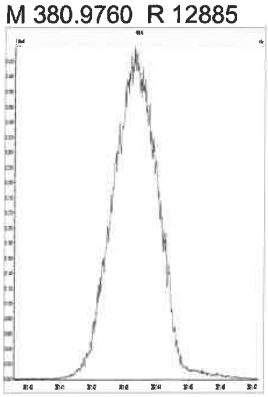

M 392.9760 R 12955

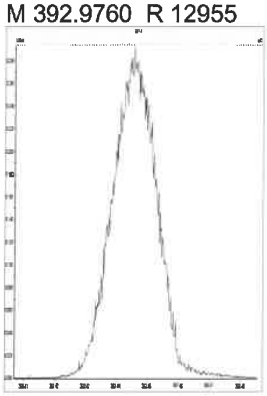

M 404.9760 R 12756

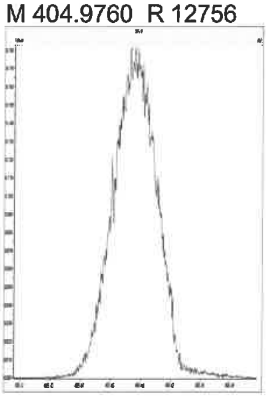

M 416.9760 R 13368

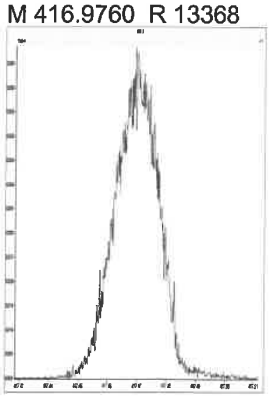

M 430.9728 R 12758

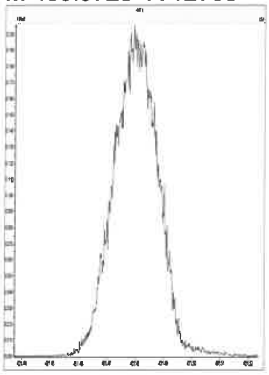

M 442.9728 R 13229

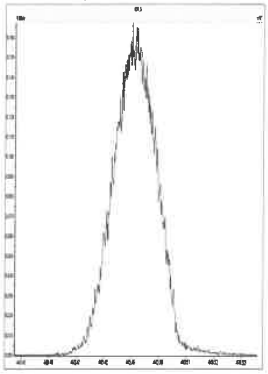

M 454.9728 R 13737

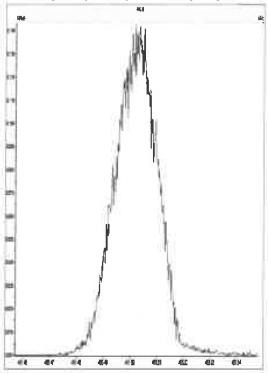

M 466.9728 R 12952

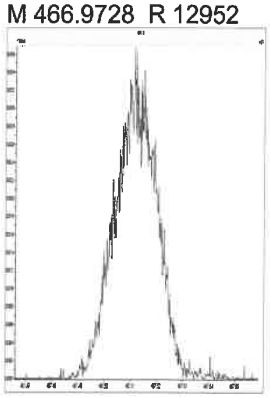

M 480.9696 R 12819

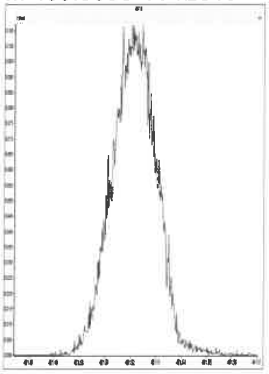

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:21:28 Pacific Daylight Time

M 380.9760 R 12630

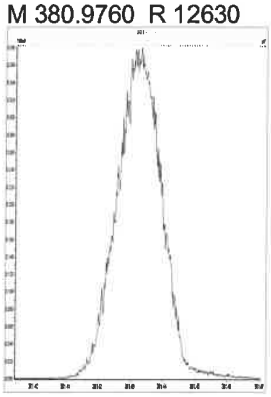

M 392.9760 R 12687

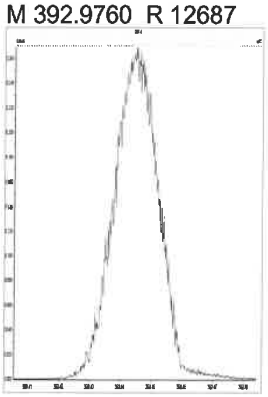

M 404.9760 R 13441

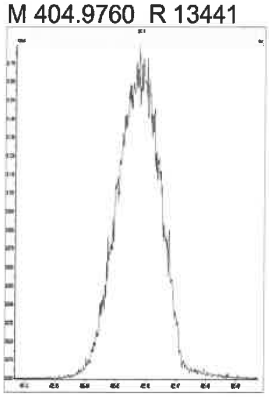

M 416.9760 R 12886

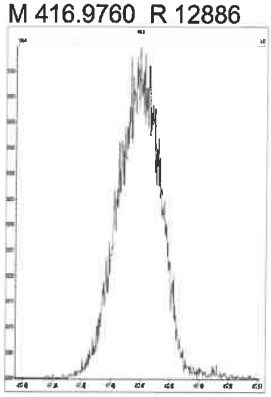

M 430.9728 R 12952

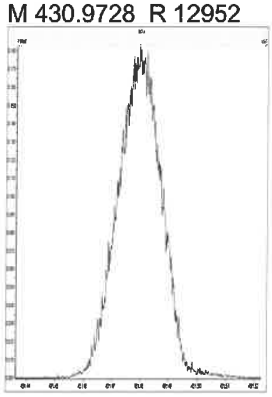

M 442.9728 R 12564

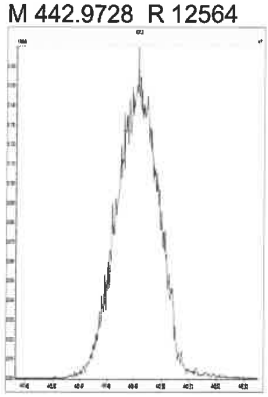

M 454.9728 R 13228

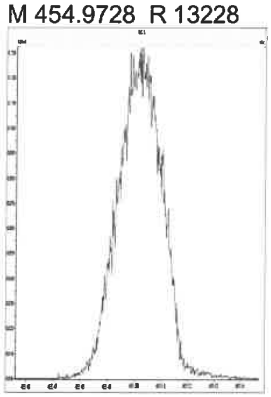

M 466.9728 R 12689

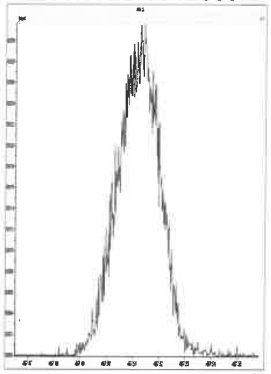

M 480.9696 R 13226

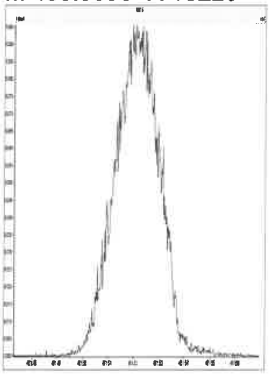

M 492.9696 R 13090

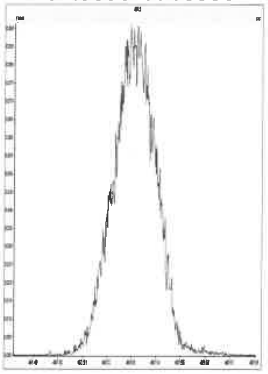

M 504.9696 R 13021

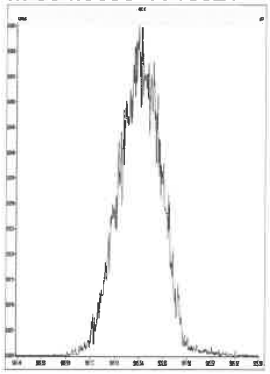

M 516.9697 R 13811

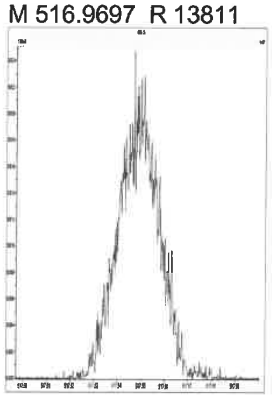

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M 292.9824 R 12322

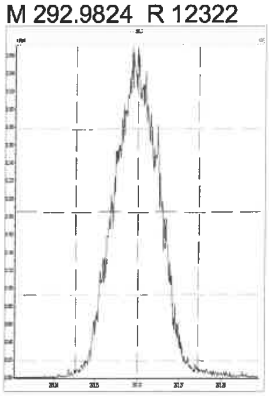

M 304.9824 R 12923

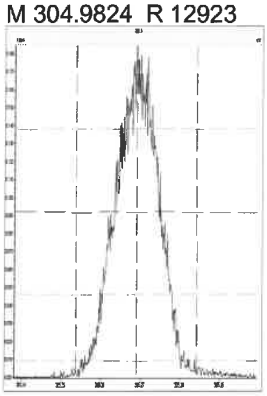

M 318.9792 R 12953

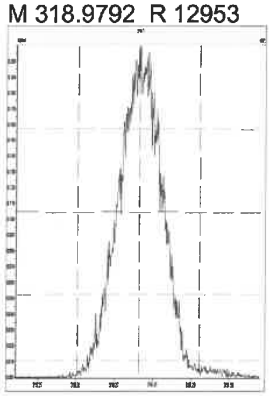

M 330.9792 R 12791

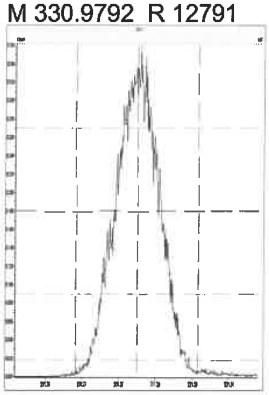

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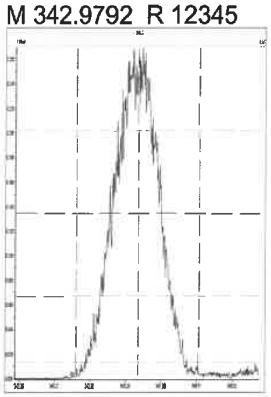

M 354.9792 R 13001

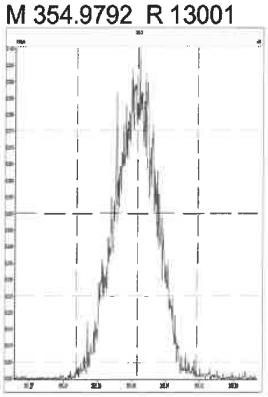

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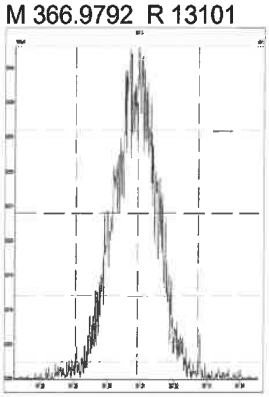

M 380.9760 R 13055

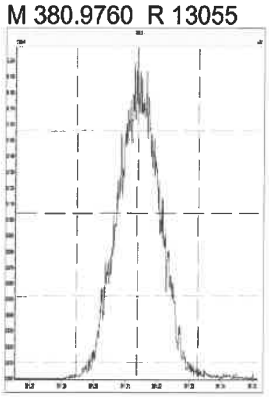

M 392.9760 R 13023

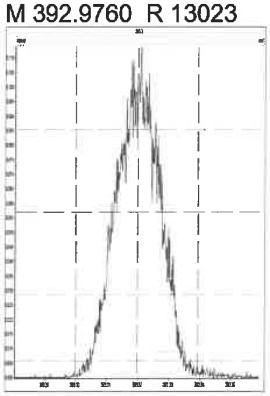

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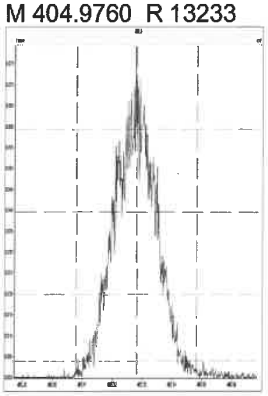

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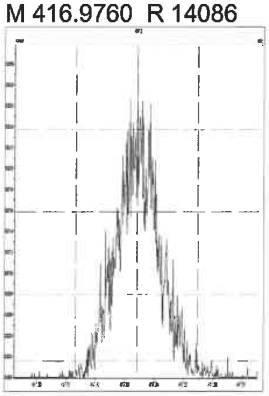

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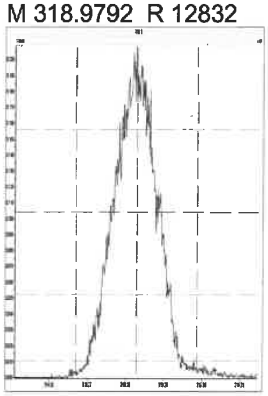

M 330.9792 R 12659

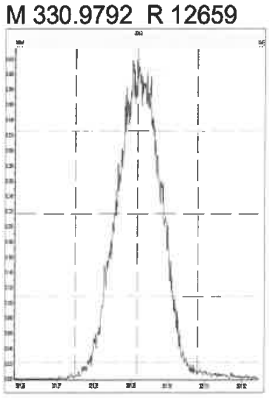

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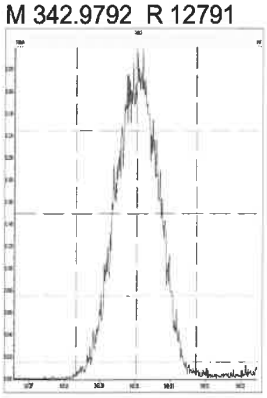

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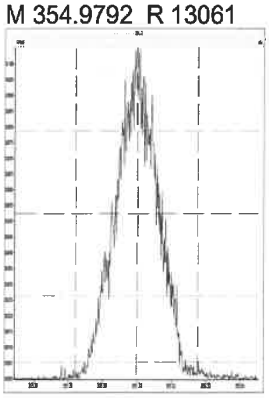

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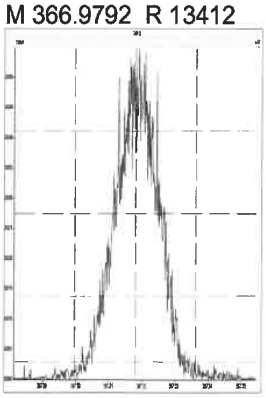

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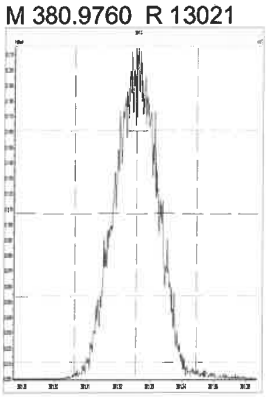

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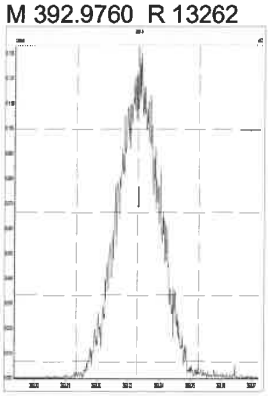

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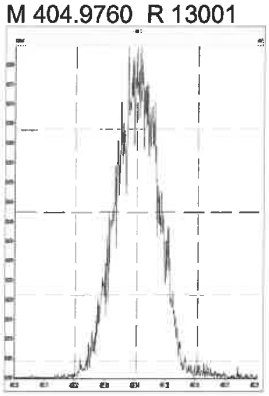

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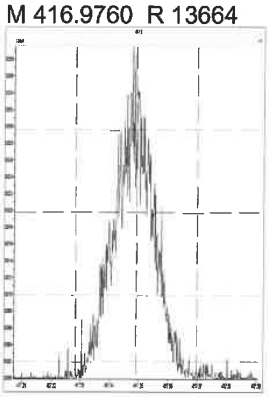

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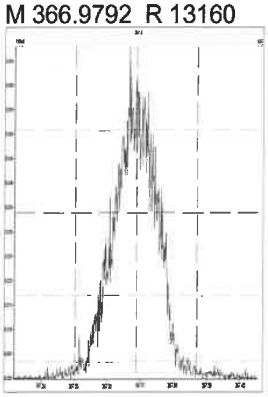

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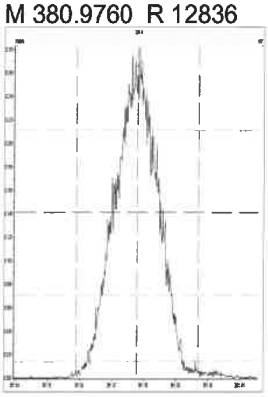

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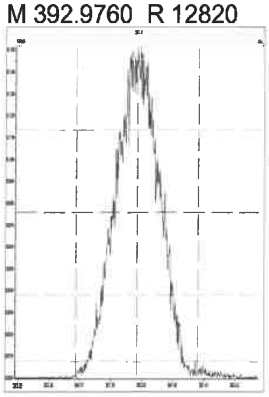

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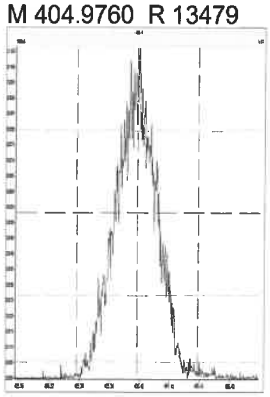

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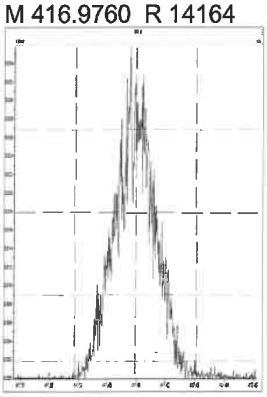

M 430.9728 R 13727

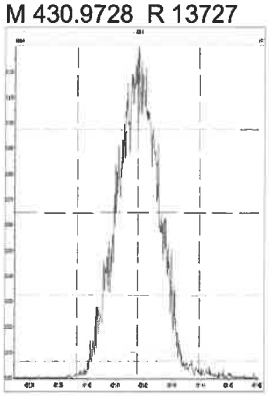

M 442.9728 R 13415

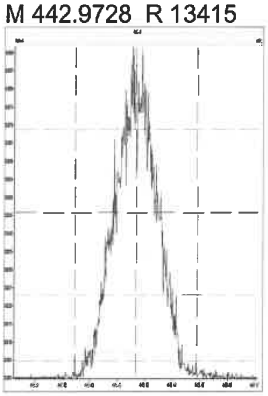

M 454.9728 R 13335

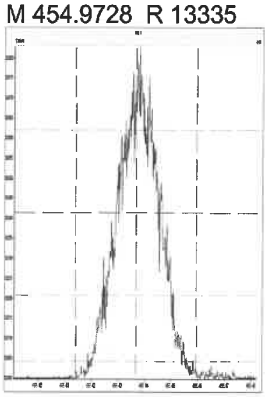

M 380.9760 R 13021

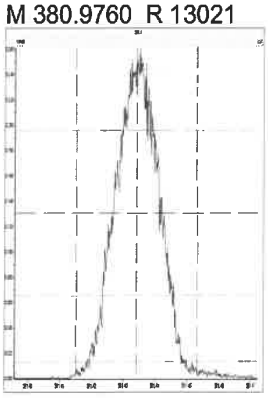

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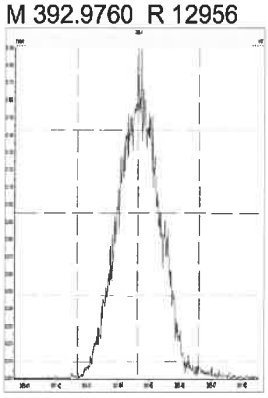

M 404.9760 R 13194

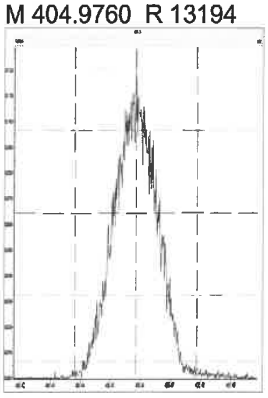

M 416.9760 R 13592

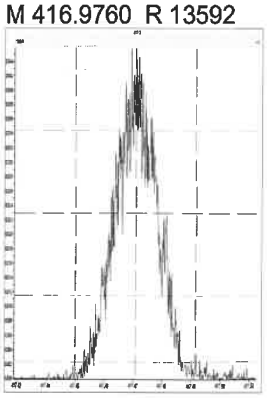

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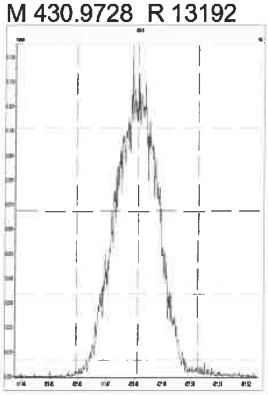

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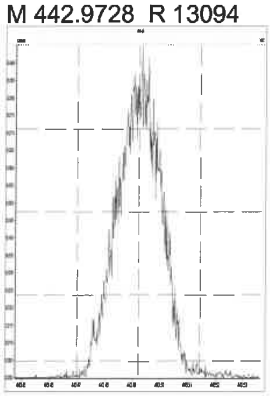

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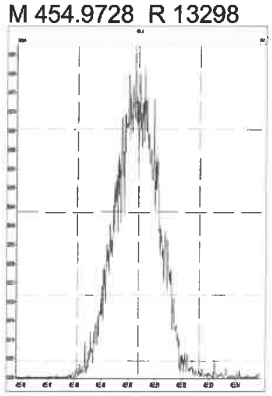

M 466.9728_R 15289

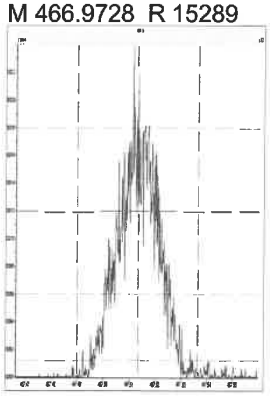

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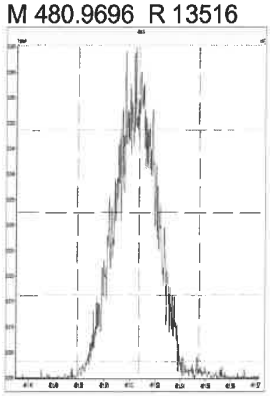

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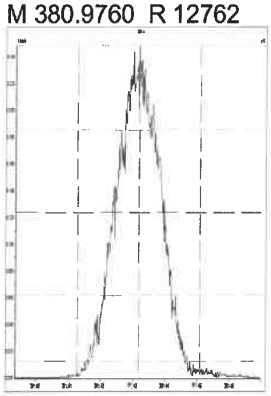

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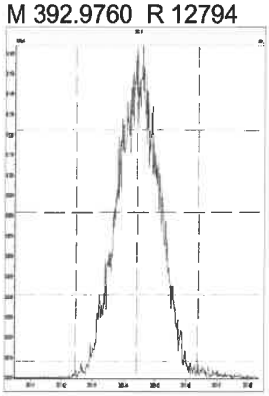

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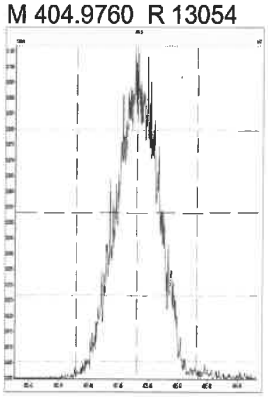

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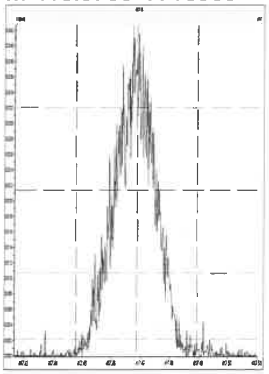

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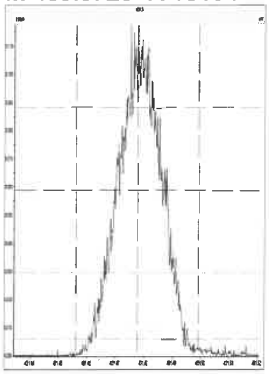

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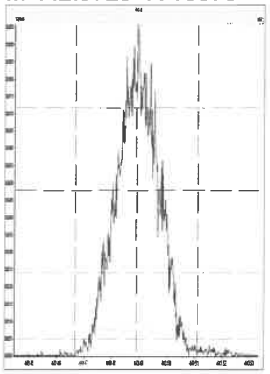

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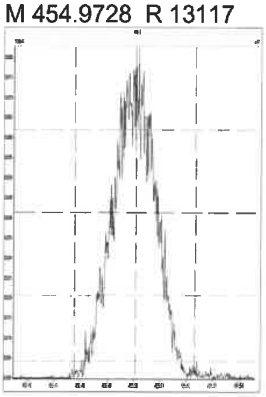

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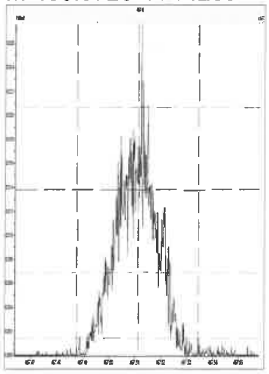

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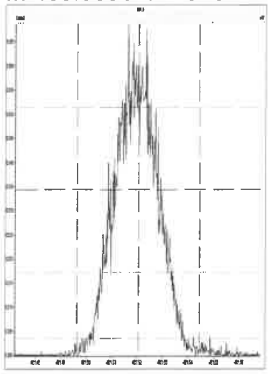

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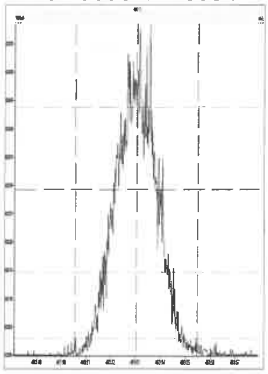

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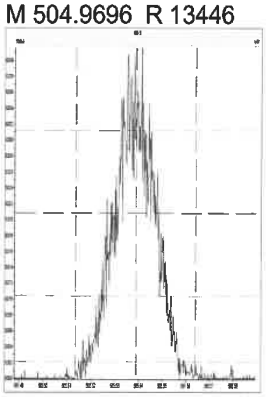

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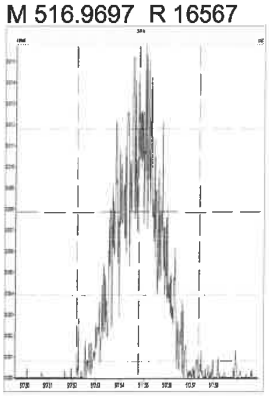

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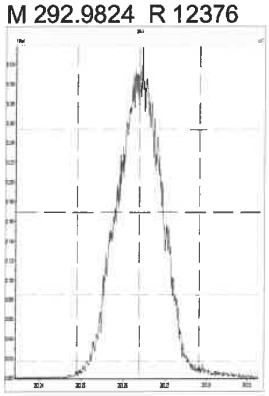

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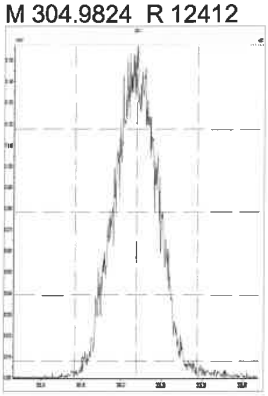

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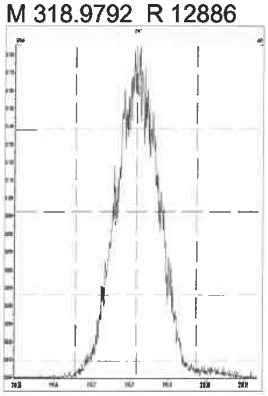

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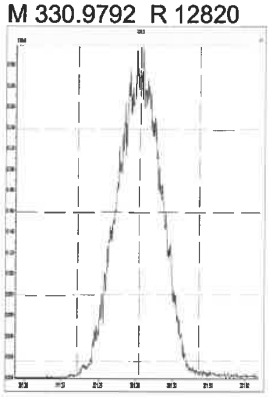

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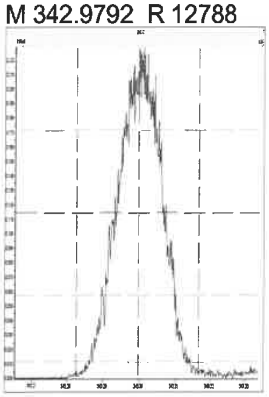

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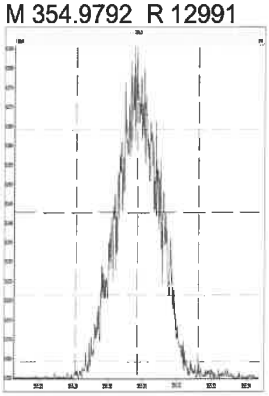

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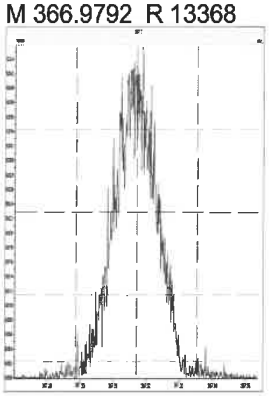

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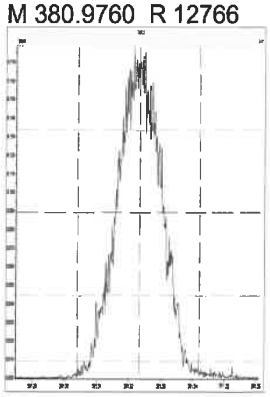

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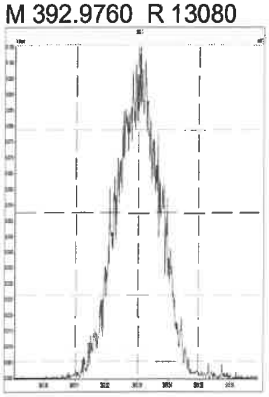

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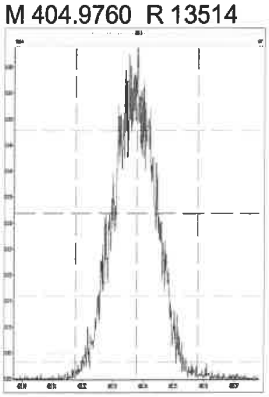

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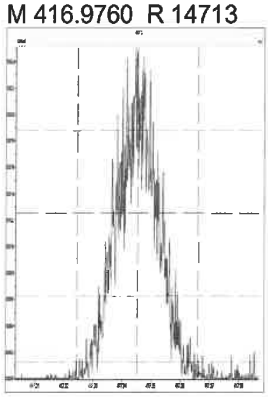

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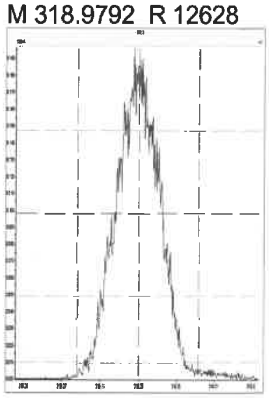

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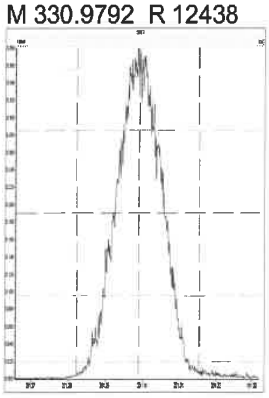

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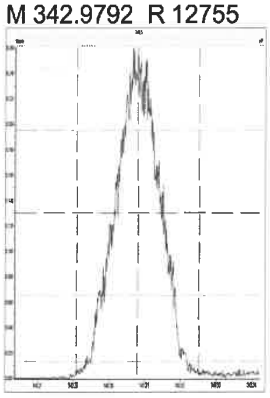

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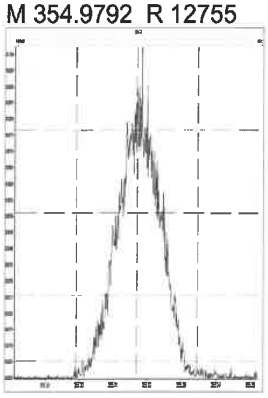

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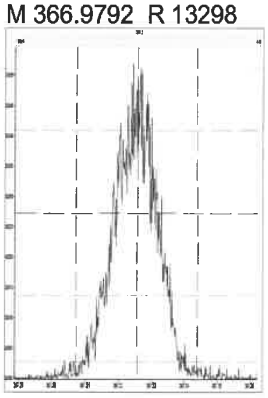

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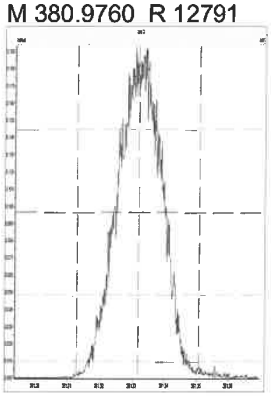

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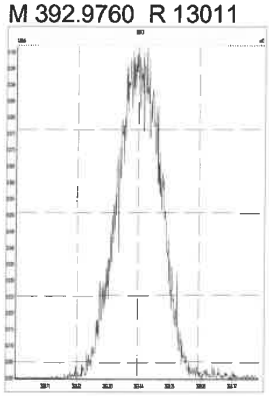

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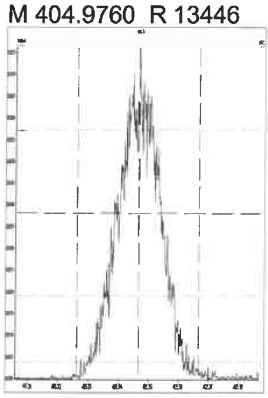

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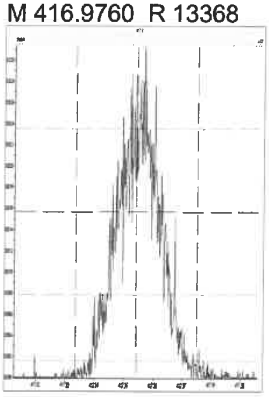

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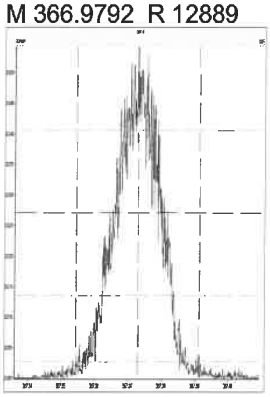

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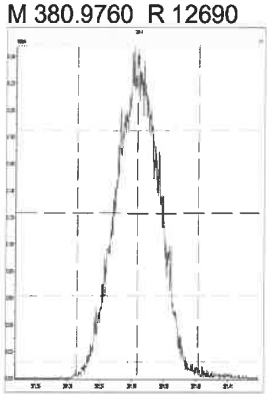

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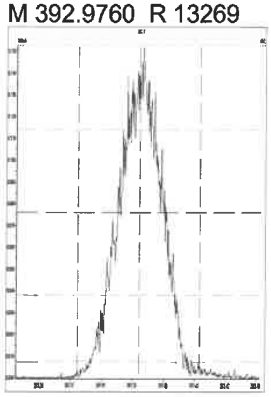

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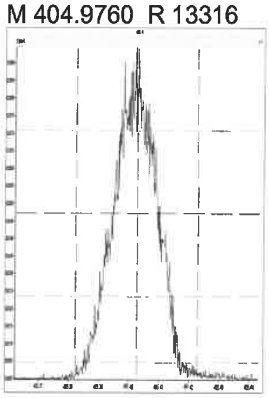

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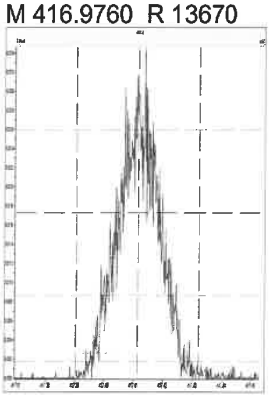

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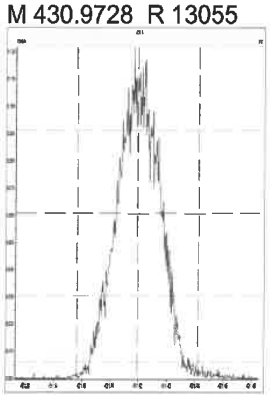

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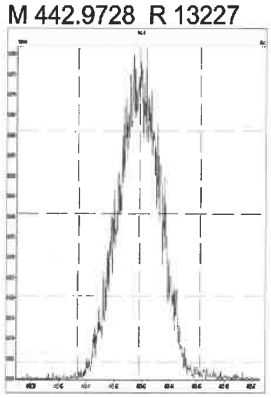

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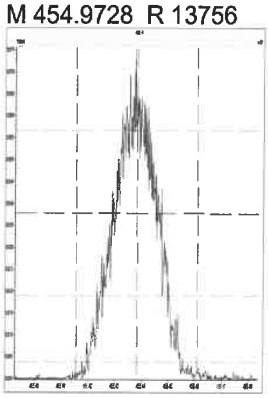

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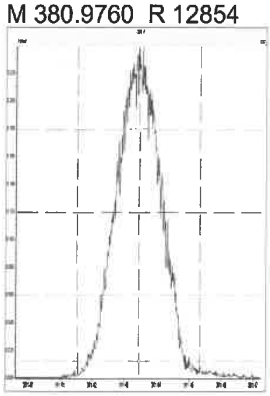

M 392.9760 R 12598

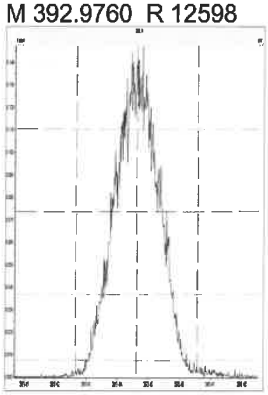

M 404.9760 R 12853

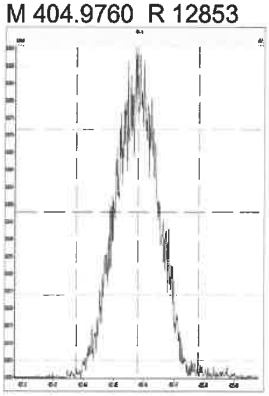

M 416.9760 R 13928

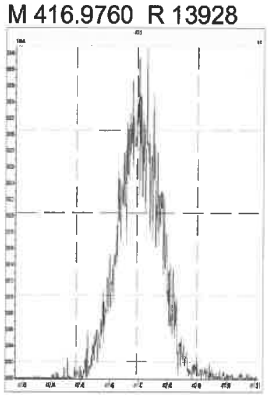

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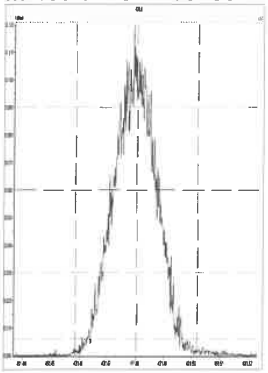

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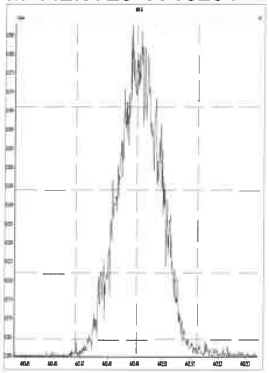

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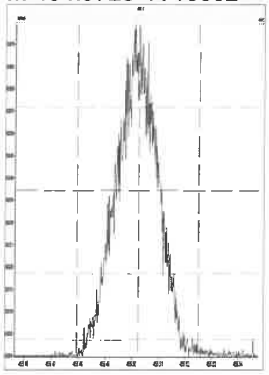

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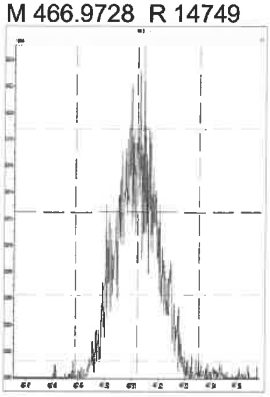

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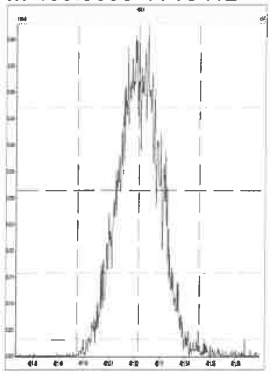

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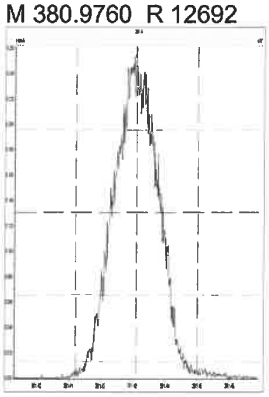

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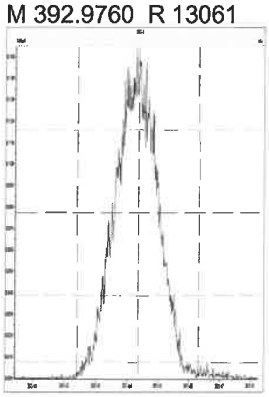

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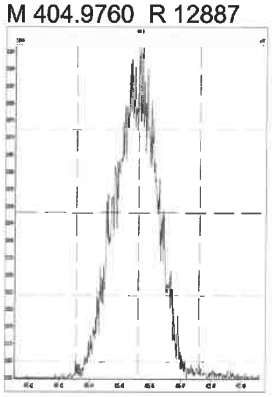

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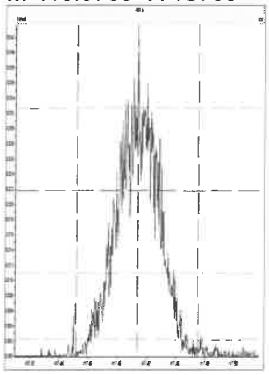

M 430.9728 R 12760

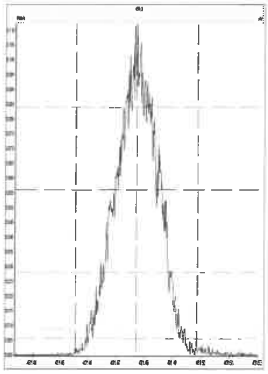

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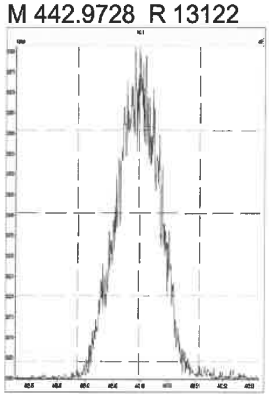

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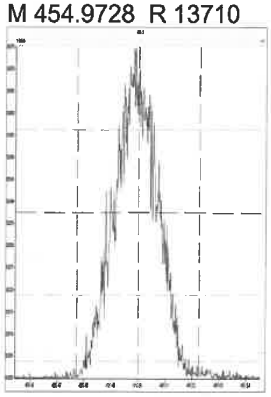

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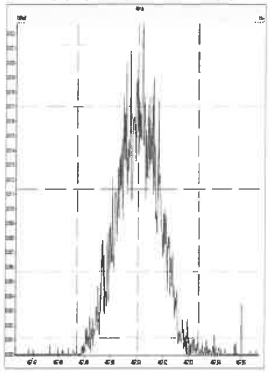

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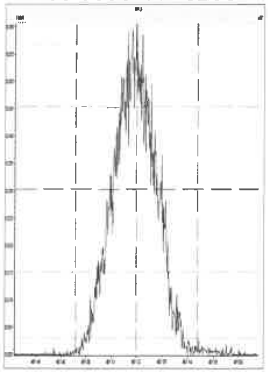

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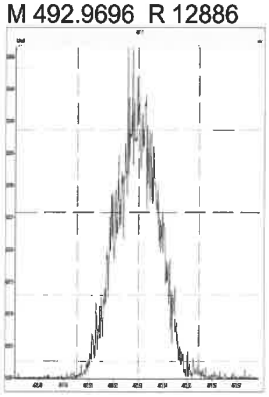

M 504.9696 R 13600

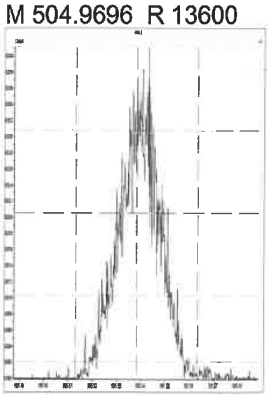

781210

Printed: Monday, July 26, 2021 16:26:55 Pacific Daylight Time

M 516.9697 R 15872

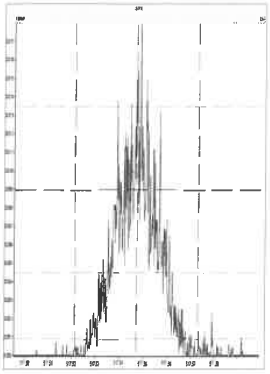

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	65685883	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	108384725	0.78	1.6249	101.5	101.5	0.1385	0.1385	102	
2,3,7,8-TCDF	17.628	557485	0.78	1.0239	0.5023	0.5023	0.009259	0.009259	100	
S Total TCDF					0.5023	0.5023	0.009259	0.009259		
D 13C-2,3,7,8-TCDD	18.338	59957723	0.80	0.8993	101.5	101.5	0.1222	0.1222	101	
$ 37Cl4-2,3,7,8-TCDD	18.338	318727		1.1071	0.4383	0.4383	0.006072	0.006072	87.65	
2,3,7,8-TCDD	18.354	376984	0.89	1.2541	0.5013	0.5013	0.0150	0.0150	100	M
S Total TCDD					0.5013	0.5013	0.0150	0.0150		
D 13C-1,2,3,7,8-PeCDF	22.749	78674290	1.60	1.2101	99.0	99.0	0.2282	0.2282	98.98	
1,2,3,7,8-PeCDF	22.776	2112140	1.63	1.0611	2.530	2.530	0.0220	0.0220	101	
D 13C-2,3,4,7,8-PeCDF	24.126	80591659	1.57	1.2395	99.0	99.0	0.2228	0.2228	98.99	
2,3,4,7,8-PeCDF	24.153	2096967	1.56	1.0184	2.555	2.555	0.0245	0.0245	102	
S Total PeCDF					5.085	5.085	0.0233	0.0233		
D 13C-1,2,3,7,8-PeCDD	24.862	49643581	1.62	0.7612	99.3	99.3	0.1197	0.1197	99.28	
1,2,3,7,8-PeCDD	24.889	1312779	1.42	1.0484	2.522	2.522	0.0218	0.0218	101	
S Total PeCDD					2.522	2.522	0.0218	0.0218		
D 13C-1,2,3,4,7,8-HxCDF	30.835	69484482	0.52	1.0837	100.4	100.4	0.5299	0.5299	100	
1,2,3,4,7,8-HxCDF	30.849	1949462	1.23	1.0851	2.586	2.586	0.0289	0.0289	103	
D 13C-1,2,3,6,7,8-HxCDF	30.995	73262388	0.52	1.1279	101.7	101.7	0.5091	0.5091	102	
1,2,3,6,7,8-HxCDF	31.022	2104086	1.18	1.1260	2.551	2.551	0.0273	0.0273	102	
D 13C-2,3,4,6,7,8-HxCDF	31.754	68885161	0.52	1.0637	101.4	101.4	0.5398	0.5398	101	
2,3,4,6,7,8-HxCDF	31.767	2104896	1.20	1.1675	2.617	2.617	0.0225	0.0225	105	
D 13C-1,2,3,7,8,9-HxCDF	32.512	62528954	0.51	0.9676	101.1	101.1	0.5935	0.5935	101	
1,2,3,7,8,9-HxCDF	32.526	1834100	1.21	1.1664	2.515	2.515	0.0244	0.0244	101	
S Total HxCDF					10.3	10.3	0.0258	0.0258		
* 13C-1,2,3,7,8,9-HxCDD	32.339	63892665	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	47363504	1.27	0.7334	101.1	101.1	0.5001	0.5001	101	
1,2,3,4,7,8-HxCDD	31.940	1300030	1.26	1.0640	2.580	2.580	0.0268	0.0268	103	
D 13C-1,2,3,6,7,8-HxCDD	32.033	56759108	1.25	0.8802	100.9	100.9	0.4167	0.4167	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	1460747	1.28	1.0001	2.573	2.573	0.0268	0.0268	103	
1,2,3,7,8,9-HxCDD	32.353	1503407	1.26	1.1325	2.550	2.550	0.0244	0.0244	102	
S Total HxCDD					7.703	7.703	0.0260	0.0260		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	51308225	0.44	0.7730	103.9	103.9	1.147	1.147	104	
1,2,3,4,6,7,8-HpCDF	33.924	1856599	1.05	1.4413	2.511	2.511	0.0321	0.0321	100	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44628352	0.44	0.7008	99.7	99.7	1.266	1.266	99.67	
1,2,3,4,7,8,9-HpCDF	35.017	1465634	1.06	1.3174	2.493	2.493	0.0442	0.0442	99.72	
S Total HpCDF					5.003	5.003	0.0381	0.0381		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	41876556	1.01	0.6472	101.3	101.3	0.6709	0.6709	101	
1,2,3,4,6,7,8-HpCDD	34.726	1164074	1.06	1.0943	2.540	2.540	0.0284	0.0284	102	
S Total HpCDD					2.540	2.540	0.0284	0.0284		
D 13C-OCDD	37.093	57018462	0.89	0.4472	199.6	199.6	0.2479	0.2479	99.79	
OCDF	37.201	1976175	0.91	1.4382	4.820	4.820	0.0196	0.0196	96.40	
OCDD	37.105	1569338	0.92	1.1070	4.973	4.973	0.0246	0.0246	99.45	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		29725607	7464659	4167	10417	1791		
333.9339	18.142	18.142	0		35960276	9003139	3074	7685	2929	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	47438761	11992473	9243	23107	1297		
317.9389	17.613	17.616	0	0.971	60945964	15328013	5578	13945	2748	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	244966	62557	418	1045	150		
305.8987	17.628	17.631	0	1.001	312519	74119	618	1545	120	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	26677109	6242710	4167	10417	1498		
333.9339	18.338	18.338	0	1.011	33280614	7789380	3074	7685	2534	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.011	318727	66577	443	1107	150		
2,3,7,8-TCDD											M
319.8965	18.354	18.357	0	1.001	177891	43427	698	1745	62		M
321.8936	18.354	18.357	0	1.001	199093	47894	356	890	135	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	48367116	8680931	10780	26950	805		
353.8970	22.749	22.754	0	1.254	30307174	5346402	7413	18532	721	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	1307686	232308	692	1730	336		
341.8567	22.762	22.779	-1	1.001	804454	137466	619	1547	222	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	49186157	7929286	10780	26950	736		
353.8970	24.126	24.129	0	1.330	31405502	5197836	7413	18532	701	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	1276283	202864	692	1730	293		
341.8567	24.153	24.156	0	1.001	820684	134634	619	1547	218	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	30684379	4744795	3870	9675	1226		
369.8919	24.862	24.865	0	1.370	18959202	2913489	2133	5332	1366	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	770345	123302	470	1175	262		
357.8516	24.889	24.892	0	1.001	542434	83964	231	577	363	1.42(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23885791	5080702	12413	31032	409		
385.8610	30.835	30.838	0	0.953	45598691	9653525	24179	60447	399	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.857	0	1.000	1073816	228005	1130	2825	202		
375.8178	30.849	30.857	0	1.000	875646	183719	720	1800	255	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	25163610	5186426	12413	31032	418		
385.8610	30.995	31.003	0	0.958	48098778	9847658	24179	60447	407	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.001	1138605	230252	1130	2825	204		
375.8178	31.008	31.022	-1	1.000	965481	194261	720	1800	270	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	23545536	6005512	12413	31032	484		
385.8610	31.754	31.756	0	0.982	45339625	11622590	24179	60447	481	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	1148495	290976	1130	2825	258		
375.8178	31.767	31.772	0	1.000	956401	245408	720	1800	341	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.512	32.523	-1	1.005	21115296	5525344	12413	31032	445		
385.8610	32.512	32.523	-1	1.005	41413658	10740911	24179	60447	444	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	1004237	260741	1130	2825	231		
375.8178	32.526	32.534	0	1.000	829863	215930	720	1800	300	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		35492157	8840472	14115	35287	626		
403.8529	32.339	32.342	0		28400508	7090007	9259	23147	766	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	26497467	7547113	14115	35287	535		
403.8529	31.927	31.929	0	0.987	20866037	5954906	9259	23147	643	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	725563	201392	885	2212	228		
391.8127	31.940	31.945	0	1.000	574467	160999	657	1642	245	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	31586686	7983088	14115	35287	566		
403.8529	32.033	32.033	0	0.991	25172422	6406461	9259	23147	692	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	819435	207367	885	2212	234		
391.8127	32.047	32.047	0	1.000	641312	163363	657	1642	249	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	837706	208716	885	2212	236		
391.8127	32.353	32.355	0	1.013	665701	168193	657	1642	256	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	15666898	4905580	16994	42485	289		
419.8220	33.912	33.914	0	1.049	35641327	11012481	39521	98802	279	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	949994	280926	1603	4007	175		
409.7789	33.924	33.926	0	1.000	906605	280503	1346	3365	208	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13532847	3927195	16994	42485	231		
419.8220	35.005	35.010	0	1.082	31095505	8744356	39521	98802	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	755406	231092	1603	4007	144		
409.7789	35.017	35.020	0	1.000	710228	201627	1346	3365	150	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	21029381	6108519	13979	34947	437		
437.8140	34.714	34.716	0	1.073	20847175	6052425	13690	34225	442	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	599401	178801	821	2052	218		
425.7737	34.726	34.726	0	1.000	564673	160703	693	1732	232	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26904388	6653832	3548	8870	1875		
471.7750	37.093	37.094	0	1.147	30114074	7334467	3515	8787	2087	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	941996	224700	300	750	749		
443.7399	37.189	37.199	-1	1.003	1034179	253612	487	1217	521	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	750544	177364	389	972	456		
459.7348	37.105	37.106	0	1.000	818794	206090	374	935	551	0.92(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.35
Area: 201476
Amount: 0.545465
Amount Units: pg/ul

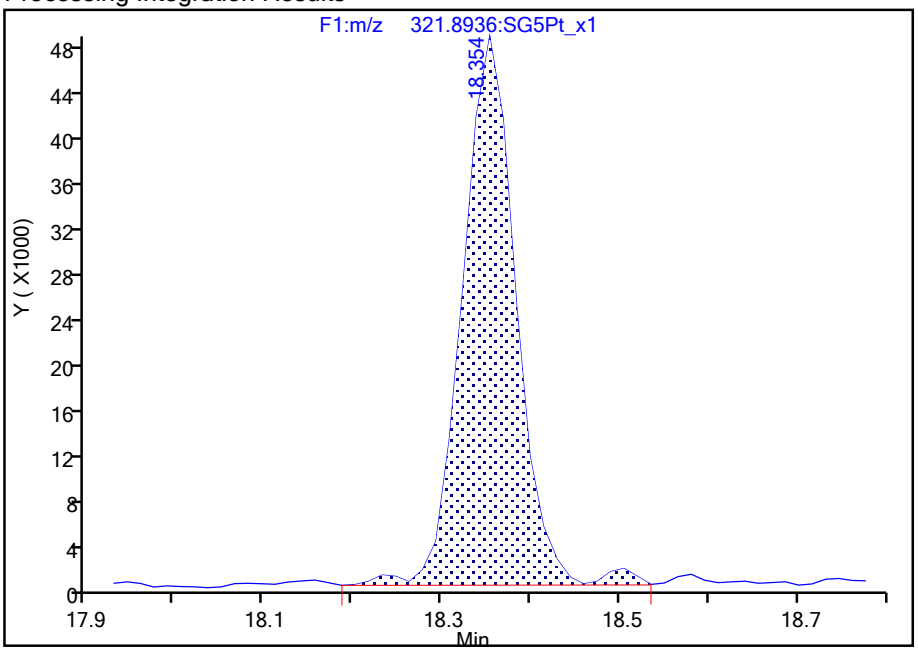

Manual Integration Results

RT: 18.35
Area: 199093
Amount: 0.501347
Amount Units: pg/ul

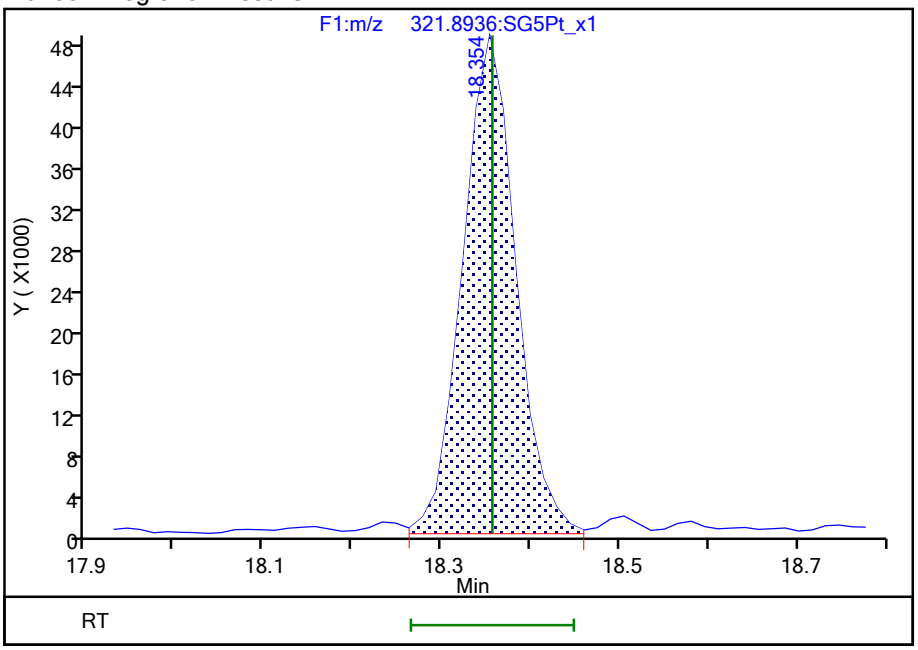

Reviewer: stephensk, 27-Jul-2021 08:15:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

Processing Integration Results

RT: 18.35
Area: 394678
Amount: 0.545465
Amount Units: pg/ul

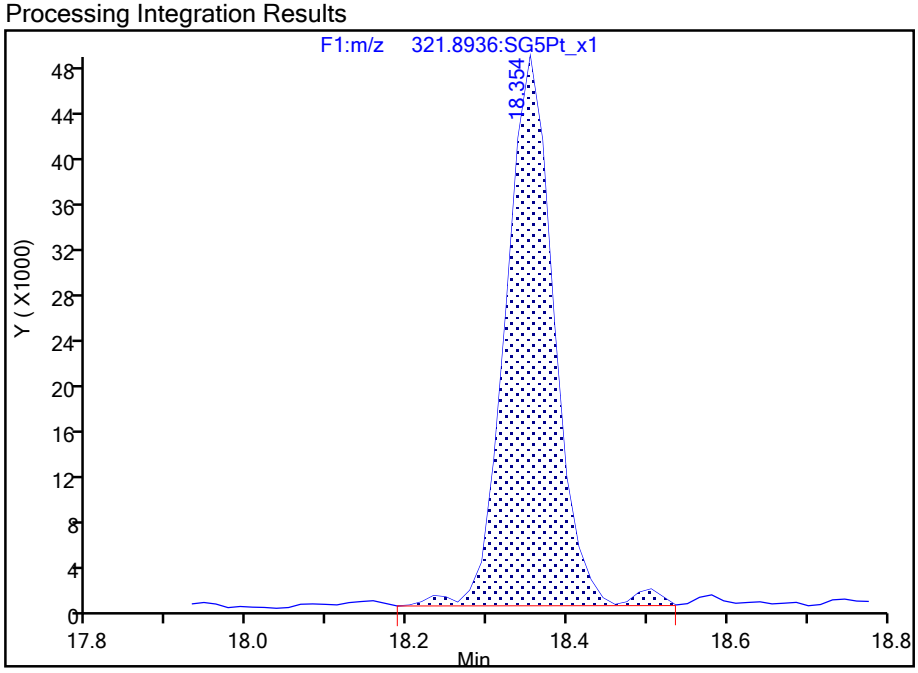

Manual Integration Results

RT: 18.35
Area: 376984
Amount: 0.501347
Amount Units: pg/ul
Reviewer: stephensk, 27-Jul-2021 08:15:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

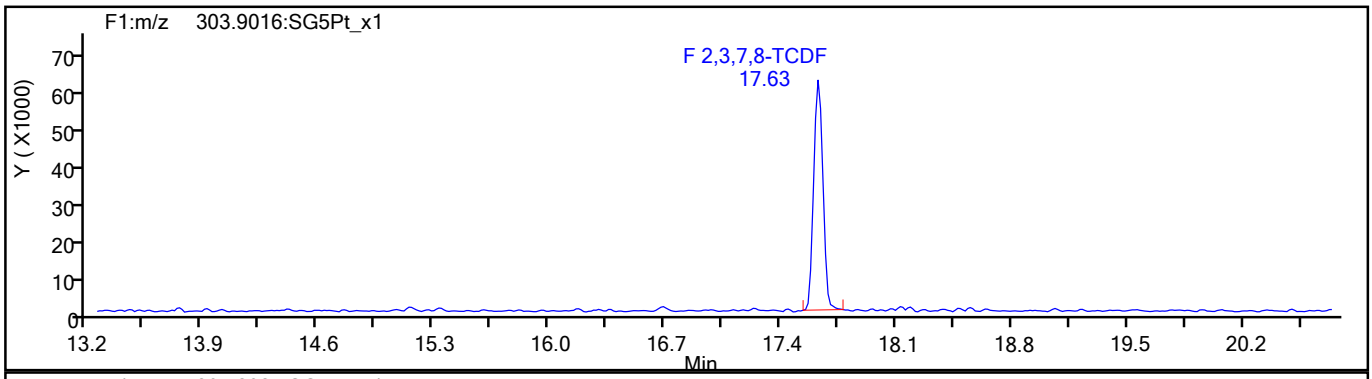

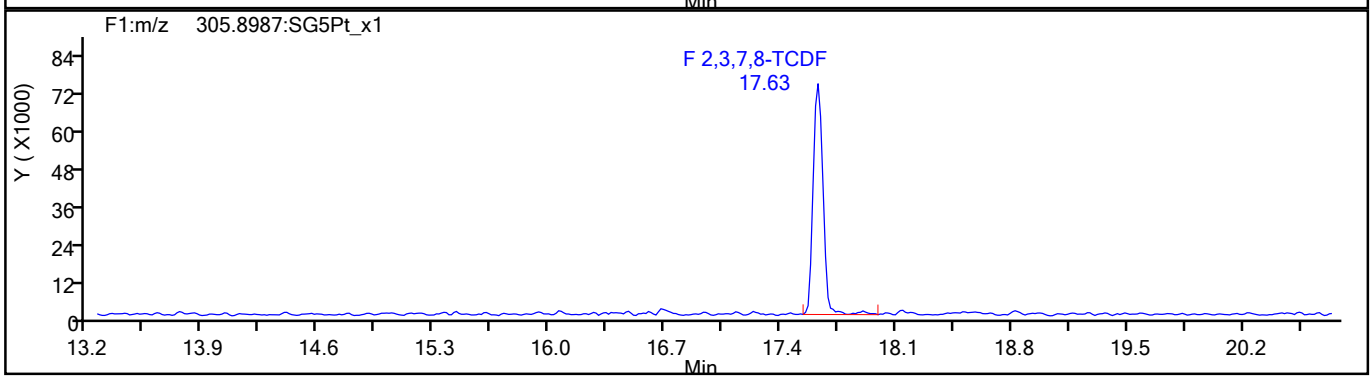

TCDF Standards

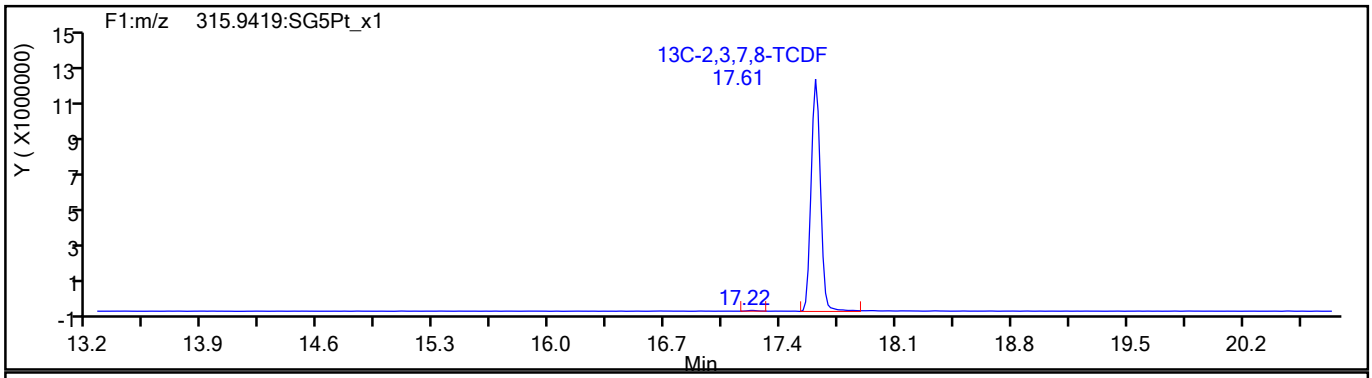

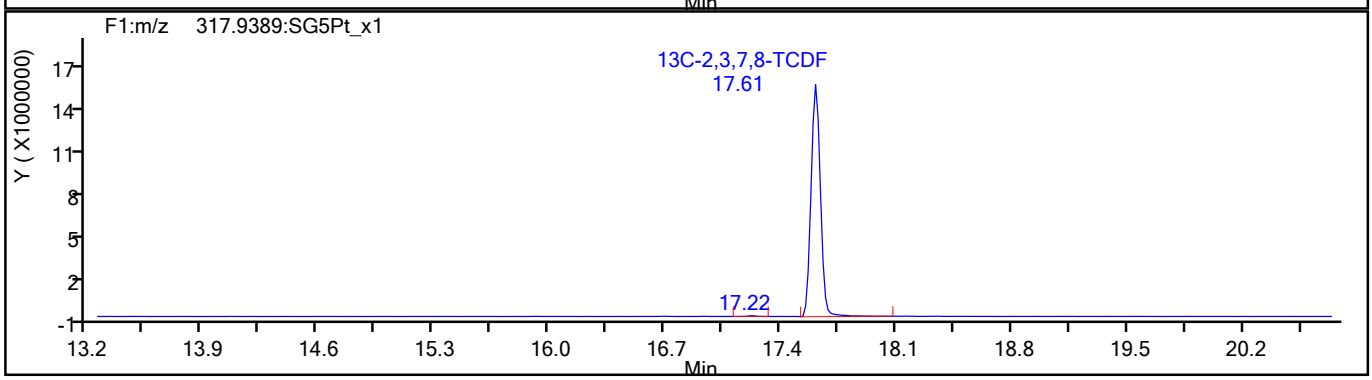

781219

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

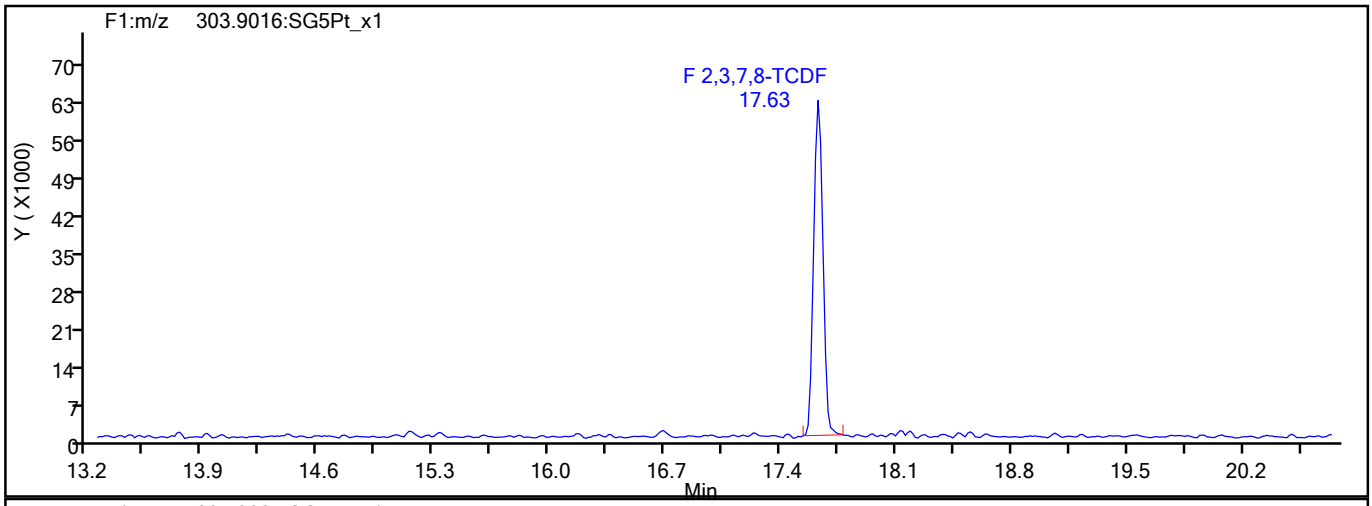

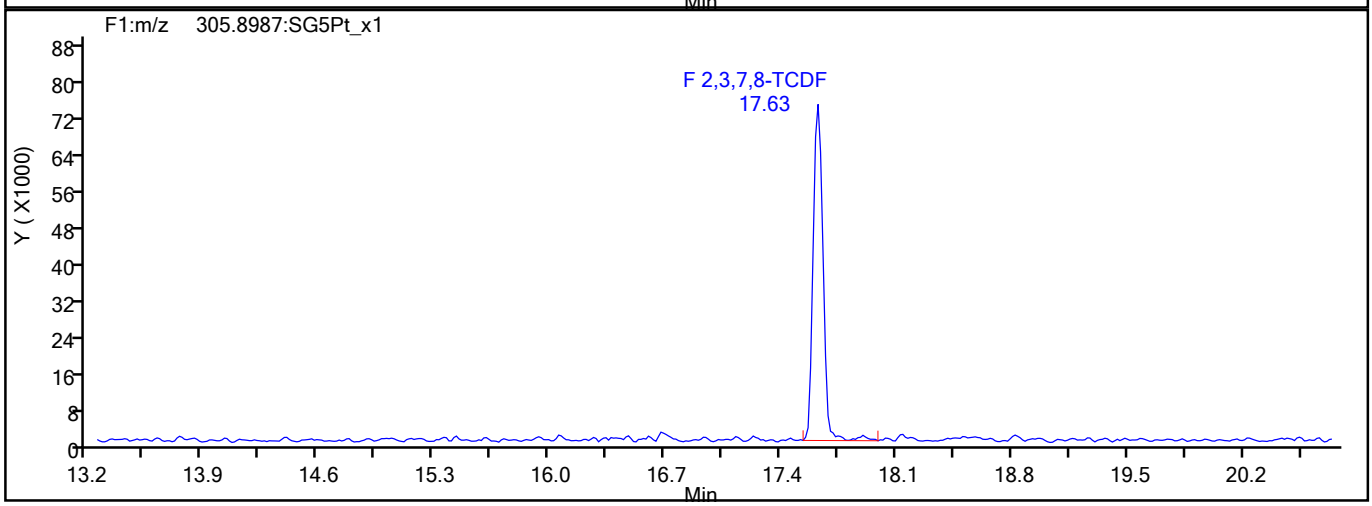

TCDF Interference Mass

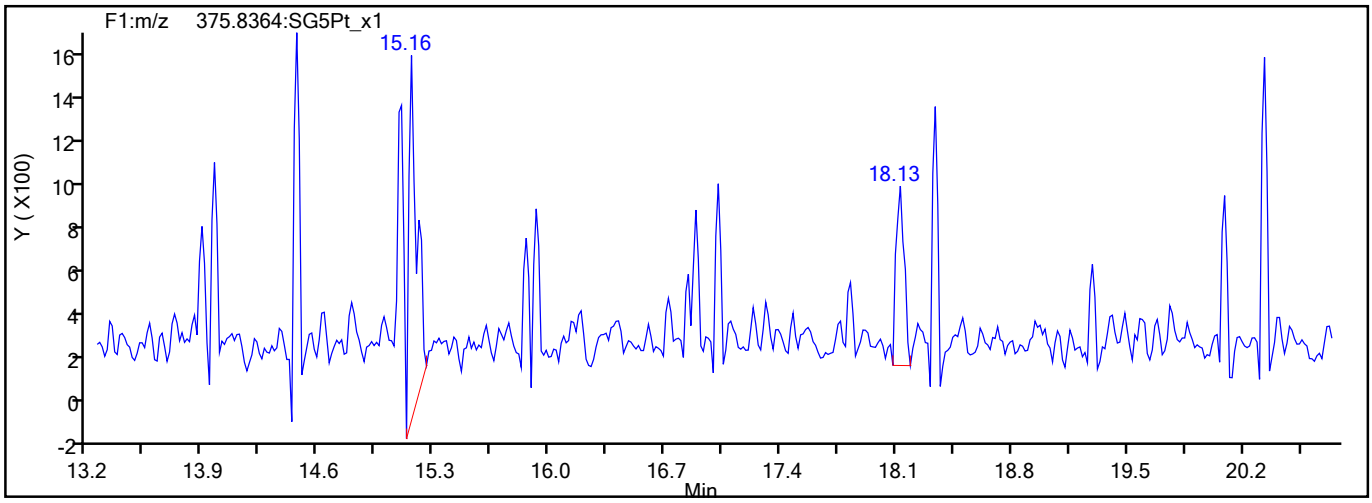

781220

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

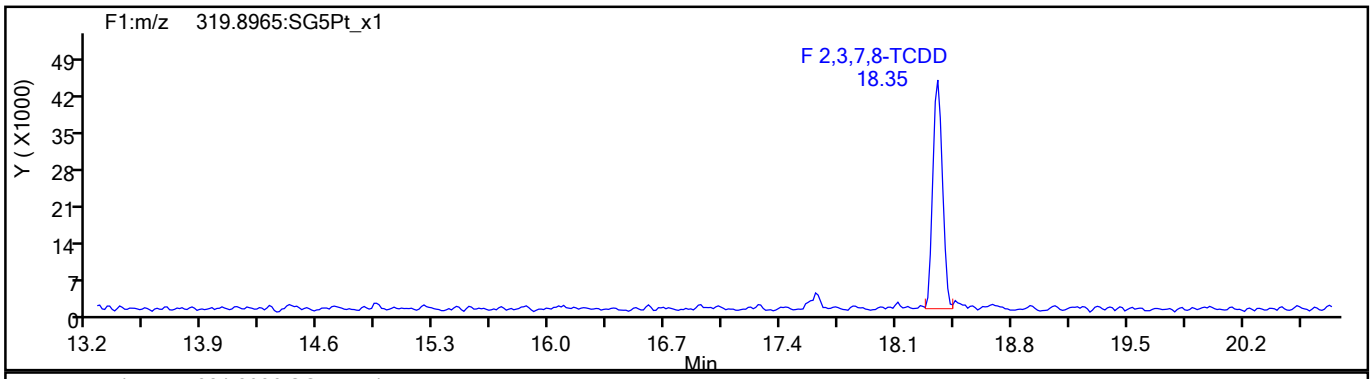

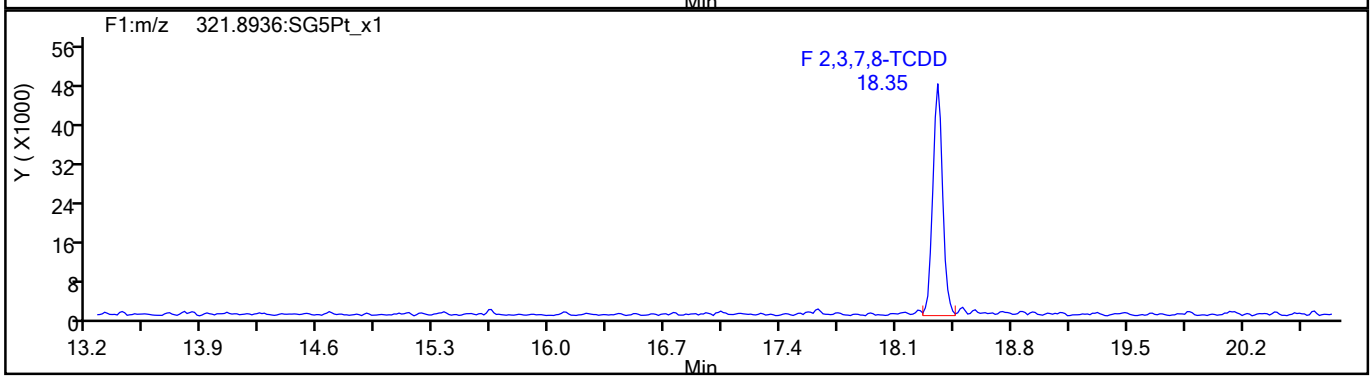

TCDD Standards

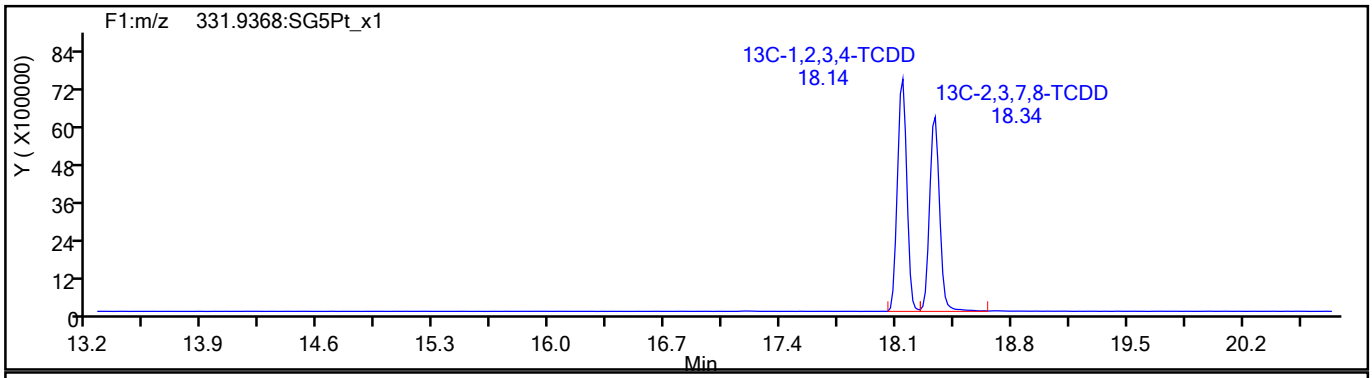

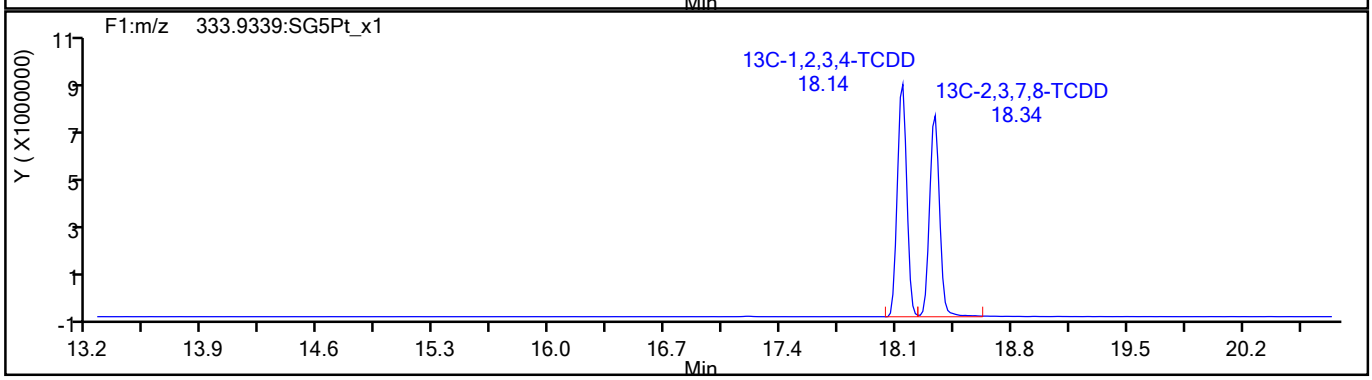

781221

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

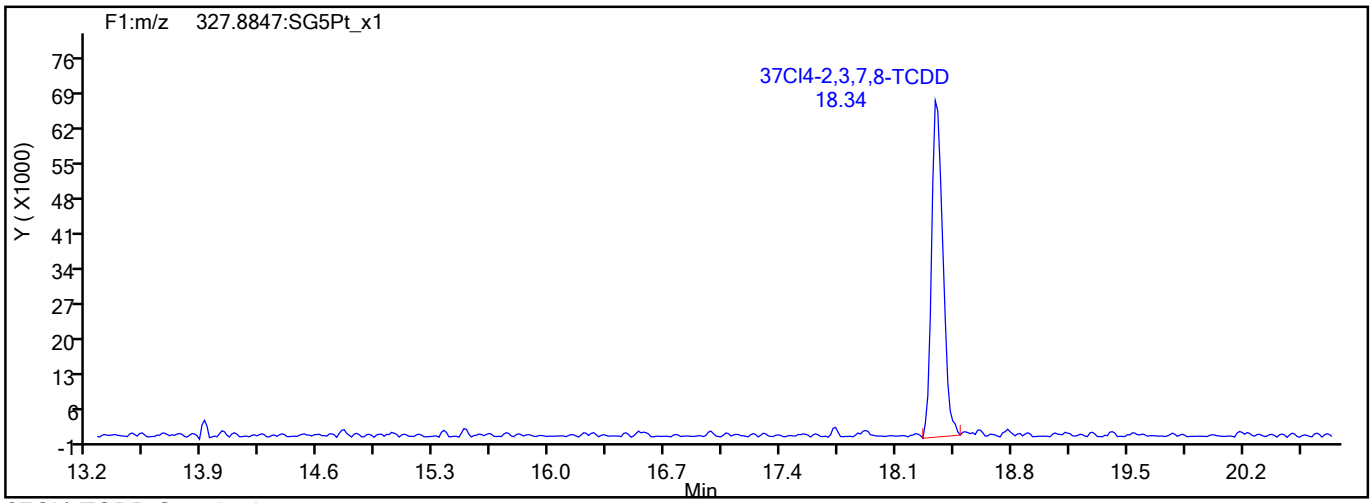

37Cl4-TCDD Standards

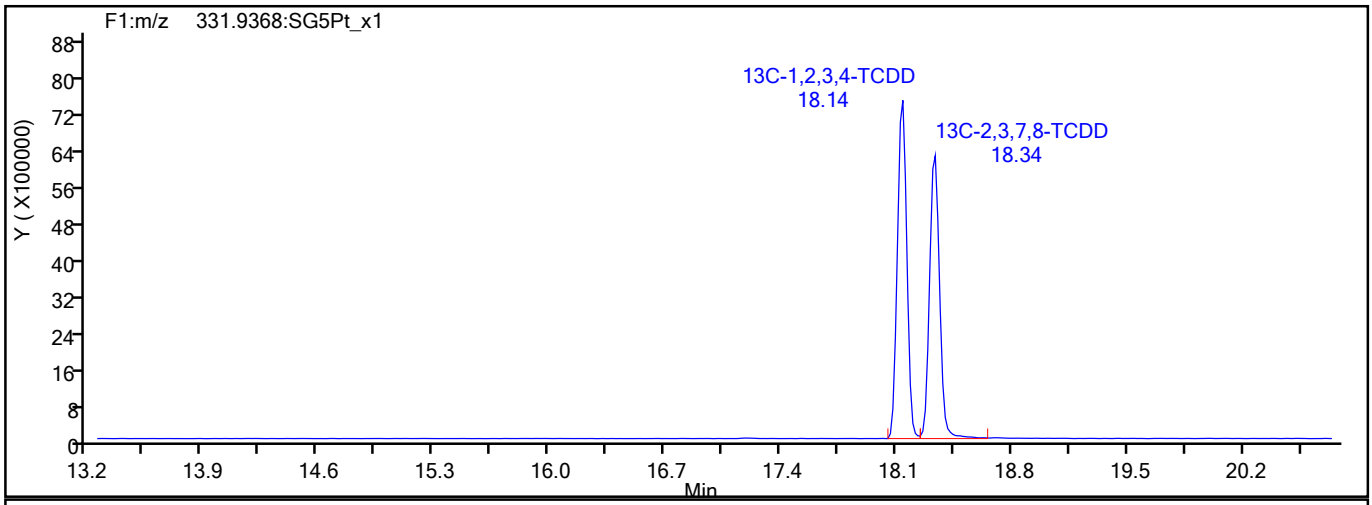

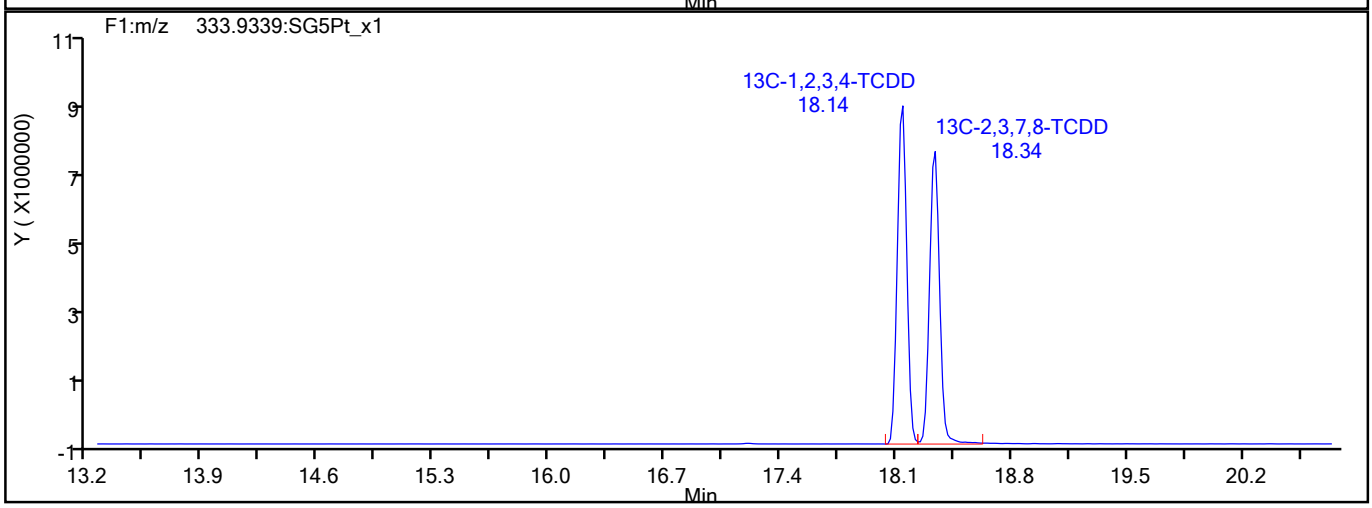

781222

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

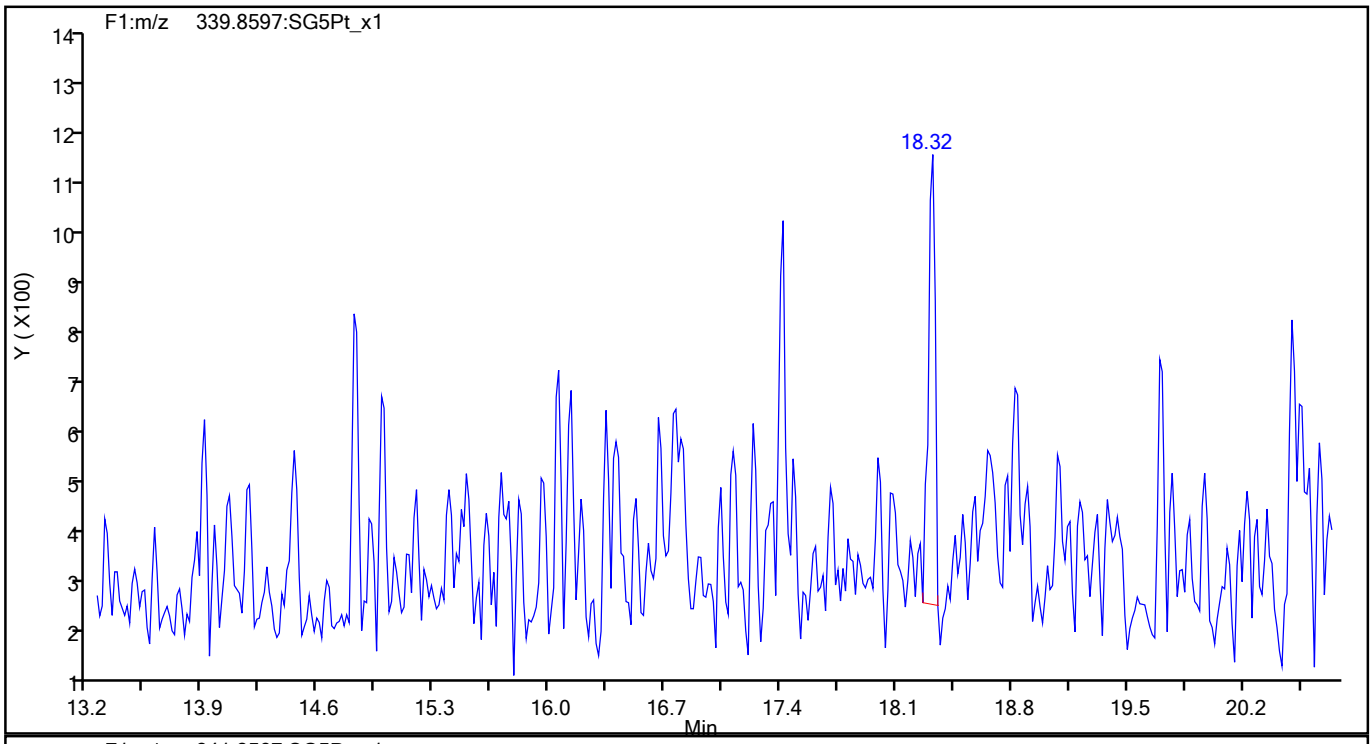

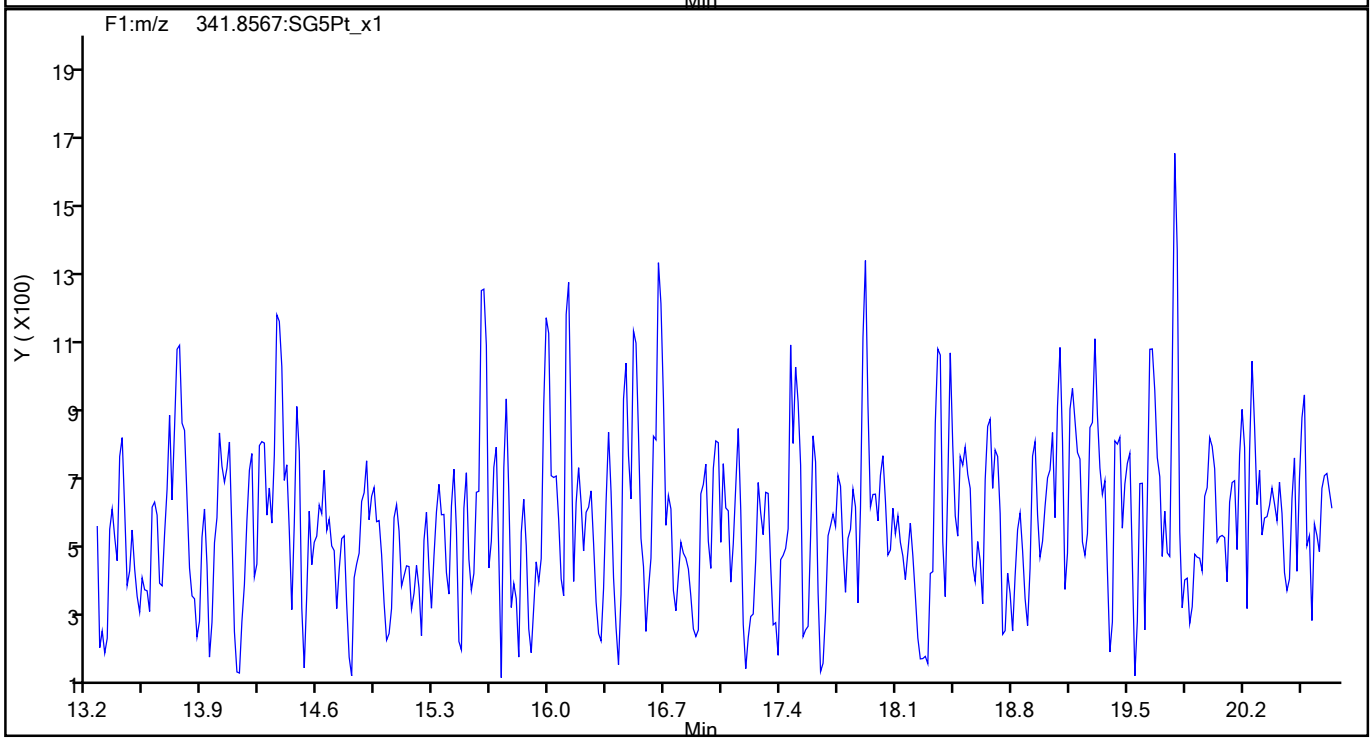

781223

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

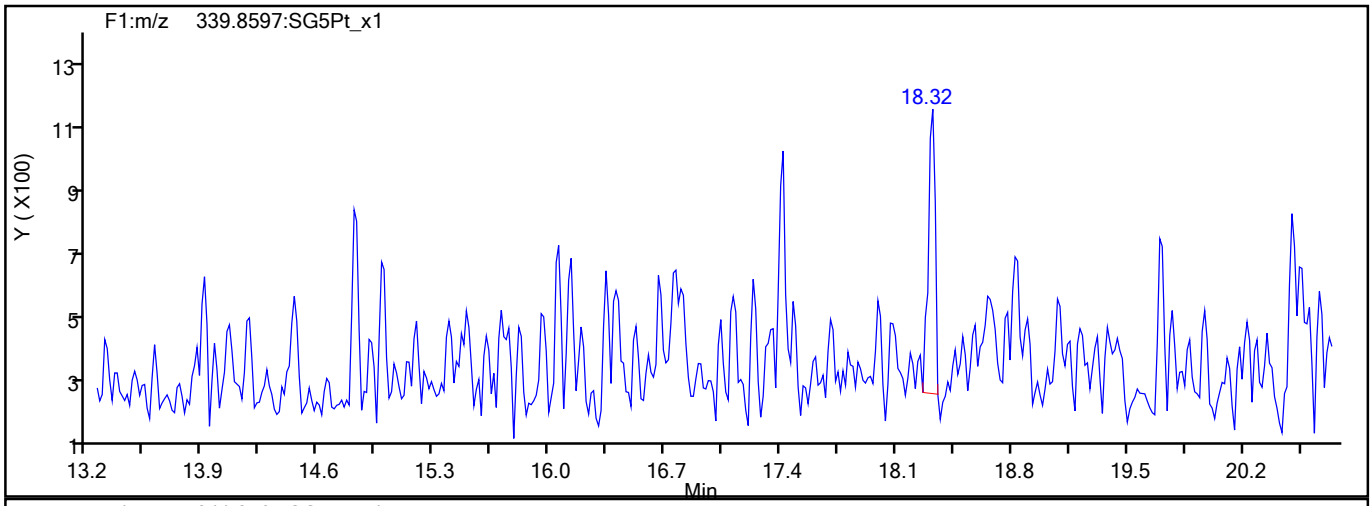

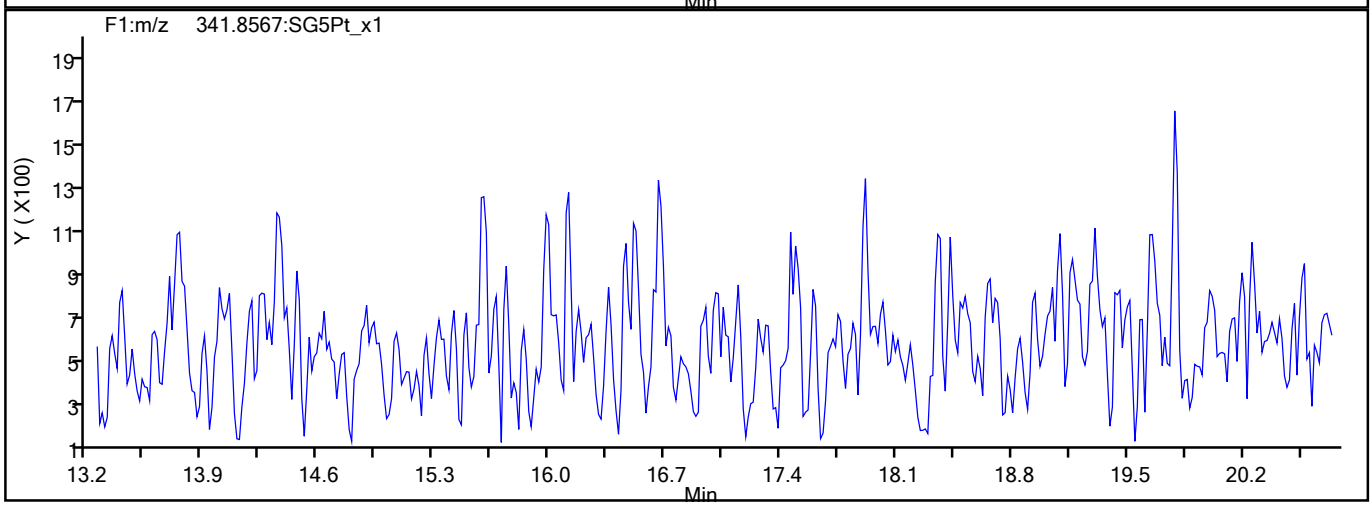

F1 PeCDFs Interference Mass

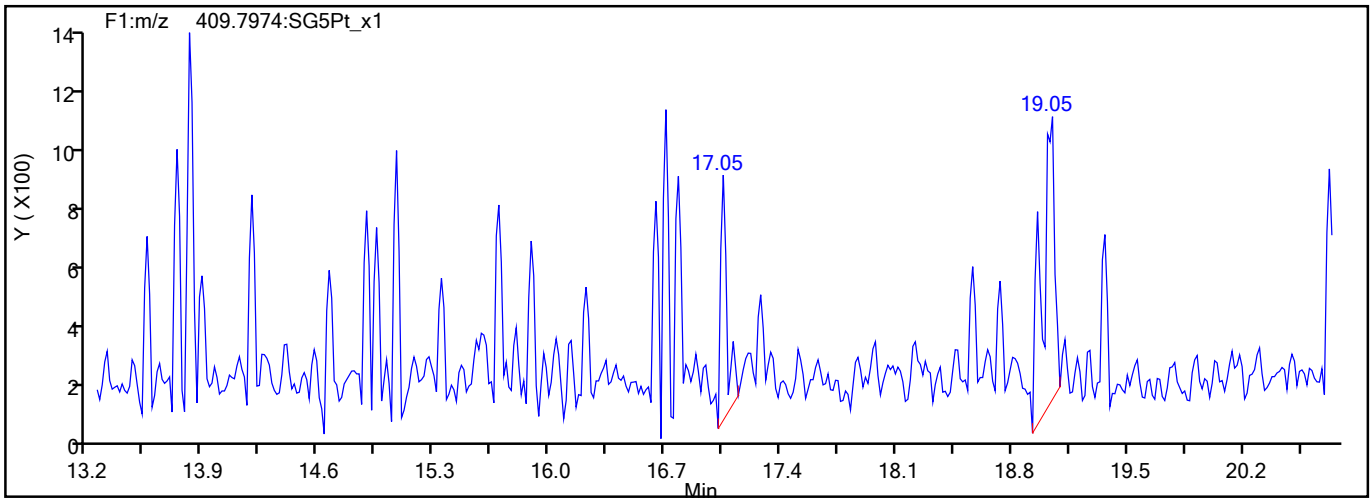

781224

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

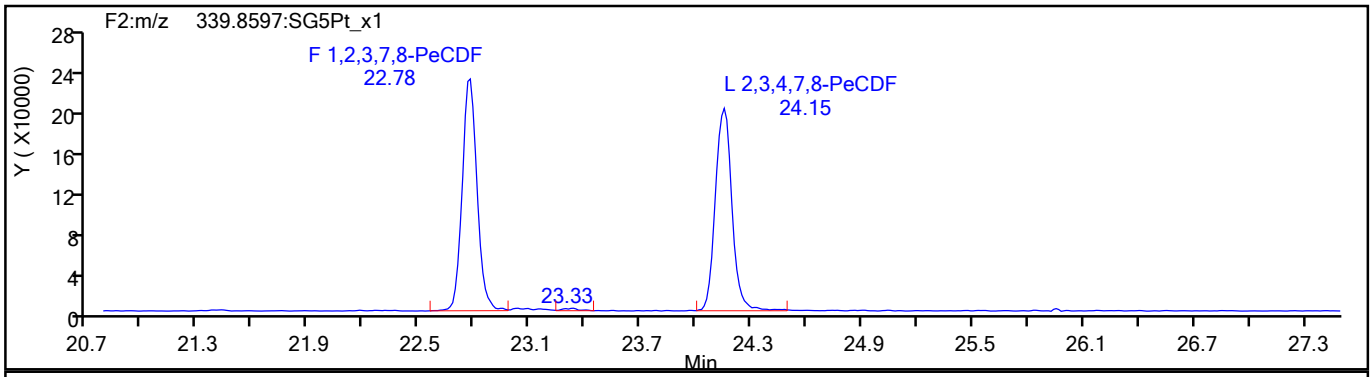

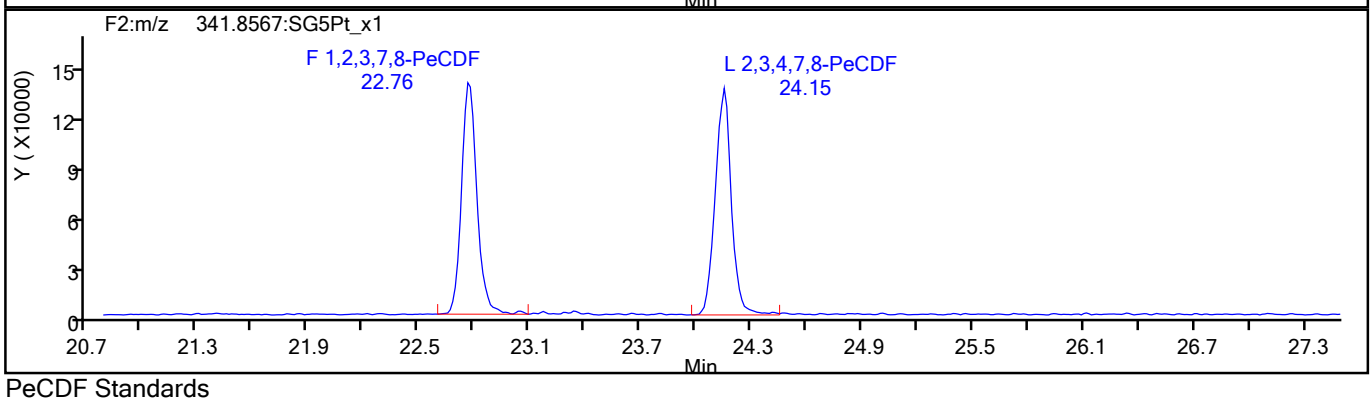

PeCDF Standards

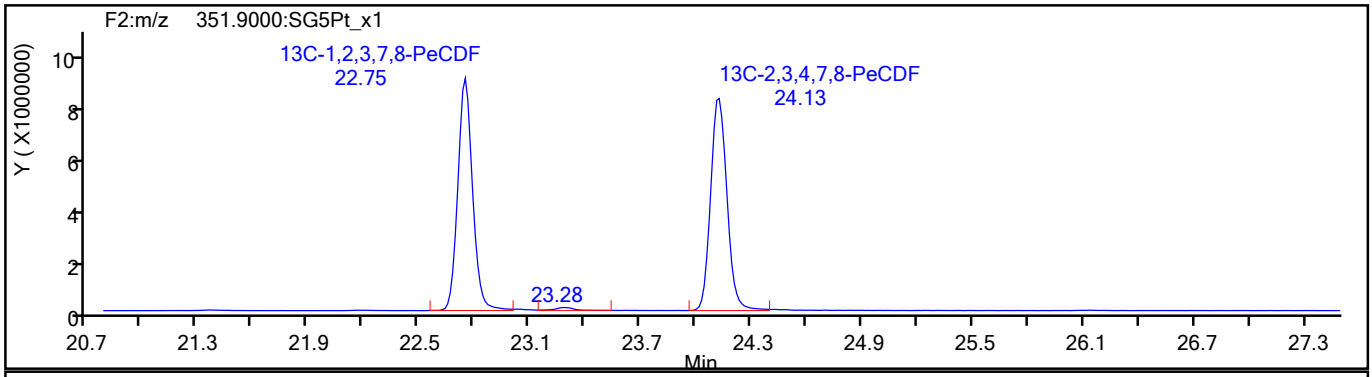

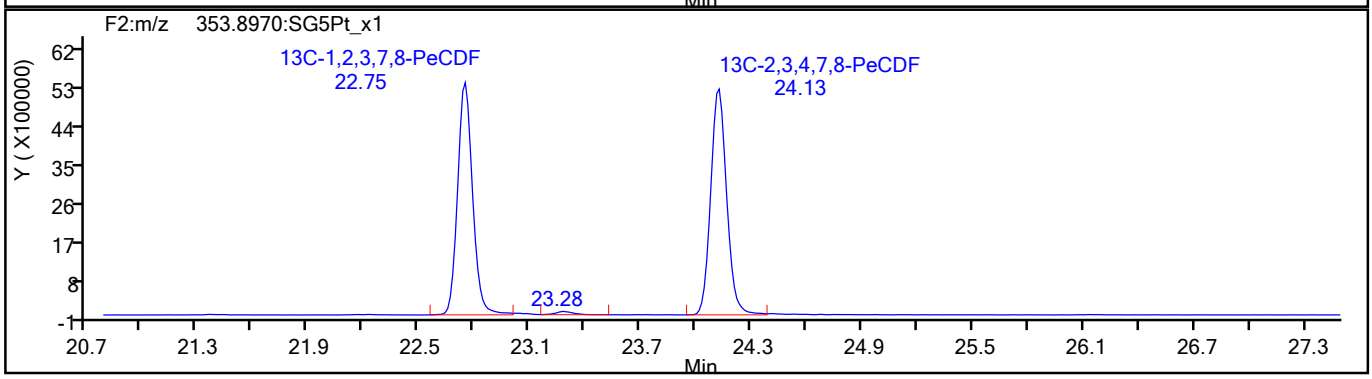

781225

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

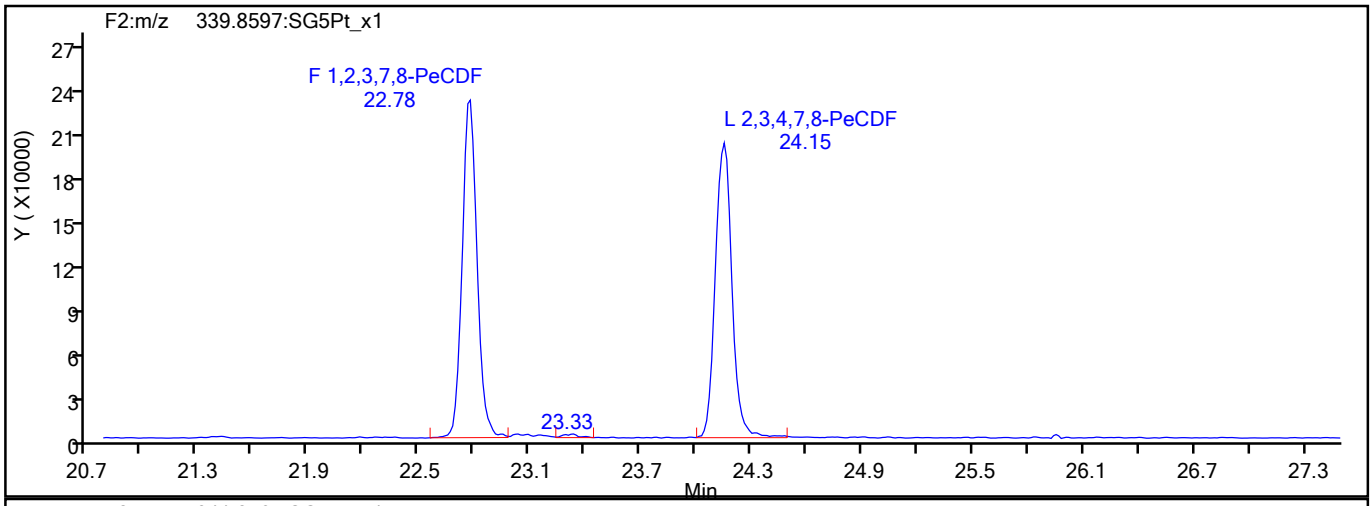

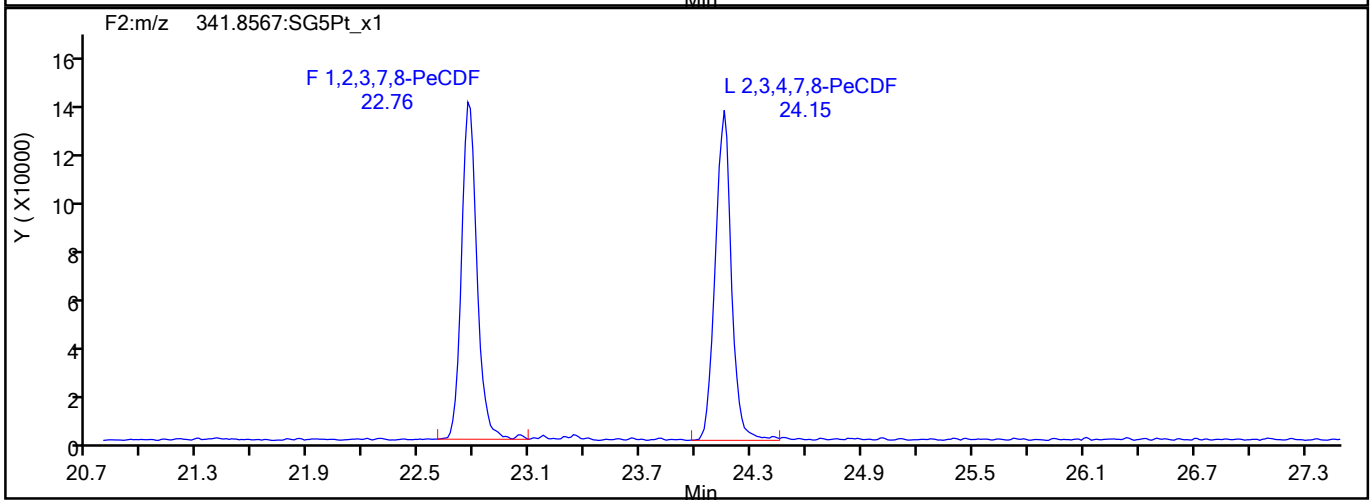

PeCDF Interference Mass

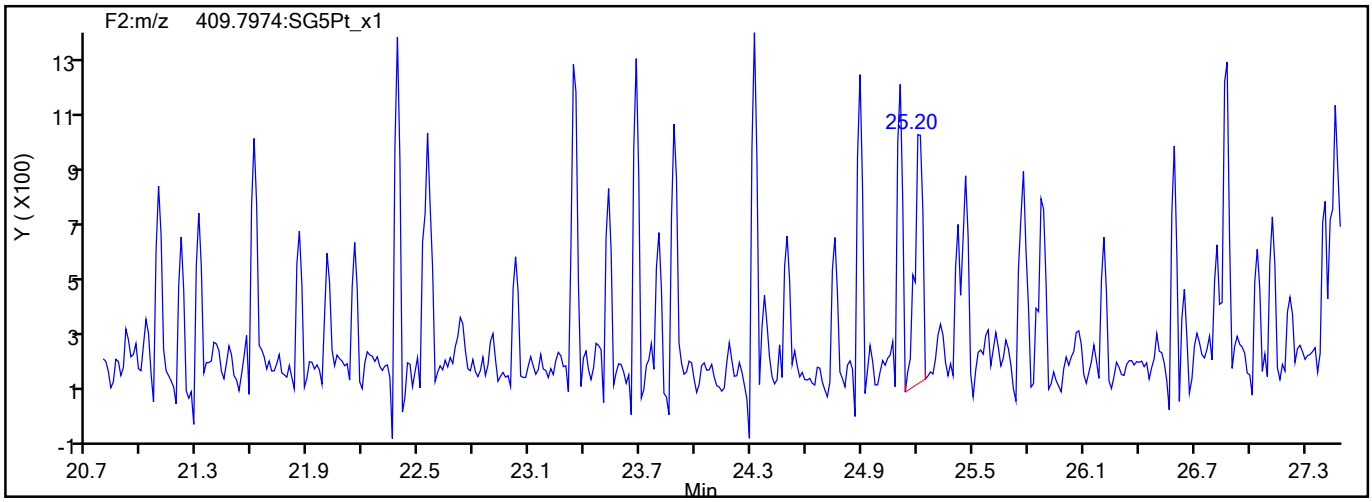

781226

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

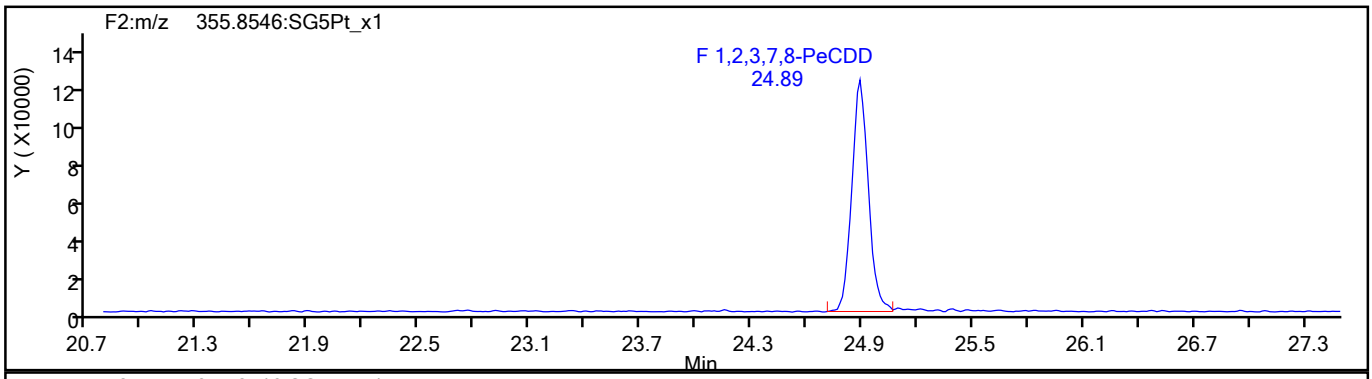

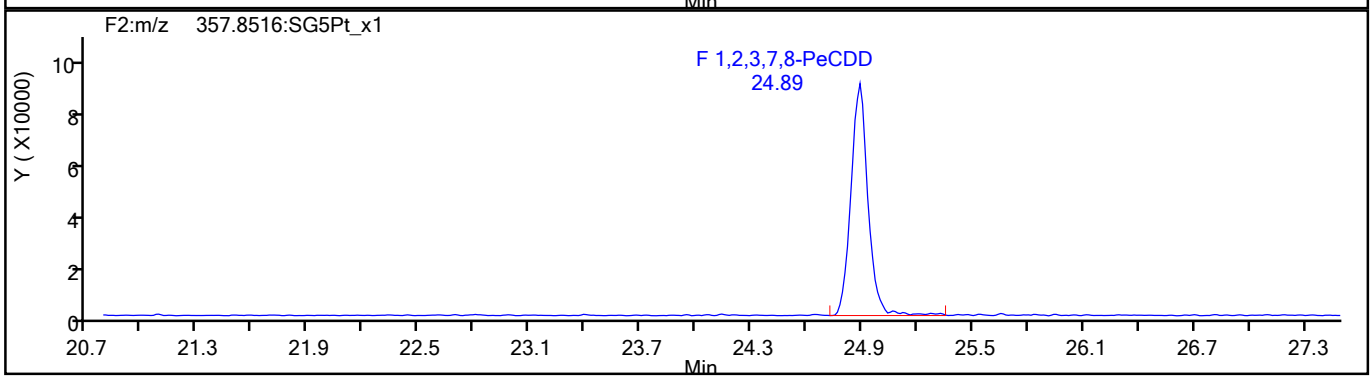

PeCDD Standards

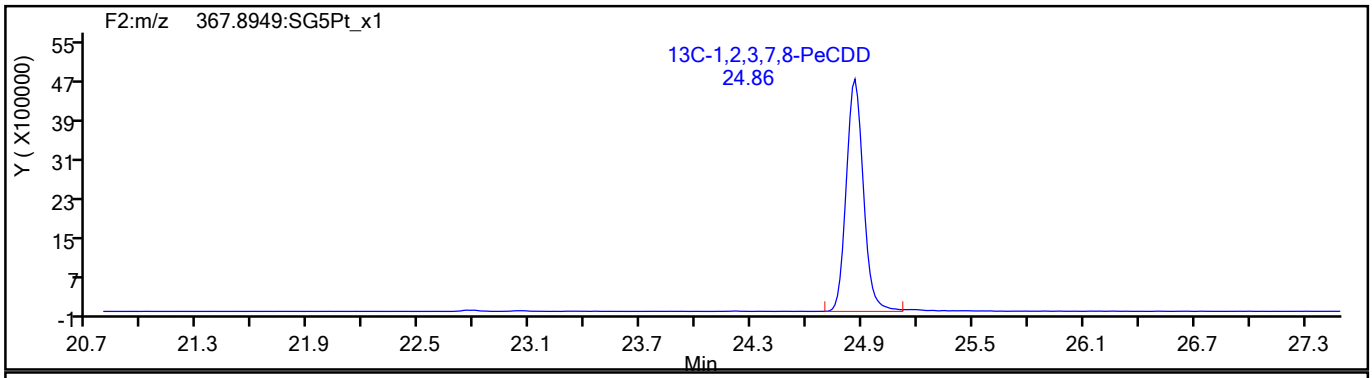

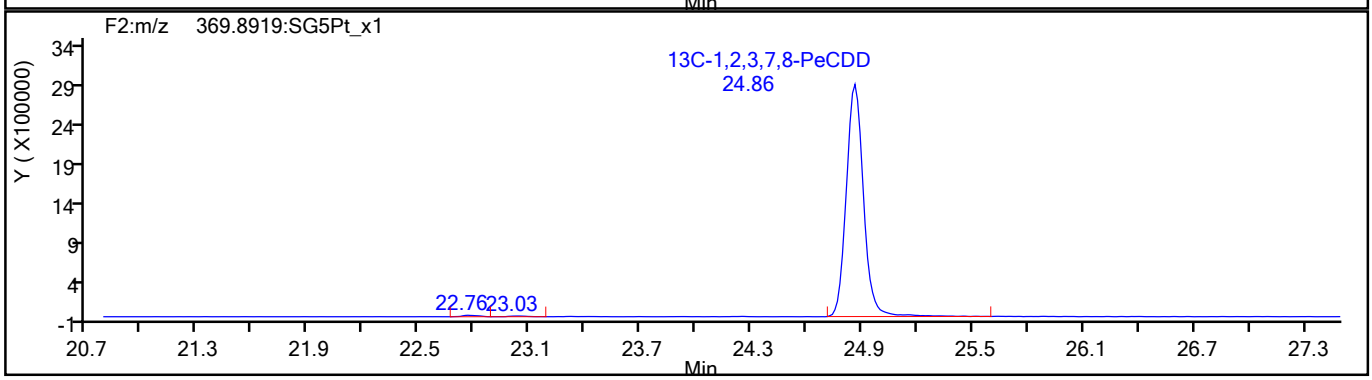

781227

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

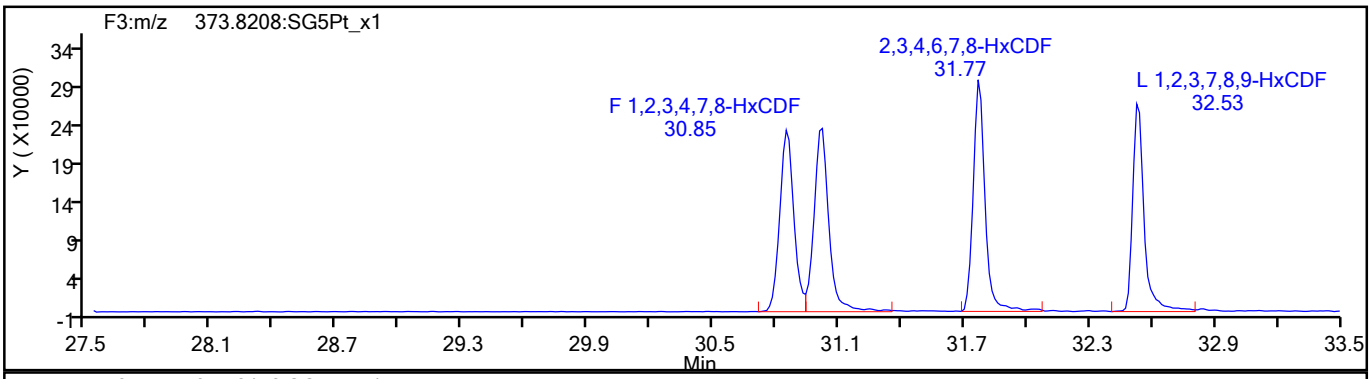

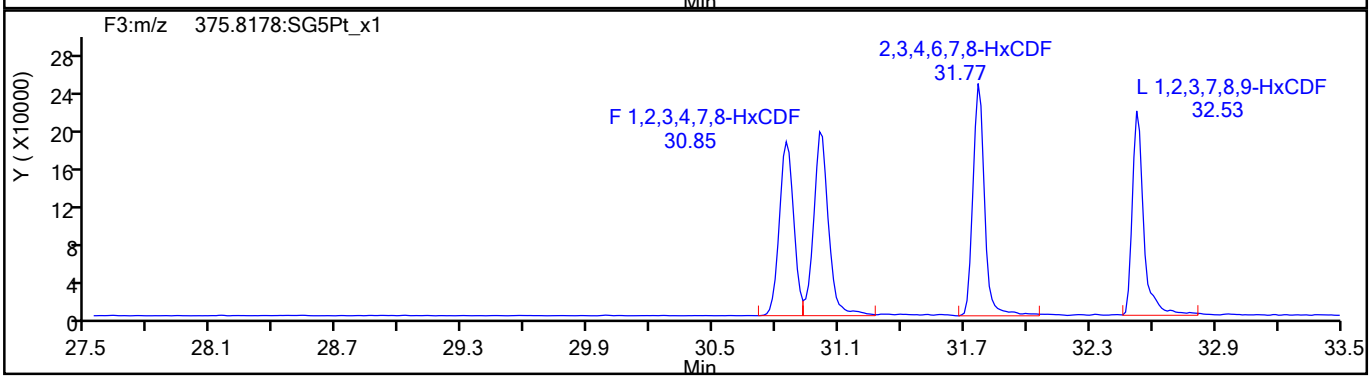

HxCDF Standards

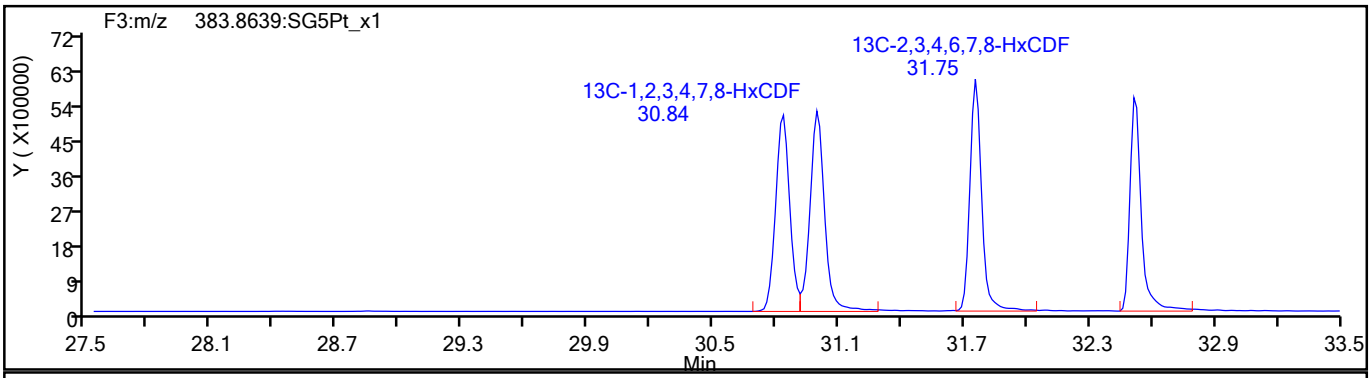

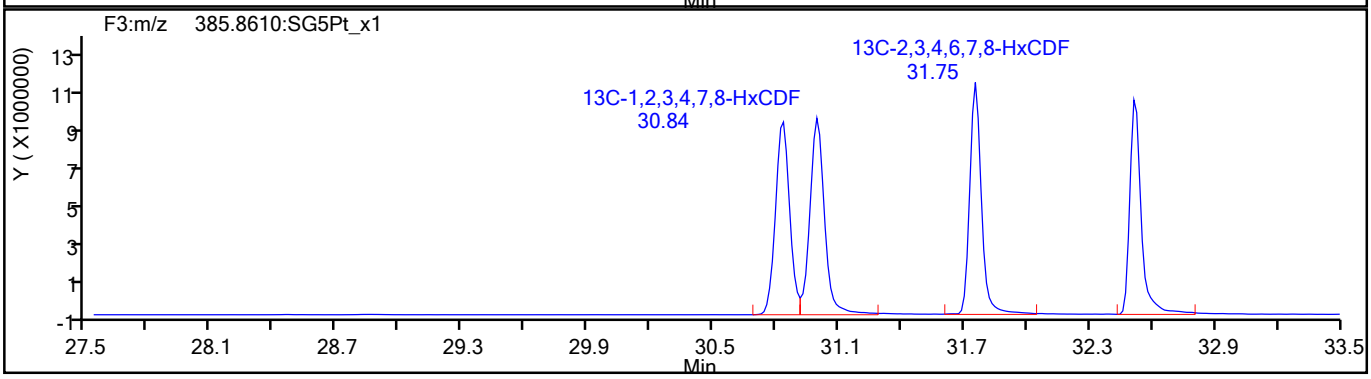

781228

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

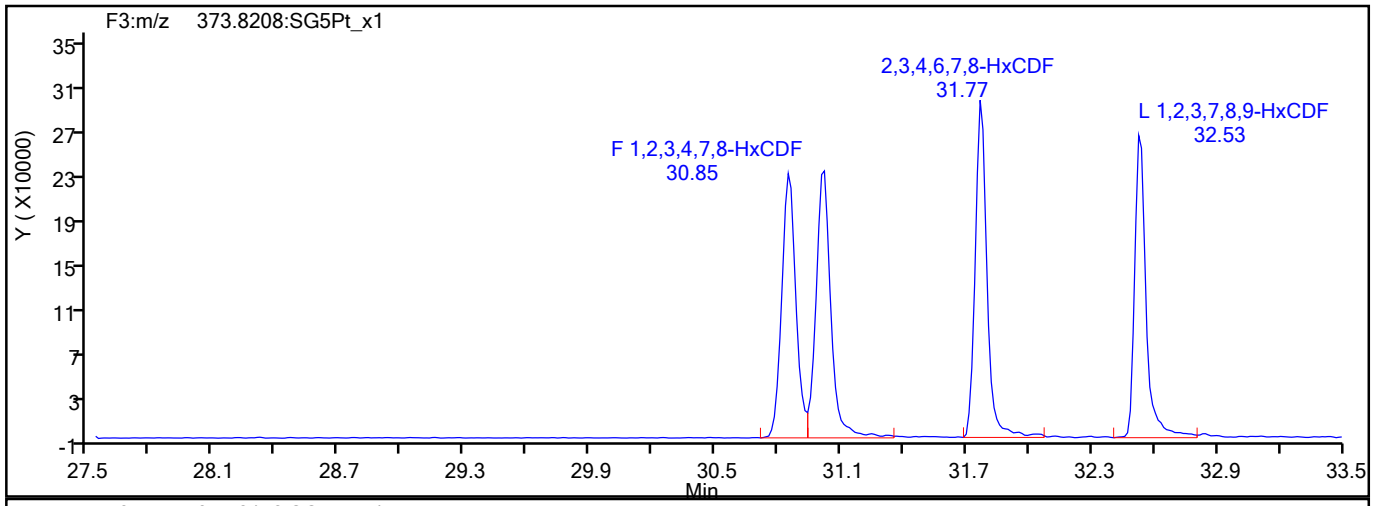

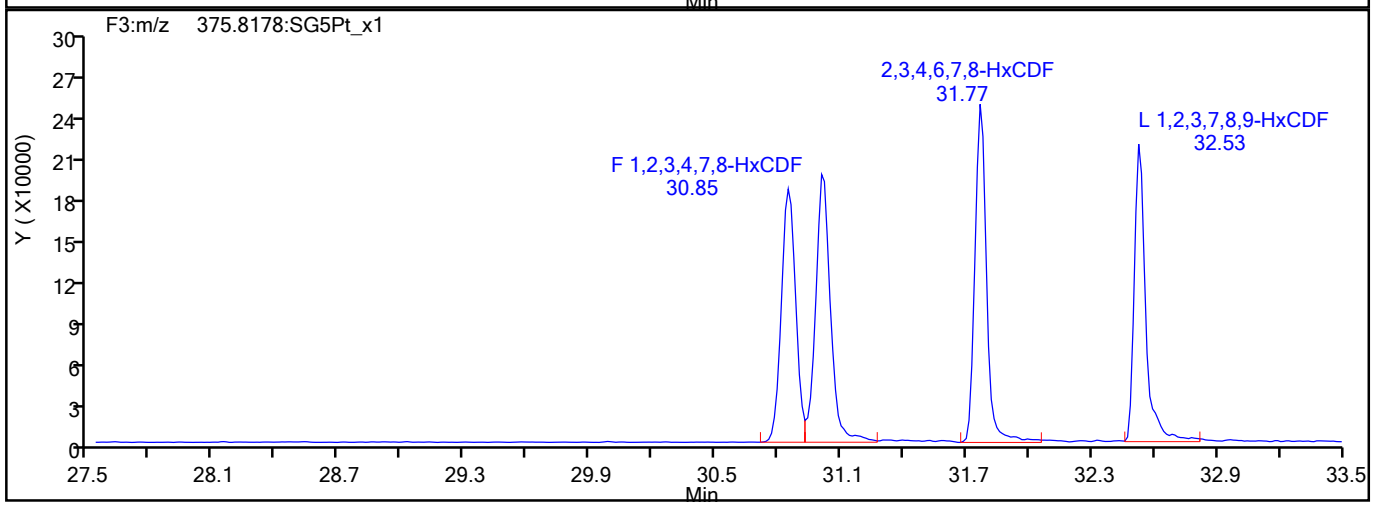

HxCDF Interference Mass

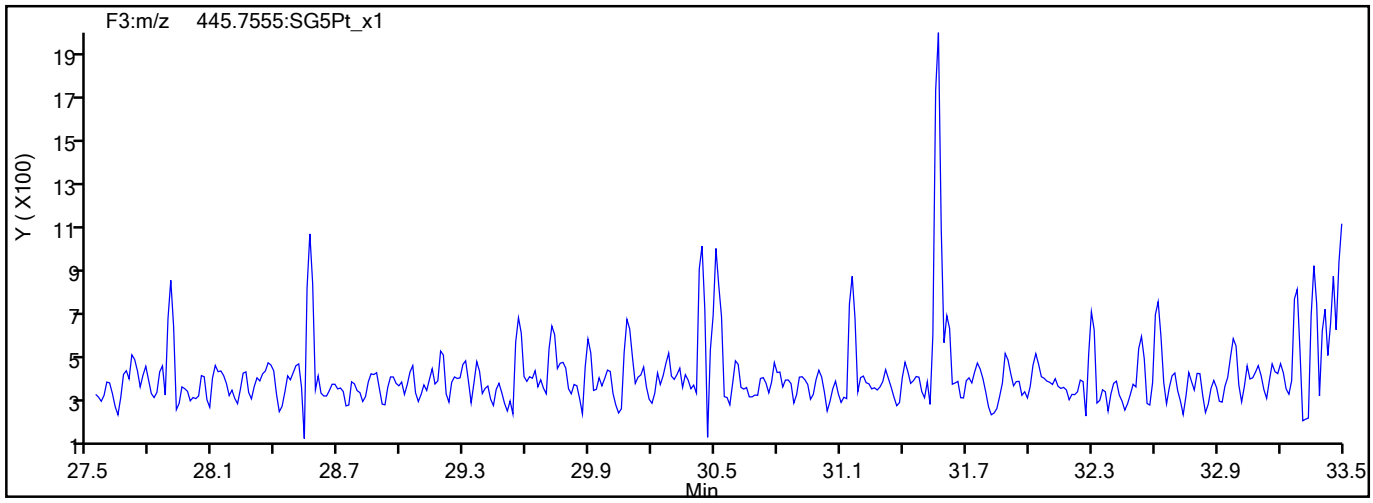

781229

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

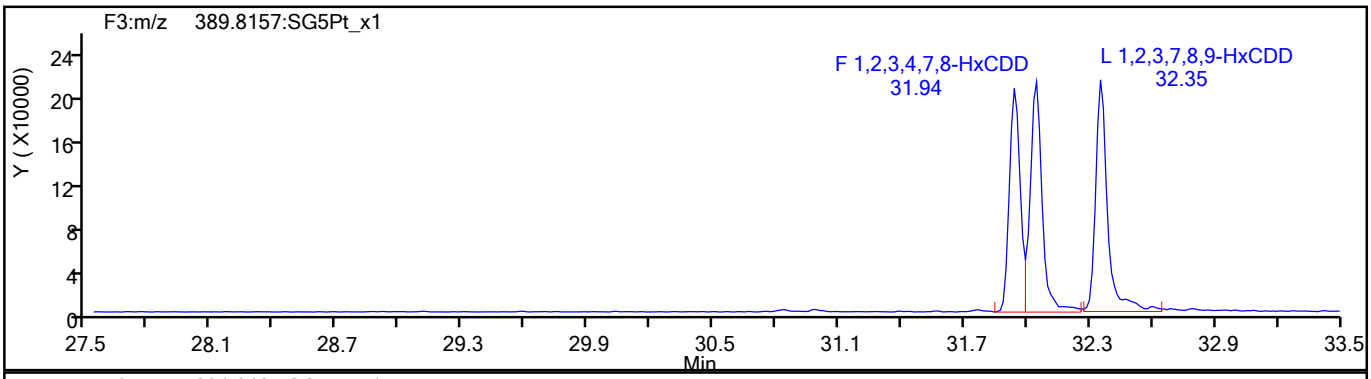

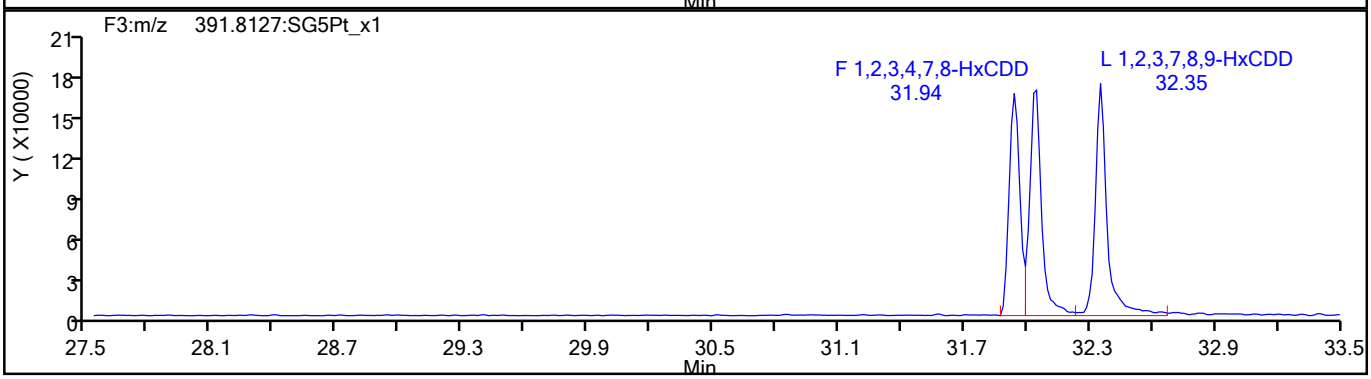

HxCDD Standards

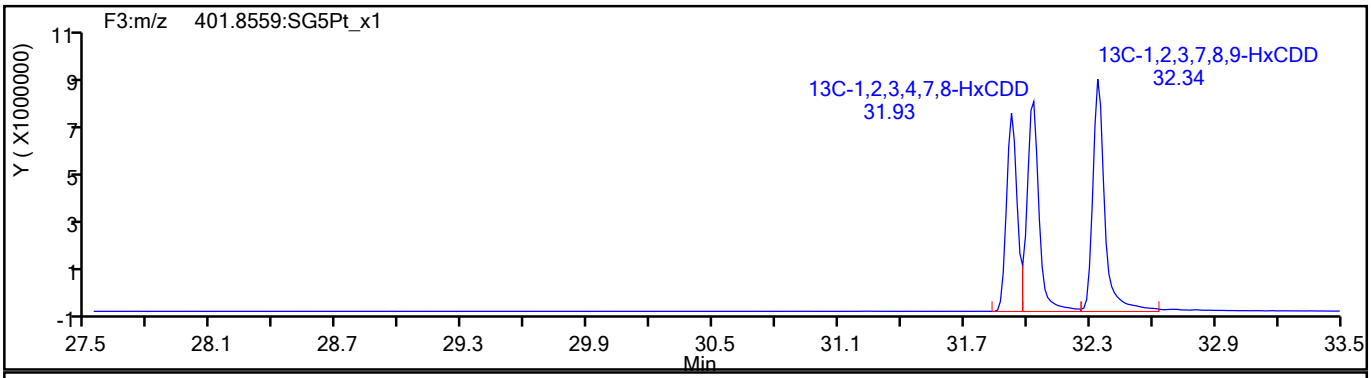

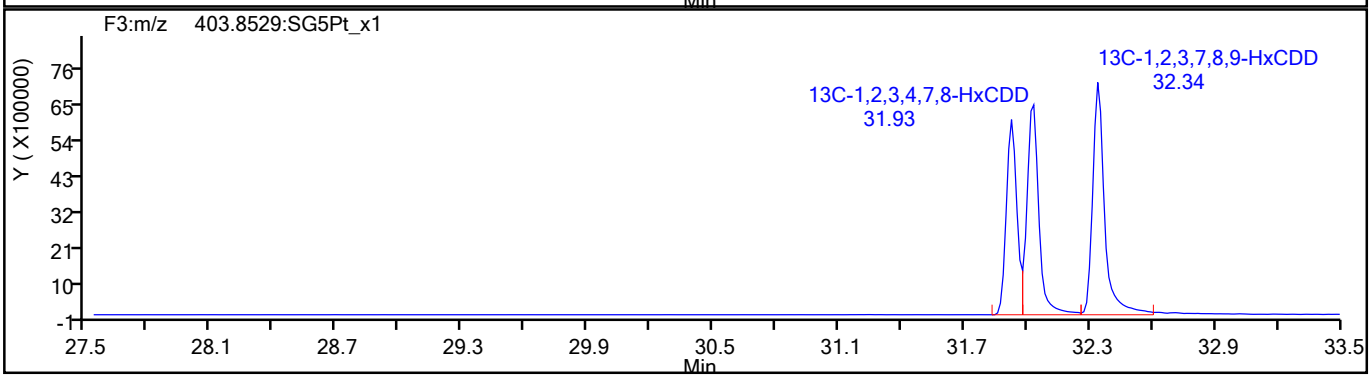

781230

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

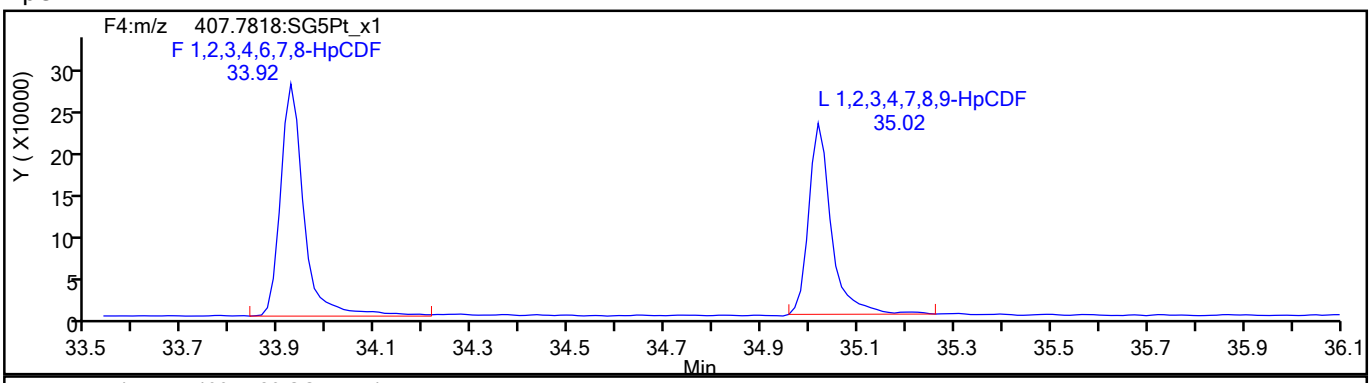

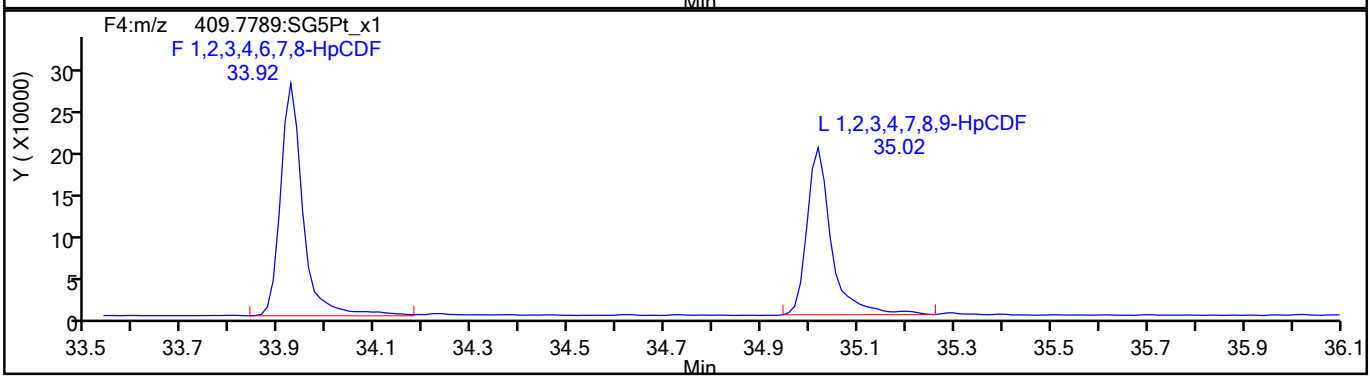

HpCDF Standards

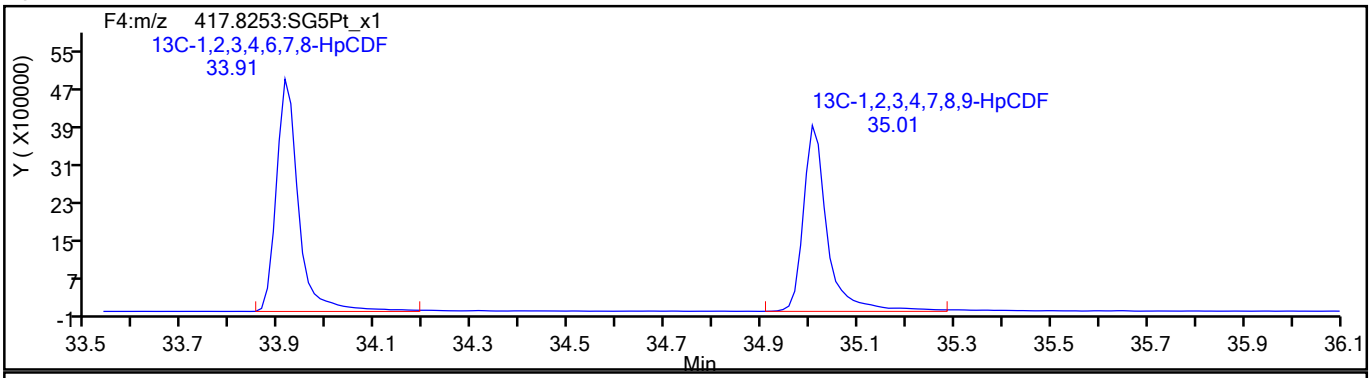

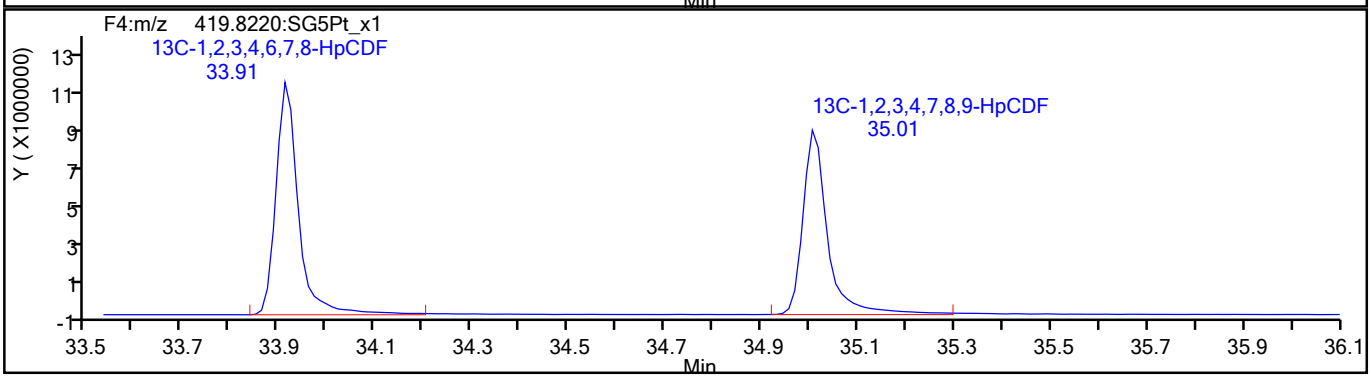

781231

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

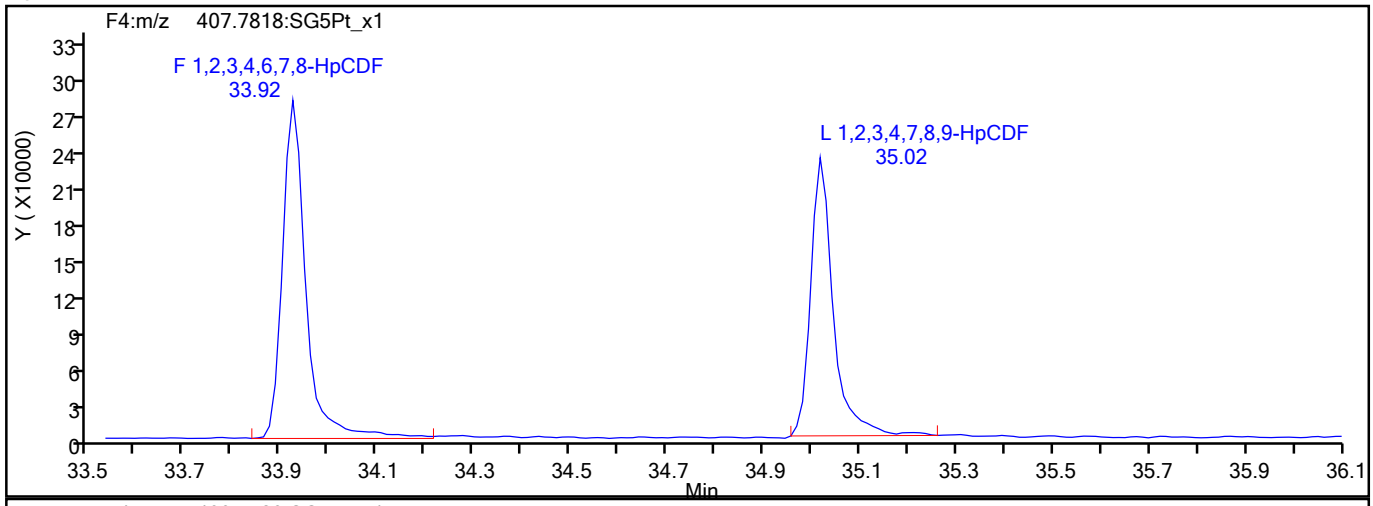

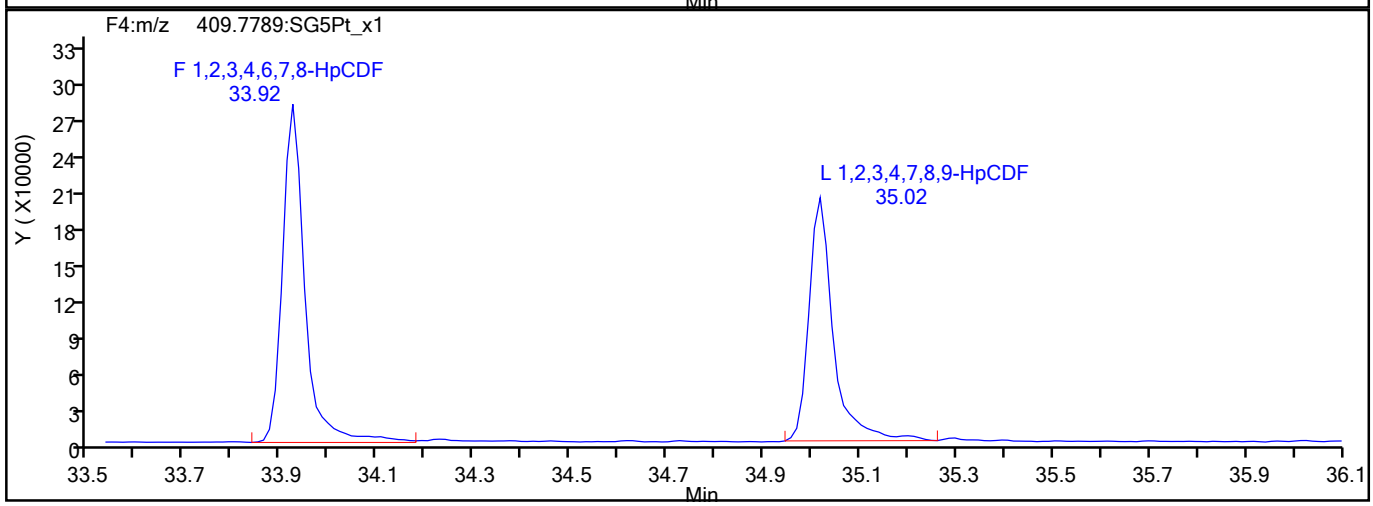

HpCDF Interference Mass

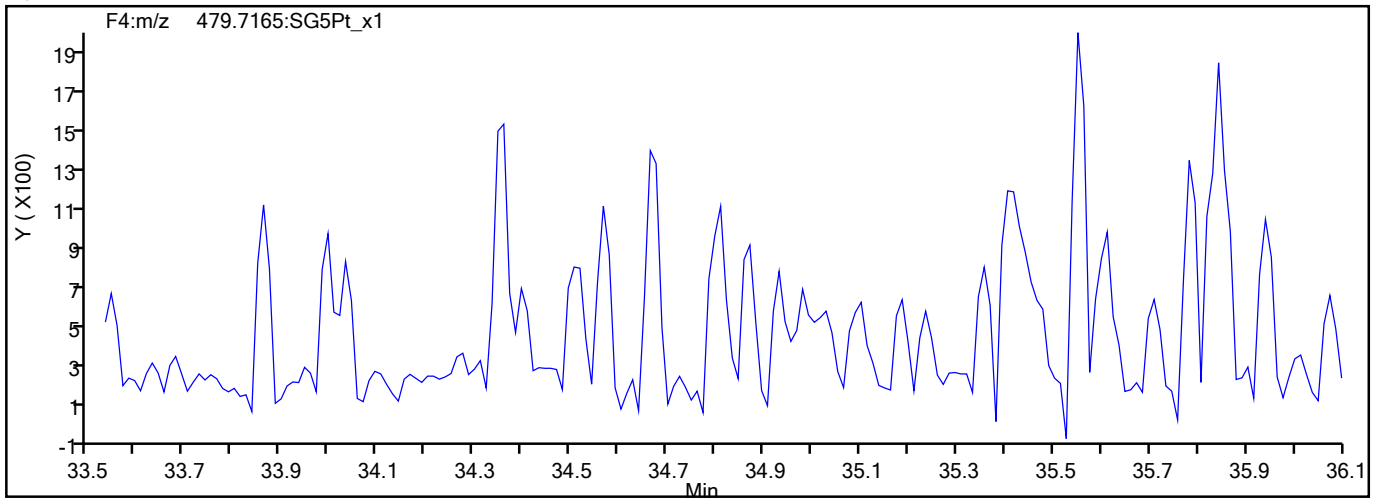

781232

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

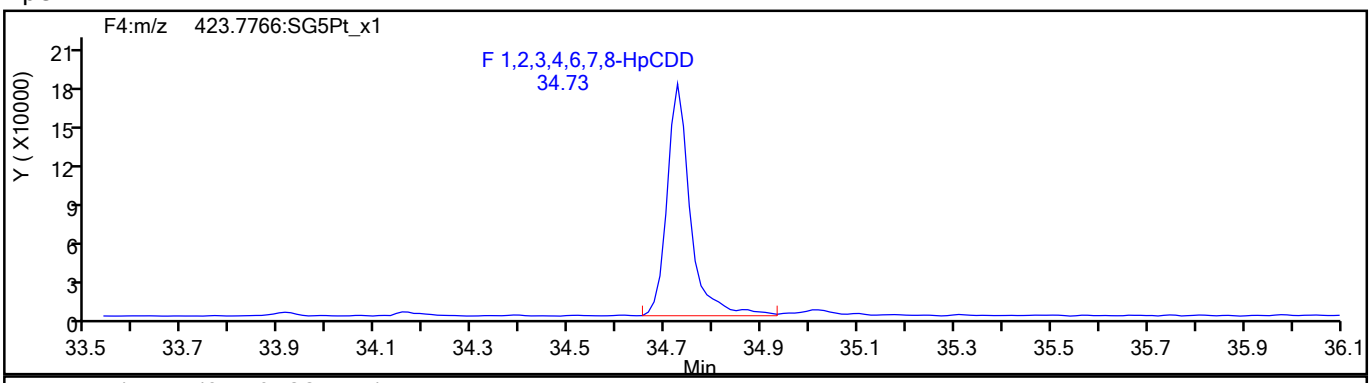

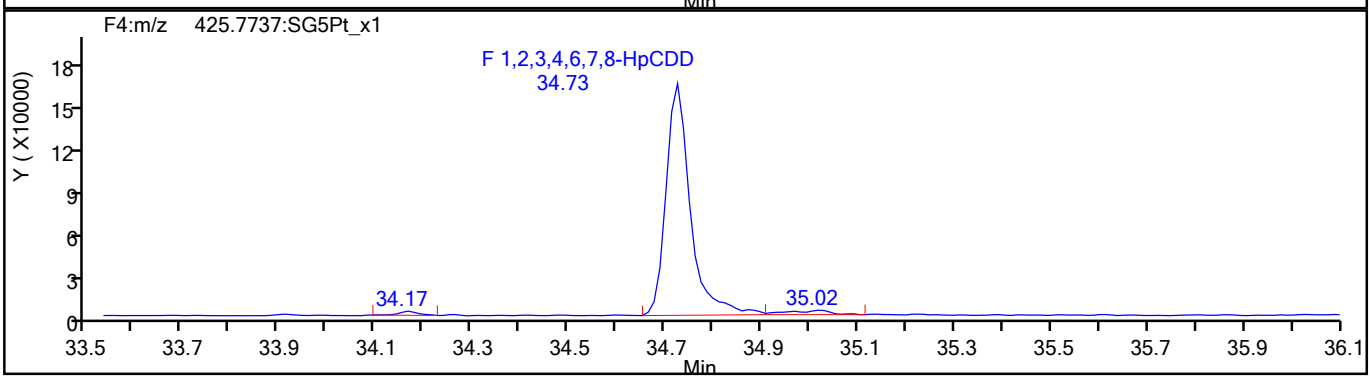

HpCDD Standards

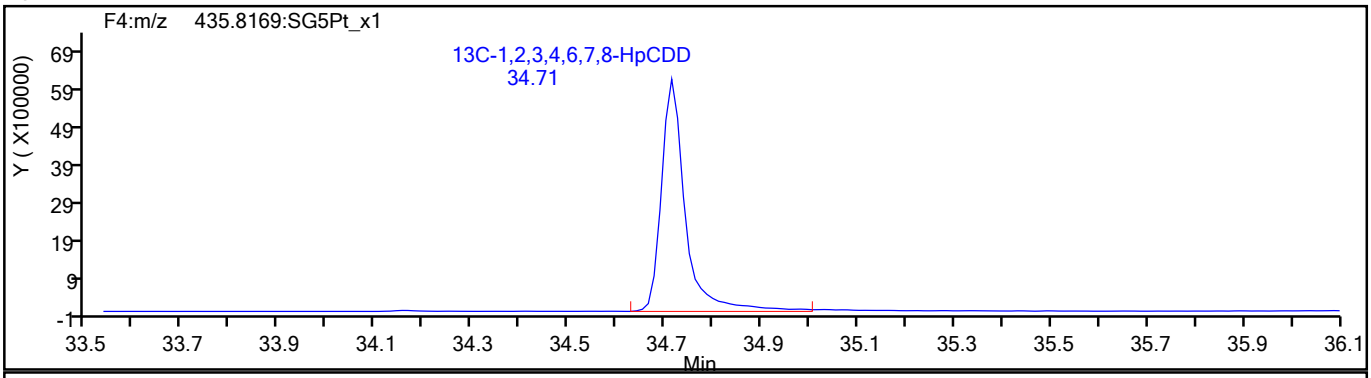

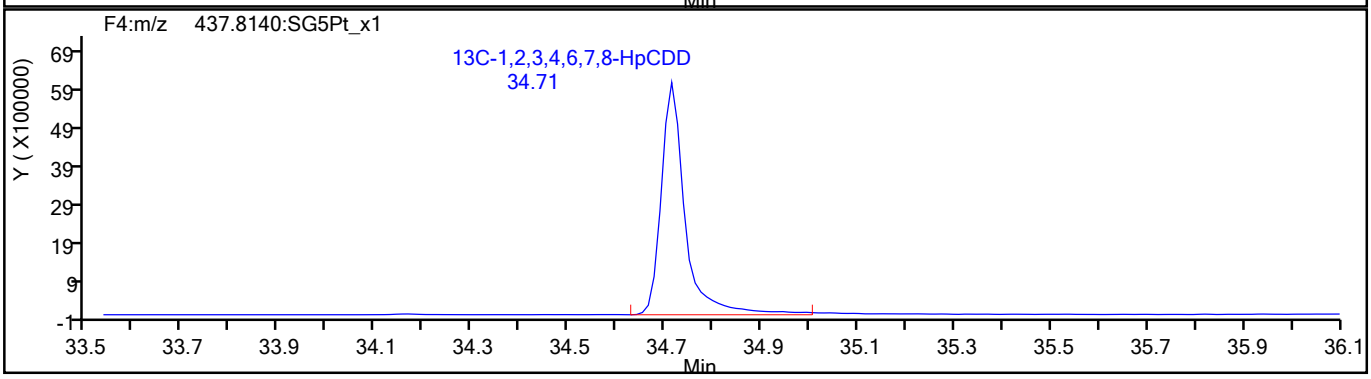

781233

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

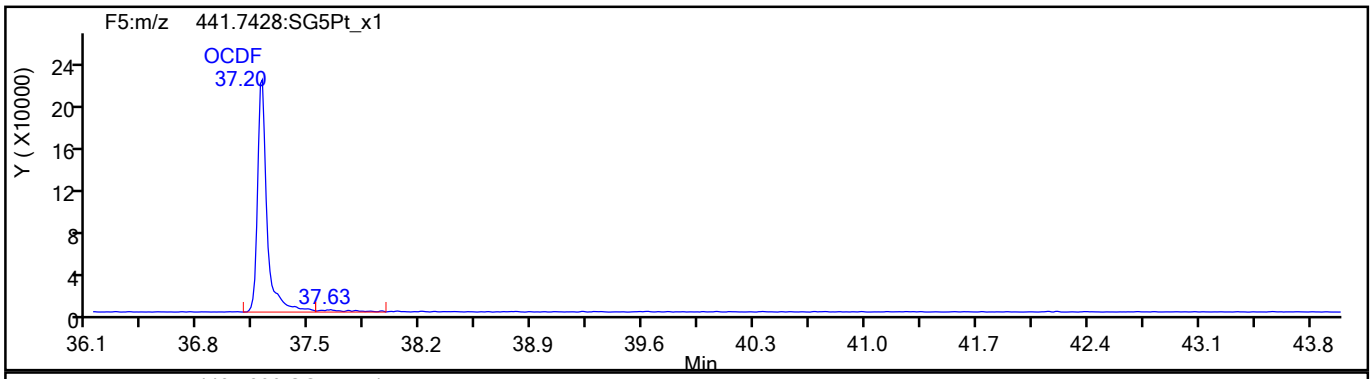

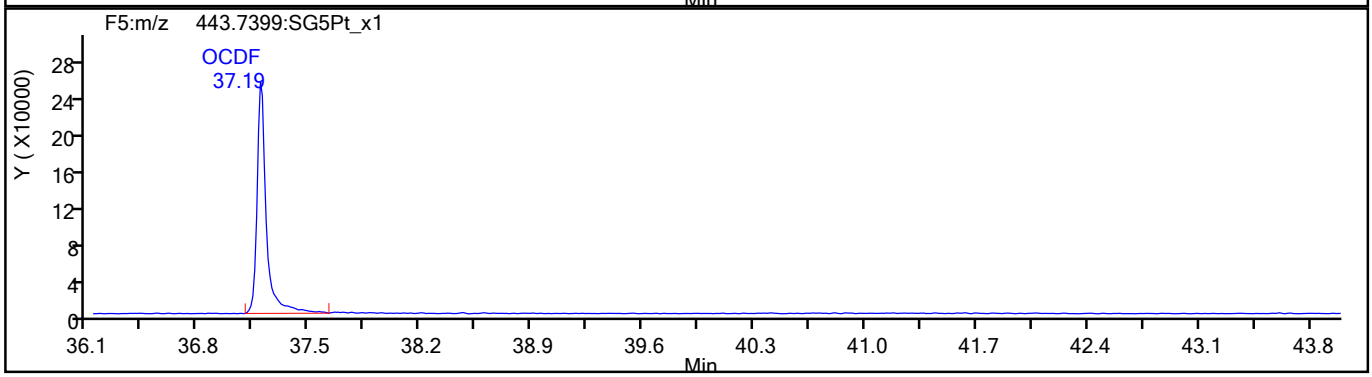

OCDF Standards

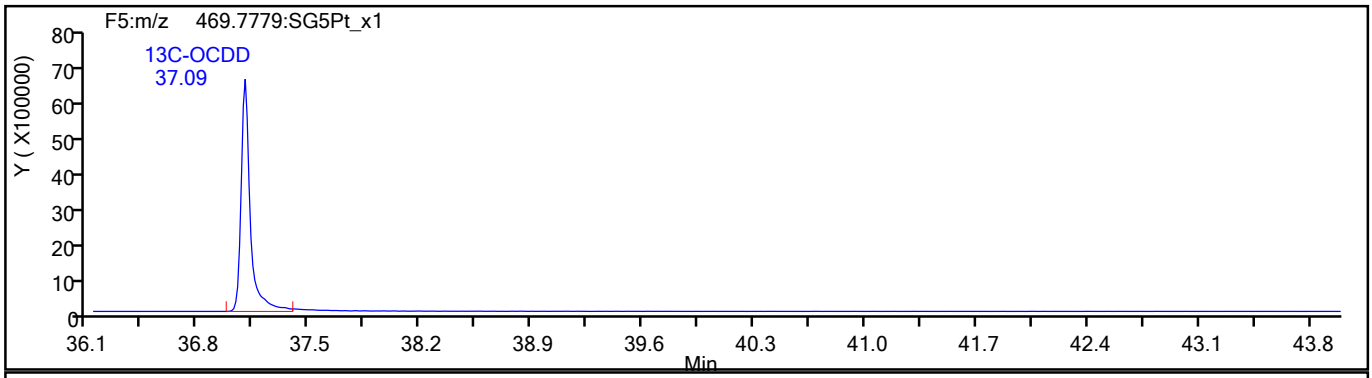

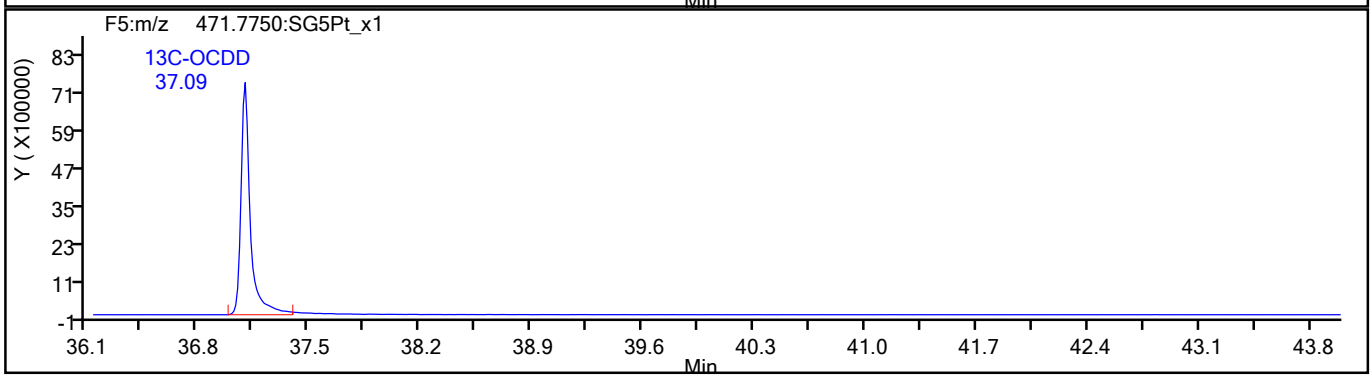

781234

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

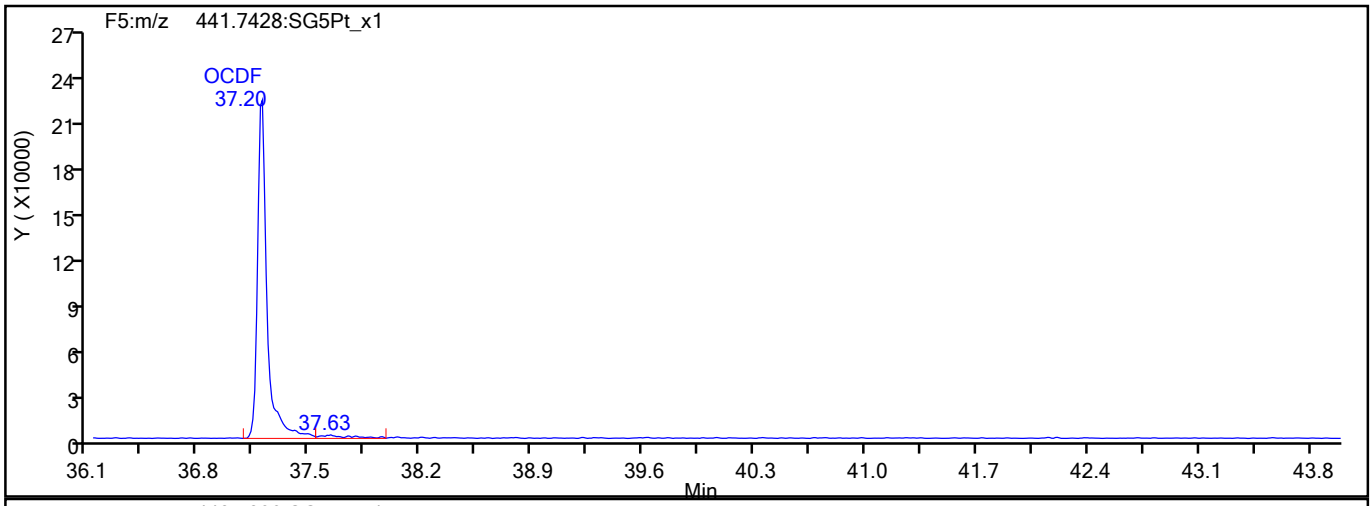

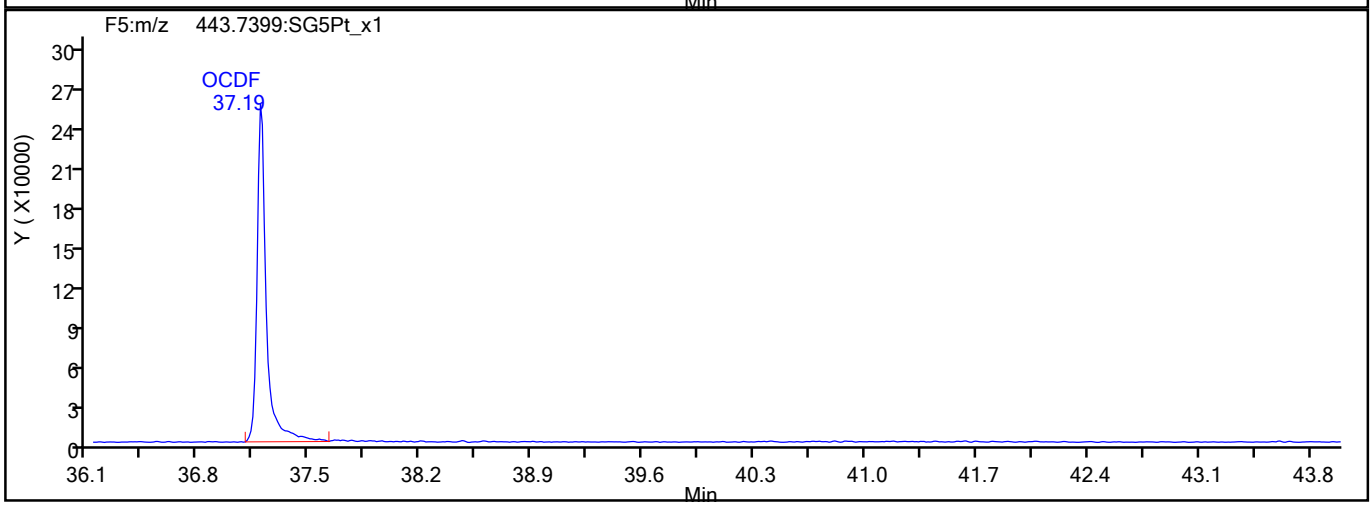

OCDF Interference Mass

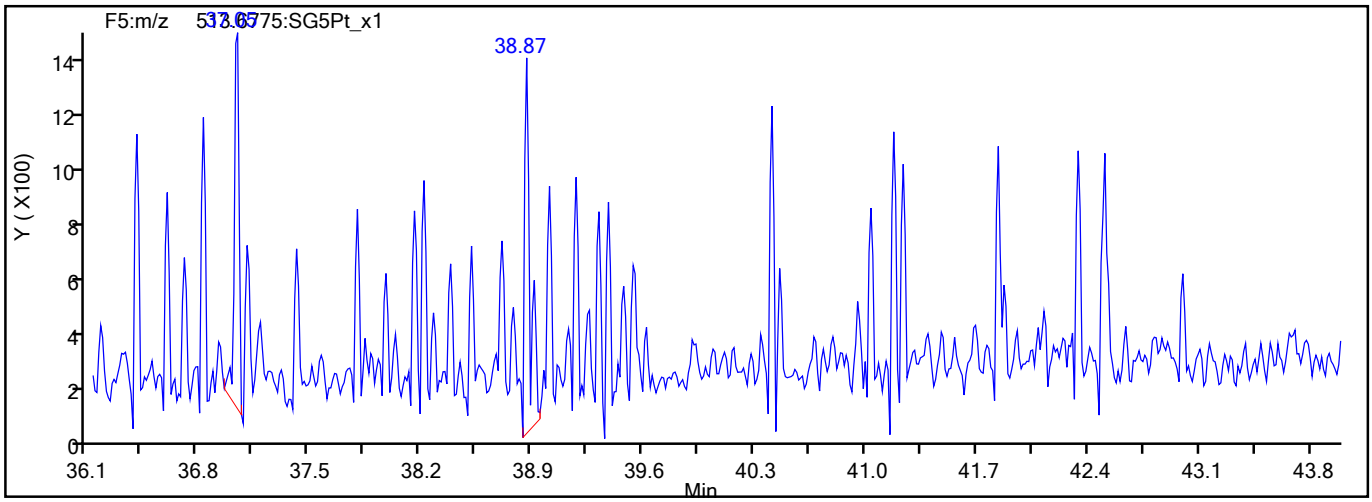

781235

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

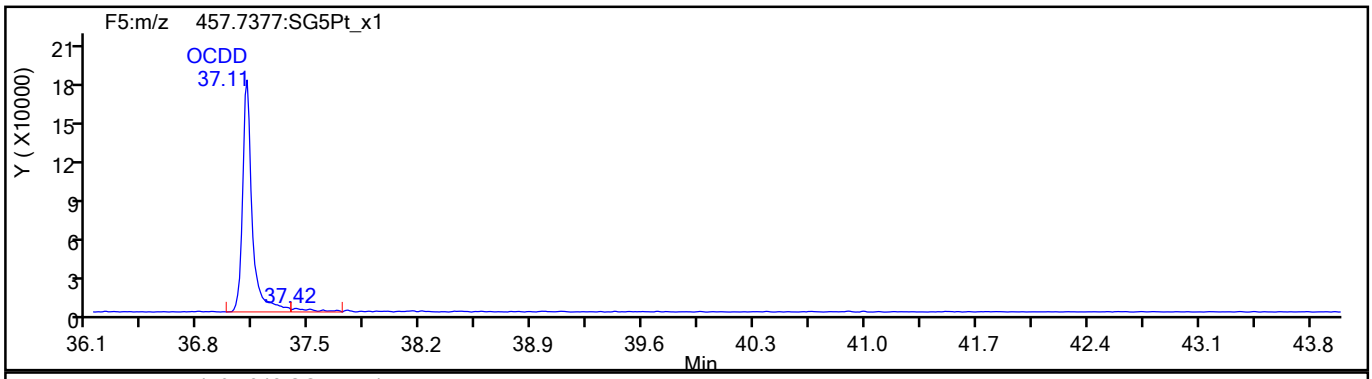

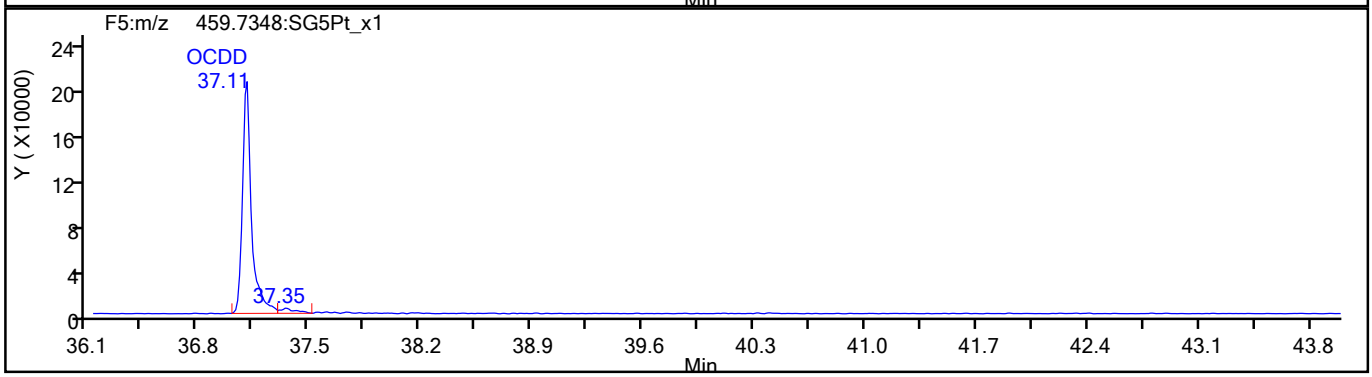

OCDD Standards

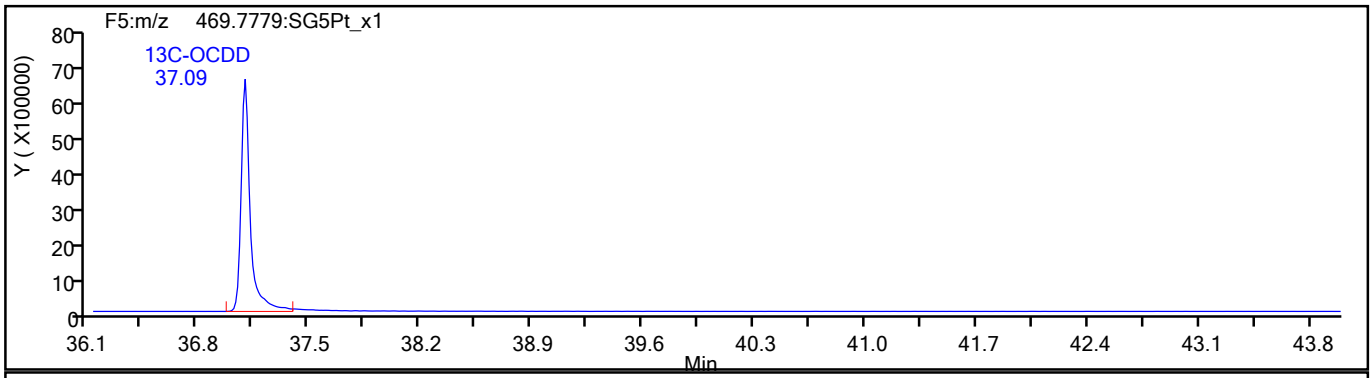

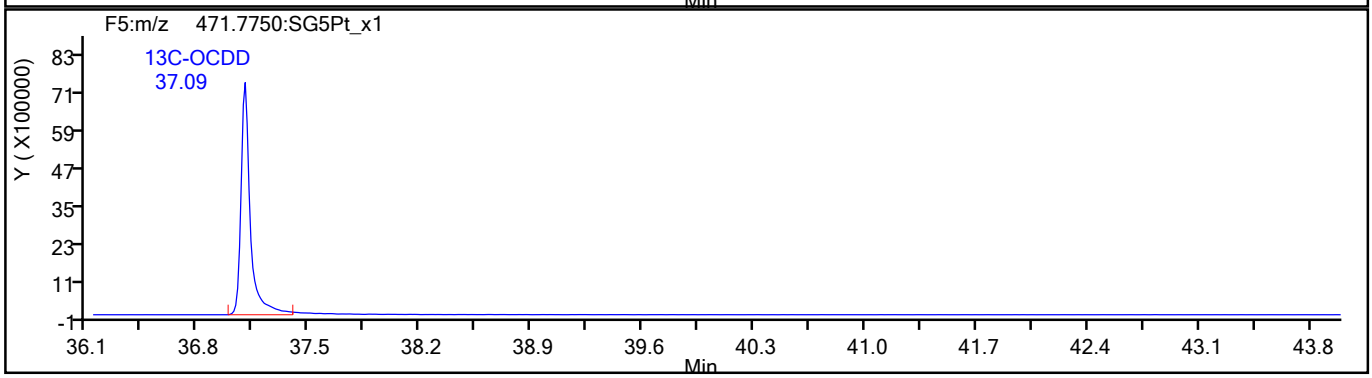

781236

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

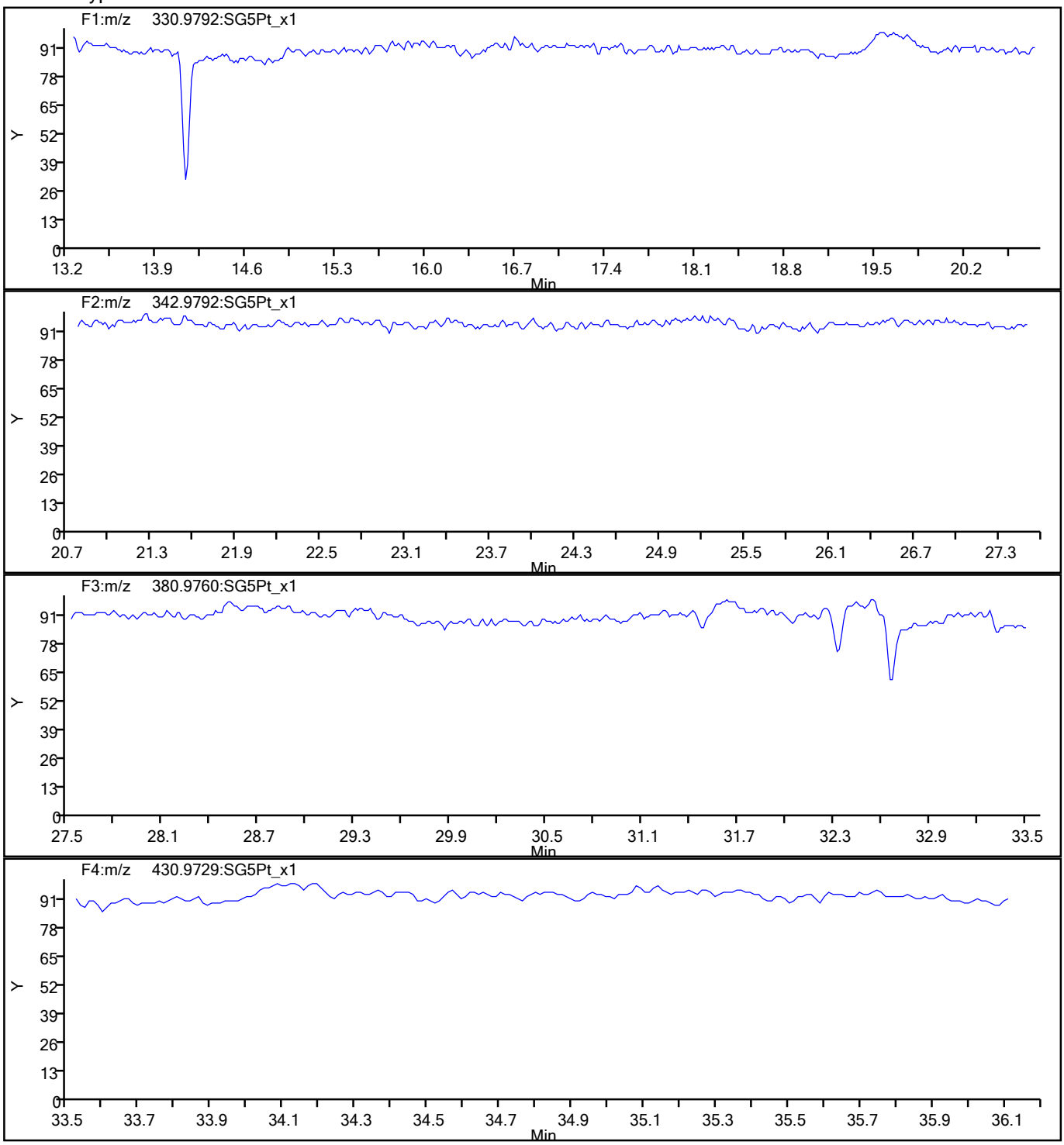

781237

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

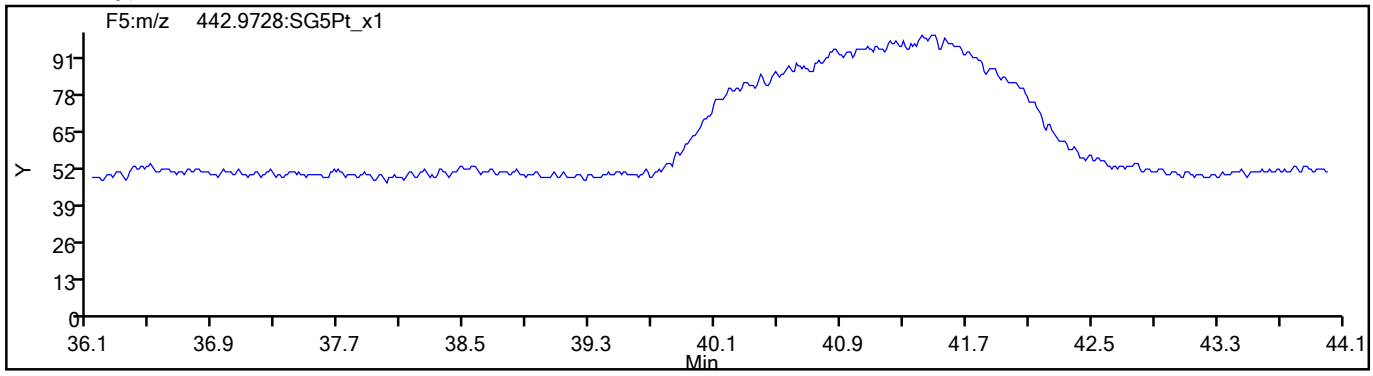

781238

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62853211	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	98246522	0.78	1.6249	96.2	96.2	0.1370	0.1370	96.20	
2,3,7,8-TCDF	17.628	1709191	0.74	1.0239	1.699	1.699	0.0115	0.0115	84.95	
S Total TCDF					1.699	1.699	0.0115	0.0115		
D 13C-2,3,7,8-TCDD	18.338	53975587	0.81	0.8993	95.5	95.5	0.1627	0.1627	95.49	
$ 37Cl4-2,3,7,8-TCDD	18.354	1231219		1.1071	1.769	1.769	0.009070	0.009070	88.47	
2,3,7,8-TCDD	18.354	1184284	0.77	1.2541	1.750	1.750	0.0187	0.0187	87.48	
S Total TCDD					1.750	1.750	0.0187	0.0187		
D 13C-1,2,3,7,8-PeCDF	22.749	72525655	1.59	1.2101	95.4	95.4	0.2163	0.2163	95.36	
1,2,3,7,8-PeCDF	22.776	6620354	1.62	1.0611	8.602	8.602	0.0369	0.0369	86.02	
D 13C-2,3,4,7,8-PeCDF	24.126	74944110	1.59	1.2395	96.2	96.2	0.2111	0.2111	96.20	a
2,3,4,7,8-PeCDF	24.153	6452410	1.61	1.0184	8.454	8.454	0.0398	0.0398	84.54	
S Total PeCDF					17.1	17.1	0.0383	0.0383		
D 13C-1,2,3,7,8-PeCDD	24.862	46721712	1.62	0.7612	97.7	97.7	0.1174	0.1174	97.65	
1,2,3,7,8-PeCDD	24.889	4219570	1.58	1.0484	8.614	8.614	0.0282	0.0282	86.14	
S Total PeCDD					8.614	8.614	0.0282	0.0282		
D 13C-1,2,3,4,7,8-HxCDF	30.835	65726932	0.51	1.0837	101.6	101.6	0.5284	0.5284	102	a
1,2,3,4,7,8-HxCDF	30.848	6041767	1.22	1.0851	8.471	8.471	0.0611	0.0611	84.71	
D 13C-1,2,3,6,7,8-HxCDF	30.995	68089005	0.53	1.1279	101.1	101.1	0.5077	0.5077	101	
1,2,3,6,7,8-HxCDF	31.021	6561860	1.24	1.1260	8.559	8.559	0.0596	0.0596	85.59	
D 13C-2,3,4,6,7,8-HxCDF	31.753	64406928	0.52	1.0637	101.4	101.4	0.5383	0.5383	101	
2,3,4,6,7,8-HxCDF	31.767	6352404	1.21	1.1675	8.448	8.448	0.0492	0.0492	84.48	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58828058	0.51	0.9676	101.8	101.8	0.5918	0.5918	102	
1,2,3,7,8,9-HxCDF	32.526	5963032	1.22	1.1664	8.691	8.691	0.0536	0.0536	86.91	
S Total HxCDF					34.2	34.2	0.0559	0.0559		
* 13C-1,2,3,7,8,9-HxCDD	32.339	59719891	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44877133	1.26	0.7334	102.5	102.5	0.4904	0.4904	102	a
1,2,3,4,7,8-HxCDD	31.940	3996910	1.25	1.0640	8.370	8.370	0.0541	0.0541	83.70	
D 13C-1,2,3,6,7,8-HxCDD	32.033	52974056	1.27	0.8802	100.8	100.8	0.4087	0.4087	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.046	4517909	1.28	1.0001	8.528	8.528	0.0541	0.0541	85.28	
1,2,3,7,8,9-HxCDD	32.353	4612548	1.27	1.1325	8.324	8.324	0.0492	0.0492	83.24	
S Total HxCDD					25.2	25.2	0.0525	0.0525		
D 13C-1,2,3,4,6,7,8-HpCDF	33.911	46691158	0.44	0.7730	101.1	101.1	1.219	1.219	101	
1,2,3,4,6,7,8-HpCDF	33.924	5795616	1.06	1.4413	8.612	8.612	0.0908	0.0908	86.12	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	42362179	0.44	0.7008	101.2	101.2	1.344	1.344	101	a
1,2,3,4,7,8,9-HpCDF	35.017	4773949	1.04	1.3174	8.554	8.554	0.1198	0.1198	85.54	
S Total HpCDF					17.2	17.2	0.1053	0.1053		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	38689128	1.01	0.6472	100.1	100.1	0.6644	0.6644	100	
1,2,3,4,6,7,8-HpCDD	34.725	3690749	1.06	1.0943	8.717	8.717	0.0588	0.0588	87.17	
S Total HpCDD					8.717	8.717	0.0588	0.0588		
D 13C-OCDD	37.093	52034518	0.88	0.4472	194.9	194.9	0.3057	0.3057	97.43	
OCDF	37.189	6198469	0.89	1.4382	16.6	16.6	0.0331	0.0331	82.83	
OCDD	37.105	5013385	0.90	1.1070	17.4	17.4	0.0477	0.0477	87.03	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28386456	7046087	6003	15007	1174		
333.9339	18.142	18.142	0		34466755	8558284	3128	7820	2736	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42972486	10763336	8679	21697	1240		
317.9389	17.613	17.616	0	0.971	55274036	13878642	5218	13045	2660	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	725190	178427	386	965	462		
305.8987	17.628	17.631	0	1.001	984001	248871	771	1927	323	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24153490	5697854	6003	15007	949		
333.9339	18.338	18.338	0	1.011	29822097	7031837	3128	7820	2248	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	1231219	295748	627	1567	472		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	516509	120344	727	1817	166		
321.8936	18.354	18.357	0	1.001	667775	162973	470	1175	347	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44514928	7853181	9659	24147	813		
353.8970	22.749	22.754	0	1.254	28010727	4960984	6675	16687	743	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	4089215	716349	1056	2640	678		
341.8567	22.776	22.779	0	1.001	2531139	446464	949	2372	470	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											a
351.9000	24.126	24.129	0	1.330	46033296	7621284	9659	24147	789		a
353.8970	24.126	24.129	0	1.330	28910814	4739818	6675	16687	710	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	3984657	653372	1056	2640	619		
341.8567	24.153	24.156	0	1.001	2467753	411895	949	2372	434	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28869986	4442492	3510	8775	1266		
369.8919	24.862	24.865	0	1.370	17851726	2719251	2068	5170	1315	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	2584600	398905	491	1227	812		
357.8516	24.889	24.892	0	1.001	1634970	246537	355	887	694	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											a
383.8639	30.835	30.838	0	0.953	22324815	4908430	11721	29302	419		a
385.8610	30.835	30.838	0	0.953	43402117	9487505	22146	55365	428	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.848	30.857	0	1.000	3322045	734549	2125	5312	346		
375.8178	30.848	30.857	0	1.000	2719722	584076	1696	4240	344	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	23443638	4852452	11721	29302	414		
385.8610	30.995	31.003	0	0.958	44645367	9390378	22146	55365	424	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.001	3628802	774738	2125	5312	365		
375.8178	31.021	31.022	0	1.001	2933058	621989	1696	4240	367	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.753	31.756	0	0.982	22116278	5724833	11721	29302	488		
385.8610	31.753	31.756	0	0.982	42290650	10891641	22146	55365	492	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	3476984	900887	2125	5312	424		
375.8178	31.767	31.772	0	1.000	2875420	748664	1696	4240	441	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	19952155	5224965	11721	29302	446		
385.8610	32.512	32.523	-1	1.005	38875903	10047992	22146	55365	454	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	3272570	870864	2125	5312	410		
375.8178	32.526	32.534	0	1.000	2690462	702575	1696	4240	414	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33208186	8207924	11753	29382	698		
403.8529	32.339	32.342	0		26511705	6578059	9521	23802	691	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	31.927	31.929	0	0.987	24991401	7247079	11753	29382	617		a
403.8529	31.927	31.929	0	0.987	19885732	5749736	9521	23802	604	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	2220855	634454	1798	4495	353		
391.8127	31.940	31.945	0	1.000	1776055	520388	1195	2987	435	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29637474	7731021	11753	29382	658		
403.8529	32.033	32.033	0	0.991	23336582	6105317	9521	23802	641	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.046	32.047	0	1.000	2539756	681391	1798	4495	379		
391.8127	32.046	32.047	0	1.000	1978153	525440	1195	2987	440	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	2578931	681238	1798	4495	379		
391.8127	32.353	32.355	0	1.013	2033617	530890	1195	2987	444	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.911	33.914	0	1.049	14324046	4548819	17096	42740	266		
419.8220	33.911	33.914	0	1.049	32367112	10373412	38619	96547	269	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	2984390	989226	3939	9847	251		
409.7789	33.924	33.926	0	1.000	2811226	912647	3871	9677	236	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											a
417.8253	35.005	35.010	0	1.082	12913204	3817815	17096	42740	223		a
419.8220	35.005	35.010	0	1.082	29448975	8551787	38619	96547	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	2430692	699814	3939	9847	178		
409.7789	35.017	35.020	0	1.000	2343257	686031	3871	9677	177	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19472945	5796031	12697	31742	456		
437.8140	34.714	34.716	0	1.073	19216183	5692167	12738	31845	447	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.725	34.726	0	1.000	1901971	557241	1605	4012	347		
425.7737	34.725	34.726	0	1.000	1788778	518346	1352	3380	383	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	24422535	6155132	2912	7280	2114		
471.7750	37.093	37.094	0	1.147	27611983	6845350	5172	12930	1324	0.88(0.76-1.02)	
OCDF											
441.7428	37.189	37.199	-1	1.003	2921445	715883	635	1587	1127		
443.7399	37.189	37.199	-1	1.003	3277024	845078	603	1507	1401	0.89(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	2373314	577341	633	1582	912		
459.7348	37.105	37.106	0	1.000	2640071	638330	739	1847	864	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.13

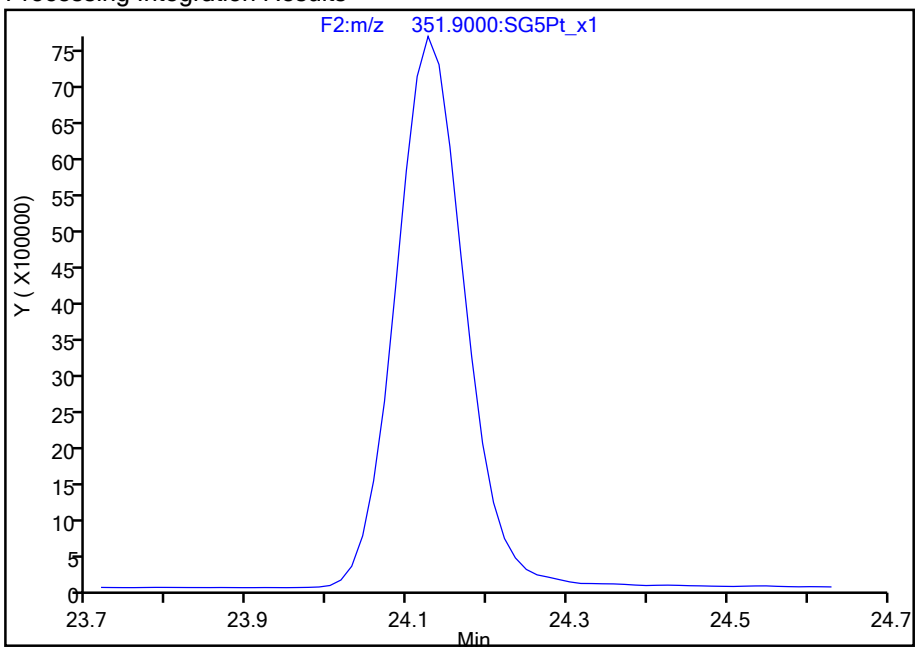

Manual Integration Results

RT: 24.13
Area: 46033296
Amount: 96.198549
Amount Units: pg/ul

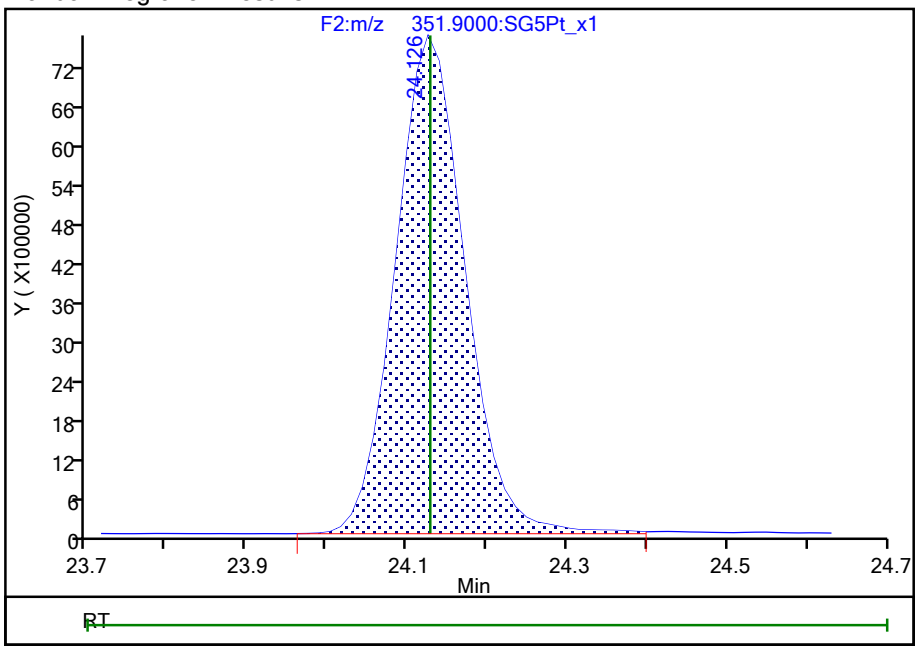

Reviewer: arghestanis, 26-Jul-2021 12:30:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

781244

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDF, CAS: 114423-98-2

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.84

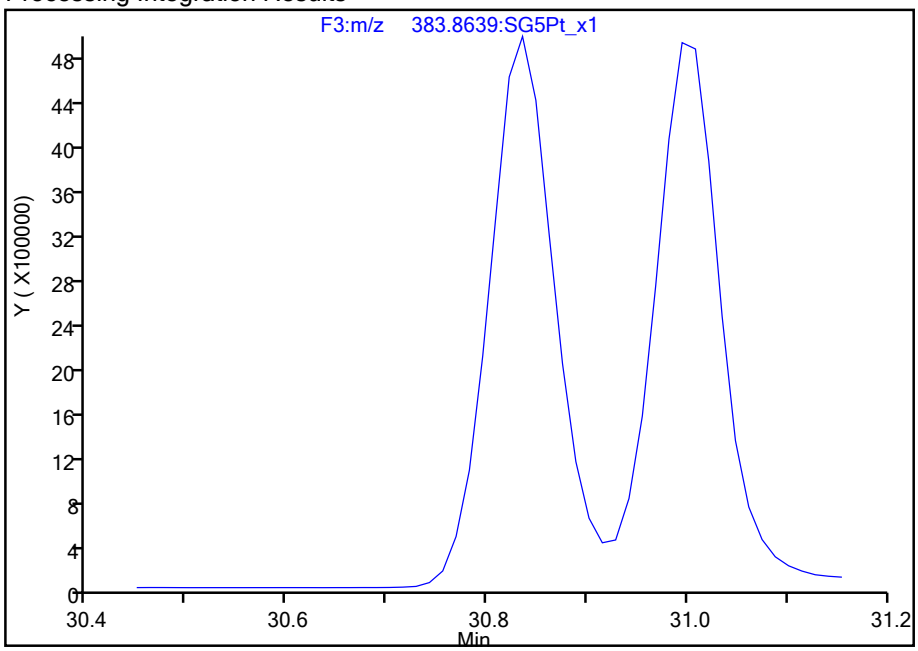

Manual Integration Results

RT: 30.84
Area: 22324815
Amount: 101.5622
Amount Units: pg/ul

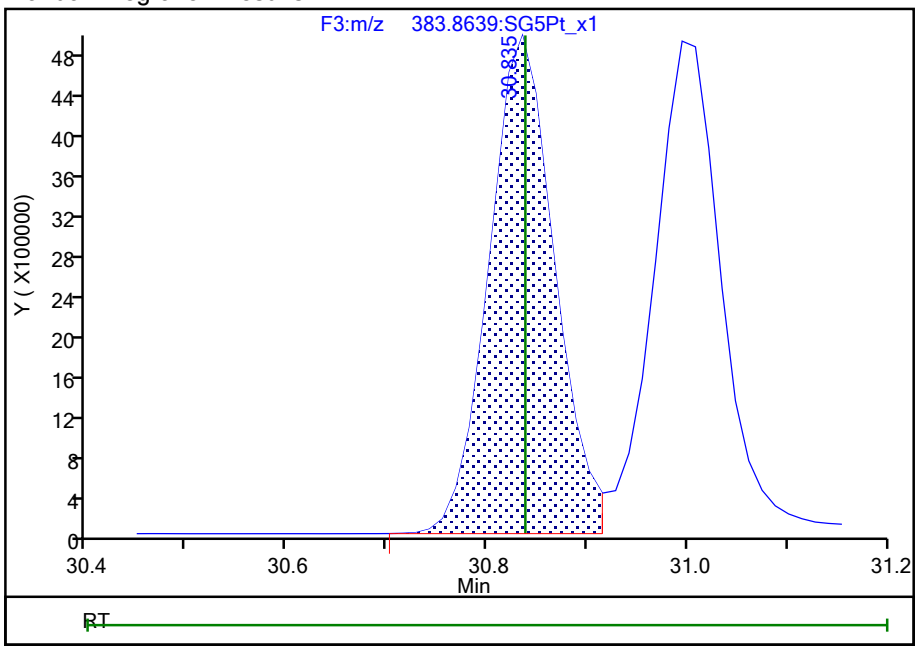

Reviewer: arghestanis, 26-Jul-2021 12:30:40
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.93

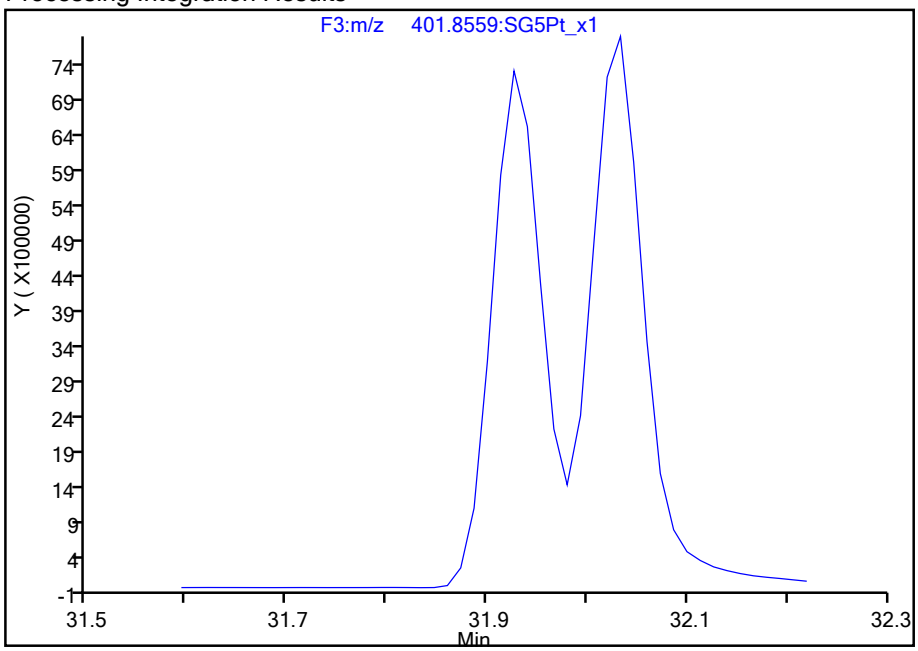

Manual Integration Results

RT: 31.93
Area: 24991401
Amount: 102.4585
Amount Units: pg/ul

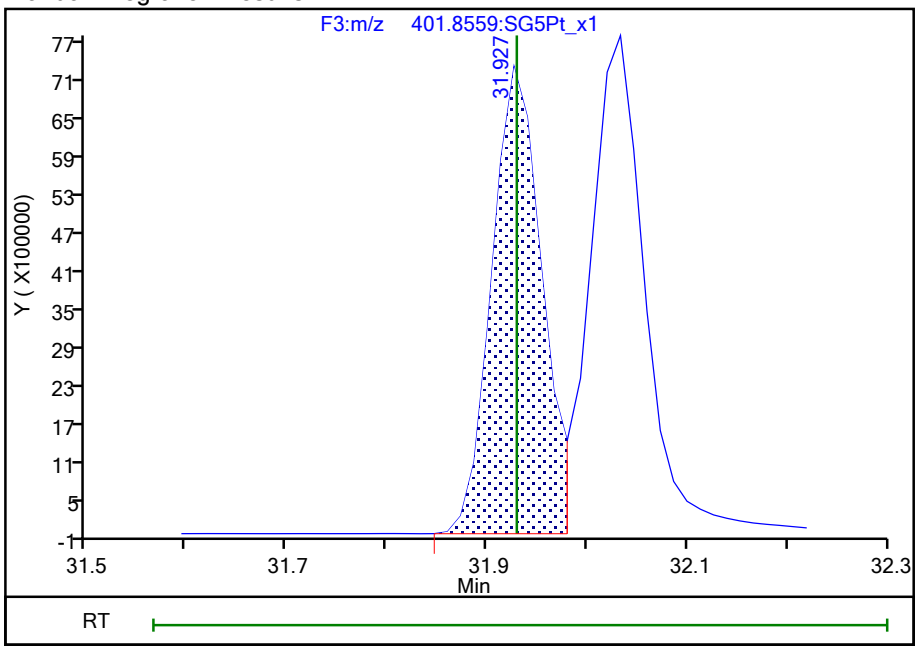

Reviewer: arghestanis, 26-Jul-2021 12:30:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.01

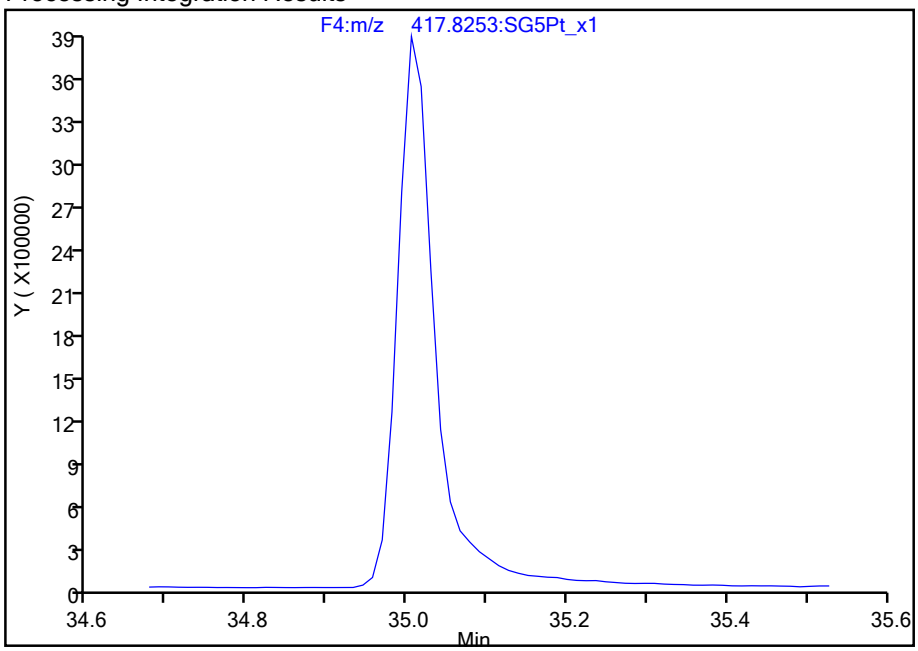

Manual Integration Results

RT: 35.01
Area: 12913204
Amount: 101.2180
Amount Units: pg/ul

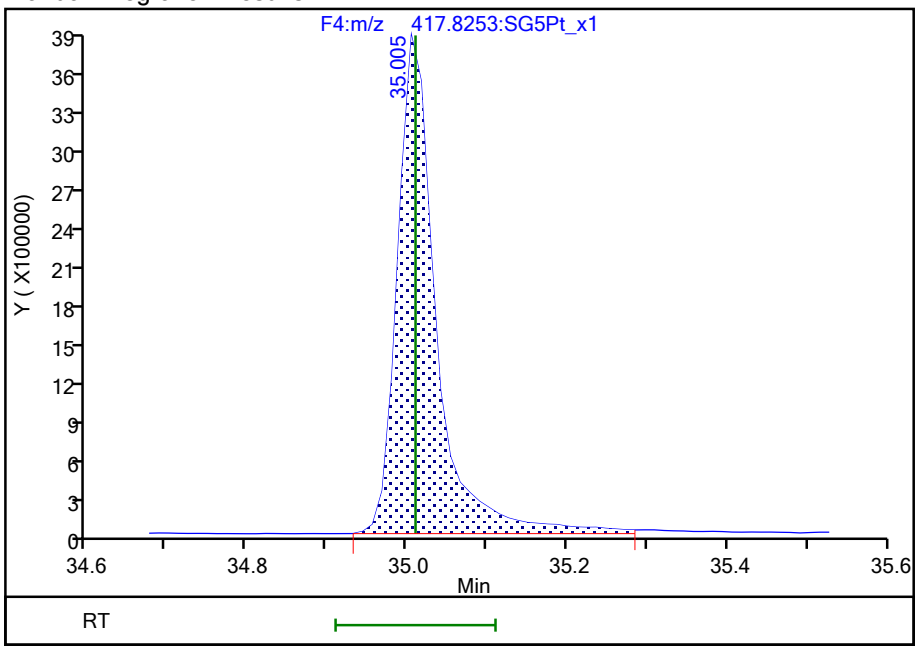

Reviewer: arghestanis, 26-Jul-2021 12:31:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

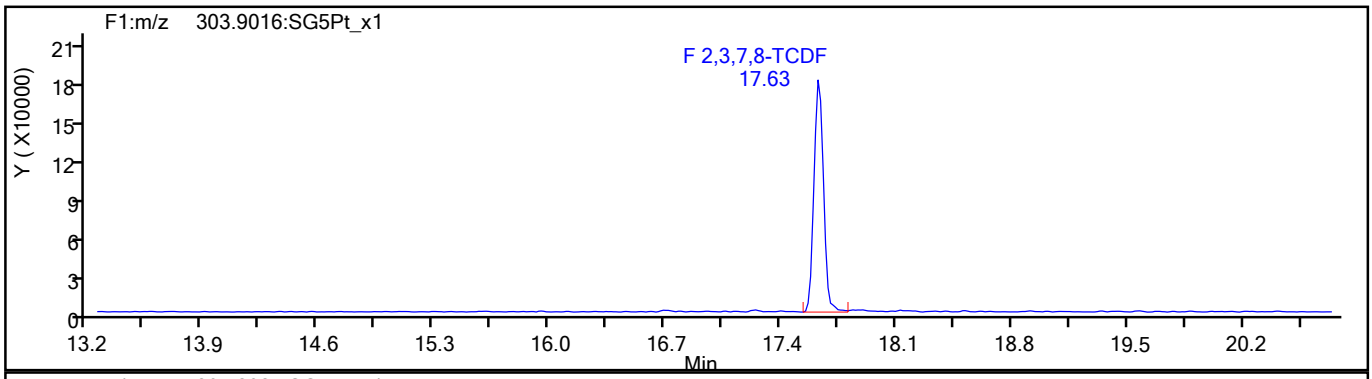

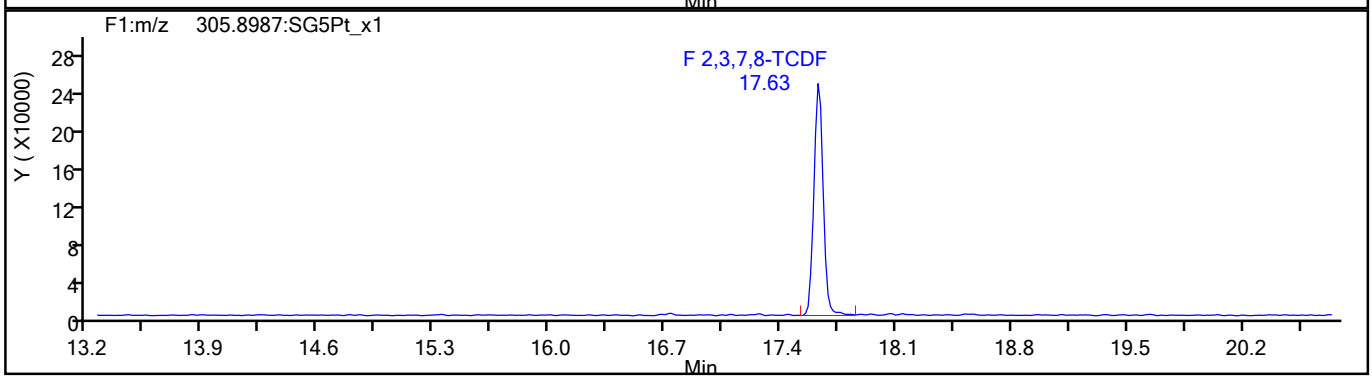

TCDF Standards

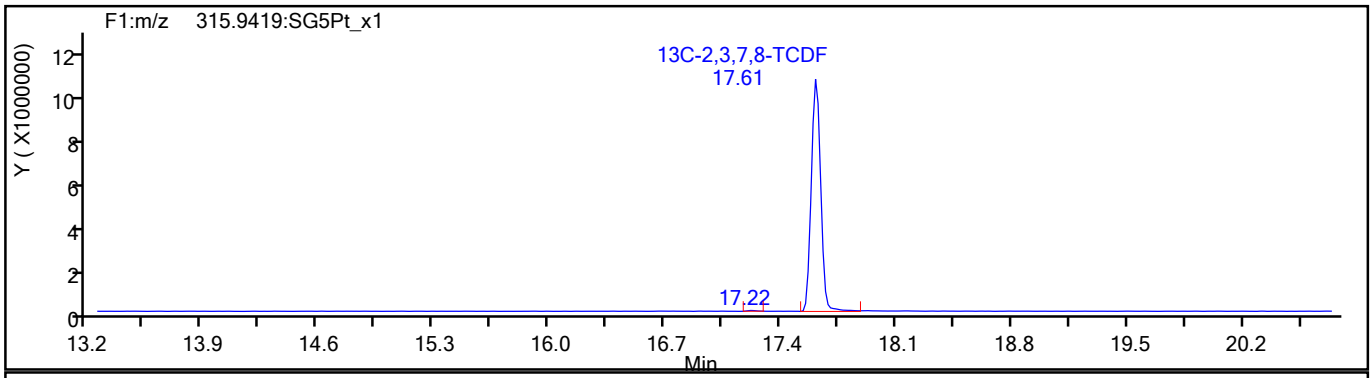

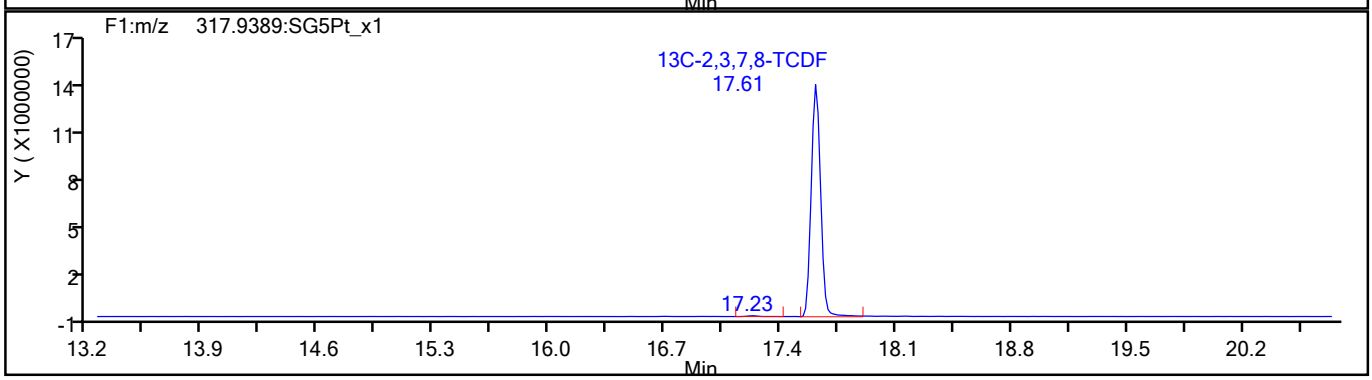

781248

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

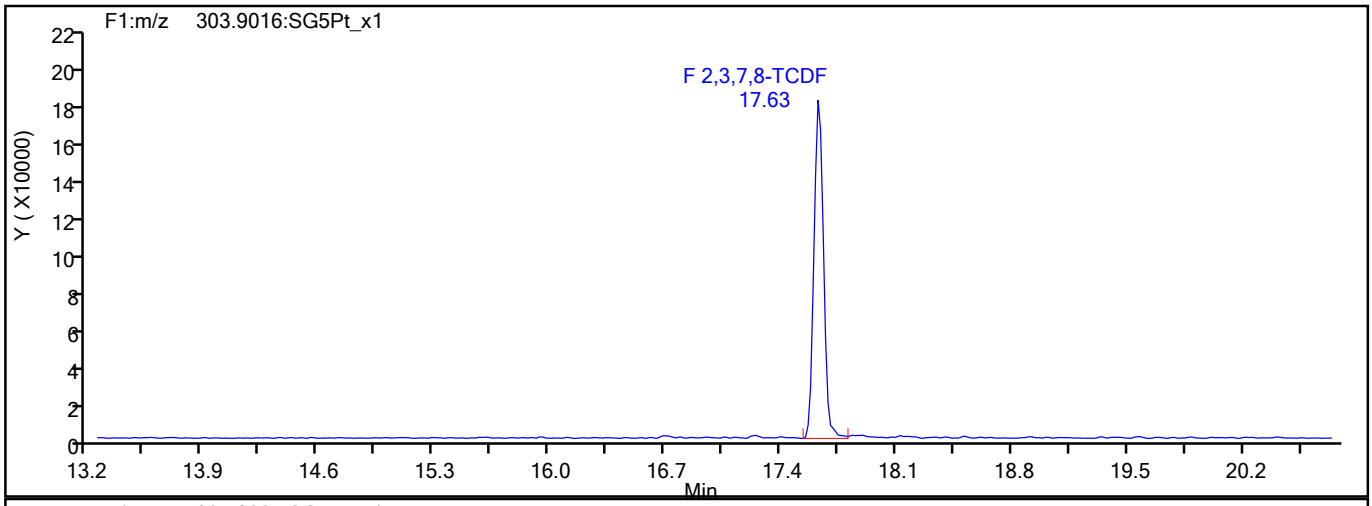

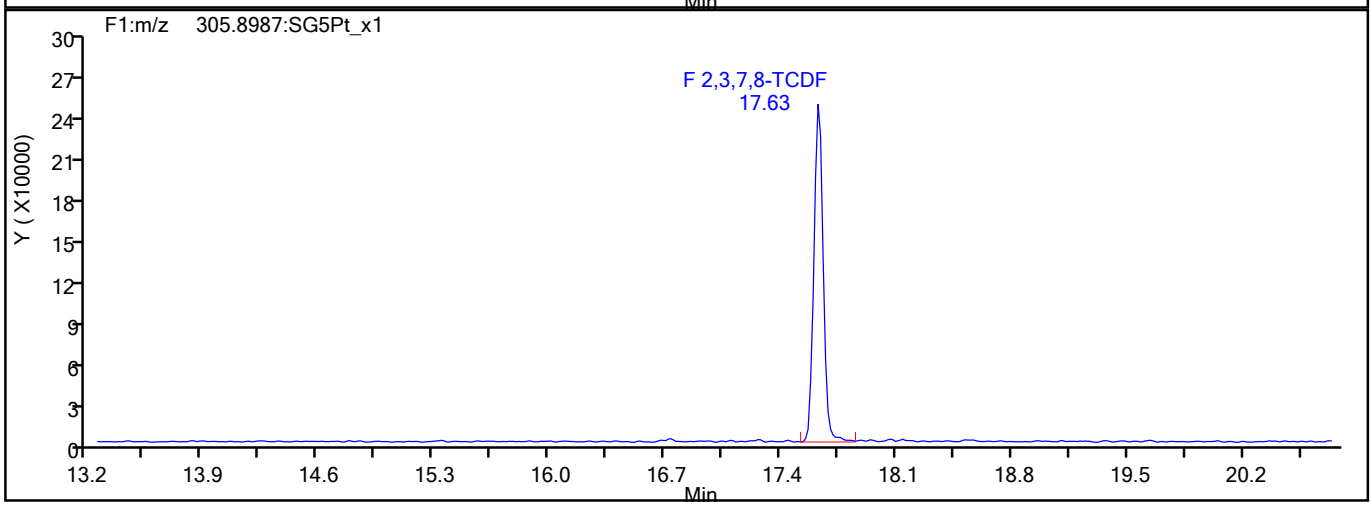

TCDF Interference Mass

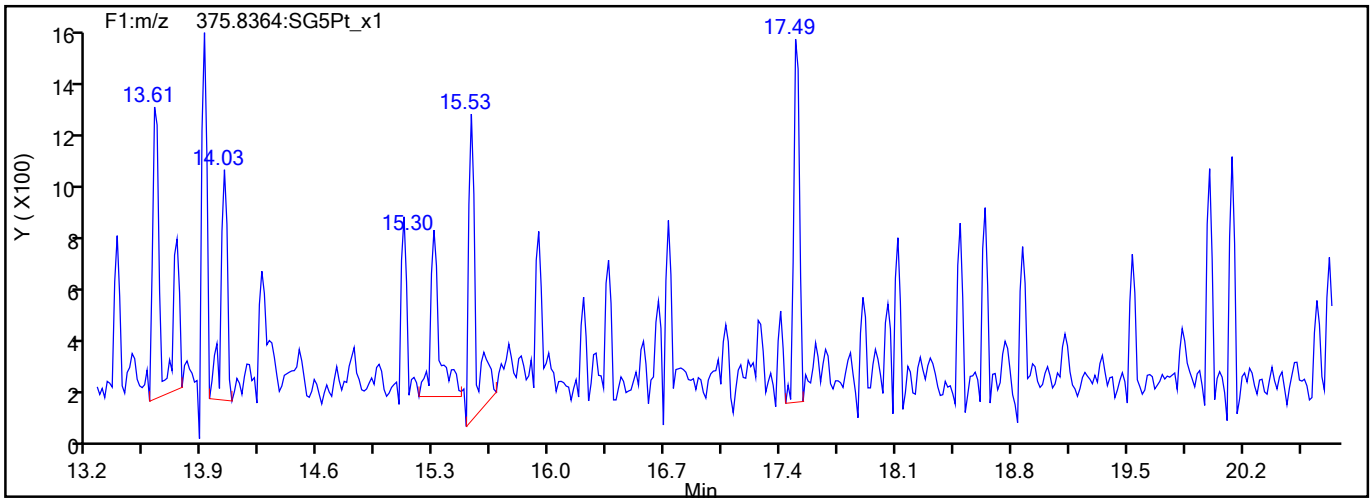

781249

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

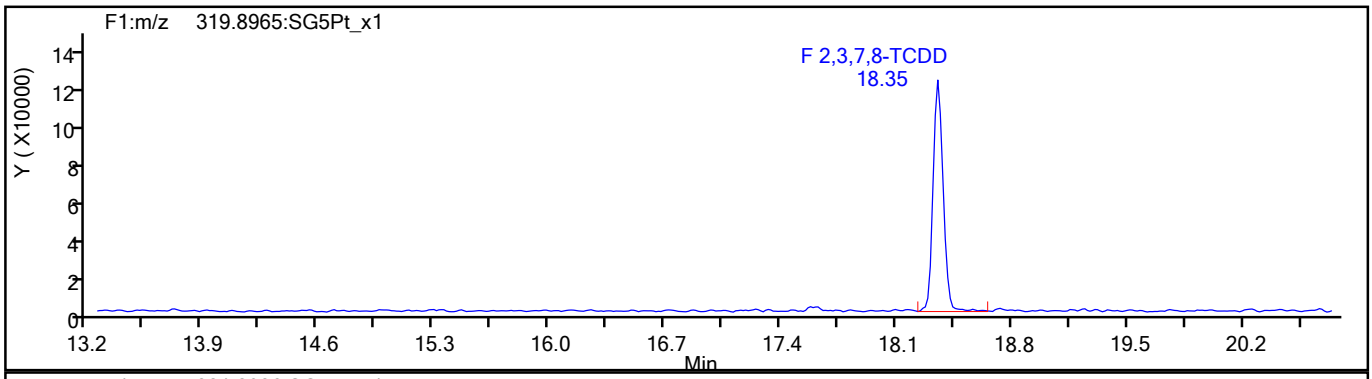

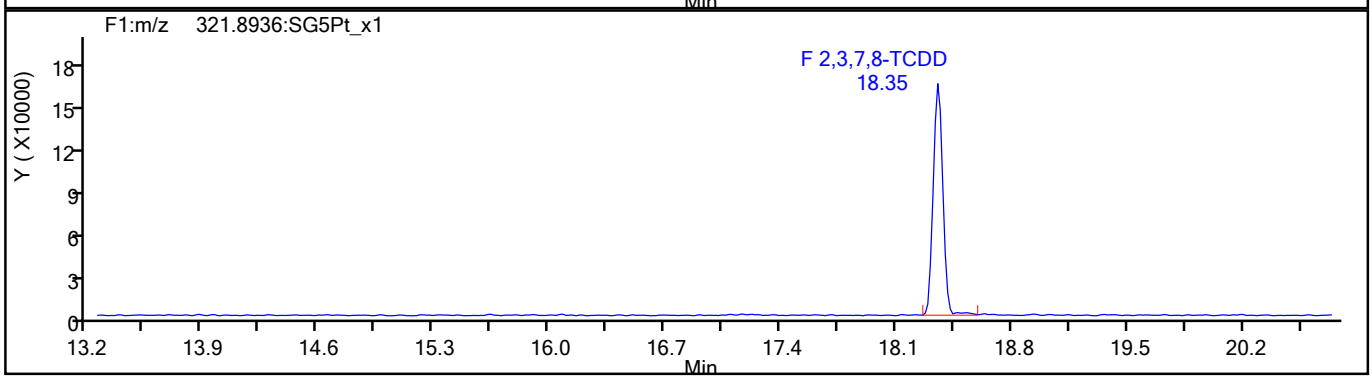

TCDD Standards

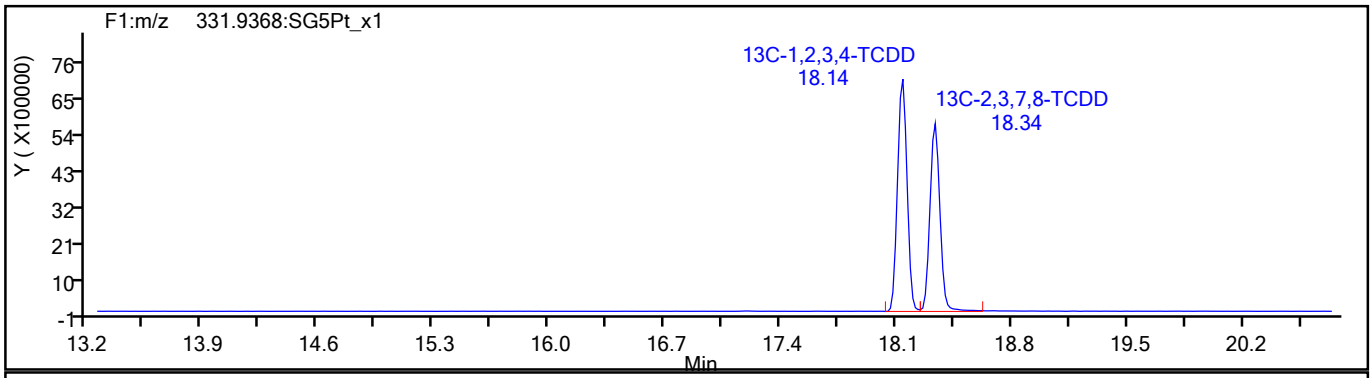

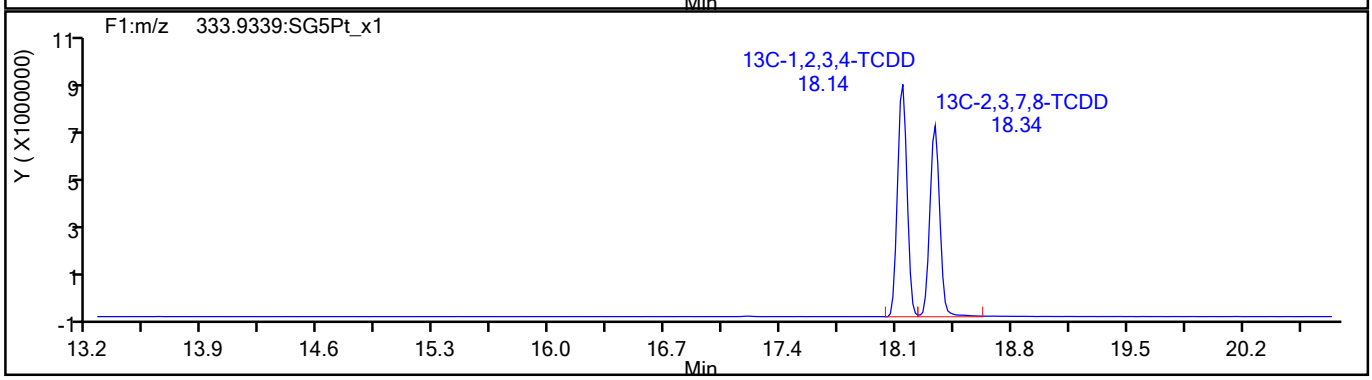

781250

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

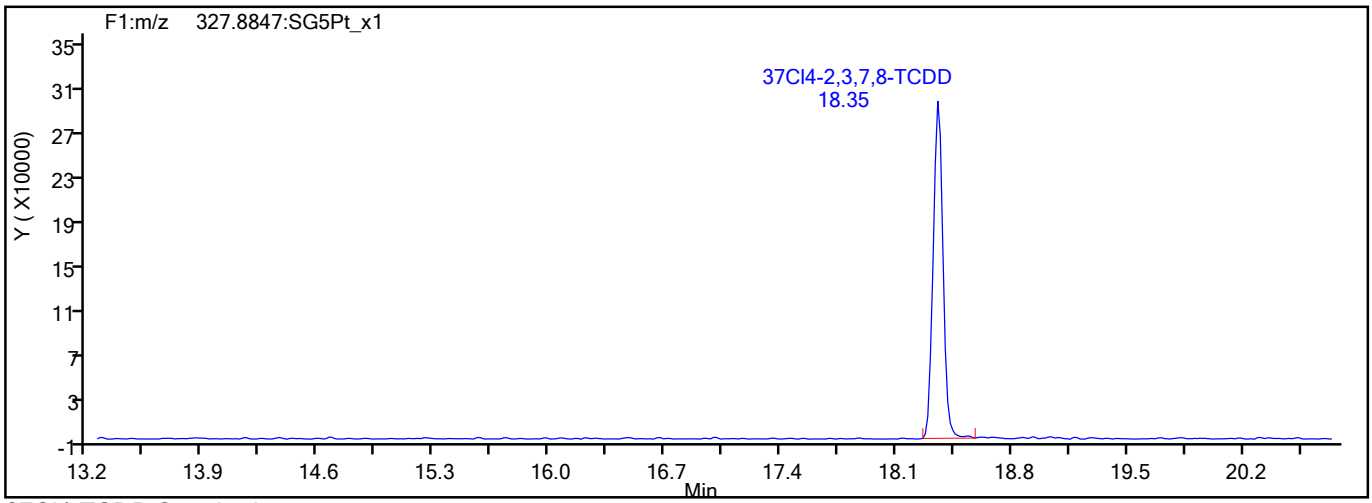

37Cl4-TCDD Standards

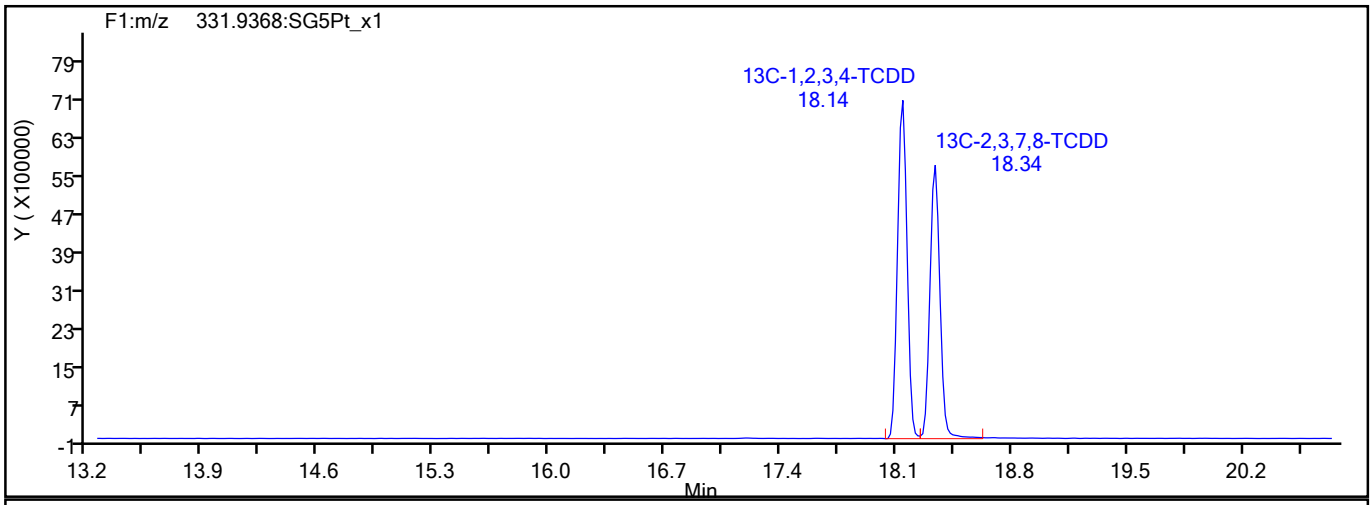

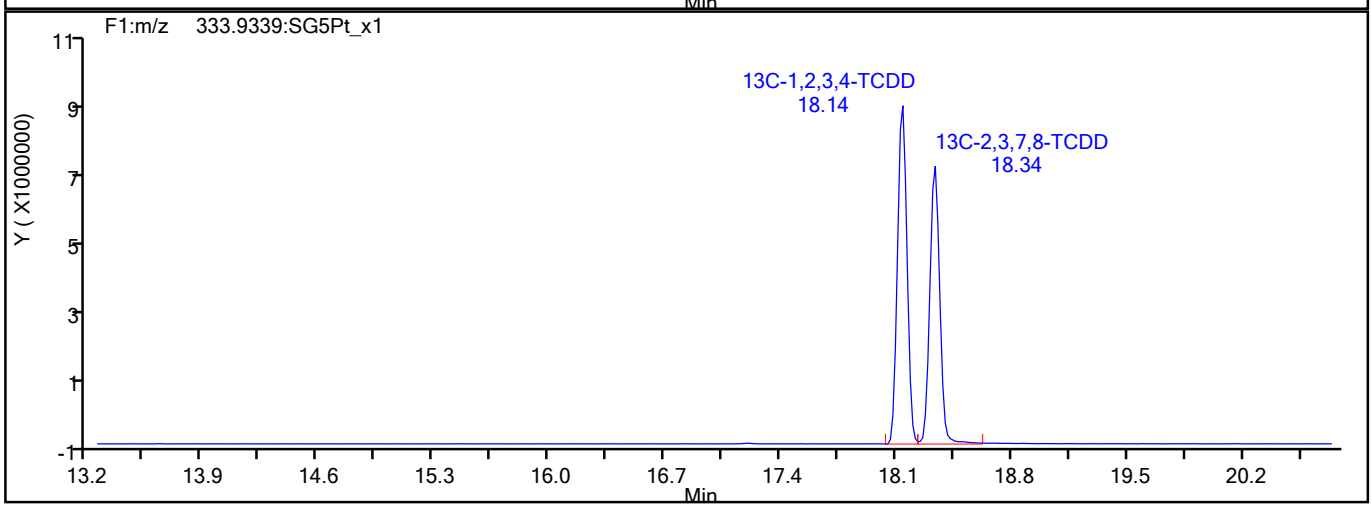

781251

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

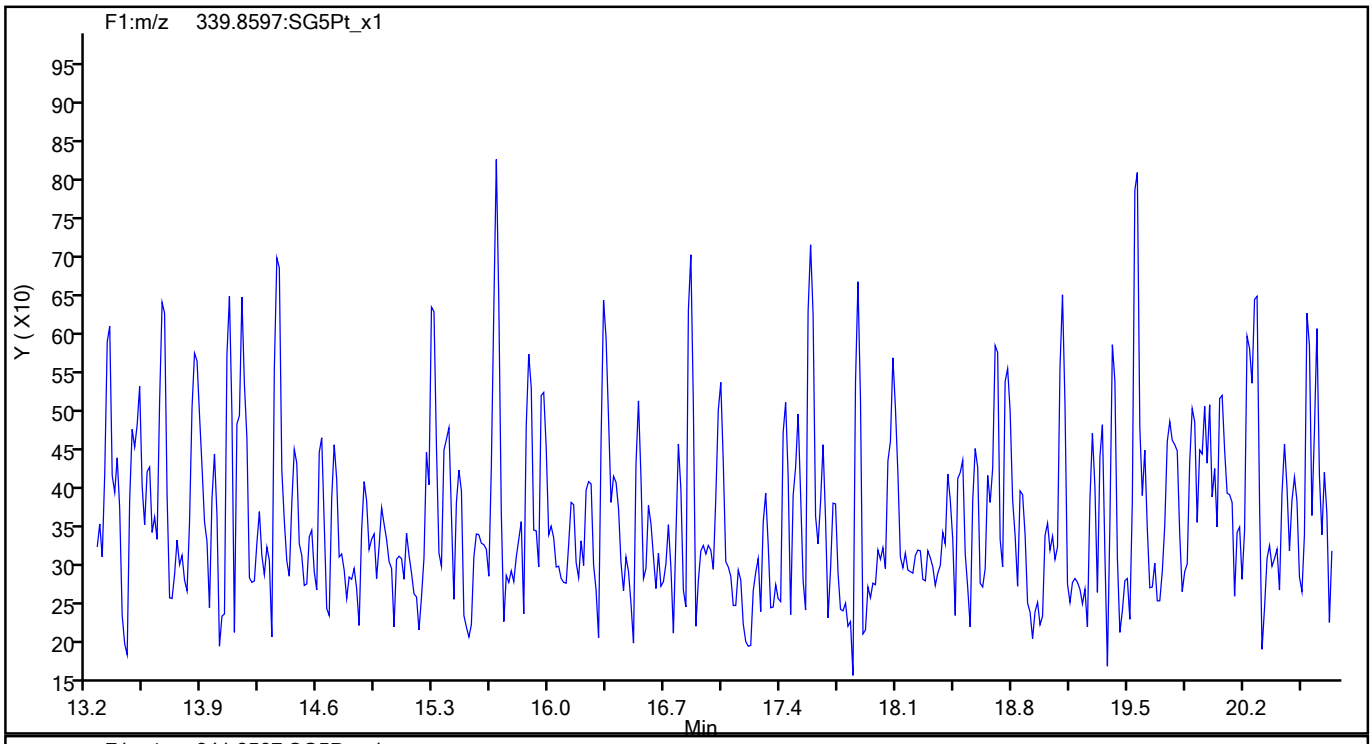

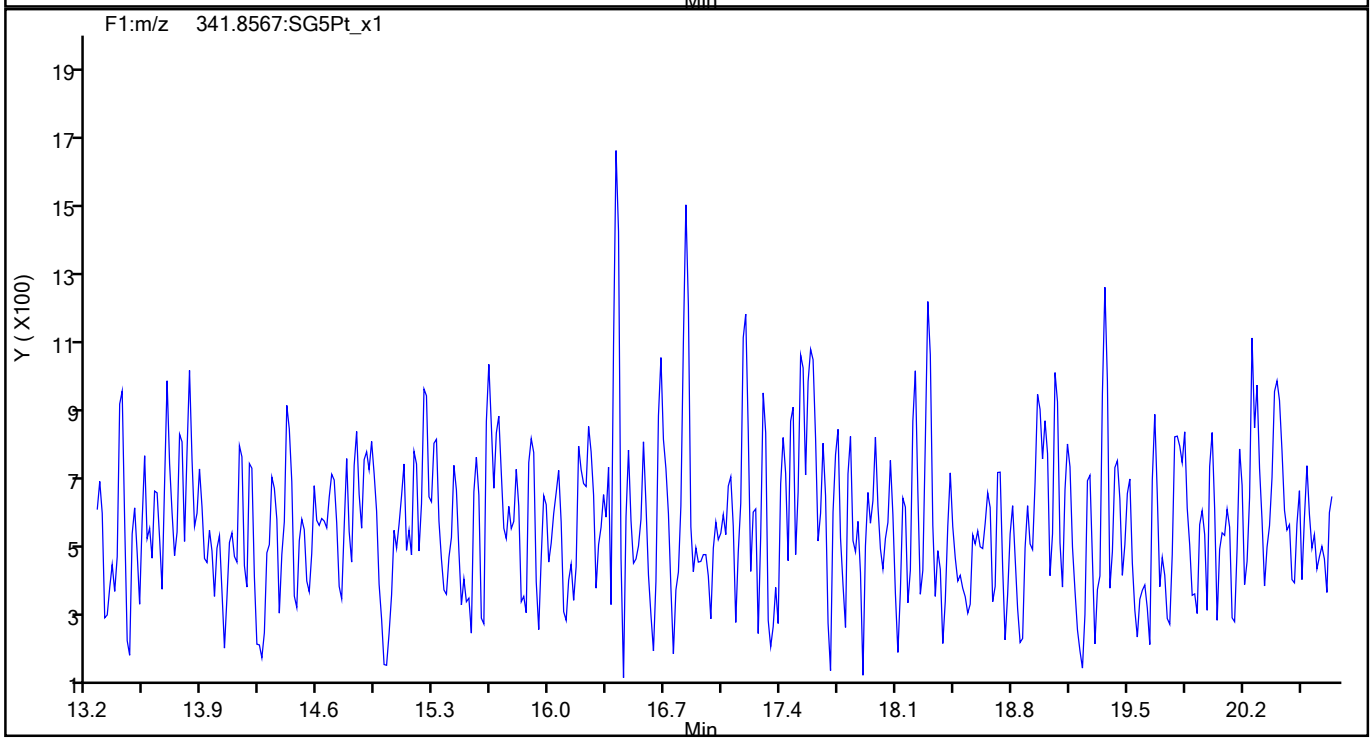

781252

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

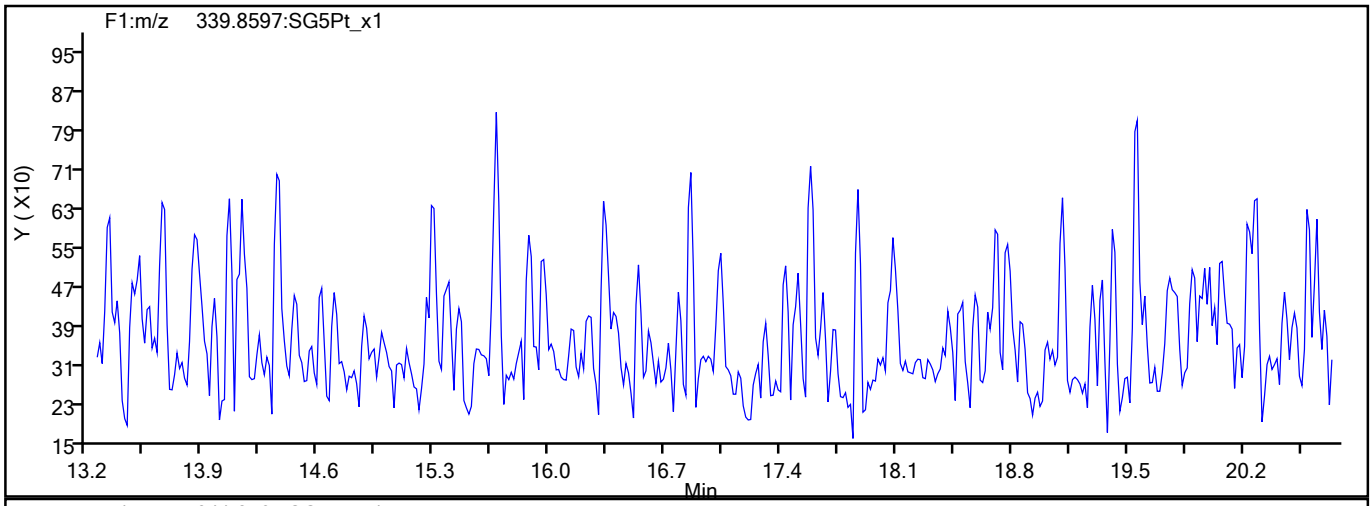

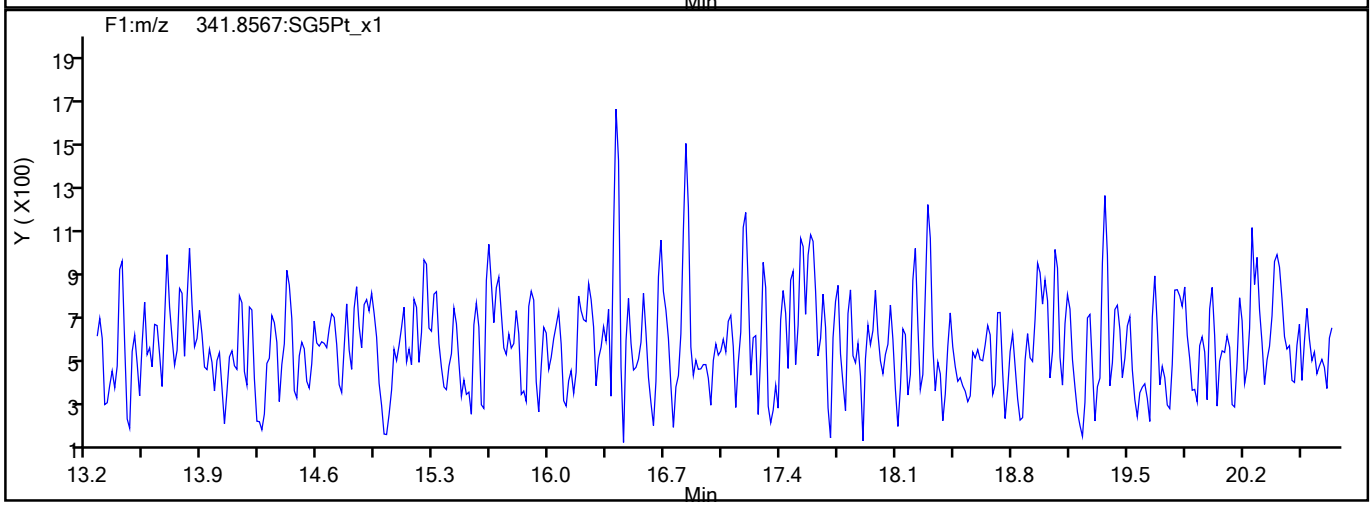

F1 PeCDFs Interference Mass

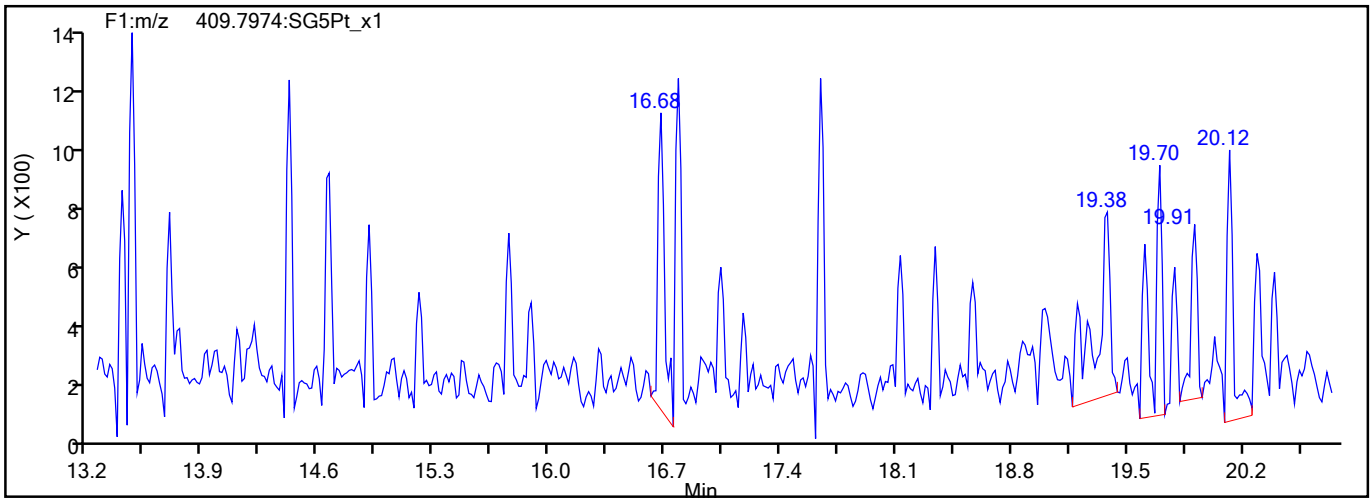

781253

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

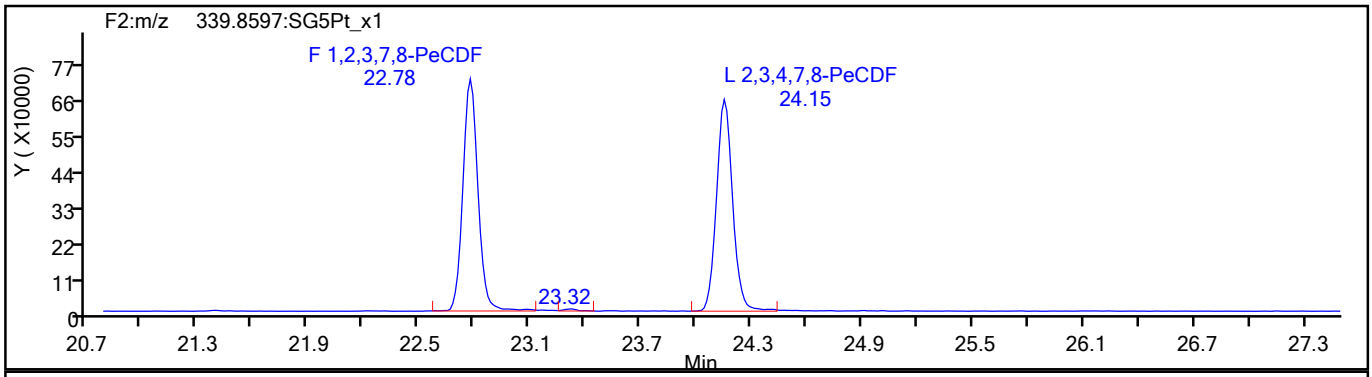

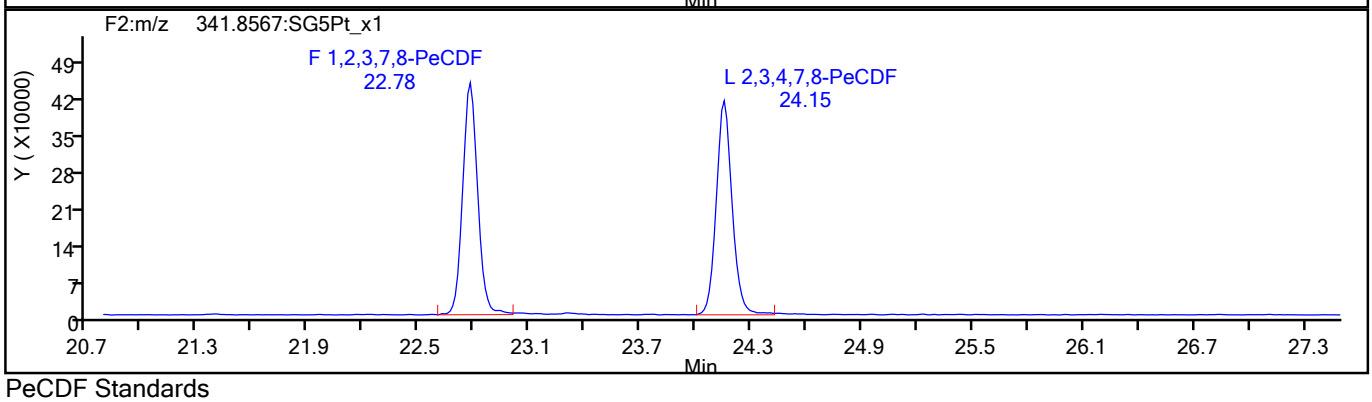

PeCDF Standards

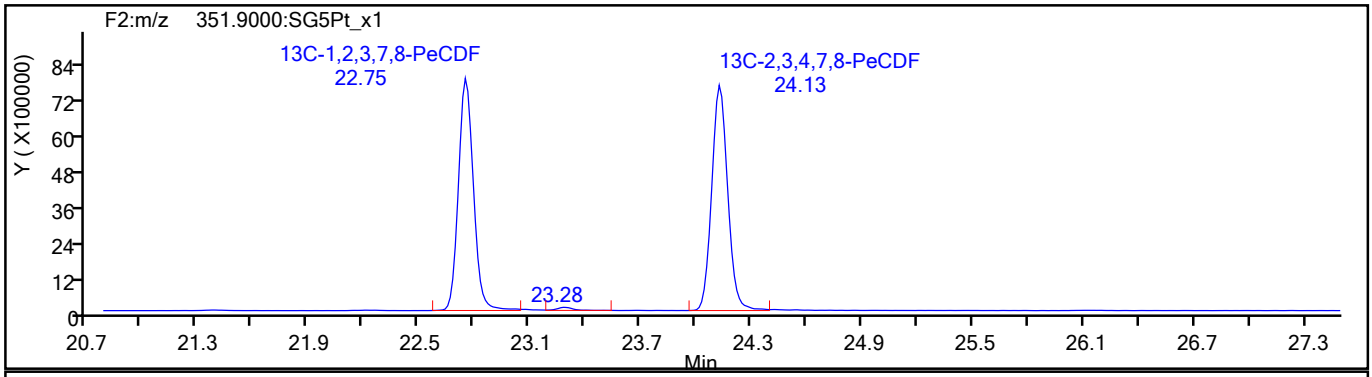

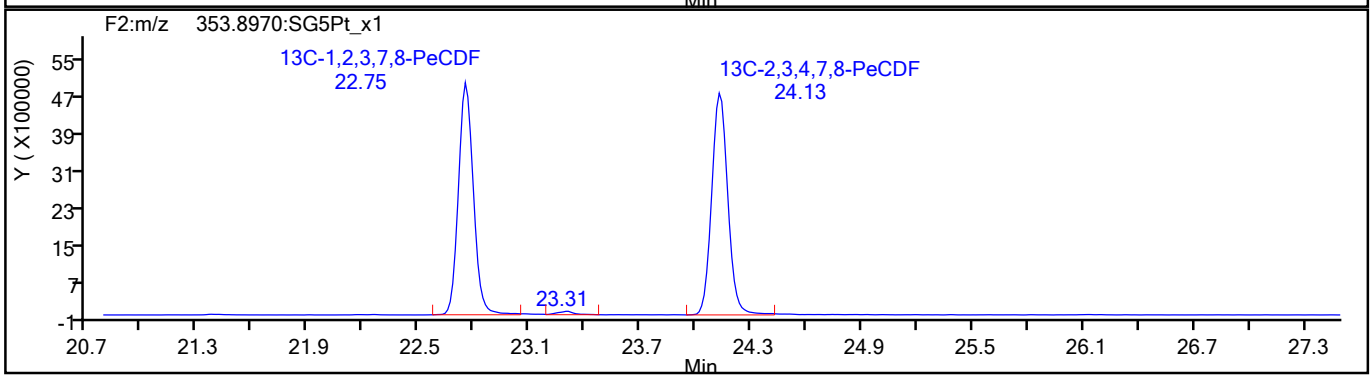

781254

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

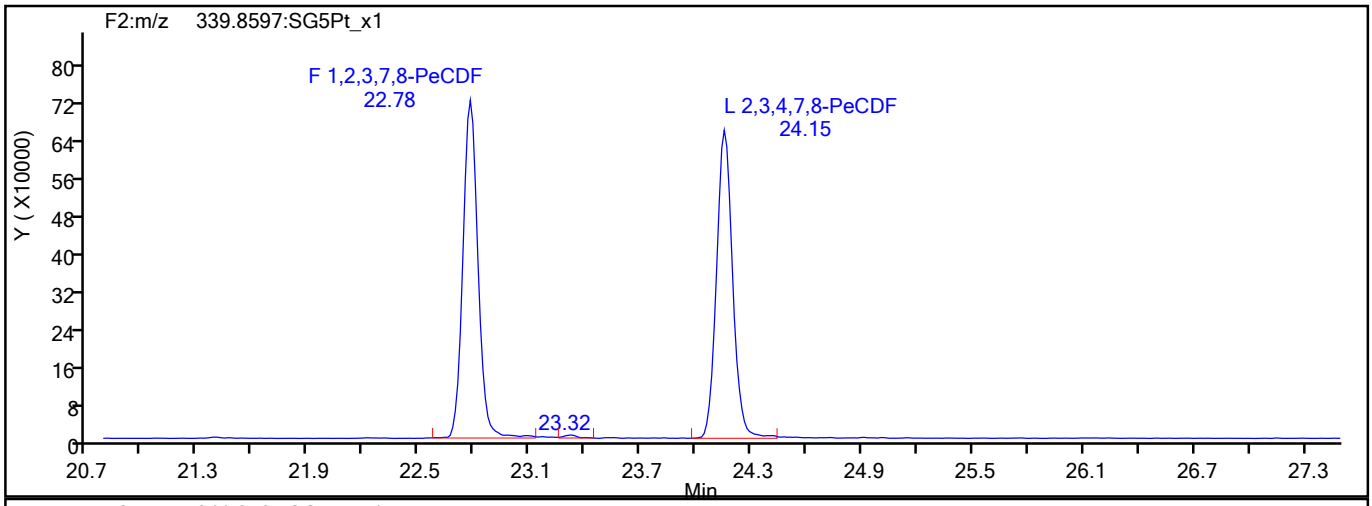

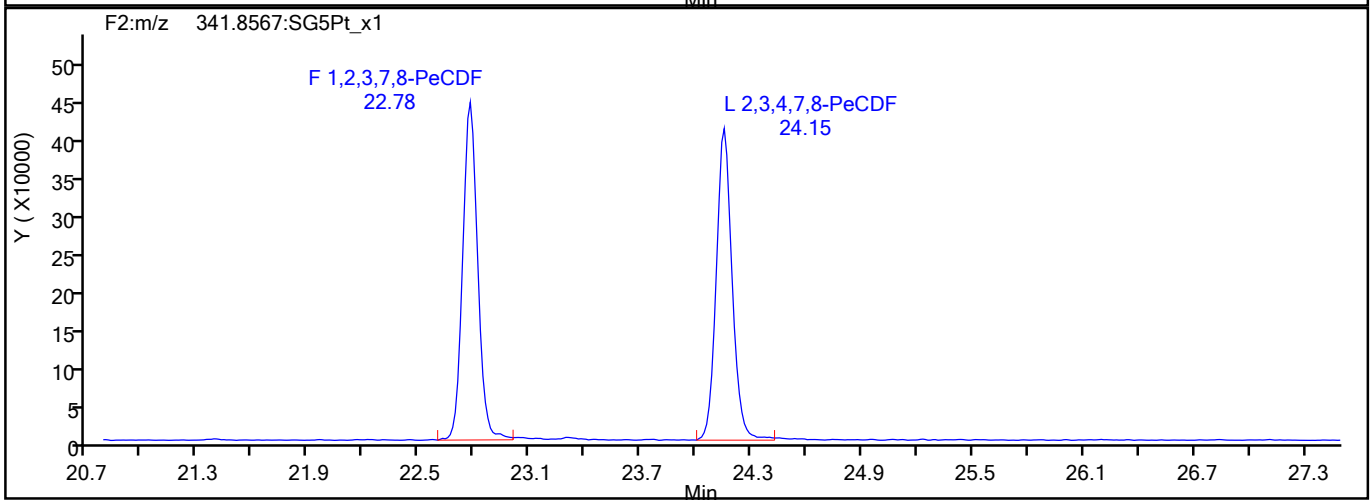

PeCDF Interference Mass

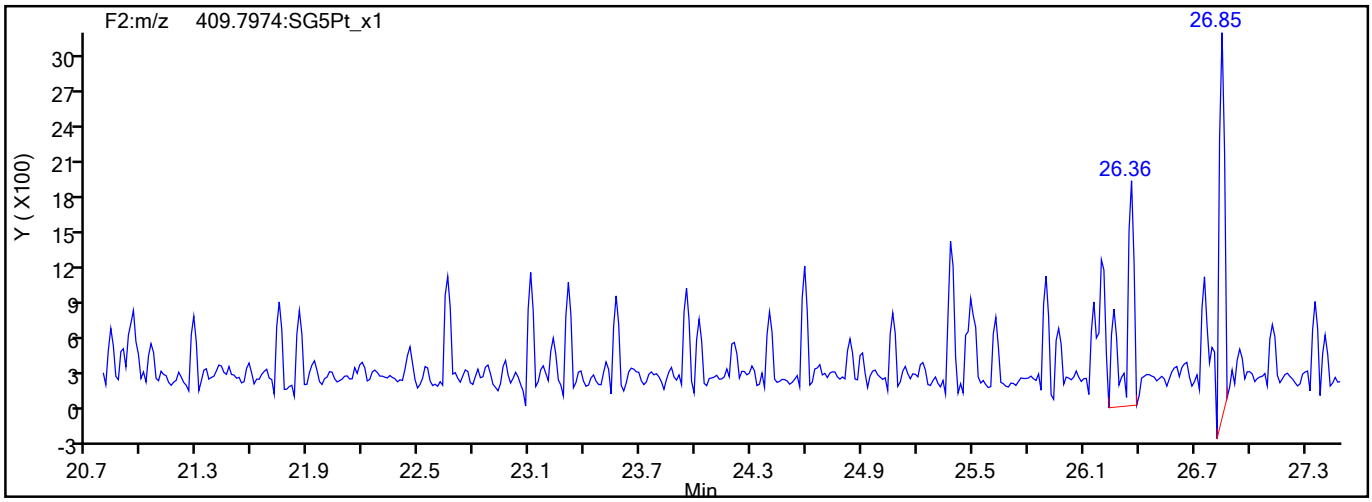

781255

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

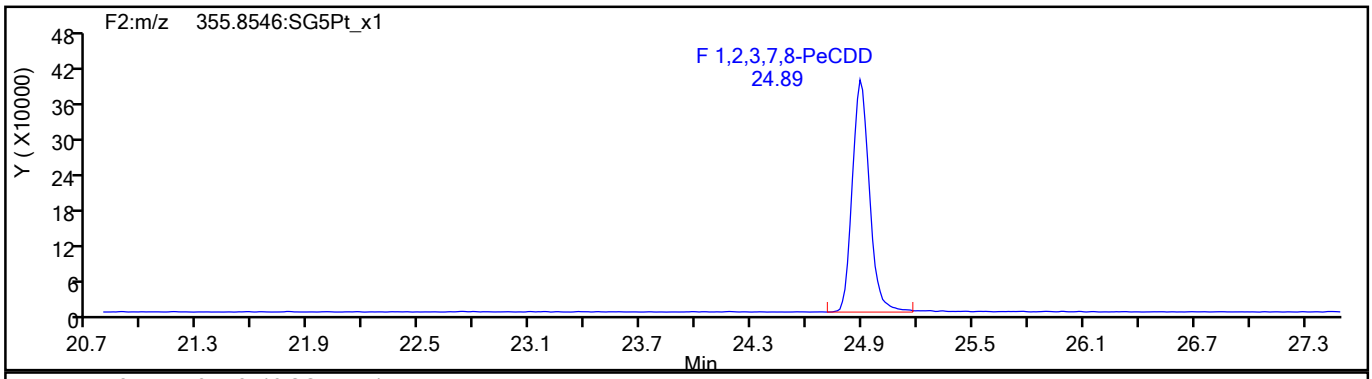

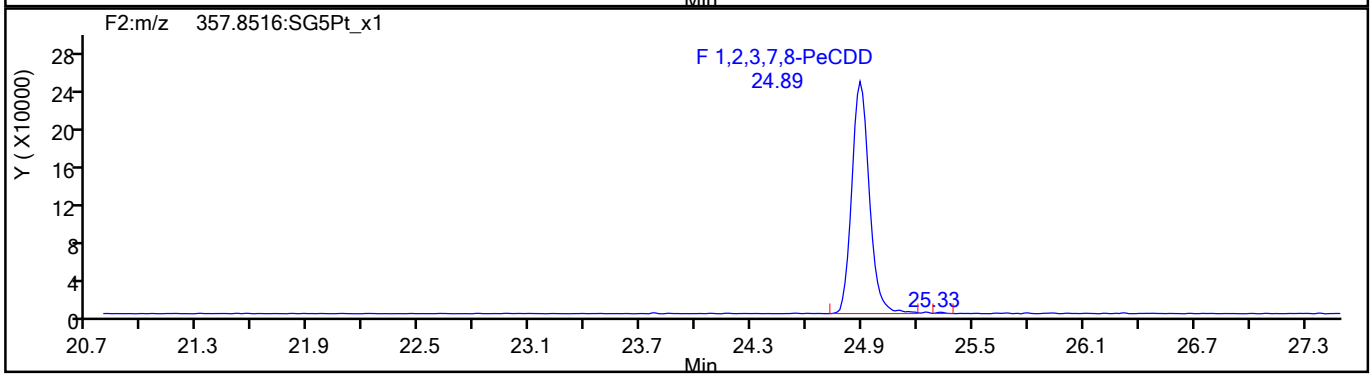

PeCDD Standards

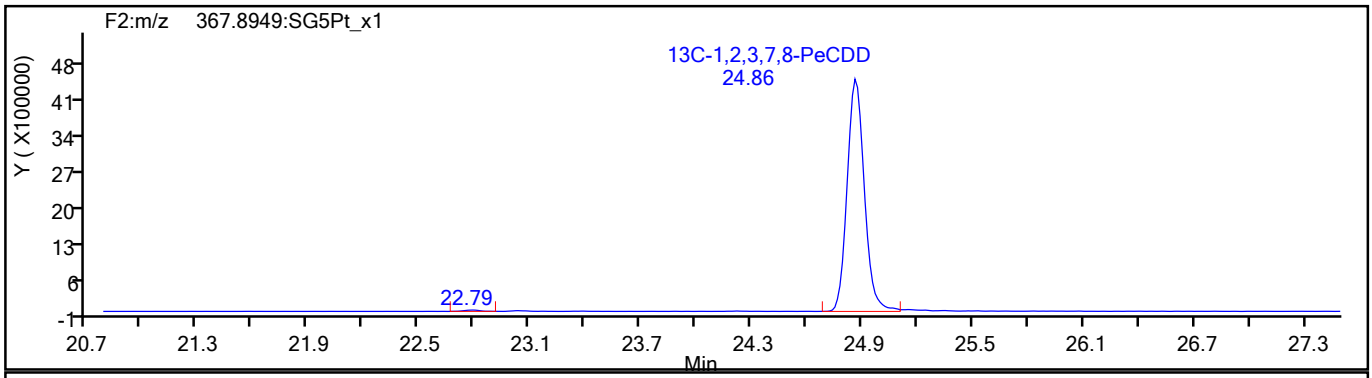

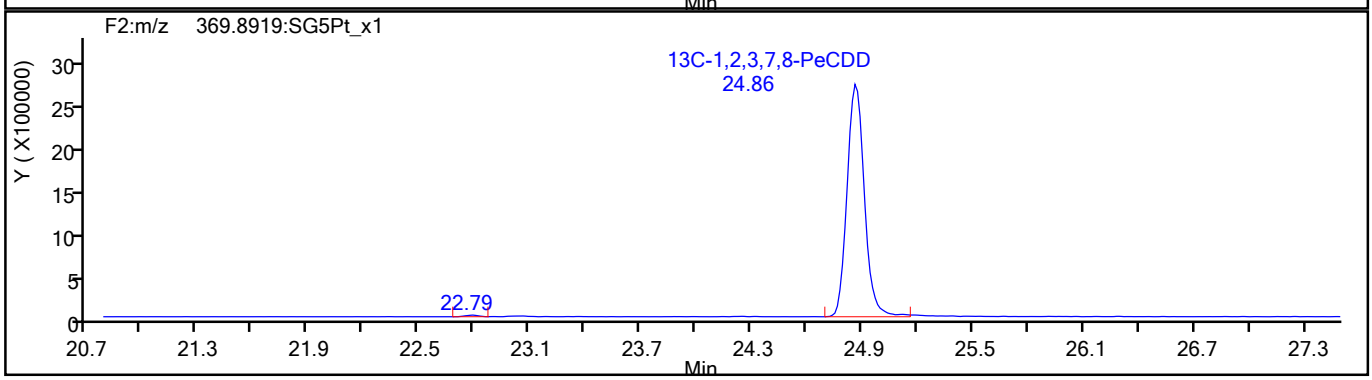

781256

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

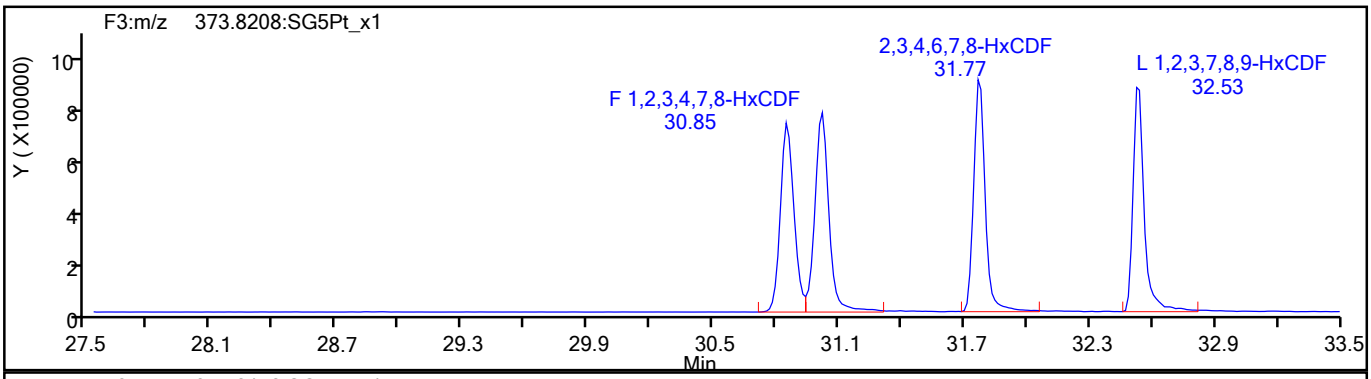

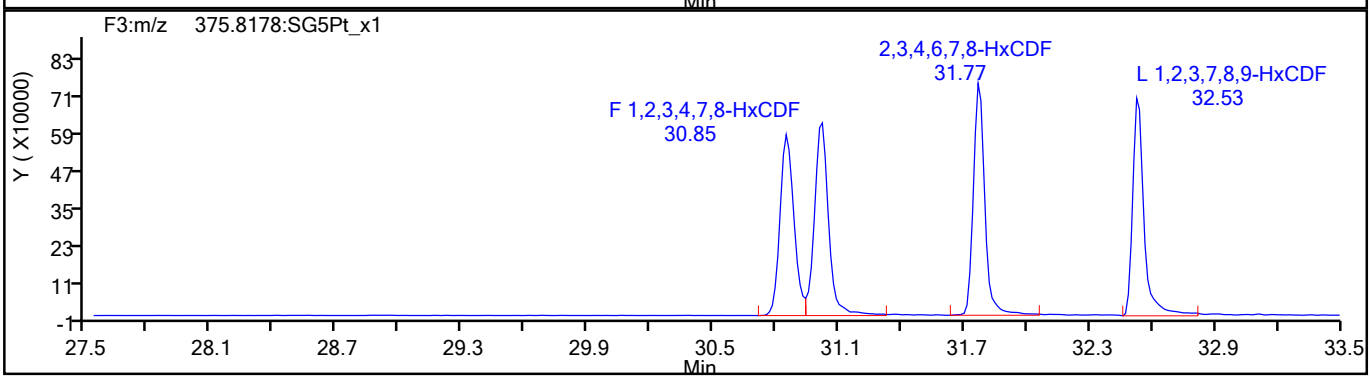

HxCDF Standards

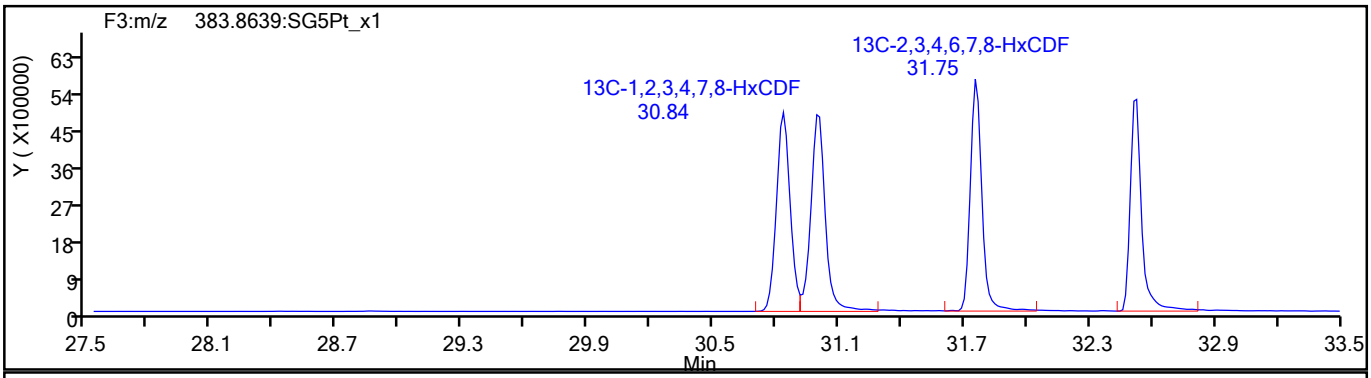

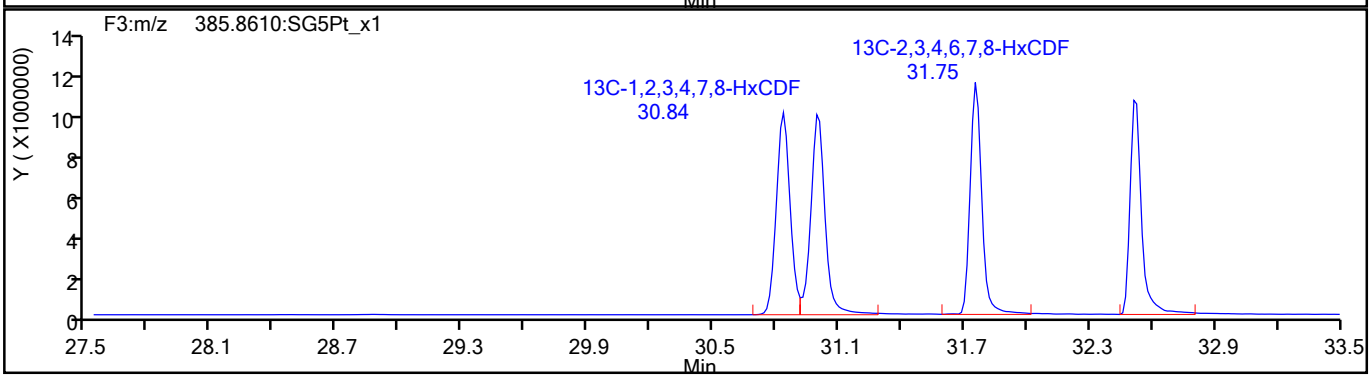

781257

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

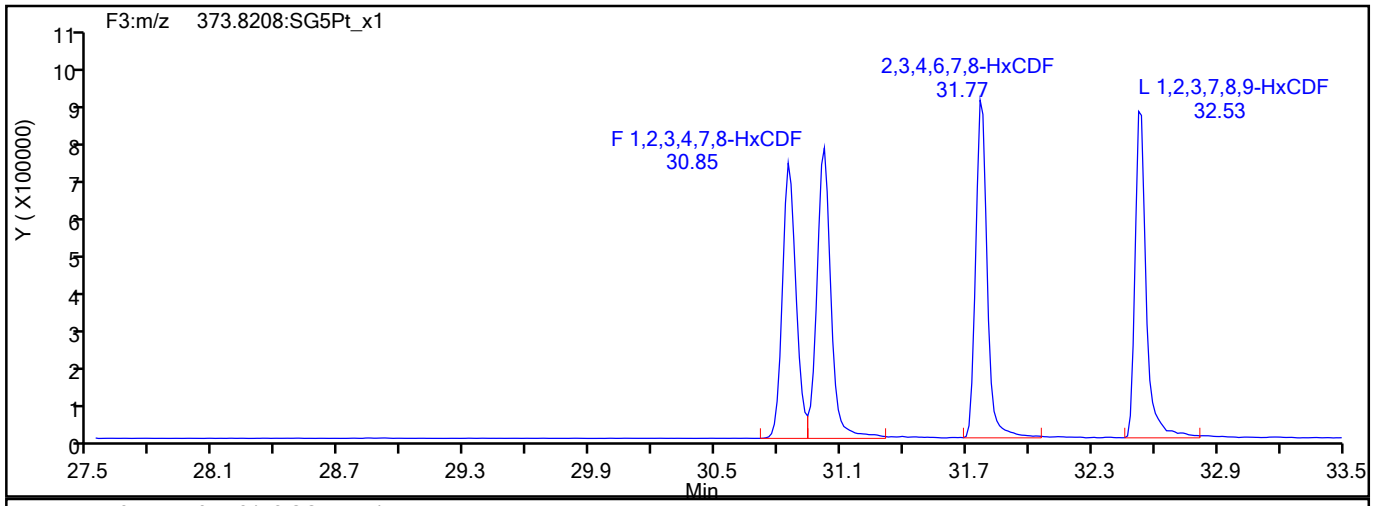

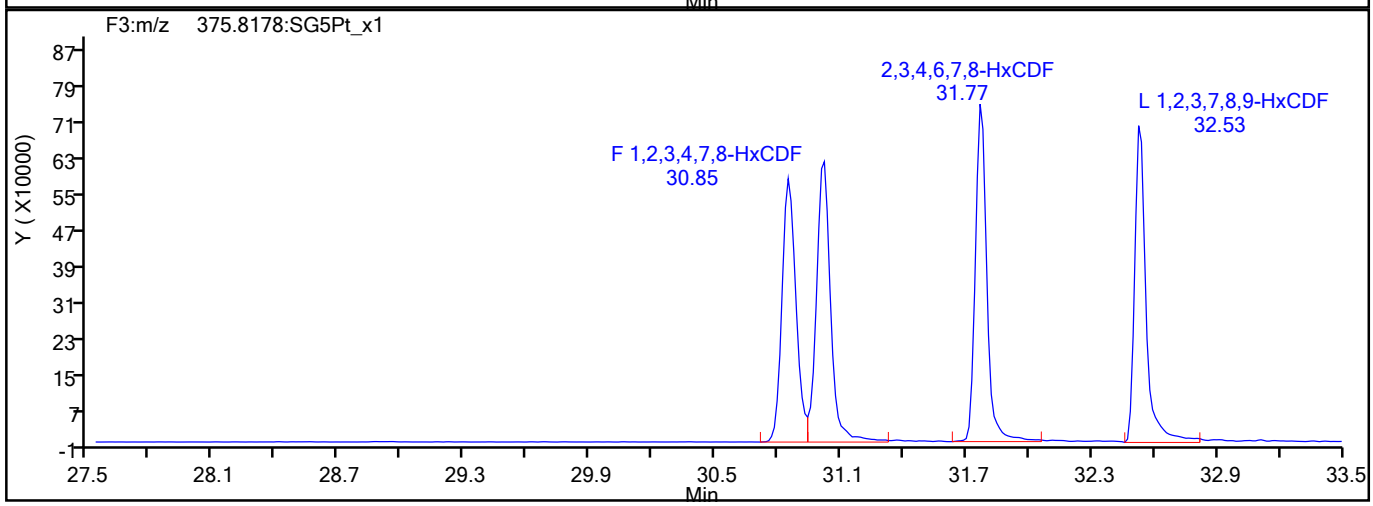

HxCDF Interference Mass

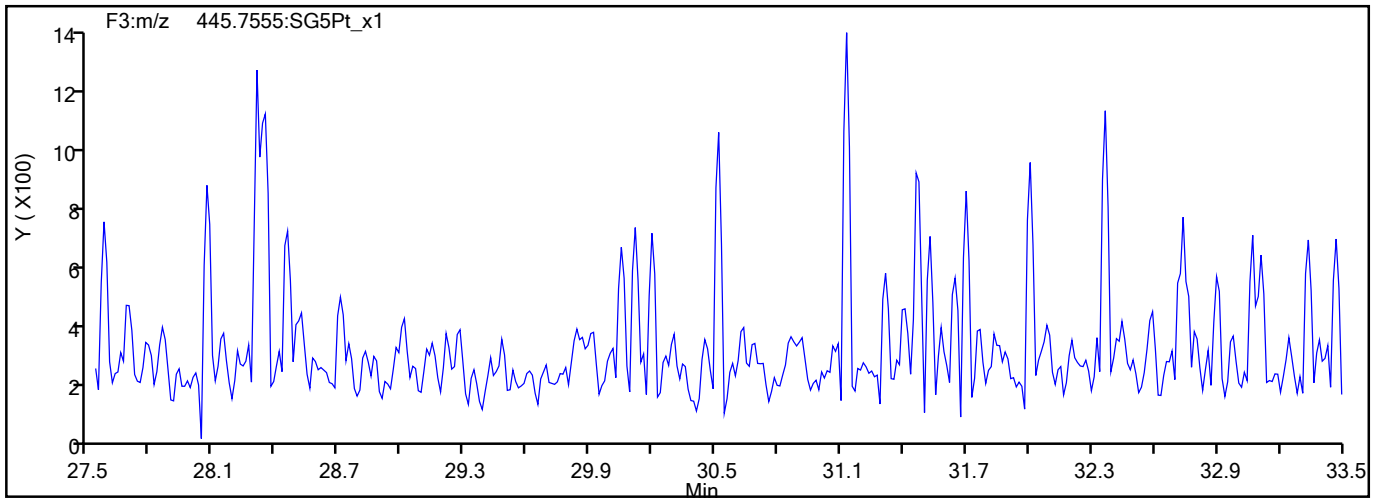

781258

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

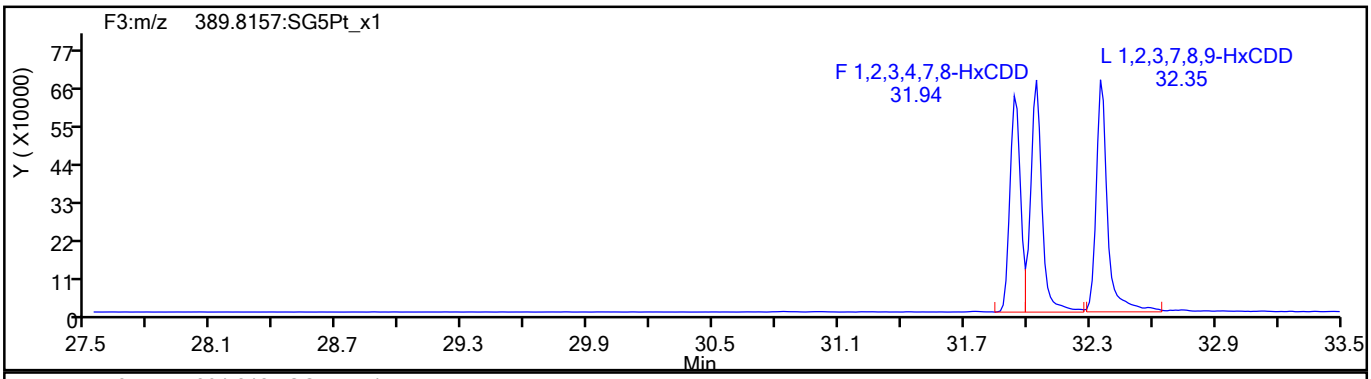

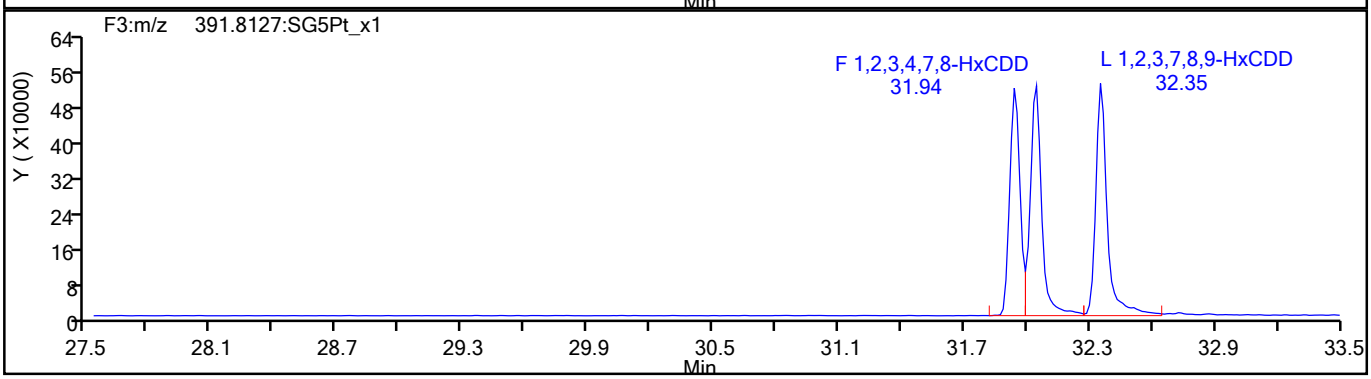

HxCDD Standards

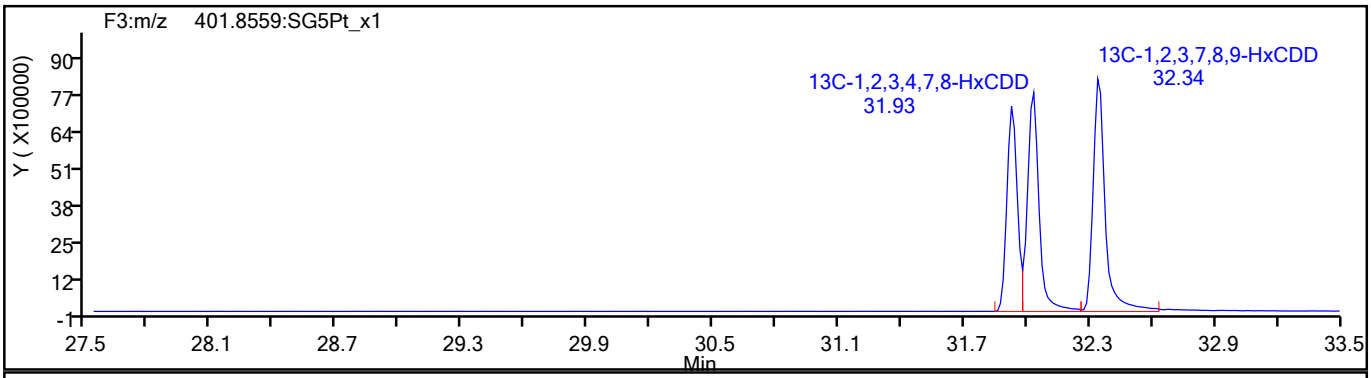

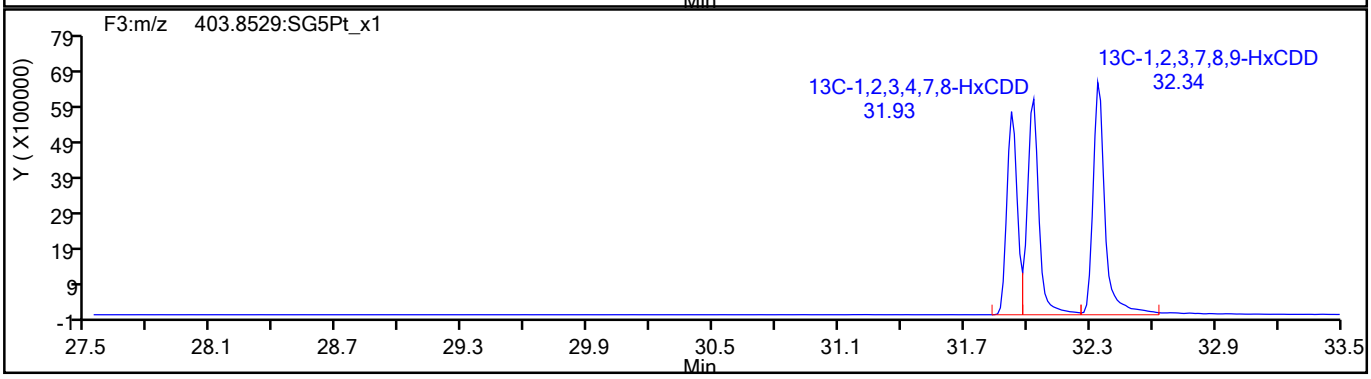

781259

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

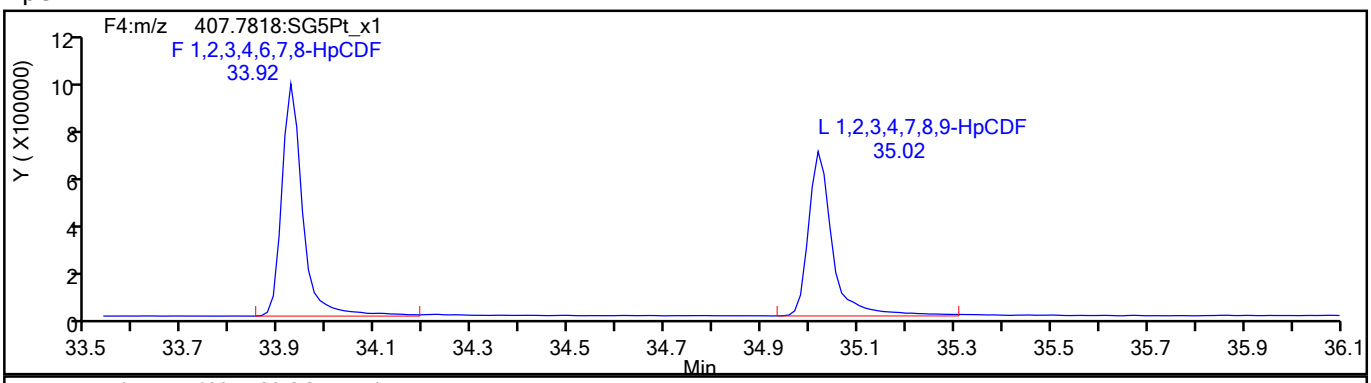

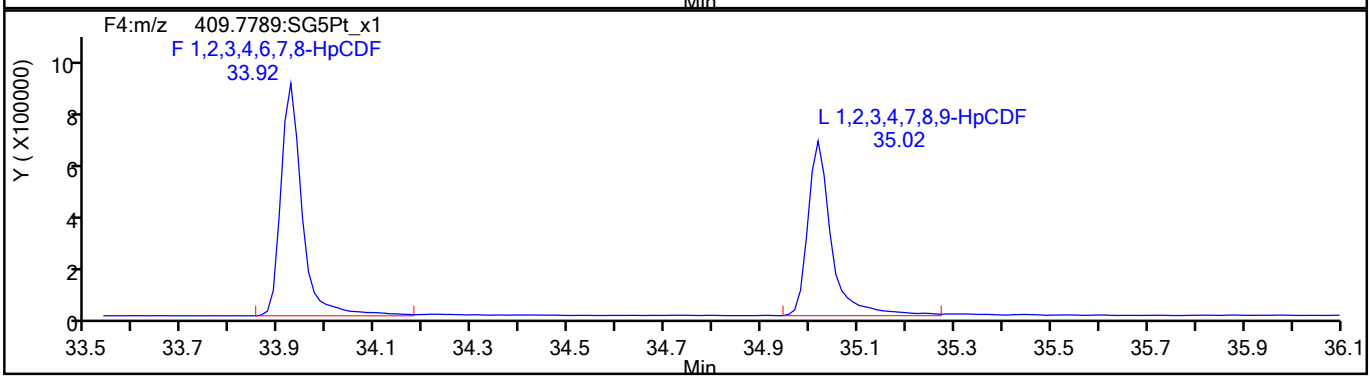

HpCDF Standards

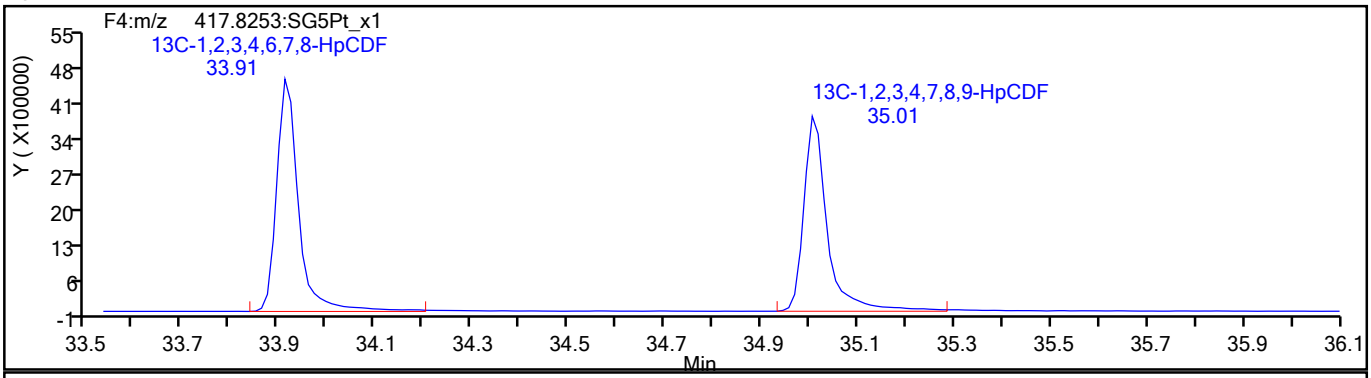

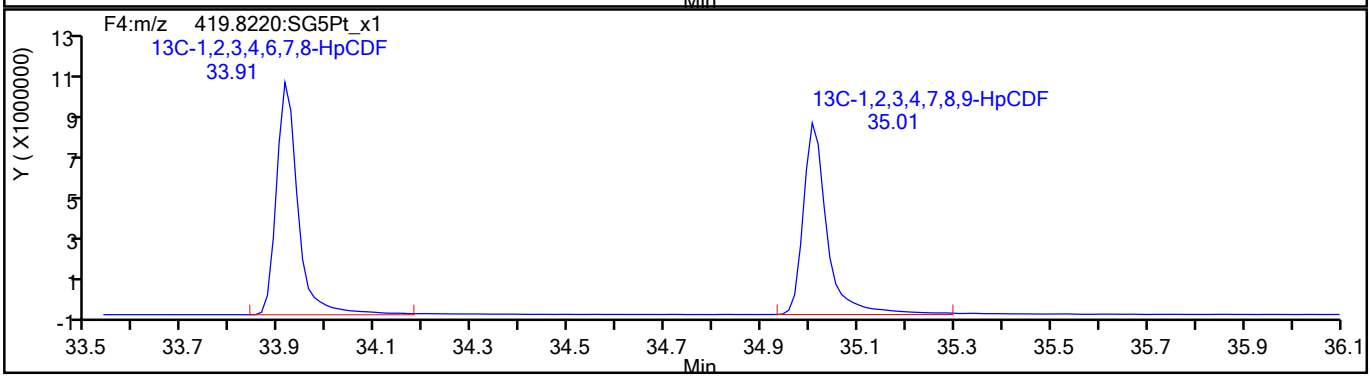

781260

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

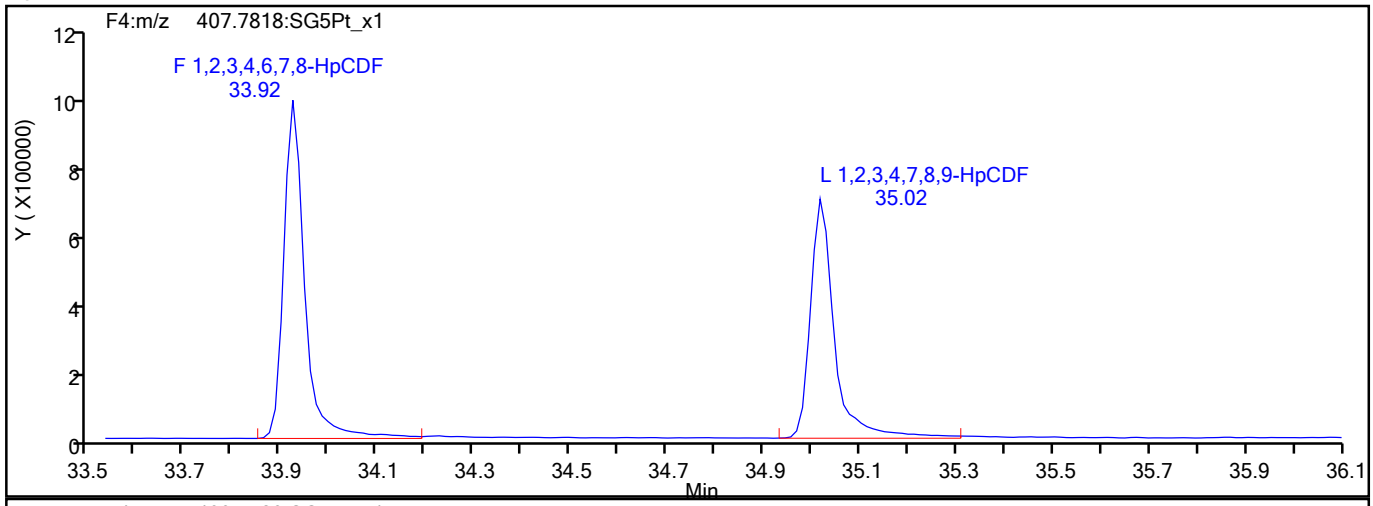

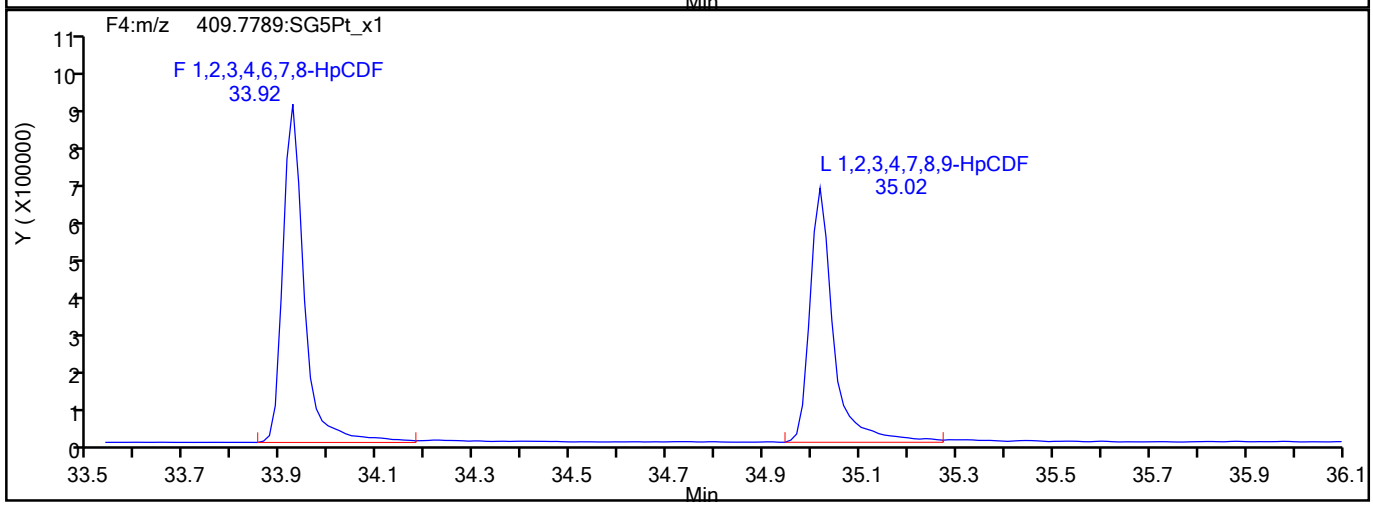

HpCDF Interference Mass

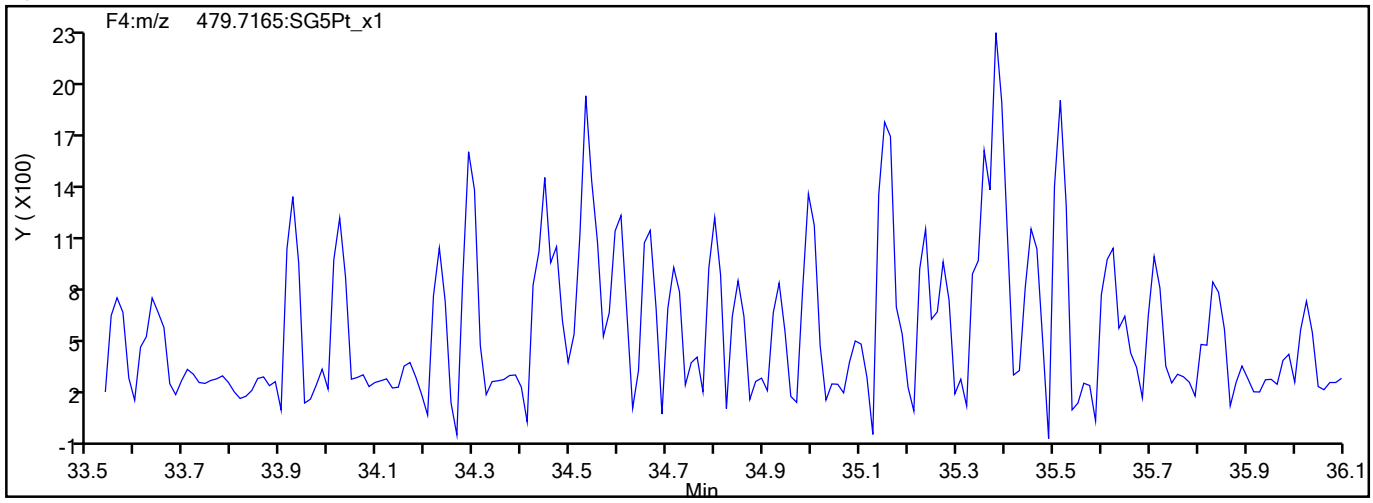

781261

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

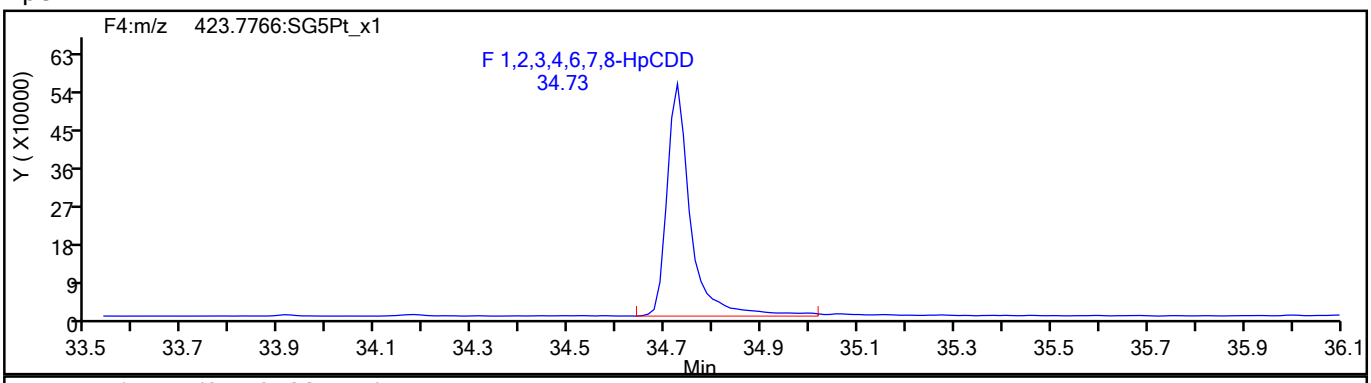

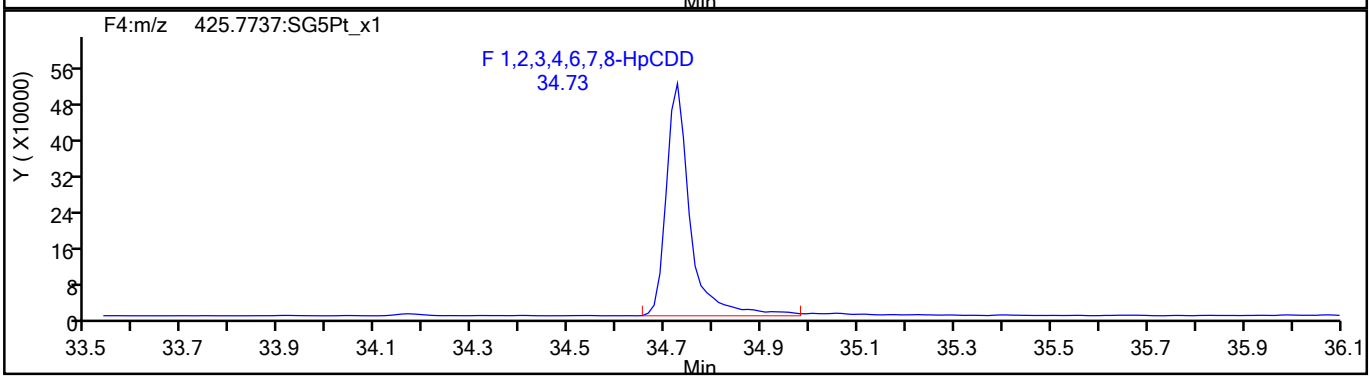

HpCDD Standards

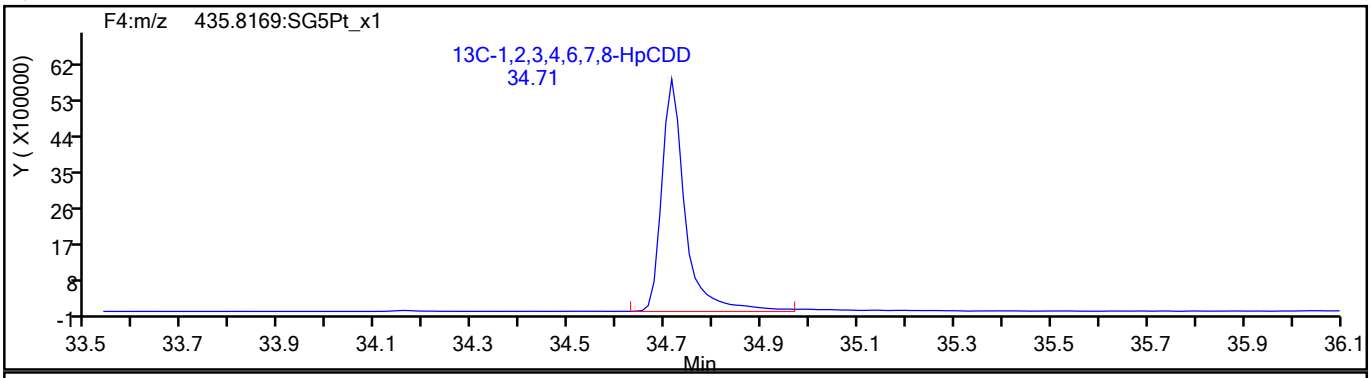

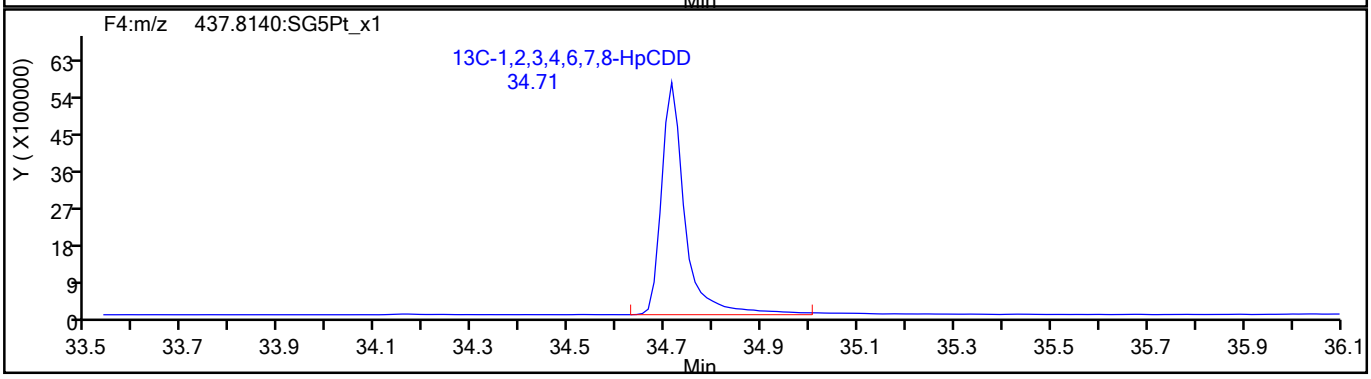

781262

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

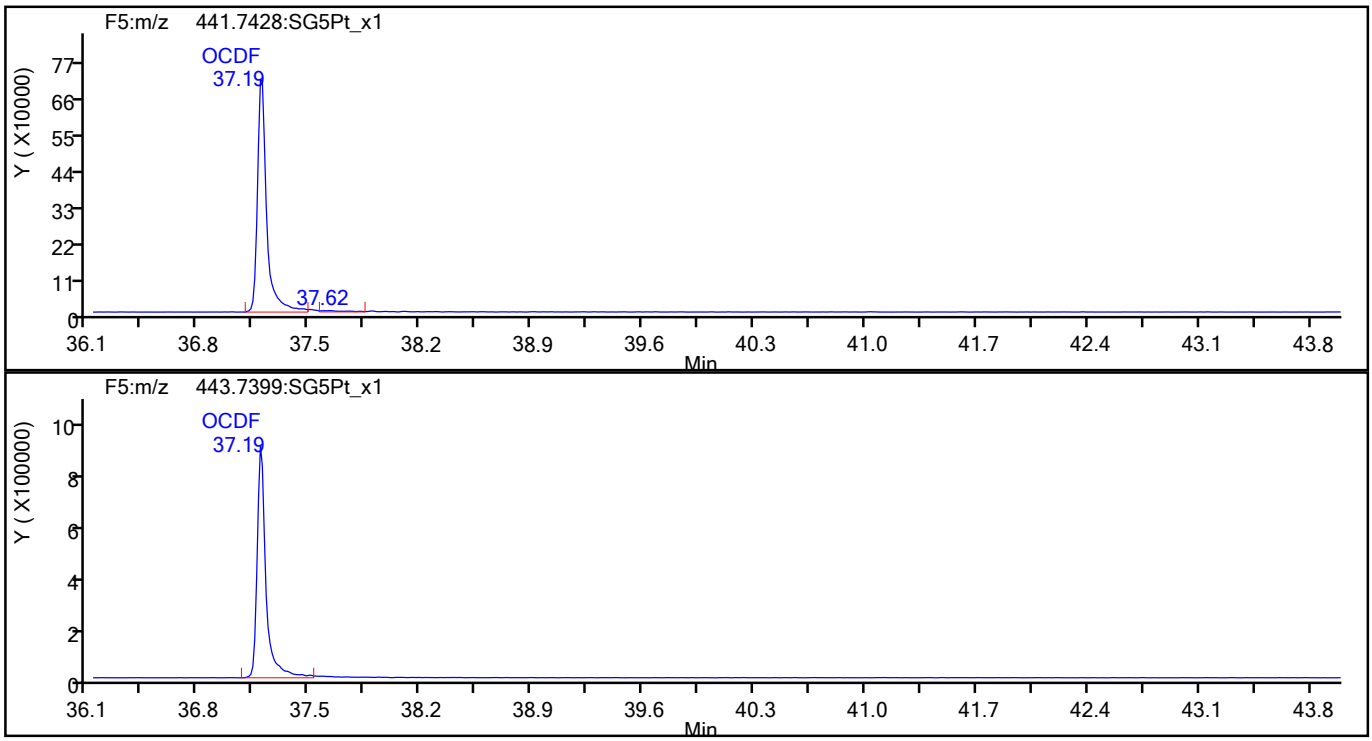

OCDF Standards

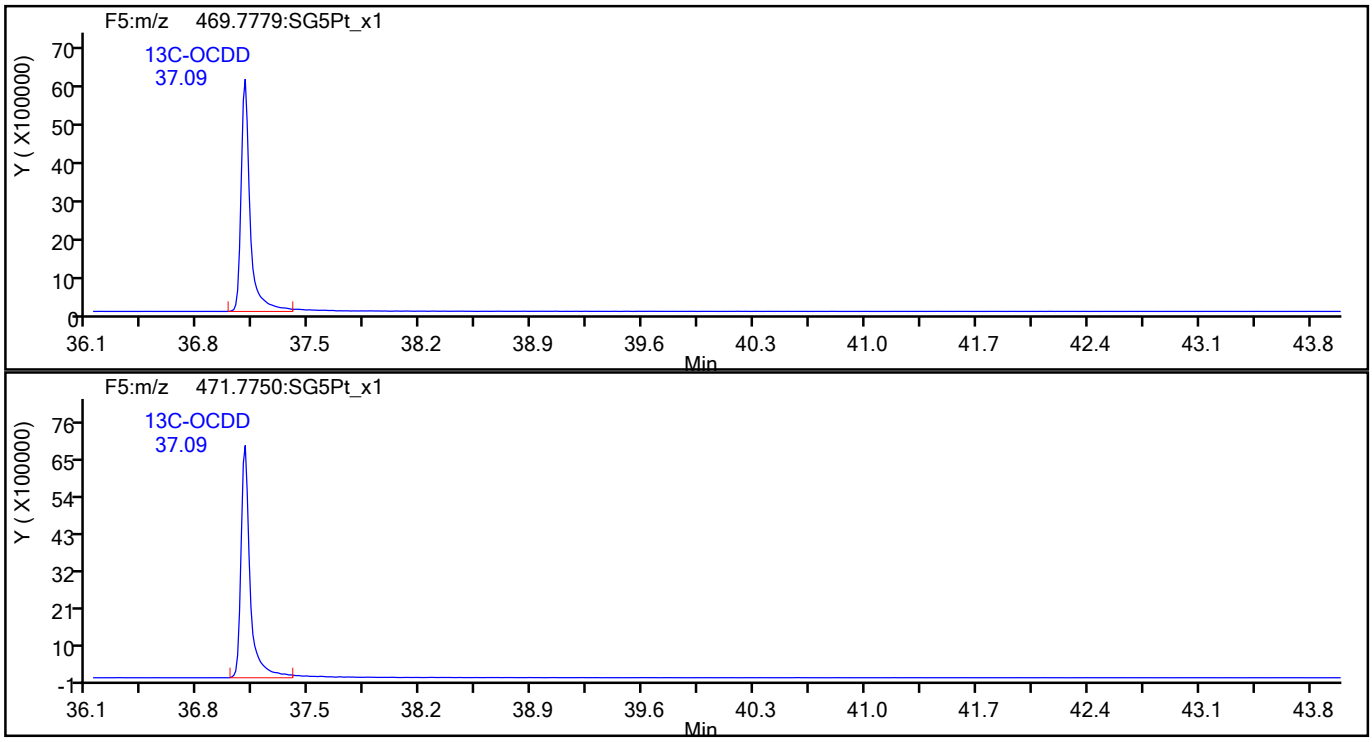

781263

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

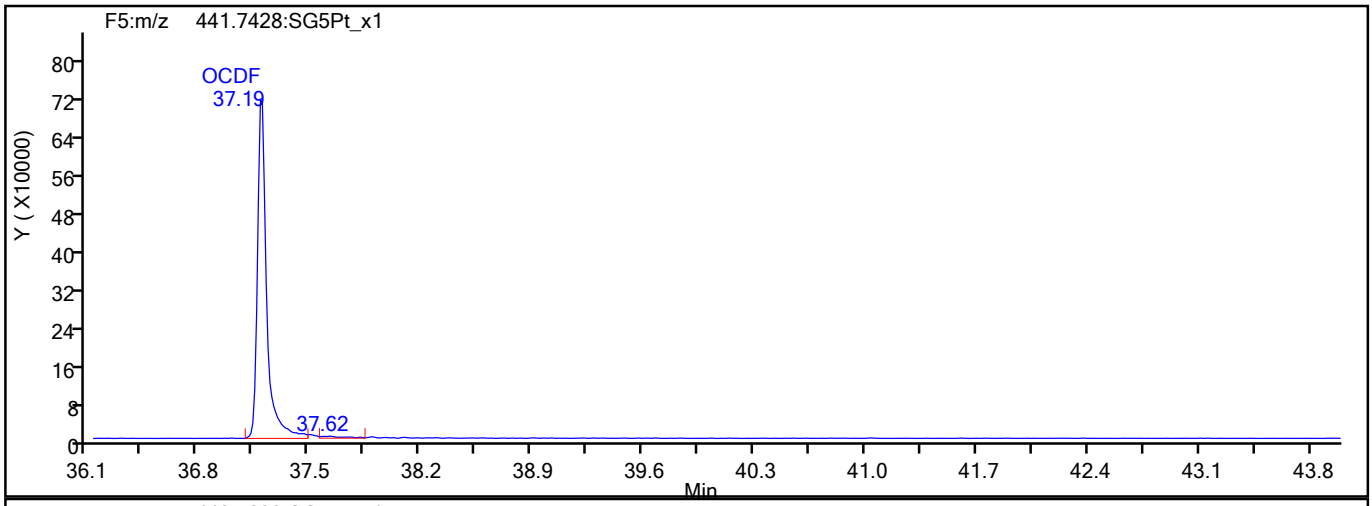

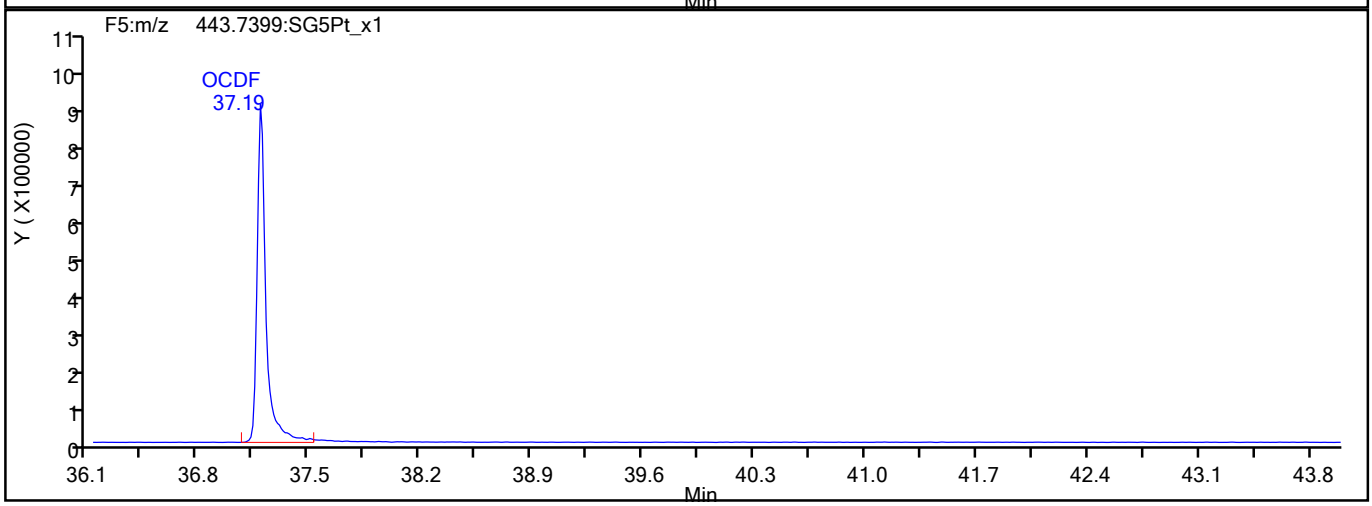

OCDF Interference Mass

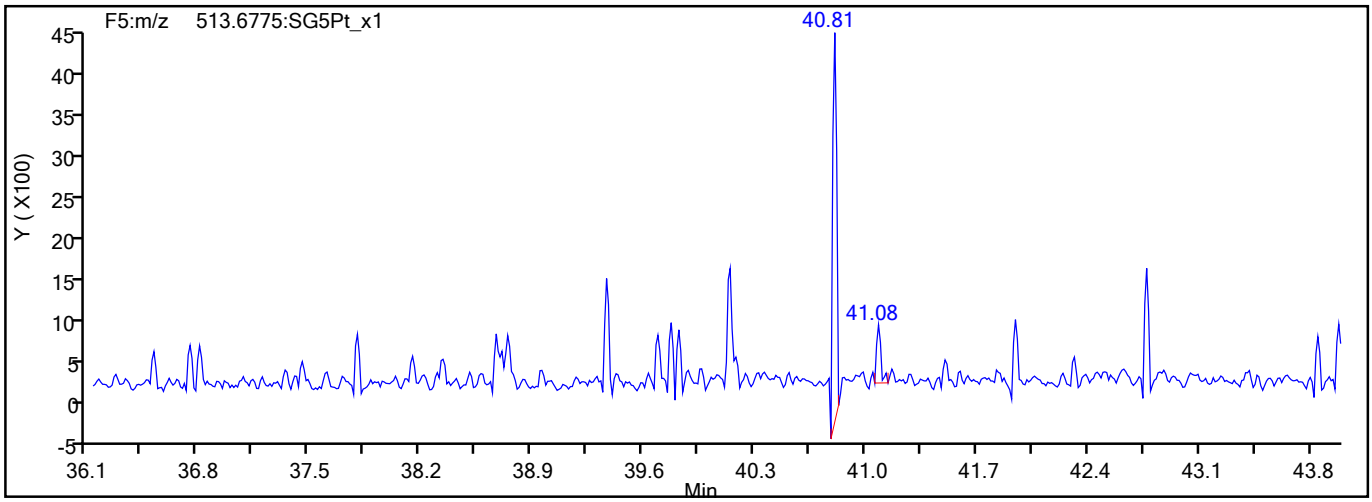

781264

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

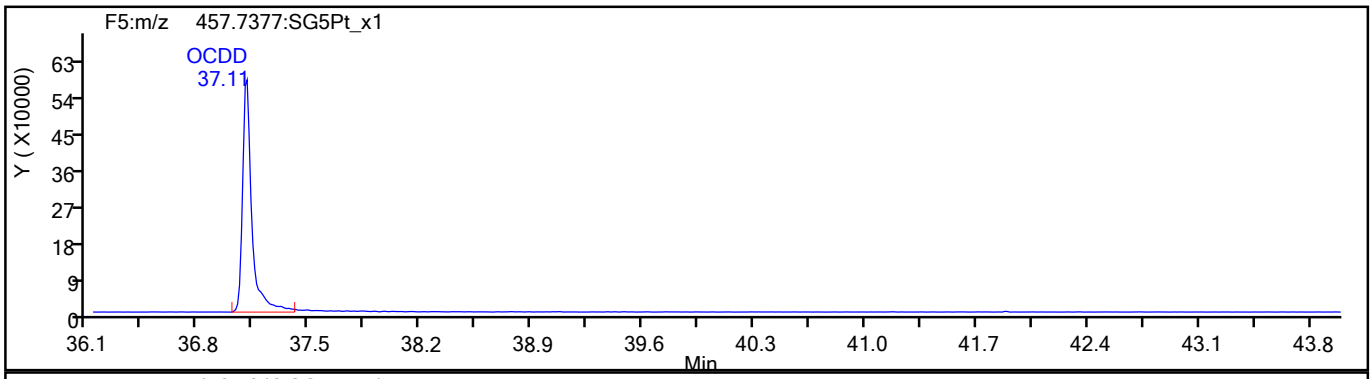

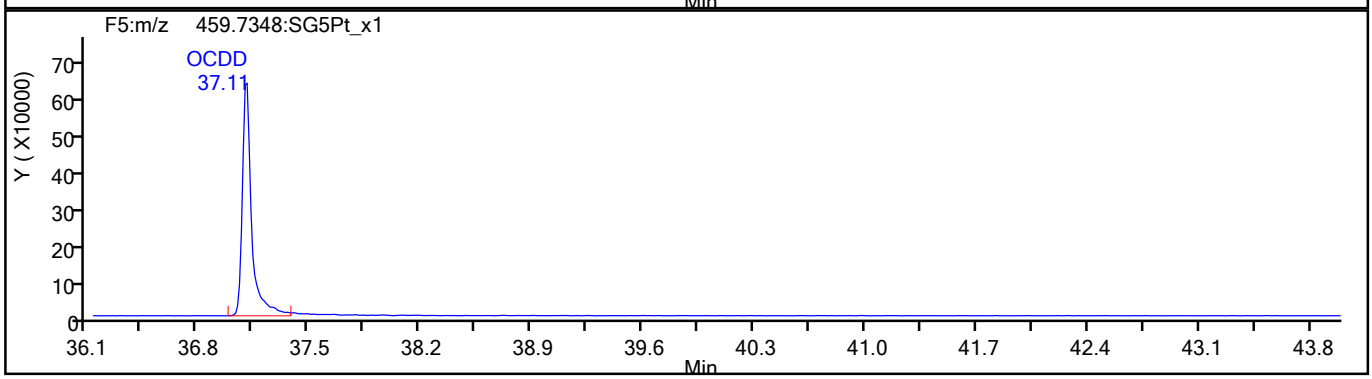

OCDD Standards

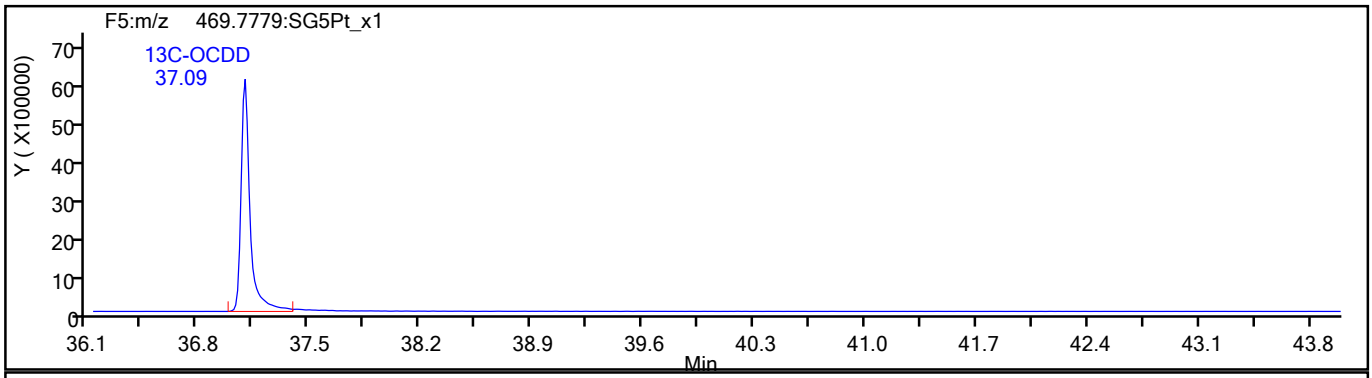

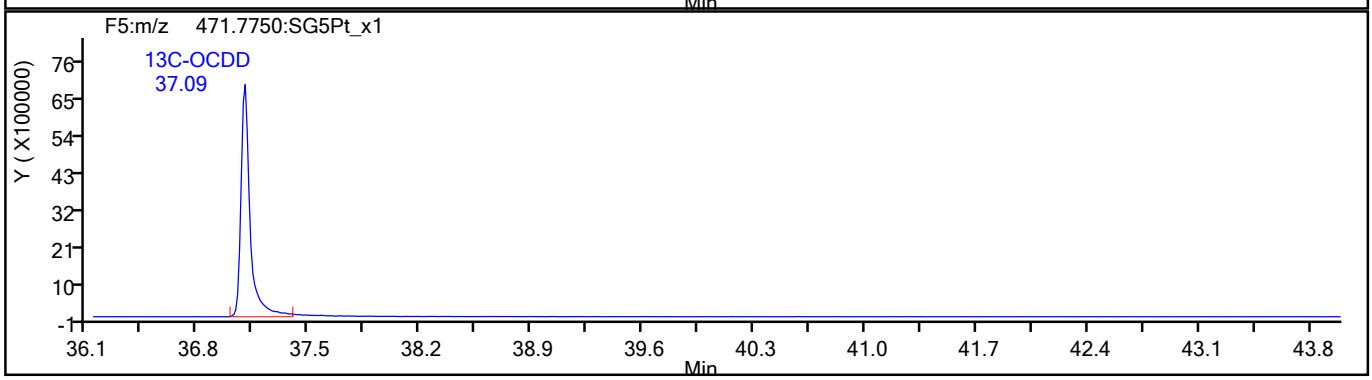

781265

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

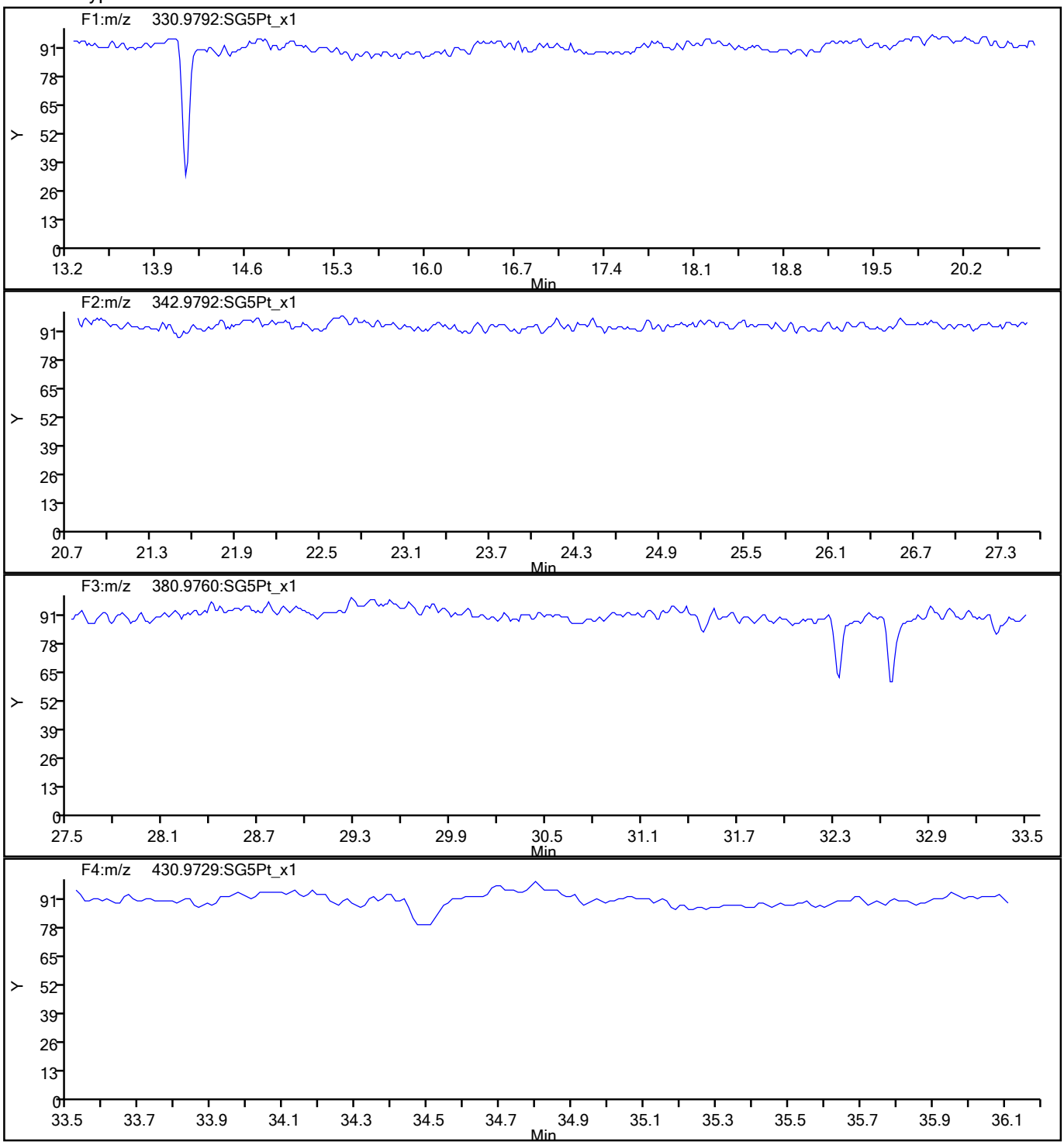

781266

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

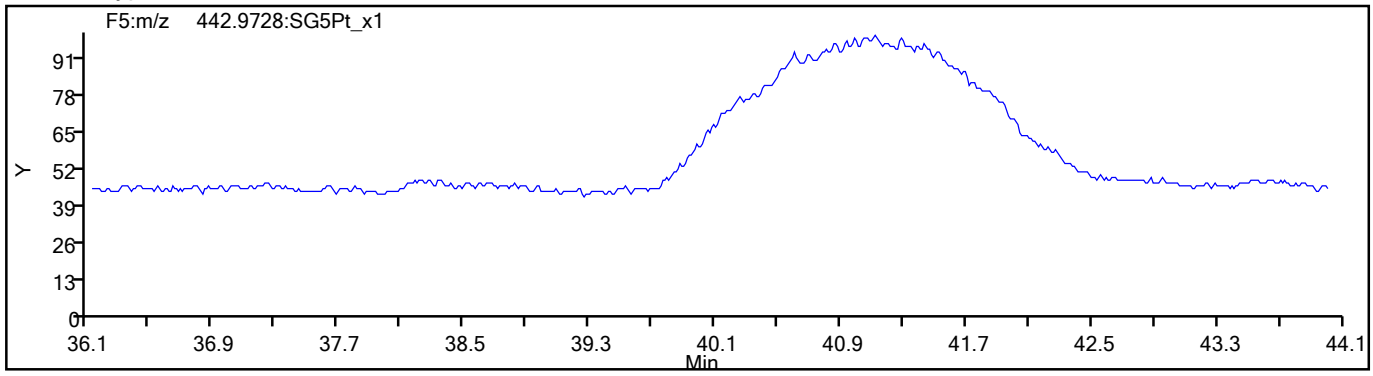

781267

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62635225	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	101724636	0.78	1.6249	99.9	99.9	0.2242	0.2242	99.95	
2,3,7,8-TCDF	17.643	10638776	0.78	1.0239	10.2	10.2	0.0283	0.0283	102	
S Total TCDF					10.2	10.2	0.0283	0.0283		
D 13C-2,3,7,8-TCDD	18.338	56155483	0.81	0.8993	99.7	99.7	0.1510	0.1510	99.69	
$ 37Cl4-2,3,7,8-TCDD	18.369	7339670		1.1071	10.6	10.6	0.0132	0.0132	106	
2,3,7,8-TCDD	18.369	7104238	0.76	1.2541	10.1	10.1	0.0224	0.0224	101	
S Total TCDD					10.1	10.1	0.0224	0.0224		
D 13C-1,2,3,7,8-PeCDF	22.762	76368219	1.58	1.2101	100.8	100.8	0.2109	0.2109	101	
1,2,3,7,8-PeCDF	22.789	41588176	1.62	1.0611	51.3	51.3	0.1508	0.1508	103	
D 13C-2,3,4,7,8-PeCDF	24.139	78214582	1.58	1.2395	100.7	100.7	0.2059	0.2059	101	
2,3,4,7,8-PeCDF	24.167	40928436	1.60	1.0184	51.4	51.4	0.1656	0.1656	103	
S Total PeCDF					102.7	102.7	0.1582	0.1582		
D 13C-1,2,3,7,8-PeCDD	24.876	47124414	1.60	0.7612	98.8	98.8	0.1214	0.1214	98.83	
1,2,3,7,8-PeCDD	24.903	25165054	1.62	1.0484	50.9	50.9	0.0669	0.0669	102	
S Total PeCDD					50.9	50.9	0.0669	0.0669		
D 13C-1,2,3,4,7,8-HxCDF	30.849	68075509	0.52	1.0837	98.8	98.8	0.4389	0.4389	98.79	
1,2,3,4,7,8-HxCDF	30.862	37525146	1.24	1.0851	50.8	50.8	0.2914	0.2914	102	
D 13C-1,2,3,6,7,8-HxCDF	31.009	70677463	0.52	1.1279	98.5	98.5	0.4217	0.4217	98.54	
1,2,3,6,7,8-HxCDF	31.022	40802767	1.21	1.1260	51.3	51.3	0.2729	0.2729	103	
D 13C-2,3,4,6,7,8-HxCDF	31.767	67028498	0.52	1.0637	99.1	99.1	0.4471	0.4471	99.10	
2,3,4,6,7,8-HxCDF	31.781	39741365	1.22	1.1675	50.8	50.8	0.2260	0.2260	102	
D 13C-1,2,3,7,8,9-HxCDF	32.526	60389284	0.52	0.9676	98.2	98.2	0.4916	0.4916	98.15	
1,2,3,7,8,9-HxCDF	32.540	35924190	1.21	1.1664	51.0	51.0	0.2363	0.2363	102	
S Total HxCDF					203.9	203.9	0.2566	0.2566		
* 13C-1,2,3,7,8,9-HxCDD	32.353	63588089	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.941	44039927	1.25	0.7334	94.4	94.4	0.3731	0.3731	94.43	
1,2,3,4,7,8-HxCDD	31.954	24891170	1.33	1.0640	53.1	53.1	0.1747	0.1747	106	
D 13C-1,2,3,6,7,8-HxCDD	32.034	55284532	1.26	0.8802	98.8	98.8	0.3109	0.3109	98.78	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	27953752	1.21	1.0001	50.6	50.6	0.1666	0.1666	101	
1,2,3,7,8,9-HxCDD	32.367	29794954	1.26	1.1325	53.0	53.0	0.1552	0.1552	106	
S Total HxCDD					156.7	156.7	0.1655	0.1655		
D 13C-1,2,3,4,6,7,8-HpCDF	33.924	47697671	0.44	0.7730	97.0	97.0	1.328	1.328	97.03	
1,2,3,4,6,7,8-HpCDF	33.937	35740964	1.05	1.4413	52.0	52.0	0.5190	0.5190	104	
D 13C-1,2,3,4,7,8,9-HpCDF	35.018	43238622	0.44	0.7008	97.0	97.0	1.465	1.465	97.03	
1,2,3,4,7,8,9-HpCDF	35.030	29450636	1.07	1.3174	51.7	51.7	0.6741	0.6741	103	
S Total HpCDF					103.7	103.7	0.5966	0.5966		
D 13C-1,2,3,4,6,7,8-HpCDD	34.726	40333717	1.03	0.6472	98.0	98.0	0.5563	0.5563	98.00	
1,2,3,4,6,7,8-HpCDD	34.726	22538791	1.03	1.0943	51.1	51.1	0.2539	0.2539	102	
S Total HpCDD					51.1	51.1	0.2539	0.2539		
D 13C-OCDD	37.094	54338243	0.87	0.4472	191.1	191.1	0.2612	0.2612	95.55	
OCDF	37.202	41147202	0.91	1.4382	105.3	105.3	0.1155	0.1155	105	
OCDD	37.106	31656667	0.89	1.1070	105.3	105.3	0.1572	0.1572	105	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28287778	7074314	3903	9757	1813		
333.9339	18.142	18.142	0		34347447	8672273	4653	11632	1864	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.616	1	0.972	44652675	10978931	8756	21890	1254		
317.9389	17.628	17.616	1	0.972	57071961	13787474	14192	35480	971	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.631	1	1.001	4665898	1145703	1759	4397	651		
305.8987	17.643	17.631	1	1.001	5972878	1458593	1111	2777	1313	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	25132336	5946858	3903	9757	1524		
333.9339	18.338	18.338	0	1.011	31023147	7337223	4653	11632	1577	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.369	18.354	1	1.012	7339670	1703834	921	2302	1850		
2,3,7,8-TCDD											
319.8965	18.369	18.357	1	1.002	3077636	720367	906	2265	795		
321.8936	18.369	18.357	1	1.002	4026602	947792	588	1470	1612	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46742521	8181774	9794	24485	835		
353.8970	22.762	22.754	0	1.255	29625698	5225925	6278	15695	832	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.789	22.779	1	1.001	25738852	4452039	5088	12720	875		
341.8567	22.789	22.779	1	1.001	15849324	2731041	3494	8735	782	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.139	24.129	1	1.331	47906018	7878060	9794	24485	804		
353.8970	24.139	24.129	1	1.331	30308564	4845446	6278	15695	772	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.167	24.156	1	1.001	25185293	4111601	5088	12720	808		
341.8567	24.167	24.156	1	1.001	15743143	2618923	3494	8735	750	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.876	24.865	1	1.371	29023498	4508866	3701	9252	1218		
369.8919	24.876	24.865	1	1.371	18100916	2812844	2121	5302	1326	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.903	24.892	1	1.001	15548746	2422000	1286	3215	1883		
357.8516	24.903	24.892	1	1.001	9616308	1489099	768	1920	1939	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.849	30.838	1	0.954	23323404	5008910	10853	27132	462		
385.8610	30.849	30.838	1	0.954	44752105	9511743	20971	52427	454	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.000	20753403	4584464	10058	25145	456		
375.8178	30.862	30.857	0	1.000	16771743	3729681	8311	20777	449	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.009	31.003	0	0.958	24213048	5206646	10853	27132	480		
385.8610	31.009	31.003	0	0.958	46464415	9739576	20971	52427	464	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	22352739	4771379	10058	25145	474		
375.8178	31.022	31.022	0	1.000	18450028	3943683	8311	20777	475	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.767	31.756	1	0.982	22835025	6015846	10853	27132	554		
385.8610	31.767	31.756	1	0.982	44193473	11391437	20971	52427	543	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.781	31.772	1	1.000	21800962	5788708	10058	25145	576		
375.8178	31.781	31.772	1	1.000	17940403	4765095	8311	20777	573	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.005	20681548	5801162	10853	27132	535		
385.8610	32.526	32.523	0	1.005	39707736	10862121	20971	52427	518	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.540	32.534	0	1.000	19691436	5514300	10058	25145	548		
375.8178	32.540	32.534	0	1.000	16232754	4594829	8311	20777	553	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.353	32.342	1		35642869	9349119	10403	26007	899		
403.8529	32.353	32.342	1		27945220	7378163	7908	19770	933	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.941	31.929	1	0.987	24473480	7240164	10403	26007	696		
403.8529	31.941	31.929	1	0.987	19566447	5775722	7908	19770	730	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.954	31.945	1	1.000	14220855	4121905	5566	13915	741		
391.8127	31.954	31.945	1	1.000	10670315	3199272	4114	10285	778	1.33(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.034	32.033	0	0.990	30876044	8117648	10403	26007	780		
403.8529	32.034	32.033	0	0.990	24408488	6404371	7908	19770	810	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	15327109	4211681	5566	13915	757		
391.8127	32.047	32.047	0	1.000	12626643	3343117	4114	10285	813	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.367	32.355	1	1.013	16583478	4368640	5566	13915	785		
391.8127	32.353	32.355	0	1.013	13211476	3519862	4114	10285	856	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.924	33.914	1	1.049	14460337	4683854	18083	45207	259		
419.8220	33.924	33.914	1	1.049	33237334	10568693	50629	126572	209	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.937	33.926	1	1.000	18301949	5790856	23497	58742	246		
409.7789	33.924	33.926	0	1.000	17439015	5585138	22139	55347	252	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.018	35.010	0	1.082	13111896	3936331	18083	45207	218		
419.8220	35.018	35.010	0	1.082	30126726	8910423	50629	126572	176	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.030	35.020	1	1.000	15206712	4448229	23497	58742	189		
409.7789	35.018	35.020	0	1.000	14243924	4117019	22139	55347	186	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.726	34.716	1	1.073	20474082	5927612	12552	31380	472		
437.8140	34.714	34.716	0	1.073	19859635	5735510	11540	28850	497	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	11412485	3410093	6511	16277	524		
425.7737	34.726	34.726	0	1.000	11126306	3358586	6451	16127	521	1.03(0.88-1.20)	
13C-OCDD											
469.7779	37.094	37.094	0	1.147	25234291	6398501	3020	7550	2119		
471.7750	37.094	37.094	0	1.147	29103952	7389026	4794	11985	1541	0.87(0.76-1.02)	
OCDF											
441.7428	37.202	37.199	0	1.003	19626693	5149784	2565	6412	2008		
443.7399	37.202	37.199	0	1.003	21520509	5563126	2015	5037	2761	0.91(0.76-1.02)	
OCDD											
457.7377	37.106	37.106	0	1.000	14916504	3846231	2276	5690	1690		
459.7348	37.106	37.106	0	1.000	16740163	4277323	2524	6310	1695	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

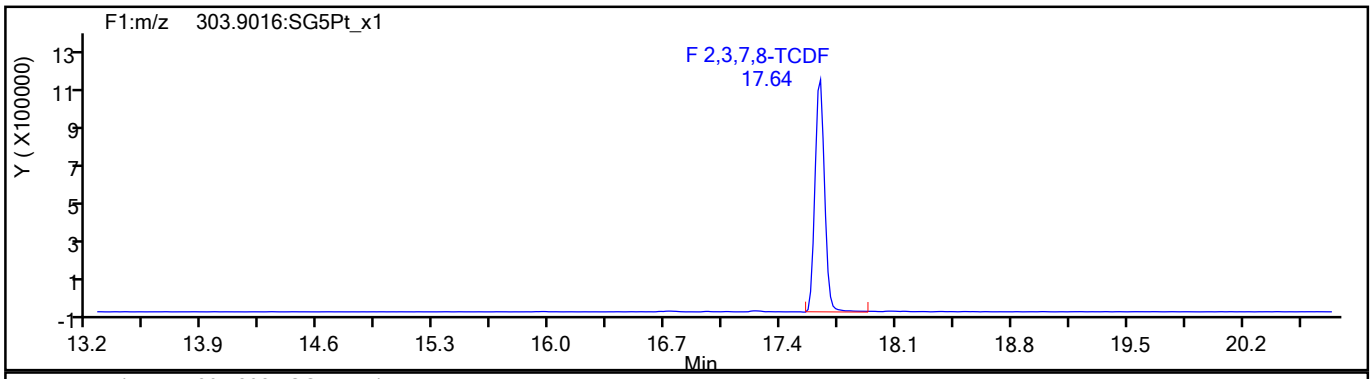

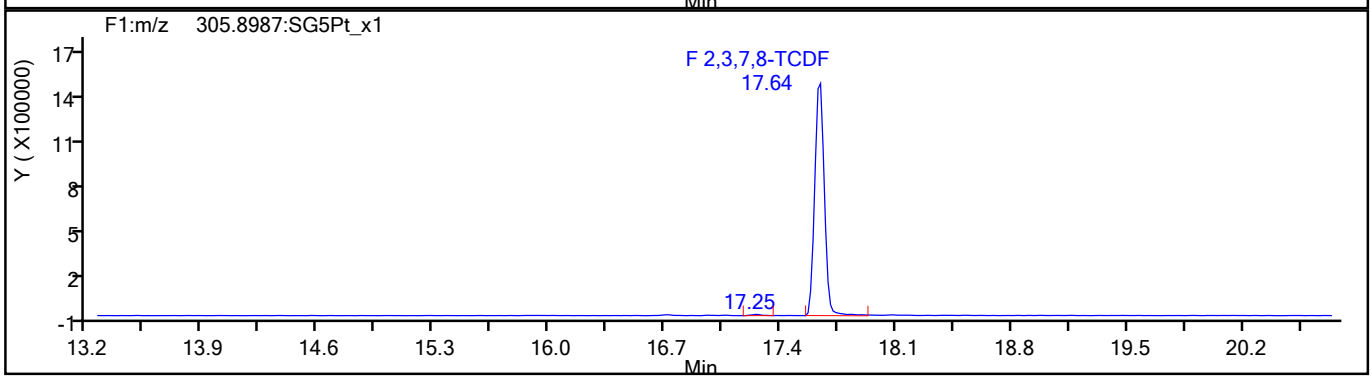

TCDF Standards

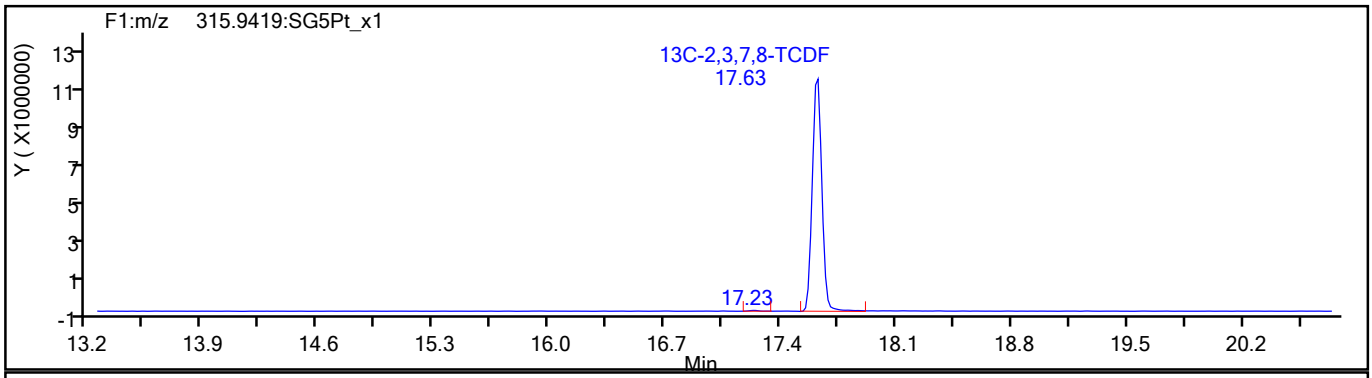

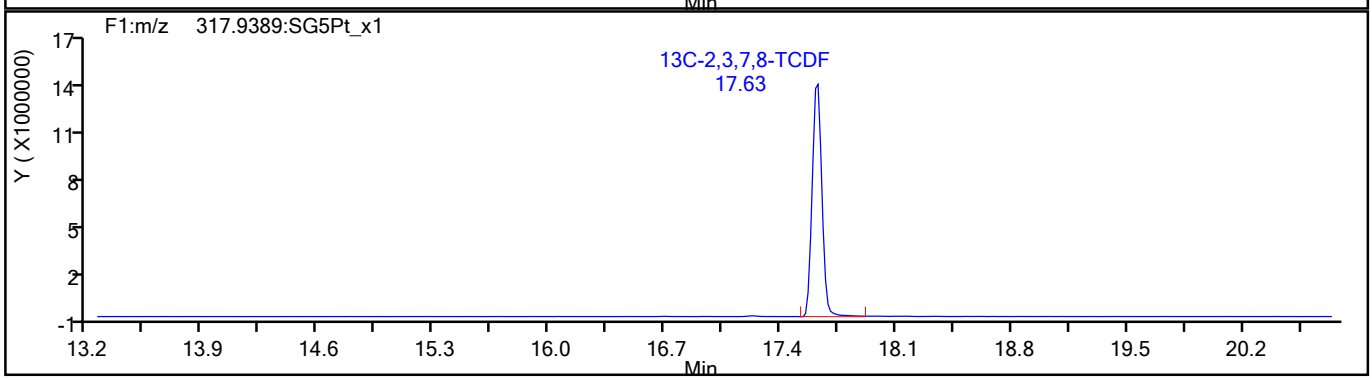

781273

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

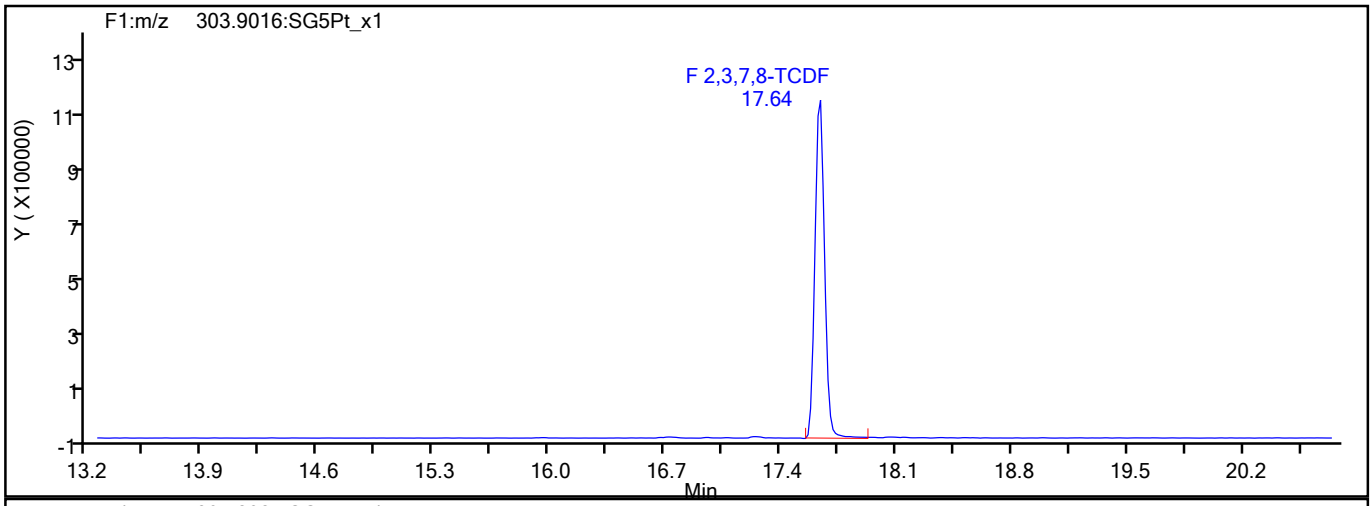

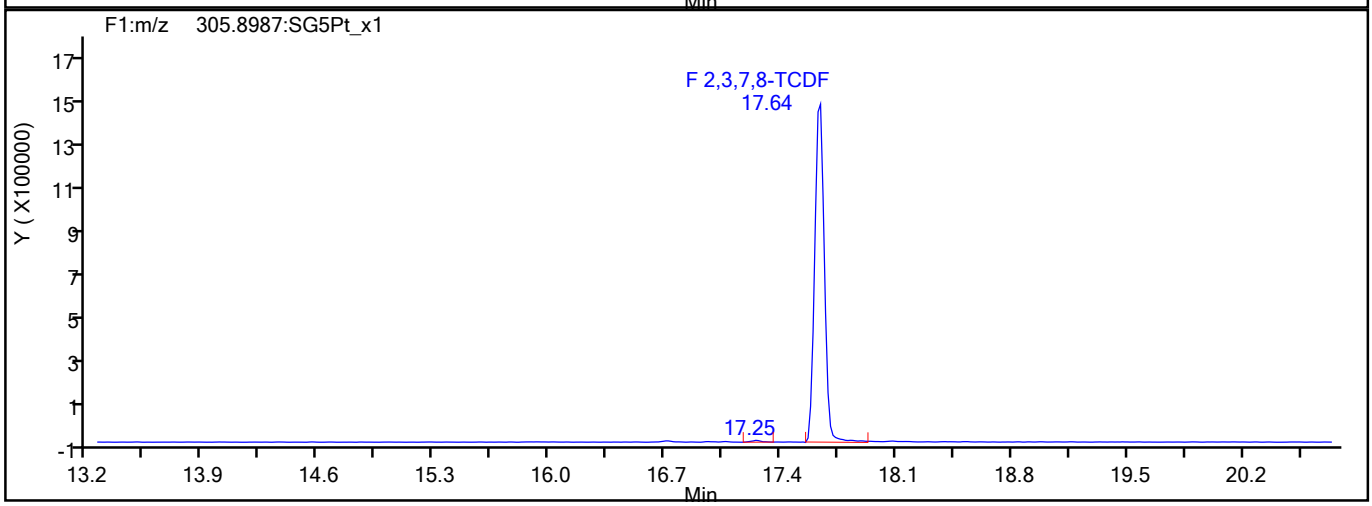

TCDF Interference Mass

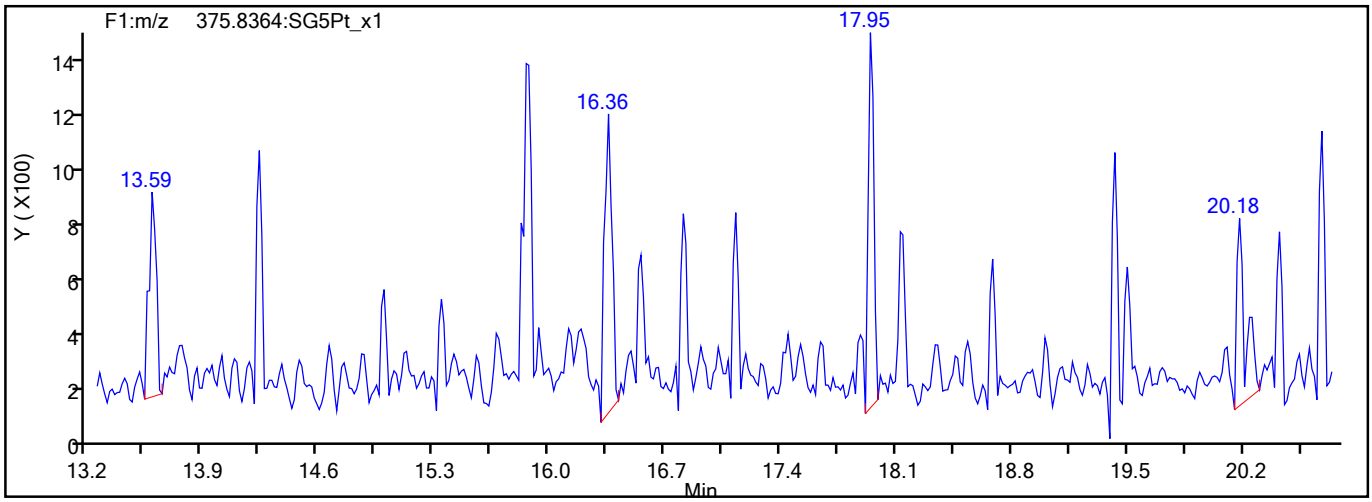

781274

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

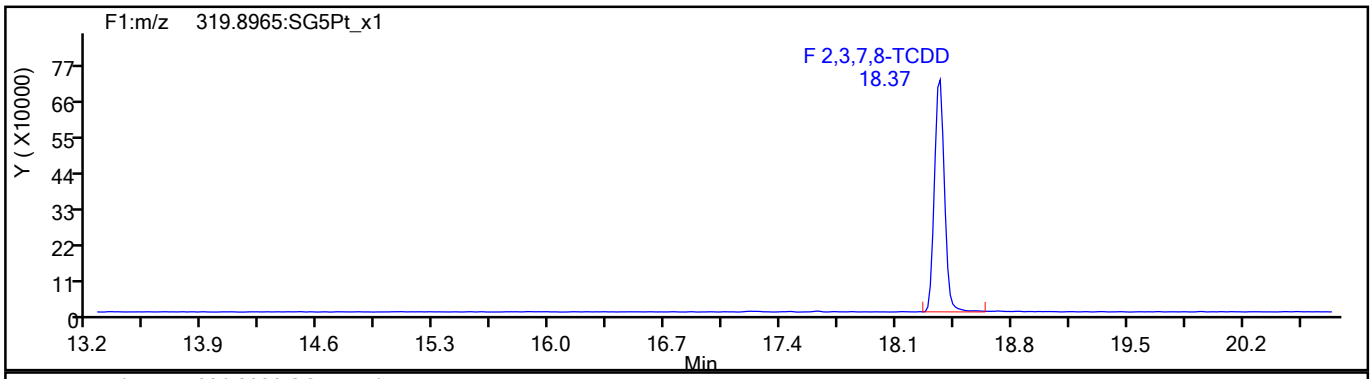

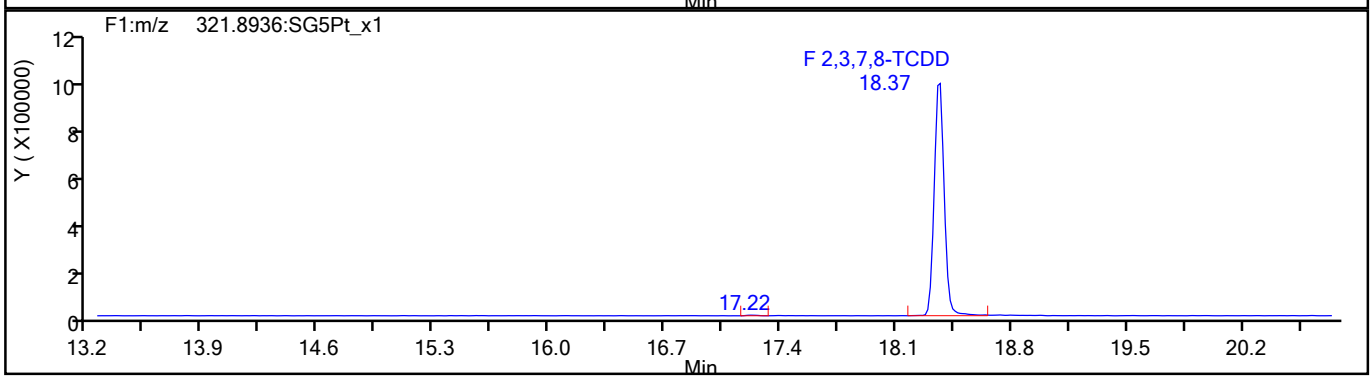

TCDD Standards

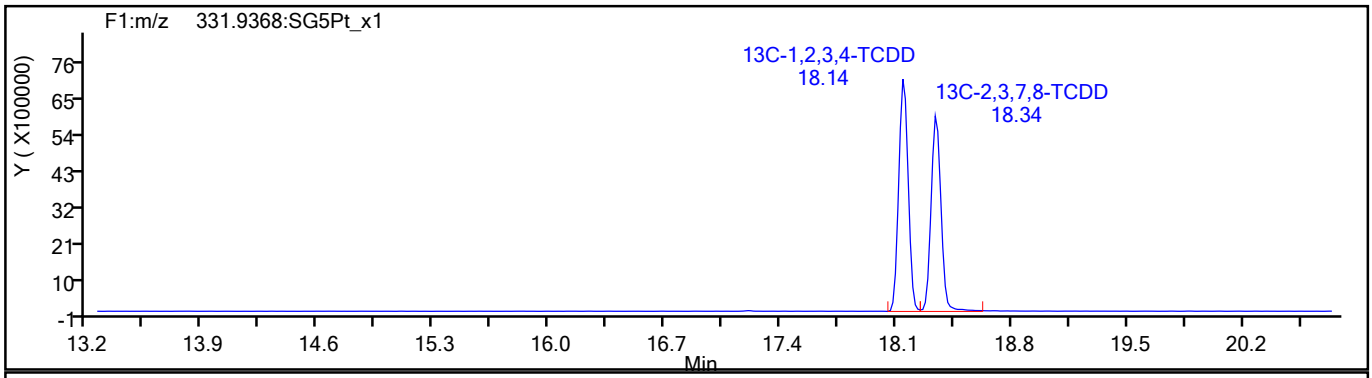

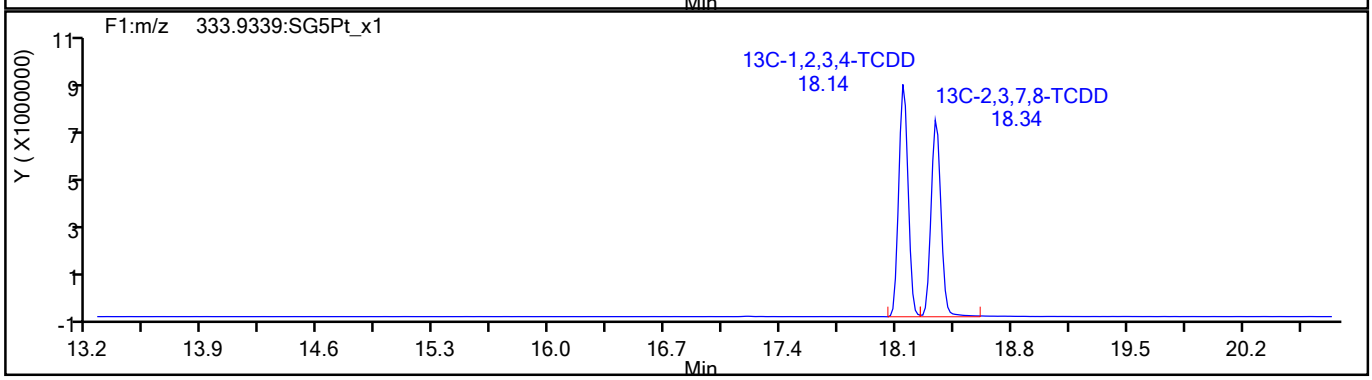

781275

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

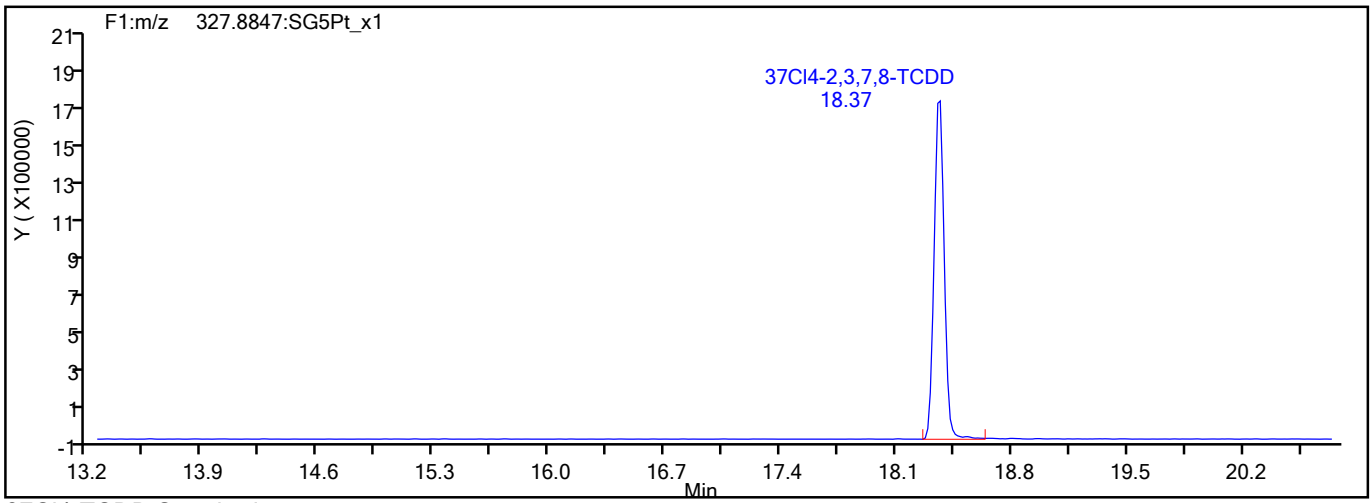

37Cl4-TCDD Standards

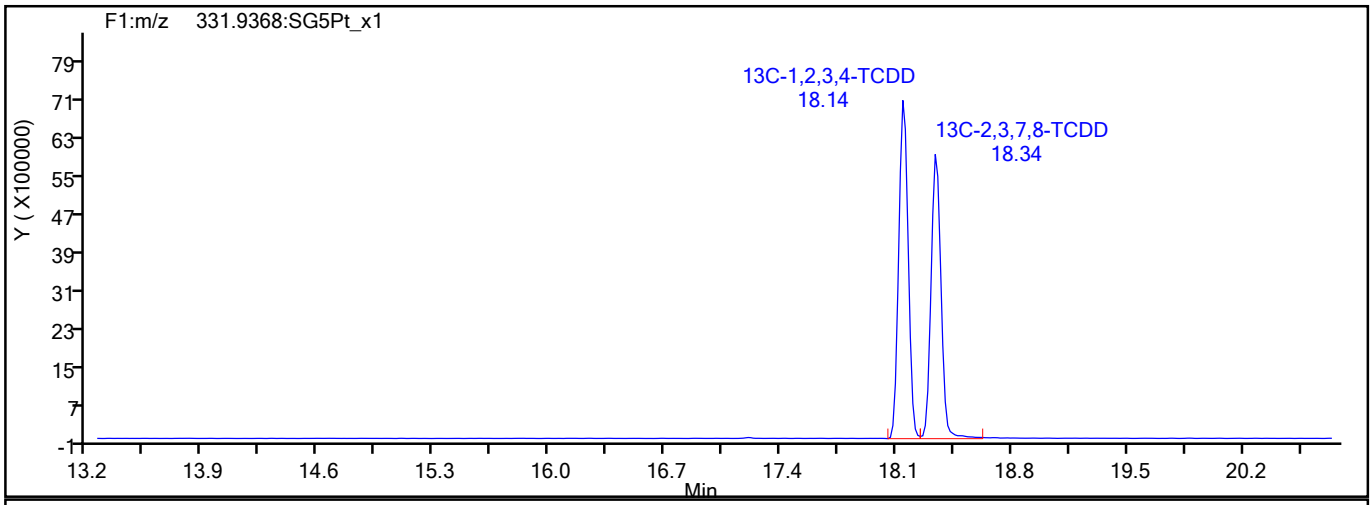

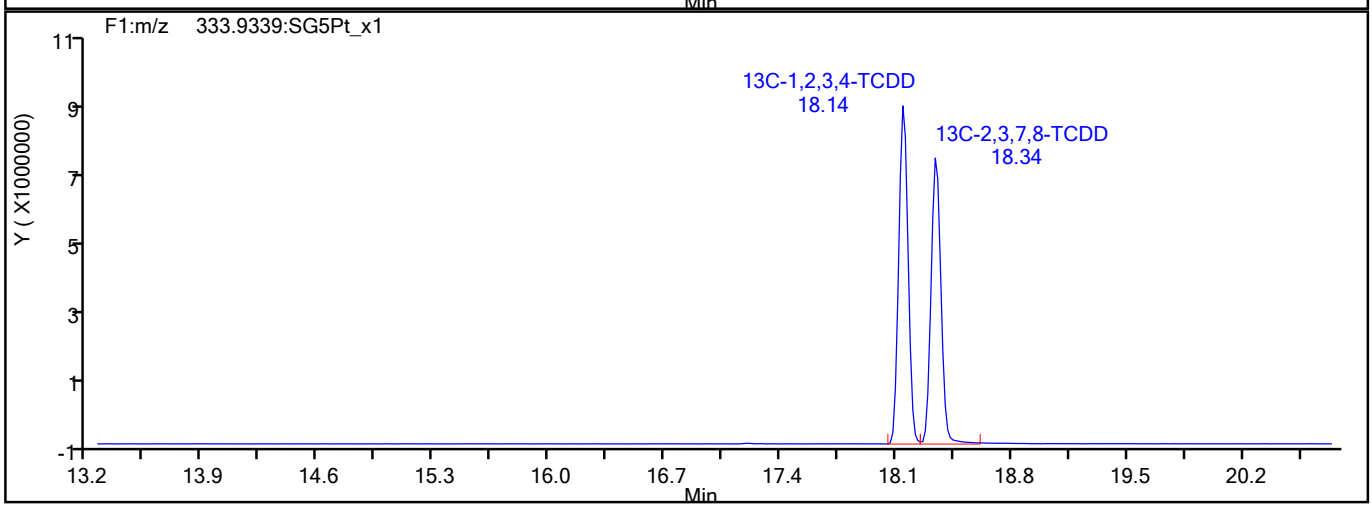

781276

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

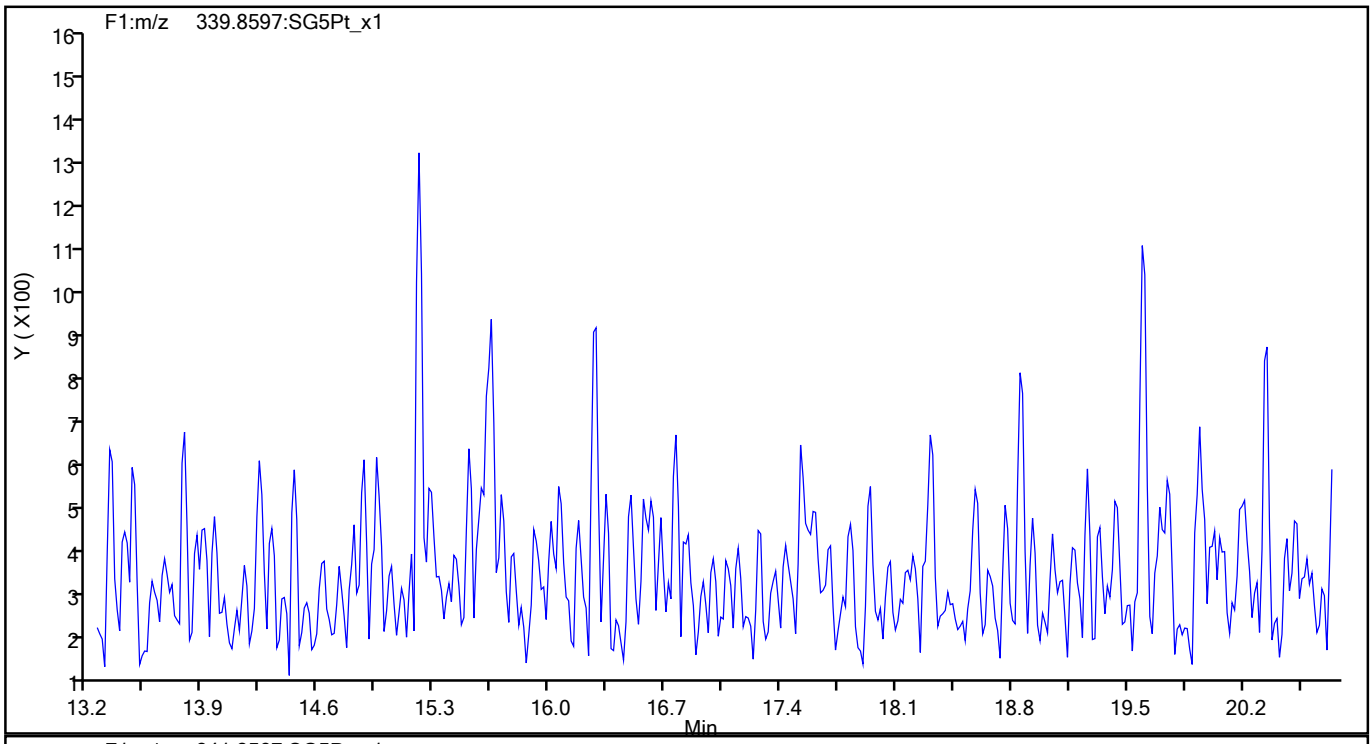

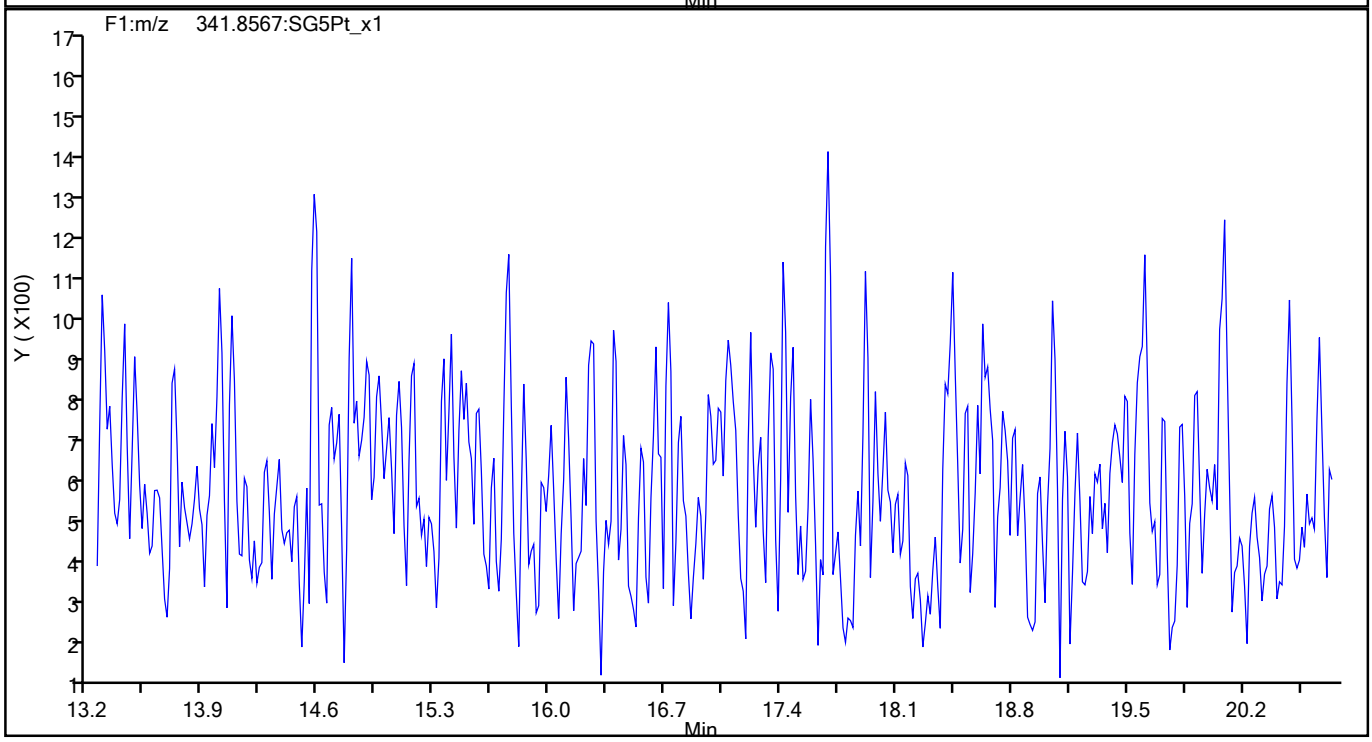

781277

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

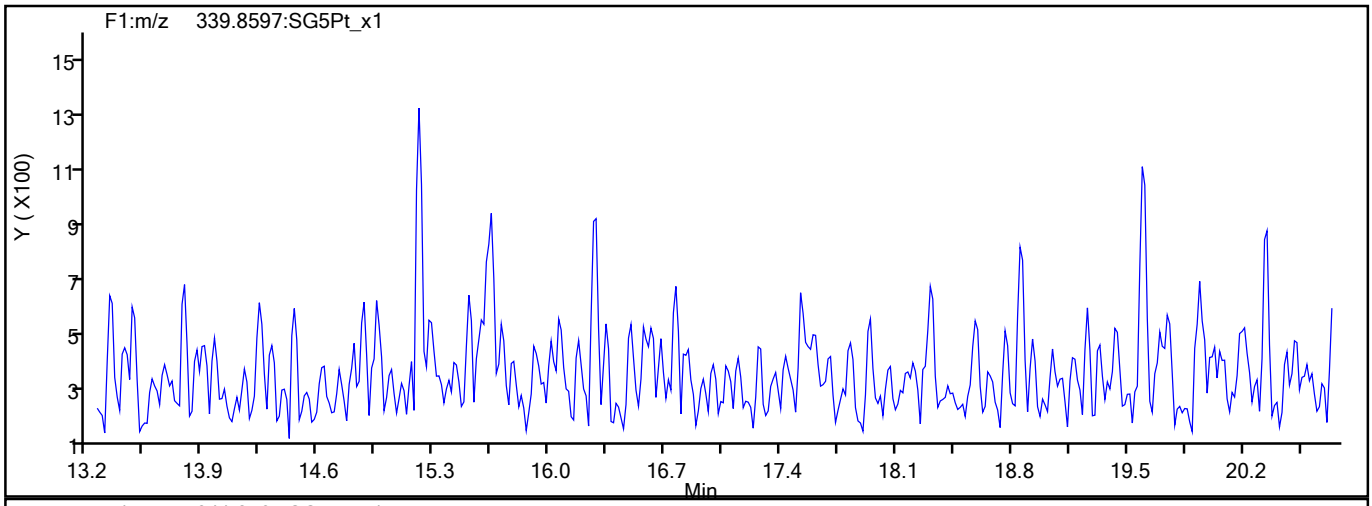

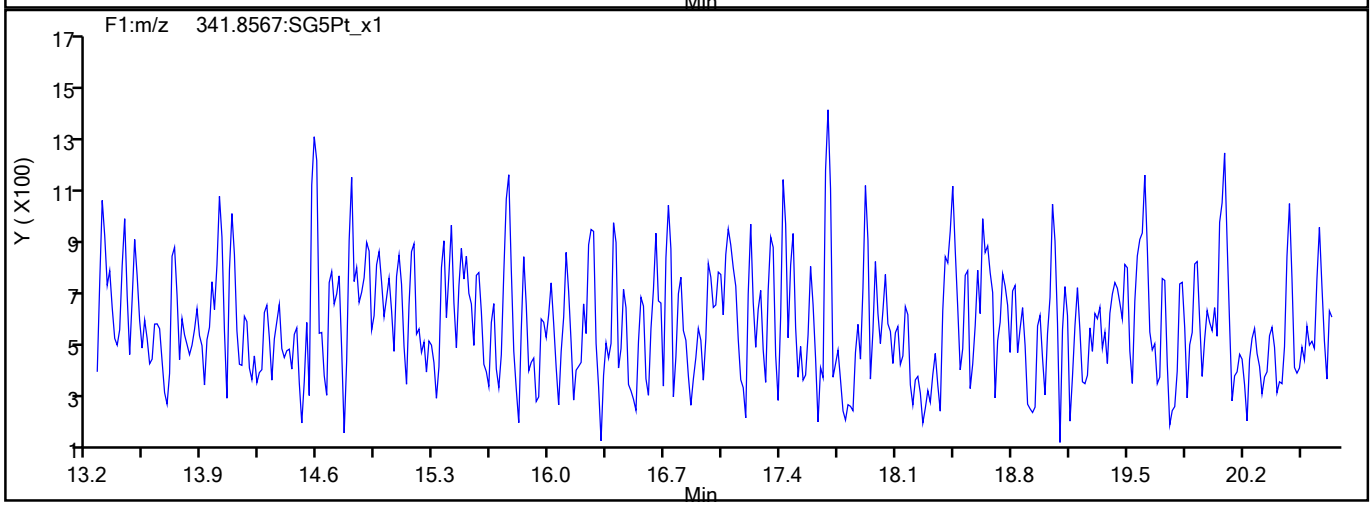

F1 PeCDFs Interference Mass

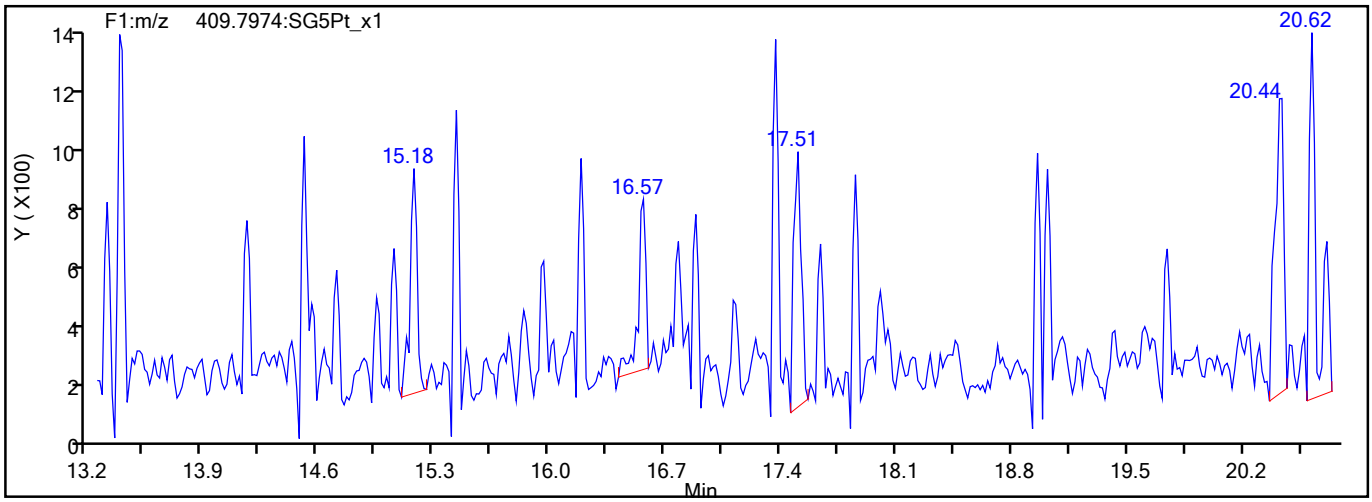

781278

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

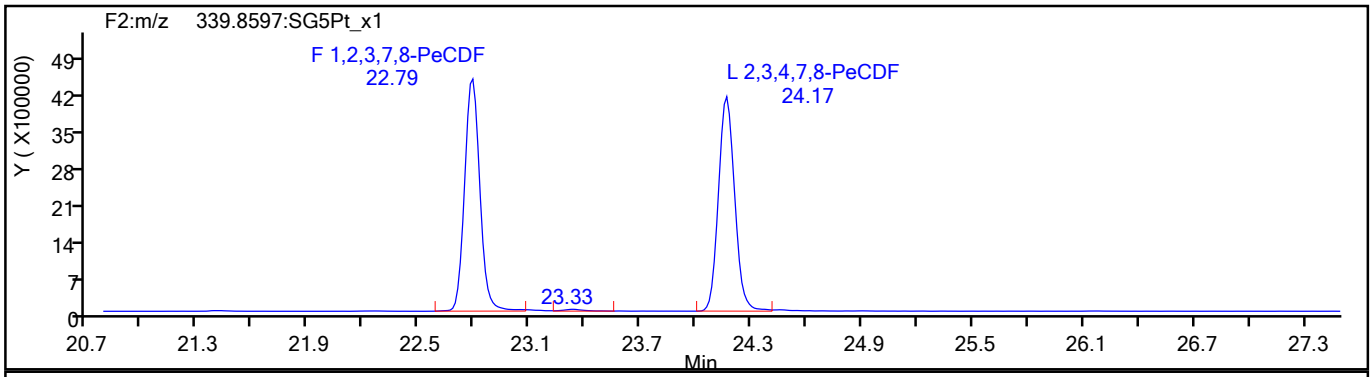

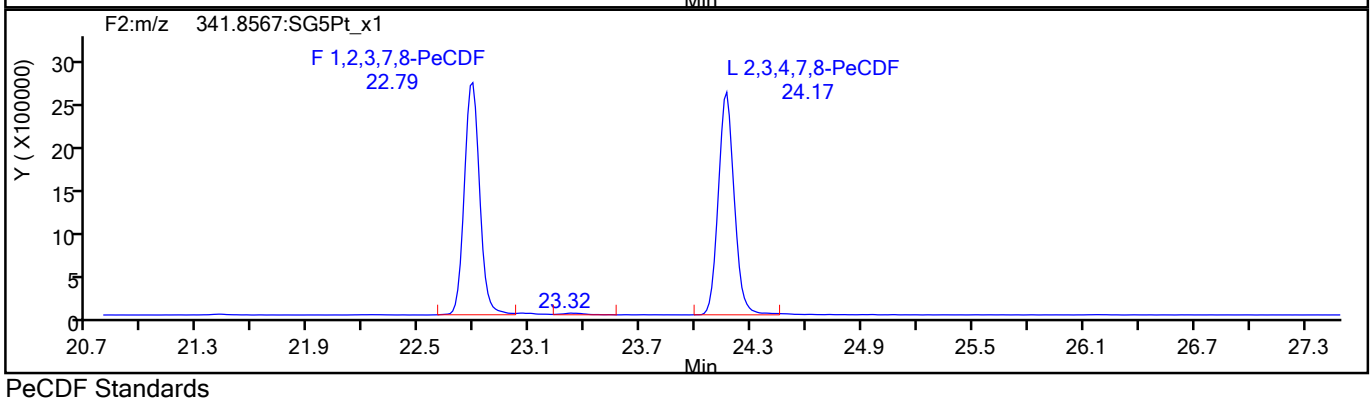

PeCDF Standards

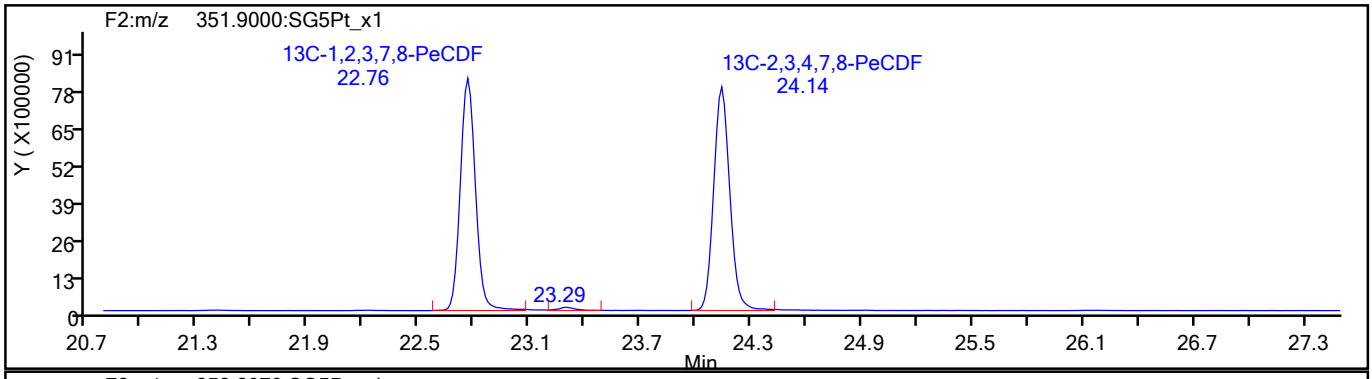

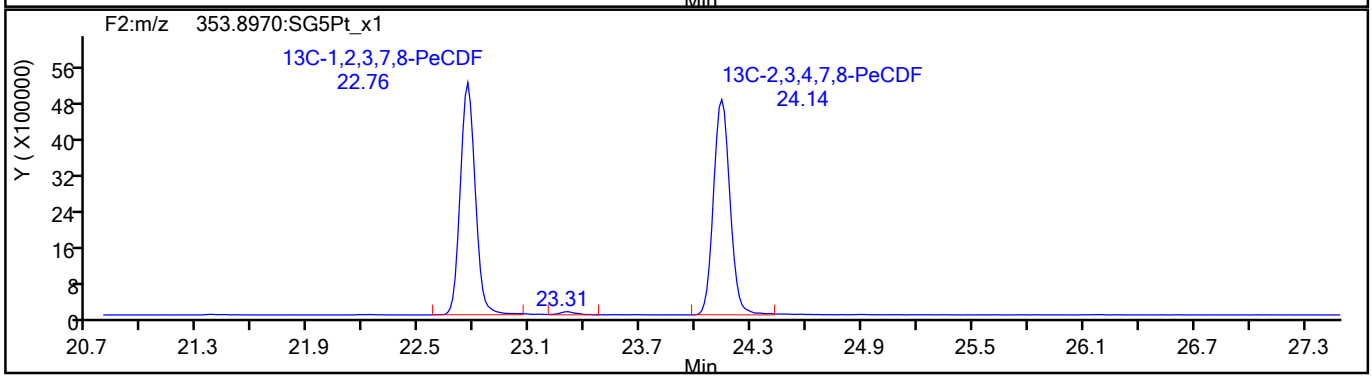

781279

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

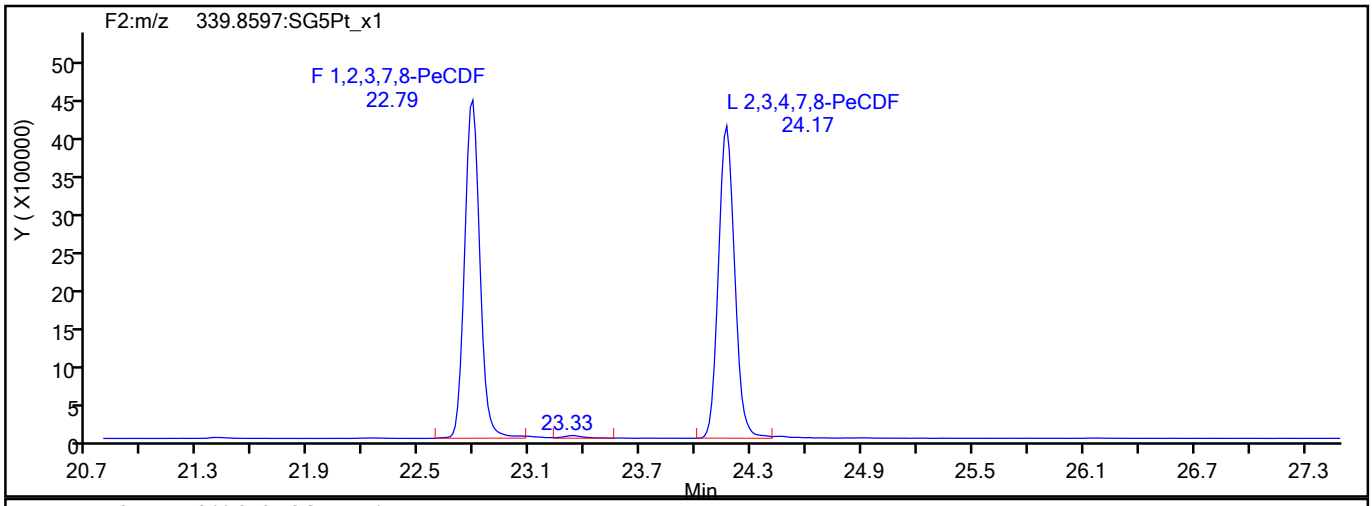

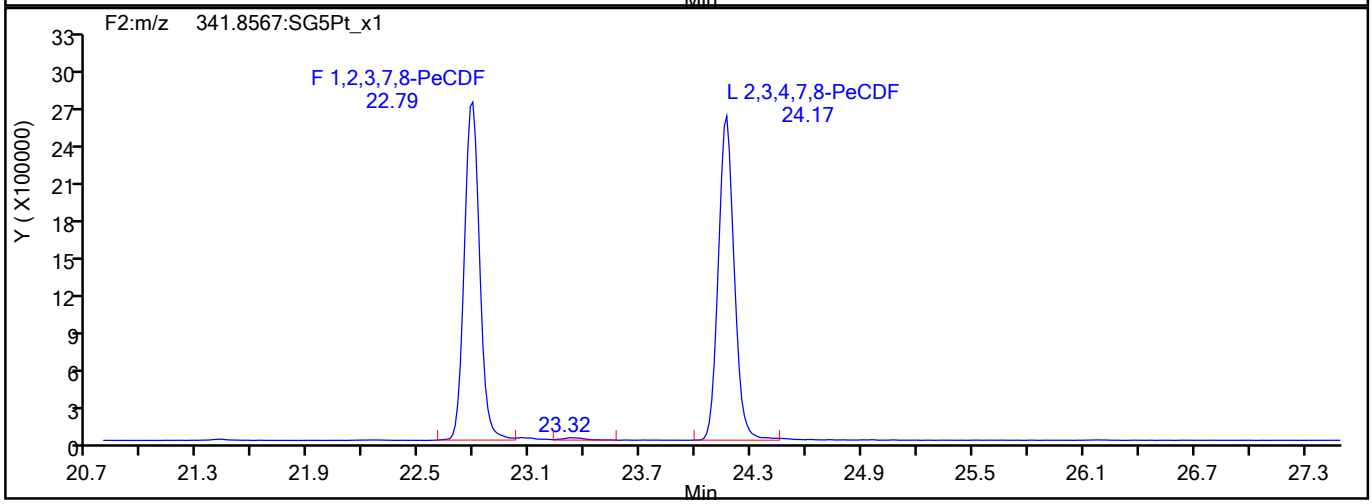

PeCDF Interference Mass

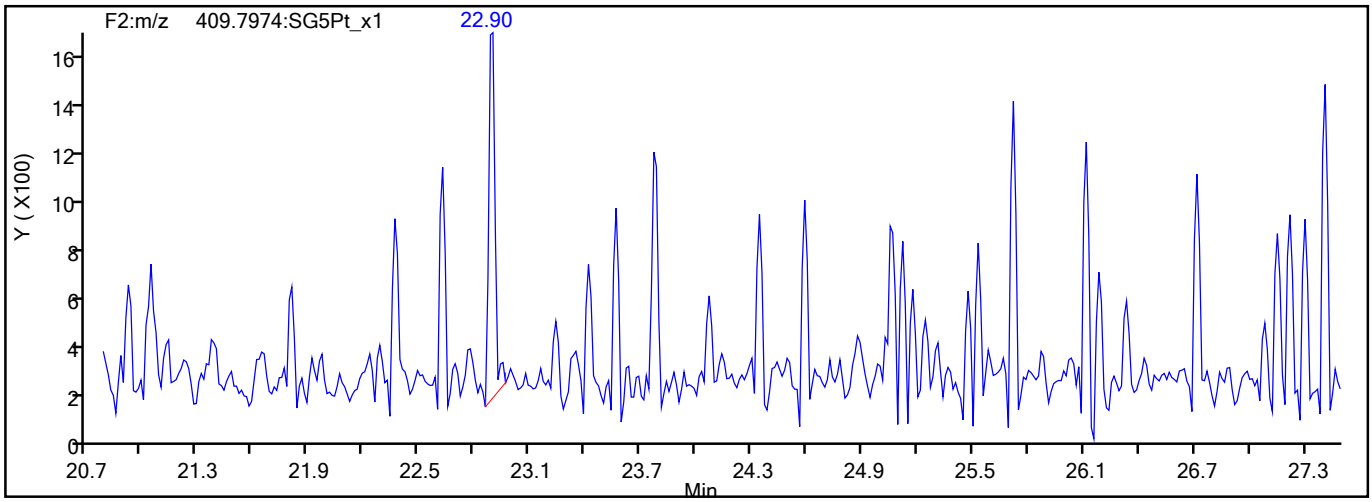

781280

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

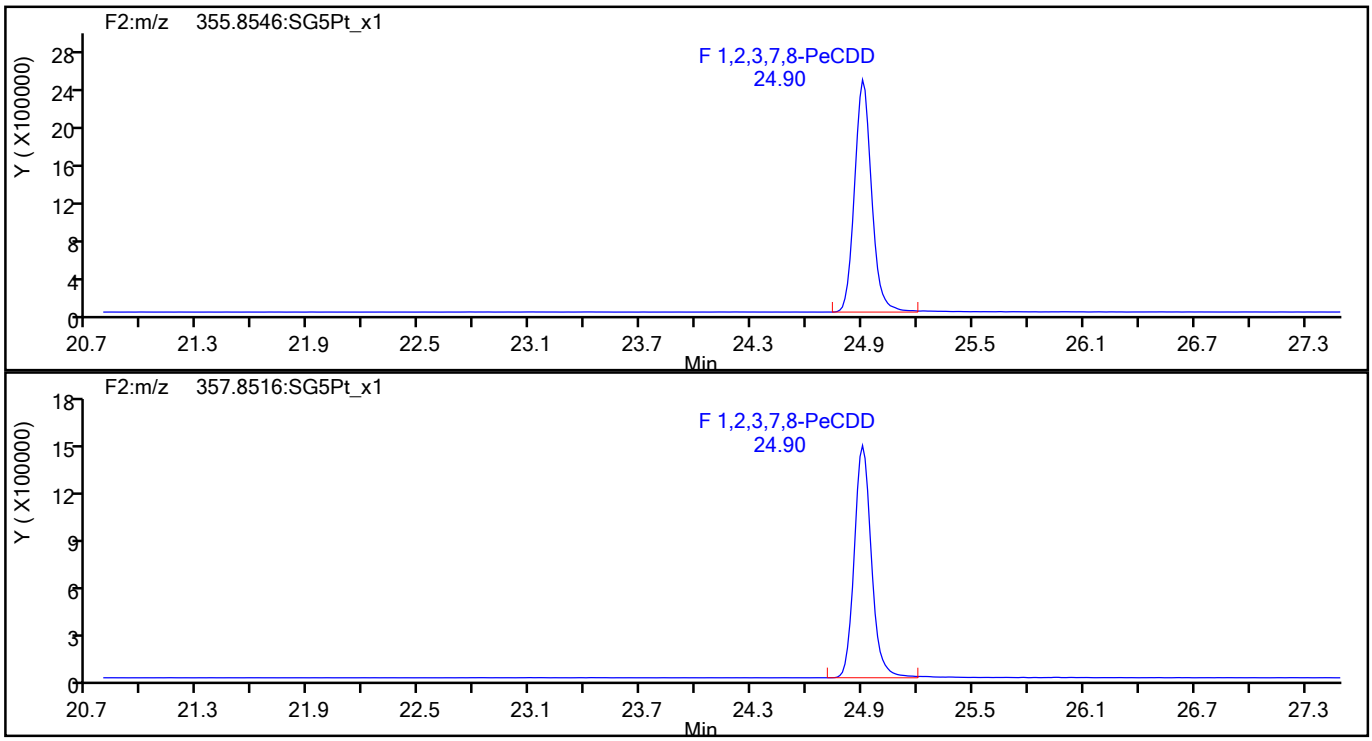

PeCDD Standards

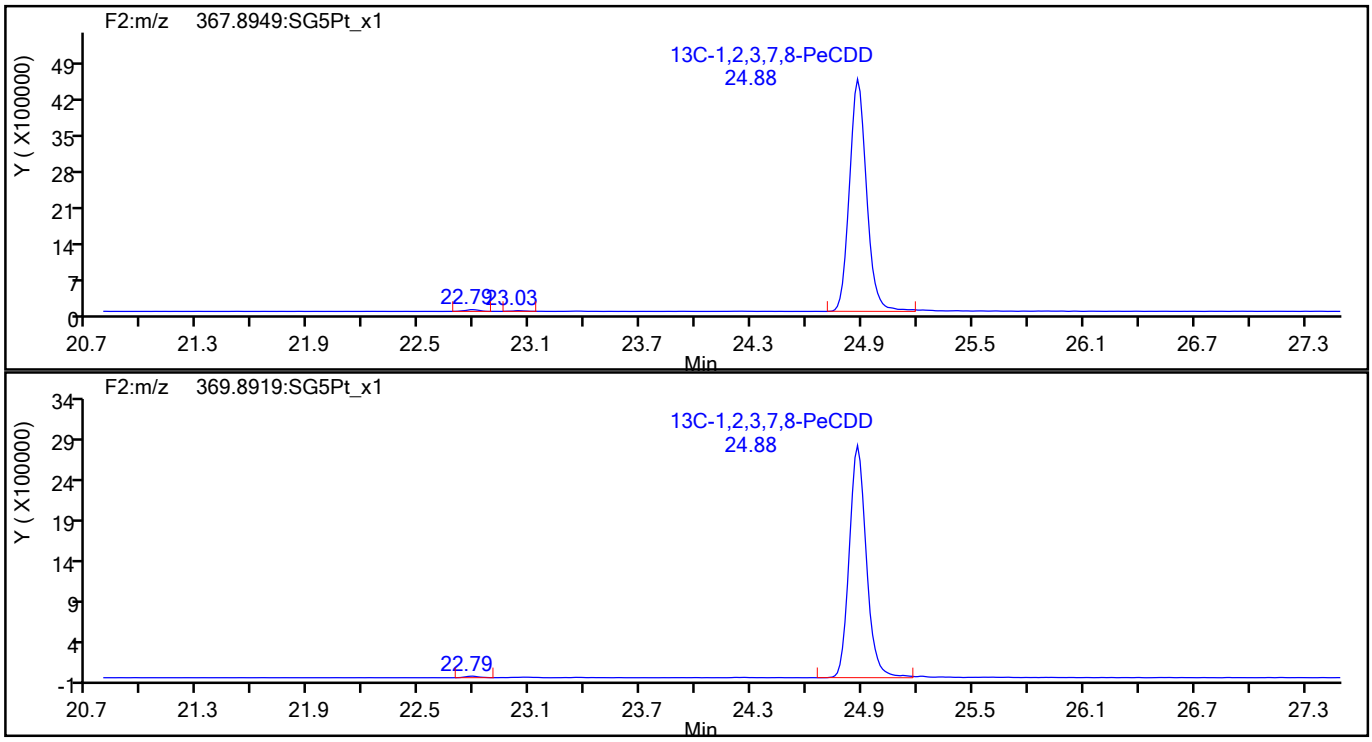

781281

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

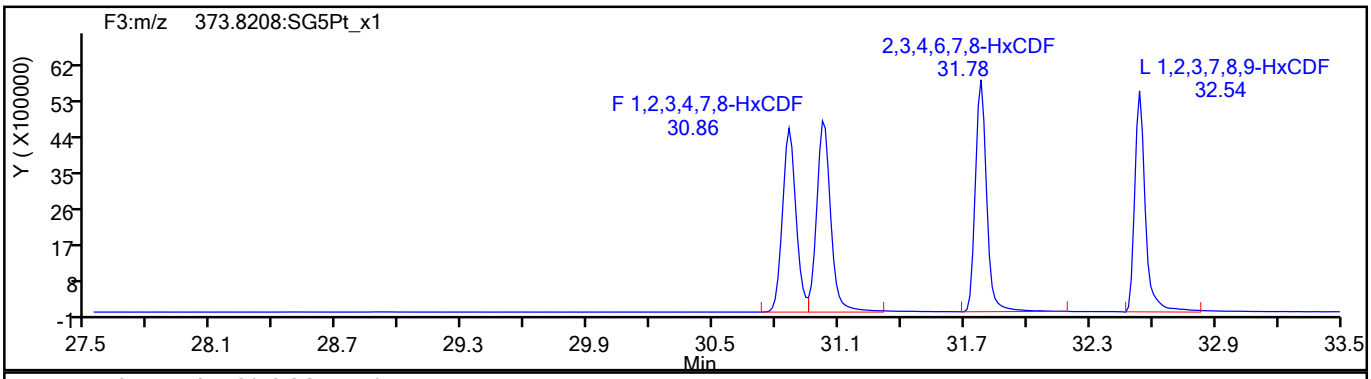

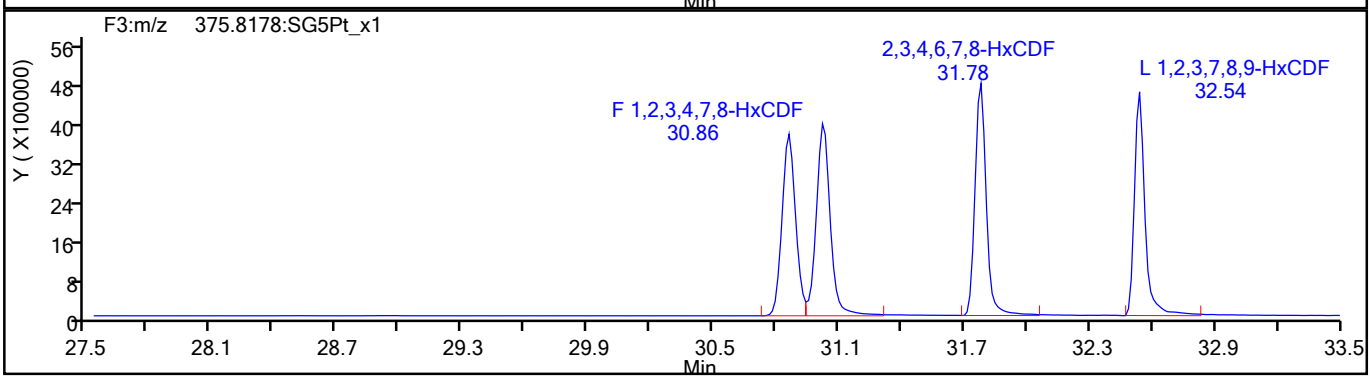

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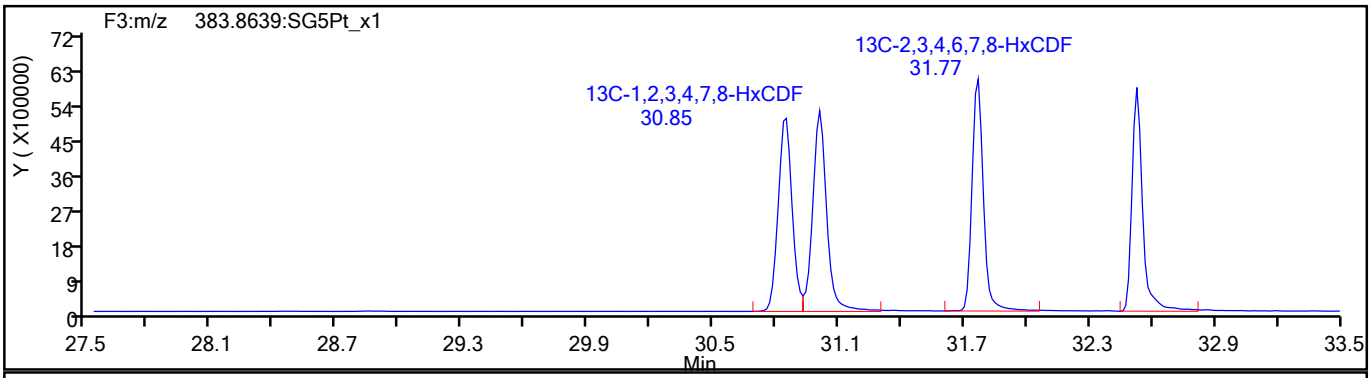

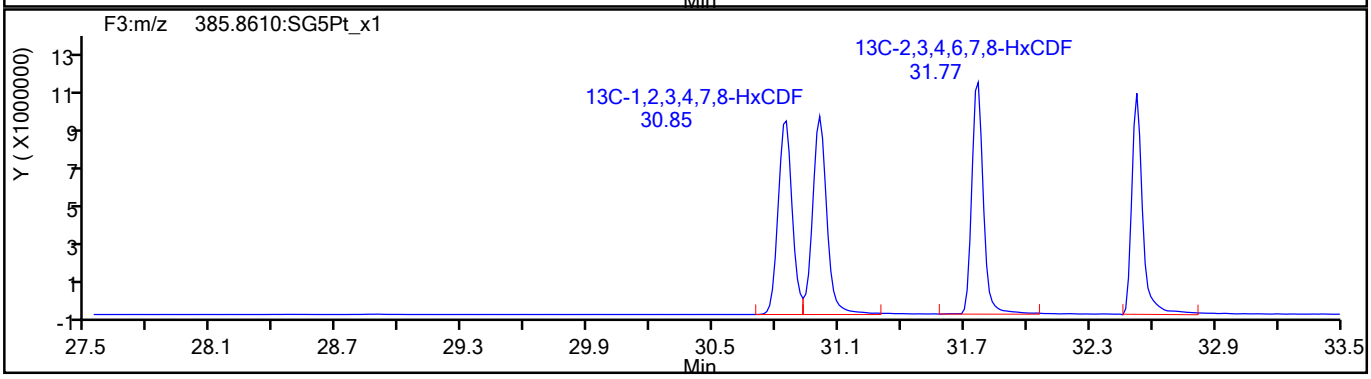

781282

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

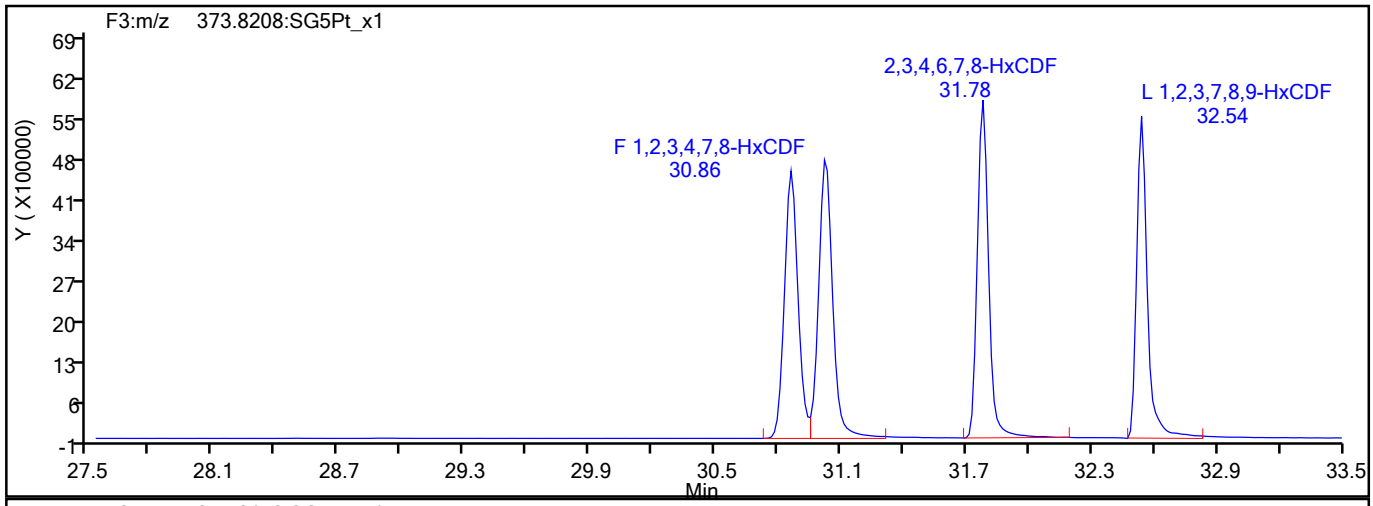

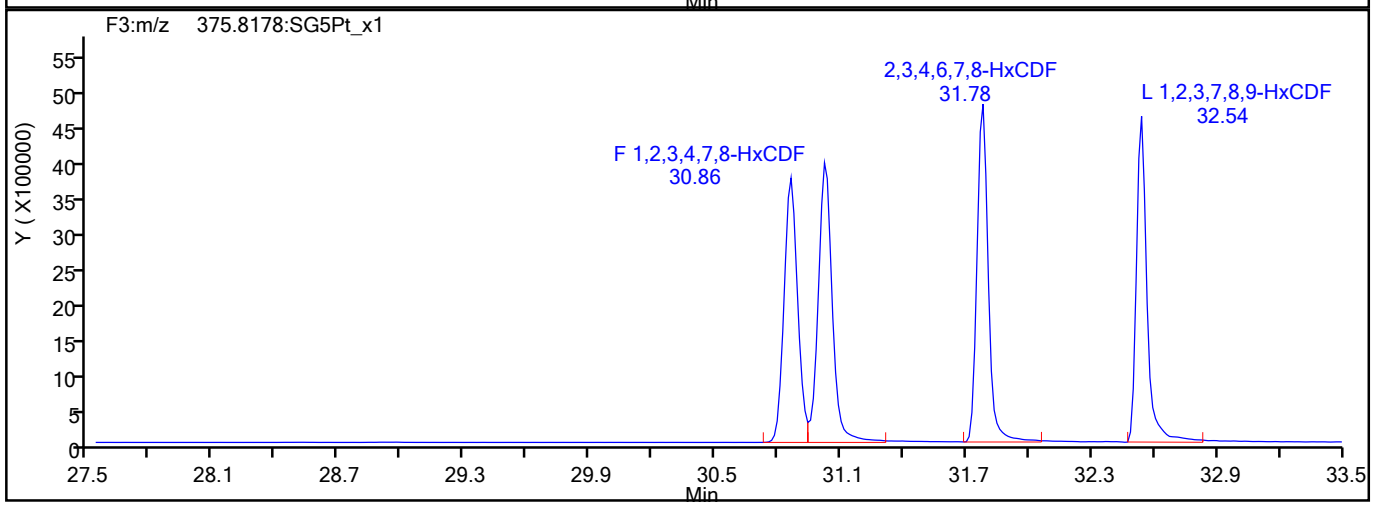

HxCDF Interference Mass

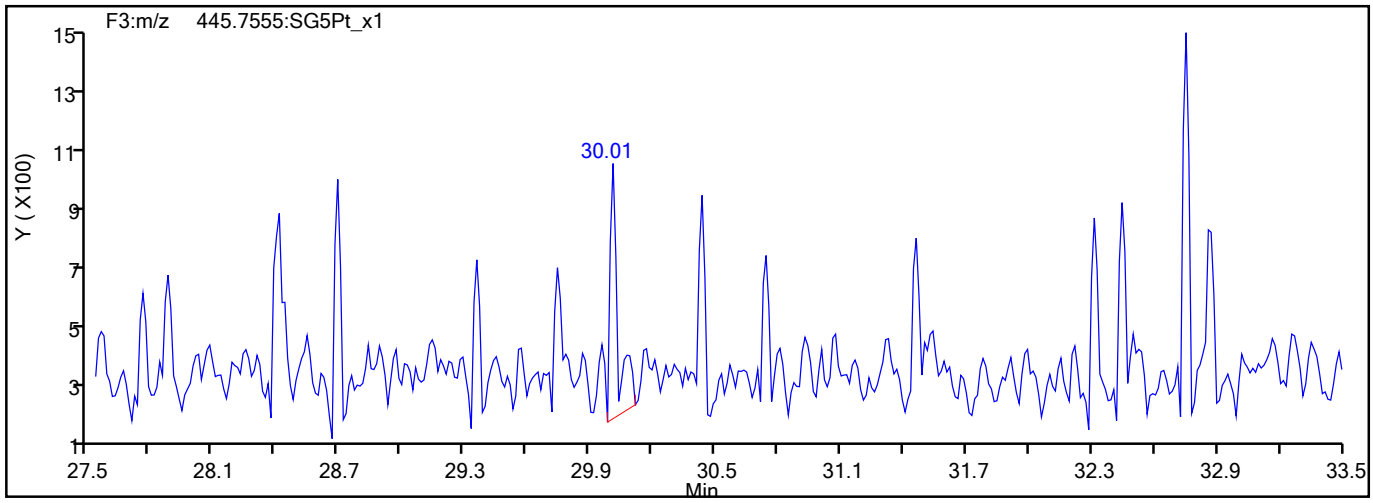

781283

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

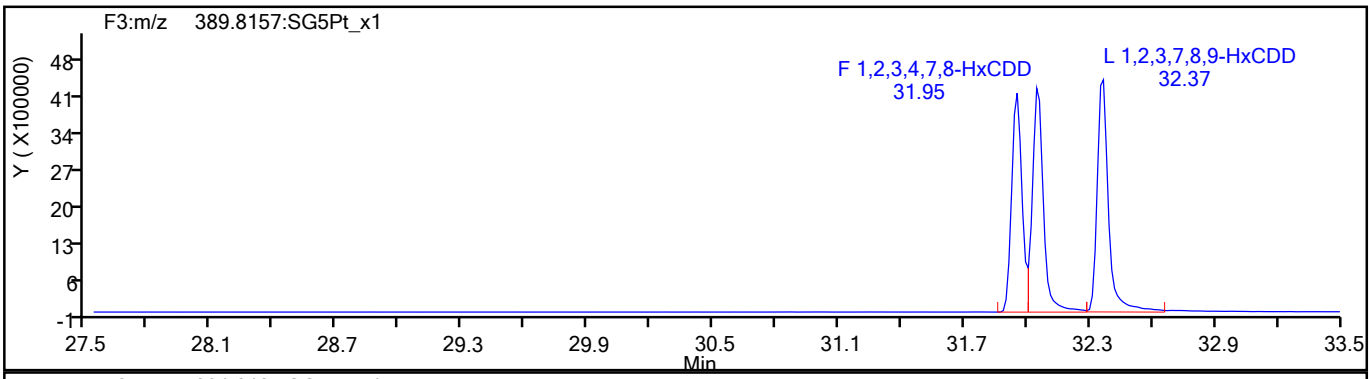

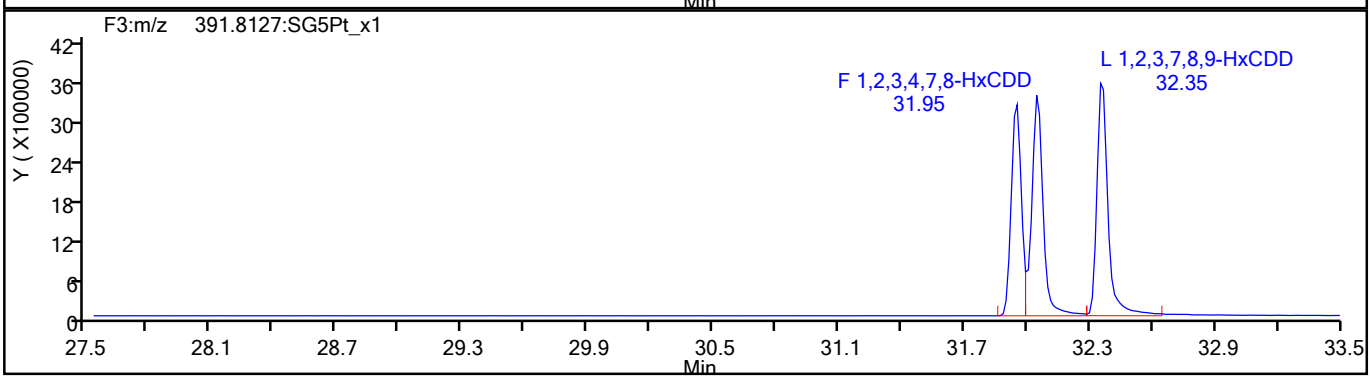

HxCDD Standards

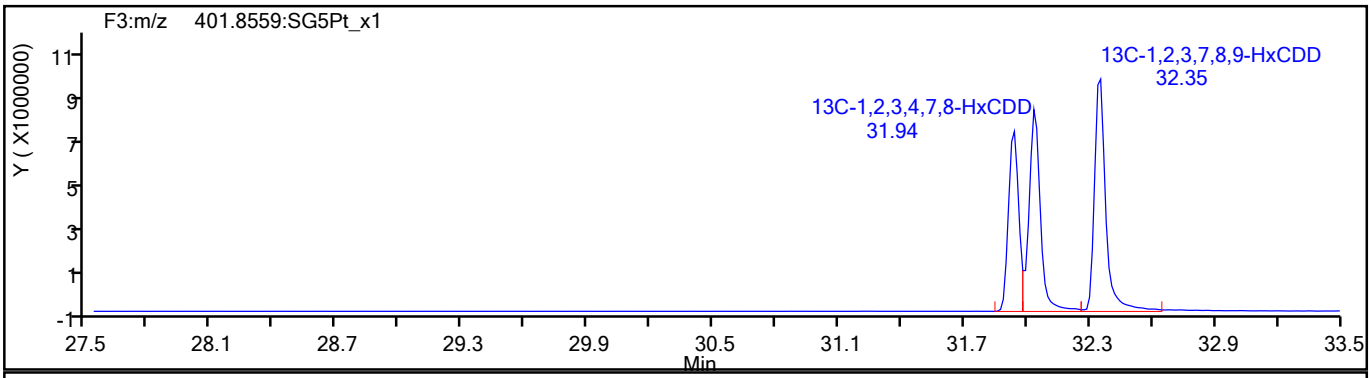

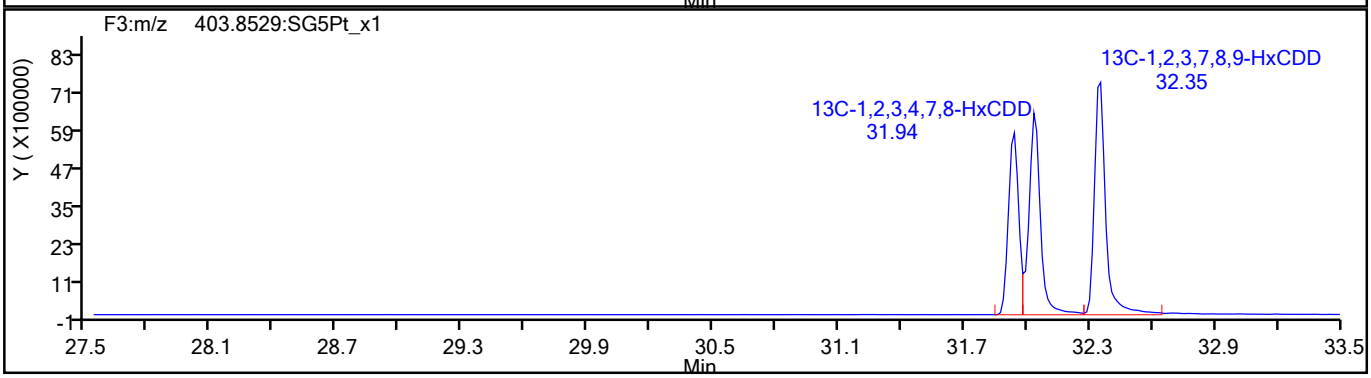

781284

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

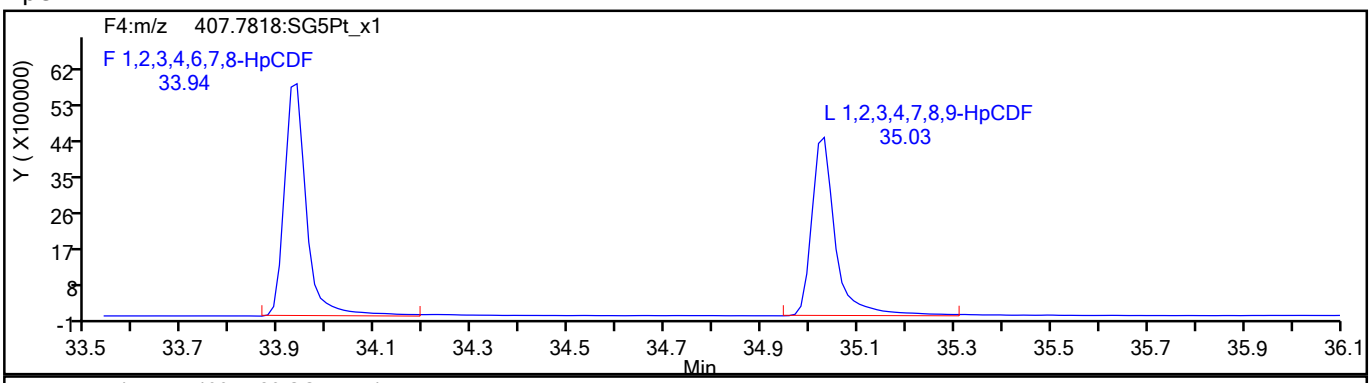

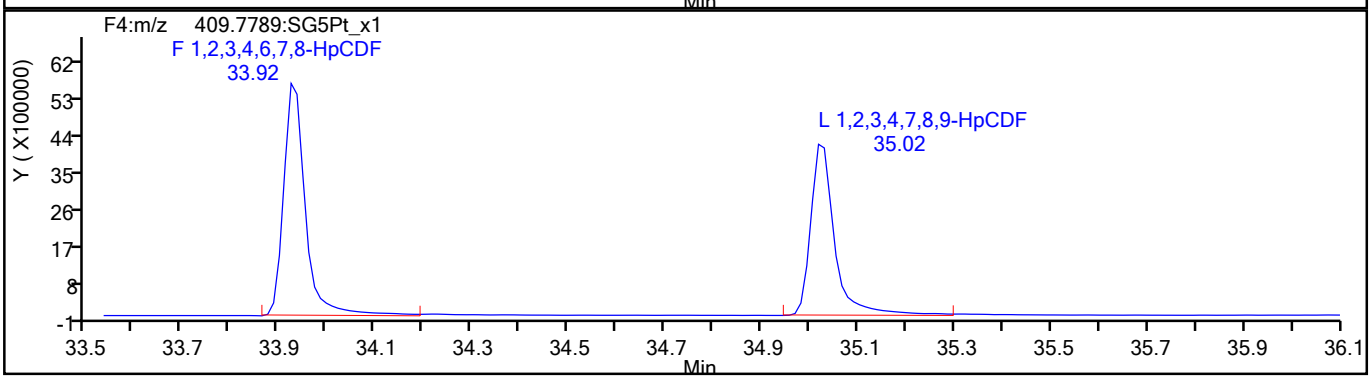

HpCDF Standards

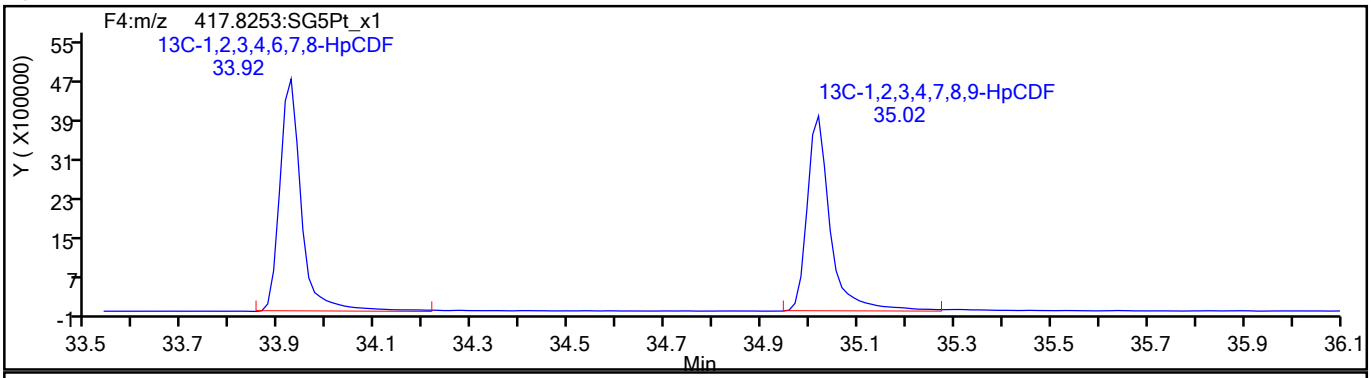

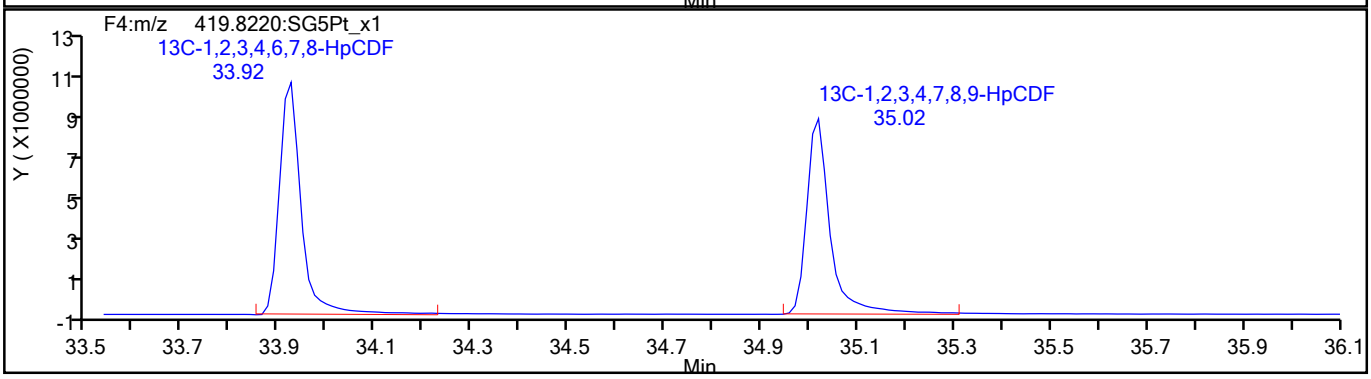

781285

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

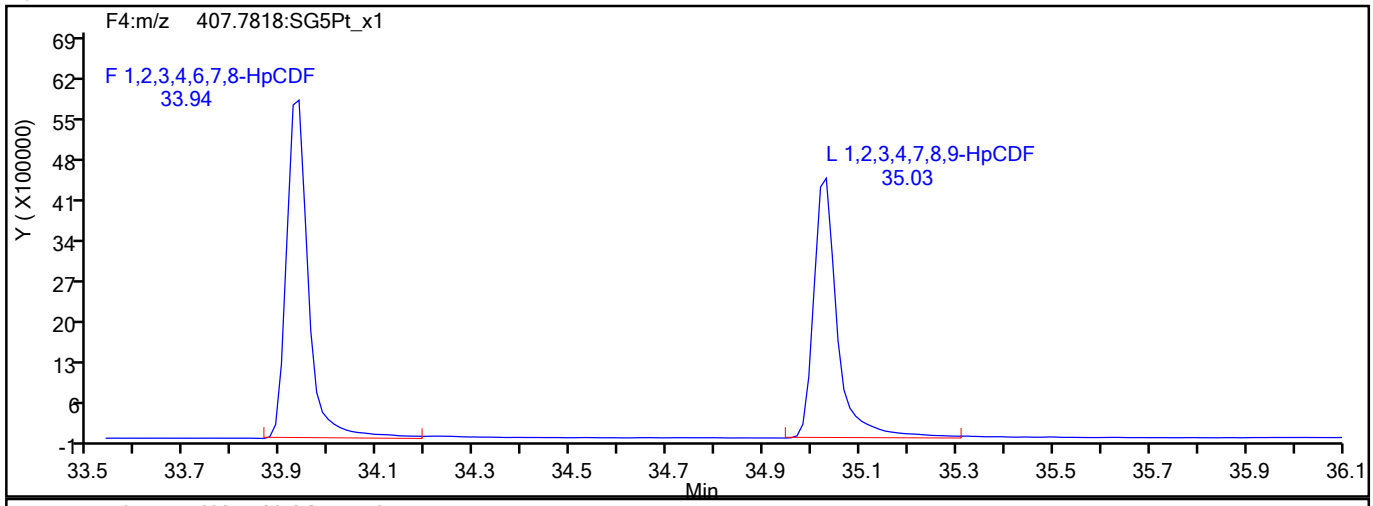

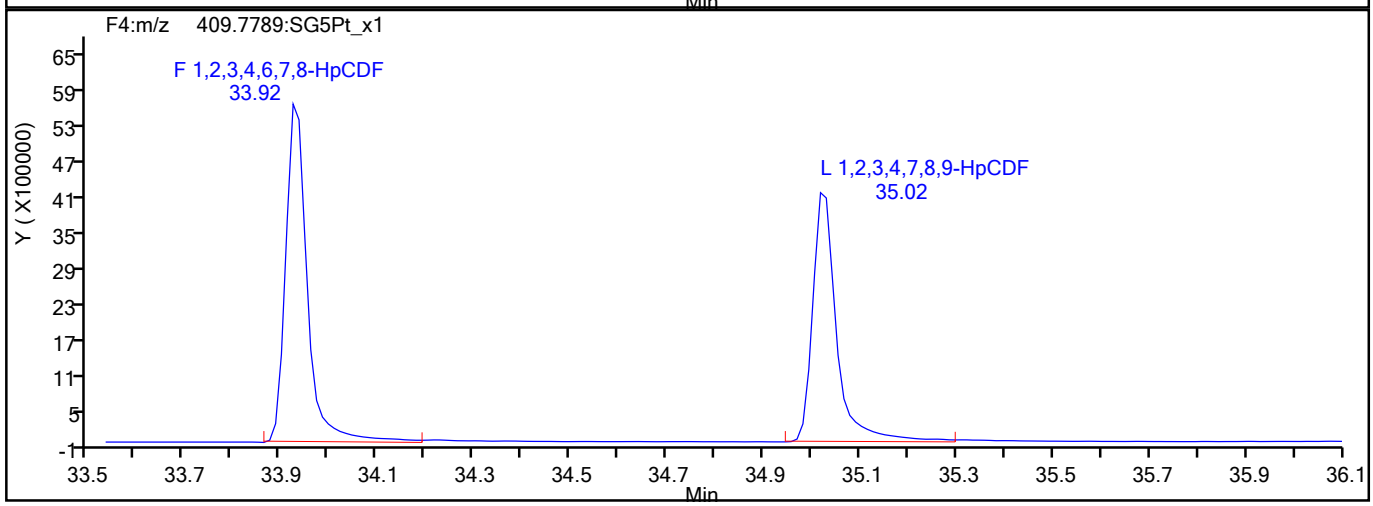

HpCDF Interference Mass

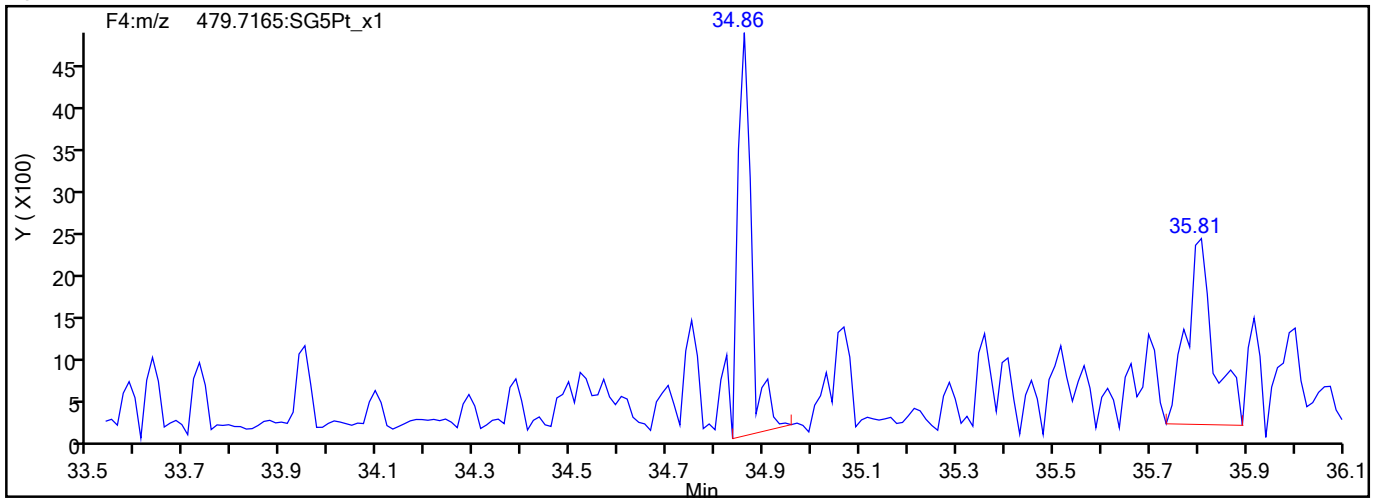

781286

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

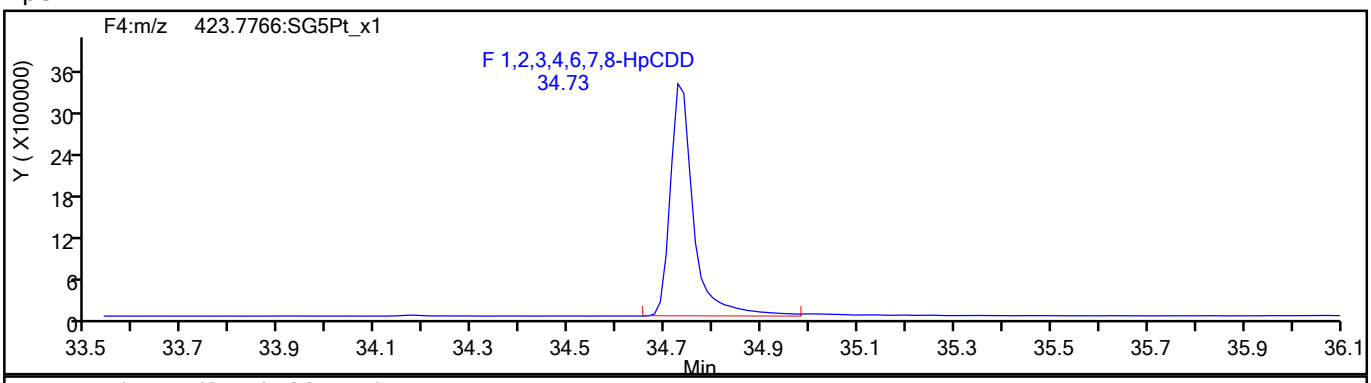

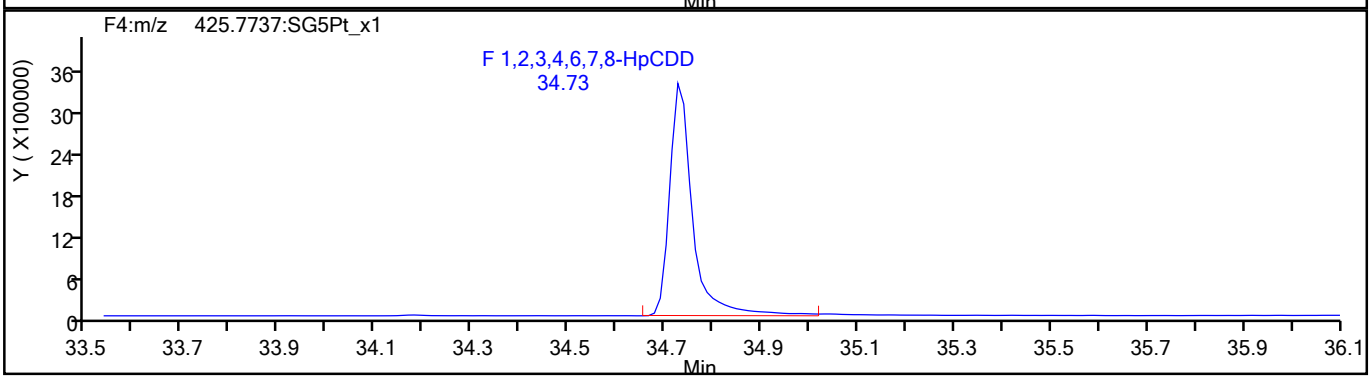

HpCDD Standards

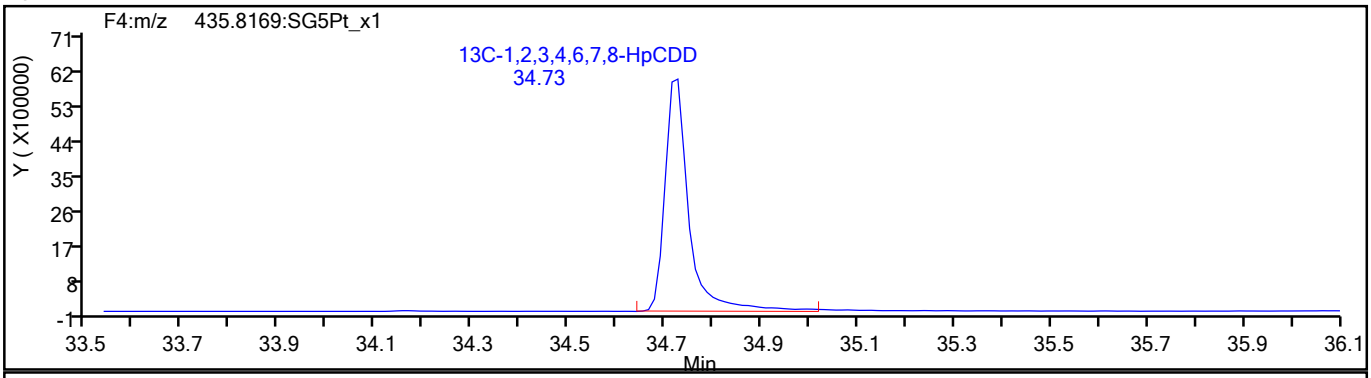

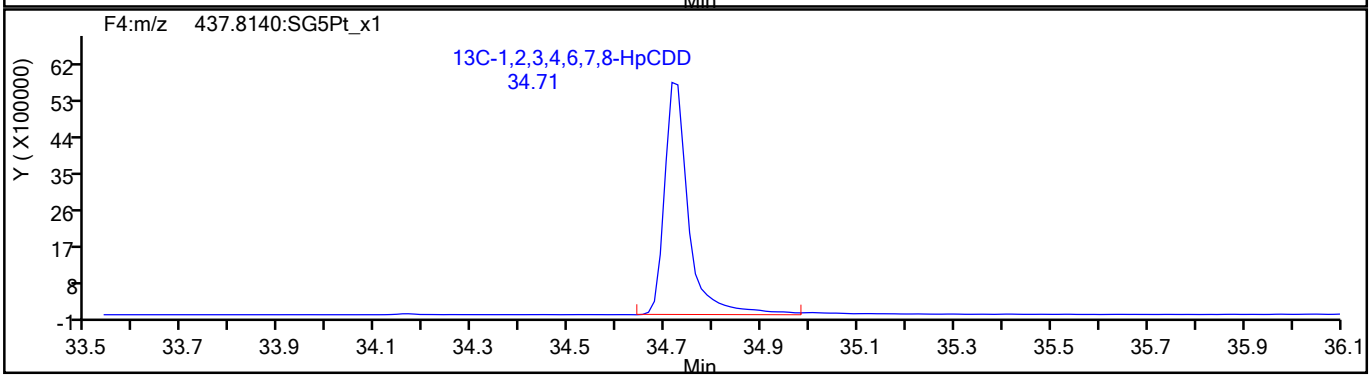

781287

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

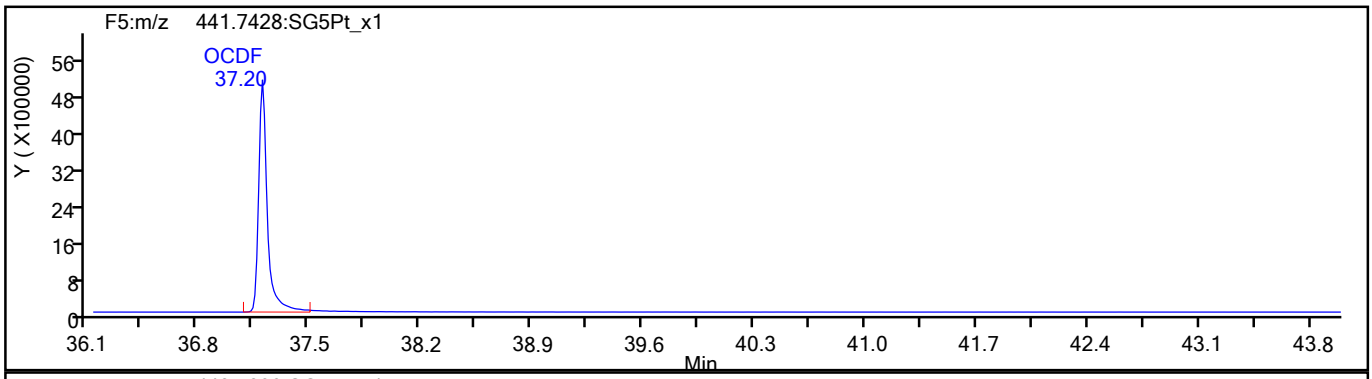

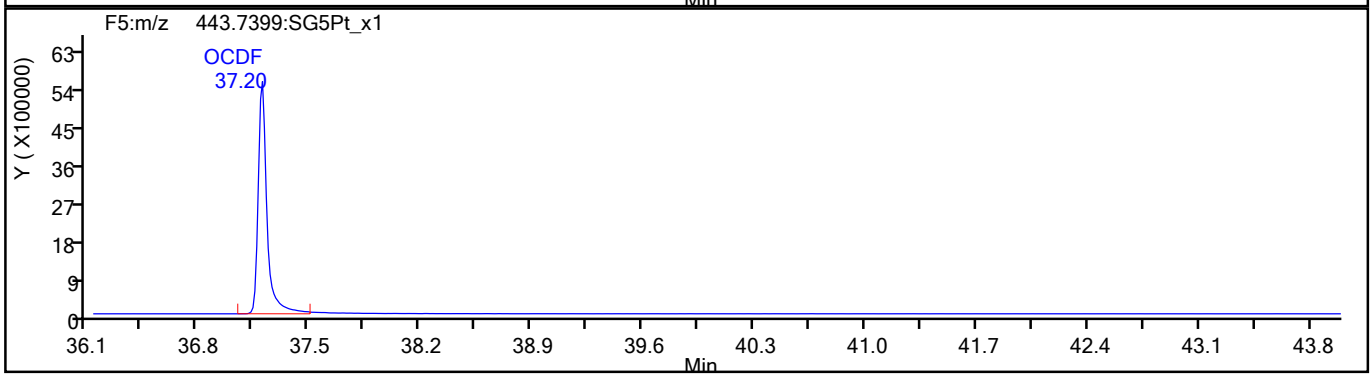

OCDF Standards

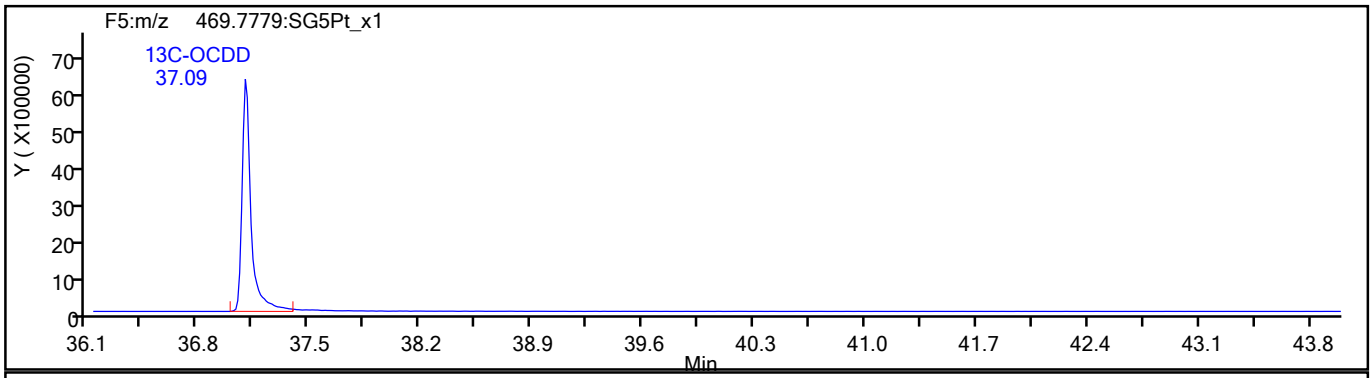

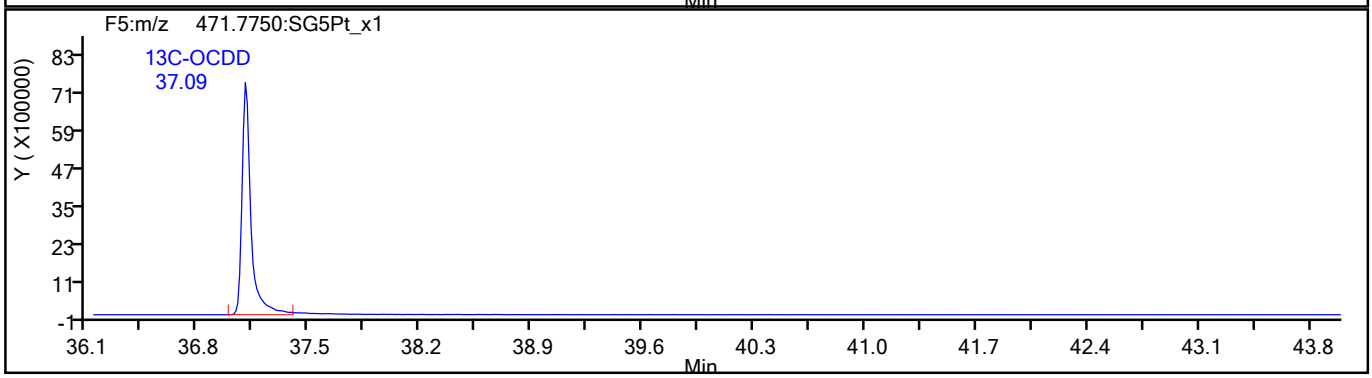

781288

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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OCDF

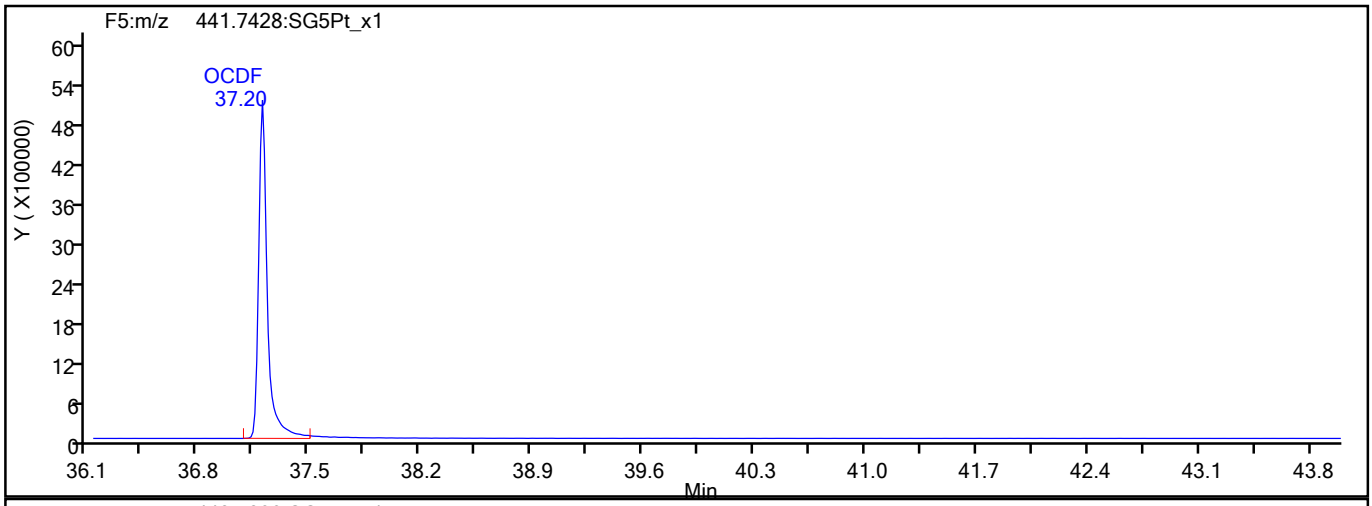

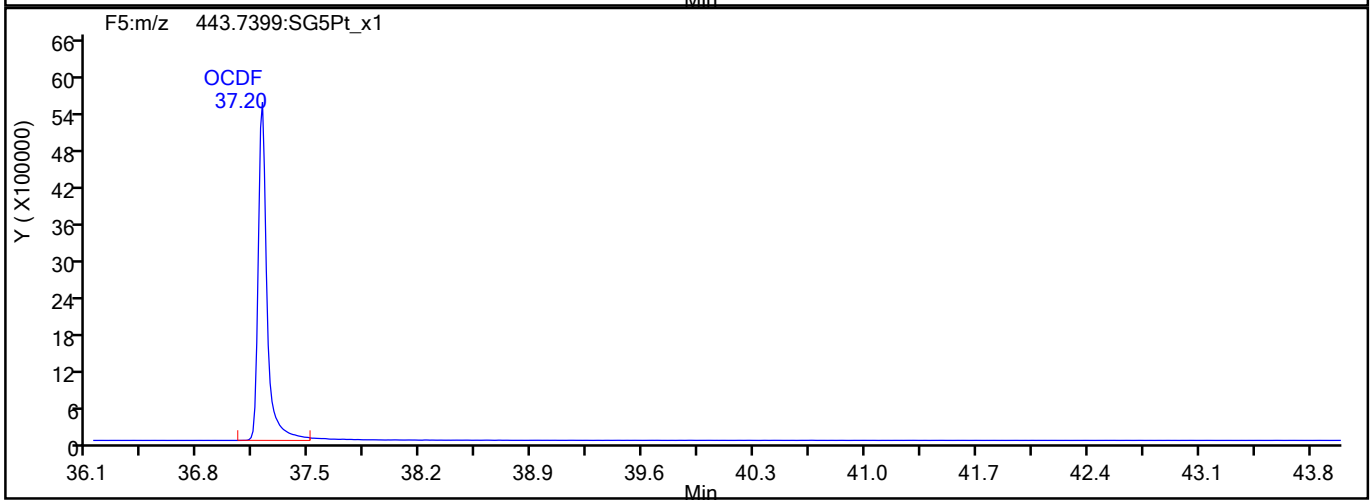

OCDF Interference Mass

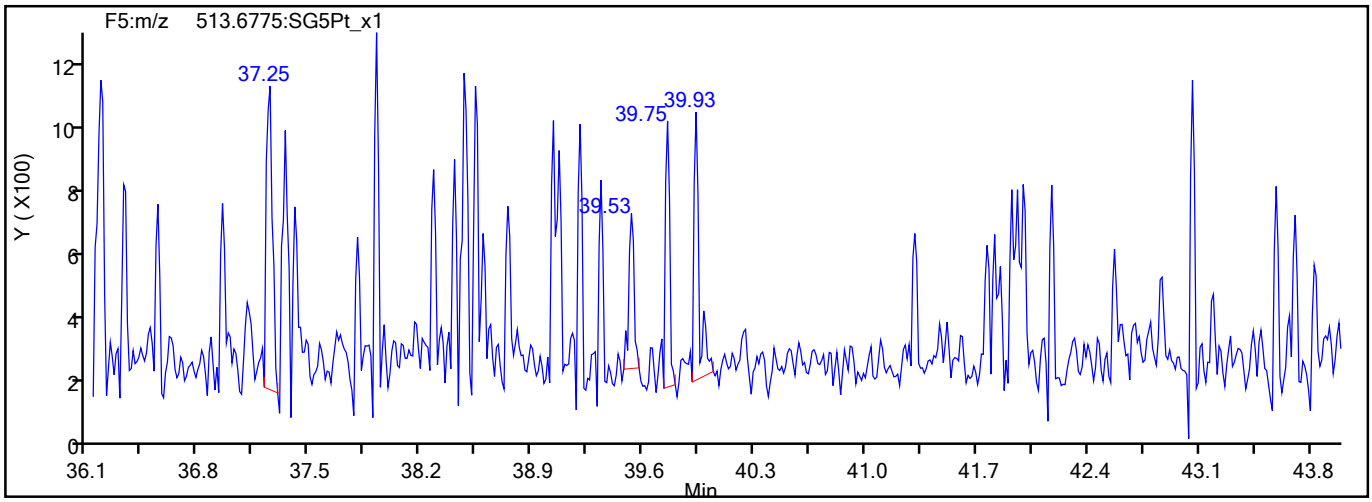

781289

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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OCDD

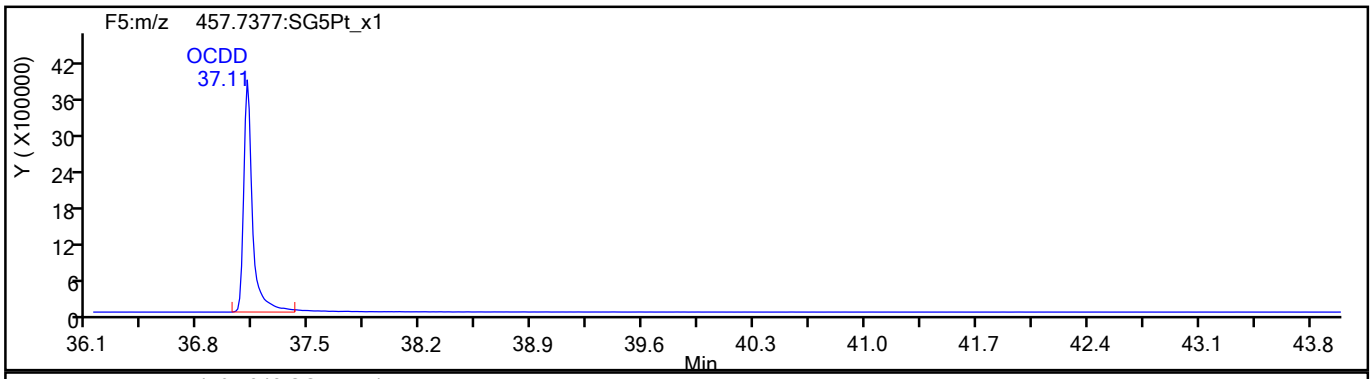

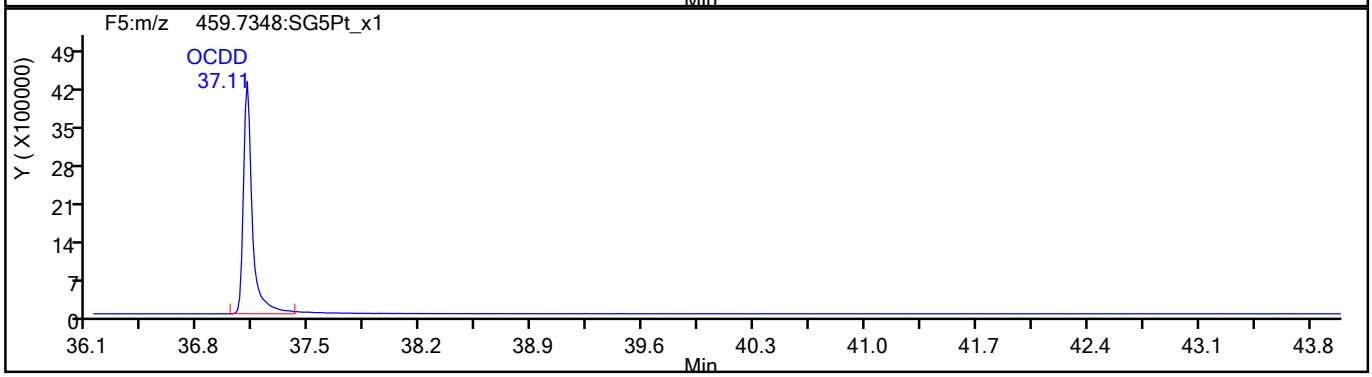

OCDD Standards

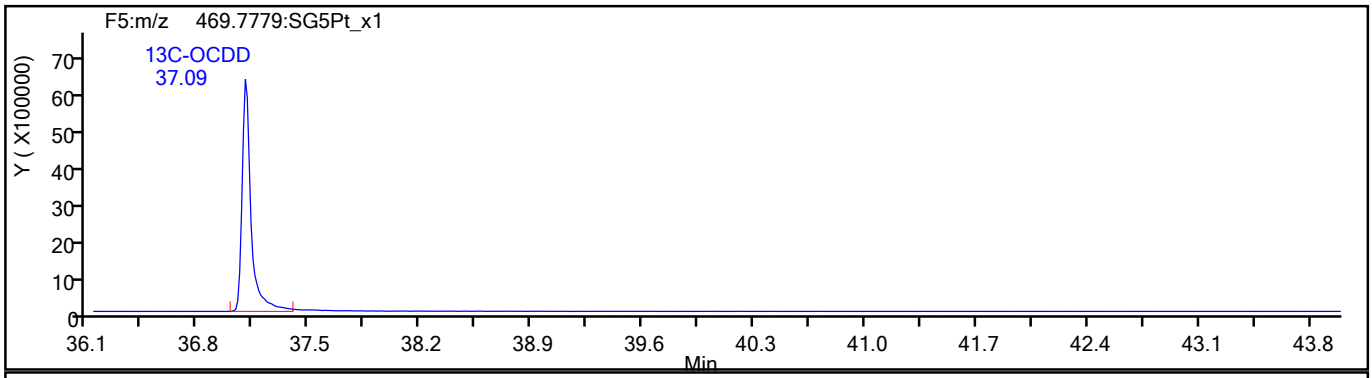

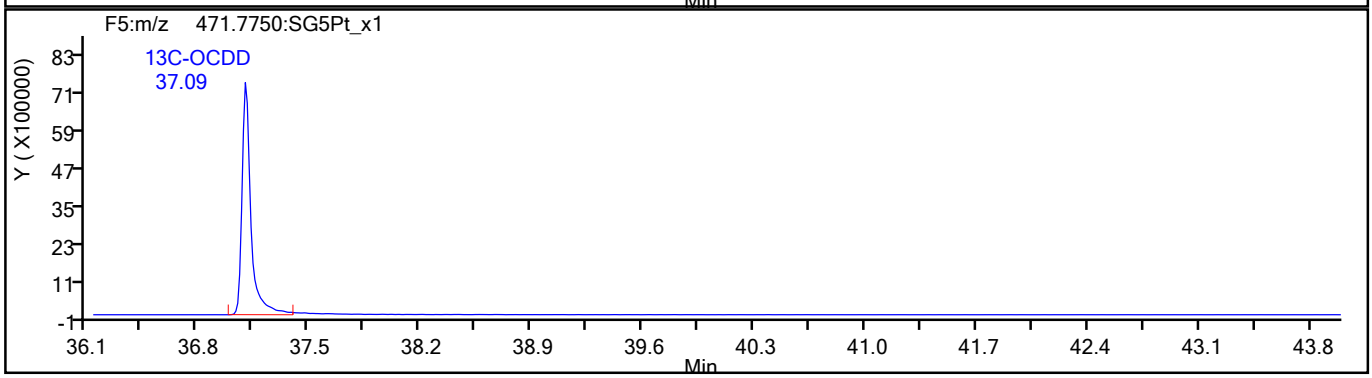

781290

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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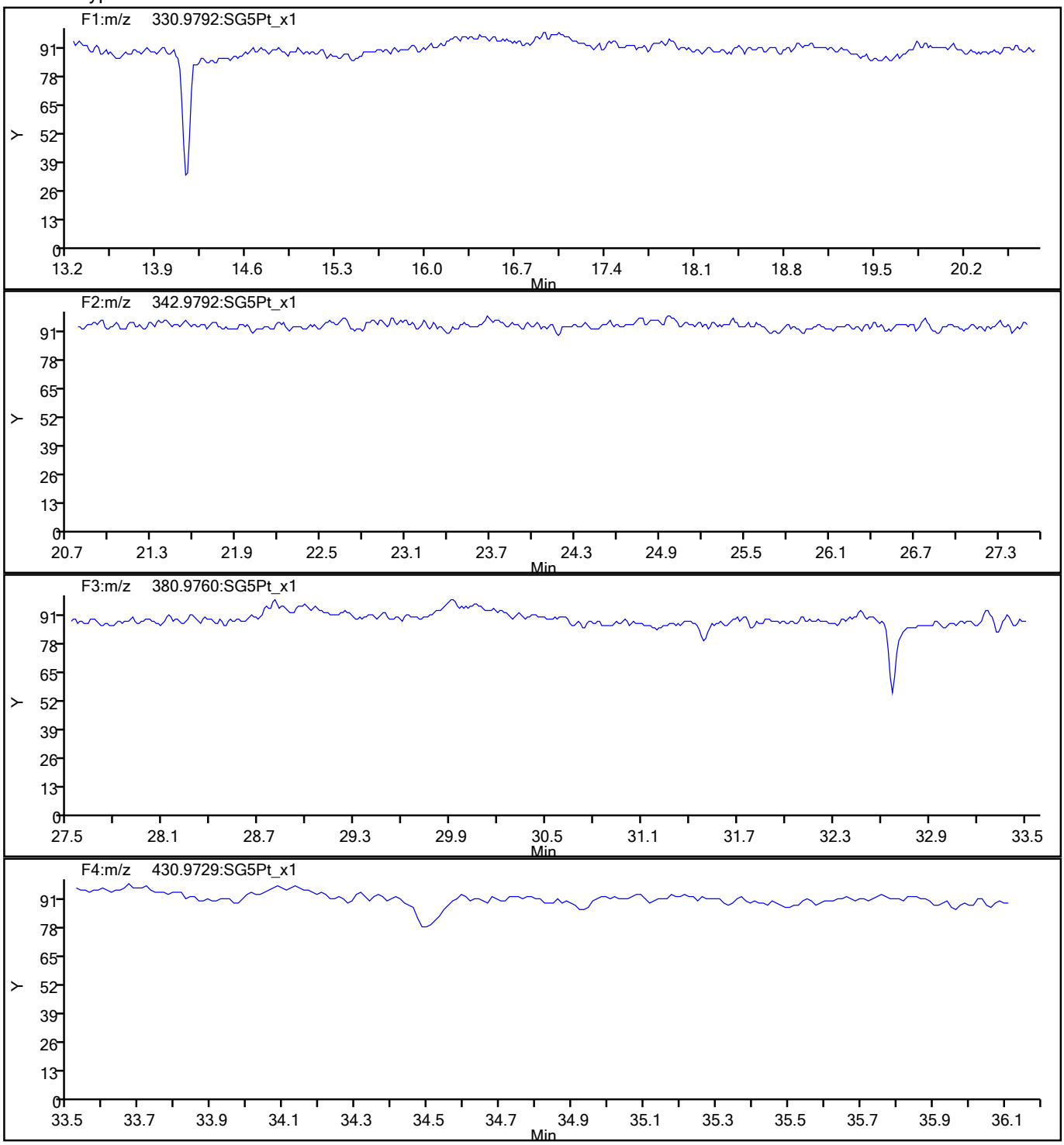

781291

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

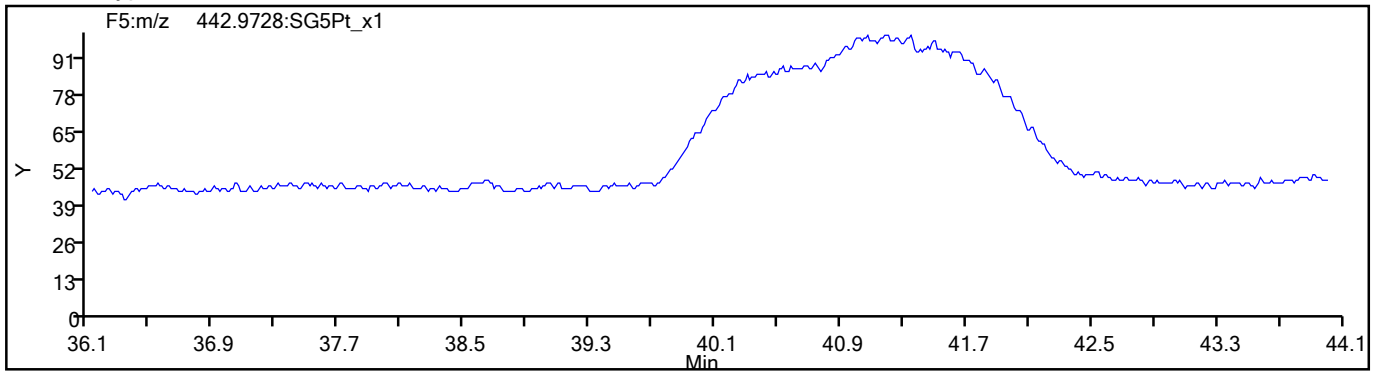

781292

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62046988	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	100332269	0.78	1.6249	99.5	99.5	0.1367	0.1367	99.52	
2,3,7,8-TCDF	17.628	44524782	0.76	1.0239	43.3	43.3	0.0503	0.0503	108	
S Total TCDF					43.3	43.3	0.0503	0.0503		
D 13C-2,3,7,8-TCDD	18.338	55471422	0.81	0.8993	99.4	99.4	0.1780	0.1780	99.41	
$ 37Cl4-2,3,7,8-TCDD	18.354	29474361		1.1071	42.9	42.9	0.0363	0.0363	107	
2,3,7,8-TCDD	18.354	29808948	0.78	1.2541	42.8	42.8	0.0471	0.0471	107	
S Total TCDD					42.8	42.8	0.0471	0.0471		
D 13C-1,2,3,7,8-PeCDF	22.762	75205597	1.60	1.2101	100.2	100.2	0.2087	0.2087	100	
1,2,3,7,8-PeCDF	22.776	171023920	1.60	1.0611	214.3	214.3	0.5904	0.5904	107	
D 13C-2,3,4,7,8-PeCDF	24.126	75259591	1.60	1.2395	97.9	97.9	0.2038	0.2038	97.86	
2,3,4,7,8-PeCDF	24.153	166805723	1.58	1.0184	217.6	217.6	0.6563	0.6563	109	
S Total PeCDF					431.9	431.9	0.6233	0.6233		
D 13C-1,2,3,7,8-PeCDD	24.862	46524396	1.64	0.7612	98.5	98.5	0.1093	0.1093	98.50	
1,2,3,7,8-PeCDD	24.889	105236005	1.57	1.0484	215.7	215.7	0.2317	0.2317	108	
S Total PeCDD					215.7	215.7	0.2317	0.2317		
D 13C-1,2,3,4,7,8-HxCDF	30.835	64951889	0.52	1.0837	95.7	95.7	0.4366	0.4366	95.70	
1,2,3,4,7,8-HxCDF	30.862	155057762	1.22	1.0851	220.0	220.0	1.165	1.165	110	
D 13C-1,2,3,6,7,8-HxCDF	31.008	70459920	0.52	1.1279	99.7	99.7	0.4194	0.4194	99.75	
1,2,3,6,7,8-HxCDF	31.022	168618976	1.23	1.1260	212.5	212.5	1.081	1.081	106	
D 13C-2,3,4,6,7,8-HxCDF	31.754	66145684	0.53	1.0637	99.3	99.3	0.4448	0.4448	99.29	
2,3,4,6,7,8-HxCDF	31.780	164241378	1.21	1.1675	212.7	212.7	0.8912	0.8912	106	
D 13C-1,2,3,7,8,9-HxCDF	32.526	59636084	0.52	0.9676	98.4	98.4	0.4890	0.4890	98.41	
1,2,3,7,8,9-HxCDF	32.539	148834491	1.23	1.1664	214.0	214.0	0.9364	0.9364	107	
S Total HxCDF					859.2	859.2	1.018	1.018		
* 13C-1,2,3,7,8,9-HxCDD	32.339	62627787	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44144841	1.25	0.7334	96.1	96.1	0.3745	0.3745	96.11	
1,2,3,4,7,8-HxCDD	31.953	103044220	1.27	1.0640	219.4	219.4	0.6488	0.6488	110	
D 13C-1,2,3,6,7,8-HxCDD	32.033	54392394	1.25	0.8802	98.7	98.7	0.3120	0.3120	98.67	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	118900298	1.28	1.0001	218.6	218.6	0.5965	0.5965	109	
1,2,3,7,8,9-HxCDD	32.353	122394998	1.26	1.1325	219.4	219.4	0.5651	0.5651	110	
S Total HxCDD					657.3	657.3	0.6034	0.6034		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	47752972	0.44	0.7730	98.6	98.6	1.001	1.001	98.64	
1,2,3,4,6,7,8-HpCDF	33.924	147892240	1.06	1.4413	214.9	214.9	2.024	2.024	107	
D 13C-1,2,3,4,7,8,9-HpCDF	35.017	42687625	0.44	0.7008	97.3	97.3	1.104	1.104	97.26	
1,2,3,4,7,8,9-HpCDF	35.017	123968724	1.06	1.3174	220.4	220.4	2.743	2.743	110	
S Total HpCDF					435.3	435.3	2.383	2.383		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	40442950	1.02	0.6472	99.8	99.8	0.5241	0.5241	99.77	
1,2,3,4,6,7,8-HpCDD	34.726	94435922	1.04	1.0943	213.4	213.4	0.9683	0.9683	107	
S Total HpCDD					213.4	213.4	0.9683	0.9683		
D 13C-OCDD	37.093	57303880	0.88	0.4472	204.6	204.6	0.2753	0.2753	102	
OCDF	37.201	181747068	0.91	1.4382	441.1	441.1	0.4159	0.4159	110	
OCDD	37.105	135570174	0.90	1.1070	427.4	427.4	0.4029	0.4029	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		27754917	7076779	4201	10502	1685		
333.9339	18.142	18.142	0		34292071	8691565	5896	14740	1474	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	43967601	10754823	8470	21175	1270		
317.9389	17.613	17.616	0	0.971	56364668	13840834	5538	13845	2499	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	19278962	4714580	2218	5545	2126		
305.8987	17.628	17.631	0	1.001	25245820	6261705	2854	7135	2194	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24807018	5848000	4201	10502	1392		
333.9339	18.338	18.338	0	1.011	30664404	7186127	5896	14740	1219	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	29474361	7040079	2537	6342	2775		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	13088265	3099418	1571	3927	1973		
321.8936	18.354	18.357	0	1.001	16720683	3961925	1508	3770	2627	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46265218	8069932	9479	23697	851		
353.8970	22.749	22.754	0	1.254	28940379	5072009	6452	16130	786	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	105236981	18677381	20013	50032	933		
341.8567	22.776	22.779	0	1.001	65786939	11693027	12919	32297	905	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46298187	7561650	9479	23697	798		
353.8970	24.126	24.129	0	1.330	28961404	4756017	6452	16130	737	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	102234081	17002363	20013	50032	850		
341.8567	24.153	24.156	0	1.001	64571642	10773383	12919	32297	834	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28884955	4397104	3175	7937	1385		
369.8919	24.862	24.865	0	1.370	17639441	2717935	2071	5177	1312	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	64347111	9837651	3945	9862	2494		
357.8516	24.889	24.892	0	1.001	40888894	6265054	2969	7422	2110	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	22237957	4900100	10775	26937	455		
385.8610	30.835	30.838	0	0.953	42713932	9213265	21190	52975	435	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	85201859	18424877	39257	98142	469		
375.8178	30.849	30.857	0	1.000	69855903	15011303	32096	80240	468	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	23996455	5001651	10775	26937	464		
385.8610	31.008	31.003	0	0.959	46463465	9659865	21190	52975	456	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	92842545	20075526	39257	98142	511		
375.8178	31.022	31.022	0	1.000	75776431	16178695	32096	80240	504	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	22792396	5861290	10775	26937	544		
385.8610	31.754	31.756	0	0.982	43353288	11282982	21190	52975	532	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.780	31.772	0	1.001	89865159	23412461	39257	98142	596		
375.8178	31.767	31.772	0	1.000	74376219	19191516	32096	80240	598	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20506438	5659225	10775	26937	525		
385.8610	32.526	32.523	0	1.006	39129646	10674002	21190	52975	504	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	82057134	22664755	39257	98142	577		
375.8178	32.539	32.534	0	1.000	66777357	17875439	32096	80240	557	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		34509982	9306847	9505	23762	979		
403.8529	32.339	32.342	0		28117805	7584182	9052	22630	838	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	24560847	6976899	9505	23762	734		
403.8529	31.927	31.929	0	0.987	19583994	5667072	9052	22630	626	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.953	31.945	0	1.001	57595942	16510469	19316	48290	855		
391.8127	31.940	31.945	0	1.000	45448278	13107381	15598	38995	840	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	30198617	8138784	9505	23762	856		
403.8529	32.033	32.033	0	0.991	24193777	6493948	9052	22630	717	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	66690137	17959920	19316	48290	930		
391.8127	32.047	32.047	0	1.000	52210161	14135061	15598	38995	906	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	68169382	18483699	19316	48290	957		
391.8127	32.353	32.355	0	1.013	54225616	14872863	15598	38995	954	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14610497	4589210	16388	40970	280		
419.8220	33.912	33.914	0	1.049	33142475	10497182	35883	89707	293	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	75936953	24520194	90693	226732	270		
409.7789	33.924	33.926	0	1.000	71955287	23549459	85368	213420	276	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.017	35.010	0	1.083	12971814	3739945	16388	40970	228		
419.8220	35.017	35.010	0	1.083	29715811	8442322	35883	89707	235	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	63647403	18553677	90693	226732	205		
409.7789	35.017	35.020	0	1.000	60321321	17850429	85368	213420	209	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	20381379	6053926	11567	28917	523		
437.8140	34.714	34.716	0	1.073	20061571	5957434	11351	28377	525	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	48165795	14539111	26079	65197	558		
425.7737	34.726	34.726	0	1.000	46270127	14041663	24831	62077	565	1.04(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26901378	6693523	3896	9740	1718		
471.7750	37.093	37.094	0	1.147	30402502	7661603	4420	11050	1733	0.88(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	86562223	22814939	9244	23110	2468		
443.7399	37.201	37.199	0	1.003	95184845	24785143	7929	19822	3126	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	64116469	16176091	6061	15152	2669		
459.7348	37.105	37.106	0	1.000	71453705	17977820	6746	16865	2665	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

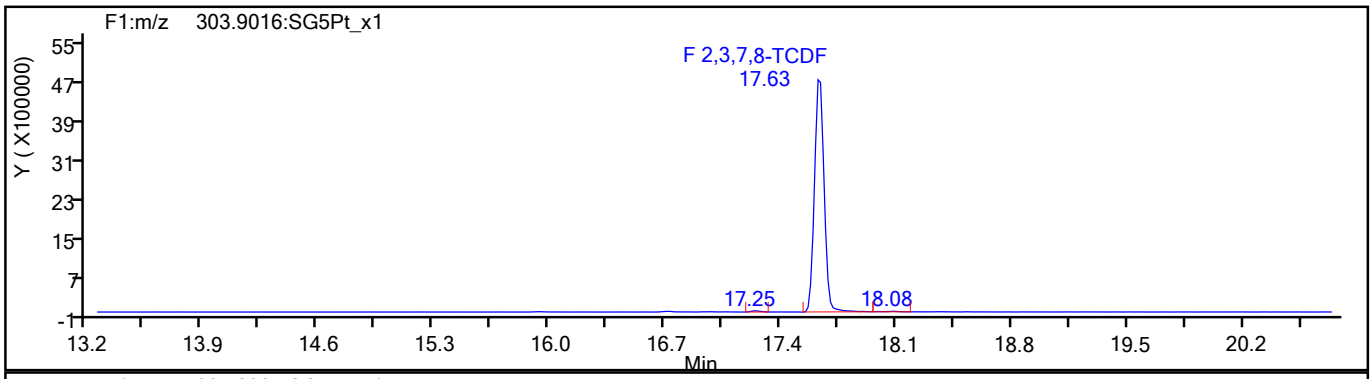

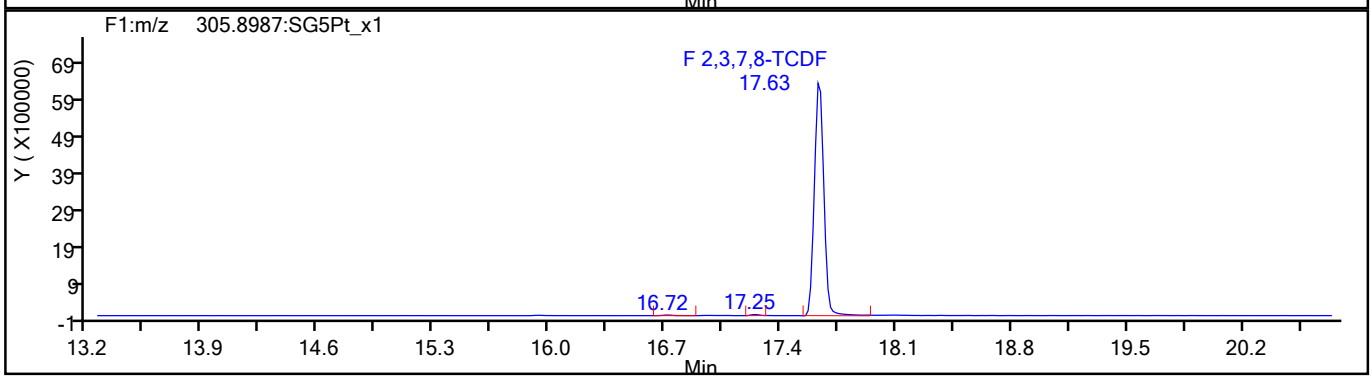

TCDF Standards

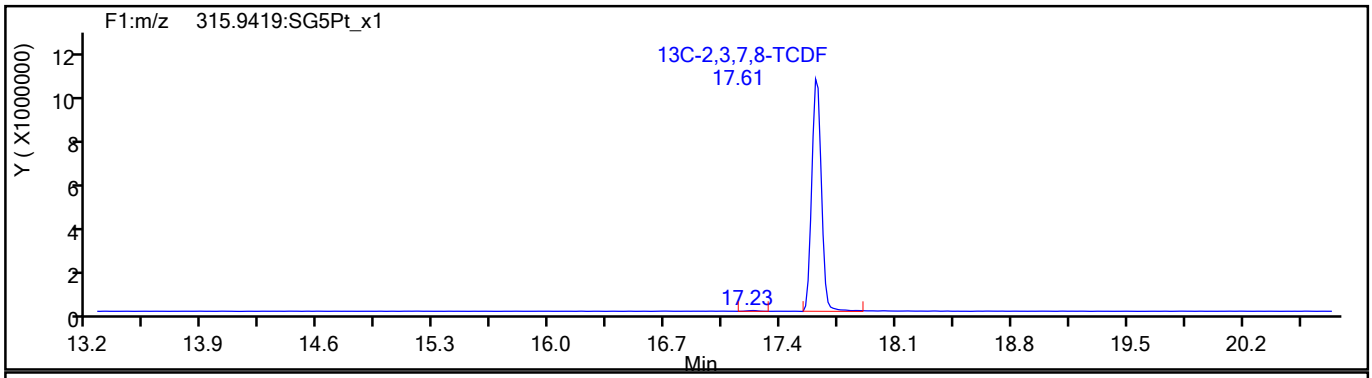

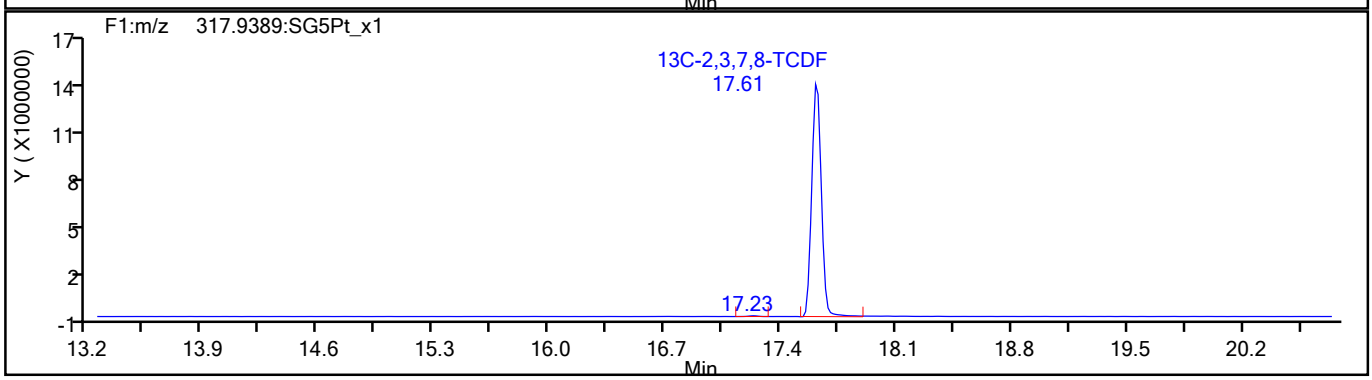

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Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

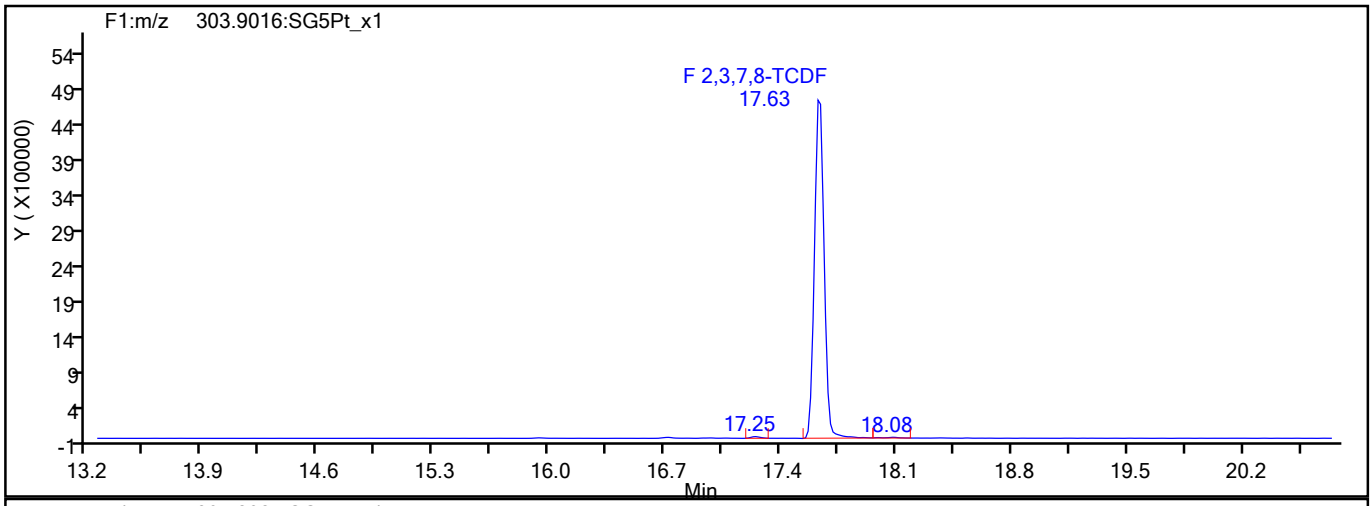

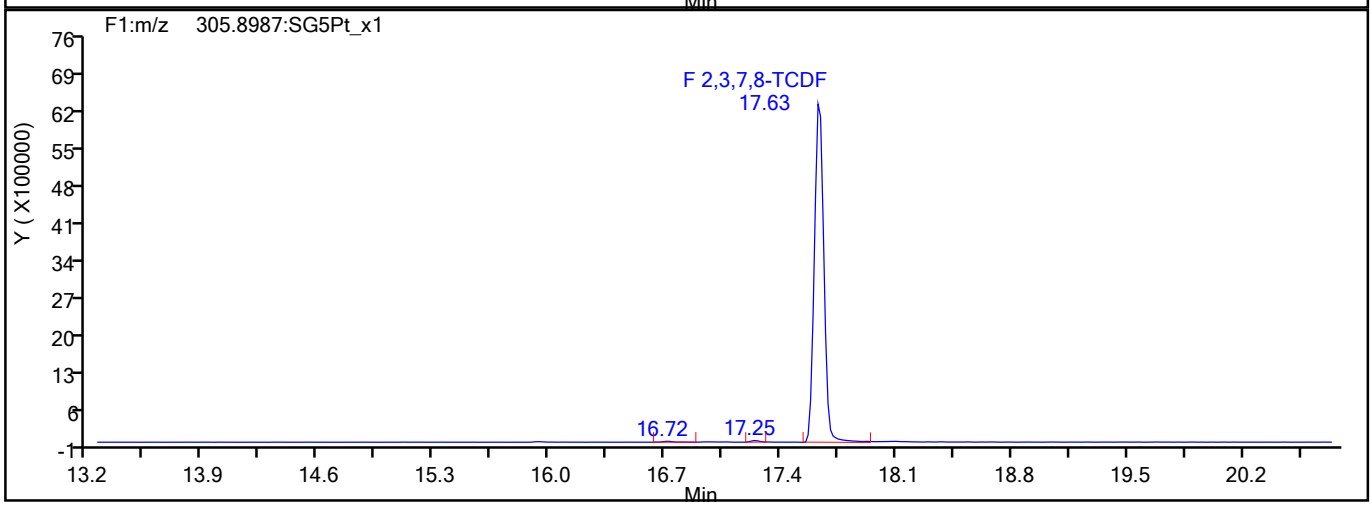

TCDF Interference Mass

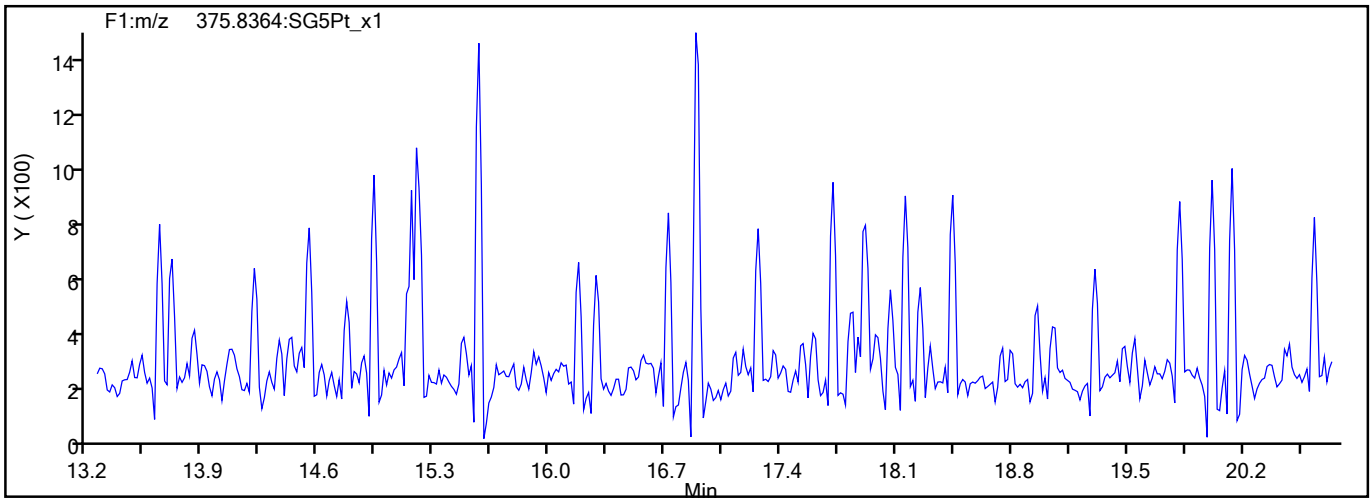

781299

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

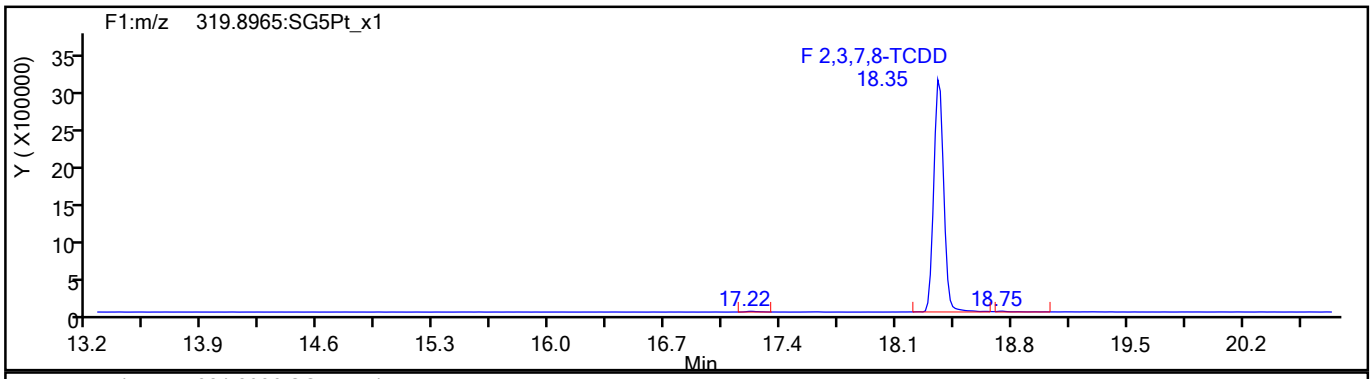

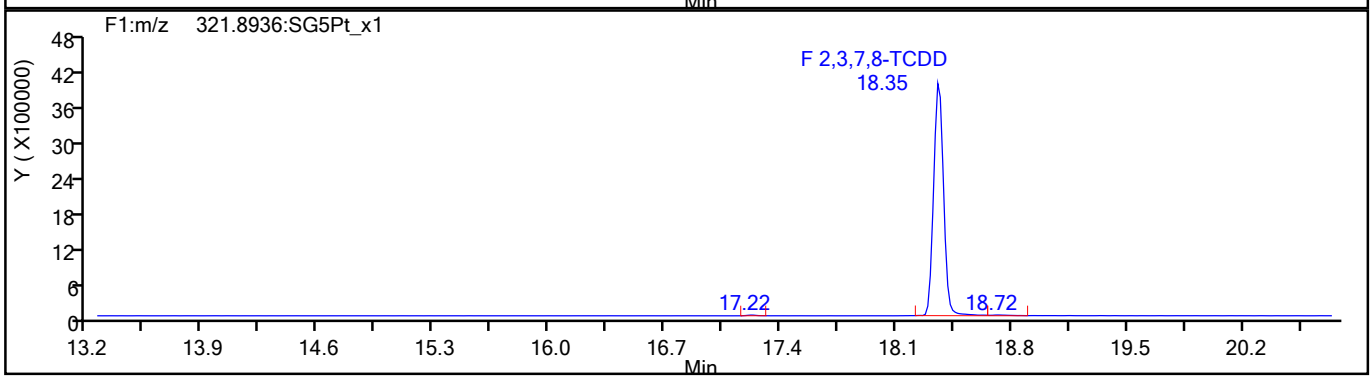

TCDD Standards

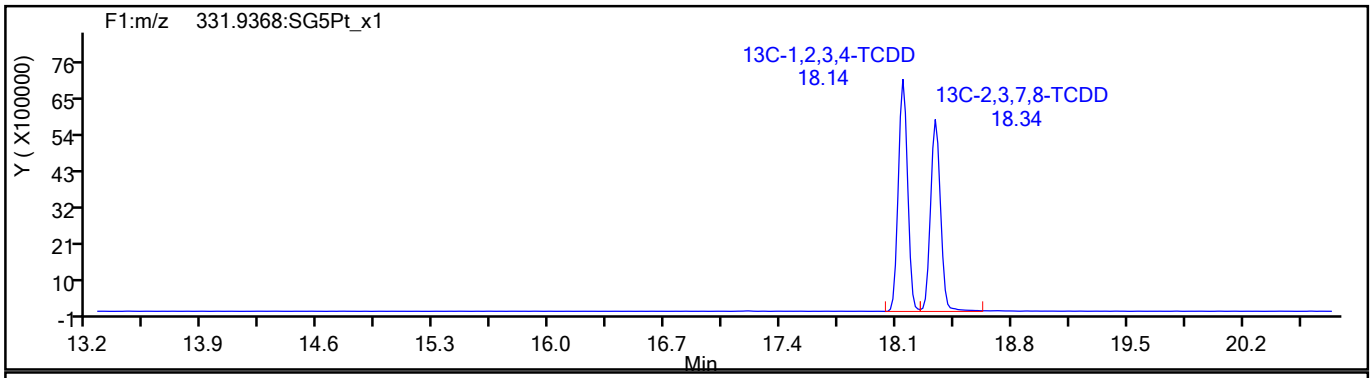

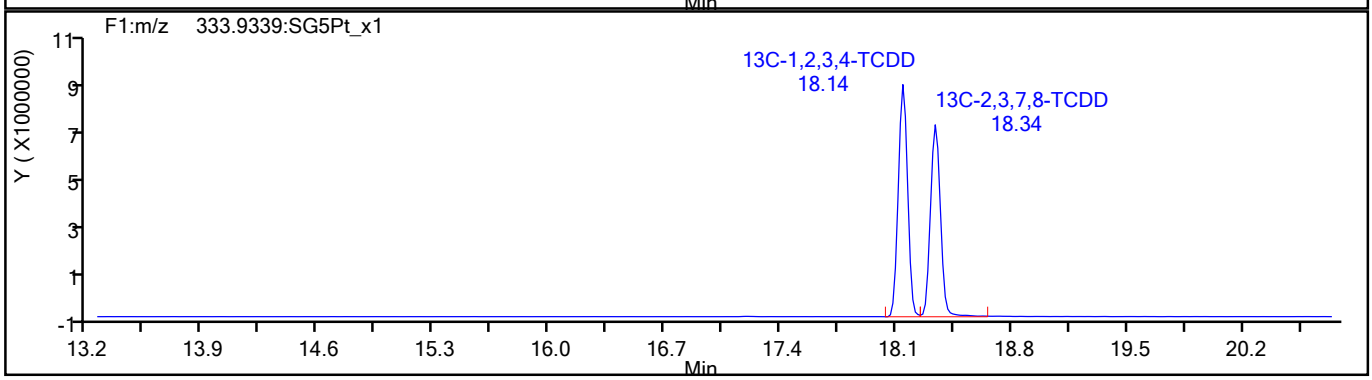

781300

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

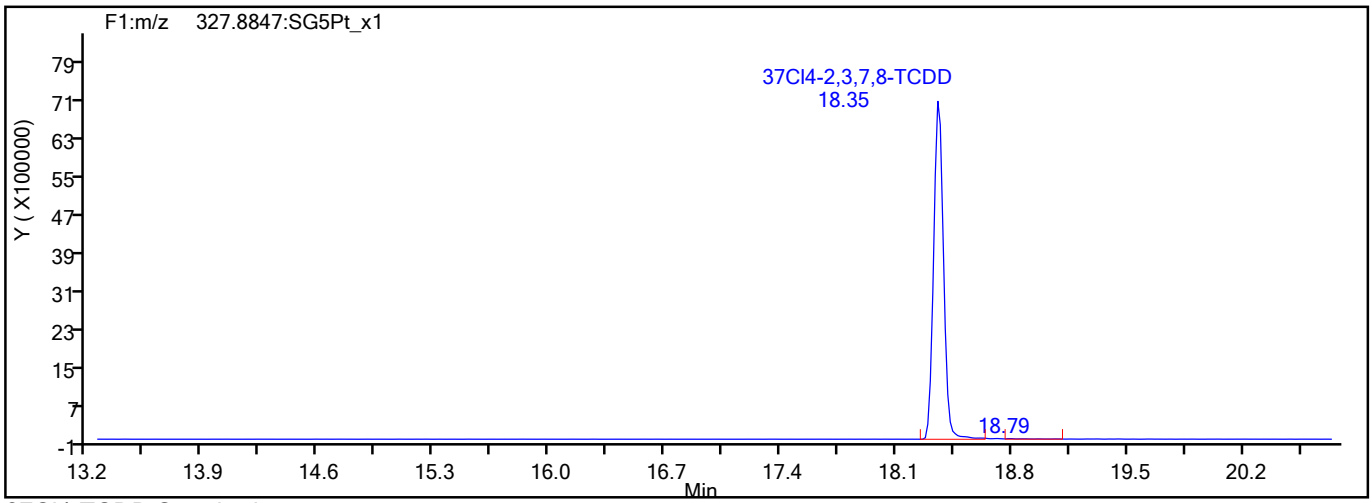

37Cl4-TCDD Standards

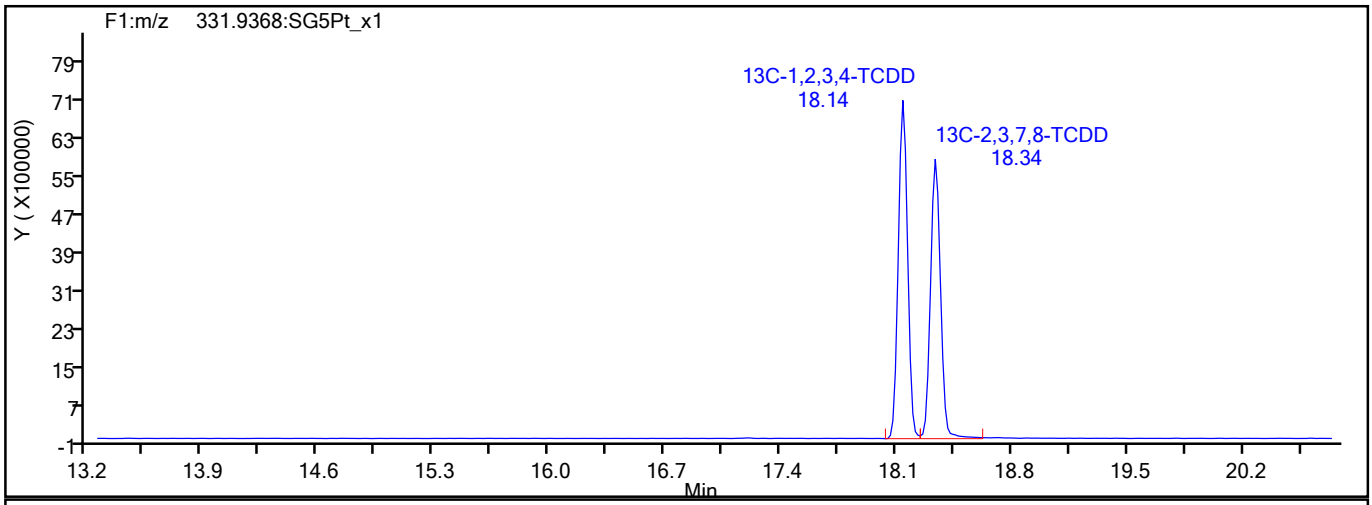

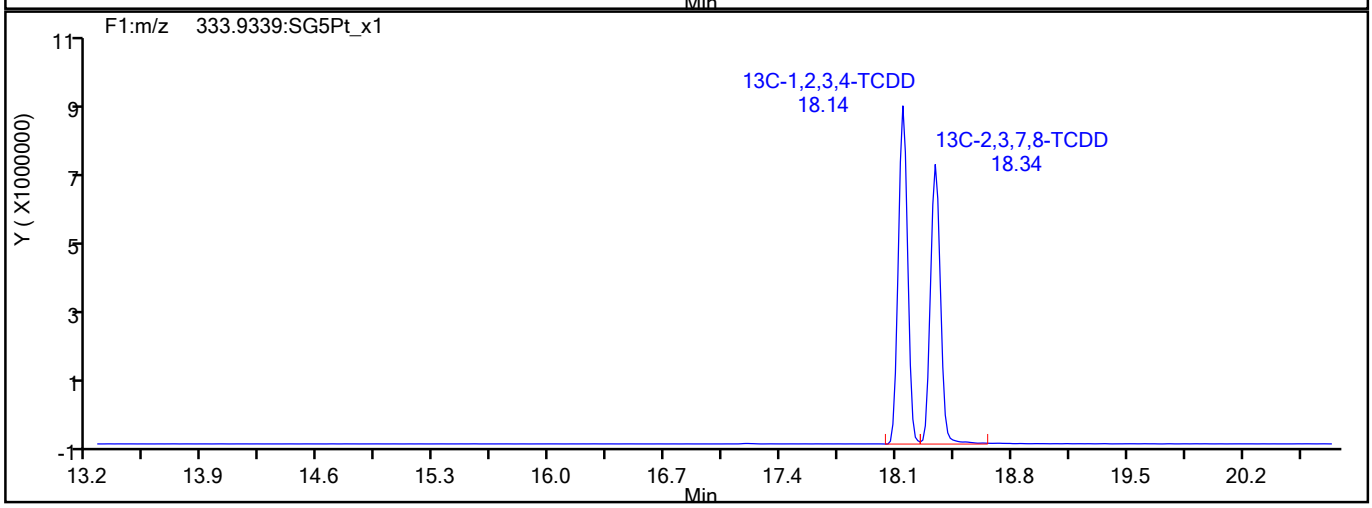

781301

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

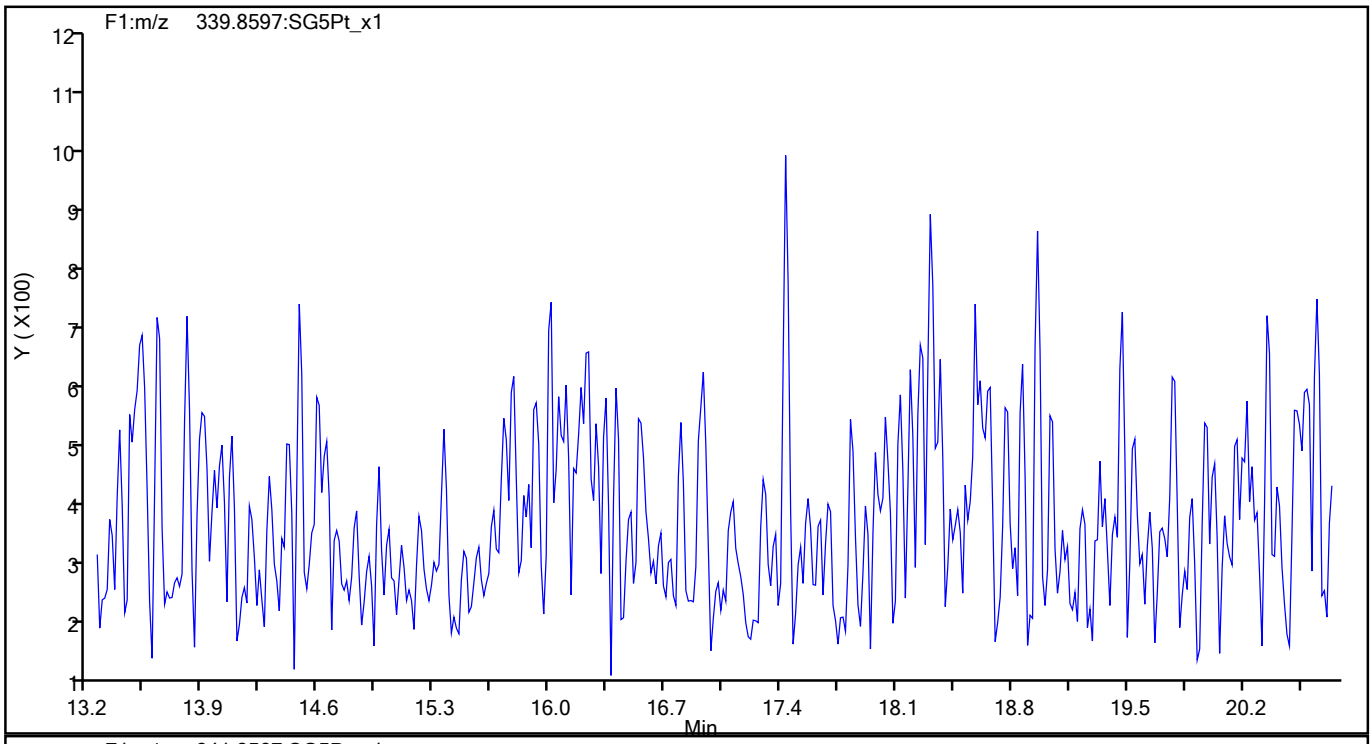

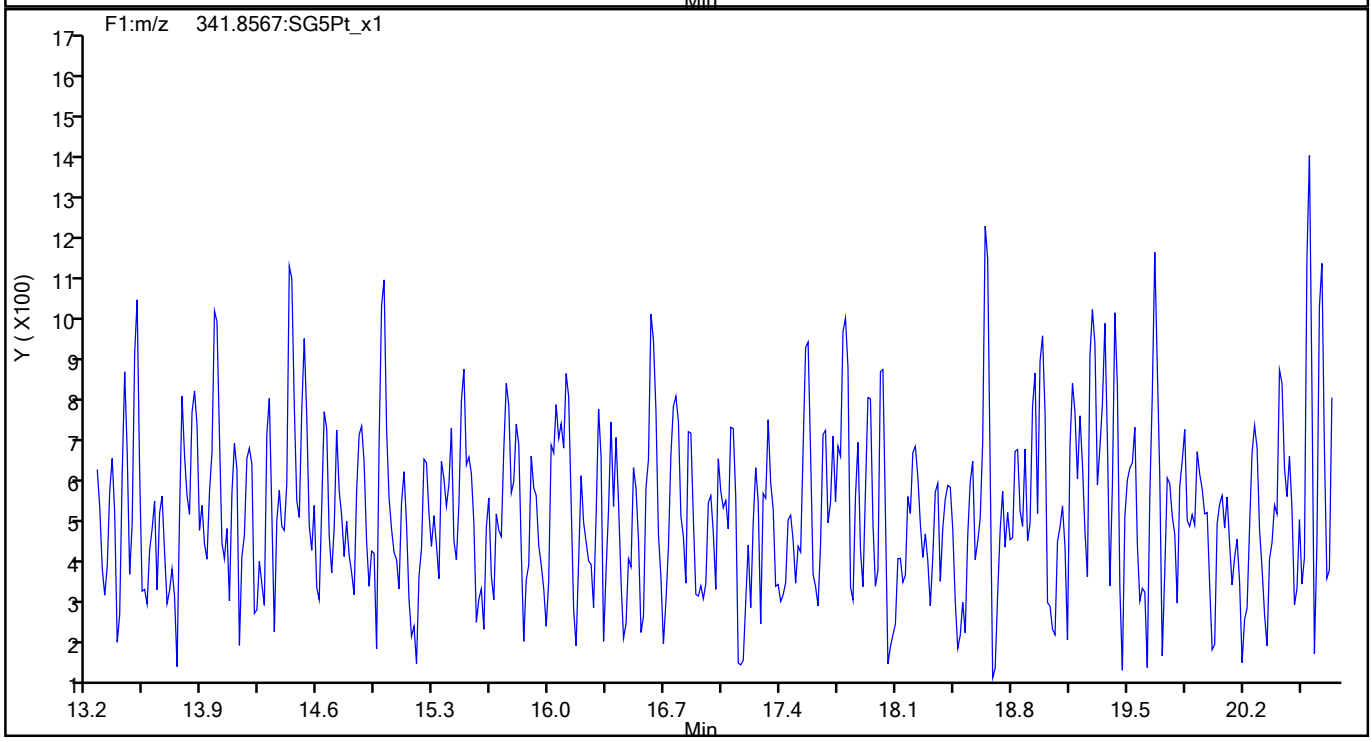

781302

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

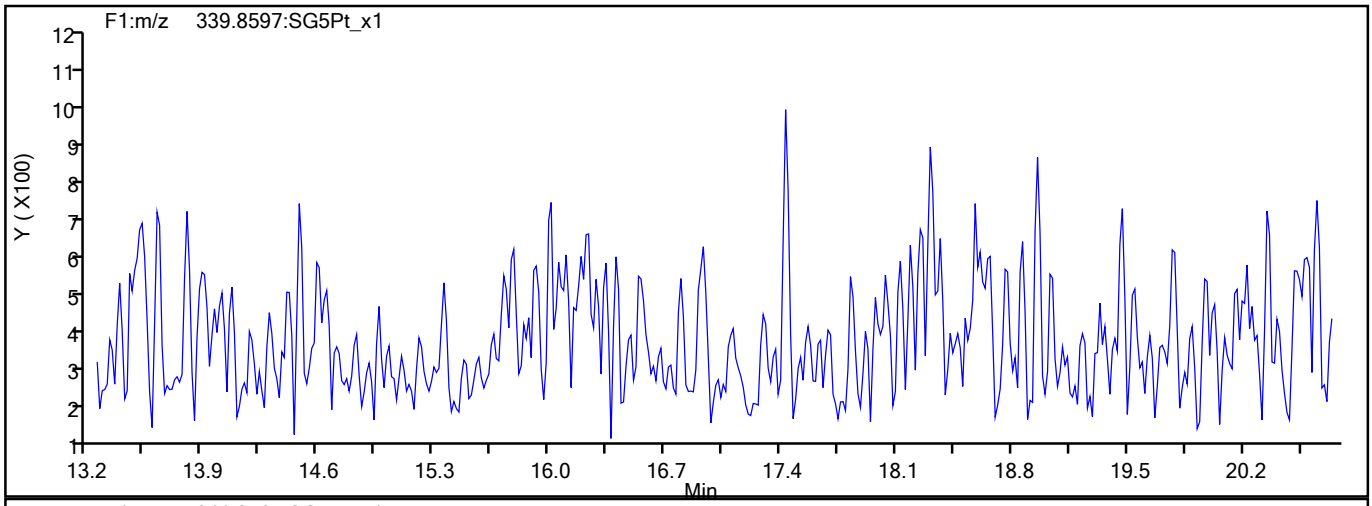

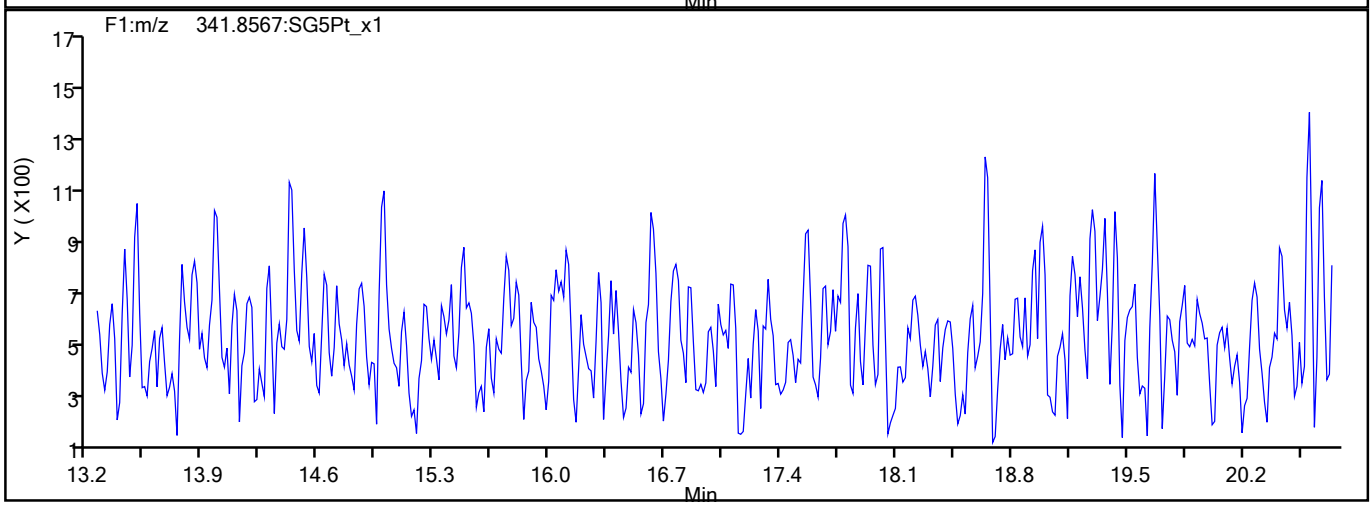

F1 PeCDFs Interference Mass

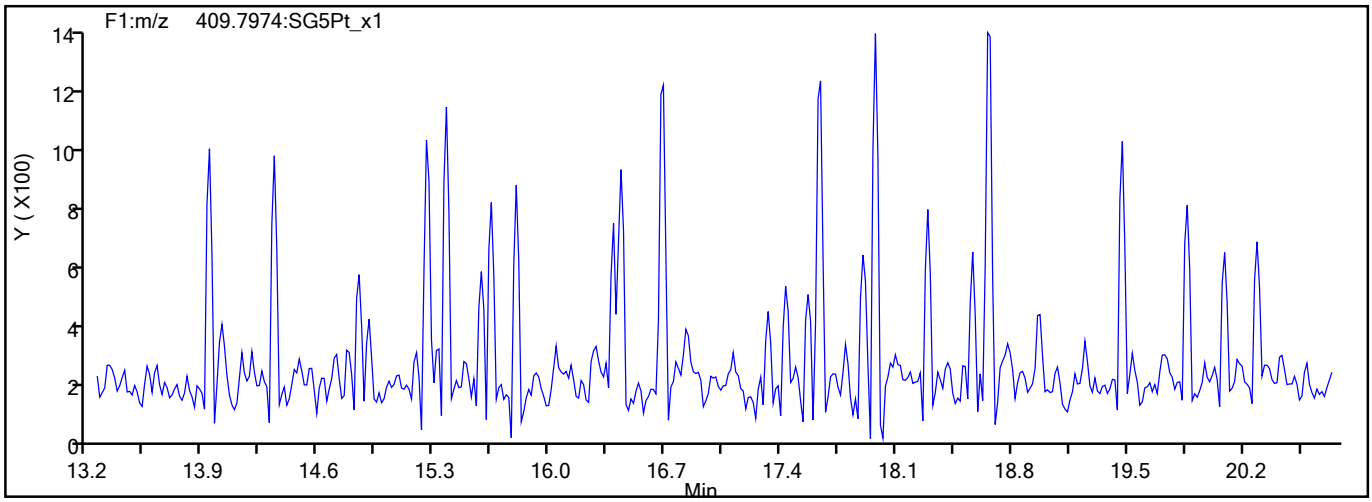

781303

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

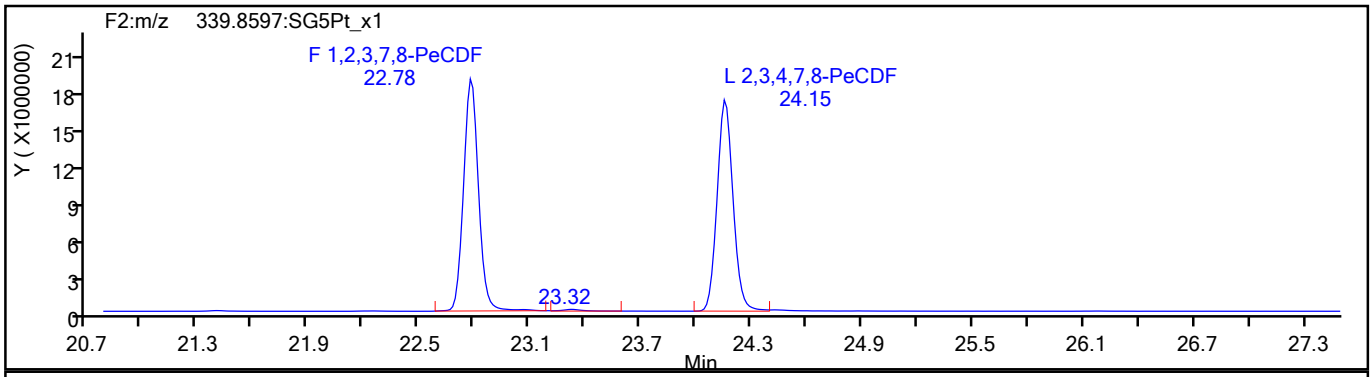

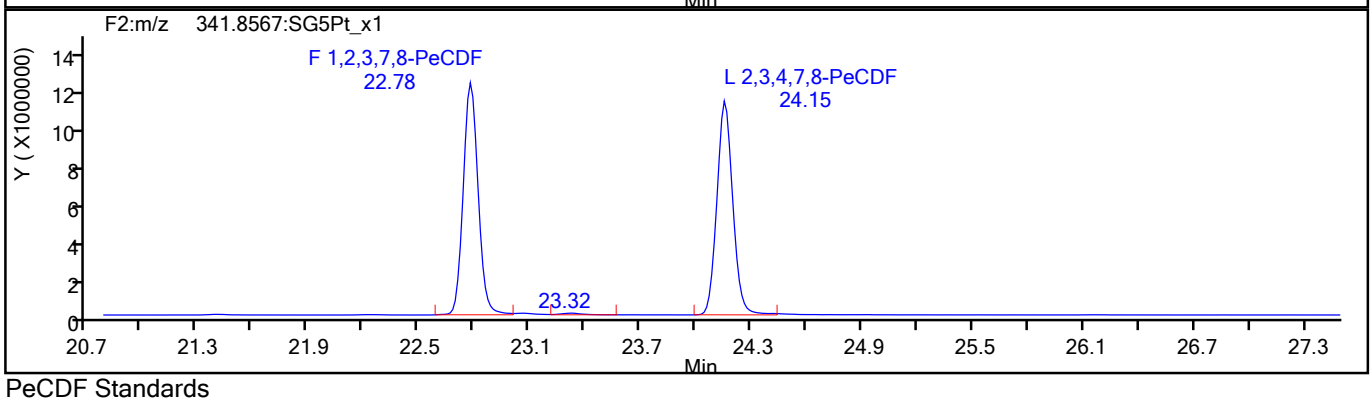

PeCDF Standards

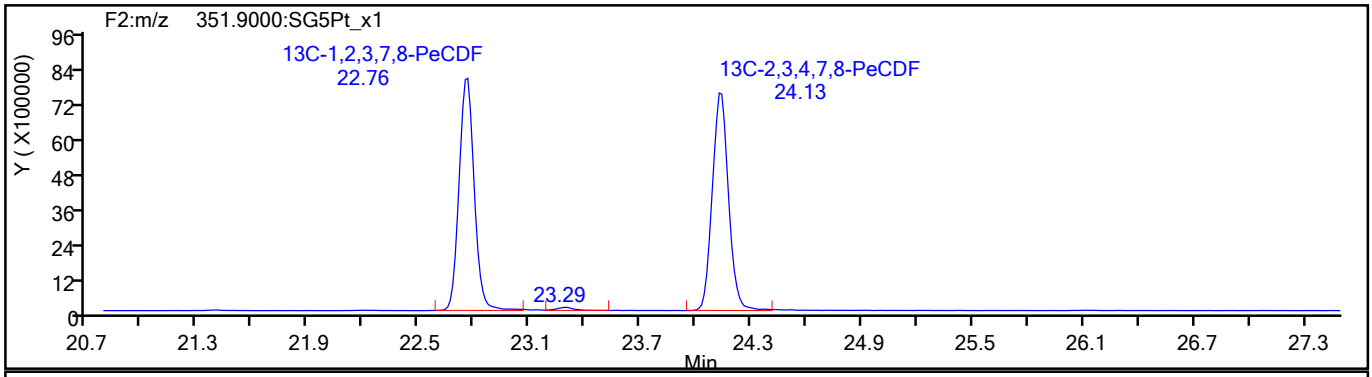

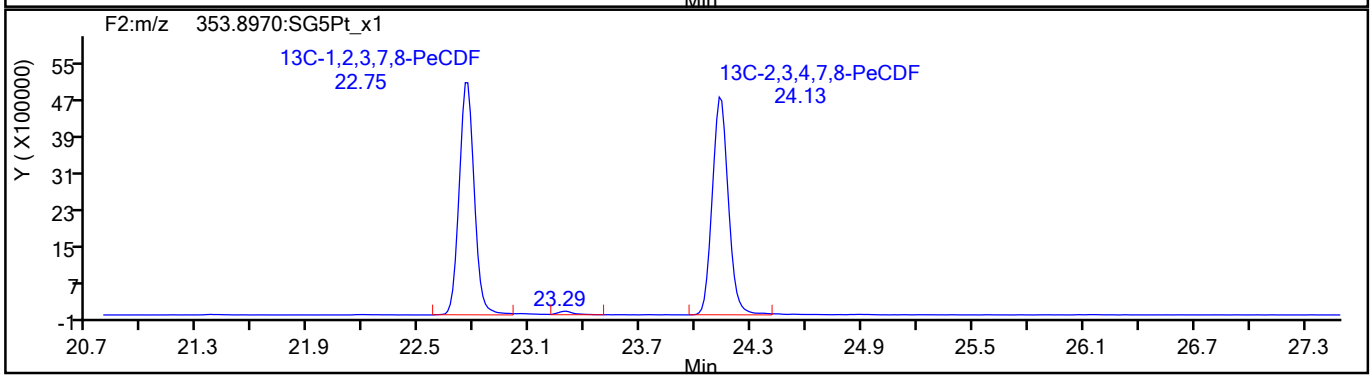

781304

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

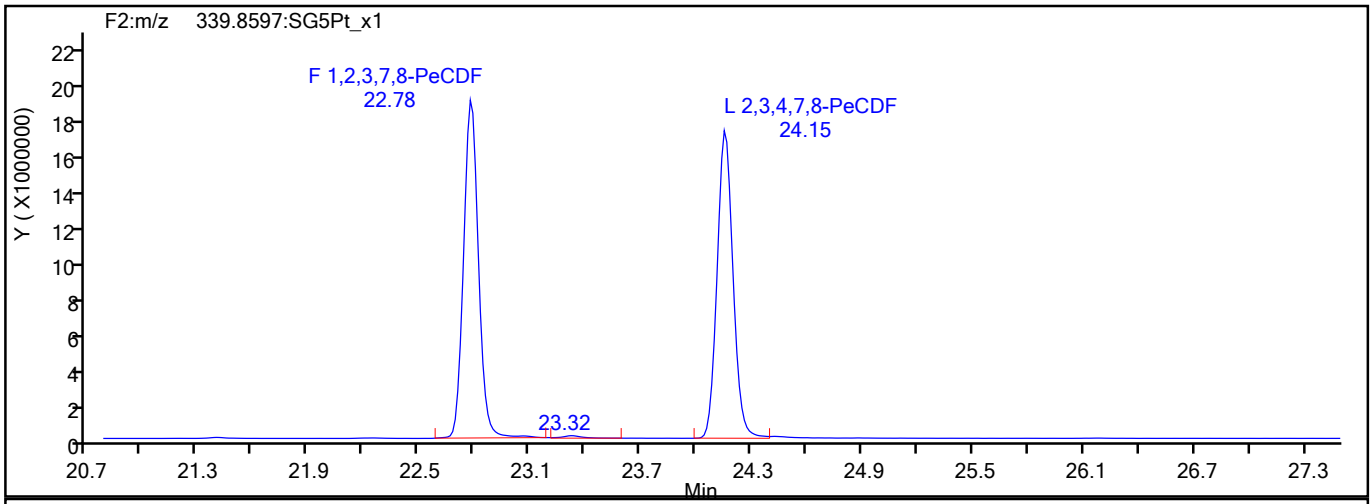

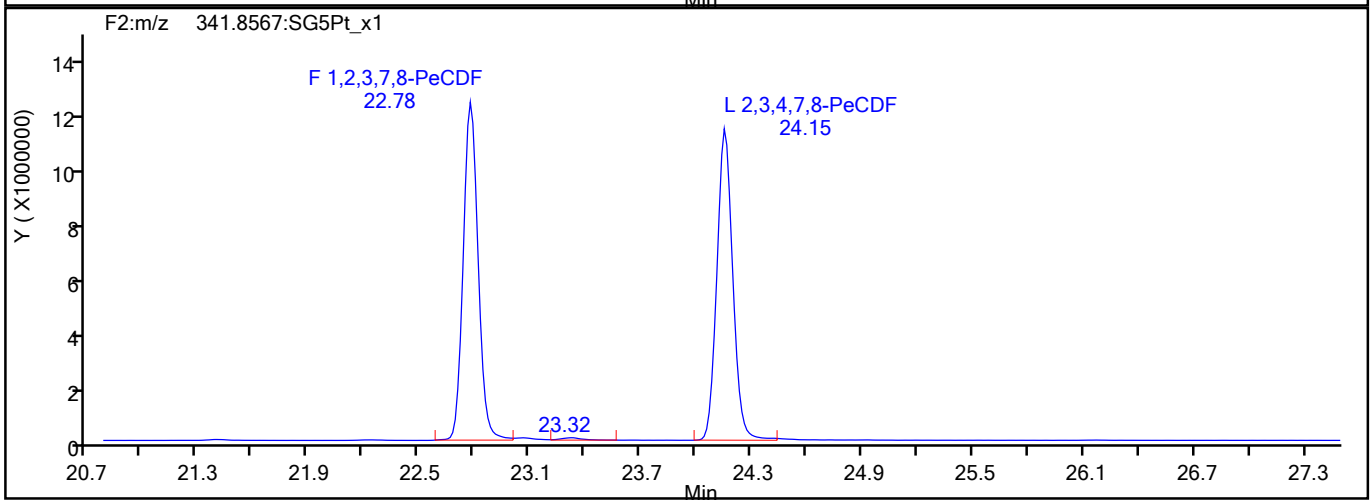

PeCDF Interference Mass

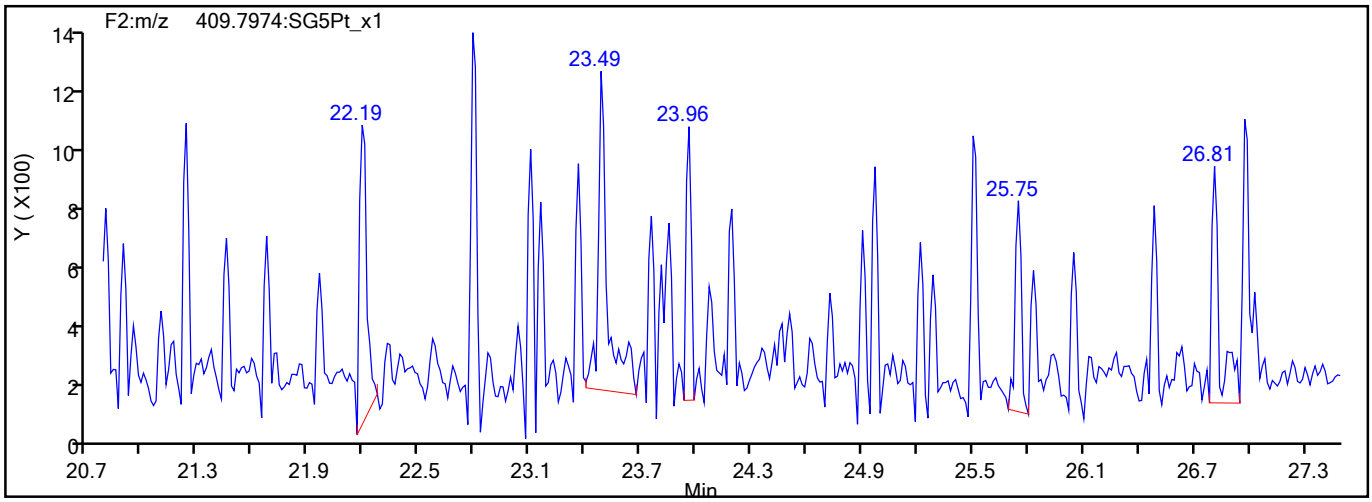

781305

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

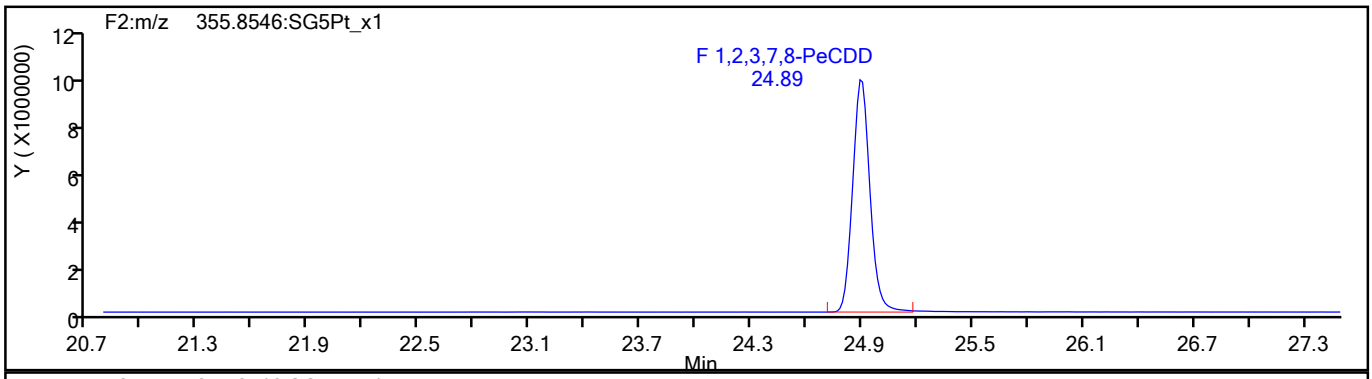

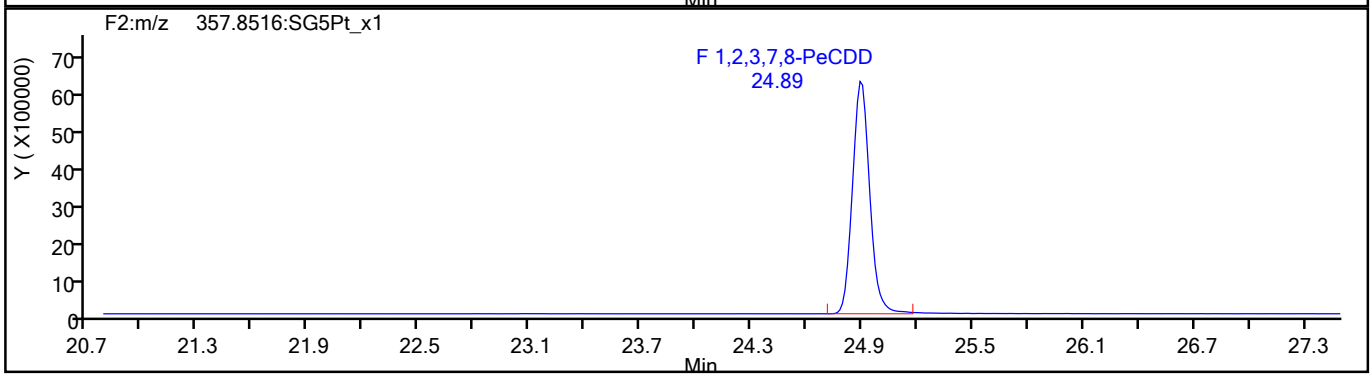

PeCDD Standards

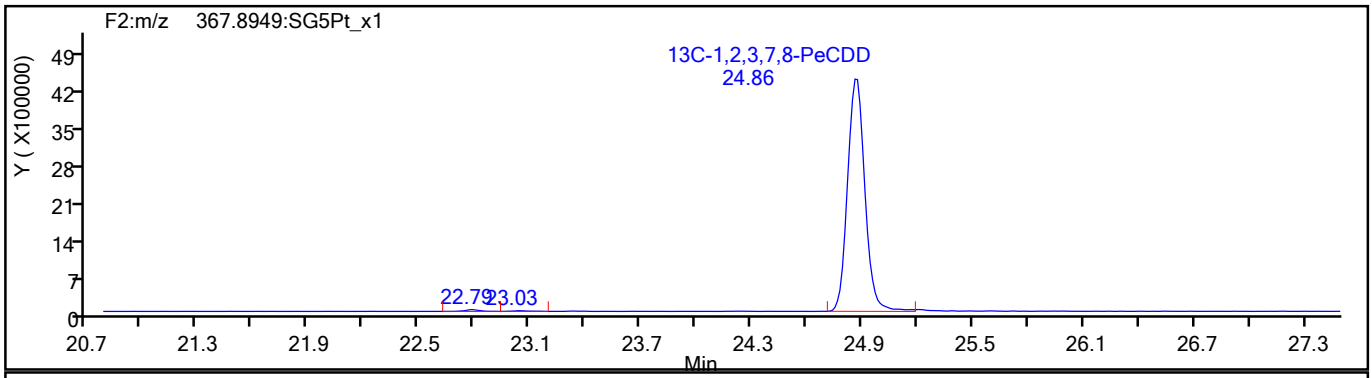

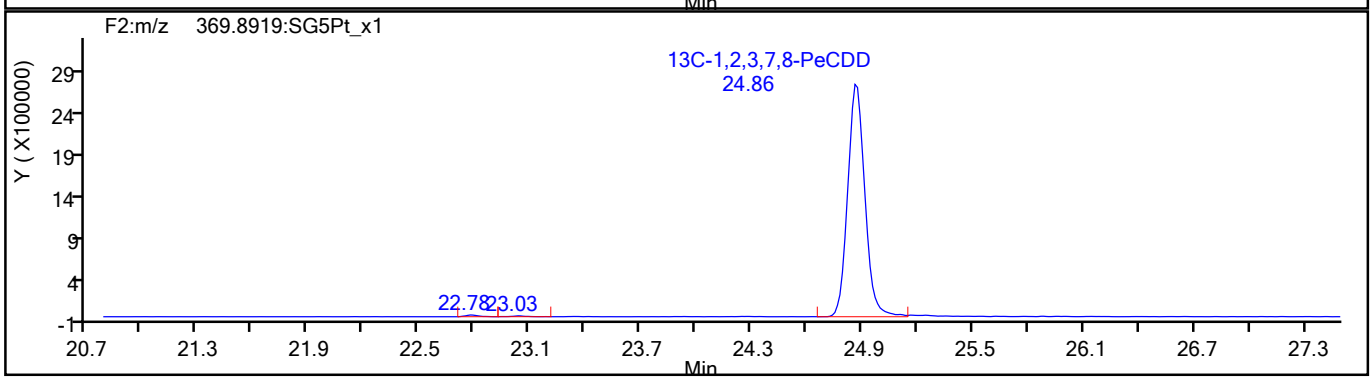

781306

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

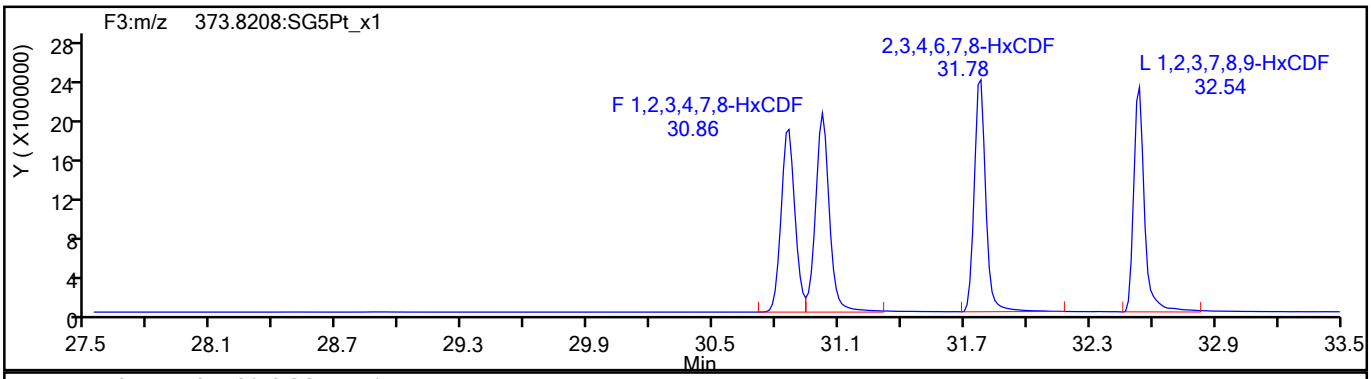

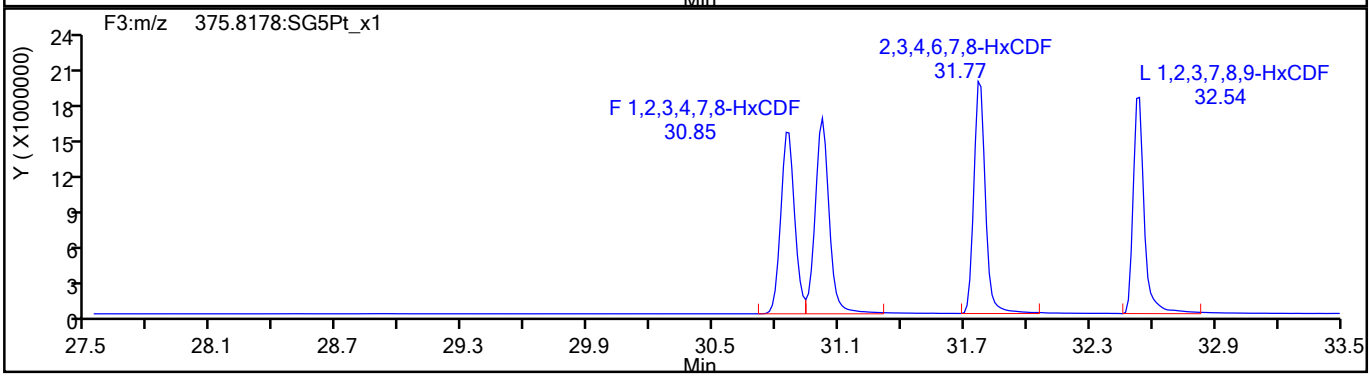

HxCDF Standards

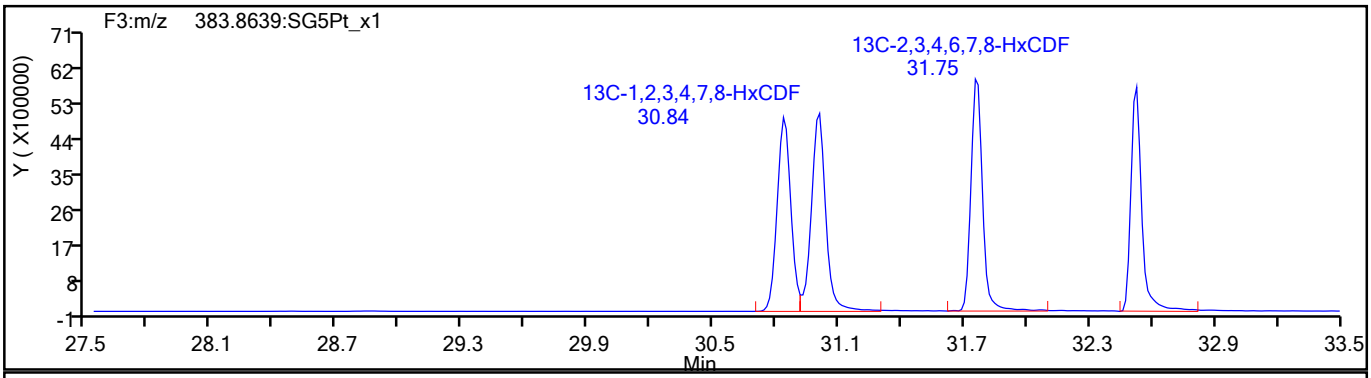

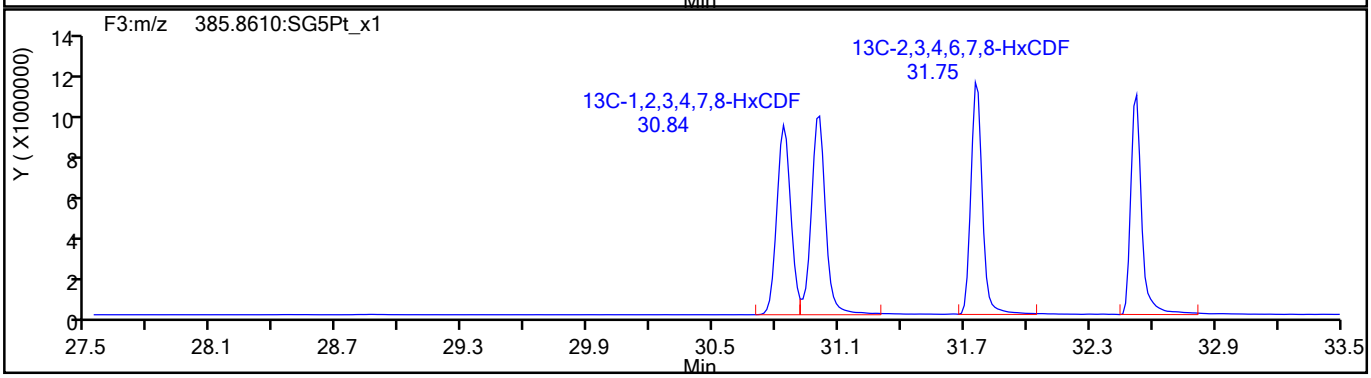

781307

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

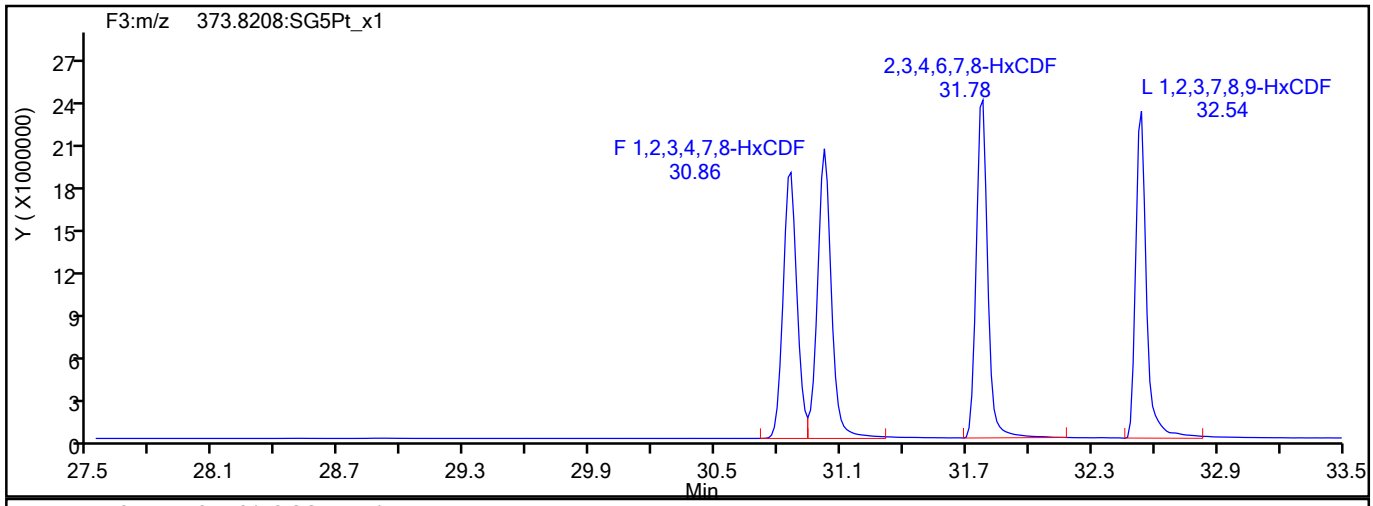

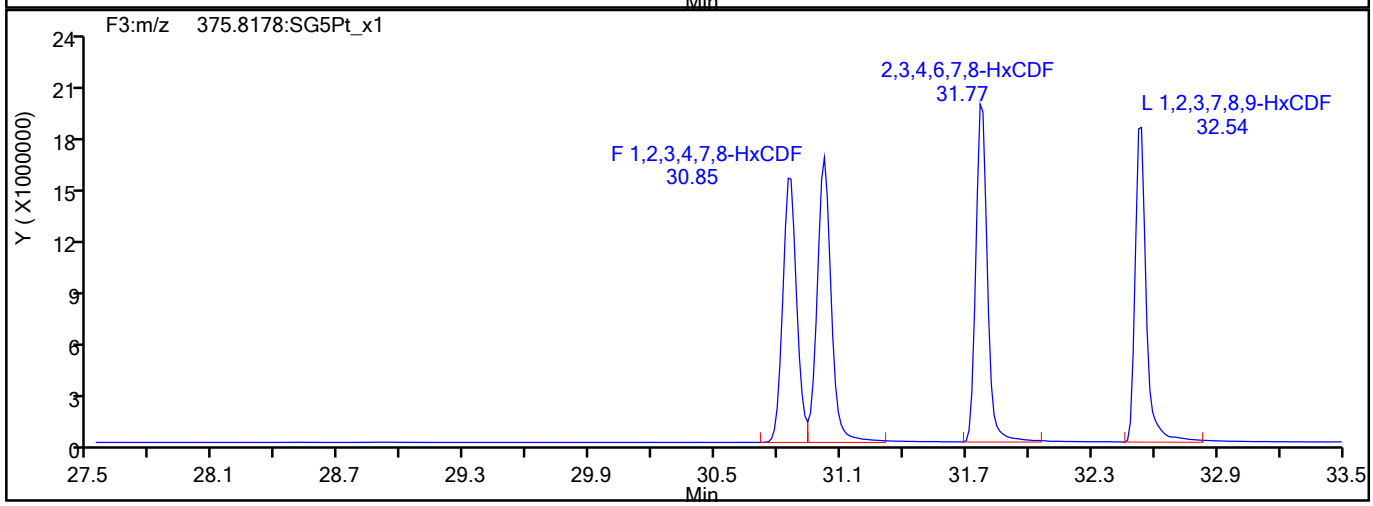

HxCDF Interference Mass

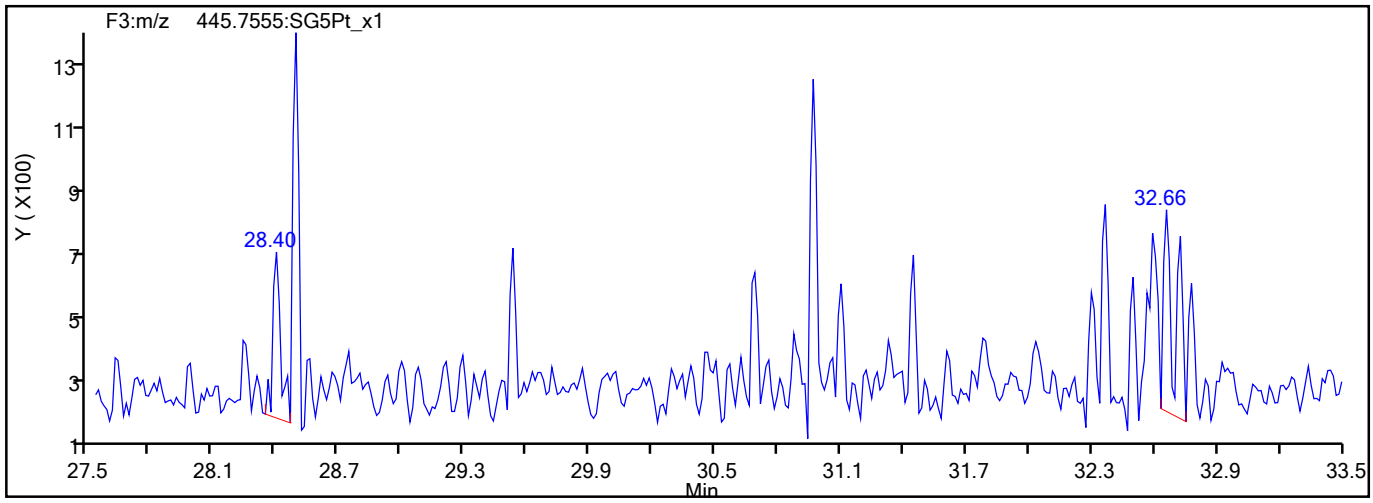

781308

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

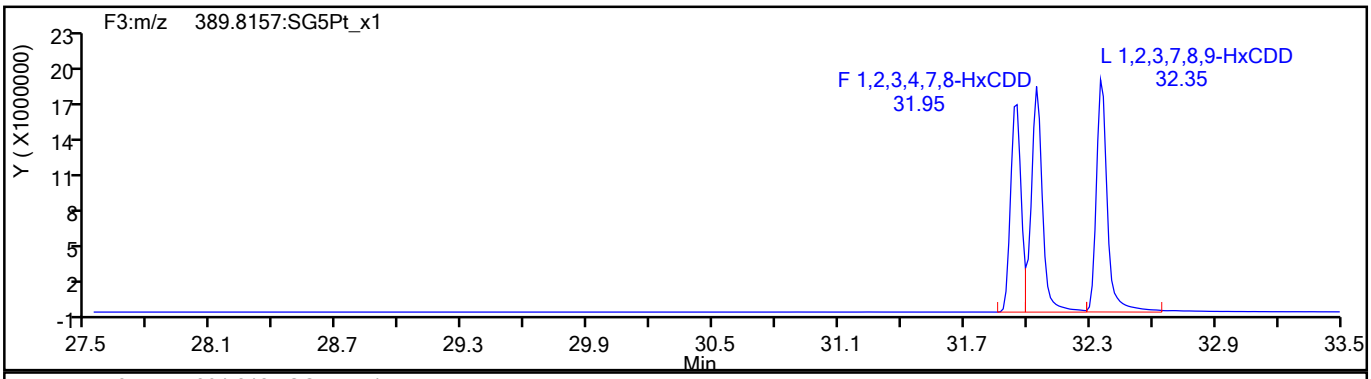

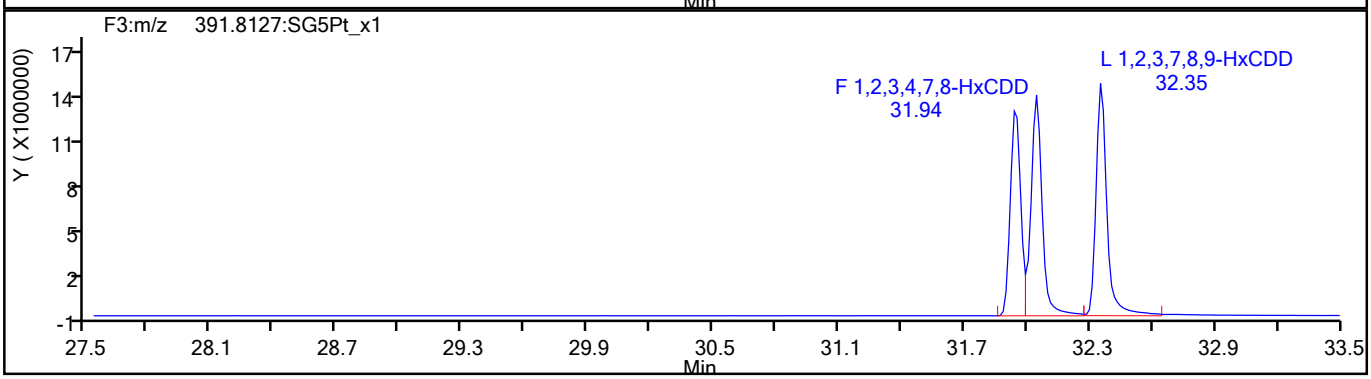

HxCDD Standards

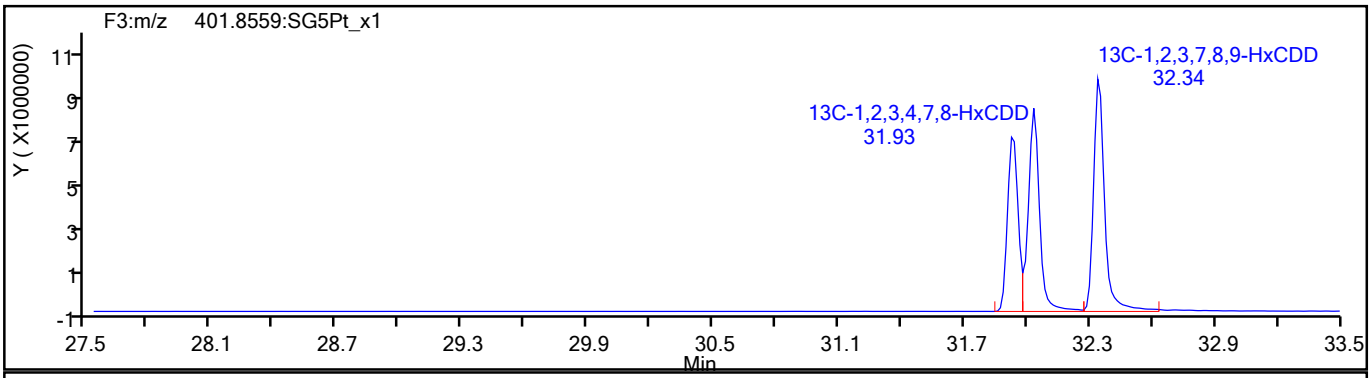

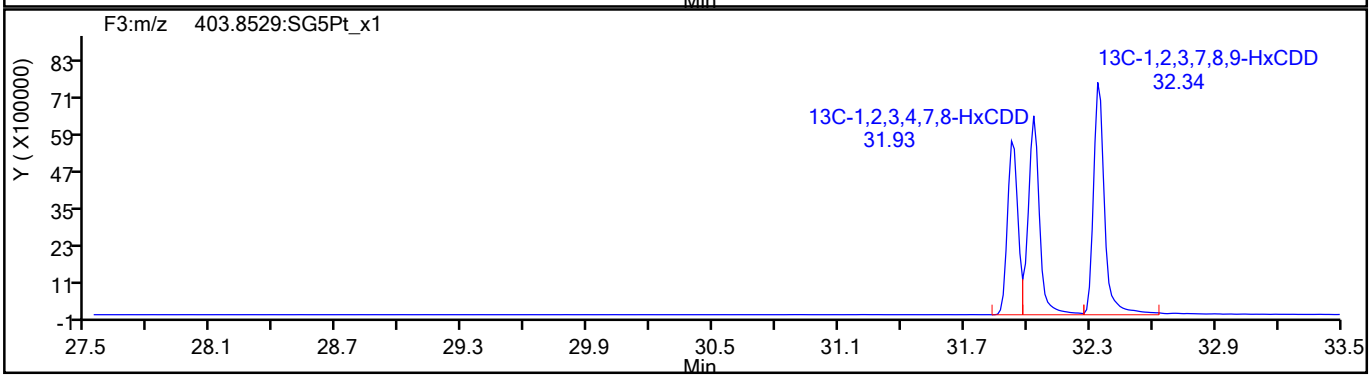

781309

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

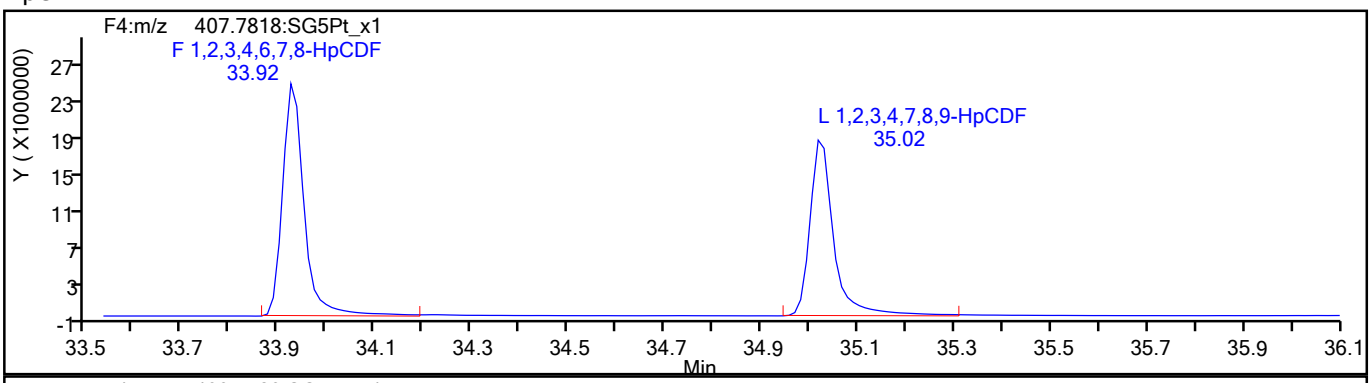

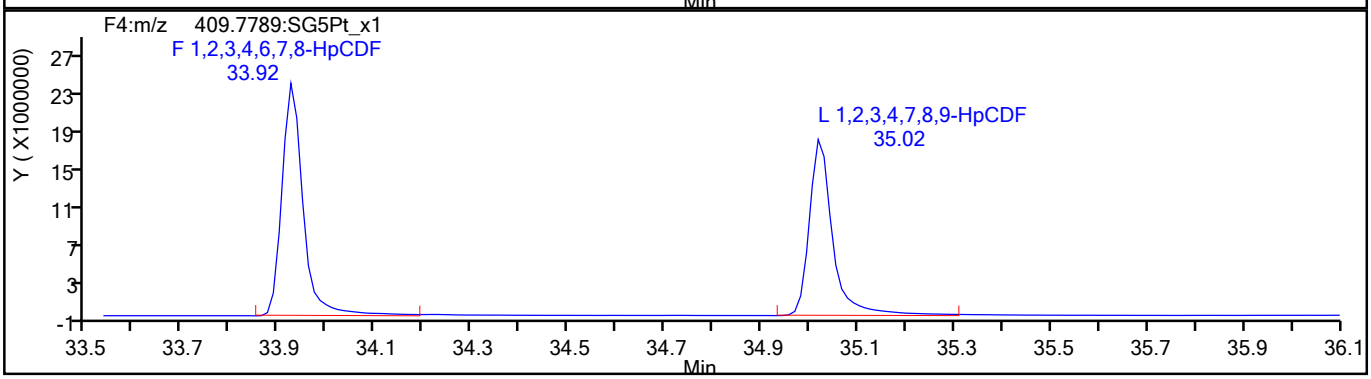

HpCDF Standards

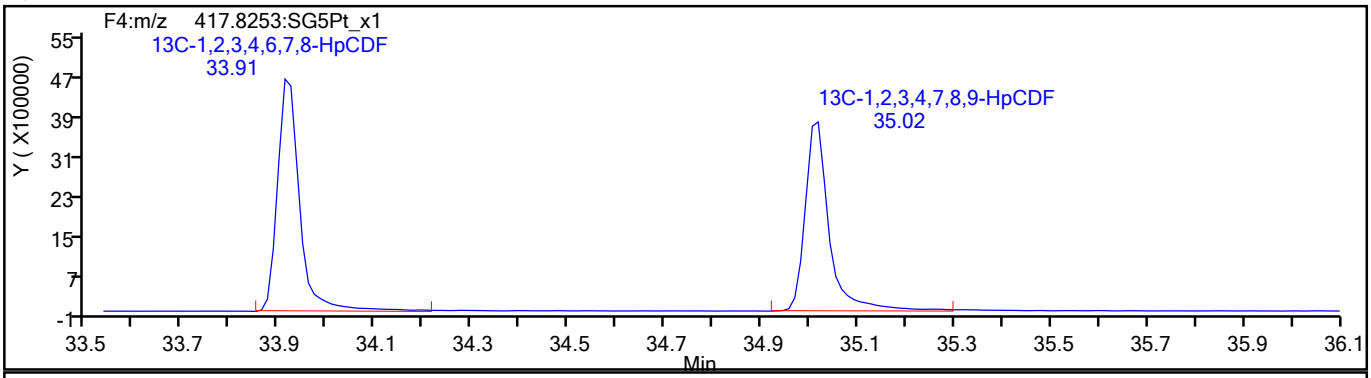

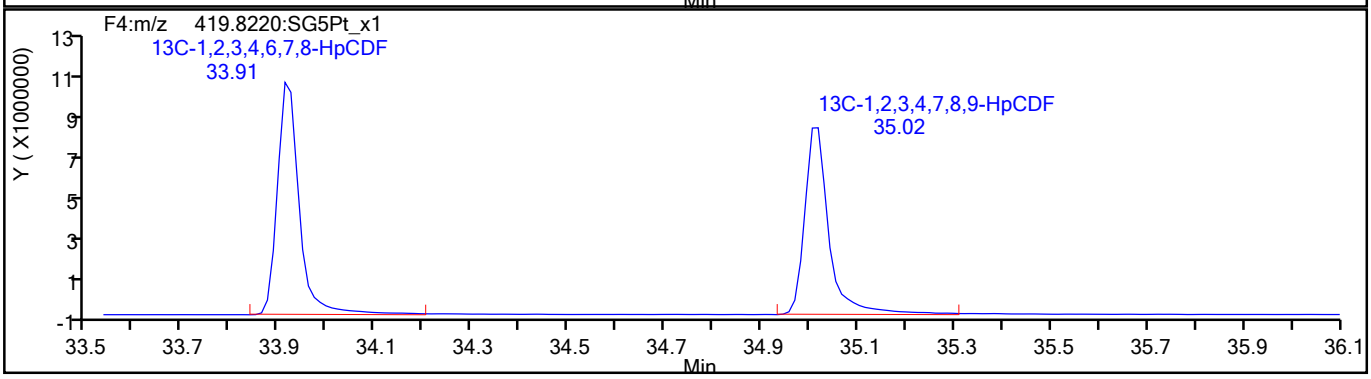

781310

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

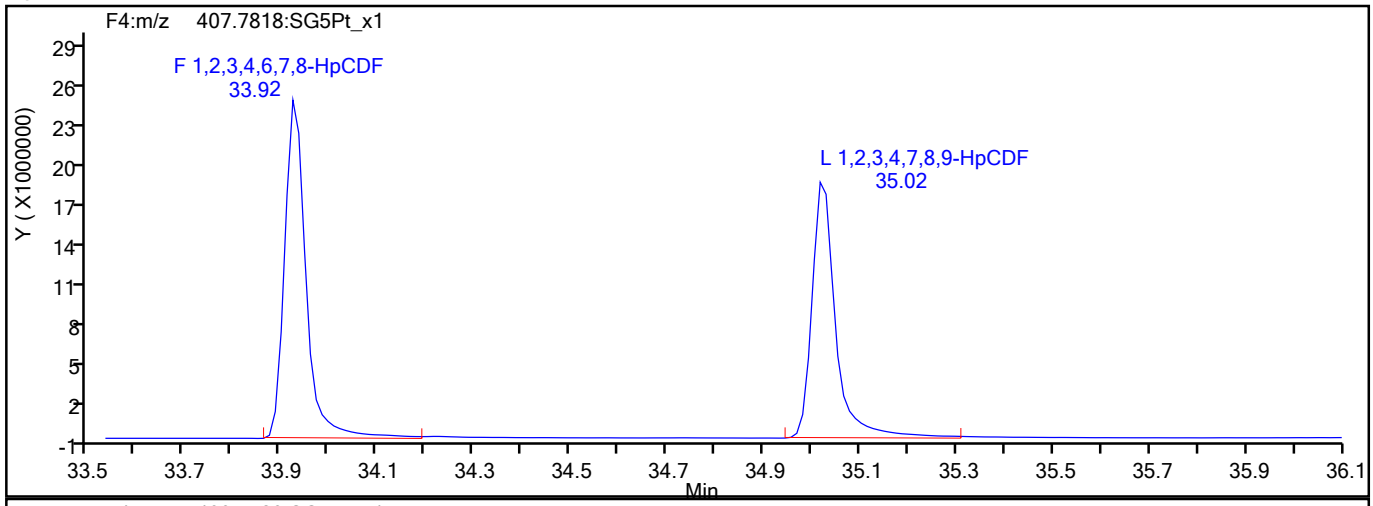

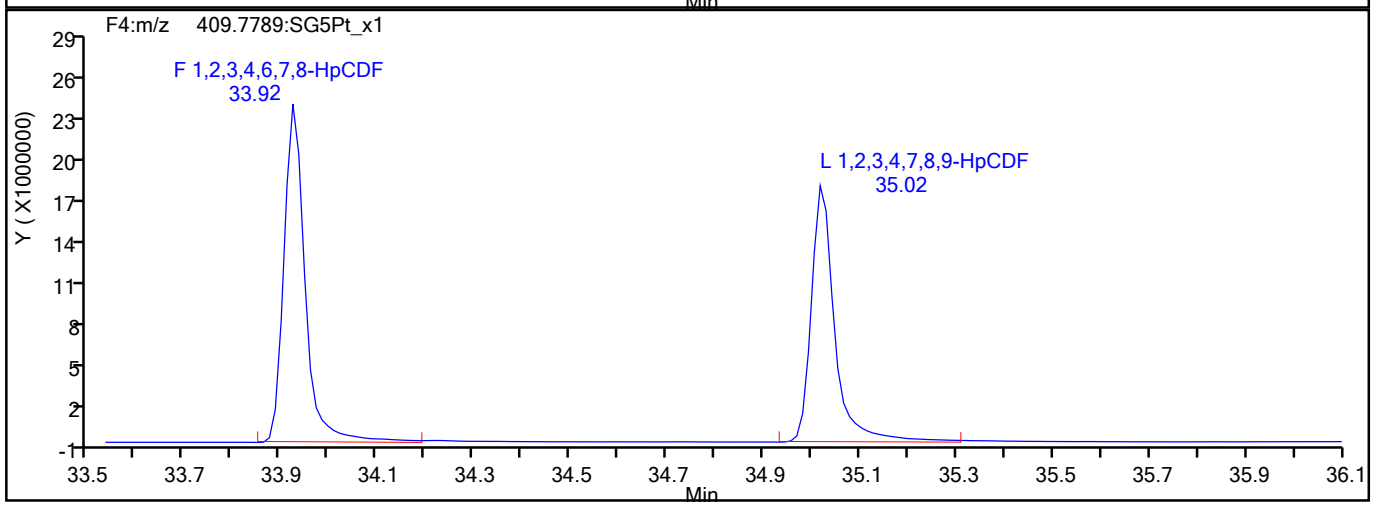

HpCDF Interference Mass

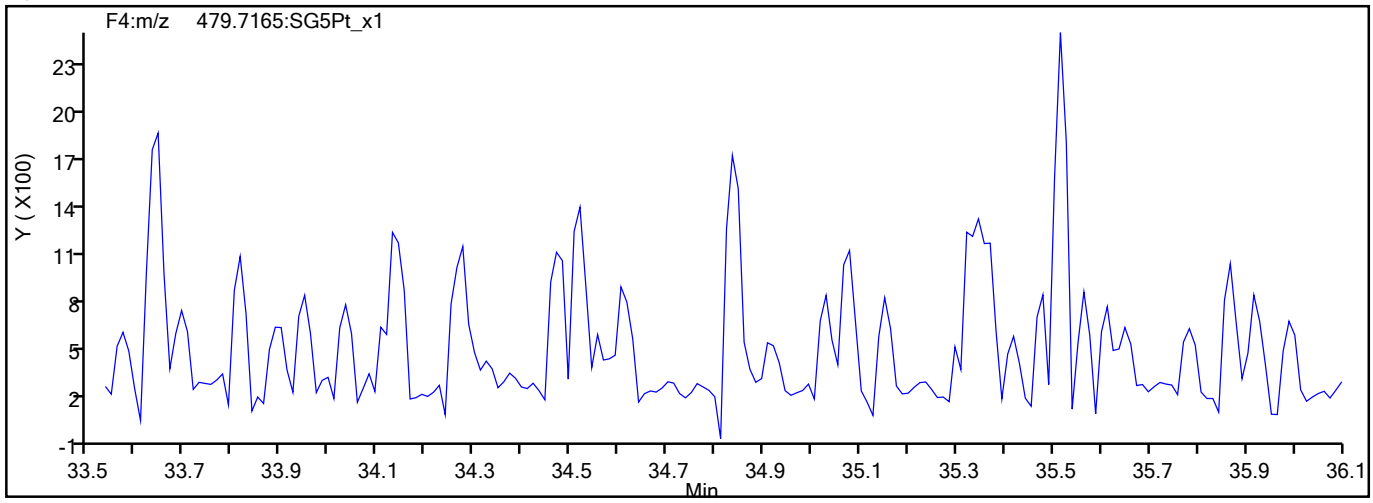

781311

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

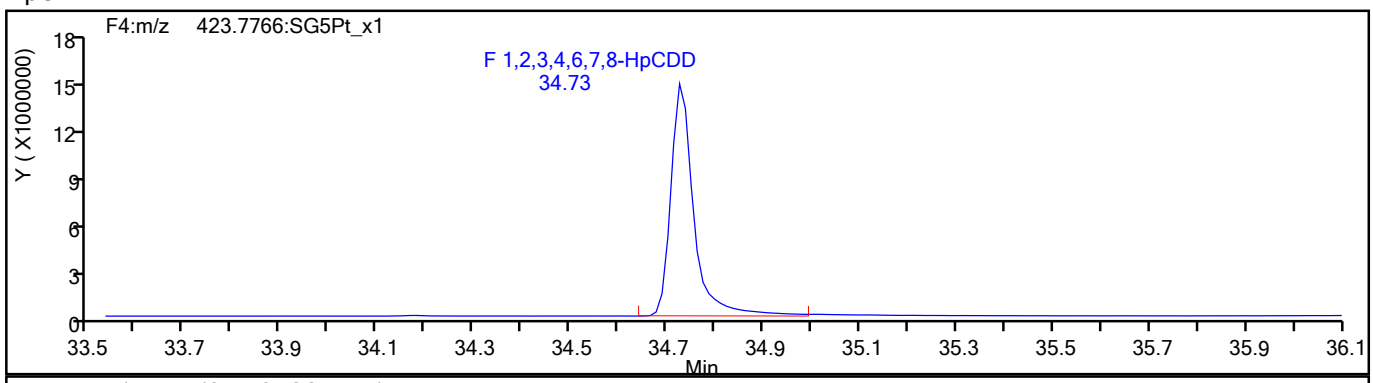

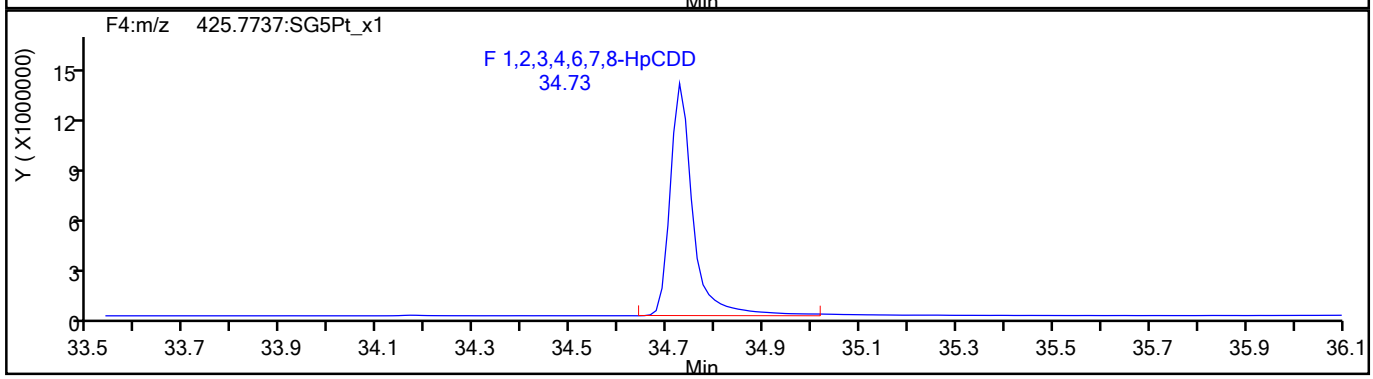

HpCDD Standards

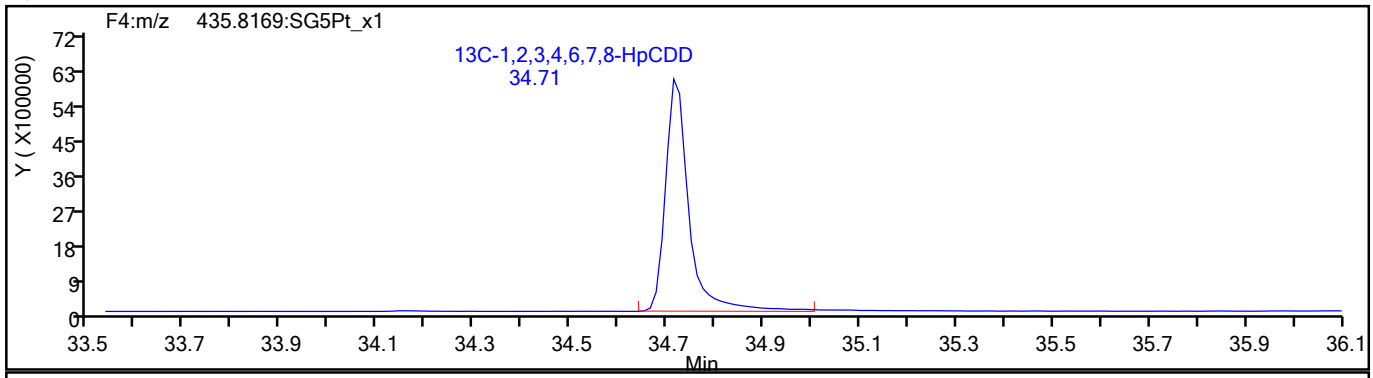

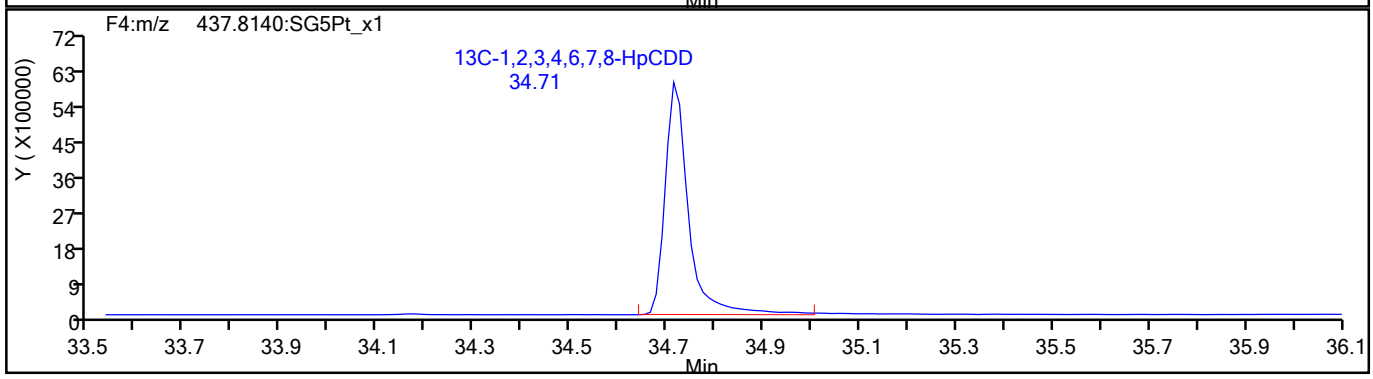

781312

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

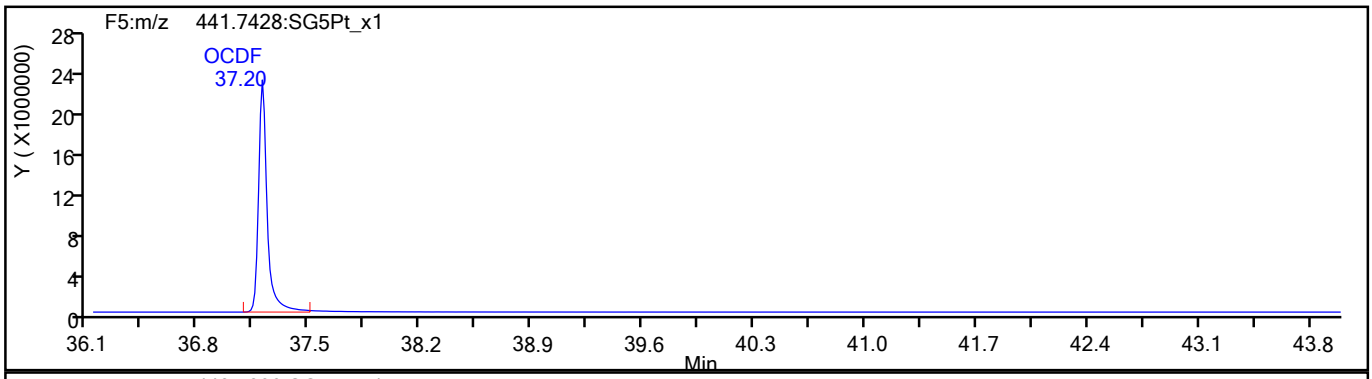

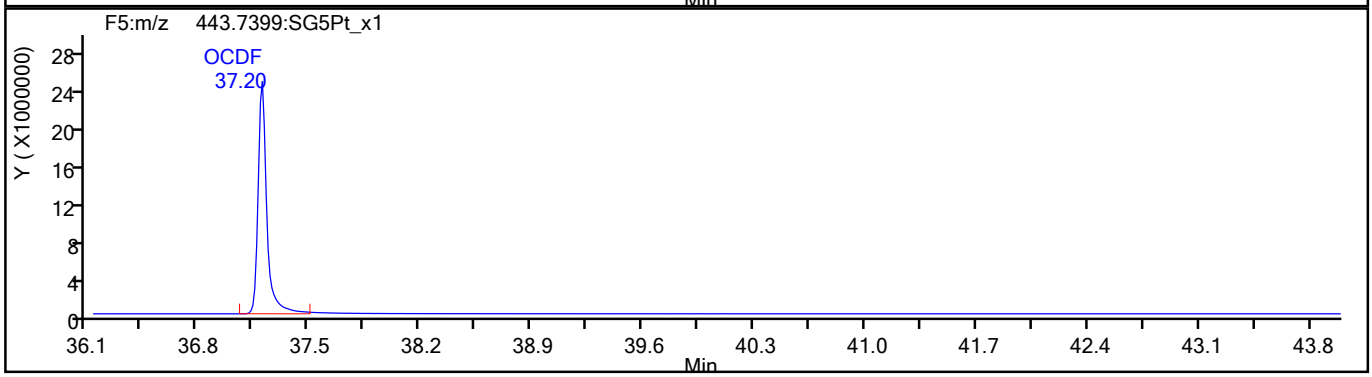

OCDF Standards

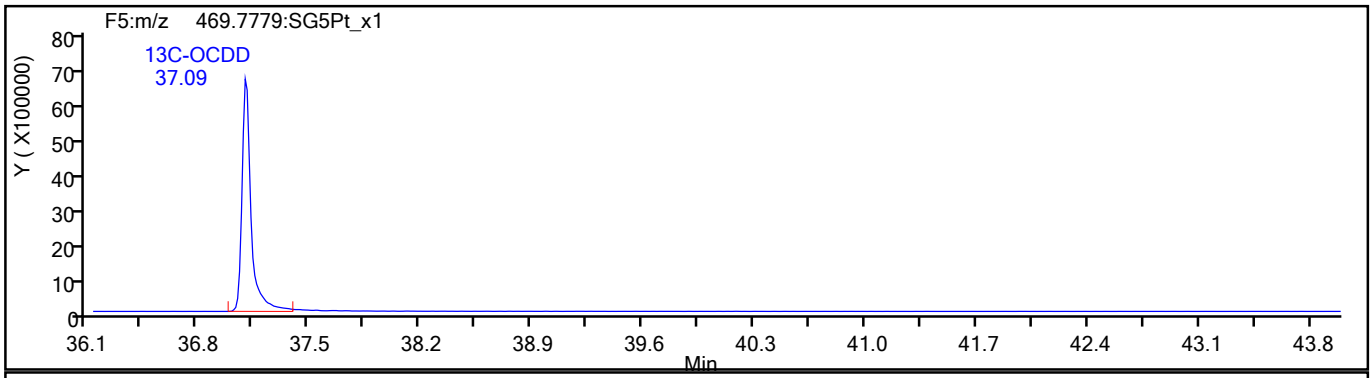

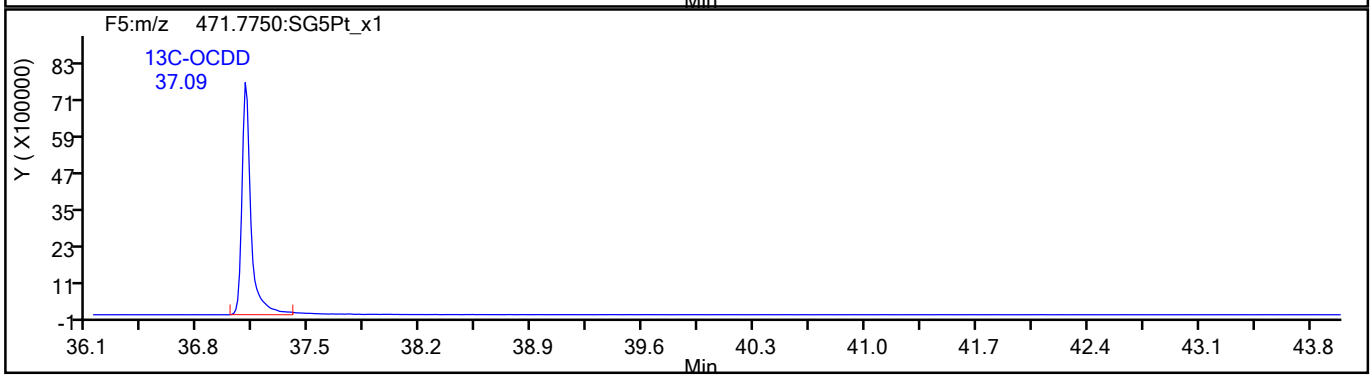

781313

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

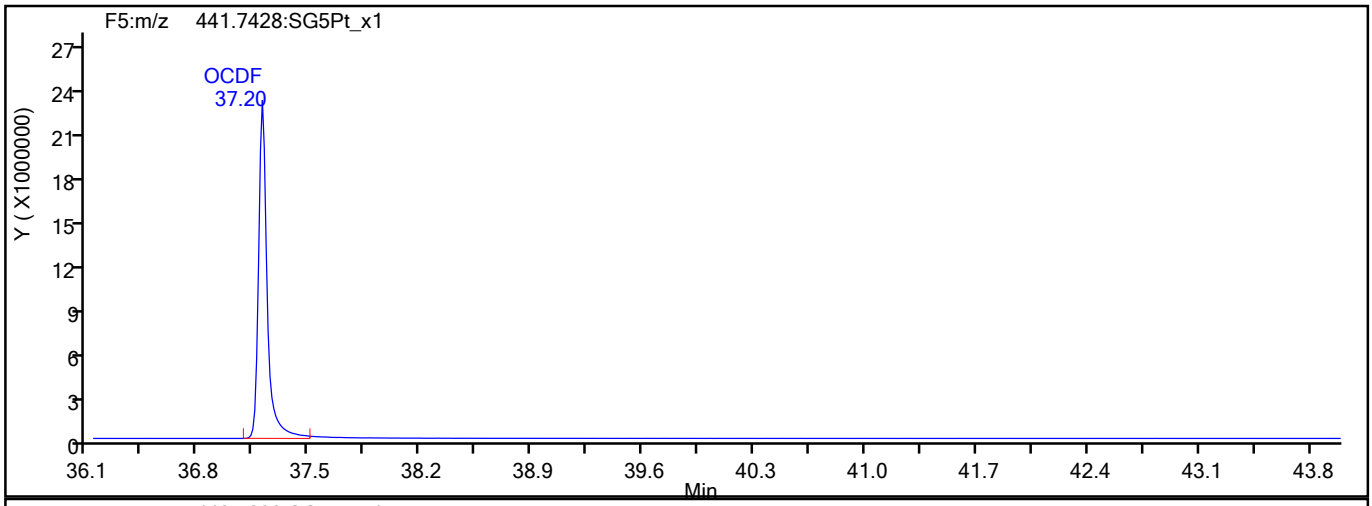

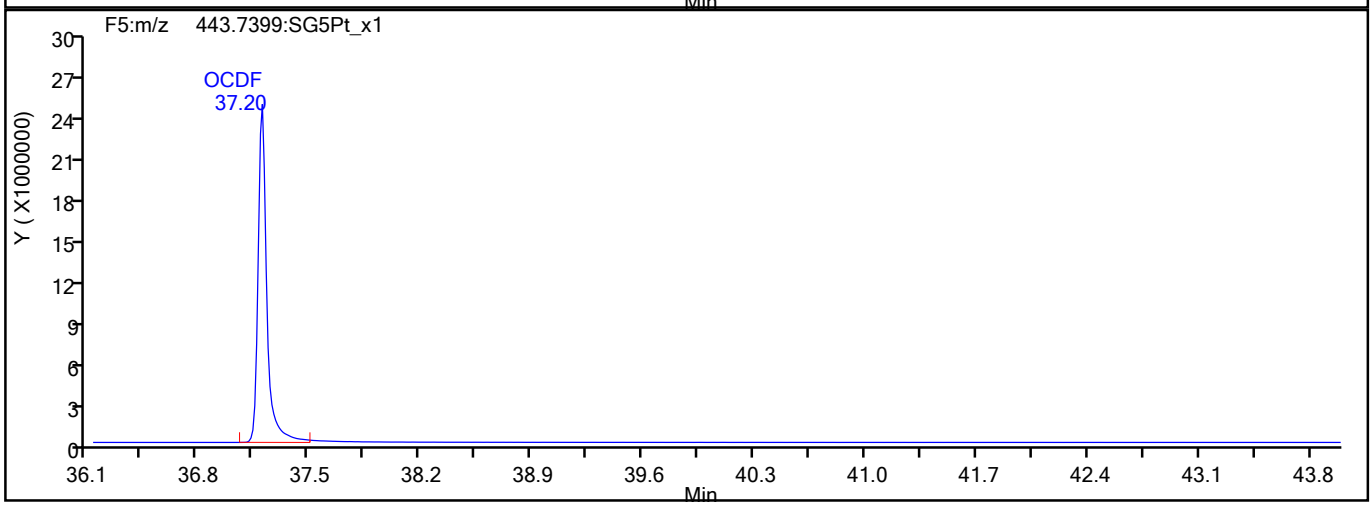

OCDF Interference Mass

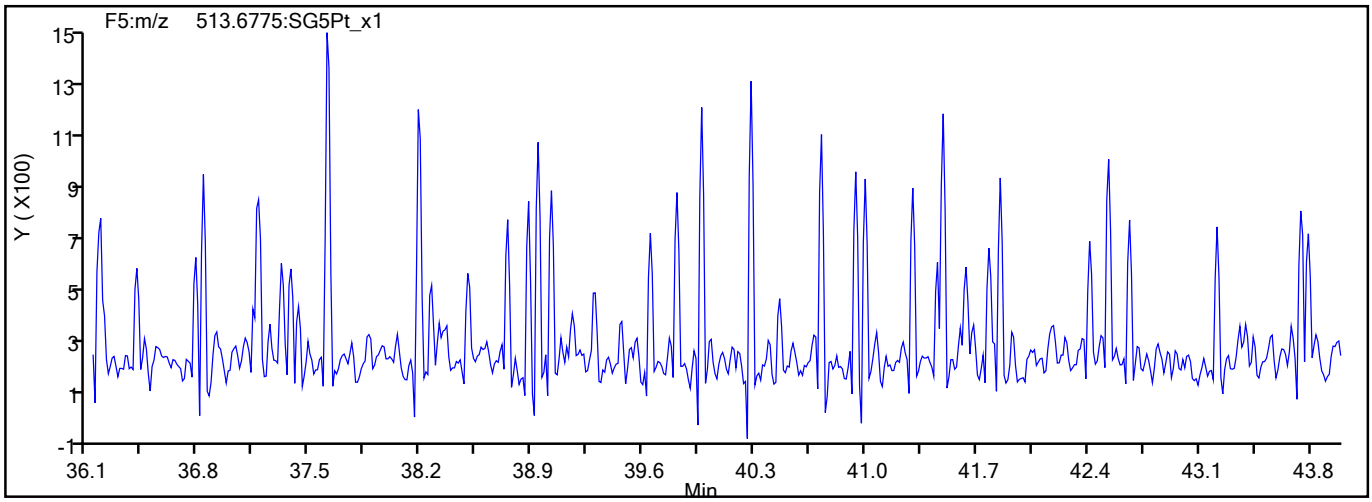

781314

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

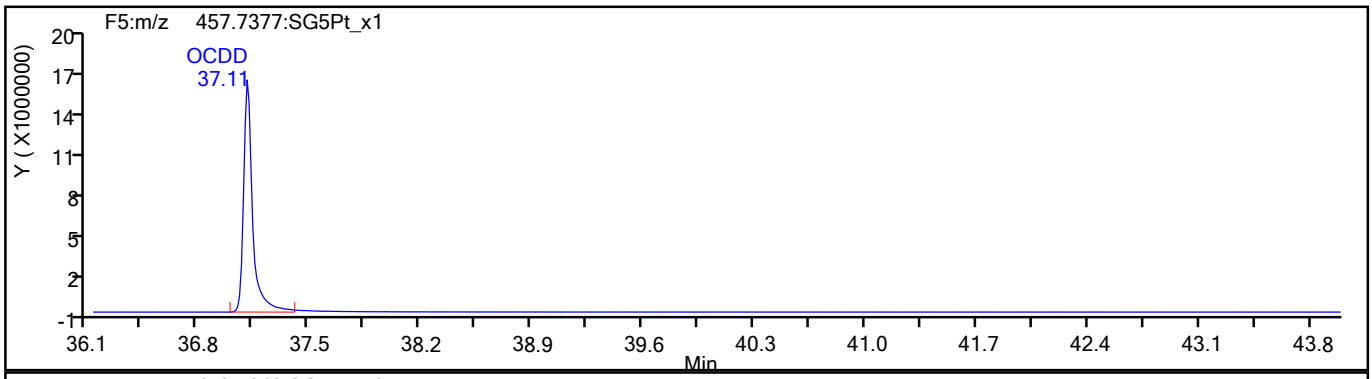

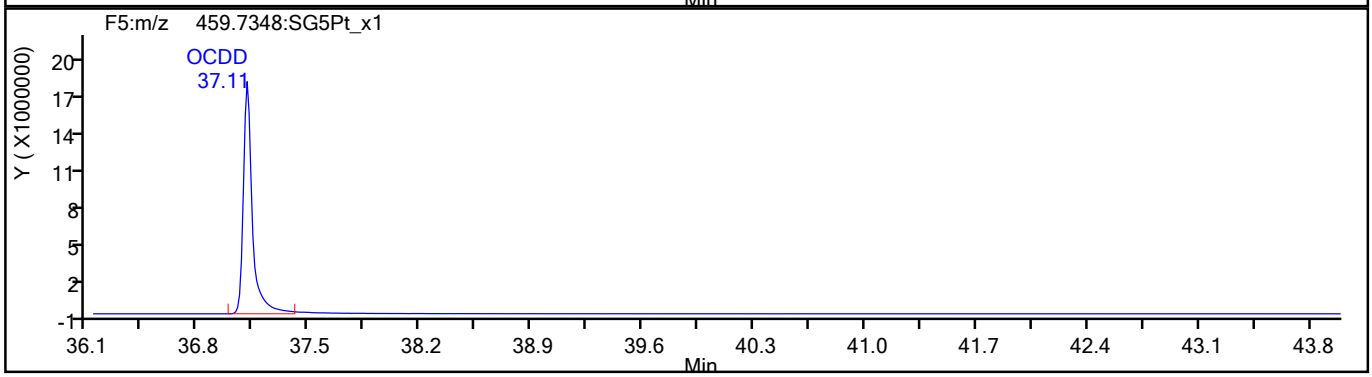

OCDD Standards

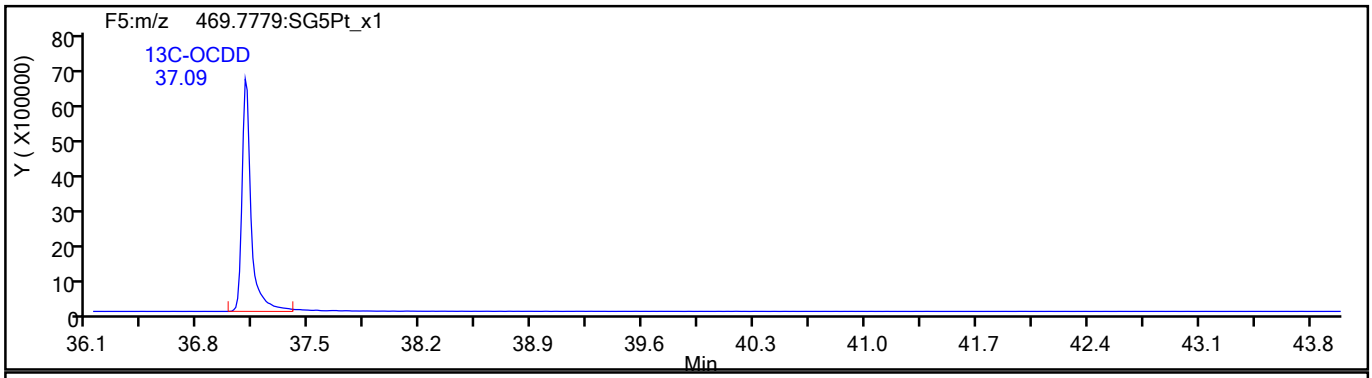

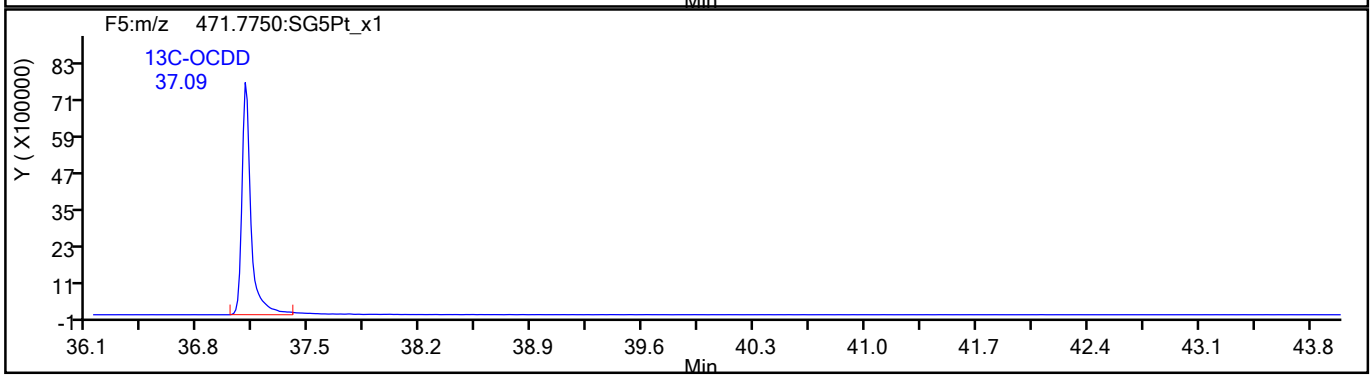

781315

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

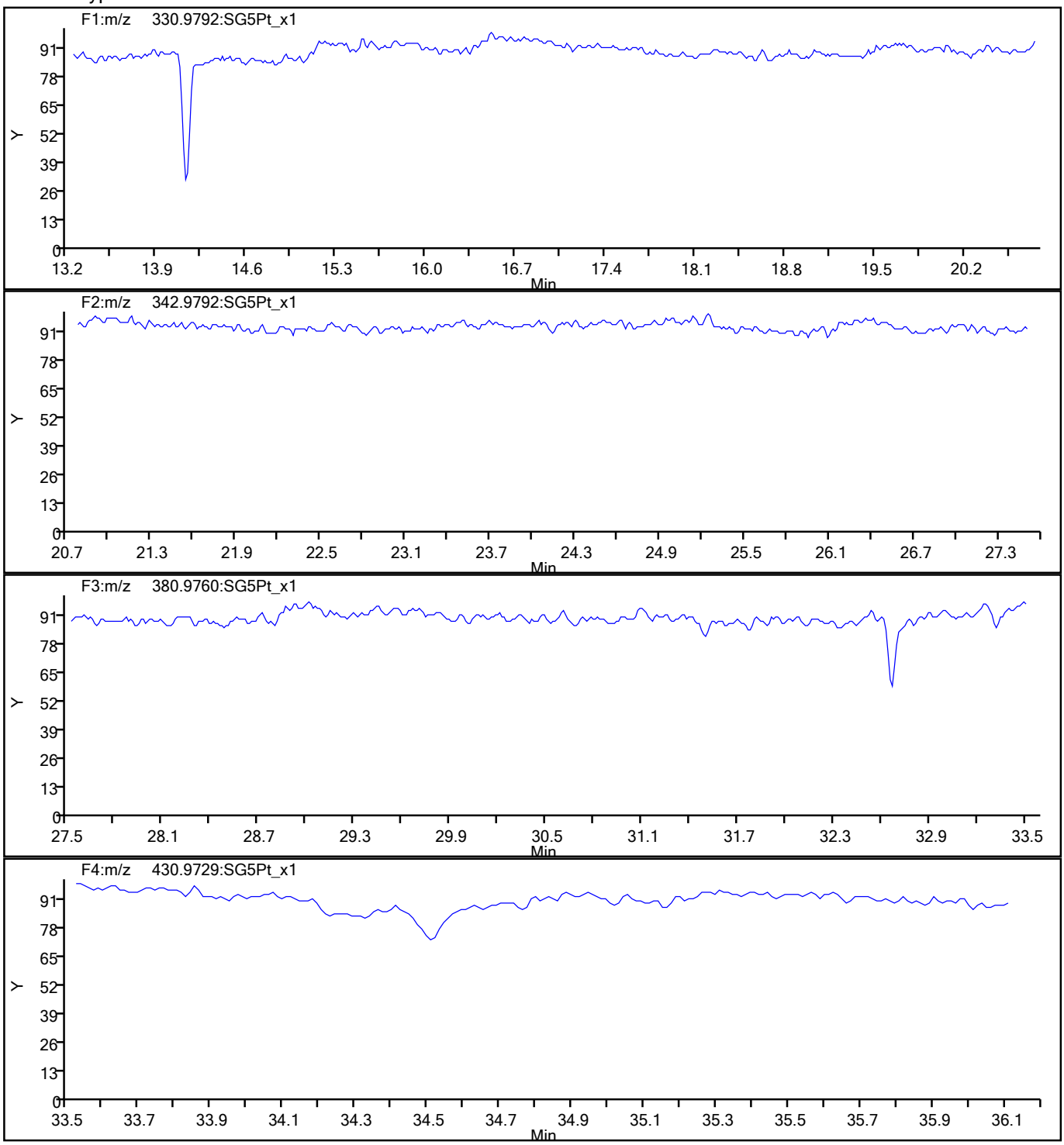

781316

Report Date: 27-Jul-2021 15:17:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

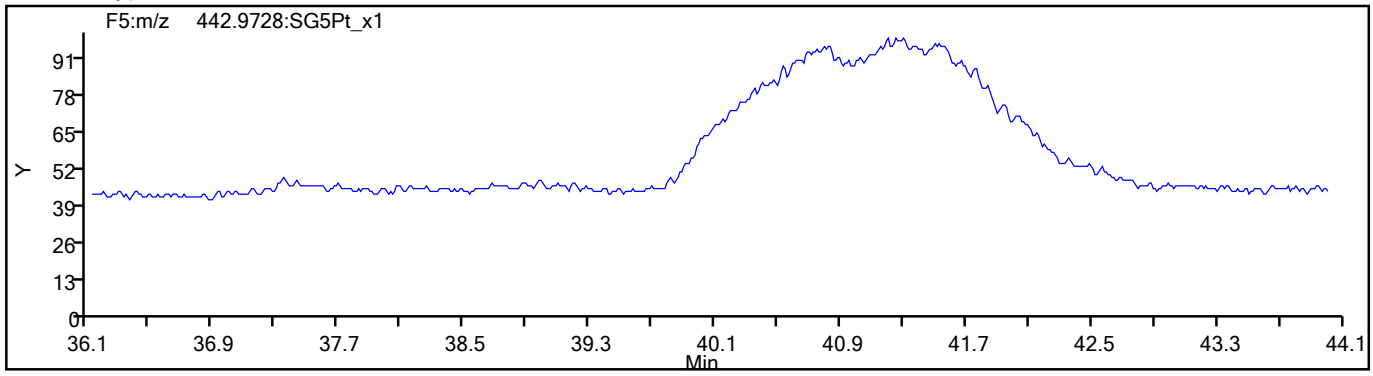

781317

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	57464333	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	95980421	0.79	1.6249	102.8	102.8	0.1660	0.1660	103	
2,3,7,8-TCDF	17.628	204575642	0.78	1.0239	208.2	208.2	0.2336	0.2336	104	
S Total TCDF					208.2	208.2	0.2336	0.2336		
D 13C-2,3,7,8-TCDD	18.338	53698206	0.83	0.8993	103.9	103.9	0.1396	0.1396	104	
$ 37Cl4-2,3,7,8-TCDD	18.354	140953034		1.1071	221.5	221.5	0.1318	0.1318	111	
2,3,7,8-TCDD	18.354	140421448	0.79	1.2541	208.5	208.5	0.1362	0.1362	104	
S Total TCDD					208.5	208.5	0.1362	0.1362		
D 13C-1,2,3,7,8-PeCDF	22.749	72829681	1.58	1.2101	104.7	104.7	0.2112	0.2112	105	
1,2,3,7,8-PeCDF	22.776	795873691	1.61	1.0611	1029.8	1029.8	2.482	2.482	103	
D 13C-2,3,4,7,8-PeCDF	24.126	75649463	1.61	1.2395	106.2	106.2	0.2062	0.2062	106	
2,3,4,7,8-PeCDF	24.153	783403837	1.59	1.0184	1016.8	1016.8	2.723	2.723	102	
S Total PeCDF					2046.7	2046.7	2.602	2.602		
D 13C-1,2,3,7,8-PeCDD	24.862	46251010	1.64	0.7612	105.7	105.7	0.1196	0.1196	106	
1,2,3,7,8-PeCDD	24.889	500555284	1.58	1.0484	1032.3	1032.3	0.8910	0.8910	103	
S Total PeCDD					1032.3	1032.3	0.8910	0.8910		
D 13C-1,2,3,4,7,8-HxCDF	30.835	67741189	0.53	1.0837	103.6	103.6	0.3784	0.3784	104	
1,2,3,4,7,8-HxCDF	30.862	737075796	1.21	1.0851	1002.7	1002.7	4.903	4.903	100	
D 13C-1,2,3,6,7,8-HxCDF	31.008	67363664	0.51	1.1279	99.0	99.0	0.3636	0.3636	98.97	
1,2,3,6,7,8-HxCDF	31.021	785709889	1.22	1.1260	1035.8	1035.8	4.873	4.873	104	
D 13C-2,3,4,6,7,8-HxCDF	31.754	63471184	0.52	1.0637	98.9	98.9	0.3855	0.3855	98.87	
2,3,4,6,7,8-HxCDF	31.767	762810877	1.21	1.1675	1029.4	1029.4	3.909	3.909	103	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58669892	0.52	0.9676	100.5	100.5	0.4238	0.4238	100	
1,2,3,7,8,9-HxCDF	32.539	708280047	1.22	1.1664	1035.0	1035.0	4.123	4.123	104	
S Total HxCDF					4103.0	4103.0	4.452	4.452		
* 13C-1,2,3,7,8,9-HxCDD	32.339	60348148	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	46886171	1.24	0.7334	105.9	105.9	0.3391	0.3391	106	
1,2,3,4,7,8-HxCDD	31.940	484857042	1.26	1.0640	971.9	971.9	2.786	2.786	97.19	
D 13C-1,2,3,6,7,8-HxCDD	32.033	53564396	1.27	0.8802	100.8	100.8	0.2826	0.2826	101	
1,2,3,6,7,8-HxCDD	32.047	543061818	1.27	1.0001	1013.8	1013.8	2.795	2.795	101	
1,2,3,7,8,9-HxCDD	32.353	563888565	1.26	1.1325	991.3	991.3	2.541	2.541	99.13	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDD					2977.0	2977.0	2.707	2.707		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	46328151	0.45	0.7730	99.3	99.3	0.9693	0.9693	99.31	
1,2,3,4,6,7,8-HpCDF	33.924	681312007	1.05	1.4413	1020.4	1020.4	8.187	8.187	102	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44333848	0.44	0.7008	104.8	104.8	1.069	1.069	105	
1,2,3,4,7,8,9-HpCDF	35.017	590555312	1.06	1.3174	1011.1	1011.1	10.5	10.5	101	
S Total HpCDF					2031.5	2031.5	9.356	9.356		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	39395832	1.02	0.6472	100.9	100.9	0.4739	0.4739	101	
1,2,3,4,6,7,8-HpCDD	34.726	441437476	1.05	1.0943	1024.0	1024.0	3.855	3.855	102	
S Total HpCDD					1024.0	1024.0	3.855	3.855		
D 13C-OCDD	37.093	56623863	0.89	0.4472	209.8	209.8	0.2327	0.2327	105	
OCDF	37.201	856685987	0.91	1.4382	2104.0	2104.0	1.905	1.905	105	
OCDD	37.105	635652839	0.90	1.1070	2028.1	2028.1	1.855	1.855	101	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		26125466	6597193	4577	11442	1441		
333.9339	18.142	18.142	0		31338867	7893522	2702	6755	2921	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42243137	10877420	7832	19580	1389		
317.9389	17.613	17.616	0	0.971	53737284	13863668	7802	19505	1777	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	89710432	22799700	10338	25845	2205		
305.8987	17.628	17.631	0	1.001	114865210	29189675	13335	33337	2189	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24360997	5757558	4577	11442	1258		
333.9339	18.338	18.338	0	1.011	29337209	6914283	2702	6755	2559	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	140953034	33738158	8459	21147	3988		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	62065087	14965631	3913	9782	3825		
321.8936	18.354	18.357	0	1.001	78356361	18744482	4747	11867	3949	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44649559	7939527	8573	21432	926		
353.8970	22.749	22.754	0	1.254	28180122	5062354	6242	15605	811	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	490871580	87021007	84135	210337	1034		
341.8567	22.776	22.779	0	1.001	305002111	54503599	52854	132135	1031	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46717935	7613965	8573	21432	888		
353.8970	24.126	24.129	0	1.330	28931528	4737188	6242	15605	759	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	480352978	79104825	84135	210337	940		
341.8567	24.153	24.156	0	1.001	303050859	50060127	52854	132135	947	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28720712	4433240	3087	7717	1436		
369.8919	24.862	24.865	0	1.370	17530298	2751802	2189	5472	1257	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	306292917	47311146	15348	38370	3083		
357.8516	24.889	24.892	0	1.001	194262367	30133208	11499	28747	2621	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23491874	5084915	9674	24185	526		
385.8610	30.835	30.838	0	0.953	44249315	9441190	17790	44475	531	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	404173144	87133654	170642	426605	511		
375.8178	30.848	30.857	0	1.000	332902652	71216591	138478	346195	514	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	22854682	4877346	9674	24185	504		
385.8610	31.008	31.003	0	0.959	44508982	9206926	17790	44475	518	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.000	431948071	93438031	170642	426605	548		
375.8178	31.021	31.022	0	1.000	353761818	76246532	138478	346195	551	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	21747421	5871662	9674	24185	607		
385.8610	31.754	31.756	0	0.982	41723763	11062051	17790	44475	622	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	417841952	110026703	170642	426605	645		
375.8178	31.767	31.772	0	1.000	344968925	92108448	138478	346195	665	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20172563	5575575	9674	24185	576		
385.8610	32.512	32.523	-1	1.005	38497329	10495423	17790	44475	590	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	388834443	107441652	170642	426605	630		
375.8178	32.526	32.534	0	1.000	319445604	89819128	138478	346195	649	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33485933	9289499	8951	22377	1038		
403.8529	32.339	32.342	0		26862215	7454274	7708	19270	967	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	25994948	7598983	8951	22377	849		
403.8529	31.927	31.929	0	0.987	20891223	6054958	7708	19270	786	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	270288224	77533273	86149	215372	900		
391.8127	31.940	31.945	0	1.000	214568818	61952830	75747	189367	818	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29946566	8106259	8951	22377	906		
403.8529	32.033	32.033	0	0.991	23617830	6373294	7708	19270	827	1.27(1.05-1.43)	

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	303387935	83103965	86149	215372	965		
391.8127	32.047	32.047	0	1.000	239673883	65565020	75747	189367	866	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	314172702	87971106	86149	215372	1021		
391.8127	32.353	32.355	0	1.013	249715863	70210414	75747	189367	927	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14282220	4787635	15981	39952	300		
419.8220	33.912	33.914	0	1.049	32045931	10687518	34202	85505	312	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	349397605	118035783	389676	974190	303		
409.7789	33.924	33.926	0	1.000	331914402	111658032	340706	851765	328	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13509696	4047534	15981	39952	253		
419.8220	35.005	35.010	0	1.082	30824152	9120201	34202	85505	267	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	303260617	91538482	389676	974190	235		
409.7789	35.017	35.020	0	1.000	287294695	87143866	340706	851765	256	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19890119	6131671	10444	26110	587		
437.8140	34.714	34.716	0	1.073	19505713	6051375	10100	25250	599	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	225857690	69087451	102453	256132	674		
425.7737	34.726	34.726	0	1.000	215579786	65898474	103127	257817	639	1.05(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26710485	6689918	2659	6647	2516		
471.7750	37.093	37.094	0	1.147	29913378	7452640	4311	10777	1729	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	409115360	108366645	37076	92690	2923		
443.7399	37.201	37.199	0	1.003	447570627	117808946	40434	101085	2914	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	300559615	76562352	27801	69502	2754		
459.7348	37.105	37.106	0	1.000	335093224	85854399	30277	75692	2836	0.90(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

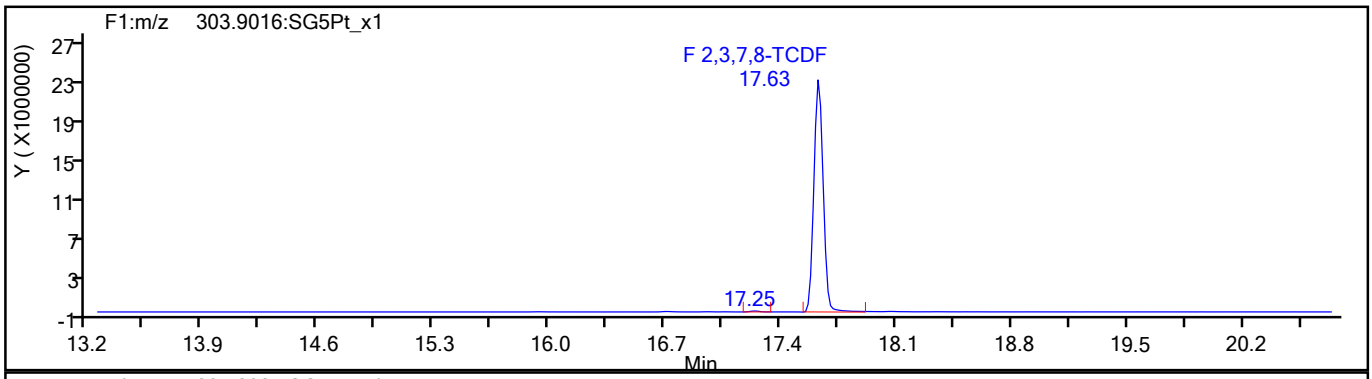

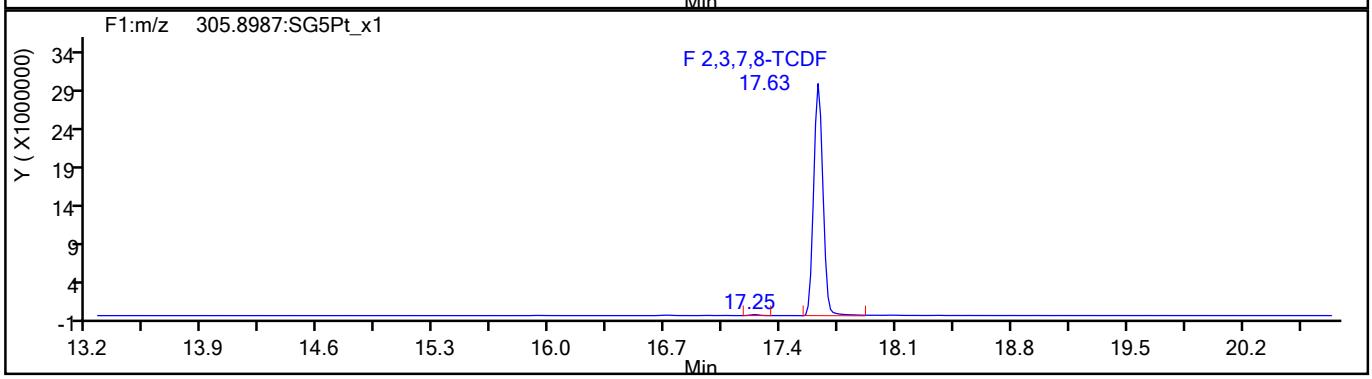

TCDF Standards

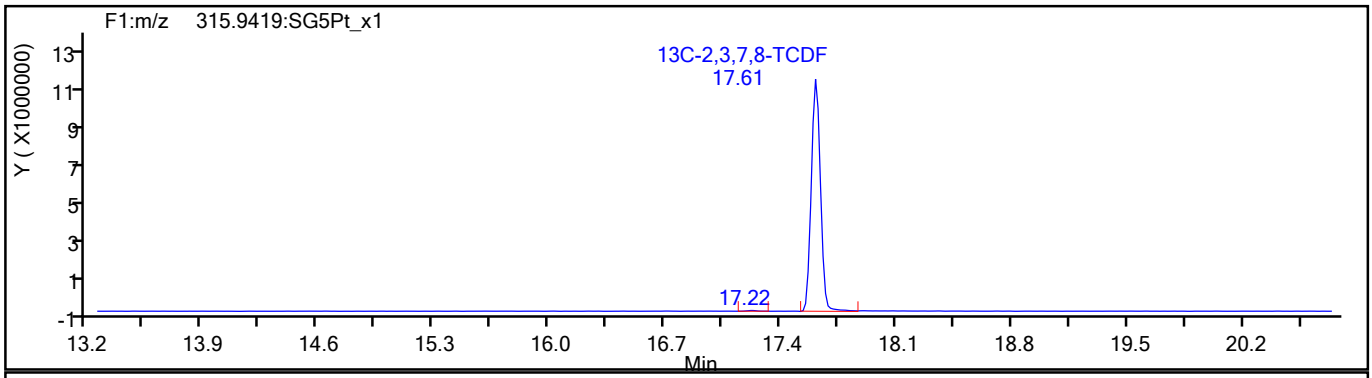

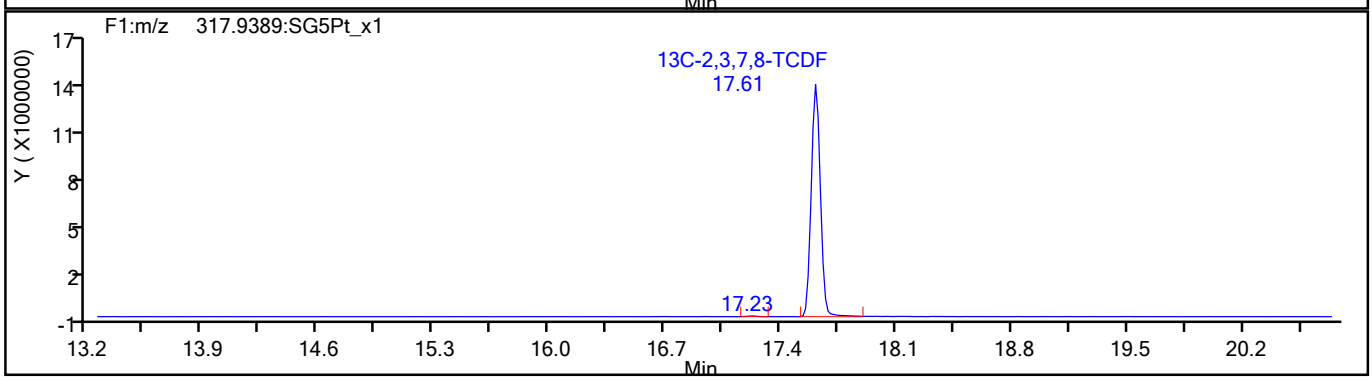

781323

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

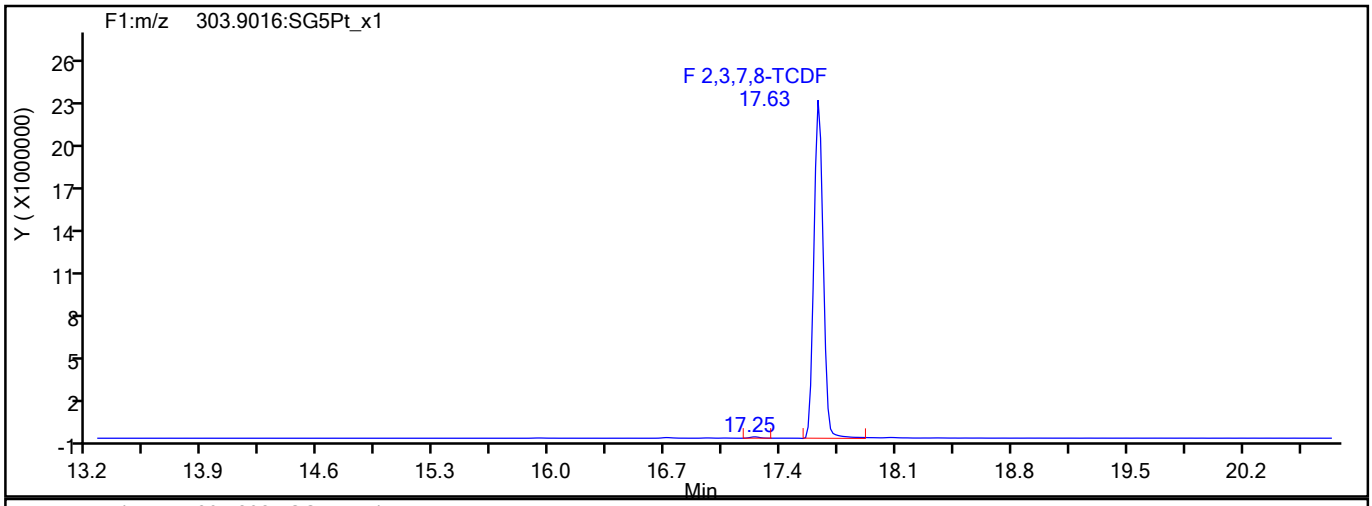

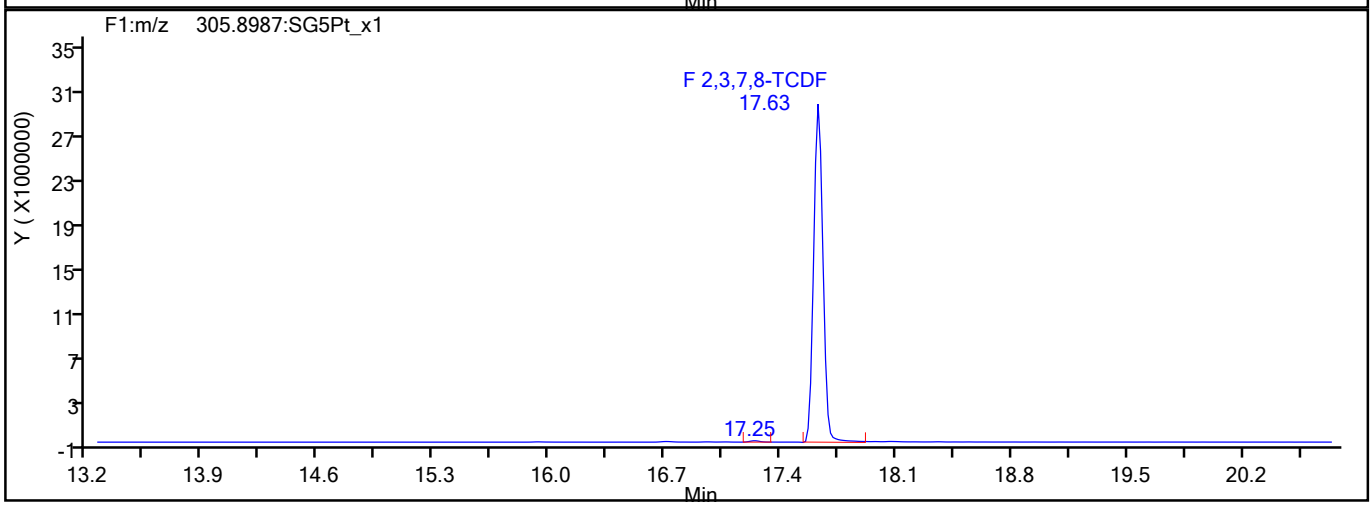

TCDF Interference Mass

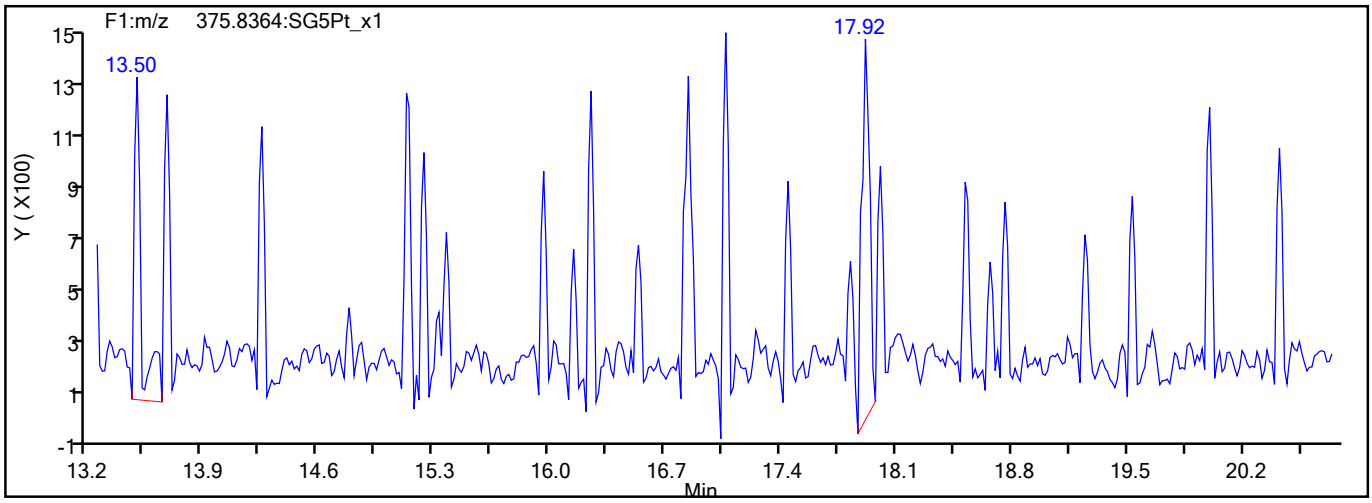

781324

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

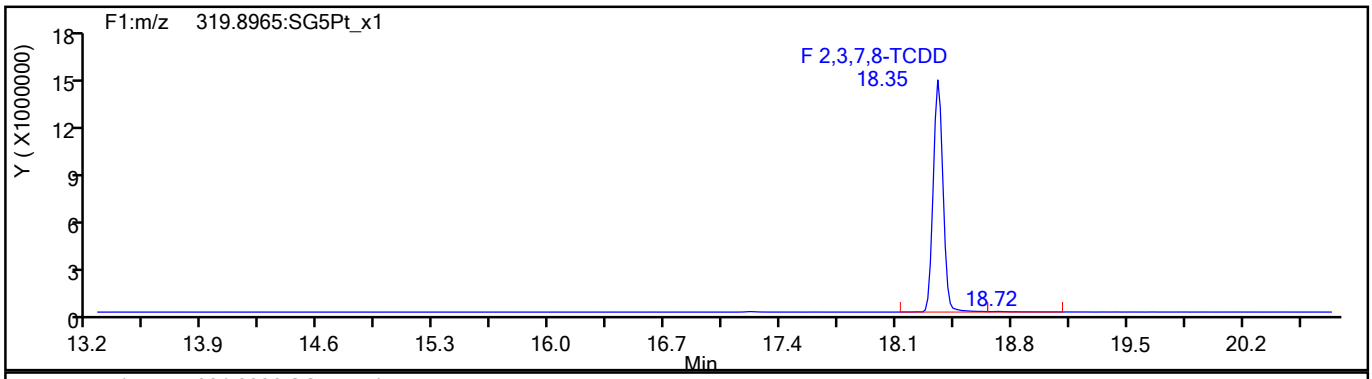

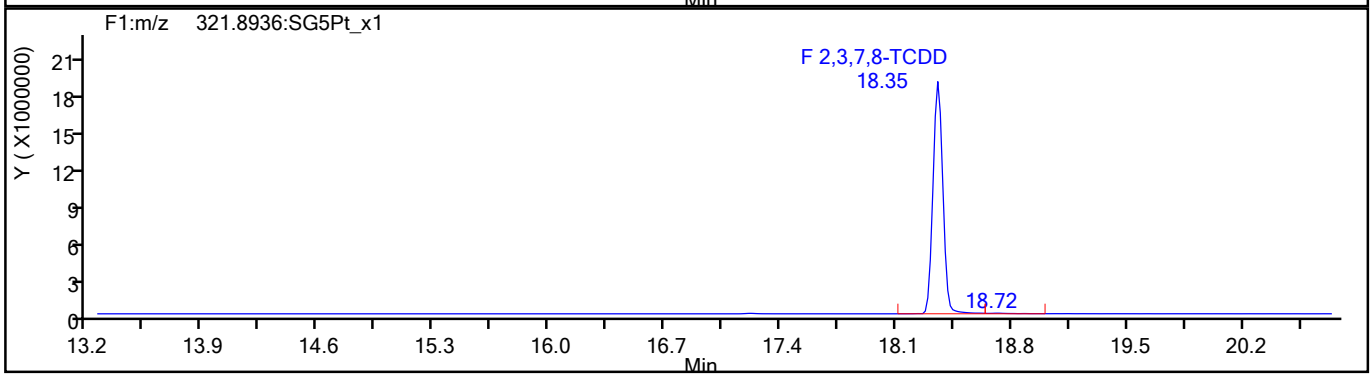

TCDD Standards

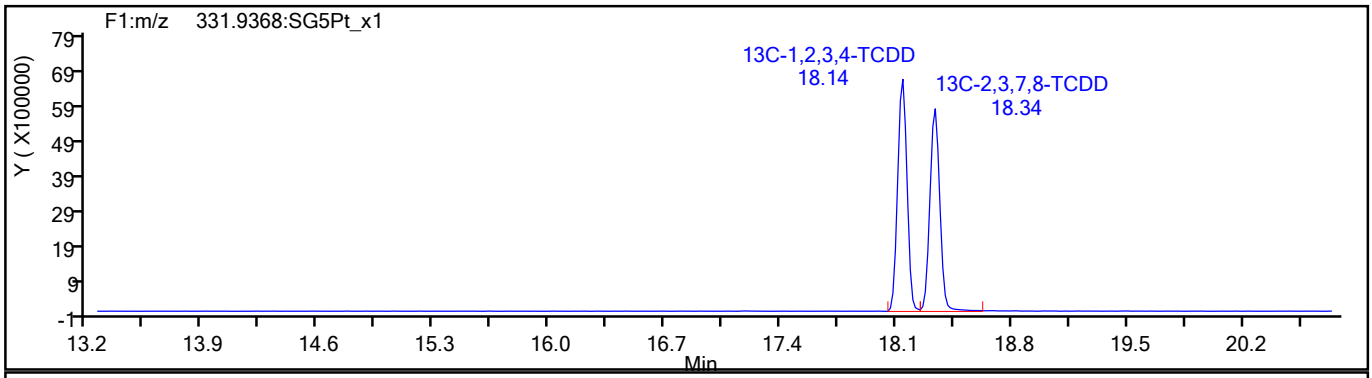

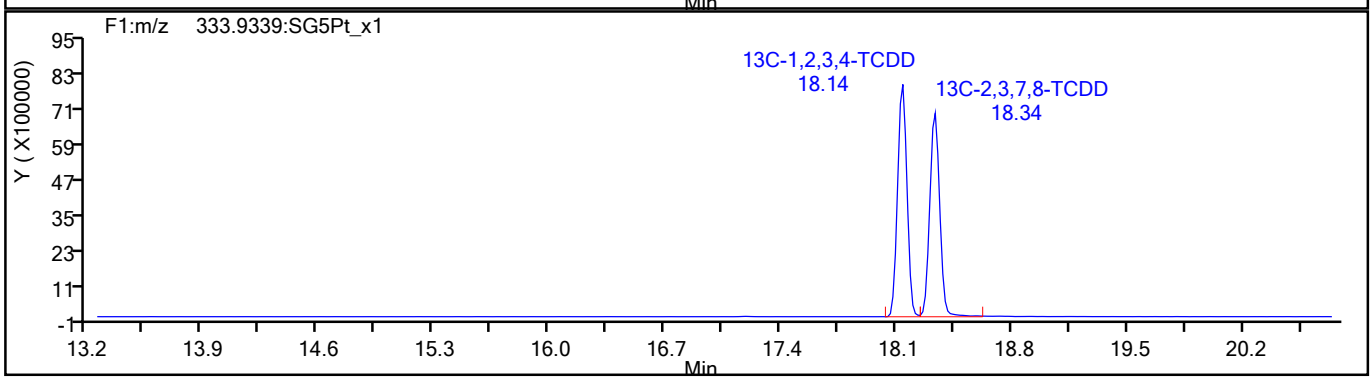

781325

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

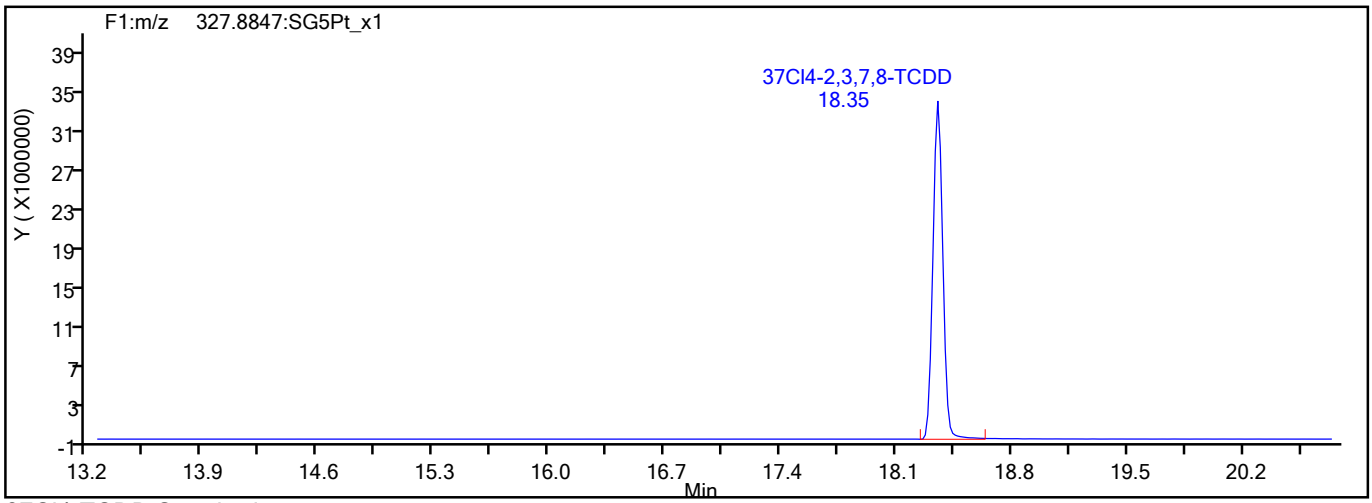

37Cl4-TCDD Standards

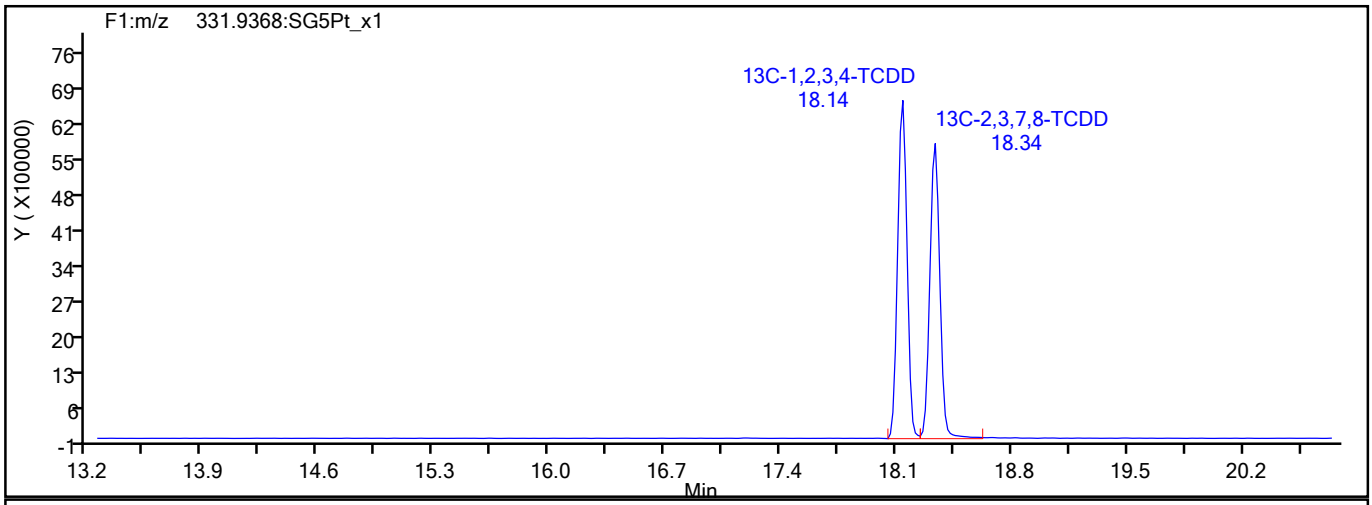

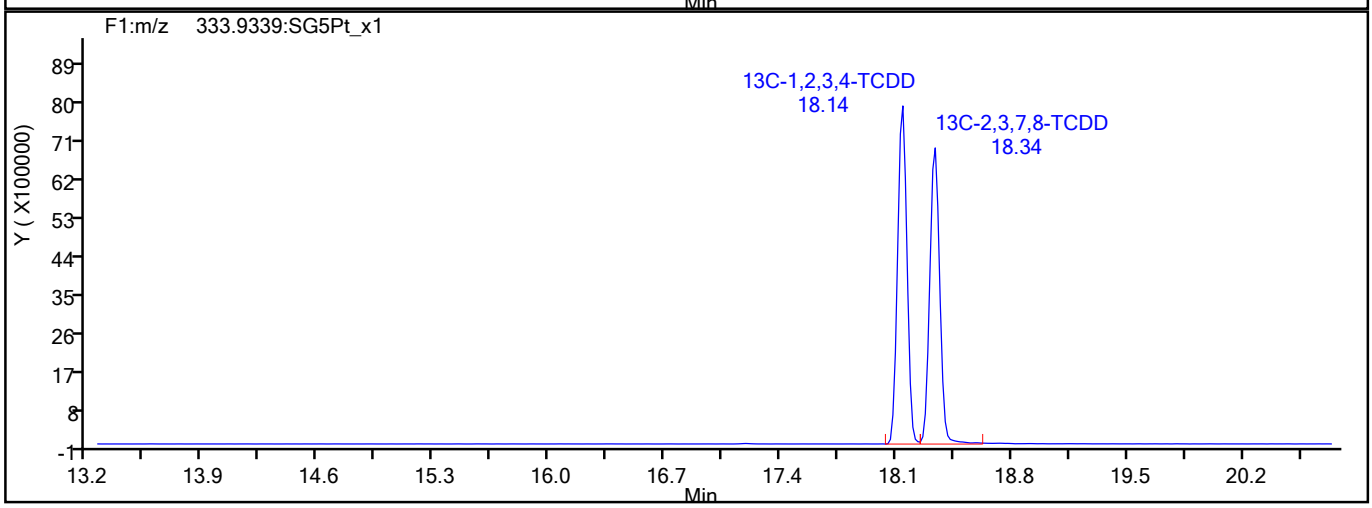

781326

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

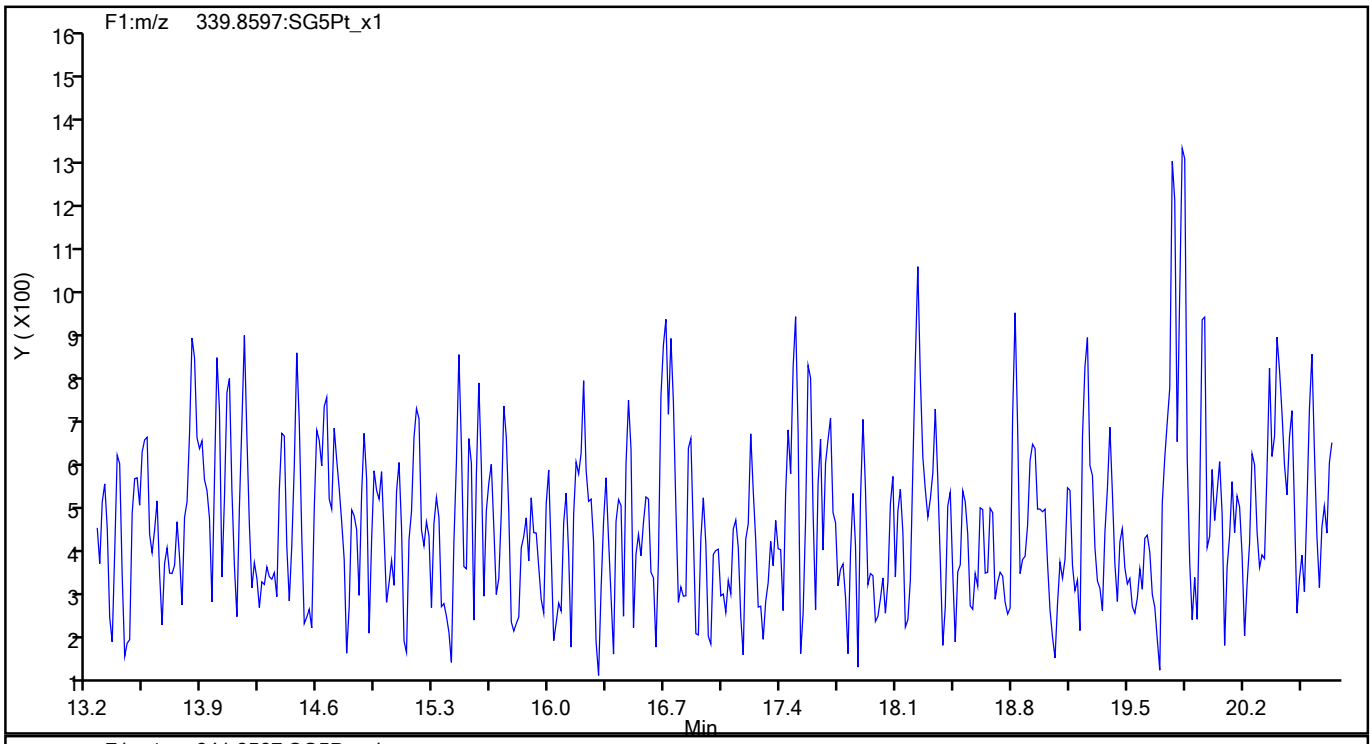

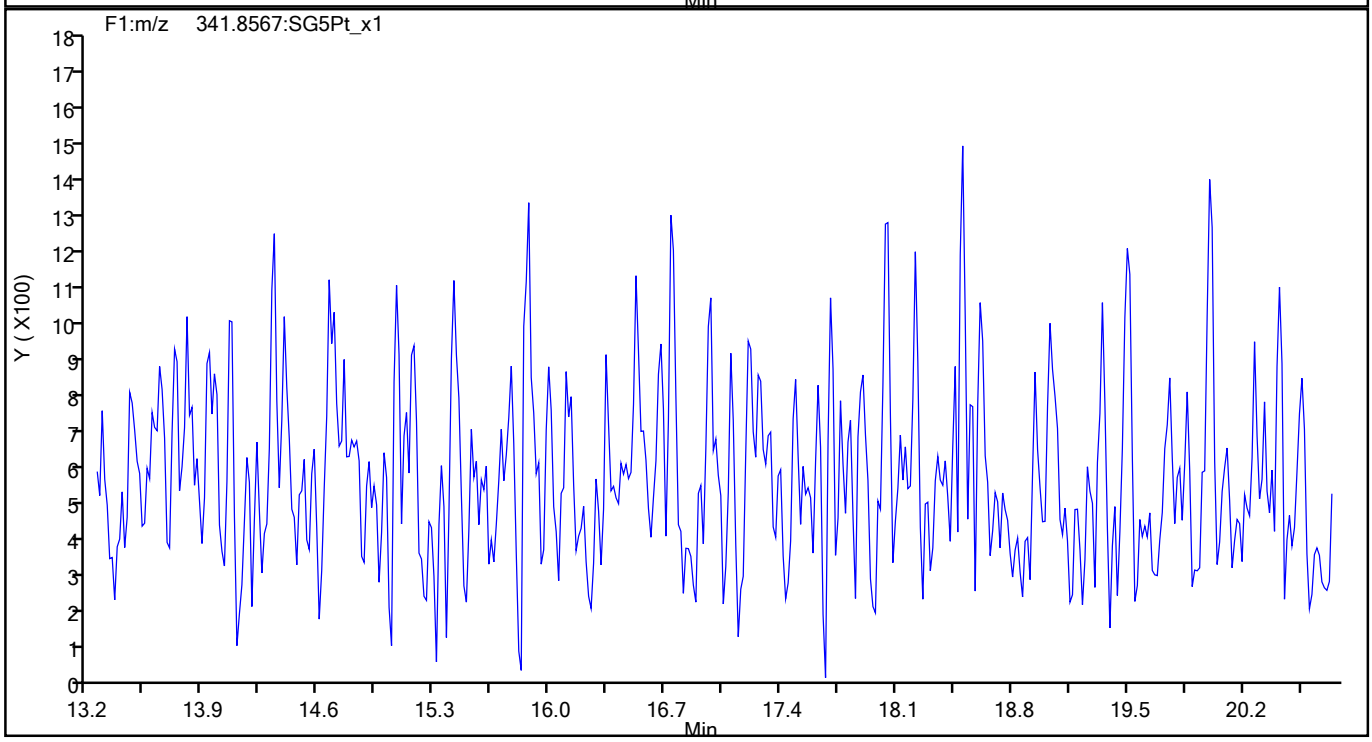

781327

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

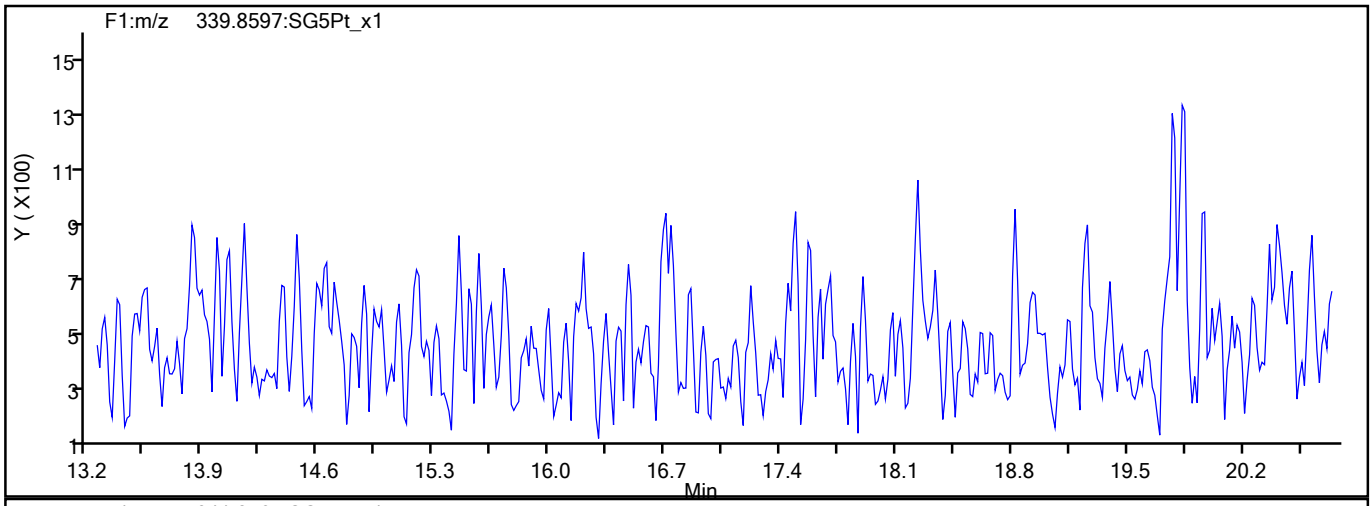

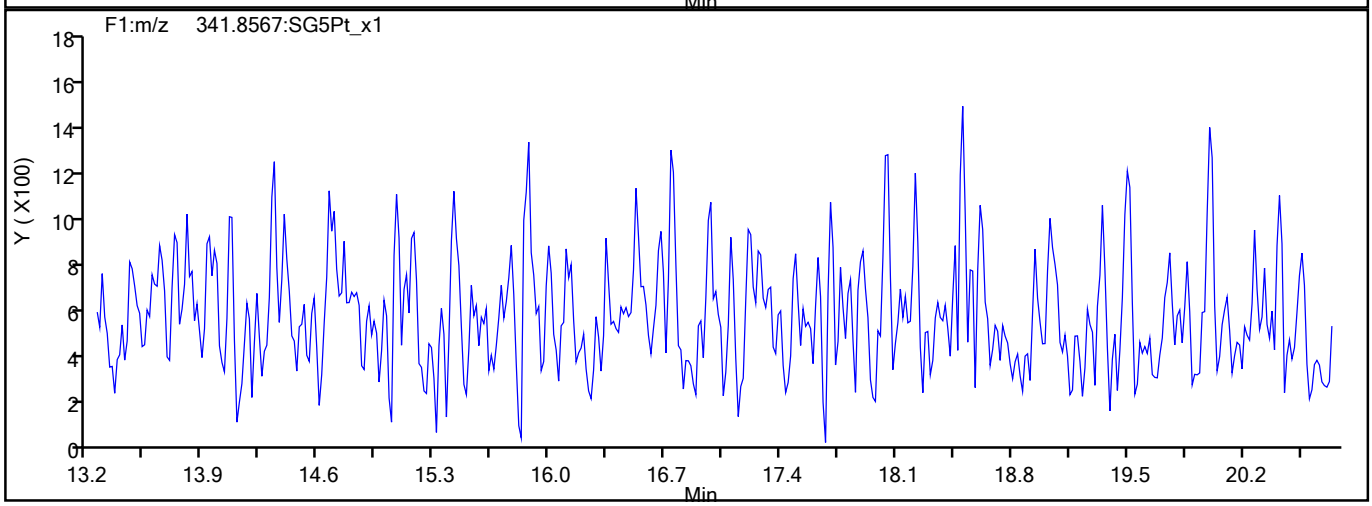

F1 PeCDFs Interference Mass

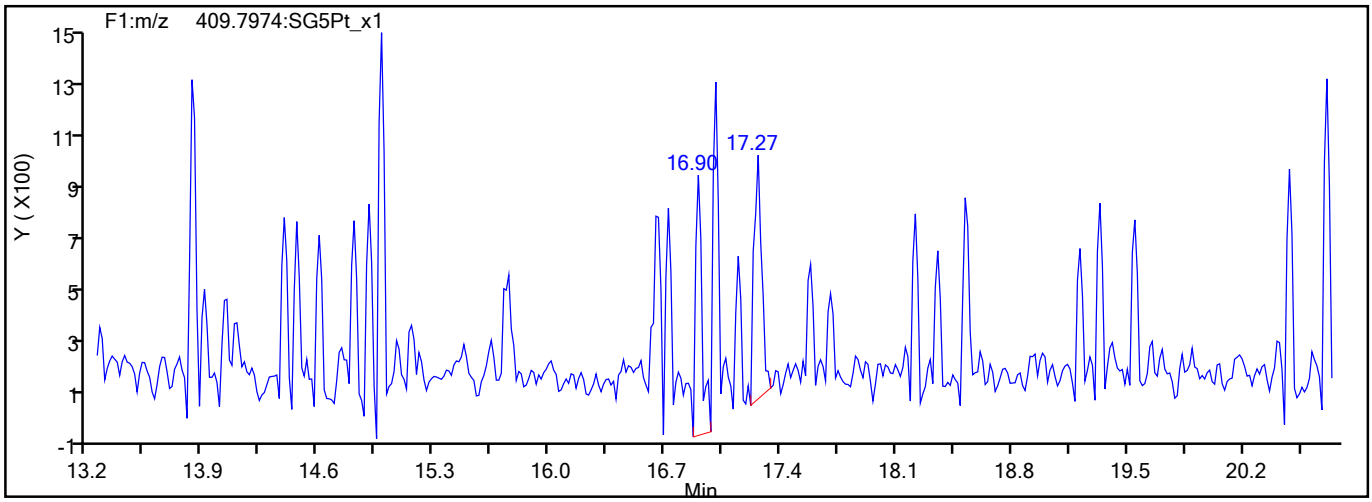

781328

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

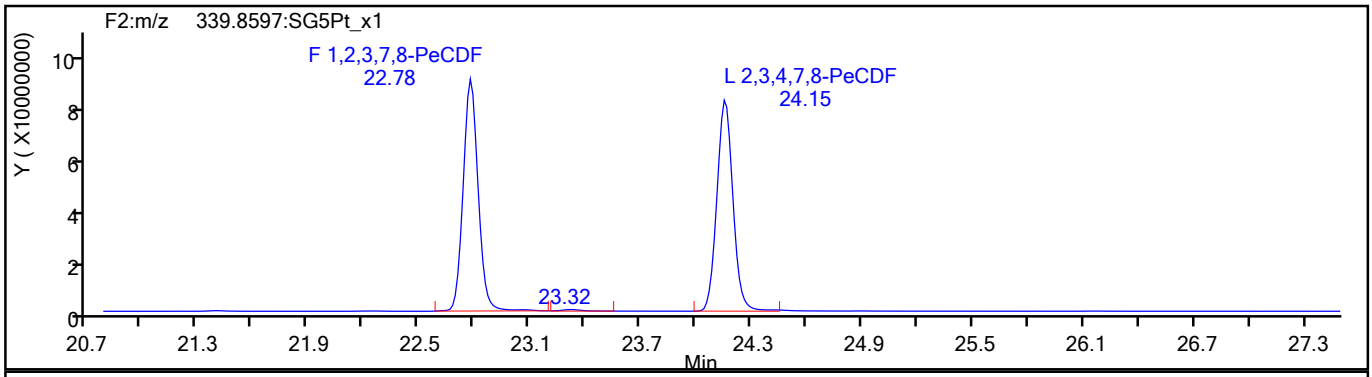

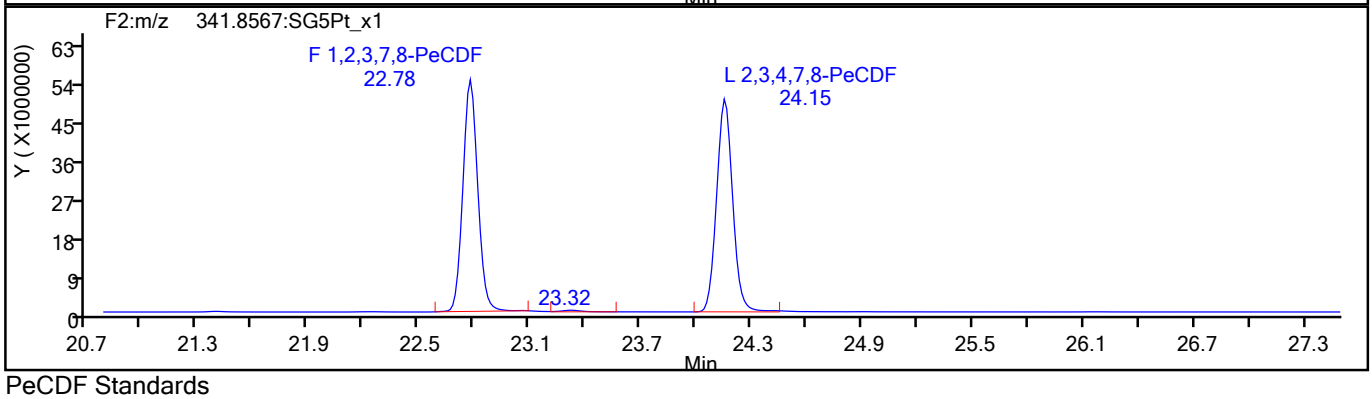

PeCDF Standards

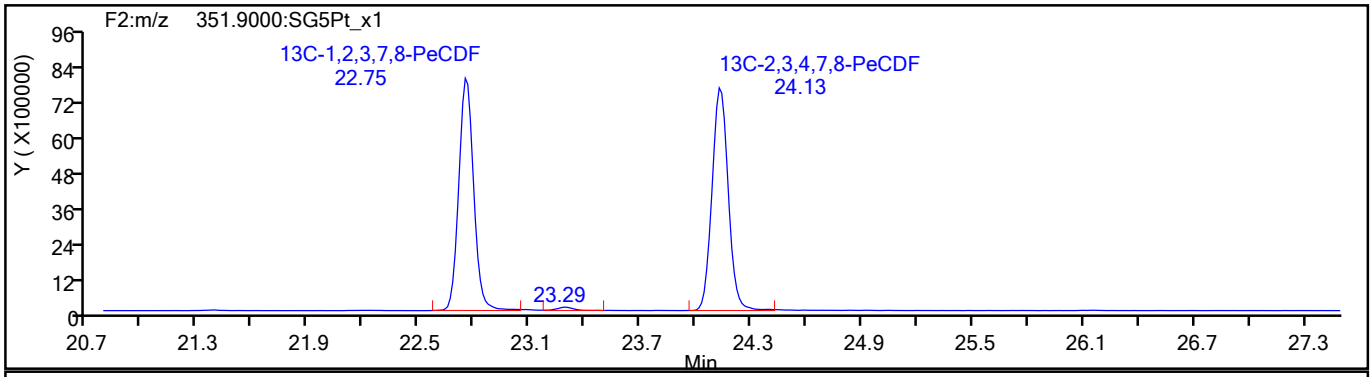

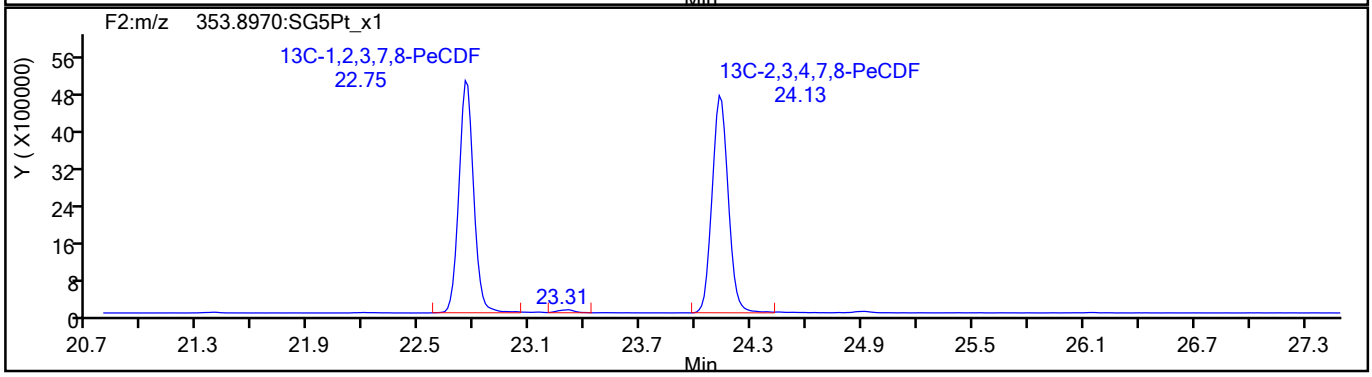

781329

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

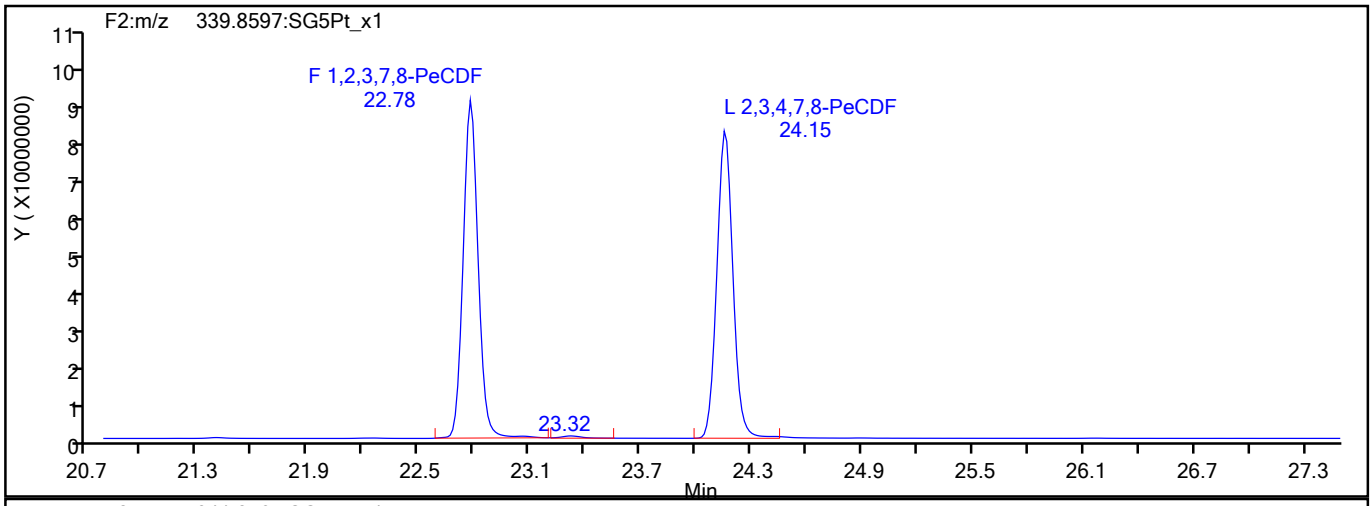

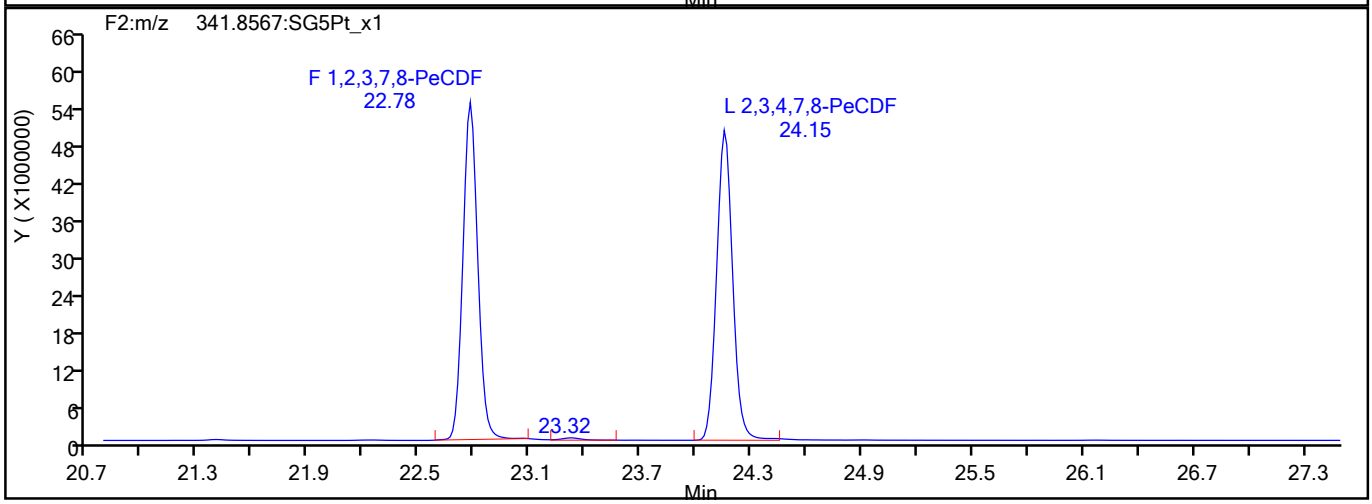

PeCDF Interference Mass

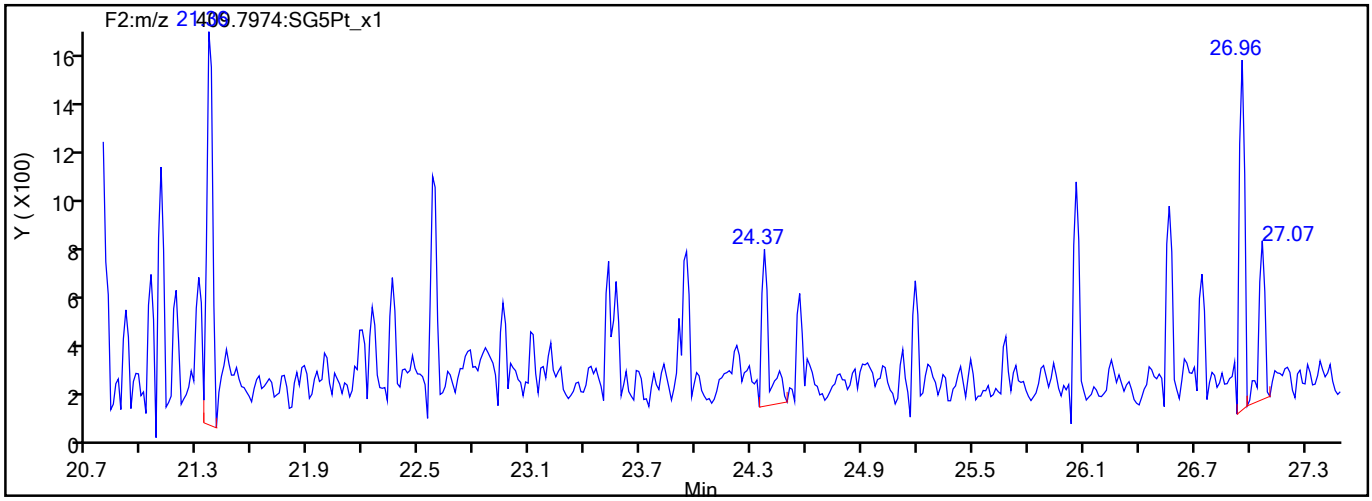

781330

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

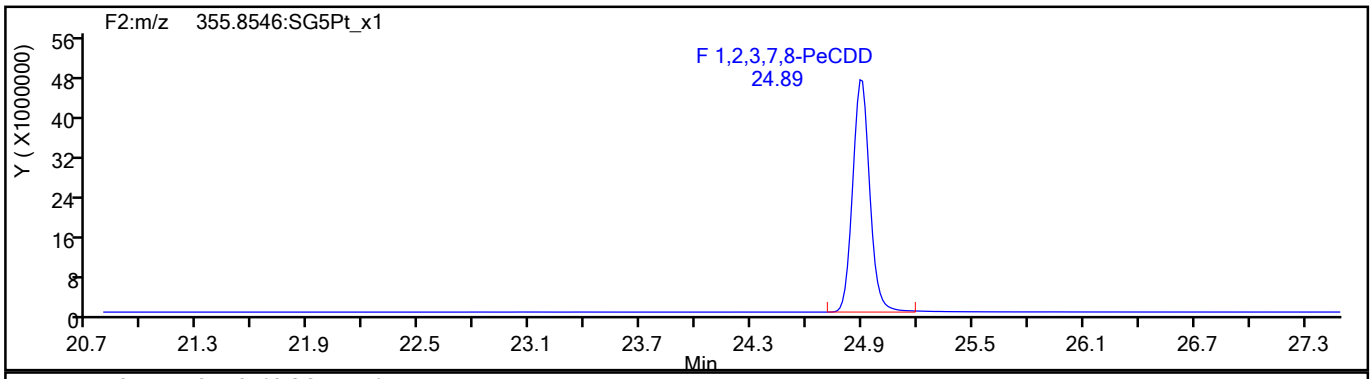

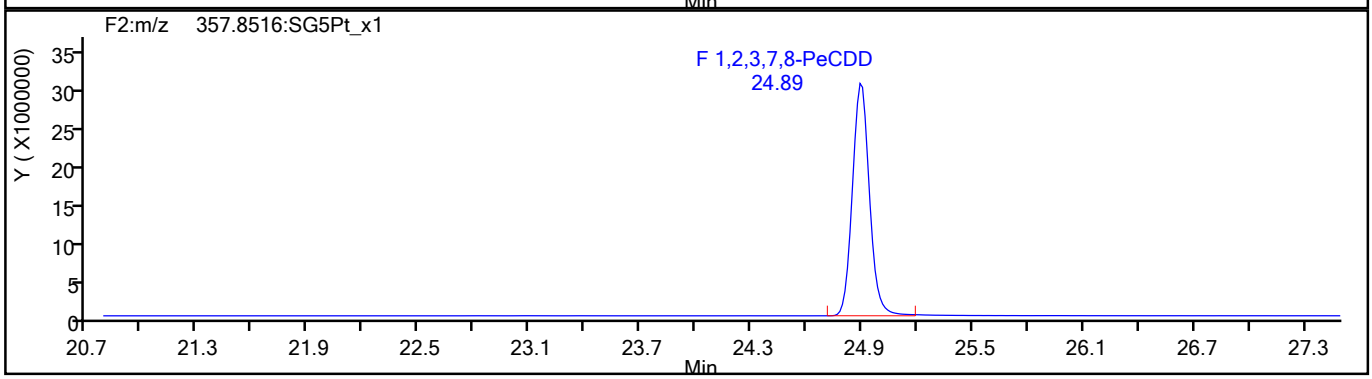

PeCDD Standards

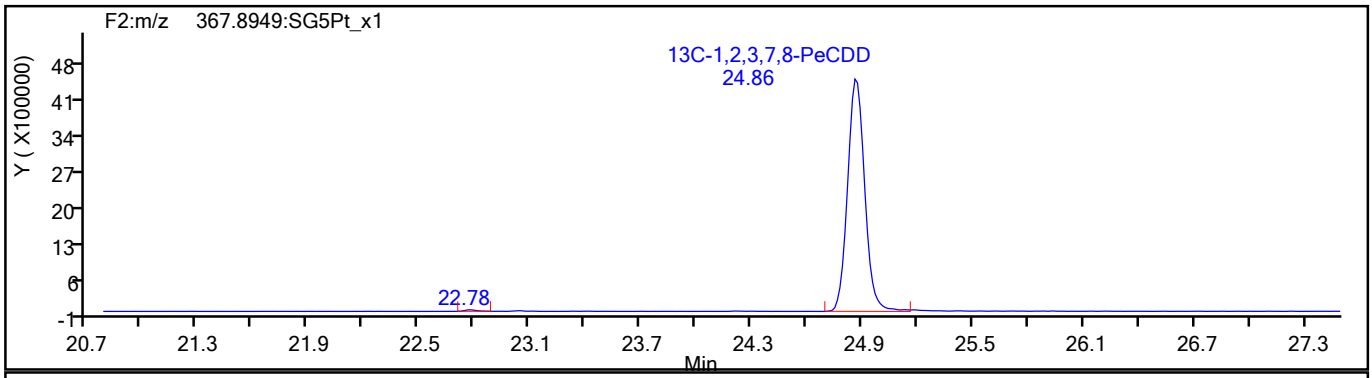

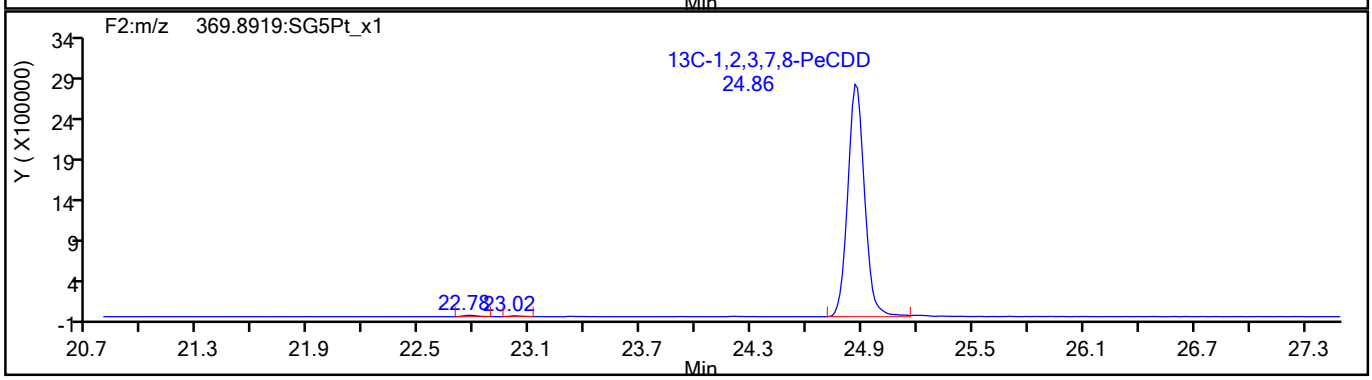

781331

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

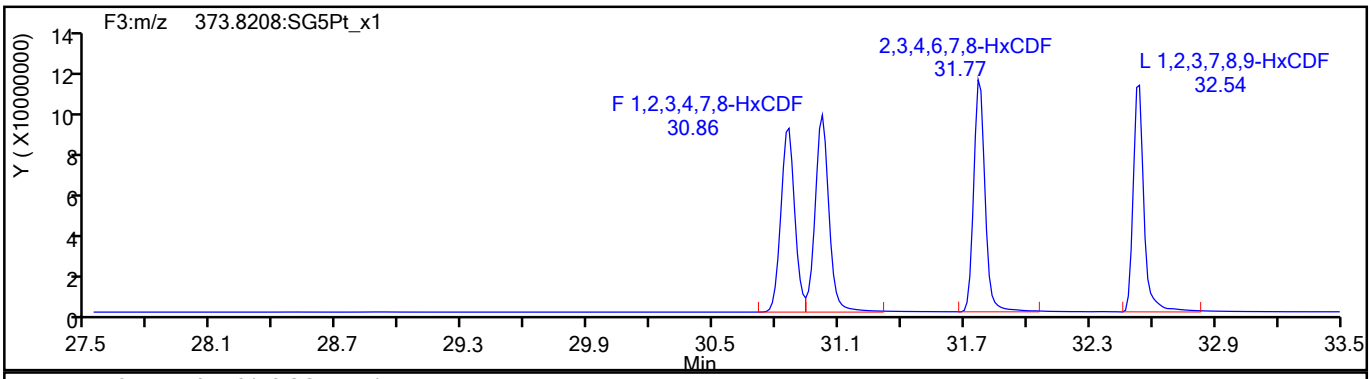

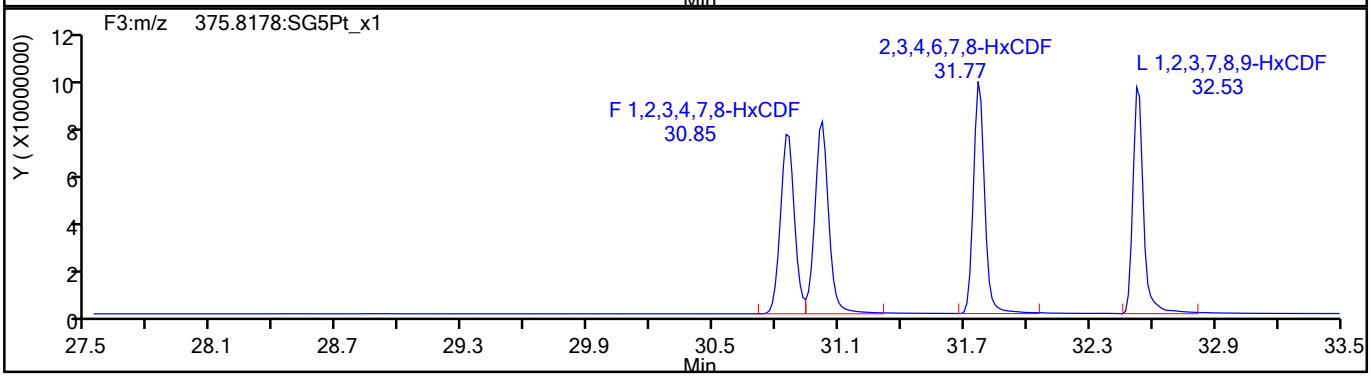

HxCDF Standards

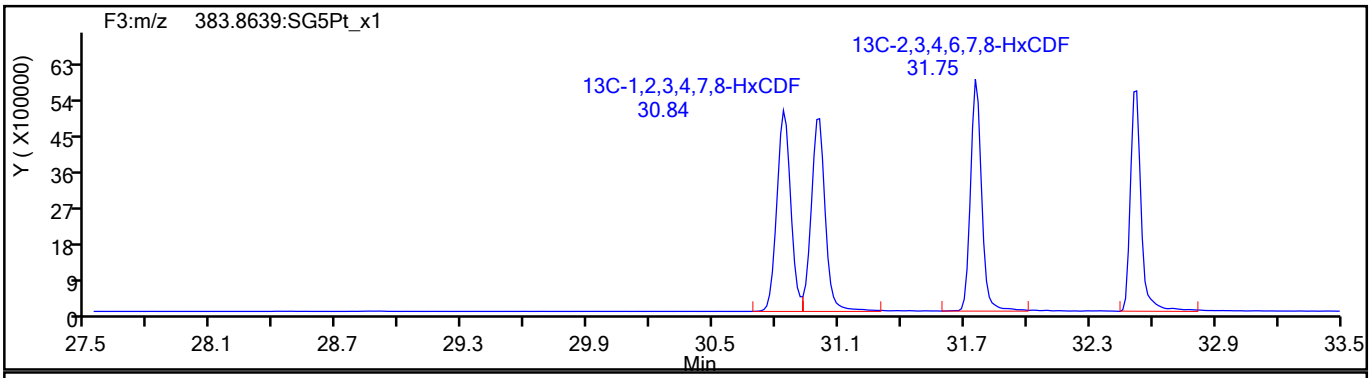

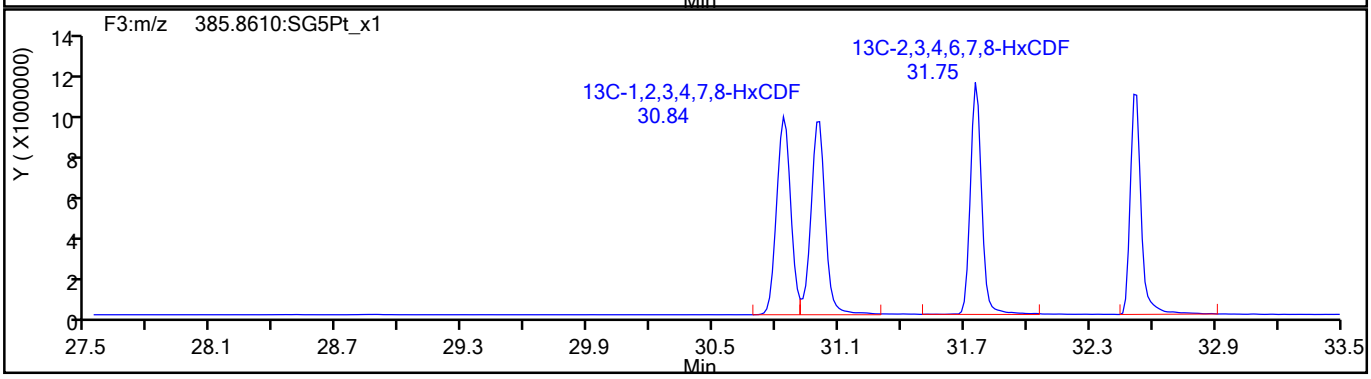

781332

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

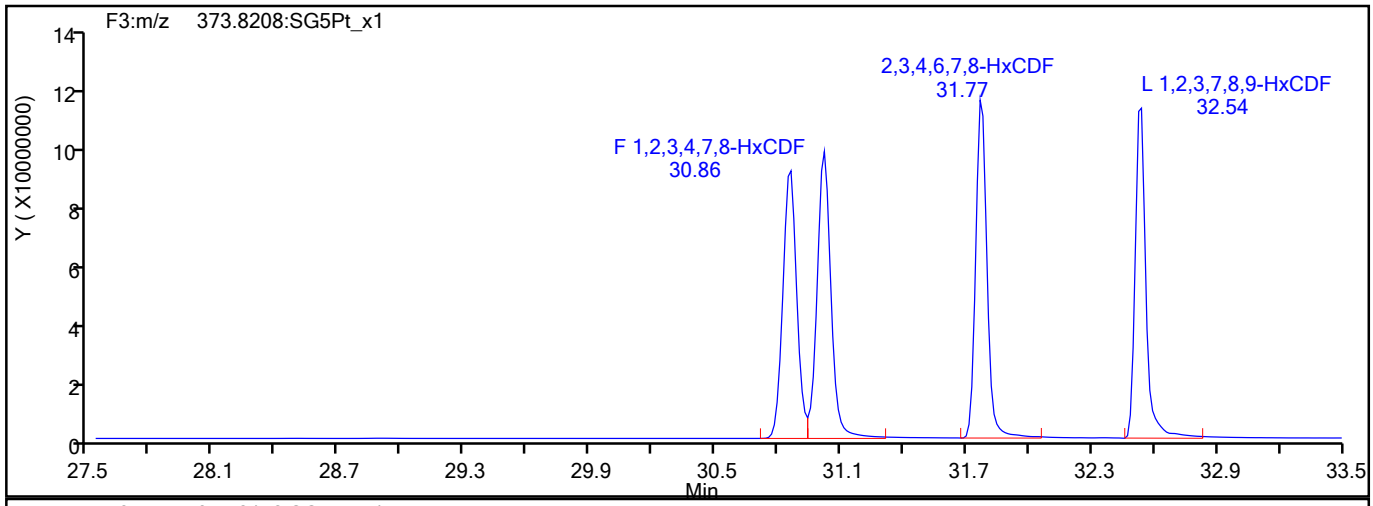

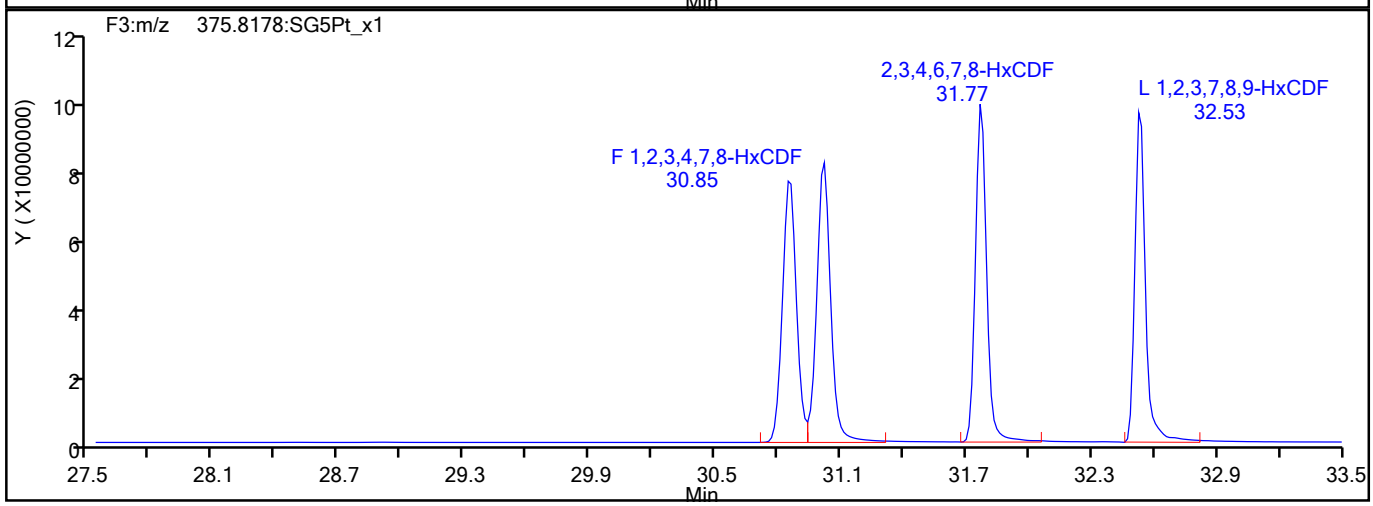

HxCDF Interference Mass

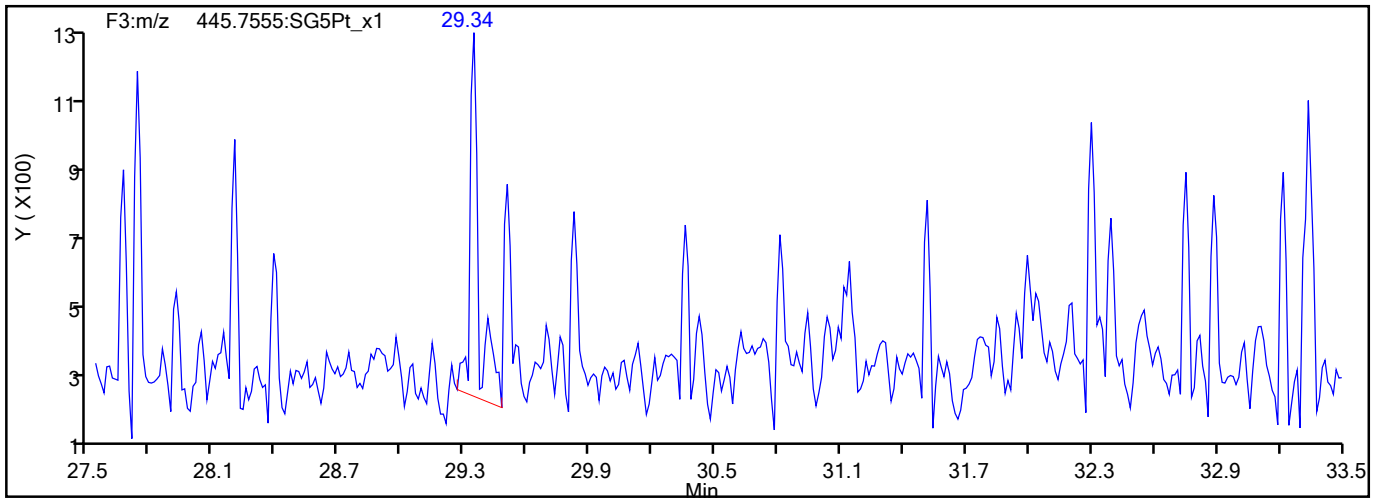

781333

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

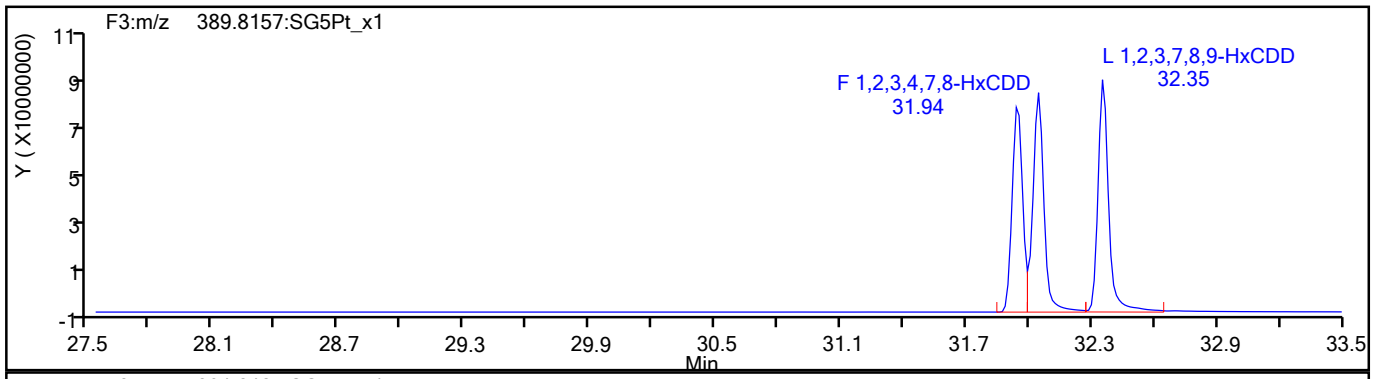

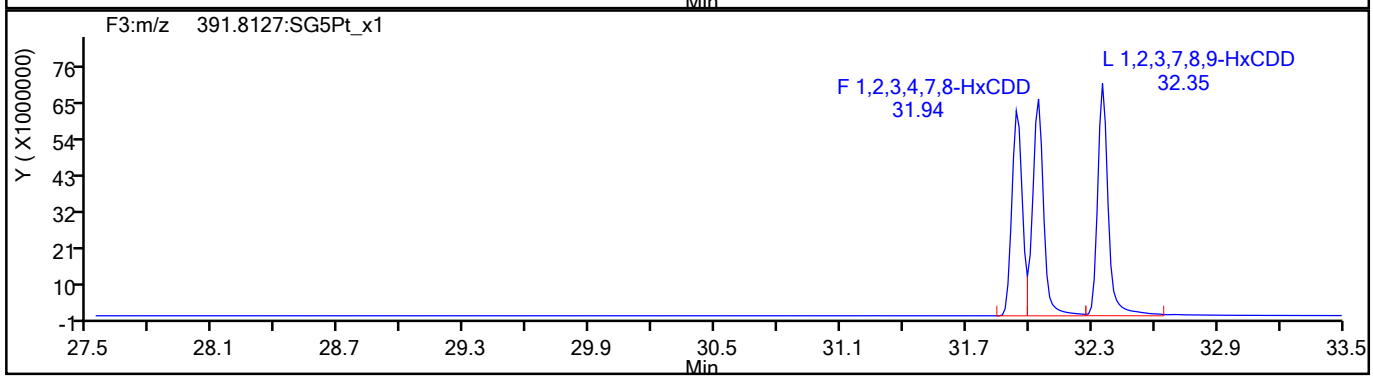

HxCDD Standards

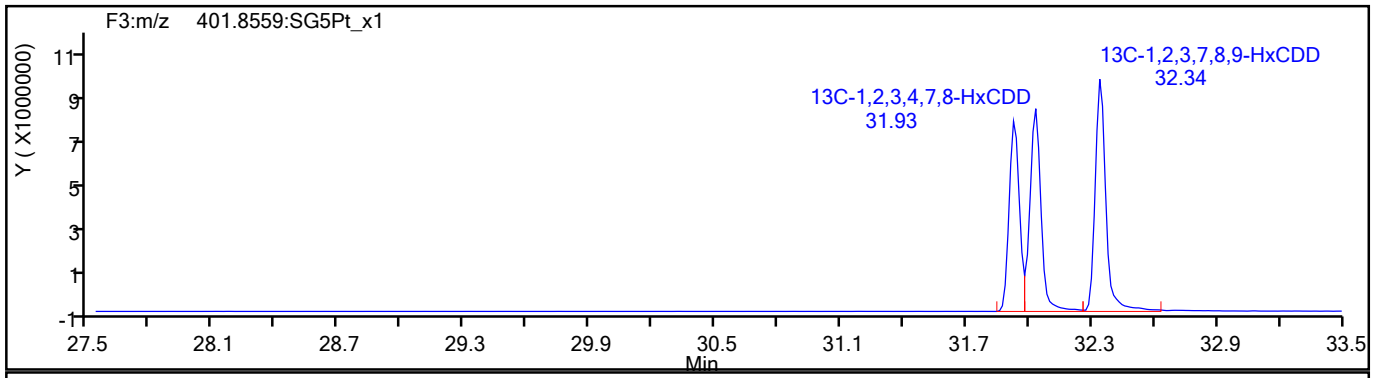

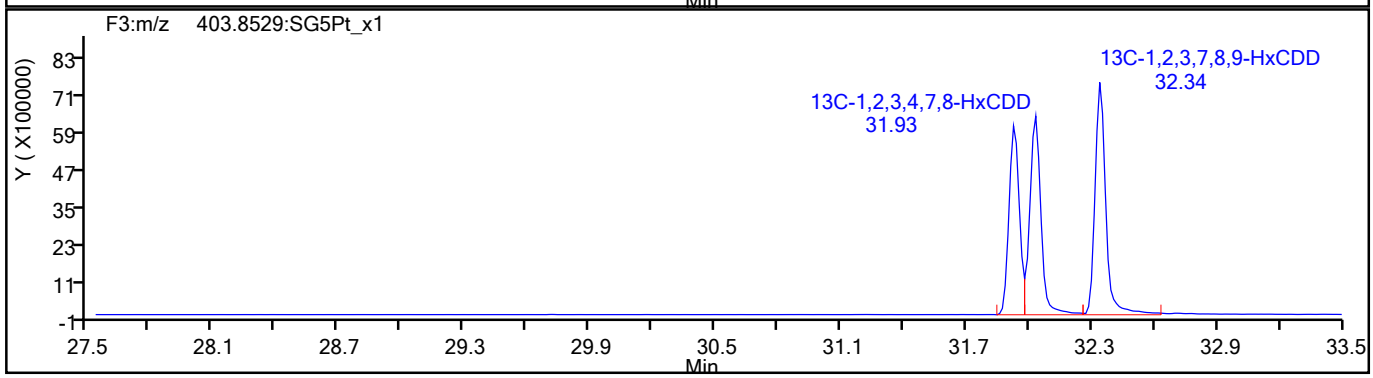

781334

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

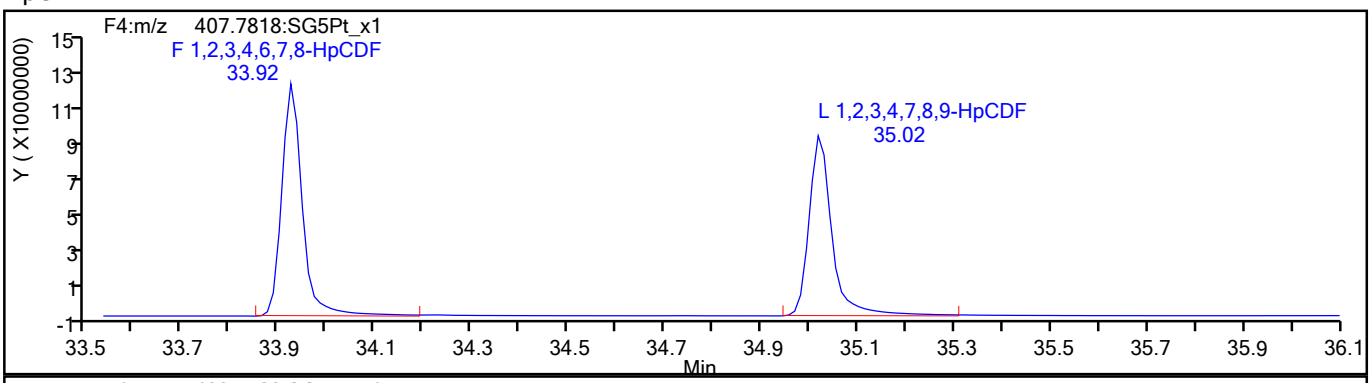

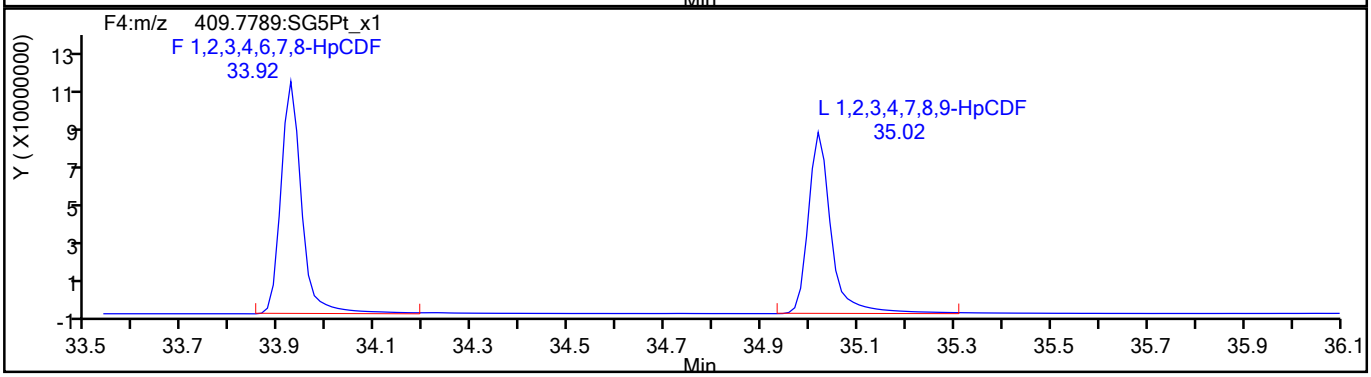

HpCDF Standards

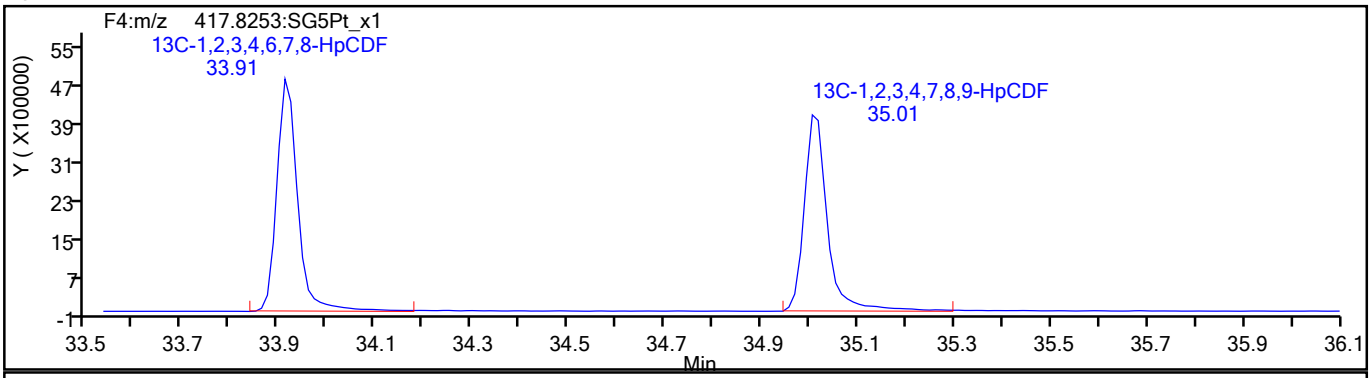

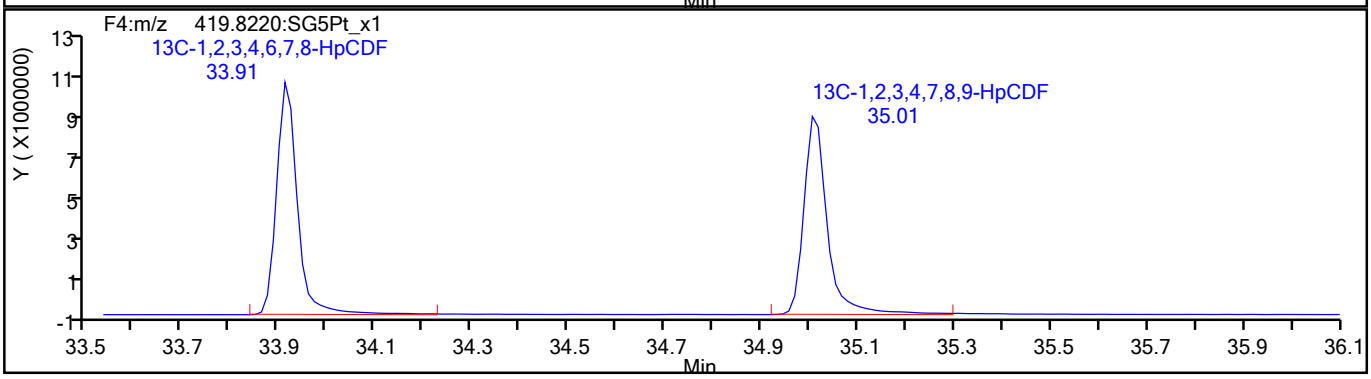

781335

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

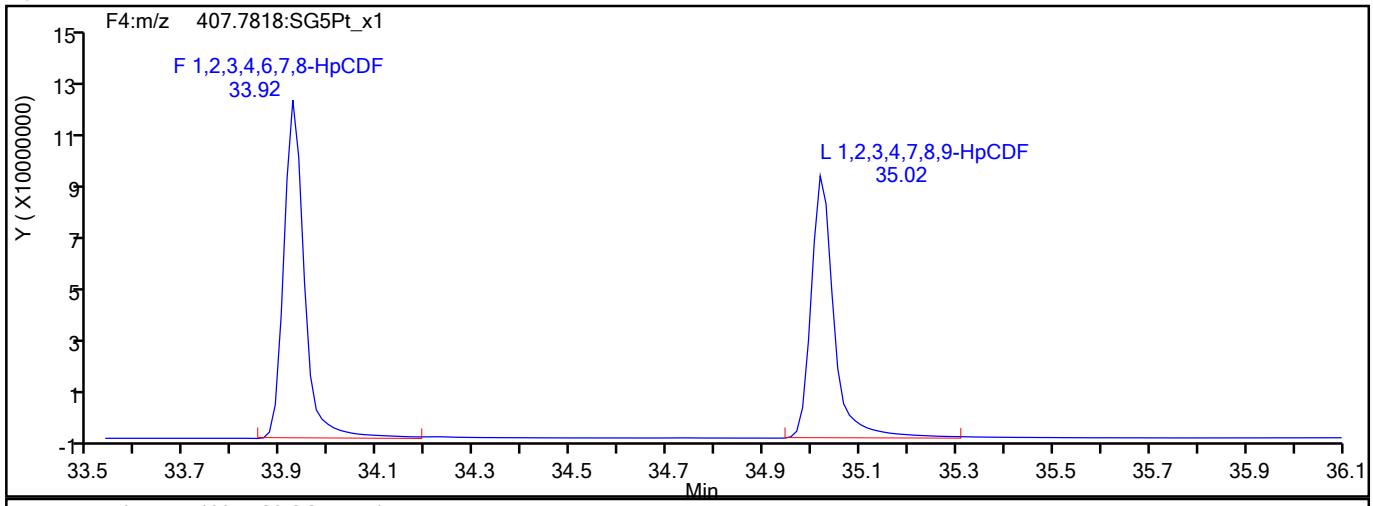

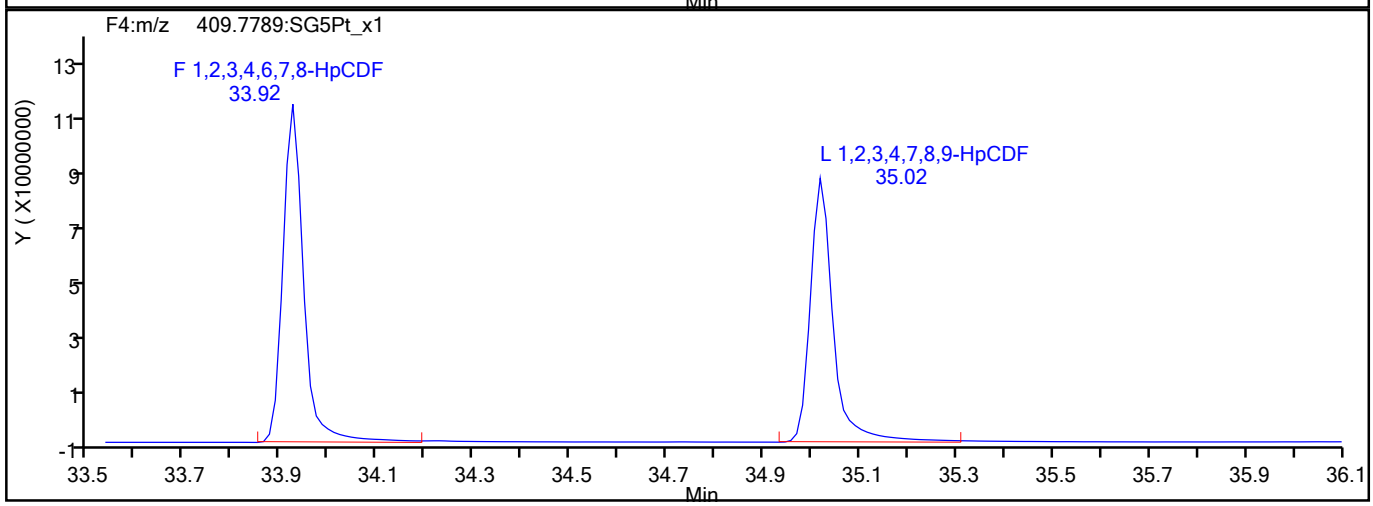

HpCDF Interference Mass

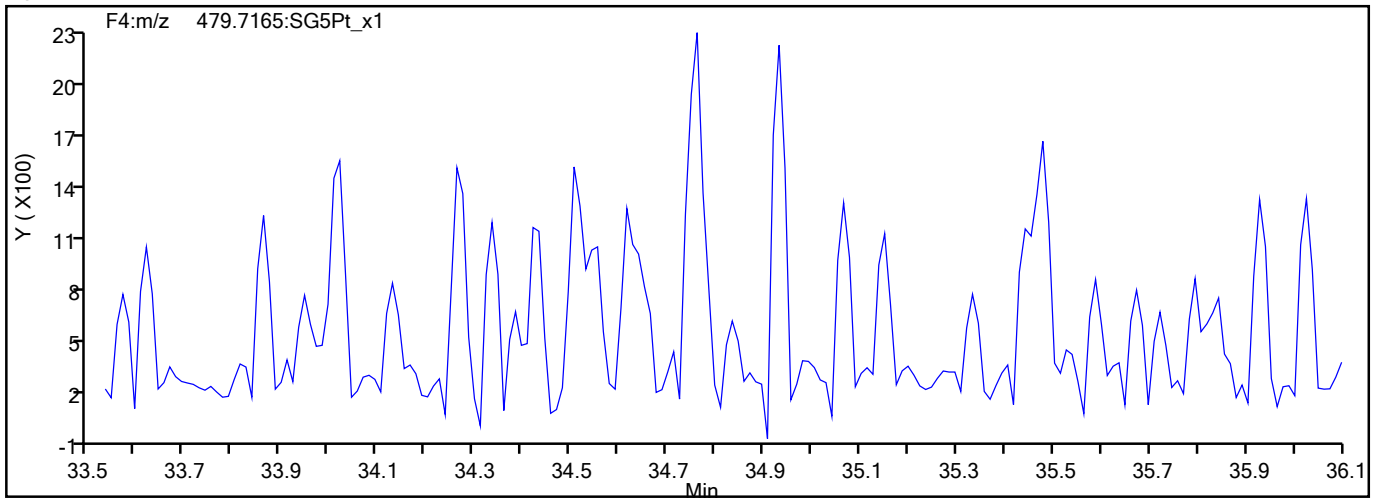

781336

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

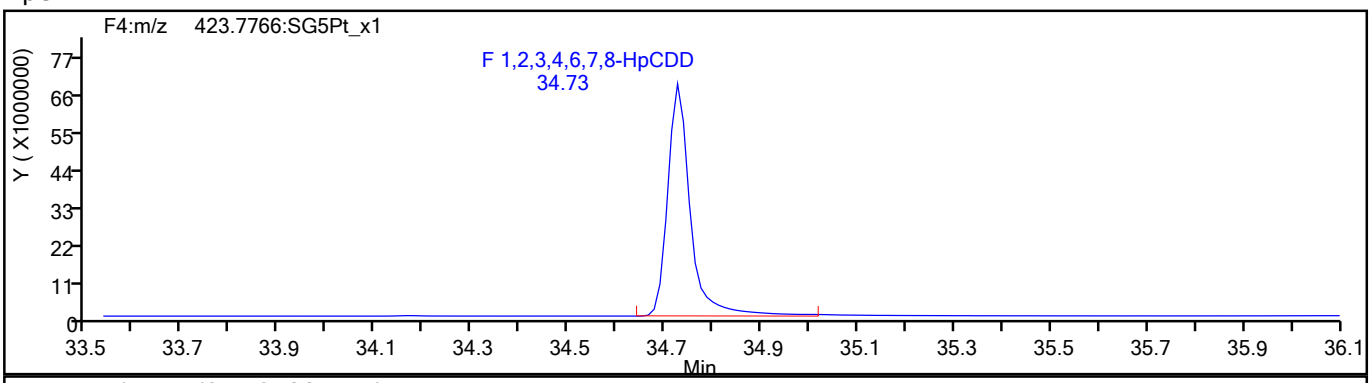

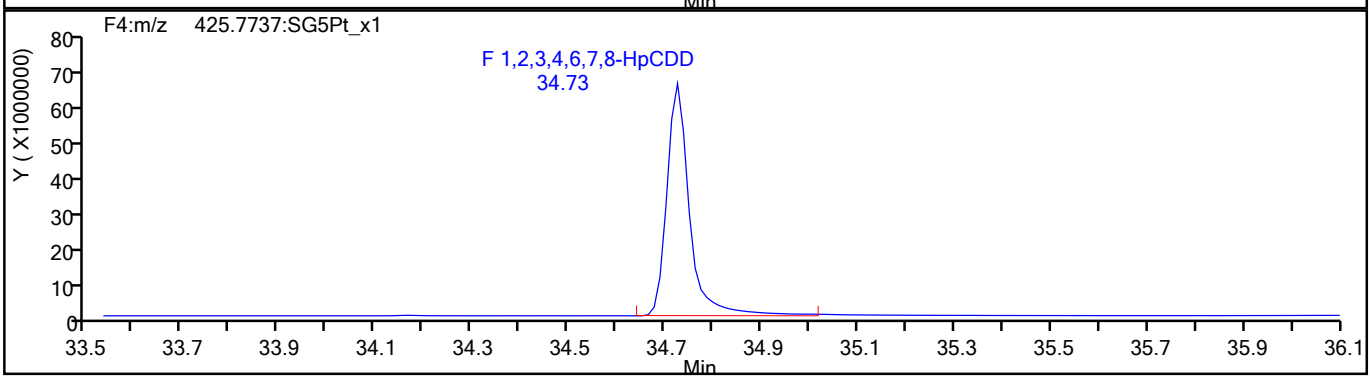

HpCDD Standards

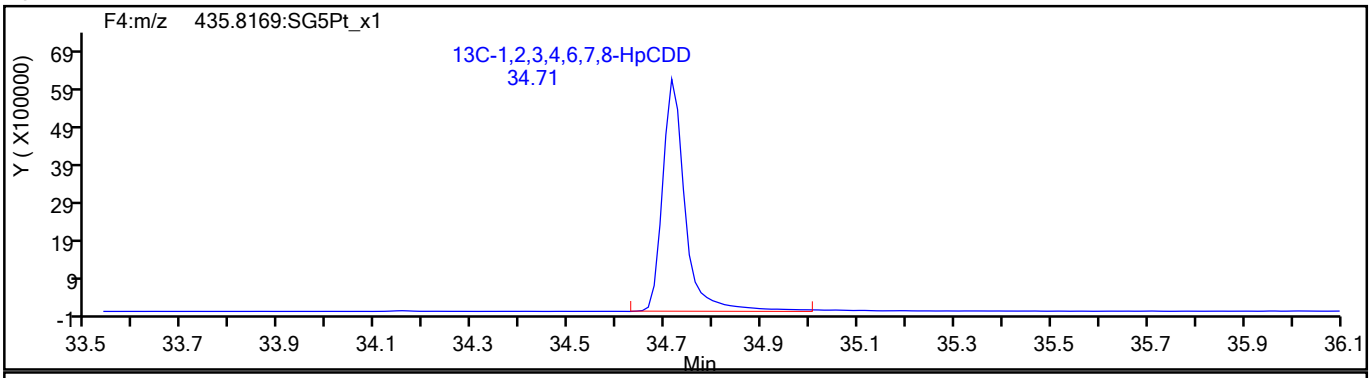

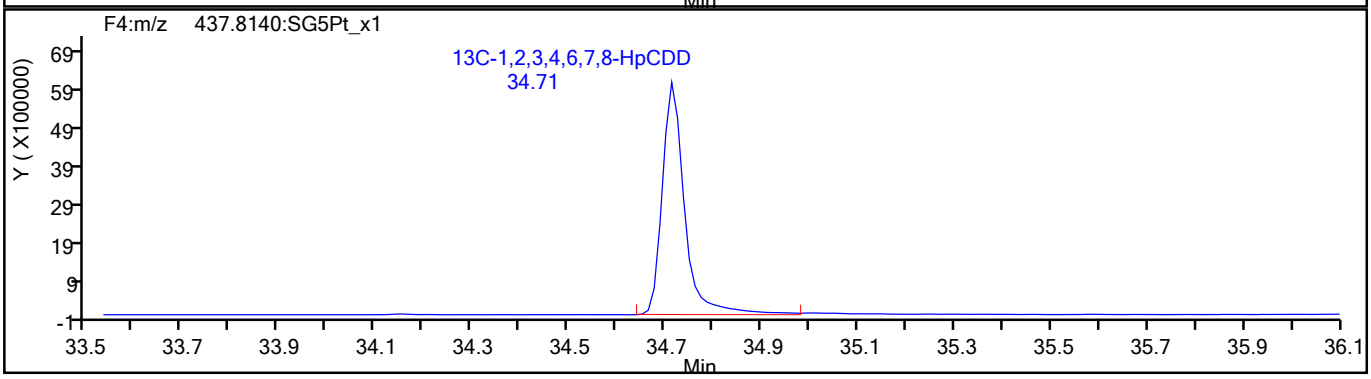

781337

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

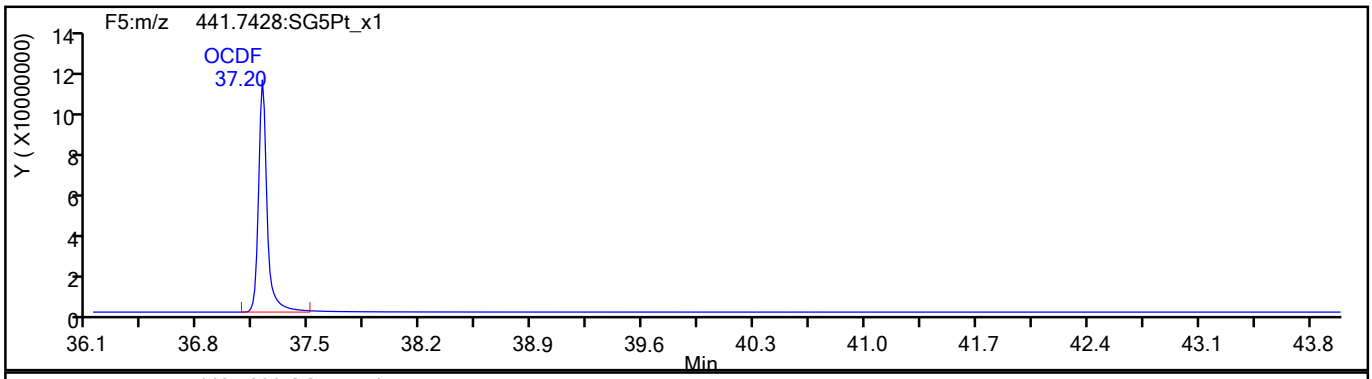

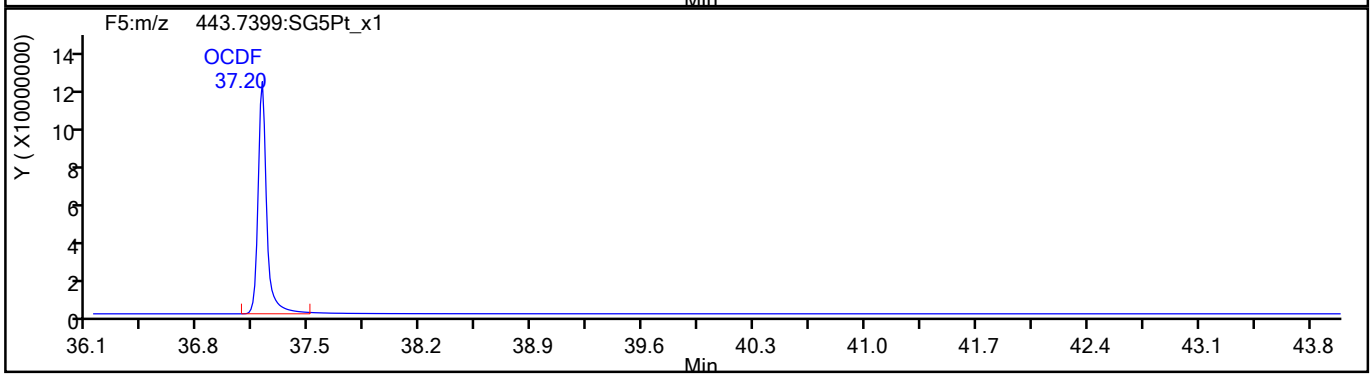

OCDF Standards

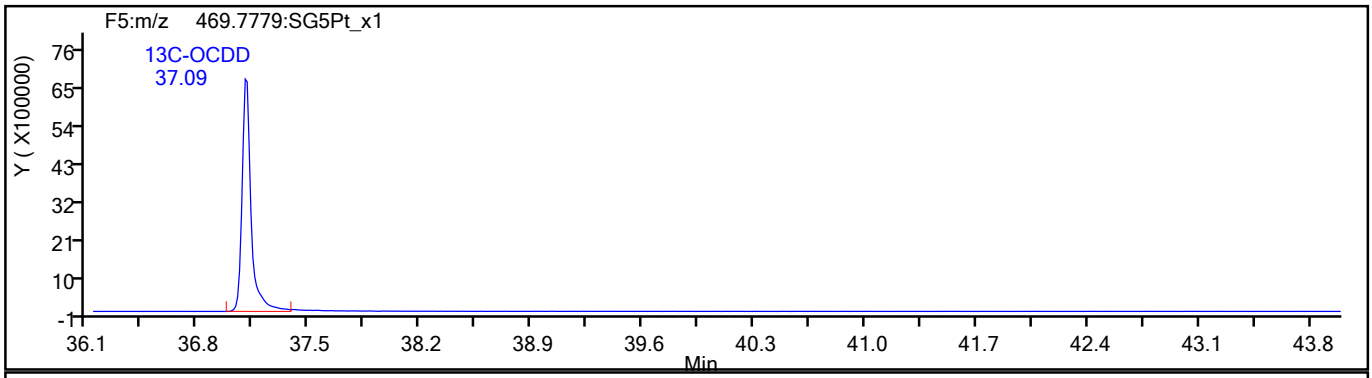

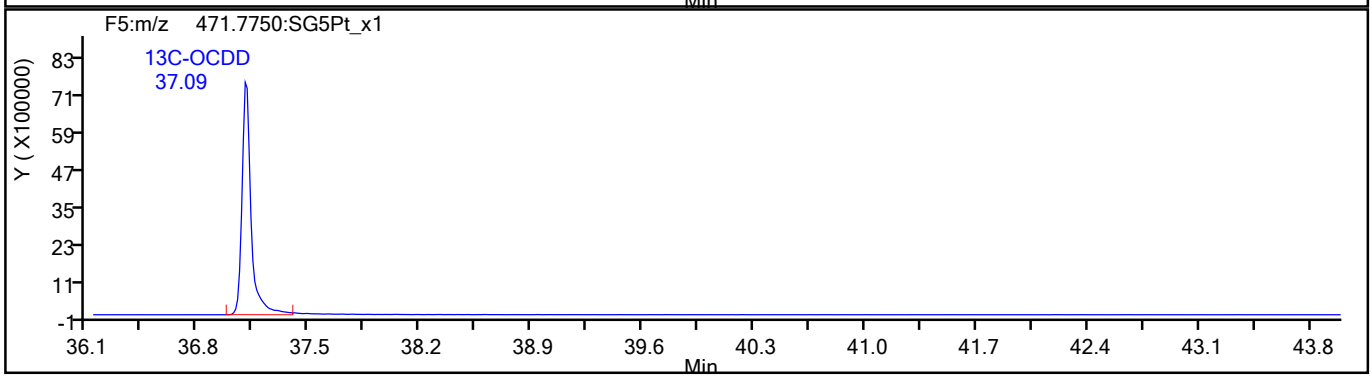

781338

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

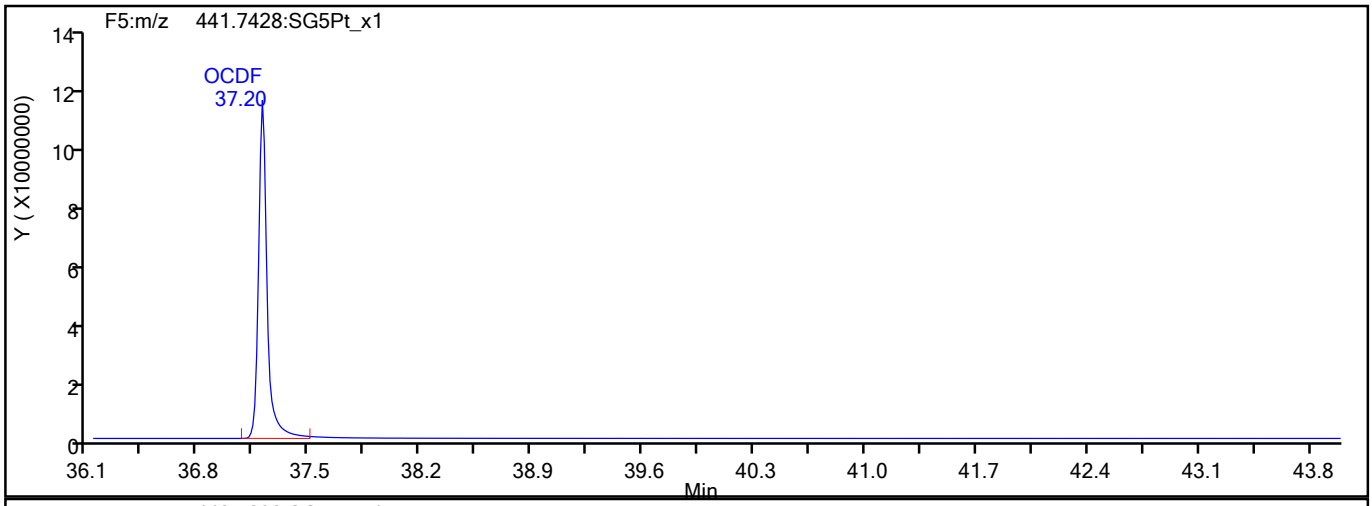

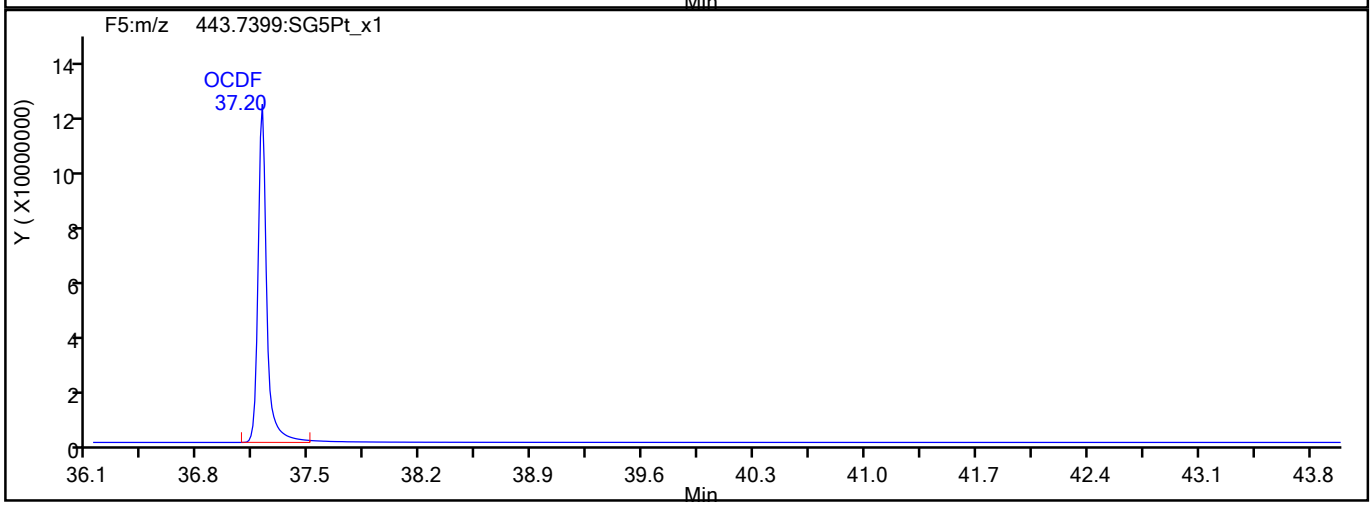

OCDF Interference Mass

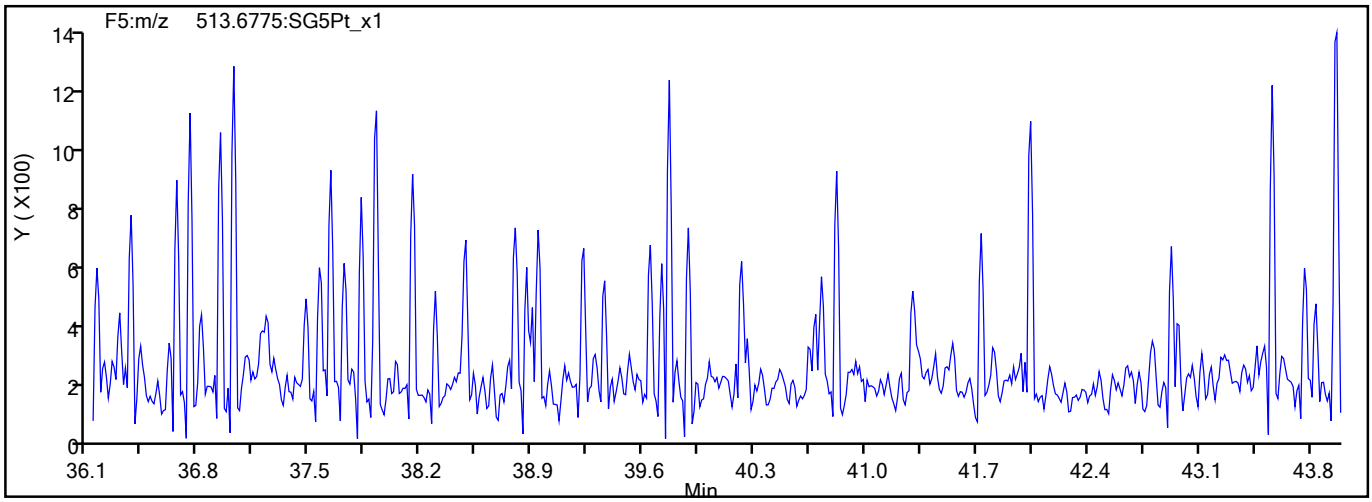

781339

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

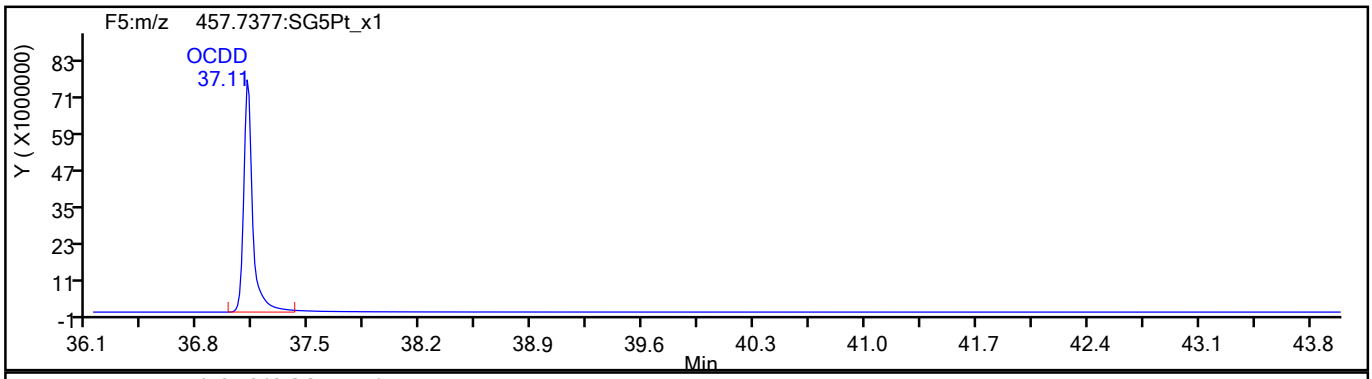

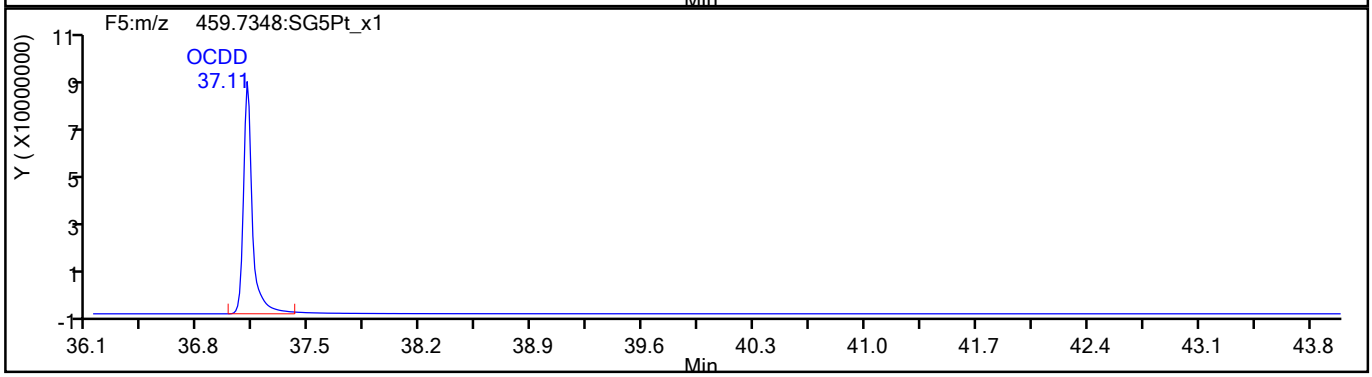

OCDD Standards

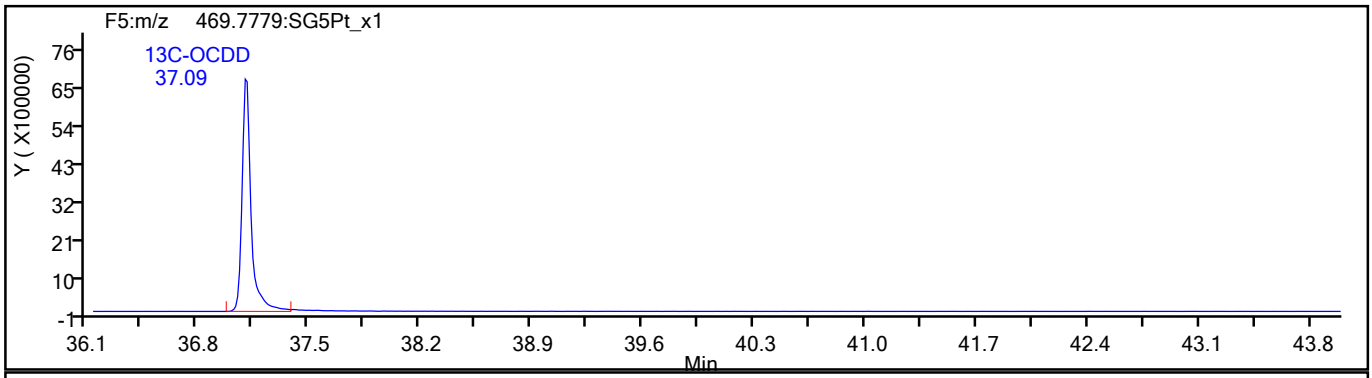

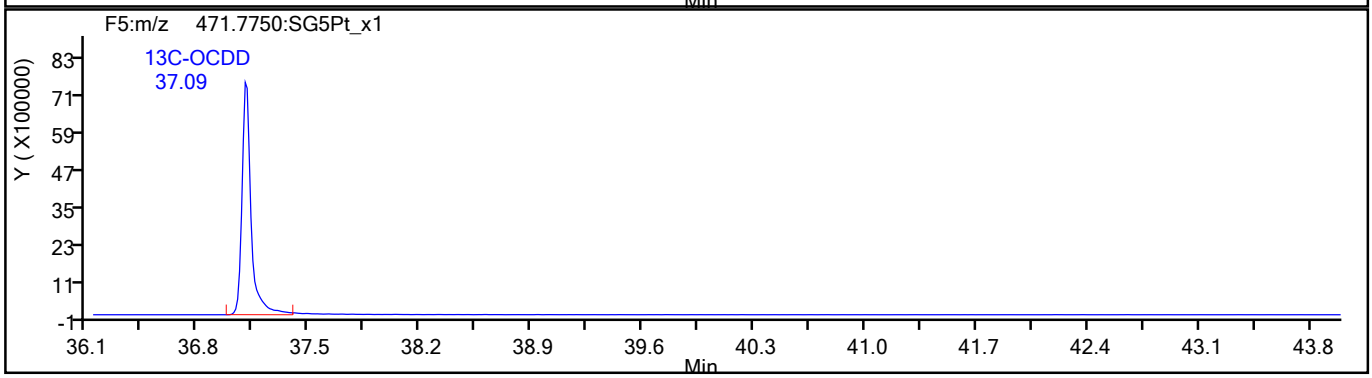

781340

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

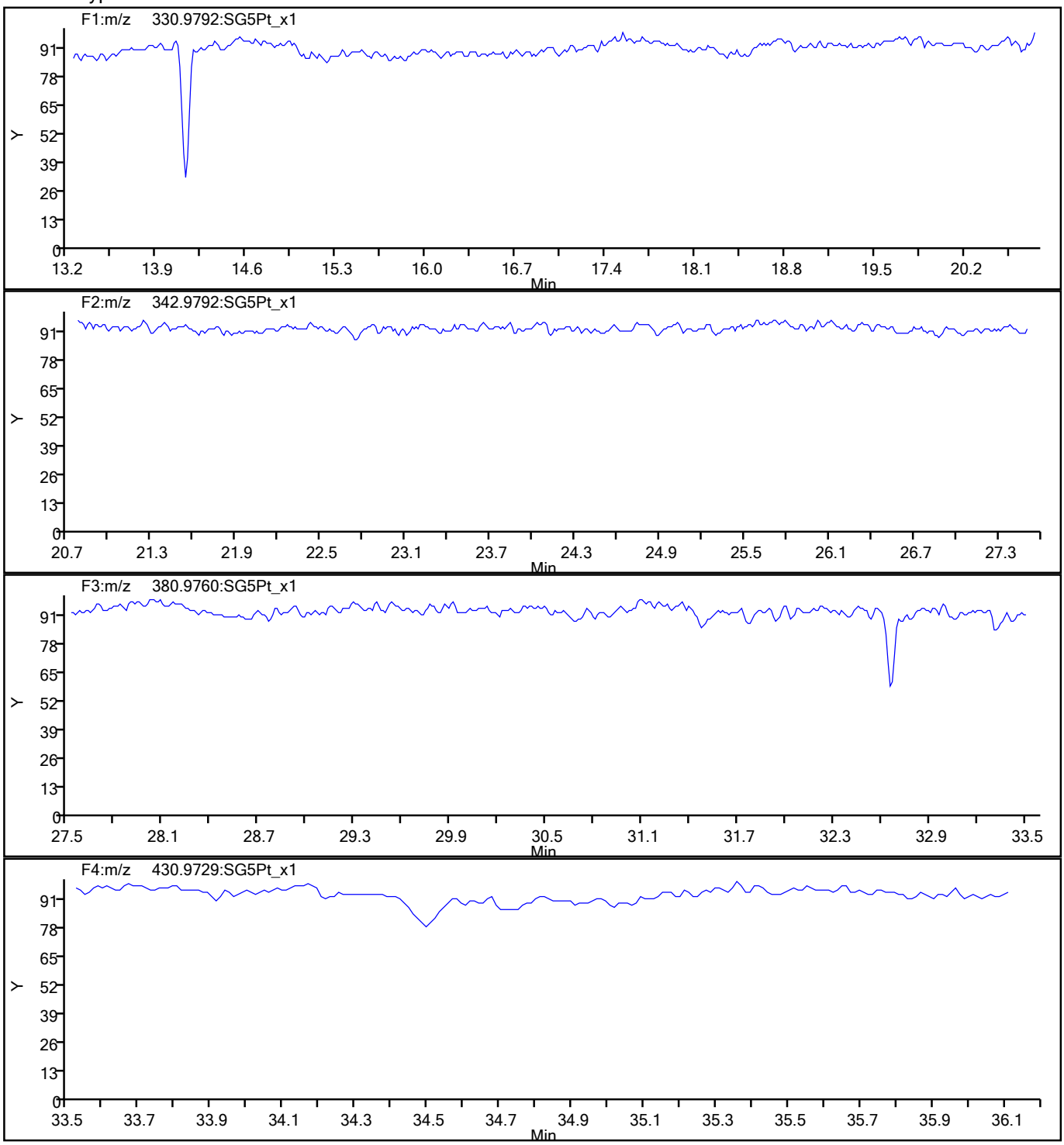

781341

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

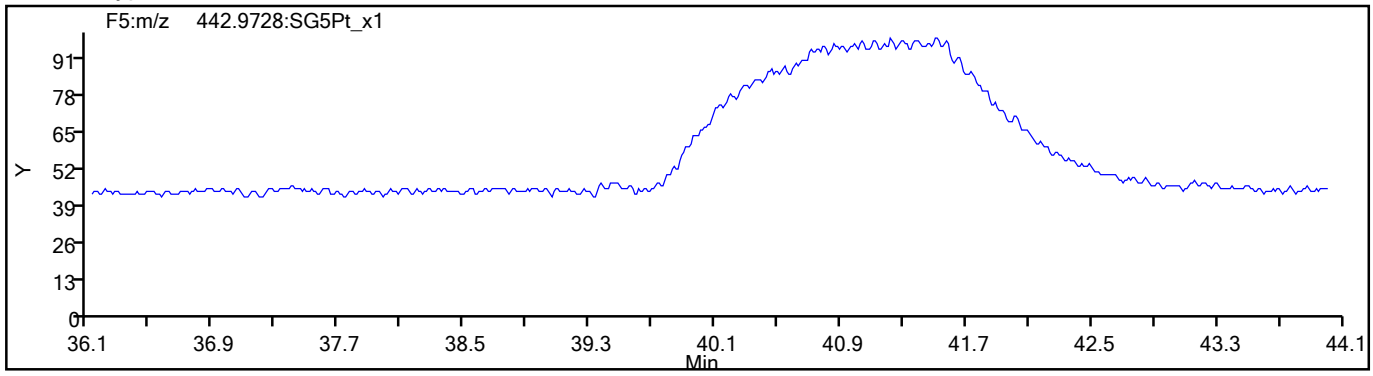

781342

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.094

Error Coefficients

Standard Error:	226000000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.779775	100.0	41876556.0	1.11191	Y
2	IC 320-510264/4	10.0	9.539499	100.0	38689128.0	0.95395	Y
3	IC 320-510264/5	50.0	55.880768	100.0	40333717.0	1.117615	Y
4	IC 320-510264/6	200.0	233.50404	100.0	40442950.0	1.16752	Y
5	IC 320-510264/7	1000.0	1120.518221	100.0	39395832.0	1.120518	Y

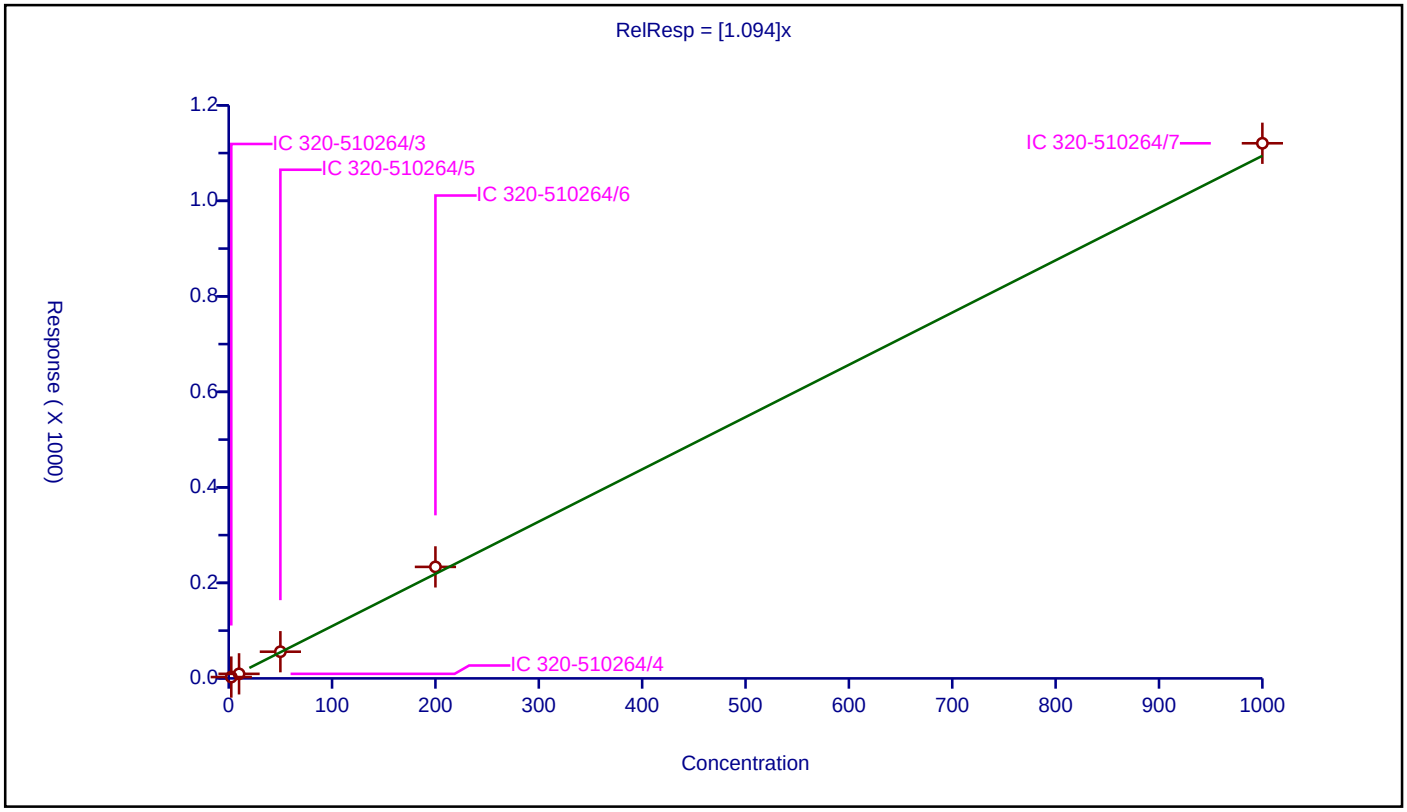

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.441

Error Coefficients

Standard Error:	349000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.618521	100.0	51308225.0	1.447408	Y
2	IC 320-510264/4	10.0	12.412663	100.0	46691158.0	1.241266	Y
3	IC 320-510264/5	50.0	74.932304	100.0	47697671.0	1.498646	Y
4	IC 320-510264/6	200.0	309.702692	100.0	47752972.0	1.548513	Y
5	IC 320-510264/7	1000.0	1470.622057	100.0	46328151.0	1.470622	Y

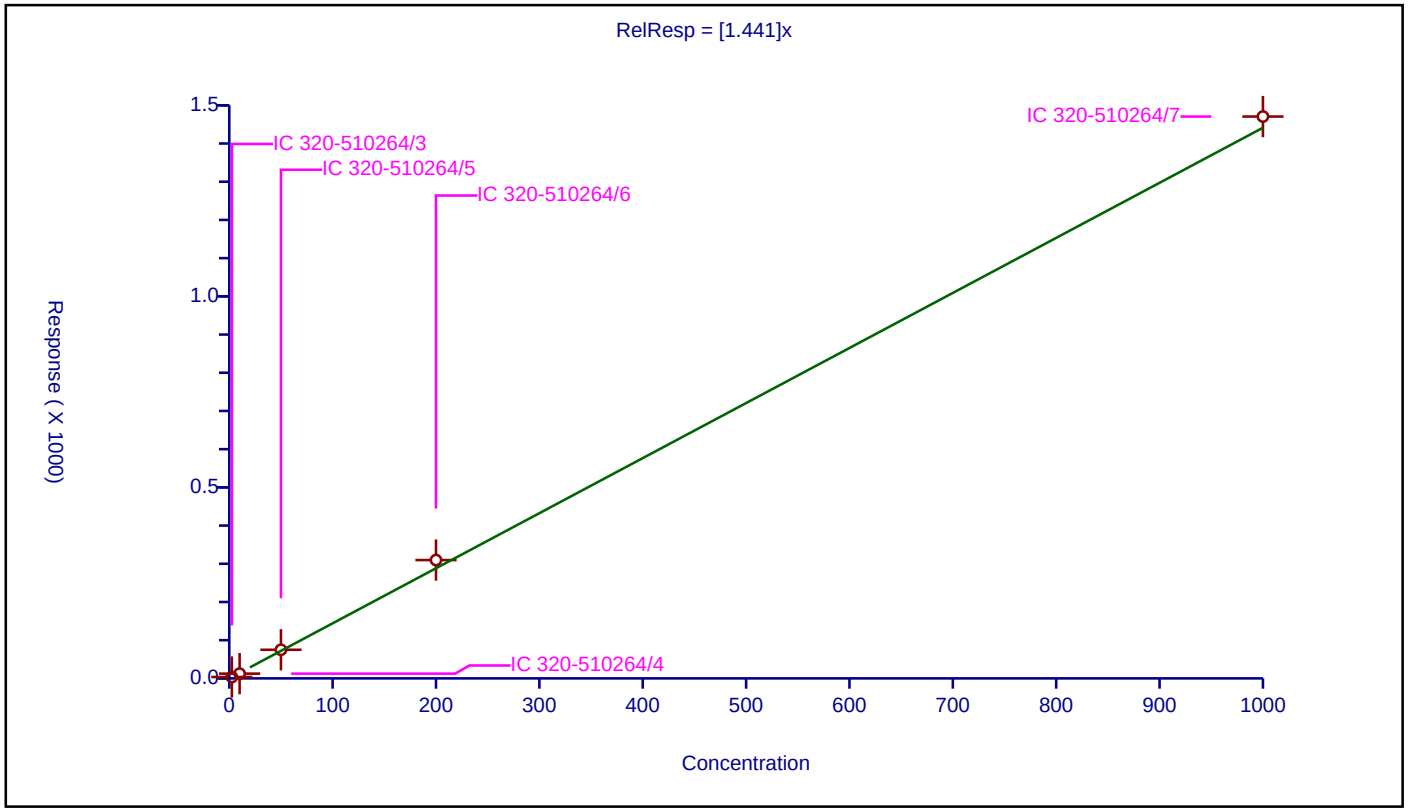

781344

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	302000000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.284087	100.0	44628352.0	1.313635	Y
2	IC 320-510264/4	10.0	11.269366	100.0	42362179.0	1.126937	Y
3	IC 320-510264/5	50.0	68.111875	100.0	43238622.0	1.362237	Y
4	IC 320-510264/6	200.0	290.409045	100.0	42687625.0	1.452045	Y
5	IC 320-510264/7	1000.0	1332.064187	100.0	44333848.0	1.332064	Y

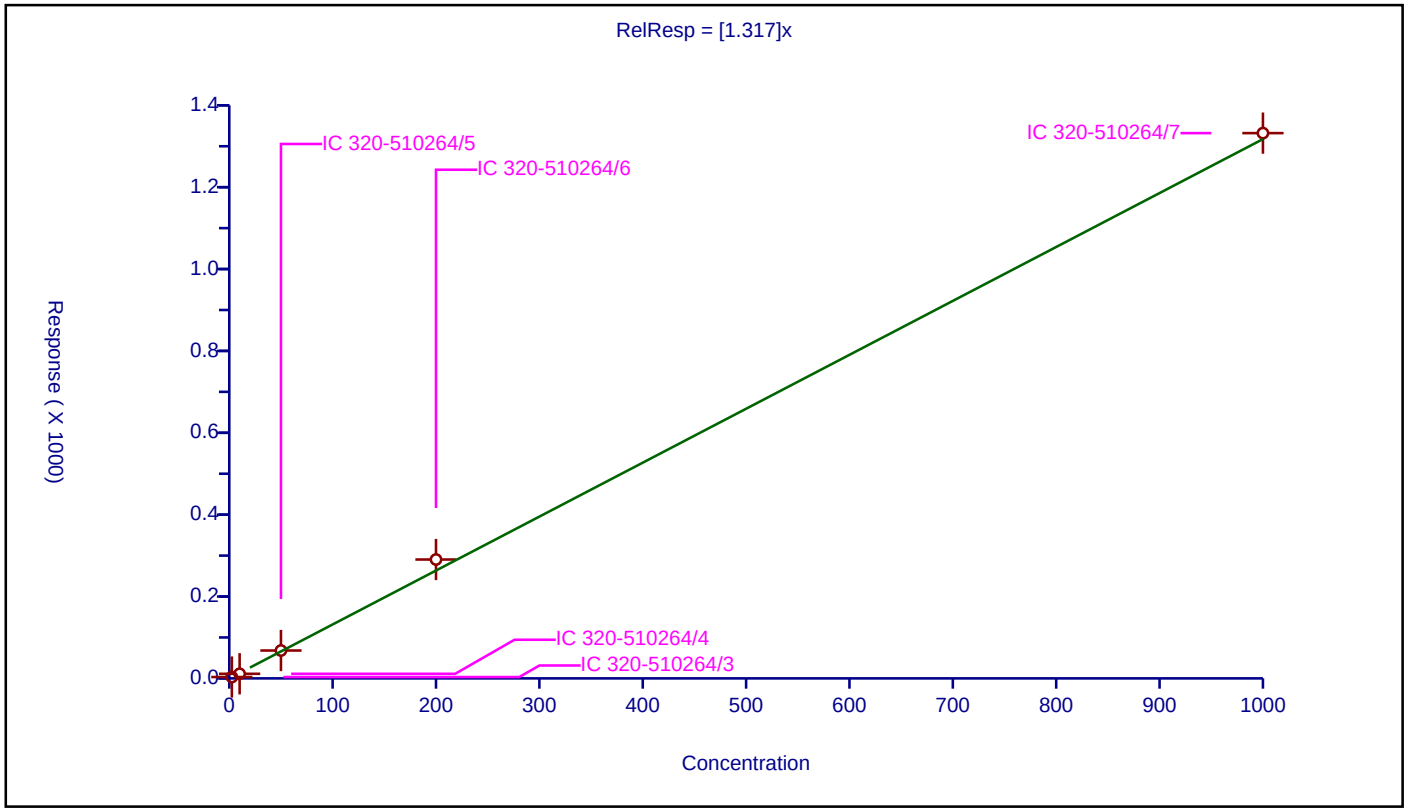

781345

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	248000000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.744793	100.0	47363504.0	1.097917	Y
2	IC 320-510264/4	10.0	8.90634	100.0	44877133.0	0.890634	Y
3	IC 320-510264/5	50.0	56.519553	100.0	44039927.0	1.130391	Y
4	IC 320-510264/6	200.0	233.423018	100.0	44144841.0	1.167115	Y
5	IC 320-510264/7	1000.0	1034.115245	100.0	46886171.0	1.034115	Y

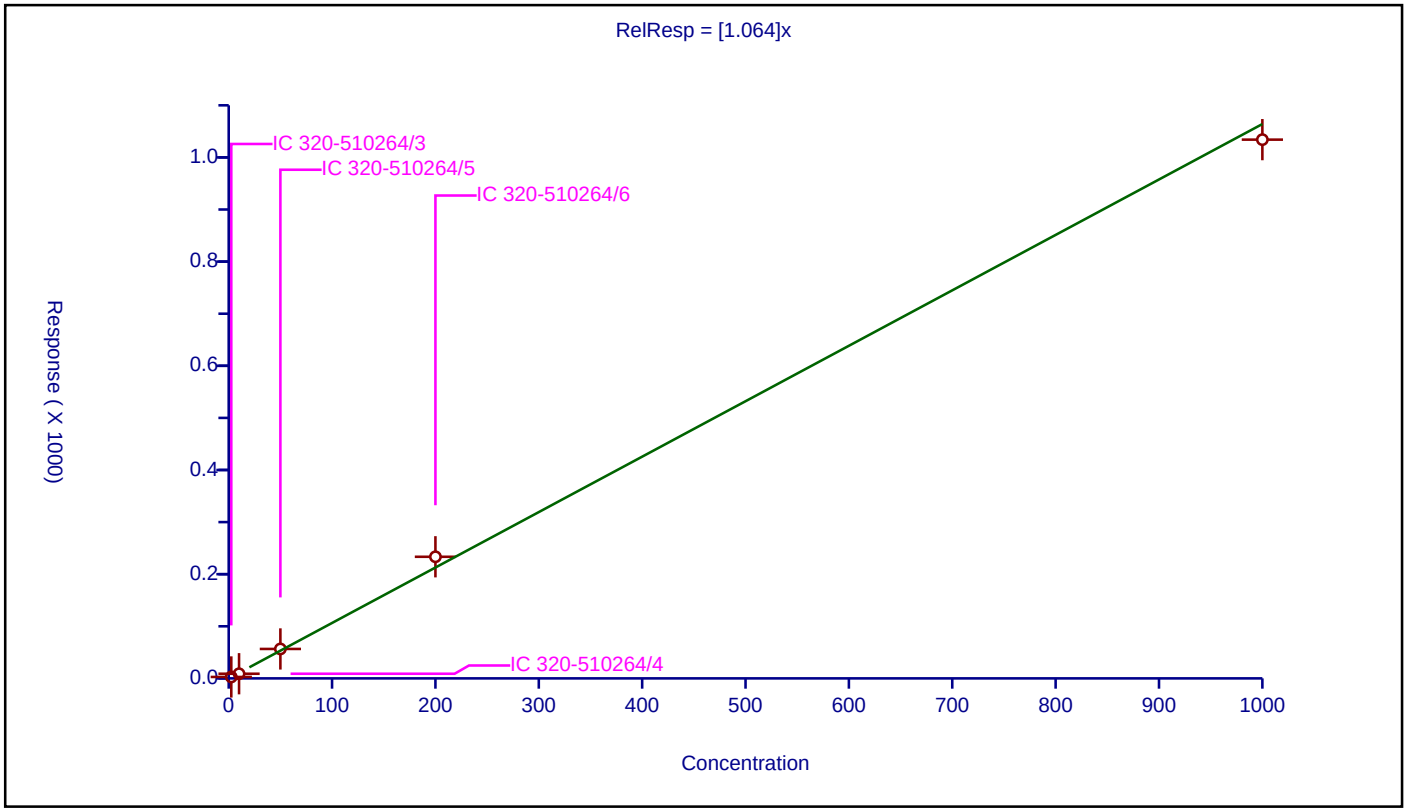

781346

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.085

Error Coefficients

Standard Error:	377000000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.805608	100.0	69484482.0	1.122243	Y
2	IC 320-510264/4	10.0	9.192224	100.0	65726932.0	0.919222	Y
3	IC 320-510264/5	50.0	55.122828	100.0	68075509.0	1.102457	Y
4	IC 320-510264/6	200.0	238.727102	100.0	64951889.0	1.193636	Y
5	IC 320-510264/7	1000.0	1088.07626	100.0	67741189.0	1.088076	Y

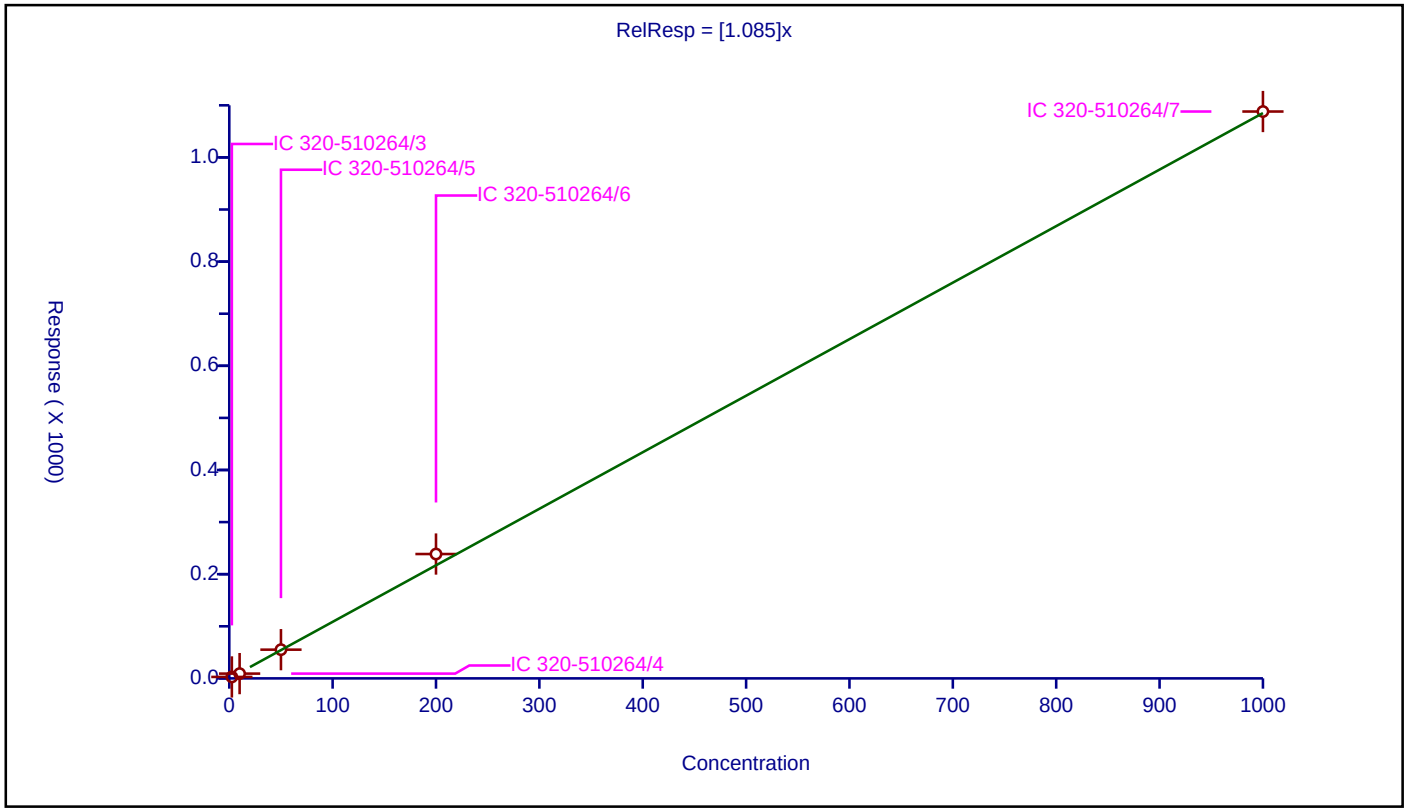

781347

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1

Error Coefficients

Standard Error:	278000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.57359	100.0	56759108.0	1.029436	Y
2	IC 320-510264/4	10.0	8.528531	100.0	52974056.0	0.852853	Y
3	IC 320-510264/5	50.0	50.563423	100.0	55284532.0	1.011268	Y
4	IC 320-510264/6	200.0	218.597288	100.0	54392394.0	1.092986	Y
5	IC 320-510264/7	1000.0	1013.848486	100.0	53564396.0	1.013848	Y

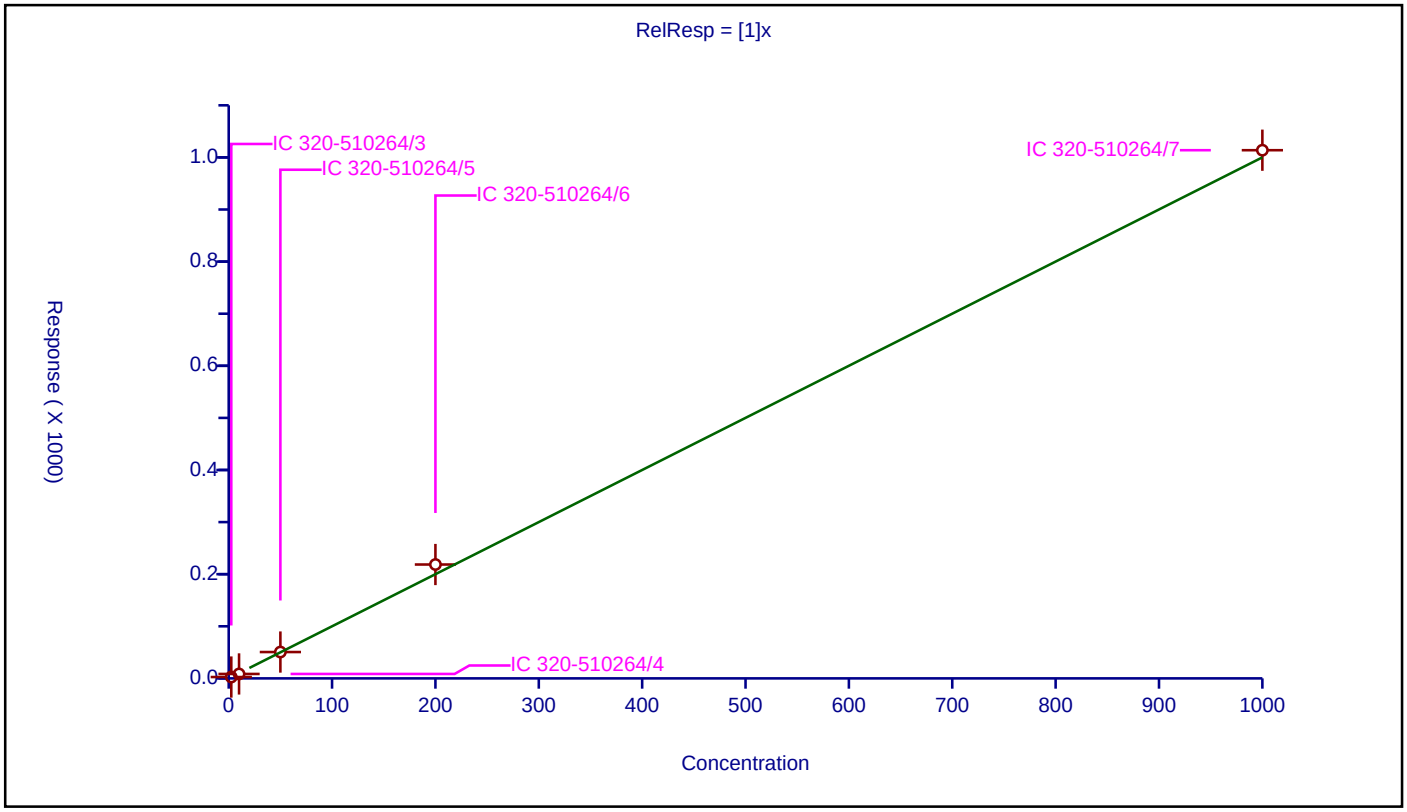

781348

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.126

Error Coefficients

Standard Error:	402000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.871987	100.0	73262388.0	1.148795	Y
2	IC 320-510264/4	10.0	9.63718	100.0	68089005.0	0.963718	Y
3	IC 320-510264/5	50.0	57.730945	100.0	70677463.0	1.154619	Y
4	IC 320-510264/6	200.0	239.311904	100.0	70459920.0	1.19656	Y
5	IC 320-510264/7	1000.0	1166.370477	100.0	67363664.0	1.16637	Y

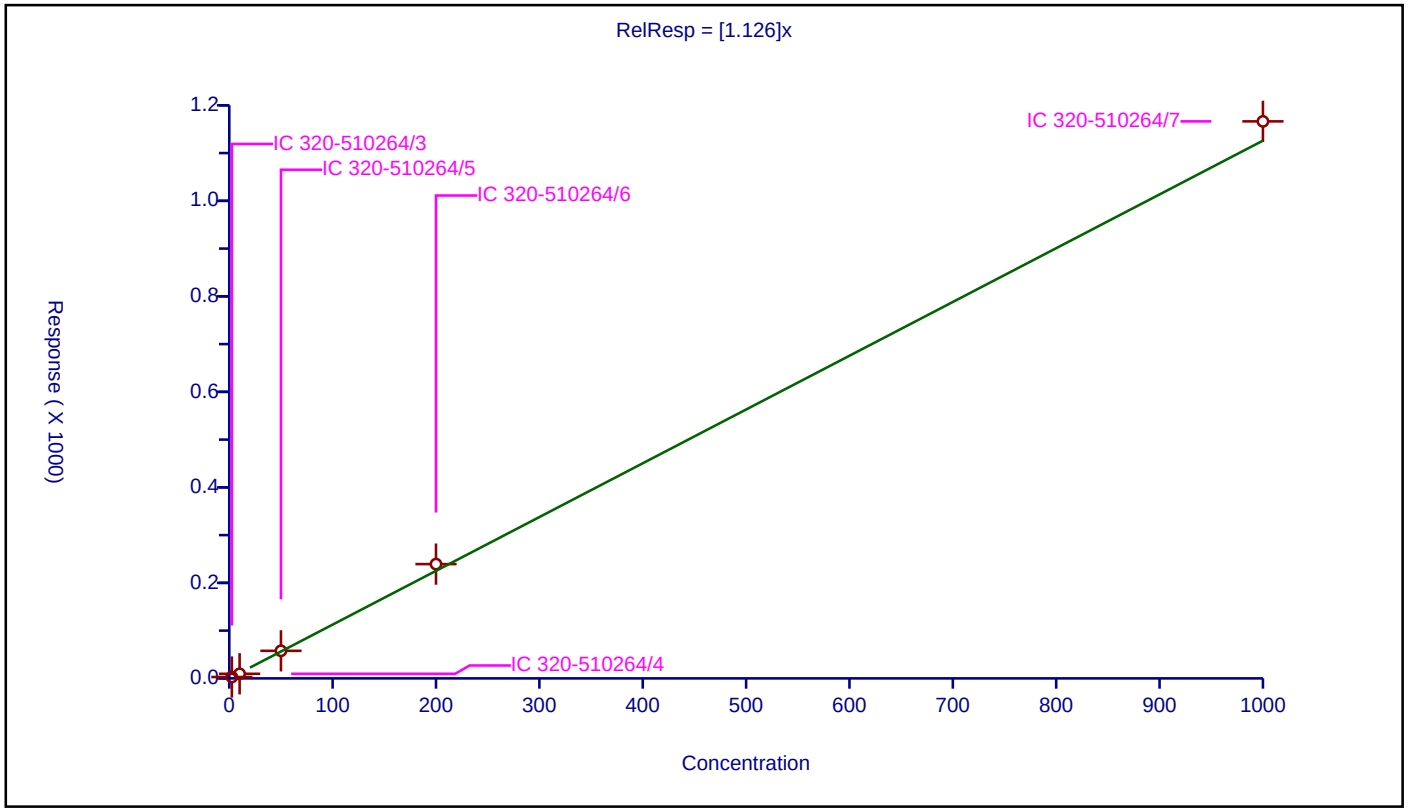

781349

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.248

Error Coefficients

Standard Error:	289000000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.174189	100.0	47363504.0	1.269675	Y
2	IC 320-510264/4	10.0	10.27817	100.0	44877133.0	1.027817	Y
3	IC 320-510264/5	50.0	67.654413	100.0	44039927.0	1.353088	Y
4	IC 320-510264/6	200.0	277.257762	100.0	44144841.0	1.386289	Y
5	IC 320-510264/7	1000.0	1202.675657	100.0	46886171.0	1.202676	Y

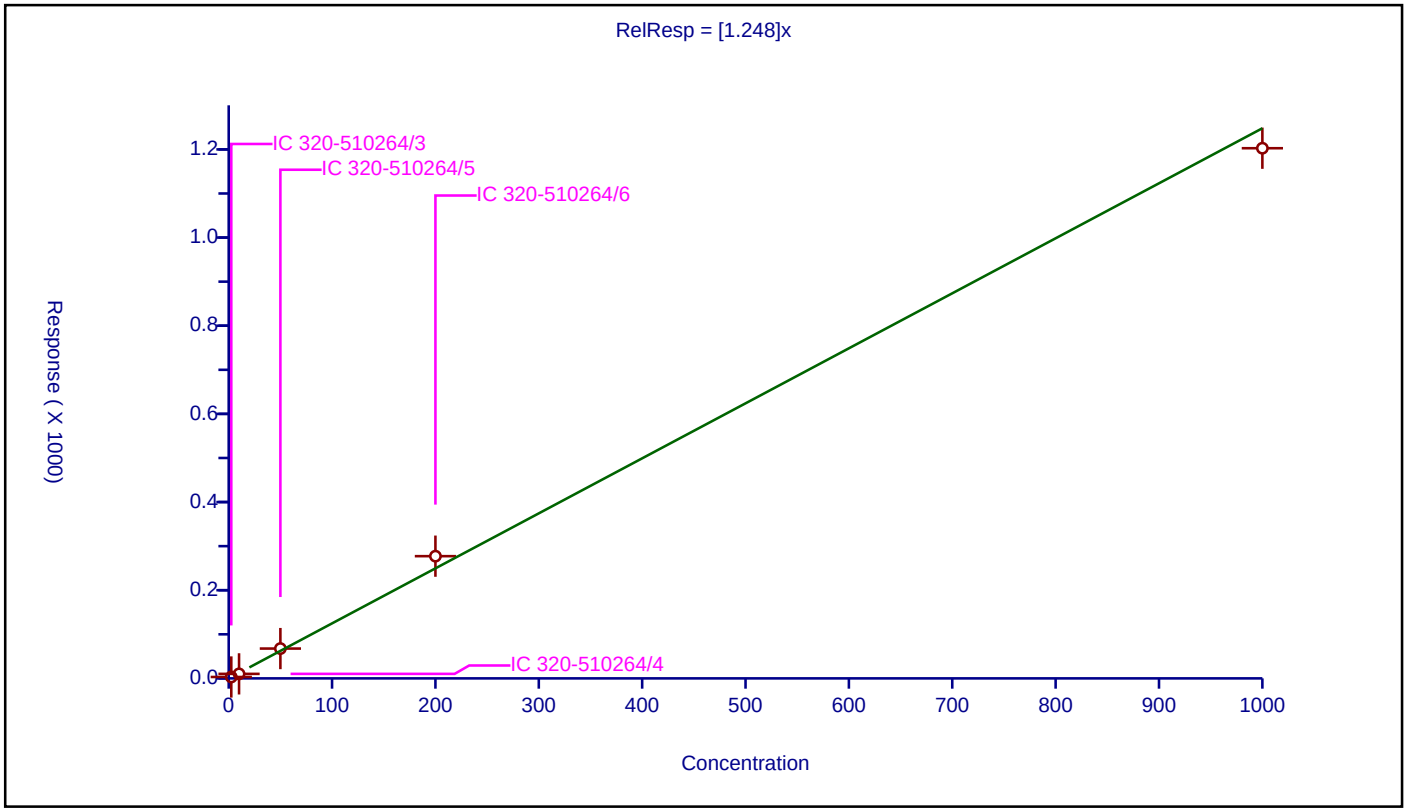

781350

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.166

Error Coefficients

Standard Error:	362000000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.933201	100.0	62528954.0	1.17328	Y
2	IC 320-510264/4	10.0	10.136374	100.0	58828058.0	1.013637	Y
3	IC 320-510264/5	50.0	59.48769	100.0	60389284.0	1.189754	Y
4	IC 320-510264/6	200.0	249.571201	100.0	59636084.0	1.247856	Y
5	IC 320-510264/7	1000.0	1207.229164	100.0	58669892.0	1.207229	Y

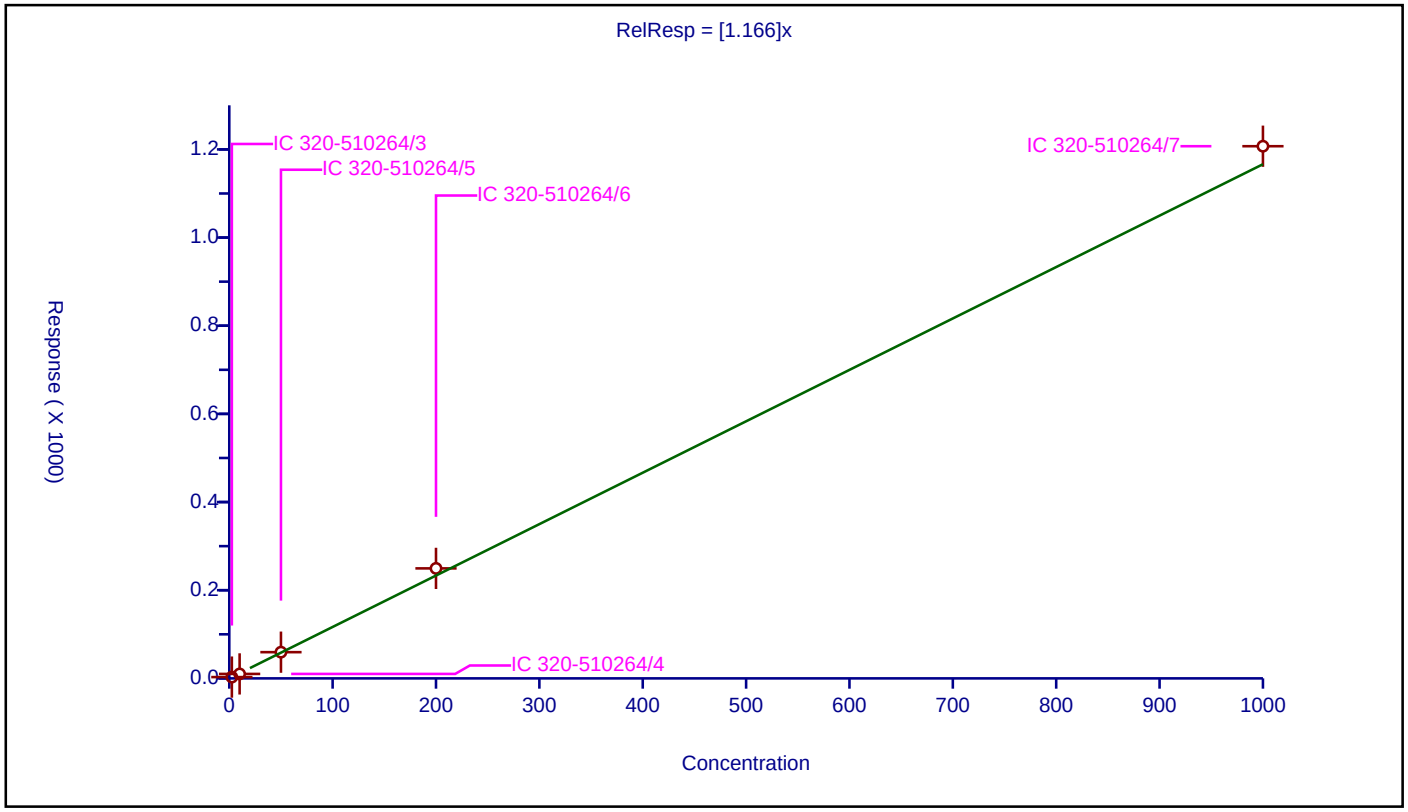

781351

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.048

Error Coefficients

Standard Error:	256000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.644408	100.0	49643581.0	1.057763	Y
2	IC 320-510264/4	10.0	9.031283	100.0	46721712.0	0.903128	Y
3	IC 320-510264/5	50.0	53.401309	100.0	47124414.0	1.068026	Y
4	IC 320-510264/6	200.0	226.195317	100.0	46524396.0	1.130977	Y
5	IC 320-510264/7	1000.0	1082.258061	100.0	46251010.0	1.082258	Y

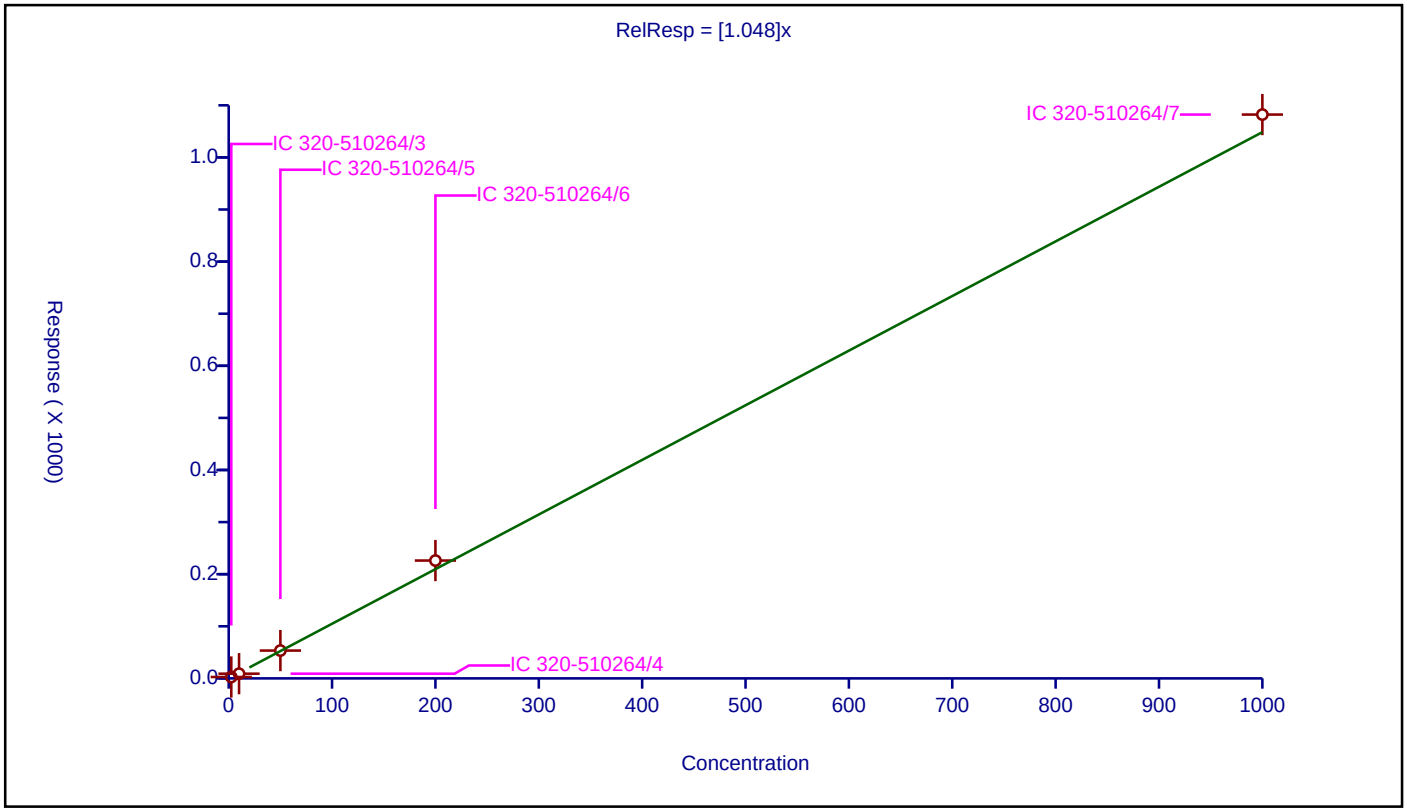

781352

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	408000000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.684664	100.0	78674290.0	1.073865	Y
2	IC 320-510264/4	10.0	9.128293	100.0	72525655.0	0.912829	Y
3	IC 320-510264/5	50.0	54.457439	100.0	76368219.0	1.089149	Y
4	IC 320-510264/6	200.0	227.4085	100.0	75205597.0	1.137042	Y
5	IC 320-510264/7	1000.0	1092.787556	100.0	72829681.0	1.092788	Y

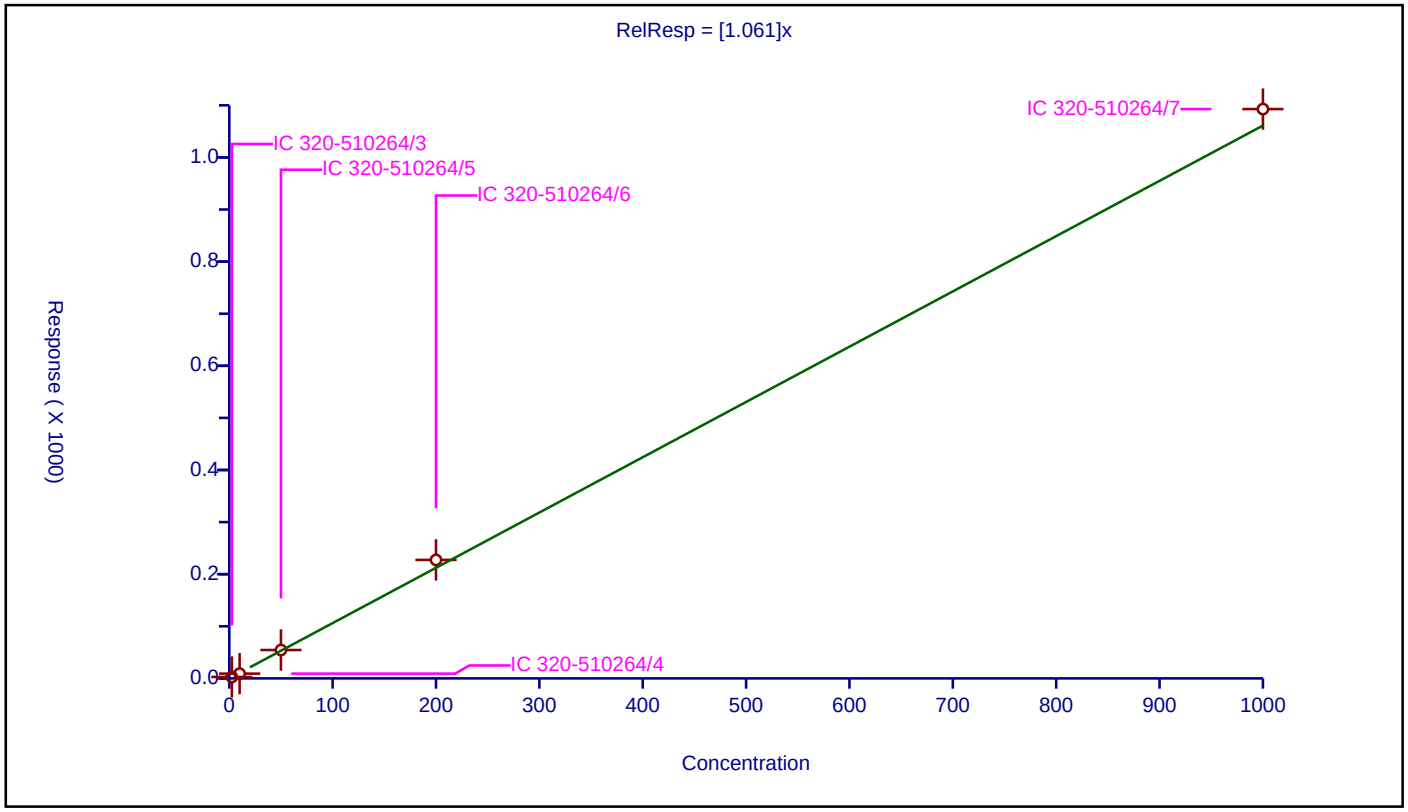

781353

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	391000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.05566	100.0	68885161.0	1.222264	Y
2	IC 320-510264/4	10.0	9.86292	100.0	64406928.0	0.986292	Y
3	IC 320-510264/5	50.0	59.290251	100.0	67028498.0	1.185805	Y
4	IC 320-510264/6	200.0	248.302486	100.0	66145684.0	1.241512	Y
5	IC 320-510264/7	1000.0	1201.822353	100.0	63471184.0	1.201822	Y

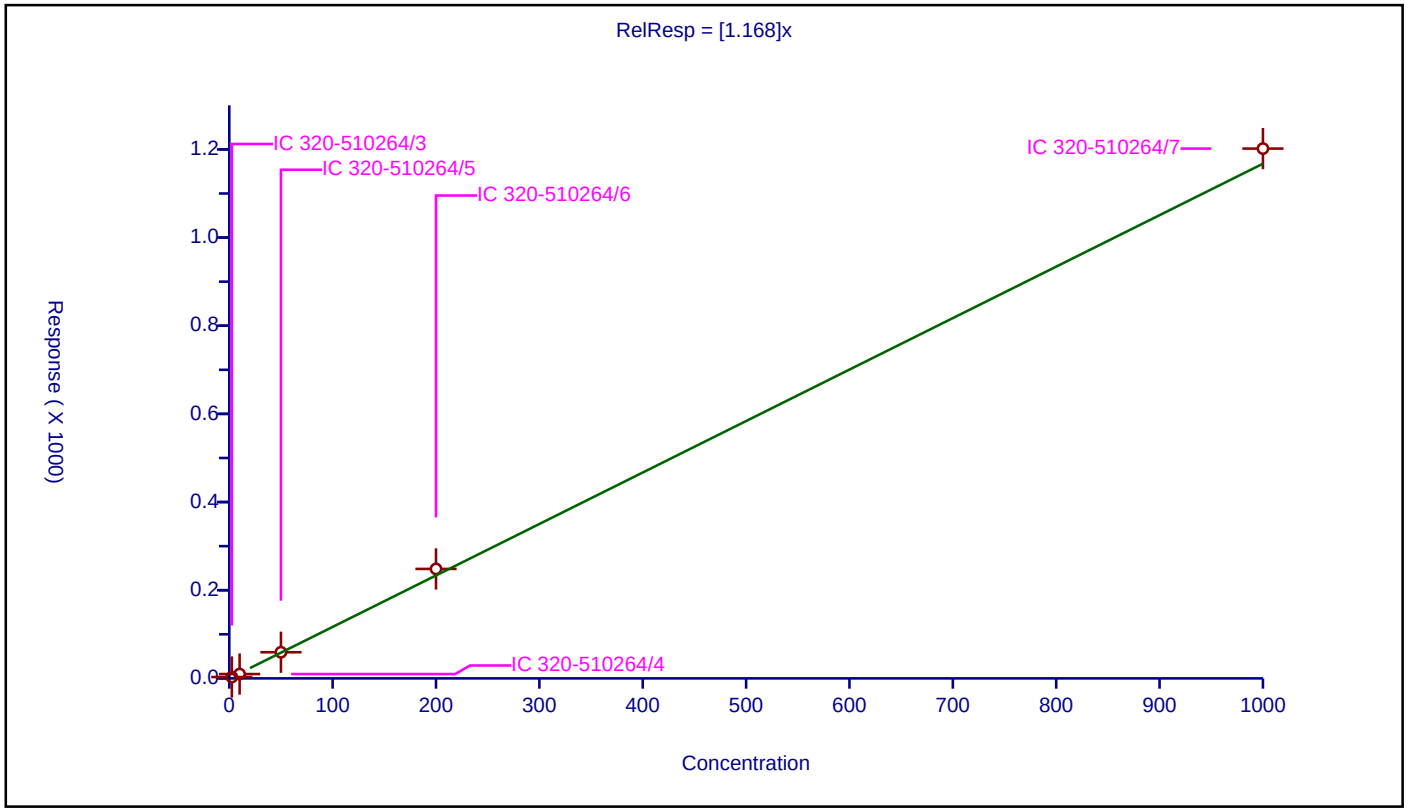

781354

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.018

Error Coefficients

Standard Error:	401000000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.601965	100.0	80591659.0	1.040786	Y
2	IC 320-510264/4	10.0	8.609629	100.0	74944110.0	0.860963	Y
3	IC 320-510264/5	50.0	52.328396	100.0	78214582.0	1.046568	Y
4	IC 320-510264/6	200.0	221.640486	100.0	75259591.0	1.108202	Y
5	IC 320-510264/7	1000.0	1035.570916	100.0	75649463.0	1.035571	Y

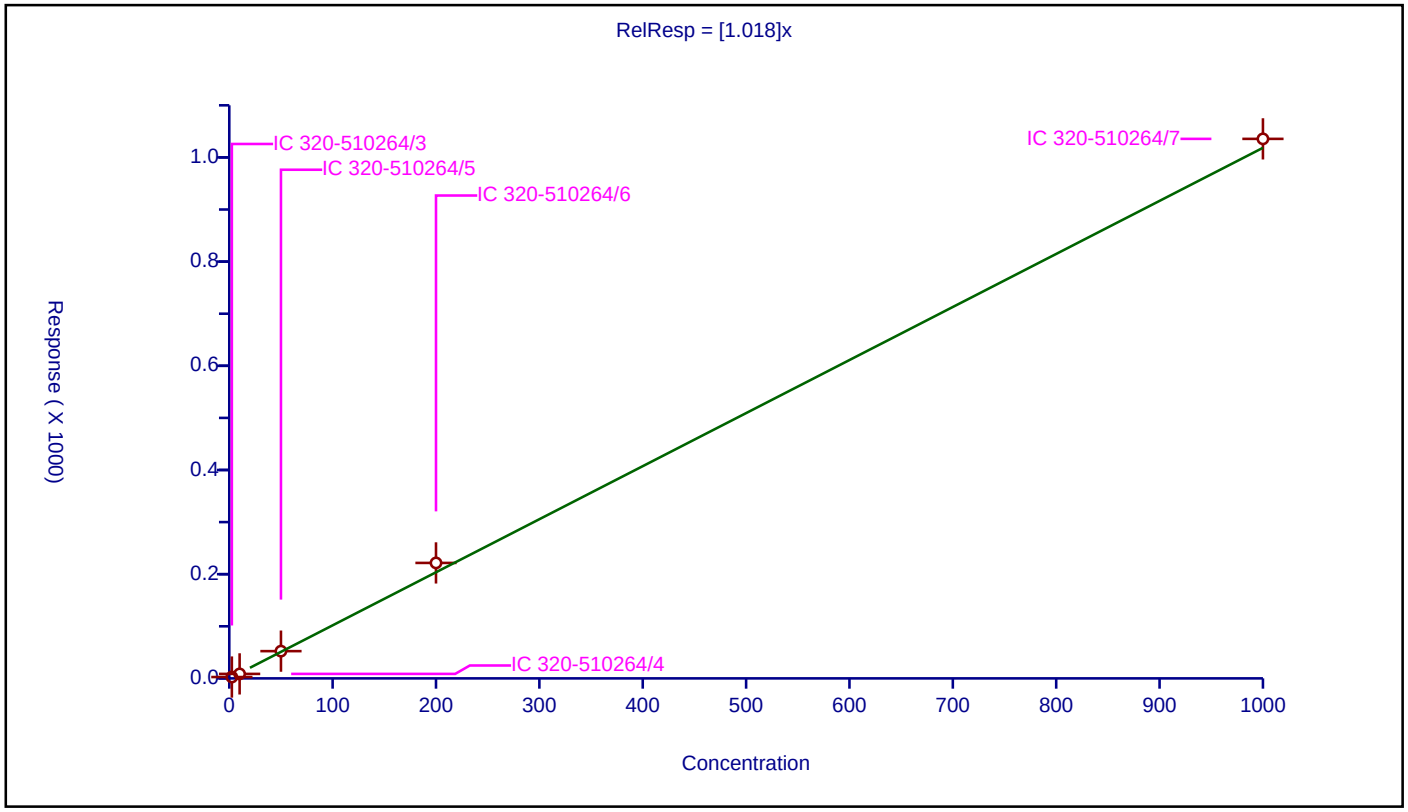

781355

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.254

Error Coefficients

Standard Error:	71900000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.62875	100.0	59957723.0	1.257499	Y
2	IC 320-510264/4	2.0	2.19411	100.0	53975587.0	1.097055	Y
3	IC 320-510264/5	10.0	12.651014	100.0	56155483.0	1.265101	Y
4	IC 320-510264/6	40.0	53.737487	100.0	55471422.0	1.343437	Y
5	IC 320-510264/7	200.0	261.501191	100.0	53698206.0	1.307506	Y

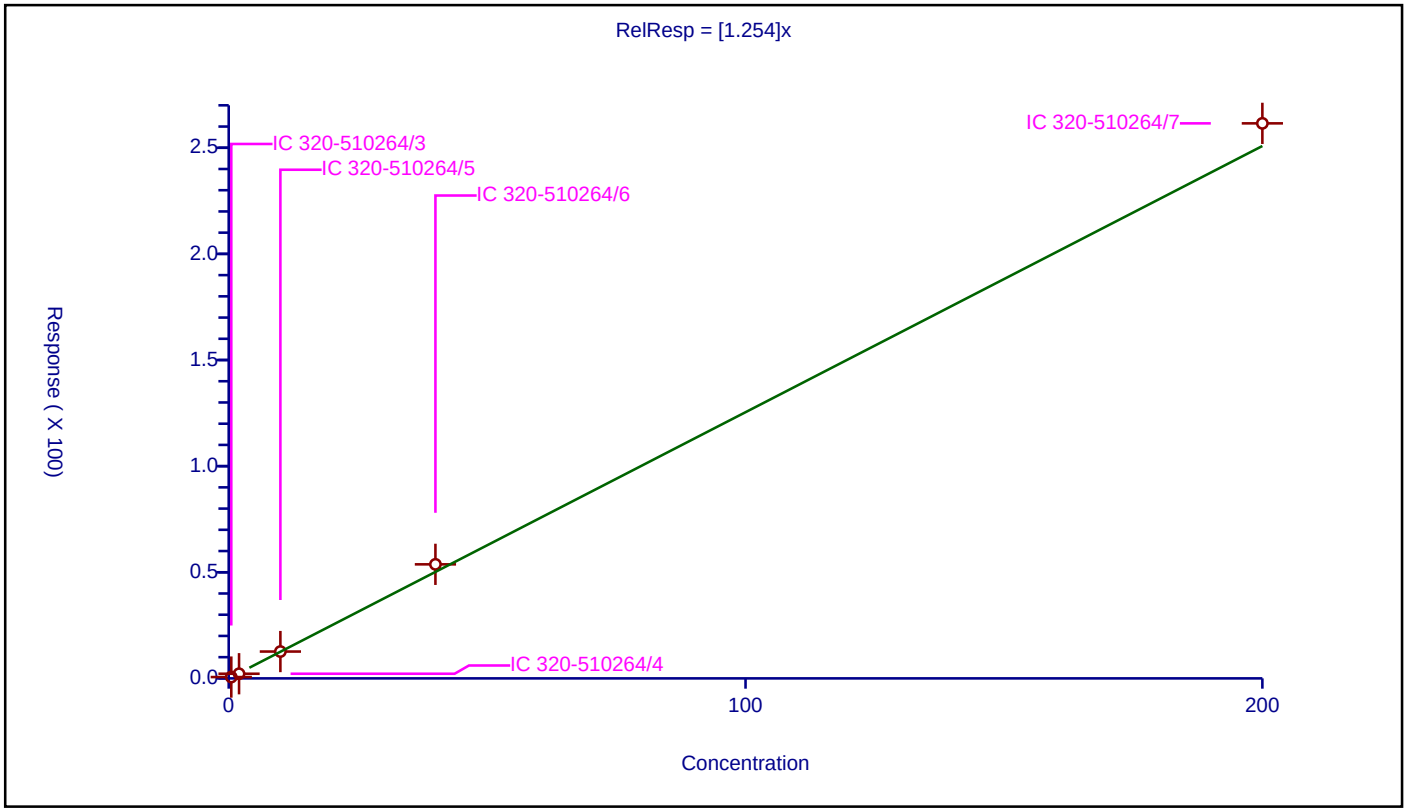

781356

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.024

Error Coefficients

Standard Error:	105000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.514358	100.0	108384725.0	1.028715	Y
2	IC 320-510264/4	2.0	1.739696	100.0	98246522.0	0.869848	Y
3	IC 320-510264/5	10.0	10.458407	100.0	101724636.0	1.045841	Y
4	IC 320-510264/6	40.0	44.37733	100.0	100332269.0	1.109433	Y
5	IC 320-510264/7	200.0	213.143097	100.0	95980421.0	1.065715	Y

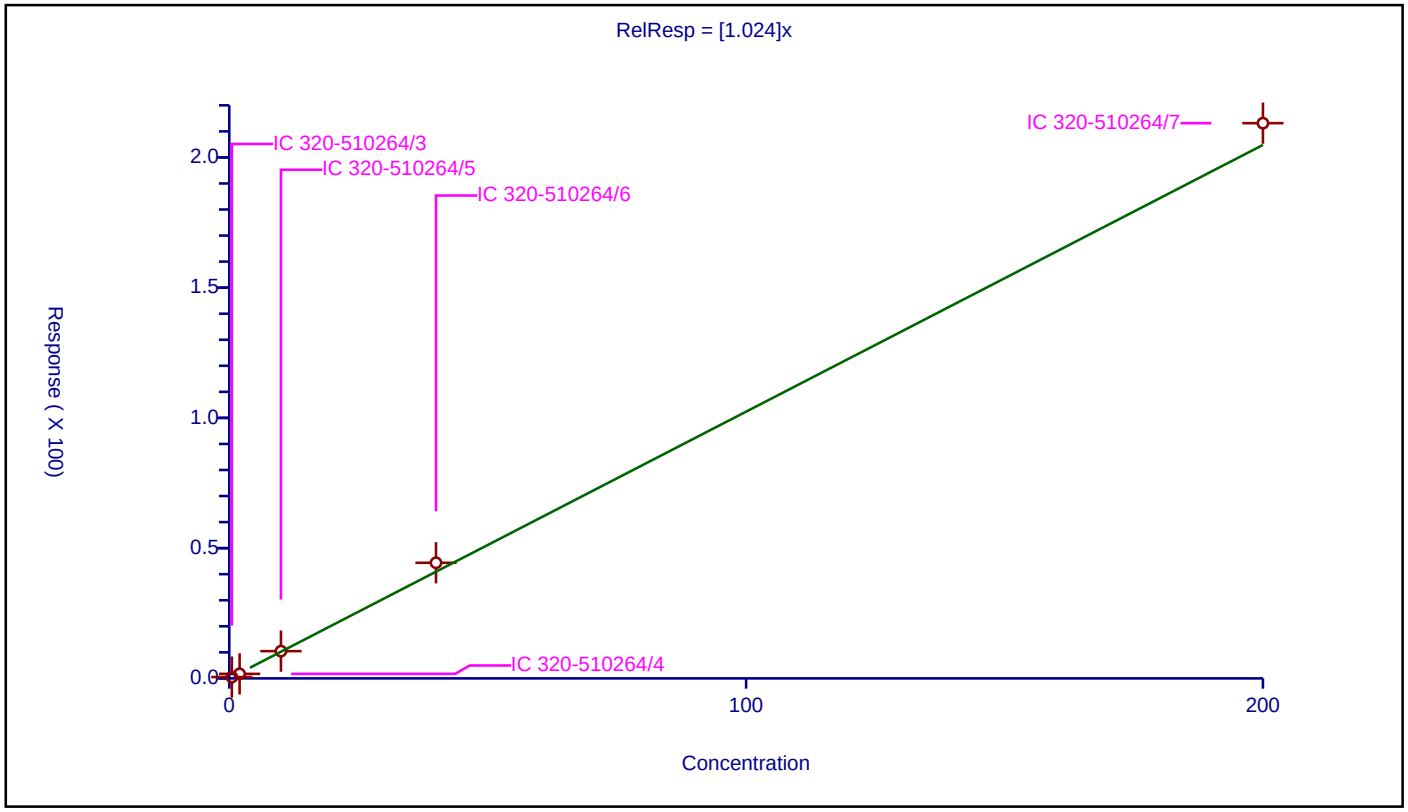

781357

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	72100000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.485229	100.0	65685883.0	0.970458	Y
2	IC 320-510264/4	2.0	1.95888	100.0	62853211.0	0.97944	Y
3	IC 320-510264/5	10.0	11.718119	100.0	62635225.0	1.171812	Y
4	IC 320-510264/6	40.0	47.503291	100.0	62046988.0	1.187582	Y
5	IC 320-510264/7	200.0	245.287862	100.0	57464333.0	1.226439	Y

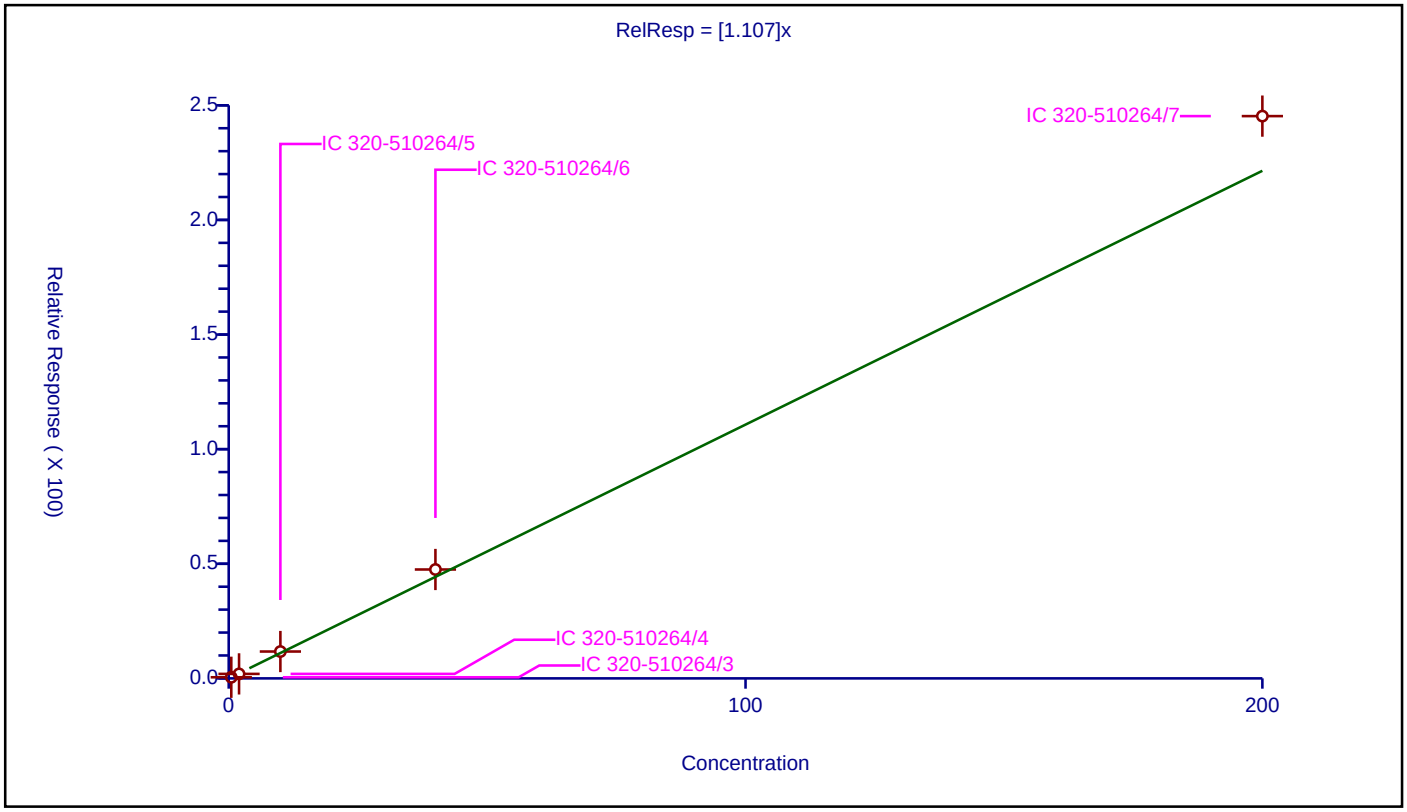

781358

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	325000000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	5.504666	200.0	57018462.0	1.100933	Y
2	IC 320-510264/4	20.0	19.269459	200.0	52034518.0	0.963473	Y
3	IC 320-510264/5	100.0	116.51708	200.0	54338243.0	1.165171	Y
4	IC 320-510264/6	400.0	473.162285	200.0	57303880.0	1.182906	Y
5	IC 320-510264/7	2000.0	2245.176522	200.0	56623863.0	1.122588	Y

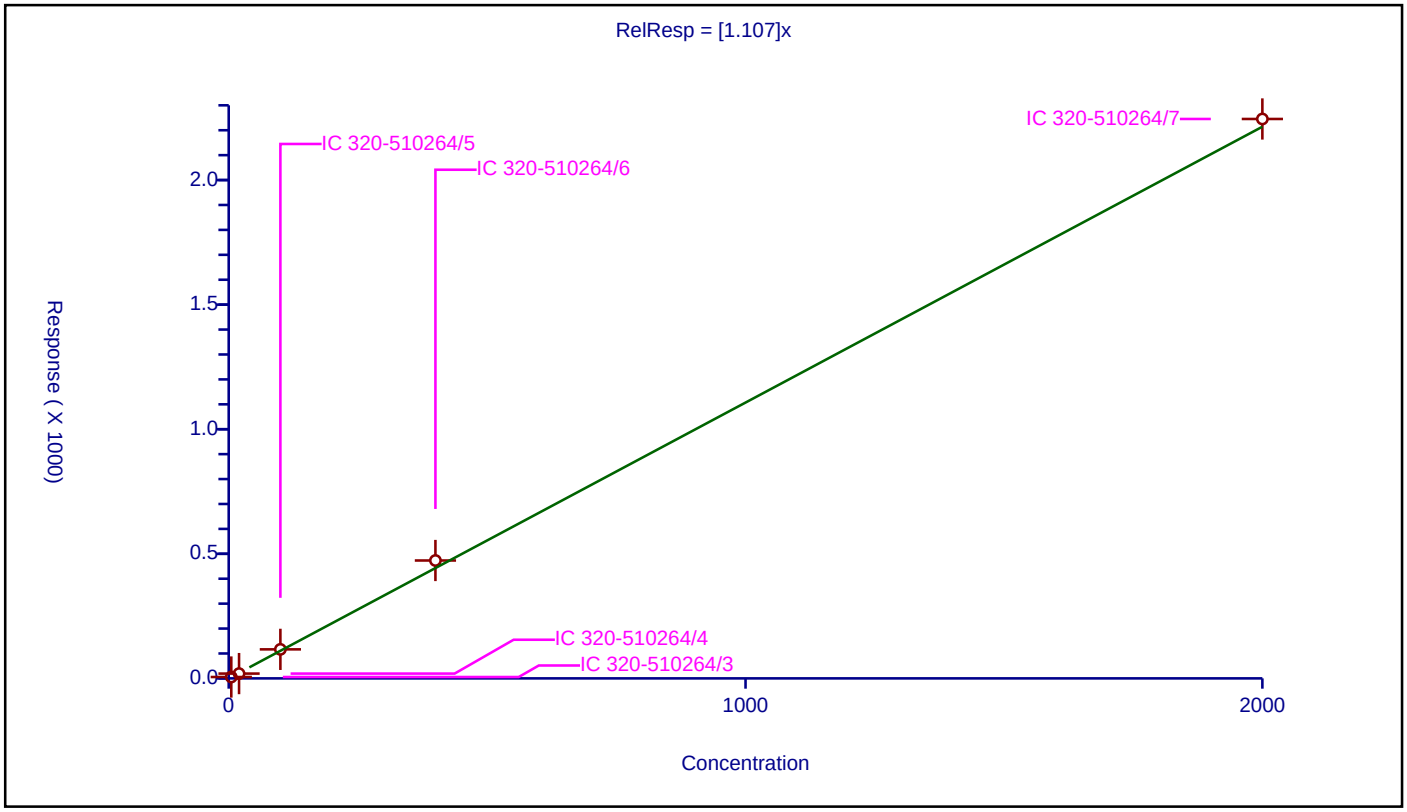

781359

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.438

Error Coefficients

Standard Error:	438000000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	6.931702	200.0	57018462.0	1.38634	Y
2	IC 320-510264/4	20.0	23.824451	200.0	52034518.0	1.191223	Y
3	IC 320-510264/5	100.0	151.448408	200.0	54338243.0	1.514484	Y
4	IC 320-510264/6	400.0	634.327267	200.0	57303880.0	1.585818	Y
5	IC 320-510264/7	2000.0	3025.883229	200.0	56623863.0	1.512942	Y

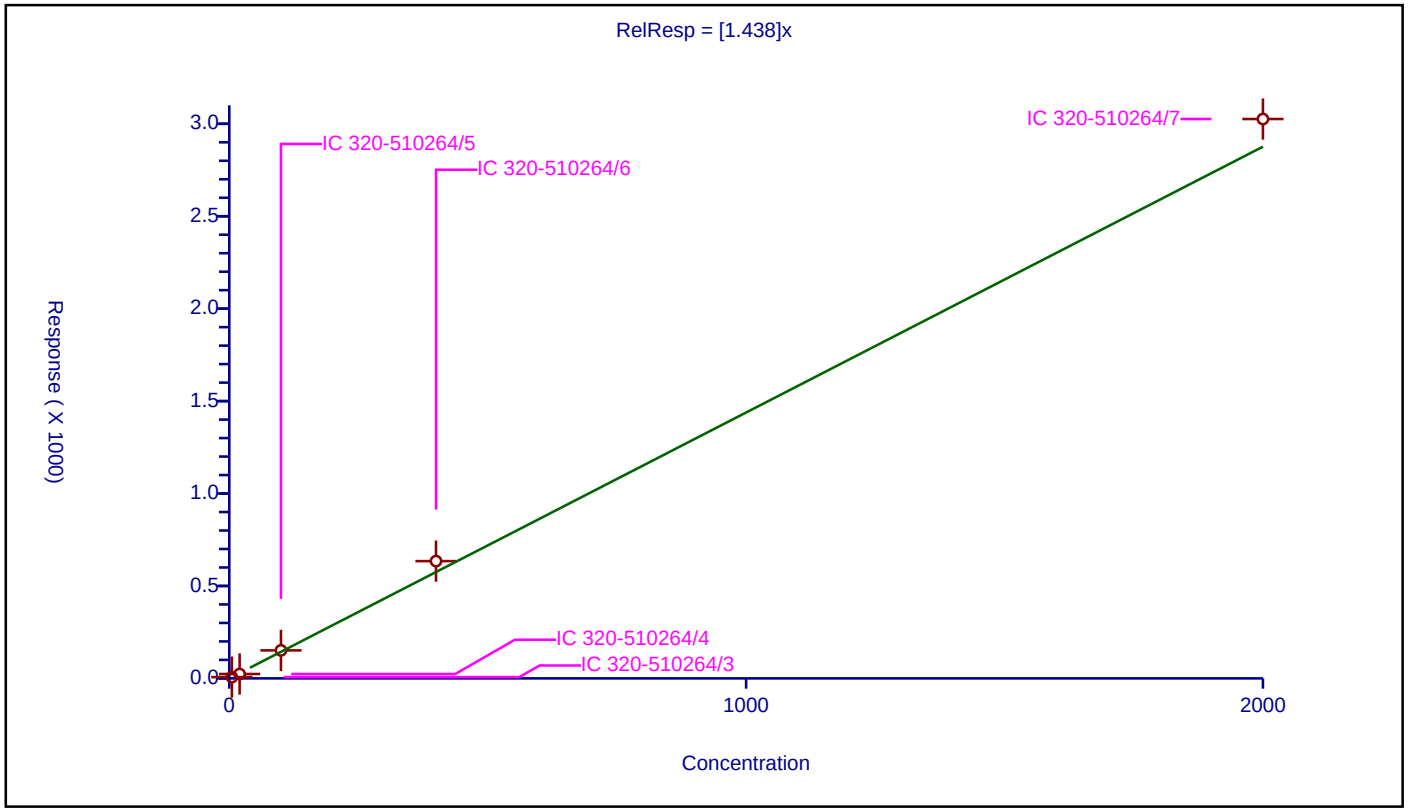

781360

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

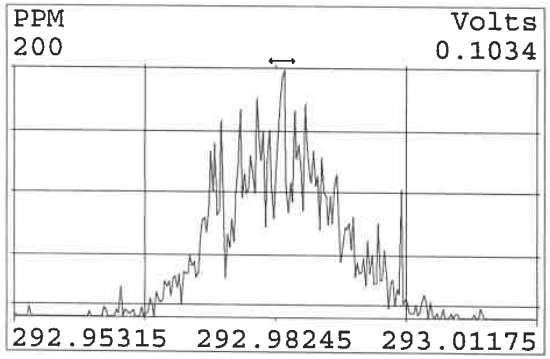

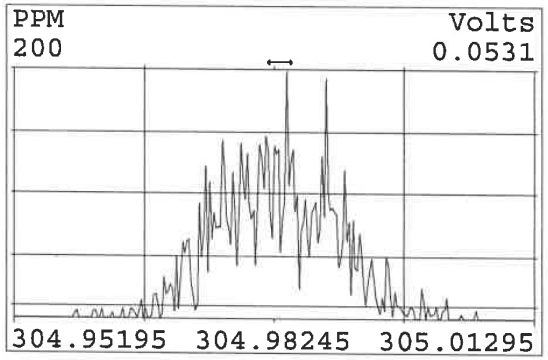

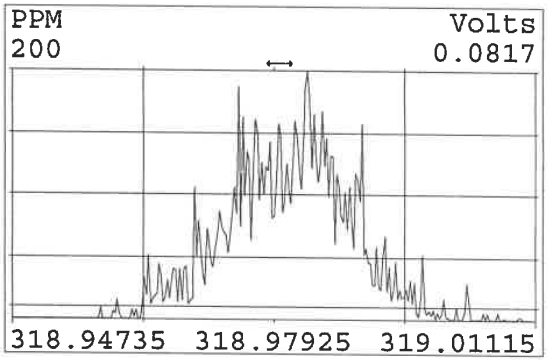

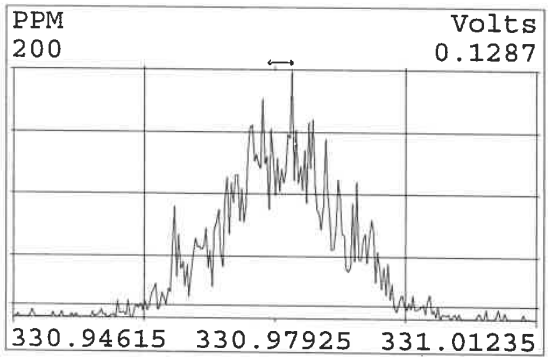

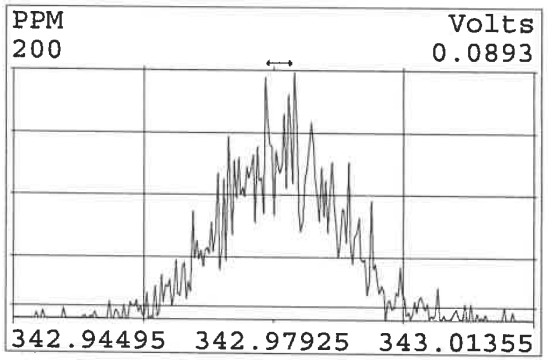

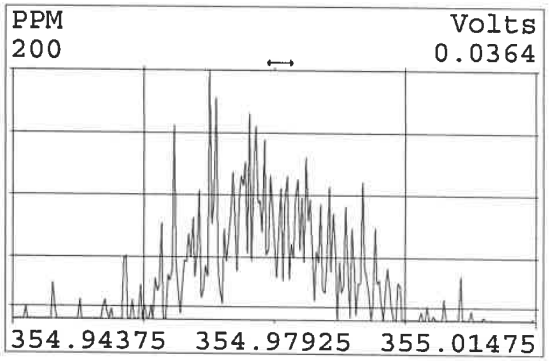

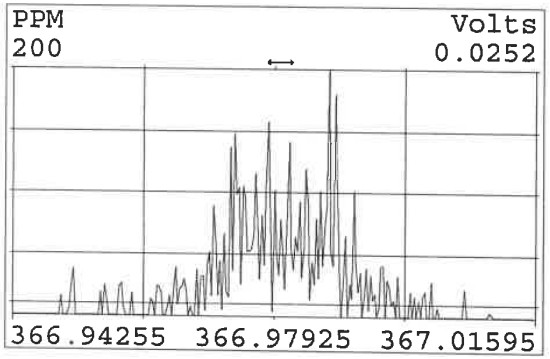

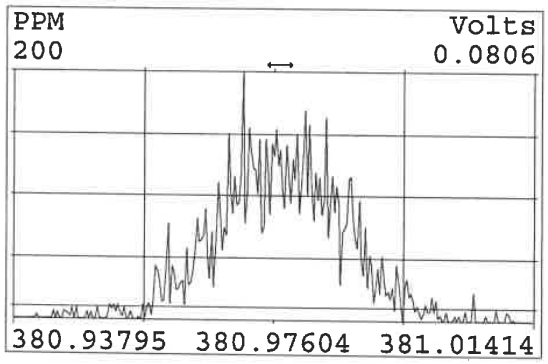

781364

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

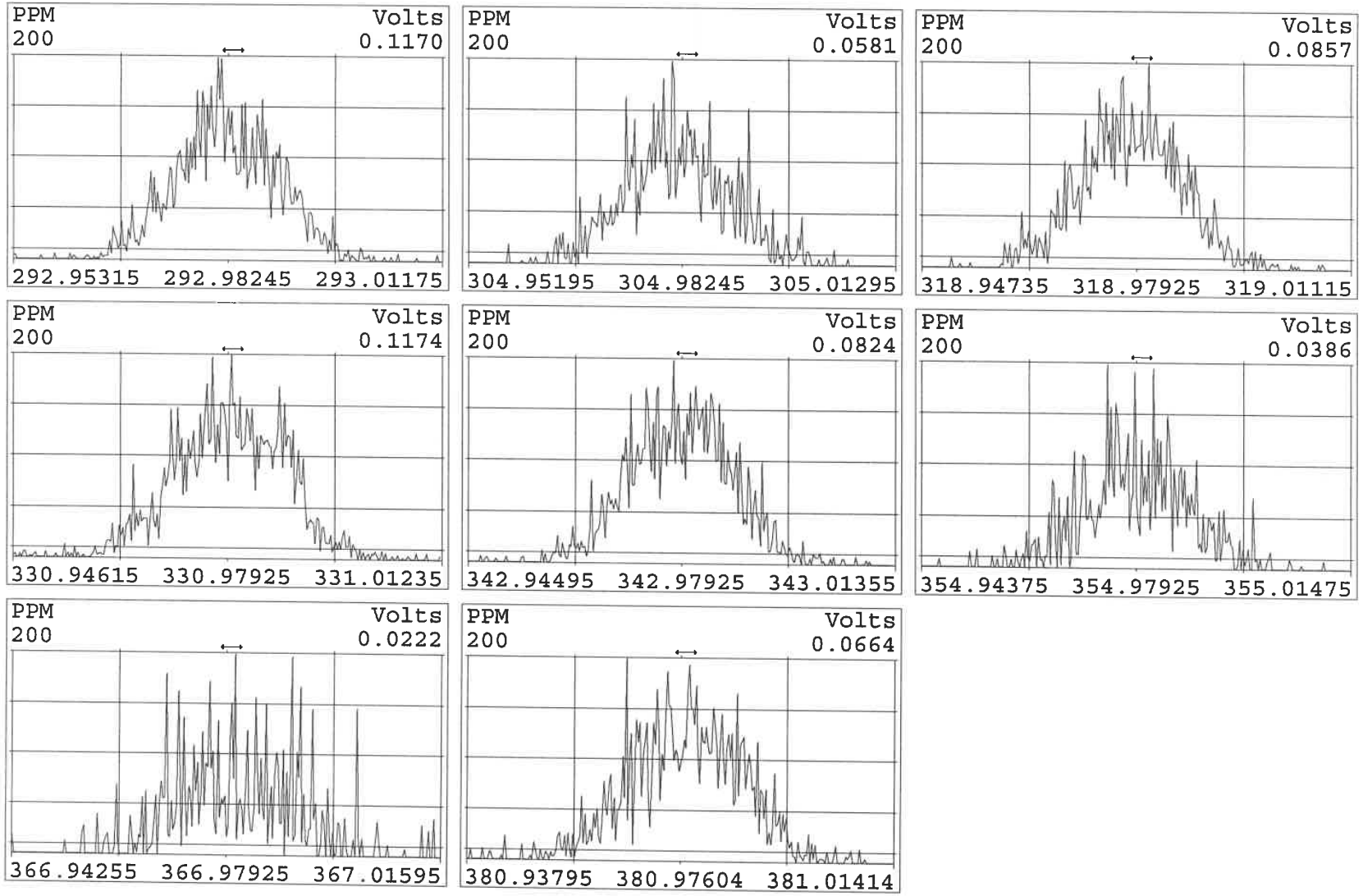

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

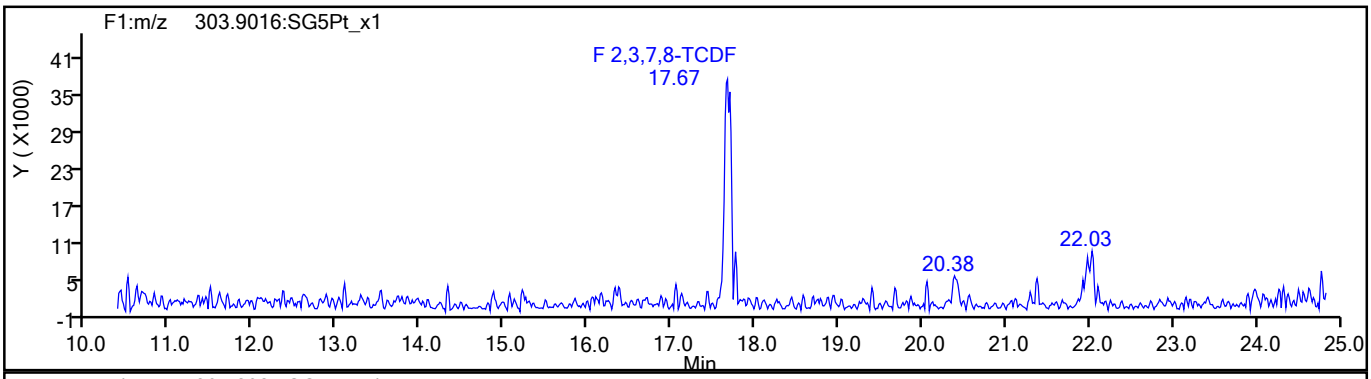

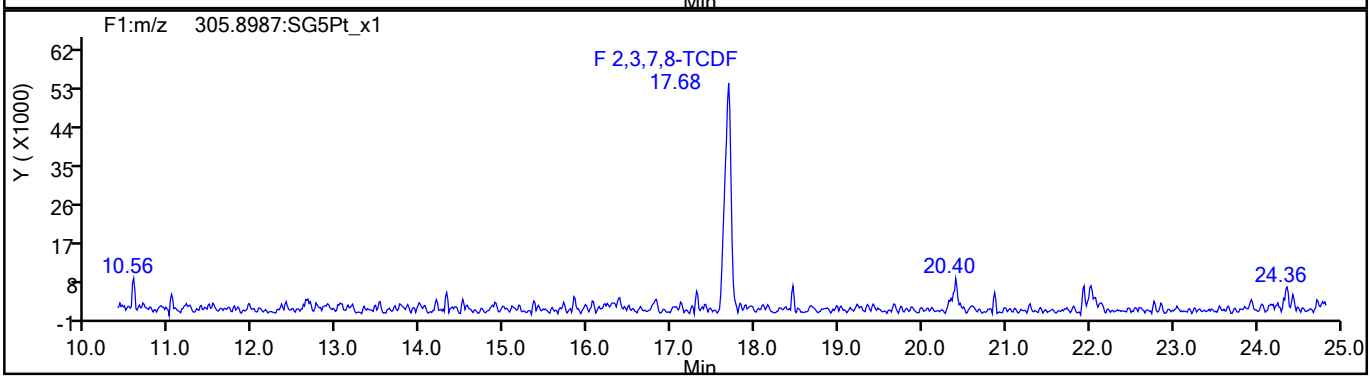

TCDF Standards

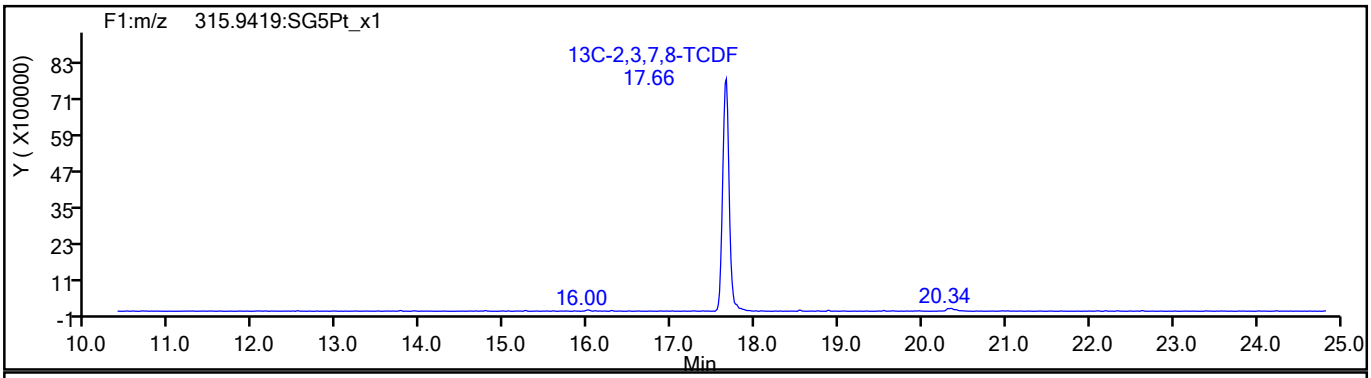

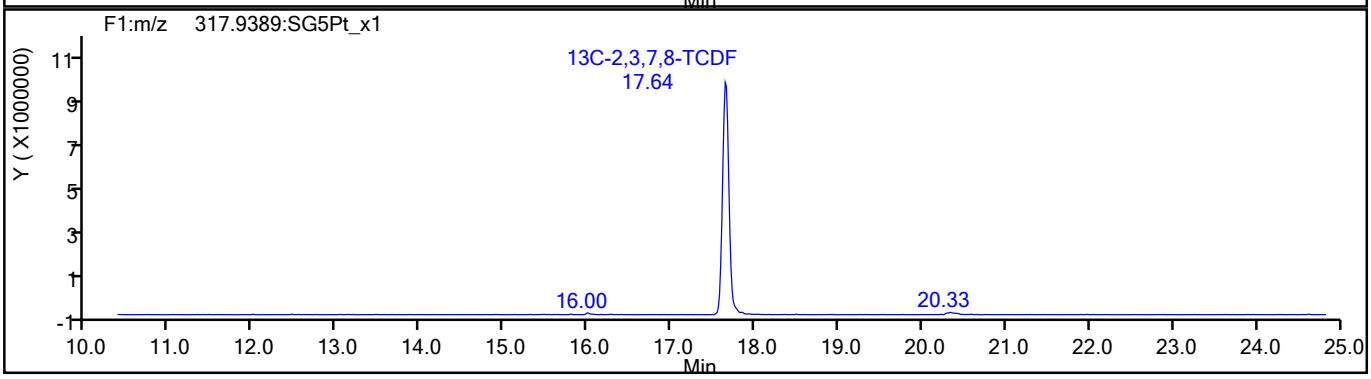

781368

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

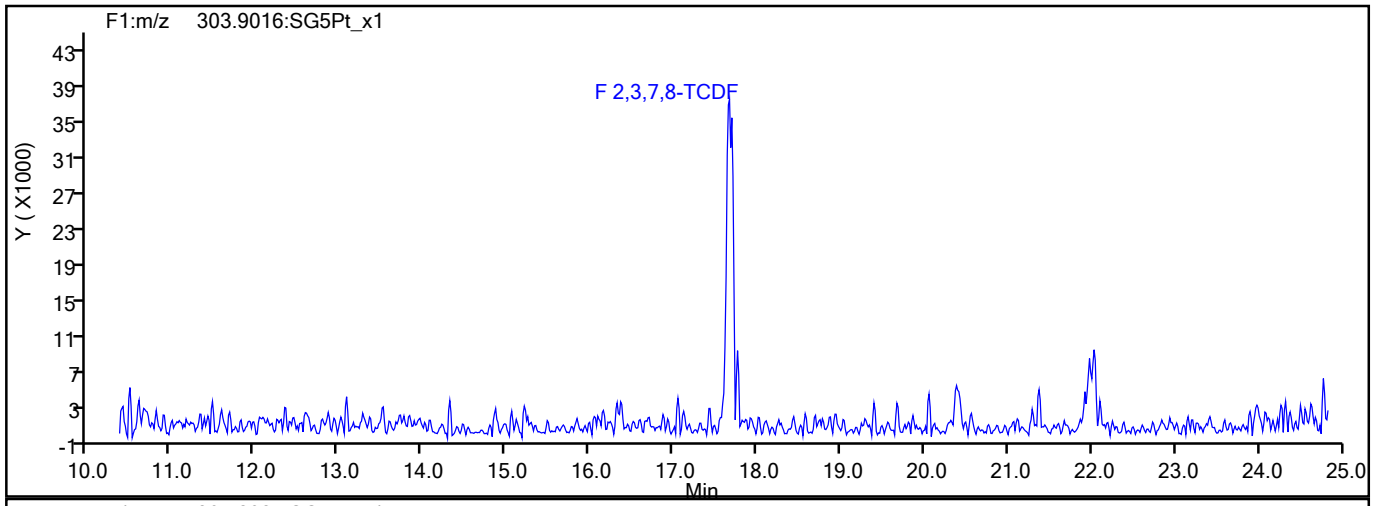

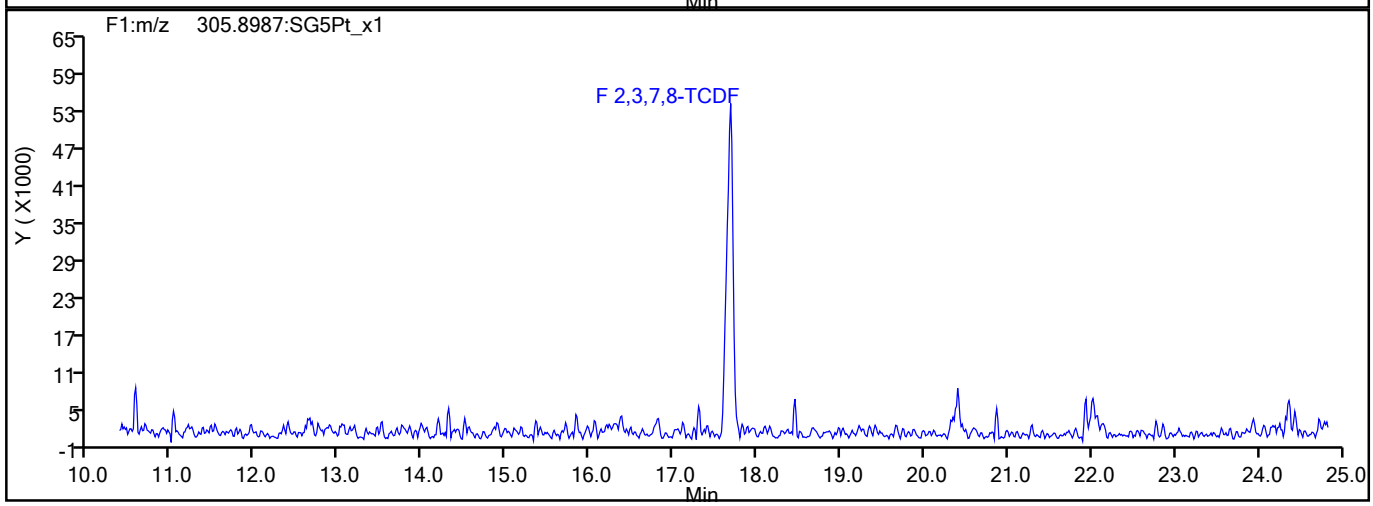

TCDF Interference Mass

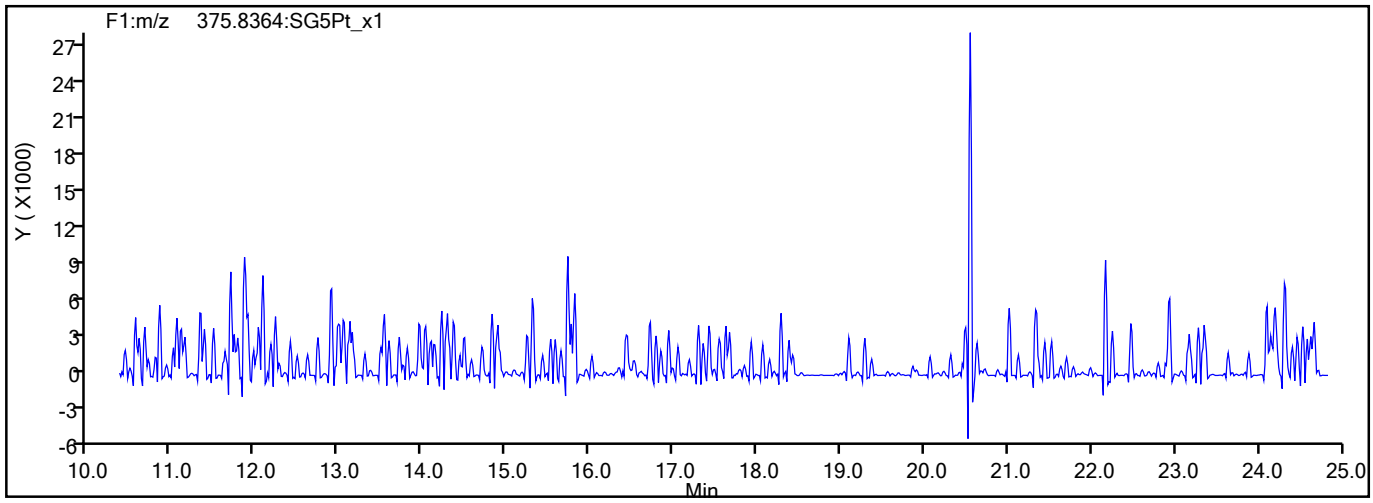

781369

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

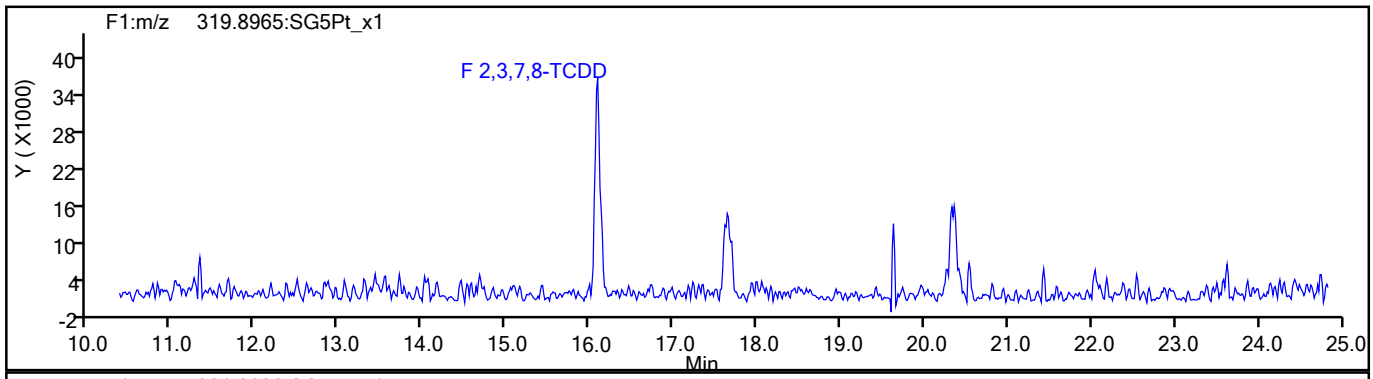

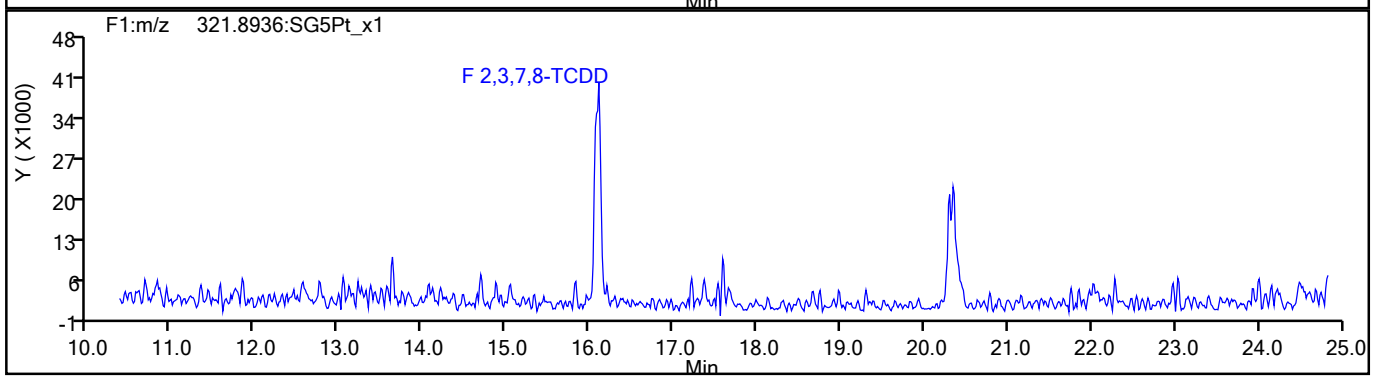

TCDD Standards

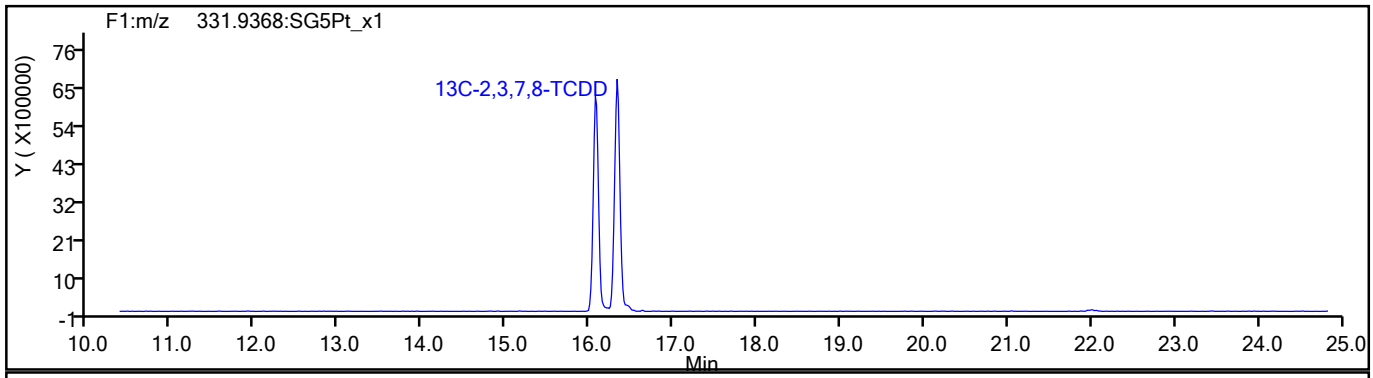

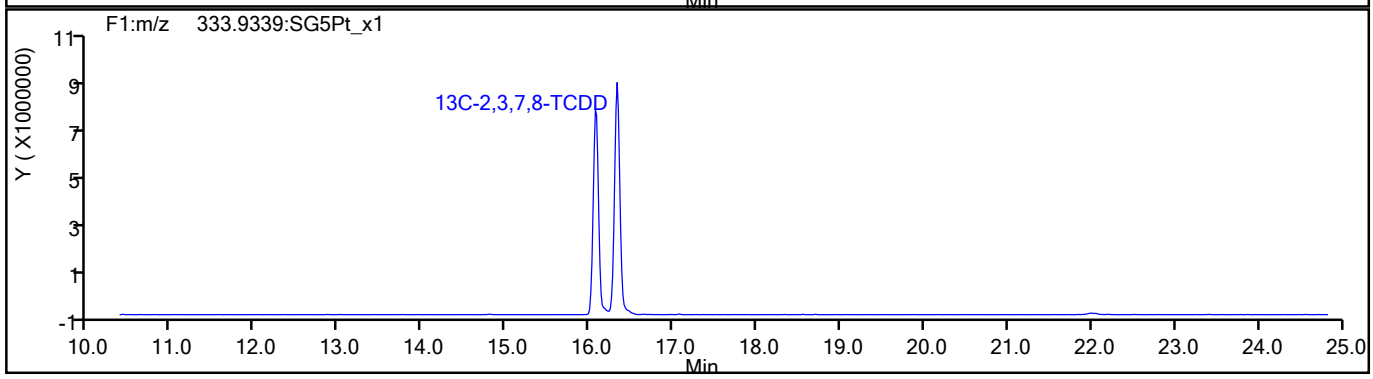

781370

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

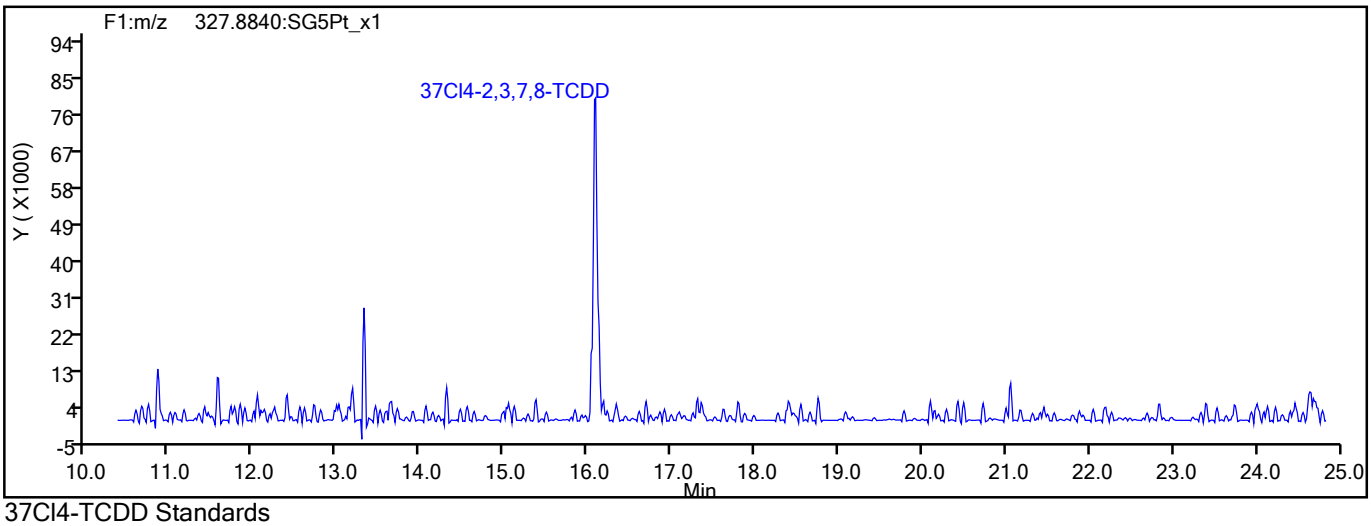

37Cl4-TCDD Standards

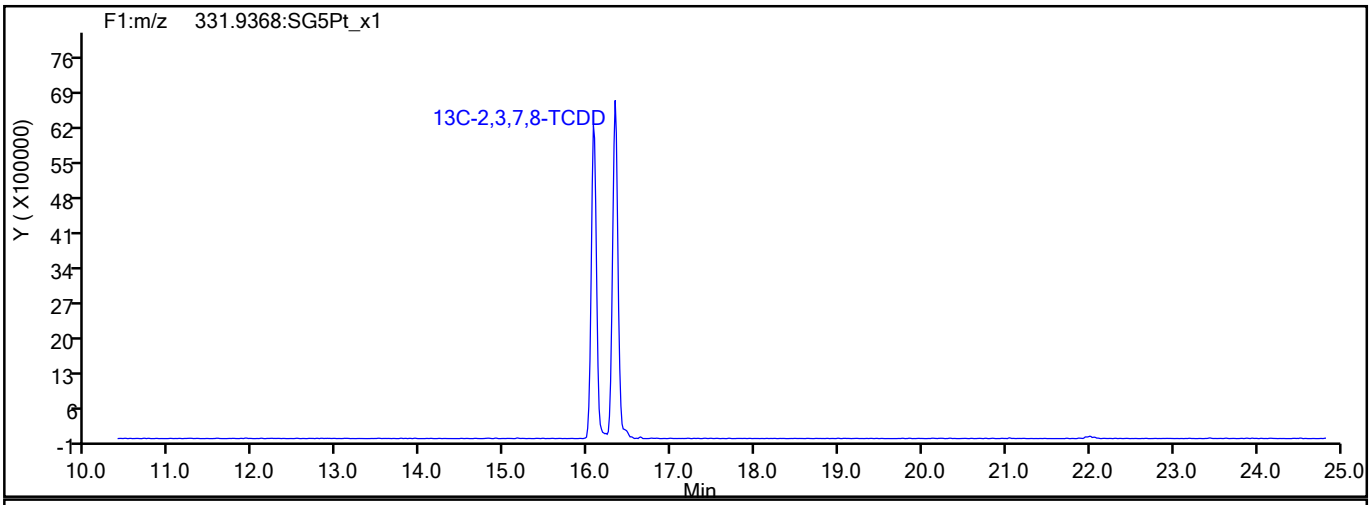

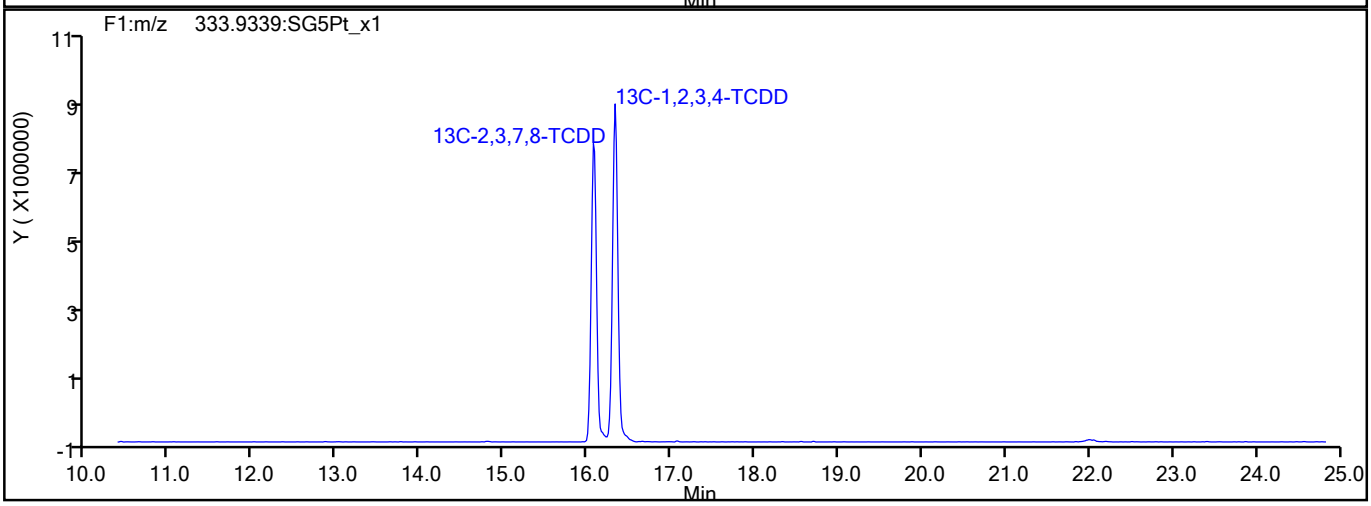

781371

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

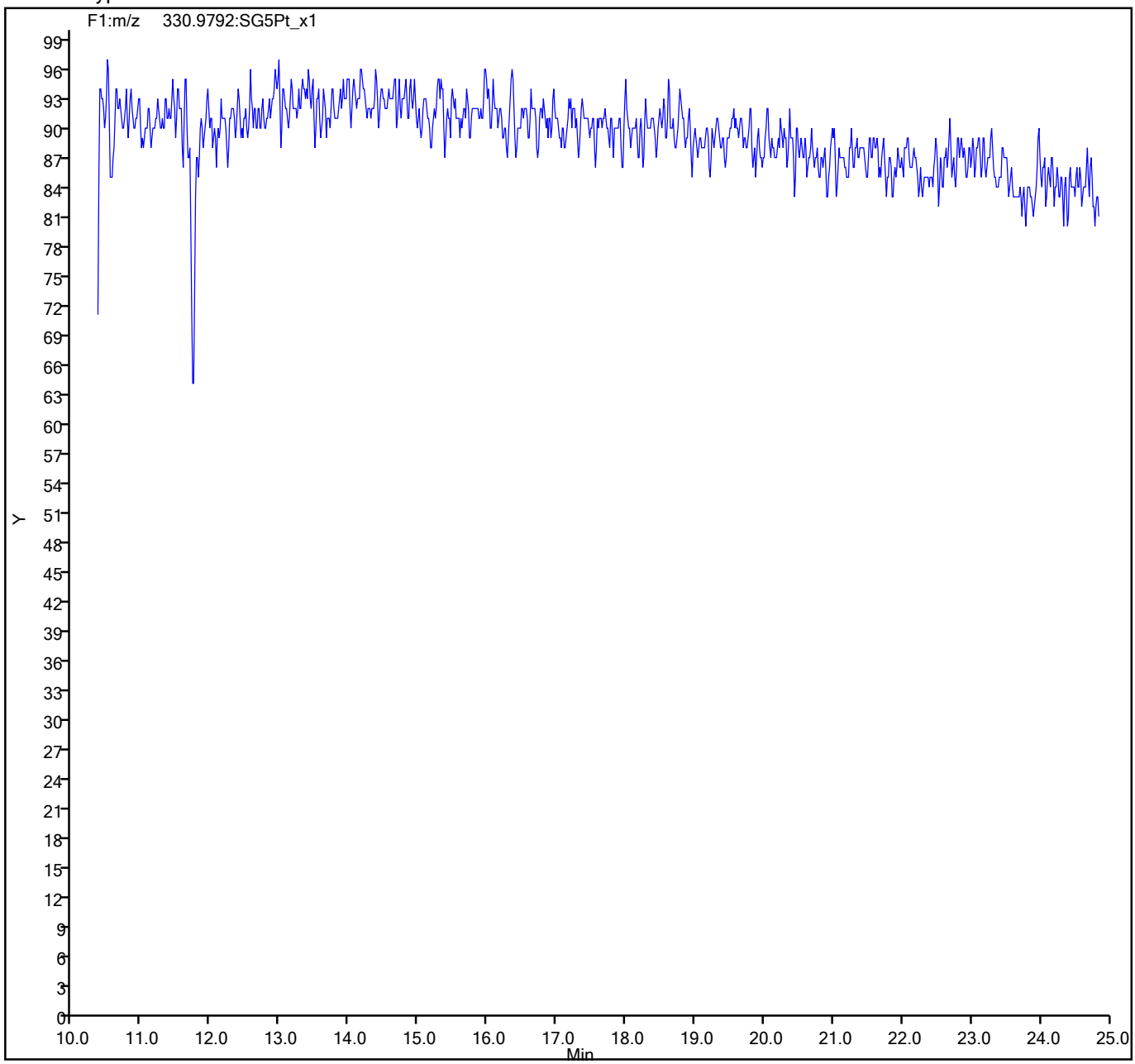

781372

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

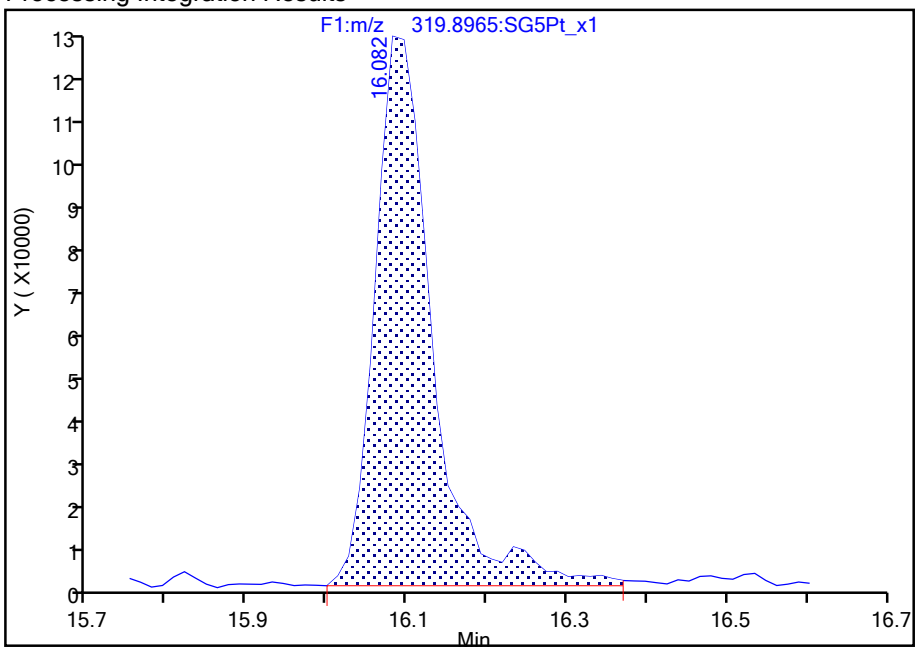

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

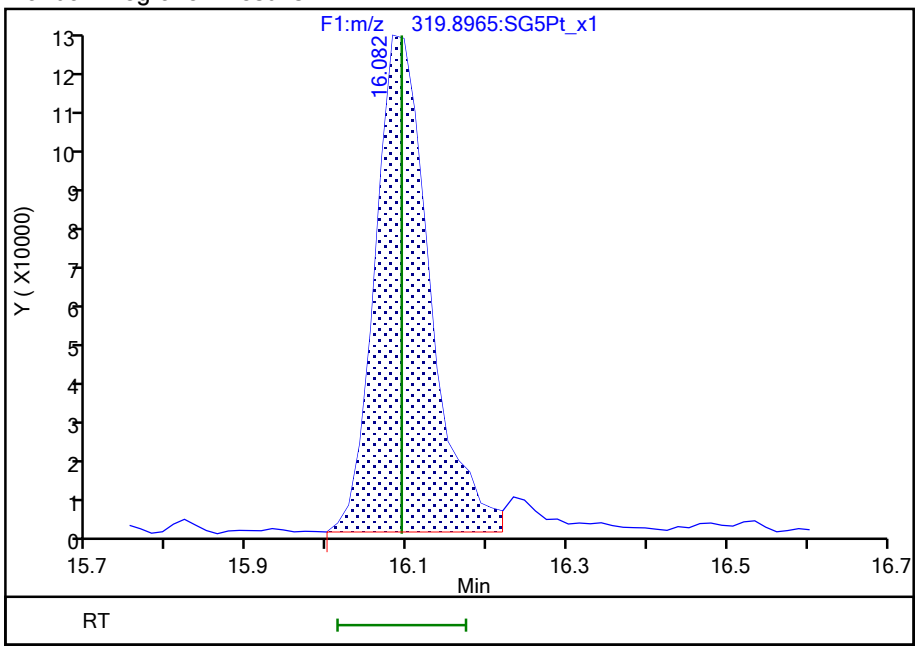

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

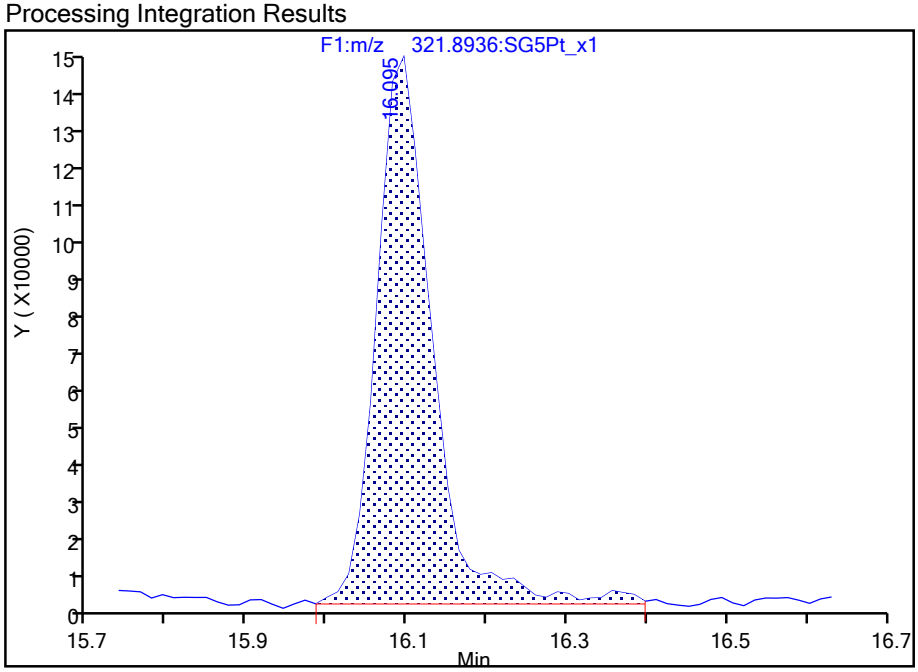

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

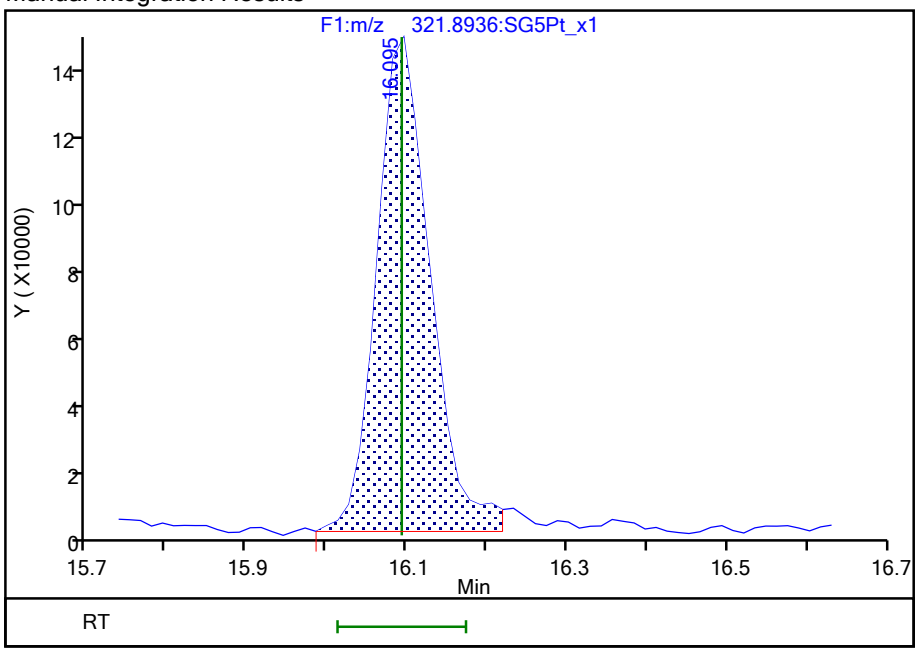

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

781376

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

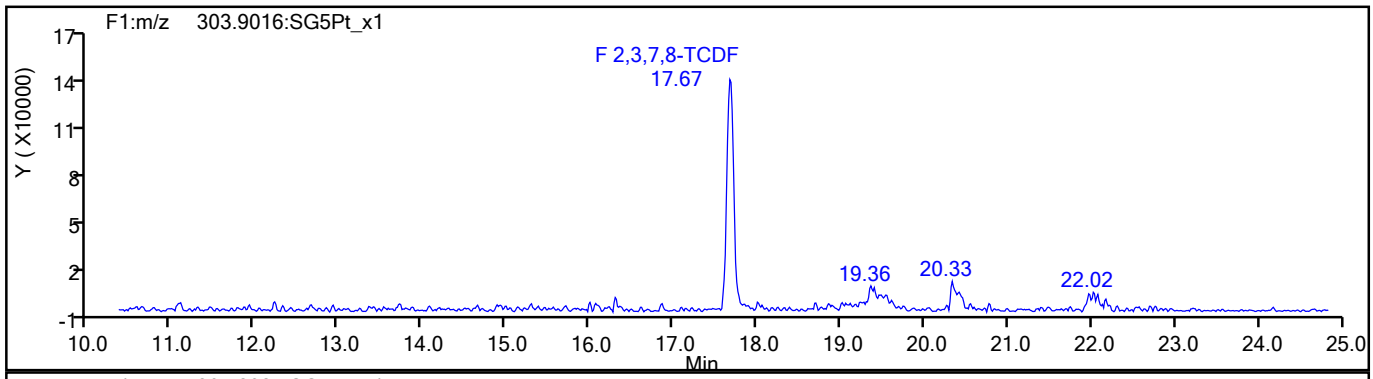

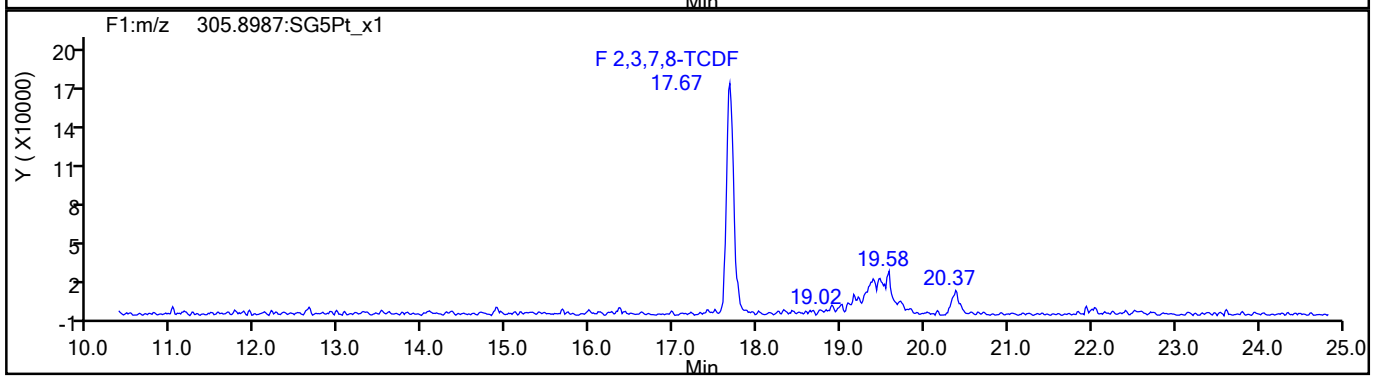

TCDF Standards

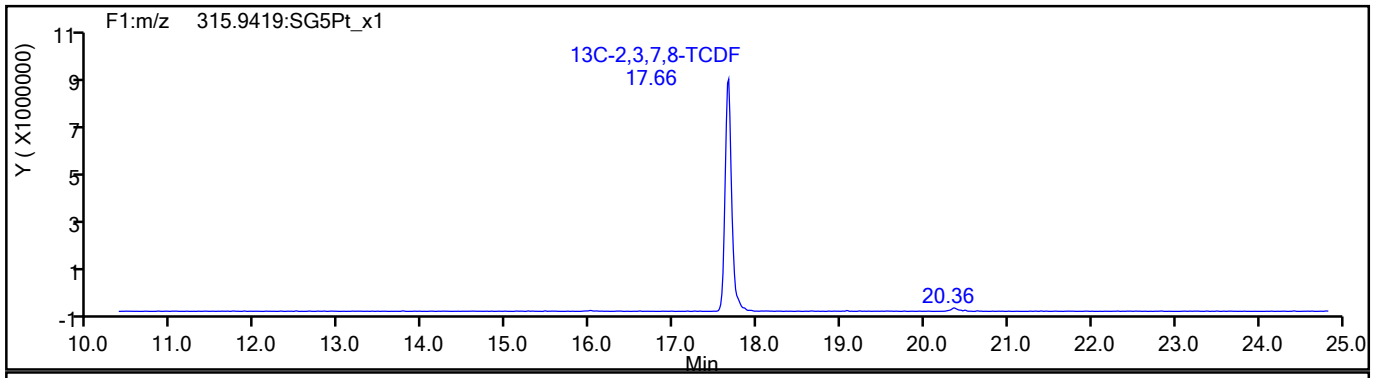

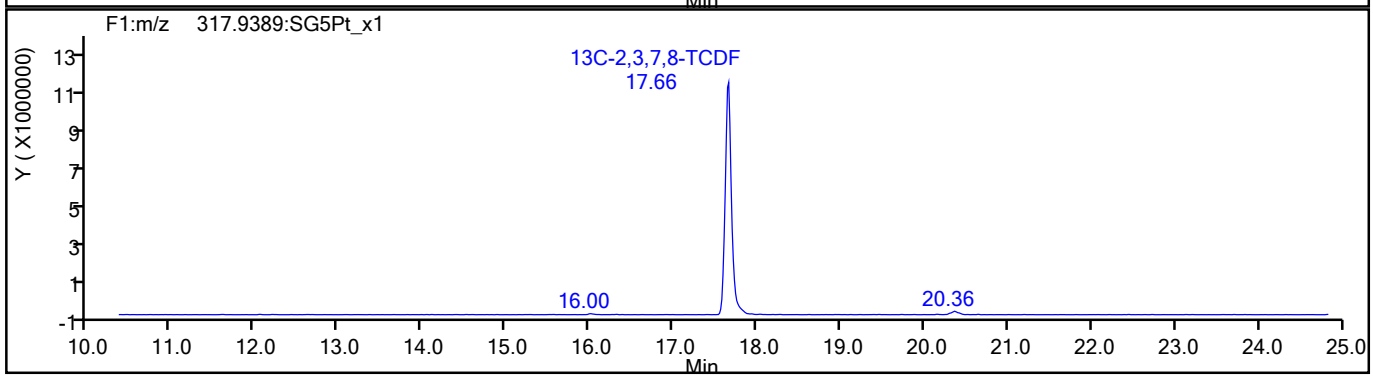

781377

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

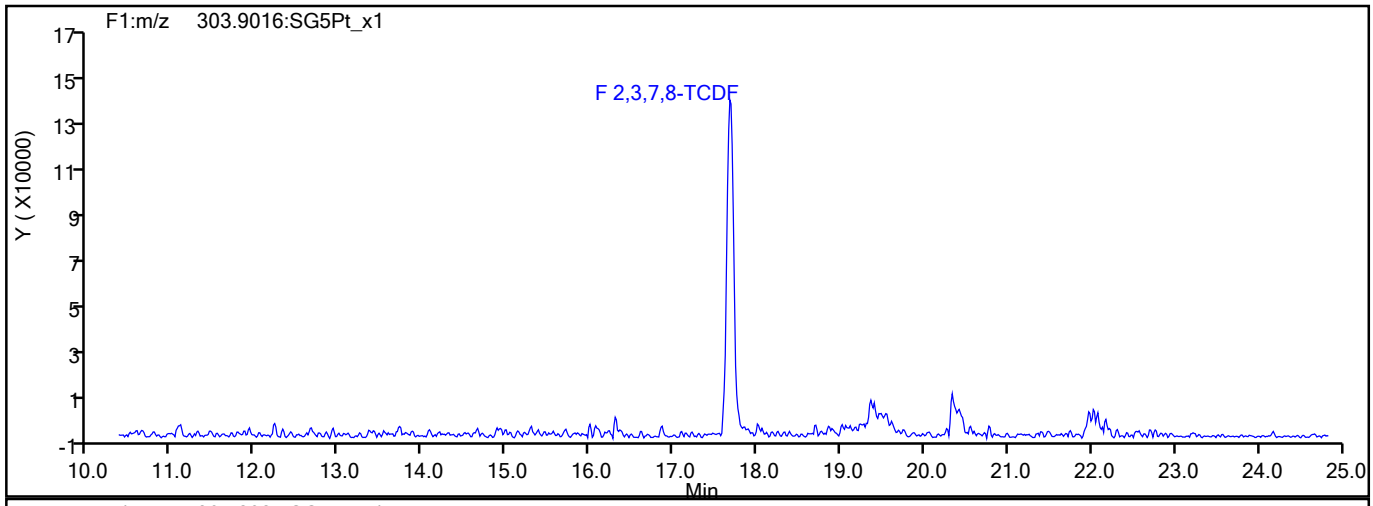

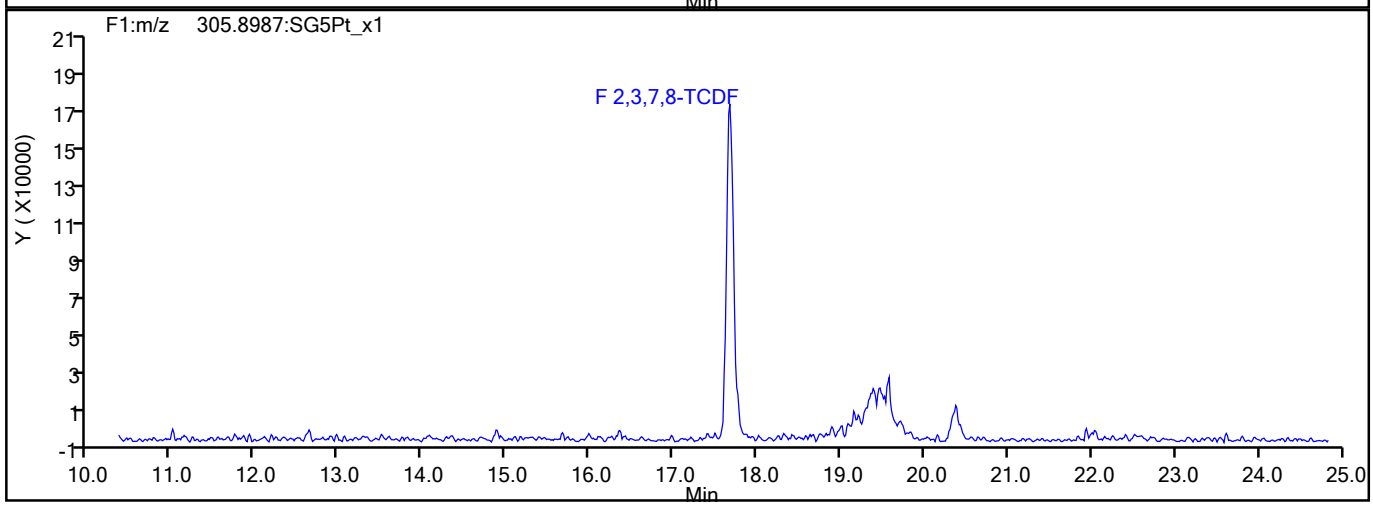

TCDF Interference Mass

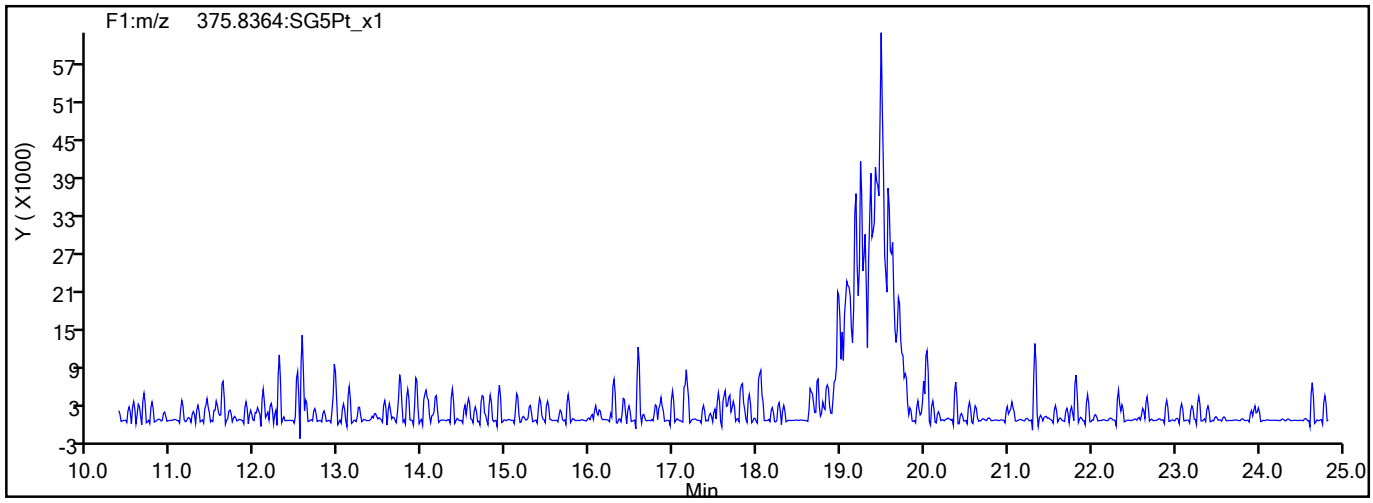

781378

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

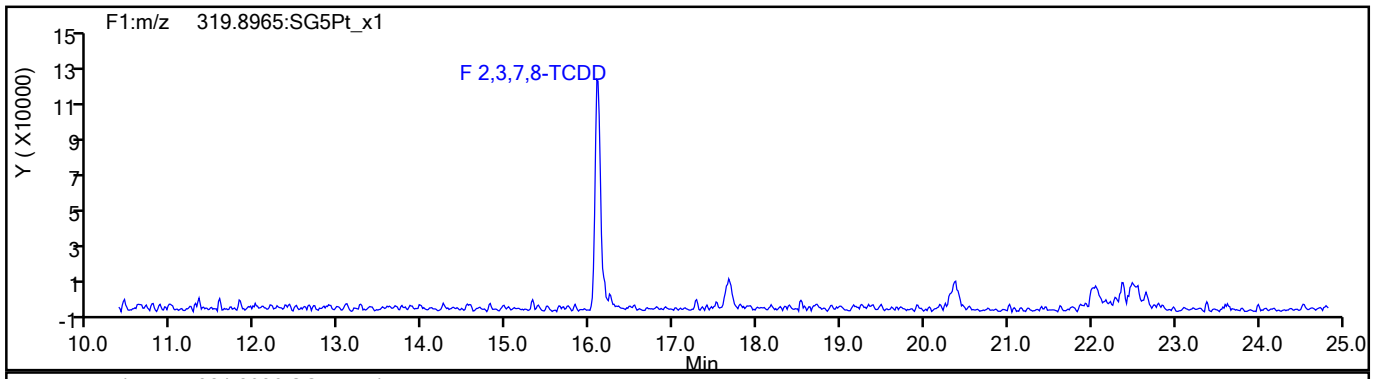

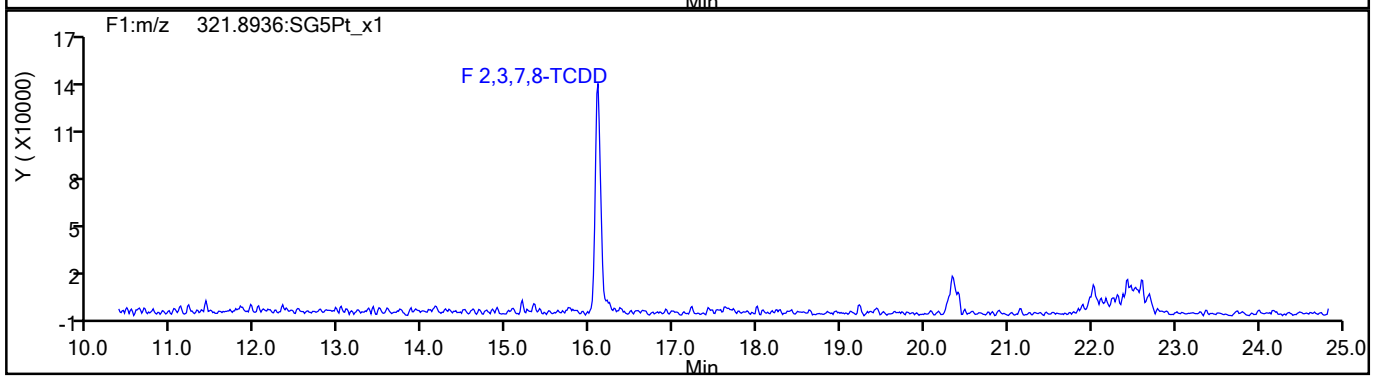

TCDD Standards

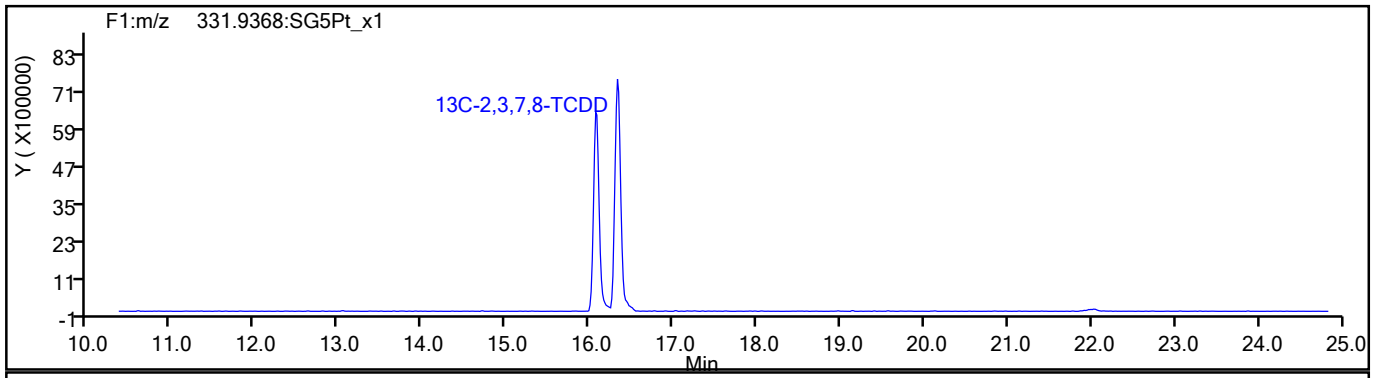

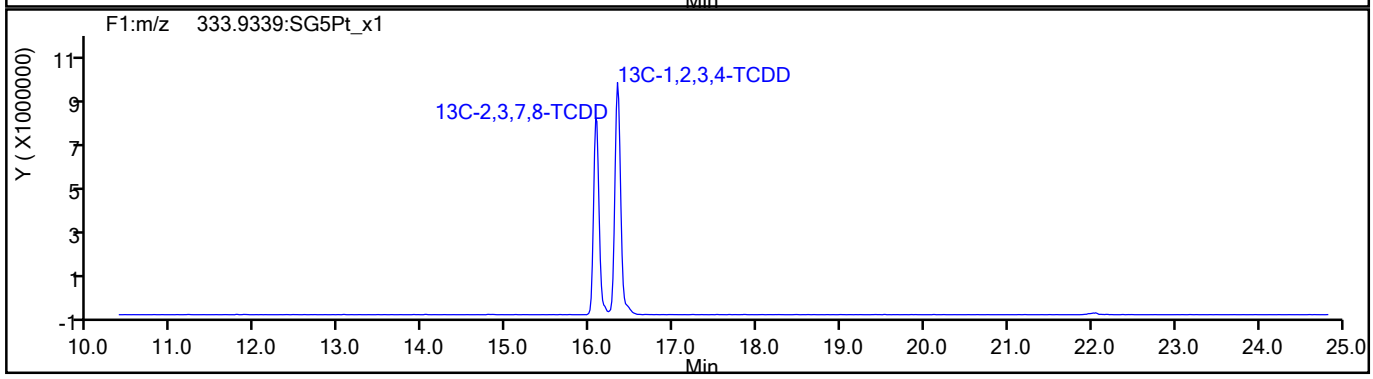

781379

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

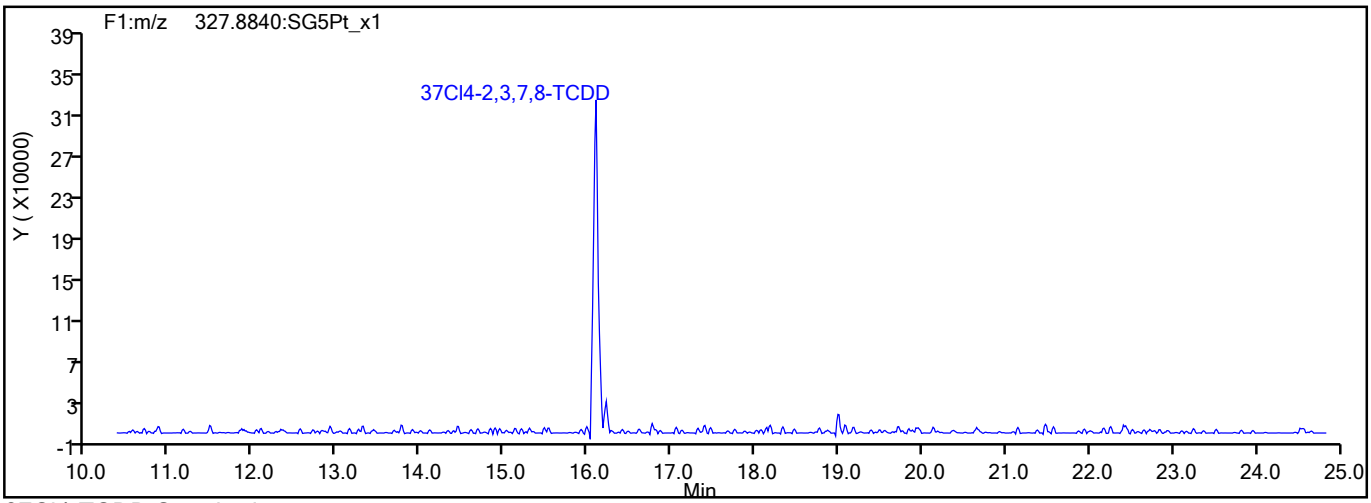

37Cl4-TCDD Standards

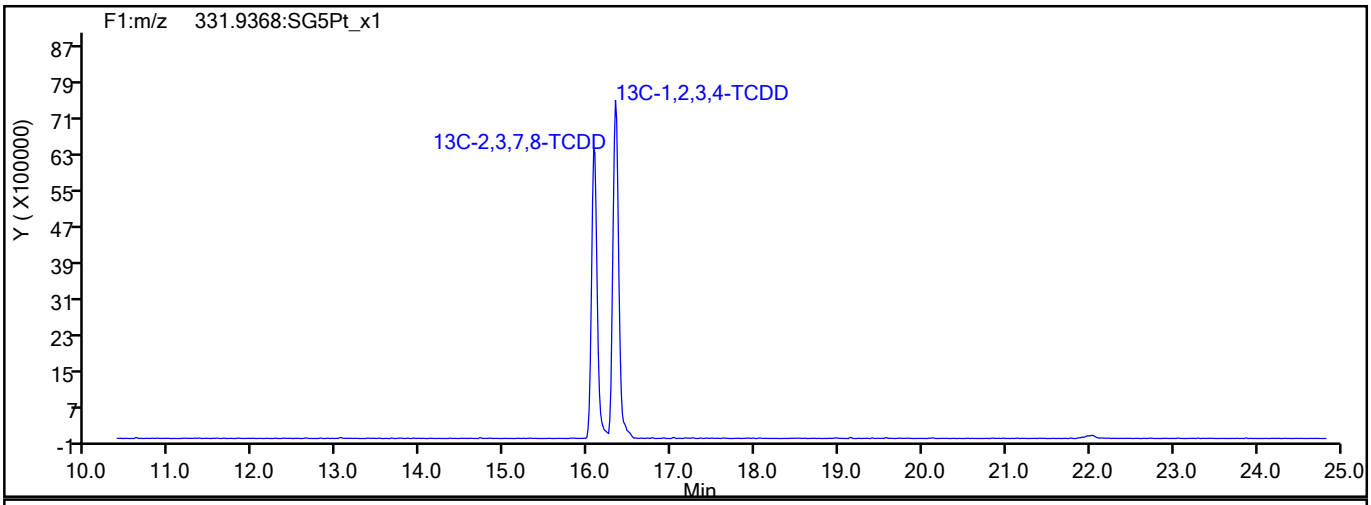

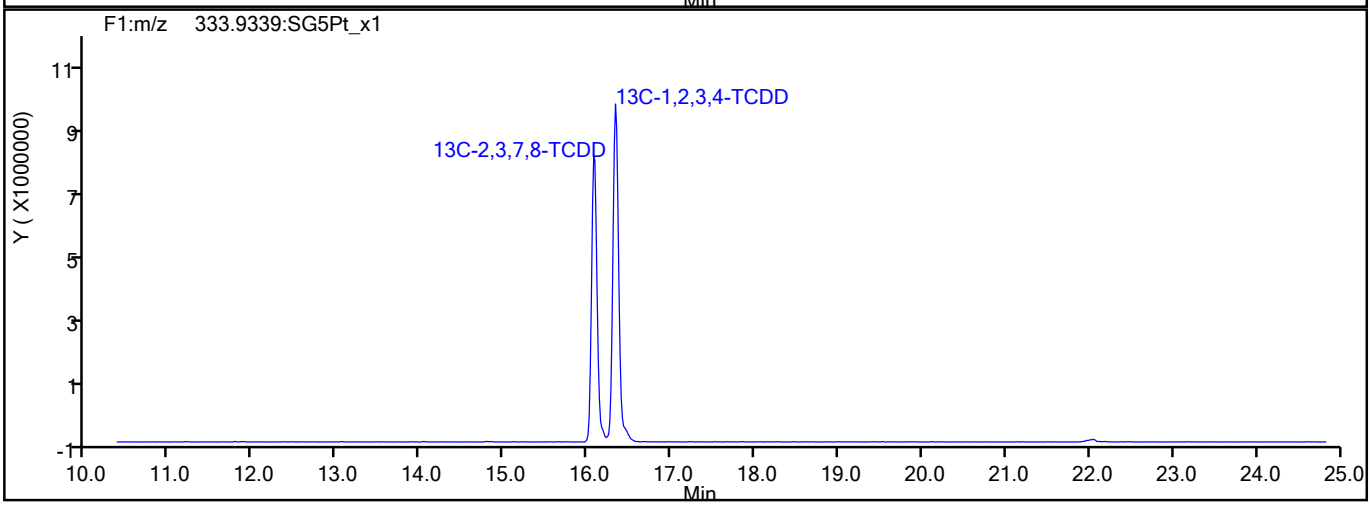

781380

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

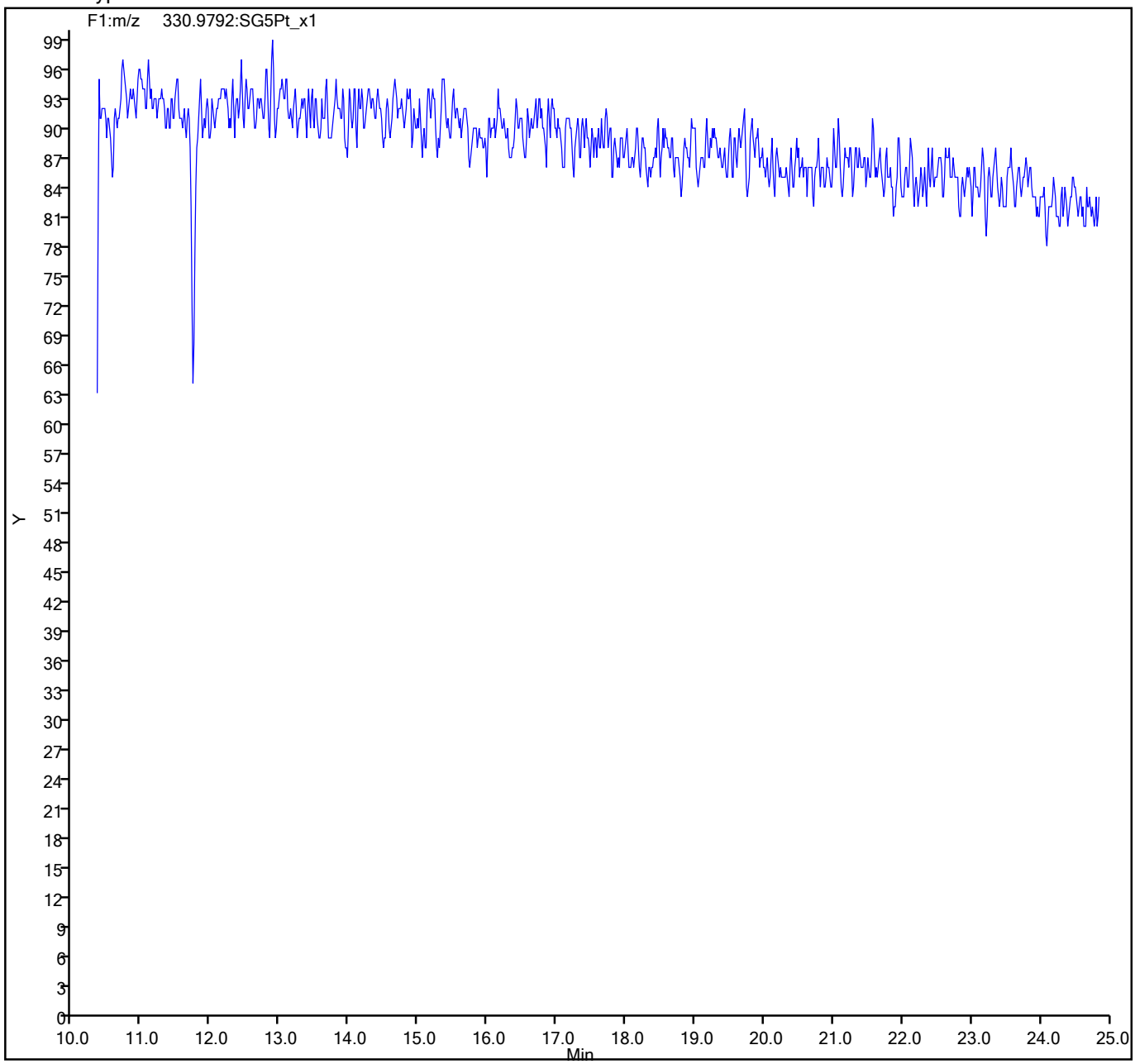

781381

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

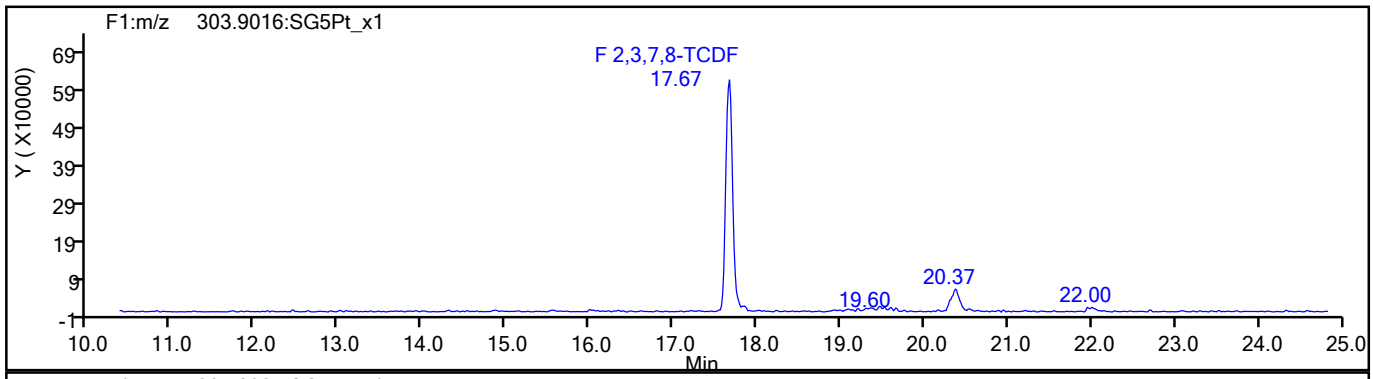

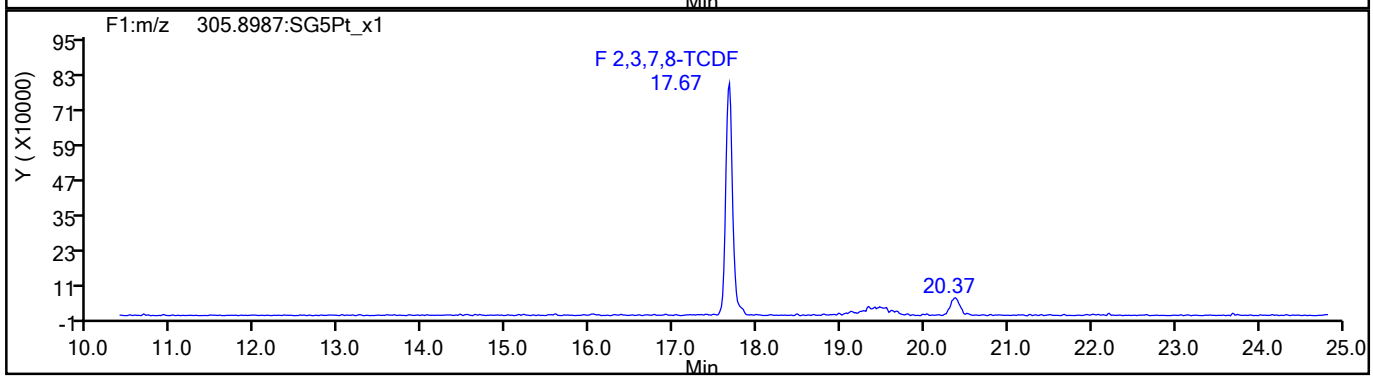

TCDF Standards

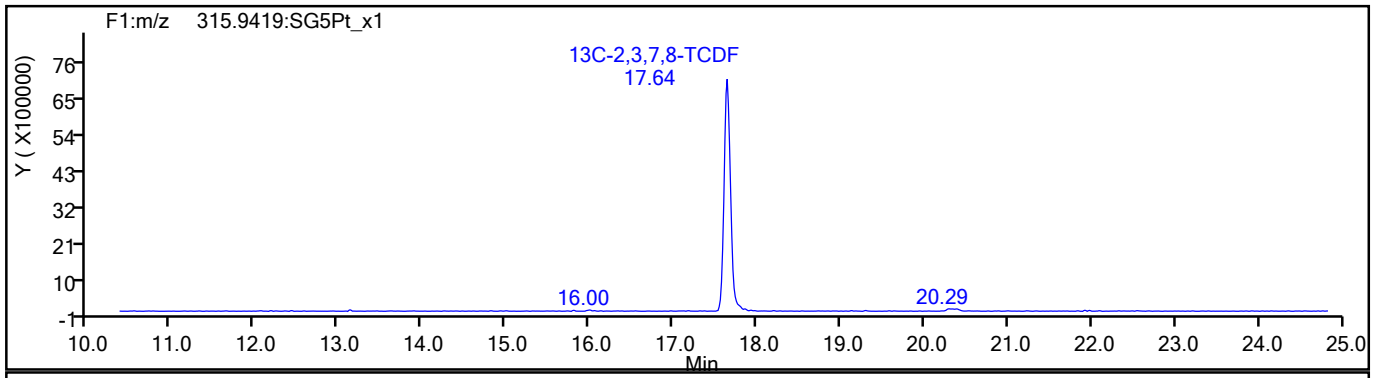

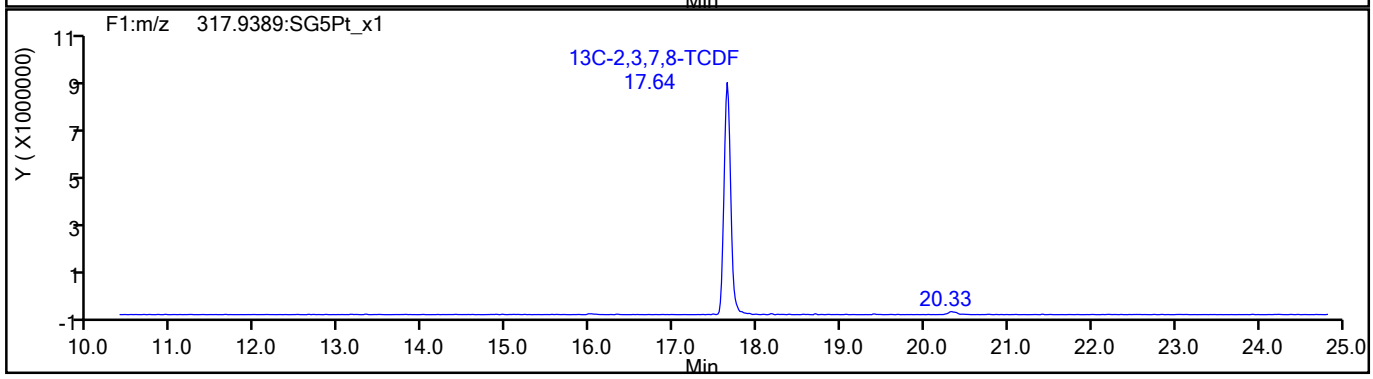

781384

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

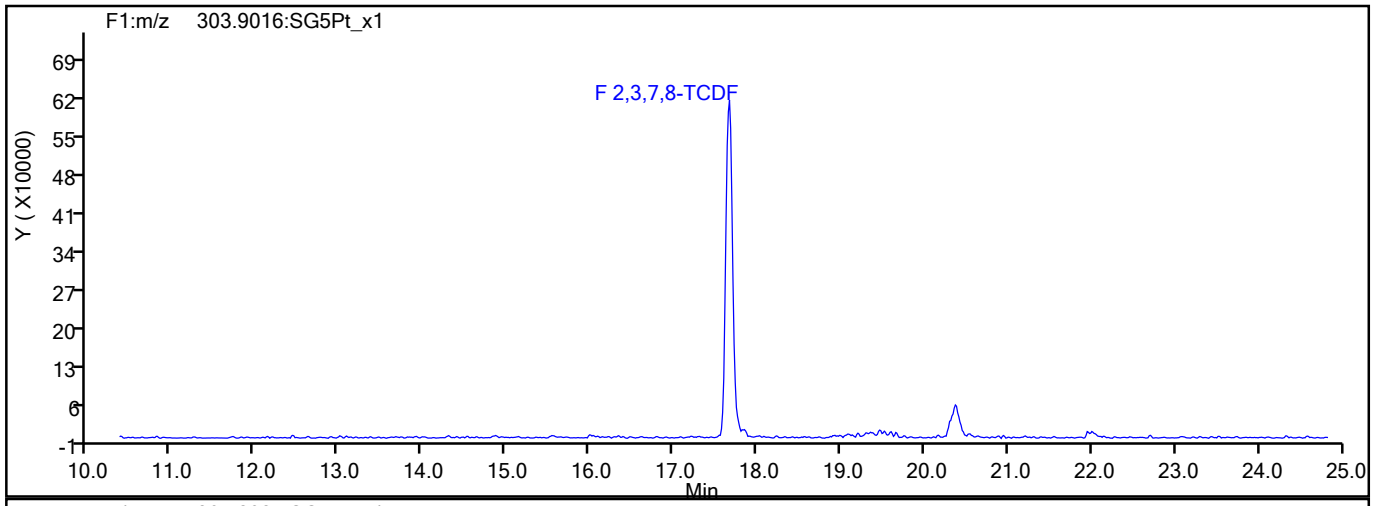

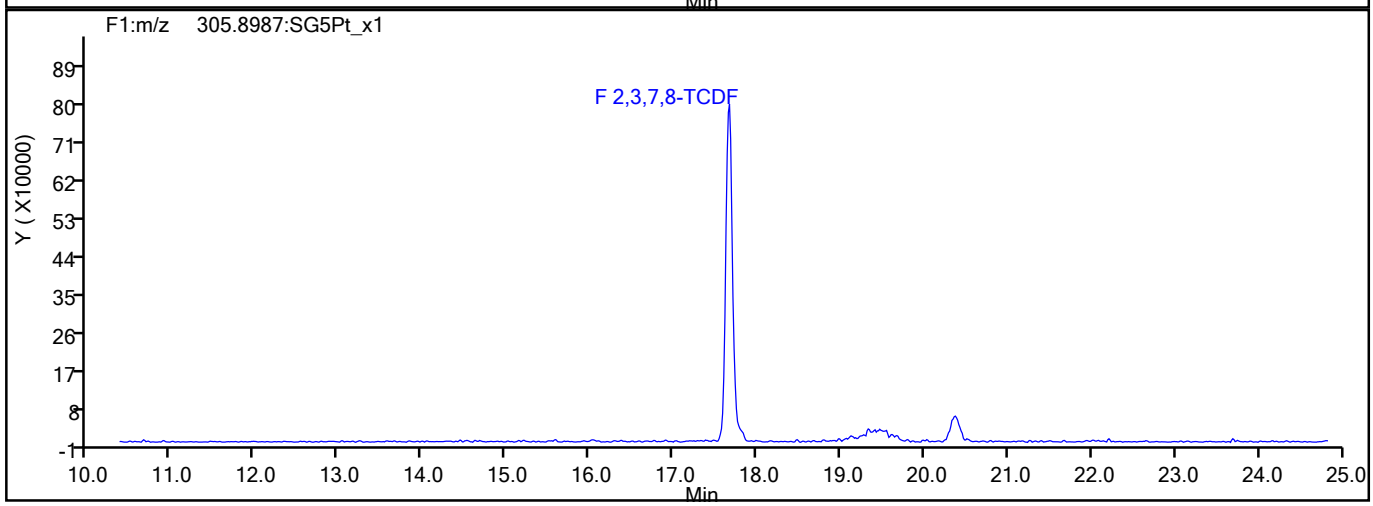

TCDF Interference Mass

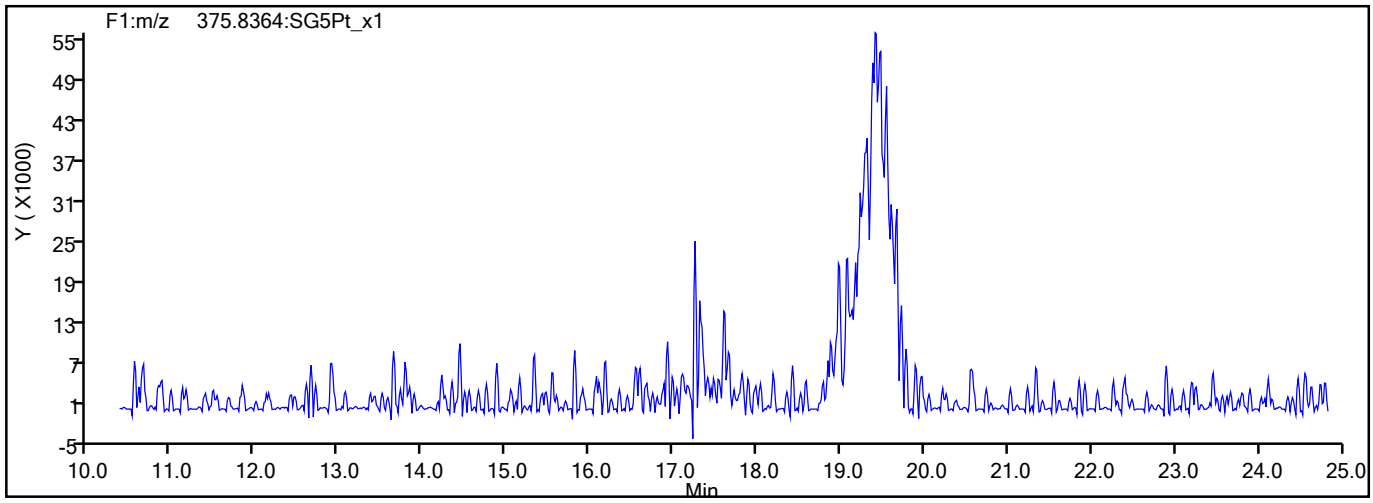

781385

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

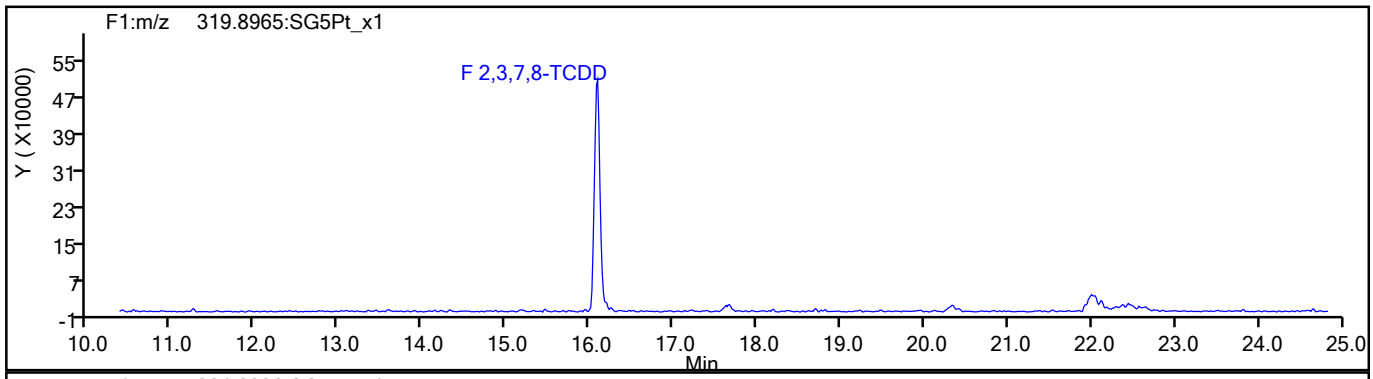

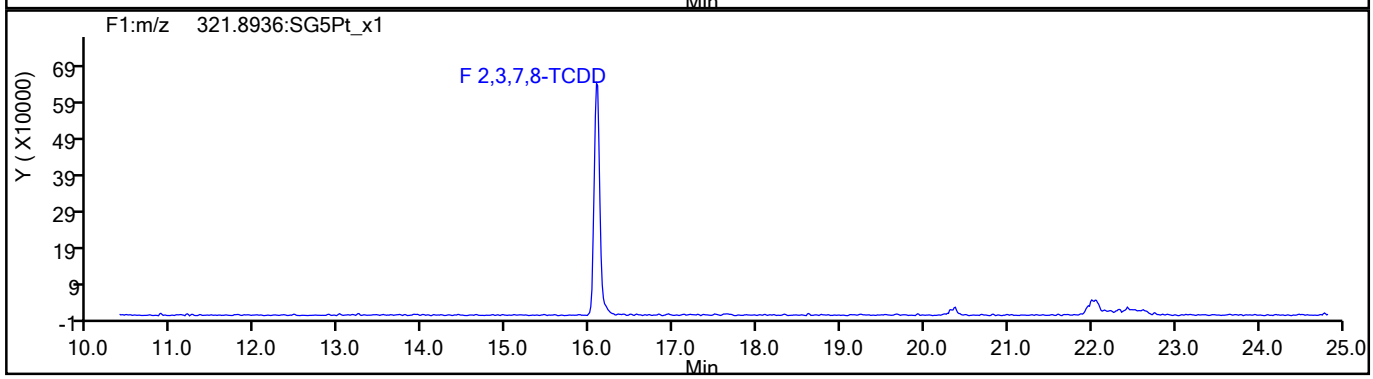

TCDD Standards

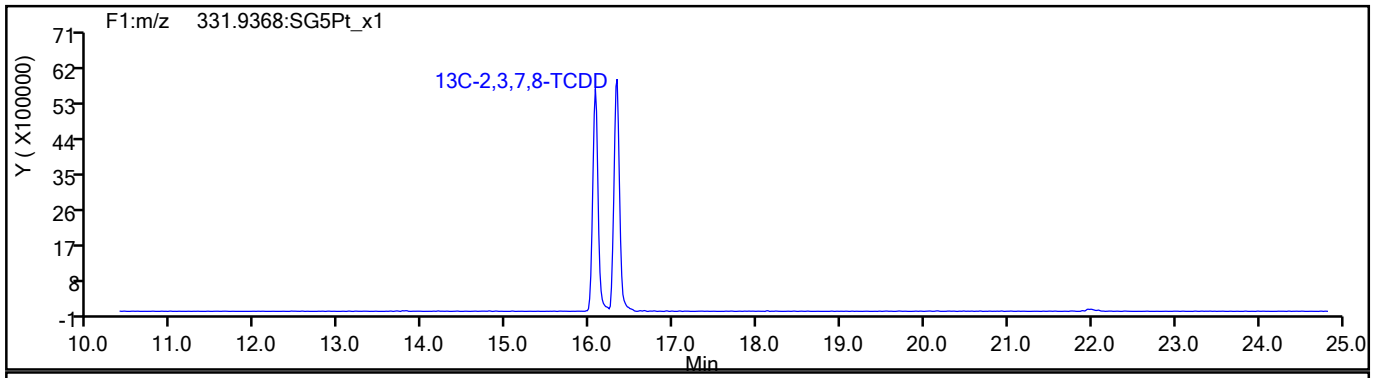

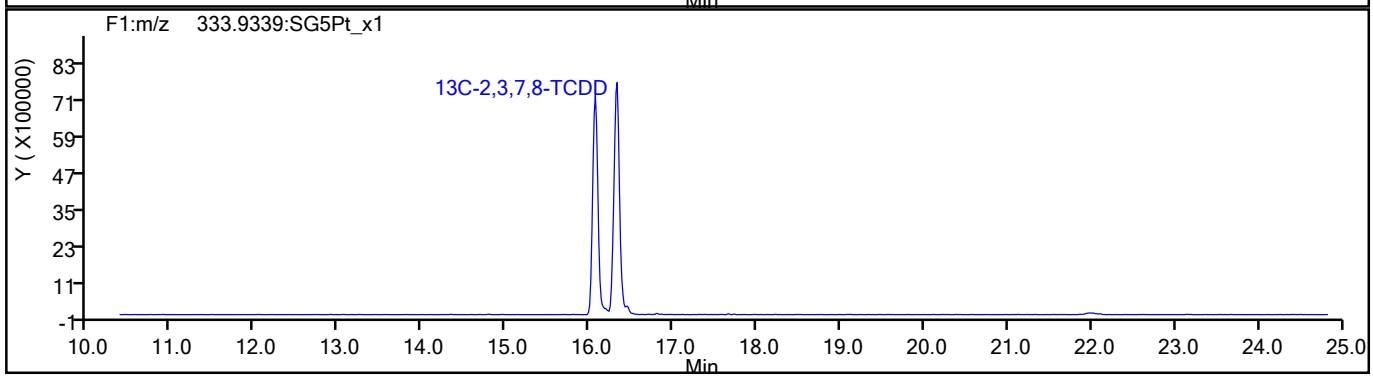

781386

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

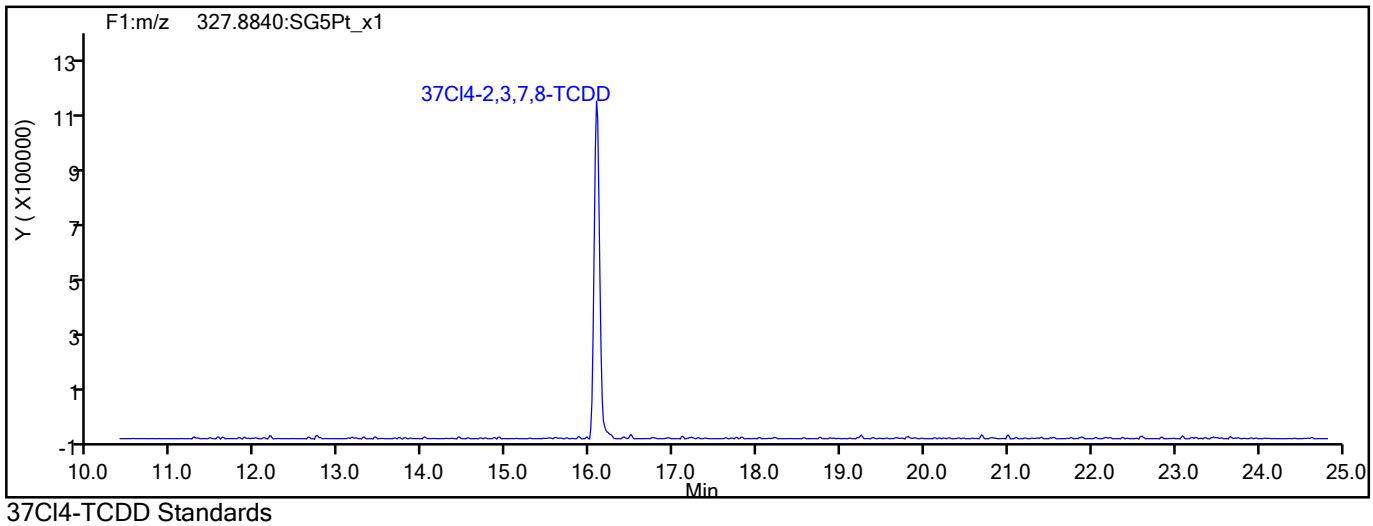

37Cl4-TCDD Standards

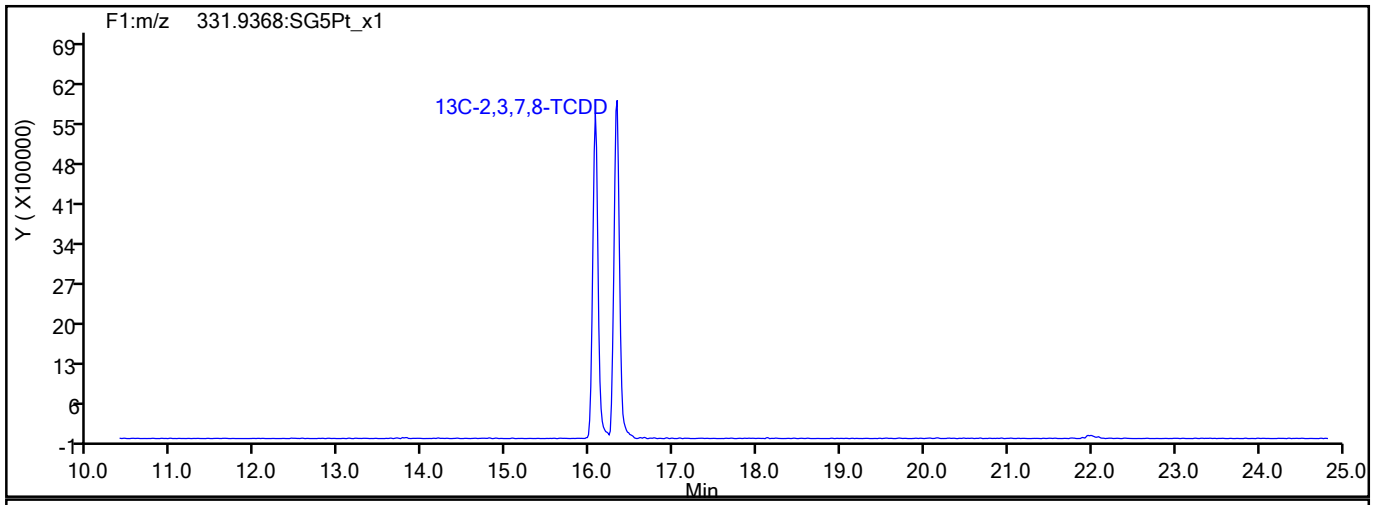

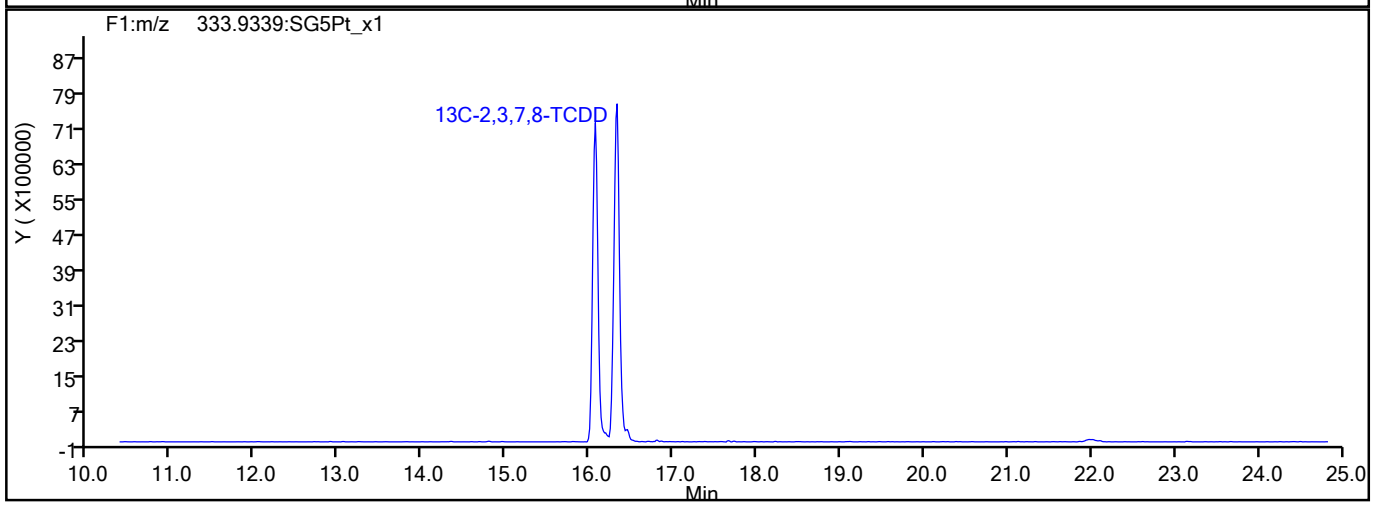

781387

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

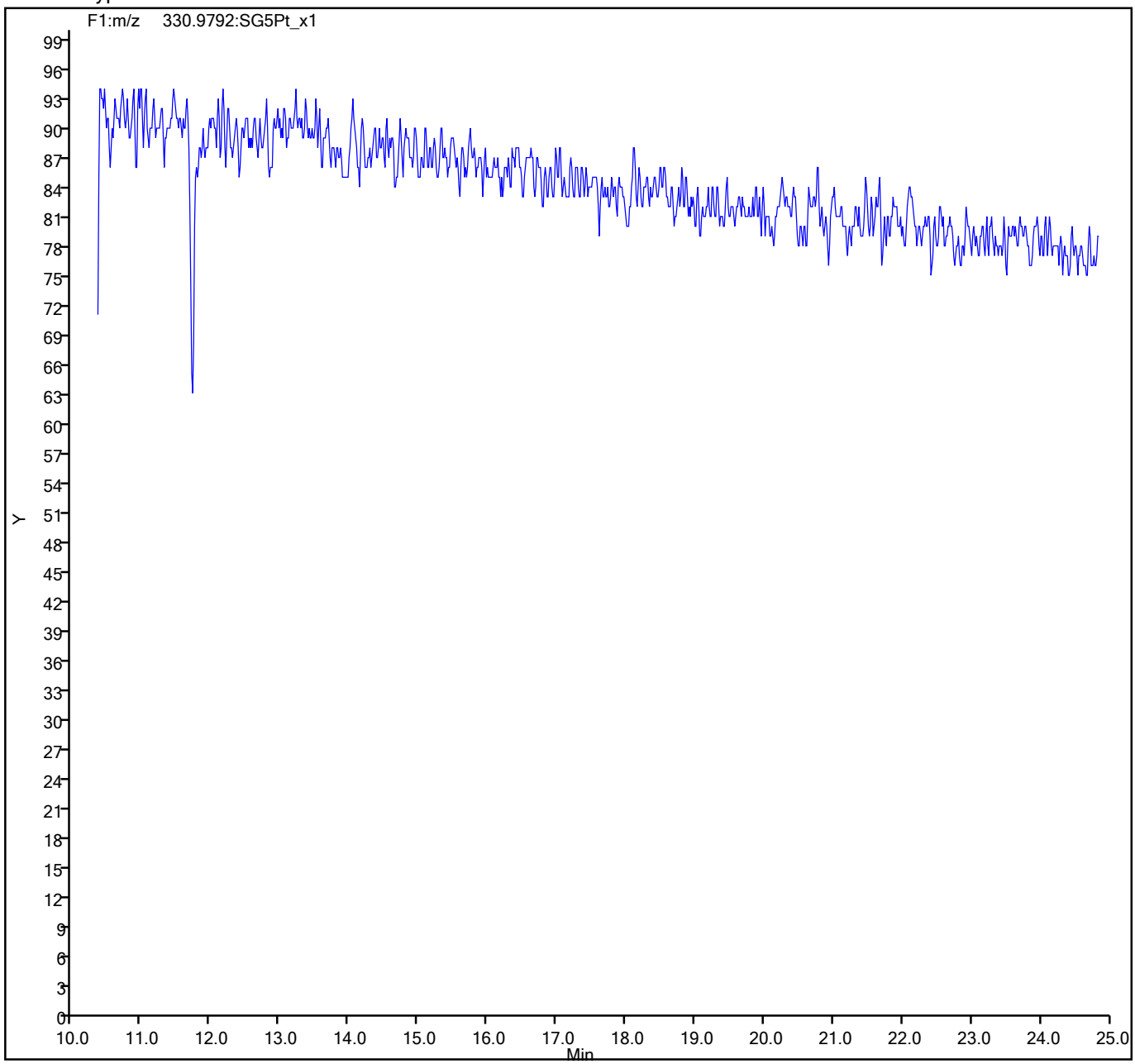

781388

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

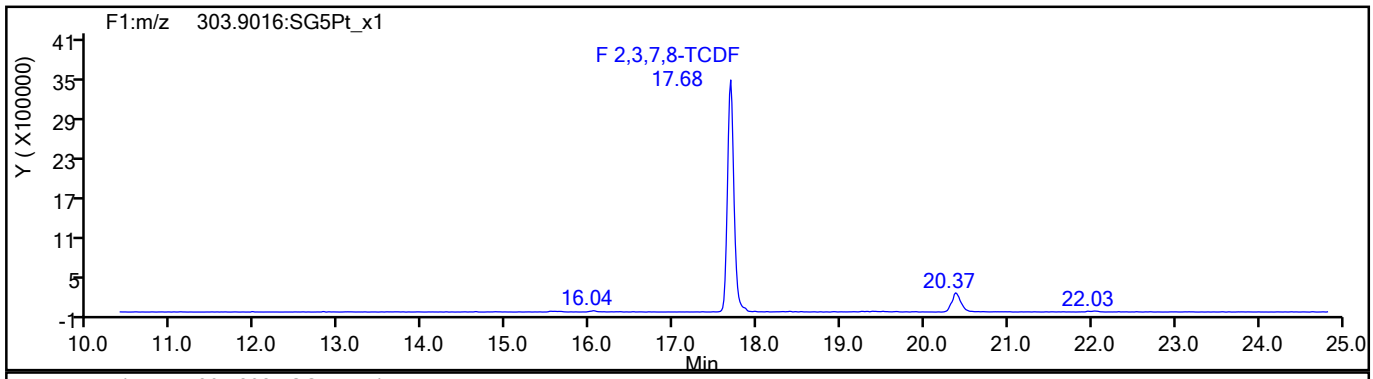

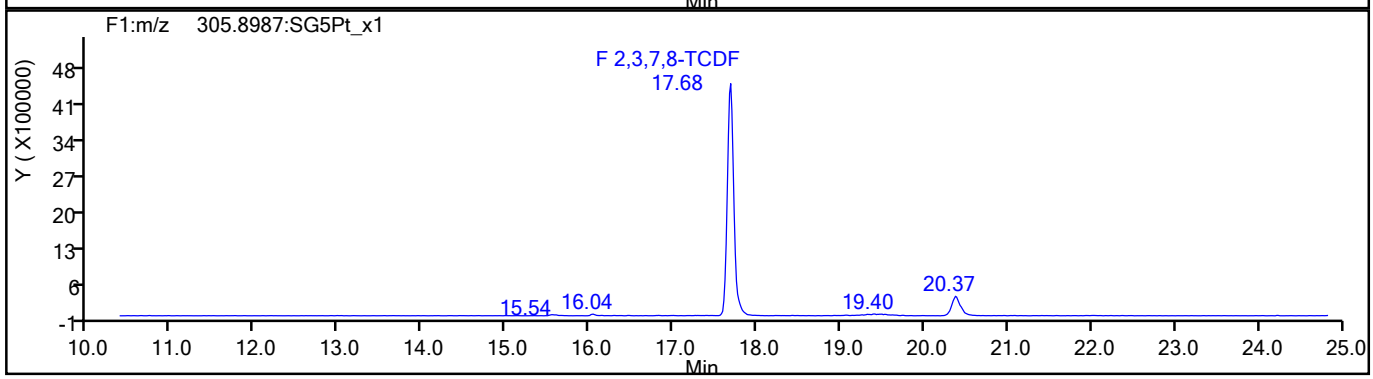

TCDF Standards

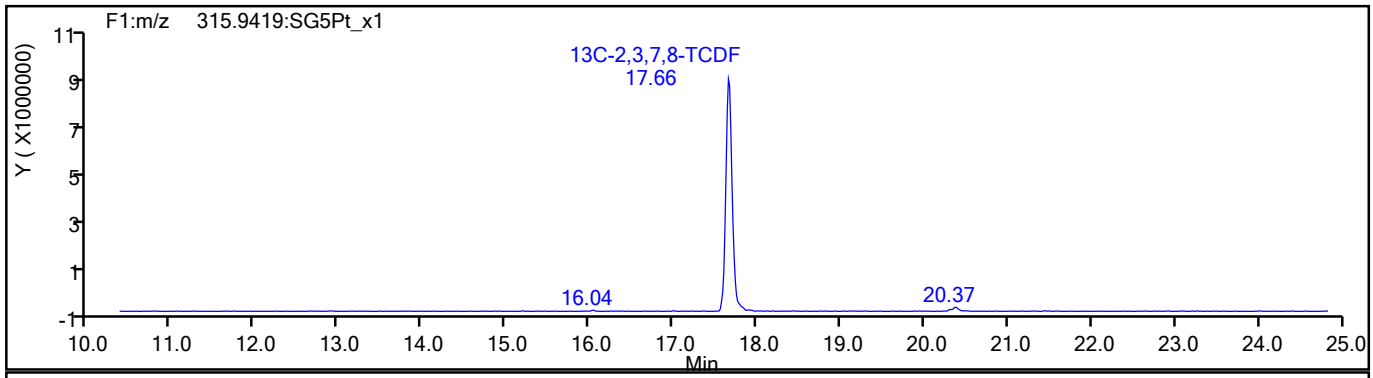

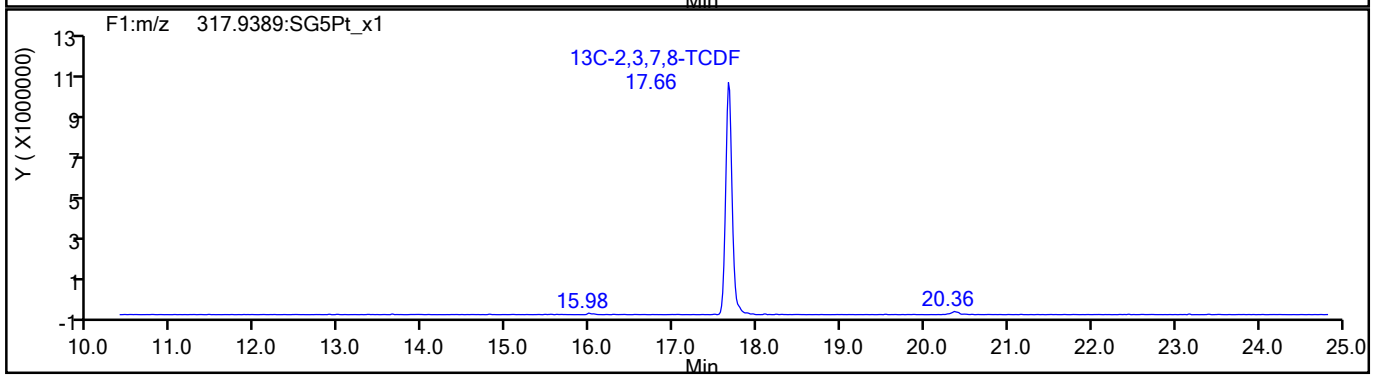

781391

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

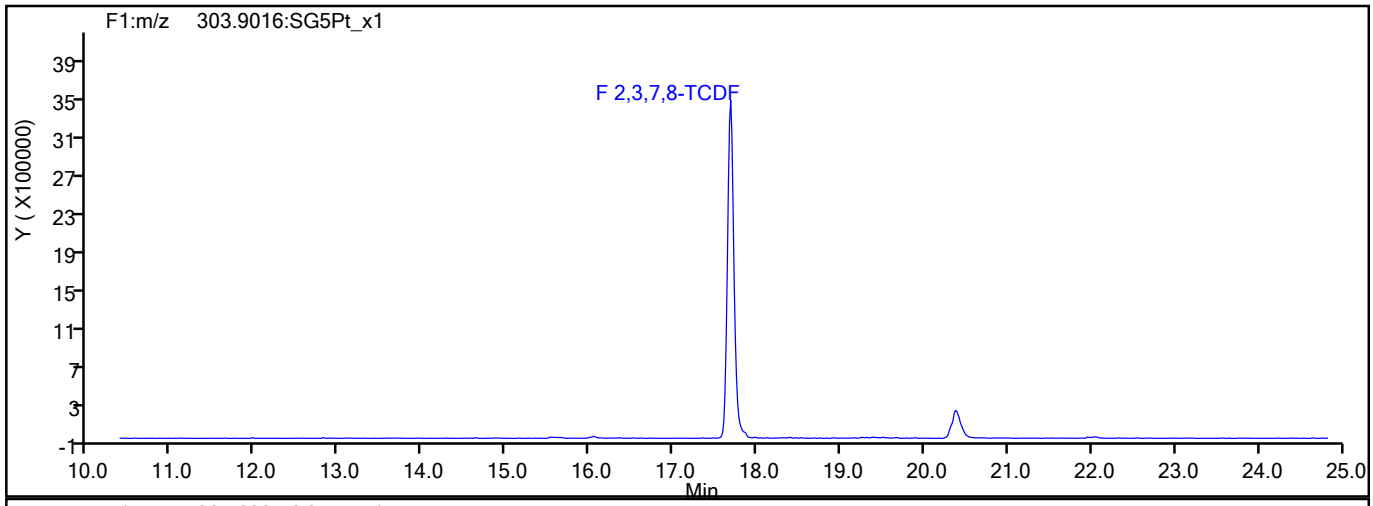

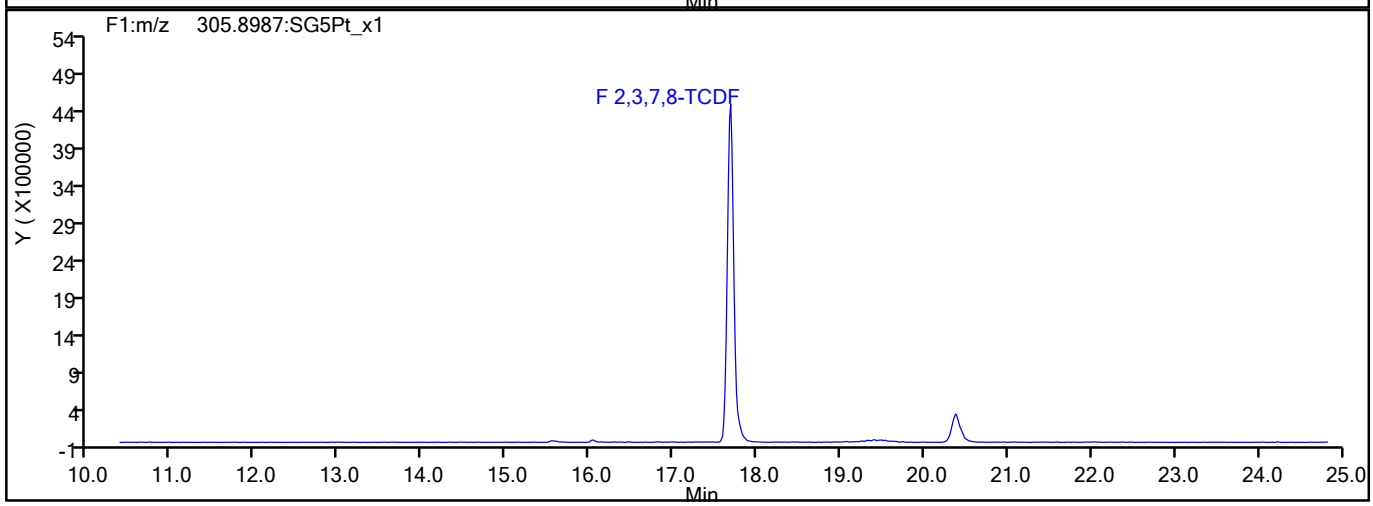

TCDF Interference Mass

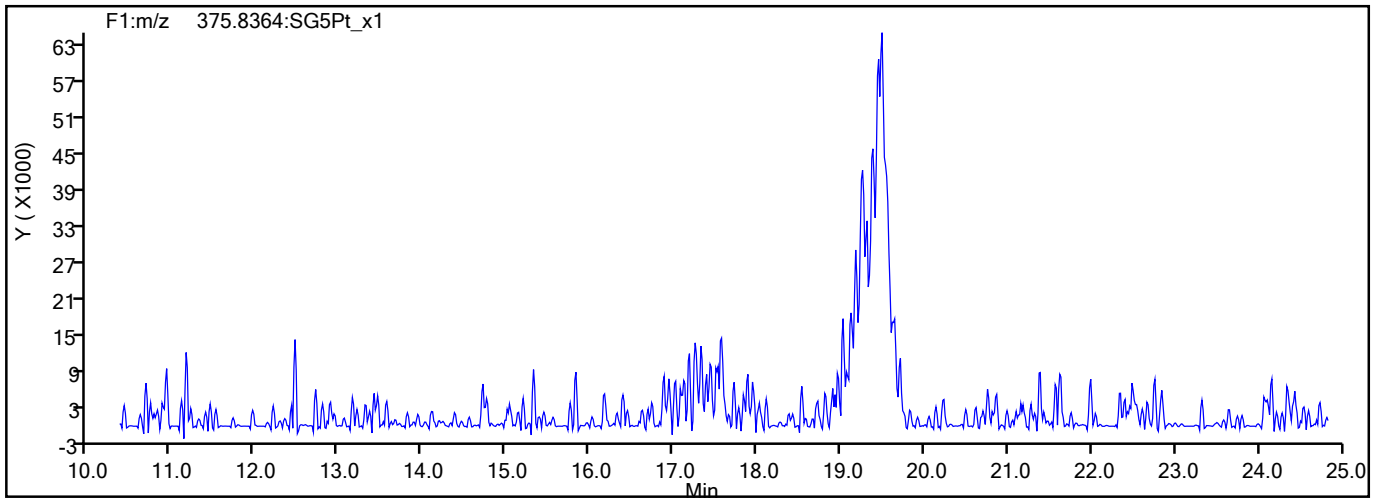

781392

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

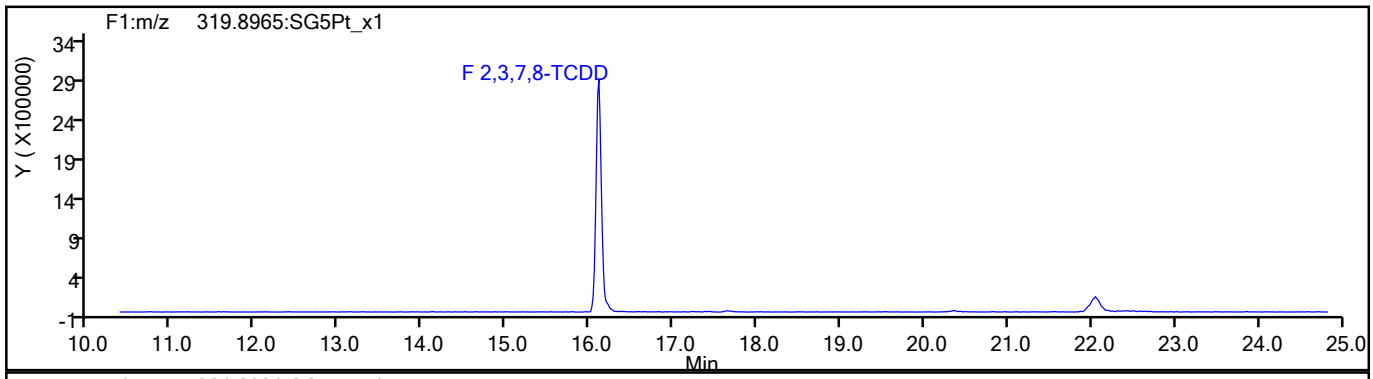

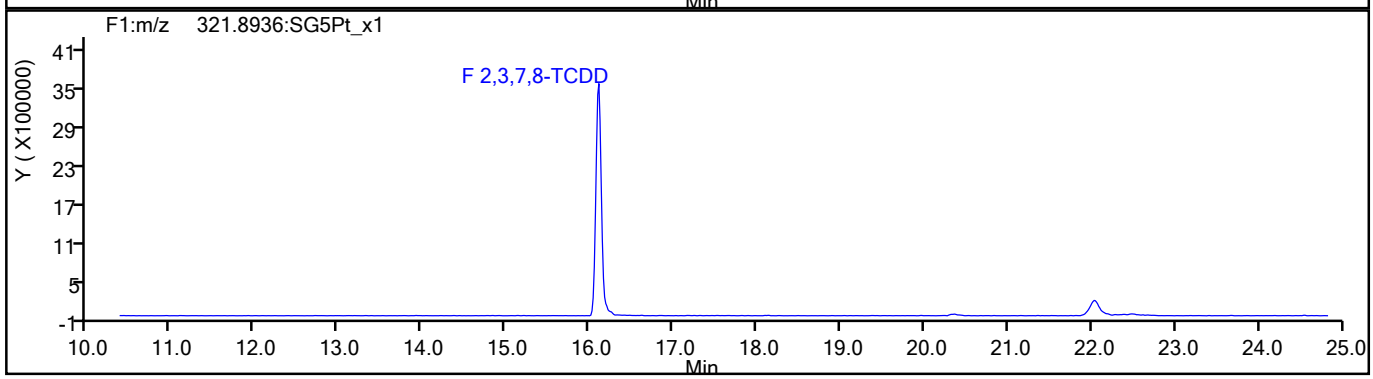

TCDD Standards

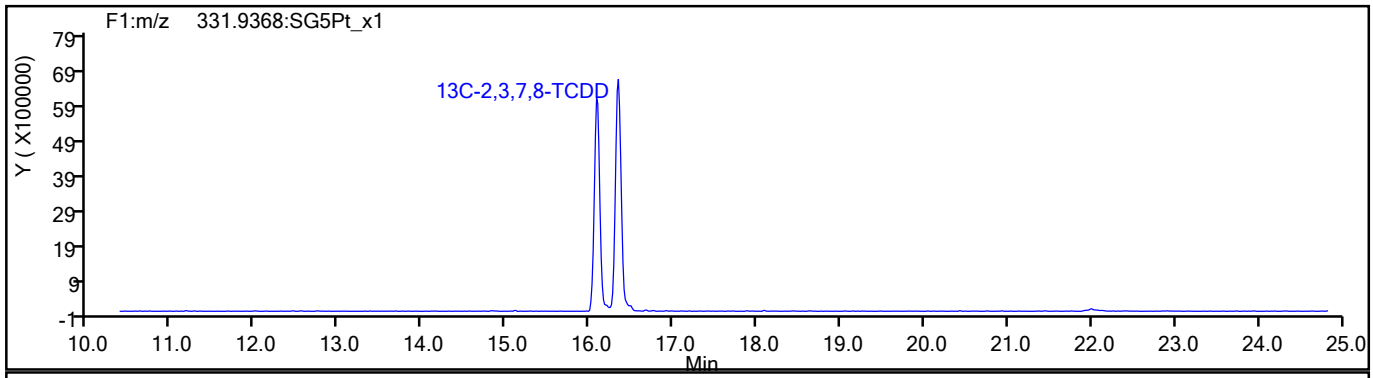

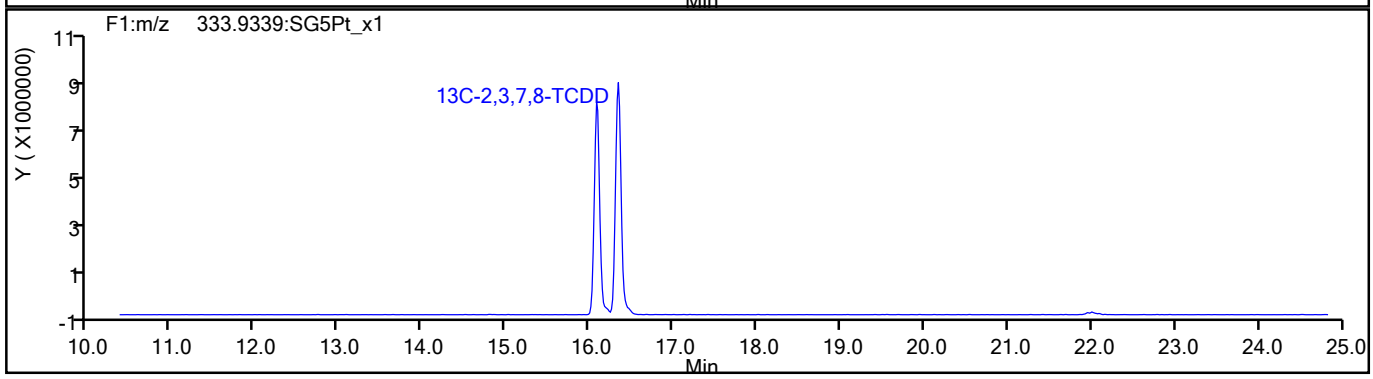

781393

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

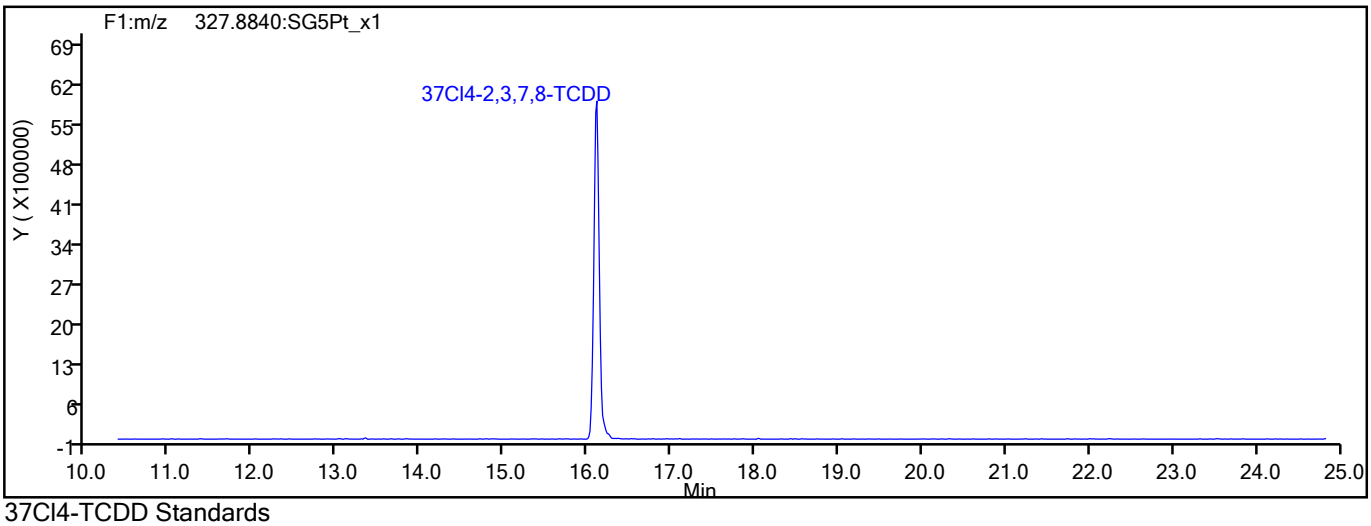

37Cl4-TCDD Standards

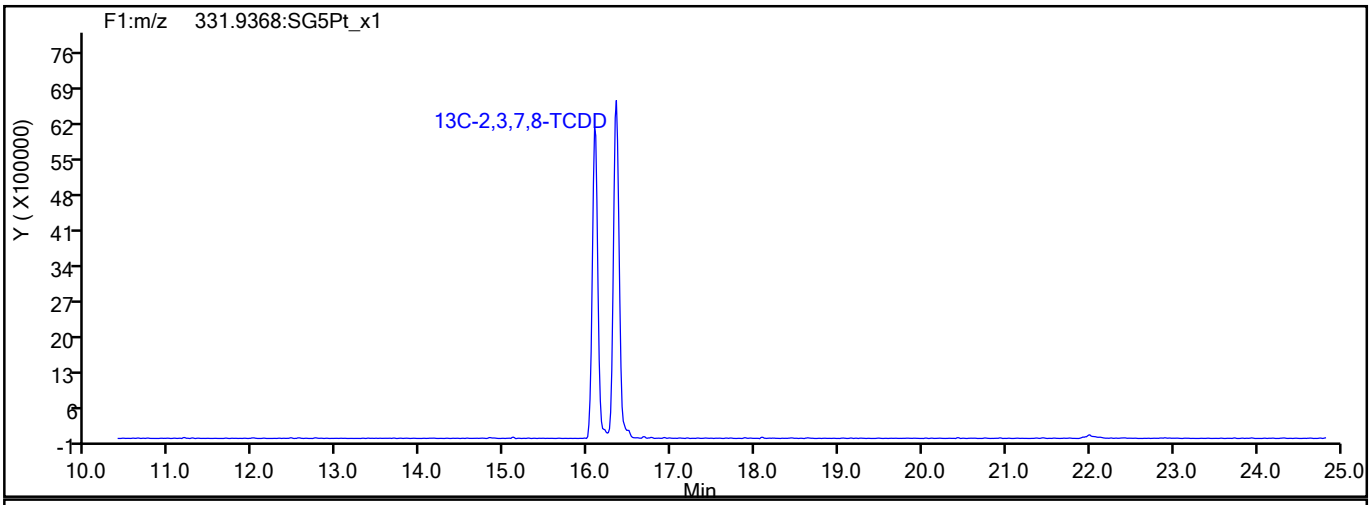

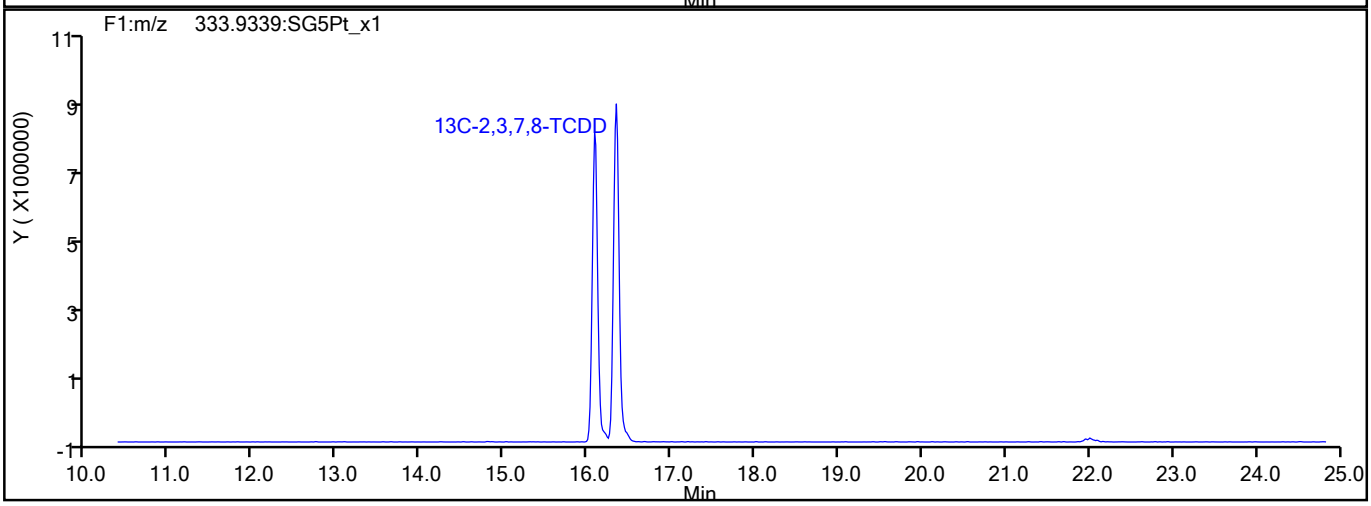

781394

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

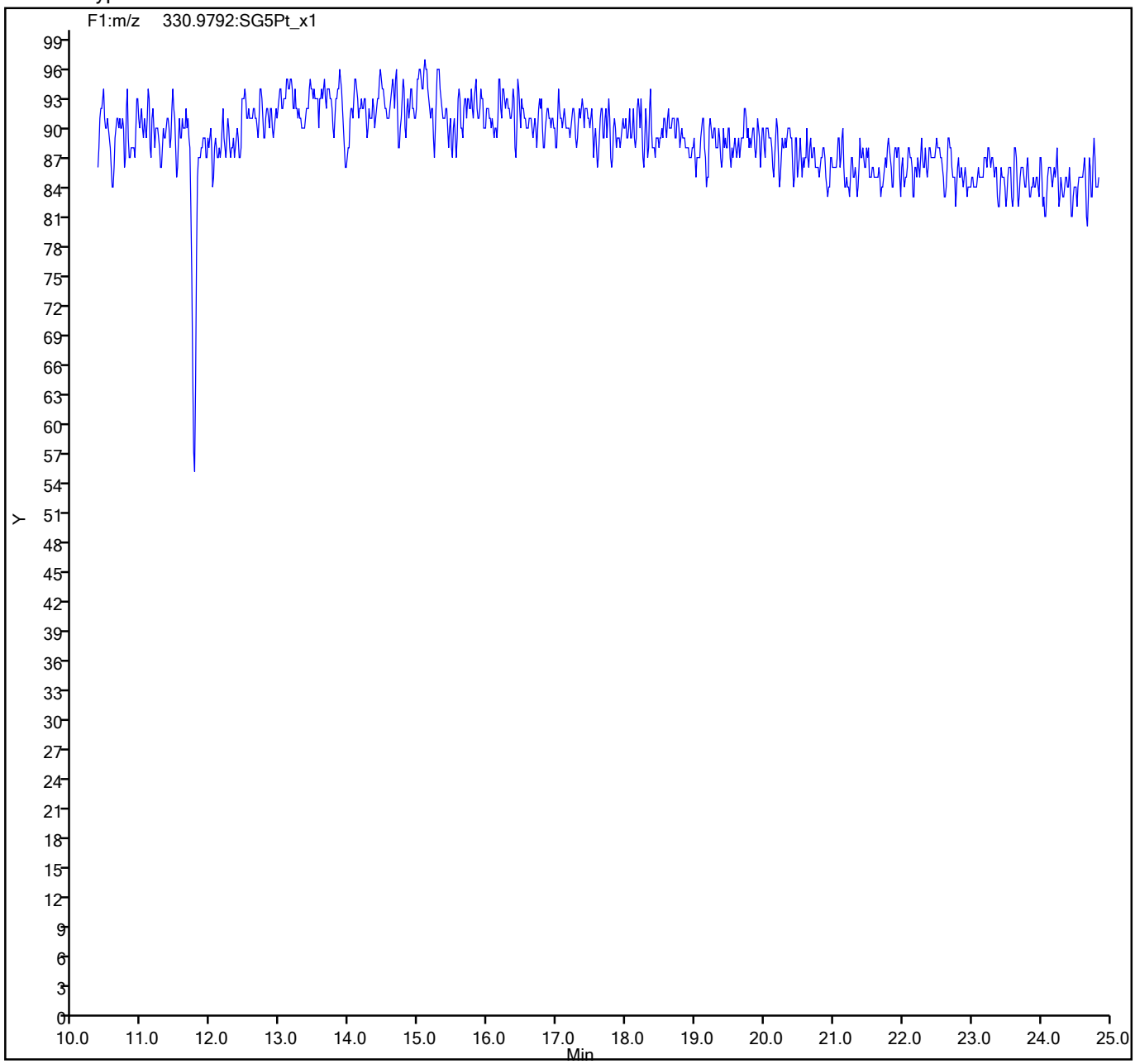

781395

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

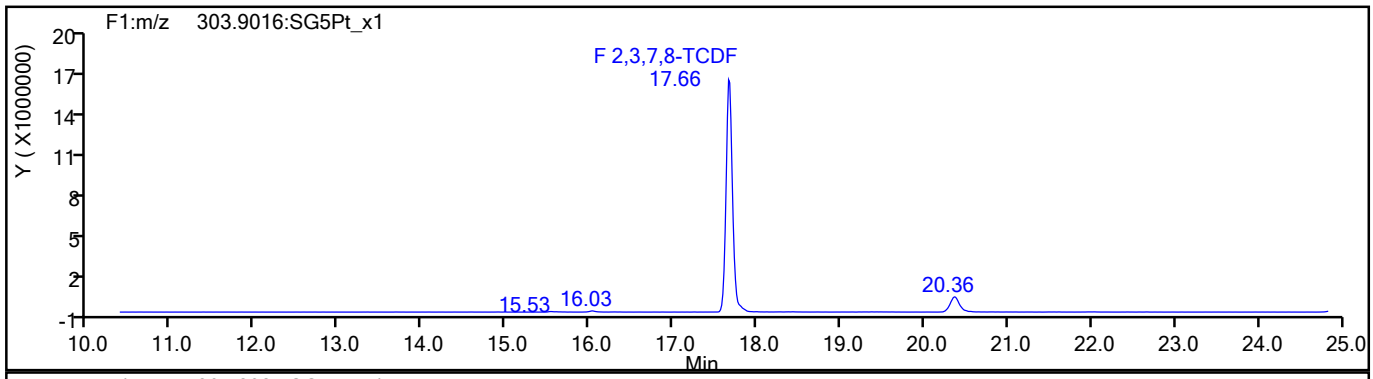

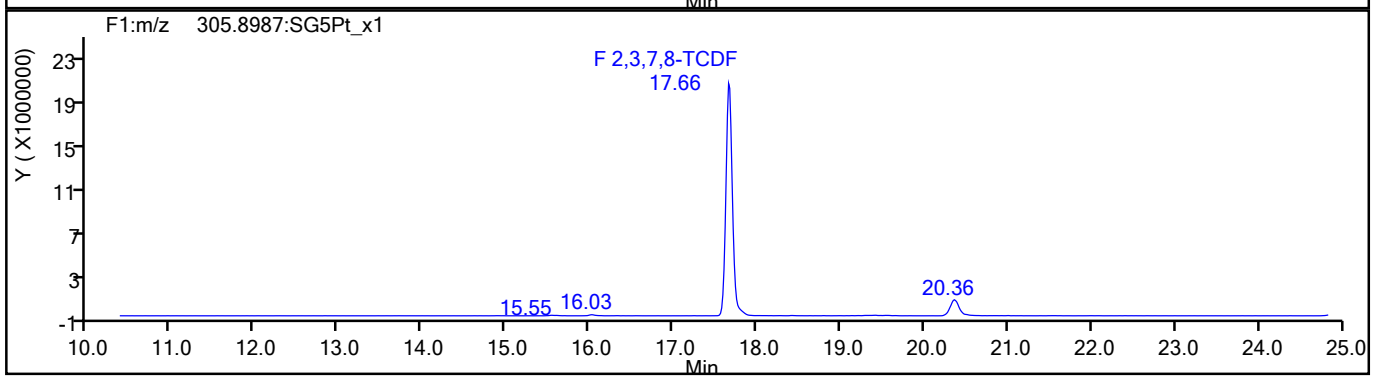

TCDF Standards

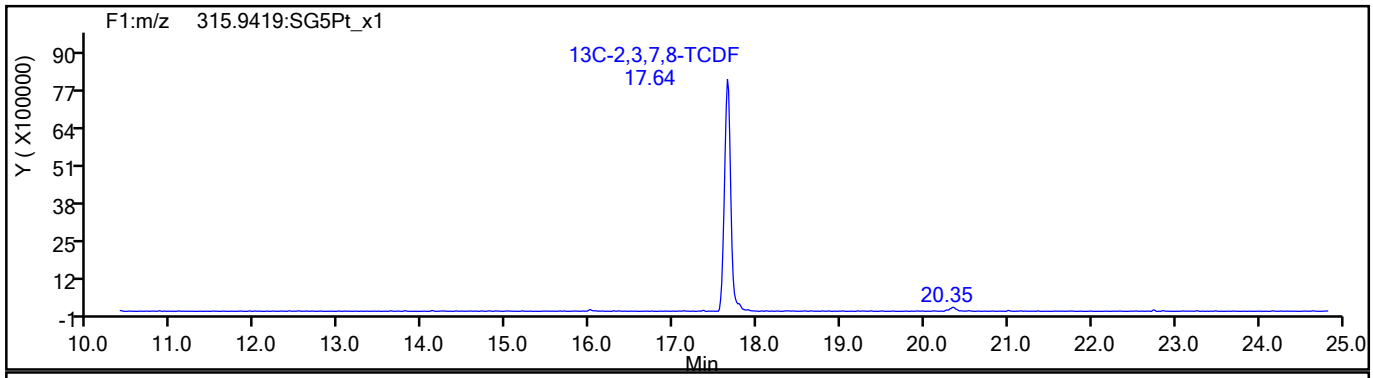

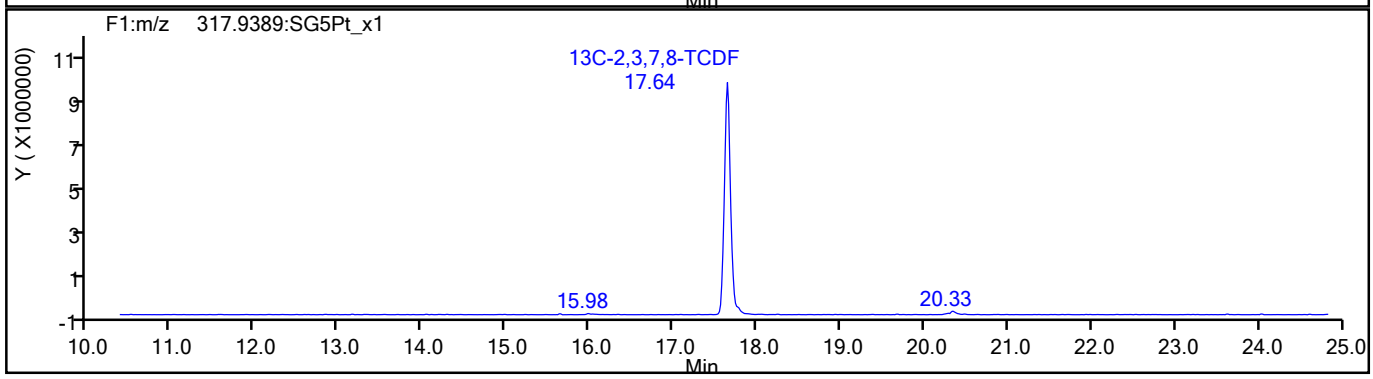

781398

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

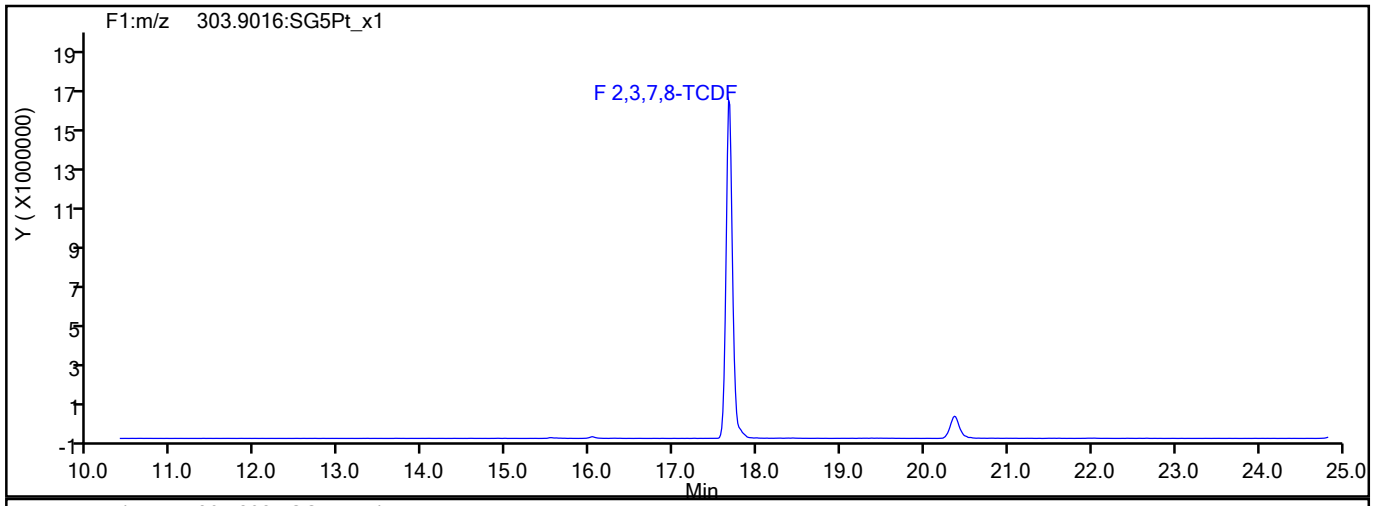

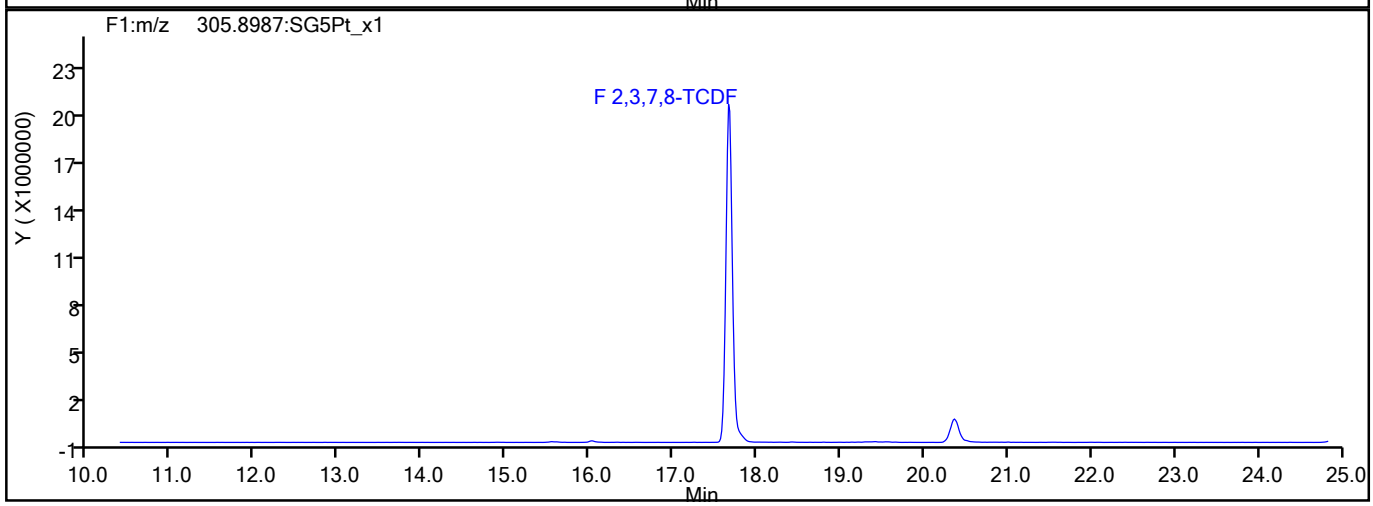

TCDF Interference Mass

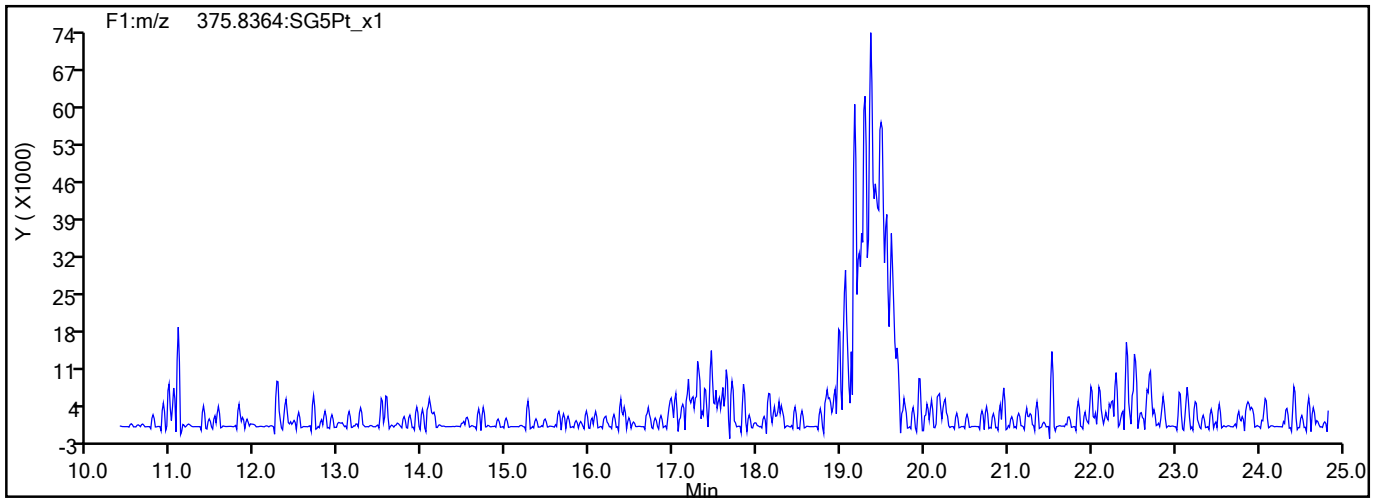

781399

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

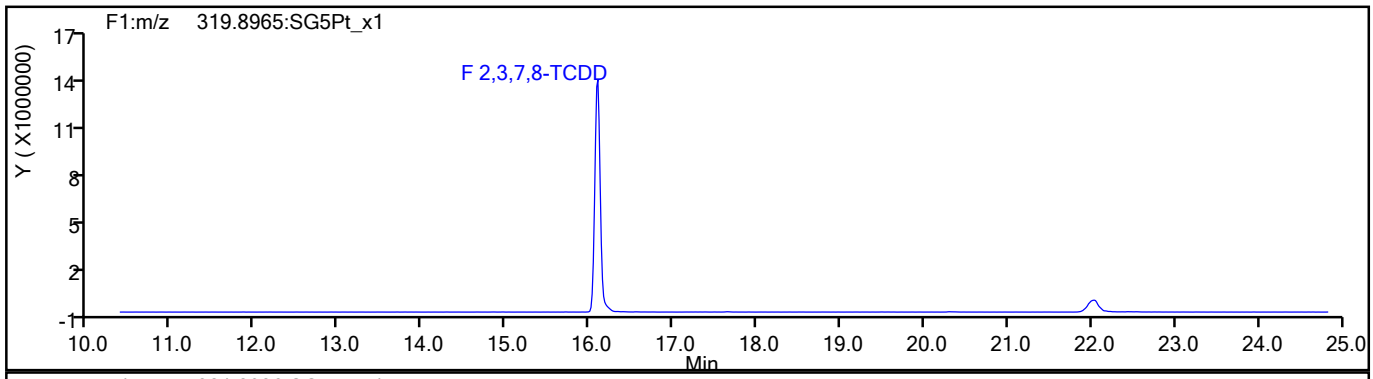

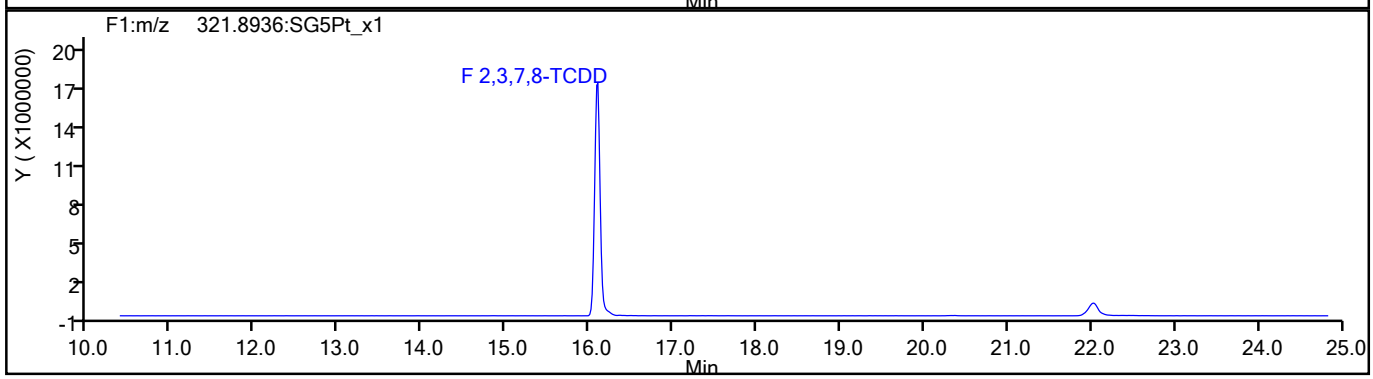

TCDD Standards

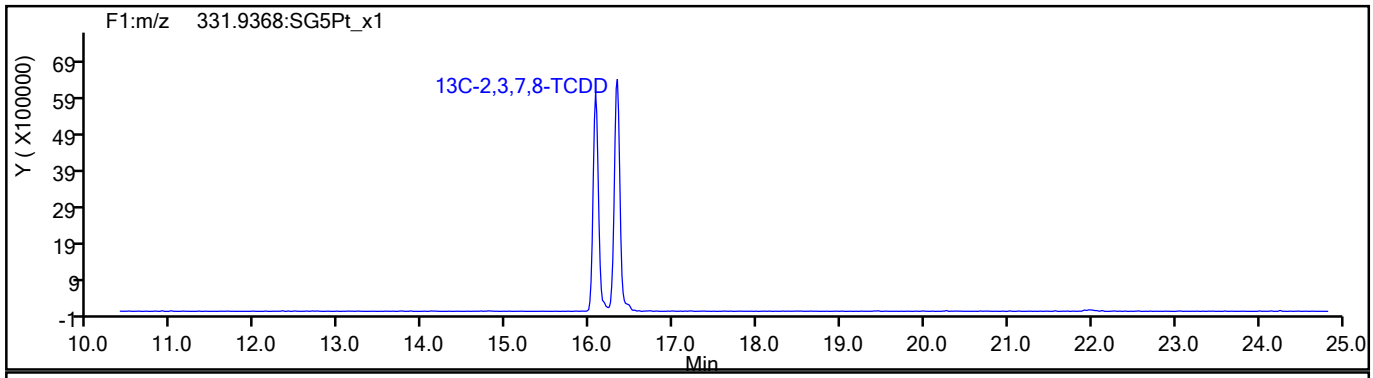

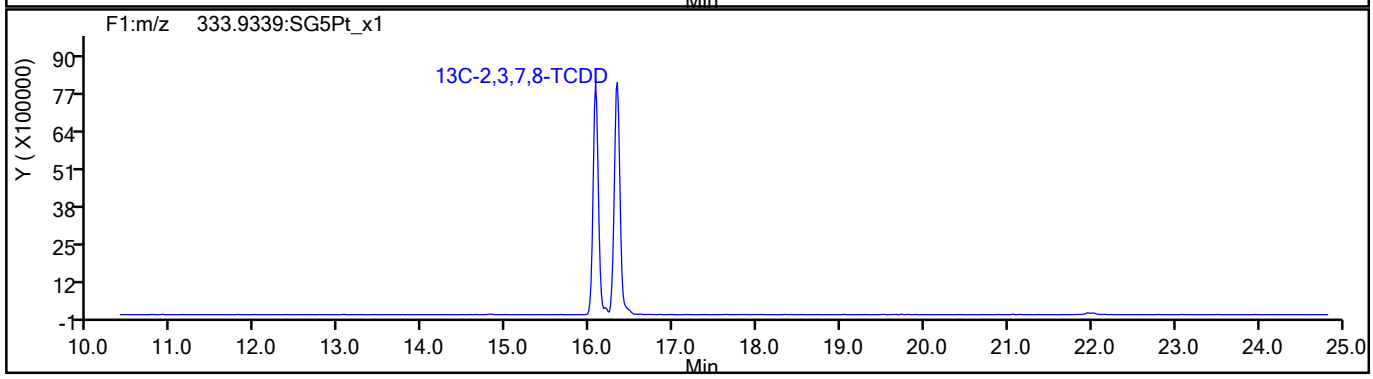

781400

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

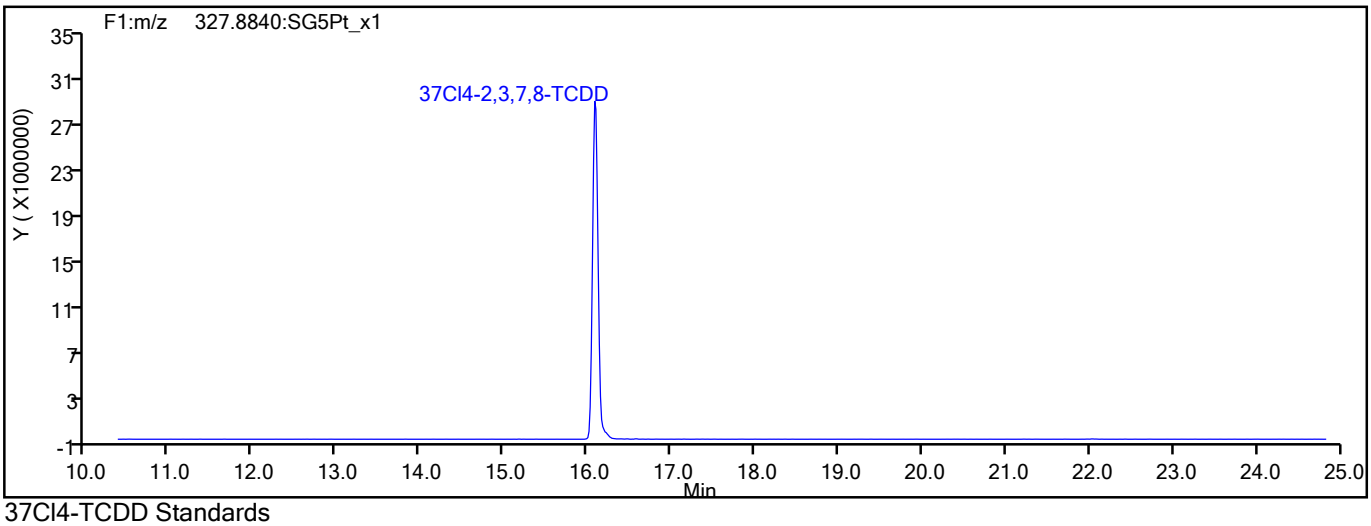

37Cl4-TCDD Standards

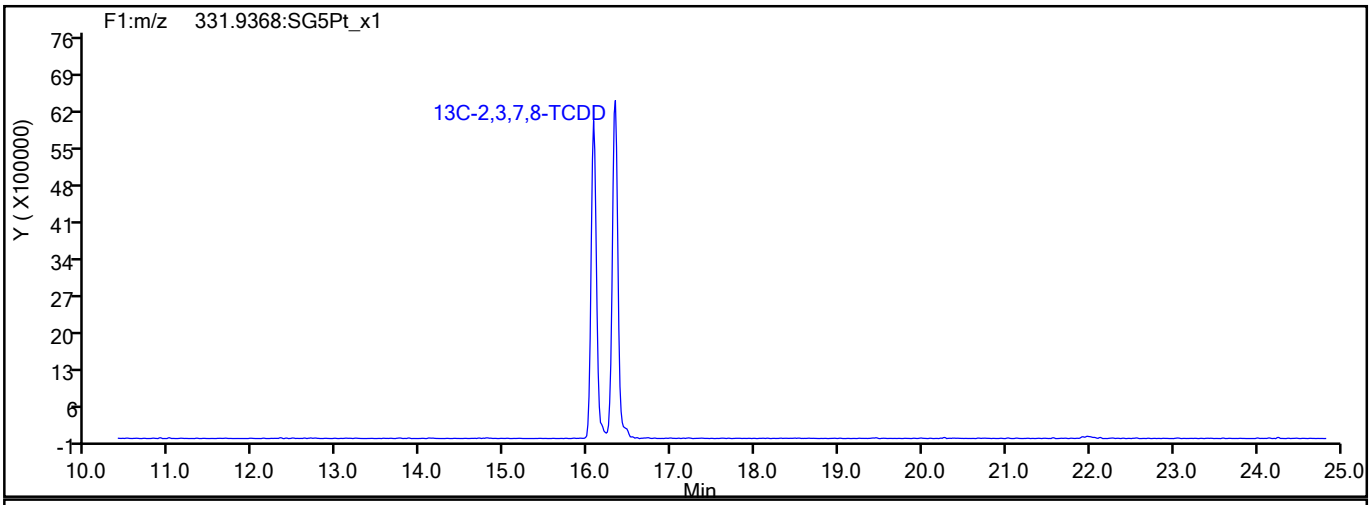

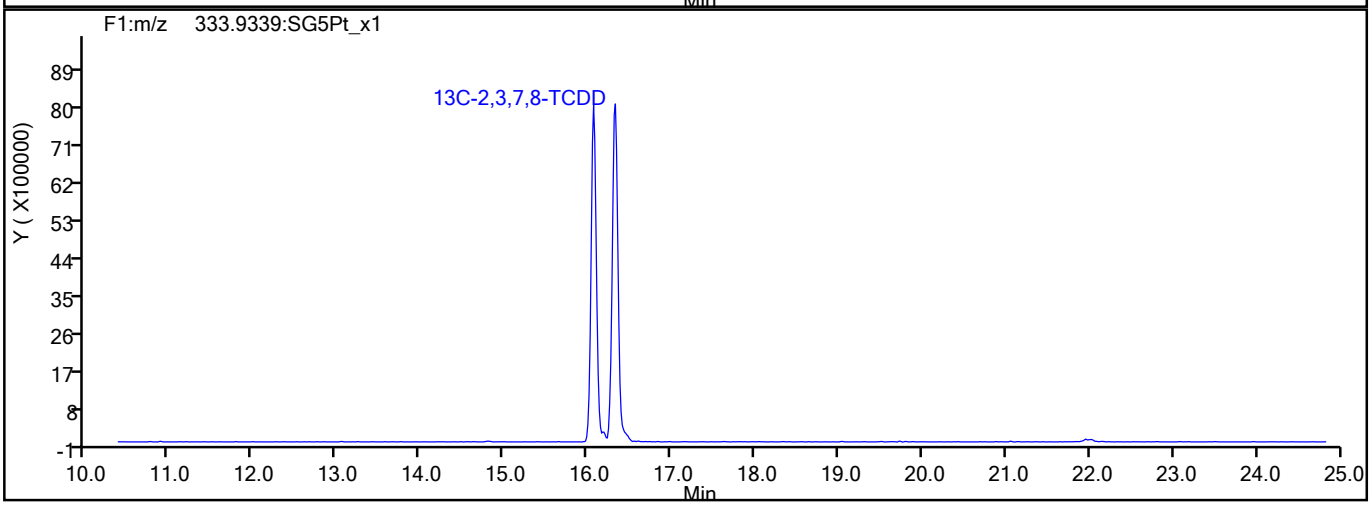

781401

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

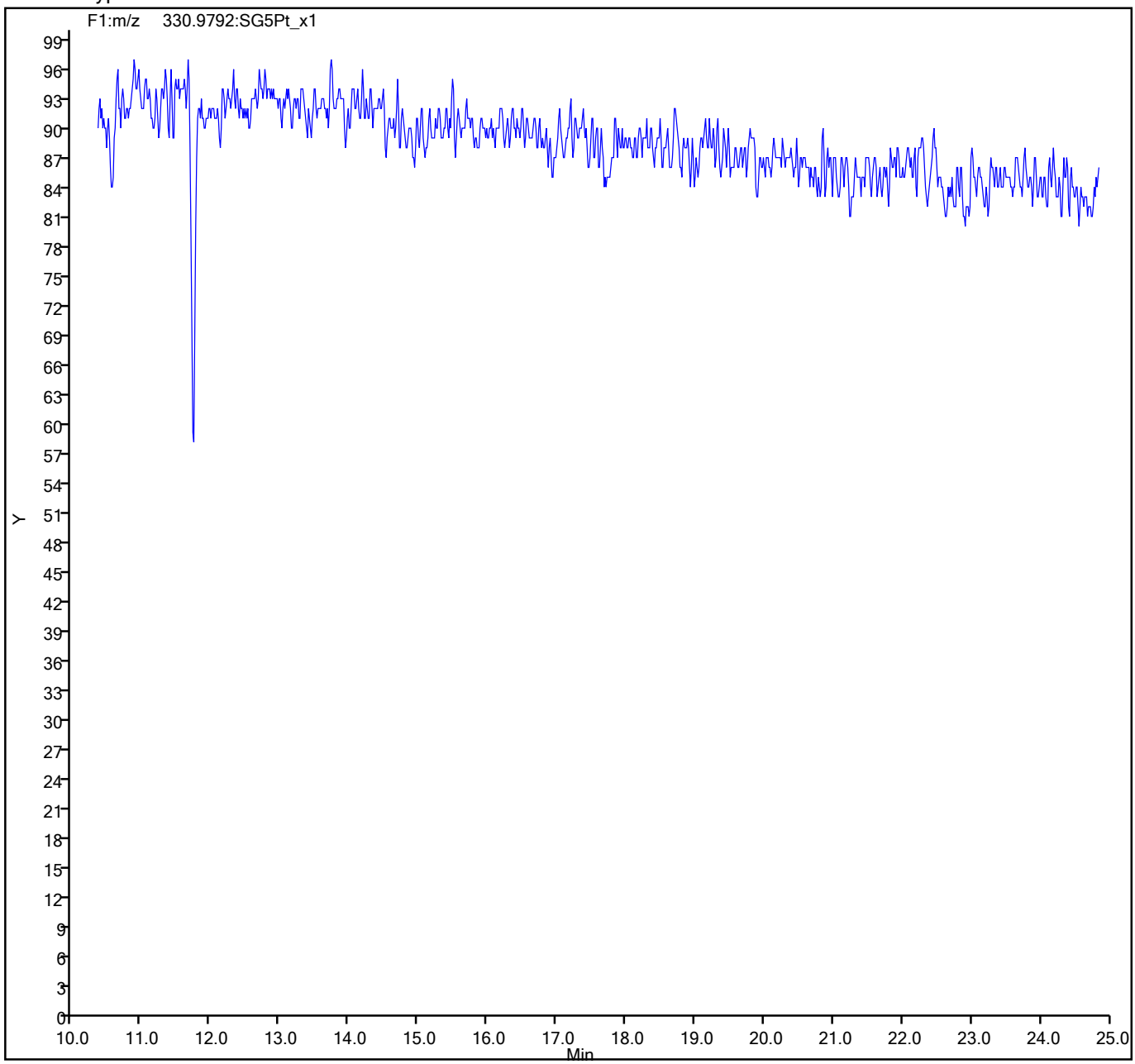

781402

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

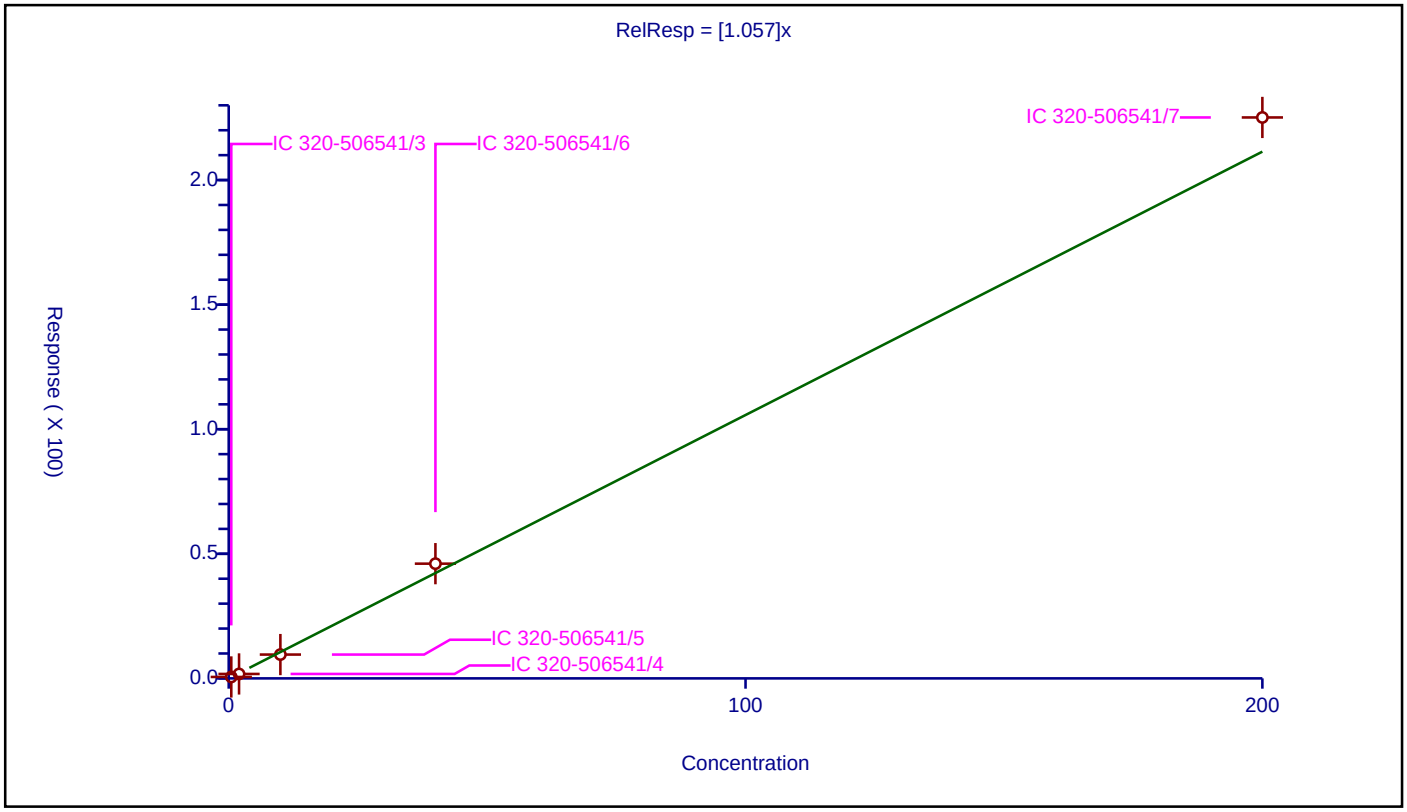

781403

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

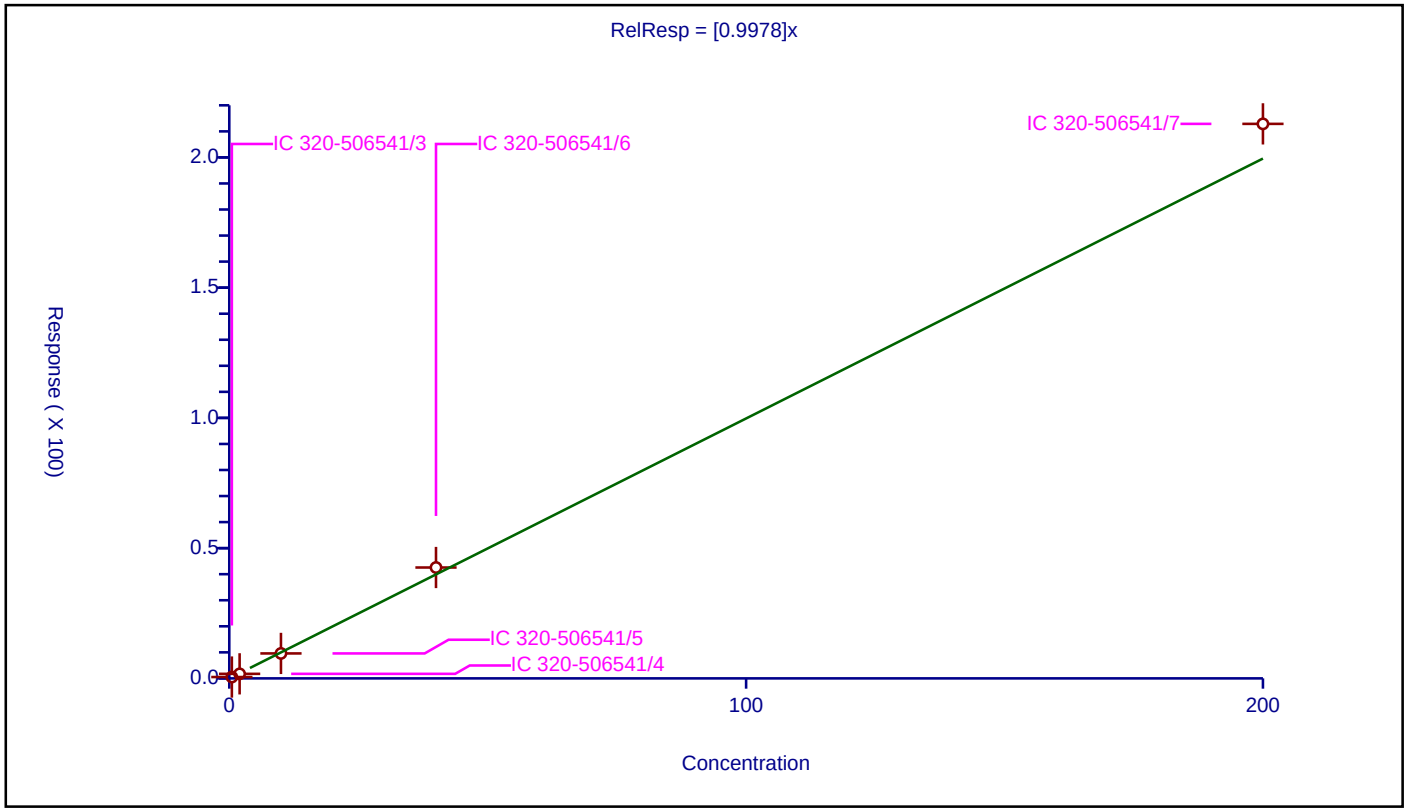

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

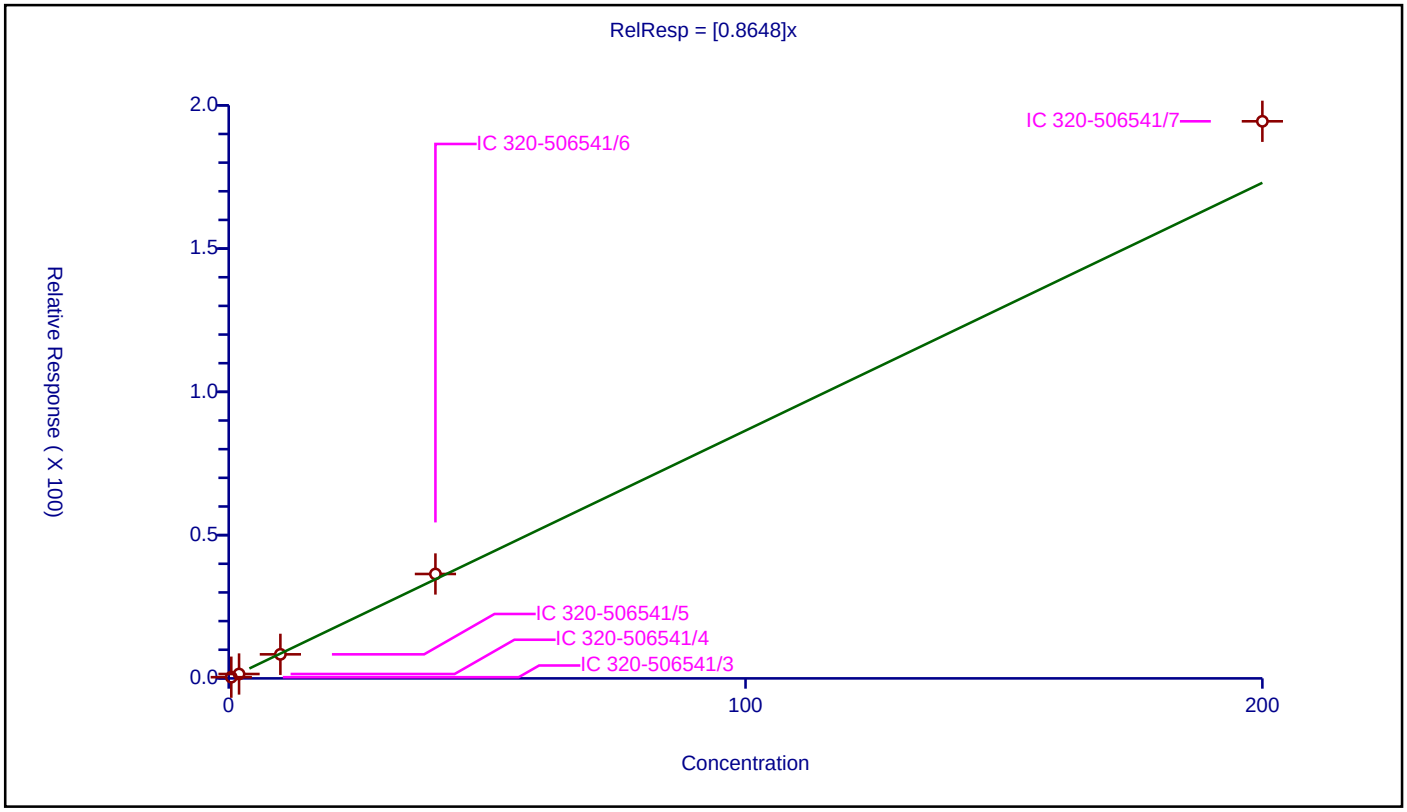

781405

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

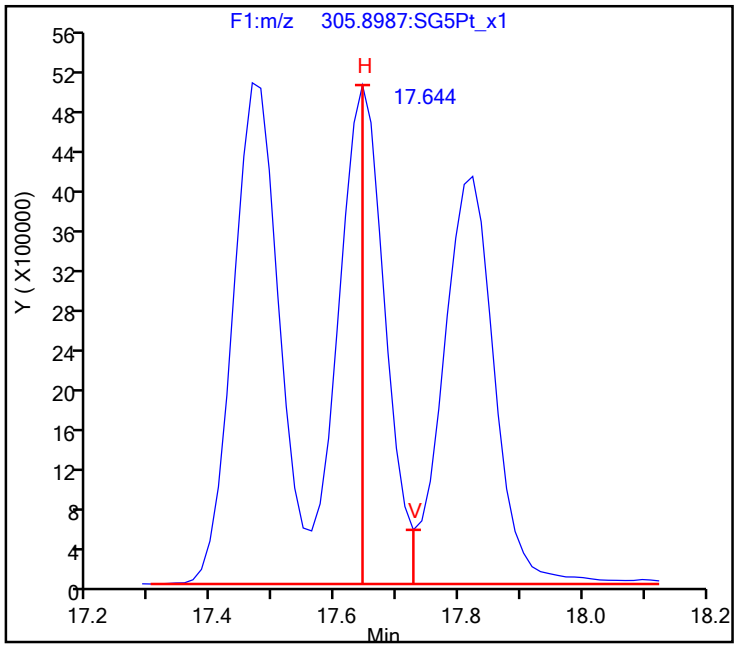

781407

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab Sample ID (1): WDM 320-510264/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 07/26/2021 09:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.34	18

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d				
Injection Date:	26-Jul-2021 09:21:58	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 725696
H (Peak Height) = 4136533

%R = 18 <= 25
Passed

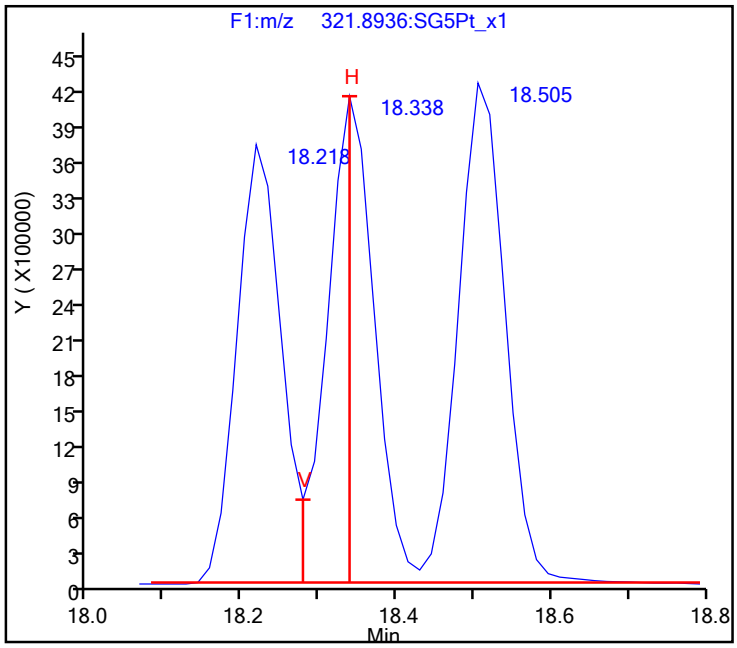

781409

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab Sample ID (1): WDM 320-516836/2 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/14/2021 02:11

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.07	23

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d				
Injection Date:	14-Aug-2021 02:11:22	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	DB	ALS Bottle#:	1	Worklist Smp#:	2
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1558048
H (Peak Height) = 6795883

%R = 23 <= 25
Passed

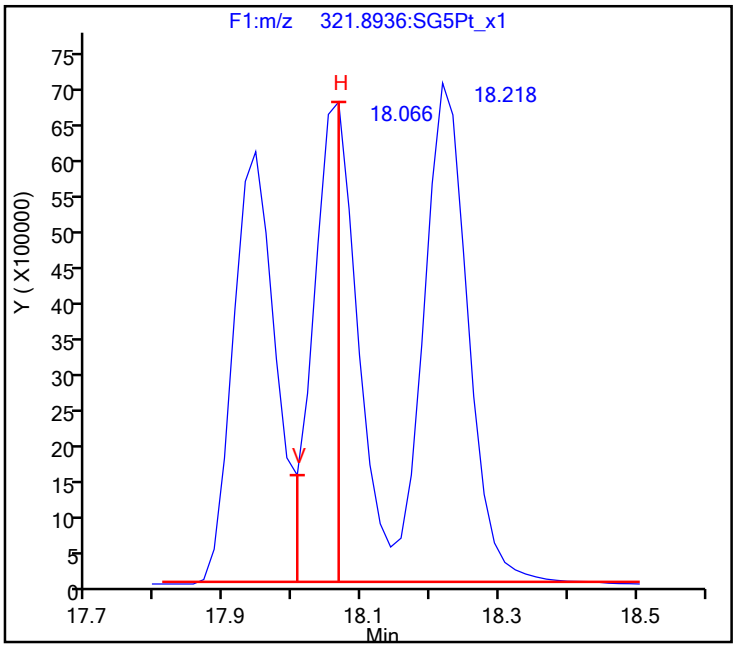

781411

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab Sample ID (1): WDM 320-516846/16 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/14/2021 13:01

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.07	22

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d				
Injection Date:	14-Aug-2021 13:01:34	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	DB	ALS Bottle#:	1	Worklist Smp#:	16
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1403660
H (Peak Height) = 6293129

%R = 22 <= 25
Passed

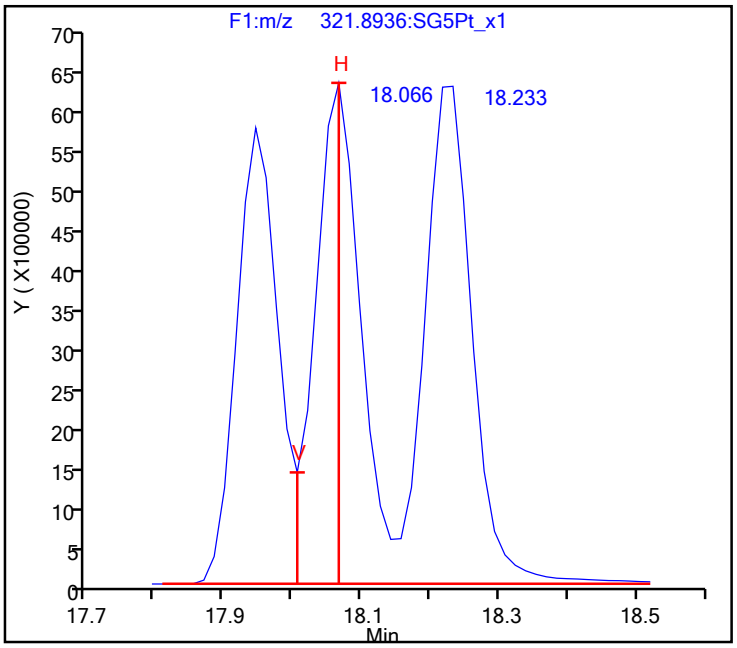

781413

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab Sample ID (1): CPS 320-518958/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/23/2021 09:32

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.67	13

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d				
Injection Date:	23-Aug-2021 09:32:15	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 147170
H (Peak Height) = 1128470

%R = 13 <= 25
Passed

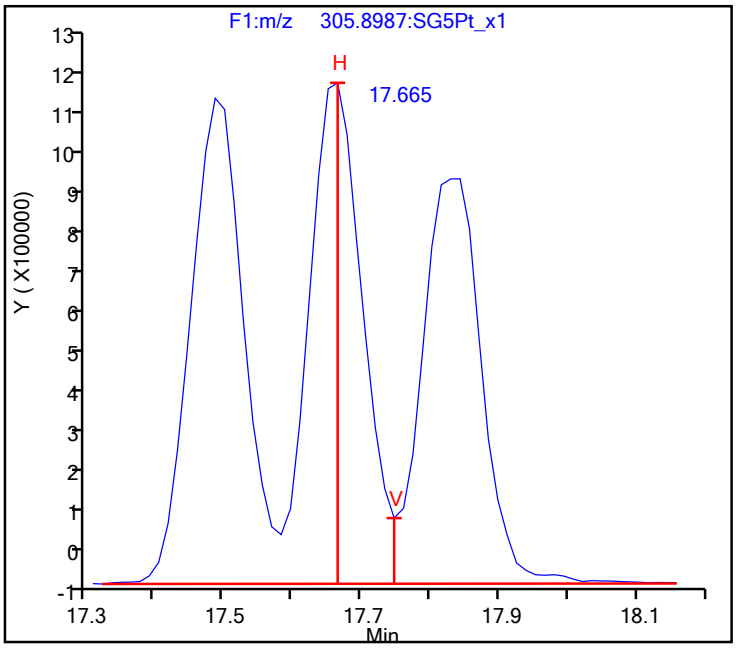

781415

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab Sample ID (1): CPS 320-518979/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/23/2021 15:34

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	13

Report Date: 24-Aug-2021 09:19:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d				
Injection Date:	23-Aug-2021 15:34:18	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 472819
H (Peak Height) = 3579908

%R = 13 <= 25
Passed

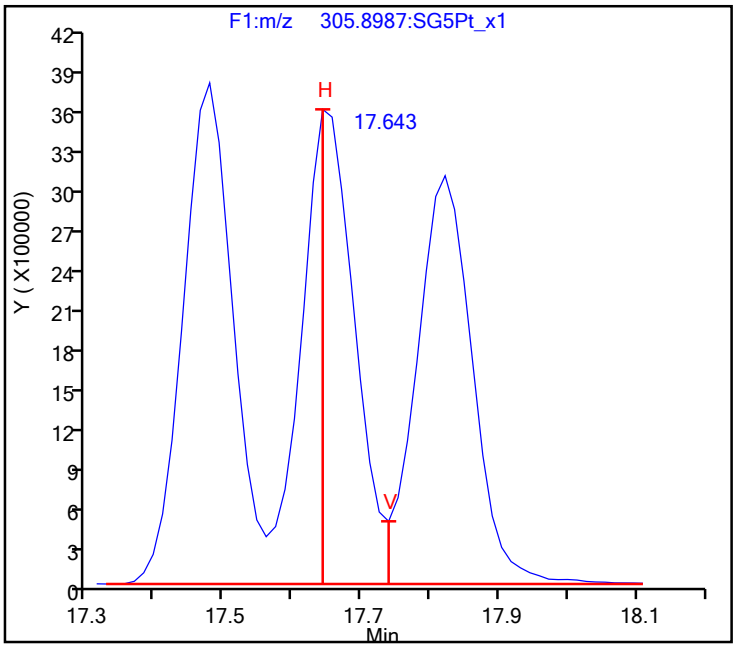

781417

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab Sample ID: ICV 320-510264/9 Calibration Date: 07/26/2021 15:31

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 26JL2110D5_9.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.105		43.2	40.0	108	70-130
2,3,7,8-TCDD	AveID	1.254	1.380		44.0	40.0	110	70-130
1,2,3,7,8-PeCDF	AveID	1.061	1.081		204	200	102	70-130
2,3,4,7,8-PeCDF	AveID	1.018	1.151		226	200	113	70-130
1,2,3,7,8-PeCDD	AveID	1.048	1.044		199	200	100	70-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.128		208	200	104	70-130
1,2,3,6,7,8-HxCDF	AveID	1.126	1.227		218	200	109	70-130
2,3,4,6,7,8-HxCDF	AveID	1.168	1.283		220	200	110	70-130
1,2,3,4,7,8-HxCDD	AveID	1.064	1.151		216	200	108	70-130
1,2,3,6,7,8-HxCDD	AveID	1.000	1.082		216	200	108	70-130
1,2,3,7,8,9-HxCDD	AveID	1.133	1.182		209	200	104	70-130
1,2,3,7,8,9-HxCDF	AveID	1.166	1.200		206	200	103	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.576		219	200	109	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.167		213	200	107	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.373		209	200	104	70-130
OCDD	AveID	1.107	1.211		438	400	109	70-130
OCDF	AveID	1.438	1.574		438	400	109	70-130
13C-2,3,7,8-TCDF	Ave	1.625	1.611		99.2	100	99	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9123		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.236		102	100	102	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.300		105	100	105	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7764		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.089		101	100	101	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.093		96.9	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.036		97.4	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7216		98.4	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8697		98.8	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9447		97.6	100	98	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7492		96.9	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6354		98.2	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7065		101	100	101	77-129
13C-OCDD	Ave	0.4472	0.4464		200	200	100	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.177		42.5	40.0	106	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	55225241	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.598	88976883	0.79	1.6249	99.2	99.2	0.1479	0.1479	99.15	
2,3,7,8-TCDF	17.613	39324874	0.78	1.0239	43.2	43.2	0.0666	0.0666	108	
A Non-2,3,7,8-sub-TCDF	17.311	524958	0.77	1.0239	0.6411	0.5762	0.0666	0.3057		RQ
S Total TCDF					43.8	43.7	0.0666	0.0666		RQ
D 13C-2,3,7,8-TCDD	18.323	50383801	0.80	0.8993	101.4	101.4	0.1314	0.1314	101	
2,3,7,8-TCDD	18.338	27801852	0.78	1.2541	44.0	44.0	0.0443	0.0443	110	
$ 37Cl4-2,3,7,8-TCDD	18.338	26006351		1.1071	42.5	42.5	0.0388	0.0388	106	
A Non-2,3,7,8-sub-TCDD	17.772	551726	0.77	1.2541	0.8732	0.8732	0.0443	0.8732		
S Total TCDD					44.9	44.9	0.0443	0.0443		
D 13C-1,2,3,7,8-PeCDF	22.749	68252478	1.57	1.2101	102.1	102.1	0.2097	0.2097	102	
1,2,3,7,8-PeCDF	22.762	147560573	1.57	1.0611	203.7	203.7	0.7454	0.7454	102	
D 13C-2,3,4,7,8-PeCDF	24.126	71797373	1.60	1.2395	104.9	104.9	0.2047	0.2047	105	
2,3,4,7,8-PeCDF	24.153	165293469	1.59	1.0184	226.1	226.1	0.7930	0.7930	113	
A F1 PeCDFs	20.244						0.0162	0.0162		
A Non-2,3,7,8-sub-PeCDF	23.473	3443801	1.55	1.0398	4.730	4.730	0.7686	4.730		
S Total PeCDF					434.5	434.5	0.7692	0.7692		
D 13C-1,2,3,7,8-PeCDD	24.862	42878117	1.62	0.7612	102.0	102.0	0.1090	0.1090	102	
1,2,3,7,8-PeCDD	24.889	89555111	1.58	1.0484	199.2	199.2	0.2271	0.2271	99.61	
A Non-2,3,7,8-sub-PeCDD	23.744						0.2271	0.2271		
S Total PeCDD					199.2	199.2	0.2271	0.2271		
D 13C-1,2,3,4,7,8-HxCDF	30.836	62488487	0.52	1.0837	100.5	100.5	0.4386	0.4386	101	
1,2,3,4,7,8-HxCDF	30.849	141029922	1.22	1.0851	208.0	208.0	1.073	1.073	104	
D 13C-1,2,3,6,7,8-HxCDF	30.995	62719524	0.52	1.1279	96.9	96.9	0.4214	0.4214	96.91	
1,2,3,6,7,8-HxCDF	31.008	153925065	1.22	1.1260	218.0	218.0	1.035	1.035	109	
D 13C-2,3,4,6,7,8-HxCDF	31.754	59440166	0.52	1.0637	97.4	97.4	0.4468	0.4468	97.39	
2,3,4,6,7,8-HxCDF	31.767	152499923	1.22	1.1675	219.7	219.7	0.8510	0.8510	110	
D 13C-1,2,3,7,8,9-HxCDF	32.513	54205090	0.51	0.9676	97.6	97.6	0.4912	0.4912	97.64	
1,2,3,7,8,9-HxCDF	32.526	130040433	1.23	1.1664	205.7	205.7	0.8755	0.8755	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
A Non-2,3,7,8-sub-HxCDF	30.542						0.9509	0.9509		
S Total HxCDF					851.4	851.4	0.9587	0.9587		
* 13C-1,2,3,7,8,9-HxCDD	32.340	57376962	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	41405543	1.26	0.7334	98.4	98.4	0.3599	0.3599	98.39	
1,2,3,4,7,8-HxCDD	31.940	95311816	1.31	1.0640	216.3	216.3	0.7396	0.7396	108	
D 13C-1,2,3,6,7,8-HxCDD	32.020	49899921	1.25	0.8802	98.8	98.8	0.2999	0.2999	98.81	
1,2,3,6,7,8-HxCDD	32.034	107959577	1.21	1.0001	216.3	216.3	0.7456	0.7456	108	
1,2,3,7,8,9-HxCDD	32.340	107964188	1.26	1.1325	208.8	208.8	0.6762	0.6762	104	
A Non-2,3,7,8-sub-HxCDD	31.215						0.7187	0.7187		
S Total HxCDD					641.5	641.5	0.7205	0.7205		
1,2,3,4,6,7,8-HpCDF	33.912	135529943	1.05	1.4413	218.8	218.8	2.088	2.088	109	
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	42985413	0.44	0.7730	96.9	96.9	0.9749	0.9749	96.91	
D 13C-1,2,3,4,7,8,9-HpCDF	35.006	40537577	0.44	0.7008	100.8	100.8	1.075	1.075	101	
1,2,3,4,7,8,9-HpCDF	35.018	111348980	1.06	1.3174	208.5	208.5	2.580	2.580	104	
A Non-2,3,7,8-sub-HpCDF	34.458						2.314	2.314		
S Total HpCDF					427.3	427.3	2.334	2.334		
D 13C-1,2,3,4,6,7,8-HpCDD	34.702	36455330	1.02	0.6472	98.2	98.2	0.5132	0.5132	98.17	
1,2,3,4,6,7,8-HpCDD	34.714	85115851	1.05	1.0943	213.4	213.4	1.044	1.044	107	
A Non-2,3,7,8-sub-HpCDD	33.504						1.044	1.044		
S Total HpCDD					213.4	213.4	1.044	1.044		
D 13C-OCDD	37.082	51228940	0.89	0.4472	199.7	199.7	0.2232	0.2232	99.84	
OCDF	37.189	161294219	0.91	1.4382	437.9	437.9	0.4409	0.4409	109	
OCDD	37.094	124067491	0.90	1.1070	437.5	437.5	0.5859	0.5859	109	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.127	18.142	-1		24811260	6334063	3297	8242	1921		
333.9339	18.127	18.142	-1		30413981	7612051	3296	8240	2309	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	0.971	39276583	9941961	7868	19670	1264		
317.9389	17.598	17.598	0	0.971	49700300	12596795	5536	13840	2275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.613	17.628	-1	1.001	17265923	4373947	2358	5895	1855		
305.8987	17.613	17.628	-1	1.001	22058951	5573170	3788	9470	1471	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.933	17.311	-23	0.962	161517	37808	2358	5895	16		
	Empc Correction				121157	34090	2358	5895	14		
305.8987	16.933	17.311	-23	0.962	157347	44274	3788	9470	12	1.03(0.65-0.89)	
303.9016	17.235	17.311	-5	0.979	125955	28258	2358	5895	12		
	Empc Correction				107214	28155	2358	5895	12		
305.8987	17.220	17.311	-5	0.979	139240	36566	3788	9470	10	0.90(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.011	22418240	5434734	3297	8242	1648		
333.9339	18.323	18.323	0	1.011	27965561	6697610	3296	8240	2032	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.338	0	1.001	12170563	2933733	1303	3257	2252		
321.8936	18.338	18.338	0	1.001	15631289	3775919	1394	3485	2709	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.012	26006351	6295077	2398	5995	2625		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											
319.8965	18.233	17.772	28	0.995	239239	60004	1303	3257	46		
321.8936	18.233	17.772	28	0.995	312487	80578	1394	3485	58	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.749	0	1.255	41668599	7333690	8485	21212	864		
353.8970	22.749	22.749	0	1.255	26583879	4652625	5670	14175	821	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.762	22.776	-1	1.001	90206138	15696498	23147	57867	678		
341.8567	22.762	22.776	-1	1.001	57354435	10012296	14777	36942	678	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.126	0	1.331	44217600	7271382	8485	21212	857		
353.8970	24.126	24.126	0	1.331	27579773	4468756	5670	14175	788	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.153	0	1.001	101392394	16526277	23147	57867	714		
341.8567	24.153	24.153	0	1.001	63901075	10428415	14777	36942	706	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.244						338	845			
341.8567	20.244						462	1155			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.308	23.473	-10	1.025	2092429	352488	23147	57867	15		
341.8567	23.308	23.473	-10	1.025	1351372	223195	14777	36942	15	1.55(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.862	0	1.372	26514155	4045355	2631	6577	1538		
369.8919	24.862	24.862	0	1.372	16363962	2537743	2000	5000	1269	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.889	0	1.001	54803563	8416527	3860	9650	2180		
357.8516	24.889	24.889	0	1.001	34751548	5423049	2410	6025	2250	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.744						3860	9650			
357.8516	23.744						2410	6025			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.836	30.835	0	0.953	21423741	4602993	10138	25345	454		
385.8610	30.836	30.835	0	0.953	41064746	8805011	18904	47260	466	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.862	-1	1.000	77446041	17056861	34028	85070	501		
375.8178	30.849	30.862	-1	1.000	63583881	14029731	28421	71052	494	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.008	-1	0.958	21527343	4645676	10138	25345	458		
385.8610	30.995	31.008	-1	0.958	41192181	8744916	18904	47260	463	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.008	31.021	-1	1.000	84458486	18178004	34028	85070	534		
375.8178	31.008	31.021	-1	1.000	69466579	15063201	28421	71052	530	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.754	0	0.982	20418672	5425134	10138	25345	535		
385.8610	31.754	31.754	0	0.982	39021494	10287607	18904	47260	544	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.767	0	1.000	83657687	22340712	34028	85070	657		
375.8178	31.767	31.767	0	1.000	68842236	18269489	28421	71052	643	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.513	32.526	-1	1.005	18351639	5227320	10138	25345	516		
385.8610	32.513	32.526	-1	1.005	35853451	10061715	18904	47260	532	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.539	-1	1.000	71665418	20282625	34028	85070	596		
375.8178	32.526	32.539	-1	1.000	58375015	16239209	28421	71052	571	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.542						34028	85070			
375.8178	30.542						28421	71052			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.340	32.339	0		32156760	8544429	8352	20880	1023		
403.8529	32.326	32.339	-1		25220202	6731682	7778	19445	865	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.927	0	0.987	23052563	6987052	8352	20880	837		
403.8529	31.927	31.927	0	0.987	18352980	5468630	7778	19445	703	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.940	0	1.000	54057818	15589077	22398	55995	696		
391.8127	31.940	31.940	0	1.000	41253998	12285721	16811	42027	731	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.020	32.033	-1	0.990	27736555	7273068	8352	20880	871		
403.8529	32.020	32.033	-1	0.990	22163366	5871752	7778	19445	755	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.034	32.047	-1	1.000	59116629	16185483	22398	55995	723		
391.8127	32.034	32.047	-1	1.000	48842948	13061351	16811	42027	777	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.340	32.353	-1	1.013	60106510	15800454	22398	55995	705		
391.8127	32.340	32.353	-1	1.013	47857678	12979231	16811	42027	772	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	31.215						22398	55995			
391.8127	31.215						16811	42027			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.912	33.911	0	1.000	69518297	21985720	82461	206152	267		
409.7789	33.912	33.911	0	1.000	66011646	21358881	78734	196835	271	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.912	0	1.049	13138473	4149229	14216	35540	292		
419.8220	33.900	33.912	-1	1.048	29846940	9243997	31835	79587	290	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.006	35.005	0	1.082	12375038	3705586	14216	35540	261		
419.8220	35.006	35.005	0	1.082	28162539	8151296	31835	79587	256	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.018	35.005	1	1.000	57298984	16523888	82461	206152	200		
409.7789	35.006	35.005	0	1.000	54049996	15559126	78734	196835	198	1.06(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						82461	206152			
409.7789	34.458						78734	196835			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.702	34.714	-1	1.073	18400619	5331850	10315	25787	517		
437.8140	34.702	34.714	-1	1.073	18054711	5313047	9982	24955	532	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.714	0	1.000	43603241	12970820	24860	62150	522		
425.7737	34.714	34.714	0	1.000	41512610	12528364	23796	59490	526	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						24860	62150			
425.7737	33.504						23796	59490			
13C-OCDD											
469.7779	37.082	37.093	-1	1.147	24118371	6015882	2552	6380	2357		
471.7750	37.082	37.093	-1	1.147	27110569	6692443	3547	8867	1887	0.89(0.76-1.02)	
OCDF											
441.7428	37.189	37.201	-1	1.003	76746145	20468133	7616	19040	2688		
443.7399	37.189	37.201	-1	1.003	84548074	22394214	8501	21252	2634	0.91(0.76-1.02)	
OCDD											
457.7377	37.094	37.105	-1	1.000	58682484	14688537	7599	18997	1933		
459.7348	37.094	37.105	-1	1.000	65385007	16510536	8885	22212	1858	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	88976883	22538756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	88976883	22538756

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.933	161517	37808	157347	44274	0.3500	1.03	RQ
16.933	121157	34090	157347	44274	0.3057		Empc Correction
17.235	125955	28258	139240	36566	0.2911	0.90	RnQ
17.235	107214	28155	139240	36566	0.2705		Empc Correction
Signal Totals:							
	228371	62245	296587	80840			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	584059	146906				0.97	RQ
	524958	143085					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6411 = (584059 * 100.000) / (88976883 * 1.024)
Empc Amount: 0.5762 = (524958 * 100.000) / (88976883 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50383801	12132344

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50383801	12132344

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.233	239239	60004	312487	80578	0.8732	0.77	
Signal Totals:							
	239239	60004	312487	80578			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	551726	140582				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8732 = (551726 * 100.000) / (50383801 * 1.254)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68252478	11986315
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71797373	11740138

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70024925	11863226

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
23.308	2092429	352488	1351372	223195	4.73	1.55	
Signal Totals:							
	2092429	352488	1351372	223195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3443801	575683				1.55	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.730 = (3443801 * 100.000) / (70024925 * 1.040)

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

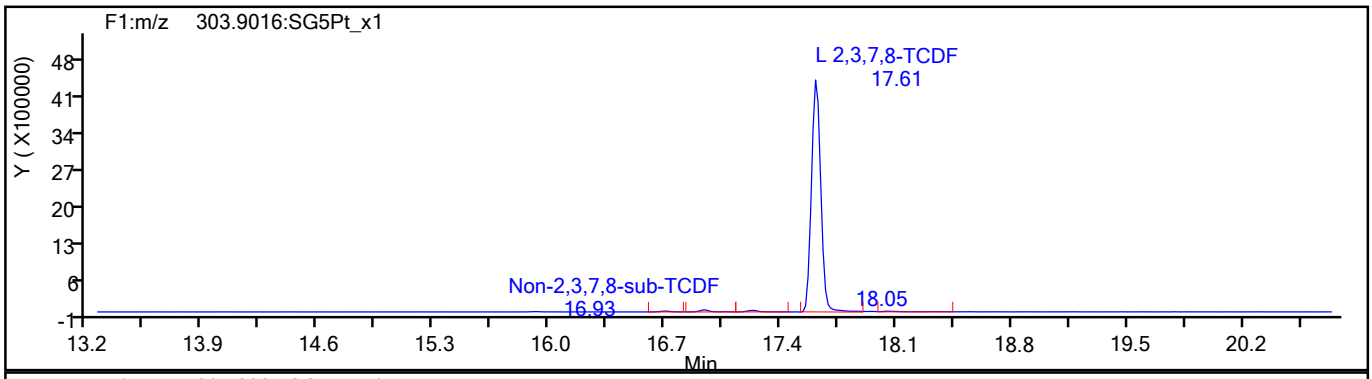

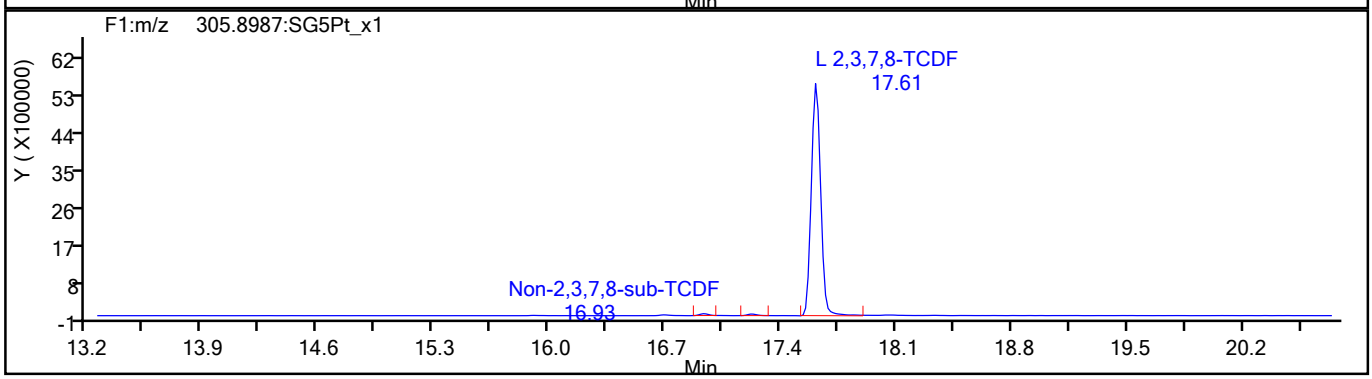

TCDF Standards

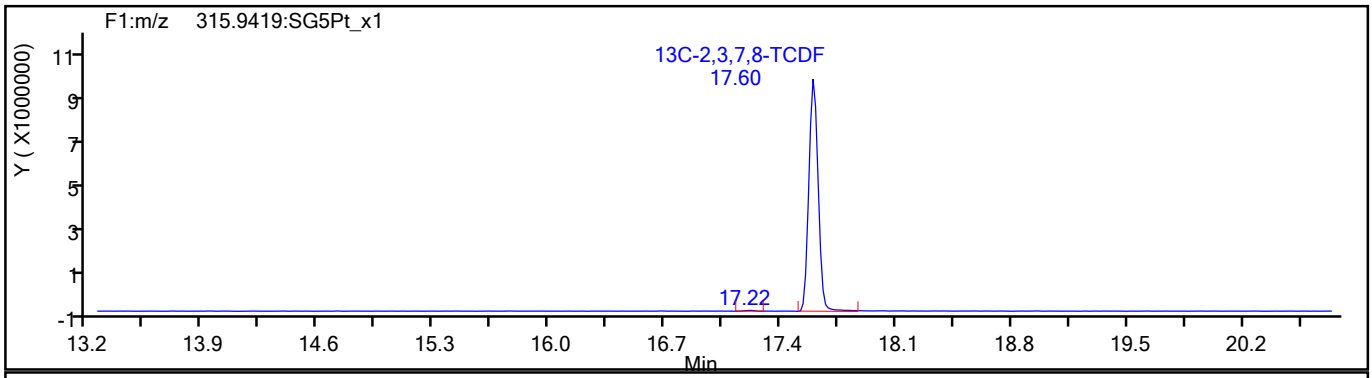

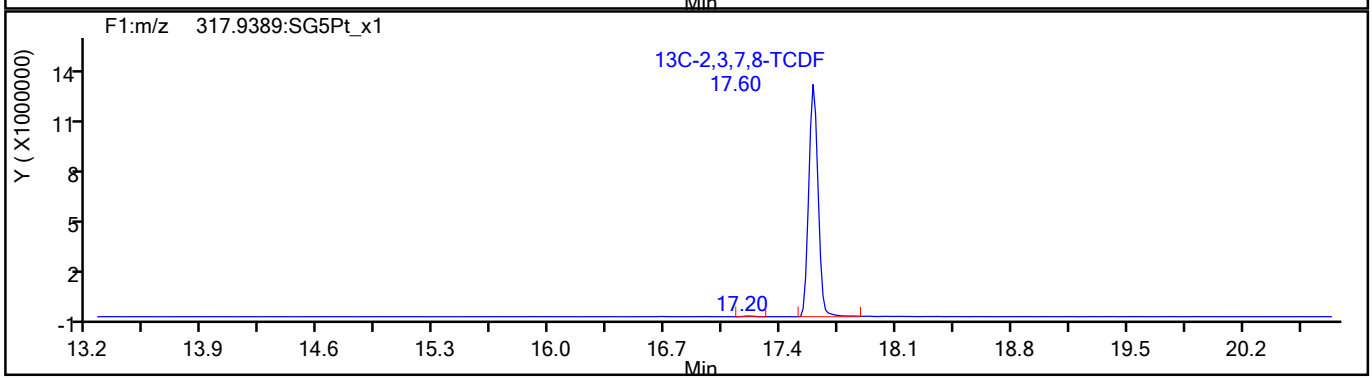

781428

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

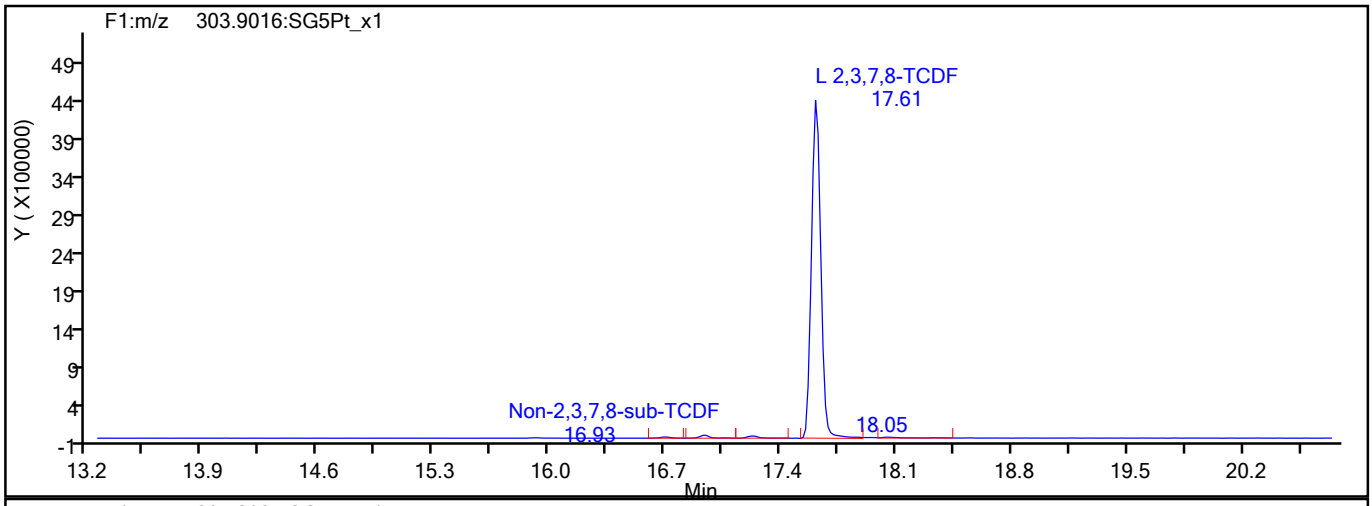

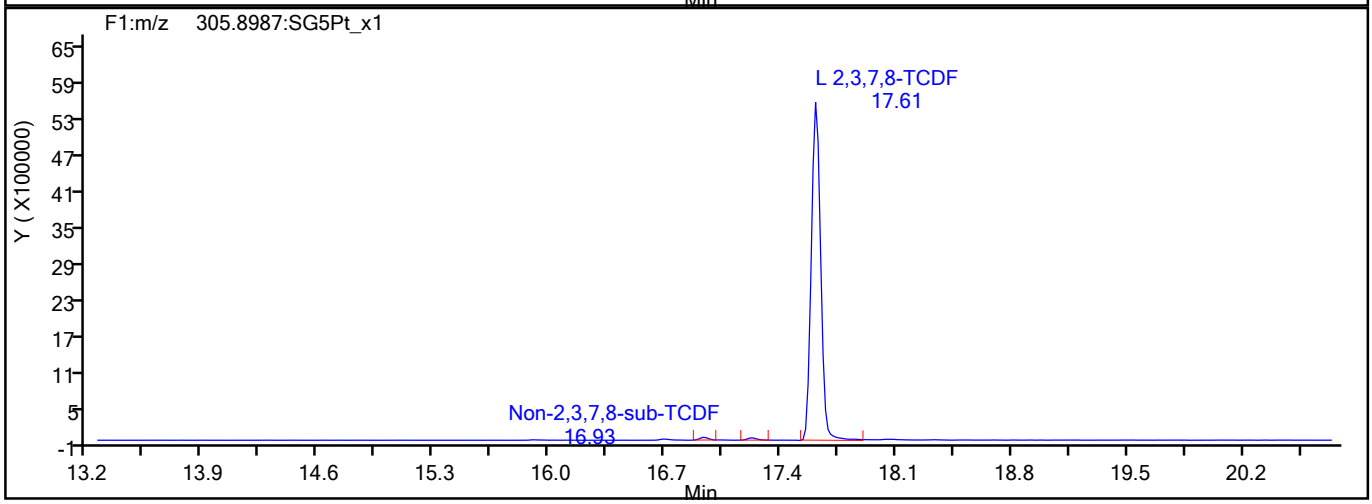

TCDF Interference Mass

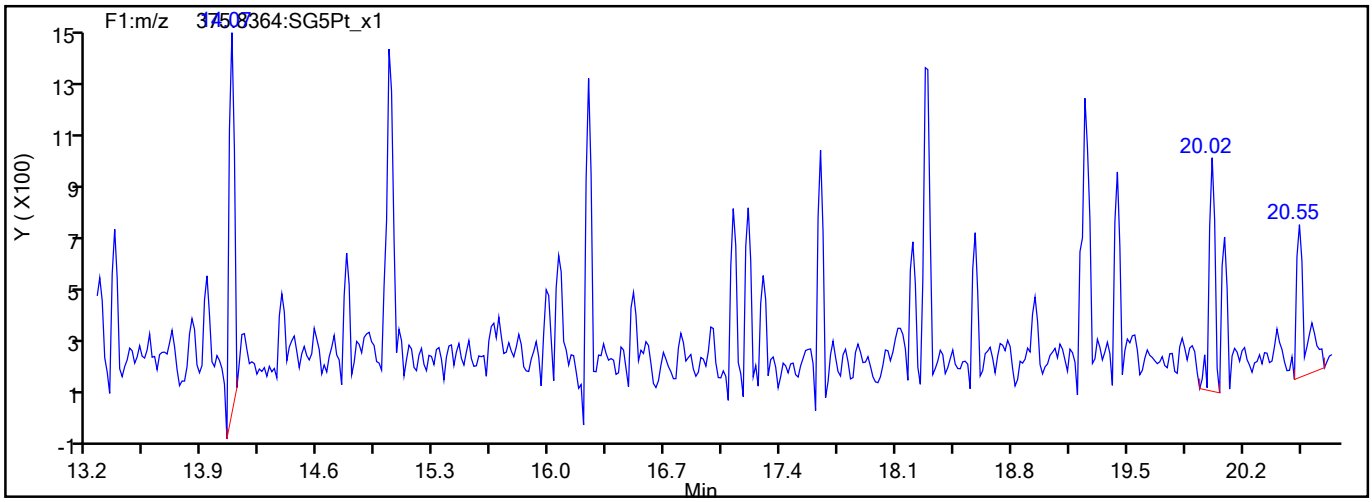

781429

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

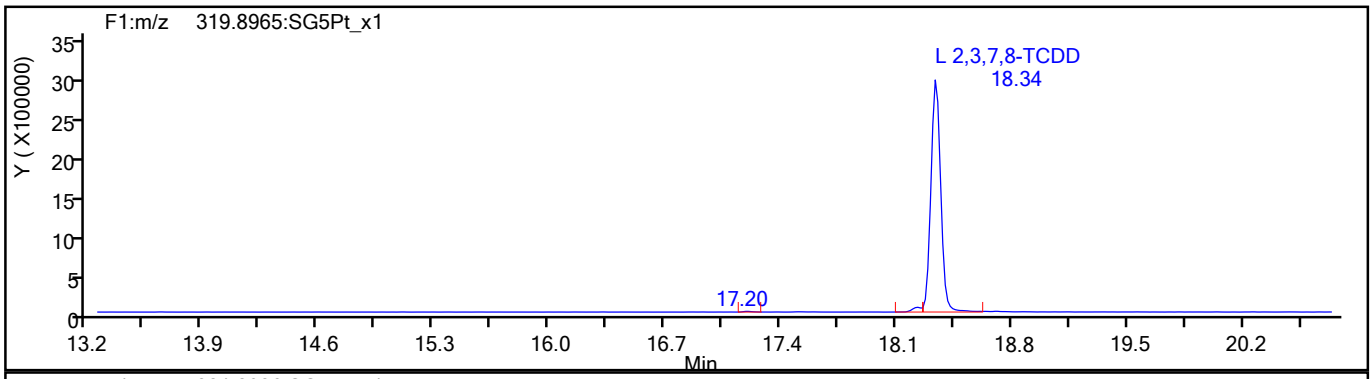

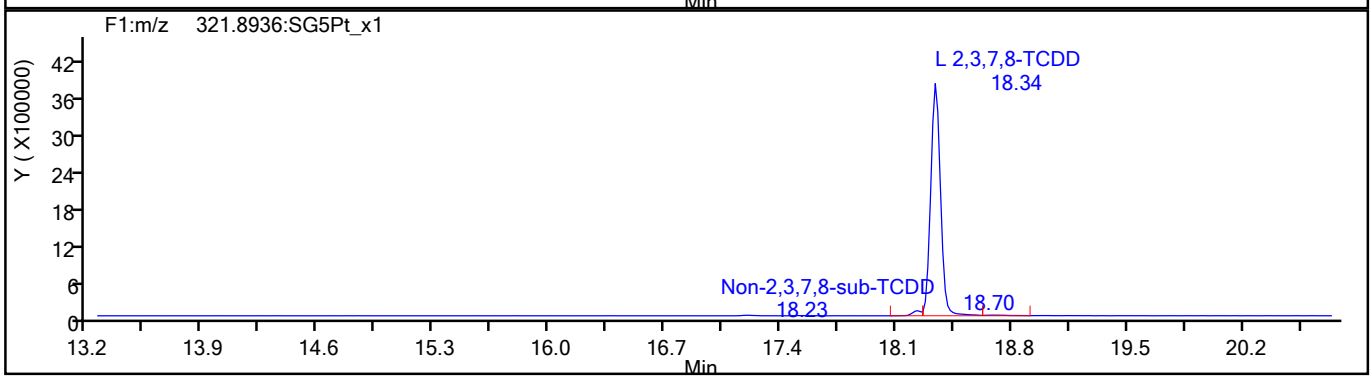

TCDD Standards

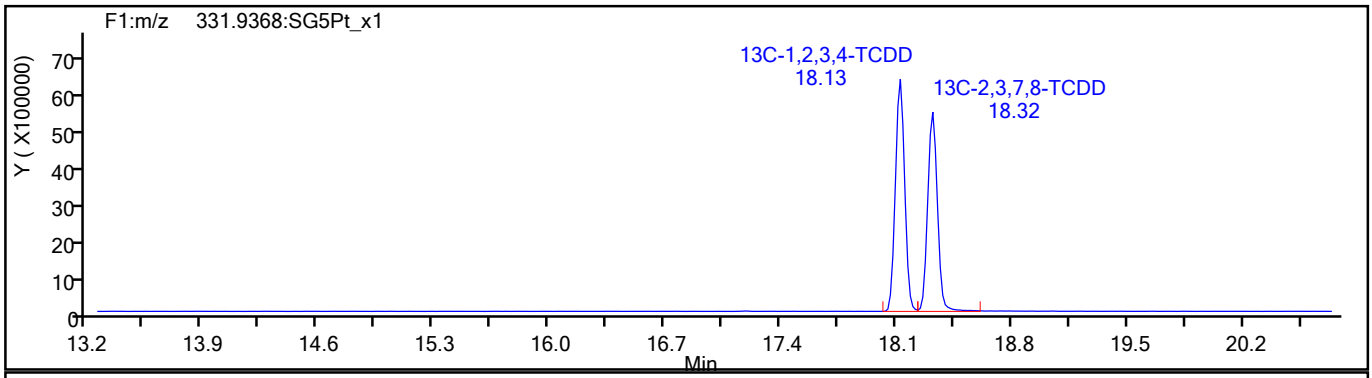

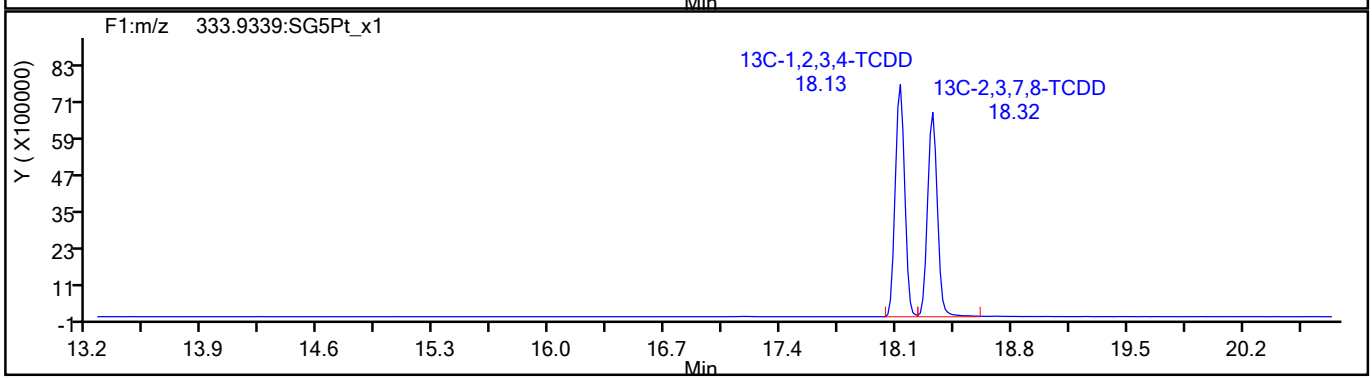

781430

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

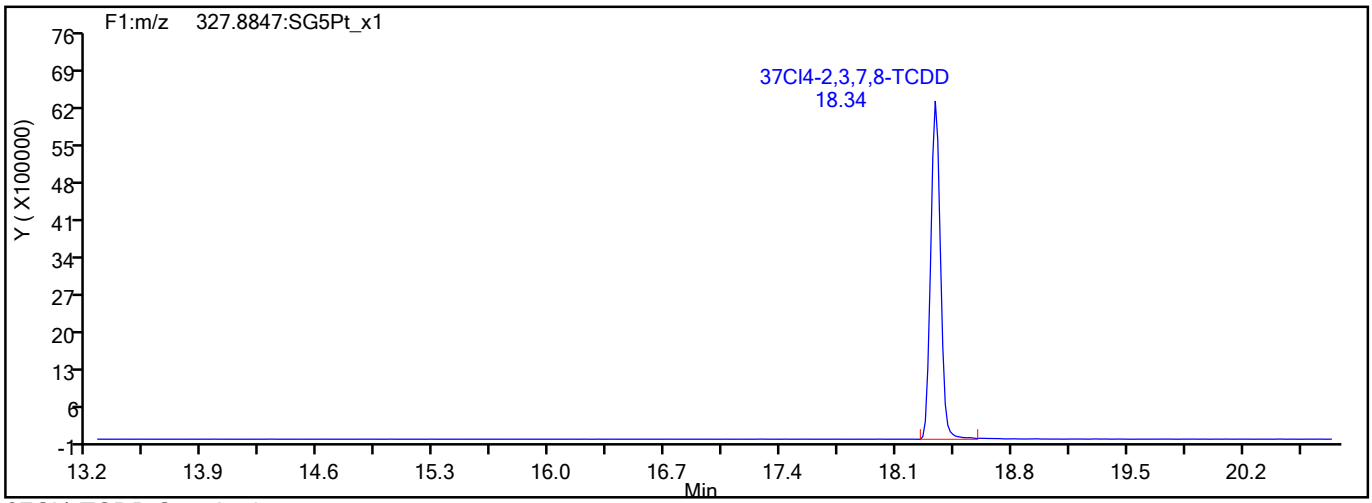

37Cl4-TCDD Standards

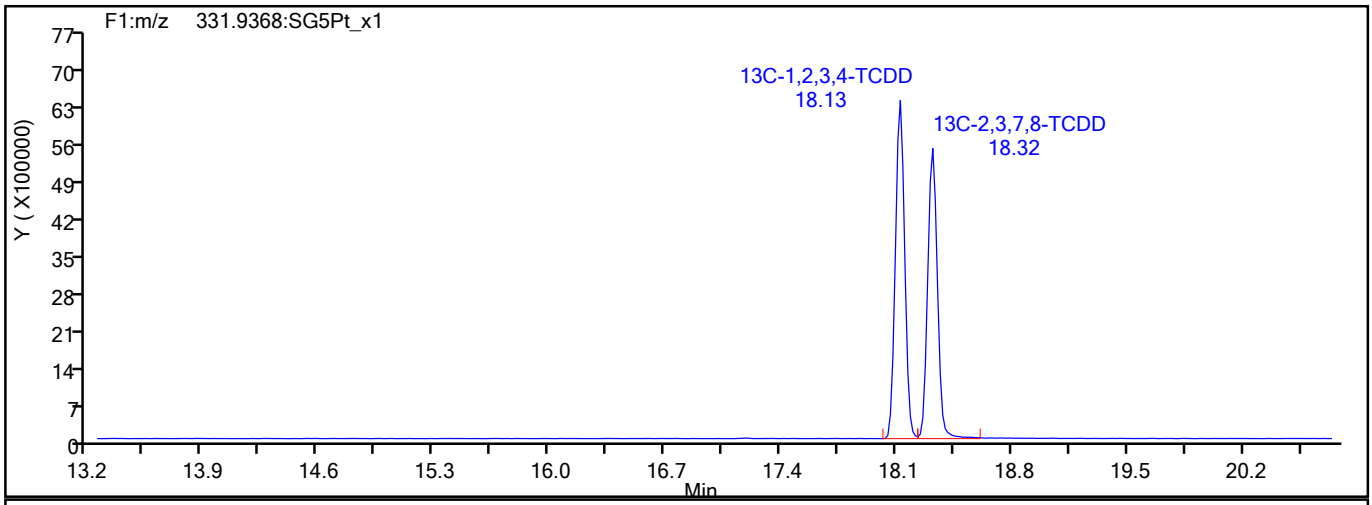

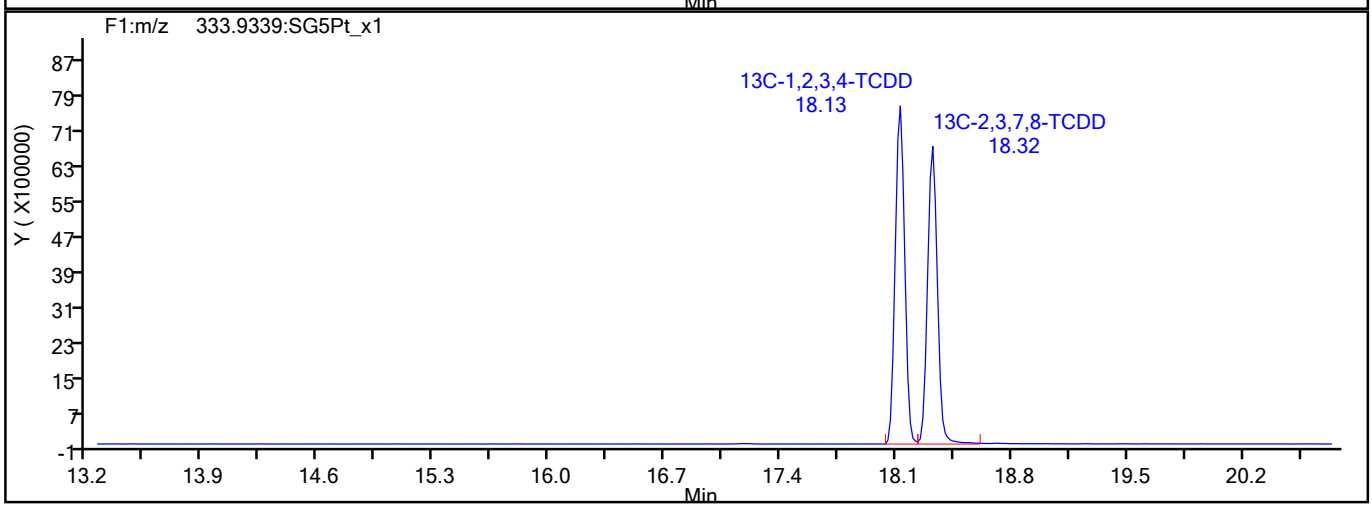

781431

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

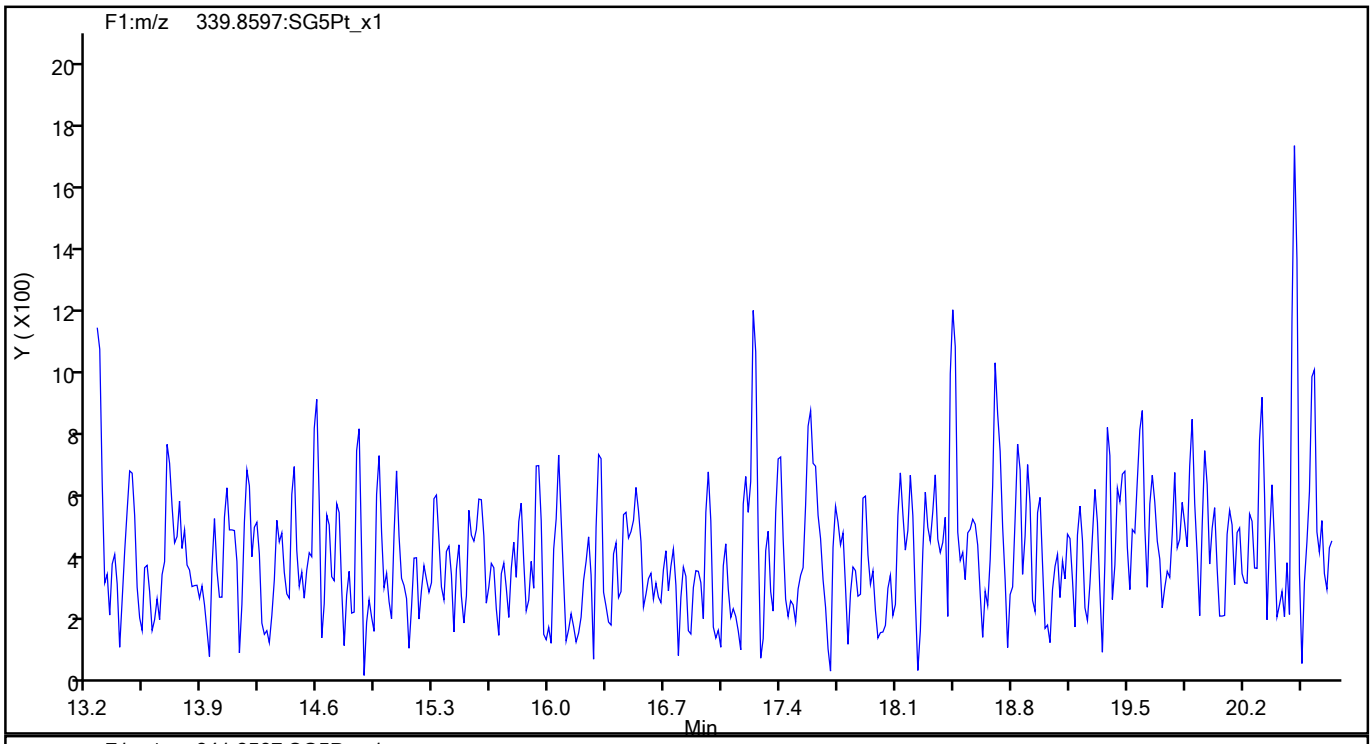

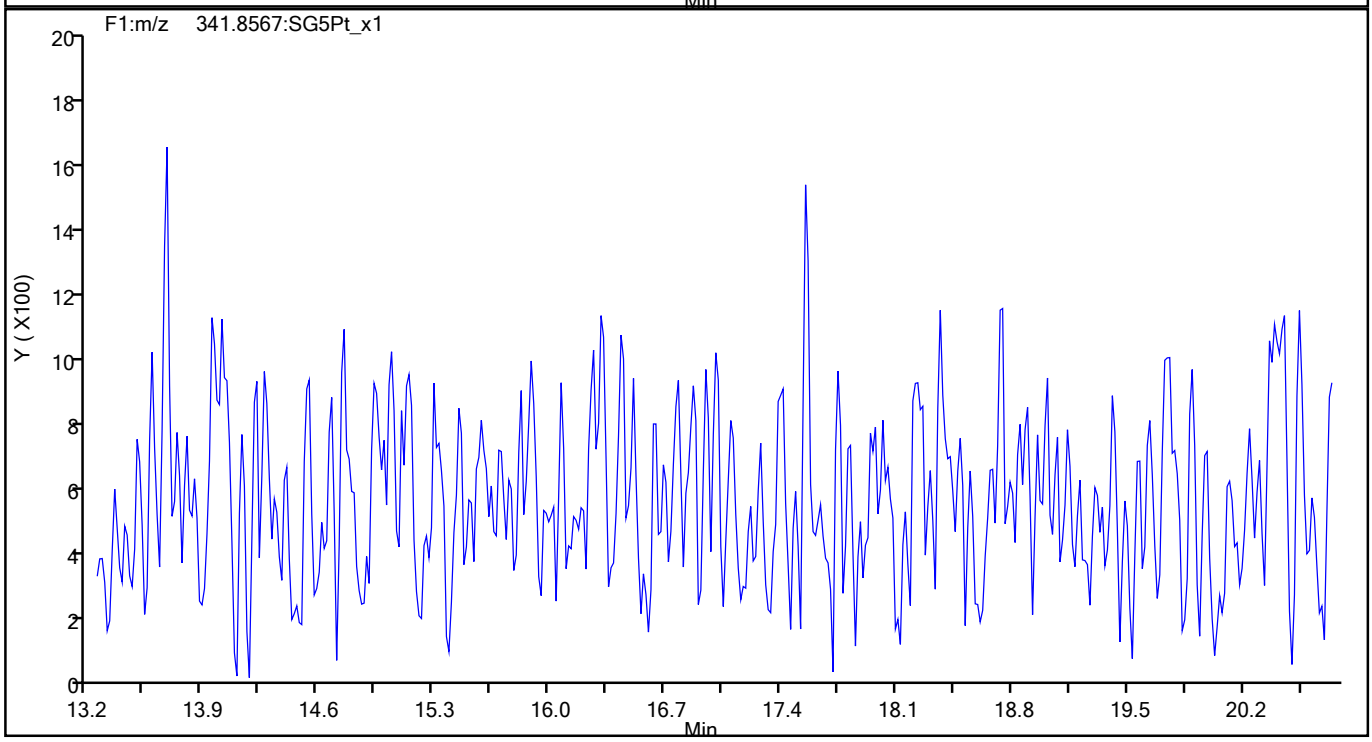

781432

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

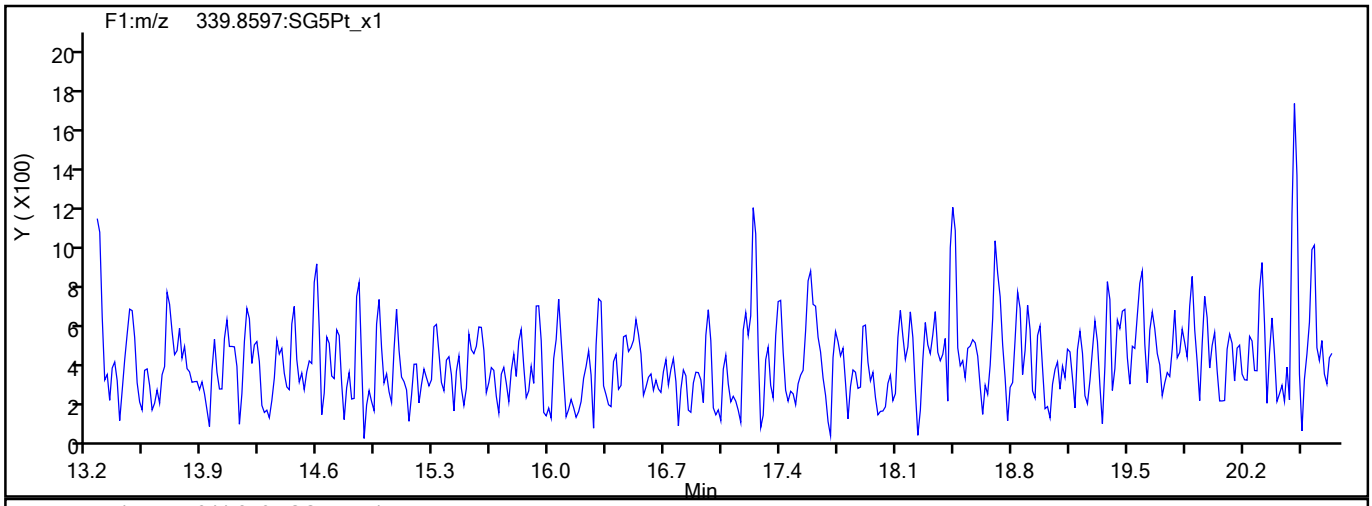

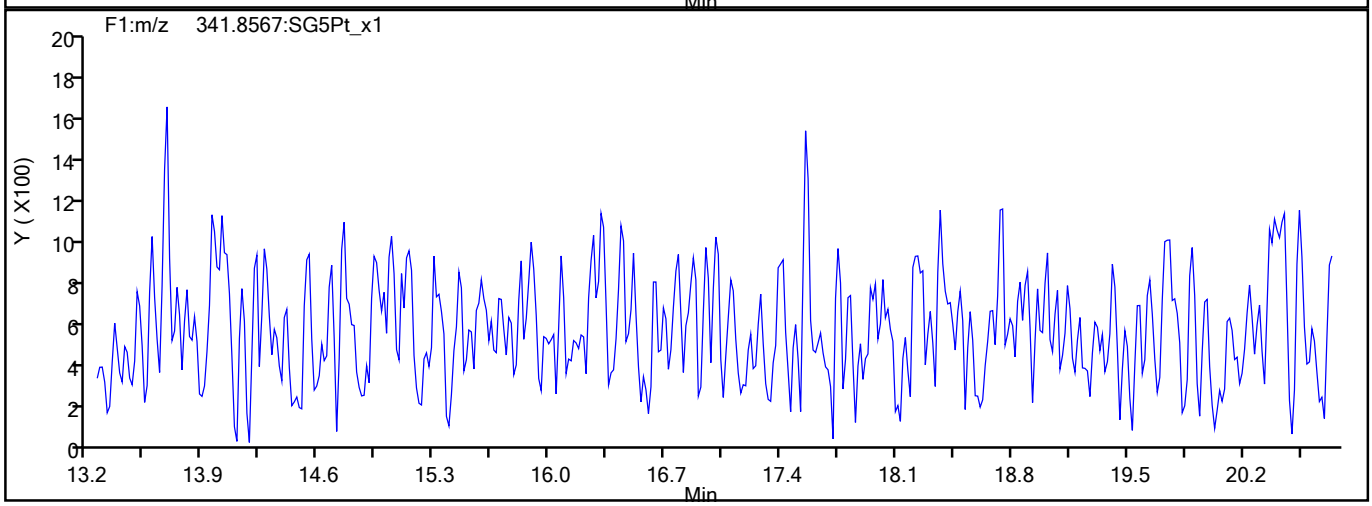

F1 PeCDFs Interference Mass

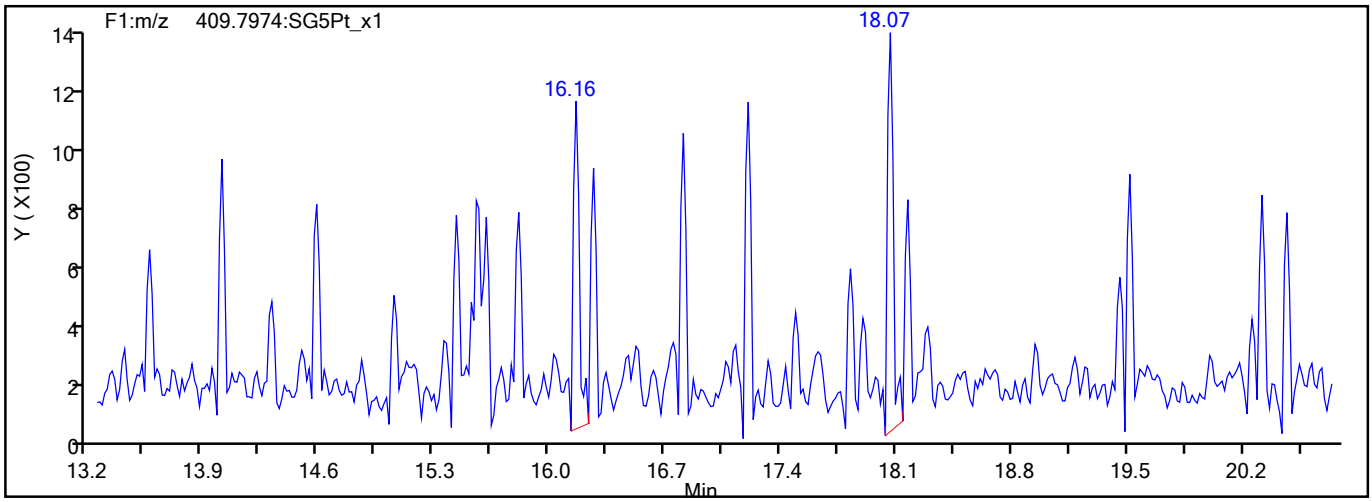

781433

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

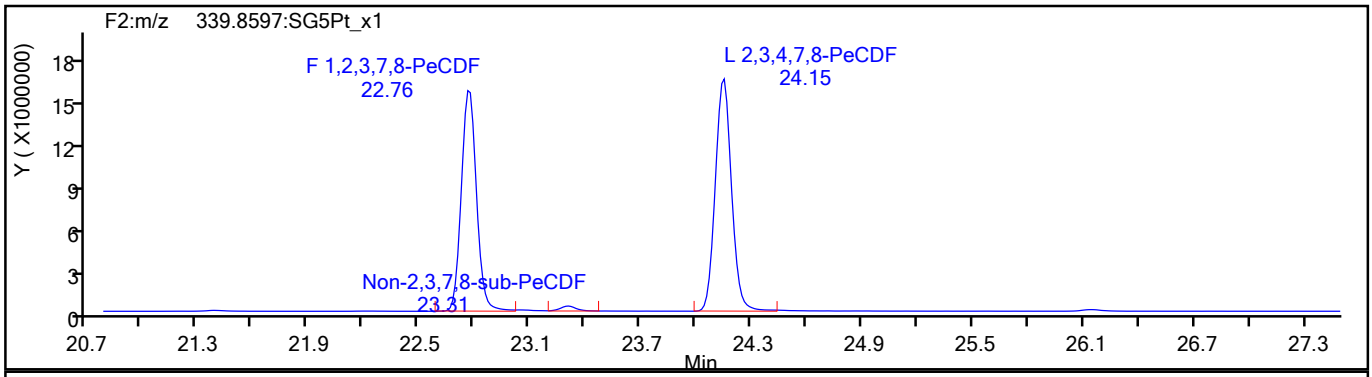

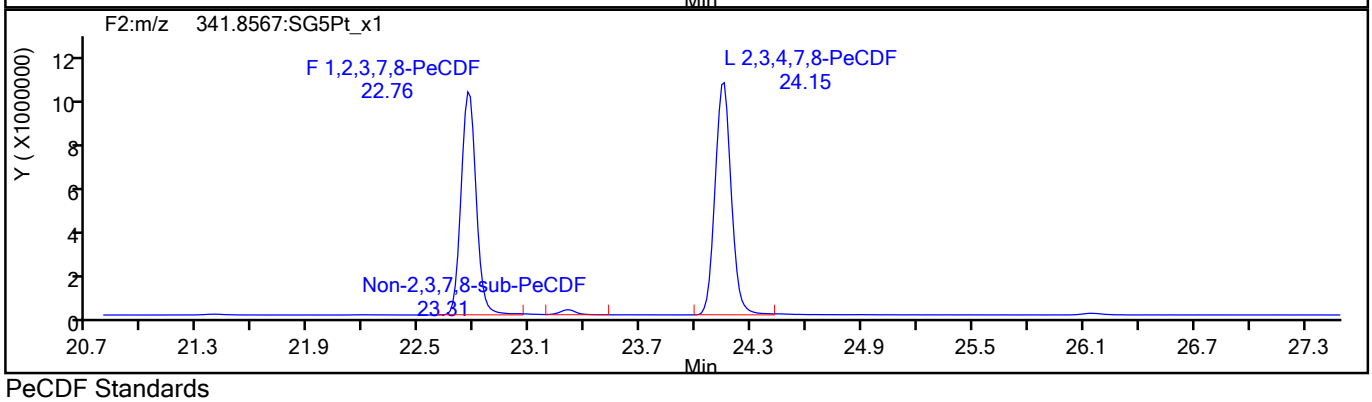

PeCDF Standards

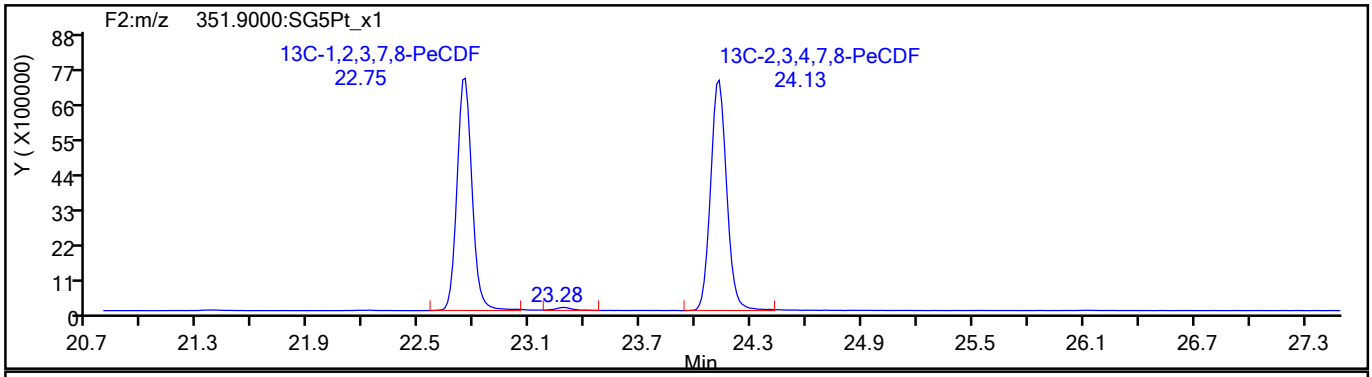

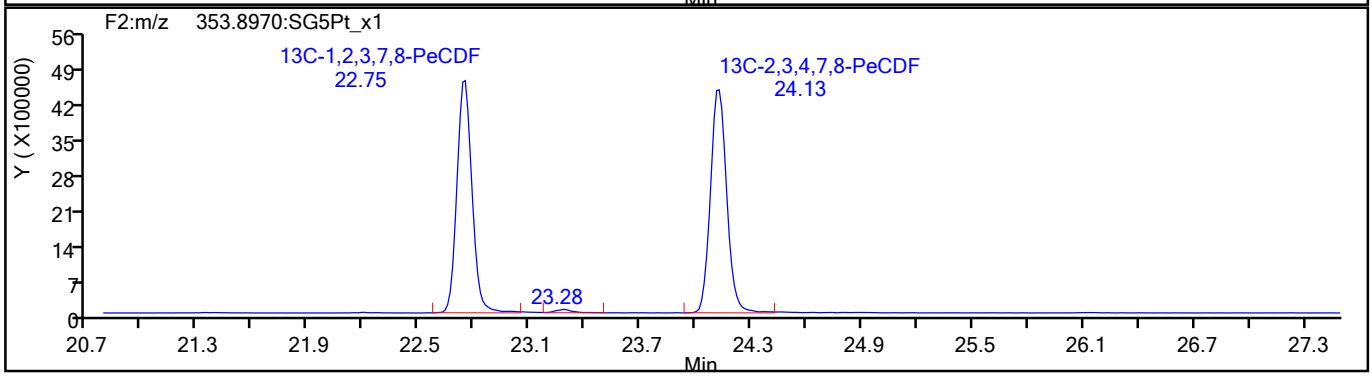

781434

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

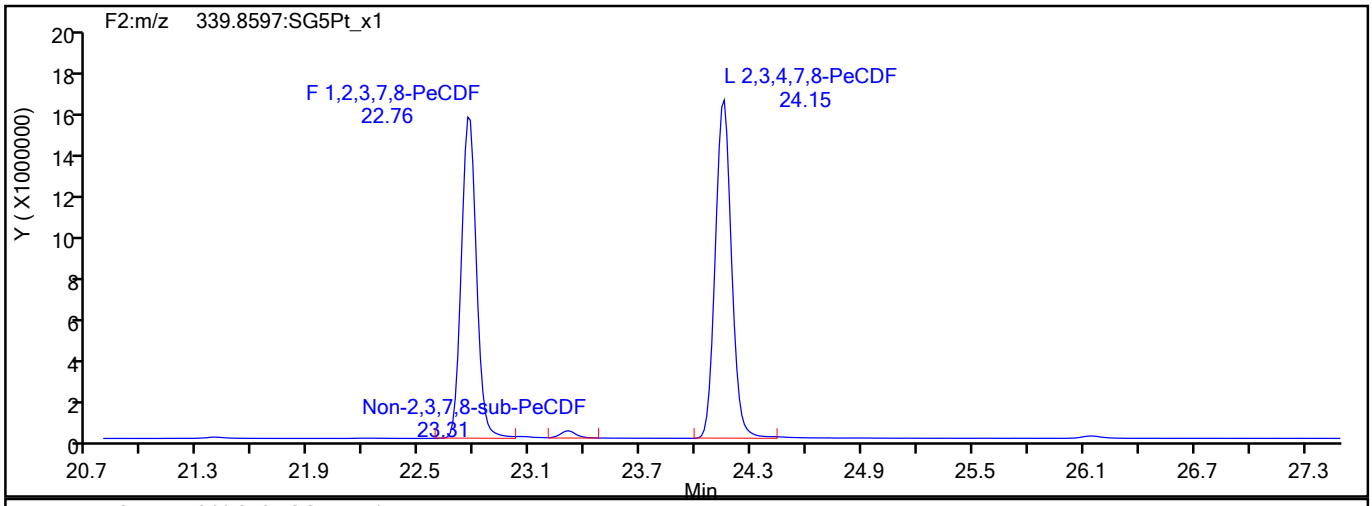

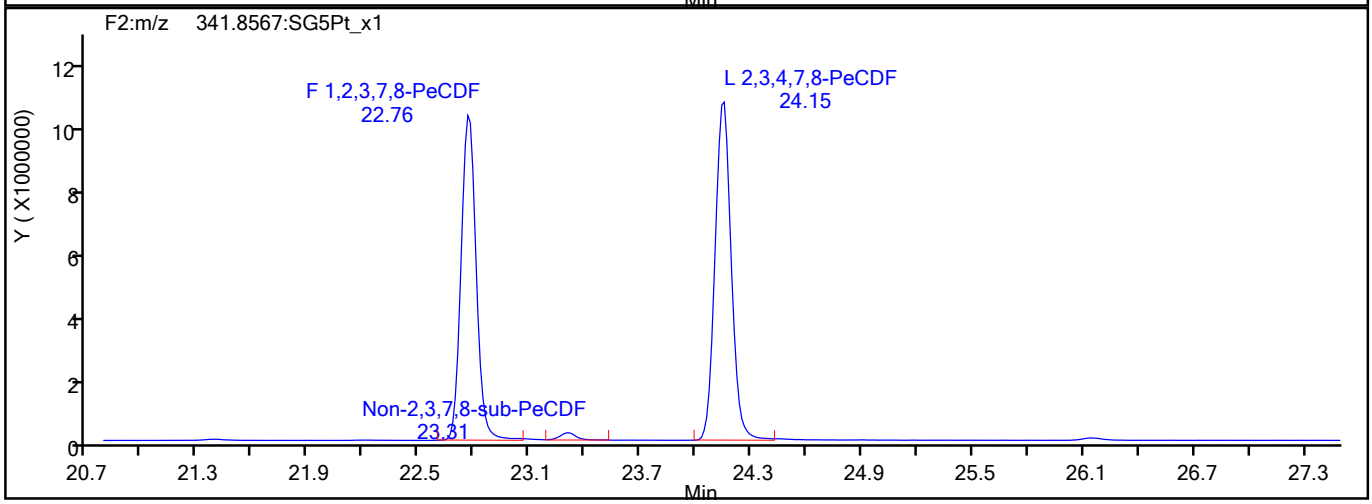

PeCDF Interference Mass

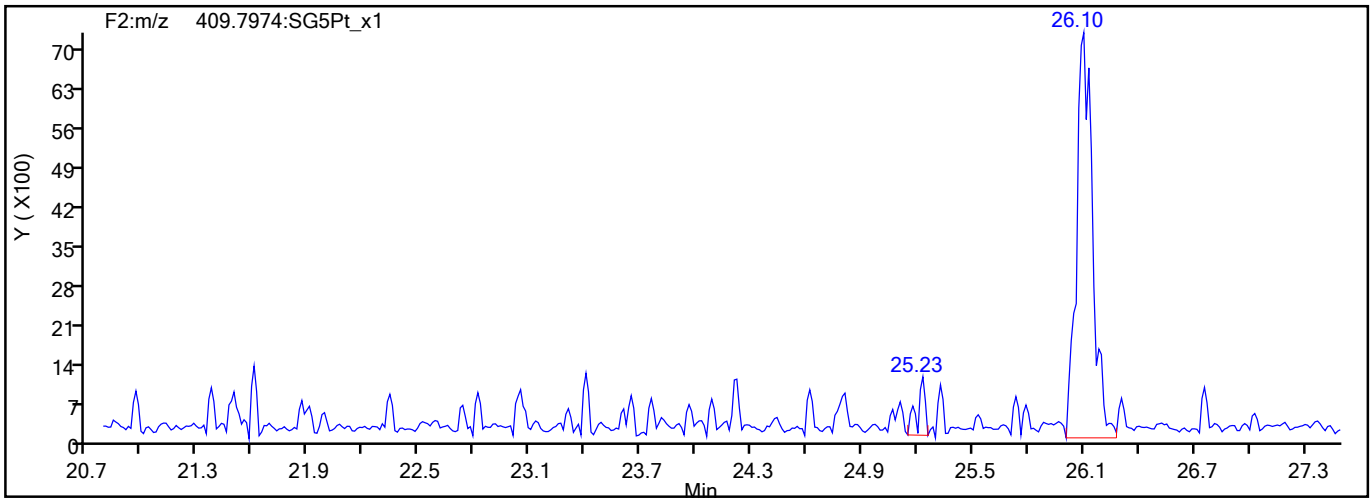

781435

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

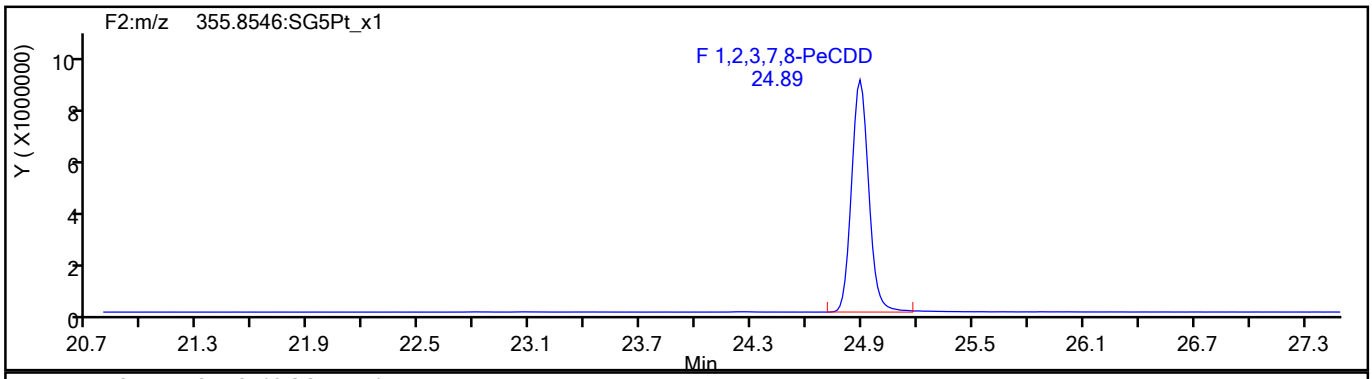

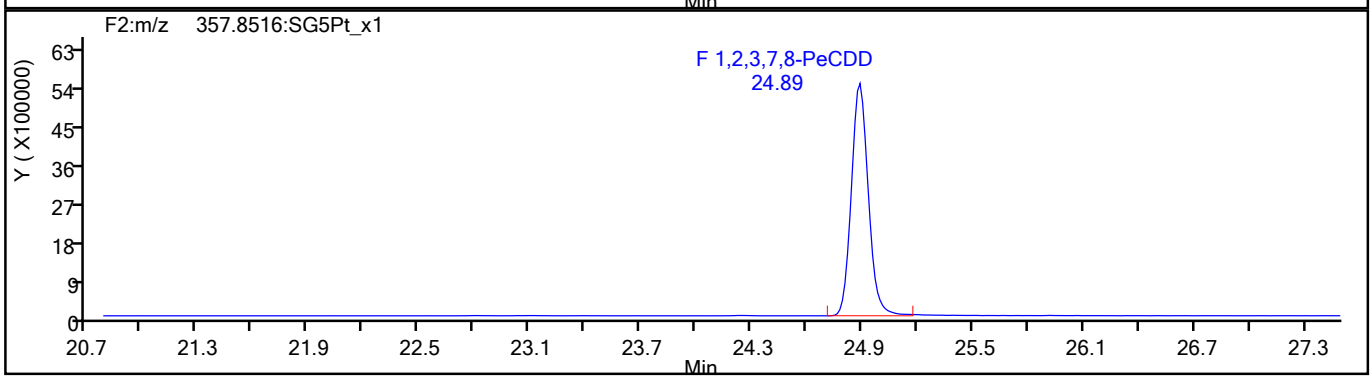

PeCDD Standards

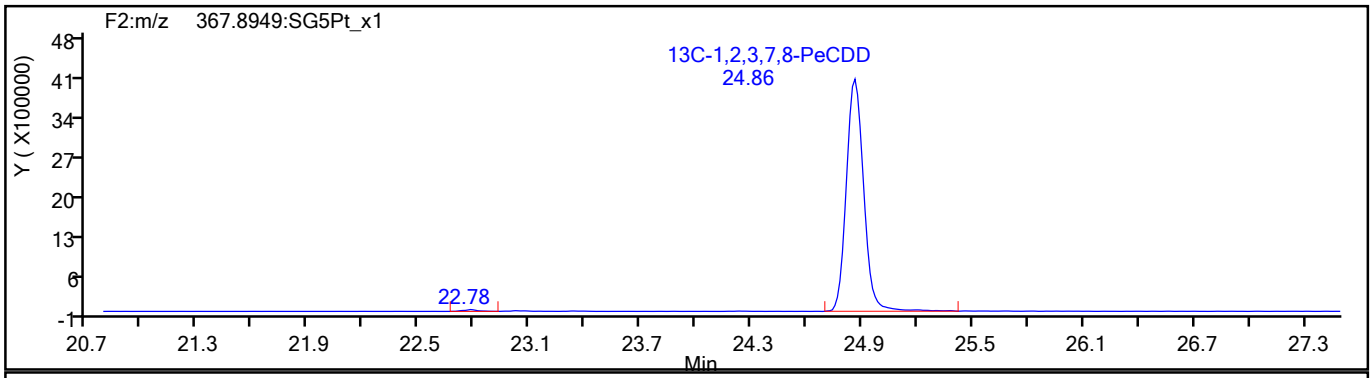

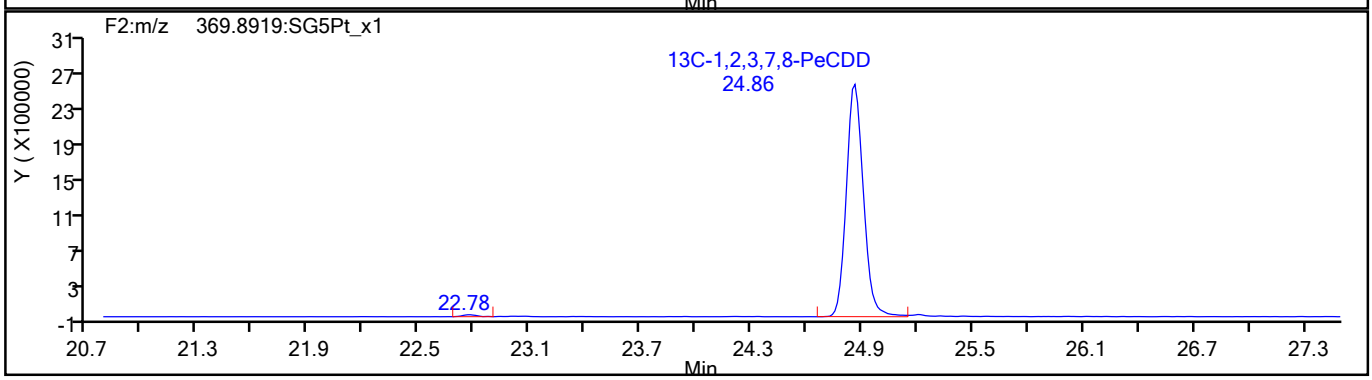

781436

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

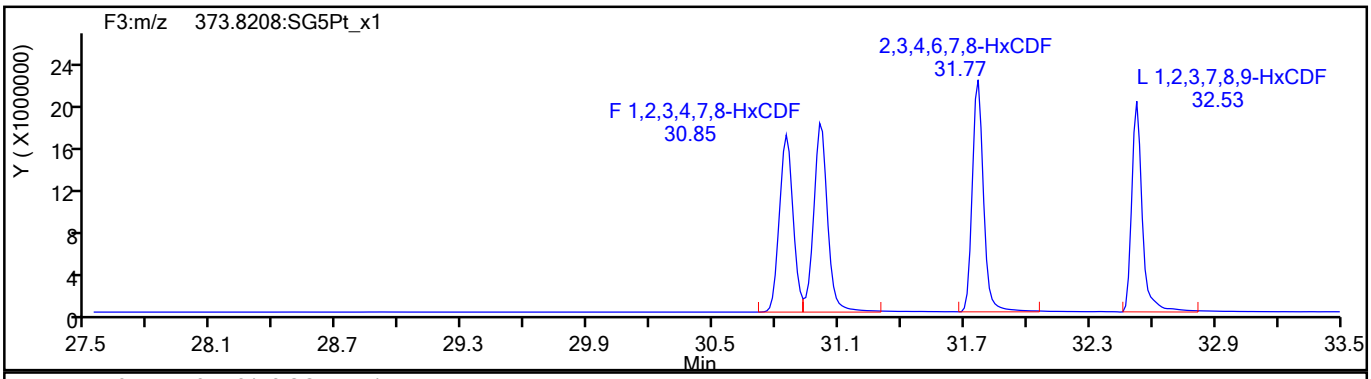

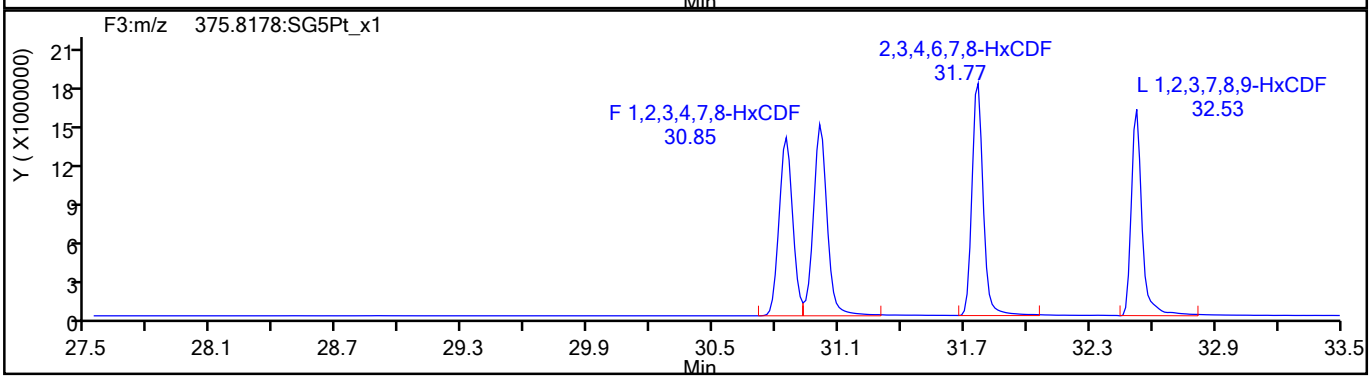

HxCDF Standards

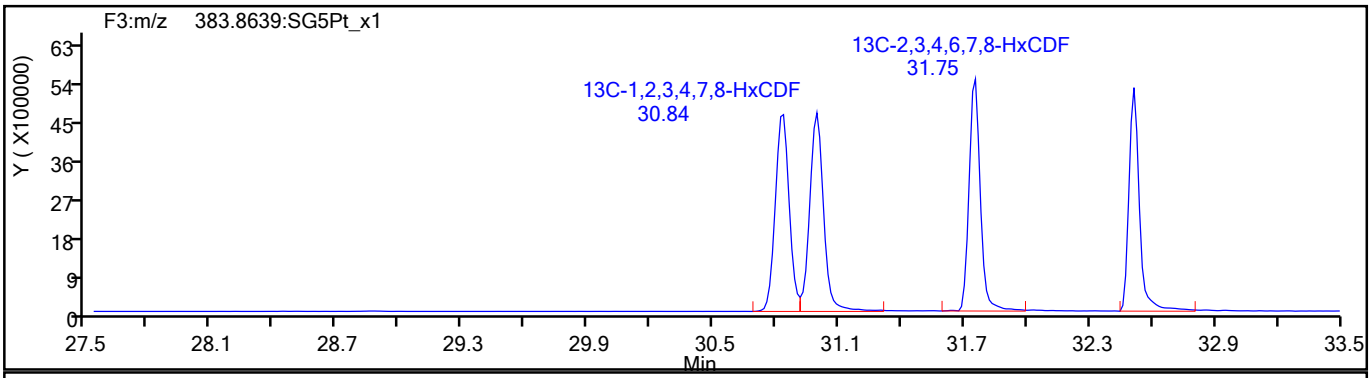

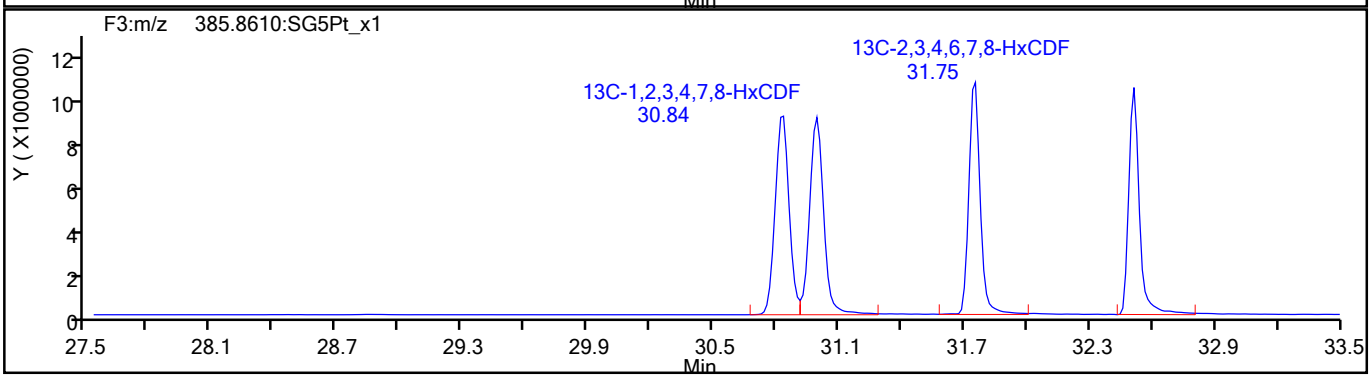

781437

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

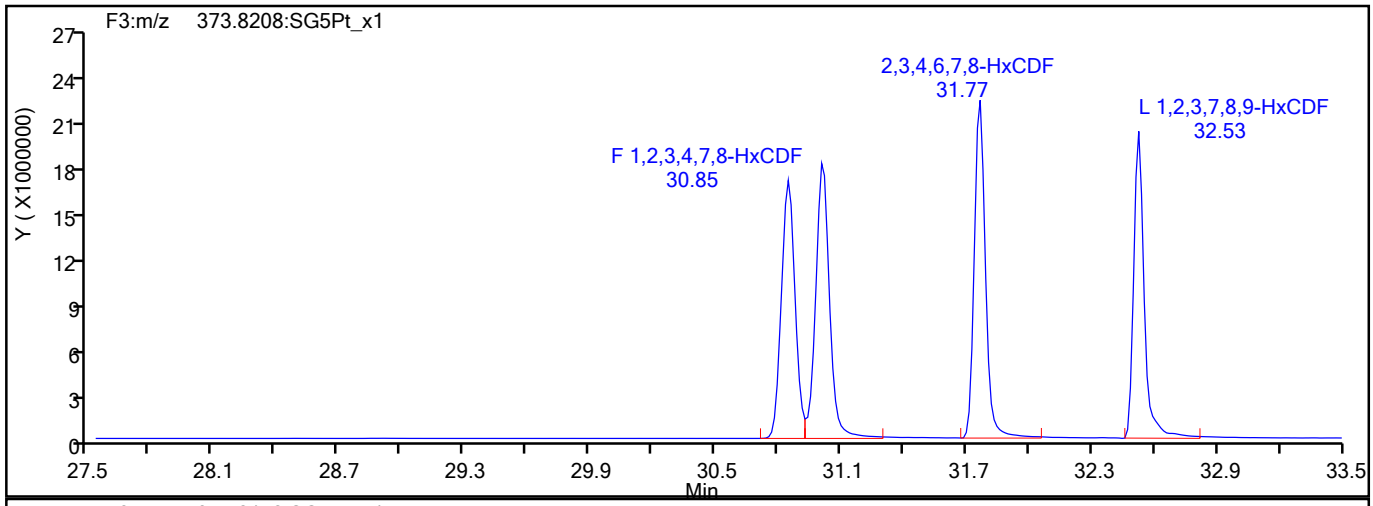

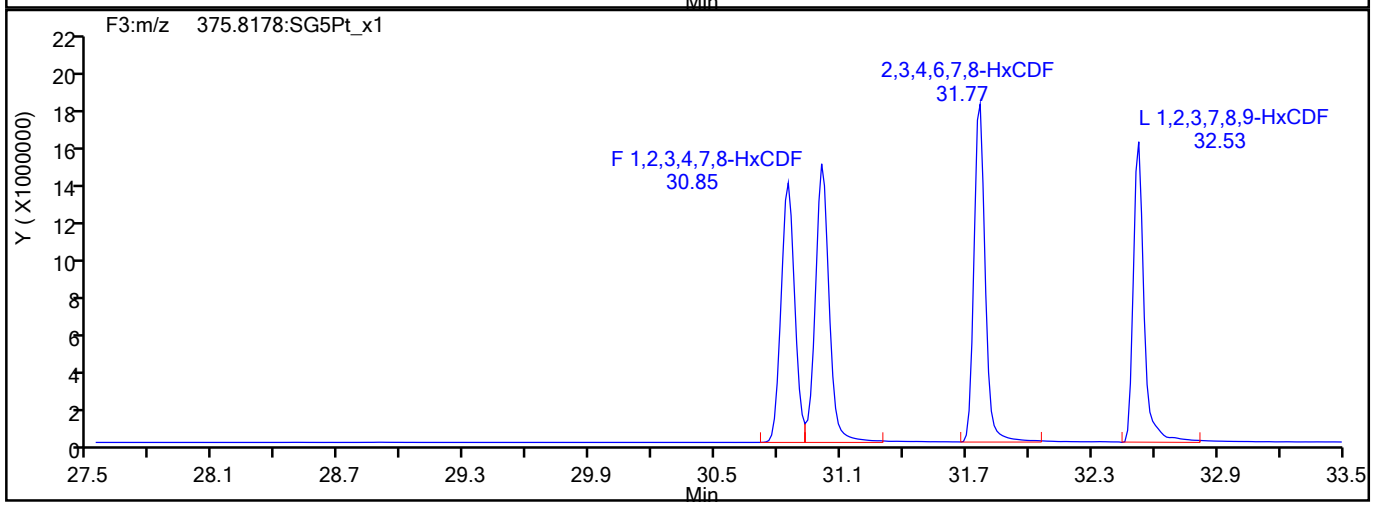

HxCDF Interference Mass

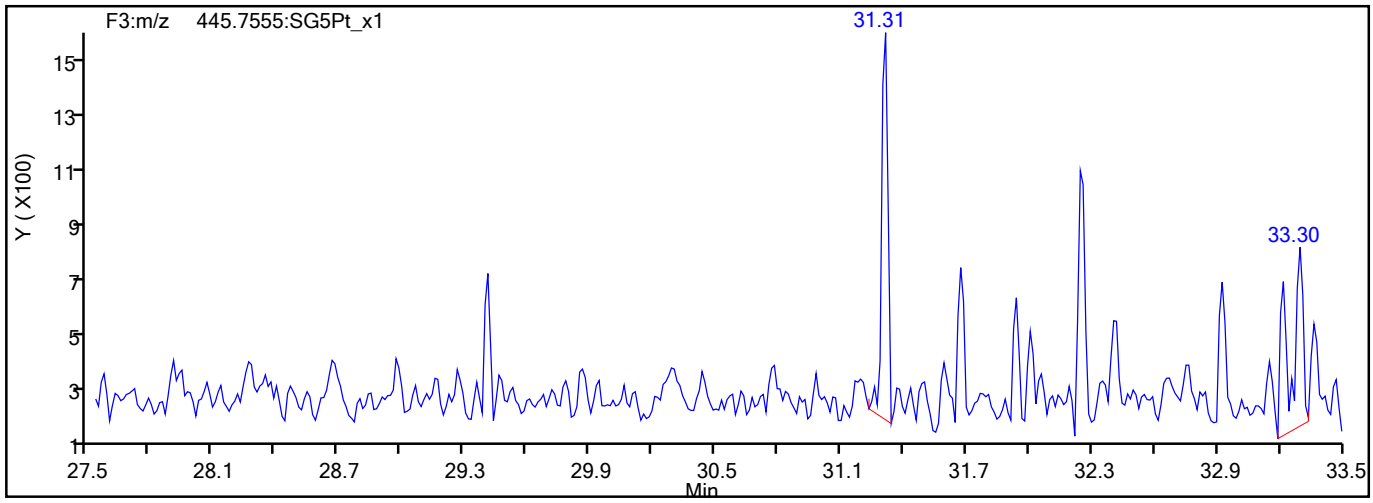

781438

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

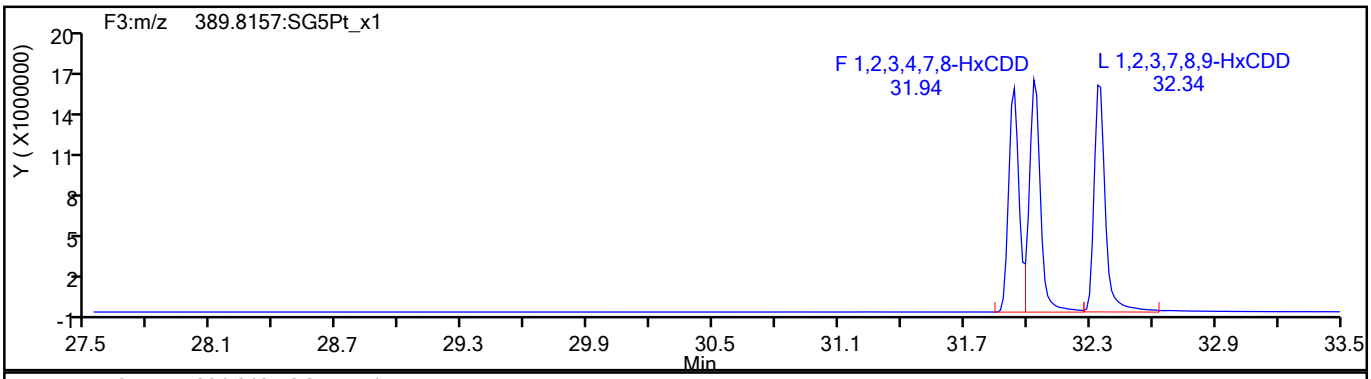

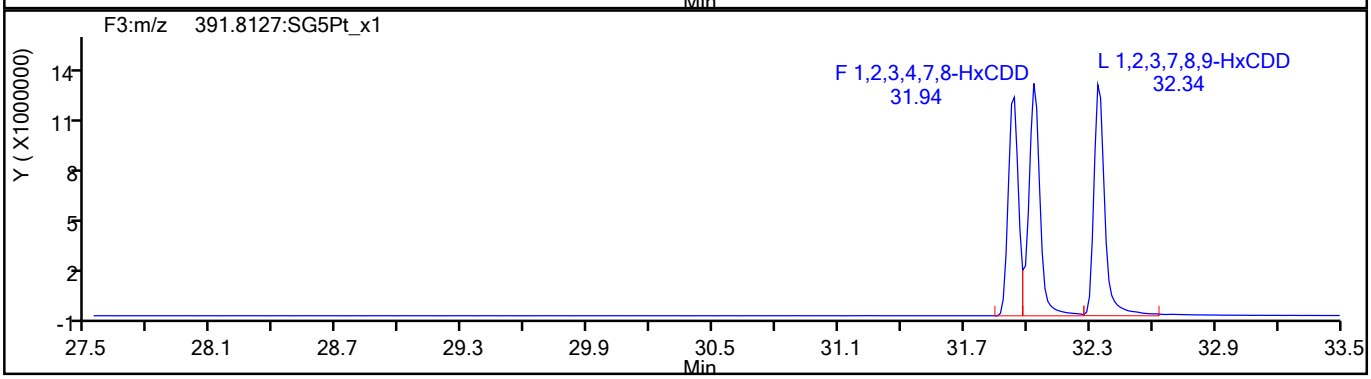

HxCDD Standards

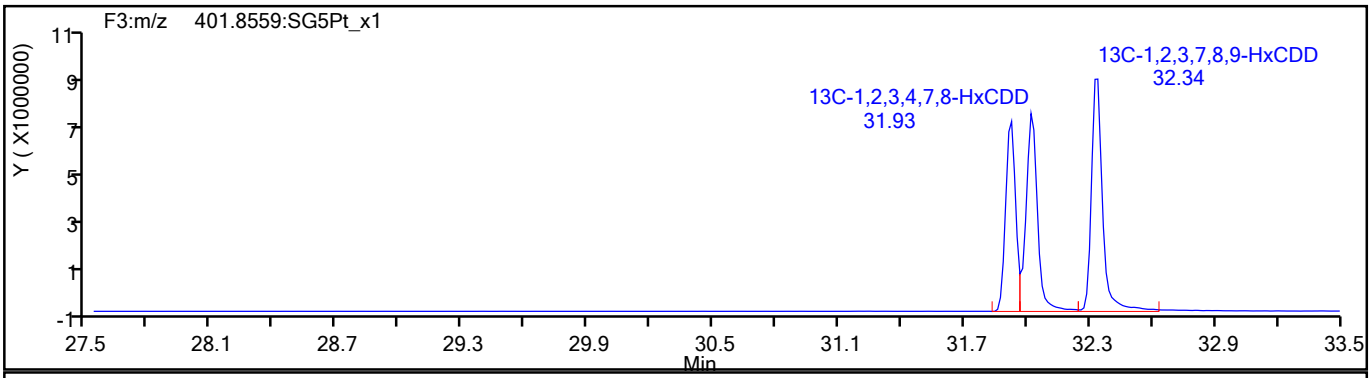

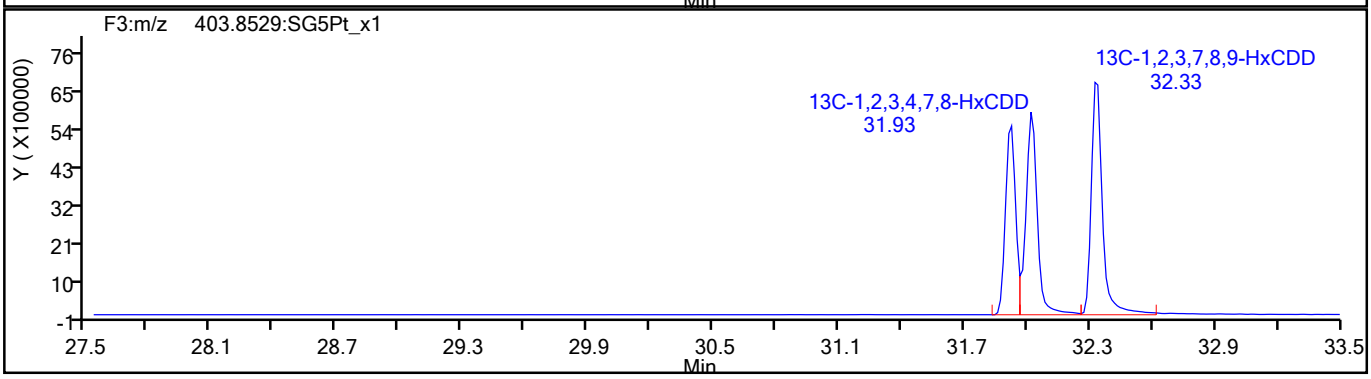

781439

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

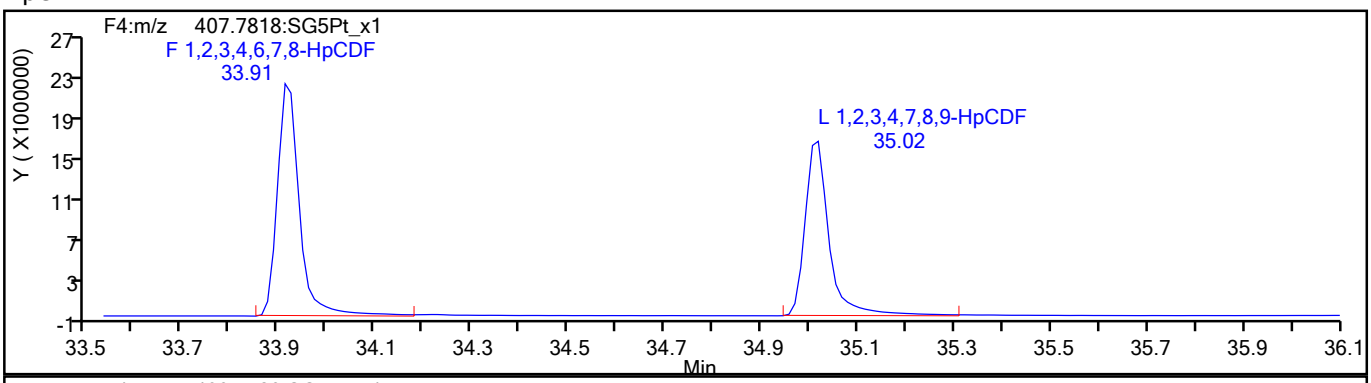

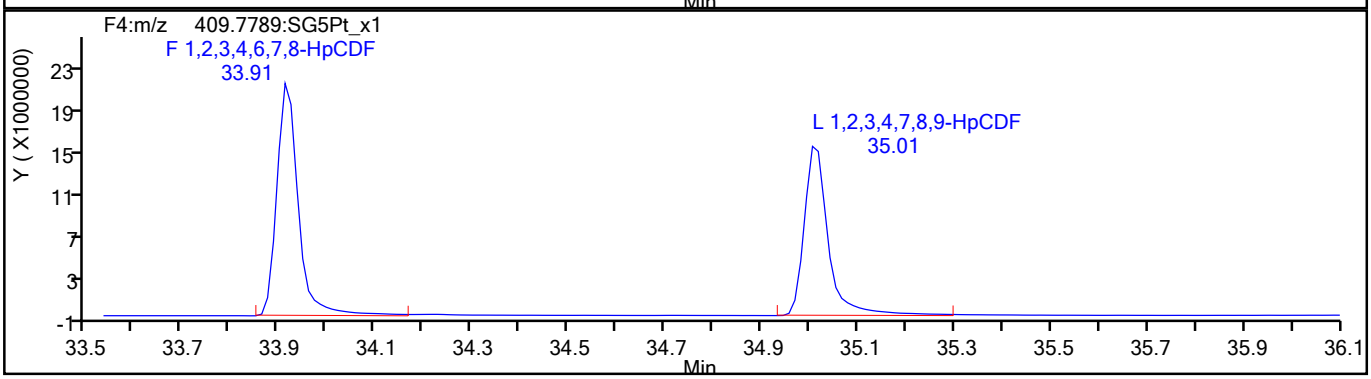

HpCDF Standards

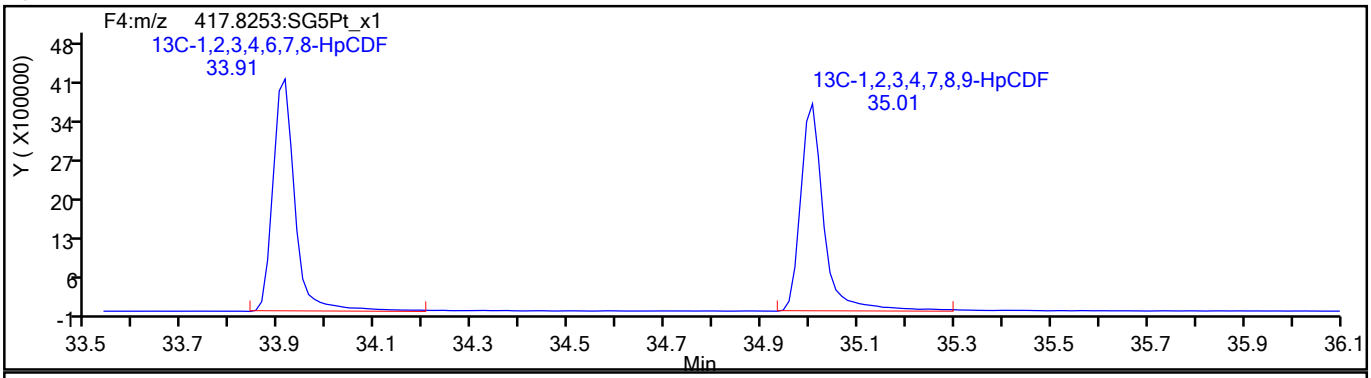

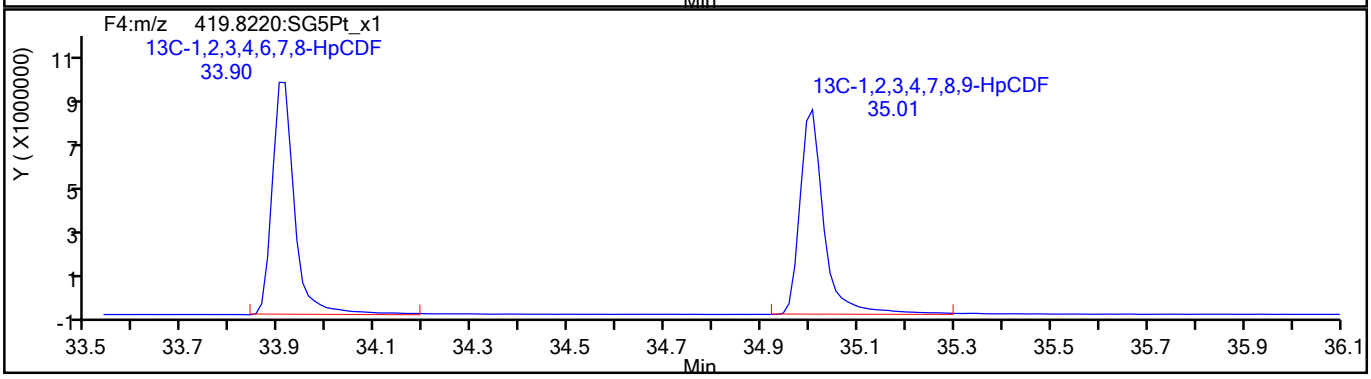

781440

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

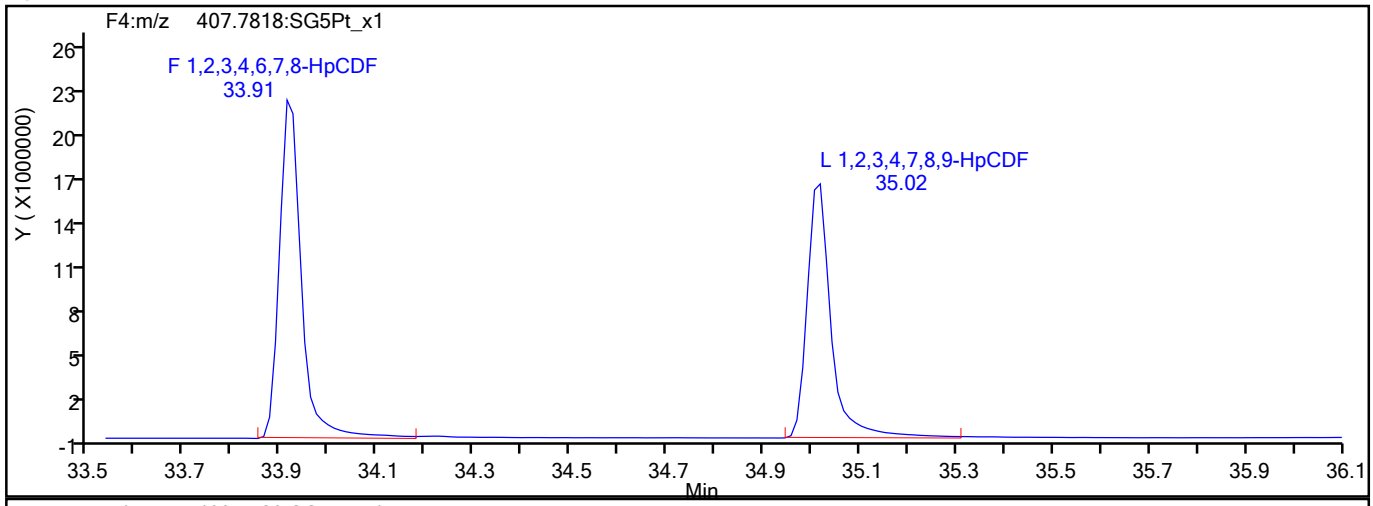

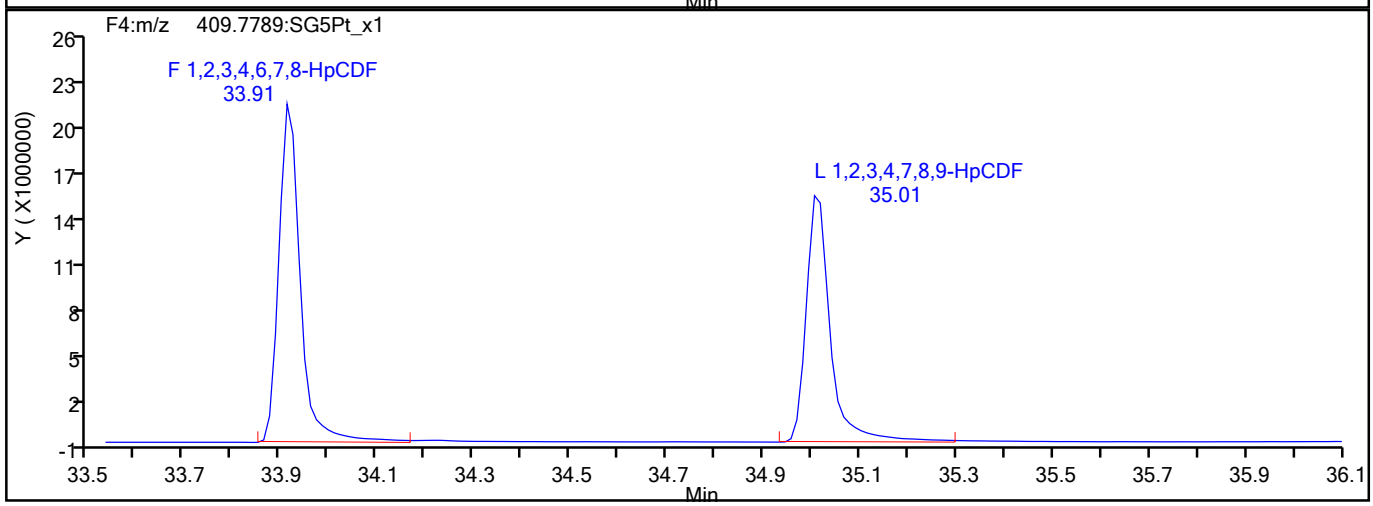

HpCDF Interference Mass

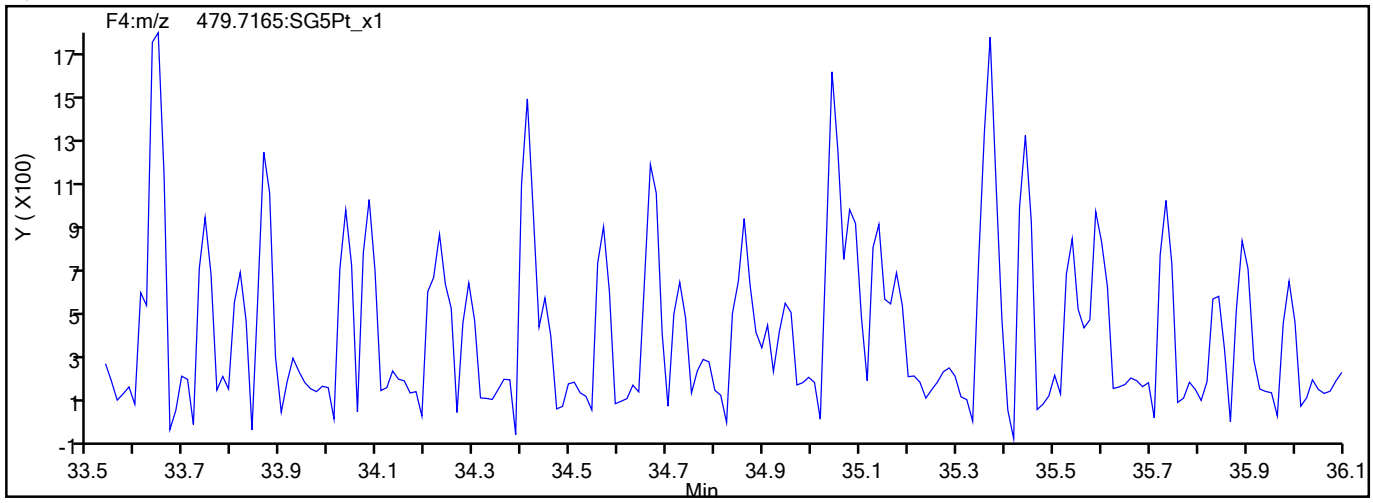

781441

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

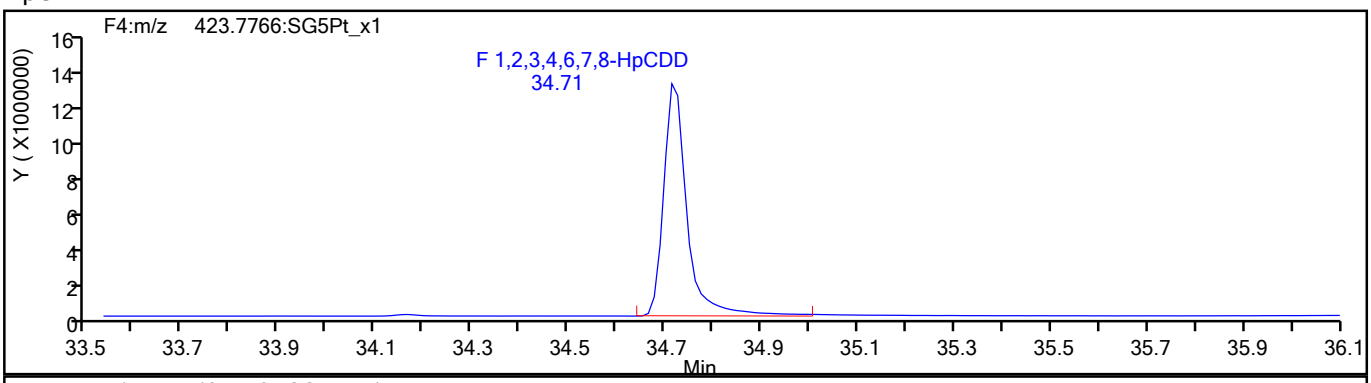

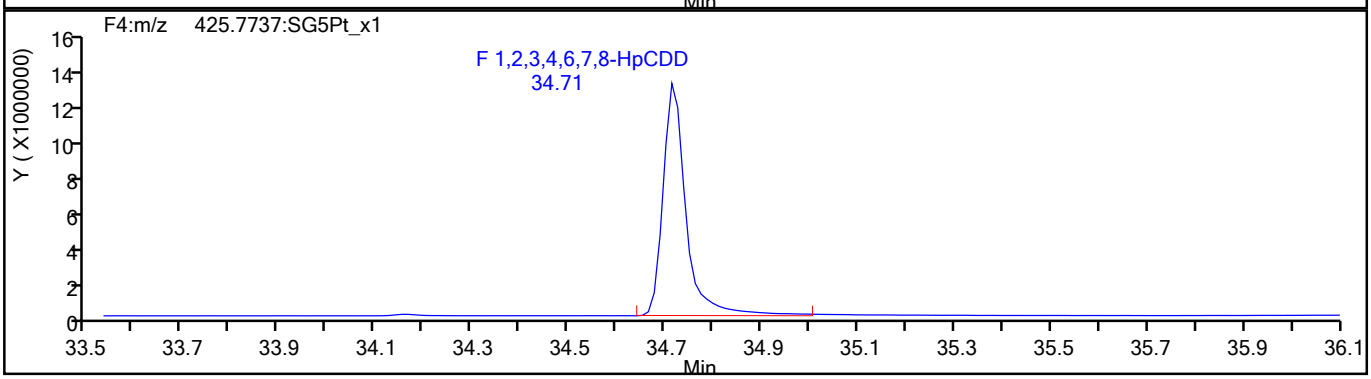

HpCDD Standards

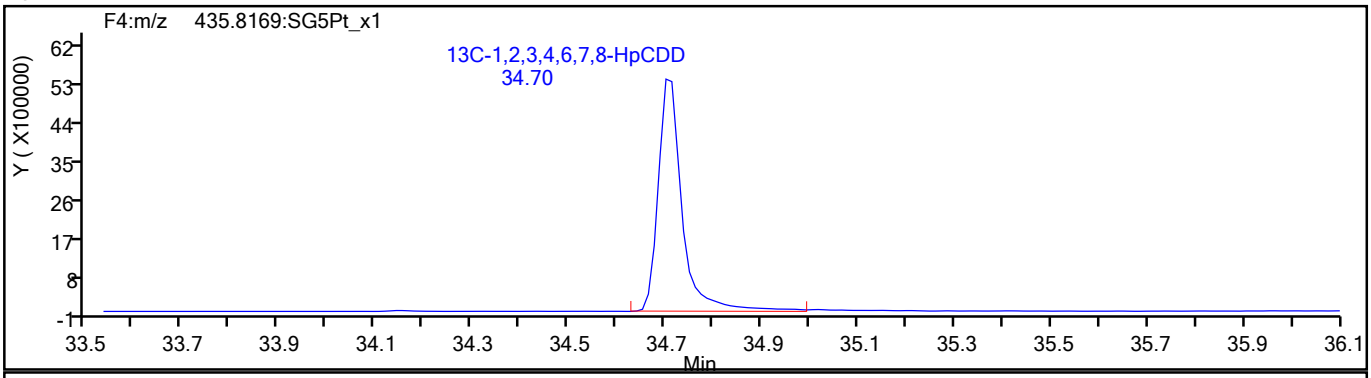

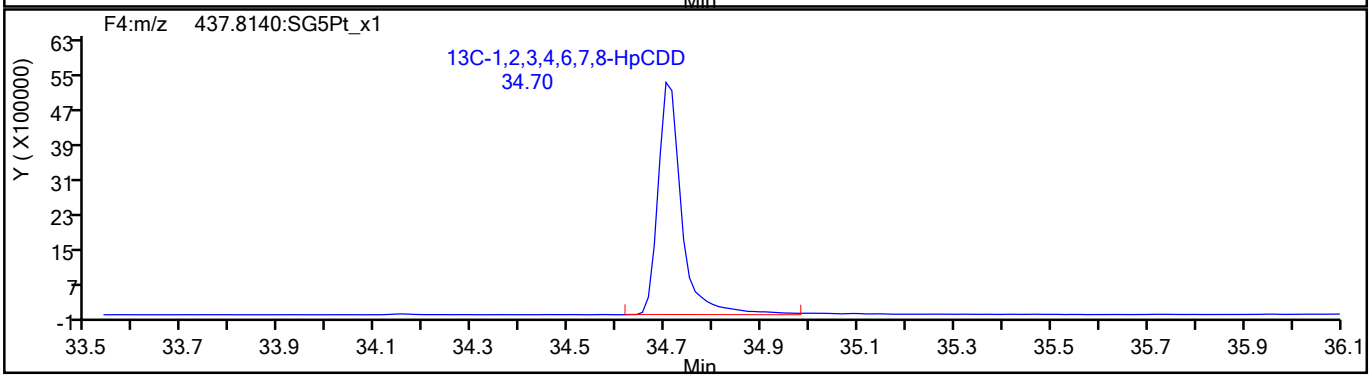

781442

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

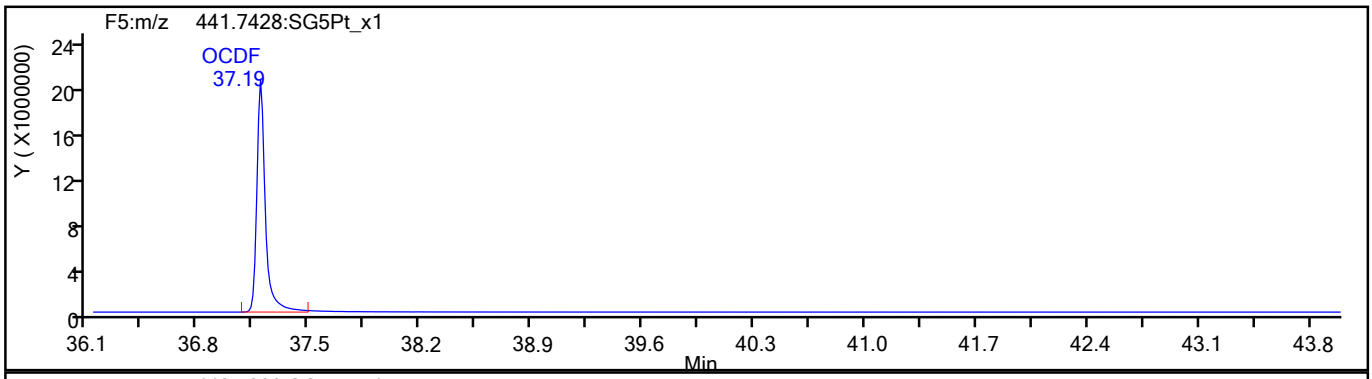

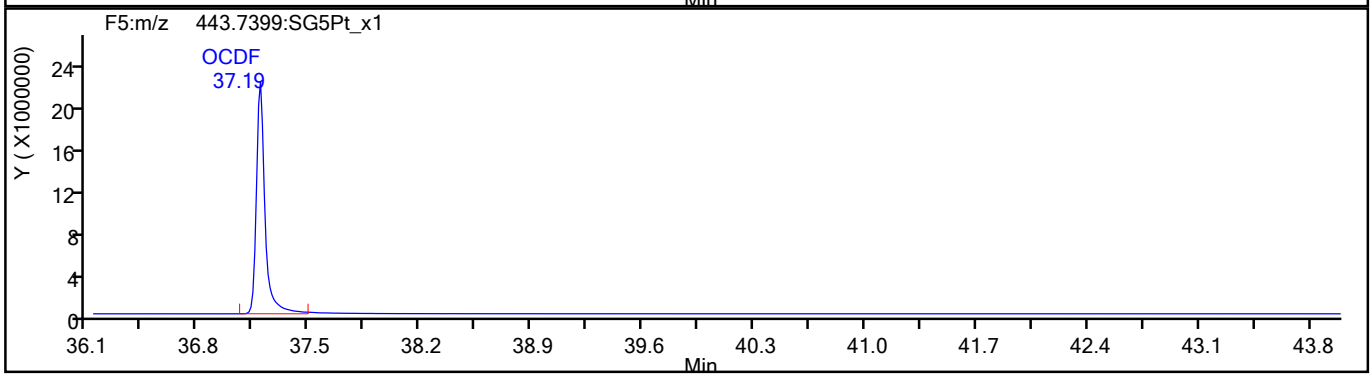

OCDF Standards

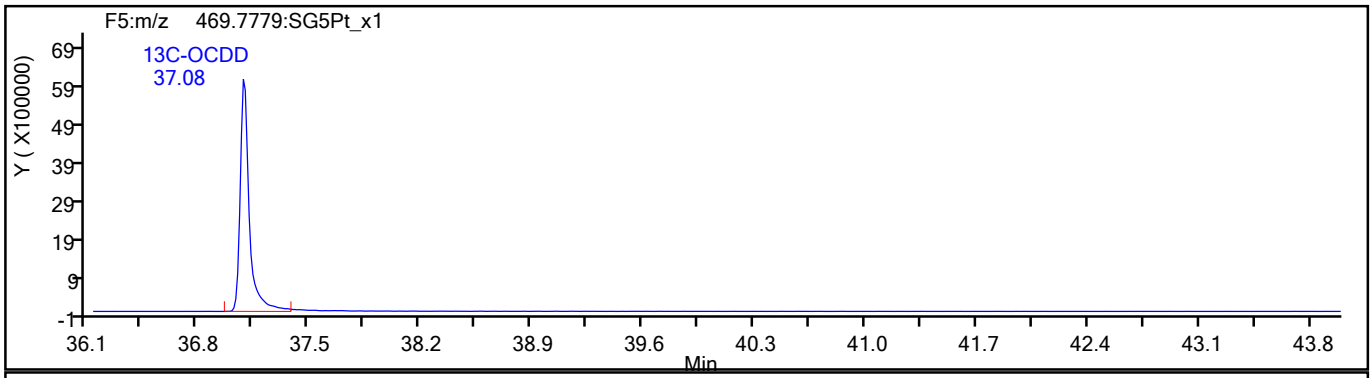

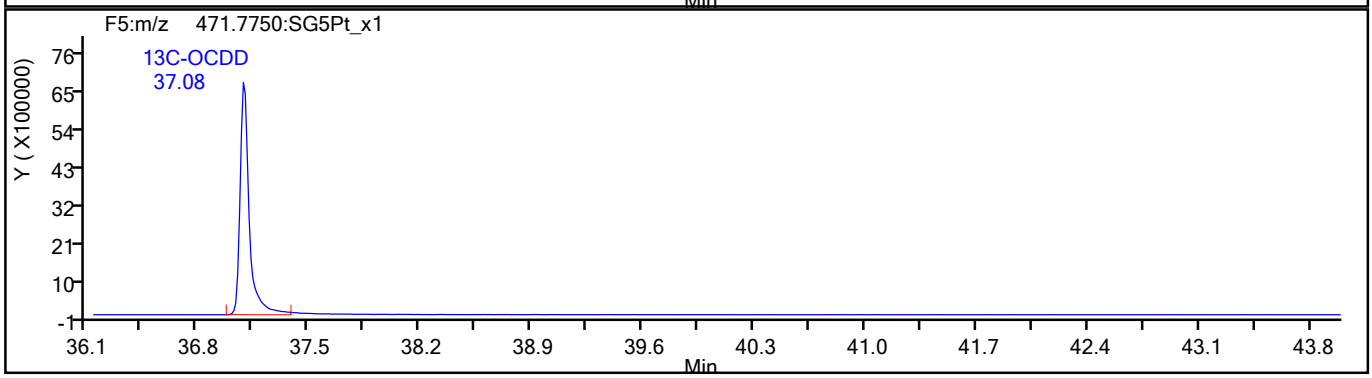

781443

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

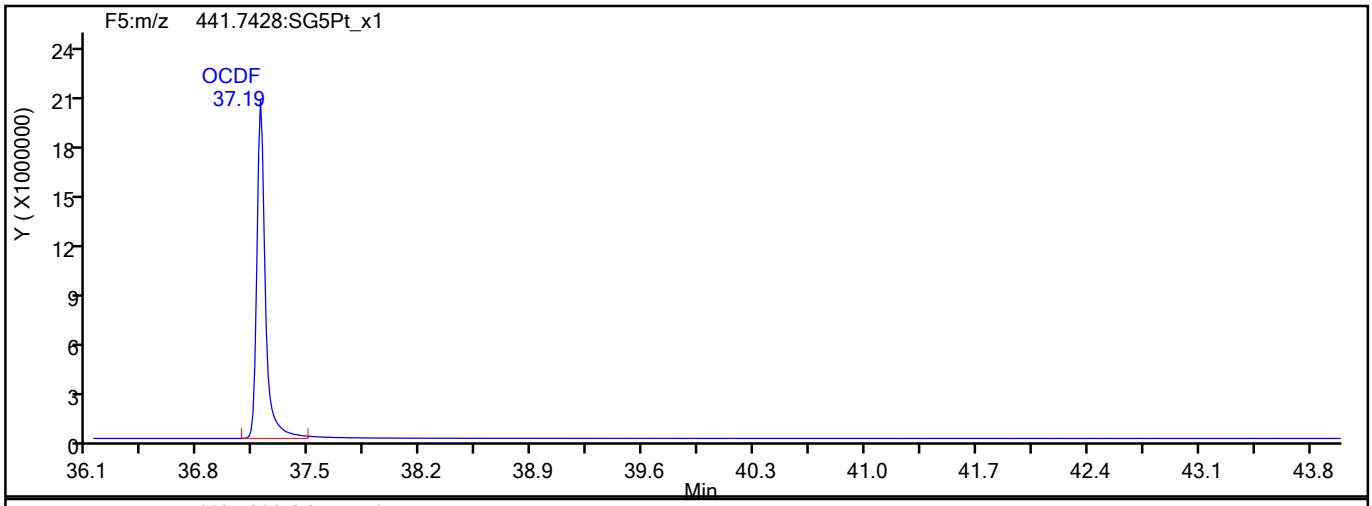

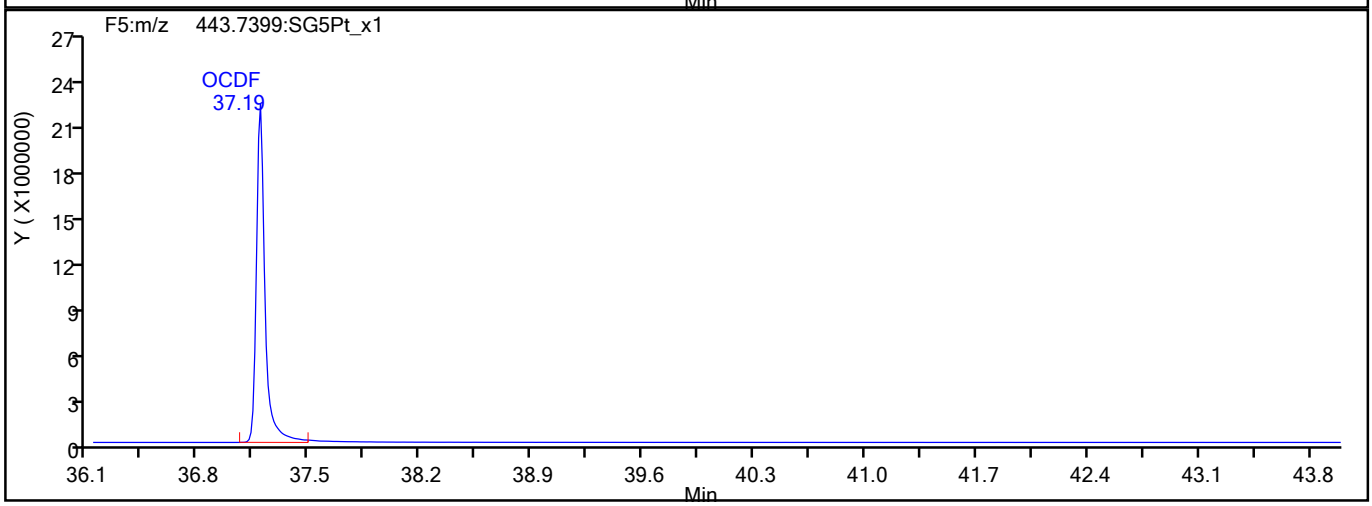

OCDF Interference Mass

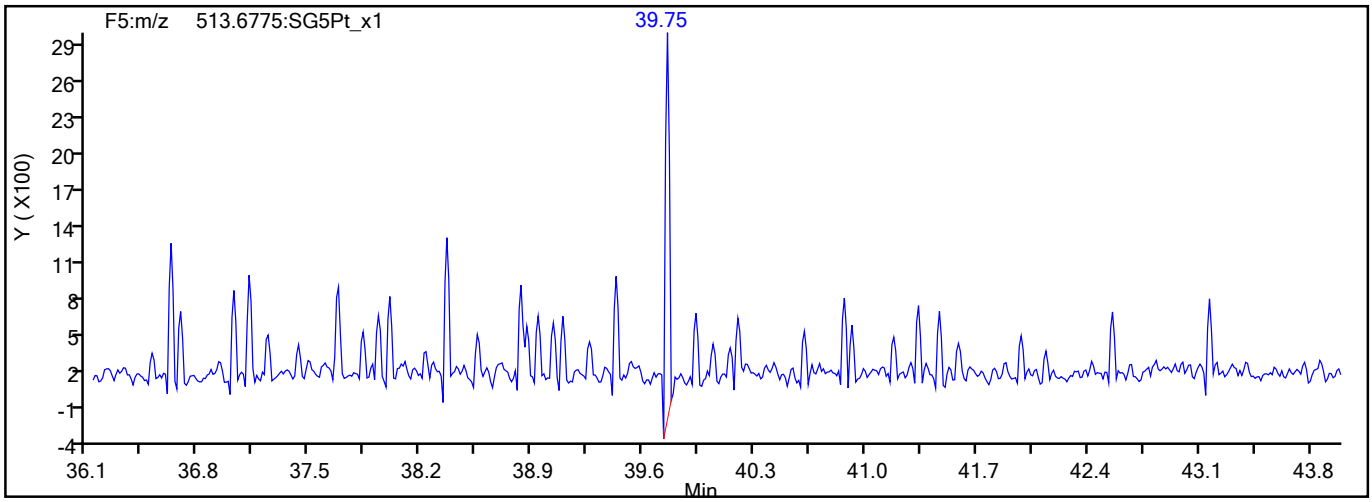

781444

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

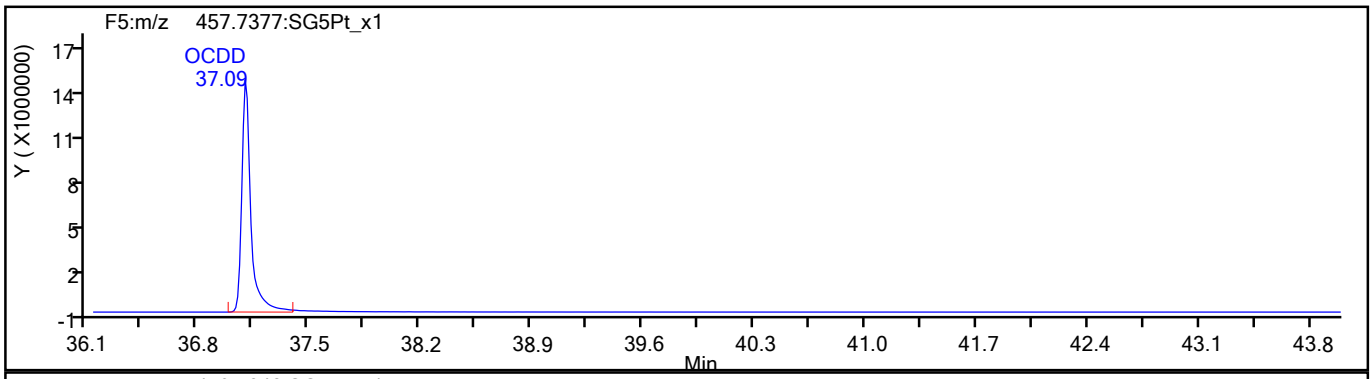

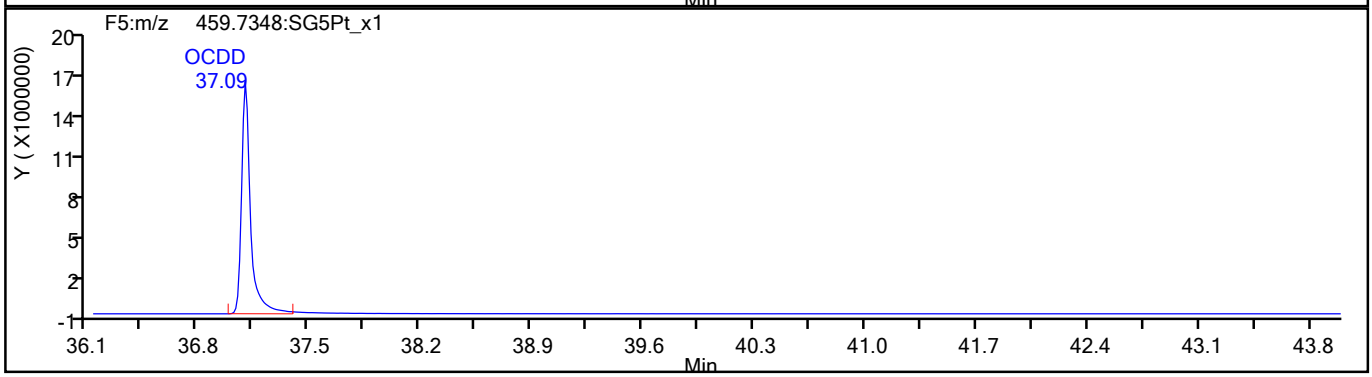

OCDD Standards

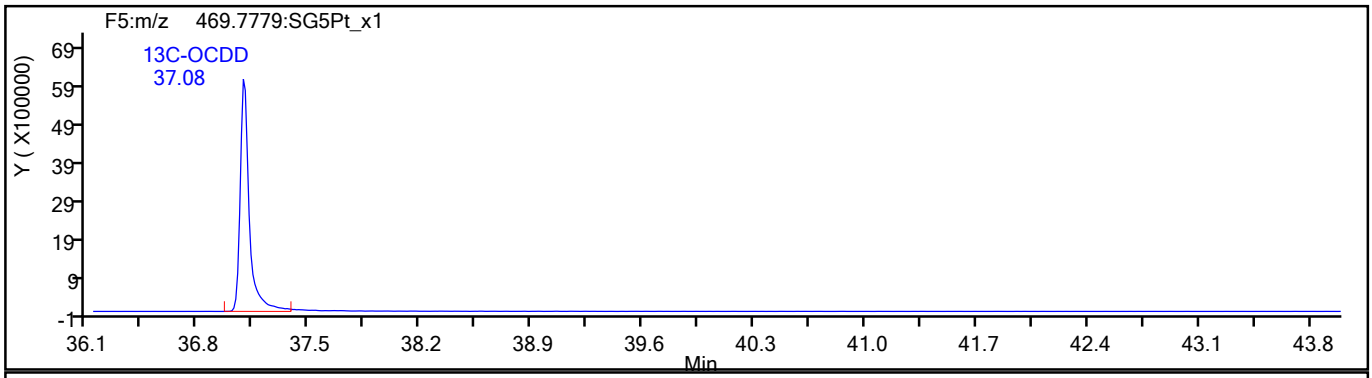

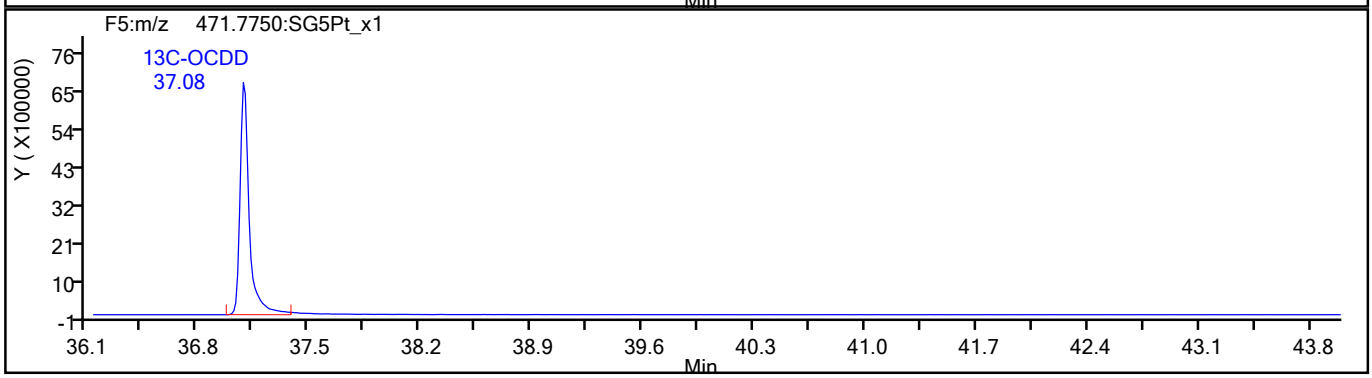

781445

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

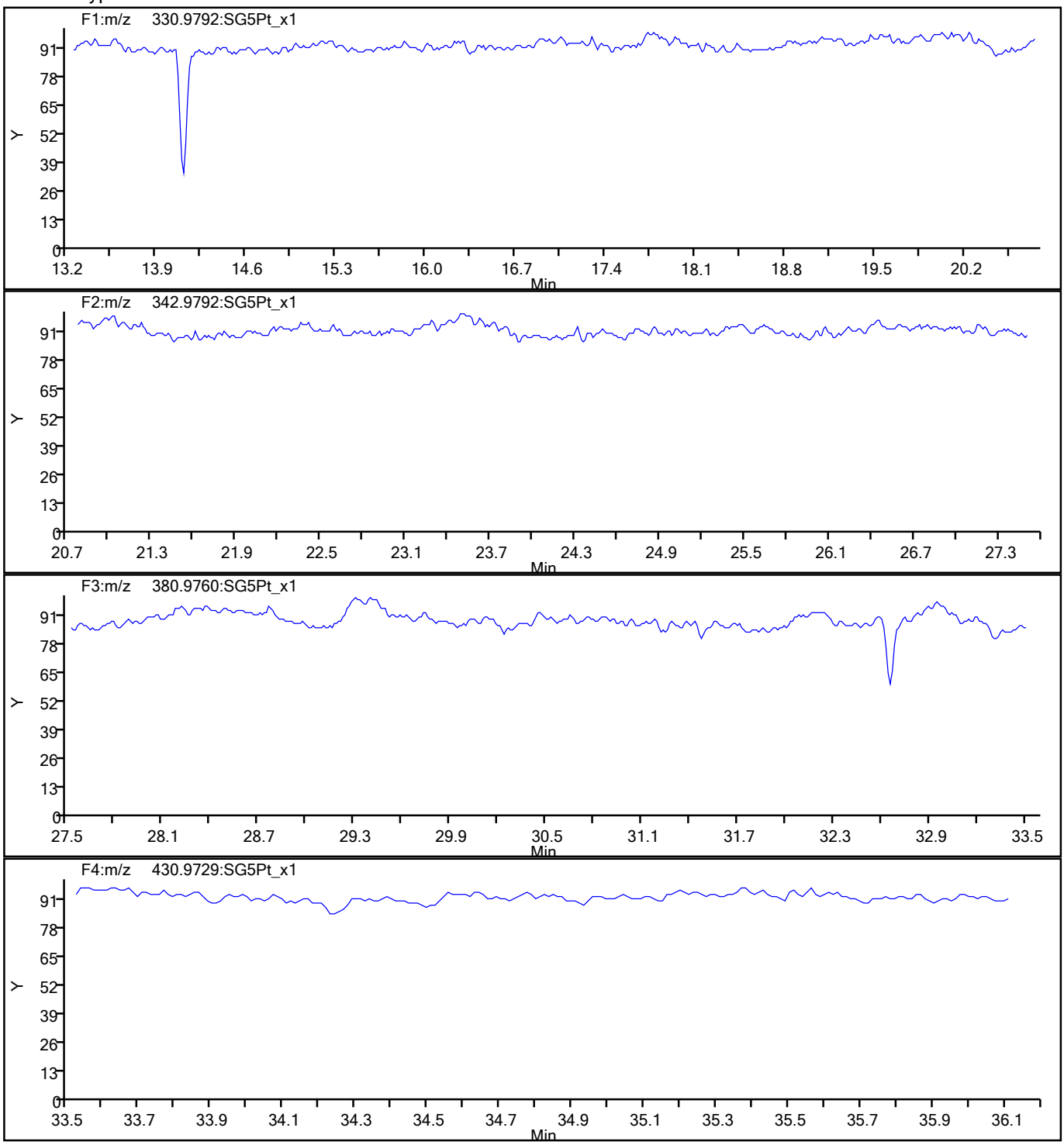

781446

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

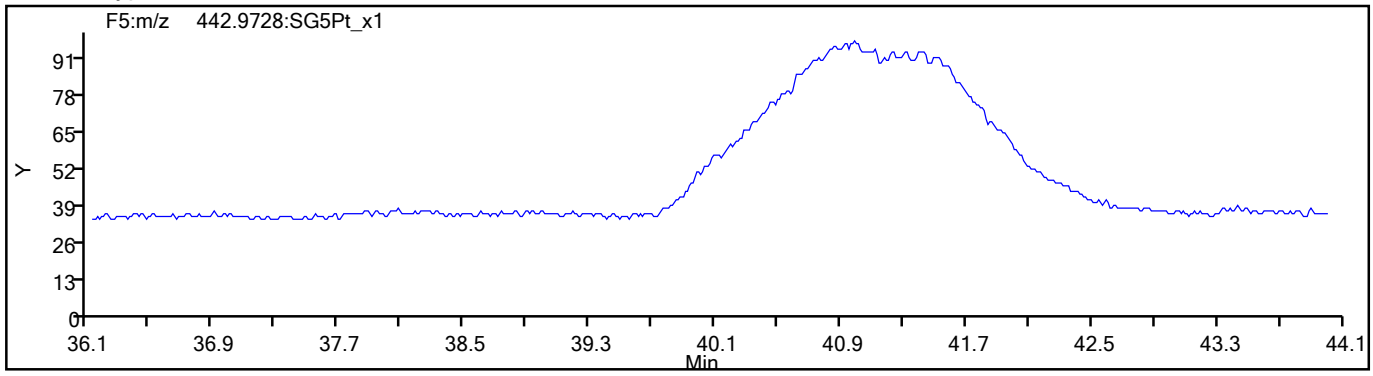

781447

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab Sample ID: CCV 320-516836/1 Calibration Date: 08/14/2021 01:16

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 13AU2110D5_12.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.039		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.292		10.3	10.0	103	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.078		50.8	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.033		50.7	50.0	101	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.037		49.4	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.100		50.7	50.0	101	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.137		50.5	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.163		49.8	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.099		51.6	50.0	103	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.058		52.9	50.0	106	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.272		56.2	50.0	112	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.179		50.5	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.489		51.6	50.0	103	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.109		50.7	50.0	101	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.356		51.5	50.0	103	86-116
OCDD	AveID	1.107	1.134		102	100	102	79-126
OCDF	AveID	1.438	1.446		101	100	101	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.624		99.9	100	100	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9168		102	100	102	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.205		99.6	100	100	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.231		99.3	100	99	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7956		105	100	105	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	0.9927		91.6	100	92	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.014		89.9	100	90	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	0.9702		91.2	100	91	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.6883		93.8	100	94	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.7759		88.2	100	88	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.8918		92.2	100	92	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7469		96.6	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6560		101	100	101	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7013		100	100	100	77-129
13C-OCDD	Ave	0.4472	0.4817		215	200	108	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.243		11.2	10.0	112	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\13AU2110D5.SPL
Last Modified: Monday, August 16, 2021 14:27:40 Pacific Daylight Time
Printed: Monday, August 16, 2021 14:27:44 Pacific Daylight Time Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	13AU2110D5_1	CS-4 HRDXNL4_00099	CCV 081321	Tray01:2	Dioxin		DB
2	13AU2110D5_2	WDM HRDXNCP_00044	WDM 081321	Tray01:1	Dioxin		DB
3	13AU2110D5_3	mb 320-514953/1-a	mb 320-514953/1-a	Tray01:4	1613B/8290A/Water	D265	DB
4	13AU2110D5_4	lcs 320-514953/2-a	lcs 320-514953/2-a	Tray01:5	1613B/8290A/Water		DB
5	13AU2110D5_5	lcsd 320-514953/3-a	lcsd 320-514953/3-a	Tray01:6	1613B/8290A/Water		DB
6	13AU2110D5_6	320-76081-a-4-b	320-76081-a-4-b	Tray01:7	1613B/8290A/Water		DB
7	13AU2110D5_7	mb 320-514735/1-a	mb 320-514735/1-a	Tray01:8	1613B/8290A/Solid	D262	DB
8	13AU2110D5_8	lcs 320-514735/2-a	lcs 320-514735/2-a	Tray01:9	1613B/8290A/Solid		DB
9	13AU2110D5_9	lcsd 320-514735/3-a	lcsd 320-514735/3-a	Tray01:10	1613B/8290A/Solid		DB
10	13AU2110D5_10	320-76718-a-1-a	320-76718-a-1-a	Tray01:11	1613B/8290A/Solid		DB
11	13AU2110D5_11	SB Solvent Blank C-14	SB 081321	Tray01:3			DB
12	13AU2110D5_12	CS-4 HRDXNL4_00099	CCV 081321A	Tray01:2	Dioxin		DB
13	13AU2110D5_13	WDM HRDXNCP_00044	WDM 081321A	Tray01:1	Dioxin		DB
14	13AU2110D5_14	mb 320-512871/1-a	mb 320-512871/1-a	Tray01:15	1613B/Solid	D265	DB
15	13AU2110D5_15	lcs 320-512871/2-a	lcs 320-512871/2-a	Tray01:16	1613B/Solid		DB
16	13AU2110D5_16	lcsd 320-512871/3-a	lcsd 320-512871/3-a	Tray01:17	1613B/Solid		DB
17	13AU2110D5_17	320-76788-a-2-a	320-76788-a-2-a	Tray01:18	1613B/Solid		DB
18	13AU2110D5_18	320-76788-a-3-a	320-76788-a-3-a	Tray01:19	1613B/Solid		DB
19	13AU2110D5_19	320-76788-a-4-a	320-76788-a-4-a	Tray01:20	1613B/Solid		DB
20	13AU2110D5_20	320-76788-a-5-a	320-76788-a-5-a	Tray01:21	1613B/Solid		DB
21	13AU2110D5_21	320-76788-a-6-a	320-76788-a-6-a	Tray01:22	1613B/Solid		DB
22	13AU2110D5_22	320-76788-a-7-a	320-76788-a-7-a	Tray01:23	1613B/Solid		DB
23	13AU2110D5_23	320-76720-a-1-a 50X	320-76720-a-1-a 50X	Tray01:24	1613B/Solid		DB
24	13AU2110D5_24	320-76720-a-5-a 25X	320-76720-a-5-a 25X	Tray01:25	1613B/Solid		DB
25	13AU2110D5_25	320-76724-a-3-a 100X	320-76724-a-3-a 100X	Tray01:26	1613B/Solid		DB
26	13AU2110D5_26	SB Solvent Blank C-14	SB 081321A	Tray01:3			DB
27	13AU2110D5_27	WDM HRDXNCP_00044	WDM 081321B	Tray01:1	Dioxin		DB
28	13AU2110D5_28	CS-4 HRDXNL4_00099	CCV 081321B	Tray01:2	Dioxin		DB
29	13AU2110D5_29	320-76788-a-8-a	320-76788-a-8-a	Tray01:29	1613B/Solid	D265	DB
30	13AU2110D5_30	320-76788-a-9-a	320-76788-a-9-a	Tray01:30	1613B/Solid		DB
31	13AU2110D5_31	320-76788-a-13-a	320-76788-a-13-a	Tray01:31	1613B/Solid		DB
32	13AU2110D5_32	320-76788-a-15-a	320-76788-a-15-a	Tray01:32	1613B/Solid		DB
33	13AU2110D5_33	320-76788-a-16-a	320-76788-a-16-a	Tray01:33	1613B/Solid		DB
34	13AU2110D5_34	320-76788-a-17-a	320-76788-a-17-a	Tray01:34	1613B/Solid		DB
35	13AU2110D5_35	320-76788-a-18-a	320-76788-a-18-a	Tray01:35	1613B/Solid		DB
36	13AU2110D5_36	320-76788-a-19-a	320-76788-a-19-a	Tray01:36	1613B/Solid		DB
37	13AU2110D5_37	320-76788-a-20-a	320-76788-a-20-a	Tray01:37	1613B/Solid		DB
38	13AU2110D5_38	320-76788-a-21-a	320-76788-a-21-a	Tray01:38	1613B/Solid		DB
39	13AU2110D5_39	320-76788-a-1-a	320-76788-a-1-a	Tray01:39	1613B/Solid		DB
40	13AU2110D5_40	320-76788-a-14-a	320-76788-a-14-a	Tray01:40	1613B/Solid		DB
41	13AU2110D5_41	SB Solvent Blank C-14	SB 081321B	Tray01:3			DB
42	13AU2110D5_42	WDM HRDXNCP_00044	WDM 081321C	Tray01:1	Dioxin		DB
43	13AU2110D5_43	CS-4 HRDXNL4_00099	CCV 081321C	Tray01:2	Dioxin		DB
44	13AU2110D5_44	mb 320-513585/1-a	mb 320-513585/1-a	Tray01:43	1613B/Solid	D265	DB
45	13AU2110D5_45	lcs 320-513585/2-a	lcs 320-513585/2-a	Tray01:44	1613B/Solid		DB
46	13AU2110D5_46	320-76765-a-18-a	320-76765-a-18-a	Tray01:45	1613B/Solid		DB
47	13AU2110D5_47	320-76769-a-1-a	320-76769-a-1-a	Tray01:46	1613B/Solid		DB
48	13AU2110D5_48	320-76769-a-1-b ms	320-76769-a-1-b ms	Tray01:47	1613B/Solid		DB
49	13AU2110D5_49	320-76769-a-1-c msd	320-76769-a-1-c msd	Tray01:48	1613B/Solid		DB
50	13AU2110D5_50	320-76769-a-2-a	320-76769-a-2-a	Tray01:49	1613B/Solid		DB
51	13AU2110D5_51	320-76769-a-3-a	320-76769-a-3-a	Tray01:50	1613B/Solid		DB
52	13AU2110D5_52	320-76769-a-5-a	320-76769-a-5-a	Tray01:51	1613B/Solid		DB
53	13AU2110D5_53	320-76769-a-6-a	320-76769-a-6-a	Tray01:52	1613B/Solid		DB
54	13AU2110D5_54	320-76769-a-7-a	320-76769-a-7-a	Tray01:53	1613B/Solid		DB
55	13AU2110D5_55	320-76769-a-8-a	320-76769-a-8-a	Tray01:54	1613B/Solid		DB
56	13AU2110D5_56	SB Solvent Blank C-14	SB 081321C	Tray01:3			DB
57	13AU2110D5_57	WDM HRDXNCP_00044	WDM 081321D	Tray01:1	Dioxin		DB
58	13AU2110D5_58	CS-4 HRDXNL4_00099	CCV 081321D	Tray01:2	Dioxin		DB

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
59	13AU2110D5_59	320-76769-a-13-a	320-76769-a-13-a	Tray01:57	1613B/Solid	D265	DB
60	13AU2110D5_60	320-76769-a-15-a	320-76769-a-15-a	Tray01:58	1613B/Solid		DB
61	13AU2110D5_61	320-76769-a-16-a	320-76769-a-16-a	Tray01:59	1613B/Solid		DB
62	13AU2110D5_62	320-76769-a-17-a	320-76769-a-17-a	Tray01:60	1613B/Solid		DB
63	13AU2110D5_63	320-76769-a-18-a	320-76769-a-18-a	Tray01:61	1613B/Solid		DB
64	13AU2110D5_64	320-76769-a-19-a	320-76769-a-19-a	Tray01:62	1613B/Solid		DB
65	13AU2110D5_65	320-76769-a-20-a	320-76769-a-20-a	Tray01:63	1613B/Solid		DB
66	13AU2110D5_66	320-76769-a-25-a	320-76769-a-25-a	Tray01:64	1613B/Solid		DB
67	13AU2110D5_67	320-76769-a-26-a	320-76769-a-26-a	Tray01:65	1613B/Solid		DB
68	13AU2110D5_68	320-76769-a-28-a	320-76769-a-28-a	Tray01:66	1613B/Solid		DB
69	13AU2110D5_69	320-76769-a-14-a	320-76769-a-14-a	Tray01:67	1613B/Solid		DB
70	13AU2110D5_70	SB Solvent Blank C-14	SB 081321D	Tray01:3			DB

Logfile checked
08/16/21 SMA

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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Sample Size	Units	MS File	Inlet File	Inject Volume	Process
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
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Printed: Saturday, August 14, 2021 01:16:08 Pacific Daylight Time

M 292.9824 R 12026

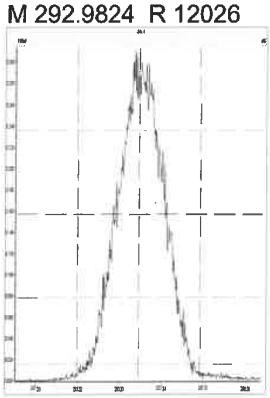

M 304.9824 R 11908

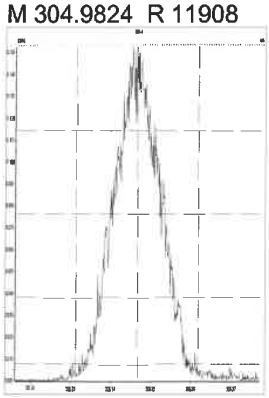

M 318.9792 R 12118

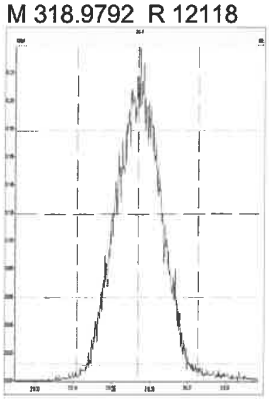

M 330.9792 R 11944

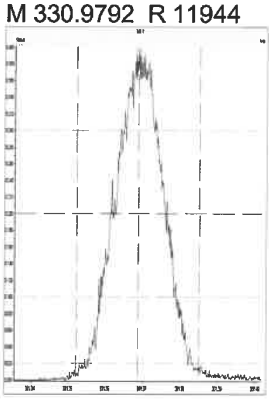

M 342.9792 R 11338

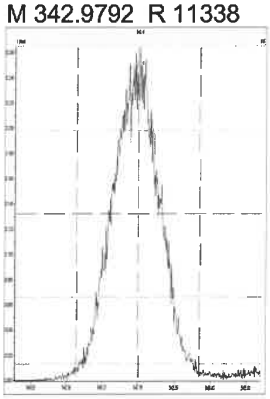

M 354.9792 R 11779

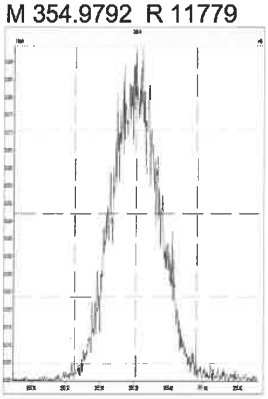

M 366.9792 R 12019

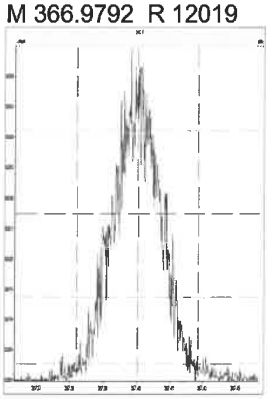

M 380.9760 R 10730

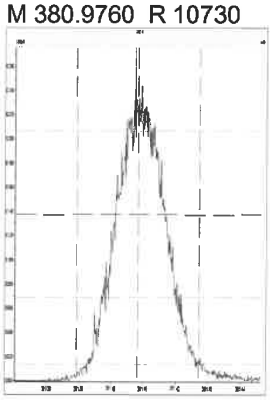

M 392.9760 R 11106

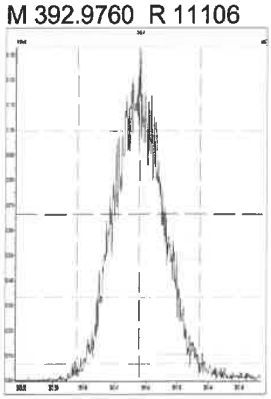

M 404.9760 R 10752

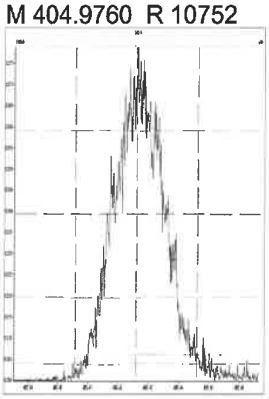

M 416.9760 R 12199

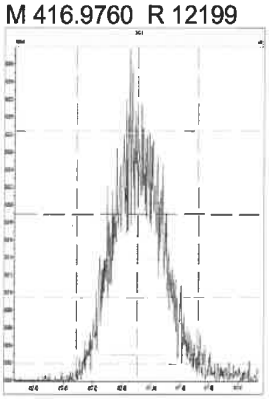

M 318.9792 R 11775

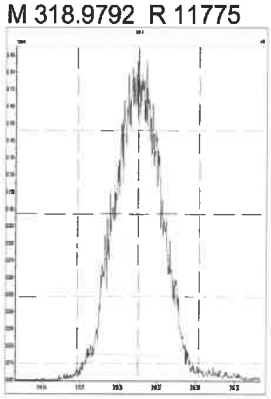

M 330.9792 R 11821

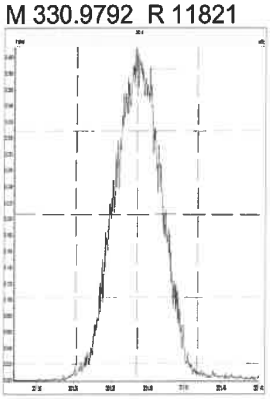

M 342.9792 R 12170

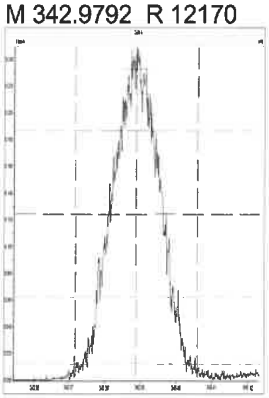

M 354.9792 R 12199

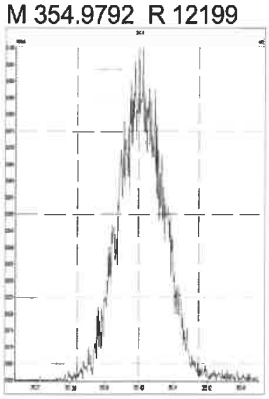

M 366.9792 R 12325

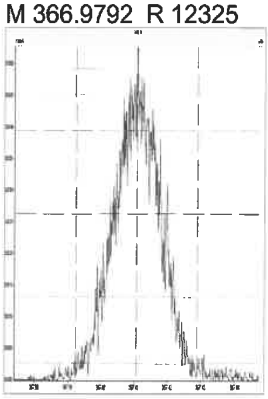

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M 380.9760 R 11369

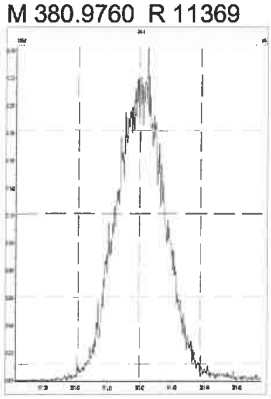

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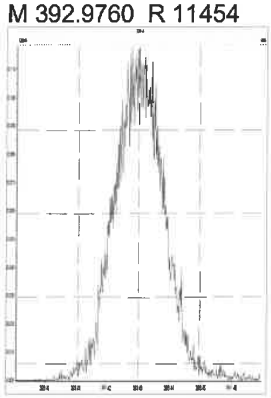

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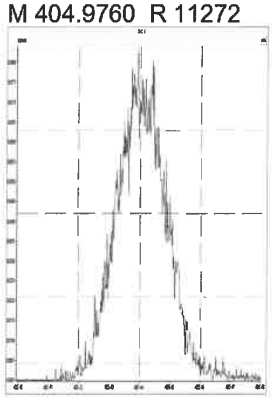

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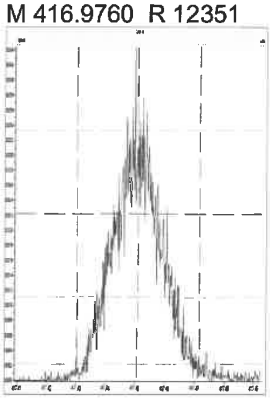

M 366.9792 R 11656

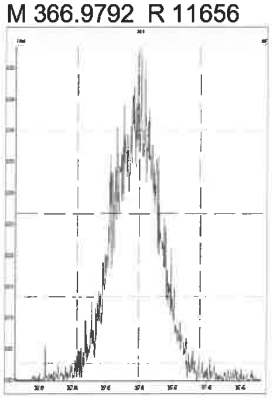

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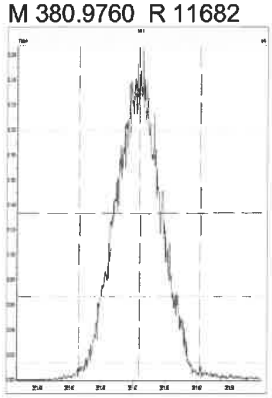

M 392.9760 R 12469

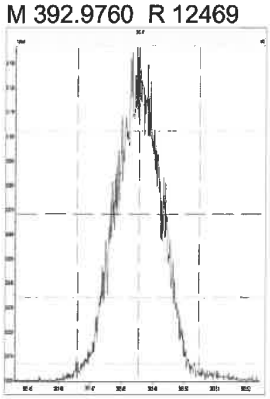

M 404.9760 R 12079

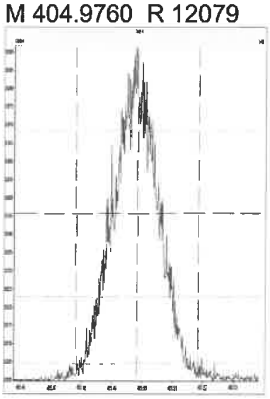

M 416.9760 R 12794

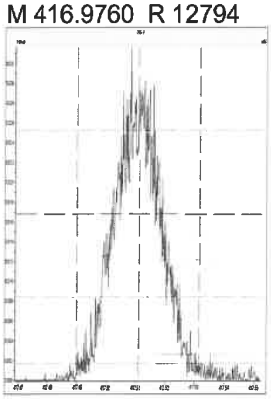

M 430.9728 R 11798

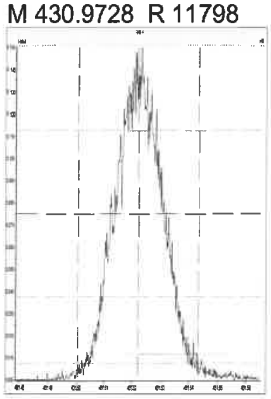

M 442.9728 R 12165

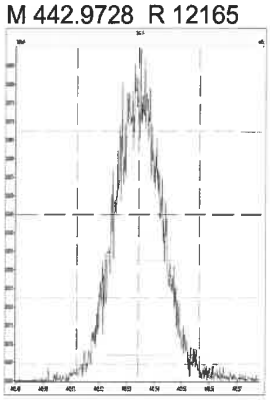

M 454.9728 R 11764

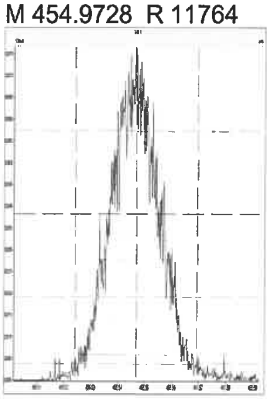

M 380.9760 R 11876

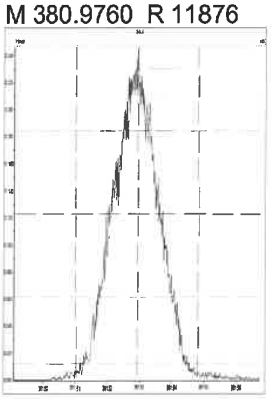

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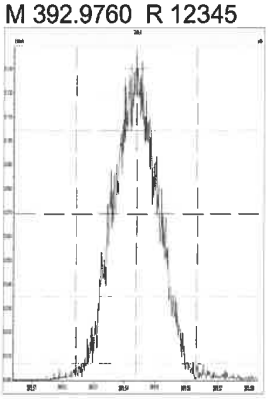

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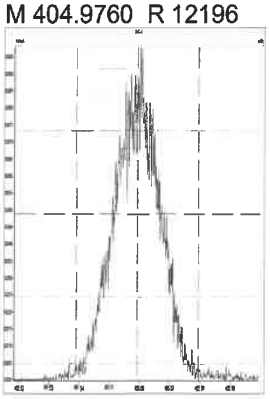

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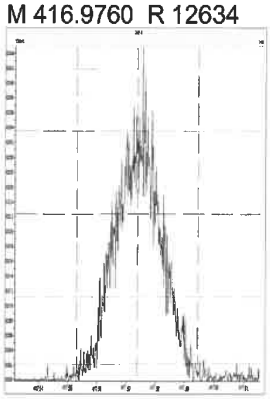

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M 430.9728 R 11655

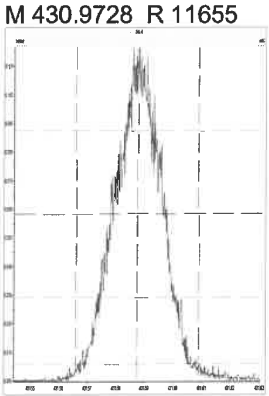

M 442.9728 R 11576

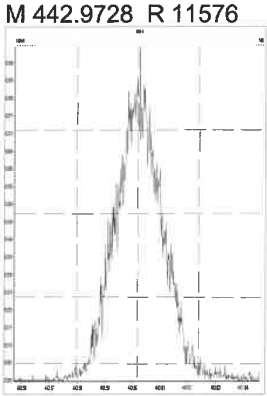

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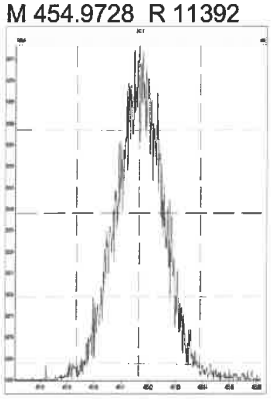

M 466.9728 R 13409

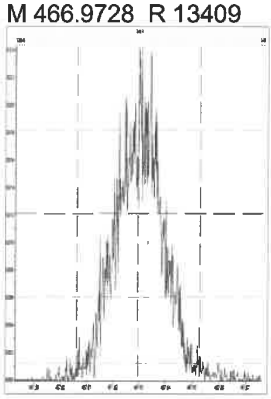

M 480.9696 R 11286

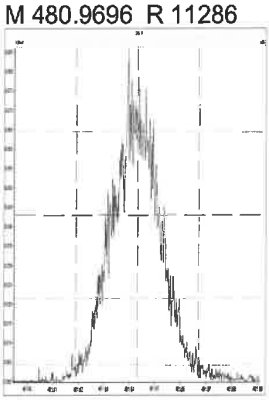

M 380.9760 R 12136

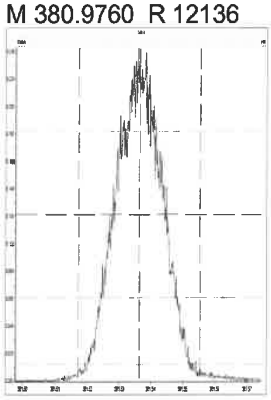

M 392.9760 R 12395

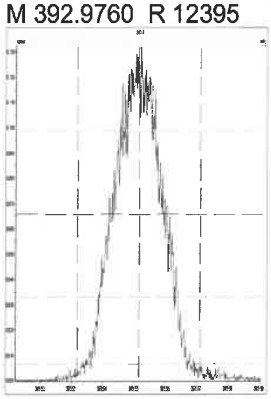

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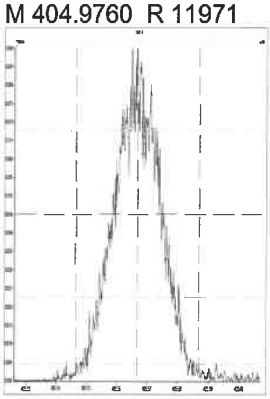

M 416.9760 R 13402

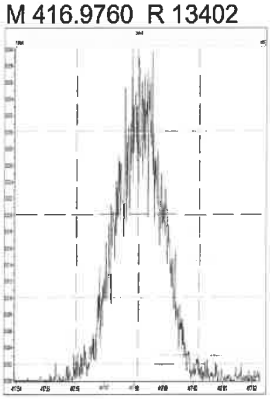

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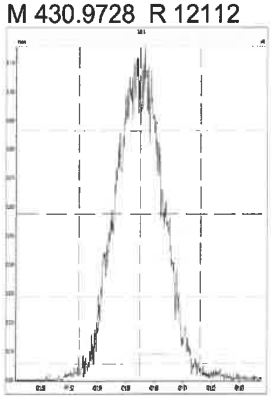

M 442.9728 R 12626

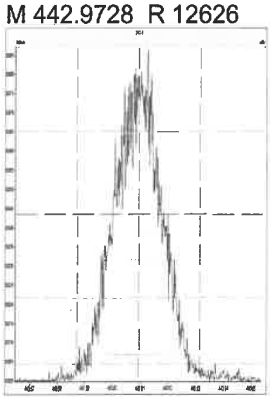

M 454.9728 R 11926

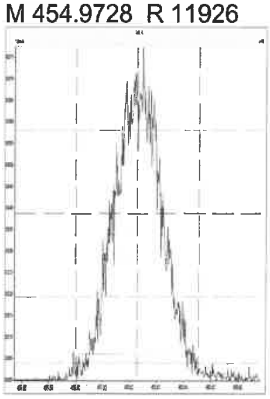

M 466.9728 R 12367

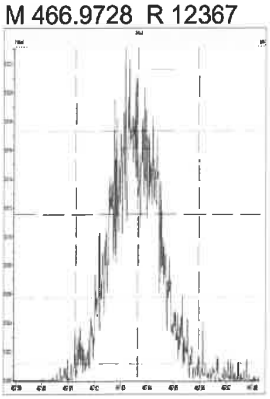

M 480.9696 R 11494

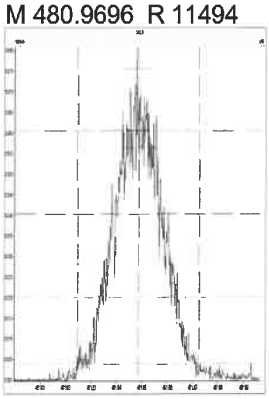

M 492.9696 R 10995

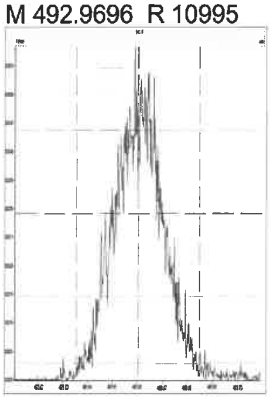

M 504.9696 R 11886

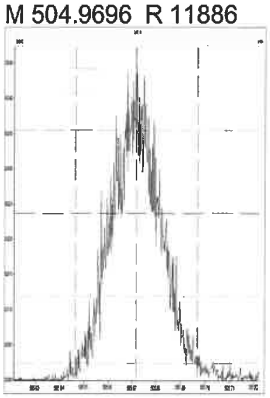

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M 516.9697 R 14005

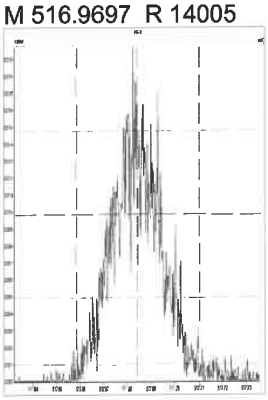

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M 292.9824 R 11904

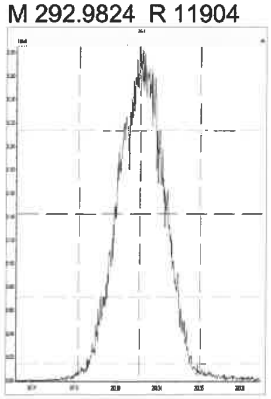

M 304.9824 R 12419

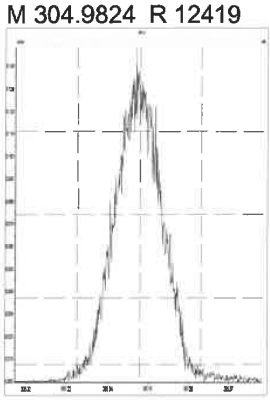

M 318.9792 R 12226

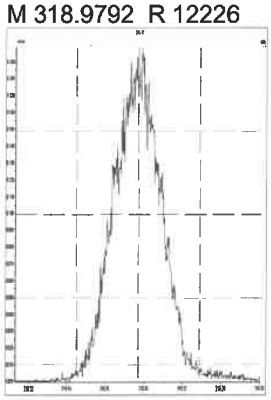

M 330.9792 R 11962

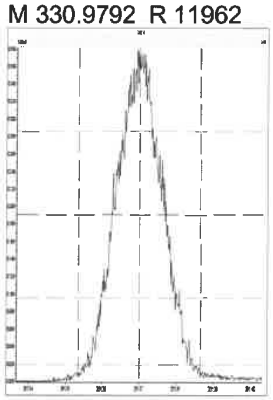

M 342.9792 R 11990

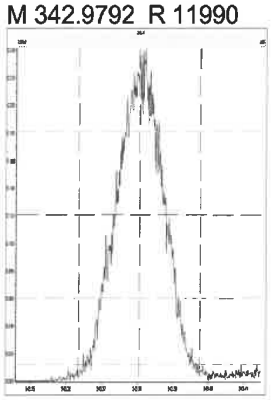

M 354.9792 R 11712

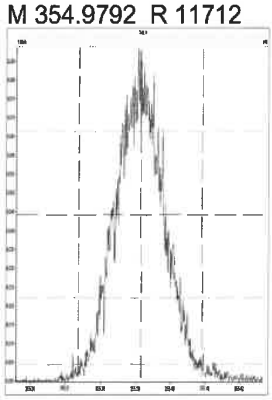

M 366.9792 R 12261

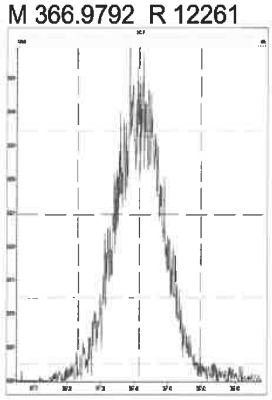

M 380.9760 R 11020

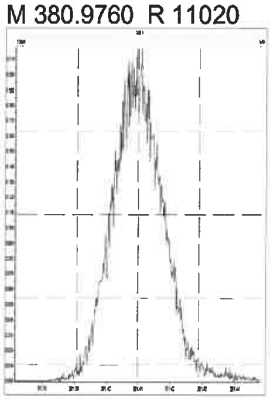

M 392.9760 R 10777

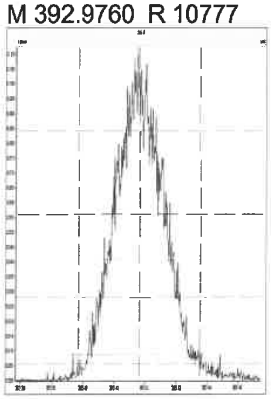

M 404.9760 R 11365

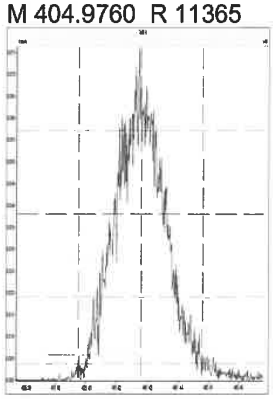

M 416.9760 R 11825

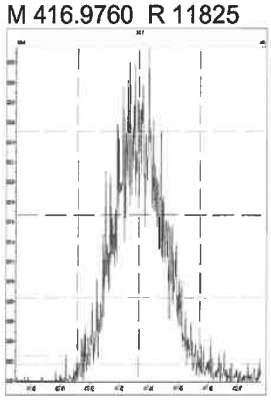

M 318.9792 R 12106

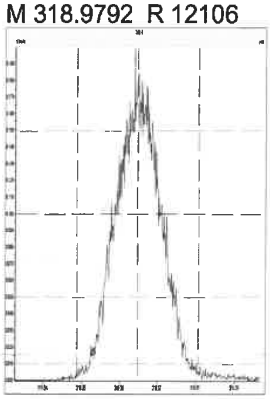

M 330.9792 R 11603

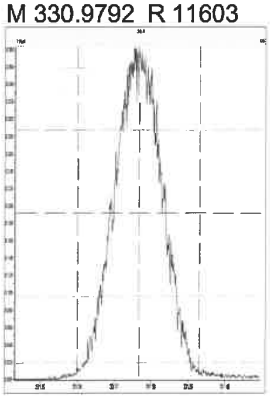

M 342.9792 R 11831

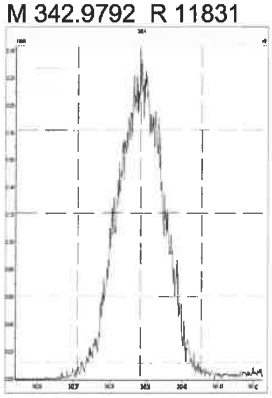

M 354.9792 R 11659

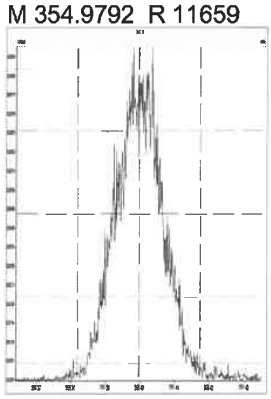

M 366.9792 R 12345

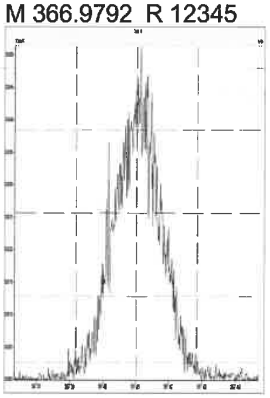

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M 380.9760 R 11441

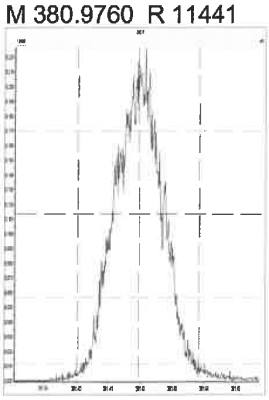

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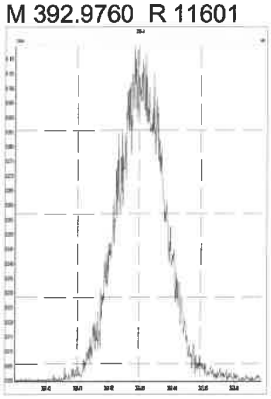

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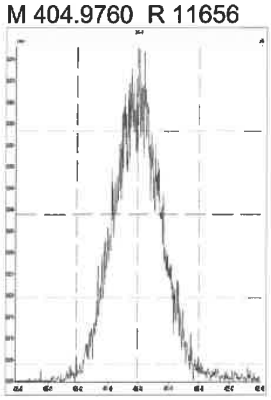

M 416.9760 R 12504

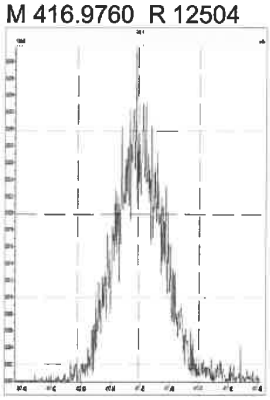

M 366.9792 R 12063

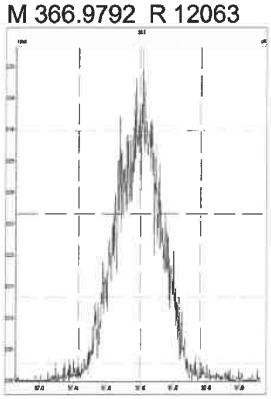

M 380.9760 R 11852

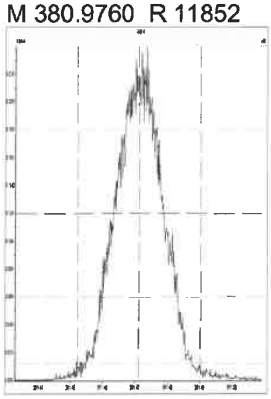

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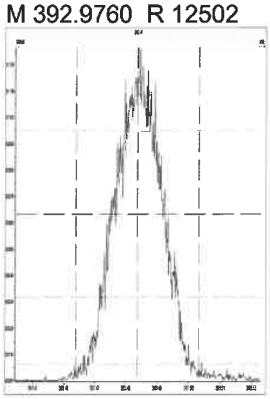

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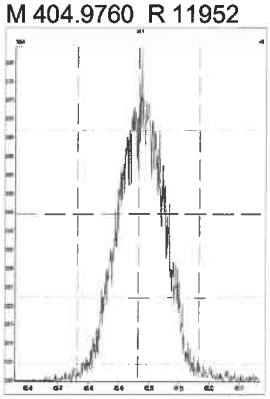

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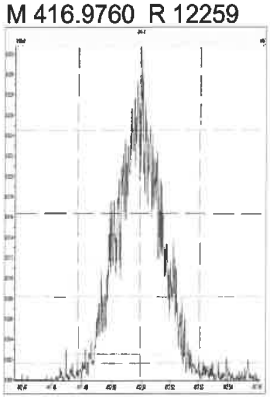

M 430.9728 R 11363

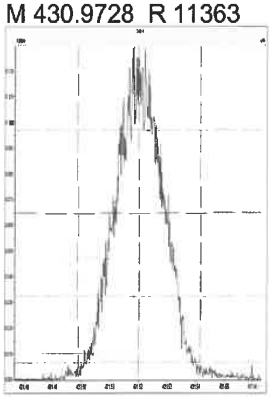

M 442.9728 R 11712

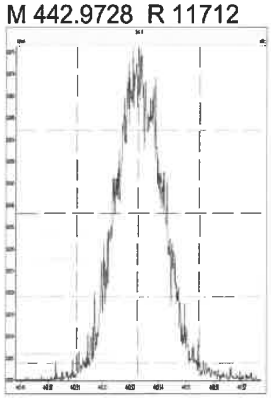

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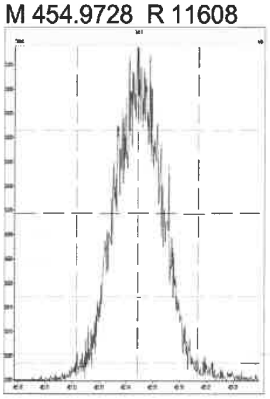

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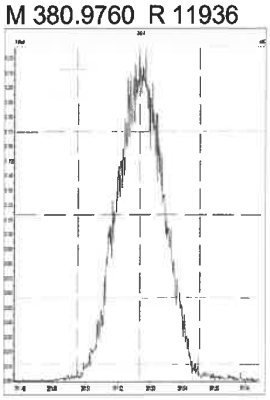

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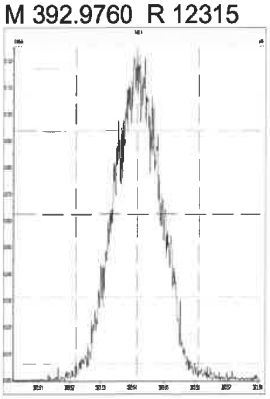

M 404.9760 R 12390

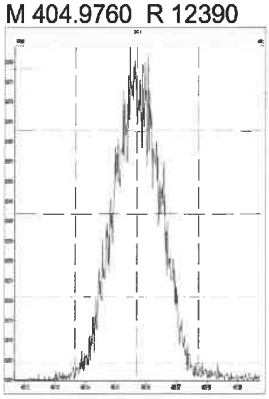

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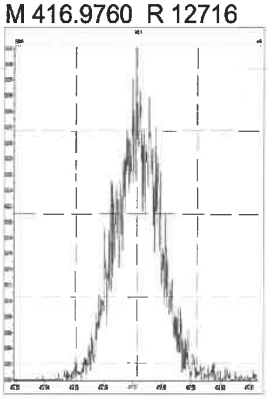

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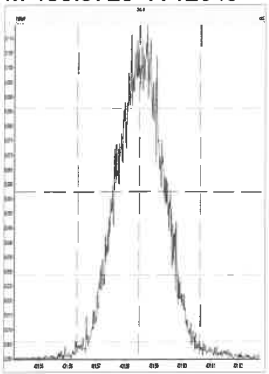

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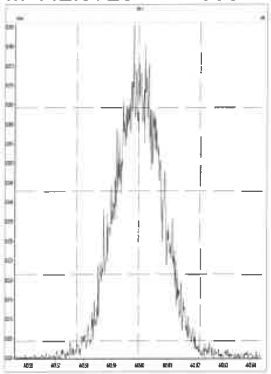

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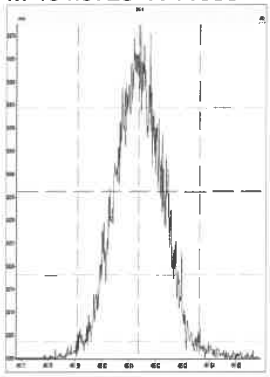

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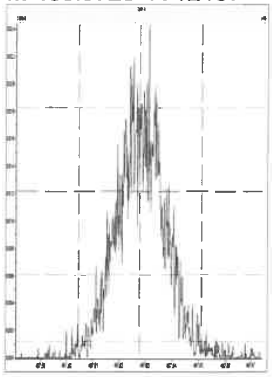

M 480.9696 R 11215

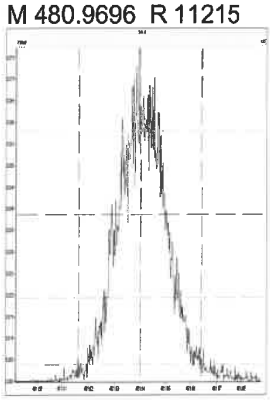

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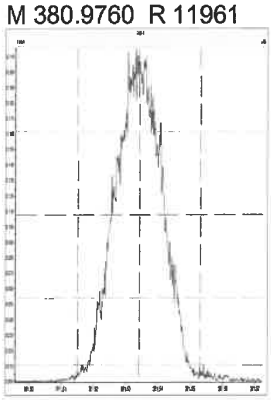

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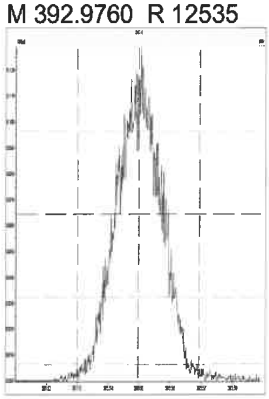

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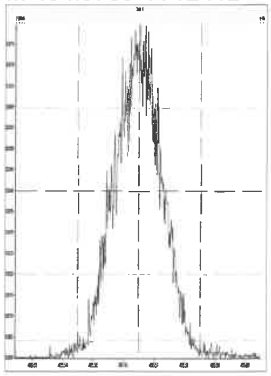

M 416.9760 R 12890

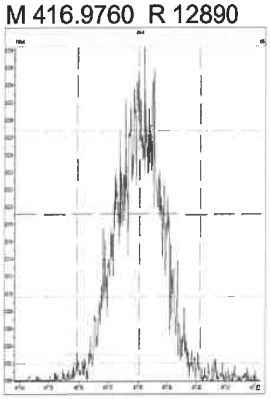

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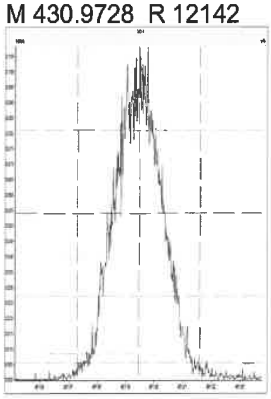

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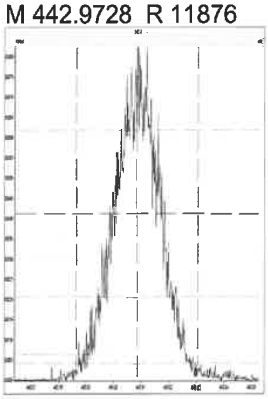

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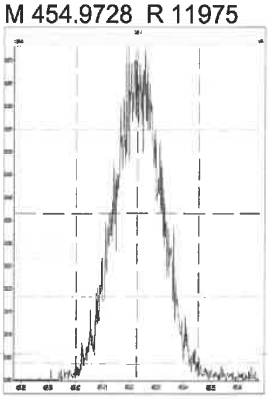

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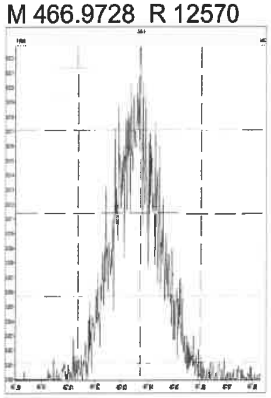

M 480.9696 R 11860

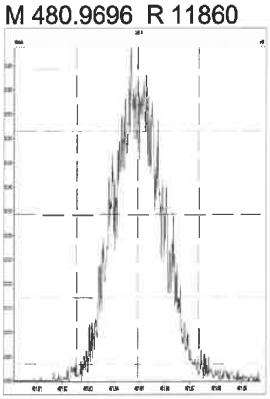

M 492.9696 R 11390

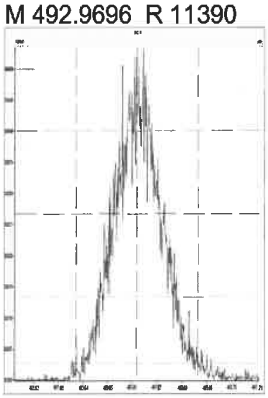

M 504.9696 R 11743

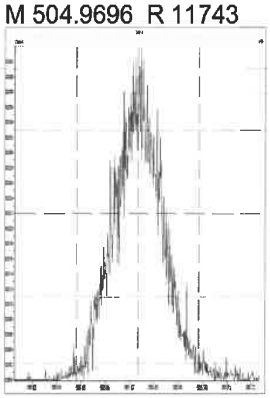

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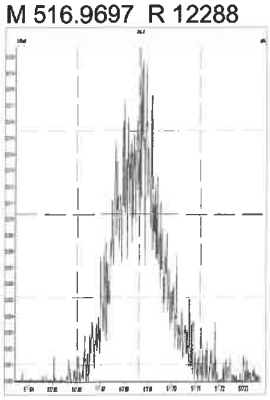

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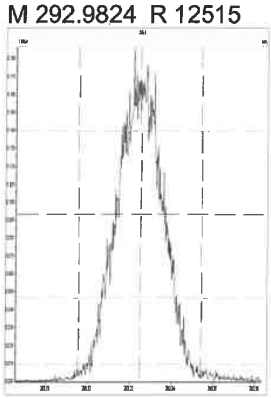

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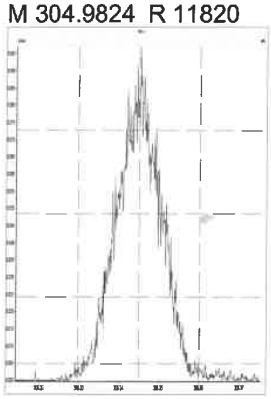

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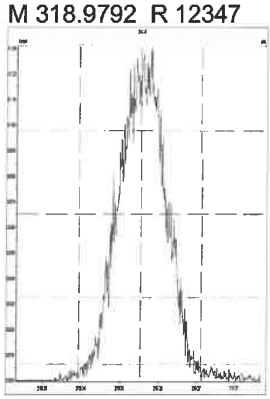

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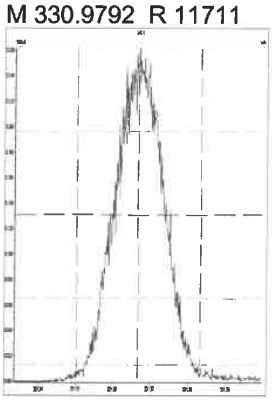

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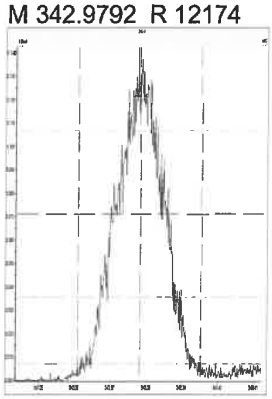

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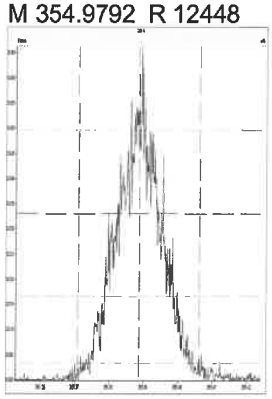

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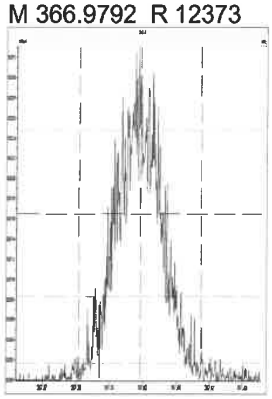

M 380.9760 R 11312

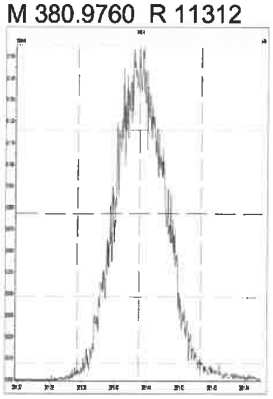

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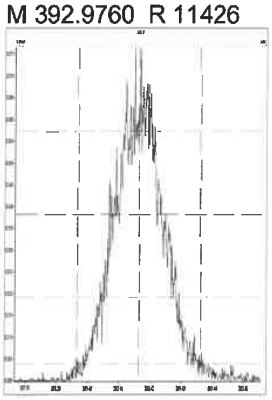

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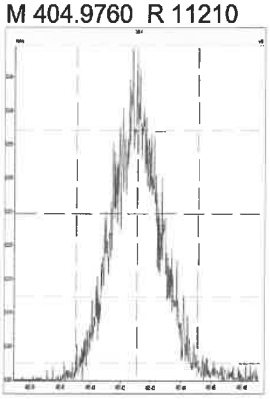

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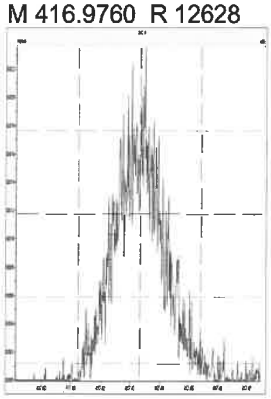

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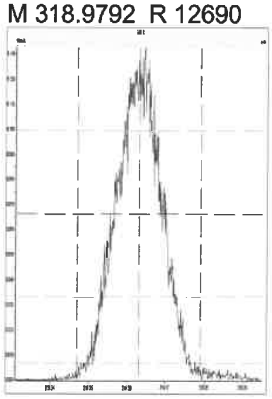

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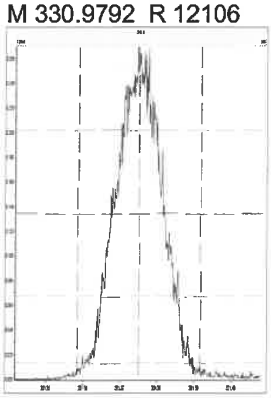

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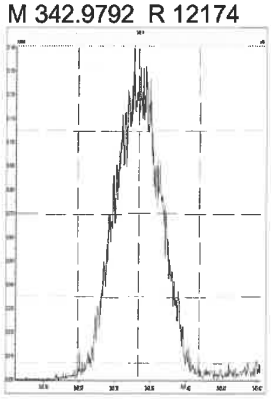

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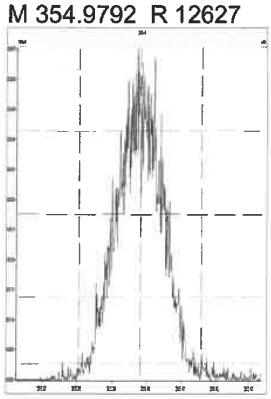

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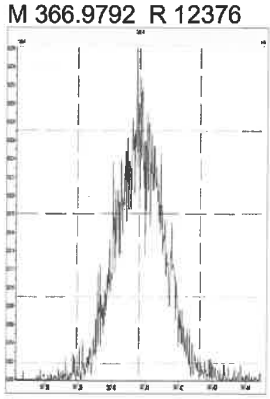

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M 380.9760 R 11585

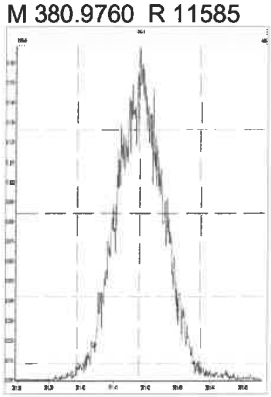

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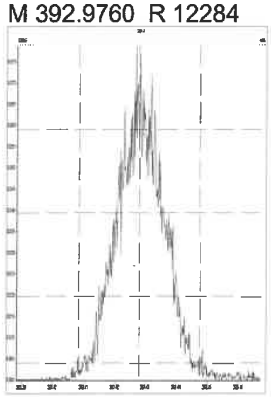

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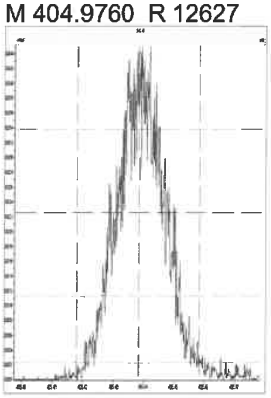

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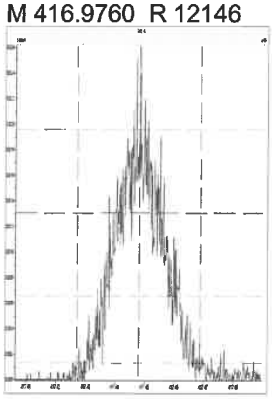

M 366.9792 R 13640

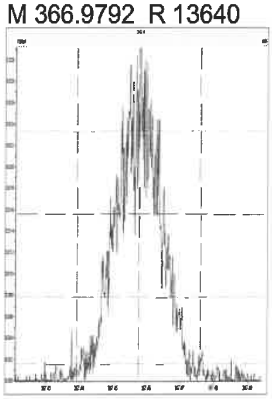

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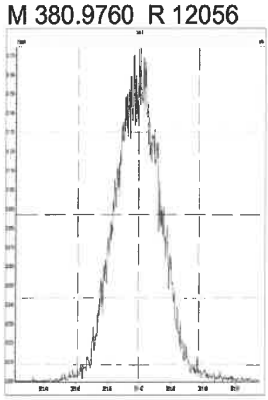

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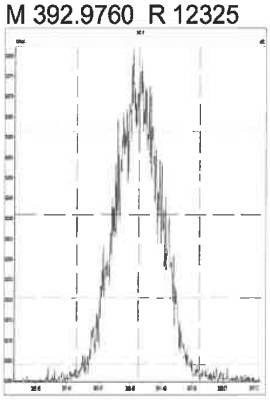

M 404.9760 R 13196

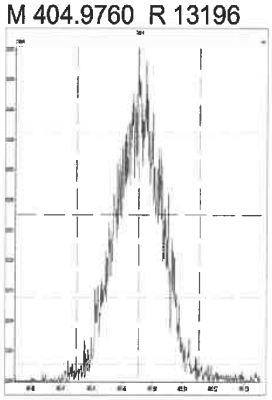

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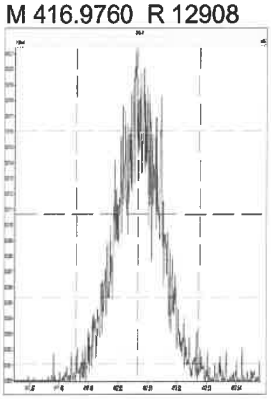

M 430.9728 R 11737

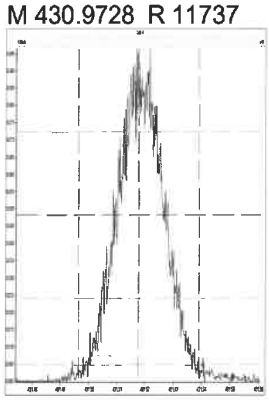

M 442.9728 R 12468

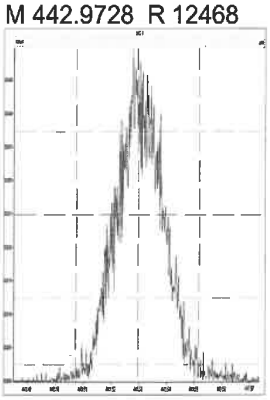

M 454.9728 R 12406

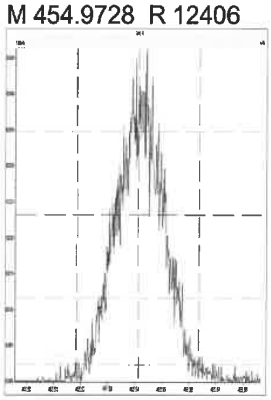

M 380.9760 R 12286

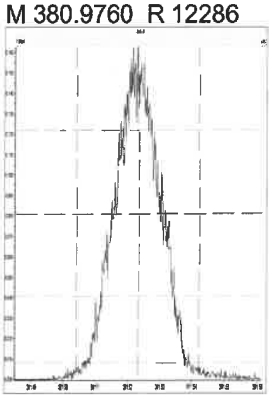

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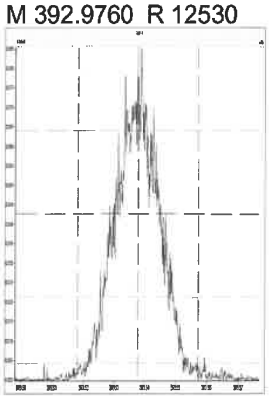

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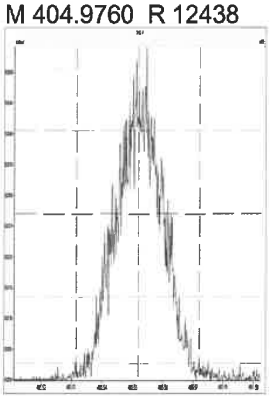

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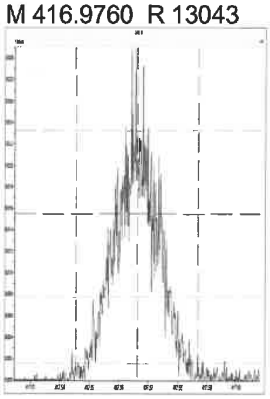

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M 430.9728_R 11944

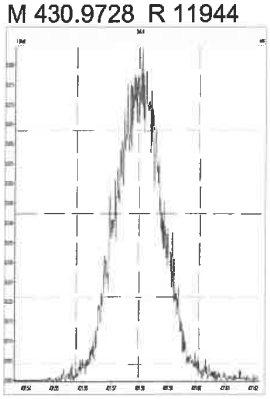

M 442.9728_R 12565

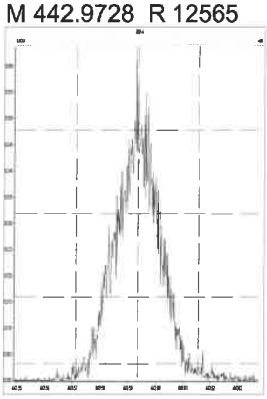

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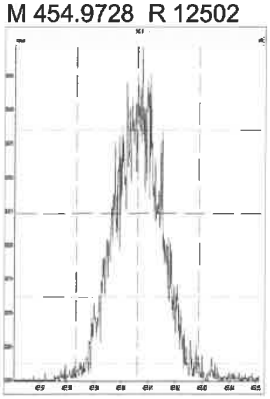

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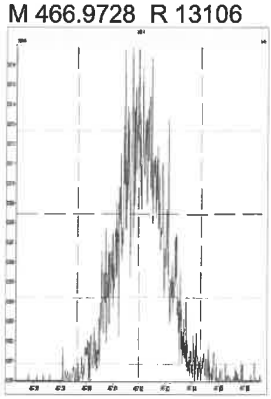

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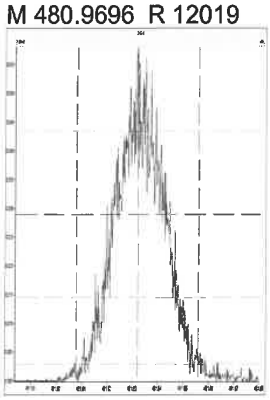

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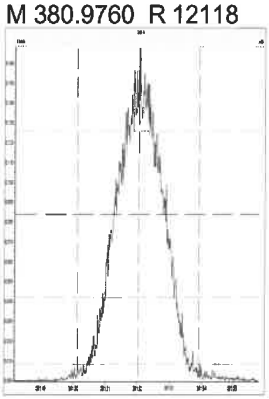

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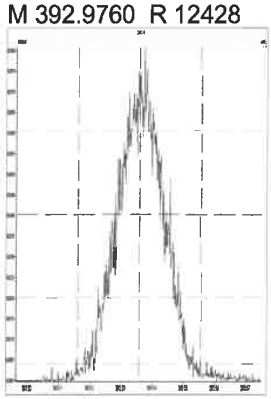

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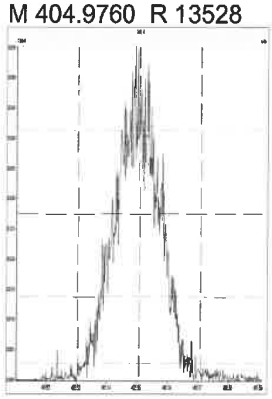

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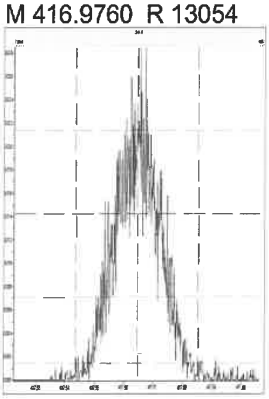

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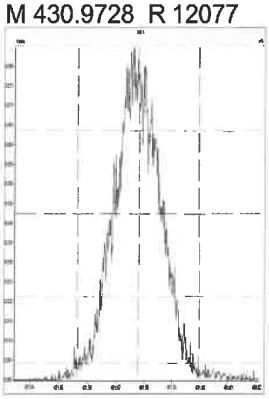

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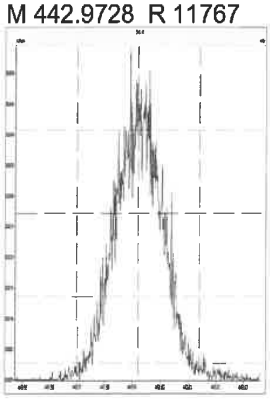

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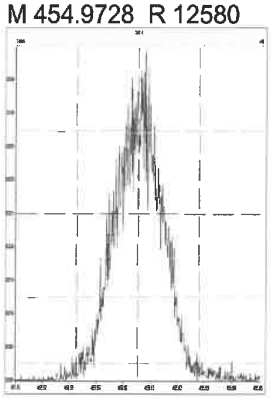

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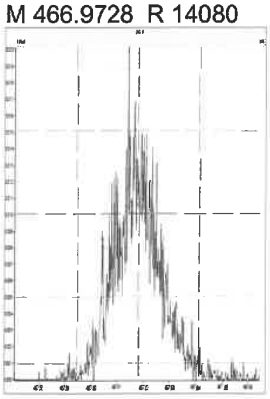

M 480.9696_R 11633

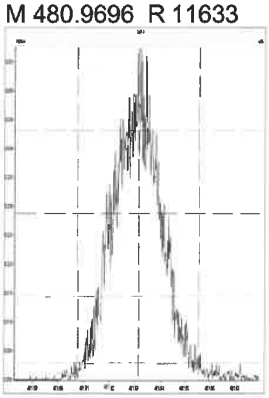

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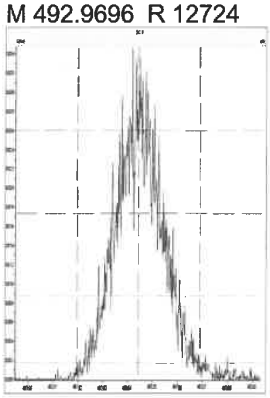

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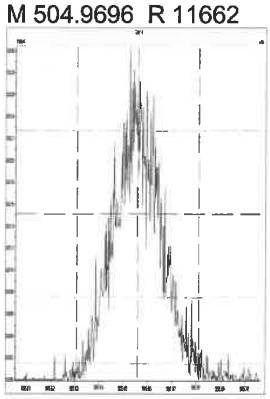

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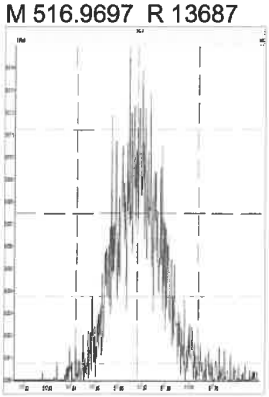

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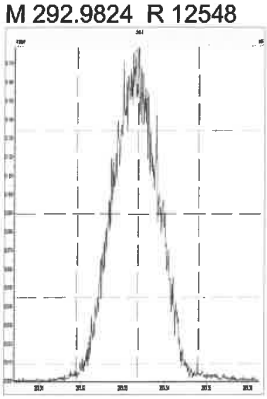

M 304.9824 R 12756

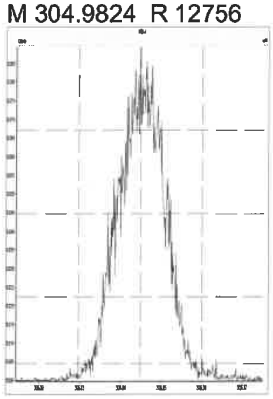

M 318.9792 R 12197

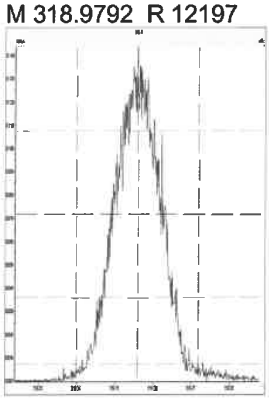

M 330.9792 R 11764

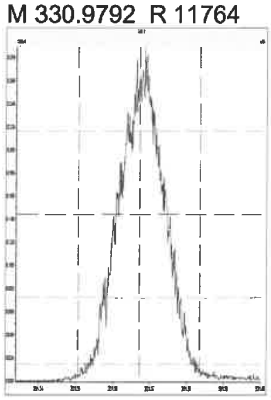

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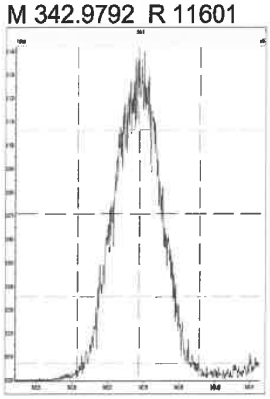

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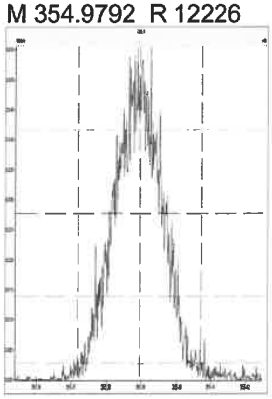

M 366.9792 R 12290

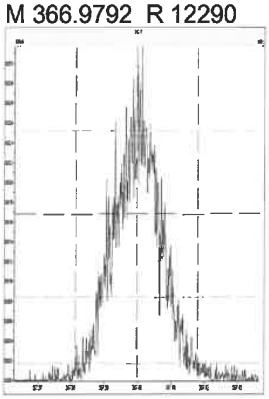

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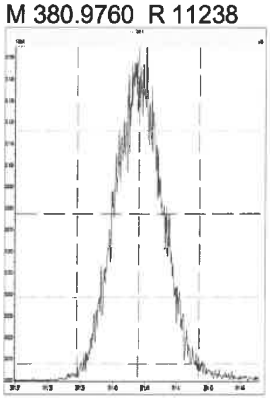

M 392.9760 R 11391

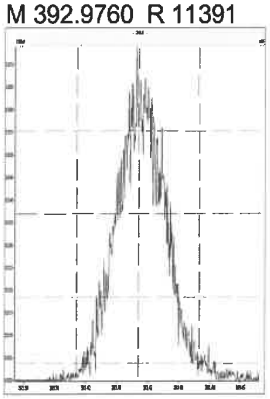

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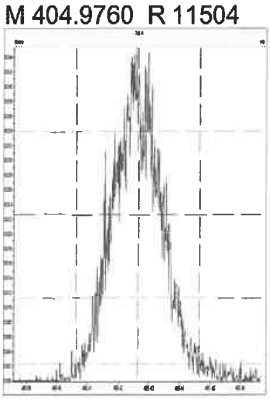

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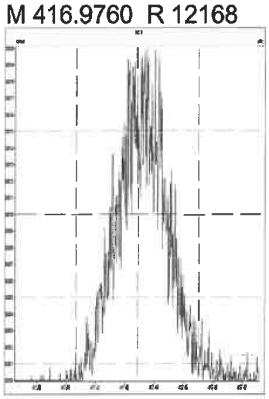

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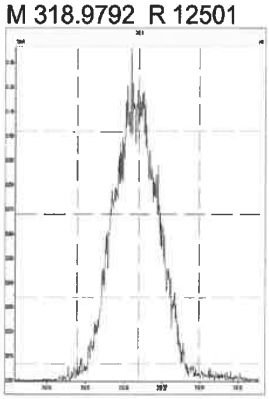

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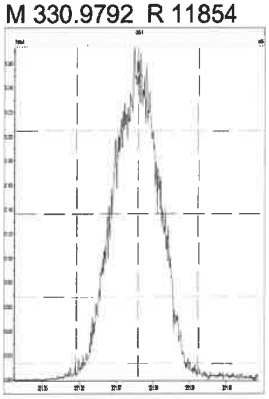

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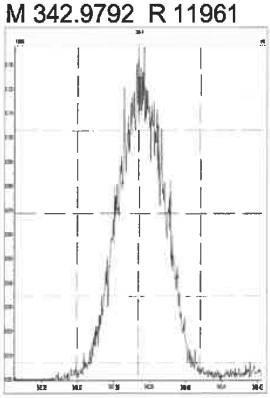

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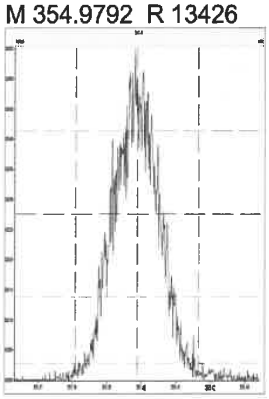

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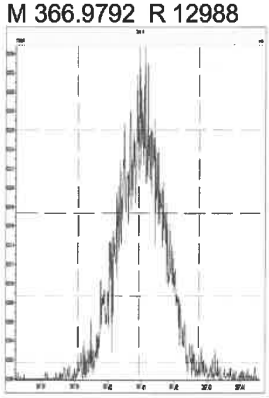

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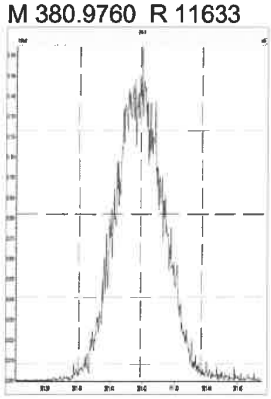

M 392.9760 R 12048

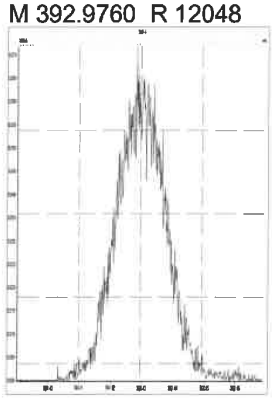

M 404.9760 R 12561

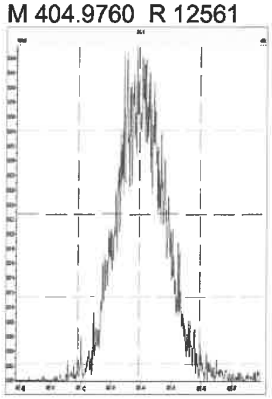

M 416.9760 R 12290

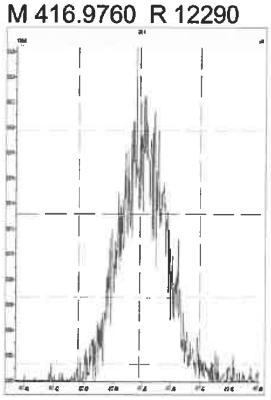

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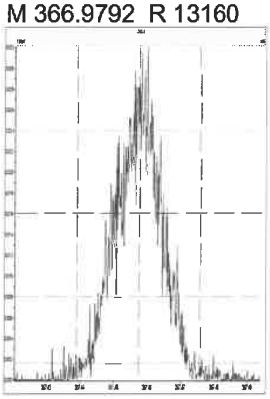

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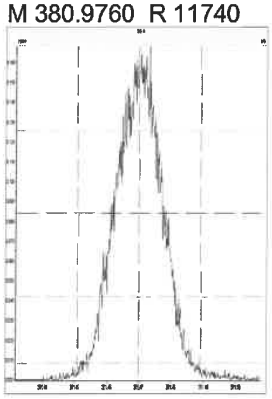

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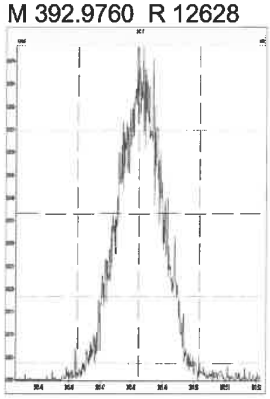

M 404.9760 R 12766

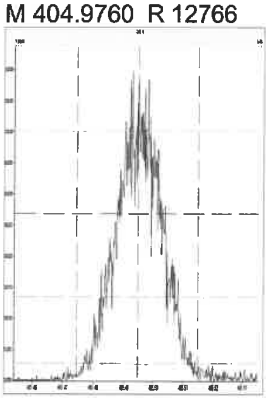

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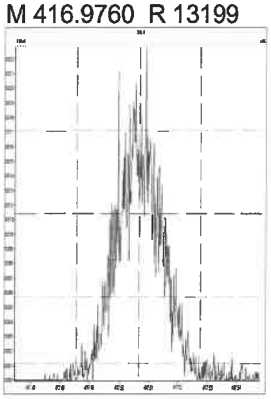

M 430.9728 R 12112

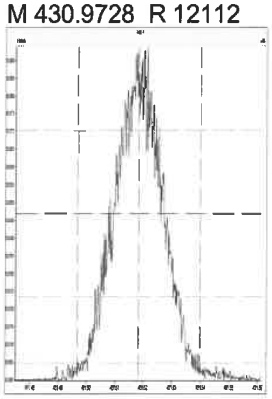

M 442.9728 R 12165

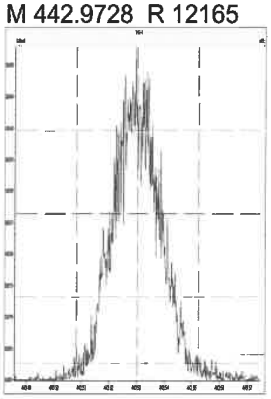

M 454.9728 R 11860

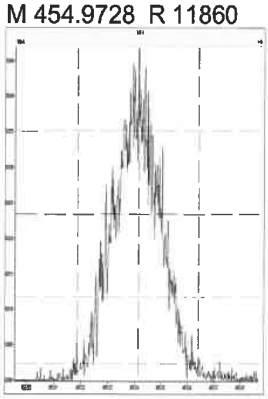

M 380.9760 R 12226

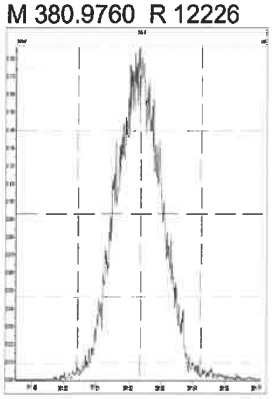

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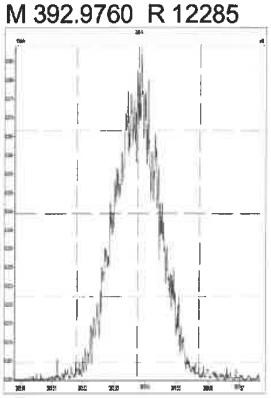

M 404.9760 R 12693

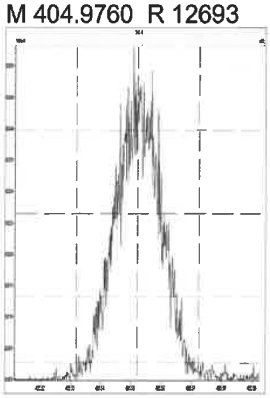

M 416.9760 R 13344

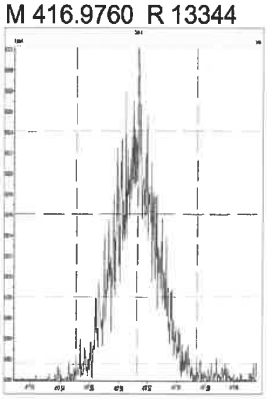

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M 430.9728 R 11944

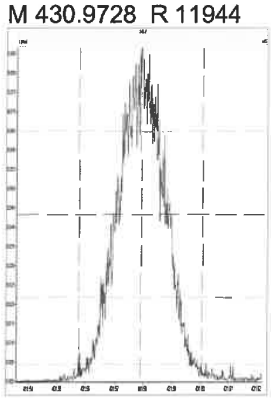

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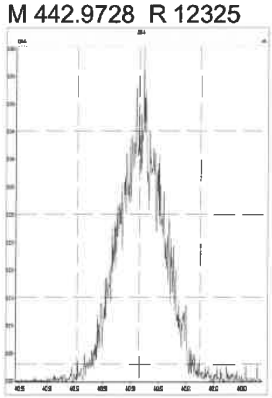

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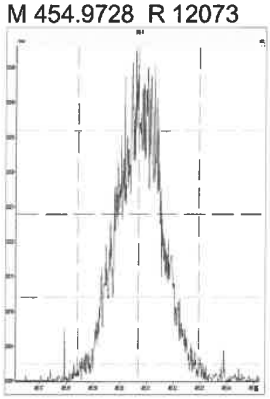

M 466.9728 R 13890

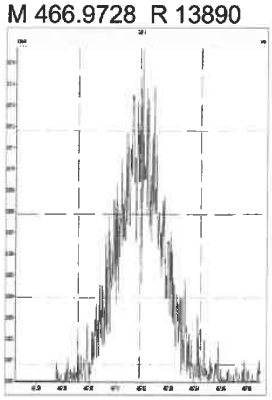

M 480.9696 R 11794

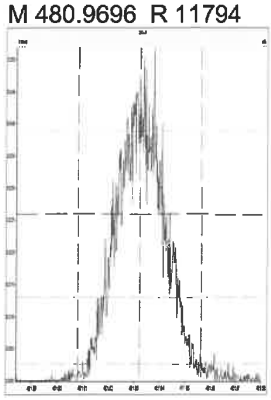

M 380.9760 R 12286

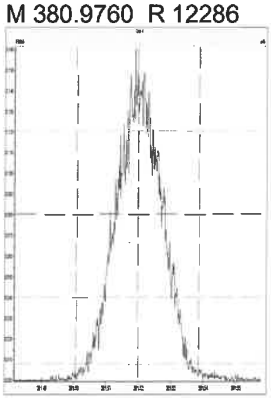

M 392.9760 R 12627

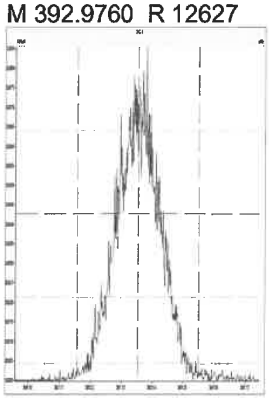

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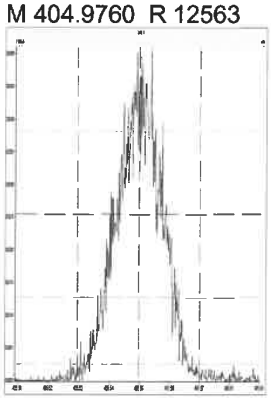

M 416.9760 R 13194

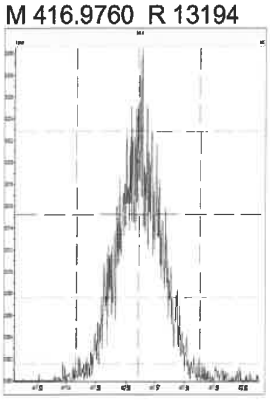

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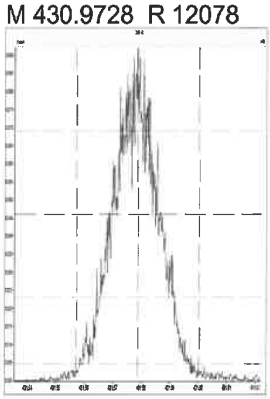

M 442.9728 R 12094

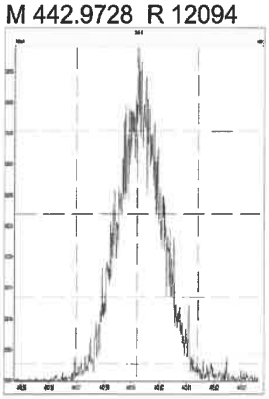

M 454.9728 R 12987

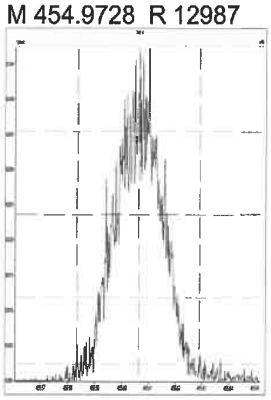

M 466.9728 R 13118

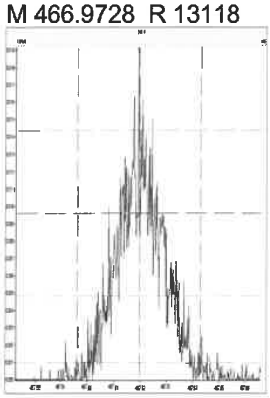

M 480.9696 R 11669

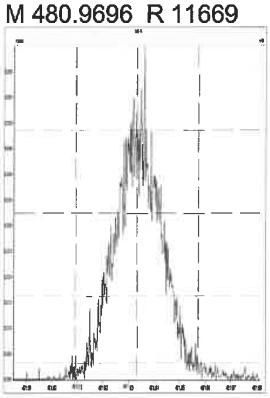

M 492.9696 R 11944

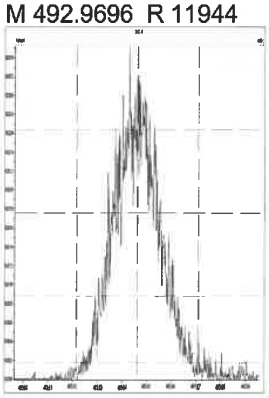

M 504.9696 R 11458

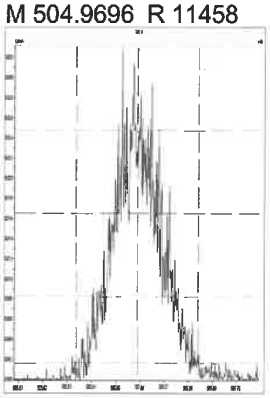

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M 516.9697 R 12954

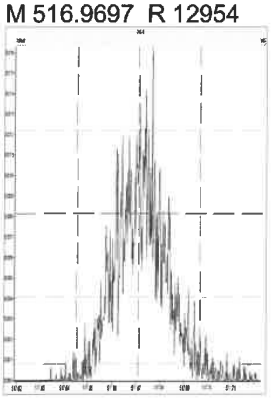

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M 292.9824 R 11338

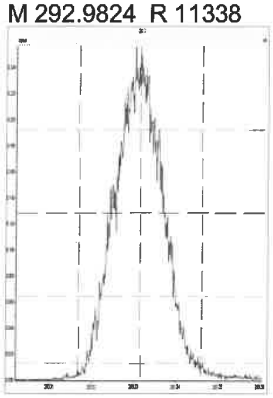

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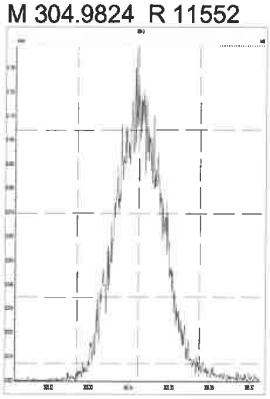

M 318.9792 R 11657

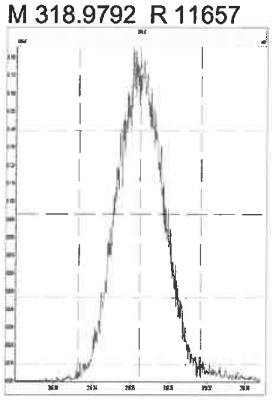

M 330.9792 R 11287

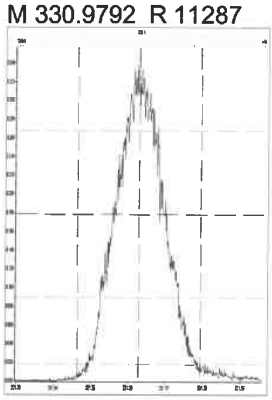

M 342.9792 R 11416

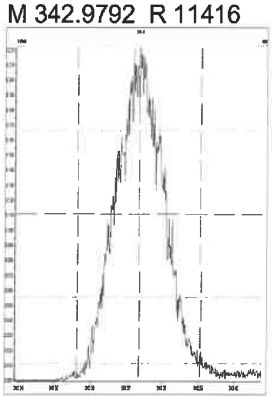

M 354.9792 R 11711

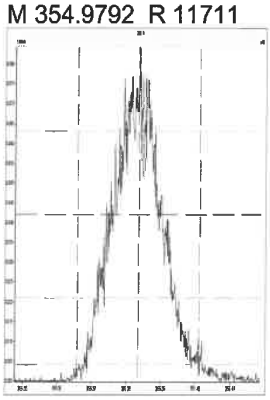

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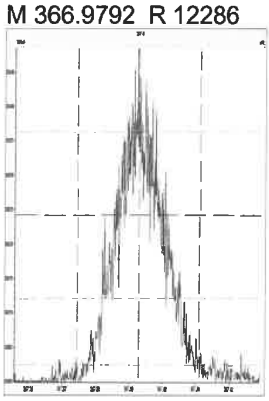

M 380.9760 R 10272

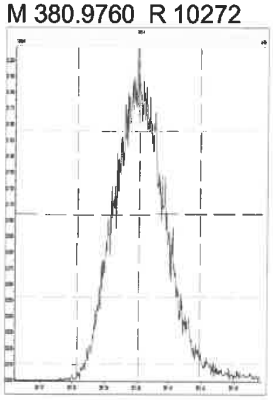

M 392.9760 R 10225

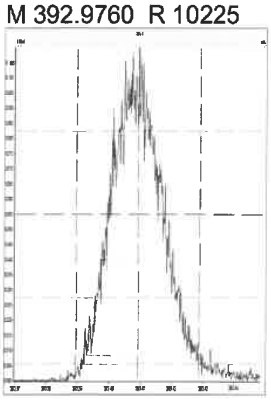

M 404.9760 R 10972

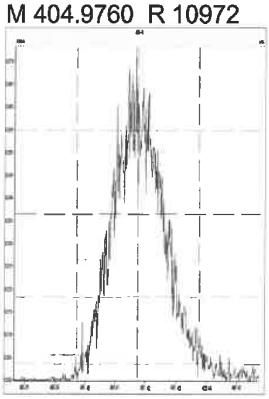

M 416.9760 R 11628

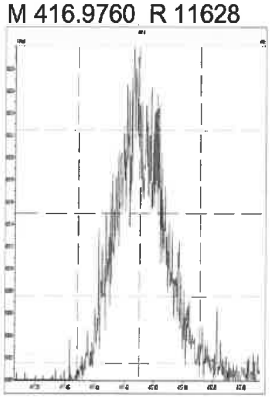

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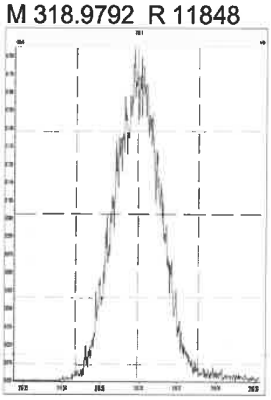

M 330.9792 R 11602

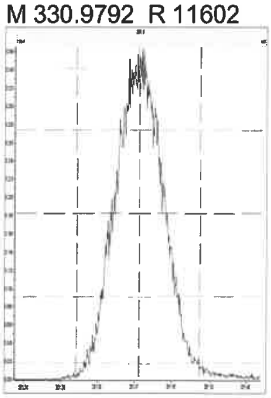

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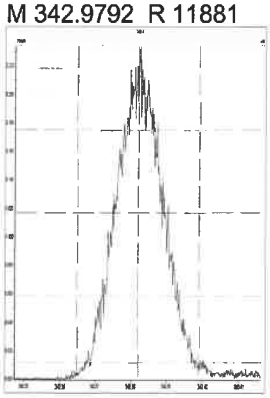

M 354.9792 R 11884

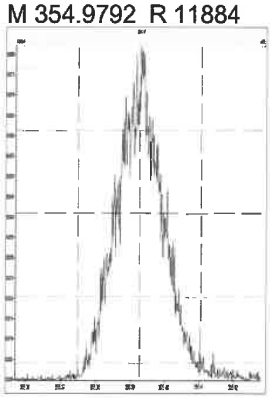

M 366.9792 R 12023

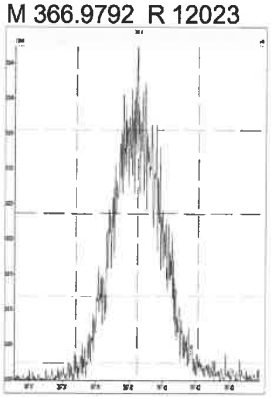

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M 380.9760 R 11627

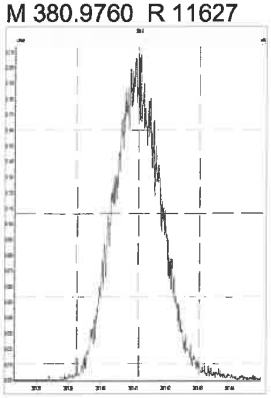

M 392.9760 R 11185

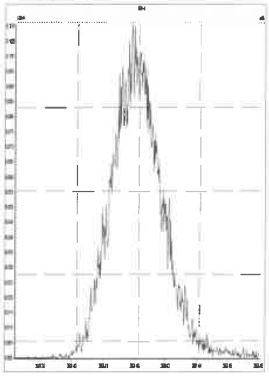

M 404.9760 R 11211

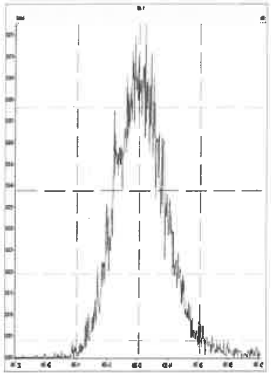

M 416.9760 R 11233

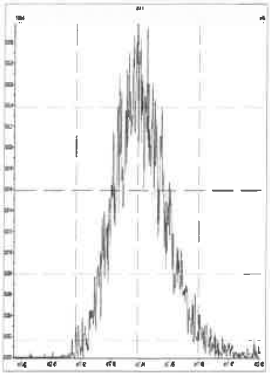

M 366.9792 R 12380

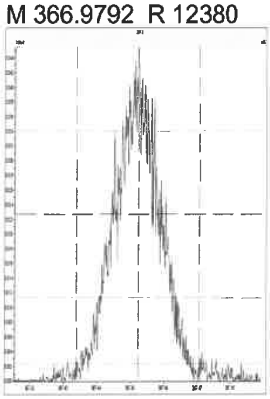

M 380.9760 R 11848

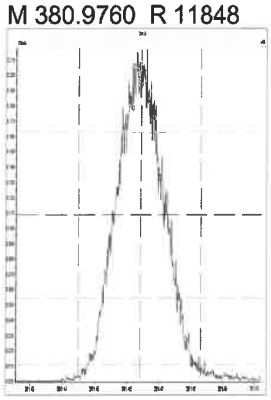

M 392.9760 R 11589

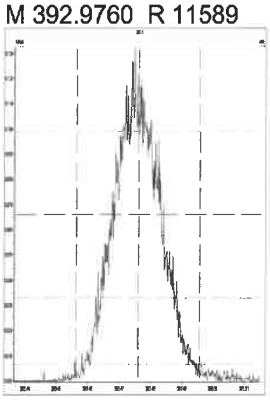

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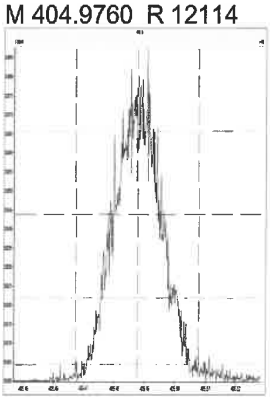

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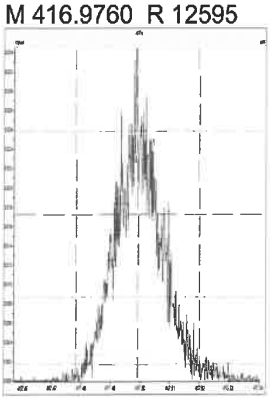

M 430.9728 R 11631

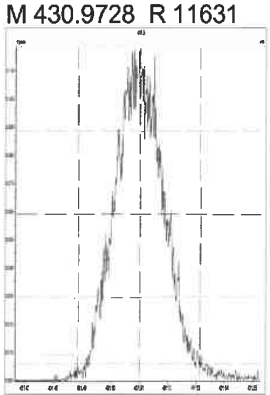

M 442.9728 R 11881

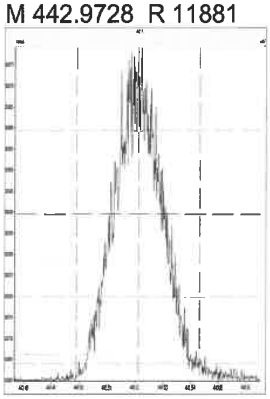

M 454.9728 R 11547

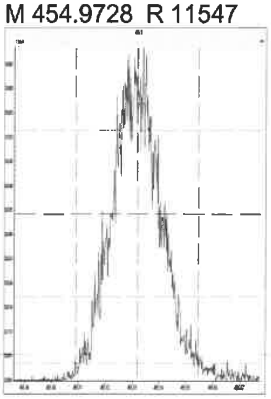

M 380.9760 R 11772

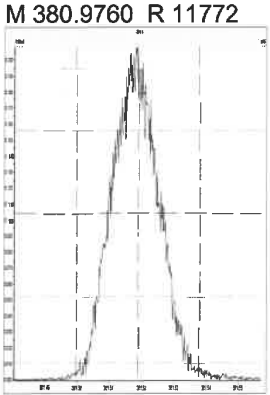

M 392.9760 R 12136

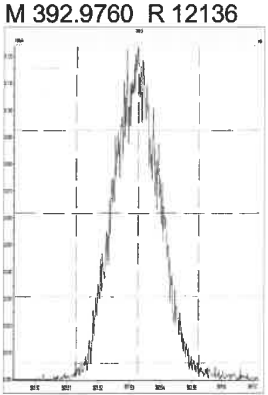

M 404.9760 R 11906

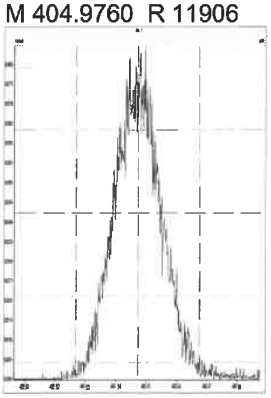

M 416.9760 R 12788

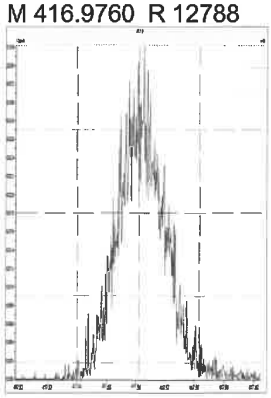

Printed: Saturday, August 14, 2021 23:41:31 Pacific Daylight Time

M 430.9728 R 11852

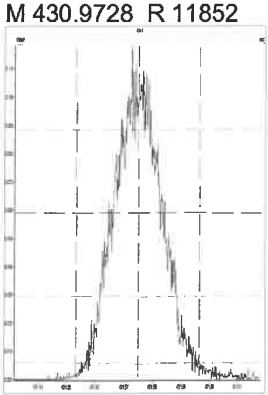

M 442.9728 R 12041

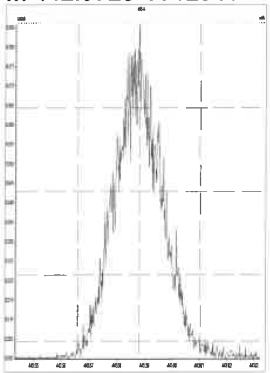

M 454.9728 R 12114

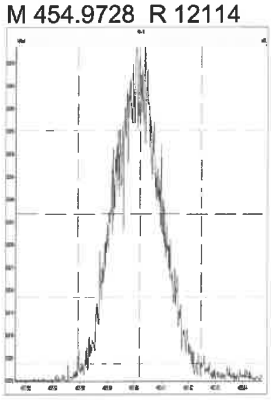

M 466.9728 R 13406

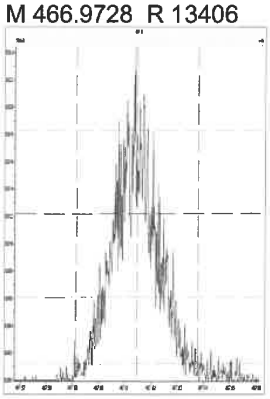

M 480.9696 R 11905

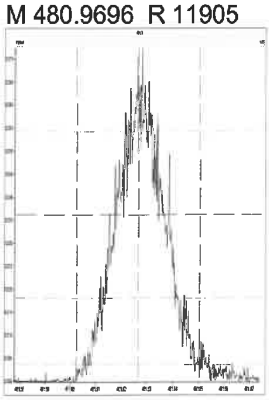

M 380.9760 R 11798

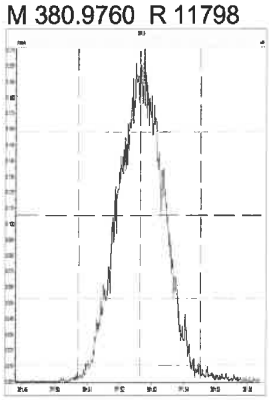

M 392.9760 R 11904

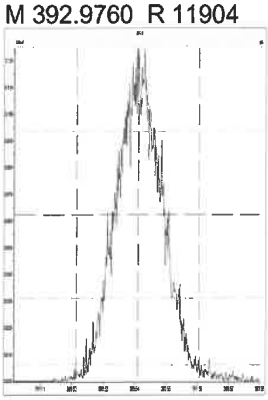

M 404.9760 R 11876

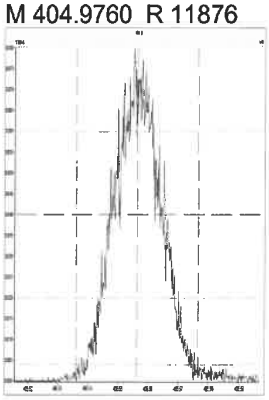

M 416.9760 R 12048

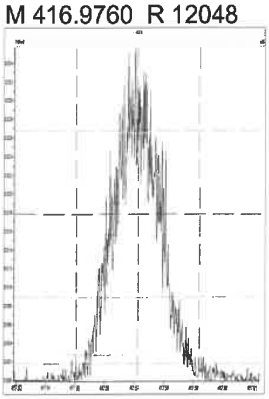

M 430.9728 R 11820

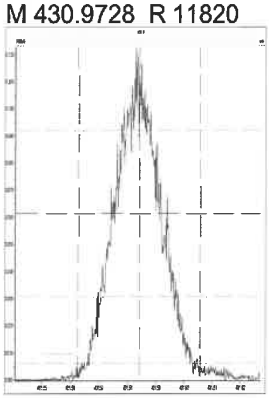

M 442.9728 R 11794

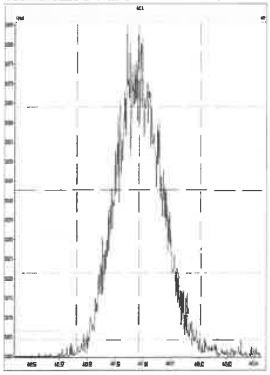

M 454.9728 R 11926

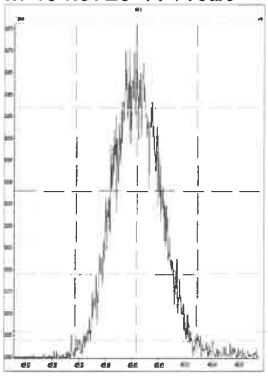

M 466.9728 R 12570

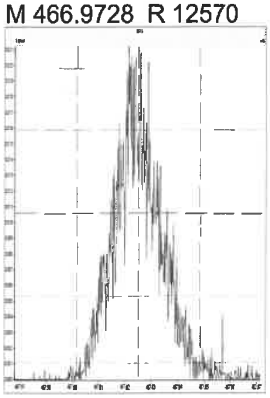

M 480.9696 R 11798

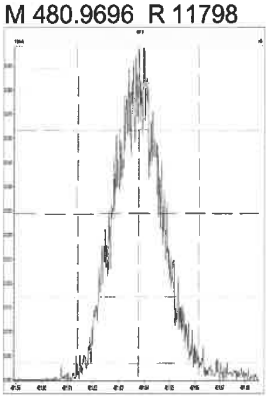

M 492.9696 R 11303

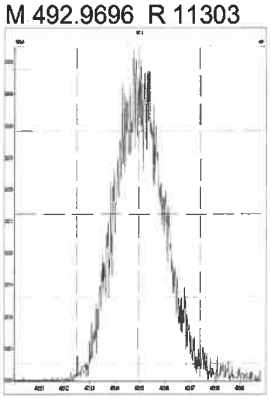

M 504.9696 R 11449

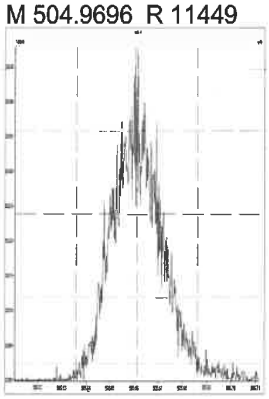

Printed: Saturday, August 14, 2021 23:41:31 Pacific Daylight Time

M 516.9697 R 11508

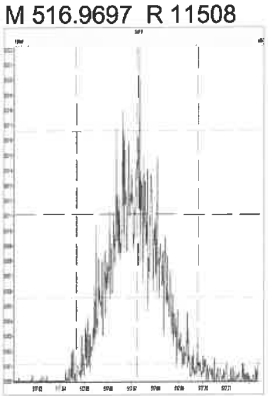

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 14-Aug-2021 01:16:15 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081321A CS-4 HRDXNL4_00099
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 11:47:28 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1665

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:32:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	129312120	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	209949347	0.77	1.6249	99.9	99.9	0.1655	0.1655	99.92	
2,3,7,8-TCDF	17.356	21812120	0.76	1.0239	10.1	10.1	0.0207	0.0207	101	
A Non-2,3,7,8-sub-TCDF	17.046						0.0207	0.0207		Rn
S Total TCDF					10.1	10.1	0.0207	0.0207		
D 13C-2,3,7,8-TCDD	18.051	118553919	0.81	0.8993	101.9	101.9	0.1441	0.1441	102	
2,3,7,8-TCDD	18.066	15318107	0.78	1.2541	10.3	10.3	0.0137	0.0137	103	
$ 37Cl4-2,3,7,8-TCDD	18.066	16073849		1.1071	11.2	11.2	0.0129	0.0129	112	
A Non-2,3,7,8-sub-TCDD	17.499						0.0137	0.0137		
S Total TCDD					10.3	10.3	0.0137	0.0137		
D 13C-1,2,3,7,8-PeCDF	22.367	155816801	1.58	1.2101	99.6	99.6	0.2217	0.2217	99.58	
1,2,3,7,8-PeCDF	22.381	83967041	1.59	1.0611	50.8	50.8	0.1552	0.1552	102	
D 13C-2,3,4,7,8-PeCDF	23.703	159188869	1.58	1.2395	99.3	99.3	0.2164	0.2164	99.32	
2,3,4,7,8-PeCDF	23.731	82255750	1.59	1.0184	50.7	50.7	0.1686	0.1686	101	
A F1 PeCDFs	20.093						0.006734	0.006734		
A Non-2,3,7,8-sub-PeCDF	23.241						0.1617	0.1617		n
S Total PeCDF					101.5	101.5	0.1619	0.1619		
D 13C-1,2,3,7,8-PeCDD	24.426	102878464	1.61	0.7612	104.5	104.5	0.1036	0.1036	105	
1,2,3,7,8-PeCDD	24.453	53334024	1.59	1.0484	49.4	49.4	0.0527	0.0527	98.89	
A Non-2,3,7,8-sub-PeCDD	23.355						0.0527	0.0527		
S Total PeCDD					49.4	49.4	0.0527	0.0527		
D 13C-1,2,3,4,7,8-HxCDF	30.503	129907161	0.52	1.0837	91.6	91.6	0.3668	0.3668	91.61	
1,2,3,4,7,8-HxCDF	30.516	71456543	1.22	1.0851	50.7	50.7	0.3029	0.3029	101	
D 13C-1,2,3,6,7,8-HxCDF	30.689	132708269	0.52	1.1279	89.9	89.9	0.3524	0.3524	89.91	
1,2,3,6,7,8-HxCDF	30.702	75422843	1.21	1.1260	50.5	50.5	0.2882	0.2882	101	
D 13C-2,3,4,6,7,8-HxCDF	31.514	126967010	0.52	1.0637	91.2	91.2	0.3736	0.3736	91.21	
2,3,4,6,7,8-HxCDF	31.528	73812262	1.20	1.1675	49.8	49.8	0.2230	0.2230	99.59	
D 13C-1,2,3,7,8,9-HxCDF	32.313	116710609	0.52	0.9676	92.2	92.2	0.4108	0.4108	92.17	
1,2,3,7,8,9-HxCDF	32.326	68796902	1.23	1.1664	50.5	50.5	0.2179	0.2179	101	
A Non-2,3,7,8-sub-HxCDF	30.210						0.2533	0.2533		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					201.5	201.5	0.2580	0.2580		
* 13C-1,2,3,7,8,9-HxCDD	32.126	130863874	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	90068855	1.24	0.7334	93.8	93.8	0.3053	0.3053	93.84	
1,2,3,4,7,8-HxCDD	31.714	49482646	1.25	1.0640	51.6	51.6	0.1770	0.1770	103	
D 13C-1,2,3,6,7,8-HxCDD	31.807	101538187	1.23	0.8802	88.2	88.2	0.2544	0.2544	88.15	
1,2,3,6,7,8-HxCDD	31.820	53714709	1.27	1.0001	52.9	52.9	0.1720	0.1720	106	
1,2,3,7,8,9-HxCDD	32.140	60942617	1.26	1.1325	56.2	56.2	0.1587	0.1587	112	
A Non-2,3,7,8-sub-HxCDD	30.882						0.1687	0.1687		
S Total HxCDD					160.7	160.7	0.1692	0.1692		
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	97742215	0.44	0.7730	96.6	96.6	0.9269	0.9269	96.62	
1,2,3,4,6,7,8-HpCDF	33.766	72749862	1.06	1.4413	51.6	51.6	0.4900	0.4900	103	
D 13C-1,2,3,4,7,8,9-HpCDF	34.835	91771207	0.44	0.7008	100.1	100.1	1.022	1.022	100	
1,2,3,4,7,8,9-HpCDF	34.847	62226856	1.05	1.3174	51.5	51.5	0.6817	0.6817	103	
A Non-2,3,7,8-sub-HpCDF	34.325						0.5732	0.5732		
S Total HpCDF					103.1	103.1	0.5859	0.5859		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	85846856	1.00	0.6472	101.4	101.4	0.4511	0.4511	101	
1,2,3,4,6,7,8-HpCDD	34.568	47595636	1.04	1.0943	50.7	50.7	0.2123	0.2123	101	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2123	0.2123		
S Total HpCDD					50.7	50.7	0.2123	0.2123		
D 13C-OCDD	36.914	126077242	0.88	0.4472	215.5	215.5	0.2821	0.2821	108	
OCDF	37.010	91129226	0.90	1.4382	100.5	100.5	0.0857	0.0857	101	
OCDD	36.926	71503748	0.89	1.1070	102.5	102.5	0.1137	0.1137	102	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 14-Aug-2021 01:16:15 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081321A CS-4 HRDXNL4_00099
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 11:47:28 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1665

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:32:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		58395123	14036444	6558	16395	2140		
333.9339	17.855	17.855	0		70916997	16873483	9470	23675	1782	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.971	91648792	21845730	14722	36805	1484		
317.9389	17.341	17.341	0	0.971	118300555	28118592	18523	46307	1518	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.001	9399773	2261722	1284	3210	1761		
305.8987	17.356	17.356	0	1.001	12412347	2982565	2947	7367	1012	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.978	17.038	-4	0.979	31302	9266	1284	3210	7		
305.8987	16.978	17.038	-4	0.979	58446	12445	2947	7367	4	0.54(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	53212652	11894023	6558	16395	1814		
333.9339	18.051	18.051	0	1.011	65341267	14442797	9470	23675	1525	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.001	6714327	1559119	972	2430	1604		
321.8936	18.066	18.066	0	1.001	8603780	1993624	836	2090	2385	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.066	0	1.012	16073849	3699633	1760	4400	2102		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.499						972	2430			
321.8936	17.499						836	2090			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	95429996	16010002	19831	49577	807		
353.8970	22.353	22.367	-1	1.252	60386805	10091352	13338	33345	757	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.381	22.381	0	1.001	51590571	8720094	10544	26360	827		
341.8567	22.381	22.381	0	1.001	32376470	5440612	6645	16612	819	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.328	97419719	15345434	19831	49577	774		
353.8970	23.703	23.703	0	1.328	61769150	9678869	13338	33345	726	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.731	23.731	0	1.001	50537064	7842318	10544	26360	744		
341.8567	23.731	23.731	0	1.001	31718686	4925044	6645	16612	741	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						214	535			
341.8567	20.093						502	1255			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.912	23.248	-20	1.024	495200	64236	10544	26360	6		
341.8567	22.899	23.248	-21	1.024	334354	38616	6645	16612	6	1.48(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.368	63438778	9407496	5439	13597	1730		
369.8919	24.426	24.426	0	1.368	39439686	5883010	4312	10780	1364	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453	24.453	0	1.001	32707944	4844875	2072	5180	2338		
357.8516	24.453	24.453	0	1.001	20626080	3080265	1305	3262	2360	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.355						2072	5180			
357.8516	23.355						1305	3262			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	44466025	8304954	19619	49047	423		
385.8610	30.503	30.503	0	0.949	85441136	15859370	36603	91507	433	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.516	30.516	0	1.000	39258152	7345845	17220	43050	427		
375.8178	30.516	30.516	0	1.000	32198391	6032482	14552	36380	415	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	45597475	8369339	19619	49047	427		
385.8610	30.689	30.689	0	0.955	87110794	16104546	36603	91507	440	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.702	30.702	0	1.000	41352688	7888121	17220	43050	458		
375.8178	30.702	30.702	0	1.000	34070155	6552292	14552	36380	450	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	43481457	10543293	19619	49047	537		
385.8610	31.514	31.514	0	0.981	83485553	19960512	36603	91507	545	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528	31.528	0	1.000	40299815	9990727	17220	43050	580		
375.8178	31.528	31.528	0	1.000	33512447	8174136	14552	36380	562	1.20(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.313	0	1.006	40110174	10828252	19619	49047	552		
385.8610	32.313	32.313	0	1.006	76600435	20431607	36603	91507	558	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.326	32.326	0	1.000	37945414	10060149	17220	43050	584		
375.8178	32.326	32.326	0	1.000	30851488	8225684	14552	36380	565	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.210						17220	43050			
375.8178	30.210						14552	36380			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.126	32.126	0		72212221	19469270	17689	44222	1101		
403.8529	32.126	32.126	0		58651653	15894926	13987	34967	1136	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.987	49935451	13161591	17689	44222	744		
403.8529	31.701	31.701	0	0.987	40133404	10523524	13987	34967	752	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.714	0	1.000	27537646	7477137	10326	25815	724		
391.8127	31.714	31.714	0	1.000	21945000	5824455	7517	18792	775	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	55932920	14302219	17689	44222	809		
403.8529	31.807	31.807	0	0.990	45605267	11635785	13987	34967	832	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.820	31.820	0	1.000	30052061	7776882	10326	25815	753		
391.8127	31.820	31.820	0	1.000	23662648	6035397	7517	18792	803	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.140	0	1.014	33965822	9165310	10326	25815	888		
391.8127	32.140	32.140	0	1.014	26976795	7320836	7517	18792	974	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						10326	25815			
391.8127	30.882						7517	18792			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.754	0	1.051	29870326	9870886	32903	82257	300		
419.8220	33.754	33.754	0	1.051	67871889	22240375	68458	171145	325	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.766	0	1.000	37355188	12186874	44358	110895	275		
409.7789	33.766	33.766	0	1.000	35394674	11373384	46353	115882	245	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.835	34.835	0	1.084	28039989	7790036	32903	82257	237		
419.8220	34.835	34.835	0	1.084	63731218	17460216	68458	171145	255	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.847	34.847	0	1.000	31919796	9047725	44358	110895	204		
409.7789	34.847	34.847	0	1.000	30307060	8658928	46353	115882	187	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						44358	110895			
409.7789	34.325						46353	115882			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.076	42818880	12508871	21493	53732	582		
437.8140	34.556	34.556	0	1.076	43027976	12275113	19804	49510	620	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	24297962	6938647	11690	29225	594		
425.7737	34.556	34.568	-1	1.000	23297674	6701285	11344	28360	591	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						11690	29225			
425.7737	34.301						11344	28360			
13C-OCDD											
469.7779	36.914	36.914	0	1.149	58863131	14692726	8051	20127	1825		
471.7750	36.914	36.914	0	1.149	67214111	16695558	9790	24475	1705	0.88(0.76-1.02)	
OCDF											
441.7428	37.010	37.010	0	1.003	43169146	10736843	3660	9150	2934		
443.7399	37.010	37.010	0	1.003	47960080	11909139	4080	10200	2919	0.90(0.76-1.02)	
OCDD											
457.7377	36.926	36.926	0	1.000	33693658	8382960	2845	7112	2947		
459.7348	36.926	36.926	0	1.000	37810090	9291558	5057	12642	1837	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

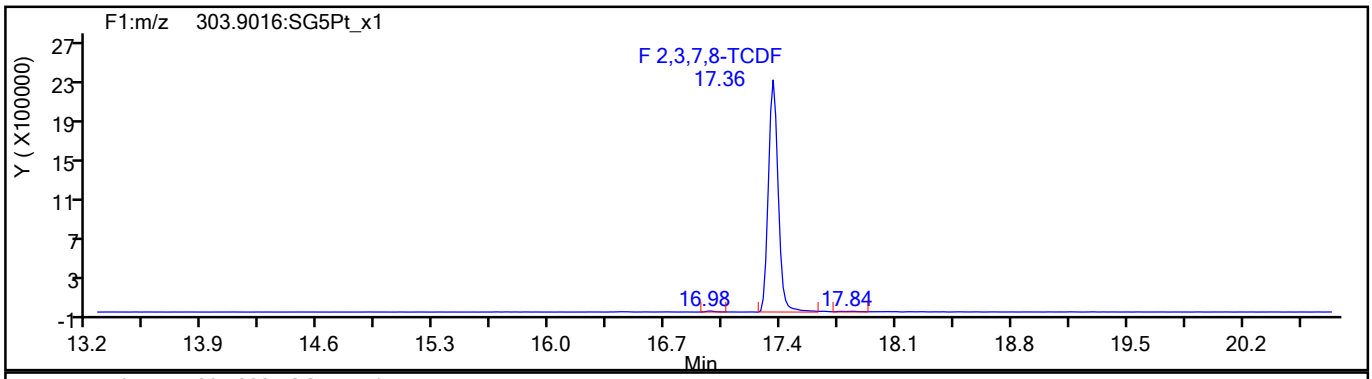

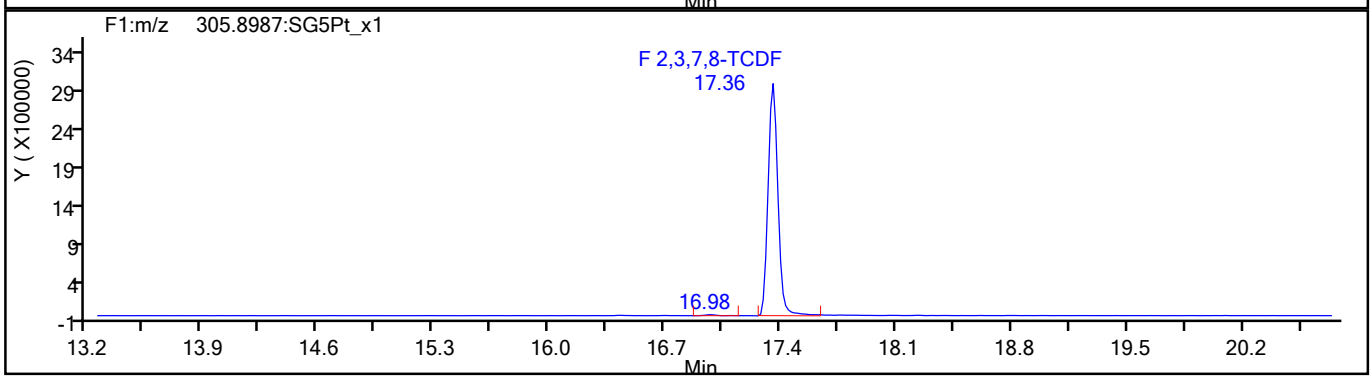

TCDF Standards

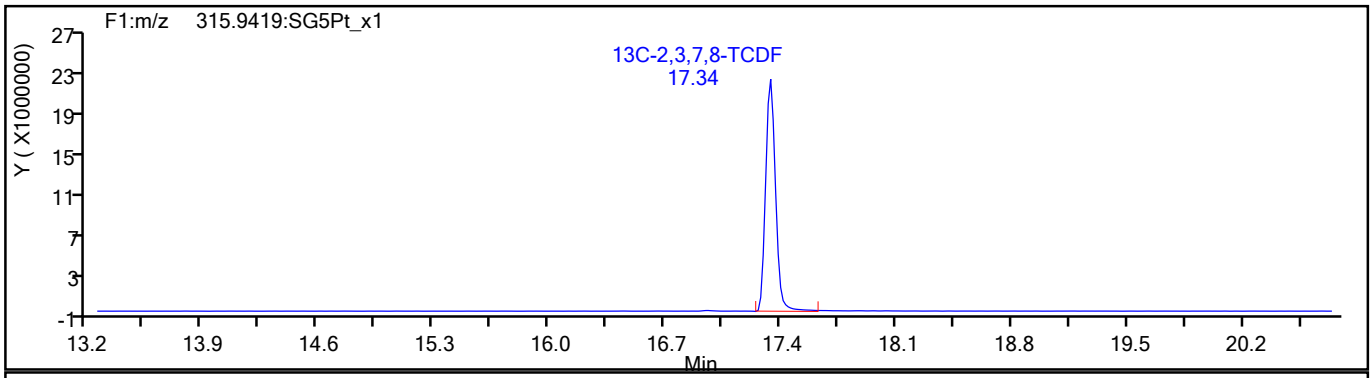

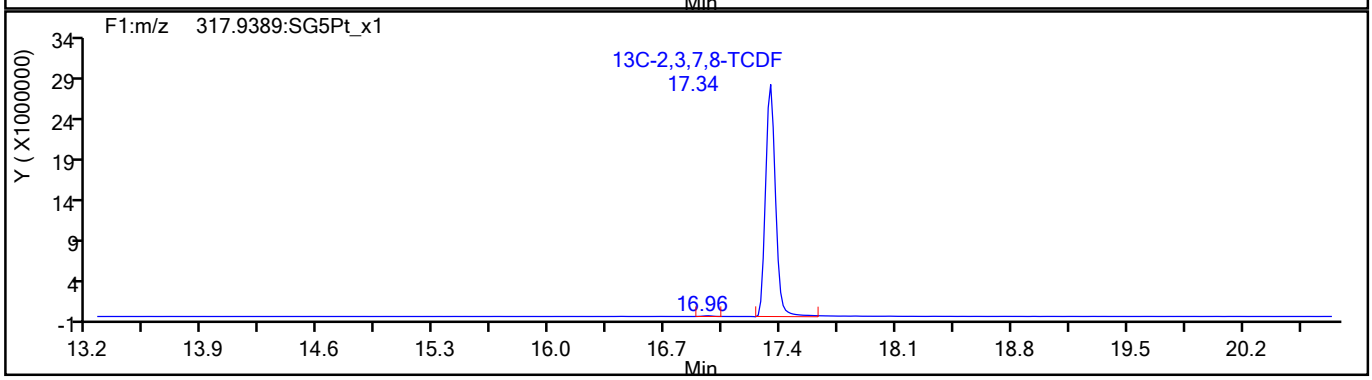

781481

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

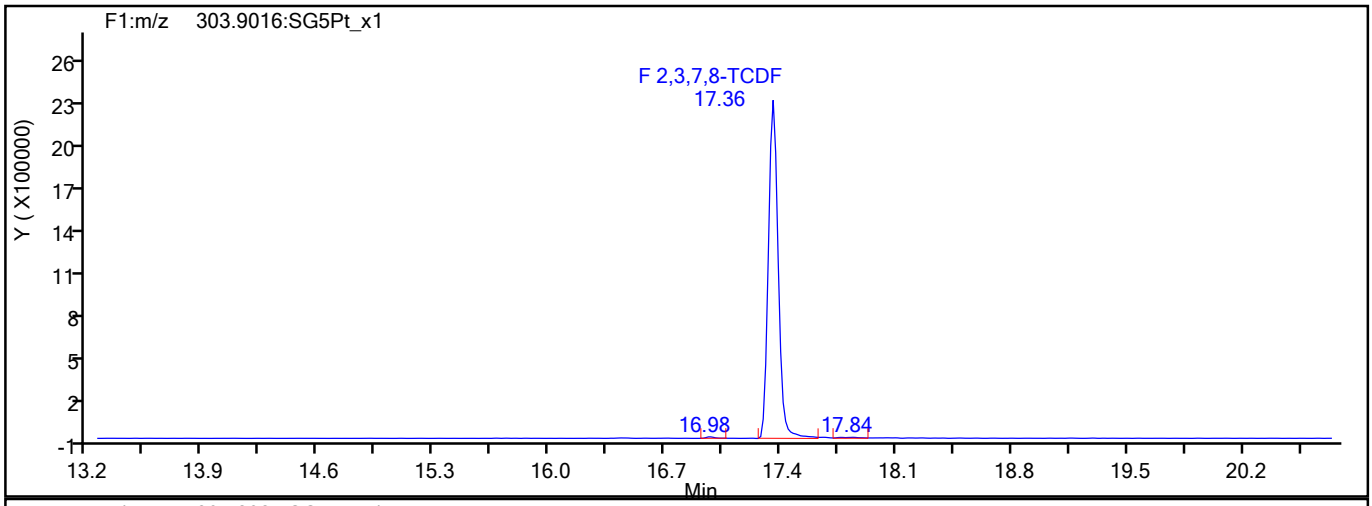

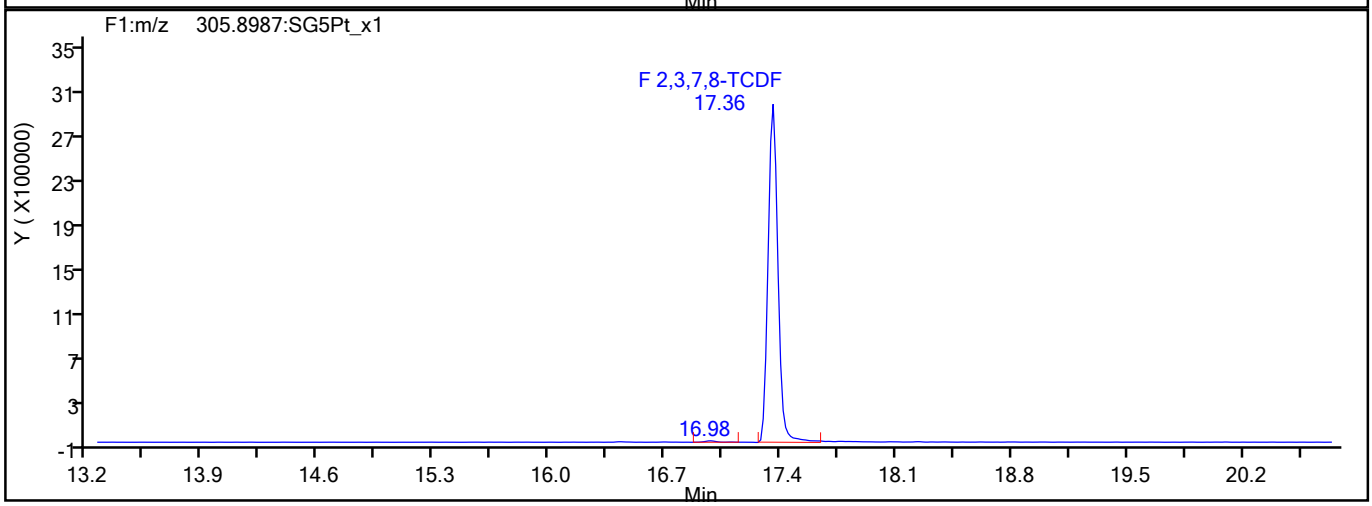

TCDF Interference Mass

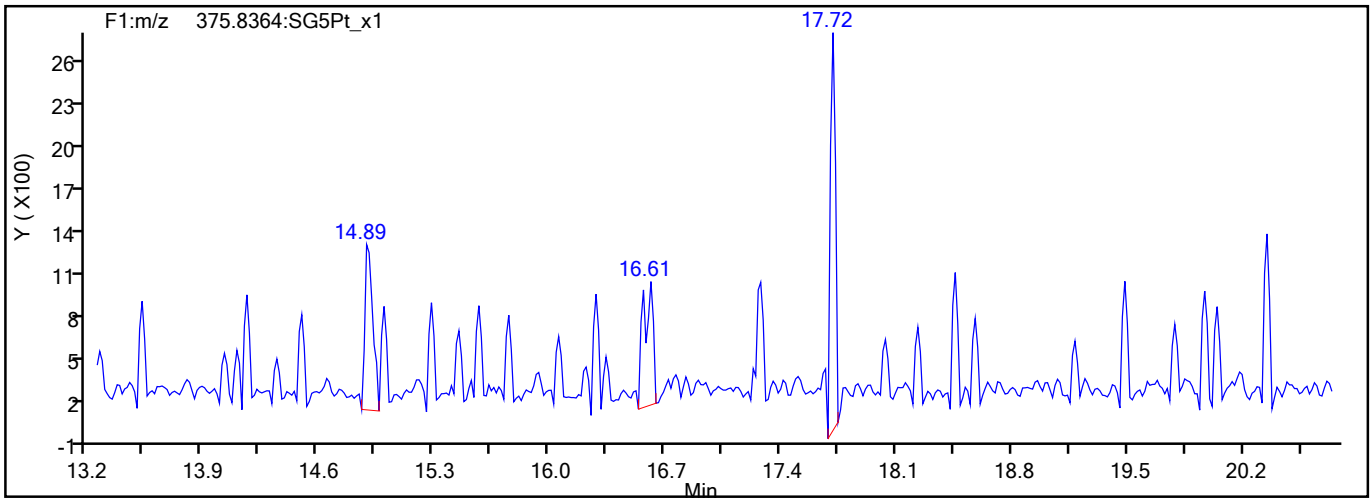

781482

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

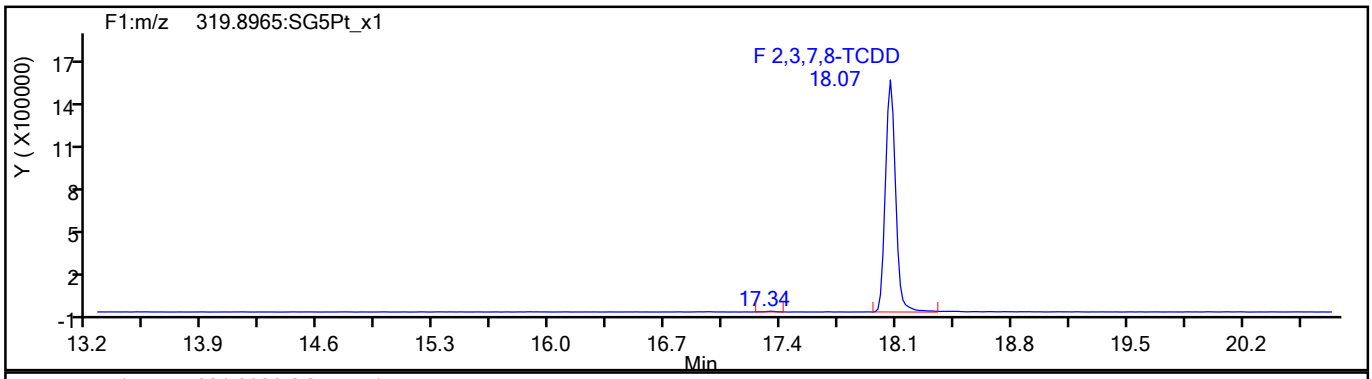

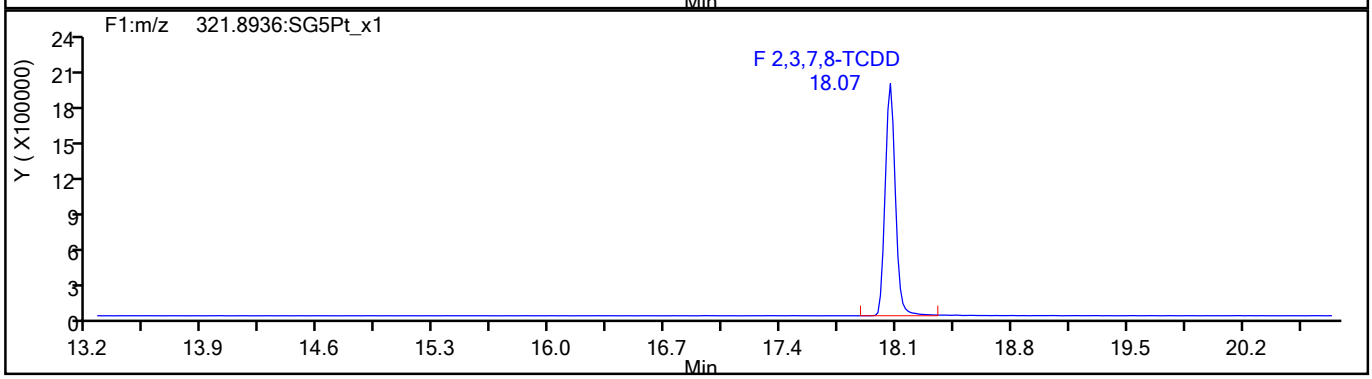

TCDD Standards

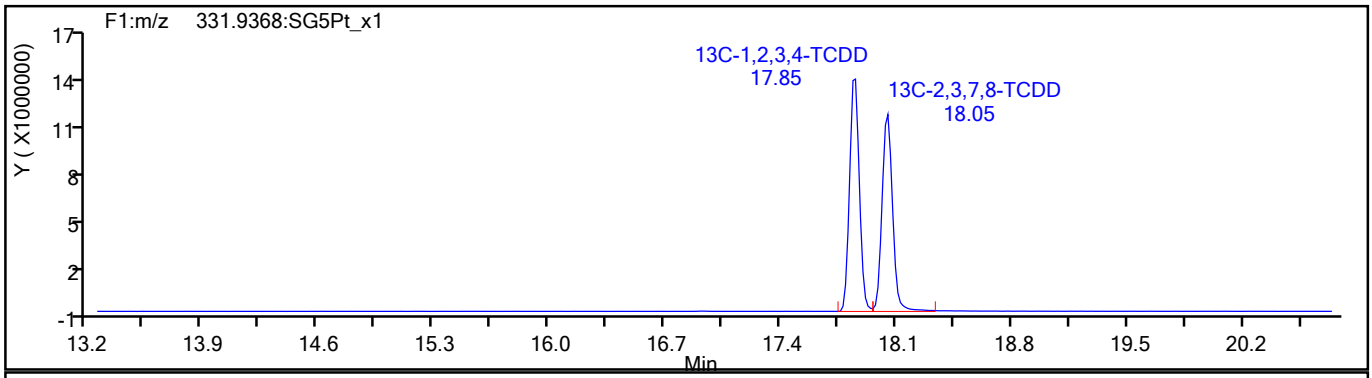

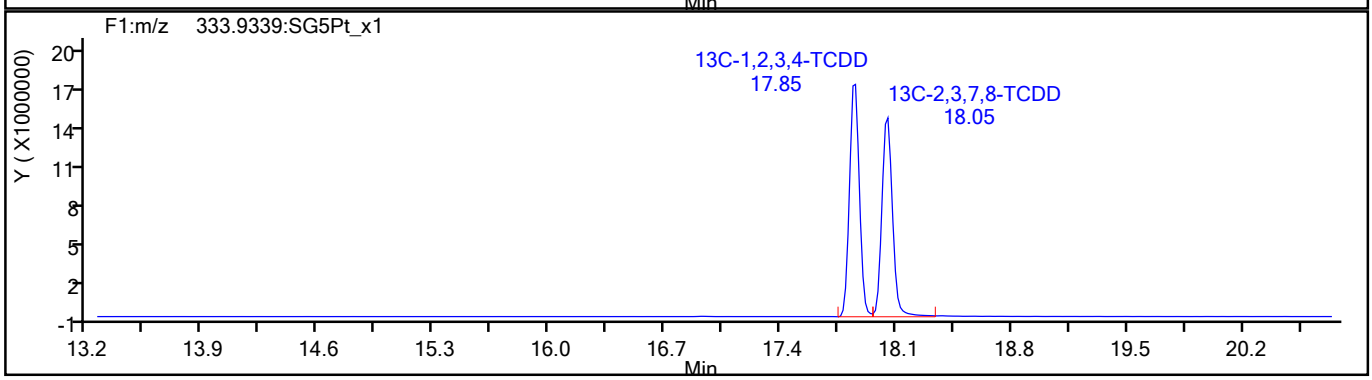

781483

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

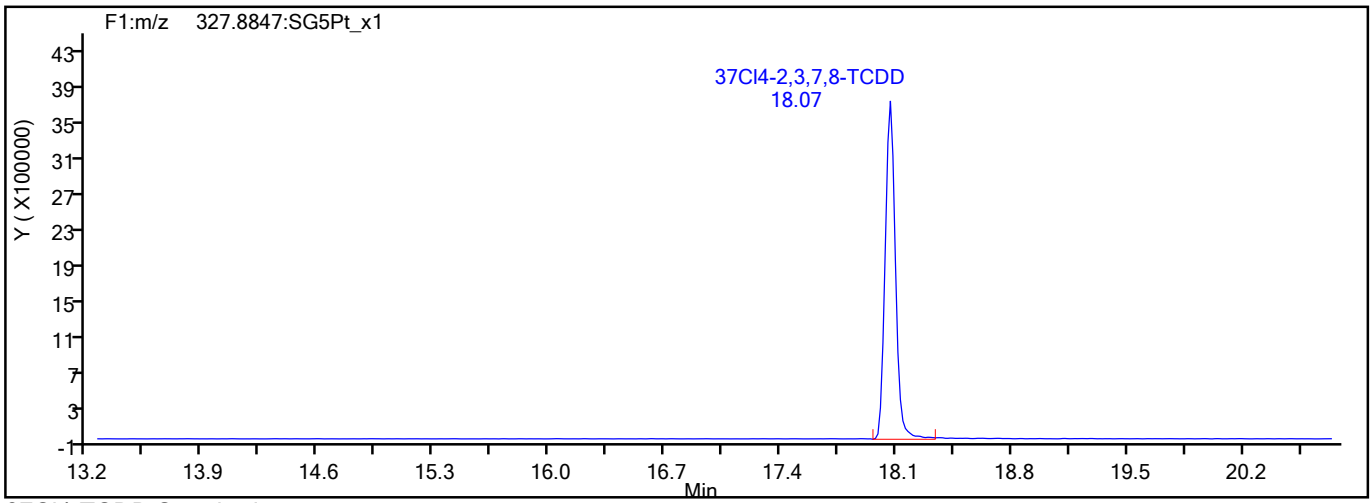

37Cl4-TCDD Standards

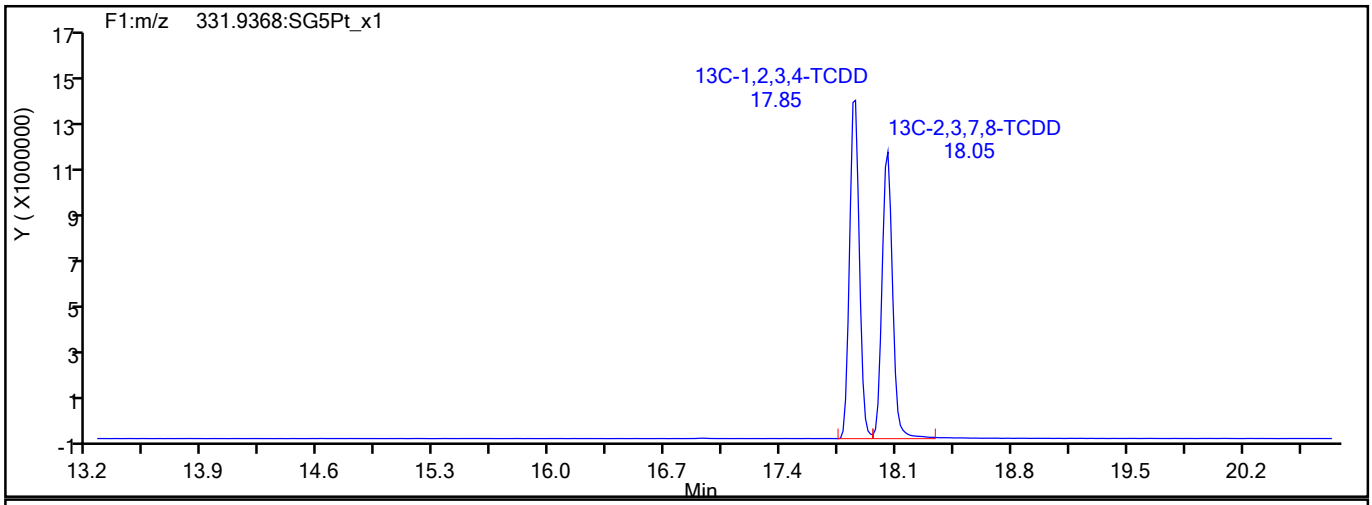

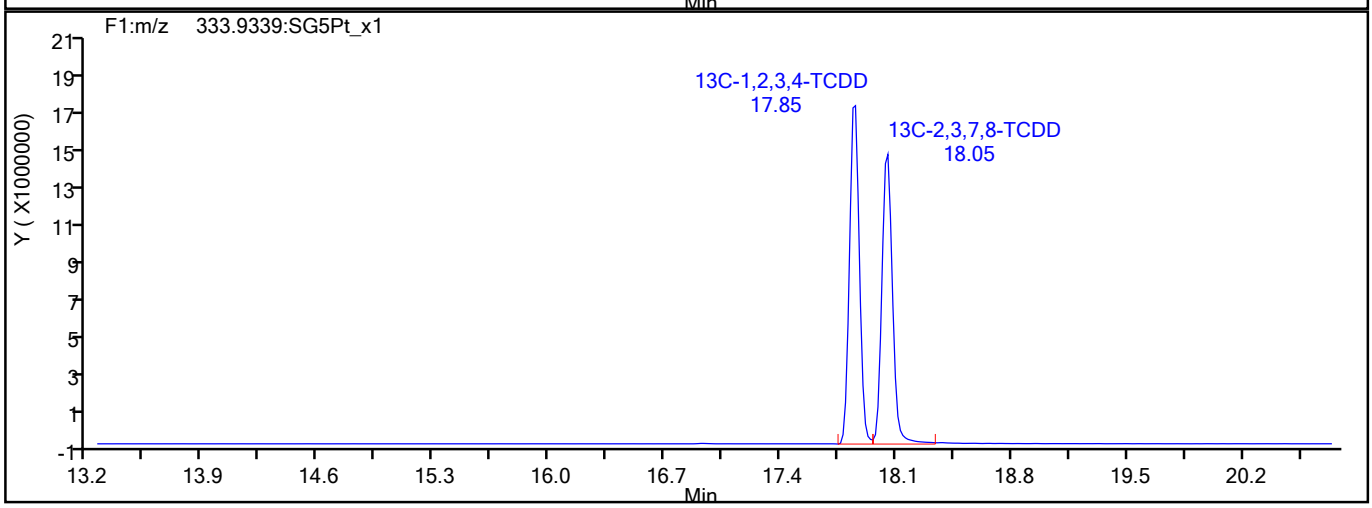

781484

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

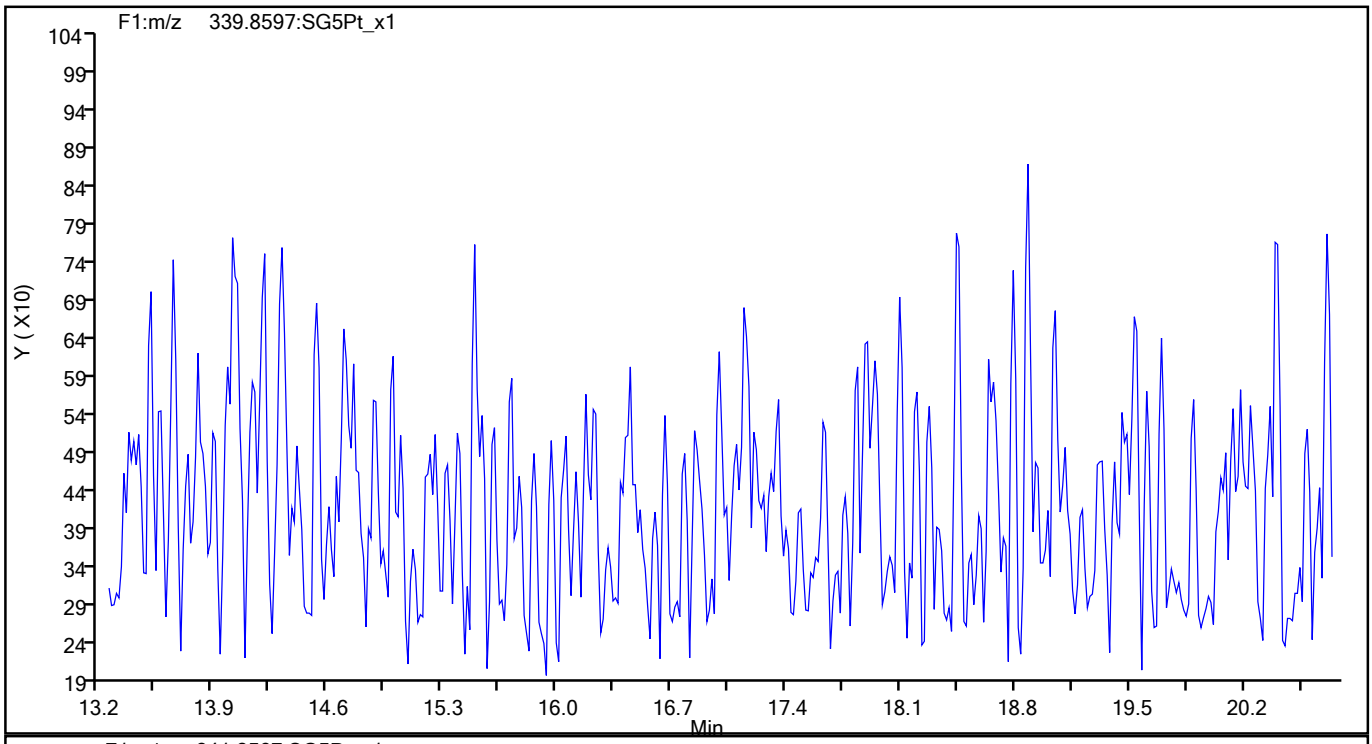

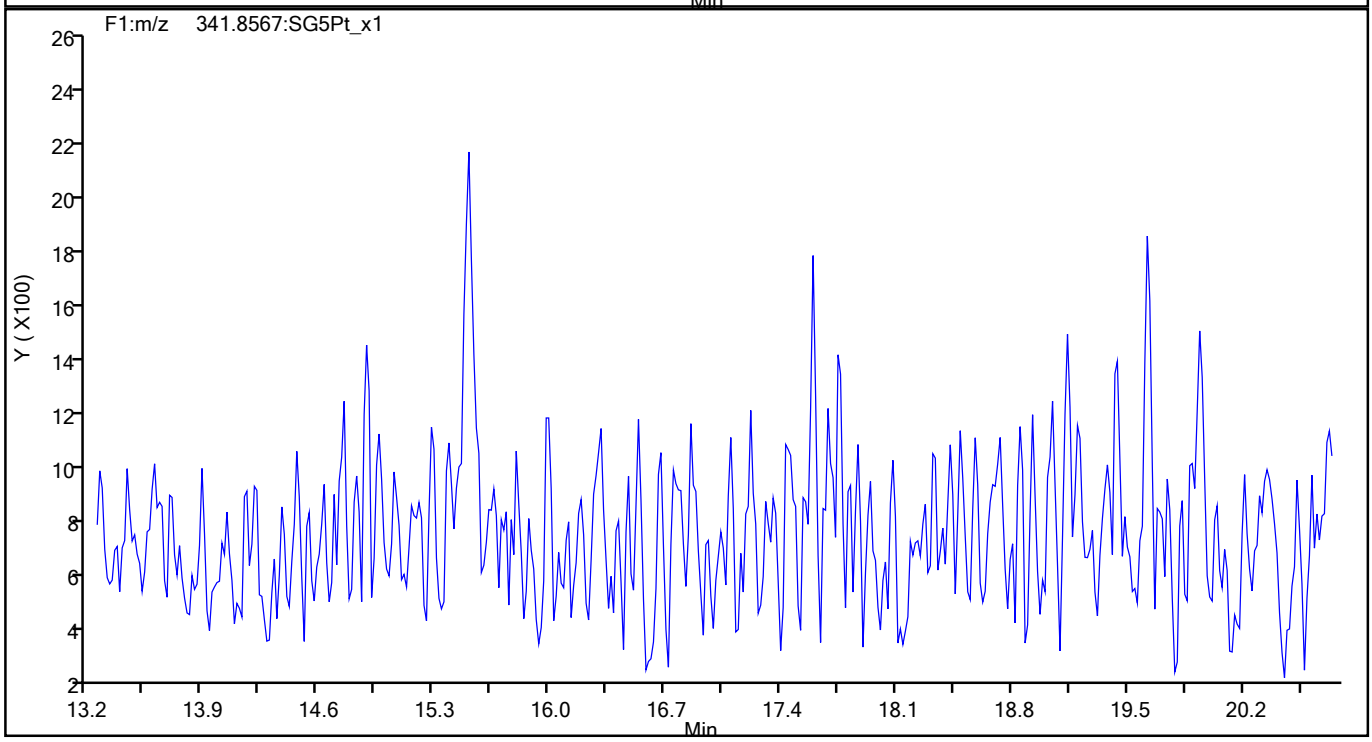

781485

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

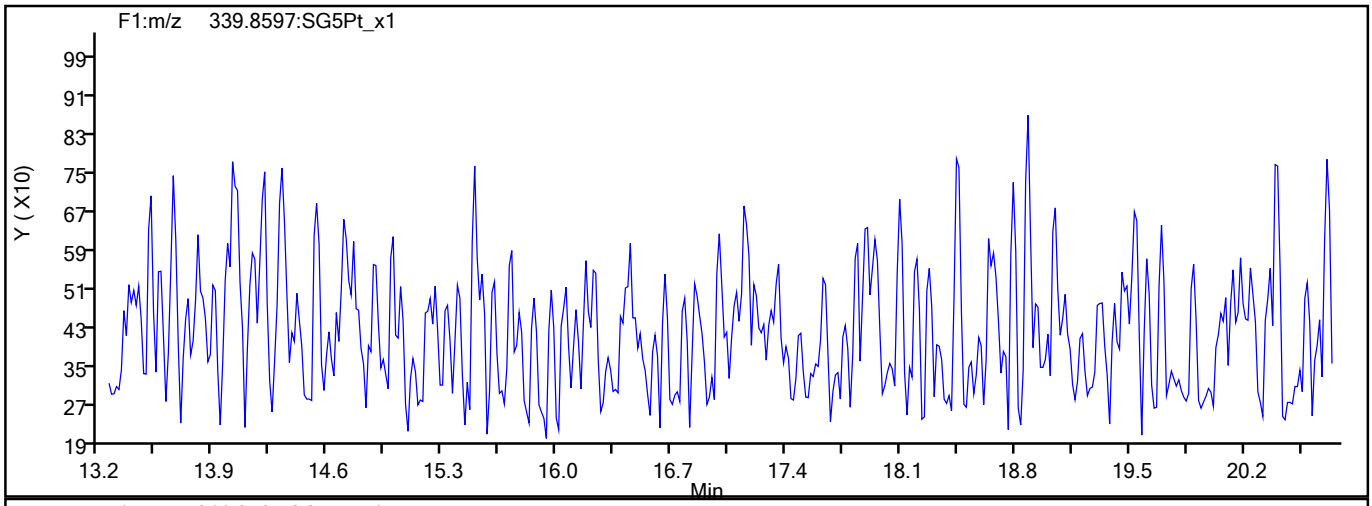

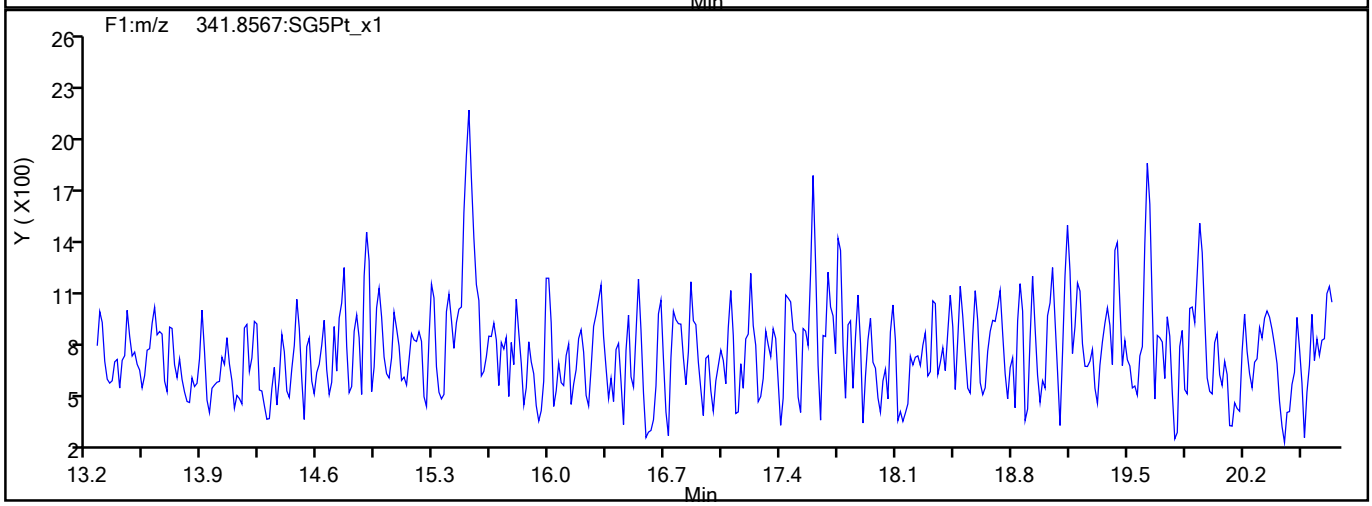

F1 PeCDFs Interference Mass

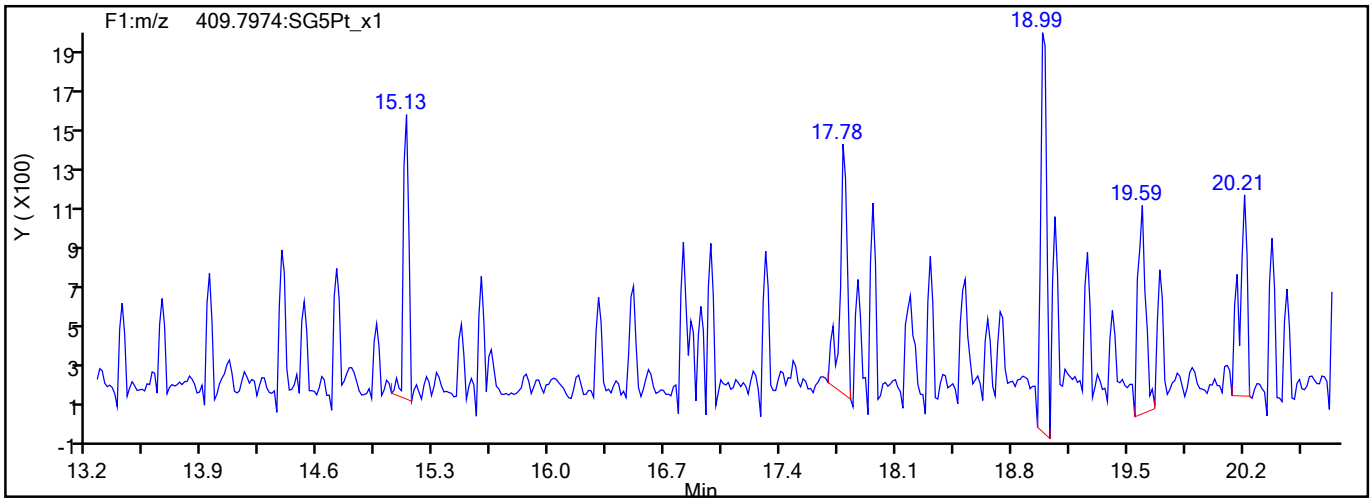

781486

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

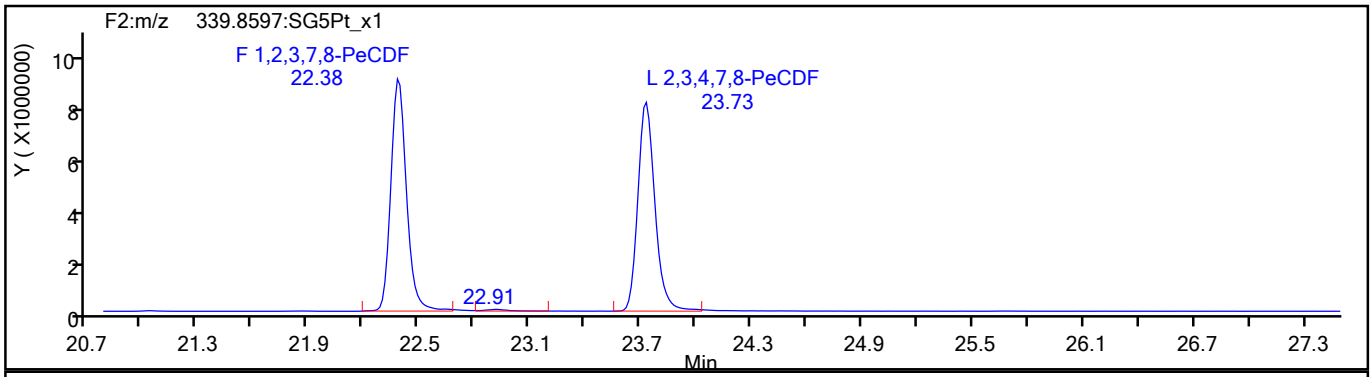

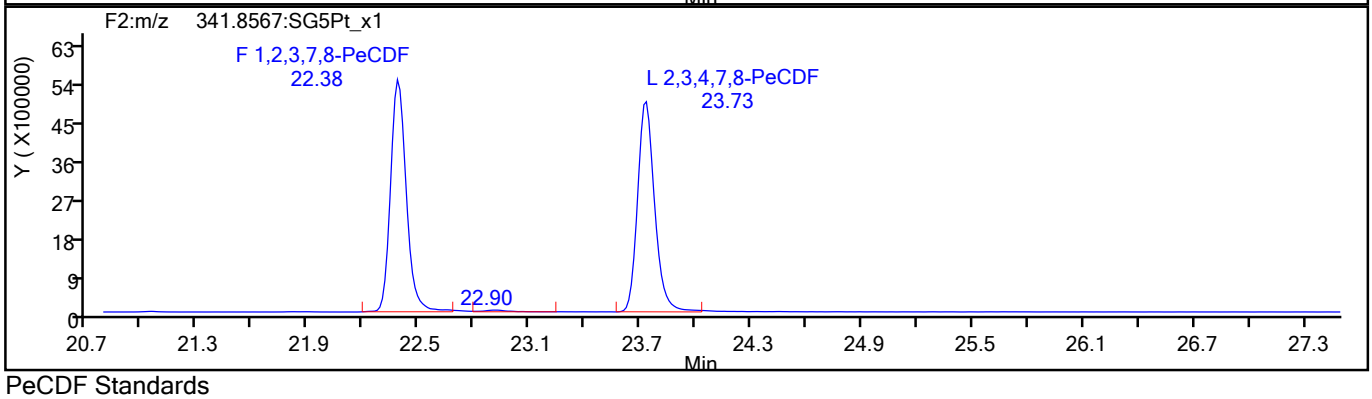

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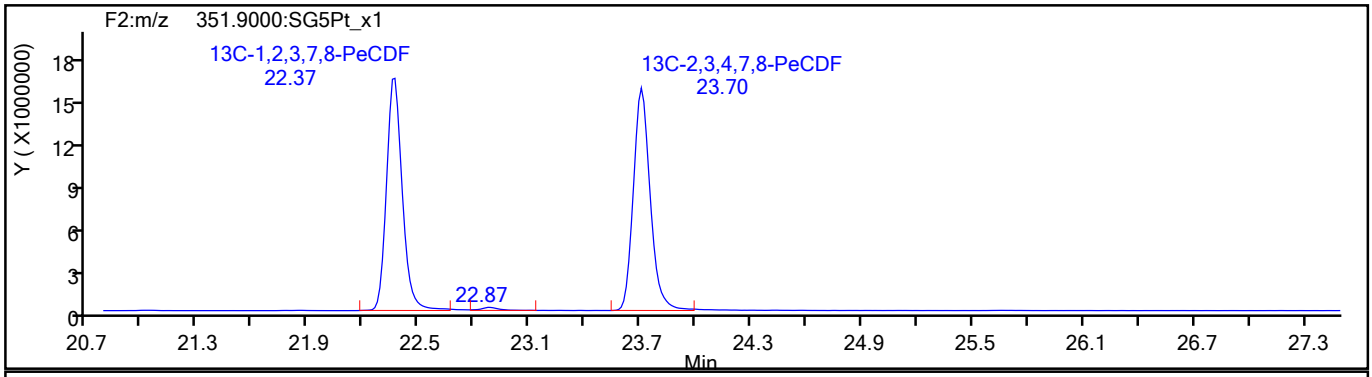

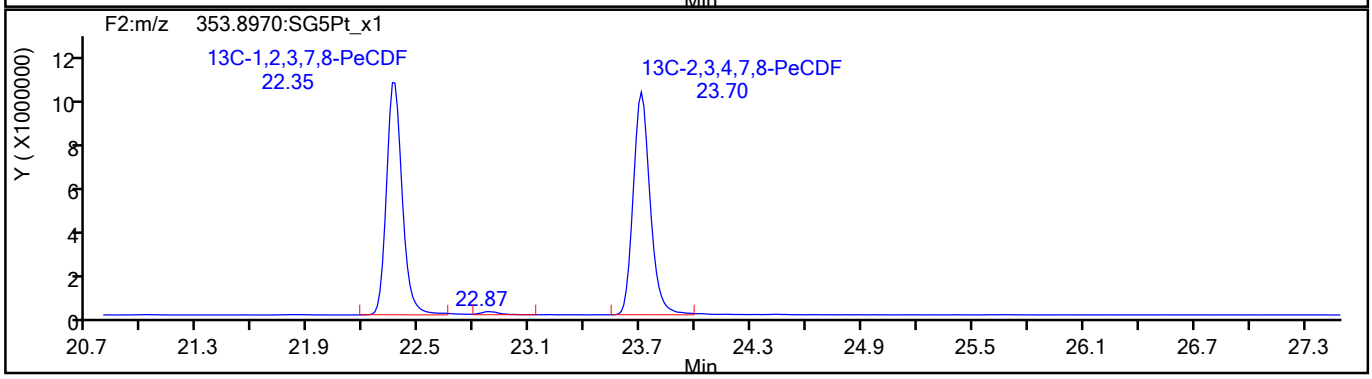

781487

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
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PeCDF

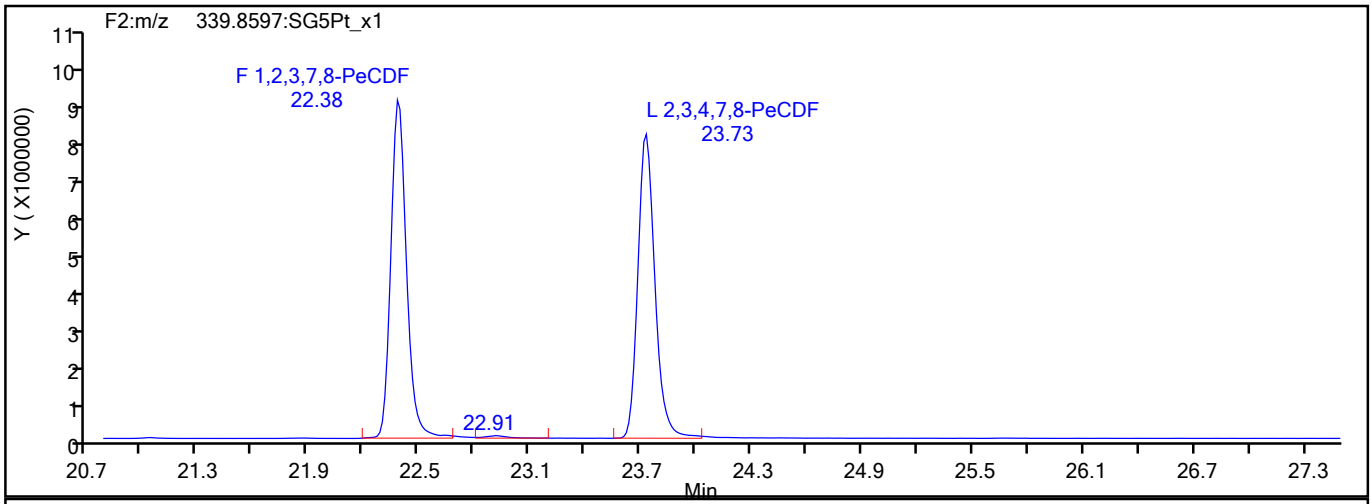

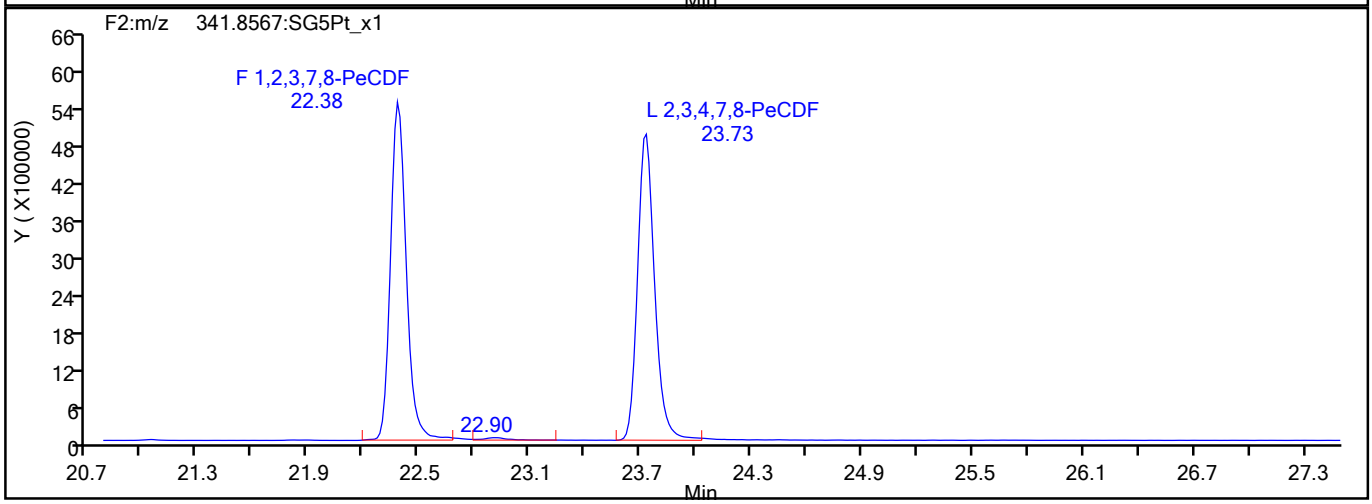

PeCDF Interference Mass

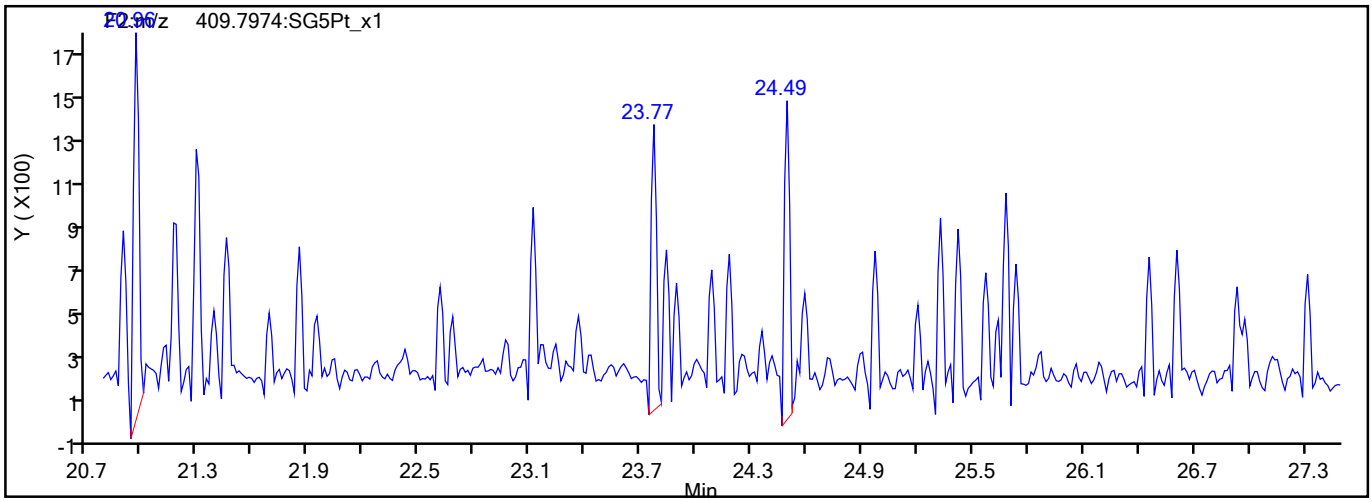

781488

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

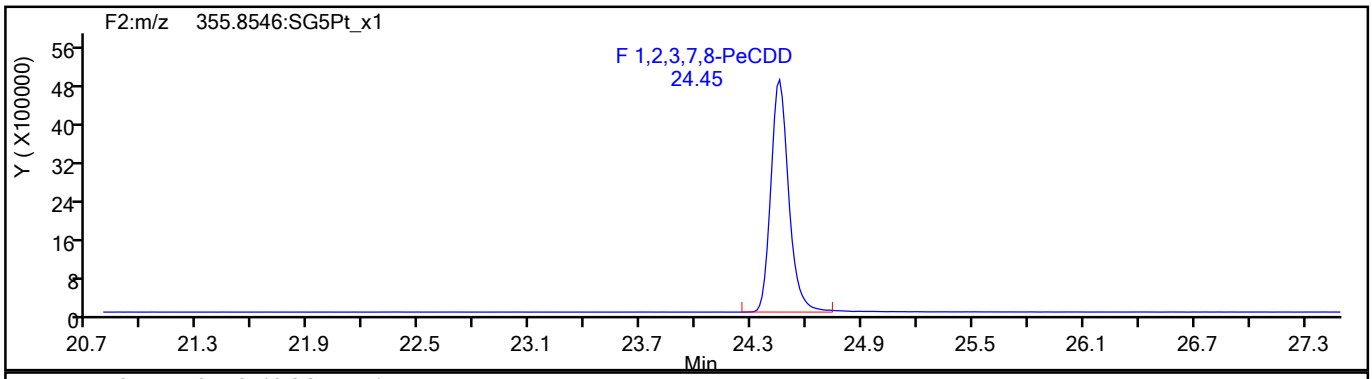

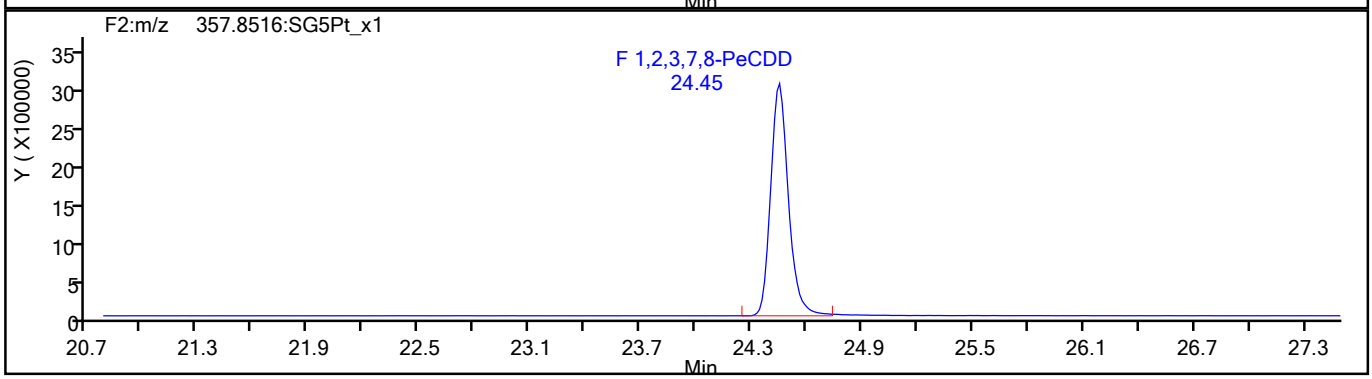

PeCDD Standards

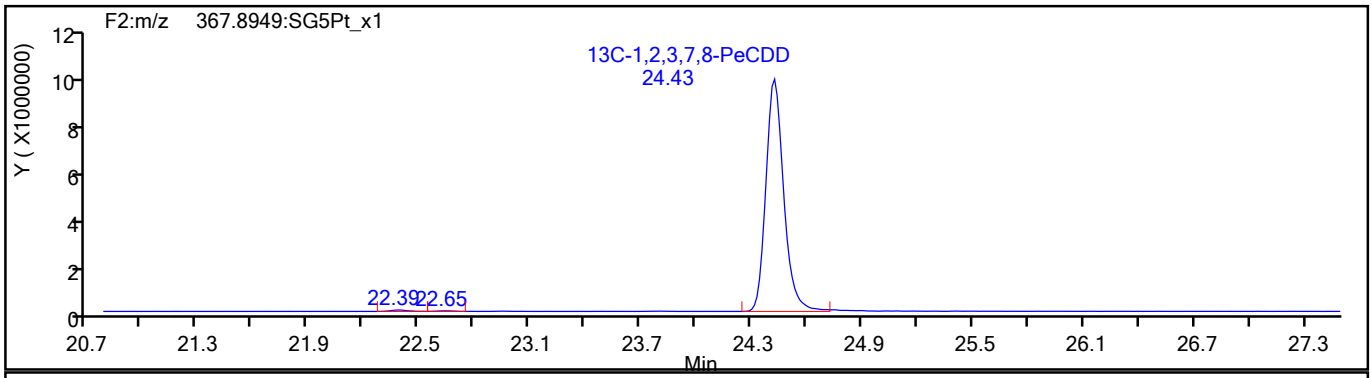

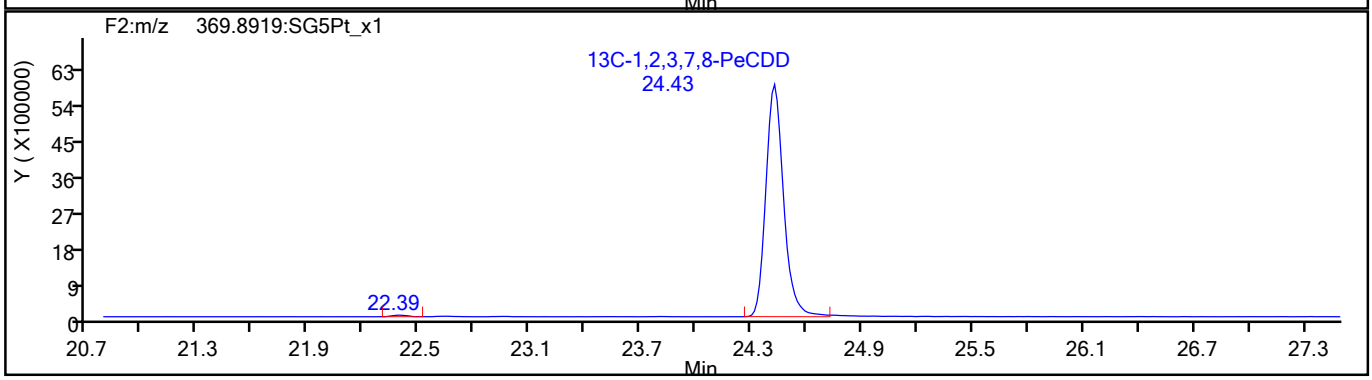

781489

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

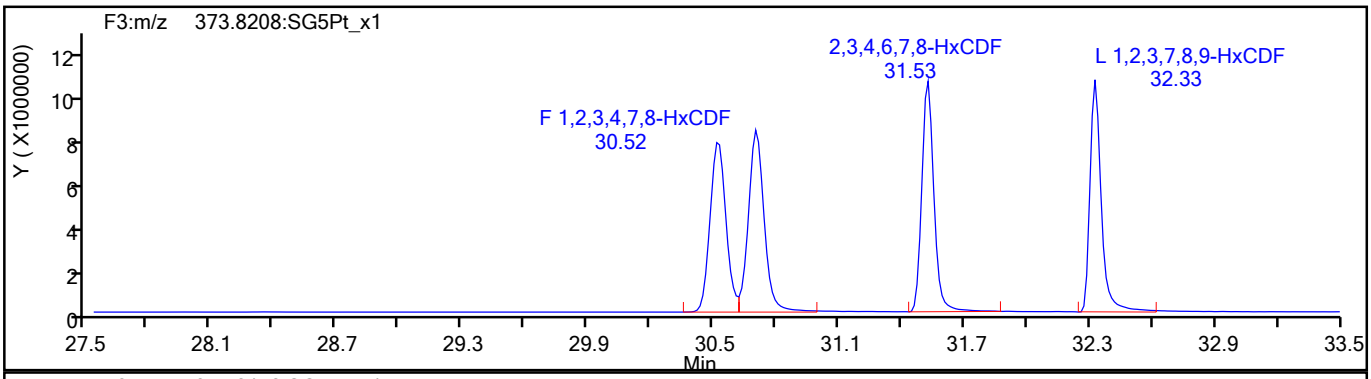

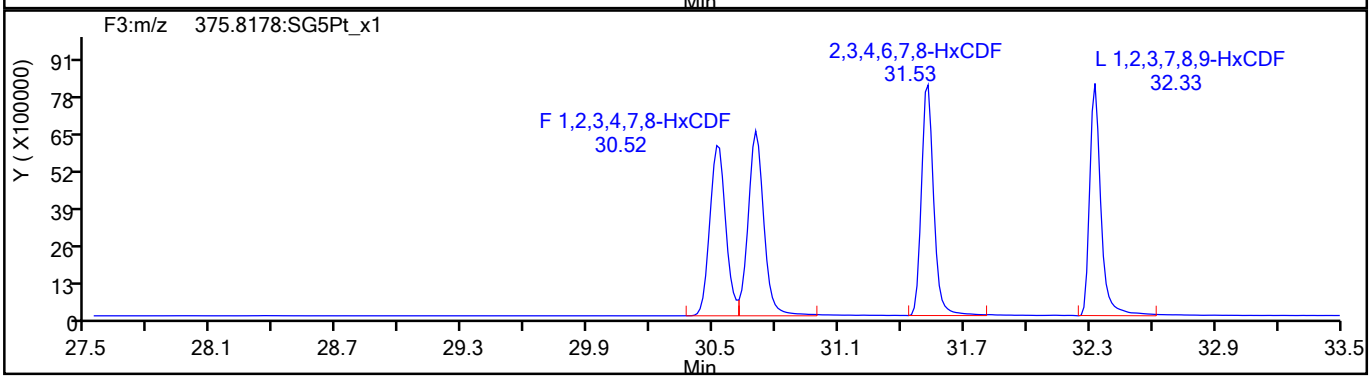

HxCDF Standards

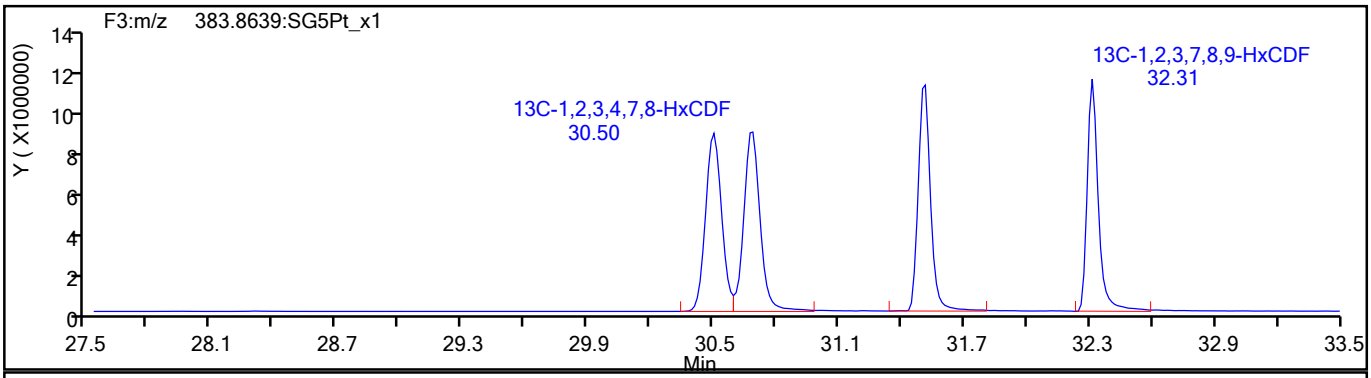

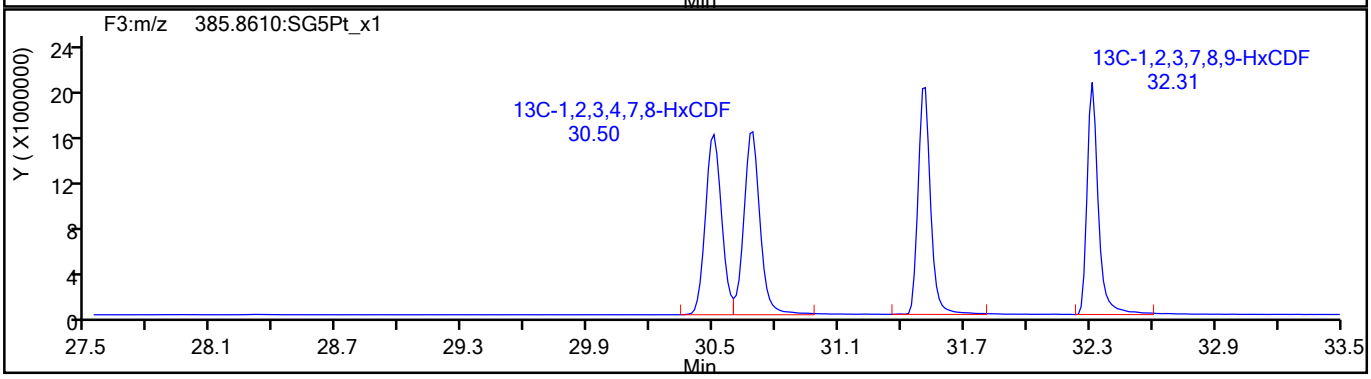

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Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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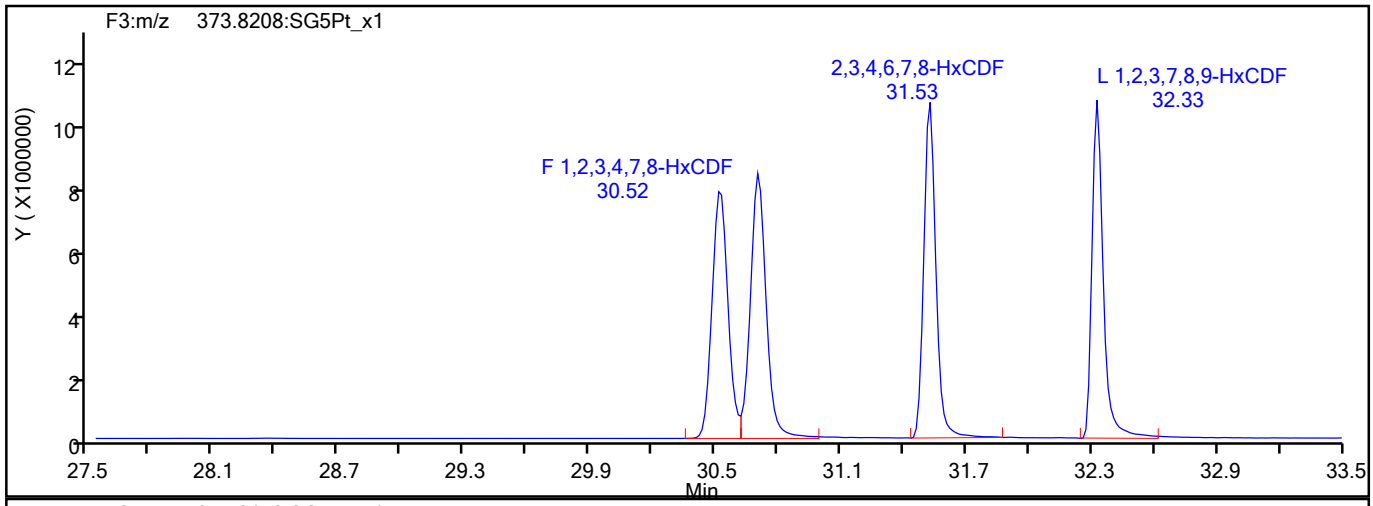

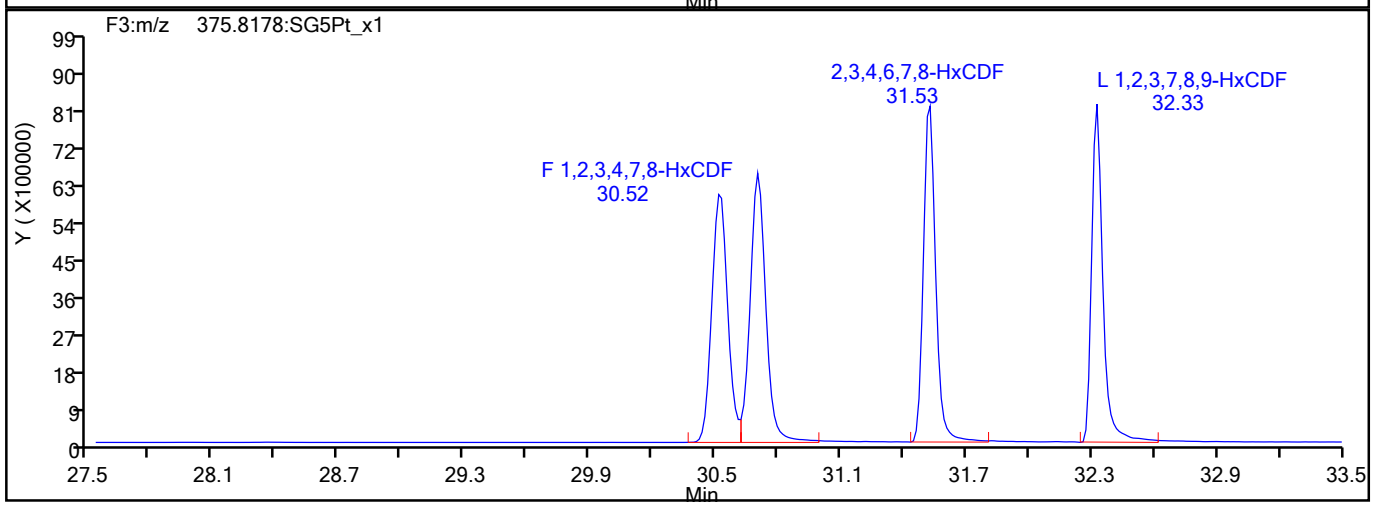

HxCDF Interference Mass

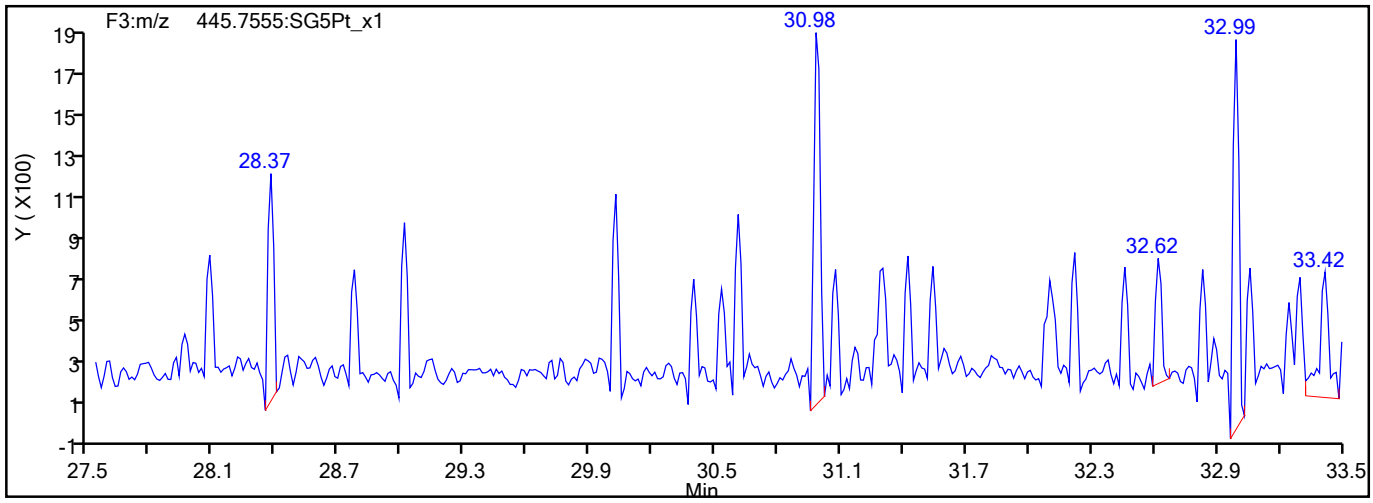

781491

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

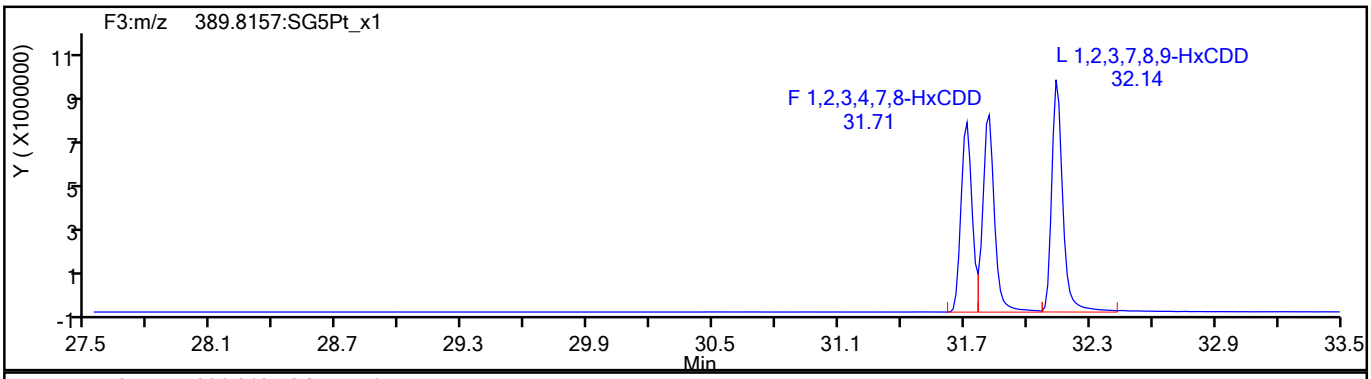

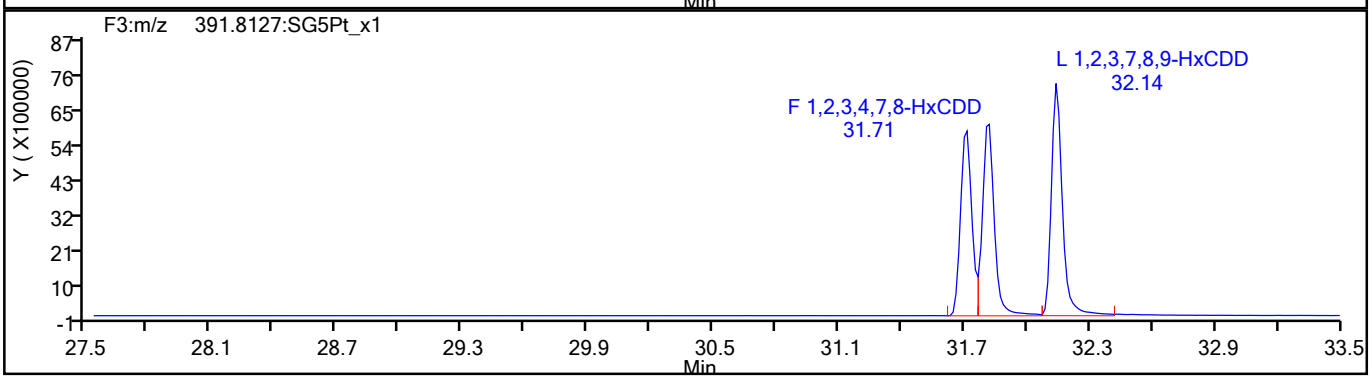

HxCDD Standards

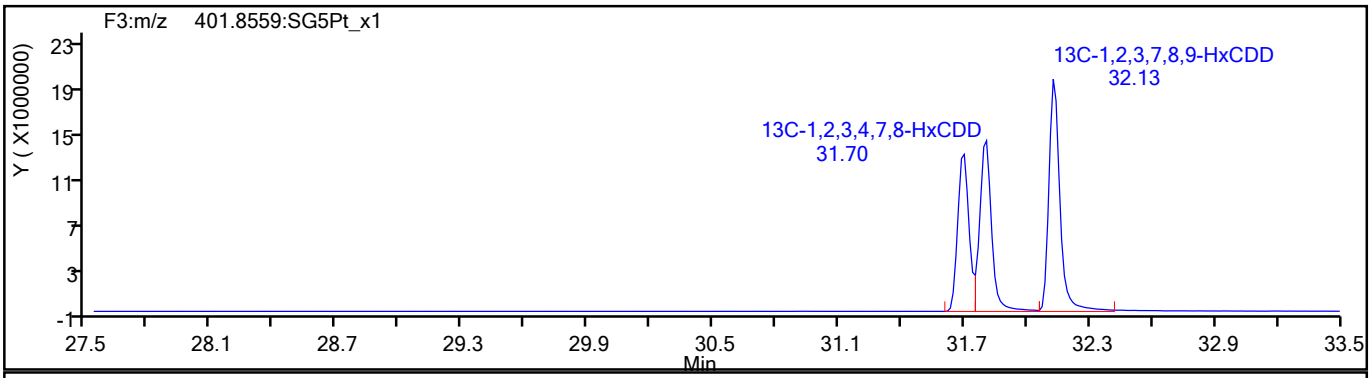

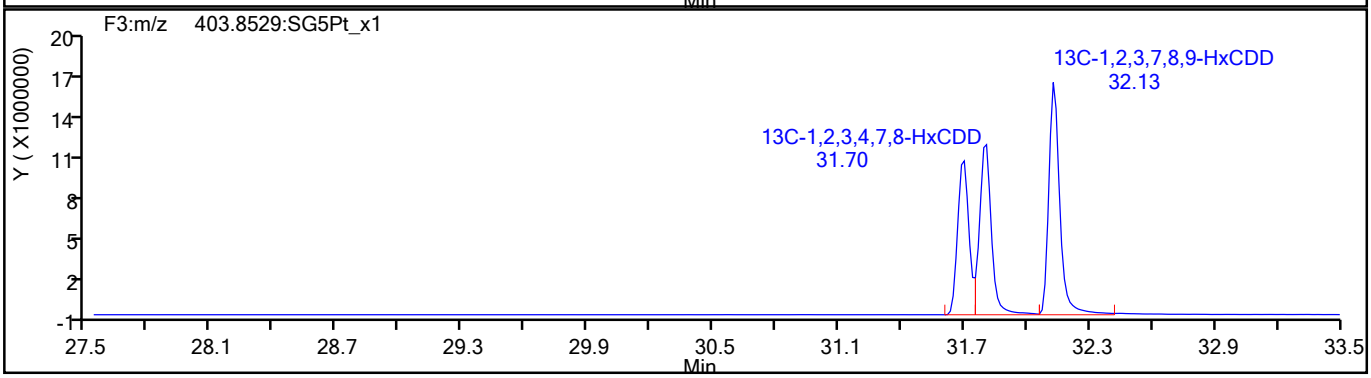

781492

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

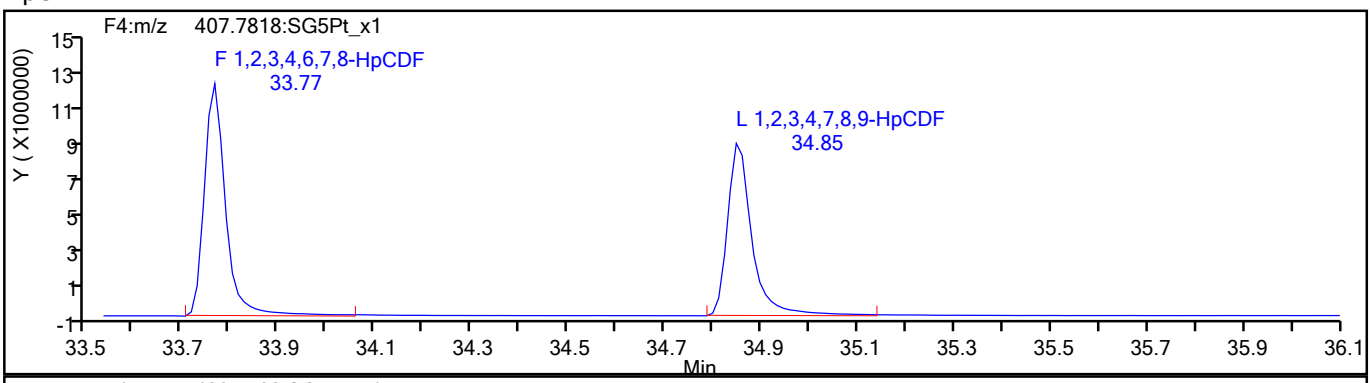

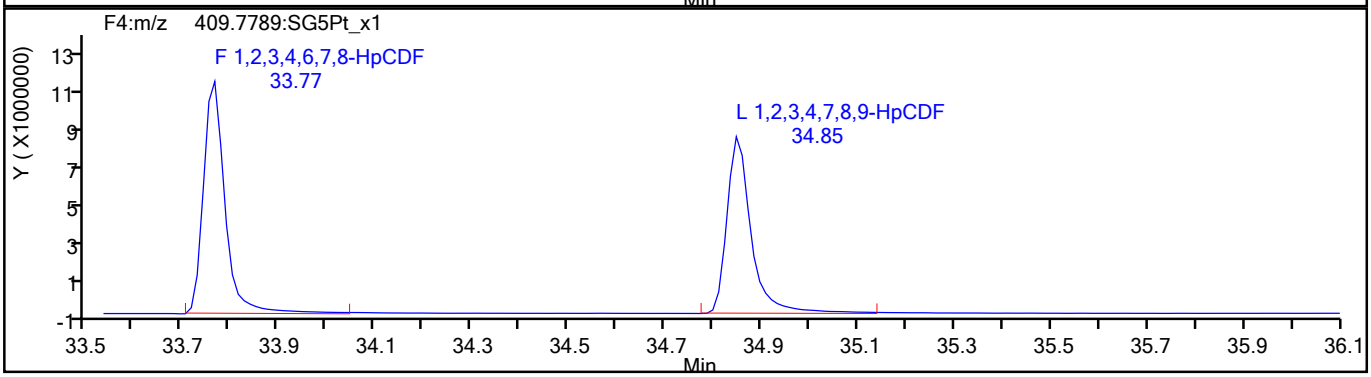

HpCDF Standards

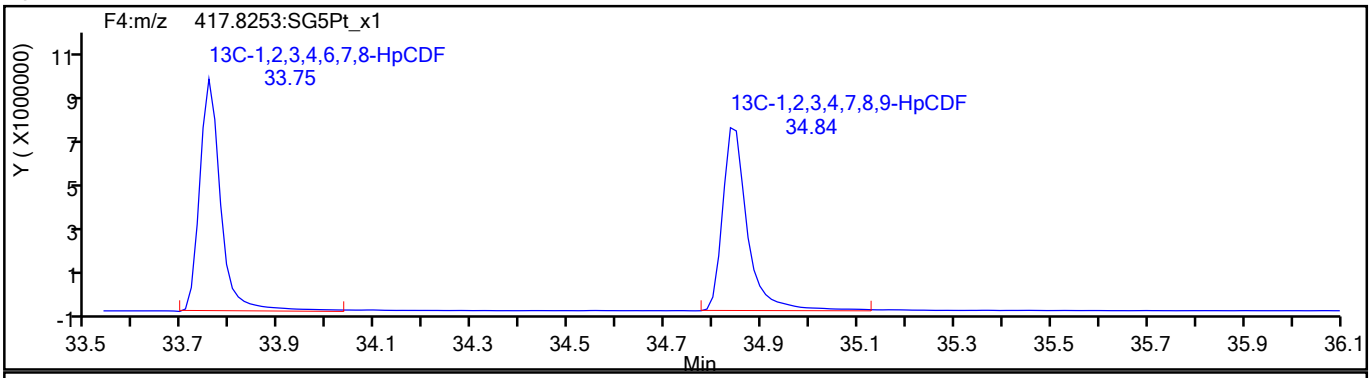

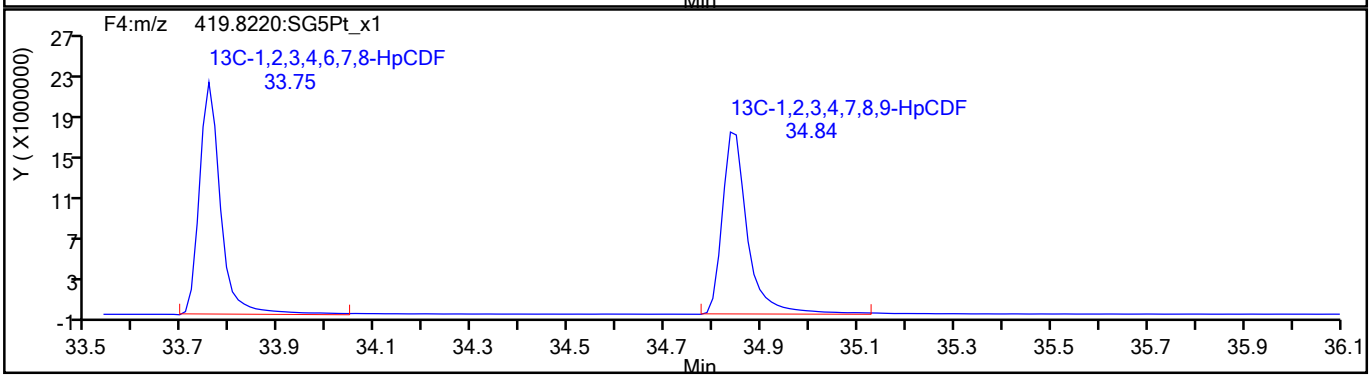

781493

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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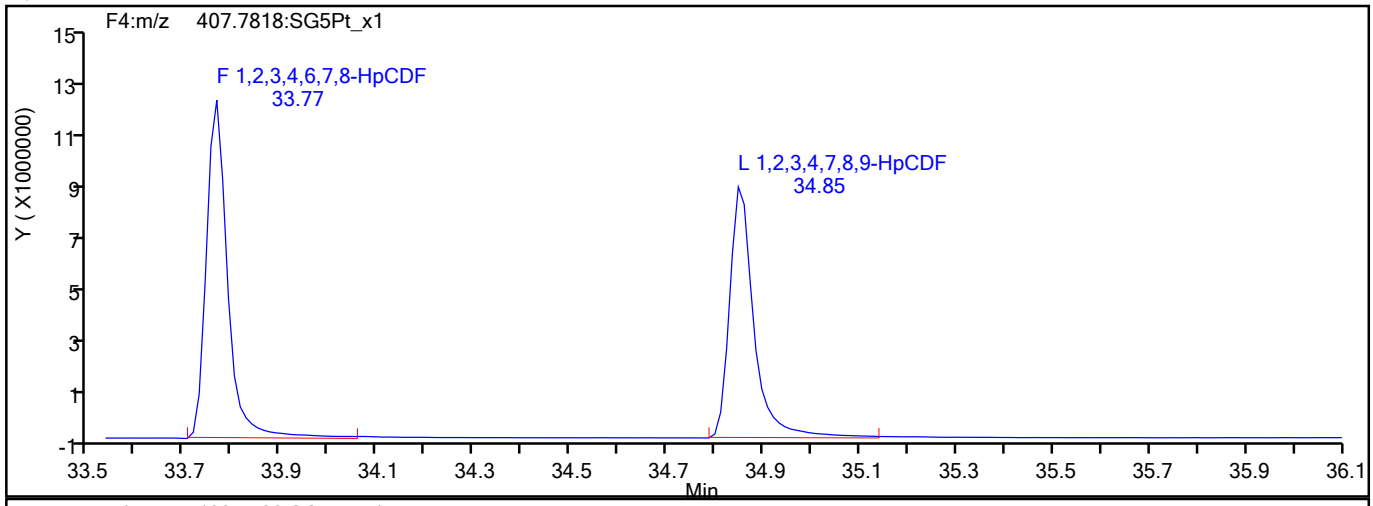

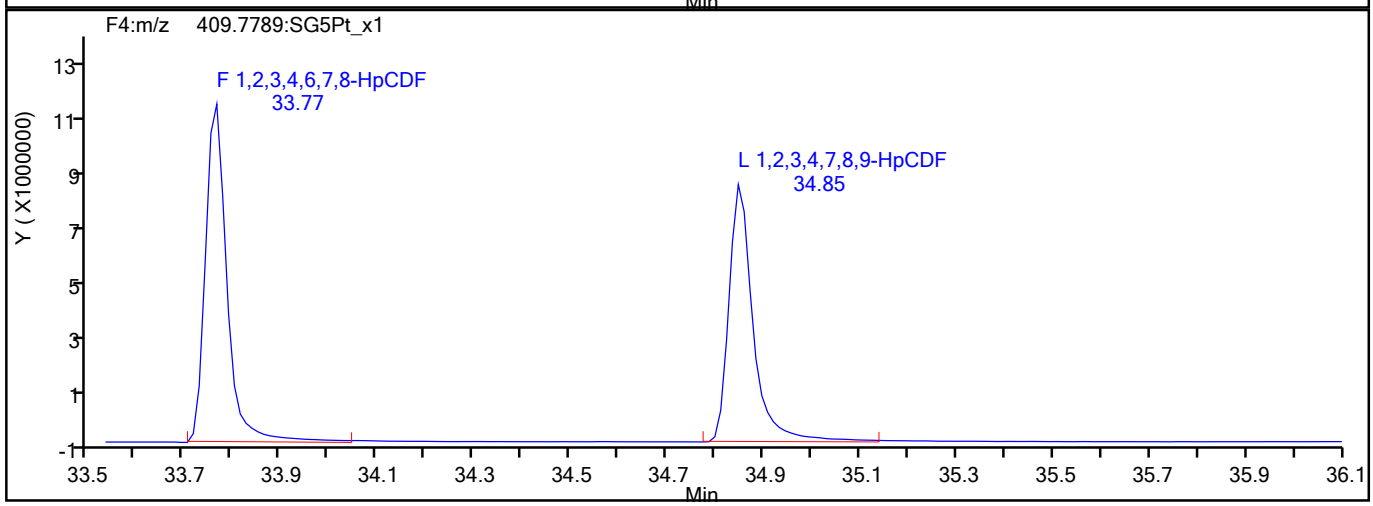

HpCDF Interference Mass

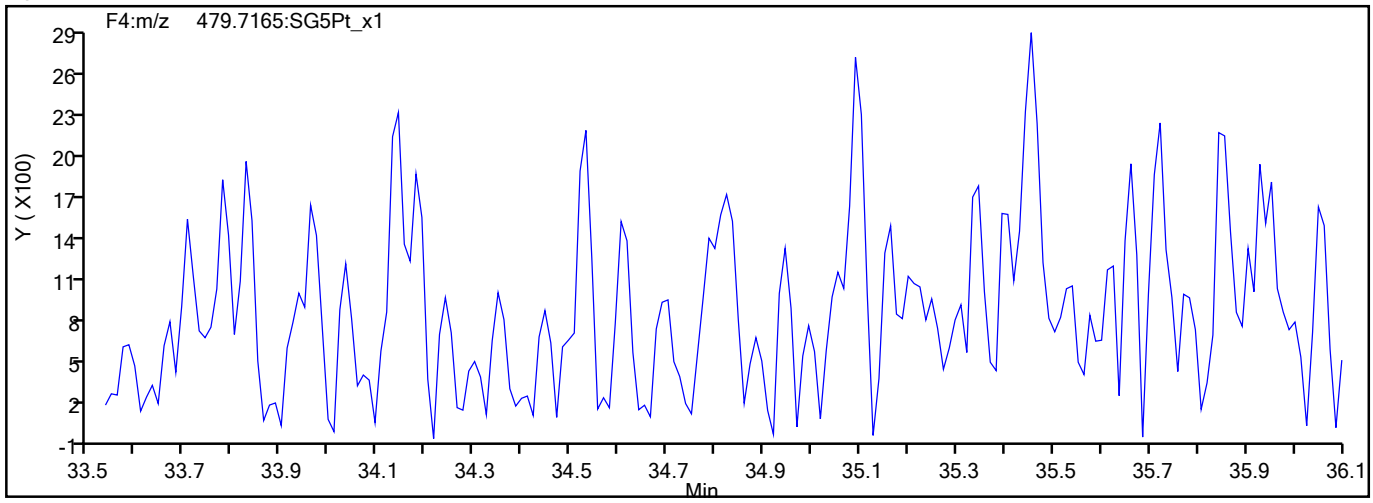

781494

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

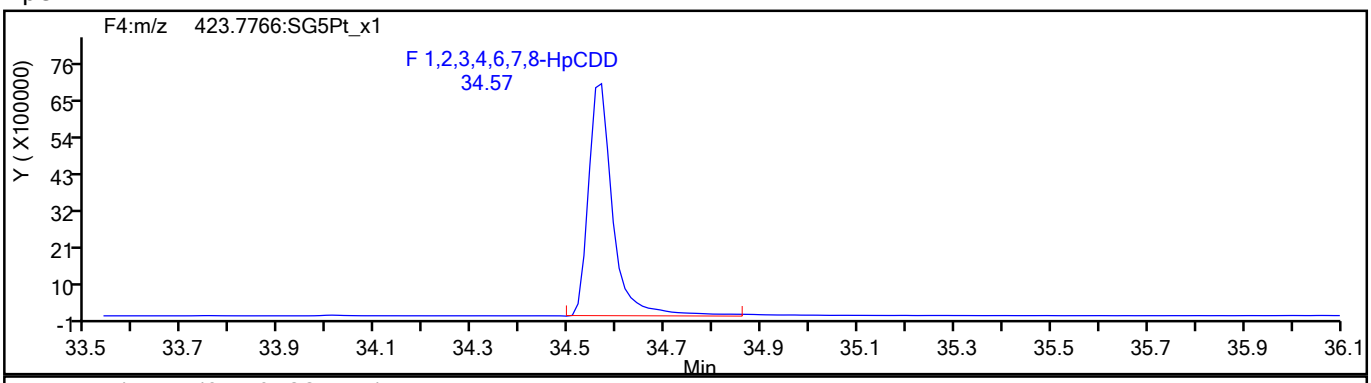

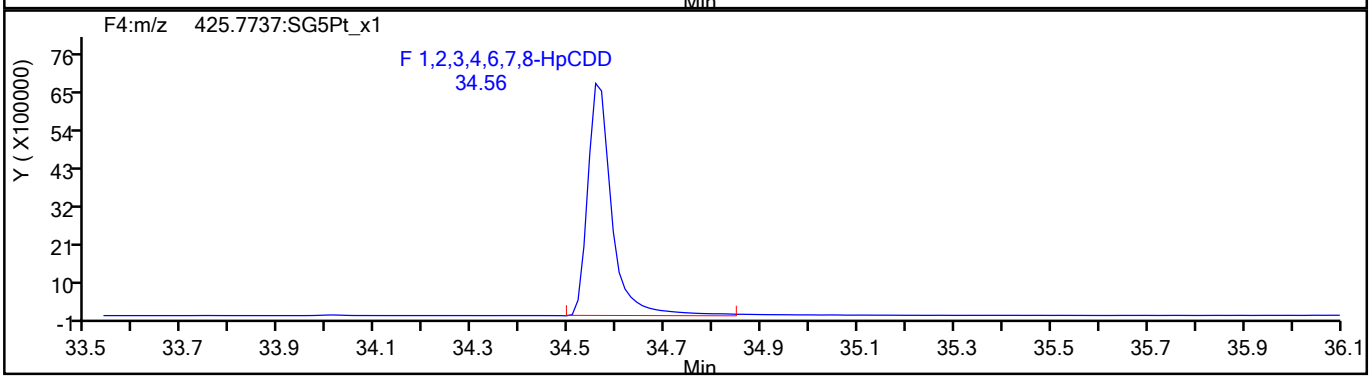

HpCDD Standards

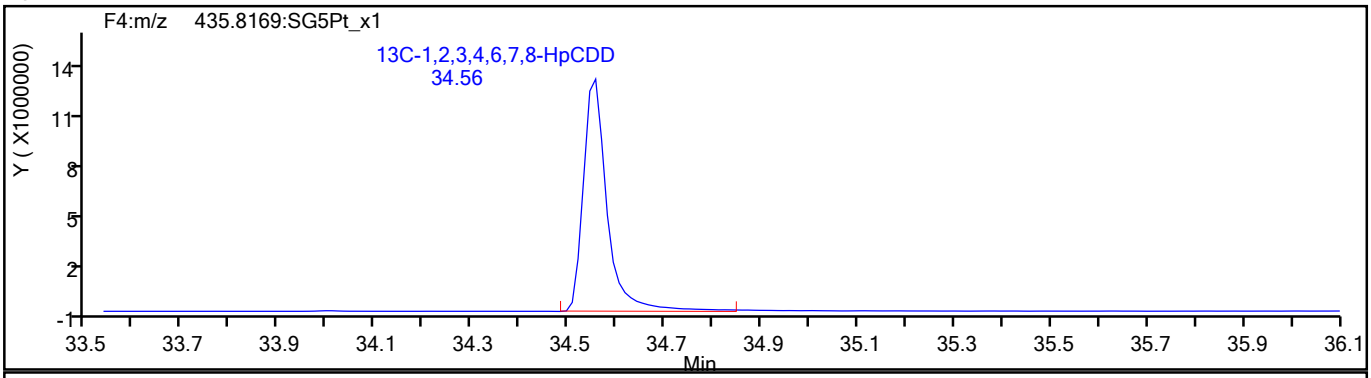

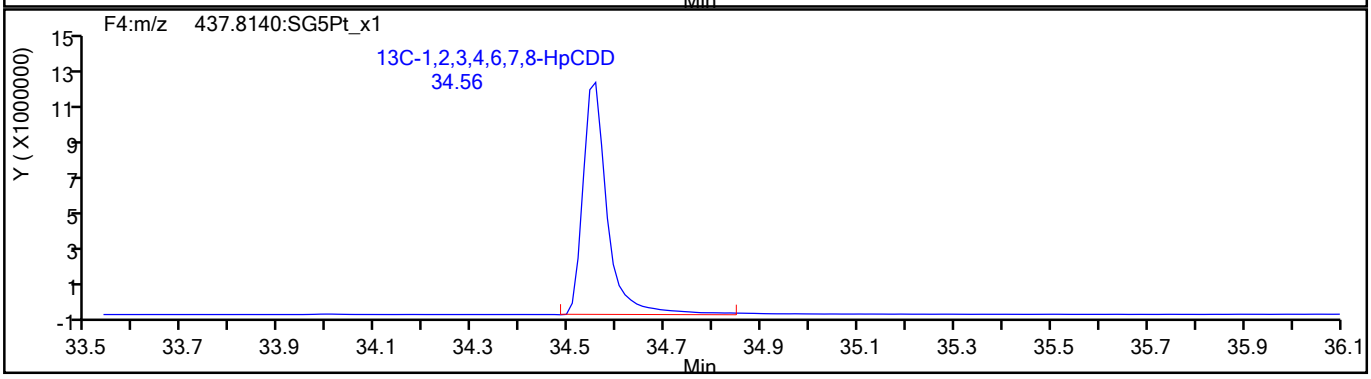

781495

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OCDF

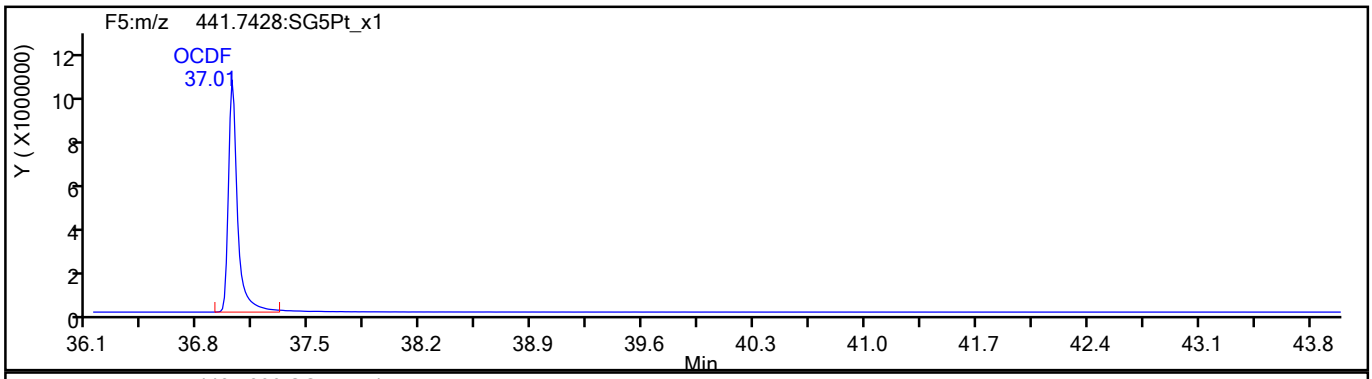

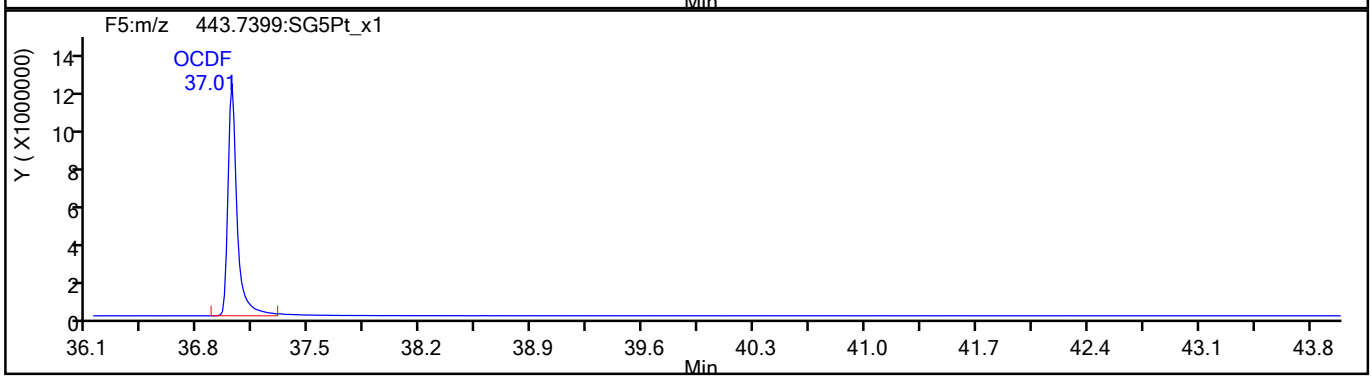

OCDF Standards

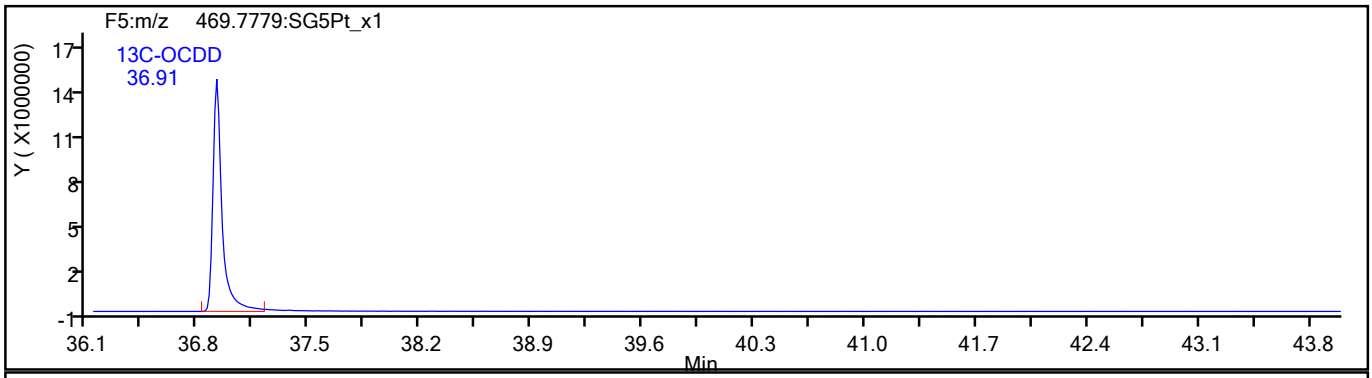

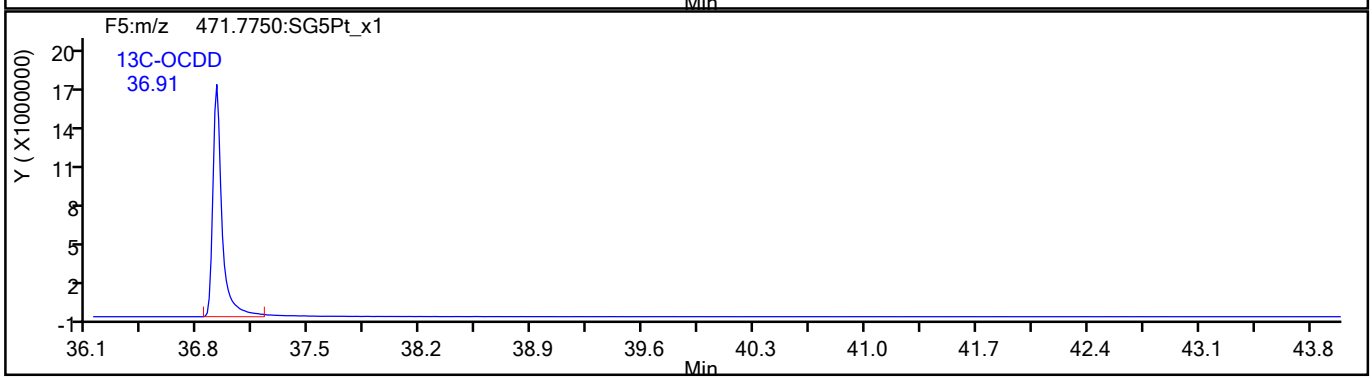

781496

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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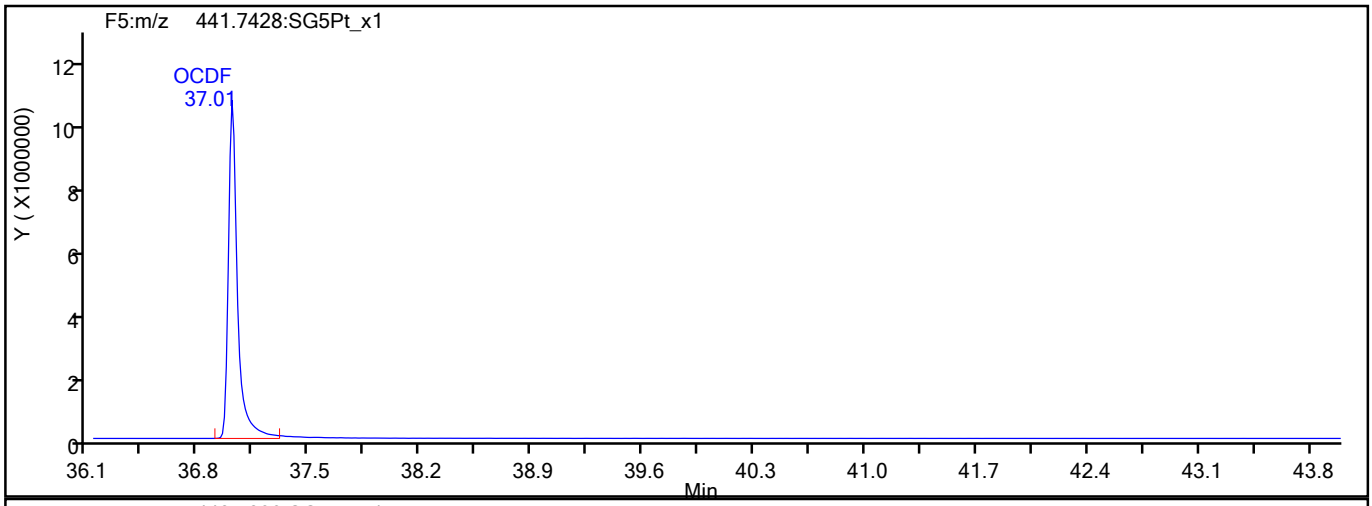

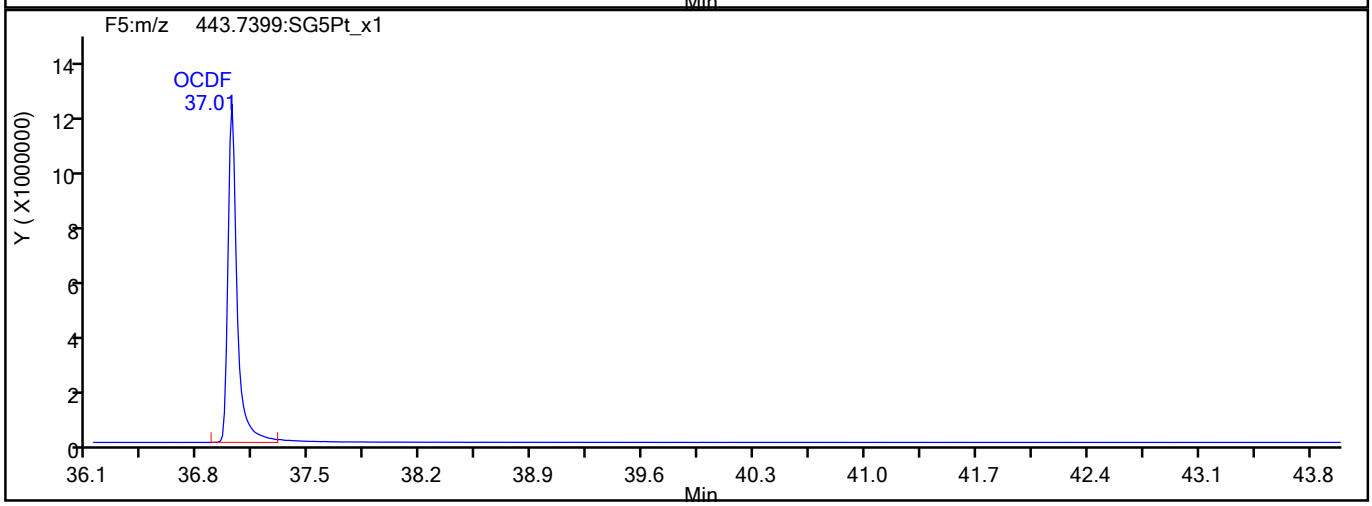

OCDF Interference Mass

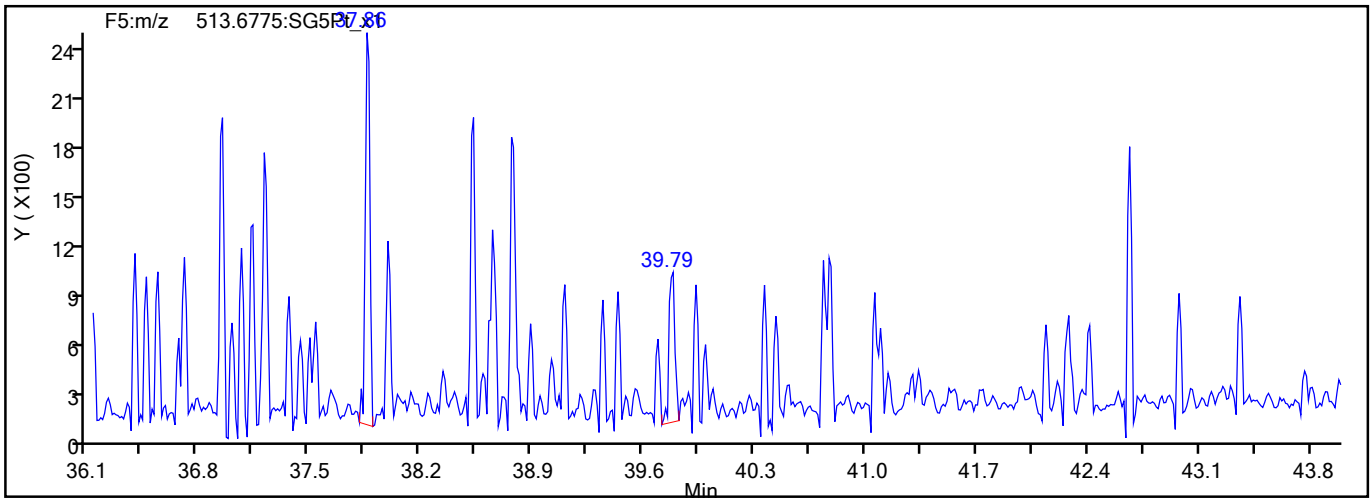

781497

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Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

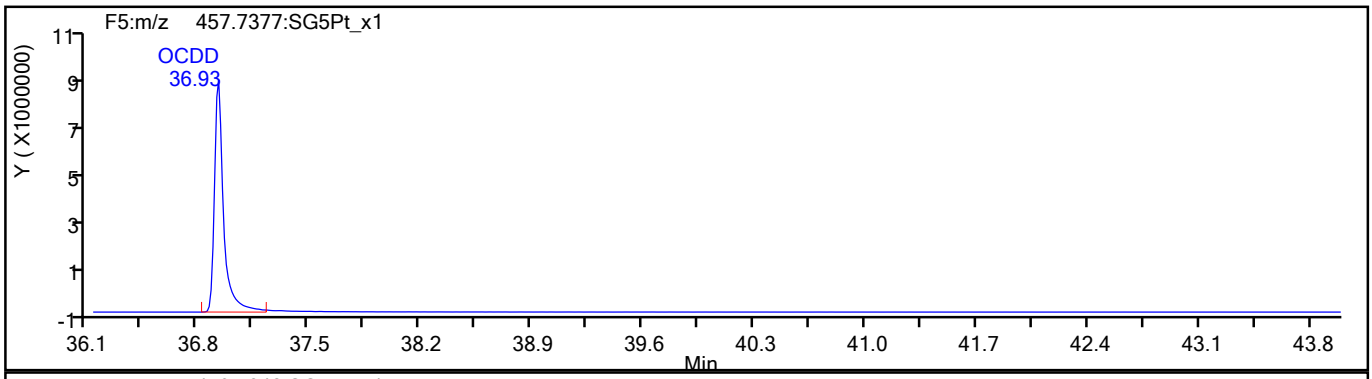

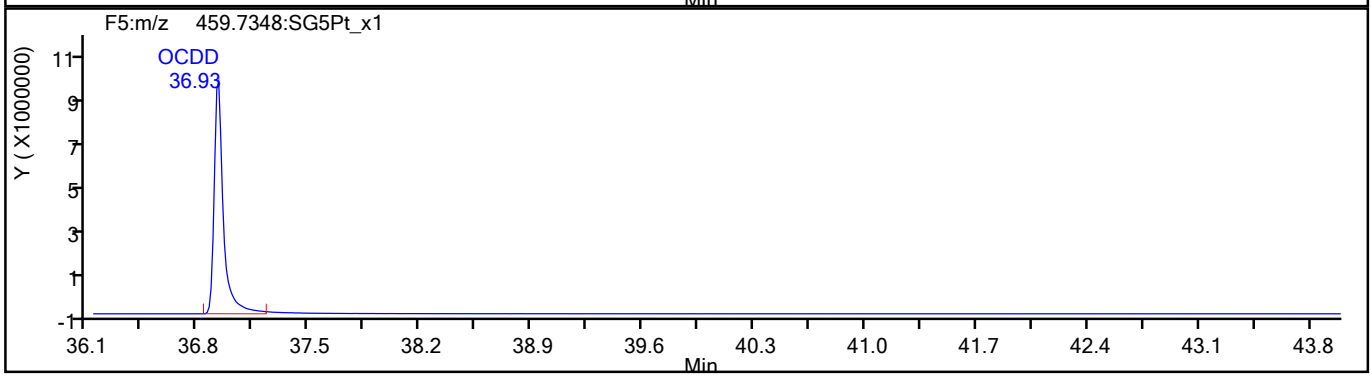

OCDD Standards

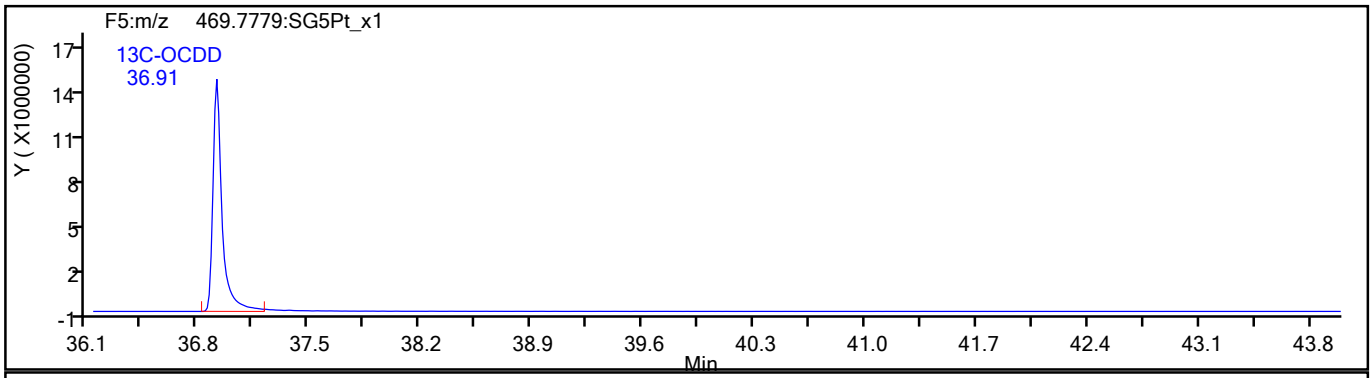

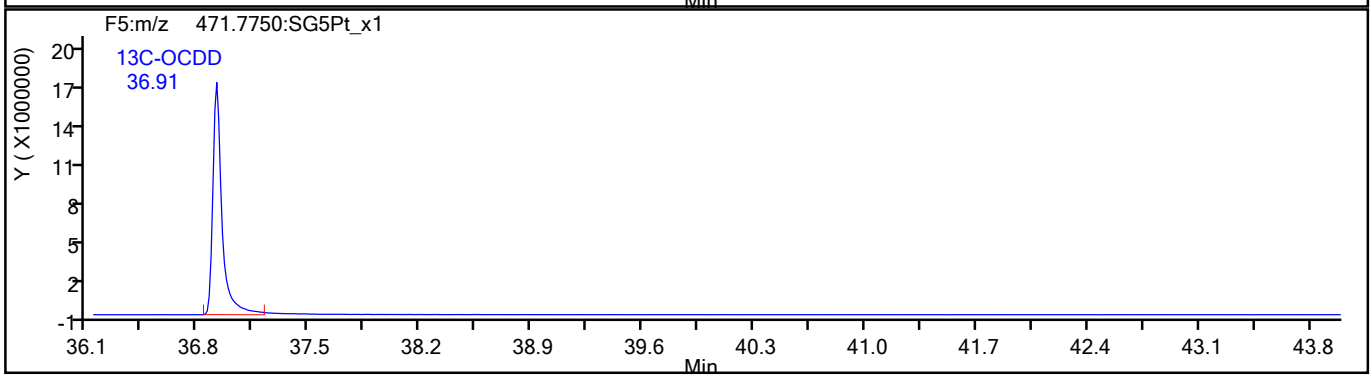

781498

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

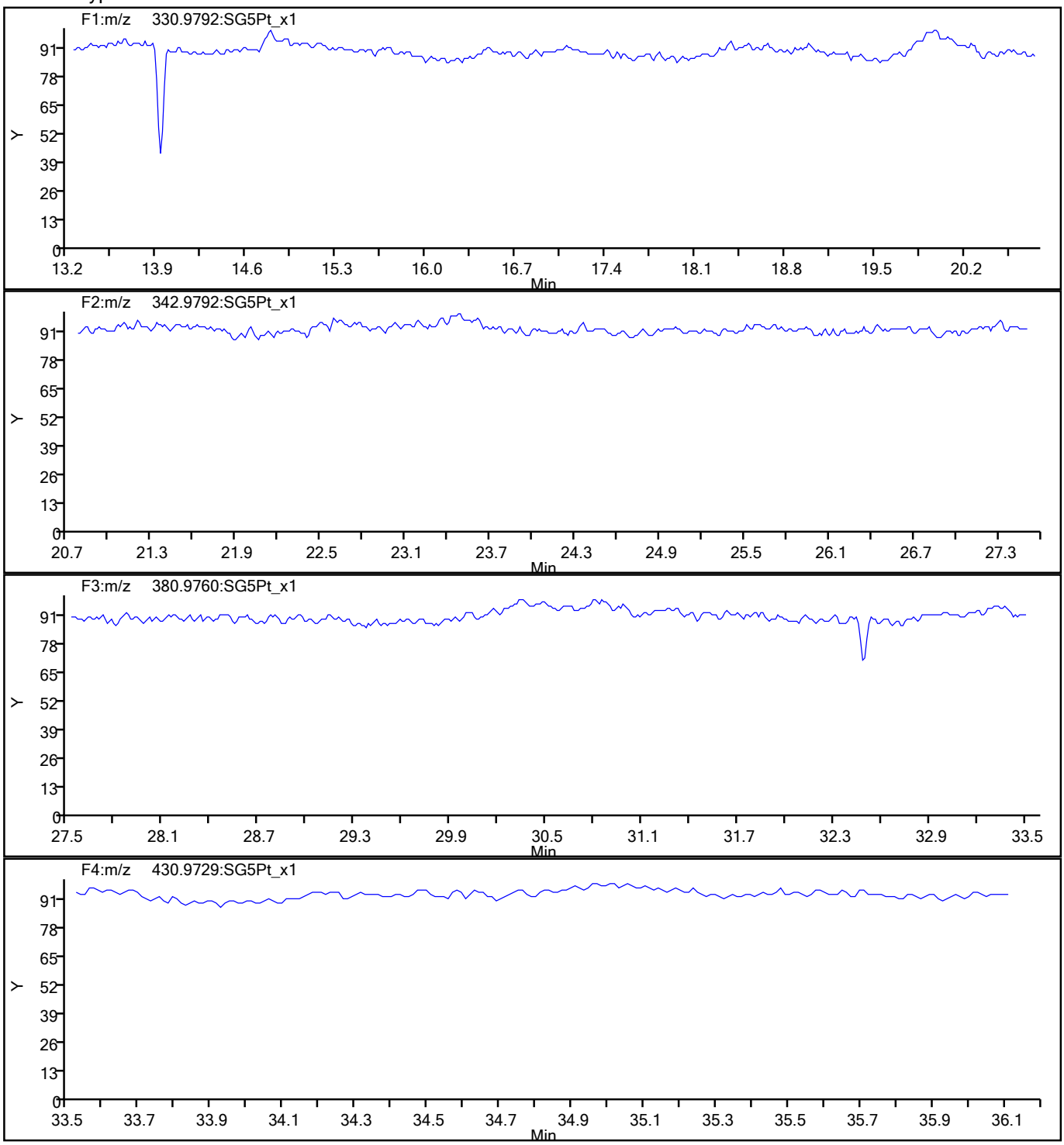

781499

Report Date: 17-Aug-2021 11:47:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_12.d		
Injection Date:	14-Aug-2021 01:16:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

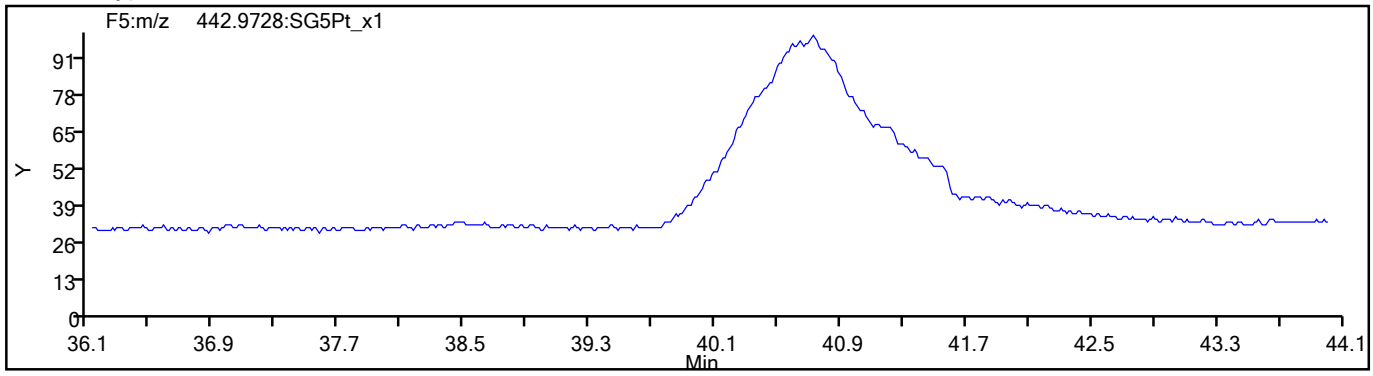

781500

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab Sample ID: CCV 320-516846/17 Calibration Date: 08/14/2021 13:46

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 13AU2110D5_28.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.031		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.268		10.1	10.0	101	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.058		49.8	50.0	100	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.029		50.5	50.0	101	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.029		49.1	50.0	98	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.087		50.1	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.119		49.7	50.0	99	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.163		49.8	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.063		49.9	50.0	100	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.036		51.8	50.0	104	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.256		55.4	50.0	111	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.167		50.0	50.0	100	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.477		51.2	50.0	102	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.103		50.4	50.0	101	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.337		50.7	50.0	101	86-116
OCDD	AveID	1.107	1.135		103	100	103	79-126
OCDF	AveID	1.438	1.433		99.7	100	100	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.542		94.9	100	95	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9086		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.173		97.0	100	97	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.190		96.0	100	96	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7811		103	100	103	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	0.9366		86.4	100	86	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	0.9717		86.2	100	86	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	0.9300		87.4	100	87	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.6763		92.2	100	92	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.7812		88.8	100	89	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.8644		89.3	100	89	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7573		98.0	100	98	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6840		106	100	106	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7354		105	100	105	77-129
13C-OCDD	Ave	0.4472	0.5180		232	200	116	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.186		10.7	10.0	107	79-127

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	13AU2110D5_1	CS-4 HRDXNL4_00099	CCV 081321	Tray01:2	Dioxin		DB
2	13AU2110D5_2	WDM HRDXNCP_00044	WDM 081321	Tray01:1	Dioxin		DB
3	13AU2110D5_3	mb 320-514953/1-a	mb 320-514953/1-a	Tray01:4	1613B/8290A/Water	D265	DB
4	13AU2110D5_4	lcs 320-514953/2-a	lcs 320-514953/2-a	Tray01:5	1613B/8290A/Water		DB
5	13AU2110D5_5	lcsd 320-514953/3-a	lcsd 320-514953/3-a	Tray01:6	1613B/8290A/Water		DB
6	13AU2110D5_6	320-76081-a-4-b	320-76081-a-4-b	Tray01:7	1613B/8290A/Water		DB
7	13AU2110D5_7	mb 320-514735/1-a	mb 320-514735/1-a	Tray01:8	1613B/8290A/Solid	D262	DB
8	13AU2110D5_8	lcs 320-514735/2-a	lcs 320-514735/2-a	Tray01:9	1613B/8290A/Solid		DB
9	13AU2110D5_9	lcsd 320-514735/3-a	lcsd 320-514735/3-a	Tray01:10	1613B/8290A/Solid		DB
10	13AU2110D5_10	320-76718-a-1-a	320-76718-a-1-a	Tray01:11	1613B/8290A/Solid		DB
11	13AU2110D5_11	SB Solvent Blank C-14	SB 081321	Tray01:3			DB
12	13AU2110D5_12	CS-4 HRDXNL4_00099	CCV 081321A	Tray01:2	Dioxin		DB
13	13AU2110D5_13	WDM HRDXNCP_00044	WDM 081321A	Tray01:1	Dioxin		DB
14	13AU2110D5_14	mb 320-512871/1-a	mb 320-512871/1-a	Tray01:15	1613B/Solid	D265	DB
15	13AU2110D5_15	lcs 320-512871/2-a	lcs 320-512871/2-a	Tray01:16	1613B/Solid		DB
16	13AU2110D5_16	lcsd 320-512871/3-a	lcsd 320-512871/3-a	Tray01:17	1613B/Solid		DB
17	13AU2110D5_17	320-76788-a-2-a	320-76788-a-2-a	Tray01:18	1613B/Solid		DB
18	13AU2110D5_18	320-76788-a-3-a	320-76788-a-3-a	Tray01:19	1613B/Solid		DB
19	13AU2110D5_19	320-76788-a-4-a	320-76788-a-4-a	Tray01:20	1613B/Solid		DB
20	13AU2110D5_20	320-76788-a-5-a	320-76788-a-5-a	Tray01:21	1613B/Solid		DB
21	13AU2110D5_21	320-76788-a-6-a	320-76788-a-6-a	Tray01:22	1613B/Solid		DB
22	13AU2110D5_22	320-76788-a-7-a	320-76788-a-7-a	Tray01:23	1613B/Solid		DB
23	13AU2110D5_23	320-76720-a-1-a 50X	320-76720-a-1-a 50X	Tray01:24	1613B/Solid		DB
24	13AU2110D5_24	320-76720-a-5-a 25X	320-76720-a-5-a 25X	Tray01:25	1613B/Solid		DB
25	13AU2110D5_25	320-76724-a-3-a 100X	320-76724-a-3-a 100X	Tray01:26	1613B/Solid		DB
26	13AU2110D5_26	SB Solvent Blank C-14	SB 081321A	Tray01:3			DB
27	13AU2110D5_27	WDM HRDXNCP_00044	WDM 081321B	Tray01:1	Dioxin		DB
28	13AU2110D5_28	CS-4 HRDXNL4_00099	CCV 081321B	Tray01:2	Dioxin		DB
29	13AU2110D5_29	320-76788-a-8-a	320-76788-a-8-a	Tray01:29	1613B/Solid	D265	DB
30	13AU2110D5_30	320-76788-a-9-a	320-76788-a-9-a	Tray01:30	1613B/Solid		DB
31	13AU2110D5_31	320-76788-a-13-a	320-76788-a-13-a	Tray01:31	1613B/Solid		DB
32	13AU2110D5_32	320-76788-a-15-a	320-76788-a-15-a	Tray01:32	1613B/Solid		DB
33	13AU2110D5_33	320-76788-a-16-a	320-76788-a-16-a	Tray01:33	1613B/Solid		DB
34	13AU2110D5_34	320-76788-a-17-a	320-76788-a-17-a	Tray01:34	1613B/Solid		DB
35	13AU2110D5_35	320-76788-a-18-a	320-76788-a-18-a	Tray01:35	1613B/Solid		DB
36	13AU2110D5_36	320-76788-a-19-a	320-76788-a-19-a	Tray01:36	1613B/Solid		DB
37	13AU2110D5_37	320-76788-a-20-a	320-76788-a-20-a	Tray01:37	1613B/Solid		DB
38	13AU2110D5_38	320-76788-a-21-a	320-76788-a-21-a	Tray01:38	1613B/Solid		DB
39	13AU2110D5_39	320-76788-a-1-a	320-76788-a-1-a	Tray01:39	1613B/Solid		DB
40	13AU2110D5_40	320-76788-a-14-a	320-76788-a-14-a	Tray01:40	1613B/Solid		DB
41	13AU2110D5_41	SB Solvent Blank C-14	SB 081321B	Tray01:3			DB
42	13AU2110D5_42	WDM HRDXNCP_00044	WDM 081321C	Tray01:1	Dioxin		DB
43	13AU2110D5_43	CS-4 HRDXNL4_00099	CCV 081321C	Tray01:2	Dioxin		DB
44	13AU2110D5_44	mb 320-513585/1-a	mb 320-513585/1-a	Tray01:43	1613B/Solid	D265	DB
45	13AU2110D5_45	lcs 320-513585/2-a	lcs 320-513585/2-a	Tray01:44	1613B/Solid		DB
46	13AU2110D5_46	320-76765-a-18-a	320-76765-a-18-a	Tray01:45	1613B/Solid		DB
47	13AU2110D5_47	320-76769-a-1-a	320-76769-a-1-a	Tray01:46	1613B/Solid		DB
48	13AU2110D5_48	320-76769-a-1-b ms	320-76769-a-1-b ms	Tray01:47	1613B/Solid		DB
49	13AU2110D5_49	320-76769-a-1-c msd	320-76769-a-1-c msd	Tray01:48	1613B/Solid		DB
50	13AU2110D5_50	320-76769-a-2-a	320-76769-a-2-a	Tray01:49	1613B/Solid		DB
51	13AU2110D5_51	320-76769-a-3-a	320-76769-a-3-a	Tray01:50	1613B/Solid		DB
52	13AU2110D5_52	320-76769-a-5-a	320-76769-a-5-a	Tray01:51	1613B/Solid		DB
53	13AU2110D5_53	320-76769-a-6-a	320-76769-a-6-a	Tray01:52	1613B/Solid		DB
54	13AU2110D5_54	320-76769-a-7-a	320-76769-a-7-a	Tray01:53	1613B/Solid		DB
55	13AU2110D5_55	320-76769-a-8-a	320-76769-a-8-a	Tray01:54	1613B/Solid		DB
56	13AU2110D5_56	SB Solvent Blank C-14	SB 081321C	Tray01:3			DB
57	13AU2110D5_57	WDM HRDXNCP_00044	WDM 081321D	Tray01:1	Dioxin		DB
58	13AU2110D5_58	CS-4 HRDXNL4_00099	CCV 081321D	Tray01:2	Dioxin		DB

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
59	13AU2110D5_59	320-76769-a-13-a	320-76769-a-13-a	Tray01:57	1613B/Solid	D265	DB
60	13AU2110D5_60	320-76769-a-15-a	320-76769-a-15-a	Tray01:58	1613B/Solid		DB
61	13AU2110D5_61	320-76769-a-16-a	320-76769-a-16-a	Tray01:59	1613B/Solid		DB
62	13AU2110D5_62	320-76769-a-17-a	320-76769-a-17-a	Tray01:60	1613B/Solid		DB
63	13AU2110D5_63	320-76769-a-18-a	320-76769-a-18-a	Tray01:61	1613B/Solid		DB
64	13AU2110D5_64	320-76769-a-19-a	320-76769-a-19-a	Tray01:62	1613B/Solid		DB
65	13AU2110D5_65	320-76769-a-20-a	320-76769-a-20-a	Tray01:63	1613B/Solid		DB
66	13AU2110D5_66	320-76769-a-25-a	320-76769-a-25-a	Tray01:64	1613B/Solid		DB
67	13AU2110D5_67	320-76769-a-26-a	320-76769-a-26-a	Tray01:65	1613B/Solid		DB
68	13AU2110D5_68	320-76769-a-28-a	320-76769-a-28-a	Tray01:66	1613B/Solid		DB
69	13AU2110D5_69	320-76769-a-14-a	320-76769-a-14-a	Tray01:67	1613B/Solid		DB
70	13AU2110D5_70	SB Solvent Blank C-14	SB 081321D	Tray01:3			DB

Logfile checked
08/16/21 SMA

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover

Process Options	Action On Error	s5
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---	---	C:\CHROM
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---	---	C:\CHROM
---	---	C:\CHROM
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
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---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
---	---	C:\CHROM

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---

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M 292.9824 R 12026

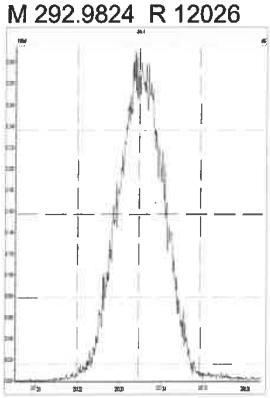

M 304.9824 R 11908

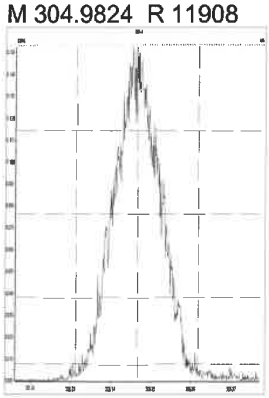

M 318.9792 R 12118

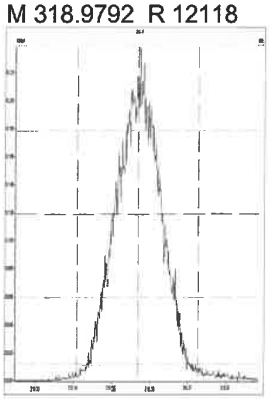

M 330.9792 R 11944

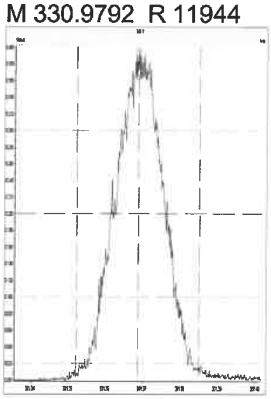

M 342.9792 R 11338

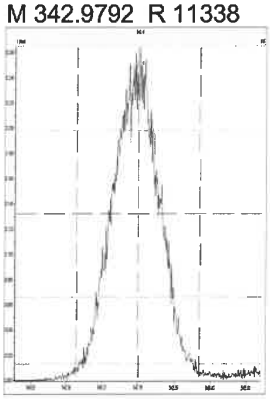

M 354.9792 R 11779

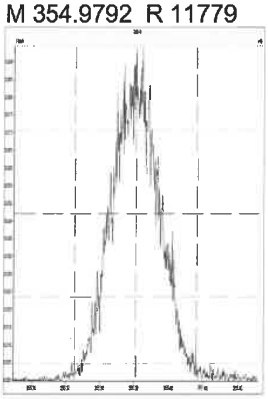

M 366.9792 R 12019

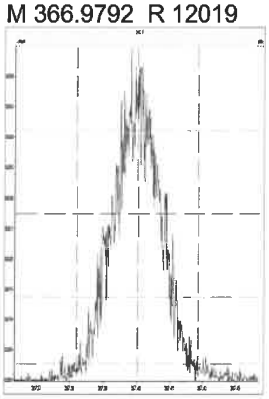

M 380.9760 R 10730

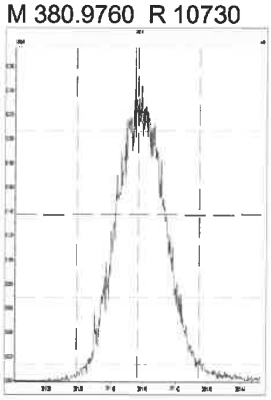

M 392.9760 R 11106

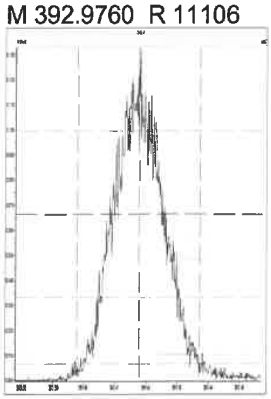

M 404.9760 R 10752

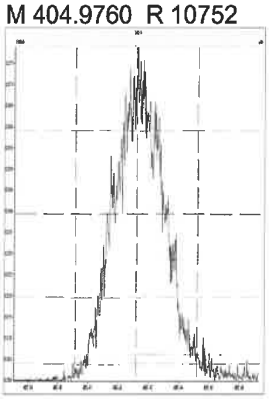

M 416.9760 R 12199

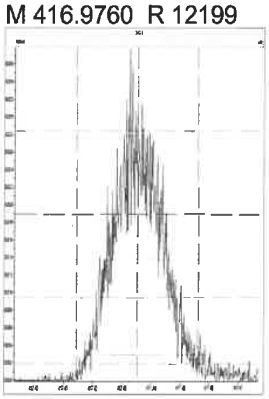

M 318.9792 R 11775

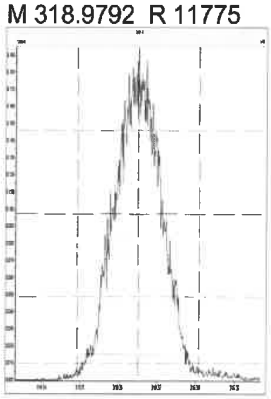

M 330.9792 R 11821

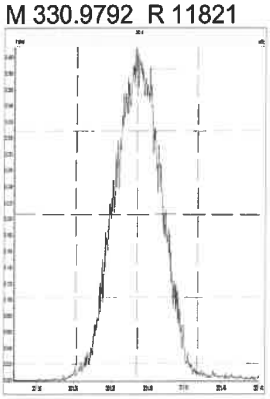

M 342.9792 R 12170

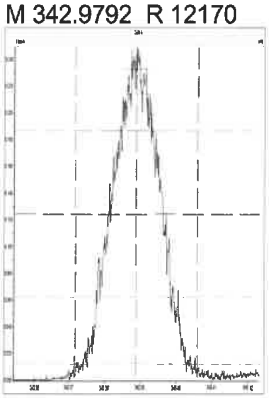

M 354.9792 R 12199

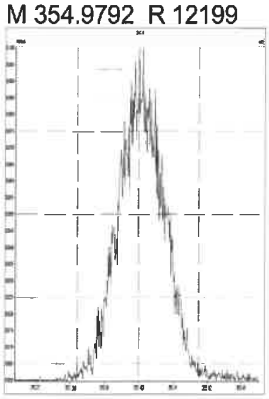

M 366.9792 R 12325

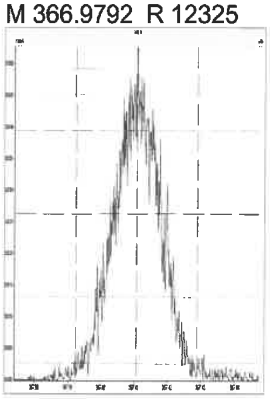

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M 380.9760 R 11369

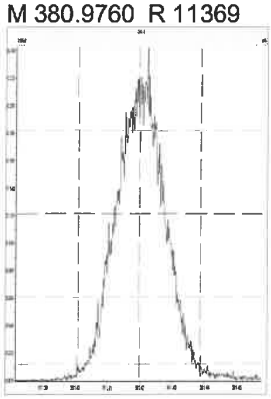

M 392.9760 R 11454

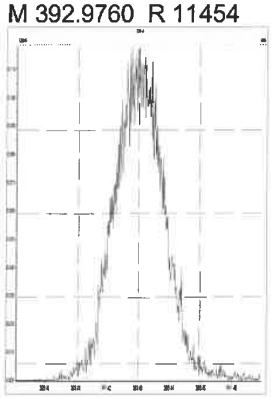

M 404.9760 R 11272

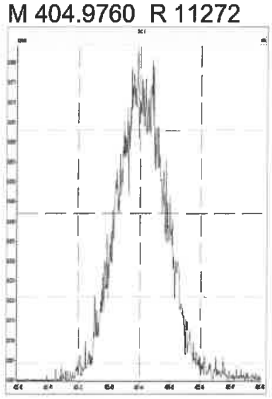

M 416.9760 R 12351

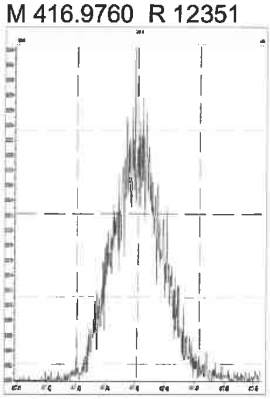

M 366.9792 R 11656

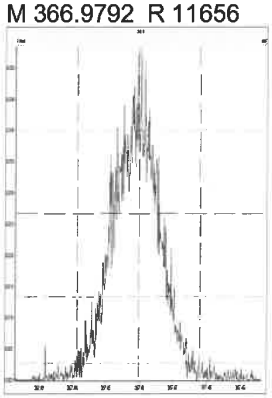

M 380.9760 R 11682

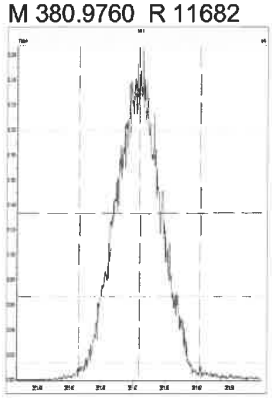

M 392.9760 R 12469

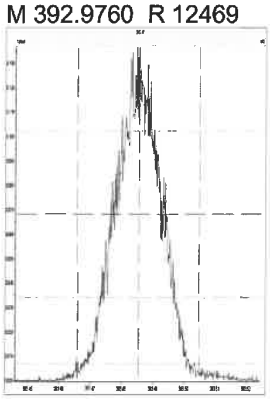

M 404.9760 R 12079

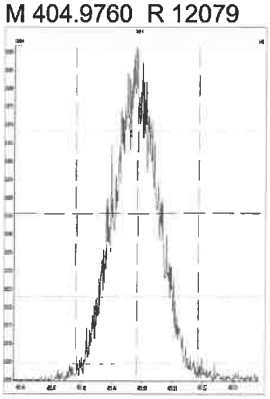

M 416.9760 R 12794

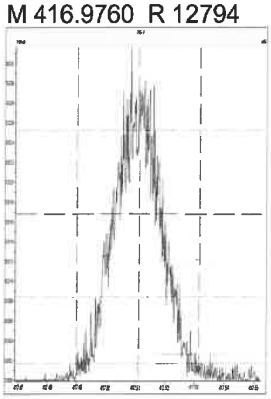

M 430.9728 R 11798

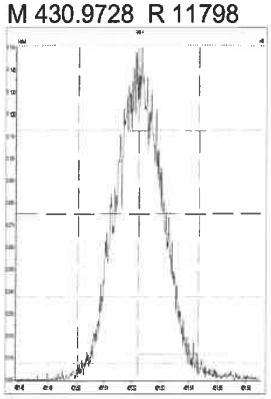

M 442.9728 R 12165

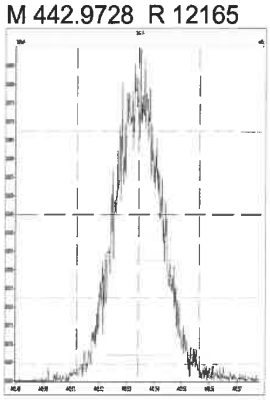

M 454.9728 R 11764

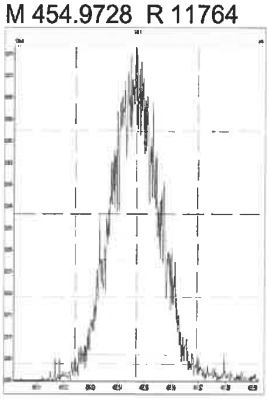

M 380.9760 R 11876

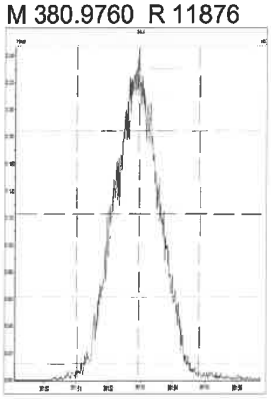

M 392.9760 R 12345

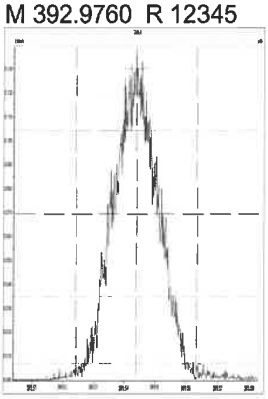

M 404.9760 R 12196

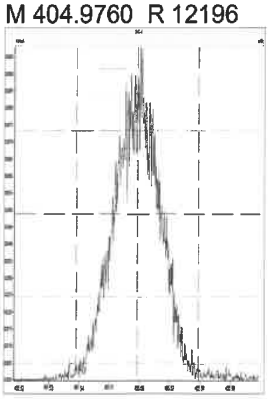

M 416.9760 R 12634

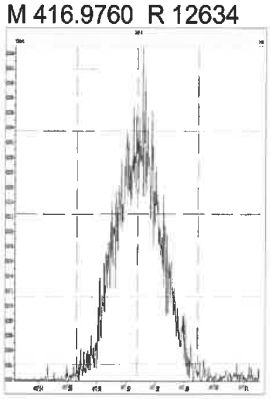

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M 430.9728 R 11655

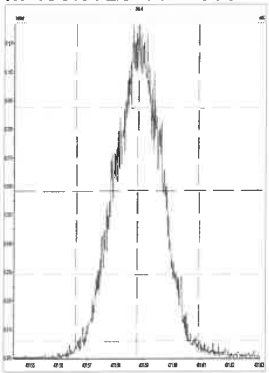

M 442.9728 R 11576

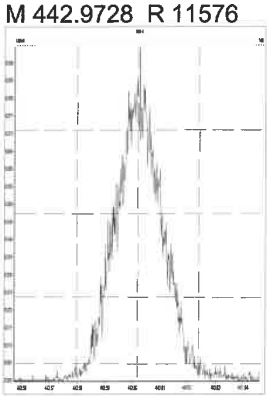

M 454.9728 R 11392

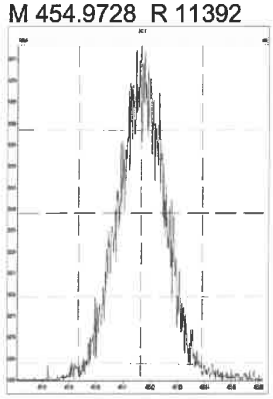

M 466.9728 R 13409

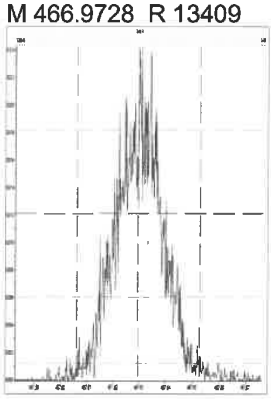

M 480.9696 R 11286

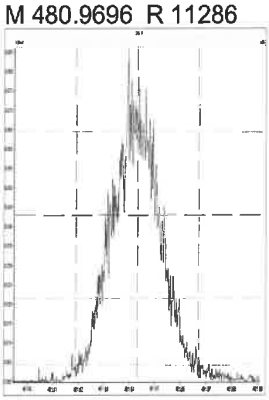

M 380.9760 R 12136

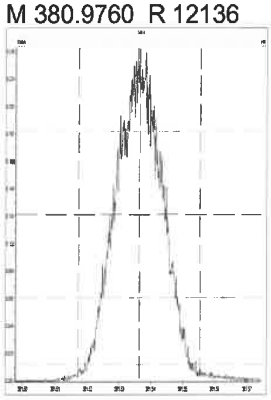

M 392.9760 R 12395

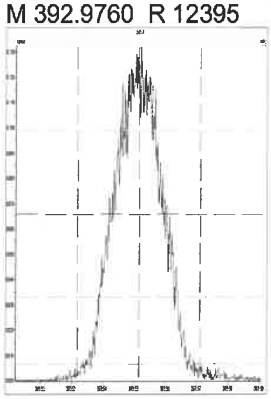

M 404.9760 R 11971

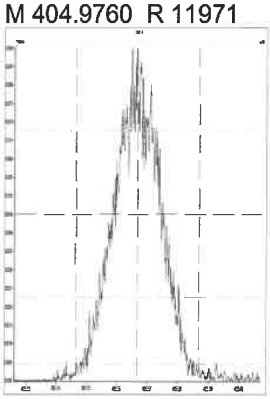

M 416.9760 R 13402

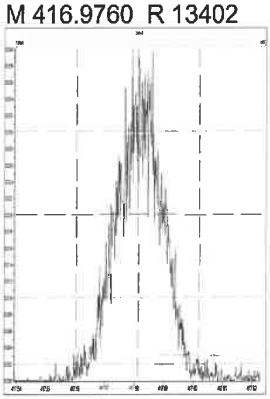

M 430.9728 R 12112

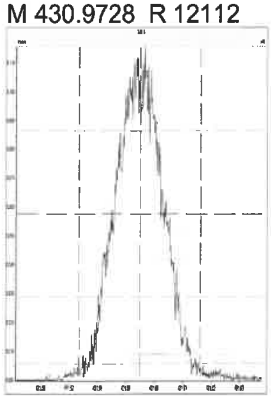

M 442.9728 R 12626

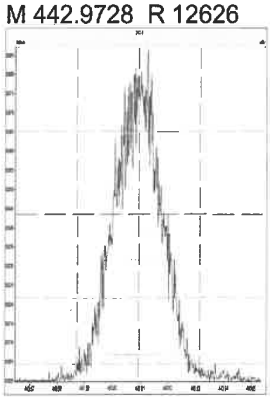

M 454.9728 R 11926

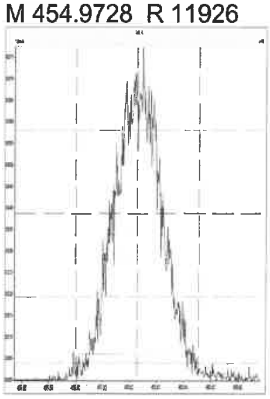

M 466.9728 R 12367

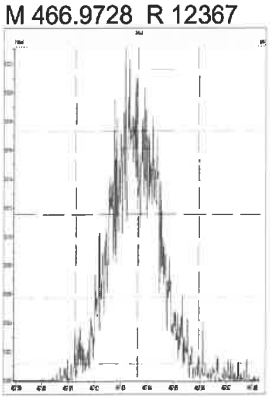

M 480.9696 R 11494

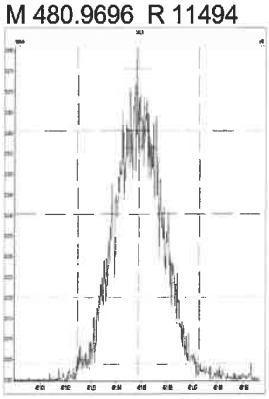

M 492.9696 R 10995

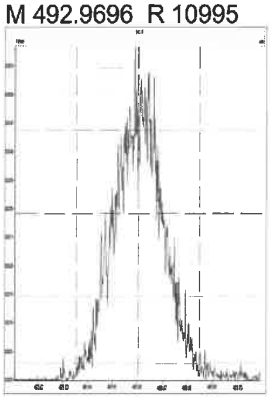

M 504.9696 R 11886

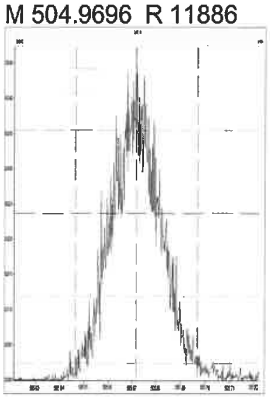

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M 516.9697 R 14005

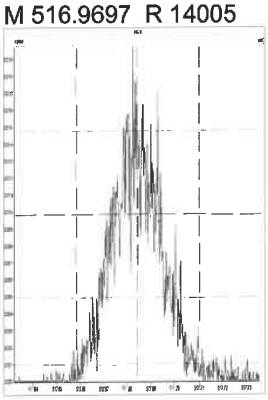

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M 292.9824 R 11904

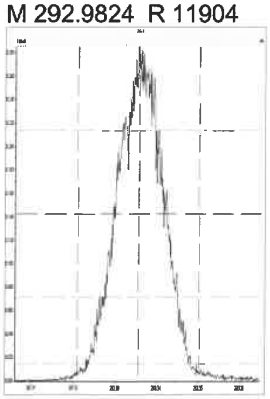

M 304.9824 R 12419

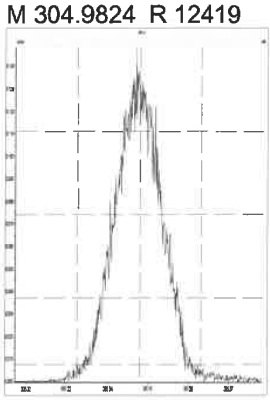

M 318.9792 R 12226

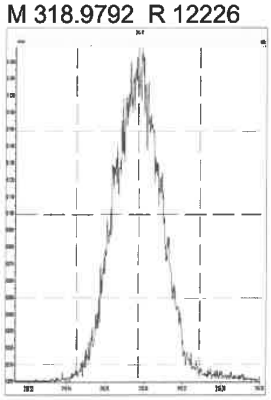

M 330.9792 R 11962

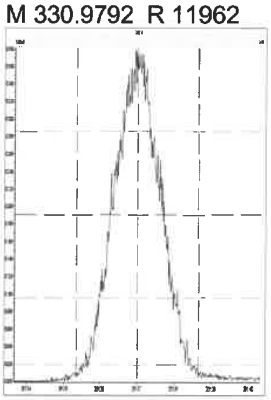

M 342.9792 R 11990

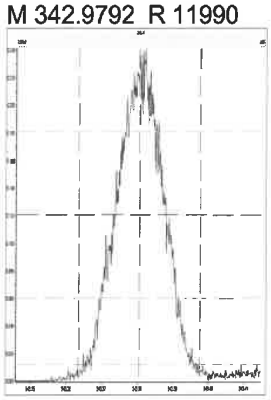

M 354.9792 R 11712

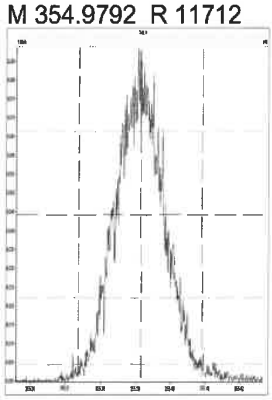

M 366.9792 R 12261

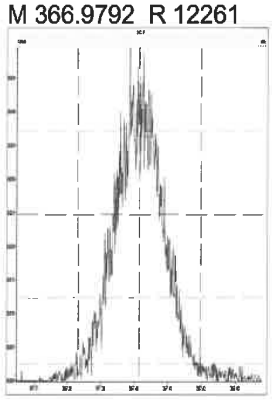

M 380.9760 R 11020

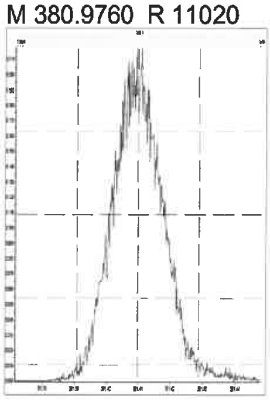

M 392.9760 R 10777

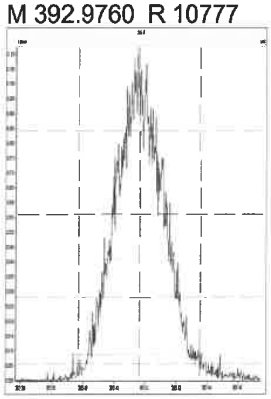

M 404.9760 R 11365

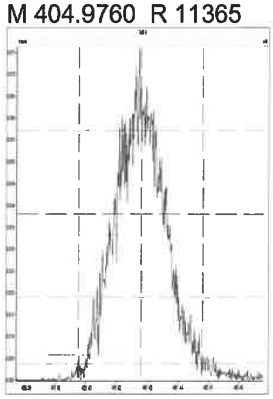

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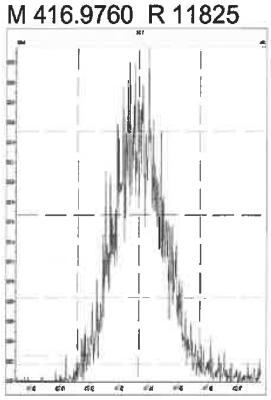

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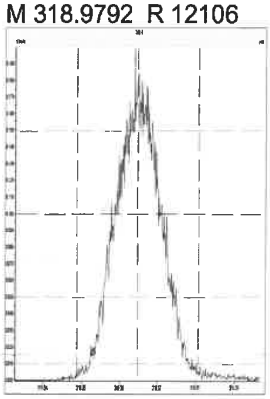

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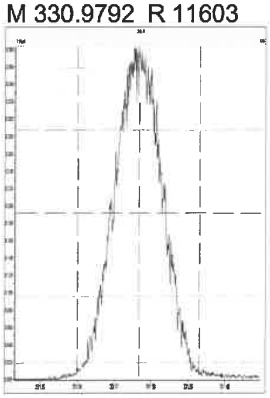

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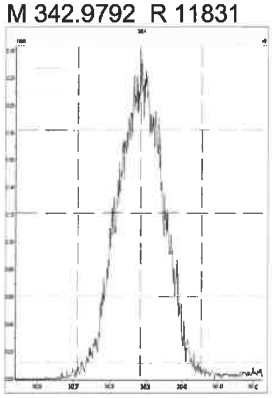

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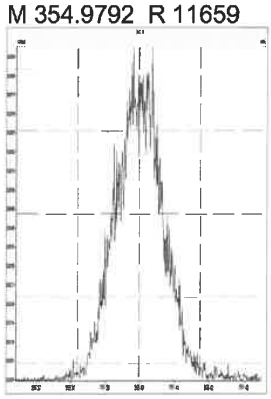

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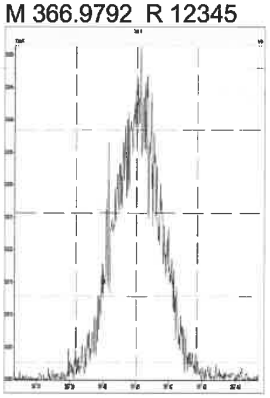

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M 380.9760 R 11441

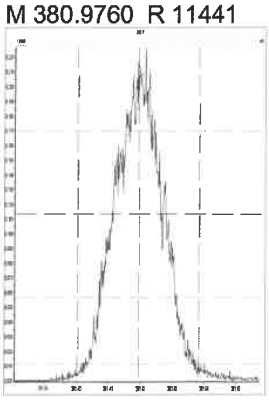

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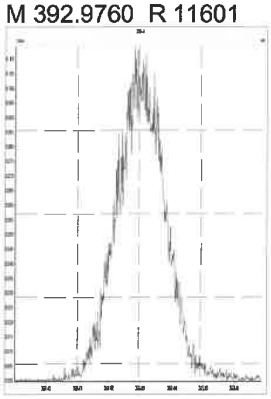

M 404.9760 R 11656

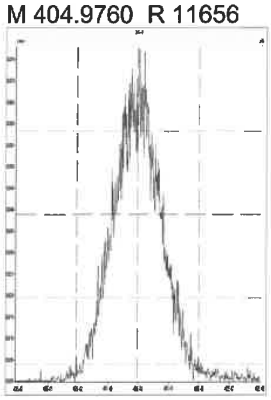

M 416.9760 R 12504

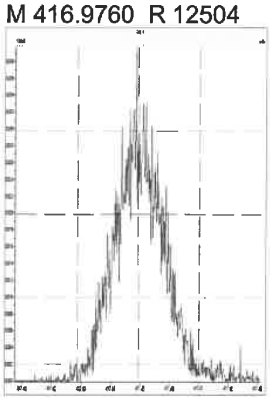

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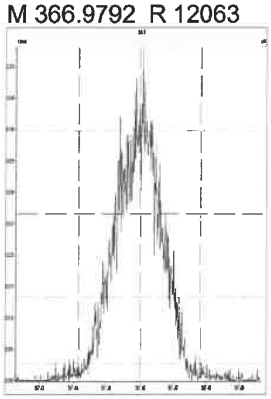

M 380.9760 R 11852

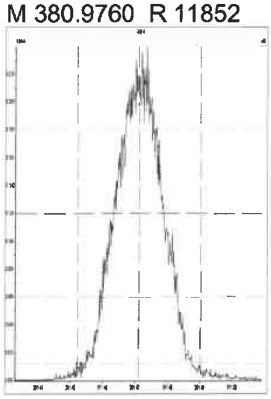

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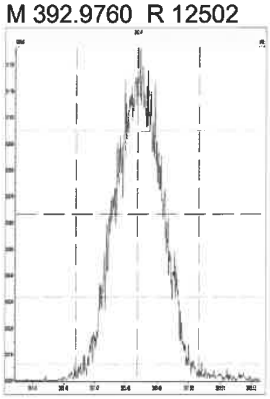

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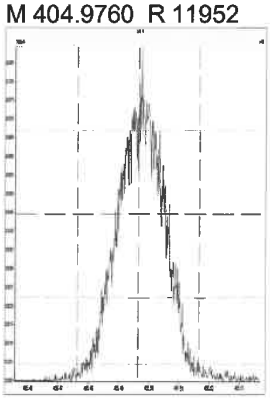

M 416.9760 R 12259

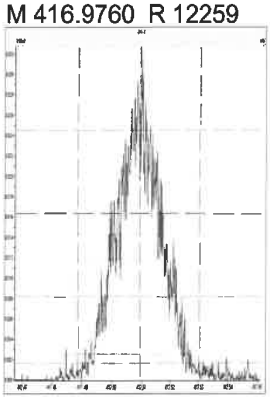

M 430.9728 R 11363

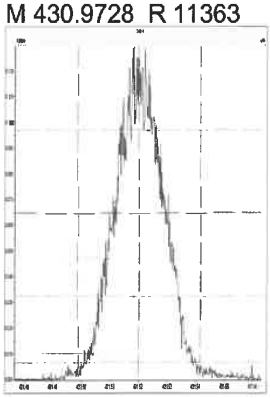

M 442.9728 R 11712

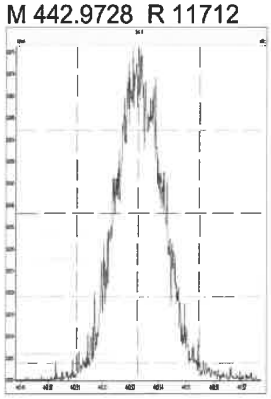

M 454.9728 R 11608

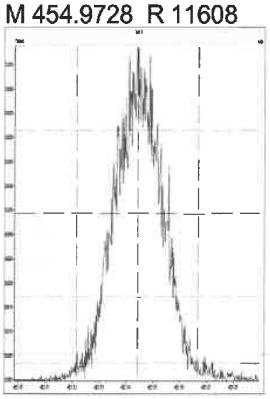

M 380.9760 R 11936

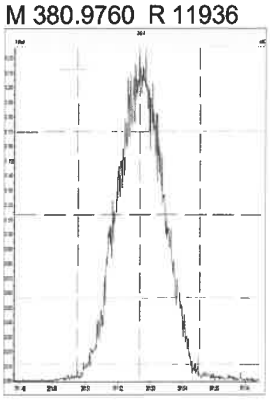

M 392.9760 R 12315

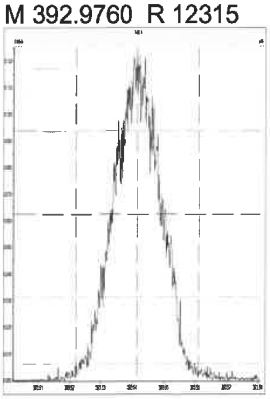

M 404.9760 R 12390

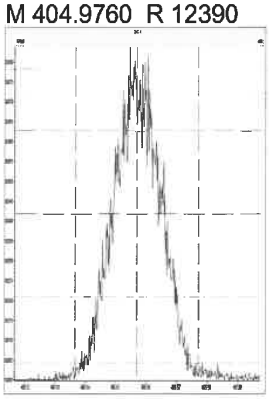

M 416.9760 R 12716

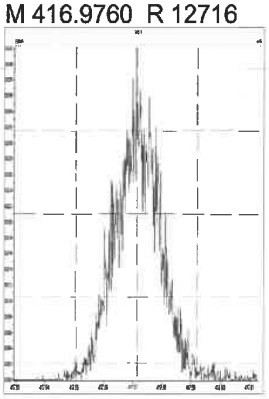

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M 430.9728 R 12048

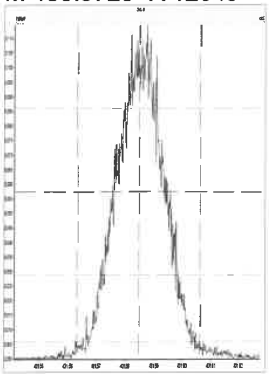

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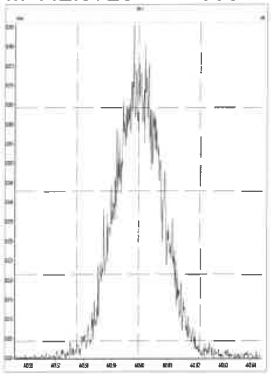

M 454.9728 R 11983

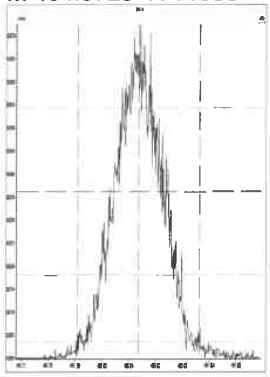

M 466.9728 R 12197

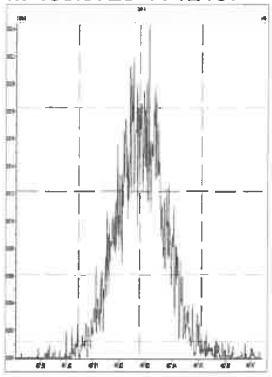

M 480.9696 R 11215

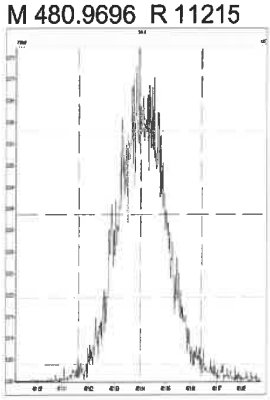

M 380.9760 R 11961

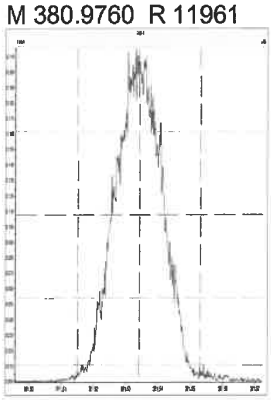

M 392.9760 R 12535

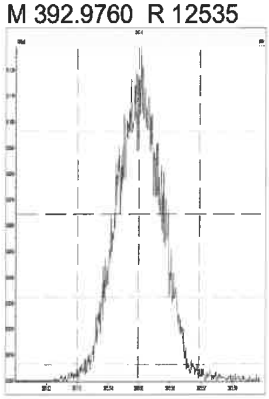

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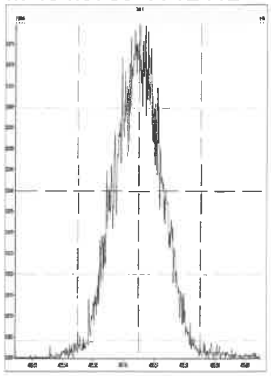

M 416.9760 R 12890

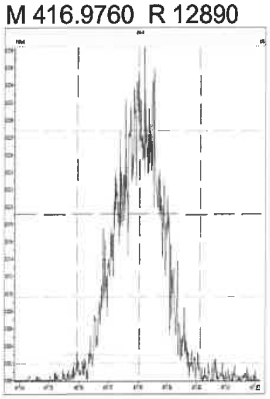

M 430.9728 R 12142

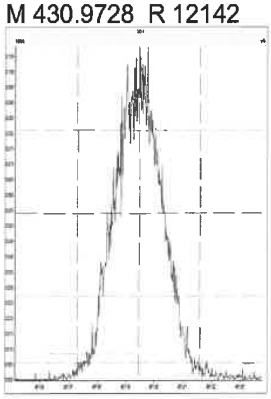

M 442.9728 R 11876

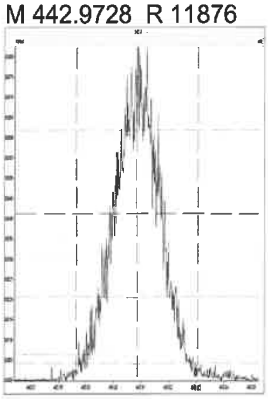

M 454.9728 R 11975

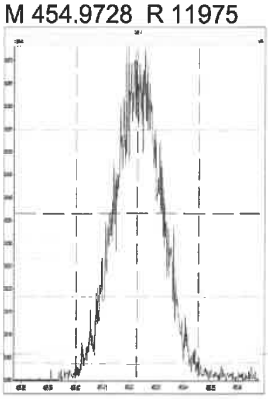

M 466.9728 R 12570

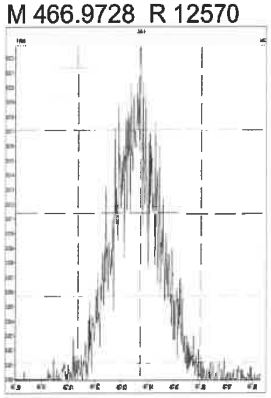

M 480.9696 R 11860

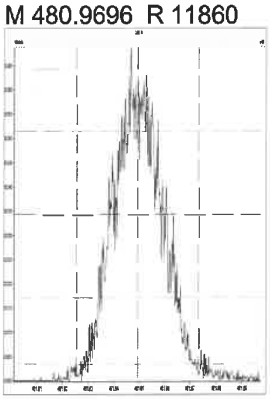

M 492.9696 R 11390

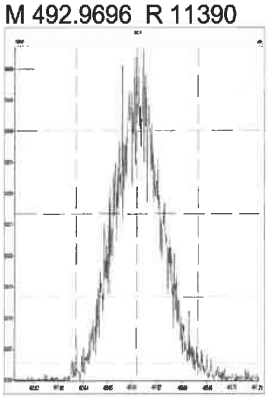

M 504.9696 R 11743

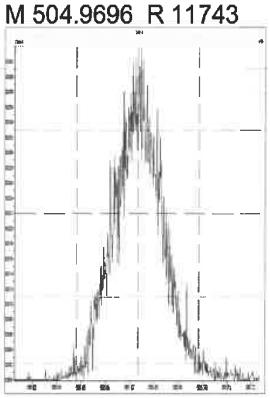

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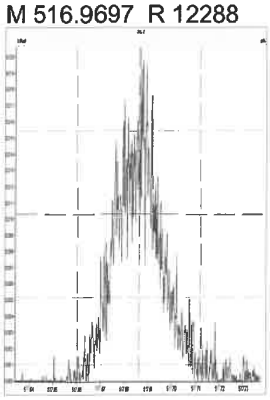

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M 292.9824 R 12515

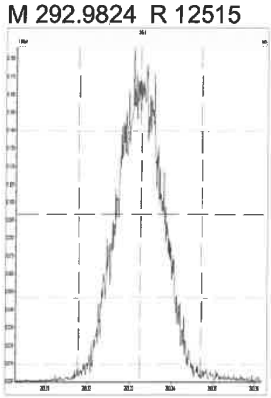

M 304.9824 R 11820

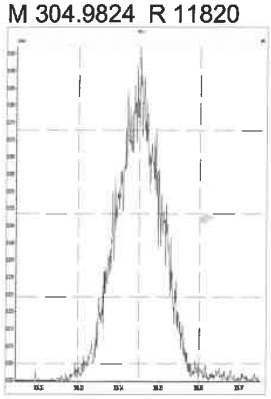

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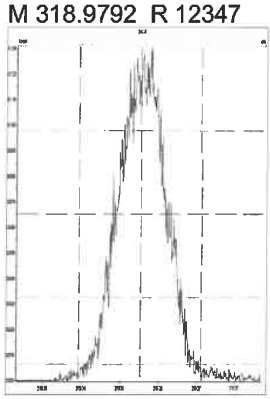

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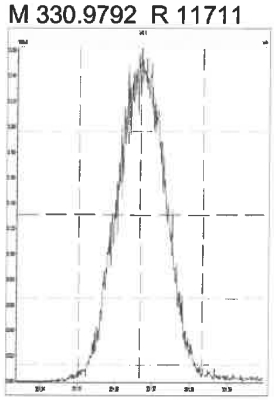

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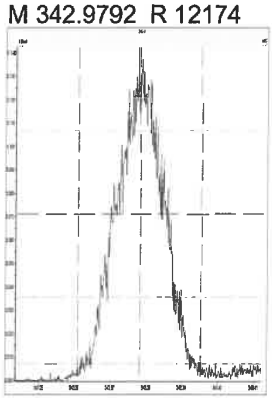

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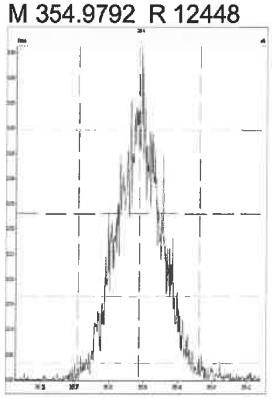

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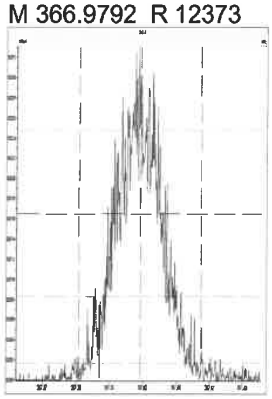

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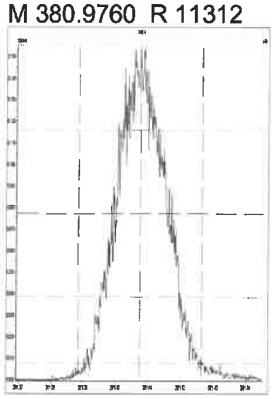

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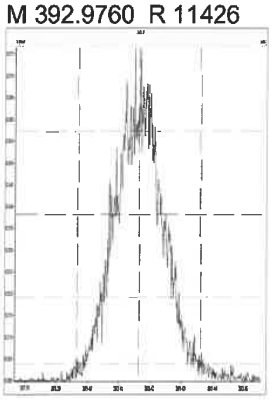

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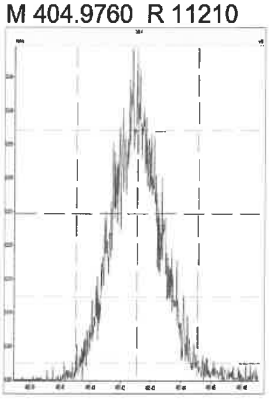

M 416.9760 R 12628

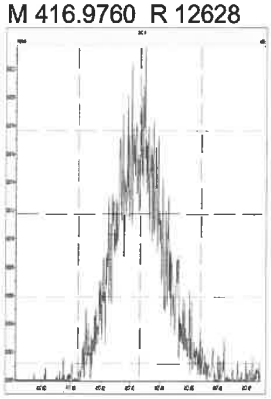

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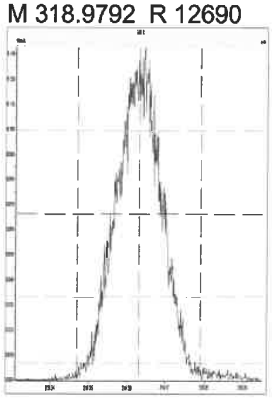

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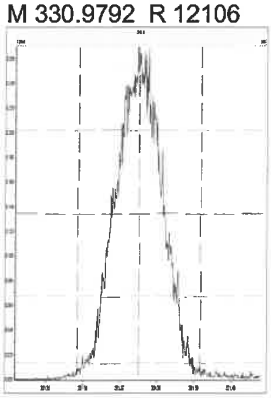

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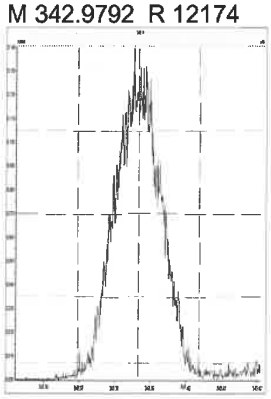

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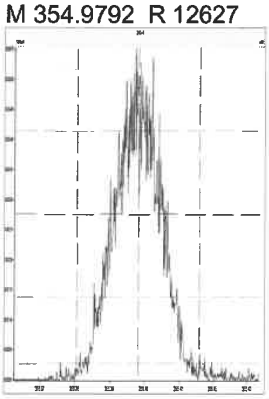

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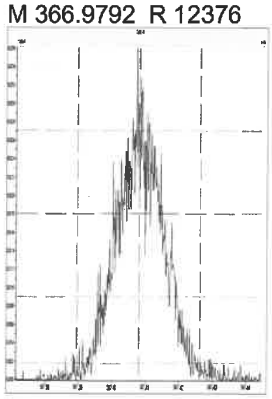

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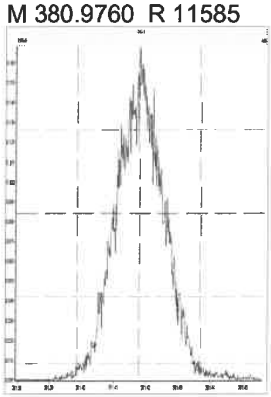

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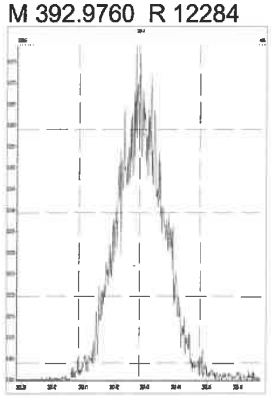

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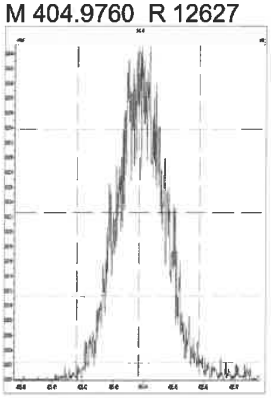

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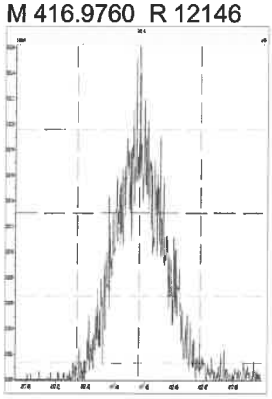

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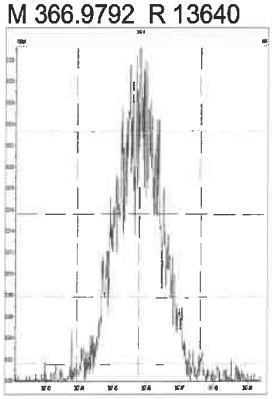

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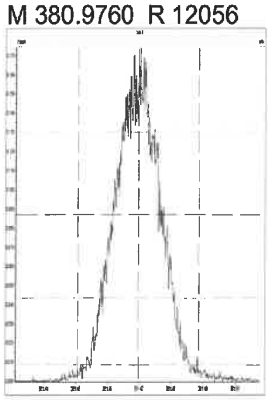

M 392.9760 R 12325

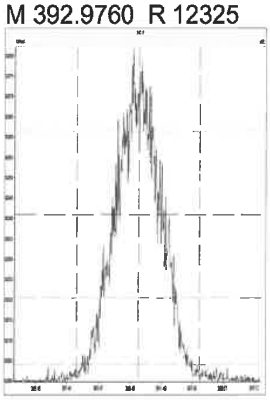

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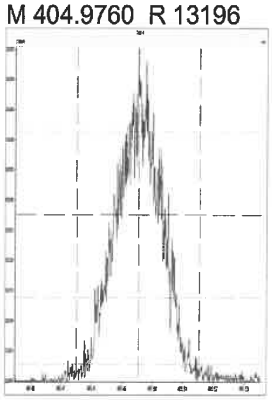

M 416.9760 R 12908

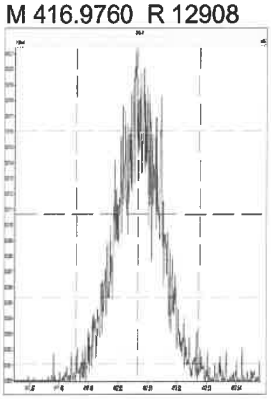

M 430.9728 R 11737

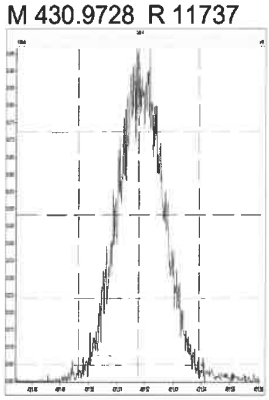

M 442.9728 R 12468

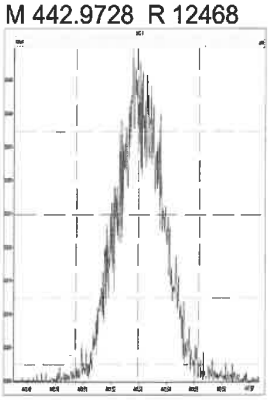

M 454.9728 R 12406

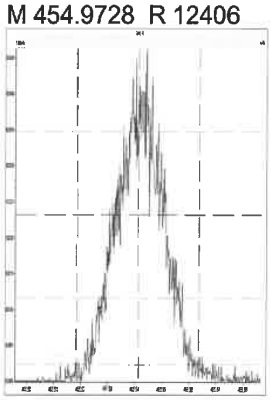

M 380.9760 R 12286

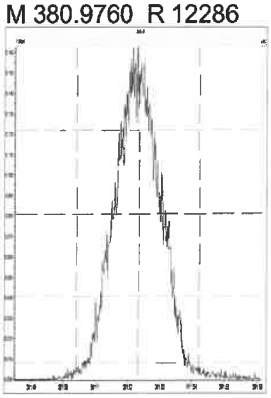

M 392.9760 R 12530

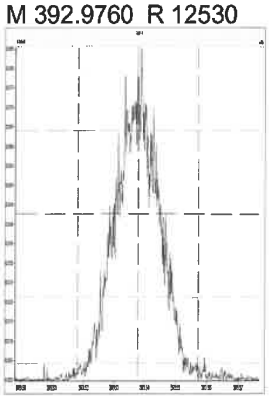

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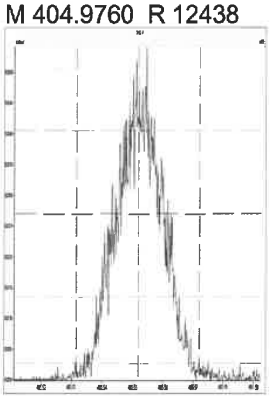

M 416.9760 R 13043

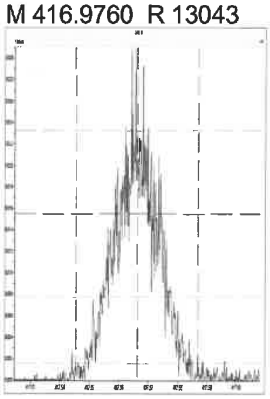

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M 430.9728 R 11944

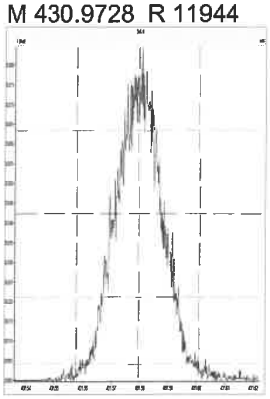

M 442.9728 R 12565

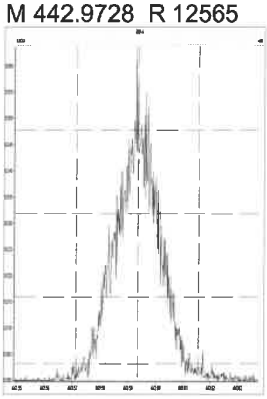

M 454.9728 R 12502

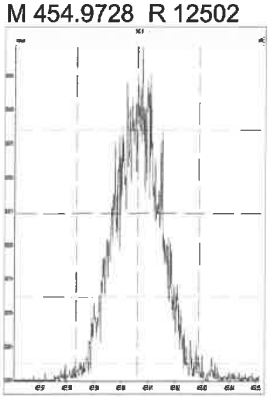

M 466.9728 R 13106

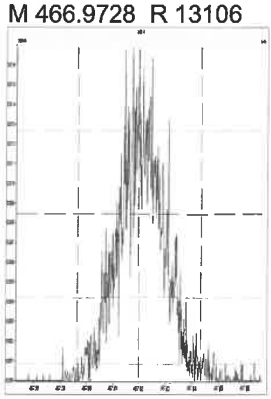

M 480.9696 R 12019

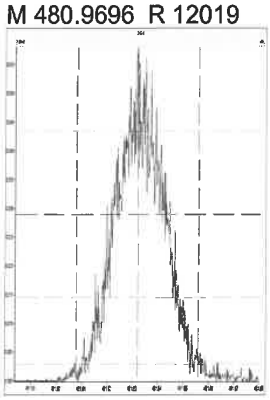

M 380.9760 R 12118

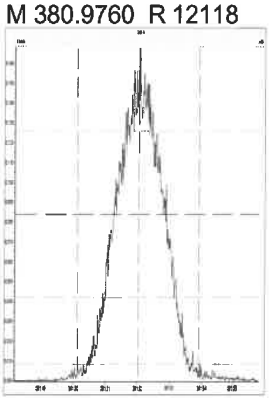

M 392.9760 R 12428

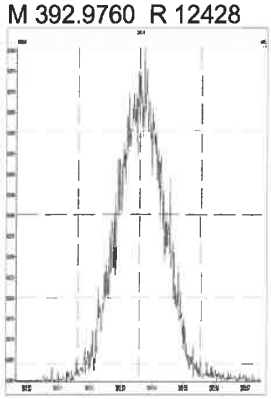

M 404.9760 R 13528

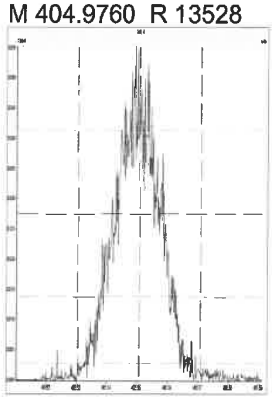

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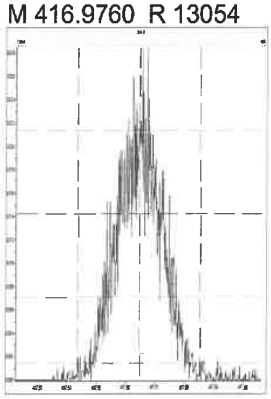

M 430.9728 R 12077

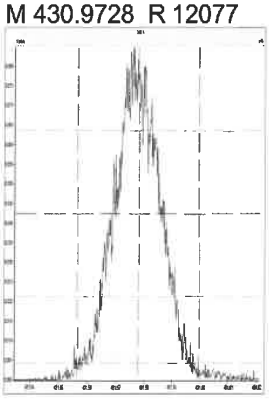

M 442.9728 R 11767

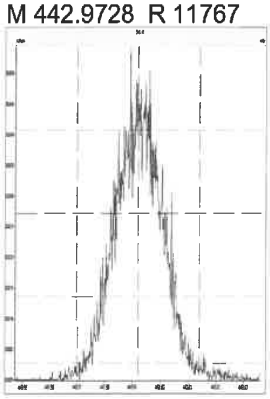

M 454.9728 R 12580

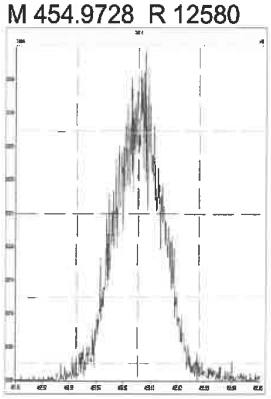

M 466.9728 R 14080

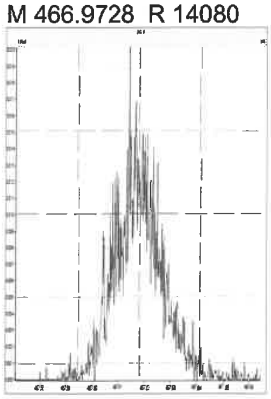

M 480.9696 R 11633

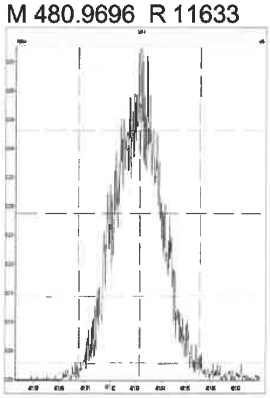

M 492.9696 R 12724

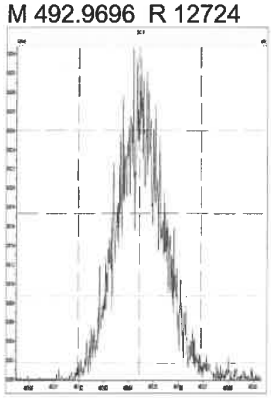

M 504.9696 R 11662

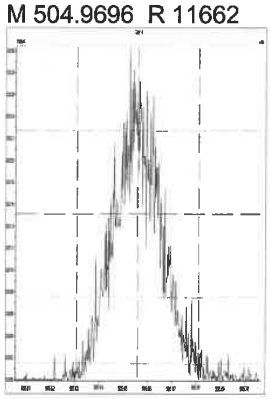

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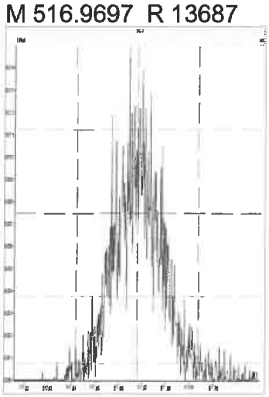

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M 292.9824 R 12548

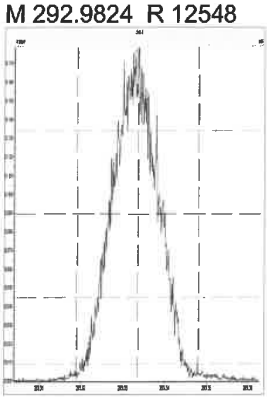

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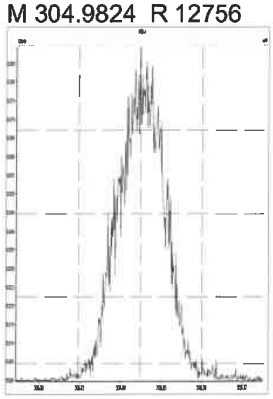

M 318.9792 R 12197

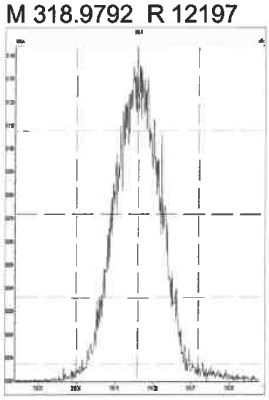

M 330.9792 R 11764

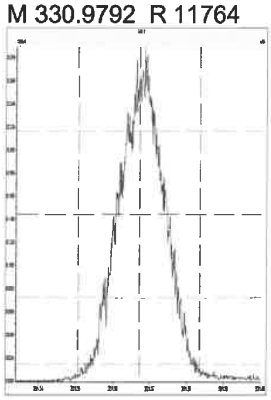

M 342.9792 R 11601

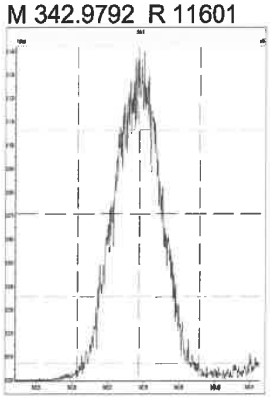

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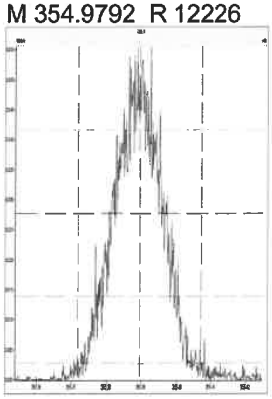

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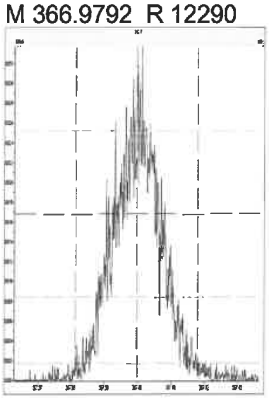

M 380.9760 R 11238

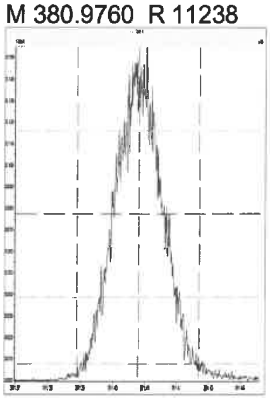

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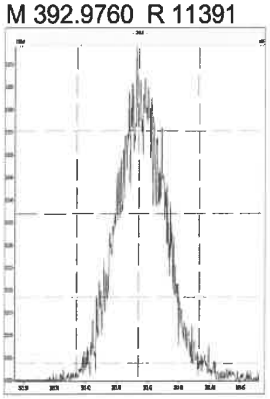

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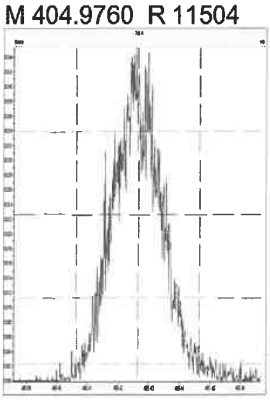

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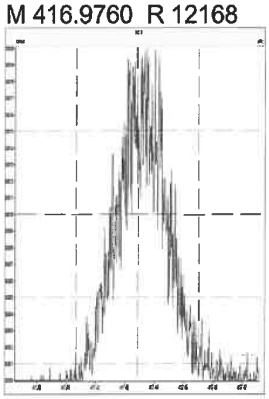

M 318.9792 R 12501

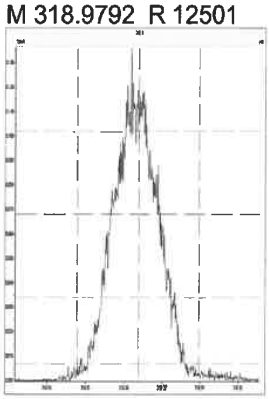

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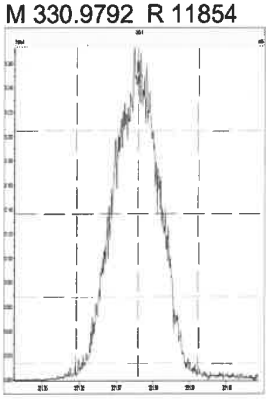

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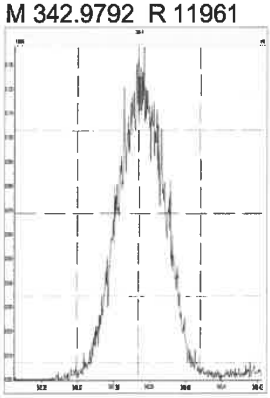

M 354.9792 R 13426

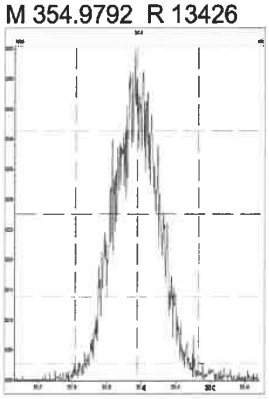

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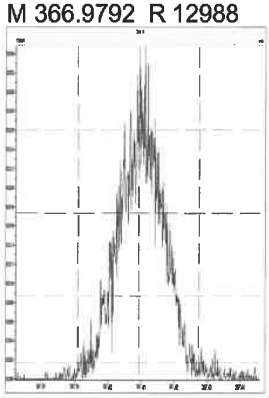

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M 380.9760 R 11633

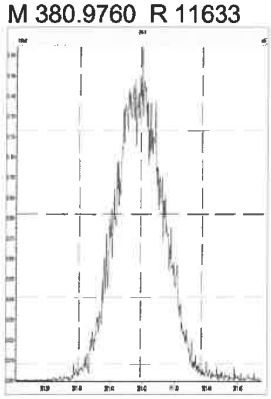

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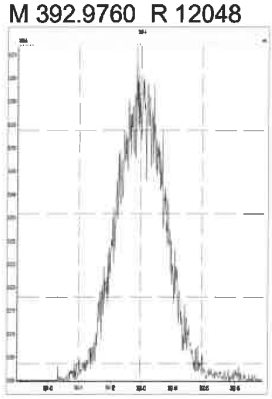

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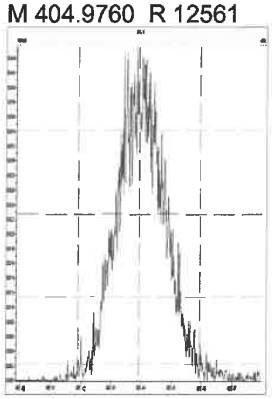

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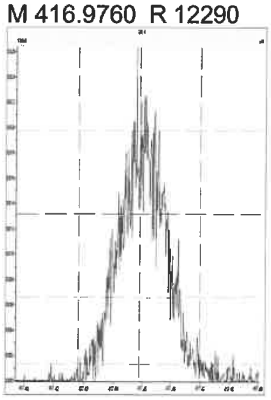

M 366.9792 R 13160

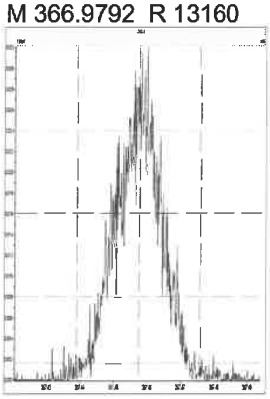

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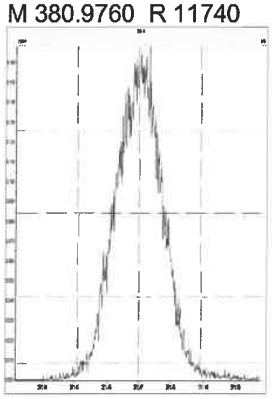

M 392.9760 R 12628

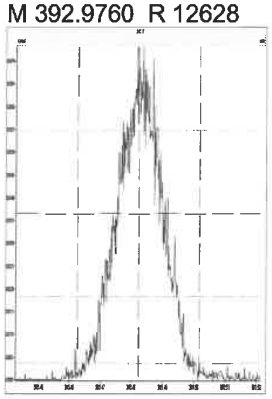

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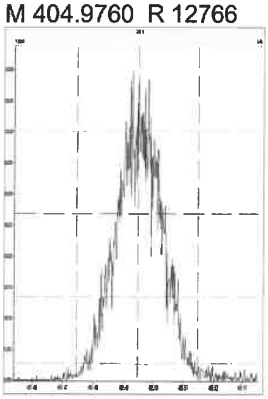

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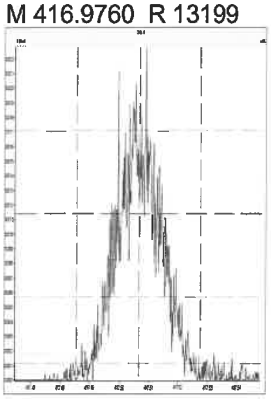

M 430.9728 R 12112

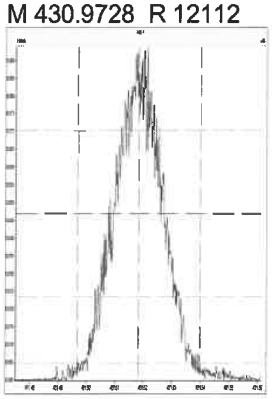

M 442.9728 R 12165

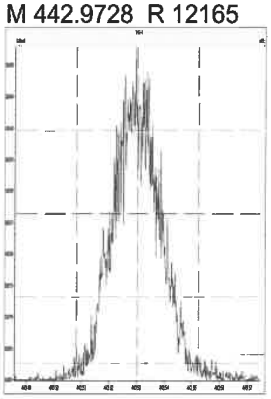

M 454.9728 R 11860

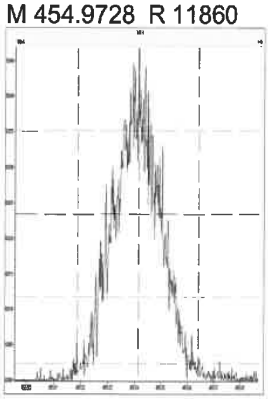

M 380.9760 R 12226

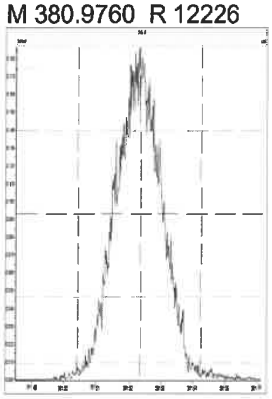

M 392.9760 R 12285

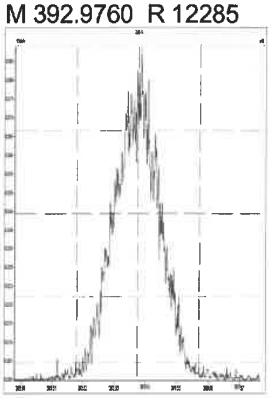

M 404.9760 R 12693

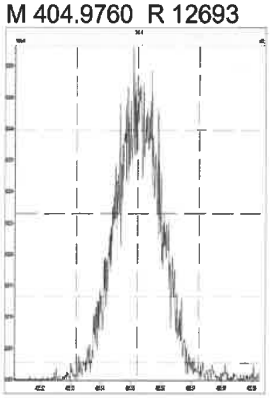

M 416.9760 R 13344

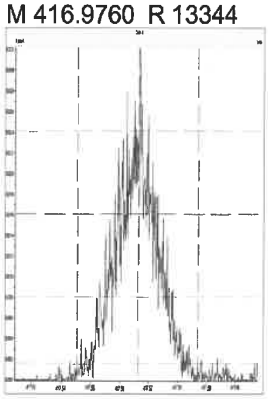

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M 430.9728 R 11944

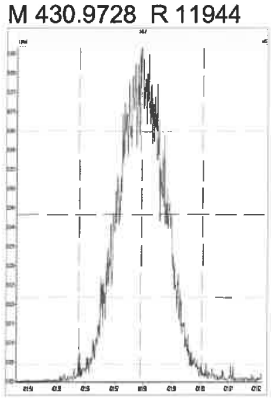

M 442.9728 R 12325

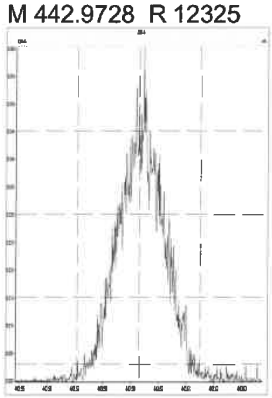

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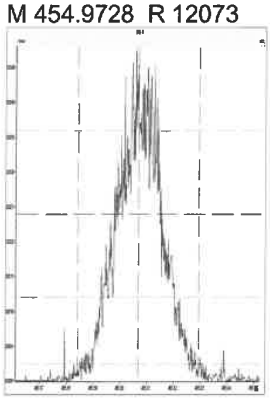

M 466.9728 R 13890

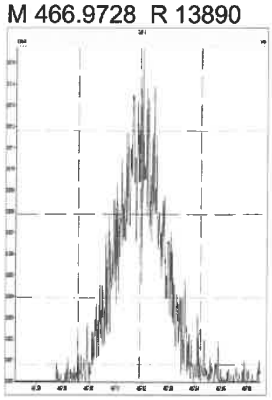

M 480.9696 R 11794

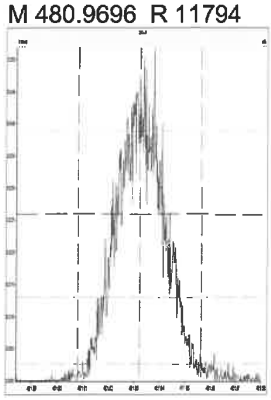

M 380.9760 R 12286

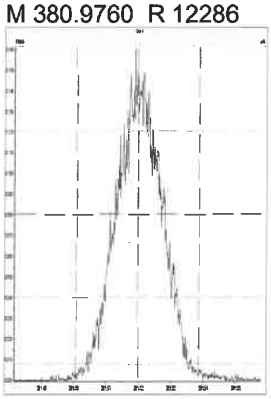

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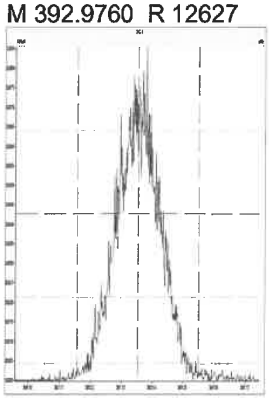

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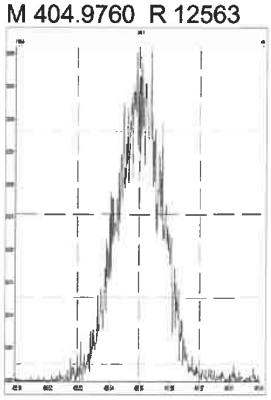

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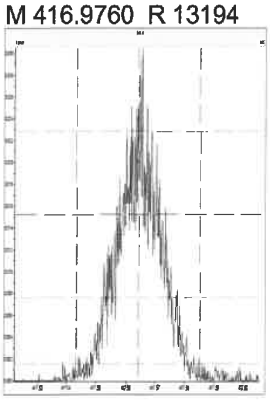

M 430.9728 R 12078

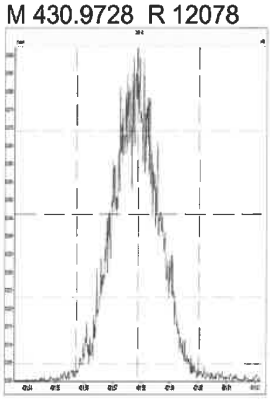

M 442.9728 R 12094

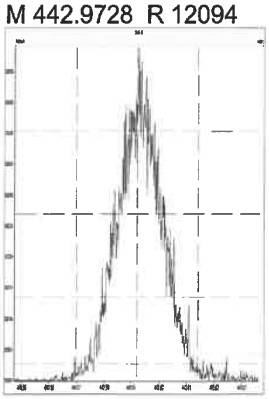

M 454.9728 R 12987

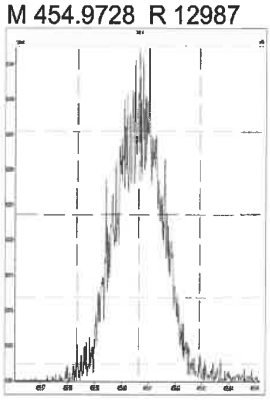

M 466.9728 R 13118

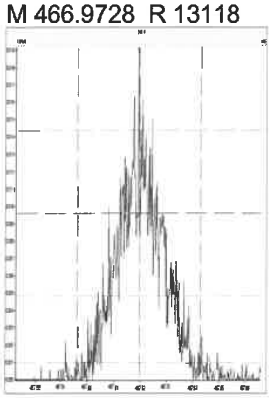

M 480.9696 R 11669

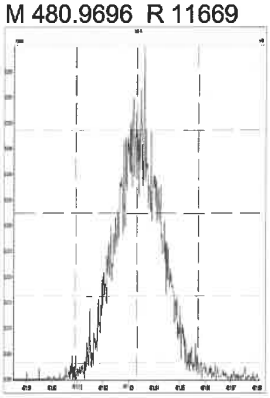

M 492.9696 R 11944

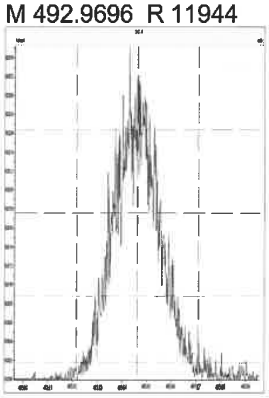

M 504.9696 R 11458

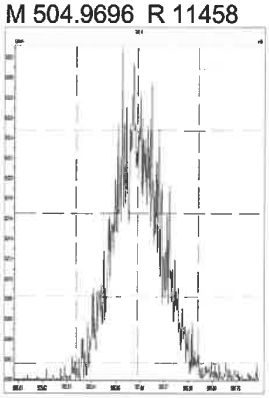

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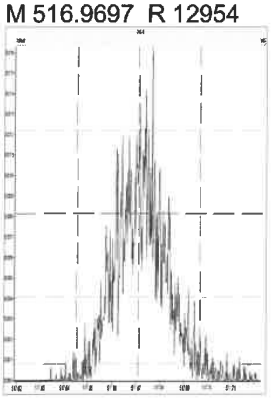

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M 292.9824 R 11338

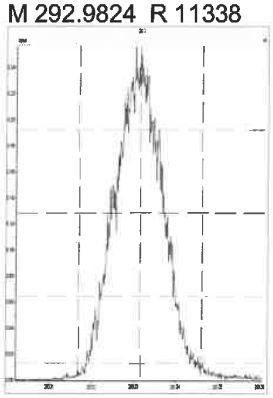

M 304.9824 R 11552

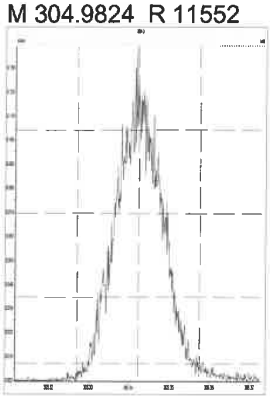

M 318.9792 R 11657

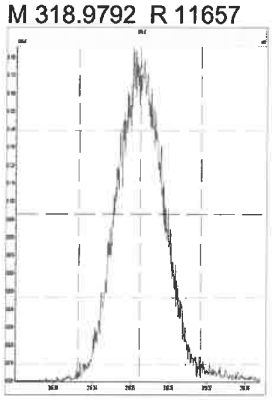

M 330.9792 R 11287

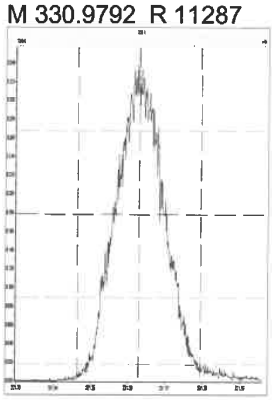

M 342.9792 R 11416

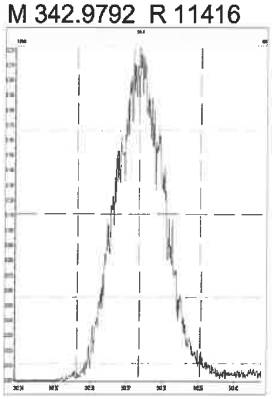

M 354.9792 R 11711

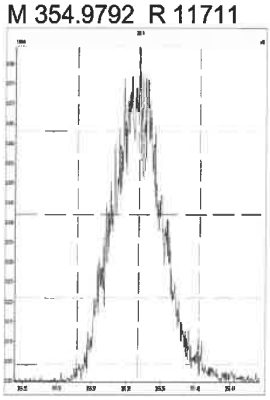

M 366.9792 R 12286

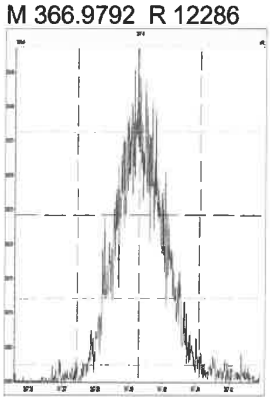

M 380.9760 R 10272

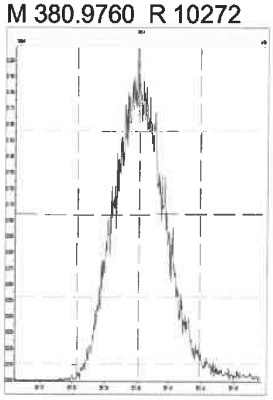

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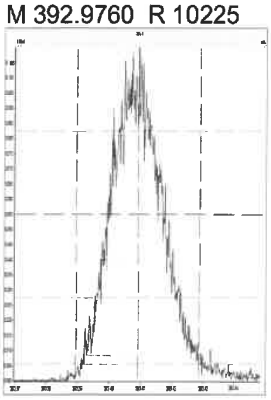

M 404.9760 R 10972

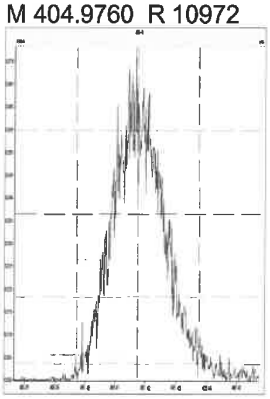

M 416.9760 R 11628

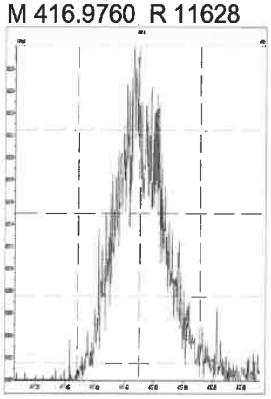

M 318.9792 R 11848

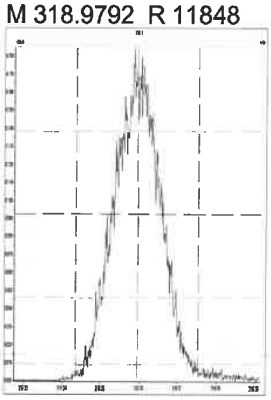

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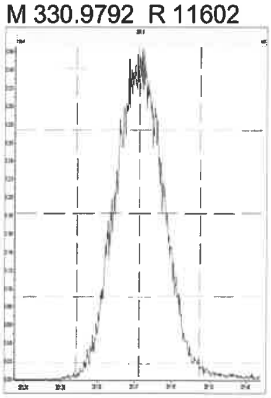

M 342.9792 R 11881

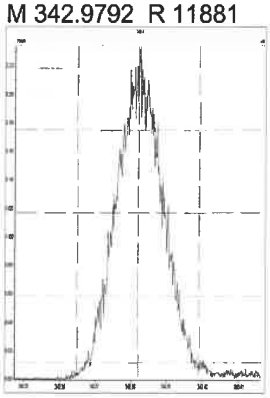

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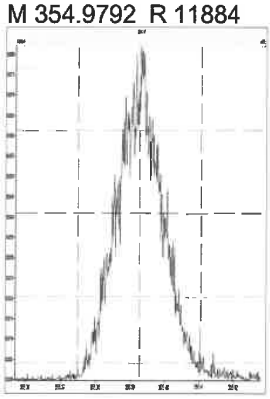

M 366.9792 R 12023

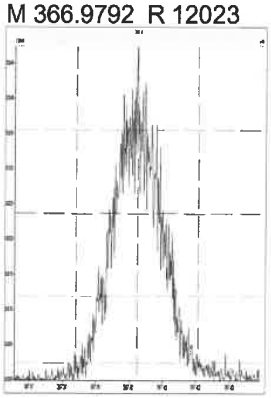

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M 380.9760 R 11627

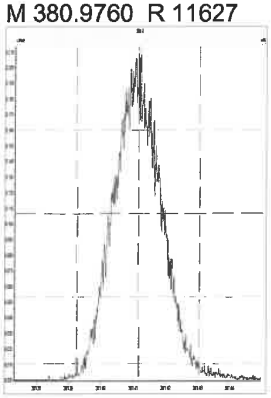

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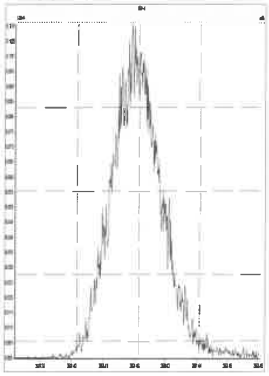

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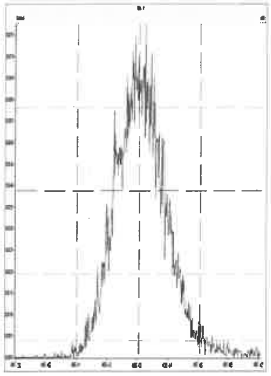

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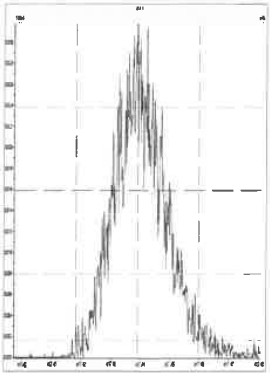

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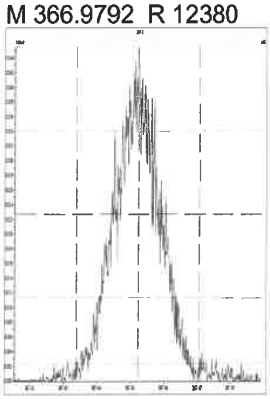

M 380.9760 R 11848

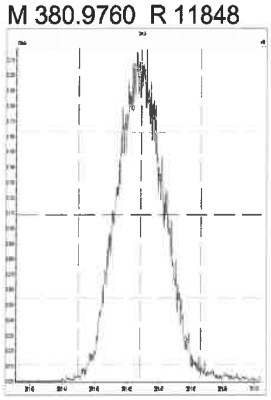

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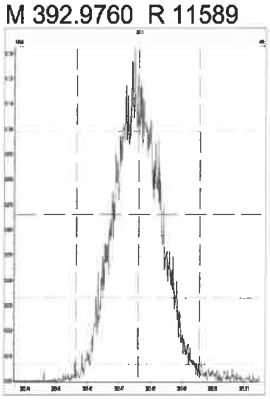

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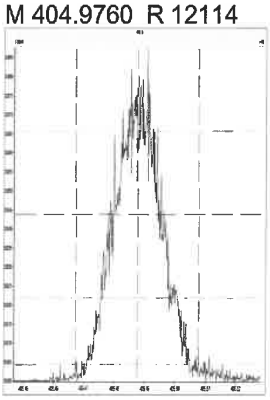

M 416.9760 R 12595

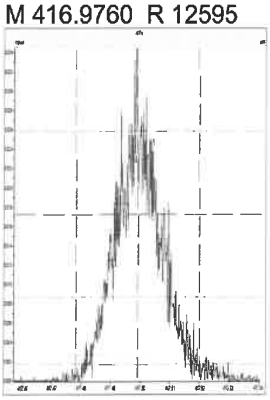

M 430.9728 R 11631

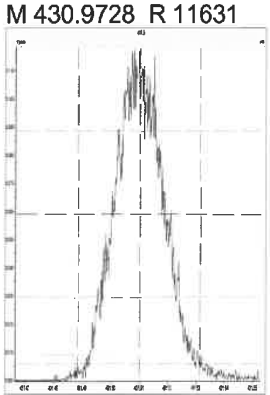

M 442.9728 R 11881

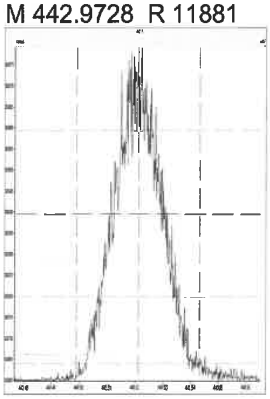

M 454.9728 R 11547

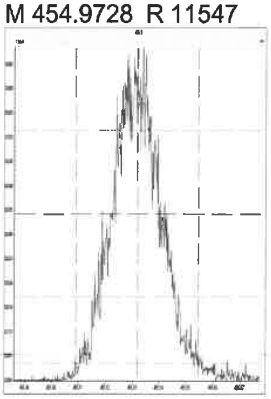

M 380.9760 R 11772

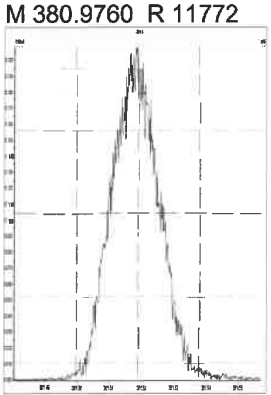

M 392.9760 R 12136

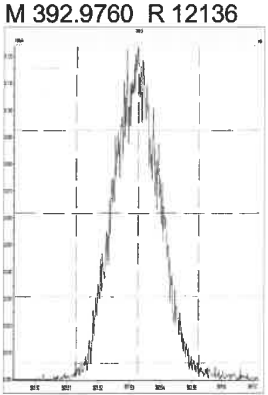

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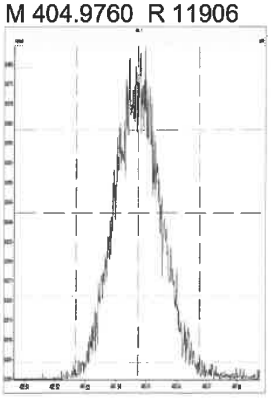

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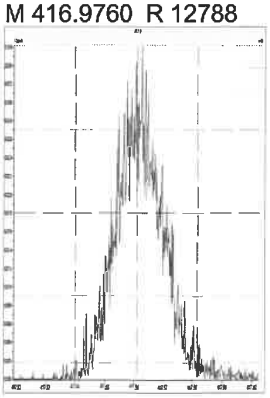

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M 430.9728 R 11852

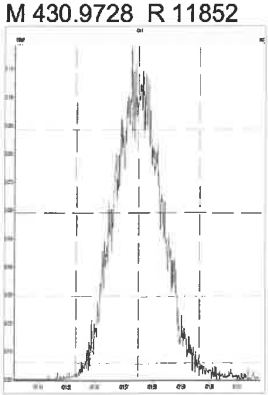

M 442.9728 R 12041

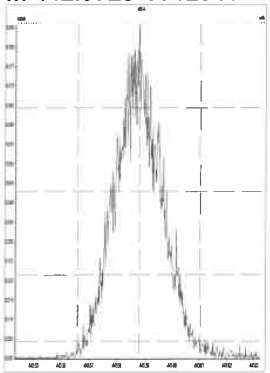

M 454.9728 R 12114

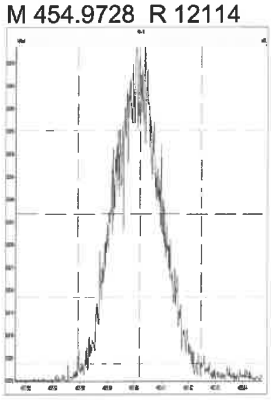

M 466.9728 R 13406

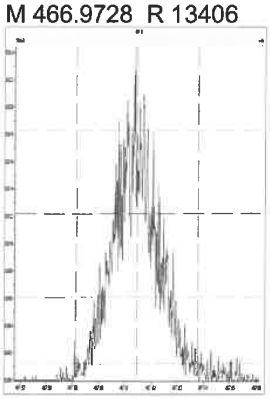

M 480.9696 R 11905

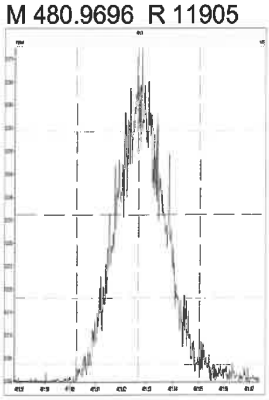

M 380.9760 R 11798

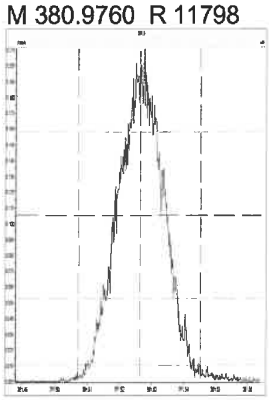

M 392.9760 R 11904

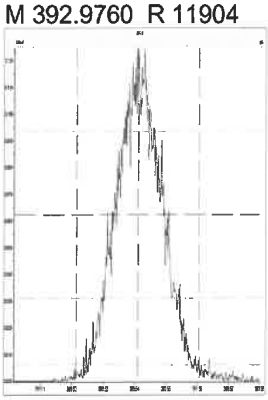

M 404.9760 R 11876

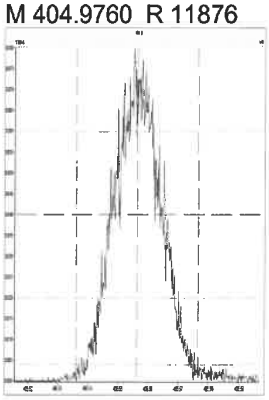

M 416.9760 R 12048

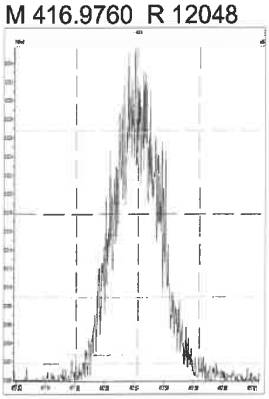

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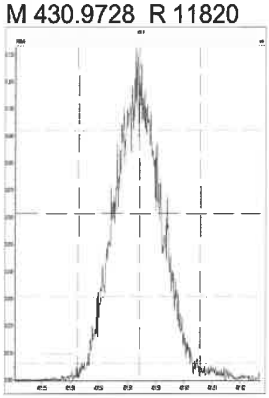

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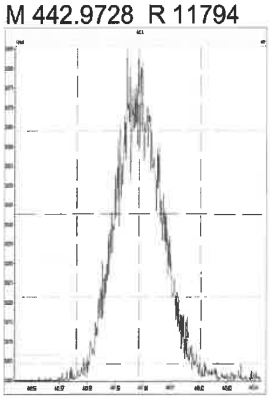

M 454.9728 R 11926

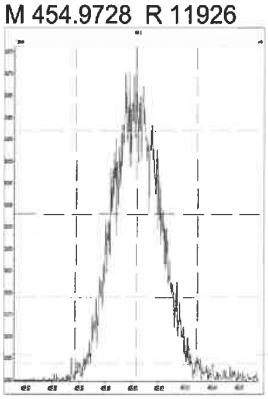

M 466.9728 R 12570

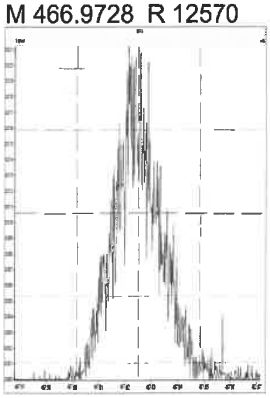

M 480.9696 R 11798

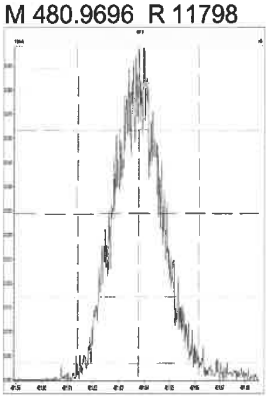

M 492.9696 R 11303

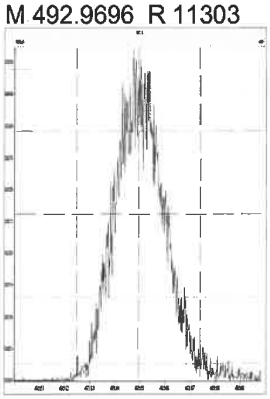

M 504.9696 R 11449

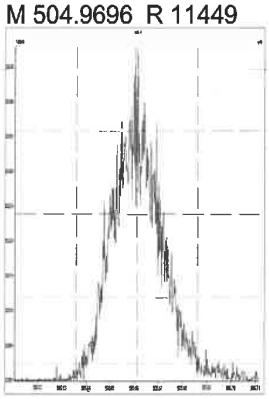

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M 516.9697 R 11508

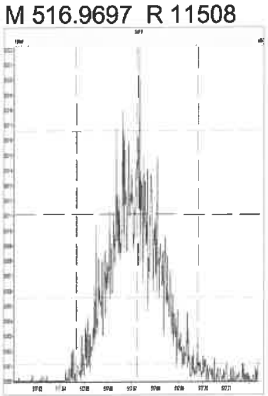

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 14-Aug-2021 13:46:37 ALS Bottle#: 2 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081321B CS-4 HRDXNL4_00099
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 14:21:40 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	94973338	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.341	146414364	0.77	1.6249	94.9	94.9	0.1559	0.1559	94.88	
2,3,7,8-TCDF	17.356	15100181	0.77	1.0239	10.1	10.1	0.0157	0.0157	101	
A Non-2,3,7,8-sub-TCDF	17.046						0.0157	0.0157		n
S Total TCDF					10.1	10.1	0.0157	0.0157		
D 13C-2,3,7,8-TCDD	18.051	86290028	0.82	0.8993	101.0	101.0	0.1511	0.1511	101	
2,3,7,8-TCDD	18.066	10941296	0.77	1.2541	10.1	10.1	0.0137	0.0137	101	
$ 37Cl4-2,3,7,8-TCDD	18.066	11262836		1.1071	10.7	10.7	0.0116	0.0116	107	
A Non-2,3,7,8-sub-TCDD	17.499						0.0137	0.0137		
S Total TCDD					10.1	10.1	0.0137	0.0137		
D 13C-1,2,3,7,8-PeCDF	22.367	111421448	1.56	1.2101	97.0	97.0	0.2306	0.2306	96.95	
1,2,3,7,8-PeCDF	22.380	58929429	1.60	1.0611	49.8	49.8	0.1653	0.1653	99.68	
D 13C-2,3,4,7,8-PeCDF	23.703	113022460	1.58	1.2395	96.0	96.0	0.2251	0.2251	96.01	
2,3,4,7,8-PeCDF	23.730	58165280	1.59	1.0184	50.5	50.5	0.1799	0.1799	101	
A F1 PeCDFs	20.093						0.006135	0.006135		
A Non-2,3,7,8-sub-PeCDF	23.241						0.1724	0.1724		n
S Total PeCDF					100.4	100.4	0.1726	0.1726		
D 13C-1,2,3,7,8-PeCDD	24.426	74186533	1.60	0.7612	102.6	102.6	0.0985	0.0985	103	
1,2,3,7,8-PeCDD	24.453	38168101	1.59	1.0484	49.1	49.1	0.0492	0.0492	98.14	
A Non-2,3,7,8-sub-PeCDD	23.349						0.0492	0.0492		
S Total PeCDD					49.1	49.1	0.0492	0.0492		
D 13C-1,2,3,4,7,8-HxCDF	30.503	91980391	0.53	1.0837	86.4	86.4	0.3748	0.3748	86.43	
1,2,3,4,7,8-HxCDF	30.529	49984654	1.22	1.0851	50.1	50.1	0.3074	0.3074	100	
D 13C-1,2,3,6,7,8-HxCDF	30.689	95424080	0.52	1.1279	86.2	86.2	0.3601	0.3601	86.15	
1,2,3,6,7,8-HxCDF	30.702	53388855	1.22	1.1260	49.7	49.7	0.2906	0.2906	99.38	
D 13C-2,3,4,6,7,8-HxCDF	31.514	91330263	0.53	1.0637	87.4	87.4	0.3818	0.3818	87.43	
2,3,4,6,7,8-HxCDF	31.528	53108059	1.21	1.1675	49.8	49.8	0.2250	0.2250	99.61	
D 13C-1,2,3,7,8,9-HxCDF	32.313	84888973	0.52	0.9676	89.3	89.3	0.4197	0.4197	89.34	
1,2,3,7,8,9-HxCDF	32.326	49512879	1.23	1.1664	50.0	50.0	0.2226	0.2226	100	
A Non-2,3,7,8-sub-HxCDF	30.197						0.2567	0.2567		
S Total HxCDF					199.6	199.6	0.2614	0.2614		

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.127	98202825	1.26	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.701	66413470	1.25	0.7334	92.2	92.2	0.3447	0.3447	92.21	
1,2,3,4,7,8-HxCDD	31.714	35295564	1.27	1.0640	49.9	49.9	0.2115	0.2115	99.89	
D 13C-1,2,3,6,7,8-HxCDD	31.807	76716318	1.26	0.8802	88.8	88.8	0.2873	0.2873	88.75	
1,2,3,6,7,8-HxCDD	31.820	39720408	1.27	1.0001	51.8	51.8	0.2100	0.2100	104	
1,2,3,7,8,9-HxCDD	32.140	44929178	1.28	1.1325	55.4	55.4	0.1918	0.1918	111	
A Non-2,3,7,8-sub-HxCDD	30.882						0.2039	0.2039		
S Total HxCDD					157.2	157.2	0.2044	0.2044		
D 13C-1,2,3,4,6,7,8-HpCDF	33.754	74365712	0.43	0.7730	98.0	98.0	0.9633	0.9633	97.96	
1,2,3,4,6,7,8-HpCDF	33.766	54923491	1.04	1.4413	51.2	51.2	0.4272	0.4272	102	
D 13C-1,2,3,4,7,8,9-HpCDF	34.847	72217204	0.43	0.7008	104.9	104.9	1.063	1.063	105	
1,2,3,4,7,8,9-HpCDF	34.860	48279681	1.05	1.3174	50.7	50.7	0.5578	0.5578	101	
A Non-2,3,7,8-sub-HpCDF	34.319						0.4858	0.4858		
S Total HpCDF					102.0	102.0	0.4925	0.4925		
D 13C-1,2,3,4,6,7,8-HpCDD	34.556	67166054	1.00	0.6472	105.7	105.7	0.5374	0.5374	106	
1,2,3,4,6,7,8-HpCDD	34.568	37049399	1.04	1.0943	50.4	50.4	0.2495	0.2495	101	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2495	0.2495		
S Total HpCDD					50.4	50.4	0.2495	0.2495		
D 13C-OCDD	36.914	101743967	0.88	0.4472	231.7	231.7	0.2010	0.2010	116	
OCDF	37.010	72915430	0.90	1.4382	99.7	99.7	0.0976	0.0976	99.66	
OCDD	36.926	57739715	0.89	1.1070	102.5	102.5	0.1212	0.1212	103	

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 14-Aug-2021 13:46:37 ALS Bottle#: 2 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081321B CS-4 HRDXNL4_00099
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 14:21:40 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.855	17.855	0		42762613	10256694	4671	11677	2196		
333.9339	17.855	17.855	0		52210725	12562739	7732	19330	1625	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	0.971	63734652	15176498	10905	27262	1392		
317.9389	17.341	17.341	0	0.971	82679712	19576474	12213	30532	1603	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.001	6577692	1566873	873	2182	1795		
305.8987	17.356	17.356	0	1.001	8522489	2007900	1356	3390	1481	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.963	17.046	-5	0.978	22767	6172	873	2182	7		
305.8987	16.978	17.046	-4	0.979	34749	8687	1356	3390	6	0.66(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.011	38806321	8806655	4671	11677	1885		
333.9339	18.051	18.051	0	1.011	47483707	10703402	7732	19330	1384	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.001	4769840	1108357	697	1742	1590		
321.8936	18.066	18.066	0	1.001	6171456	1402049	643	1607	2180	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.066	0	1.012	11262836	2577463	1176	2940	2192		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.499						697	1742			
321.8936	17.499						643	1607			
13C-1,2,3,7,8-PeCDF											
351.9000	22.367	22.367	0	1.253	67825449	11217044	15080	37700	744		
353.8970	22.367	22.367	0	1.253	43595999	7122002	10390	25975	685	1.56(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.380	22.380	0	1.001	36250111	5931099	7639	19097	776		
341.8567	22.380	22.380	0	1.001	22679318	3732273	5232	13080	713	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.703	23.703	0	1.328	69214606	10664371	15080	37700	707		
353.8970	23.703	23.703	0	1.328	43807854	6897886	10390	25975	664	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.730	23.730	0	1.001	35722455	5526303	7639	19097	723		
341.8567	23.730	23.730	0	1.001	22442825	3461636	5232	13080	662	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						147	367			
341.8567	20.093						311	777			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.912	23.241	-20	1.024	334909	42127	7639	19097	6		
341.8567	22.912	23.241	-20	1.024	214294	27189	5232	13080	5	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.426	24.426	0	1.368	45657431	6598110	4093	10232	1612		
369.8919	24.426	24.426	0	1.368	28529102	4130483	2748	6870	1503	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453	24.453	0	1.001	23436954	3406075	1343	3357	2536		
357.8516	24.453	24.453	0	1.001	14731147	2125742	869	2172	2446	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.349						1343	3357			
357.8516	23.349						869	2172			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.503	30.503	0	0.949	31680924	6018295	14484	36210	416		
385.8610	30.503	30.503	0	0.949	60299467	11376572	27635	69087	412	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.529	30.529	0	1.001	27500145	5127033	12781	31952	401		
375.8178	30.529	30.529	0	1.001	22484509	4124532	10428	26070	396	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.689	30.689	0	0.955	32812682	6145561	14484	36210	424		
385.8610	30.689	30.689	0	0.955	62611398	11583324	27635	69087	419	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.702	30.702	0	1.000	29370233	5510176	12781	31952	431		
375.8178	30.702	30.702	0	1.000	24018622	4571981	10428	26070	438	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.514	31.514	0	0.981	31453354	7642624	14484	36210	528		
385.8610	31.514	31.514	0	0.981	59876909	14448427	27635	69087	523	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528	31.528	0	1.000	29092089	7191664	12781	31952	563		
375.8178	31.528	31.528	0	1.000	24015970	5969424	10428	26070	572	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.313	32.313	0	1.006	28928590	7592595	14484	36210	524		
385.8610	32.313	32.313	0	1.006	55960383	14760353	27635	69087	534	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.326	32.326	0	1.000	27306767	7075729	12781	31952	554		
375.8178	32.326	32.326	0	1.000	22206112	5835836	10428	26070	560	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						12781	31952			
375.8178	30.197						10428	26070			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.127	32.127	0		54724621	14379412	13046	32615	1102		
403.8529	32.127	32.127	0		43478204	11548142	13177	32942	876	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.701	31.701	0	0.987	36927663	9995543	13046	32615	766		
403.8529	31.701	31.701	0	0.987	29485807	8000276	13177	32942	607	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.714	31.714	0	1.000	19732306	5466547	8797	21992	621		
391.8127	31.714	31.714	0	1.000	15563258	4278550	7400	18500	578	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.807	31.807	0	0.990	42726119	10783509	13046	32615	827		
403.8529	31.807	31.807	0	0.990	33990199	8501178	13177	32942	645	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.820	31.820	0	1.000	22235915	5725544	8797	21992	651		
391.8127	31.820	31.820	0	1.000	17484493	4544453	7400	18500	614	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.140	32.140	0	1.014	25221793	6585900	8797	21992	749		
391.8127	32.140	32.140	0	1.014	19707385	5278564	7400	18500	713	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						8797	21992			
391.8127	30.882						7400	18500			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.754	33.754	0	1.051	22514407	7324502	24183	60457	303		
419.8220	33.754	33.754	0	1.051	51851305	16806552	53045	132612	317	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.766	33.766	0	1.000	28047664	9201400	29512	73780	312		
409.7789	33.766	33.766	0	1.000	26875827	8858287	29923	74807	296	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.847	34.847	0	1.085	21802338	6213714	24183	60457	257		
419.8220	34.847	34.847	0	1.085	50414866	14007010	53045	132612	264	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860	34.860	0	1.000	24765451	6829450	29512	73780	231		
409.7789	34.847	34.860	-1	1.000	23514230	6548523	29923	74807	219	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						29512	73780			
409.7789	34.319						29923	74807			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.556	34.556	0	1.076	33583674	10175591	16198	40495	628		
437.8140	34.556	34.556	0	1.076	33582380	10168153	19873	49682	512	1.00(0.88-1.20)	

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.568	34.568	0	1.000	18917383	5711865	10018	25045	570		
425.7737	34.568	34.568	0	1.000	18132016	5360181	12203	30507	439	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						10018	25045			
425.7737	34.301						12203	30507			
13C-OCDD											
469.7779	36.914	36.914	0	1.149	47645986	11732203	4788	11970	2450		
471.7750	36.914	36.914	0	1.149	54097981	13368797	4532	11330	2950	0.88(0.76-1.02)	
OCDF											
441.7428	37.010	37.010	0	1.003	34631106	8578586	3858	9645	2224		
443.7399	37.010	37.010	0	1.003	38284324	9626700	3187	7967	3021	0.90(0.76-1.02)	
OCDD											
457.7377	36.926	36.926	0	1.000	27189261	6903873	2805	7012	2461		
459.7348	36.926	36.926	0	1.000	30550454	7701604	3933	9832	1958	0.89(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

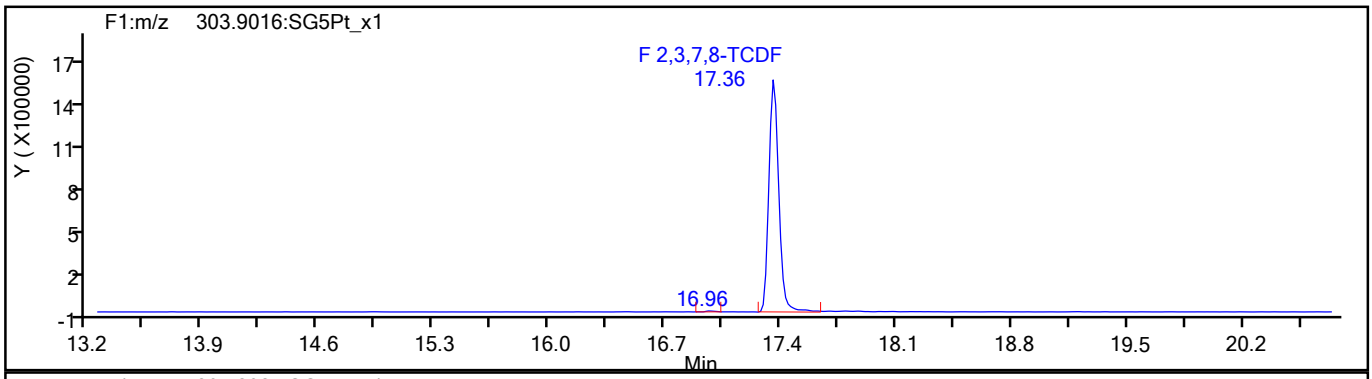

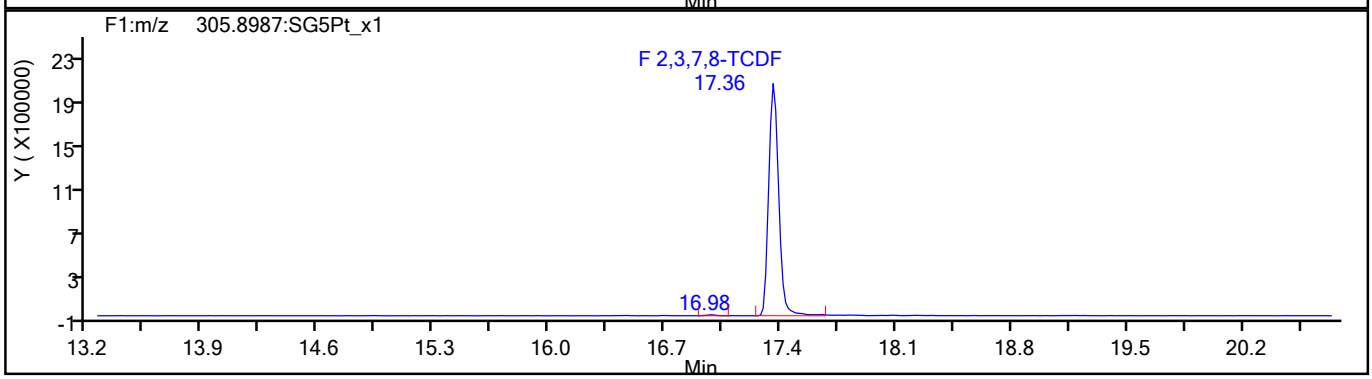

TCDF Standards

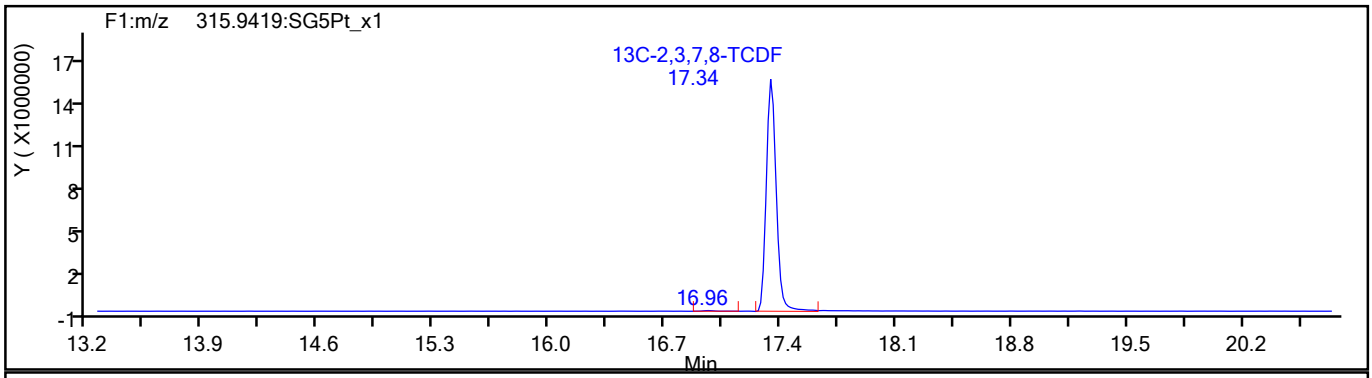

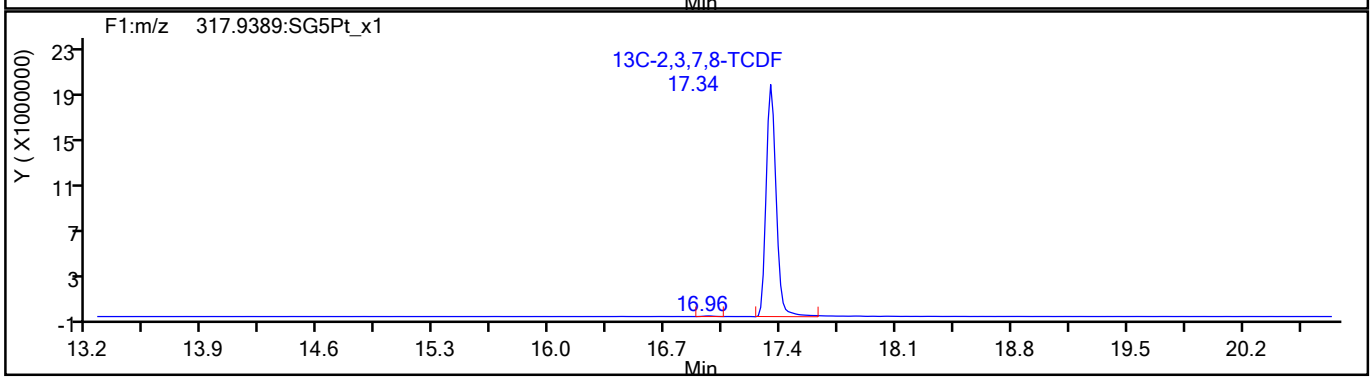

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Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

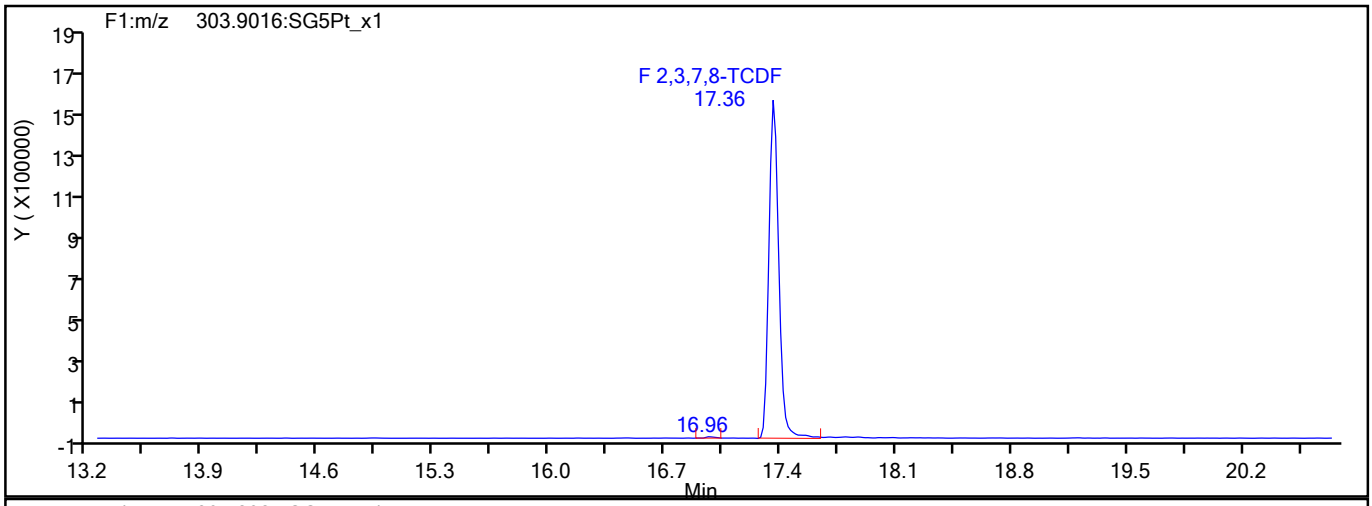

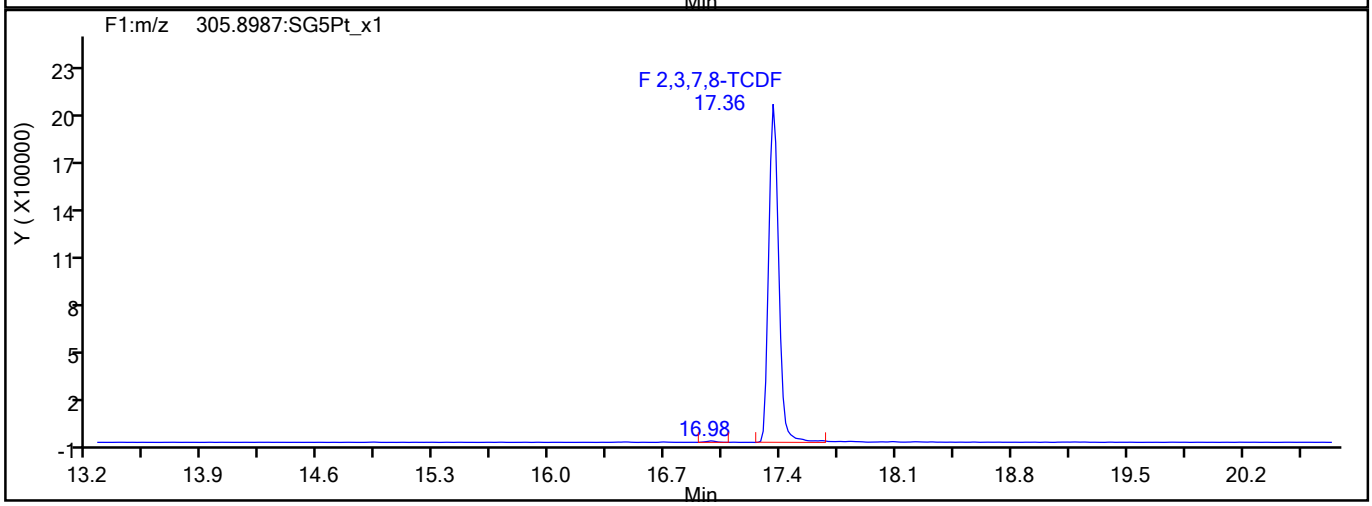

TCDF Interference Mass

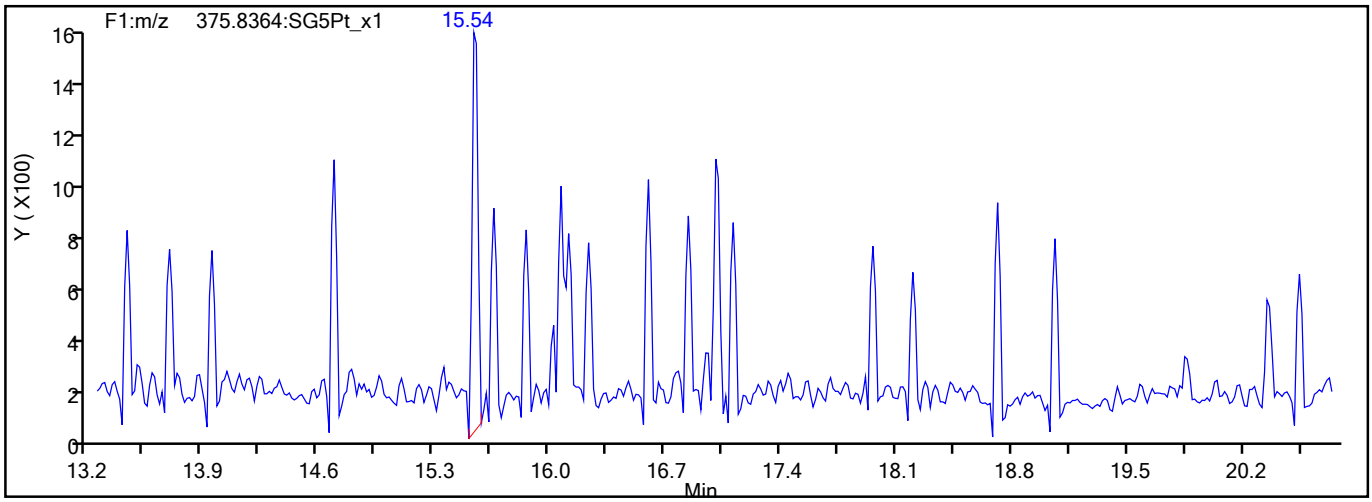

781535

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

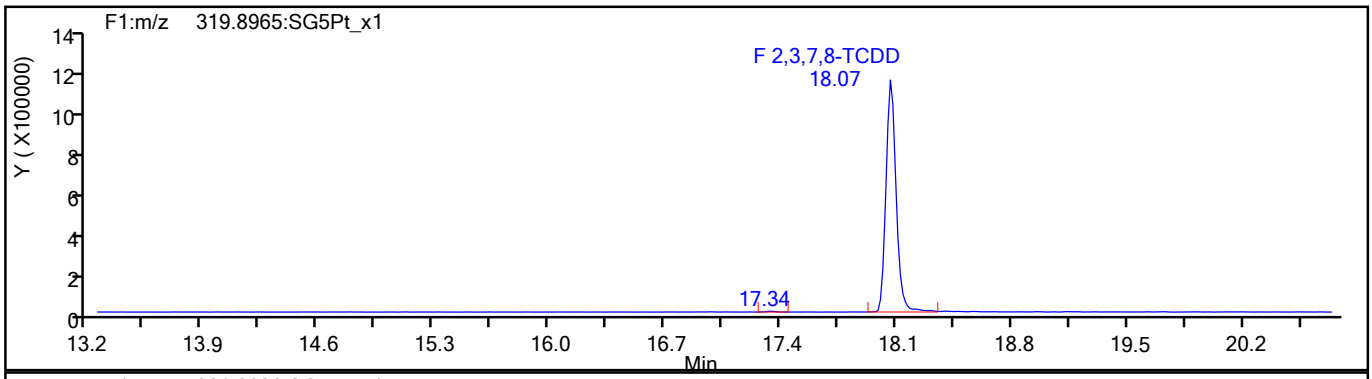

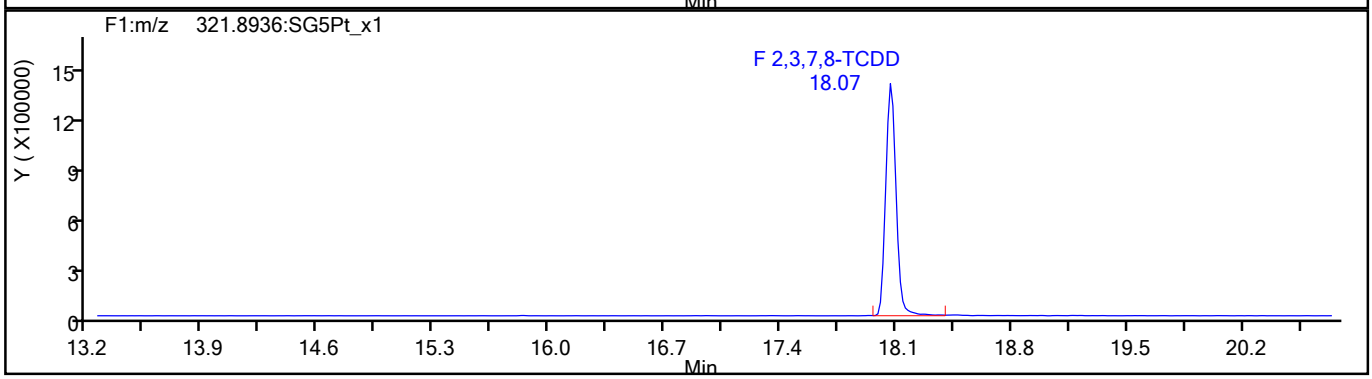

TCDD Standards

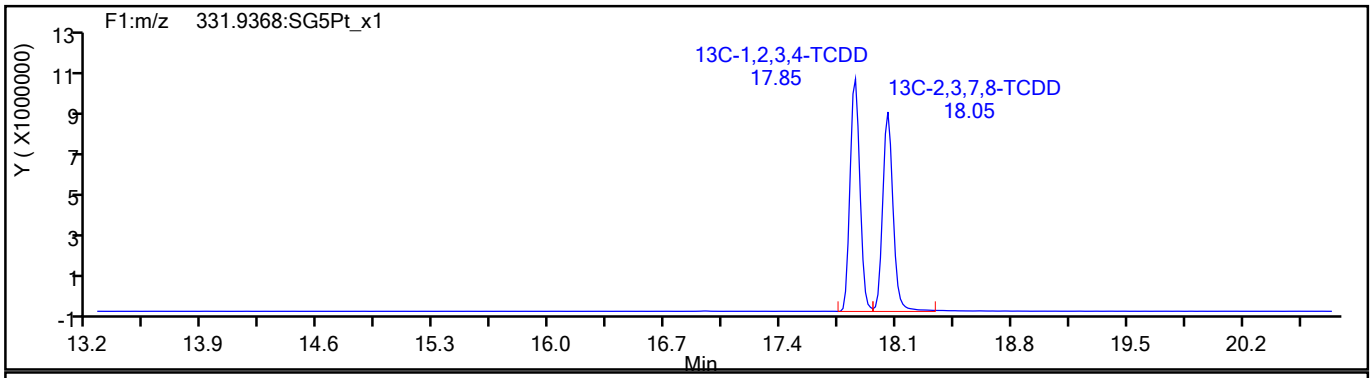

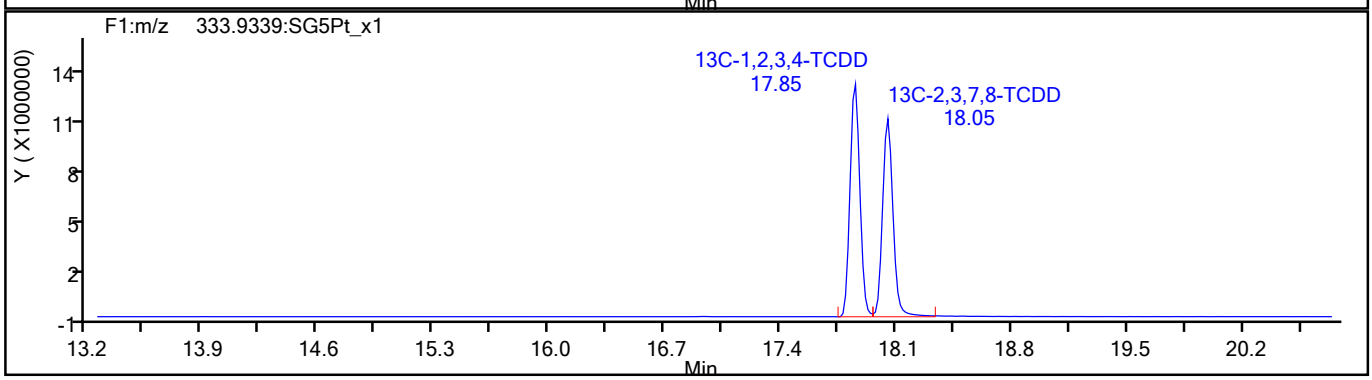

781536

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

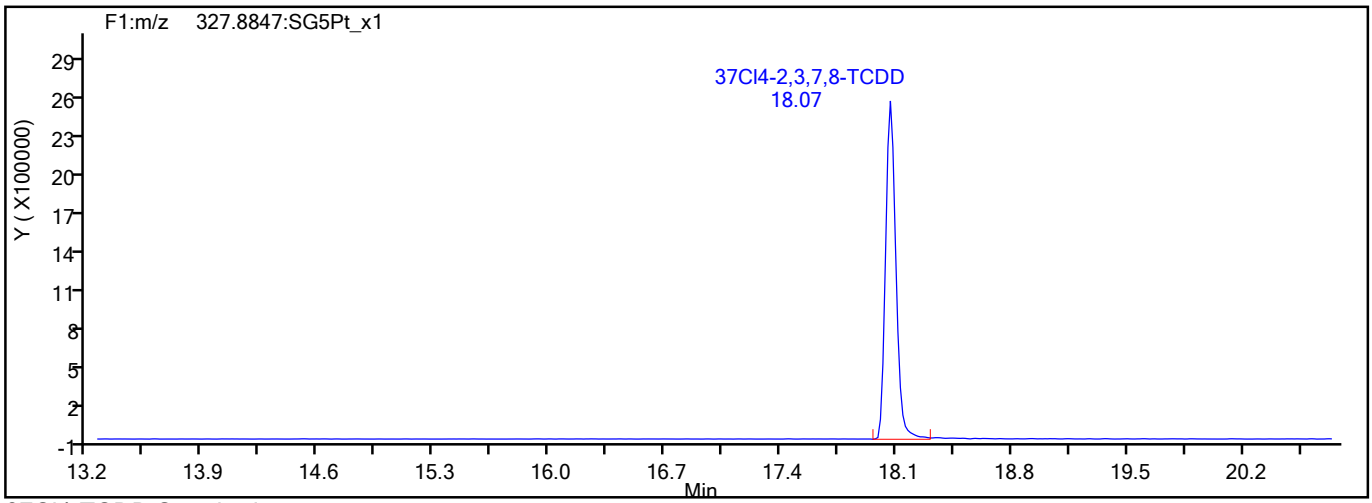

37Cl4-TCDD Standards

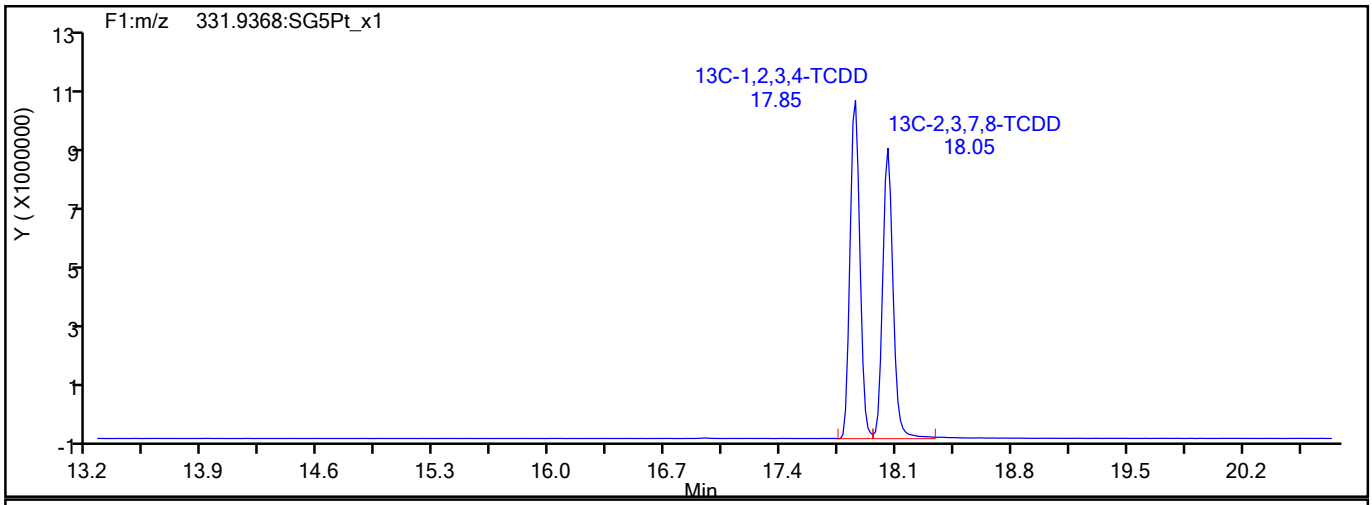

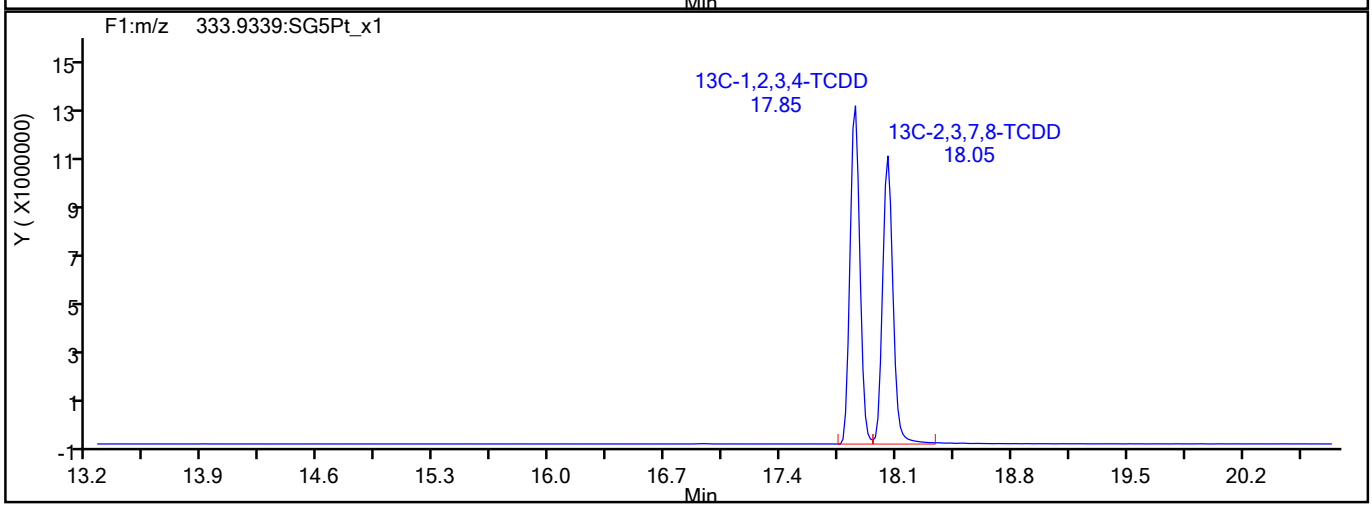

781537

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

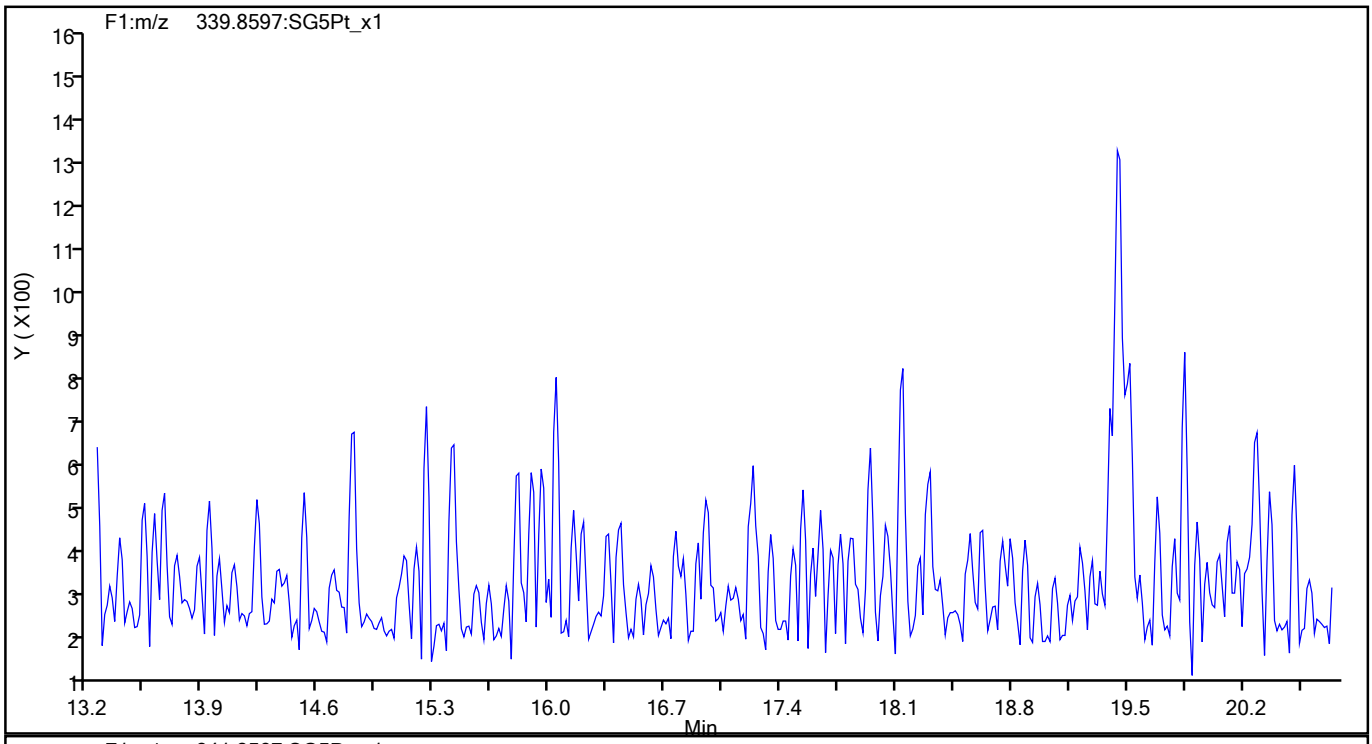

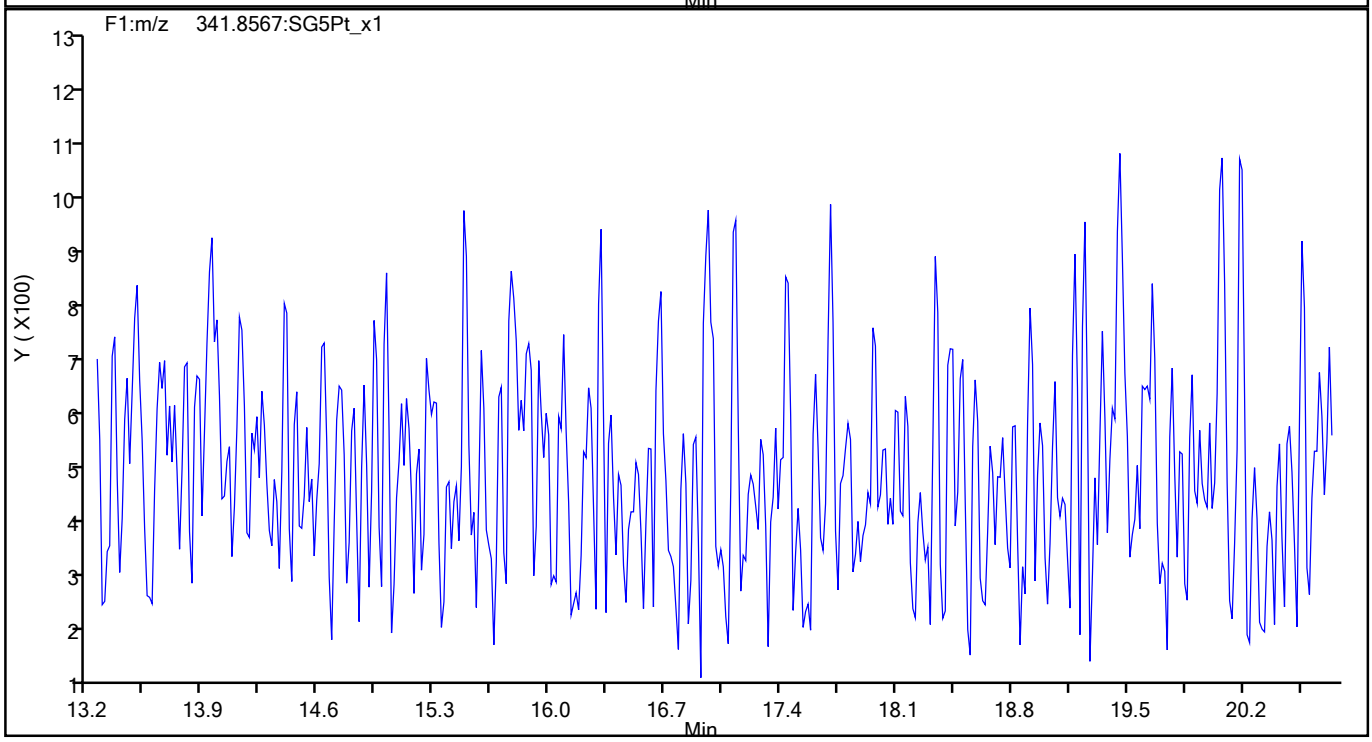

781538

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

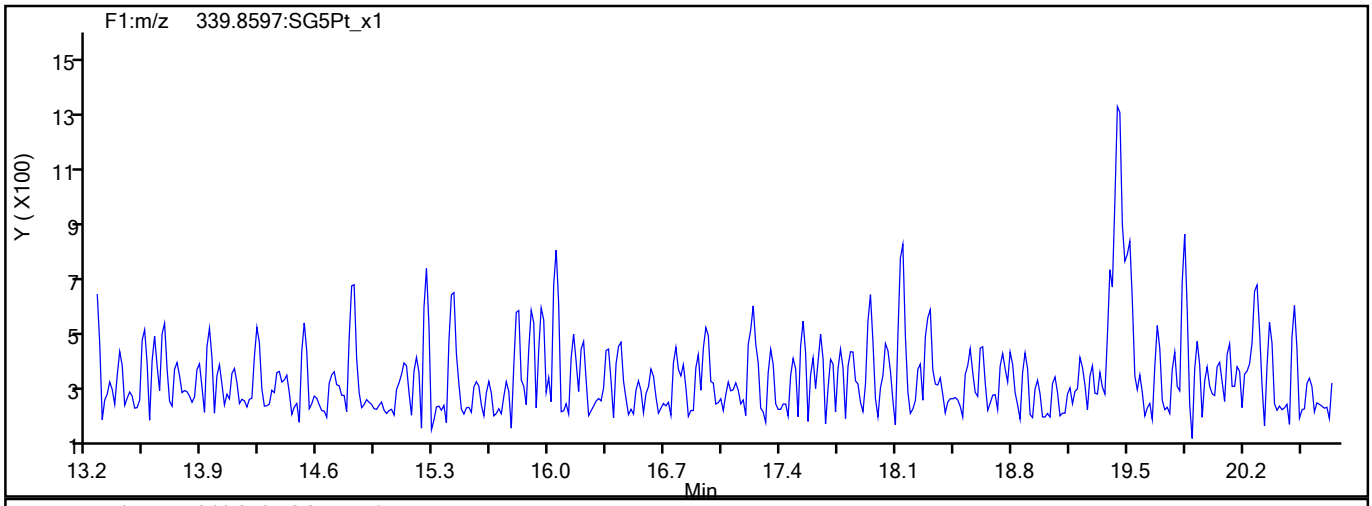

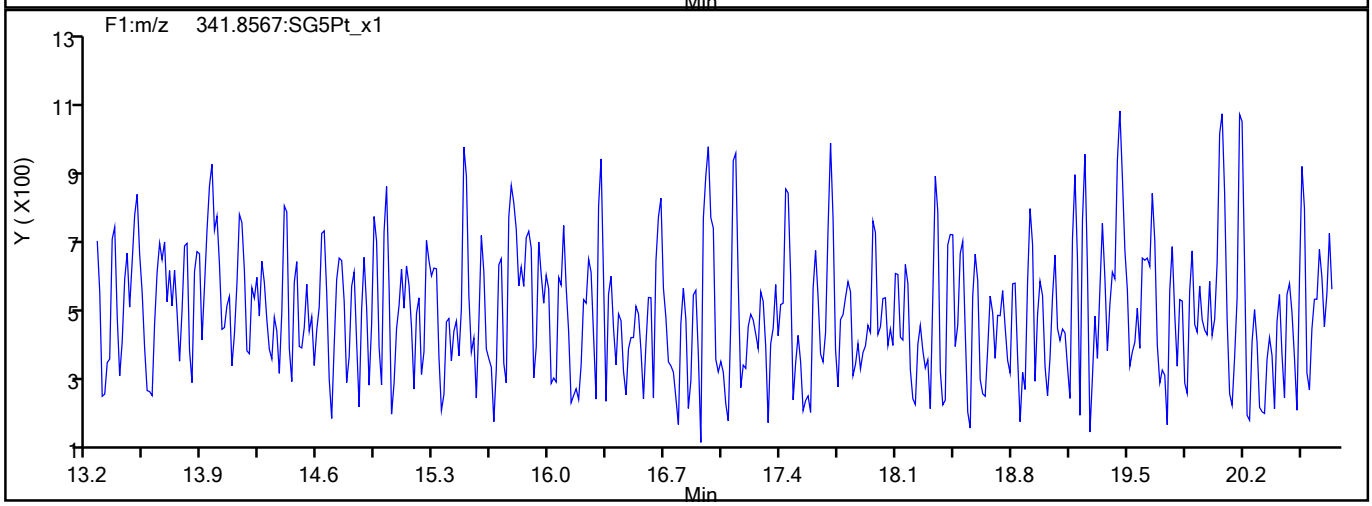

F1 PeCDFs Interference Mass

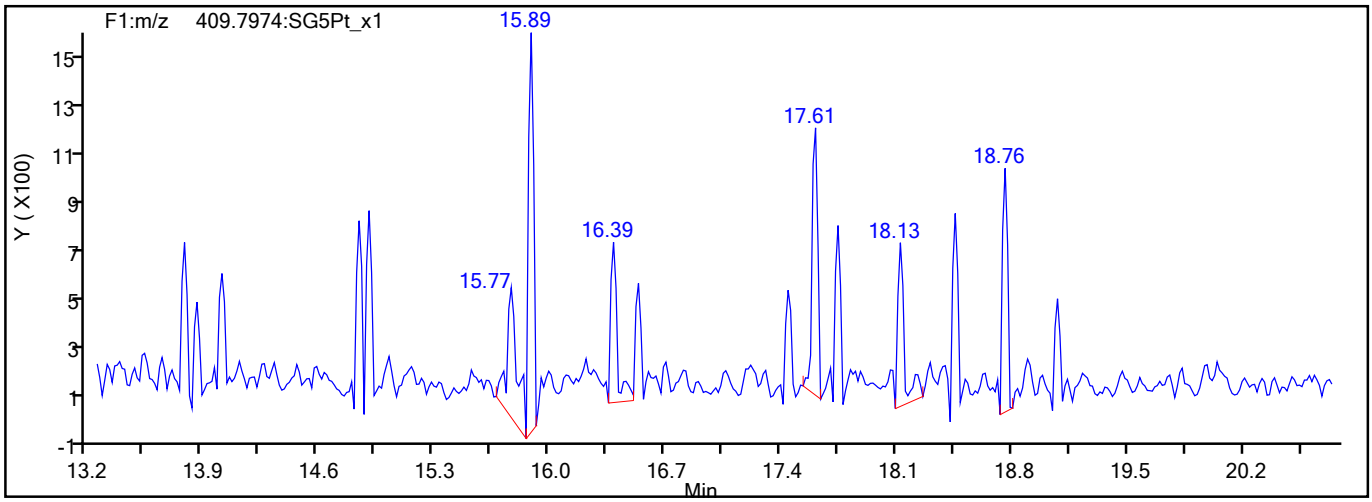

781539

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

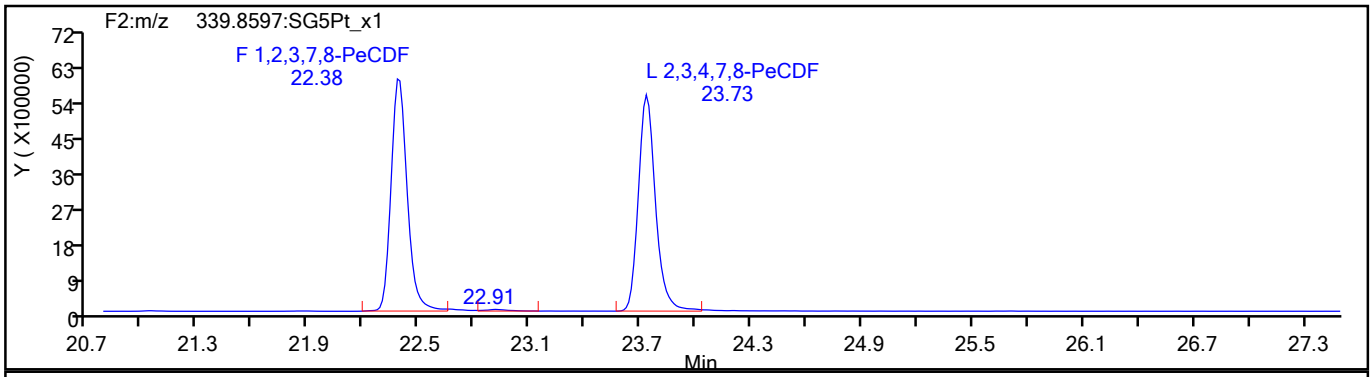

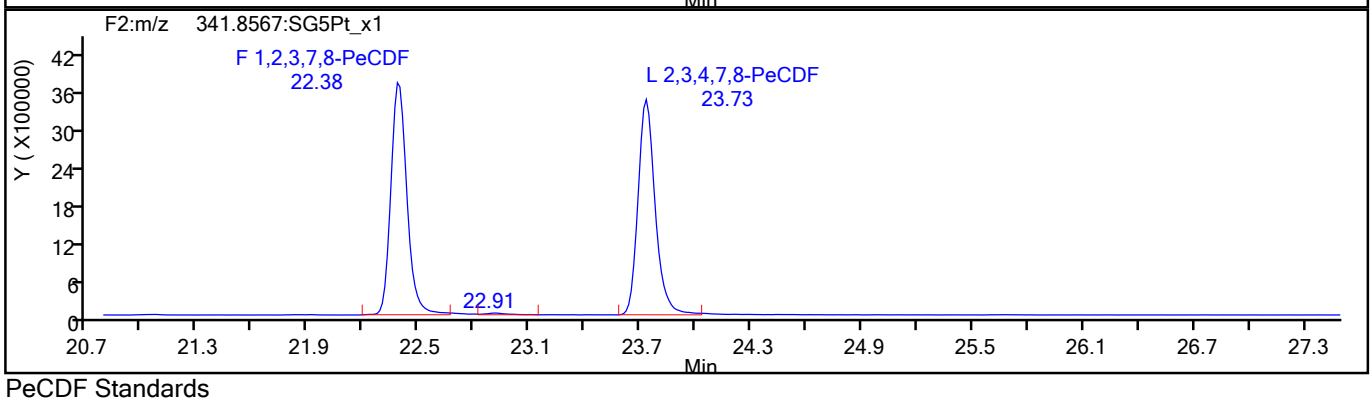

PeCDF Standards

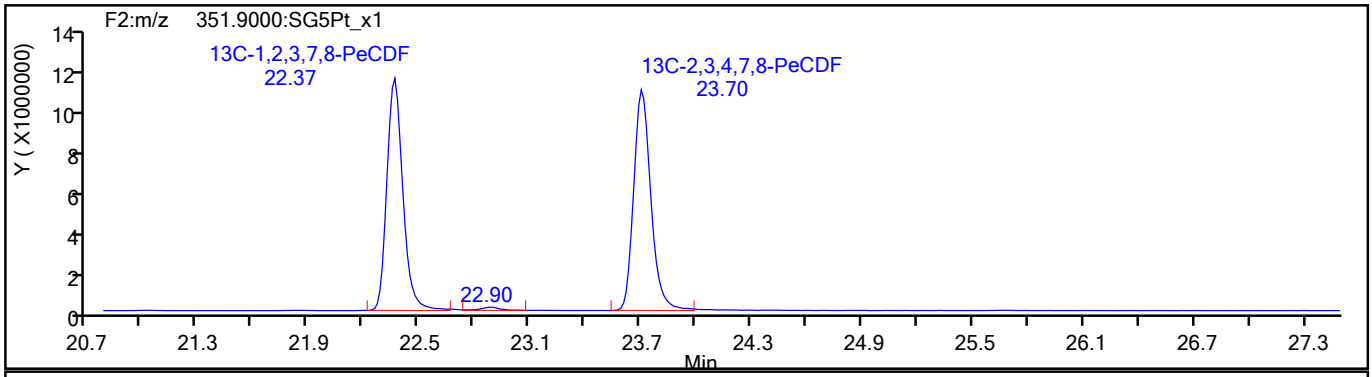

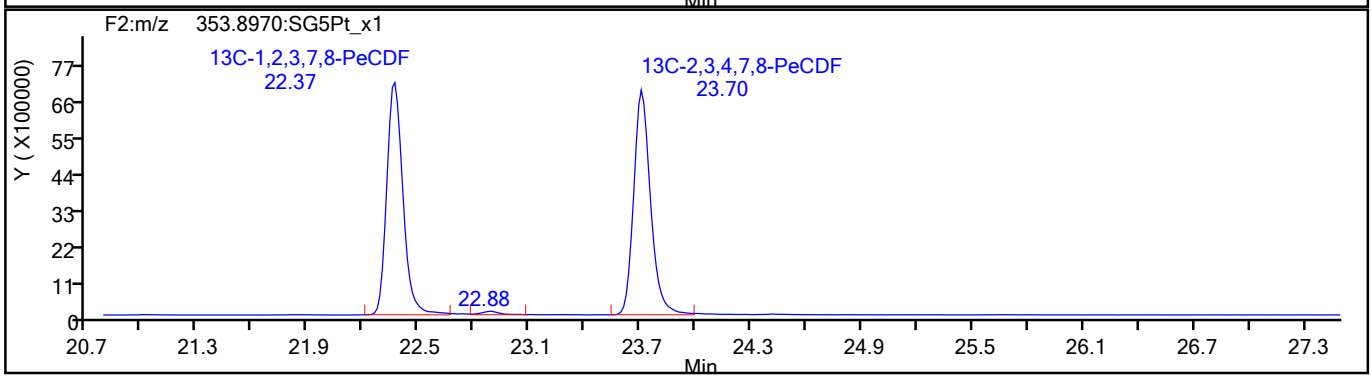

781540

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

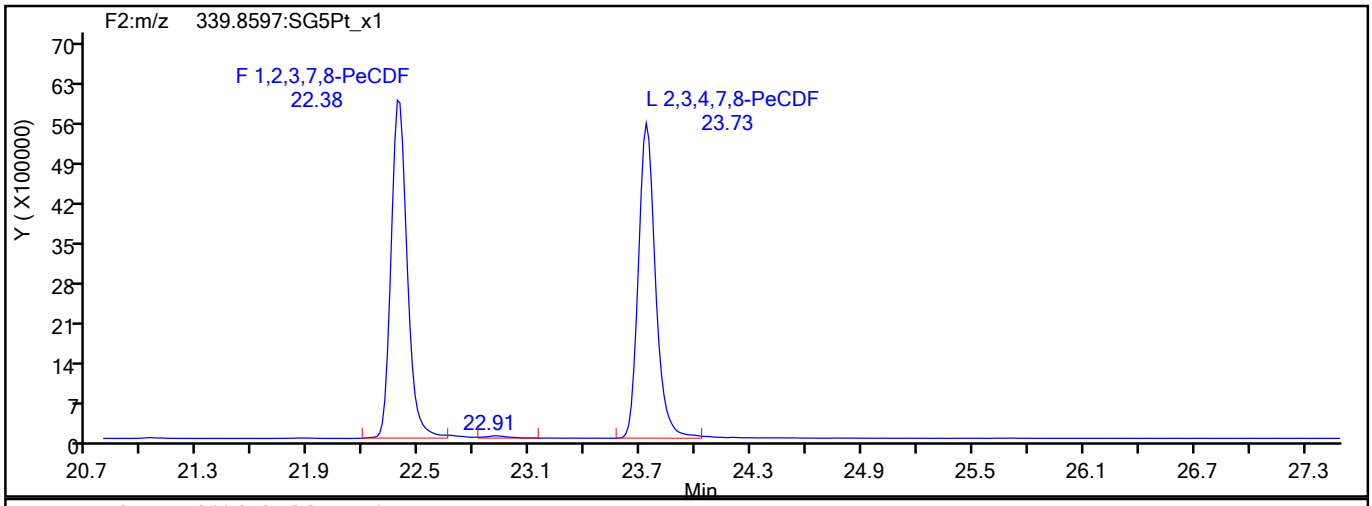

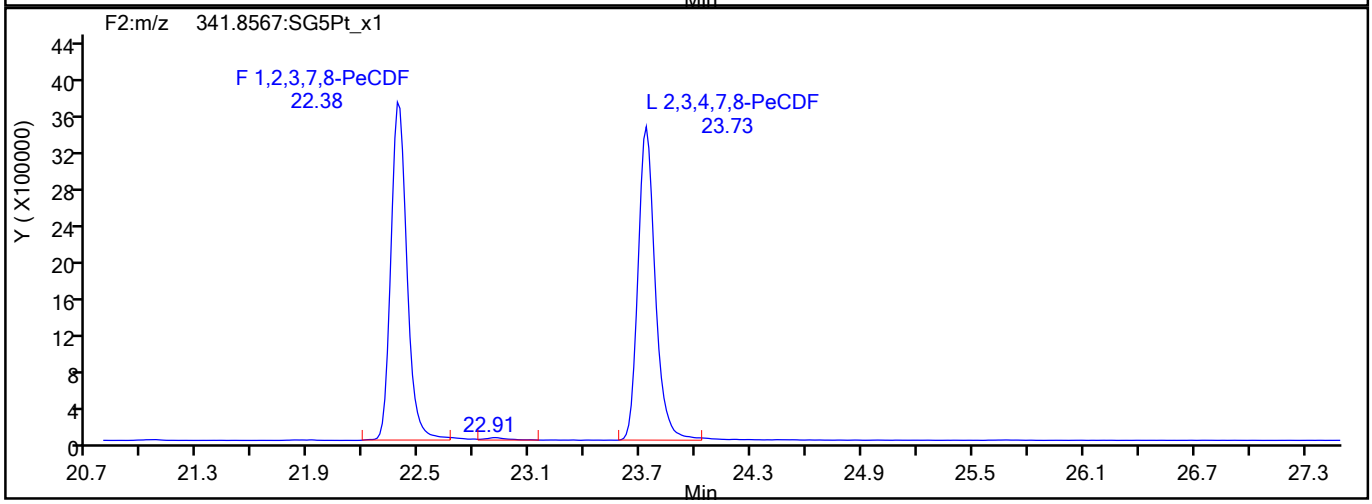

PeCDF Interference Mass

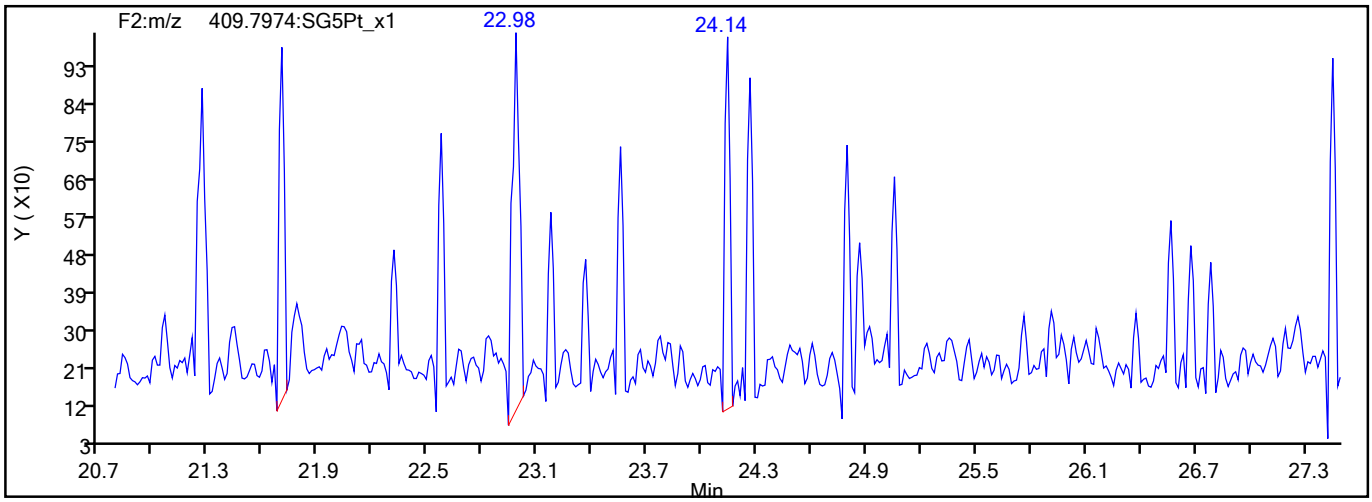

781541

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDD

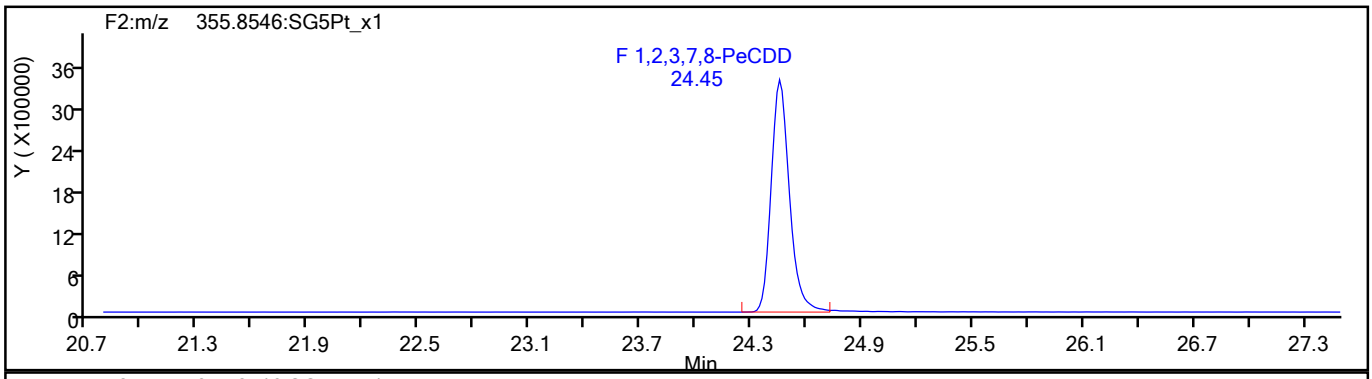

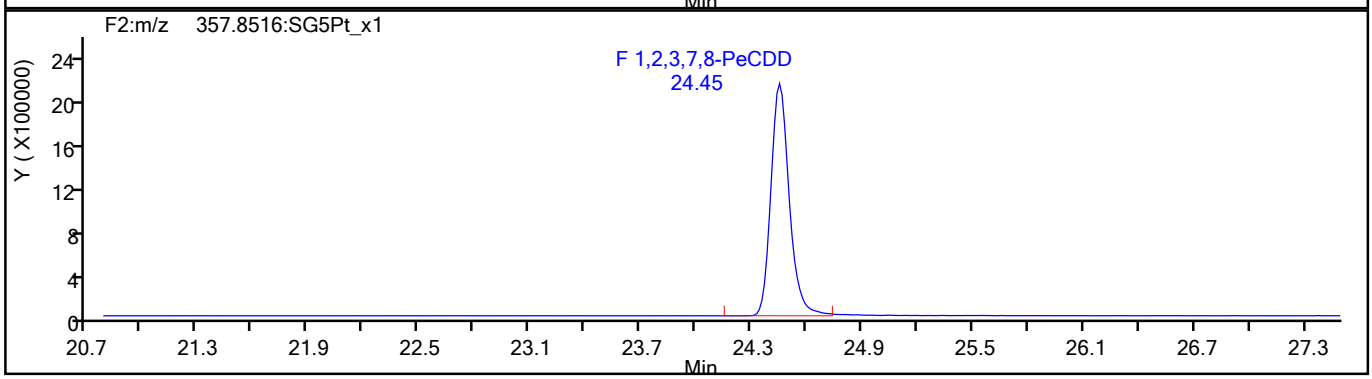

PeCDD Standards

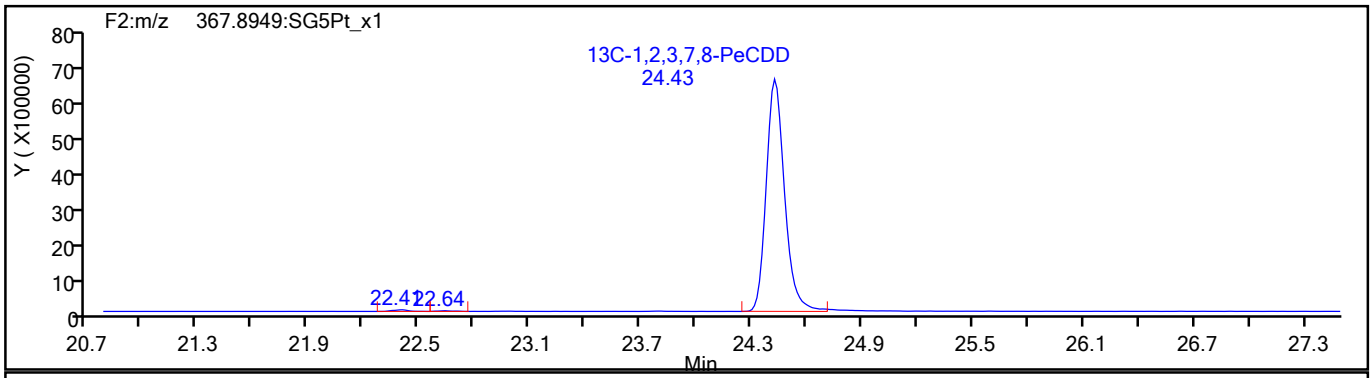

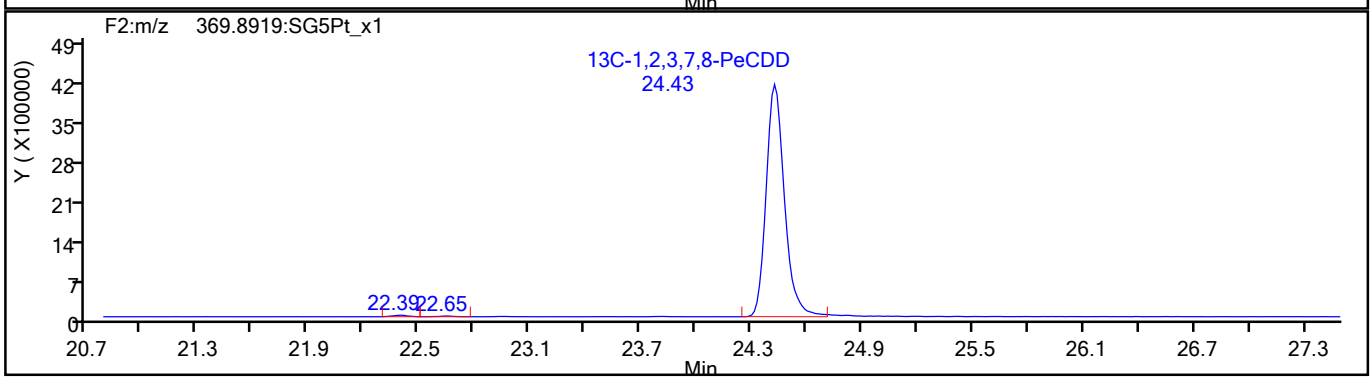

781542

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

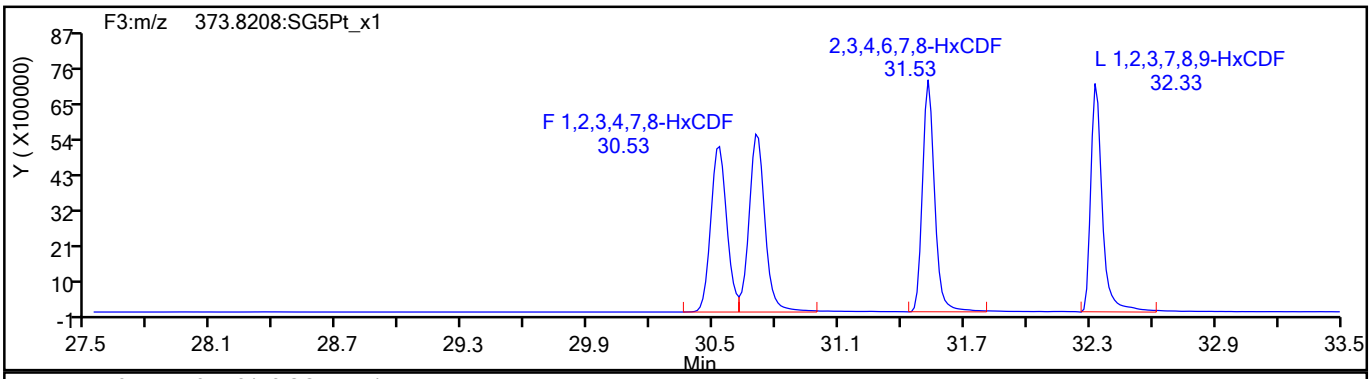

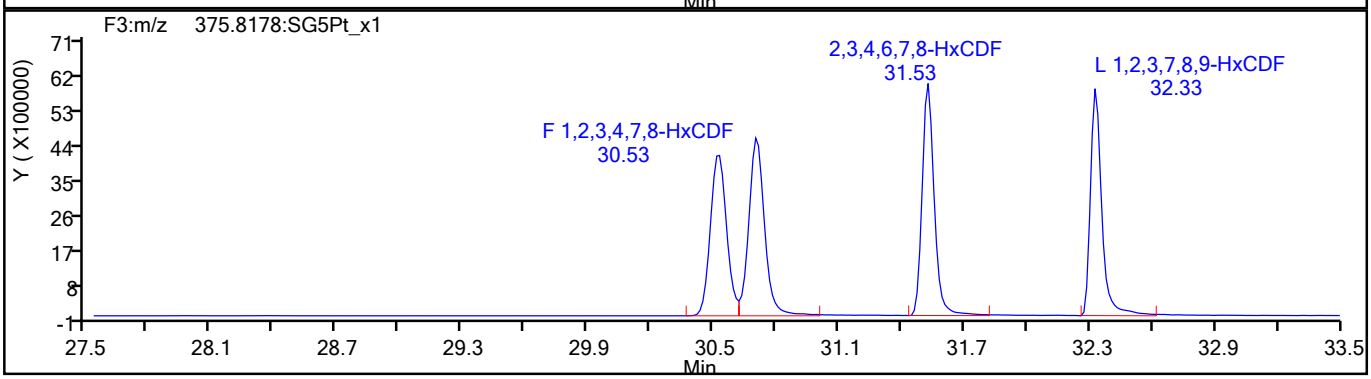

HxCDF Standards

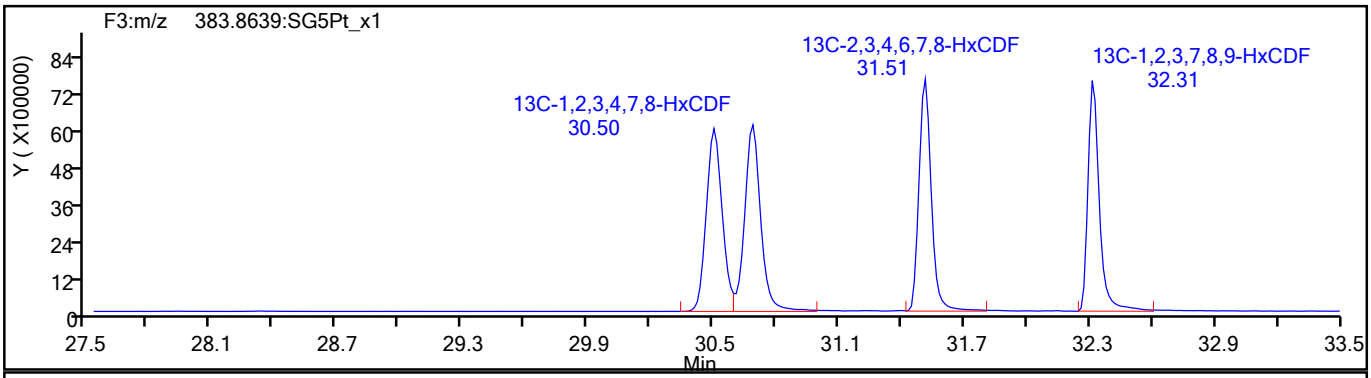

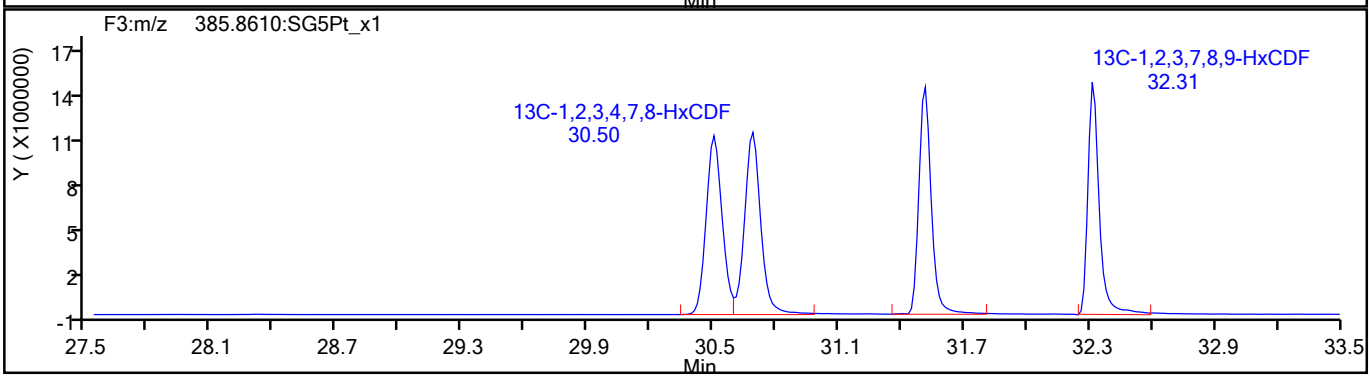

781543

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

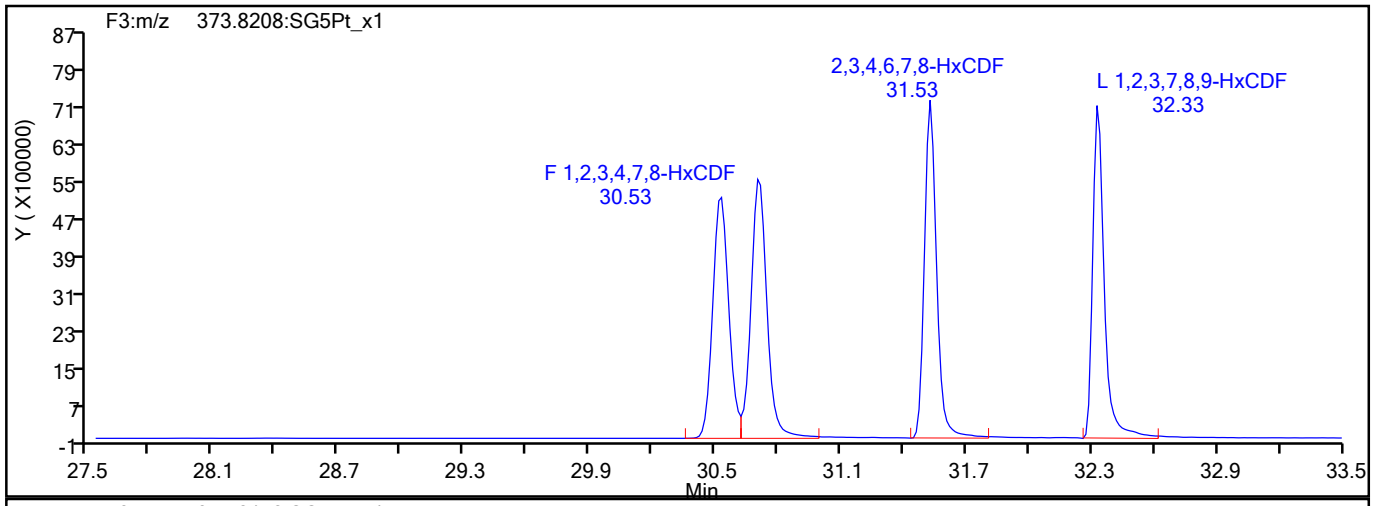

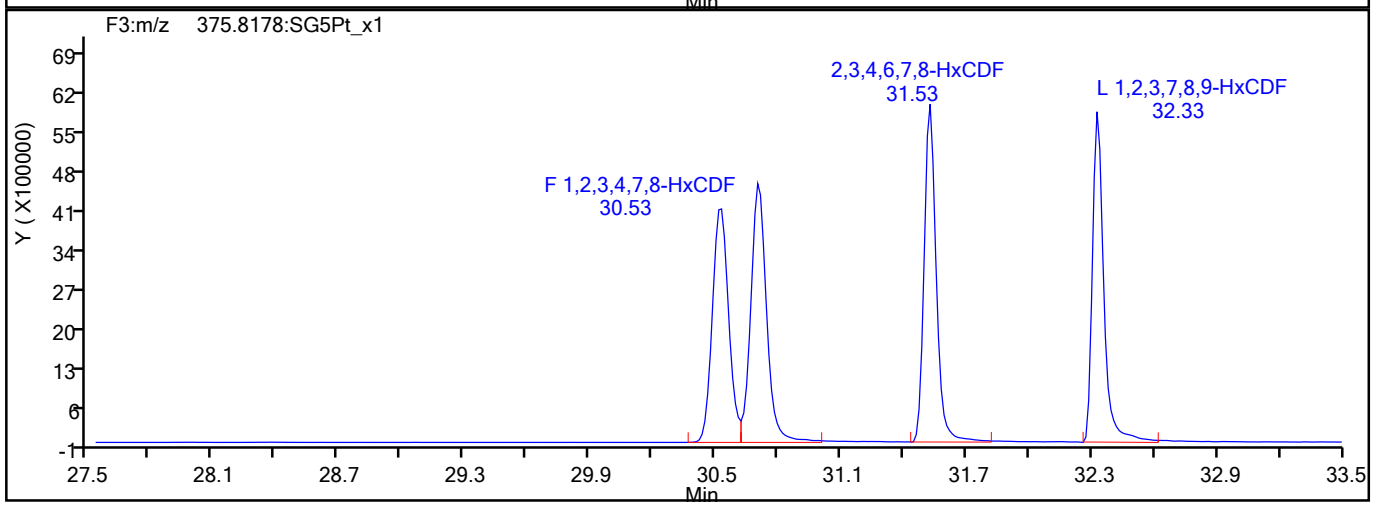

HxCDF Interference Mass

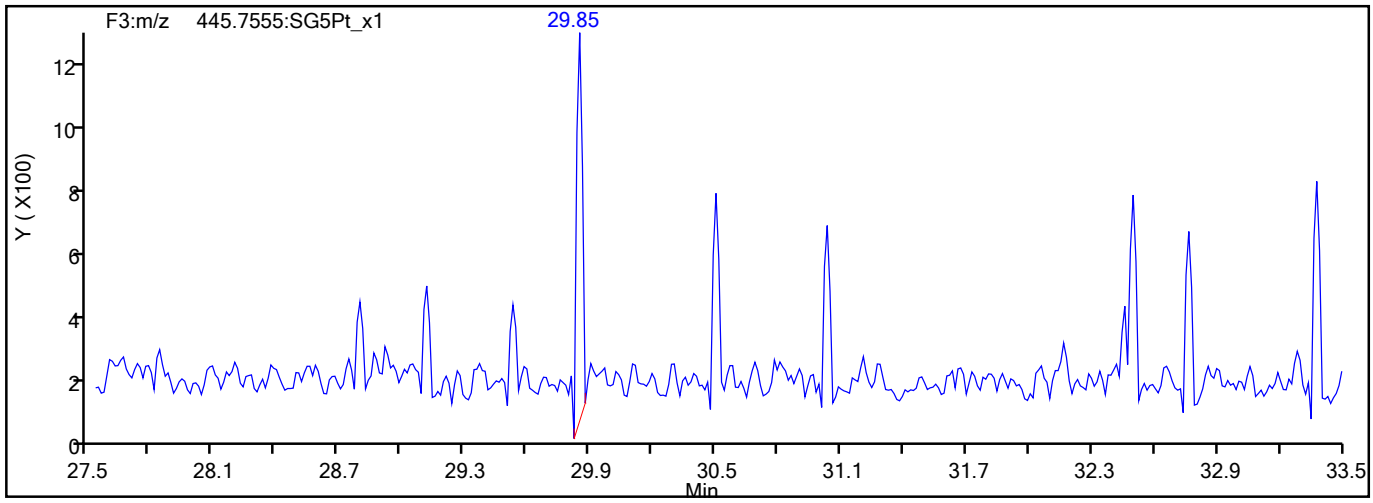

781544

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

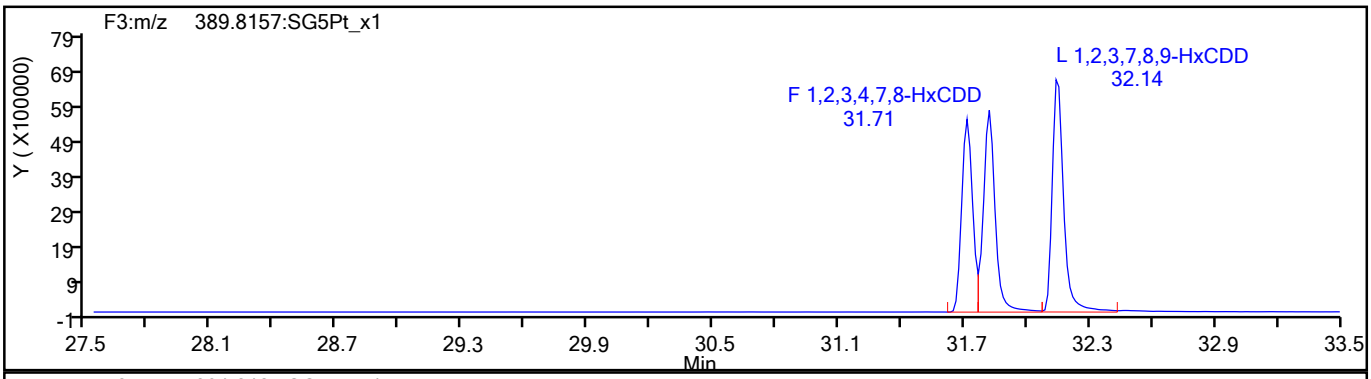

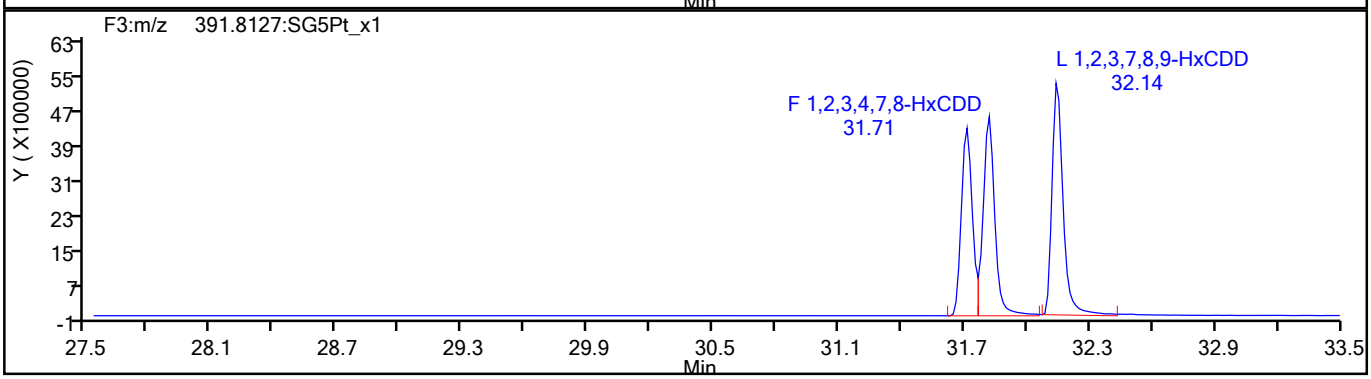

HxCDD Standards

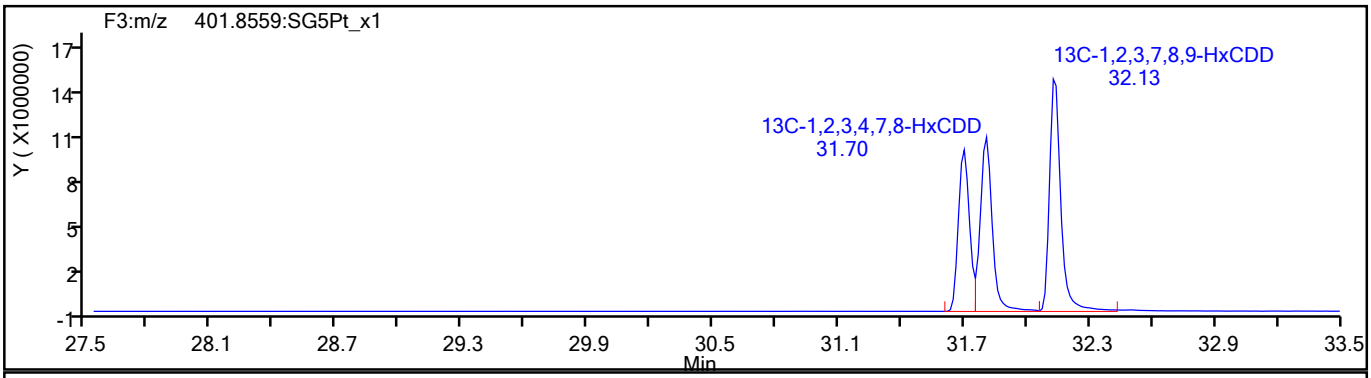

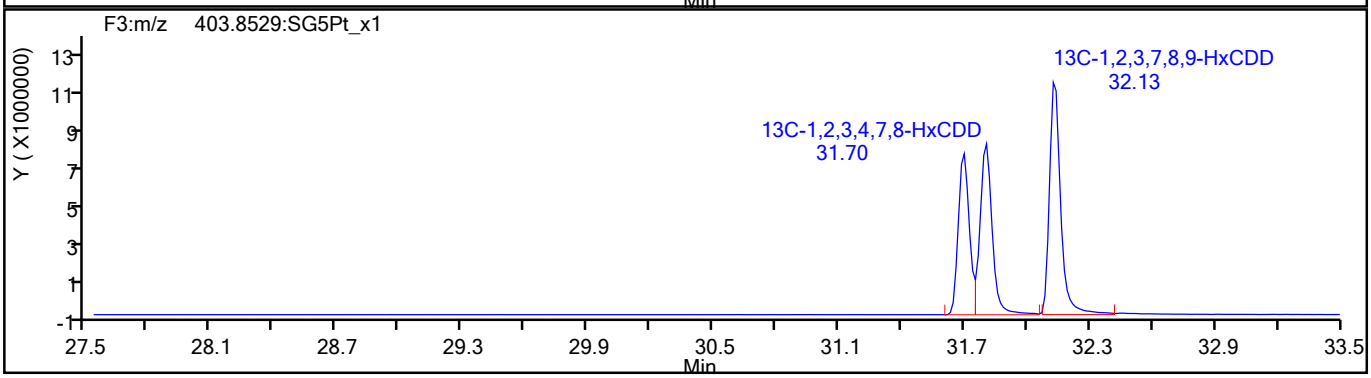

781545

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

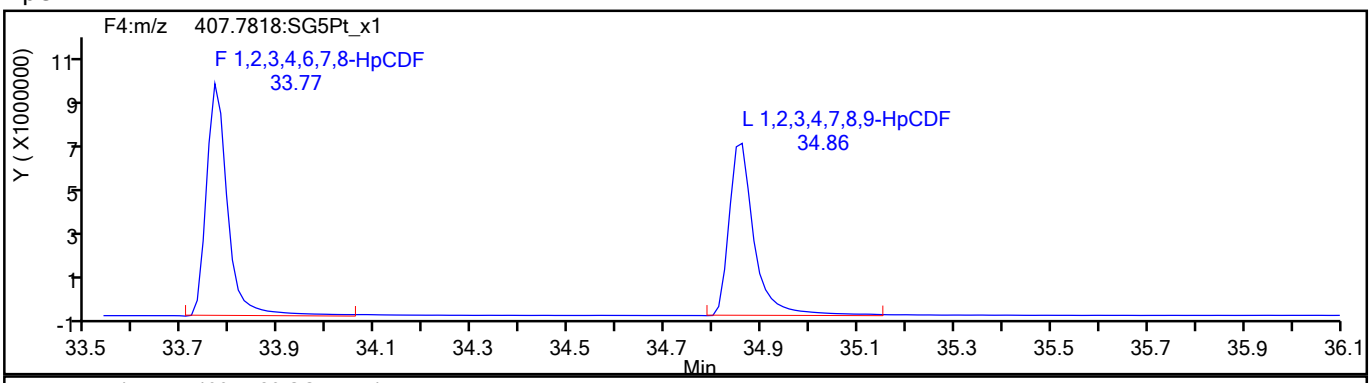

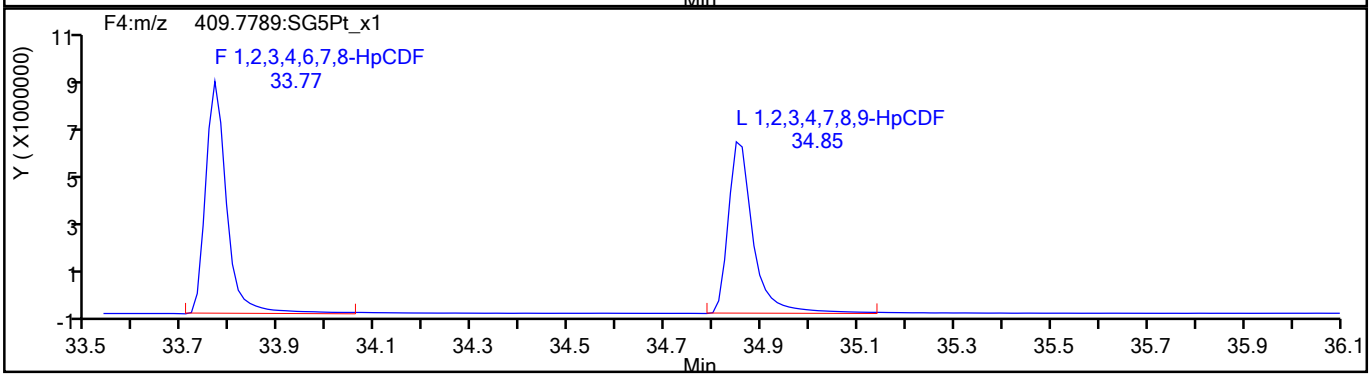

HpCDF Standards

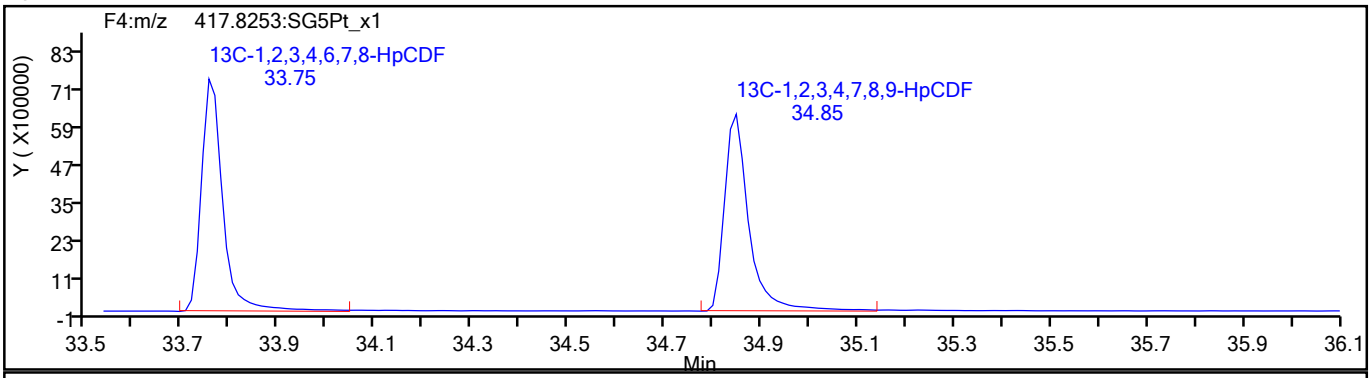

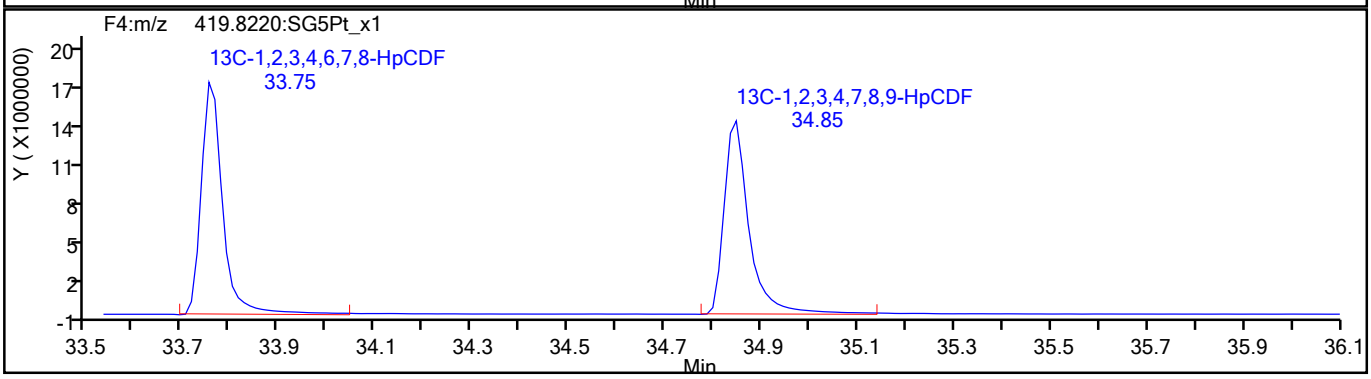

781546

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

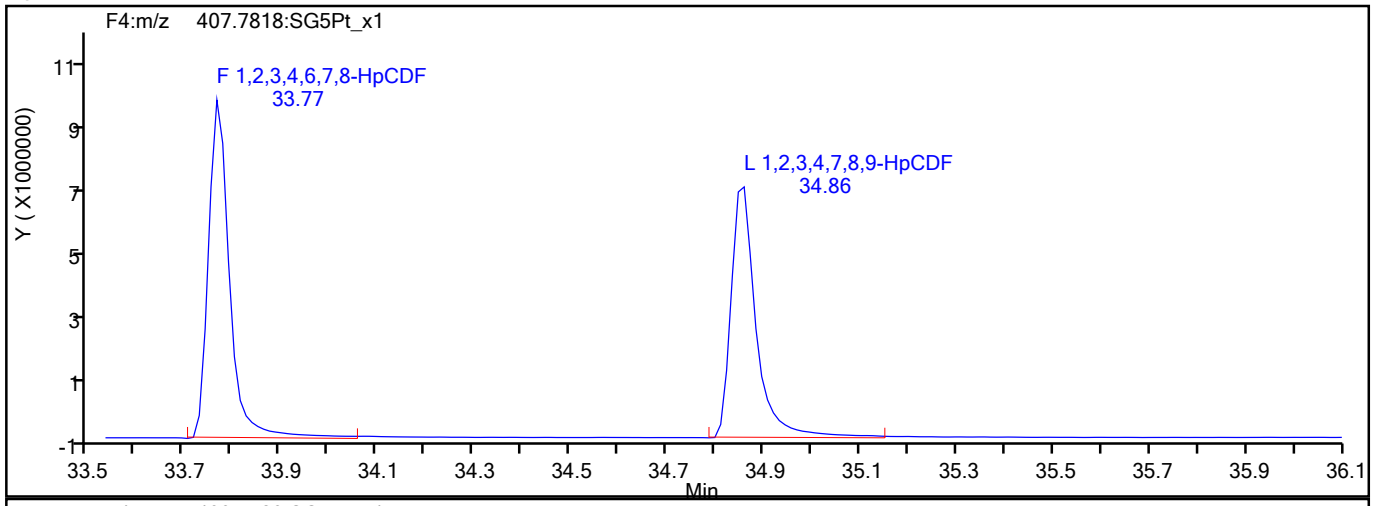

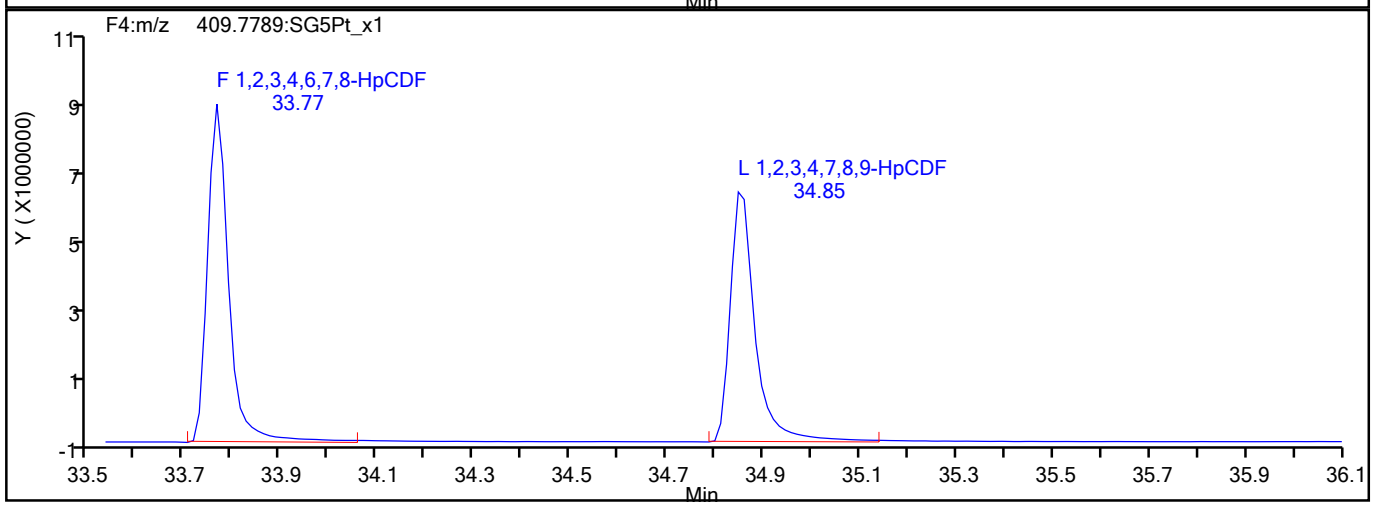

HpCDF Interference Mass

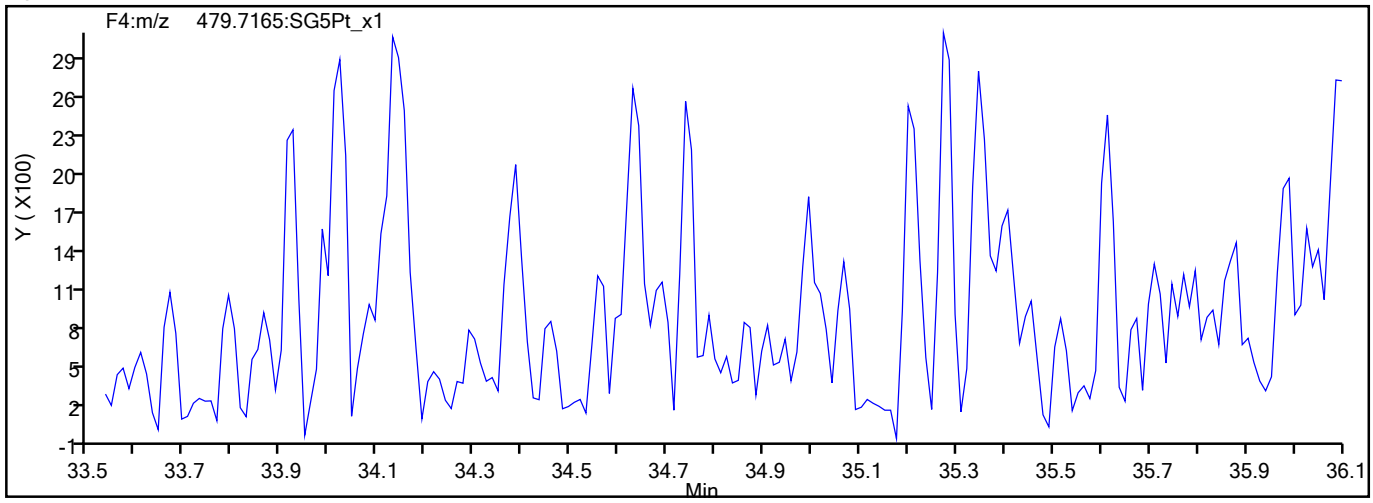

781547

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

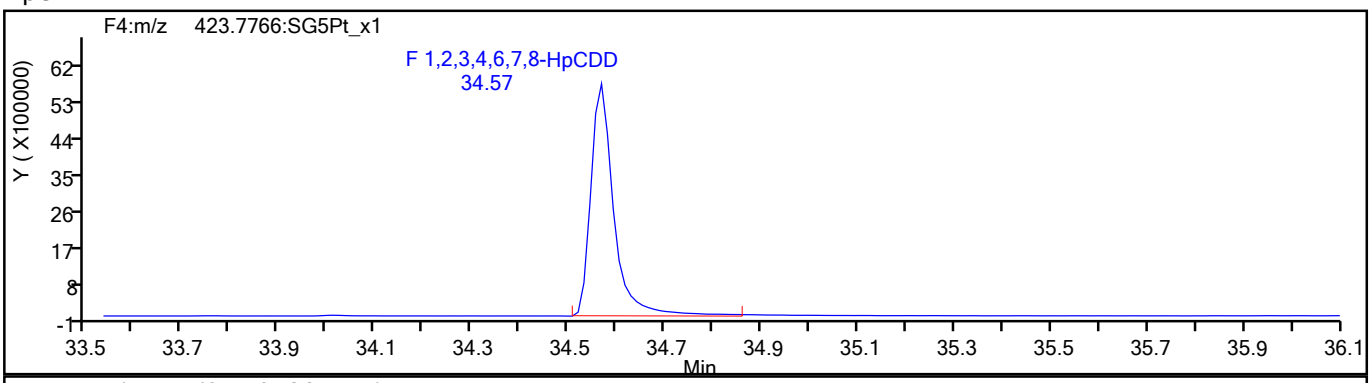

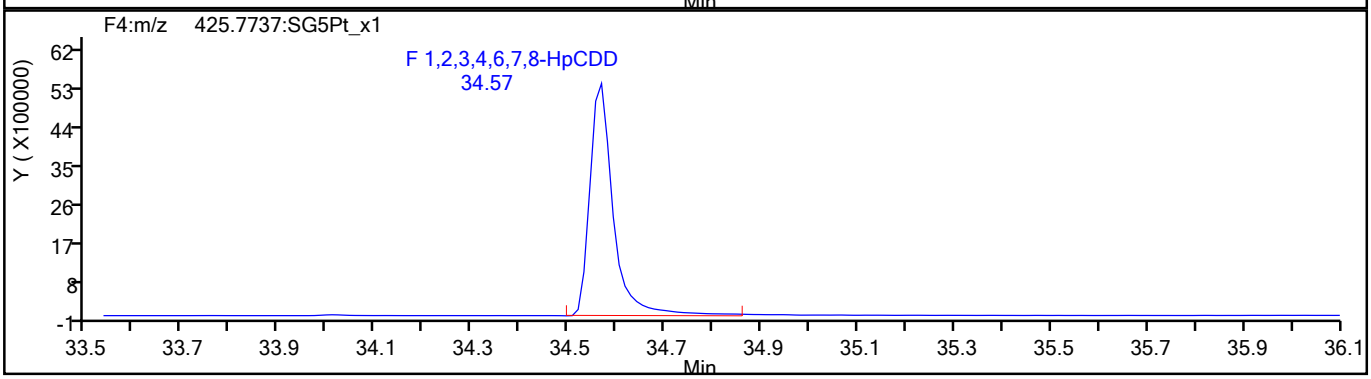

HpCDD Standards

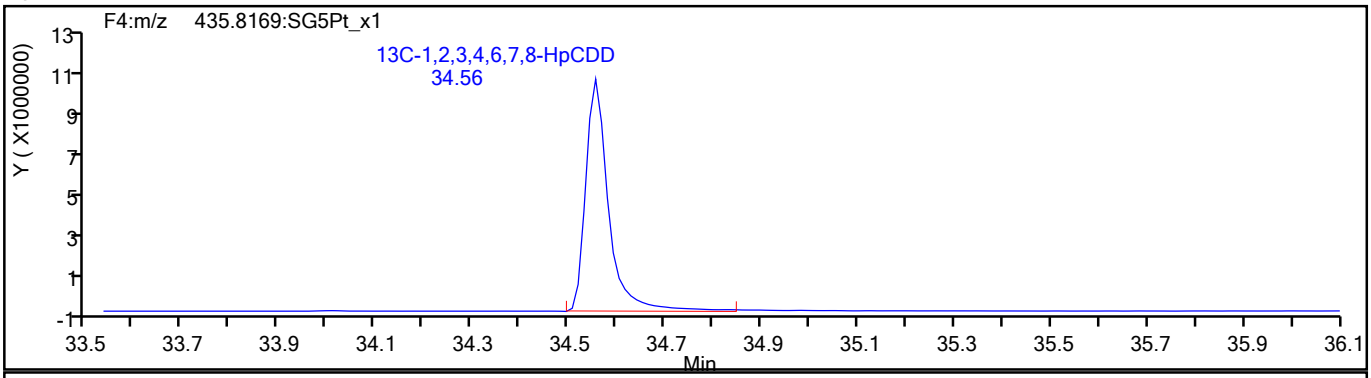

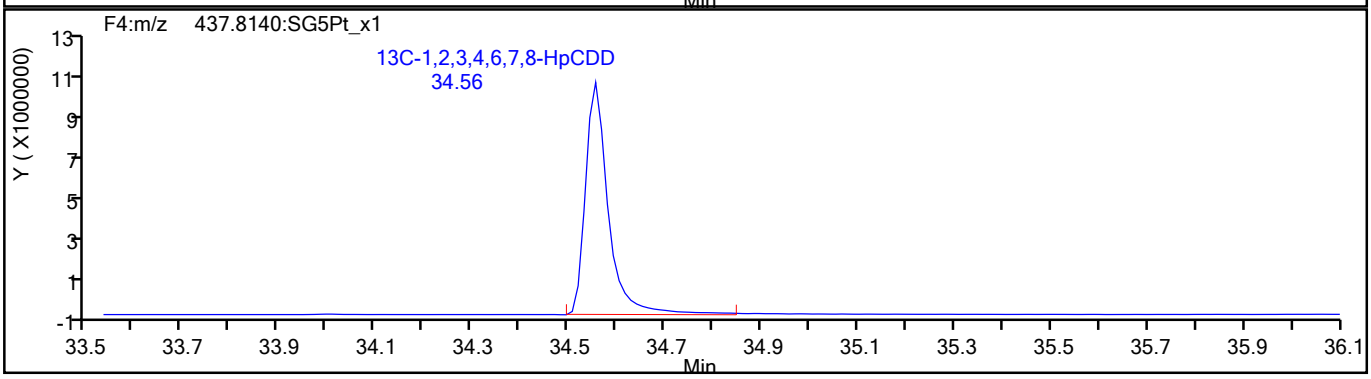

781548

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

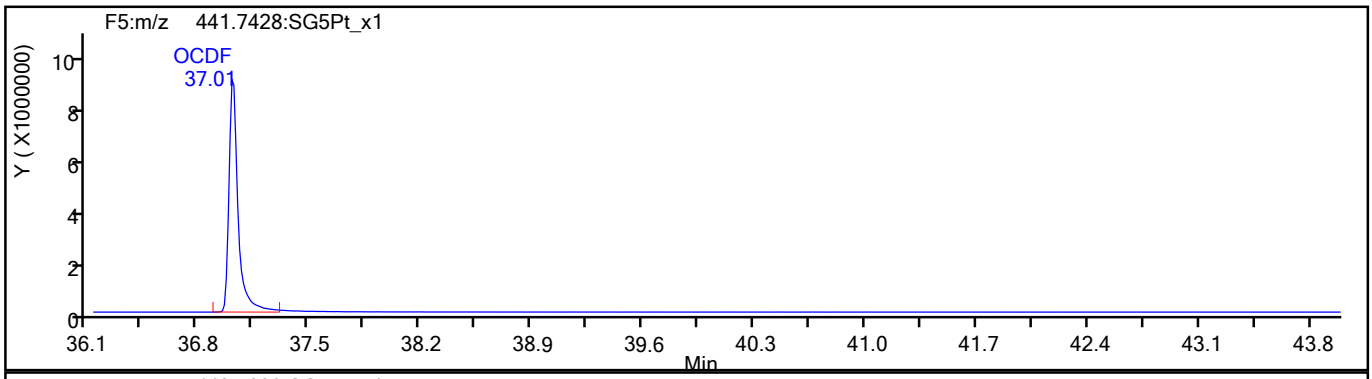

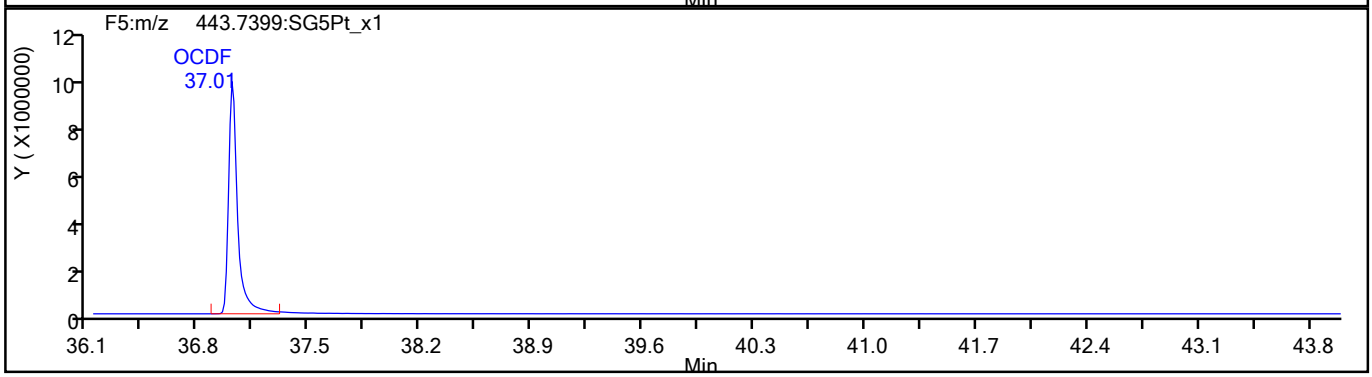

OCDF Standards

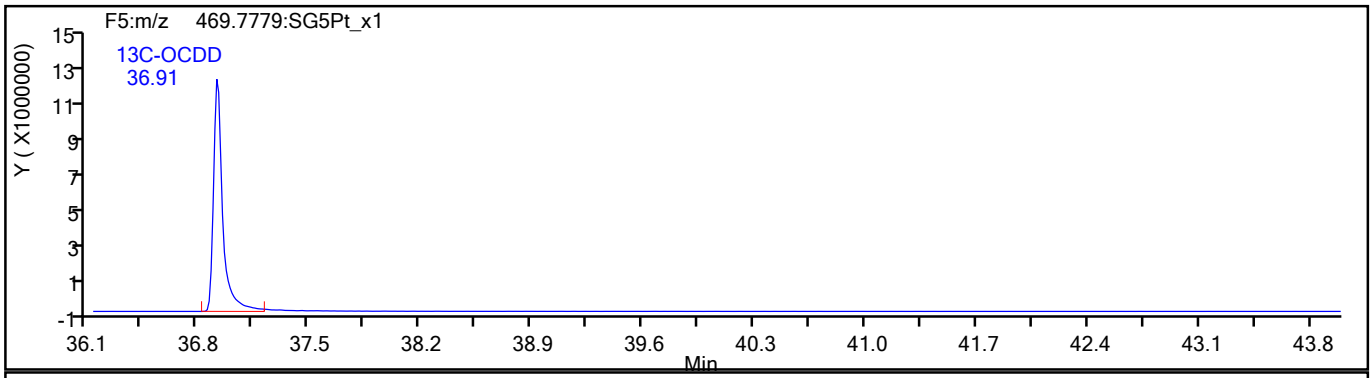

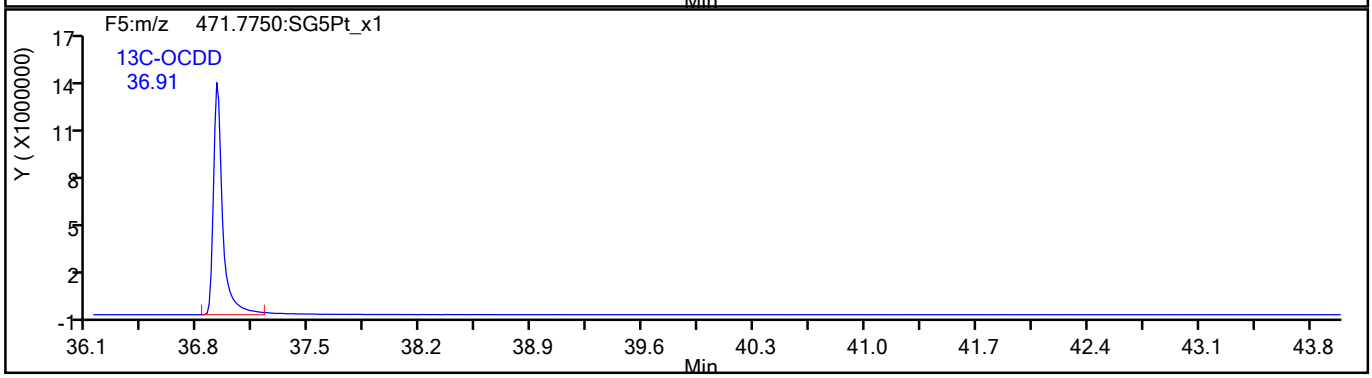

781549

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

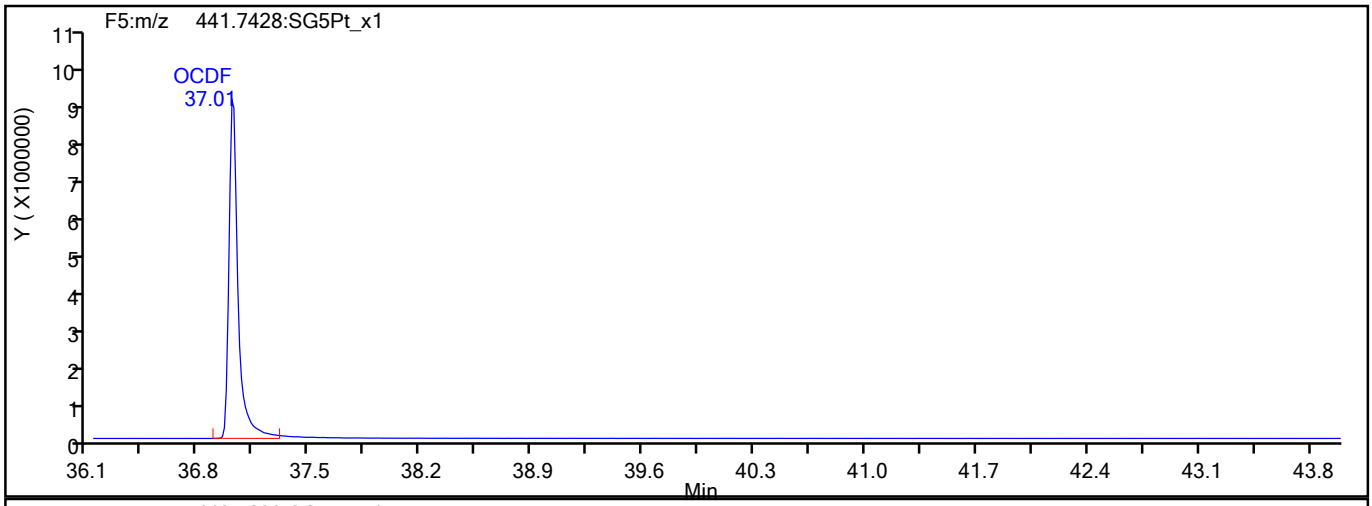

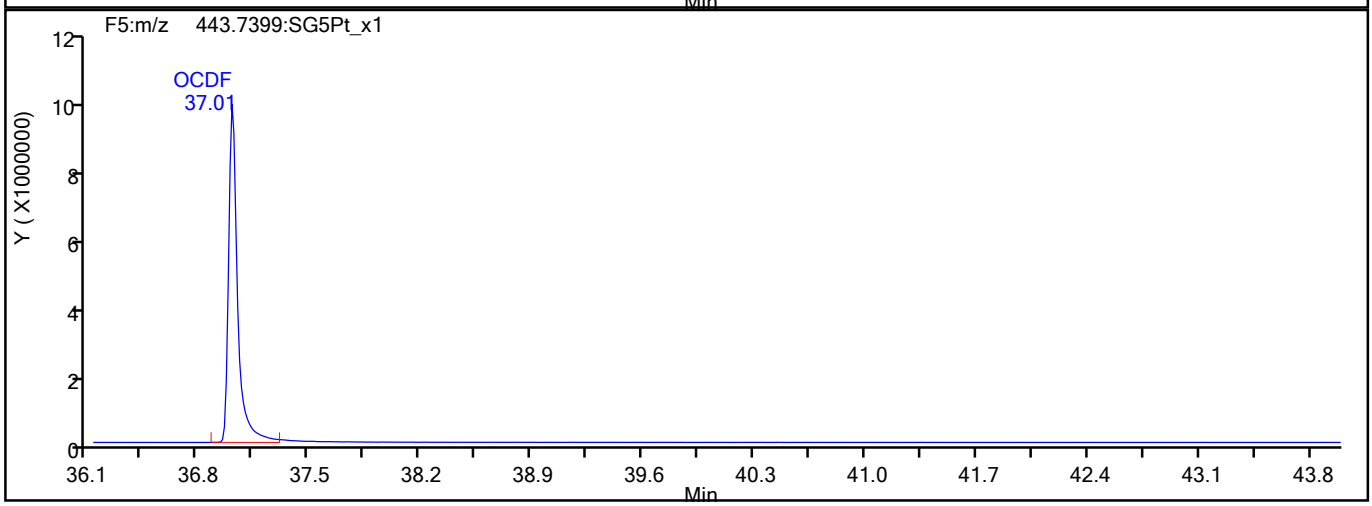

OCDF Interference Mass

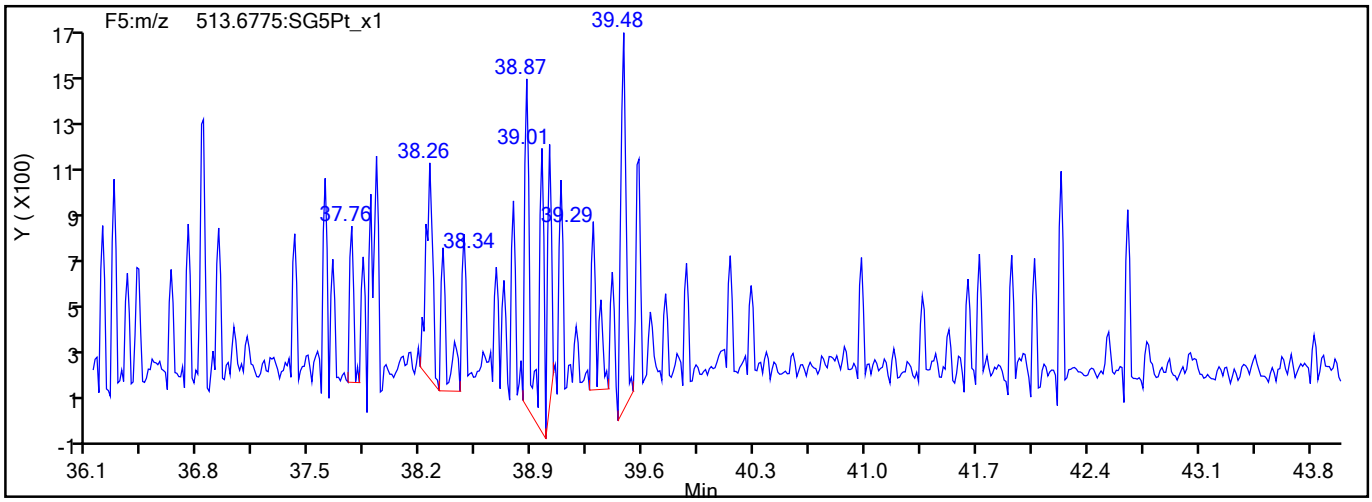

781550

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

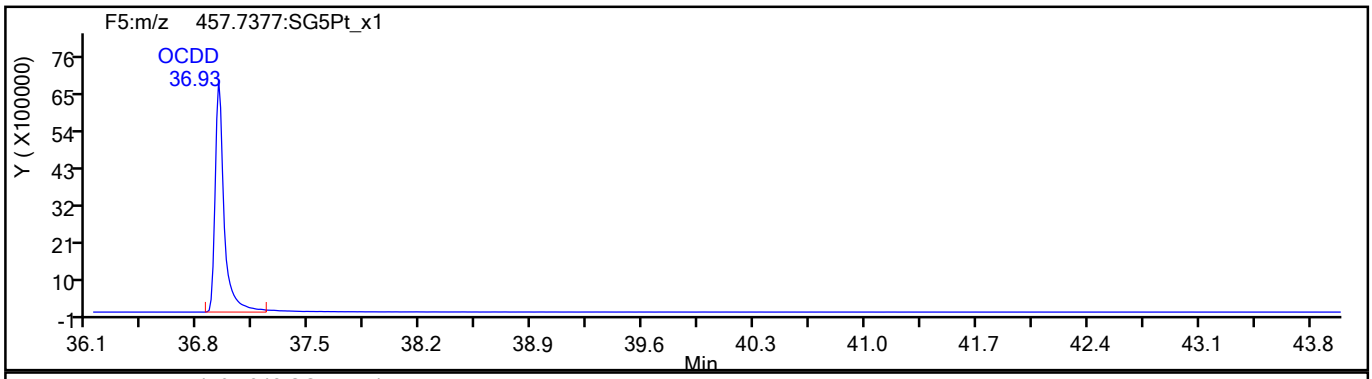

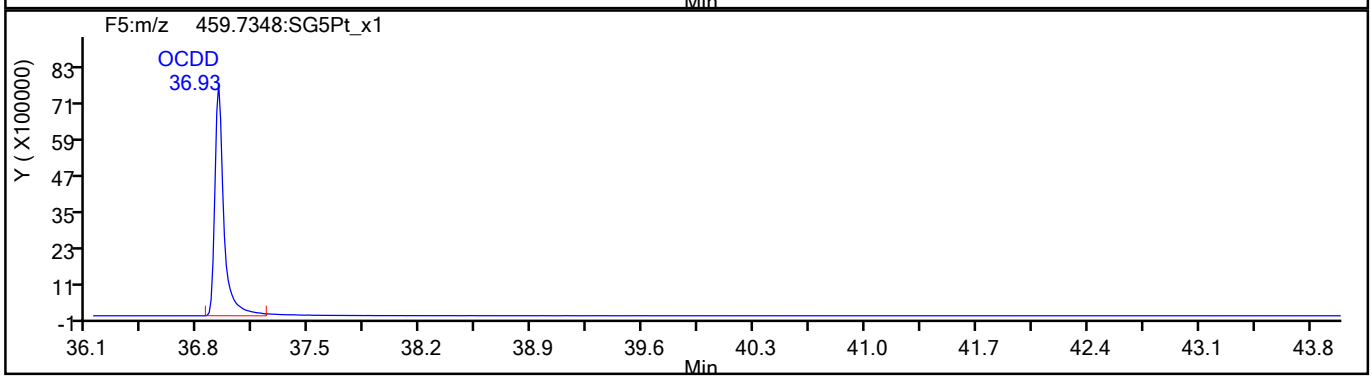

OCDD Standards

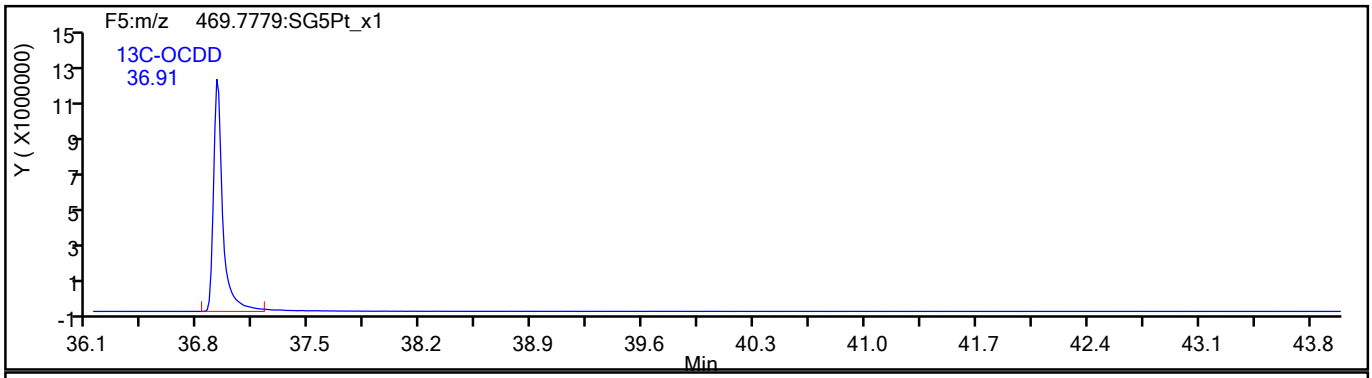

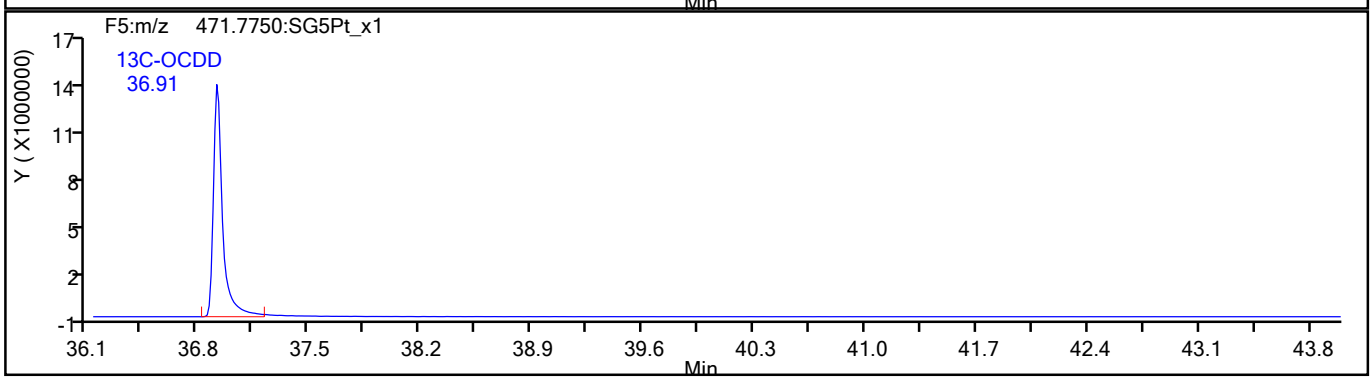

781551

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

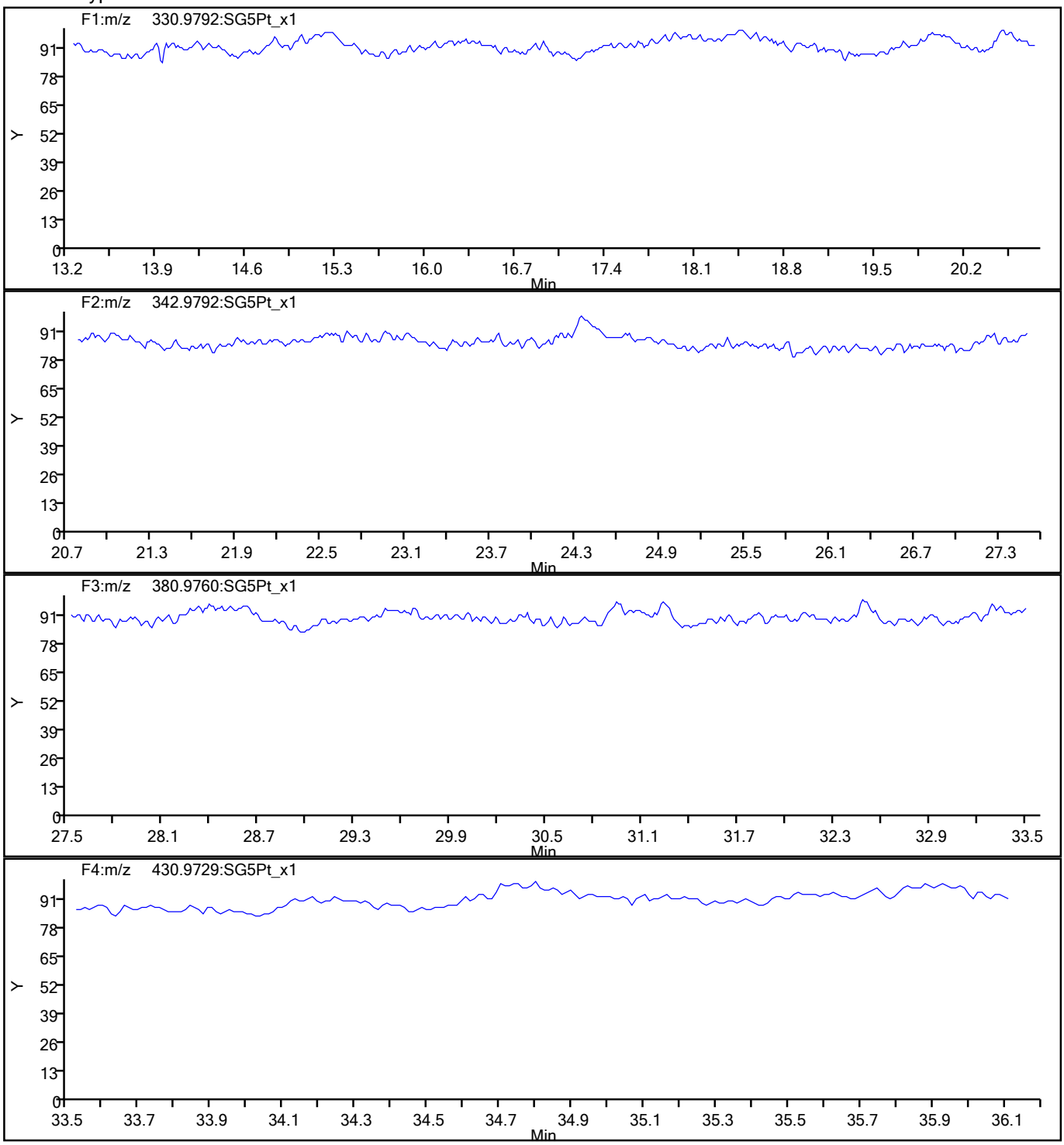

781552

Report Date: 17-Aug-2021 14:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_28.d		
Injection Date:	14-Aug-2021 13:46:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	17
Column Type:	DB-5	Column Dia:	0.32 mm

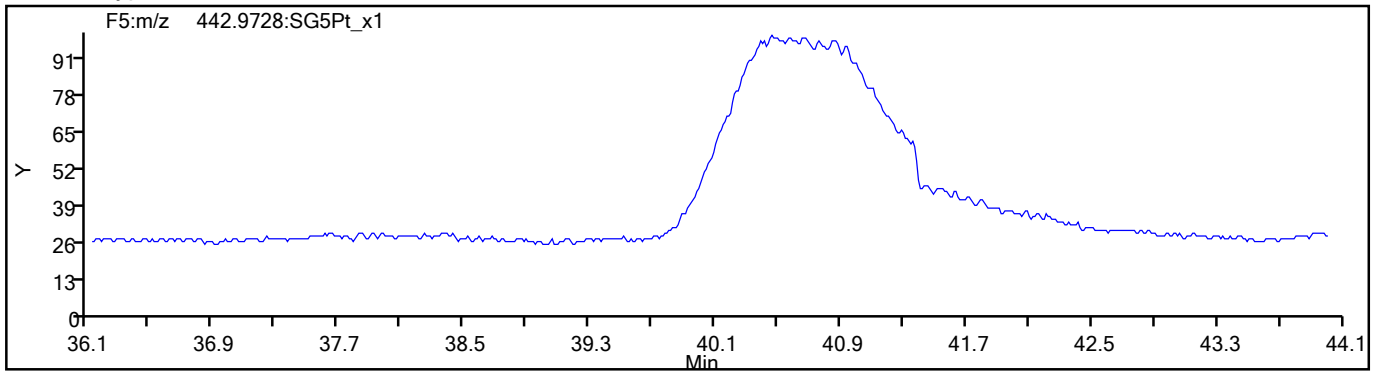

781553

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

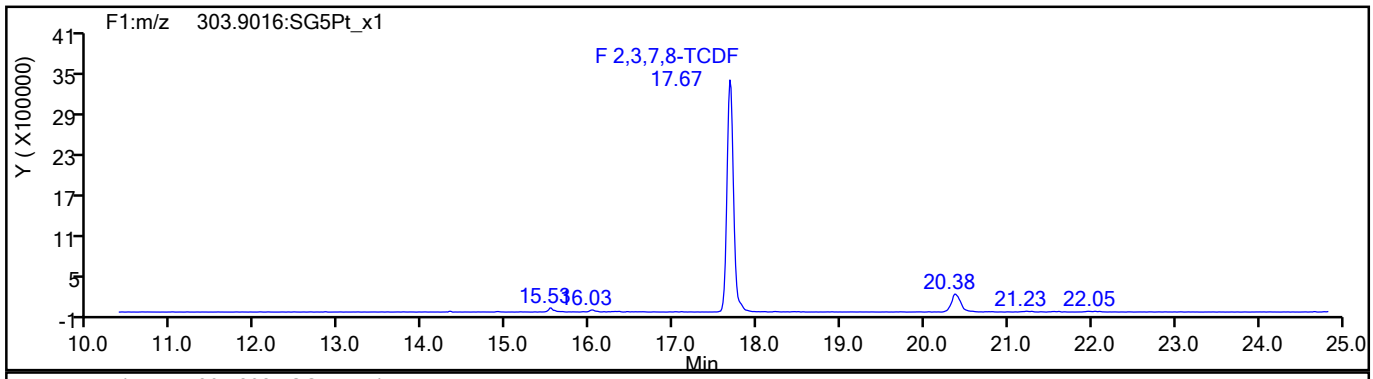

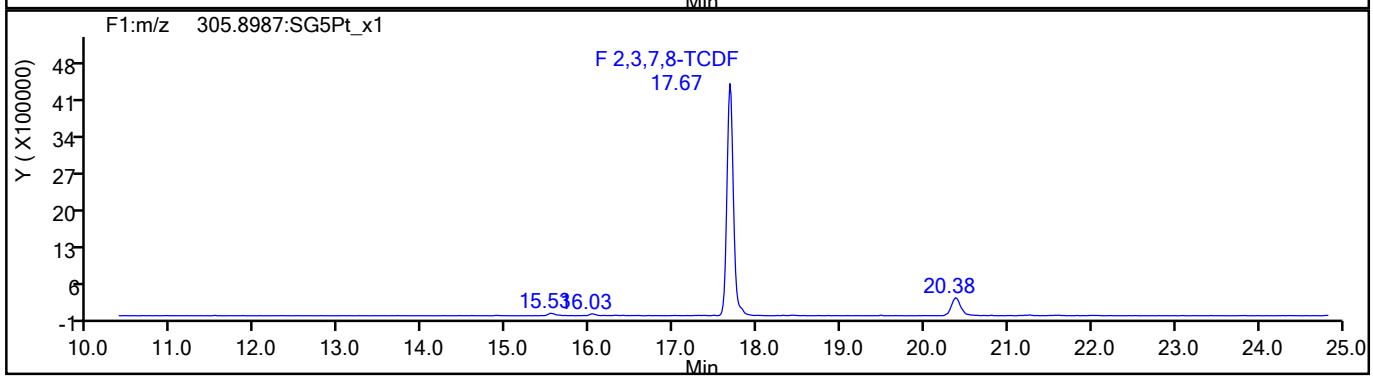

TCDF Standards

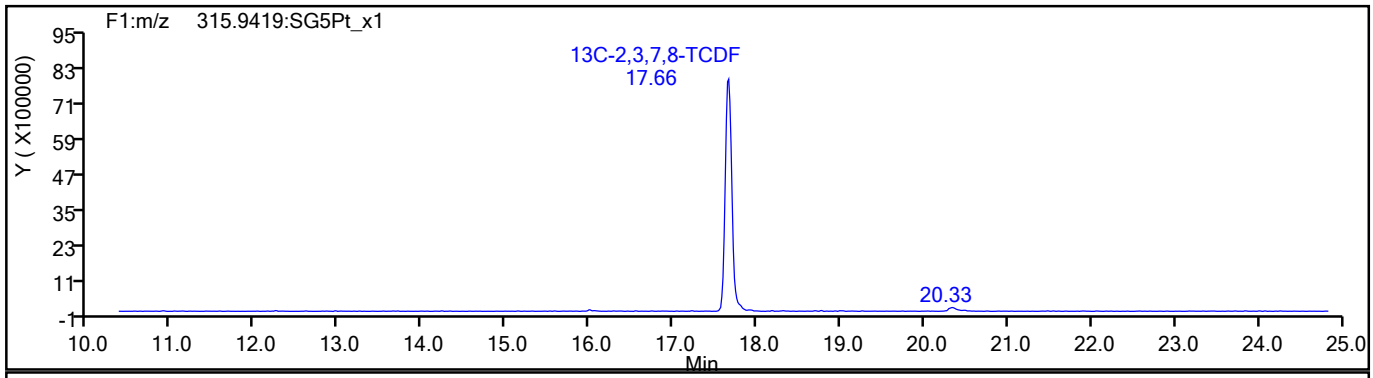

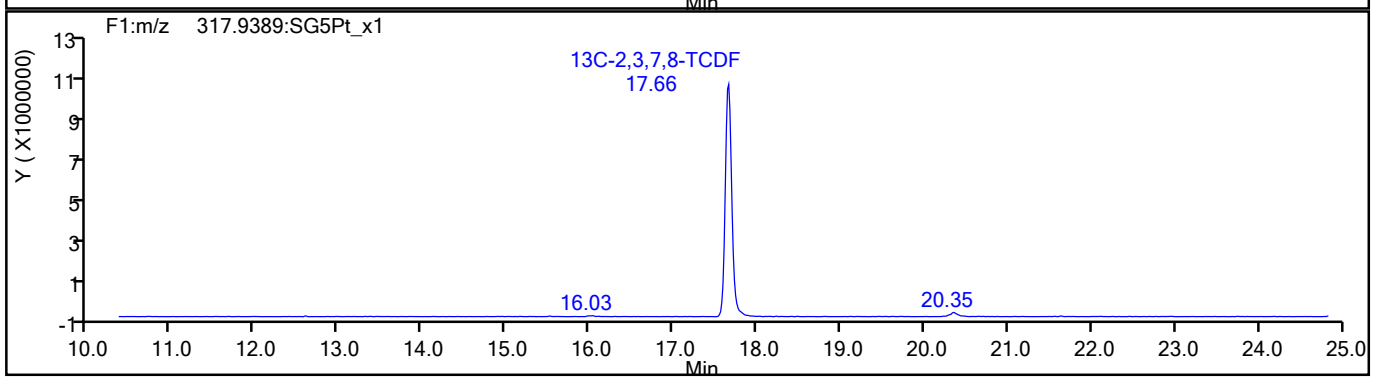

781557

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

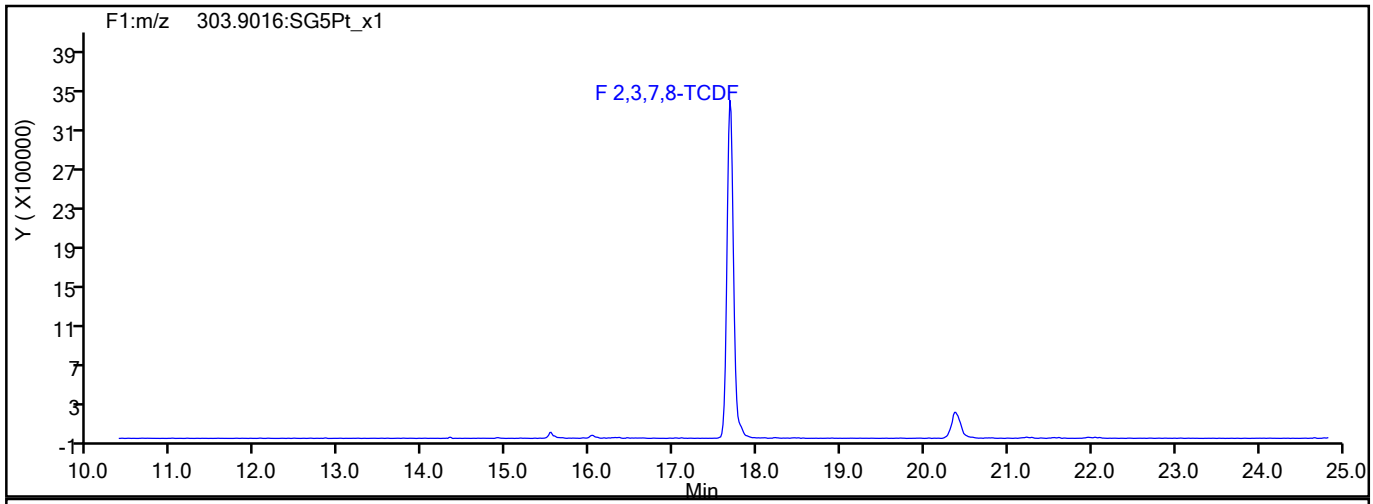

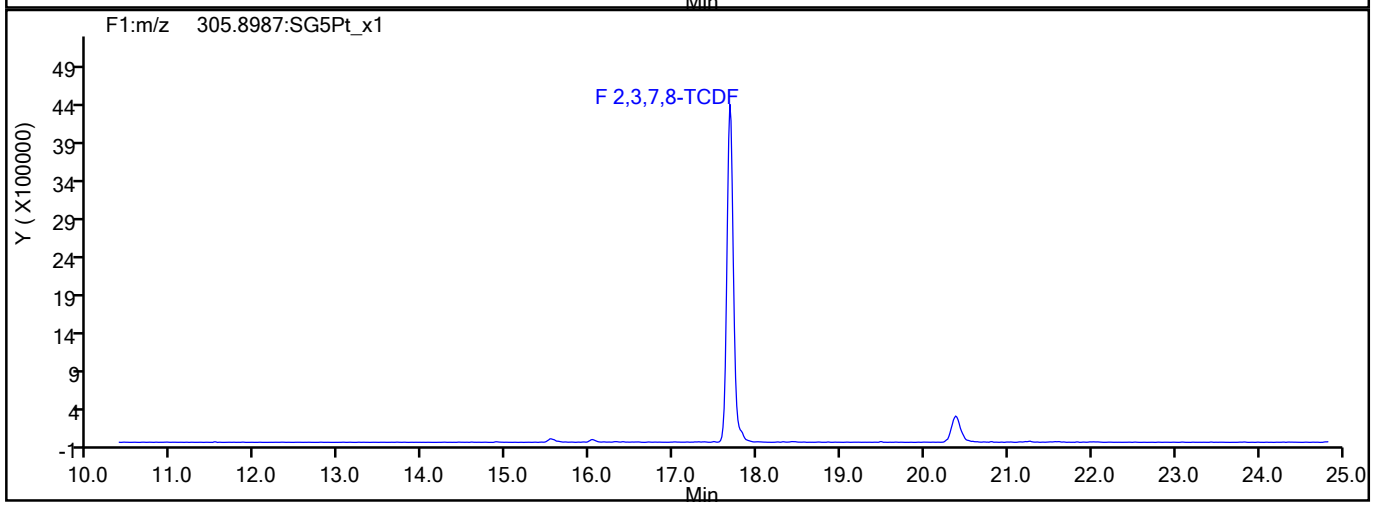

TCDF Interference Mass

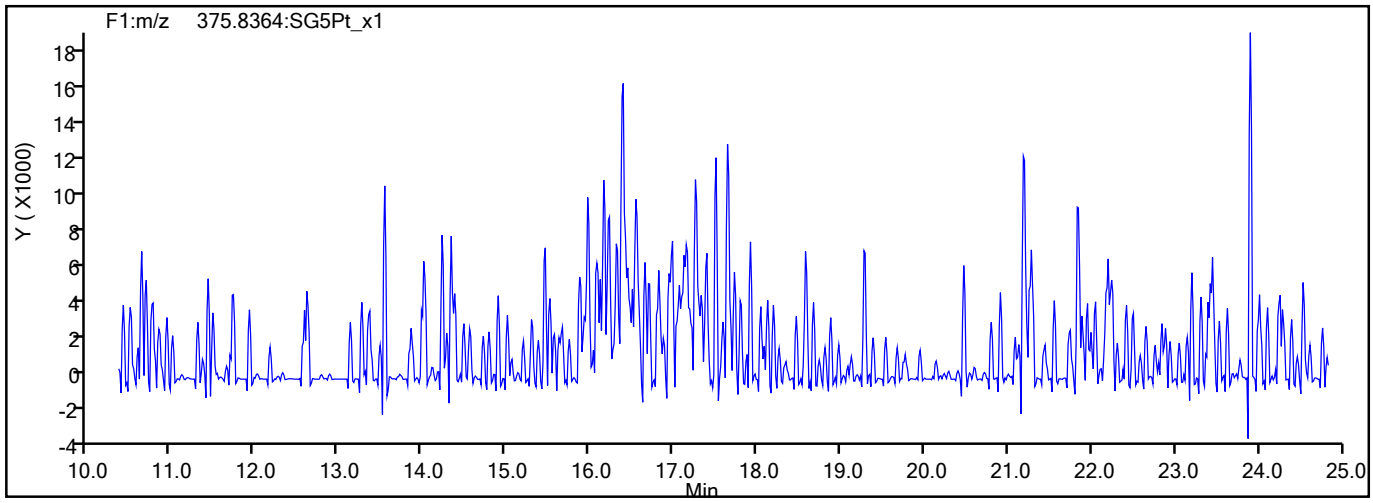

781558

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

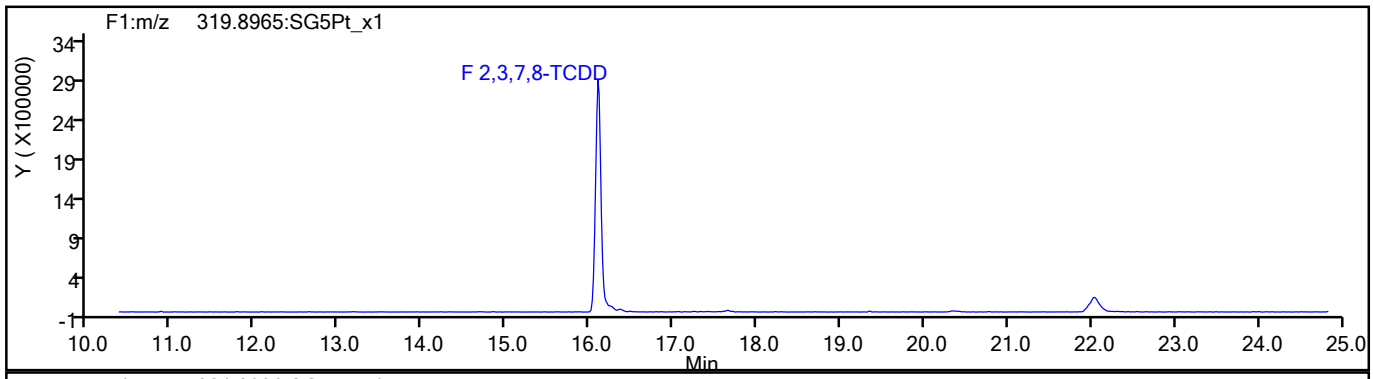

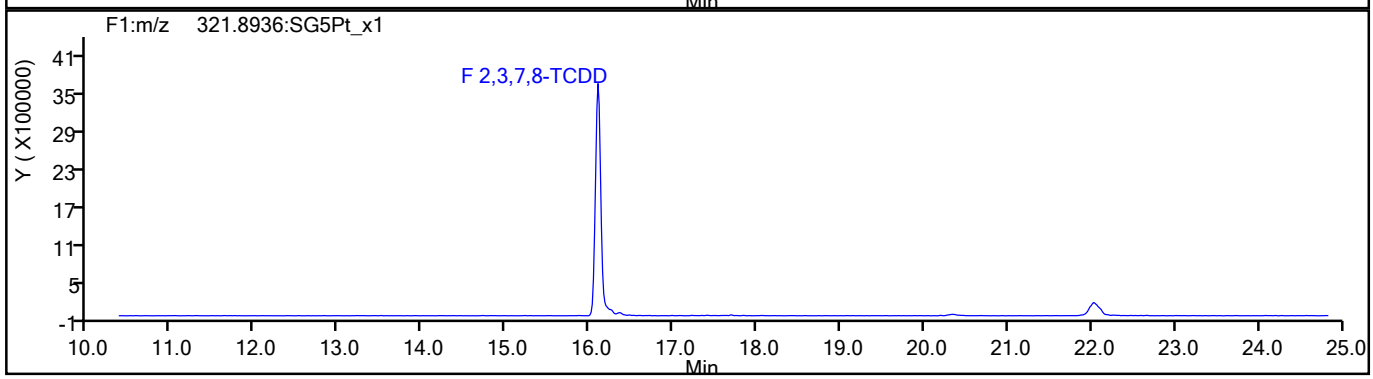

TCDD Standards

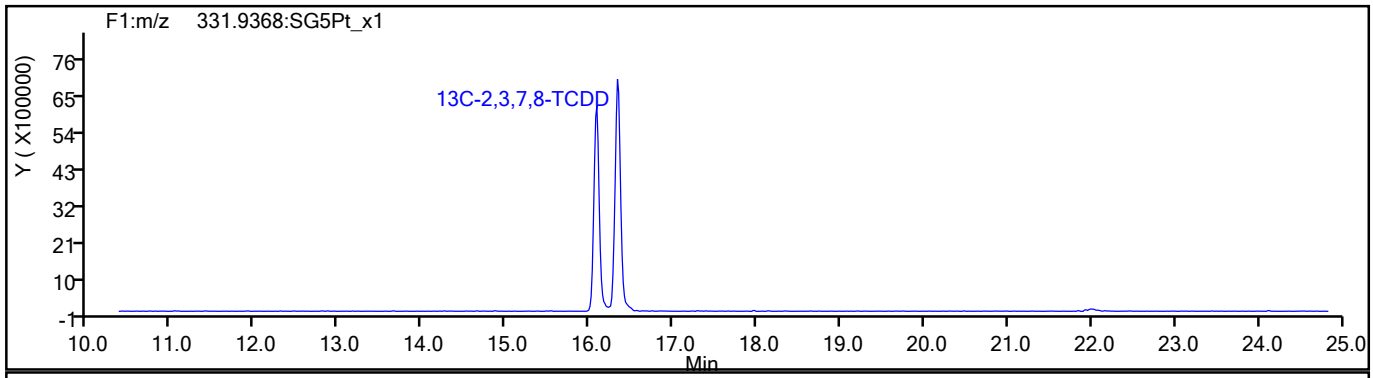

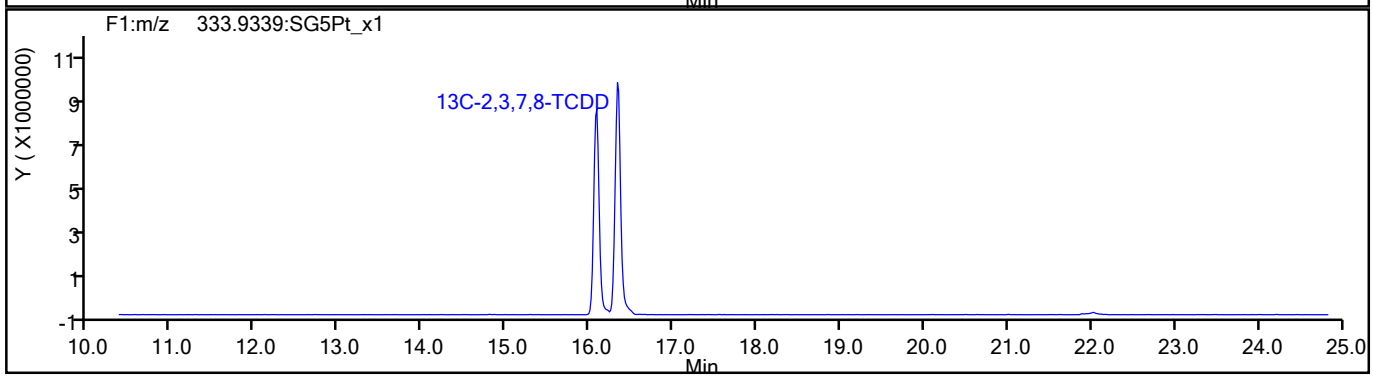

781559

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

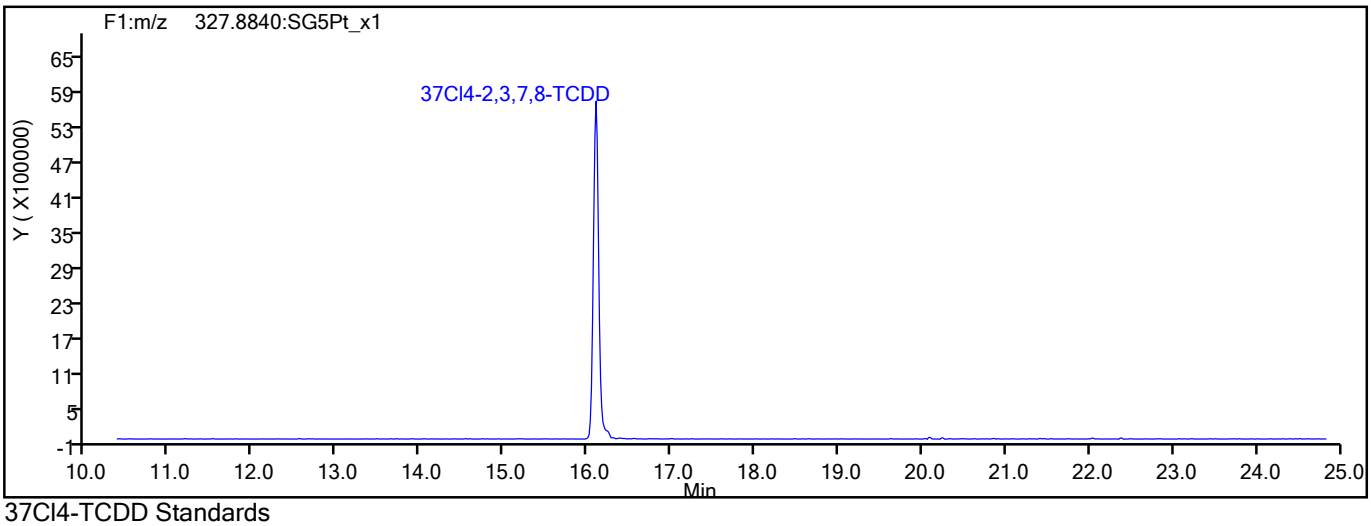

37Cl4-TCDD Standards

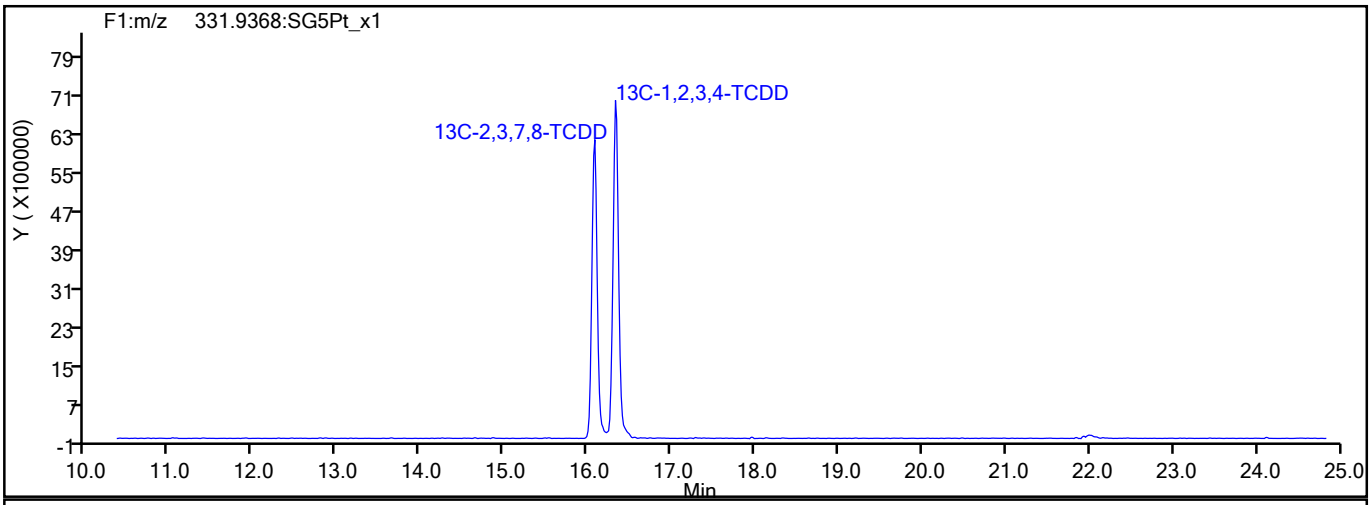

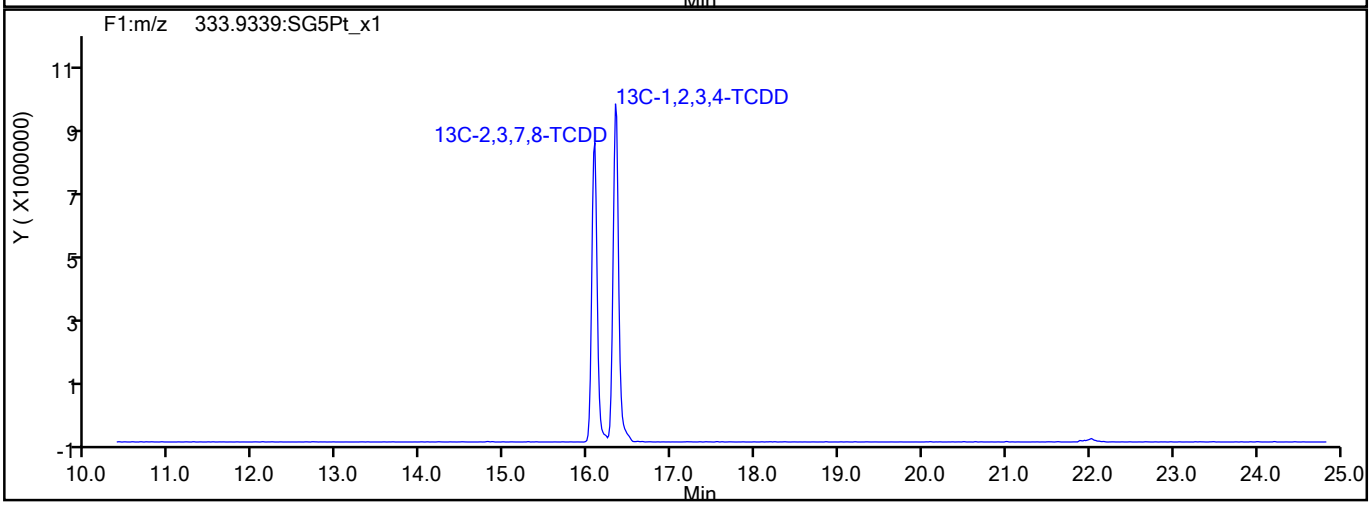

781560

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

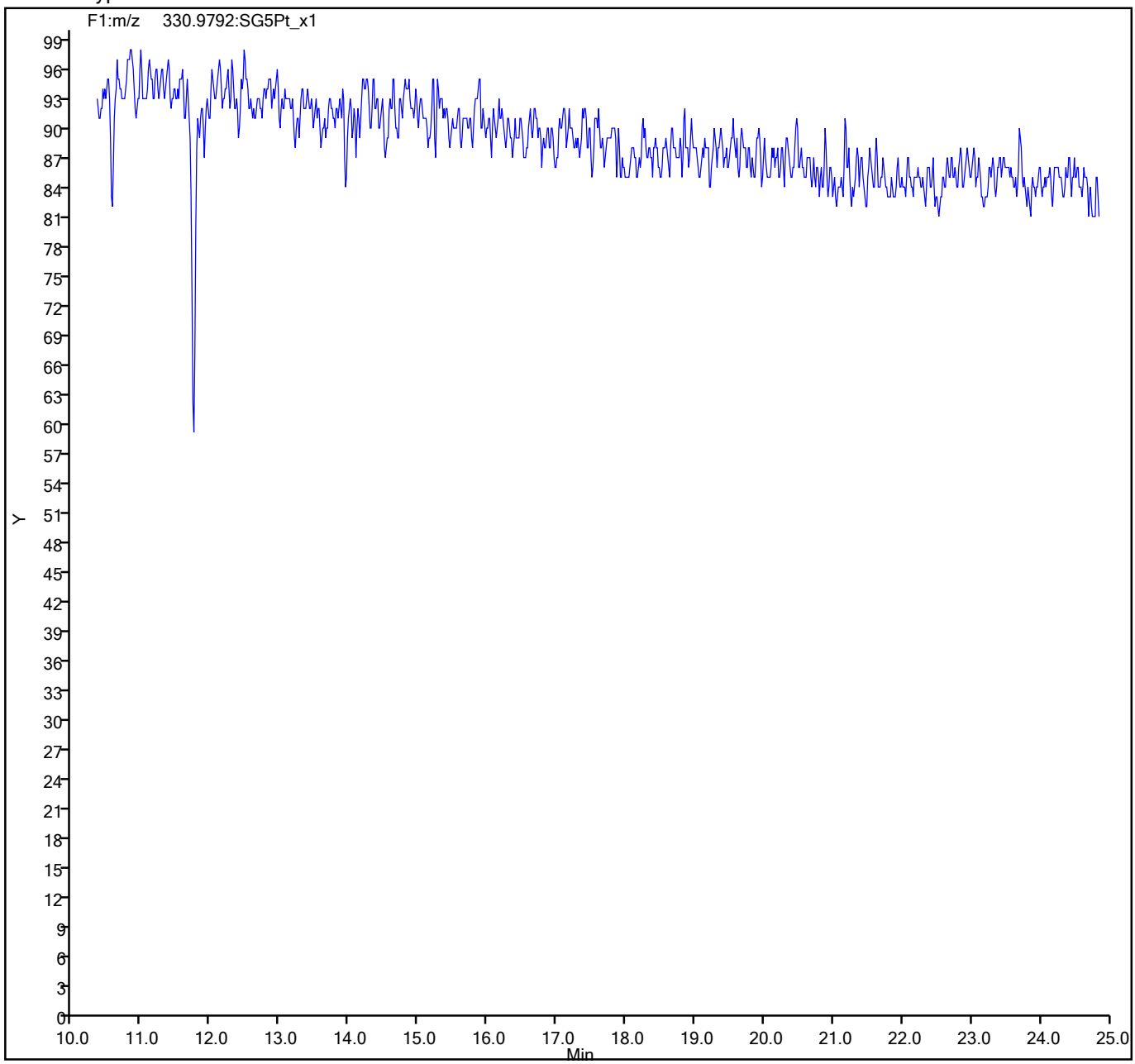

781561

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab Sample ID: CCV 320-518958/2 Calibration Date: 08/23/2021 10:10

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 23AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.038		9.82	10.0	98	78-129
2,3,7,8-TCDF	AveID	0.998	1.004		10.1	10.0	101	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9441		108	100	108	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.458		109	100	109	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8997		10.4	10.0	104	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
23AU2111D2	1	CPS 082321	CPS HRDXNCP_00044				1.00000	
23AU2111D2	2	CCV 082321	CCV CS-4 HRDXNL4_00100				1.00000	
23AU2111D2	3	SB 082321	Solvent Blank C-14				1.00000	
23AU2111D2	4	320-513879	320-76888-A-9-A	20	1613B/Solid	D267	10.00000	g
23AU2111D2	5	320-512871	320-76788-A-21-A	20	1613B/Solid	D265	10.00000	g
23AU2111D2	6	320-513585	320-76769-A-20-A	20	1613B/Solid	D265	10.00000	g
23AU2111D2	7	320-513585	320-76769-A-1-A X5	20	1613B/Solid		10.00000	g
23AU2111D2	8	320-513585	320-76769-A-1-B MS X5	20	1613B/Solid		10.00000	g
23AU2111D2	9	320-513585	320-76769-A-1-C MSD X5	20	1613B/Solid		10.00000	g
23AU2111D2	10						1.00000	
23AU2111D2	11						1.00000	
23AU2111D2	12						1.00000	
23AU2111D2	13						1.00000	
23AU2111D2	14						1.00000	
23AU2111D2	15		KSS 08-23-21				1.00000	
23AU2111D2	16						1.00000	

LOGFILE CHECKED
DB 8/23/21

781563

Peak Locate Examination:23-AUG-2021:09:31 File:23AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

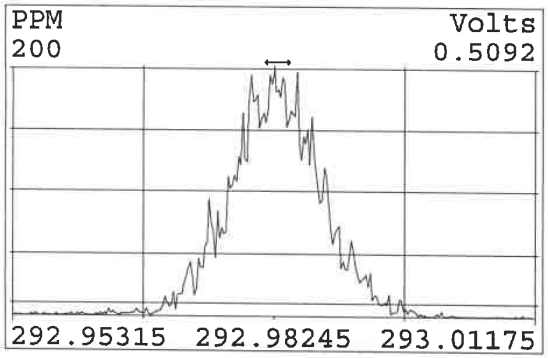

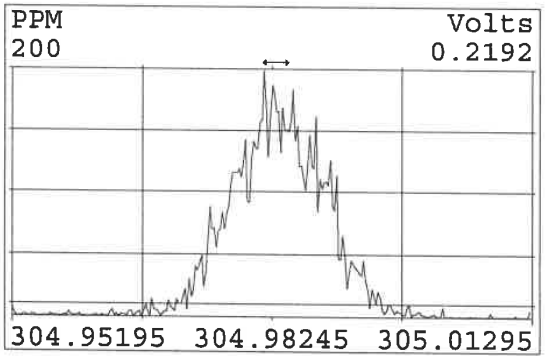

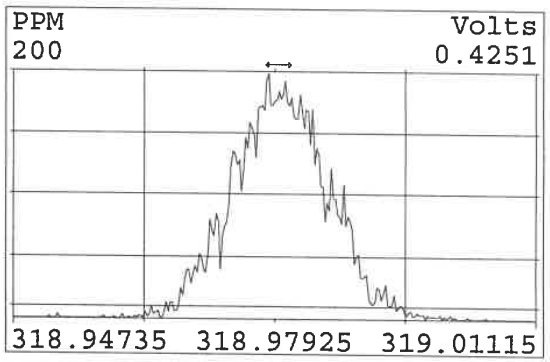

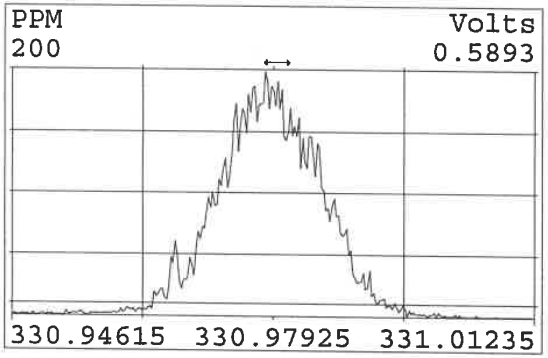

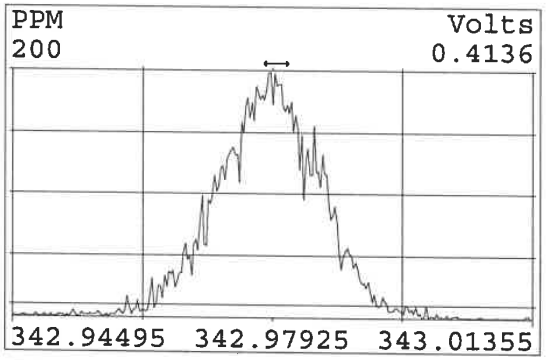

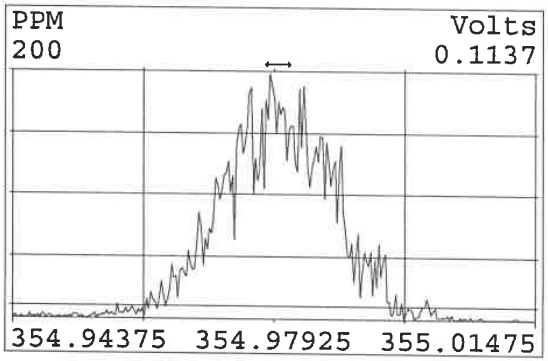

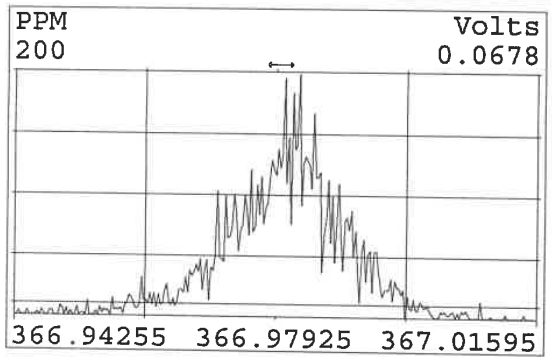

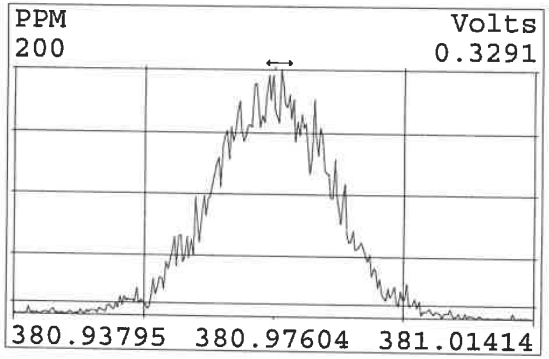

781564

Peak Locate Examination:23-AUG-2021:15:21 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

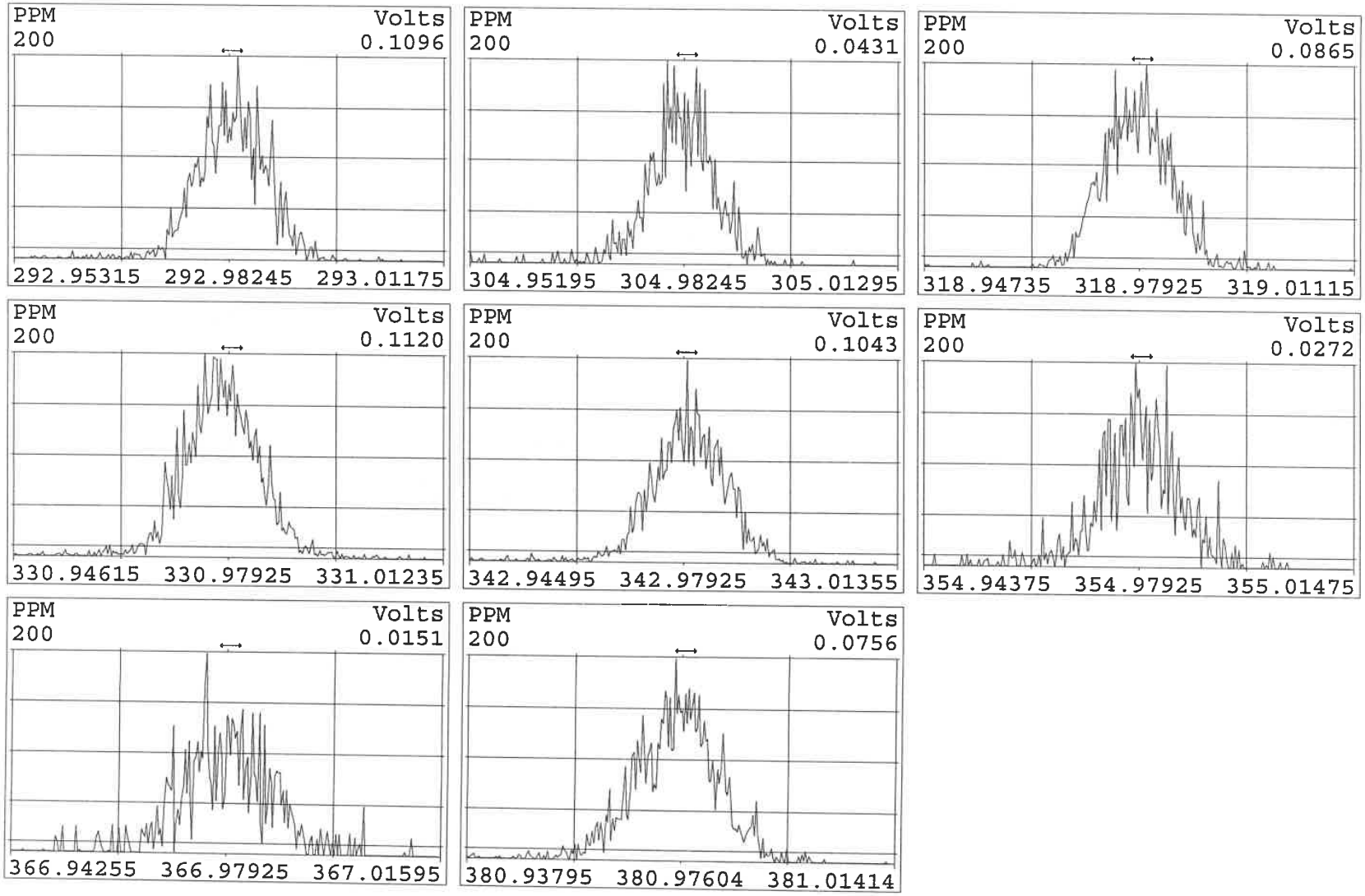

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2021 10:10:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:43:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.312	16971560	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	24750130	0.83	1.3327	109.4	109.4	0.6226	0.6226	109	
2,3,7,8-TCDF	17.643	2483909	0.79	0.9978	10.1	10.1	0.0976	0.0976	101	
D 13C-2,3,7,8-TCDD	16.065	16022399	0.78	0.8749	107.9	107.9	0.9142	0.9142	108	
2,3,7,8-TCDD	16.093	1663816	0.82	1.0570	9.824	9.824	0.1305	0.1305	98.24	
$ 37Cl4-2,3,7,8-TCDD	16.093	1526894		0.8648	10.4	10.4	0.1464	0.1464	104	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2021 10:10:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:43:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.312	16.312	0		7313306	1607766	7398	18495	217		
333.9339	16.298	16.312	-1		9658254	2138046	4587	11467	466	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.080	11243672	2122892	6842	17105	310		
317.9389	17.629	17.615	1	1.081	13506458	2501128	5591	13977	447	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.643	0	1.002	1095594	194388	644	1610	302		
305.8987	17.656	17.643	1	1.002	1388315	256841	1157	2892	222	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	0.985	7024679	1536870	7398	18495	208		
333.9339	16.065	16.065	0	0.985	8997720	1912819	4587	11467	417	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.093	0	1.002	751350	174426	1159	2897	150		
321.8936	16.093	16.093	0	1.002	912466	213269	744	1860	287	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.093	16.093	0	0.987	1526894	322057	1897	4742	170		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

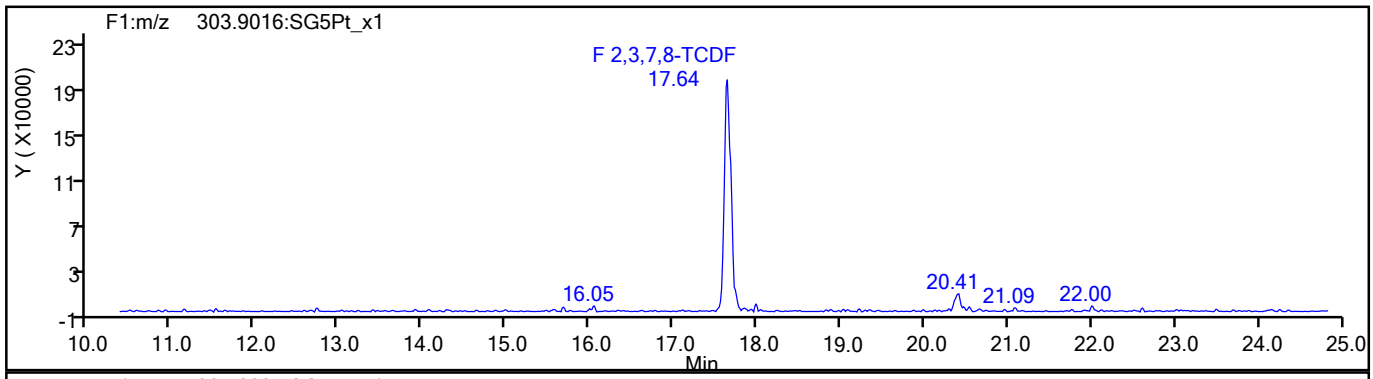

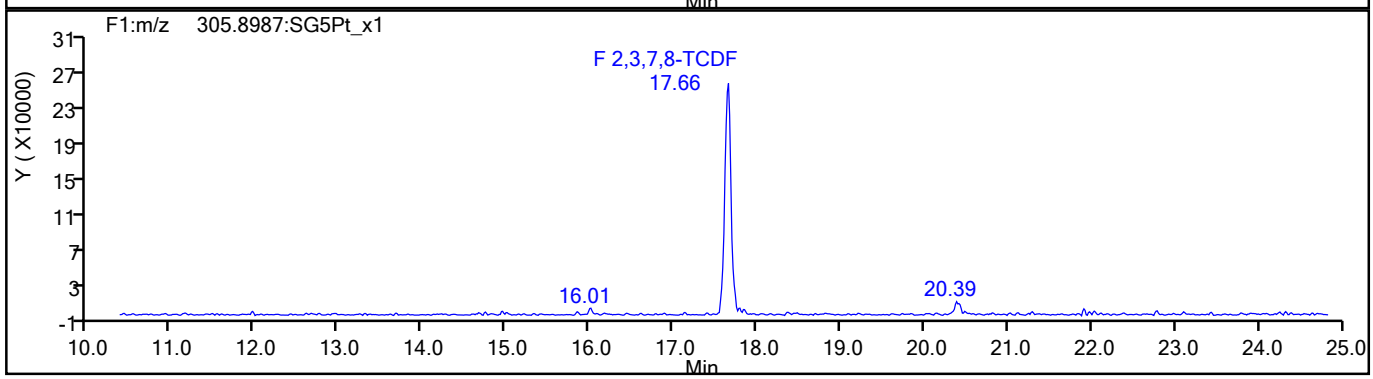

TCDF Standards

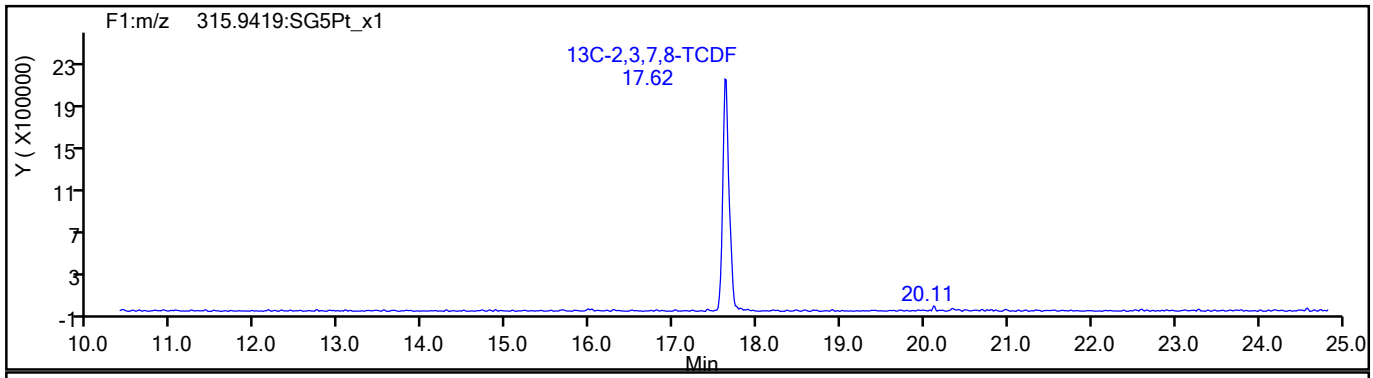

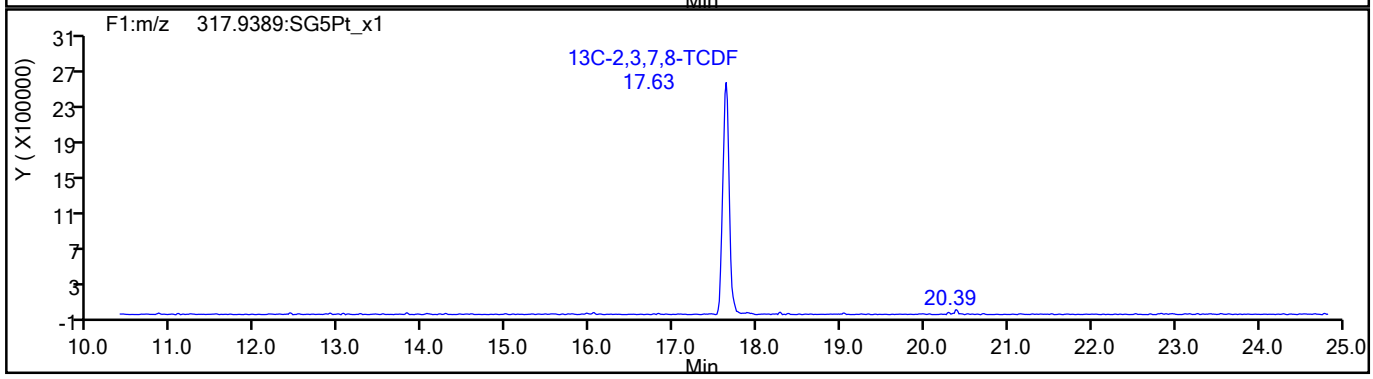

781568

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

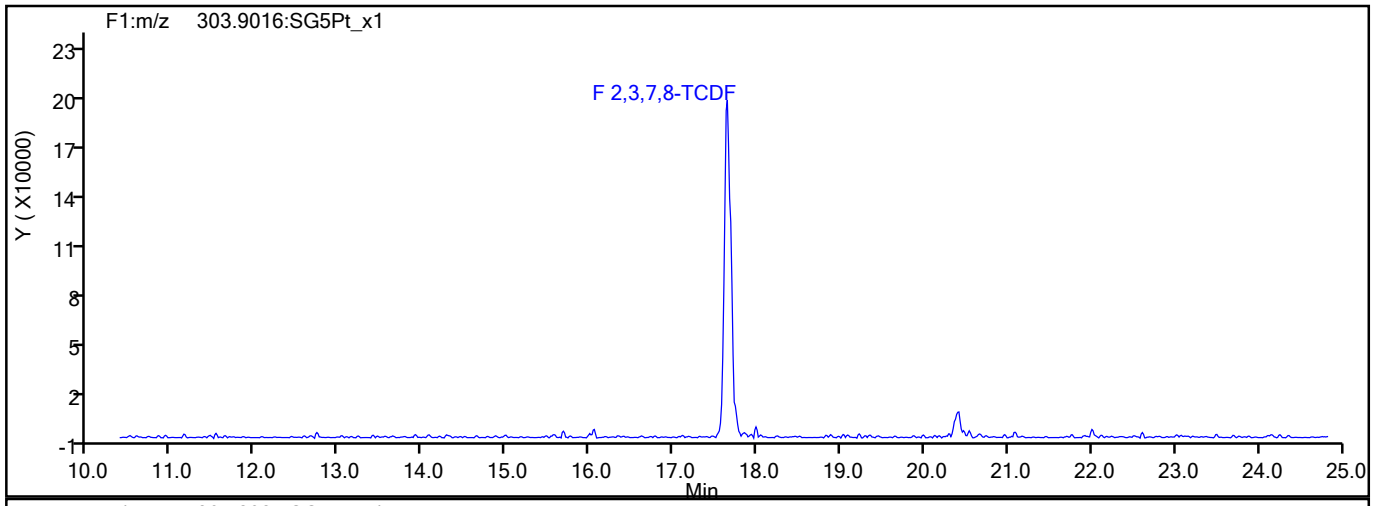

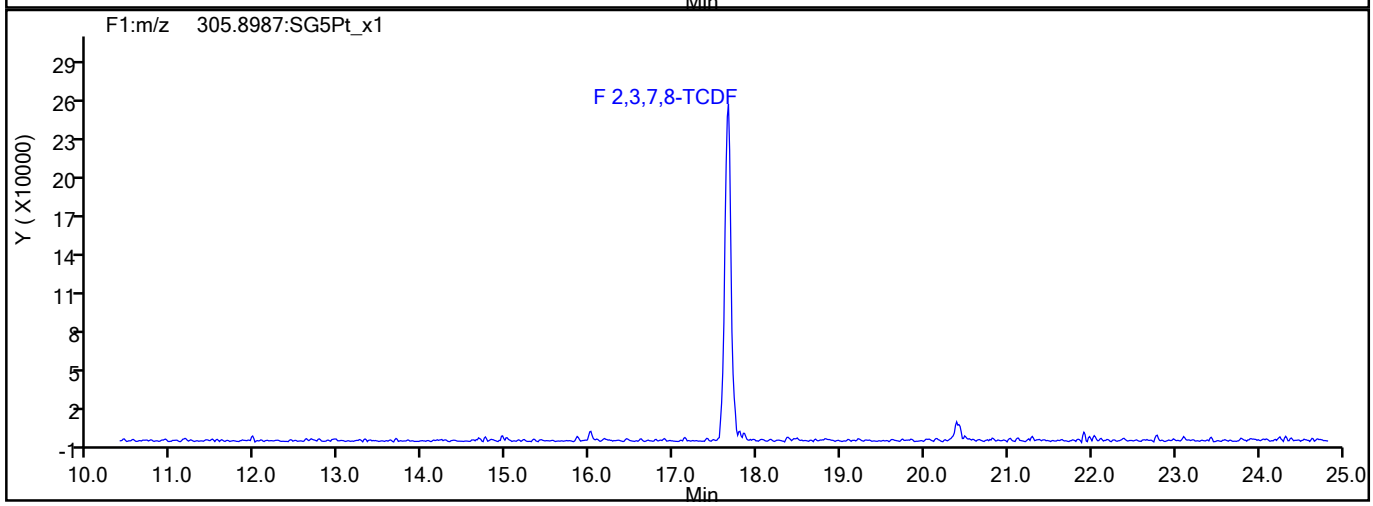

TCDF Interference Mass

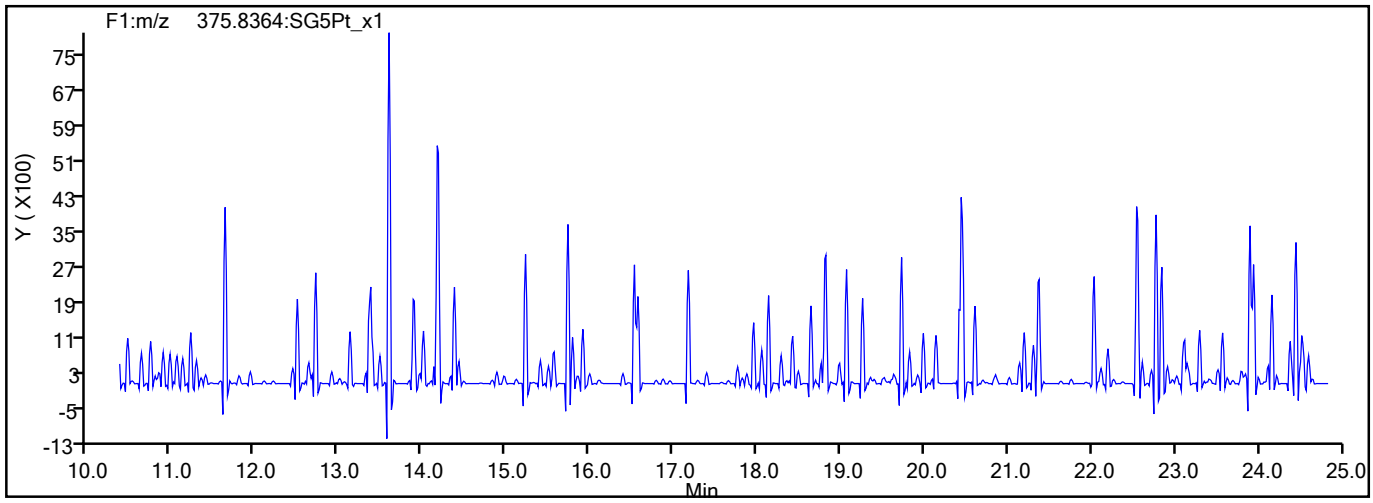

781569

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

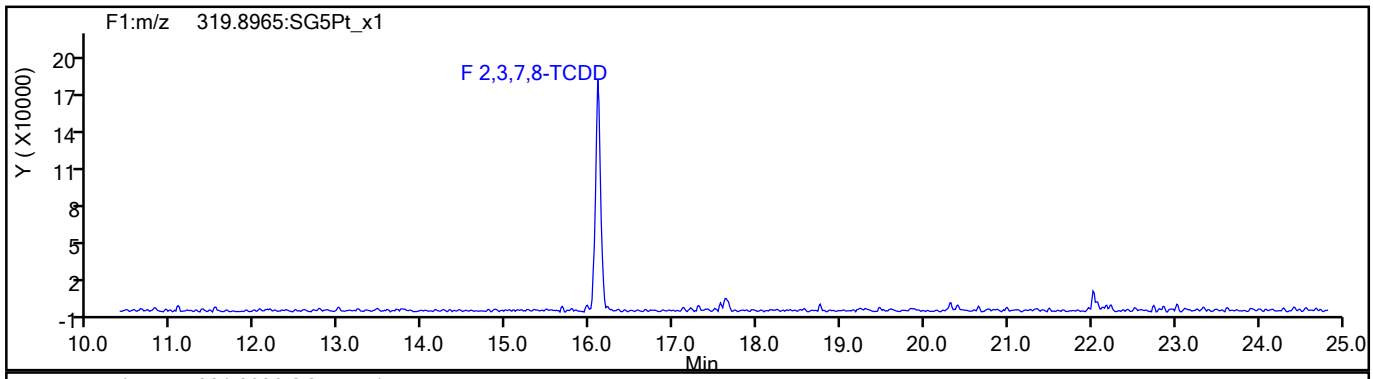

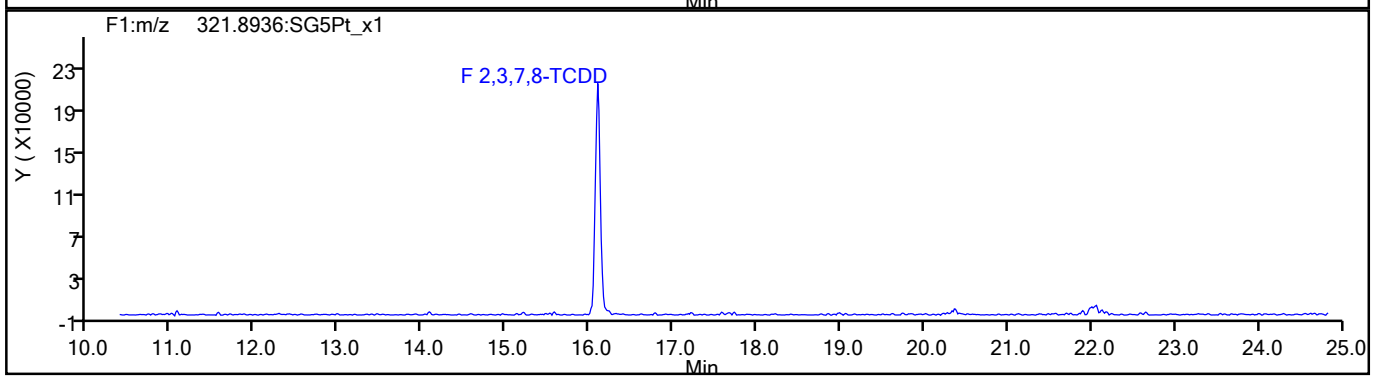

TCDD Standards

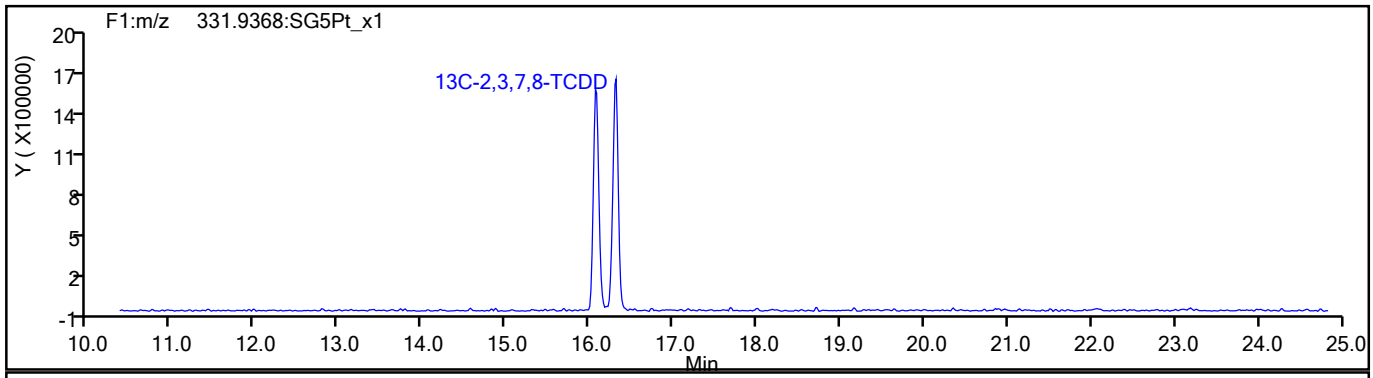

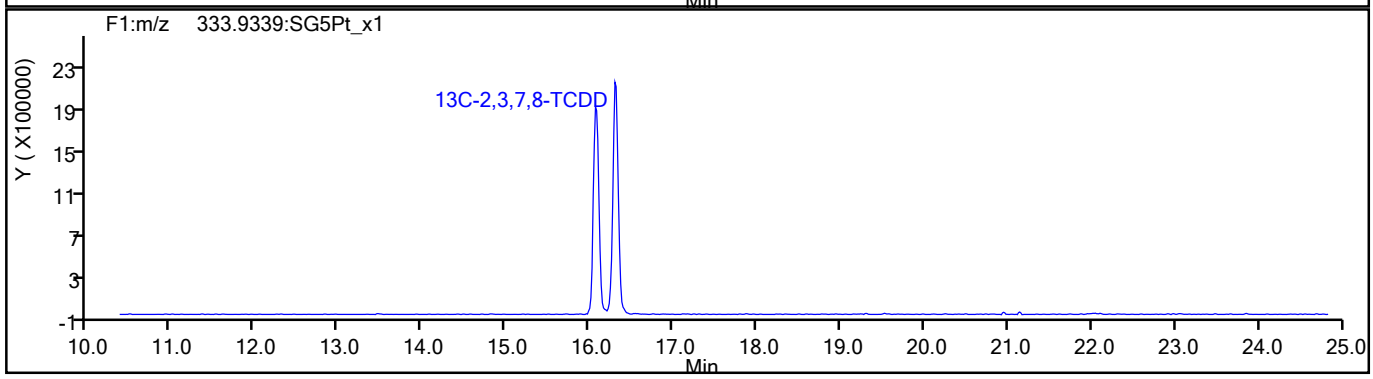

781570

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

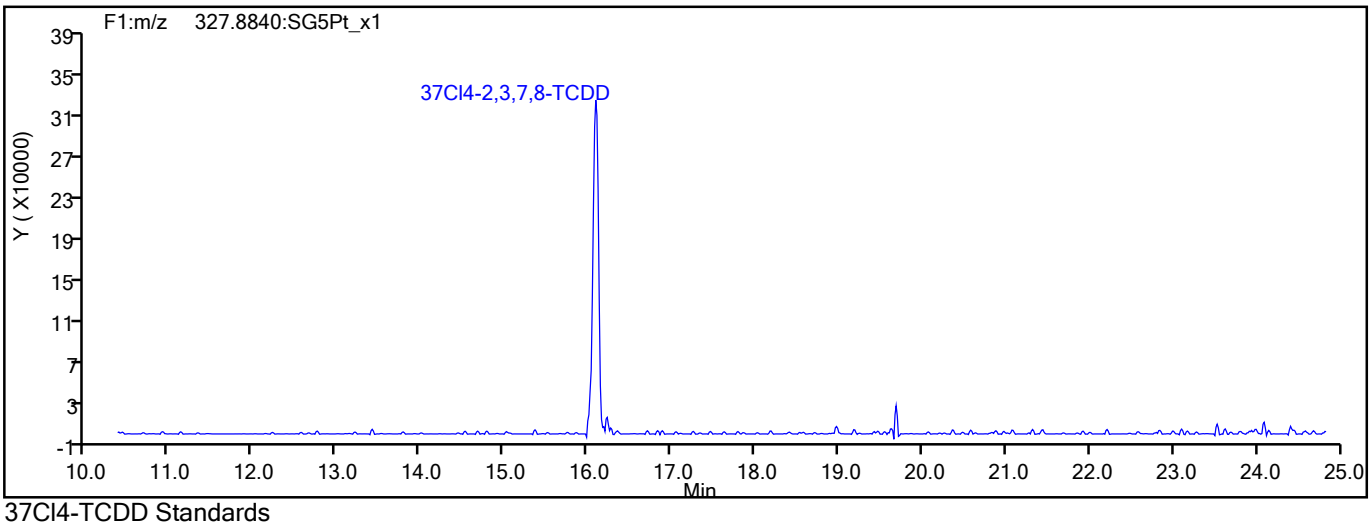

37Cl4-TCDD Standards

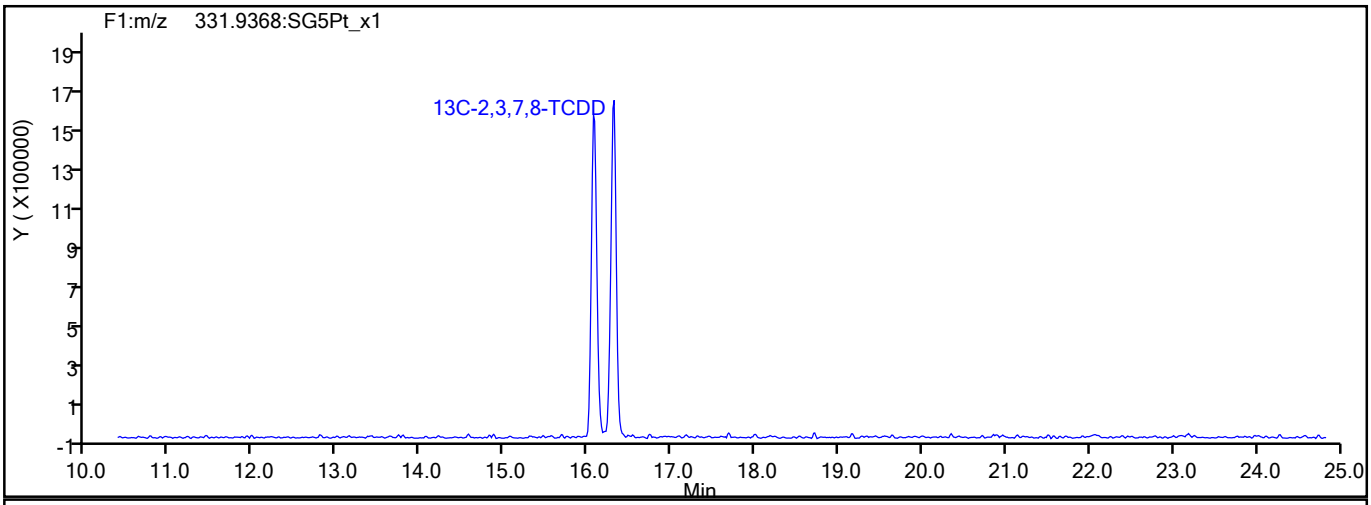

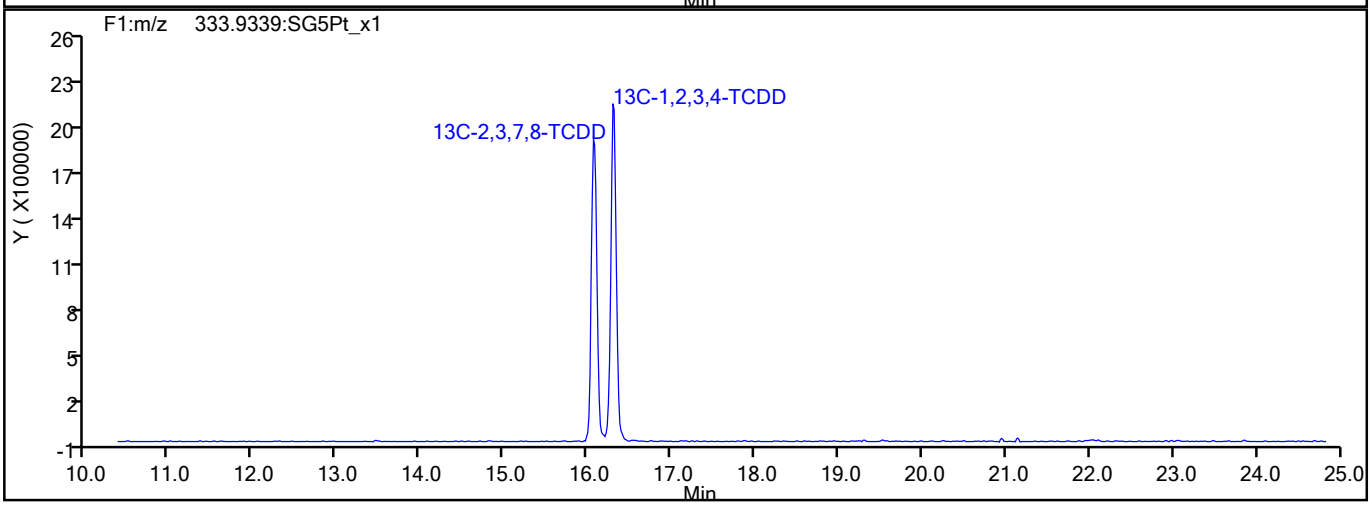

781571

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

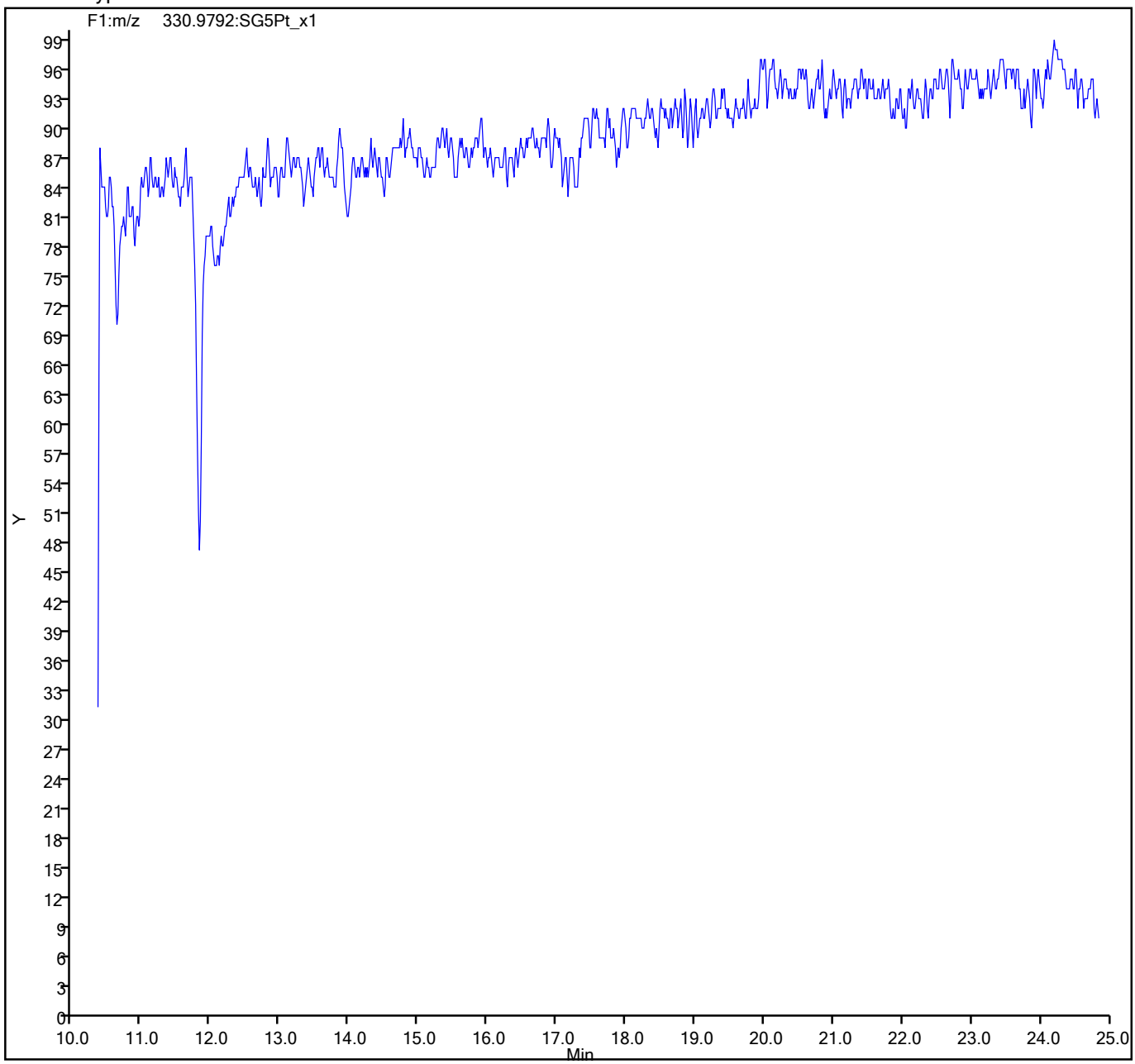

781572

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Lab Sample ID: CCV 320-518979/2 Calibration Date: 08/23/2021 16:12

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 23AU21A11D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	0.9770		9.24	10.0	92	78-129
2,3,7,8-TCDF	AveID	0.998	0.9288		9.31	10.0	93	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9322		107	100	107	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.415		106	100	106	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8519		9.85	10.0	99	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
23AU21A11D2	1	CPS 082321A	CPS HRDXNCP_00044				1.00000	
23AU21A11D2	2	CCV 082321A	CCV CS-4 HRDXNL4_00100				1.00000	
23AU21A11D2	3	SB 082321A	Solvent Blank C-14				1.00000	
23AU21A11D2	4	320-512871	320-76788-A-9-A	20	1613B/Solid	D265	10.00000	g
23AU21A11D2	5	320-513586	320-76887-A-9-A	20	1613B/Solid	D266	10.00000	g
23AU21A11D2	6	320-513585	320-76769-A-8-A	20	1613B/Solid	D265	10.00000	g
23AU21A11D2	7	320-513585	320-76769-A-6-A	20	1613B/Solid		10.00000	g
23AU21A11D2	8	320-513585	320-76769-A-7-A	20	1613B/Solid		10.00000	g
23AU21A11D2	9	320-513585	320-76769-A-25-A	20	1613B/Solid		10.00000	g
23AU21A11D2	10	320-513585	320-76769-A-18-A	20	1613B/Solid		10.00000	g
23AU21A11D2	11	320-513586	320-76769-A-34-A	20	1613B/Solid	D266	10.00000	g
23AU21A11D2	12	320-513585	320-76769-A-17-A	20	1613B/Solid	D265	10.00000	g
23AU21A11D2	13	320-513586	320-76769-A-31-A	20	1613B/Solid	D266	10.00000	g
23AU21A11D2	14	320-513586	320-76769-A-33-A	20	1613B/Solid		10.00000	g
23AU21A11D2	15	320-513585	320-76769-A-16-A	20	1613B/Solid	D265	10.00000	g
23AU21A11D2	16	320-513586	320-76769-A-32-A	20	1613B/Solid	D266	10.00000	g
23AU21A11D2	17	320-513586	320-76769-A-30-A	20	1613B/Solid		10.00000	g
23AU21A11D2	18	320-513879	320-76769-A-4-B	20	1613B/Solid	D267	10.00000	g
23AU21A11D2	19						1.00000	
23AU21A11D2	20						1.00000	
23AU21A11D2	21						1.00000	
23AU21A11D2	22						1.00000	
23AU21A11D2	23						1.00000	
23AU21A11D2	24		DB 08-23-21				1.00000	
23AU21A11D2	25						1.00000	

Logfile ✓'d
8/24/21 KSS

Peak Locate Examination:23-AUG-2021:15:33 File:23AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

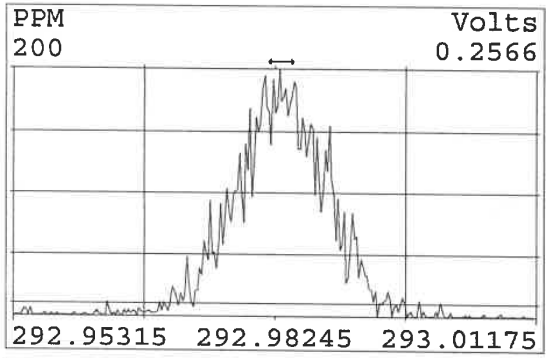

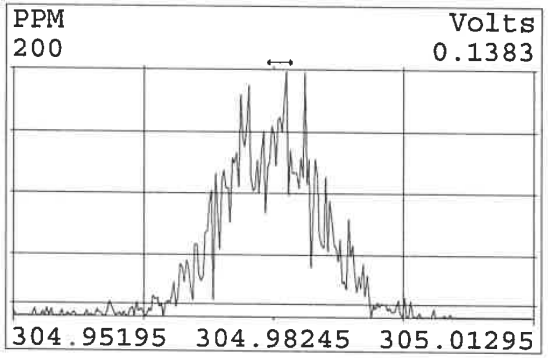

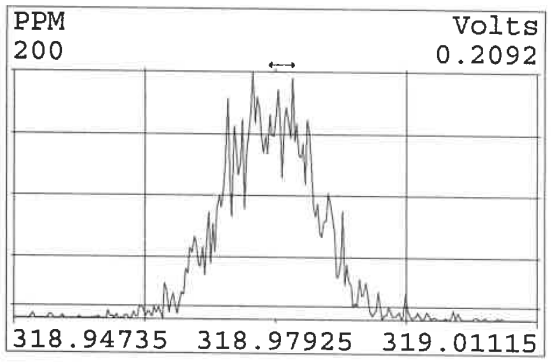

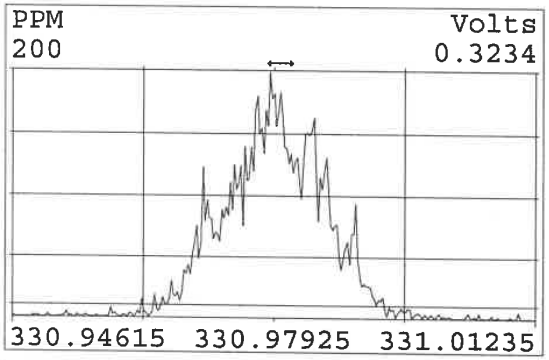

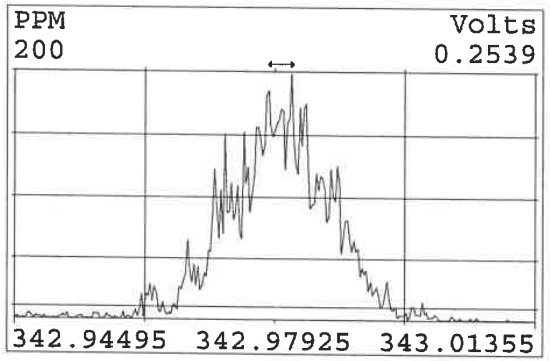

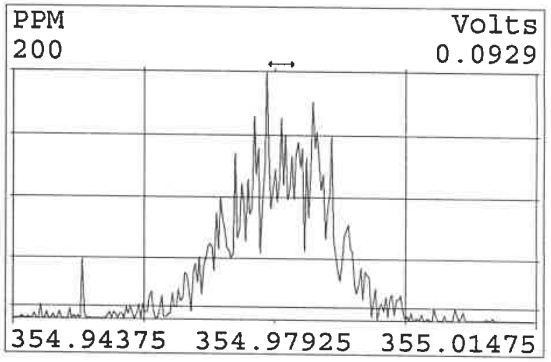

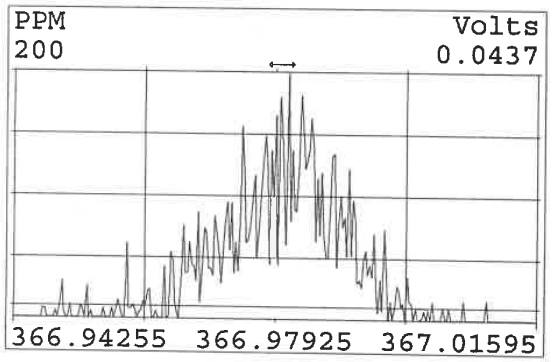

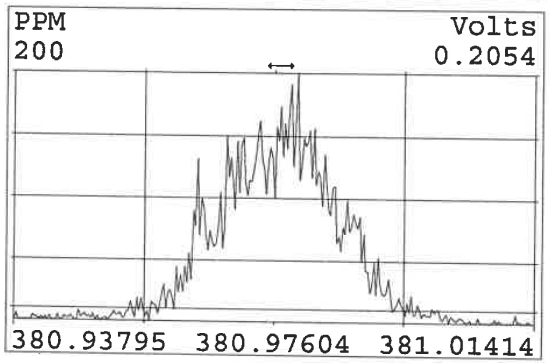

Peak Locate Examination:24-AUG-2021:03:30 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

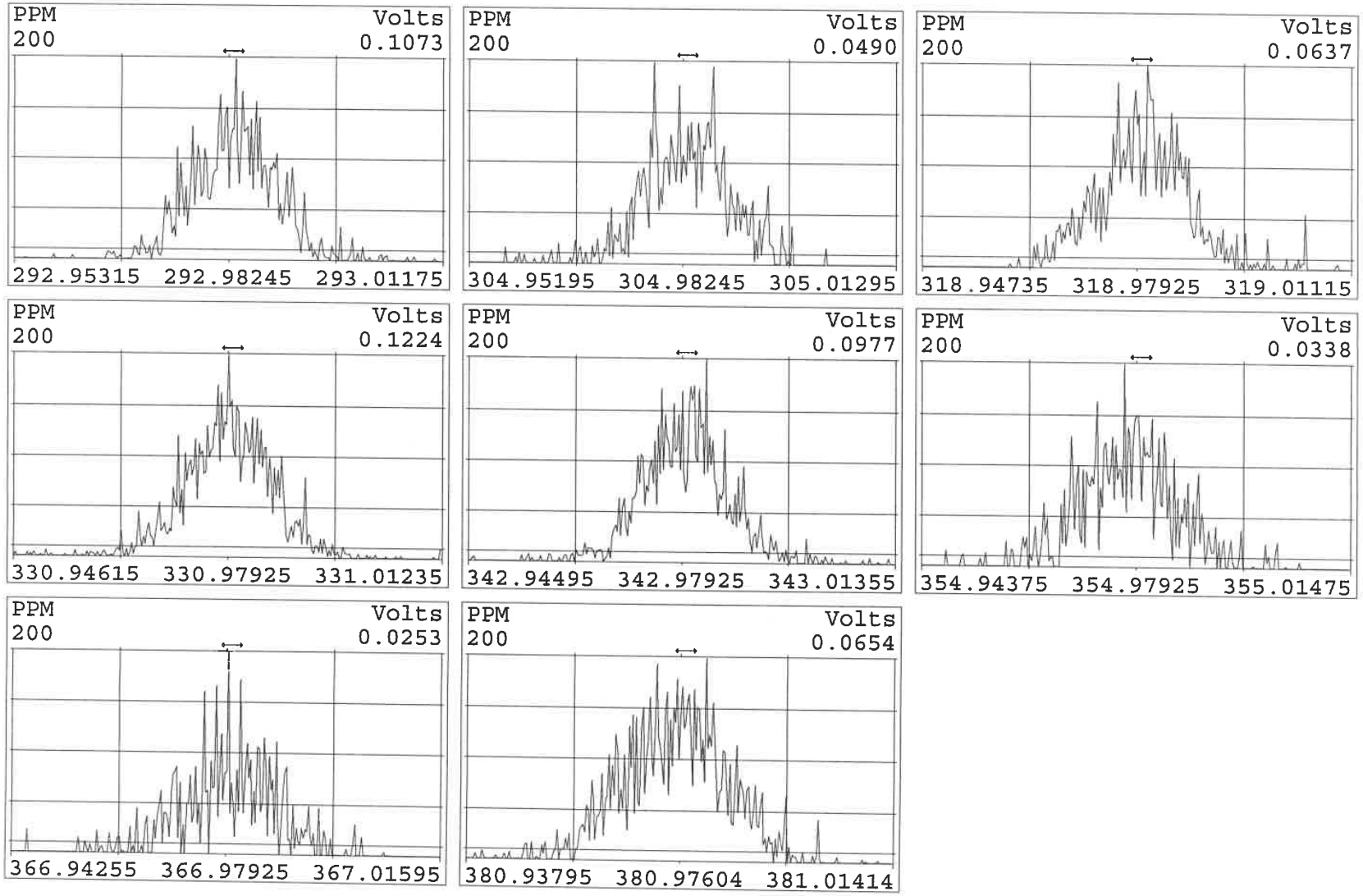

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2021 16:12:40 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:13:16

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	54200262	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	76698090	0.78	1.3327	106.2	106.2	0.2954	0.2954	106	
2,3,7,8-TCDF	17.643	7123807	0.81	0.9978	9.309	9.309	0.0640	0.0640	93.09	
D 13C-2,3,7,8-TCDD	16.065	50526805	0.75	0.8749	106.5	106.5	0.3200	0.3200	107	
2,3,7,8-TCDD	16.079	4936344	0.79	1.0570	9.243	9.243	0.0661	0.0661	92.43	
$ 37Cl4-2,3,7,8-TCDD	16.093	4617218		0.8648	9.850	9.850	0.0451	0.0451	98.50	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2021 16:12:40 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:13:16

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.298	16.298	0		23828852	5208477	8177	20442	637		
333.9339	16.298	16.298	0		30371410	6668751	5123	12807	1302	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.081	33708553	6168866	9314	23285	662		
317.9389	17.629	17.615	1	1.082	42989537	8144875	9390	23475	867	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.643	0	1.002	3178735	579321	1438	3595	403		
305.8987	17.643	17.643	0	1.002	3945072	703015	2219	5547	317	0.81(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	0.986	21653368	4888638	8177	20442	598		
333.9339	16.065	16.065	0	0.986	28873437	6356793	5123	12807	1241	0.75(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.079	16.079	0	1.001	2182274	476513	1780	4450	268		
321.8936	16.079	16.079	0	1.001	2754070	588013	1361	3402	432	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.093	16.093	0	0.987	4617218	1056796	1855	4637	570		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

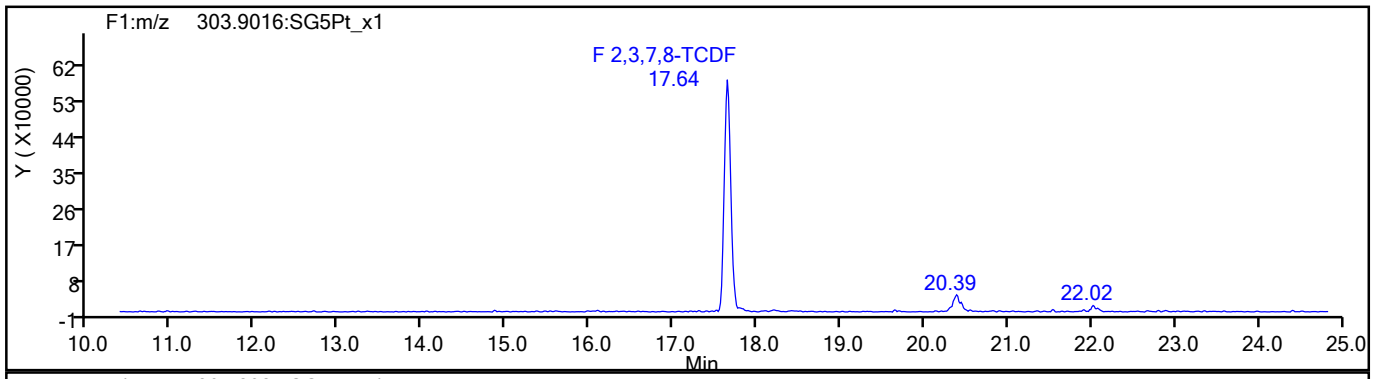

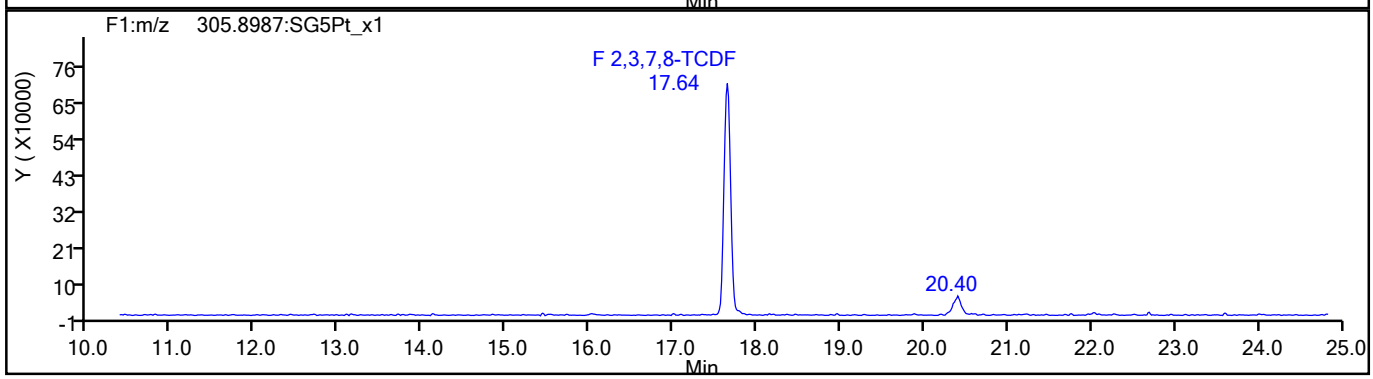

TCDF Standards

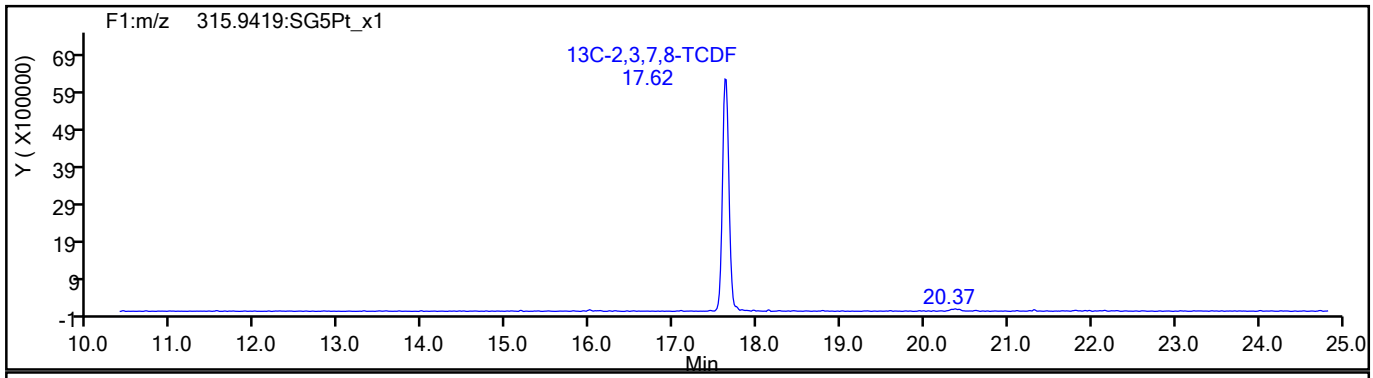

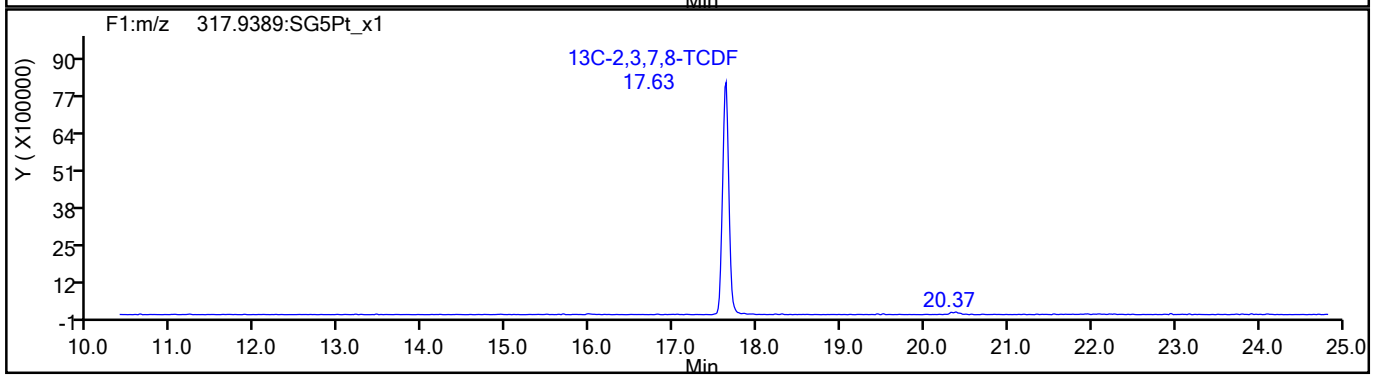

781579

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

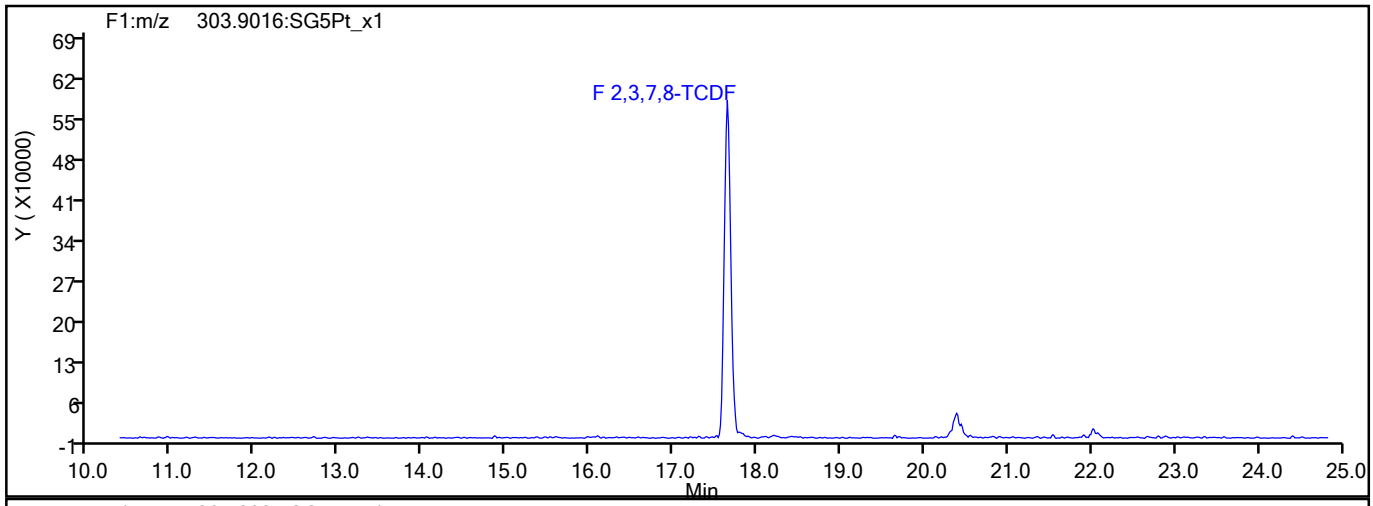

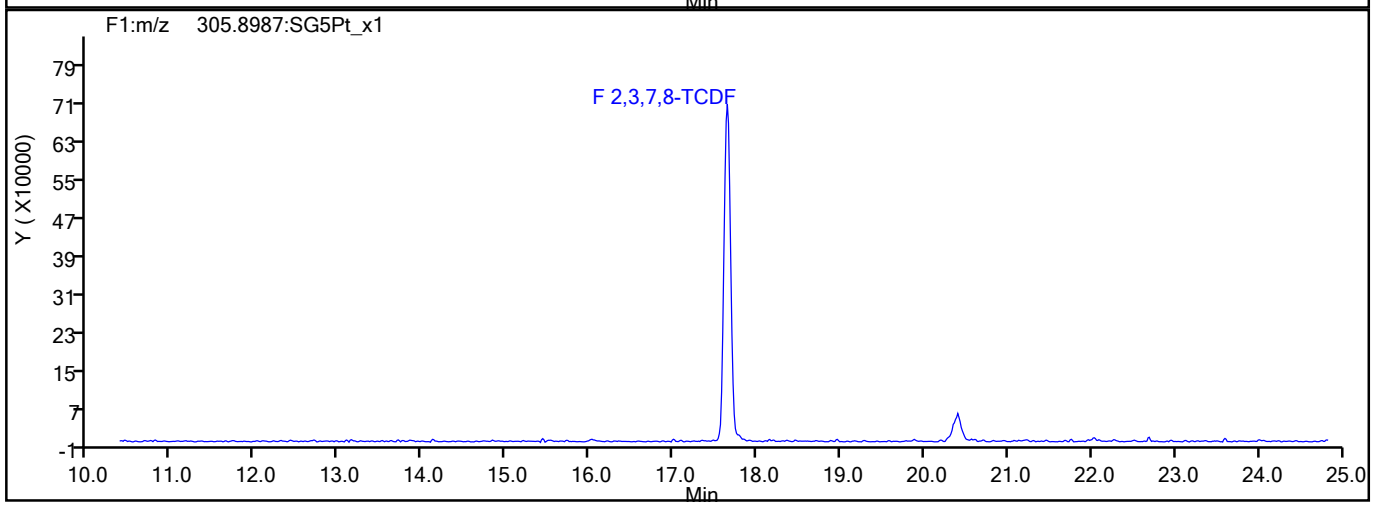

TCDF Interference Mass

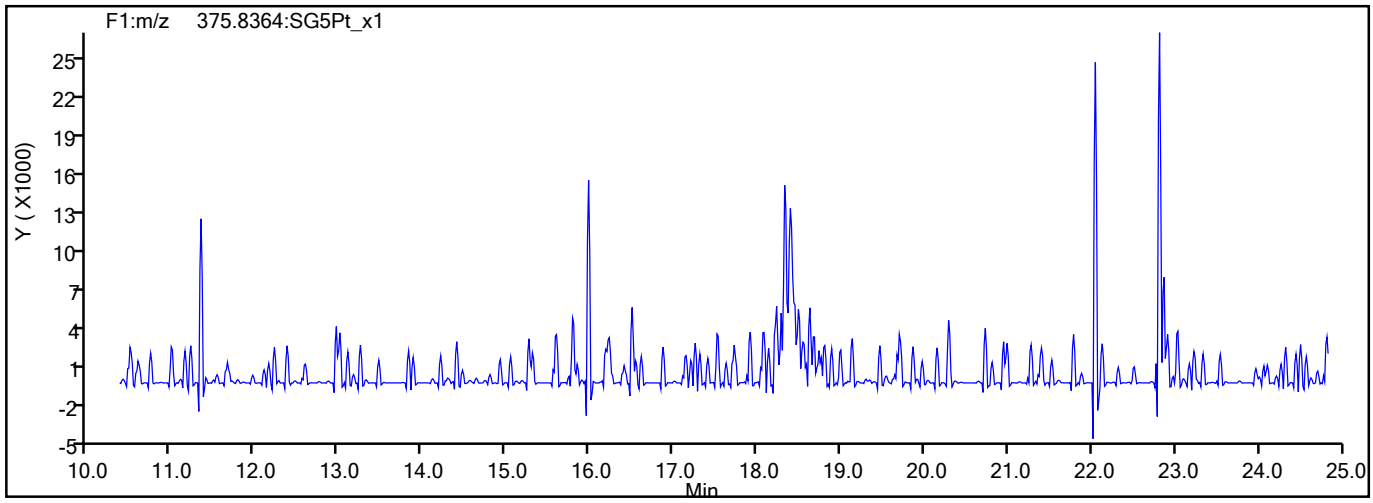

781580

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

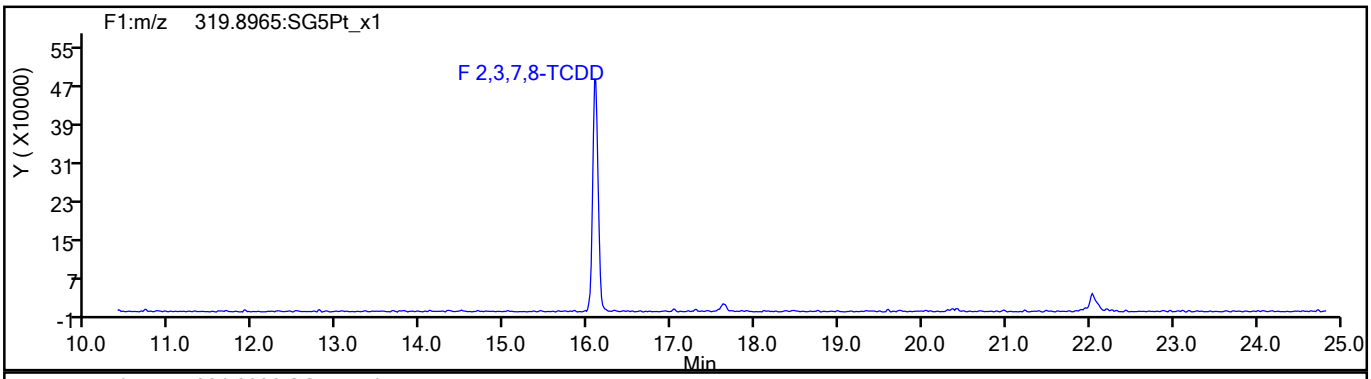

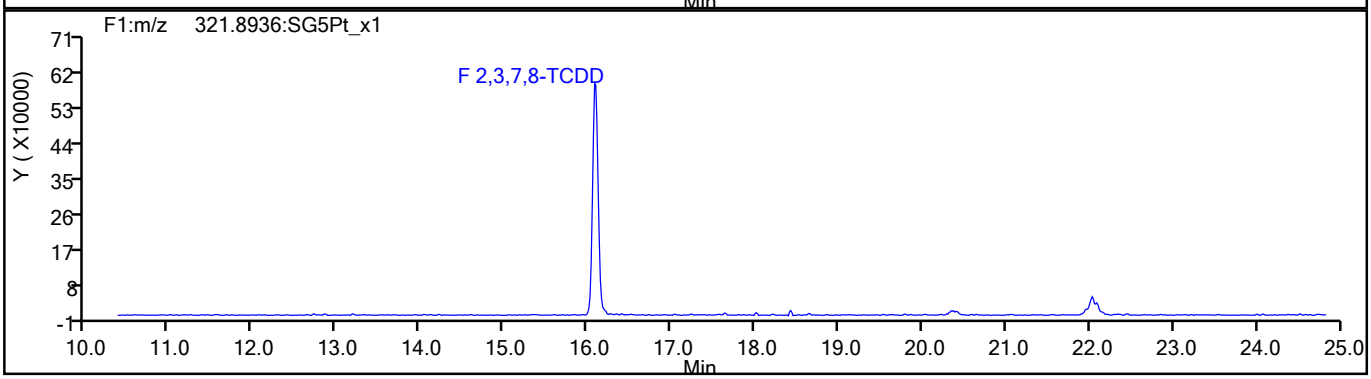

TCDD Standards

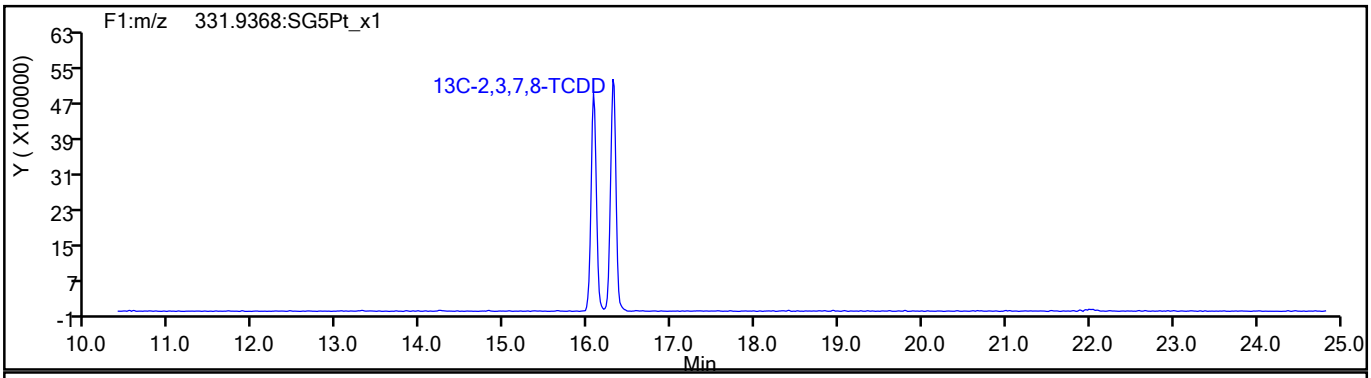

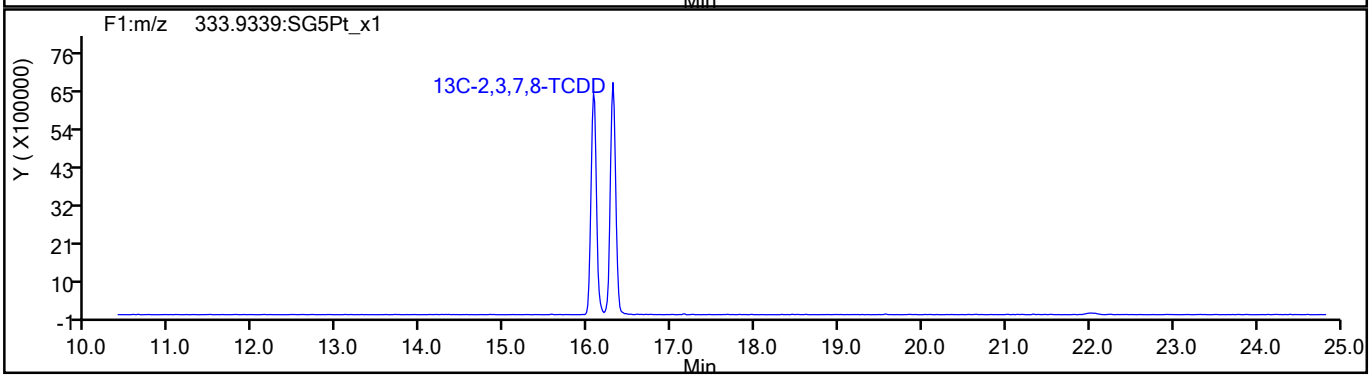

781581

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

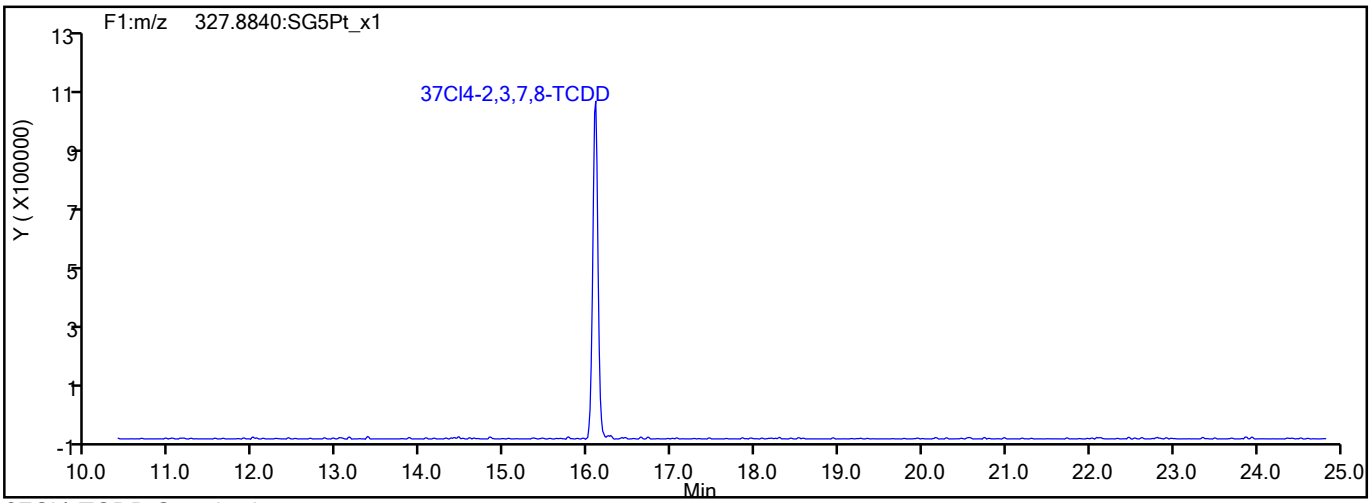

37Cl4-TCDD Standards

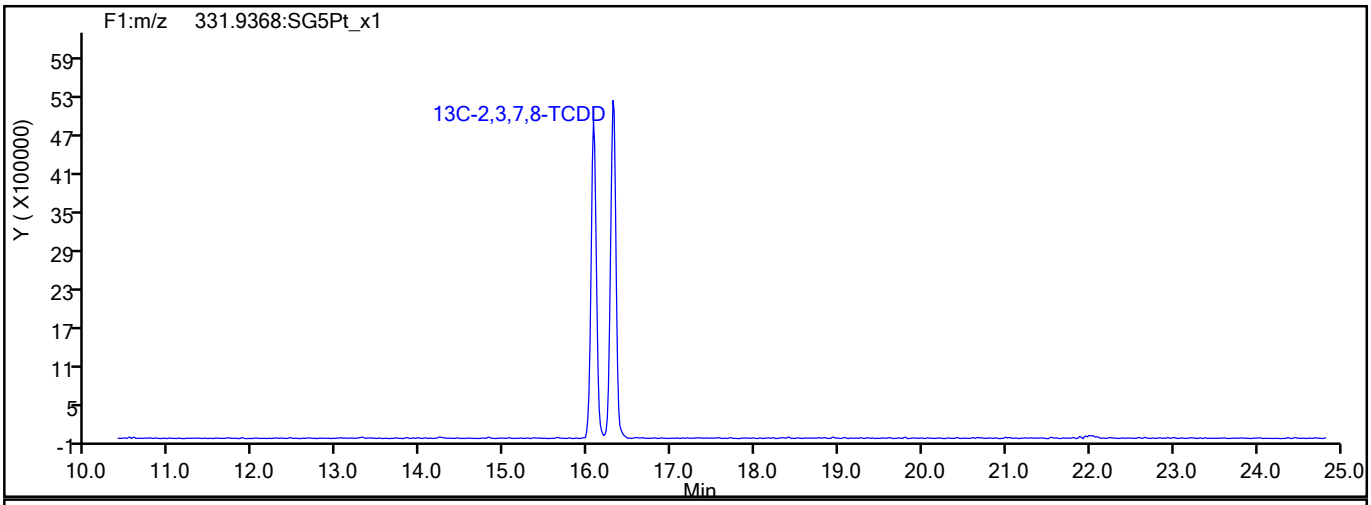

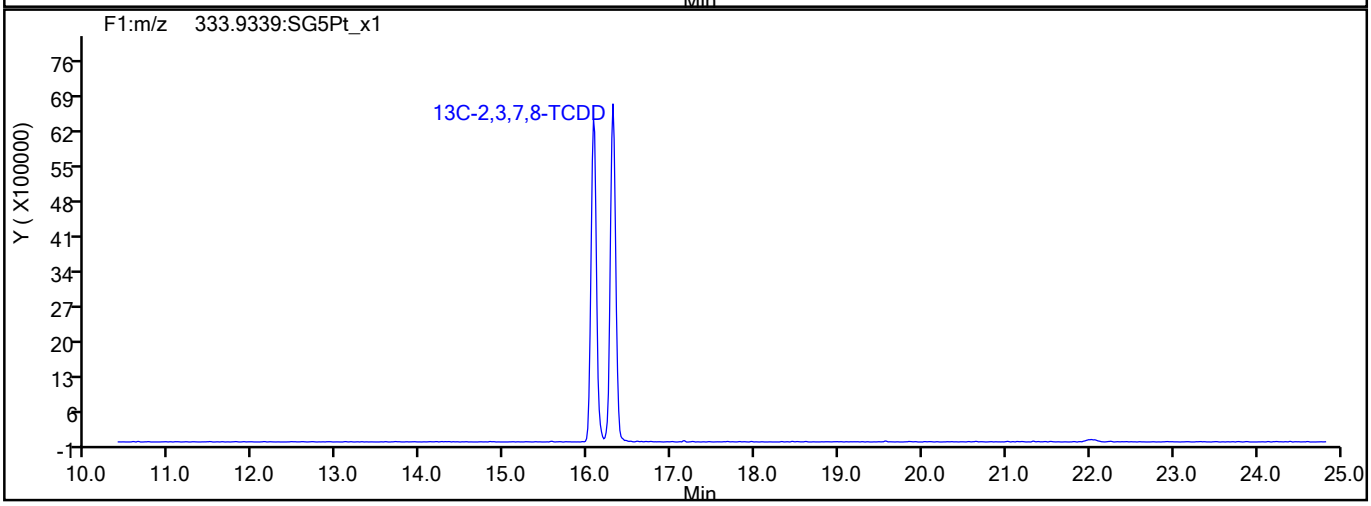

781582

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

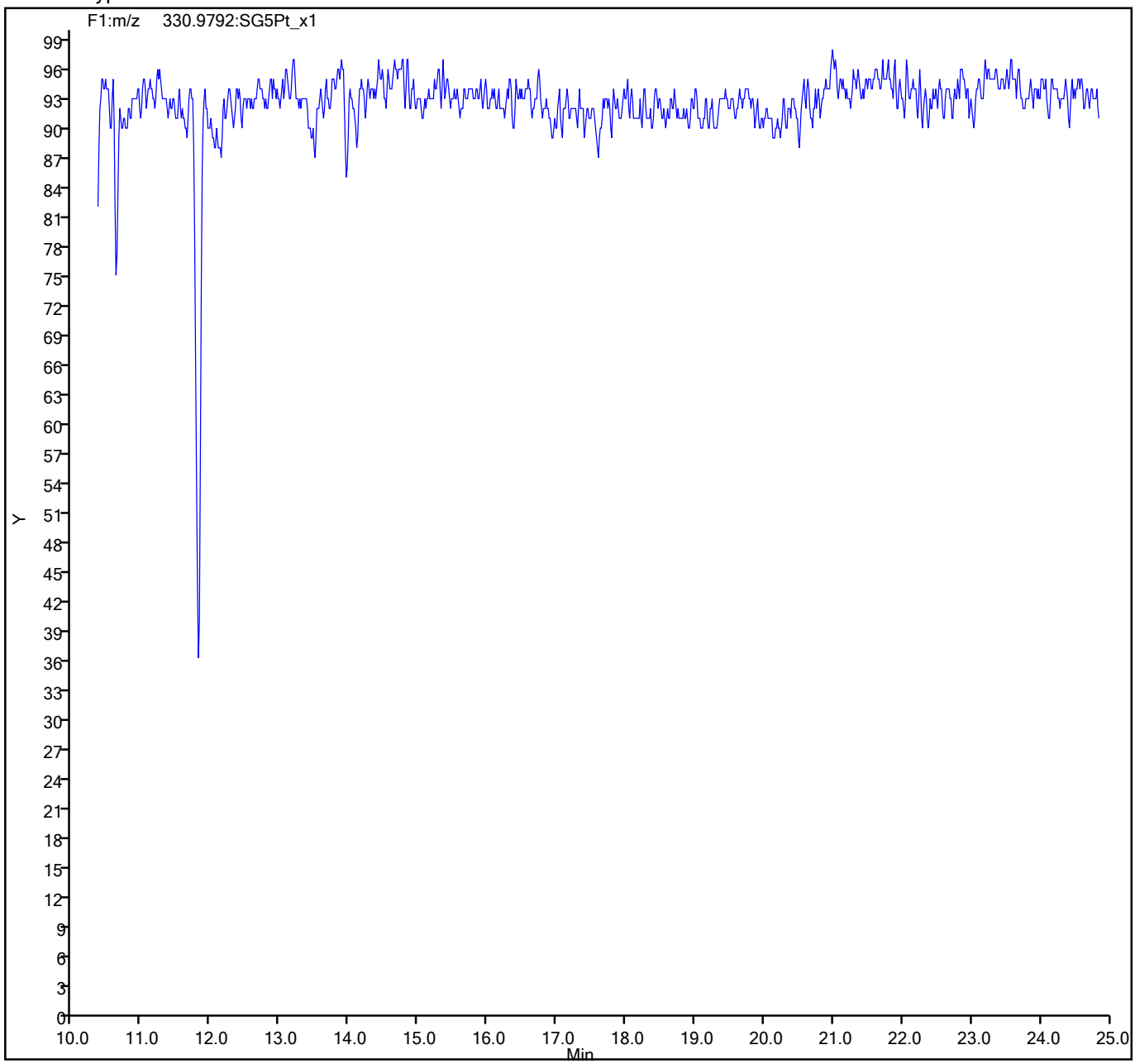

781583

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.598	43192451	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.628	95812265	0.77	1.0239	86.7	86.7	0.4368	0.4368		
A Non-2,3,7,8-sub-TCDF	17.311	141340622	0.77	1.0239	127.8	127.8	0.4368	50.4		
S Total TCDF					214.5	214.5	0.4368	0.4368		
D 13C-2,3,7,8-TCDD	18.323	22643725	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.338	31002300	0.78	1.2541	43.7	43.7	0.2199	0.2199		
A Non-2,3,7,8-sub-TCDD	17.772	120319254	0.78	1.2541	169.5	169.5	0.2199	46.0		
S Total TCDD					213.1	213.1	0.2199	0.2199		
A F1 PeCDFs	20.244	36548211	1.59	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.473	28699153	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.744	44367204	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.542	988216341	1.23	0.0000						
A Non-2,3,7,8-sub-HxCDF	30.542	1016402527	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	31.215	43254937	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.911	28490431	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	35.005	21744380	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.458						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.714	17168827	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.133	55744963	0.78							a
1,3,6,8-TCDD	16.071	32157911	0.78							a
2,3,4,7-TCDF	17.628	95812265	0.77							a
1,2,3,7-TCDD	18.218	26254918	0.77							a
1,2,3,9-TCDF	18.505	41465019	0.77							a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,9-TCDD	18.505	32677146	0.79							a
1,2,8,9-TCDD	19.472	12707183								a
1,2,8,9-TCDF	19.488	41982512	0.76							a
1,3,4,6,8-PeCDF	19.760	36548211	1.59							a
1,2,4,7,9-PeCDD	21.576	23369968	1.58							a
1,2,3,8,9-PeCDD	25.912	20997236	1.59							a
1,2,3,8,9-PeCDF	26.144	28026312	1.61							a
1,2,3,4,6,8-HxCDF	28.479	29886017	1.22							a
1,2,4,6,7,9-HxCDD	30.023	21768457	1.27							a
1,2,3,4,6,7-HxCDD	32.299	21486480	1.24							a
1,2,3,4,8,9-HxCDF	32.605	28186186	1.23							a
1,2,3,4,6,7,9-HpCDD	34.154						0.0	0.0		U

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	1.000	18796968	4666881	8168	20420	571		
317.9389	17.598	17.598	0	1.000	24395483	6066397	3473	8682	1747	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.002	41629702	9682578	19585	48962	494		
305.8987	17.628	17.631	0	1.002	54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.133	17.311	-130	0.860	24509538	7569037	19585	48962	386		
305.8987	15.133	17.311	-130	0.860	31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
303.9016	18.505	17.311	72	1.052	18061189	4195885	19585	48962	214		
305.8987	18.505	17.311	72	1.052	23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
303.9016	19.488	17.311	130	1.107	18098944	4035450	19585	48962	206		
305.8987	19.488	17.311	130	1.107	23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
303.9016	19.775	17.311	148	1.124	944774	152570	19585	48962	8		
305.8987	19.775	17.311	148	1.124	1203354	204203	28414	71035	7	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.000	10063481	2396990	3086	7715	777		
333.9339	18.323	18.323	0	1.000	12580244	3018588	1527	3817	1977	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.357	-1	1.001	13597515	3193209	6116	15290	522		
321.8936	18.338	18.357	-1	1.001	17404785	4135946	8817	22042	469	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	16.071	17.772	-102	0.877	14103074	4061475	6116	15290	664		
321.8936	16.071	17.772	-102	0.877	18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
319.8965	18.218	17.772	27	0.994	11446127	2829889	6116	15290	463		
321.8936	18.218	17.772	27	0.994	14808791	3726958	8817	22042	423	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	18.505	17.772	44	1.010	14439496	3301963	6116	15290	540		
321.8936	18.505	17.772	44	1.010	18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
319.8965	19.472	17.772	102	1.063	12707183	2751784	6116	15290	450		
321.8936	19.472	17.772	102	1.063	16522096	3661962	8817	22042	415	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.760	20.244	-29	1.000	22414023	4920048	649	1622	7581		
341.8567	19.760	20.244	-29	1.000	14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.344	23.473	-127	1.000	84191	14080	2633	6582	5		
341.8567	21.344	23.473	-127	1.000	53909	7615	1950	4875	4	1.56(1.32-1.78)	
339.8597	22.176	23.473	-78	1.000	88076	13805	2633	6582	5		
341.8567	22.190	23.473	-77	1.000	48170	9635	1950	4875	5	1.83(1.32-1.78)	
339.8597	22.749	23.473	-43	1.000	168309	20506	2633	6582	8		
341.8567	22.762	23.473	-43	1.000	82177	12827	1950	4875	7	2.05(1.32-1.78)	
339.8597	23.321	23.473	-9	1.000	142716	22963	2633	6582	9		
341.8567	23.321	23.473	-9	1.000	79356	11480	1950	4875	6	1.80(1.32-1.78)	
339.8597	26.144	23.473	160	1.000	17301746	2425915	2633	6582	921		
341.8567	26.144	23.473	160	1.000	10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.576	23.744	-130	1.000	14314296	2552271	2414	6035	1057		
357.8516	21.576	23.744	-130	1.000	9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
355.8546	25.912	23.744	130	1.000	12881489	1801570	2414	6035	746		
357.8516	25.912	23.744	130	1.000	8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	32.605	30.542	124	1.000	15534015	4607321	4603	11507	1001		
375.8178	32.605	30.542	124	1.000	12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.023	31.215	-71	1.000	12175655	1922535	6506	16265	296		
391.8127	30.023	31.215	-71	1.000	9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
389.8157	32.299	31.215	65	1.000	11903453	3254284	6506	16265	500		
391.8127	32.299	31.215	65	1.000	9583027	2649988	5715	14287	464	1.24(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.911	33.926	-1	1.000	14581587	4505694	20273	50682	222		
409.7789	33.911	33.926	-1	1.000	13908844	4348275	17441	43602	249	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.005	35.020	-1	1.000	11106344	3153936	20273	50682	156		
409.7789	35.005	35.020	-1	1.000	10638036	3040493	17441	43602	174	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						20273	50682			
409.7789	34.458						17441	43602			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.726	-1	1.000	8809155	2526480	13831	34577	183		
425.7737	34.714	34.726	-1	1.000	8359672	2427581	13744	34360	177	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						13831	34577			
425.7737	33.504						13744	34360			
1,3,6,8-TCDF											a
303.9016	15.133	15.133	0		24509538	7569037	19585	48962	386		a
305.8987	15.133	15.133	0		31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
1,3,6,8-TCDD											a
319.8965	16.071	16.071	0		14103074	4061475	6116	15290	664		a
321.8936	16.071	16.071	0		18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
2,3,4,7-TCDF											a
303.9016	17.628	17.628	0		41629702	9682578	19585	48962	494		a
305.8987	17.628	17.628	0		54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
1,2,3,7-TCDD											a
319.8965	18.218	18.218	0		11446127	2829889	6116	15290	463		a
321.8936	18.218	18.218	0		14808791	3726958	8817	22042	423	0.77(0.65-0.89)	
1,2,3,9-TCDF											a
303.9016	18.505	18.505	0		18061189	4195885	19585	48962	214		a
305.8987	18.505	18.505	0		23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
1,2,3,9-TCDD											a
319.8965	18.505	18.505	0		14439496	3301963	6116	15290	540		a
321.8936	18.505	18.505	0		18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
1,2,8,9-TCDD											a
319.8965	19.472	19.472	0		12707183	2751784	6116	15290	450		a
1,2,8,9-TCDF											a
303.9016	19.488	19.488	0		18098944	4035450	19585	48962	206		a
305.8987	19.488	19.488	0		23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
1,3,4,6,8-PeCDF											a
339.8597	19.760	19.760	0		22414023	4920048	649	1622	7581		a
341.8567	19.760	19.760	0		14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	21.576	21.576	0		14314296	2552271	2414	6035	1057		a
357.8516	21.576	21.576	0		9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											a
355.8546	25.912	25.912	0		12881489	1801570	2414	6035	746		a
357.8516	25.912	25.912	0		8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	26.144	26.144	0		17301746	2425915	2633	6582	921		a
341.8567	26.144	26.144	0		10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											a
373.8208	28.479	28.479	0		16406487	2121744	4603	11507	461		a
375.8178	28.479	28.479	0		13479530	1752621	3729	9322	470	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											a
389.8157	30.023	30.023	0		12175655	1922535	6506	16265	296		a
391.8127	30.023	30.023	0		9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											a
389.8157	32.299	32.299	0		11903453	3254284	6506	16265	500		a
391.8127	32.299	32.299	0		9583027	2649988	5715	14287	464	1.24(1.05-1.43)	

Report Date: 27-Jul-2021 15:09:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,8,9-HxCDF											a
373.8208	32.605	32.605	0		15534015	4607321	4603	11507	1001		a
375.8178	32.605	32.605	0		12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.154						13831	34577			
425.7737	34.154						13744	34360			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	43192451	10733278

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	43192451	10733278

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.133	24509538	7569037	31235425	9722736	50.4	0.78	
18.505	18061189	4195885	23403830	5509968	37.5	0.77	
19.488	18098944	4035450	23883568	5304928	38.0	0.76	
19.775	944774	152570	1203354	204203	1.94	0.79	
Signal Totals:	61614445	15952942	79726177	20741835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141340622	36694777				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 127.837 = (141340622 * 40.000) / (43192451 * 1.024)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	22643725	5415578

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	22643725	5415578

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.071	14103074	4061475	18054837	5166402	45.3	0.78	
18.218	11446127	2829889	14808791	3726958	37.0	0.77	
18.505	14439496	3301963	18237650	4248308	46.0	0.79	
19.472	12707183	2751784	16522096	3661962	41.2	0.77	
Signal Totals:							
	52695880	12945111	67623374	16803630			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	120319254	29748741				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 169.476 = (120319254 * 40.000) / (22643725 * 1.254)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

F1 PeCDFs, RT: 20.244

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.760	22414023	4920048	14134188	3116108		1.59	
Signal Totals:							
	22414023	4920048	14134188	3116108			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	36548211	8036156				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (36548211 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.344	84191	14080	53909	7615		1.56	
22.176	88076	13805	48170	9635		1.83	R
22.749	168309	20506	82177	12827		2.05	R
23.321	142716	22963	79356	11480		1.80	R
26.144	17301746	2425915	10724566	1530575		1.61	
Signal Totals:							
	17785038	2497269	10988178	1572132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28773216	4069401				1.62	RQ
	28699153	4064735					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (28773216 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (28699153 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.744

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.576	14314296	2552271	9055672	1599456		1.58	
25.912	12881489	1801570	8115747	1169053		1.59	
Signal Totals:							
	27195785	4353841	17171419	2768509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	44367204	7122350				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (44367204 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.542

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
32.605	15534015	4607321	12652171	3734547		1.23	
Signal Totals:							
	15534015	4607321	12652171	3734547			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	988216341	287497877				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (988216341 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 31.215

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.023	12175655	1922535	9592802	1497827		1.27	
32.299	11903453	3254284	9583027	2649988		1.24	
Signal Totals:							
	24079108	5176819	19175829	4147815			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43254937	9324634				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43254937 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

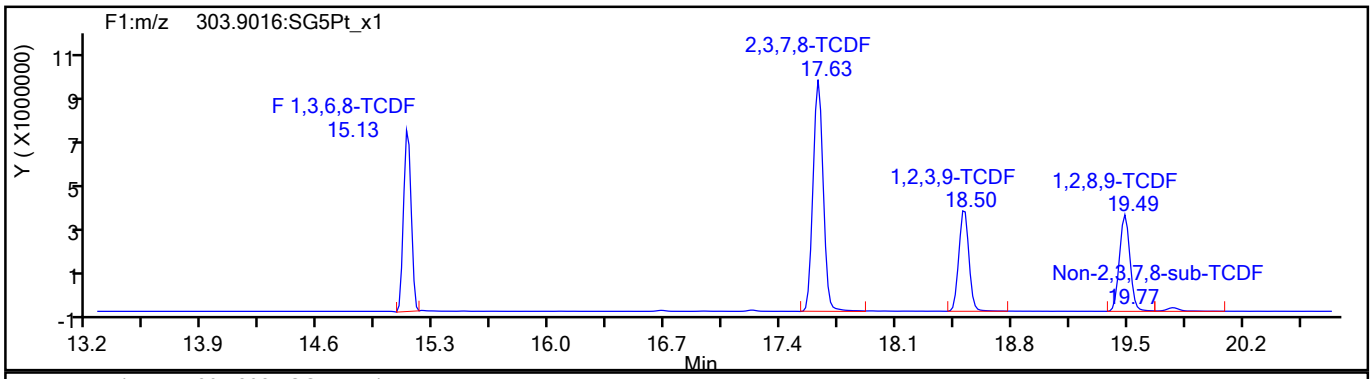

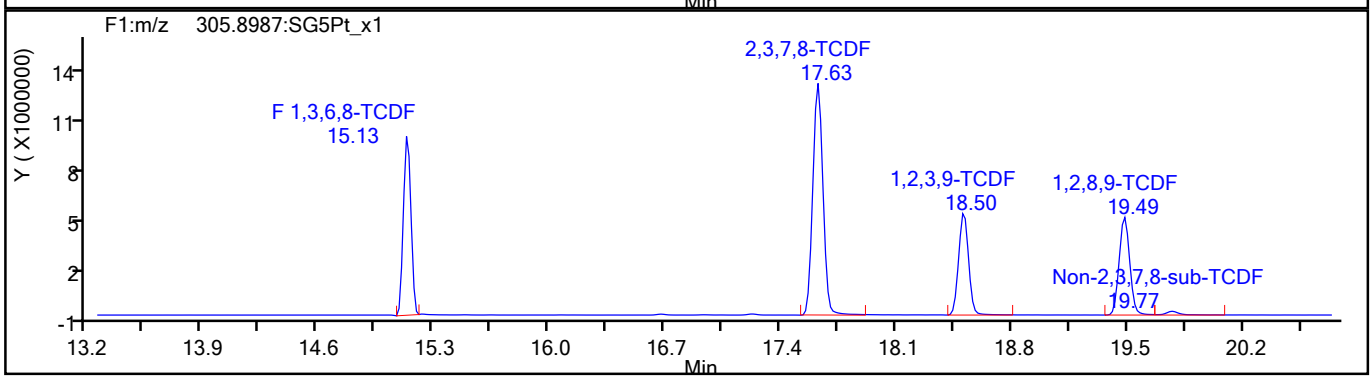

TCDF Standards

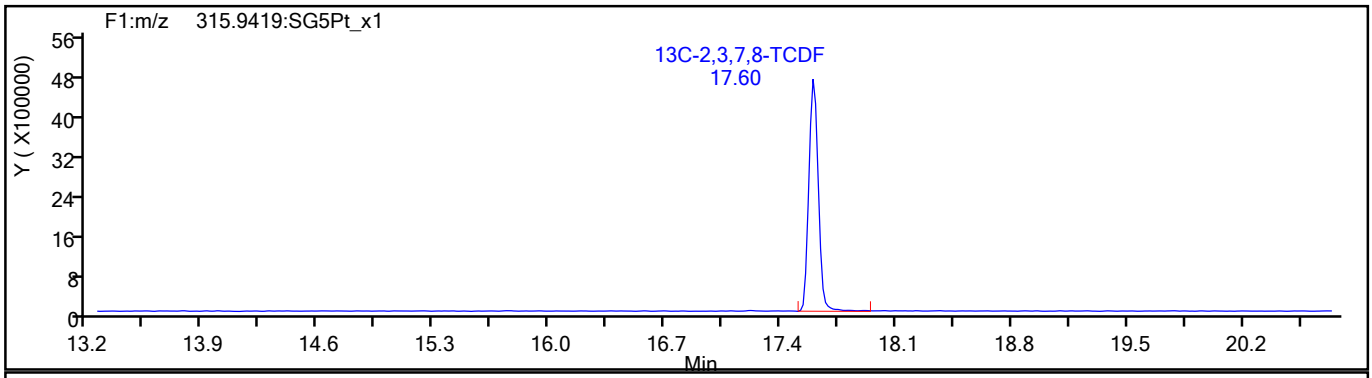

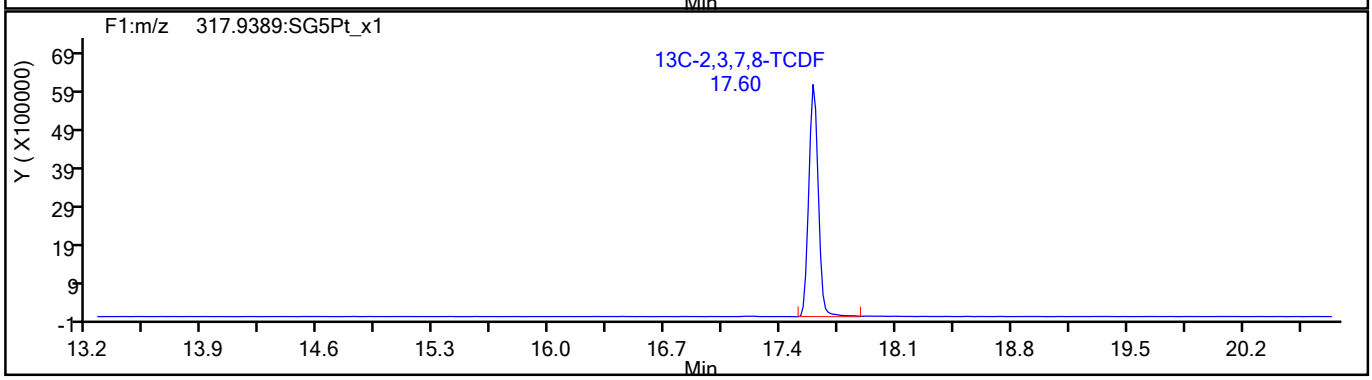

781598

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

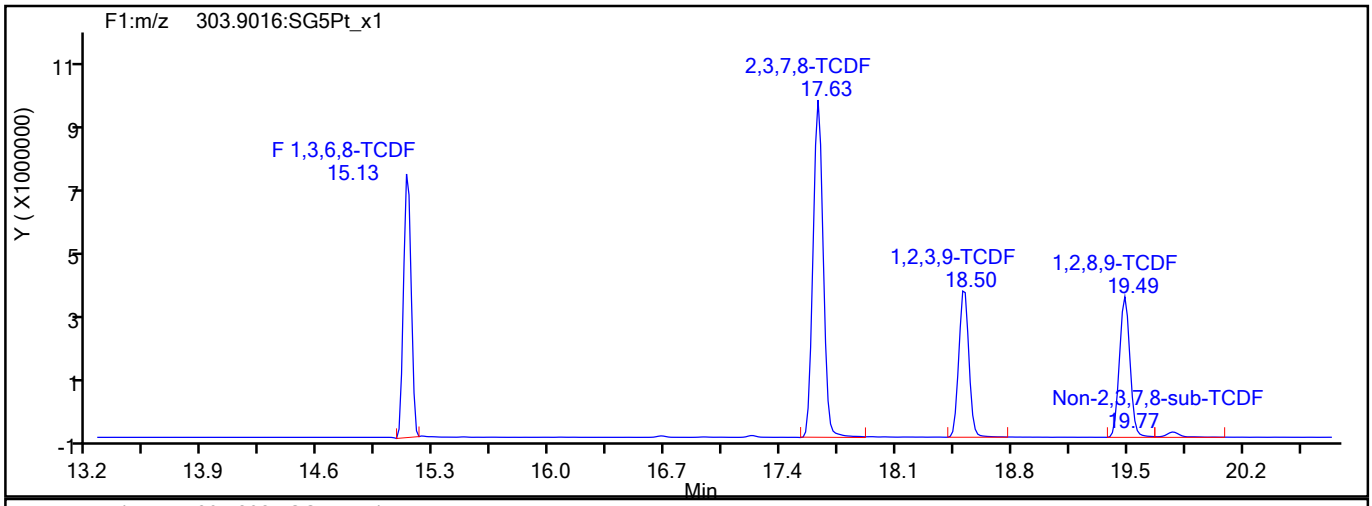

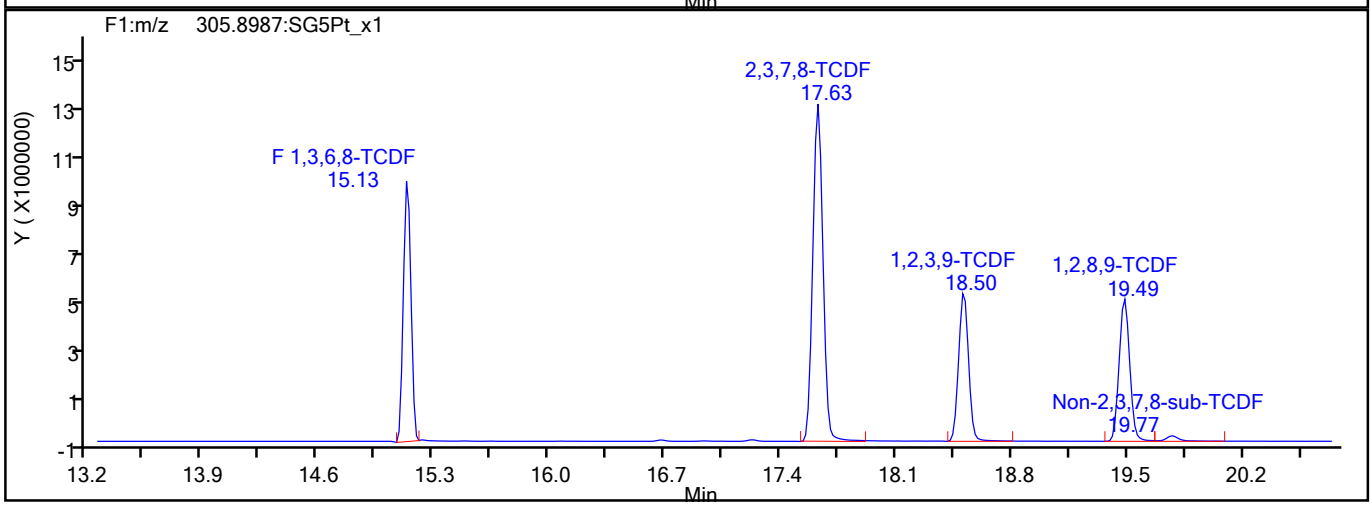

TCDF Interference Mass

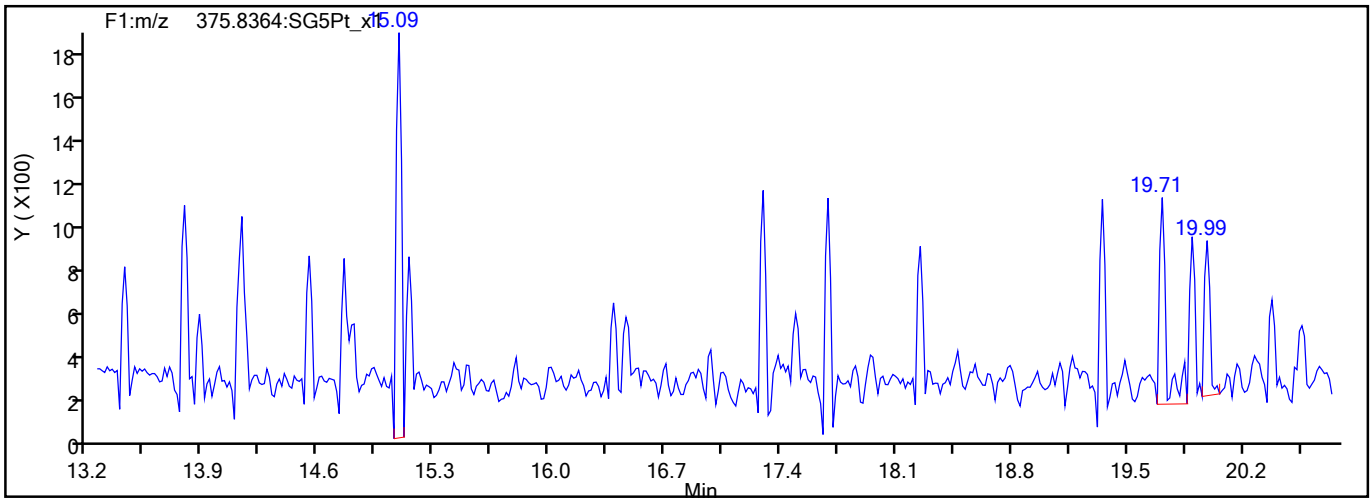

781599

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

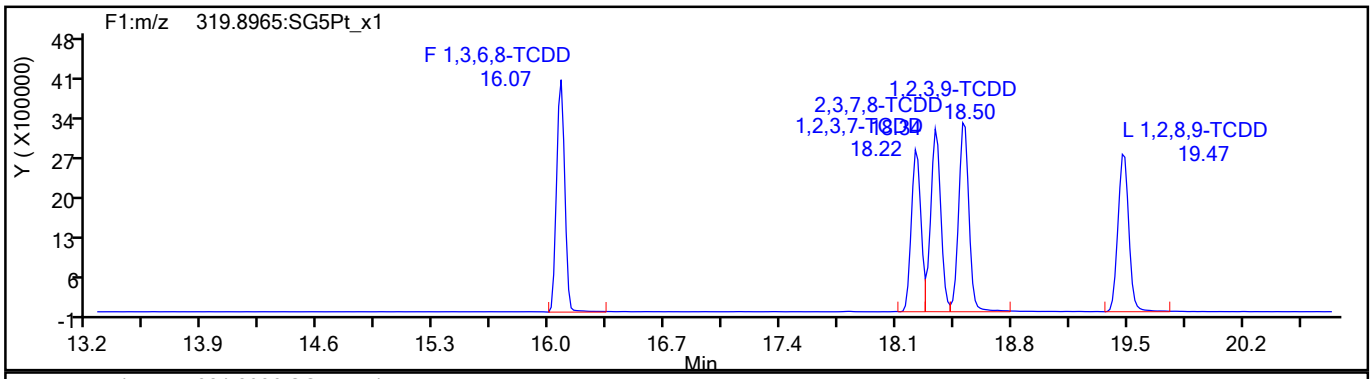

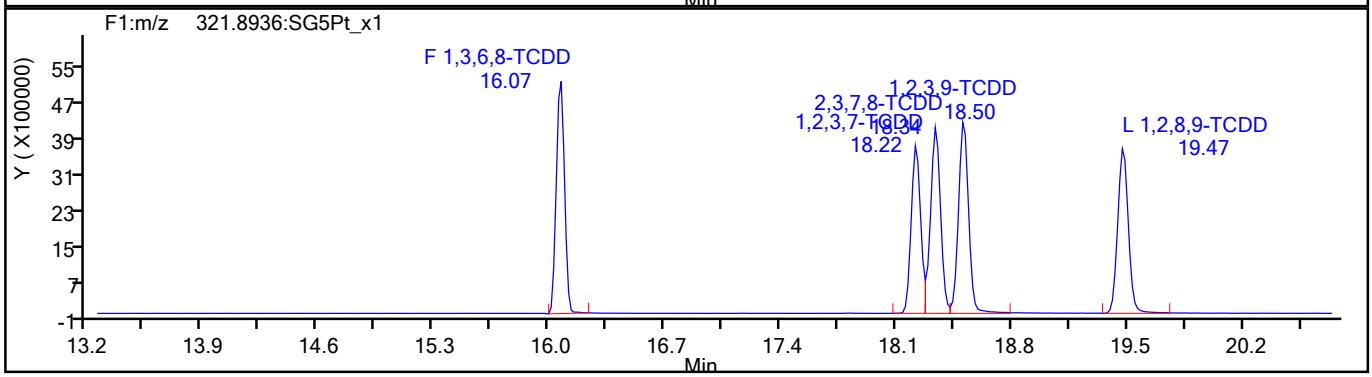

TCDD Standards

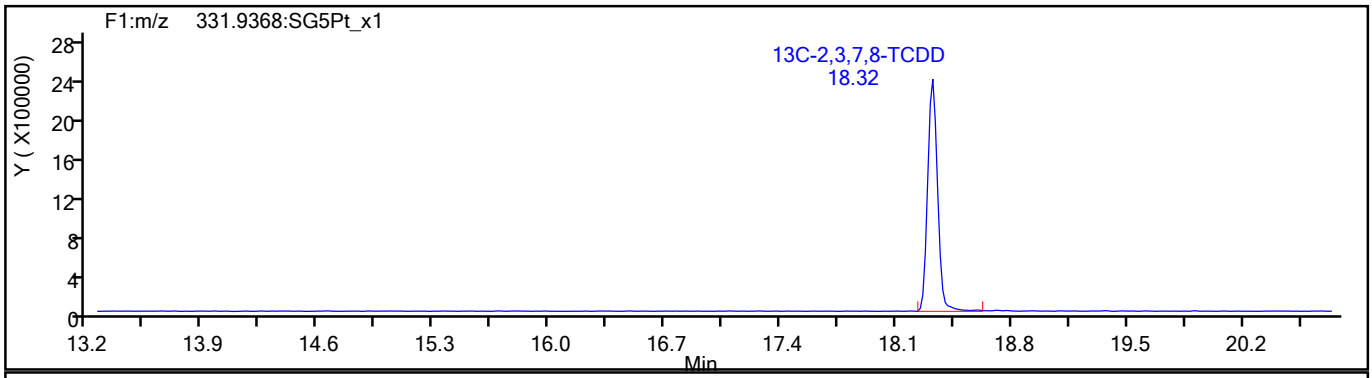

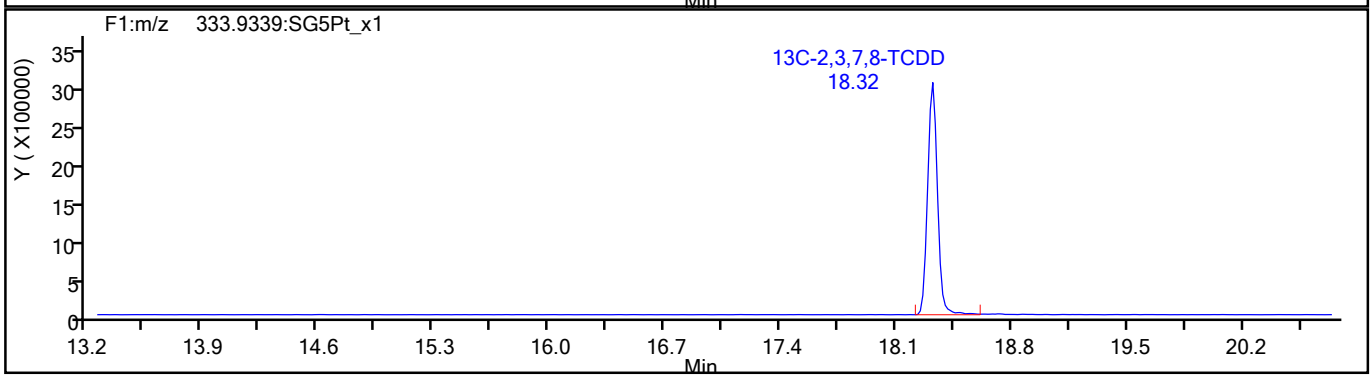

781600

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

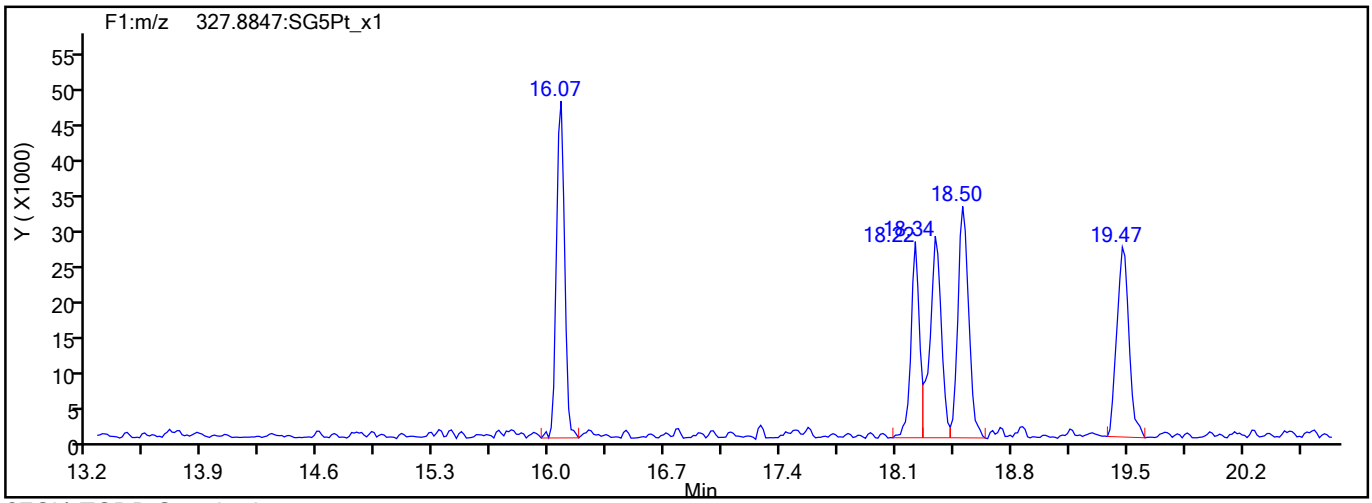

37Cl4-TCDD Standards

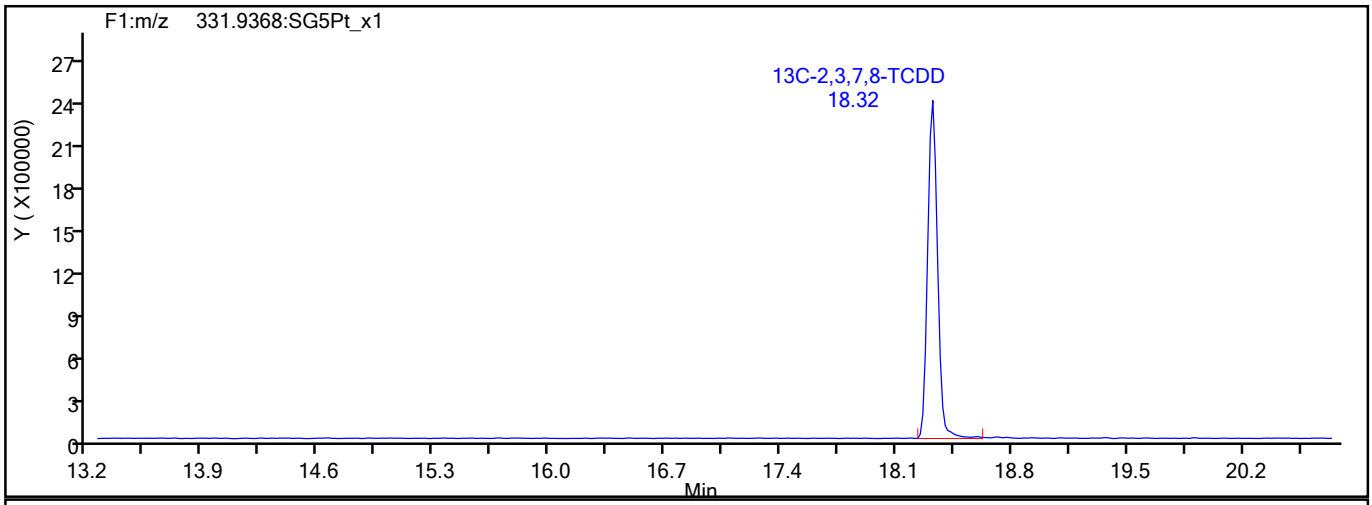

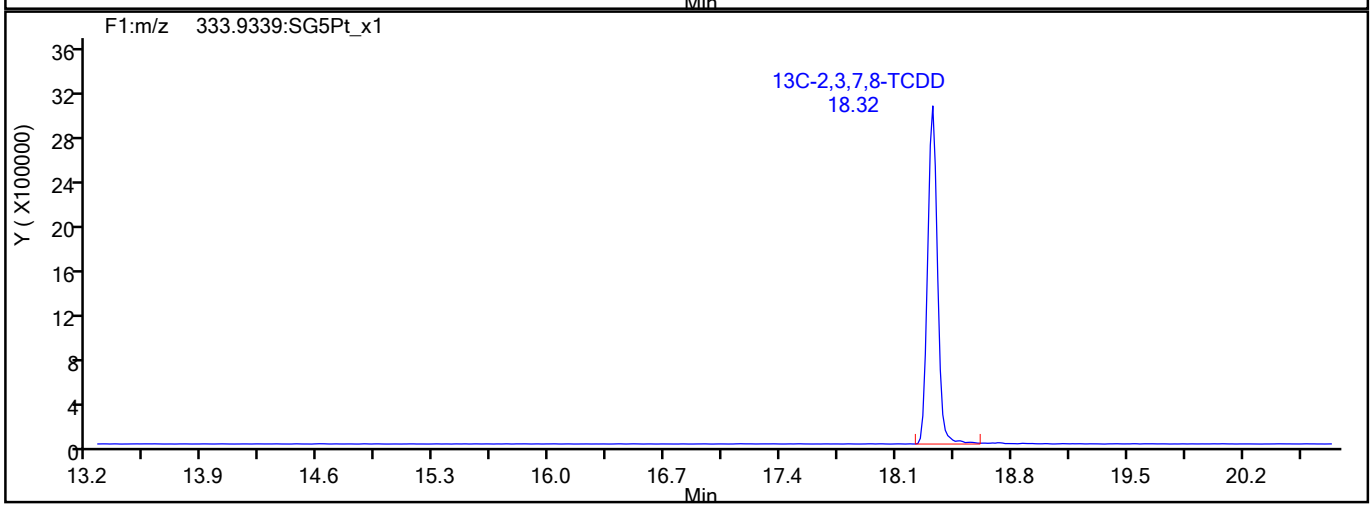

781601

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

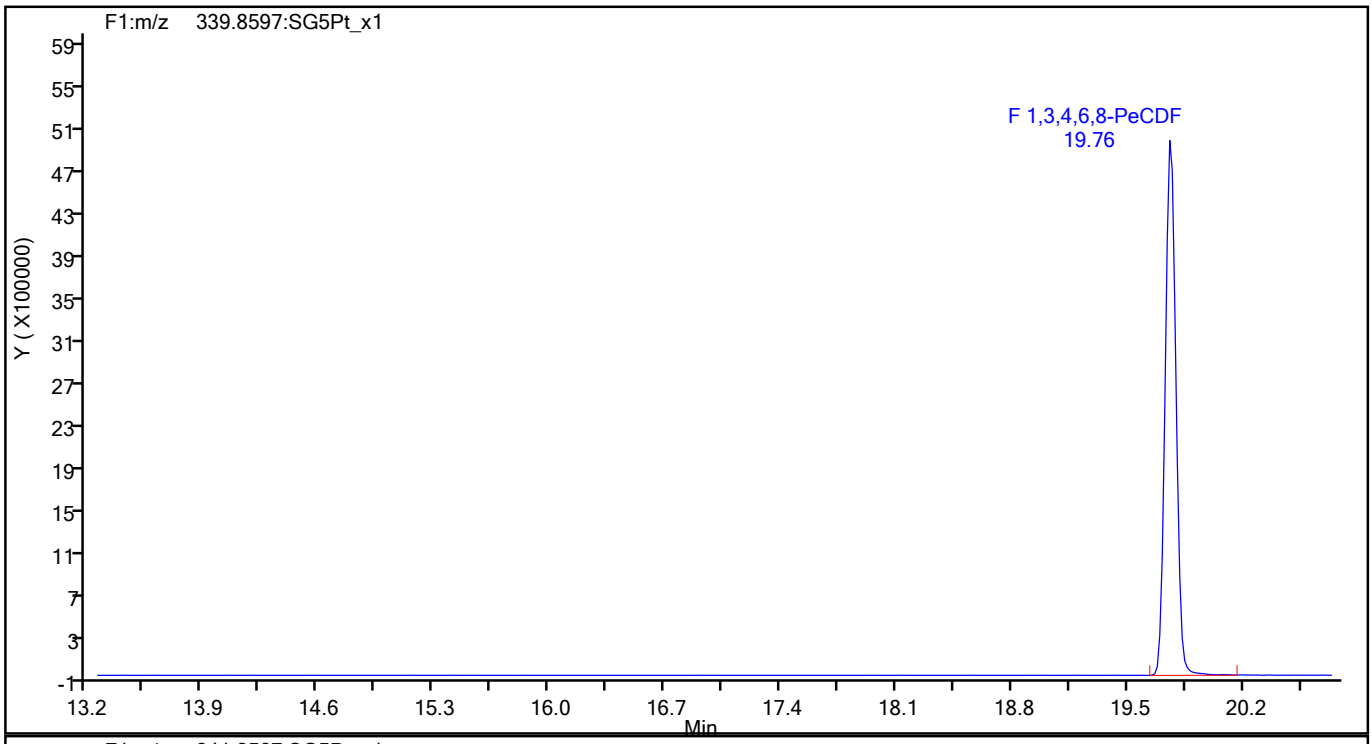

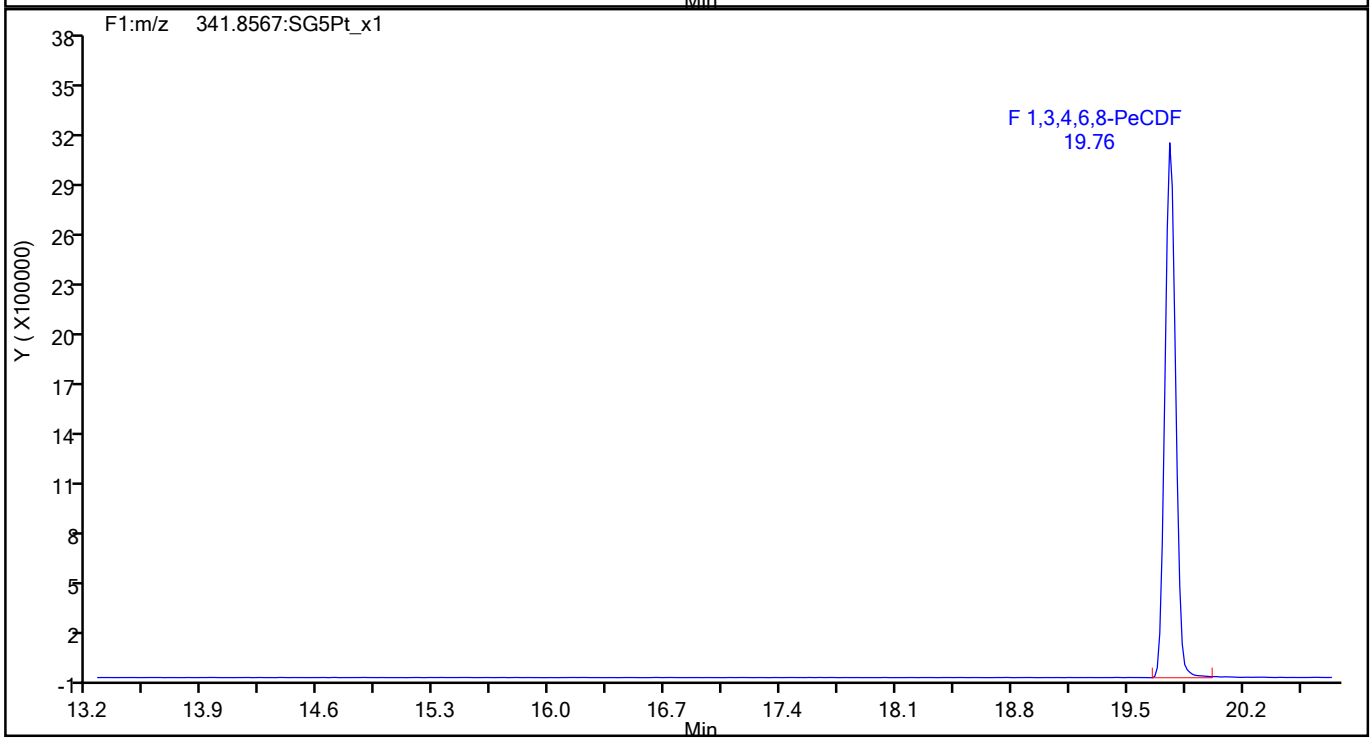

781602

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

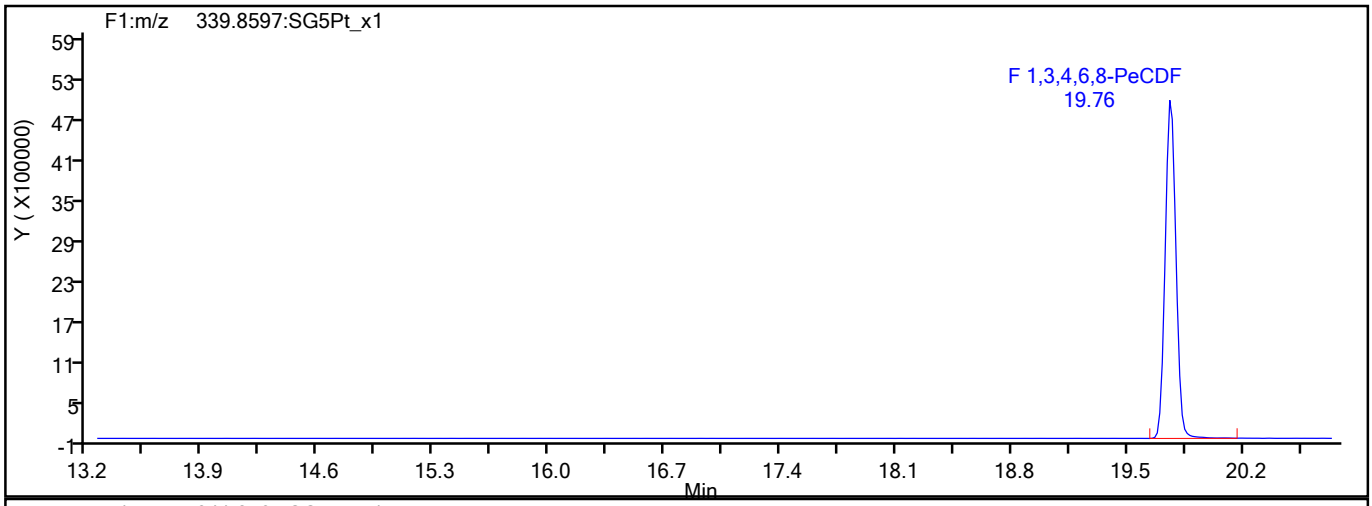

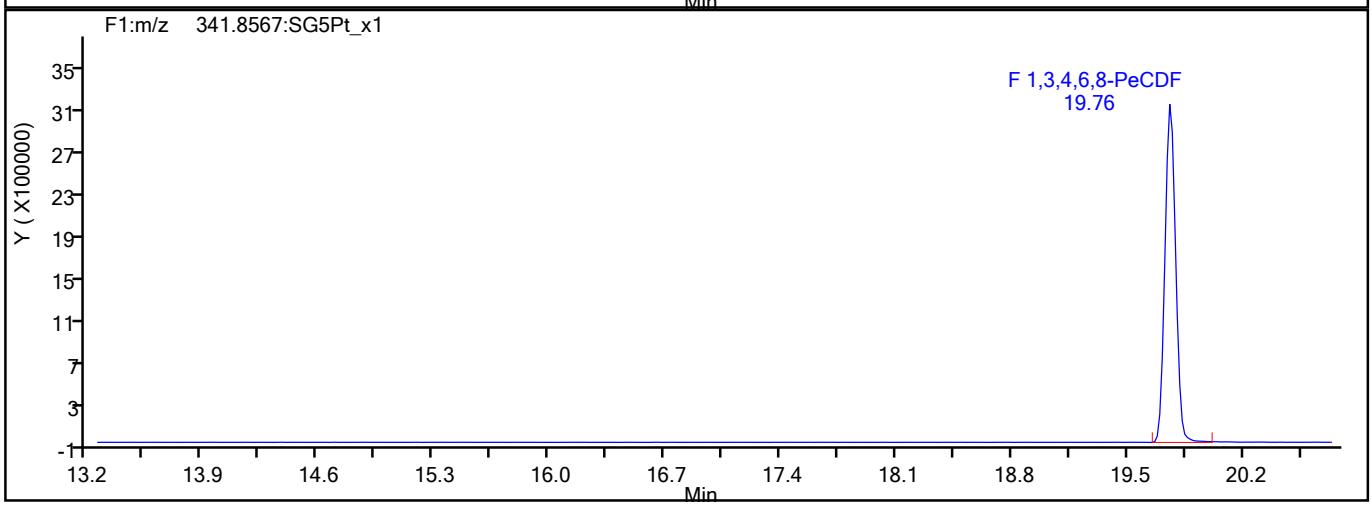

F1 PeCDFs Interference Mass

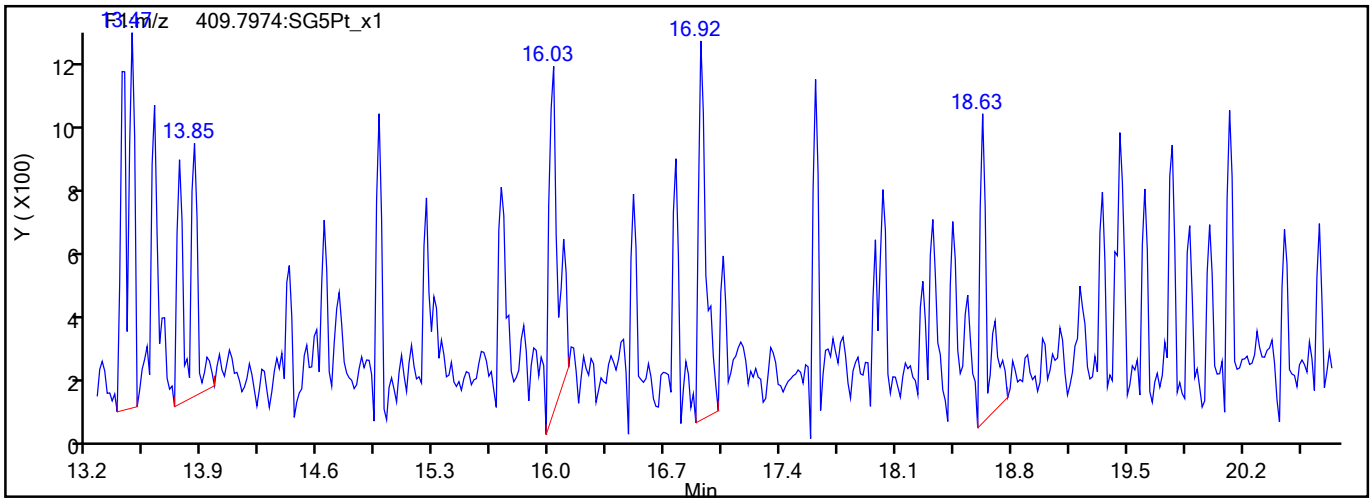

781603

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

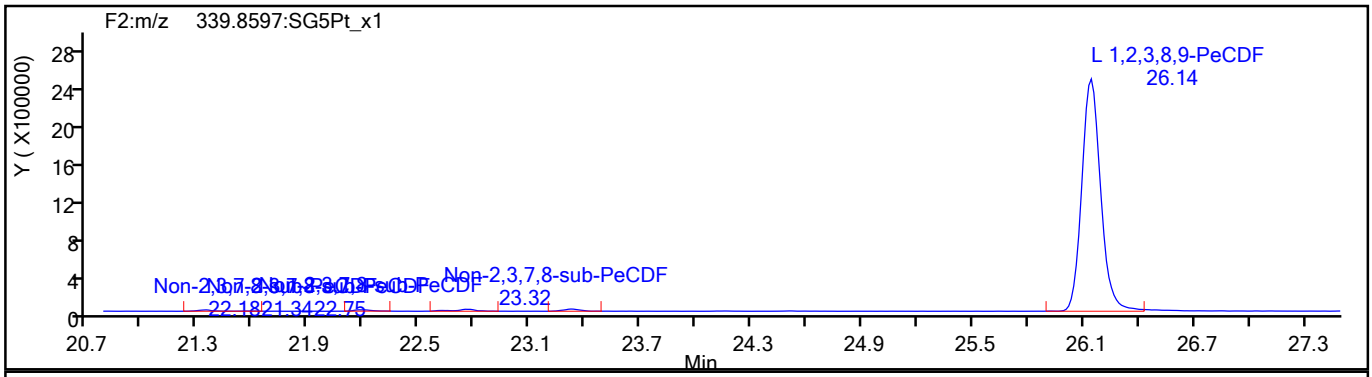

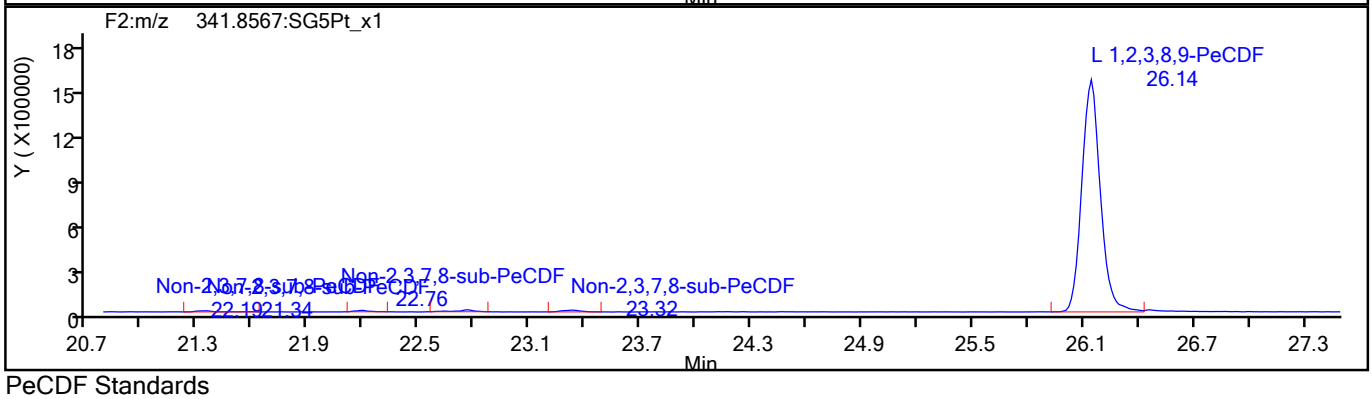

PeCDF Standards

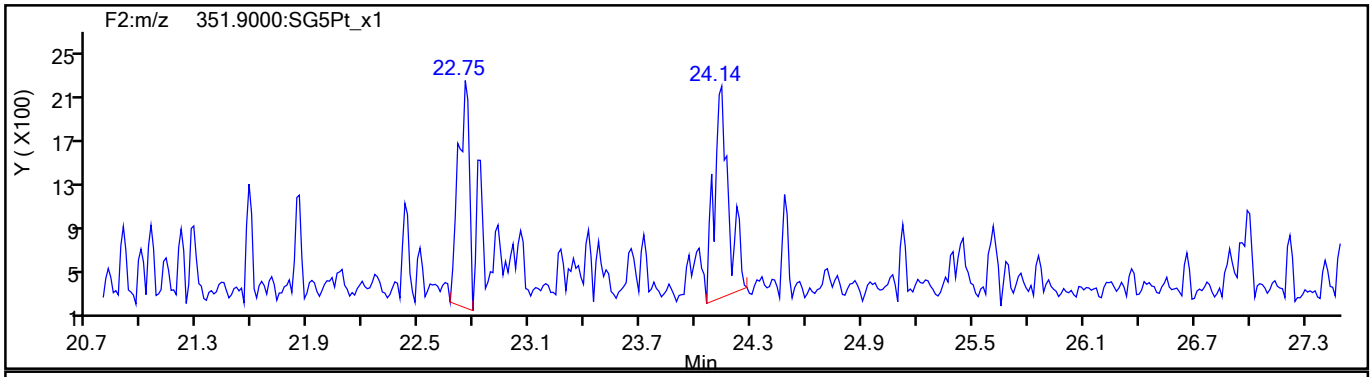

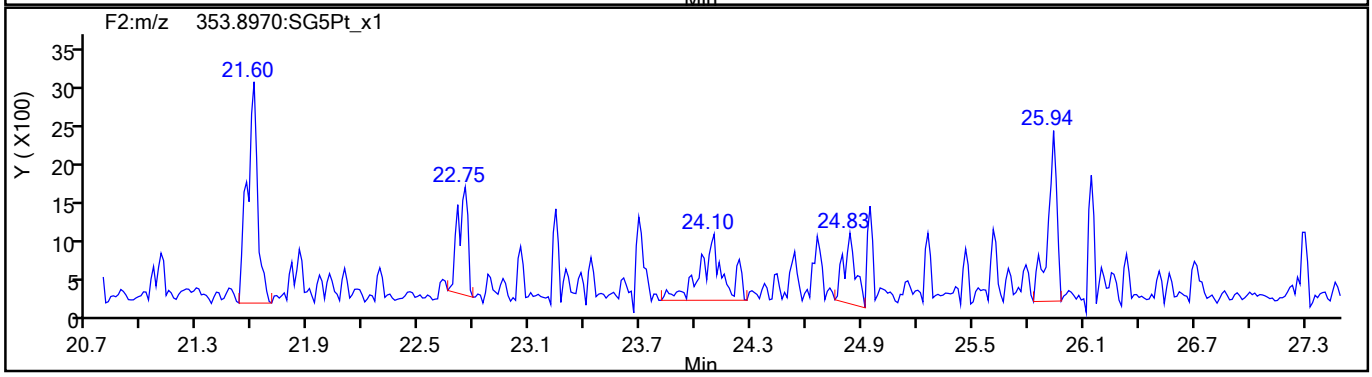

781604

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

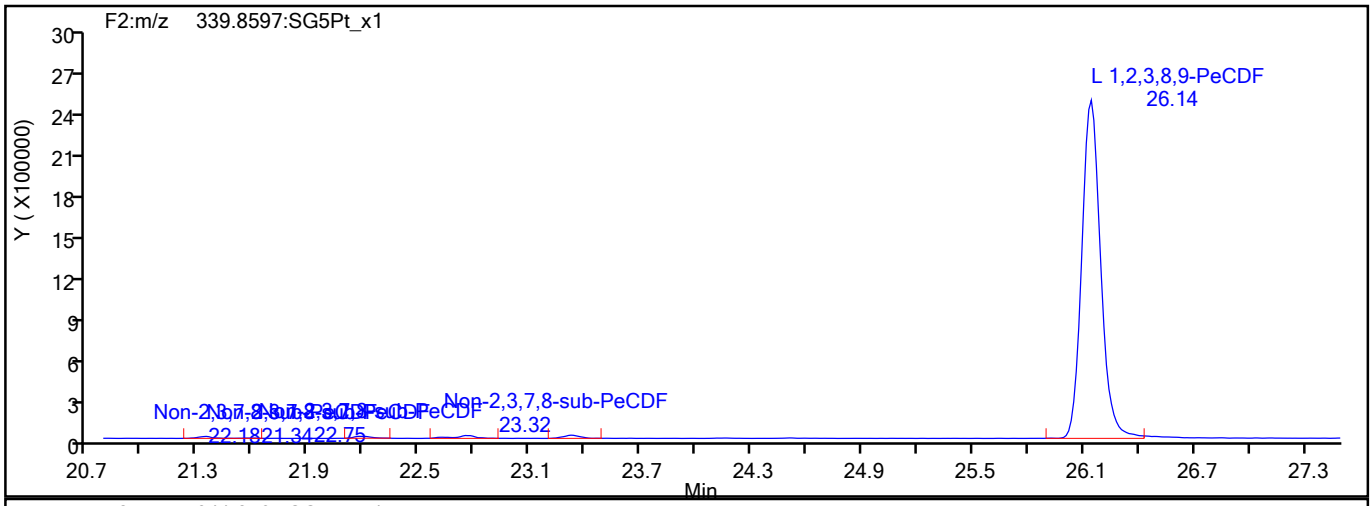

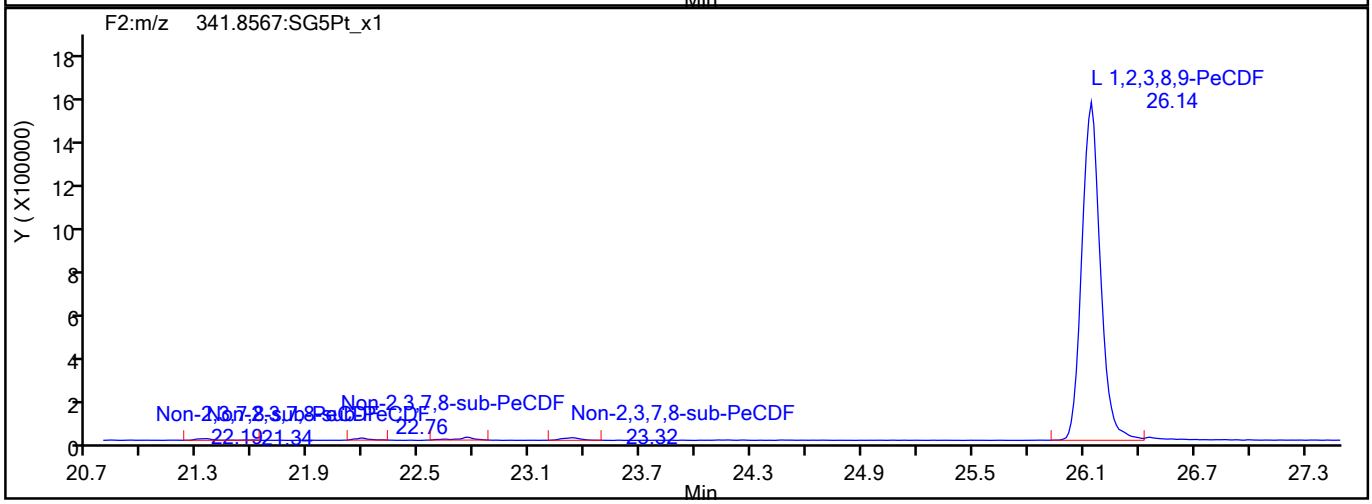

PeCDF Interference Mass

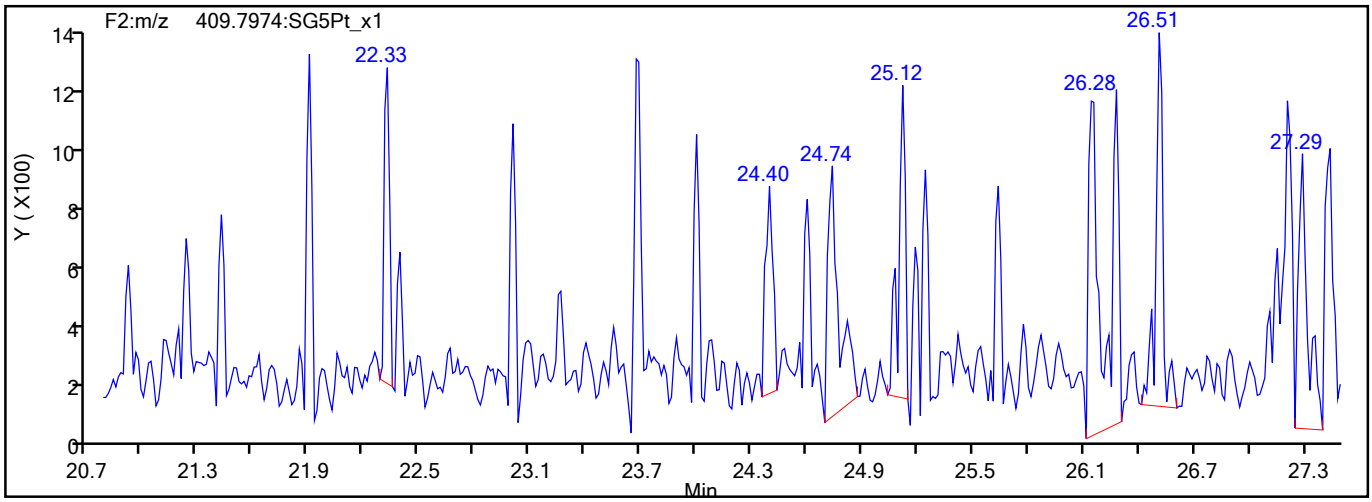

781605

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

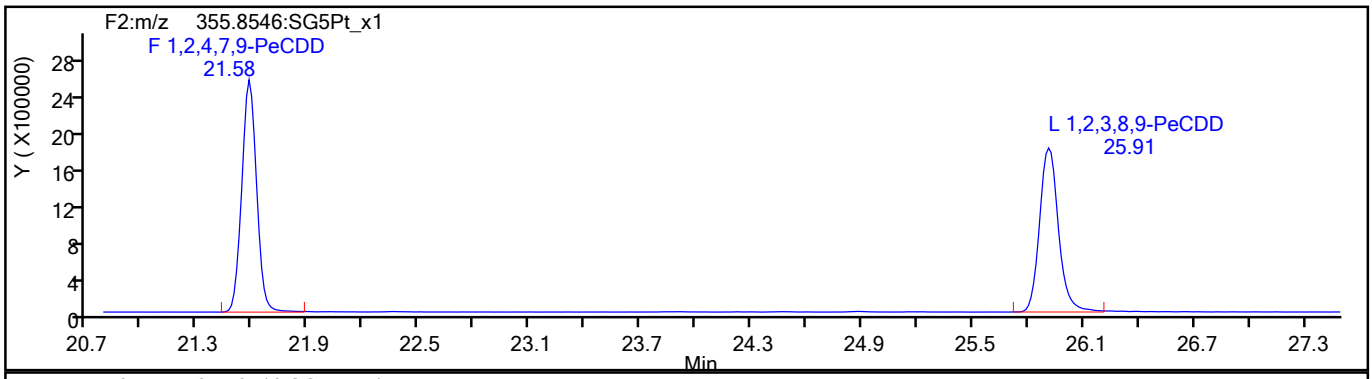

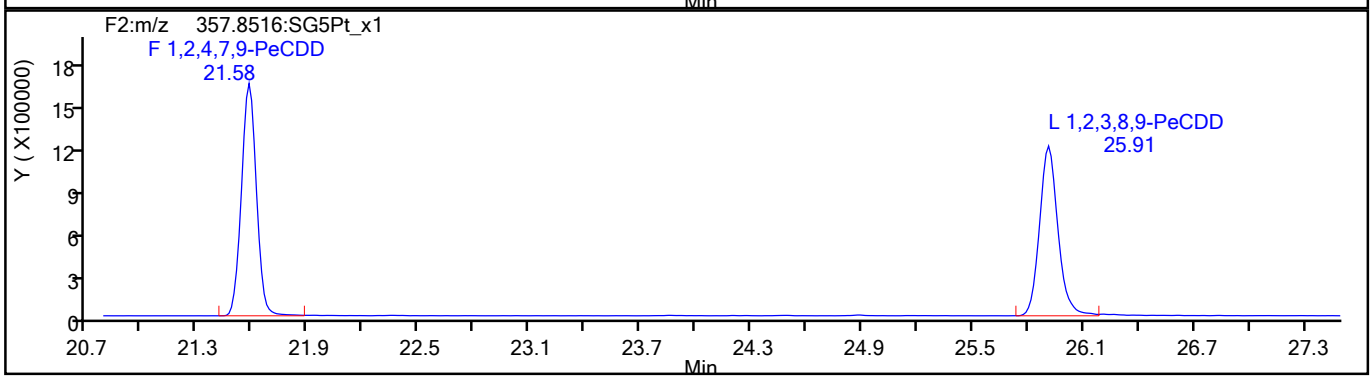

PeCDD Standards

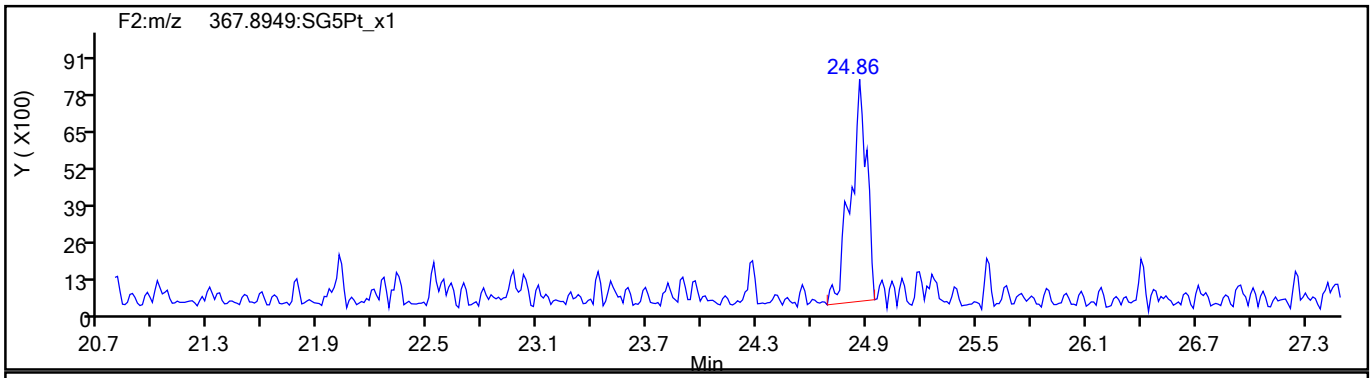

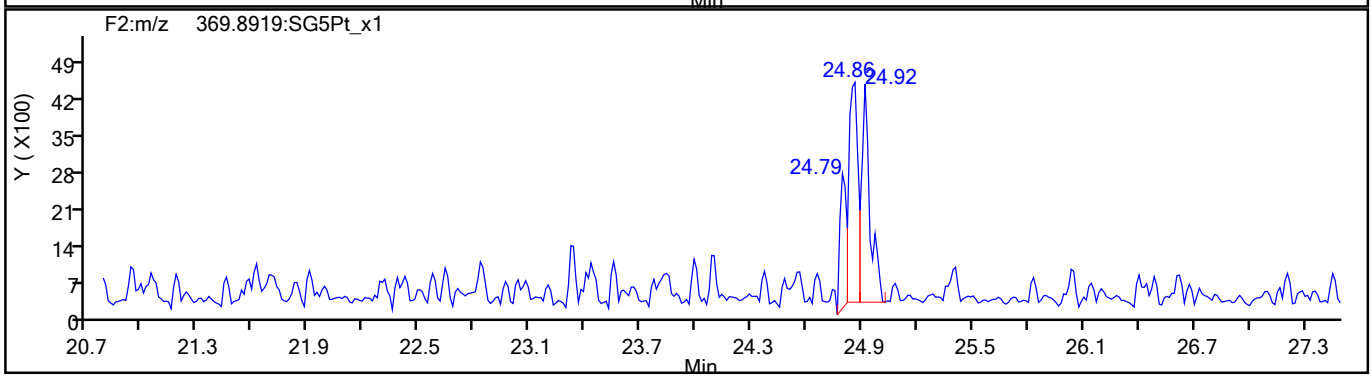

781606

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

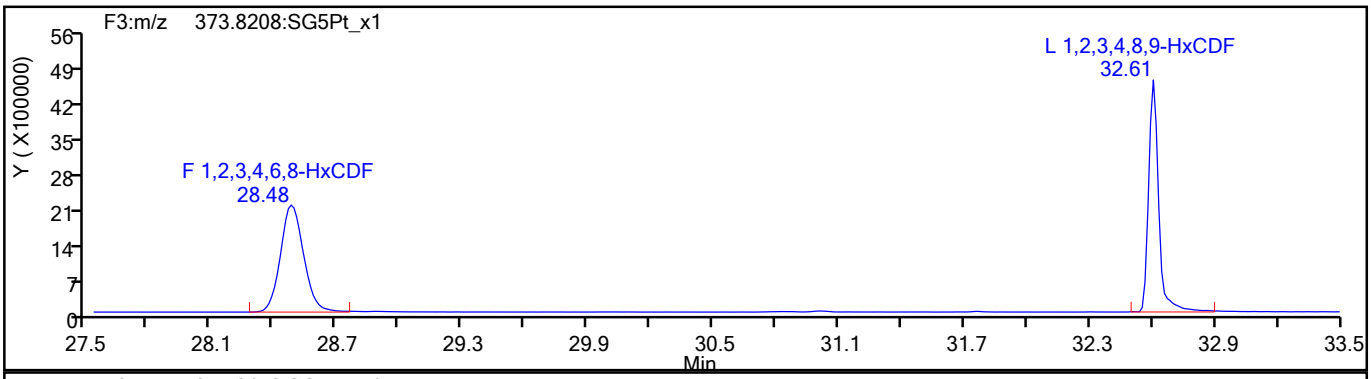

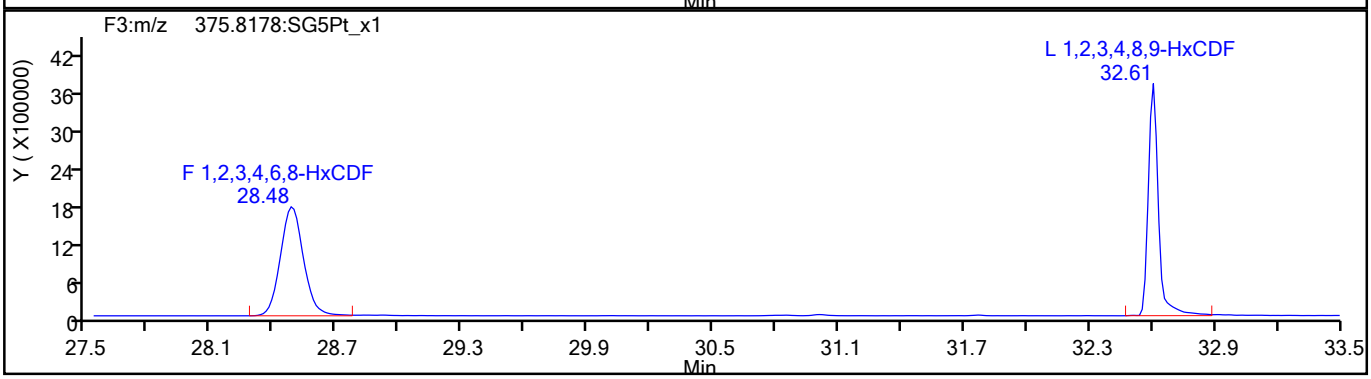

HxCDF Standards

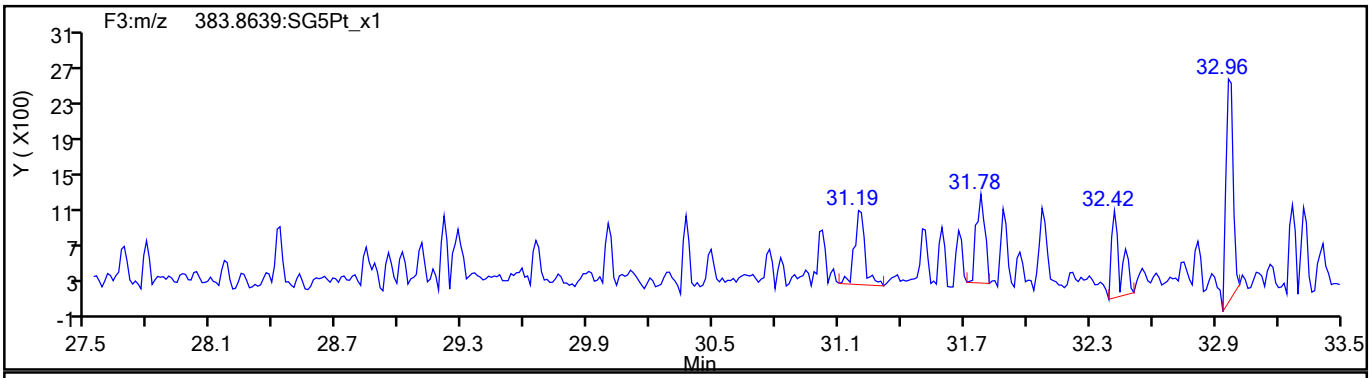

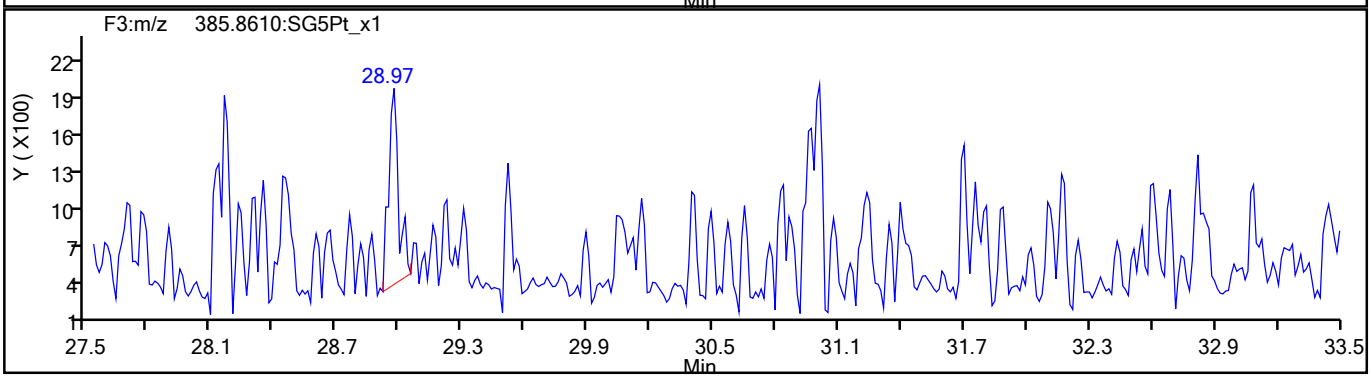

781607

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

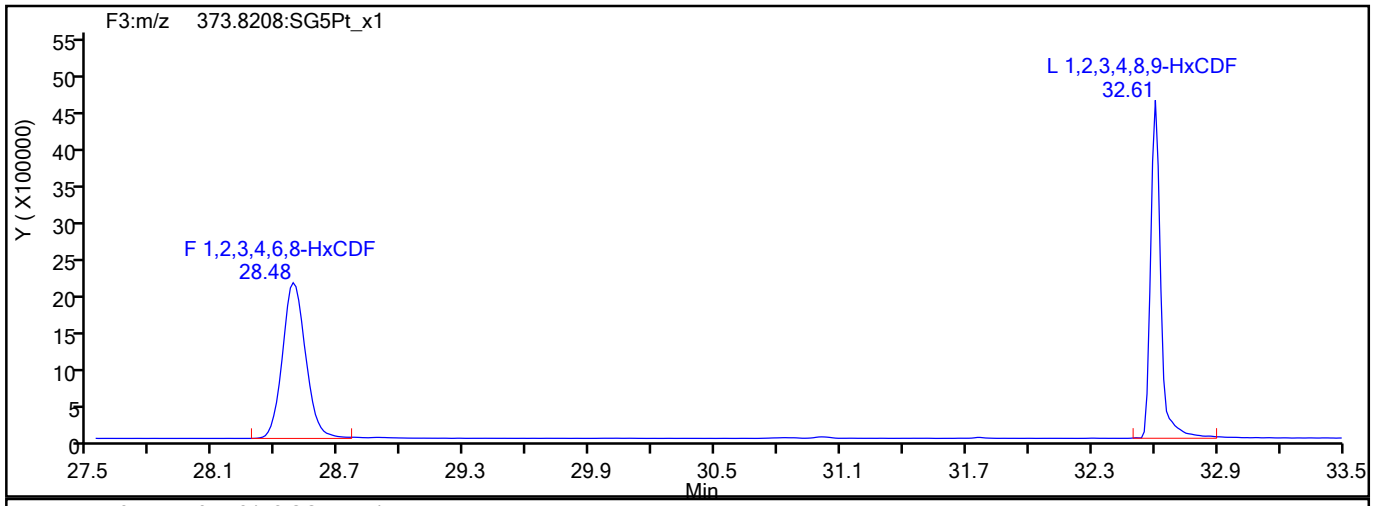

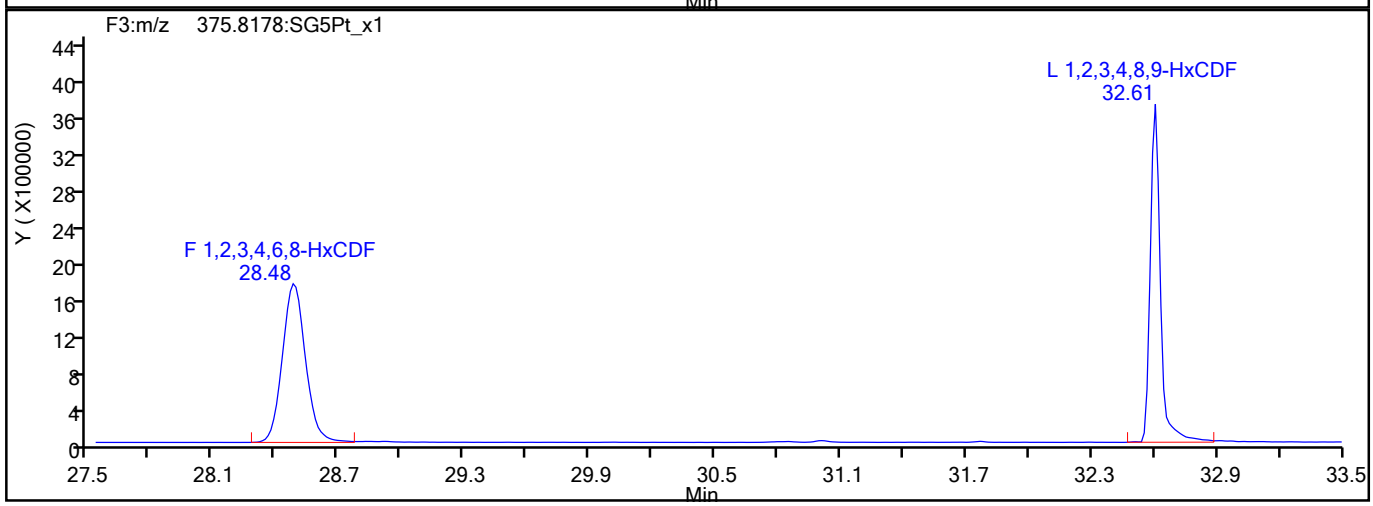

HxCDF Interference Mass

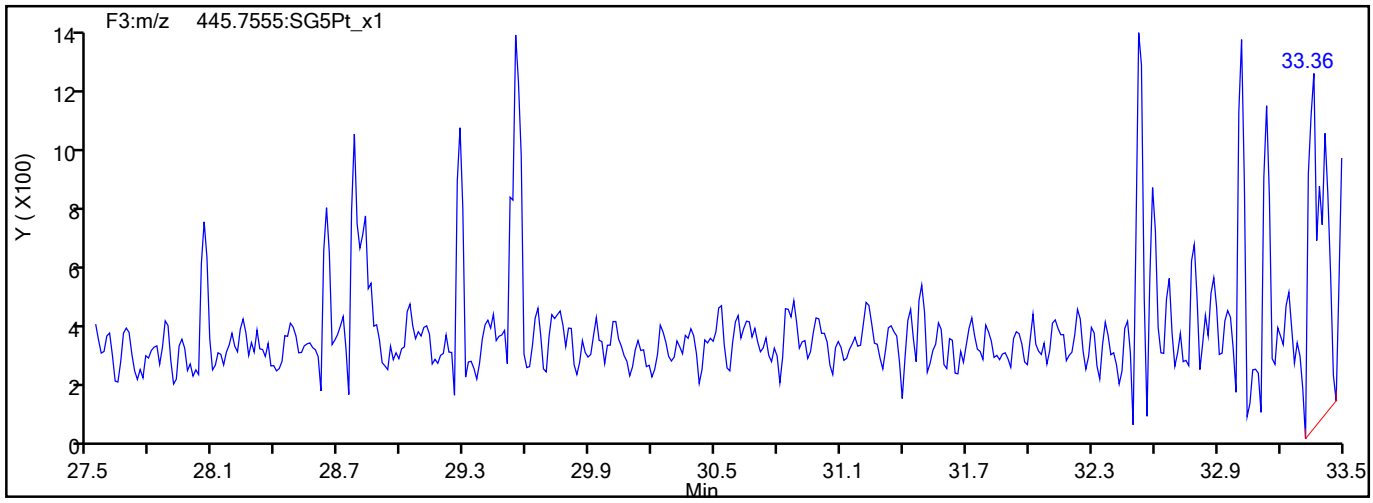

781608

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

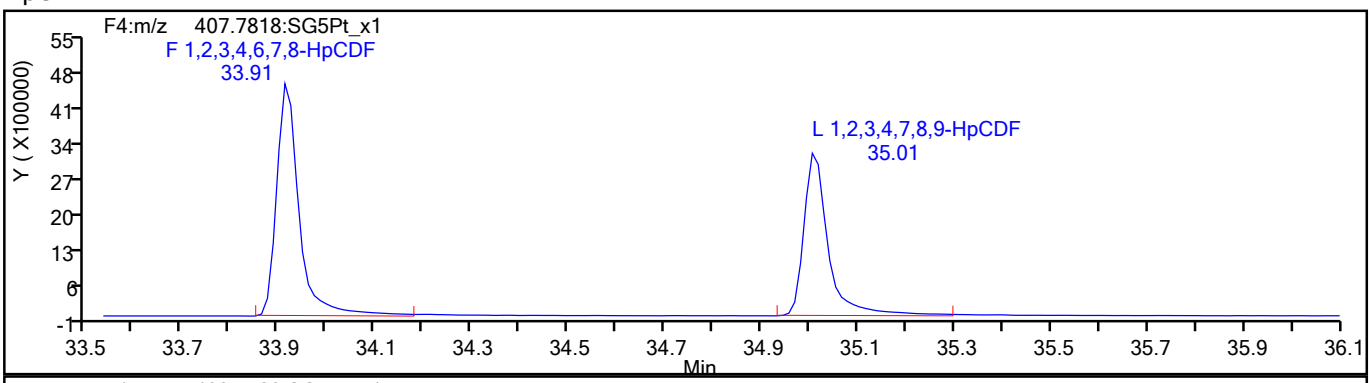

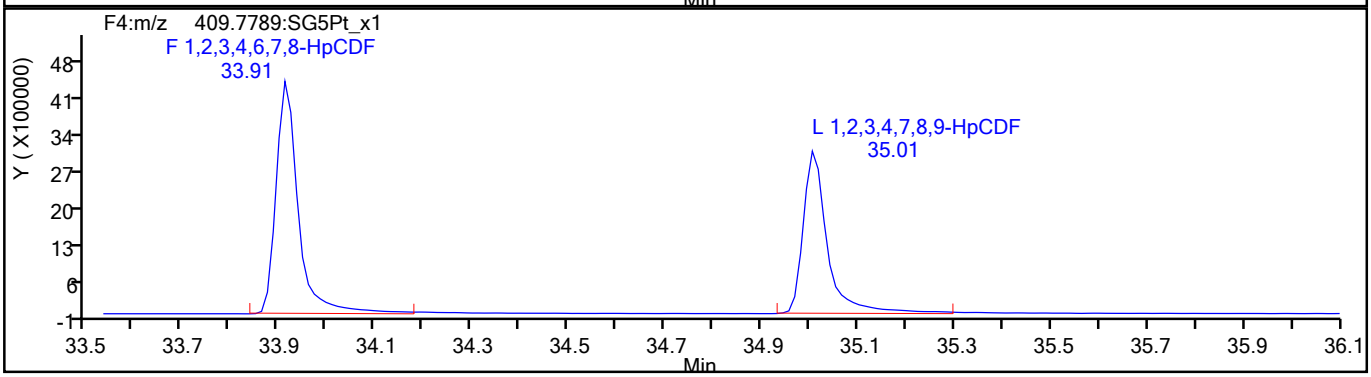

HpCDF Standards

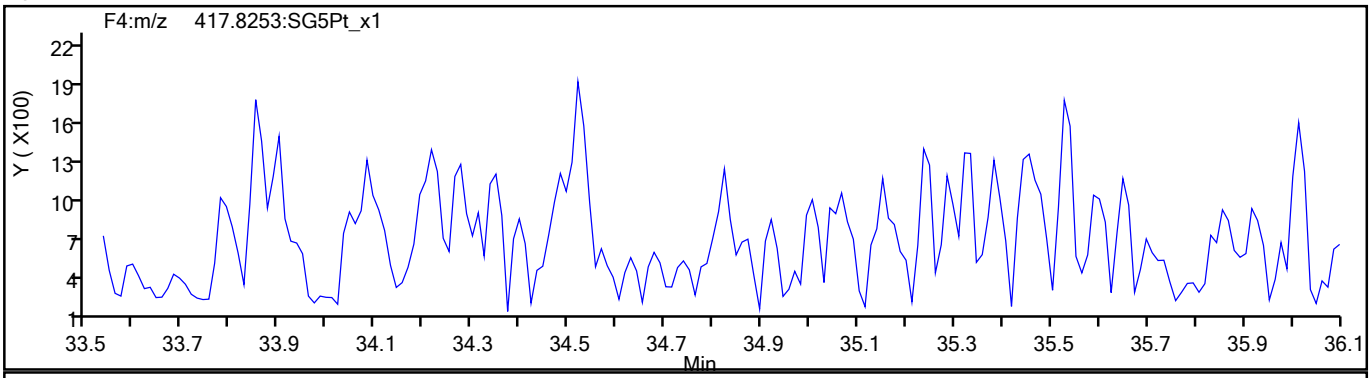

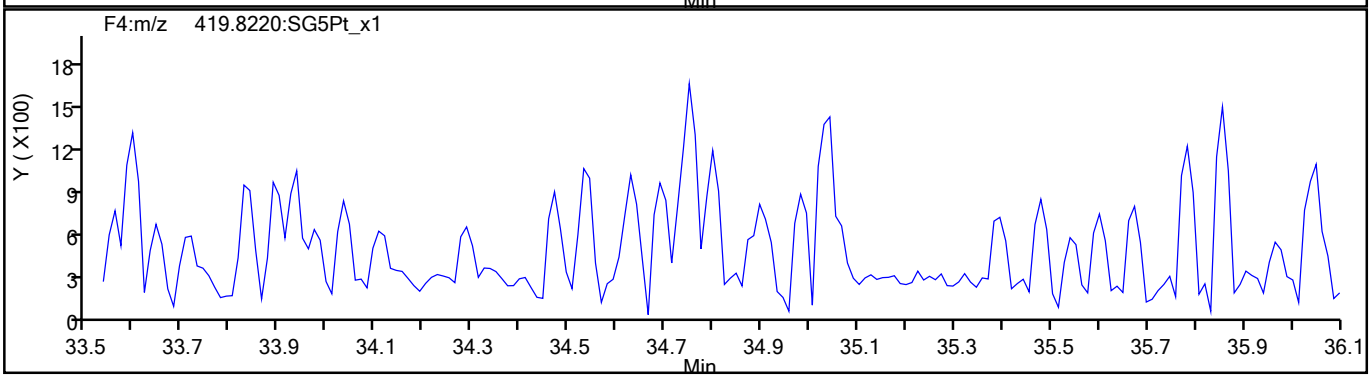

781609

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

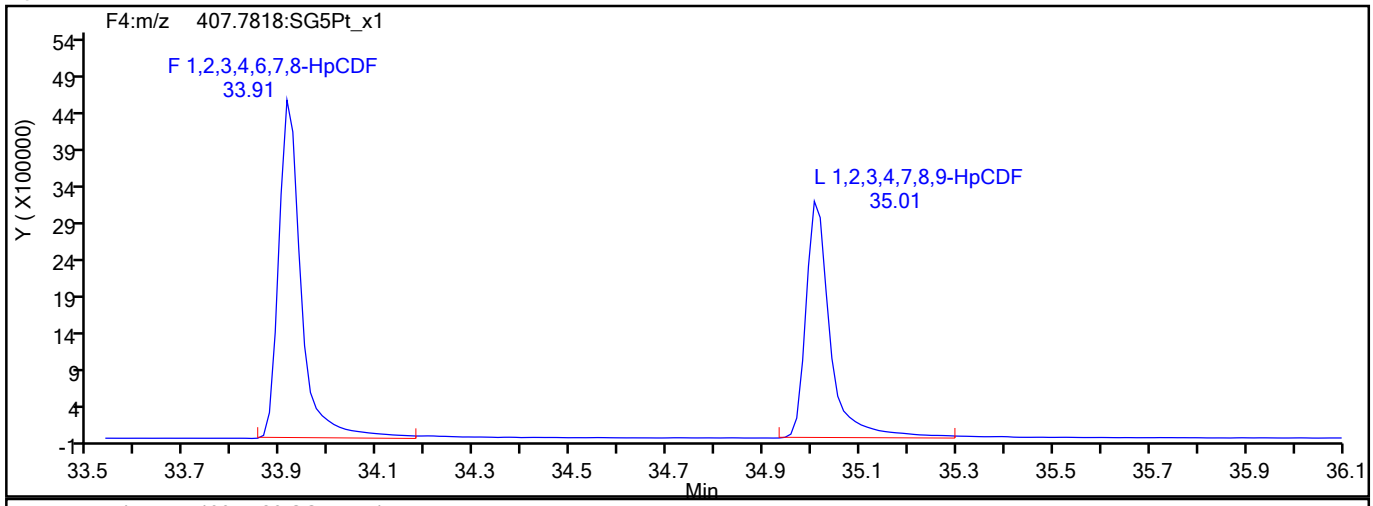

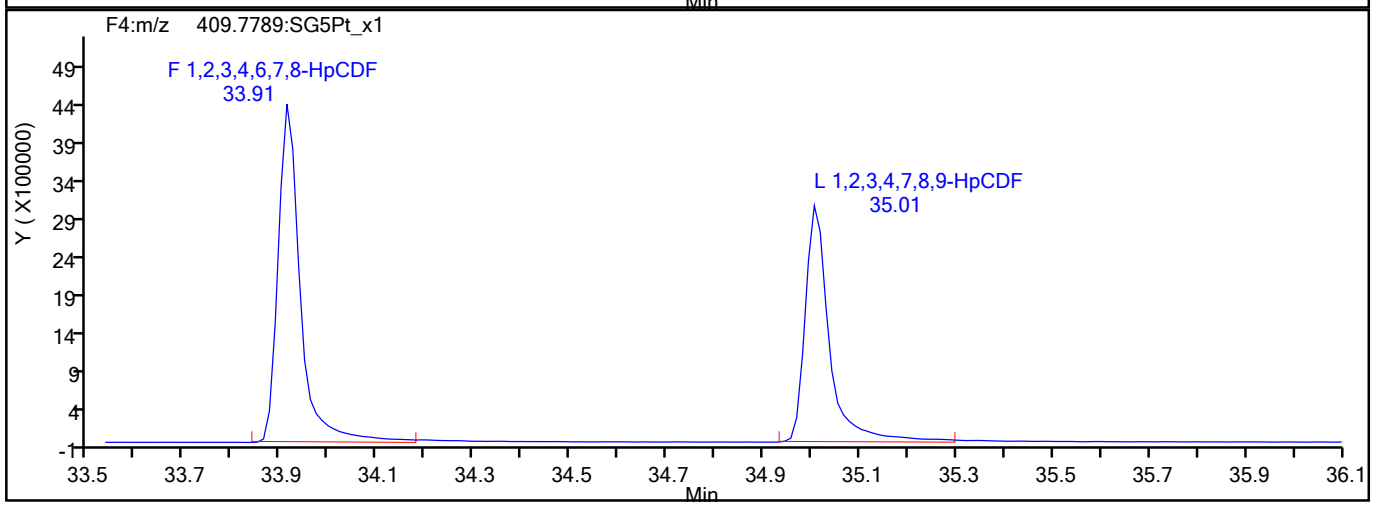

HpCDF Interference Mass

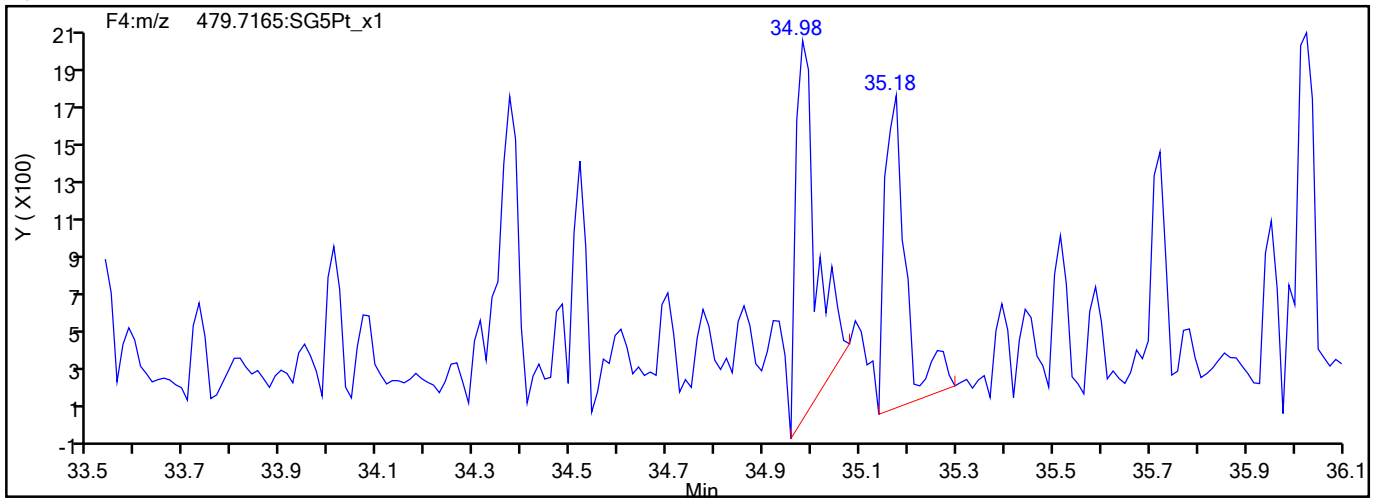

781610

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

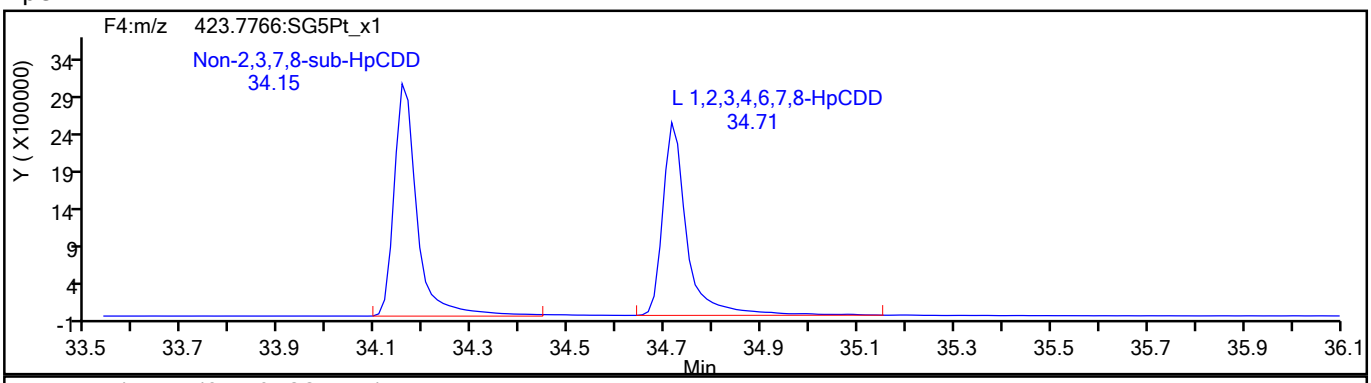

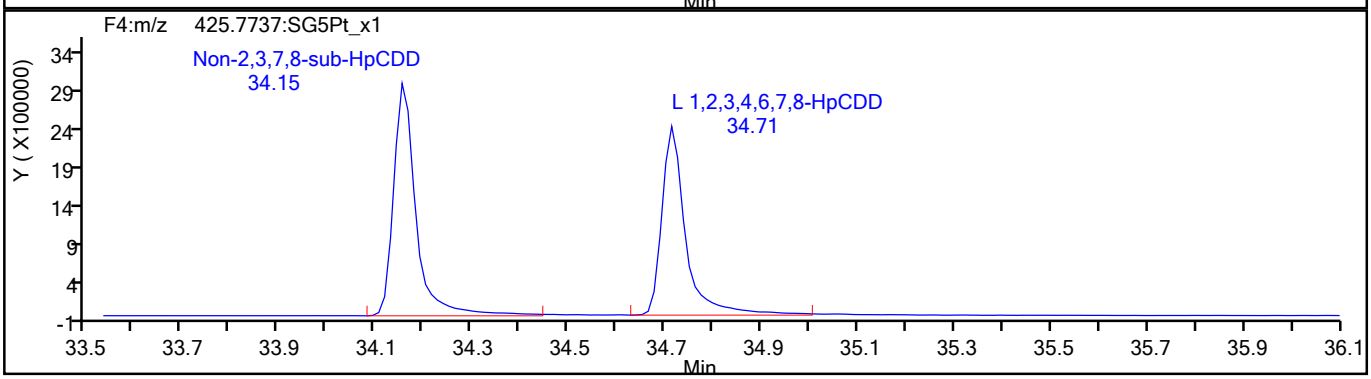

HpCDD Standards

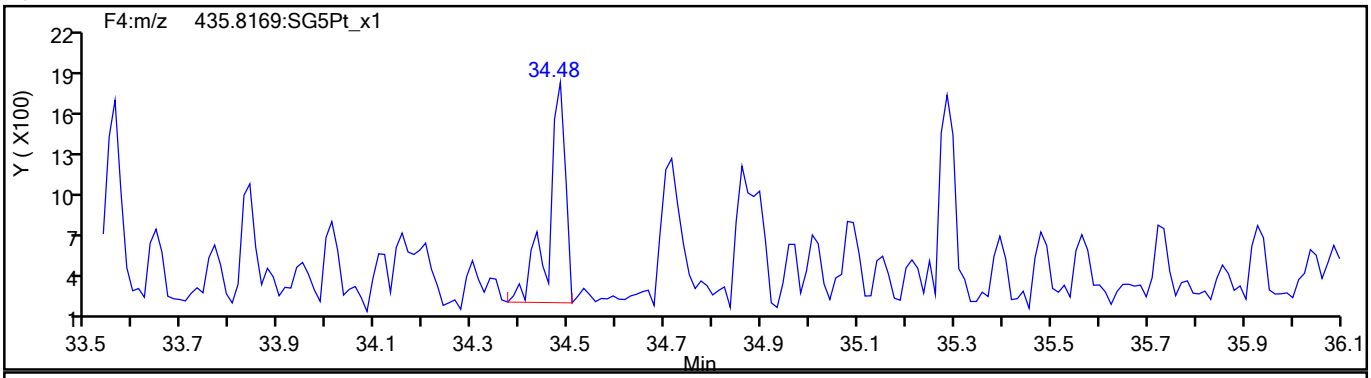

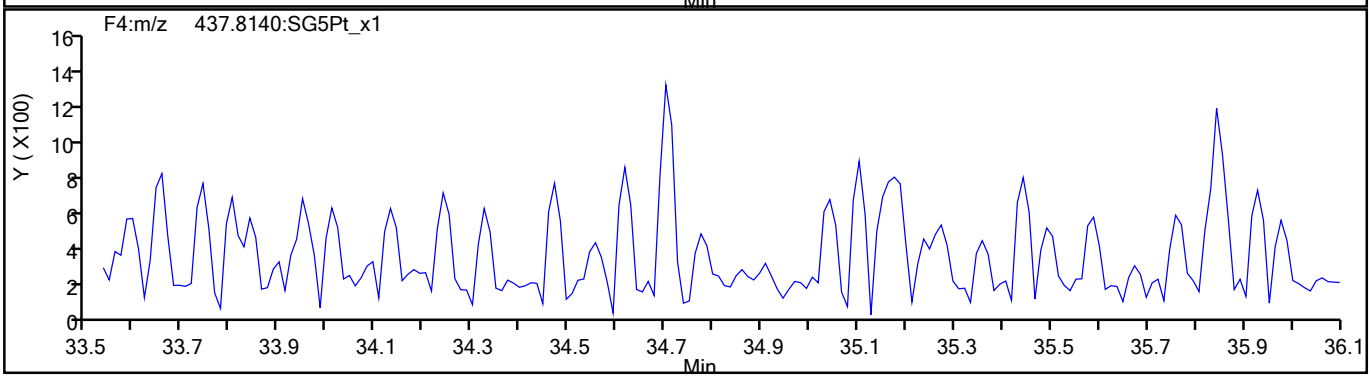

781611

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

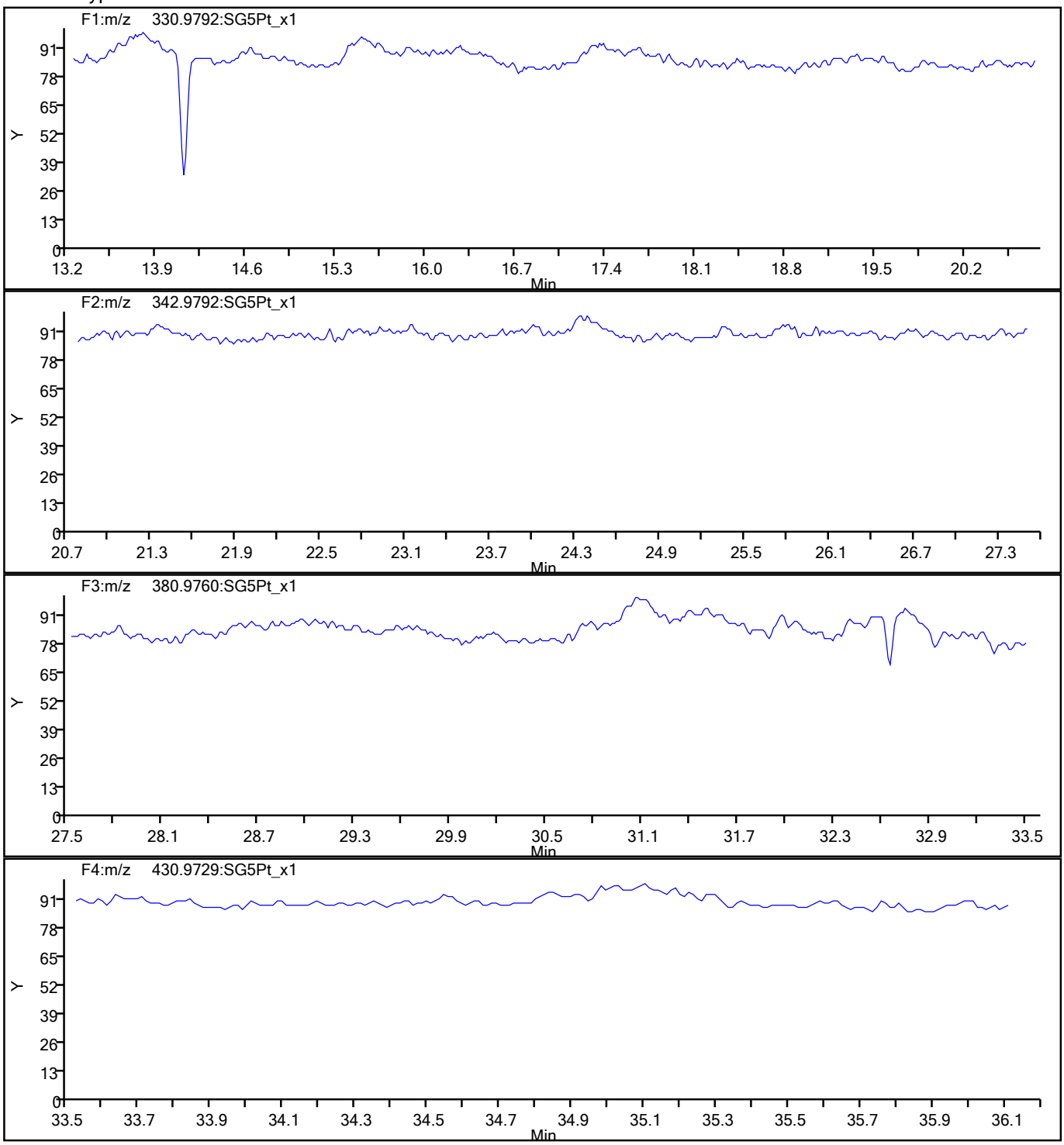

781612

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

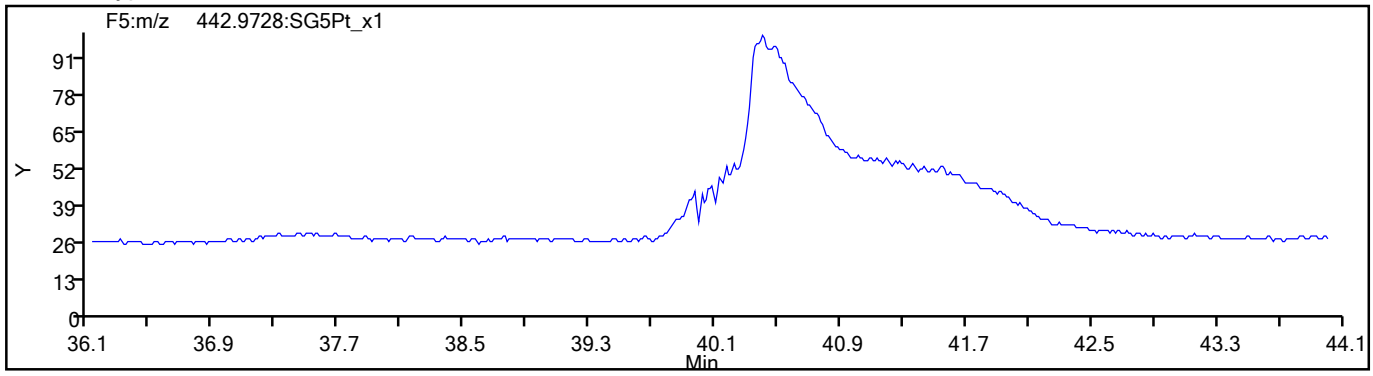

781613

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 14-Aug-2021 02:11:22 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081321A WDM HRDXNCP_00044
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 11:47:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1665

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:33:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.326	73847502	0.78	1.6249					0.00	
2,3,7,8-TCDF	17.356	160363741	0.77	1.0239	84.8	84.8	0.5491	0.5491		
A Non-2,3,7,8-sub-TCDF	17.038						0.5491	0.5491		
S Total TCDF					84.8	84.8	0.5491	0.5491		
D 13C-2,3,7,8-TCDD	18.036	38531367	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.066	53535563	0.78	1.2541	44.3	44.3	0.2604	0.2604		
A Non-2,3,7,8-sub-TCDD	17.499	46296934	0.77	1.2541	38.3	38.3	0.2604	38.3		
S Total TCDD					82.6	82.6	0.2604	0.2604		
A F1 PeCDFs	20.093						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	23.248	669707	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.355						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.210						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.882						0.0	0.0		
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.778	52446448	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	34.871	44429712	1.05	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.325						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.580	34141922	1.03	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.301						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.906	90335126	0.78							
1,3,6,8-TCDD	15.829	55571854	0.78							
2,3,4,7-TCDF	17.356	160363741	0.77							
1,2,3,7-TCDD	18.066	53545879	0.78							
1,2,3,9-TCDF	18.218	69282284	0.77							
1,2,3,9-TCDD	18.218	58005652	0.78							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.170	22388543								
1,2,8,9-TCDF	19.170	72952269	0.78							
1,3,4,6,8-PeCDF	19.458	63400218	1.58							
1,2,4,7,9-PeCDD	21.235	41260358	1.57							
1,2,3,8,9-PeCDD	25.476	38852460	1.58							
1,2,3,8,9-PeCDF	25.694	50742128	1.62							
1,2,3,4,6,8-HxCDF	27.987	51213051	1.22							
1,2,4,6,7,9-HxCDD	29.571	38269783	1.27							
1,2,3,4,6,7-HxCDD	32.113	39596232	1.26							
1,2,3,4,8,9-HxCDF	32.432	49722483	1.22							
1,2,3,4,6,7,9-HpCDD	34.021	38488182	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 14-Aug-2021 02:11:22 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081321A WDM HRDXNCP_00044
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 11:47:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1665

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:33:57

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.326	17.326	0	1.000	32306791	7484682	7281	18202	1028		
317.9389	17.326	17.326	0	1.000	41540711	9666692	4176	10440	2315	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.356	17.356	0	1.002	69582430	15360655	41874	104685	367		
305.8987	17.356	17.356	0	1.002	90781311	20354590	54553	136382	373	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.038						41874	104685			
305.8987	17.038						54553	136382			
13C-2,3,7,8-TCDD											
331.9368	18.036	18.036	0	1.000	17105354	3754762	2959	7397	1269		
333.9339	18.036	18.036	0	1.000	21426013	4767750	1967	4917	2424	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.002	23526054	5399948	10270	25675	526		
321.8936	18.066	18.066	0	1.002	30009509	6795438	17563	43907	387	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.945	17.499	27	0.995	20151434	4762208	10270	25675	464		
321.8936	17.945	17.499	27	0.995	26145500	6097888	17563	43907	347	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	20.093						1353	3382			
341.8567	20.093						1308	3270			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.835	23.248	-85	1.000	129682	21699	4687	11717	5		
341.8567	21.808	23.248	-86	1.000	46625	9163	3163	7907	3	2.78(1.32-1.78)	
339.8597	22.394	23.248	-51	1.000	187231	28396	4687	11717	6		
341.8567	22.408	23.248	-50	1.000	157893	19396	3163	7907	6	1.19(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	22.980	23.248	-16	1.000	140673	22145	4687	11717	5		
341.8567	22.967	23.248	-17	1.000	102116	14963	3163	7907	5	1.38(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.355						4949	12372			
357.8516	23.355						2474	6185			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.210						7916	19790			
375.8178	30.210						6284	15710			
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						12921	32302			
391.8127	30.882						10838	27095			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	26862677	8380905	35116	87790	239		
409.7789	33.778	33.778	0	1.000	25583771	7969158	33554	83885	238	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.871	34.871	0	1.000	22758244	5838044	35116	87790	166		
409.7789	34.859	34.871	-1	1.000	21671468	5546139	33554	83885	165	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.325						35116	87790			
409.7789	34.325						33554	83885			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	17302217	4819932	22672	56680	213		
425.7737	34.580	34.580	0	1.000	16839705	4651057	24704	61760	188	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						22672	56680			
425.7737	34.301						24704	61760			
1,3,6,8-TCDF											
303.9016	14.906	14.906	0		39532037	11747986	41874	104685	281		
305.8987	14.906	14.906	0		50803089	15184651	54553	136382	278	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.829	15.829	0		24269839	6753372	10270	25675	658		
321.8936	15.829	15.829	0		31302015	8737738	17563	43907	498	0.78(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.356	17.356	0		69582430	15360655	41874	104685	367		
305.8987	17.356	17.356	0		90781311	20354590	54553	136382	373	0.77(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.066	18.066	0		23533100	5400906	10270	25675	526		
321.8936	18.066	18.066	0		30012779	6795883	17563	43907	387	0.78(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	18.218	18.218	0		30083567	6676292	41874	104685	159		
305.8987	18.218	18.218	0		39198717	8737439	54553	136382	160	0.77(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.218	18.218	0		25410369	5397686	10270	25675	526		
321.8936	18.218	18.218	0		32595283	7061287	17563	43907	402	0.78(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.170	19.170	0		22388543	4650701	10270	25675	453		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	19.170	19.170	0		32060222	6420841	41874	104685	153		
305.8987	19.170	19.170	0		40892047	8366824	54553	136382	153	0.78(0.65-0.89)	
1,3,4,6,8-PeCDF											
339.8597	19.458	19.458	0		38783312	7975300	1353	3382	5895		
341.8567	19.458	19.458	0		24616906	5101824	1308	3270	3900	1.58(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	21.235	21.235	0		25225934	4121951	4949	12372	833		
357.8516	21.235	21.235	0		16034424	2606151	2474	6185	1053	1.57(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	25.476	25.476	0		23811775	3111403	4949	12372	629		
357.8516	25.476	25.476	0		15040685	1969918	2474	6185	796	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	25.694	25.694	0		31341379	3975503	4687	11717	848		
341.8567	25.694	25.694	0		19400749	2459949	3163	7907	778	1.62(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	27.987	27.987	0		28143198	3288649	7916	19790	415		
375.8178	27.987	27.987	0		23069853	2694552	6284	15710	429	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.571	29.571	0		21410056	2443263	12921	32302	189		
391.8127	29.571	29.571	0		16859727	1895294	10838	27095	175	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8157	32.113	32.113	0		22078905	5734467	12921	32302	444		
391.8127	32.113	32.113	0		17517327	4572962	10838	27095	422	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.432	32.432	0		27301626	7074320	7916	19790	894		
375.8178	32.419	32.432	-1		22420857	5762049	6284	15710	917	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	34.021	34.021	0		19617048	5961023	22672	56680	263		
425.7737	34.021	34.021	0		18871134	5724936	24704	61760	232	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d
Lims ID: WDM
Client ID:
Inject. Date: 14-Aug-2021 02:11:22 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	38531367	8522512

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	38531367	8522512

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.945	20151434	4762208	26145500	6097888	38.3	0.77	
Signal Totals:							
	20151434	4762208	26145500	6097888			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	46296934	10860096				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 38.323 = (46296934 * 40.000) / (38531367 * 1.254)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d
Lims ID: WDM
Client ID:
Inject. Date: 14-Aug-2021 02:11:22 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDF, RT: 23.248

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.835	129682	21699	46625	9163		2.78	R
22.394	187231	28396	157893	19396		1.19	R
22.980	140673	22145	102116	14963		1.38	
Signal Totals:							
	457586	72240	306634	43522			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	764220	115762				1.49	RQ
	669707	107189					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (764220 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (669707 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

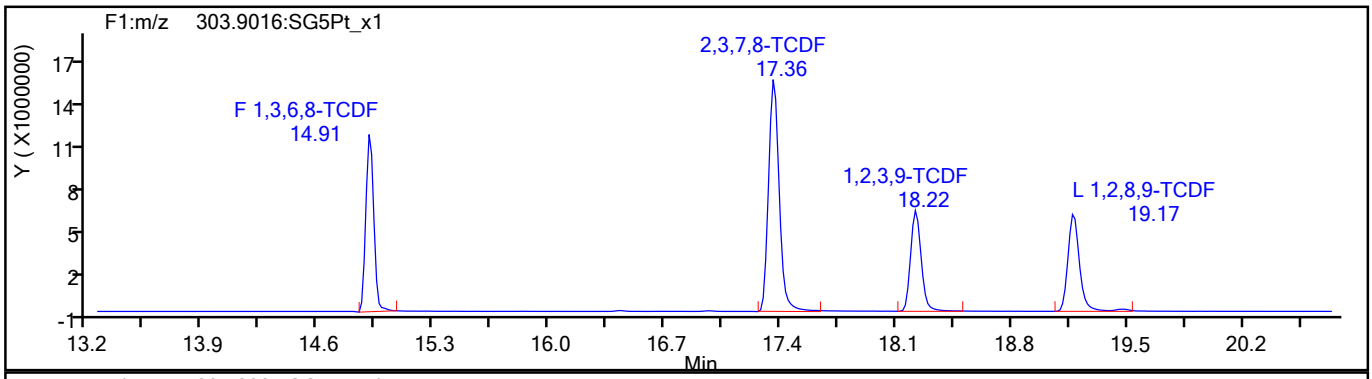

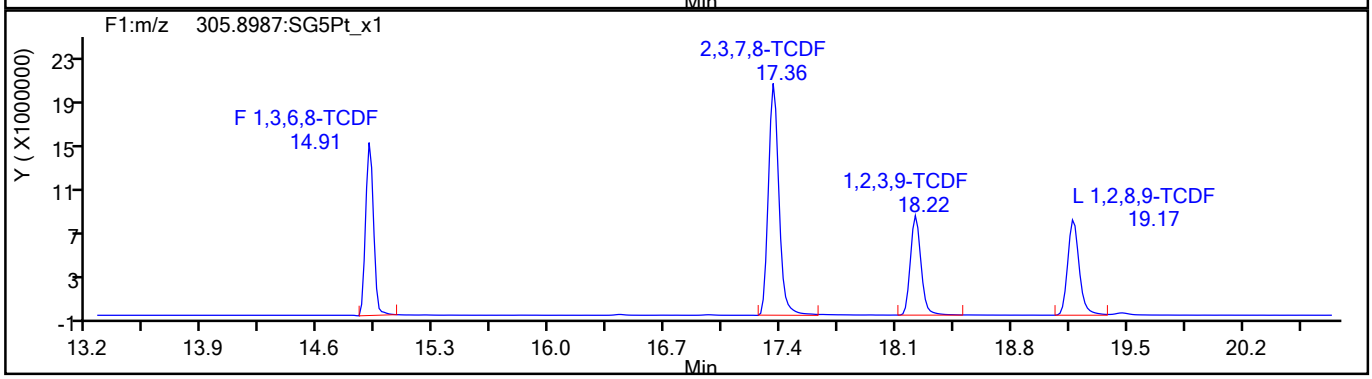

TCDF Standards

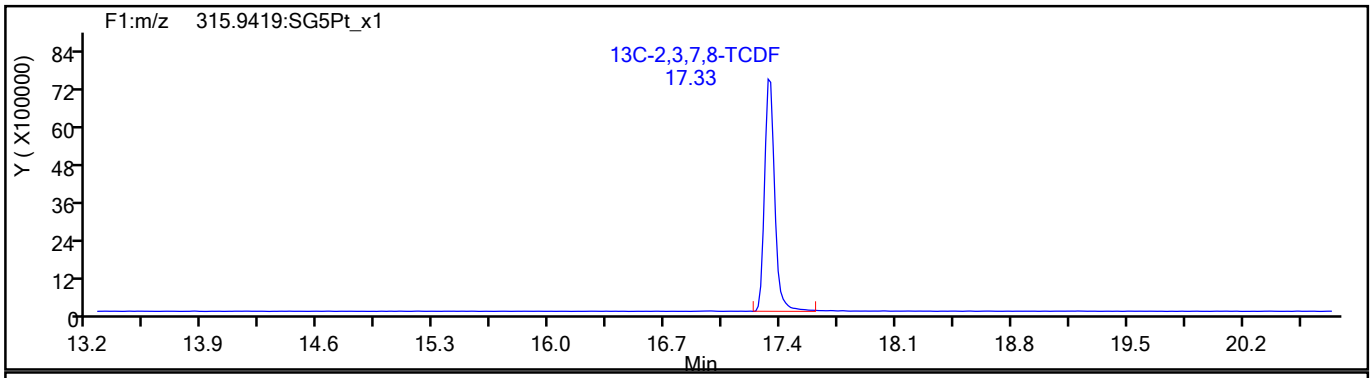

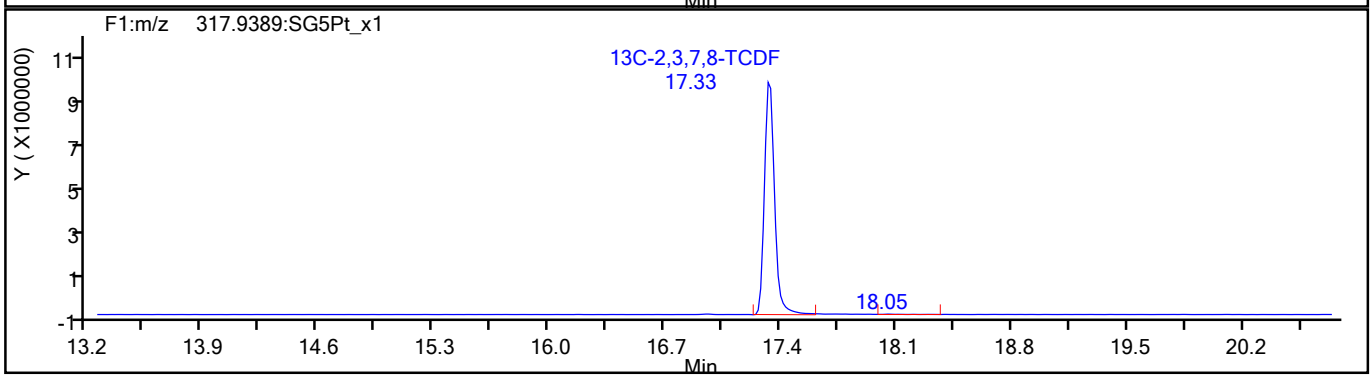

781621

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

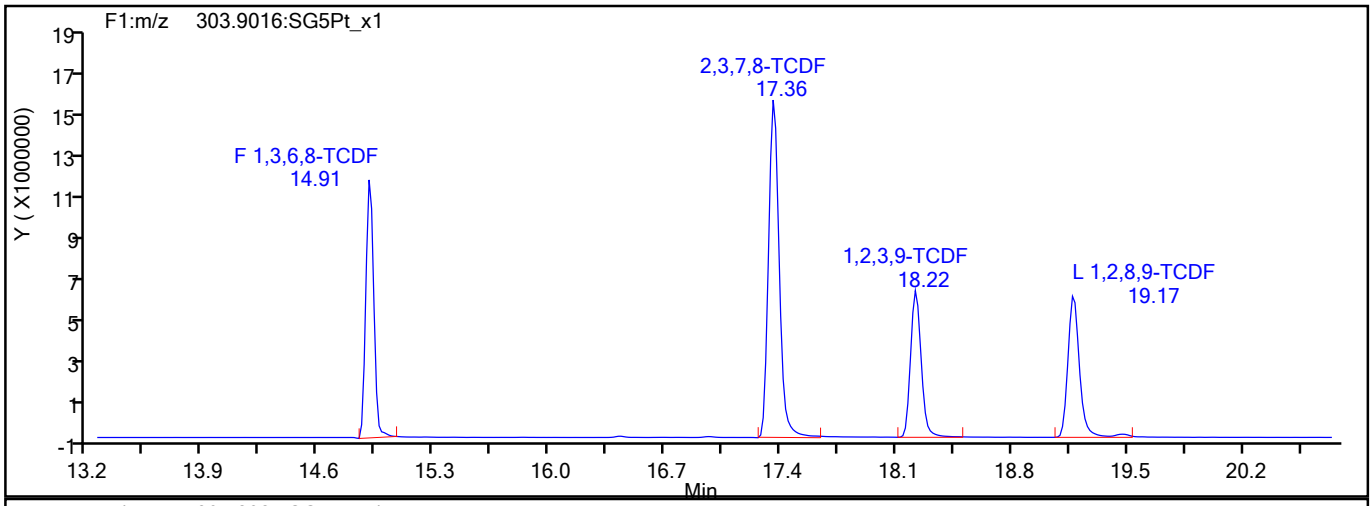

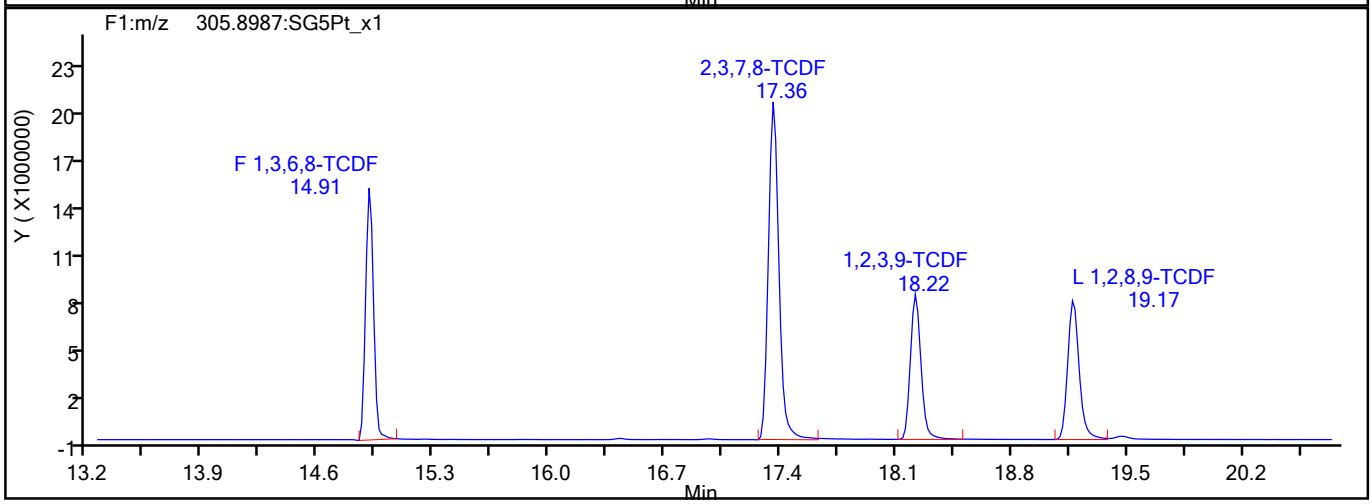

TCDF Interference Mass

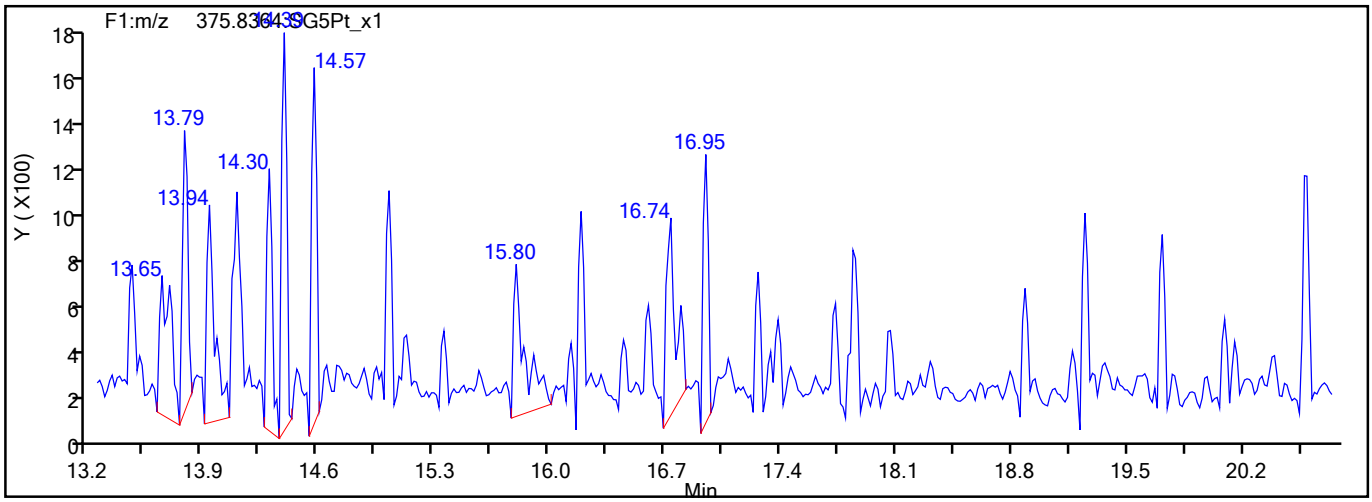

781622

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

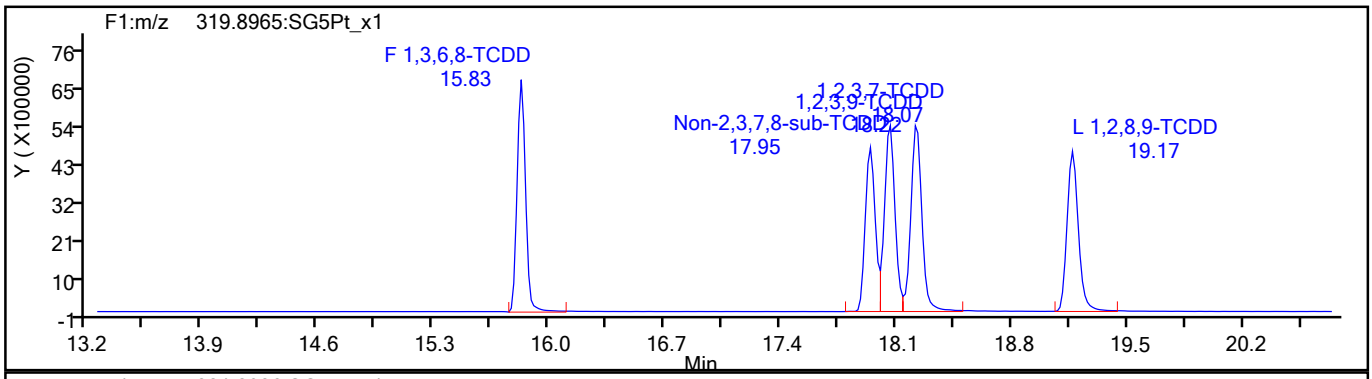

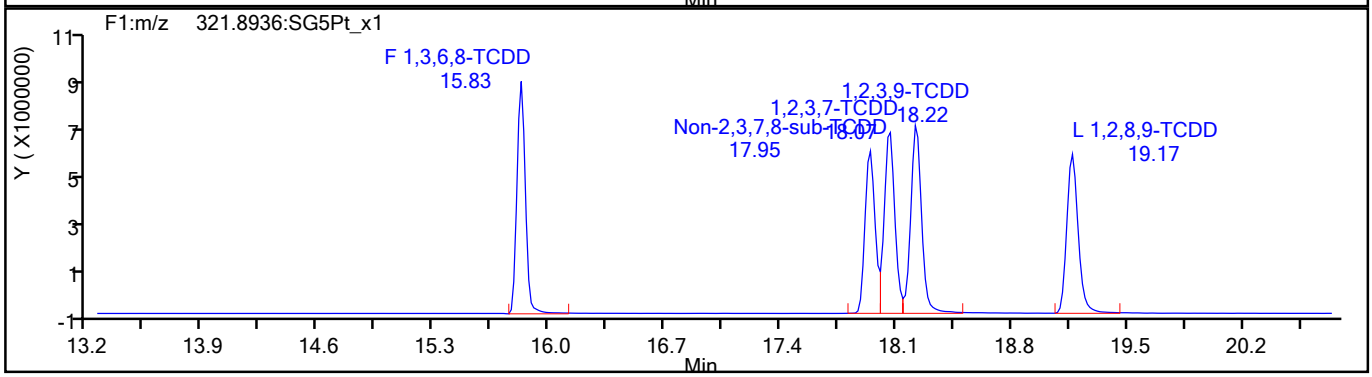

TCDD Standards

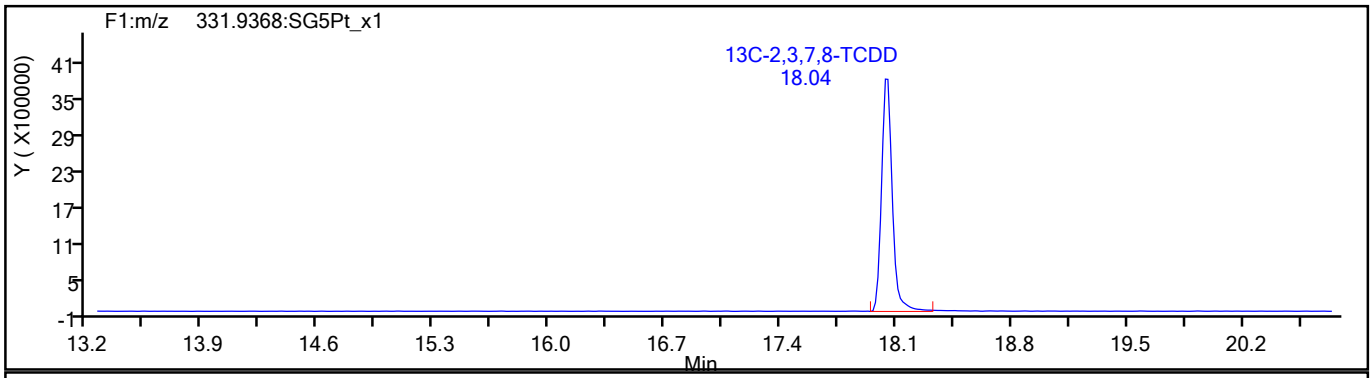

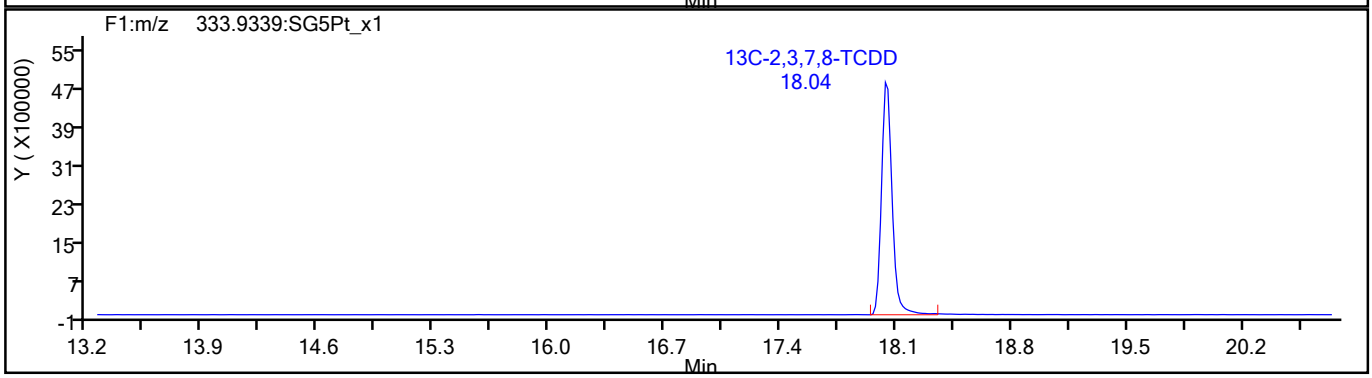

781623

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

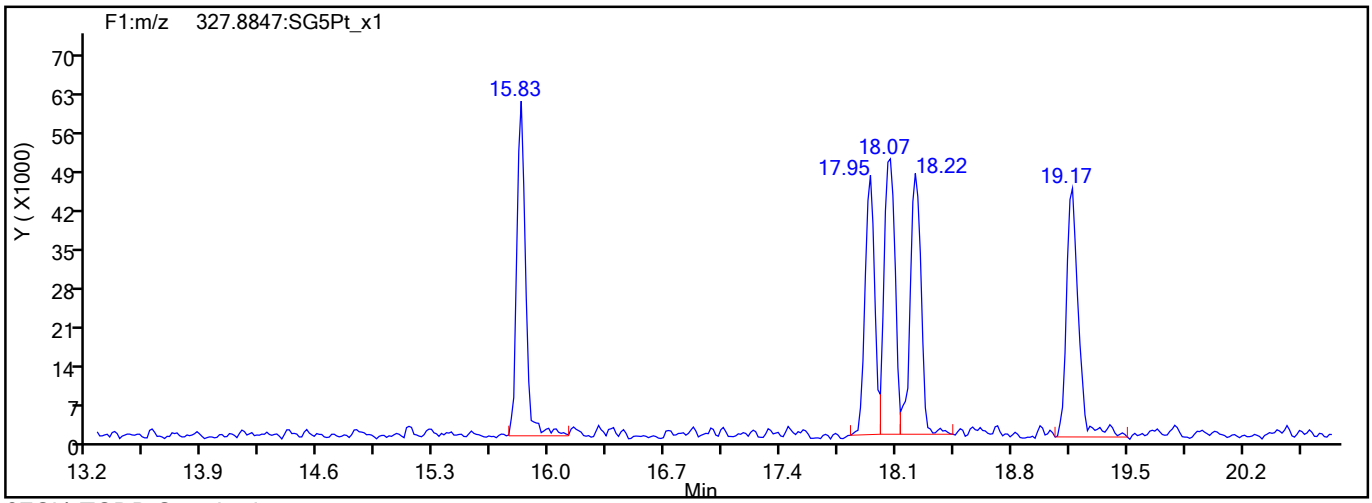

37Cl4-TCDD Standards

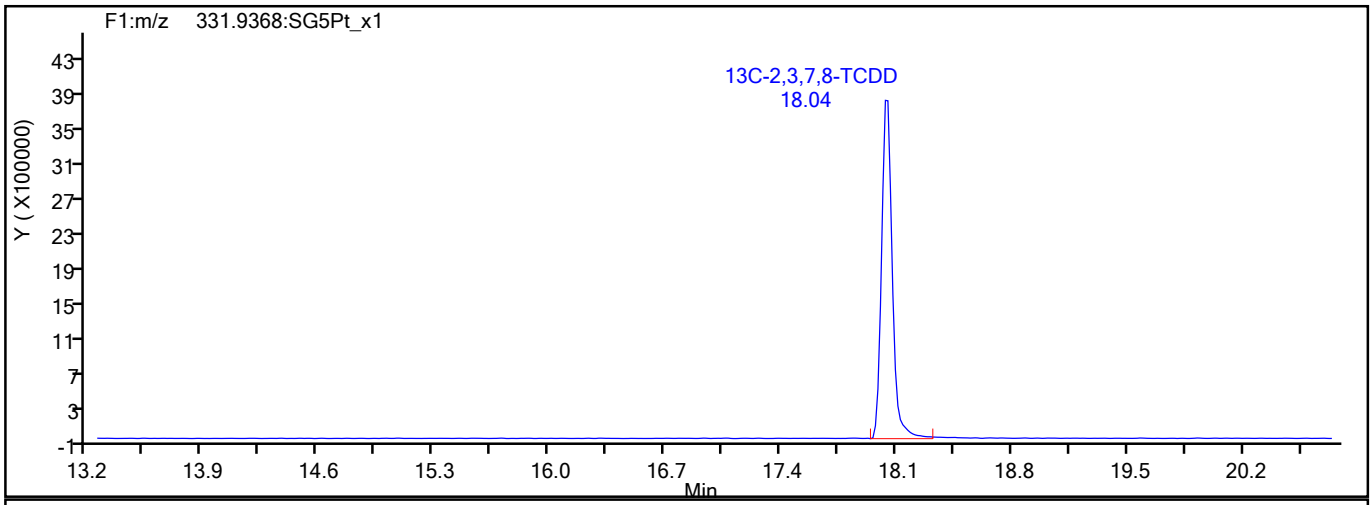

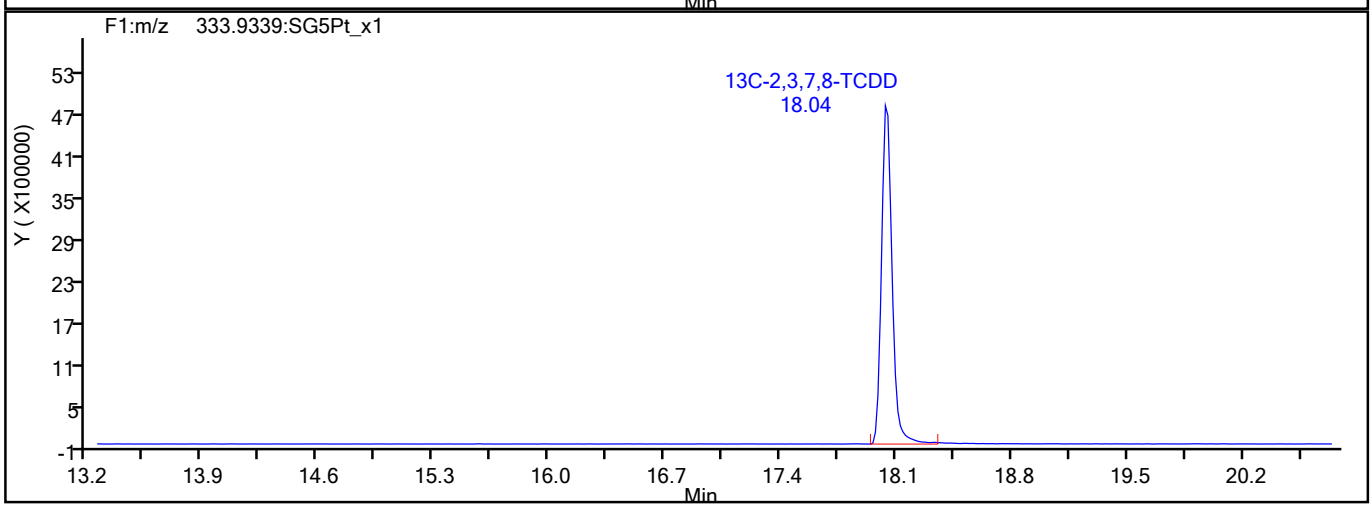

781624

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

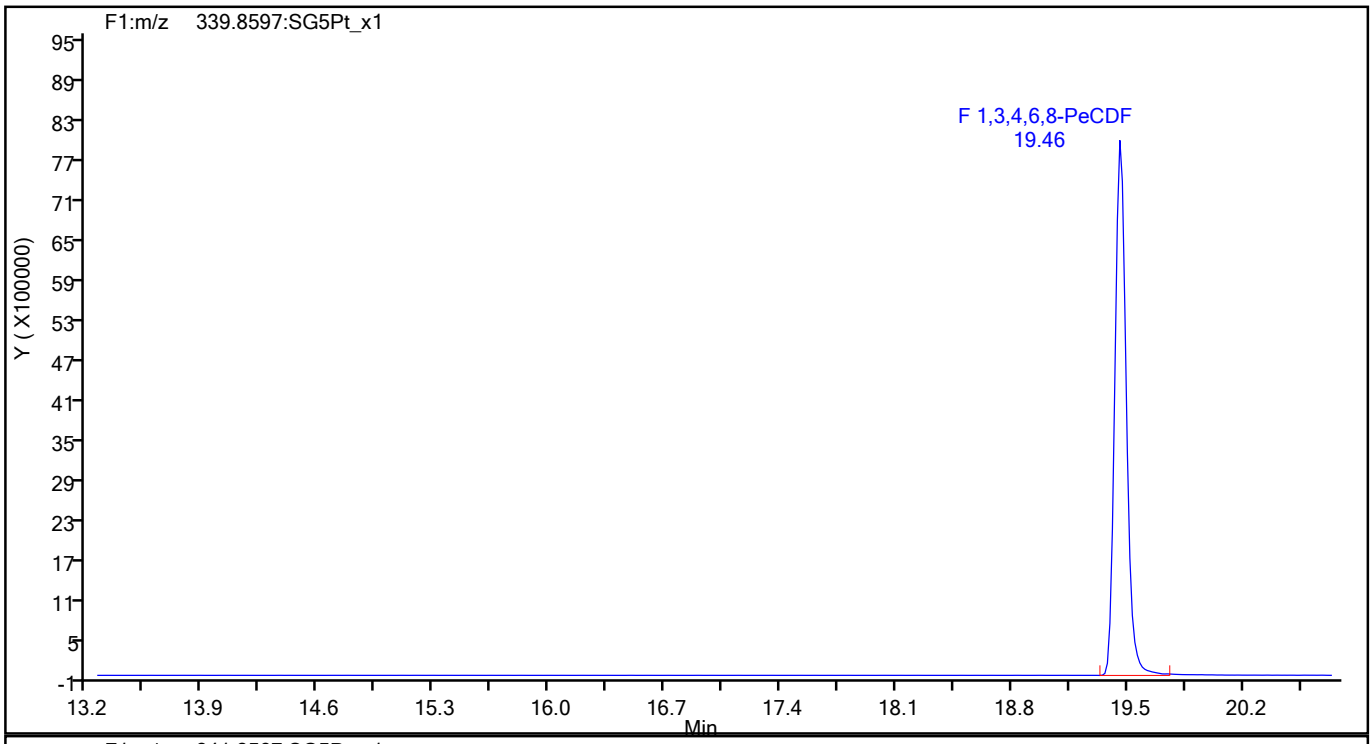

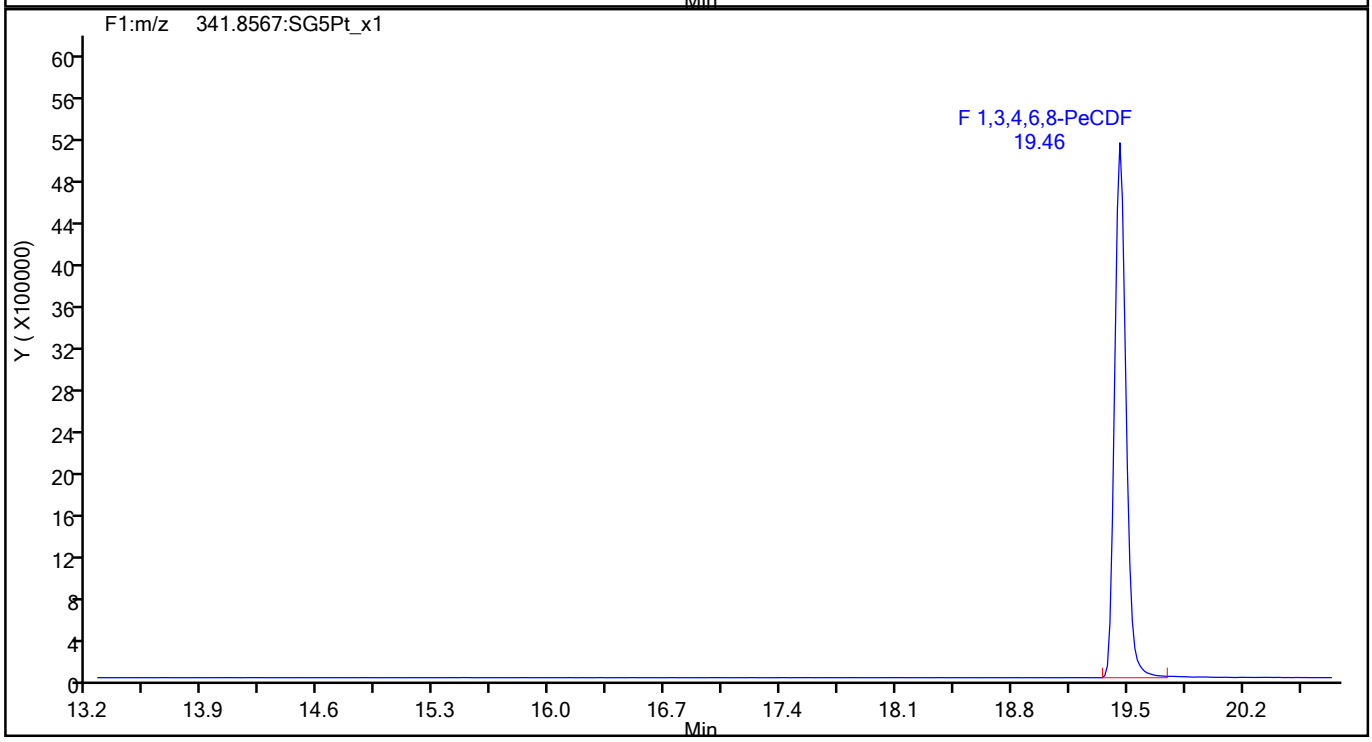

781625

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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F1 PeCDFs

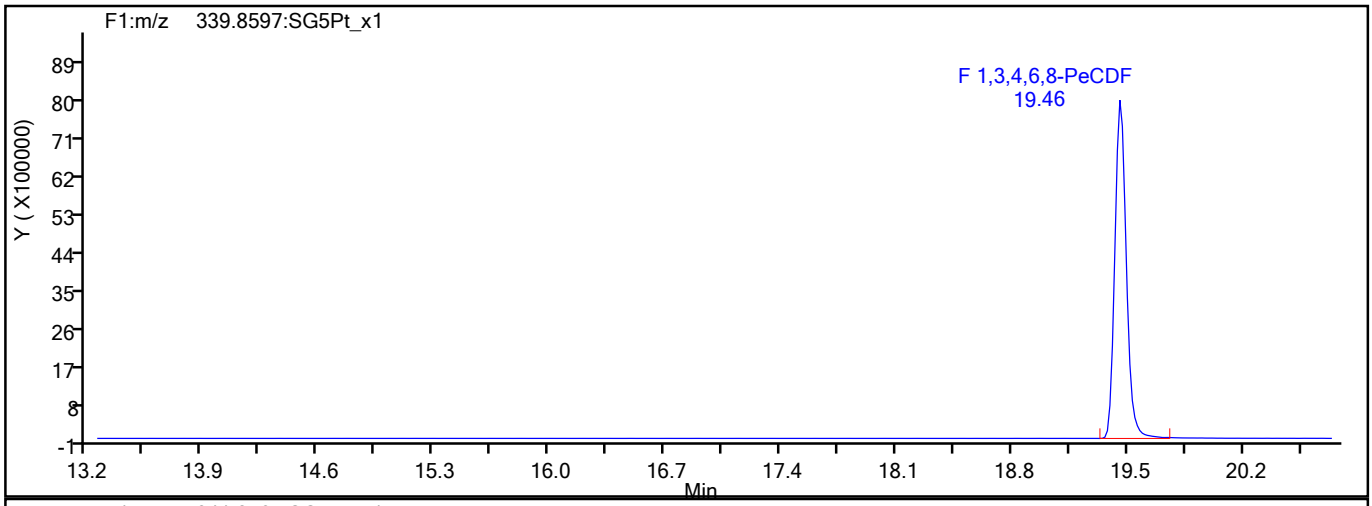

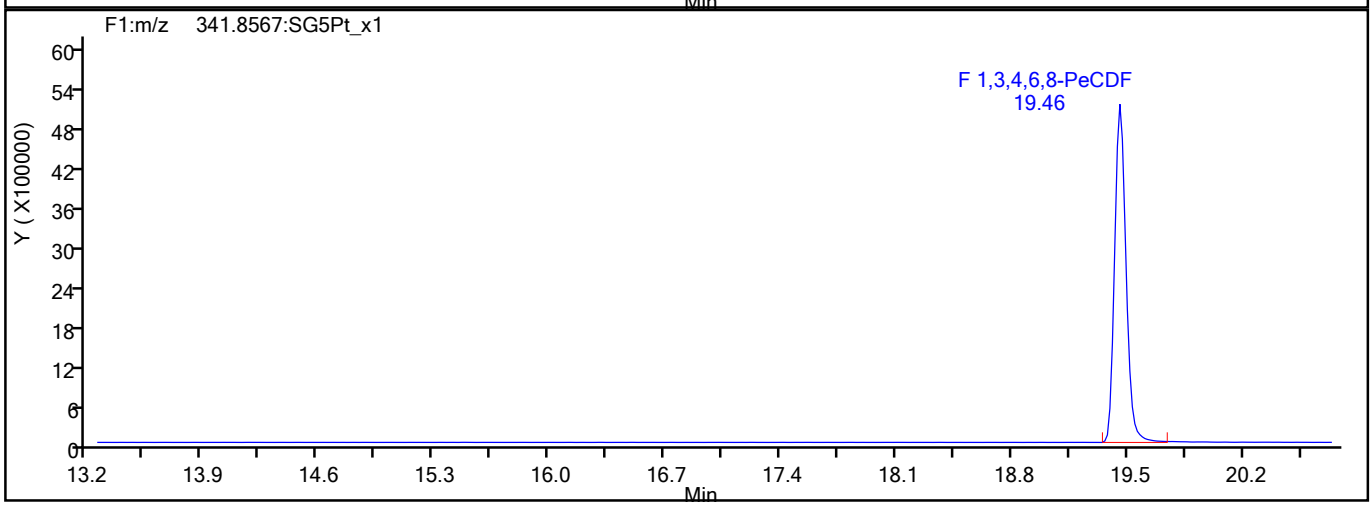

F1 PeCDFs Interference Mass

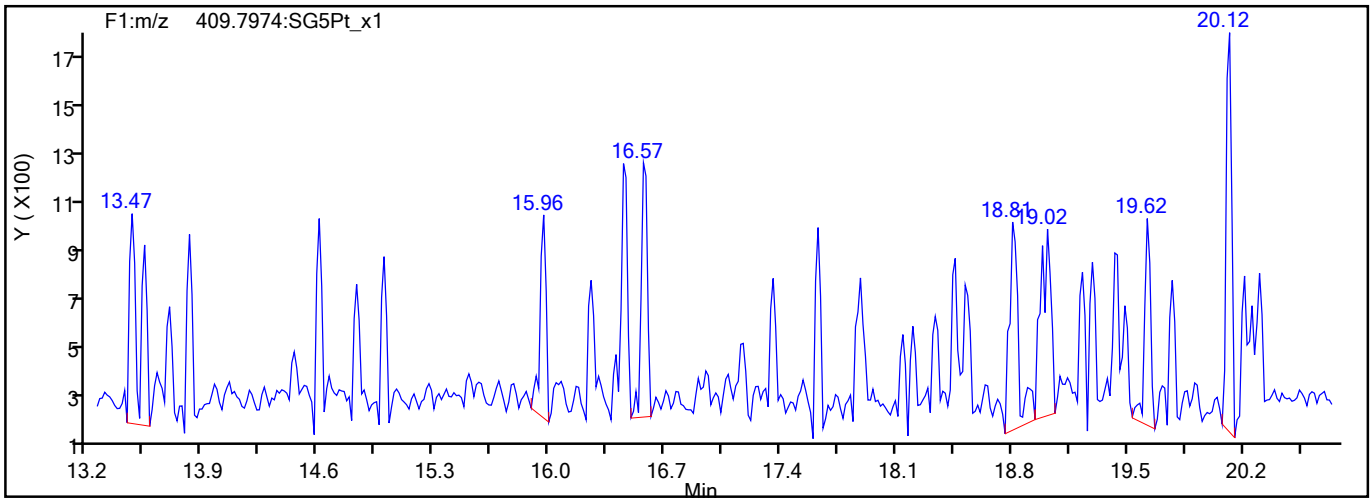

781626

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

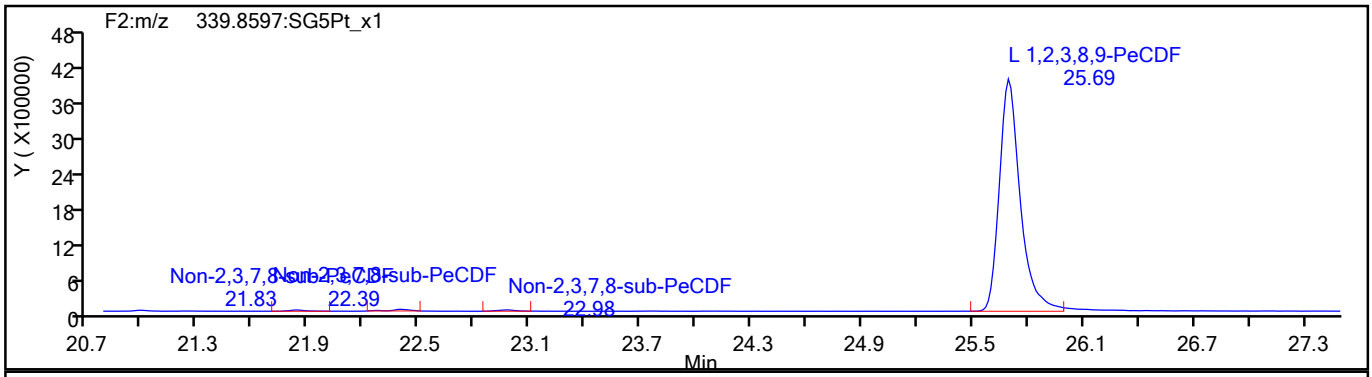

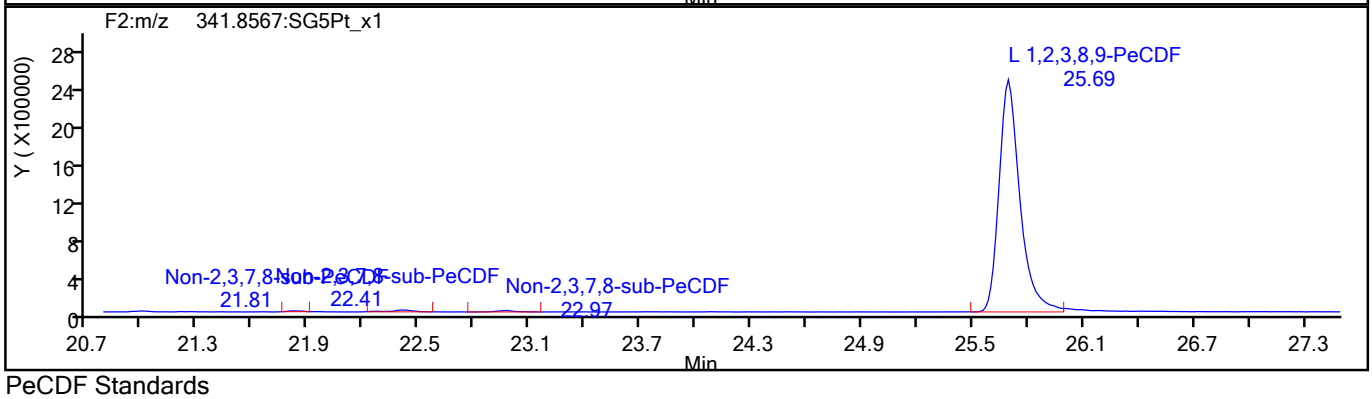

PeCDF Standards

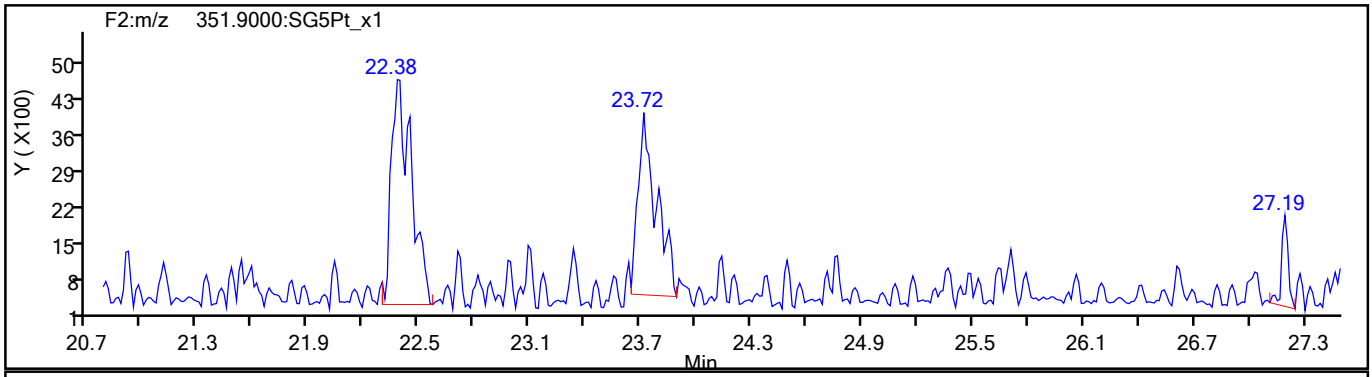

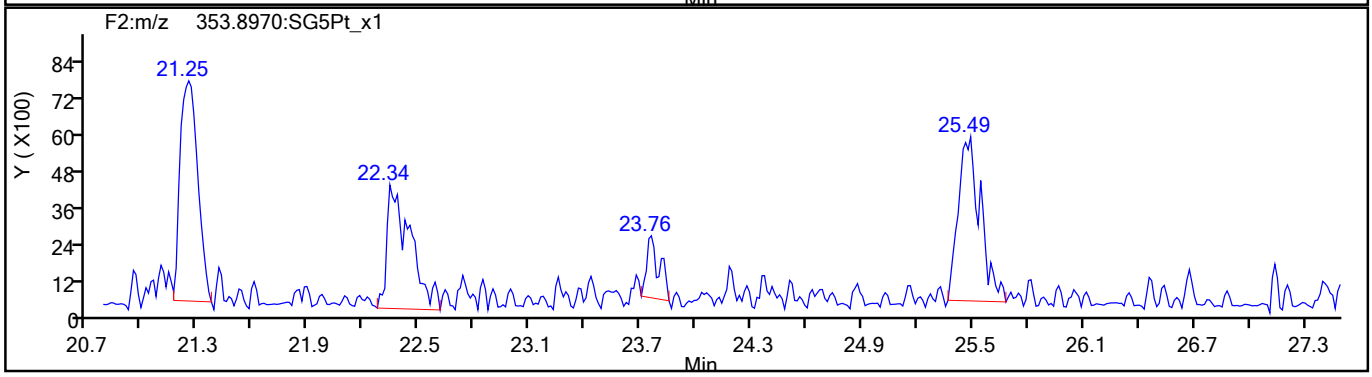

781627

Report Date: 17-Aug-2021 11:47:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

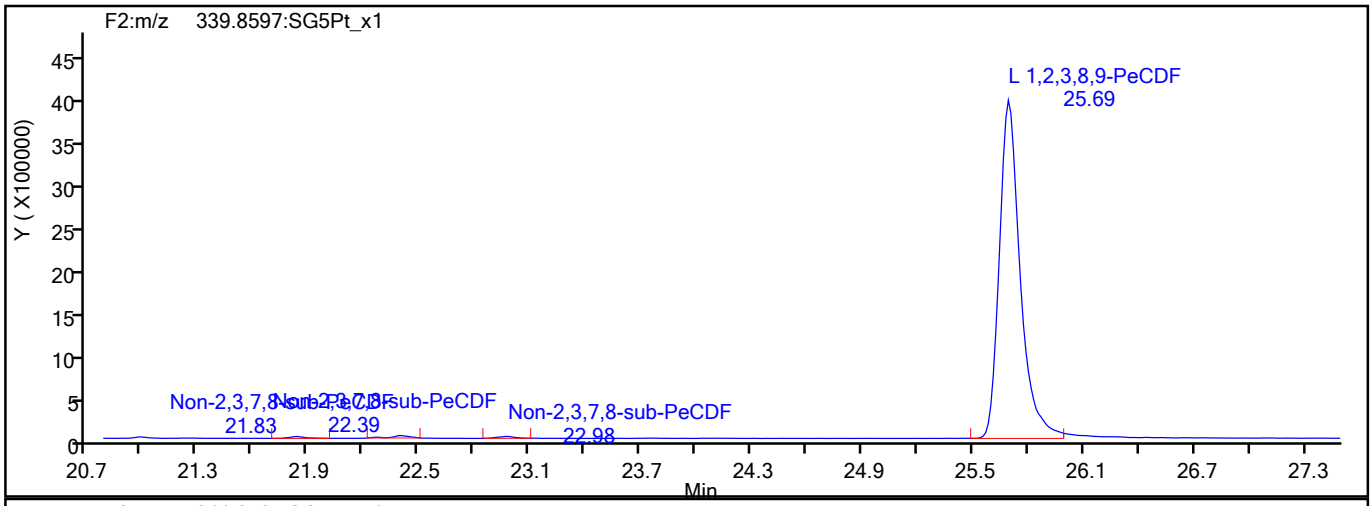

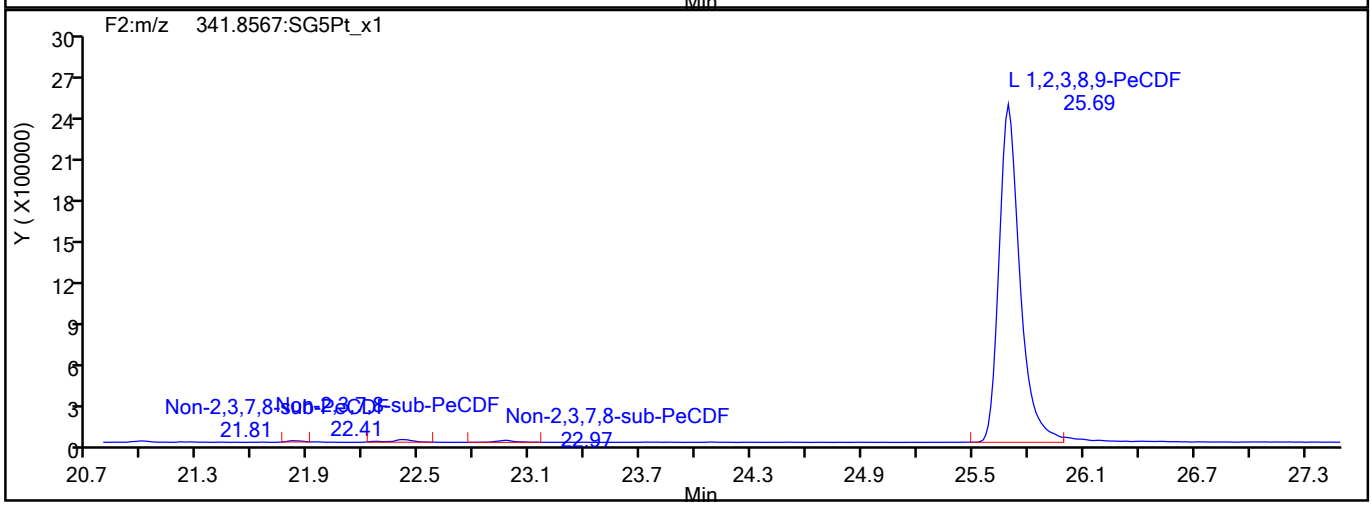

PeCDF Interference Mass

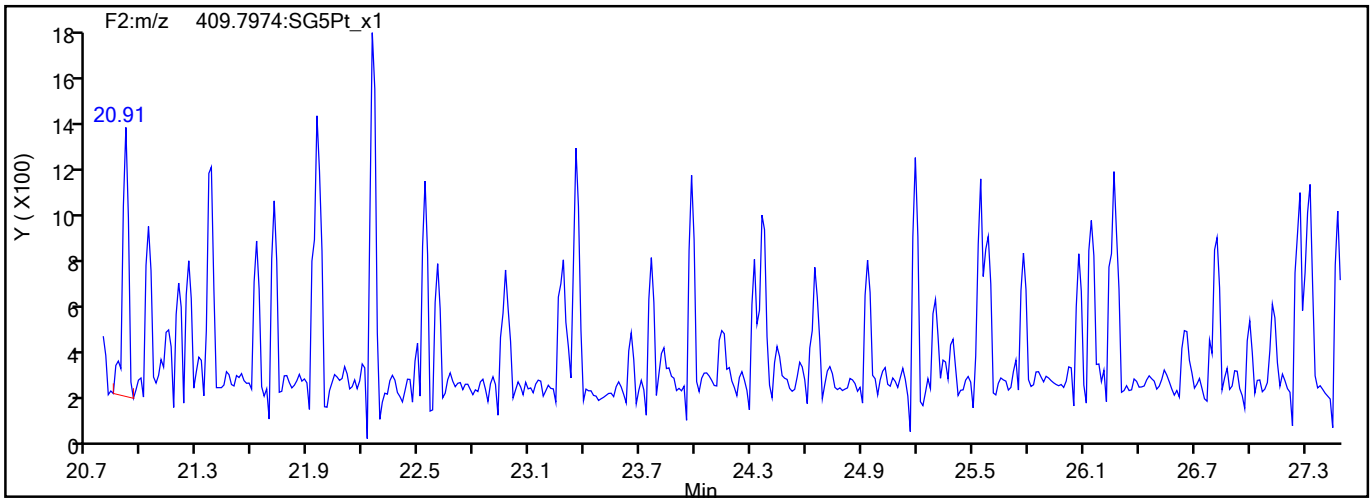

781628

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

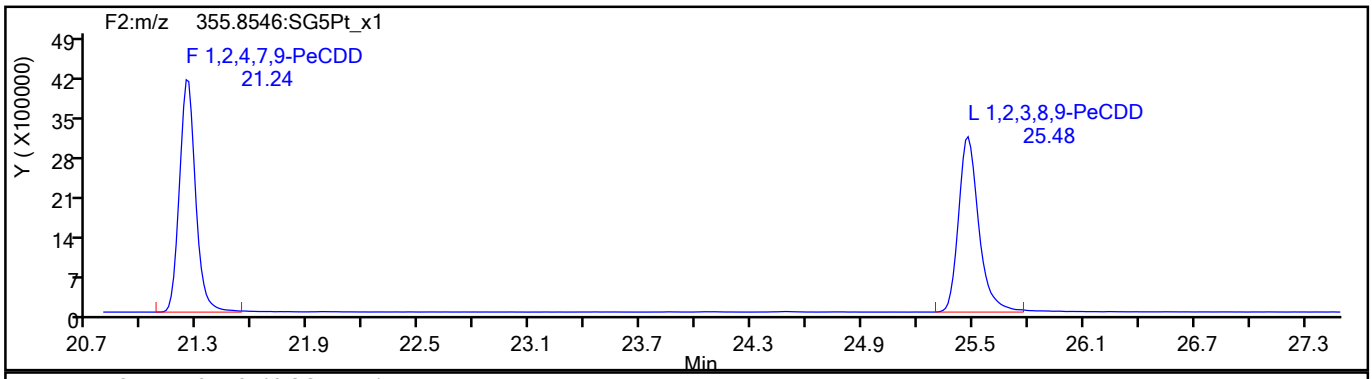

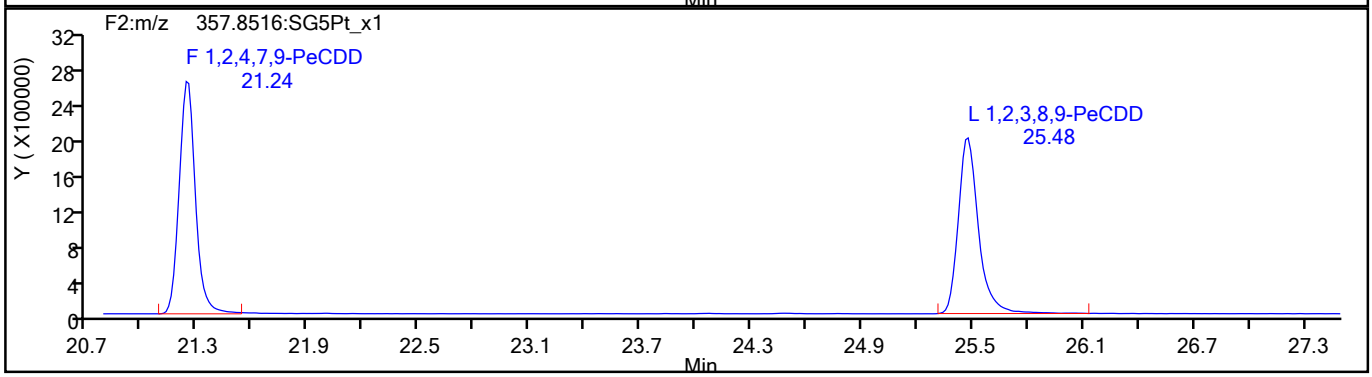

PeCDD Standards

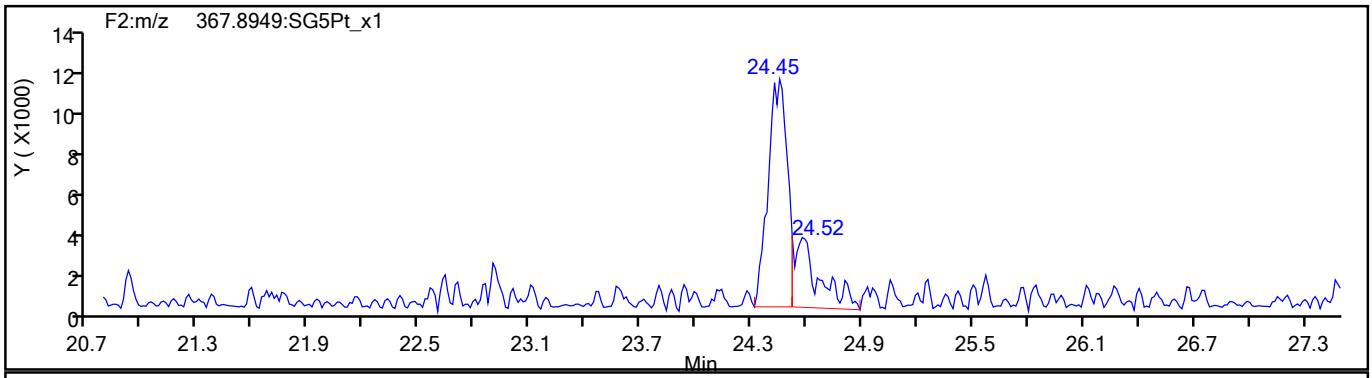

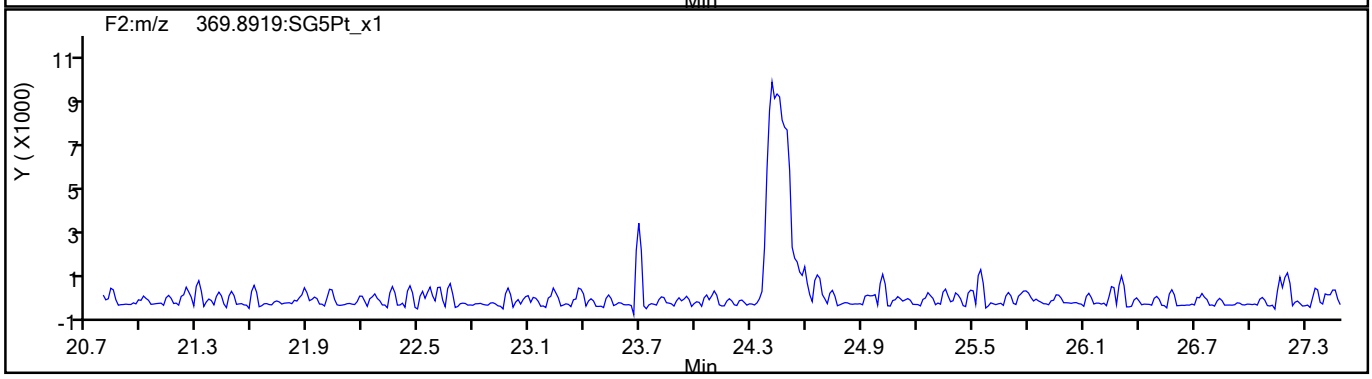

781629

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

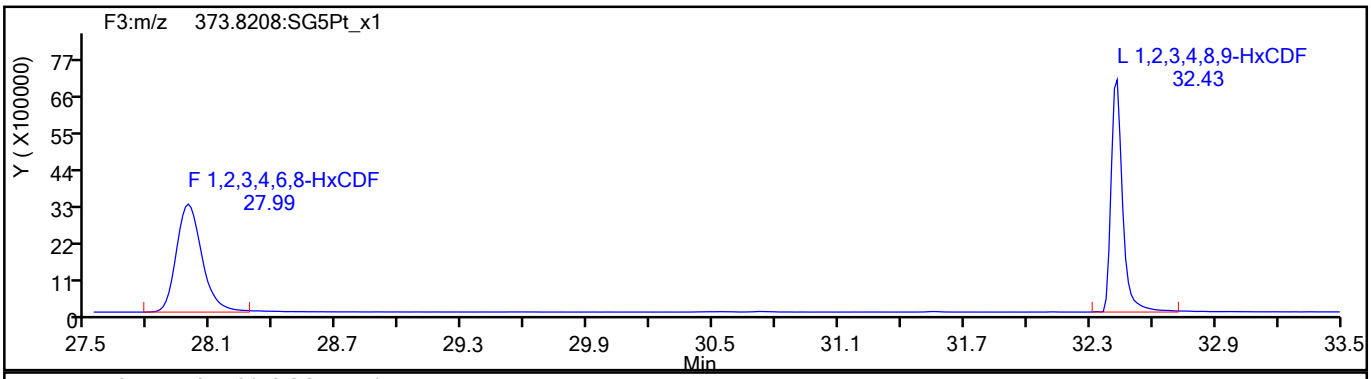

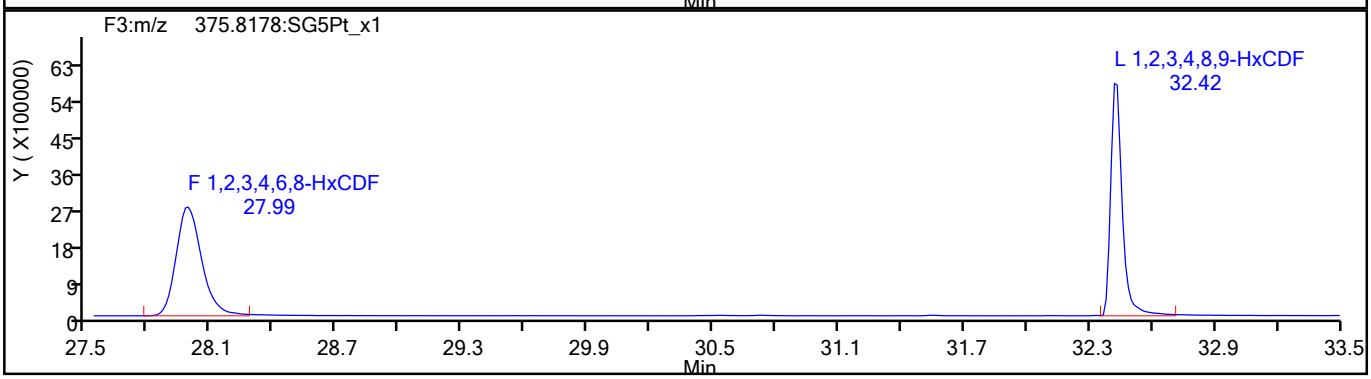

HxCDF Standards

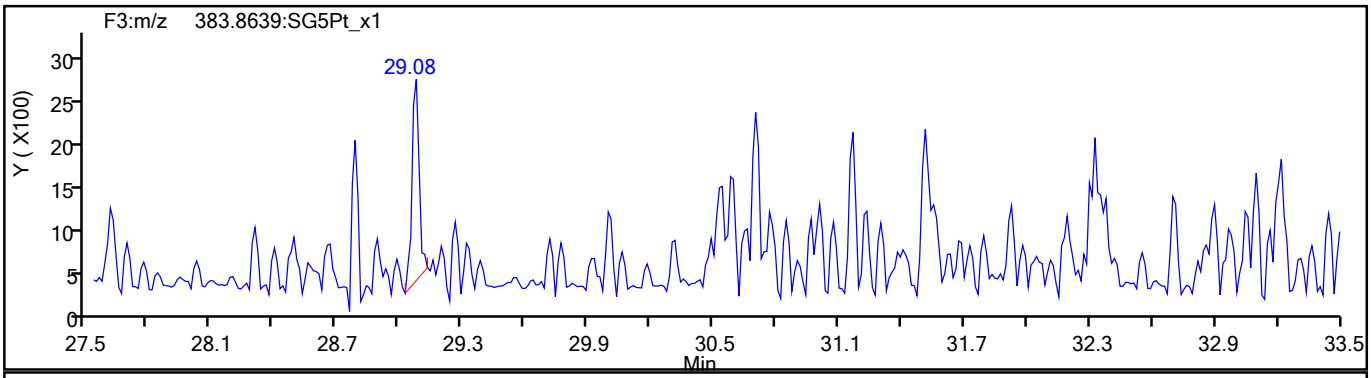

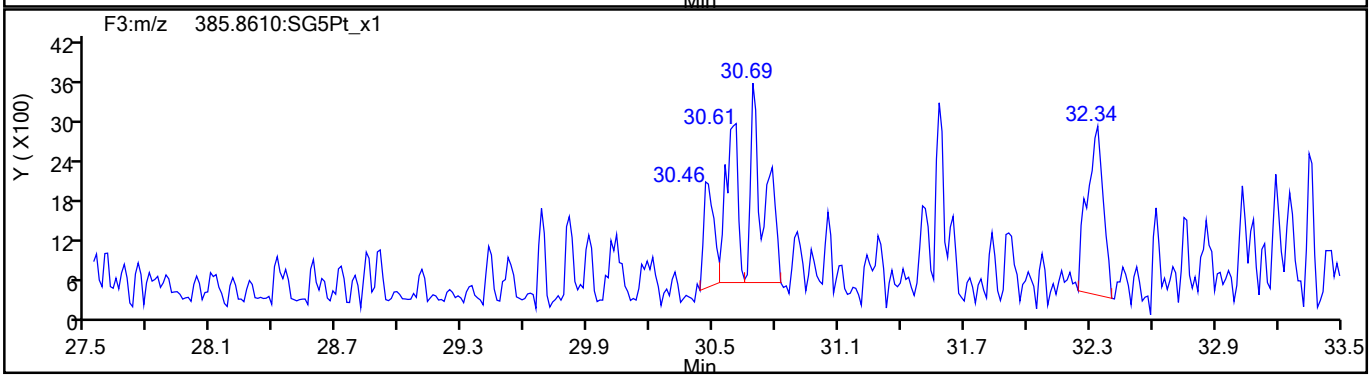

781630

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

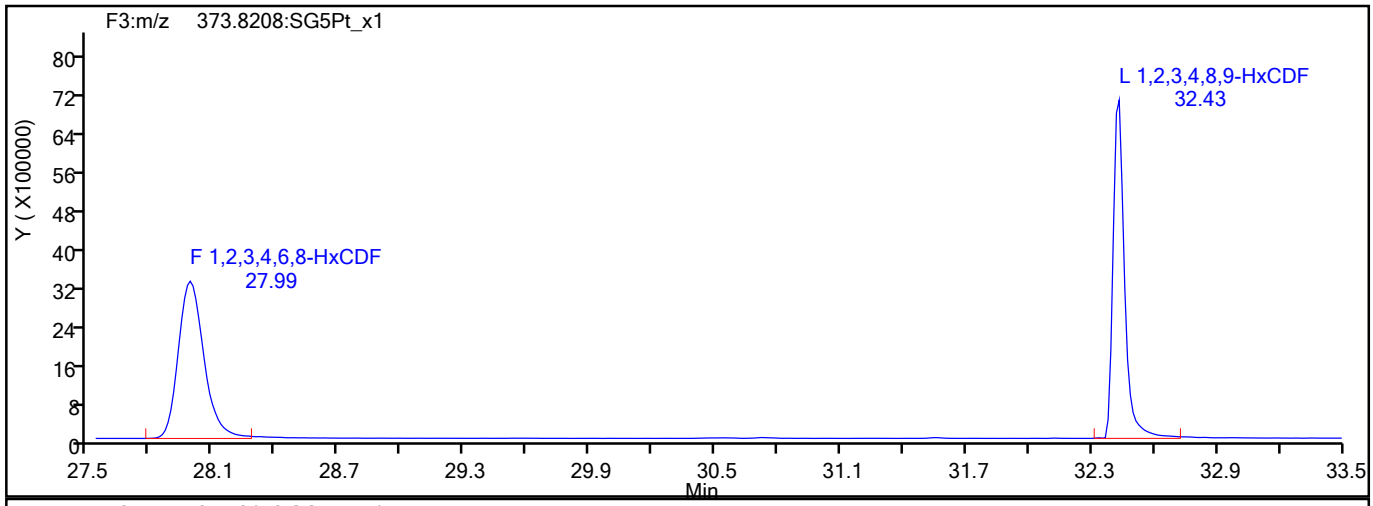

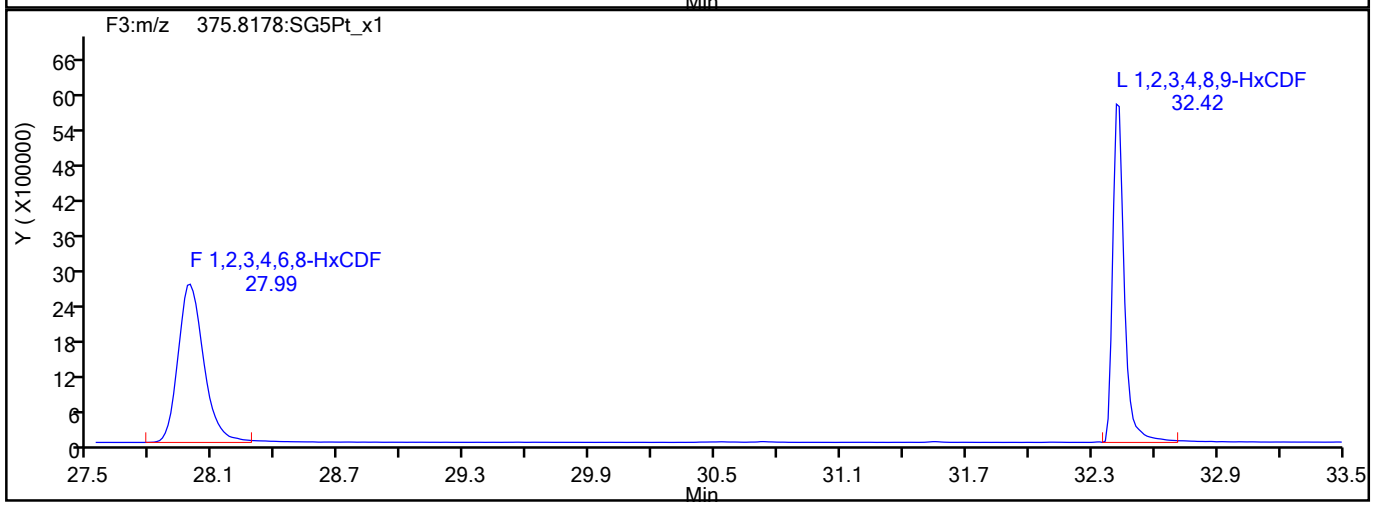

HxCDF Interference Mass

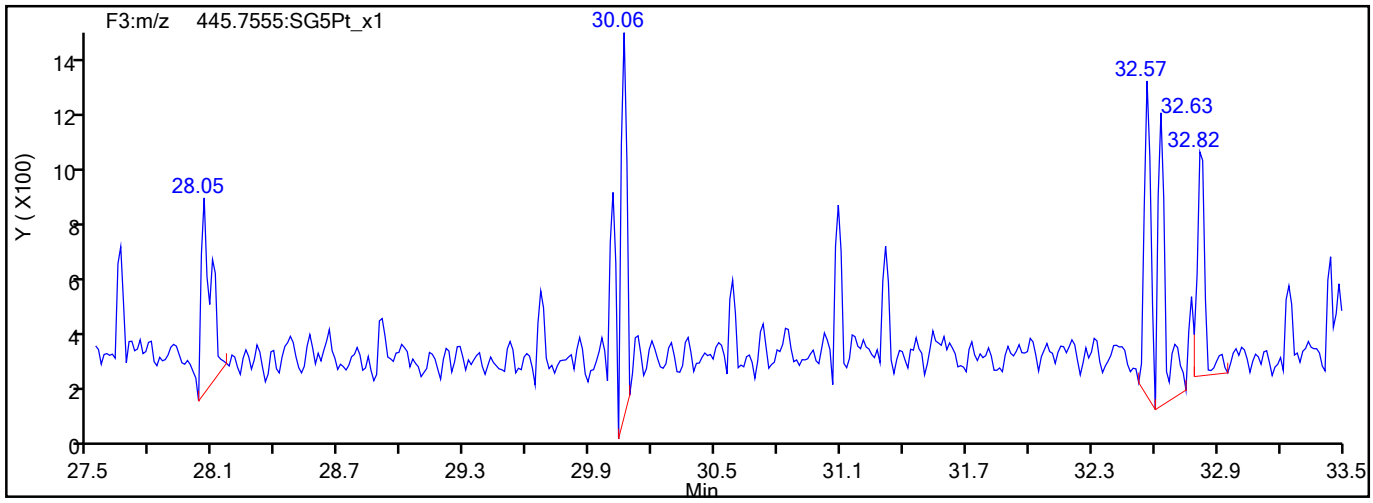

781631

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

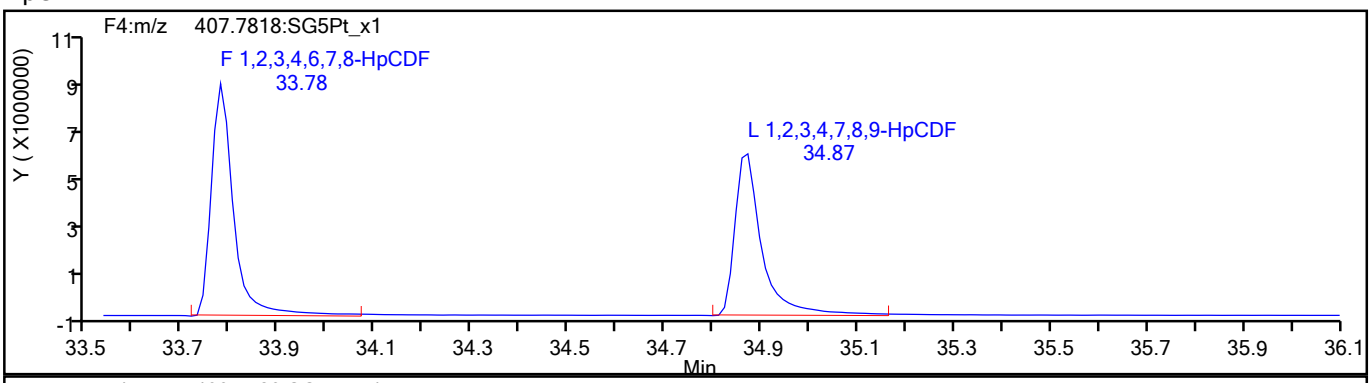

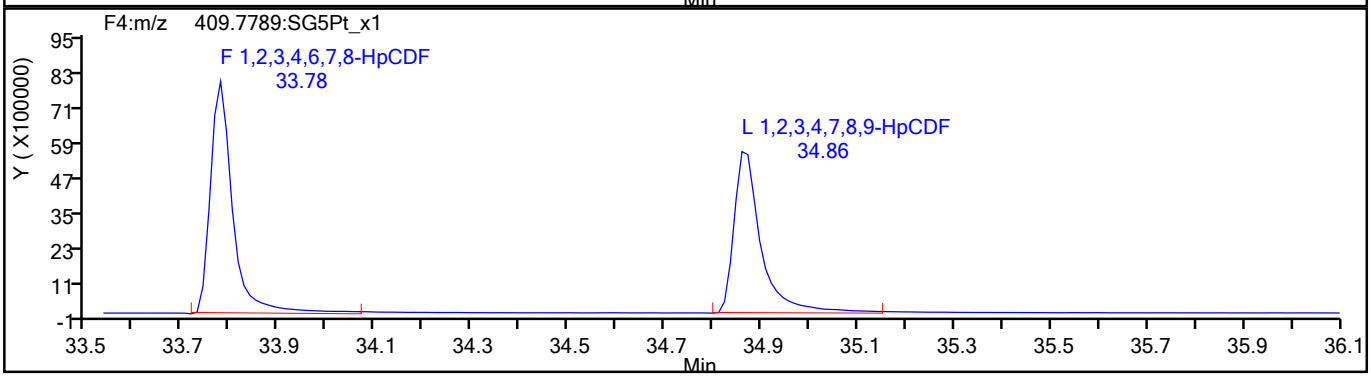

HpCDF Standards

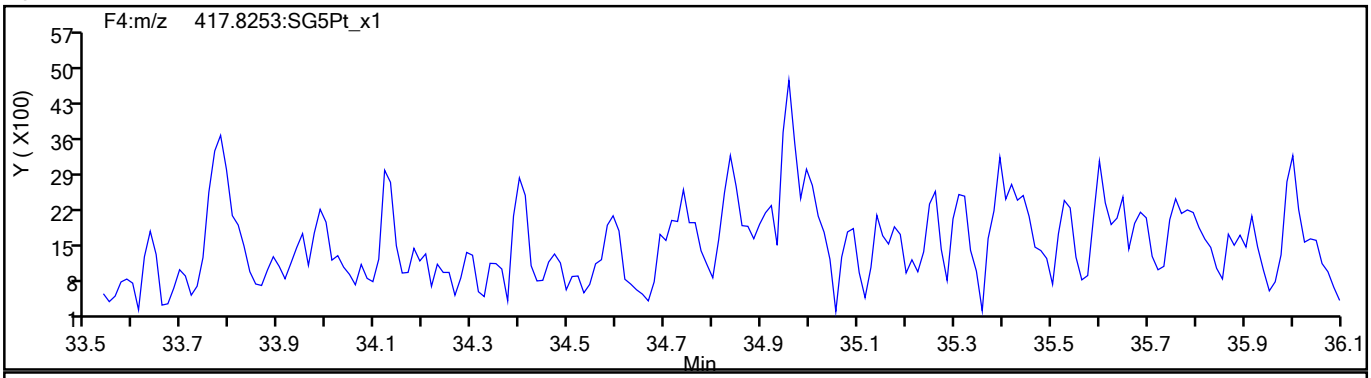

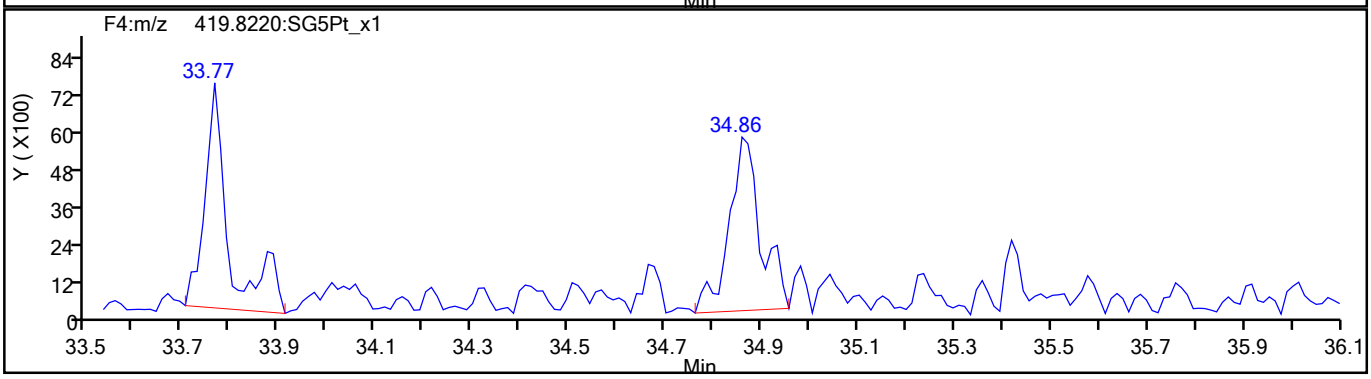

781632

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

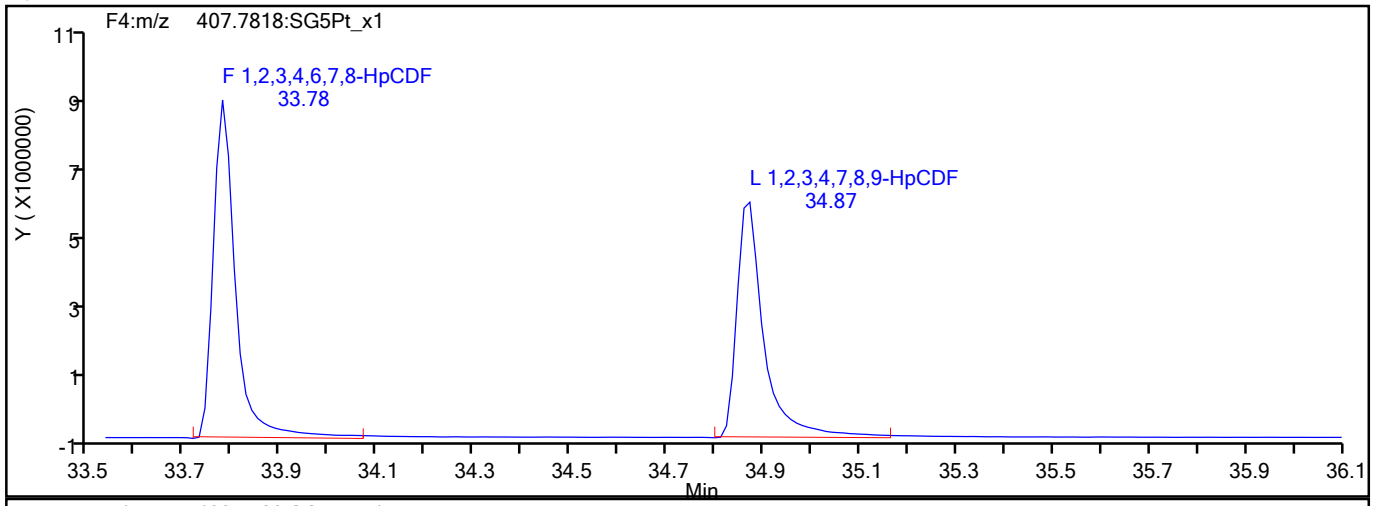

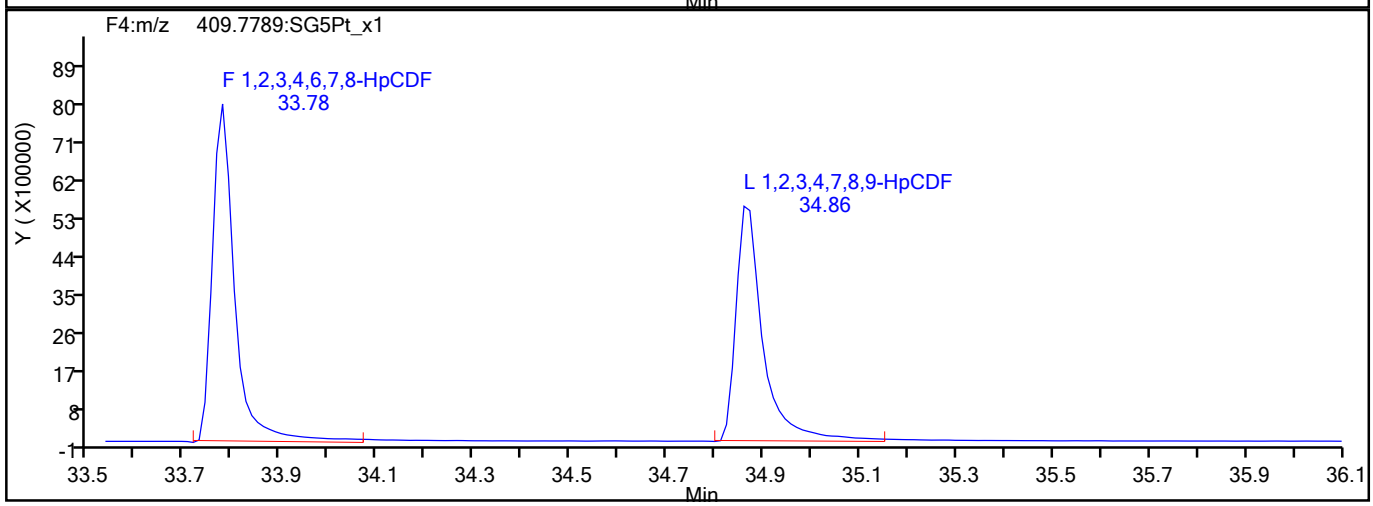

HpCDF Interference Mass

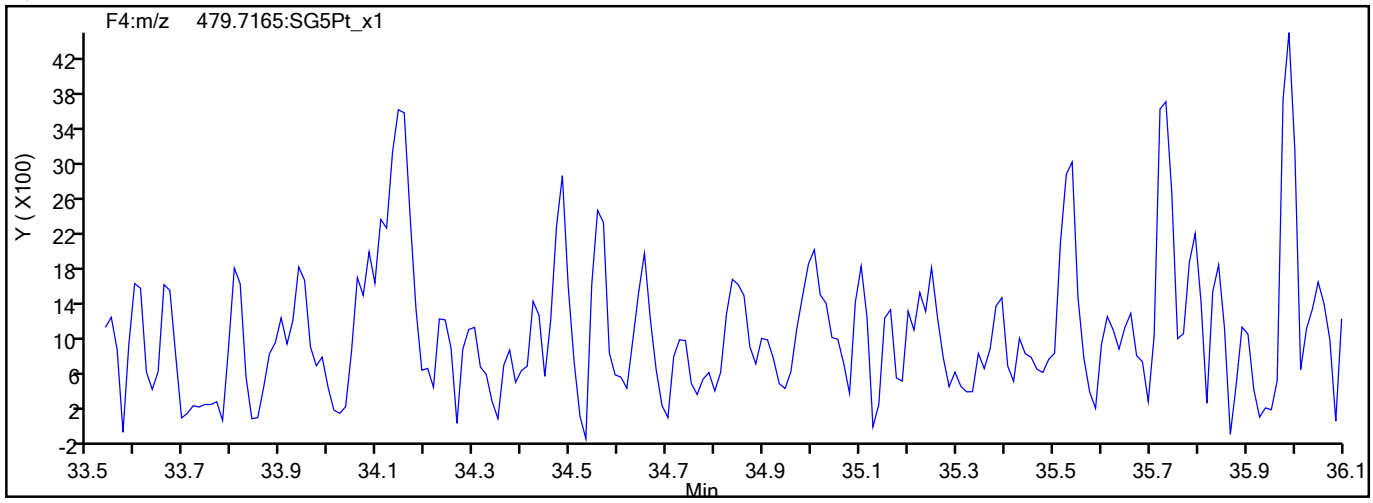

781633

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_13.d		
Injection Date:	14-Aug-2021 02:11:22	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Worklist#:	516836	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

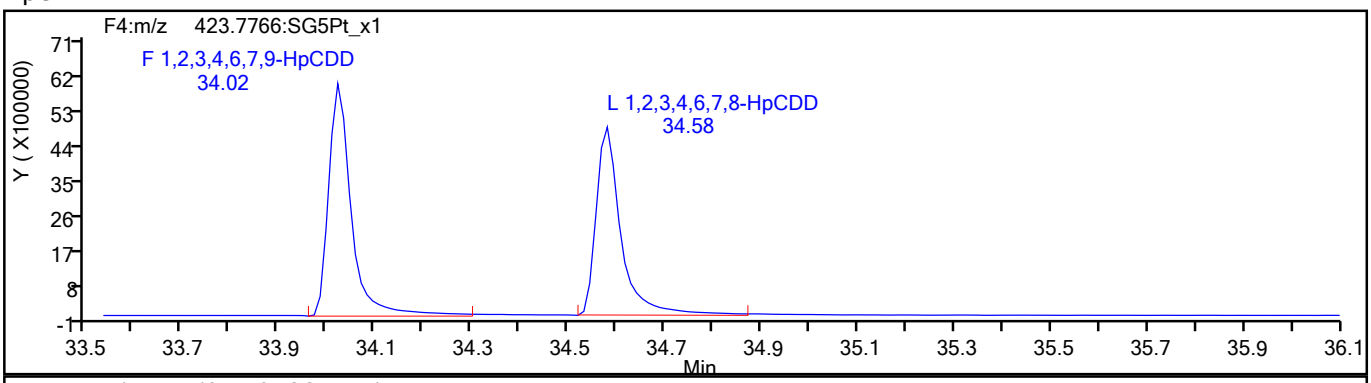

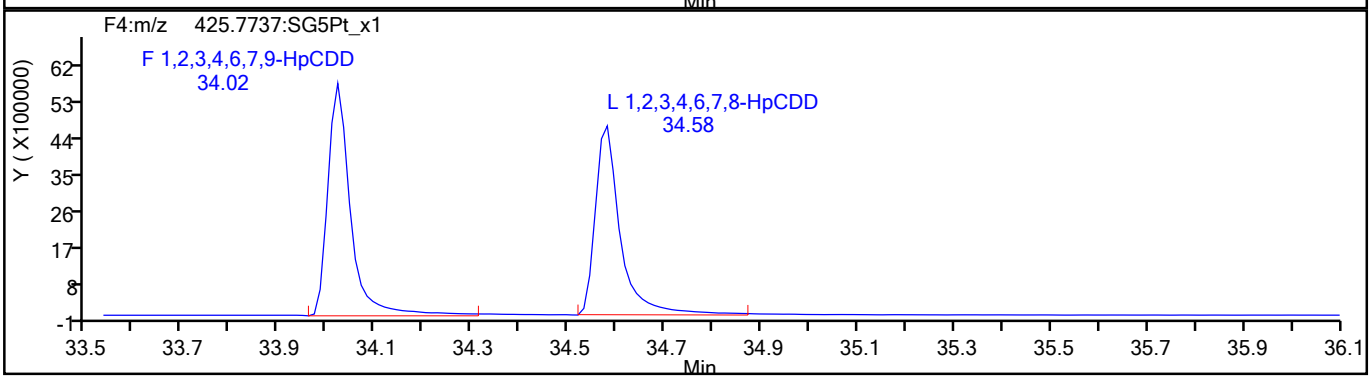

HpCDD Standards

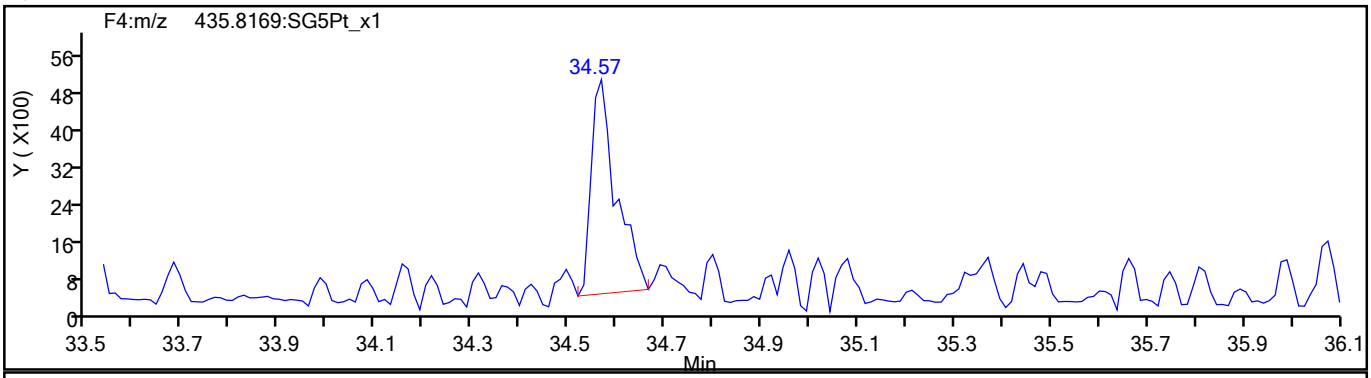

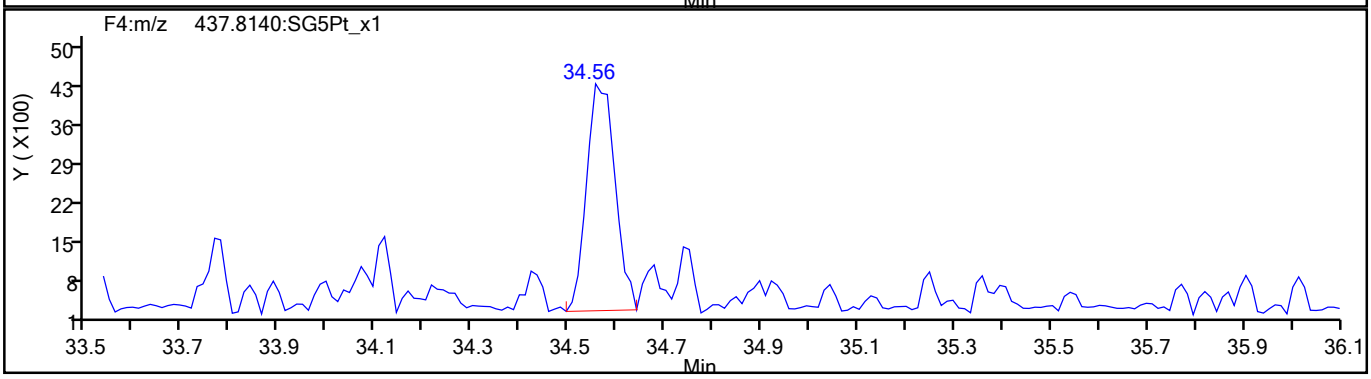

781634

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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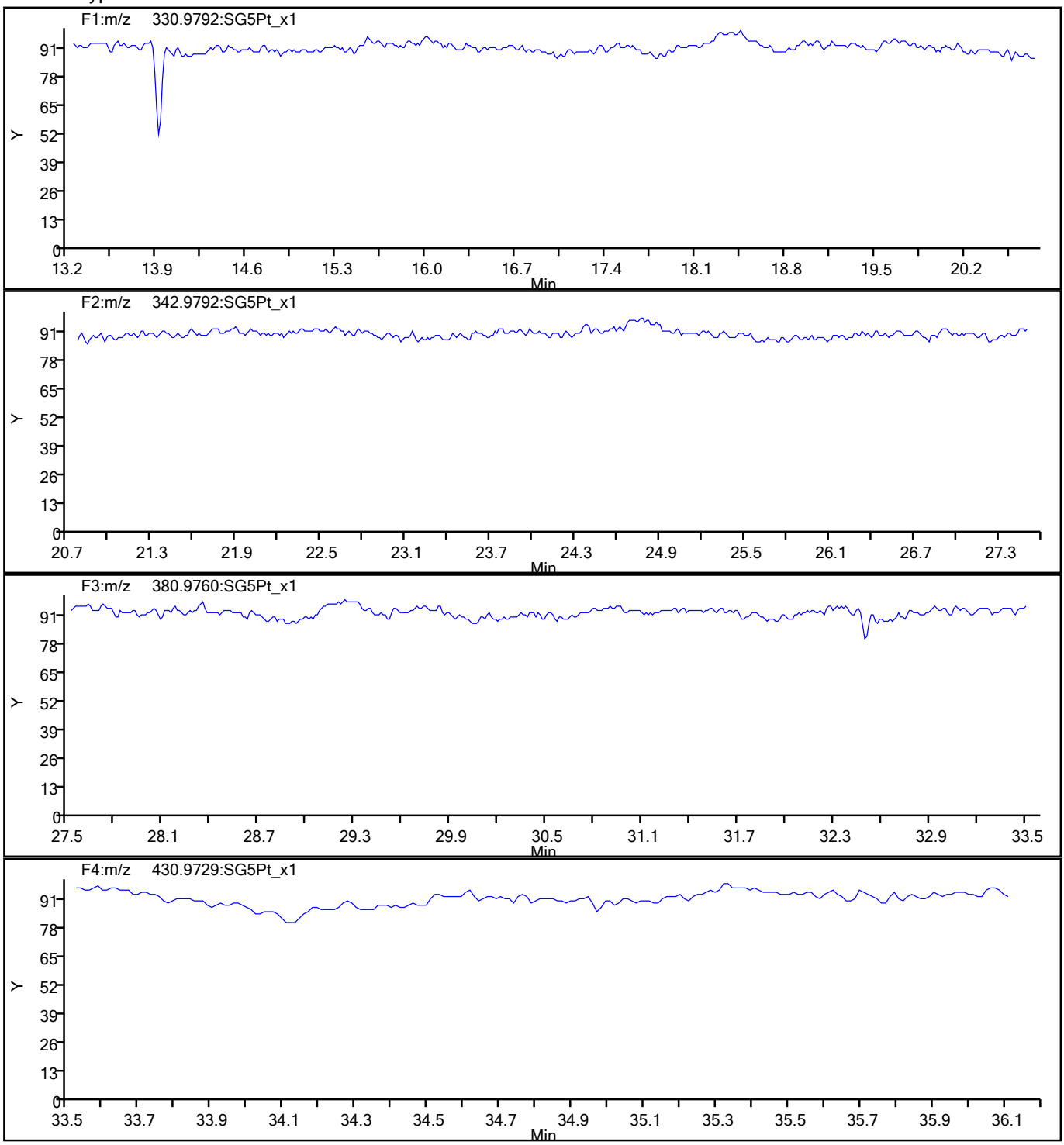

781635

Report Date: 17-Aug-2021 11:47:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

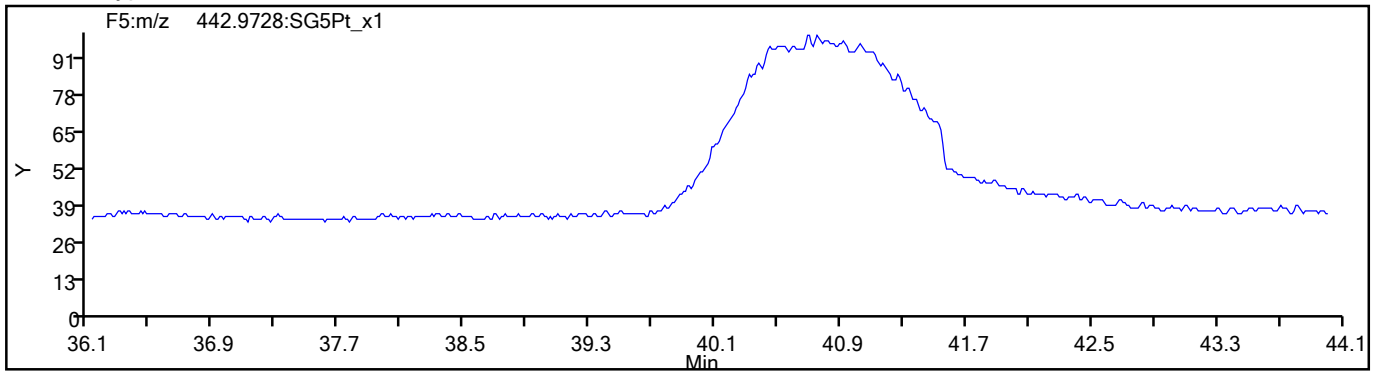

781636

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d
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Client ID:
Sample Type: WDM
Inject. Date: 14-Aug-2021 13:01:34 ALS Bottle#: 1 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081321B WDM HRDXNCP_00044
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 14:21:38 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

First Level Reviewer: bennettd Date: 17-Aug-2021 14:00:03

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.341	68167152	0.76	1.6249					0.00	
2,3,7,8-TCDF	17.371	148700443	0.77	1.0239	85.2	85.2	0.3440	0.3440		
A Non-2,3,7,8-sub-TCDF	17.046	2730174	0.77	1.0239	1.565	1.565	0.3440	1.565		
S Total TCDF					86.8	86.8	0.3440	0.3440		
D 13C-2,3,7,8-TCDD	18.051	35542207	0.81	0.8993					0.00	
2,3,7,8-TCDD	18.066	50292710	0.80	1.2541	45.1	45.1	0.2010	0.2010		
A Non-2,3,7,8-sub-TCDD	17.499	42172548	0.77	1.2541	37.8	37.8	0.2010	37.8		
S Total TCDD					83.0	83.0	0.2010	0.2010		
A F1 PeCDFs	20.093						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	23.241	547056	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.349						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.197						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.882						0.0	0.0		
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.778	46129709	1.04	1.4413						
1,2,3,4,7,8,9-HpCDF	34.860	38522805	1.05	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.319						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.580	29858843	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.301						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.922	86568973	0.78							
1,3,6,8-TCDD	15.829	51758906	0.77							
2,3,4,7-TCDF	17.371	148700443	0.77							
1,2,3,7-TCDD	18.066	50316659	0.80							
1,2,3,9-TCDF	18.218	64085928	0.78							
1,2,3,9-TCDD	18.233	53586022	0.77							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.170	20715994								
1,2,8,9-TCDF	19.170	66391892	0.77							
1,3,4,6,8-PeCDF	19.458	58277330	1.56							
1,2,4,7,9-PeCDD	21.235	36807404	1.59							
1,2,3,8,9-PeCDD	25.462	33620370	1.58							
1,2,3,8,9-PeCDF	25.681	44109012	1.61							
1,2,3,4,6,8-HxCDF	27.974	44030117	1.23							
1,2,4,6,7,9-HxCDD	29.558	32923172	1.27							
1,2,3,4,6,7-HxCDD	32.113	34370319	1.26							
1,2,3,4,8,9-HxCDF	32.419	43522805	1.22							
1,2,3,4,6,7,9-HpCDD	34.021	33605227	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 14-Aug-2021 13:01:34 ALS Bottle#: 1 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081321B WDM HRDXNCP_00044
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 17-Aug-2021 14:21:38 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1671

First Level Reviewer: bennettd Date: 17-Aug-2021 14:00:03

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.341	17.341	0	1.000	29472871	7007652	5797	14492	1209		
317.9389	17.341	17.341	0	1.000	38694281	9088814	4758	11895	1910	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.371	0	1.002	64491750	13727010	22677	56692	605		
305.8987	17.356	17.371	-1	1.001	84208693	18034296	34018	85045	530	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	19.473	17.046	145	1.123	1185841	183437	22677	56692	8		
305.8987	19.473	17.046	145	1.123	1544333	238459	34018	85045	7	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.051	0	1.000	15931128	3550236	2494	6235	1424		
333.9339	18.051	18.051	0	1.000	19611079	4357268	1759	4397	2477	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.066	18.066	0	1.001	22289990	4906372	8204	20510	598		
321.8936	18.066	18.066	0	1.001	28002720	6291857	11728	29320	536	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.945	17.499	27	0.994	18341135	4362144	8204	20510	532		
321.8936	17.945	17.499	27	0.994	23831413	5728437	11728	29320	488	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	20.093						1911	4777			
341.8567	20.093						1991	4977			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.835	23.241	-84	1.000	100118	16941	3836	9590	4		
341.8567	21.835	23.241	-84	1.000	50071	9945	2668	6670	4	2.00(1.32-1.78)	
339.8597	22.408	23.241	-50	1.000	142317	23314	3836	9590	6		
341.8567	22.394	23.241	-51	1.000	148004	16497	2668	6670	6	0.96(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	22.967	23.241	-16	1.000	116621	16117	3836	9590	4		
341.8567	22.967	23.241	-16	1.000	68620	12135	2668	6670	5	1.70(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.349						4453	11132			
357.8516	23.349						2843	7107			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						6999	17497			
375.8178	30.197						5776	14440			
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						8629	21572			
391.8127	30.882						7844	19610			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.778	0	1.000	23557758	7348390	30828	77070	238		
409.7789	33.778	33.778	0	1.000	22571951	7029317	32630	81575	215	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.860	34.860	0	1.000	19764901	5030404	30828	77070	163		
409.7789	34.860	34.860	0	1.000	18757904	4841578	32630	81575	148	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						30828	77070			
409.7789	34.319						32630	81575			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.580	0	1.000	15199194	4152682	20457	51142	203		
425.7737	34.580	34.580	0	1.000	14659649	3934184	22063	55157	178	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						20457	51142			
425.7737	34.301						22063	55157			
1,3,6,8-TCDF											
303.9016	14.922	14.922	0		37923277	11057094	22677	56692	488		
305.8987	14.922	14.922	0		48645696	14032270	34018	85045	412	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.829	15.829	0		22468325	5970585	8204	20510	728		
321.8936	15.829	15.829	0		29290581	7734132	11728	29320	659	0.77(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.371	17.371	0		64491750	13727010	22677	56692	605		
305.8987	17.356	17.371	-1		84208693	18034296	34018	85045	530	0.77(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.066	18.066	0		22304590	4908304	8204	20510	598		
321.8936	18.066	18.066	0		28012069	6293129	11728	29320	537	0.80(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	18.218	18.218	0		27989748	6088475	22677	56692	268		
305.8987	18.218	18.218	0		36096180	8009053	34018	85045	235	0.78(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.233	18.233	0		23262839	4925154	8204	20510	600		
321.8936	18.233	18.233	0		30323183	6250036	11728	29320	533	0.77(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.170	19.170	0		20715994	4224804	8204	20510	515		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	19.170	19.170	0		28791322	5790850	22677	56692	255		
305.8987	19.170	19.170	0		37600570	7606883	34018	85045	224	0.77(0.65-0.89)	
1,3,4,6,8-PeCDF											
339.8597	19.458	19.458	0		35543463	7416328	1911	4777	3881		
341.8567	19.458	19.458	0		22733867	4772277	1991	4977	2397	1.56(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	21.235	21.235	0		22587504	3672966	4453	11132	825		
357.8516	21.235	21.235	0		14219900	2311386	2843	7107	813	1.59(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	25.462	25.462	0		20590037	2683784	4453	11132	603		
357.8516	25.462	25.462	0		13030333	1703802	2843	7107	599	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	25.681	25.681	0		27195789	3331175	3836	9590	868		
341.8567	25.681	25.681	0		16913223	2046908	2668	6670	767	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	27.974	27.974	0		24244782	2848190	6999	17497	407		
375.8178	27.974	27.974	0		19785335	2341279	5776	14440	405	1.23(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.558	29.558	0		18447193	2061700	8629	21572	239		
391.8127	29.558	29.558	0		14475979	1636071	7844	19610	209	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8157	32.113	32.113	0		19136186	5044226	8629	21572	585		
391.8127	32.113	32.113	0		15234133	3993994	7844	19610	509	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.419	32.419	0		23931031	6046754	6999	17497	864		
375.8178	32.419	32.419	0		19591774	5065700	5776	14440	877	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	34.021	34.021	0		17156171	5215341	20457	51142	255		
425.7737	34.021	34.021	0		16449056	5010683	22063	55157	227	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d
Lims ID: WDM
Client ID:
Inject. Date: 14-Aug-2021 13:01:34 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 16

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	68167152	16096466

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	68167152	16096466

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.473	1185841	183437	1544333	238459	1.56	0.77	
Signal Totals:							
	1185841	183437	1544333	238459			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2730174	421896				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.565 = (2730174 * 40.000) / (68167152 * 1.024)

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d
Lims ID: WDM
Client ID:
Inject. Date: 14-Aug-2021 13:01:34 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 16

Non-2,3,7,8-sub-TCDD, RT: 17.499

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	35542207	7907504

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	35542207	7907504

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.945	18341135	4362144	23831413	5728437	37.8	0.77	
Signal Totals:							
	18341135	4362144	23831413	5728437			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	42172548	10090581				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 37.845 = (42172548 * 40.000) / (35542207 * 1.254)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d
Lims ID: WDM
Client ID:
Inject. Date: 14-Aug-2021 13:01:34 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516846 Lims Sample ID: 16

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.835	100118	16941	50071	9945		2.00	R
22.408	142317	23314	148004	16497		0.96	R
22.967	116621	16117	68620	12135		1.70	
Signal Totals:							
	359056	56372	266695	38577			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	625751	94949				1.35	RQ
	547056	91966					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (625751 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (547056 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

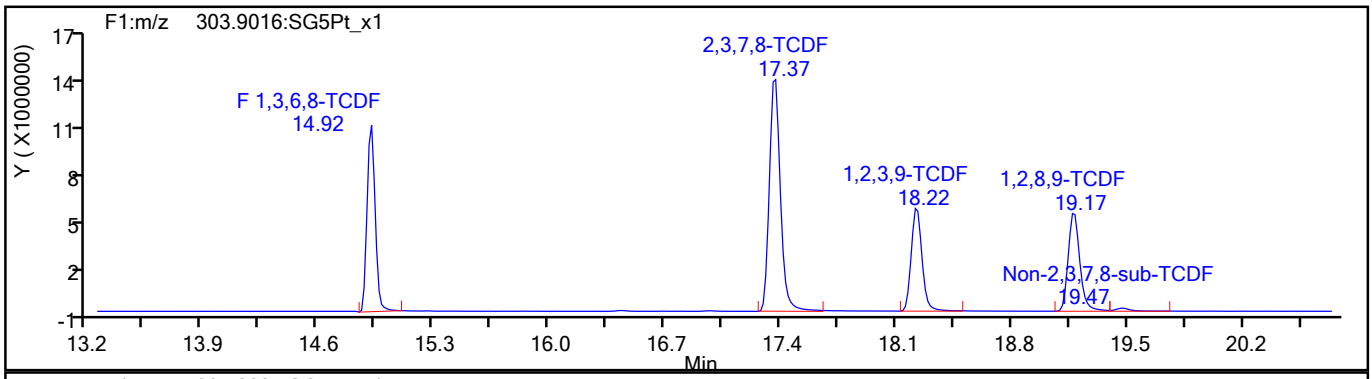

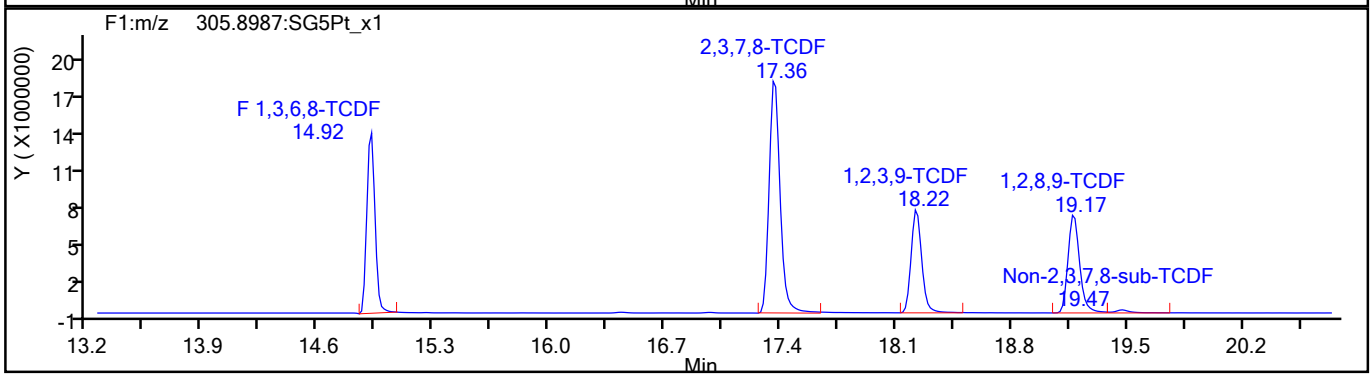

TCDF Standards

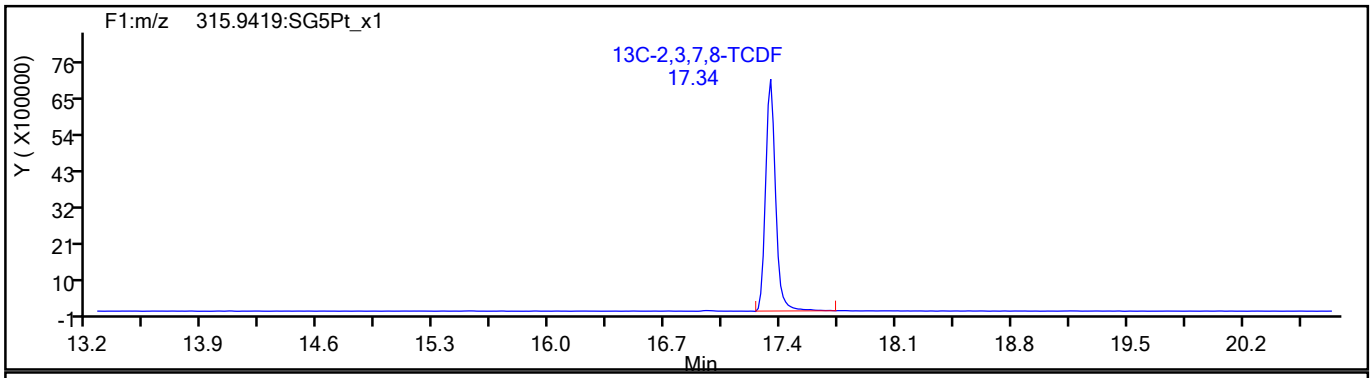

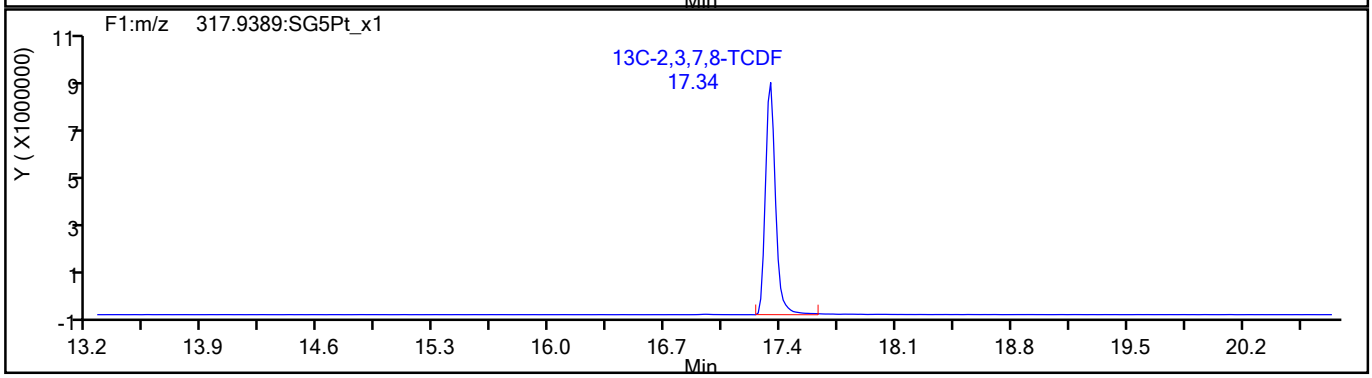

781645

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

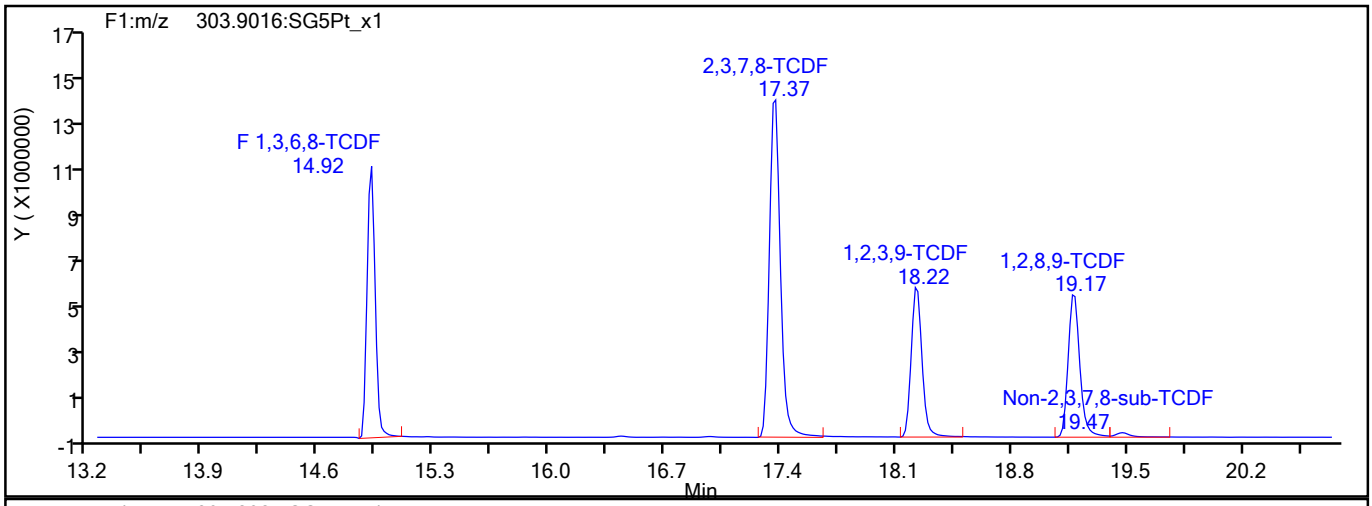

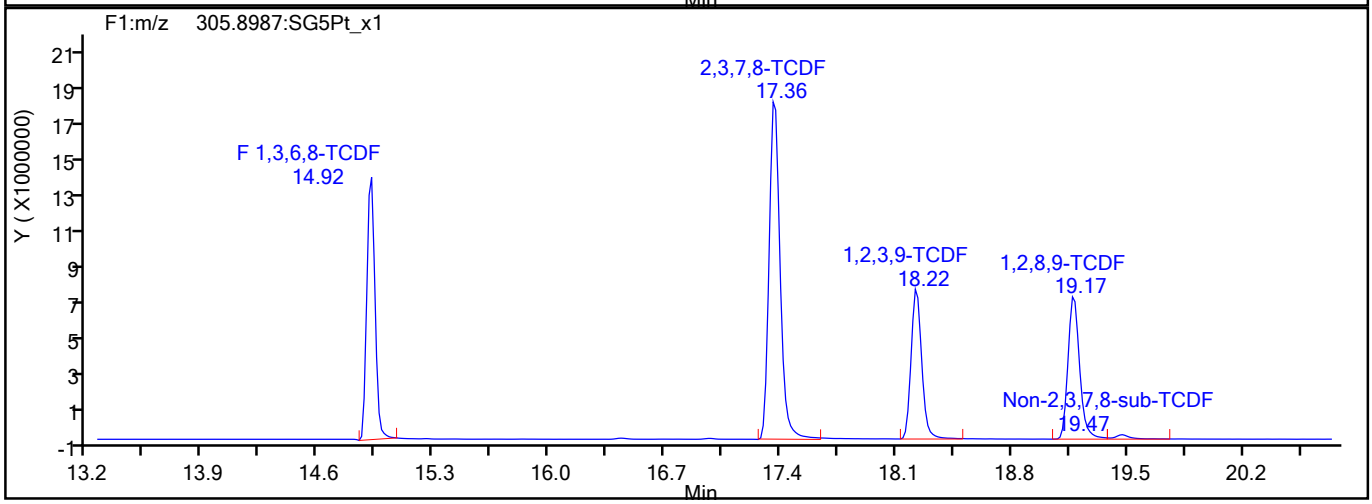

TCDF Interference Mass

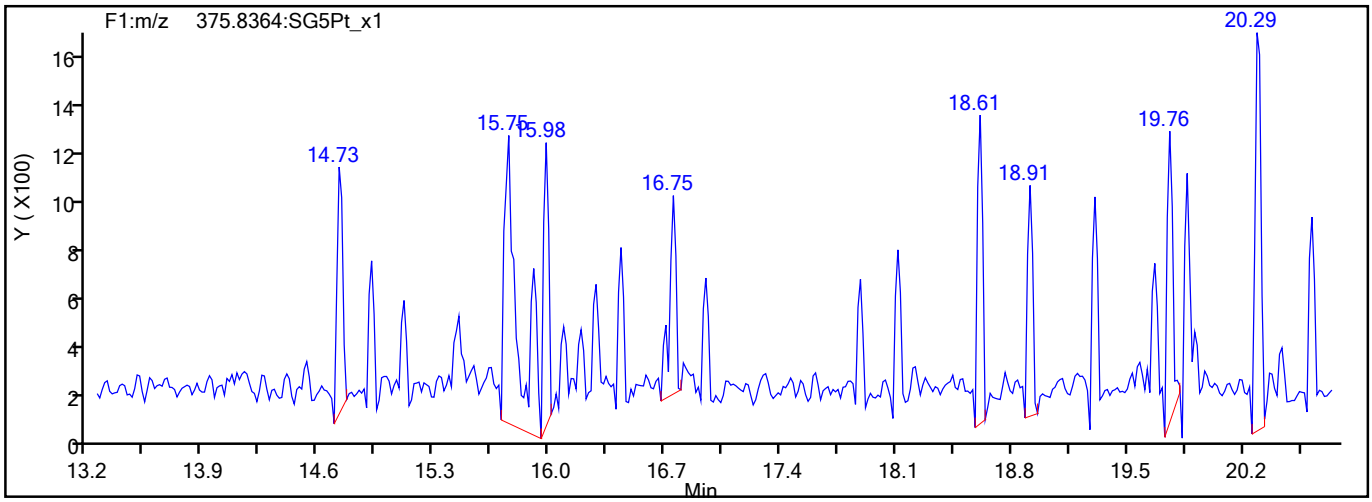

781646

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

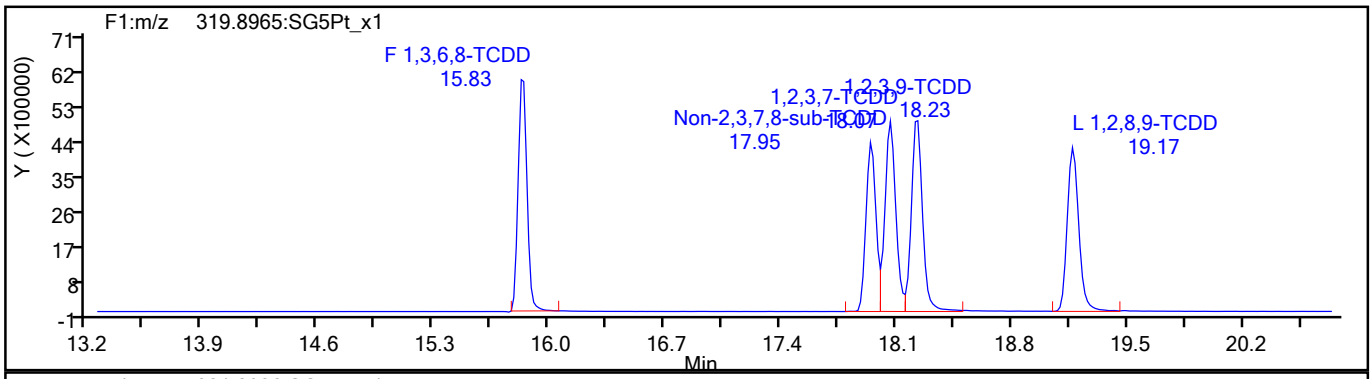

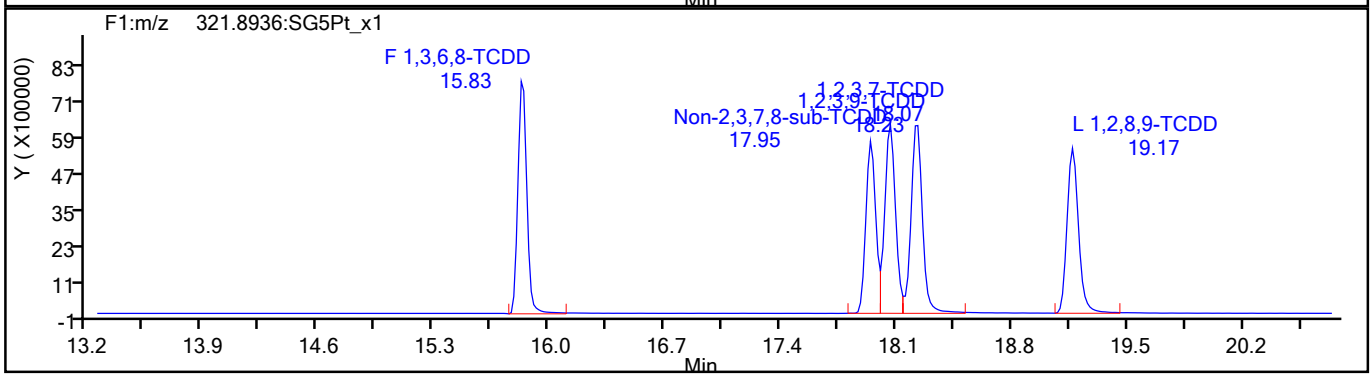

TCDD Standards

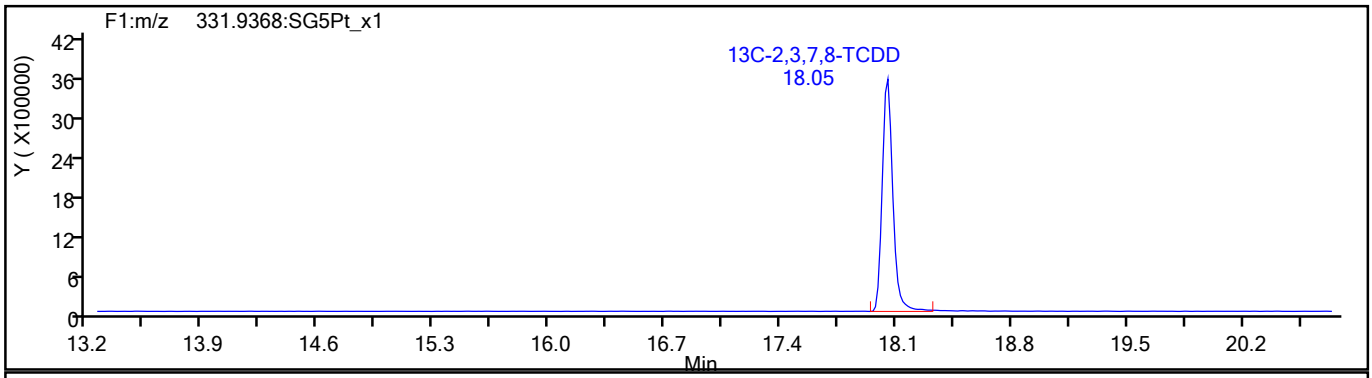

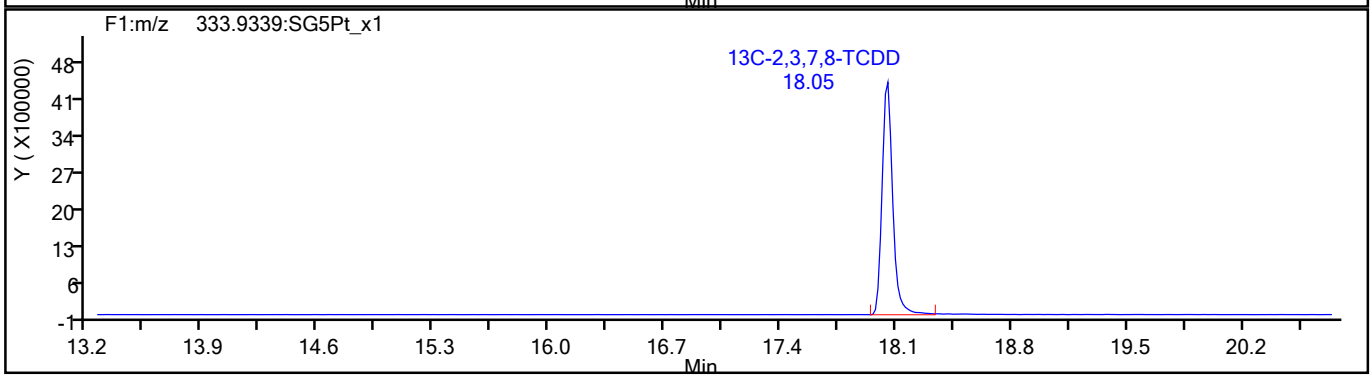

781647

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

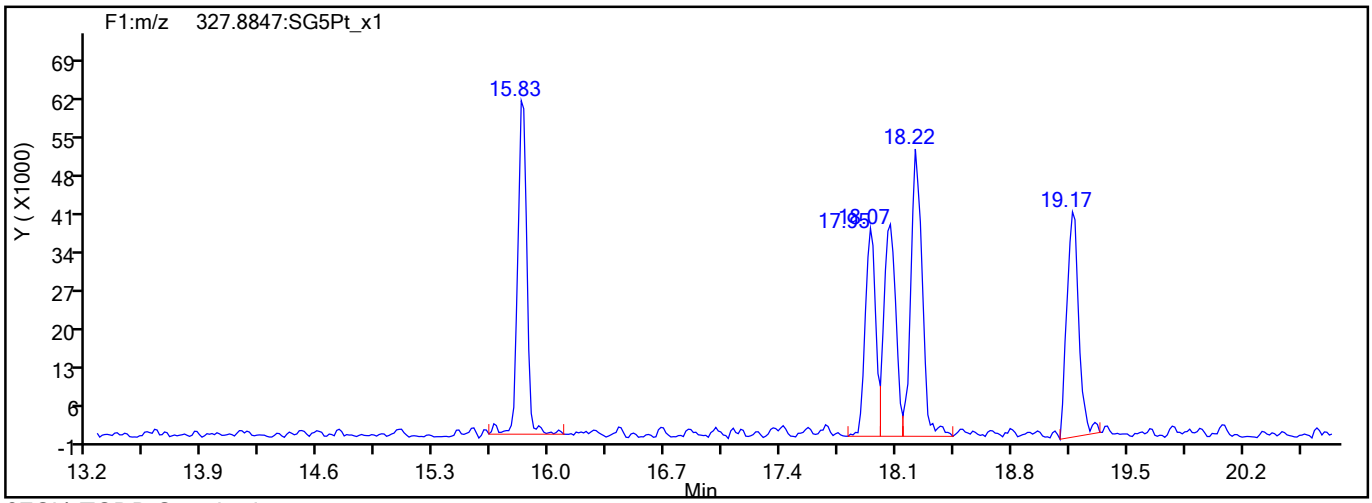

37Cl4-TCDD Standards

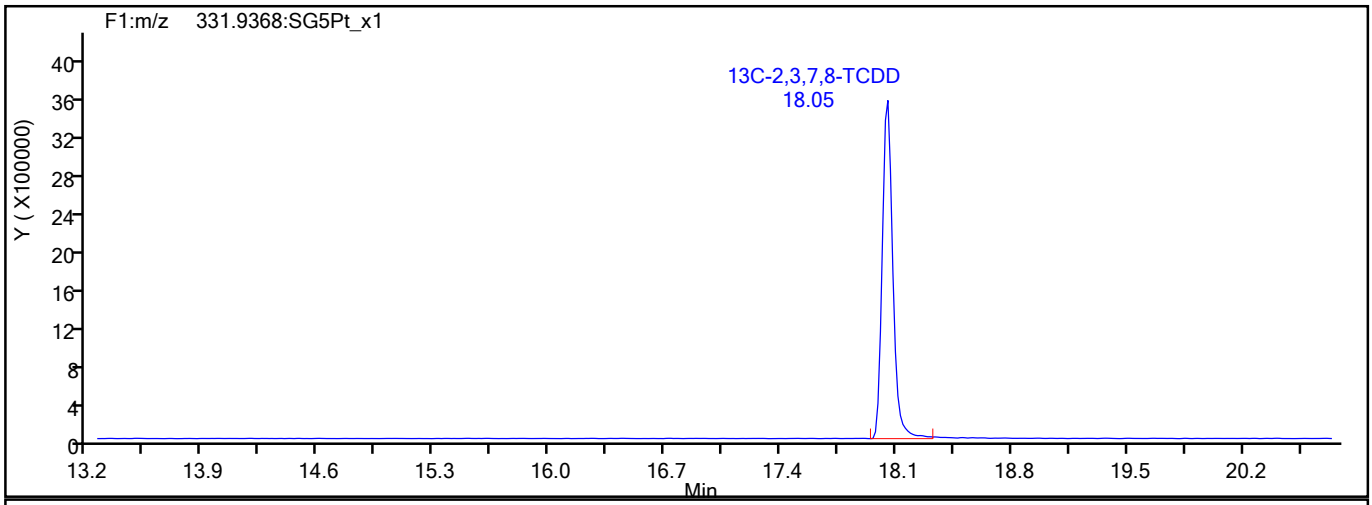

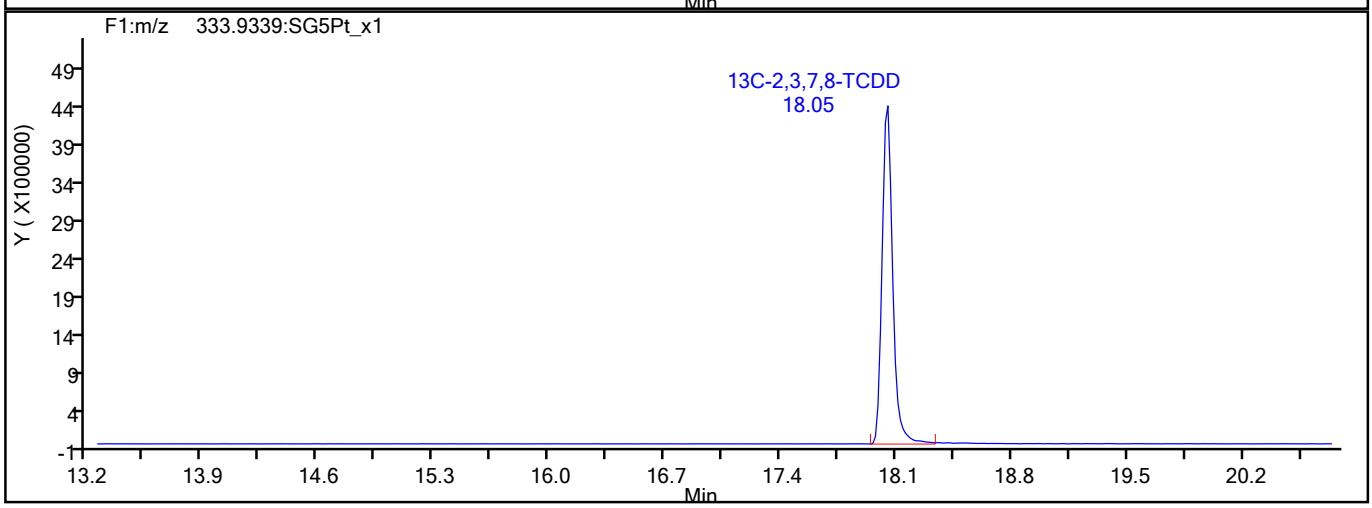

781648

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

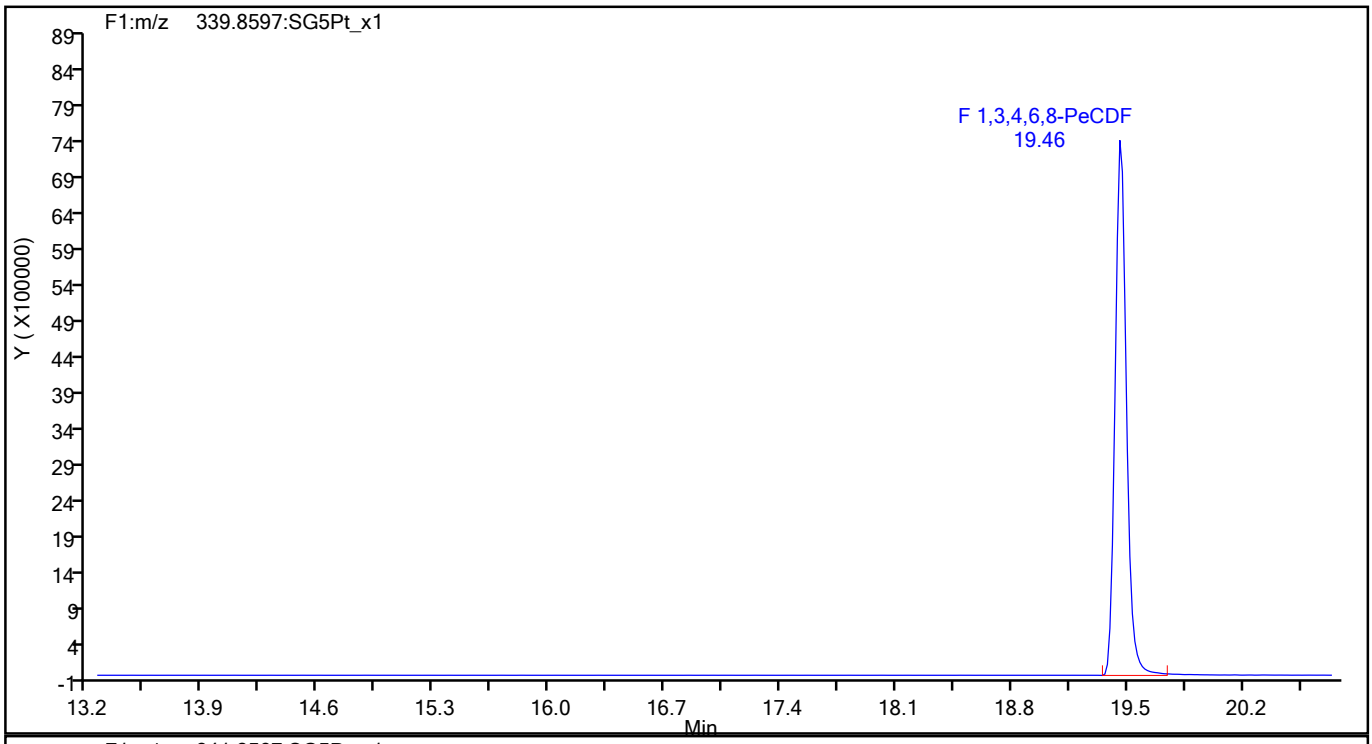

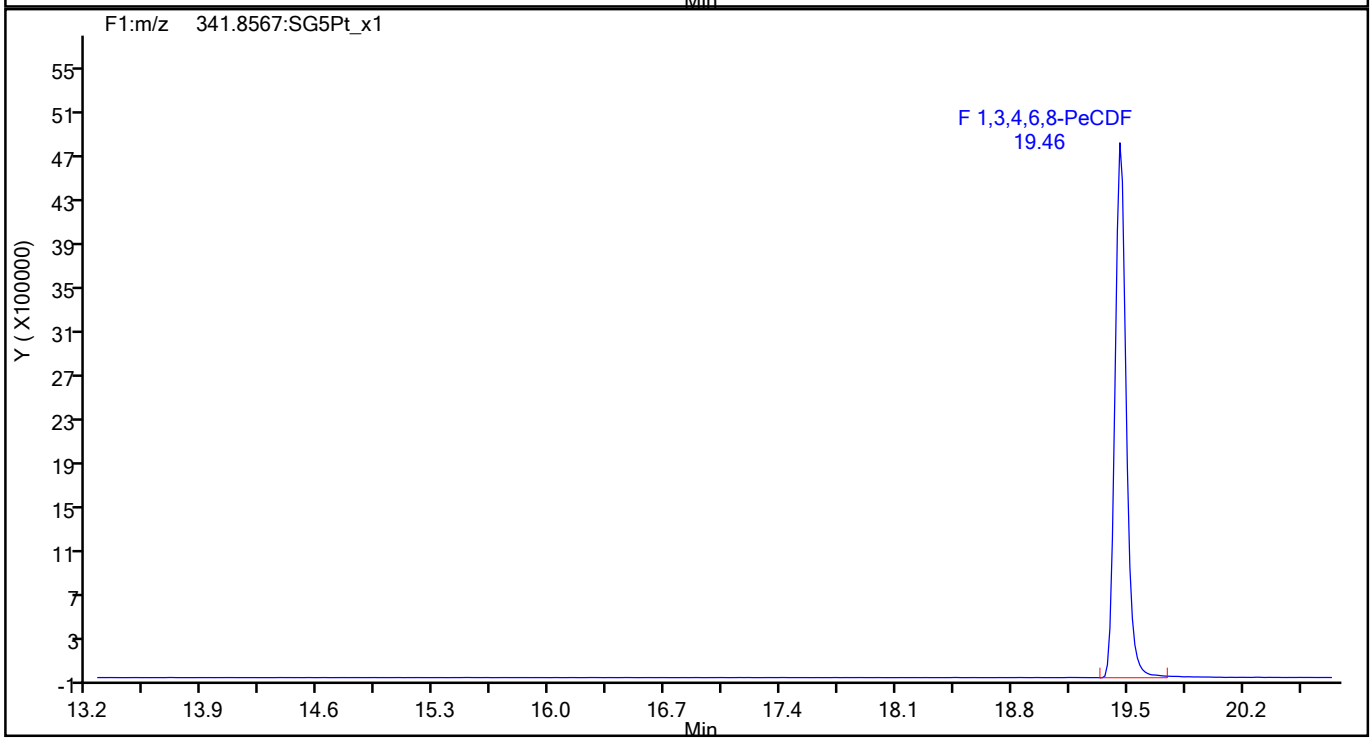

781649

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

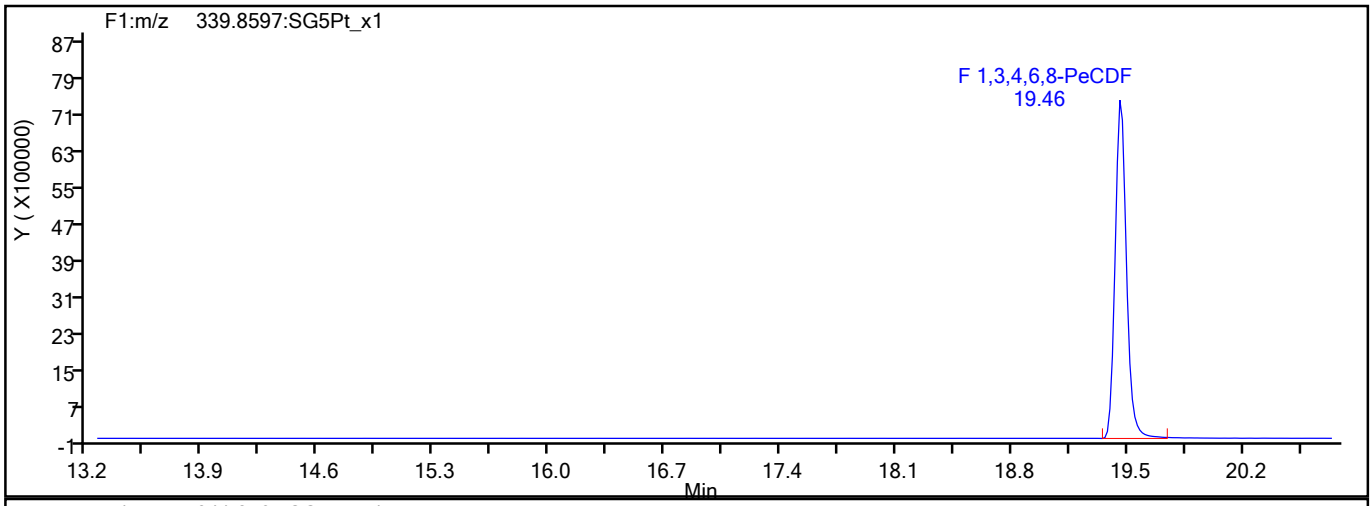

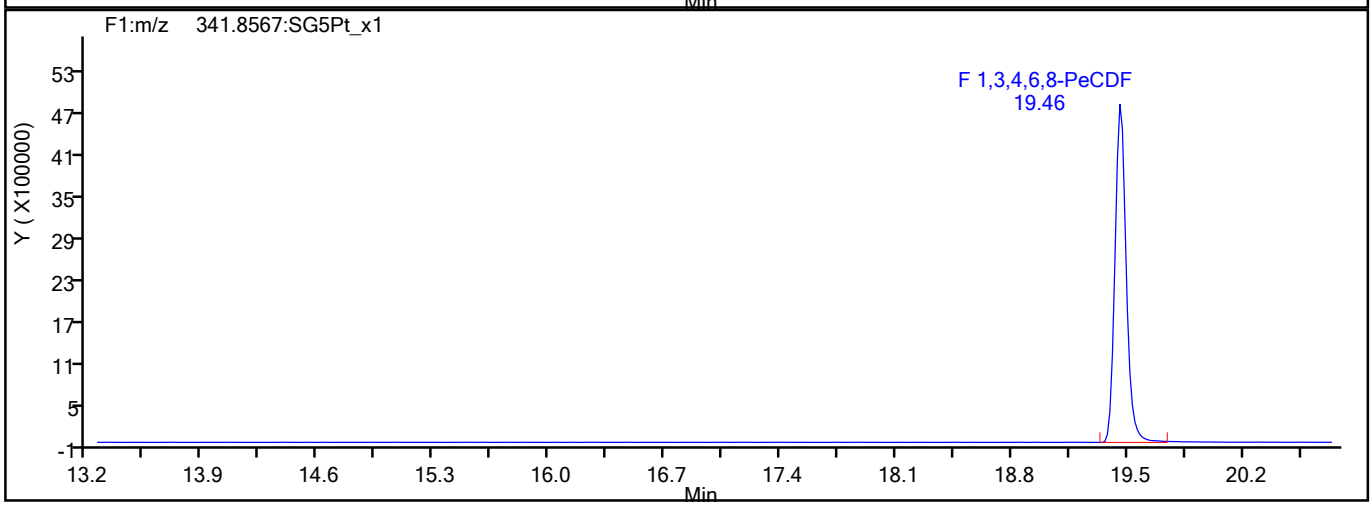

F1 PeCDFs Interference Mass

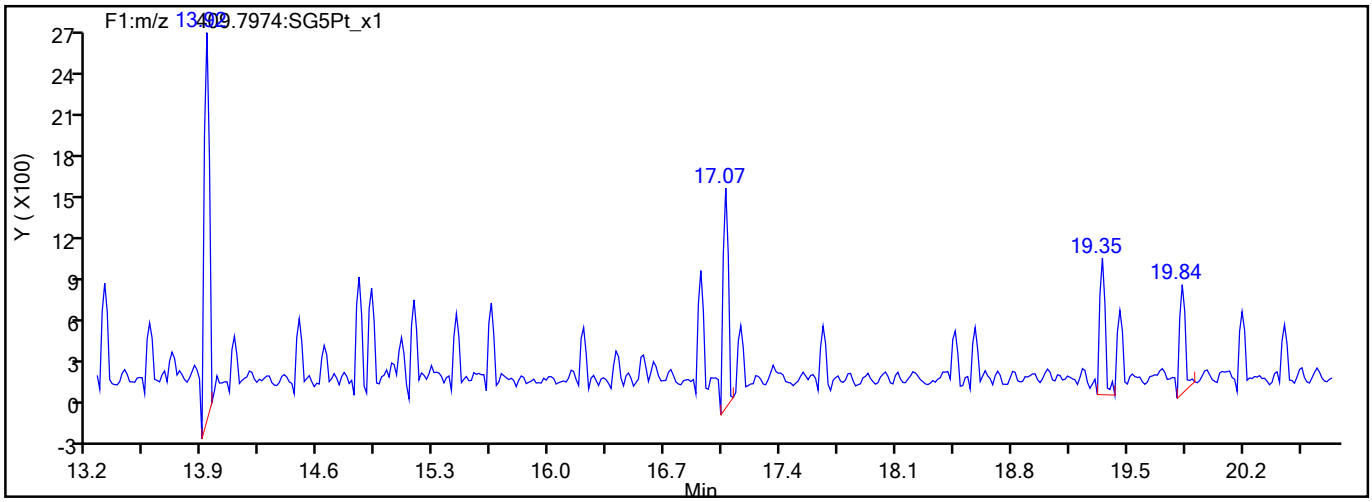

781650

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

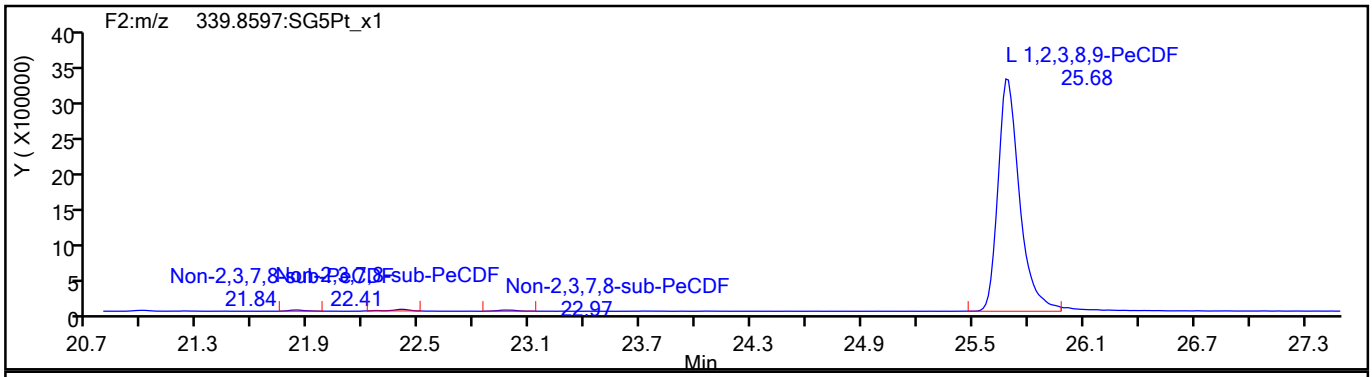

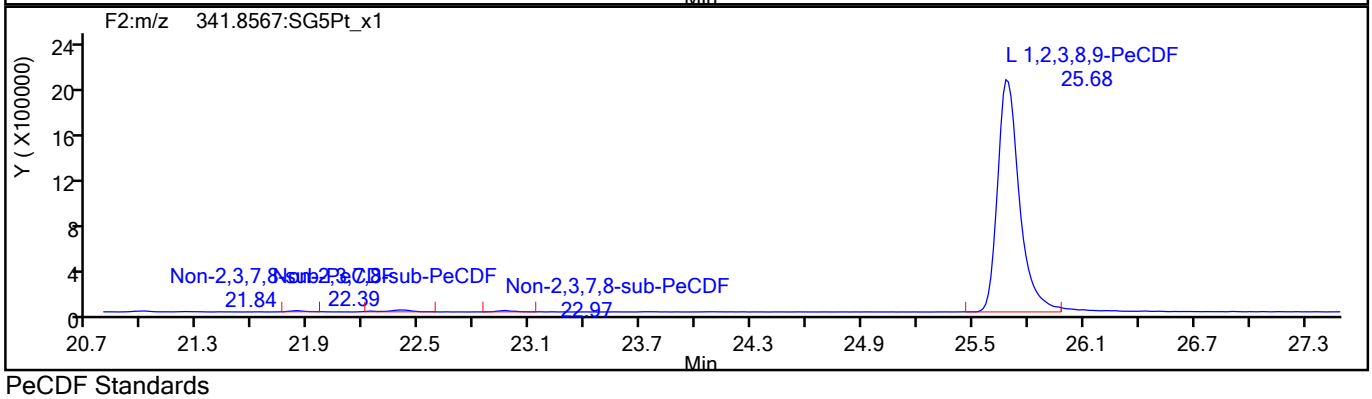

PeCDF Standards

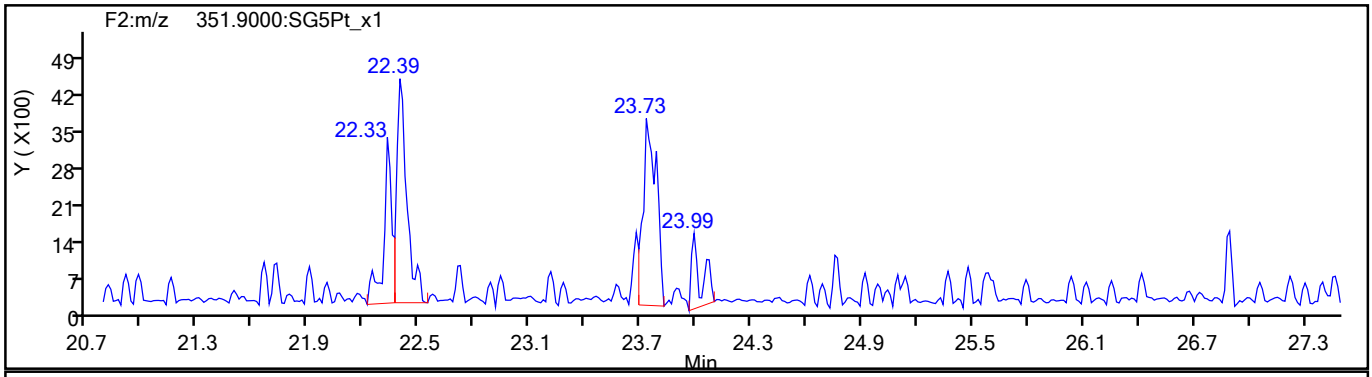

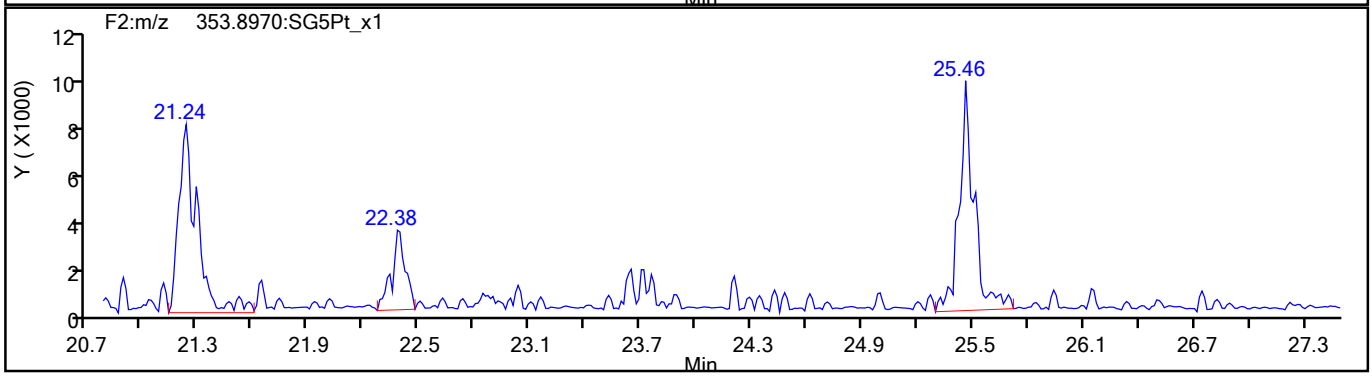

781651

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

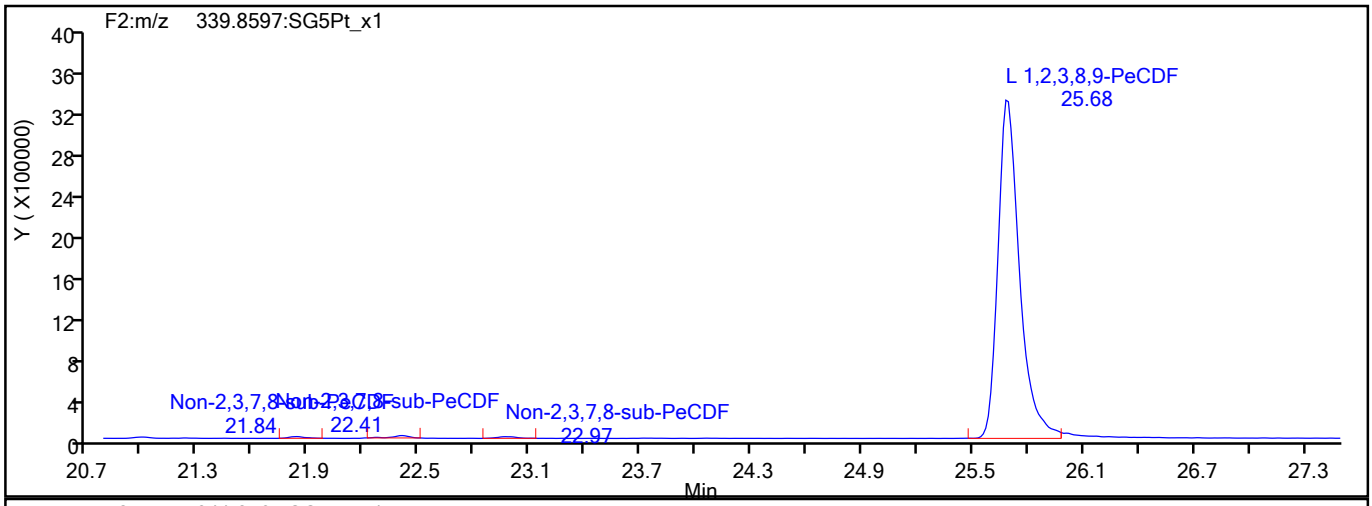

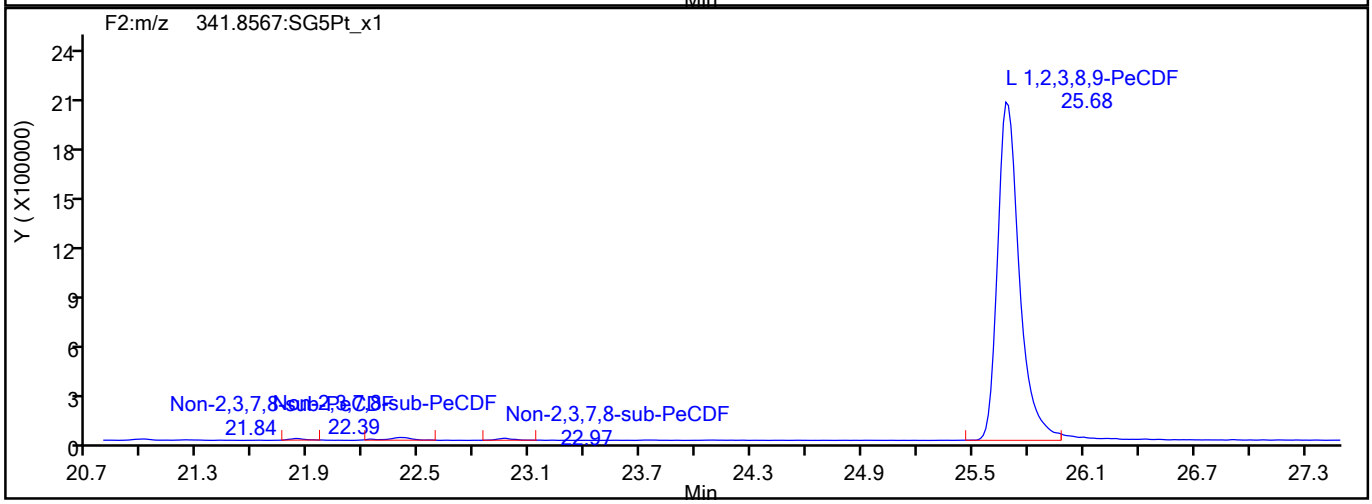

PeCDF Interference Mass

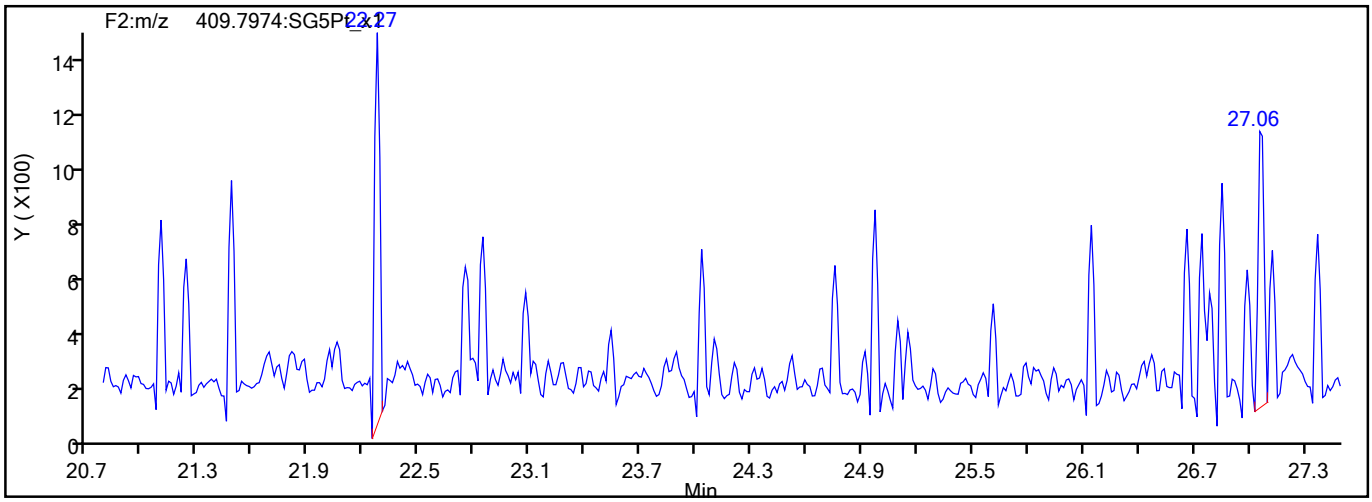

781652

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

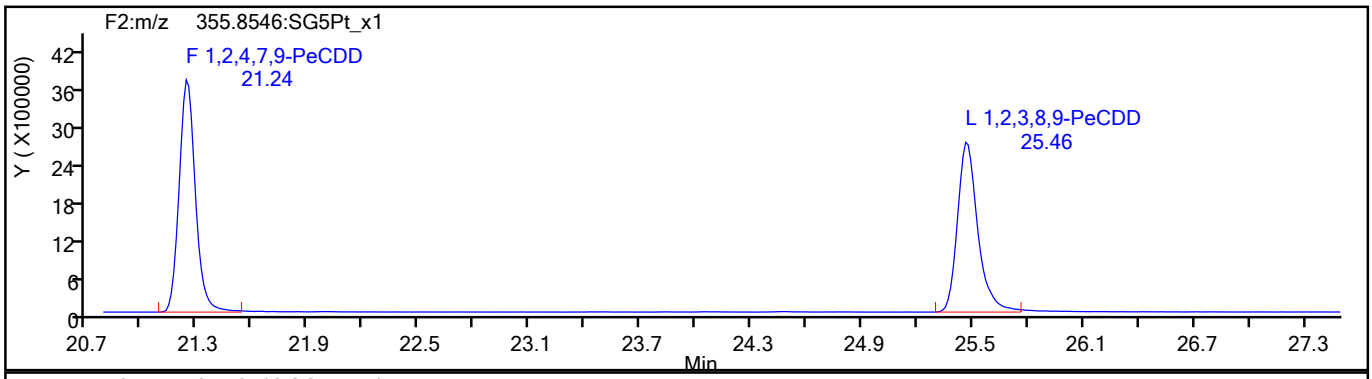

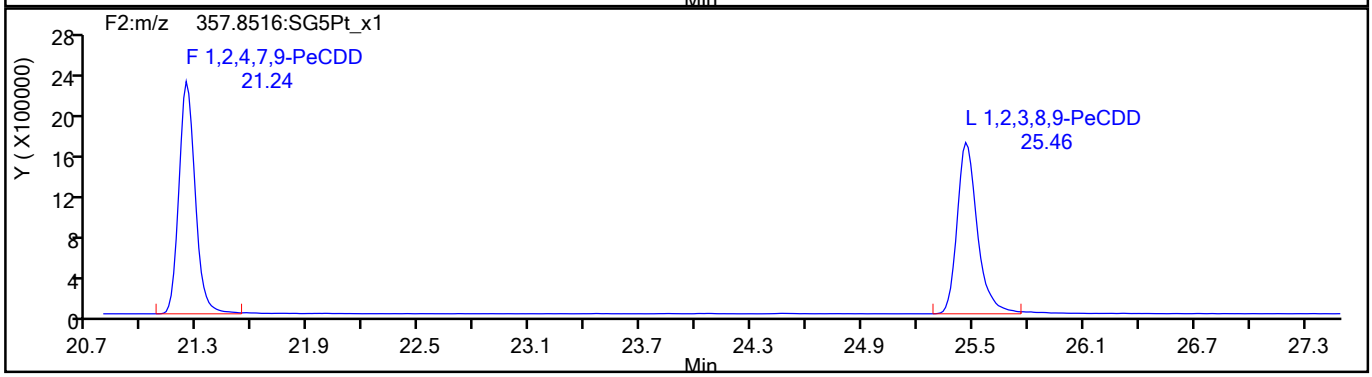

PeCDD Standards

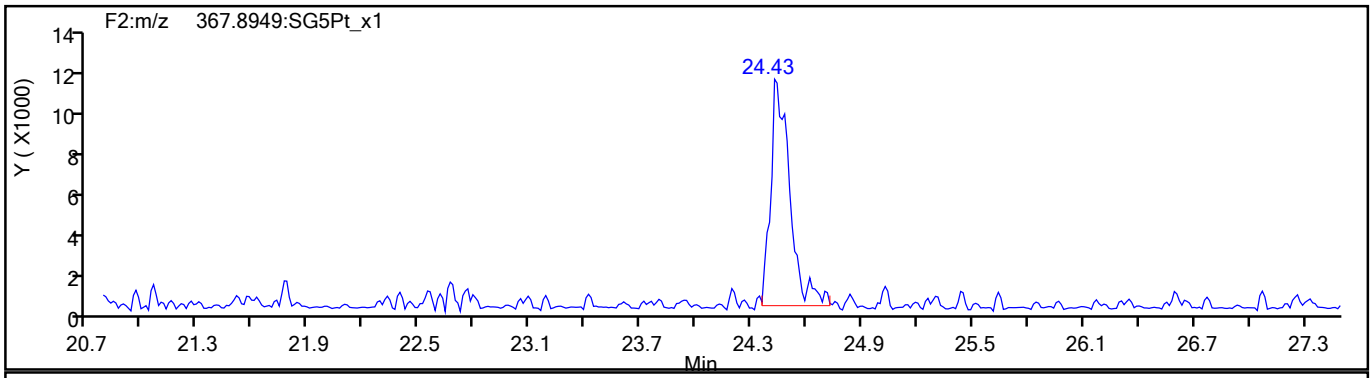

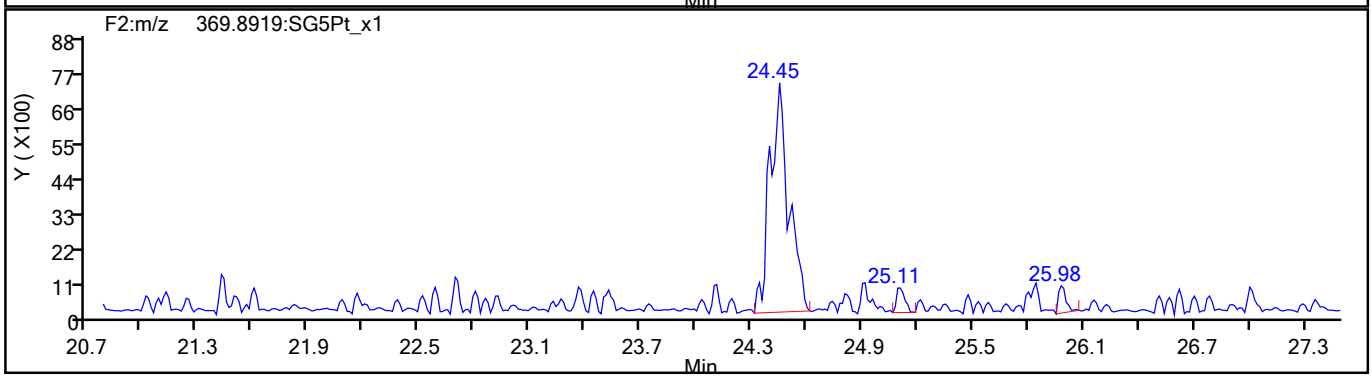

781653

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Eurofins TestAmerica, Sacramento

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HxCDF

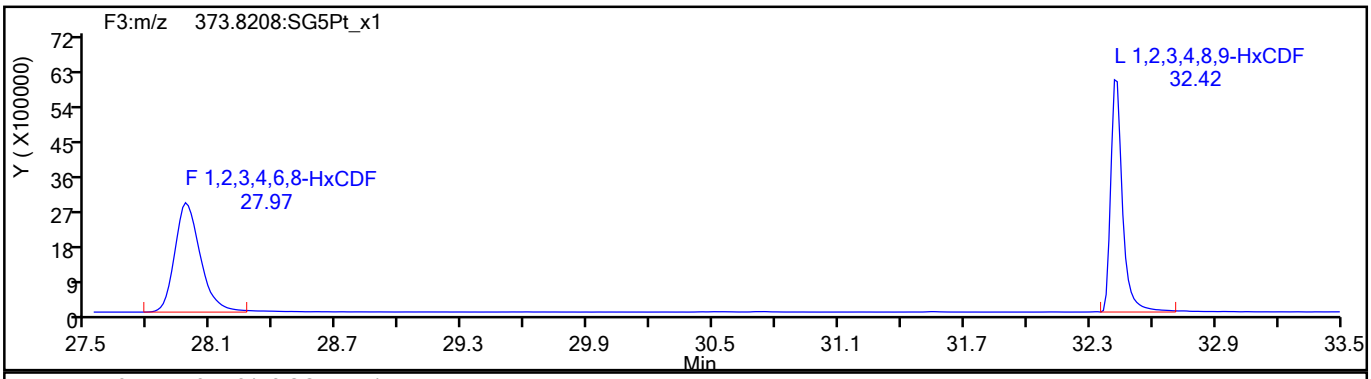

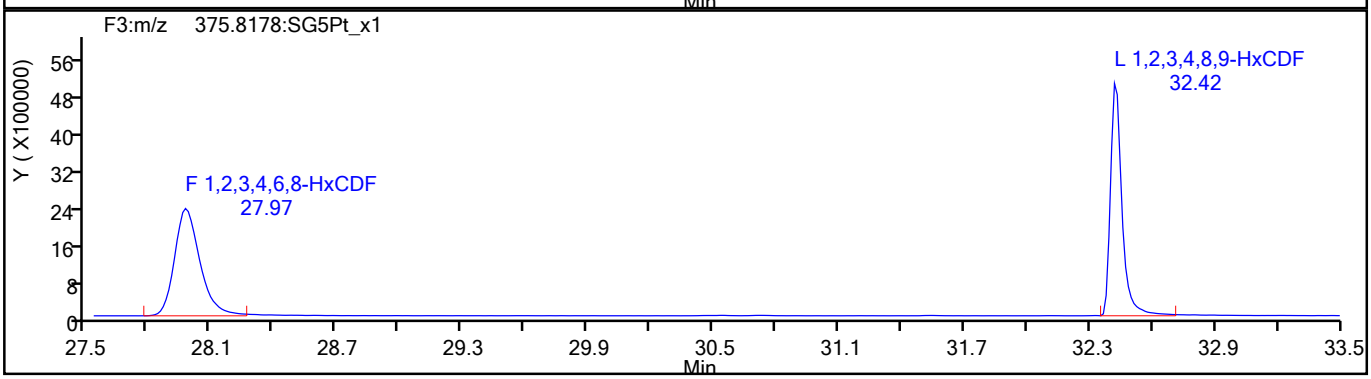

HxCDF Standards

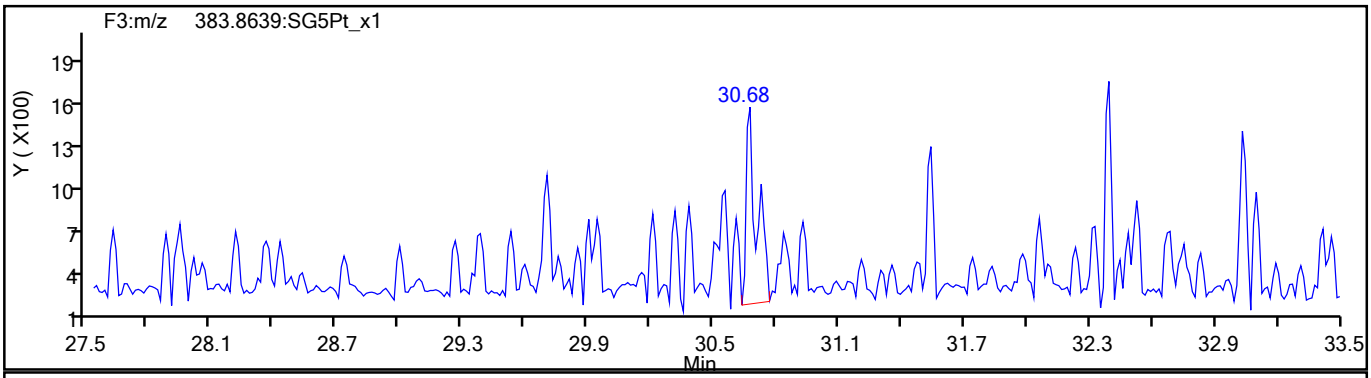

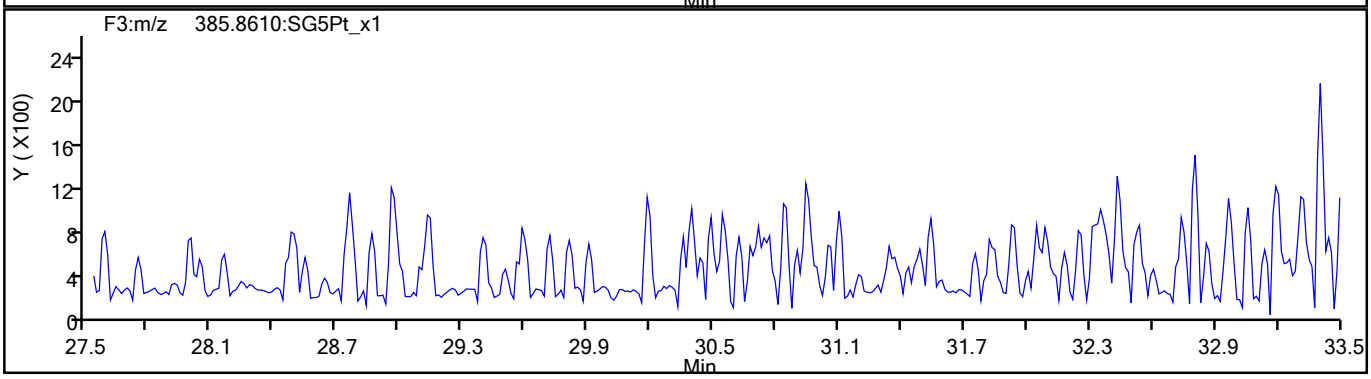

781654

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

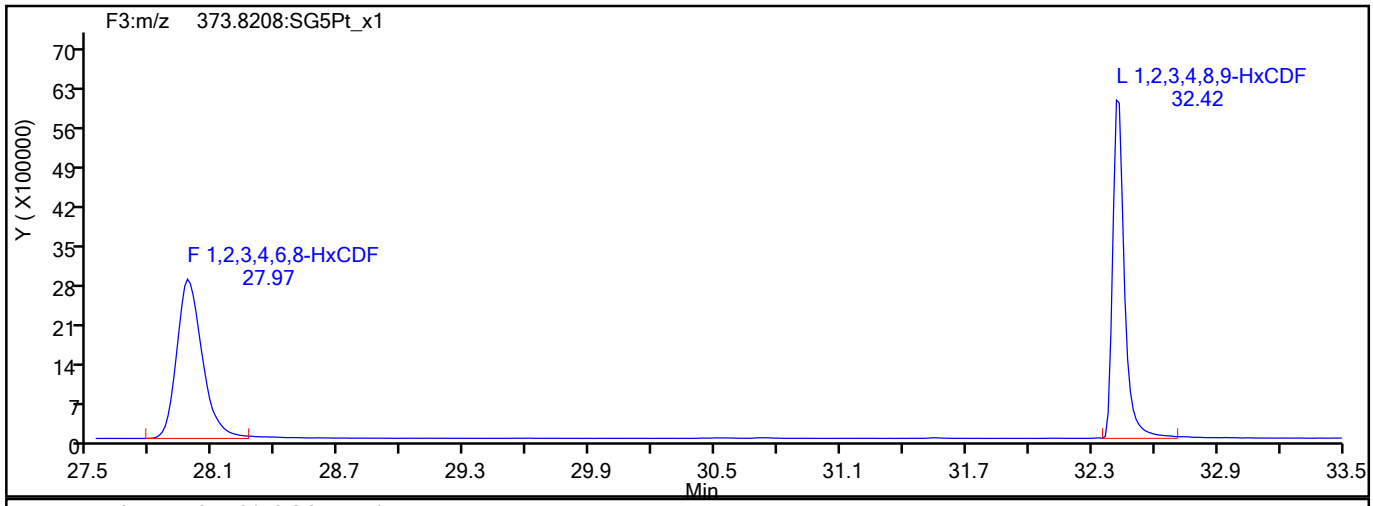

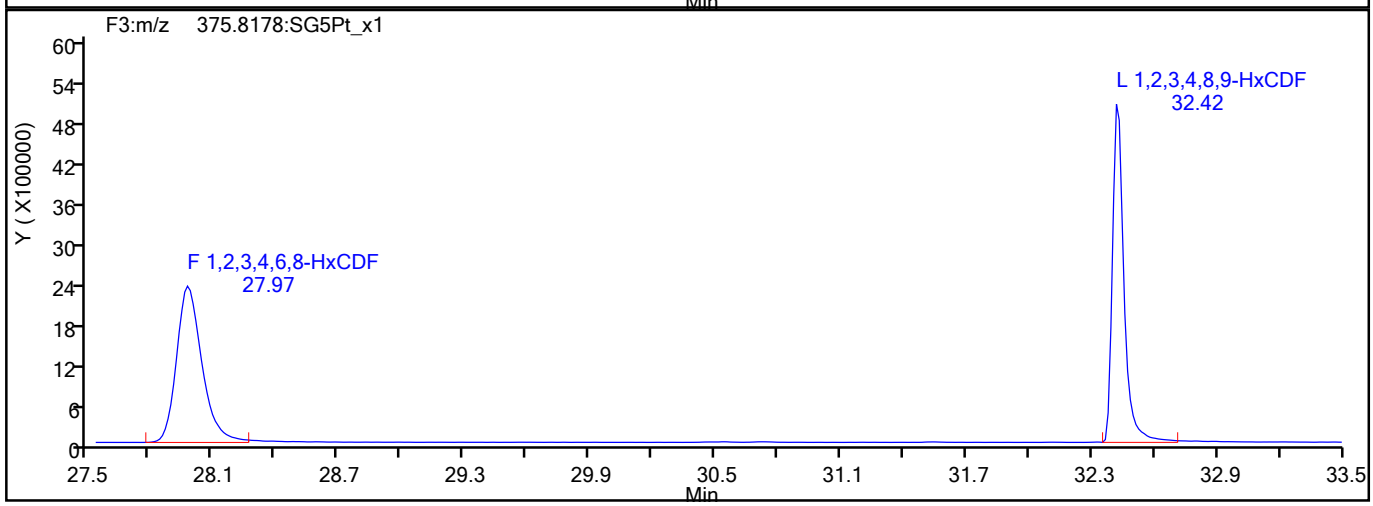

HxCDF Interference Mass

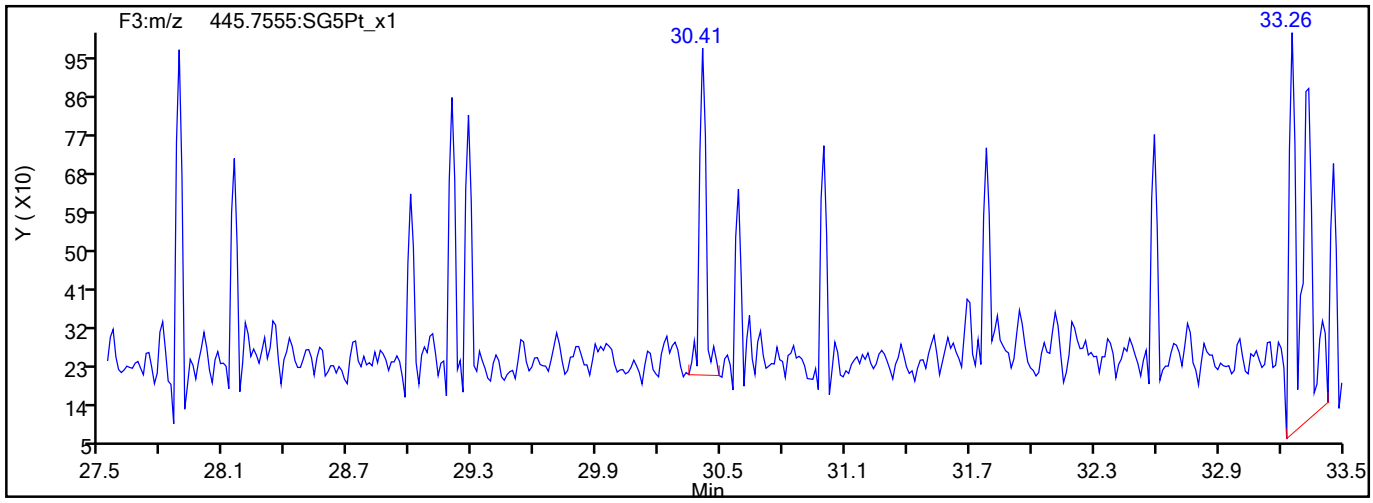

781655

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

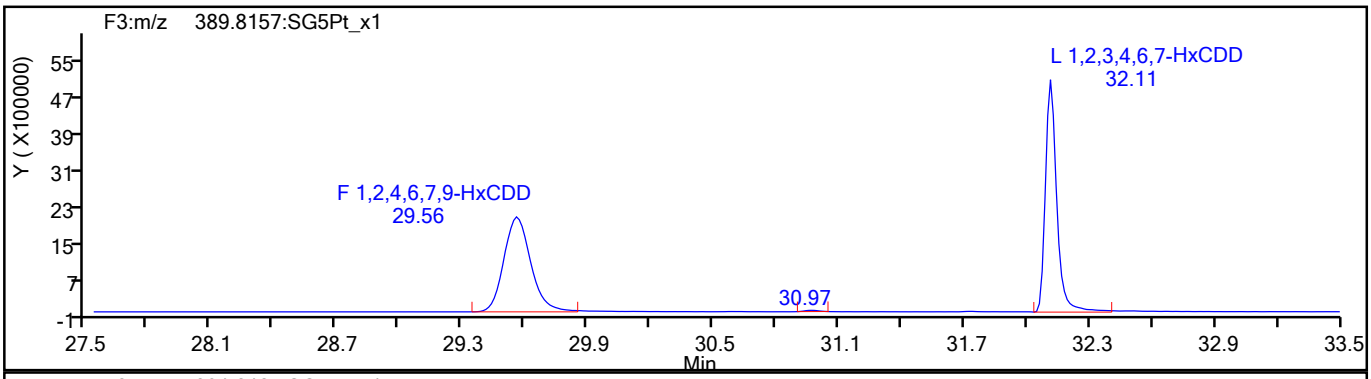

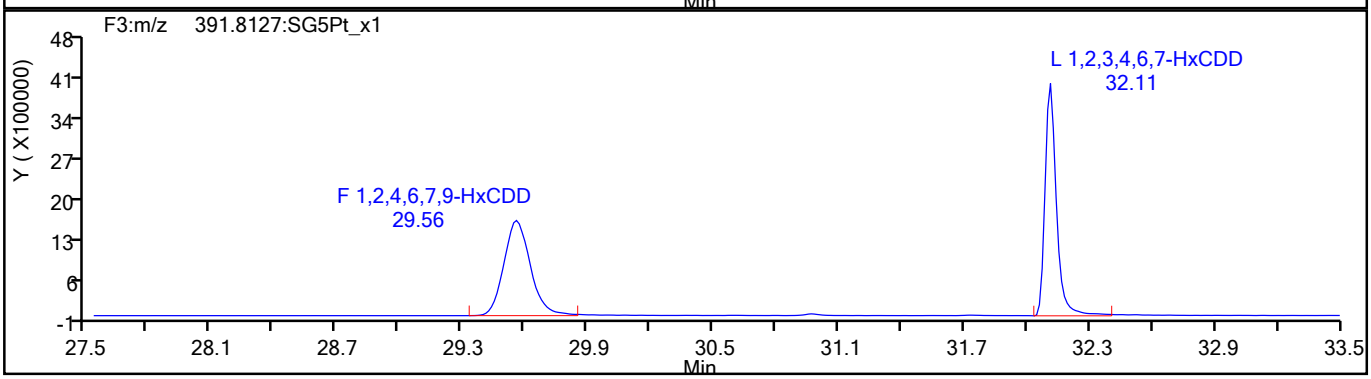

HxCDD Standards

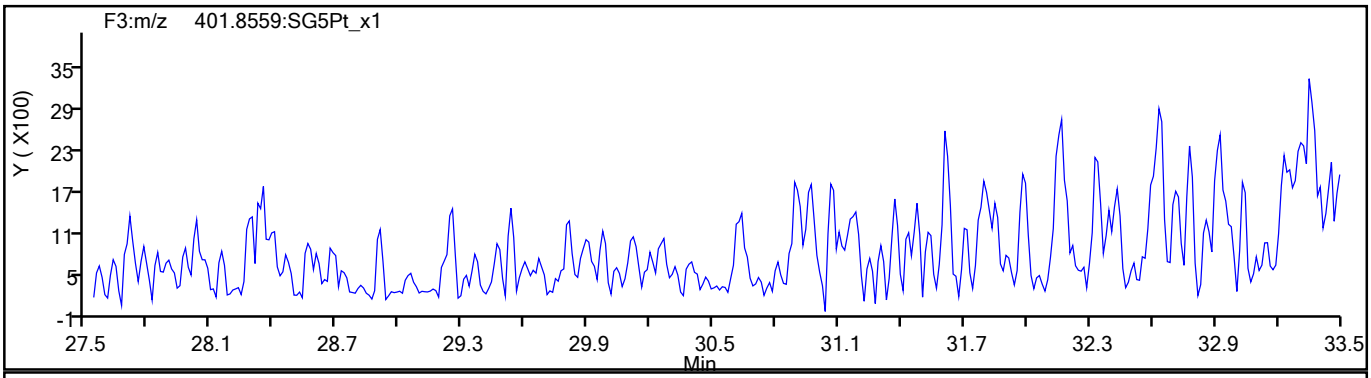

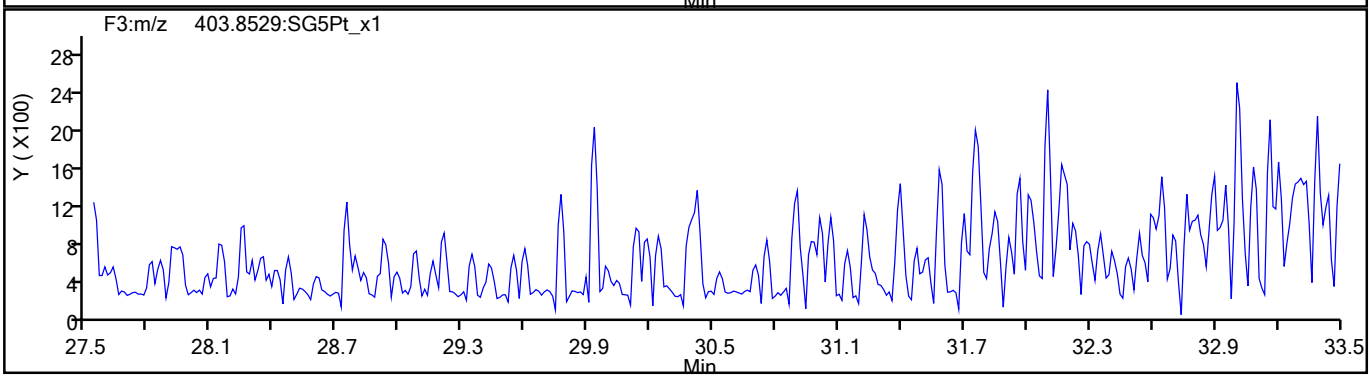

781656

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

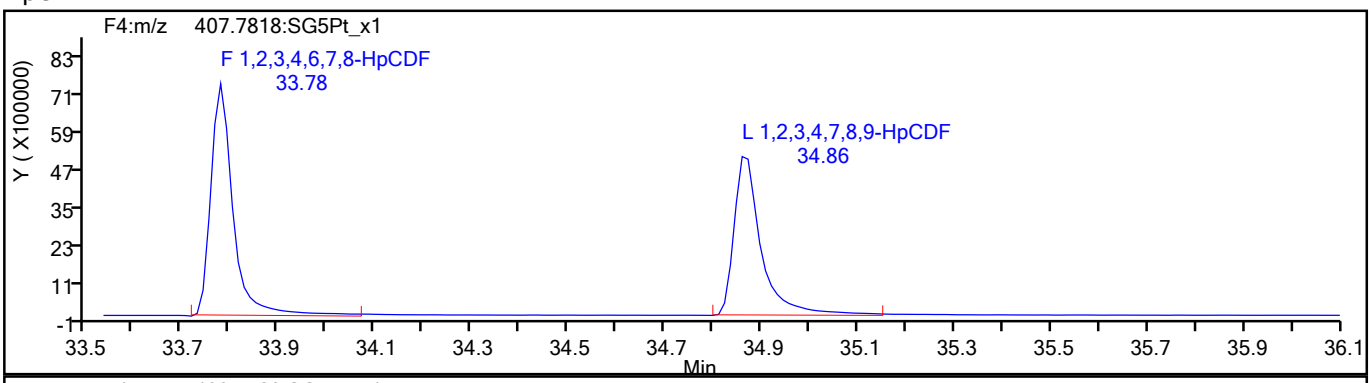

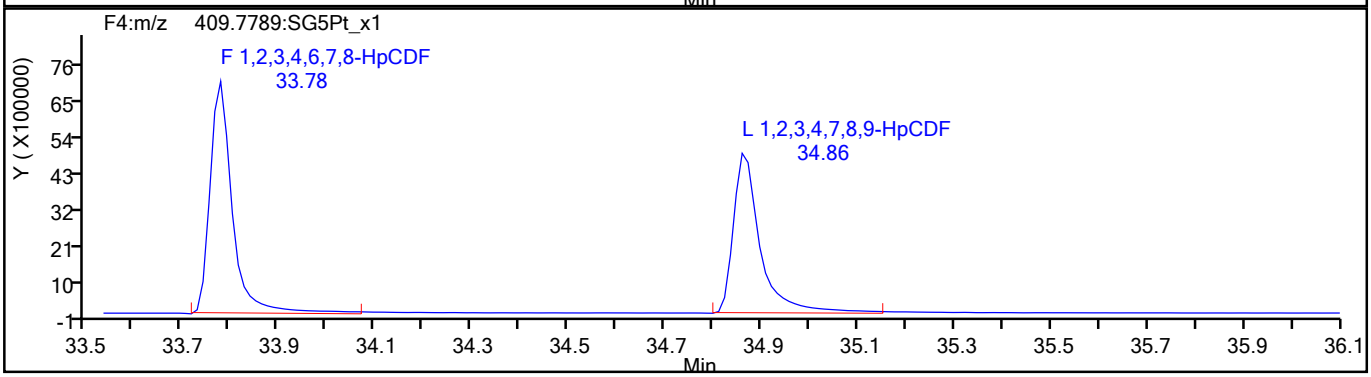

HpCDF Standards

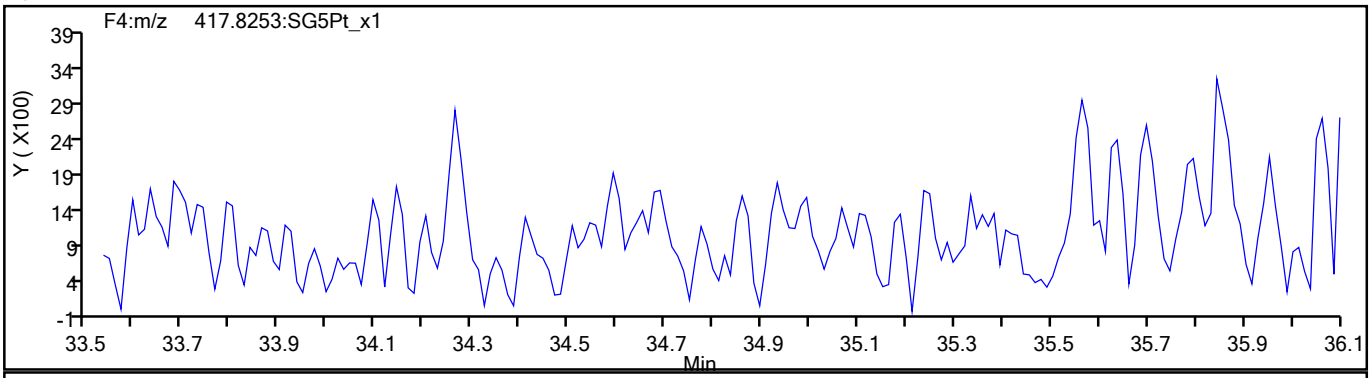

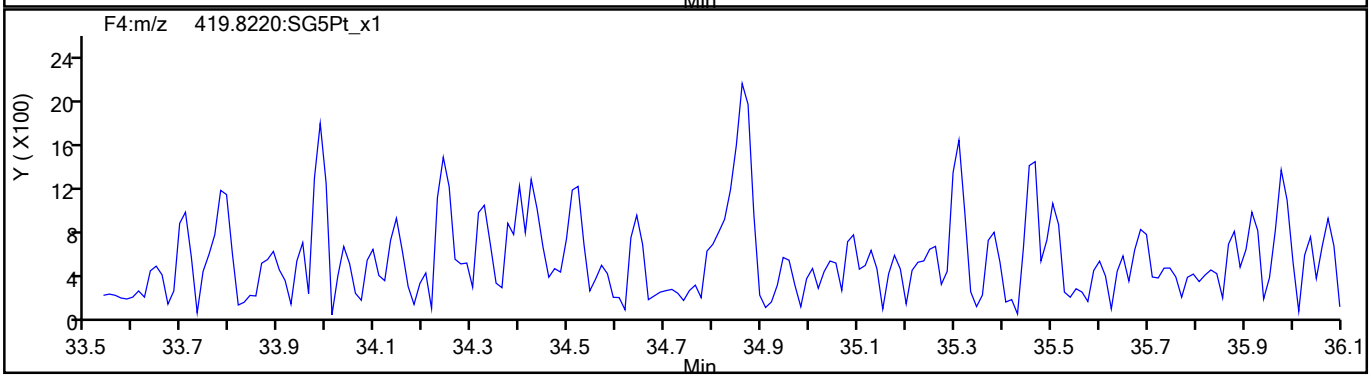

781657

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

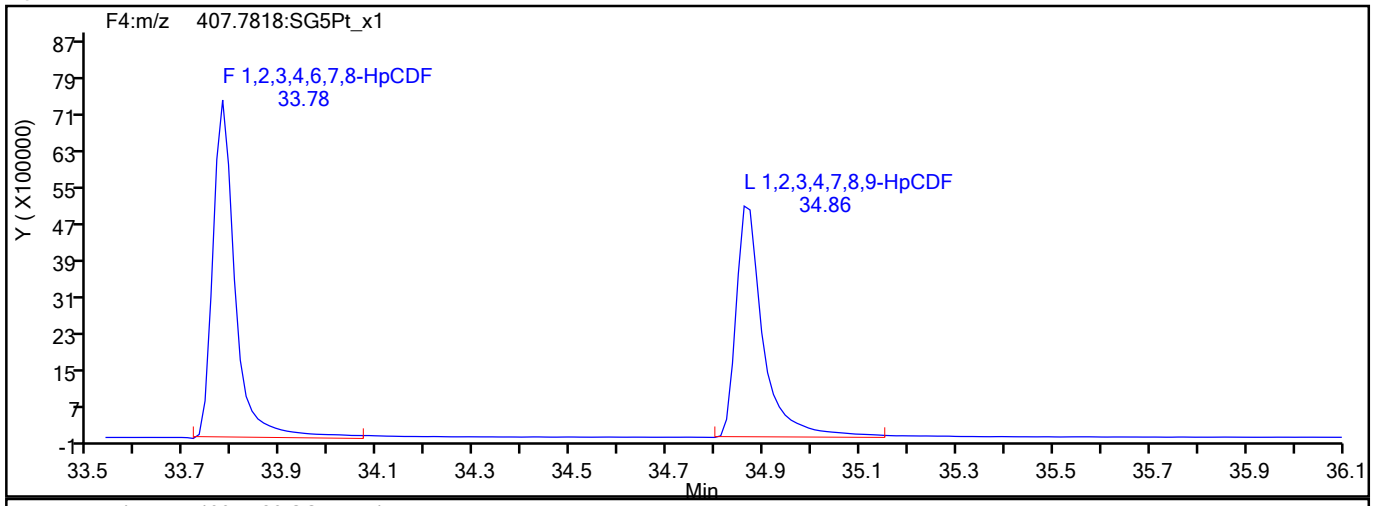

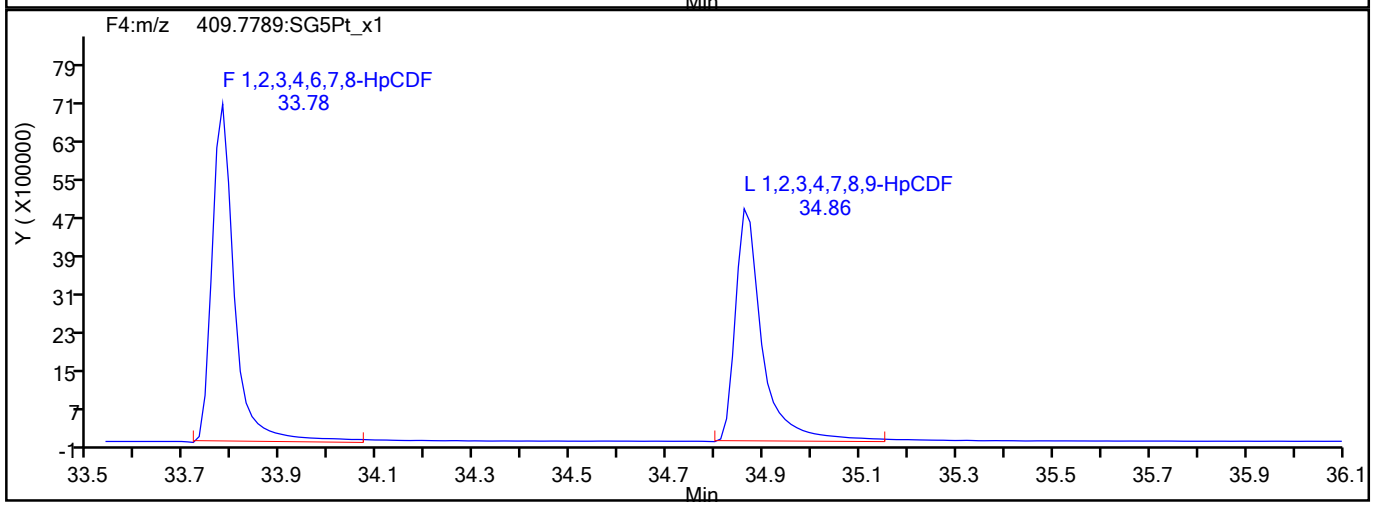

HpCDF Interference Mass

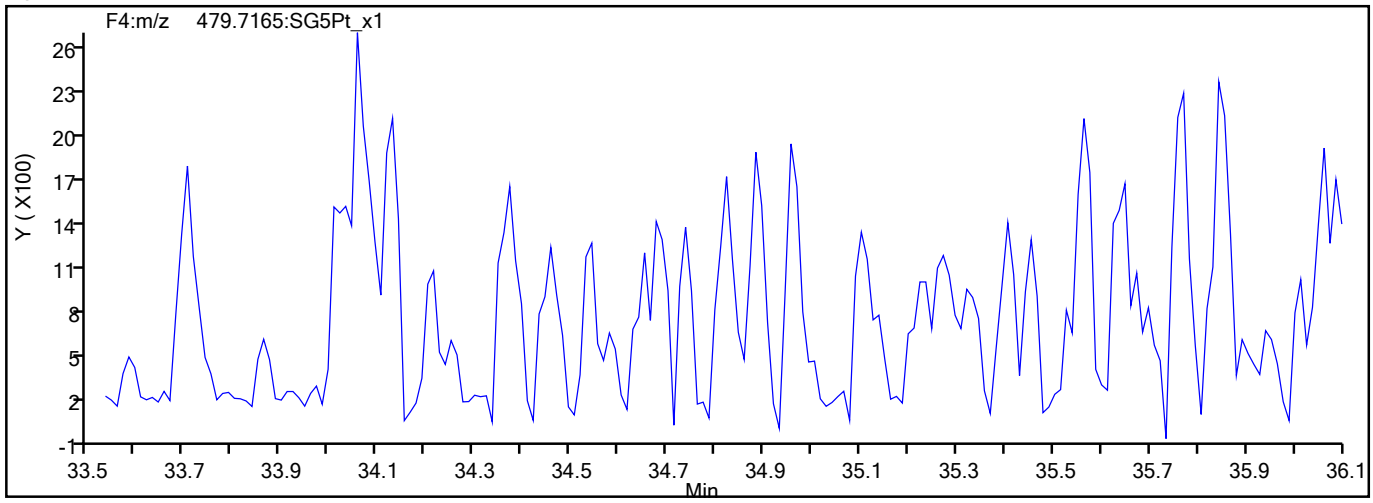

781658

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

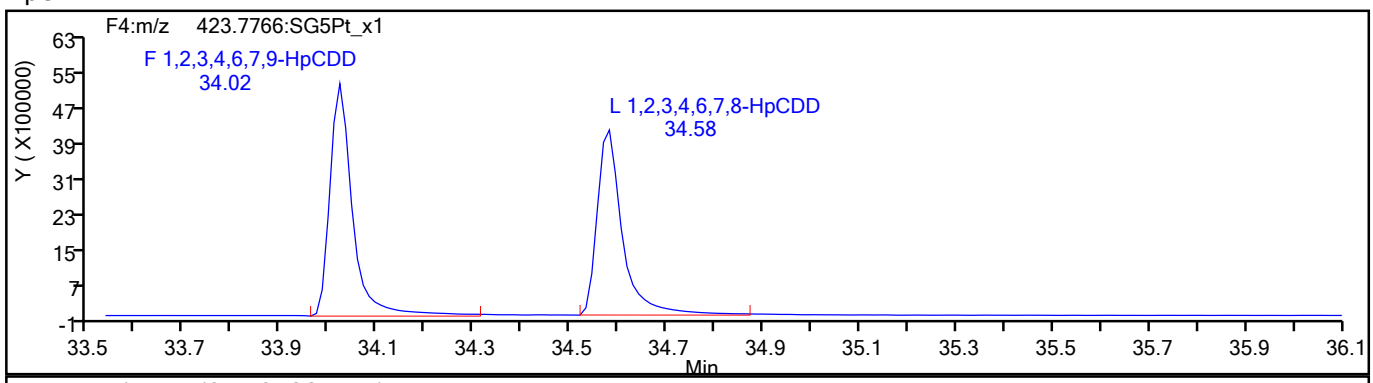

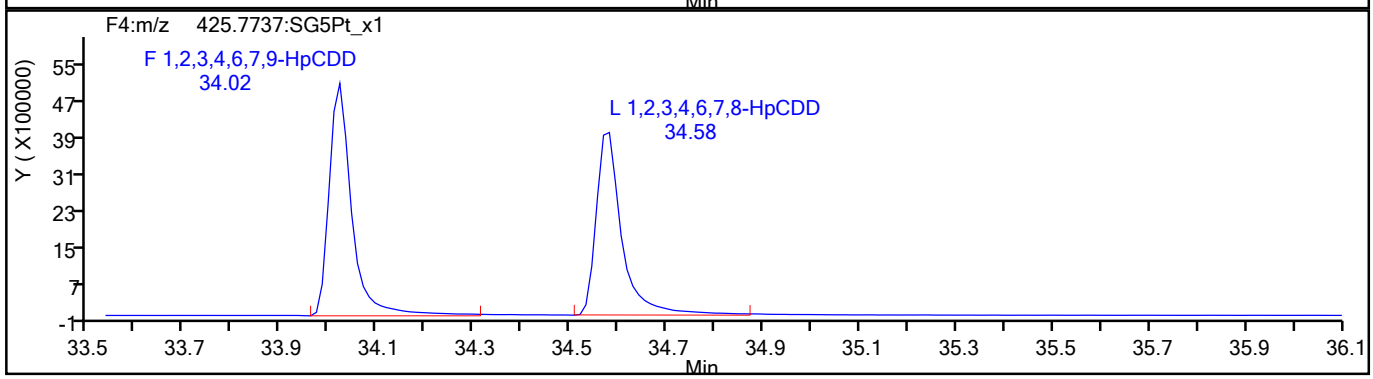

HpCDD Standards

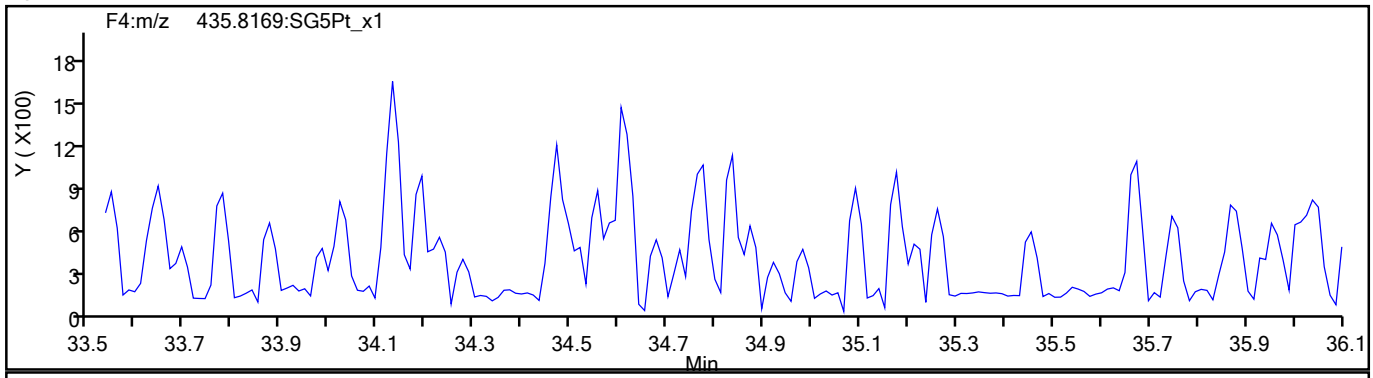

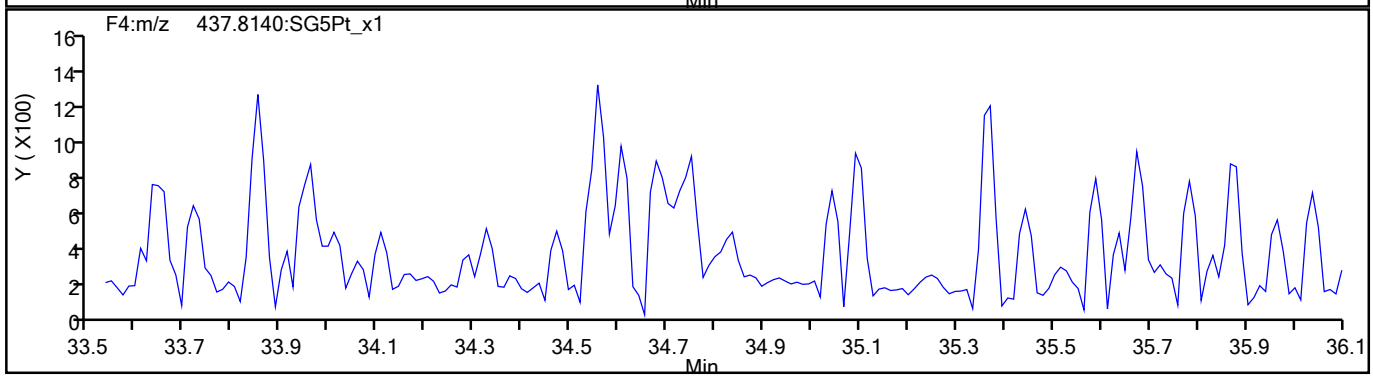

781659

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

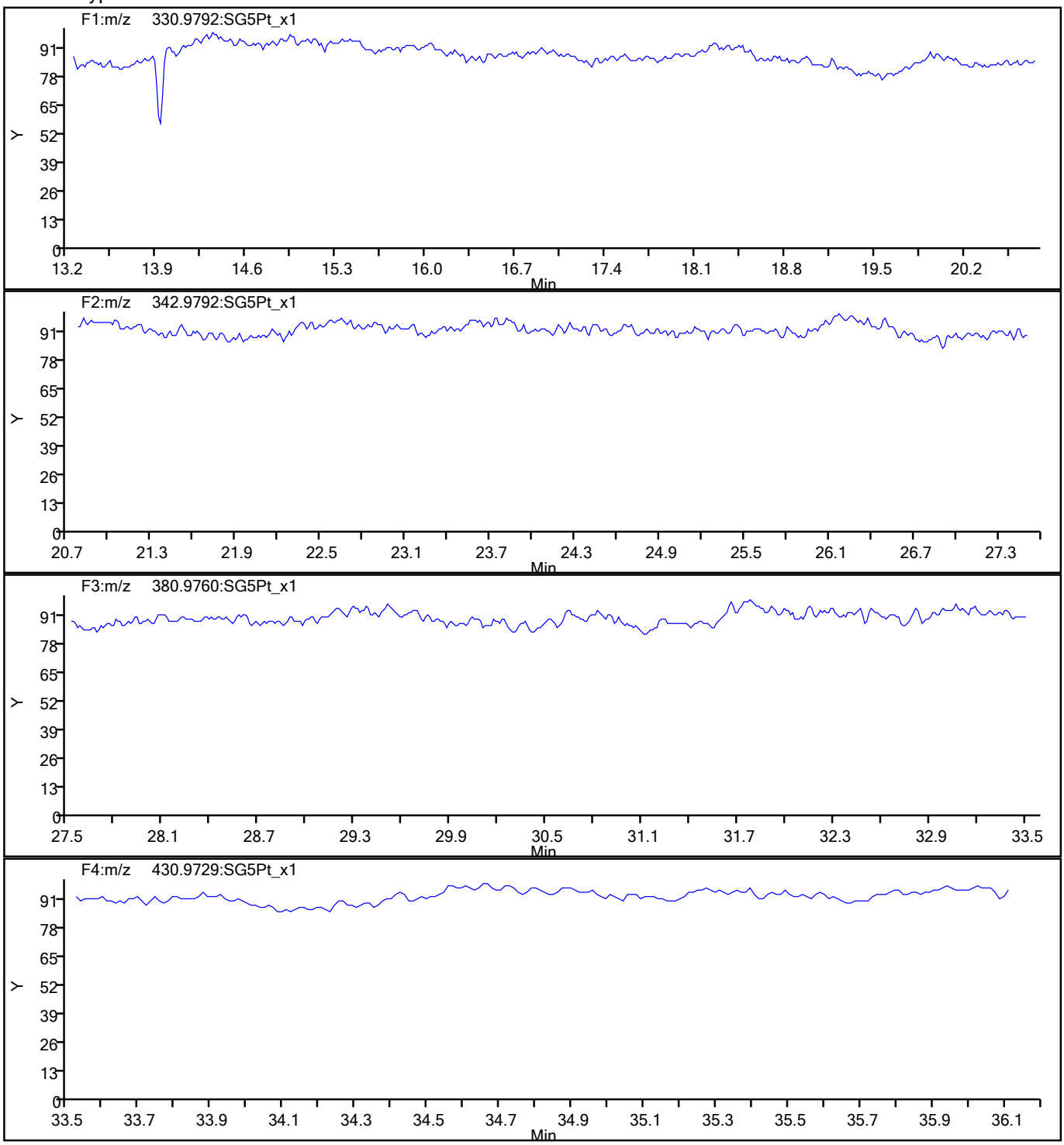

781660

Report Date: 17-Aug-2021 14:21:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_27.d		
Injection Date:	14-Aug-2021 13:01:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516846	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

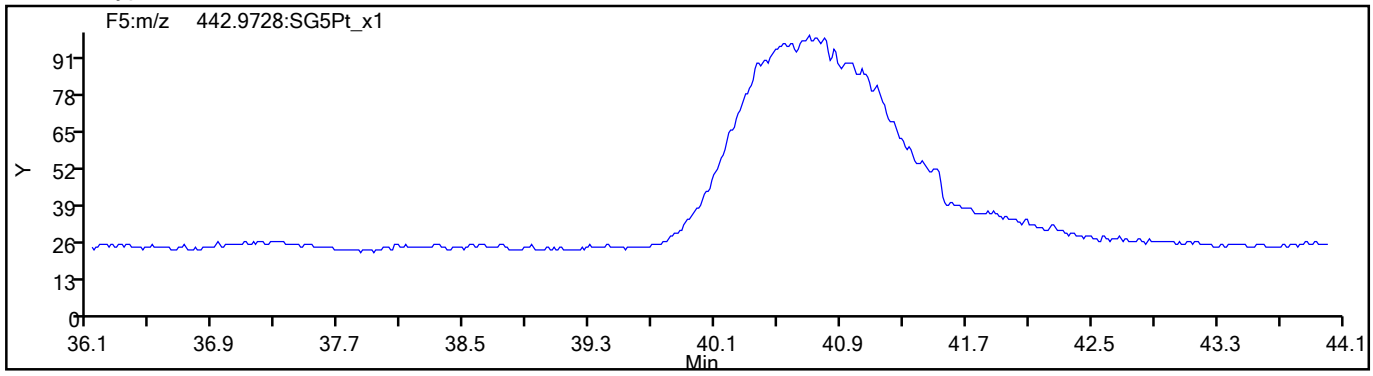

781661

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

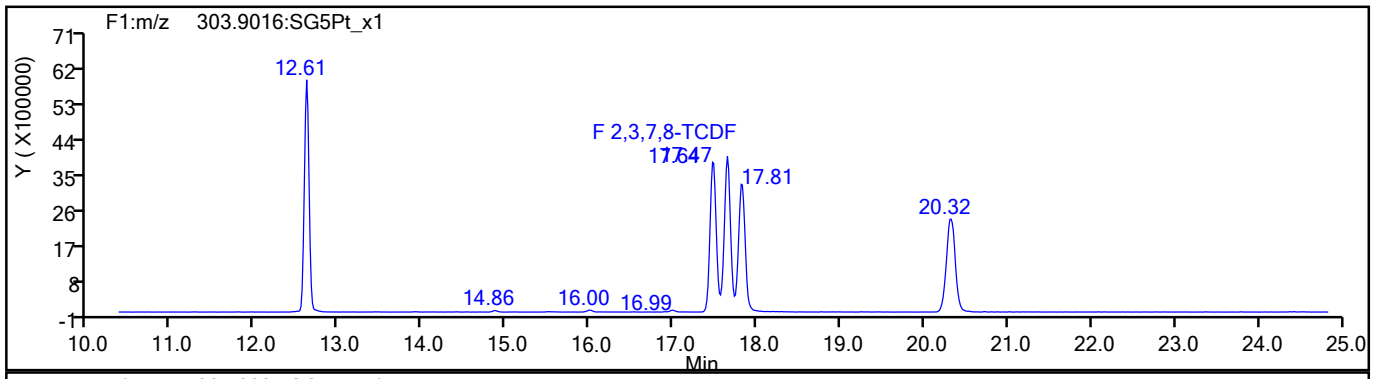

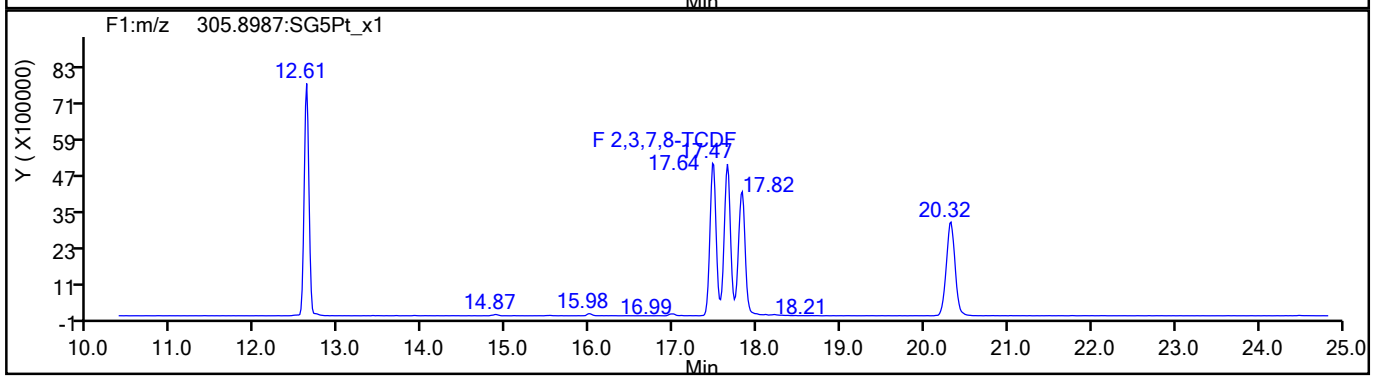

TCDF Standards

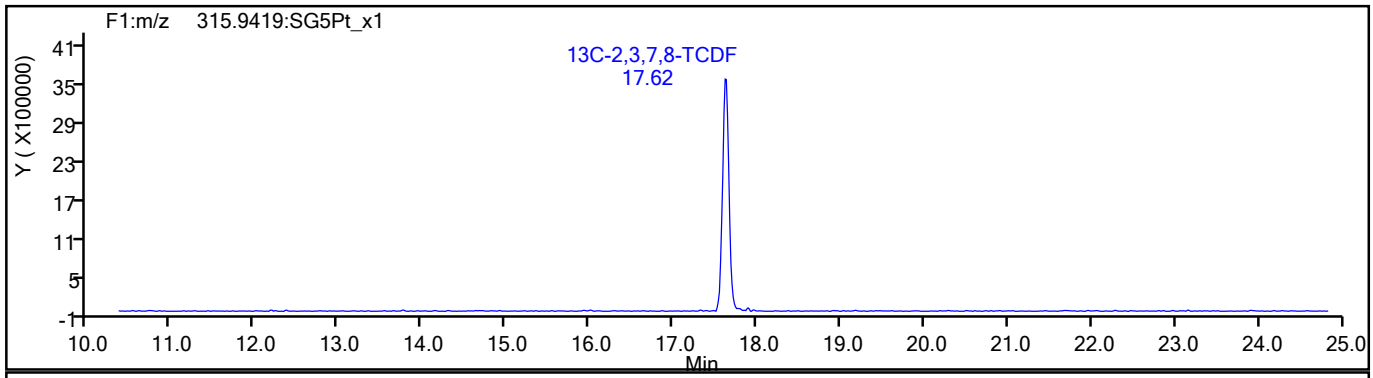

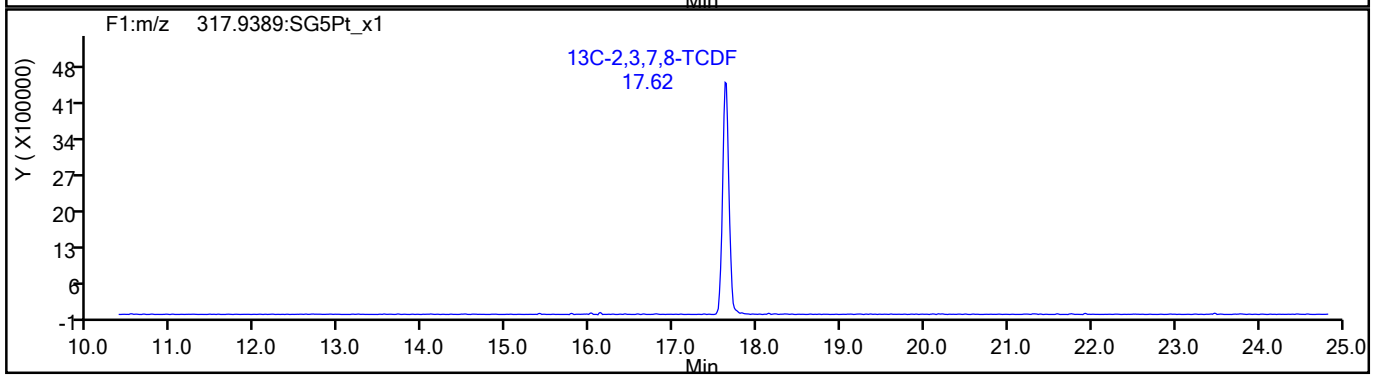

781664

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

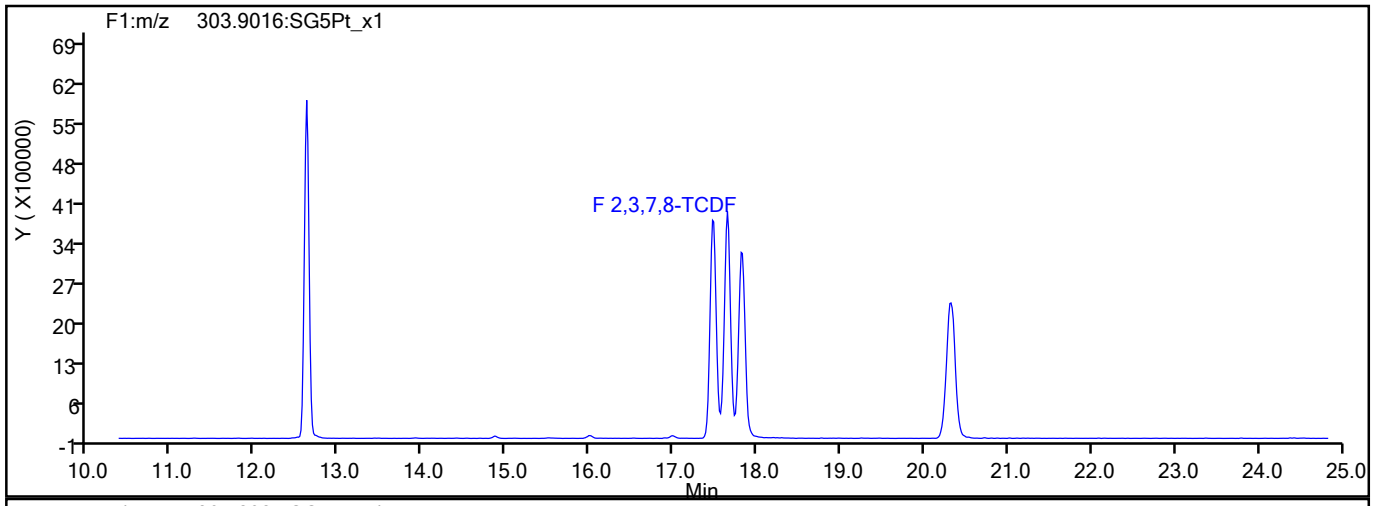

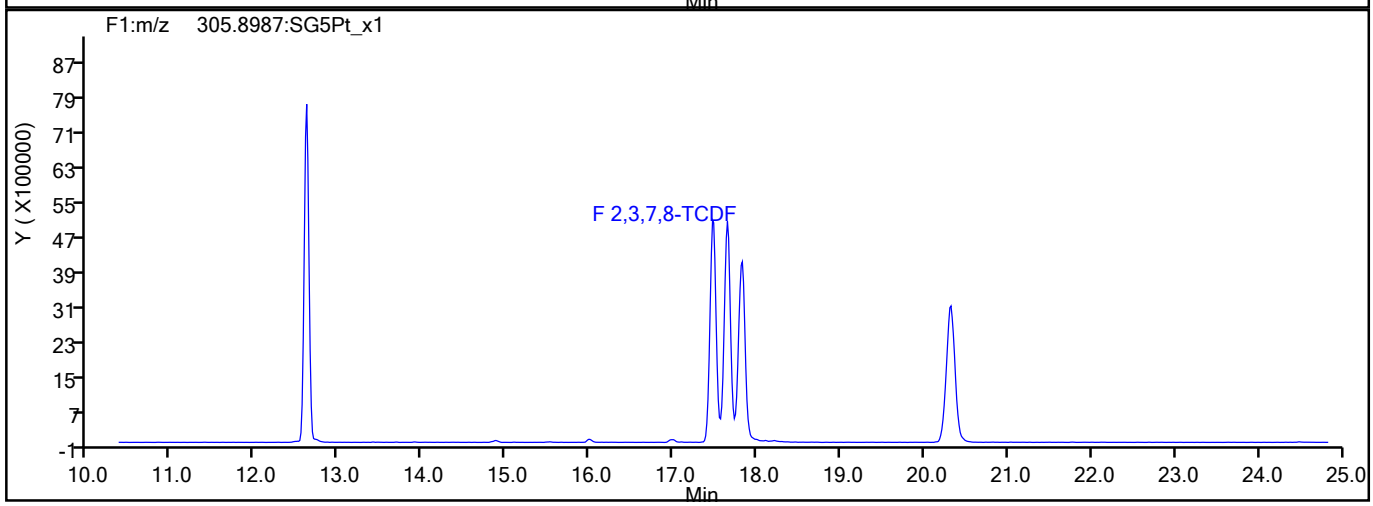

TCDF Interference Mass

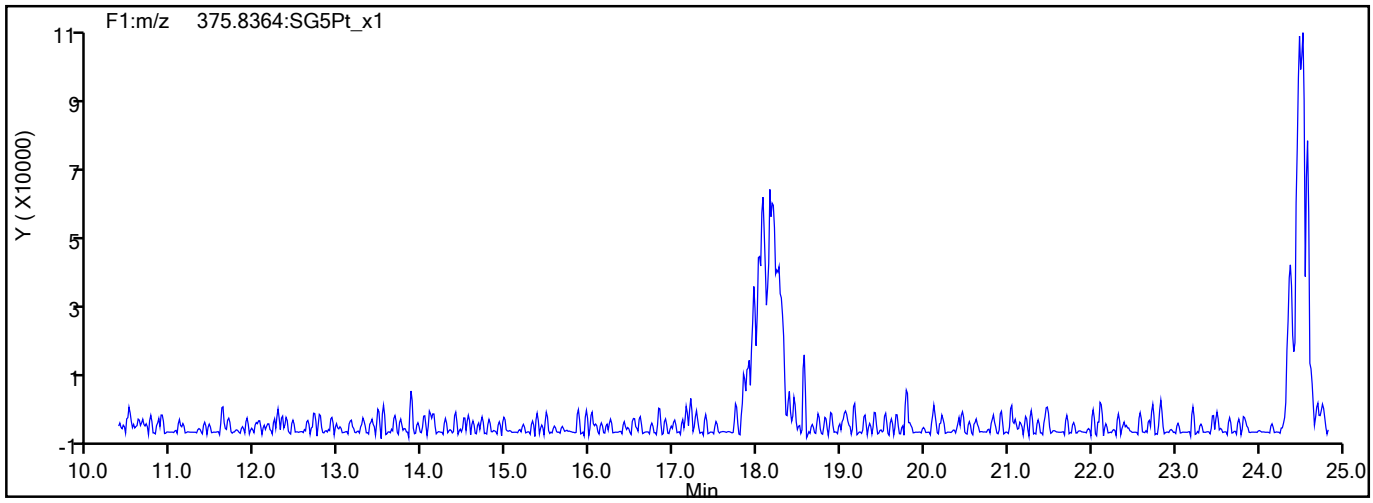

781665

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

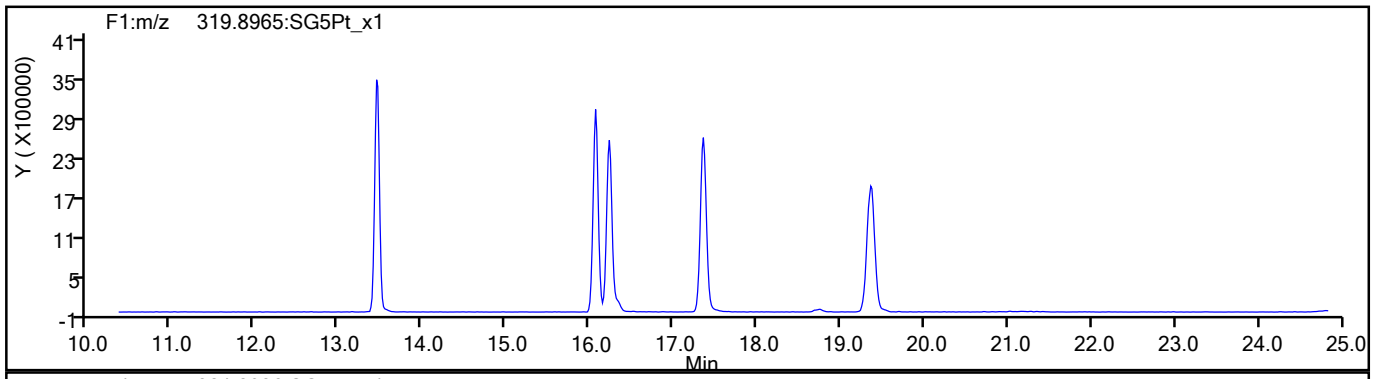

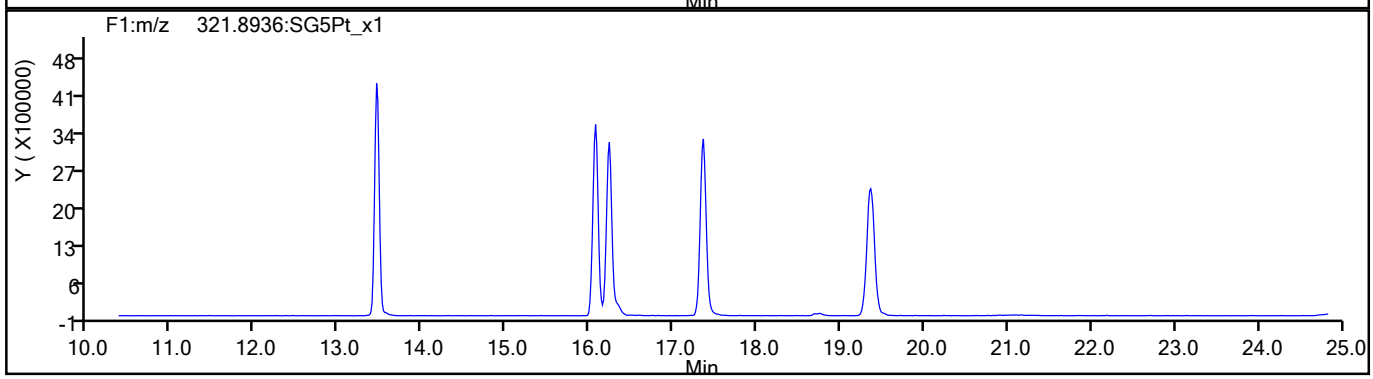

TCDD Standards

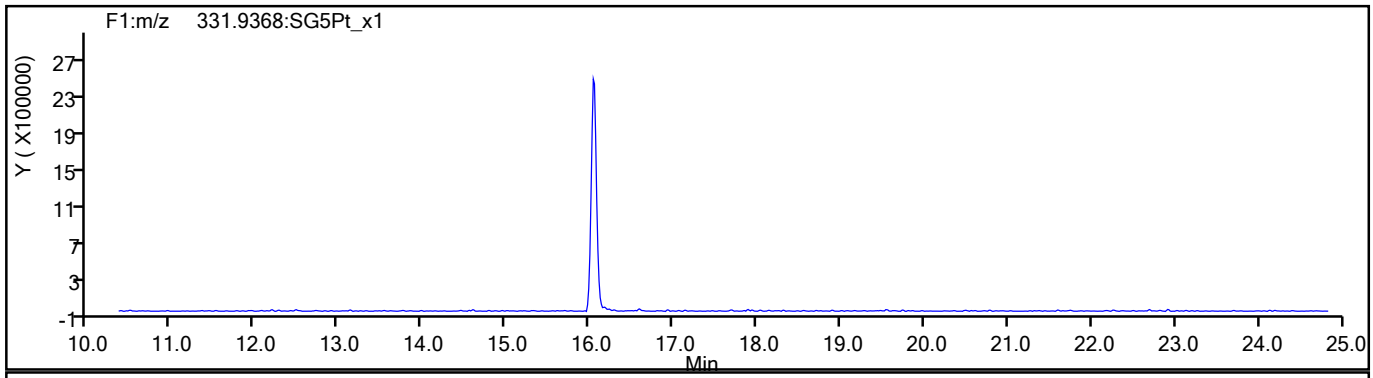

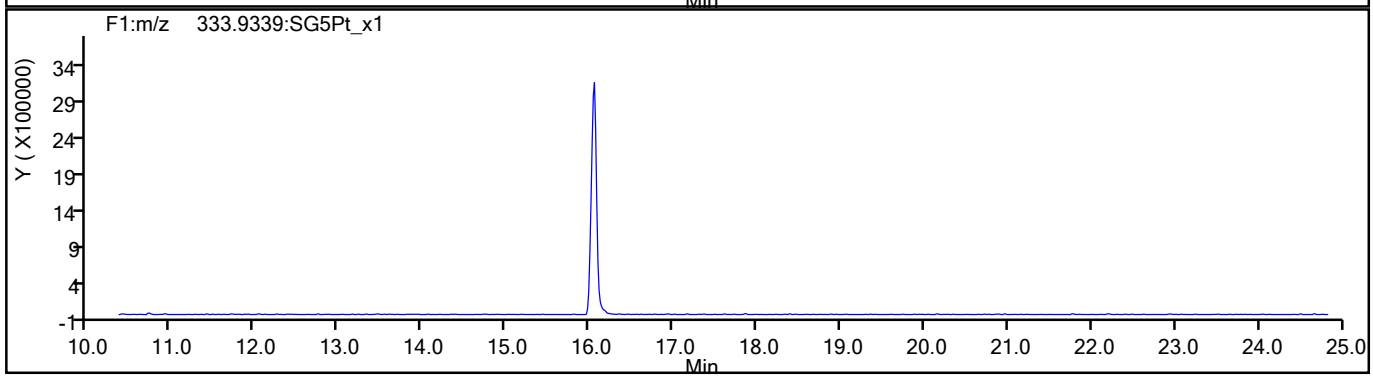

781666

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

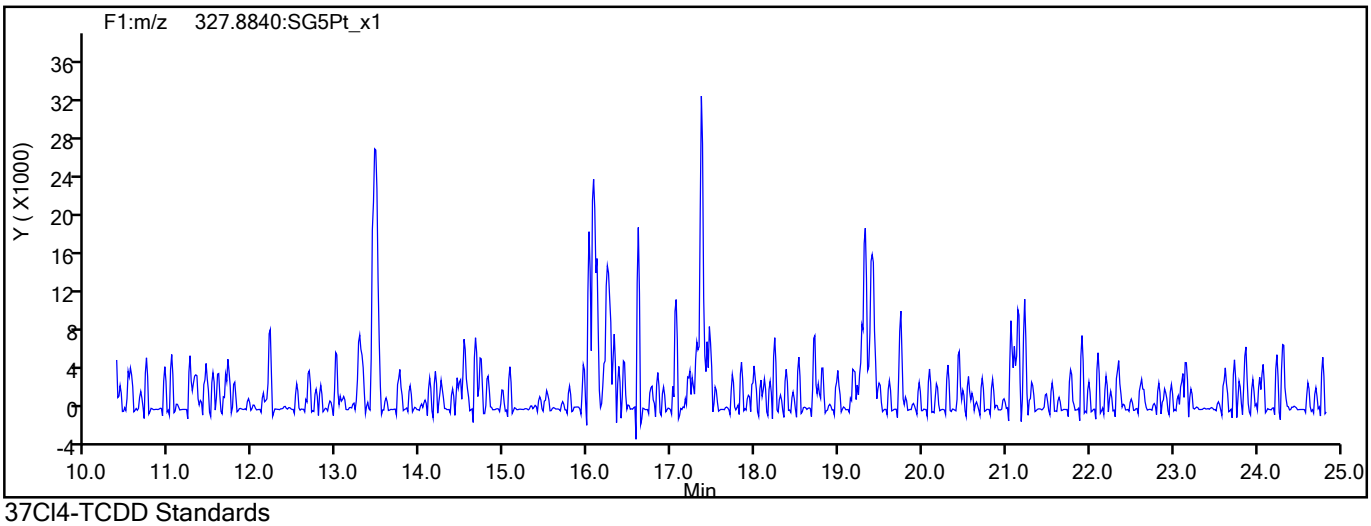

37Cl4-TCDD Standards

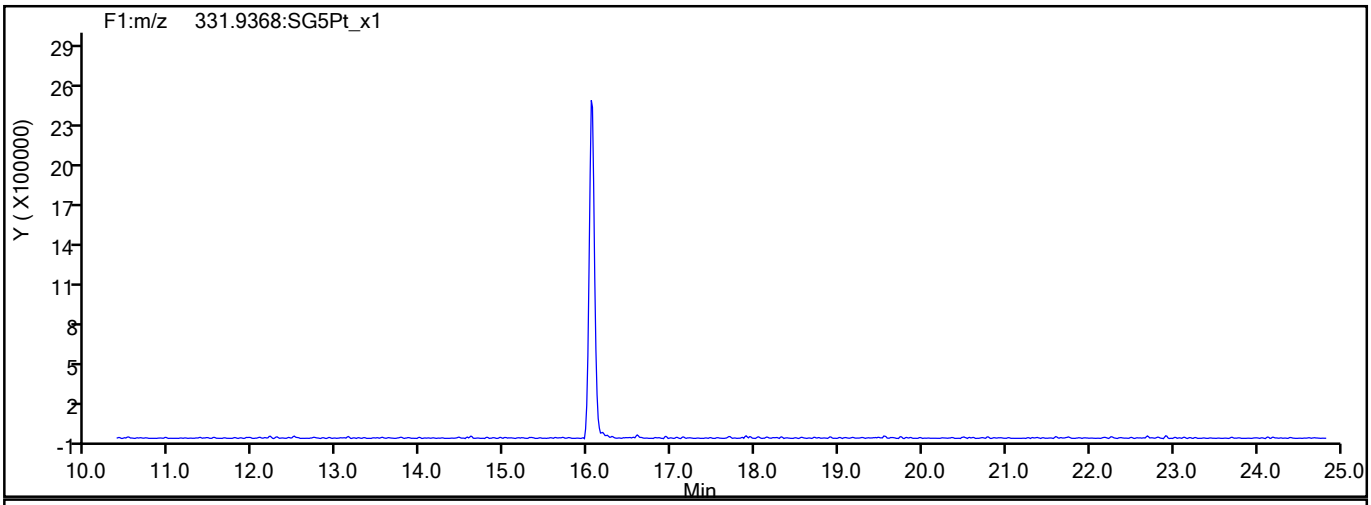

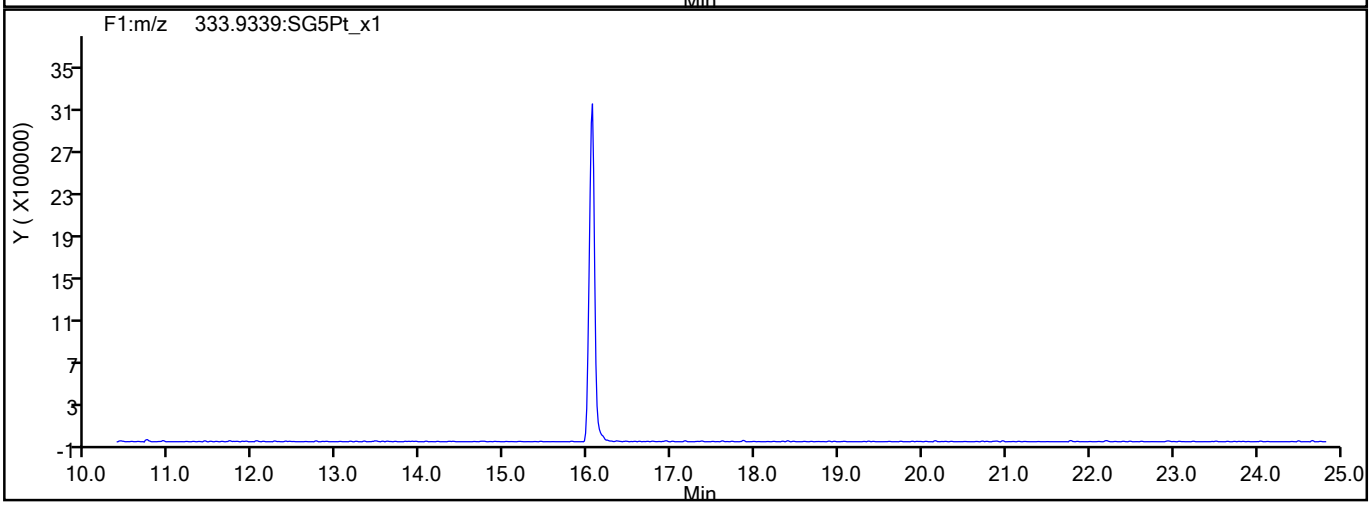

781667

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

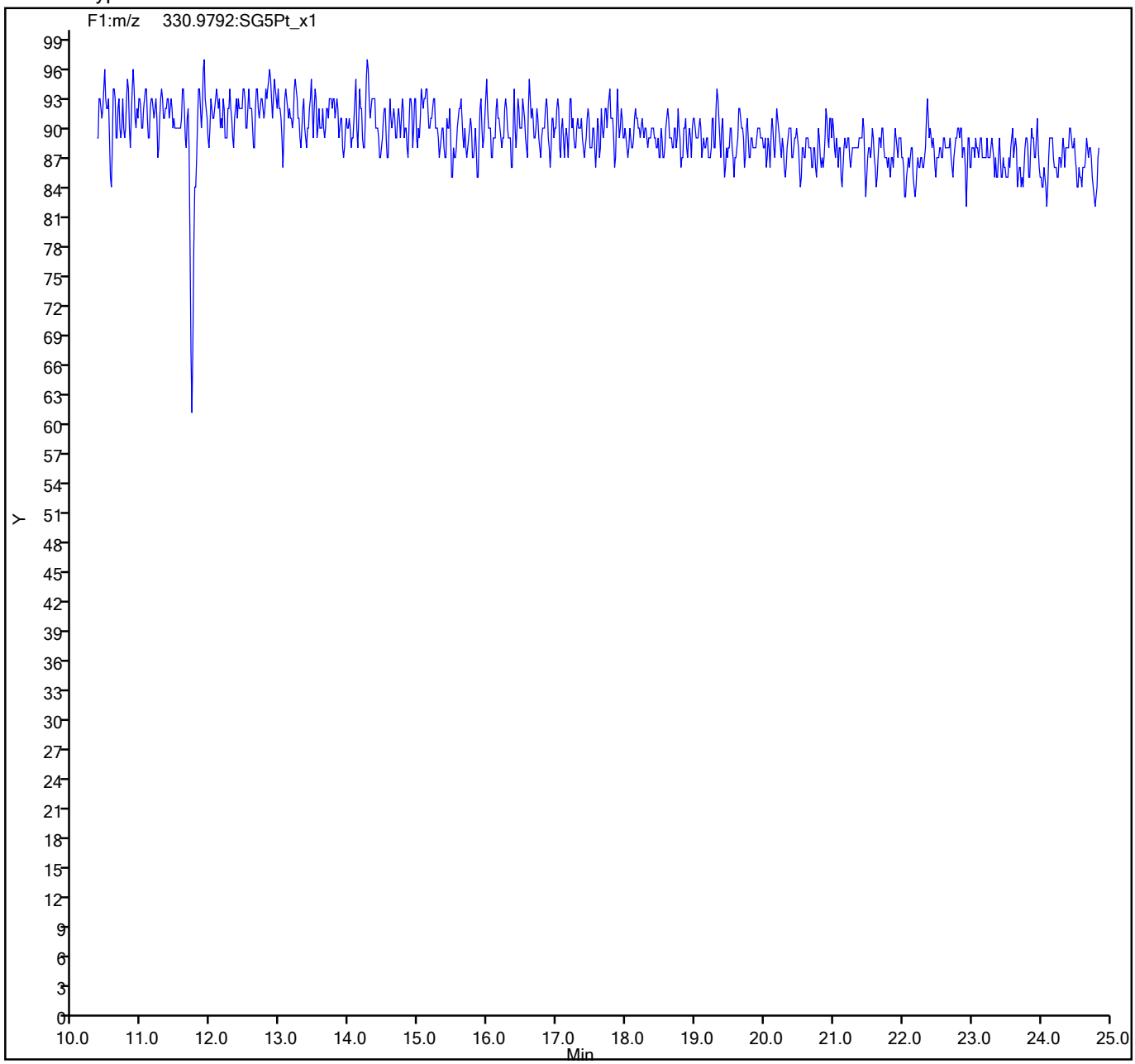

781668

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 23-Aug-2021 09:32:15 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:43:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.637	9601063	0.85	1.3327					0.00	
2,3,7,8-TCDF	17.665	11045352	0.82	0.9978	46.1	46.1	0.1927	0.1927		
D 13C-2,3,7,8-TCDD	16.087	6481328	0.76	0.8749					0.00	
2,3,7,8-TCDD	16.101	6949267	0.78	1.0570	40.6	40.6	0.2121	0.2121		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 23-Aug-2021 09:32:15 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:43:19

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.637	17.637	0	1.000	4407572	855495	7388	18470	116		
317.9389	17.637	17.637	0	1.000	5193491	1011684	5445	13612	186	0.85(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.665	17.665	0	1.002	4971101	886156	1668	4170	531		
305.8987	17.665	17.665	0	1.002	6074251	1128635	1922	4805	587	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.087	16.087	0	1.000	2800293	587194	6878	17195	85		
333.9339	16.087	16.087	0	1.000	3681035	811326	2649	6622	306	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.101	16.101	0	1.001	3034454	677456	1907	4767	355		
321.8936	16.101	16.101	0	1.001	3914813	870353	1228	3070	709	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d		
Injection Date:	23-Aug-2021 09:32:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

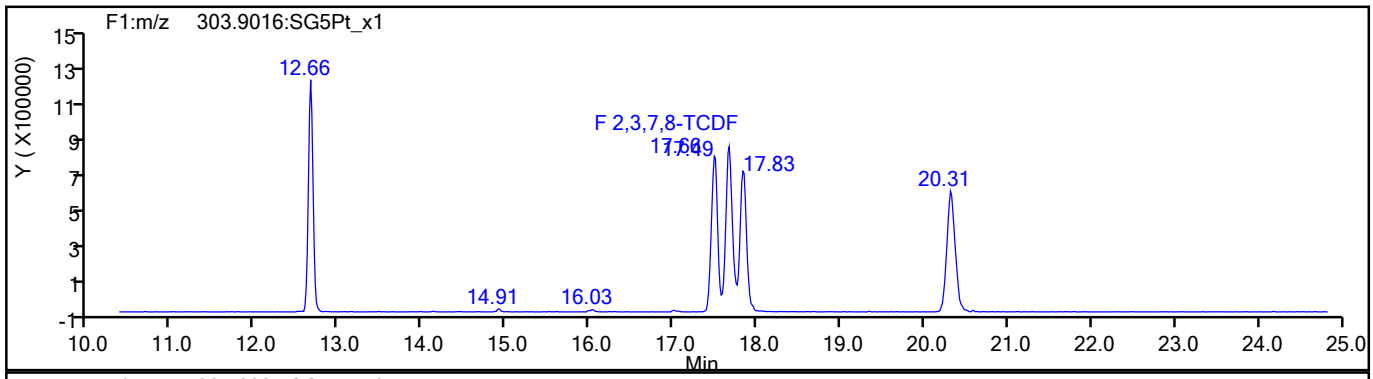

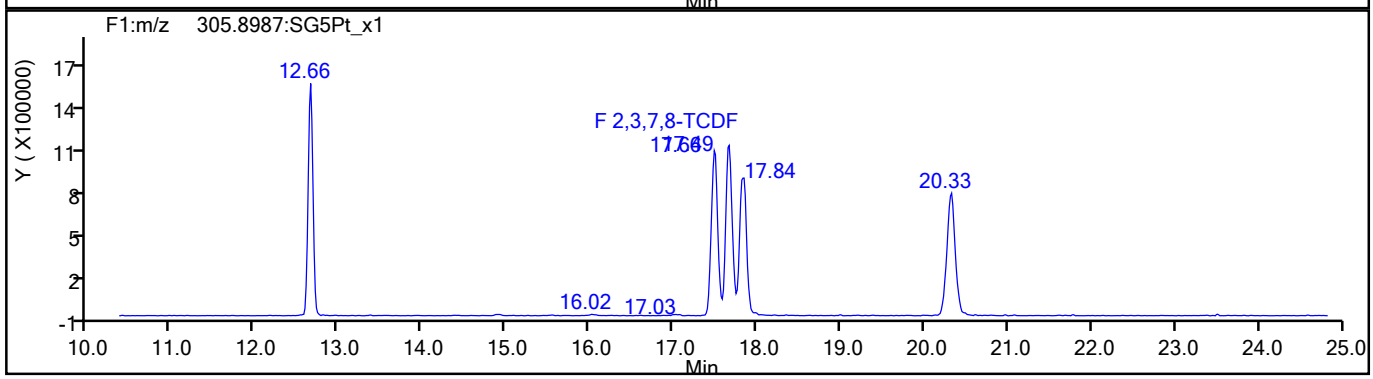

TCDF Standards

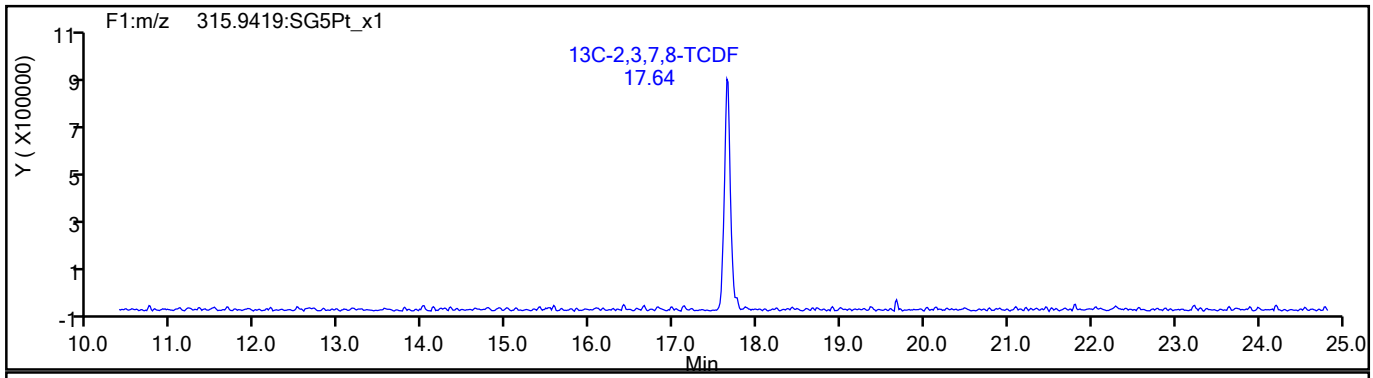

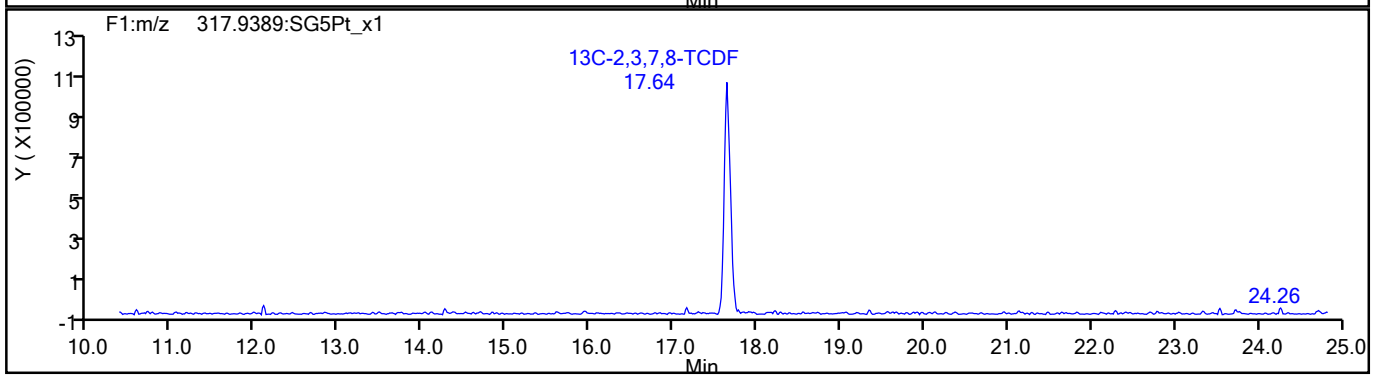

781671

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d		
Injection Date:	23-Aug-2021 09:32:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

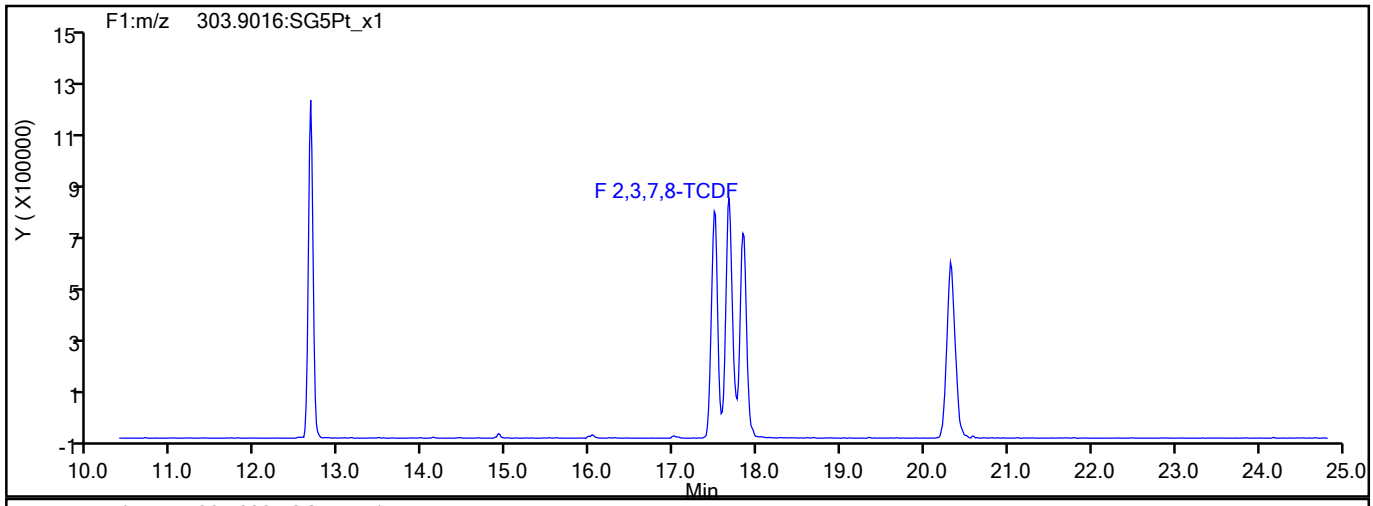

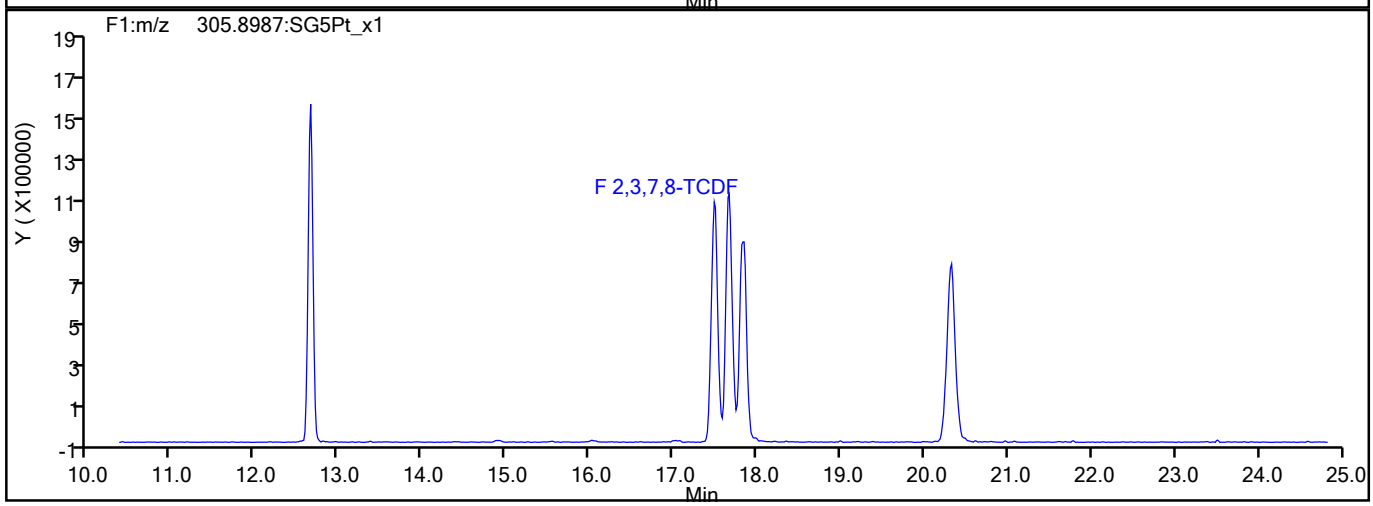

TCDF Interference Mass

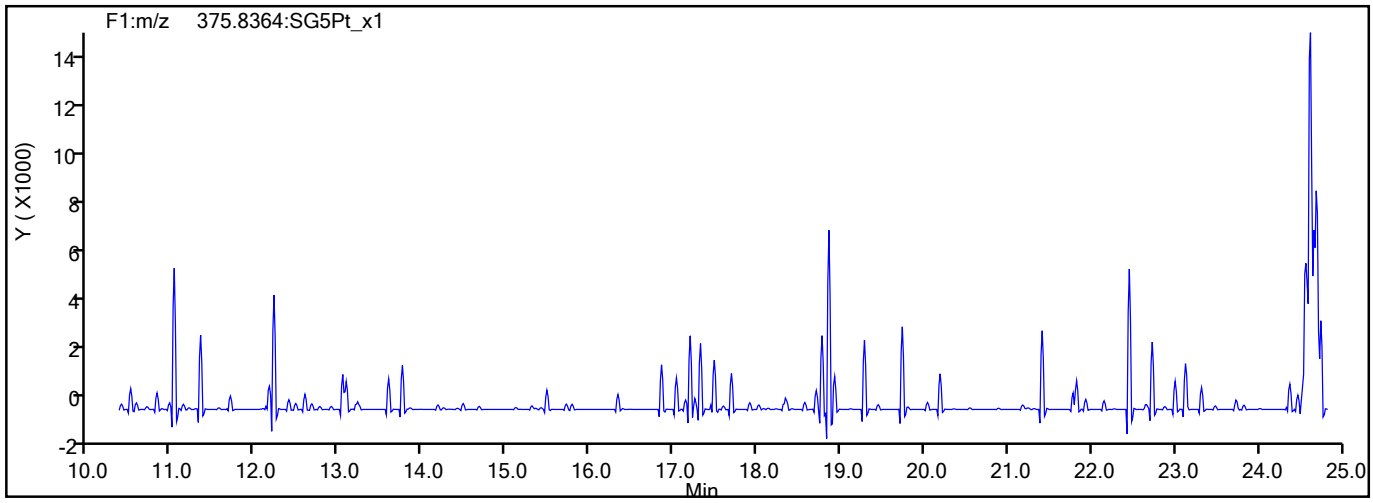

781672

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d		
Injection Date:	23-Aug-2021 09:32:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

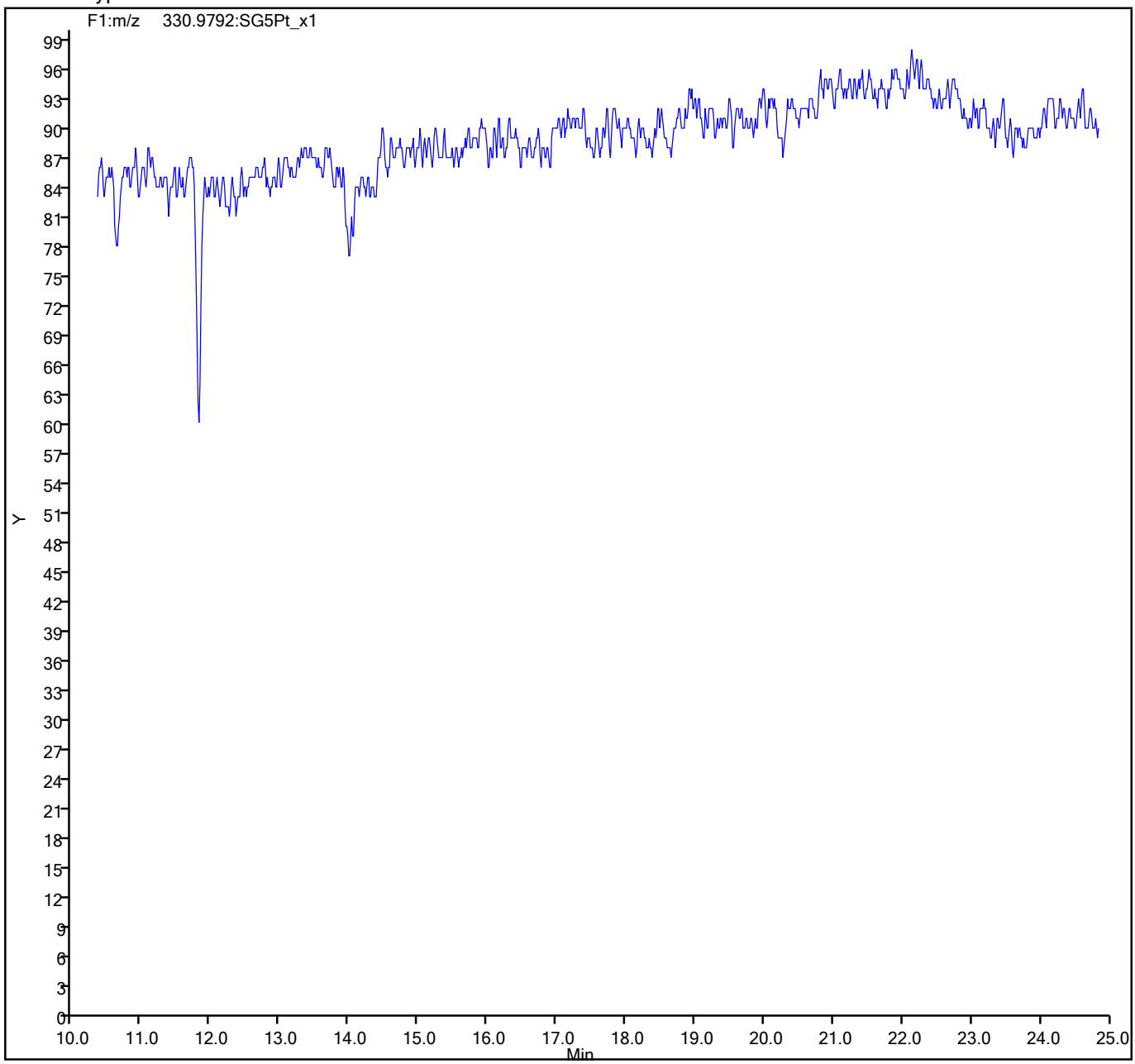

781673

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 23-Aug-2021 15:34:18 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:39 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:13:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.629	32758937	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.657	34131251	0.78	0.9978	41.8	41.8	0.1128	0.1128		
D 13C-2,3,7,8-TCDD	16.079	19405997	0.76	0.8749					0.00	
2,3,7,8-TCDD	16.093	21994765	0.79	1.0570	42.9	42.9	0.1176	0.1176		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 23-Aug-2021 15:34:18 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:39 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:13:04

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.629	17.629	0	1.000	14792047	2886457	8002	20005	361		
317.9389	17.629	17.629	0	1.000	17966890	3466817	8253	20632	420	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.657	17.657	0	1.002	14965952	2812417	3180	7950	884		
305.8987	17.643	17.657	-1	1.001	19165299	3579927	3970	9925	902	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.079	16.079	0	1.000	8398782	1875390	22329	55822	84		
333.9339	16.079	16.079	0	1.000	11007215	2396714	10997	27492	218	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.093	0	1.001	9703507	2157313	2641	6602	817		
321.8936	16.093	16.093	0	1.001	12291258	2740074	2671	6677	1026	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 24-Aug-2021 09:19:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d		
Injection Date:	23-Aug-2021 15:34:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

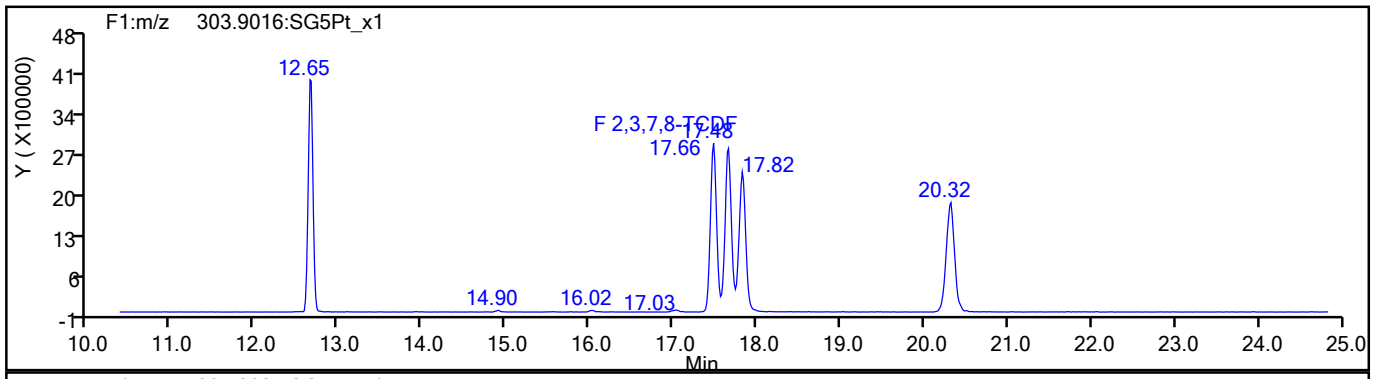

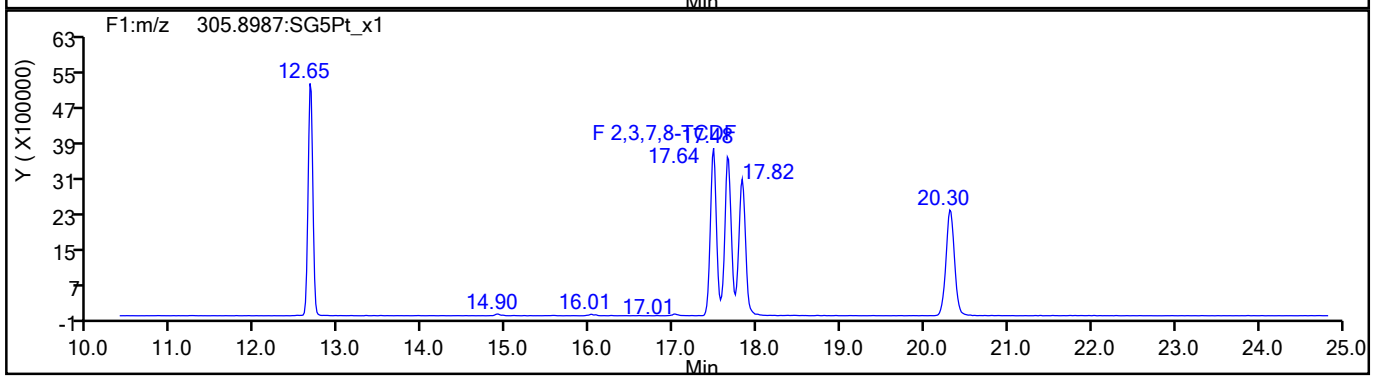

TCDF Standards

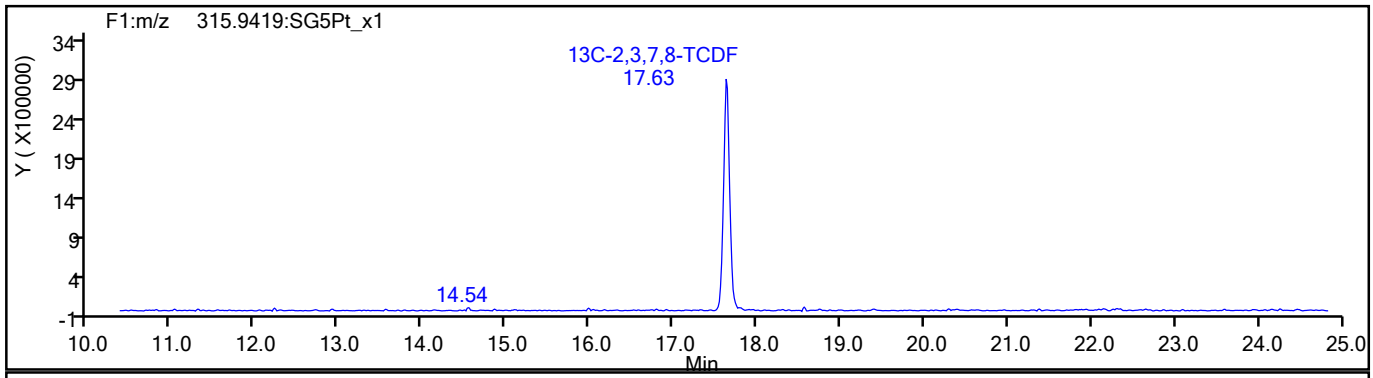

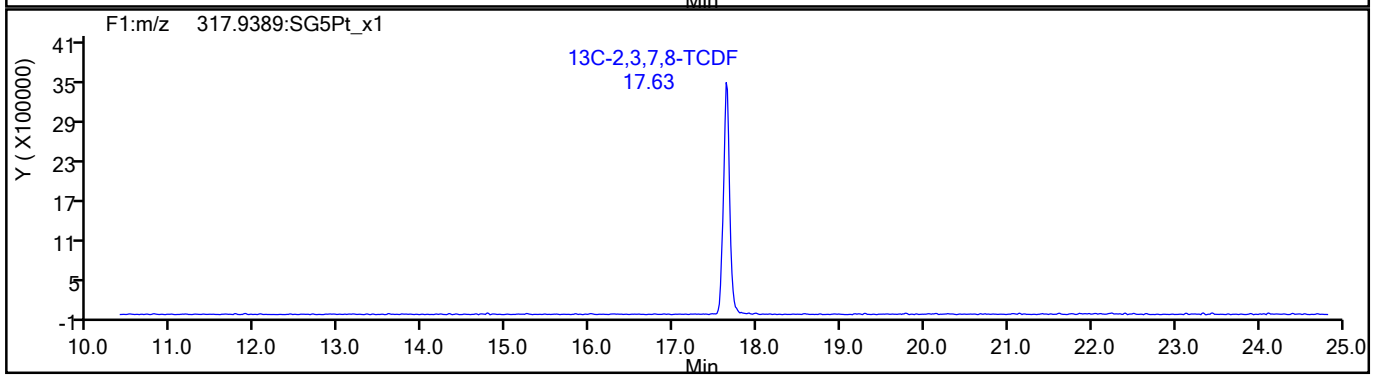

781676

Report Date: 24-Aug-2021 09:19:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d		
Injection Date:	23-Aug-2021 15:34:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

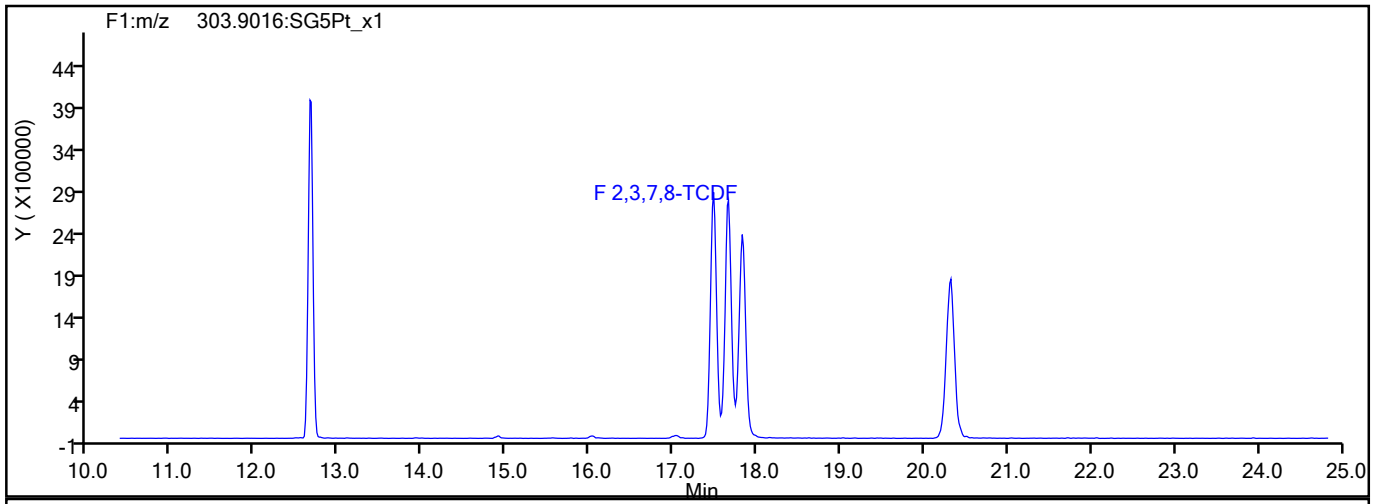

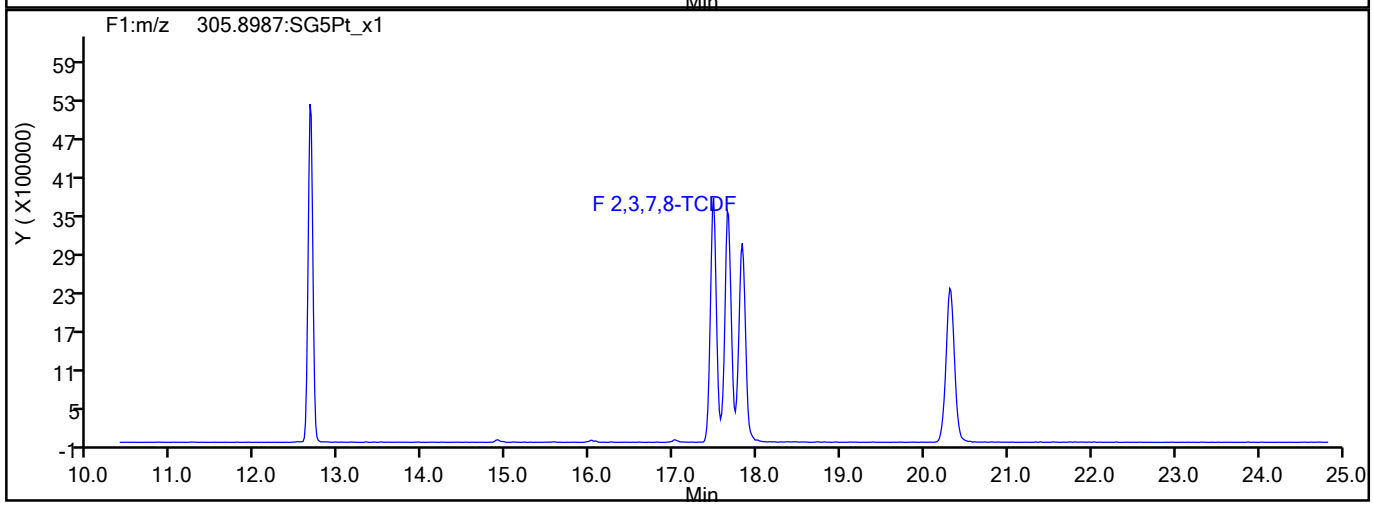

TCDF Interference Mass

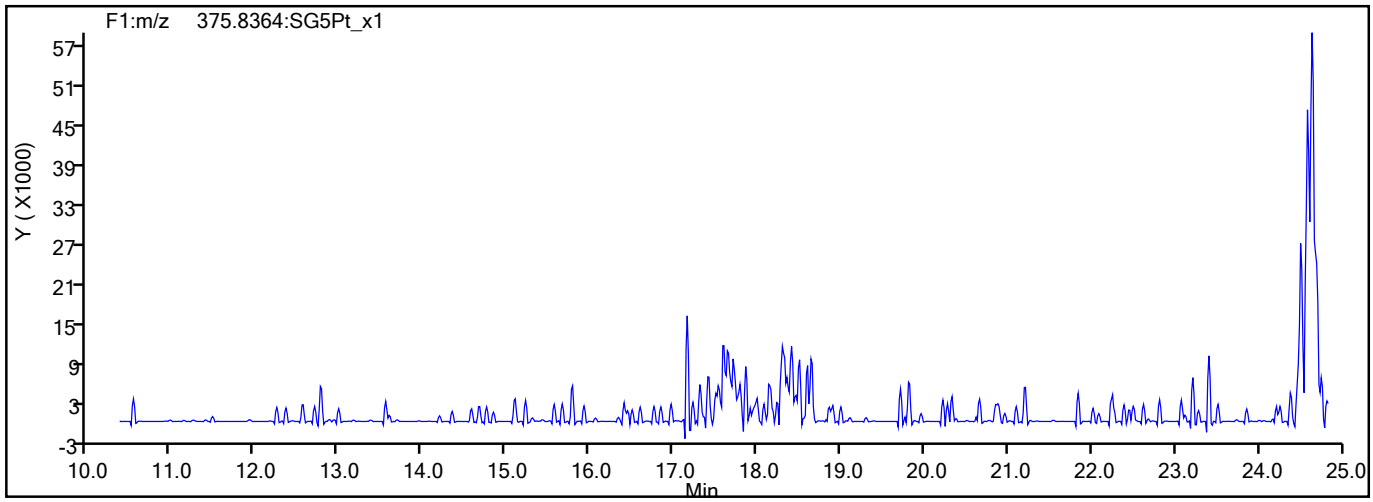

781677

Report Date: 24-Aug-2021 09:19:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d		
Injection Date:	23-Aug-2021 15:34:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

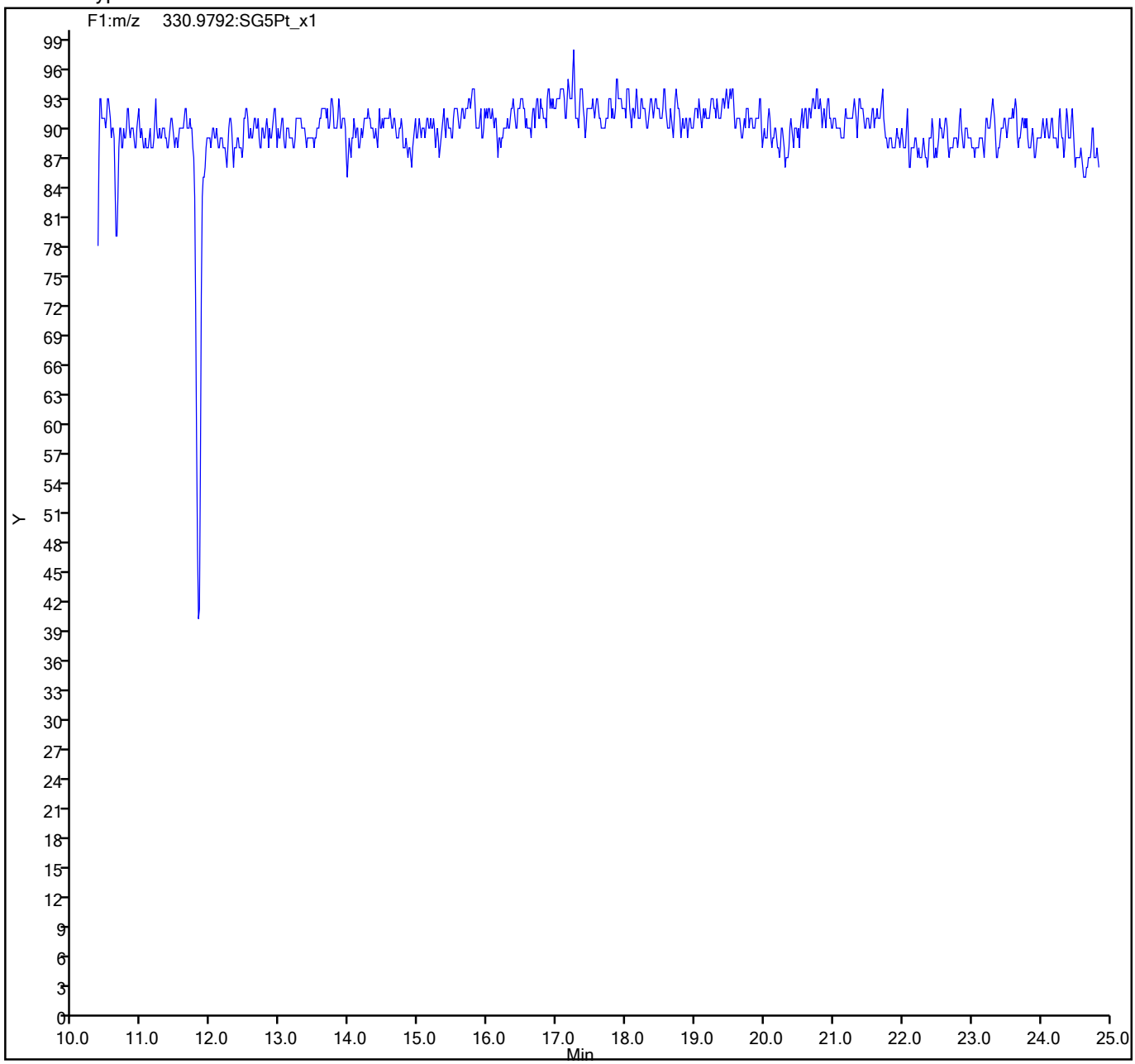

781678

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-2
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-512871/1-A
Matrix: Solid
Lab File ID: 13AU2110D5_14.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10(g)
Date Analyzed: 08/14/2021 02:56
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.0906	J	1.0	0.028
51207-31-9	2,3,7,8-TCDF	0.0905	J	1.0	0.017
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.035
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.028
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.029
39227-28-6	1,2,3,4,7,8-HxCDD	0.161	J	5.0	0.030
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.031
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.028
70648-26-9	1,2,3,4,7,8-HxCDF	0.0330	J	5.0	0.019
57117-44-9	1,2,3,6,7,8-HxCDF	0.0264	J	5.0	0.019
72918-21-9	1,2,3,7,8,9-HxCDF	0.0556	J	5.0	0.016
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.016
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.181	J	5.0	0.020
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.126	J	5.0	0.026
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.102	J	5.0	0.036
3268-87-9	OCDD	0.467	J	10	0.032
39001-02-0	OCDF	0.112	J	10	0.021
41903-57-5	Total TCDD	0.0906	J	1.0	0.028
30402-14-3	Total TCDF	0.183	J	1.0	0.017
36088-22-9	Total PeCDD	ND		5.0	0.039
30402-15-4	Total PeCDF	ND		5.0	0.029
34465-46-8	Total HxCDD	0.161	J	5.0	0.029
55684-94-1	Total HxCDF	0.115	J	5.0	0.017
37871-00-4	Total HpCDD	0.386	J	5.0	0.020
38998-75-3	Total HpCDF	0.228	J	5.0	0.031

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-2
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-512871/1-A
Matrix: Solid
Lab File ID: 13AU2110D5_14.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10(g)
Date Analyzed: 08/14/2021 02:56
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	56		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	54		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	59		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	52		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	58		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	52		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	51		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	52		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	58		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	57		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	62		26-138
114423-97-1	13C-OCDD	60		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	81		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Sample Type: MB
Inject. Date: 14-Aug-2021 02:56:25 ALS Bottle#: 15 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-512871/1-a mb 320-512871/1-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 08:51:16 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:34:30

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	123792367	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	110736450	0.77	1.6249	55.1	55.1	0.0939	0.0939	55.05	
2,3,7,8-TCDF	17.371	51307	0.77	1.0239	0.0570	0.0453	0.008724	0.008724		RQ
A Non-2,3,7,8-sub-TCDF	17.046	52688	0.77	1.0239	0.0561	0.0465	0.008724	0.0161		RQM
S Total TCDF					0.1131	0.0917	0.008724	0.008724		RQ
D 13C-2,3,7,8-TCDD	18.066	63989425	0.82	0.8993	57.5	57.5	0.1189	0.1189	57.48	
2,3,7,8-TCDD	18.066	36365	0.77	1.2541	0.0967	0.0453	0.0142	0.0142		RQM
$ 37Cl4-2,3,7,8-TCDD	18.082	44252474		1.1071	32.3	32.3	0.0378	0.0378	80.72	
A Non-2,3,7,8-sub-TCDD	17.499						0.0142	0.0142		
S Total TCDD					0.0967	0.0453	0.0142	0.0142		RQ
D 13C-1,2,3,7,8-PeCDF	22.381	80658388	1.57	1.2101	53.8	53.8	0.1501	0.1501	53.85	
1,2,3,7,8-PeCDF	22.381						0.0140	0.0140		
D 13C-2,3,4,7,8-PeCDF	23.730	90620709	1.59	1.2395	59.1	59.1	0.1465	0.1465	59.06	
2,3,4,7,8-PeCDF	23.731						0.0144	0.0144		
A F1 PeCDFs	20.093						0.0137	0.0137		
A Non-2,3,7,8-sub-PeCDF	23.241						0.0142	0.0142		
S Total PeCDF							0.0144	0.0144		
D 13C-1,2,3,7,8-PeCDD	24.453	53239203	1.61	0.7612	56.5	56.5	0.0562	0.0562	56.50	
1,2,3,7,8-PeCDD	24.453						0.0175	0.0175		
A Non-2,3,7,8-sub-PeCDD	23.349						0.0175	0.0193		RQU
S Total PeCDD							0.0193	0.0193		
D 13C-1,2,3,4,7,8-HxCDF	30.516	75247294	0.52	1.0837	57.8	57.8	0.2533	0.2533	57.77	
1,2,3,4,7,8-HxCDF	30.542	13456	1.06	1.0851	0.0165	0.0165	0.009450	0.009450		M
D 13C-1,2,3,6,7,8-HxCDF	30.702	70394827	0.52	1.1279	51.9	51.9	0.2434	0.2434	51.93	
1,2,3,6,7,8-HxCDF	30.729	10475	1.24	1.1260	0.0150	0.0132	0.009682	0.009682		RQM
D 13C-2,3,4,6,7,8-HxCDF	31.528	65857014	0.53	1.0637	51.5	51.5	0.2581	0.2581	51.51	
2,3,4,6,7,8-HxCDF	31.528						0.007804	0.007804		
D 13C-1,2,3,7,8,9-HxCDF	32.326	59770504	0.52	0.9676	51.4	51.4	0.2837	0.2837	51.40	
1,2,3,7,8,9-HxCDF	32.353	19367	1.29	1.1664	0.0278	0.0278	0.008043	0.008043		M
A Non-2,3,7,8-sub-HxCDF	30.197						0.008680	0.008680		U
S Total HxCDF					0.0593	0.0575	0.008745	0.008745		RQ

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.140	120188967	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	50923109	1.25	0.7334	57.8	57.8	0.3104	0.3104	57.77	
1,2,3,4,7,8-HxCDD	31.727	43502	1.22	1.0640	0.0803	0.0803	0.0148	0.0148		M
D 13C-1,2,3,6,7,8-HxCDD	31.820	55358257	1.23	0.8802	52.3	52.3	0.2587	0.2587	52.33	
1,2,3,6,7,8-HxCDD	31.727						0.0156	0.0156		QMU
1,2,3,7,8,9-HxCDD	32.140						0.0138	0.0138		
A Non-2,3,7,8-sub-HxCDD	30.882						0.0147	0.0414		RQU
S Total HxCDD					0.0803	0.0803	0.0147	0.0147		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	52546913	0.43	0.7730	56.6	56.6	0.7170	0.7170	56.56	
1,2,3,4,6,7,8-HpCDF	33.790	47795	1.04	1.4413	0.0682	0.0631	0.0132	0.0132		RQ
D 13C-1,2,3,4,7,8,9-HpCDF	34.859	52048397	0.44	0.7008	61.8	61.8	0.7909	0.7909	61.79	
1,2,3,4,7,8,9-HpCDF	34.871	34810	0.97	1.3174	0.0508	0.0508	0.0178	0.0178		M
A Non-2,3,7,8-sub-HpCDF	34.319						0.0152	0.0152		
S Total HpCDF					0.1190	0.1139	0.0155	0.0155		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	45029316	1.00	0.6472	57.9	57.9	0.4021	0.4021	57.89	
1,2,3,4,6,7,8-HpCDD	34.580	44472	0.88	1.0943	0.0903	0.0903	0.0102	0.0102		M
A Non-2,3,7,8-sub-HpCDD	34.301	50568	1.10	1.0943	0.1026	0.1026	0.0102	0.1026		M
S Total HpCDD					0.1929	0.1929	0.0102	0.0102		
D 13C-OCDD	36.926	64373693	0.88	0.4472	119.8	119.8	0.1872	0.1872	59.89	
OCDF	37.022	25935	1.00	1.4382	0.0560	0.0560	0.0105	0.0105		M
OCDD	36.938	83113	0.82	1.1070	0.2333	0.2333	0.0158	0.0158		M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Sample Type: MB
Inject. Date: 14-Aug-2021 02:56:25 ALS Bottle#: 15 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-512871/1-a mb 320-512871/1-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 08:51:16 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:34:30

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		55592799	13398487	6529	16322	2052		
333.9339	17.870	17.855	1		68199568	16431962	6230	15575	2638	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.341	1	0.971	48300313	11587115	9363	23407	1238		
317.9389	17.356	17.341	1	0.971	62436137	14664874	8835	22087	1660	0.77(0.65-0.89)	
2,3,7,8-TCDF											RQ
303.9016	17.371	17.356	1	1.001	22320	4864	350	875	14		
305.8987	17.386	17.356	2	1.002	42276	9320	588	1470	16	0.53(0.65-0.89)	
	Empc Correction				28987	6316	588	1470	11		
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	16.993	17.046	-3	0.979	7893	1727	350	875	5		
305.8987	16.993	17.046	-3	0.979	12634	3178	588	1470	5	0.62(0.65-0.89)	
	Empc Correction				10250	2242	588	1470	4		
303.9016	17.870	17.046	49	1.030	14307	2543	350	875	7		M
	Empc Correction				7924	1905	350	875	5		
305.8987	17.870	17.046	49	1.030	10291	2475	588	1470	4	1.39(0.65-0.89)	
303.9016	18.293	17.046	75	1.054	9303	1842	350	875	5		
	Empc Correction				7104	1382	350	875	4		
305.8987	18.248	17.046	72	1.051	9226	1796	588	1470	3	1.01(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	28733713	6387614	6529	16322	978		
333.9339	18.066	18.051	1	1.011	35255712	7785291	6230	15575	1250	0.82(0.65-0.89)	
2,3,7,8-TCDD											RQM
319.8965	18.066	18.066	0	1.000	15820	4023	563	1407	7		M
321.8936	18.082	18.066	1	1.001	61793	14846	444	1110	33	0.26(0.65-0.89)	M
	Empc Correction				20545	5224	444	1110	12		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.066	1	1.012	44252474	10000230	4993	12482	2003		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.499						563	1407			
321.8936	17.499						444	1110			
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.252	49233820	8234140	13186	32965	624		
353.8970	22.381	22.367	1	1.252	31424568	5209775	8484	21210	614	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.380						245	612			
341.8567	22.380						555	1387			
13C-2,3,4,7,8-PeCDF											
351.9000	23.730	23.703	2	1.328	55569388	8319246	13186	32965	631		
353.8970	23.730	23.703	2	1.328	35051321	5317992	8484	21210	627	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.730						245	612			
341.8567	23.730						555	1387			
A F1 PeCDFs											
339.8597	20.093						246	615			
341.8567	20.093						528	1320			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.241						245	612			
341.8567	23.241						555	1387			
13C-1,2,3,7,8-PeCDD											
367.8949	24.453	24.426	2	1.368	32852969	4687980	3053	7632	1536		
369.8919	24.453	24.426	2	1.368	20386234	2945437	2054	5135	1434	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.453						403	1007			
357.8516	24.453						156	390			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	21.249	23.349	-126	0.869	6547	1548	403	1007	4		
357.8516	21.235	23.349	-127	0.868	6420	1325	156	390	8	1.02(1.32-1.78)	
	Empc Correction				4223	998	156	390	6		
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	25840700	4831951	12200	30500	396		
385.8610	30.516	30.503	1	0.949	49406594	9064143	22378	55945	405	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											M
373.8208	30.542	30.529	1	1.001	6916	1654	331	827	5		M
375.8178	30.529	30.529	0	1.000	6540	1117	239	597	5	1.06(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	24116523	4494534	12200	30500	368		
385.8610	30.702	30.689	1	0.955	46278304	8575846	22378	55945	383	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQM
373.8208	30.729	30.702	2	1.001	5799	1519	331	827	5		M
375.8178	30.742	30.702	2	1.001	6097	1093	239	597	5	0.95(1.05-1.43)	M
	Empc Correction				4676	1224	239	597	5		

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.528	31.514	1	0.981	22808219	5491712	12200	30500	450		
385.8610	31.528	31.514	1	0.981	43048795	10147684	22378	55945	453	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.528						331	827			
375.8178	31.528						239	597			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	20424010	5159805	12200	30500	423		
385.8610	32.326	32.313	1	1.006	39346494	10030578	22378	55945	448	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.353	32.326	2	1.001	10921	3198	331	827	10		M
375.8178	32.353	32.326	2	1.001	8446	2024	239	597	8	1.29(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.197						331	827			
375.8178	30.197						239	597			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		66463977	17359527	16736	41840	1037		
403.8529	32.140	32.127	1		53724990	14132400	11943	29857	1183	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.987	28248433	7463381	16736	41840	446		
403.8529	31.714	31.701	1	0.987	22674676	6025044	11943	29857	504	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.727	31.714	1	1.000	23898	6173	483	1207	13		M
391.8127	31.727	31.714	1	1.000	19604	6349	365	912	17	1.22(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.807	1	0.990	30582179	7487586	16736	41840	447		
403.8529	31.820	31.807	1	0.990	24776078	6092162	11943	29857	510	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											QMU
389.8157	31.820						483	1207			
391.8127	31.820						365	912			
1,2,3,7,8,9-HxCDD											
389.8157	32.140						483	1207			
391.8127	32.140						365	912			
A Non-2,3,7,8-sub-HxCDD											U
389.8157	30.542	30.882	-20	0.960	12968	2498	483	1207	5		
391.8127	30.542	30.882	-20	0.960	16131	1346	365	912	4	0.80(1.05-1.43)	
	Empc Correction				10458	2014	365	912	6		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	15886800	5014938	20989	52472	239		
419.8220	33.766	33.754	1	1.051	36660113	11559032	48831	122077	237	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQ
407.7818	33.790	33.766	1	1.001	28232	9783	917	2292	11		
	Empc Correction				24366	8481	917	2292	9		
409.7789	33.778	33.766	1	1.000	23429	8155	346	865	24	1.21(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.859	34.847	1	1.085	15946668	4152228	20989	52472	198		
419.8220	34.847	34.847	0	1.084	36101729	9336523	48831	122077	191	0.44(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.871	34.860	1	1.000	17181	4179	917	2292	5		M
409.7789	34.859	34.860	0	1.000	17629	4555	346	865	13	0.97(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						917	2292			
409.7789	34.319						346	865			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.556	1	1.076	22513980	6271364	16295	40737	385		
437.8140	34.568	34.556	1	1.076	22515336	6234152	16489	41222	378	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											M
423.7766	34.580	34.568	1	1.000	20807	6303	264	660	24		M
425.7737	34.568	34.568	0	1.000	23665	8000	295	737	27	0.88(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											M
423.7766	34.021	34.301	-17	0.984	26462	8684	264	660	33		M
425.7737	34.021	34.301	-17	0.984	24106	7557	295	737	26	1.10(0.88-1.20)	M
13C-OCDD											
469.7779	36.926	36.914	1	1.149	30180064	7085369	4545	11362	1559		
471.7750	36.926	36.914	1	1.149	34193629	7899325	5999	14997	1317	0.88(0.76-1.02)	
OCDF											M
441.7428	37.022	37.010	1	1.003	12972	3595	198	495	18		
443.7399	37.022	37.010	1	1.003	12963	4107	253	632	16	1.00(0.76-1.02)	M
OCDD											M
457.7377	36.938	36.926	1	1.000	37435	9081	248	620	37		M
459.7348	36.938	36.926	1	1.000	45678	9919	276	690	36	0.82(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Inject. Date: 14-Aug-2021 02:56:25 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 3

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	110736450	26251989

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	110736450	26251989

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.993	7893	1727	12634	3178	0.0181	0.62	RQ
16.993	7893	1727	10250	2242	0.0160		Empc Correction
17.870	14307	2543	10291	2475	0.0217	1.39	RQM
17.870	7924	1905	10291	2475	0.0161		Empc Correction
18.293	9303	1842	9226	1796	0.0163	1.01	RQ
18.293	7104	1382	9226	1796	0.0144		Empc Correction
Signal Totals:							
	22921	5014	29767	6513			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63654	13561				0.98	RQM
	52688	11527					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0561 = (63654 * 100.000) / (110736450 * 1.024)
Empc Amount: 0.0465 = (52688 * 100.000) / (110736450 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Inject. Date: 14-Aug-2021 02:56:25 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 3

Non-2,3,7,8-sub-PeCDD, RT: 23.349

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	53239203	7633417

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	53239203	7633417

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.249	6547	1548	6420	1325	0.0232	1.02	RQ
21.249	6547	1548	4223	998	0.0193		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Inject. Date: 14-Aug-2021 02:56:25 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDF, RT: 30.197

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	75247294	13896094
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	70394827	13070380
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	65857014	15639396
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	59770504	15190383

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	67817409	14449063

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Inject. Date: 14-Aug-2021 02:56:25 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDD, RT: 30.882

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	50923109	13488425
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	55358257	13579748
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	53140683	13534086

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.542	12968	2498	16131	1346	0.0514	0.80	RQ
30.542	12968	2498	10458	2014	0.0414		Empc Correction

Compound is Marked ND

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d
Lims ID: MB 320-512871/1-A
Client ID:
Inject. Date: 14-Aug-2021 02:56:25 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 3

Non-2,3,7,8-sub-HpCDD, RT: 34.301

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	45029316	12505516

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	45029316	12505516

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
34.021	26462	8684	24106	7557	0.1026	1.10	M
Signal Totals:							
	26462	8684	24106	7557			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	50568	16241				1.10	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1026 = (50568 * 100.000) / (45029316 * 1.094)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.89- 19.20)

Signal: 1

Processing Integration Results

RT = 17.870 Area = 18645

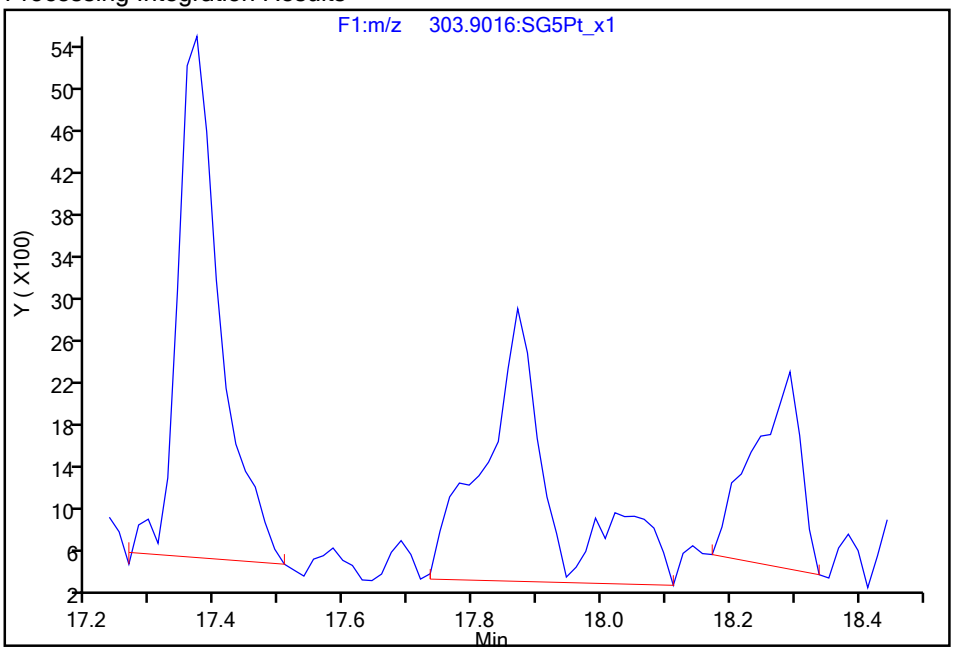

Manual Integration Results

RT = 17.870 Area = 14307 M

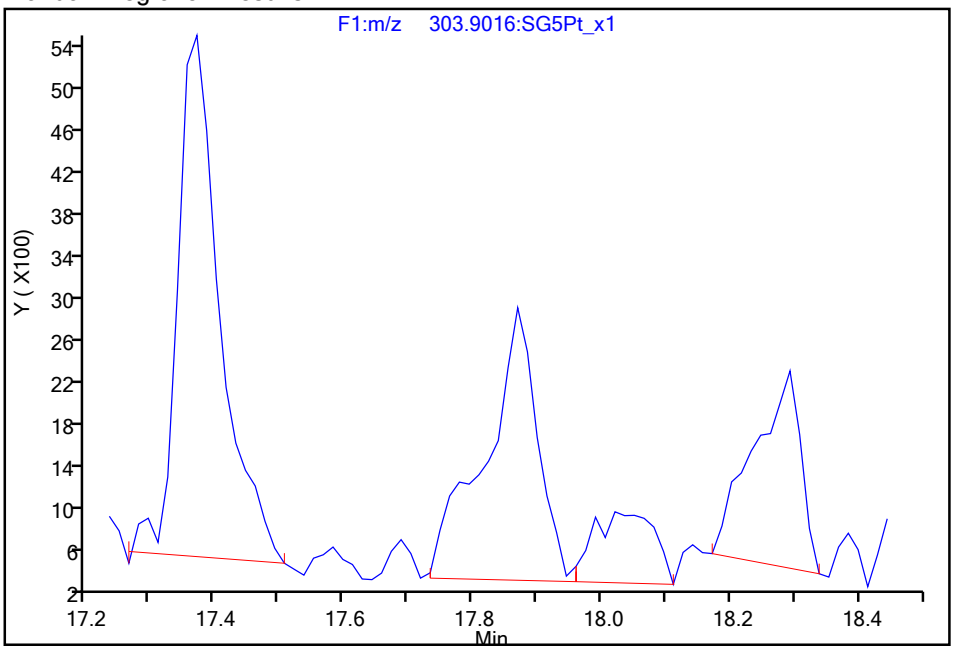

Reviewer: dadunj, 18-Aug-2021 08:48:43

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.07
Area: 15789
Amount: 0.107317
Amount Units: pg/ul

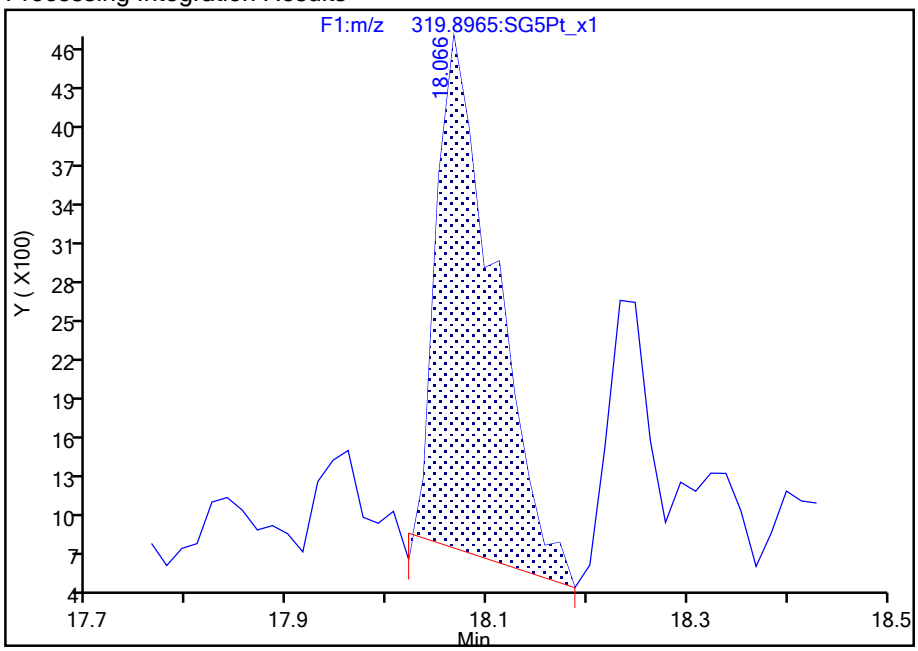

Manual Integration Results

RT: 18.07
Area: 15820
Amount: 0.096714
Amount Units: pg/ul

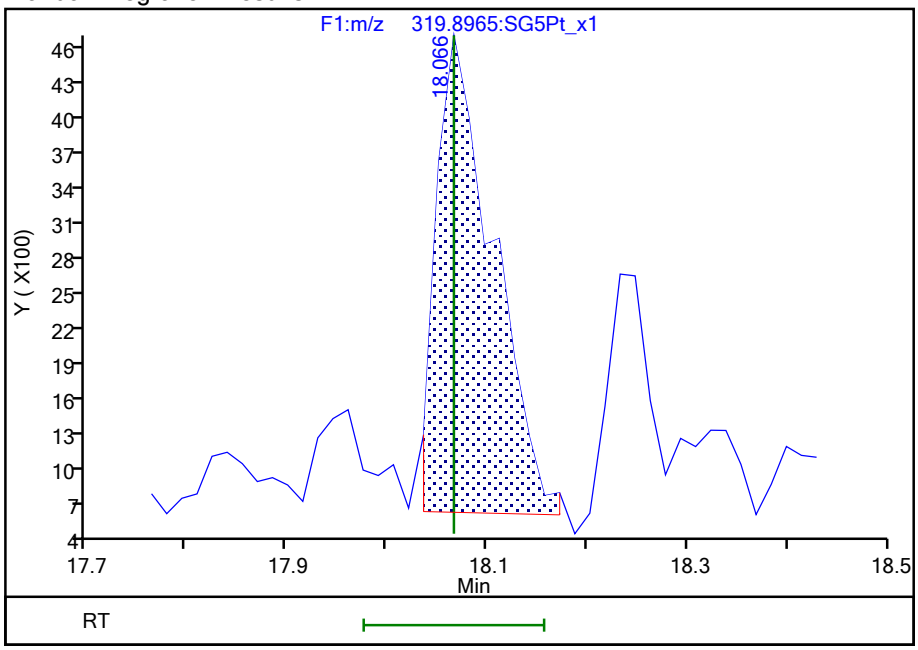

Reviewer: dadunj, 18-Aug-2021 08:49:10

Audit Action: Manually Integrated Audit Reason: Split Peak

781694

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.08
Area: 70333
Amount: 0.107317
Amount Units: pg/ul

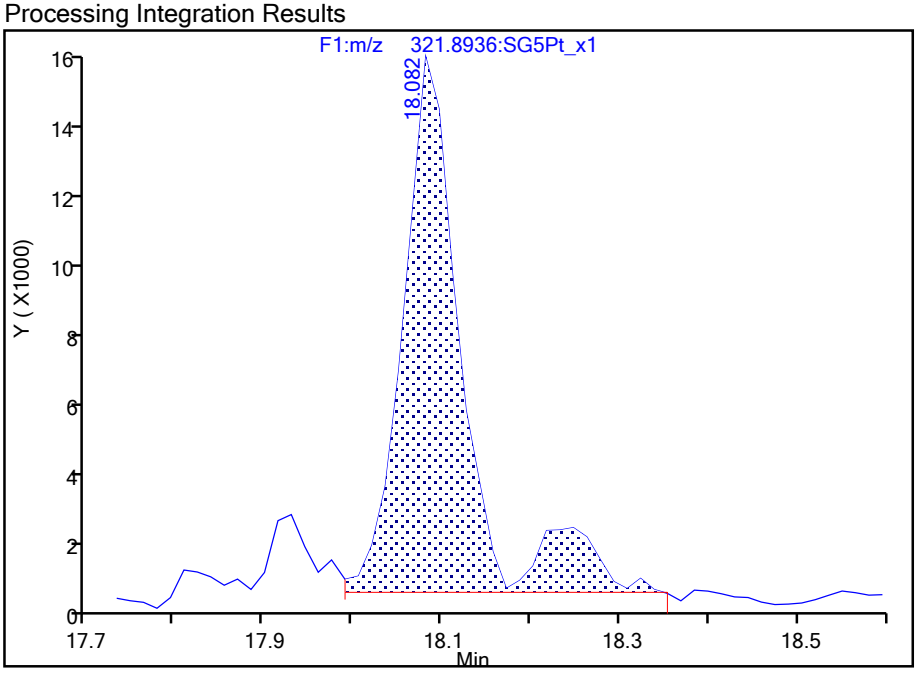

Manual Integration Results

RT: 18.08
Area: 61793
Amount: 0.096714
Amount Units: pg/ul

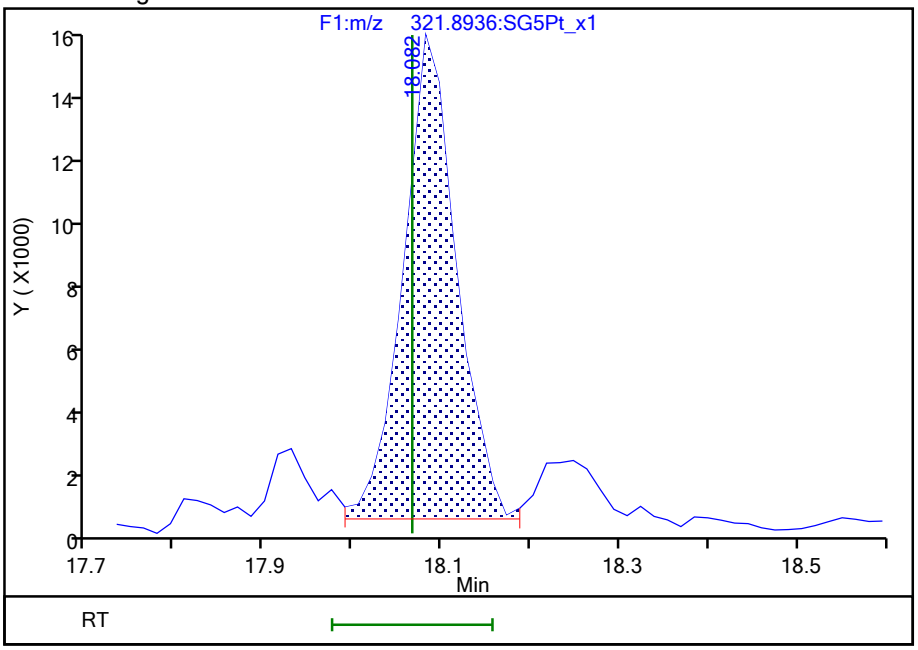

Reviewer: dadunj, 18-Aug-2021 08:49:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

RT: 30.54
Area: 6570
Amount: 0.016056
Amount Units: pg/ul

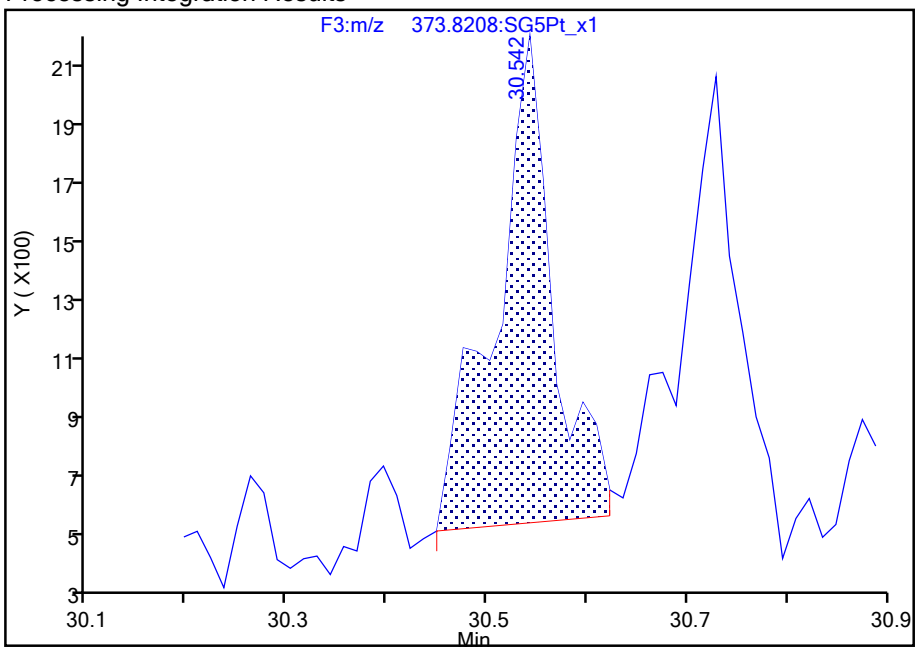

Manual Integration Results

RT: 30.54
Area: 6916
Amount: 0.016480
Amount Units: pg/ul

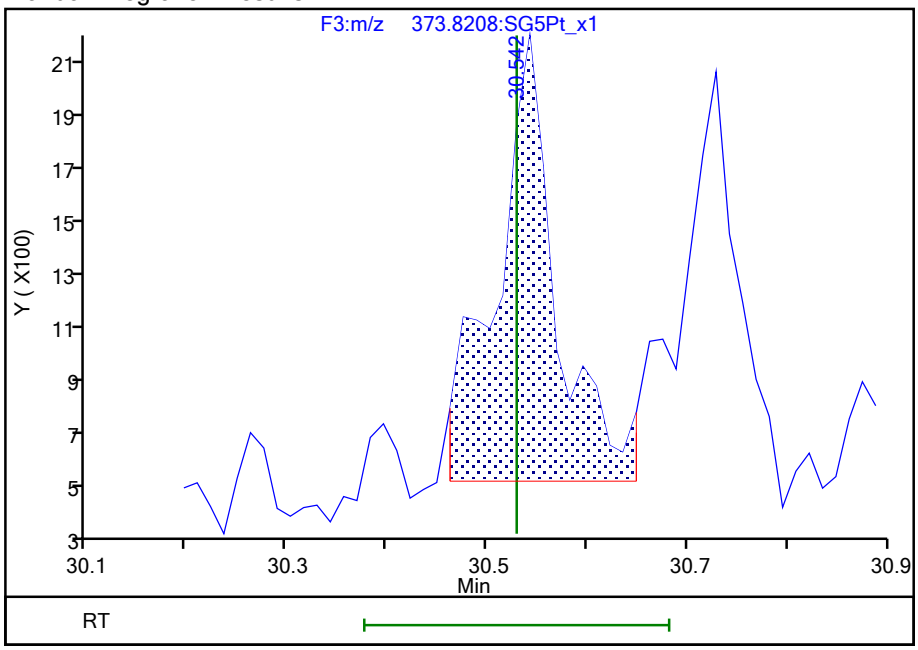

Reviewer: dadunj, 18-Aug-2021 08:49:51

Audit Action: Manually Integrated Audit Reason: Baseline

781696

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.73
Area: 5924
Amount: 0.015711
Amount Units: pg/ul

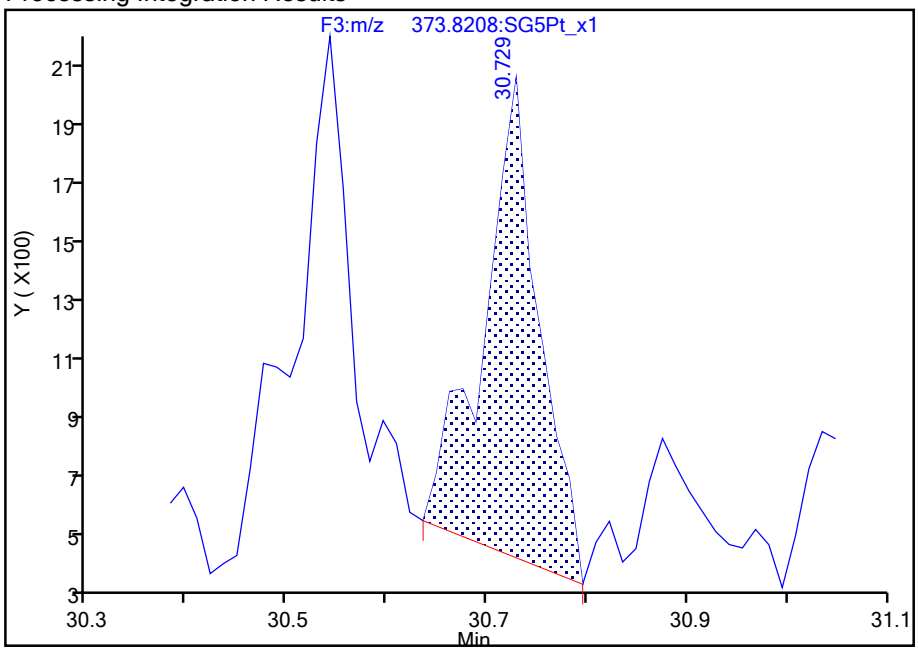

Manual Integration Results

RT: 30.73
Area: 5799
Amount: 0.015008
Amount Units: pg/ul

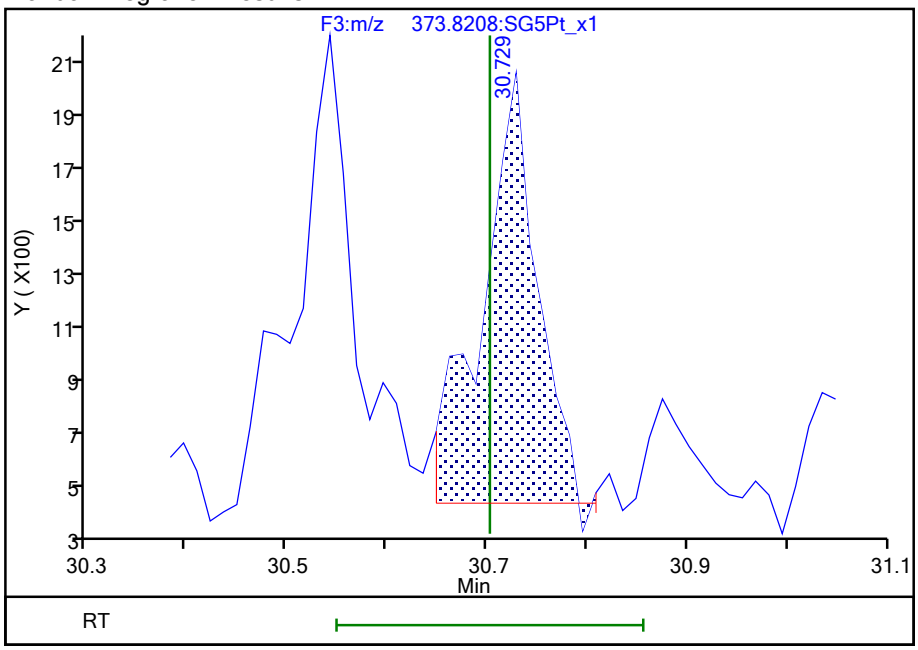

Reviewer: dadunj, 18-Aug-2021 08:49:51

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 30.74
Area: 6529
Amount: 0.015711
Amount Units: pg/ul

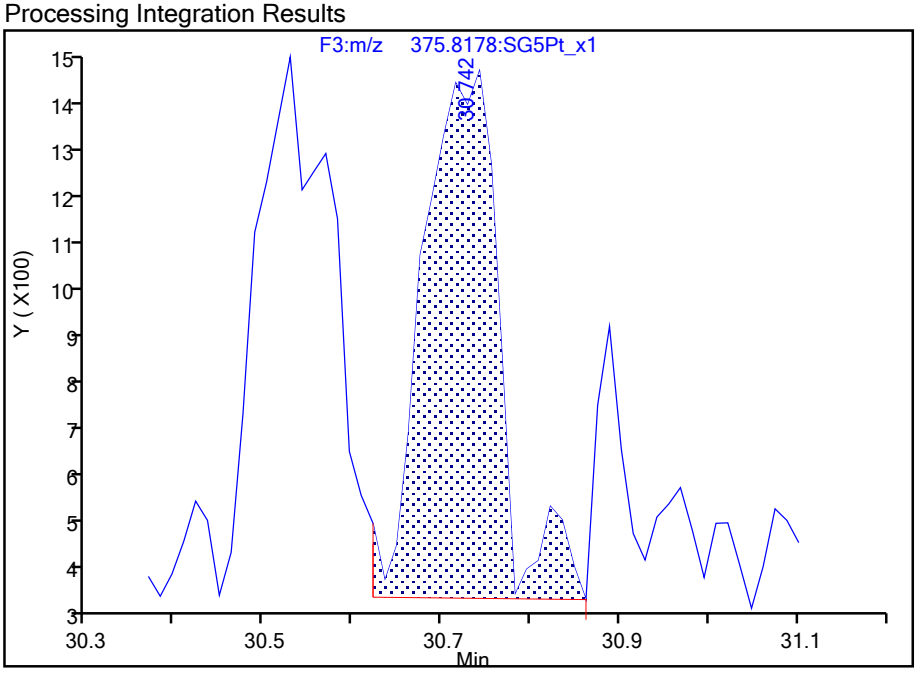

Manual Integration Results

RT: 30.74
Area: 6097
Amount: 0.015008
Amount Units: pg/ul

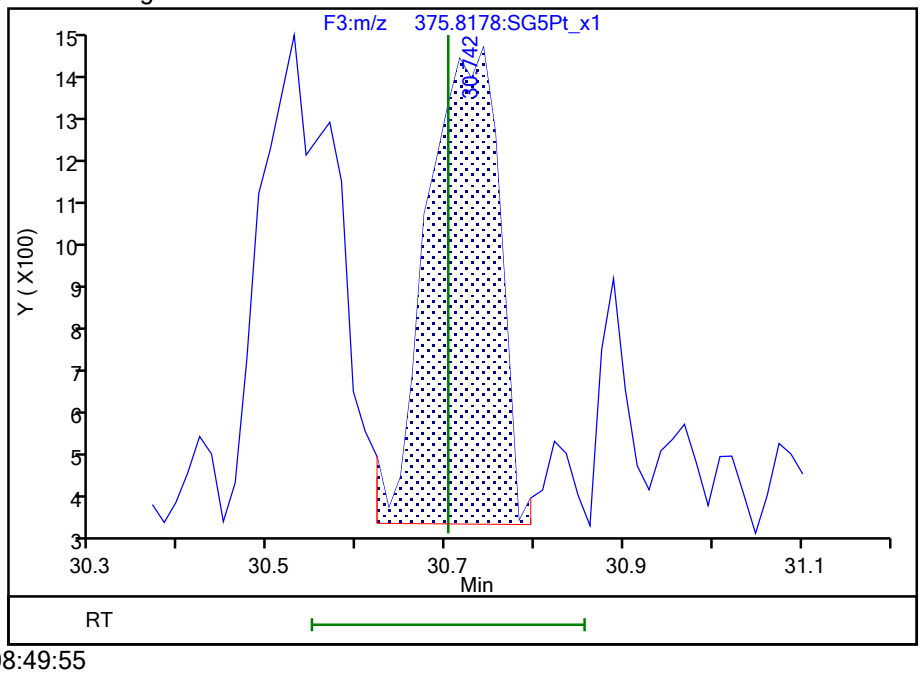

Reviewer: dadunj, 18-Aug-2021 08:49:55
Audit Action: Split an Integrated Peak Audit Reason: Baseline

781698

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.35
Area: 17406
Amount: 0.049815
Amount Units: pg/ul

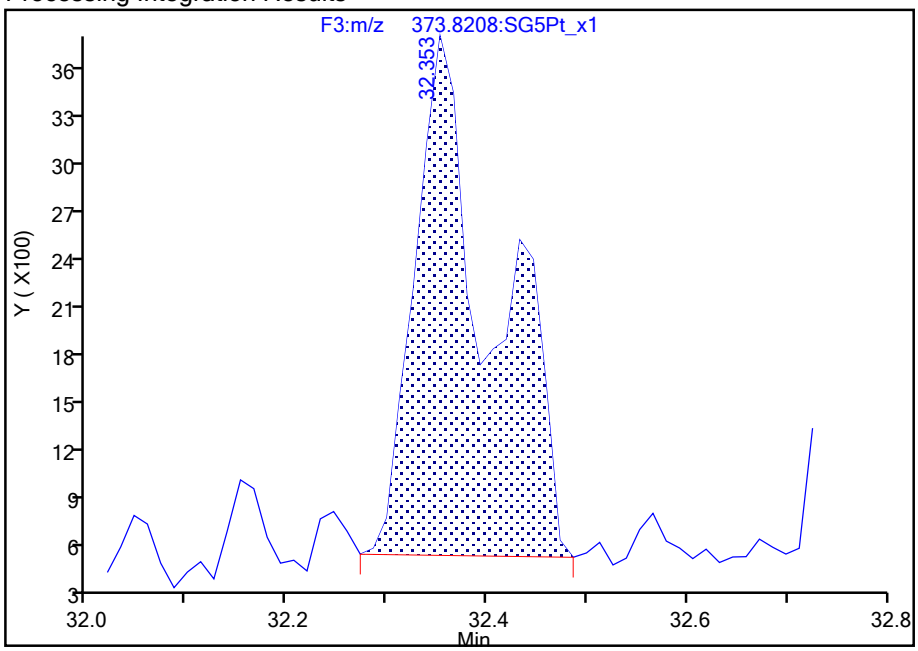

Manual Integration Results

RT: 32.35
Area: 10921
Amount: 0.027781
Amount Units: pg/ul

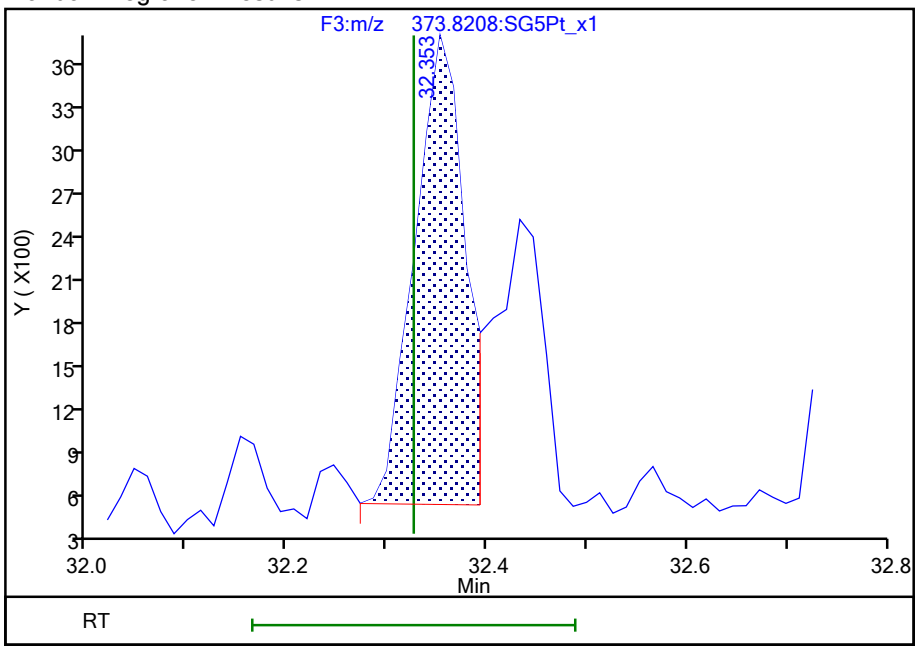

Reviewer: dadunj, 18-Aug-2021 08:50:04

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.35
Area: 17322
Amount: 0.049815
Amount Units: pg/ul

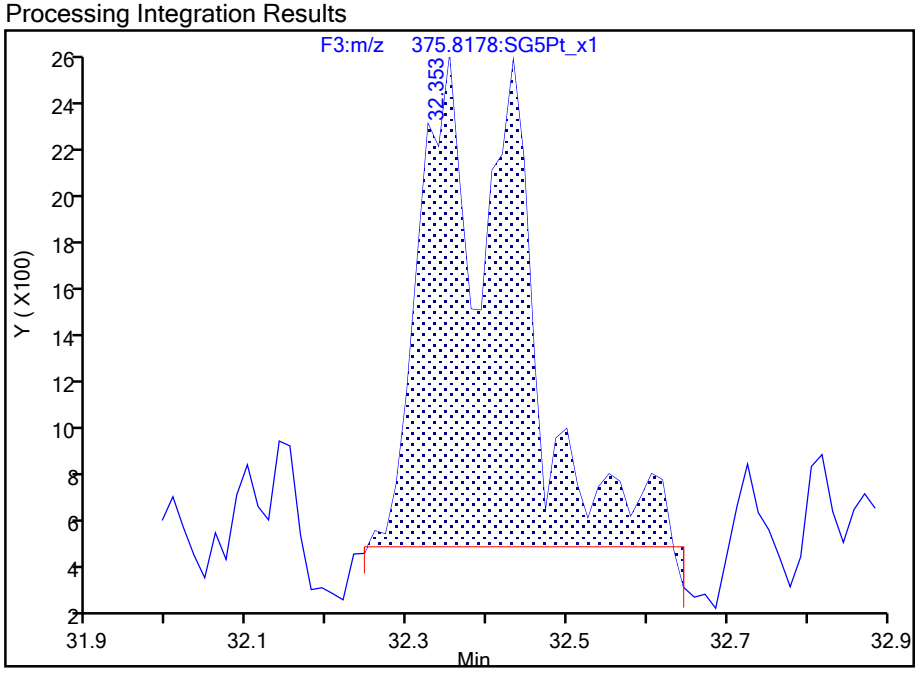

Manual Integration Results

RT: 32.35
Area: 8446
Amount: 0.027781
Amount Units: pg/ul

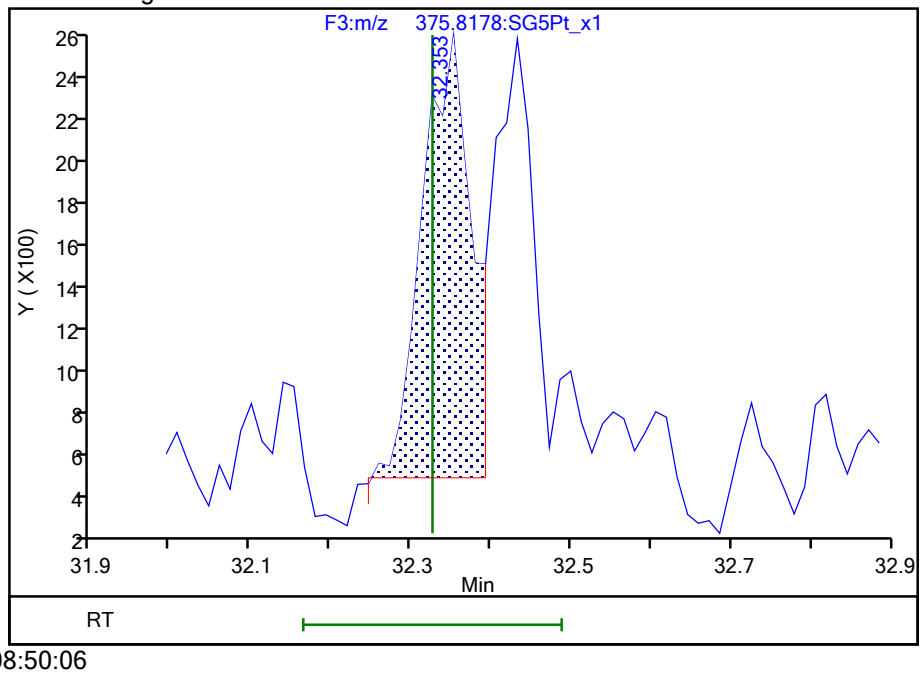

Reviewer: dadunj, 18-Aug-2021 08:50:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

781700

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.73
Area: 36552
Amount: 0.115800
Amount Units: pg/ul

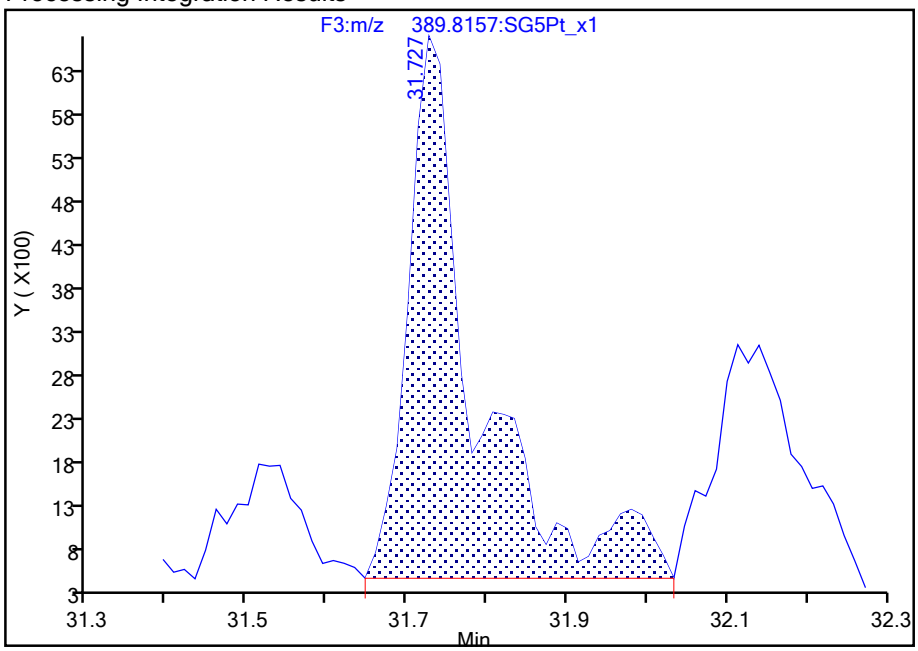

Manual Integration Results

RT: 31.73
Area: 23898
Amount: 0.080286
Amount Units: pg/ul

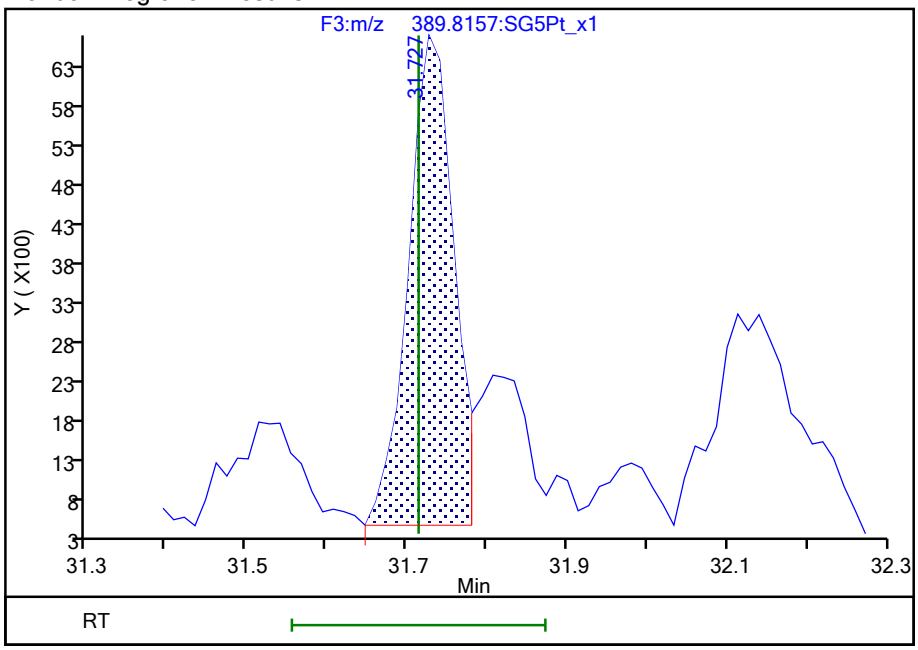

Reviewer: dadunj, 18-Aug-2021 08:50:16

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.73
Area: 26193
Amount: 0.115800
Amount Units: pg/ul

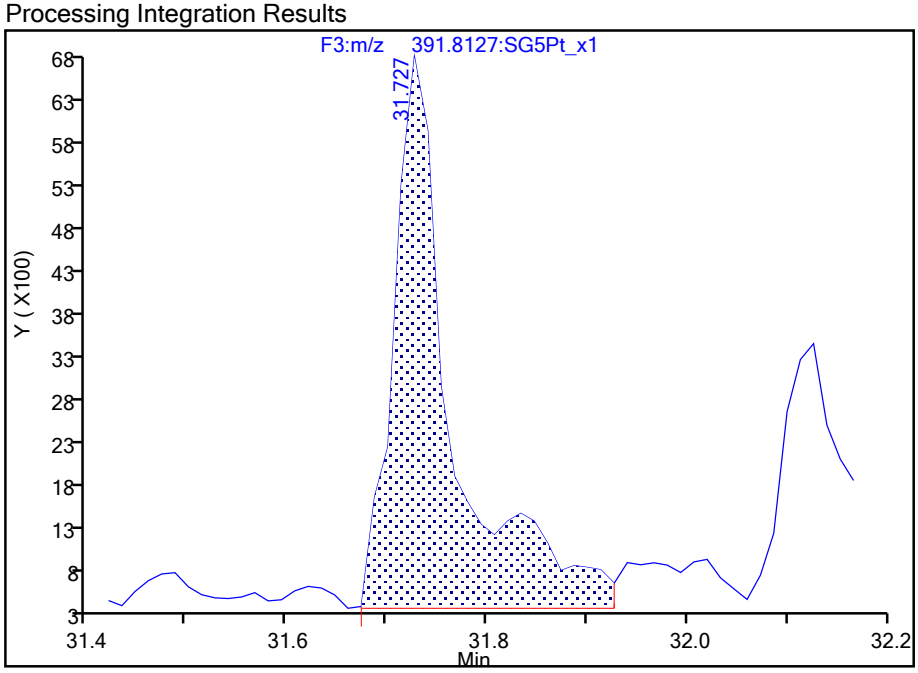

Manual Integration Results

RT: 31.73
Area: 19604
Amount: 0.080286
Amount Units: pg/ul

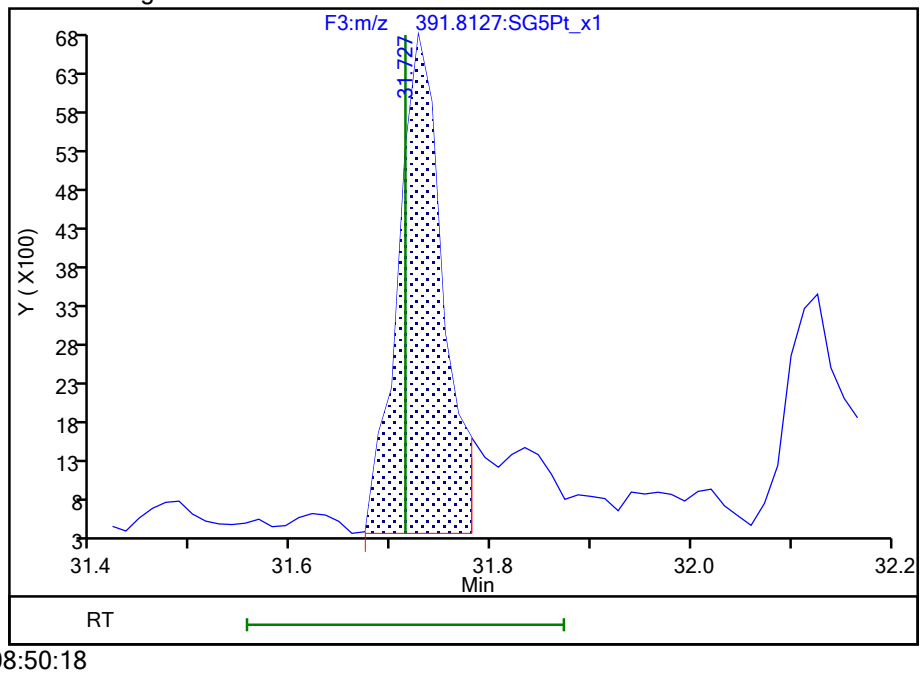

Reviewer: dadunj, 18-Aug-2021 08:50:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 34.87
Area: 19311
Amount: 0.053874
Amount Units: pg/ul

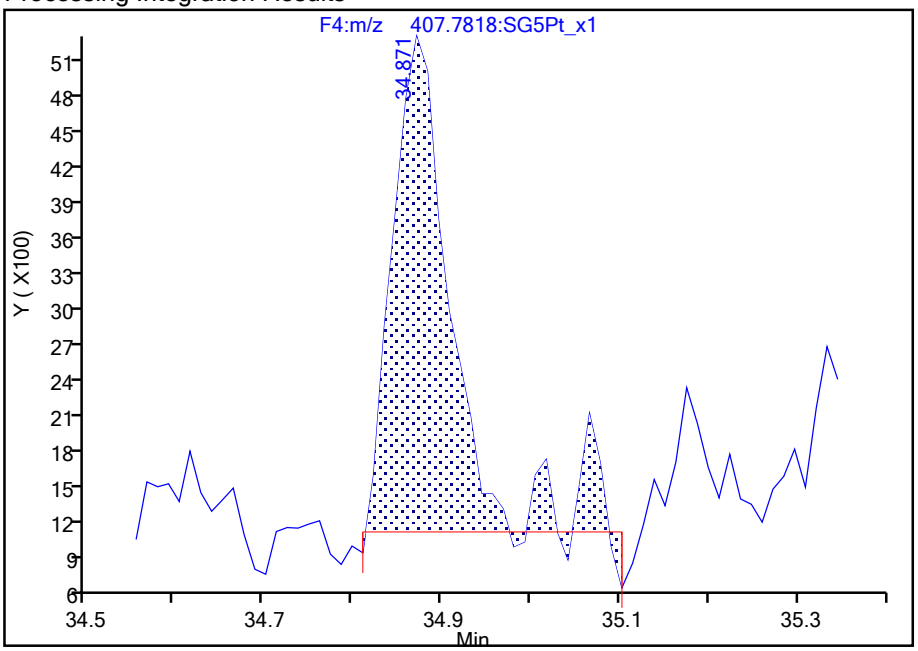

Manual Integration Results

RT: 34.87
Area: 17181
Amount: 0.050767
Amount Units: pg/ul

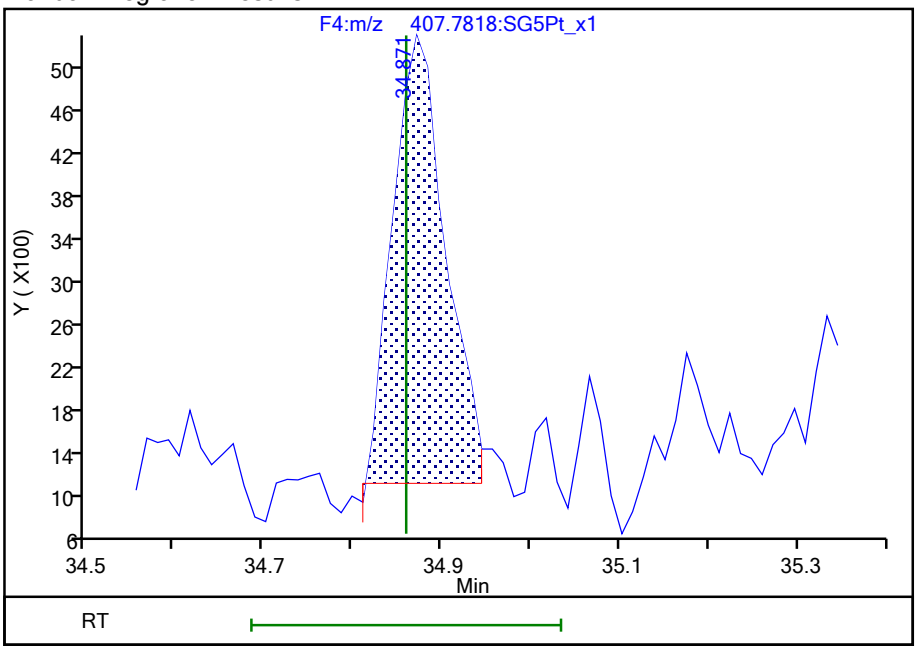

Reviewer: dadunj, 18-Aug-2021 08:50:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 34.57
Area: 28047
Amount: 0.103948
Amount Units: pg/ul

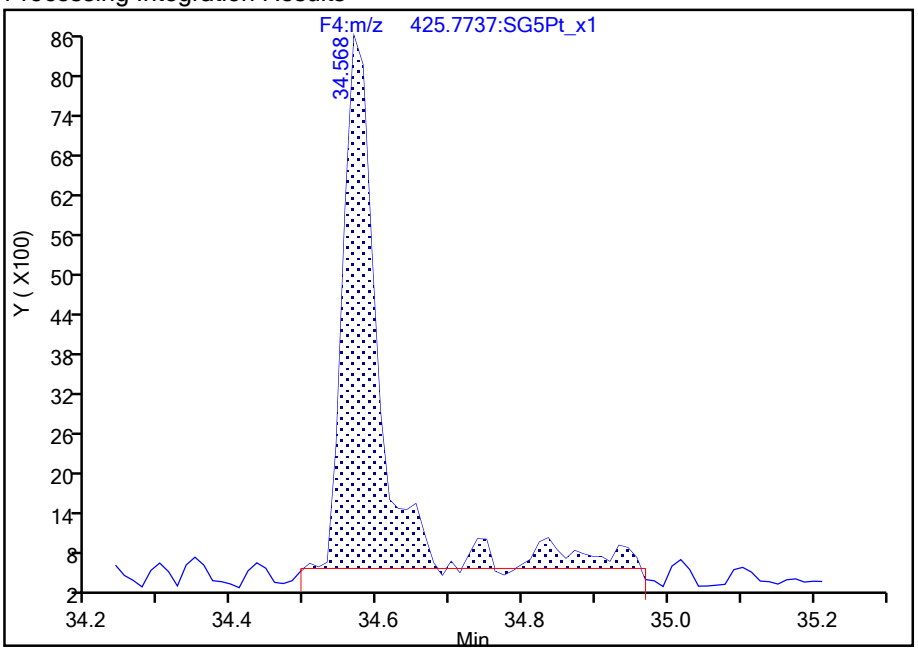

Manual Integration Results

RT: 34.57
Area: 23665
Amount: 0.090251
Amount Units: pg/ul

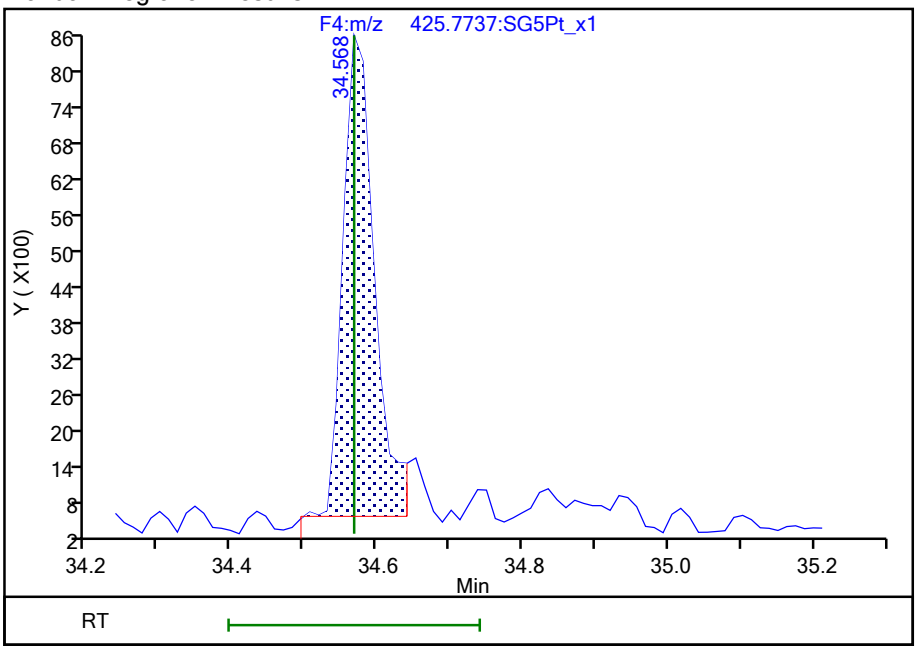

Reviewer: dadunj, 18-Aug-2021 08:50:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 34.58
Area: 23174
Amount: 0.103948
Amount Units: pg/ul

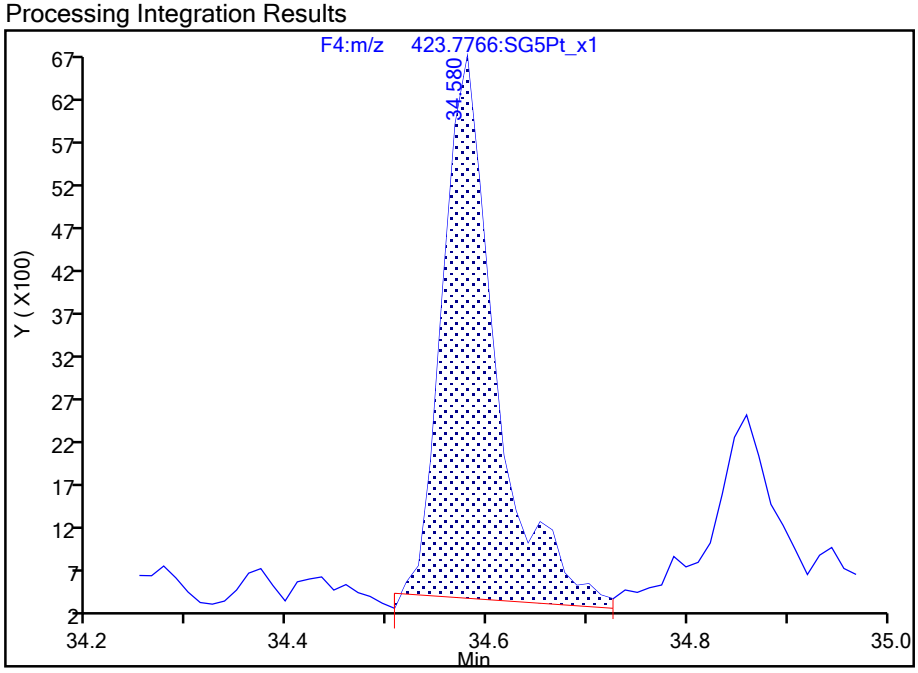

Manual Integration Results

RT: 34.58
Area: 20807
Amount: 0.090251
Amount Units: pg/ul

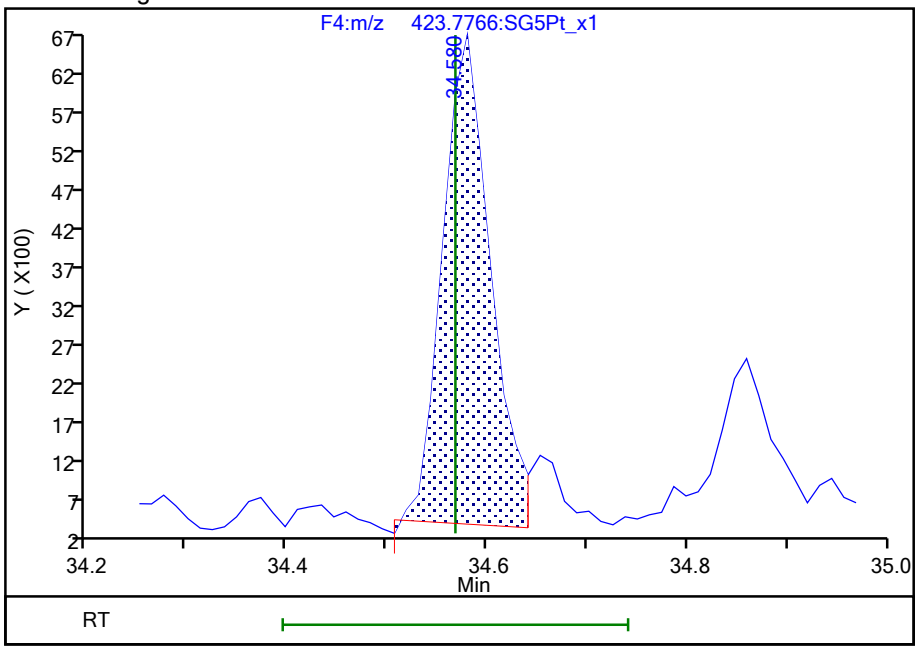

Reviewer: dadunj, 18-Aug-2021 08:50:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 1, m/z: 423.7766, RT: (33.99- 34.61)

Signal: 1

Processing Integration Results

RT = 34.021 Area = 38649

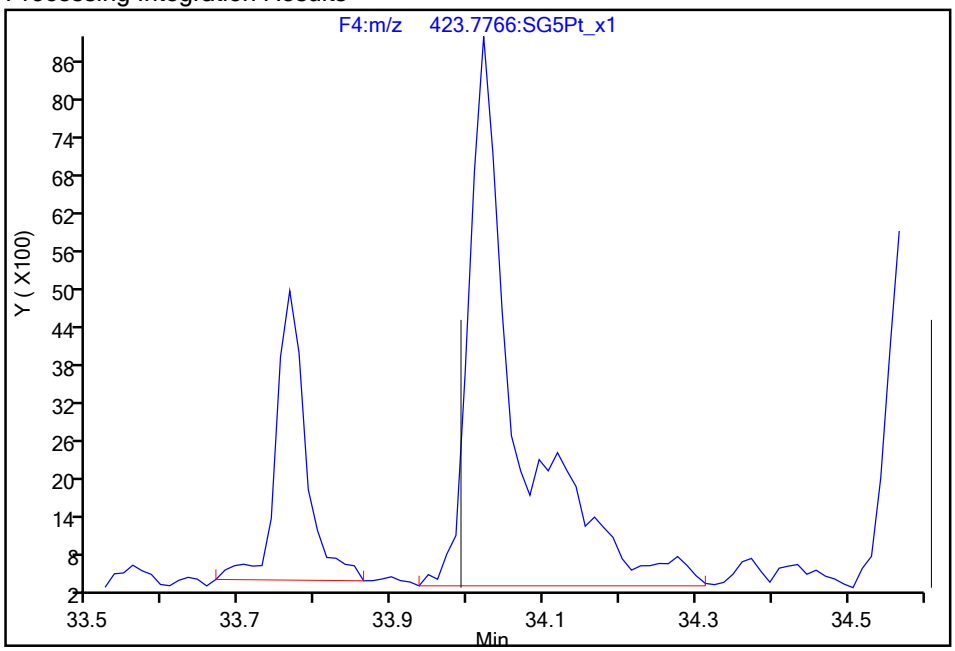

Manual Integration Results

RT = 34.021 Area = 26462 M

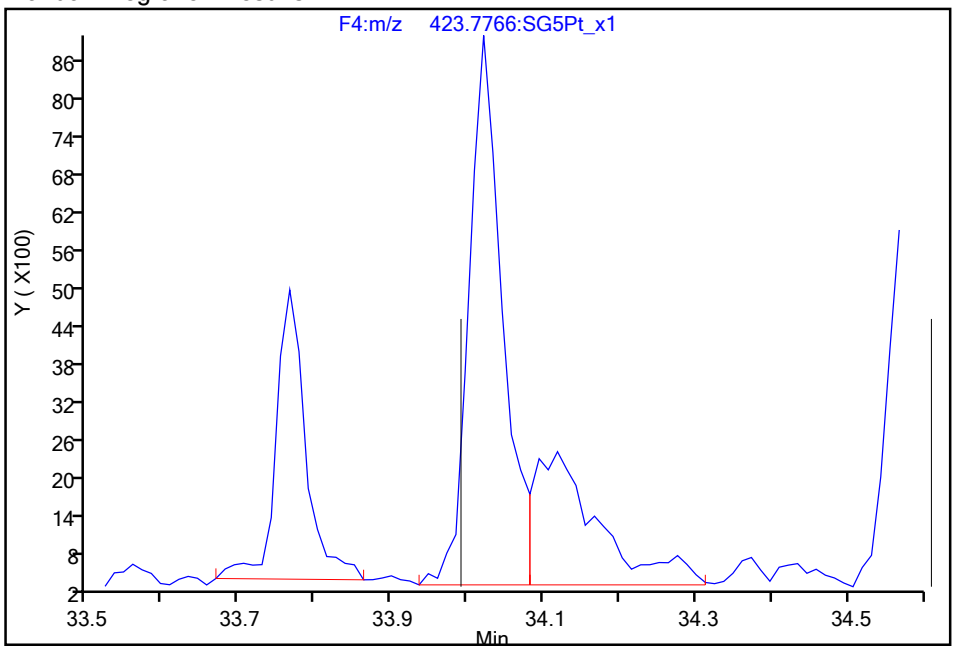

Reviewer: dadunj, 18-Aug-2021 08:50:38

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 2, m/z: 425.7737, RT: (33.99- 34.61)

Signal: 2

Processing Integration Results

RT = 34.021 Area = 27626

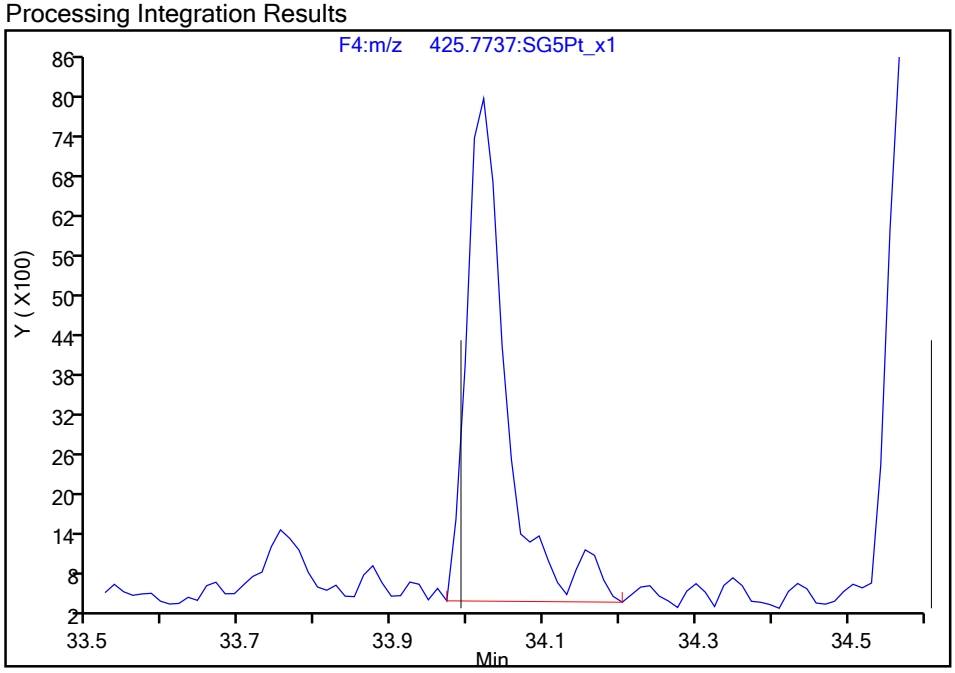

Manual Integration Results

RT = 34.021 Area = 24106 M

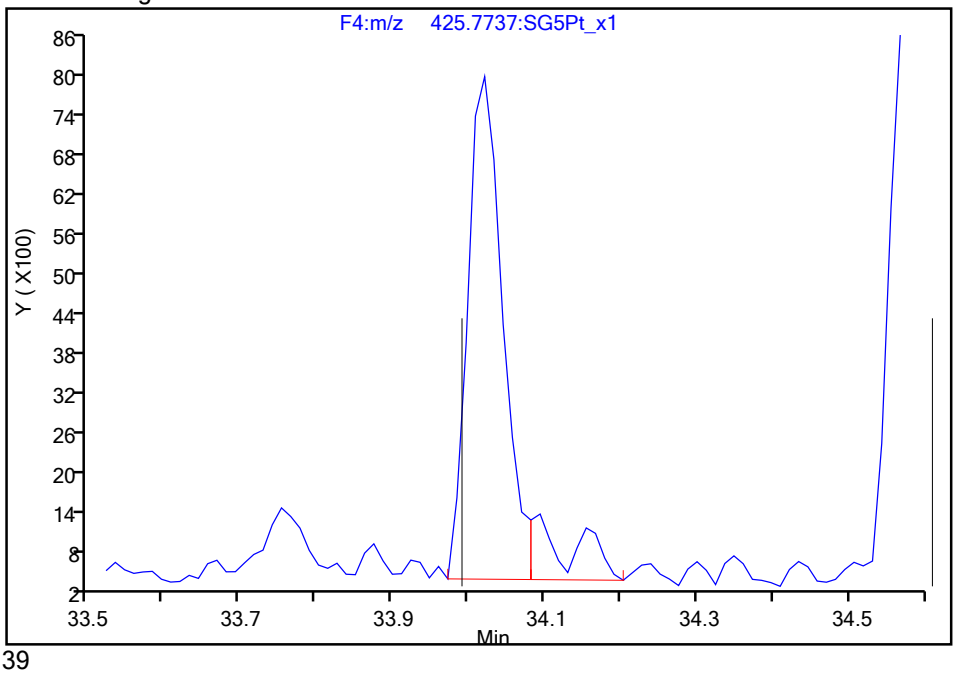

Reviewer: dadunj, 18-Aug-2021 08:50:39

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 37.02
Area: 13865
Amount: 0.057976
Amount Units: pg/ul

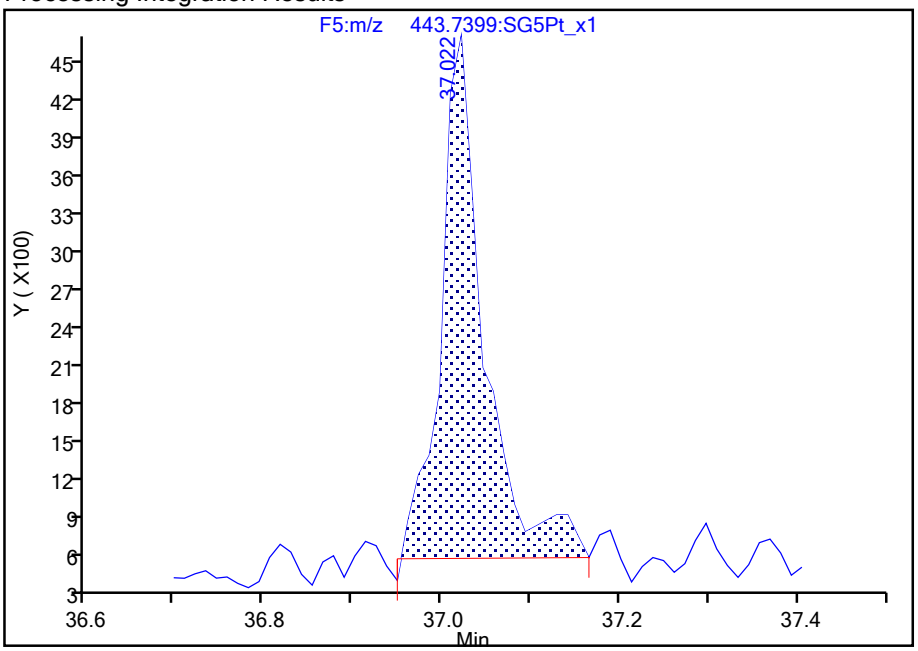

Manual Integration Results

RT: 37.02
Area: 12963
Amount: 0.056027
Amount Units: pg/ul

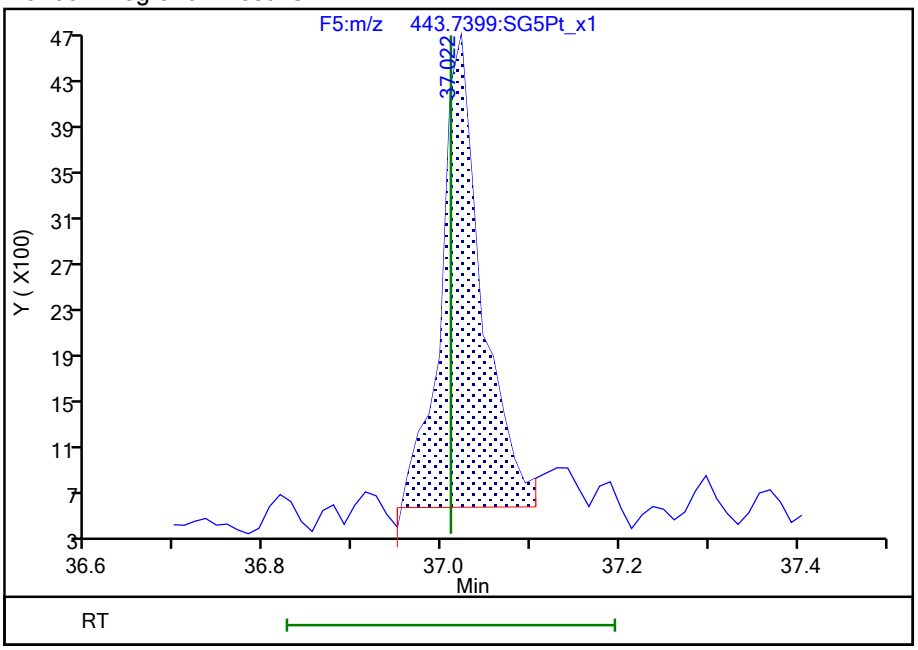

Reviewer: dadunj, 18-Aug-2021 08:50:45

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d				
Injection Date:	14-Aug-2021 02:56:25	Instrument ID:	10D5		
Lims ID:	MB 320-512871/1-A				
Client ID:					
Operator ID:	DB	ALS Bottle#:	15	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 36.94
Area: 44906
Amount: 0.254226
Amount Units: pg/ul

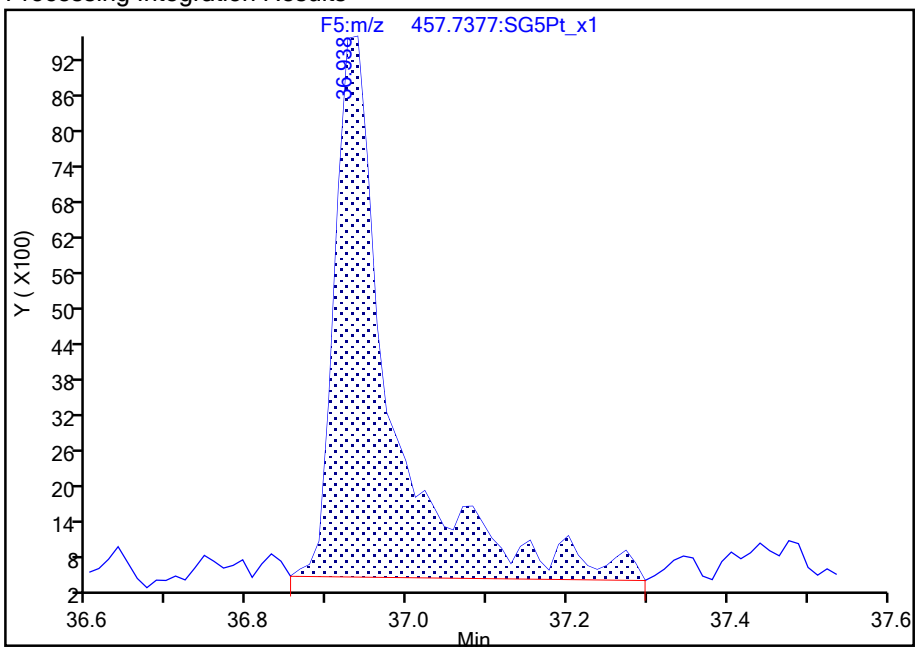

Manual Integration Results

RT: 36.94
Area: 37435
Amount: 0.233258
Amount Units: pg/ul

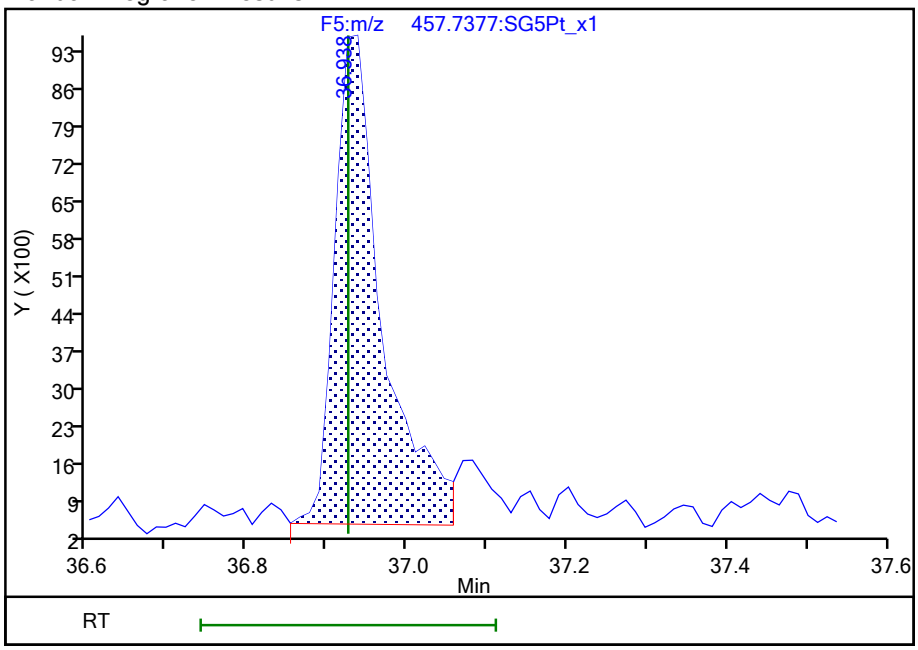

Reviewer: dadunj, 18-Aug-2021 08:50:49

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

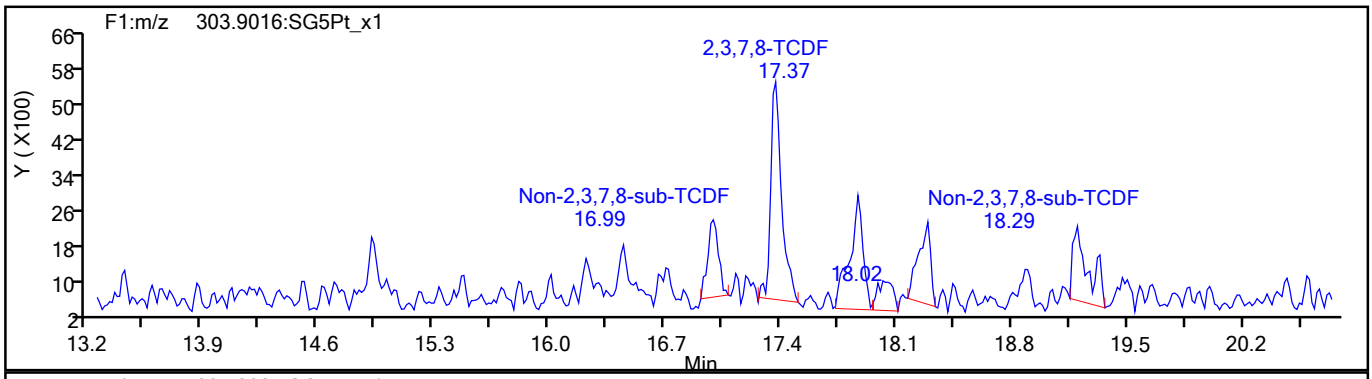

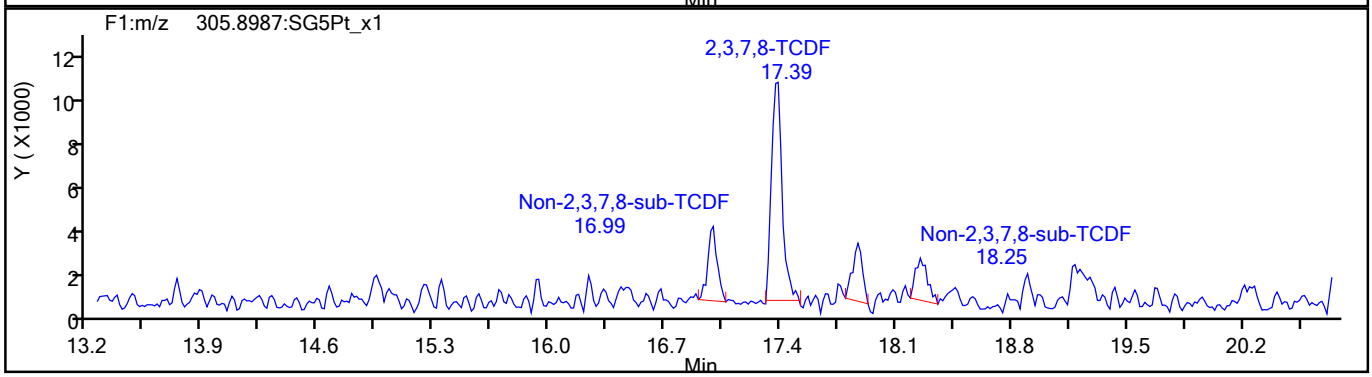

TCDF Standards

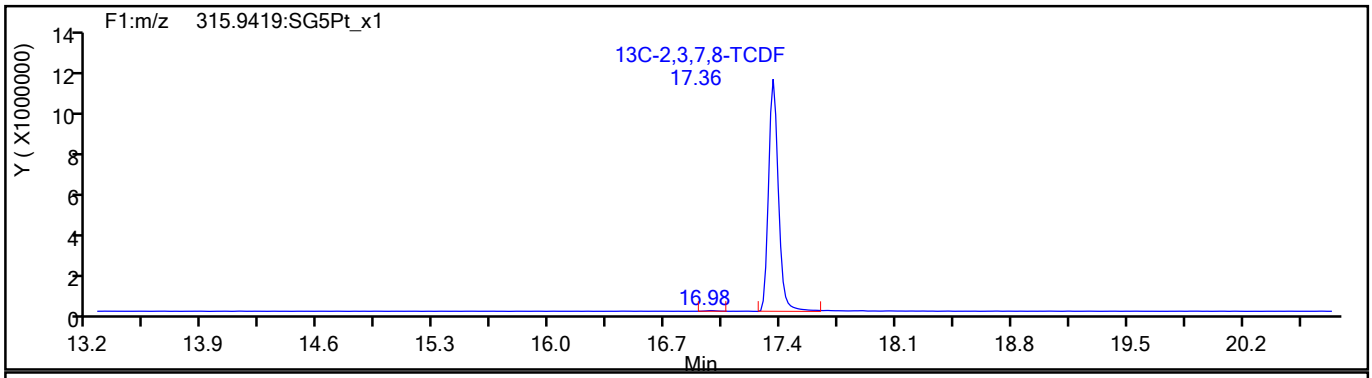

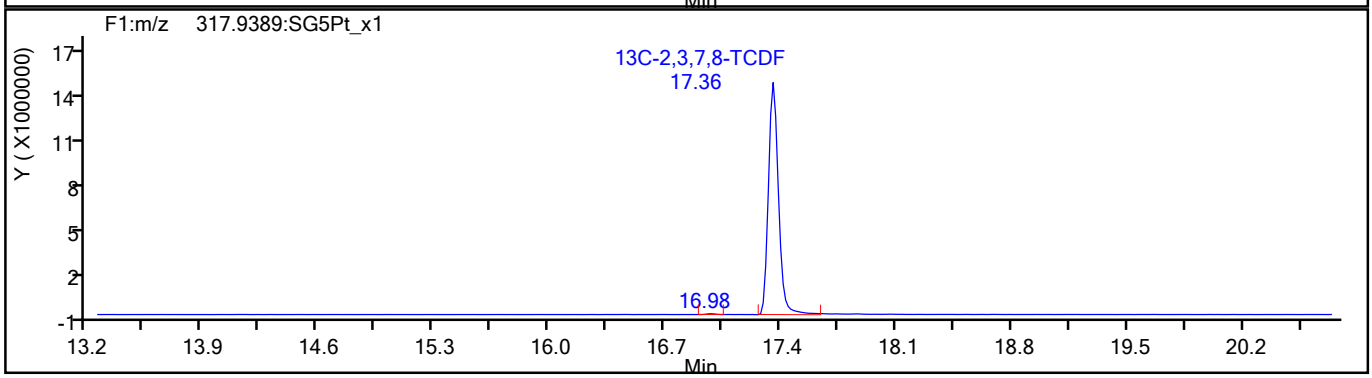

781710

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

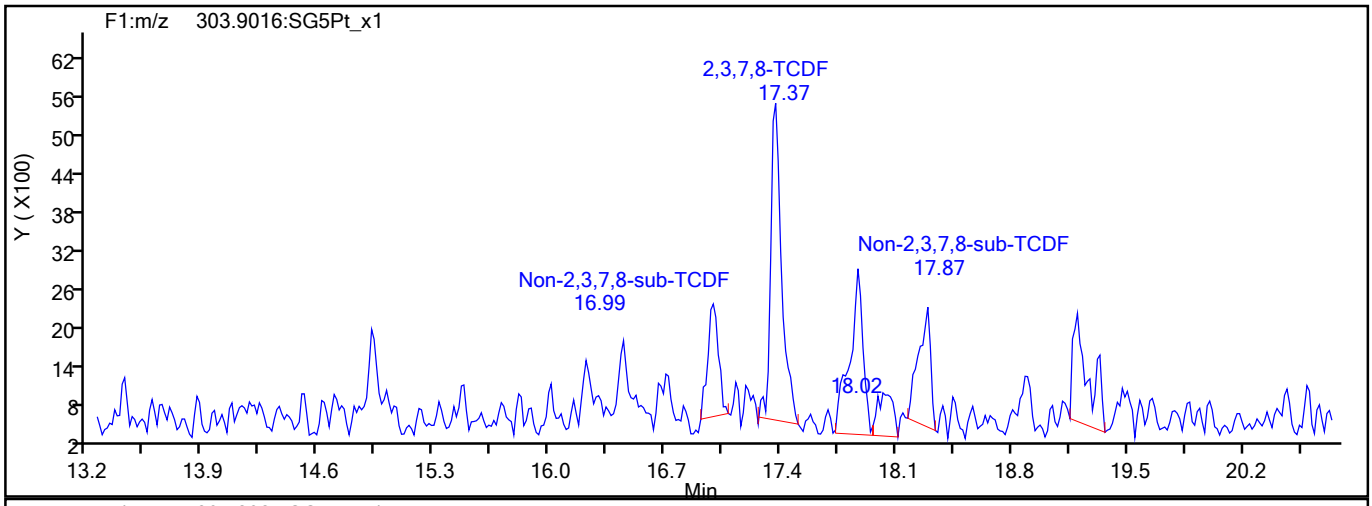

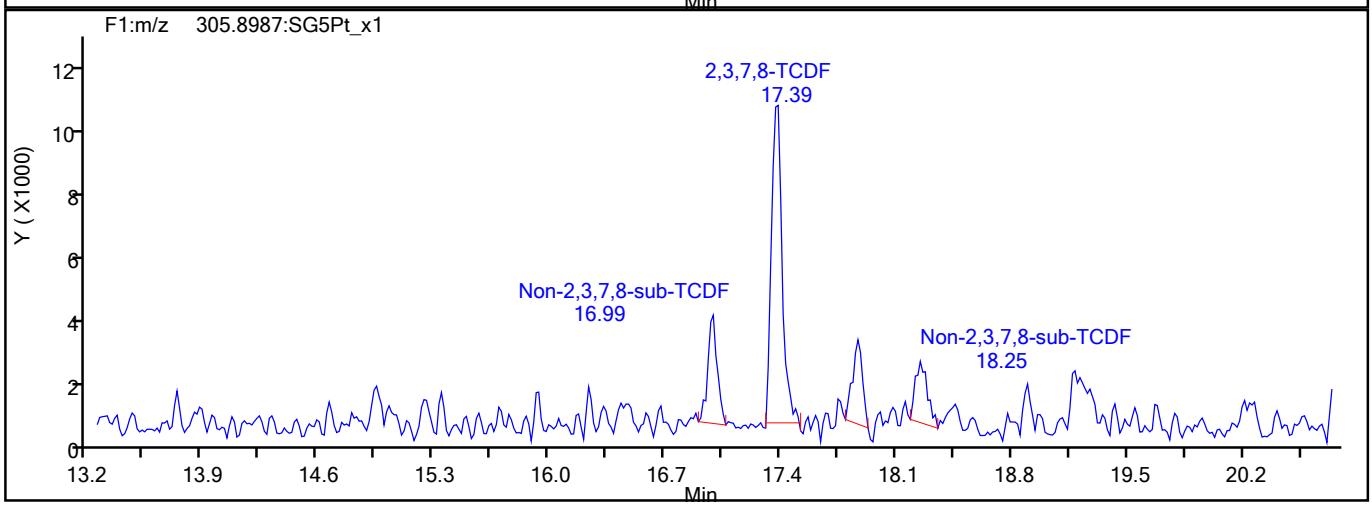

TCDF Interference Mass

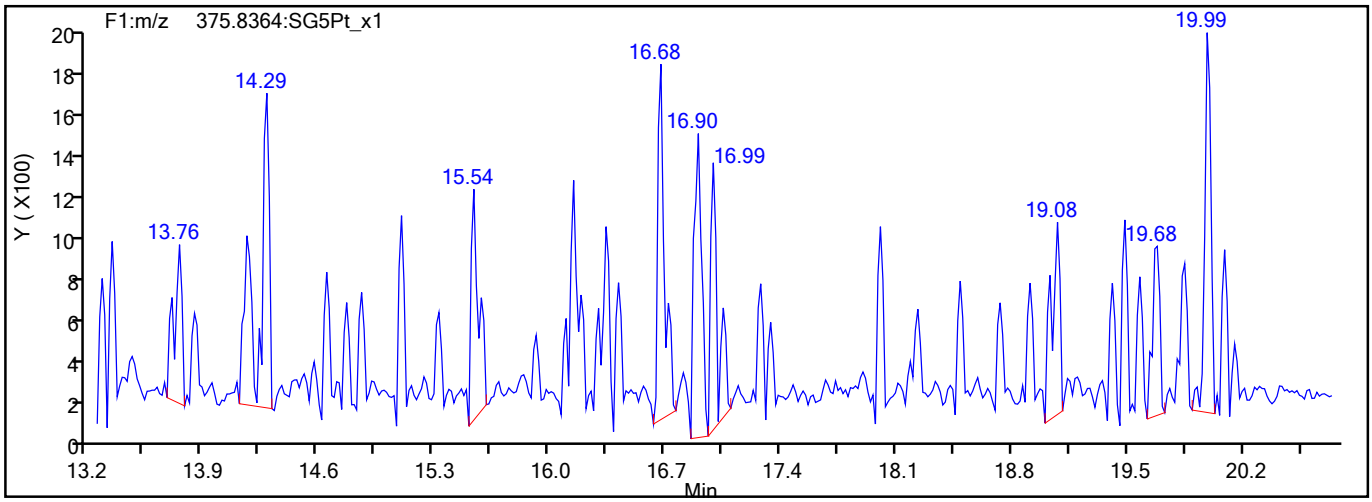

781711

Report Date: 18-Aug-2021 08:51:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

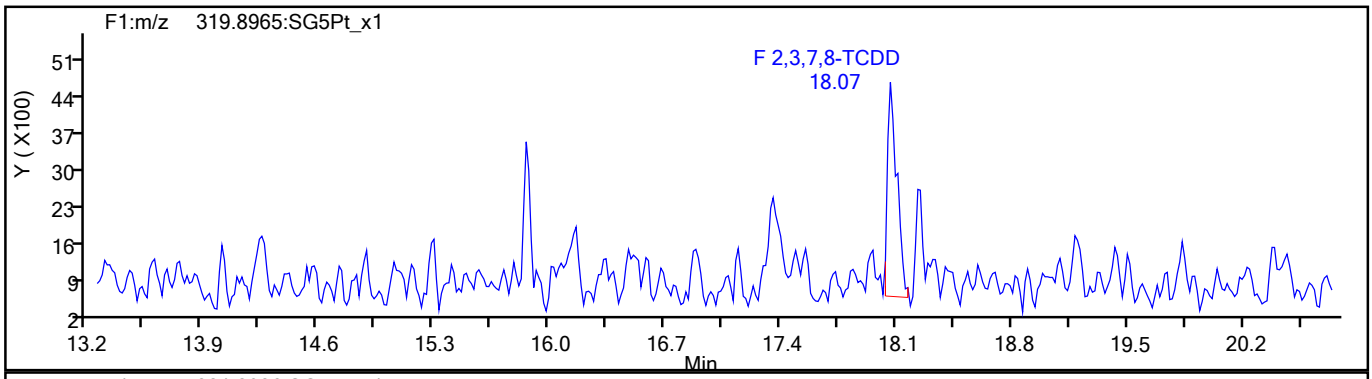

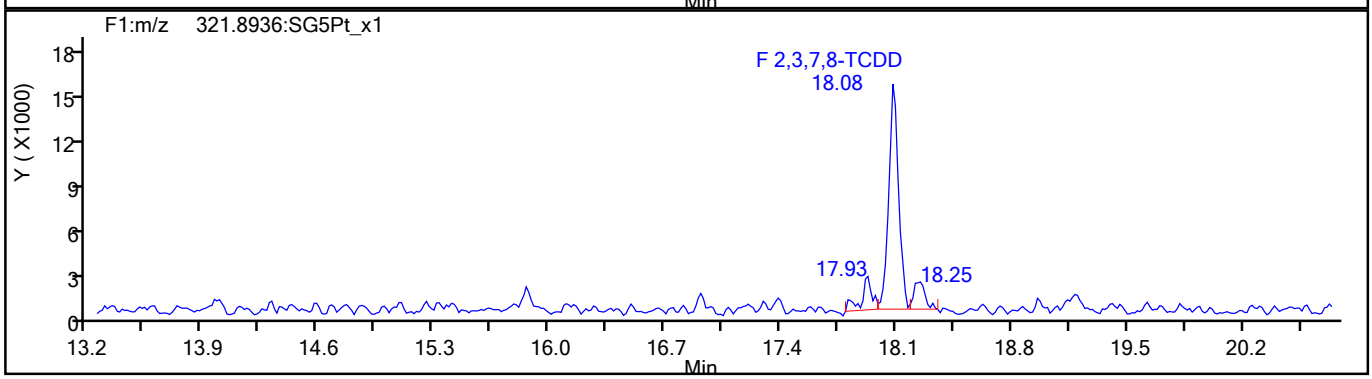

TCDD Standards

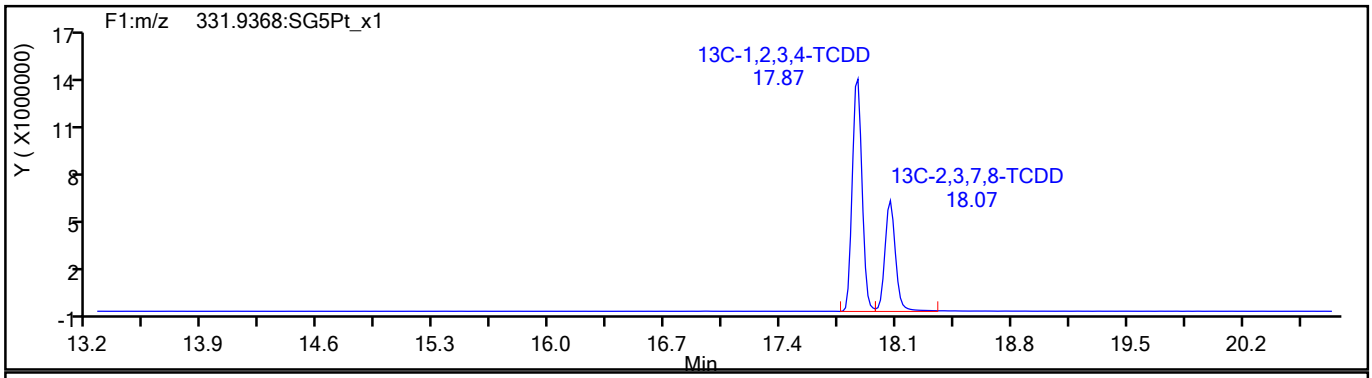

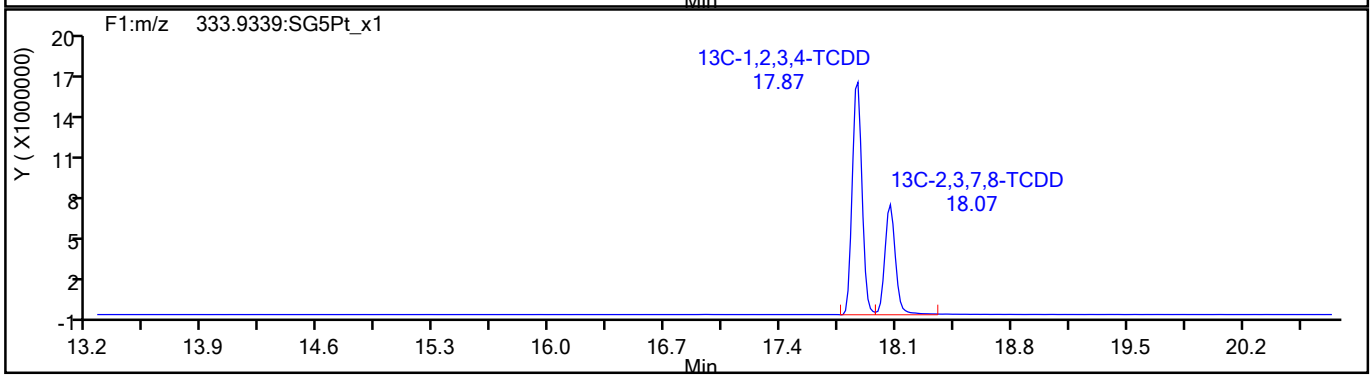

781712

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

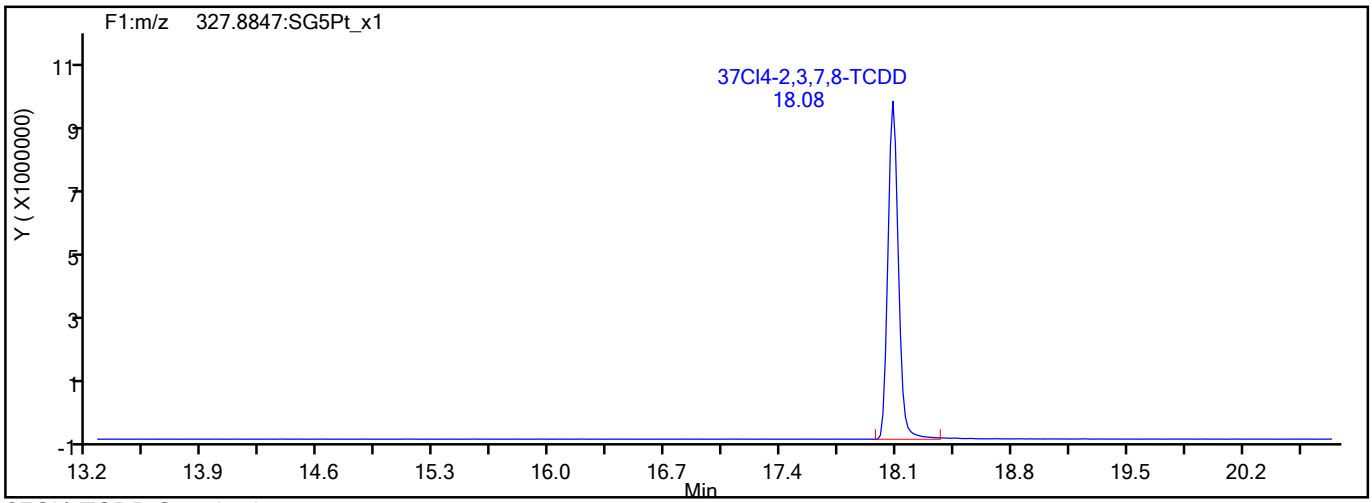

37Cl4-TCDD Standards

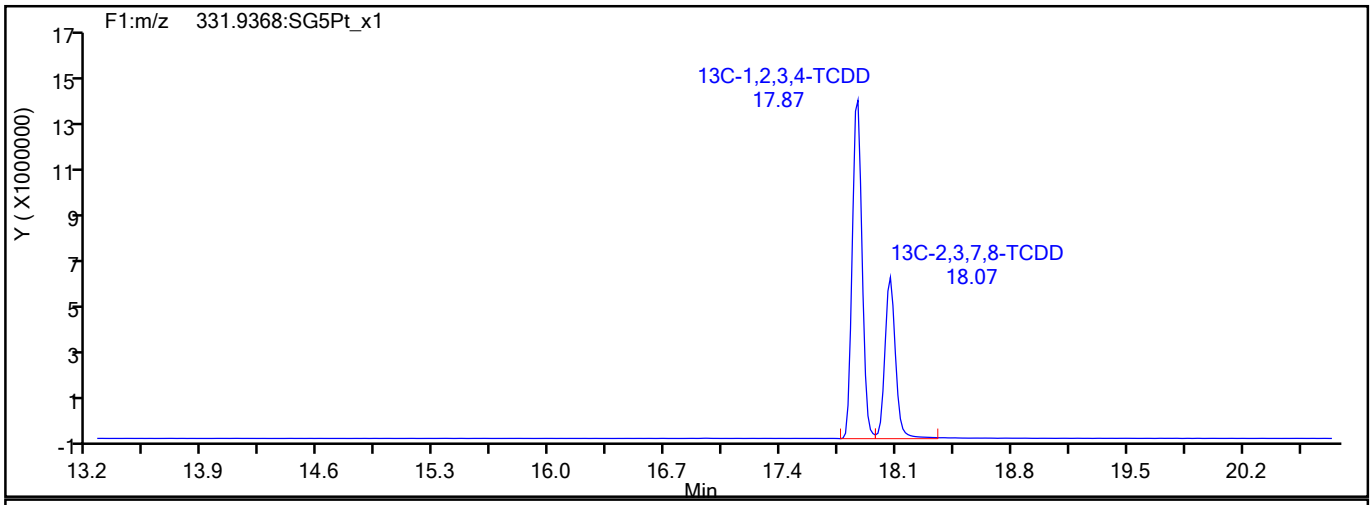

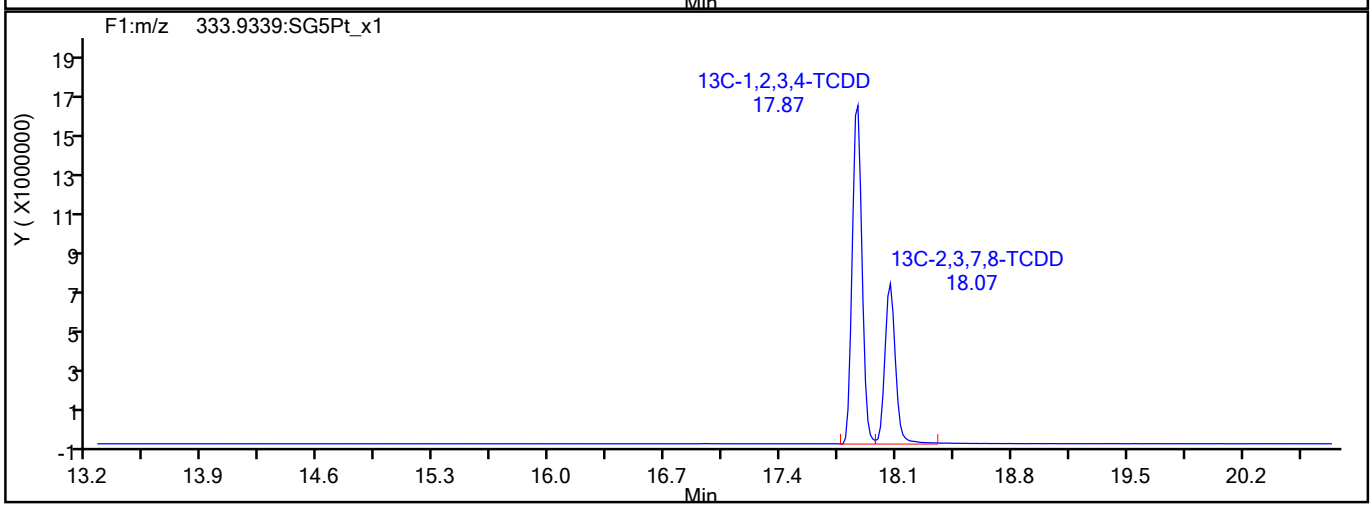

781713

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

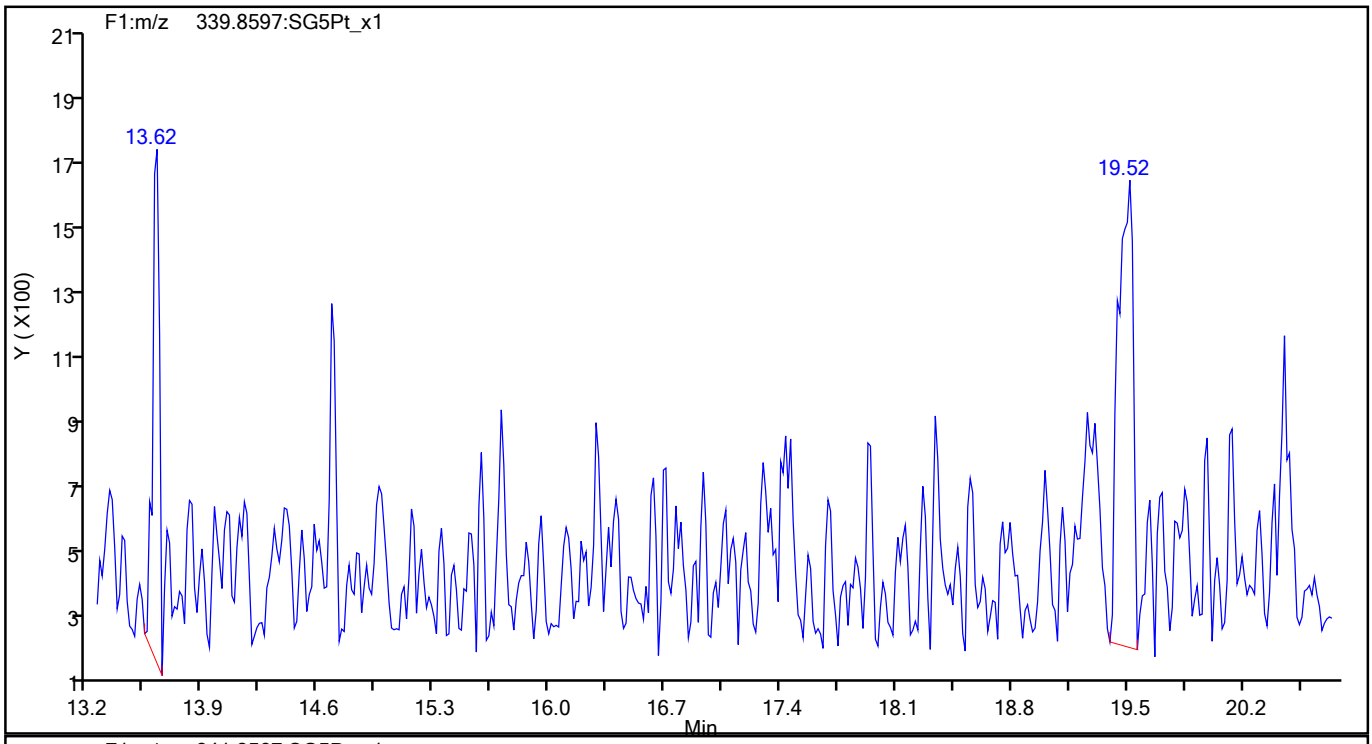

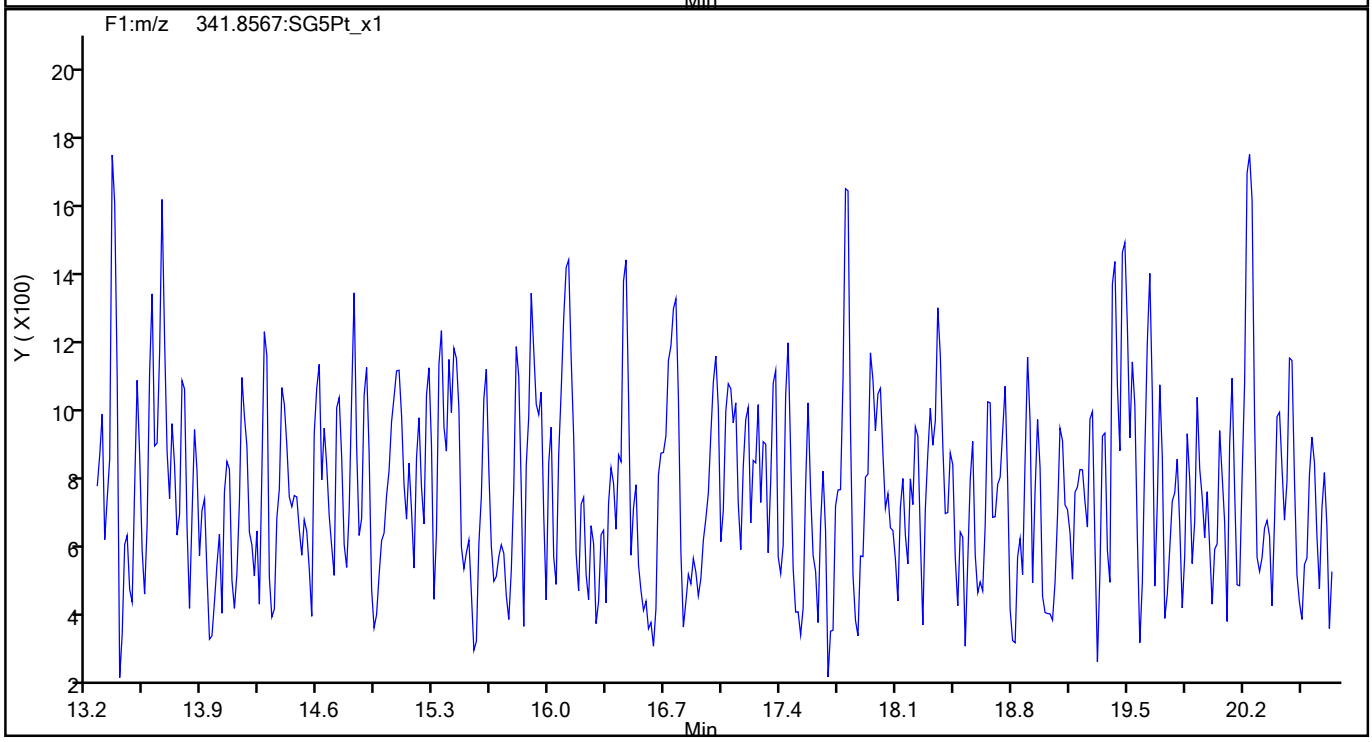

781714

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

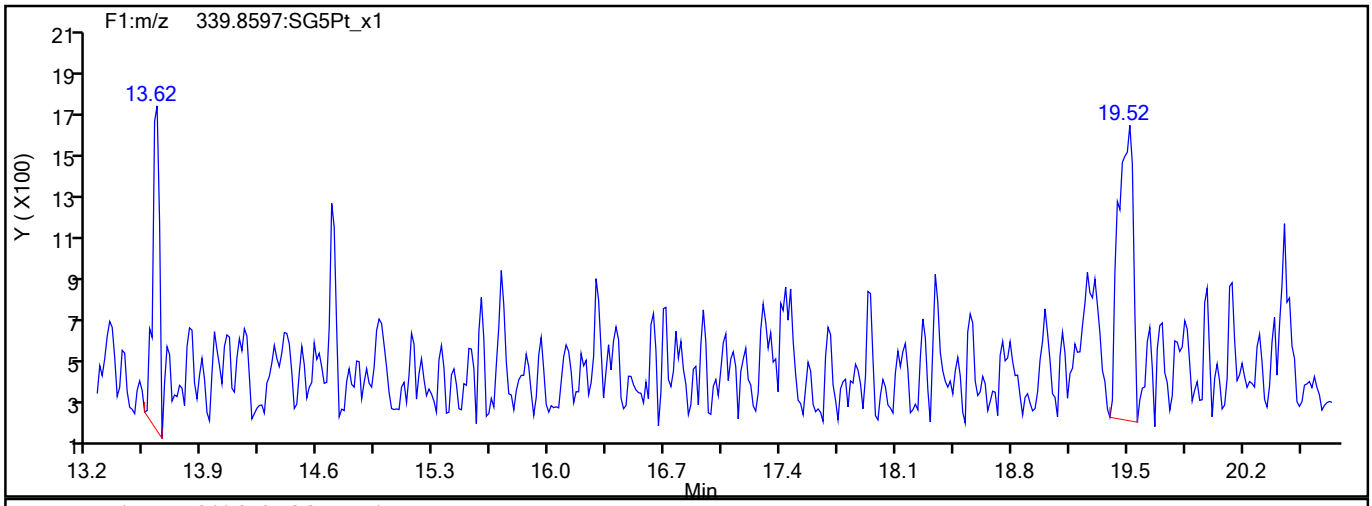

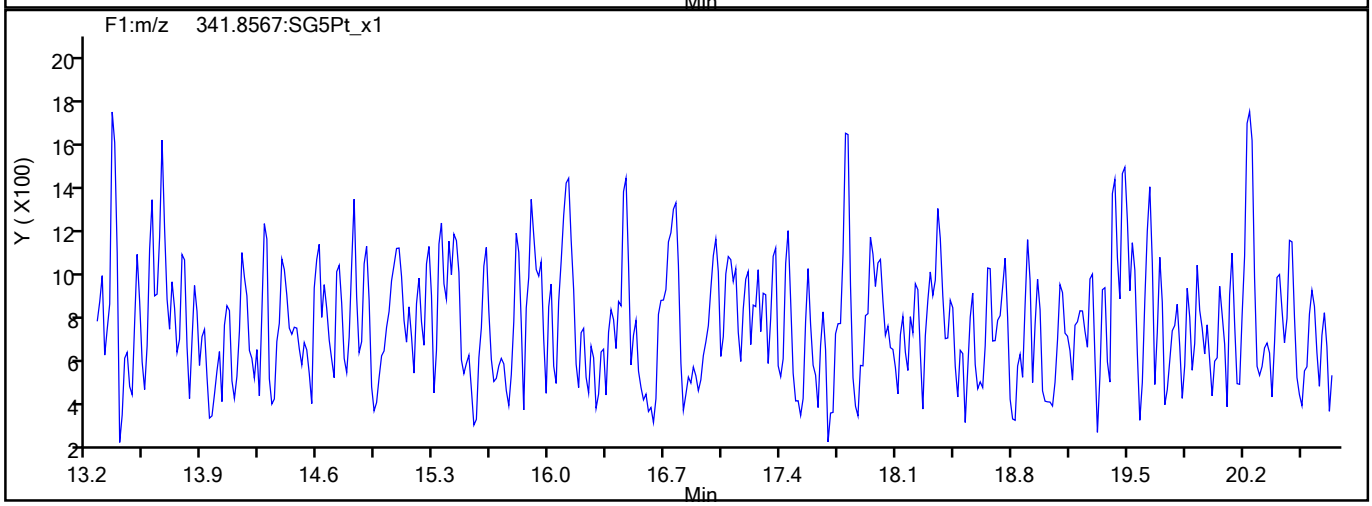

F1 PeCDFs Interference Mass

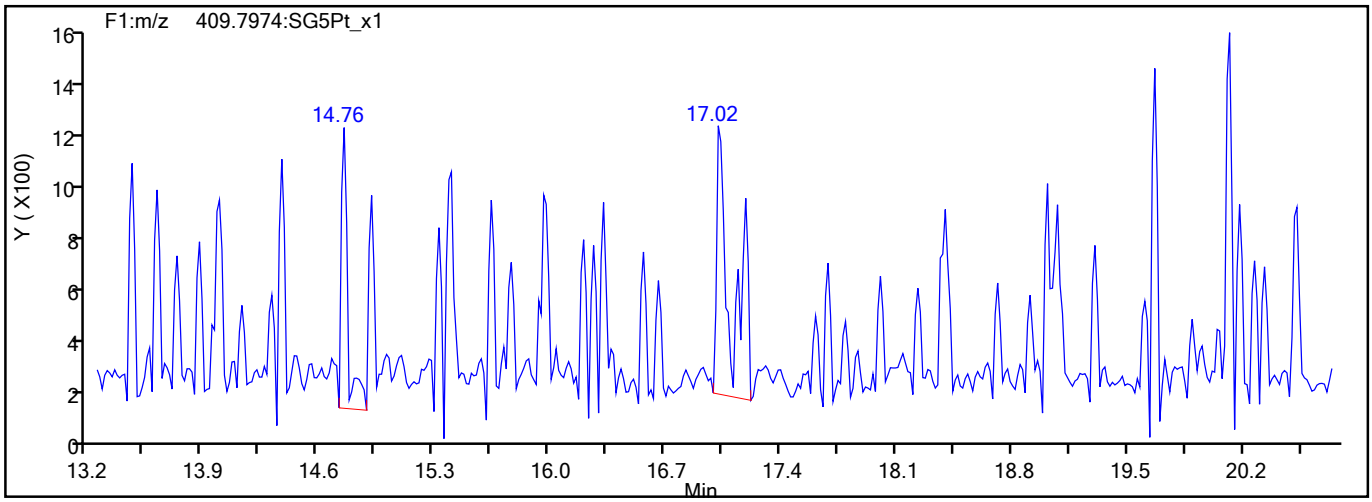

781715

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

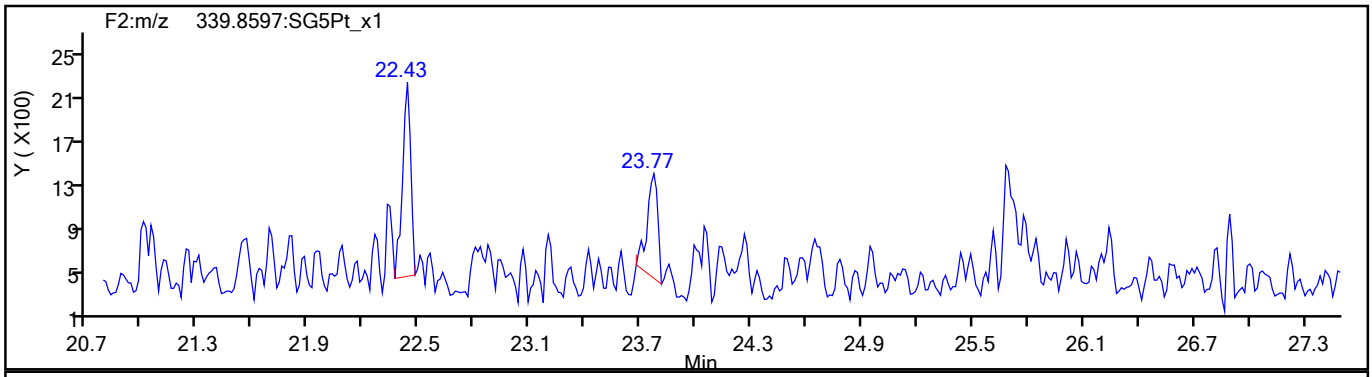

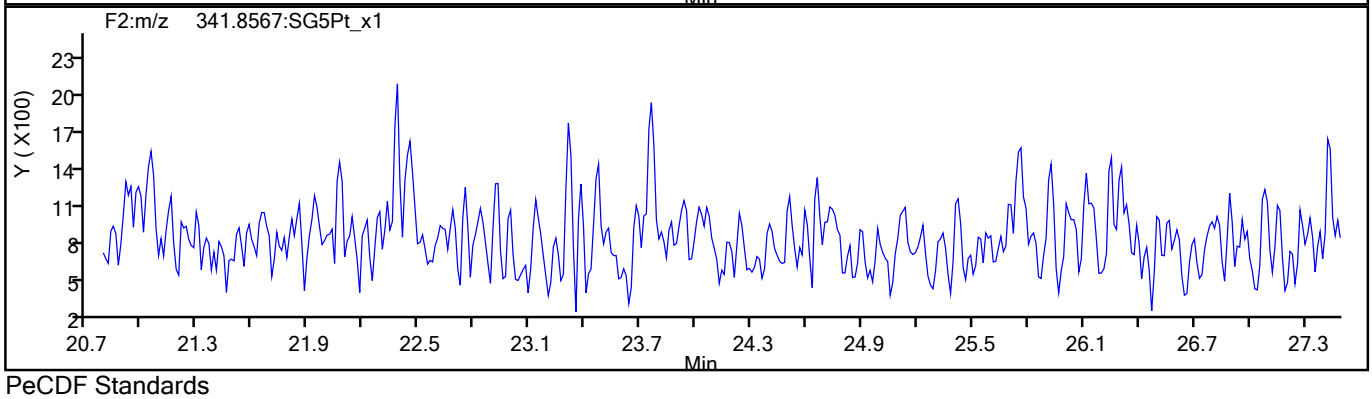

PeCDF Standards

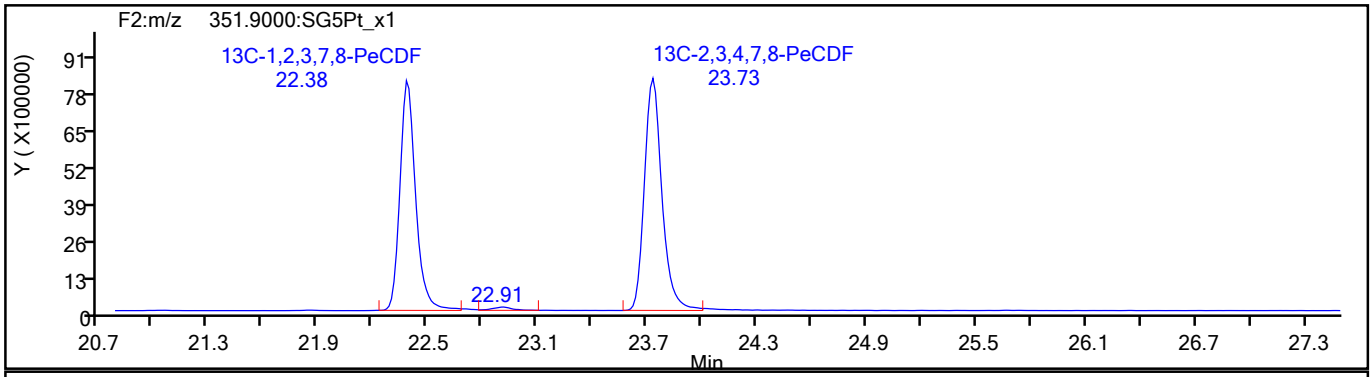

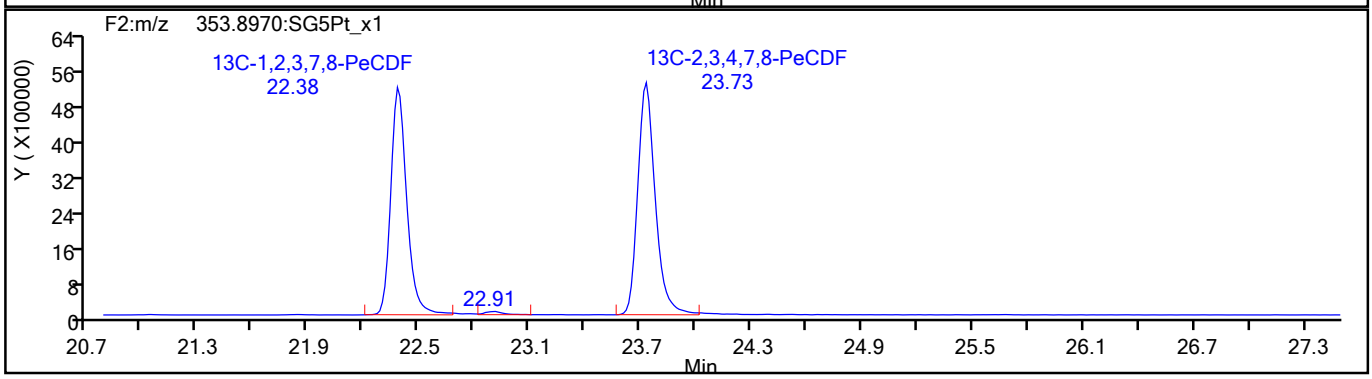

781716

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

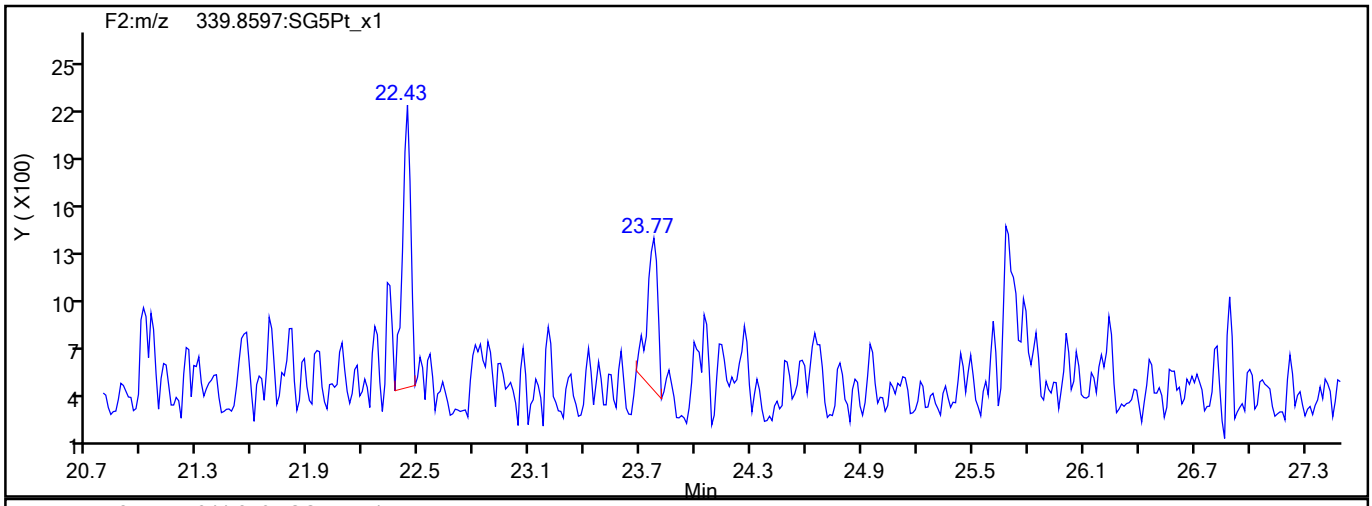

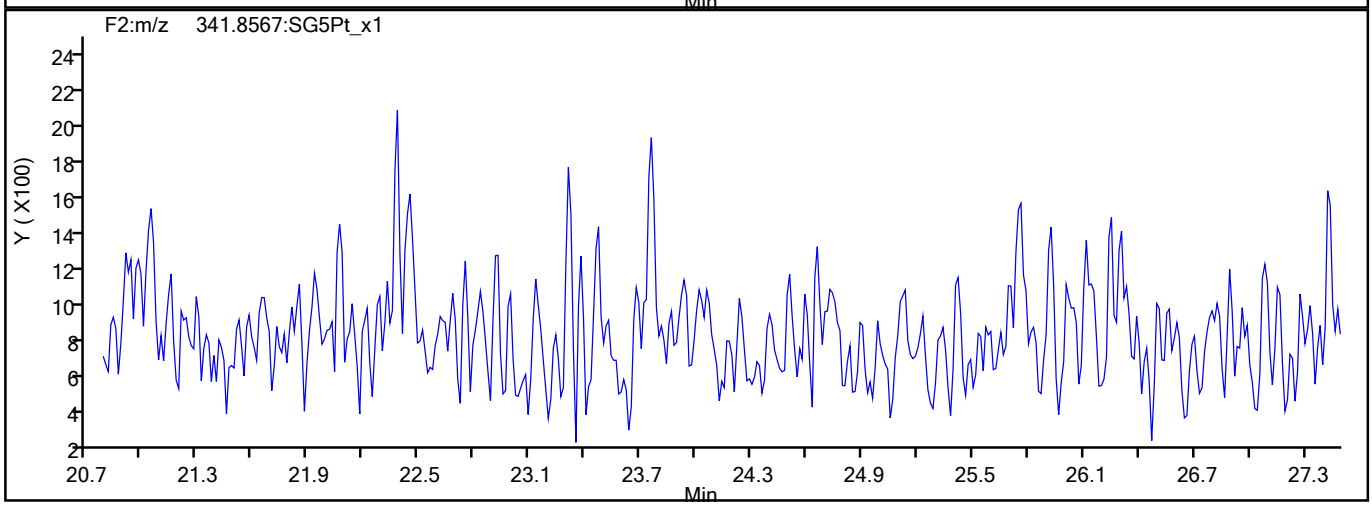

PeCDF Interference Mass

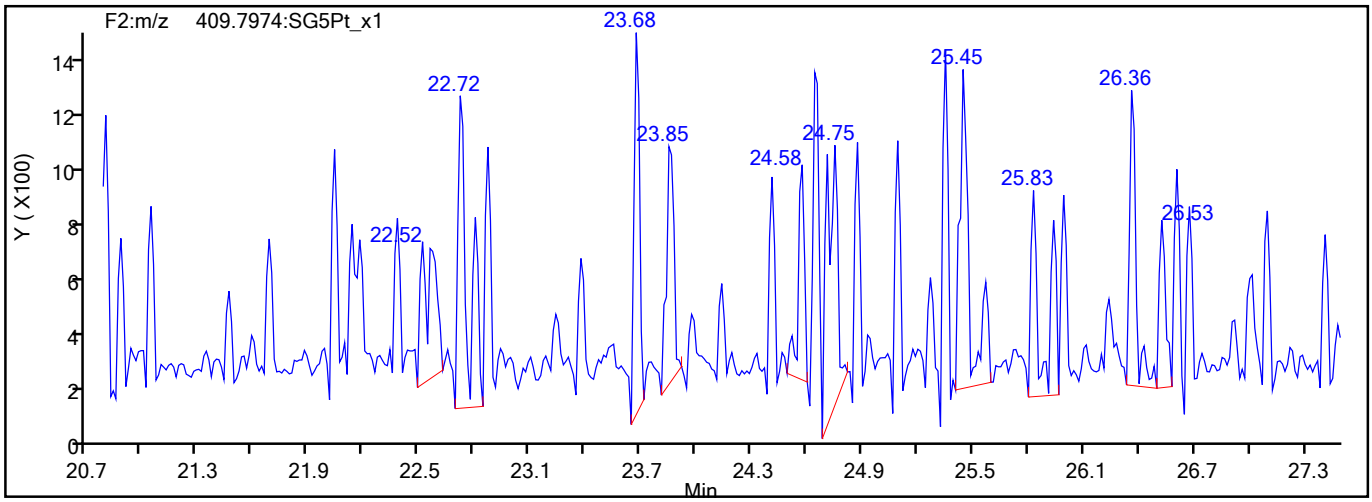

781717

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

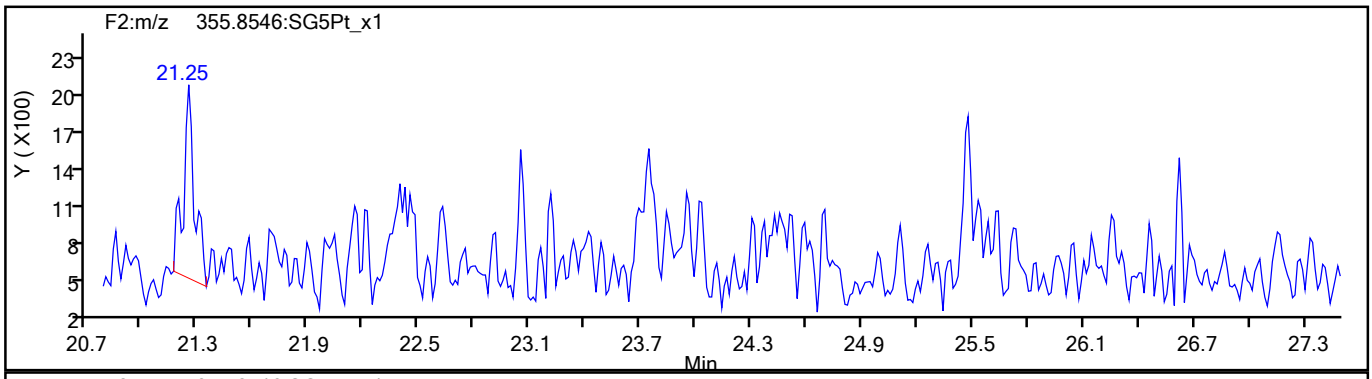

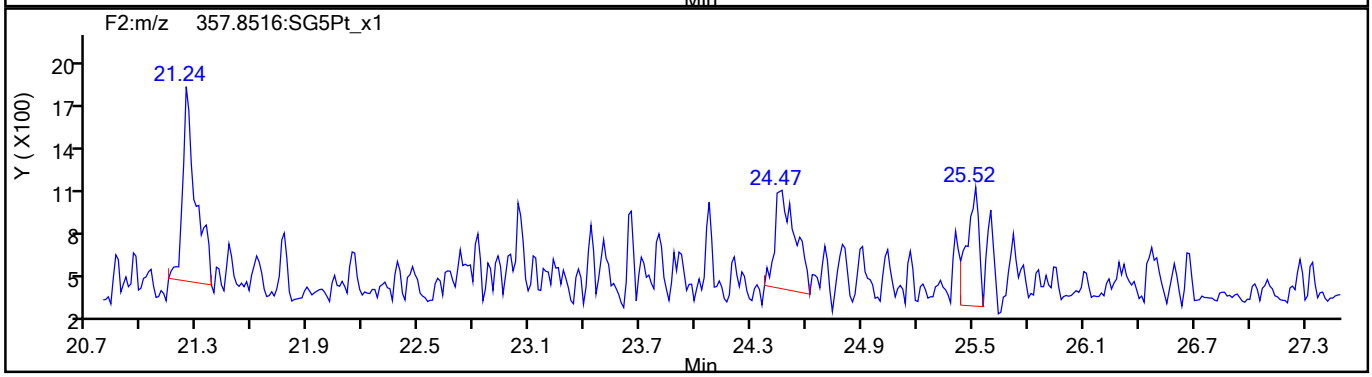

PeCDD Standards

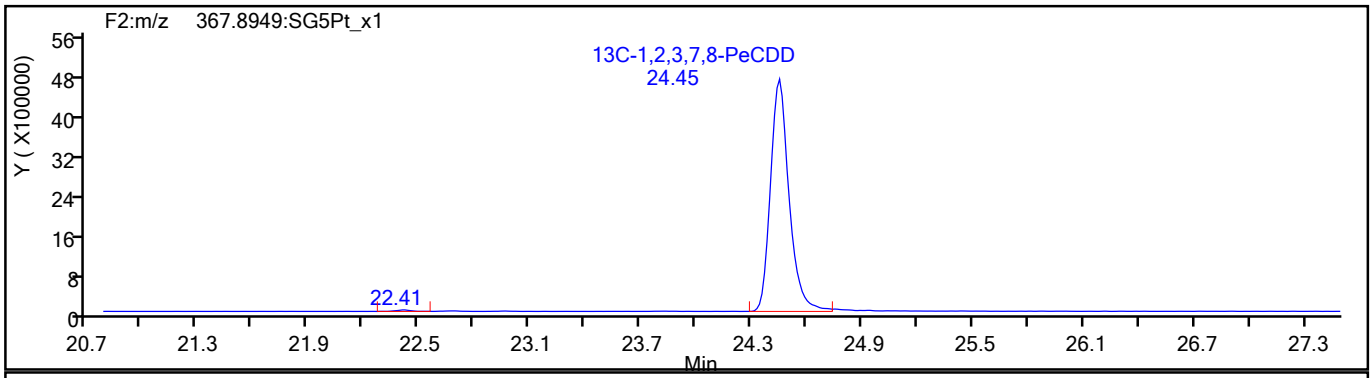

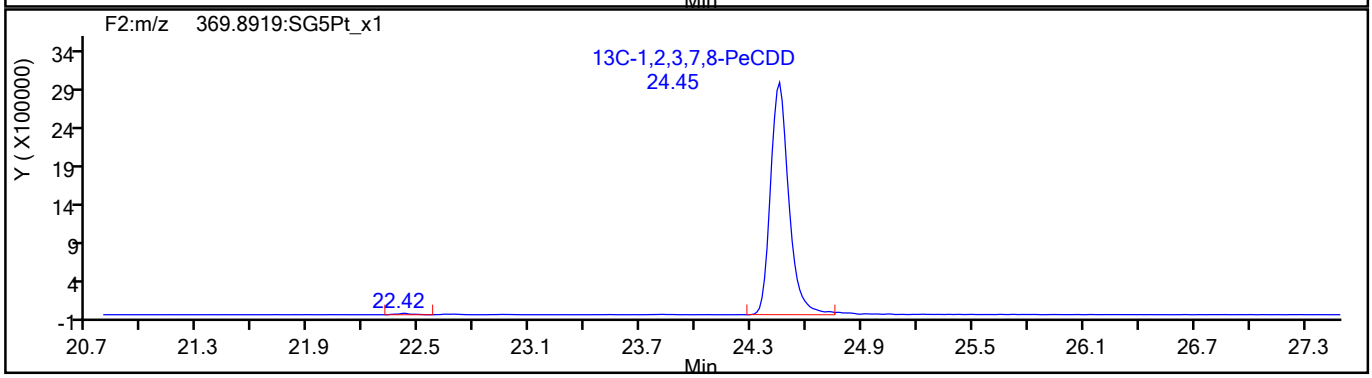

781718

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

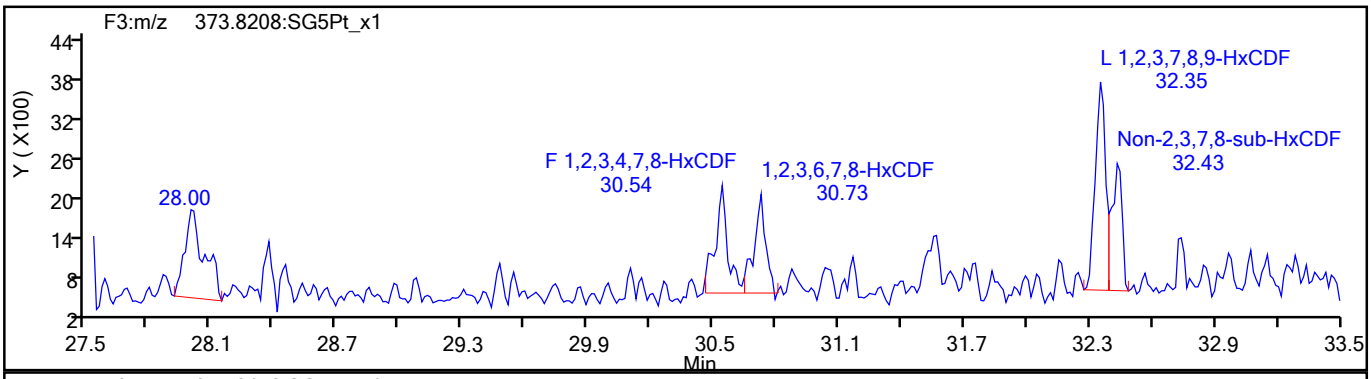

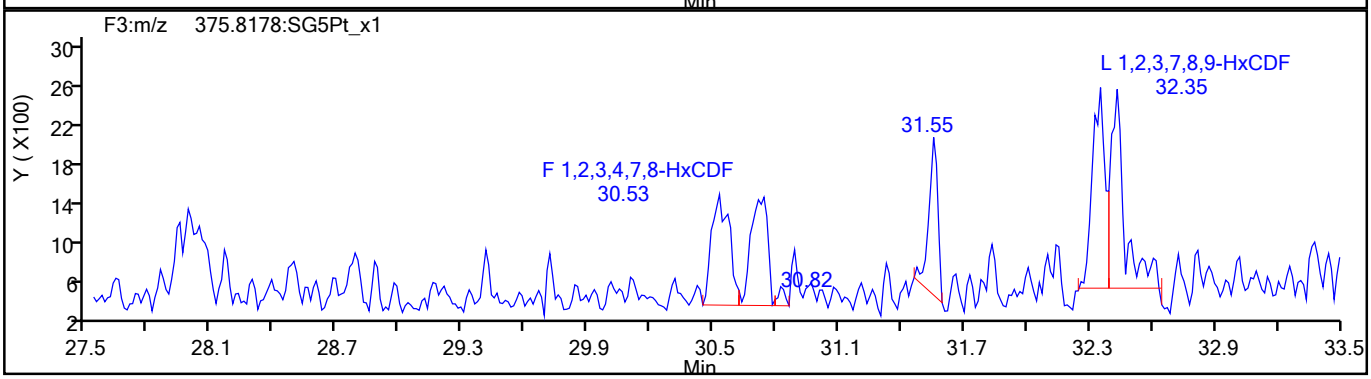

HxCDF Standards

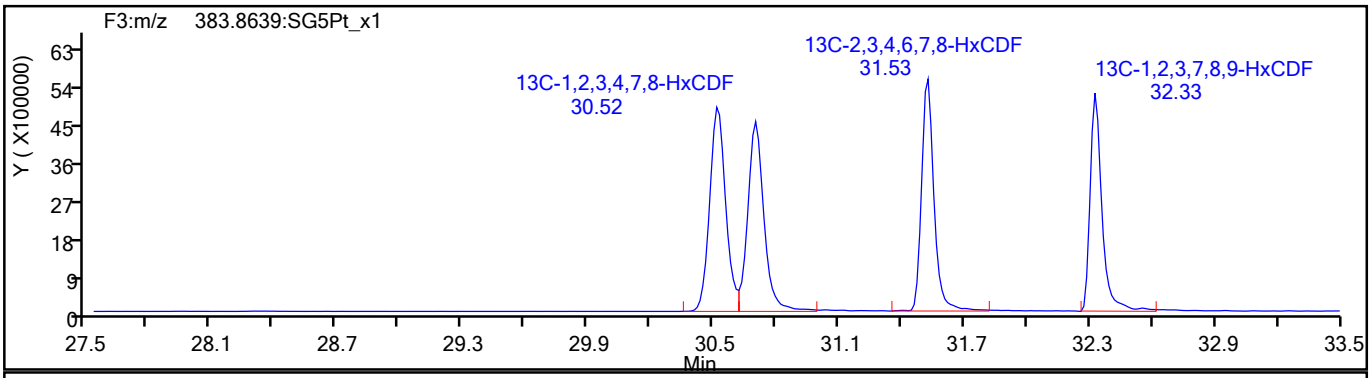

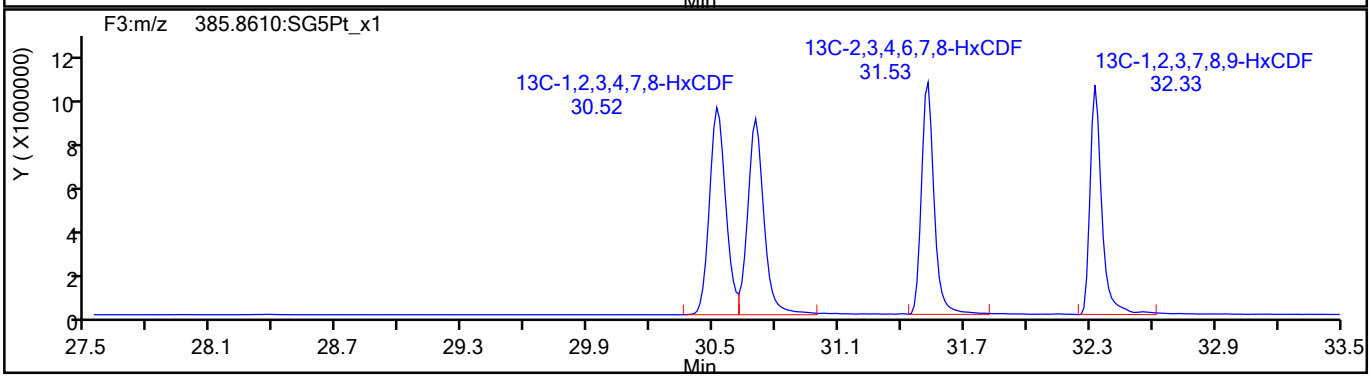

781719

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

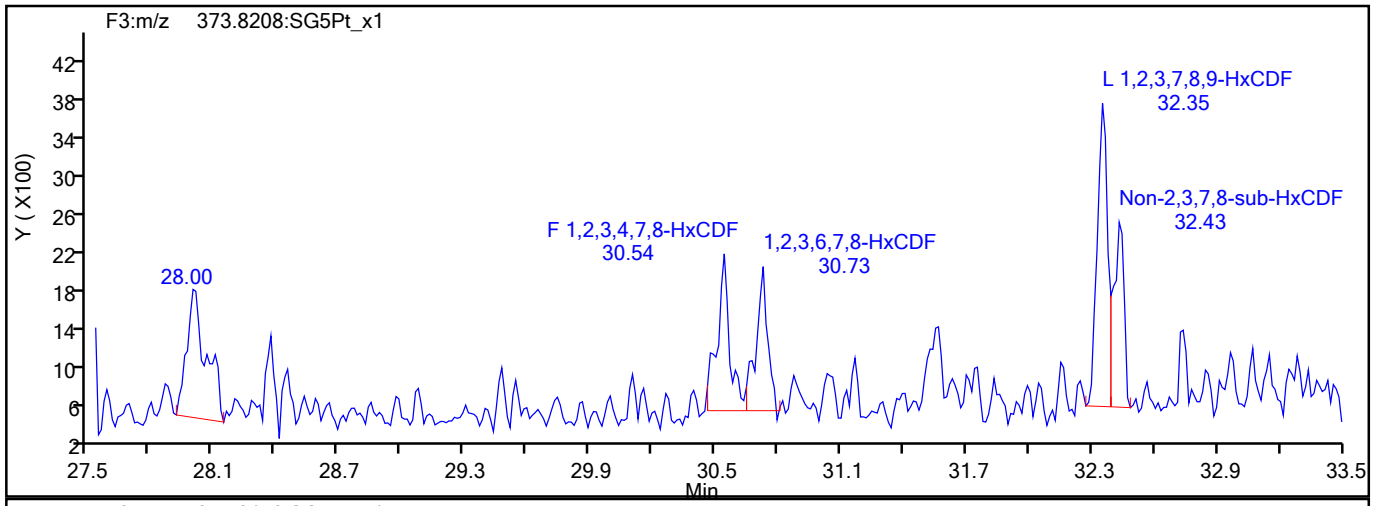

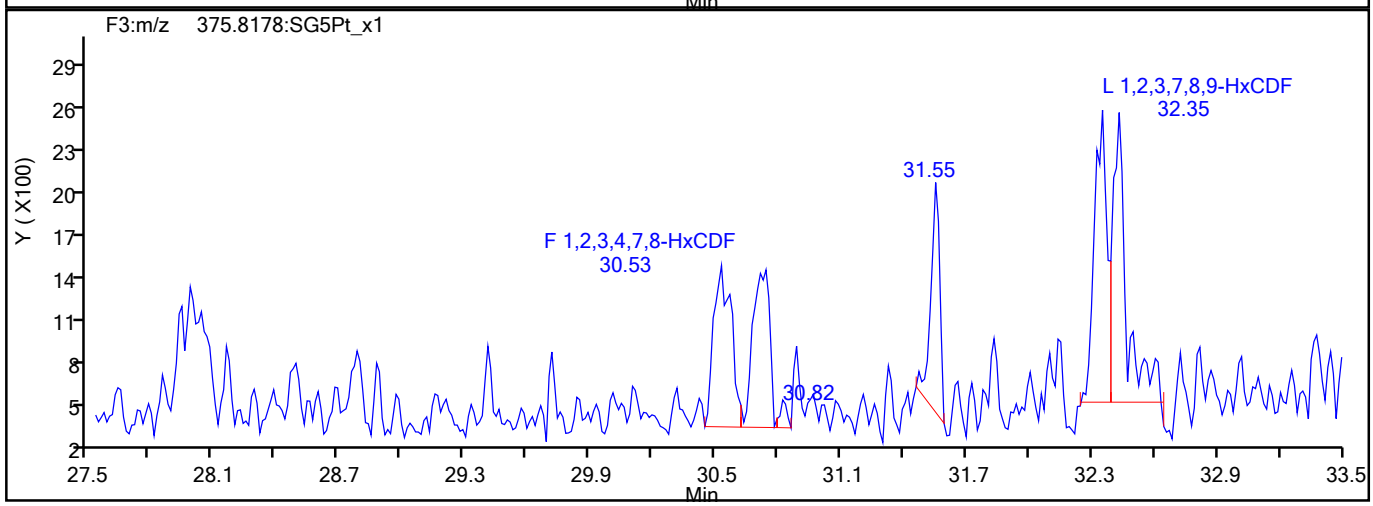

HxCDF Interference Mass

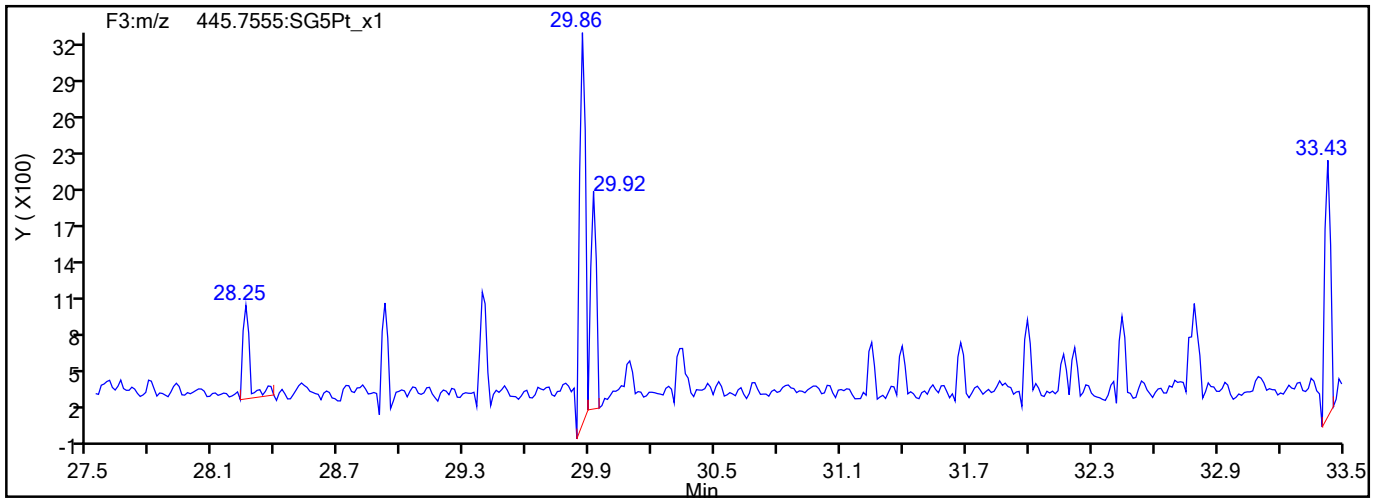

781720

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

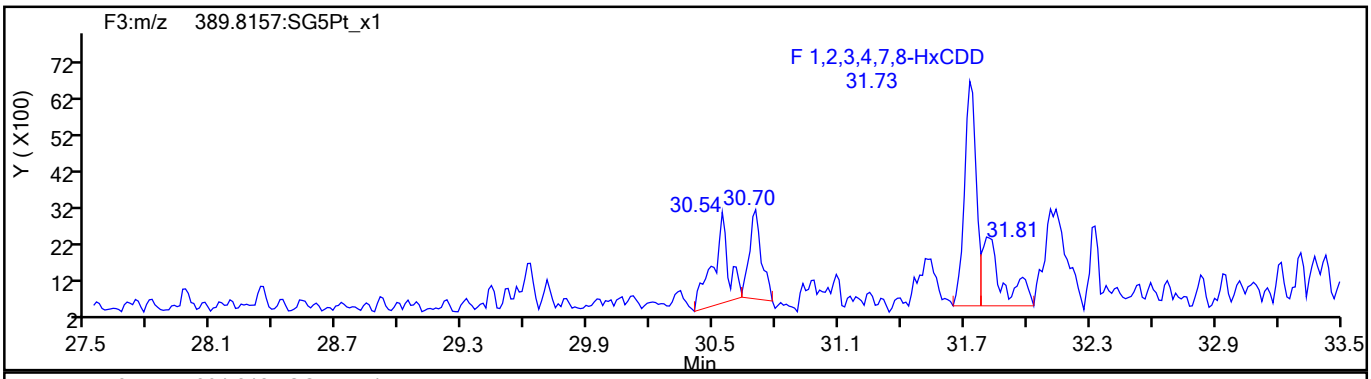

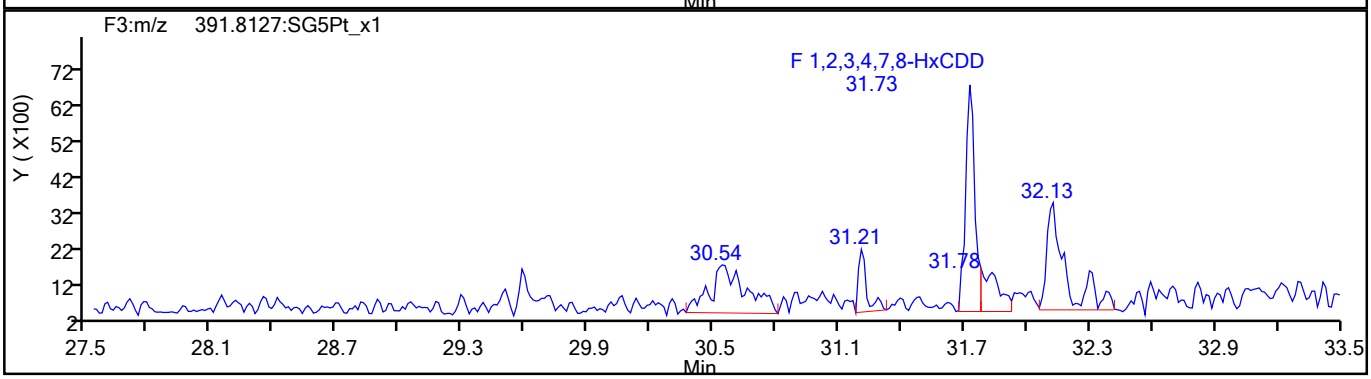

HxCDD Standards

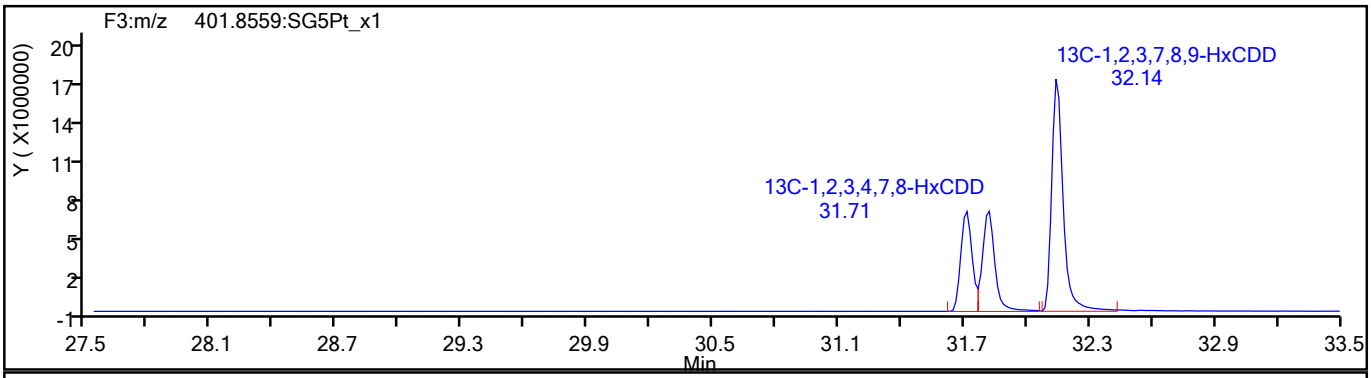

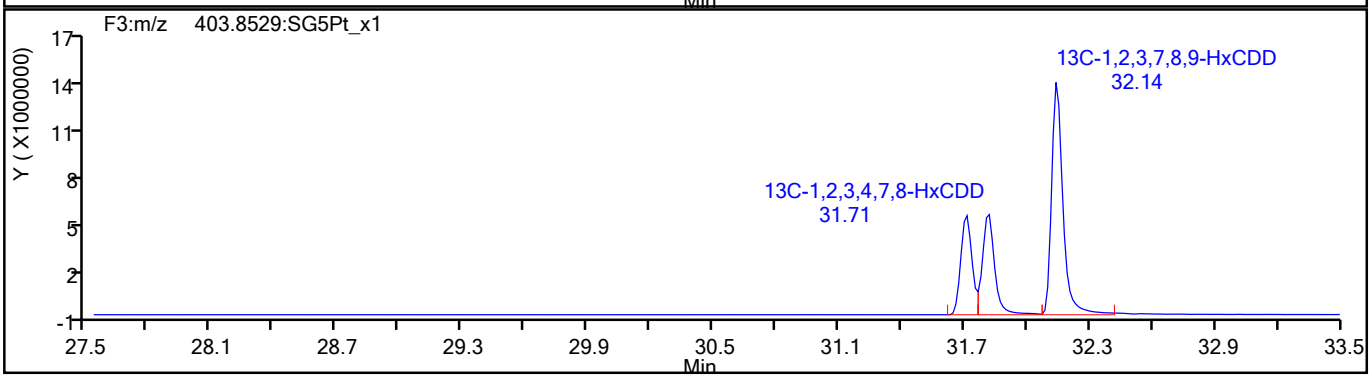

781721

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

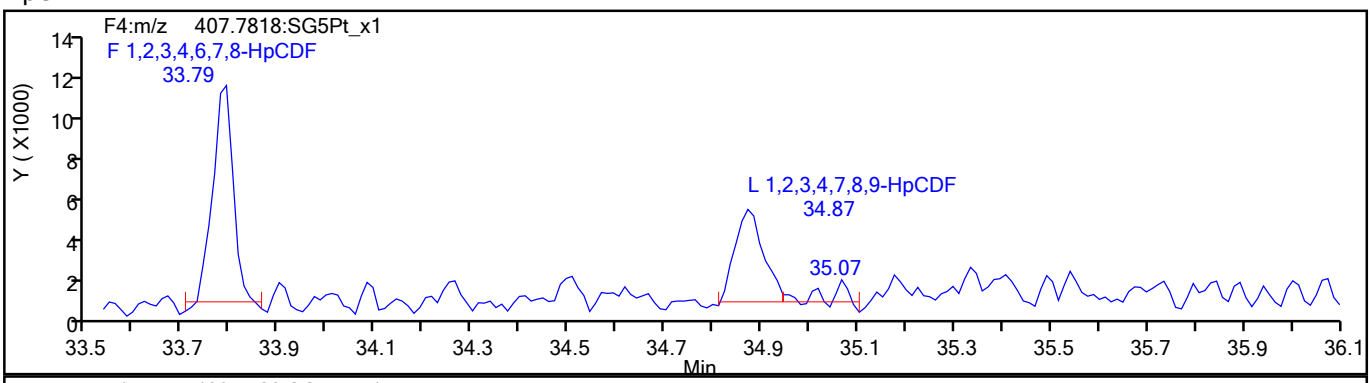

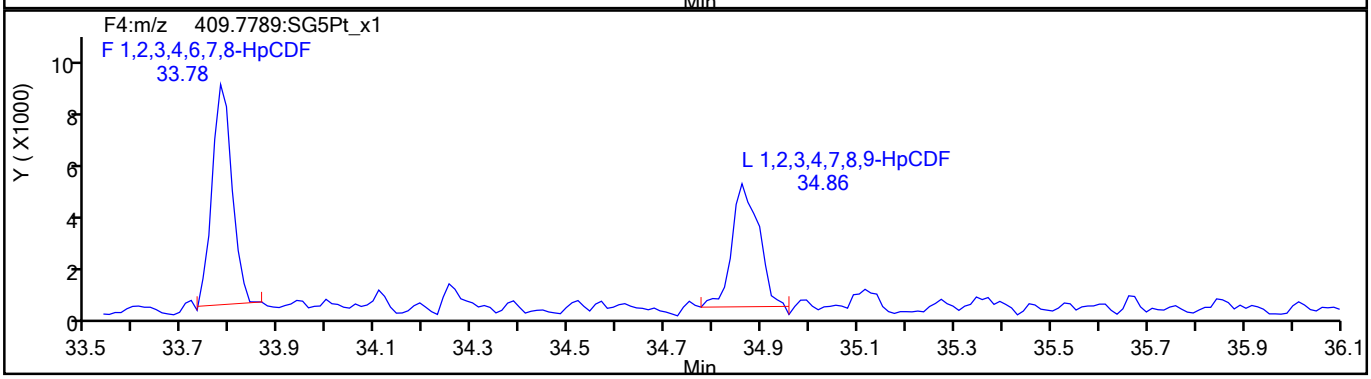

HpCDF Standards

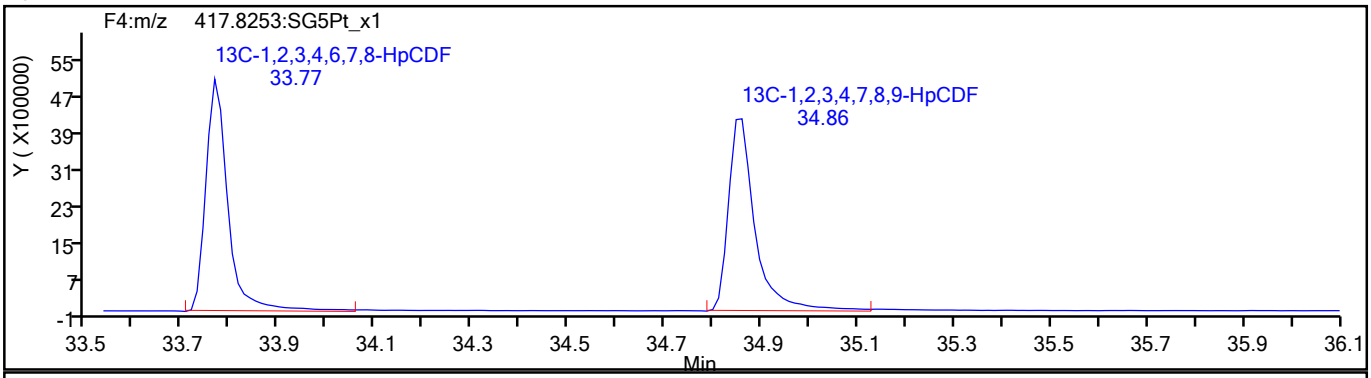

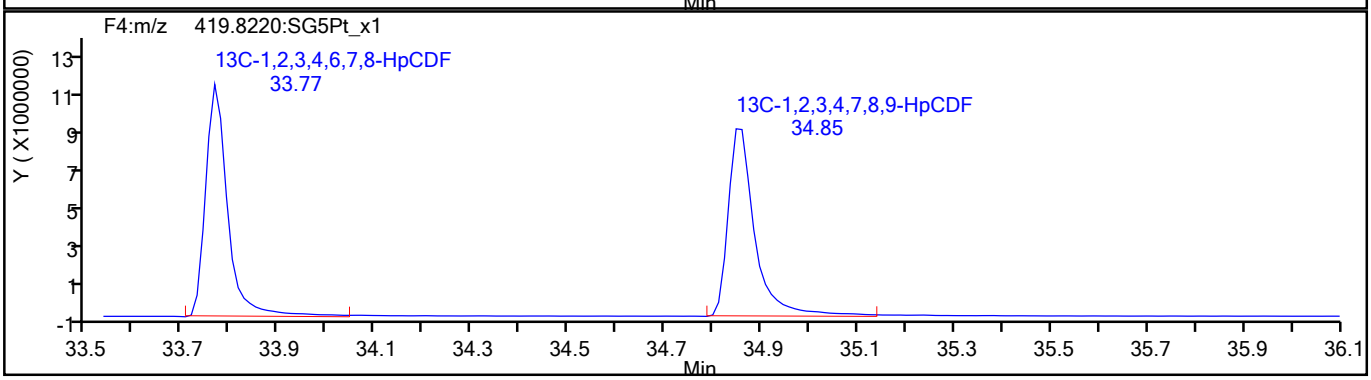

781722

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

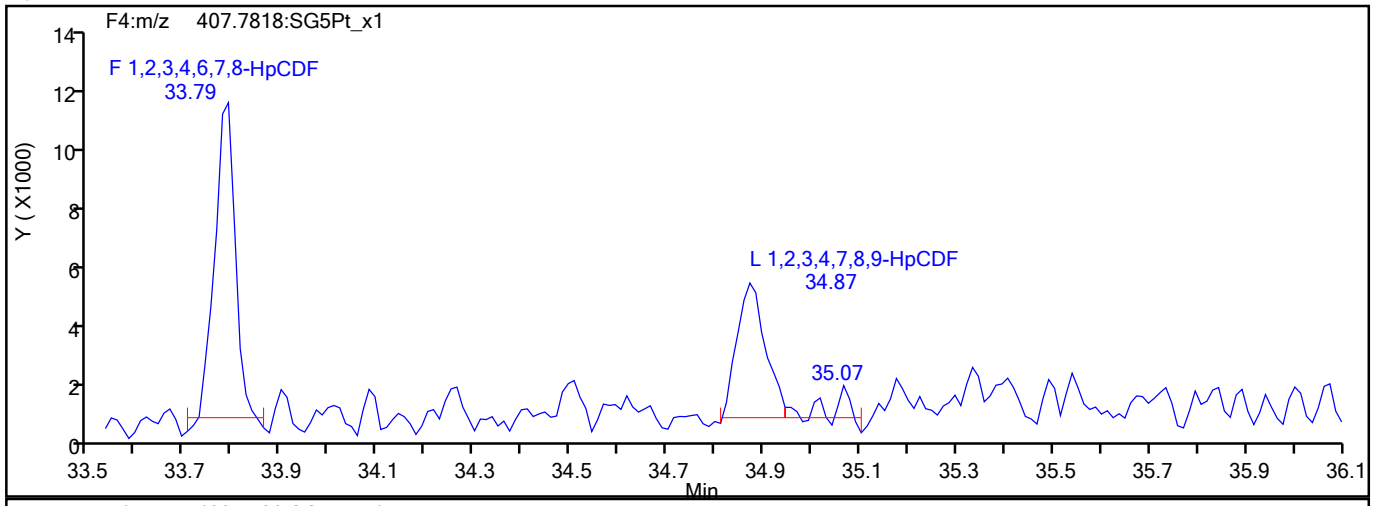

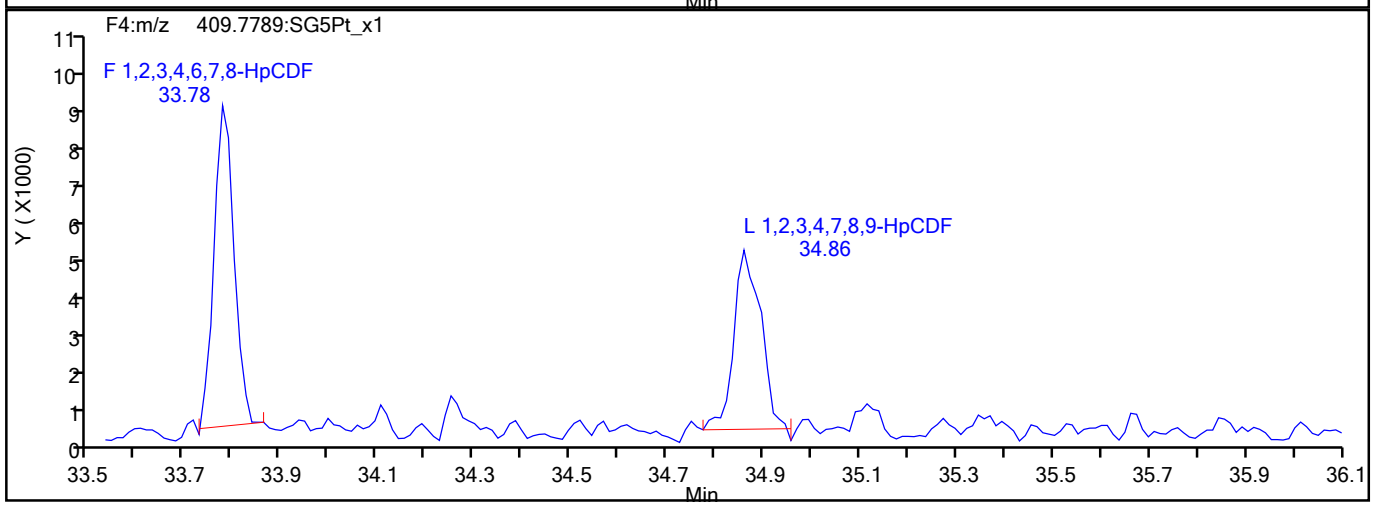

HpCDF Interference Mass

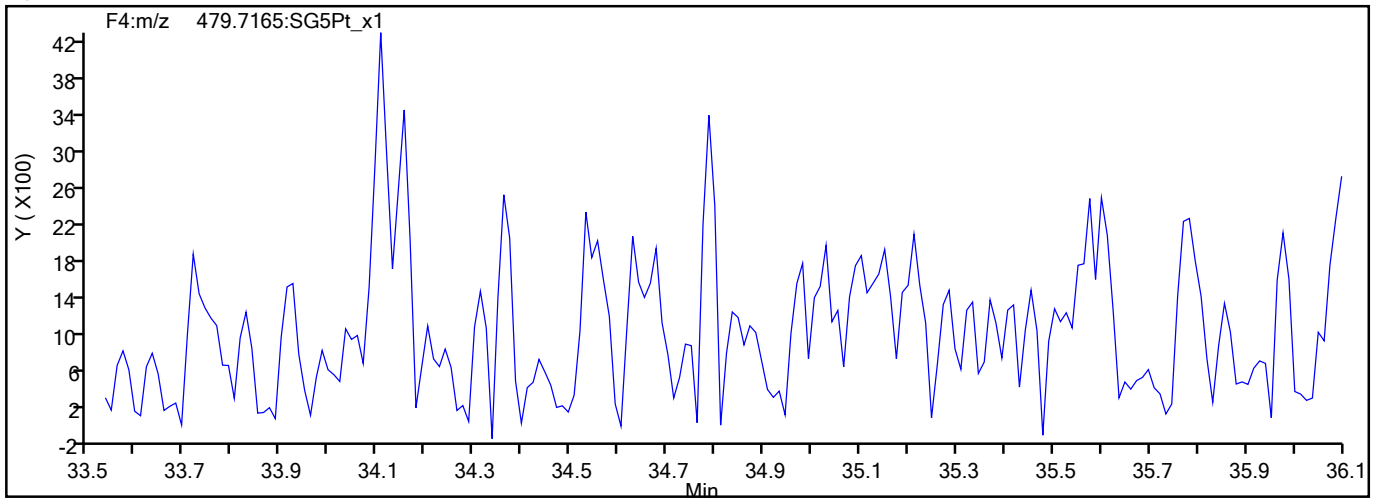

781723

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

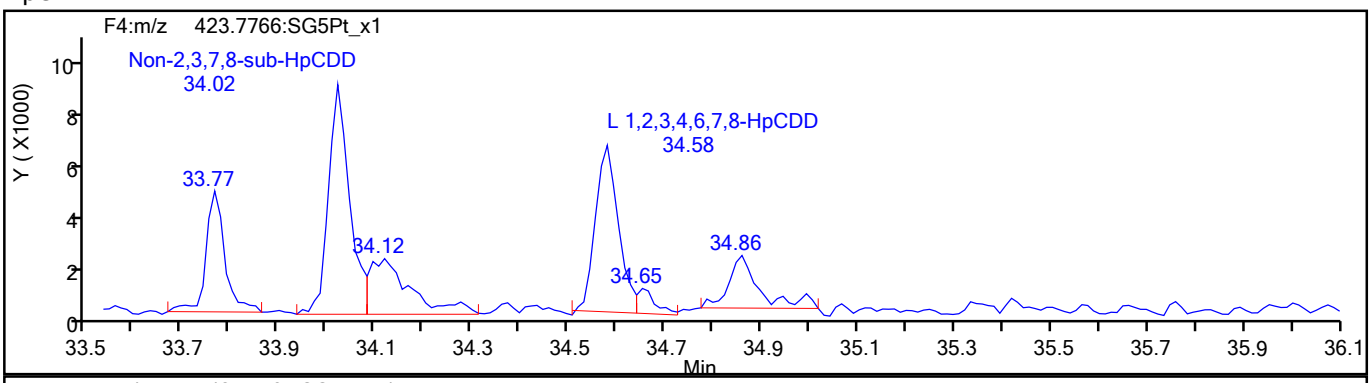

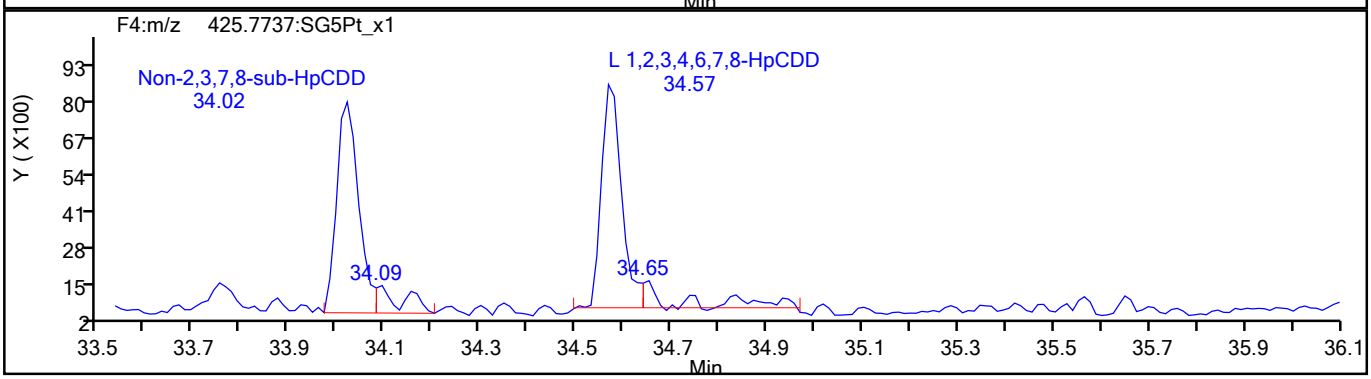

HpCDD Standards

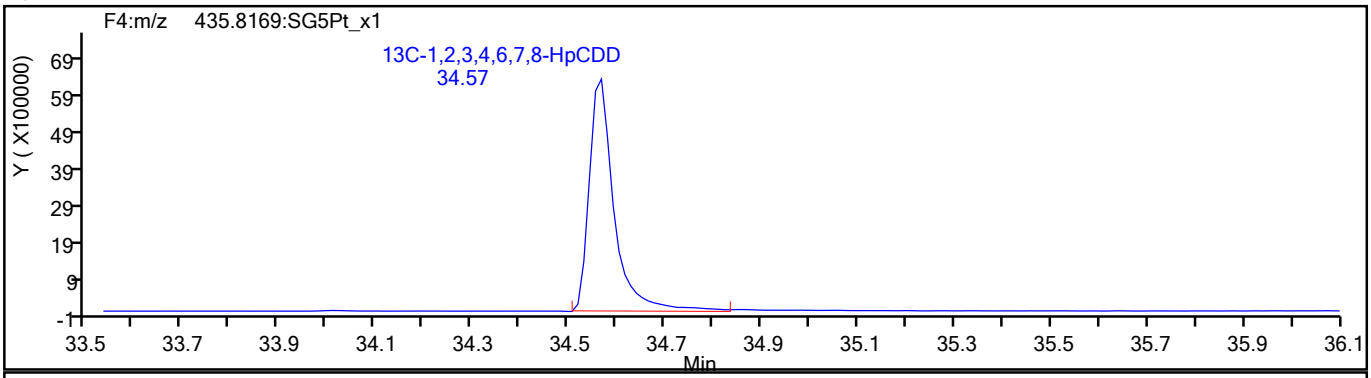

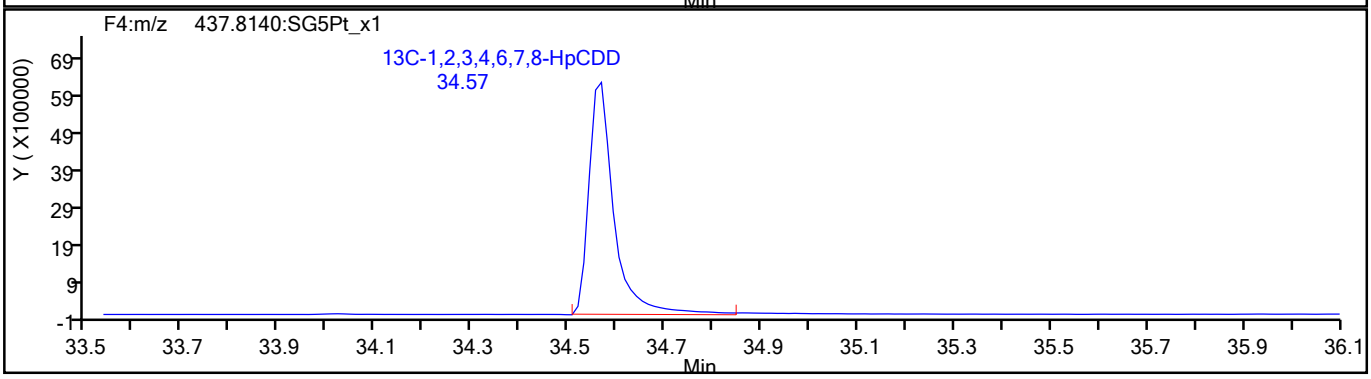

781724

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

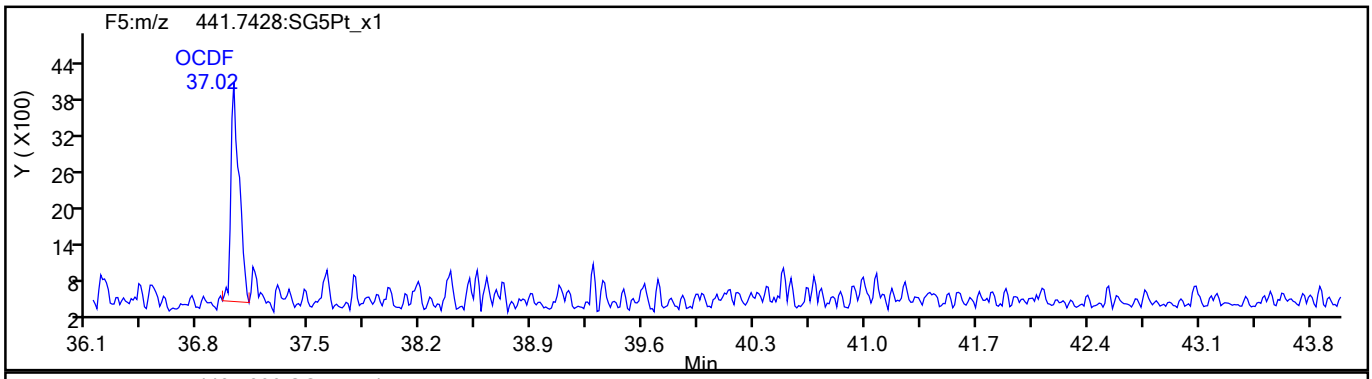

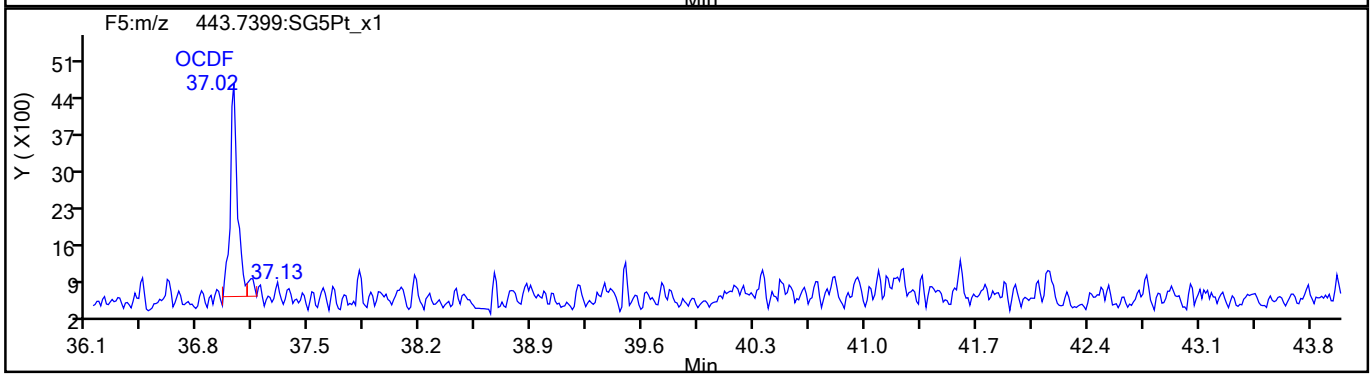

OCDF Standards

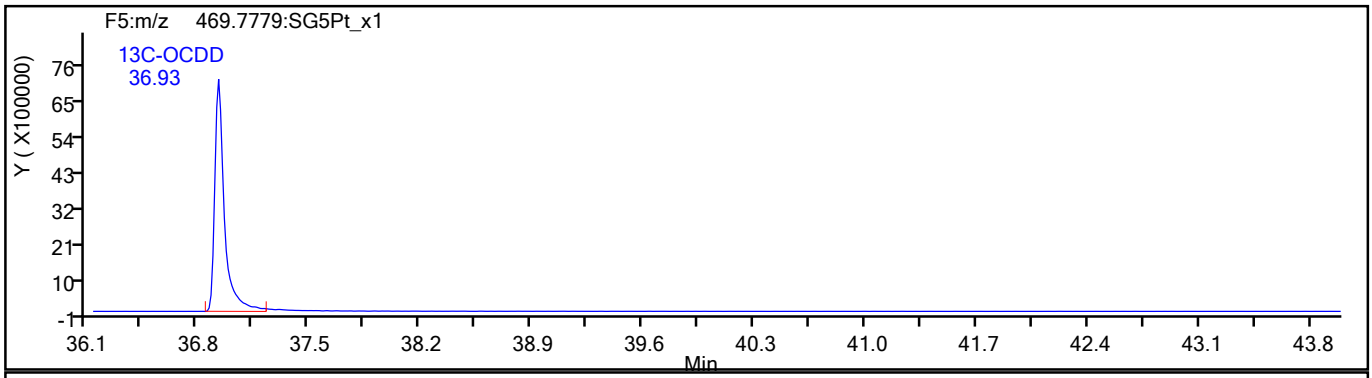

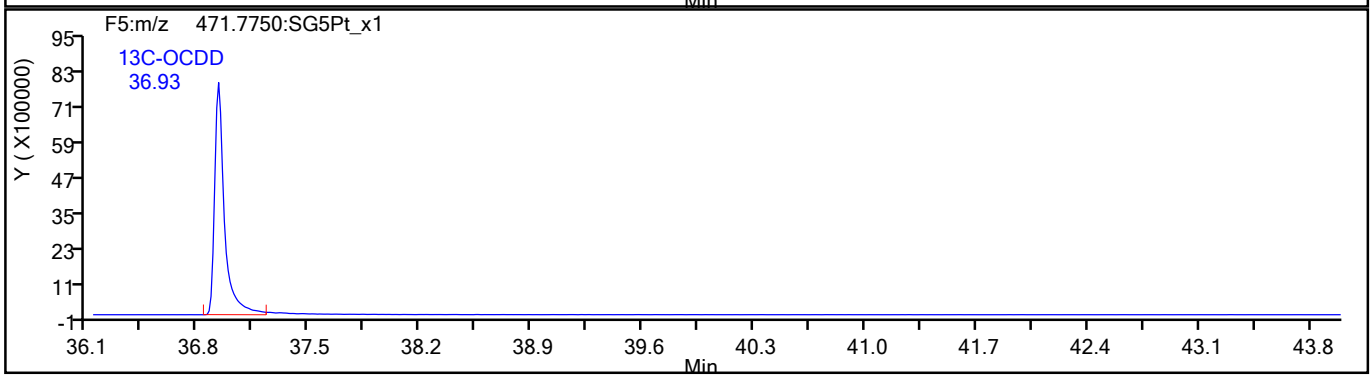

781725

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

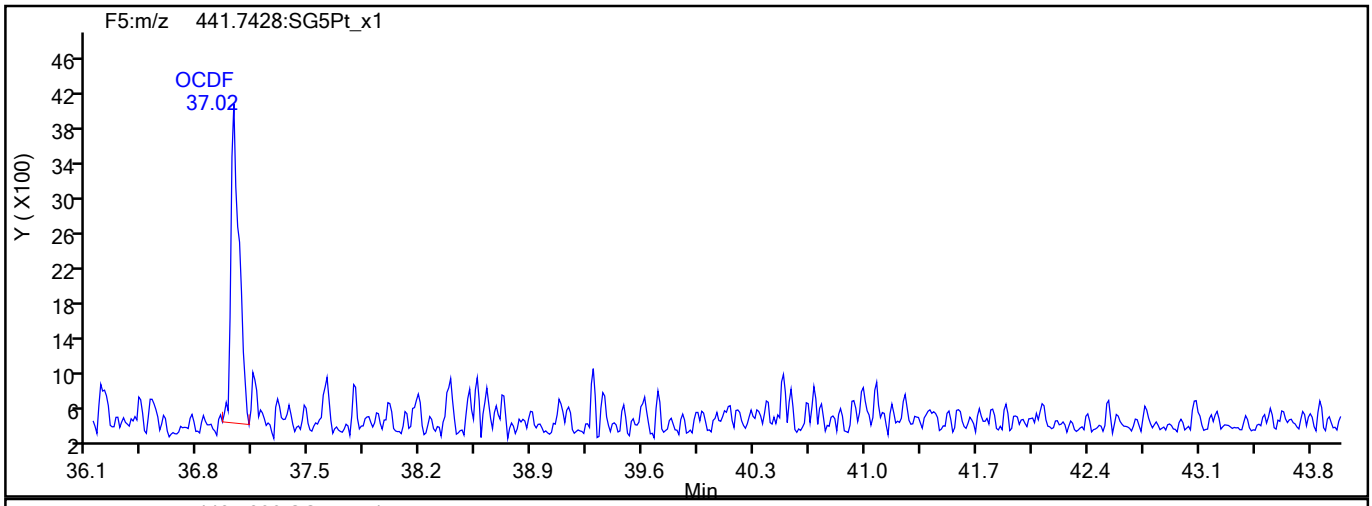

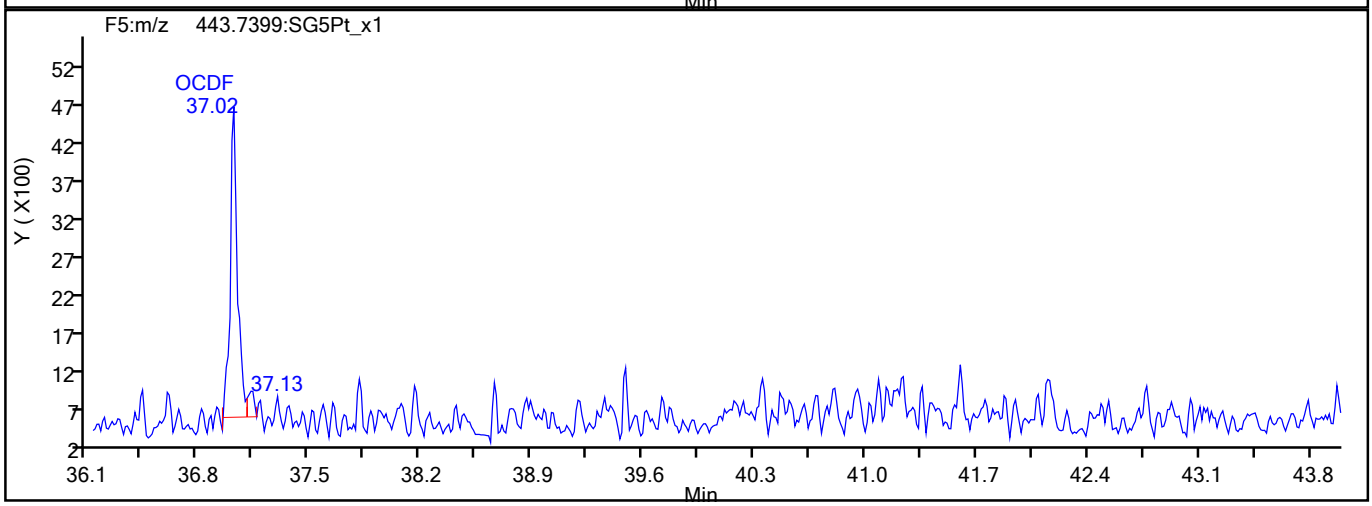

OCDF Interference Mass

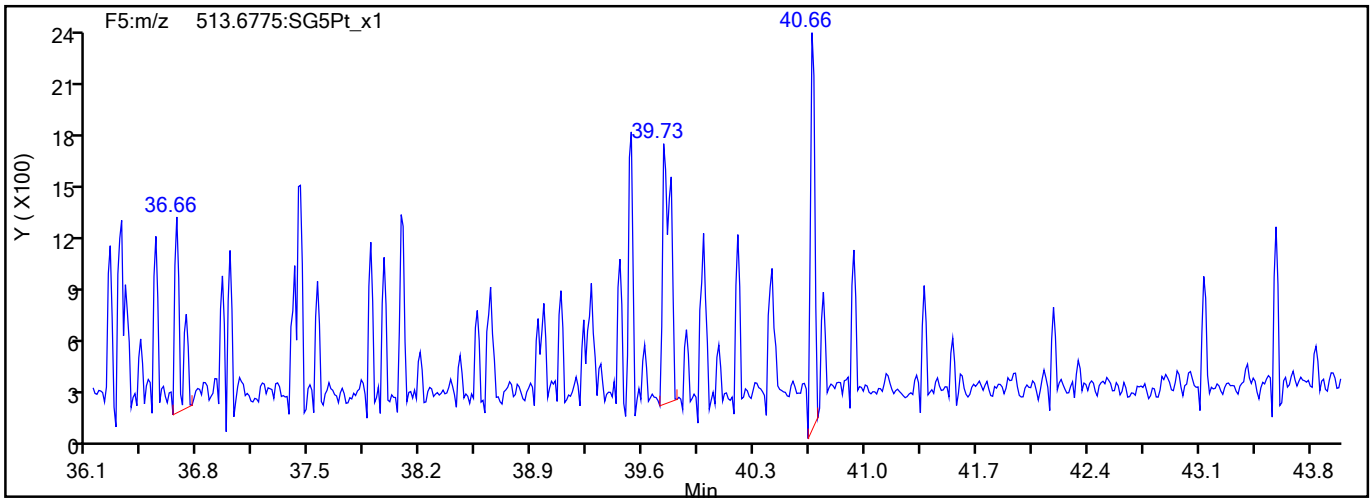

781726

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

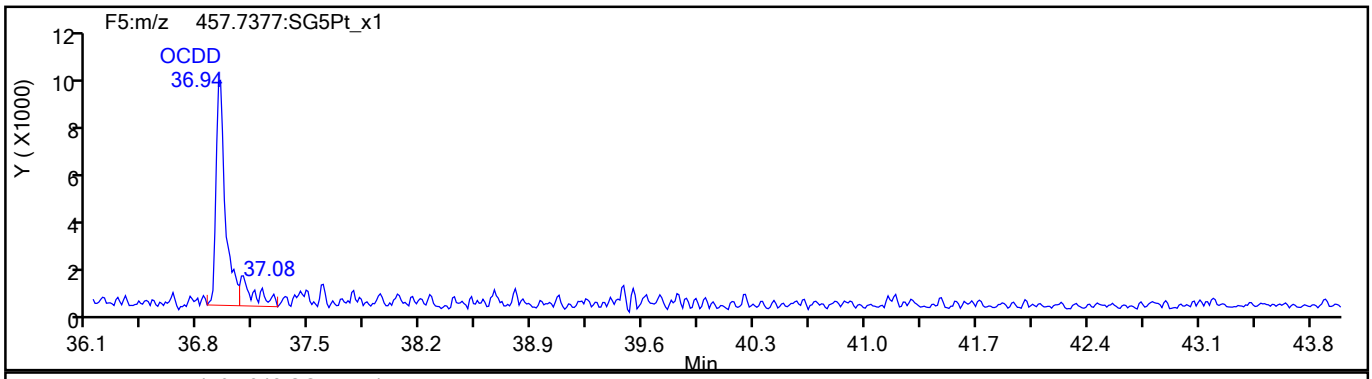

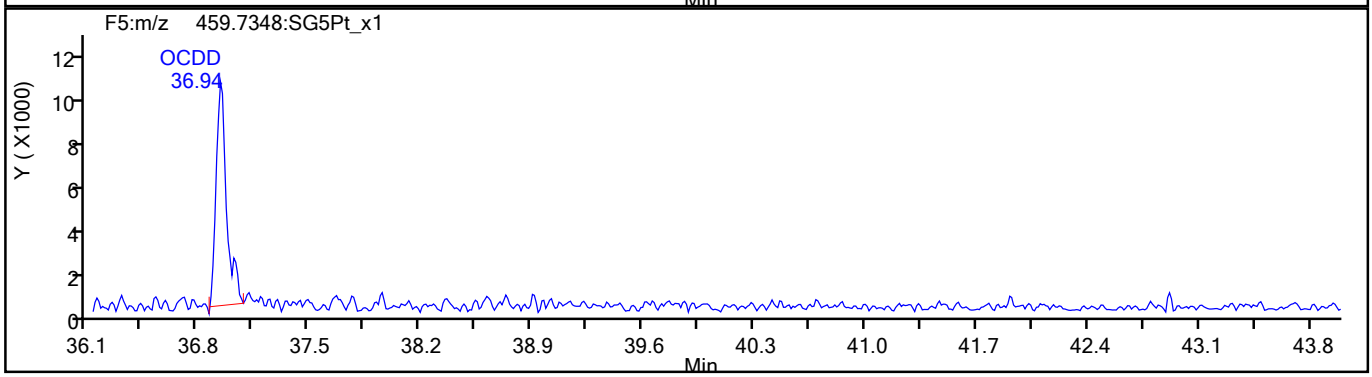

OCDD Standards

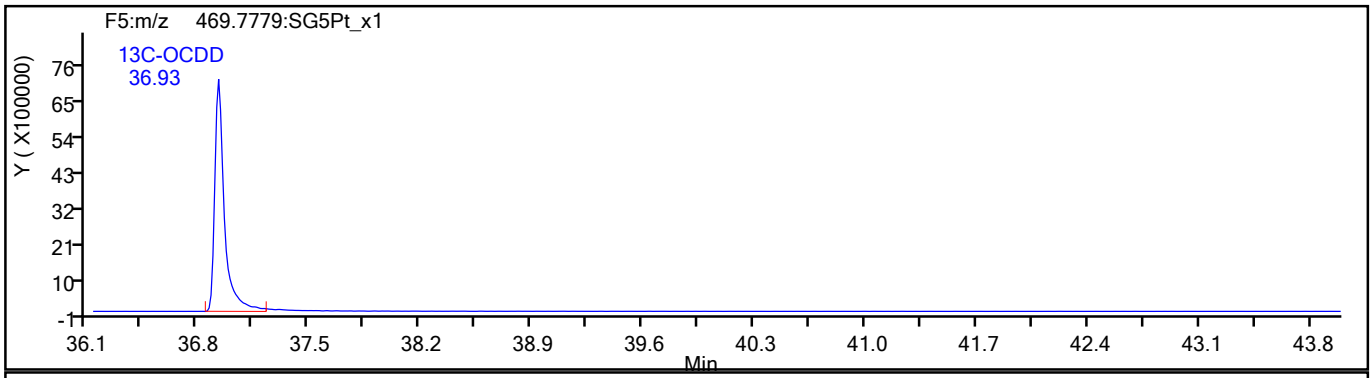

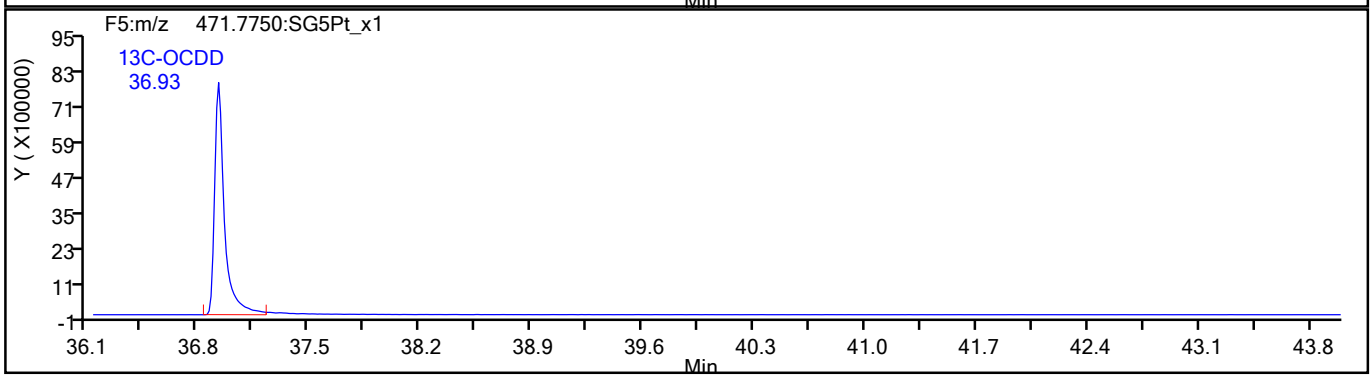

781727

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

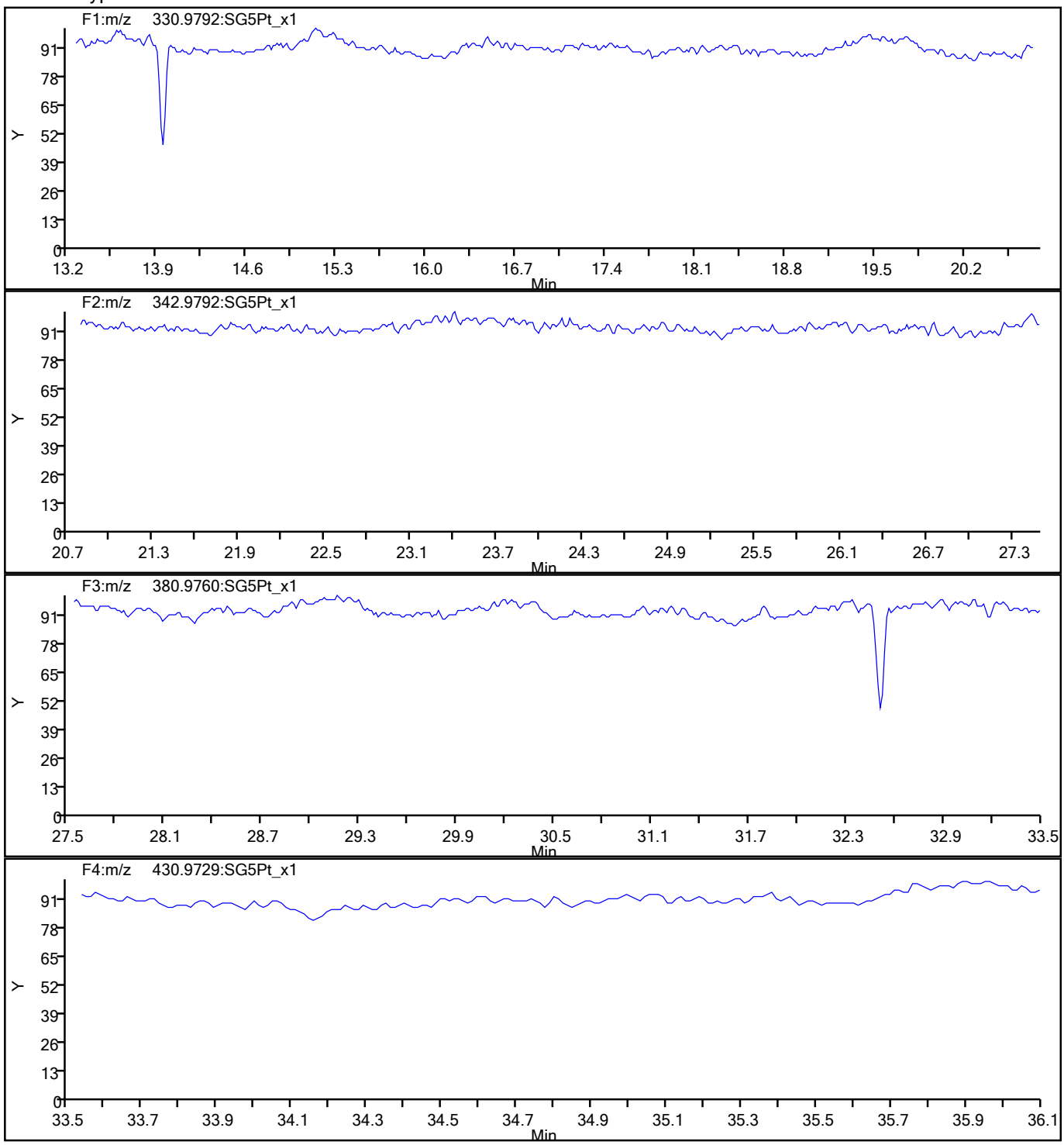

781728

Report Date: 18-Aug-2021 08:51:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_14.d		
Injection Date:	14-Aug-2021 02:56:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

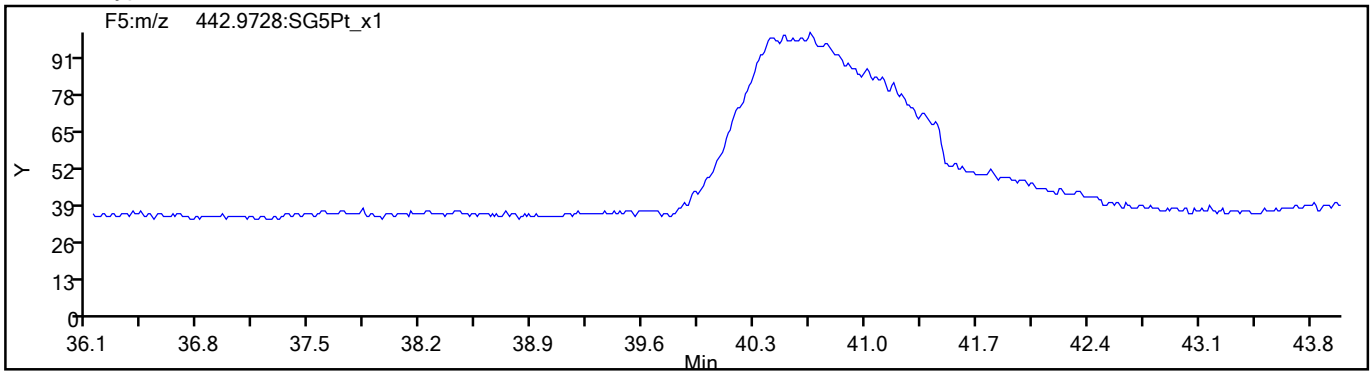

781729

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-2
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-512871/2-A
Matrix: Solid
Lab File ID: 13AU2110D5_15.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10(g)
Date Analyzed: 08/14/2021 03:41
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	19.5		1.0	0.044
51207-31-9	2,3,7,8-TCDF	20.7		1.0	0.046
40321-76-4	1,2,3,7,8-PeCDD	105		5.0	0.16
57117-41-6	1,2,3,7,8-PeCDF	105		5.0	0.39
57117-31-4	2,3,4,7,8-PeCDF	96.3		5.0	0.41
39227-28-6	1,2,3,4,7,8-HxCDD	95.0		5.0	0.41
57653-85-7	1,2,3,6,7,8-HxCDD	106		5.0	0.43
19408-74-3	1,2,3,7,8,9-HxCDD	107		5.0	0.38
70648-26-9	1,2,3,4,7,8-HxCDF	93.4		5.0	0.61
57117-44-9	1,2,3,6,7,8-HxCDF	105		5.0	0.62
72918-21-9	1,2,3,7,8,9-HxCDF	103		5.0	0.51
60851-34-5	2,3,4,6,7,8-HxCDF	104		5.0	0.51
35822-46-9	1,2,3,4,6,7,8-HpCDD	104		5.0	0.42
67562-39-4	1,2,3,4,6,7,8-HpCDF	106		5.0	0.99
55673-89-7	1,2,3,4,7,8,9-HpCDF	96.5		5.0	1.2
3268-87-9	OCDD	206		10	0.26
39001-02-0	OCDF	202		10	0.20
41903-57-5	Total TCDD	19.5		1.0	0.044
30402-14-3	Total TCDF	21.0		1.0	0.046
36088-22-9	Total PeCDD	105		5.0	0.16
30402-15-4	Total PeCDF	202		5.0	0.40
34465-46-8	Total HxCDD	308		5.0	0.41
55684-94-1	Total HxCDF	405		5.0	0.56
37871-00-4	Total HpCDD	104		5.0	0.42
38998-75-3	Total HpCDF	202		5.0	1.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-2
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-512871/2-A
Matrix: Solid
Lab File ID: 13AU2110D5_15.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10(g)
Date Analyzed: 08/14/2021 03:41
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		20-175
89059-46-1	13C-2,3,7,8-TCDF	56		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	57		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	56		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	59		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	53		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	59		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	53		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	53		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	60		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	58		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	66		20-186
114423-97-1	13C-OCDD	64		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	81		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d
Lims ID: LCS 320-512871/2-A
Client ID:
Sample Type: LCS
Inject. Date: 14-Aug-2021 03:41:25 ALS Bottle#: 16 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-512871/2-a lcs 320-512871/2-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 08:51:16 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:35:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	115231230	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	105553328	0.76	1.6249	56.4	56.4	0.1127	0.1127	56.37	
2,3,7,8-TCDF	17.371	11207688	0.75	1.0239	10.4	10.4	0.0232	0.0232	104	
A Non-2,3,7,8-sub-TCDF	17.046	140077	0.89	1.0239	0.1296	0.1296	0.0232	0.1296	0.00	
S Total TCDF					10.5	10.5	0.0232	0.0232		
D 13C-2,3,7,8-TCDD	18.066	61252097	0.81	0.8993	59.1	59.1	0.1143	0.1143	59.11	
2,3,7,8-TCDD	18.081	7488678	0.77	1.2541	9.749	9.749	0.0221	0.0221	97.49	
$ 37Cl4-2,3,7,8-TCDD	18.081	41195584		1.1071	32.3	32.3	0.0600	0.0600	80.73	
A Non-2,3,7,8-sub-TCDD	17.499						0.0221	0.0221		
S Total TCDD					9.749	9.749	0.0221	0.0221		
D 13C-1,2,3,7,8-PeCDF	22.381	77390797	1.58	1.2101	55.5	55.5	0.1432	0.1432	55.50	
1,2,3,7,8-PeCDF	22.408	43084338	1.61	1.0611	52.5	52.5	0.1930	0.1930	105	
D 13C-2,3,4,7,8-PeCDF	23.717	84091487	1.58	1.2395	58.9	58.9	0.1398	0.1398	58.88	
2,3,4,7,8-PeCDF	23.744	41232187	1.61	1.0184	48.1	48.1	0.2036	0.2036	96.29	
A F1 PeCDFs	20.093						0.0126	0.0126		
A Non-2,3,7,8-sub-PeCDF	23.241	456307	1.59	1.0398	0.5435	0.5435	0.1982	0.5435	0.00	
S Total PeCDF					101.2	101.2	0.1983	0.1983		
D 13C-1,2,3,7,8-PeCDD	24.440	49630526	1.60	0.7612	56.6	56.6	0.0680	0.0680	56.58	
1,2,3,7,8-PeCDD	24.467	27194407	1.59	1.0484	52.3	52.3	0.0775	0.0775	105	
A Non-2,3,7,8-sub-PeCDD	23.349						0.0775	0.0775		
S Total PeCDD					52.3	52.3	0.0775	0.0775		
D 13C-1,2,3,4,7,8-HxCDF	30.516	70184264	0.52	1.0837	58.9	58.9	0.2489	0.2489	58.89	
1,2,3,4,7,8-HxCDF	30.543	35549281	1.22	1.0851	46.7	46.7	0.3073	0.3073	93.36	
D 13C-1,2,3,6,7,8-HxCDF	30.702	65678666	0.52	1.1279	52.9	52.9	0.2391	0.2391	52.95	
1,2,3,6,7,8-HxCDF	30.716	38744685	1.21	1.1260	52.4	52.4	0.3112	0.3112	105	
D 13C-2,3,4,6,7,8-HxCDF	31.528	61844348	0.51	1.0637	52.9	52.9	0.2535	0.2535	52.87	
2,3,4,6,7,8-HxCDF	31.541	37591874	1.23	1.1675	52.1	52.1	0.2525	0.2525	104	
D 13C-1,2,3,7,8,9-HxCDF	32.326	56448795	0.52	0.9676	53.1	53.1	0.2787	0.2787	53.05	
1,2,3,7,8,9-HxCDF	32.340	33913078	1.23	1.1664	51.5	51.5	0.2572	0.2572	103	
A Non-2,3,7,8-sub-HxCDF	30.197						0.2799	0.2799		
S Total HxCDF					202.6	202.6	0.2821	0.2821		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.140	109972872	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	46921549	1.24	0.7334	58.2	58.2	0.3129	0.3129	58.17	
1,2,3,4,7,8-HxCDD	31.727	23722535	1.24	1.0640	47.5	47.5	0.2046	0.2046	95.03	
D 13C-1,2,3,6,7,8-HxCDD	31.820	51612353	1.23	0.8802	53.3	53.3	0.2607	0.2607	53.32	
1,2,3,6,7,8-HxCDD	31.834	27297748	1.28	1.0001	52.9	52.9	0.2159	0.2159	106	
1,2,3,7,8,9-HxCDD	32.153	29942026	1.29	1.1325	53.7	53.7	0.1914	0.1914	107	
A Non-2,3,7,8-sub-HxCDD	30.882						0.2035	0.2035		
S Total HxCDD					154.1	154.1	0.2040	0.2040		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	49580886	0.42	0.7730	58.3	58.3	0.6774	0.6774	58.32	
1,2,3,4,6,7,8-HpCDF	33.778	37796066	1.05	1.4413	52.9	52.9	0.4958	0.4958	106	
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	50883302	0.43	0.7008	66.0	66.0	0.7472	0.7472	66.02	
1,2,3,4,7,8,9-HpCDF	34.872	32351903	1.05	1.3174	48.3	48.3	0.6144	0.6144	96.53	
A Non-2,3,7,8-sub-HpCDF	34.319						0.5503	0.5503		
S Total HpCDF					101.2	101.2	0.5551	0.5551		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	42645983	1.00	0.6472	59.9	59.9	0.3155	0.3155	59.92	
1,2,3,4,6,7,8-HpCDD	34.580	24337835	1.04	1.0943	52.2	52.2	0.2110	0.2110	104	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2110	0.2110		
S Total HpCDD					52.2	52.2	0.2110	0.2110		
D 13C-OCDD	36.926	63077334	0.87	0.4472	128.3	128.3	0.1873	0.1873	64.14	
OCDF	37.022	45873571	0.90	1.4382	101.1	101.1	0.0988	0.0988	101	
OCDD	36.938	35965490	0.89	1.1070	103.0	103.0	0.1311	0.1311	103	

QC Flag Legend

Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d
Lims ID: LCS 320-512871/2-A
Client ID:
Sample Type: LCS
Inject. Date: 14-Aug-2021 03:41:25 ALS Bottle#: 16 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-512871/2-a lcs 320-512871/2-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 08:51:16 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:35:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		51853905	12330607	4733	11832	2605		
333.9339	17.870	17.855	1		63377325	15037575	6524	16310	2305	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.341	1	0.971	45689609	10782443	10842	27105	995		
317.9389	17.356	17.341	1	0.971	59863719	14211241	9208	23020	1543	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.356	1	1.001	4813232	1162961	1206	3015	964		
305.8987	17.371	17.356	1	1.001	6394456	1518492	1165	2912	1303	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.993	17.046	-3	0.979	65972	14005	1206	3015	12		
305.8987	16.993	17.046	-3	0.979	74105	16464	1165	2912	14	0.89(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	27416516	6062083	4733	11832	1281		
333.9339	18.066	18.051	1	1.011	33835581	7400821	6524	16310	1134	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.081	18.066	1	1.001	3251139	746582	770	1925	970		
321.8936	18.081	18.066	1	1.001	4237539	961034	722	1805	1331	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.081	18.066	1	1.012	41195584	9256836	7272	18180	1273		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.499						770	1925			
321.8936	17.499						722	1805			
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.252	47381376	7778559	11370	28425	684		
353.8970	22.381	22.367	1	1.252	30009421	4858529	7604	19010	639	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.408	22.380	2	1.001	26600700	4378314	6230	15575	703		
341.8567	22.408	22.380	2	1.001	16483638	2687423	4124	10310	652	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.327	51490230	7574336	11370	28425	666		
353.8970	23.717	23.703	1	1.327	32601257	4912381	7604	19010	646	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.744	23.730	1	1.001	25431555	3809626	6230	15575	611		
341.8567	23.744	23.730	1	1.001	15800632	2392982	4124	10310	580	1.61(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						193	482			
341.8567	20.093						464	1160			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.926	23.241	-19	1.024	279957	36990	6230	15575	6		
341.8567	22.926	23.241	-19	1.024	176350	23783	4124	10310	6	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.368	30539559	4231508	3175	7937	1333		
369.8919	24.440	24.426	1	1.368	19090967	2696195	2492	6230	1082	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.467	24.453	1	1.001	16694942	2386011	1394	3485	1712		
357.8516	24.467	24.453	1	1.001	10499465	1505884	858	2145	1755	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.349						1394	3485			
357.8516	23.349						858	2145			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	24031785	4415652	10735	26837	411		
385.8610	30.516	30.503	1	0.949	46152479	8532250	20368	50920	419	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.543	30.529	1	1.001	19519987	3669713	9417	23542	390		
375.8178	30.543	30.529	1	1.001	16029294	3004945	7853	19632	383	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	22414046	4193213	10735	26837	391		
385.8610	30.702	30.689	1	0.955	43264620	8126419	20368	50920	399	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.716	30.702	1	1.000	21244721	3920269	9417	23542	416		
375.8178	30.716	30.702	1	1.000	17499964	3297394	7853	19632	420	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.528	31.514	1	0.981	21004087	4975381	10735	26837	463		
385.8610	31.528	31.514	1	0.981	40840261	9669715	20368	50920	475	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.541	31.528	1	1.000	20766734	5080534	9417	23542	540		
375.8178	31.541	31.528	1	1.000	16825140	4097793	7853	19632	522	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	19362293	4977806	10735	26837	464		
385.8610	32.326	32.313	1	1.006	37086502	9414965	20368	50920	462	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.340	32.326	1	1.000	18692446	4750271	9417	23542	504		
375.8178	32.340	32.326	1	1.000	15220632	3903021	7853	19632	497	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						9417	23542			
375.8178	30.197						7853	19632			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		61025264	16068512	12879	32197	1248		
403.8529	32.140	32.127	1		48947608	12762634	13586	33965	939	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.987	25951077	7054678	12879	32197	548		
403.8529	31.714	31.701	1	0.987	20970472	5716444	13586	33965	421	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.727	31.714	1	1.000	13149700	3649582	5779	14447	632		
391.8127	31.727	31.714	1	1.000	10572835	2935500	5340	13350	550	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.820	31.807	1	0.990	28459630	7126523	12879	32197	553		
403.8529	31.820	31.807	1	0.990	23152723	5744575	13586	33965	423	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.834	31.820	1	1.000	15345401	3862293	5779	14447	668		
391.8127	31.834	31.820	1	1.000	11952347	2987819	5340	13350	560	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.140	1	1.014	16844530	4349054	5779	14447	753		
391.8127	32.153	32.140	1	1.014	13097496	3480143	5340	13350	652	1.29(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						5779	14447			
391.8127	30.882						5340	13350			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	14737136	4763194	17550	43875	271		
419.8220	33.766	33.754	1	1.051	34843750	10943116	42838	107095	255	0.42(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.766	1	1.000	19395705	6161268	22804	57010	270		
409.7789	33.778	33.766	1	1.000	18400361	5882333	22086	55215	266	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.847	1	1.085	15423004	4240492	17550	43875	242		
419.8220	34.860	34.847	1	1.085	35460298	9624824	42838	107095	225	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.860	1	1.000	16568462	4419421	22804	57010	194		
409.7789	34.860	34.860	0	1.000	15783441	4274456	22086	55215	194	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						22804	57010			
409.7789	34.319						22086	55215			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.556	1	1.076	21321662	6239773	12610	31525	495		
437.8140	34.568	34.556	1	1.076	21324321	6216415	10942	27355	568	1.00(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.568	1	1.000	12398120	3584249	5997	14992	598		
425.7737	34.580	34.568	1	1.000	11939715	3375269	5506	13765	613	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						5997	14992			
425.7737	34.301						5506	13765			
13C-OCDD											
469.7779	36.926	36.914	1	1.149	29393277	7160537	4446	11115	1611		
471.7750	36.926	36.914	1	1.149	33684057	8145317	5211	13027	1563	0.87(0.76-1.02)	
OCDF											
441.7428	37.022	37.010	1	1.003	21773786	5368569	1983	4957	2707		
443.7399	37.022	37.010	1	1.003	24099785	5933130	2368	5920	2506	0.90(0.76-1.02)	
OCDD											
457.7377	36.938	36.926	1	1.000	16982835	4084024	1811	4527	2255		
459.7348	36.938	36.926	1	1.000	18982655	4515668	2631	6577	1716	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d
Lims ID: LCS 320-512871/2-A
Client ID:
Inject. Date: 14-Aug-2021 03:41:25 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	105553328	24993684

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	105553328	24993684

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.993	65972	14005	74105	16464	0.1296	0.89	
Signal Totals:							
	65972	14005	74105	16464			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	140077	30469				0.89	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1296 = (140077 * 100.000) / (105553328 * 1.024)

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d
Lims ID: LCS 320-512871/2-A
Client ID:
Inject. Date: 14-Aug-2021 03:41:25 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 4

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	77390797	12637088
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	84091487	12486717

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	80741142	12561902

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.926	279957	36990	176350	23783	0.5435	1.59	
Signal Totals:							
	279957	36990	176350	23783			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	456307	60773				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5435 = (456307 * 100.000) / (80741142 * 1.040)

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

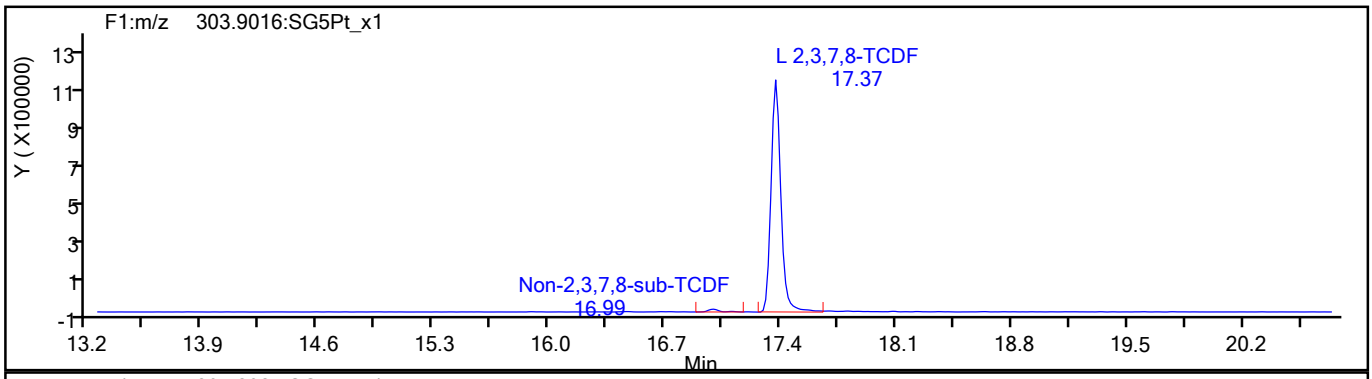

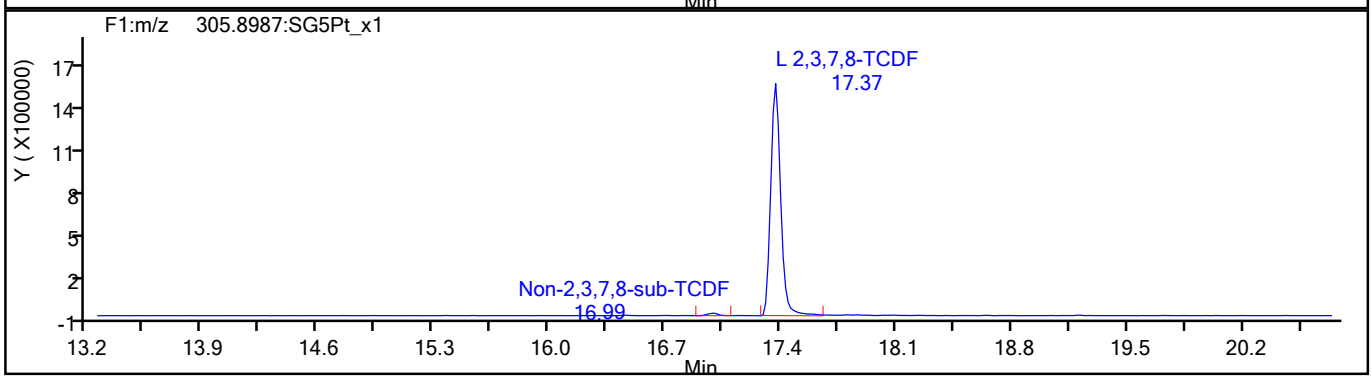

TCDF Standards

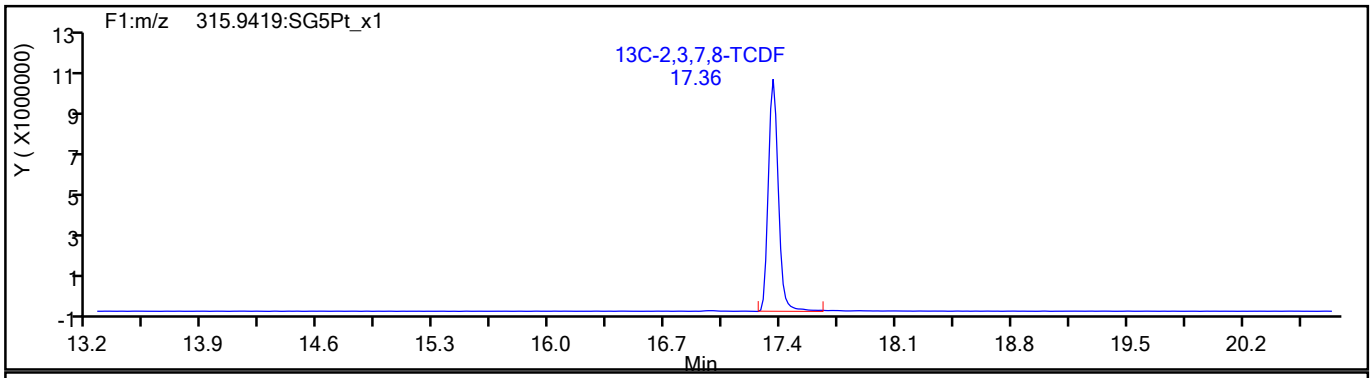

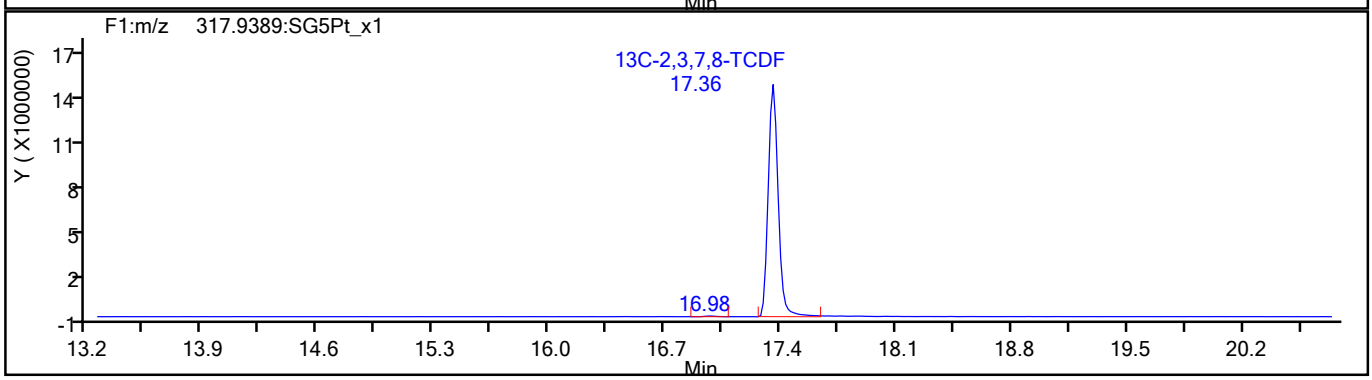

781740

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

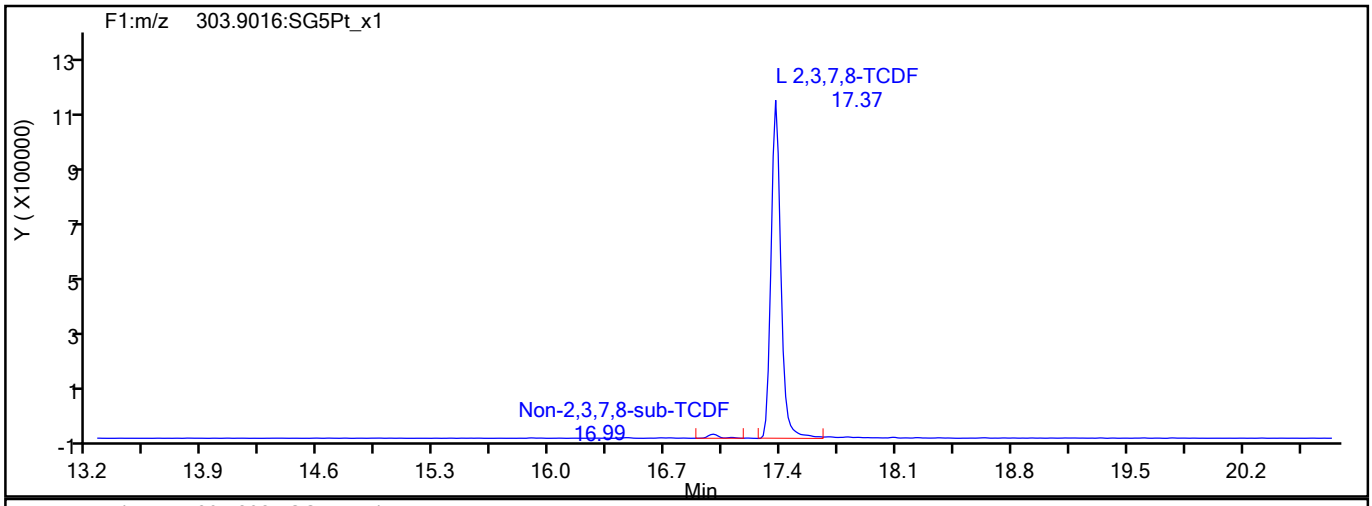

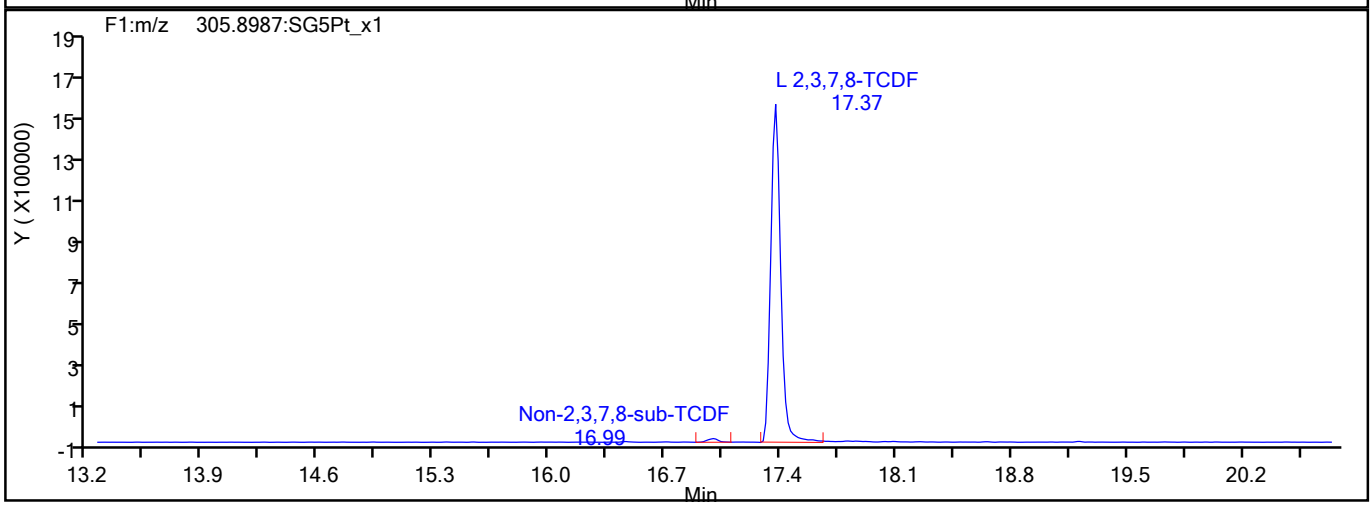

TCDF Interference Mass

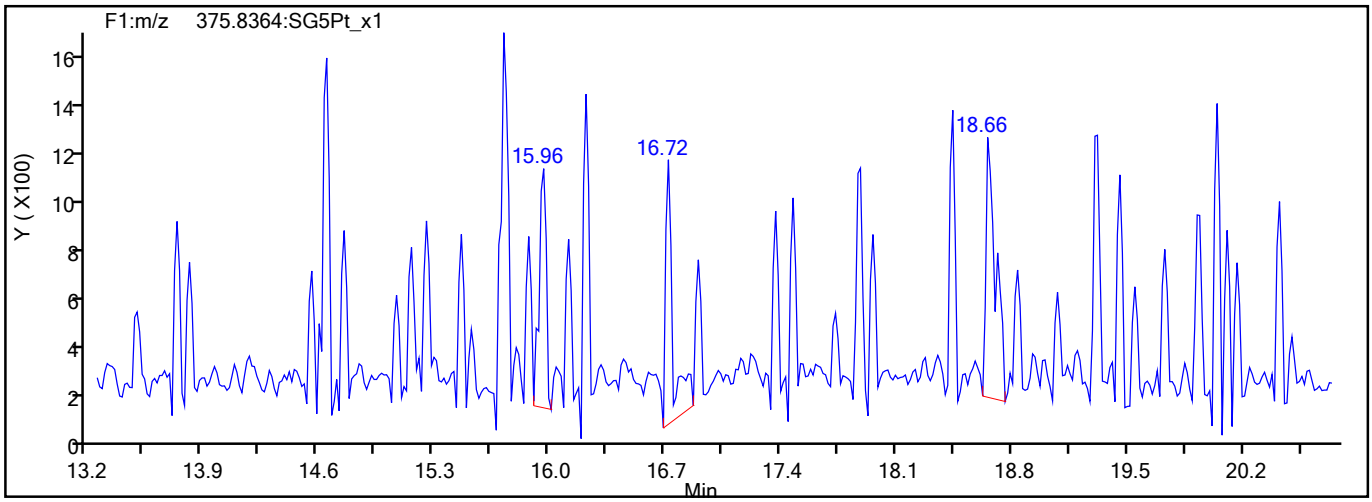

781741

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

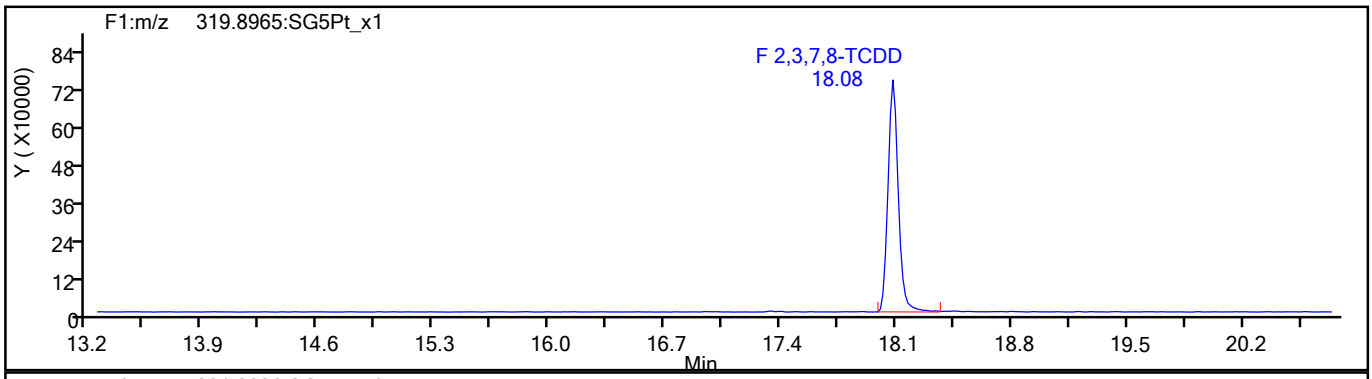

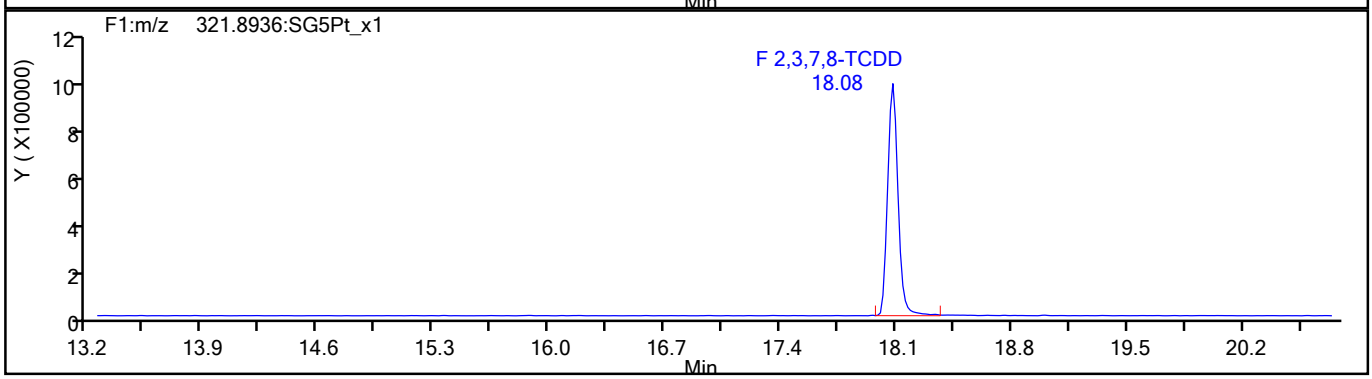

TCDD Standards

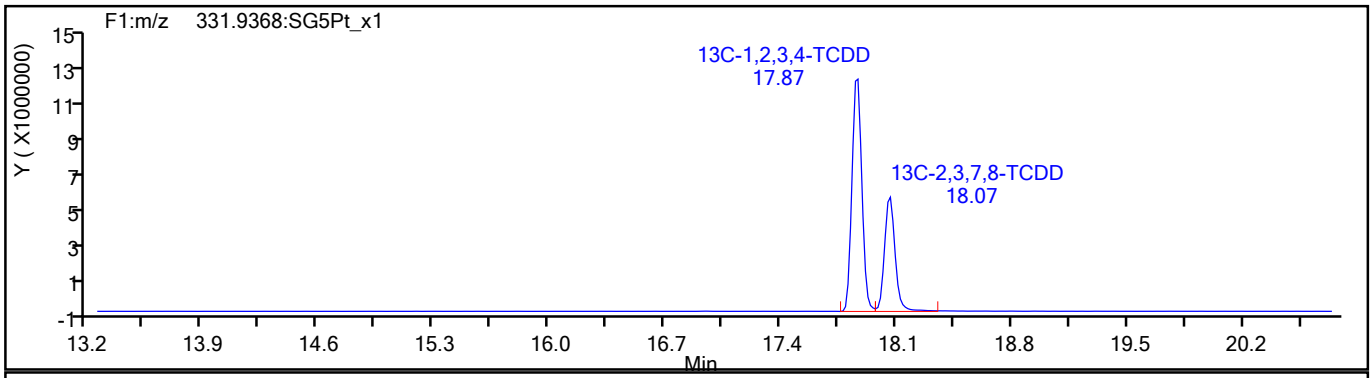

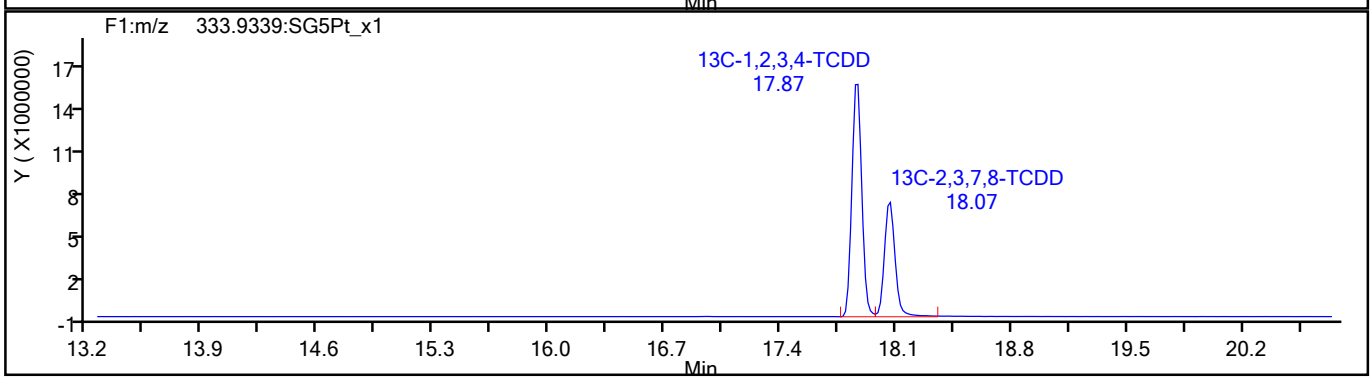

781742

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

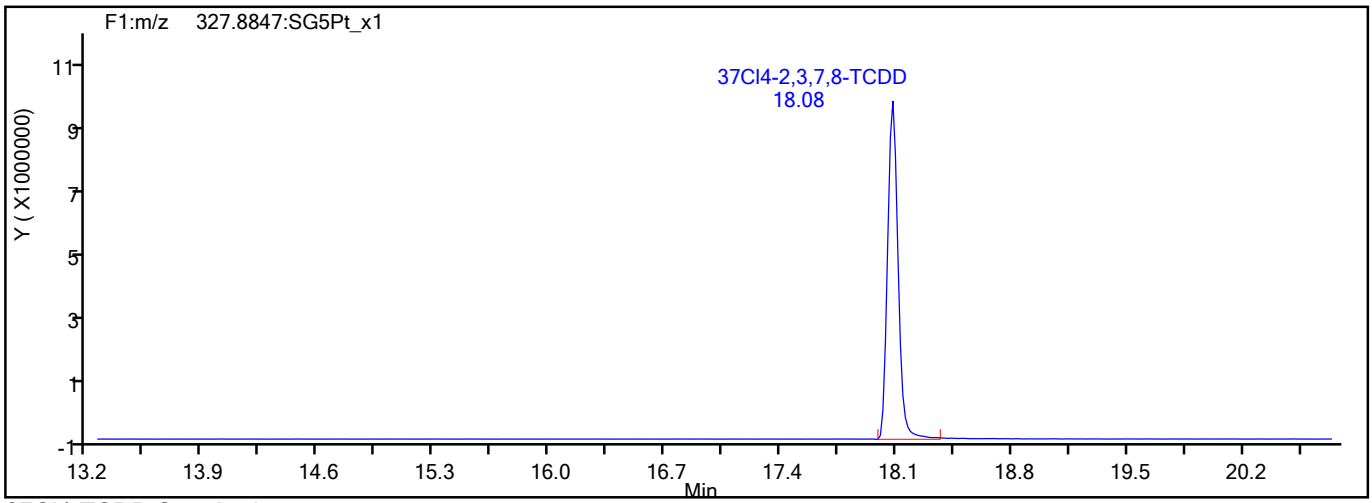

37Cl4-TCDD Standards

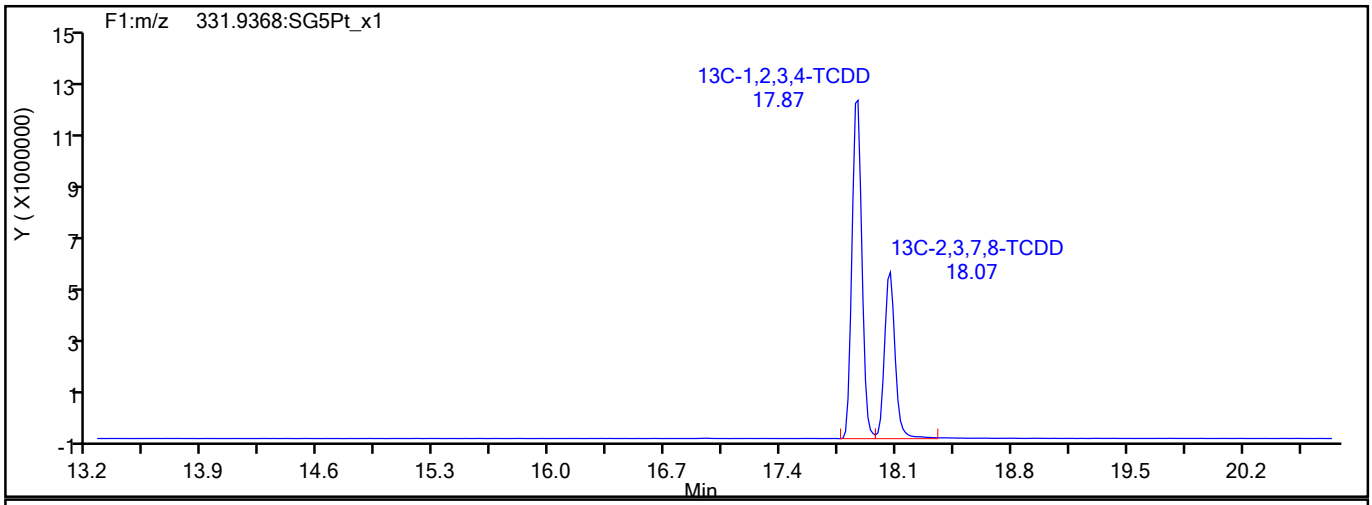

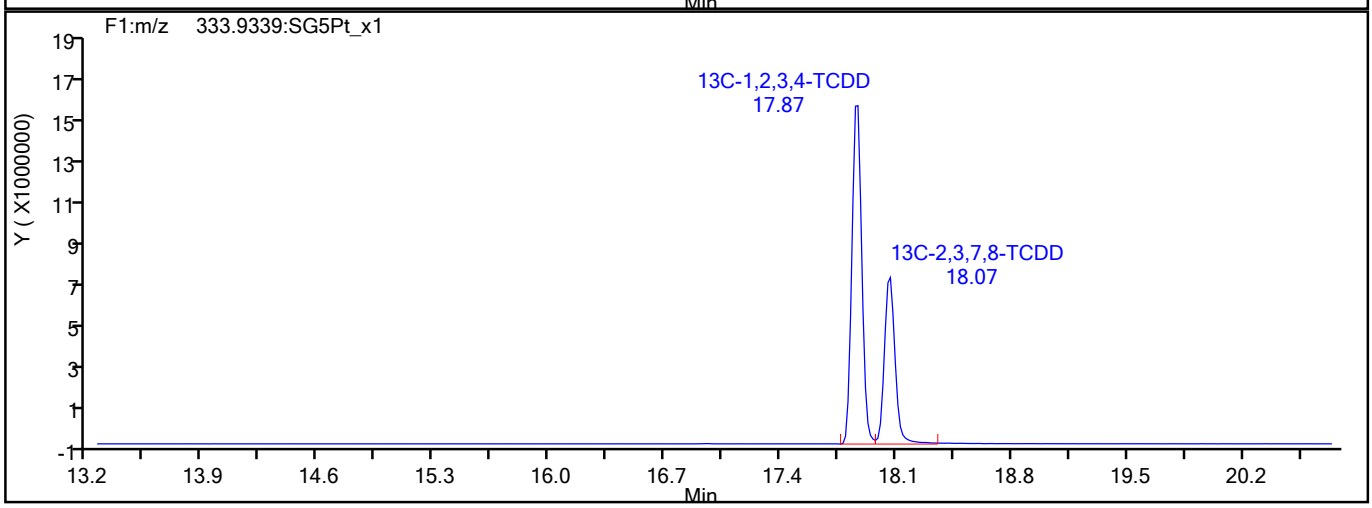

781743

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

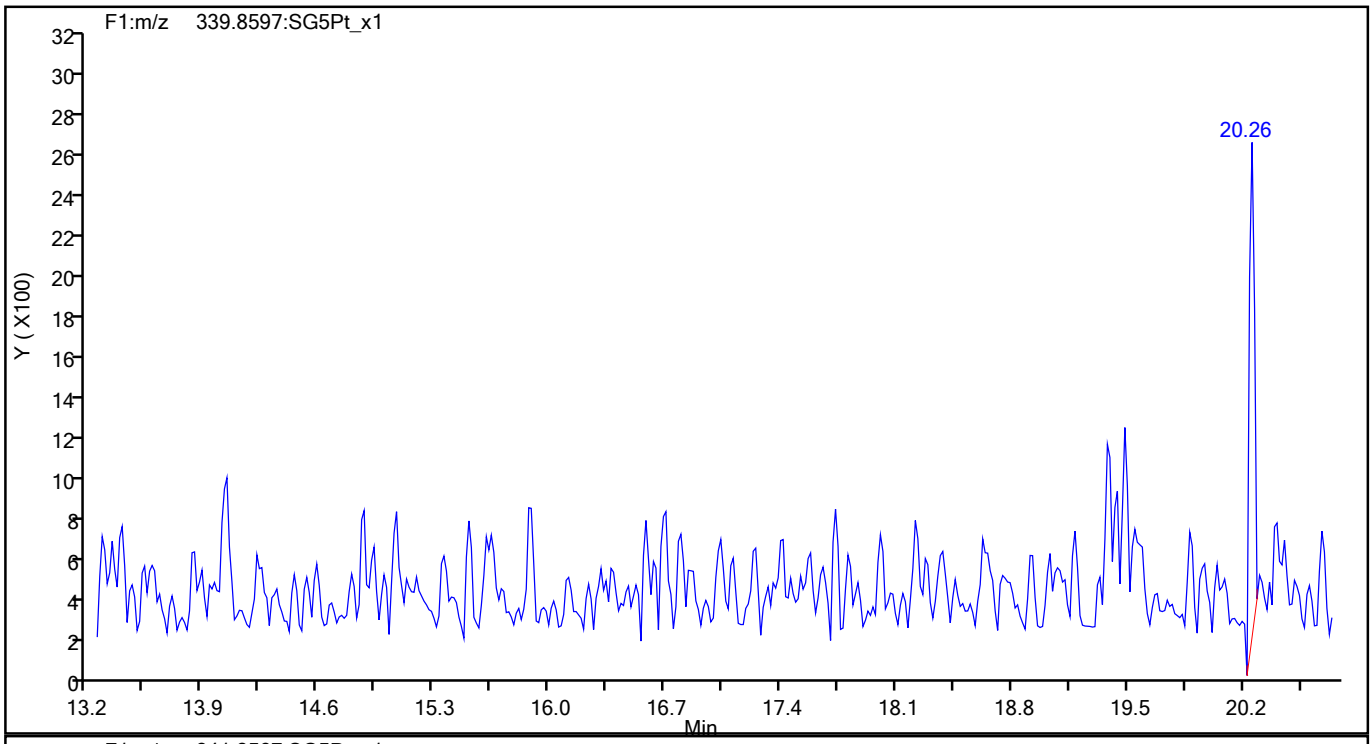

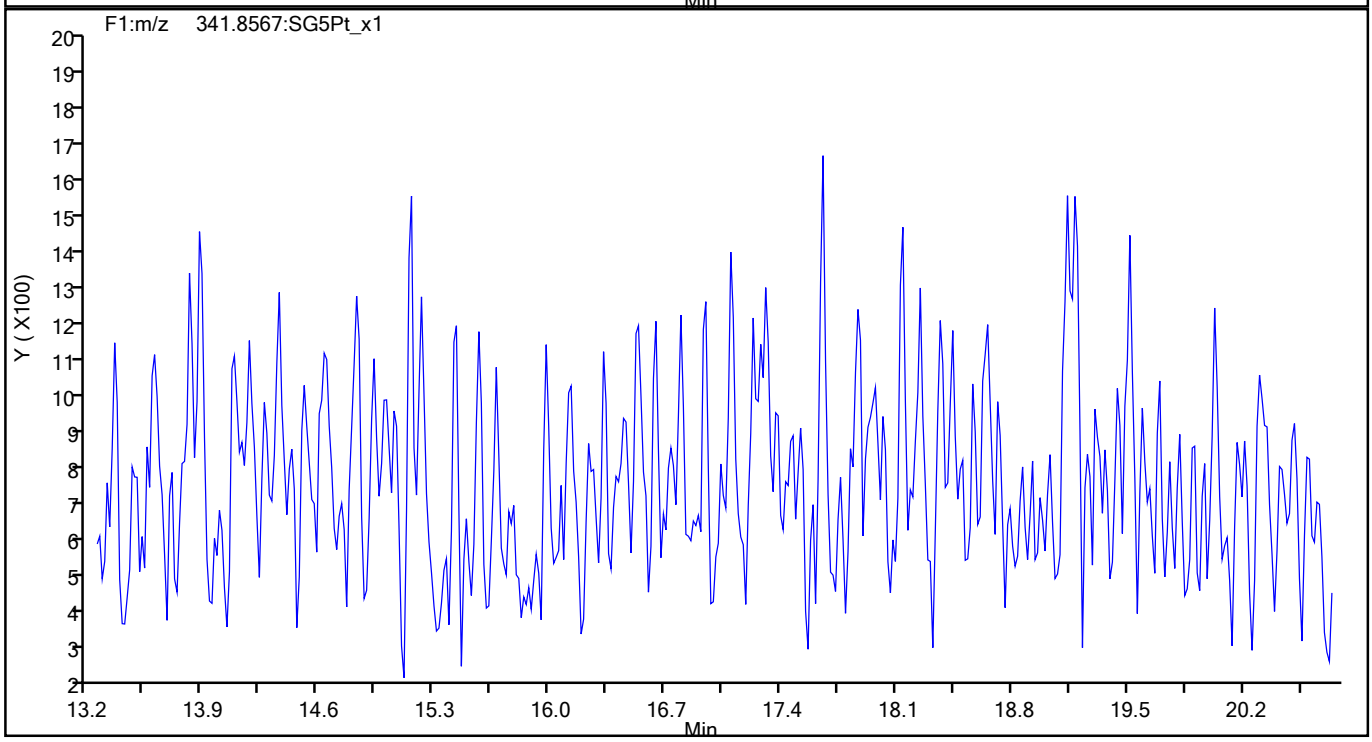

781744

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

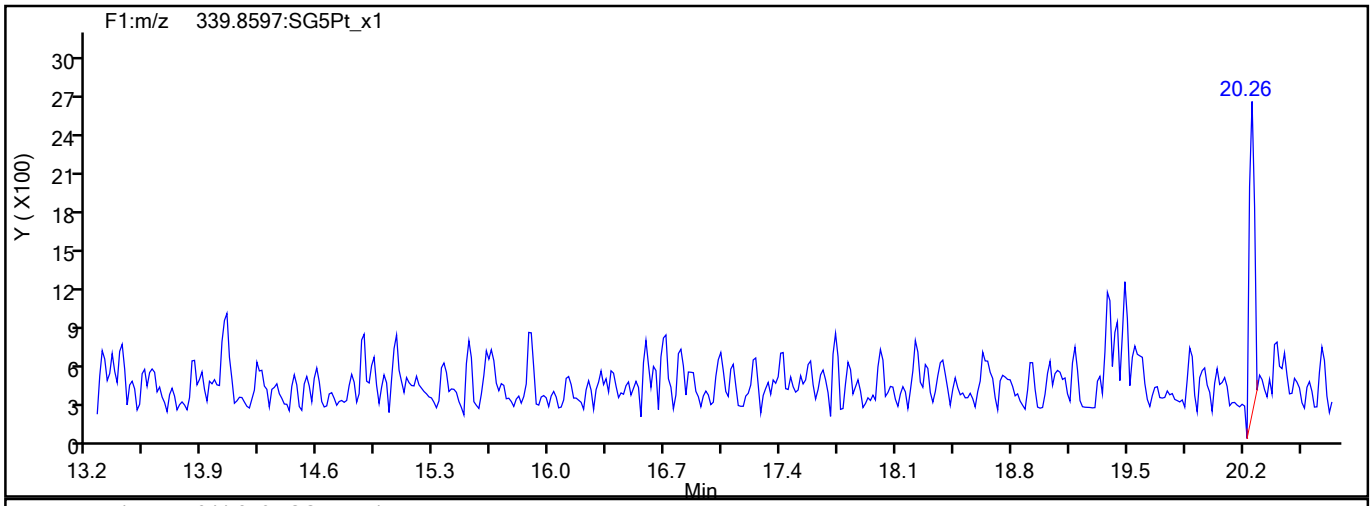

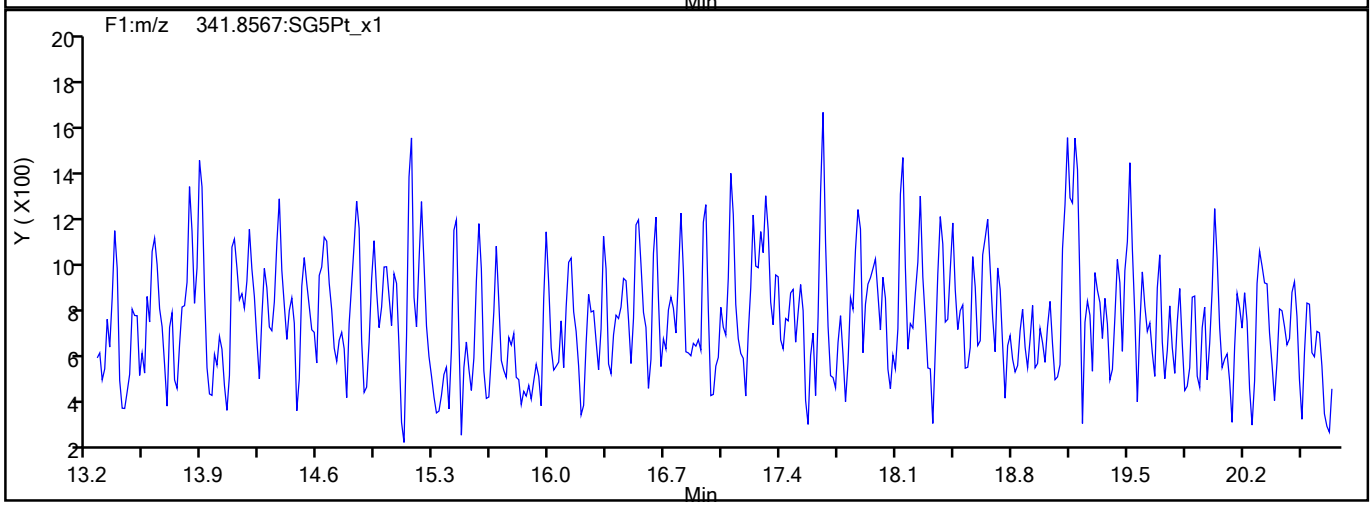

F1 PeCDFs Interference Mass

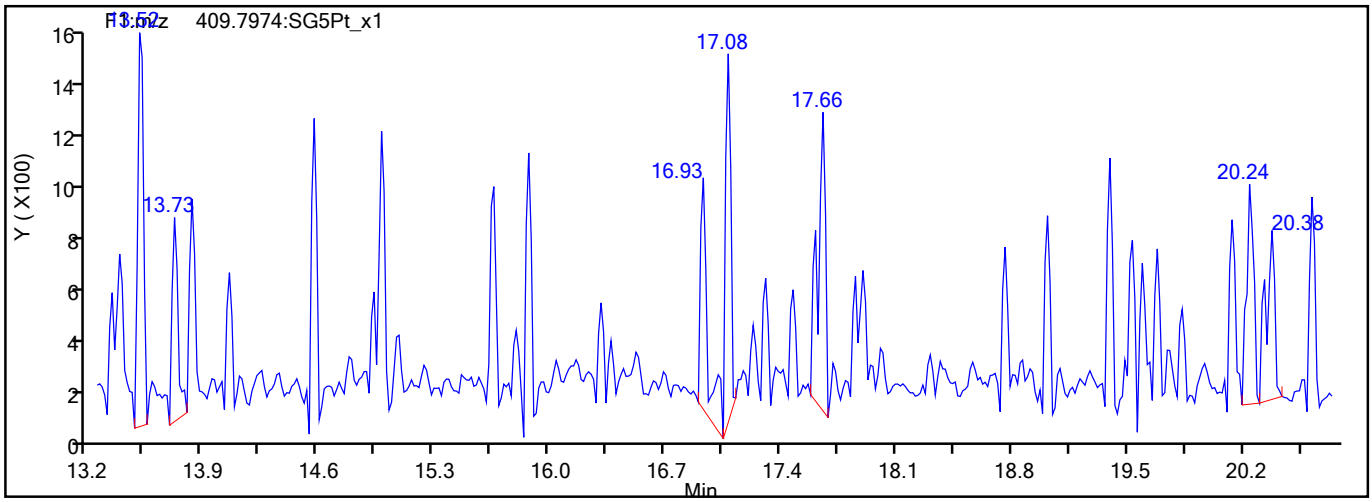

781745

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

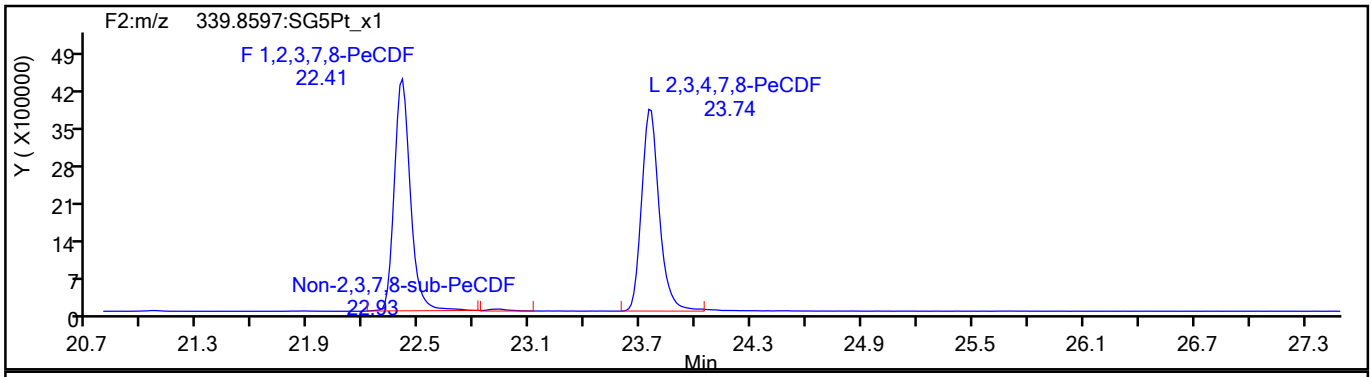

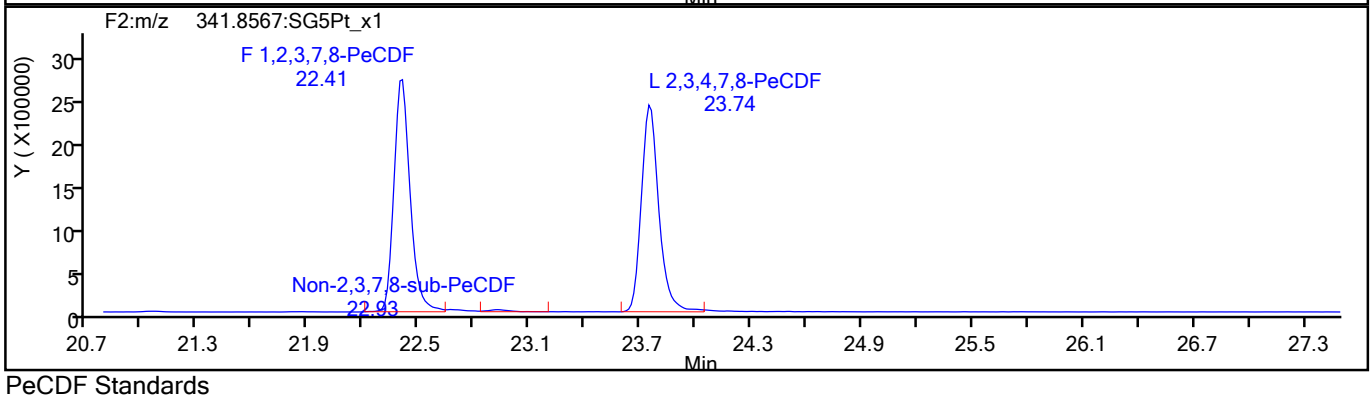

PeCDF Standards

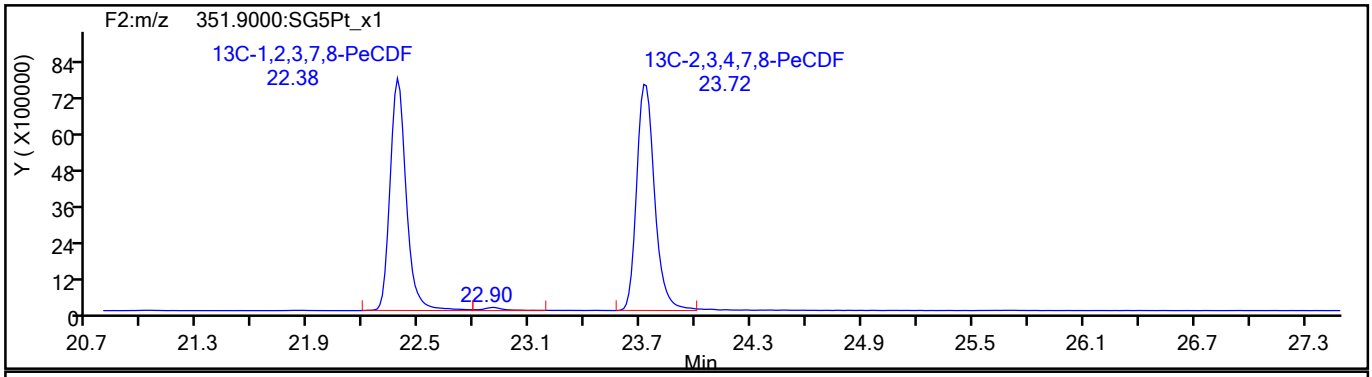

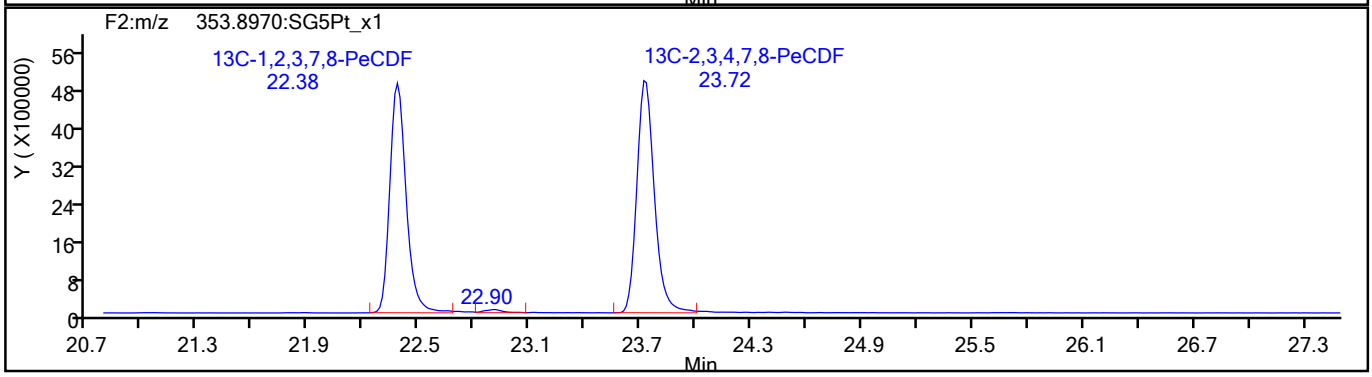

781746

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

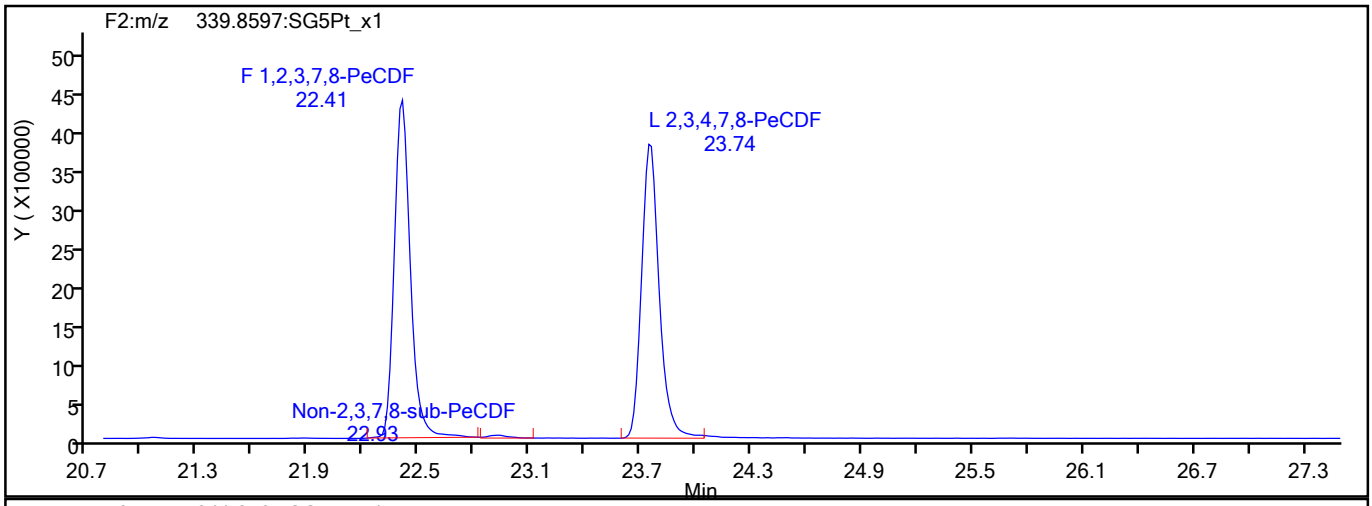

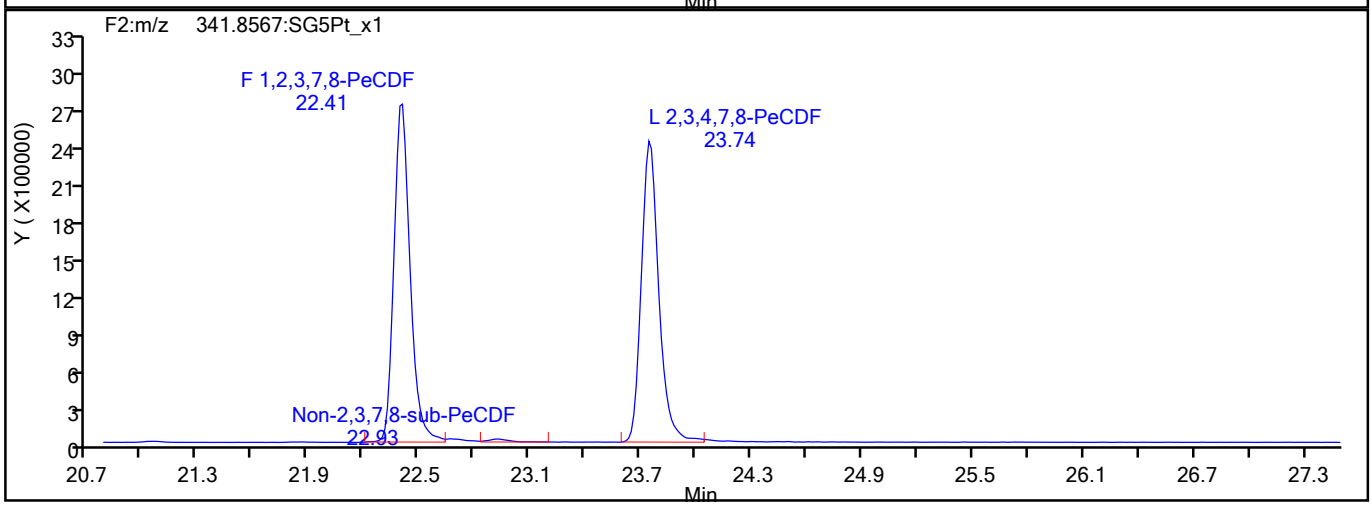

PeCDF Interference Mass

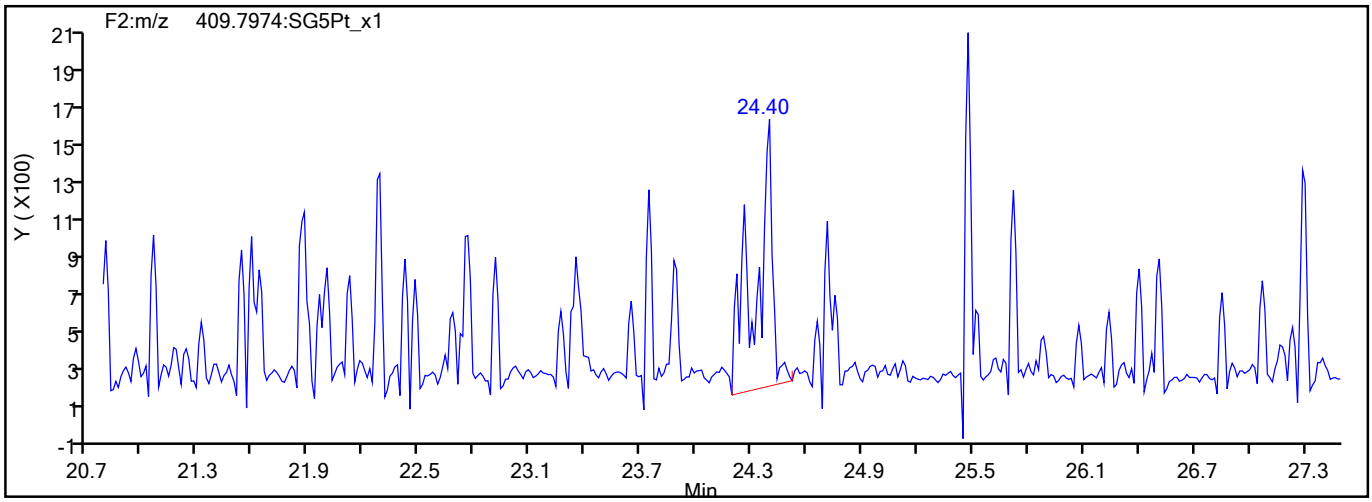

781747

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

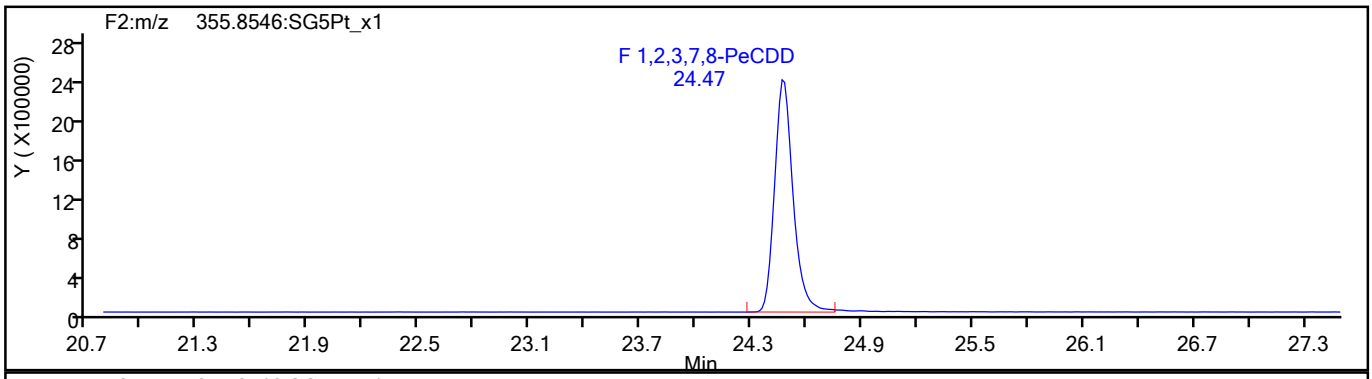

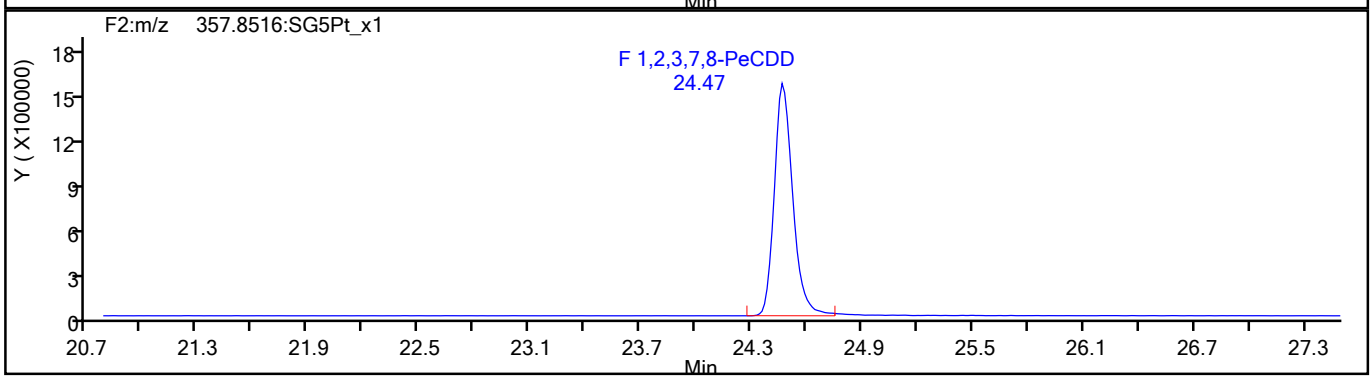

PeCDD Standards

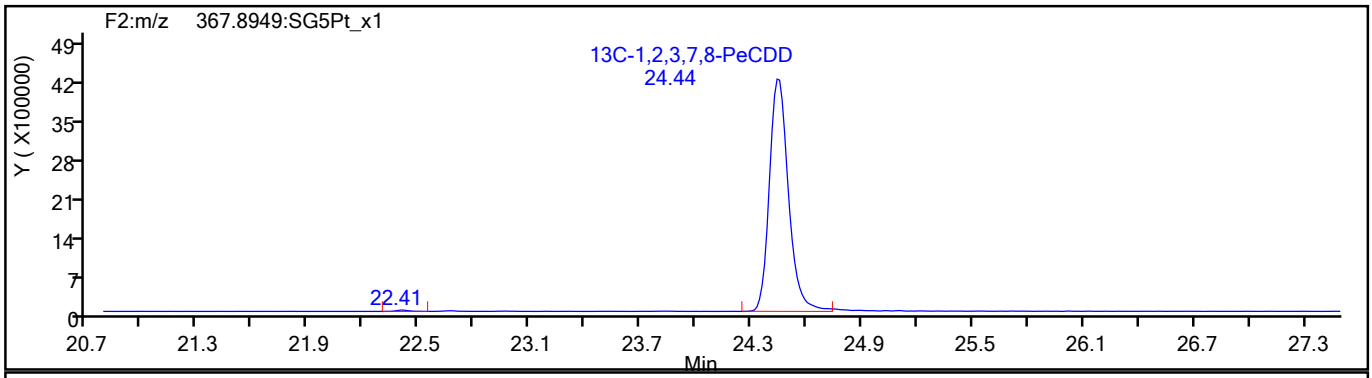

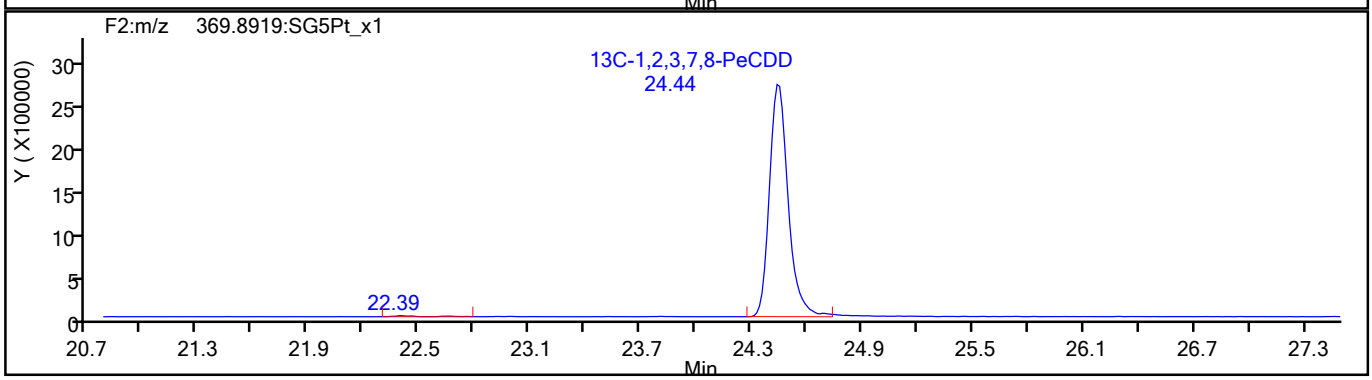

781748

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

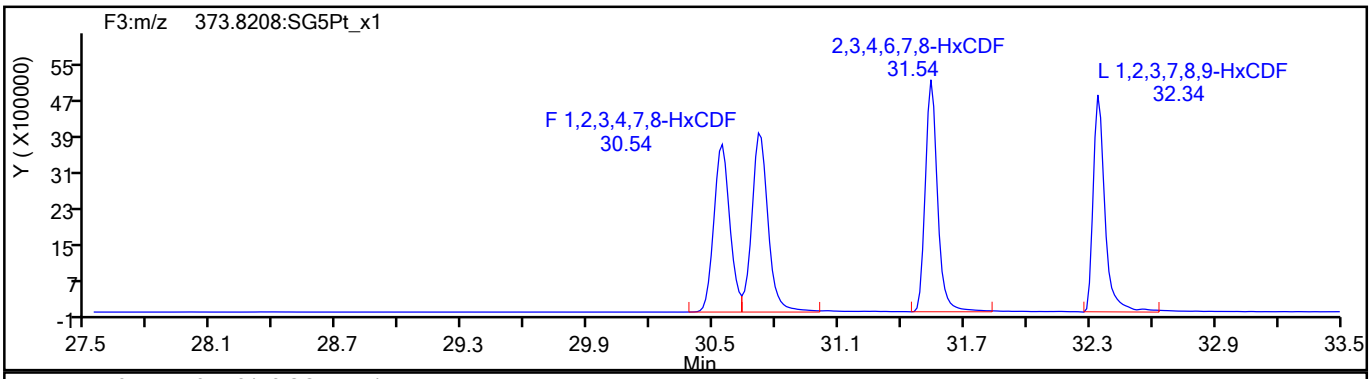

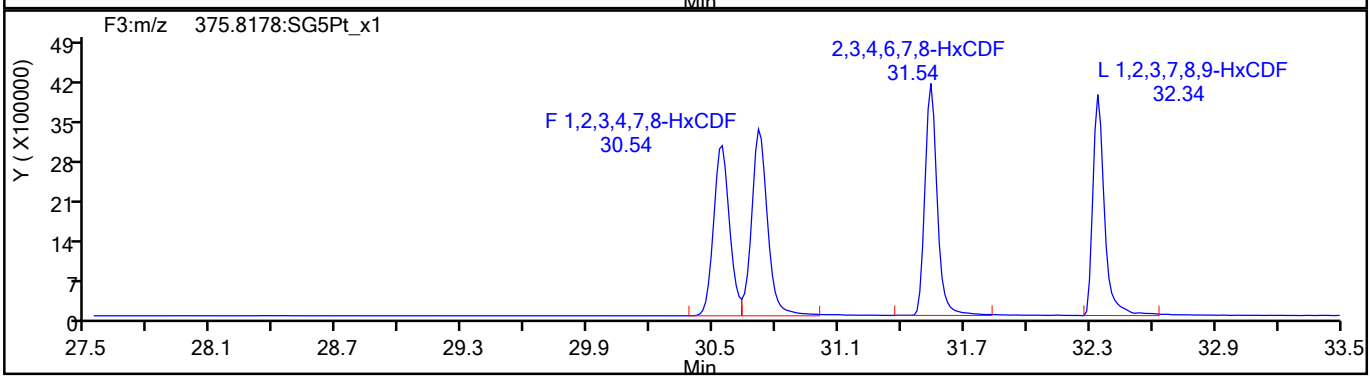

HxCDF Standards

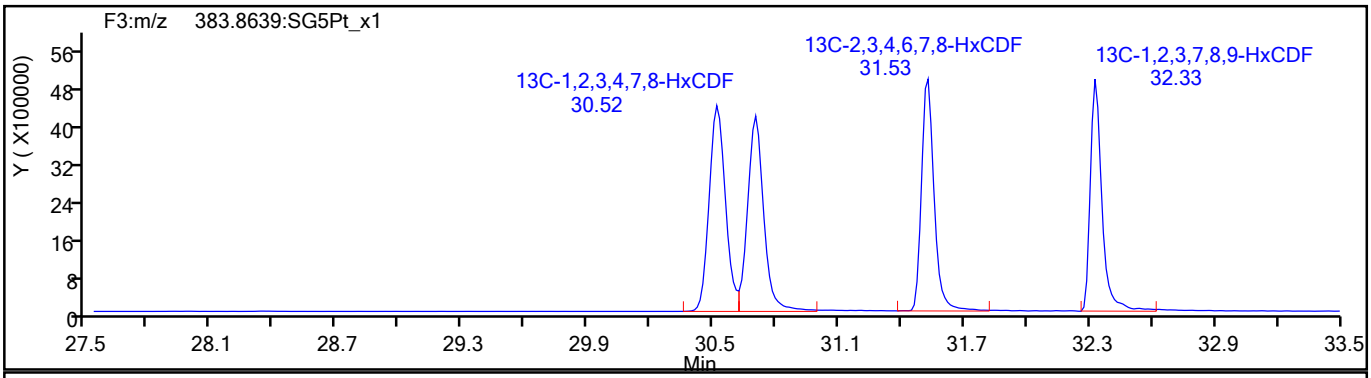

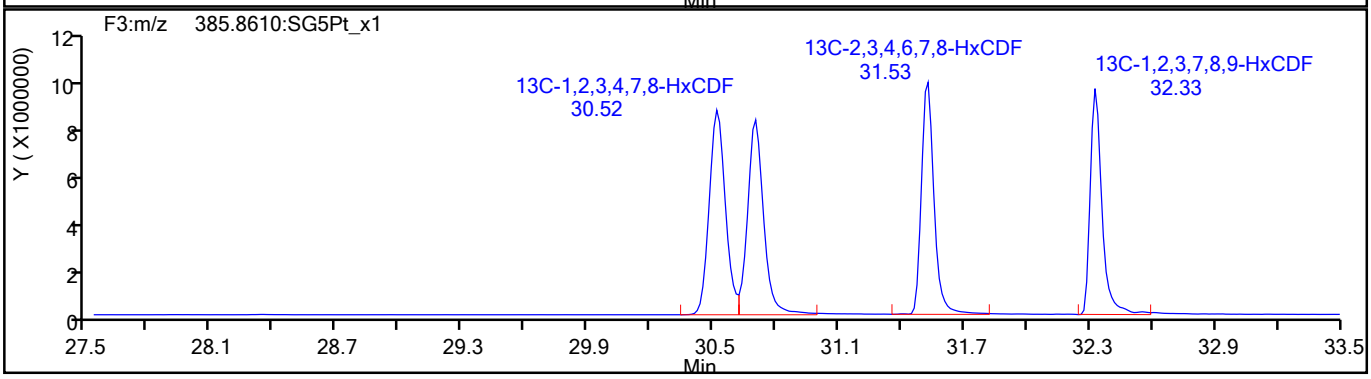

781749

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

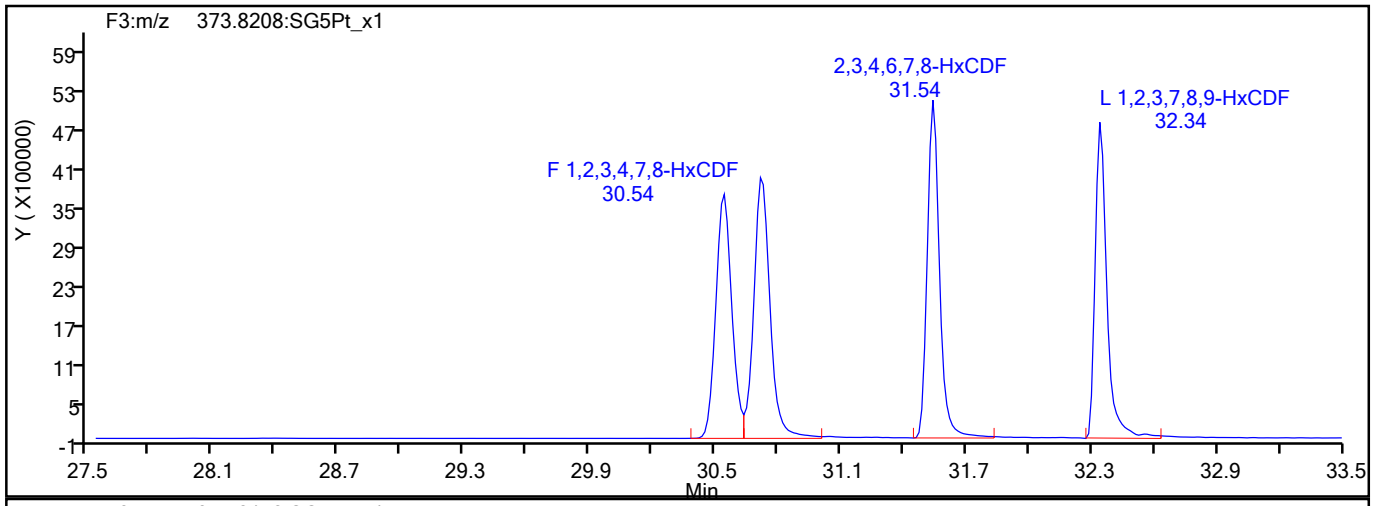

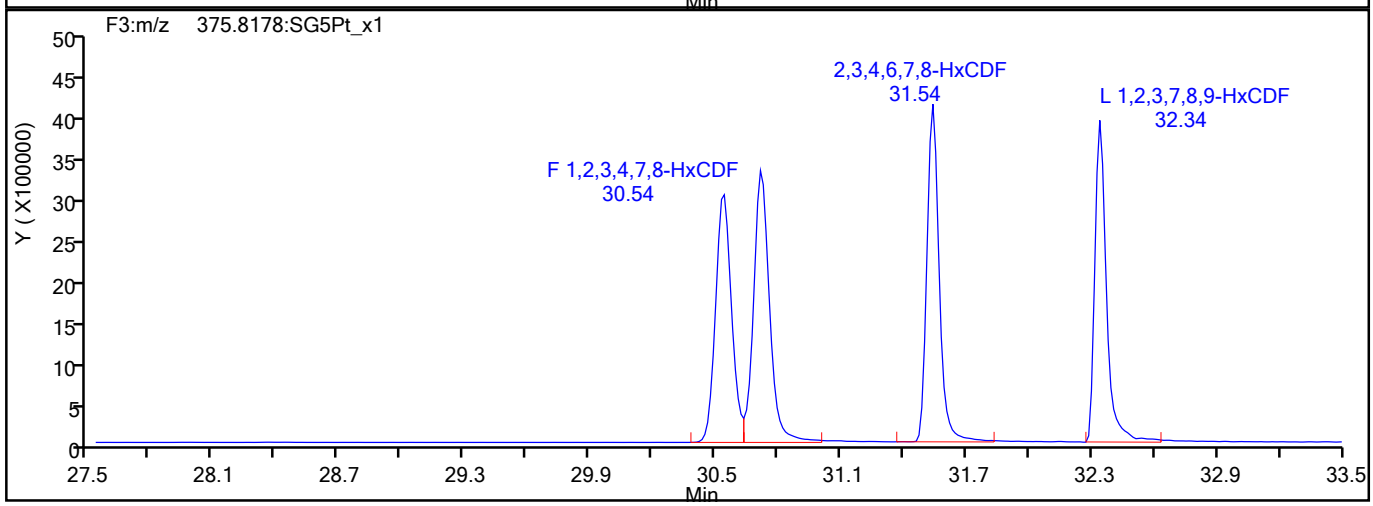

HxCDF Interference Mass

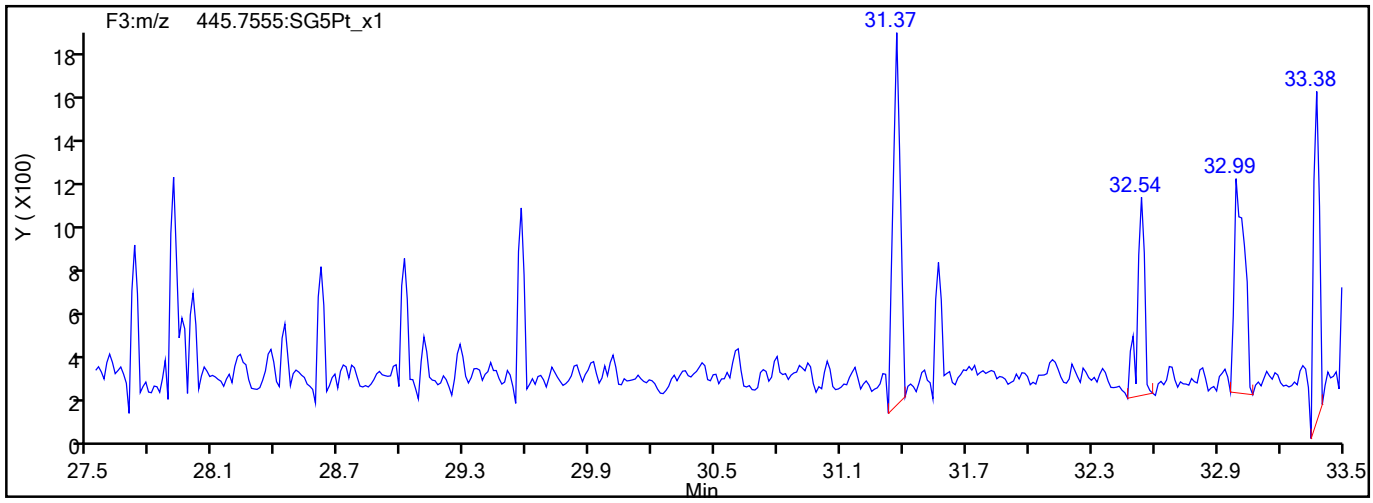

781750

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

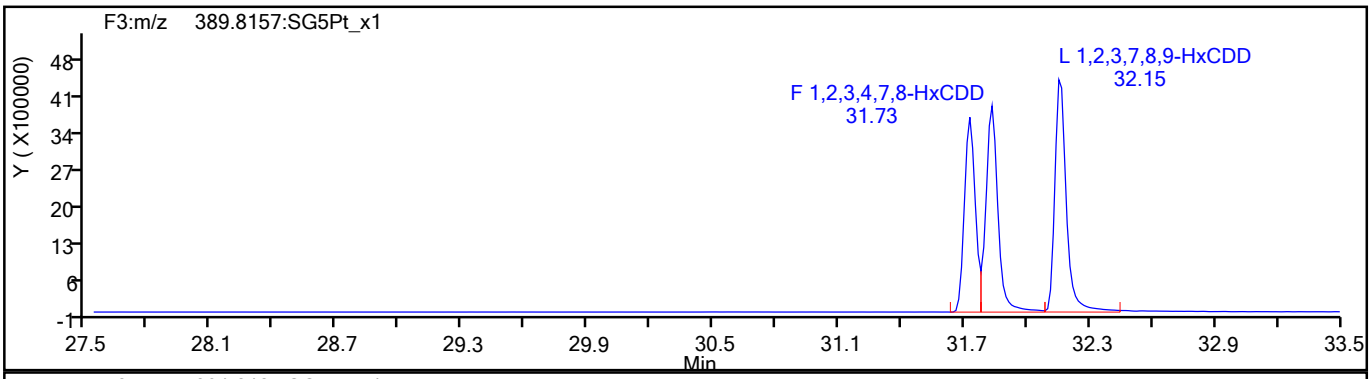

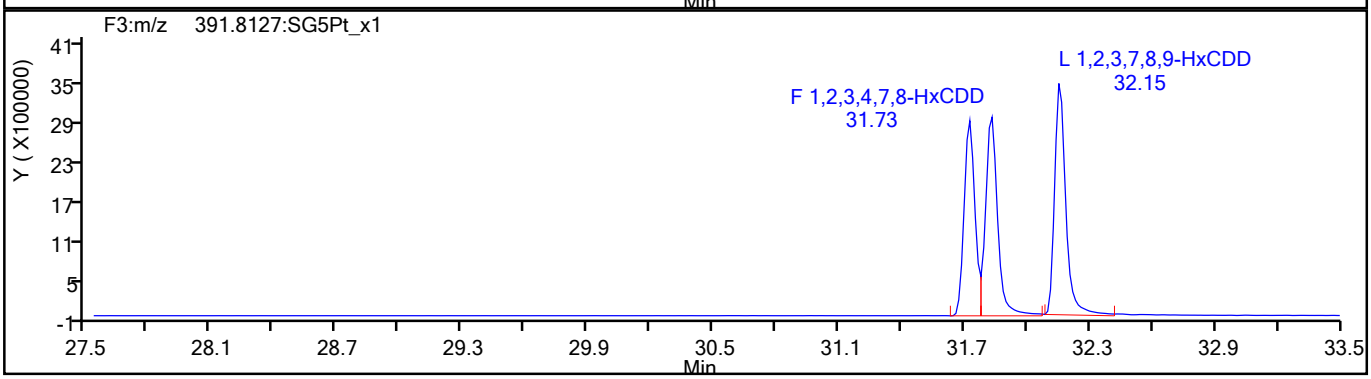

HxCDD Standards

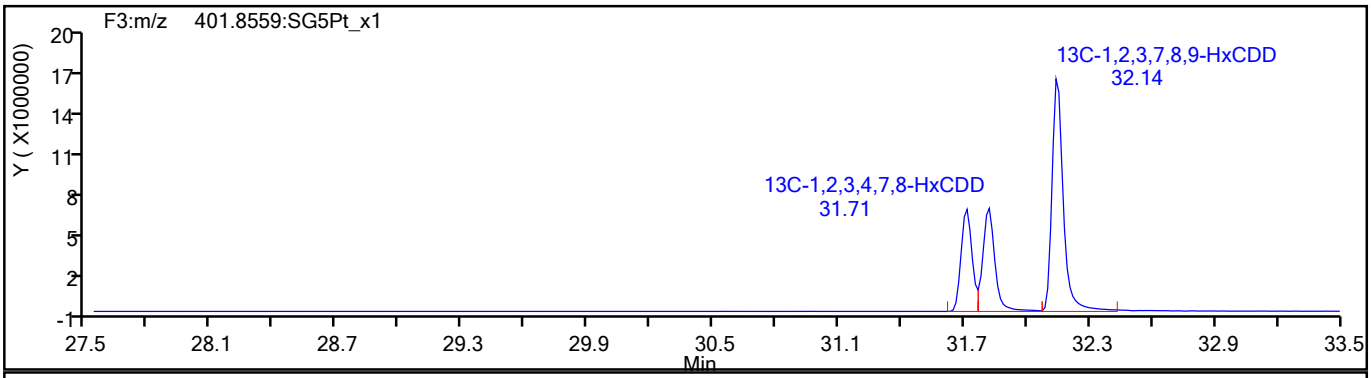

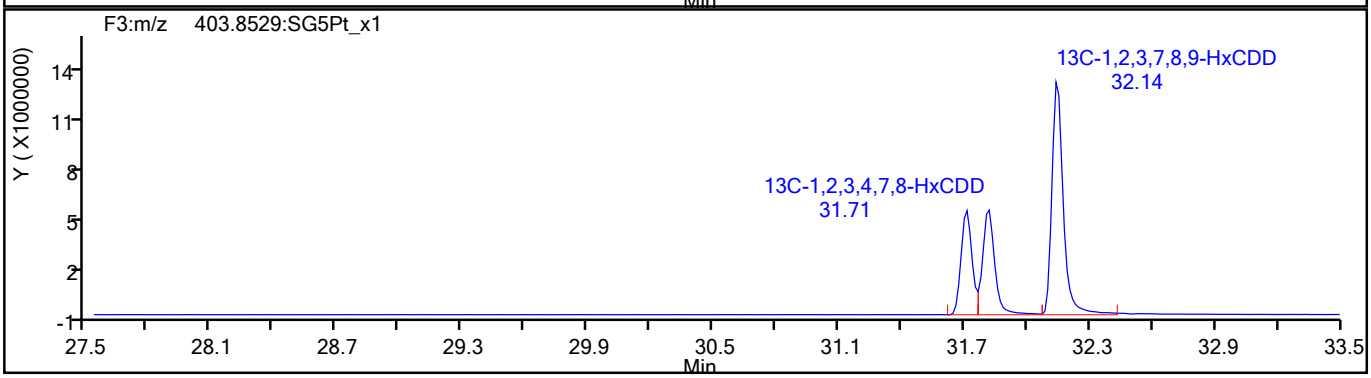

781751

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

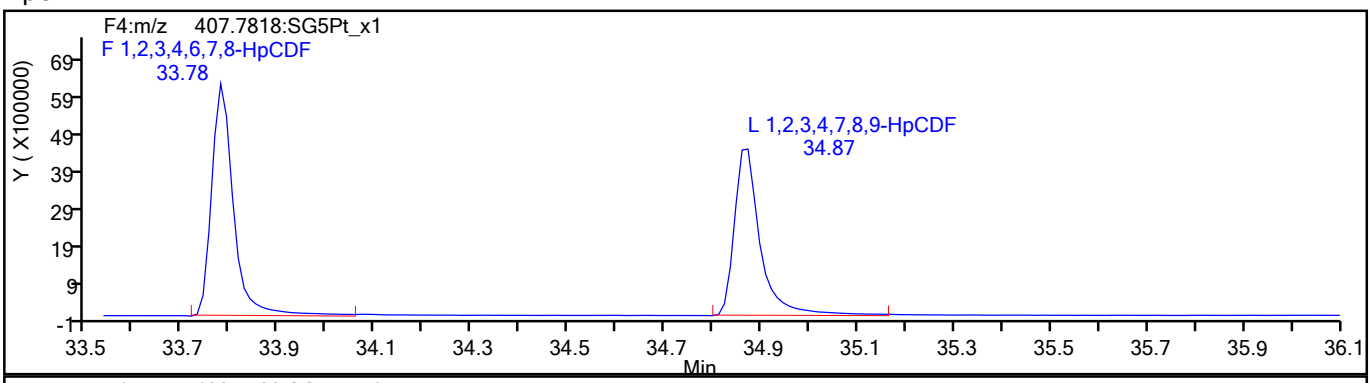

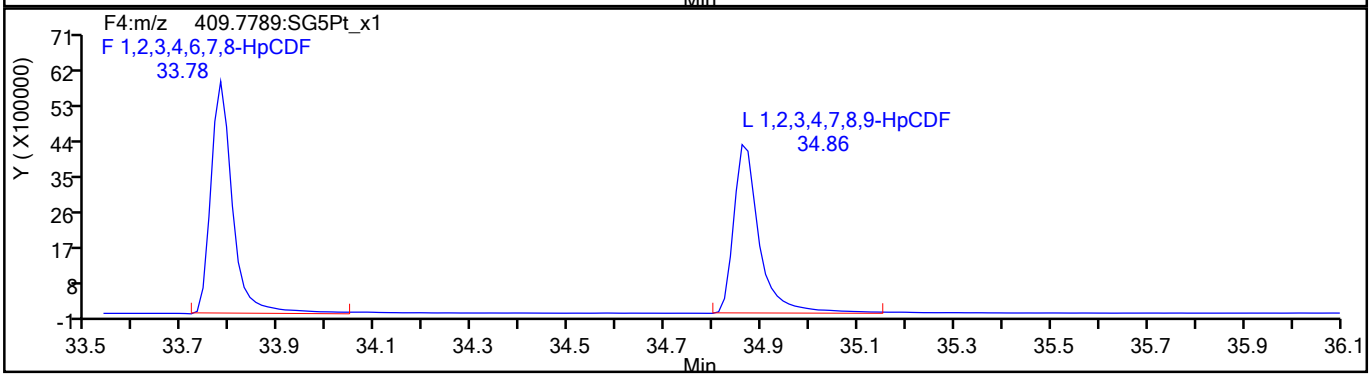

HpCDF Standards

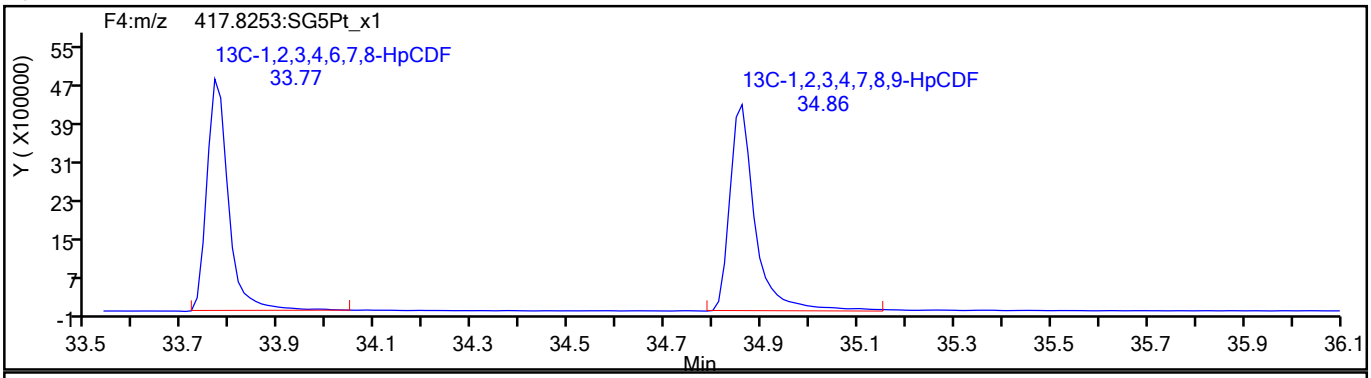

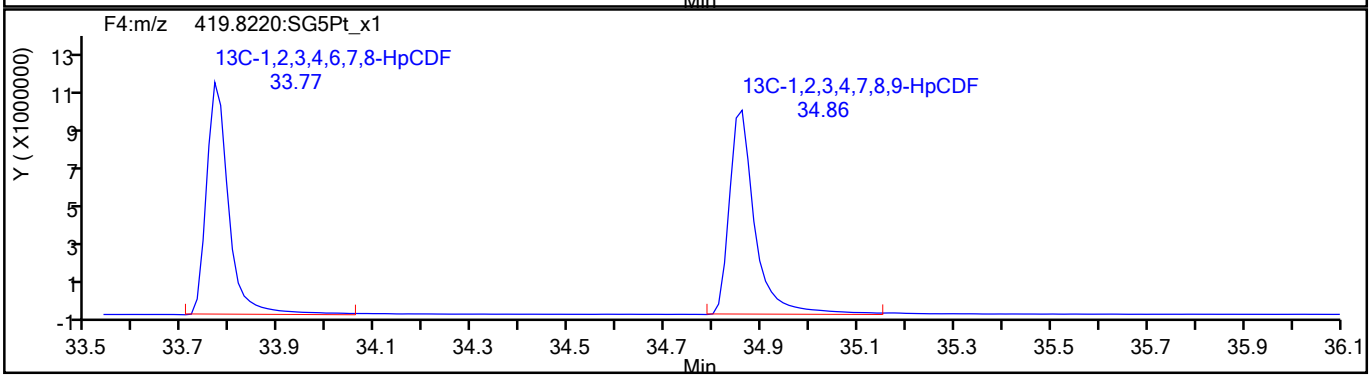

781752

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

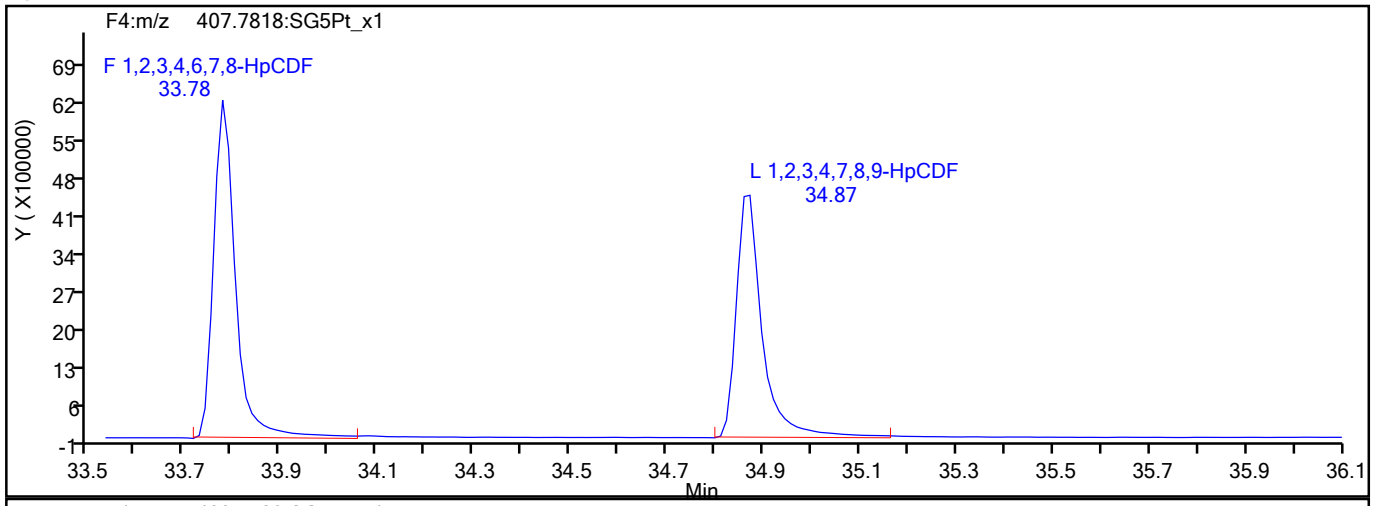

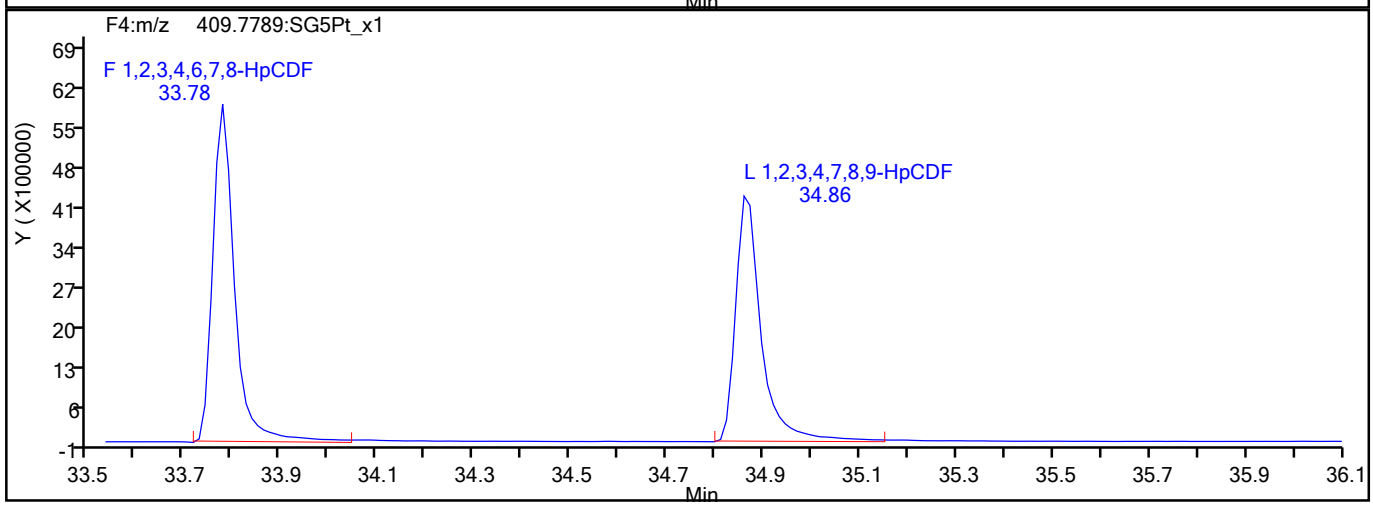

HpCDF Interference Mass

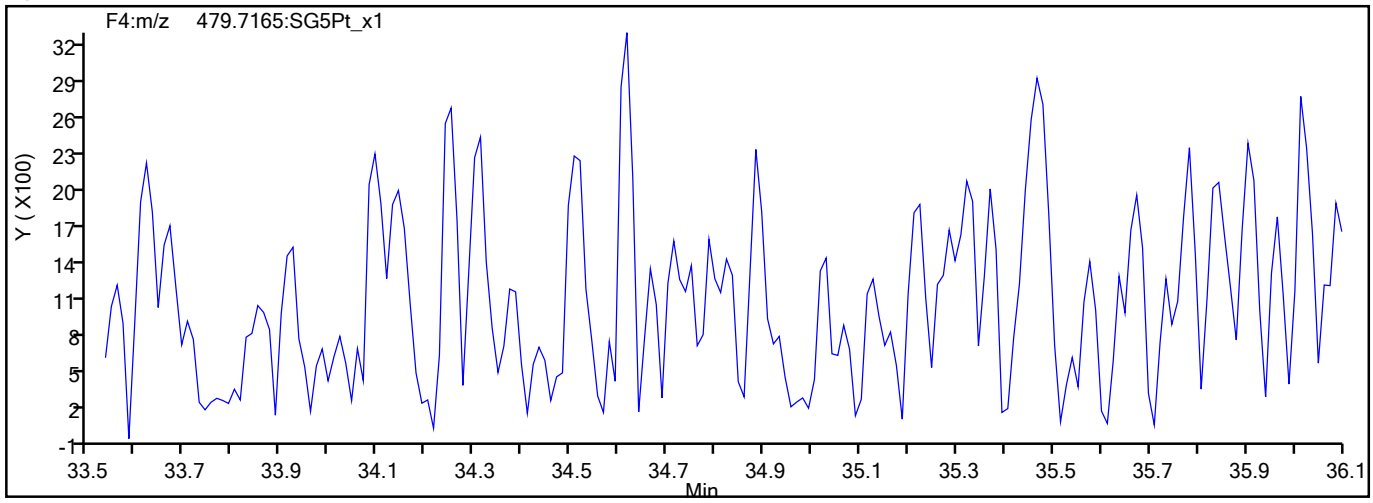

781753

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

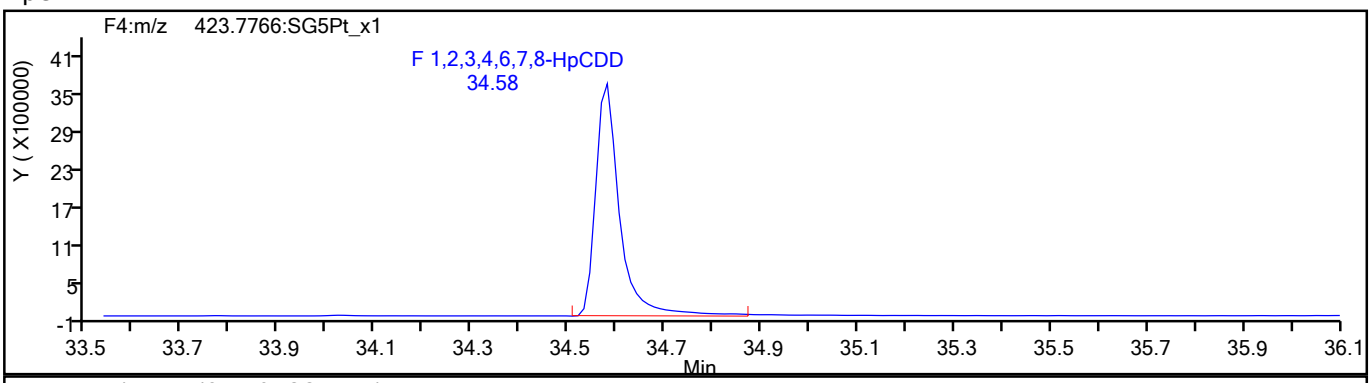

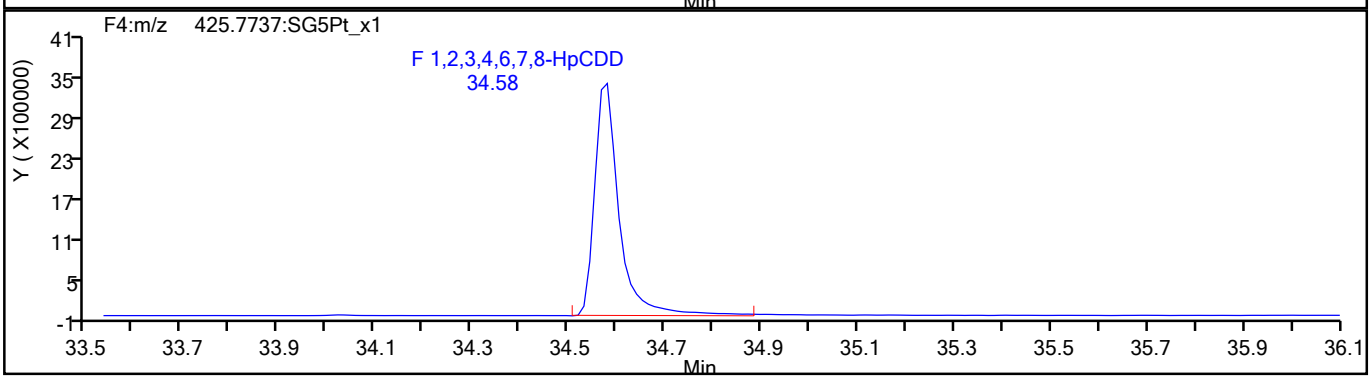

HpCDD Standards

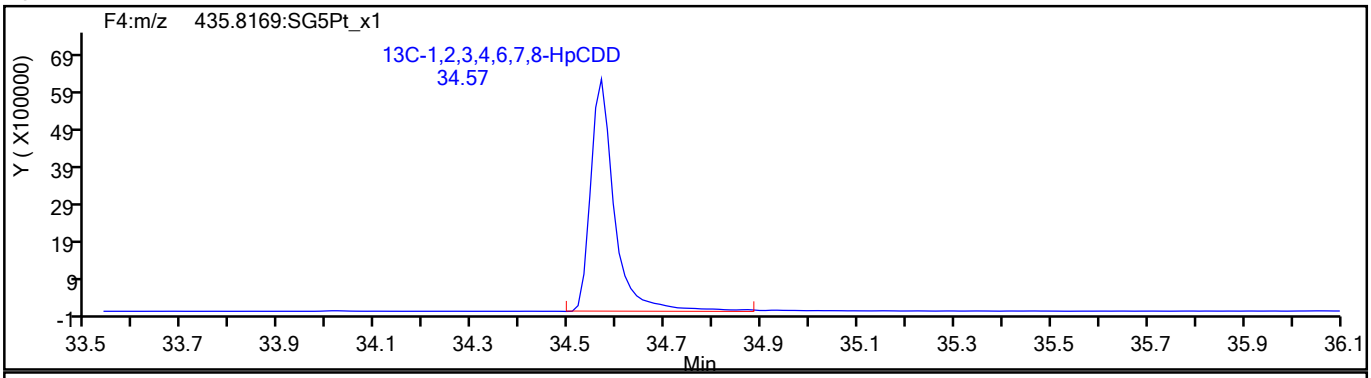

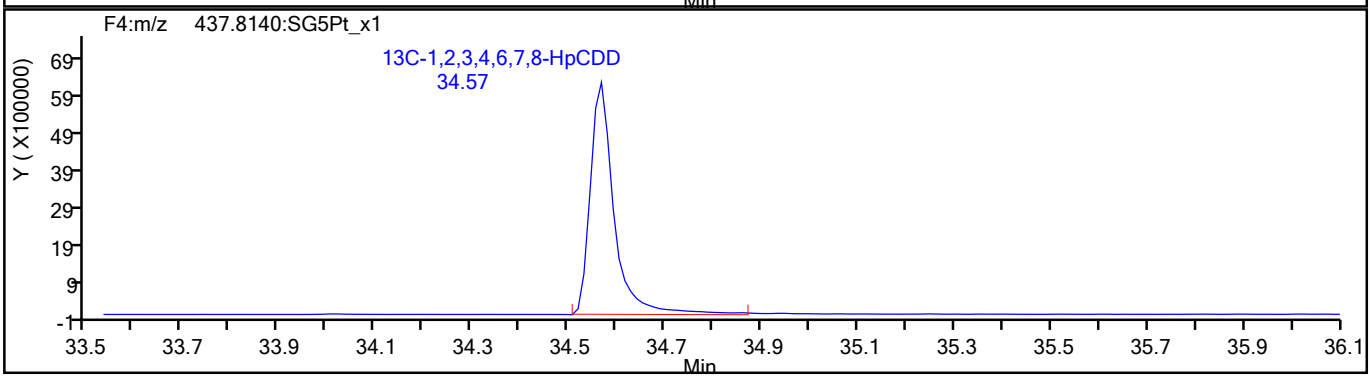

781754

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

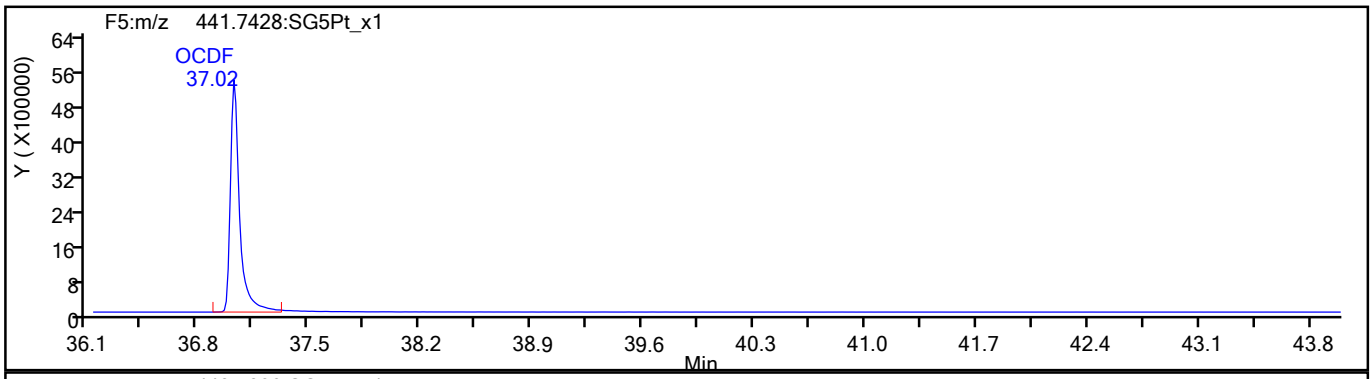

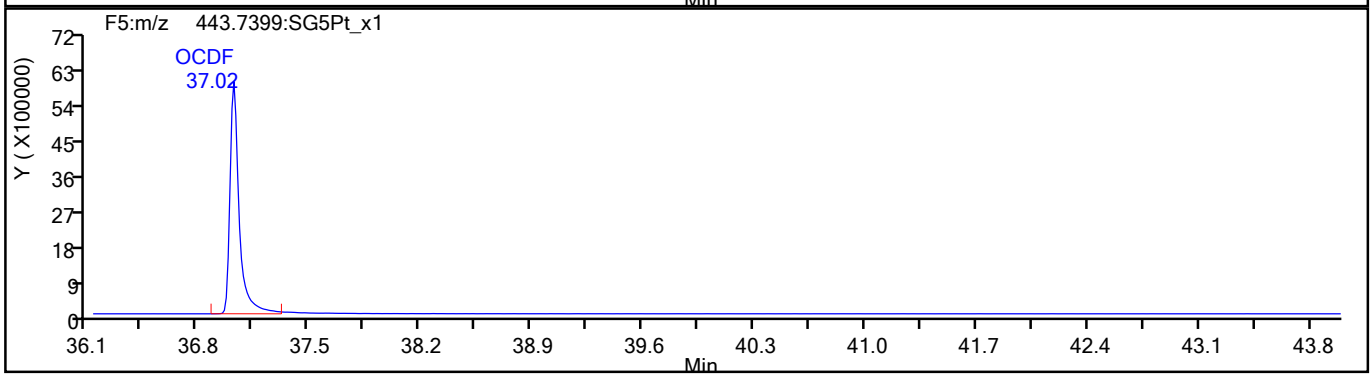

OCDF Standards

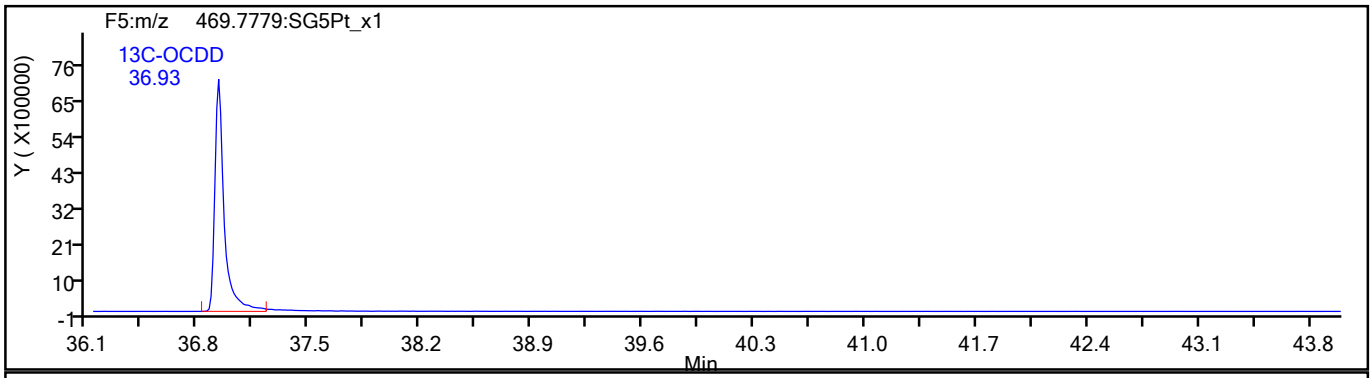

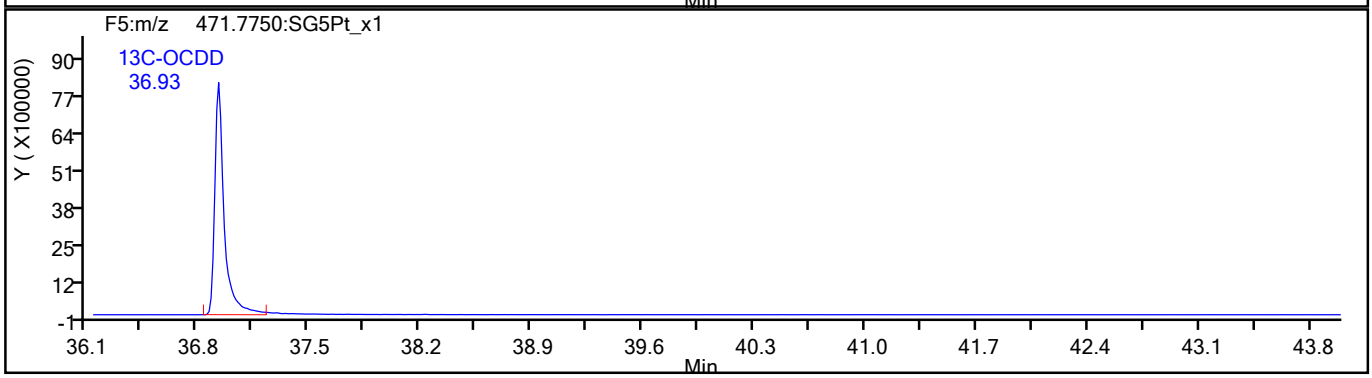

781755

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

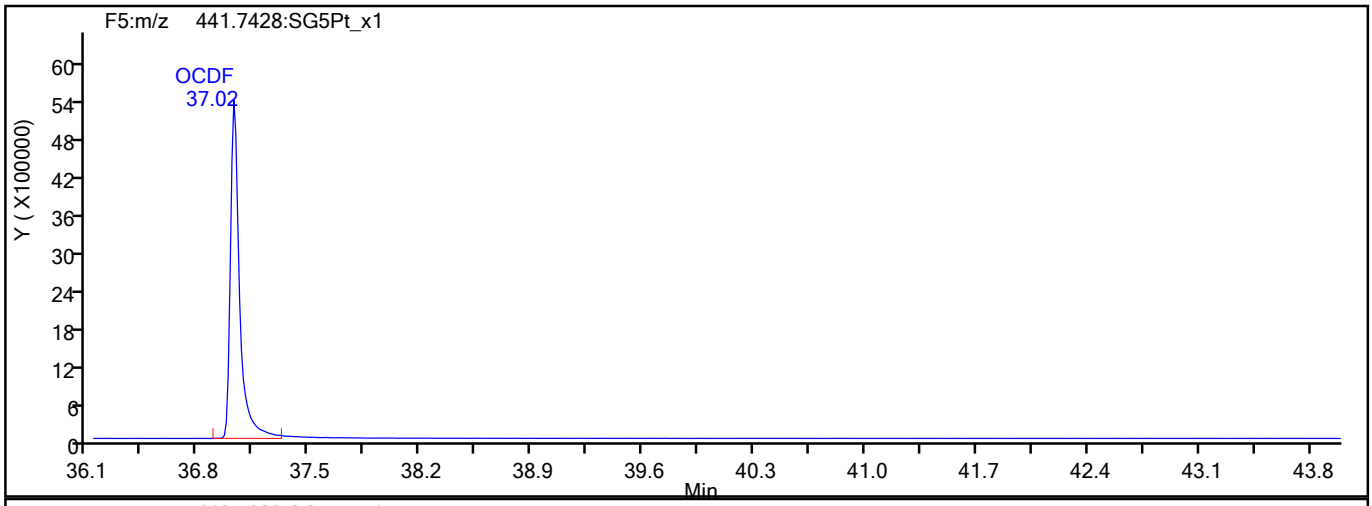

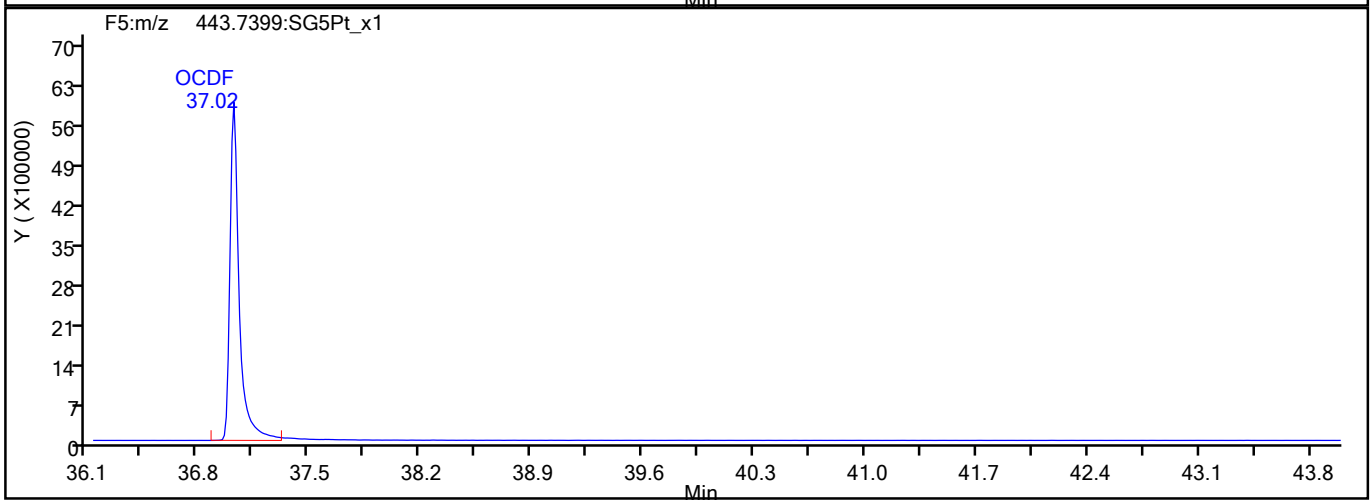

OCDF Interference Mass

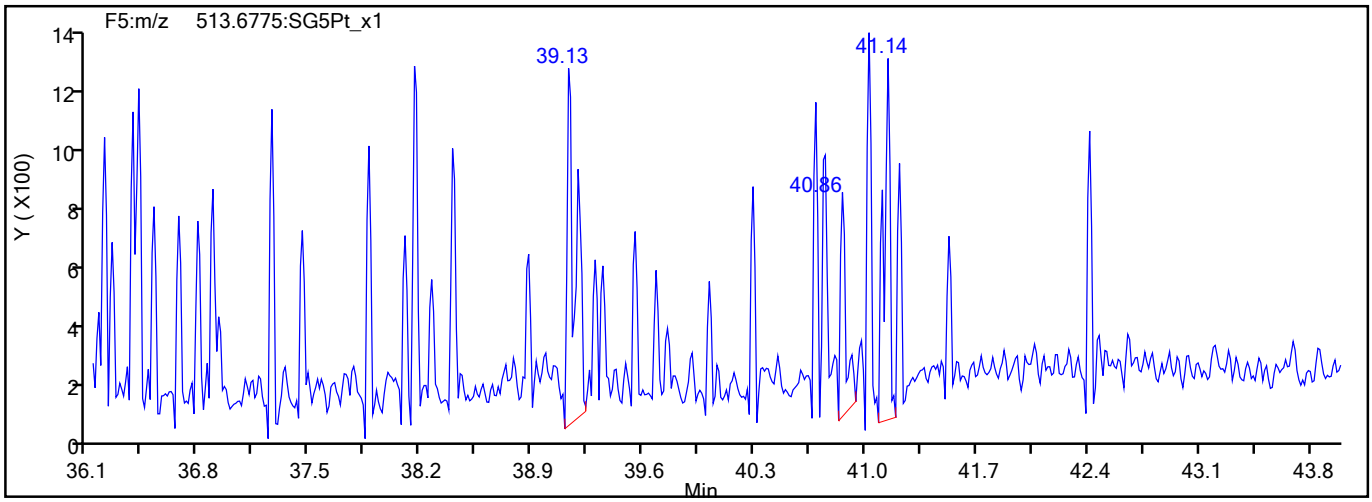

781756

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

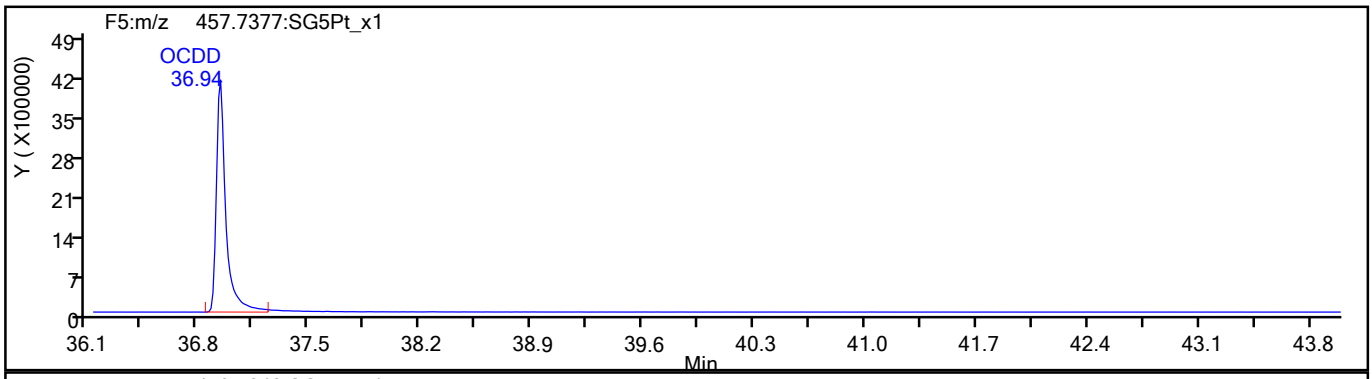

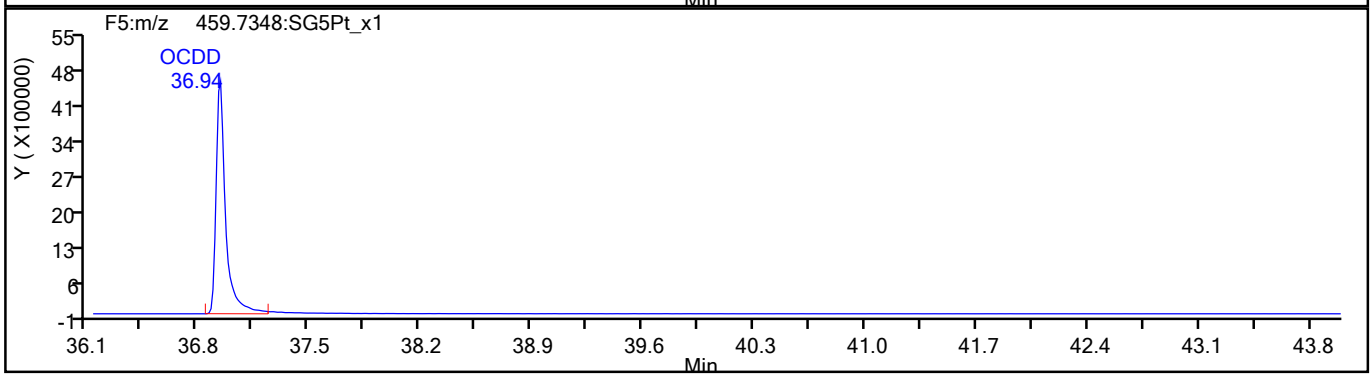

OCDD Standards

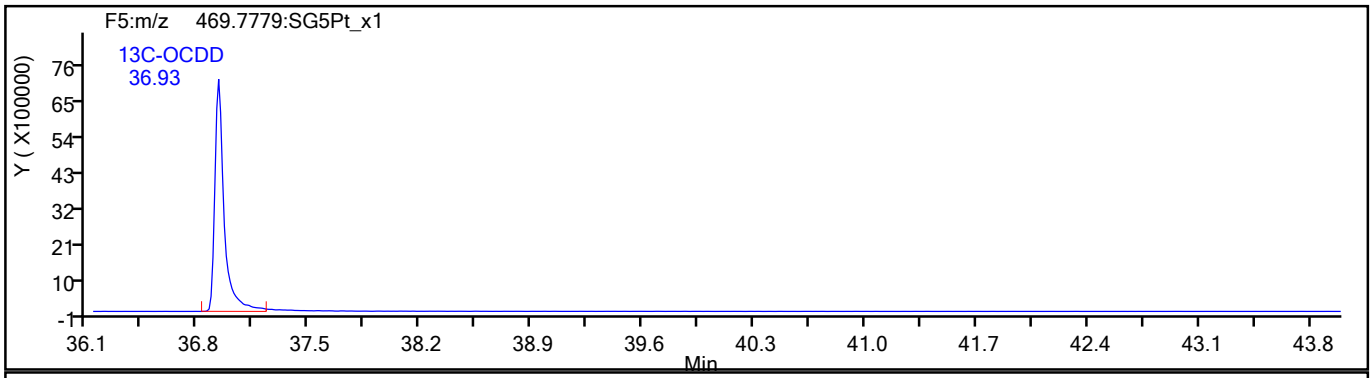

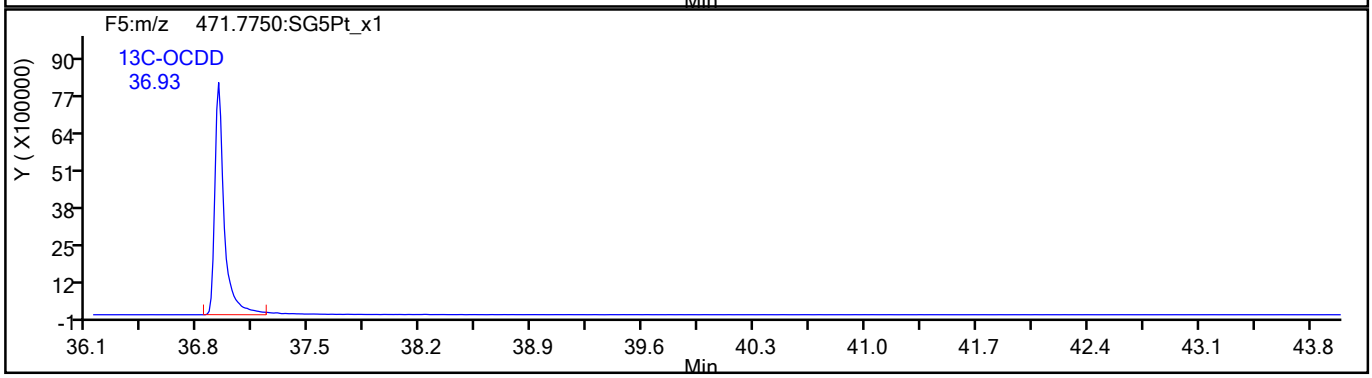

781757

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

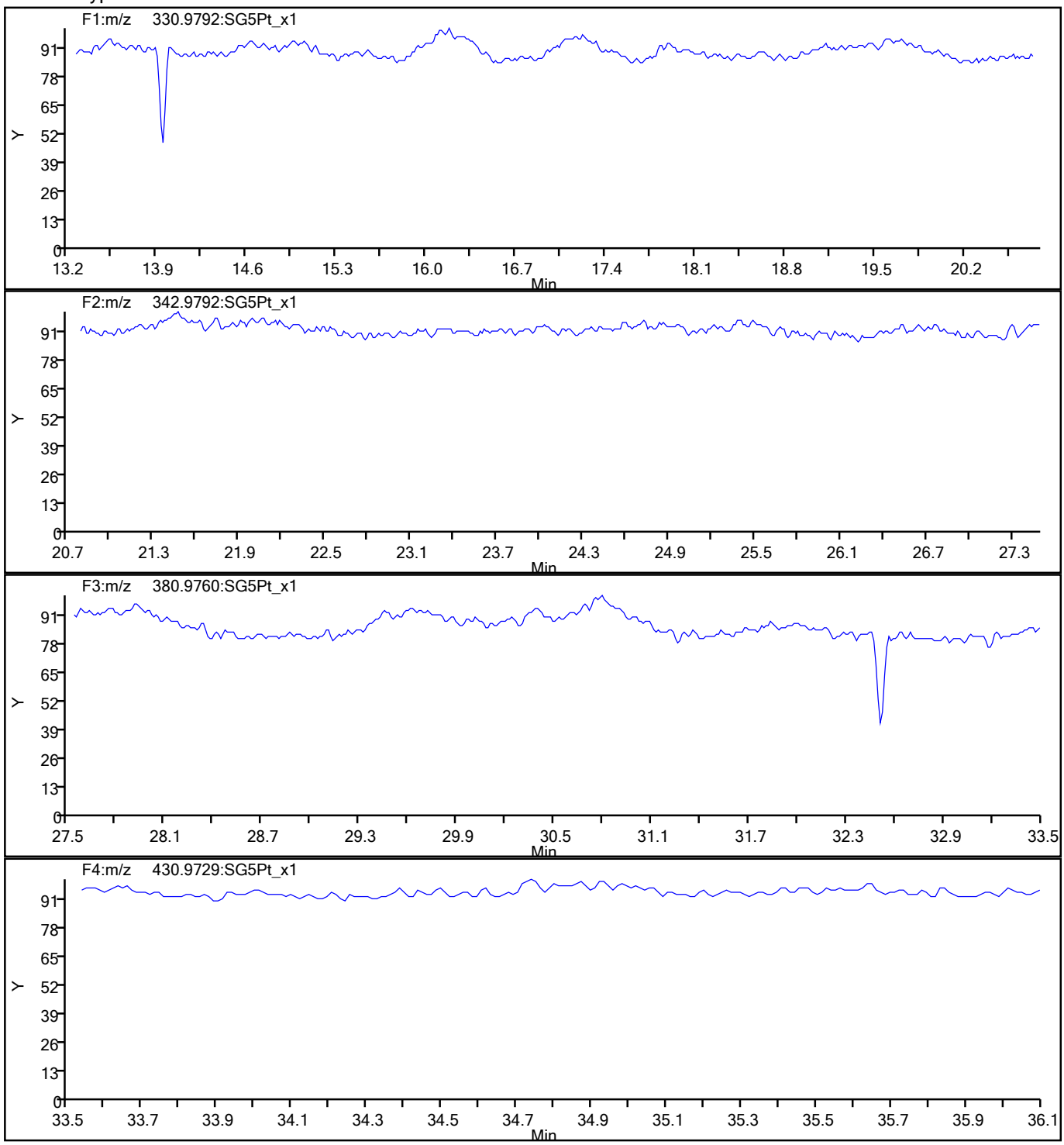

781758

Report Date: 18-Aug-2021 08:54:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_15.d		
Injection Date:	14-Aug-2021 03:41:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

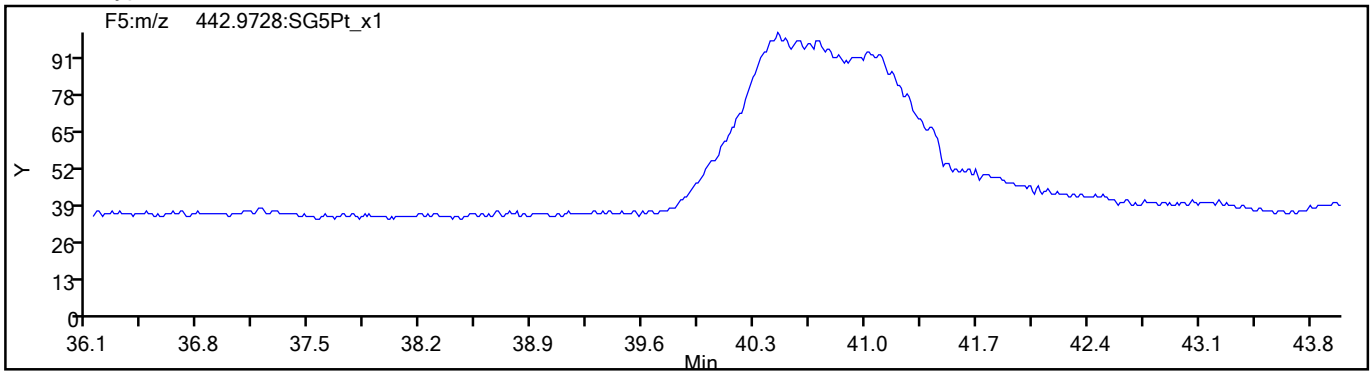

781759

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-2
SDG No.:
Client Sample ID:
Lab Sample ID: LCSD 320-512871/3-A
Matrix: Solid
Lab File ID: 13AU2110D5_16.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10(g)
Date Analyzed: 08/14/2021 04:26
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	19.8		1.0	0.043
51207-31-9	2,3,7,8-TCDF	20.7		1.0	0.040
40321-76-4	1,2,3,7,8-PeCDD	105		5.0	0.14
57117-41-6	1,2,3,7,8-PeCDF	106		5.0	0.38
57117-31-4	2,3,4,7,8-PeCDF	97.0		5.0	0.38
39227-28-6	1,2,3,4,7,8-HxCDD	94.9		5.0	0.33
57653-85-7	1,2,3,6,7,8-HxCDD	105		5.0	0.34
19408-74-3	1,2,3,7,8,9-HxCDD	105		5.0	0.31
70648-26-9	1,2,3,4,7,8-HxCDF	95.3		5.0	0.64
57117-44-9	1,2,3,6,7,8-HxCDF	104		5.0	0.65
72918-21-9	1,2,3,7,8,9-HxCDF	103		5.0	0.52
60851-34-5	2,3,4,6,7,8-HxCDF	104		5.0	0.52
35822-46-9	1,2,3,4,6,7,8-HpCDD	106		5.0	0.53
67562-39-4	1,2,3,4,6,7,8-HpCDF	106		5.0	0.99
55673-89-7	1,2,3,4,7,8,9-HpCDF	97.7		5.0	1.2
3268-87-9	OCDD	207		10	0.20
39001-02-0	OCDF	205		10	0.19
41903-57-5	Total TCDD	19.8		1.0	0.043
30402-14-3	Total TCDF	20.9		1.0	0.040
36088-22-9	Total PeCDD	105		5.0	0.14
30402-15-4	Total PeCDF	204		5.0	0.38
34465-46-8	Total HxCDD	305		5.0	0.33
55684-94-1	Total HxCDF	406		5.0	0.58
37871-00-4	Total HpCDD	106		5.0	0.53
38998-75-3	Total HpCDF	204		5.0	1.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76788-2
SDG No.:
Client Sample ID:
Lab Sample ID: LCSD 320-512871/3-A
Matrix: Solid
Lab File ID: 13AU2110D5_16.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/04/2021 07:15
Sample wt/vol: 10(g)
Date Analyzed: 08/14/2021 04:26
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 516836
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	60		20-175
89059-46-1	13C-2,3,7,8-TCDF	57		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	58		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	56		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	62		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	61		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	60		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	55		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	54		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	55		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	60		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	59		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	65		20-186
114423-97-1	13C-OCDD	63		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	78		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d
Lims ID: LCSD 320-512871/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 14-Aug-2021 04:26:25 ALS Bottle#: 17 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-512871/3-a lcsd 320-512871/3-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 08:51:16 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:36:14

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.870	125492295	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.356	116077478	0.77	1.6249	56.9	56.9	0.1256	0.1256	56.92	
2,3,7,8-TCDF	17.371	12304854	0.75	1.0239	10.4	10.4	0.0198	0.0198	104	
A Non-2,3,7,8-sub-TCDF	17.046	99908	0.82	1.0239	0.0841	0.0841	0.0198	0.0841	0.00	
S Total TCDF					10.4	10.4	0.0198	0.0198		
D 13C-2,3,7,8-TCDD	18.066	67464070	0.81	0.8993	59.8	59.8	0.1536	0.1536	59.78	
2,3,7,8-TCDD	18.082	8386492	0.77	1.2541	9.912	9.912	0.0217	0.0217	99.12	
$ 37Cl4-2,3,7,8-TCDD	18.082	43588272		1.1071	31.4	31.4	0.0271	0.0271	78.43	
A Non-2,3,7,8-sub-TCDD	17.499						0.0217	0.0217		
S Total TCDD					9.912	9.912	0.0217	0.0217		
D 13C-1,2,3,7,8-PeCDF	22.381	85288463	1.57	1.2101	56.2	56.2	0.1402	0.1402	56.16	
1,2,3,7,8-PeCDF	22.408	47753683	1.60	1.0611	52.8	52.8	0.1880	0.1880	106	
D 13C-2,3,4,7,8-PeCDF	23.717	95700422	1.58	1.2395	61.5	61.5	0.1369	0.1369	61.53	
2,3,4,7,8-PeCDF	23.744	47279876	1.58	1.0184	48.5	48.5	0.1890	0.1890	97.02	
A F1 PeCDFs	20.093						0.0121	0.0121		
A Non-2,3,7,8-sub-PeCDF	23.241	541192	1.48	1.0398	0.5752	0.5752	0.1885	0.5752	0.00	
S Total PeCDF					101.9	101.9	0.1885	0.1885		
D 13C-1,2,3,7,8-PeCDD	24.440	55356202	1.58	0.7612	57.9	57.9	0.0589	0.0589	57.95	
1,2,3,7,8-PeCDD	24.467	30551495	1.58	1.0484	52.6	52.6	0.0713	0.0713	105	
A Non-2,3,7,8-sub-PeCDD	23.349						0.0713	0.0713		
S Total PeCDD					52.6	52.6	0.0713	0.0713		
D 13C-1,2,3,4,7,8-HxCDF	30.516	76972754	0.52	1.0837	59.7	59.7	0.2508	0.2508	59.69	
1,2,3,4,7,8-HxCDF	30.543	39813425	1.21	1.0851	47.7	47.7	0.3217	0.3217	95.33	
D 13C-1,2,3,6,7,8-HxCDF	30.702	73564129	0.53	1.1279	54.8	54.8	0.2409	0.2409	54.81	
1,2,3,6,7,8-HxCDF	30.716	42890832	1.22	1.1260	51.8	51.8	0.3271	0.3271	104	
D 13C-2,3,4,6,7,8-HxCDF	31.528	69185754	0.53	1.0637	54.7	54.7	0.2555	0.2555	54.66	
2,3,4,6,7,8-HxCDF	31.541	41994233	1.23	1.1675	52.0	52.0	0.2610	0.2610	104	
D 13C-1,2,3,7,8,9-HxCDF	32.326	62425470	0.52	0.9676	54.2	54.2	0.2809	0.2809	54.22	
1,2,3,7,8,9-HxCDF	32.340	37458289	1.23	1.1664	51.4	51.4	0.2588	0.2588	103	
A Non-2,3,7,8-sub-HxCDF	30.197						0.2892	0.2892		
S Total HxCDF					202.9	202.9	0.2921	0.2921		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	32.140	118995879	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.714	53321503	1.25	0.7334	61.1	61.1	0.2794	0.2794	61.10	
1,2,3,4,7,8-HxCDD	31.728	26923450	1.27	1.0640	47.5	47.5	0.1660	0.1660	94.91	
D 13C-1,2,3,6,7,8-HxCDD	31.821	58324196	1.27	0.8802	55.7	55.7	0.2329	0.2329	55.69	
1,2,3,6,7,8-HxCDD	31.834	30589200	1.27	1.0001	52.4	52.4	0.1703	0.1703	105	
1,2,3,7,8,9-HxCDD	32.153	33190384	1.26	1.1325	52.5	52.5	0.1531	0.1531	105	
A Non-2,3,7,8-sub-HxCDD	30.882						0.1628	0.1628		
S Total HxCDD					152.4	152.4	0.1632	0.1632		
D 13C-1,2,3,4,6,7,8-HpCDF	33.766	54676073	0.44	0.7730	59.4	59.4	0.6434	0.6434	59.44	
1,2,3,4,6,7,8-HpCDF	33.778	41708800	1.04	1.4413	52.9	52.9	0.4945	0.4945	106	
D 13C-1,2,3,4,7,8,9-HpCDF	34.860	54392960	0.43	0.7008	65.2	65.2	0.7097	0.7097	65.22	
1,2,3,4,7,8,9-HpCDF	34.872	35017154	1.06	1.3174	48.9	48.9	0.6239	0.6239	97.74	
A Non-2,3,7,8-sub-HpCDF	34.319						0.5535	0.5535		
S Total HpCDF					101.8	101.8	0.5592	0.5592		
D 13C-1,2,3,4,6,7,8-HpCDD	34.568	45928232	1.01	0.6472	59.6	59.6	0.3161	0.3161	59.63	
1,2,3,4,6,7,8-HpCDD	34.580	26714369	1.04	1.0943	53.2	53.2	0.2646	0.2646	106	
A Non-2,3,7,8-sub-HpCDD	34.301						0.2646	0.2646		
S Total HpCDD					53.2	53.2	0.2646	0.2646		
D 13C-OCDD	36.926	67205365	0.88	0.4472	126.3	126.3	0.1879	0.1879	63.15	
OCDF	37.022	49482768	0.90	1.4382	102.4	102.4	0.0931	0.0931	102	
OCDD	36.938	38530833	0.89	1.1070	103.6	103.6	0.1015	0.1015	104	

QC Flag Legend

Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d
Lims ID: LCSD 320-512871/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 14-Aug-2021 04:26:25 ALS Bottle#: 17 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcsd 320-512871/3-a lcsd 320-512871/3-a
Misc. Info.: 13AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 08:51:16 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1615

First Level Reviewer: arghestanis Date: 17-Aug-2021 11:36:14

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.870	17.855	1		56808907	13985759	7768	19420	1800		
333.9339	17.870	17.855	1		68683388	16938139	9322	23305	1817	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.356	17.341	1	0.971	50453228	11918399	10311	25777	1156		
317.9389	17.356	17.341	1	0.971	65624250	15476917	14927	37317	1037	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.371	17.356	1	1.001	5291557	1253834	1005	2512	1248		
305.8987	17.371	17.356	1	1.001	7013297	1659093	1217	3042	1363	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.993	17.046	-3	0.979	45157	10115	1005	2512	10		
305.8987	16.993	17.046	-3	0.979	54751	12625	1217	3042	10	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.066	18.051	1	1.011	30217426	6817087	7768	19420	878		
333.9339	18.066	18.051	1	1.011	37246644	8323073	9322	23305	893	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.082	18.066	1	1.001	3661266	828013	891	2227	929		
321.8936	18.082	18.066	1	1.001	4725226	1064111	755	1887	1409	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.082	18.066	1	1.012	43588272	9690944	3714	9285	2609		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.499						891	2227			
321.8936	17.499						755	1887			
13C-1,2,3,7,8-PeCDF											
351.9000	22.381	22.367	1	1.252	52128768	8665610	12343	30857	702		
353.8970	22.381	22.367	1	1.252	33159695	5562718	8644	21610	644	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.408	22.380	2	1.001	29406526	4880013	6794	16985	718		
341.8567	22.408	22.380	2	1.001	18347157	3063434	4562	11405	672	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.717	23.703	1	1.327	58603684	9030941	12343	30857	732		
353.8970	23.717	23.703	1	1.327	37096738	5716812	8644	21610	661	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.744	23.730	1	1.001	28982914	4493092	6794	16985	661		
341.8567	23.744	23.730	1	1.001	18296962	2811530	4562	11405	616	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.093						211	527			
341.8567	20.093						519	1297			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.913	23.241	-20	1.024	322575	44438	6794	16985	7		
341.8567	22.926	23.241	-19	1.024	218617	27402	4562	11405	6	1.48(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.440	24.426	1	1.368	33910360	4987397	3332	8330	1497		
369.8919	24.440	24.426	1	1.368	21445842	3153147	2219	5547	1421	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.467	24.453	1	1.001	18703722	2734886	1480	3700	1848		
357.8516	24.467	24.453	1	1.001	11847773	1740273	953	2382	1826	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.349						1480	3700			
357.8516	23.349						953	2382			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.516	30.503	1	0.949	26328277	4872667	11802	29505	413		
385.8610	30.516	30.503	1	0.949	50644477	9128603	22052	55130	414	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.543	30.529	1	1.001	21782713	3980064	10708	26770	372		
375.8178	30.543	30.529	1	1.001	18030712	3298935	8840	22100	373	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.702	30.689	1	0.955	25374118	4626437	11802	29505	392		
385.8610	30.702	30.689	1	0.955	48190011	8643804	22052	55130	392	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.716	30.702	1	1.000	23547335	4392270	10708	26770	410		
375.8178	30.716	30.702	1	1.000	19343497	3603072	8840	22100	408	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.528	31.514	1	0.981	23854575	5509120	11802	29505	467		
385.8610	31.528	31.514	1	0.981	45331179	10525732	22052	55130	477	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.541	31.528	1	1.000	23138745	5600263	10708	26770	523		
375.8178	31.541	31.528	1	1.000	18855488	4518390	8840	22100	511	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.326	32.313	1	1.006	21293770	5549856	11802	29505	470		
385.8610	32.326	32.313	1	1.006	41131700	10641660	22052	55130	483	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.340	32.326	1	1.000	20647913	5328627	10708	26770	498		
375.8178	32.340	32.326	1	1.000	16810376	4376903	8840	22100	495	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.197						10708	26770			
375.8178	30.197						8840	22100			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.140	32.127	1		65646758	17106020	14383	35957	1189		
403.8529	32.140	32.127	1		53349121	14038816	11150	27875	1259	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.714	31.701	1	0.987	29630470	7708116	14383	35957	536		
403.8529	31.714	31.701	1	0.987	23691033	6109112	11150	27875	548	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.728	31.714	1	1.000	15040175	3995682	5475	13687	730		
391.8127	31.728	31.714	1	1.000	11883275	3128784	4288	10720	730	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.821	31.807	1	0.990	32596948	8028241	14383	35957	558		
403.8529	31.821	31.807	1	0.990	25727248	6298996	11150	27875	565	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.834	31.820	1	1.000	17095387	4289216	5475	13687	783		
391.8127	31.834	31.820	1	1.000	13493813	3352500	4288	10720	782	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.153	32.140	1	1.014	18472134	4759376	5475	13687	869		
391.8127	32.153	32.140	1	1.014	14718250	3823935	4288	10720	892	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.882						5475	13687			
391.8127	30.882						4288	10720			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.766	33.754	1	1.051	16643783	5143997	17294	43235	297		
419.8220	33.766	33.754	1	1.051	38032290	11767768	44671	111677	263	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.778	33.766	1	1.000	21302818	6751254	25807	64517	262		
409.7789	33.778	33.766	1	1.000	20405982	6512417	22408	56020	291	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.860	34.847	1	1.085	16468394	4520917	17294	43235	261		
419.8220	34.860	34.847	1	1.085	37924566	10144932	44671	111677	227	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.872	34.860	1	1.000	17977679	4765569	25807	64517	185		
409.7789	34.860	34.860	0	1.000	17039475	4607419	22408	56020	206	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.319						25807	64517			
409.7789	34.319						22408	56020			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.568	34.556	1	1.076	23037969	6582824	12043	30107	547		
437.8140	34.568	34.556	1	1.076	22890263	6485351	13447	33617	482	1.01(0.88-1.20)	

Report Date: 18-Aug-2021 08:55:15 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.580	34.568	1	1.000	13614086	3882808	7601	19002	511		
425.7737	34.580	34.568	1	1.000	13100283	3685415	7537	18842	489	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.301						7601	19002			
425.7737	34.301						7537	18842			
13C-OCDD											
469.7779	36.926	36.914	1	1.149	31478175	7505121	4410	11025	1702		
471.7750	36.926	36.914	1	1.149	35727190	8538356	6057	15142	1410	0.88(0.76-1.02)	
OCDF											
441.7428	37.022	37.010	1	1.003	23477411	5546568	2115	5287	2622		
443.7399	37.022	37.010	1	1.003	26005357	6298651	2181	5452	2888	0.90(0.76-1.02)	
OCDD											
457.7377	36.938	36.926	1	1.000	18093928	4317133	1817	4542	2376		
459.7348	36.938	36.926	1	1.000	20436905	4909098	1789	4472	2744	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d
Lims ID: LCSD 320-512871/3-A
Client ID:
Inject. Date: 14-Aug-2021 04:26:25 Dil. Factor: 1.0000
Sample Type: LCSD, LCS Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDF, RT: 17.046

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	116077478	27395316

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	116077478	27395316

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.993	45157	10115	54751	12625	0.0841	0.82	
Signal Totals:							
	45157	10115	54751	12625			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	99908	22740				0.82	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0841 = (99908 * 100.000) / (116077478 * 1.024)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d
Lims ID: LCSD 320-512871/3-A
Client ID:
Inject. Date: 14-Aug-2021 04:26:25 Dil. Factor: 1.0000
Sample Type: LCSD, LCS Duplicate
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 516836 Lims Sample ID: 5

Non-2,3,7,8-sub-PeCDF, RT: 23.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	85288463	14228328
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	95700422	14747753

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	90494442	14488040

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.913	322575	44438	218617	27402	0.5752	1.48	
Signal Totals:							
	322575	44438	218617	27402			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	541192	71840				1.48	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5752 = (541192 * 100.000) / (90494442 * 1.040)

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

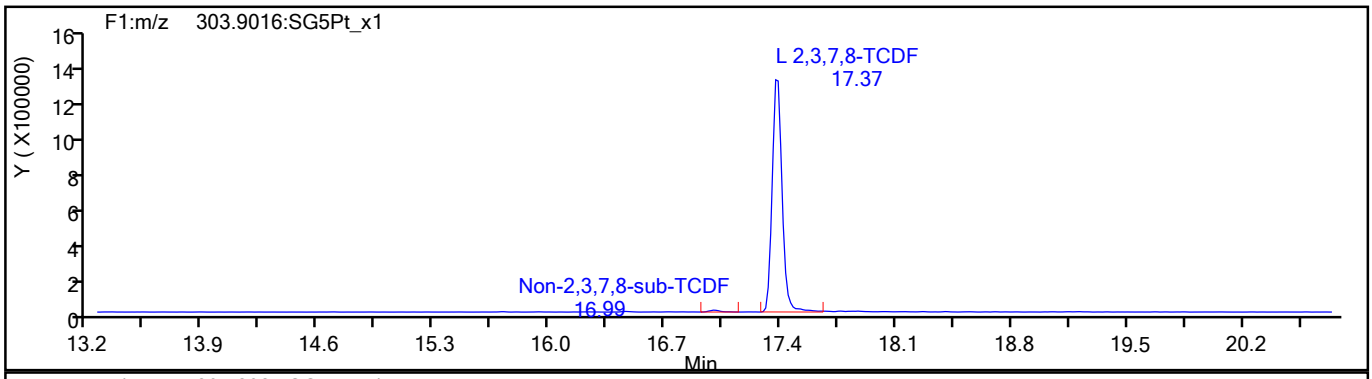

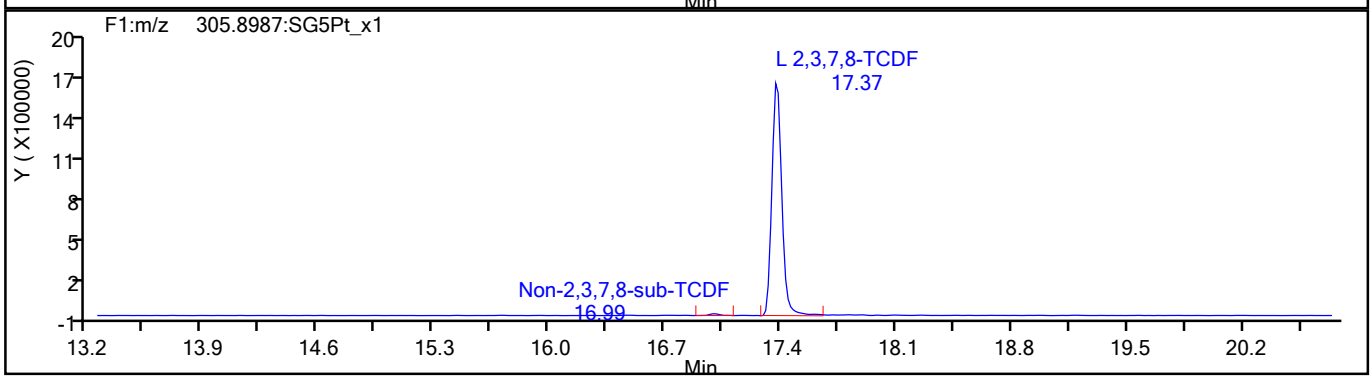

TCDF Standards

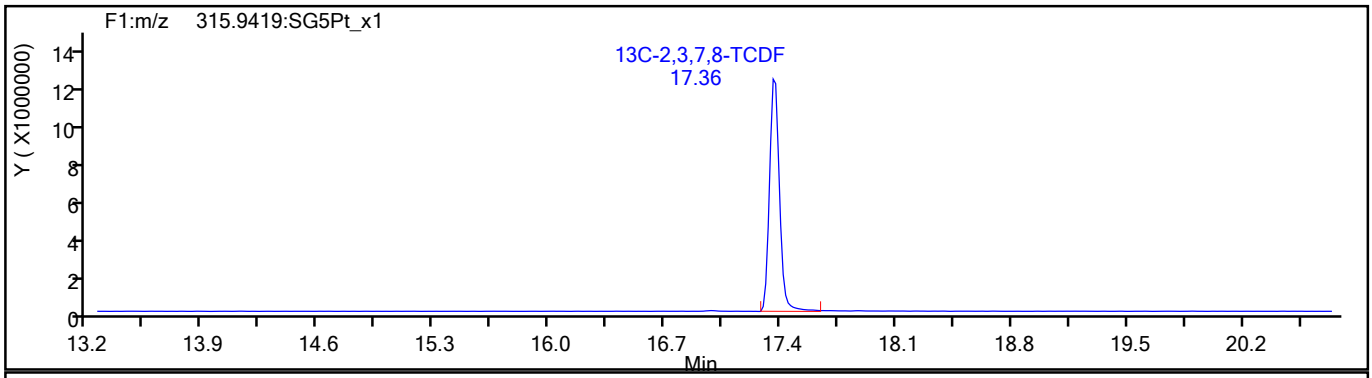

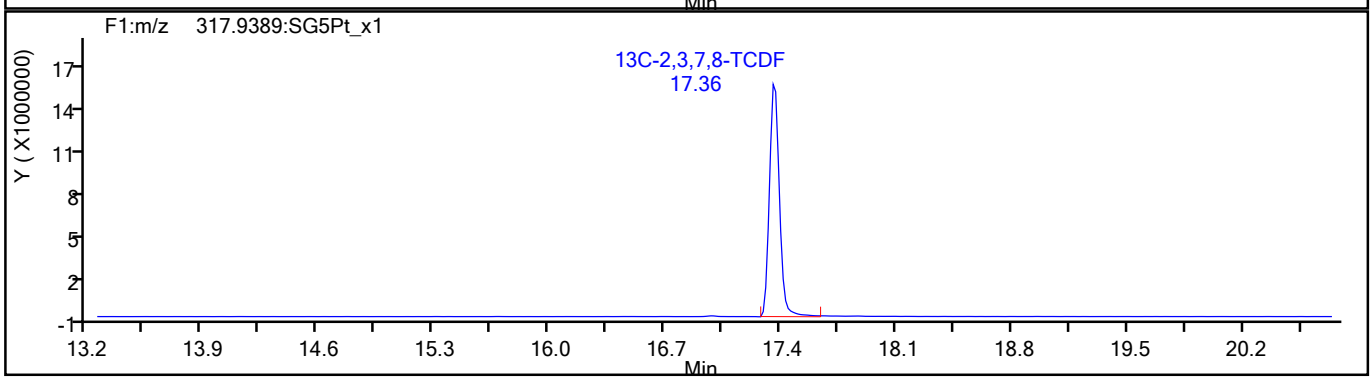

781770

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

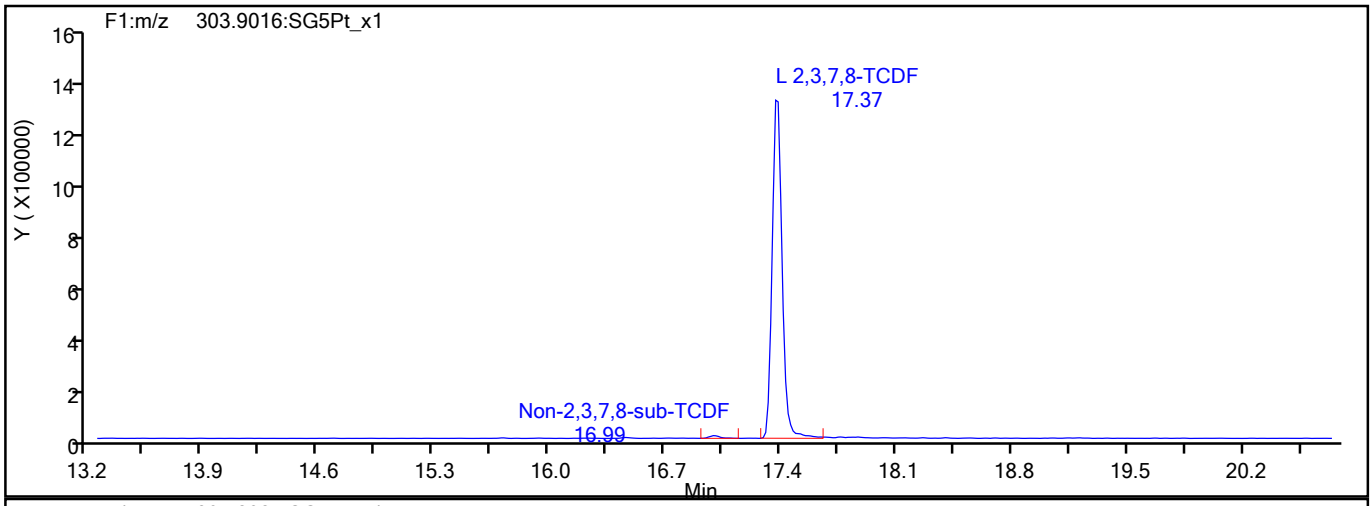

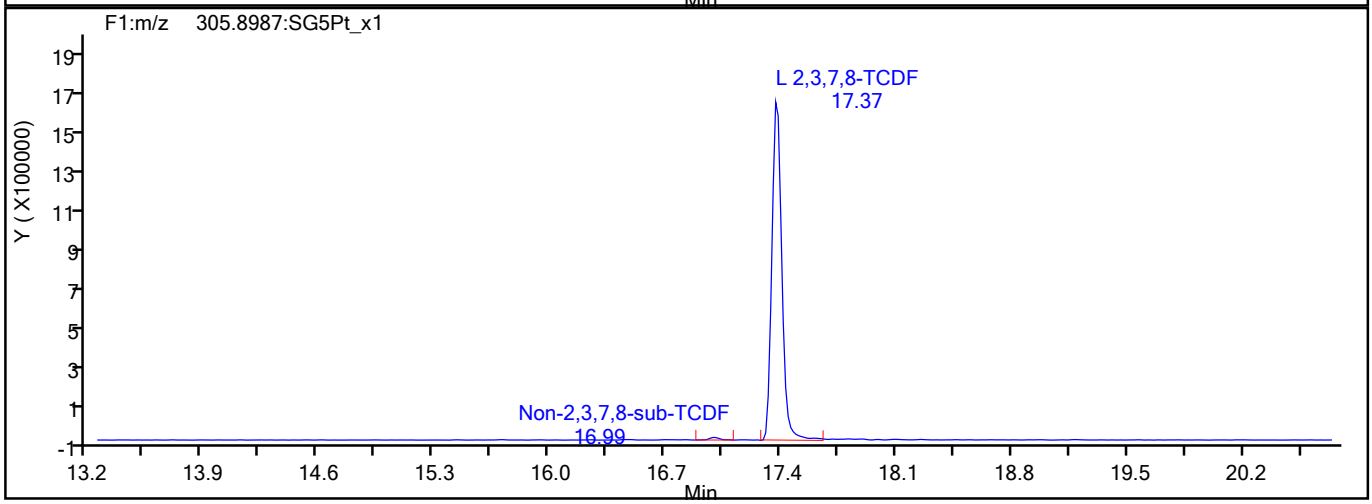

TCDF Interference Mass

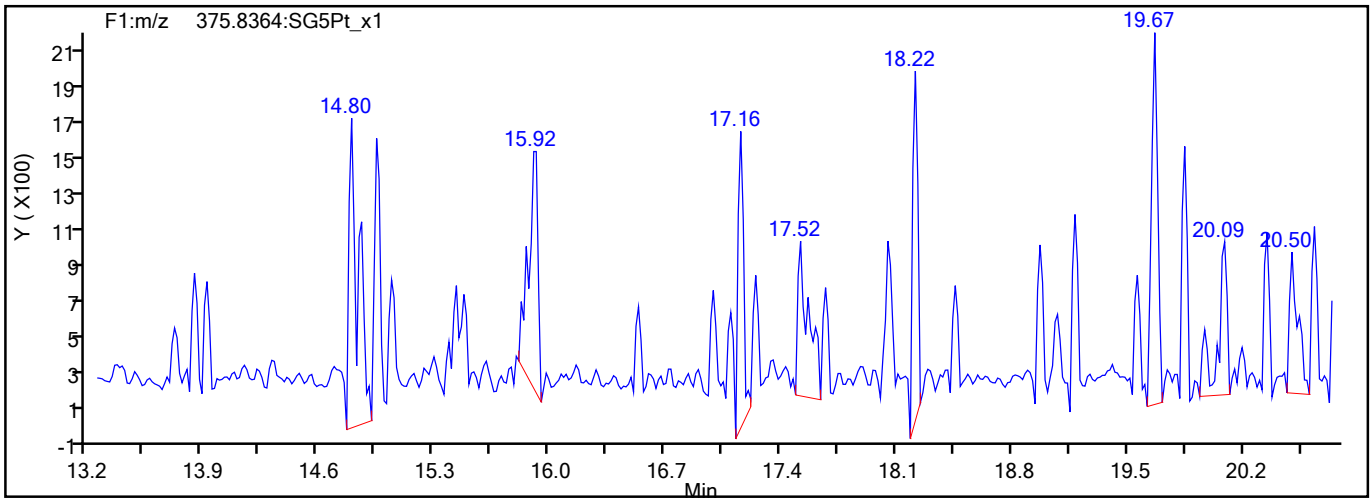

781771

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

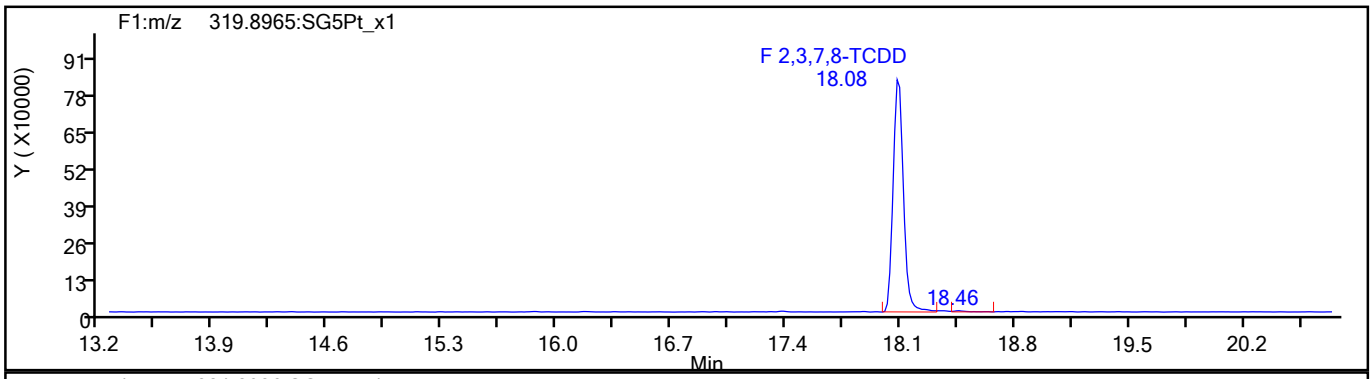

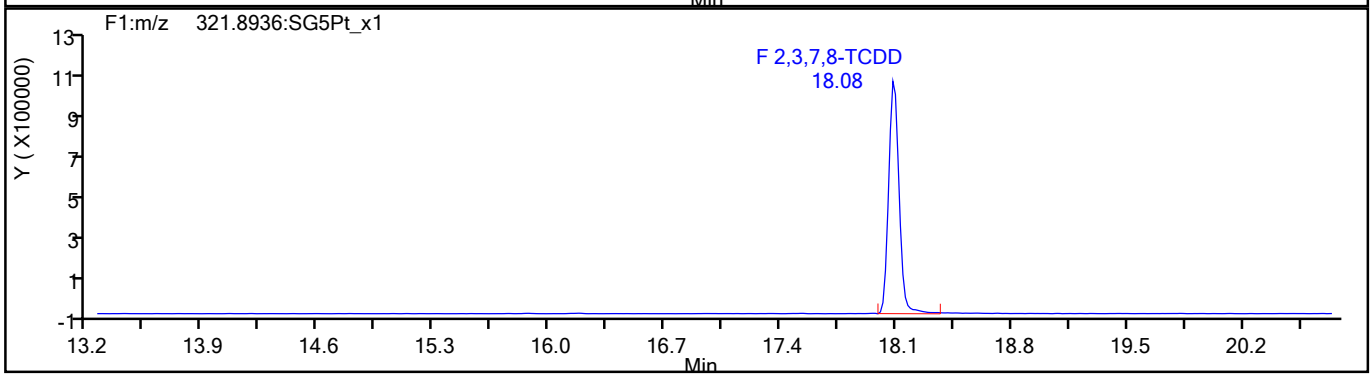

TCDD Standards

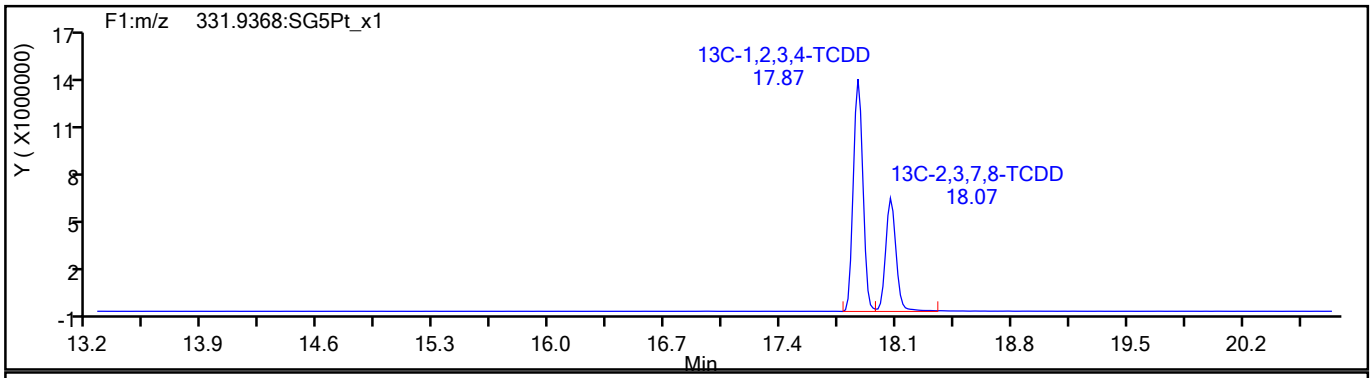

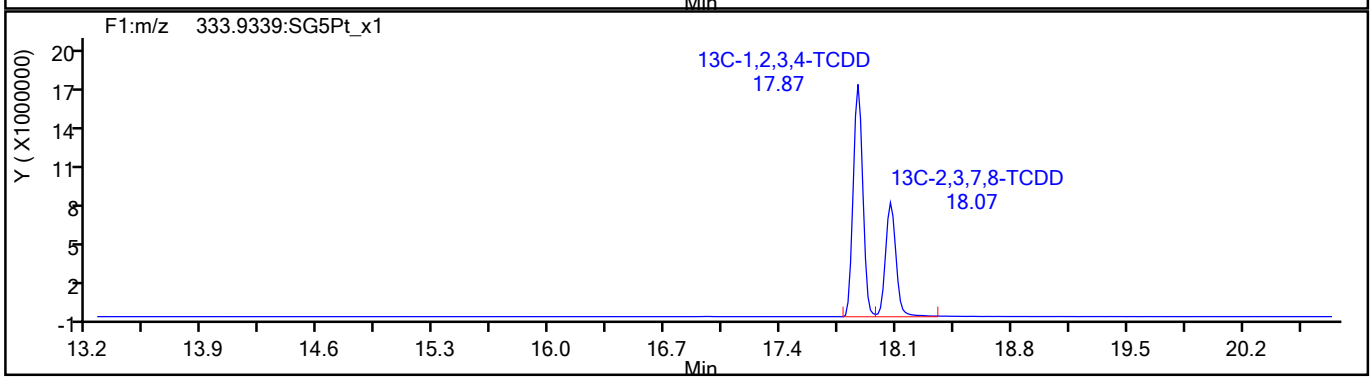

781772

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

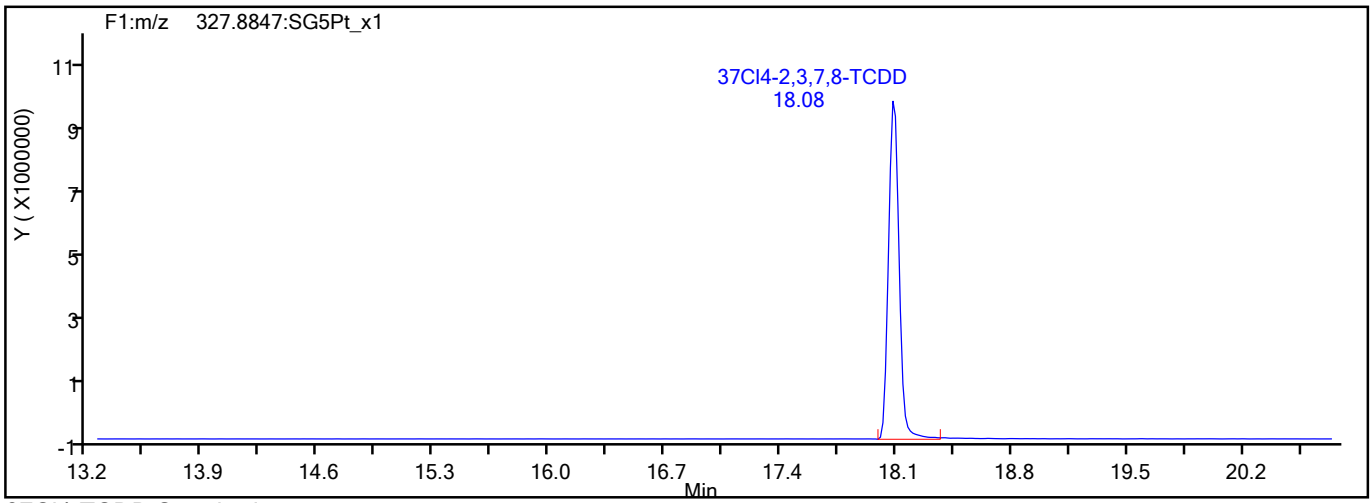

37Cl4-TCDD Standards

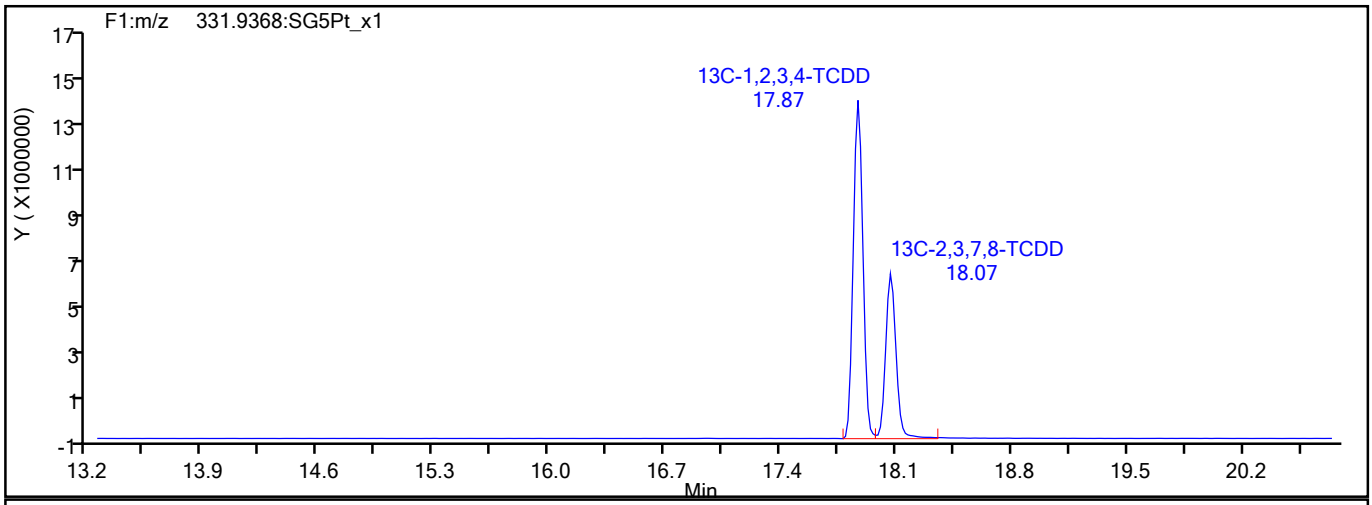

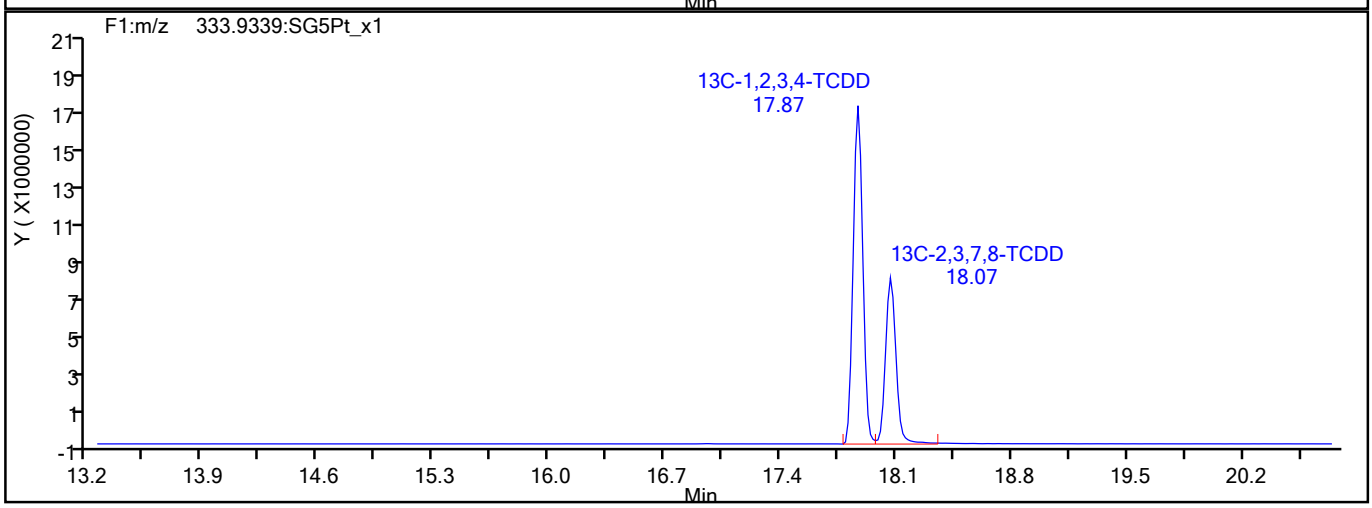

781773

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

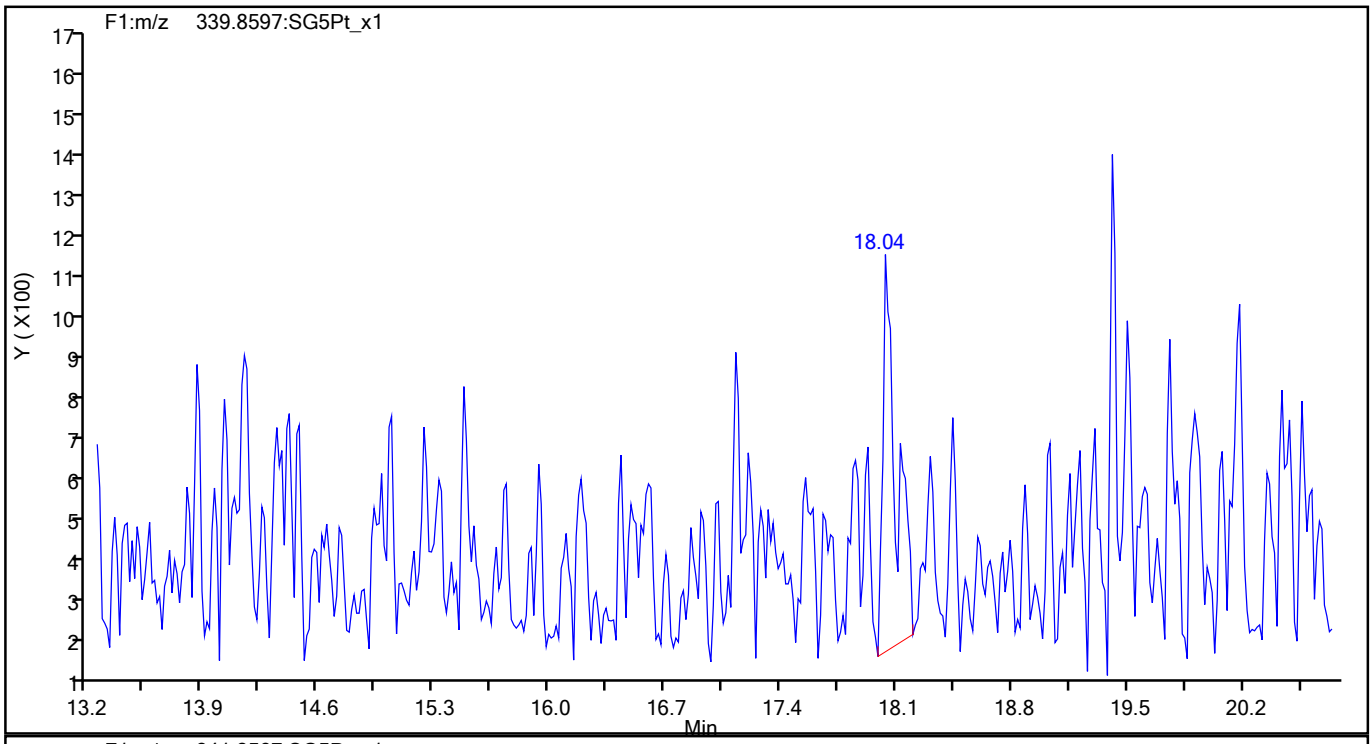

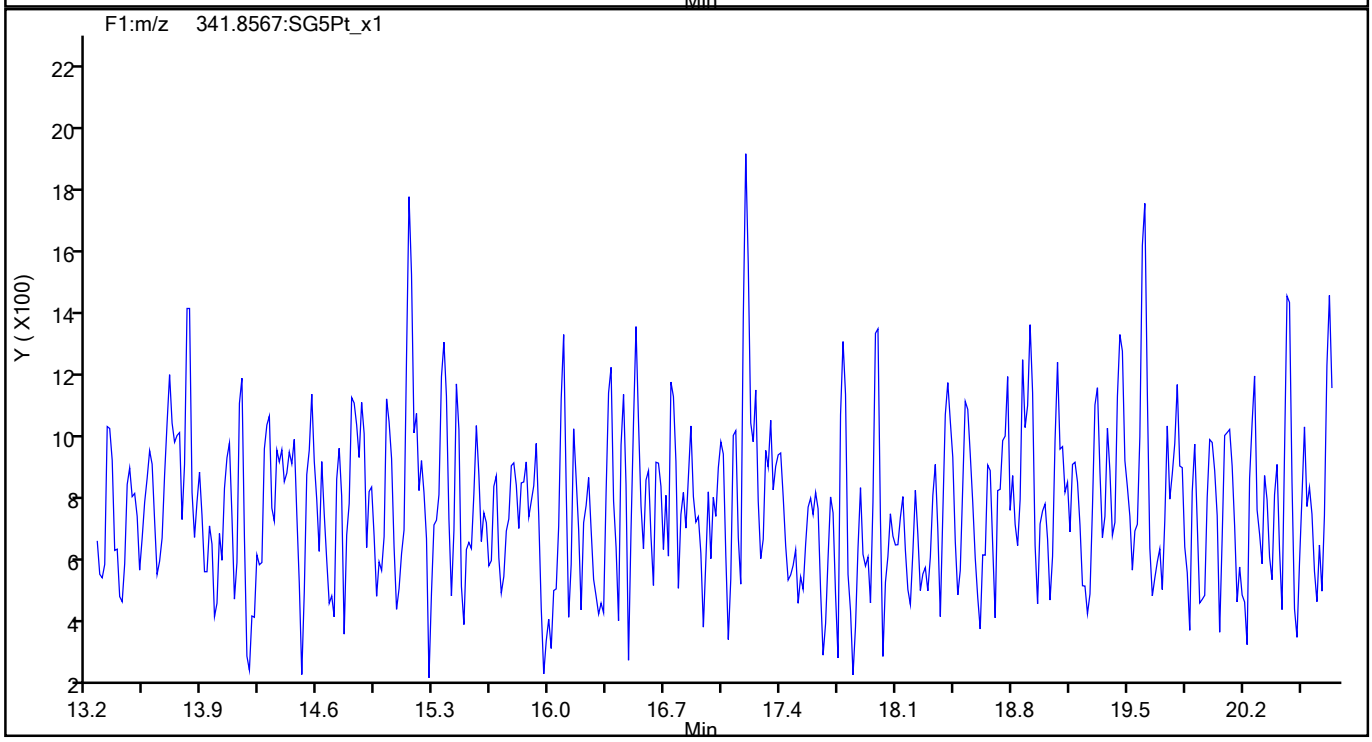

781774

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

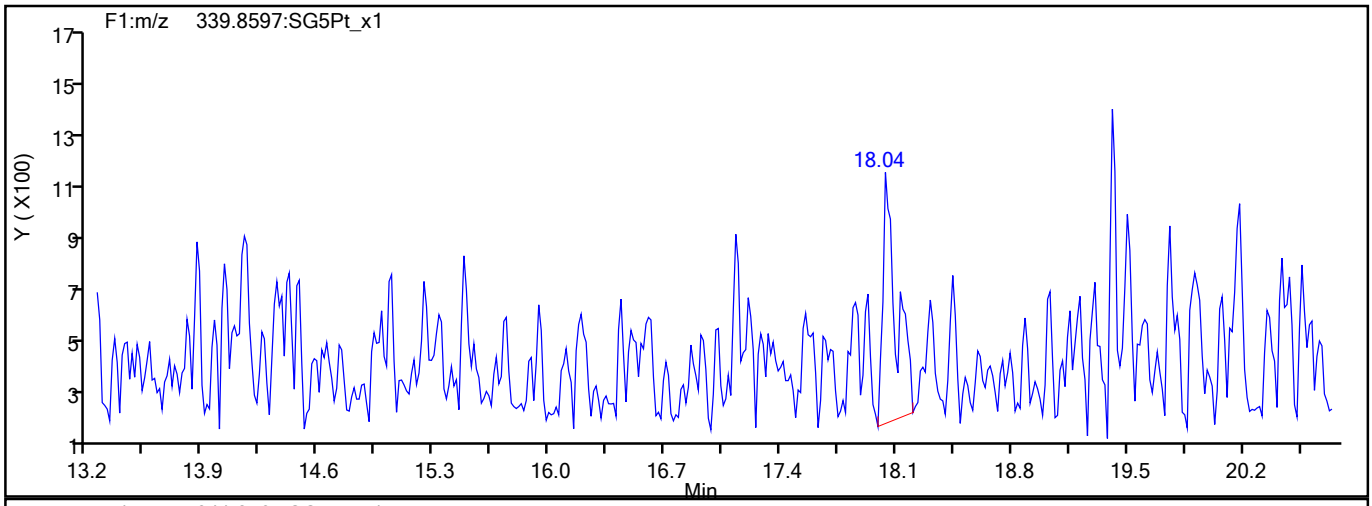

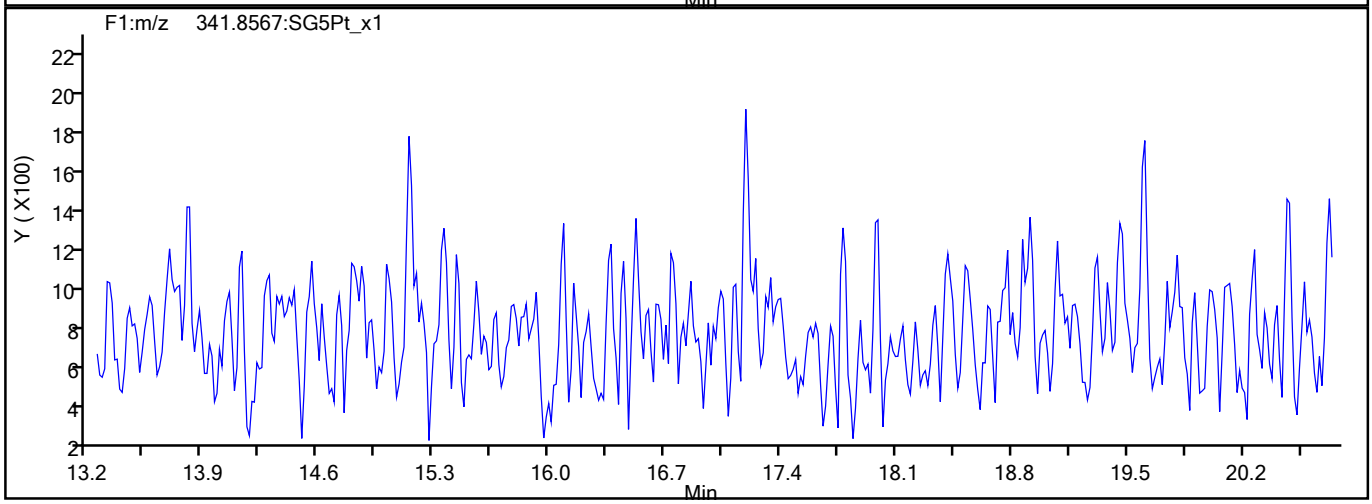

F1 PeCDFs Interference Mass

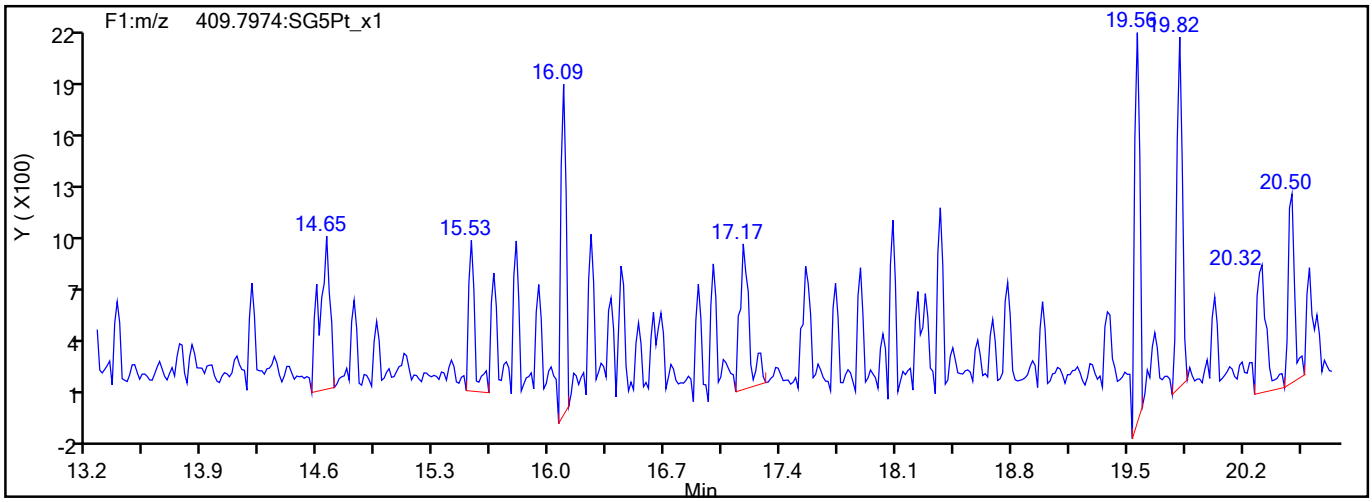

781775

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

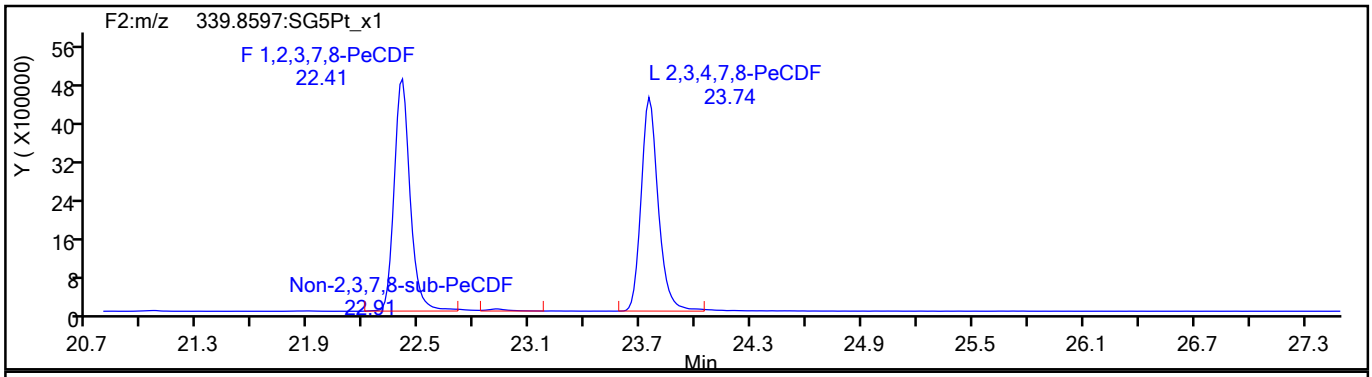

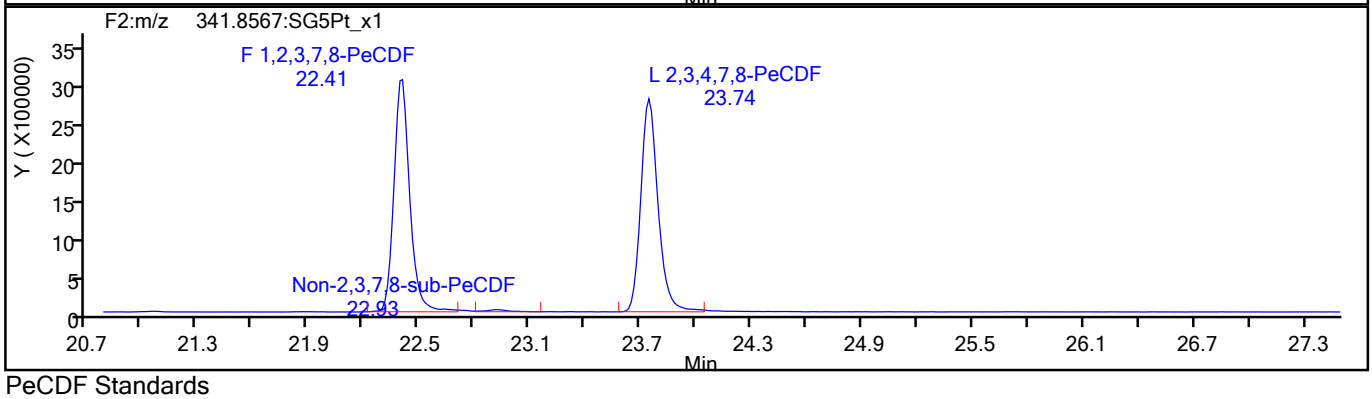

PeCDF Standards

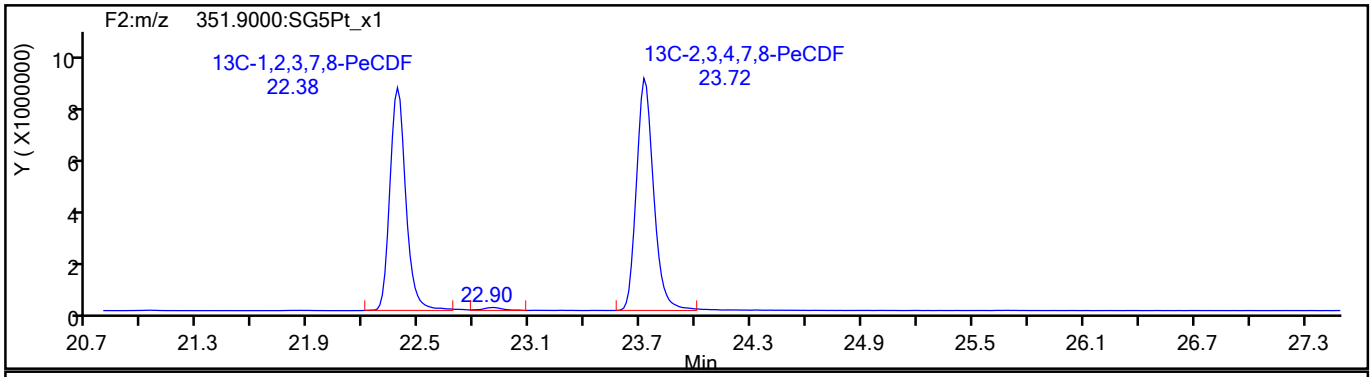

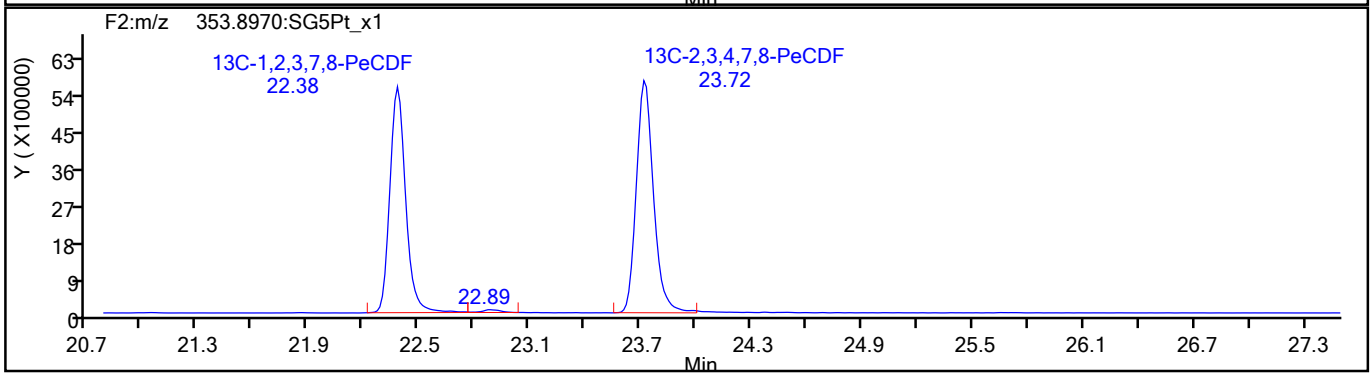

781776

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

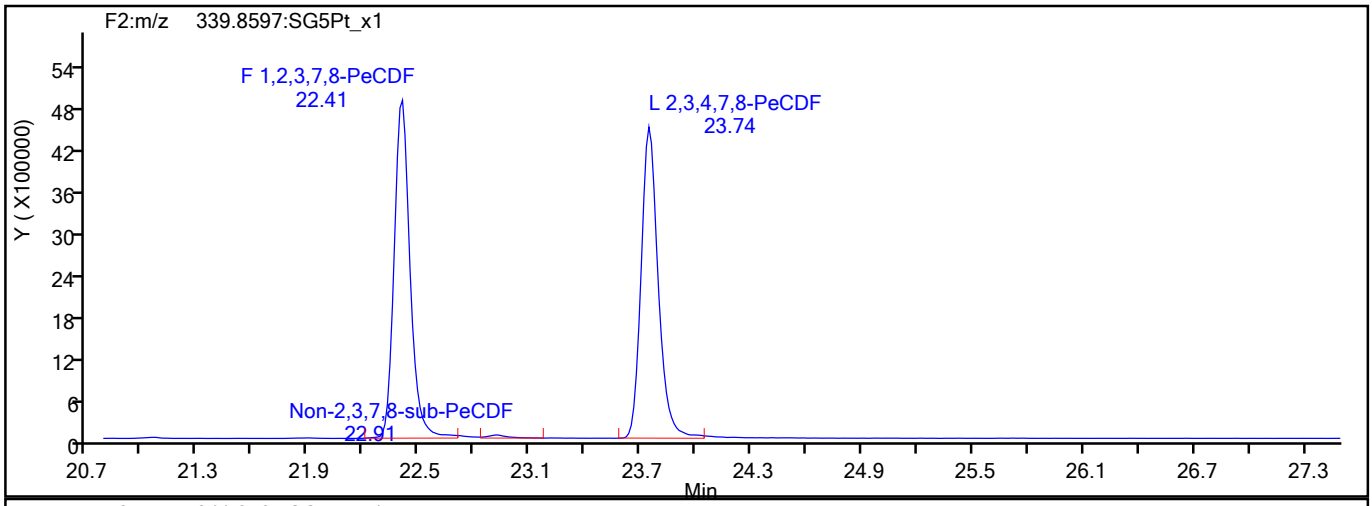

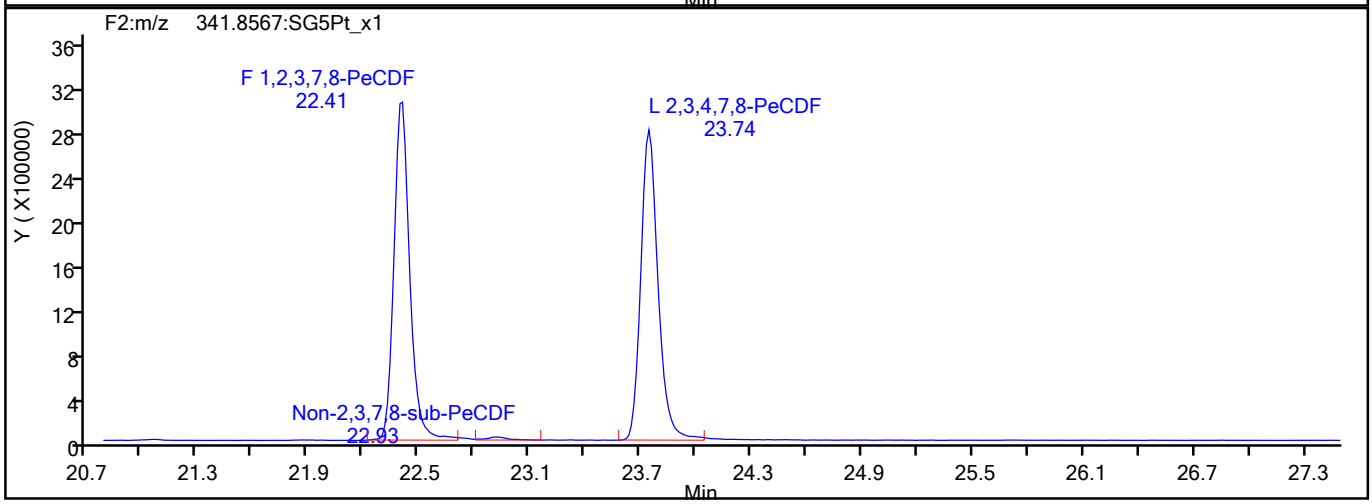

PeCDF Interference Mass

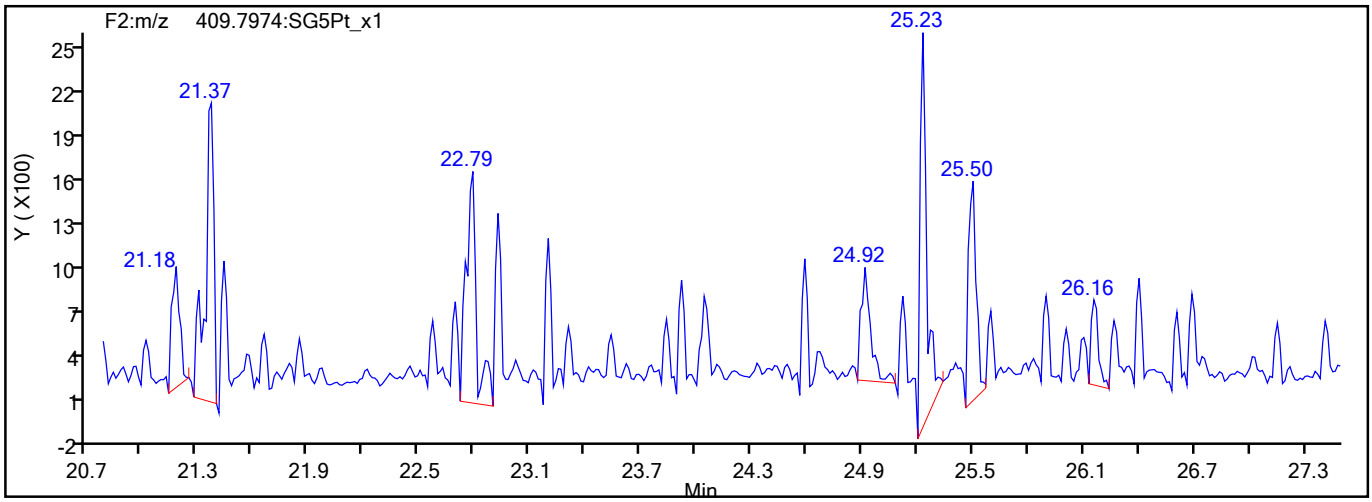

781777

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

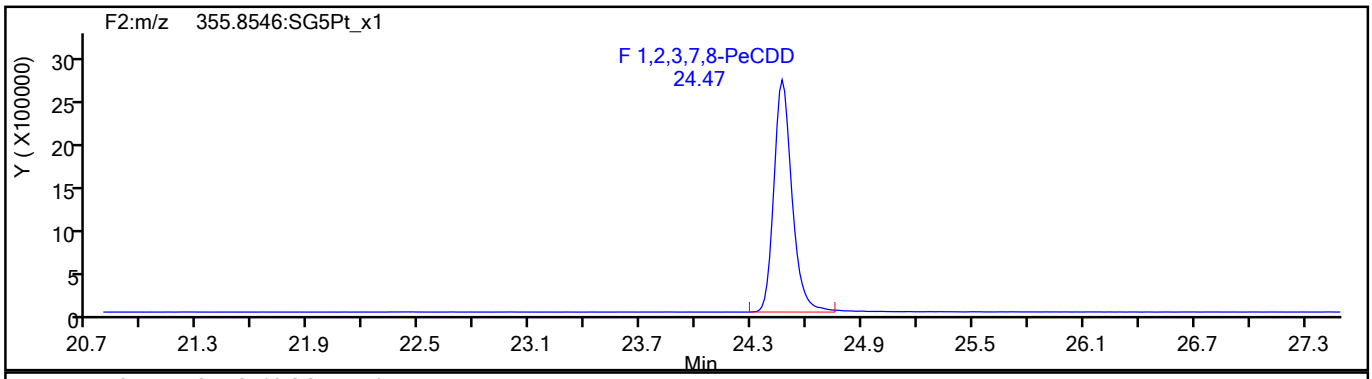

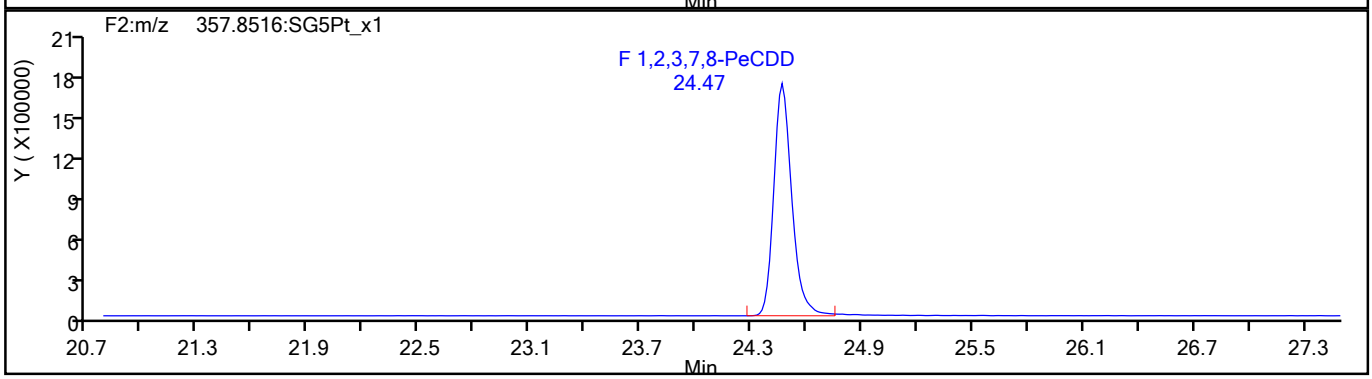

PeCDD Standards

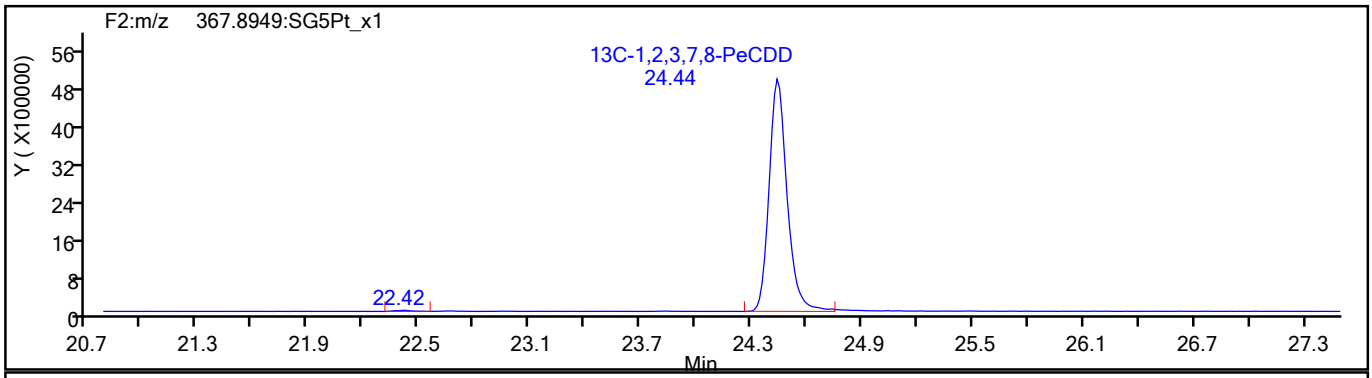

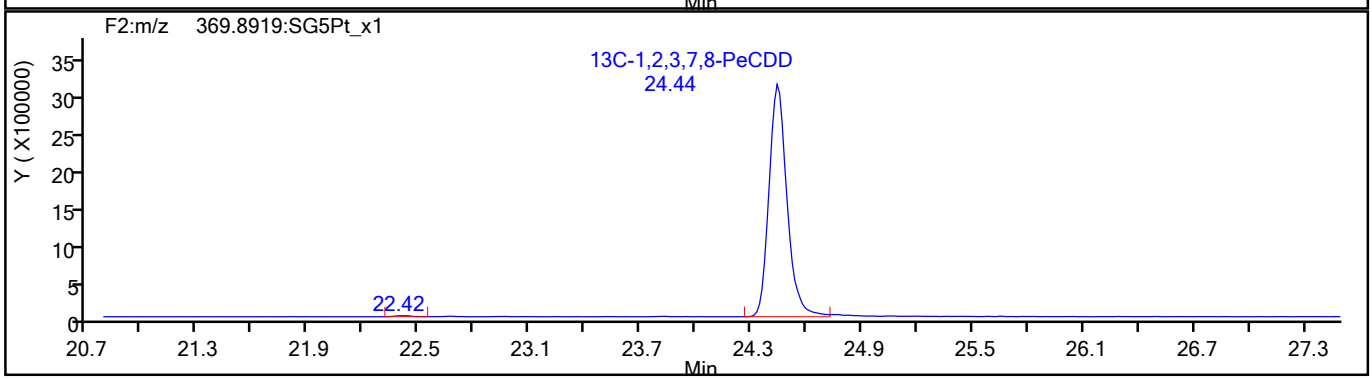

781778

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
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HxCDF

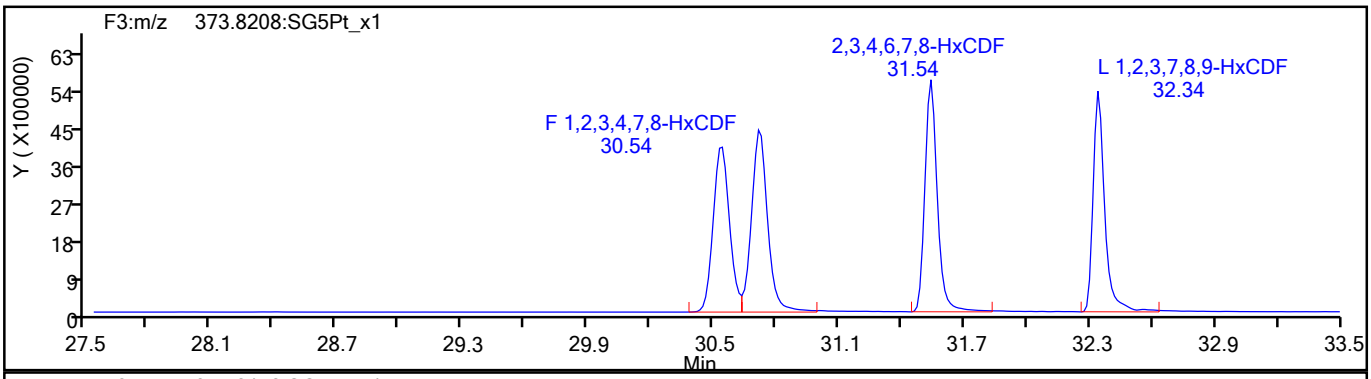

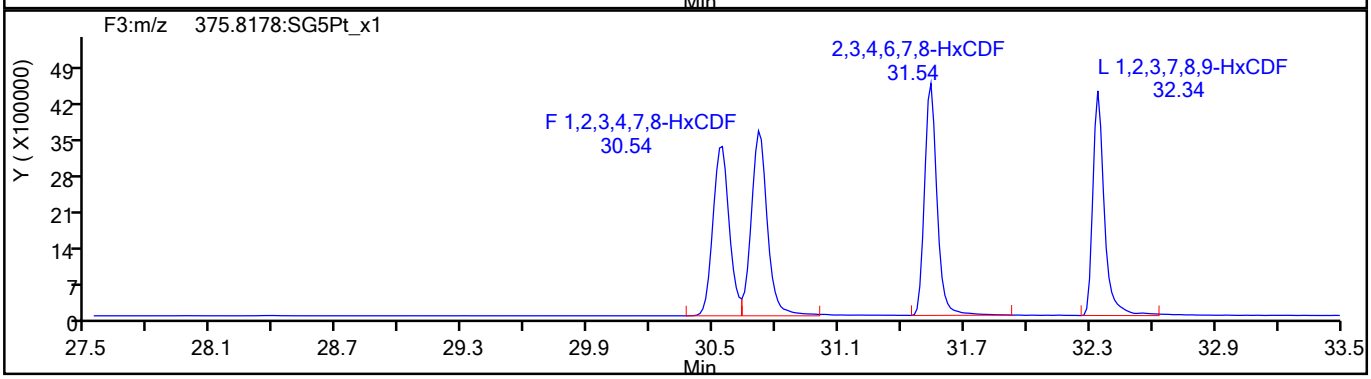

HxCDF Standards

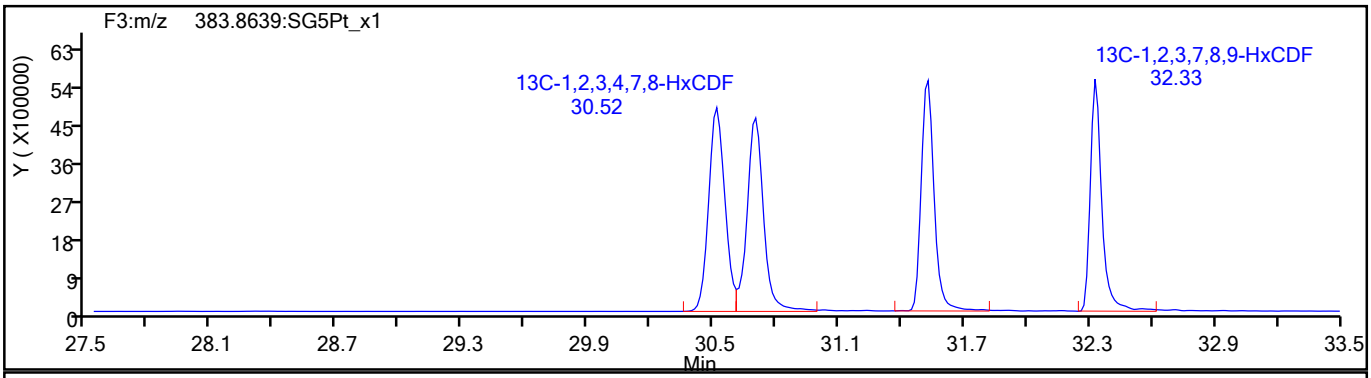

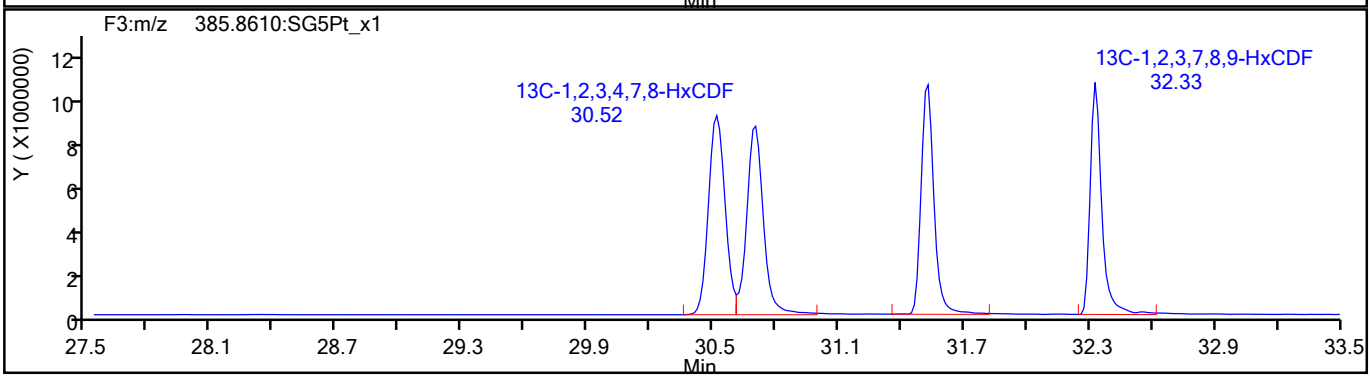

781779

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

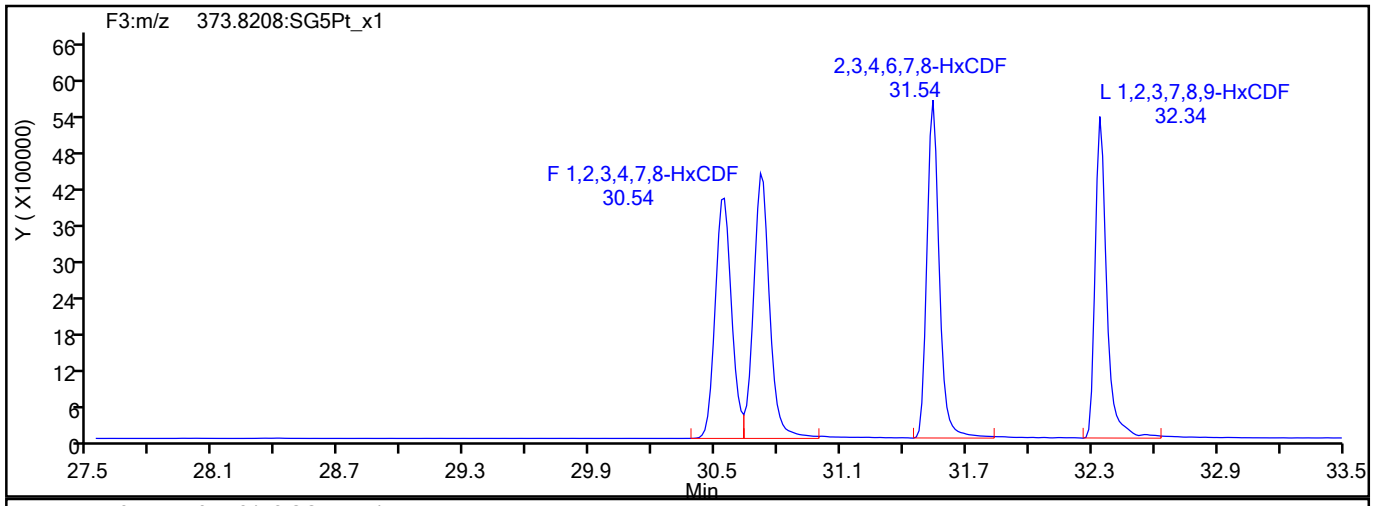

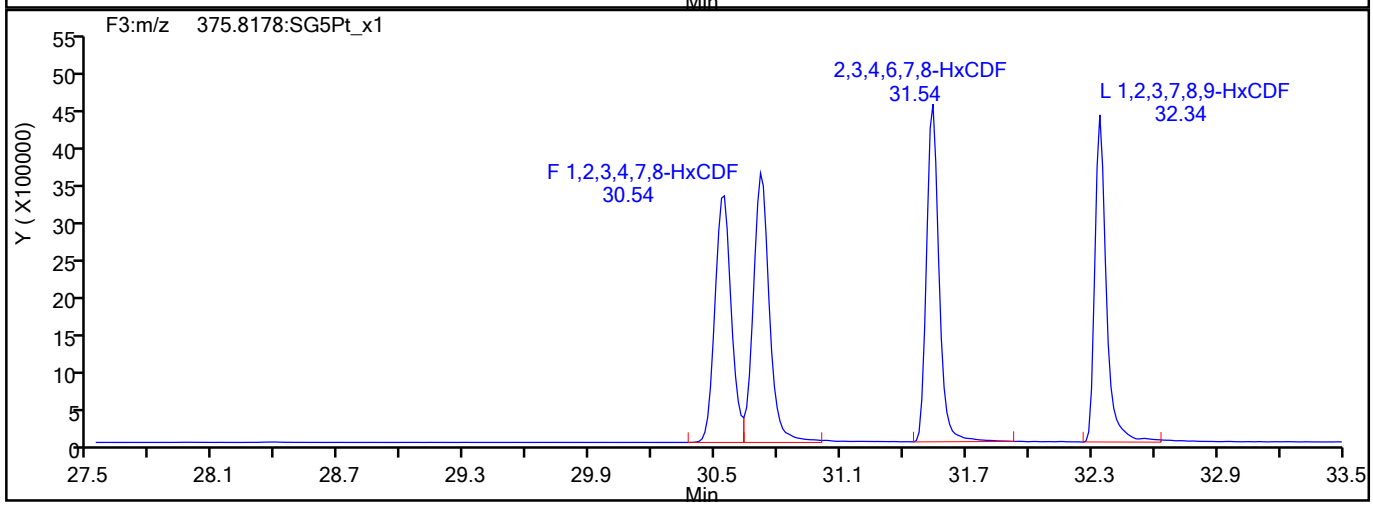

HxCDF Interference Mass

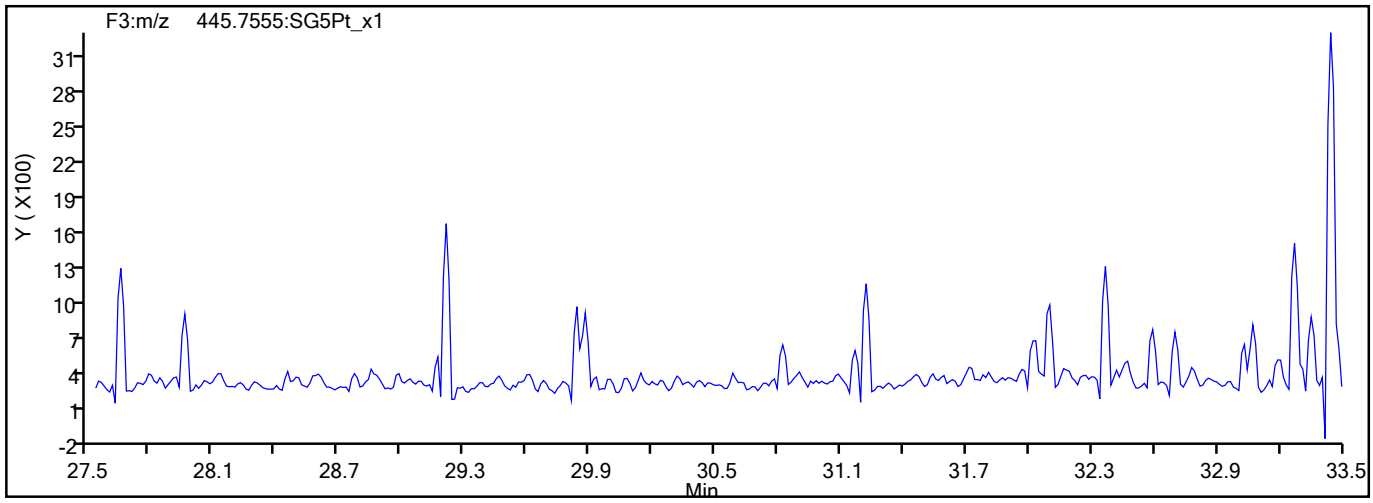

781780

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

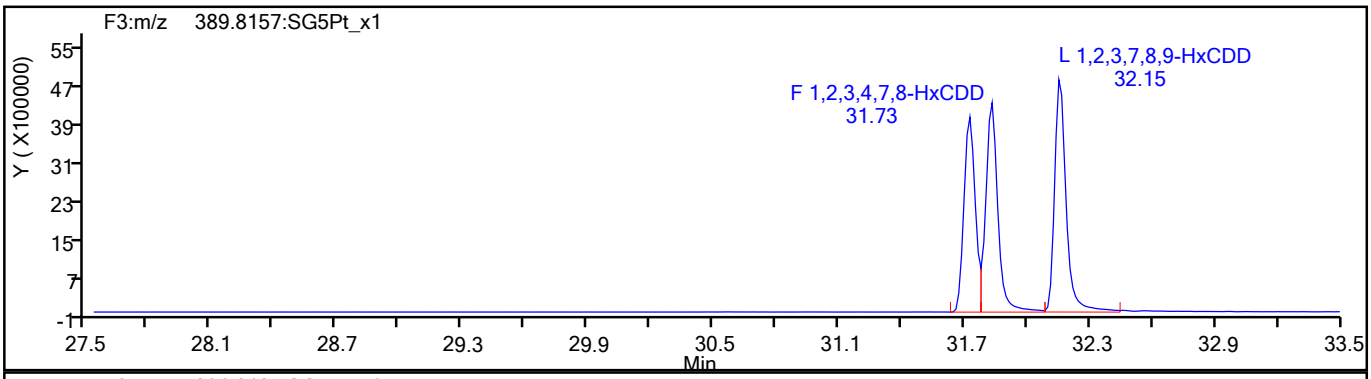

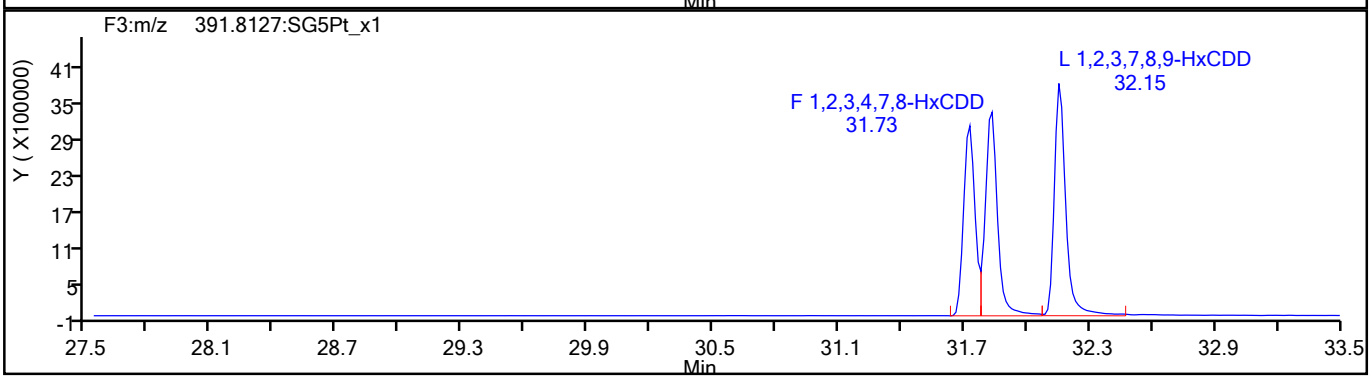

HxCDD Standards

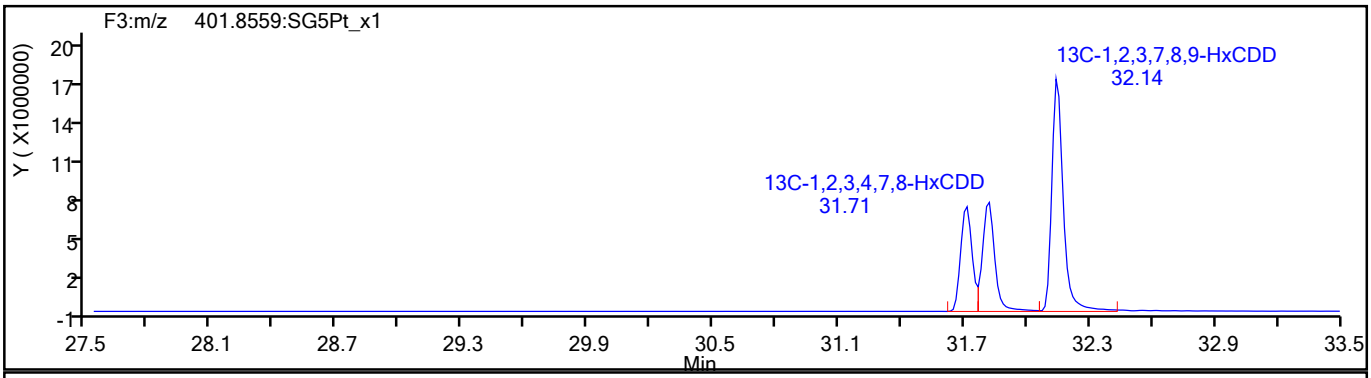

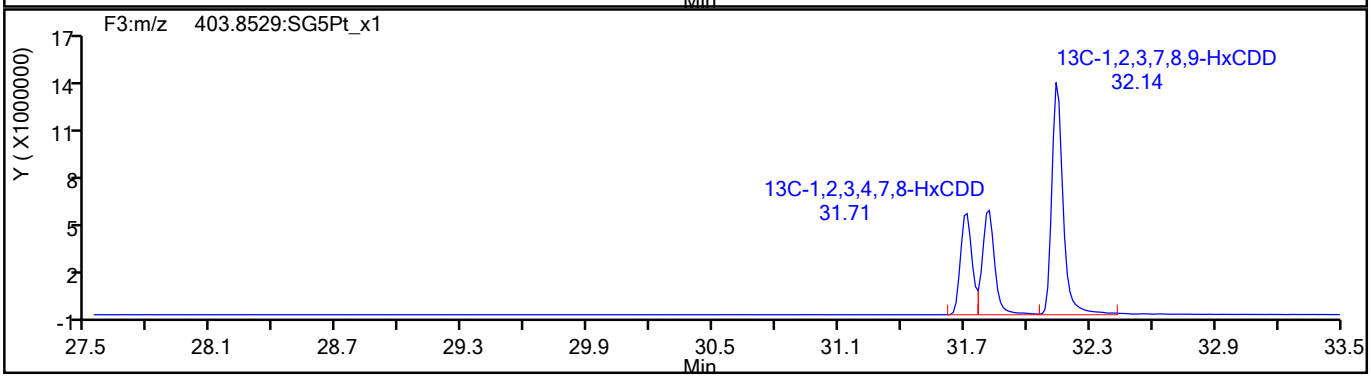

781781

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

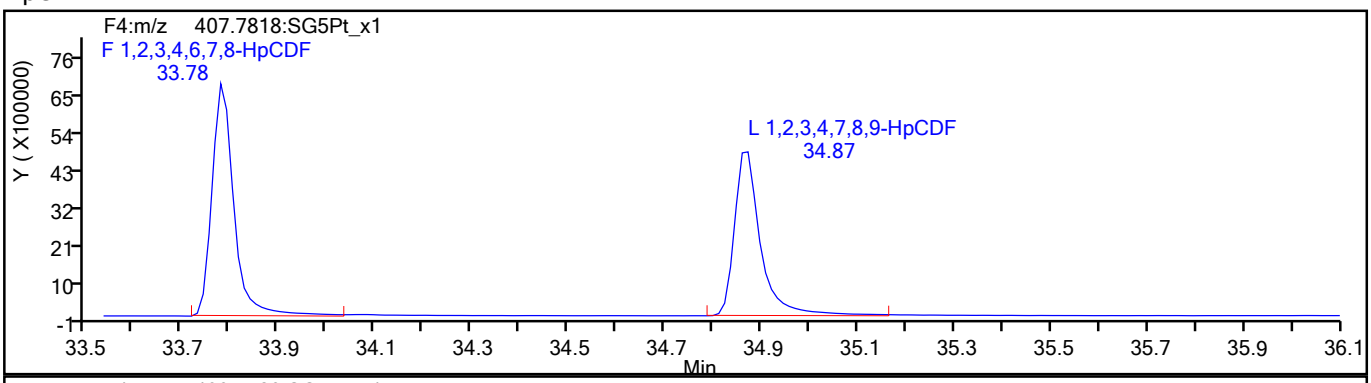

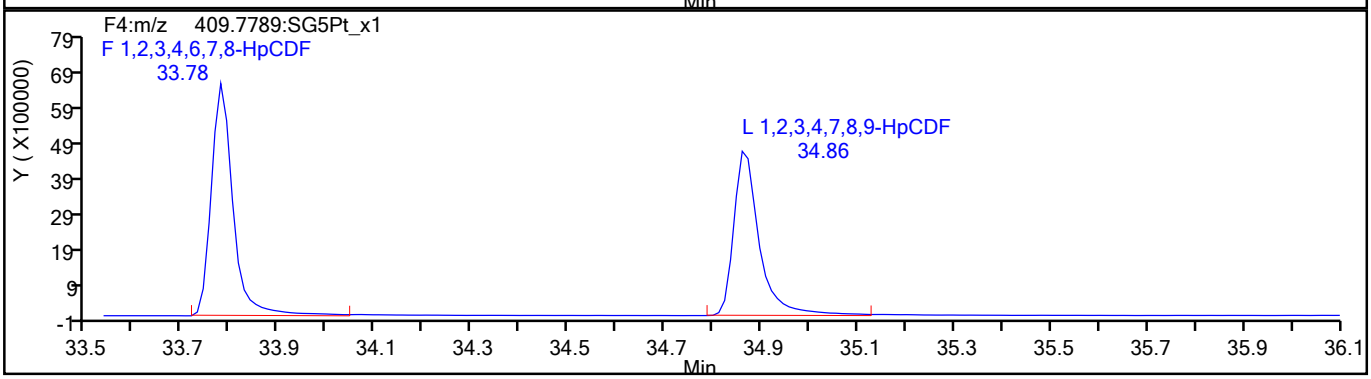

HpCDF Standards

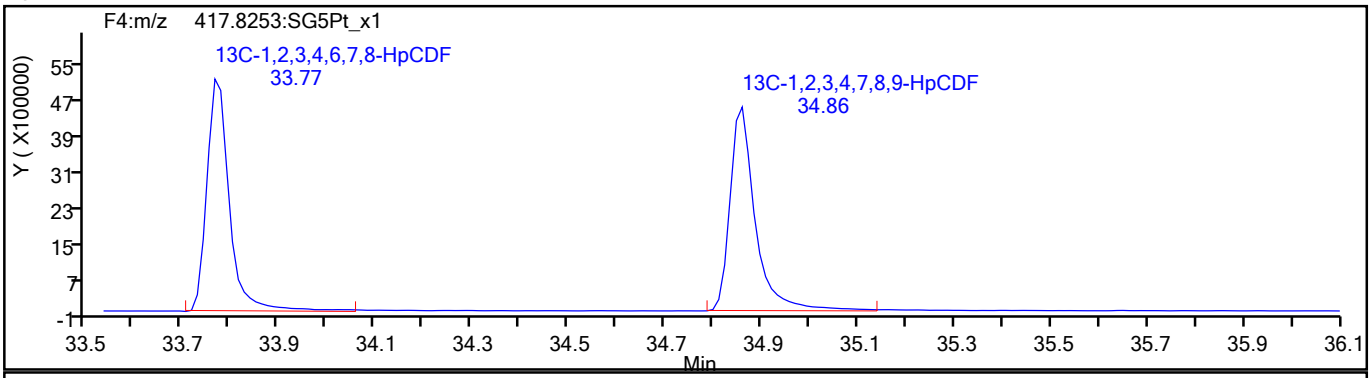

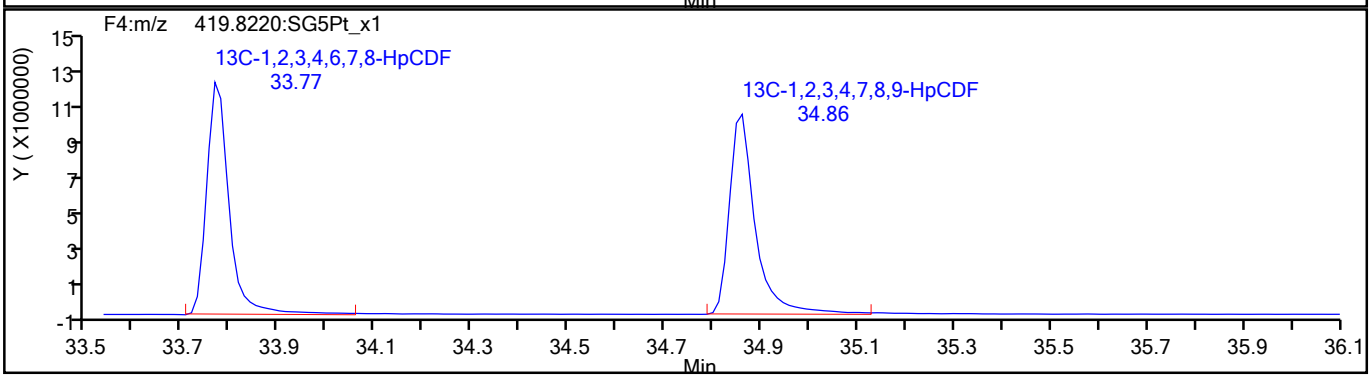

781782

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

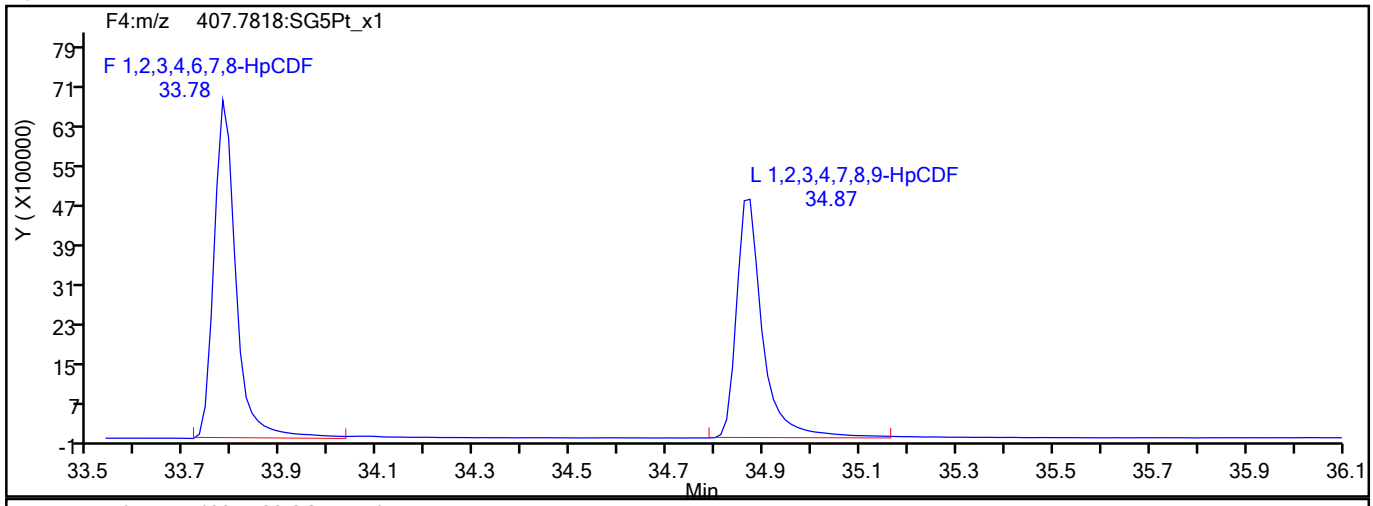

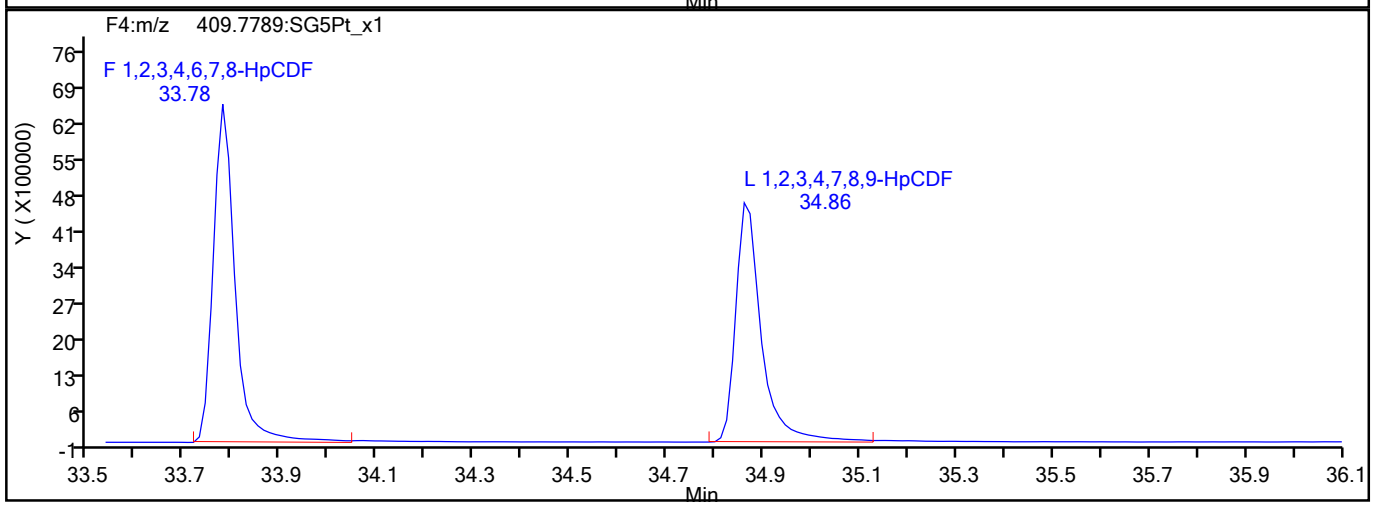

HpCDF Interference Mass

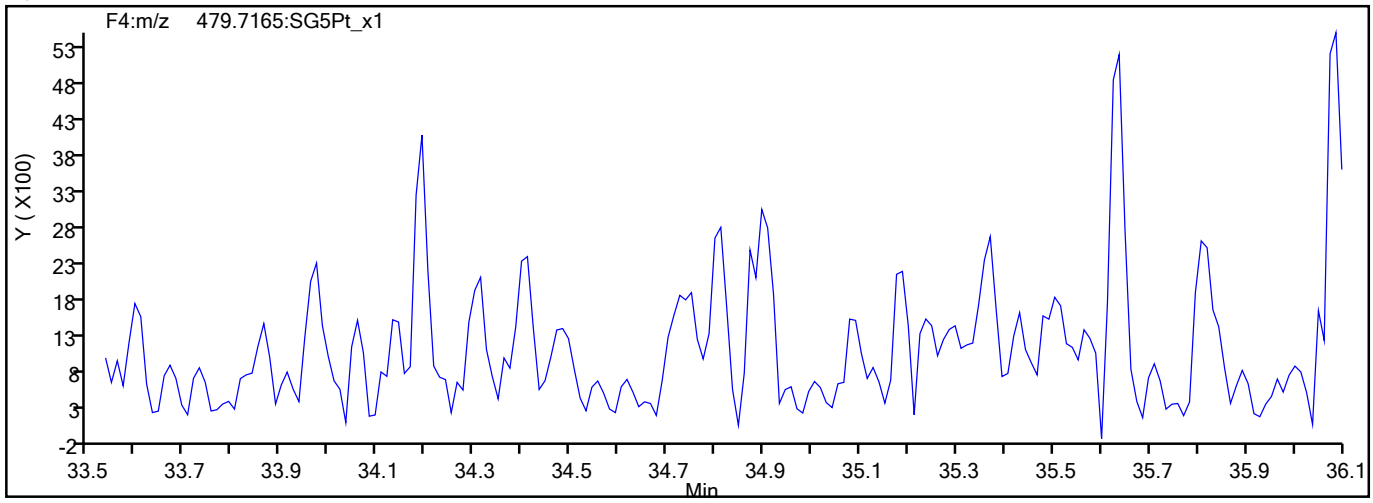

781783

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

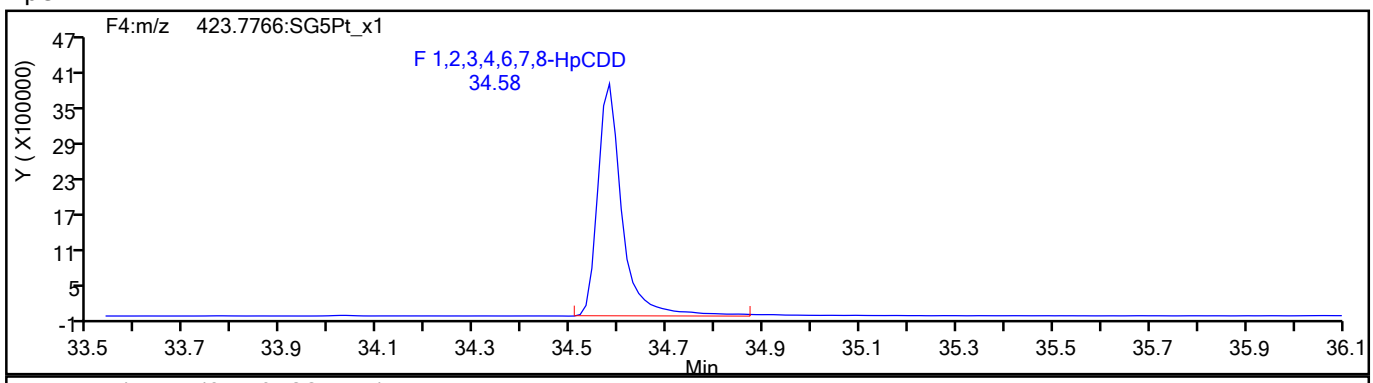

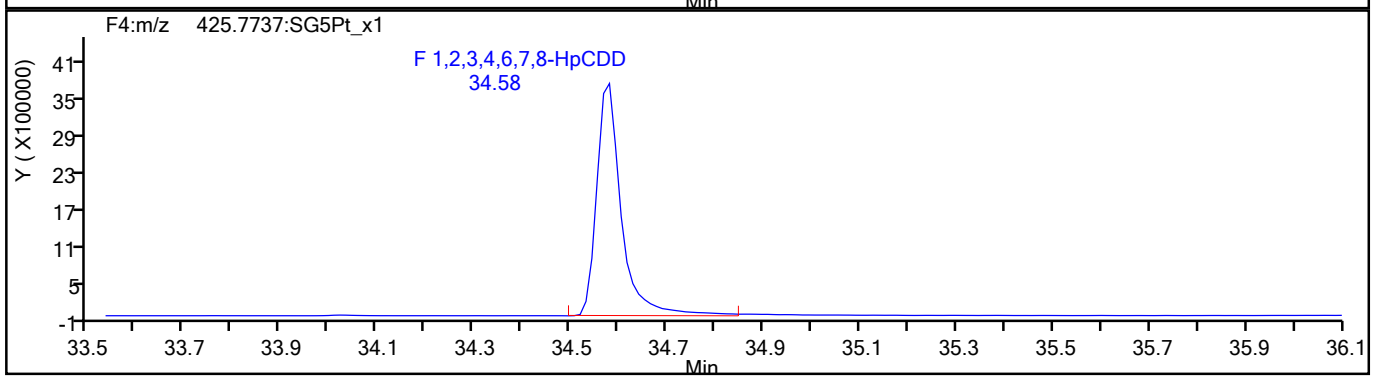

HpCDD Standards

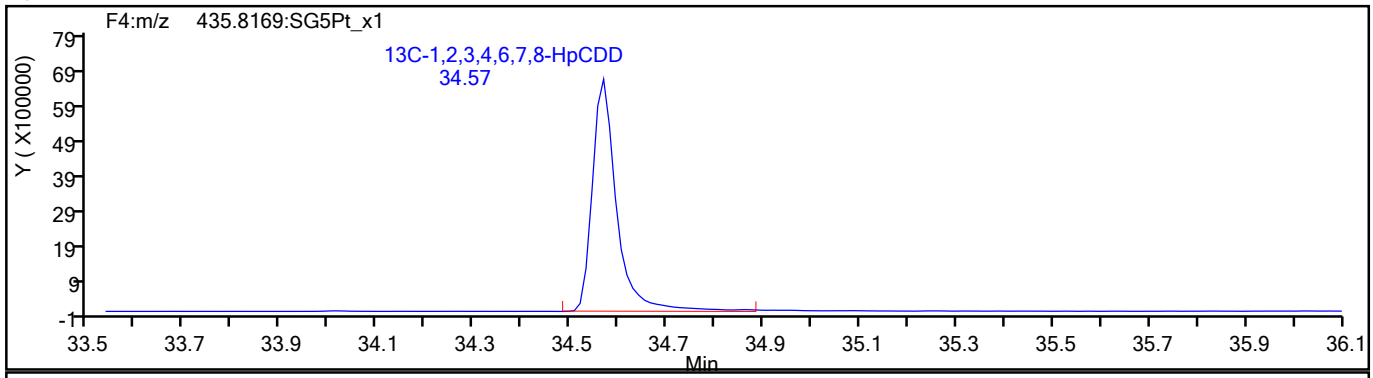

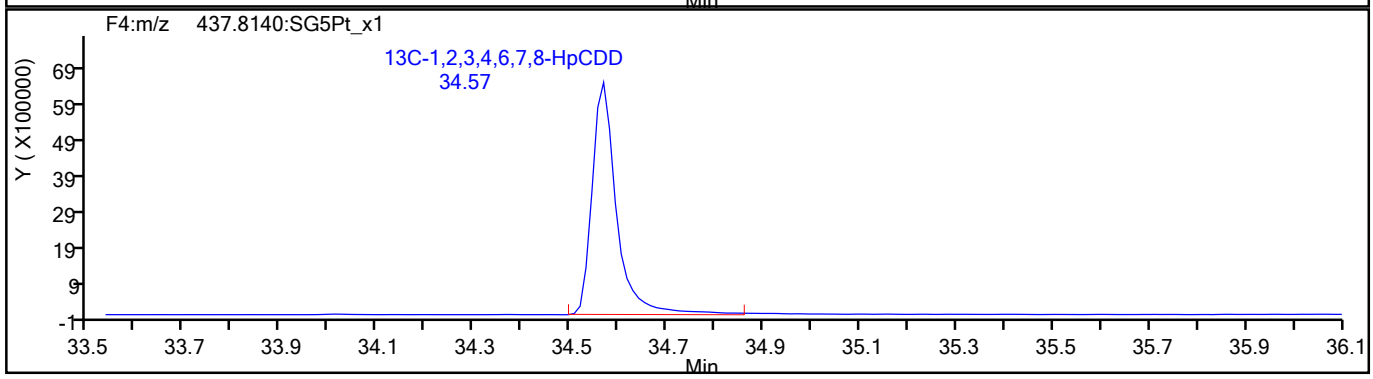

781784

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

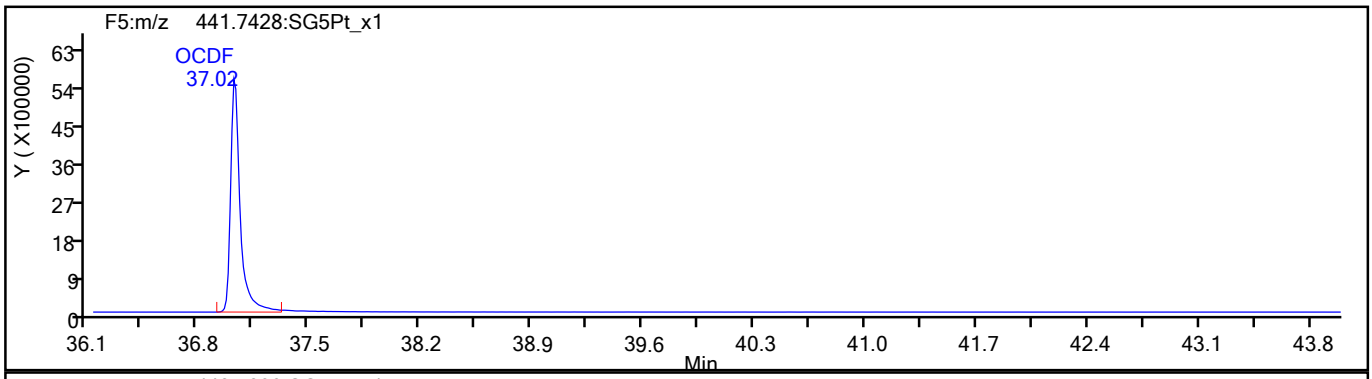

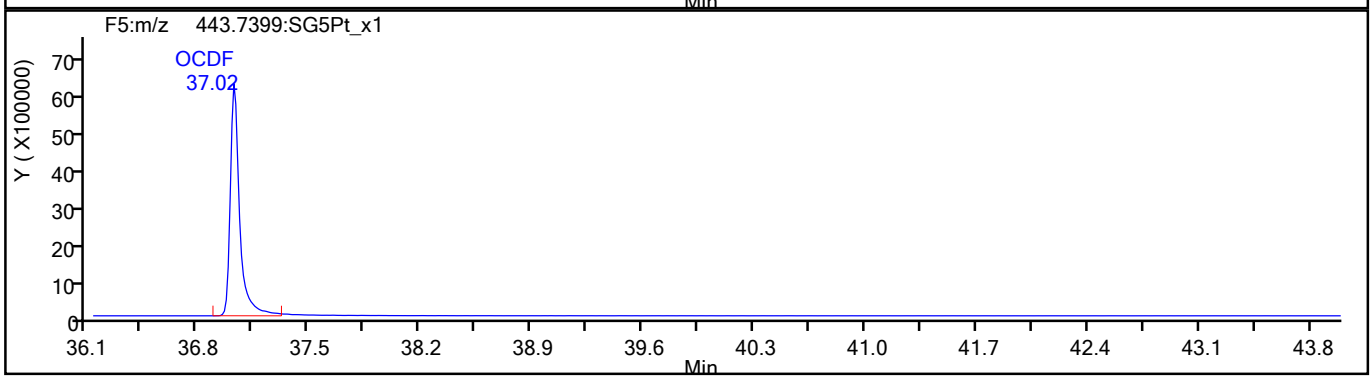

OCDF Standards

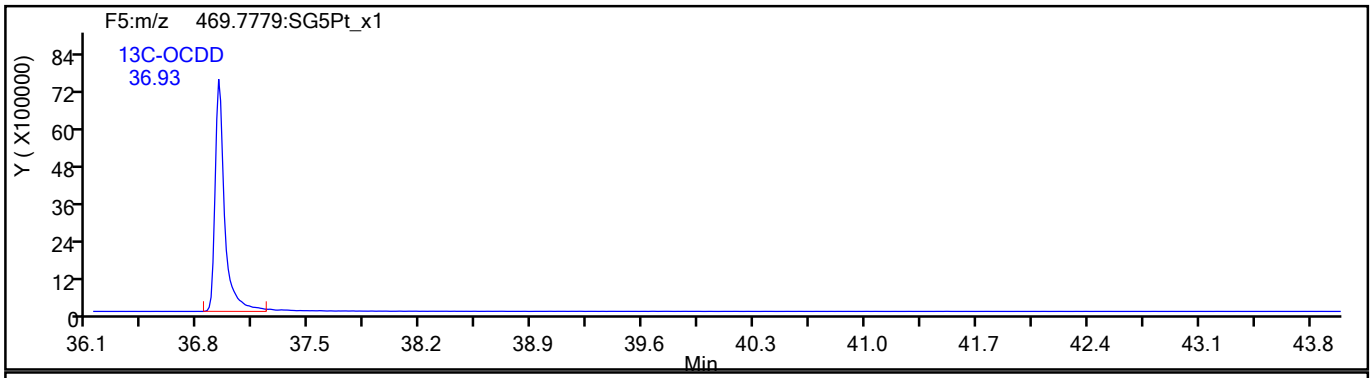

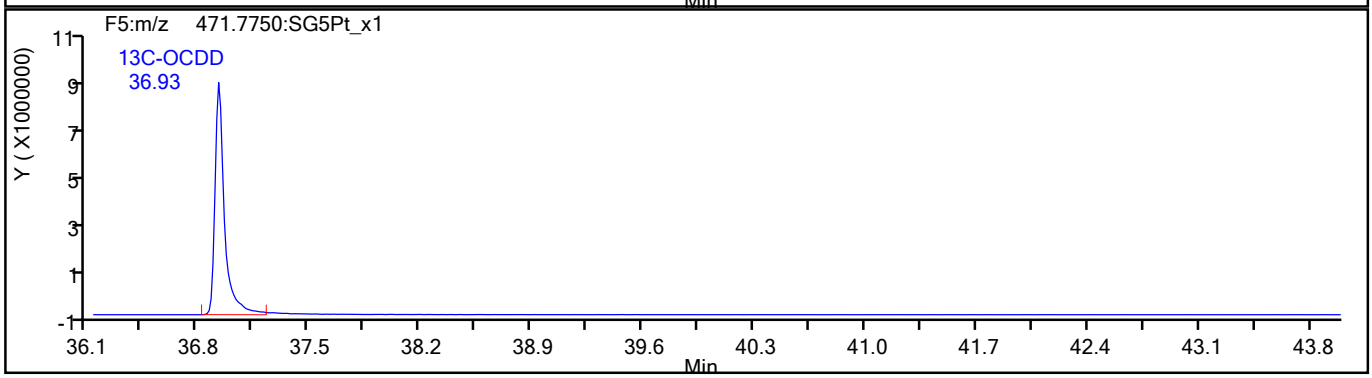

781785

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

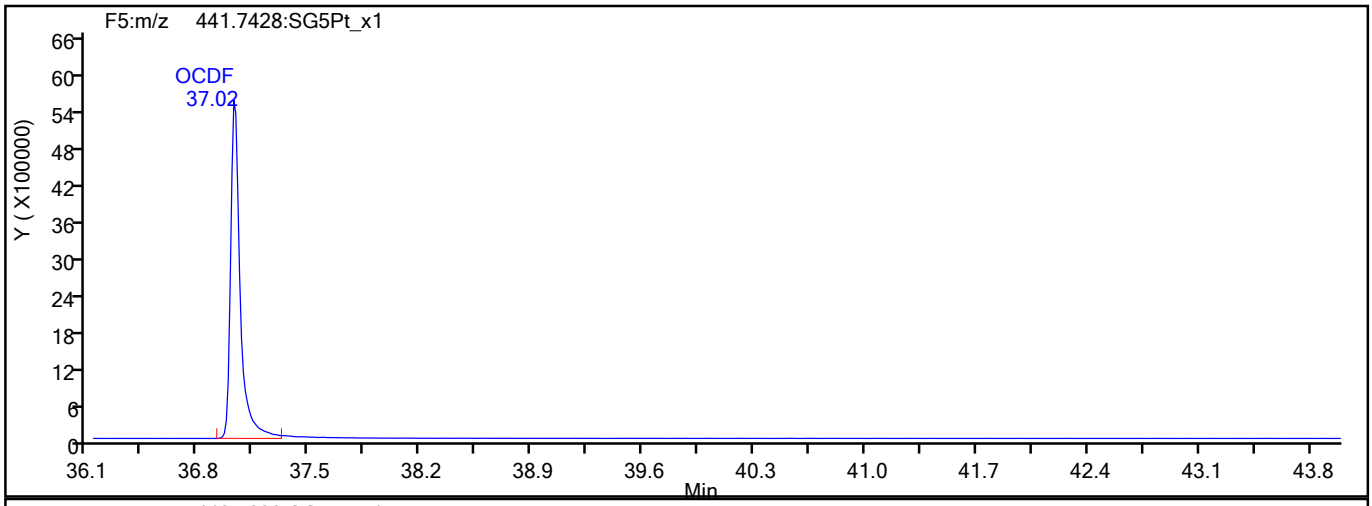

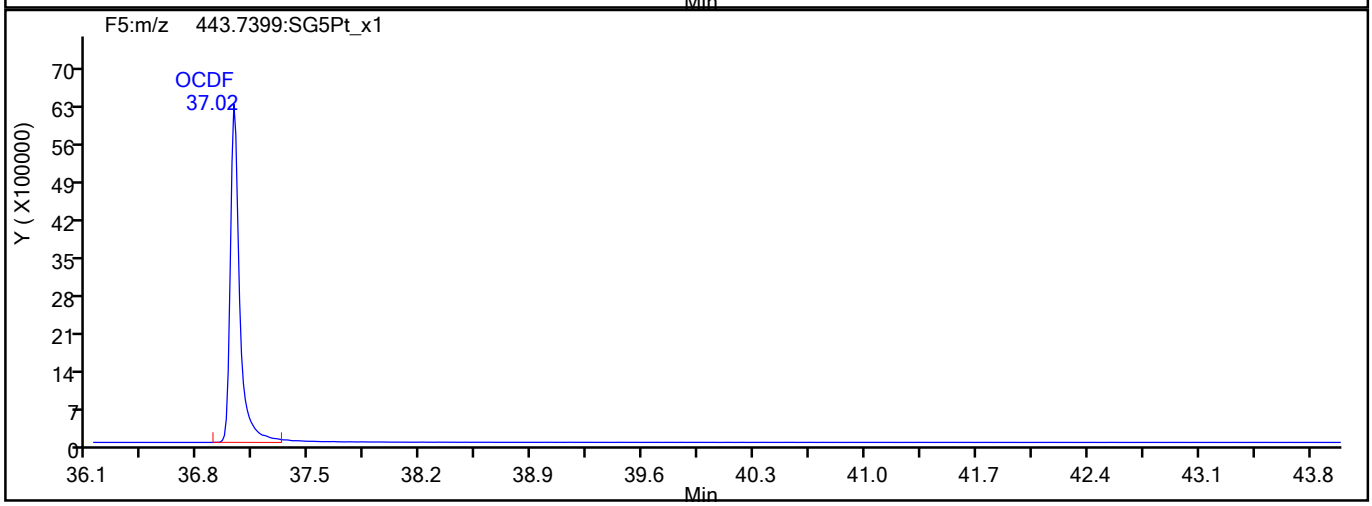

OCDF Interference Mass

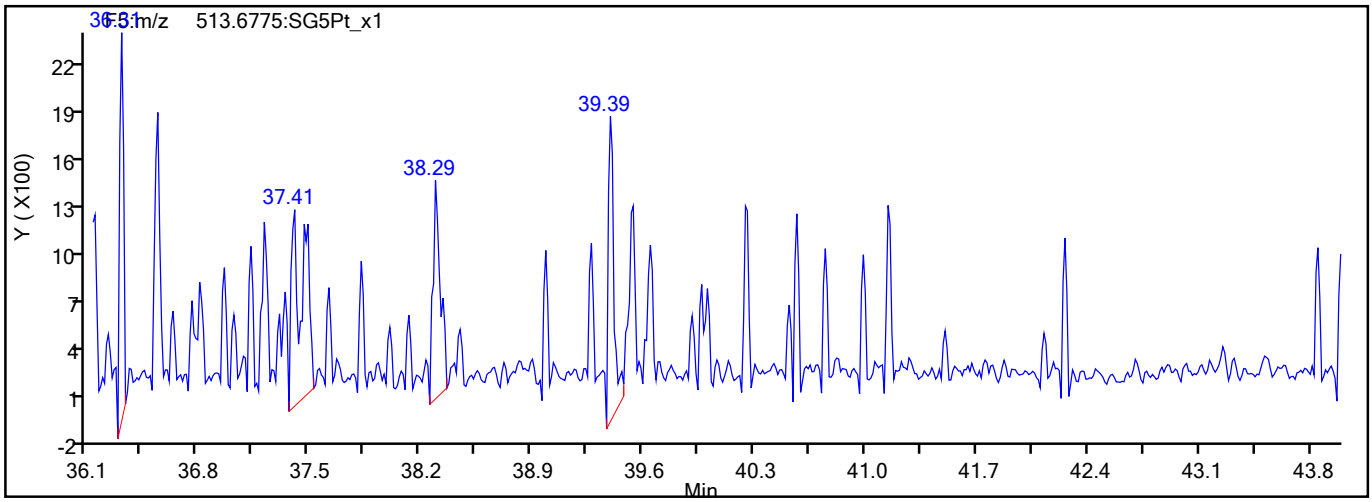

781786

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

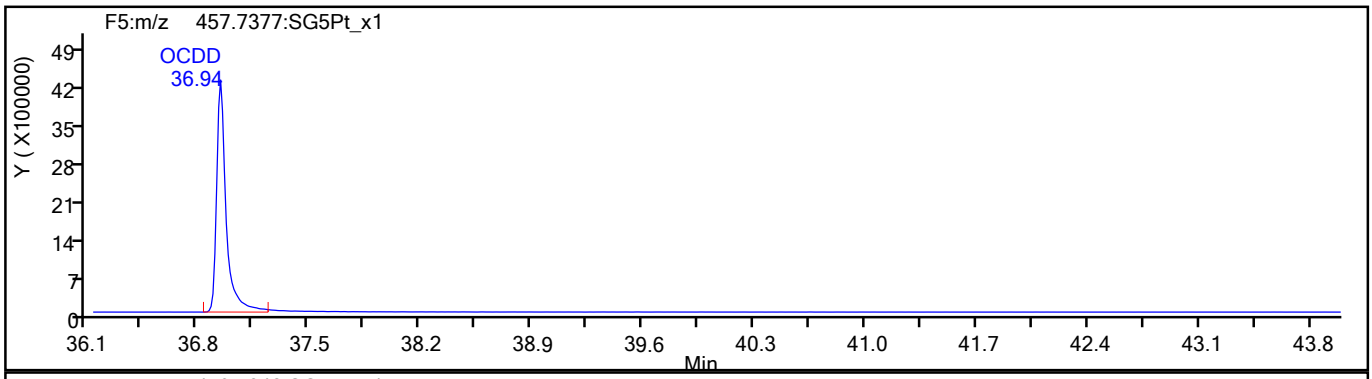

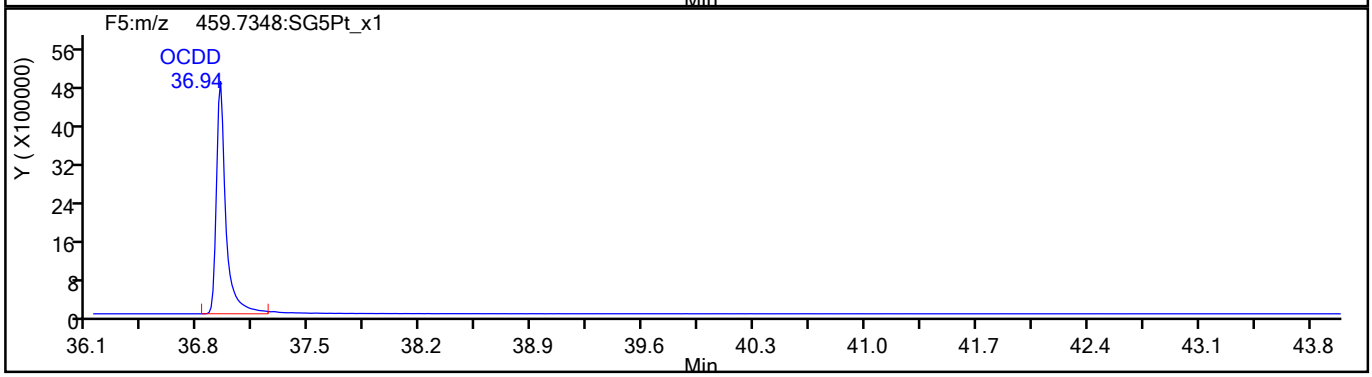

OCDD Standards

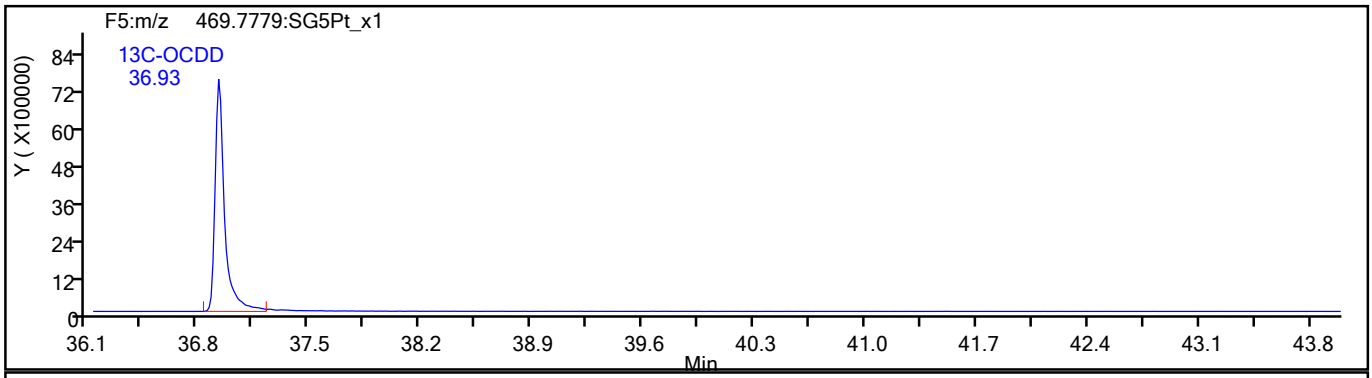

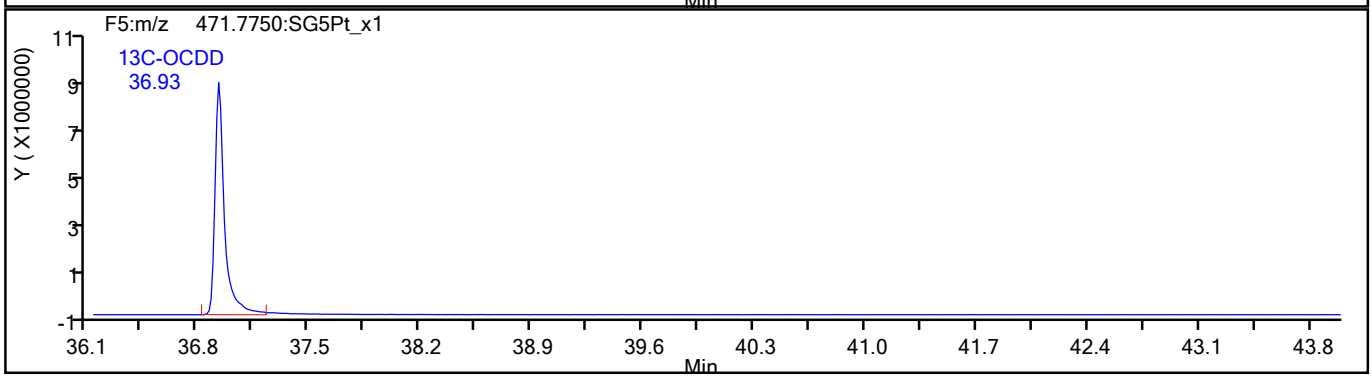

781787

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

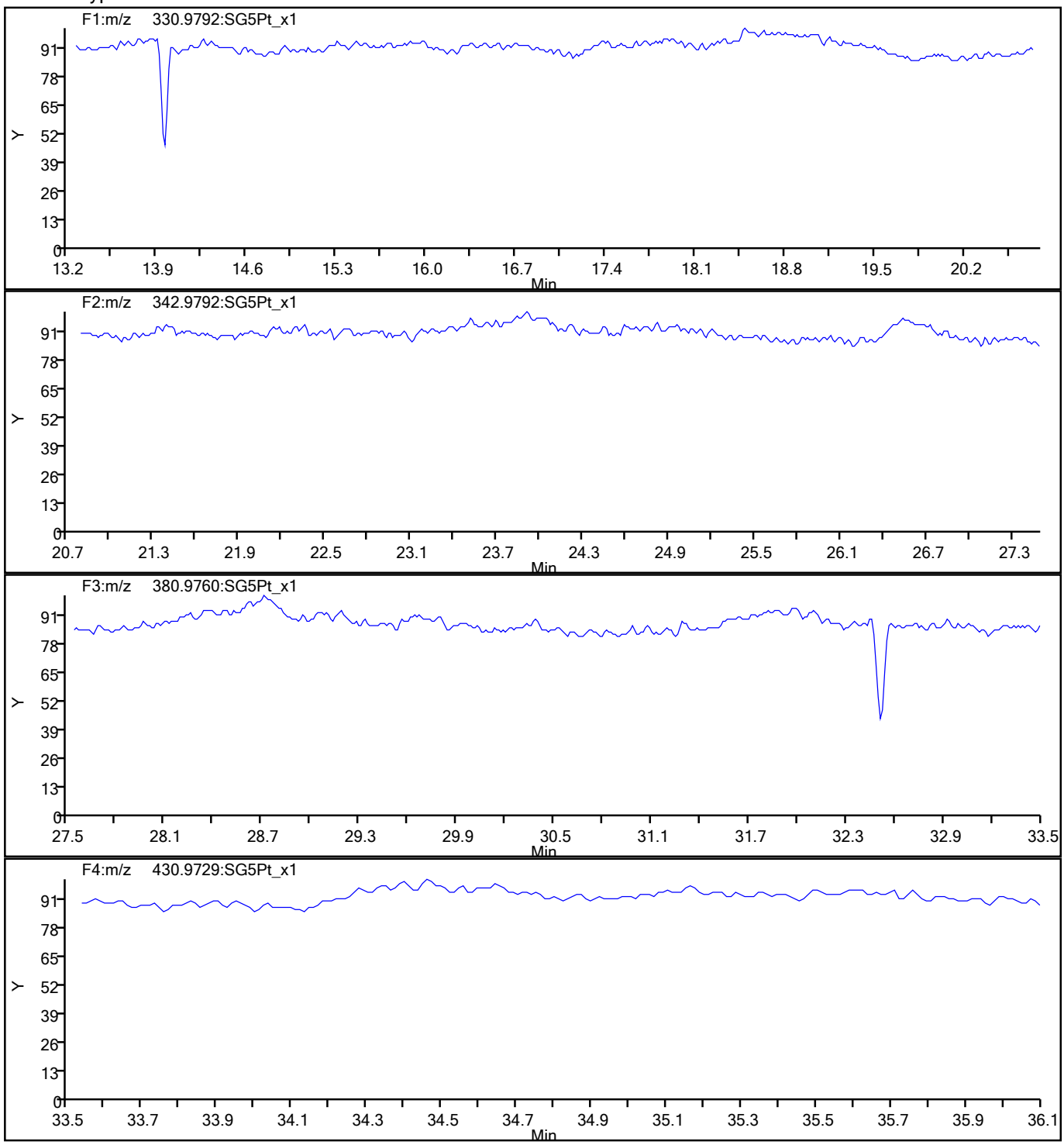

781788

Report Date: 18-Aug-2021 08:55:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210816-125076.b\13AU2110D5_16.d		
Injection Date:	14-Aug-2021 04:26:25	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	516836	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

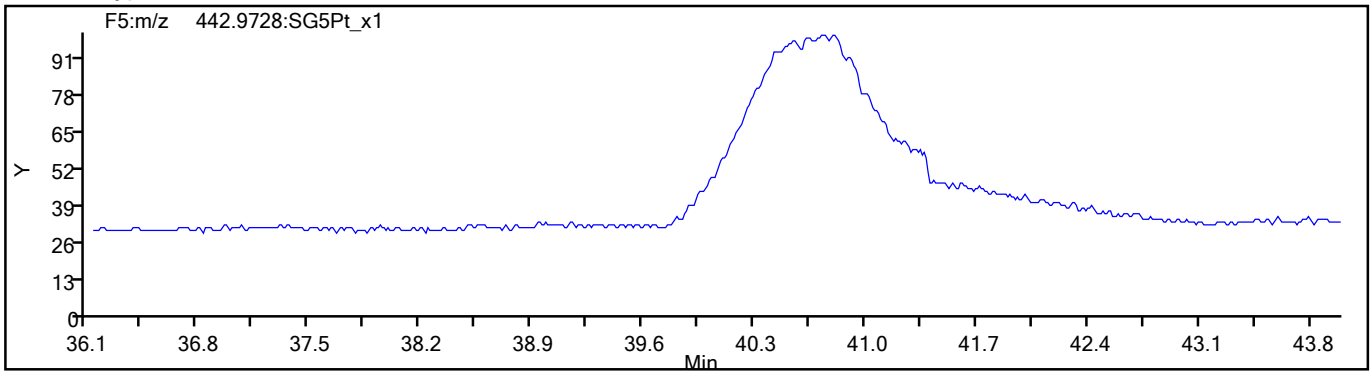

781789

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Instrument ID: 10D5 Start Date: 07/26/2021 09:21

Analysis Batch Number: 510264 End Date: 07/26/2021 15:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-510264/1		07/26/2021 09:21	1	26JL2110D5_1.d	DB-5 0.32(mm)
IC 320-510264/3		07/26/2021 10:51	1	26JL2110D5_3.d	DB-5 0.32(mm)
IC 320-510264/4		07/26/2021 11:36	1	26JL2110D5_4.d	DB-5 0.32(mm)
IC 320-510264/5		07/26/2021 12:21	1	26JL2110D5_5.d	DB-5 0.32(mm)
IC 320-510264/6		07/26/2021 13:06	1	26JL2110D5_6.d	DB-5 0.32(mm)
IC 320-510264/7		07/26/2021 13:51	1	26JL2110D5_7.d	DB-5 0.32(mm)
ICV 320-510264/9		07/26/2021 15:31	1	26JL2110D5_9.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Instrument ID: 10D5 Start Date: 08/14/2021 01:16

Analysis Batch Number: 516836 End Date: 08/14/2021 12:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-516836/1		08/14/2021 01:16	1	13AU2110D5_12.d	DB-5 0.32(mm)
WDM 320-516836/2		08/14/2021 02:11	1	13AU2110D5_13.d	DB-5 0.32(mm)
MB 320-512871/1-A		08/14/2021 02:56	1	13AU2110D5_14.d	DB-5 0.32(mm)
LCS 320-512871/2-A		08/14/2021 03:41	1	13AU2110D5_15.d	DB-5 0.32(mm)
LCSD 320-512871/3-A		08/14/2021 04:26	1	13AU2110D5_16.d	DB-5 0.32(mm)
ZZZZZ		08/14/2021 05:11	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 05:56	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 06:41	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 07:26	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 08:11	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 08:56	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 09:41	50		DB-5 0.32(mm)
ZZZZZ		08/14/2021 10:26	25		DB-5 0.32(mm)
ZZZZZ		08/14/2021 11:11	100		DB-5 0.32(mm)
ZZZZZ		08/14/2021 12:06	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Instrument ID: 10D5 Start Date: 08/14/2021 13:01

Analysis Batch Number: 516846 End Date: 08/14/2021 23:41

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-516846/16		08/14/2021 13:01	1	13AU2110D5_27.d	DB-5 0.32(mm)
CCV 320-516846/17		08/14/2021 13:46	1	13AU2110D5_28.d	DB-5 0.32(mm)
ZZZZZ		08/14/2021 14:31	1		DB-5 0.32(mm)
320-76788-9	11215702-072321-BN-SJ SB085 (16-18)	08/14/2021 15:16	1	13AU2110D5_30.d	DB-5 0.32(mm)
ZZZZZ		08/14/2021 16:01	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 16:46	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 17:31	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 18:16	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 19:01	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 19:46	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 20:31	1		DB-5 0.32(mm)
320-76788-21	11215702-072321-BN-SJ SB105 (16-18)	08/14/2021 21:16	1	13AU2110D5_38.d	DB-5 0.32(mm)
ZZZZZ		08/14/2021 22:01	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 22:46	1		DB-5 0.32(mm)
ZZZZZ		08/14/2021 23:41	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/23/2021 09:32

Analysis Batch Number: 518958 End Date: 08/23/2021 14:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-518958/1		08/23/2021 09:32	1	23AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-518958/2		08/23/2021 10:10	1	23AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/23/2021 10:48	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 11:27	1		DB-225 0.32(mm)
320-76788-21 RA	11215702-072321-BN-SJ SB105 (16-18) RA	08/23/2021 12:05	1	23AU2111D2_005.d	DB-225 0.32(mm)
ZZZZZ		08/23/2021 12:43	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 13:22	5		DB-225 0.32(mm)
ZZZZZ		08/23/2021 14:00	5		DB-225 0.32(mm)
ZZZZZ		08/23/2021 14:38	5		DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/23/2021 15:34

Analysis Batch Number: 518979 End Date: 08/24/2021 02:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-518979/1		08/23/2021 15:34	1	23AU21A11D2_001.d	DB-225 0.32(mm)
CCV 320-518979/2		08/23/2021 16:12	1	23AU21A11D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/23/2021 16:51	1		DB-225 0.32(mm)
320-76788-9 RA	11215702-072321-BN-SJSB085 (16-18) RA	08/23/2021 17:29	1	23AU21A11D2_004.d	DB-225 0.32(mm)
ZZZZZ		08/23/2021 18:07	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 18:46	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 19:24	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 20:02	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 20:41	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 21:19	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 21:58	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 22:36	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 23:14	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 23:53	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 00:31	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 01:09	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 01:48	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 02:26	1		DB-225 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76788-2

SDG No.:

Batch Number: 512871 Batch Start Date: 08/04/21 07:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/12/21 13:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-512871/1		HRMS-Sox, 1613B		10 g	20.0 uL	G-1	37/55	1	1 mL
LCS 320-512871/2		HRMS-Sox, 1613B		10 g	20.0 uL	G-2	30/48	1	1 mL
LCSD 320-512871/3		HRMS-Sox, 1613B		10 g	20.0 uL	G-3	82/105	3	1 mL
320-76788-A-9	11215702-072321-BN-SJSB085 (16-18)	HRMS-Sox, 1613B	T	9.78 g	20.0 uL	H-6	62/37	1	1 mL
320-76788-A-21	11215702-072321-BN-SJSB105 (16-18)	HRMS-Sox, 1613B	T	10.63 g	20.0 uL	J-3	8/51	3	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-512871/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-512871/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
LCSD 320-512871/3		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76788-A-9	11215702-072321-BN-SJSB085 (16-18)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76788-A-21	11215702-072321-BN-SJSB105 (16-18)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76788-2

SDG No.:

Batch Number: 512871 Batch Start Date: 08/04/21 07:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/12/21 13:00

Batch Notes	
20% DCM:Hexane ID	DH28_00193 mL
65% DCM:Hexane ID	DH6535_00545
Acid Silica Gel ID	SA5644_00731
Acid Alumina ID	Acid_Alumina_00018
Balance ID	QA-074
Sulfuric Acid Lot Number	H2SO4_00151
Hexane ID	Hexane_00287
IFB Clean Up	TGL 08/12/21
Na2SO4 ID	SodiumSulfate_00165
Option C Clean Up	GLB 08/12/21
Analyst ID - IDA Reagent Drop	FC 8/4/21 HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	TGL 08/04/21
Analyst ID - IS Reagent Drop	TGL 08/12/21 DB15270 HRDXNIS_00137 B 1/4 20.0 uL
Analyst ID - IS Reagent Drop Witness	FC 08/12/21
Analyst ID - SU Reagent Drop	GLB 08/12/21 HD05018 HRDXNSU_00255 B 3/5 1.0 mL
Analyst ID - SU Reagent Drop Witness	FC 08/12/21
Analyst ID - TA Reagent Drop	FC 8/4/21 DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	TGL 08/04/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/4/21 11:20
Soxhlet/Soxtherm Start	8/4/21 08:20
Storage Box ID	DXN -265
Toluene ID	Toluene_00109

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

781798

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-76788-2

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-072321-BN-SJSB085 (16-18)	320-76788-9
11215702-072321-BN-SJSB105 (16-18)	320-76788-21

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76788-2

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76788-2

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76788-2

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/29/2021 12:04 End Date: 07/29/2021 12:04

Lab Sample Id	D/F	Type	Time	Analytes																							
				% Sol	Moist																						
ZZZZZZ			12:04																								
320-76788-A-1 DU	1	T	12:04	X	X																						
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
320-76788-9	1	T	12:04	X	X																						
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
ZZZZZZ			12:04																								
320-76788-21	1	T	12:04	X	X																						

Prep Types:
T = Total/NA

FORM XIII-IN

781802

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76788-2

SDG No.:

Batch Number: 511309 Batch Start Date: 07/29/21 12:04 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 07/30/21 08:54

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76788-A-1 DU		D 2216	T	2	1.00 g	7.37 g	3.73 g	57.1428571428571 %	42.8571428571429 %
320-76788-A-9	11215702-072321-BN-SJSB085 (16-18)	D 2216	T	10	1.00 g	11.91 g	7.68 g	38.7717690192484 %	61.2282309807516 %
320-76788-A-21	11215702-072321-BN-SJSB105 (16-18)	D 2216	T	19	1.02 g	8.51 g	6.06 g	32.7102803738318 %	67.2897196261682 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	07/30/2021 08:00
Date and Time Samples out of Desiccator	07/30/2021 08:54
Date samples were placed in the oven	07/29/2021
Oven Temp In	111 Degrees C
Time samples were place in the oven	12:04
Date samples were removed from oven	07/30/2021
Oven Temp Out	111 Degrees C
Time Samples were removed from oven	08:00
Oven ID	Soil Prep #2
Thermometer ID	151969607

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-76788-2

Batch: 511309
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76788-A-1 DU

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	57.1428571428571	%
Percent Solids	None	1	42.8571428571429	%

Lab Sample ID: 320-76788-A-9

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	38.7717690192484	%
Percent Solids	None	1	61.2282309807516	%

Lab Sample ID: 320-76788-A-21

Analysis Date: Jul 29, 2021 12:04

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	32.7102803738318	%
Percent Solids	None	1	67.2897196261682	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

781807

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 1 of 3
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

320-76788 Chain of Custody

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072321-BN-SJSB085 (0-2)	7-23-21	1100	G	S	N	N	X	X	X	1	
(2-4)		1105			N	N	X	X	X	1	
(4-6)		1110			N	N	X	X	X	1	
(6-8)		1115			N	N	X	X	X	1	
(8-10)		1120			N	N	X	X	X	1	
(10-12)		1125			N	N	X	X	X	1	
(12-14)		1130			N	N	X	X	X	1	
(14-16)		1135			N	N	X	X	X	1	
(16-18)		1140			N	N	X	X	X	1	Priority
(18-20)		1145			N	N	X	X	X	1	HOLD
(20-22)		1150			N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date:	Time:	Method of Shipment: FedEx		
Relinquished by: Breanna North	Date/Time: 7-26-21 1400	Company: GHD	Received by:	Date/Time: 7/27/21-945	Company: ETASA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Yes / No	Custody Seal No.: 519356		Cooler Temperature(s) °C and Other Remarks: 4.7		

Ver: 01/16/2019

781808

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 2 of 3
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture									Total Number of containers	Special Instructions/Note:
			Preservation Code:																
11215702-072321-BN-SJSB085 (22-24)	7-23-21	1155	G	S	N	N	X	X	X									1	HOLD
11215702-072321-BN-SJSB105 (0-2)		1530			N	N	X	X	X									1	
(2-4)		1535			N	N	X	X	X									1	
(4-6)		1540			N	N	X	X	X									1	
(6-8)		1545			N	N	X	X	X									1	
(8-10)		1550			N	N	X	X	X									1	
(10-12)		1555			N	N	X	X	X									1	
(12-14)		1600			N	N	X	X	X									1	
(14-16)		1605			N	N	X	X	X									1	
(16-18)		1610			N	N	X	X	X									1	Priority
(18-20)		1615			N	N	X	X	X									1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:		Method of Shipment: FedEx	
Relinquished by: Breanna North	Date/Time: 7-26-21 1400	Company: GHD	Received by:	Date/Time: 7/27/21-945	Company: EMSLA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Yes ✓ No	Custody Seal No.: 151936		Cooler Temperature(s) °C and Other Remarks: 4.7		

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 3 of 3
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X				X	
11215702-072321-BN-SJSB105(20-22)	7-23-21	1620	G	S	N	N	X	X	X	1	HOLD
11215702-072321-BN-SJSB105(22-24)	7-23-21	1625	G	S	N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:		Method of Shipment: FedEx	
Relinquished by: Breanna North	Date/Time: 7-26-21 1400	Company	Received by:	Date/Time: 7/27/21 945	Company EASL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: 1519356		Cooler Temperature(s) °C and Other Remarks: 4.7		

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-76788-2

Login Number: 76788
List Number: 1
Creator: Cahill, Nicholas P

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1519356
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Job Number: 320-76887-1

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
8/30/2021 10:25 AM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
08/30/2021

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager or designee who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 320-76887-1
Project/Site: SJRWP Supplemental Design Investigation

Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 7/29/2021 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0º C.

Receipt Exceptions
There was no sample collection time listed on the container for sample 11215702-072721-BN-SJSB096 (22-24) (320-76887-12).

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

Method 1613B: The concentration of one or more analytes associated with the following sample exceeded the instrument calibration range: 11215702-072721-BN-SJSB096 (0-2) (320-76887-1), 11215702-072721-BN-SJSB096 (2-4) (320-76887-2), 11215702-072721-BN-SJSB096 (2-4) (320-76887-2[MS]), 11215702-072721-BN-SJSB096 (2-4) (320-76887-2[MSD]), 11215702-072721-BN-SJSB096 (4-6) (320-76887-3), & 11215702-072721-BN-SJSB096 (8-10) (320-76887-5). These analytes have been qualified with an 'E' flag; however, the peaks did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Method 1613B: The following samples were diluted to mitigate matrix interference and bring the concentration of target analytes to be under the saturation level of the instrument detector: 11215702-072721-BN-SJSB096 (0-2) (320-76887-1), 11215702-072721-BN-SJSB096 (2-4) (320-76887-2), 11215702-072721-BN-SJSB096 (2-4) (320-76887-2[MS]) and 11215702-072721-BN-SJSB096 (2-4) (320-76887-2[MSD]). Elevated reporting limits (RLs) are provided.

Method 1613B: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the estimated detection limit (EDL): 11215702-072721-BN-SJSB096 (0-2) (320-76887-1), 11215702-072721-BN-SJSB096 (2-4) (320-76887-2), 11215702-072721-BN-SJSB096 (2-4) (320-76887-2[MS]), 11215702-072721-BN-SJSB096 (2-4) (320-76887-2[MSD]), 11215702-072721-BN-SJSB096 (4-6) (320-76887-3), & 11215702-072721-BN-SJSB096 (8-10) (320-76887-5) . The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method 1613B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 320-513586 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: 11215702-072721-BN-SJSB096 (2-4) (320-76887-2), 11215702-072721-BN-SJSB096 (2-4) (320-76887-2[MS]), 11215702-072721-BN-SJSB096 (2-4) (320-76887-2[MSD]), 11215702-072721-BN-SJSB096 (6-8) (320-76887-4) and (CCV 320-517729/2). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following sample run on instrument 10D5 exceeded this criteria: 11215702-072721-BN-SJSB096 (0-2) (320-76887-1) and (CCV 320-520325/2). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Client Sample ID: 11215702-072721-BN-SJSB096 (0-2) — Lab Sample ID: 320-76887-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDD	550		10	6.4	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	3500	G	25	25	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	3200	G	19	19	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	5.9	J	10	0.66	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	13		10	0.79	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	10		10	0.67	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	1200		10	10	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	89		10	7.8	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	150	G	14	14	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	130	B	10	0.70	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1500		10	3.3	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	450		10	3.7	pg/g	1	☼	1613B	Total/NA
OCDD	1100	B	20	1.7	pg/g	1	☼	1613B	Total/NA
OCDF	700		20	1.3	pg/g	1	☼	1613B	Total/NA
Total PeCDD	590	q	10	6.4	pg/g	1	☼	1613B	Total/NA
Total PeCDF	9300	G	22	22	pg/g	1	☼	1613B	Total/NA
Total HxCDD	99		10	0.71	pg/g	1	☼	1613B	Total/NA
Total HxCDF	6200	G	11	11	pg/g	1	☼	1613B	Total/NA
Total HpCDD	230	B	10	0.70	pg/g	1	☼	1613B	Total/NA
Total HpCDF	2200		10	3.5	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDD - DL	60000	E G	190	190	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF - DL	4400		100	15	pg/g	10	☼	1613B	Total/NA
Total TCDD - DL	70000	q G	190	190	pg/g	10	☼	1613B	Total/NA
Total TCDF - DL	390000	q G	690	690	pg/g	10	☼	1613B	Total/NA
2,3,7,8-TCDF - RADL	250000	E G	160	160	pg/g	10	☼	1613B	Total/NA

Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) — Lab Sample ID: 320-76887-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	15000	E G	48	48	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	130	F1	79	3.1	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	1300		79	9.3	pg/g	10	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	930		79	9.0	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	2.1	J	79	0.43	pg/g	10	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	4.0	J q	79	0.47	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.6	J	79	0.41	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	2000		79	11	pg/g	10	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	500	F1	79	11	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	23	J	79	8.4	pg/g	10	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	47	J	79	8.6	pg/g	10	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	43	J B	79	0.65	pg/g	10	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	650		79	4.6	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	200		79	5.5	pg/g	10	☼	1613B	Total/NA
OCDD	610	F1 B	160	1.3	pg/g	10	☼	1613B	Total/NA
OCDF	290		160	0.83	pg/g	10	☼	1613B	Total/NA
Total TCDD	16000	G	48	48	pg/g	10	☼	1613B	Total/NA
Total TCDF	110000	G	160	160	pg/g	10	☼	1613B	Total/NA
Total PeCDD	150	q	79	3.1	pg/g	10	☼	1613B	Total/NA
Total PeCDF	3400	q	79	9.2	pg/g	10	☼	1613B	Total/NA
Total HxCDD	27	J q	79	0.43	pg/g	10	☼	1613B	Total/NA
Total HxCDF	2900		79	9.6	pg/g	10	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) (Continued) — Lab Sample ID: 320-76887-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HpCDD	88	B	79	0.65	pg/g	10	☼	1613B	Total/NA
Total HpCDF	980		79	5.1	pg/g	10	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	61000	E G	66	66	pg/g	10	☼	1613B	Total/NA

Client Sample ID: 11215702-072721-BN-SJSB096 (4-6) — Lab Sample ID: 320-76887-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	210		1.4	0.59	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	2.6	J	6.8	0.17	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	18		6.8	0.28	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	13		6.8	0.29	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.1	J	6.8	0.25	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	25		6.8	0.27	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	6.4	J	6.8	0.28	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.73	J q	6.8	0.26	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	36	B	6.8	0.31	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	7.6		6.8	0.19	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	2.6	J	6.8	0.17	pg/g	1	☼	1613B	Total/NA
OCDD	950	B	14	0.92	pg/g	1	☼	1613B	Total/NA
OCDF	3.8	J	14	0.22	pg/g	1	☼	1613B	Total/NA
Total TCDD	230	q	1.4	0.59	pg/g	1	☼	1613B	Total/NA
Total TCDF	1500	q G	2.0	2.0	pg/g	1	☼	1613B	Total/NA
Total PeCDD	5.7	J q	6.8	0.17	pg/g	1	☼	1613B	Total/NA
Total PeCDF	48	q	6.8	0.29	pg/g	1	☼	1613B	Total/NA
Total HxCDD	25		6.8	0.26	pg/g	1	☼	1613B	Total/NA
Total HxCDF	32	q	6.8	0.27	pg/g	1	☼	1613B	Total/NA
Total HpCDD	120	B	6.8	0.31	pg/g	1	☼	1613B	Total/NA
Total HpCDF	12		6.8	0.18	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	910	E	1.4	1.1	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072721-BN-SJSB096 (6-8) — Lab Sample ID: 320-76887-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	2.4		1.4	0.084	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.29	J	7.2	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.86	J	7.2	0.047	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.35	J	7.2	0.049	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.59	J	7.2	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.81	J q	7.2	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.9	J	7.2	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.74	J	7.2	0.040	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.25	J	7.2	0.040	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.12	J	7.2	0.031	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.043	J q	7.2	0.031	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	39	B	7.2	0.79	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.18	J q	7.2	0.036	pg/g	1	☼	1613B	Total/NA
OCDD	980	B	14	0.88	pg/g	1	☼	1613B	Total/NA
OCDF	0.51	J	14	0.039	pg/g	1	☼	1613B	Total/NA
Total TCDD	7.9	q	1.4	0.084	pg/g	1	☼	1613B	Total/NA
Total TCDF	15	q	1.4	0.059	pg/g	1	☼	1613B	Total/NA
Total PeCDD	5.9	J	7.2	0.13	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072721-BN-SJSB096 (6-8) (Continued) Lab Sample ID: 320-76887-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total PeCDF	1.9	J	7.2	0.048	pg/g	1	☼	1613B	Total/NA
Total HxCDD	38	q	7.2	0.12	pg/g	1	☼	1613B	Total/NA
Total HxCDF	1.3	J q	7.2	0.035	pg/g	1	☼	1613B	Total/NA
Total HpCDD	150	B	7.2	0.79	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.18	J q	7.2	0.039	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	8.8		1.4	0.19	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072721-BN-SJSB096 (8-10) Lab Sample ID: 320-76887-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1900	G E	1.9	1.9	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	24		7.0	0.70	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	150		7.0	1.5	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	120		7.0	1.6	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.79	J	7.0	0.23	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.3	J	7.0	0.26	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.7	J	7.0	0.22	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	200		7.0	0.94	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	51		7.0	0.94	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	3.3	J	7.0	0.89	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	6.5	J	7.0	0.97	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	41	B	7.0	0.28	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	68		7.0	0.23	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	22		7.0	0.22	pg/g	1	☼	1613B	Total/NA
OCDD	1000	B	14	0.84	pg/g	1	☼	1613B	Total/NA
OCDF	37		14	0.17	pg/g	1	☼	1613B	Total/NA
Total TCDD	2100	G q	1.9	1.9	pg/g	1	☼	1613B	Total/NA
Total TCDF	14000	G	13	13	pg/g	1	☼	1613B	Total/NA
Total PeCDD	24		7.0	0.70	pg/g	1	☼	1613B	Total/NA
Total PeCDF	400		7.0	1.5	pg/g	1	☼	1613B	Total/NA
Total HxCDD	36		7.0	0.23	pg/g	1	☼	1613B	Total/NA
Total HxCDF	290	q	7.0	0.93	pg/g	1	☼	1613B	Total/NA
Total HpCDD	140	B	7.0	0.28	pg/g	1	☼	1613B	Total/NA
Total HpCDF	100		7.0	0.22	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	8000	E G	7.6	7.6	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072721-BN-SJSB096 (10-12) Lab Sample ID: 320-76887-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	45		1.5	0.19	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	3.6	J	7.7	0.13	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	2.6	J	7.7	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.49	J q	7.7	0.26	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.3	J	7.7	0.29	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.3	J	7.7	0.25	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	4.9	J	7.7	0.069	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	1.2	J	7.7	0.075	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.25	J q	7.7	0.066	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	51	B	7.7	0.33	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1.4	J	7.7	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.39	J	7.7	0.11	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072721-BN-SJSB096 (10-12) (Continued) Lab Sample ID: 320-76887-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
OCDD	1200	B	15	0.99	pg/g	1	☼	1613B	Total/NA
OCDF	0.74	J	15	0.087	pg/g	1	☼	1613B	Total/NA
Total TCDD	45		1.5	0.19	pg/g	1	☼	1613B	Total/NA
Total TCDF	360	q	1.5	0.70	pg/g	1	☼	1613B	Total/NA
Total PeCDD	7.7	q	7.7	0.16	pg/g	1	☼	1613B	Total/NA
Total PeCDF	8.5	q	7.7	0.13	pg/g	1	☼	1613B	Total/NA
Total HxCDD	41	q	7.7	0.27	pg/g	1	☼	1613B	Total/NA
Total HxCDF	6.4	J q	7.7	0.069	pg/g	1	☼	1613B	Total/NA
Total HpCDD	160	B	7.7	0.33	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1.8	J	7.7	0.11	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	190		1.5	0.47	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072721-BN-SJSB096 (12-14) Lab Sample ID: 320-76887-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	3.3		1.3	0.068	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.26	J	6.4	0.039	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.16	J q	6.4	0.040	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.3	J	6.4	0.19	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	24	B	6.4	0.19	pg/g	1	☼	1613B	Total/NA
OCDD	460	B	13	0.49	pg/g	1	☼	1613B	Total/NA
Total TCDD	3.3		1.3	0.068	pg/g	1	☼	1613B	Total/NA
Total TCDF	17	q	1.3	0.079	pg/g	1	☼	1613B	Total/NA
Total PeCDD	3.9	J q	6.4	0.10	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.43	J q	6.4	0.040	pg/g	1	☼	1613B	Total/NA
Total HxCDD	28		6.4	0.20	pg/g	1	☼	1613B	Total/NA
Total HpCDD	100	B	6.4	0.19	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	11		1.3	0.17	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072721-BN-SJSB096 (14-16) Lab Sample ID: 320-76887-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.95	J q	1.4	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.29	J q	6.9	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.54	J	6.9	0.17	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.6	J q	6.9	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	18	B	6.9	0.16	pg/g	1	☼	1613B	Total/NA
OCDD	360	B	14	0.35	pg/g	1	☼	1613B	Total/NA
OCDF	0.74	J q	14	0.057	pg/g	1	☼	1613B	Total/NA
Total TCDD	2.2	q	1.4	0.12	pg/g	1	☼	1613B	Total/NA
Total TCDF	5.6	q	1.4	0.091	pg/g	1	☼	1613B	Total/NA
Total PeCDD	4.8	J q	6.9	0.11	pg/g	1	☼	1613B	Total/NA
Total HxCDD	24	q	6.9	0.15	pg/g	1	☼	1613B	Total/NA
Total HpCDD	71	B	6.9	0.16	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	3.9		1.4	0.17	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072721-BN-DUP-9 Lab Sample ID: 320-76887-13

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	2.5		1.6	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.82	J q	8.0	0.26	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Job ID: 320-76887-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072721-BN-DUP-9 (Continued) Lab Sample ID: 320-76887-13

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDF	0.29	J	8.0	0.032	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	34	B	8.0	0.35	pg/g	1	☼	1613B	Total/NA
OCDD	820	B	16	0.70	pg/g	1	☼	1613B	Total/NA
Total TCDD	4.1		1.6	0.12	pg/g	1	☼	1613B	Total/NA
Total TCDF	14		1.6	0.12	pg/g	1	☼	1613B	Total/NA
Total PeCDD	5.0	J q	8.0	0.15	pg/g	1	☼	1613B	Total/NA
Total HxCDD	30	q	8.0	0.24	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.29	J	8.0	0.032	pg/g	1	☼	1613B	Total/NA
Total HpCDD	130	B	8.0	0.35	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	8.6		1.6	0.20	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc. Job ID: 320-76887-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072721-BN-SJSB096 (0-2) Lab Sample ID: 320-76887-1

Date Collected: 07/27/21 12:45 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	51.0		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	49.0		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072721-BN-SJSB096 (0-2) Lab Sample ID: 320-76887-1

Date Collected: 07/27/21 12:45 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 49.0**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8-PeCDD	550		10	6.4	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
1,2,3,7,8-PeCDF	3500	G	25	25	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
2,3,4,7,8-PeCDF	3200	G	19	19	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
1,2,3,4,7,8-HxCDD	5.9	J	10	0.66	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
1,2,3,6,7,8-HxCDD	13		10	0.79	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
1,2,3,7,8,9-HxCDD	10		10	0.67	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
1,2,3,6,7,8-HxCDF	1200		10	10	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
1,2,3,7,8,9-HxCDF	89		10	7.8	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
2,3,4,6,7,8-HxCDF	150	G	14	14	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
1,2,3,4,6,7,8-HpCDD	130	B	10	0.70	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
1,2,3,4,6,7,8-HpCDF	1500		10	3.3	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
1,2,3,4,7,8,9-HpCDF	450		10	3.7	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
OCDD	1100	B	20	1.7	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
OCDF	700		20	1.3	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
Total PeCDD	590	q	10	6.4	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
Total PeCDF	9300	G	22	22	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
Total HxCDD	99		10	0.71	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
Total HxCDF	6200	G	11	11	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
Total HpCDD	230	B	10	0.70	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1
Total HpCDF	2200		10	3.5	pg/g	☼	08/06/21 05:28	08/18/21 23:36	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,7,8-PeCDD	*62*		*25 - 181*	*08/06/21 05:28*	*08/18/21 23:36*	*1*
13C-1,2,3,7,8-PeCDF	*59*		*24 - 185*	*08/06/21 05:28*	*08/18/21 23:36*	*1*
13C-2,3,4,7,8-PeCDF	*61*		*21 - 178*	*08/06/21 05:28*	*08/18/21 23:36*	*1*
13C-1,2,3,4,7,8-HxCDD	*55*		*32 - 141*	*08/06/21 05:28*	*08/18/21 23:36*	*1*
13C-1,2,3,6,7,8-HxCDD	*51*		*28 - 130*	*08/06/21 05:28*	*08/18/21 23:36*	*1*
13C-1,2,3,4,7,8-HxCDF	*70*		*26 - 152*	*08/06/21 05:28*	*08/18/21 23:36*	*1*
13C-1,2,3,6,7,8-HxCDF	*59*		*26 - 123*	*08/06/21 05:28*	*08/18/21 23:36*	*1*
13C-1,2,3,7,8,9-HxCDF	*54*		*29 - 147*	*08/06/21 05:28*	*08/18/21 23:36*	*1*
13C-2,3,4,6,7,8-HxCDF	*51*		*28 - 136*	*08/06/21 05:28*	*08/18/21 23:36*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*72*		*23 - 140*	*08/06/21 05:28*	*08/18/21 23:36*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*61*		*28 - 143*	*08/06/21 05:28*	*08/18/21 23:36*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*58*		*26 - 138*	*08/06/21 05:28*	*08/18/21 23:36*	*1*
13C-OCDD	*70*		*17 - 157*	*08/06/21 05:28*	*08/18/21 23:36*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*108*		*35 - 197*	*08/06/21 05:28*	*08/18/21 23:36*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	60000	E G	190	190	pg/g	☼	08/06/21 05:28	08/26/21 21:06	10

Client Sample ID: 11215702-072721-BN-SJSB096 (0-2) Lab Sample ID: 320-76887-1

Date Collected: 07/27/21 12:45 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 49.0**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - DL (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDF	4400		100	15	pg/g	☼	08/06/21 05:28	08/26/21 21:06	10
Total TCDD	70000	q G	190	190	pg/g	☼	08/06/21 05:28	08/26/21 21:06	10
Total TCDF	390000	q G	690	690	pg/g	☼	08/06/21 05:28	08/26/21 21:06	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*47*		*25 - 164*	*08/06/21 05:28*	*08/26/21 21:06*	*10*
13C-2,3,7,8-TCDF	*61*		*24 - 169*	*08/06/21 05:28*	*08/26/21 21:06*	*10*
13C-1,2,3,4,7,8-HxCDF	*67*		*26 - 152*	*08/06/21 05:28*	*08/26/21 21:06*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*154*		*35 - 197*	*08/06/21 05:28*	*08/26/21 21:06*	*10*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RADL

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	250000	E G	160	160	pg/g	☼	08/06/21 05:28	08/25/21 23:50	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*34*		*24 - 169*	*08/06/21 05:28*	*08/25/21 23:50*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*98*		*35 - 197*	*08/06/21 05:28*	*08/25/21 23:50*	*10*

Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) Lab Sample ID: 320-76887-2

Date Collected: 07/27/21 12:50 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	38.0		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	62.0		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) Lab Sample ID: 320-76887-2

Date Collected: 07/27/21 12:50 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 62.0**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	15000	E G	48	48	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
1,2,3,7,8-PeCDD	130	F1	79	3.1	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
1,2,3,7,8-PeCDF	1300		79	9.3	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
2,3,4,7,8-PeCDF	930		79	9.0	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
1,2,3,4,7,8-HxCDD	2.1	J	79	0.43	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
1,2,3,6,7,8-HxCDD	4.0	J q	79	0.47	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
1,2,3,7,8,9-HxCDD	2.6	J	79	0.41	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
1,2,3,4,7,8-HxCDF	2000		79	11	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
1,2,3,6,7,8-HxCDF	500	F1	79	11	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
1,2,3,7,8,9-HxCDF	23	J	79	8.4	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
2,3,4,6,7,8-HxCDF	47	J	79	8.6	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
1,2,3,4,6,7,8-HpCDD	43	J B	79	0.65	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
1,2,3,4,6,7,8-HpCDF	650		79	4.6	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
1,2,3,4,7,8,9-HpCDF	200		79	5.5	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
OCDD	610	F1 B	160	1.3	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
OCDF	290		160	0.83	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10

Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) Lab Sample ID: 320-76887-2

Date Collected: 07/27/21 12:50 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 62.0**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDD	16000	G	48	48	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
Total TCDF	110000	G	160	160	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
Total PeCDD	150	q	79	3.1	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
Total PeCDF	3400	q	79	9.2	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
Total HxCDD	27	J q	79	0.43	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
Total HxCDF	2900		79	9.6	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
Total HpCDD	88	B	79	0.65	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10
Total HpCDF	980		79	5.1	pg/g	☼	08/06/21 05:28	08/18/21 19:34	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*68*		*25 - 164*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-2,3,7,8-TCDF	*68*		*24 - 169*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-1,2,3,7,8-PeCDD	*75*		*25 - 181*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-1,2,3,7,8-PeCDF	*69*		*24 - 185*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-2,3,4,7,8-PeCDF	*76*		*21 - 178*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-1,2,3,4,7,8-HxCDD	*76*		*32 - 141*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-1,2,3,6,7,8-HxCDD	*68*		*28 - 130*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-1,2,3,4,7,8-HxCDF	*76*		*26 - 152*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-1,2,3,6,7,8-HxCDF	*67*		*26 - 123*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-1,2,3,7,8,9-HxCDF	*68*		*29 - 147*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-2,3,4,6,7,8-HxCDF	*68*		*28 - 136*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-1,2,3,4,6,7,8-HpCDD	*73*		*23 - 140*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-1,2,3,4,6,7,8-HpCDF	*66*		*28 - 143*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-1,2,3,4,7,8,9-HpCDF	*76*		*26 - 138*	*08/06/21 05:28*	*08/18/21 19:34*	*10*
13C-OCDD	*74*		*17 - 157*	*08/06/21 05:28*	*08/18/21 19:34*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*110*		*35 - 197*	*08/06/21 05:28*	*08/18/21 19:34*	*10*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	61000	E G	66	66	pg/g	☼	08/06/21 05:28	08/25/21 21:55	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*36*		*24 - 169*	*08/06/21 05:28*	*08/25/21 21:55*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*48*		*35 - 197*	*08/06/21 05:28*	*08/25/21 21:55*	*10*

Client Sample ID: 11215702-072721-BN-SJSB096 (4-6) Lab Sample ID: 320-76887-3

Date Collected: 07/27/21 12:55 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	30.1		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	69.9		0.1	0.1	%			07/30/21 12:30	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Client Sample ID: 11215702-072721-BN-SJSB096 (4-6)

Lab Sample ID: 320-76887-3

Date Collected: 07/27/21 12:55
Date Received: 07/29/21 09:45

Matrix: Sediment
Percent Solids: 69.9

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	210		1.4	0.59	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
1,2,3,7,8-PeCDD	2.6	J	6.8	0.17	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
1,2,3,7,8-PeCDF	18		6.8	0.28	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
2,3,4,7,8-PeCDF	13		6.8	0.29	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
1,2,3,4,7,8-HxCDD	ND		6.8	0.26	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
1,2,3,6,7,8-HxCDD	ND		6.8	0.27	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
1,2,3,7,8,9-HxCDD	2.1	J	6.8	0.25	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
1,2,3,4,7,8-HxCDF	25		6.8	0.27	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
1,2,3,6,7,8-HxCDF	6.4	J	6.8	0.28	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
1,2,3,7,8,9-HxCDF	ND		6.8	0.26	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
2,3,4,6,7,8-HxCDF	0.73	J q	6.8	0.26	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
1,2,3,4,6,7,8-HpCDD	36	B	6.8	0.31	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
1,2,3,4,6,7,8-HpCDF	7.6		6.8	0.19	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
1,2,3,4,7,8,9-HpCDF	2.6	J	6.8	0.17	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
OCDD	950	B	14	0.92	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
OCDF	3.8	J	14	0.22	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
Total TCDD	230	q	1.4	0.59	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
Total TCDF	1500	q G	2.0	2.0	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
Total PeCDD	5.7	J q	6.8	0.17	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
Total PeCDF	48	q	6.8	0.29	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
Total HxCDD	25		6.8	0.26	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
Total HxCDF	32	q	6.8	0.27	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
Total HpCDD	120	B	6.8	0.31	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1
Total HpCDF	12		6.8	0.18	pg/g	☼	08/06/21 05:28	08/18/21 08:30	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*60*		*25 - 164*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-2,3,7,8-TCDF	*59*		*24 - 169*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-1,2,3,7,8-PeCDD	*61*		*25 - 181*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-1,2,3,7,8-PeCDF	*59*		*24 - 185*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-2,3,4,7,8-PeCDF	*65*		*21 - 178*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-1,2,3,4,7,8-HxCDD	*67*		*32 - 141*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-1,2,3,6,7,8-HxCDD	*61*		*28 - 130*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-1,2,3,4,7,8-HxCDF	*72*		*26 - 152*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-1,2,3,6,7,8-HxCDF	*63*		*26 - 123*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-1,2,3,7,8,9-HxCDF	*60*		*29 - 147*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-2,3,4,6,7,8-HxCDF	*60*		*28 - 136*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*73*		*23 - 140*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*68*		*28 - 143*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*81*		*26 - 138*	*08/06/21 05:28*	*08/18/21 08:30*	*1*
13C-OCDD	*76*		*17 - 157*	*08/06/21 05:28*	*08/18/21 08:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*69*		*35 - 197*	*08/06/21 05:28*	*08/18/21 08:30*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	910	E	1.4	1.1	pg/g	☼	08/06/21 05:28	08/25/21 18:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*63*		*24 - 169*	*08/06/21 05:28*	*08/25/21 18:05*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Client Sample ID: 11215702-072721-BN-SJSB096 (4-6)

Lab Sample ID: 320-76887-3
Date Collected: 07/27/21 12:55
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 69.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	74		35 - 197	08/06/21 05:28	08/25/21 18:05	1

Client Sample ID: 11215702-072721-BN-SJSB096 (6-8)

Lab Sample ID: 320-76887-4
Date Collected: 07/27/21 13:00
Matrix: Sediment
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	31.8		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	68.2		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072721-BN-SJSB096 (6-8)

Lab Sample ID: 320-76887-4
Date Collected: 07/27/21 13:00
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 68.2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	2.4		1.4	0.084	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,7,8-PeCDD	0.29	J	7.2	0.13	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,7,8-PeCDF	0.86	J	7.2	0.047	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
2,3,4,7,8-PeCDF	0.35	J	7.2	0.049	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,4,7,8-HxCDD	0.59	J	7.2	0.13	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,6,7,8-HxCDD	0.81	J q	7.2	0.13	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,7,8,9-HxCDD	2.9	J	7.2	0.12	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,4,7,8-HxCDF	0.74	J	7.2	0.040	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,6,7,8-HxCDF	0.25	J	7.2	0.040	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,7,8,9-HxCDF	0.12	J	7.2	0.031	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
2,3,4,6,7,8-HxCDF	0.043	J q	7.2	0.031	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,4,6,7,8-HpCDD	39	B	7.2	0.79	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,4,6,7,8-HpCDF	0.18	J q	7.2	0.036	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,4,7,8,9-HpCDF	ND		7.2	0.041	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
OCDD	980	B	14	0.88	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
OCDF	0.51	J	14	0.039	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total TCDD	7.9	q	1.4	0.084	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total TCDF	15	q	1.4	0.059	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total PeCDD	5.9	J	7.2	0.13	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total PeCDF	1.9	J	7.2	0.048	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total HxCDD	38	q	7.2	0.12	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total HxCDF	1.3	J q	7.2	0.035	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total HpCDD	150	B	7.2	0.79	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total HpCDF	0.18	J q	7.2	0.039	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	58		25 - 164	08/06/21 05:28	08/18/21 18:49	1
13C-2,3,7,8-TCDF	54		24 - 169	08/06/21 05:28	08/18/21 18:49	1
13C-1,2,3,7,8-PeCDD	58		25 - 181	08/06/21 05:28	08/18/21 18:49	1
13C-1,2,3,7,8-PeCDF	54		24 - 185	08/06/21 05:28	08/18/21 18:49	1
13C-2,3,4,7,8-PeCDF	56		21 - 178	08/06/21 05:28	08/18/21 18:49	1
13C-1,2,3,4,7,8-HxCDD	59		32 - 141	08/06/21 05:28	08/18/21 18:49	1
13C-1,2,3,6,7,8-HxCDD	54		28 - 130	08/06/21 05:28	08/18/21 18:49	1
13C-1,2,3,4,7,8-HxCDF	59		26 - 152	08/06/21 05:28	08/18/21 18:49	1
13C-1,2,3,6,7,8-HxCDF	56		26 - 123	08/06/21 05:28	08/18/21 18:49	1

Client Sample ID: 11215702-072721-BN-SJSB096 (6-8) Lab Sample ID: 320-76887-4

Date Collected: 07/27/21 13:00 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 68.2**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	56		29 - 147	08/06/21 05:28	08/18/21 18:49	1
13C-2,3,4,6,7,8-HxCDF	56		28 - 136	08/06/21 05:28	08/18/21 18:49	1
13C-1,2,3,4,6,7,8-HpCDD	60		23 - 140	08/06/21 05:28	08/18/21 18:49	1
13C-1,2,3,4,6,7,8-HpCDF	53		28 - 143	08/06/21 05:28	08/18/21 18:49	1
13C-1,2,3,4,7,8,9-HpCDF	64		26 - 138	08/06/21 05:28	08/18/21 18:49	1
13C-OCDD	61		17 - 157	08/06/21 05:28	08/18/21 18:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	72		35 - 197	08/06/21 05:28	08/18/21 18:49	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	8.8		1.4	0.19	pg/g	☼	08/06/21 05:28	08/25/21 16:10	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	57		24 - 169	08/06/21 05:28	08/25/21 16:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	75		35 - 197	08/06/21 05:28	08/25/21 16:10	1

Client Sample ID: 11215702-072721-BN-SJSB096 (8-10) Lab Sample ID: 320-76887-5

Date Collected: 07/27/21 13:05 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	33.2		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	66.8		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072721-BN-SJSB096 (8-10) Lab Sample ID: 320-76887-5

Date Collected: 07/27/21 13:05 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 66.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	1900	G E	1.9	1.9	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
1,2,3,7,8-PeCDD	24		7.0	0.70	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
1,2,3,7,8-PeCDF	150		7.0	1.5	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
2,3,4,7,8-PeCDF	120		7.0	1.6	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
1,2,3,4,7,8-HxCDD	0.79	J	7.0	0.23	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
1,2,3,6,7,8-HxCDD	1.3	J	7.0	0.26	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
1,2,3,7,8,9-HxCDD	2.7	J	7.0	0.22	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
1,2,3,4,7,8-HxCDF	200		7.0	0.94	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
1,2,3,6,7,8-HxCDF	51		7.0	0.94	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
1,2,3,7,8,9-HxCDF	3.3	J	7.0	0.89	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
2,3,4,6,7,8-HxCDF	6.5	J	7.0	0.97	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
1,2,3,4,6,7,8-HpCDD	41	B	7.0	0.28	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
1,2,3,4,6,7,8-HpCDF	68		7.0	0.23	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
1,2,3,4,7,8,9-HpCDF	22		7.0	0.22	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
OCDD	1000	B	14	0.84	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
OCDF	37		14	0.17	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
Total TCDD	2100	G q	1.9	1.9	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1

Client Sample ID: 11215702-072721-BN-SJSB096 (8-10) Lab Sample ID: 320-76887-5

Date Collected: 07/27/21 13:05 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 66.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	14000	G	13	13	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
Total PeCDD	24		7.0	0.70	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
Total PeCDF	400		7.0	1.5	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
Total HxCDD	36		7.0	0.23	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
Total HxCDF	290	q	7.0	0.93	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
Total HpCDD	140	B	7.0	0.28	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1
Total HpCDF	100		7.0	0.22	pg/g	☼	08/06/21 05:28	08/18/21 10:06	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*60*		*25 - 164*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-2,3,7,8-TCDF	*57*		*24 - 169*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-1,2,3,7,8-PeCDD	*59*		*25 - 181*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-1,2,3,7,8-PeCDF	*59*		*24 - 185*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-2,3,4,7,8-PeCDF	*61*		*21 - 178*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-1,2,3,4,7,8-HxCDD	*64*		*32 - 141*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-1,2,3,6,7,8-HxCDD	*59*		*28 - 130*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-1,2,3,4,7,8-HxCDF	*72*		*26 - 152*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-1,2,3,6,7,8-HxCDF	*60*		*26 - 123*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-1,2,3,7,8,9-HxCDF	*59*		*29 - 147*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-2,3,4,6,7,8-HxCDF	*57*		*28 - 136*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*68*		*23 - 140*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*65*		*28 - 143*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*76*		*26 - 138*	*08/06/21 05:28*	*08/18/21 10:06*	*1*
13C-OCDD	*73*		*17 - 157*	*08/06/21 05:28*	*08/18/21 10:06*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*74*		*35 - 197*	*08/06/21 05:28*	*08/18/21 10:06*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	8000	E G	7.6	7.6	pg/g	☼	08/06/21 05:28	08/25/21 19:22	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*67*		*24 - 169*	*08/06/21 05:28*	*08/25/21 19:22*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*79*		*35 - 197*	*08/06/21 05:28*	*08/25/21 19:22*	*1*

Client Sample ID: 11215702-072721-BN-SJSB096 (10-12) Lab Sample ID: 320-76887-6

Date Collected: 07/27/21 13:10 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	34.1		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	65.9		0.1	0.1	%			07/30/21 12:30	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Client Sample ID: 11215702-072721-BN-SJSB096 (10-12)

Lab Sample ID: 320-76887-6

Date Collected: 07/27/21 13:10
Date Received: 07/29/21 09:45

Matrix: Sediment
Percent Solids: 65.9

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**45**		1.5	0.19	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
1,2,3,7,8-PeCDD	ND		7.7	0.16	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
1,2,3,7,8-PeCDF	**3.6**	**J**	7.7	0.13	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
2,3,4,7,8-PeCDF	**2.6**	**J**	7.7	0.13	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
1,2,3,4,7,8-HxCDD	**0.49**	**J q**	7.7	0.26	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
1,2,3,6,7,8-HxCDD	**1.3**	**J**	7.7	0.29	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
1,2,3,7,8,9-HxCDD	**3.3**	**J**	7.7	0.25	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
1,2,3,4,7,8-HxCDF	**4.9**	**J**	7.7	0.069	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
1,2,3,6,7,8-HxCDF	**1.2**	**J**	7.7	0.075	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
1,2,3,7,8,9-HxCDF	**0.25**	**J q**	7.7	0.066	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
2,3,4,6,7,8-HxCDF	ND		7.7	0.066	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
1,2,3,4,6,7,8-HpCDD	**51**	**B**	7.7	0.33	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
1,2,3,4,6,7,8-HpCDF	**1.4**	**J**	7.7	0.12	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
1,2,3,4,7,8,9-HpCDF	**0.39**	**J**	7.7	0.11	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
OCDD	**1200**	**B**	15	0.99	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
OCDF	**0.74**	**J**	15	0.087	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
Total TCDD	**45**		1.5	0.19	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
Total TCDF	**360**	**q**	1.5	0.70	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
Total PeCDD	**7.7**	**q**	7.7	0.16	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
Total PeCDF	**8.5**	**q**	7.7	0.13	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
Total HxCDD	**41**	**q**	7.7	0.27	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
Total HxCDF	**6.4**	**J q**	7.7	0.069	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
Total HpCDD	**160**	**B**	7.7	0.33	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1
Total HpCDF	**1.8**	**J**	7.7	0.11	pg/g	☼	08/06/21 05:28	08/18/21 10:54	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*62*		*25 - 164*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-2,3,7,8-TCDF	*62*		*24 - 169*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-1,2,3,7,8-PeCDD	*61*		*25 - 181*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-1,2,3,7,8-PeCDF	*61*		*24 - 185*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-2,3,4,7,8-PeCDF	*66*		*21 - 178*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-1,2,3,4,7,8-HxCDD	*69*		*32 - 141*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-1,2,3,6,7,8-HxCDD	*64*		*28 - 130*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-1,2,3,4,7,8-HxCDF	*74*		*26 - 152*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-1,2,3,6,7,8-HxCDF	*63*		*26 - 123*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-1,2,3,7,8,9-HxCDF	*61*		*29 - 147*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-2,3,4,6,7,8-HxCDF	*62*		*28 - 136*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*70*		*23 - 140*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*67*		*28 - 143*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*78*		*26 - 138*	*08/06/21 05:28*	*08/18/21 10:54*	*1*
13C-OCDD	*74*		*17 - 157*	*08/06/21 05:28*	*08/18/21 10:54*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*68*		*35 - 197*	*08/06/21 05:28*	*08/18/21 10:54*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**190**		1.5	0.47	pg/g	☼	08/06/21 05:28	08/25/21 17:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*67*		*24 - 169*	*08/06/21 05:28*	*08/25/21 17:27*	*1*

Client Sample ID: 11215702-072721-BN-SJSB096 (10-12) Lab Sample ID: 320-76887-6

Date Collected: 07/27/21 13:10 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 65.9**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	77		35 - 197	08/06/21 05:28	08/25/21 17:27	1

Client Sample ID: 11215702-072721-BN-SJSB096 (12-14) Lab Sample ID: 320-76887-7

Date Collected: 07/27/21 13:15 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**26.6**		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	**73.4**		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072721-BN-SJSB096 (12-14) Lab Sample ID: 320-76887-7

Date Collected: 07/27/21 13:15 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 73.4**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**3.3**		1.3	0.068	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
1,2,3,7,8-PeCDD	ND		6.4	0.10	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
1,2,3,7,8-PeCDF	**0.26**	**J**	6.4	0.039	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
2,3,4,7,8-PeCDF	**0.16**	**J q**	6.4	0.040	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
1,2,3,4,7,8-HxCDD	ND		6.4	0.19	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
1,2,3,6,7,8-HxCDD	ND		6.4	0.21	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
1,2,3,7,8,9-HxCDD	**2.3**	**J**	6.4	0.19	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
1,2,3,4,7,8-HxCDF	ND		6.4	0.038	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
1,2,3,6,7,8-HxCDF	ND		6.4	0.038	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
1,2,3,7,8,9-HxCDF	ND		6.4	0.037	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
2,3,4,6,7,8-HxCDF	ND		6.4	0.038	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
1,2,3,4,6,7,8-HpCDD	**24**	**B**	6.4	0.19	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
1,2,3,4,6,7,8-HpCDF	ND		6.4	0.050	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
1,2,3,4,7,8,9-HpCDF	ND		6.4	0.048	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
OCDD	**460**	**B**	13	0.49	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
OCDF	ND		13	0.095	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
Total TCDD	**3.3**		1.3	0.068	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
Total TCDF	**17**	**q**	1.3	0.079	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
Total PeCDD	**3.9**	**J q**	6.4	0.10	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
Total PeCDF	**0.43**	**J q**	6.4	0.040	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
Total HxCDD	**28**		6.4	0.20	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
Total HxCDF	ND		6.4	0.038	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
Total HpCDD	**100**	**B**	6.4	0.19	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1
Total HpCDF	ND		6.4	0.050	pg/g	☼	08/06/21 05:28	08/18/21 11:42	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	55		25 - 164	08/06/21 05:28	08/18/21 11:42	1
13C-2,3,7,8-TCDF	54		24 - 169	08/06/21 05:28	08/18/21 11:42	1
13C-1,2,3,7,8-PeCDD	52		25 - 181	08/06/21 05:28	08/18/21 11:42	1
13C-1,2,3,7,8-PeCDF	53		24 - 185	08/06/21 05:28	08/18/21 11:42	1
13C-2,3,4,7,8-PeCDF	58		21 - 178	08/06/21 05:28	08/18/21 11:42	1
13C-1,2,3,4,7,8-HxCDD	60		32 - 141	08/06/21 05:28	08/18/21 11:42	1
13C-1,2,3,6,7,8-HxCDD	54		28 - 130	08/06/21 05:28	08/18/21 11:42	1
13C-1,2,3,4,7,8-HxCDF	63		26 - 152	08/06/21 05:28	08/18/21 11:42	1
13C-1,2,3,6,7,8-HxCDF	56		26 - 123	08/06/21 05:28	08/18/21 11:42	1

Client Sample ID: 11215702-072721-BN-SJSB096 (12-14) Lab Sample ID: 320-76887-7

Date Collected: 07/27/21 13:15 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 73.4**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	52		29 - 147	08/06/21 05:28	08/18/21 11:42	1
13C-2,3,4,6,7,8-HxCDF	54		28 - 136	08/06/21 05:28	08/18/21 11:42	1
13C-1,2,3,4,6,7,8-HpCDD	61		23 - 140	08/06/21 05:28	08/18/21 11:42	1
13C-1,2,3,4,6,7,8-HpCDF	61		28 - 143	08/06/21 05:28	08/18/21 11:42	1
13C-1,2,3,4,7,8,9-HpCDF	69		26 - 138	08/06/21 05:28	08/18/21 11:42	1
13C-OCDD	66		17 - 157	08/06/21 05:28	08/18/21 11:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	68		35 - 197	08/06/21 05:28	08/18/21 11:42	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	11		1.3	0.17	pg/g	☼	08/06/21 05:28	08/25/21 16:48	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	59		24 - 169	08/06/21 05:28	08/25/21 16:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	77		35 - 197	08/06/21 05:28	08/25/21 16:48	1

Client Sample ID: 11215702-072721-BN-SJSB096 (14-16) Lab Sample ID: 320-76887-8

Date Collected: 07/27/21 13:20 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27.7		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	72.3		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072721-BN-SJSB096 (14-16) Lab Sample ID: 320-76887-8

Date Collected: 07/27/21 13:20 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 72.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.95	J q	1.4	0.12	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
1,2,3,7,8-PeCDD	ND		6.9	0.11	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
1,2,3,7,8-PeCDF	ND		6.9	0.037	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
2,3,4,7,8-PeCDF	ND		6.9	0.040	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
1,2,3,4,7,8-HxCDD	0.29	J q	6.9	0.15	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
1,2,3,6,7,8-HxCDD	0.54	J	6.9	0.17	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
1,2,3,7,8,9-HxCDD	1.6	J q	6.9	0.15	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
1,2,3,4,7,8-HxCDF	ND		6.9	0.024	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
1,2,3,6,7,8-HxCDF	ND		6.9	0.025	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
1,2,3,7,8,9-HxCDF	ND		6.9	0.024	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
2,3,4,6,7,8-HxCDF	ND		6.9	0.024	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
1,2,3,4,6,7,8-HpCDD	18	B	6.9	0.16	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
1,2,3,4,6,7,8-HpCDF	ND		6.9	0.039	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
1,2,3,4,7,8,9-HpCDF	ND		6.9	0.036	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
OCDD	360	B	14	0.35	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
OCDF	0.74	J q	14	0.057	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
Total TCDD	2.2	q	1.4	0.12	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1

Client Sample ID: 11215702-072721-BN-SJSB096 (14-16) Lab Sample ID: 320-76887-8

Date Collected: 07/27/21 13:20 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 72.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	**5.6**	**q**	1.4	0.091	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
Total PeCDD	**4.8**	**J q**	6.9	0.11	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
Total PeCDF	ND		6.9	0.040	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
Total HxCDD	**24**	**q**	6.9	0.15	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
Total HxCDF	ND		6.9	0.027	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
Total HpCDD	**71**	**B**	6.9	0.16	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1
Total HpCDF	ND		6.9	0.039	pg/g	☼	08/06/21 05:28	08/18/21 17:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*60*		*25 - 164*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-2,3,7,8-TCDF	*58*		*24 - 169*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-1,2,3,7,8-PeCDD	*58*		*25 - 181*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-1,2,3,7,8-PeCDF	*56*		*24 - 185*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-2,3,4,7,8-PeCDF	*63*		*21 - 178*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-1,2,3,4,7,8-HxCDD	*68*		*32 - 141*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-1,2,3,6,7,8-HxCDD	*61*		*28 - 130*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-1,2,3,4,7,8-HxCDF	*72*		*26 - 152*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-1,2,3,6,7,8-HxCDF	*62*		*26 - 123*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-1,2,3,7,8,9-HxCDF	*57*		*29 - 147*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-2,3,4,6,7,8-HxCDF	*60*		*28 - 136*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*65*		*23 - 140*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*66*		*28 - 143*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*74*		*26 - 138*	*08/06/21 05:28*	*08/18/21 17:13*	*1*
13C-OCDD	*69*		*17 - 157*	*08/06/21 05:28*	*08/18/21 17:13*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*67*		*35 - 197*	*08/06/21 05:28*	*08/18/21 17:13*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**3.9**		1.4	0.17	pg/g	☼	08/06/21 05:28	08/25/21 14:54	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*62*		*24 - 169*	*08/06/21 05:28*	*08/25/21 14:54*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*75*		*35 - 197*	*08/06/21 05:28*	*08/25/21 14:54*	*1*

Client Sample ID: 11215702-072721-BN-DUP-9 Lab Sample ID: 320-76887-13

Date Collected: 07/27/21 00:00 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**34.9**		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	**65.1**		0.1	0.1	%			07/30/21 12:30	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Client Sample ID: 11215702-072721-BN-DUP-9

Date Collected: 07/27/21 00:00
Date Received: 07/29/21 09:45

Lab Sample ID: 320-76887-13

Matrix: Sediment
Percent Solids: 65.1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**2.5**		1.6	0.12	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,7,8-PeCDD	ND		8.0	0.15	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,7,8-PeCDF	ND		8.0	0.042	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
2,3,4,7,8-PeCDF	ND		8.0	0.041	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,4,7,8-HxCDD	ND		8.0	0.23	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,6,7,8-HxCDD	**0.82**	**J q**	8.0	0.26	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,7,8,9-HxCDD	ND		8.0	0.23	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,4,7,8-HxCDF	**0.29**	**J**	8.0	0.032	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,6,7,8-HxCDF	ND		8.0	0.033	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,7,8,9-HxCDF	ND		8.0	0.034	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
2,3,4,6,7,8-HxCDF	ND		8.0	0.032	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,4,6,7,8-HpCDD	**34**	**B**	8.0	0.35	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,4,6,7,8-HpCDF	ND		8.0	0.071	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
1,2,3,4,7,8,9-HpCDF	ND		8.0	0.072	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
OCDD	**820**	**B**	16	0.70	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
OCDF	ND		16	0.13	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total TCDD	**4.1**		1.6	0.12	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total TCDF	**14**		1.6	0.12	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total PeCDD	**5.0**	**J q**	8.0	0.15	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total PeCDF	ND		8.0	0.057	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total HxCDD	**30**	**q**	8.0	0.24	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total HxCDF	**0.29**	**J**	8.0	0.032	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total HpCDD	**130**	**B**	8.0	0.35	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1
Total HpCDF	ND		8.0	0.072	pg/g	☼	08/06/21 05:28	08/18/21 18:49	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*60*		*25 - 164*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-2,3,7,8-TCDF	*57*		*24 - 169*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-1,2,3,7,8-PeCDD	*56*		*25 - 181*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-1,2,3,7,8-PeCDF	*57*		*24 - 185*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-2,3,4,7,8-PeCDF	*62*		*21 - 178*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-1,2,3,4,7,8-HxCDD	*70*		*32 - 141*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-1,2,3,6,7,8-HxCDD	*64*		*28 - 130*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-1,2,3,4,7,8-HxCDF	*77*		*26 - 152*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-1,2,3,6,7,8-HxCDF	*66*		*26 - 123*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-1,2,3,7,8,9-HxCDF	*58*		*29 - 147*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-2,3,4,6,7,8-HxCDF	*61*		*28 - 136*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*69*		*23 - 140*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*66*		*28 - 143*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*74*		*26 - 138*	*08/06/21 05:28*	*08/18/21 18:49*	*1*
13C-OCDD	*68*		*17 - 157*	*08/06/21 05:28*	*08/18/21 18:49*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*67*		*35 - 197*	*08/06/21 05:28*	*08/18/21 18:49*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**8.6**		1.6	0.20	pg/g	☼	08/06/21 05:28	08/25/21 15:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*61*		*24 - 169*	*08/06/21 05:28*	*08/25/21 15:32*	*1*

Client Sample Results

Client: GHD Services Inc.
Job ID: 320-76887-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072721-BN-DUP-9
Lab Sample ID: 320-76887-13

Date Collected: 07/27/21 00:00
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 65.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	73		35 - 197	08/06/21 05:28	08/25/21 15:32	1

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Client Sample ID: 11215702-072721-BN-SJSB096 (0-2) — Lab Sample ID: 320-76887-1

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDD	550		10	6.4	pg/g	1	550	1613B
1,2,3,7,8-PeCDF	3500	G	25	25	pg/g	0.03	110	1613B
2,3,4,7,8-PeCDF	3200	G	19	19	pg/g	0.3	960	1613B
1,2,3,4,7,8-HxCDD	5.9	J	10	0.66	pg/g	0.1	0.59	1613B
1,2,3,6,7,8-HxCDD	13		10	0.79	pg/g	0.1	1.3	1613B
1,2,3,7,8,9-HxCDD	10		10	0.67	pg/g	0.1	1.0	1613B
1,2,3,6,7,8-HxCDF	1200		10	10	pg/g	0.1	120	1613B
1,2,3,7,8,9-HxCDF	89		10	7.8	pg/g	0.1	8.9	1613B
2,3,4,6,7,8-HxCDF	150	G	14	14	pg/g	0.1	15	1613B
1,2,3,4,6,7,8-HpCDD	130	B	10	0.70	pg/g	0.01	1.3	1613B
1,2,3,4,6,7,8-HpCDF	1500		10	3.3	pg/g	0.01	15	1613B
1,2,3,4,7,8,9-HpCDF	450		10	3.7	pg/g	0.01	4.5	1613B
OCDD	1100	B	20	1.7	pg/g	0.0003	0.33	1613B
OCDF	700		20	1.3	pg/g	0.0003	0.21	1613B
2,3,7,8-TCDD - DL	60000	E G	190	190	pg/g	1	60000	1613B
1,2,3,4,7,8-HxCDF - DL	4400		100	15	pg/g	0.1	440	1613B
2,3,7,8-TCDF - RADL	250000	E G	160	160	pg/g	0.1	25000	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		87000	TEQ

Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) — Lab Sample ID: 320-76887-2

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	15000	E G	48	48	pg/g	1	15000	1613B
1,2,3,7,8-PeCDD	130	F1	79	3.1	pg/g	1	130	1613B
1,2,3,7,8-PeCDF	1300		79	9.3	pg/g	0.03	39	1613B
2,3,4,7,8-PeCDF	930		79	9.0	pg/g	0.3	280	1613B
1,2,3,4,7,8-HxCDD	2.1	J	79	0.43	pg/g	0.1	0.21	1613B
1,2,3,6,7,8-HxCDD	4.0	J q	79	0.47	pg/g	0.1	0.40	1613B
1,2,3,7,8,9-HxCDD	2.6	J	79	0.41	pg/g	0.1	0.26	1613B
1,2,3,4,7,8-HxCDF	2000		79	11	pg/g	0.1	200	1613B
1,2,3,6,7,8-HxCDF	500	F1	79	11	pg/g	0.1	50	1613B
1,2,3,7,8,9-HxCDF	23	J	79	8.4	pg/g	0.1	2.3	1613B
2,3,4,6,7,8-HxCDF	47	J	79	8.6	pg/g	0.1	4.7	1613B
1,2,3,4,6,7,8-HpCDD	43	J B	79	0.65	pg/g	0.01	0.43	1613B
1,2,3,4,6,7,8-HpCDF	650		79	4.6	pg/g	0.01	6.5	1613B
1,2,3,4,7,8,9-HpCDF	200		79	5.5	pg/g	0.01	2.0	1613B
OCDD	610	F1 B	160	1.3	pg/g	0.0003	0.18	1613B
OCDF	290		160	0.83	pg/g	0.0003	0.087	1613B
2,3,7,8-TCDF - RA	61000	E G	66	66	pg/g	0.1	6100	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) (Continued) — Lab Sample ID: 320-76887-2

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		22000	TEQ

Client Sample ID: 11215702-072721-BN-SJSB096 (4-6) — Lab Sample ID: 320-76887-3

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**210**		1.4	0.59	pg/g	1	**210**	1613B
1,2,3,7,8-PeCDD	**2.6**	**J**	6.8	0.17	pg/g	1	**2.6**	1613B
1,2,3,7,8-PeCDF	**18**		6.8	0.28	pg/g	0.03	**0.54**	1613B
2,3,4,7,8-PeCDF	**13**		6.8	0.29	pg/g	0.3	**3.9**	1613B
1,2,3,4,7,8-HxCDD	ND		6.8	0.26	pg/g	0.1	0.013	1613B
1,2,3,6,7,8-HxCDD	ND		6.8	0.27	pg/g	0.1	0.014	1613B
1,2,3,7,8,9-HxCDD	**2.1**	**J**	6.8	0.25	pg/g	0.1	**0.21**	1613B
1,2,3,4,7,8-HxCDF	**25**		6.8	0.27	pg/g	0.1	**2.5**	1613B
1,2,3,6,7,8-HxCDF	**6.4**	**J**	6.8	0.28	pg/g	0.1	**0.64**	1613B
1,2,3,7,8,9-HxCDF	ND		6.8	0.26	pg/g	0.1	0.013	1613B
2,3,4,6,7,8-HxCDF	**0.73**	**J q**	6.8	0.26	pg/g	0.1	**0.073**	1613B
1,2,3,4,6,7,8-HpCDD	**36**	**B**	6.8	0.31	pg/g	0.01	**0.36**	1613B
1,2,3,4,6,7,8-HpCDF	**7.6**		6.8	0.19	pg/g	0.01	**0.076**	1613B
1,2,3,4,7,8,9-HpCDF	**2.6**	**J**	6.8	0.17	pg/g	0.01	**0.026**	1613B
OCDD	**950**	**B**	14	0.92	pg/g	0.0003	**0.29**	1613B
OCDF	**3.8**	**J**	14	0.22	pg/g	0.0003	**0.0011**	1613B
2,3,7,8-TCDF - RA	**910**	**E**	1.4	1.1	pg/g	0.1	**91**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		310	TEQ

Client Sample ID: 11215702-072721-BN-SJSB096 (6-8) — Lab Sample ID: 320-76887-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**2.4**		1.4	0.084	pg/g	1	**2.4**	1613B
1,2,3,7,8-PeCDD	**0.29**	**J**	7.2	0.13	pg/g	1	**0.29**	1613B
1,2,3,7,8-PeCDF	**0.86**	**J**	7.2	0.047	pg/g	0.03	**0.026**	1613B
2,3,4,7,8-PeCDF	**0.35**	**J**	7.2	0.049	pg/g	0.3	**0.11**	1613B
1,2,3,4,7,8-HxCDD	**0.59**	**J**	7.2	0.13	pg/g	0.1	**0.059**	1613B
1,2,3,6,7,8-HxCDD	**0.81**	**J q**	7.2	0.13	pg/g	0.1	**0.081**	1613B
1,2,3,7,8,9-HxCDD	**2.9**	**J**	7.2	0.12	pg/g	0.1	**0.29**	1613B
1,2,3,4,7,8-HxCDF	**0.74**	**J**	7.2	0.040	pg/g	0.1	**0.074**	1613B
1,2,3,6,7,8-HxCDF	**0.25**	**J**	7.2	0.040	pg/g	0.1	**0.025**	1613B
1,2,3,7,8,9-HxCDF	**0.12**	**J**	7.2	0.031	pg/g	0.1	**0.012**	1613B
2,3,4,6,7,8-HxCDF	**0.043**	**J q**	7.2	0.031	pg/g	0.1	**0.0043**	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Client Sample ID: 11215702-072721-BN-SJSB096 (6-8) (Continued) — Lab Sample ID: 320-76887-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDD	39	B	7.2	0.79	pg/g	0.01	0.39	1613B
1,2,3,4,6,7,8-HpCDF	0.18	J q	7.2	0.036	pg/g	0.01	0.0018	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.2	0.041	pg/g	0.01	0.00021	1613B
OCDD	980	B	14	0.88	pg/g	0.0003	0.29	1613B
OCDF	0.51	J	14	0.039	pg/g	0.0003	0.00015	1613B
2,3,7,8-TCDF - RA	8.8		1.4	0.19	pg/g	0.1	0.88	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		4.9	TEQ

Client Sample ID: 11215702-072721-BN-SJSB096 (8-10) — Lab Sample ID: 320-76887-5

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	1900	G E	1.9	1.9	pg/g	1	1900	1613B
1,2,3,7,8-PeCDD	24		7.0	0.70	pg/g	1	24	1613B
1,2,3,7,8-PeCDF	150		7.0	1.5	pg/g	0.03	4.5	1613B
2,3,4,7,8-PeCDF	120		7.0	1.6	pg/g	0.3	36	1613B
1,2,3,4,7,8-HxCDD	0.79	J	7.0	0.23	pg/g	0.1	0.079	1613B
1,2,3,6,7,8-HxCDD	1.3	J	7.0	0.26	pg/g	0.1	0.13	1613B
1,2,3,7,8,9-HxCDD	2.7	J	7.0	0.22	pg/g	0.1	0.27	1613B
1,2,3,4,7,8-HxCDF	200		7.0	0.94	pg/g	0.1	20	1613B
1,2,3,6,7,8-HxCDF	51		7.0	0.94	pg/g	0.1	5.1	1613B
1,2,3,7,8,9-HxCDF	3.3	J	7.0	0.89	pg/g	0.1	0.33	1613B
2,3,4,6,7,8-HxCDF	6.5	J	7.0	0.97	pg/g	0.1	0.65	1613B
1,2,3,4,6,7,8-HpCDD	41	B	7.0	0.28	pg/g	0.01	0.41	1613B
1,2,3,4,6,7,8-HpCDF	68		7.0	0.23	pg/g	0.01	0.68	1613B
1,2,3,4,7,8,9-HpCDF	22		7.0	0.22	pg/g	0.01	0.22	1613B
OCDD	1000	B	14	0.84	pg/g	0.0003	0.30	1613B
OCDF	37		14	0.17	pg/g	0.0003	0.011	1613B
2,3,7,8-TCDF - RA	8000	E G	7.6	7.6	pg/g	0.1	800	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2800	TEQ

Client Sample ID: 11215702-072721-BN-SJSB096 (10-12) — Lab Sample ID: 320-76887-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	45		1.5	0.19	pg/g	1	45	1613B
1,2,3,7,8-PeCDD	ND		7.7	0.16	pg/g	1	0.080	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Client Sample ID: 11215702-072721-BN-SJSB096 (10-12) (Continued) Lab Sample ID: 320-76887-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDF	3.6	J	7.7	0.13	pg/g	0.03	0.11	1613B
2,3,4,7,8-PeCDF	2.6	J	7.7	0.13	pg/g	0.3	0.78	1613B
1,2,3,4,7,8-HxCDD	0.49	J q	7.7	0.26	pg/g	0.1	0.049	1613B
1,2,3,6,7,8-HxCDD	1.3	J	7.7	0.29	pg/g	0.1	0.13	1613B
1,2,3,7,8,9-HxCDD	3.3	J	7.7	0.25	pg/g	0.1	0.33	1613B
1,2,3,4,7,8-HxCDF	4.9	J	7.7	0.069	pg/g	0.1	0.49	1613B
1,2,3,6,7,8-HxCDF	1.2	J	7.7	0.075	pg/g	0.1	0.12	1613B
1,2,3,7,8,9-HxCDF	0.25	J q	7.7	0.066	pg/g	0.1	0.025	1613B
2,3,4,6,7,8-HxCDF	ND		7.7	0.066	pg/g	0.1	0.0033	1613B
1,2,3,4,6,7,8-HpCDD	51	B	7.7	0.33	pg/g	0.01	0.51	1613B
1,2,3,4,6,7,8-HpCDF	1.4	J	7.7	0.12	pg/g	0.01	0.014	1613B
1,2,3,4,7,8,9-HpCDF	0.39	J	7.7	0.11	pg/g	0.01	0.0039	1613B
OCDD	1200	B	15	0.99	pg/g	0.0003	0.36	1613B
OCDF	0.74	J	15	0.087	pg/g	0.0003	0.00022	1613B
2,3,7,8-TCDF - RA	190		1.5	0.47	pg/g	0.1	19	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		67	TEQ

Client Sample ID: 11215702-072721-BN-SJSB096 (12-14) Lab Sample ID: 320-76887-7

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	3.3		1.3	0.068	pg/g	1	3.3	1613B
1,2,3,7,8-PeCDD	ND		6.4	0.10	pg/g	1	0.050	1613B
1,2,3,7,8-PeCDF	0.26	J	6.4	0.039	pg/g	0.03	0.0078	1613B
2,3,4,7,8-PeCDF	0.16	J q	6.4	0.040	pg/g	0.3	0.048	1613B
1,2,3,4,7,8-HxCDD	ND		6.4	0.19	pg/g	0.1	0.0095	1613B
1,2,3,6,7,8-HxCDD	ND		6.4	0.21	pg/g	0.1	0.011	1613B
1,2,3,7,8,9-HxCDD	2.3	J	6.4	0.19	pg/g	0.1	0.23	1613B
1,2,3,4,7,8-HxCDF	ND		6.4	0.038	pg/g	0.1	0.0019	1613B
1,2,3,6,7,8-HxCDF	ND		6.4	0.038	pg/g	0.1	0.0019	1613B
1,2,3,7,8,9-HxCDF	ND		6.4	0.037	pg/g	0.1	0.0019	1613B
2,3,4,6,7,8-HxCDF	ND		6.4	0.038	pg/g	0.1	0.0019	1613B
1,2,3,4,6,7,8-HpCDD	24	B	6.4	0.19	pg/g	0.01	0.24	1613B
1,2,3,4,6,7,8-HpCDF	ND		6.4	0.050	pg/g	0.01	0.00025	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.4	0.048	pg/g	0.01	0.00024	1613B
OCDD	460	B	13	0.49	pg/g	0.0003	0.14	1613B
OCDF	ND		13	0.095	pg/g	0.0003	0.000014	1613B
2,3,7,8-TCDF - RA	11		1.3	0.17	pg/g	0.1	1.1	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Client Sample ID: 11215702-072721-BN-SJSB096 (12-14) (Continued) — Lab Sample ID: 320-76887-7

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		5.1	TEQ

Client Sample ID: 11215702-072721-BN-SJSB096 (14-16) — Lab Sample ID: 320-76887-8

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**0.95**	**J q**	1.4	0.12	pg/g	1	**0.95**	1613B
1,2,3,7,8-PeCDD	ND		6.9	0.11	pg/g	1	0.055	1613B
1,2,3,7,8-PeCDF	ND		6.9	0.037	pg/g	0.03	0.00056	1613B
2,3,4,7,8-PeCDF	ND		6.9	0.040	pg/g	0.3	0.0060	1613B
1,2,3,4,7,8-HxCDD	**0.29**	**J q**	6.9	0.15	pg/g	0.1	**0.029**	1613B
1,2,3,6,7,8-HxCDD	**0.54**	**J**	6.9	0.17	pg/g	0.1	**0.054**	1613B
1,2,3,7,8,9-HxCDD	**1.6**	**J q**	6.9	0.15	pg/g	0.1	**0.16**	1613B
1,2,3,4,7,8-HxCDF	ND		6.9	0.024	pg/g	0.1	0.0012	1613B
1,2,3,6,7,8-HxCDF	ND		6.9	0.025	pg/g	0.1	0.0013	1613B
1,2,3,7,8,9-HxCDF	ND		6.9	0.024	pg/g	0.1	0.0012	1613B
2,3,4,6,7,8-HxCDF	ND		6.9	0.024	pg/g	0.1	0.0012	1613B
1,2,3,4,6,7,8-HpCDD	**18**	**B**	6.9	0.16	pg/g	0.01	**0.18**	1613B
1,2,3,4,6,7,8-HpCDF	ND		6.9	0.039	pg/g	0.01	0.00020	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.9	0.036	pg/g	0.01	0.00018	1613B
OCDD	**360**	**B**	14	0.35	pg/g	0.0003	**0.11**	1613B
OCDF	**0.74**	**J q**	14	0.057	pg/g	0.0003	**0.00022**	1613B
2,3,7,8-TCDF - RA	**3.9**		1.4	0.17	pg/g	0.1	**0.39**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		1.9	TEQ

Client Sample ID: 11215702-072721-BN-DUP-9 — Lab Sample ID: 320-76887-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**2.5**		1.6	0.12	pg/g	1	**2.5**	1613B
1,2,3,7,8-PeCDD	ND		8.0	0.15	pg/g	1	0.075	1613B
1,2,3,7,8-PeCDF	ND		8.0	0.042	pg/g	0.03	0.00063	1613B
2,3,4,7,8-PeCDF	ND		8.0	0.041	pg/g	0.3	0.0062	1613B
1,2,3,4,7,8-HxCDD	ND		8.0	0.23	pg/g	0.1	0.012	1613B
1,2,3,6,7,8-HxCDD	**0.82**	**J q**	8.0	0.26	pg/g	0.1	**0.082**	1613B
1,2,3,7,8,9-HxCDD	ND		8.0	0.23	pg/g	0.1	0.012	1613B
1,2,3,4,7,8-HxCDF	**0.29**	**J**	8.0	0.032	pg/g	0.1	**0.029**	1613B
1,2,3,6,7,8-HxCDF	ND		8.0	0.033	pg/g	0.1	0.0017	1613B
1,2,3,7,8,9-HxCDF	ND		8.0	0.034	pg/g	0.1	0.0017	1613B
2,3,4,6,7,8-HxCDF	ND		8.0	0.032	pg/g	0.1	0.0016	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Job ID: 320-76887-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072721-BN-DUP-9 (Continued) — Lab Sample ID: 320-76887-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
1,2,3,4,6,7,8-HpCDD	**34**	**B**	8.0	0.35	pg/g	0.01	**0.34**	1613B
1,2,3,4,6,7,8-HpCDF	ND		8.0	0.071	pg/g	0.01	0.00036	1613B
1,2,3,4,7,8,9-HpCDF	ND		8.0	0.072	pg/g	0.01	0.00036	1613B
OCDD	**820**	**B**	16	0.70	pg/g	0.0003	**0.25**	1613B
OCDF	ND		16	0.13	pg/g	0.0003	0.000020	1613B
2,3,7,8-TCDF - RA	**8.6**		1.6	0.20	pg/g	0.1	**0.86**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
Total Dioxin/Furan TEQ					pg/g		4.2	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-76887-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-76887-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	37TCDD (35-197)
320-76887-1	11215702-072721-BN-SJSB096	108
320-76887-1 - RADL	11215702-072721-BN-SJSB096 (0-2)	98
320-76887-1 - DL	11215702-072721-BN-SJSB096 (0-2)	154
320-76887-2	11215702-072721-BN-SJSB096 (2-4)	110
320-76887-2 - RA	11215702-072721-BN-SJSB096 (2-4)	48
320-76887-2 MS	11215702-072721-BN-SJSB096 (2-4)	115
320-76887-2 MS - RA	11215702-072721-BN-SJSB096 (2-4)	65
320-76887-2 MSD	11215702-072721-BN-SJSB096 (2-4)	112
320-76887-2 MSD - RA	11215702-072721-BN-SJSB096 (2-4)	81
320-76887-3	11215702-072721-BN-SJSB096 (4-6)	69
320-76887-3 - RA	11215702-072721-BN-SJSB096 (4-6)	74
320-76887-4	11215702-072721-BN-SJSB096 (6-8)	72
320-76887-4 - RA	11215702-072721-BN-SJSB096 (6-8)	75
320-76887-5	11215702-072721-BN-SJSB096 (8-10)	74
320-76887-5 - RA	11215702-072721-BN-SJSB096 (8-10)	79
320-76887-6	11215702-072721-BN-SJSB096 (10-12)	68
320-76887-6 - RA	11215702-072721-BN-SJSB096 (10-12)	77
320-76887-7	11215702-072721-BN-SJSB096 (12-14)	68
320-76887-7 - RA	11215702-072721-BN-SJSB096 (12-14)	77
320-76887-8	11215702-072721-BN-SJSB096 (14-16)	67
320-76887-8 - RA	11215702-072721-BN-SJSB096 (14-16)	75
320-76887-13	11215702-072721-BN-DUP-9	67
320-76887-13 - RA	11215702-072721-BN-DUP-9	73
MB 320-513586/1-A	Method Blank	68

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	37TCDD (31-191)
LCS 320-513586/2-A	Lab Control Sample	69

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-76887-1
Project/Site: SJRWP Supplemental Design Investigation

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76887-1	11215702-072721-BN-SJSB096			62	59	61	55	51	70
320-76887-1 - RADL	11215702-072721-BN-SJSB096 (0-2)		34						
320-76887-1 - DL	11215702-072721-BN-SJSB096 (0-2)	47	61						67
320-76887-2	11215702-072721-BN-SJSB096 (2-4)	68	68	75	69	76	76	68	76
320-76887-2 - RA	11215702-072721-BN-SJSB096 (2-4)		36						
320-76887-2 MS	11215702-072721-BN-SJSB096 (2-4)	58	57	63	59	65	64	59	65
320-76887-2 MS - RA	11215702-072721-BN-SJSB096 (2-4)		44						
320-76887-2 MSD	11215702-072721-BN-SJSB096 (2-4)	54	55	58	55	57	56	52	57
320-76887-2 MSD - RA	11215702-072721-BN-SJSB096 (2-4)		42						
320-76887-3	11215702-072721-BN-SJSB096 (4-6)	60	59	61	59	65	67	61	72
320-76887-3 - RA	11215702-072721-BN-SJSB096 (4-6)		63						
320-76887-4	11215702-072721-BN-SJSB096 (6-8)	58	54	58	54	56	59	54	59
320-76887-4 - RA	11215702-072721-BN-SJSB096 (6-8)		57						
320-76887-5	11215702-072721-BN-SJSB096 (8-10)	60	57	59	59	61	64	59	72
320-76887-5 - RA	11215702-072721-BN-SJSB096 (8-10)		67						
320-76887-6	11215702-072721-BN-SJSB096 (10-12)	62	62	61	61	66	69	64	74
320-76887-6 - RA	11215702-072721-BN-SJSB096 (10-12)		67						
320-76887-7	11215702-072721-BN-SJSB096 (12-14)	55	54	52	53	58	60	54	63
320-76887-7 - RA	11215702-072721-BN-SJSB096 (12-14)		59						
320-76887-8	11215702-072721-BN-SJSB096 (14-16)	60	58	58	56	63	68	61	72
320-76887-8 - RA	11215702-072721-BN-SJSB096 (14-16)		62						
320-76887-13	11215702-072721-BN-DUP-9	60	57	56	57	62	70	64	77
320-76887-13 - RA	11215702-072721-BN-DUP-9		61						
MB 320-513586/1-A	Method Blank	59	57	58	61	65	65	60	74

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76887-1	11215702-072721-BN-SJSB096	59	54	51	72	61	58	70
320-76887-1 - RADL	11215702-072721-BN-SJSB096 (0-2)							
320-76887-1 - DL	11215702-072721-BN-SJSB096 (0-2)							
320-76887-2	11215702-072721-BN-SJSB096 (2-4)	67	68	68	73	66	76	74

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76887-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76887-2 - RA	11215702-072721-BN-SJSB096							
320-76887-2 MS	11215702-072721-BN-SJSB096 (2-4)	57	57	59	60	57	64	62
320-76887-2 MS - RA	11215702-072721-BN-SJSB096 (2-4)							
320-76887-2 MSD	11215702-072721-BN-SJSB096 (2-4)	52	54	55	56	52	61	57
320-76887-2 MSD - RA	11215702-072721-BN-SJSB096 (2-4)							
320-76887-3	11215702-072721-BN-SJSB096 (4-6)	63	60	60	73	68	81	76
320-76887-3 - RA	11215702-072721-BN-SJSB096 (4-6)							
320-76887-4	11215702-072721-BN-SJSB096 (6-8)	56	56	56	60	53	64	61
320-76887-4 - RA	11215702-072721-BN-SJSB096 (6-8)							
320-76887-5	11215702-072721-BN-SJSB096 (8-10)	60	59	57	68	65	76	73
320-76887-5 - RA	11215702-072721-BN-SJSB096 (8-10)							
320-76887-6	11215702-072721-BN-SJSB096 (10-12)	63	61	62	70	67	78	74
320-76887-6 - RA	11215702-072721-BN-SJSB096 (10-12)							
320-76887-7	11215702-072721-BN-SJSB096 (12-14)	56	52	54	61	61	69	66
320-76887-7 - RA	11215702-072721-BN-SJSB096 (12-14)							
320-76887-8	11215702-072721-BN-SJSB096 (14-16)	62	57	60	65	66	74	69
320-76887-8 - RA	11215702-072721-BN-SJSB096 (14-16)							
320-76887-13	11215702-072721-BN-DUP-9	66	58	61	69	66	74	68
320-76887-13 - RA	11215702-072721-BN-DUP-9							
MB 320-513586/1-A	Method Blank	64	61	61	72	65	78	76

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76887-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**TCDD (20-175)**	**TCDF (22-152)**	**PeCDD (21-227)**	**PeCDF (21-192)**	**PeCF (13-328)**	**HxCDD (21-193)**	**HxDD (25-163)**	**HxCDF (19-202)**
LCS 320-513586/2-A	Lab Control Sample	54	54	59	56	63	60	54	67

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**HxDF (21-159)**	**HxCF (17-205)**	**13CHxCF (22-176)**	**HpCDD (26-166)**	**HpCDF (21-158)**	**HpCDF2 (20-186)**	**OCDD (13-199)**	
LCS 320-513586/2-A	Lab Control Sample	58	53	54	67	63	72	71	

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-513586/1-A
Matrix: Sediment
Analysis Batch: 517196

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513586

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.031	pg/g		08/06/21 05:28	08/17/21 17:01	1
2,3,7,8-TCDF	ND		1.0	0.011	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8-PeCDD	ND		5.0	0.041	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8-PeCDF	ND		5.0	0.026	pg/g		08/06/21 05:28	08/17/21 17:01	1
2,3,4,7,8-PeCDF	ND		5.0	0.028	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.034	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.034	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.031	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.015	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.016	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.015	pg/g		08/06/21 05:28	08/17/21 17:01	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.015	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,6,7,8-HpCDD	0.198	J q	5.0	0.021	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	0.039	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.037	pg/g		08/06/21 05:28	08/17/21 17:01	1
OCDD	0.435	J q	10	0.035	pg/g		08/06/21 05:28	08/17/21 17:01	1
OCDF	ND		10	0.061	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total TCDD	ND		1.0	0.031	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total TCDF	ND		1.0	0.13	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total PeCDD	ND		5.0	0.16	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total PeCDF	ND		5.0	0.028	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HxCDD	ND		5.0	0.16	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HxCDF	ND		5.0	0.036	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HpCDD	0.357	J q	5.0	0.021	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HpCDF	ND		5.0	0.039	pg/g		08/06/21 05:28	08/17/21 17:01	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*59*		*25 - 164*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-2,3,7,8-TCDF	*57*		*24 - 169*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,7,8-PeCDD	*58*		*25 - 181*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,7,8-PeCDF	*61*		*24 - 185*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-2,3,4,7,8-PeCDF	*65*		*21 - 178*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,7,8-HxCDD	*65*		*32 - 141*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,6,7,8-HxCDD	*60*		*28 - 130*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,7,8-HxCDF	*74*		*26 - 152*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,6,7,8-HxCDF	*64*		*26 - 123*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,7,8,9-HxCDF	*61*		*29 - 147*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-2,3,4,6,7,8-HxCDF	*61*		*28 - 136*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*72*		*23 - 140*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*65*		*28 - 143*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*78*		*26 - 138*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-OCDD	*76*		*17 - 157*	*08/06/21 05:28*	*08/17/21 17:01*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*68*		*35 - 197*	*08/06/21 05:28*	*08/17/21 17:01*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-513586/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517196 **Prep Batch: 513586**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	21.3		pg/g		107	67 - 158
2,3,7,8-TCDF	20.0	21.8		pg/g		109	75 - 158
1,2,3,7,8-PeCDD	100	112		pg/g		112	70 - 142
1,2,3,7,8-PeCDF	100	114		pg/g		114	80 - 134
2,3,4,7,8-PeCDF	100	105		pg/g		105	68 - 160
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	70 - 164
1,2,3,6,7,8-HxCDD	100	111		pg/g		111	76 - 134
1,2,3,7,8,9-HxCDD	100	110		pg/g		110	64 - 162
1,2,3,4,7,8-HxCDF	100	107		pg/g		107	72 - 134
1,2,3,6,7,8-HxCDF	100	112		pg/g		112	84 - 130
1,2,3,7,8,9-HxCDF	100	116		pg/g		116	78 - 130
2,3,4,6,7,8-HxCDF	100	117		pg/g		117	70 - 156
1,2,3,4,6,7,8-HpCDD	100	108		pg/g		108	70 - 140
1,2,3,4,6,7,8-HpCDF	100	112		pg/g		112	82 - 122
1,2,3,4,7,8,9-HpCDF	100	105		pg/g		105	78 - 138
OCDD	200	228		pg/g		114	78 - 144
OCDF	200	248		pg/g		124	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*54*		*20 - 175*
13C-2,3,7,8-TCDF	*54*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*59*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*56*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*63*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*60*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*54*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*67*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*58*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*53*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*54*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*67*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*63*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*72*		*20 - 186*
13C-OCDD	*71*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*69*		*31 - 191*

Lab Sample ID: 320-76887-2 MS **Client Sample ID: 11215702-072721-BN-SJSB096 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517729 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	15000	E G	31.9	16100	E 4 G	pg/g	☼	4297	67 - 158
1,2,3,7,8-PeCDD	130	F1	159	329		pg/g	☼	123	70 - 142
1,2,3,7,8-PeCDF	1300		159	1590	4	pg/g	☼	212	80 - 134
2,3,4,7,8-PeCDF	930		159	1230	4	pg/g	☼	193	68 - 160
1,2,3,4,7,8-HxCDD	2.1	J	159	161		pg/g	☼	100	70 - 164

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76887-2 MS **Client Sample ID: 11215702-072721-BN-SJSB096 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517729 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	4.0	J q	159	183		pg/g	☼	112	76 - 134
1,2,3,7,8,9-HxCDD	2.6	J	159	164		pg/g	☼	101	64 - 162
1,2,3,4,7,8-HxCDF	2000		159	1950	4	pg/g	☼	-31	72 - 134
1,2,3,6,7,8-HxCDF	500	F1	159	647		pg/g	☼	94	84 - 130
1,2,3,7,8,9-HxCDF	23	J	159	173		pg/g	☼	94	78 - 130
2,3,4,6,7,8-HxCDF	47	J	159	215		pg/g	☼	105	70 - 156
1,2,3,4,6,7,8-HpCDD	43	J B	159	219		pg/g	☼	110	70 - 140
1,2,3,4,6,7,8-HpCDF	650		159	701	4	pg/g	☼	32	82 - 122
1,2,3,4,7,8,9-HpCDF	200		159	325		pg/g	☼	78	78 - 138
OCDD	610	F1 B	319	1020		pg/g	☼	129	78 - 144
OCDF	290		319	555		pg/g	☼	83	63 - 170

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*58*		*25 - 164*
13C-2,3,7,8-TCDF	*57*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*63*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*59*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*65*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*64*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*59*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*65*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*57*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*57*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*59*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*60*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*57*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*64*		*26 - 138*
13C-OCDD	*62*		*17 - 157*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*115*		*35 - 197*

Lab Sample ID: 320-76887-2 MSD **Client Sample ID: 11215702-072721-BN-SJSB096 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517729 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	15000	E G	30.9	19400	E 4 G	pg/g	☼	15092	67 - 158	19	50
1,2,3,7,8-PeCDD	130	F1	154	366	F1	pg/g	☼	151	70 - 142	11	50
1,2,3,7,8-PeCDF	1300		154	2150	4	pg/g	☼	584	80 - 134	30	50
2,3,4,7,8-PeCDF	930		154	1450	4	pg/g	☼	337	68 - 160	16	50
1,2,3,4,7,8-HxCDD	2.1	J	154	162		pg/g	☼	103	70 - 164	0	50
1,2,3,6,7,8-HxCDD	4.0	J q	154	183		pg/g	☼	116	76 - 134	0	50
1,2,3,7,8,9-HxCDD	2.6	J	154	172		pg/g	☼	110	64 - 162	5	50
1,2,3,4,7,8-HxCDF	2000		154	2640	4	pg/g	☼	420	72 - 134	30	50
1,2,3,6,7,8-HxCDF	500	F1	154	831	F1	pg/g	☼	217	84 - 130	25	50
1,2,3,7,8,9-HxCDF	23	J	154	186		pg/g	☼	106	78 - 130	7	50
2,3,4,6,7,8-HxCDF	47	J	154	236		pg/g	☼	122	70 - 156	9	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76887-2 MSD **Client Sample ID: 11215702-072721-BN-SJSB096 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517729 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	43	J B	154	240		pg/g	☼	127	70 - 140	9	50
1,2,3,4,6,7,8-HpCDF	650		154	893	4	pg/g	☼	158	82 - 122	24	50
1,2,3,4,7,8,9-HpCDF	200		154	386		pg/g	☼	120	78 - 138	17	50
OCDD	610	F1 B	309	1240	F1	pg/g	☼	202	78 - 144	19	50
OCDF	290		309	649		pg/g	☼	116	63 - 170	16	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*54*		*25 - 164*
13C-2,3,7,8-TCDF	*55*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*58*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*55*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*57*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*56*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*52*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*57*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*52*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*54*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*55*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*56*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*52*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*61*		*26 - 138*
13C-OCDD	*57*		*17 - 157*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*112*		*35 - 197*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: 320-76887-2 MS **Client Sample ID: 11215702-072721-BN-SJSB096 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519744 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDF - RA	61000	E G	31.9	71100	E 4 G	pg/g	☼	30642	75 - 158		

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDF - RA	*44*		*24 - 169*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD - RA	*65*		*35 - 197*

Lab Sample ID: 320-76887-2 MSD **Client Sample ID: 11215702-072721-BN-SJSB096 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519744 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	61000	E G	30.9	74700	E 4 G	pg/g	☼	43487	75 - 158	5	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA (Continued)

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDF - RA	*42*		*24 - 169*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD - RA	*81*		*35 - 197*

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-76887-1 DU **Client Sample ID: 11215702-072721-BN-SJSB096 (0-2)**

Matrix: Sediment **Prep Type: Total/NA**

Analysis Batch: 511708

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	51.0			50.7		%				0.6	20
Percent Solids	49.0			49.3		%				0.6	20

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-76887-1
Project/Site: SJRWP Supplemental Design Investigation

Specialty Organics

Prep Batch: 513586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-1 - DL	11215702-072721-BN-SJSB096 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76887-1 - RADL	11215702-072721-BN-SJSB096 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76887-1	11215702-072721-BN-SJSB096 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76887-2	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76887-2 - RA	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76887-3 - RA	11215702-072721-BN-SJSB096 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-76887-3	11215702-072721-BN-SJSB096 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-76887-4	11215702-072721-BN-SJSB096 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-76887-4 - RA	11215702-072721-BN-SJSB096 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-76887-5 - RA	11215702-072721-BN-SJSB096 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-76887-5	11215702-072721-BN-SJSB096 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-76887-6 - RA	11215702-072721-BN-SJSB096 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-76887-6	11215702-072721-BN-SJSB096 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-76887-7 - RA	11215702-072721-BN-SJSB096 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-76887-7	11215702-072721-BN-SJSB096 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-76887-8 - RA	11215702-072721-BN-SJSB096 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-76887-8	11215702-072721-BN-SJSB096 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-76887-13 - RA	11215702-072721-BN-DUP-9	Total/NA	Sediment	HRMS-Sox	
320-76887-13	11215702-072721-BN-DUP-9	Total/NA	Sediment	HRMS-Sox	
MB 320-513586/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-513586/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-76887-2 MS	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76887-2 MS - RA	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76887-2 MSD	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76887-2 MSD - RA	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	HRMS-Sox	

Analysis Batch: 517196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-513586/1-A	Method Blank	Total/NA	Sediment	1613B	513586
LCS 320-513586/2-A	Lab Control Sample	Total/NA	Sediment	1613B	513586

Analysis Batch: 517281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-3	11215702-072721-BN-SJSB096 (4-6)	Total/NA	Sediment	1613B	513586
320-76887-5	11215702-072721-BN-SJSB096 (8-10)	Total/NA	Sediment	1613B	513586
320-76887-6	11215702-072721-BN-SJSB096 (10-12)	Total/NA	Sediment	1613B	513586
320-76887-7	11215702-072721-BN-SJSB096 (12-14)	Total/NA	Sediment	1613B	513586

Analysis Batch: 517461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-1	11215702-072721-BN-SJSB096 (0-2)	Total/NA	Sediment	1613B	513586
320-76887-8	11215702-072721-BN-SJSB096 (14-16)	Total/NA	Sediment	1613B	513586
320-76887-13	11215702-072721-BN-DUP-9	Total/NA	Sediment	1613B	513586

Analysis Batch: 517729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-2	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	1613B	513586
320-76887-4	11215702-072721-BN-SJSB096 (6-8)	Total/NA	Sediment	1613B	513586
320-76887-2 MS	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	1613B	513586
320-76887-2 MSD	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	1613B	513586

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-76887-1
Project/Site: SJRWP Supplemental Design Investigation

Specialty Organics

Analysis Batch: 519744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-1 - RADL	11215702-072721-BN-SJSB096 (0-2)	Total/NA	Sediment	1613B	513586
320-76887-2 - RA	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	1613B	513586
320-76887-3 - RA	11215702-072721-BN-SJSB096 (4-6)	Total/NA	Sediment	1613B	513586
320-76887-4 - RA	11215702-072721-BN-SJSB096 (6-8)	Total/NA	Sediment	1613B	513586
320-76887-5 - RA	11215702-072721-BN-SJSB096 (8-10)	Total/NA	Sediment	1613B	513586
320-76887-6 - RA	11215702-072721-BN-SJSB096 (10-12)	Total/NA	Sediment	1613B	513586
320-76887-7 - RA	11215702-072721-BN-SJSB096 (12-14)	Total/NA	Sediment	1613B	513586
320-76887-8 - RA	11215702-072721-BN-SJSB096 (14-16)	Total/NA	Sediment	1613B	513586
320-76887-13 - RA	11215702-072721-BN-DUP-9	Total/NA	Sediment	1613B	513586
320-76887-2 MS - RA	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	1613B	513586
320-76887-2 MSD - RA	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	1613B	513586

Analysis Batch: 520325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-1 - DL	11215702-072721-BN-SJSB096 (0-2)	Total/NA	Sediment	1613B	513586

General Chemistry

Analysis Batch: 511708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-1	11215702-072721-BN-SJSB096 (0-2)	Total/NA	Sediment	D 2216	
320-76887-2	11215702-072721-BN-SJSB096 (2-4)	Total/NA	Sediment	D 2216	
320-76887-3	11215702-072721-BN-SJSB096 (4-6)	Total/NA	Sediment	D 2216	
320-76887-4	11215702-072721-BN-SJSB096 (6-8)	Total/NA	Sediment	D 2216	
320-76887-5	11215702-072721-BN-SJSB096 (8-10)	Total/NA	Sediment	D 2216	
320-76887-6	11215702-072721-BN-SJSB096 (10-12)	Total/NA	Sediment	D 2216	
320-76887-7	11215702-072721-BN-SJSB096 (12-14)	Total/NA	Sediment	D 2216	
320-76887-8	11215702-072721-BN-SJSB096 (14-16)	Total/NA	Sediment	D 2216	
320-76887-13	11215702-072721-BN-DUP-9	Total/NA	Sediment	D 2216	
320-76887-1 DU	11215702-072721-BN-SJSB096 (0-2)	Total/NA	Sediment	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Client Sample ID: 11215702-072721-BN-SJSB096 (0-2)

Lab Sample ID: 320-76887-1
Date Collected: 07/27/21 12:45
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (0-2)

Lab Sample ID: 320-76887-1
Date Collected: 07/27/21 12:45
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 49.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	DL		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	DL	10	520325	08/26/21 21:06	SMA	TAL SAC
Total/NA	Prep	HRMS-Sox	RADL		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RADL	10	519744	08/25/21 23:50	KSS	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517461	08/18/21 23:36	KSS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (2-4)

Lab Sample ID: 320-76887-2
Date Collected: 07/27/21 12:50
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (2-4)

Lab Sample ID: 320-76887-2
Date Collected: 07/27/21 12:50
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 62.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		10	517729	08/18/21 19:34	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	10	519744	08/25/21 21:55	KSS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (4-6)

Lab Sample ID: 320-76887-3
Date Collected: 07/27/21 12:55
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (4-6)

Lab Sample ID: 320-76887-3
Date Collected: 07/27/21 12:55
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 69.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519744	08/25/21 18:05	KSS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Client Sample ID: 11215702-072721-BN-SJSB096 (4-6)
Lab Sample ID: 320-76887-3
Date Collected: 07/27/21 12:55
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 69.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517281	08/18/21 08:30	KSS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (6-8)
Lab Sample ID: 320-76887-4
Date Collected: 07/27/21 13:00
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (6-8)
Lab Sample ID: 320-76887-4
Date Collected: 07/27/21 13:00
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 68.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517729	08/18/21 18:49	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519744	08/25/21 16:10	KSS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (8-10)
Lab Sample ID: 320-76887-5
Date Collected: 07/27/21 13:05
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (8-10)
Lab Sample ID: 320-76887-5
Date Collected: 07/27/21 13:05
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 66.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519744	08/25/21 19:22	KSS	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517281	08/18/21 10:06	KSS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (10-12)
Lab Sample ID: 320-76887-6
Date Collected: 07/27/21 13:10
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (10-12) Lab Sample ID: 320-76887-6

Date Collected: 07/27/21 13:10 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 65.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519744	08/25/21 17:27	KSS	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517281	08/18/21 10:54	KSS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (12-14) Lab Sample ID: 320-76887-7

Date Collected: 07/27/21 13:15 **Matrix: Sediment**
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (12-14) Lab Sample ID: 320-76887-7

Date Collected: 07/27/21 13:15 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 73.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519744	08/25/21 16:48	KSS	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517281	08/18/21 11:42	KSS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (14-16) Lab Sample ID: 320-76887-8

Date Collected: 07/27/21 13:20 **Matrix: Sediment**
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (14-16) Lab Sample ID: 320-76887-8

Date Collected: 07/27/21 13:20 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 72.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519744	08/25/21 14:54	KSS	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517461	08/18/21 17:13	KSS	TAL SAC

Client Sample ID: 11215702-072721-BN-DUP-9 Lab Sample ID: 320-76887-13

Date Collected: 07/27/21 00:00 **Matrix: Sediment**
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Client Sample ID: 11215702-072721-BN-DUP-9

Date Collected: 07/27/21 00:00
Date Received: 07/29/21 09:45

Lab Sample ID: 320-76887-13

Matrix: Sediment
Percent Solids: 65.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519744	08/25/21 15:32	KSS	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517461	08/18/21 18:49	KSS	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-76887-1
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDD
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDF
1613B	HRMS-Sox	Sediment	OCDD
1613B	HRMS-Sox	Sediment	OCDF
1613B	HRMS-Sox	Sediment	Total HpCDD
1613B	HRMS-Sox	Sediment	Total HpCDF
1613B	HRMS-Sox	Sediment	Total HxCDD
1613B	HRMS-Sox	Sediment	Total HxCDF
1613B	HRMS-Sox	Sediment	Total PeCDD
1613B	HRMS-Sox	Sediment	Total PeCDF
1613B	HRMS-Sox	Sediment	Total TCDD
1613B	HRMS-Sox	Sediment	Total TCDF
D 2216		Sediment	Percent Moisture
D 2216		Sediment	Percent Solids
TEQ		Sediment	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76887-1	11215702-072721-BN-SJSB096 (0-2)	Sediment	07/27/21 12:45	07/29/21 09:45
320-76887-2	11215702-072721-BN-SJSB096 (2-4)	Sediment	07/27/21 12:50	07/29/21 09:45
320-76887-3	11215702-072721-BN-SJSB096 (4-6)	Sediment	07/27/21 12:55	07/29/21 09:45
320-76887-4	11215702-072721-BN-SJSB096 (6-8)	Sediment	07/27/21 13:00	07/29/21 09:45
320-76887-5	11215702-072721-BN-SJSB096 (8-10)	Sediment	07/27/21 13:05	07/29/21 09:45
320-76887-6	11215702-072721-BN-SJSB096 (10-12)	Sediment	07/27/21 13:10	07/29/21 09:45
320-76887-7	11215702-072721-BN-SJSB096 (12-14)	Sediment	07/27/21 13:15	07/29/21 09:45
320-76887-8	11215702-072721-BN-SJSB096 (14-16)	Sediment	07/27/21 13:20	07/29/21 09:45
320-76887-13	11215702-072721-BN-DUP-9	Sediment	07/27/21 00:00	07/29/21 09:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: WDM 320-510264/1 Client Sample ID:

Date Analyzed: 07/26/21 09:21 Lab File ID: 26JL2110D5_1.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,6,8-TCDF	15.13	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,6,8-TCDD	16.07	Peak assignment corrected	arghestanis	07/26/21 12:21
2,3,4,7-TCDF	17.63	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,7-TCDD	18.22	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDD	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDF	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,8,9-TCDD	19.47	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,8,9-TCDF	19.49	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,4,6,8-PeCDF	19.76	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,4,7,9-PeCDD	21.58	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDD	25.91	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDF	26.14	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,8-HxCDF	28.48	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,4,6,7,9-HxCDD	30.02	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,7-HxCDD	32.30	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,3,4,8,9-HxCDF	32.61	Peak assignment corrected	arghestanis	07/26/21 12:23

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: IC 320-510264/3 Client Sample ID:

Date Analyzed: 07/26/21 10:51 Lab File ID: 26JL2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.35	Invalid Compound ID	stephensk	07/27/21 08:15

Lab Sample ID: IC 320-510264/4 Client Sample ID:

Date Analyzed: 07/26/21 11:36 Lab File ID: 26JL2110D5_4.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,4,7,8-PeCDF	24.13	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDF	30.84	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDD	31.93	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8,9-HpCDF	35.01	Peak assignment corrected	arghestanis	07/26/21 12:31

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 517729

Lab Sample ID: 320-76887-4 Client Sample ID: 11215702-072721-BN-SJSB096 (6-8)

Date Analyzed: 08/18/21 18:49 Lab File ID: 18AU2110D5_7.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.04	Invalid Compound ID	krenns	08/22/21 09:23
1,2,3,7,8-PeCDF	22.33	Peak Tail	bennettd	08/19/21 12:48
1,2,3,7,8-PeCDD	24.40	Missed Peak	bennettd	08/19/21 12:49
1,2,3,6,7,8-HxCDF	30.65	Peak Tail	bennettd	08/19/21 12:50
2,3,4,6,7,8-HxCDF	31.50	Missed Peak	bennettd	08/19/21 12:51
1,2,3,4,7,8-HxCDD	31.67	Wrong peak	bennettd	08/19/21 12:52
1,2,3,6,7,8-HxCDD	31.79	Wrong peak	bennettd	08/19/21 12:52
1,2,3,7,8,9-HxCDF	32.30	Split Peak	bennettd	08/19/21 12:51
1,2,3,4,6,7,8-HpCDF	33.74	Incomplete Integration	bennettd	08/19/21 12:52
OCDF	36.89	Peak Tail	bennettd	08/19/21 12:53

Lab Sample ID: 320-76887-2 Client Sample ID: 11215702-072721-BN-SJSB096 (2-4)

Date Analyzed: 08/18/21 19:34 Lab File ID: 18AU2110D5_8.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.37	Poor chromatography	bennettd	08/19/21 12:56
1,2,3,6,7,8-HxCDD	31.79	Peak Tail	bennettd	08/19/21 12:57
1,2,3,7,8,9-HxCDD	32.13	Peak Tail	bennettd	08/19/21 12:57

Lab Sample ID: 320-76887-2 MSD Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) MSD

Date Analyzed: 08/18/21 21:04 Lab File ID: 18AU2110D5_10.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,7,8-PeCDF	22.34	Peak Tail	bennettd	08/19/21 13:06

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 520325

Lab Sample ID: 320-76887-1 DL Client Sample ID: 11215702-072721-BN-SJSB096 (0-2) DL

Date Analyzed: 08/26/21 21:06 Lab File ID: 25AU2110D5_46.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	17.90	Peak assignment corrected	arghestanis	08/27/21 10:09

1613B

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

1613B

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 519744

Lab Sample ID: 320-76887-8 RA Client Sample ID: 11215702-072721-BN-SJSB096 (14-16) RA

Date Analyzed: 08/25/21 14:54 Lab File ID: 25AU21A11D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.63	Poor chromatography	stephensk	08/26/21 09:04

Lab Sample ID: 320-76887-7 RA Client Sample ID: 11215702-072721-BN-SJSB096 (12-14) RA

Date Analyzed: 08/25/21 16:48 Lab File ID: 25AU21A11D2_007.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.62	Poor chromatography	stephensk	08/26/21 09:05

Lab Sample ID: 320-76887-2 RA Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) RA

Date Analyzed: 08/25/21 21:55 Lab File ID: 25AU21A11D2_015.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.08	Retention Time Shift	stephensk	08/26/21 09:22
13C-2,3,7,8-TCDF	17.64	Poor chromatography	stephensk	08/26/21 09:21

Lab Sample ID: 320-76887-2 MS RA Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) MS RA

Date Analyzed: 08/25/21 22:33 Lab File ID: 25AU21A11D2_016.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.08	Retention Time Shift	stephensk	08/26/21 09:24
13C-2,3,7,8-TCDF	17.62	Poor chromatography	stephensk	08/26/21 09:23

Lab Sample ID: 320-76887-2 MSD RA Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) MSD RA

Date Analyzed: 08/25/21 23:11 Lab File ID: 25AU21A11D2_017.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.62	Poor chromatography	stephensk	08/26/21 09:26

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 519744

Lab Sample ID: 320-76887-1 RADL Client Sample ID: 11215702-072721-BN-SJSB096 (0-2) RADL

Date Analyzed: 08/25/21 23:50 Lab File ID: 25AU21A11D2_018.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.12	Retention Time Shift	stephensk	08/26/21 09:30
13C-2,3,7,8-TCDF	17.67	Retention Time Shift	stephensk	08/26/21 09:29
2,3,7,8-TCDF	17.70	Retention Time Shift	stephensk	08/26/21 09:29

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517196

Lab Sample ID: CCV 320-517196/2 Client Sample ID:

Date Analyzed: 08/17/21 15:14 Lab File ID: 17au21dfs1_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.54	Baseline	stephensk	08/17/21 16:07
13C-1,2,3,4-TCDD	21.51	Peak assignment corrected	stephensk	08/17/21 16:07
13C-1,2,3,7,8,9-HxCDD	36.67	Baseline	stephensk	08/17/21 16:09
13C-1,2,3,4,7,8,9-HpCDF	39.92	Baseline	stephensk	08/17/21 16:09

Lab Sample ID: MB 320-513586/1-A Client Sample ID:

Date Analyzed: 08/17/21 17:01 Lab File ID: 17au21dfs1_5.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,6,7,8-HpCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,4,7,8,9-HpCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/19/21 12:06
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
2,3,7,8-TCDD		Invalid Compound ID	stephensk	08/17/21 18:31
2,3,7,8-TCDF		Invalid Compound ID	dadunj	08/19/21 12:06
OCDF		Invalid Compound ID	dadunj	08/19/21 12:07
1,2,3,4,6,7,8-HpCDD	39.61	Invalid Compound ID	dadunj	08/19/21 12:07
OCDD	42.12	Baseline	dadunj	08/19/21 12:07

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517281

Lab Sample ID: CCV 320-517281/15 Client Sample ID:

Date Analyzed: 08/18/21 02:07 Lab File ID: 17au21dfs1_17.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.54	Baseline	stephensk	08/18/21 08:26
2,3,7,8-TCDD	21.91	Baseline	stephensk	08/18/21 08:26

Lab Sample ID: 320-76887-3 Client Sample ID: 11215702-072721-BN-SJSB096 (4-6)

Date Analyzed: 08/18/21 08:30 Lab File ID: 17au21dfs1_25.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:58
OCDF	42.17	Split Peak	dadunj	08/19/21 12:59

Lab Sample ID: 320-76887-5 Client Sample ID: 11215702-072721-BN-SJSB096 (8-10)

Date Analyzed: 08/18/21 10:06 Lab File ID: 17au21dfs1_27.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	27.38	Split Peak	dadunj	08/19/21 13:01
1,2,3,7,8-PeCDD	29.70	Split Peak	dadunj	08/19/21 13:01
2,3,4,6,7,8-HxCDF	35.95	Split Peak	dadunj	08/19/21 13:01
1,2,3,4,7,8-HxCDD	36.15	Invalid Compound ID	dadunj	08/19/21 13:02
1,2,3,6,7,8-HxCDD	36.28	Split Peak	dadunj	08/19/21 13:02
1,2,3,7,8,9-HxCDF	36.85	Invalid Compound ID	dadunj	08/19/21 13:01

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517281

Lab Sample ID: 320-76887-6 Client Sample ID: 11215702-072721-BN-SJSB096 (10-12)

Date Analyzed: 08/18/21 10:54 Lab File ID: 17au21dfs1_28.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/19/21 13:07
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 13:08
1,2,3,7,8-PeCDF	27.31	Split Peak	dadunj	08/19/21 13:10
2,3,4,7,8-PeCDF	28.81	Baseline	dadunj	08/19/21 13:07
1,2,3,4,7,8-HxCDD	36.15	Invalid Compound ID	dadunj	08/19/21 13:09
1,2,3,6,7,8-HxCDD	36.26	Split Peak	dadunj	08/19/21 13:09
1,2,3,7,8,9-HxCDF	36.82	Split Peak	dadunj	08/19/21 13:08
1,2,3,4,6,7,8-HpCDF	38.65	Split Peak	dadunj	08/19/21 13:09
1,2,3,4,7,8,9-HpCDF	39.89	Split Peak	dadunj	08/19/21 13:09
OCDF	42.18	Split Peak	dadunj	08/19/21 13:10

Lab Sample ID: 320-76887-7 Client Sample ID: 11215702-072721-BN-SJSB096 (12-14)

Date Analyzed: 08/18/21 11:42 Lab File ID: 17au21dfs1_29.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 13:16
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 13:16
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/19/21 13:15
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/19/21 13:14
2,3,7,8-TCDF	20.44	Baseline	dadunj	08/19/21 13:14
1,2,3,7,8-PeCDF	27.31	Baseline	dadunj	08/19/21 13:14

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517461

Lab Sample ID: CCV 320-517461/29 Client Sample ID:

Date Analyzed: 08/18/21 13:48 Lab File ID: 17au21dfs1_32.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.52	Baseline	stephensk	08/18/21 14:38
13C-1,2,3,4-TCDD	21.44	Peak assignment corrected	stephensk	08/18/21 14:37
2,3,7,8-TCDD	21.88	Incomplete Integration	stephensk	08/18/21 14:38
13C-1,2,3,7,8,9-HxCDD	36.62	Baseline	stephensk	08/18/21 15:08
13C-1,2,3,4,7,8,9-HpCDF	39.88	Baseline	stephensk	08/18/21 14:43

Lab Sample ID: 320-76887-8 Client Sample ID: 11215702-072721-BN-SJSB096 (14-16)

Date Analyzed: 08/18/21 17:13 Lab File ID: 17au21dfs1_36.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,6,7,8-HpCDF		Invalid Compound ID	dadunj	08/20/21 08:29
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/20/21 08:28
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/20/21 08:29
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/20/21 08:29
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/20/21 08:28
1,2,3,7,8-PeCDF		Invalid Compound ID	dadunj	08/20/21 08:28
2,3,7,8-TCDF	20.46	Baseline	stephensk	08/18/21 18:11
2,3,7,8-TCDD	21.78	Incomplete Integration	stephensk	08/18/21 18:12
1,2,3,4,7,8-HxCDD	36.12	Invalid Compound ID	dadunj	08/20/21 08:29
OCDF	42.07	Baseline	stephensk	08/18/21 18:14

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517461

Lab Sample ID: 320-76887-13 Client Sample ID: 11215702-072721-BN-DUP-9

Date Analyzed: 08/18/21 18:49 Lab File ID: 17au21dfs1_38.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,6,7,8-HpCDF		Invalid Compound ID	dadunj	08/20/21 09:16
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/20/21 09:14
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/20/21 09:14
1,2,3,7,8-PeCDF		Invalid Compound ID	dadunj	08/20/21 09:13
OCDF		Invalid Compound ID	dadunj	08/20/21 09:16
2,3,7,8-TCDD	21.79	Baseline	dadunj	08/20/21 09:13
1,2,3,6,7,8-HxCDD	36.27	Invalid Compound ID	dadunj	08/20/21 09:15

Lab Sample ID: 320-76887-1 Client Sample ID: 11215702-072721-BN-SJSB096 (0-2)

Date Analyzed: 08/18/21 23:36 Lab File ID: 17au21dfs1_44.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	23.25	Poor chromatography	stephensk	08/19/21 11:17
1,2,3,7,8-PeCDF	28.28	Split Peak	dadunj	08/20/21 09:38
2,3,4,7,8-PeCDF	29.72	Poor chromatography	stephensk	08/19/21 11:18
1,2,3,7,8-PeCDD	30.53	Poor chromatography	stephensk	08/19/21 11:18
1,2,3,4,7,8-HxCDF	35.37	Poor chromatography	stephensk	08/19/21 11:18
1,2,3,6,7,8-HxCDF	35.49	Poor chromatography	stephensk	08/19/21 11:19
13C-2,3,4,6,7,8-HxCDF	36.26	Poor chromatography	stephensk	08/19/21 11:19
2,3,4,6,7,8-HxCDF	36.28	Split Peak	dadunj	08/20/21 09:39
13C-1,2,3,4,7,8-HxCDD	36.45	Poor chromatography	stephensk	08/19/21 11:18
1,2,3,4,7,8-HxCDD	36.47	Poor chromatography	stephensk	08/19/21 11:18
13C-1,2,3,6,7,8-HxCDD	36.56	Poor chromatography	stephensk	08/19/21 11:18
1,2,3,6,7,8-HxCDD	36.57	Poor chromatography	stephensk	08/19/21 11:18
1,2,3,7,8,9-HxCDD	36.91	Poor chromatography	stephensk	08/19/21 11:19
1,2,3,7,8,9-HxCDF	37.09	Poor chromatography	stephensk	08/19/21 11:19
13C-1,2,3,7,8,9-HxCDF	37.09	Poor chromatography	stephensk	08/19/21 11:19

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30		CIL, Lot ER09031903		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

781892

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

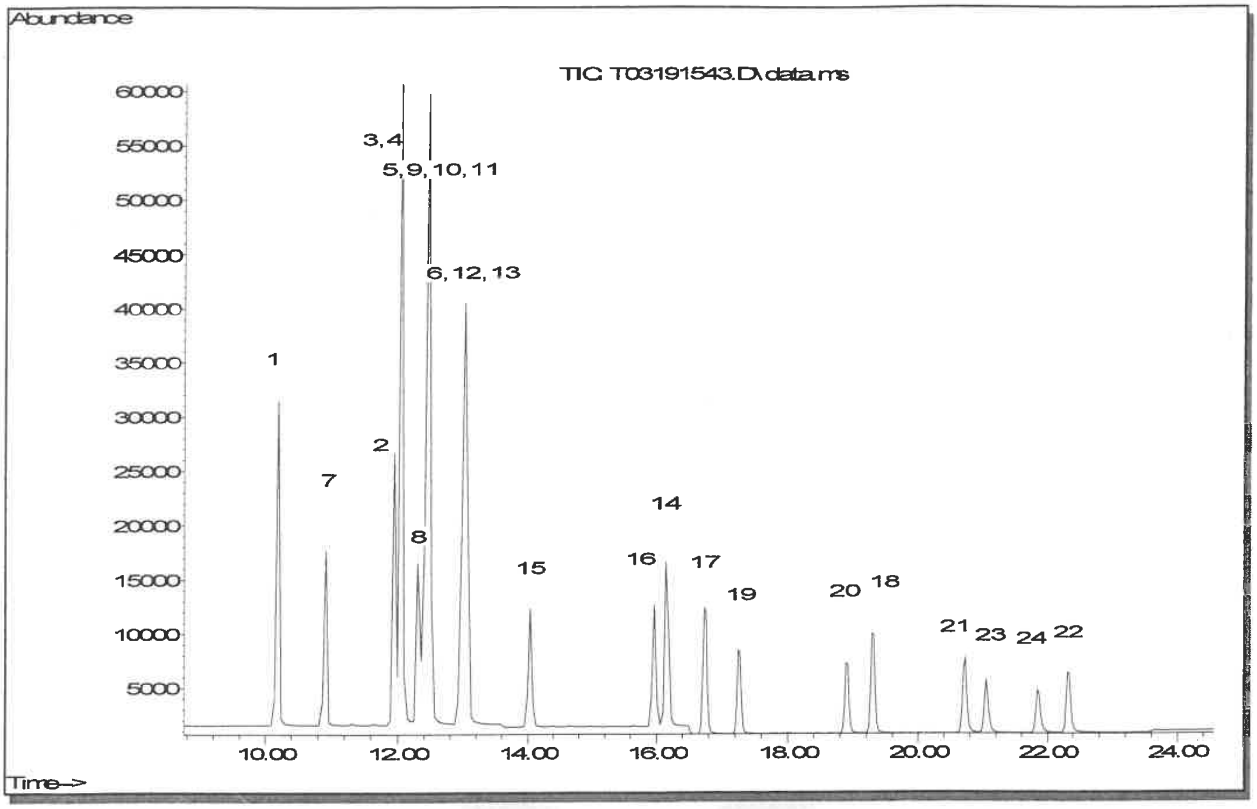

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

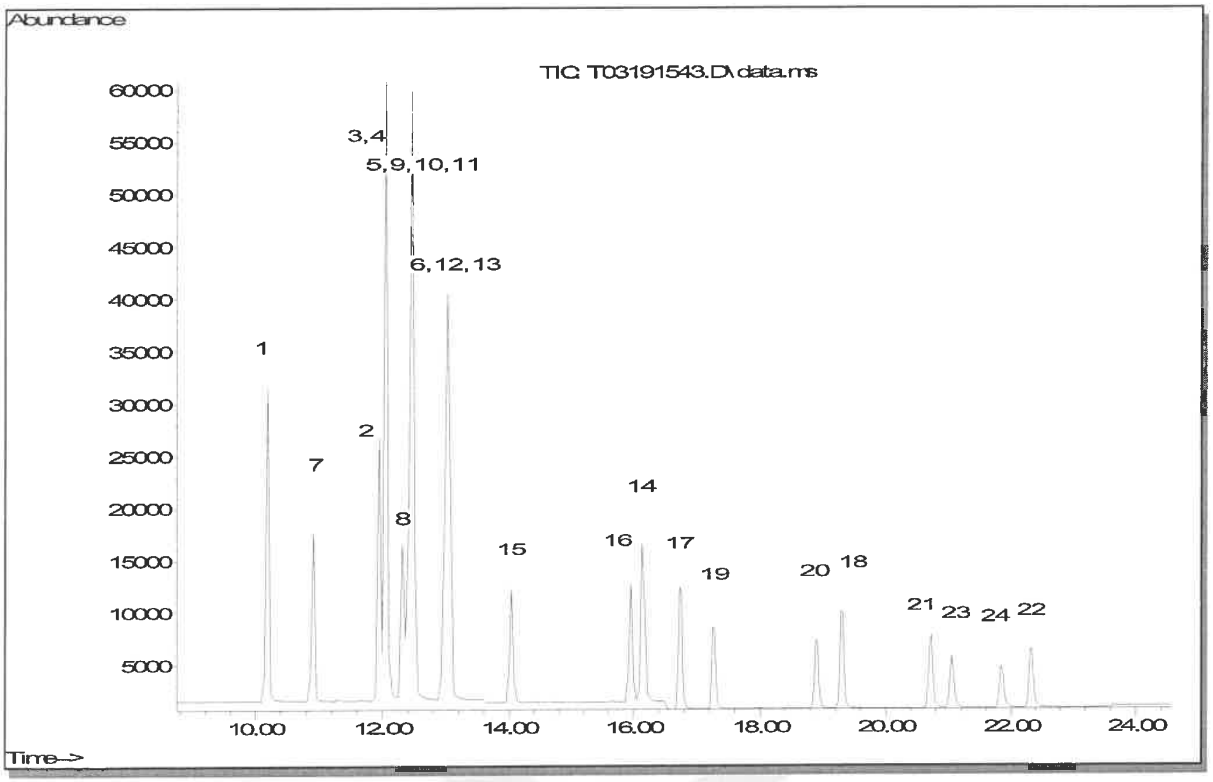

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r: 3/30/20

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

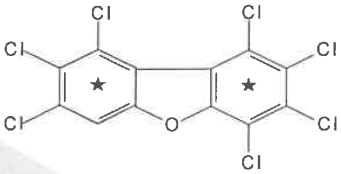

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

781906

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

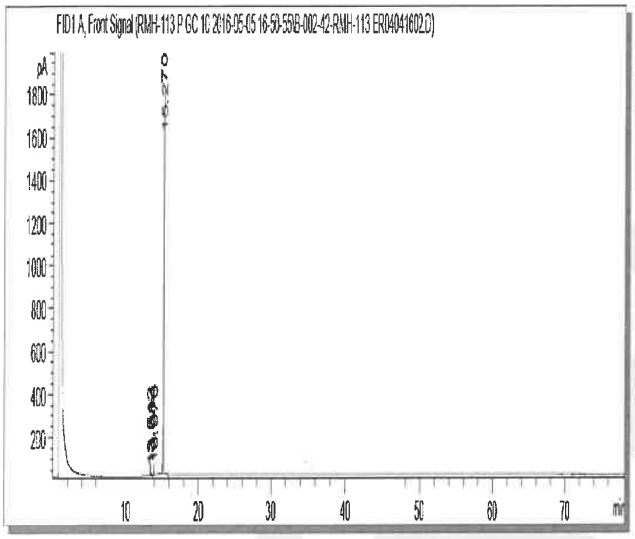

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

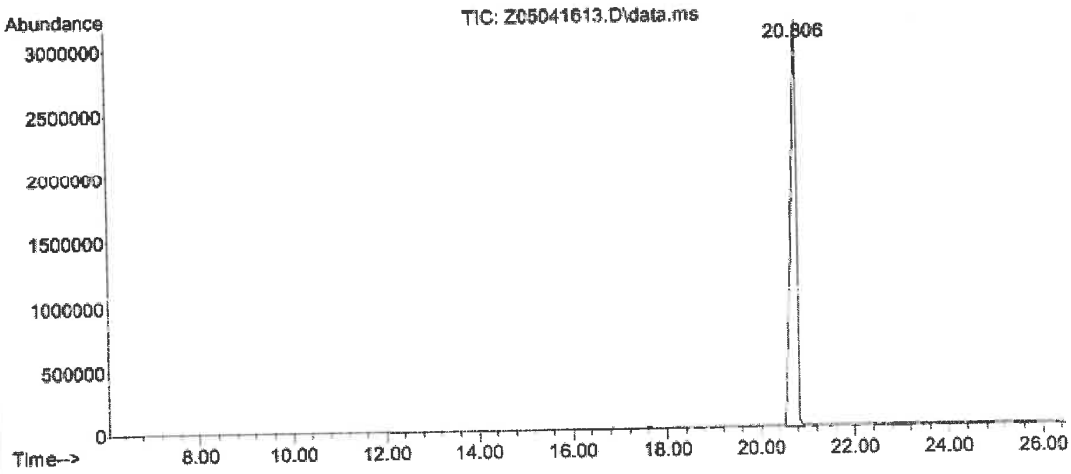

Mass Spectrum

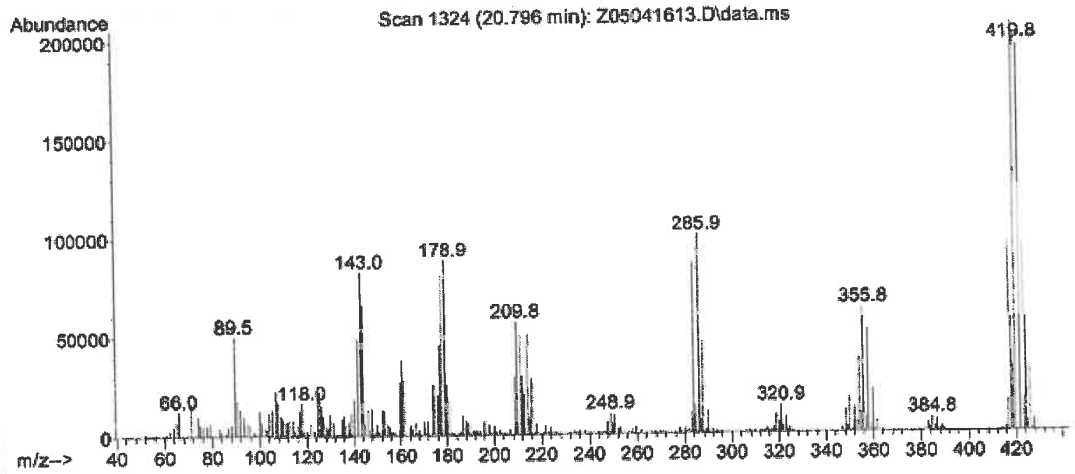

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 [illegible]

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

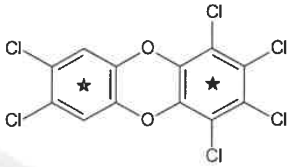

Catalog Number:	ED-946
Solution Lot:	ER04211601
Expiration Date:	June 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

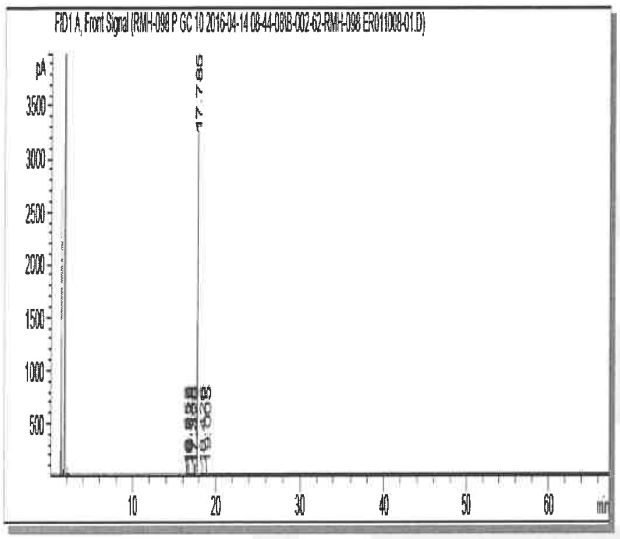

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 50 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Data File Name: RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument: GC#10
Sample Name: ER011008-01
Acquired: April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

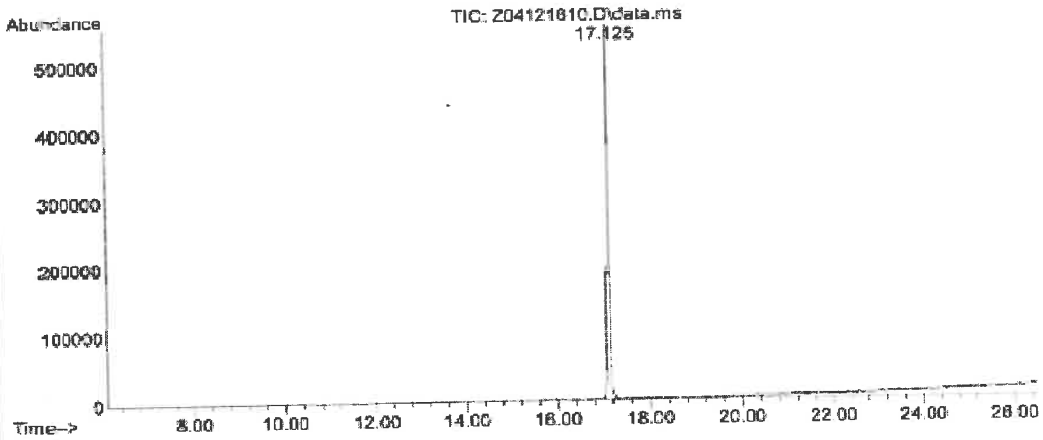

Mass Spectrum

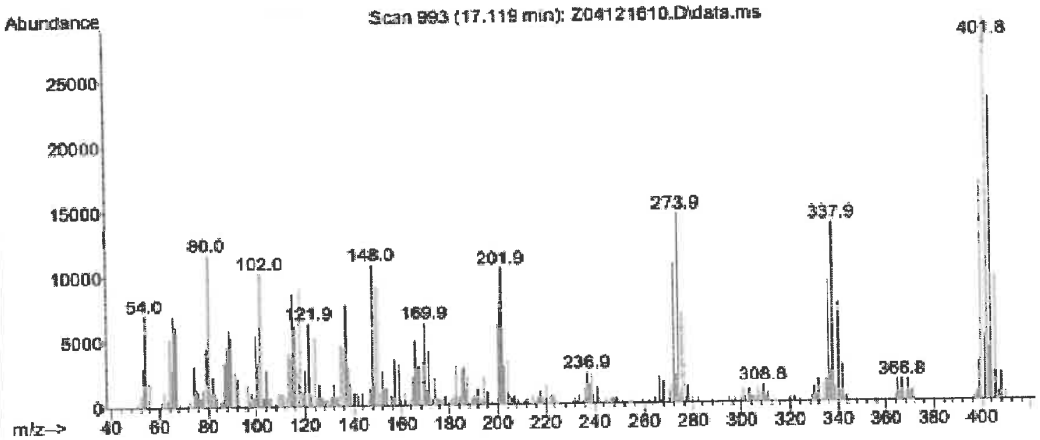

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

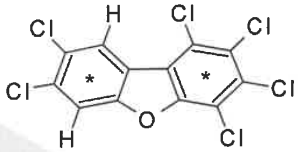

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot:	ER11281601

Chemical Formula:	$^{13}C_{12}Cl_6H_2O$
CAS Number:	114423-98-2
Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

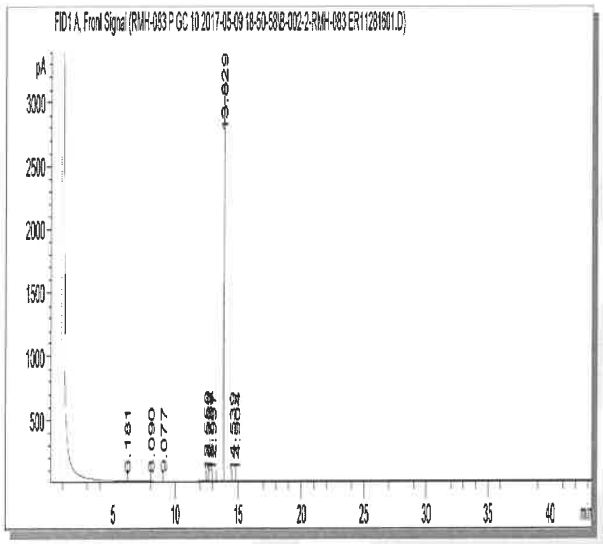

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

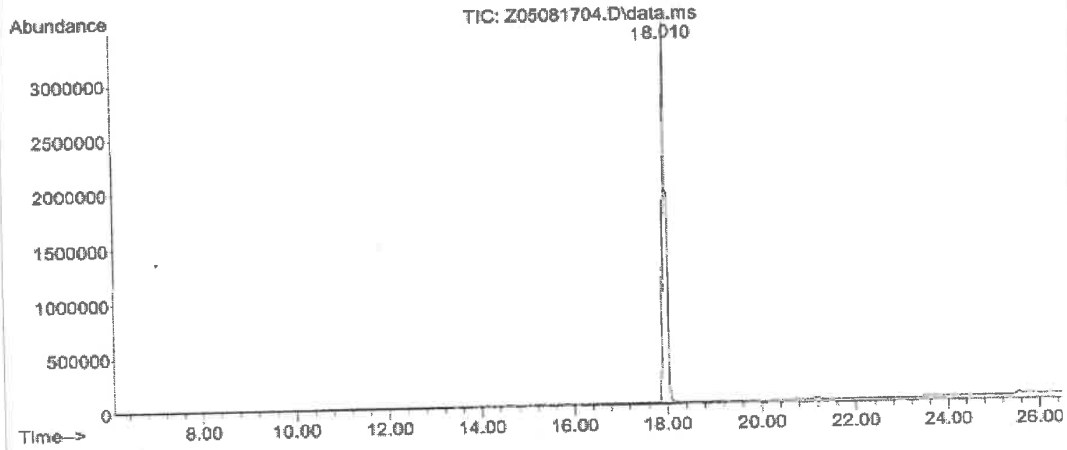

Mass Spectrum

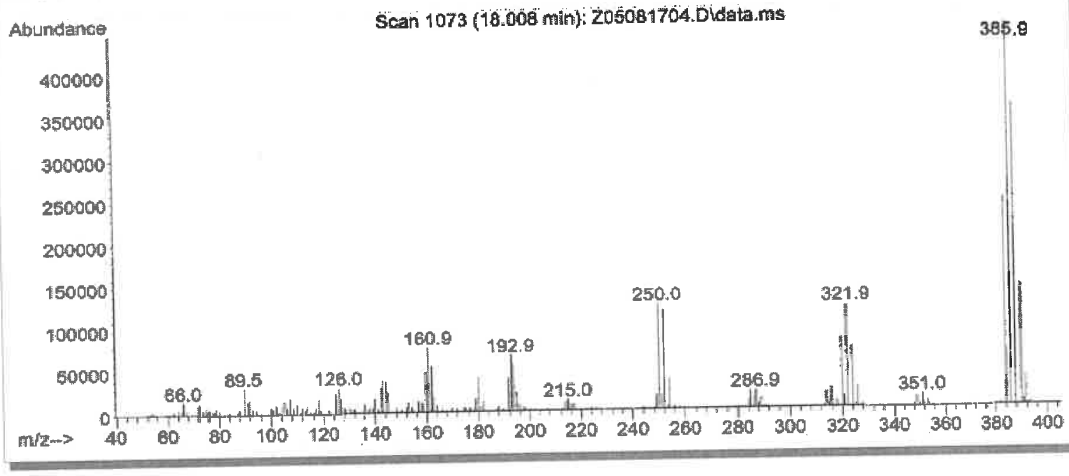

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

Cerilliant
Analytical Reference Standards
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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

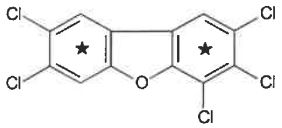

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

781923

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

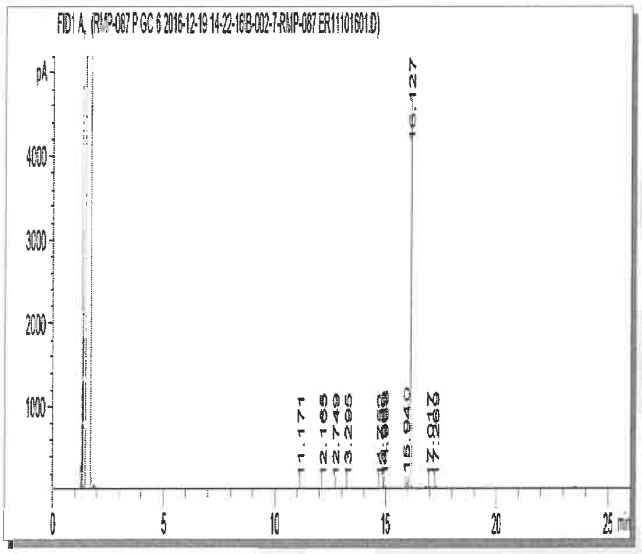

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

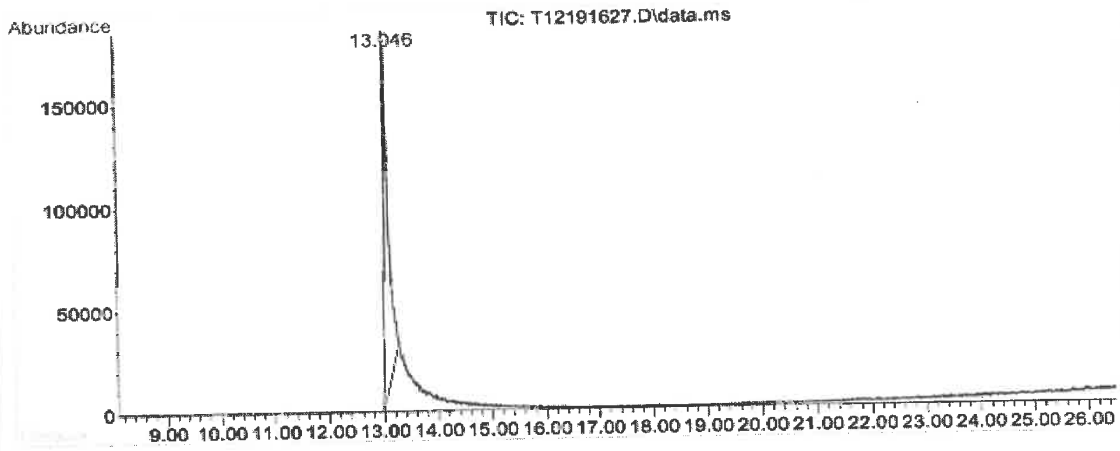

Mass Spectrum

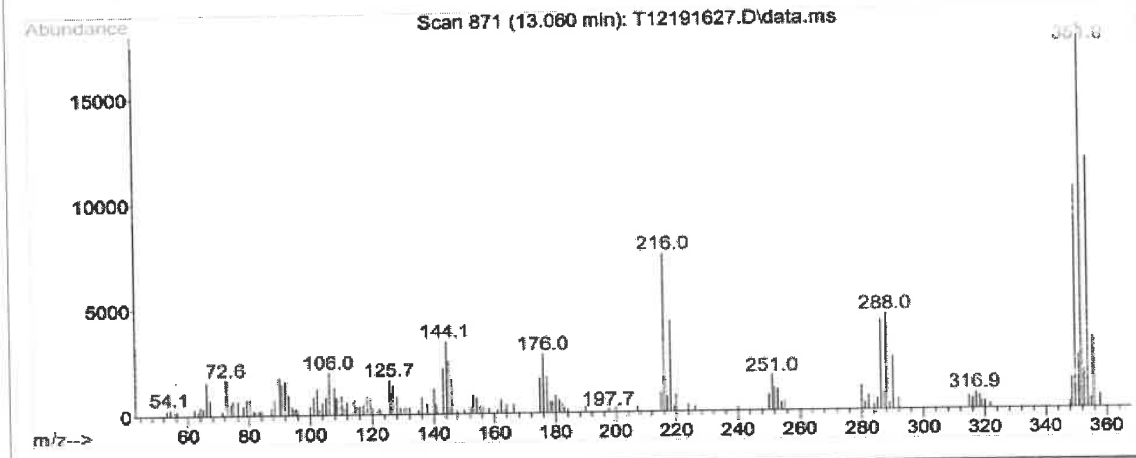

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

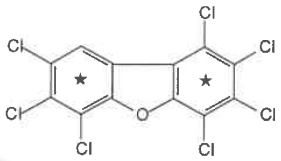

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

781928

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER020507-02

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-84-8
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

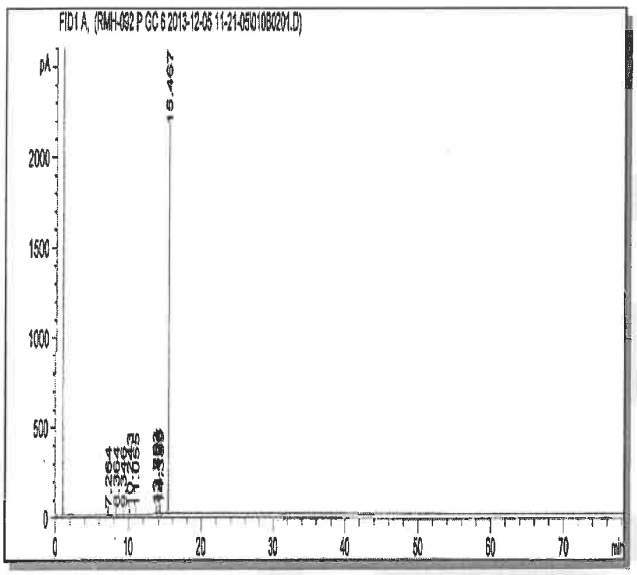

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Data File Name: RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument: GC#6
Sample Name: ER020507-02
Acquired: December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

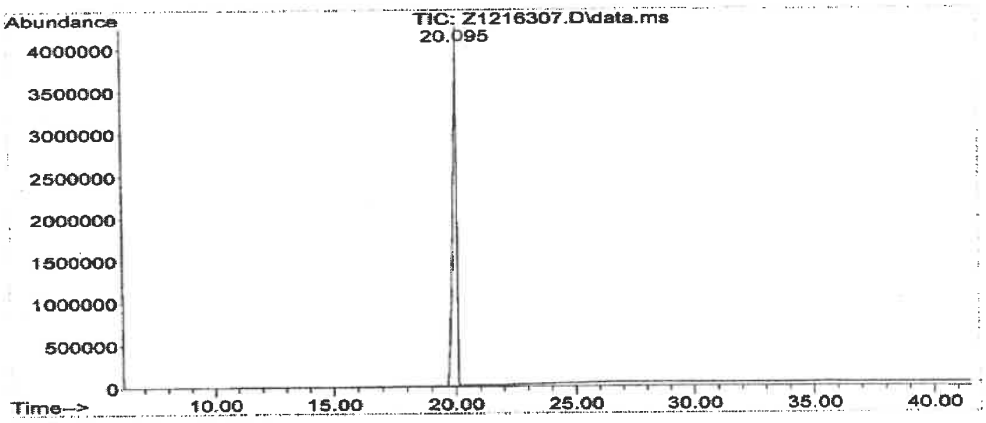

Mass Spectrum

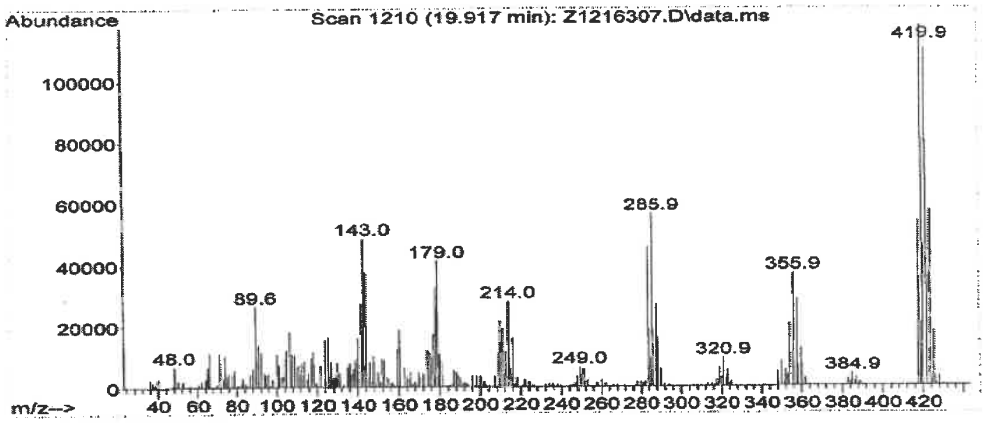

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

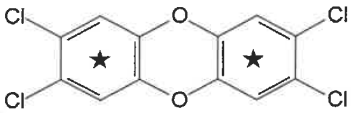

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

781935

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

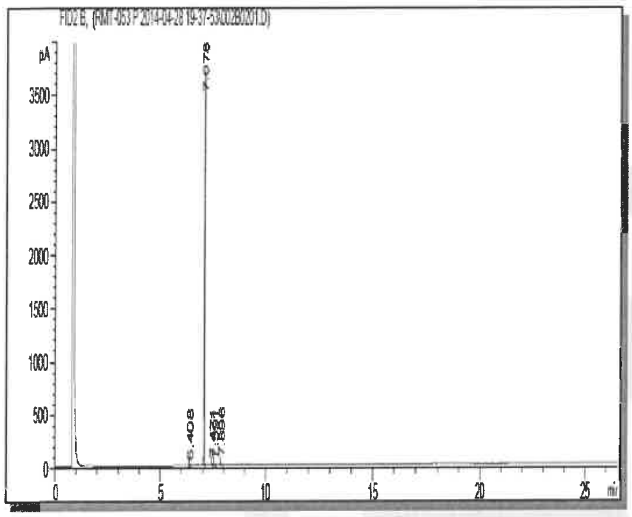

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

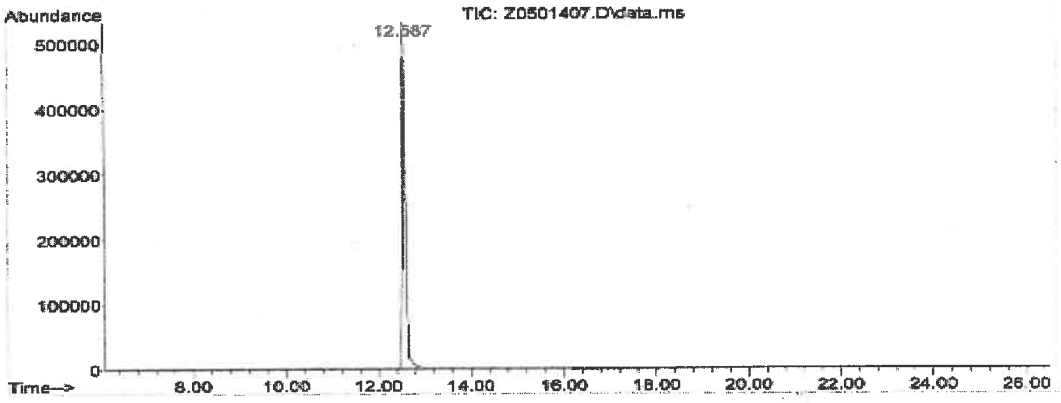

Mass Spectrum

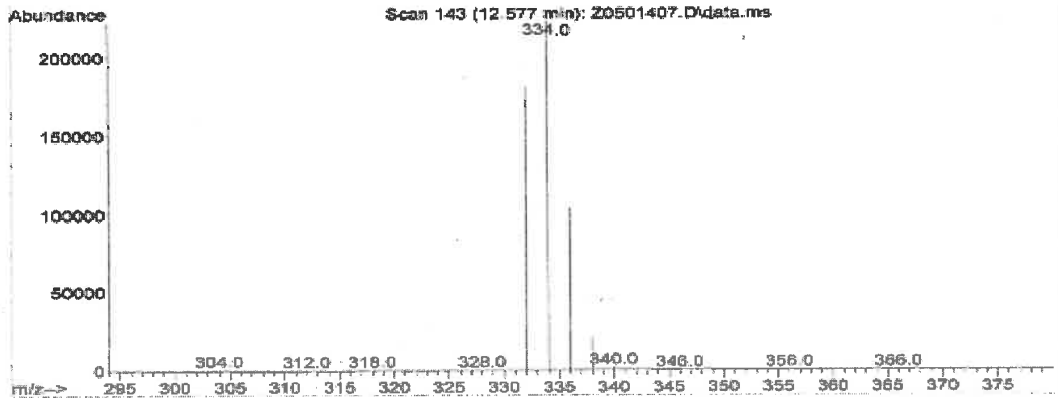

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

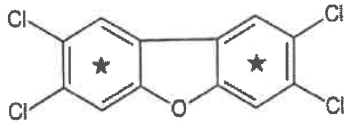

Catalog Number: EF-904
Solution Lot: ER09131601
Expiration Date: September 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

781940

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/FID

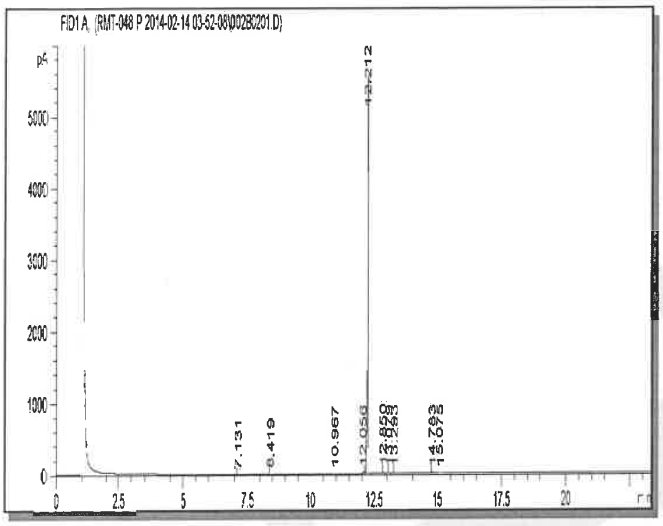

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

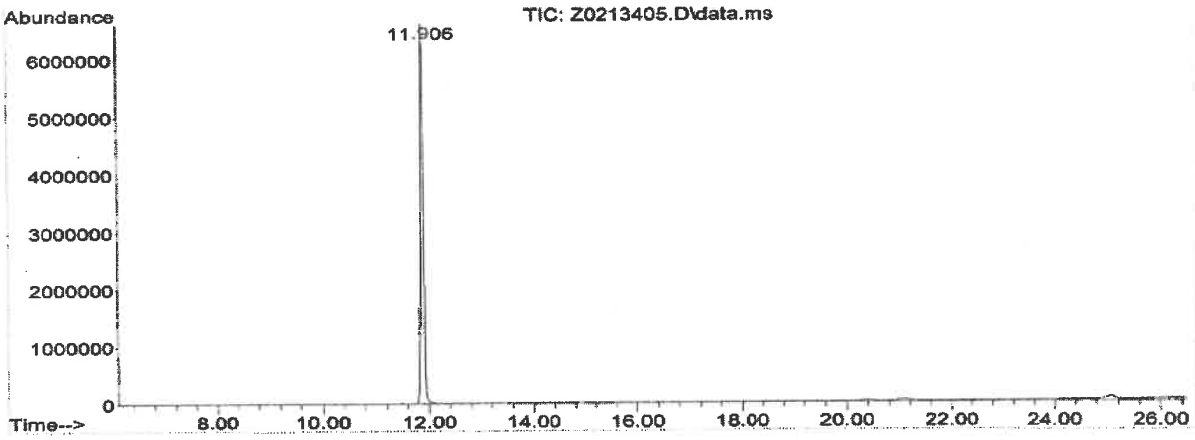

Mass Spectrum

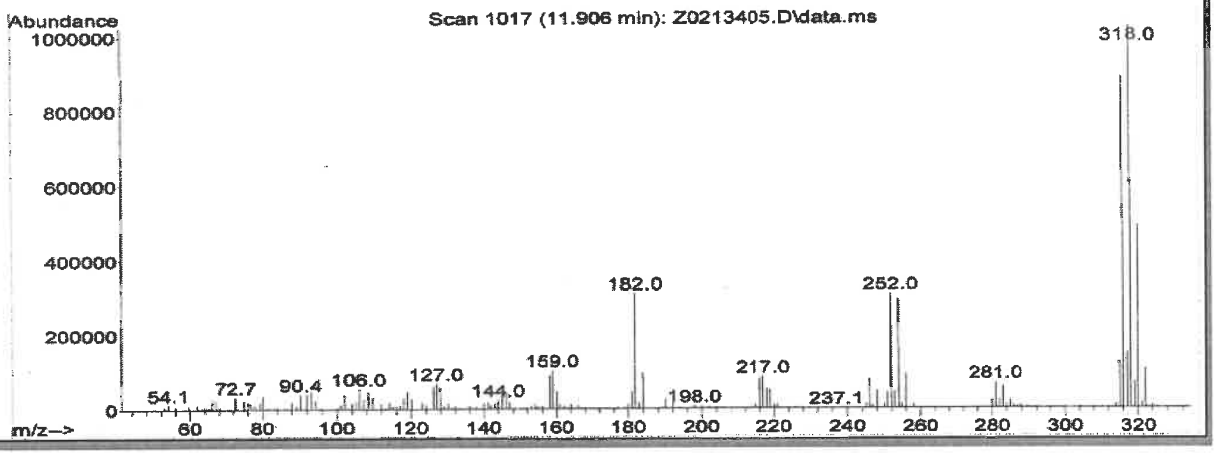

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Reagent

HRDXNIDA_00443

Rev'ed 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

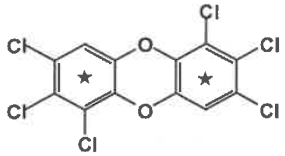

Catalog Number: ED-966
Solution Lot: ER03151801
Expiration Date: March 2028
Solvent: n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

781945

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

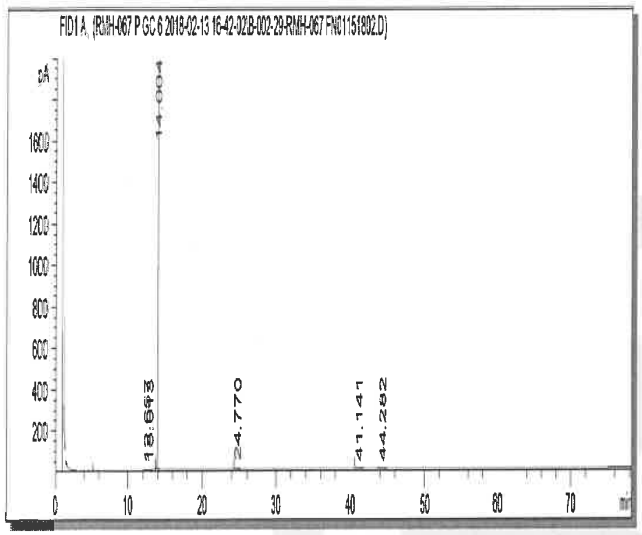

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: FN01151802
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Mar 05 10:17:33 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

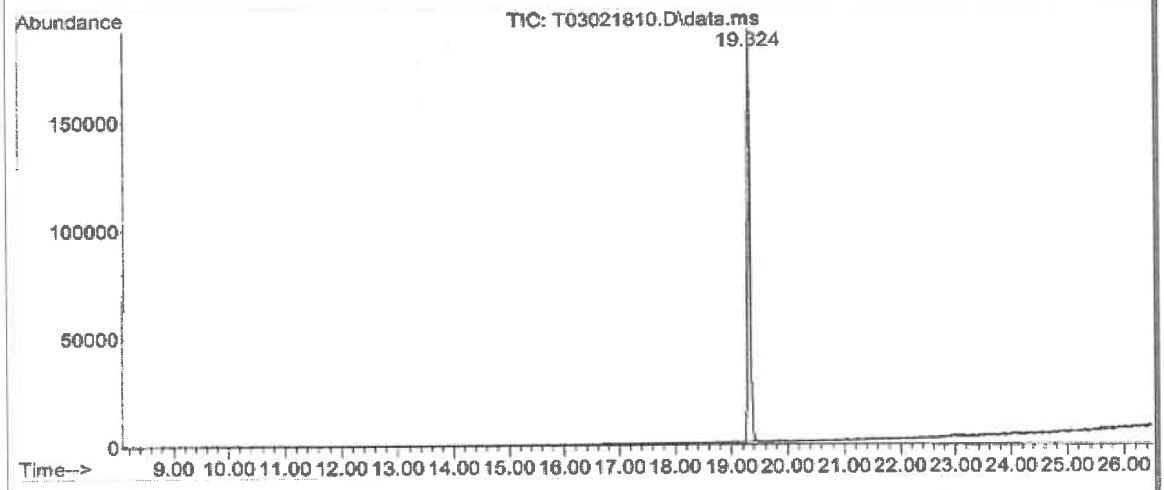

Mass Spectrum

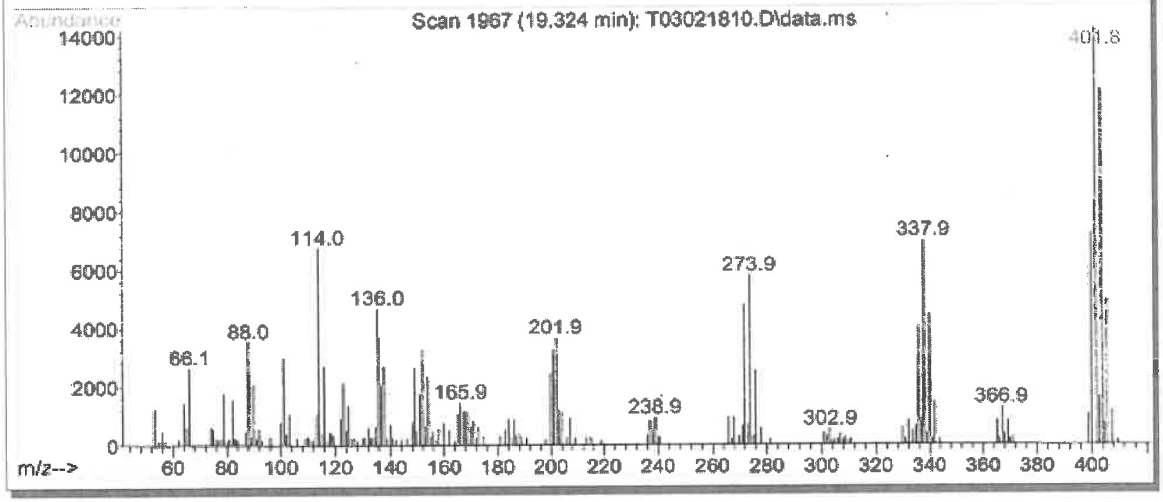

Reagent

HRDXNIDA_00457

r: 1/18/21 SW

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

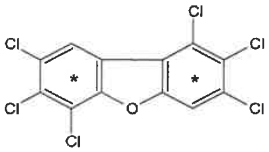

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

781950

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

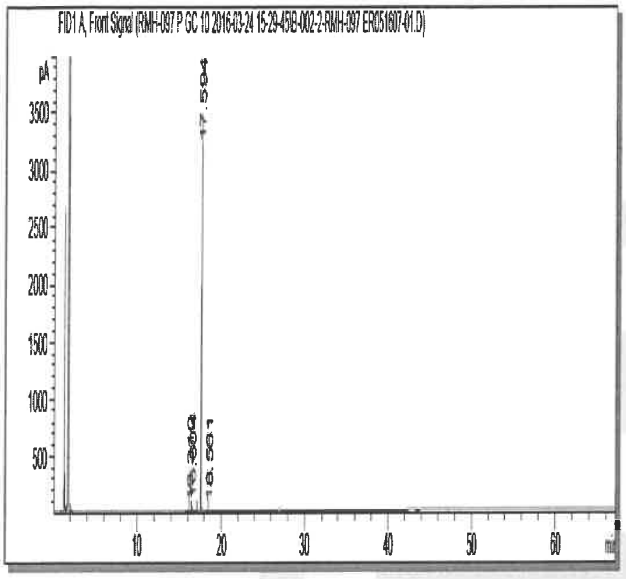

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

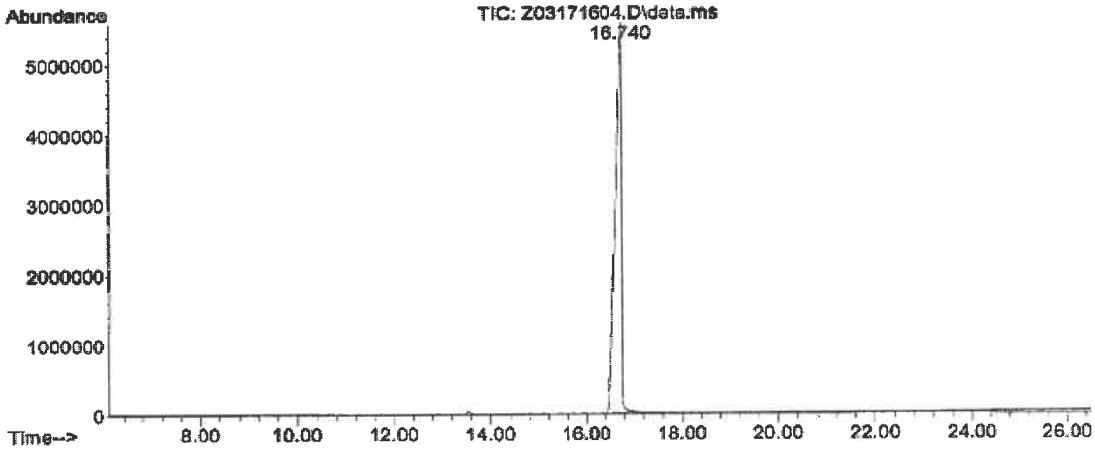

Mass Spectrum

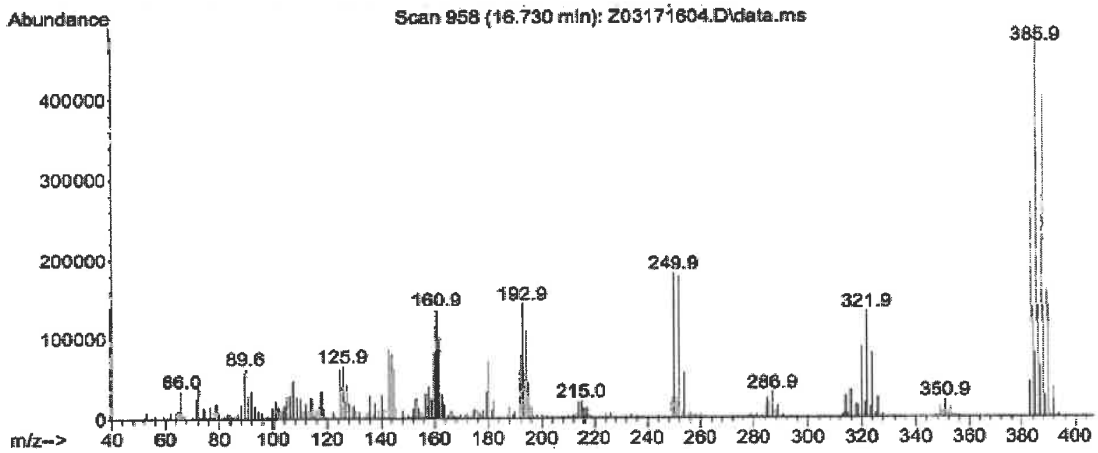

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
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CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

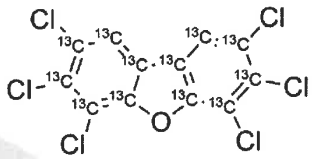

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

781957

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER09051801

Chemical Formula: $^{13}C_{12}H_2Cl_6O$
CAS Number: 116843-05-1
Molecular Weight: 386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

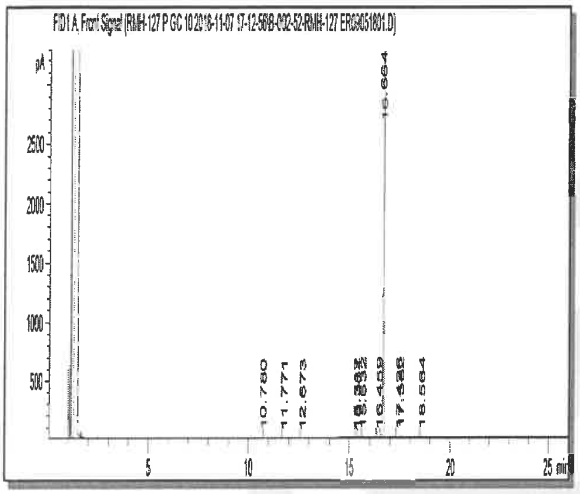

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

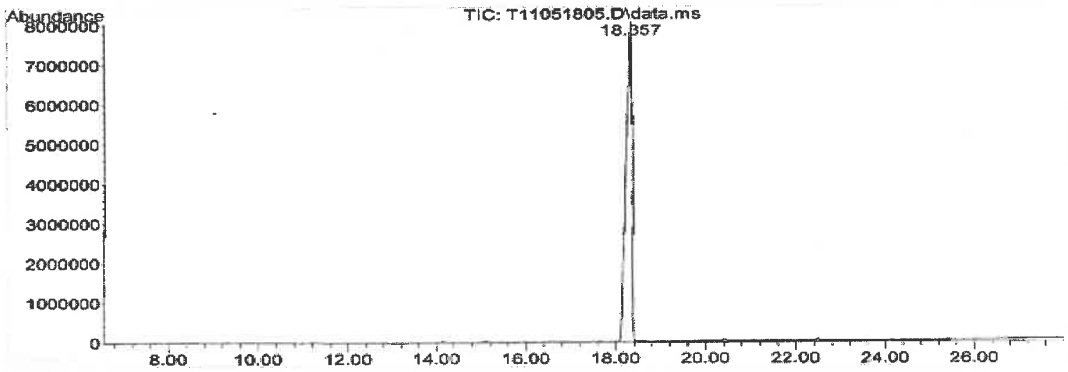

Mass Spectrum

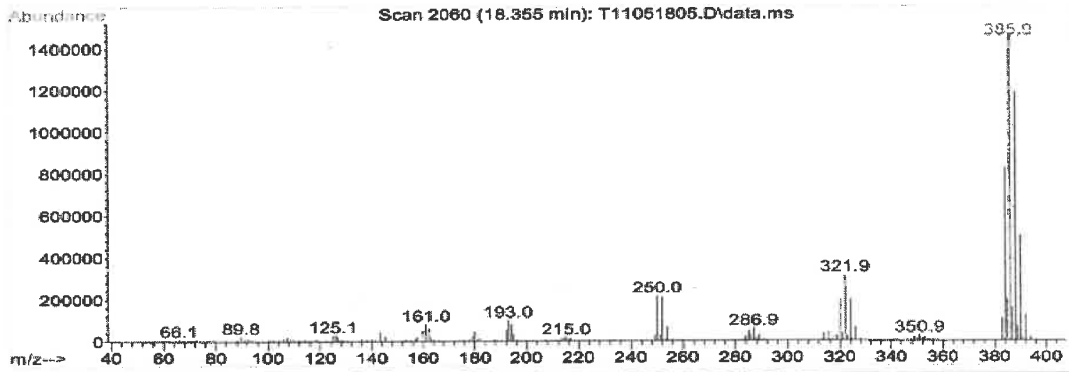

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

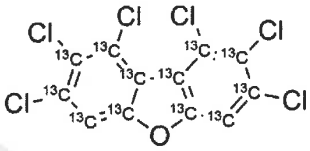

Catalog Number:	EF-986
Solution Lot:	ER01062016
Expiration Date:	January 2030
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

781964

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

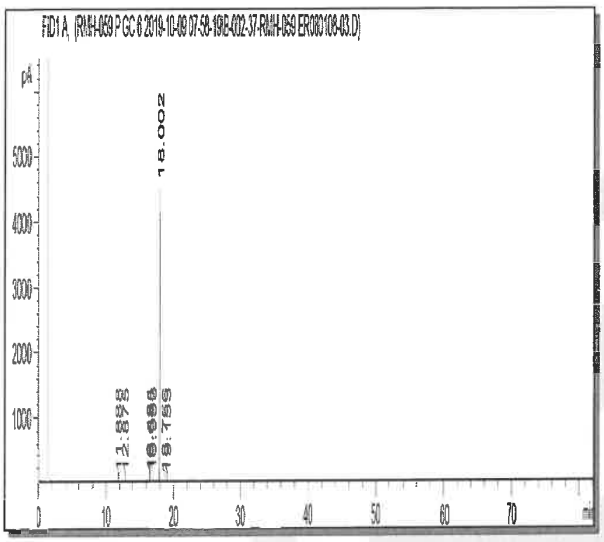

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

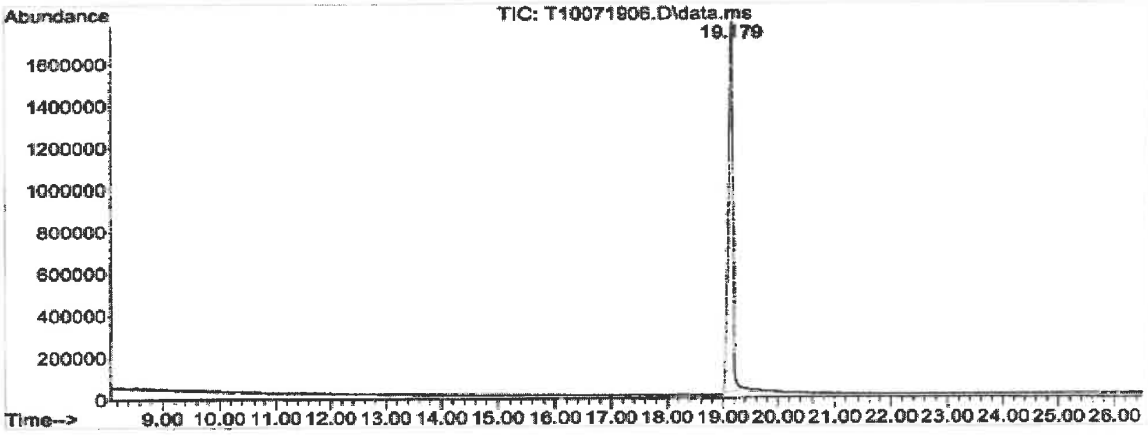

Mass Spectrum

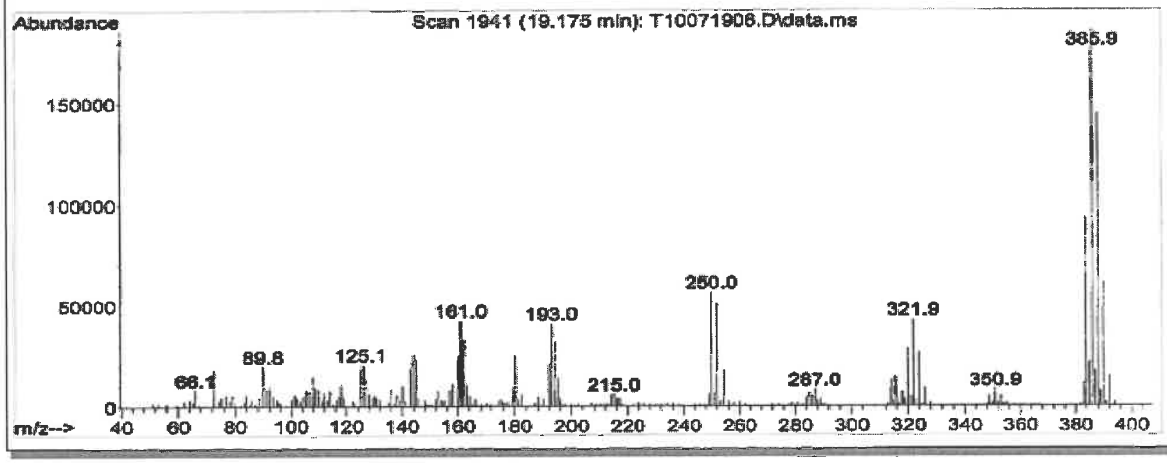

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

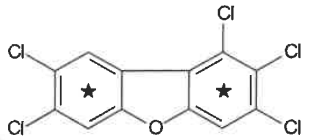

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER090110-01

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 109719-77-9
Molecular Weight: 352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

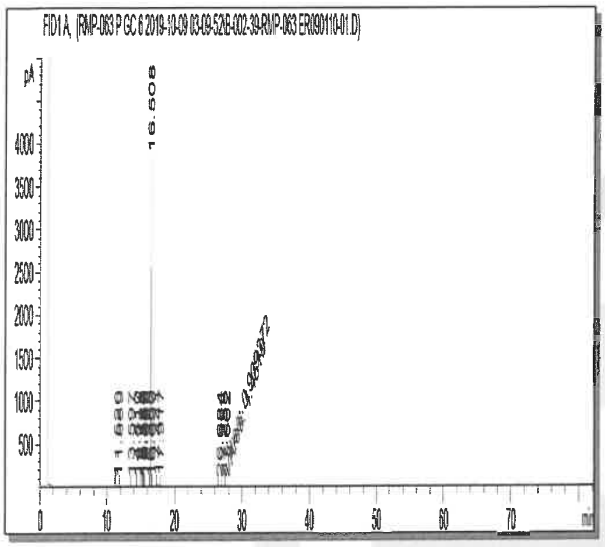

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Sample Name: ER090110-01
Acquired: October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

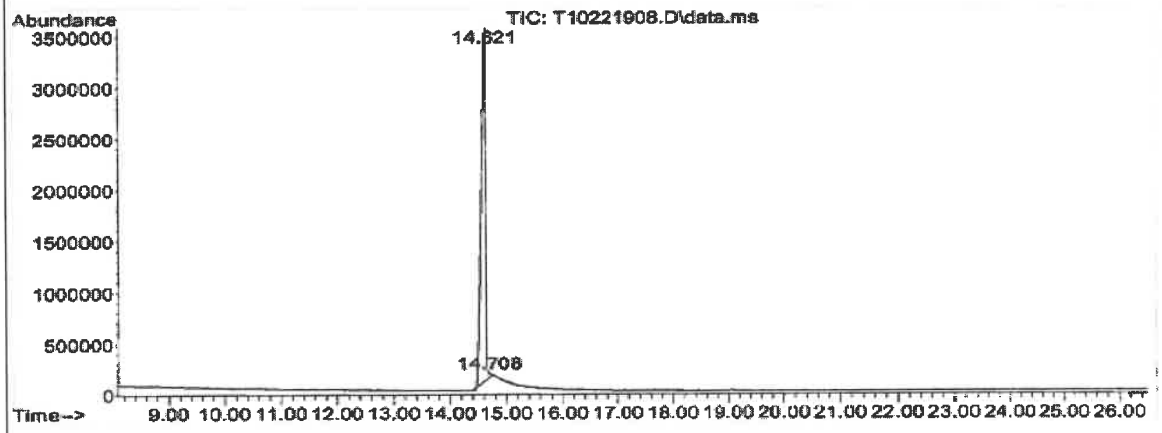

Mass Spectrum

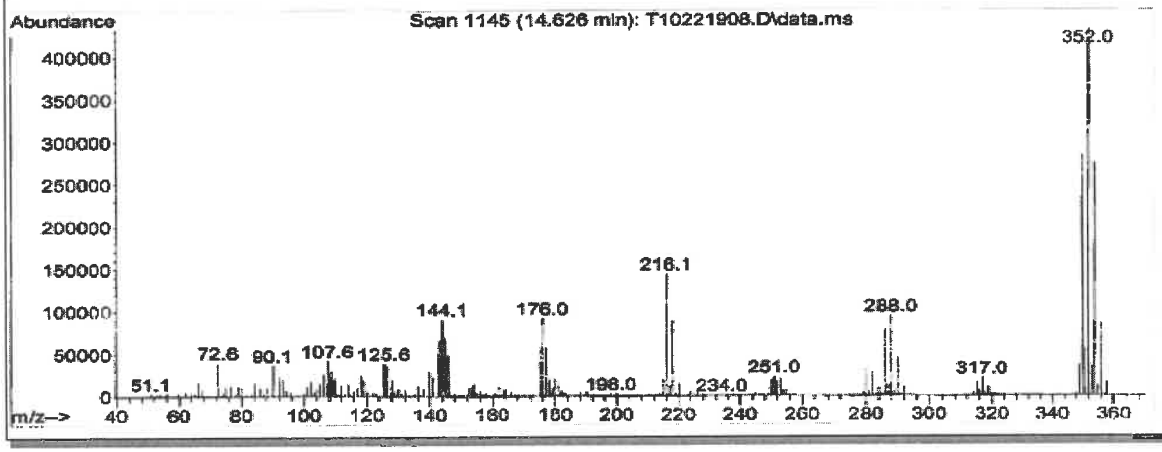

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

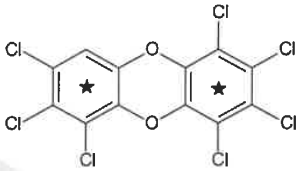

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

781978

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	0.999

Neat Material Data

Compound Name:	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}HCl_7O_2$
Compound Lot:	ER100110-01	**CAS Number:**	109719-83-7
		Molecular Weight:	437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

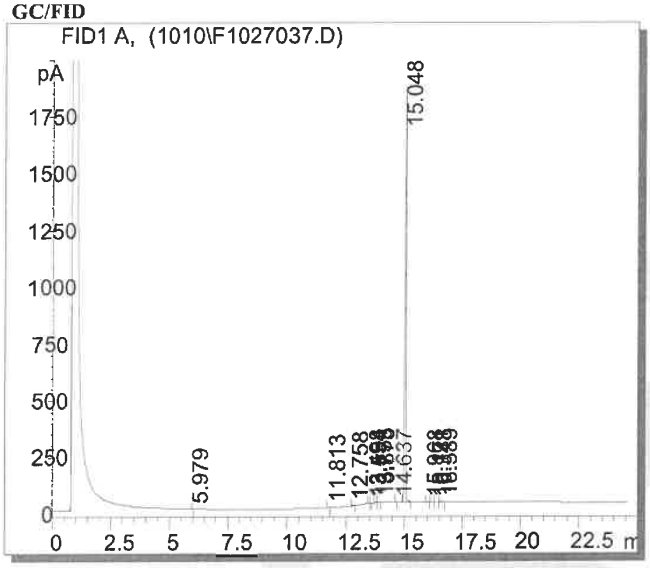

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

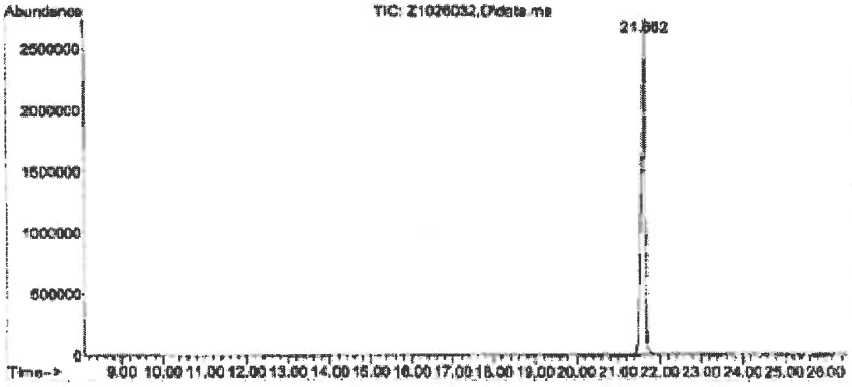

Mass Spectrum

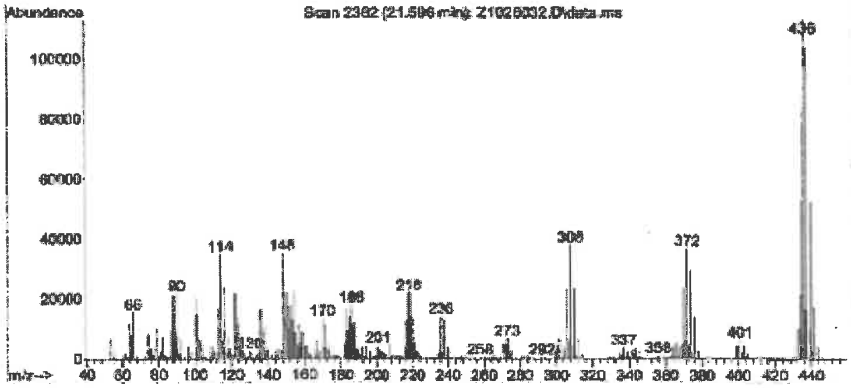

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

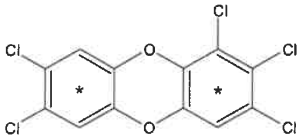

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

781983

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O_2$
Compound Lot:	ER06241403	**CAS Number:**	109719-79-1
		Molecular Weight:	368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

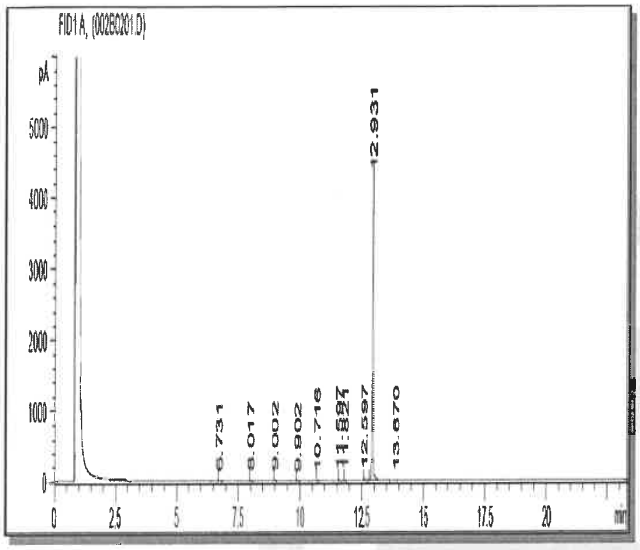

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

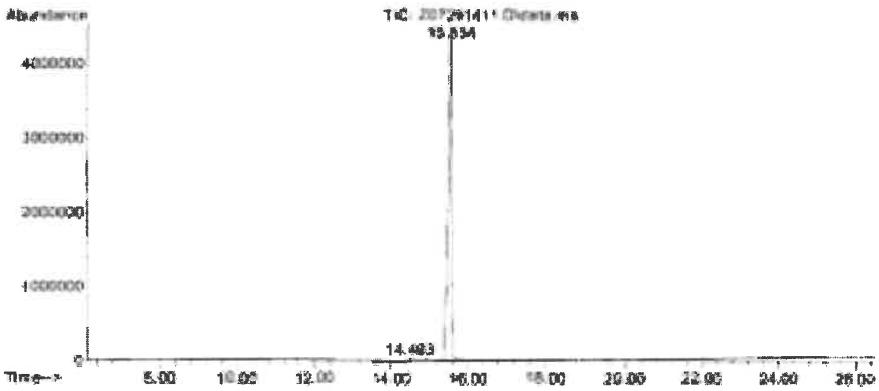

Mass Spectrum

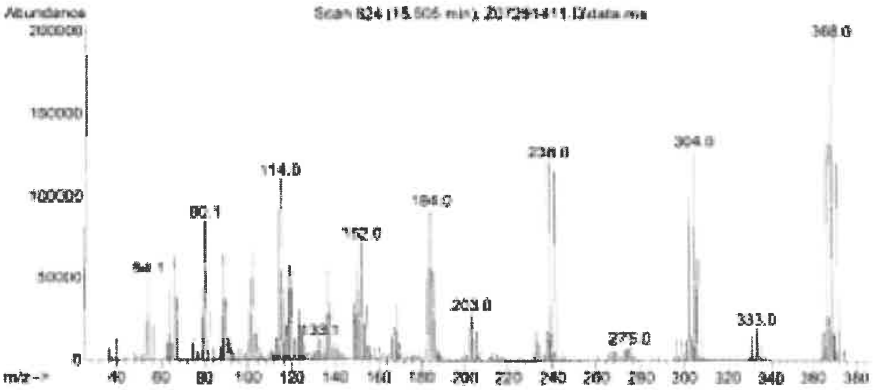

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

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Analytical Reference Standards
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CIL

Certificate of Analysis

ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

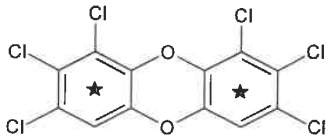

Catalog Number: ED-996
Solution Lot: ER08221601
Expiration Date: September 2026
Solvent: n-Nonane:Toluene (80:20)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

781990

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

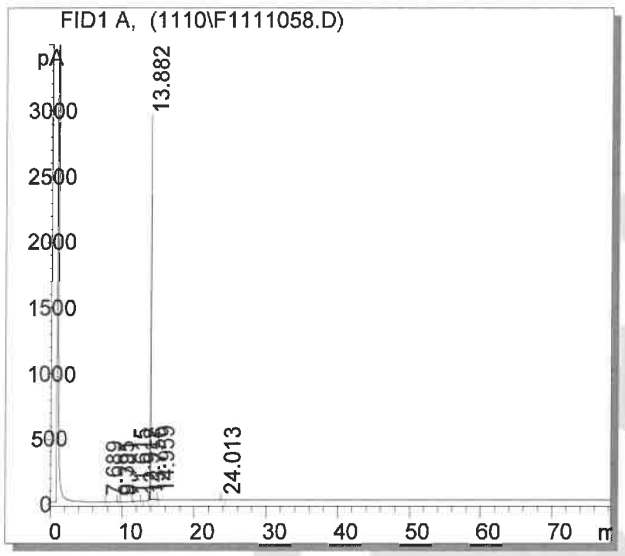

Column: DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-column
Detector Temp: 325°C

Data File Name: S:\GC\GC6\2010\1110\F1111058.D
Instrument: GC#6
Sample Name: ER110510-01
Acquired: November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

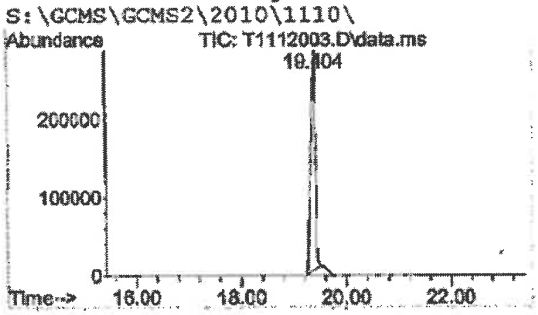

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

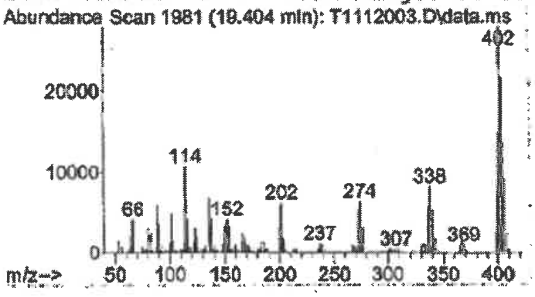

SIM Ion Chromatogram 1

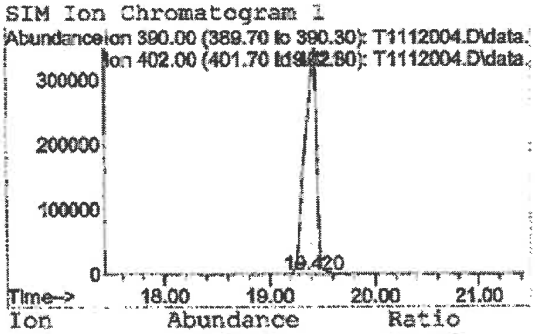

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

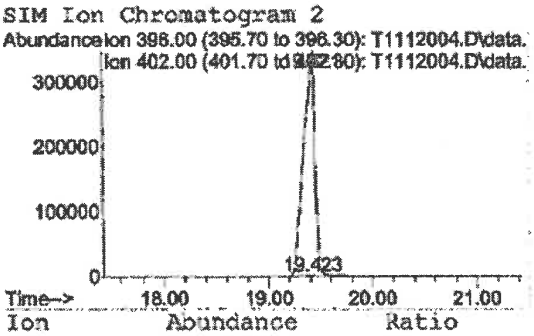

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

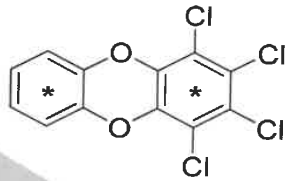

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

781997

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

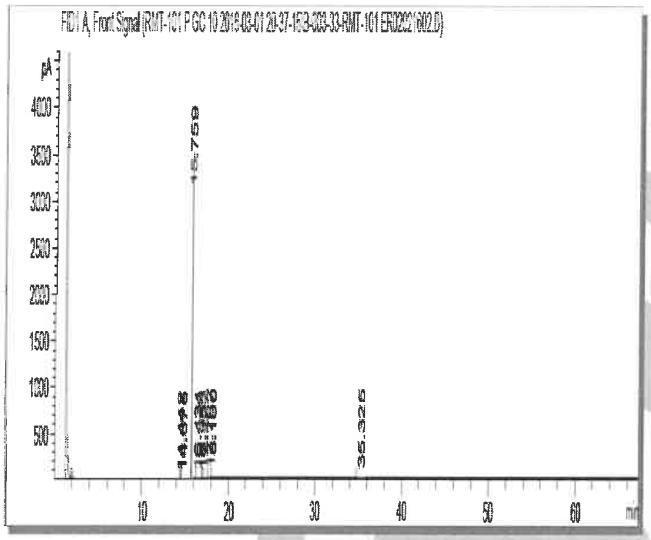

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

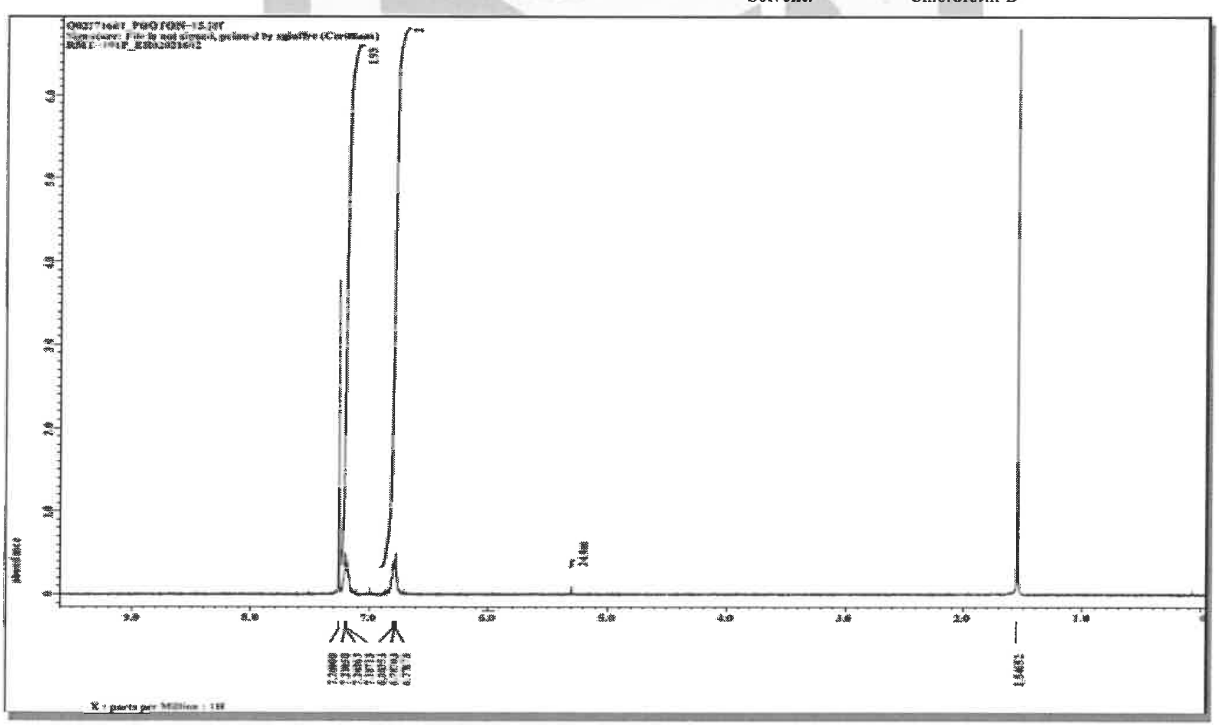

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER02021602
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Fri Feb 19 12:55:12 2016
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

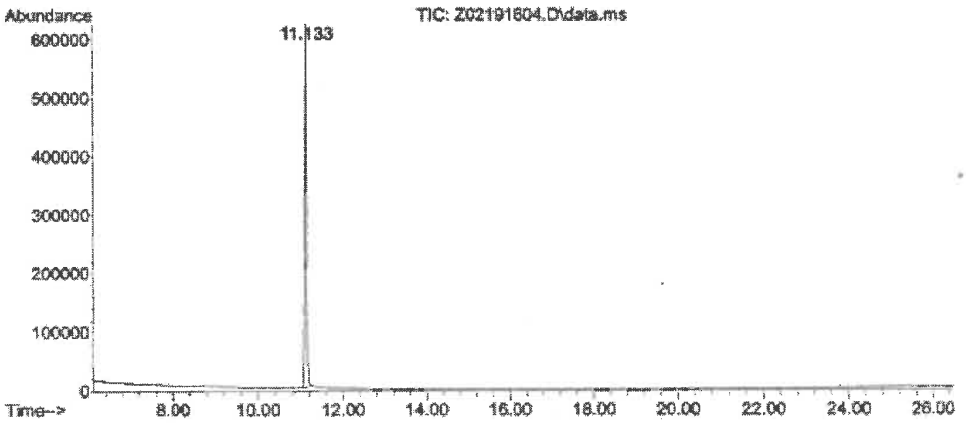

Mass Spectrum

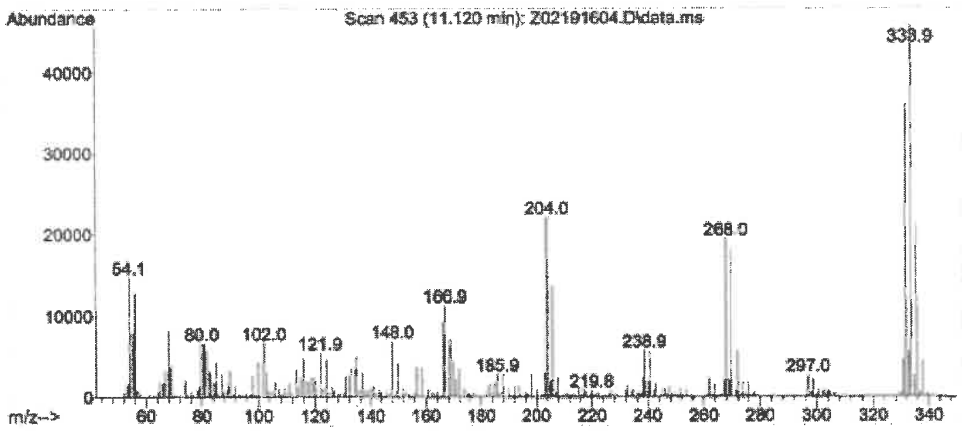

Reagent

HRDXNTA_00108

(2)

P: 4ba/19 SKJ

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

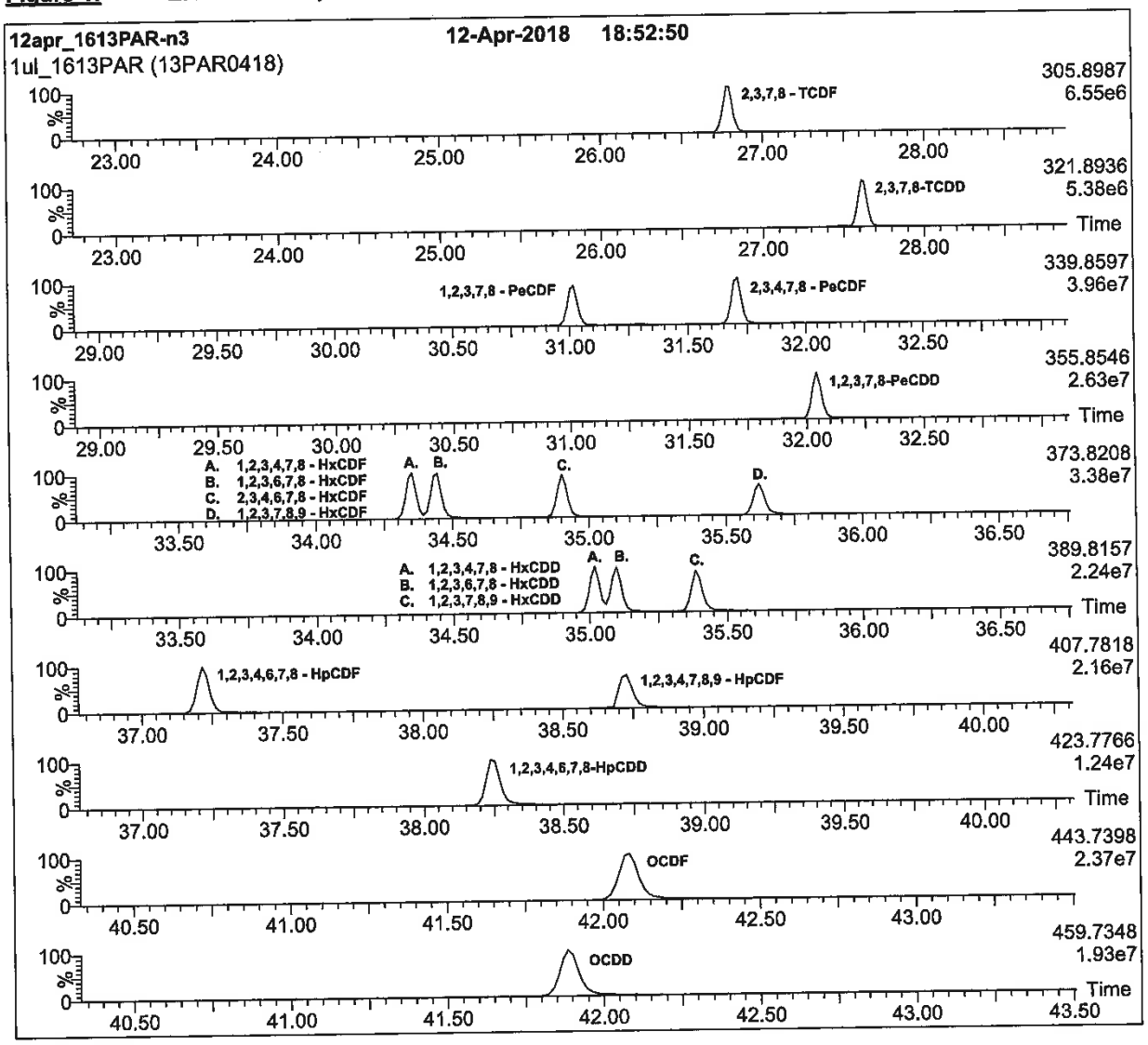

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

(3)

P: 4/3dic SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number: EDF-7999-10X
Solution Lot: ER02241602
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

782007

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method: GC/ECD
Column: DB-5ms, 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program: 140°C to 200°C at 40°C/min, 200°C to 300°C at 4°C/min hold 3 min
Injector Temp: Cool on-column
Detector Temp: 280°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397.1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386.6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0.8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0.7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

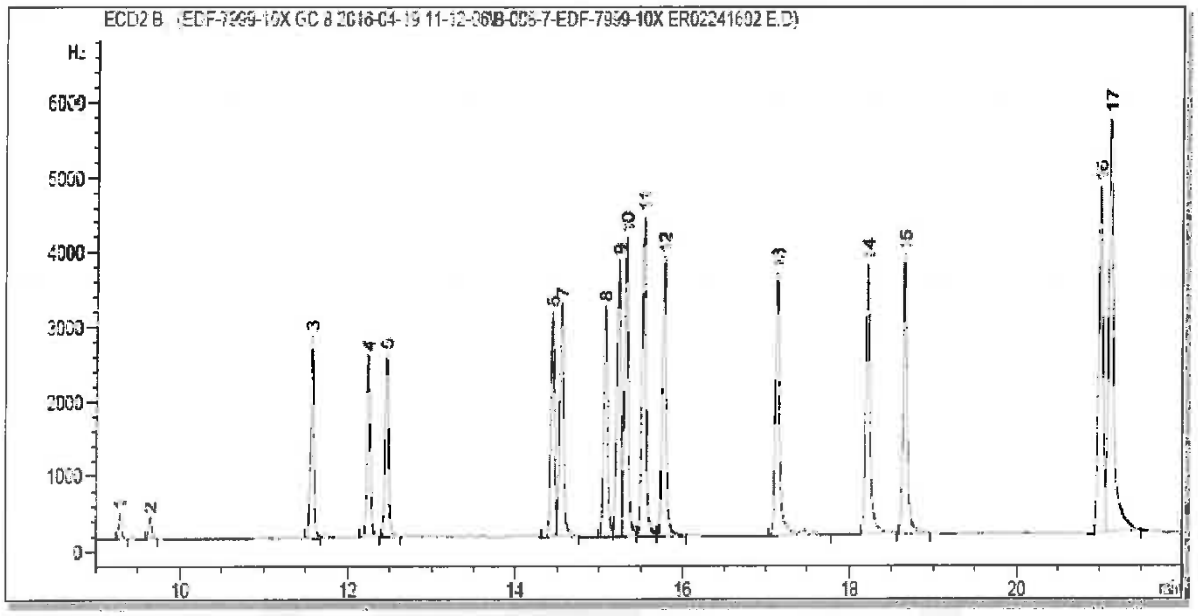

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

Cerilliant®
Analytical Reference Standards
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Certificate of Analysis

Method 1613 PAR Stock Solution

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

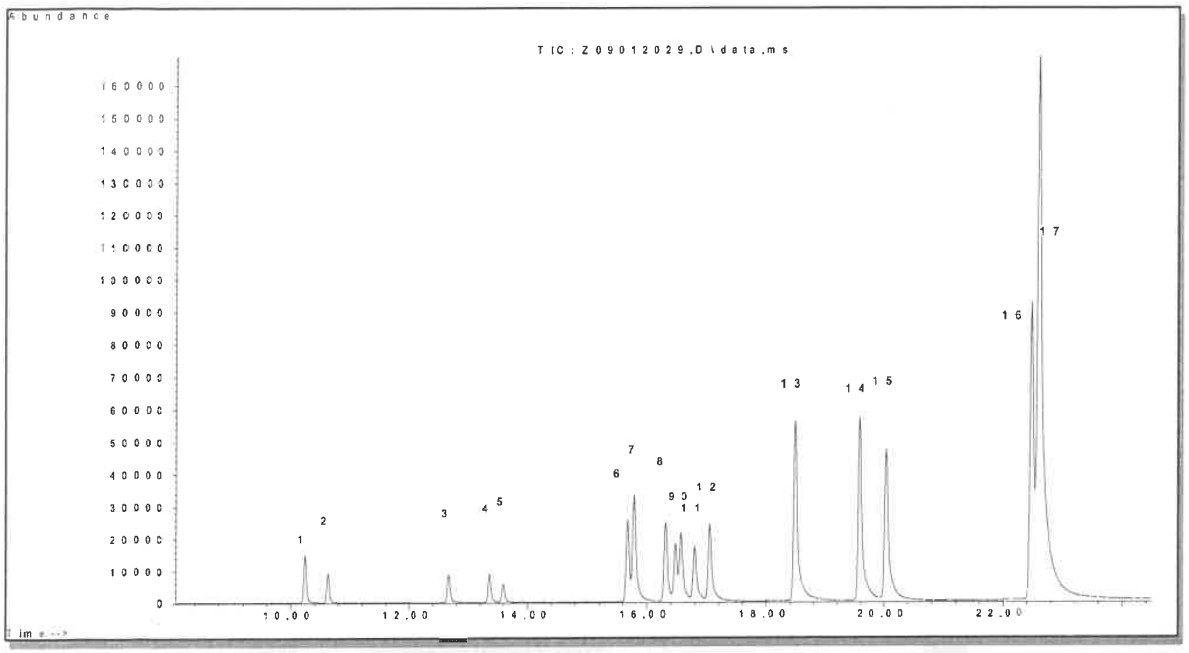

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #	13CHxCF #	HxCDD #
11215702-072721-BN -SJSB096 (0-2)	320-76887-1	108	59	61	62	70	59	51	55

	QC LIMITS
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072721-BN -SJSB096 (0-2)	320-76887-1	51	54	61	72	58	70

	QC LIMITS
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-513586/2-A	54	54	69	56	63	59	67	58

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-513586/2-A	54	60	54	53	63	67	72	71

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-072721-BN -SJSB096 (0-2) RADL	320-76887-1 RADL	34	98
11215702-072721-BN -SJSB096 (2-4) RA	320-76887-2 RA	36	48
11215702-072721-BN -SJSB096 (4-6) RA	320-76887-3 RA	63	74
11215702-072721-BN -SJSB096 (6-8) RA	320-76887-4 RA	57	75
11215702-072721-BN -SJSB096 (8-10) RA	320-76887-5 RA	67	79
11215702-072721-BN -SJSB096 (10-12) RA	320-76887-6 RA	67	77
11215702-072721-BN -SJSB096 (12-14) RA	320-76887-7 RA	59	77
11215702-072721-BN -SJSB096 (14-16) RA	320-76887-8 RA	62	75
11215702-072721-BN -DUP-9 RA	320-76887-13 RA	61	73
11215702-072721-BN -SJSB096 (2-4) MS RA	320-76887-2 MS RA	44	65
11215702-072721-BN -SJSB096 (2-4) MSD RA	320-76887-2 MSD RA	42	81

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	HxCDF #
11215702-072721-BN -SJSB096 (0-2) DL	320-76887-1 DL	61	47	154	67

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-072721-BN -SJSB096 (2-4)	320-76887-2	68	68	110	69	76	75	76	67
11215702-072721-BN -SJSB096 (4-6)	320-76887-3	59	60	69	59	65	61	72	63
11215702-072721-BN -SJSB096 (6-8)	320-76887-4	54	58	72	54	56	58	59	56
11215702-072721-BN -SJSB096 (8-10)	320-76887-5	57	60	74	59	61	59	72	60
11215702-072721-BN -SJSB096 (10-12)	320-76887-6	62	62	68	61	66	61	74	63
11215702-072721-BN -SJSB096 (12-14)	320-76887-7	54	55	68	53	58	52	63	56
11215702-072721-BN -SJSB096 (14-16)	320-76887-8	58	60	67	56	63	58	72	62
11215702-072721-BN -DUP-9	320-76887-13	57	60	67	57	62	56	77	66
	MB 320-513586/1-A	57	59	68	61	65	58	74	64
11215702-072721-BN -SJSB096 (2-4) MS	320-76887-2 MS	57	58	115	59	65	63	65	57
11215702-072721-BN -SJSB096 (2-4) MSD	320-76887-2 MSD	55	54	112	55	57	58	57	52

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072721-BN -SJSB096 (2-4)	320-76887-2	68	76	68	68	66	73	76	74
11215702-072721-BN -SJSB096 (4-6)	320-76887-3	60	67	61	60	68	73	81	76
11215702-072721-BN -SJSB096 (6-8)	320-76887-4	56	59	54	56	53	60	64	61
11215702-072721-BN -SJSB096 (8-10)	320-76887-5	57	64	59	59	65	68	76	73
11215702-072721-BN -SJSB096 (10-12)	320-76887-6	62	69	64	61	67	70	78	74
11215702-072721-BN -SJSB096 (12-14)	320-76887-7	54	60	54	52	61	61	69	66
11215702-072721-BN -SJSB096 (14-16)	320-76887-8	60	68	61	57	66	65	74	69
11215702-072721-BN -DUP-9	320-76887-13	61	70	64	58	66	69	74	68
	MB 320-513586/1-A	61	65	60	61	65	72	78	76
11215702-072721-BN -SJSB096 (2-4) MS	320-76887-2 MS	59	64	59	57	57	60	64	62
11215702-072721-BN -SJSB096 (2-4) MSD	320-76887-2 MSD	55	56	52	54	52	56	61	57

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_6.d

Lab ID: LCS 320-513586/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	21.3	107	67-158	
2,3,7,8-TCDF	20.0	21.8	109	75-158	
1,2,3,7,8-PeCDD	100	112	112	70-142	
1,2,3,7,8-PeCDF	100	114	114	80-134	
2,3,4,7,8-PeCDF	100	105	105	68-160	
1,2,3,4,7,8-HxCDD	100	101	101	70-164	
1,2,3,6,7,8-HxCDD	100	111	111	76-134	
1,2,3,7,8,9-HxCDD	100	110	110	64-162	
1,2,3,4,7,8-HxCDF	100	107	107	72-134	
1,2,3,6,7,8-HxCDF	100	112	112	84-130	
1,2,3,7,8,9-HxCDF	100	116	116	78-130	
2,3,4,6,7,8-HxCDF	100	117	117	70-156	
1,2,3,4,6,7,8-HpCDD	100	108	108	70-140	
1,2,3,4,6,7,8-HpCDF	100	112	112	82-122	
1,2,3,4,7,8,9-HpCDF	100	105	105	78-138	
OCDD	200	228	114	78-144	
OCDF	200	248	124	63-170	
13C-2,3,7,8-TCDD	200	109	54	20-175	
13C-2,3,7,8-TCDF	200	108	54	22-152	
13C-1,2,3,7,8-PeCDD	200	117	59	21-227	
13C-1,2,3,7,8-PeCDF	200	113	56	21-192	
13C-2,3,4,7,8-PeCDF	200	127	63	13-328	
13C-1,2,3,4,7,8-HxCDD	200	121	60	21-193	
13C-1,2,3,6,7,8-HxCDD	200	108	54	25-163	
13C-1,2,3,4,7,8-HxCDF	200	133	67	19-202	
13C-1,2,3,6,7,8-HxCDF	200	117	58	21-159	
13C-1,2,3,7,8,9-HxCDF	200	107	53	17-205	
13C-2,3,4,6,7,8-HxCDF	200	107	54	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	133	67	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	126	63	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	143	72	20-186	
13C-OCDD	400	283	71	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 18AU2110D5_9.d

Lab ID: 320-76887-2 MS Client ID: 11215702-072721-BN-SJSB096 (2-4

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	31.9	15000	16100	4297	67-158	E 4 G
1,2,3,7,8-PeCDD	159	130	329	123	70-142	
1,2,3,7,8-PeCDF	159	1300	1590	212	80-134	4
2,3,4,7,8-PeCDF	159	930	1230	193	68-160	4
1,2,3,4,7,8-HxCDD	159	2.1 J	161	100	70-164	
1,2,3,6,7,8-HxCDD	159	4.0 J	183	112	76-134	
1,2,3,7,8,9-HxCDD	159	2.6 J	164	101	64-162	
1,2,3,4,7,8-HxCDF	159	2000	1950	-31	72-134	4
1,2,3,6,7,8-HxCDF	159	500	647	94	84-130	
1,2,3,7,8,9-HxCDF	159	23 J	173	94	78-130	
2,3,4,6,7,8-HxCDF	159	47 J	215	105	70-156	
1,2,3,4,6,7,8-HpCDD	159	43 J	219	110	70-140	
1,2,3,4,6,7,8-HpCDF	159	650	701	32	82-122	4
1,2,3,4,7,8,9-HpCDF	159	200	325	78	78-138	
OCDD	319	610	1020	129	78-144	
OCDF	319	290	555	83	63-170	
13C-2,3,7,8-TCDD	319	210	184	58	25-164	
13C-2,3,7,8-TCDF	319	210	181	57	24-169	
13C-1,2,3,7,8-PeCDD	319	240	202	63	25-181	
13C-1,2,3,7,8-PeCDF	319	220	188	59	24-185	
13C-2,3,4,7,8-PeCDF	319	240	206	65	21-178	
13C-1,2,3,4,7,8-HxCDD	319	240	202	64	32-141	
13C-1,2,3,6,7,8-HxCDD	319	210	187	59	28-130	
13C-1,2,3,4,7,8-HxCDF	319	240	207	65	26-152	
13C-1,2,3,6,7,8-HxCDF	319	210	183	57	26-123	
13C-1,2,3,7,8,9-HxCDF	319	220	182	57	29-147	
13C-2,3,4,6,7,8-HxCDF	319	220	189	59	28-136	
13C-1,2,3,4,6,7,8-HpCDD	319	230	192	60	23-140	
13C-1,2,3,4,6,7,8-HpCDF	319	210	182	57	28-143	
13C-1,2,3,4,7,8,9-HpCDF	319	240	204	64	26-138	
13C-OCDD	637	470	394	62	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU21A11D2_016.d

Lab ID: 320-76887-2 MS RA Client ID: 11215702-072721-BN-SJSB096 (2-4

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	31.9	61000	71100	30642	75-158	E 4 G
13C-2,3,7,8-TCDF	319	110	140	44	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 18AU2110D5_10.d

Lab ID: 320-76887-2 MSD Client ID: 11215702-072721-BN-SJSB096 (2-4

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	30.9	19400	15092	19	50	67-158	E 4 G
1,2,3,7,8-PeCDD	154	366	151	11	50	70-142	F1
1,2,3,7,8-PeCDF	154	2150	584	30	50	80-134	4
2,3,4,7,8-PeCDF	154	1450	337	16	50	68-160	4
1,2,3,4,7,8-HxCDD	154	162	103	0	50	70-164	
1,2,3,6,7,8-HxCDD	154	183	116	0	50	76-134	
1,2,3,7,8,9-HxCDD	154	172	110	5	50	64-162	
1,2,3,4,7,8-HxCDF	154	2640	420	30	50	72-134	4
1,2,3,6,7,8-HxCDF	154	831	217	25	50	84-130	F1
1,2,3,7,8,9-HxCDF	154	186	106	7	50	78-130	
2,3,4,6,7,8-HxCDF	154	236	122	9	50	70-156	
1,2,3,4,6,7,8-HpCDD	154	240	127	9	50	70-140	
1,2,3,4,6,7,8-HpCDF	154	893	158	24	50	82-122	4
1,2,3,4,7,8,9-HpCDF	154	386	120	17	50	78-138	
OCDD	309	1240	202	19	50	78-144	F1
OCDF	309	649	116	16	50	63-170	
13C-2,3,7,8-TCDD	309	168	54			25-164	
13C-2,3,7,8-TCDF	309	170	55			24-169	
13C-1,2,3,7,8-PeCDD	309	181	58			25-181	
13C-1,2,3,7,8-PeCDF	309	171	55			24-185	
13C-2,3,4,7,8-PeCDF	309	175	57			21-178	
13C-1,2,3,4,7,8-HxCDD	309	173	56			32-141	
13C-1,2,3,6,7,8-HxCDD	309	159	52			28-130	
13C-1,2,3,4,7,8-HxCDF	309	176	57			26-152	
13C-1,2,3,6,7,8-HxCDF	309	162	52			26-123	
13C-1,2,3,7,8,9-HxCDF	309	167	54			29-147	
13C-2,3,4,6,7,8-HxCDF	309	170	55			28-136	
13C-1,2,3,4,6,7,8-HpCDD	309	172	56			23-140	
13C-1,2,3,4,6,7,8-HpCDF	309	161	52			28-143	
13C-1,2,3,4,7,8,9-HpCDF	309	187	61			26-138	
13C-OCDD	618	355	57			17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU21A11D2_017.d

Lab ID: 320-76887-2 MSD RA Client ID: 11215702-072721-BN-SJSB096 (2-4

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2,3,7,8-TCDF	30.9	74700	43487	5	50	75-158	E 4 G
13C-2,3,7,8-TCDF	309	131	42			24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab File ID: 17au21dfs1_5.d Lab Sample ID: MB 320-513586/1-A

Matrix: Sediment Date Extracted: 08/06/2021 05:28

Instrument ID: DFS 1 Date Analyzed: 08/17/2021 17:01

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-513586/2-A	17au21dfs1_6.d	08/17/2021 17:49
11215702-072721-BN-SJSB096 (4-6)	320-76887-3	17au21dfs1_25.d	08/18/2021 08:30
11215702-072721-BN-SJSB096 (8-10)	320-76887-5	17au21dfs1_27.d	08/18/2021 10:06
11215702-072721-BN-SJSB096 (10-12)	320-76887-6	17au21dfs1_28.d	08/18/2021 10:54
11215702-072721-BN-SJSB096 (12-14)	320-76887-7	17au21dfs1_29.d	08/18/2021 11:42
11215702-072721-BN-SJSB096 (14-16)	320-76887-8	17au21dfs1_36.d	08/18/2021 17:13
11215702-072721-BN-SJSB096 (6-8)	320-76887-4	18AU2110D5_7.d	08/18/2021 18:49
11215702-072721-BN-DUP-9	320-76887-13	17au21dfs1_38.d	08/18/2021 18:49
11215702-072721-BN-SJSB096 (2-4)	320-76887-2	18AU2110D5_8.d	08/18/2021 19:34
11215702-072721-BN-SJSB096 (2-4) MS	320-76887-2 MS	18AU2110D5_9.d	08/18/2021 20:19
11215702-072721-BN-SJSB096 (2-4) MSD	320-76887-2 MSD	18AU2110D5_10.d	08/18/2021 21:04
11215702-072721-BN-SJSB096 (0-2)	320-76887-1	17au21dfs1_44.d	08/18/2021 23:36
11215702-072721-BN-SJSB096 (14-16) RA	320-76887-8 RA	25AU21A11D2_004.d	08/25/2021 14:54
11215702-072721-BN-DUP-9 RA	320-76887-13 RA	25AU21A11D2_005.d	08/25/2021 15:32
11215702-072721-BN-SJSB096 (6-8) RA	320-76887-4 RA	25AU21A11D2_006.d	08/25/2021 16:10
11215702-072721-BN-SJSB096 (12-14) RA	320-76887-7 RA	25AU21A11D2_007.d	08/25/2021 16:48
11215702-072721-BN-SJSB096 (10-12) RA	320-76887-6 RA	25AU21A11D2_008.d	08/25/2021 17:27
11215702-072721-BN-SJSB096 (4-6) RA	320-76887-3 RA	25AU21A11D2_009.d	08/25/2021 18:05
11215702-072721-BN-SJSB096 (8-10) RA	320-76887-5 RA	25AU21A11D2_011.d	08/25/2021 19:22
11215702-072721-BN-SJSB096 (2-4) RA	320-76887-2 RA	25AU21A11D2_015.d	08/25/2021 21:55
11215702-072721-BN-SJSB096 (2-4) MS RA	320-76887-2 MS RA	25AU21A11D2_016.d	08/25/2021 22:33
11215702-072721-BN-SJSB096 (2-4) MSD RA	320-76887-2 MSD RA	25AU21A11D2_017.d	08/25/2021 23:11

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab File ID: 17au21dfs1_5.d Lab Sample ID: MB 320-513586/1-A

Matrix: Sediment Date Extracted: 08/06/2021 05:28

Instrument ID: DFS 1 Date Analyzed: 08/17/2021 17:01

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
11215702-072721-BN-SJSB096 (0-2) RADL	320-76887-1 RADL	25AU21A11D2_018.d	08/25/2021 23:50
11215702-072721-BN-SJSB096 (0-2) DL	320-76887-1 DL	25AU2110D5_46.d	08/26/2021 21:06

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (0-2)
Lab Sample ID: 320-76887-1
Matrix: Sediment
Lab File ID: 17au21dfs1_44.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:45
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.04(g)
Date Analyzed: 08/18/2021 23:36
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 51.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
40321-76-4	1,2,3,7,8-PeCDD	550		10	6.4
57117-41-6	1,2,3,7,8-PeCDF	3500	G	25	25
57117-31-4	2,3,4,7,8-PeCDF	3200	G	19	19
39227-28-6	1,2,3,4,7,8-HxCDD	5.9	J	10	0.66
57653-85-7	1,2,3,6,7,8-HxCDD	13		10	0.79
19408-74-3	1,2,3,7,8,9-HxCDD	10		10	0.67
57117-44-9	1,2,3,6,7,8-HxCDF	1200		10	10
72918-21-9	1,2,3,7,8,9-HxCDF	89		10	7.8
60851-34-5	2,3,4,6,7,8-HxCDF	150	G	14	14
35822-46-9	1,2,3,4,6,7,8-HpCDD	130	B	10	0.70
67562-39-4	1,2,3,4,6,7,8-HpCDF	1500		10	3.3
55673-89-7	1,2,3,4,7,8,9-HpCDF	450		10	3.7
3268-87-9	OCDD	1100	B	20	1.7
39001-02-0	OCDF	700		20	1.3
36088-22-9	Total PeCDD	590	q	10	6.4
30402-15-4	Total PeCDF	9300	G	22	22
34465-46-8	Total HxCDD	99		10	0.71
55684-94-1	Total HxCDF	6200	G	11	11
37871-00-4	Total HpCDD	230	B	10	0.70
38998-75-3	Total HpCDF	2200		10	3.5

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (0-2)
Lab Sample ID: 320-76887-1
Matrix: Sediment
Lab File ID: 17au21dfs1_44.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:45
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.04(g)
Date Analyzed: 08/18/2021 23:36
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 51.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
109719-79-1	13C-1,2,3,7,8-PeCDD	62		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	59		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	61		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	55		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	51		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	70		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	59		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	54		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	51		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	72		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	61		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	58		26-138
114423-97-1	13C-OCDD	70		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	108		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d
Lims ID: 320-76887-A-1-A
Client ID: 11215702-072721-BN-SJSB096 (0-2)
Sample Type: Client
Inject. Date: 18-Aug-2021 23:36:00 ALS Bottle#: 0 Worklist Smp#: 41
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-1-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:42:00 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:20:12

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	22.483	610892	0.79	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	21.467	569583	0.76	1.3459	69.3	69.3	1.453	1.453	69.28	
2,3,7,8-TCDF	21.519	327686669	0.88	1.0802	53260	53260	103.5	103.5		Ea
A Non-2,3,7,8-sub-TCDF	19.878	194080625	0.77	1.0802	32148	31545	103.5	23581		RQ
S Total TCDF					85408	84804	103.5	103.5		RQ
D 13C-2,3,7,8-TCDD	23.240	342464	0.77	0.9317	60.2	60.2	3.725	3.725	60.17	M
2,3,7,8-TCDD	23.249	34323463	0.81	1.0753	9320.3	9320.3	19.8	19.8		EM
$ 37Cl4-2,3,7,8-TCDD	23.249	265770		1.0083	43.1	43.1	2.670	2.670	108	M
A Non-2,3,7,8-sub-TCDD	20.707	4184432	0.78	1.0753	1136.2	1136.2	19.8	1118.0		M
S Total TCDD					10457	10457	19.8	19.8		
D 13C-1,2,3,7,8-PeCDF	28.262	409257	1.75	1.1405	58.7	58.7	1.098	1.098	58.74	
1,2,3,7,8-PeCDF	28.278	3763082	1.64	1.0543	872.2	872.2	6.105	6.105		M
D 13C-2,3,4,7,8-PeCDF	29.692	419796	1.59	1.1253	61.1	61.1	1.112	1.112	61.07	
2,3,4,7,8-PeCDF	29.718	3284993	1.64	1.0079	776.4	776.4	4.775	4.775		a
A F1 PeCDFs	24.648	33495	1.55	1.0311	7.837	7.837	0.1246	7.837		M
A Non-2,3,7,8-sub-PeCDF	28.125	2722017	1.63	1.0311	636.9	636.9	5.341	343.8		Ma
S Total PeCDF					2293.3	2293.3	5.440	5.440		
D 13C-1,2,3,7,8-PeCDD	30.492	270571	1.60	0.7165	61.8	61.8	0.9619	0.9619	61.82	
1,2,3,7,8-PeCDD	30.534	380177	1.56	1.0465	134.3	134.3	1.582	1.582		a
A Non-2,3,7,8-sub-PeCDD	28.489	28119	1.55	1.0465	10.4	9.931	1.582	5.749		RQ
S Total PeCDD					144.7	144.2	1.582	1.582		RQ
D 13C-1,2,3,4,7,8-HxCDF	35.352	454877	0.53	0.9648	70.4	70.4	0.6761	0.6761	70.37	
1,2,3,4,7,8-HxCDF	35.368	5537046	1.33	1.1474	1060.9	1060.9	2.974	2.974		Ea
D 13C-1,2,3,6,7,8-HxCDF	35.486	425551	0.55	1.0708	59.3	59.3	0.6092	0.6092	59.32	
1,2,3,6,7,8-HxCDF	35.494	1589800	1.35	1.2178	306.8	306.8	2.479	2.479		a
D 13C-2,3,4,6,7,8-HxCDF	36.260	354322	0.55	1.0413	50.8	50.8	0.6265	0.6265	50.79	a
2,3,4,6,7,8-HxCDF	36.277	160485	1.25	1.2145	37.3	37.3	3.522	3.522		Ma
D 13C-1,2,3,7,8,9-HxCDF	37.085	354030	0.55	0.9731	54.3	54.3	0.6704	0.6704	54.31	a
1,2,3,7,8,9-HxCDF	37.093	96039	1.31	1.2401	21.9	21.9	1.920	1.920		Ma
A Non-2,3,7,8-sub-HxCDF	35.028	517169	1.21	1.2049	108.1	108.1	2.597	56.9		Ma
S Total HxCDF					1534.9	1534.9	2.724	2.724		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.891	669946	1.27	1.8E+04	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	36.445	281261	1.34	0.7587	55.3	55.3	0.3000	0.3000	55.34	a
1,2,3,4,7,8-HxCDD	36.471	4350	1.26	1.0608	1.458	1.458	0.1619	0.1619		a
D 13C-1,2,3,6,7,8-HxCDD	36.555	295231	1.27	0.8593	51.3	51.3	0.2648	0.2648	51.29	a
1,2,3,6,7,8-HxCDD	36.572	9251	1.34	0.9933	3.154	3.154	0.1947	0.1947		a
1,2,3,7,8,9-HxCDD	36.908	7989	1.11	1.1094	2.498	2.498	0.1640	0.1640		a
A Non-2,3,7,8-sub-HxCDD	35.394	52086	1.26	1.0545	17.1	17.1	0.1725	11.8		
S Total HxCDD					24.2	24.2	0.1735	0.1735		
D 13C-1,2,3,4,6,7,8-HpCDF	38.797	300107	0.46	0.7359	60.9	60.9	0.4226	0.4226	60.87	
1,2,3,4,6,7,8-HpCDF	38.805	1569411	1.06	1.4421	362.6	362.6	0.8145	0.8145		
D 13C-1,2,3,4,7,8,9-HpCDF	39.975	265365	0.44	0.6854	57.8	57.8	0.4538	0.4538	57.79	
1,2,3,4,7,8,9-HpCDF	39.984	381561	1.05	1.3092	109.8	109.8	0.8985	0.8985		
A Non-2,3,7,8-sub-HpCDF	39.258	290791	1.06	1.3756	74.8	74.8	0.8544	74.8		
S Total HpCDF					547.2	547.2	0.8565	0.8565		
D 13C-1,2,3,4,6,7,8-HpCDD	39.672	323135	1.08	0.6745	71.5	71.5	0.6129	0.6129	71.51	
1,2,3,4,6,7,8-HpCDD	39.689	105193	1.02	1.0503	31.0	31.0	0.1720	0.1720		
A Non-2,3,7,8-sub-HpCDD	39.258	90583	1.01	1.0503	26.7	26.7	0.1720	26.7		
S Total HpCDD					57.7	57.7	0.1720	0.1720		
D 13C-OCDD	42.154	507830	0.87	0.5446	139.2	139.2	0.9541	0.9541	69.59	
OCDF	42.246	571634	0.98	1.3168	171.0	171.0	0.3241	0.3241		
OCDD	42.162	740405	0.89	1.0620	274.6	274.6	0.4115	0.4115		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d
Lims ID: 320-76887-A-1-A
Client ID: 11215702-072721-BN-SJSB096 (0-2)
Sample Type: Client
Inject. Date: 18-Aug-2021 23:36:00 ALS Bottle#: 0 Worklist Smp#: 41
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-1-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:42:00 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:20:12

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	22.483	21.427	63		270359	36884	478	1195	77		a
333.9338	22.466	21.427	62		340533	52354	761	1902	69	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	21.467	20.401	64	0.955	245529	27422	279	697	98		
317.9389	21.502	20.401	66	0.956	324054	36463	419	1047	87	0.76(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	21.519	20.436	65	1.002	153038528	17350147	13627	34067	1273		a
305.8987	21.528	20.436	65	1.003	174648141	19561174	14955	37387	1308	0.88(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.903	19.878	-58	0.881	2127689	313393	13627	34067	23		
	Empc Correction				1800734	266360	13627	34067	20		
305.8987	18.894	19.878	-59	0.880	2338616	345923	14955	37387	23	0.91(0.65-0.89)	
303.9016	19.393	19.878	-29	0.903	3410372	406247	13627	34067	30		
	Empc Correction				2891742	364622	13627	34067	27		
305.8987	19.393	19.878	-29	0.903	3755510	473536	14955	37387	32	0.91(0.65-0.89)	
303.9016	19.867	19.878	-1	0.925	3168515	584749	13627	34067	43		
	Empc Correction				2696924	500992	13627	34067	37		
305.8987	19.867	19.878	-1	0.925	3502499	650639	14955	37387	44	0.90(0.65-0.89)	
303.9016	20.168	19.878	17	0.939	5084286	934813	13627	34067	69		
	Empc Correction				4362876	793823	13627	34067	58		
305.8987	20.168	19.878	17	0.939	5666074	1030939	14955	37387	69	0.90(0.65-0.89)	
303.9016	20.650	19.878	46	0.962	67953400	5368192	13627	34067	394		
305.8987	20.641	19.878	46	0.962	77132531	6132748	14955	37387	410	0.88(0.65-0.89)	
303.9016	21.158	19.878	77	0.986	1870541	151472	13627	34067	11		
	Empc Correction				1601933	132101	13627	34067	10		
305.8987	21.141	19.878	76	0.985	2080433	171561	14955	37387	11	0.90(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	22.354	19.878	148	1.041	9364188	1102093	13627	34067	81		
	Empc Correction				7959865	930383	13627	34067	68		
305.8987	22.354	19.878	148	1.041	10337488	1208290	14955	37387	81	0.91(0.65-0.89)	
13C-2,3,7,8-TCDD											M
331.9368	23.240	21.743	90	1.034	149334	8670	478	1195	18		M
333.9338	23.240	21.743	90	1.034	193130	10511	761	1902	14	0.77(0.65-0.89)	M
2,3,7,8-TCDD											EM
319.8965	23.249	21.777	88	1.000	15329799	1378915	860	2150	1603		M
321.8936	23.249	21.777	88	1.000	18993664	1743203	776	1940	2246	0.81(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											M
327.8847	23.249	21.849	84	1.034	265770	27803	961	2402	29		M
A Non-2,3,7,8-sub-TCDD											M
319.8965	21.381	20.707	40	0.920	27683	6170	860	2150	7		
321.8936	21.390	20.707	41	0.920	39508	7964	776	1940	10	0.70(0.65-0.89)	
319.8965	23.516	20.707	168	1.012	1804353	308277	860	2150	358		
321.8936	23.516	20.707	168	1.012	2312888	395372	776	1940	510	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	28.262	27.288	58	1.257	260701	28114	166	415	169		
353.8970	28.236	27.288	57	1.256	148556	16510	281	702	59	1.75(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	28.278	27.313	58	1.001	2337301	231808	715	1787	324		M
341.8567	28.287	27.313	58	1.001	1425781	144999	434	1085	334	1.64(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	29.692	28.795	54	1.321	257415	36387	166	415	219		
353.8970	29.692	28.795	54	1.321	162381	23287	281	702	83	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	29.718	28.820	54	1.001	2041031	263551	715	1787	369		a
341.8567	29.718	28.820	54	1.001	1243962	160058	434	1085	369	1.64(1.32-1.78)	
A F1 PeCDFs											M
339.8597	25.005	24.648	21	0.885	20377	2654	14	35	190		M
341.8567	25.031	24.648	23	0.886	13118	1983	13	32	153	1.55(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDF											Ma
339.8597	26.730	28.125	-84	0.946	904999	154058	715	1787	215		M
341.8567	26.730	28.125	-84	0.946	564501	93804	434	1085	216	1.60(1.32-1.78)	
339.8597	27.672	28.125	-27	0.979	117373	11006	715	1787	15		
341.8567	27.664	28.125	-28	0.979	69151	6997	434	1085	16	1.70(1.32-1.78)	
339.8597	28.135	28.125	1	0.996	194606	47267	715	1787	66		M
341.8567	28.135	28.125	1	0.996	114254	26918	434	1085	62	1.70(1.32-1.78)	
339.8597	28.607	28.125	29	1.012	34211	12548	715	1787	18		
341.8567	28.598	28.125	28	1.012	21394	8068	434	1085	19	1.60(1.32-1.78)	
339.8597	30.037	28.125	115	1.063	435083	52930	715	1787	74		
341.8567	30.037	28.125	115	1.063	266445	32432	434	1085	75	1.63(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	30.492	29.612	53	1.356	166314	21083	181	452	116		
369.8919	30.484	29.612	52	1.356	104257	13044	65	162	201	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											a
355.8546	30.534	29.637	54	1.001	231619	30209	96	240	315		a
357.8516	30.526	29.637	53	1.001	148558	19248	130	325	148	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	28.598	28.489	7	0.938	9909	2313	96	240	24		
357.8516	28.598	28.489	7	0.938	6369	1550	130	325	12	1.56(1.32-1.78)	
355.8546	30.778	28.489	137	1.009	7198	1436	96	240	15		
357.8516	30.778	28.489	137	1.009	6004	937	130	325	7	1.20(1.32-1.78)	
	Empc Correction				4643	926	130	325	7		
13C-1,2,3,4,7,8-HxCDF											
383.8639	35.352	34.942	25	0.958	158263	36893	166	415	222		
385.8610	35.352	34.942	25	0.958	296614	65456	178	445	368	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											Ea
373.8208	35.368	34.959	25	1.000	3161450	659150	954	2385	691		a
375.8178	35.368	34.959	25	1.000	2375596	494169	443	1107	1116	1.33(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.486	35.111	22	0.962	151098	41908	166	415	252		
385.8610	35.478	35.111	22	0.962	274453	73750	178	445	414	0.55(0.43-0.59)	
1,2,3,6,7,8-HxCDF											a
373.8208	35.494	35.119	22	1.000	913839	249315	954	2385	261		a
375.8178	35.494	35.119	22	1.000	675961	184840	443	1107	417	1.35(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											a
383.8639	36.260	35.919	20	0.983	126170	28826	166	415	174		a
385.8610	36.260	35.919	20	0.983	228152	52818	178	445	297	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											Ma
373.8208	36.277	35.936	20	1.000	89048	21249	954	2385	22		M
375.8178	36.269	35.936	20	1.000	71437	15811	443	1107	36	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											a
383.8639	37.085	36.811	16	1.005	125325	51960	166	415	313		a
385.8610	37.085	36.811	16	1.005	228705	94723	178	445	532	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											Ma
373.8208	37.093	36.828	16	1.000	54386	21583	954	2385	23		M
375.8178	37.093	36.828	16	1.000	41653	17425	443	1107	39	1.31(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	34.140	35.028	-53	0.966	150672	59961	954	2385	63		
375.8178	34.140	35.028	-53	0.966	121815	44683	443	1107	101	1.24(1.05-1.43)	
373.8208	34.822	35.028	-12	0.985	80742	22165	954	2385	23		a
375.8178	34.822	35.028	-12	0.985	66849	18265	443	1107	41	1.21(1.05-1.43)	
373.8208	36.142	35.028	67	1.022	52020	10348	954	2385	11		M
375.8178	36.142	35.028	67	1.022	45071	8098	443	1107	18	1.15(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	36.891	36.609	17		374575	71744	72	180	996		a
403.8529	36.900	36.609	17		295371	60085	48	120	1252	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	36.445	36.129	19	0.988	161031	41919	72	180	582		a
403.8529	36.454	36.129	19	0.988	120230	30871	48	120	643	1.34(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDD											a
389.8158	36.471	36.146	19	1.001	2422	720	23	57	31		a
391.8127	36.462	36.146	19	1.000	1928	460	27	67	17	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											a
401.8559	36.555	36.247	18	0.991	165084	34567	72	180	480		a
403.8529	36.546	36.247	18	0.991	130147	30057	48	120	626	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											a
389.8158	36.572	36.264	18	1.000	5299	1134	23	57	49		a
391.8127	36.563	36.264	18	1.000	3952	797	27	67	30	1.34(1.05-1.43)	
1,2,3,7,8,9-HxCDD											a
389.8158	36.908	36.626	17	1.013	4203	757	23	57	33		a
391.8127	36.908	36.626	17	1.013	3786	737	27	67	27	1.11(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.754	35.394	-38	0.951	6024	1237	23	57	54		
391.8127	34.754	35.394	-38	0.951	4566	1024	27	67	38	1.32(1.05-1.43)	
389.8158	35.419	35.394	1	0.969	3216	807	23	57	35		
391.8127	35.419	35.394	1	0.969	2383	711	27	67	26	1.35(1.05-1.43)	
389.8158	35.722	35.394	20	0.977	19822	3519	23	57	153		
391.8127	35.713	35.394	19	0.977	16075	3035	27	67	112	1.23(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.797	38.626	10	1.052	94218	24024	97	242	248		
419.8220	38.797	38.626	10	1.052	205889	55754	67	167	832	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.805	38.630	10	1.000	807465	222365	199	497	1117		
409.7788	38.805	38.630	10	1.000	761946	212262	176	440	1206	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.975	39.880	6	1.084	81522	23991	97	242	247		
419.8220	39.975	39.880	6	1.084	183843	55669	67	167	831	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.984	39.885	6	1.000	195312	58595	199	497	294		
409.7788	39.984	39.885	6	1.000	186249	56473	176	440	321	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.142	39.258	-7	1.009	149954	49262	199	497	248		
409.7788	39.134	39.258	-7	1.009	140837	45234	176	440	257	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.672	39.569	6	1.075	168152	49151	142	355	346		
437.8140	39.681	39.569	7	1.076	154983	44961	76	190	592	1.08(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.689	39.582	6	1.000	53203	16945	33	82	513		
425.7737	39.689	39.582	6	1.000	51990	16431	35	87	469	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.075	39.258	-11	0.985	45613	14680	33	82	445		
425.7737	39.075	39.258	-11	0.985	44970	15306	35	87	437	1.01(0.88-1.20)	
13C-OCDD											
469.7780	42.154	42.072	5	1.143	236506	63075	181	452	348		
471.7750	42.154	42.072	5	1.143	271324	72834	93	232	783	0.87(0.76-1.02)	

Report Date: 20-Aug-2021 09:42:01 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											
441.7428	42.246	42.165	5	1.002	282467	73043	57	142	1281		
443.7399	42.246	42.165	5	1.002	289167	75346	59	147	1277	0.98(0.76-1.02)	
OCDD											
457.7377	42.162	42.081	5	1.000	347842	93698	59	147	1588		
459.7348	42.162	42.081	5	1.000	392563	104348	60	150	1739	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 20-Aug-2021 09:42:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	18-Aug-2021 23:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	41

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	569583	63885

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	569583	63885

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.903	2127689	313393	2338616	345923	725.9	0.91	RQ
18.903	1800734	266360	2338616	345923	672.8		Empc Correction
19.393	3410372	406247	3755510	473536	1164.7	0.91	RQ
19.393	2891742	364622	3755510	473536	1080.4		Empc Correction
19.867	3168515	584749	3502499	650639	1084.3	0.90	RQ
19.867	2696924	500992	3502499	650639	1007.6		Empc Correction
20.168	5084286	934813	5666074	1030939	1747.3	0.90	RQ
20.168	4362876	793823	5666074	1030939	1630.0		Empc Correction
20.650	67953400	5368192	77132531	6132748	23581	0.88	
21.158	1870541	151472	2080433	171561	642.2	0.90	RQ
21.158	1601933	132101	2080433	171561	598.5		Empc Correction
22.354	9364188	1102093	10337488	1208290	3202.2	0.91	RQ
22.354	7959865	930383	10337488	1208290	2973.9		Empc Correction
Signal Totals:							
	89267474	8356473	104813151	10013636			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	197792142	18874595				0.89	RQ
	194080625	18370109					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 32148 = (197792142 * 100.000) / (569583 * 1.080)

Empc Amount: 31545 = (194080625 * 100.000) / (569583 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:42:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	18-Aug-2021 23:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	41

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	342464	19181

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	342464	19181

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.381	27683	6170	39508	7964	18.2	0.70	
23.516	1804353	308277	2312888	395372	1118.0	0.78	
Signal Totals:							
	1832036	314447	2352396	403336			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4184432	717783				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1136.2 = (4184432 * 100.000) / (342464 * 1.075)

Report Date: 20-Aug-2021 09:42:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	18-Aug-2021 23:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	41

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	409257	44624
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	419796	59674

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	414526	52149

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.005	20377	2654	13118	1983	7.84	1.55	M
Signal Totals:							
	20377	2654	13118	1983			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	33495	4637				1.55	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.837 = (33495 * 100.000) / (414526 * 1.031)

QC Flag Legend

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	18-Aug-2021 23:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	41

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	409257	44624
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	419796	59674

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	414526	52149

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
26.730	904999	154058	564501	93804	343.8	1.60	M
27.672	117373	11006	69151	6997	43.6	1.70	
28.135	194606	47267	114254	26918	72.3	1.70	Ma
28.607	34211	12548	21394	8068	13.0	1.60	
30.037	435083	52930	266445	32432	164.1	1.63	
Signal Totals:							
	1686272	277809	1035745	168219			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2722017	446028				1.63	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 636.875 = (2722017 * 100.000) / (414526 * 1.031)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 20-Aug-2021 09:42:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	18-Aug-2021 23:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	41

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	270571	34127

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	270571	34127

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
28.598	9909	2313	6369	1550	5.75	1.56	
30.778	7198	1436	6004	937	4.66	1.20	RQ
30.778	7198	1436	4643	926	4.18		Empc Correction
Signal Totals:							
	17107	3749	11012	2476			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	29480	6236				1.38	RQ
	28119	6225					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 10.411 = (29480 * 100.000) / (270571 * 1.046)

Empc Amount: 9.931 = (28119 * 100.000) / (270571 * 1.046)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:42:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	18-Aug-2021 23:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	41

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	454877	102349
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	425551	115658
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	354322	81644
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	354030	146683

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	397195	111583

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
34.140	150672	59961	121815	44683	56.9	1.24	
34.822	80742	22165	66849	18265	30.8	1.21	a
36.142	52020	10348	45071	8098	20.3	1.15	Ma
Signal Totals:							
	283434	92474	233735	71046			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	517169	163520				1.21	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 108.059 = (517169 * 100.000) / (397195 * 1.205)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 20-Aug-2021 09:42:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	18-Aug-2021 23:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	41

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	281261	72790
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	295231	64624
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	288246	68707

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.754	6024	1237	4566	1024	3.48	1.32	
35.419	3216	807	2383	711	1.84	1.35	
35.722	19822	3519	16075	3035	11.8	1.23	
Signal Totals:							
	29062	5563	23024	4770			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	52086	10333				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 17.136 = (52086 * 100.000) / (288246 * 1.055)

Report Date: 20-Aug-2021 09:42:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	18-Aug-2021 23:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	41

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	300107	79778
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	265365	79660

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	282736	79719

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
39.142	149954	49262	140837	45234	74.8	1.06	
Signal Totals:							
	149954	49262	140837	45234			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	290791	94496				1.06	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 74.766 = (290791 * 100.000) / (282736 * 1.376)

Report Date: 20-Aug-2021 09:42:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	18-Aug-2021 23:36:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	41

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	323135	94112

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	323135	94112

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
39.075	45613	14680	44970	15306	26.7	1.01	
Signal Totals:							
	45613	14680	44970	15306			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	90583	29986				1.01	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 26.690 = (90583 * 100.000) / (323135 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.85

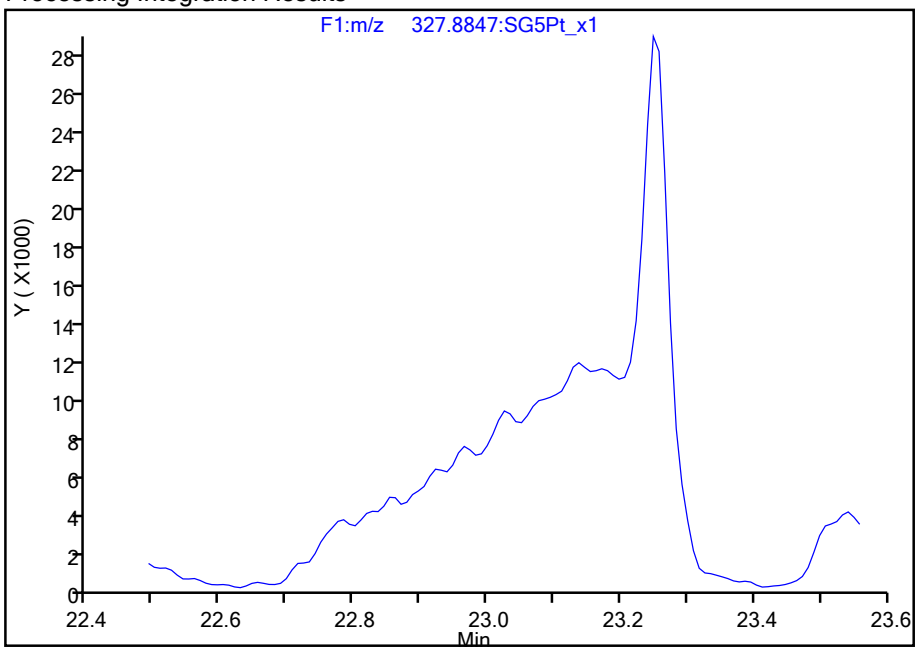

Manual Integration Results

RT: 23.25
Area: 265770
Amount: 43.147330
Amount Units: pg/ul

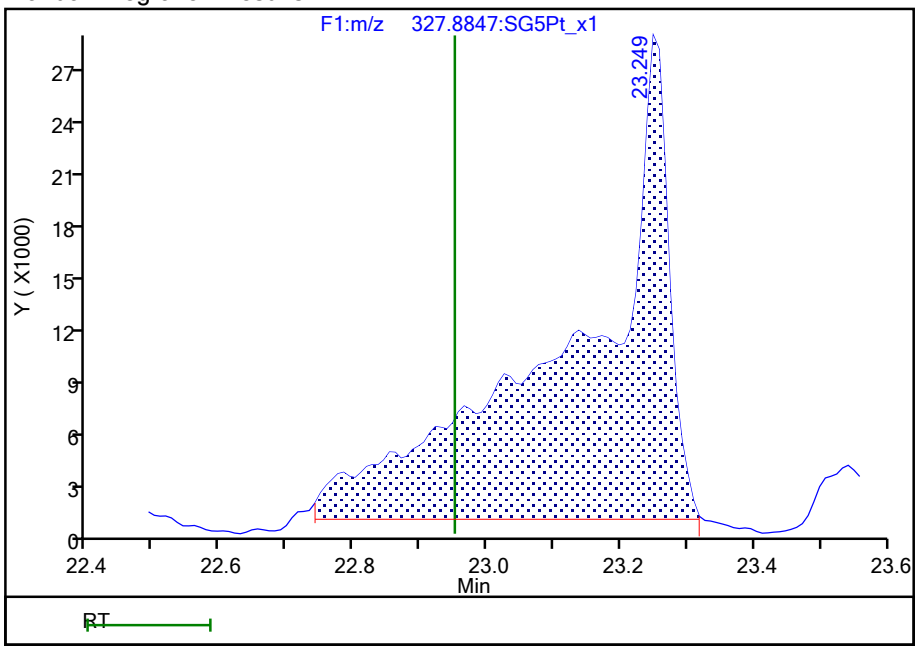

Reviewer: stephensk, 19-Aug-2021 11:17:37

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

Not Detected
Expected RT: 27.31

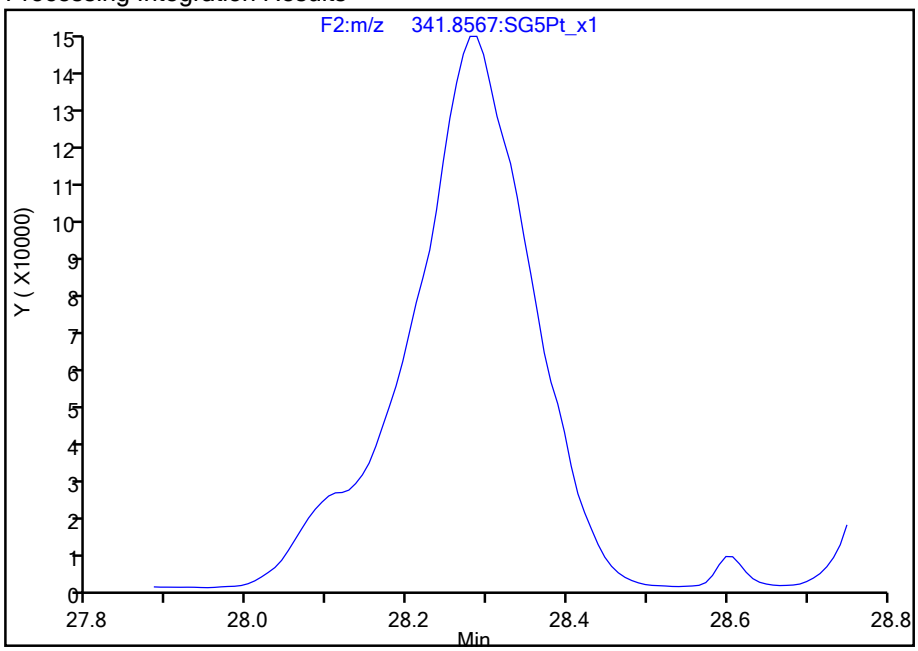

Manual Integration Results

RT: 28.29
Area: 1425781
Amount: 872.1650
Amount Units: pg/ul

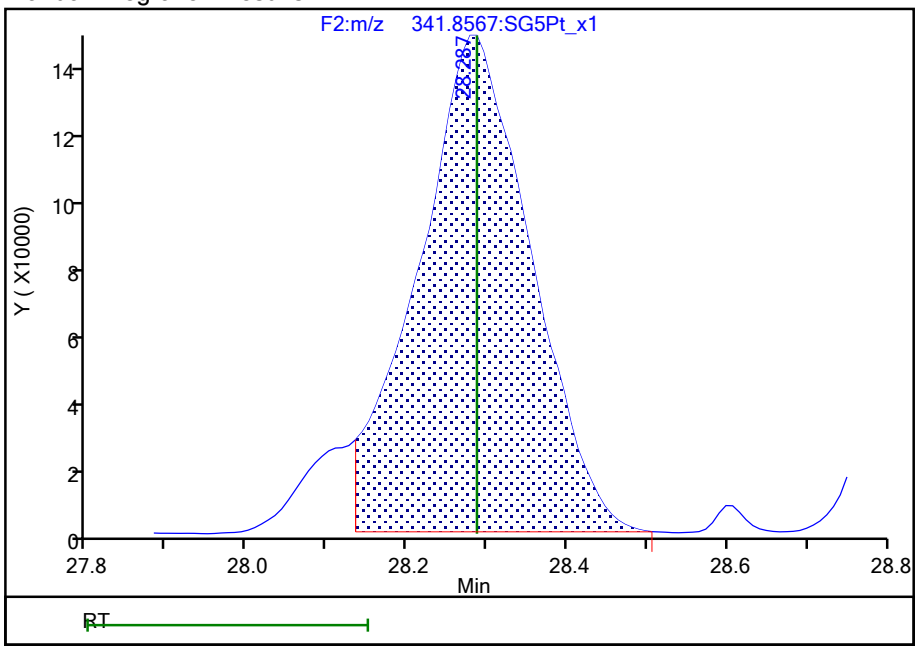

Reviewer: dadunj, 20-Aug-2021 09:38:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 27.31

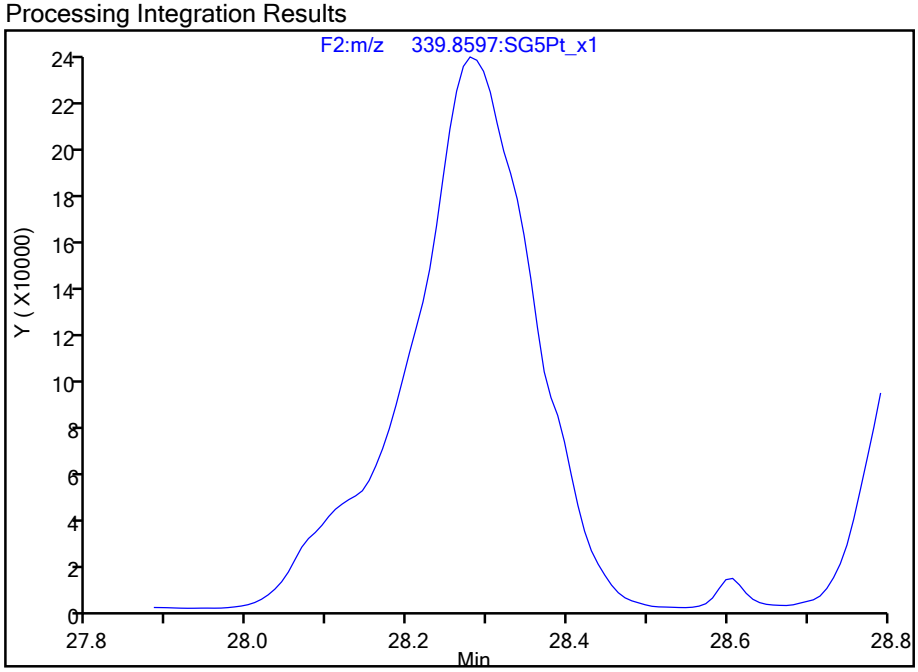

Manual Integration Results

RT: 28.28
Area: 2337301
Amount: 872.1650
Amount Units: pg/ul

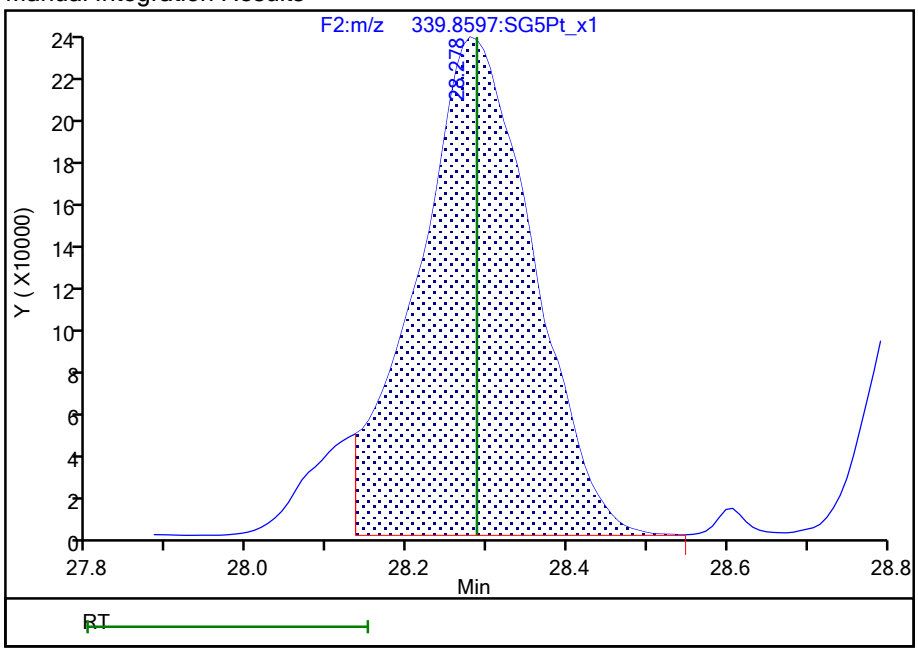

Reviewer: dadunj, 20-Aug-2021 09:38:39
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

782053

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 28.82
Area: 676134
Amount: 258.6340
Amount Units: pg/ul

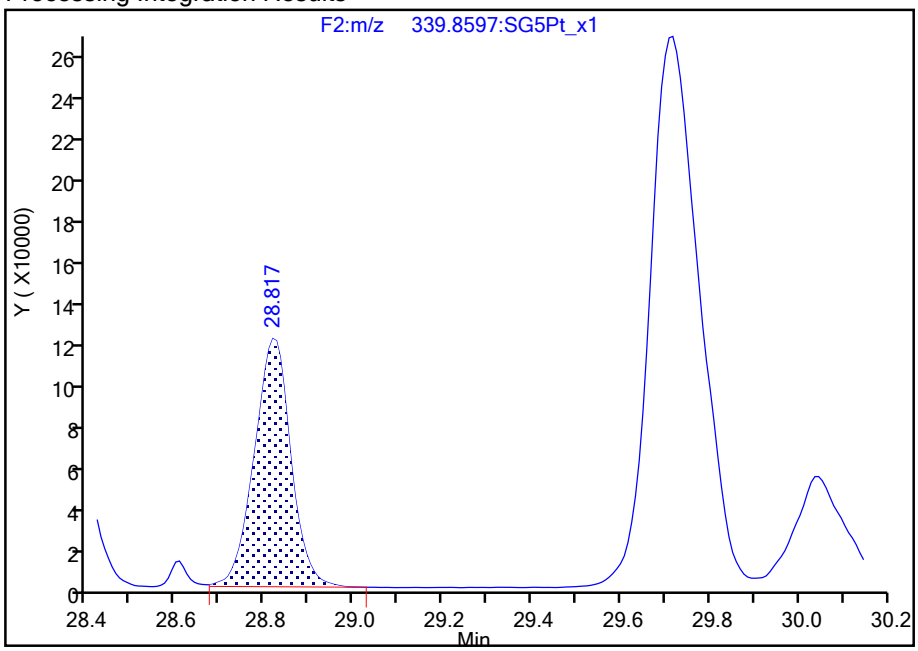

Manual Integration Results

RT: 29.72
Area: 2041031
Amount: 776.4186
Amount Units: pg/ul

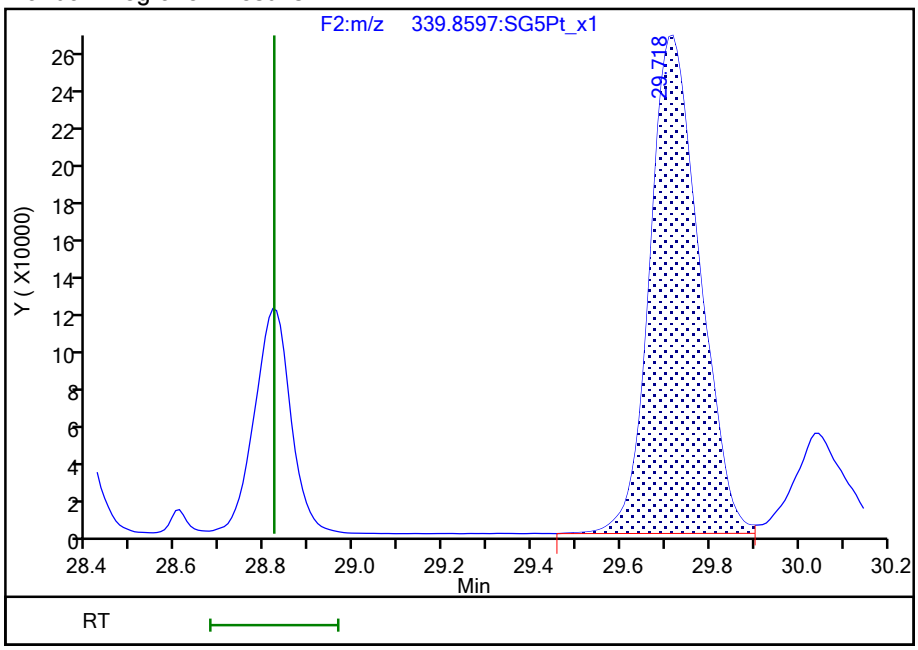

Reviewer: stephensk, 19-Aug-2021 11:18:37

Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

F1 PeCDFs, Signal: 1, m/z: 339.8597, RT: (23.99- 25.30)

Signal: 1

Processing Integration Results

RT = 25.005 Area = 20377

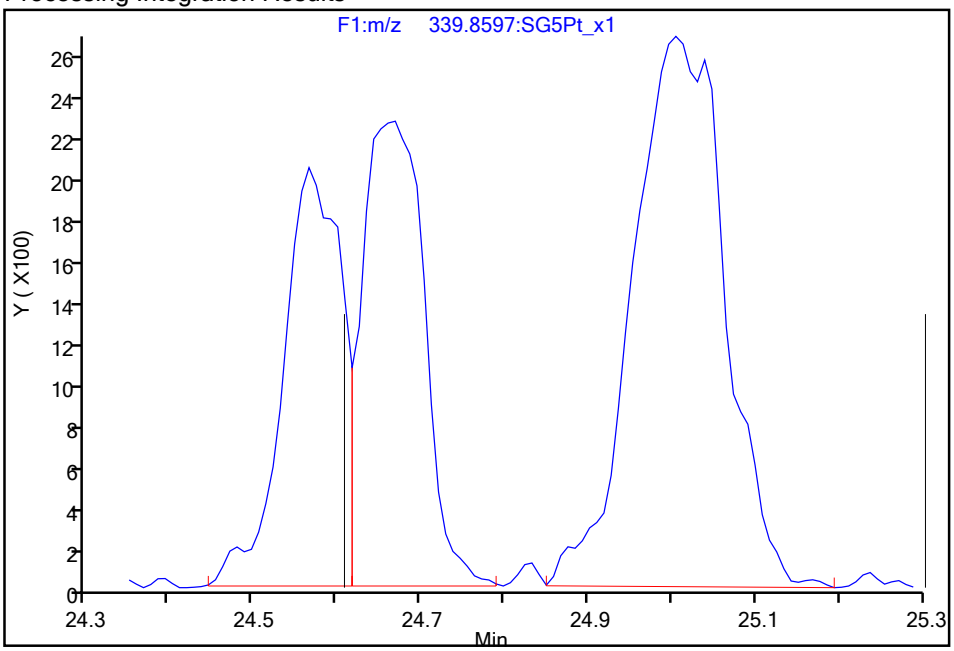

Manual Integration Results

RT = 25.005 Area = 20377

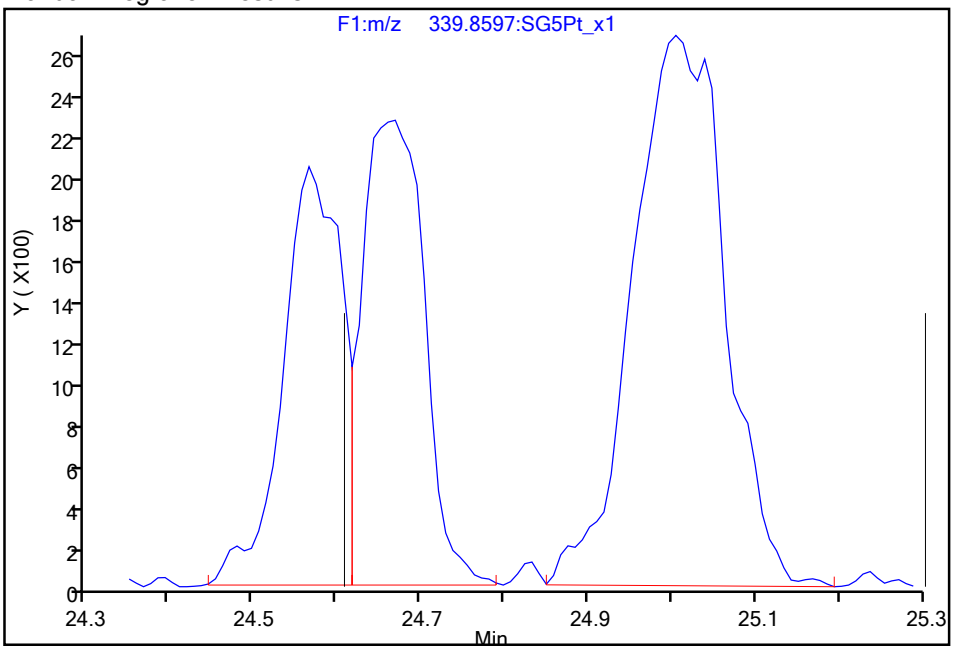

Reviewer: dadunj, 20-Aug-2021 09:37:40

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

F1 PeCDFs, Signal: 2, m/z: 341.8567, RT: (23.99- 25.30)

Signal: 2

Processing Integration Results

RT = 25.031 Area = 11775

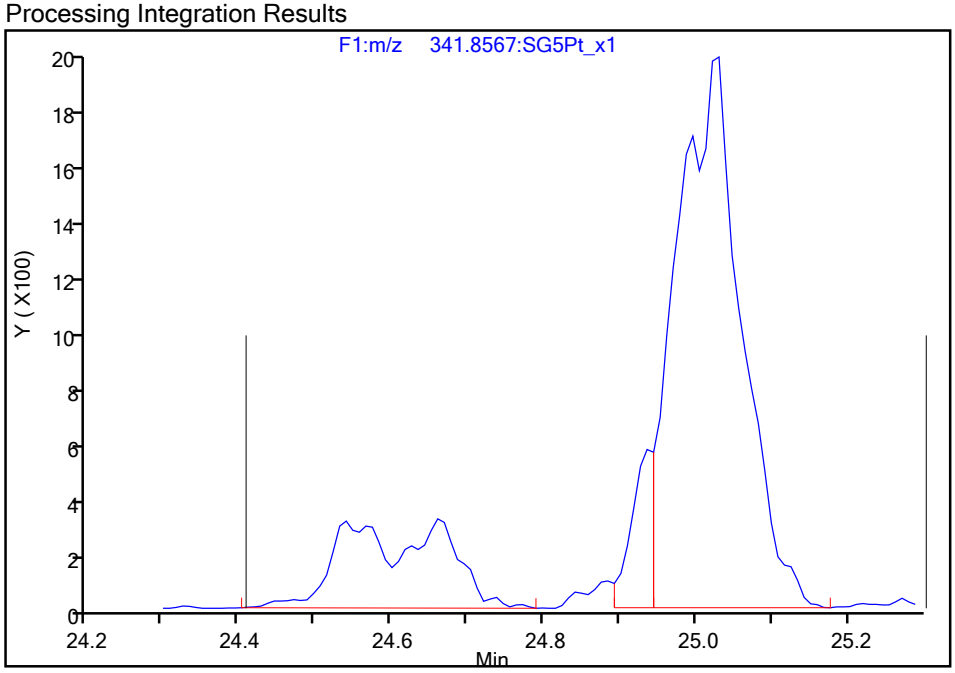

Manual Integration Results

RT = 25.031 Area = 13118 M

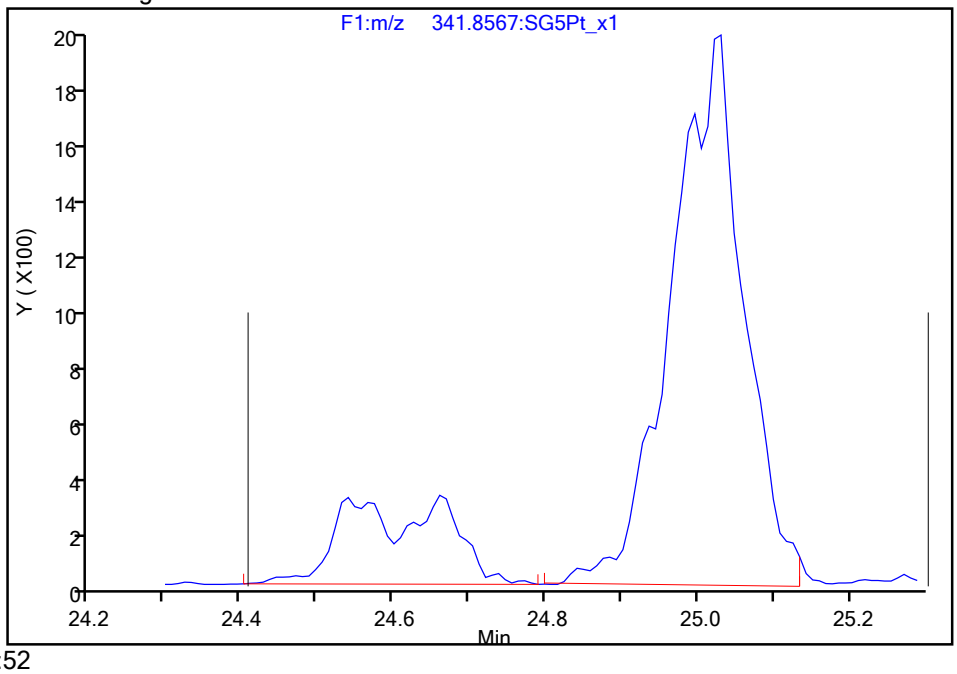

Reviewer: dadunj, 20-Aug-2021 09:37:52

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.38- 30.87)

Signal: 1

Processing Integration Results

RT = 26.730 Area = 927410

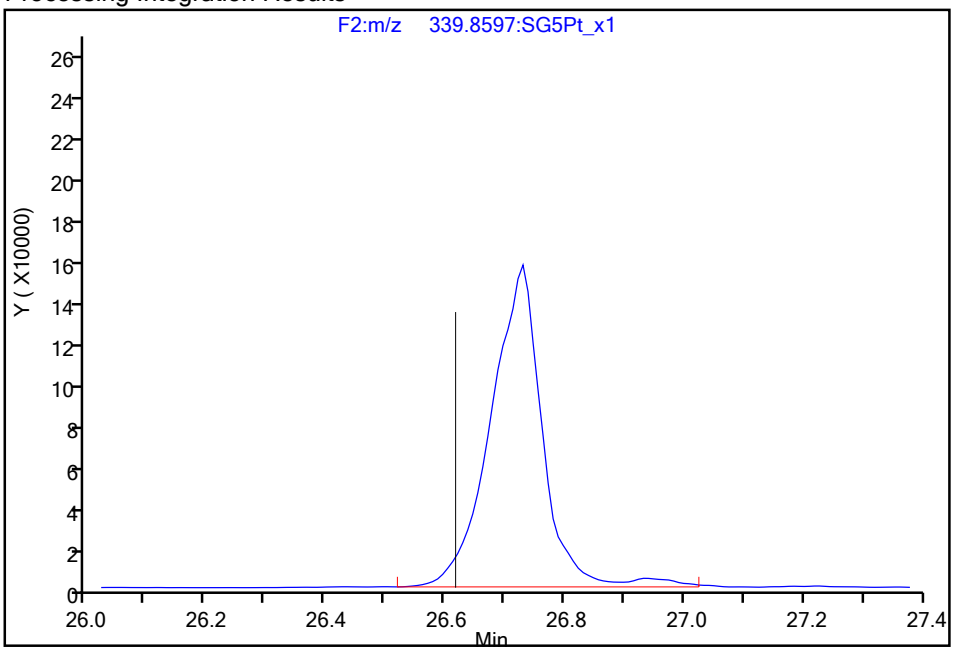

Manual Integration Results

RT = 26.730 Area = 904999 M

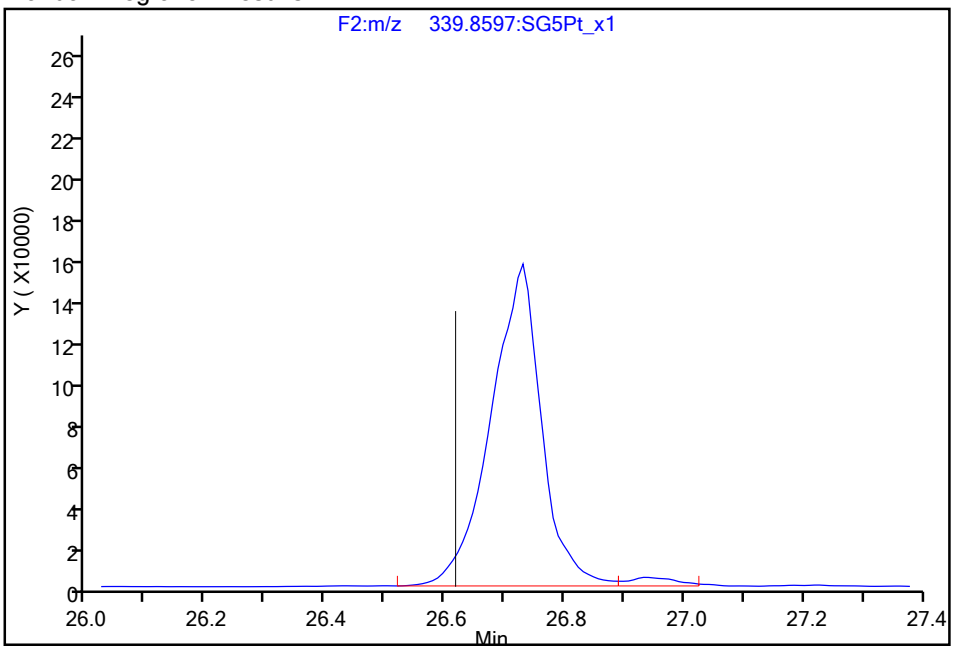

Reviewer: dadunj, 20-Aug-2021 09:38:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.38- 30.87)

Signal: 1

Not Detected
RT: 25.38- 30.87

Processing Integration Results

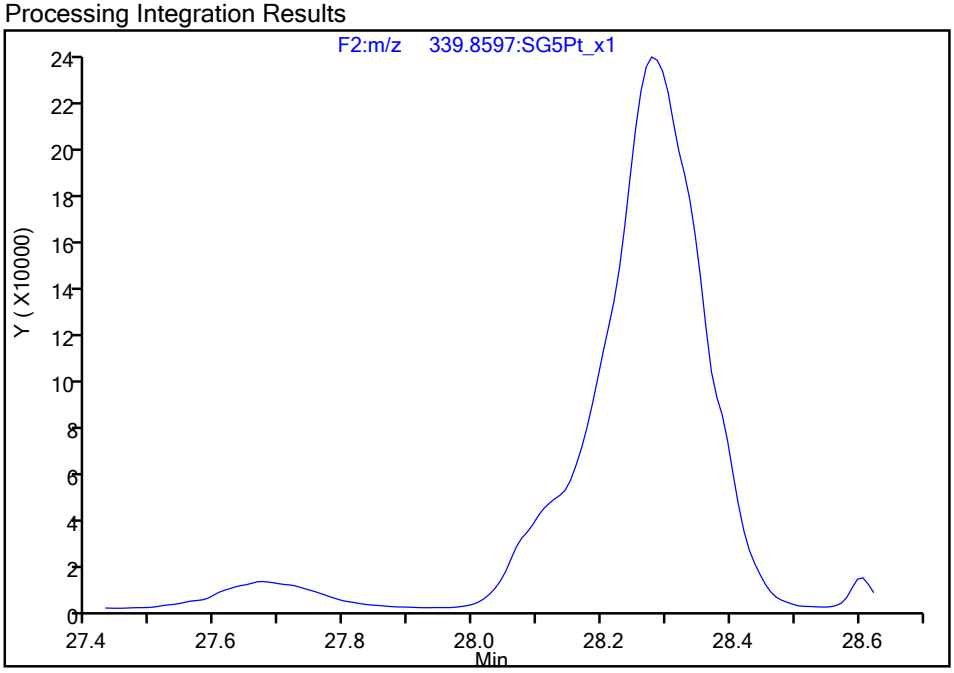

RT = 28.135 Area = 194606 M

Manual Integration Results

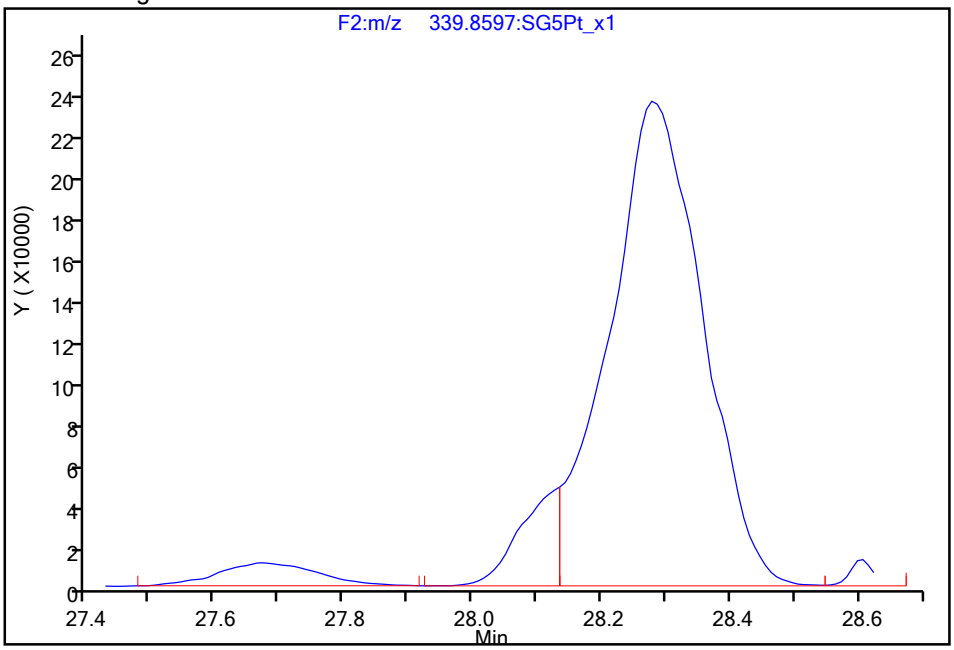

Reviewer: dadunj, 20-Aug-2021 09:38:54
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 29.64

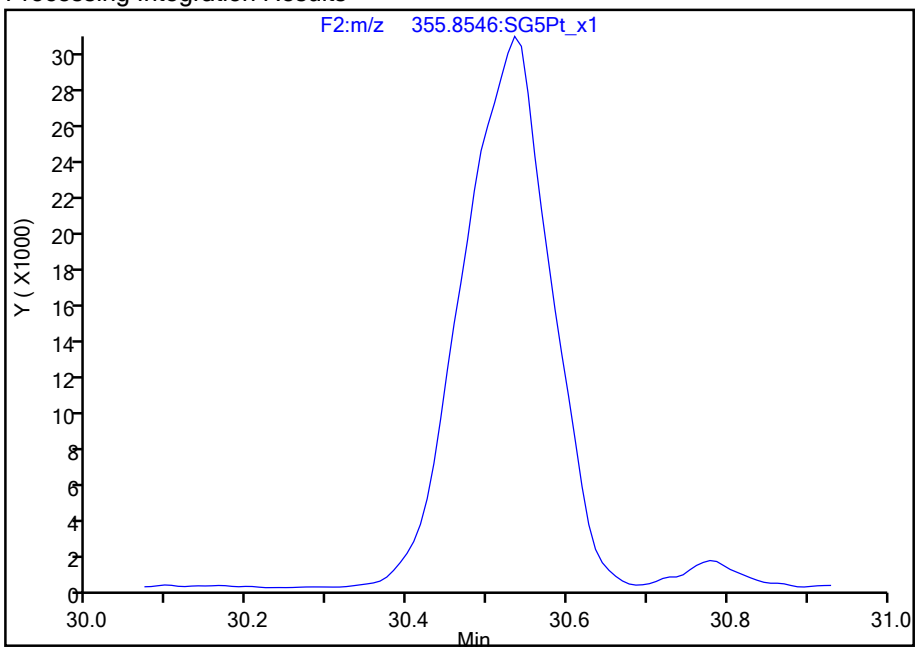

Manual Integration Results

RT: 30.53
Area: 231619
Amount: 134.2661
Amount Units: pg/ul

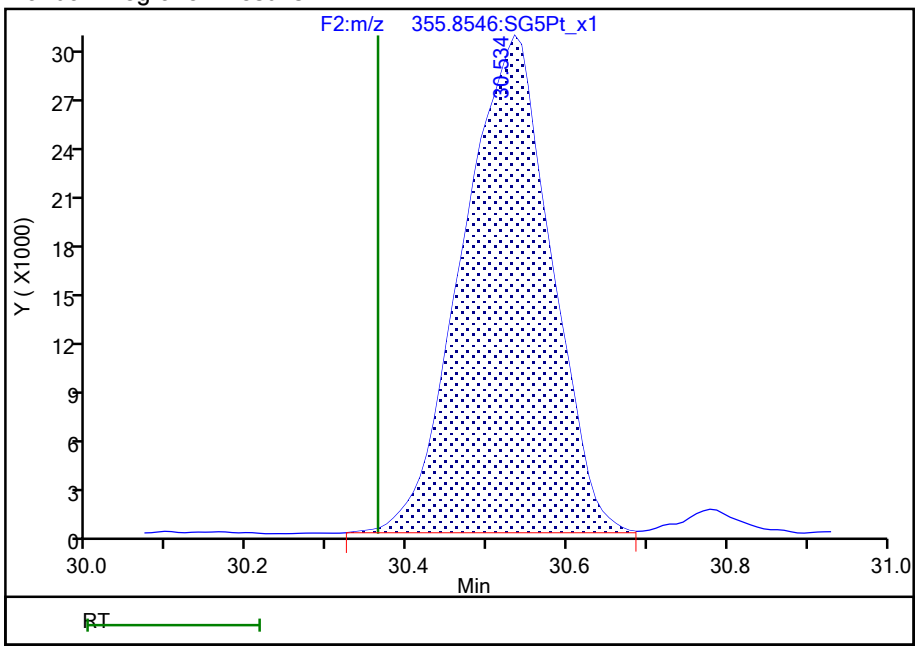

Reviewer: stephensk, 19-Aug-2021 11:18:45
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

782059

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

RT: 34.82
Area: 80742
Amount: 28.278612
Amount Units: pg/ul

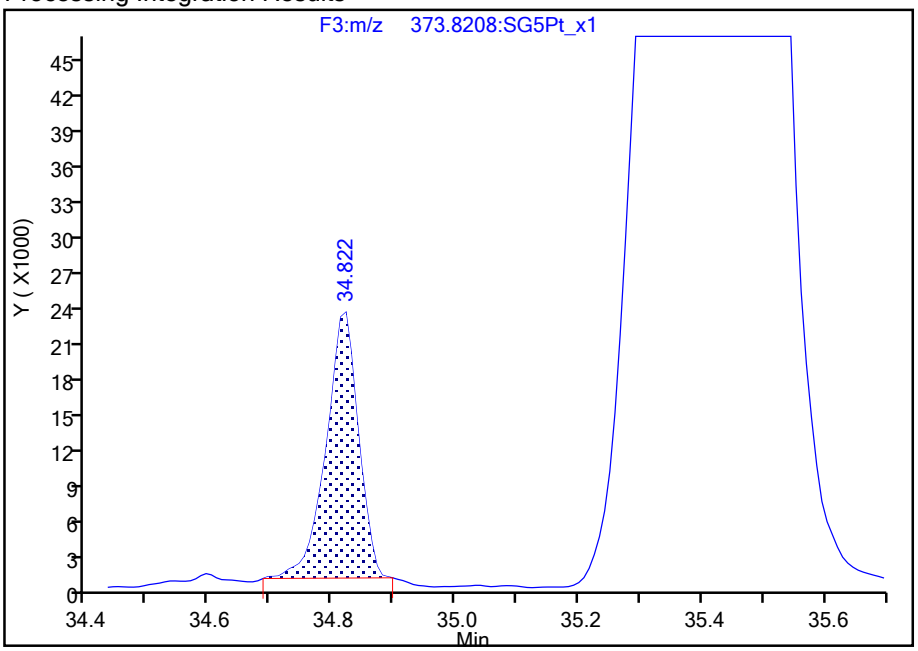

Manual Integration Results

RT: 35.37
Area: 3161450
Amount: 1060.9046
Amount Units: pg/ul

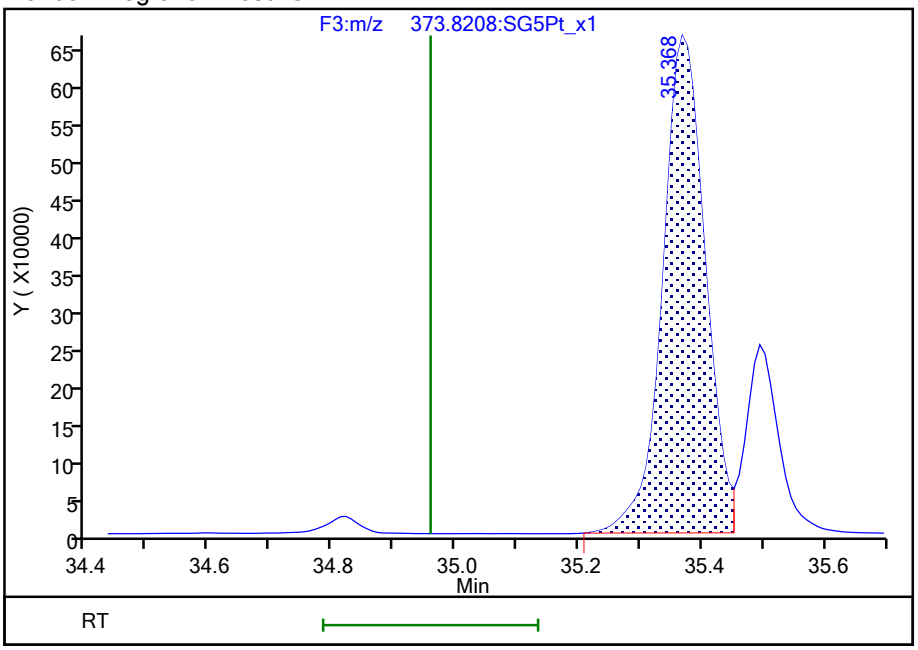

Reviewer: stephensk, 19-Aug-2021 11:18:53

Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Not Detected
Expected RT: 35.12

Processing Integration Results

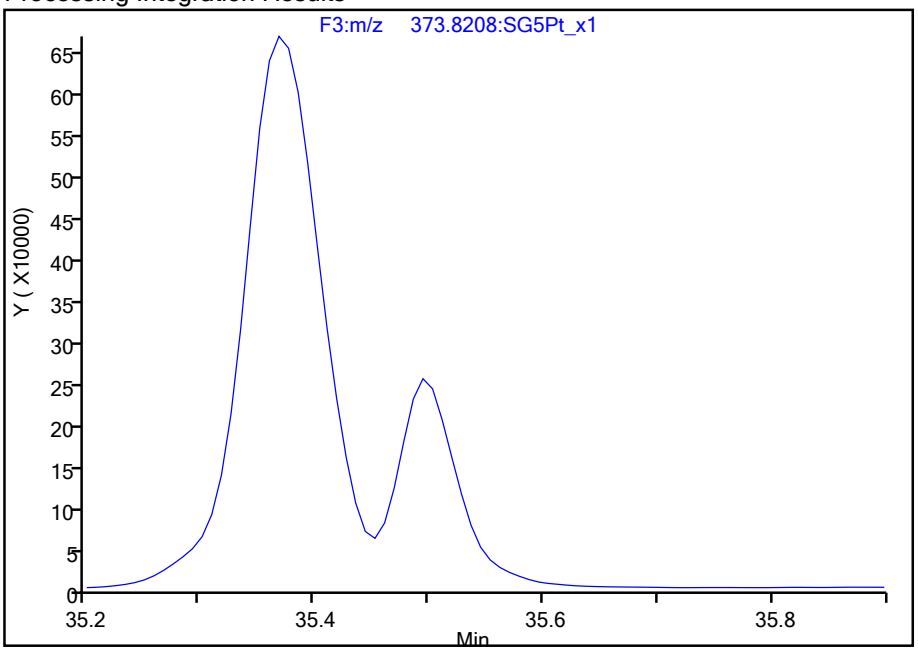

Manual Integration Results

RT: 35.49
Area: 913839
Amount: 306.7728
Amount Units: pg/ul

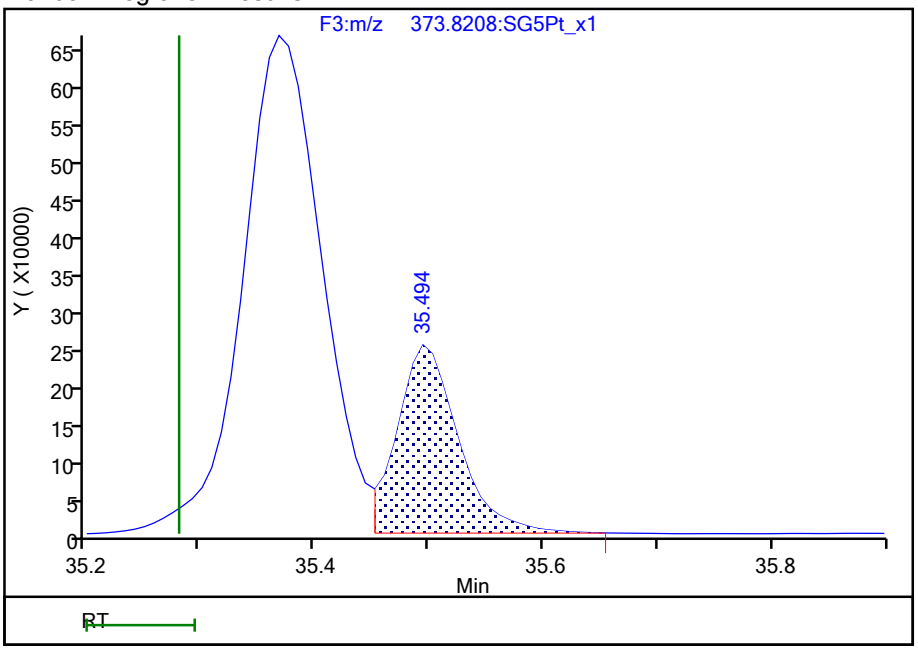

Reviewer: stephensk, 19-Aug-2021 11:19:02
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

782061

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-2,3,4,6,7,8-HxCDF, CAS: 116843-05-1

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.92

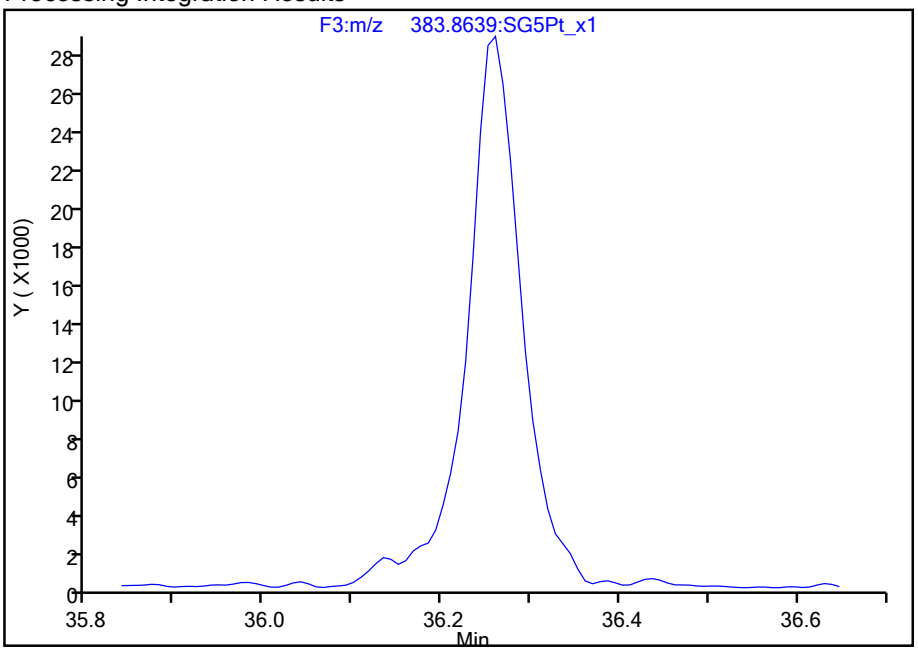

Manual Integration Results

RT: 36.26
Area: 126170
Amount: 50.790241
Amount Units: pg/ul

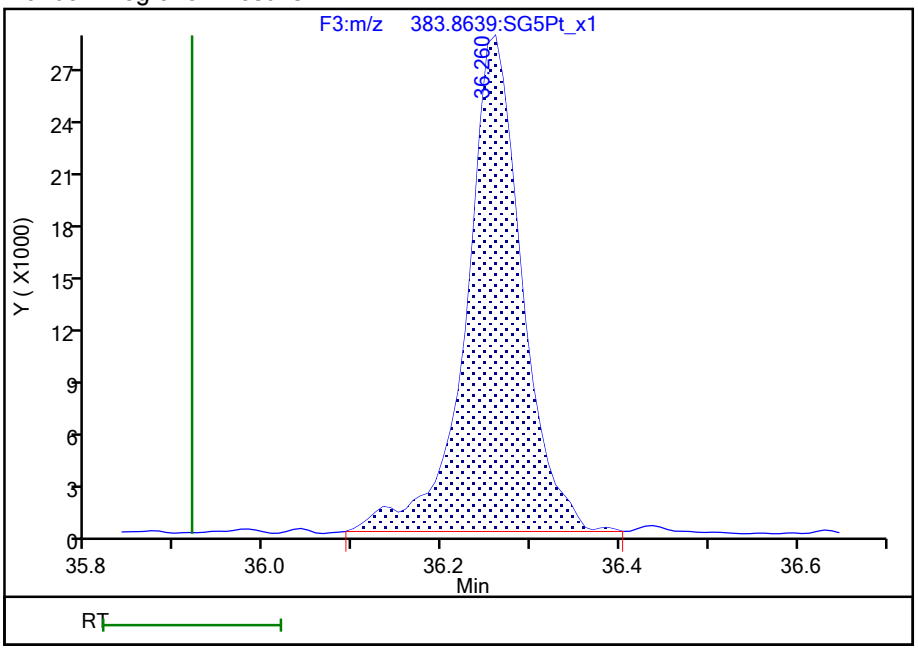

Reviewer: stephensk, 19-Aug-2021 11:19:10
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

782062

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.94

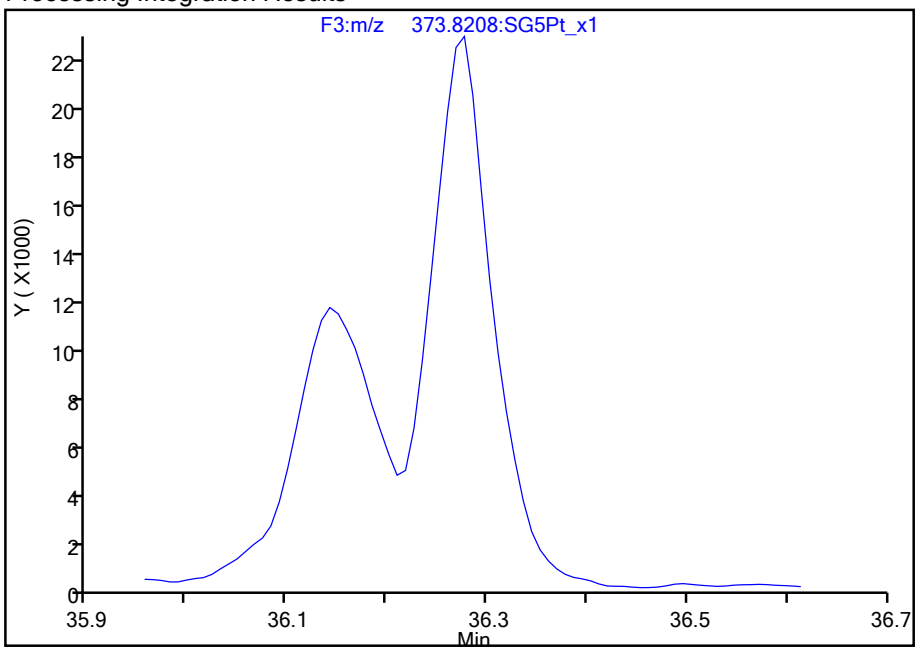

Manual Integration Results

RT: 36.28
Area: 89048
Amount: 37.294919
Amount Units: pg/ul

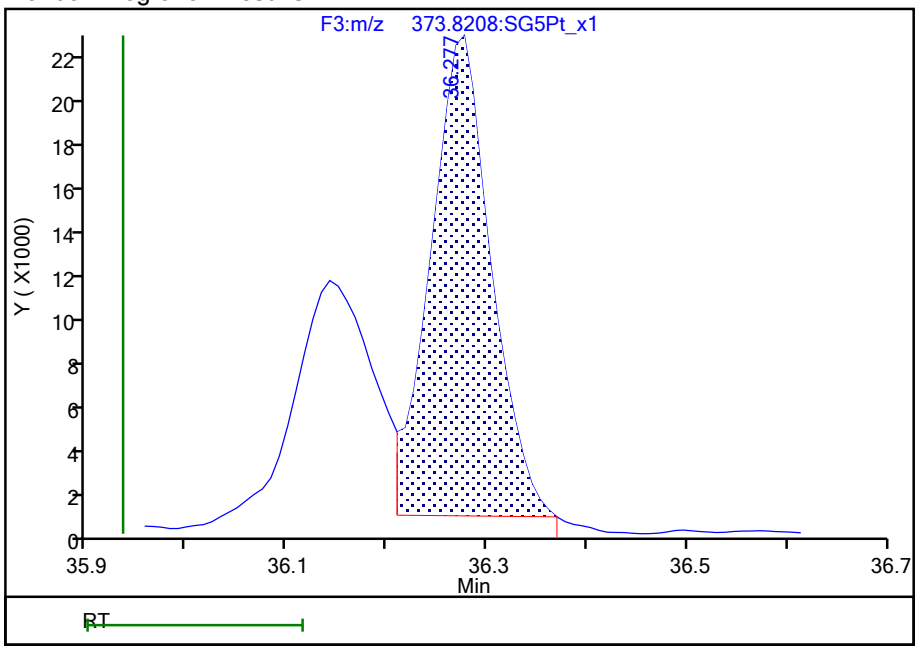

Reviewer: dadunj, 20-Aug-2021 09:39:54
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

782063

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDF, CAS: 116843-04-0

Signal: 1

Processing Integration Results

RT: 36.26
Area: 126170
Amount: 54.351402
Amount Units: pg/ul

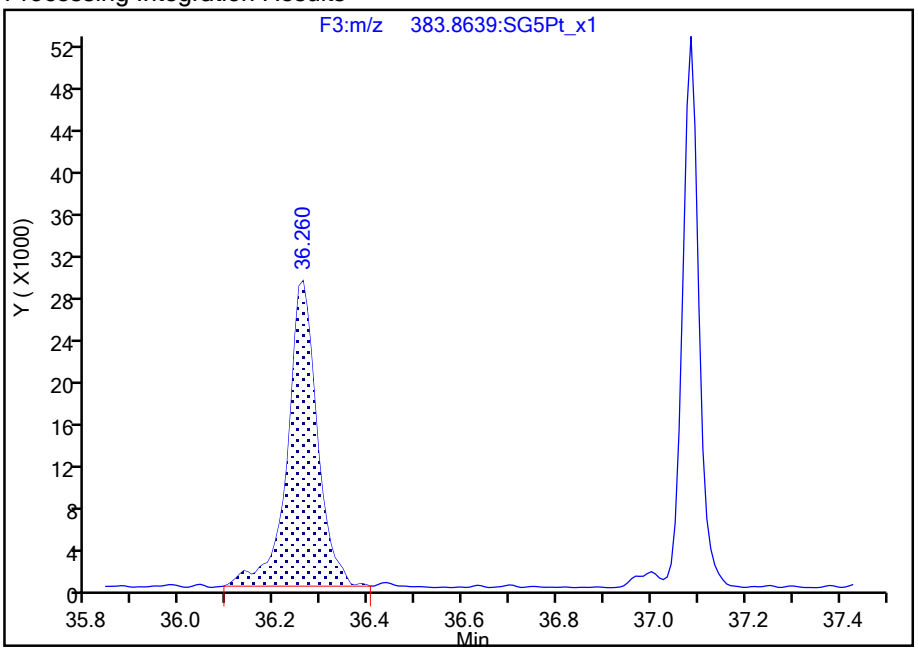

Manual Integration Results

RT: 37.08
Area: 125325
Amount: 54.306610
Amount Units: pg/ul

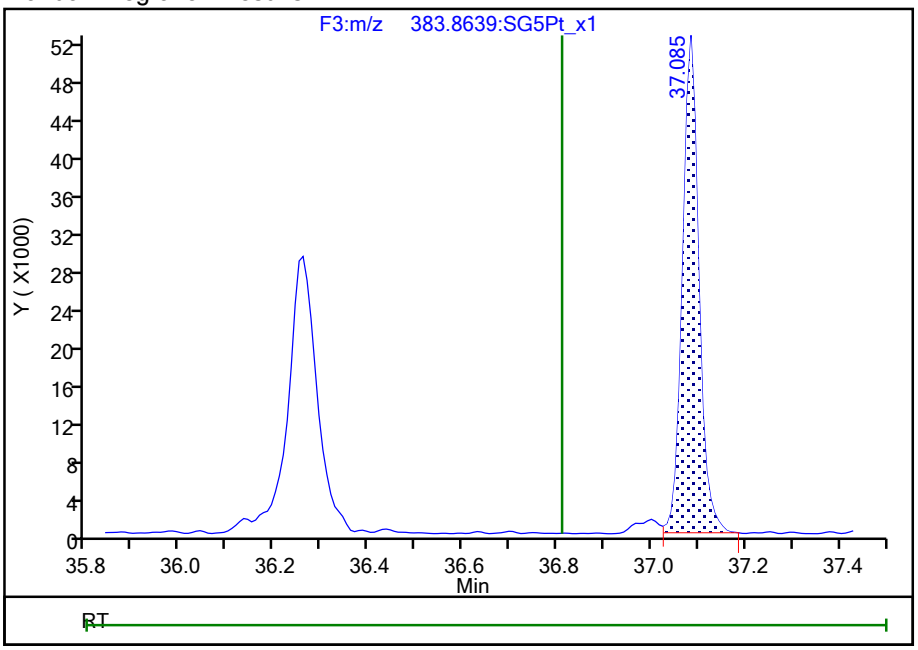

Reviewer: stephensk, 19-Aug-2021 11:19:21

Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Not Detected
Expected RT: 36.83

Processing Integration Results

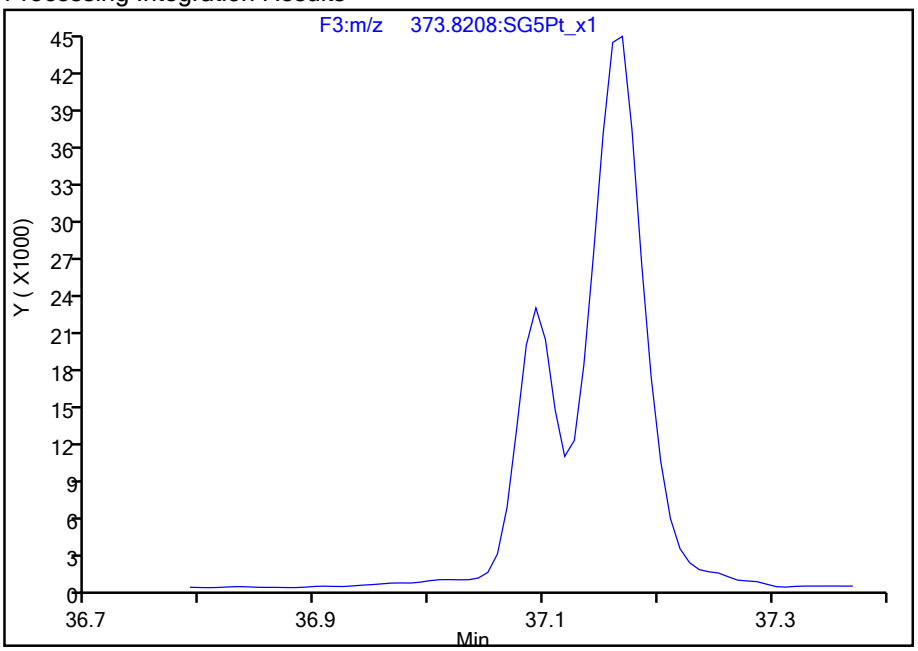

Manual Integration Results

RT: 37.09
Area: 54386
Amount: 21.874807
Amount Units: pg/ul

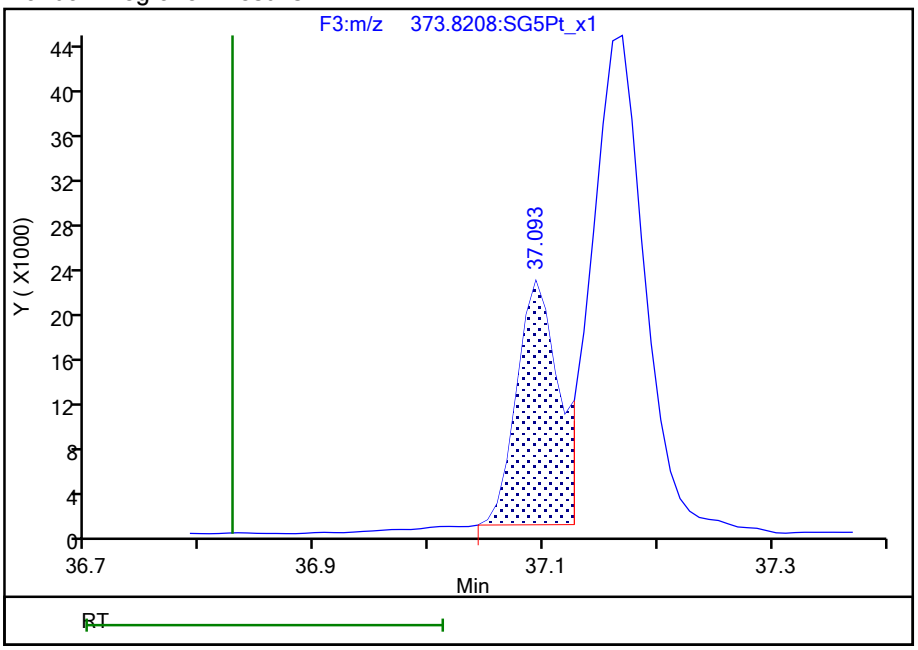

Reviewer: stephensk, 19-Aug-2021 11:19:32
Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.11- 36.95)

Signal: 1

Processing Integration Results

Not Detected
RT: 33.11- 36.95

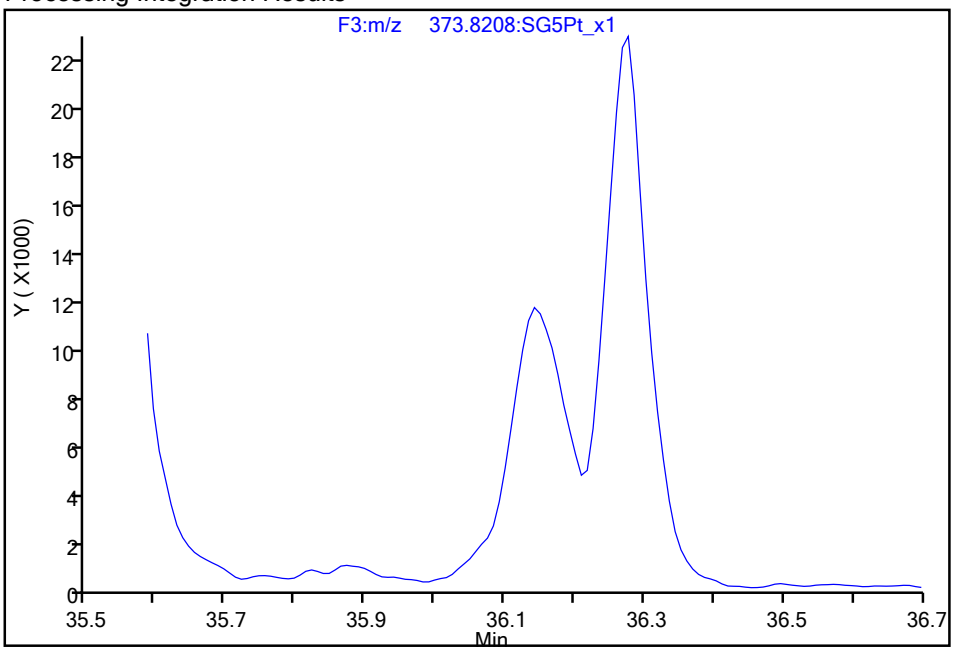

Manual Integration Results

RT = 36.142 Area = 52020 M

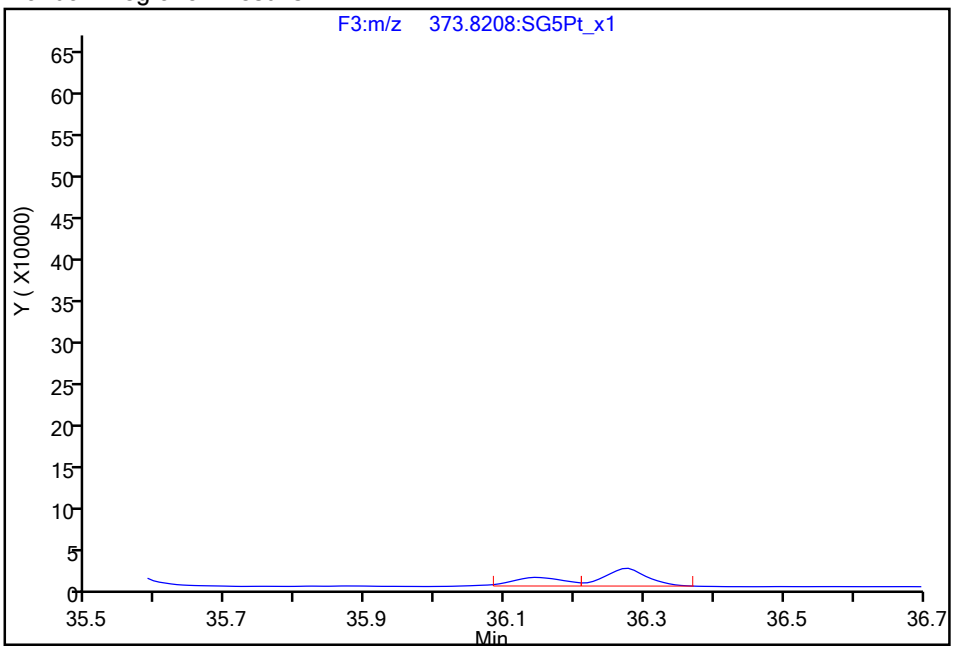

Reviewer: dadunj, 20-Aug-2021 09:40:23

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

RT: 36.34
Area: 4734
Amount: 1.625691
Amount Units: pg/ul

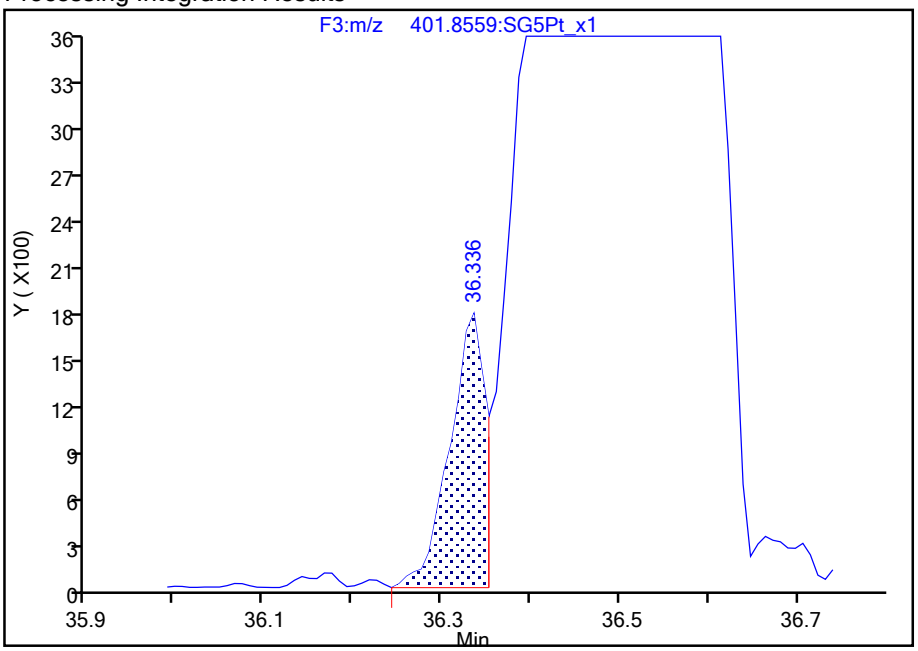

Manual Integration Results

RT: 36.45
Area: 161031
Amount: 55.336243
Amount Units: pg/ul

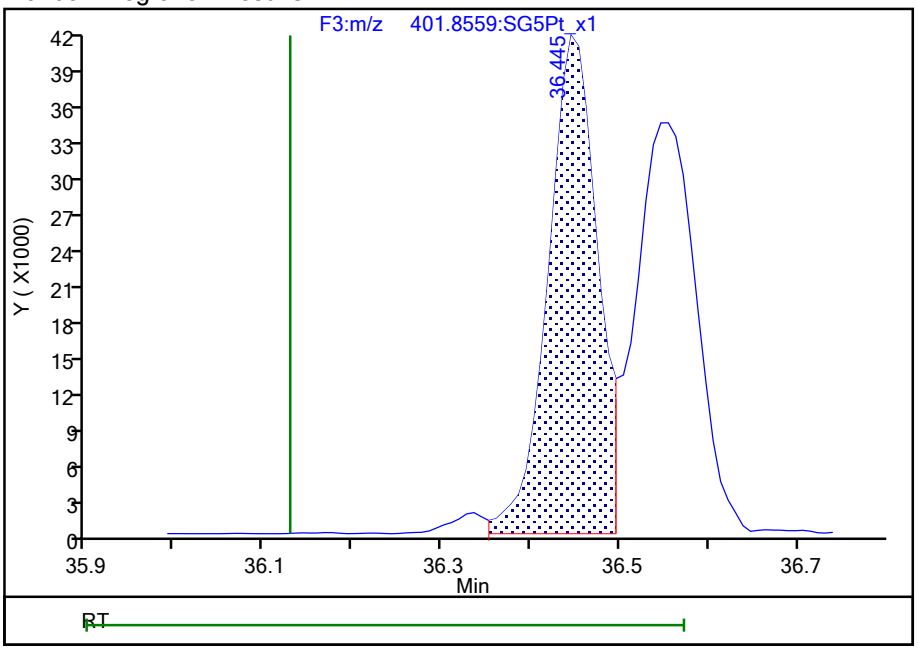

Reviewer: stephensk, 19-Aug-2021 11:18:03

Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Not Detected
Expected RT: 36.15

Processing Integration Results

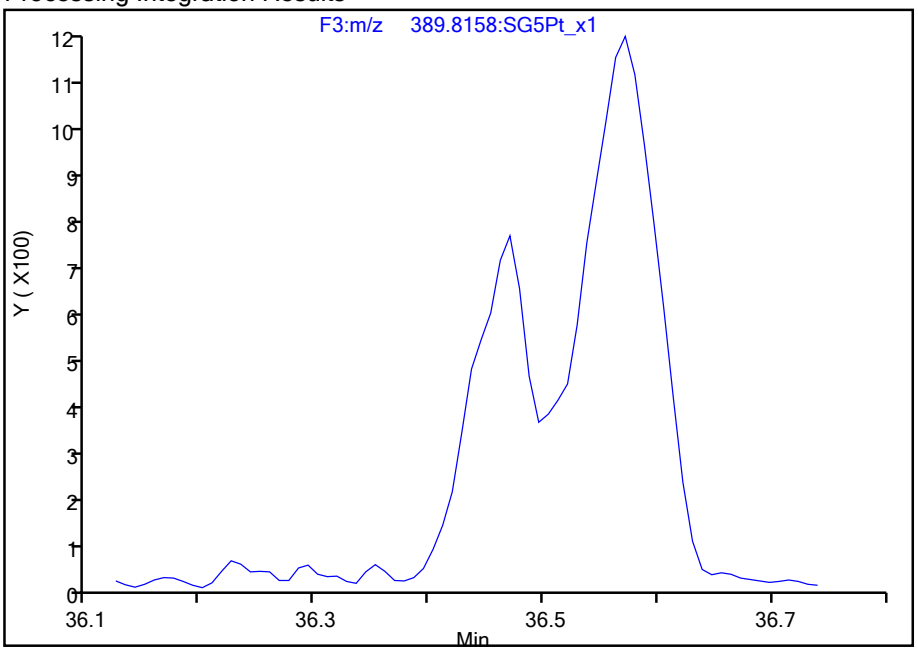

Manual Integration Results

RT: 36.47
Area: 2422
Amount: 1.457977
Amount Units: pg/ul

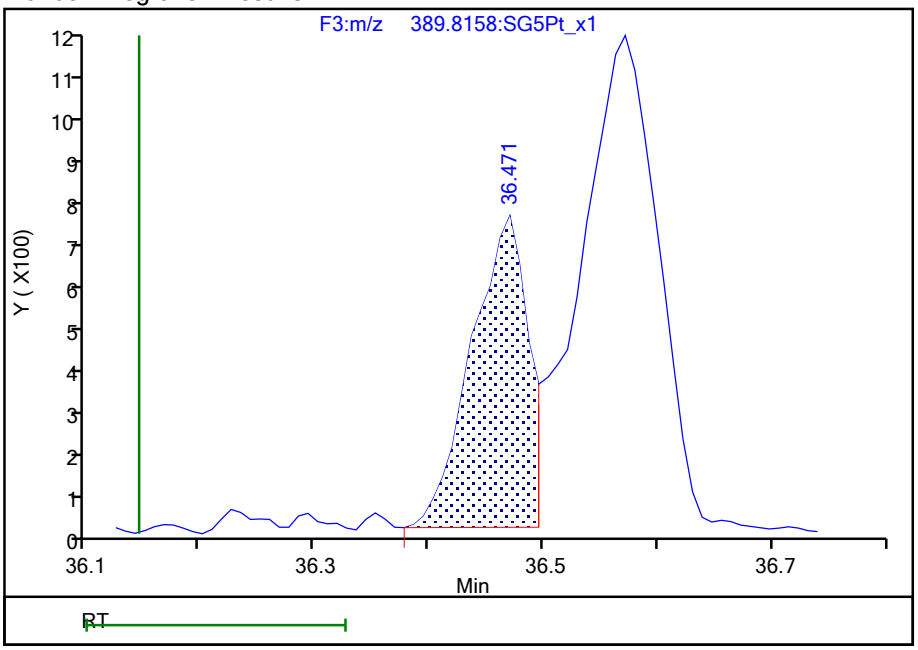

Reviewer: stephensk, 19-Aug-2021 11:18:09
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

782068

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,6,7,8-HxCDD, CAS: 109719-81-5

Signal: 1

Processing Integration Results

RT: 36.45
Area: 161031
Amount: 48.858851
Amount Units: pg/ul

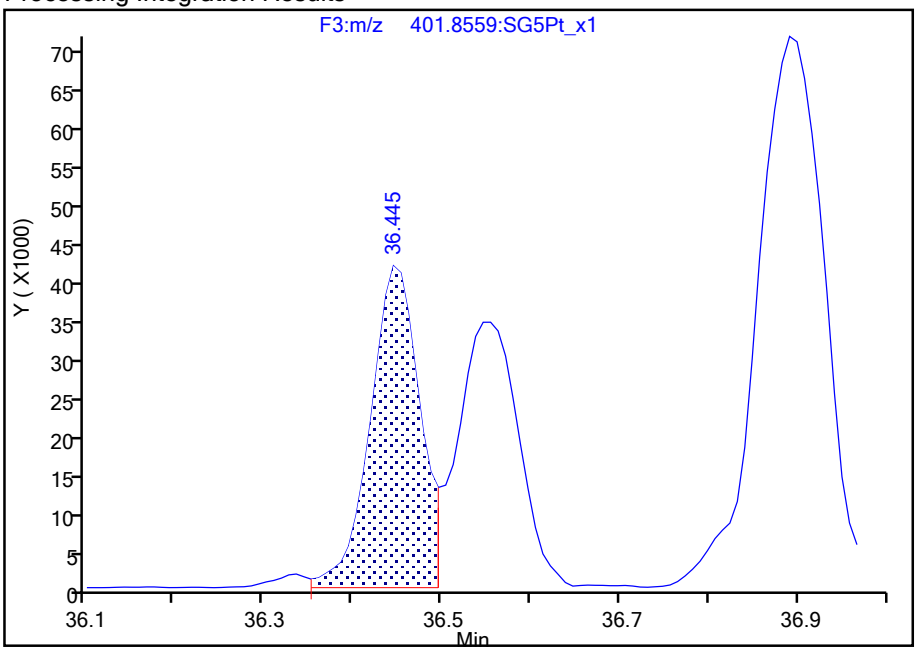

Manual Integration Results

RT: 36.55
Area: 165084
Amount: 51.285630
Amount Units: pg/ul

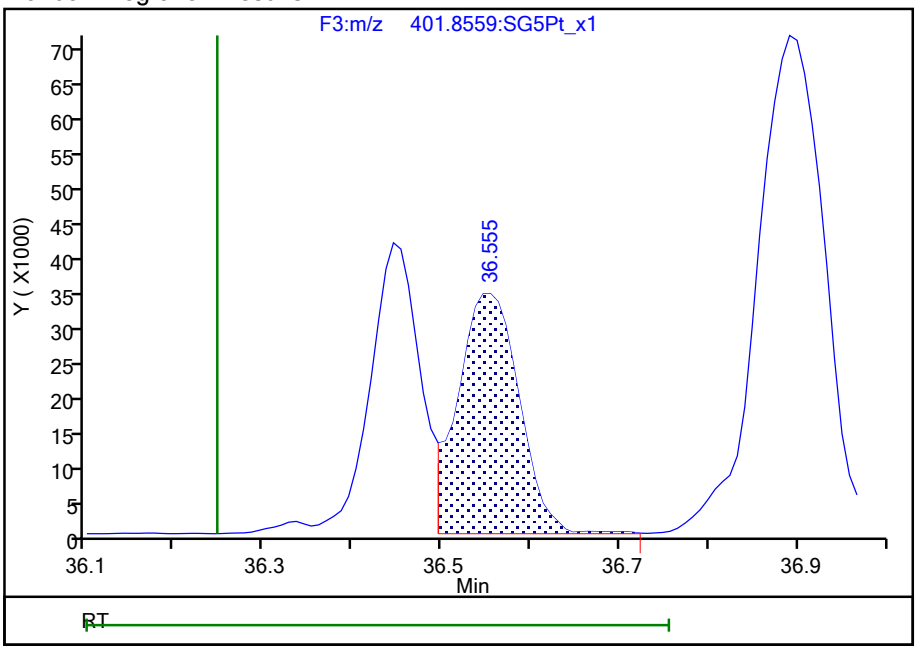

Reviewer: stephensk, 19-Aug-2021 11:18:15

Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 36.26

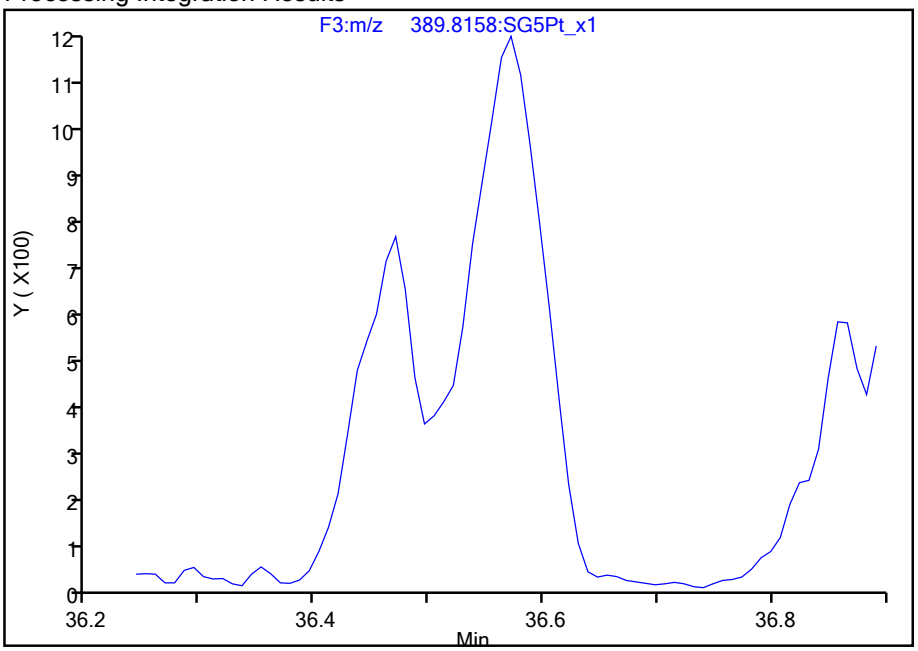

Manual Integration Results

RT: 36.57
Area: 5299
Amount: 3.154482
Amount Units: pg/ul

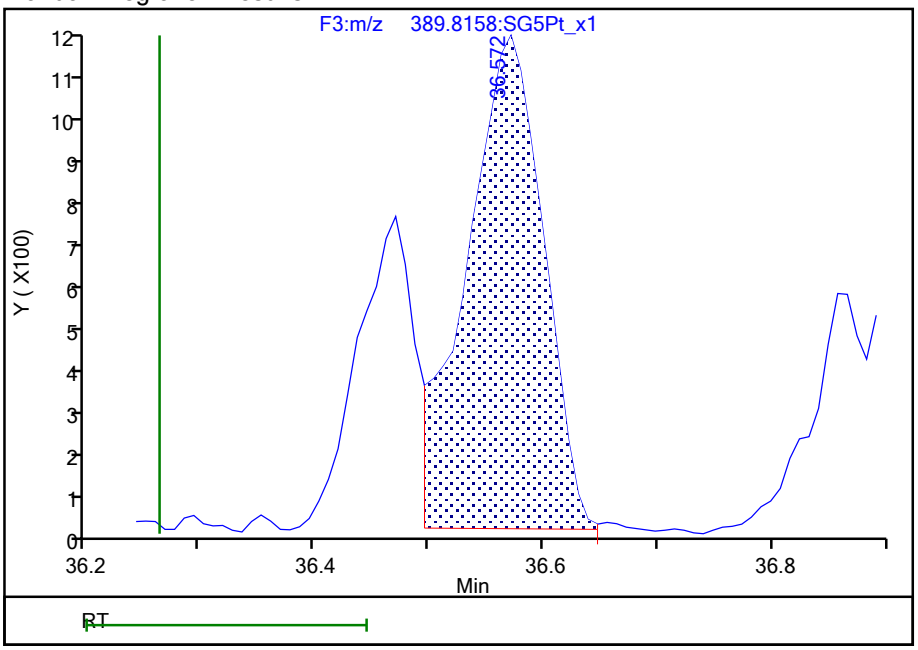

Reviewer: stephensk, 19-Aug-2021 11:18:21
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

782070

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d				
Injection Date:	18-Aug-2021 23:36:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	41
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 36.57
Area: 5299
Amount: 2.892867
Amount Units: pg/ul

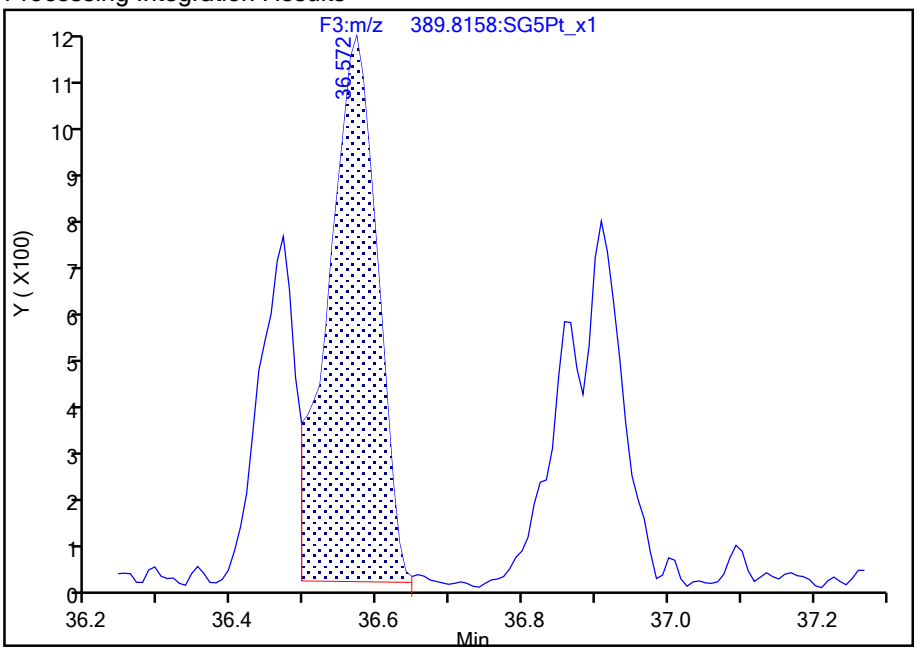

Manual Integration Results

RT: 36.91
Area: 4203
Amount: 2.498229
Amount Units: pg/ul

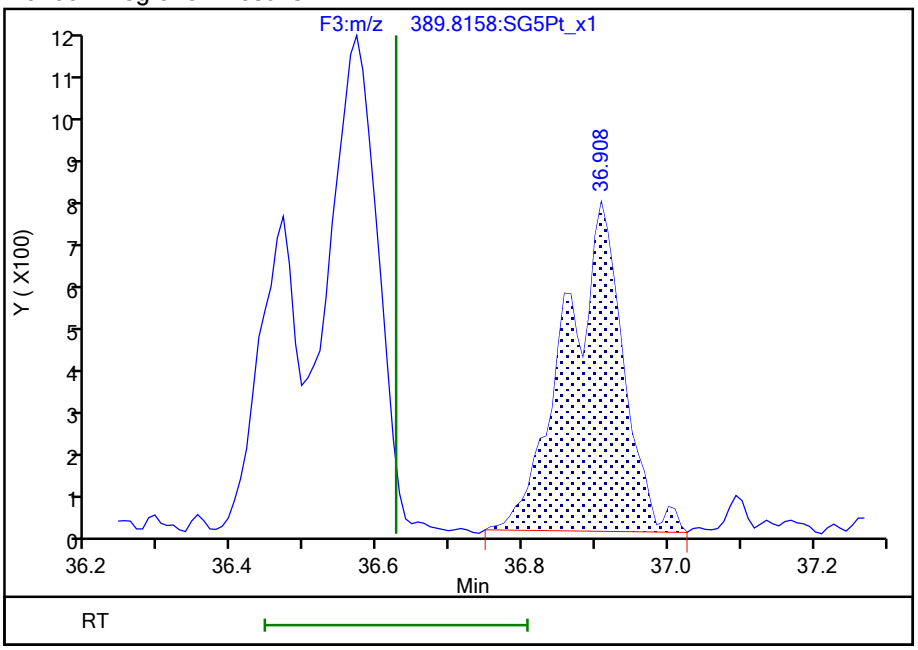

Reviewer: stephensk, 19-Aug-2021 11:19:49

Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Report Date: 20-Aug-2021 09:42:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

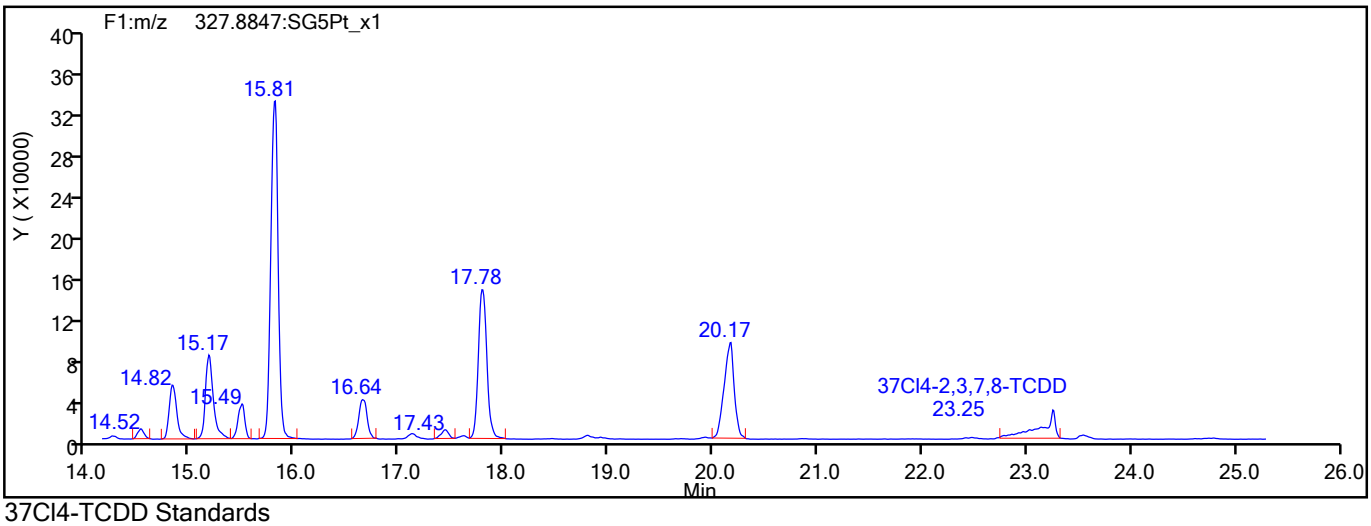

37Cl4-TCDD Standards

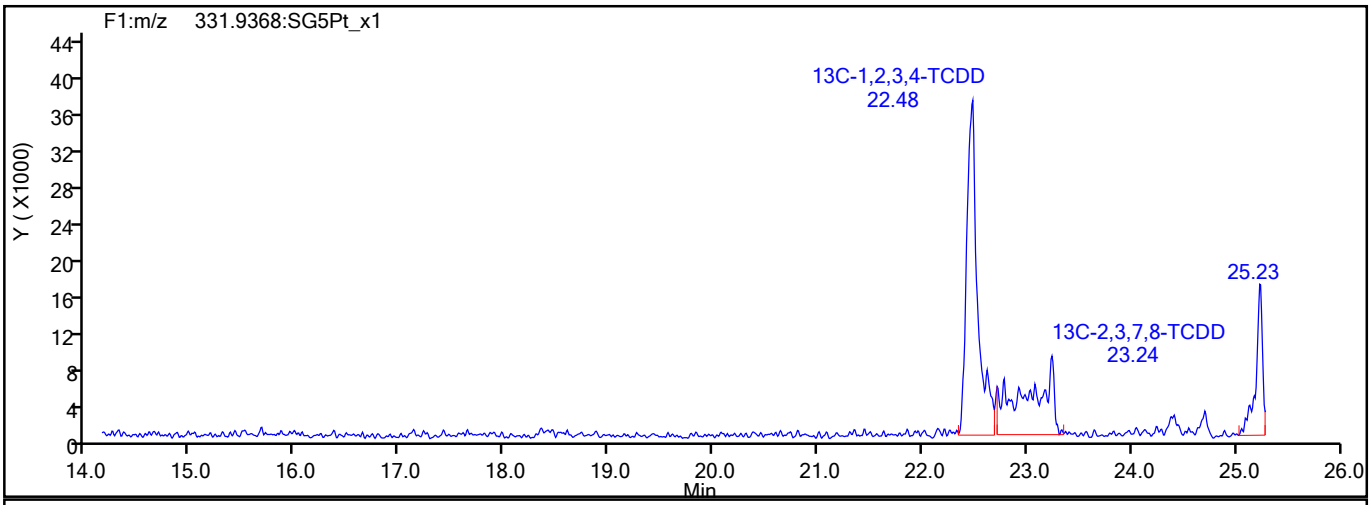

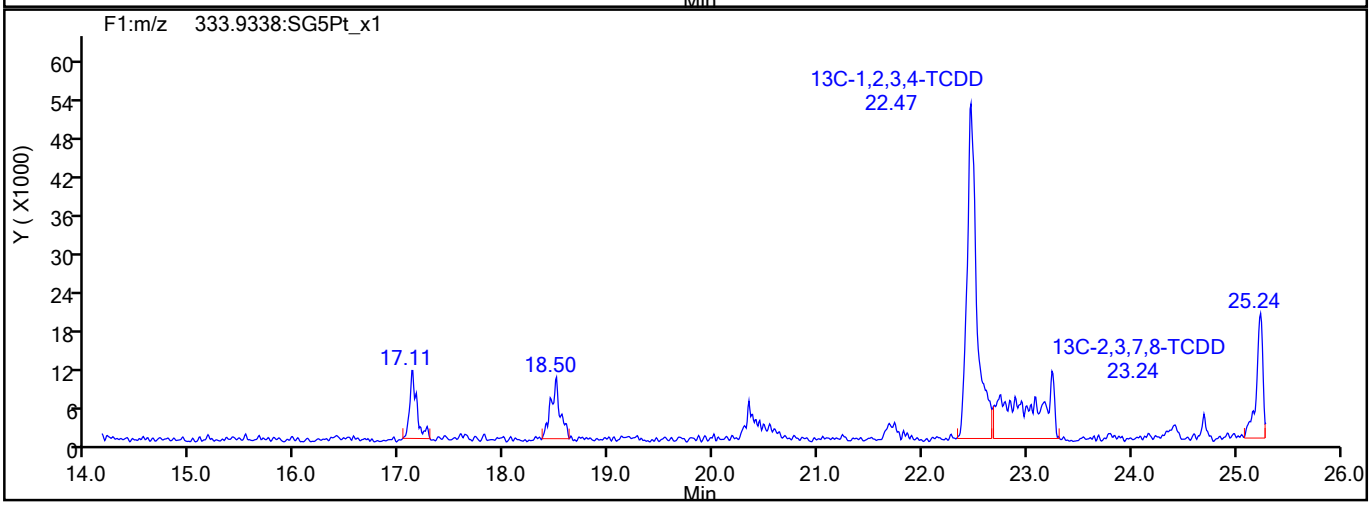

782072

Report Date: 20-Aug-2021 09:42:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

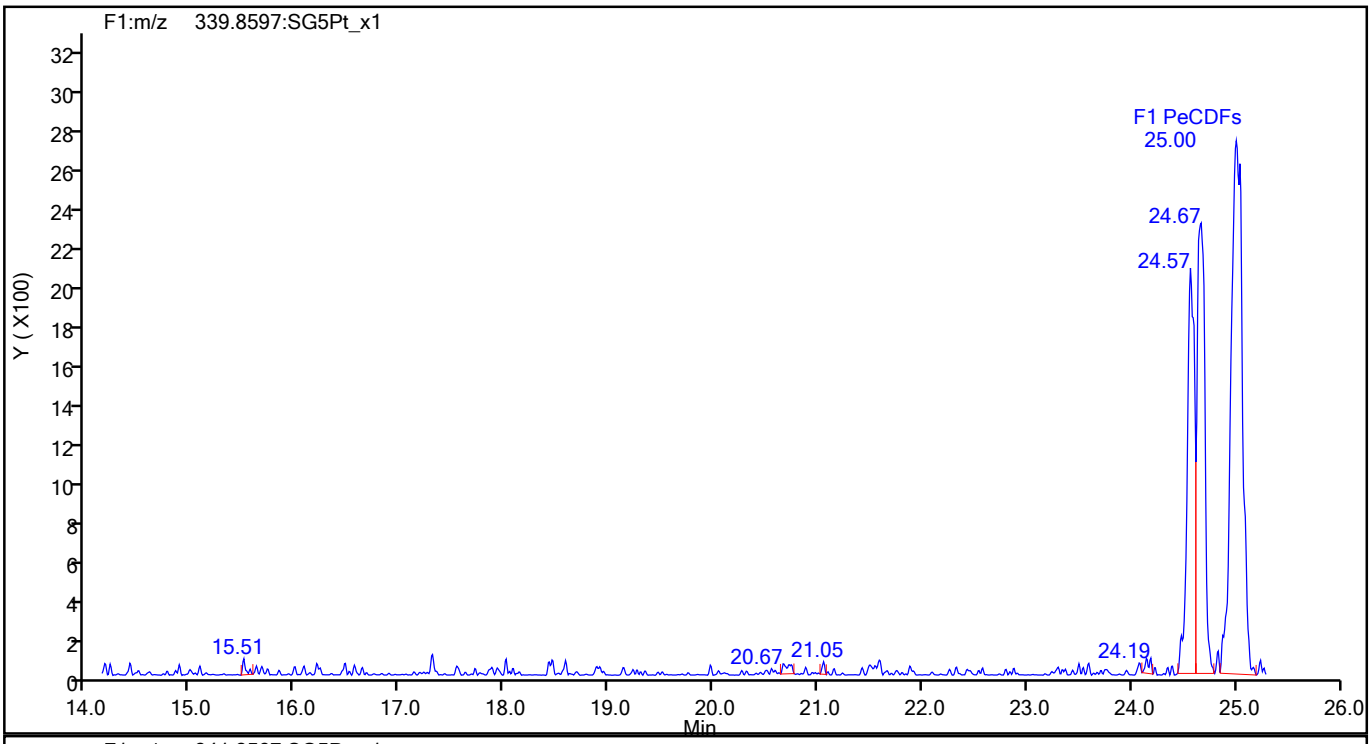

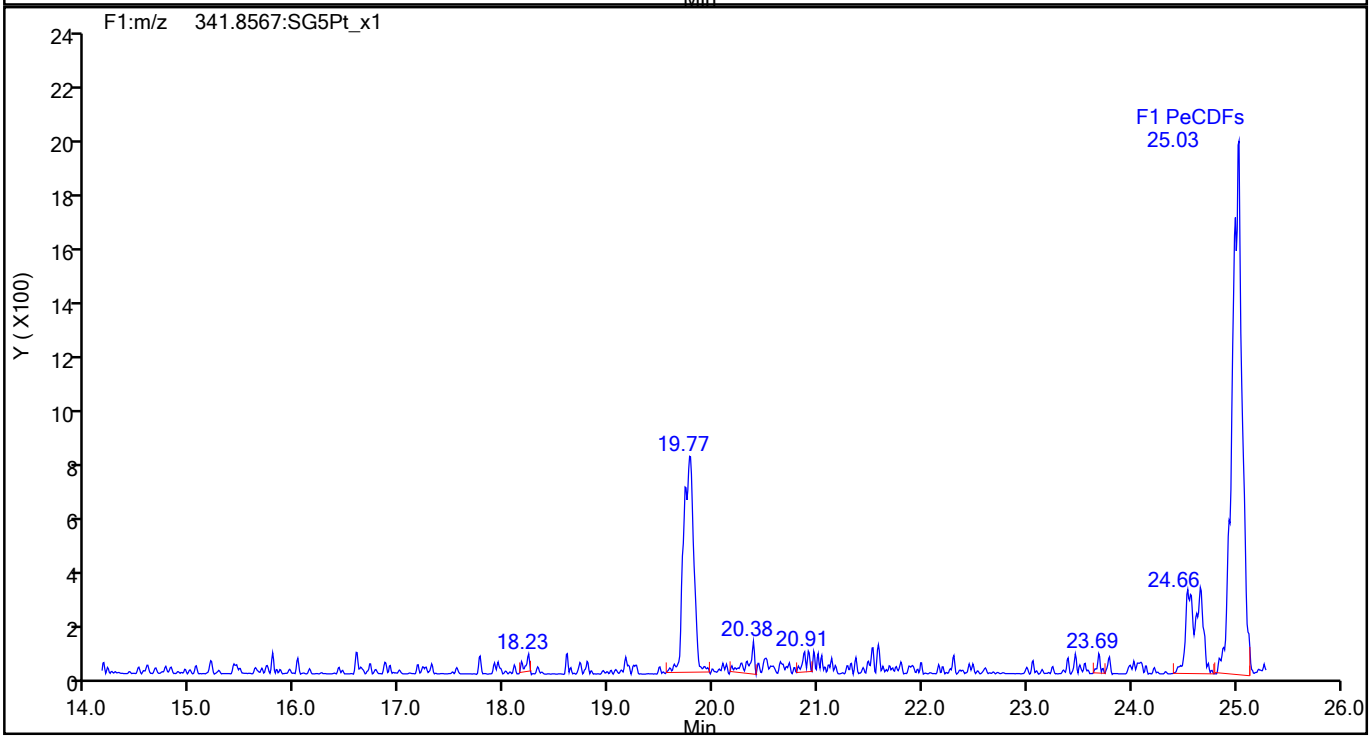

782073

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

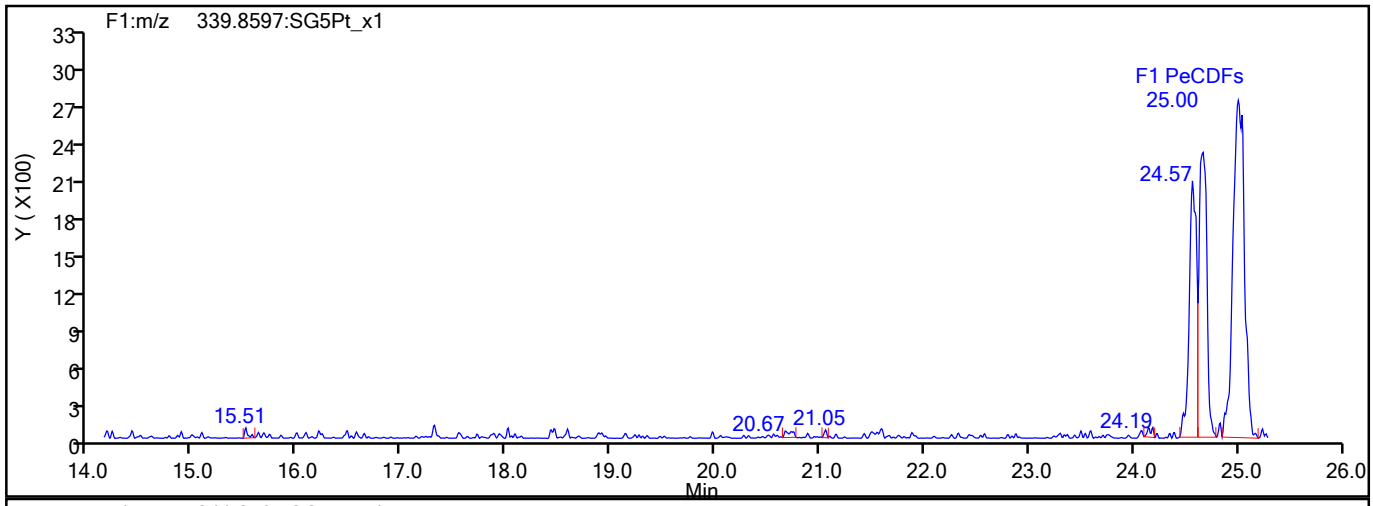

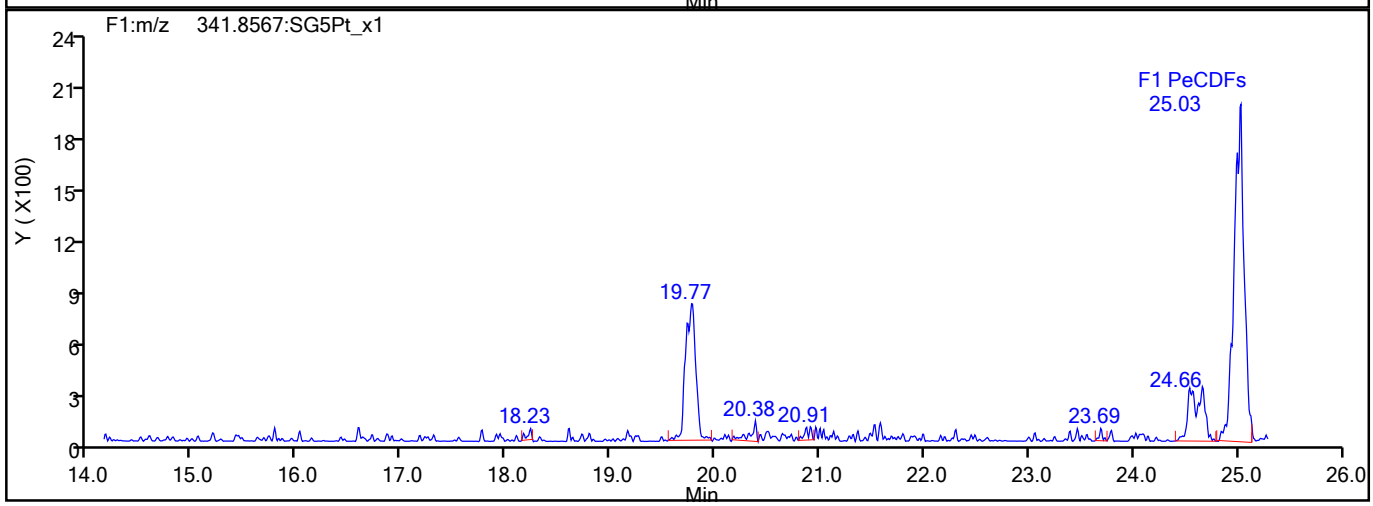

F1 PeCDFs Interference Mass

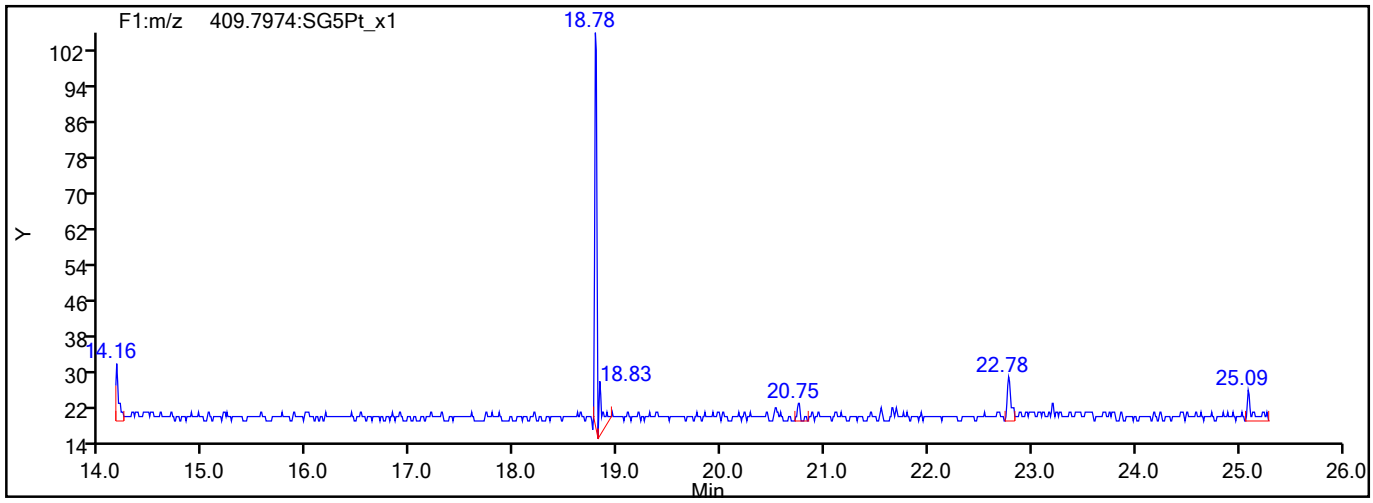

782074

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

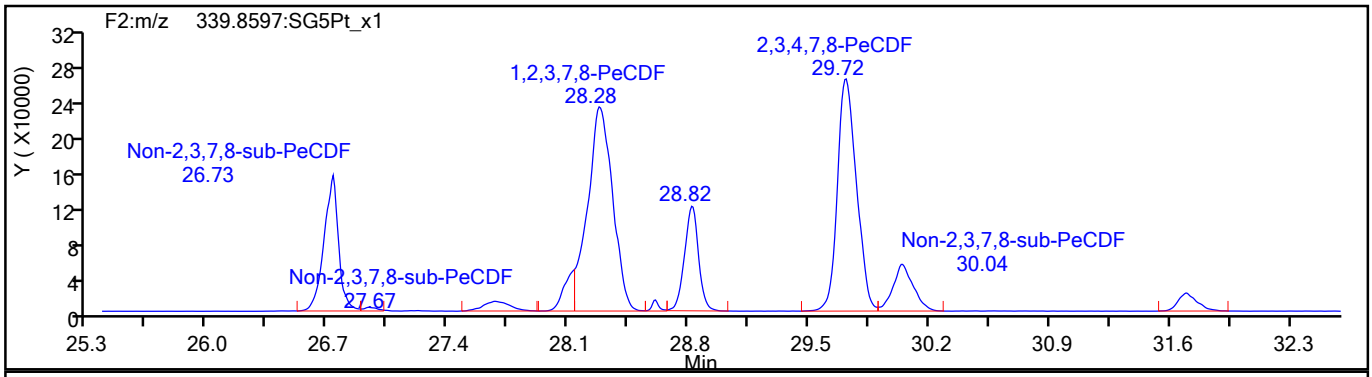

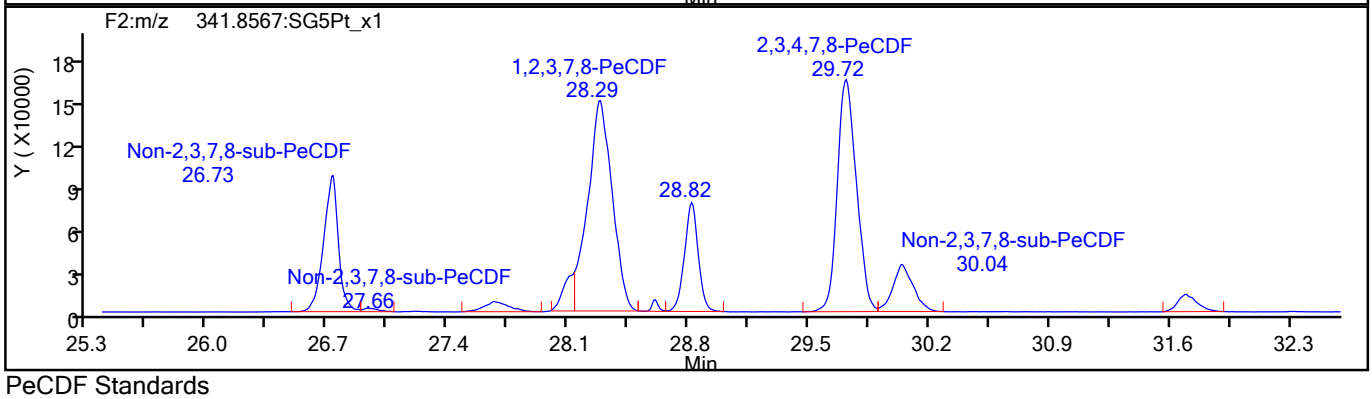

PeCDF Standards

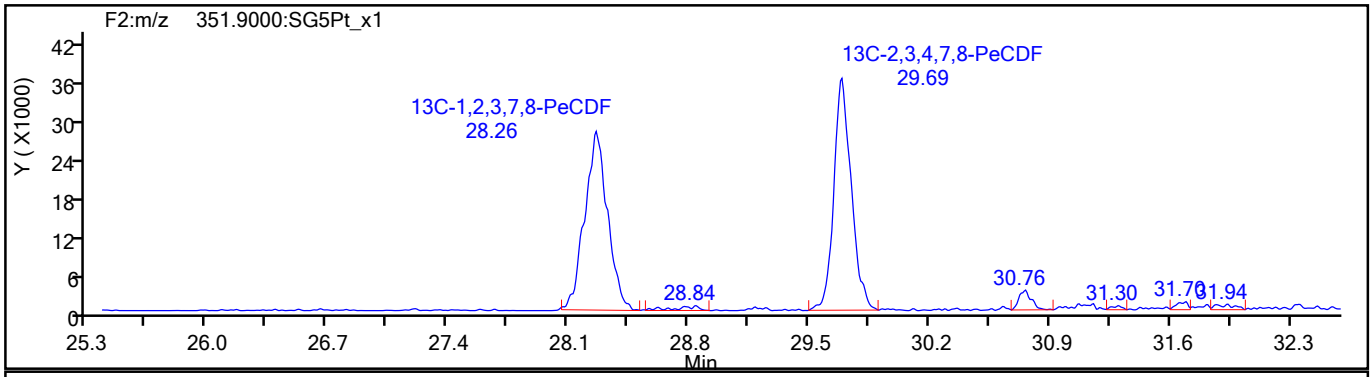

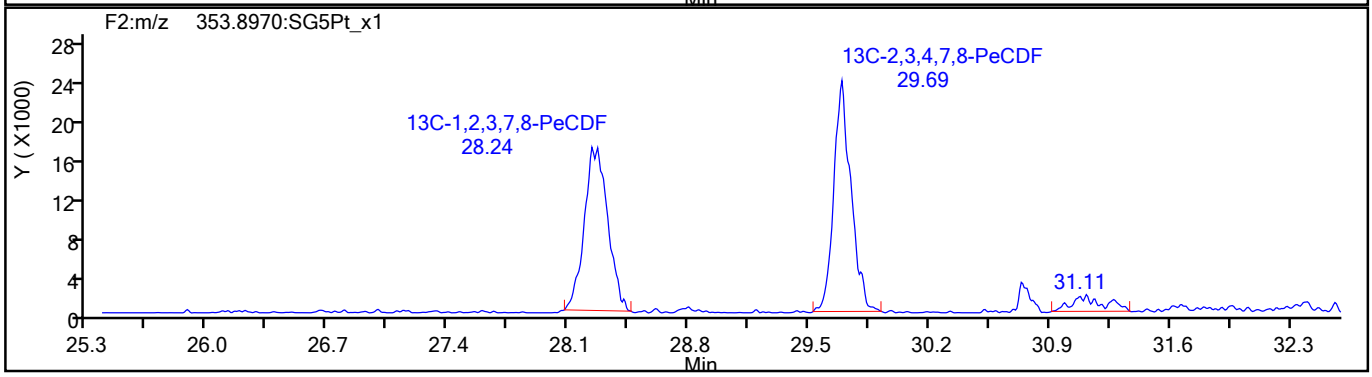

782075

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

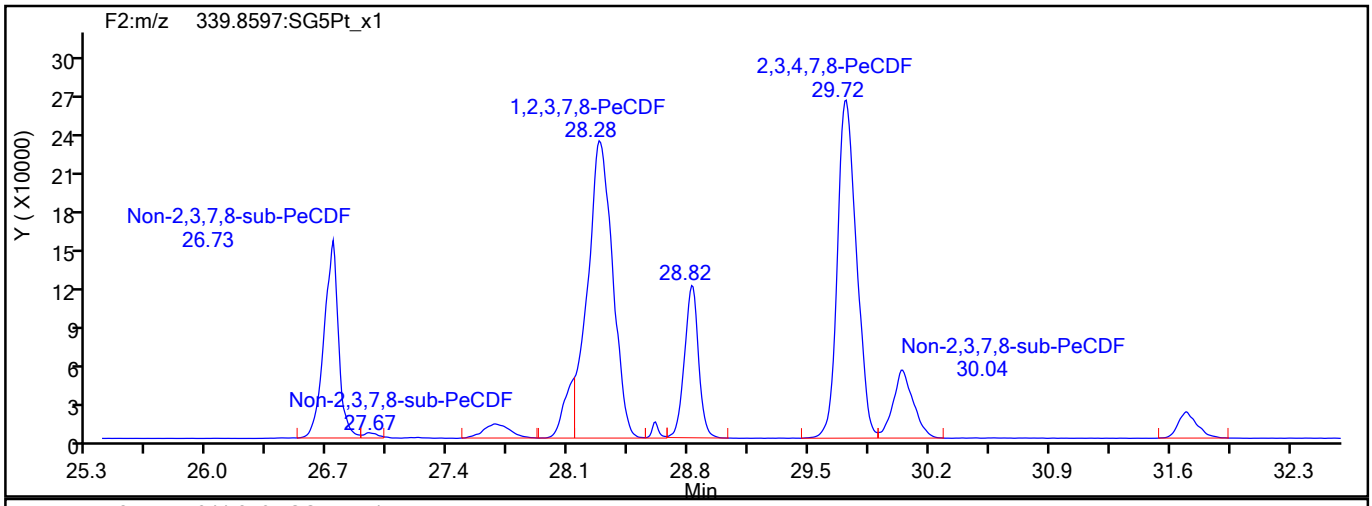

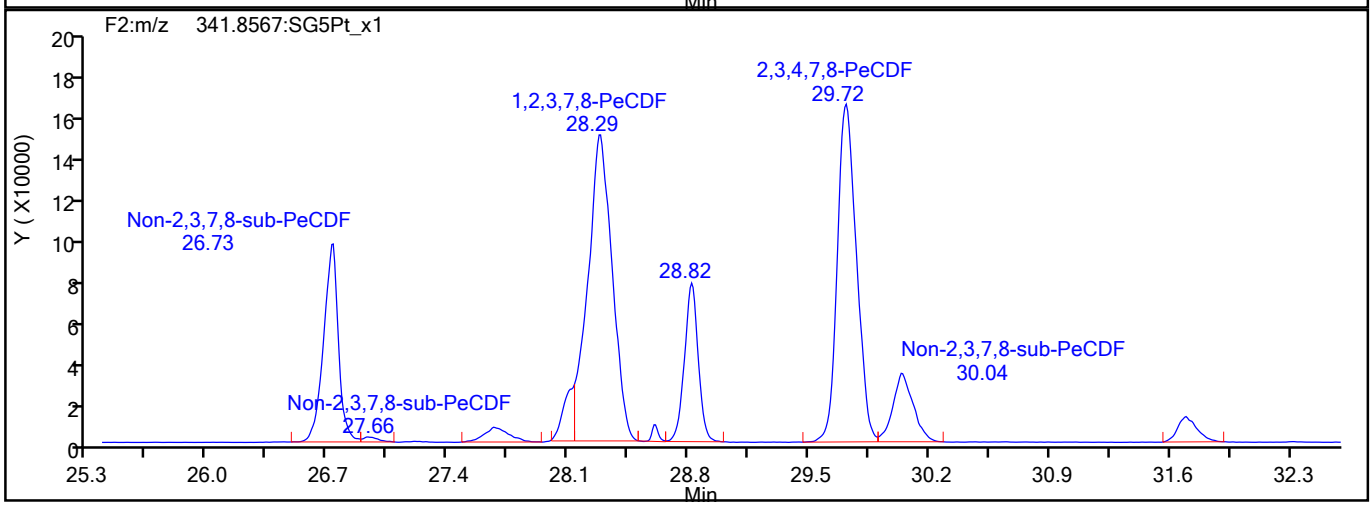

PeCDF Interference Mass

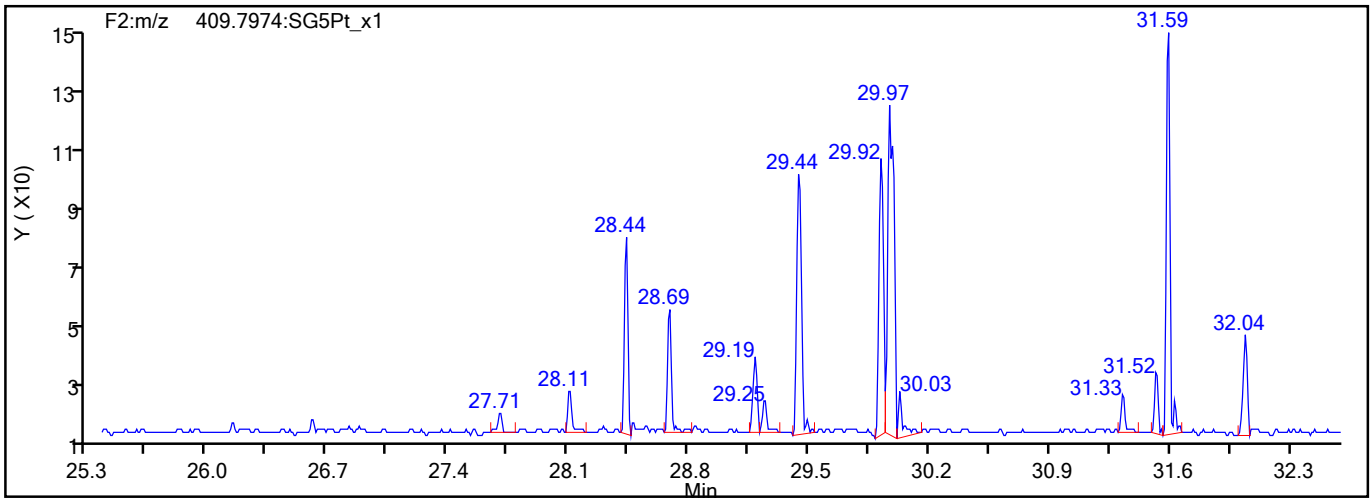

782076

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

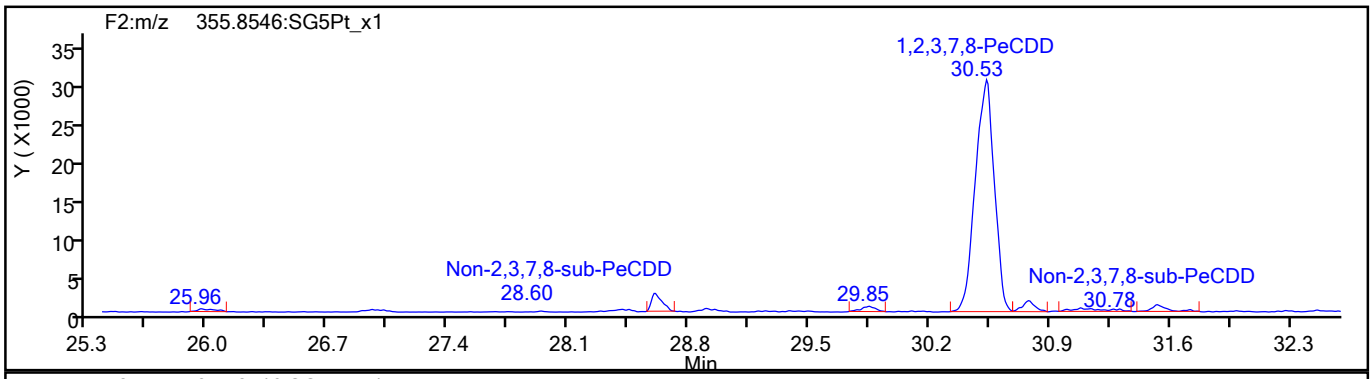

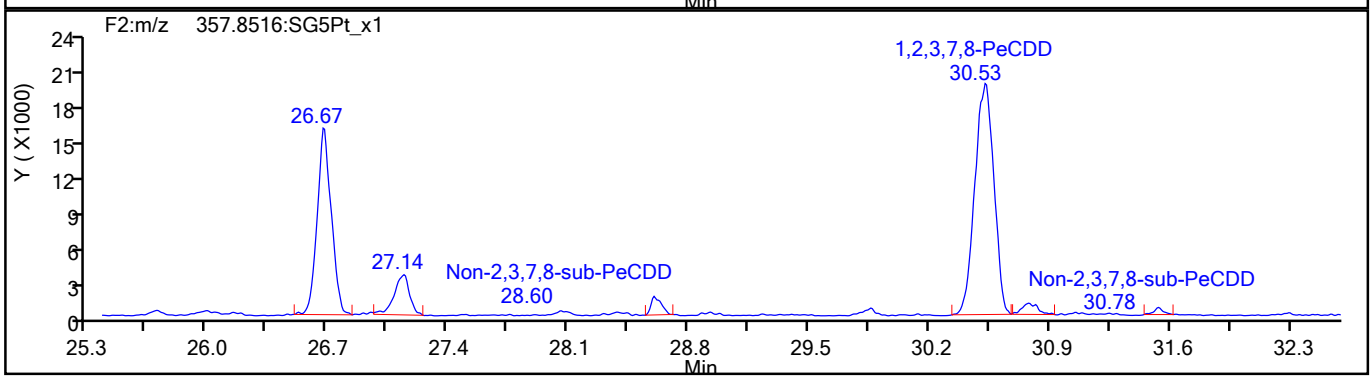

PeCDD Standards

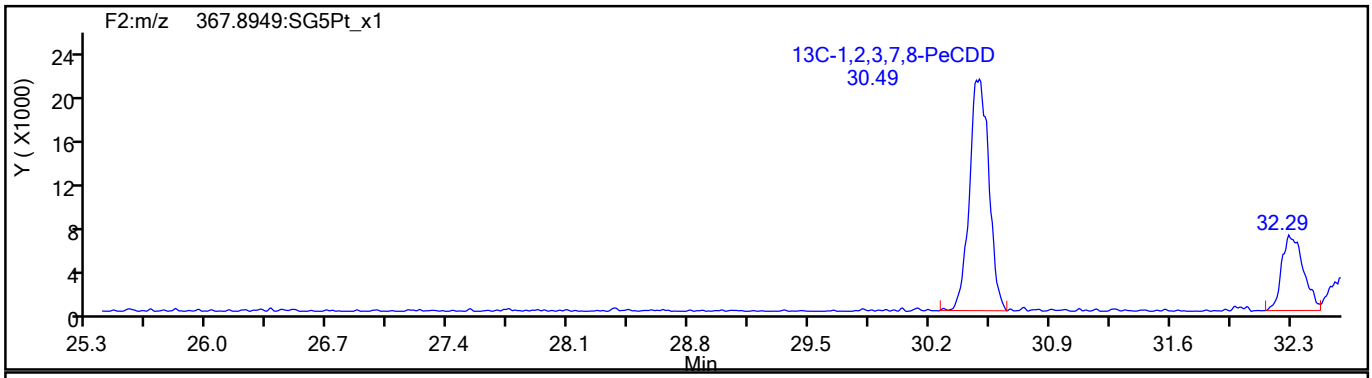

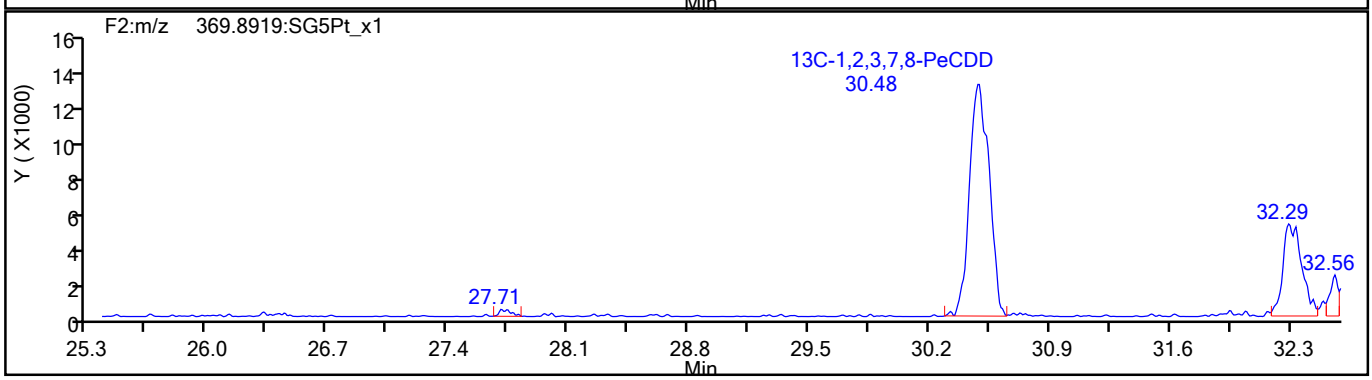

782077

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

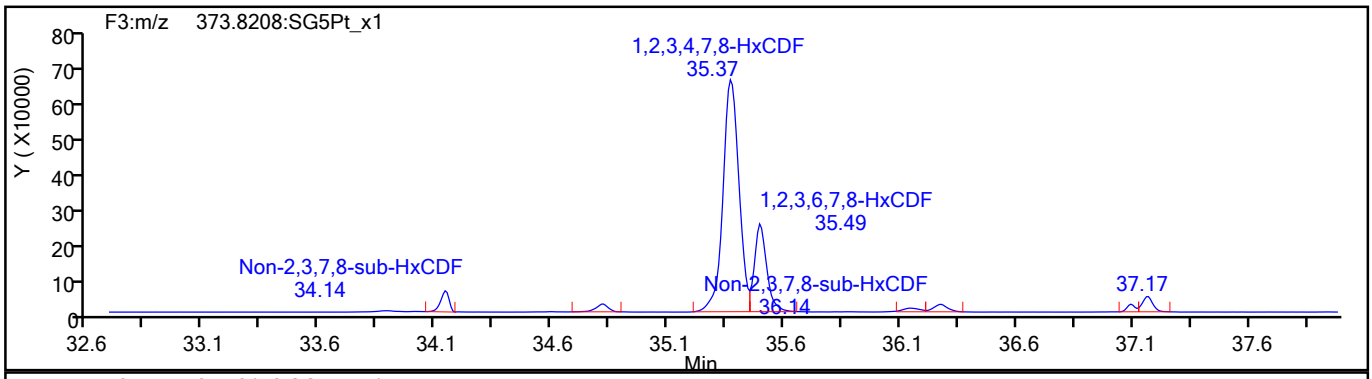

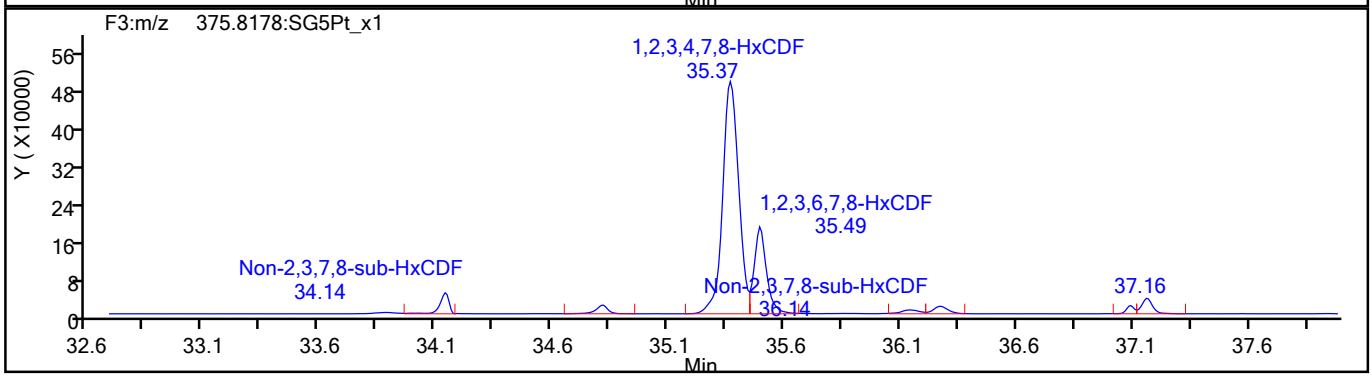

HxCDF Standards

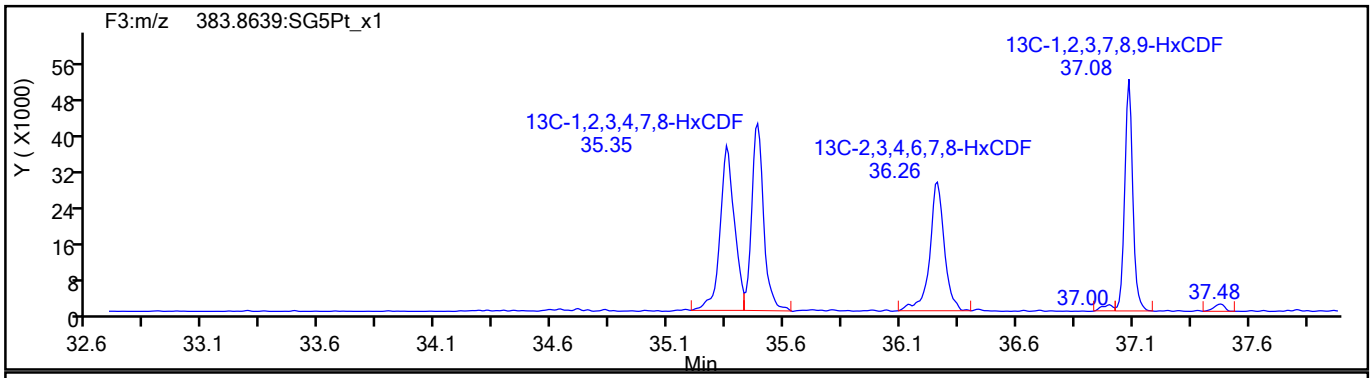

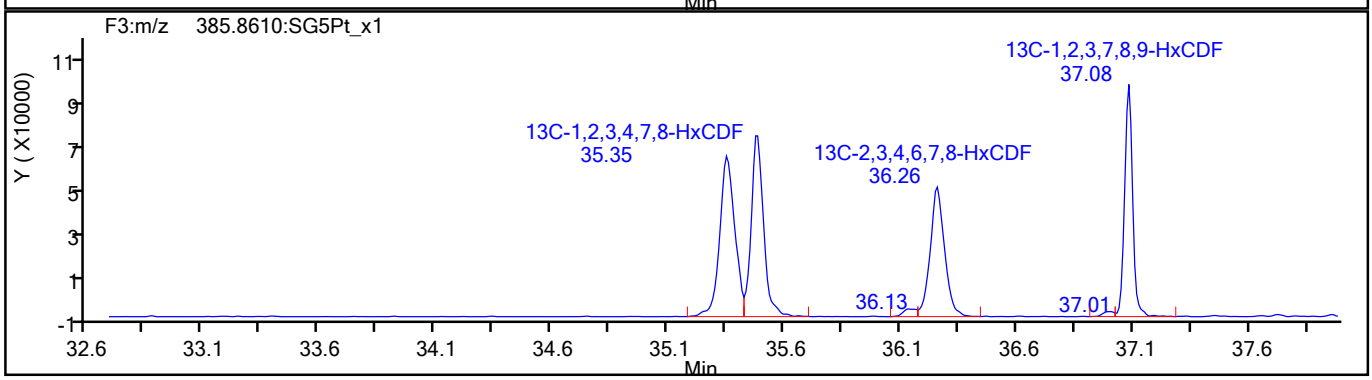

782078

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

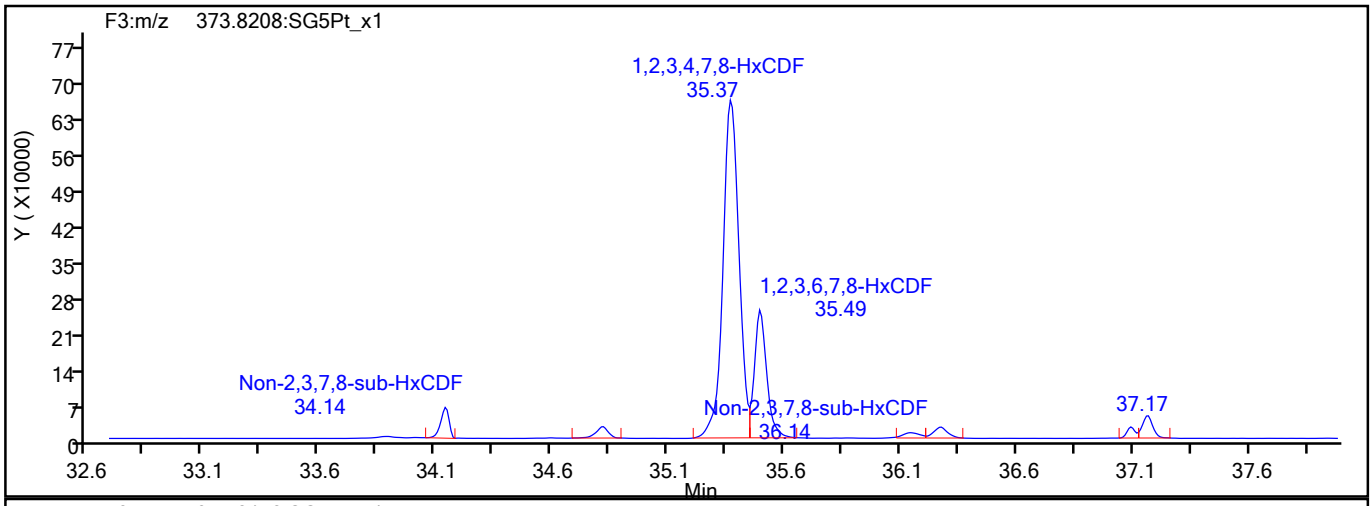

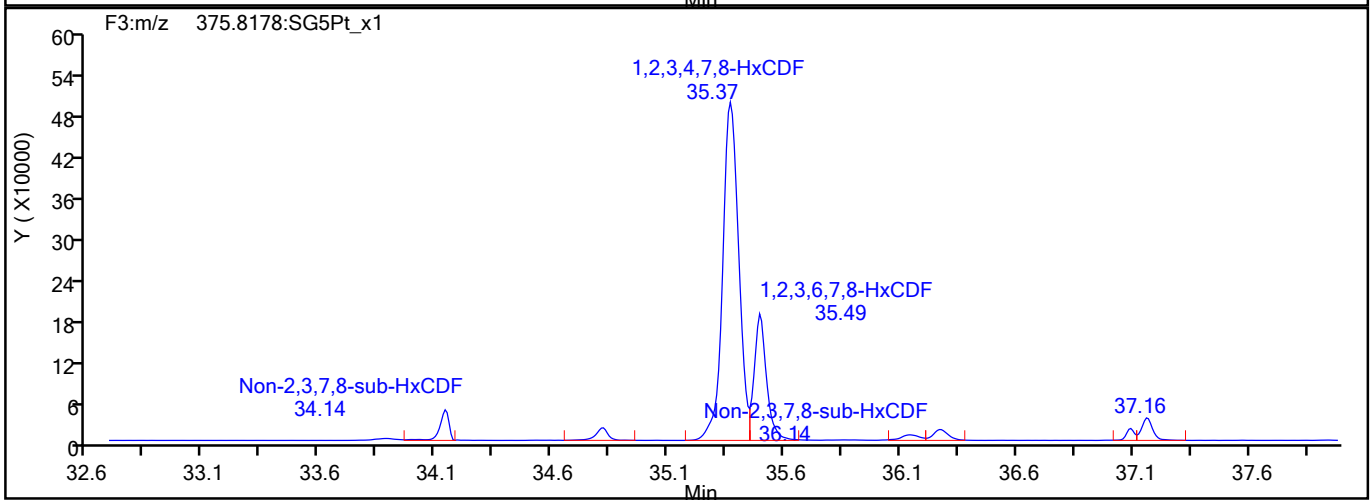

HxCDF Interference Mass

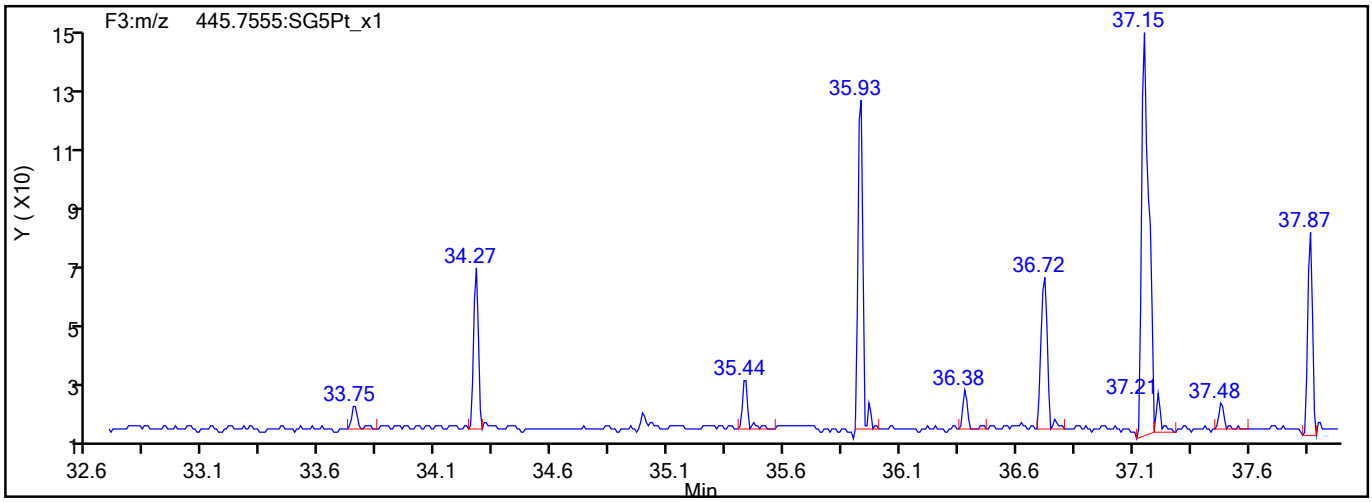

782079

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

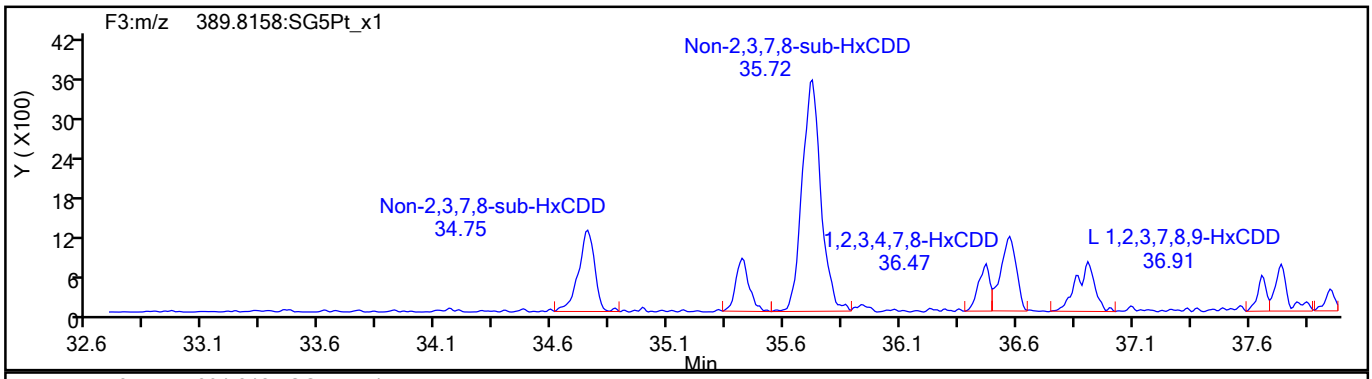

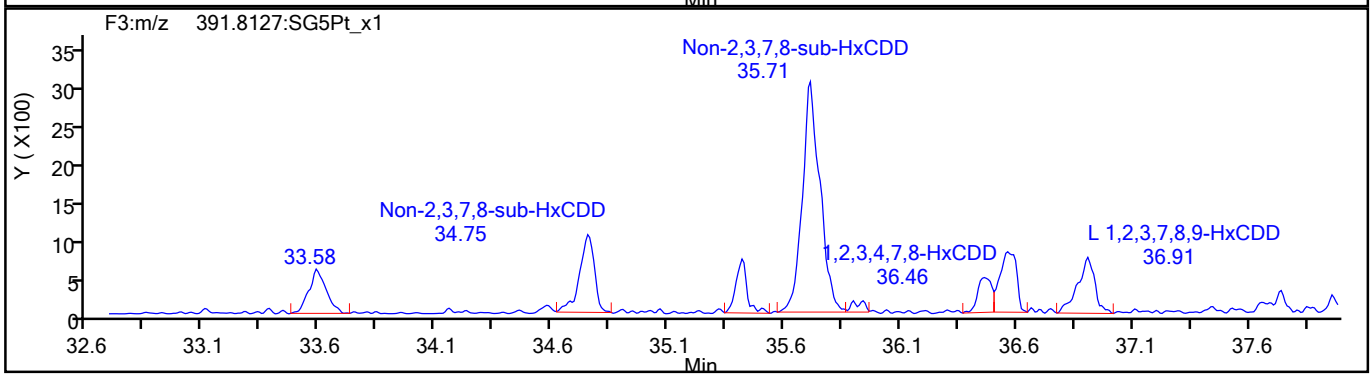

HxCDD Standards

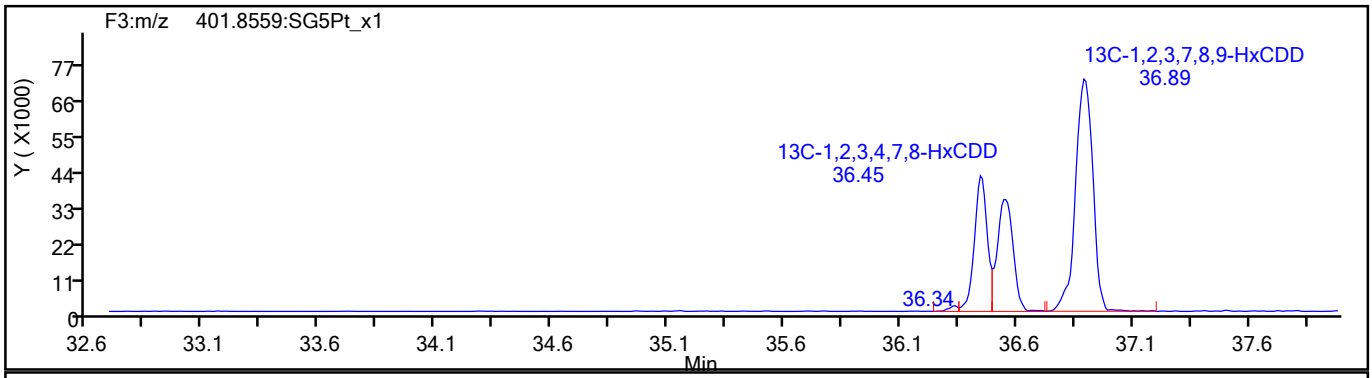

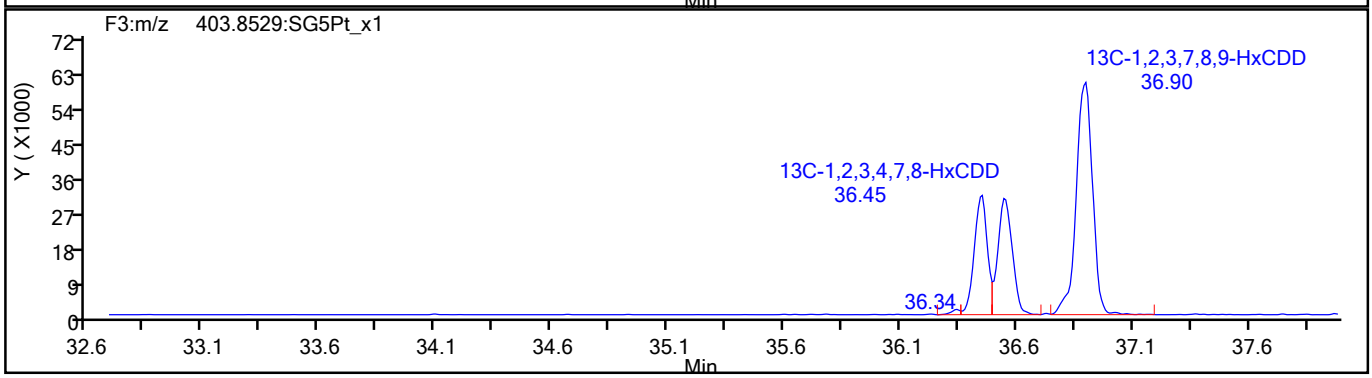

782080

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

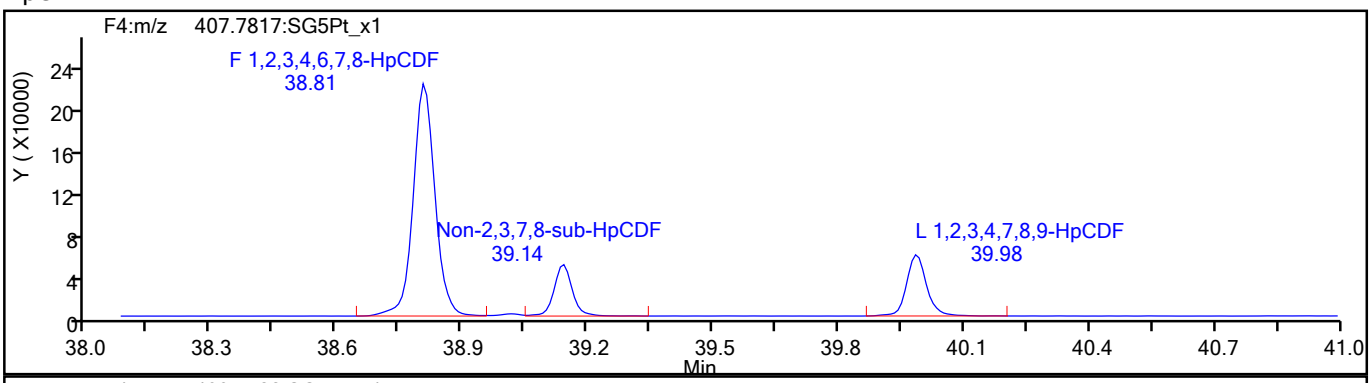

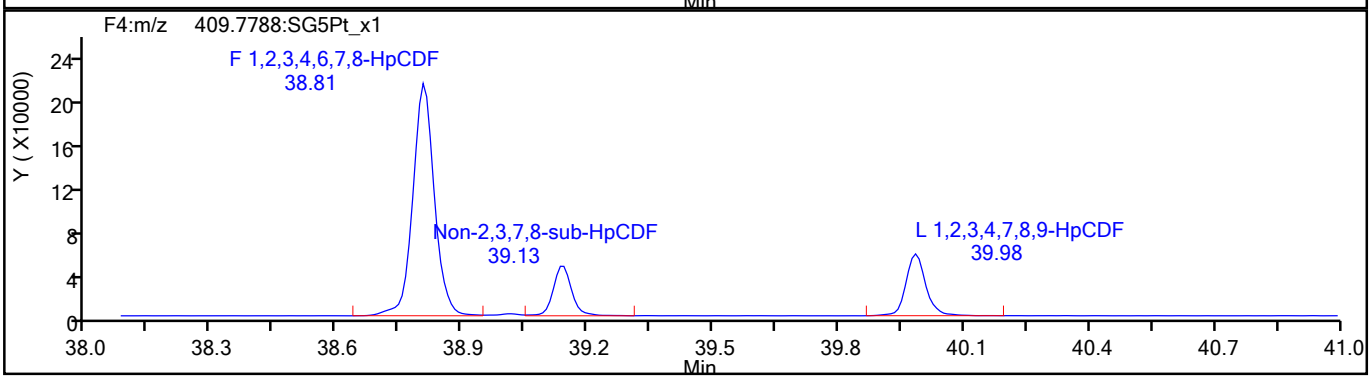

HpCDF Standards

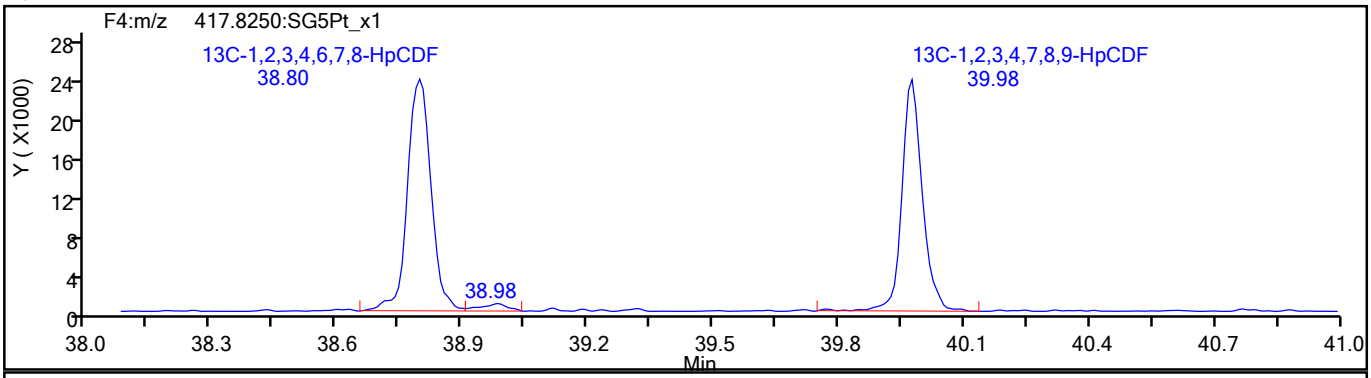

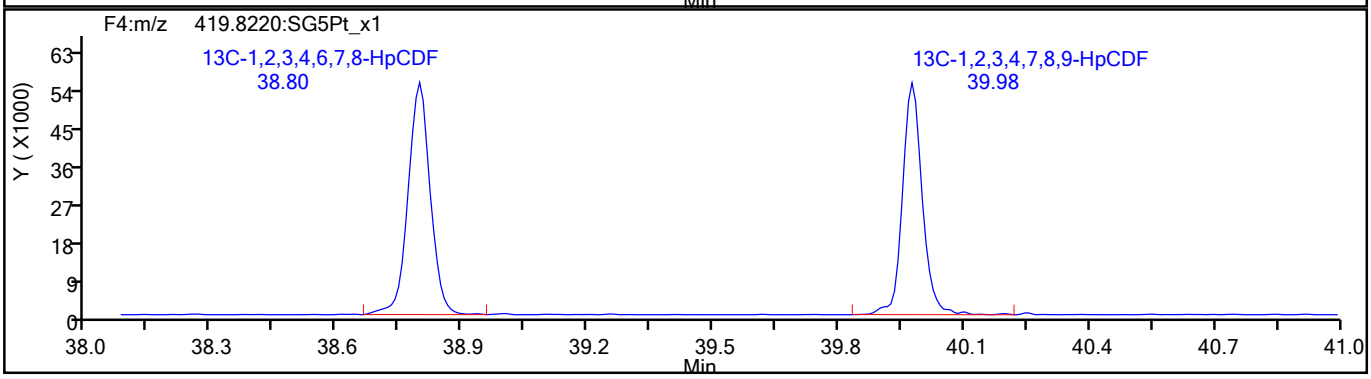

782081

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

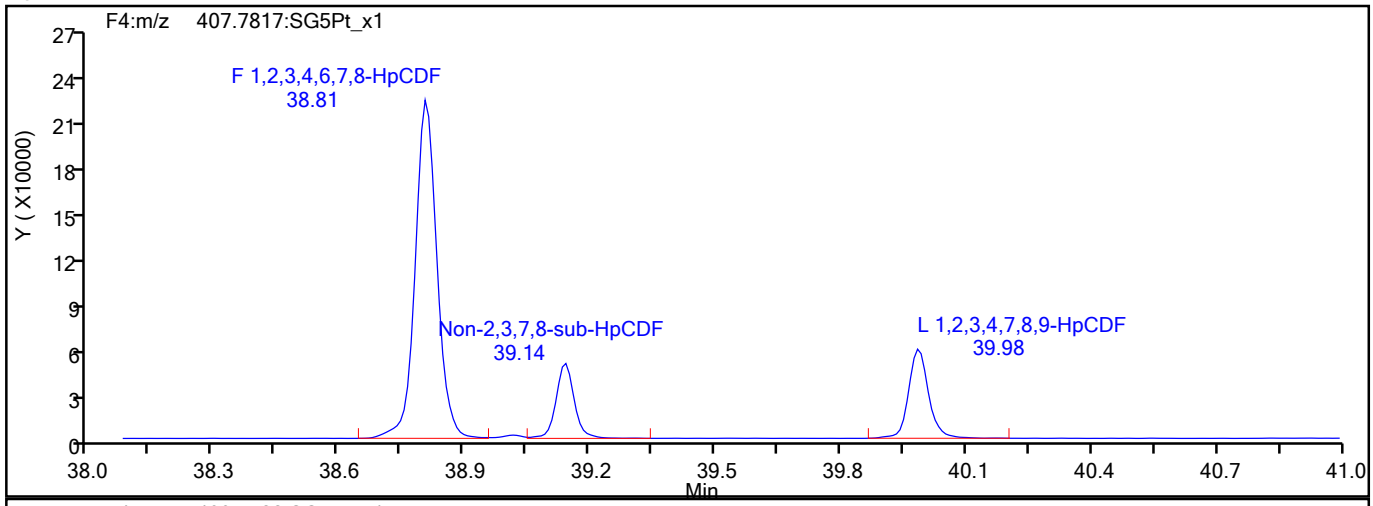

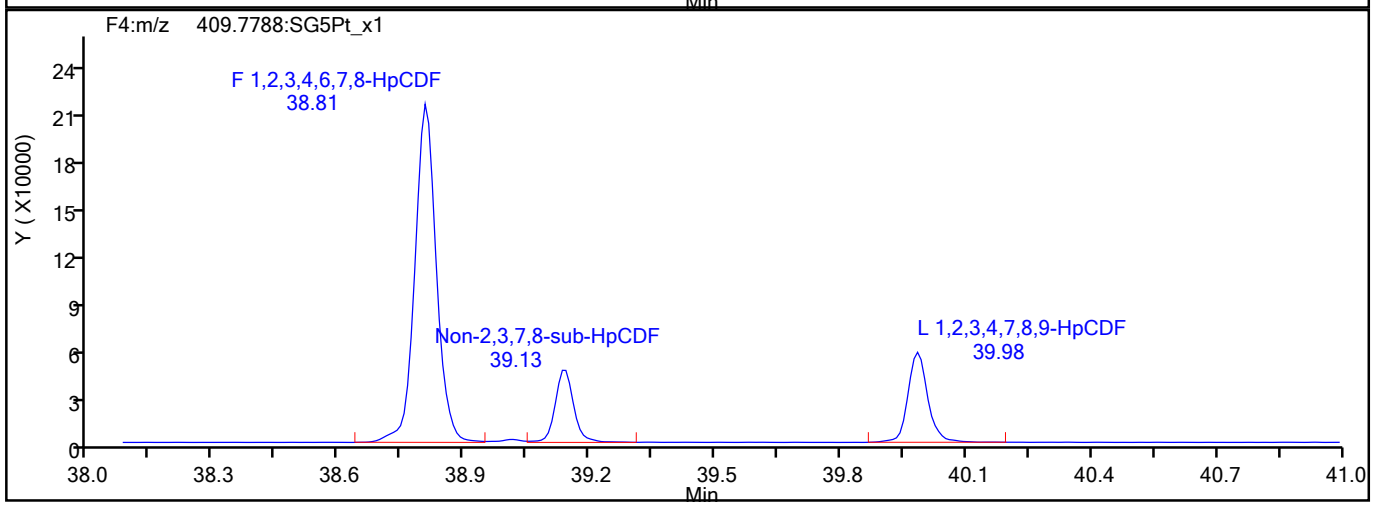

HpCDF Interference Mass

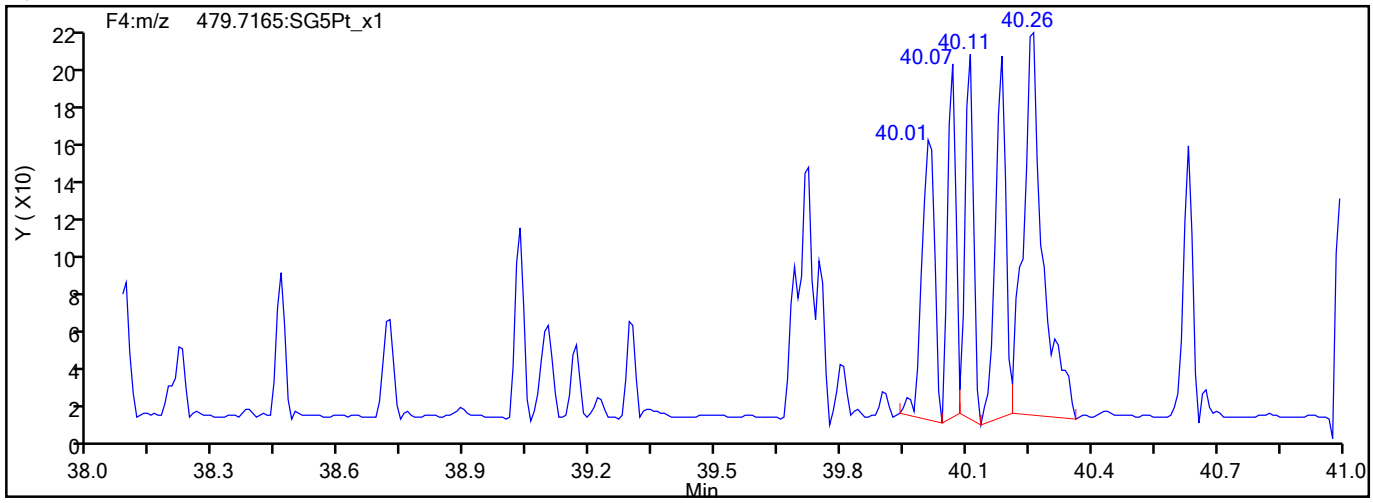

782082

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

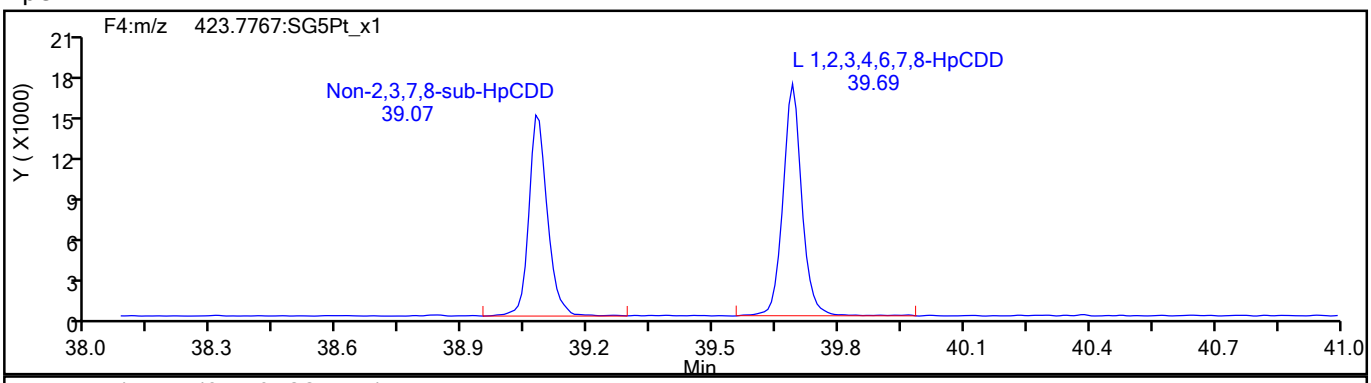

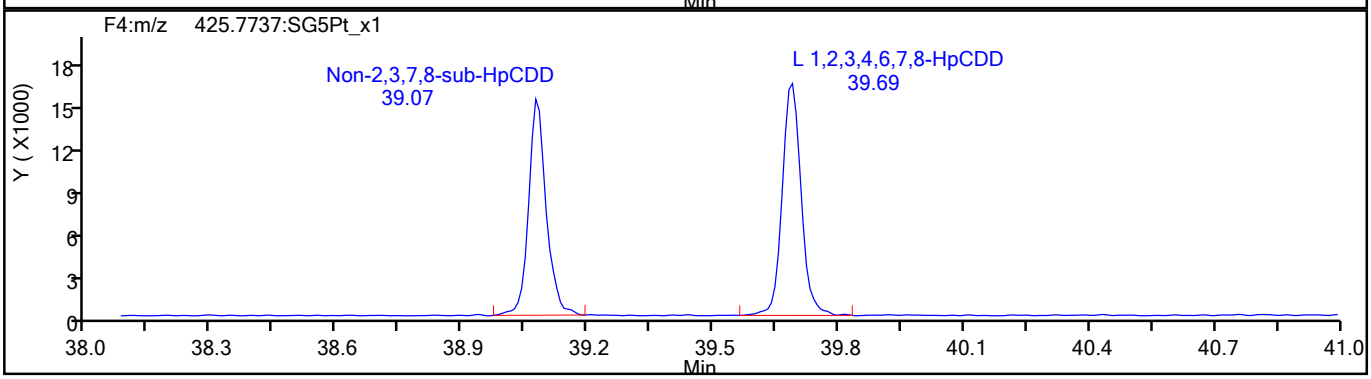

HpCDD Standards

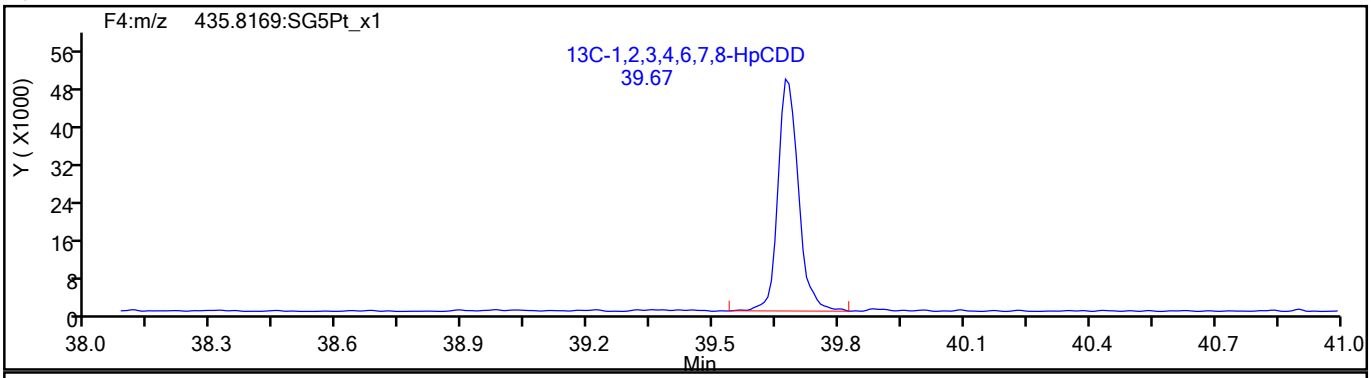

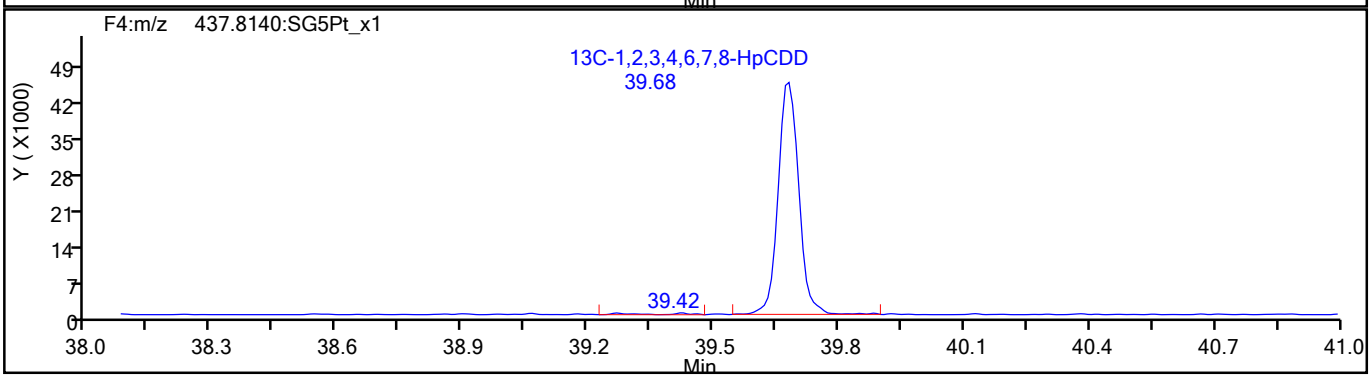

782083

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

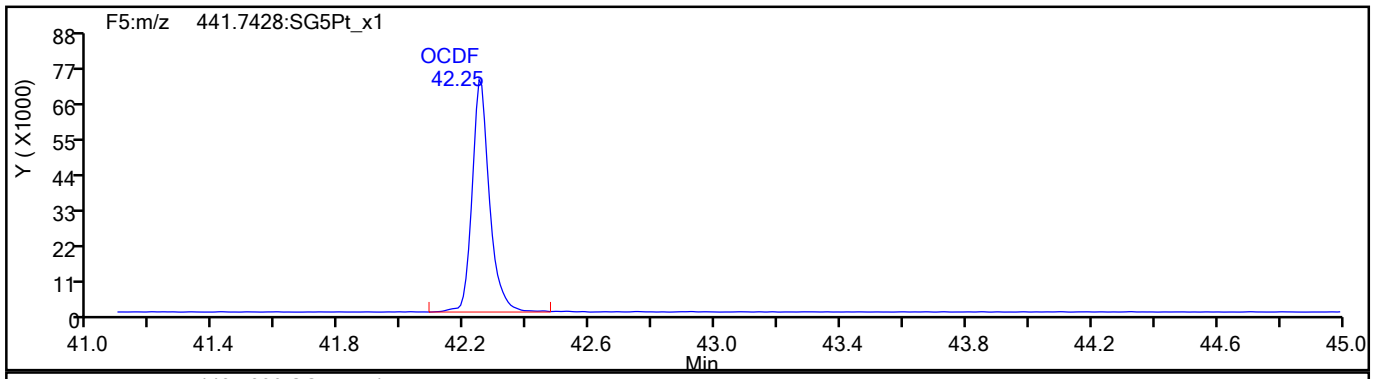

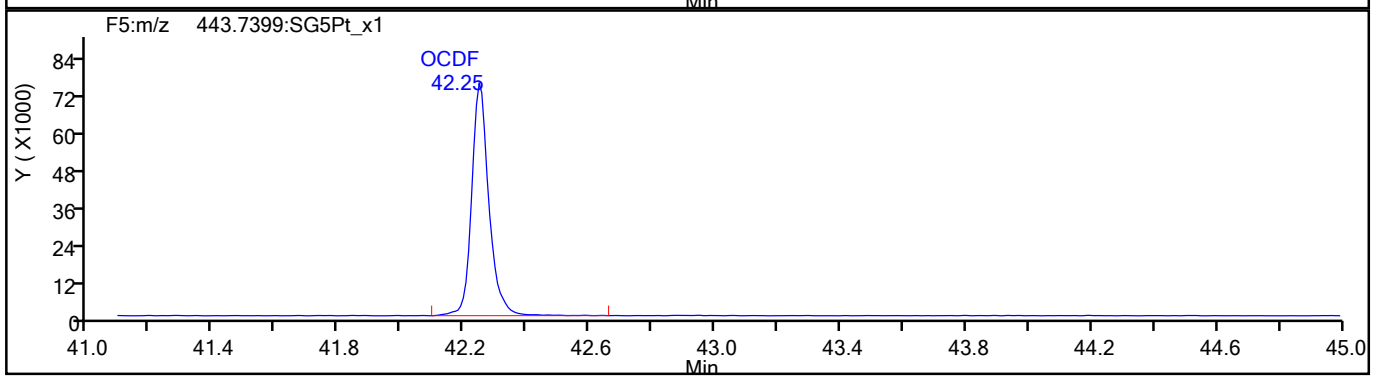

OCDF Standards

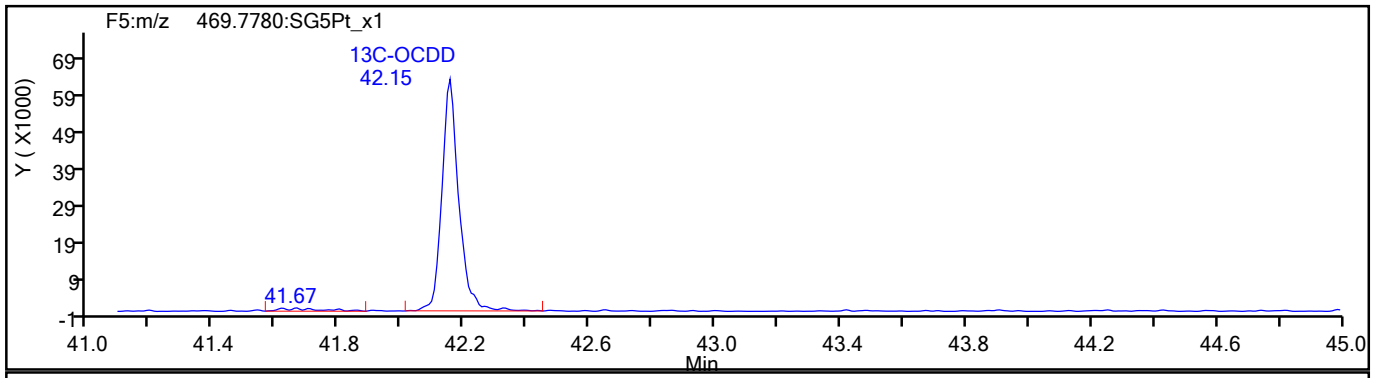

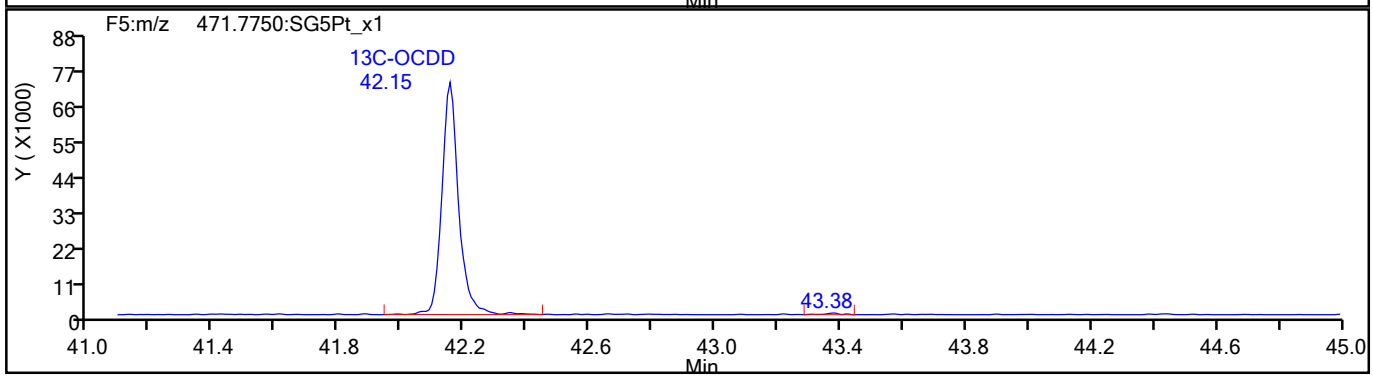

782084

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

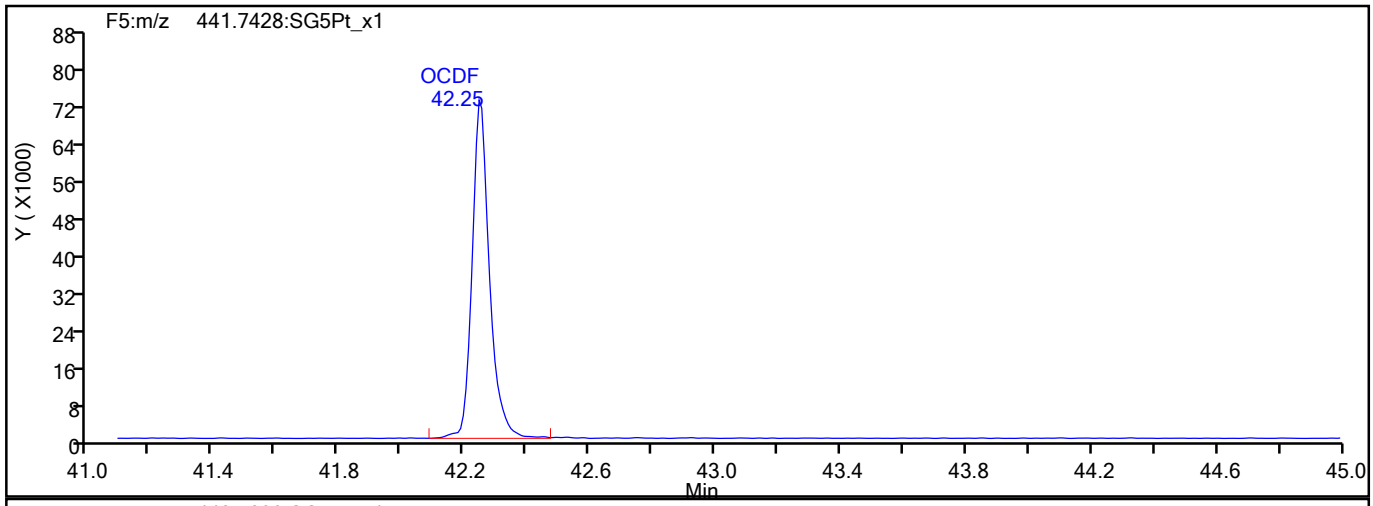

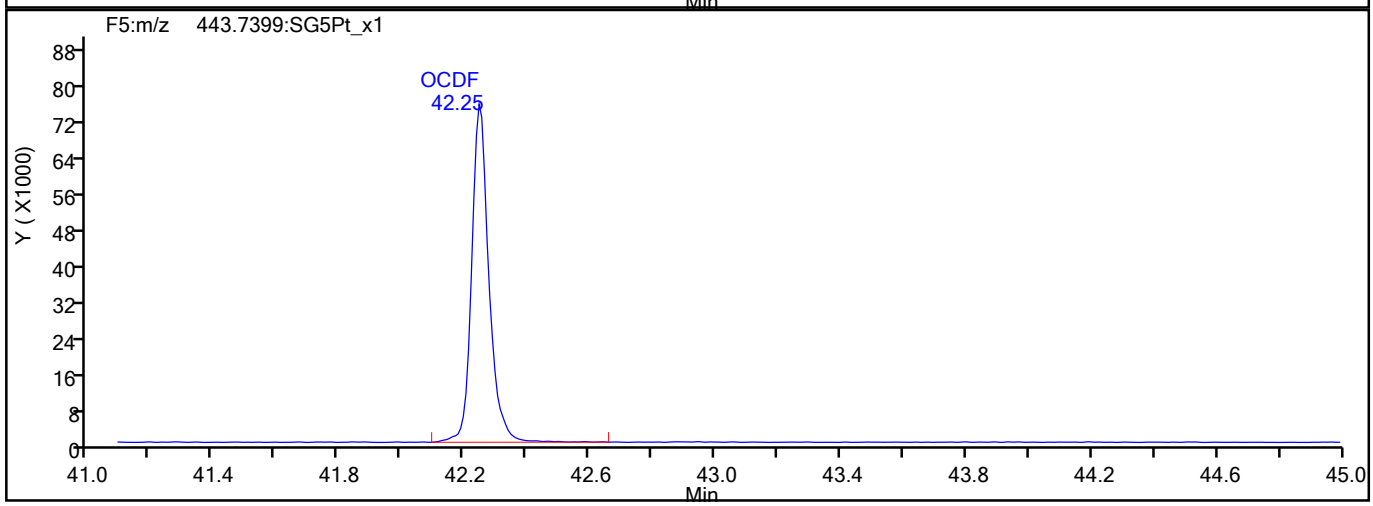

OCDF Interference Mass

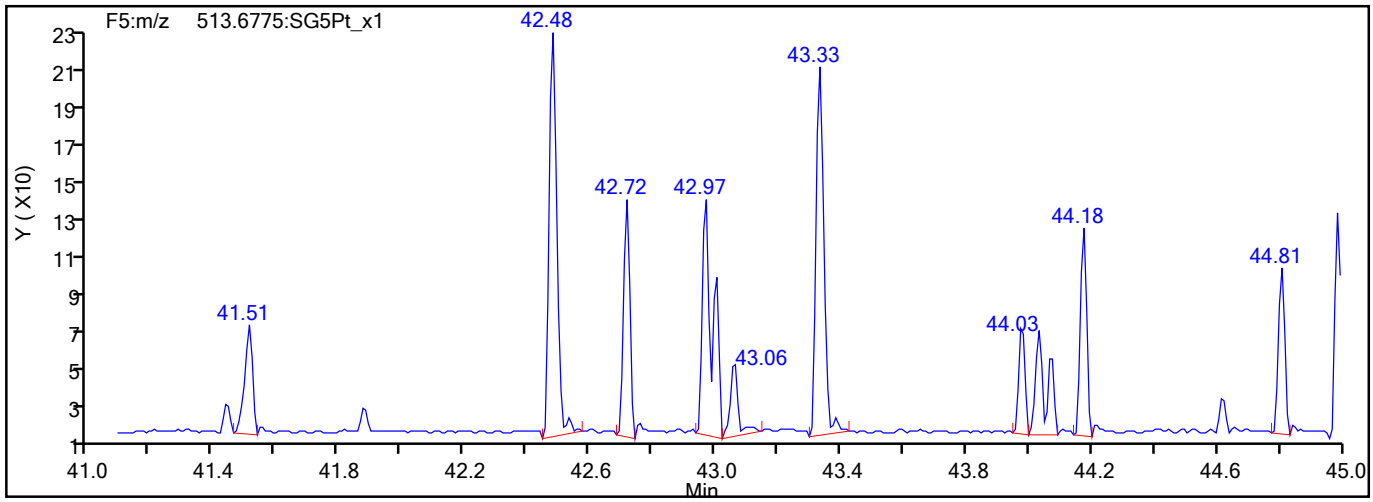

782085

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

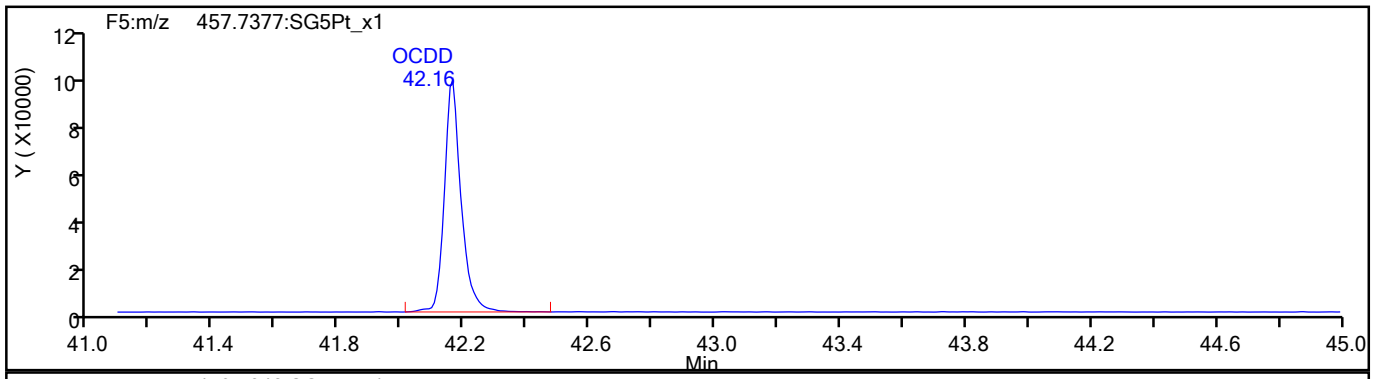

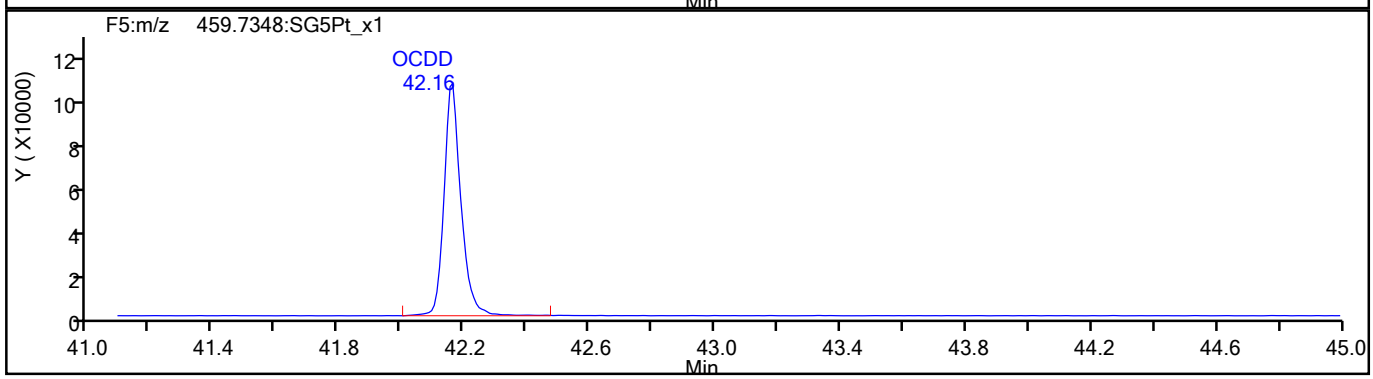

OCDD Standards

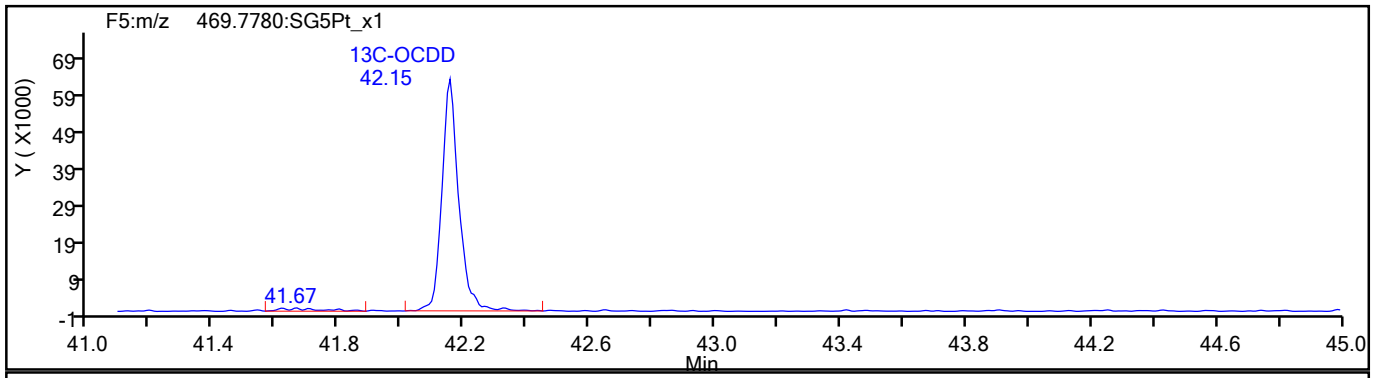

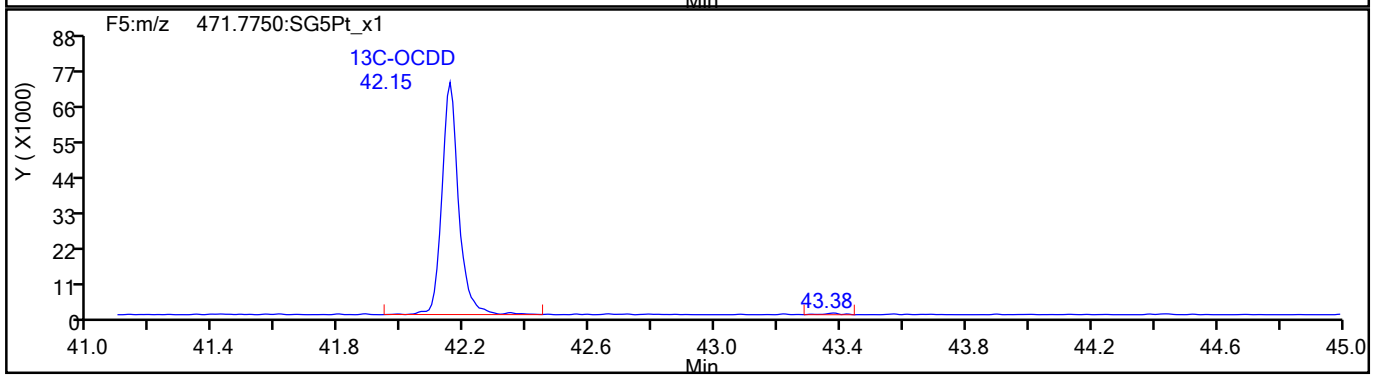

782086

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

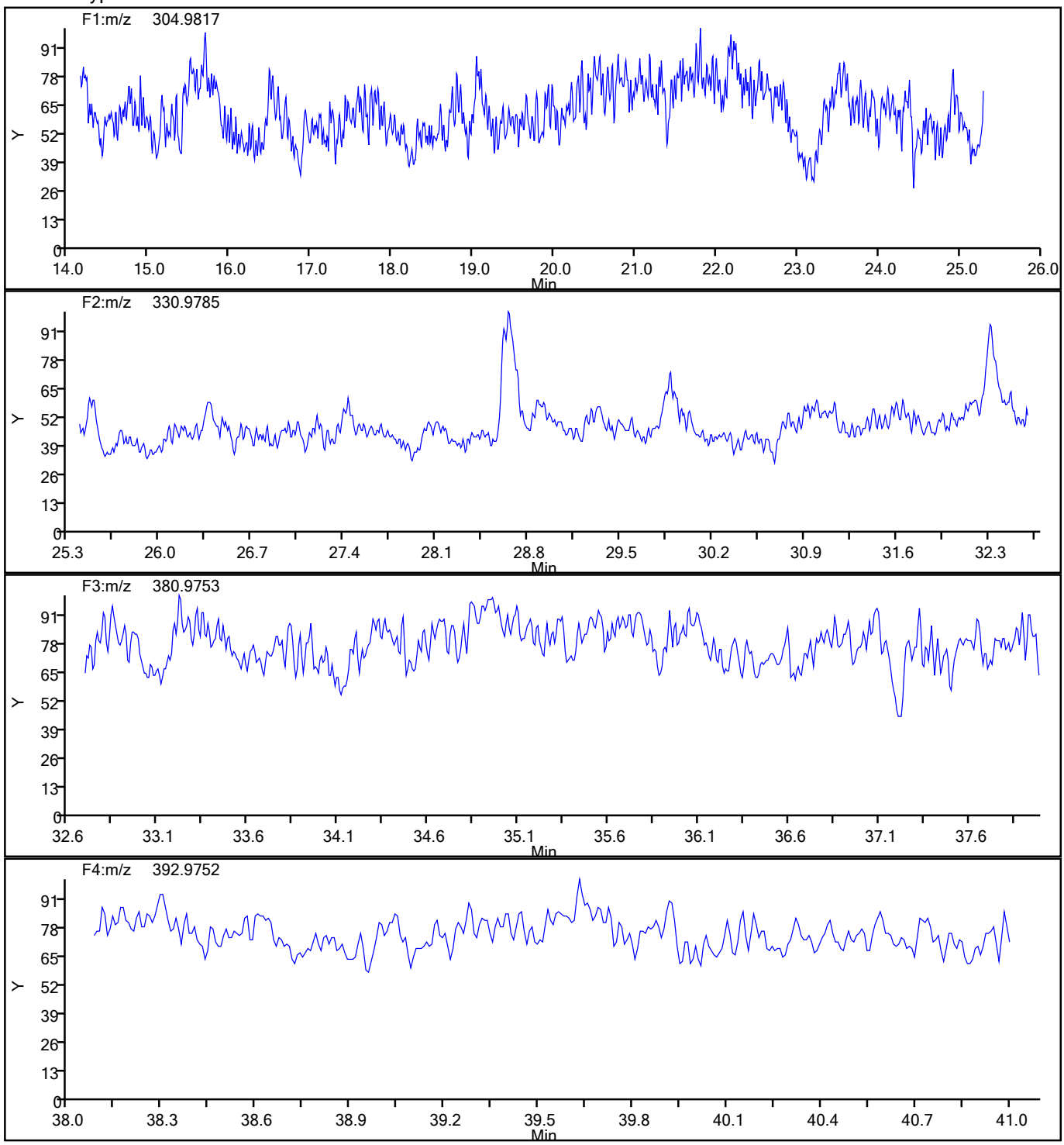

782087

Report Date: 20-Aug-2021 09:42:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_44.d		
Injection Date:	18-Aug-2021 23:36:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	517461	Sample Line#:	41
Column Type:	DB-5	Column Dia:	0.32 mm

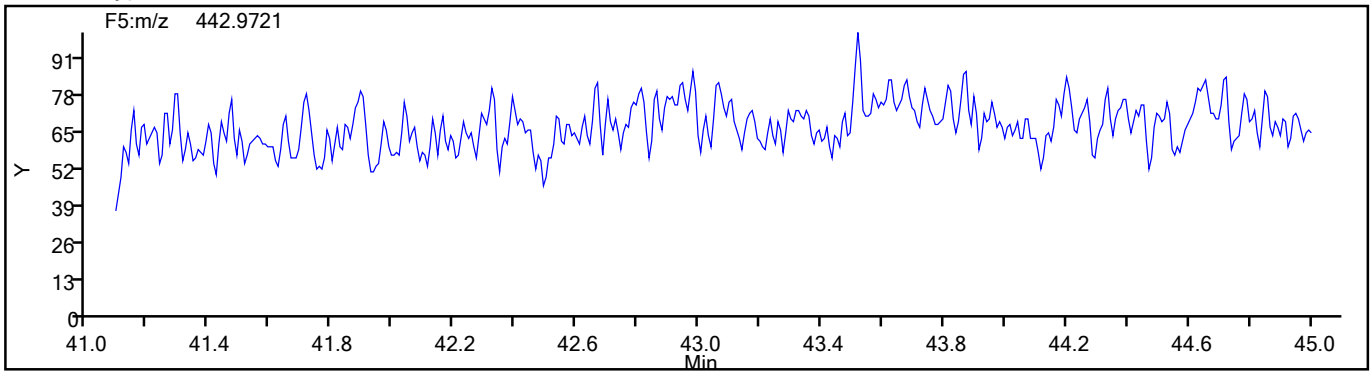

782088

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (0-2) RADL
Lab Sample ID: 320-76887-1 RADL
Matrix: Sediment
Lab File ID: 25AU21A11D2_018.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:45
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.04(g)
Date Analyzed: 08/25/2021 23:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 51.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	250000	E G	160	160

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	34		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	98		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_018.d
Lims ID: 320-76887-A-1-A
Client ID: 11215702-072721-BN-SJSB096 (0-2)
Sample Type: Client
Inject. Date: 25-Aug-2021 23:50:13 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-A-1-A X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:30:22

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.340	8061654	0.87	7.2E+05	10.0	10.0				nM
D 13C-2,3,7,8-TCDF	17.671	3638835	0.74	1.3327	3.387	3.387	1.955	1.955	33.87	a
2,3,7,8-TCDF	17.698	2196716443	0.79	0.9978	6050.1	6050.1	3.978	3.978		Ea
D 13C-2,3,7,8-TCDD	16.107	3017685	0.85	0.8749	4.278	4.278	14.4	14.4	42.78	nM
2,3,7,8-TCDD	16.121	397950630	0.79	1.0570	1247.6	1247.6	5.808	5.808		Ea
$ 37Cl4-2,3,7,8-TCDD	16.121	2723889		0.8648	3.907	3.907	0.2324	0.2324	97.67	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_018.d
Lims ID: 320-76887-A-1-A
Client ID: 11215702-072721-BN-SJSB096 (0-2)
Sample Type: Client
Inject. Date: 25-Aug-2021 23:50:13 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-A-1-A X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:30:22

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											nM
331.9368	16.340	16.298	3		3761620	647777	333425	833562	2		M
333.9339	16.340	16.298	3		4300034	743371	366886	917215	2	0.87(0.65-0.89)	M
13C-2,3,7,8-TCDF											a
315.9419	17.671	17.615	3	1.081	1551394	325505	63344	158360	5		a
317.9389	17.684	17.615	4	1.082	2087441	439258	81626	204065	5	0.74(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.698	17.628	4	1.002	967466653	162339960	55585	138962	2921		a
305.8987	17.684	17.628	3	1.001	1229249790	206008579	65833	164582	3129	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.107	16.065	3	0.986	1390593	263154	333425	833562	1		M
333.9339	16.107	16.065	3	0.986	1627092	329330	366886	917215	1	0.85(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.121	16.078	3	1.001	176145746	38721283	86403	216007	448		a
321.8936	16.121	16.078	3	1.001	221804884	48458646	59076	147690	820	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.121	16.078	3	0.987	2723889	601952	11185	27962	54		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_018.d				
Injection Date:	25-Aug-2021 23:50:13	Instrument ID:	11D2		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 18.62
Area: 2078563
Amount: 4.903288
Amount Units: pg/ul

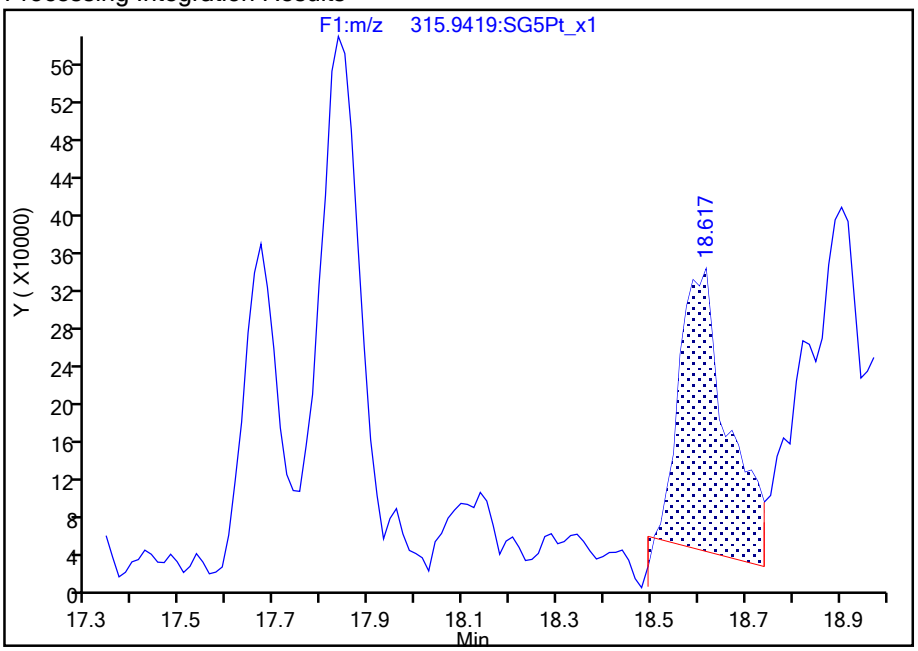

Manual Integration Results

RT: 17.67
Area: 1551394
Amount: 3.386962
Amount Units: pg/ul

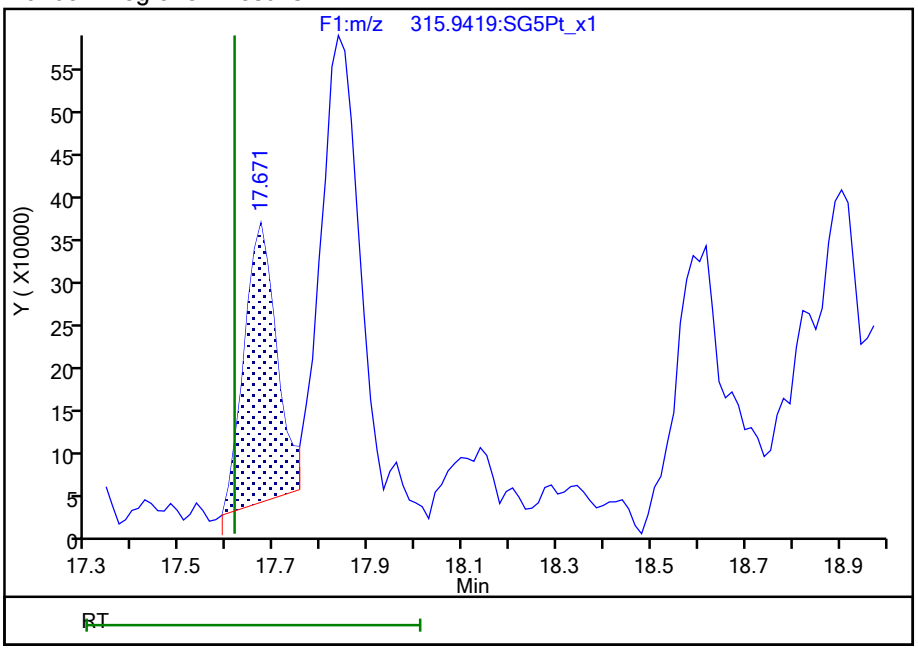

Reviewer: stephensk, 26-Aug-2021 09:29:18

Audit Action: Assigned Compound ID Audit Reason: Retention Time Shift

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_018.d				
Injection Date:	25-Aug-2021 23:50:13	Instrument ID:	11D2		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.63

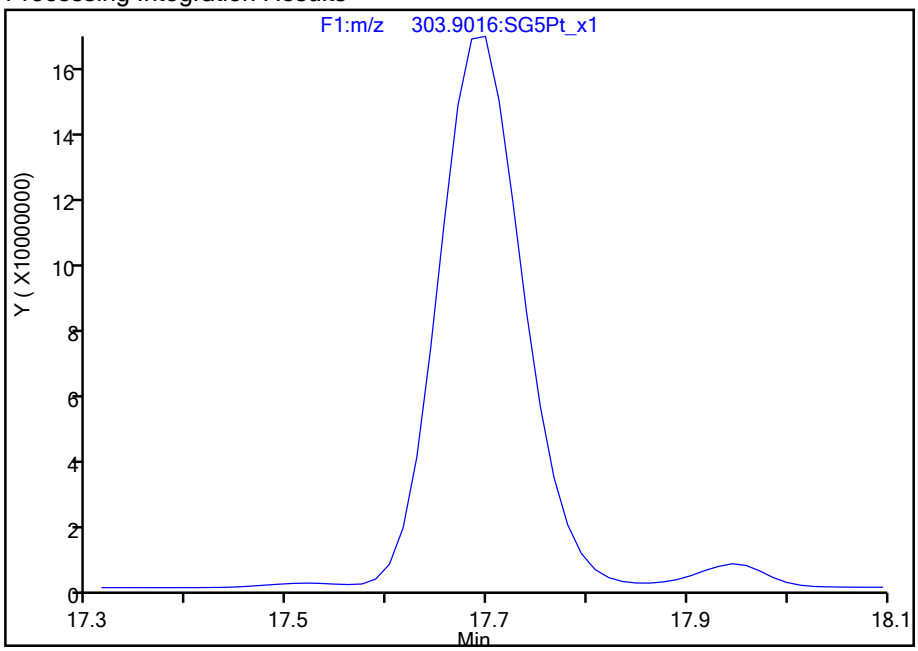

Manual Integration Results

RT: 17.70
Area: 967466653
Amount: 6050.1367
Amount Units: pg/ul

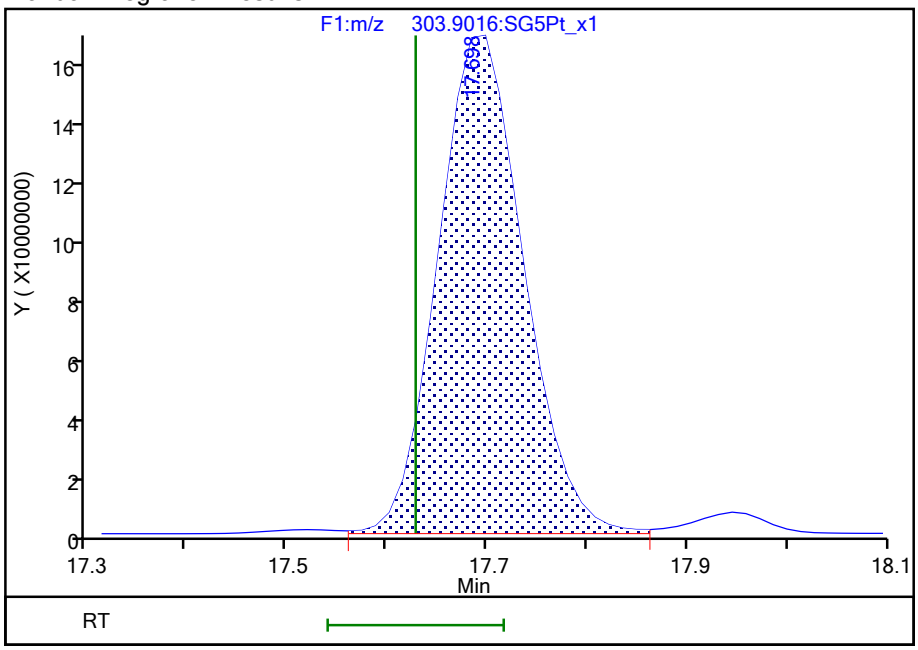

Reviewer: stephensk, 26-Aug-2021 09:29:26
Audit Action: Assigned Compound ID Audit Reason: Retention Time Shift

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_018.d				
Injection Date:	25-Aug-2021 23:50:13	Instrument ID:	11D2		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Not Detected
Expected RT: 16.08

Processing Integration Results

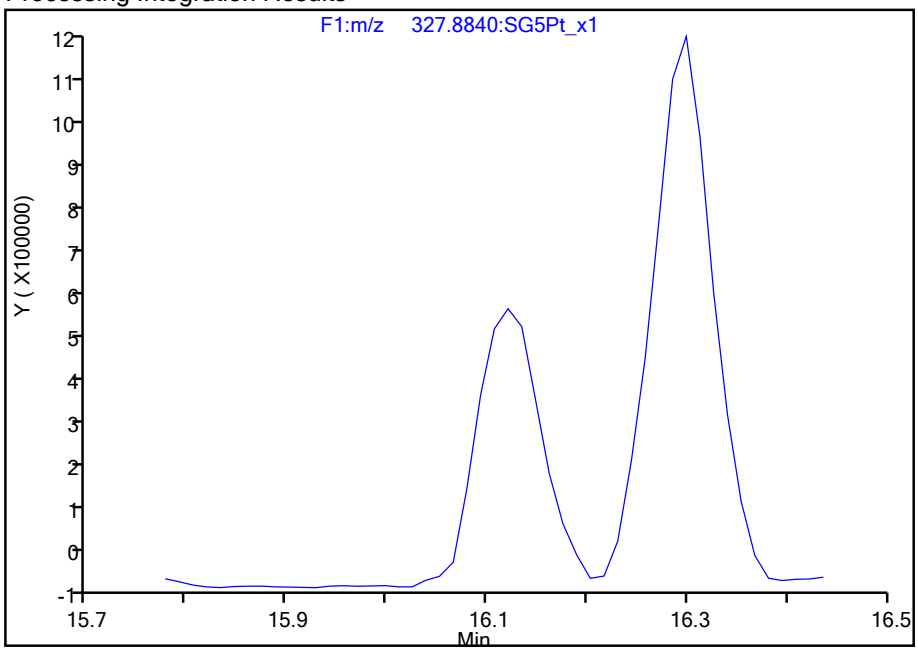

Manual Integration Results

RT: 16.12
Area: 2723889
Amount: 3.906982
Amount Units: pg/ul

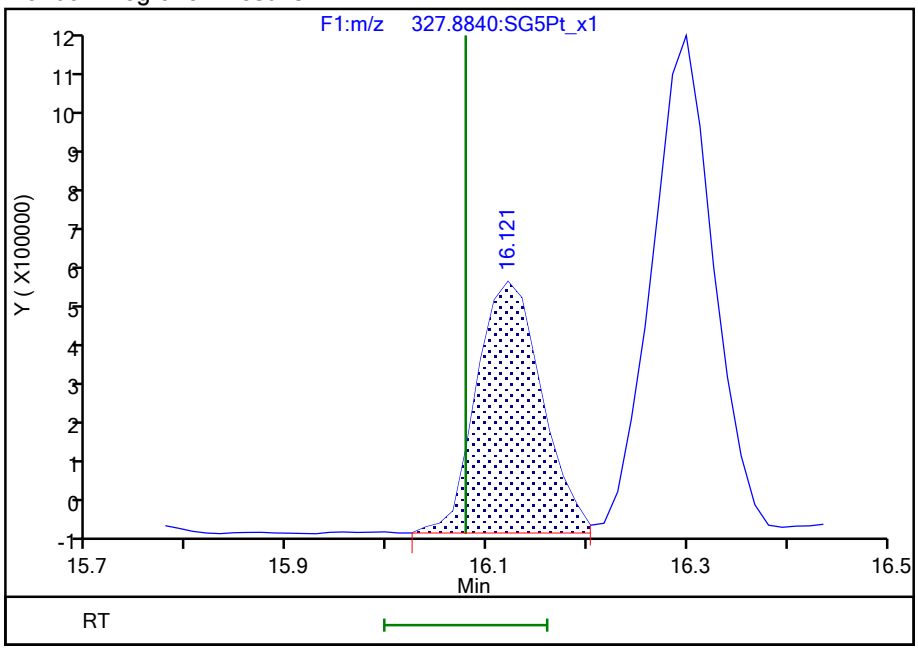

Reviewer: stephensk, 26-Aug-2021 09:30:12
Audit Action: Assigned Compound ID Audit Reason: Retention Time Shift

Report Date: 26-Aug-2021 09:30:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_018.d		
Injection Date:	25-Aug-2021 23:50:13	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	519744	Sample Line#:	18
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

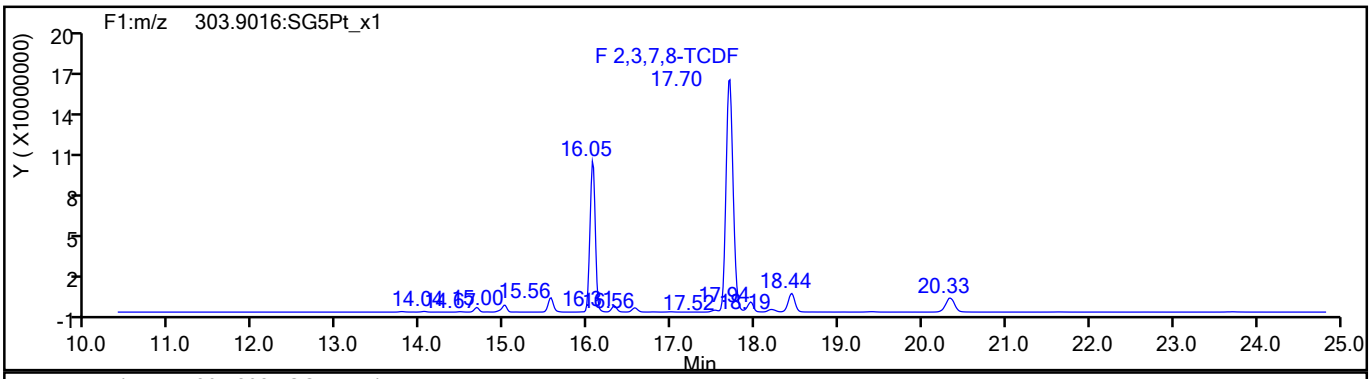

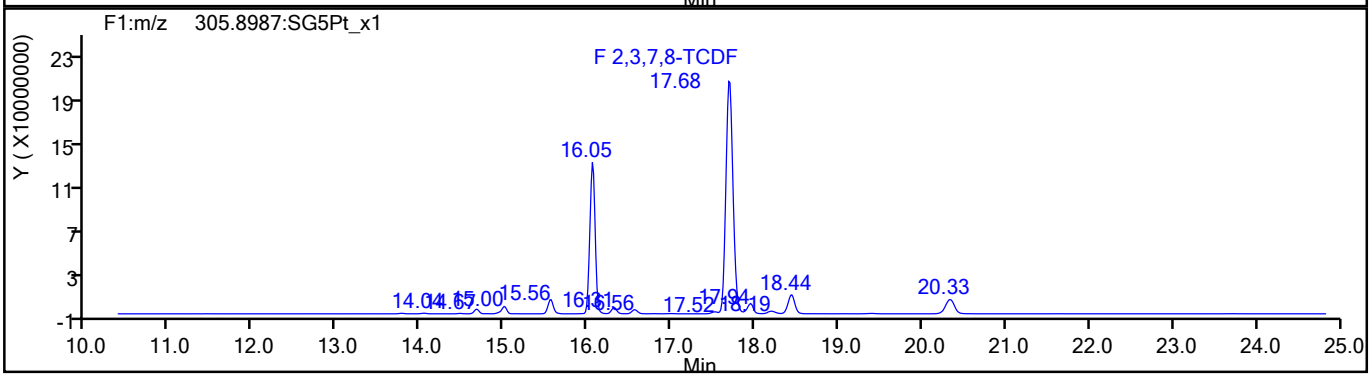

TCDF Standards

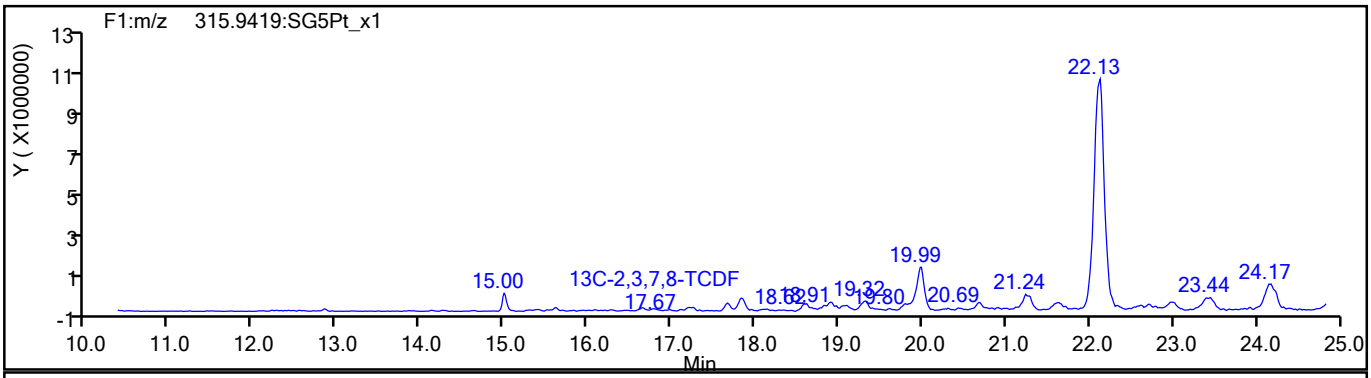

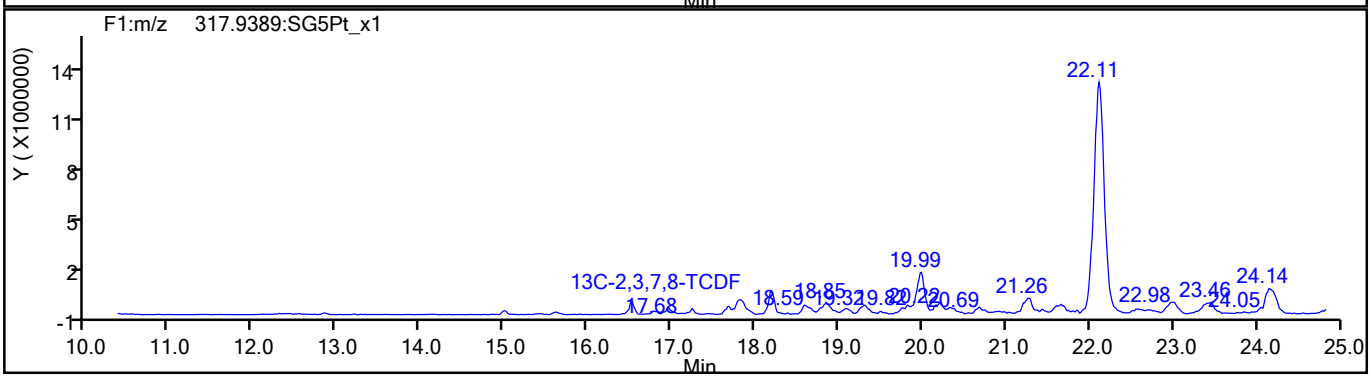

782095

Report Date: 26-Aug-2021 09:30:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_018.d		
Injection Date:	25-Aug-2021 23:50:13	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	519744	Sample Line#:	18
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

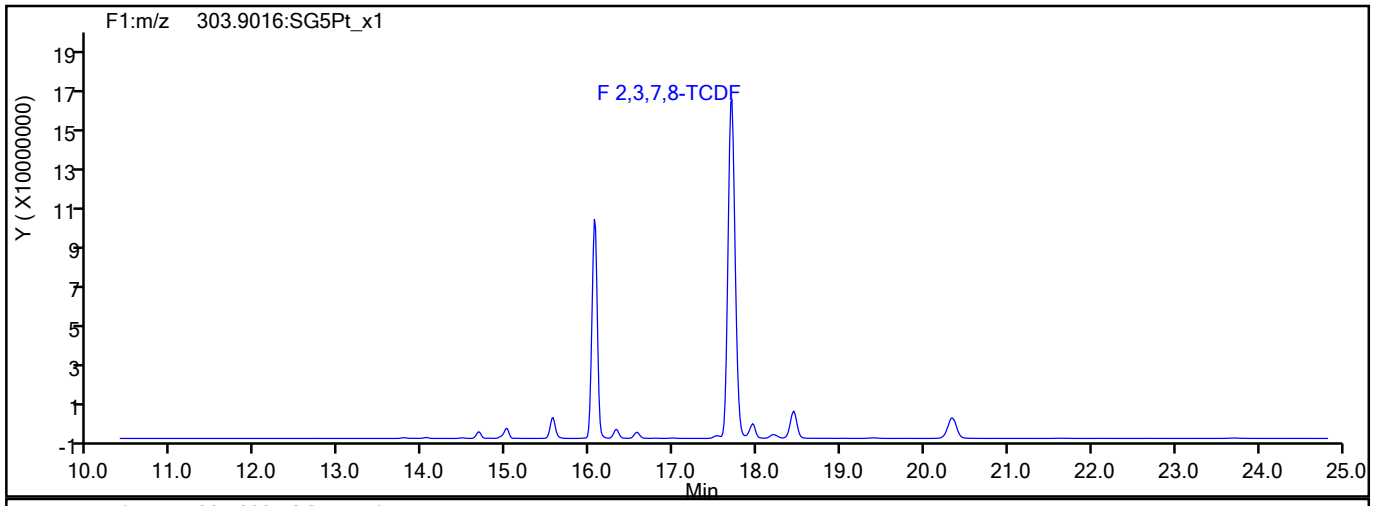

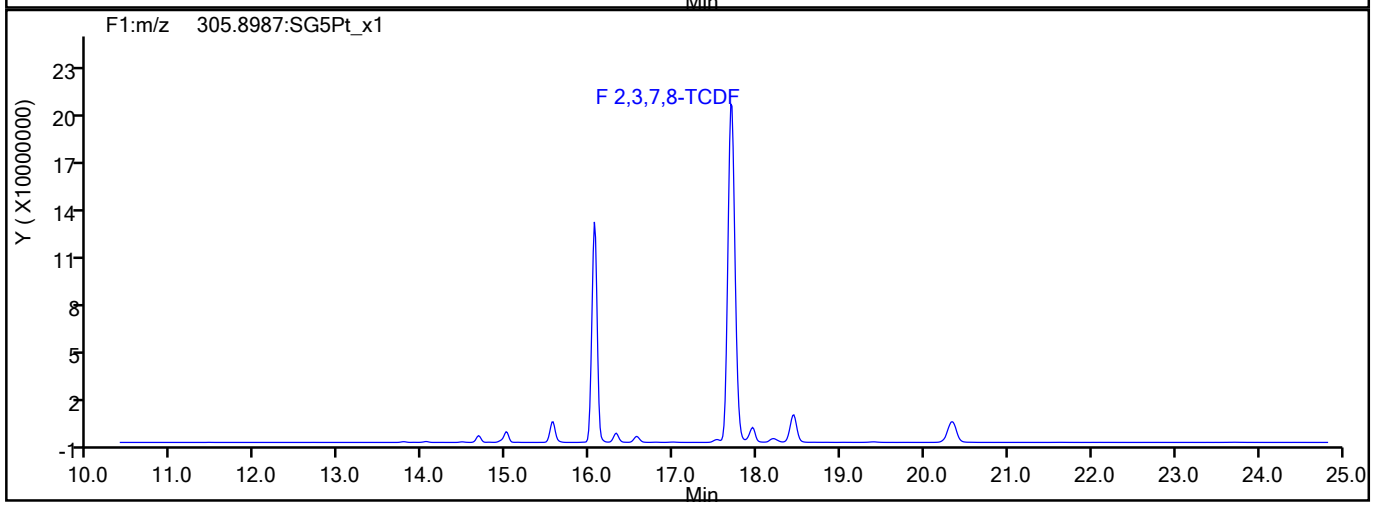

TCDF Interference Mass

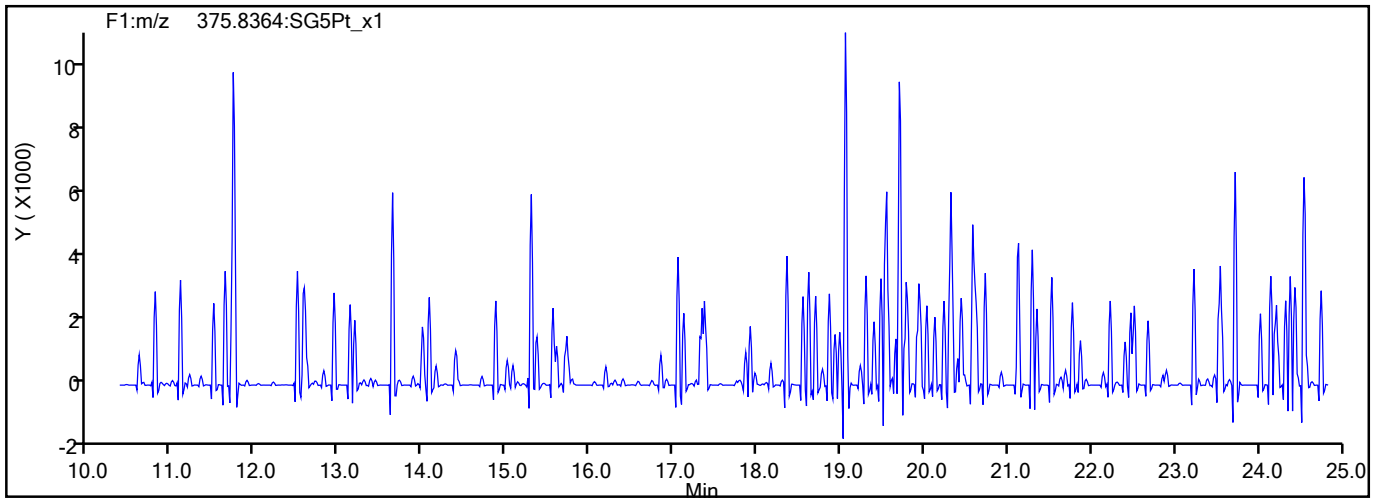

782096

Report Date: 26-Aug-2021 09:30:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_018.d		
Injection Date:	25-Aug-2021 23:50:13	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	519744	Sample Line#:	18
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

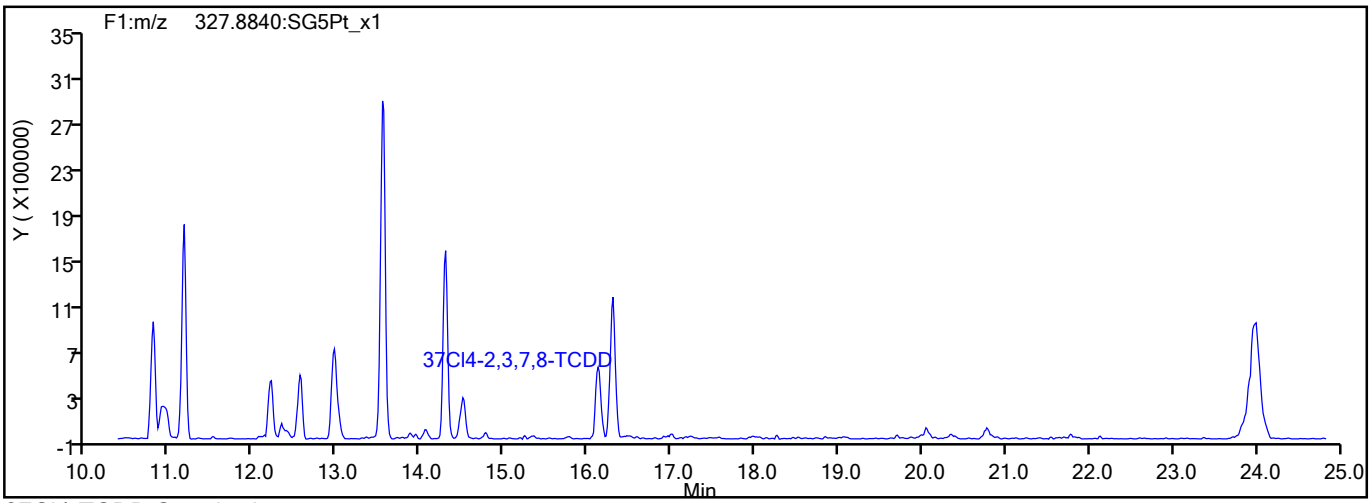

37Cl4-TCDD Standards

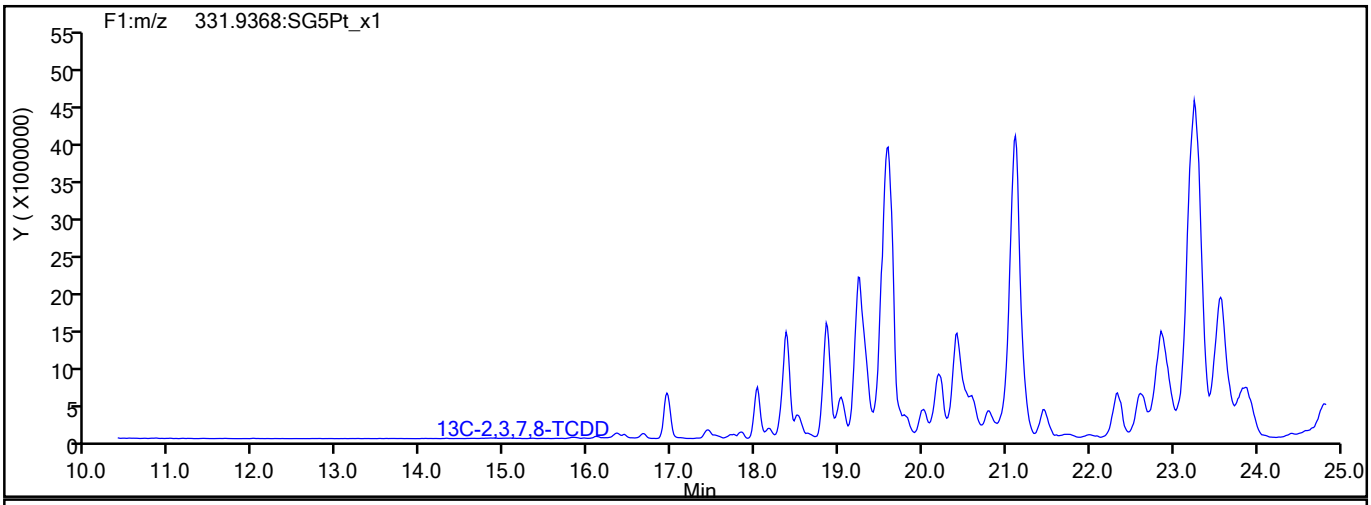

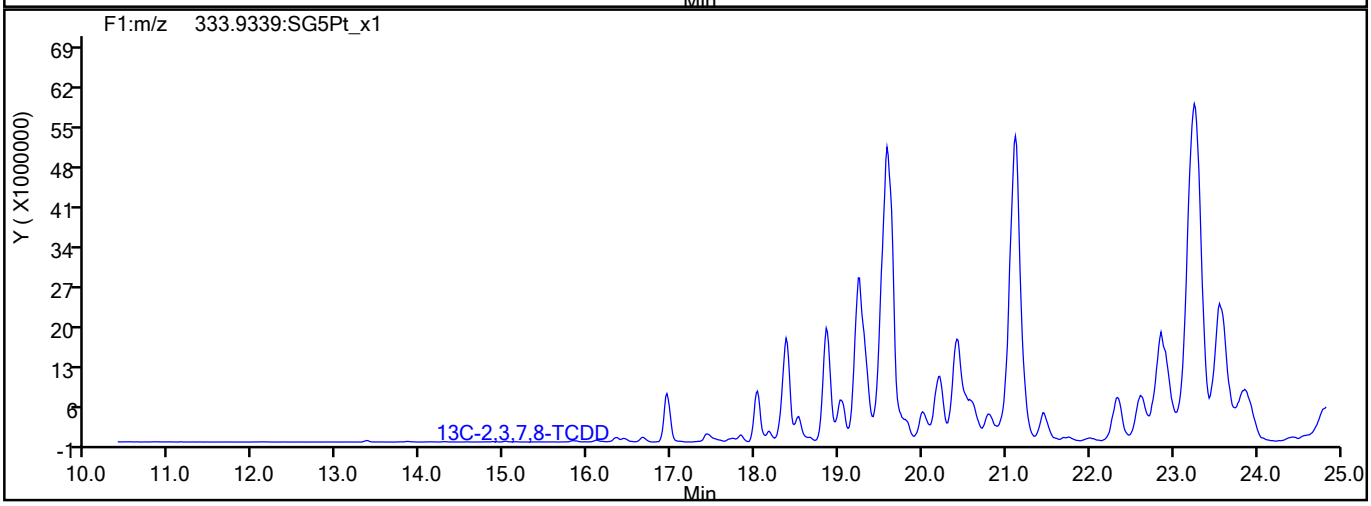

782097

Report Date: 26-Aug-2021 09:30:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_018.d		
Injection Date:	25-Aug-2021 23:50:13	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	519744	Sample Line#:	18
Column Type:	DB-225	Column Dia:	0.32 mm

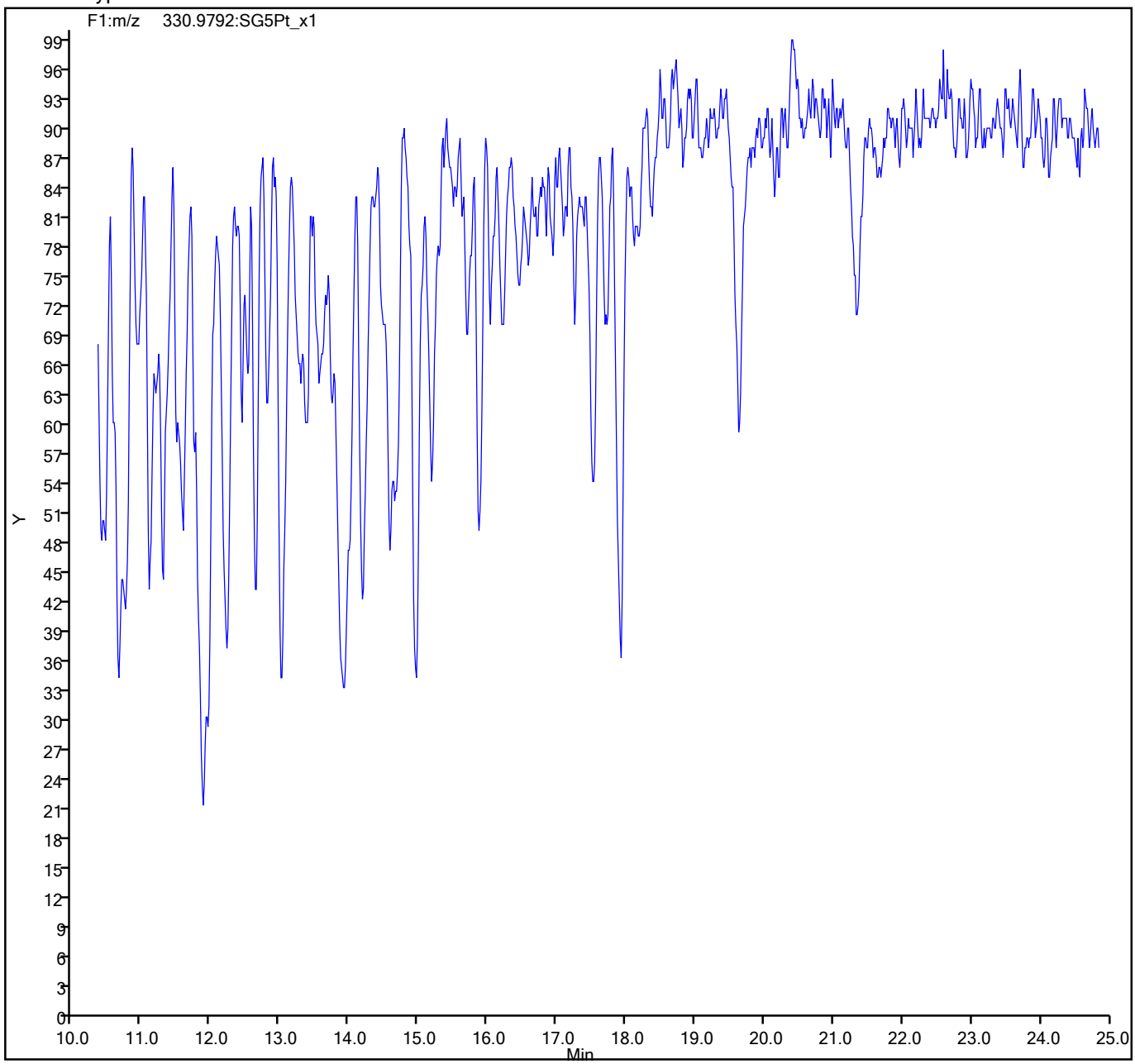

782098

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (0-2) DL
Lab Sample ID: 320-76887-1 DL
Matrix: Sediment
Lab File ID: 25AU2110D5_46.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:45
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.04(g)
Date Analyzed: 08/26/2021 21:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 51.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520325
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	60000	E G	190	190
70648-26-9	1,2,3,4,7,8-HxCDF	4400		100	15
41903-57-5	Total TCDD	70000	q G	190	190
30402-14-3	Total TCDF	390000	q G	690	690

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	47		25-164
89059-46-1	13C-2,3,7,8-TCDF	61		24-169
114423-98-2	13C-1,2,3,4,7,8-HxCDF	67		26-152

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	154		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d
Lims ID: 320-76887-A-1-A
Client ID: 11215702-072721-BN-SJSB096 (0-2)
Sample Type: Client
Inject. Date: 26-Aug-2021 21:06:01 ALS Bottle#: 57 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-a-1-a X10 320-76887-a-1-a X10
Misc. Info.: 25AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 16:34:59 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 16:34:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.658	8578853	0.77	6.2E+05	10.0	10.0				Ma
D 13C-2,3,7,8-TCDF	17.144	8559597	0.82	1.6249	6.140	6.140	0.3858	0.3858	61.40	
2,3,7,8-TCDF	17.159	4655003166	0.77	1.0239	5311.3	5311.3	17.1	17.1		E
A Non-2,3,7,8-sub-TCDF	17.069	3756639255	0.77	1.0239	4290.7	4286.3	17.1	2764.9		RQM
S Total TCDF					9602.0	9597.7	17.1	17.1		RQ
D 13C-2,3,7,8-TCDD	17.885	3613376	0.76	0.8993	4.684	4.684	0.2225	0.2225	46.84	
2,3,7,8-TCDD	17.900	667062650	0.79	1.2541	1472.0	1472.0	4.598	4.598		Ea
$ 37Cl4-2,3,7,8-TCDD	17.900	5856211		1.1071	6.166	6.166	0.3961	0.3961	154	
A Non-2,3,7,8-sub-TCDD	17.530	117363198	0.77	1.2541	307.0	259.0	4.598	173.6		RQMa
S Total TCDD					1779.0	1731.0	4.598	4.598		RQ
D 13C-1,2,3,7,8-PeCDF	22.115	7427719	1.57	1.2101	7.155	7.155	0.1414	0.1414	71.55	
1,2,3,7,8-PeCDF	22.129	74951689	1.59	1.0611	95.1	95.1	0.7547	0.7547		a
D 13C-2,3,4,7,8-PeCDF	23.411	8419247	1.57	1.2395	7.918	7.918	0.1380	0.1380	79.18	a
2,3,4,7,8-PeCDF	23.438	67001222	1.60	1.0184	78.1	78.1	0.6975	0.6975		
A F1 PeCDFs	19.851	527917	1.55	1.0398	0.6408	0.6408	0.0162	0.6408		a
A Non-2,3,7,8-sub-PeCDF	23.067	77614136	1.60	1.0398	94.2	94.2	0.7241	35.6		a
S Total PeCDF					268.1	268.1	0.7261	0.7261		
D 13C-1,2,3,7,8-PeCDD	24.120	5736734	1.63	0.7612	8.785	8.785	0.0410	0.0410	87.85	
1,2,3,7,8-PeCDD	24.147	8409616	1.63	1.0484	14.0	14.0	0.1834	0.1834		
A Non-2,3,7,8-sub-PeCDD	23.696	1471228	1.55	1.0484	2.783	2.446	0.1834	0.7734		RQMa
S Total PeCDD					16.8	16.4	0.1834	0.1834		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.226	7672767	0.53	1.0837	6.701	6.701	0.0376	0.0376	67.01	
1,2,3,4,7,8-HxCDF	30.252	90662114	1.22	1.0851	108.9	108.9	0.3687	0.3687		
D 13C-1,2,3,6,7,8-HxCDF	30.426	7036040	0.52	1.1279	5.904	5.904	0.0361	0.0361	59.04	M
1,2,3,6,7,8-HxCDF	30.452	23223950	1.21	1.1260	29.3	29.3	0.3448	0.3448		
D 13C-2,3,4,6,7,8-HxCDF	31.317	6762591	0.53	1.0637	6.017	6.017	0.0383	0.0383	60.17	
2,3,4,6,7,8-HxCDF	31.330	2620556	1.21	1.1675	3.319	3.319	0.2749	0.2749		M
D 13C-1,2,3,7,8,9-HxCDF	32.143	5924220	0.52	0.9676	5.795	5.795	0.0421	0.0421	57.95	
1,2,3,7,8,9-HxCDF	32.156	1093506	1.16	1.1664	1.583	1.583	0.2716	0.2716		
A Non-2,3,7,8-sub-HxCDF	30.331	8569645	1.20	1.1363	11.0	11.0	0.3102	6.363		Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					154.1	154.1	0.3150	0.3150		
* 13C-1,2,3,7,8,9-HxCDD	31.956	10565926	1.21	6.2E+05	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	31.517	4865597	1.23	0.7334	6.279	6.279	0.0336	0.0336	62.79	a
1,2,3,4,7,8-HxCDD	31.530	72739	1.36	1.0640	0.1405	0.1405	0.0202	0.0202		Ma
D 13C-1,2,3,6,7,8-HxCDD	31.623	5288344	1.20	0.8802	5.686	5.686	0.0280	0.0280	56.86	
1,2,3,6,7,8-HxCDD	31.637	161941	1.31	1.0001	0.3062	0.3062	0.0201	0.0201		M
1,2,3,7,8,9-HxCDD	31.969	117287	1.28	1.1325	0.2040	0.2040	0.0183	0.0183		M
A Non-2,3,7,8-sub-HxCDD	30.512	826606	1.24	1.0655	1.547	1.528	0.0195	0.8952		RQMa
S Total HxCDD					2.198	2.179	0.0196	0.0196		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.615	4070476	0.43	0.7730	4.984	4.984	0.0637	0.0637	49.84	
1,2,3,4,6,7,8-HpCDF	33.615	23284328	1.05	1.4413	39.7	39.7	0.2740	0.2740		
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	4520845	0.43	0.7008	6.105	6.105	0.0703	0.0703	61.05	a
1,2,3,4,7,8,9-HpCDF	34.684	6443975	1.04	1.3174	10.8	10.8	0.2798	0.2798		
A Non-2,3,7,8-sub-HpCDF	34.150	3996212	1.02	1.3793	6.744	6.744	0.2765	6.744		
S Total HpCDF					57.3	57.3	0.2769	0.2769		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	3770490	1.02	0.6472	5.514	5.514	0.0288	0.0288	55.14	
1,2,3,4,6,7,8-HpCDD	34.405	1313002	0.99	1.0943	3.182	3.182	0.0289	0.0289		
A Non-2,3,7,8-sub-HpCDD	34.223	1232649	1.00	1.0943	2.987	2.987	0.0289	2.987		
S Total HpCDD					6.170	6.170	0.0289	0.0289		
D 13C-OCDD	36.701	5763733	0.87	0.4472	12.2	12.2	0.0321	0.0321	61.00	
OCDF	36.797	6449893	0.89	1.4382	15.6	15.6	0.0245	0.0245		
OCDD	36.701	8730013	0.91	1.1070	27.4	27.4	0.0538	0.0538		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d
Lims ID: 320-76887-A-1-A
Client ID: 11215702-072721-BN-SJSB096 (0-2)
Sample Type: Client
Inject. Date: 26-Aug-2021 21:06:01 ALS Bottle#: 57 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-a-1-a X10 320-76887-a-1-a X10
Misc. Info.: 25AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 16:34:59 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 16:34:59

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											Ma
331.9368	17.658	17.583	5		3732609	730024	3797	9492	192		a
333.9339	17.674	17.583	5		4846244	951929	9668	24170	98	0.77(0.65-0.89)	M
13C-2,3,7,8-TCDF											
315.9419	17.144	17.084	4	0.971	3866270	1019046	18308	45770	56		
317.9389	17.144	17.084	4	0.971	4693327	1235470	23865	59662	52	0.82(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.159	17.099	4	1.001	2030955553	500712123	672053	1680132	745		
305.8987	17.159	17.099	4	1.001	2624047613	652949660	902332	2255830	724	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	15.511	17.069	-93	0.905	9784887	3120527	672053	1680132	5		M
305.8987	15.511	17.069	-93	0.905	13213677	4268725	902332	2255830	5	0.74(0.65-0.89)	M
303.9016	15.769	17.069	-78	0.920	42252743	12253875	672053	1680132	18		
305.8987	15.769	17.069	-78	0.920	54728172	16129316	902332	2255830	18	0.77(0.65-0.89)	M
303.9016	16.056	17.069	-61	0.936	54975461	9262496	672053	1680132	14		
305.8987	16.041	17.069	-62	0.936	72047782	12165048	902332	2255830	13	0.76(0.65-0.89)	
303.9016	16.282	17.069	-47	0.950	48351594	11911174	672053	1680132	18		
305.8987	16.267	17.069	-48	0.949	62284569	15202691	902332	2255830	17	0.78(0.65-0.89)	
303.9016	16.509	17.069	-33	0.963	87739272	23100734	672053	1680132	34		
305.8987	16.509	17.069	-33	0.963	114034038	29620458	902332	2255830	33	0.77(0.65-0.89)	
303.9016	16.781	17.069	-17	0.979	1055314384	265249544	672053	1680132	395		
305.8987	16.781	17.069	-17	0.979	1367893331	340628601	902332	2255830	377	0.77(0.65-0.89)	
303.9016	17.008	17.069	-4	0.992	30415144	6871346	672053	1680132	10		
305.8987	17.008	17.069	-4	0.992	39167765	8788410	902332	2255830	10	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.583	17.069	31	1.026	151345779	40015348	672053	1680132	60		
305.8987	17.583	17.069	31	1.026	196631590	51763312	902332	2255830	57	0.77(0.65-0.89)	
303.9016	17.885	17.069	49	1.043	15601516	2799873	672053	1680132	4		M
	Empc Correction				11795642	2492521	672053	1680132	4		
305.8987	17.885	17.069	49	1.043	15319017	3237041	902332	2255830	4	1.02(0.65-0.89)	M
303.9016	18.974	17.069	114	1.107	144314943	34447557	672053	1680132	51		
305.8987	18.974	17.069	114	1.107	185029465	44085559	902332	2255830	49	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.885	17.779	6	1.013	1565041	438101	3797	9492	115		
333.9339	17.885	17.779	6	1.013	2048335	604186	9668	24170	62	0.76(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	17.900	17.794	6	1.001	294110075	86665774	93380	233450	928		a
321.8936	17.900	17.794	6	1.001	372952575	108849639	147042	367605	740	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.900	17.794	6	1.014	5856211	1600197	29503	73757	54		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	16.751	17.530	-47	0.937	1175404	284329	93380	233450	3		M
321.8936	16.751	17.530	-47	0.937	1452955	341074	147042	367605	2	0.81(0.65-0.89)	M
319.8965	17.069	17.530	-28	0.954	513601	149389	93380	233450	2		M
321.8936	17.069	17.530	-28	0.954	609112	186611	147042	367605	1	0.84(0.65-0.89)	M
319.8965	17.779	17.530	15	0.994	3056855	769726	93380	233450	8		a
321.8936	17.779	17.530	15	0.994	3694865	936421	147042	367605	6	0.83(0.65-0.89)	
319.8965	18.218	17.530	41	1.019	35330998	8086130	93380	233450	87		
321.8936	18.203	17.530	40	1.018	43341486	10033948	147042	367605	68	0.82(0.65-0.89)	
319.8965	19.442	17.530	115	1.087	34020815	6548543	93380	233450	70		
	Empc Correction				12262542	2258186	93380	233450	24		
321.8936	19.442	17.530	115	1.087	15925380	2932710	147042	367605	20	2.14(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.115	21.993	7	1.252	4539502	794611	6682	16705	119		
353.8970	22.115	21.993	7	1.252	2888217	537558	4829	12072	111	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.129	22.020	7	1.001	45959284	7986608	26022	65055	307		a
341.8567	22.129	22.020	7	1.001	28992405	5069477	16651	41627	304	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											a
351.9000	23.411	23.315	6	1.326	5147747	907656	6682	16705	136		a
353.8970	23.411	23.315	6	1.326	3271500	594110	4829	12072	123	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.438	23.343	6	1.001	41204527	7207798	26022	65055	277		
341.8567	23.438	23.343	6	1.001	25796695	4576852	16651	41627	275	1.60(1.32-1.78)	
A F1 PeCDFs											a
339.8597	19.276	19.851	-34	0.872	321116	71136	351	877	203		a
341.8567	19.276	19.851	-34	0.872	206801	48412	604	1510	80	1.55(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											a
339.8597	20.806	23.067	-135	0.941	18032156	3816948	26022	65055	147		
341.8567	20.806	23.067	-135	0.941	11307304	2362328	16651	41627	142	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	21.611	23.067	-87	0.977	2137694	262271	26022	65055	10		
341.8567	21.625	23.067	-86	0.978	1312847	162496	16651	41627	10	1.63(1.32-1.78)	
339.8597	22.006	23.067	-64	0.995	3803049	881245	26022	65055	34		a
341.8567	21.993	23.067	-64	0.994	2391440	531292	16651	41627	32	1.59(1.32-1.78)	
339.8597	22.416	23.067	-39	1.014	699113	149962	26022	65055	6		
341.8567	22.416	23.067	-39	1.014	458541	96910	16651	41627	6	1.52(1.32-1.78)	
339.8597	22.634	23.067	-26	1.023	12419266	2334805	26022	65055	90		
341.8567	22.634	23.067	-26	1.023	7718773	1466814	16651	41627	88	1.61(1.32-1.78)	
339.8597	23.779	23.067	43	1.075	8083763	1179880	26022	65055	45		
341.8567	23.765	23.067	42	1.075	4996822	733357	16651	41627	44	1.62(1.32-1.78)	
339.8597	25.320	23.067	135	1.145	2606271	398993	26022	65055	15		
341.8567	25.333	23.067	136	1.146	1647097	259909	16651	41627	16	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.120	24.024	6	1.366	3556397	589255	1197	2992	492		
369.8919	24.120	24.024	6	1.366	2180337	344389	902	2255	382	1.63(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.147	24.038	7	1.001	5217891	873311	3821	9552	229		
357.8516	24.133	24.038	6	1.001	3191725	532464	3359	8397	159	1.63(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQMa
355.8546	22.170	23.696	-91	0.919	63263	12255	3821	9552	3		M
357.8516	22.184	23.696	-91	0.920	92280	12535	3359	8397	4	0.69(1.32-1.78)	M
	Empc Correction				40814	7906	3359	8397	2		
355.8546	22.388	23.696	-78	0.928	181917	35064	3821	9552	9		M
357.8516	22.388	23.696	-78	0.928	129683	23344	3359	8397	7	1.40(1.32-1.78)	
355.8546	22.404	23.696	-77	0.000			3821	9552			
357.8516	22.404	23.696	-77	0.000			3359	8397		0.00(1.32-1.78)	
355.8546	22.467	23.696	-74	0.000			3821	9552			
357.8516	22.467	23.696	-74	0.000			3359	8397		0.00(1.32-1.78)	
355.8546	22.702	23.696	-60	0.941	50915	8497	3821	9552	2		M
357.8516	22.674	23.696	-61	0.940	26862	4107	3359	8397	1	1.90(1.32-1.78)	
355.8546	23.547	23.696	-9	0.976	75688	12835	3821	9552	3		M
357.8516	23.547	23.696	-9	0.976	51235	10981	3359	8397	3	1.48(1.32-1.78)	M
355.8546	24.434	23.696	44	1.013	132567	24154	3821	9552	6		
357.8516	24.420	23.696	43	1.012	75224	14612	3359	8397	4	1.76(1.32-1.78)	
355.8546	24.638	23.696	56	1.021	434088	49954	3821	9552	13		
	Empc Correction				282741	25832	3821	9552	7		
357.8516	24.665	23.696	58	1.023	182414	16666	3359	8397	5	2.38(1.32-1.78)	
355.8546	25.143	23.696	87	1.042	108103	15671	3821	9552	4		M
357.8516	25.129	23.696	86	1.042	69802	10728	3359	8397	3	1.55(1.32-1.78)	M
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.226	30.159	4	0.946	2642956	478714	2855	7137	168		
385.8610	30.226	30.159	4	0.946	5029811	908423	2092	5230	434	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.252	30.173	5	1.001	49843444	9118706	12296	30740	742		
375.8178	30.239	30.173	4	1.000	40818670	7370152	9900	24750	744	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDF											M
383.8639	30.426	30.372	3	0.952	2409745	503834	2855	7137	176		M
385.8610	30.426	30.372	3	0.952	4626295	925544	2092	5230	442	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.452	30.385	4	1.001	12719325	2554379	12296	30740	208		
375.8178	30.452	30.385	4	1.001	10504625	2122884	9900	24750	214	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.317	31.277	2	0.980	2344122	583181	2855	7137	204		
385.8610	31.317	31.277	2	0.980	4418469	1145779	2092	5230	548	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.330	31.291	2	1.000	1435674	385697	12296	30740	31		M
375.8178	31.330	31.291	2	1.000	1184882	315379	9900	24750	32	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.116	2	1.006	2014416	603136	2855	7137	211		
385.8610	32.143	32.116	2	1.006	3909804	1148547	2092	5230	549	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.156	32.129	2	1.000	586696	205873	12296	30740	17		
375.8178	32.156	32.129	2	1.000	506810	176135	9900	24750	18	1.16(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	29.281	30.331	-63	0.969	1154081	154405	12296	30740	13		
375.8178	29.267	30.331	-64	0.968	990012	129981	9900	24750	13	1.17(1.05-1.43)	
373.8208	31.211	30.331	53	1.033	801551	204734	12296	30740	17		M
375.8178	31.211	30.331	53	1.033	672609	169253	9900	24750	17	1.19(1.05-1.43)	
373.8208	32.249	30.331	115	1.067	2721567	927585	12296	30740	75		
375.8178	32.249	30.331	115	1.067	2229825	759723	9900	24750	77	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.930	2		5794390	1678956	1557	3892	1078		
403.8529	31.956	31.930	2		4771536	1358512	1433	3582	948	1.21(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	31.517	31.477	2	0.986	2683832	759084	1557	3892	488		a
403.8529	31.517	31.477	2	0.986	2181765	623371	1433	3582	435	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											Ma
389.8157	31.530	31.490	2	1.000	41944	12106	625	1562	19		M
391.8127	31.530	31.490	2	1.000	30795	8424	563	1407	15	1.36(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.623	31.597	2	0.990	2889625	810441	1557	3892	521		
403.8529	31.623	31.597	2	0.990	2398719	665693	1433	3582	465	1.20(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.637	31.610	2	1.000	91871	24864	625	1562	40		M
391.8127	31.637	31.610	2	1.000	70070	21004	563	1407	37	1.31(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											M
389.8157	31.969	31.943	2	1.014	65942	16627	625	1562	27		M
391.8127	31.969	31.943	2	1.014	51345	12342	563	1407	22	1.28(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQMa

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
389.8157	29.108	30.512	-84	0.920	107288	14346	625	1562	23		
391.8127	29.108	30.512	-84	0.920	82524	10275	563	1407	18	1.30(1.05-1.43)	
389.8157	30.306	30.512	-12	0.958	59374	11912	625	1562	19		
391.8127	30.319	30.512	-12	0.959	50137	8474	563	1407	15	1.18(1.05-1.43)	
389.8157	30.718	30.512	12	0.971	263544	55186	625	1562	88		
391.8127	30.718	30.512	12	0.971	220759	43021	563	1407	76	1.19(1.05-1.43)	
389.8157	30.944	30.512	26	0.979	14111	2875	625	1562	5		
391.8127	30.931	30.512	25	0.978	21756	6144	563	1407	11	0.65(1.05-1.43)	
	Empc Correction				11379	2318	563	1407	4		
389.8157	31.930	30.512	85	1.010	9123	5064	625	1562	8		M
391.8127	31.930	30.512	85	1.010	8367	5010	563	1407	9	1.09(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.615	33.591	1	1.052	1217721	444288	2384	5960	186		
419.8220	33.603	33.591	1	1.052	2852755	1025015	3599	8997	285	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.603	1	1.000	11934456	4414875	11522	28805	383		
409.7789	33.615	33.603	1	1.000	11349872	4318345	11689	29222	369	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											a
417.8253	34.672	34.660	1	1.085	1348880	462537	2384	5960	194		a
419.8220	34.672	34.660	1	1.085	3171965	1111487	3599	8997	309	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.684	34.672	1	1.000	3284458	1154963	11522	28805	100		
409.7789	34.684	34.672	1	1.000	3159517	1088376	11689	29222	93	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	33.907	34.150	-15	1.009	2016638	786249	11522	28805	68		
409.7789	33.907	34.150	-15	1.009	1979574	792416	11689	29222	68	1.02(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.381	1	1.076	1901295	689382	1351	3377	510		
437.8140	34.393	34.381	1	1.076	1869195	644961	916	2290	704	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.393	1	1.000	653028	231629	884	2210	262		
425.7737	34.393	34.393	0	1.000	659974	224104	806	2015	278	0.99(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.858	34.223	-22	0.984	617275	240687	884	2210	272		
425.7737	33.858	34.223	-22	0.984	615374	227135	806	2015	282	1.00(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.689	1	1.148	2685892	787535	765	1912	1029		
471.7750	36.701	36.689	1	1.148	3077841	906571	979	2447	926	0.87(0.76-1.02)	
OCDF											
441.7428	36.797	36.785	1	1.003	3029763	931765	530	1325	1758		
443.7399	36.797	36.785	1	1.003	3420130	1012245	665	1662	1522	0.89(0.76-1.02)	
OCDD											
457.7377	36.701	36.701	0	1.000	4150909	1236577	1296	3240	954		
459.7348	36.701	36.701	0	1.000	4579104	1372248	721	1802	1903	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 27-Aug-2021 16:35:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	26-Aug-2021 21:06:01	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	520325	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	8559597	2254516

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		10.000	8559597	2254516

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.511	9784887	3120527	13213677	4268725	26.2	0.74	M
15.769	42252743	12253875	54728172	16129316	110.7	0.77	M
16.056	54975461	9262496	72047782	12165048	144.9	0.76	
16.282	48351594	11911174	62284569	15202691	126.2	0.78	
16.509	87739272	23100734	114034038	29620458	230.2	0.77	
16.781	1055314384	265249544	1367893331	340628601	2764.9	0.77	
17.008	30415144	6871346	39167765	8788410	79.4	0.78	
17.583	151345779	40015348	196631590	51763312	397.0	0.77	
17.885	15601516	2799873	15319017	3237041	35.3	1.02	RQM
17.885	11795642	2492521	15319017	3237041	30.9		Empc Correction
18.974	144314943	34447557	185029465	44085559	375.8	0.78	
Signal Totals:							
	1636289849	408725122	2120349406	525889161			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3760445129	934921635				0.77	RQM
	3756639255	934614283					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4290.7 = (3760445129 * 10.000) / (8559597 * 1.024)

Empc Amount: 4286.3 = (3756639255 * 10.000) / (8559597 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 27-Aug-2021 16:35:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	26-Aug-2021 21:06:01	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	520325	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	3613376	1042287

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		10.000	3613376	1042287

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.751	1175404	284329	1452955	341074	5.80	0.81	nM
17.069	513601	149389	609112	186611	2.48	0.84	nM
17.779	3056855	769726	3694865	936421	14.9	0.83	a
18.218	35330998	8086130	43341486	10033948	173.6	0.82	
19.442	34020815	6548543	15925380	2932710	110.2	2.14	RQ
19.442	12262542	2258186	15925380	2932710	62.2		Empc Correction
Signal Totals:							
	52339400	11547760	65023798	14430764			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	139121471	30268881				1.14	RQMa
	117363198	25978524					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 307.003 = (139121471 * 10.000) / (3613376 * 1.254)

Empc Amount: 258.988 = (117363198 * 10.000) / (3613376 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d
Lims ID: 320-76887-A-1-A
Client ID: 11215702-072721-BN-SJSB096 (0-2)
Inject. Date: 26-Aug-2021 21:06:01 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 520325 Lims Sample ID: 4

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	7427719	1332169
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	8419247	1501766

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		10.000	7923483	1416967

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.276	321116	71136	206801	48412	0.6408	1.55	a
Signal Totals:							
	321116	71136	206801	48412			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	527917	119548				1.55	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6408 = (527917 * 10.000) / (7923483 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 16:35:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	26-Aug-2021 21:06:01	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	520325	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	7427719	1332169
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	8419247	1501766

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		10.000	7923483	1416967

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.806	18032156	3816948	11307304	2362328	35.6	1.59	
21.611	2137694	262271	1312847	162496	4.19	1.63	
22.006	3803049	881245	2391440	531292	7.52	1.59	a
22.416	699113	149962	458541	96910	1.41	1.52	
22.634	12419266	2334805	7718773	1466814	24.4	1.61	
23.779	8083763	1179880	4996822	733357	15.9	1.62	
25.320	2606271	398993	1647097	259909	5.16	1.58	
Signal Totals:							
	47781312	9024104	29832824	5613106			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	77614136	14637210				1.60	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 94.207 = (77614136 * 10.000) / (7923483 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 16:35:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	26-Aug-2021 21:06:01	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	520325	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	5736734	933644

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		10.000	5736734	933644

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.170	63263	12255	92280	12535	0.2586	0.69	RQM
22.170	63263	12255	40814	7906	0.1730		Empc Correction
22.388	181917	35064	129683	23344	0.5181	1.40	Ma
22.404	0	0	0	0		0.00	
22.467	0	0	0	0		0.00	
22.702	50915	8497	26862	4107	0.1293	1.90	RnMa
23.547	75688	12835	51235	10981	0.2110	1.48	M
24.434	132567	24154	75224	14612	0.3455	1.76	
24.638	434088	49954	182414	16666	1.03	2.38	RQ
24.638	282741	25832	182414	16666	0.7734		Empc Correction
25.143	108103	15671	69802	10728	0.2958	1.55	M
Signal Totals:							
	895194	134308	576034	88344			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1674041	251403				1.67	RQMa
	1471228	222652					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.783 = (1674041 * 10.000) / (5736734 * 1.048)

Empc Amount: 2.446 = (1471228 * 10.000) / (5736734 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d
Lims ID: 320-76887-A-1-A
Client ID: 11215702-072721-BN-SJSB096 (0-2)
Inject. Date: 26-Aug-2021 21:06:01 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 520325 Lims Sample ID: 4

Non-2,3,7,8-sub-HxCDF, RT: 30.331

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	7672767	1387137
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	7036040	1429378
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	6762591	1728960
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	5924220	1751683

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		10.000	6848904	1574289

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.281	1154081	154405	990012	129981	2.76	1.17	
31.211	801551	204734	672609	169253	1.89	1.19	Ma
32.249	2721567	927585	2229825	759723	6.36	1.22	
Signal Totals:							
	4677199	1286724	3892446	1058957			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8569645	2345681				1.20	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 11.012 = (8569645 * 10.000) / (6848904 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 27-Aug-2021 16:35:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	26-Aug-2021 21:06:01	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	520325	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDD, RT: 30.512

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	4865597	1382455
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	5288344	1476134
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		10.000	5076970	1429294

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.108	107288	14346	82524	10275	0.3509	1.30	
30.306	59374	11912	50137	8474	0.2024	1.18	
30.718	263544	55186	220759	43021	0.8952	1.19	
30.944	14111	2875	21756	6144	0.0663	0.65	RQ
30.944	14111	2875	11379	2318	0.0471		Empc Correction
31.930	9123	5064	8367	5010	0.0323	1.09	Ma
Signal Totals:							
	453440	89383	373166	69098			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	836983	162307				1.18	RQMa
	826606	158481					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.547 = (836983 * 10.000) / (5076970 * 1.066)

Empc Amount: 1.528 = (826606 * 10.000) / (5076970 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	26-Aug-2021 21:06:01	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	520325	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDF, RT: 34.150

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	4070476	1469303
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	4520845	1574024

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		10.000	4295660	1521663

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
33.907	2016638	786249	1979574	792416	6.74	1.02	
Signal Totals:							
	2016638	786249	1979574	792416			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3996212	1578665				1.02	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 6.744 = (3996212 * 10.000) / (4295660 * 1.379)

Report Date: 27-Aug-2021 16:35:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Lims ID:	320-76887-A-1-A		
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Inject. Date:	26-Aug-2021 21:06:01	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	520325	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	3770490	1334343

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		10.000	3770490	1334343

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.858	617275	240687	615374	227135	2.99	1.00	
Signal Totals:							
	617275	240687	615374	227135			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1232649	467822				1.00	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.987 = (1232649 * 10.000) / (3770490 * 1.094)

Report Date: 27-Aug-2021 16:35:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d				
Injection Date:	26-Aug-2021 21:06:01	Instrument ID:	10D5		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.68- 19.46)

Signal: 1

Processing Integration Results

Not Detected

RT: 14.68- 19.46

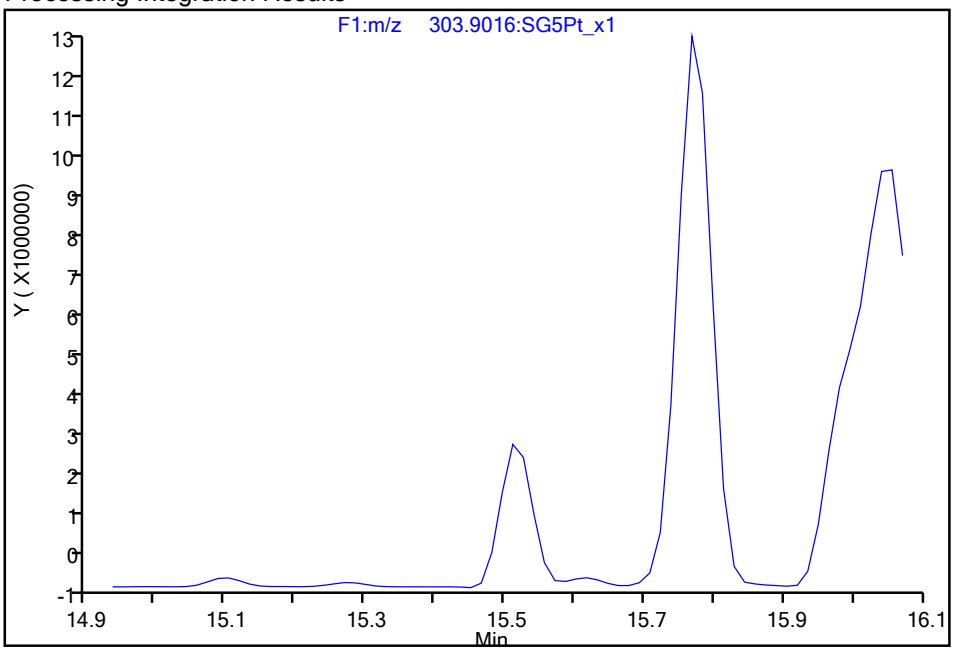

Manual Integration Results

RT = 15.511 Area = 9784887 M

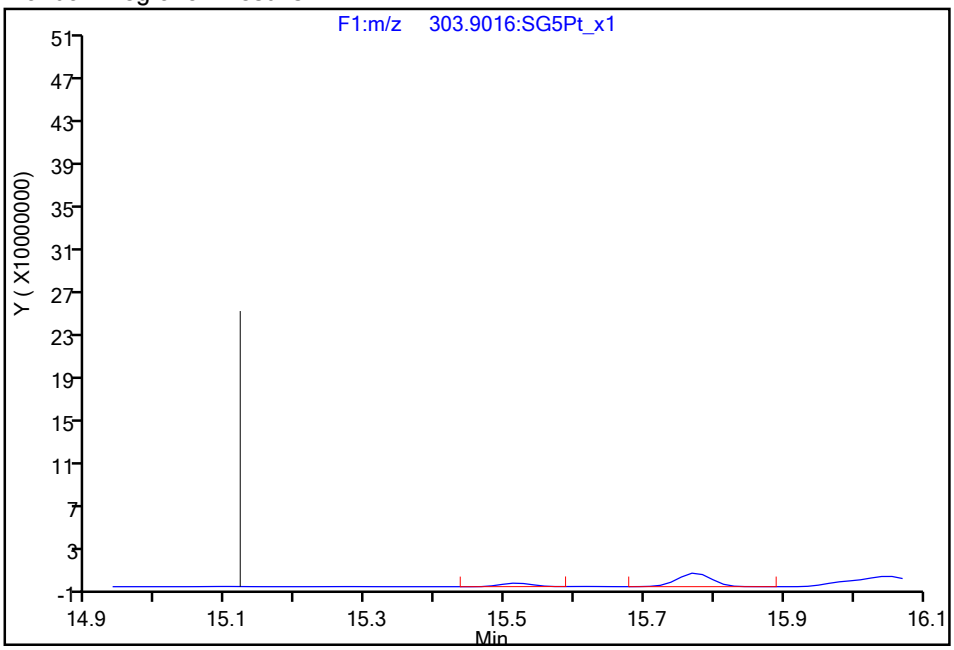

Reviewer: bennettd, 27-Aug-2021 16:26:00

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d				
Injection Date:	26-Aug-2021 21:06:01	Instrument ID:	10D5		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.68- 19.46)

Signal: 2

Processing Integration Results

RT = 15.511 Area = 14672003

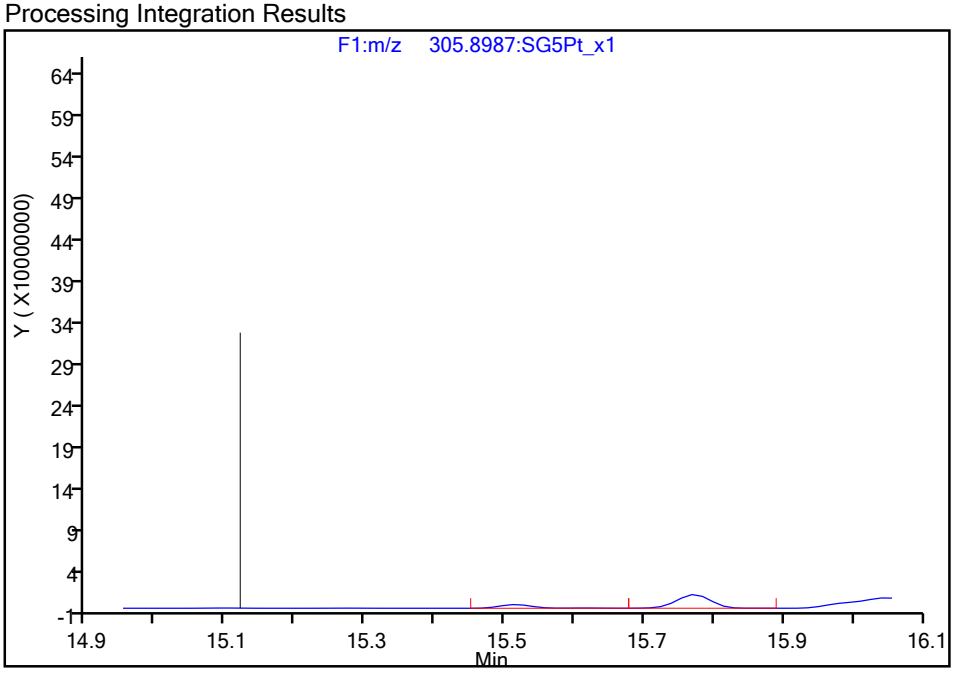

Manual Integration Results

RT = 15.511 Area = 13213677 M

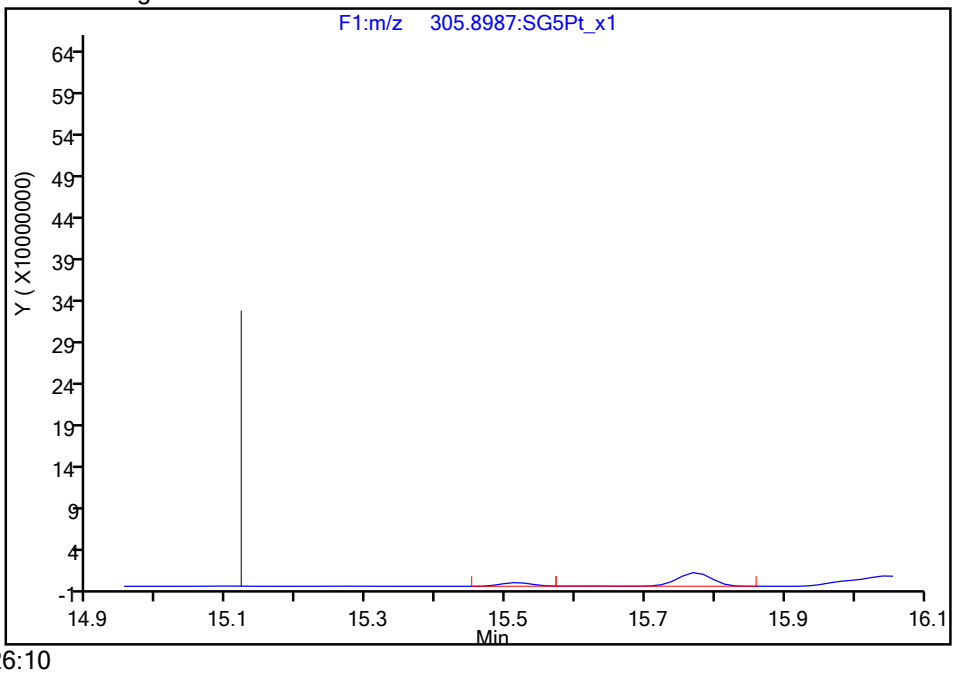

Reviewer: bennettd, 27-Aug-2021 16:26:10

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d				
Injection Date:	26-Aug-2021 21:06:01	Instrument ID:	10D5		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.68- 19.46)

Signal: 2

Processing Integration Results

RT = 15.769 Area = 55295046

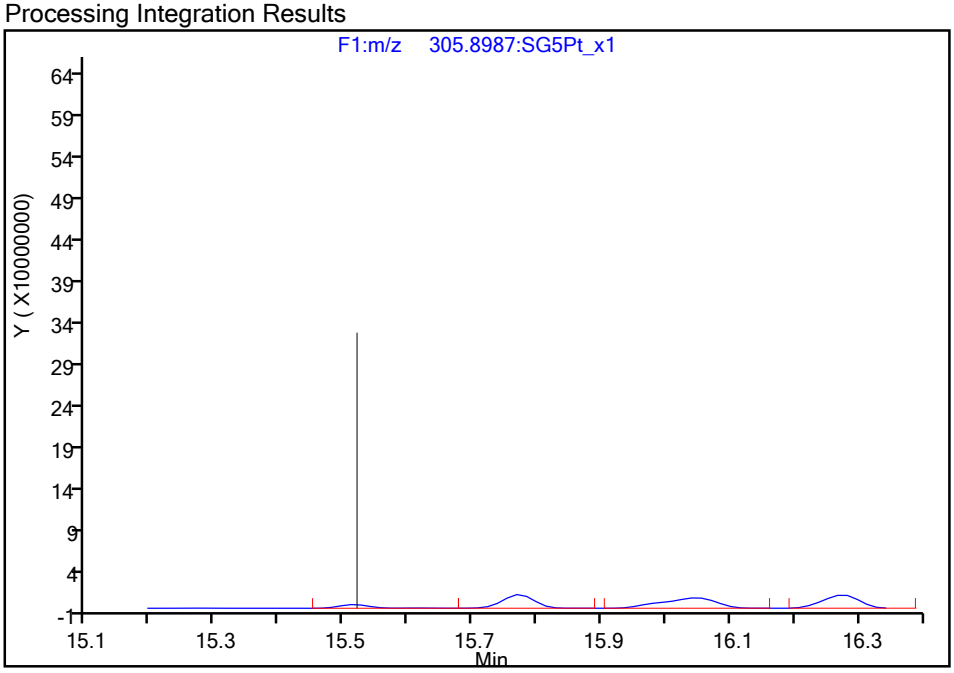

Manual Integration Results

RT = 15.769 Area = 54667341 M

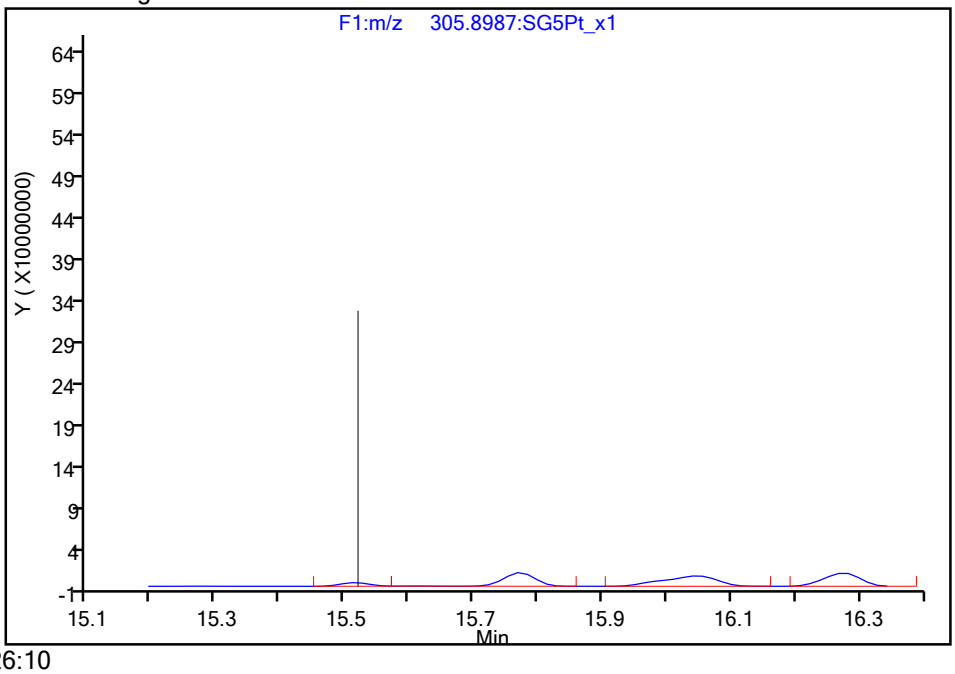

Reviewer: bennettd, 27-Aug-2021 16:26:10

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d				
Injection Date:	26-Aug-2021 21:06:01	Instrument ID:	10D5		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.68- 19.46)

Signal: 1

Not Detected
RT: 14.68- 19.46

Processing Integration Results

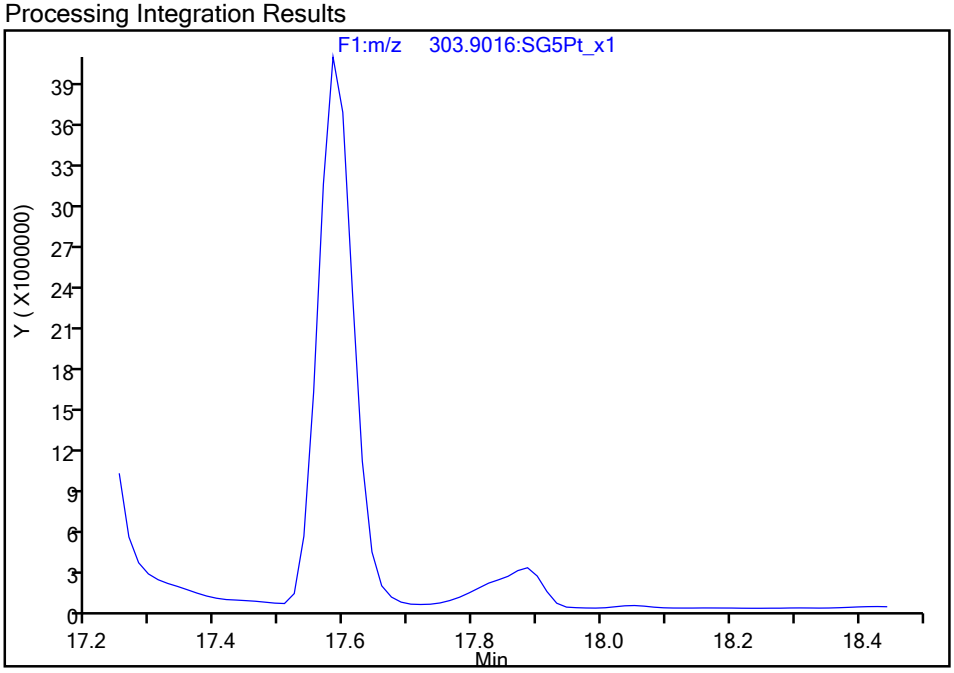

RT = 17.885 Area = 15601516 M

Manual Integration Results

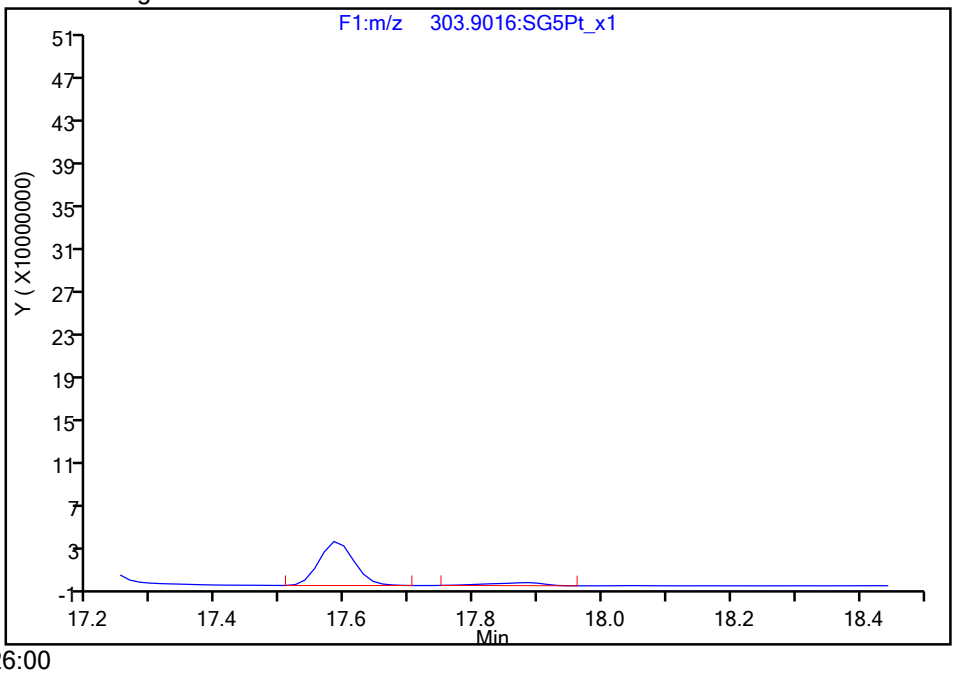

Reviewer: bennettd, 27-Aug-2021 16:26:00
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d				
Injection Date:	26-Aug-2021 21:06:01	Instrument ID:	10D5		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.68- 19.46)

Signal: 2

Not Detected
RT: 14.68- 19.46

Processing Integration Results

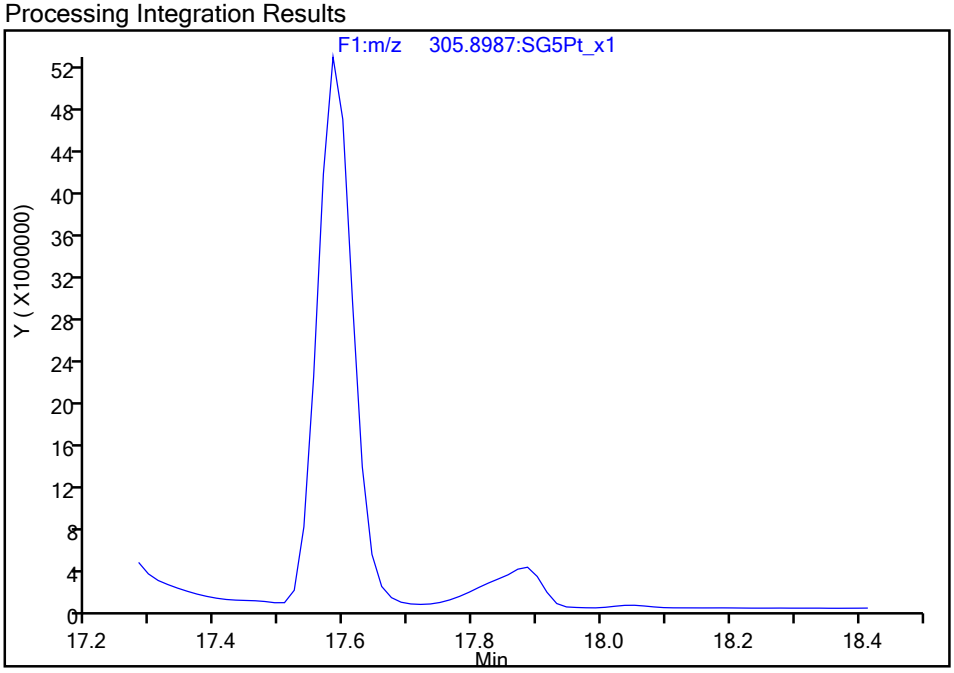

RT = 17.885 Area = 15319017 M

Manual Integration Results

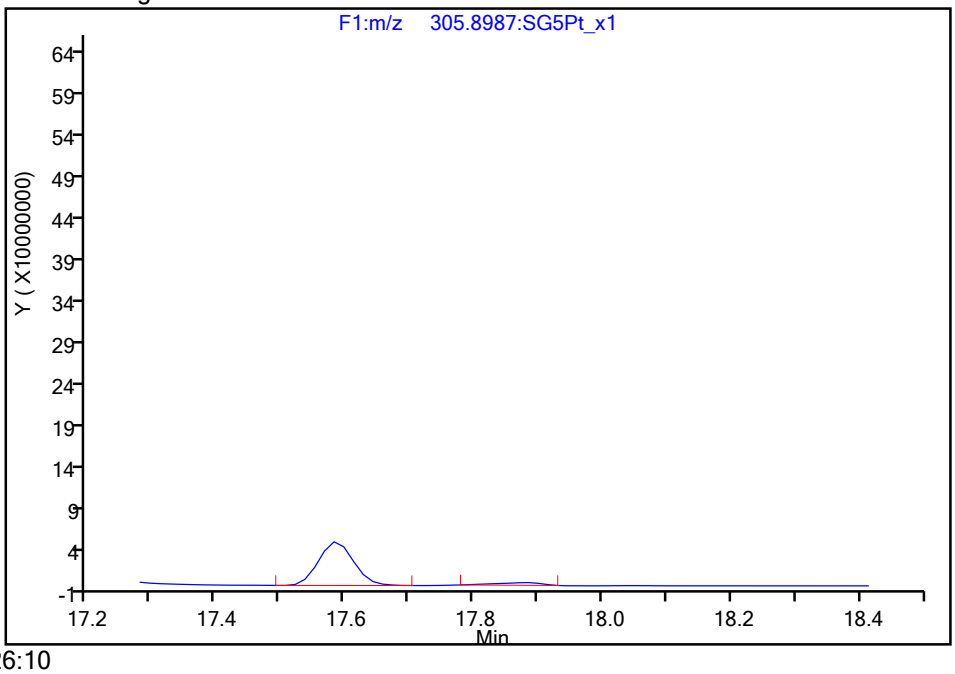

Reviewer: bennettd, 27-Aug-2021 16:26:10
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d				
Injection Date:	26-Aug-2021 21:06:01	Instrument ID:	10D5		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 17.78
Area: 3056855
Amount: 14.899175
Amount Units: pg/ul

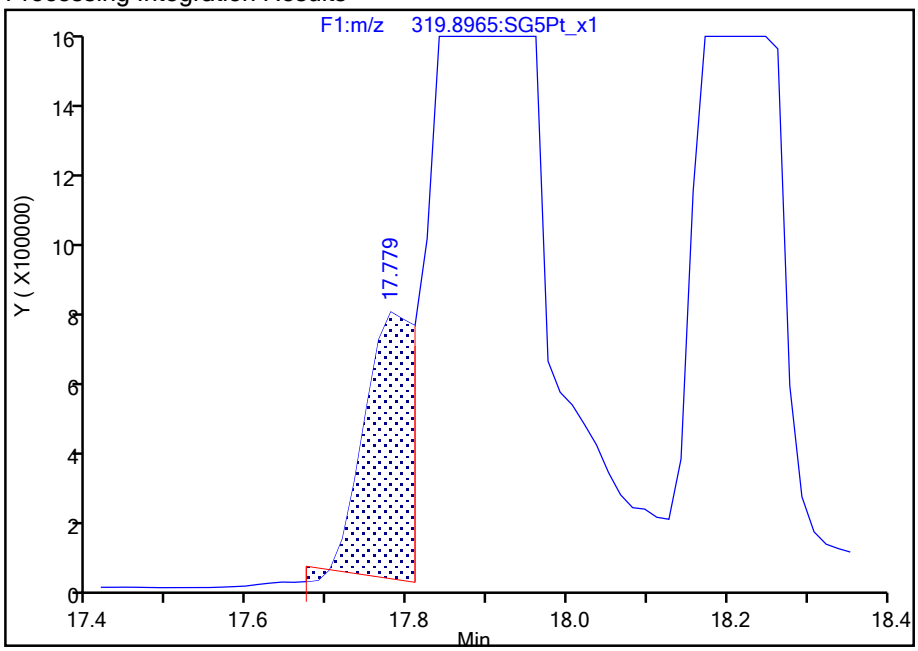

Manual Integration Results

RT: 17.90
Area: 294110075
Amount: 1472.0225
Amount Units: pg/ul

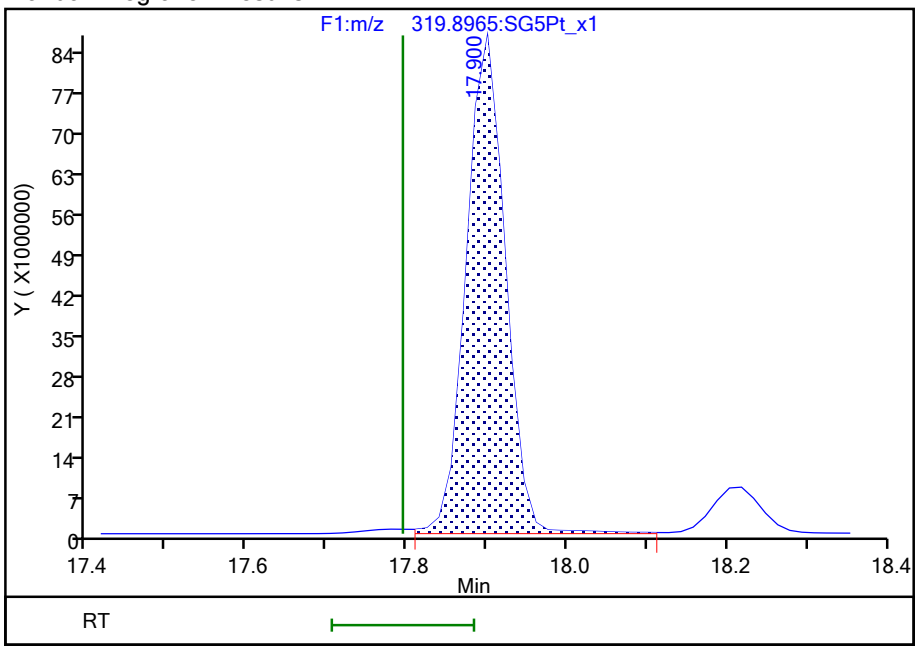

Reviewer: arghestanis, 27-Aug-2021 10:09:48

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d				
Injection Date:	26-Aug-2021 21:06:01	Instrument ID:	10D5		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.59- 19.47)

Signal: 1

Processing Integration Results

Not Detected
RT: 15.59- 19.47

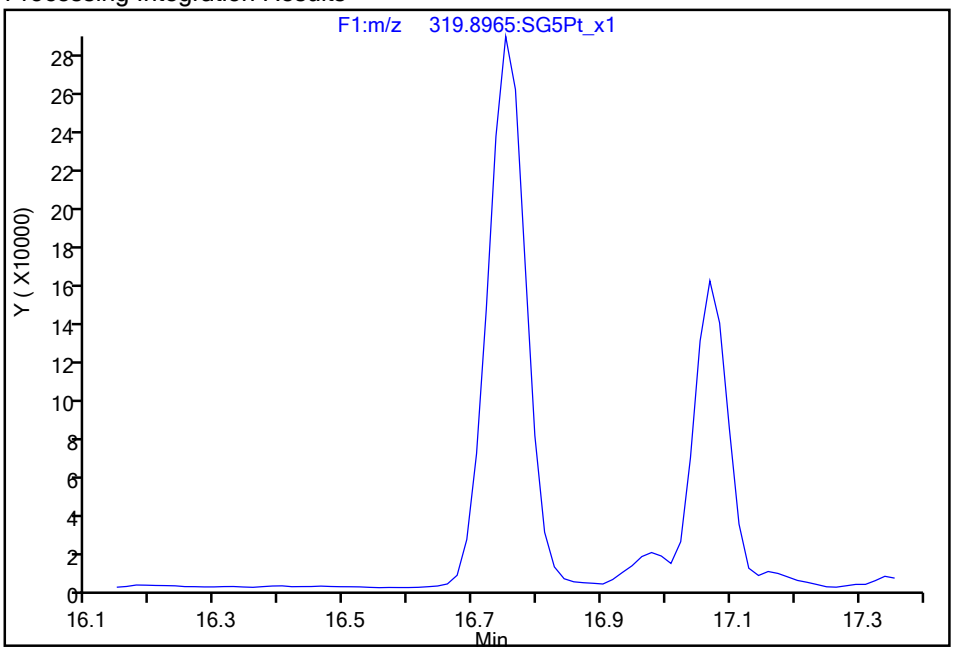

Manual Integration Results

RT = 16.751 Area = 1175404 M

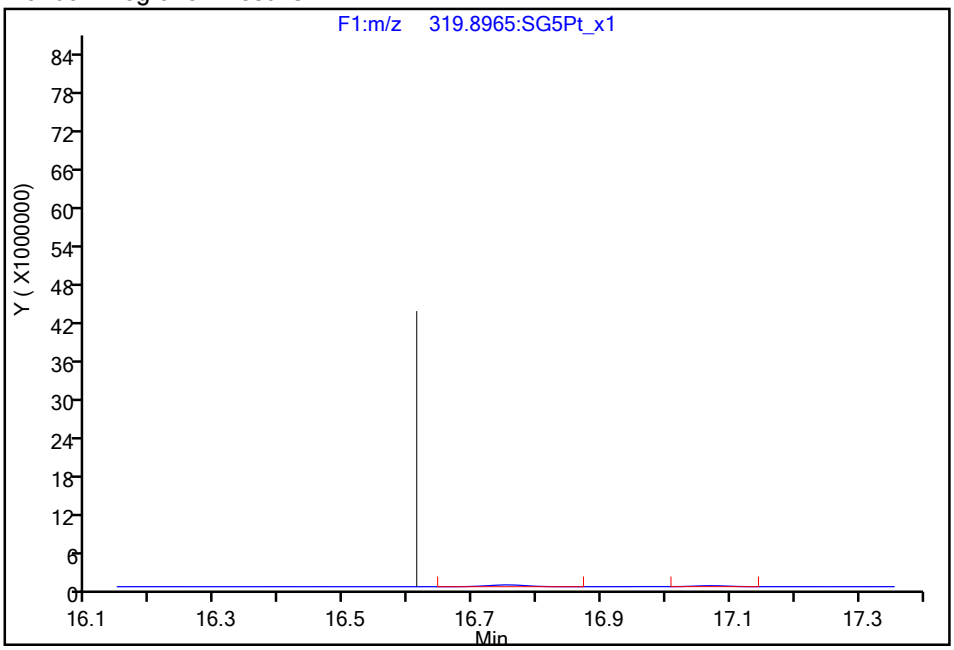

Reviewer: bennettd, 27-Aug-2021 16:28:24

Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d				
Injection Date:	26-Aug-2021 21:06:01	Instrument ID:	10D5		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (15.59- 19.47)

Signal: 2

Processing Integration Results

Not Detected
RT: 15.59- 19.47

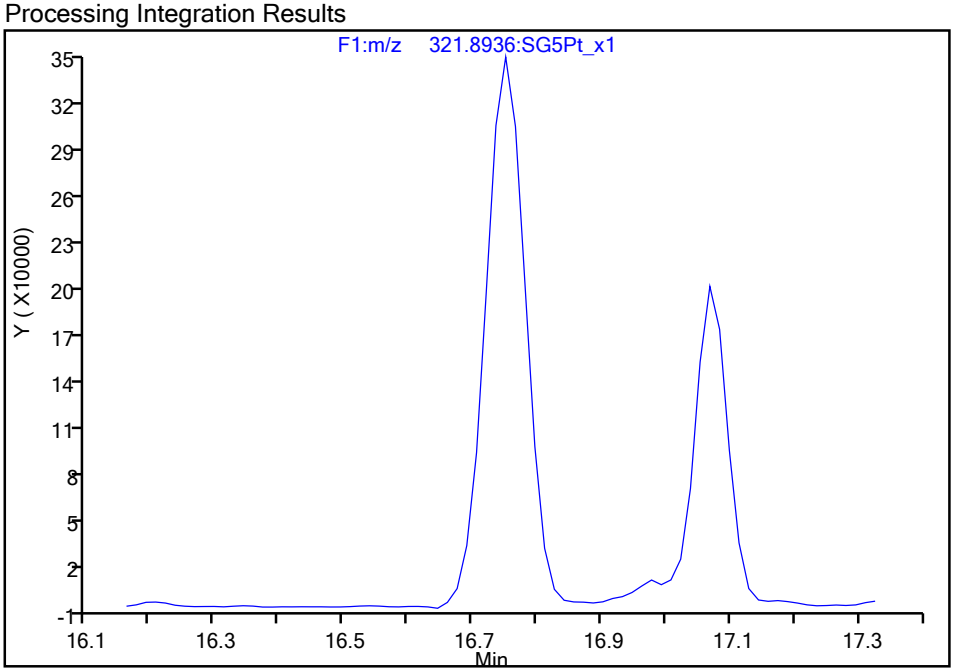

Manual Integration Results

RT = 16.751 Area = 1452955 M

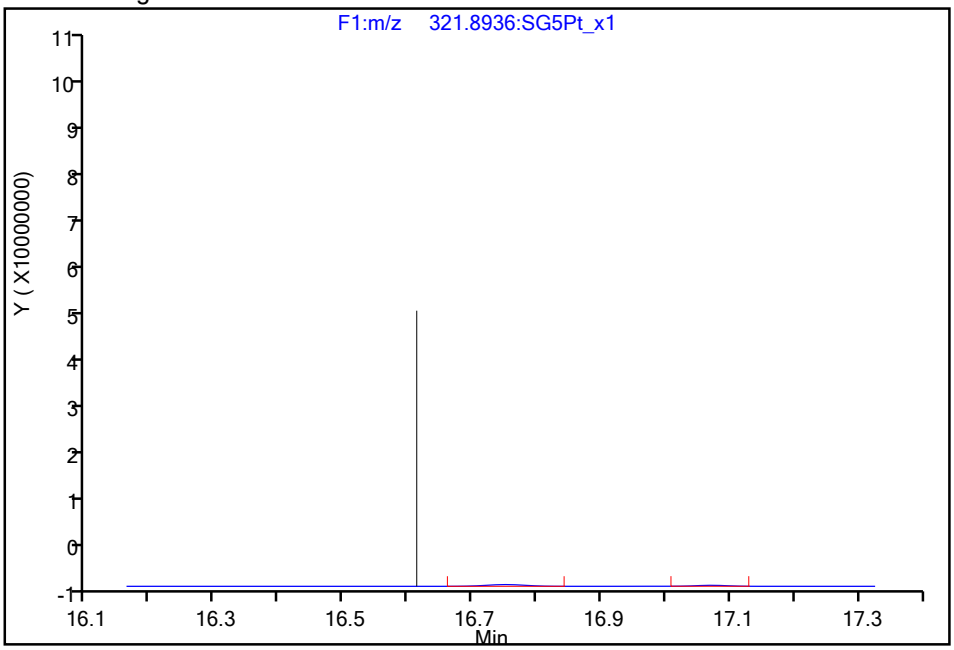

Reviewer: bennettd, 27-Aug-2021 16:27:52
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d				
Injection Date:	26-Aug-2021 21:06:01	Instrument ID:	10D5		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.59- 19.47)

Signal: 1

Not Detected
RT: 15.59- 19.47

Processing Integration Results

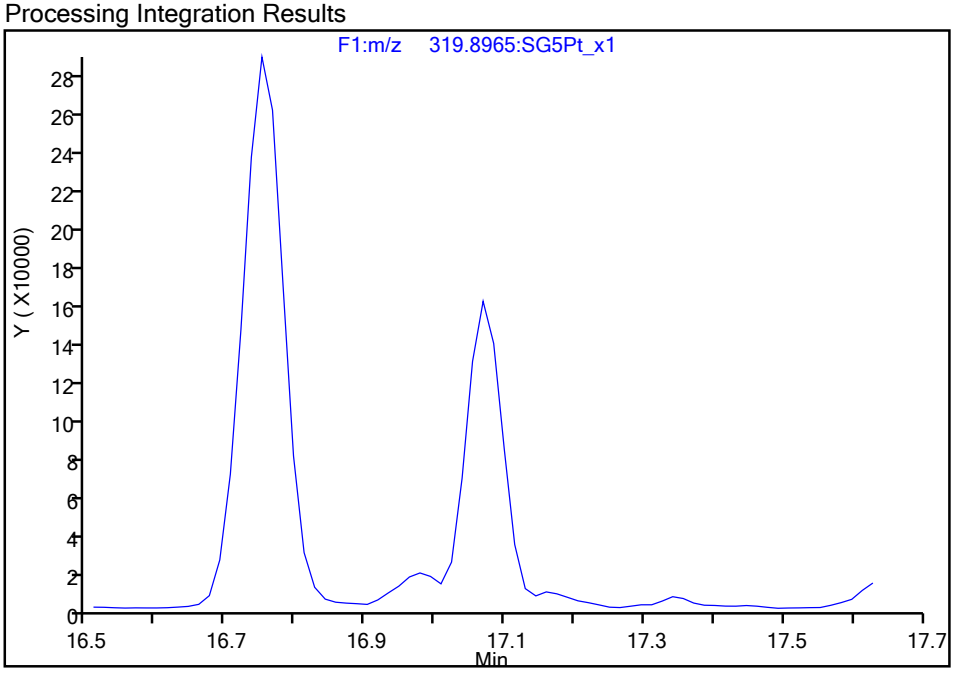

RT = 17.069 Area = 513601 M

Manual Integration Results

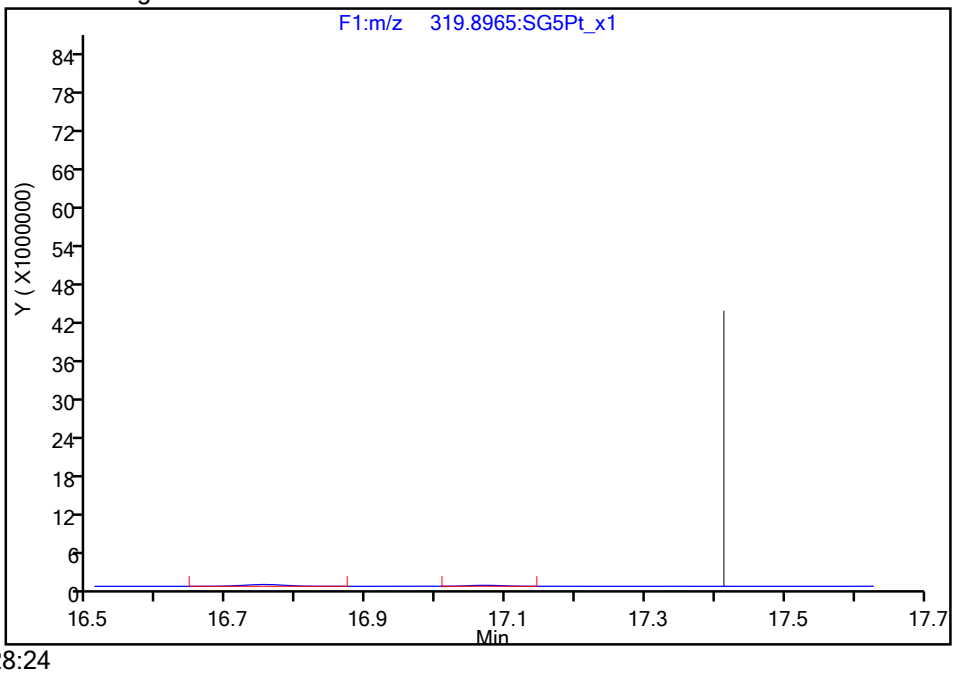

Reviewer: bennettd, 27-Aug-2021 16:28:24
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d				
Injection Date:	26-Aug-2021 21:06:01	Instrument ID:	10D5		
Lims ID:	320-76887-A-1-A	Lab Sample ID:	320-76887-1		
Client ID:	11215702-072721-BN-SJSB096 (0-2)				
Operator ID:	DB	ALS Bottle#:	57	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (15.59- 19.47)

Signal: 2

Processing Integration Results

Not Detected
RT: 15.59- 19.47

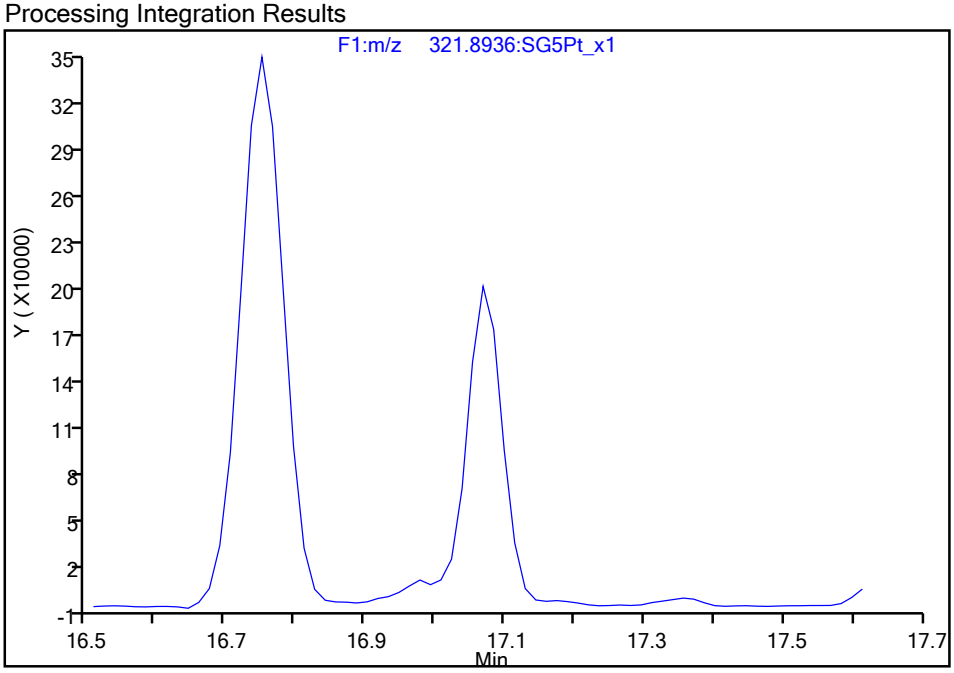

Manual Integration Results

RT = 17.069 Area = 609112 M

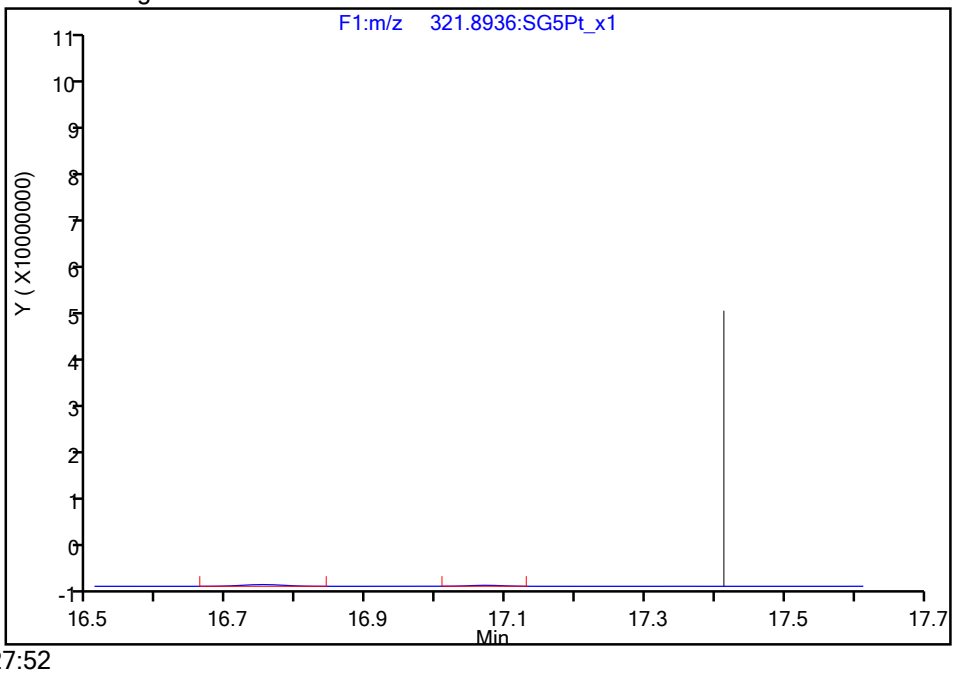

Reviewer: bennettd, 27-Aug-2021 16:27:52

Audit Action: Manually Integrated Audit Reason: Missed Peak

Report Date: 27-Aug-2021 16:35:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Injection Date:	26-Aug-2021 21:06:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	520325	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

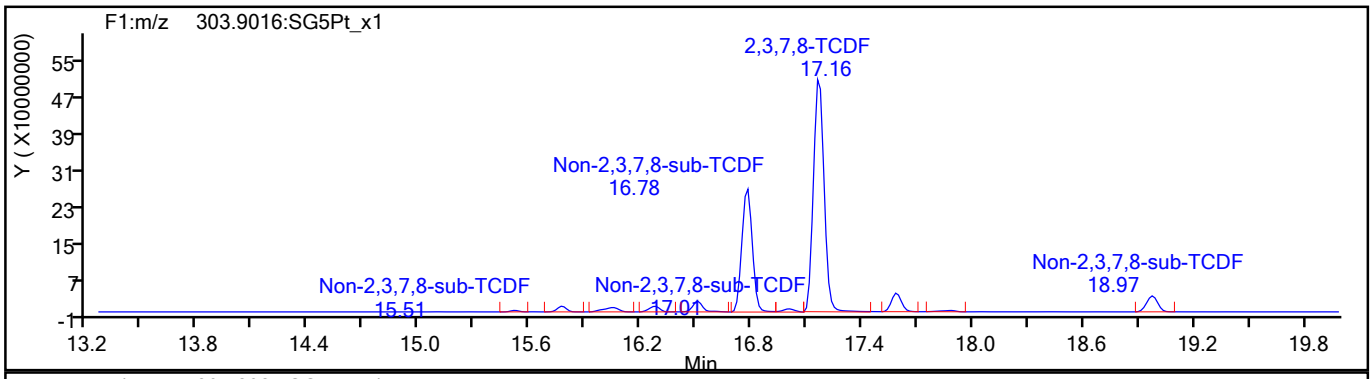

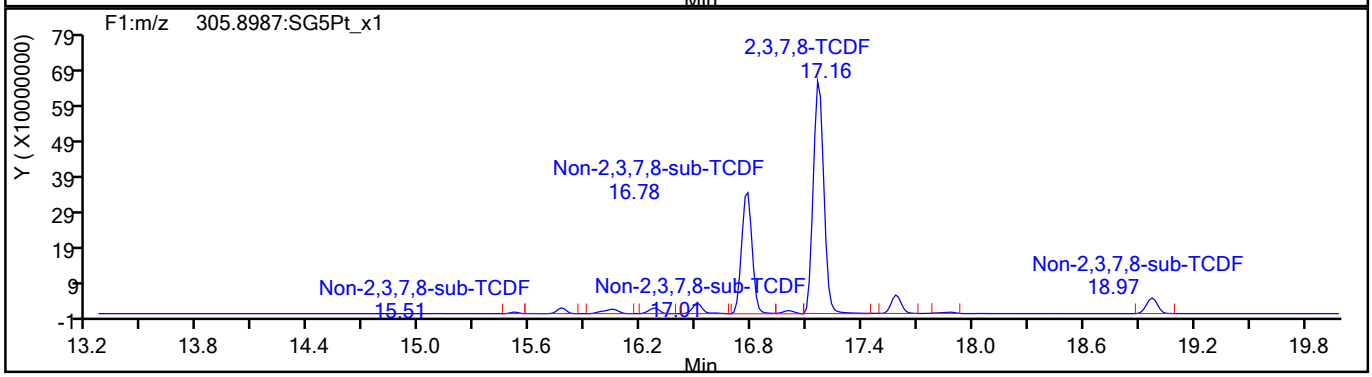

TCDF Standards

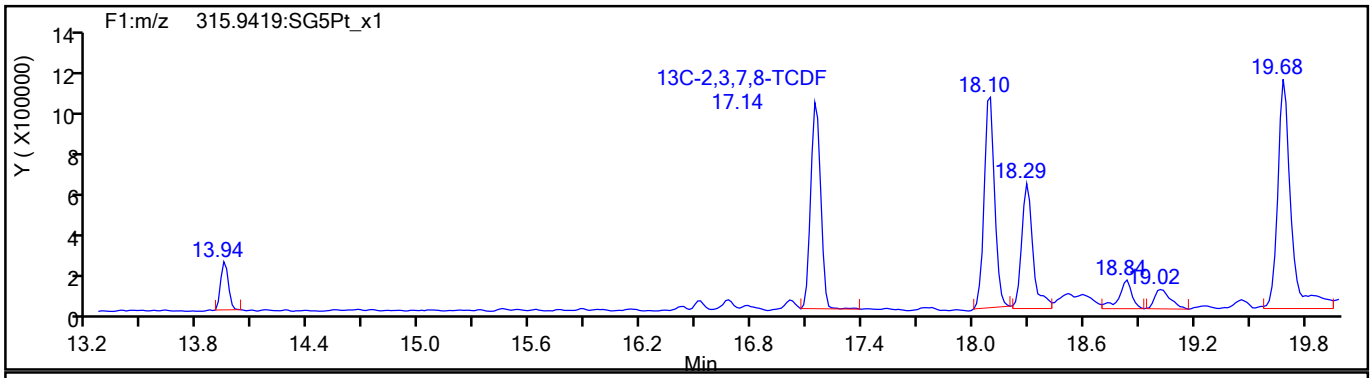

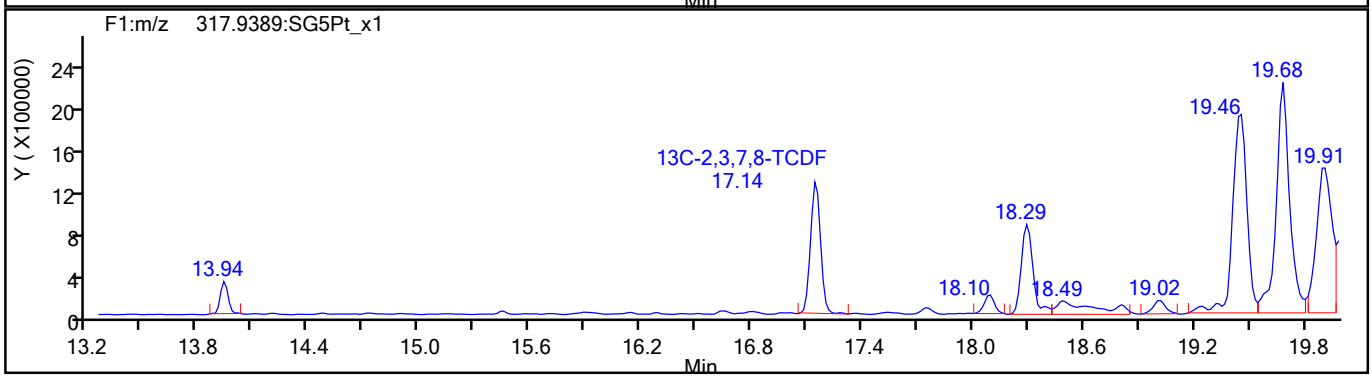

782131

Report Date: 27-Aug-2021 16:35:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Injection Date:	26-Aug-2021 21:06:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	520325	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

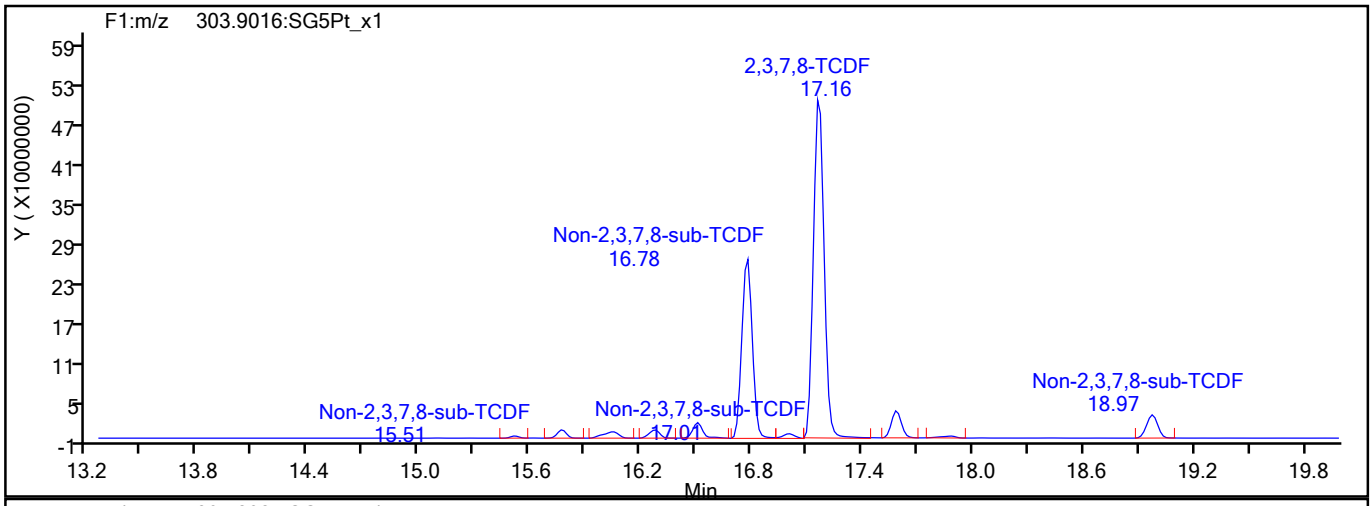

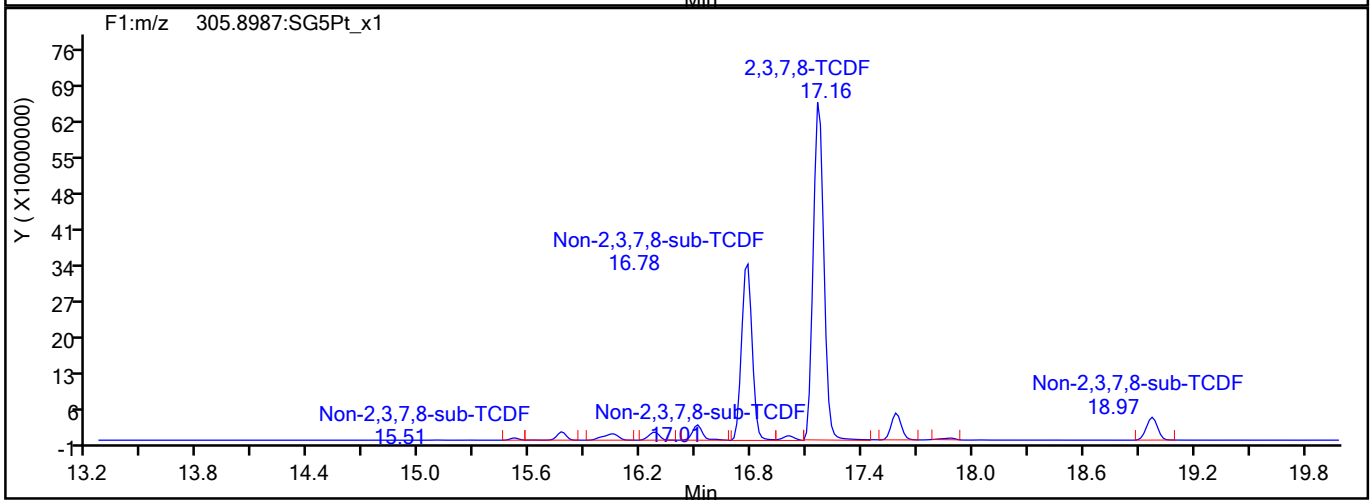

TCDF Interference Mass

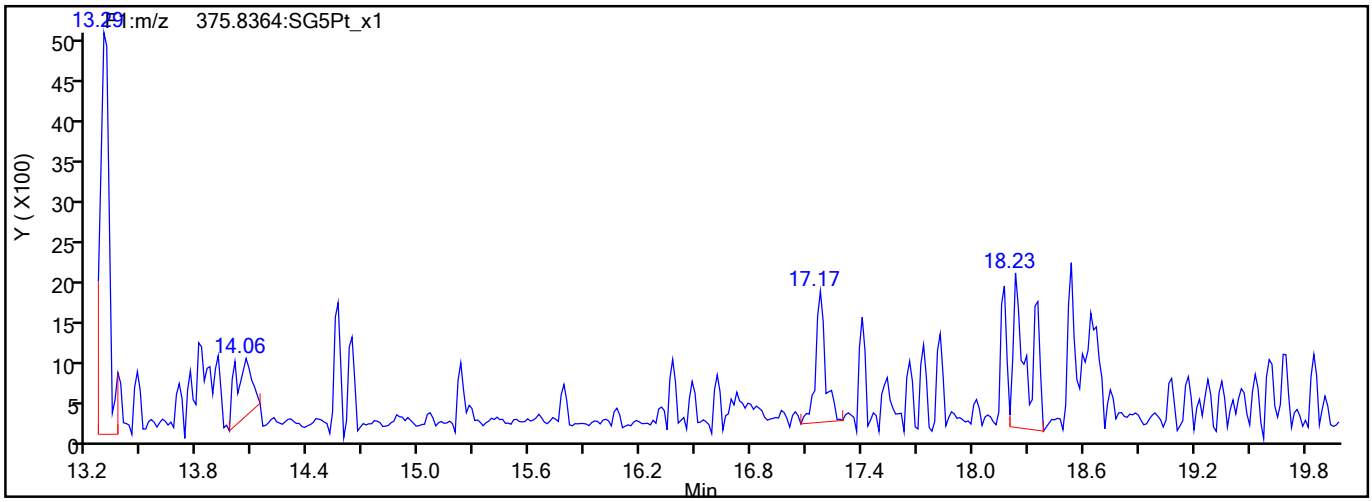

782132

Report Date: 27-Aug-2021 16:35:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Injection Date:	26-Aug-2021 21:06:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	520325	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

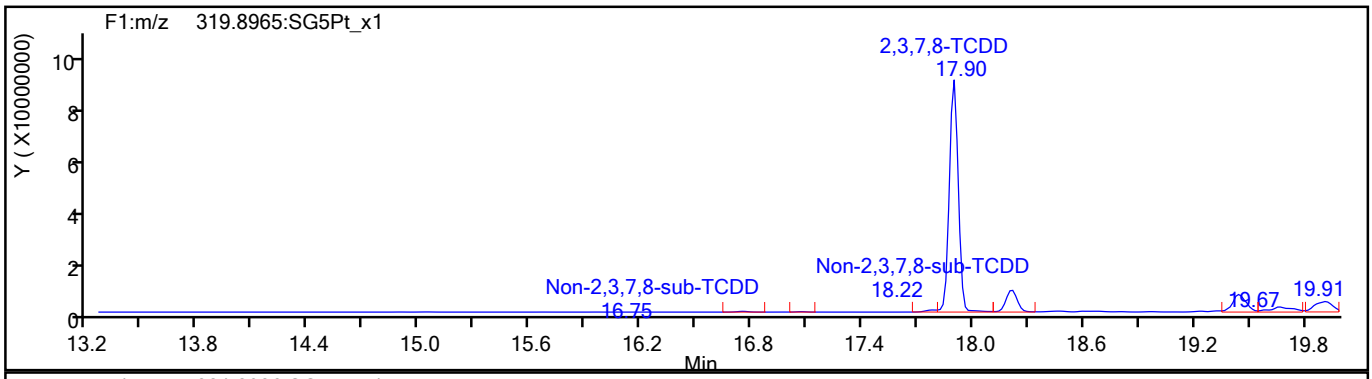

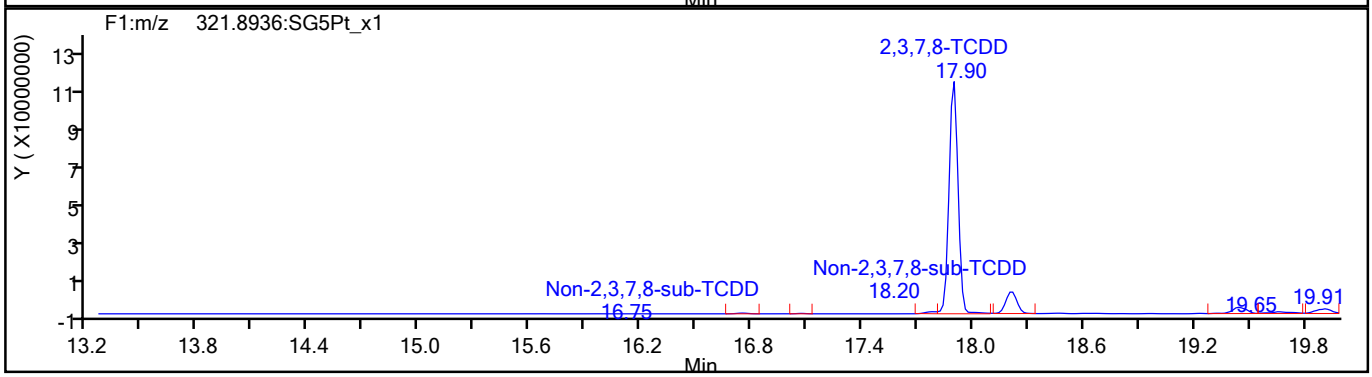

TCDD Standards

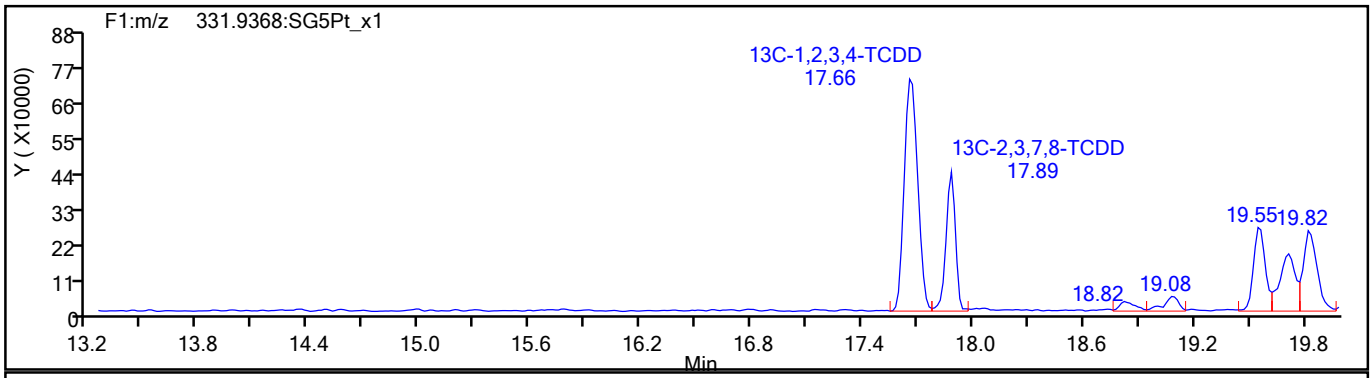

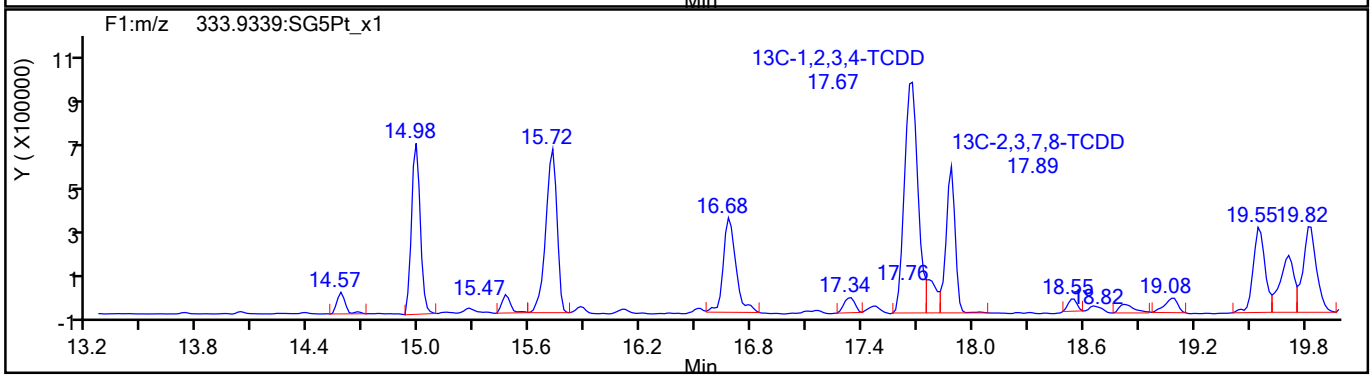

782133

Report Date: 27-Aug-2021 16:35:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Injection Date:	26-Aug-2021 21:06:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	520325	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

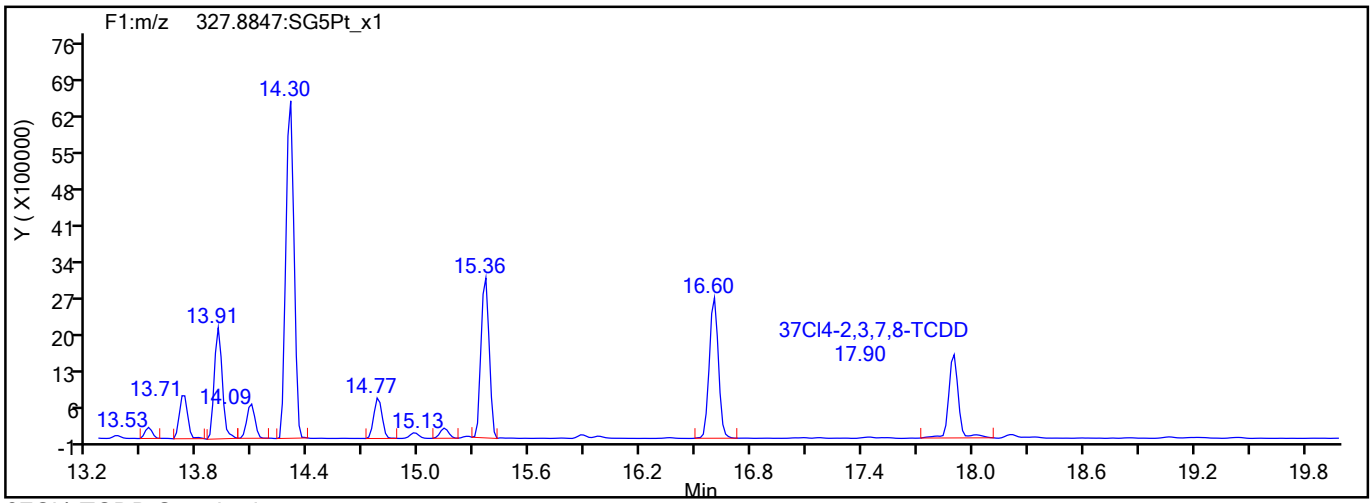

37Cl4-TCDD Standards

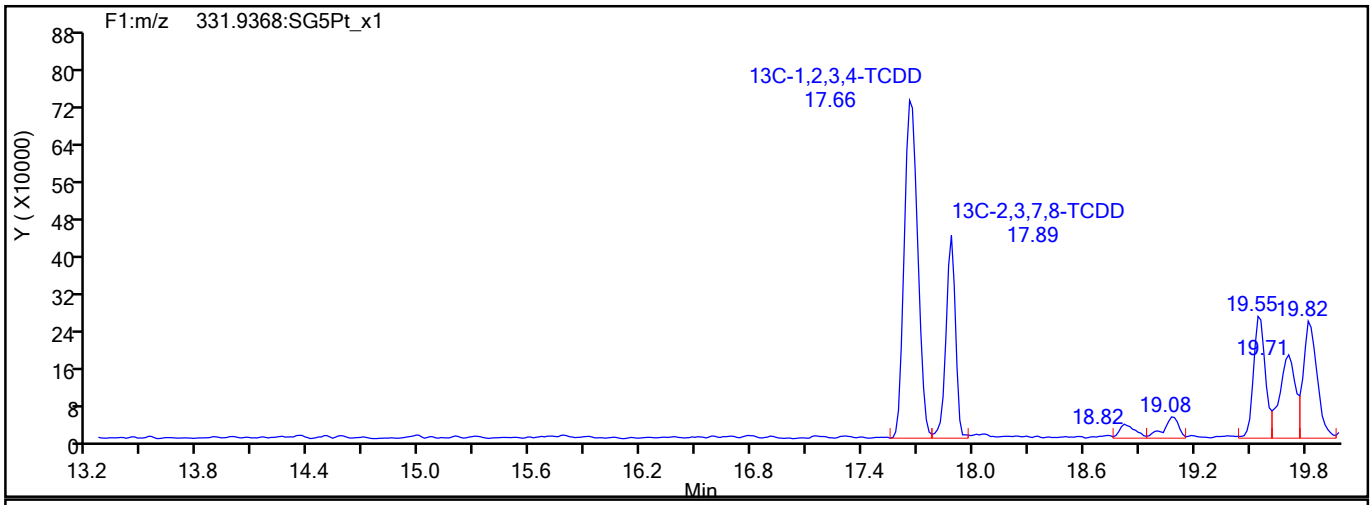

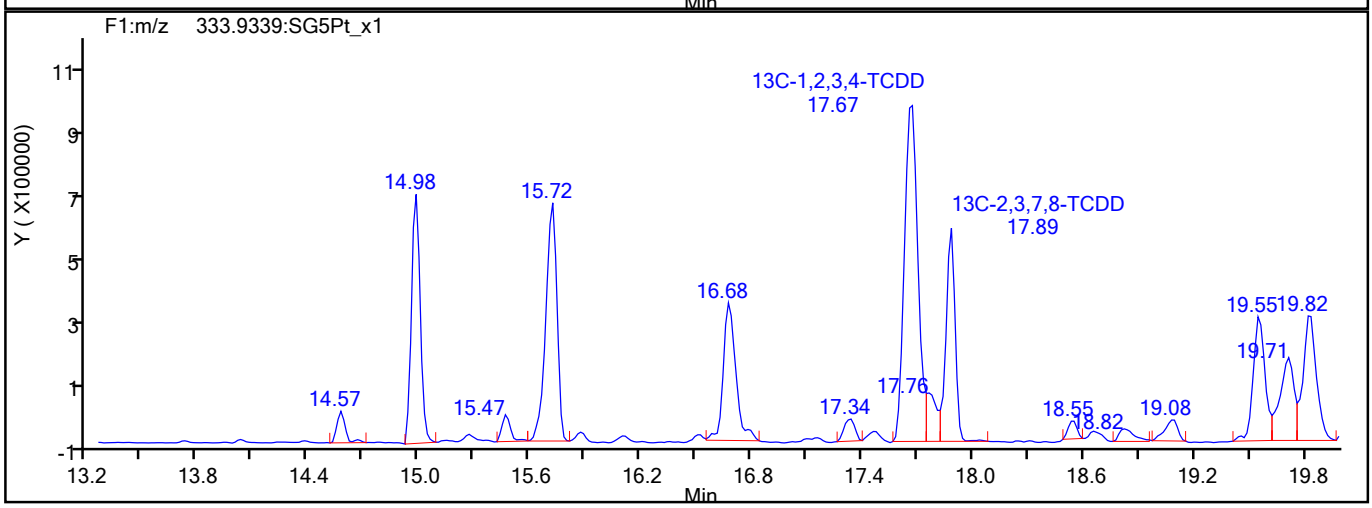

782134

Report Date: 27-Aug-2021 16:35:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Injection Date:	26-Aug-2021 21:06:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	520325	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

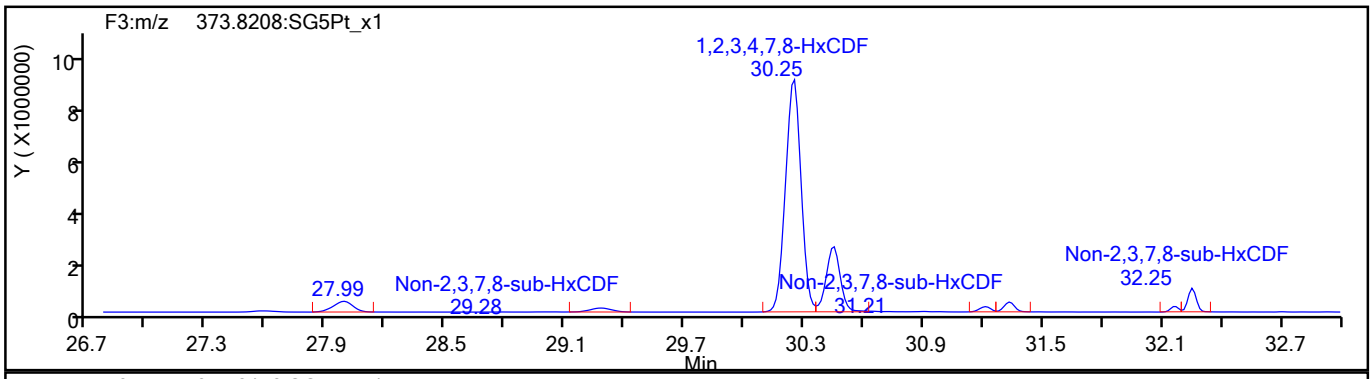

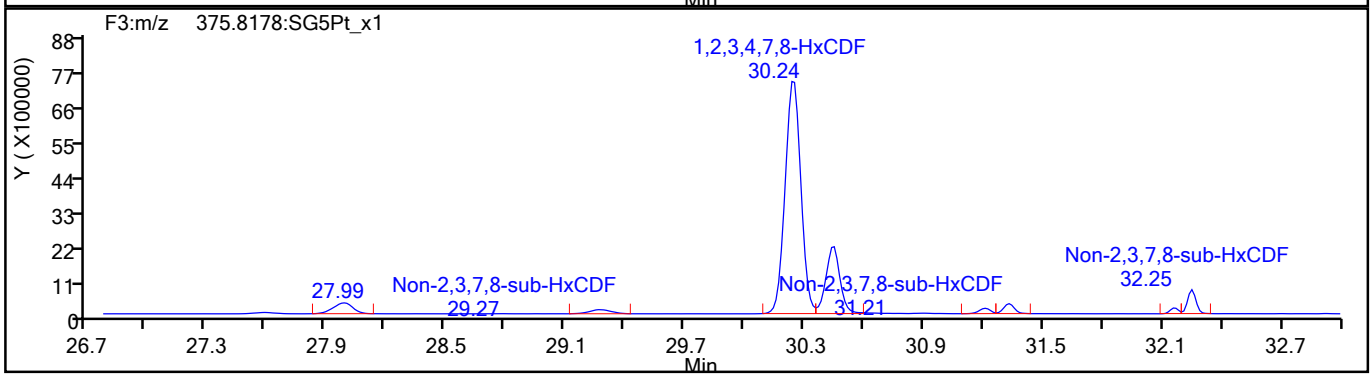

HxCDF Standards

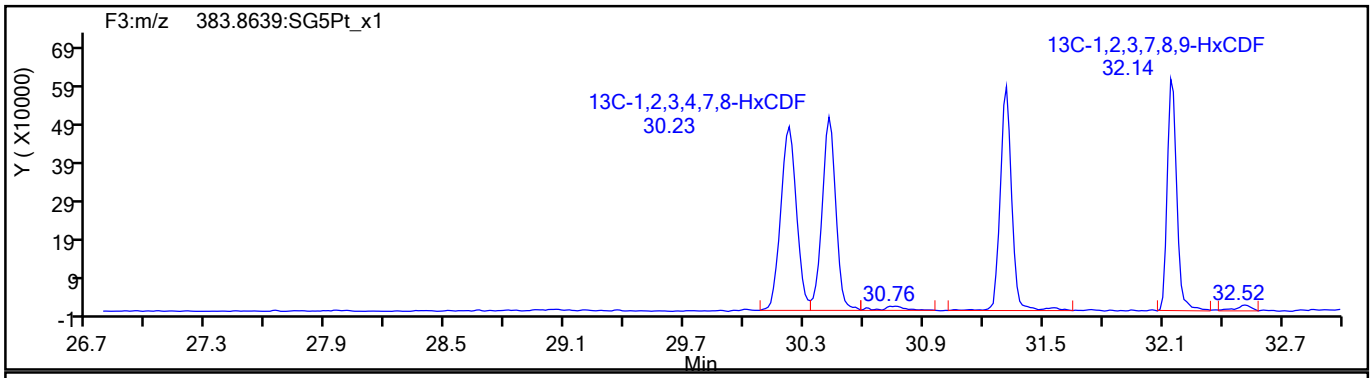

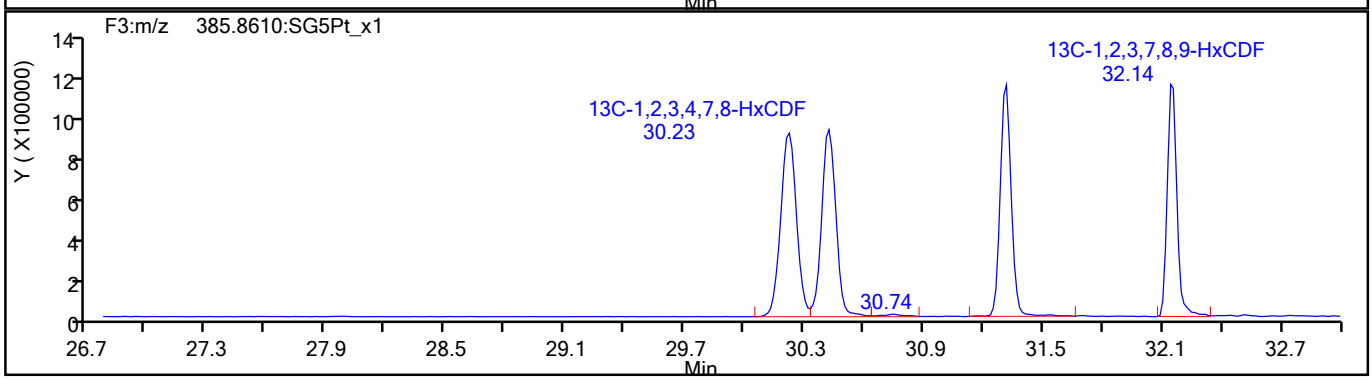

782135

Report Date: 27-Aug-2021 16:35:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Injection Date:	26-Aug-2021 21:06:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	520325	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

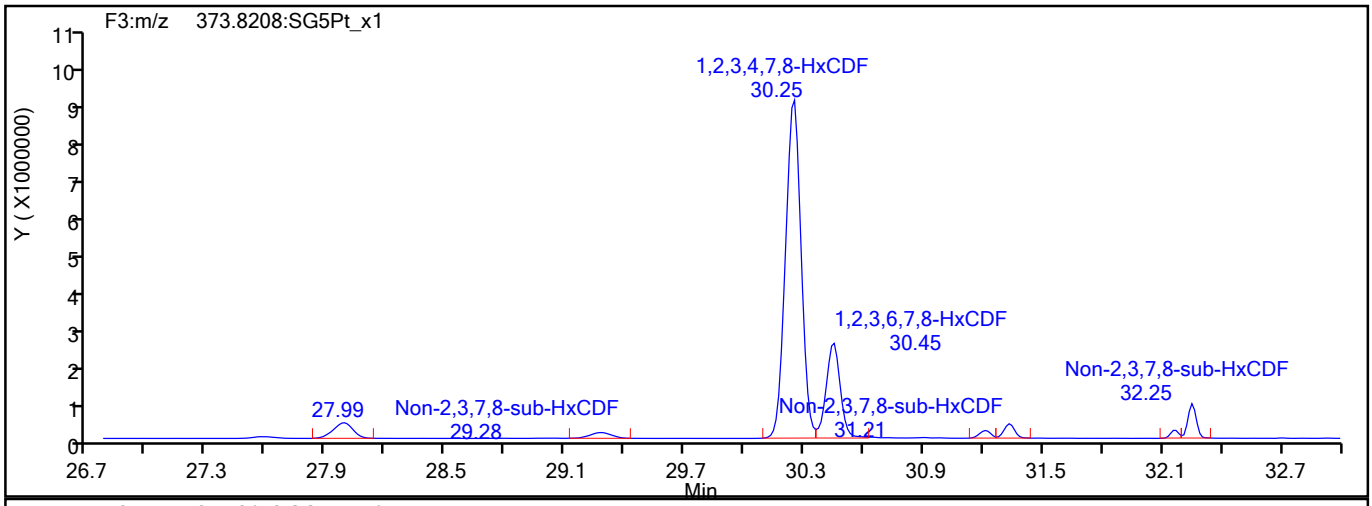

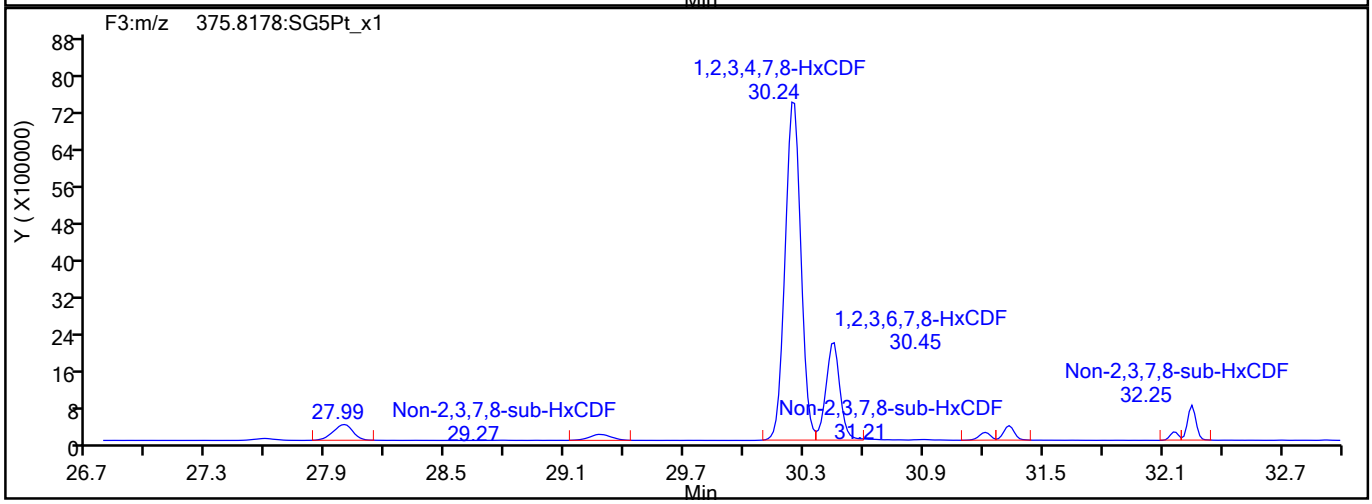

HxCDF Interference Mass

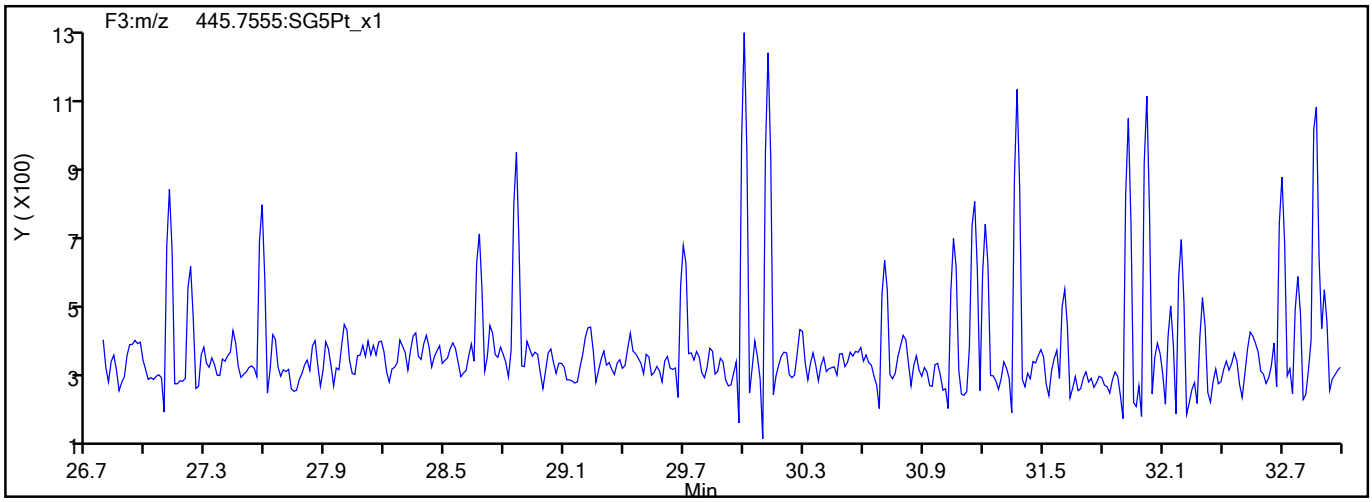

782136

Report Date: 27-Aug-2021 16:35:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Injection Date:	26-Aug-2021 21:06:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	520325	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

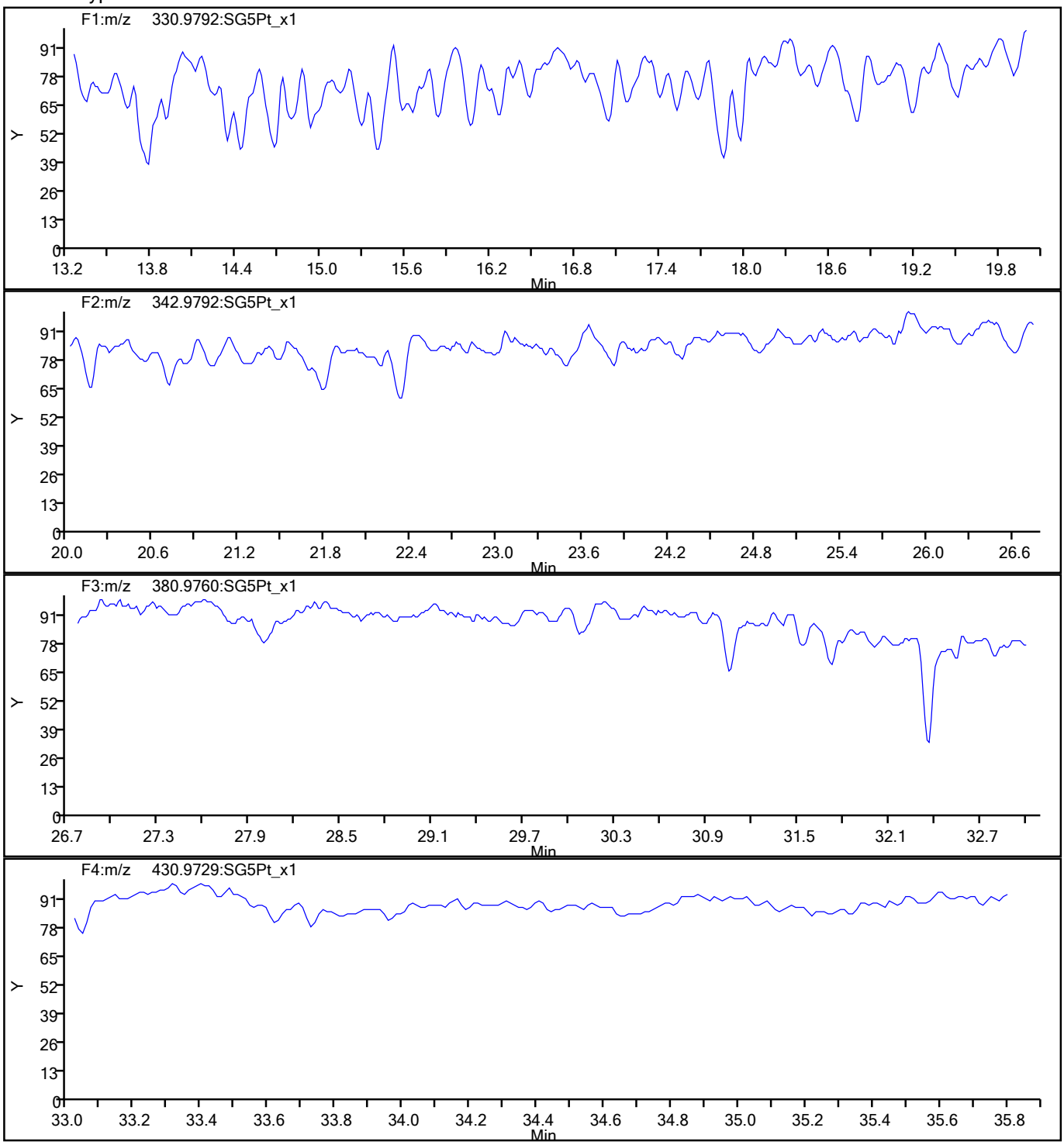

782137

Report Date: 27-Aug-2021 16:35:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_46.d		
Injection Date:	26-Aug-2021 21:06:01	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (0-2)		
Worklist#:	520325	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

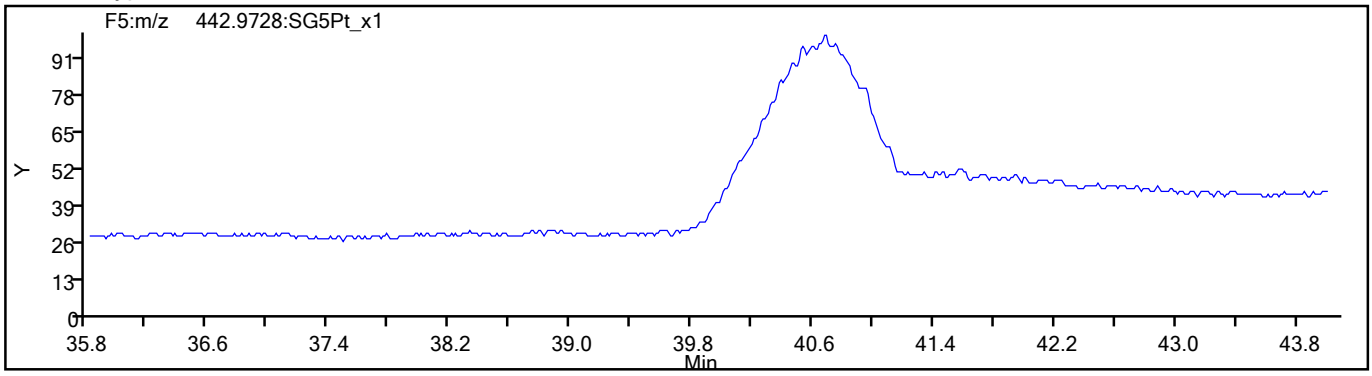

782138

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (2-4)
Lab Sample ID: 320-76887-2
Matrix: Sediment
Lab File ID: 18AU2110D5_8.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.21(g)
Date Analyzed: 08/18/2021 19:34
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	15000	E G	48	48
40321-76-4	1,2,3,7,8-PeCDD	130	F1	79	3.1
57117-41-6	1,2,3,7,8-PeCDF	1300		79	9.3
57117-31-4	2,3,4,7,8-PeCDF	930		79	9.0
39227-28-6	1,2,3,4,7,8-HxCDD	2.1	J	79	0.43
57653-85-7	1,2,3,6,7,8-HxCDD	4.0	J q	79	0.47
19408-74-3	1,2,3,7,8,9-HxCDD	2.6	J	79	0.41
70648-26-9	1,2,3,4,7,8-HxCDF	2000		79	11
57117-44-9	1,2,3,6,7,8-HxCDF	500	F1	79	11
72918-21-9	1,2,3,7,8,9-HxCDF	23	J	79	8.4
60851-34-5	2,3,4,6,7,8-HxCDF	47	J	79	8.6
35822-46-9	1,2,3,4,6,7,8-HpCDD	43	J B	79	0.65
67562-39-4	1,2,3,4,6,7,8-HpCDF	650		79	4.6
55673-89-7	1,2,3,4,7,8,9-HpCDF	200		79	5.5
3268-87-9	OCDD	610	F1 B	160	1.3
39001-02-0	OCDF	290		160	0.83
41903-57-5	Total TCDD	16000	G	48	48
30402-14-3	Total TCDF	110000	G	160	160
36088-22-9	Total PeCDD	150	q	79	3.1
30402-15-4	Total PeCDF	3400	q	79	9.2
34465-46-8	Total HxCDD	27	J q	79	0.43
55684-94-1	Total HxCDF	2900		79	9.6
37871-00-4	Total HpCDD	88	B	79	0.65
38998-75-3	Total HpCDF	980		79	5.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (2-4)
Lab Sample ID: 320-76887-2
Matrix: Sediment
Lab File ID: 18AU2110D5_8.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.21(g)
Date Analyzed: 08/18/2021 19:34
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	68		25-164
89059-46-1	13C-2,3,7,8-TCDF	68		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	75		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	69		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	76		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	76		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	68		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	76		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	67		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	68		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	68		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	73		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	66		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	76		26-138
114423-97-1	13C-OCDD	74		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	110		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d
Lims ID: 320-76887-A-2-A
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: Client
Inject. Date: 18-Aug-2021 19:34:28 ALS Bottle#: 9 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-a-2-a 10x 320-76887-a-2-a 10x
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:57:51

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.840	8465412	0.80	6.2E+05	10.0	10.0				a
D 13C-2,3,7,8-TCDF	17.326	9334572	0.78	1.6249	6.786	6.786	0.2771	0.2771	67.86	
2,3,7,8-TCDF	17.341	1885993069	0.78	1.0239	1973.3	1973.3	5.079	5.079		E
A Non-2,3,7,8-sub-TCDF	17.159	1421704504	0.78	1.0239	1487.5	1487.5	5.079	920.6		M
S Total TCDF					3460.7	3460.7	5.079	5.079		
D 13C-2,3,7,8-TCDD	18.051	5153112	0.75	0.8993	6.769	6.769	0.1417	0.1417	67.69	
2,3,7,8-TCDD	18.066	301193897	0.78	1.2541	466.1	466.1	1.519	1.519		E
$ 37Cl4-2,3,7,8-TCDD	18.066	4122972		1.1071	4.399	4.399	0.1036	0.1036	110	
A Non-2,3,7,8-sub-TCDD	17.620	32305267	0.71	1.2541	50.0	50.0	1.519	45.7		
S Total TCDD					516.0	516.0	1.519	1.519		
D 13C-1,2,3,7,8-PeCDF	22.340	7108688	1.56	1.2101	6.940	6.940	0.0674	0.0674	69.40	
1,2,3,7,8-PeCDF	22.367	29931703	1.63	1.0611	39.7	39.7	0.2938	0.2938		M
D 13C-2,3,4,7,8-PeCDF	23.662	7959388	1.56	1.2395	7.586	7.586	0.0658	0.0658	75.86	
2,3,4,7,8-PeCDF	23.690	23793890	1.61	1.0184	29.4	29.4	0.2864	0.2864		
A F1 PeCDFs	20.229						0.0142	0.0142		
A Non-2,3,7,8-sub-PeCDF	23.445	31304167	1.55	1.0398	40.0	40.0	0.2899	16.3		RQMa
S Total PeCDF					109.1	109.0	0.2901	0.2901		RQ
D 13C-1,2,3,7,8-PeCDD	24.385	4859735	1.58	0.7612	7.541	7.541	0.0438	0.0438	75.41	
1,2,3,7,8-PeCDD	24.412	2147702	1.61	1.0484	4.215	4.215	0.0990	0.0990		
A Non-2,3,7,8-sub-PeCDD	23.696	222301	1.55	1.0484	0.5517	0.4363	0.0990	0.2423		RQ
S Total PeCDD					4.767	4.652	0.0990	0.0990		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.463	7136638	0.51	1.0837	7.614	7.614	0.0457	0.0457	76.14	
1,2,3,4,7,8-HxCDF	30.490	48941589	1.21	1.0851	63.2	63.2	0.3376	0.3376		
D 13C-1,2,3,6,7,8-HxCDF	30.649	6529920	0.52	1.1279	6.694	6.694	0.0439	0.0439	66.94	
1,2,3,6,7,8-HxCDF	30.676	11554689	1.23	1.1260	15.7	15.7	0.3400	0.3400		
D 13C-2,3,4,6,7,8-HxCDF	31.488	6290474	0.51	1.0637	6.837	6.837	0.0465	0.0465	68.37	
2,3,4,6,7,8-HxCDF	31.501	1103496	1.19	1.1675	1.503	1.503	0.2708	0.2708		
D 13C-1,2,3,7,8,9-HxCDF	32.286	5730657	0.52	0.9676	6.848	6.848	0.0512	0.0512	68.48	
1,2,3,7,8,9-HxCDF	32.300	482029	1.28	1.1664	0.7212	0.7212	0.2655	0.2655		
A Non-2,3,7,8-sub-HxCDF	30.410	6744049	1.21	1.1363	9.242	9.242	0.3000	3.657		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					90.4	90.4	0.3035	0.3035		
* 13C-1,2,3,7,8,9-HxCDD	32.113	8648904	1.24	6.2E+05	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	31.674	4828880	1.30	0.7334	7.613	7.613	0.0539	0.0539	76.13	
1,2,3,4,7,8-HxCDD	31.688	33762	1.19	1.0640	0.0657	0.0657	0.0136	0.0136		
D 13C-1,2,3,6,7,8-HxCDD	31.781	5157434	1.24	0.8802	6.775	6.775	0.0449	0.0449	67.75	
1,2,3,6,7,8-HxCDD	31.794	64971	1.24	1.0001	0.1386	0.1260	0.0148	0.0148		RQM
1,2,3,7,8,9-HxCDD	32.127	47283	1.18	1.1325	0.0836	0.0836	0.0129	0.0129		M
A Non-2,3,7,8-sub-HxCDD	30.816	305180	1.22	1.0655	0.5736	0.5736	0.0137	0.3353		M
S Total HxCDD					0.8615	0.8489	0.0138	0.0138		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.742	4410855	0.43	0.7730	6.597	6.597	0.0799	0.0799	65.97	
1,2,3,4,6,7,8-HpCDF	33.742	13067873	1.05	1.4413	20.6	20.6	0.1451	0.1451		
D 13C-1,2,3,4,7,8,9-HpCDF	34.823	4597102	0.43	0.7008	7.584	7.584	0.0881	0.0881	75.84	
1,2,3,4,7,8,9-HpCDF	34.823	3837867	1.02	1.3174	6.337	6.337	0.1748	0.1748		
A Non-2,3,7,8-sub-HpCDF	34.283	2645394	1.05	1.3793	4.258	4.258	0.1589	4.258		
S Total HpCDF					31.2	31.2	0.1600	0.1600		
D 13C-1,2,3,4,6,7,8-HpCDD	34.532	4090954	1.04	0.6472	7.308	7.308	0.0441	0.0441	73.08	
1,2,3,4,6,7,8-HpCDD	34.544	612700	1.06	1.0943	1.369	1.369	0.0207	0.0207		
A Non-2,3,7,8-sub-HpCDD	33.504	640766	1.01	1.0943	1.431	1.431	0.0207	1.431		a
S Total HpCDD					2.800	2.800	0.0207	0.0207		
D 13C-OCDD	36.878	5734153	0.88	0.4472	14.8	14.8	0.0381	0.0381	74.13	
OCDF	36.974	3797106	0.88	1.4382	9.209	9.209	0.0264	0.0264		
OCDD	36.890	6148656	0.88	1.1070	19.4	19.4	0.0413	0.0413		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d
Lims ID: 320-76887-A-2-A
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: Client
Inject. Date: 18-Aug-2021 19:34:28 ALS Bottle#: 9 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-a-2-a 10x 320-76887-a-2-a 10x
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:57:51

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.840	17.809	2		3765729	862916	4850	12125	178		a
333.9339	17.840	17.809	2		4699683	1098031	5148	12870	213	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.326	17.295	2	0.971	4104295	1048864	8944	22360	117		
317.9389	17.326	17.295	2	0.971	5230277	1353320	26369	65922	51	0.78(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.341	17.310	2	1.001	825287720	196767687	219980	549950	894		
305.8987	17.341	17.310	2	1.001	1060705349	255939840	279685	699212	915	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											M
303.9016	15.678	17.159	-89	0.905	3913730	1078062	219980	549950	5		M
305.8987	15.678	17.159	-89	0.905	4410170	1356227	279685	699212	5	0.89(0.65-0.89)	M
303.9016	15.935	17.159	-73	0.920	12900266	3683938	219980	549950	17		
305.8987	15.935	17.159	-73	0.920	16308657	4767203	279685	699212	17	0.79(0.65-0.89)	
303.9016	16.222	17.159	-56	0.936	24025928	4991846	219980	549950	23		
305.8987	16.222	17.159	-56	0.936	31145482	6343570	279685	699212	23	0.77(0.65-0.89)	
303.9016	16.449	17.159	-43	0.949	23762164	6246757	219980	549950	28		
305.8987	16.449	17.159	-43	0.949	30643060	7975553	279685	699212	29	0.78(0.65-0.89)	
303.9016	16.676	17.159	-29	0.962	35963505	8889697	219980	549950	40		
305.8987	16.676	17.159	-29	0.962	46671499	11530047	279685	699212	41	0.77(0.65-0.89)	
303.9016	16.963	17.159	-12	0.979	385524440	99484801	219980	549950	452		
305.8987	16.963	17.159	-12	0.979	494343845	126355971	279685	699212	452	0.78(0.65-0.89)	
303.9016	17.174	17.159	1	0.991	12520221	2992774	219980	549950	14		
305.8987	17.174	17.159	1	0.991	16310012	3925011	279685	699212	14	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.779	17.159	37	1.026	59617990	13945164	219980	549950	63		
305.8987	17.764	17.159	36	1.025	77357498	18091504	279685	699212	65	0.77(0.65-0.89)	
303.9016	18.036	17.159	52	1.041	9438639	2058446	219980	549950	9		
305.8987	18.036	17.159	52	1.041	12654002	2662973	279685	699212	10	0.75(0.65-0.89)	
303.9016	19.155	17.159	119	1.106	54244395	12501736	219980	549950	57		
305.8987	19.155	17.159	119	1.106	69949001	16264084	279685	699212	58	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.006	3	1.012	2209356	579955	4850	12125	120		
333.9339	18.051	18.006	3	1.012	2943756	732911	5148	12870	142	0.75(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	18.066	18.021	3	1.001	132413175	35390386	55791	139477	634		
321.8936	18.066	18.021	3	1.001	168780722	44187864	44241	110602	999	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.021	3	1.013	4122972	1062473	9000	22500	118		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.961	17.620	20	0.995	1169183	328047	55791	139477	6		
321.8936	17.961	17.620	20	0.995	1629288	492461	44241	110602	11	0.72(0.65-0.89)	
319.8965	18.399	17.620	47	1.019	12206803	2902673	55791	139477	52		
321.8936	18.399	17.620	47	1.019	17299993	3872787	44241	110602	88	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.340	22.299	2	1.252	4331442	780748	3625	9062	215		
353.8970	22.340	22.299	2	1.252	2777246	510745	2777	6942	184	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.367	22.326	2	1.001	18563087	3236944	9910	24775	327		
341.8567	22.353	22.326	2	1.001	11368616	2030708	6194	15485	328	1.63(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.662	23.635	2	1.326	4848910	848183	3625	9062	234		
353.8970	23.676	23.635	2	1.327	3110478	531969	2777	6942	192	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.690	23.649	2	1.001	14664455	2503694	9910	24775	253		
341.8567	23.690	23.649	2	1.001	9129435	1577433	6194	15485	255	1.61(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.229						305	762			
341.8567	20.229						484	1210			
A Non-2,3,7,8-sub-PeCDF											RQMa
339.8597	21.017	23.445	-145	0.941	7827849	1602136	9910	24775	162		
341.8567	21.017	23.445	-145	0.941	4912365	1001350	6194	15485	162	1.59(1.32-1.78)	
339.8597	21.849	23.445	-96	0.978	789288	100237	9910	24775	10		
341.8567	21.862	23.445	-95	0.979	536164	61809	6194	15485	10	1.47(1.32-1.78)	
339.8597	22.230	23.445	-73	0.995	1434756	318332	9910	24775	32		M
341.8567	22.230	23.445	-73	0.995	1044945	203218	6194	15485	33	1.37(1.32-1.78)	
339.8597	22.640	23.445	-48	1.013	266927	46885	9910	24775	5		
	Empc Correction				214008	39757	9910	24775	4		
341.8567	22.640	23.445	-48	1.013	138070	25650	6194	15485	4	1.93(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	22.872	23.445	-34	1.024	5210328	966605	9910	24775	98		
341.8567	22.872	23.445	-34	1.024	3176581	582219	6194	15485	94	1.64(1.32-1.78)	
339.8597	24.031	23.445	35	1.076	3050434	452633	9910	24775	46		
341.8567	24.017	23.445	34	1.075	1782296	273422	6194	15485	44	1.71(1.32-1.78)	
339.8597	25.626	23.445	131	1.147	738724	110249	9910	24775	11		
341.8567	25.612	23.445	130	1.147	448359	71719	6194	15485	12	1.65(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.385	24.358	2	1.367	2972895	472854	1798	4495	263		
369.8919	24.385	24.358	2	1.367	1886840	306317	816	2040	375	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.412	24.372	2	1.001	1323850	214314	1910	4775	112		
357.8516	24.412	24.372	2	1.001	823852	128133	1326	3315	97	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	22.626	23.696	-64	0.928	63273	11335	1910	4775	6		
357.8516	22.626	23.696	-64	0.928	35570	6871	1326	3315	5	1.78(1.32-1.78)	
355.8546	24.917	23.696	73	1.022	133831	15937	1910	4775	8		
	Empc Correction				75043	9530	1910	4775	5		
357.8516	24.903	23.696	72	1.021	48415	6149	1326	3315	5	2.76(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.463	30.436	2	0.949	2403475	451998	2048	5120	221		
385.8610	30.463	30.436	2	0.949	4733163	891173	2576	6440	346	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.490	30.463	2	1.001	26819251	5157254	12972	32430	398		
375.8178	30.490	30.463	2	1.001	22122338	4228943	6709	16772	630	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.649	30.623	2	0.954	2239985	437467	2048	5120	214		
385.8610	30.649	30.623	2	0.954	4289935	847704	2576	6440	329	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.676	30.649	2	1.001	6369438	1215734	12972	32430	94		
375.8178	30.663	30.649	1	1.000	5185251	972788	6709	16772	145	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.488	31.461	2	0.981	2123555	515307	2048	5120	252		
385.8610	31.488	31.461	2	0.981	4166919	1041039	2576	6440	404	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.501	31.488	1	1.000	600681	152473	12972	32430	12		
375.8178	31.501	31.488	1	1.000	502815	125768	6709	16772	19	1.19(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.286	32.273	1	1.005	1956735	535463	2048	5120	261		
385.8610	32.286	32.273	1	1.005	3773922	1053277	2576	6440	409	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.300	32.286	1	1.000	270901	83102	12972	32430	6		
375.8178	32.300	32.286	1	1.000	211128	70643	6709	16772	11	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	28.293	30.410	-127	0.929	1470987	215212	12972	32430	17		
375.8178	28.293	30.410	-127	0.929	1197192	175119	6709	16772	26	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	29.638	30.410	-46	0.973	619743	96988	12972	32430	7		
375.8178	29.638	30.410	-46	0.973	534580	75955	6709	16772	11	1.16(1.05-1.43)	
373.8208	31.381	30.410	58	1.030	378759	98876	12972	32430	8		
375.8178	31.381	30.410	58	1.030	333092	77833	6709	16772	12	1.14(1.05-1.43)	
373.8208	32.393	30.410	119	1.063	1229469	367751	12972	32430	28		
375.8178	32.393	30.410	119	1.063	980227	293241	6709	16772	44	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.113	32.100	1		4795219	1298283	1997	4992	650		
403.8529	32.113	32.100	1		3853685	1037131	1698	4245	611	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.674	31.661	1	0.986	2727168	764177	1997	4992	383		
403.8529	31.674	31.661	1	0.986	2101712	587991	1698	4245	346	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.688	31.674	1	1.000	18369	4640	393	982	12		
391.8127	31.688	31.674	1	1.000	15393	5008	390	975	13	1.19(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.781	31.767	1	0.990	2851612	737482	1997	4992	369		
403.8529	31.781	31.767	1	0.990	2305822	586914	1698	4245	346	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQM
389.8157	31.794	31.781	1	1.000	42465	11233	393	982	29		
	Empc Correction				35966	8526	393	982	22		
391.8127	31.794	31.781	1	1.000	29005	6876	390	975	18	1.46(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											M
389.8157	32.127	32.113	1	1.014	25642	4691	393	982	12		M
391.8127	32.113	32.113	0	1.014	21641	5238	390	975	13	1.18(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											M
389.8157	29.465	30.816	-81	0.927	46161	6403	393	982	16		M
391.8127	29.518	30.816	-78	0.929	35593	3884	390	975	10	1.30(1.05-1.43)	
389.8157	30.543	30.816	-16	0.961	24274	5285	393	982	13		M
391.8127	30.516	30.816	-18	0.960	20779	3434	390	975	9	1.17(1.05-1.43)	
389.8157	30.929	30.816	7	0.973	97101	20000	393	982	51		
391.8127	30.929	30.816	7	0.973	81272	15640	390	975	40	1.19(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.742	33.718	1	1.051	1327168	428319	2291	5727	187		
419.8220	33.742	33.718	1	1.051	3083687	1021926	3476	8690	294	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.742	33.730	1	1.000	6699095	2216434	6209	15522	357		
409.7789	33.742	33.730	1	1.000	6368778	2148163	5926	14815	362	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.823	34.811	1	1.084	1375000	387297	2291	5727	169		
419.8220	34.823	34.811	1	1.084	3222102	929920	3476	8690	268	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.823	34.811	1	1.000	1937776	578495	6209	15522	93		
409.7789	34.823	34.811	1	1.000	1900091	570008	5926	14815	96	1.02(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.046	34.283	-14	1.009	1353736	440346	6209	15522	71		
409.7789	34.046	34.283	-14	1.009	1291658	414000	5926	14815	70	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.532	34.520	1	1.075	2086233	670904	1240	3100	541		
437.8140	34.532	34.520	1	1.075	2004721	620631	1428	3570	435	1.04(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.544	34.532	1	1.000	315710	96497	589	1472	164		
425.7737	34.544	34.532	1	1.000	296990	87886	583	1457	151	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.985	33.504	29	0.984	322110	103773	589	1472	176		a
425.7737	33.985	33.504	29	0.984	318656	103689	583	1457	178	1.01(0.88-1.20)	
13C-OCDD											
469.7779	36.878	36.866	1	1.148	2691141	657531	879	2197	748		
471.7750	36.878	36.866	1	1.148	3043012	776190	714	1785	1087	0.88(0.76-1.02)	
OCDF											
441.7428	36.974	36.962	1	1.003	1780935	453265	504	1260	899		
443.7399	36.974	36.962	1	1.003	2016171	512122	583	1457	878	0.88(0.76-1.02)	
OCDD											
457.7377	36.890	36.878	1	1.000	2885968	723266	670	1675	1080		
459.7348	36.890	36.878	1	1.000	3262688	823152	642	1605	1282	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 19-Aug-2021 13:08:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d
Lims ID: 320-76887-A-2-A
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 19:34:28 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDF, RT: 17.159

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	9334572	2402184

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		10.000	9334572	2402184

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.678	3913730	1078062	4410170	1356227	8.71	0.89	M
15.935	12900266	3683938	16308657	4767203	30.6	0.79	
16.222	24025928	4991846	31145482	6343570	57.7	0.77	
16.449	23762164	6246757	30643060	7975553	56.9	0.78	
16.676	35963505	8889697	46671499	11530047	86.5	0.77	
16.963	385524440	99484801	494343845	126355971	920.6	0.78	
17.174	12520221	2992774	16310012	3925011	30.2	0.77	
17.779	59617990	13945164	77357498	18091504	143.3	0.77	
18.036	9438639	2058446	12654002	2662973	23.1	0.75	
19.155	54244395	12501736	69949001	16264084	129.9	0.78	
Signal Totals:							
	621911278	155873221	799793226	199272143			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1421704504	355145364				0.78	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1487.5 = (1421704504 * 10.000) / (9334572 * 1.024)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 13:08:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d
Lims ID: 320-76887-A-2-A
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 19:34:28 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDD, RT: 17.620

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	5153112	1312866

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		10.000	5153112	1312866

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.961	1169183	328047	1629288	492461	4.33	0.72	
18.399	12206803	2902673	17299993	3872787	45.7	0.71	
Signal Totals:							
	13375986	3230720	18929281	4365248			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	32305267	7595968				0.71	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 49.988 = (32305267 * 10.000) / (5153112 * 1.254)

Report Date: 19-Aug-2021 13:08:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Lims ID:	320-76887-A-2-A		
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Inject. Date:	18-Aug-2021 19:34:28	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDF, RT: 23.445

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	7108688	1291493
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	7959388	1380152

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		10.000	7534038	1335822

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.017	7827849	1602136	4912365	1001350	16.3	1.59	
21.849	789288	100237	536164	61809	1.69	1.47	
22.230	1434756	318332	1044945	203218	3.17	1.37	Ma
22.640	266927	46885	138070	25650	0.5170	1.93	RQ
22.640	214008	39757	138070	25650	0.4494		Empc Correction
22.872	5210328	966605	3176581	582219	10.7	1.64	
24.031	3050434	452633	1782296	273422	6.17	1.71	
25.626	738724	110249	448359	71719	1.52	1.65	
Signal Totals:							
	19265387	3589949	12038780	2219387			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	31357086	5816464				1.60	RQMa
	31304167	5809336					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 40.028 = (31357086 * 10.000) / (7534038 * 1.040)

Empc Amount: 39.961 = (31304167 * 10.000) / (7534038 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d
Lims ID: 320-76887-A-2-A
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 19:34:28 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 8

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	4859735	779171

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		10.000	4859735	779171

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.626	63273	11335	35570	6871	0.1940	1.78	
24.917	133831	15937	48415	6149	0.3577	2.76	RQ
24.917	75043	9530	48415	6149	0.2423		Empc Correction
Signal Totals:							
	138316	20865	83985	13020			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	281089	40292				2.35	RQ
	222301	33885					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5517 = (281089 * 10.000) / (4859735 * 1.048)
Empc Amount: 0.4363 = (222301 * 10.000) / (4859735 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 13:08:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d
Lims ID: 320-76887-A-2-A
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 19:34:28 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDF, RT: 30.410

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	7136638	1343171
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	6529920	1285171
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	6290474	1556346
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	5730657	1588740

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		10.000	6421922	1443357

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.293	1470987	215212	1197192	175119	3.66	1.23	
29.638	619743	96988	534580	75955	1.58	1.16	
31.381	378759	98876	333092	77833	0.9755	1.14	
32.393	1229469	367751	980227	293241	3.03	1.25	
Signal Totals:							
	3698958	778827	3045091	622148			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6744049	1400975				1.21	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 9.242 = (6744049 * 10.000) / (6421922 * 1.136)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d
Lims ID: 320-76887-A-2-A
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 19:34:28 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDD, RT: 30.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	4828880	1352168
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	5157434	1324396
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		10.000	4993157	1338282

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.465	46161	6403	35593	3884	0.1537	1.30	M
30.543	24274	5285	20779	3434	0.0847	1.17	M
30.929	97101	20000	81272	15640	0.3353	1.19	
Signal Totals:							
	167536	31688	137644	22958			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	305180	54646				1.22	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5736 = (305180 * 10.000) / (4993157 * 1.066)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 13:08:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Lims ID:	320-76887-A-2-A		
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Inject. Date:	18-Aug-2021 19:34:28	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	8

Non-2,3,7,8-sub-HpCDF, RT: 34.283

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	4410855	1450245
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	4597102	1317217

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		10.000	4503978	1383731

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.046	1353736	440346	1291658	414000	4.26	1.05	
Signal Totals:							
	1353736	440346	1291658	414000			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2645394	854346				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.258 = (2645394 * 10.000) / (4503978 * 1.379)

Report Date: 19-Aug-2021 13:08:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Lims ID:	320-76887-A-2-A		
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Inject. Date:	18-Aug-2021 19:34:28	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	8

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	4090954	1291535

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		10.000	4090954	1291535

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.985	322110	103773	318656	103689	1.43	1.01	a
Signal Totals:							
	322110	103773	318656	103689			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	640766	207462				1.01	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.431 = (640766 * 10.000) / (4090954 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d				
Injection Date:	18-Aug-2021 19:34:28	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-A	Lab Sample ID:	320-76887-2		
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.86- 19.46)

Signal: 1

Processing Integration Results

RT = 15.678 Area = 3876744

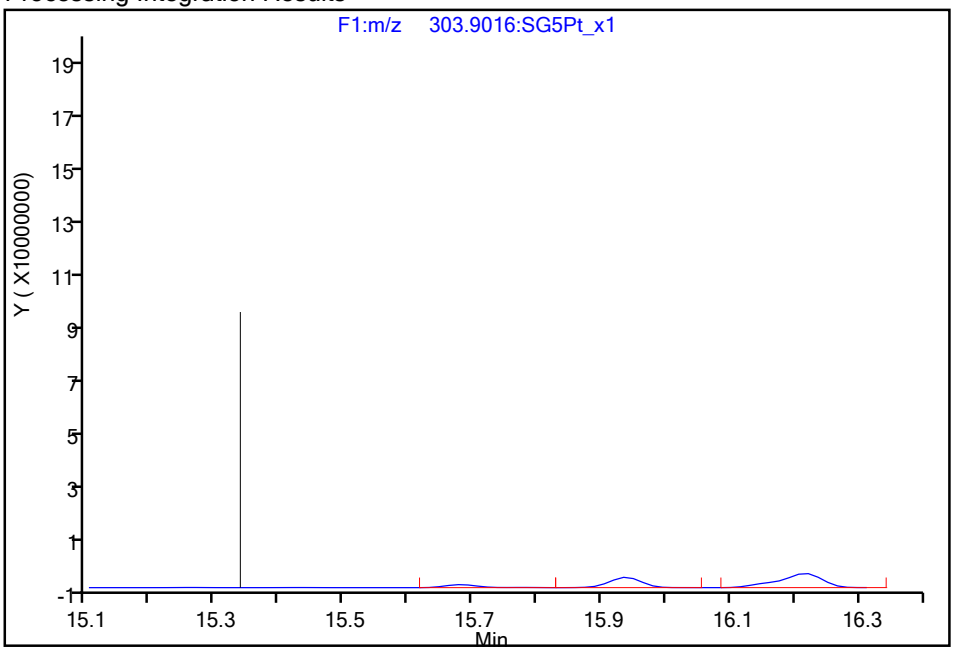

Manual Integration Results

RT = 15.678 Area = 3913730 M

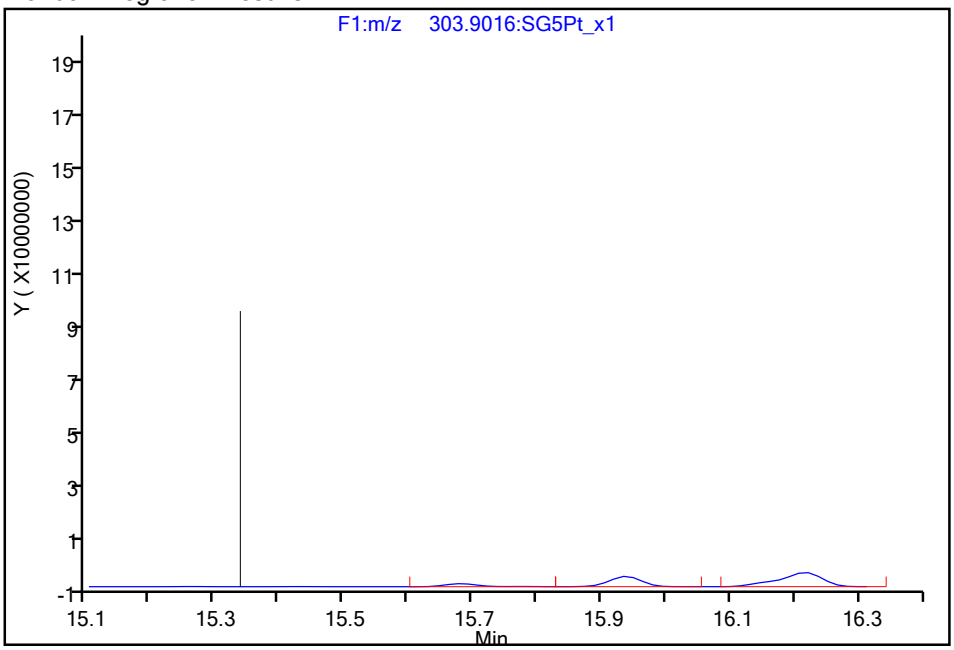

Reviewer: bennettd, 19-Aug-2021 12:55:15

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d				
Injection Date:	18-Aug-2021 19:34:28	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-A	Lab Sample ID:	320-76887-2		
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.86- 19.46)

Signal: 2

Not Detected
RT: 14.86- 19.46

Processing Integration Results

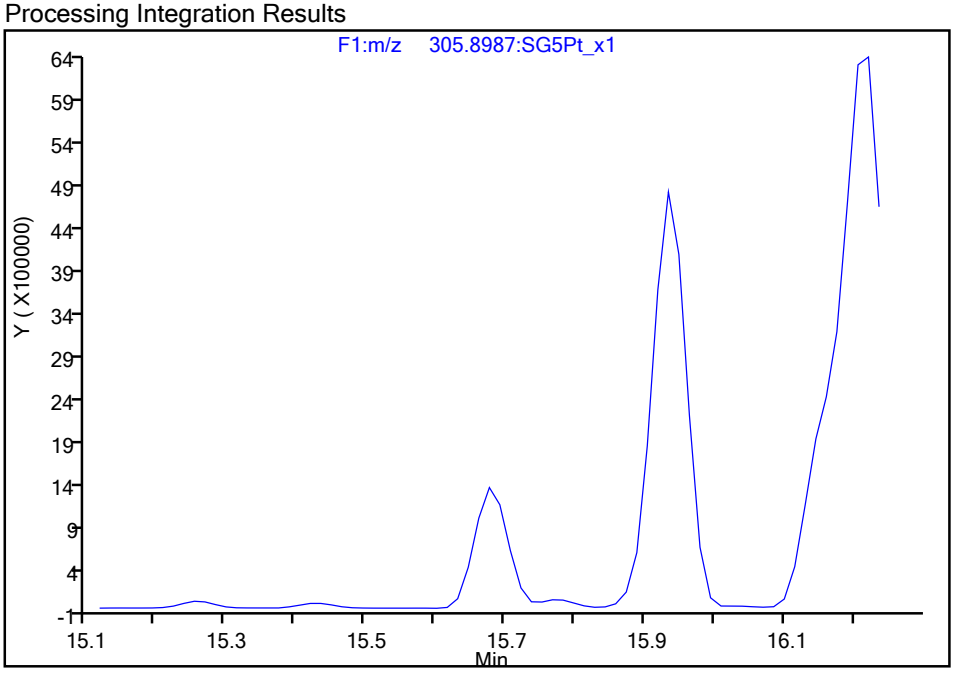

RT = 15.678 Area = 4410170 M

Manual Integration Results

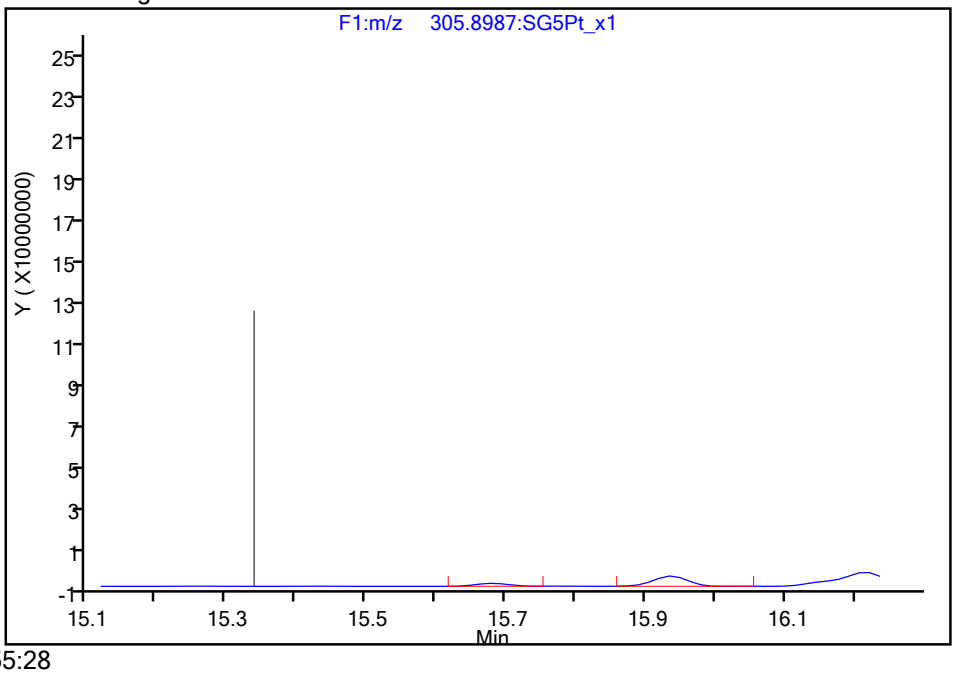

Reviewer: bennettd, 19-Aug-2021 12:55:28
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d				
Injection Date:	18-Aug-2021 19:34:28	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-A	Lab Sample ID:	320-76887-2		
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.35
Area: 12413235
Amount: 41.064816
Amount Units: pg/ul

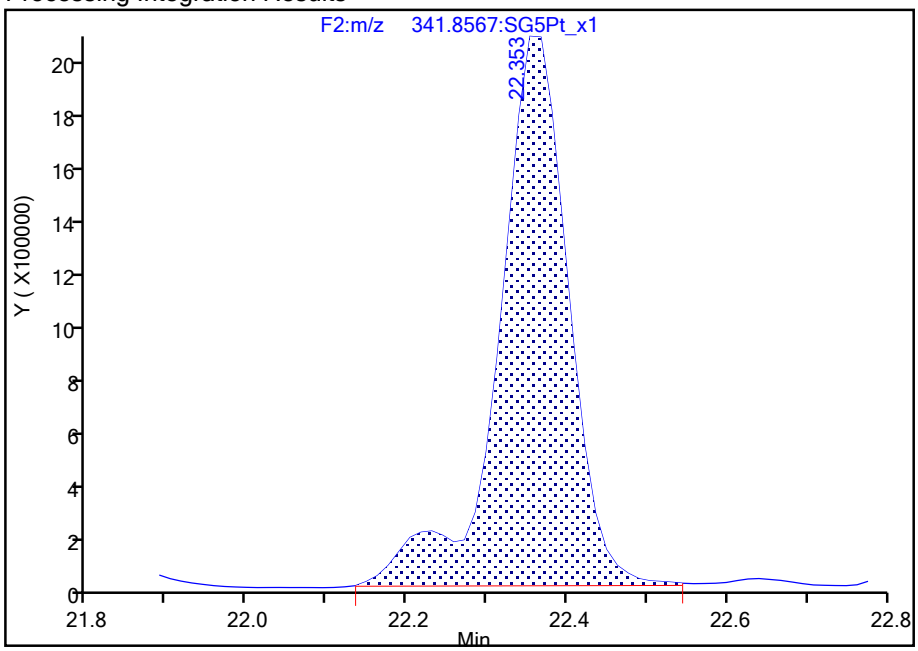

Manual Integration Results

RT: 22.35
Area: 11368616
Amount: 39.679981
Amount Units: pg/ul

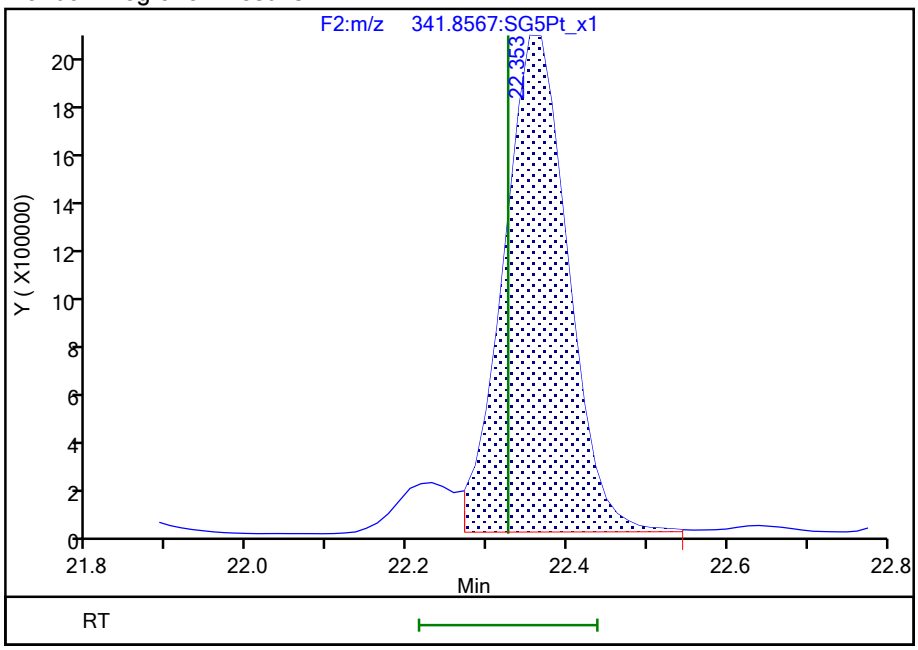

Reviewer: bennettd, 19-Aug-2021 12:56:09

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d				
Injection Date:	18-Aug-2021 19:34:28	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-A	Lab Sample ID:	320-76887-2		
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 26.12)

Signal: 1

Processing Integration Results

RT = 22.230 Area = 1434756

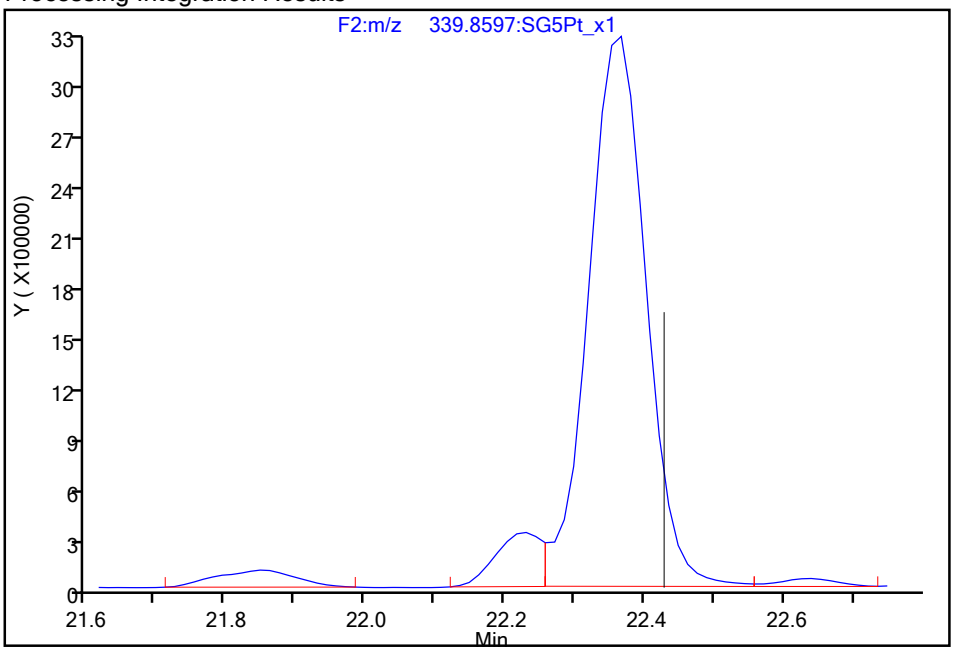

Manual Integration Results

RT = 22.230 Area = 1434756

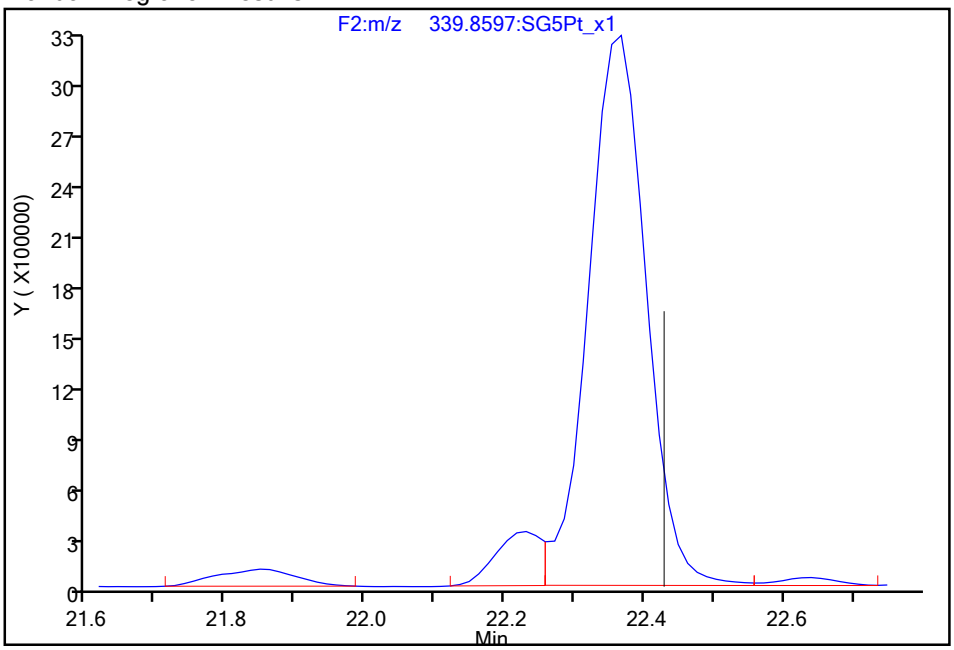

Reviewer: bennettd, 19-Aug-2021 12:56:24

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d				
Injection Date:	18-Aug-2021 19:34:28	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-A	Lab Sample ID:	320-76887-2		
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.79
Area: 30975
Amount: 0.142385
Amount Units: pg/ul

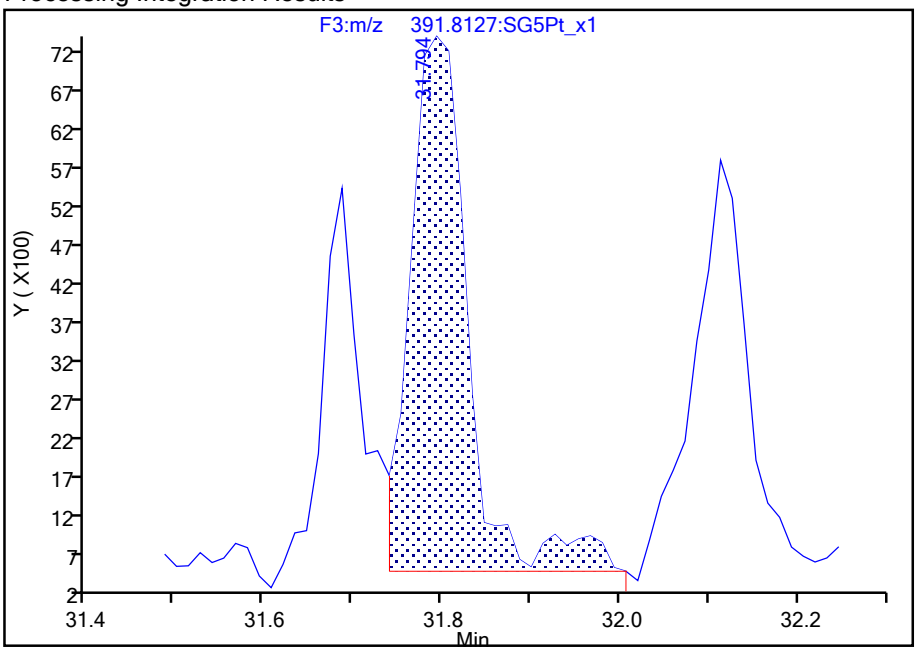

Manual Integration Results

RT: 31.79
Area: 29005
Amount: 0.138566
Amount Units: pg/ul

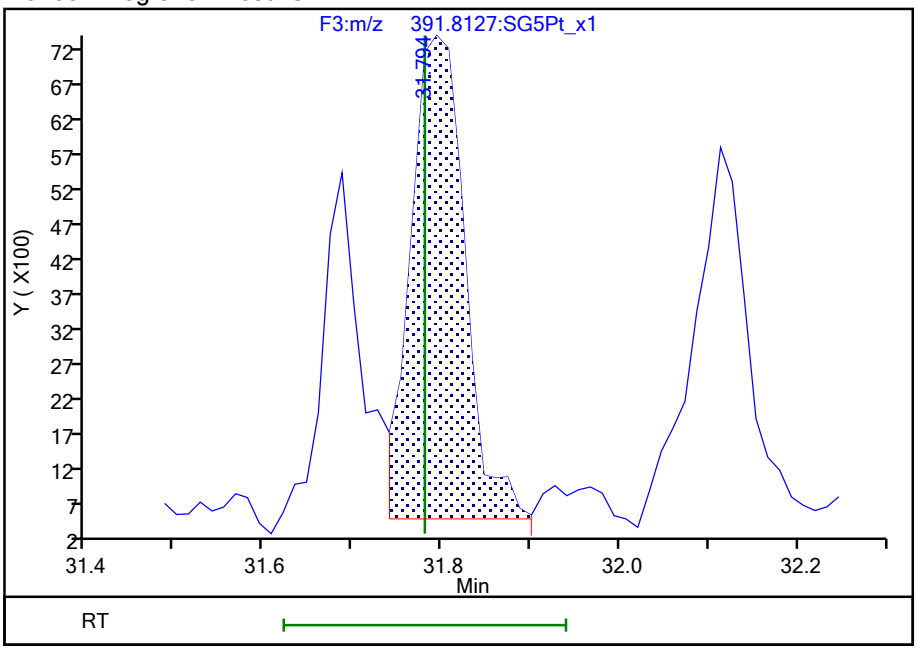

Reviewer: bennettd, 19-Aug-2021 12:57:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d				
Injection Date:	18-Aug-2021 19:34:28	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-A	Lab Sample ID:	320-76887-2		
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 32.11
Area: 25598
Amount: 0.093684
Amount Units: pg/ul

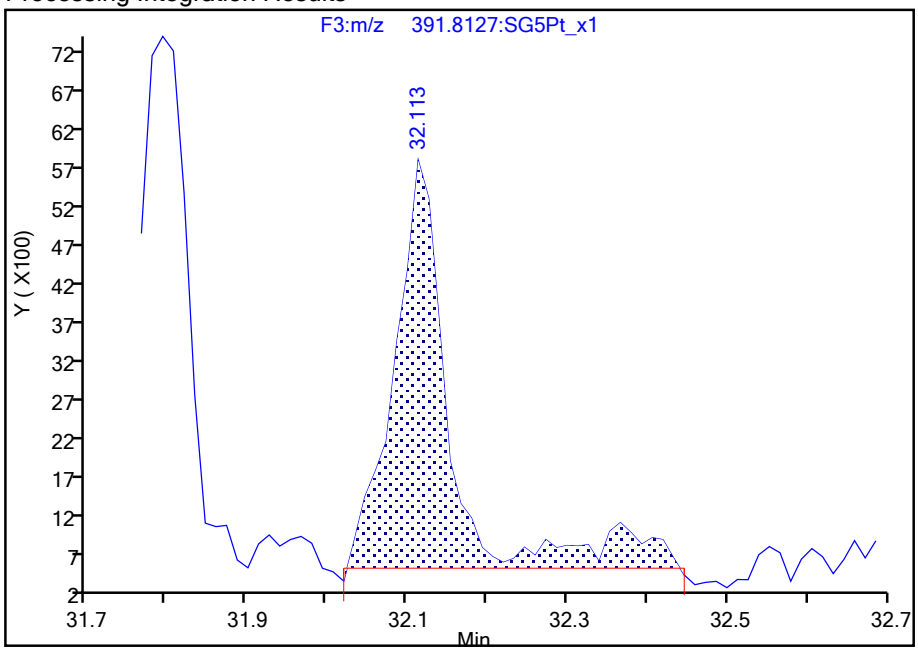

Manual Integration Results

RT: 32.11
Area: 21641
Amount: 0.083615
Amount Units: pg/ul

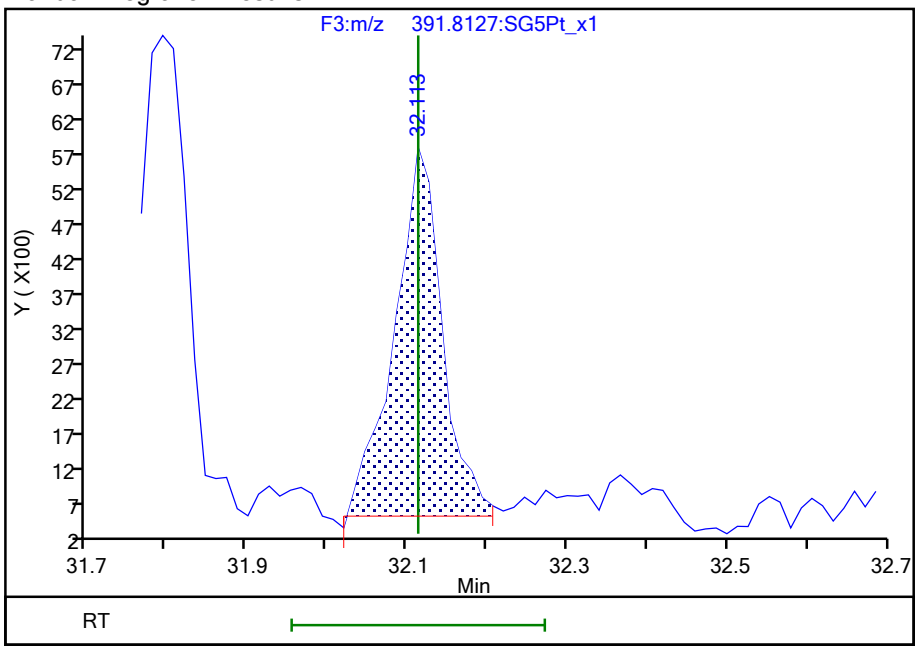

Reviewer: bennettd, 19-Aug-2021 12:57:09

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d				
Injection Date:	18-Aug-2021 19:34:28	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-A	Lab Sample ID:	320-76887-2		
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 32.13
Area: 27379
Amount: 0.093684
Amount Units: pg/ul

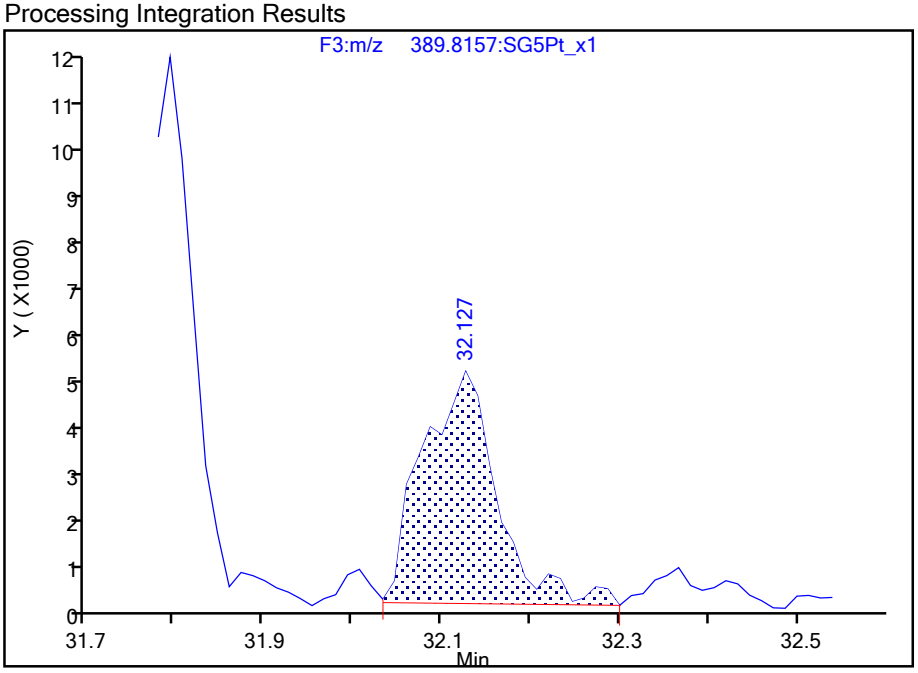

Manual Integration Results

RT: 32.13
Area: 25642
Amount: 0.083615
Amount Units: pg/ul

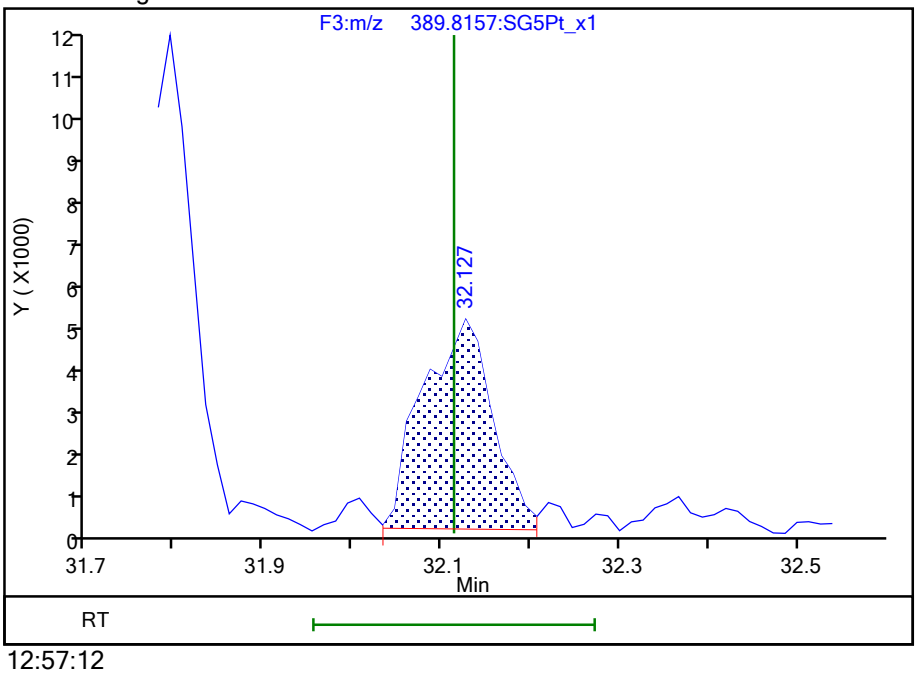

Reviewer: bennettd, 19-Aug-2021 12:57:12

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 19-Aug-2021 13:08:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d				
Injection Date:	18-Aug-2021 19:34:28	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-A	Lab Sample ID:	320-76887-2		
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (29.26- 32.37)

Signal: 1

Processing Integration Results

RT = 29.465 Area = 47742

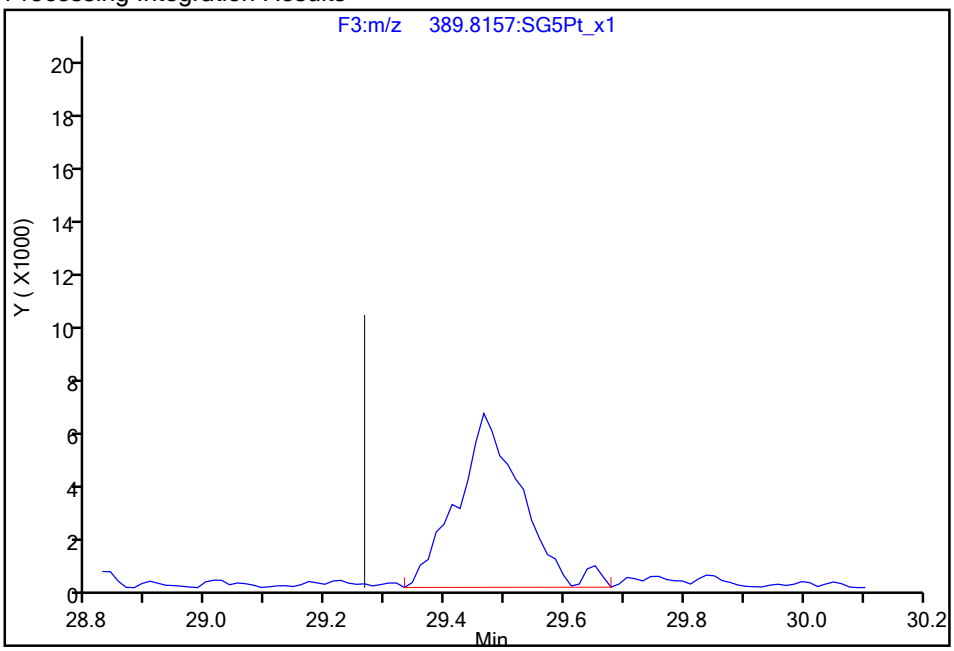

Manual Integration Results

RT = 29.465 Area = 46161 M

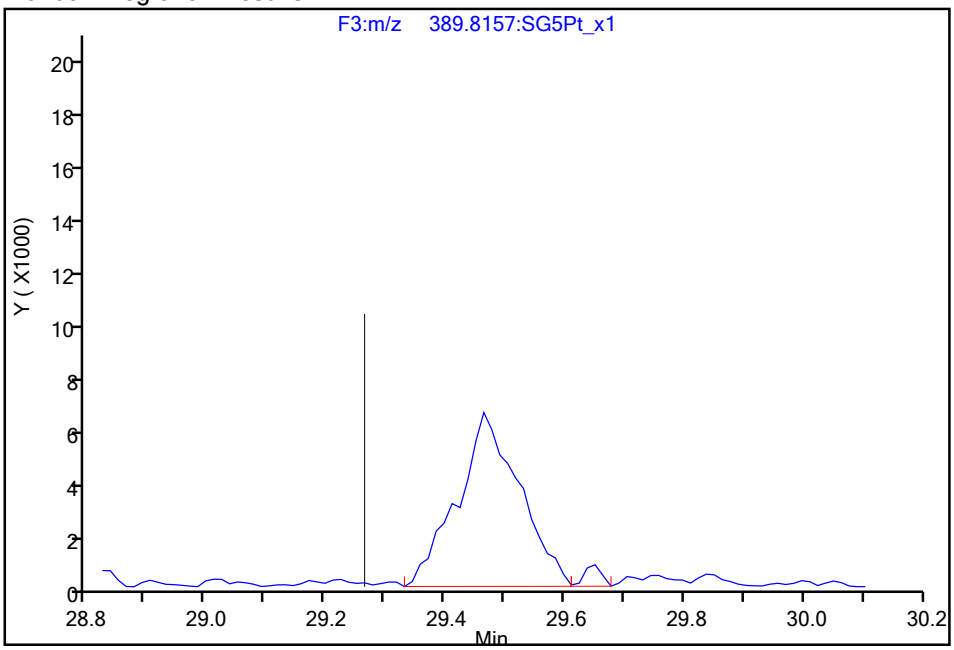

Reviewer: bennettd, 19-Aug-2021 12:57:22

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d				
Injection Date:	18-Aug-2021 19:34:28	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-A	Lab Sample ID:	320-76887-2		
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (29.26- 32.37)

Signal: 1

Processing Integration Results

RT = 30.543 Area = 25888

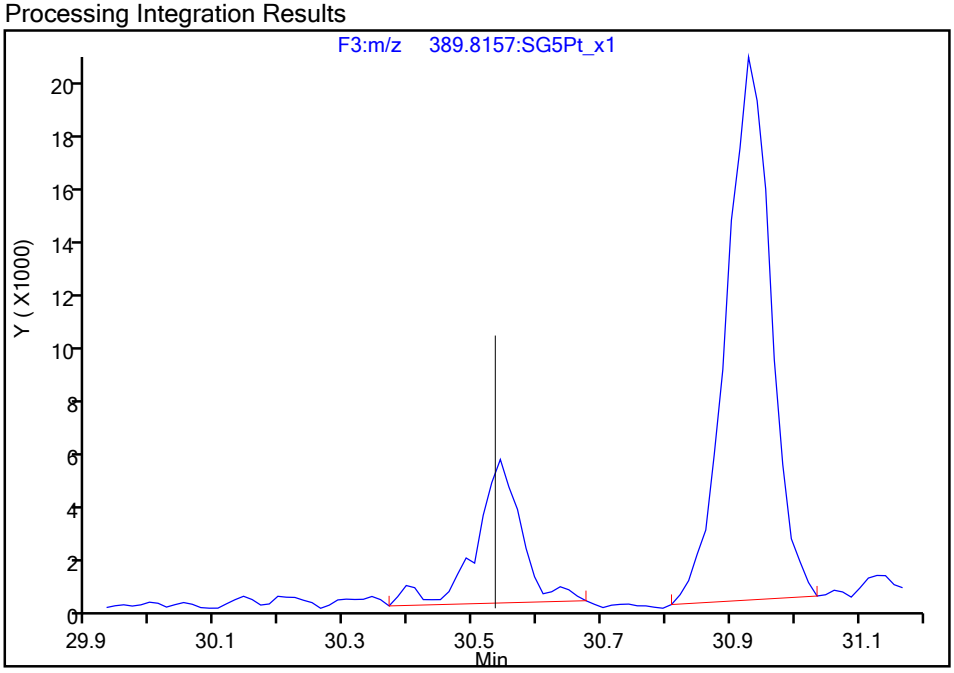

Manual Integration Results

RT = 30.543 Area = 24274 M

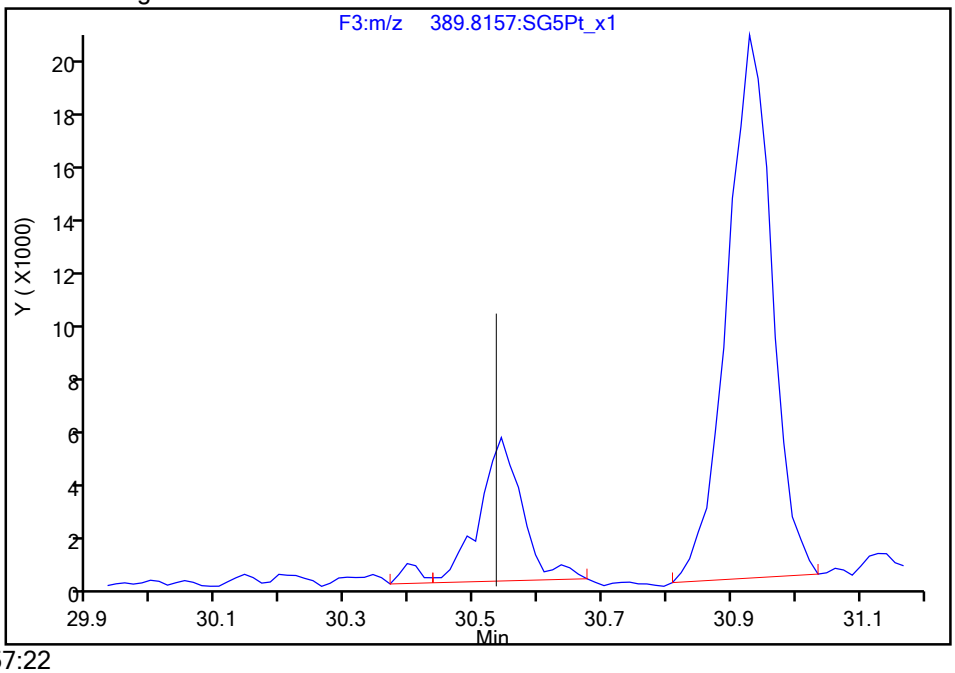

Reviewer: bennettd, 19-Aug-2021 12:57:22

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 19-Aug-2021 13:08:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

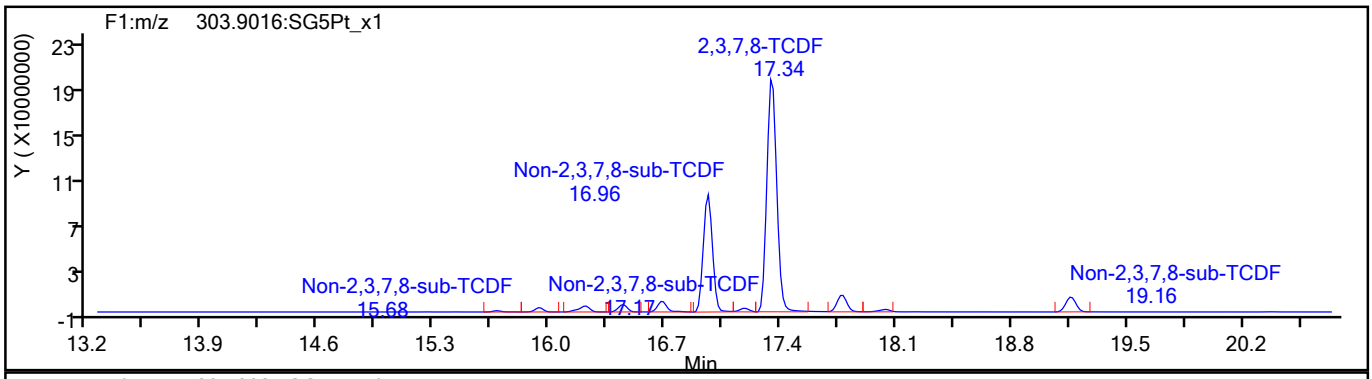

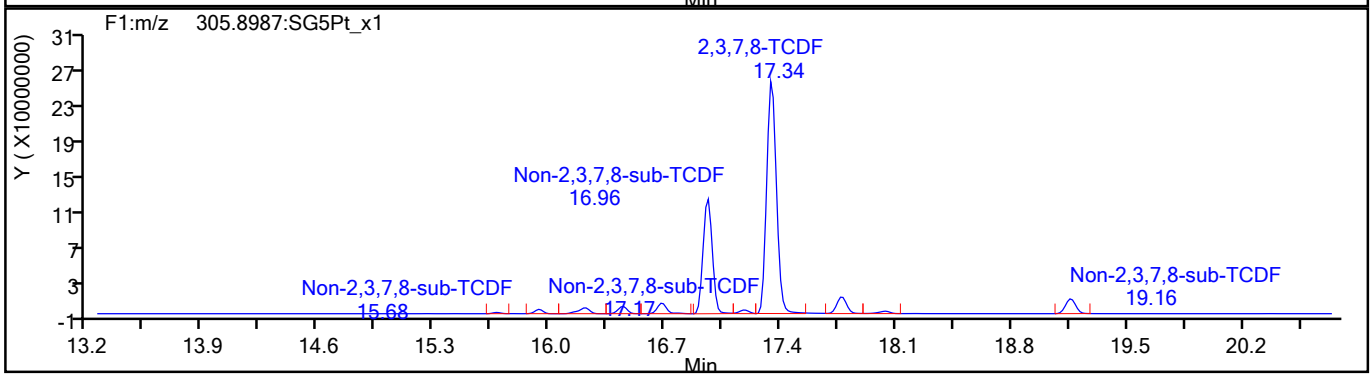

TCDF Standards

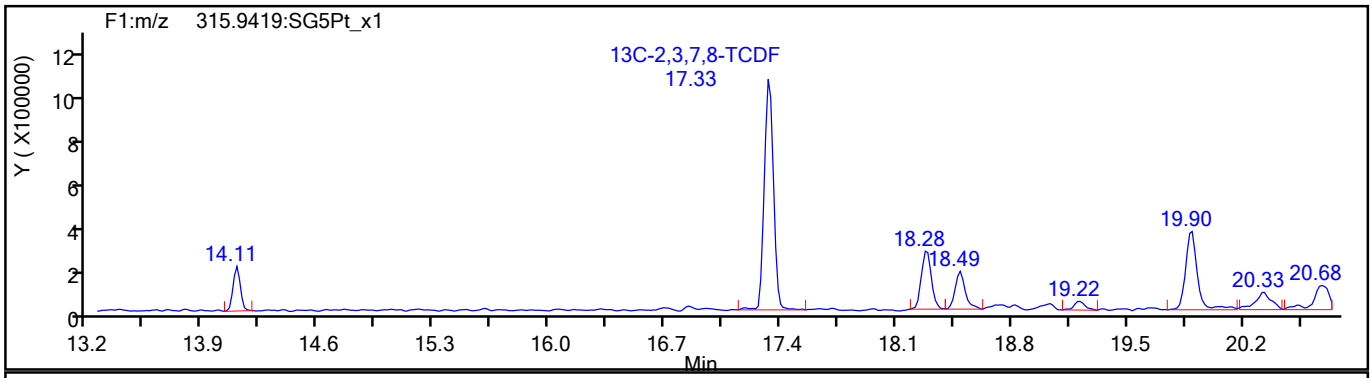

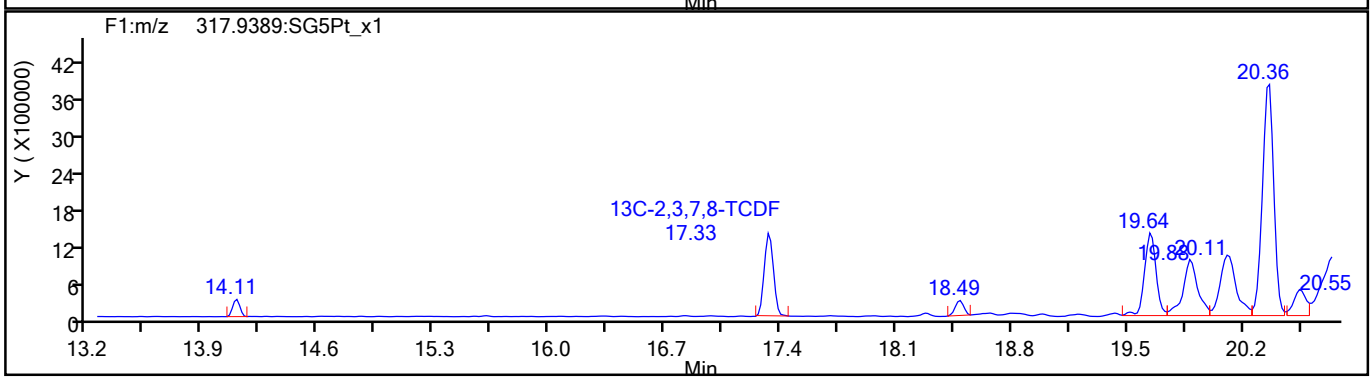

782166

Report Date: 19-Aug-2021 13:08:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

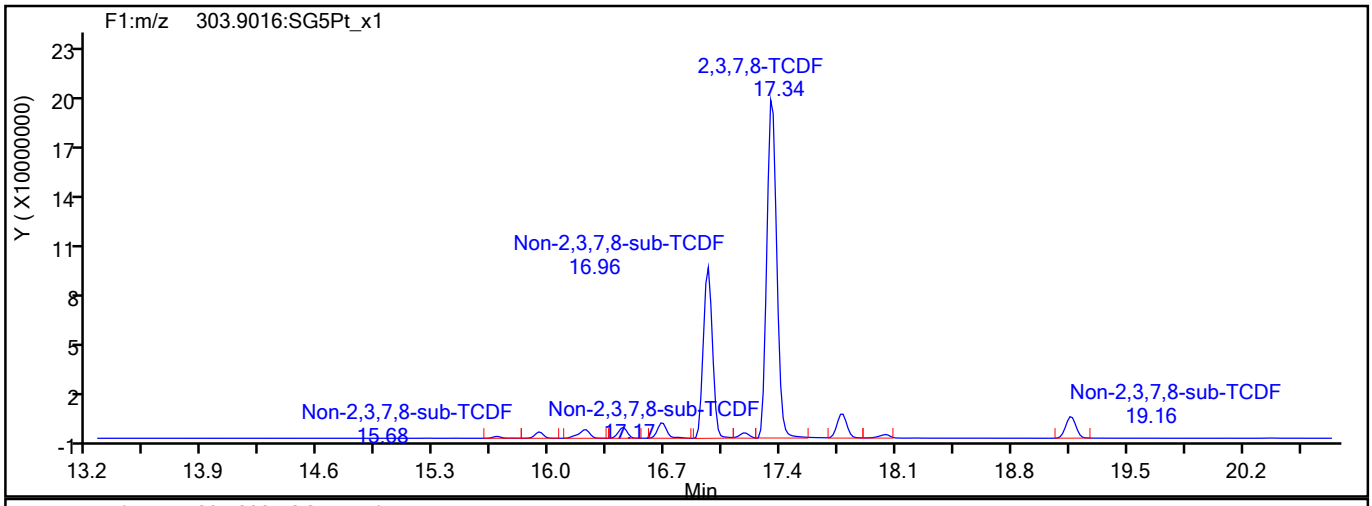

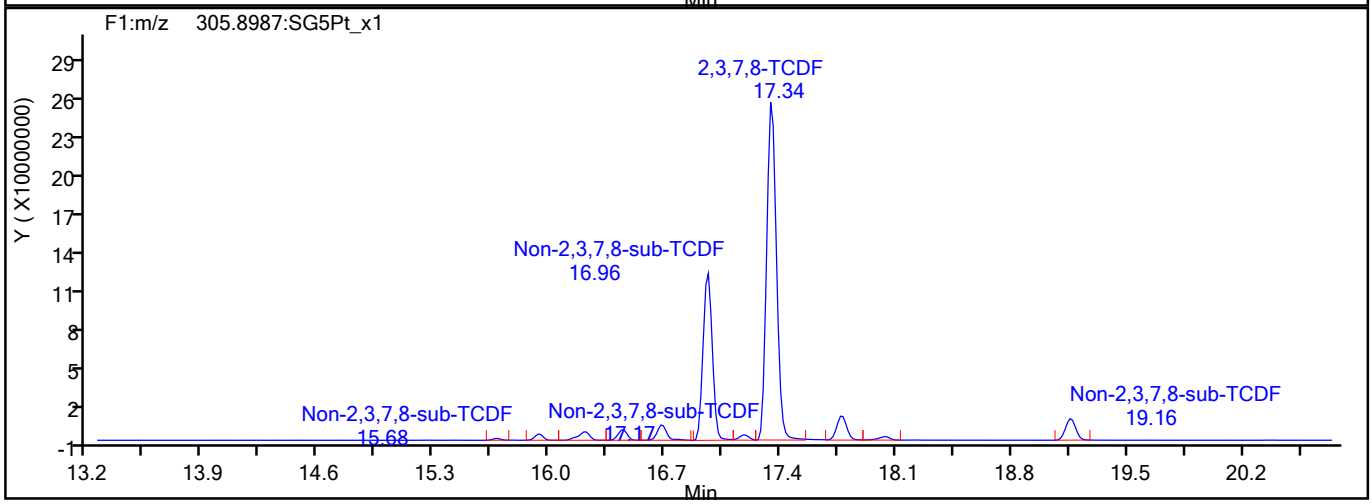

TCDF Interference Mass

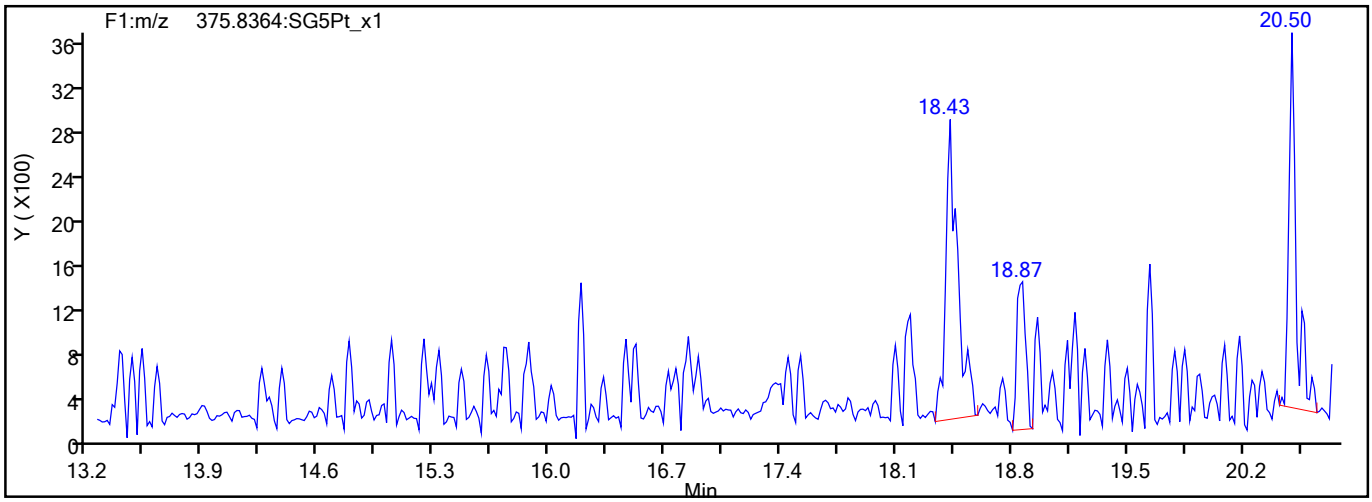

782167

Report Date: 19-Aug-2021 13:08:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

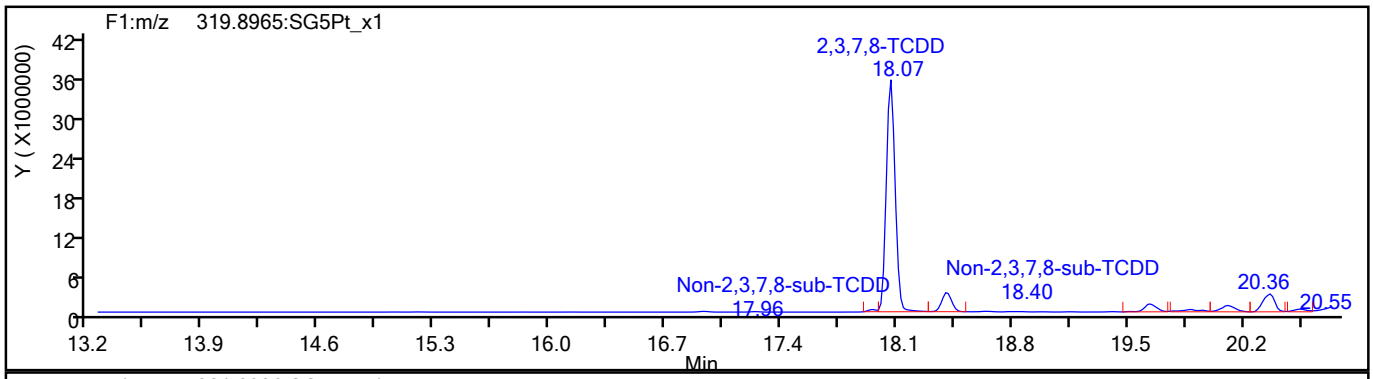

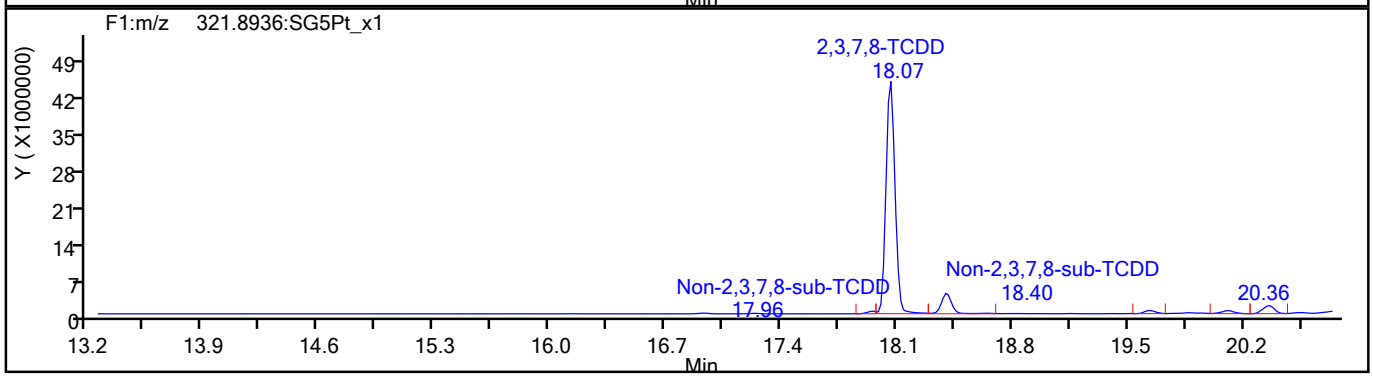

TCDD Standards

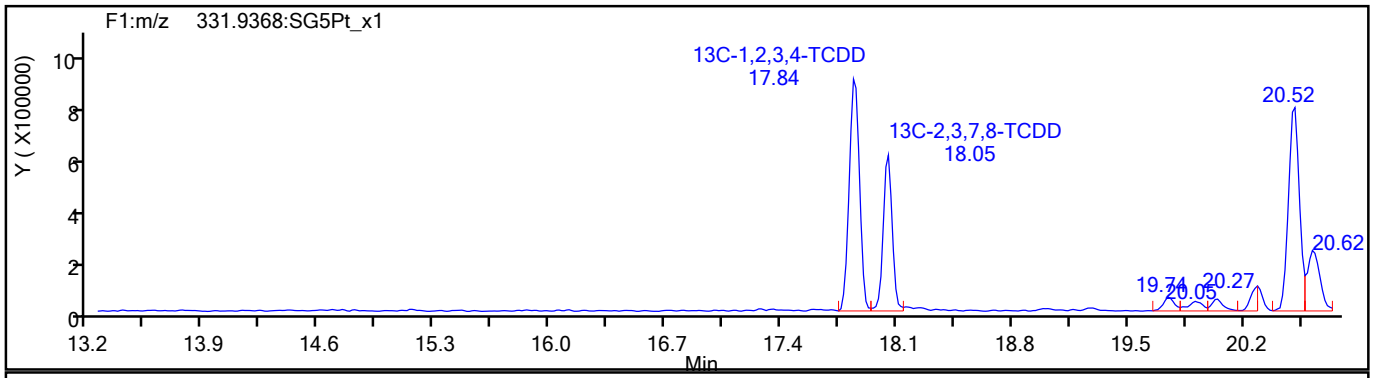

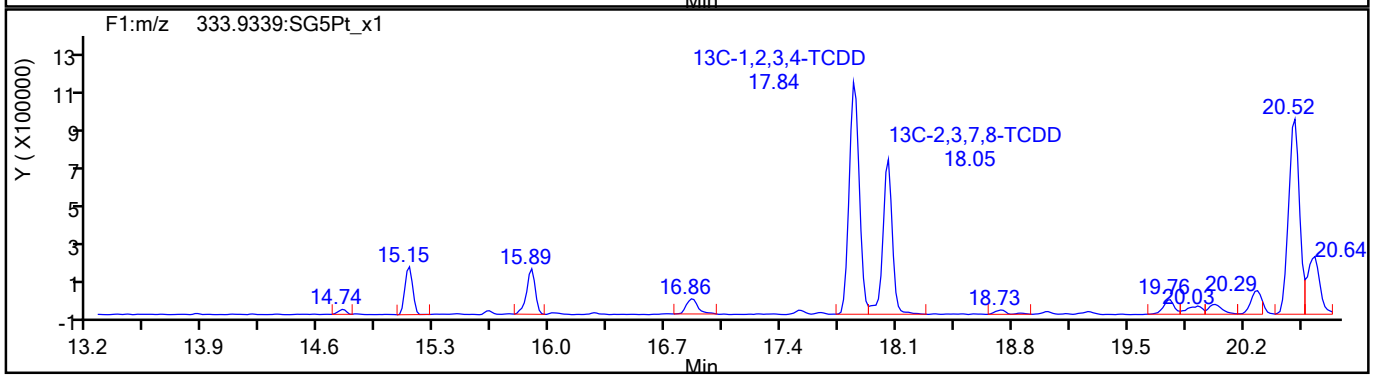

782168

Report Date: 19-Aug-2021 13:08:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

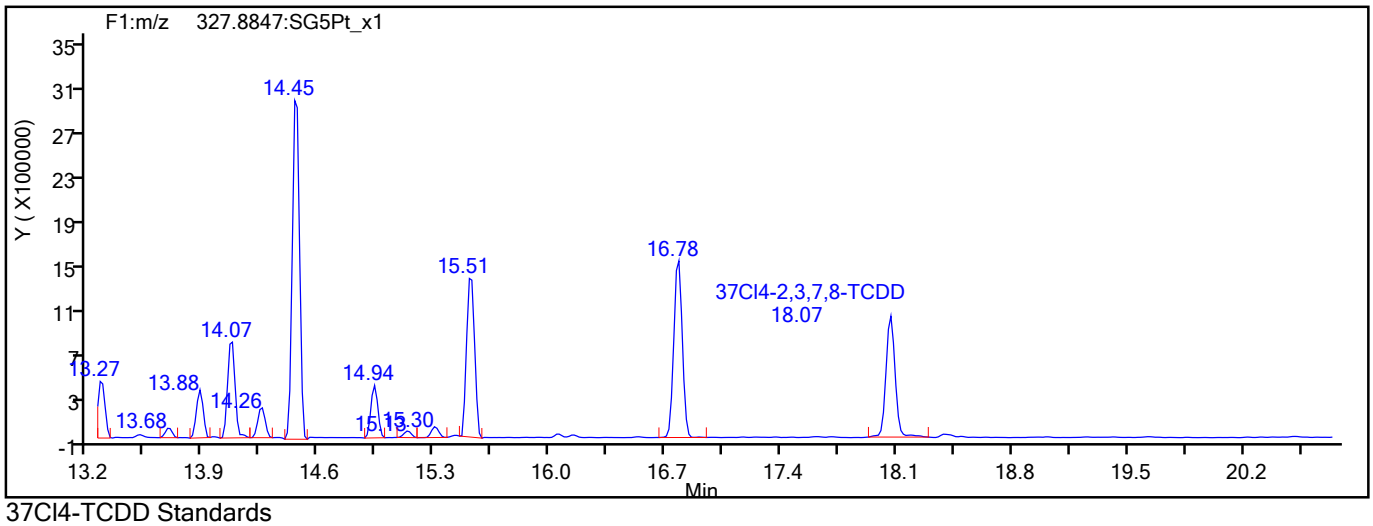

37Cl4-TCDD Standards

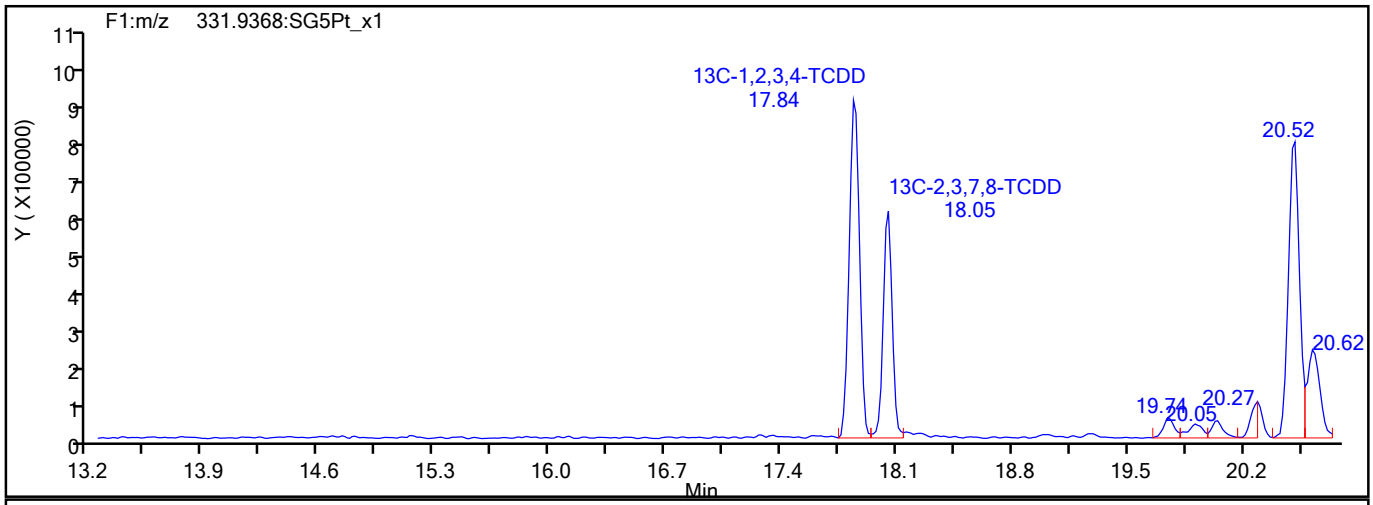

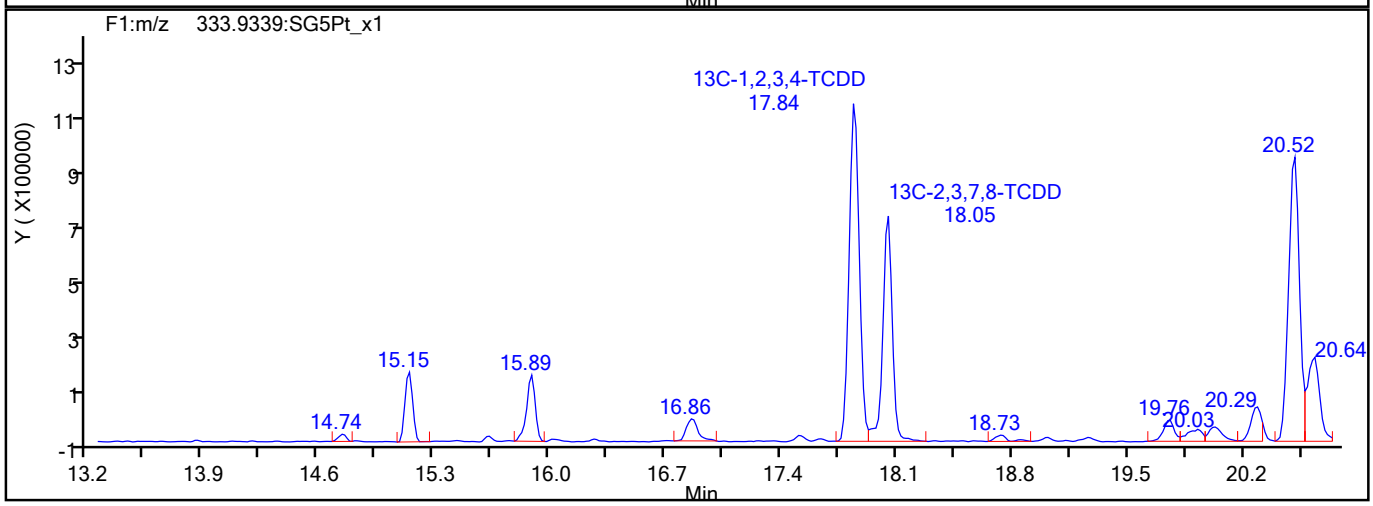

782169

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

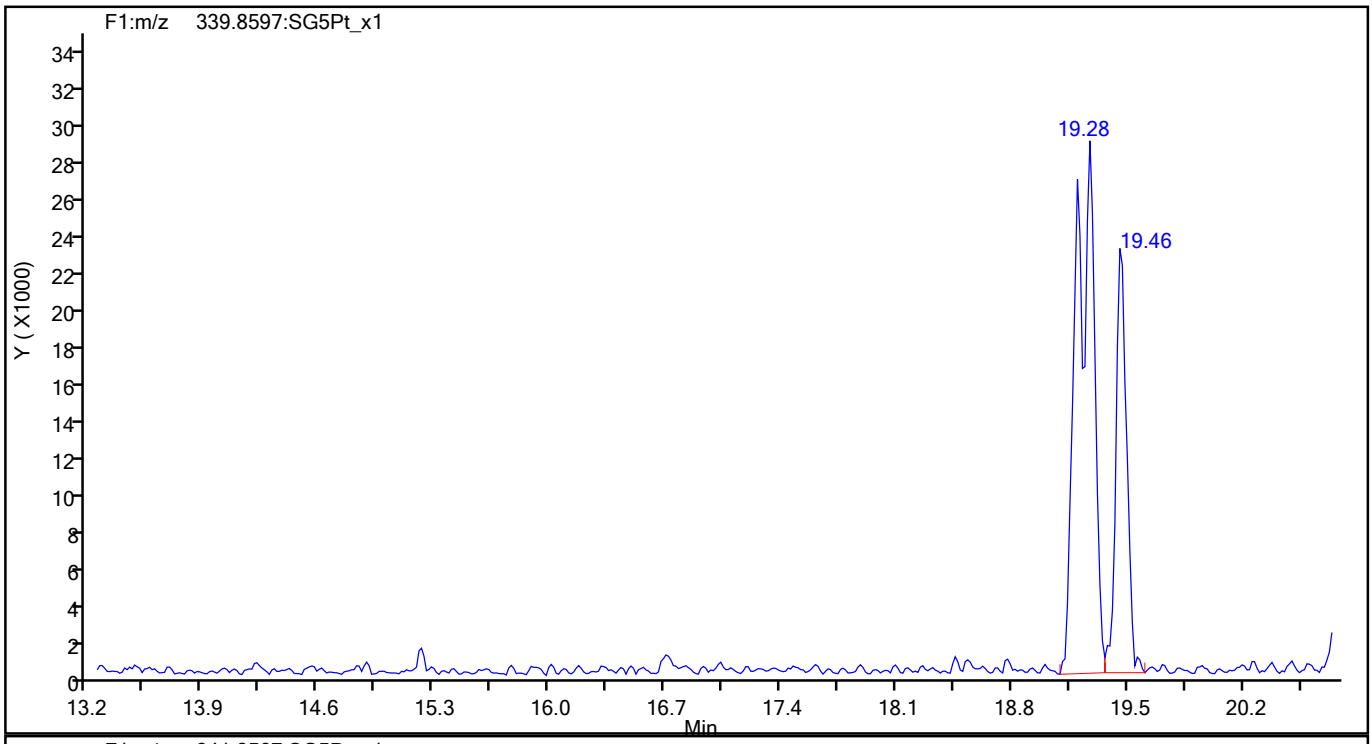

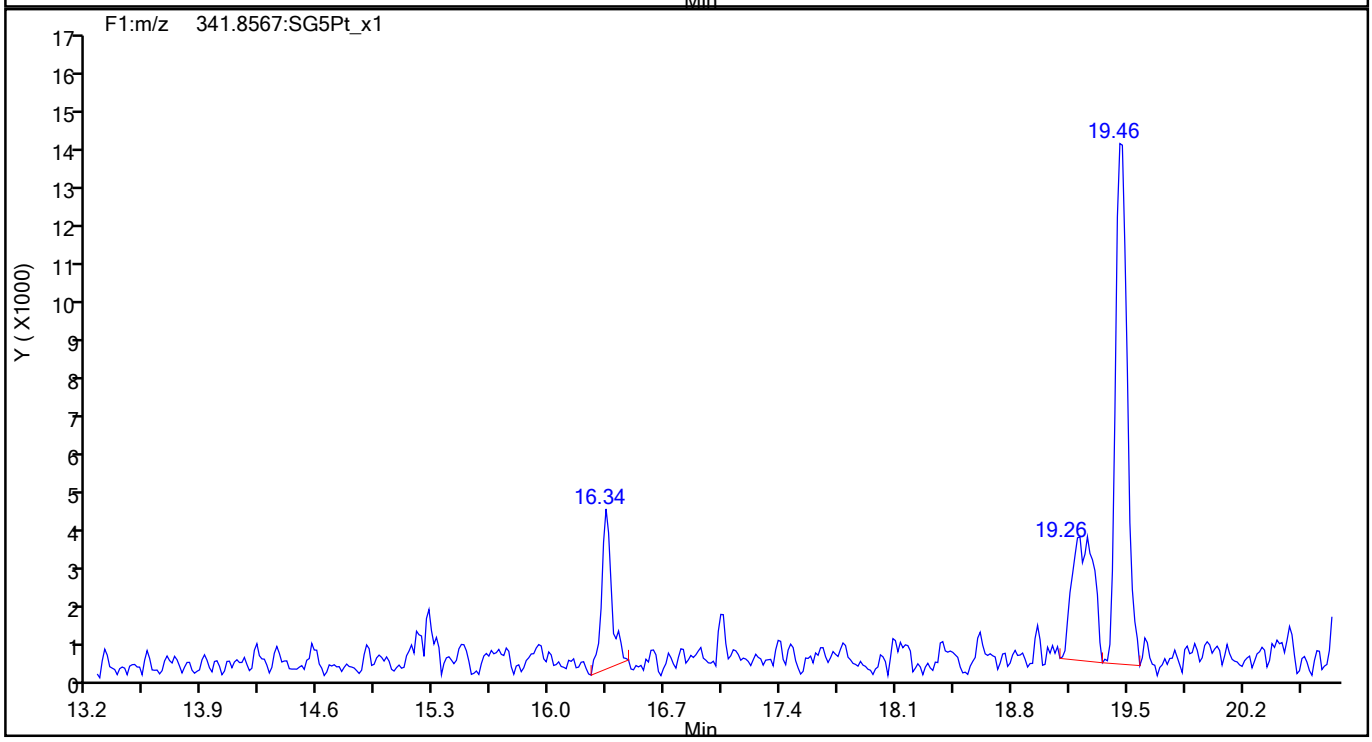

782170

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

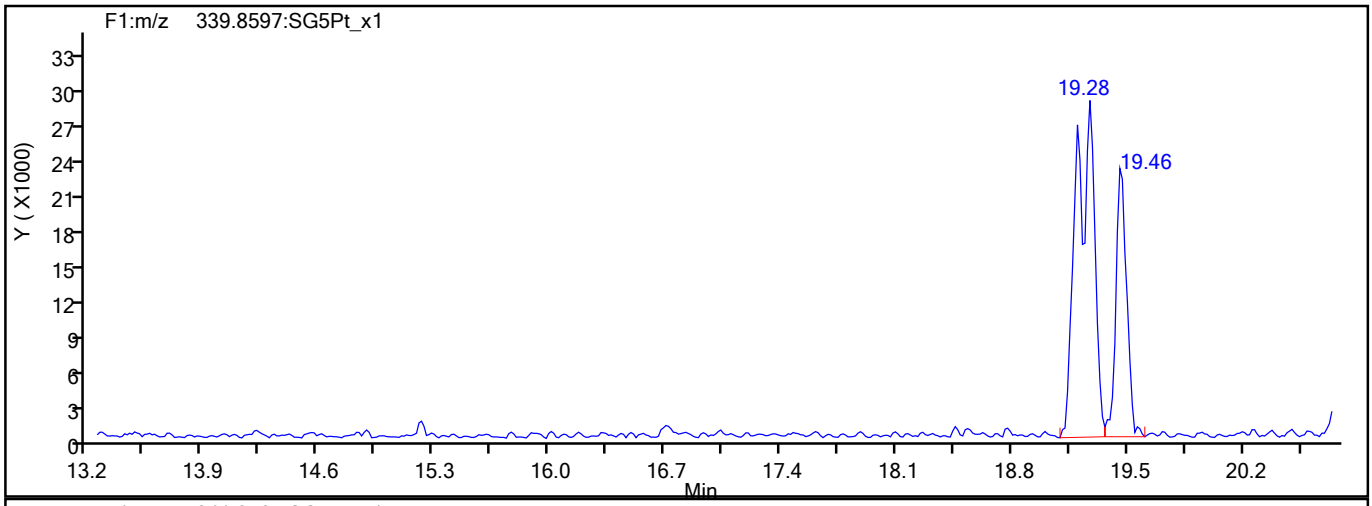

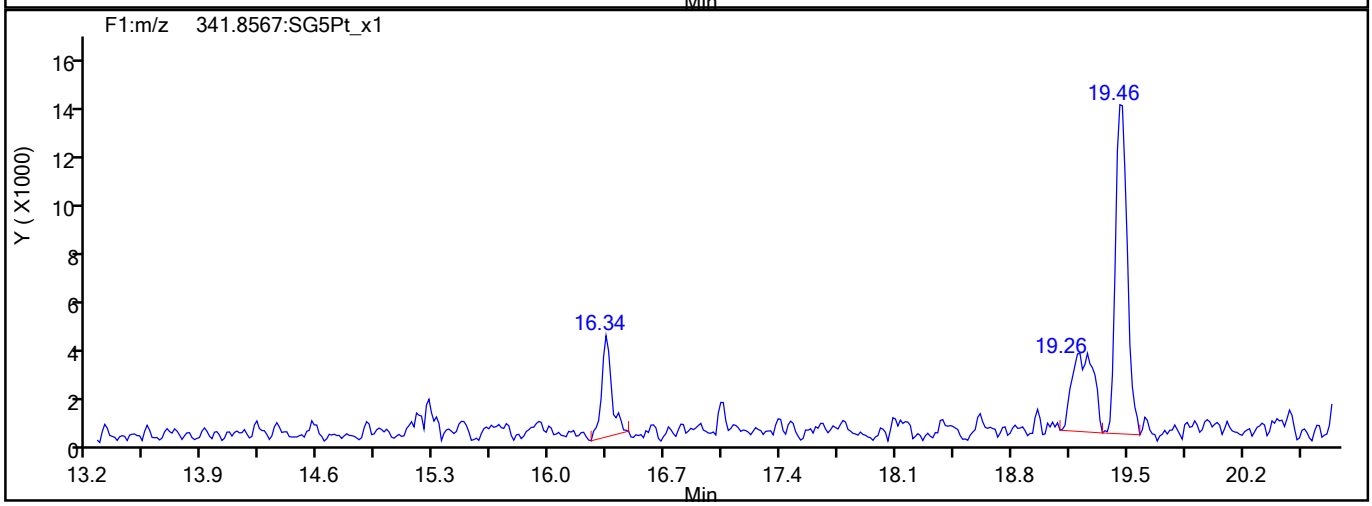

F1 PeCDFs Interference Mass

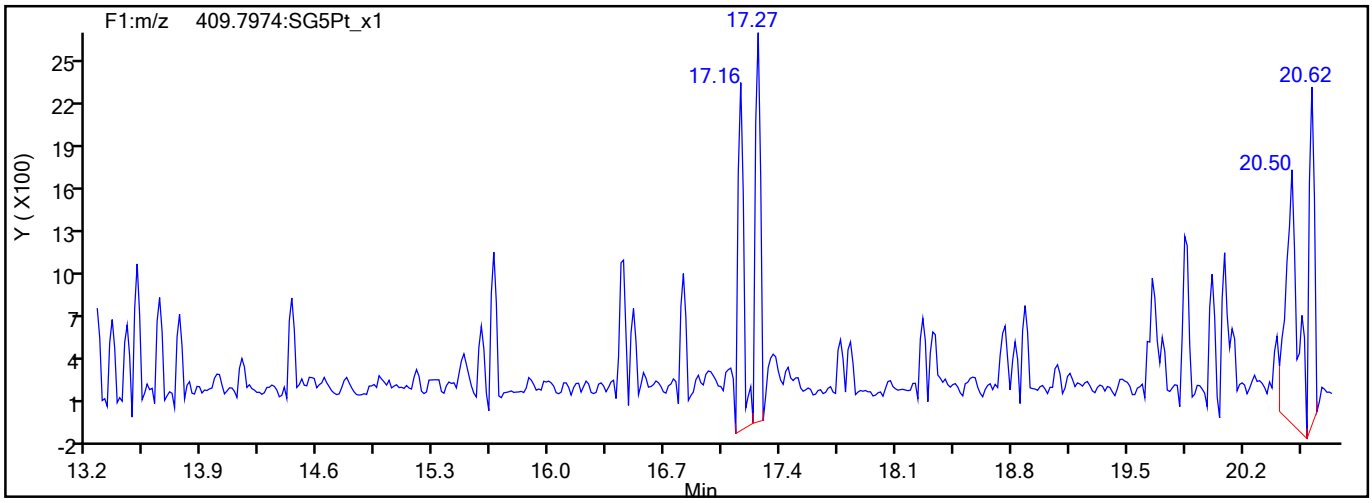

782171

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

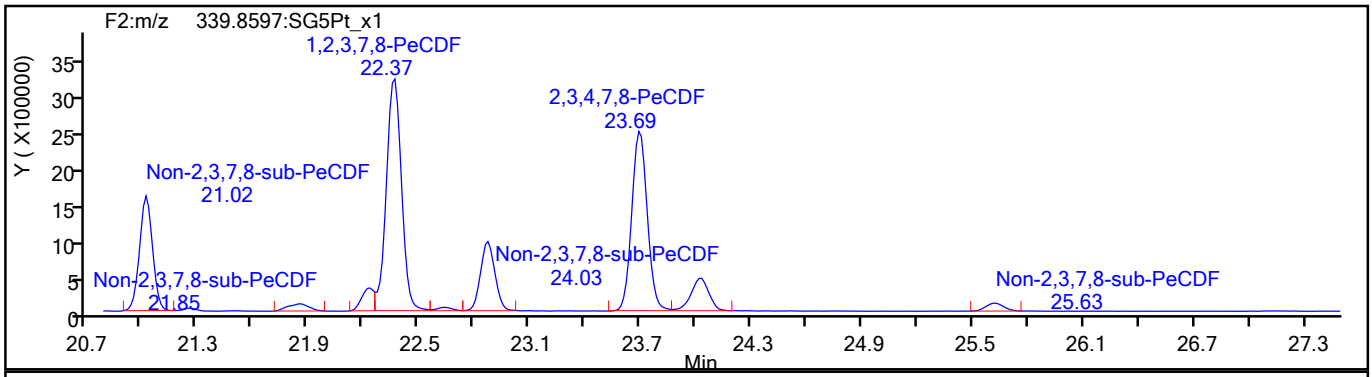

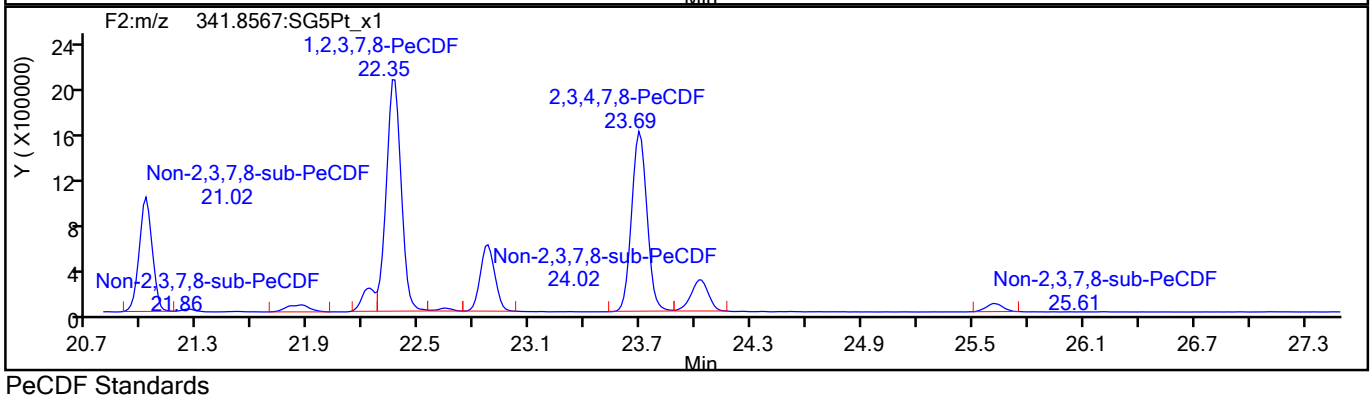

PeCDF Standards

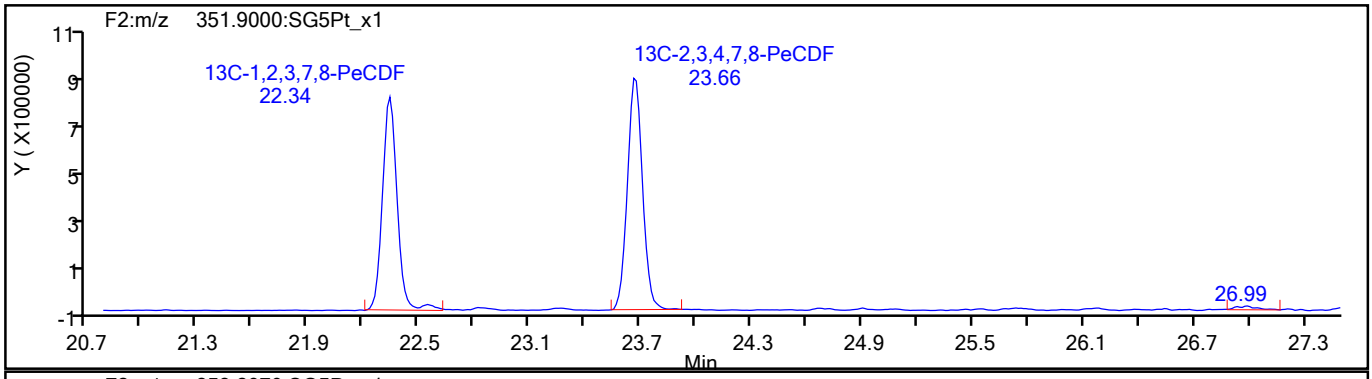

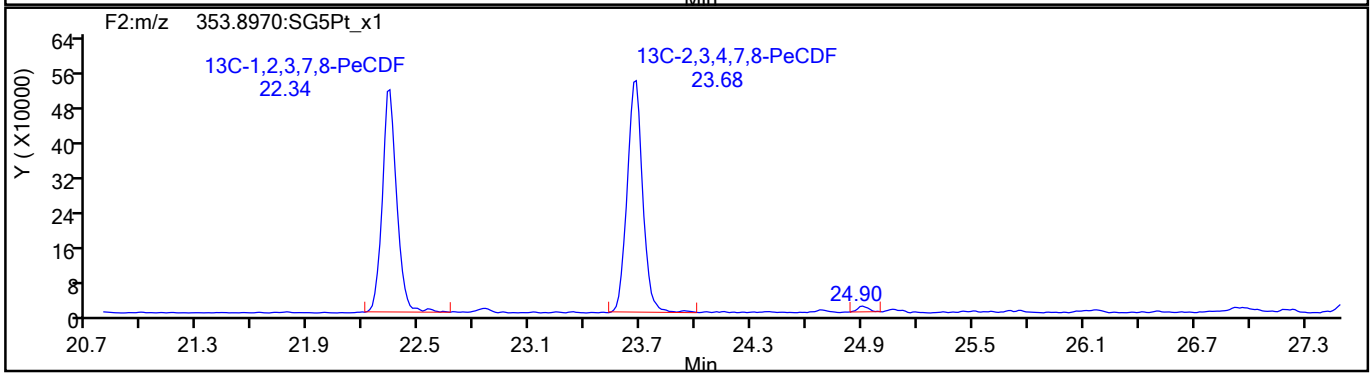

782172

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

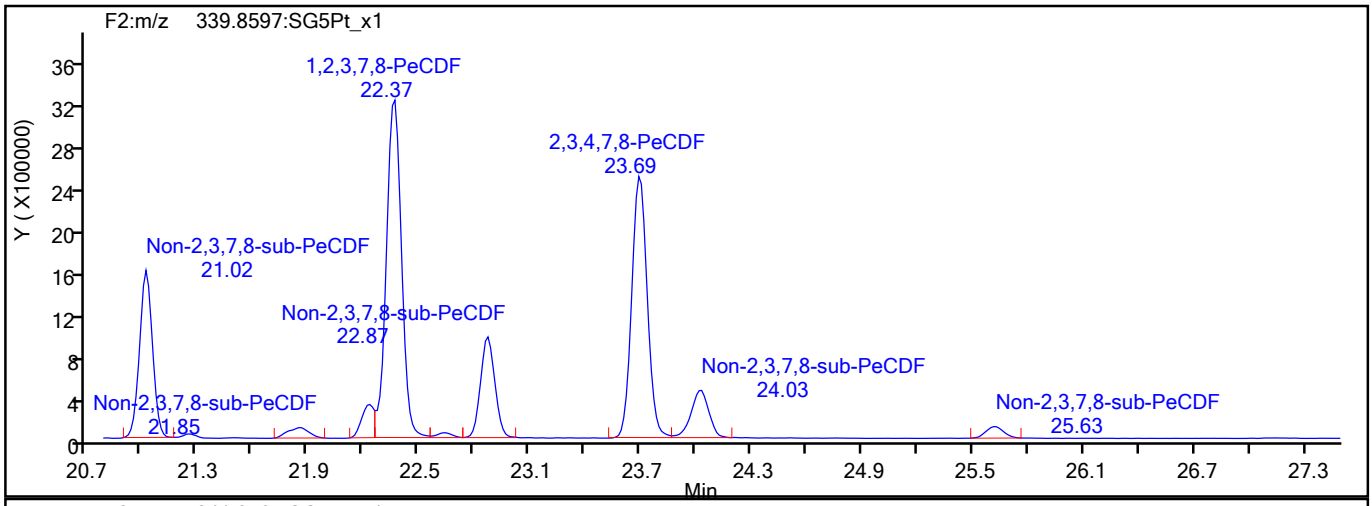

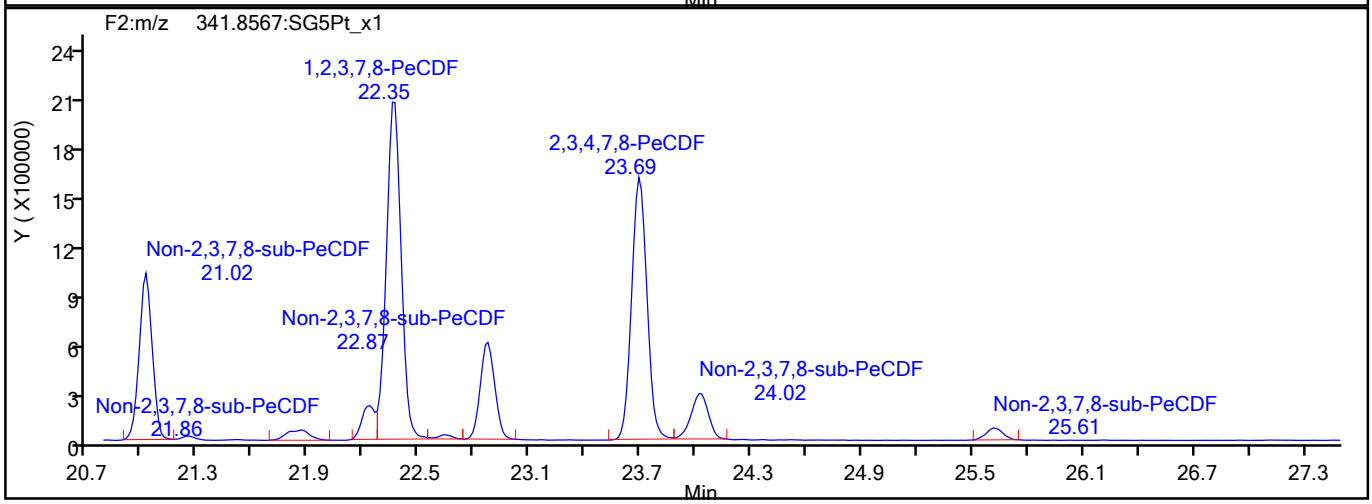

PeCDF Interference Mass

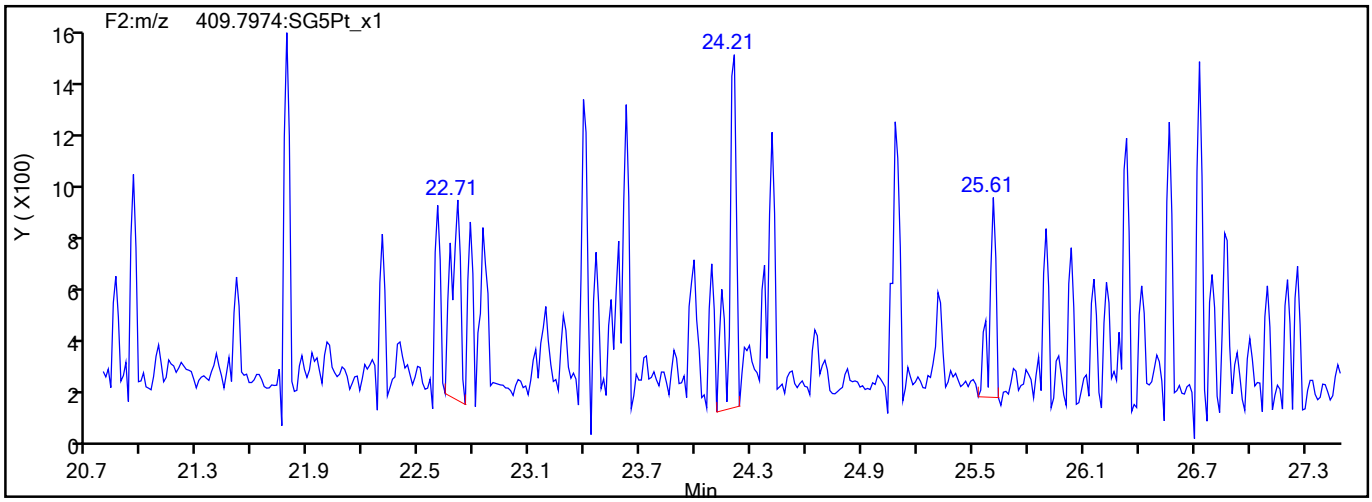

782173

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

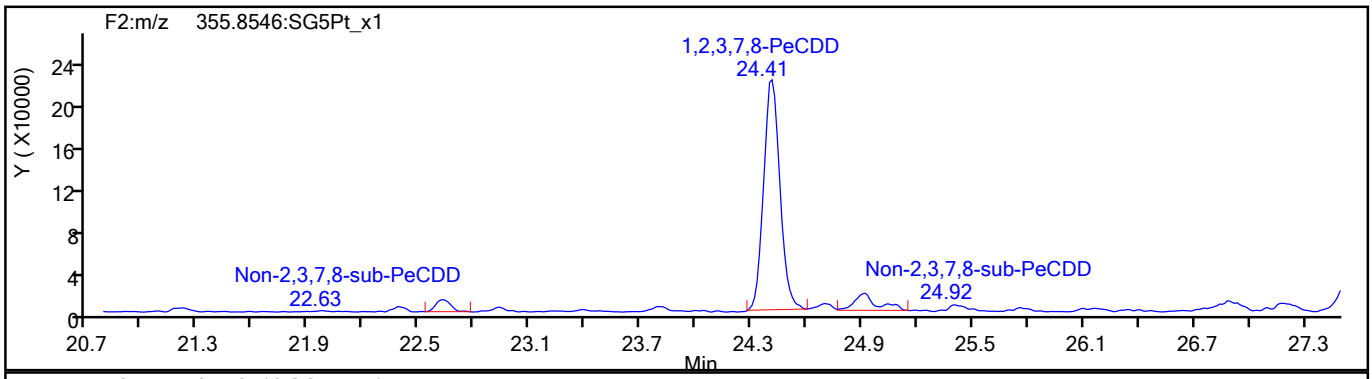

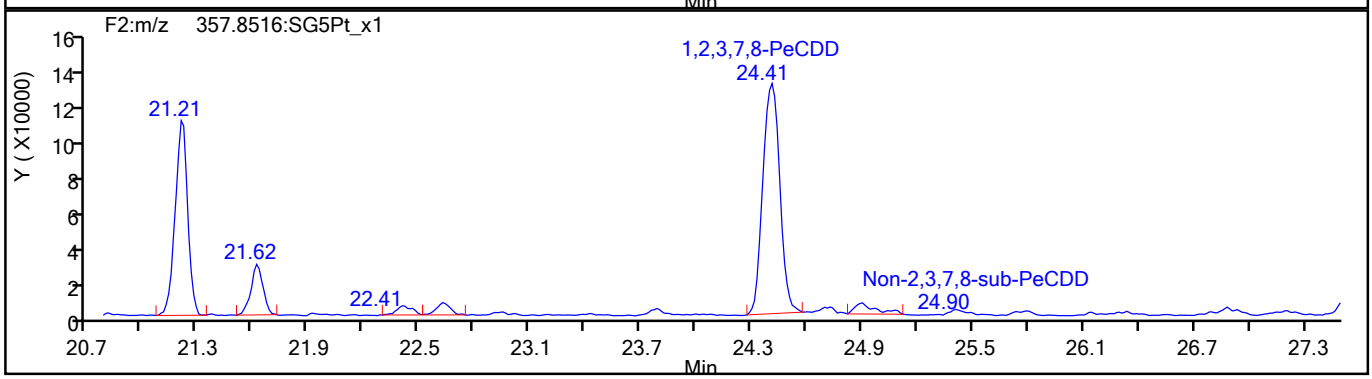

PeCDD Standards

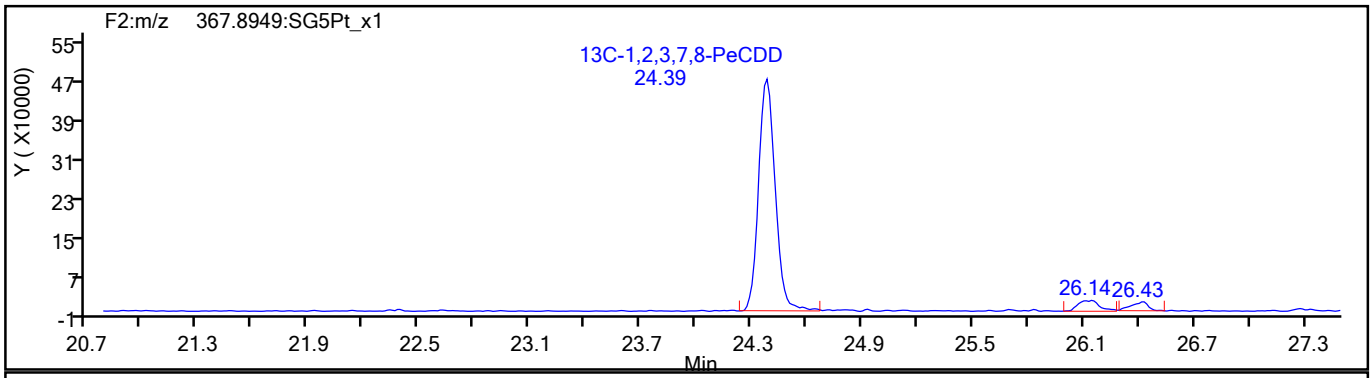

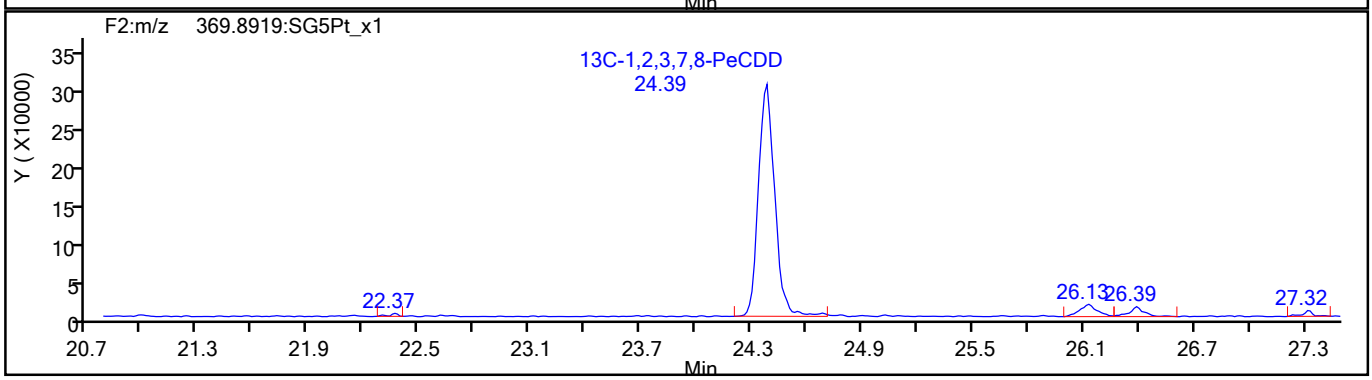

782174

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

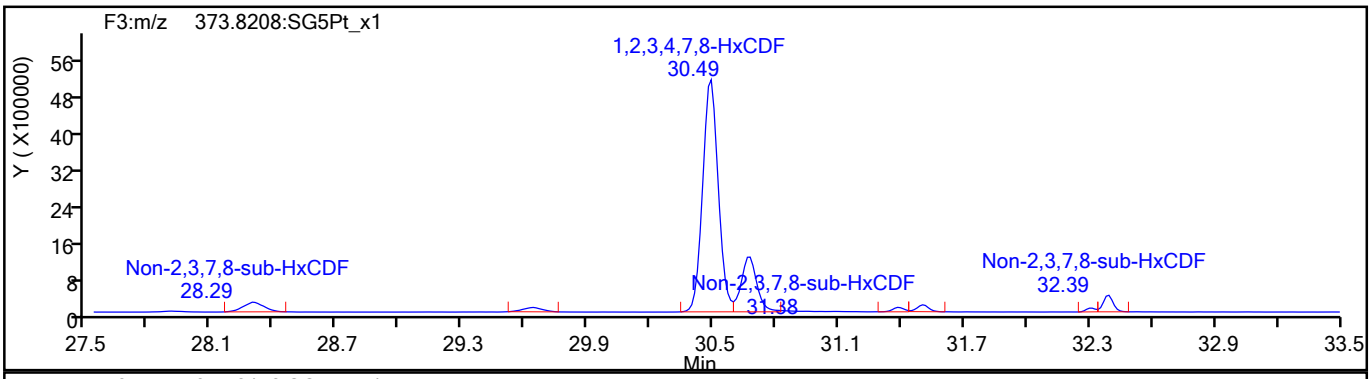

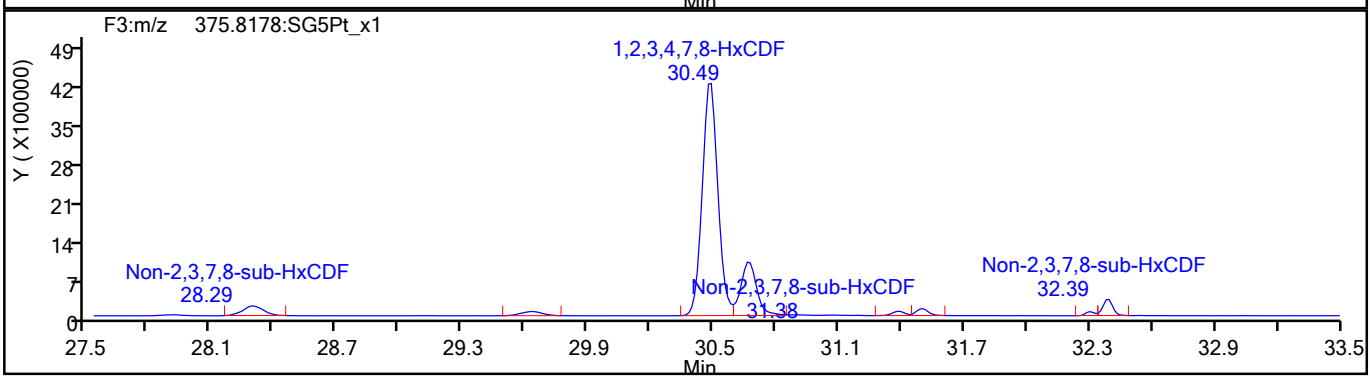

HxCDF Standards

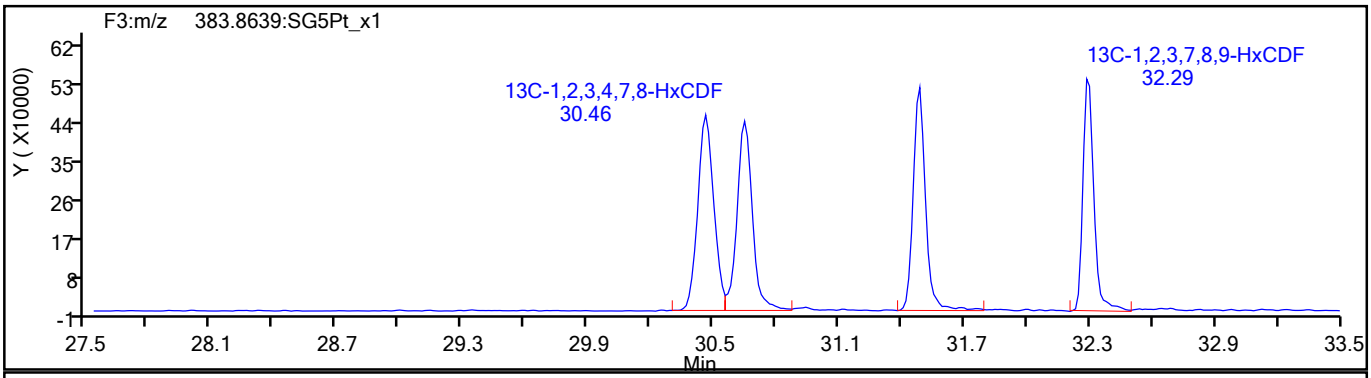

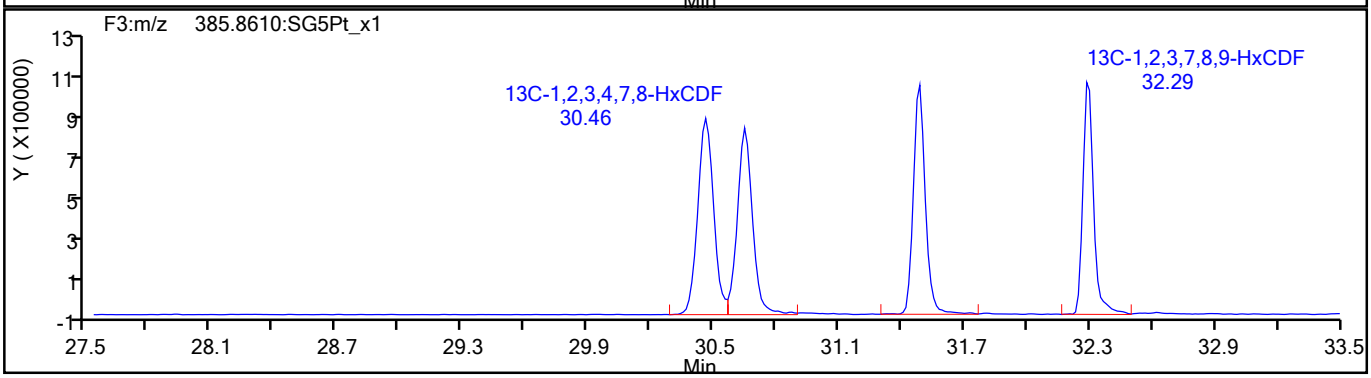

782175

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

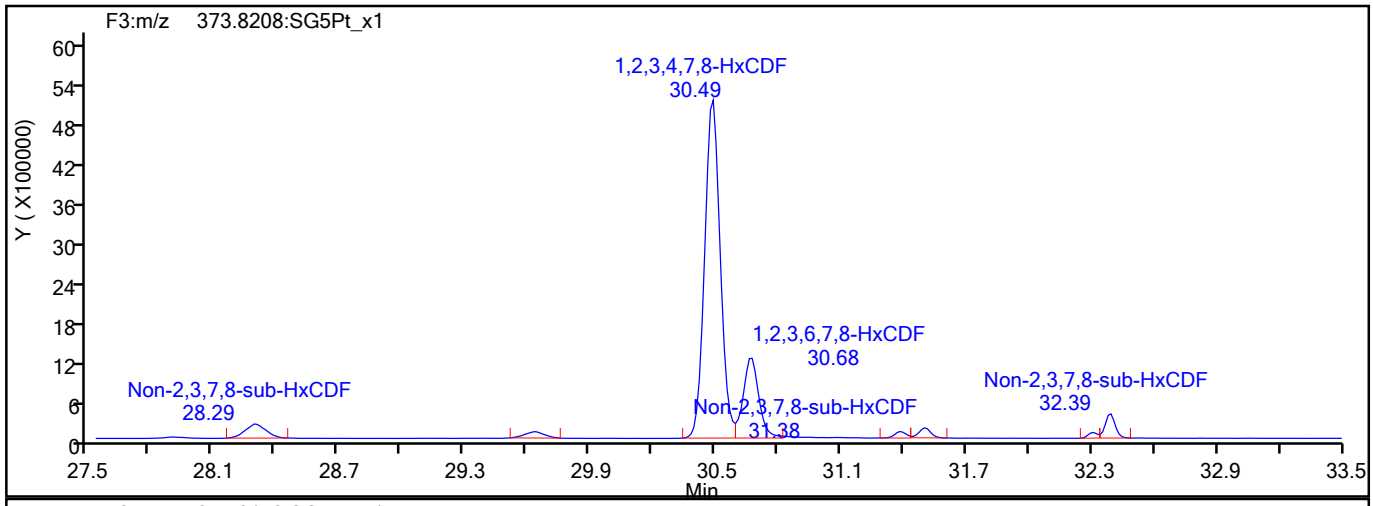

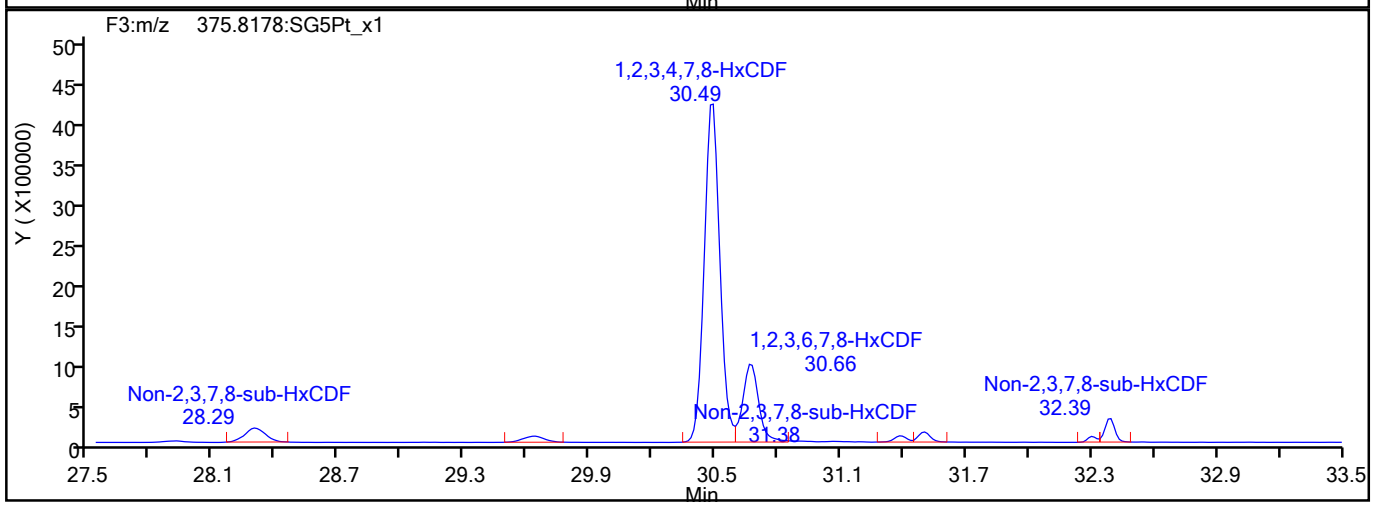

HxCDF Interference Mass

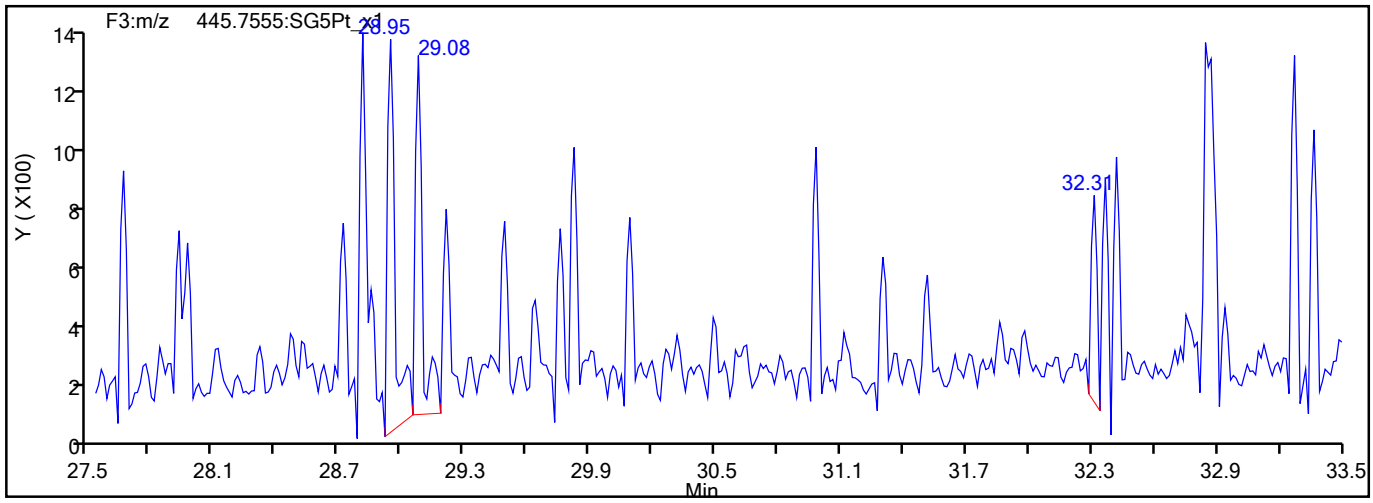

782176

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

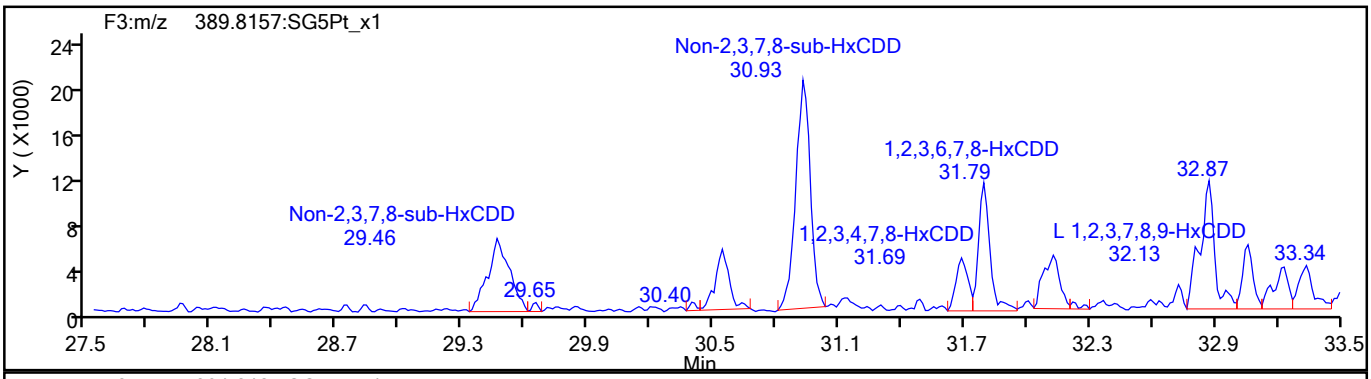

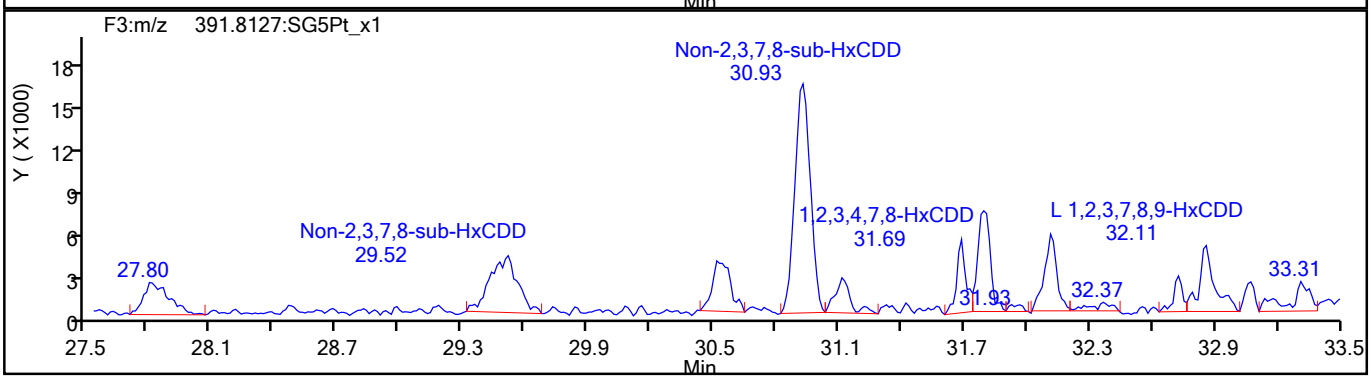

HxCDD Standards

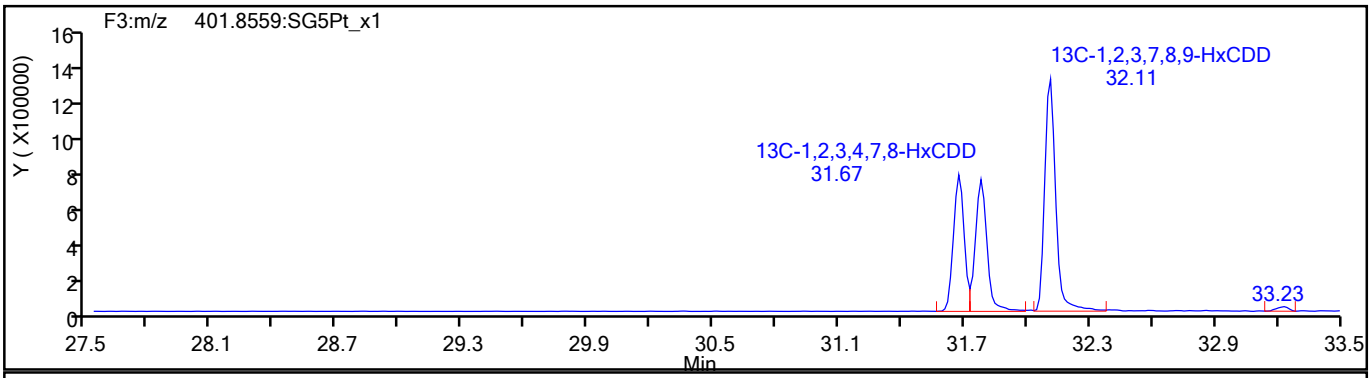

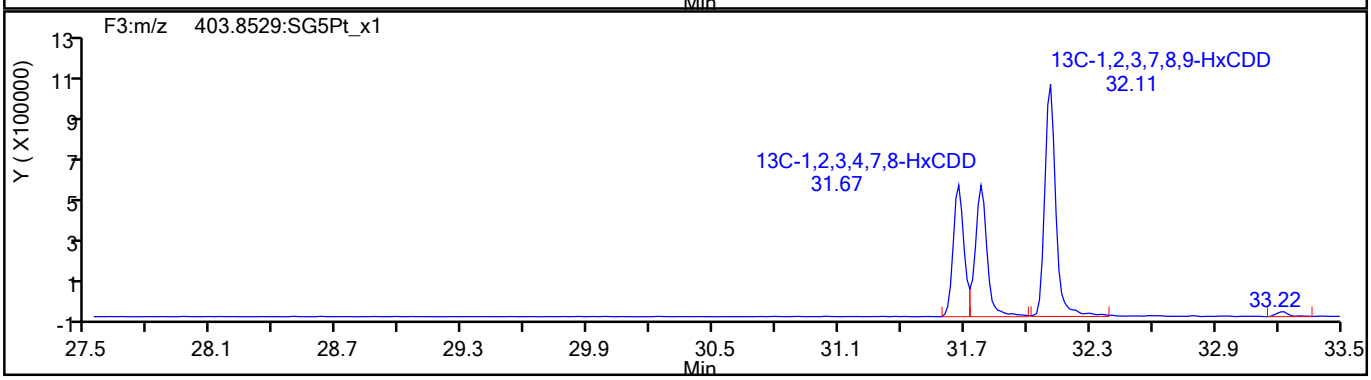

782177

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

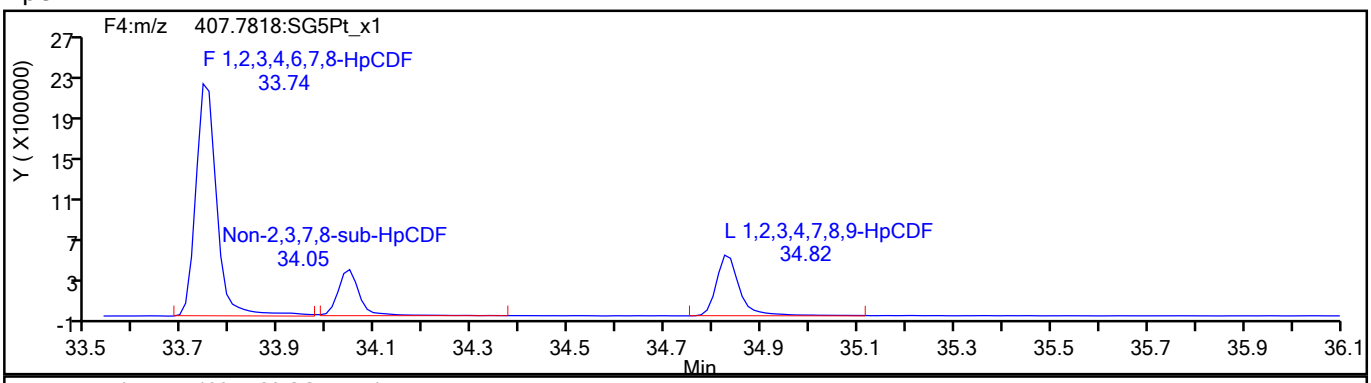

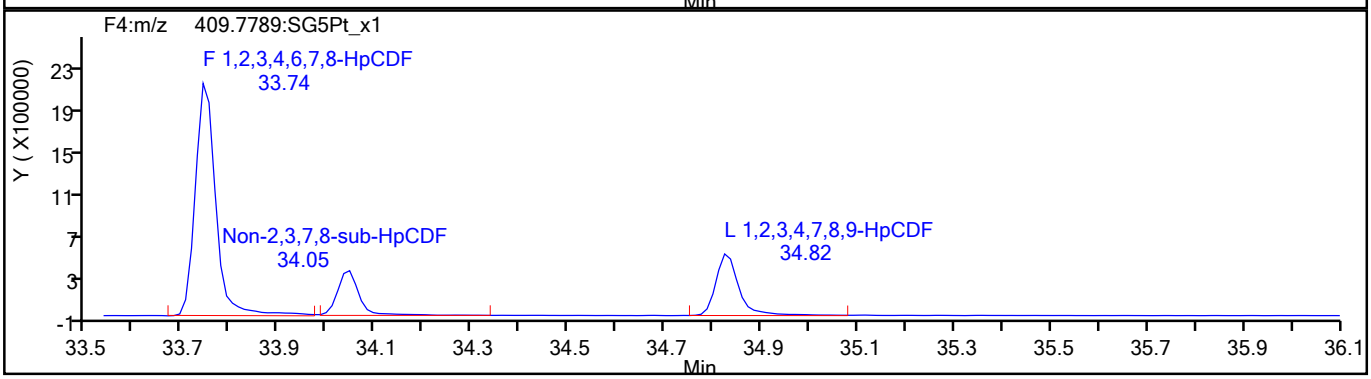

HpCDF Standards

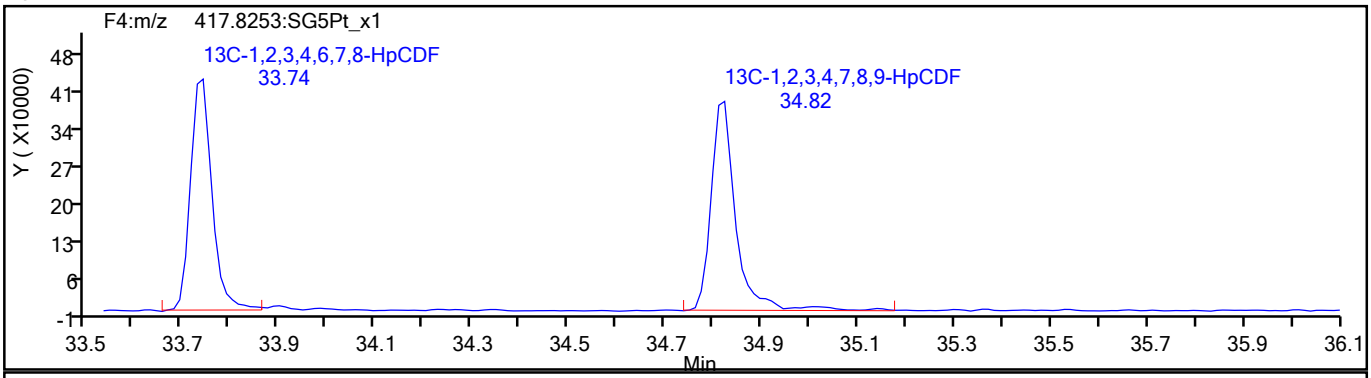

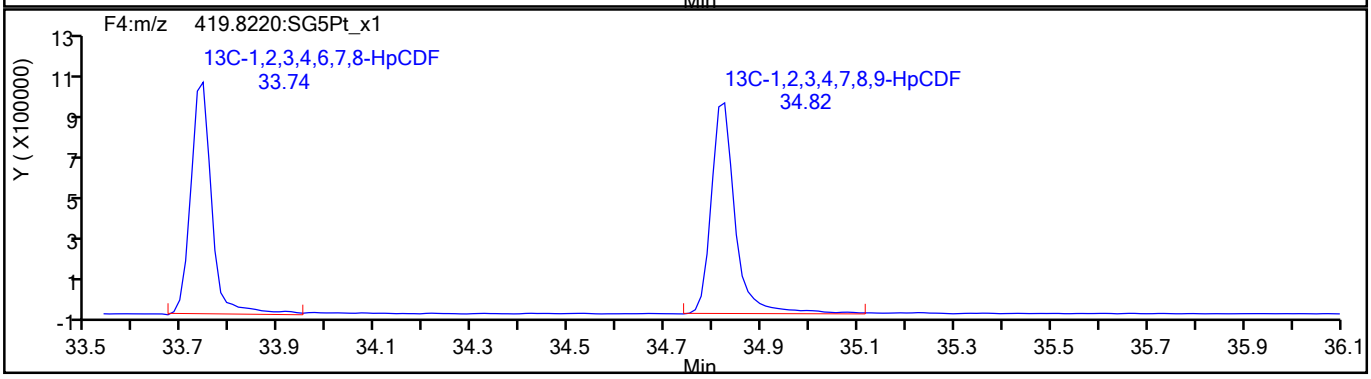

782178

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

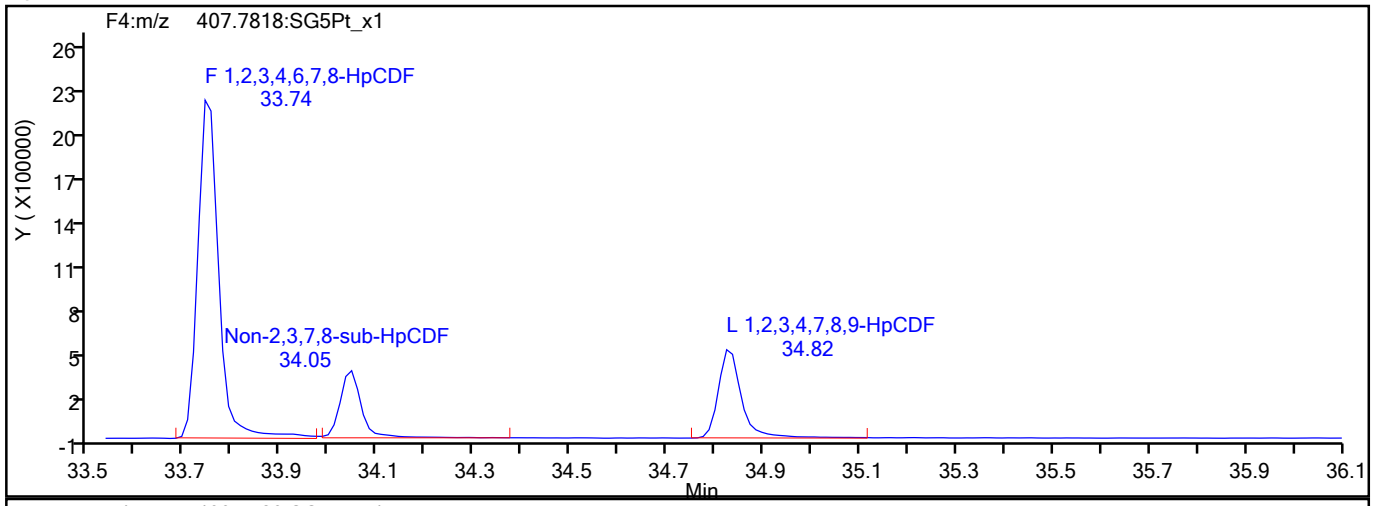

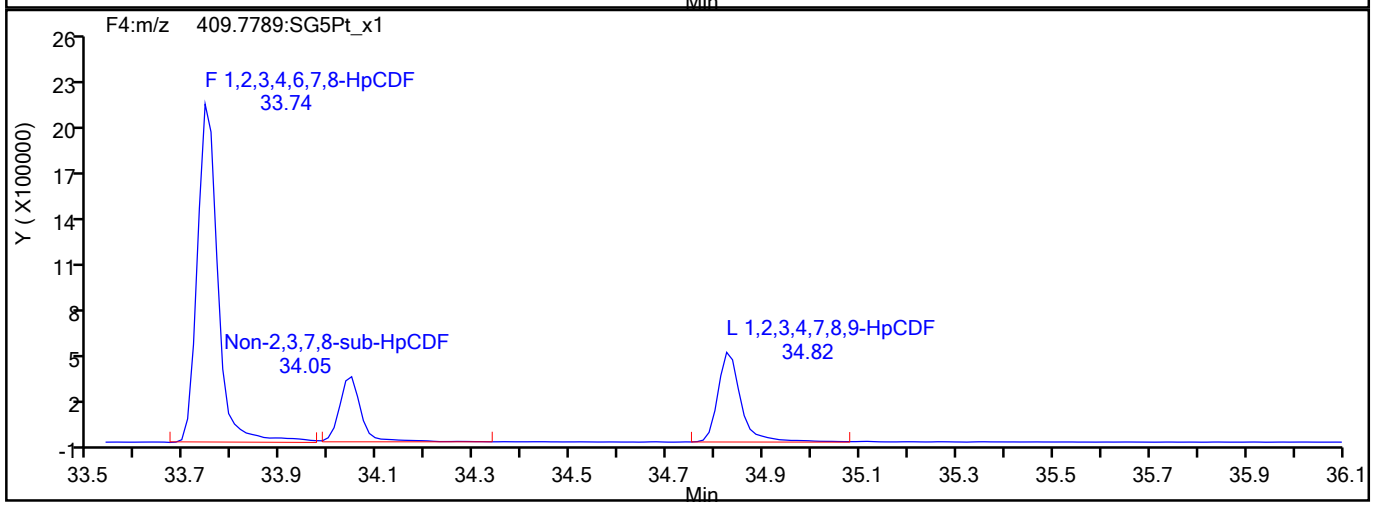

HpCDF Interference Mass

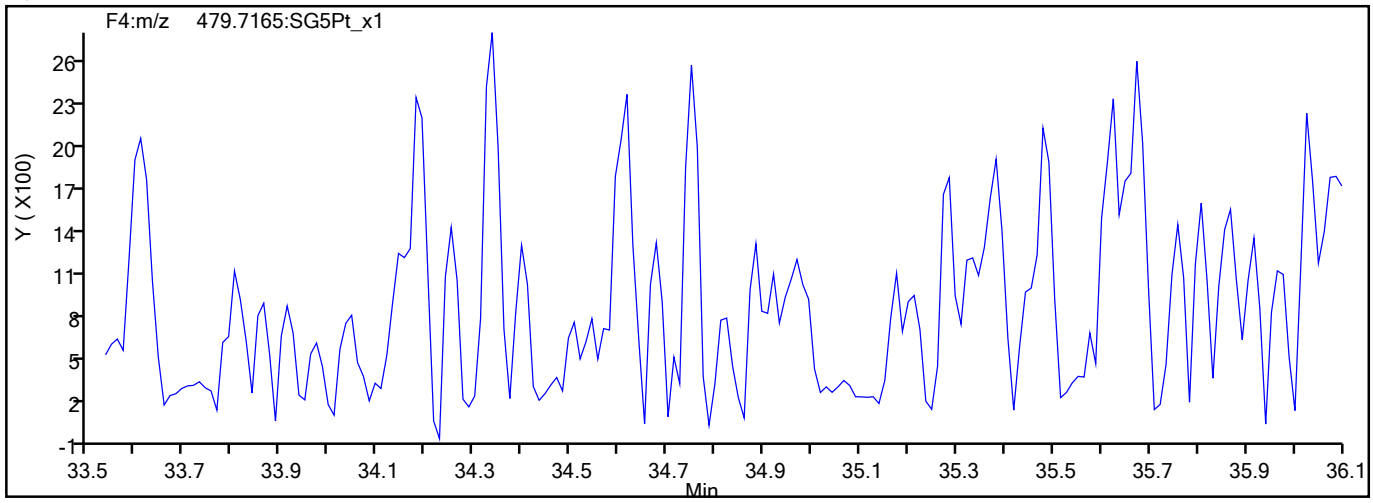

782179

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

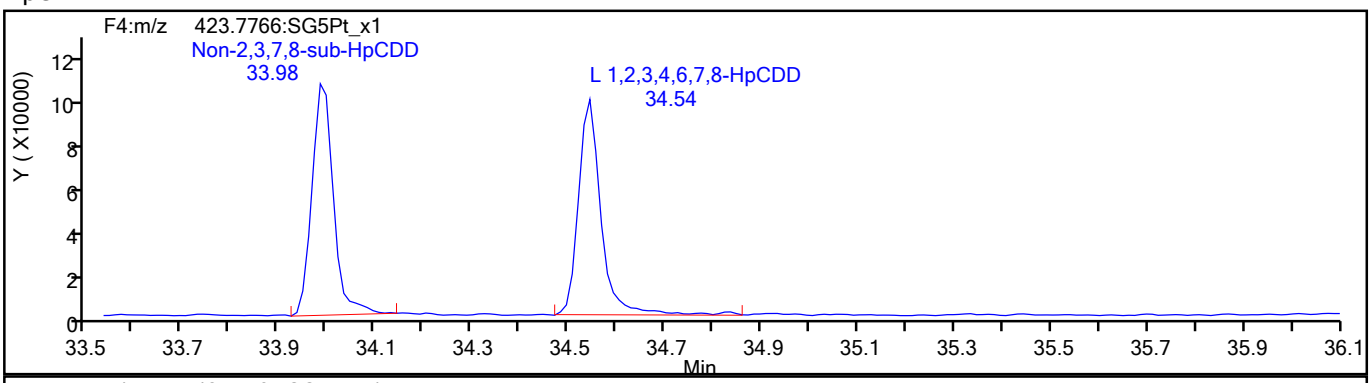

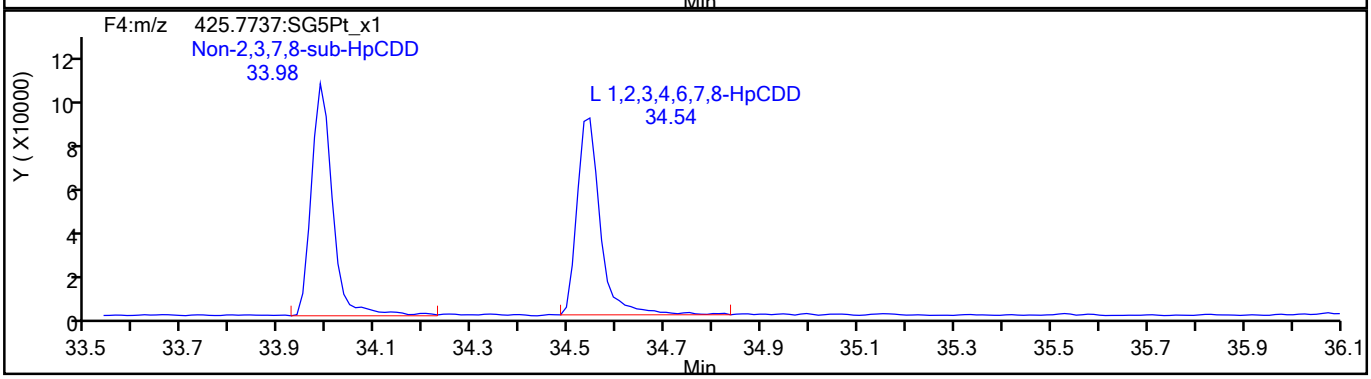

HpCDD Standards

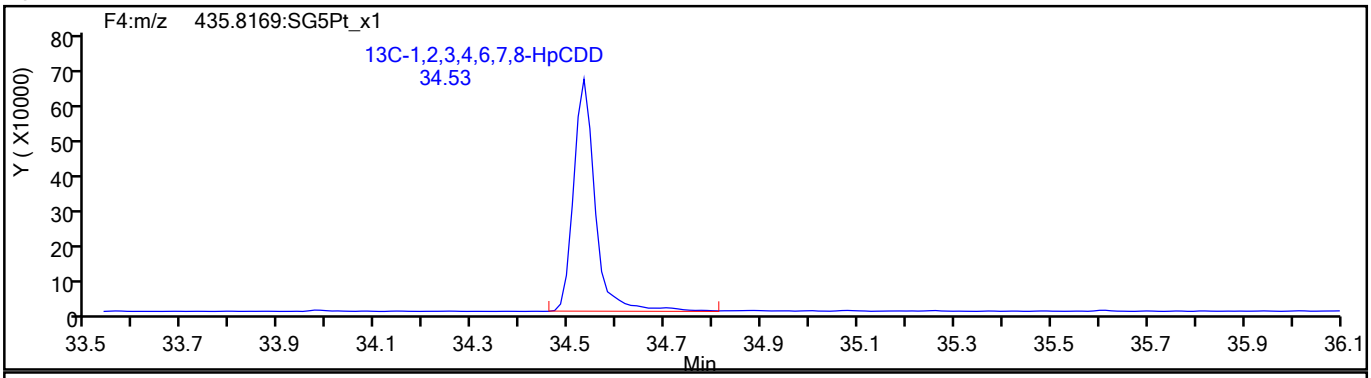

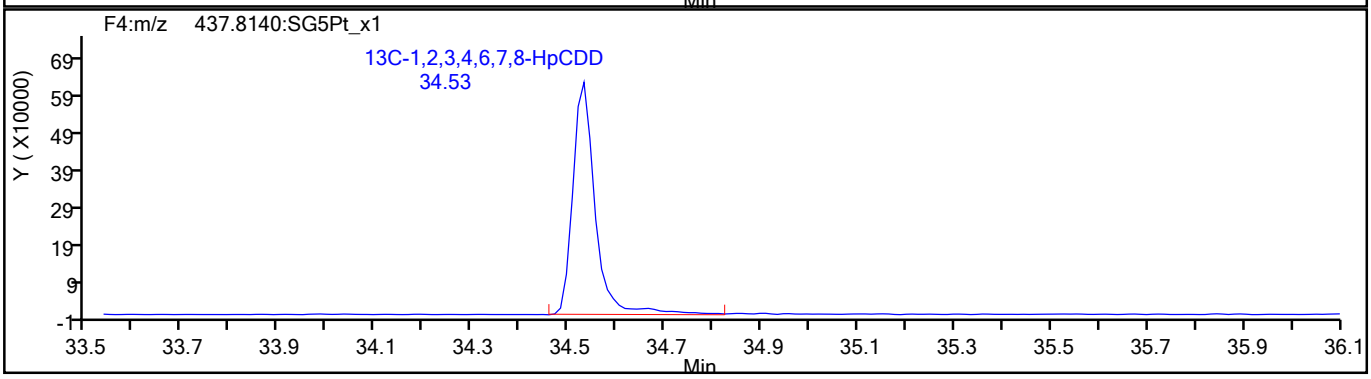

782180

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

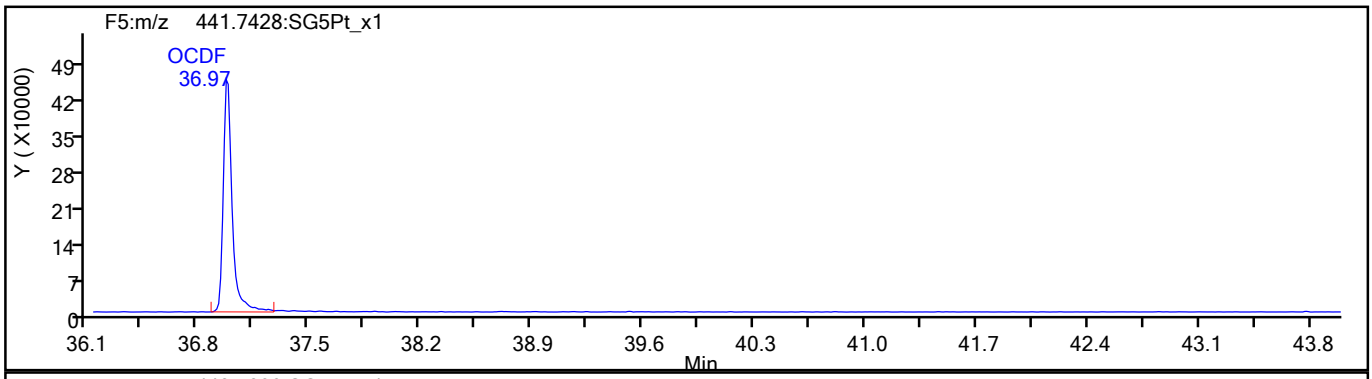

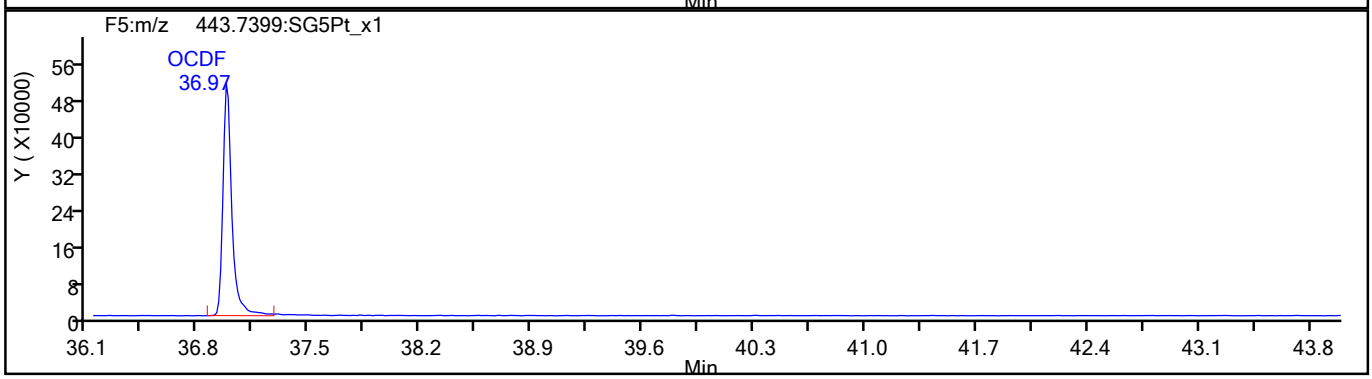

OCDF Standards

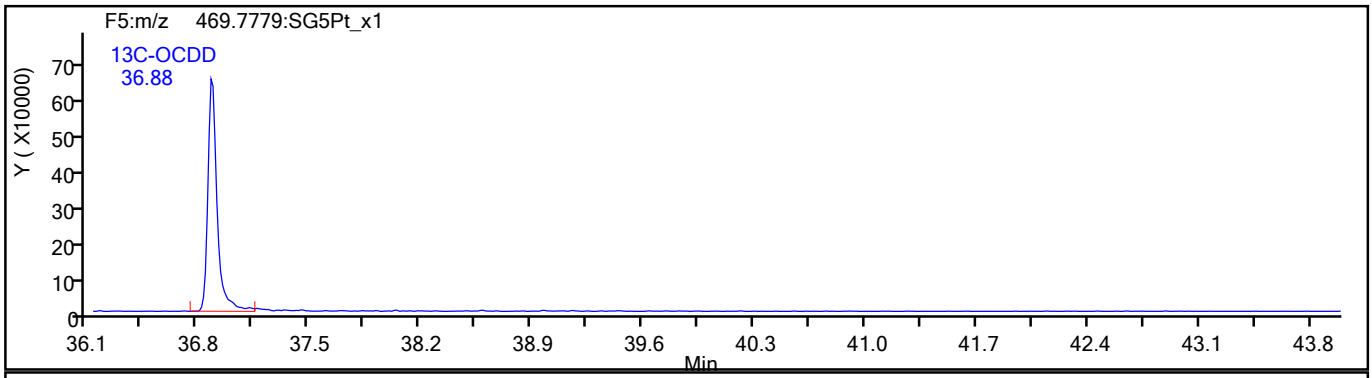

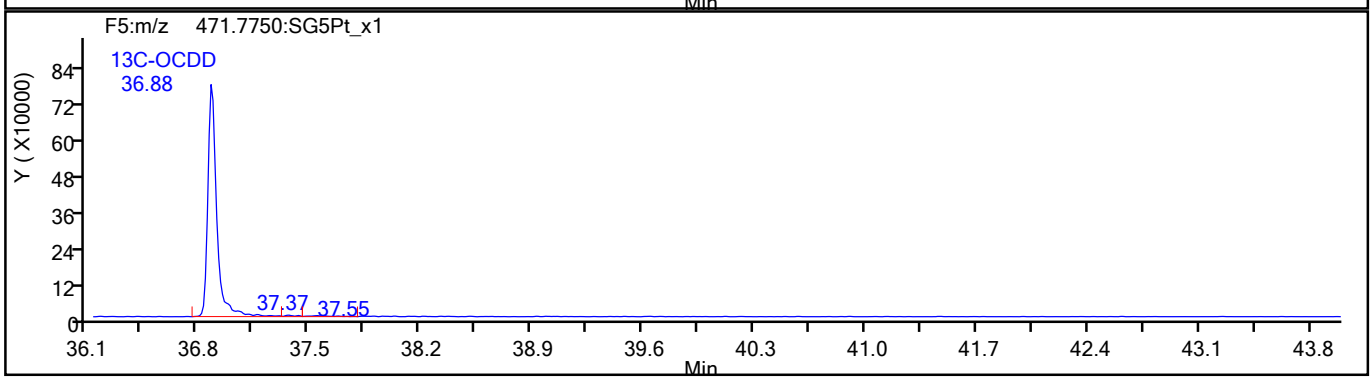

782181

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

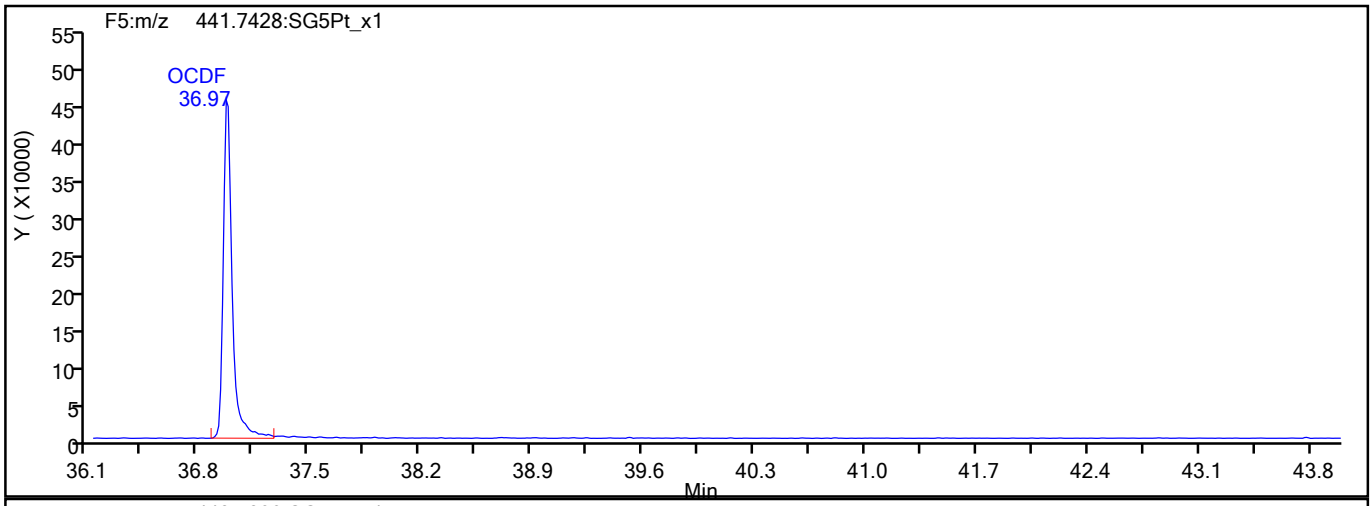

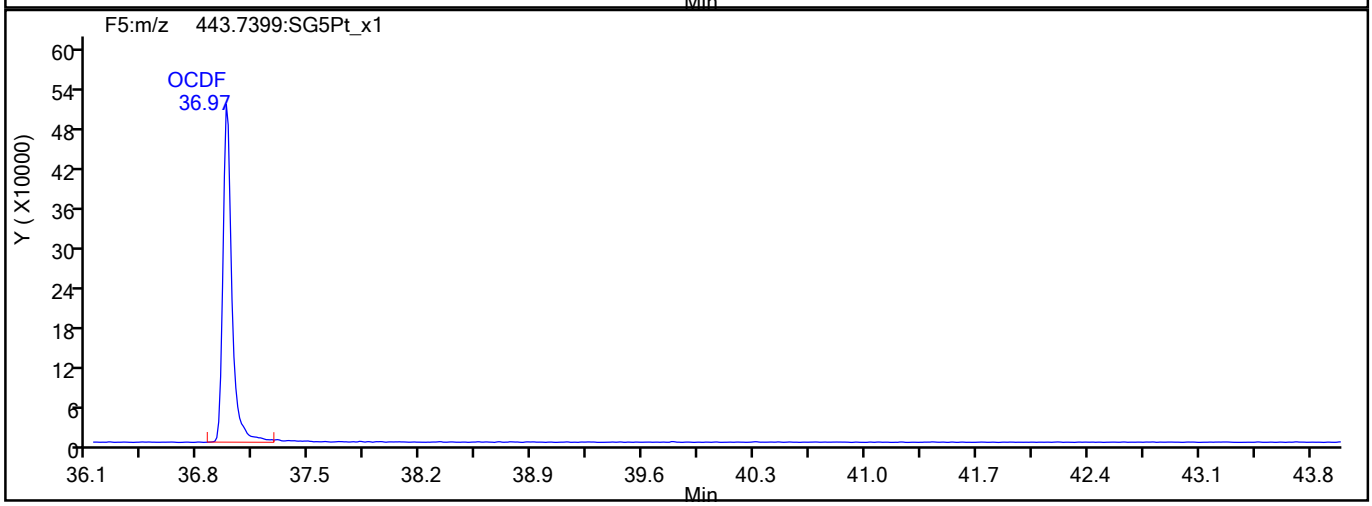

OCDF Interference Mass

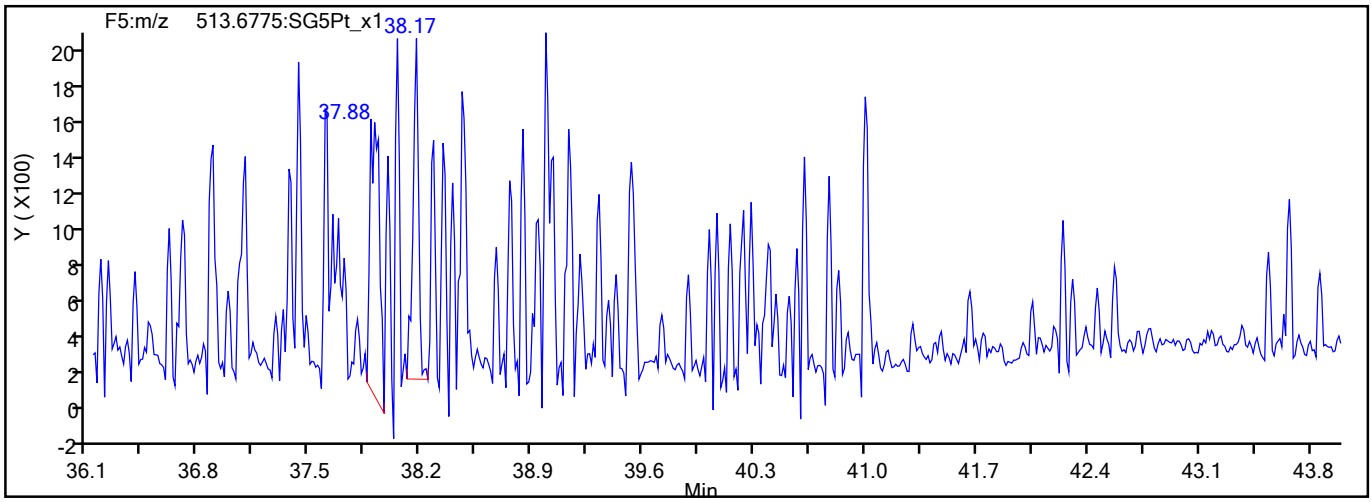

782182

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

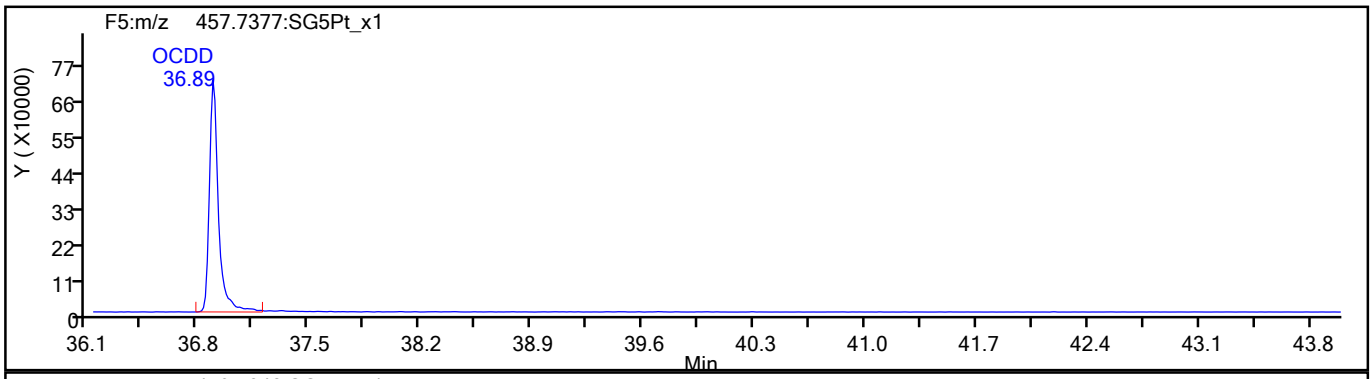

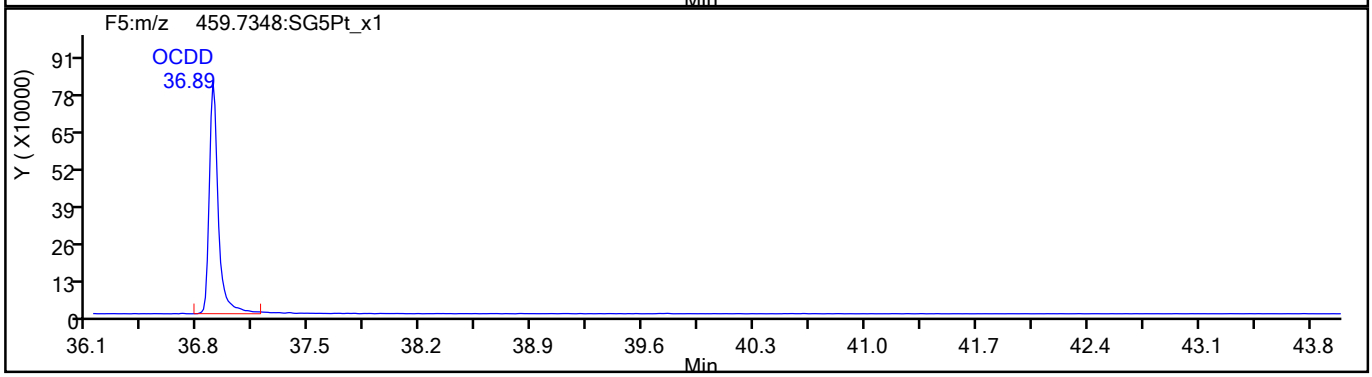

OCDD Standards

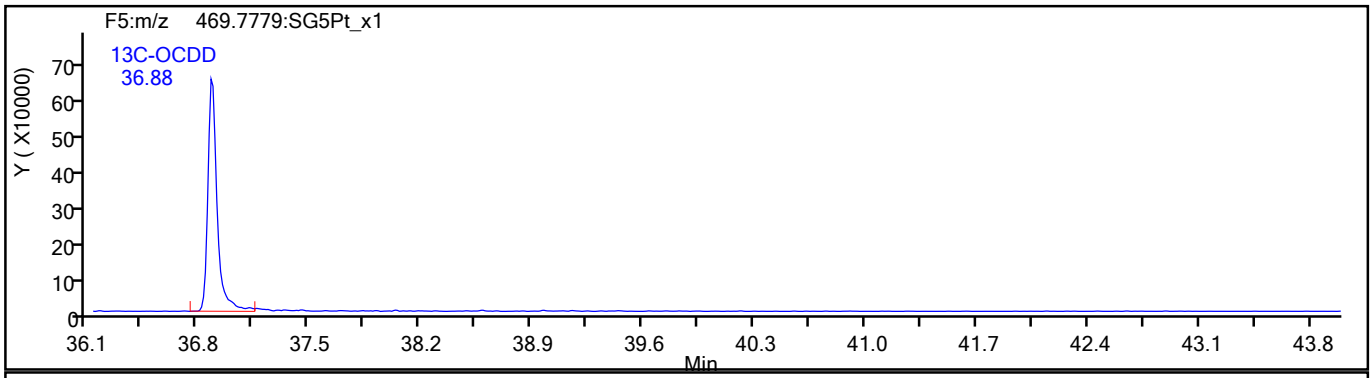

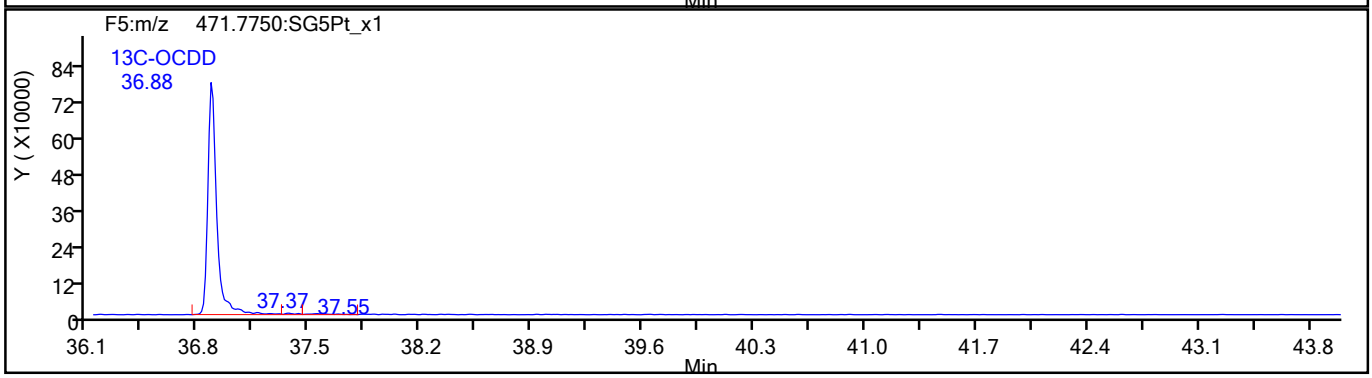

782183

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

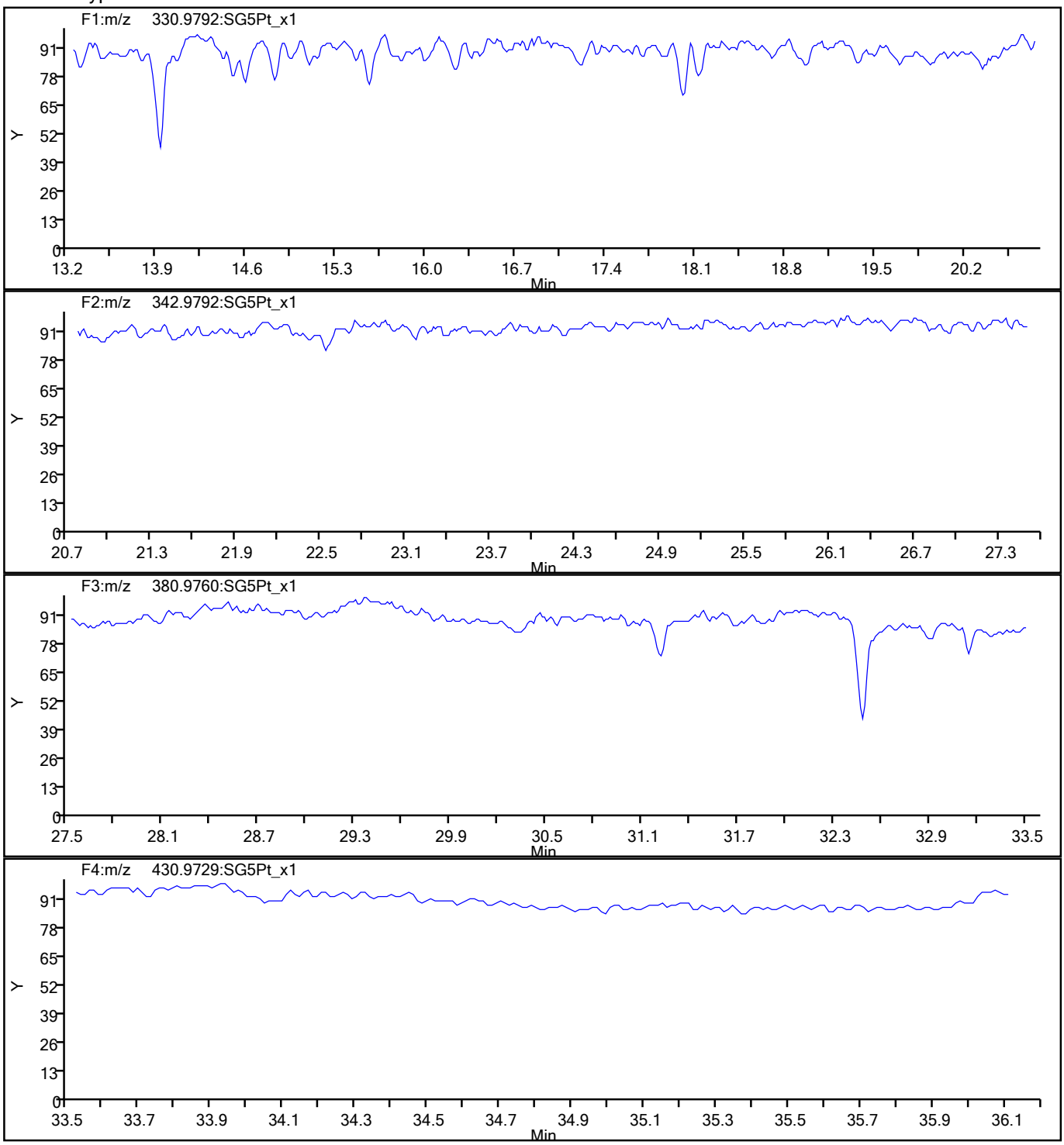

782184

Report Date: 19-Aug-2021 13:08:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_8.d		
Injection Date:	18-Aug-2021 19:34:28	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

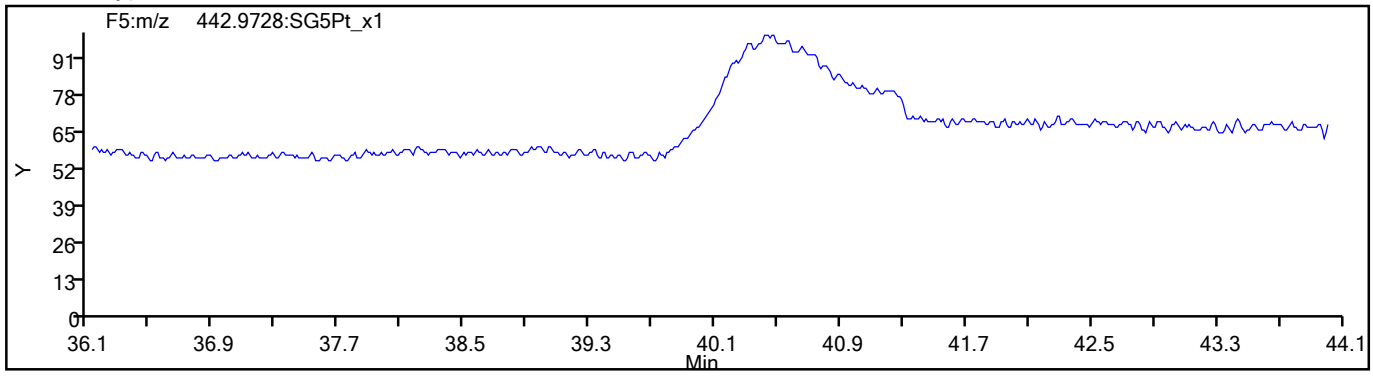

782185

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) RA
Lab Sample ID: 320-76887-2 RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_015.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.21(g)
Date Analyzed: 08/25/2021 21:55
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	61000	E G	66	66

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	36		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	48		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_015.d
Lims ID: 320-76887-A-2-A
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: Client
Inject. Date: 25-Aug-2021 21:55:18 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-A-2-A X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:22:36

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.314	6507093	0.86	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.644	3090383	0.80	1.3327	3.564	3.564	1.623	1.623	35.64	M
2,3,7,8-TCDF	17.644	598401124	0.78	0.9978	1940.6	1940.6	2.095	2.095		E
D 13C-2,3,7,8-TCDD	16.067	1945132	0.89	0.8749	3.417	3.417	8.828	8.828	34.17	nM
2,3,7,8-TCDD	16.094	98725471	0.79	1.0570	480.2	480.2	1.883	1.883		Ea
$ 37Cl4-2,3,7,8-TCDD	16.081	1072669		0.8648	1.906	1.906	0.1761	0.1761	47.65	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_015.d
Lims ID: 320-76887-A-2-A
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: Client
Inject. Date: 25-Aug-2021 21:55:18 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-A-2-A X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:22:36

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.314	16.298	1		3016257	464108	145441	363602	3		M
333.9339	16.300	16.298	0		3490836	466095	141944	354860	3	0.86(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.644	17.615	2	1.082	1373244	245868	39487	98717	6		M
317.9389	17.617	17.615	0	1.080	1717139	280850	41010	102525	7	0.80(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.644	17.628	1	1.000	262938107	47949509	22690	56725	2113		
305.8987	17.644	17.628	1	1.000	335463017	61663949	21359	53397	2887	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.067	16.065	0	0.985	918441	235117	145441	363602	2		M
333.9339	16.067	16.065	0	0.985	1026691	275671	141944	354860	2	0.89(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.094	16.078	1	1.002	43632077	9874961	25216	63040	392		a
321.8936	16.094	16.078	1	1.002	55093394	12372526	15448	38620	801	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.081	16.078	0	0.986	1072669	232030	5666	14165	41		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_015.d				
Injection Date:	25-Aug-2021 21:55:18	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-A	Lab Sample ID:	320-76887-2		
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.64
Area: 1423458
Amount: 4.541049
Amount Units: pg/ul

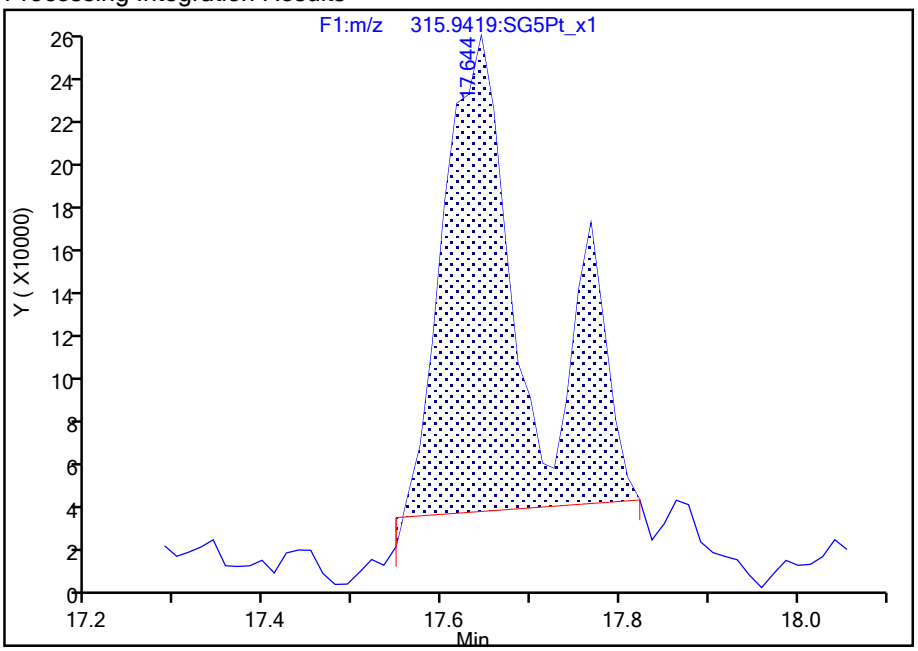

Manual Integration Results

RT: 17.64
Area: 1373244
Amount: 3.563670
Amount Units: pg/ul

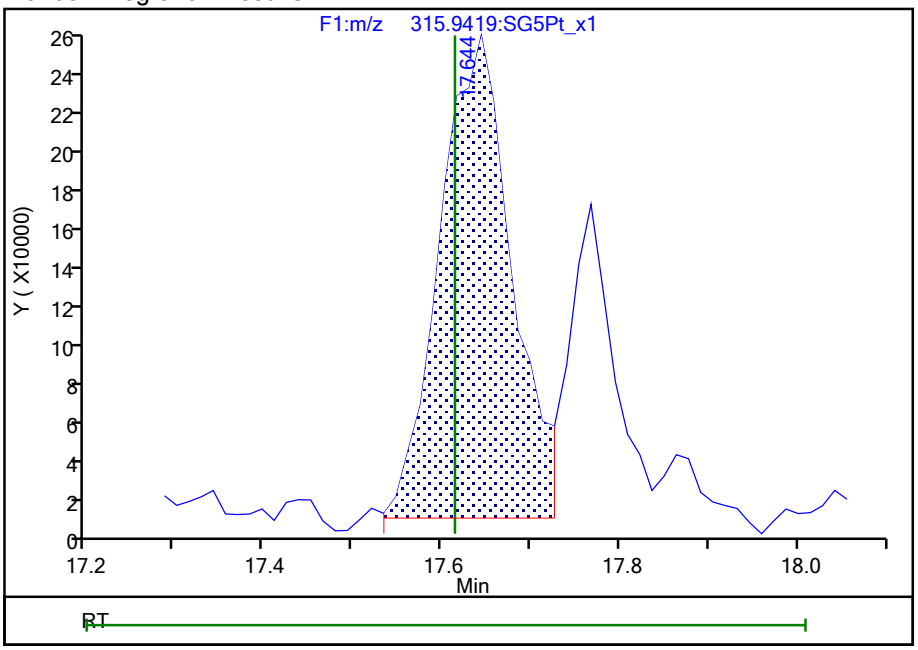

Reviewer: stephensk, 26-Aug-2021 09:21:13

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_015.d				
Injection Date:	25-Aug-2021 21:55:18	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-A	Lab Sample ID:	320-76887-2		
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.62
Area: 2514500
Amount: 4.541049
Amount Units: pg/ul

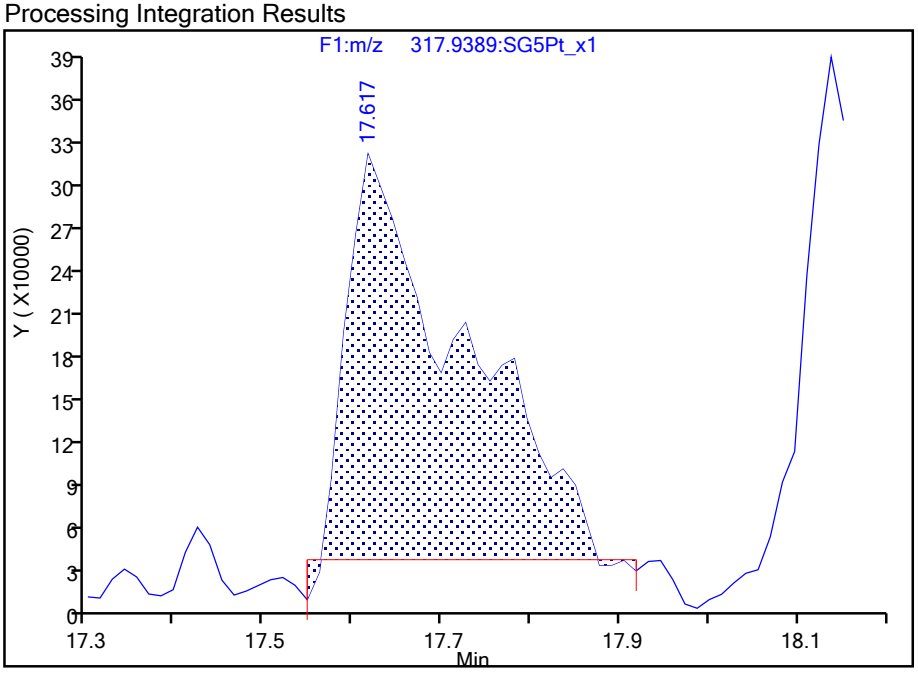

Manual Integration Results

RT: 17.62
Area: 1717139
Amount: 3.563670
Amount Units: pg/ul

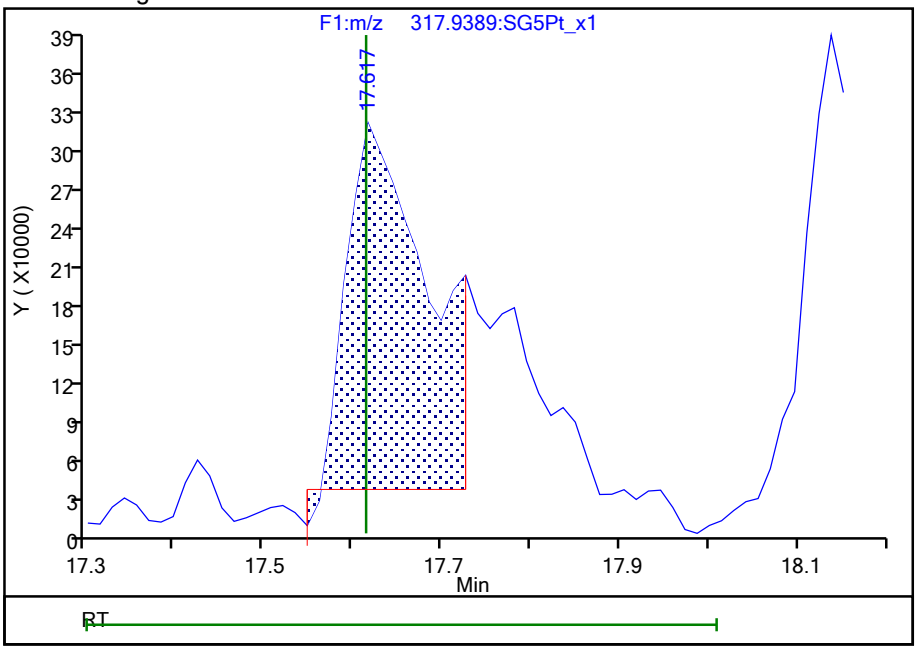

Reviewer: stephensk, 26-Aug-2021 09:21:16

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_015.d				
Injection Date:	25-Aug-2021 21:55:18	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-A	Lab Sample ID:	320-76887-2		
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

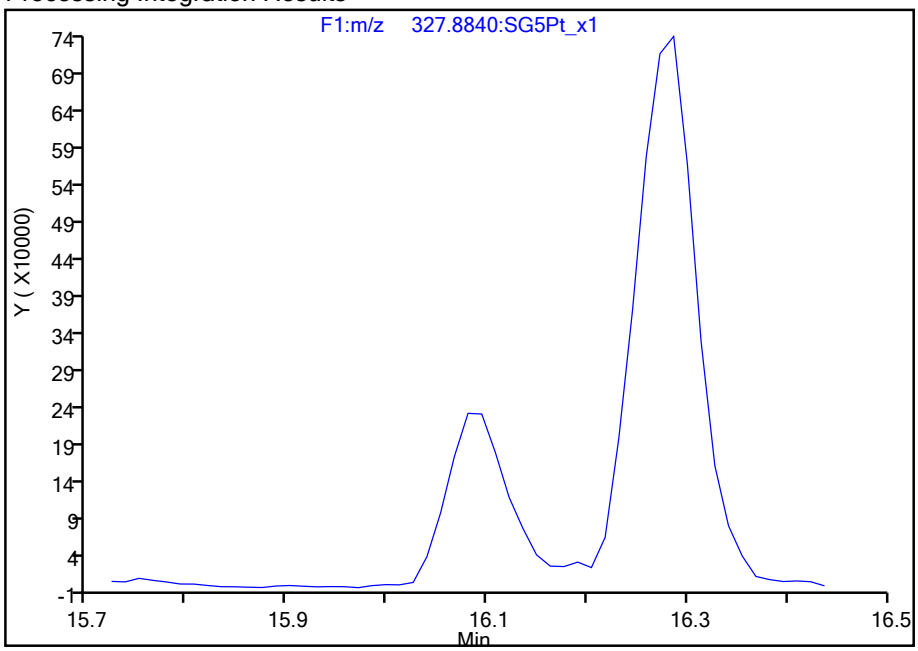

Manual Integration Results

RT: 16.08
Area: 1072669
Amount: 1.906141
Amount Units: pg/ul

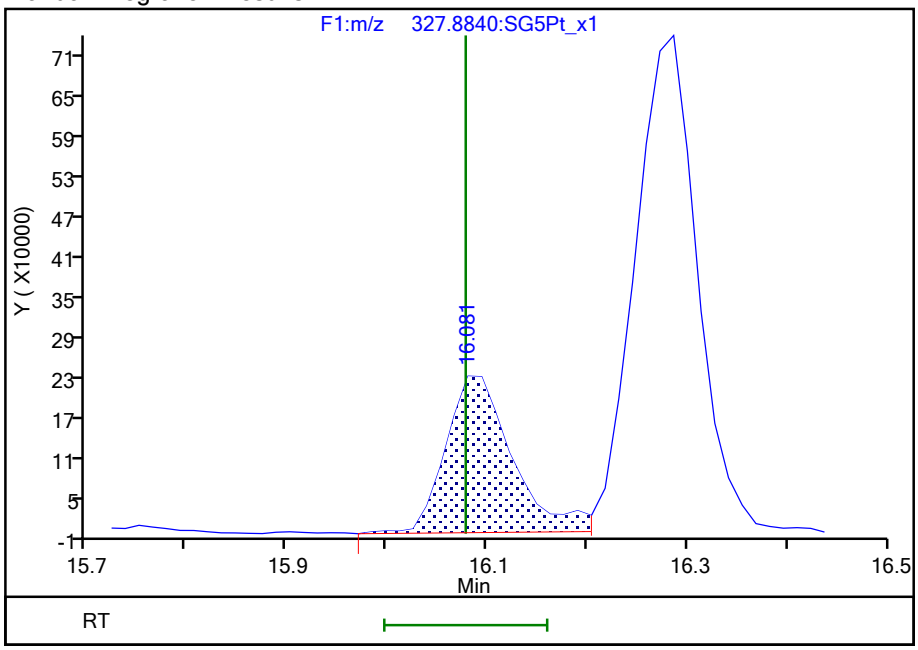

Reviewer: stephensk, 26-Aug-2021 09:22:25
Audit Action: Assigned Compound ID Audit Reason: Retention Time Shift

Report Date: 26-Aug-2021 09:30:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_015.d		
Injection Date:	25-Aug-2021 21:55:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

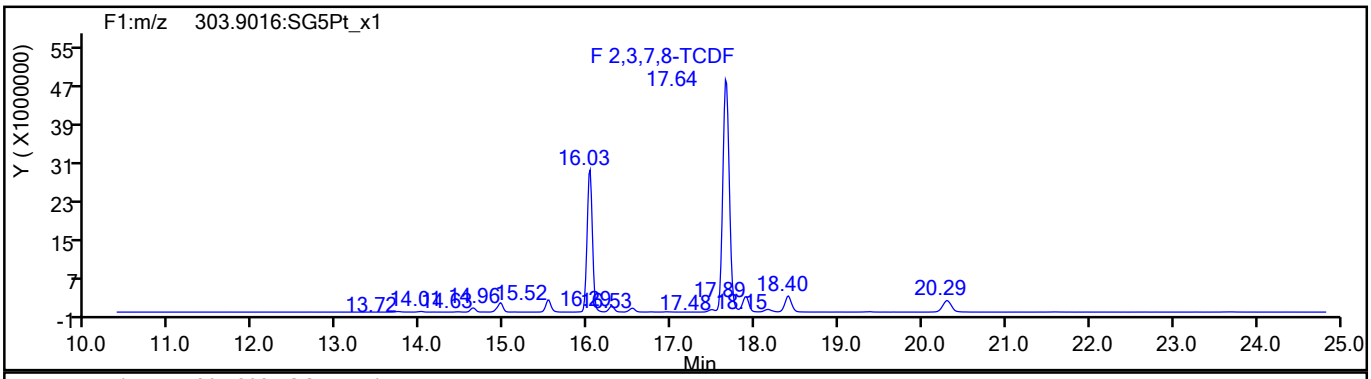

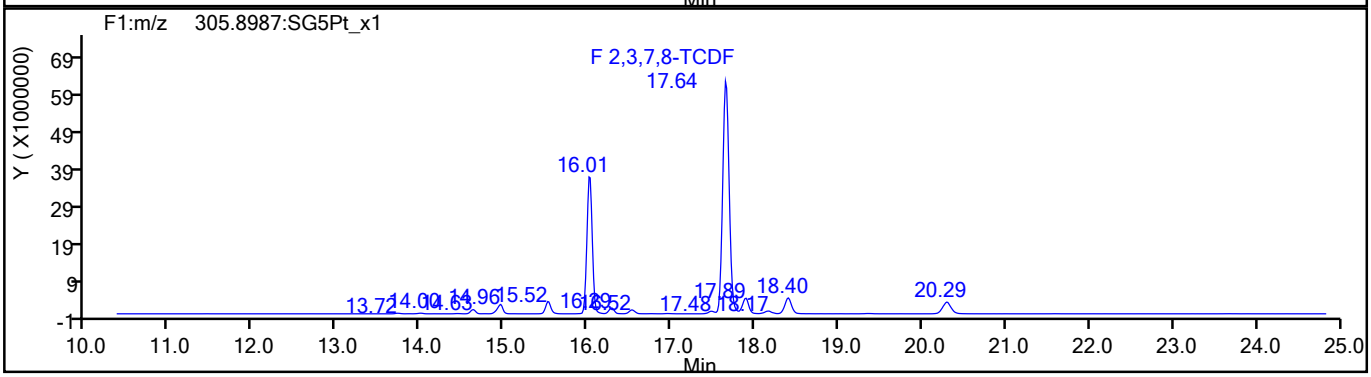

TCDF Standards

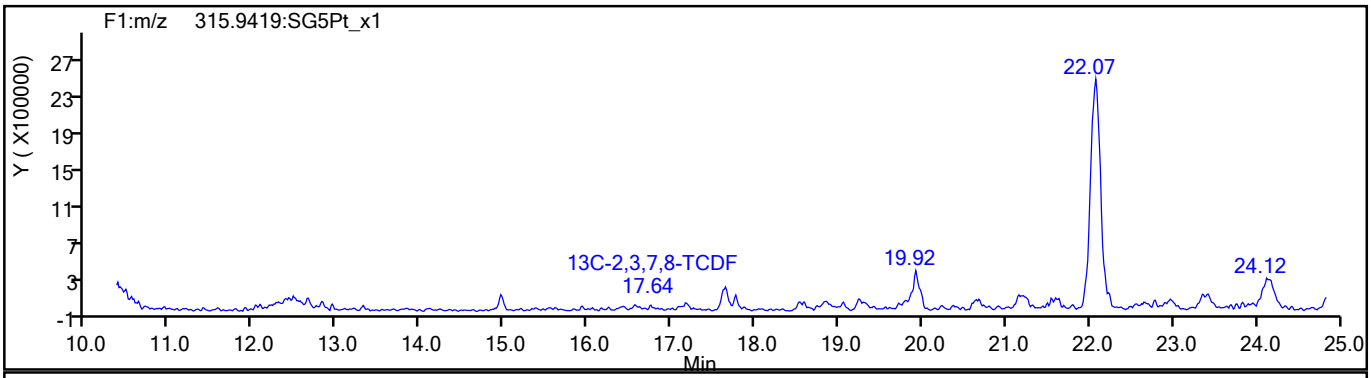

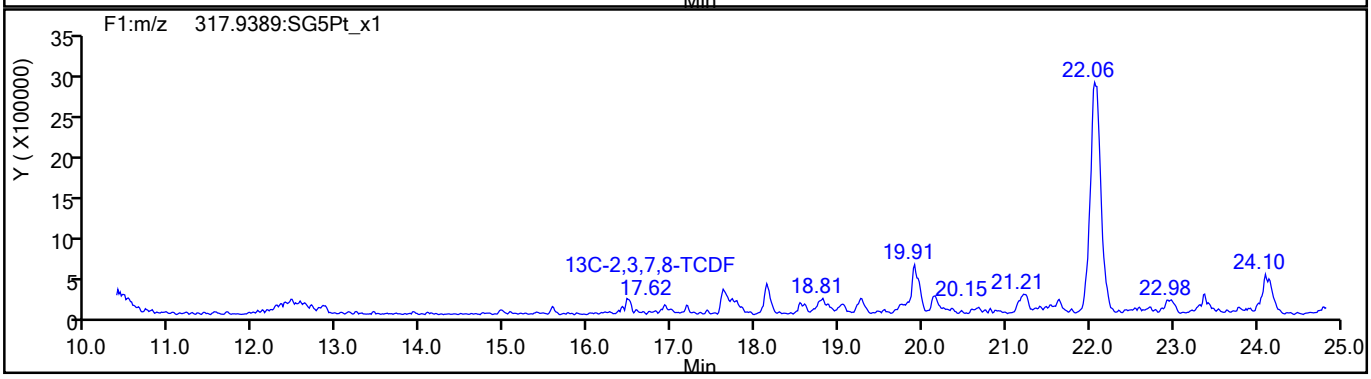

782192

Report Date: 26-Aug-2021 09:30:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_015.d		
Injection Date:	25-Aug-2021 21:55:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

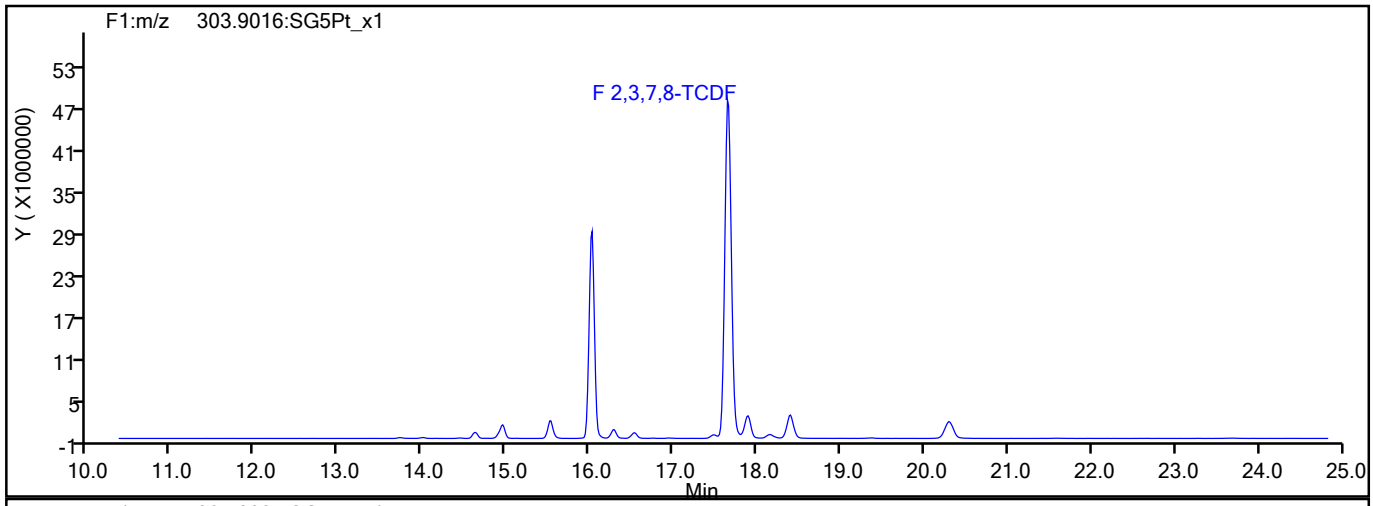

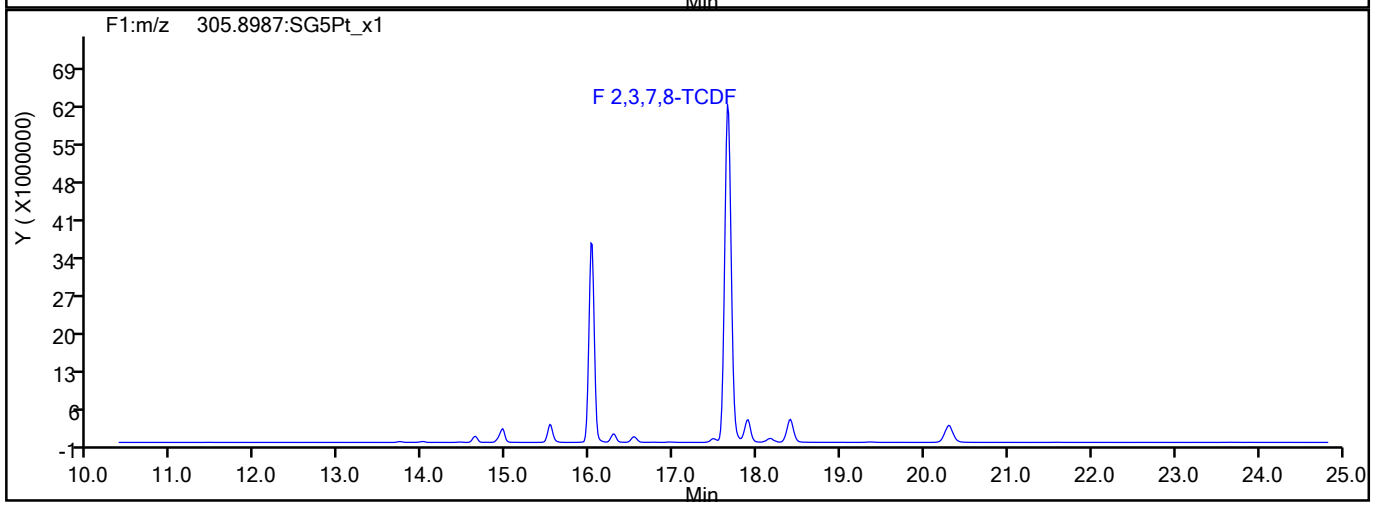

TCDF Interference Mass

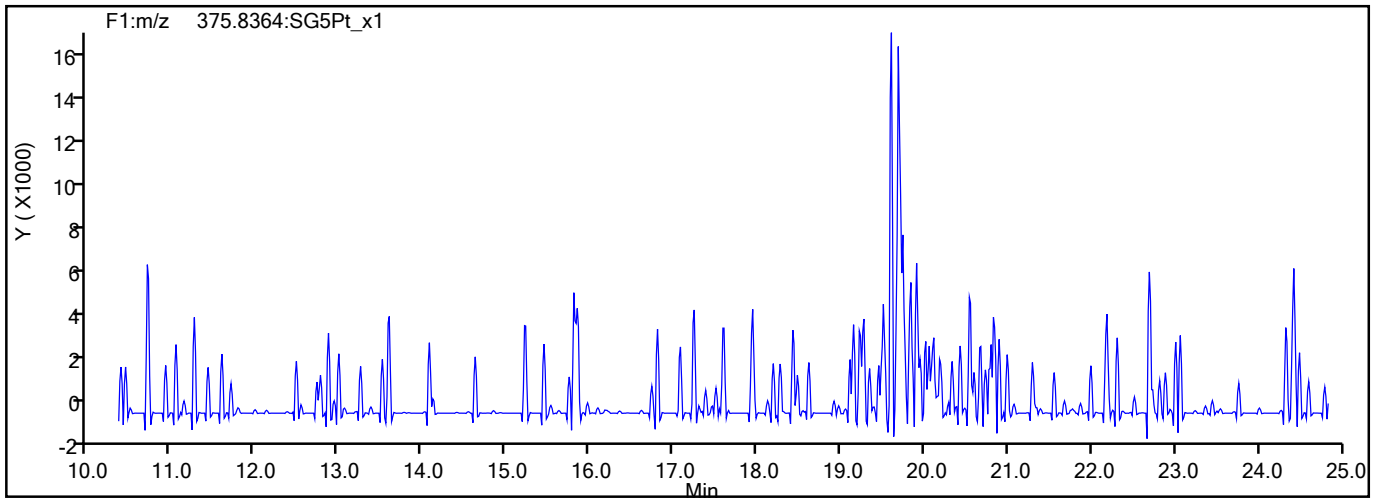

782193

Report Date: 26-Aug-2021 09:30:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_015.d		
Injection Date:	25-Aug-2021 21:55:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

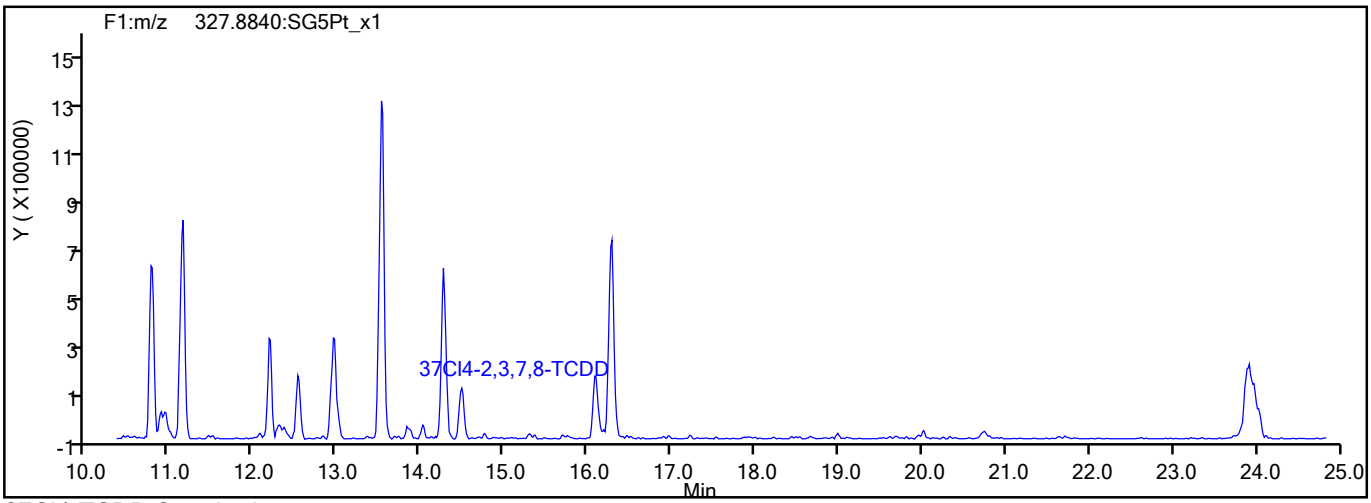

37Cl4-TCDD Standards

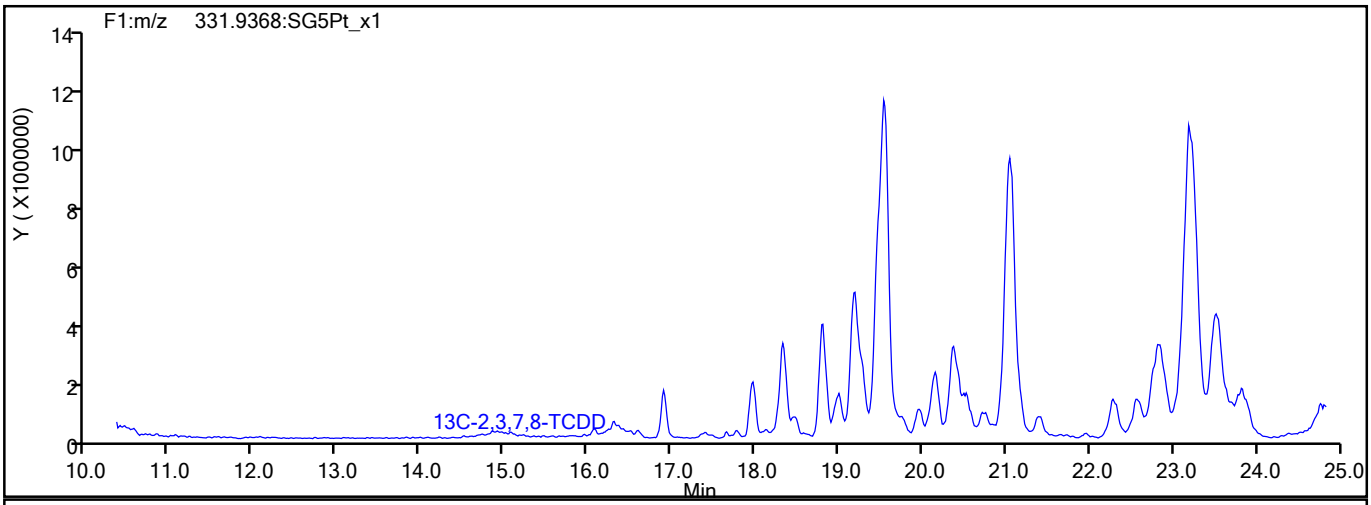

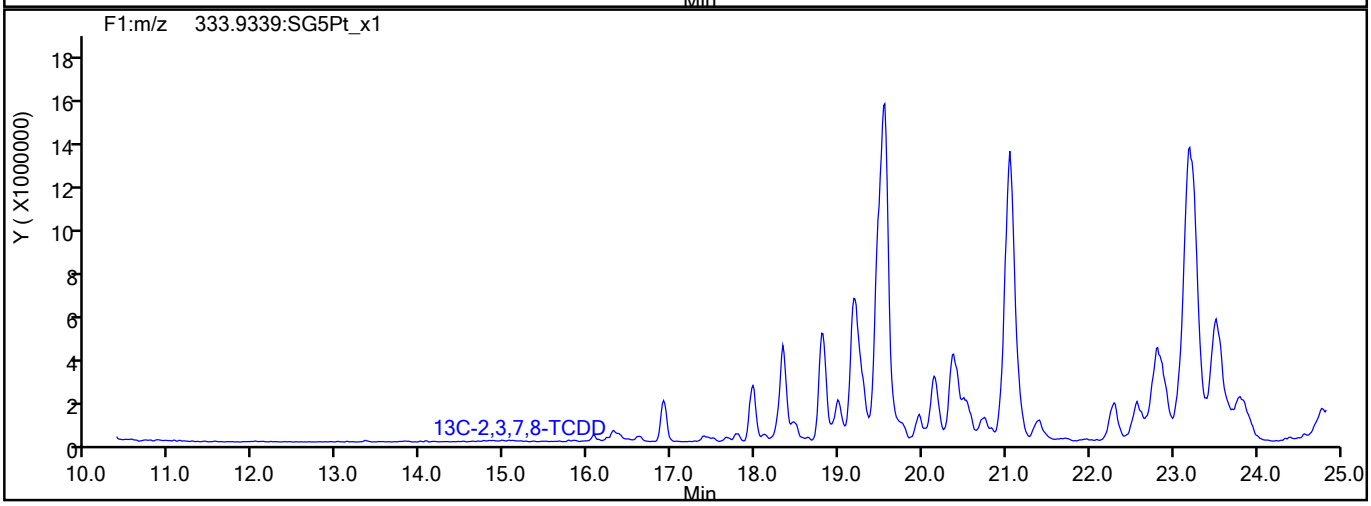

782194

Report Date: 26-Aug-2021 09:30:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_015.d		
Injection Date:	25-Aug-2021 21:55:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

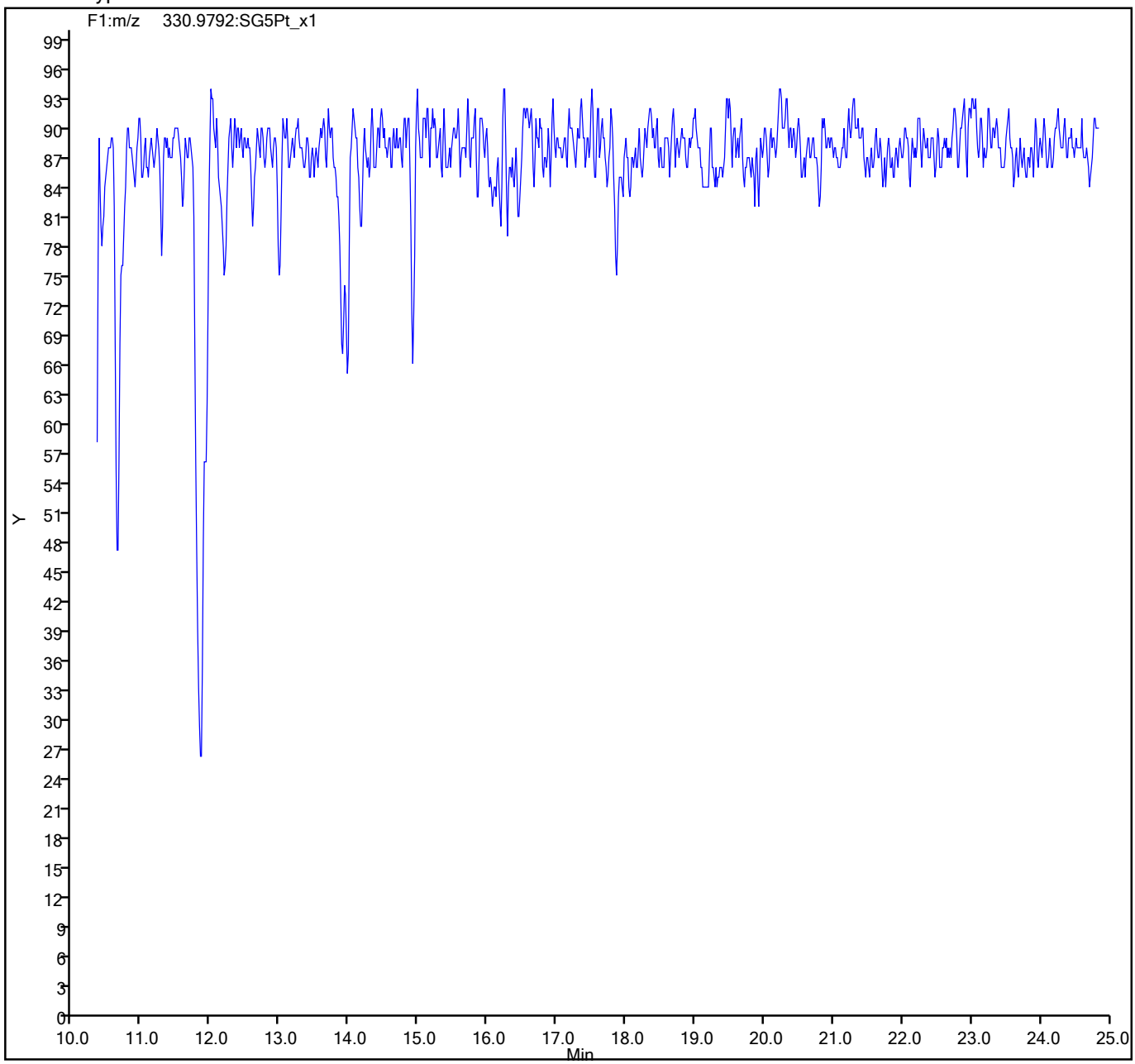

782195

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (4-6)
Lab Sample ID: 320-76887-3
Matrix: Sediment
Lab File ID: 17au21dfs1_25.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:55
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.55(g)
Date Analyzed: 08/18/2021 08:30
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517281
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	210		1.4	0.59
40321-76-4	1,2,3,7,8-PeCDD	2.6	J	6.8	0.17
57117-41-6	1,2,3,7,8-PeCDF	18		6.8	0.28
57117-31-4	2,3,4,7,8-PeCDF	13		6.8	0.29
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.8	0.26
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.8	0.27
19408-74-3	1,2,3,7,8,9-HxCDD	2.1	J	6.8	0.25
70648-26-9	1,2,3,4,7,8-HxCDF	25		6.8	0.27
57117-44-9	1,2,3,6,7,8-HxCDF	6.4	J	6.8	0.28
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.8	0.26
60851-34-5	2,3,4,6,7,8-HxCDF	0.73	J q	6.8	0.26
35822-46-9	1,2,3,4,6,7,8-HpCDD	36	B	6.8	0.31
67562-39-4	1,2,3,4,6,7,8-HpCDF	7.6		6.8	0.19
55673-89-7	1,2,3,4,7,8,9-HpCDF	2.6	J	6.8	0.17
3268-87-9	OCDD	950	B	14	0.92
39001-02-0	OCDF	3.8	J	14	0.22
41903-57-5	Total TCDD	230	q	1.4	0.59
30402-14-3	Total TCDF	1500	q G	2.0	2.0
36088-22-9	Total PeCDD	5.7	J q	6.8	0.17
30402-15-4	Total PeCDF	48	q	6.8	0.29
34465-46-8	Total HxCDD	25		6.8	0.26
55684-94-1	Total HxCDF	32	q	6.8	0.27
37871-00-4	Total HpCDD	120	B	6.8	0.31
38998-75-3	Total HpCDF	12		6.8	0.18

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (4-6)
Lab Sample ID: 320-76887-3
Matrix: Sediment
Lab File ID: 17au21dfs1_25.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:55
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.55(g)
Date Analyzed: 08/18/2021 08:30
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517281
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	60		25-164
89059-46-1	13C-2,3,7,8-TCDF	59		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	61		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	59		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	65		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	67		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	61		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	72		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	63		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	60		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	60		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	73		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	68		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	81		26-138
114423-97-1	13C-OCDD	76		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	69		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d
Lims ID: 320-76887-A-3-A
Client ID: 11215702-072721-BN-SJSB096 (4-6)
Sample Type: Client
Inject. Date: 18-Aug-2021 08:30:00 ALS Bottle#: 0 Worklist Smp#: 23
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-3-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:00:07 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 18-Aug-2021 14:15:24

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.426	1069132	0.80	2.1E+04	100.0	100.0				a
2,3,7,8-TCDF	20.498	2941050	0.80	1.0802	323.3	323.3	0.7442	0.7442		E
D 13C-2,3,7,8-TCDF	20.472	842064	0.82	1.3459	58.5	58.5	0.3972	0.3972	58.52	
A Non-2,3,7,8-sub-TCDF	19.916	2153415	0.77	1.0802	237.7	236.7	0.7442	146.2		RQMa
S Total TCDF					561.1	560.1	0.7442	0.7442		RQ
D 13C-2,3,7,8-TCDD	21.830	593646	0.83	0.9317	59.6	59.6	1.244	1.244	59.60	
2,3,7,8-TCDD	21.856	499093	0.80	1.0753	78.2	78.2	0.2185	0.2185		
$ 37Cl4-2,3,7,8-TCDD	21.865	299096		1.0083	27.7	27.7	0.0487	0.0487	69.36	
A Non-2,3,7,8-sub-TCDD	20.750	46462	0.77	1.0753	7.499	7.278	0.2185	6.346		RQ
S Total TCDD					85.7	85.5	0.2185	0.2185		RQ
D 13C-1,2,3,7,8-PeCDF	27.303	724013	1.64	1.1405	59.4	59.4	0.1735	0.1735	59.38	
1,2,3,7,8-PeCDF	27.328	50319	1.55	1.0543	6.592	6.592	0.1045	0.1045		
D 13C-2,3,4,7,8-PeCDF	28.810	776431	1.60	1.1253	64.5	64.5	0.1758	0.1758	64.53	
2,3,4,7,8-PeCDF	28.844	38617	1.47	1.0079	4.935	4.935	0.1069	0.1069		
A F1 PeCDFs	24.676						0.0194	0.0224		RQU
A Non-2,3,7,8-sub-PeCDF	28.167	48939	1.55	1.0311	6.388	6.327	0.1057	2.698		RQa
S Total PeCDF					17.9	17.9	0.1057	0.1057		RQ
D 13C-1,2,3,7,8-PeCDD	29.618	463931	1.67	0.7165	60.6	60.6	0.2419	0.2419	60.57	
1,2,3,7,8-PeCDD	29.652	4594	1.50	1.0465	0.9462	0.9462	0.0623	0.0623		
A Non-2,3,7,8-sub-PeCDD	28.556	5686	1.55	1.0465	1.509	1.171	0.0623	0.5722		RQ
S Total PeCDD					2.456	2.117	0.0623	0.0623		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.958	722378	0.50	0.9648	72.3	72.3	0.2082	0.2082	72.27	
1,2,3,4,7,8-HxCDF	34.975	77132	1.29	1.1474	9.306	9.306	0.1009	0.1009		
D 13C-1,2,3,6,7,8-HxCDF	35.110	701559	0.54	1.0708	63.2	63.2	0.1876	0.1876	63.24	
1,2,3,6,7,8-HxCDF	35.118	20290	1.24	1.2178	2.375	2.375	0.1040	0.1040		
D 13C-2,3,4,6,7,8-HxCDF	35.935	645823	0.53	1.0413	59.9	59.9	0.1929	0.1929	59.87	
2,3,4,6,7,8-HxCDF	35.943	2110	1.24	1.2145	0.4040	0.2690	0.0960	0.0960		RQ
D 13C-1,2,3,7,8,9-HxCDF	36.827	600383	0.54	0.9731	59.6	59.6	0.2064	0.2064	59.56	
1,2,3,7,8,9-HxCDF	36.945						0.0959	0.0959		U
A Non-2,3,7,8-sub-HxCDF	35.074						0.0990	0.0990		U
S Total HxCDF					12.1	11.9	0.0992	0.0992		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.625	1035941	1.29	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.145	524415	1.22	0.7587	66.7	66.7	0.1728	0.1728	66.72	
1,2,3,4,7,8-HxCDD	36.178						0.0943	0.0943		
D 13C-1,2,3,6,7,8-HxCDD	36.255	545411	1.30	0.8593	61.3	61.3	0.1526	0.1526	61.27	
1,2,3,6,7,8-HxCDD	36.296						0.1013	0.1013		
1,2,3,7,8,9-HxCDD	36.617	4644	1.29	1.1094	0.7826	0.7826	0.0904	0.0904		
A Non-2,3,7,8-sub-HxCDD	35.432	47322	1.29	1.0545	8.389	8.389	0.0951	6.150		M
S Total HxCDD					9.172	9.172	0.0953	0.0953		
D 13C-1,2,3,4,6,7,8-HpCDF	38.640	521768	0.46	0.7359	68.4	68.4	0.2482	0.2482	68.44	
1,2,3,4,6,7,8-HpCDF	38.648	20942	1.01	1.4421	2.783	2.783	0.0694	0.0694		
1,2,3,4,7,8,9-HpCDF	39.911	7188	1.17	1.3092	0.9582	0.9582	0.0632	0.0632		
D 13C-1,2,3,4,7,8,9-HpCDF	39.894	572983	0.46	0.6854	80.7	80.7	0.2666	0.2666	80.70	
A Non-2,3,7,8-sub-HpCDF	39.277	4399	1.04	1.3756	0.5842	0.5842	0.0659	0.5842		
S Total HpCDF					4.326	4.326	0.0663	0.0663		
D 13C-1,2,3,4,6,7,8-HpCDD	39.582	511576	1.02	0.6745	73.2	73.2	0.2633	0.2633	73.21	
1,2,3,4,6,7,8-HpCDD	39.591	71289	1.04	1.0503	13.3	13.3	0.1128	0.1128		
A Non-2,3,7,8-sub-HpCDD	39.277	159029	1.05	1.0503	29.6	29.6	0.1128	29.6		
S Total HpCDD					42.9	42.9	0.1128	0.1128		
D 13C-OCDD	42.087	851965	0.87	0.5446	151.0	151.0	0.2757	0.2757	75.50	
OCDF	42.171	7763	0.82	1.3168	1.384	1.384	0.0806	0.0806		M
OCDD	42.095	1581023	0.89	1.0620	349.5	349.5	0.3398	0.3398		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d
Lims ID: 320-76887-A-3-A
Client ID: 11215702-072721-BN-SJSB096 (4-6)
Sample Type: Client
Inject. Date: 18-Aug-2021 08:30:00 ALS Bottle#: 0 Worklist Smp#: 23
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-3-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:00:07 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 18-Aug-2021 14:15:24

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.426	21.483	-3		474479	63944	325	812	197		a
333.9338	21.435	21.483	-3		594653	78599	336	840	234	0.80(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.498	20.482	1	1.001	1307765	175477	160	400	1097		
305.8987	20.498	20.482	1	1.001	1633285	221033	219	547	1009	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.472	20.594	-7	0.955	378900	53244	154	385	346		
317.9389	20.472	20.594	-7	0.955	463164	64561	151	377	428	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	17.491	19.916	-145	0.854	5912	992	160	400	6		
	Empc Correction				3401	740	160	400	5		
305.8987	17.525	19.916	-143	0.856	4417	962	219	547	4	1.34(0.65-0.89)	
303.9016	17.963	19.916	-117	0.877	20525	3520	160	400	22		
305.8987	17.963	19.916	-117	0.877	25260	4603	219	547	21	0.81(0.65-0.89)	
303.9016	18.453	19.916	-88	0.901	36273	5301	160	400	33		M
305.8987	18.453	19.916	-88	0.901	45438	6525	219	547	30	0.80(0.65-0.89)	
303.9016	18.883	19.916	-62	0.922	37762	4772	160	400	30		
305.8987	18.874	19.916	-62	0.922	43903	5432	219	547	25	0.86(0.65-0.89)	M
303.9016	19.261	19.916	-39	0.941	57095	8196	160	400	51		
305.8987	19.278	19.916	-38	0.942	67653	9756	219	547	45	0.84(0.65-0.89)	
303.9016	19.768	19.916	-9	0.966	594594	88027	160	400	550		
305.8987	19.768	19.916	-9	0.966	735019	113569	219	547	519	0.81(0.65-0.89)	
303.9016	20.197	19.916	17	0.987	21537	3085	160	400	19		
305.8987	20.171	19.916	15	0.985	24617	3477	219	547	16	0.87(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.271	19.916	81	1.039	93039	12497	160	400	78		
305.8987	21.280	19.916	82	1.039	108770	14836	219	547	68	0.86(0.65-0.89)	
303.9016	21.719	19.916	108	1.061	20395	2122	160	400	13		
	Empc Correction				13952	1834	160	400	11		
305.8987	21.736	19.916	109	1.062	18120	2382	219	547	11	1.13(0.65-0.89)	
303.9016	23.661	19.916	224	1.156	92206	16114	160	400	101		
305.8987	23.661	19.916	224	1.156	109834	19806	219	547	90	0.84(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.830	21.790	2	1.019	269248	37464	325	812	115		
333.9338	21.822	21.790	2	1.018	324398	45538	336	840	136	0.83(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.856	21.825	2	1.001	221251	29136	44	110	662		
321.8936	21.847	21.825	1	1.001	277842	35640	34	85	1048	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.865	21.905	-2	1.020	299096	38396	28	70	1371		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	21.658	20.750	54	0.992	2590	564	44	110	13		
321.8936	21.650	20.750	54	0.992	4772	935	34	85	28	0.54(0.65-0.89)	
	Empc Correction				3363	732	34	85	22		
319.8965	22.526	20.750	106	1.032	17876	2290	44	110	52		
321.8936	22.552	20.750	108	1.033	22633	2936	34	85	86	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.303	27.343	-2	1.274	449402	68625	74	185	927		
353.8970	27.294	27.343	-3	1.274	274611	40291	39	97	1033	1.64(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.328	27.368	-2	1.001	30612	4687	27	67	174		
341.8567	27.320	27.368	-3	1.001	19707	3108	21	52	148	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.810	28.867	-3	1.345	478374	70560	74	185	954		
353.8970	28.810	28.867	-3	1.345	298057	40809	39	97	1046	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.844	28.884	-2	1.001	22967	3153	27	67	117		
341.8567	28.827	28.884	-3	1.001	15650	2406	21	52	115	1.47(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.177	24.676	-30	0.886	290	56	5	12	11		
	Empc Correction				105	69	5	12	14		
341.8567	24.108	24.676	-34	0.883	68	45	4	10	11	4.26(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQa
339.8597	25.863	28.167	-138	0.947	12186	1952	27	67	72		
341.8567	25.846	28.167	-139	0.947	8681	1498	21	52	71	1.40(1.32-1.78)	
339.8597	27.185	28.167	-59	0.996	2150	477	27	67	18		a
341.8567	27.227	28.167	-56	0.997	1864	453	21	52	22	1.15(1.32-1.78)	
	Empc Correction				1387	307	21	52	15		
339.8597	27.918	28.167	-15	1.023	8451	1410	27	67	52		
341.8567	27.918	28.167	-15	1.023	5376	855	21	52	41	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	29.147	28.167	59	1.068	5125	714	27	67	26		
341.8567	29.164	28.167	60	1.068	3222	505	21	52	24	1.59(1.32-1.78)	
339.8597	30.914	28.167	165	1.132	1425	221	27	67	8		
341.8567	30.880	28.167	162	1.131	936	164	21	52	8	1.52(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.618	29.667	-3	1.382	289938	39824	65	162	613		
369.8919	29.635	29.667	-2	1.383	173993	24566	34	85	723	1.67(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.652	29.692	-2	1.001	2758	419	12	30	35		
357.8516	29.660	29.692	-2	1.001	1836	331	5	12	66	1.50(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.124	28.556	-146	0.882	685	111	12	30	9		
357.8516	26.166	28.556	-143	0.883	2083	277	5	12	55	0.33(1.32-1.78)	
	Empc Correction				441	71	5	12	14		
355.8546	26.924	28.556	-98	0.909	1583	274	12	30	23		
357.8516	26.907	28.556	-99	0.908	1195	274	5	12	55	1.32(1.32-1.78)	
355.8546	28.549	28.556	0	0.964	1043	181	12	30	15		
357.8516	28.583	28.556	2	0.965	739	110	5	12	22	1.41(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.958	34.974	-1	0.954	241223	45294	78	195	581		
385.8610	34.958	34.974	-1	0.954	481155	90258	112	280	806	0.50(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.975	35.000	-1	1.000	43496	8531	24	60	355		
375.8178	34.967	35.000	-2	1.000	33636	6601	39	97	169	1.29(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.110	35.134	-1	0.959	245214	42836	78	195	549		
385.8610	35.118	35.134	-1	0.959	456345	81152	112	280	725	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.118	35.151	-2	1.000	11246	2034	24	60	85		
375.8178	35.135	35.151	-1	1.001	9044	1514	39	97	39	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.935	35.951	-1	0.981	223156	48175	78	195	618		
385.8610	35.926	35.951	-1	0.981	422667	86478	112	280	772	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQ
373.8208	35.943	35.968	-1	1.000	2227	369	24	60	15		
	Empc Correction				1168	244	24	60	10		
375.8178	35.952	35.968	-1	1.000	942	197	39	97	5	2.36(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.827	36.843	-1	1.006	209733	46455	78	195	596		
385.8610	36.819	36.843	-1	1.005	390650	85582	112	280	764	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											U
373.8208	36.852						24	60			
375.8178	36.852						39	97			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	35.074						24	60			
375.8178	35.074						39	97			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.625	36.641	-1		582637	135115	66	165	2047		
403.8529	36.625	36.641	-1		453304	101341	58	145	1747	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.145	36.161	-1	0.987	288341	65108	66	165	986		
403.8529	36.137	36.161	-1	0.987	236074	49881	58	145	860	1.22(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.178						26	65			
391.8127	36.178						20	50			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.255	36.279	-1	0.990	308587	63791	66	165	967		
403.8529	36.255	36.279	-1	0.990	236824	50532	58	145	871	1.30(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.296						26	65			
391.8127	36.296						20	50			
1,2,3,7,8,9-HxCDD											
389.8158	36.617	36.658	-2	1.013	2616	545	26	65	21		
391.8127	36.625	36.658	-2	1.013	2028	340	20	50	17	1.29(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											M
389.8158	34.252	35.432	-71	0.945	19270	3324	26	65	128		
391.8127	34.260	35.432	-70	0.945	15418	2539	20	50	127	1.25(1.05-1.43)	
389.8158	35.388	35.432	-3	0.976	7382	1489	26	65	57		
391.8127	35.388	35.432	-3	0.976	5252	977	20	50	49	1.41(1.05-1.43)	M
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.640	38.647	0	1.055	163266	41527	79	197	526		
419.8220	38.640	38.647	0	1.055	358502	90330	94	235	961	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.648	38.654	0	1.000	10505	2690	36	90	75		
409.7788	38.648	38.654	0	1.000	10437	2758	17	42	162	1.01(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.911	39.900	1	1.000	3879	1113	36	90	31		
409.7788	39.902	39.900	0	1.000	3309	901	17	42	53	1.17(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.894	39.901	0	1.089	179623	50457	79	197	639		
419.8220	39.894	39.901	0	1.089	393360	109080	94	235	1160	0.46(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.018	39.277	-15	1.010	2240	593	36	90	16		
409.7788	39.010	39.277	-16	1.010	2159	654	17	42	38	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.582	39.590	0	1.081	258550	70831	115	287	616		
437.8140	39.582	39.590	0	1.081	253026	68488	53	132	1292	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.591	39.597	0	1.000	36274	10228	35	87	292		
425.7737	39.591	39.597	0	1.000	35015	9268	31	77	299	1.04(0.88-1.20)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.960	39.277	-19	0.984	81466	21801	35	87	623		
425.7737	38.951	39.277	-20	0.984	77563	19861	31	77	641	1.05(0.88-1.20)	
13C-OCDD											
469.7780	42.087	42.094	0	1.149	397002	90517	91	227	995		
471.7750	42.079	42.094	-1	1.149	454963	107315	51	127	2104	0.87(0.76-1.02)	
OCDF											M
441.7428	42.171	42.187	-1	1.002	3492	837	15	37	56		M
443.7399	42.171	42.187	-1	1.002	4271	999	27	67	37	0.82(0.76-1.02)	M
OCDD											
457.7377	42.095	42.103	0	1.000	746126	175226	67	167	2615		
459.7348	42.095	42.103	0	1.000	834897	194585	76	190	2560	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 19-Aug-2021 13:00:07 Chrom Revision: 2.3 13-May-2021 07:57:40

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Lims ID:	320-76887-A-3-A		
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Inject. Date:	18-Aug-2021 08:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	23

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	842064	117805

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	842064	117805

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.491	5912	992	4417	962	1.14	1.34	RQ
17.491	3401	740	4417	962	0.8595		Empc Correction
17.963	20525	3520	25260	4603	5.03	0.81	
18.453	36273	5301	45438	6525	8.98	0.80	Ma
18.883	37762	4772	43903	5432	8.98	0.86	M
19.261	57095	8196	67653	9756	13.7	0.84	
19.768	594594	88027	735019	113569	146.2	0.81	
20.197	21537	3085	24617	3477	5.07	0.87	
21.271	93039	12497	108770	14836	22.2	0.86	
21.719	20395	2122	18120	2382	4.23	1.13	RQ
21.719	13952	1834	18120	2382	3.53		Empc Correction
23.661	92206	16114	109834	19806	22.2	0.84	
Signal Totals:							
	970384	144086	1183031	181348			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2162369	325974				0.83	RQMa
	2153415	325434					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 237.730 = (2162369 * 100.000) / (842064 * 1.080)

Empc Amount: 236.745 = (2153415 * 100.000) / (842064 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 19-Aug-2021 13:00:07 Chrom Revision: 2.3 13-May-2021 07:57:40

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Lims ID:	320-76887-A-3-A		
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Inject. Date:	18-Aug-2021 08:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	23

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	593646	83002

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	593646	83002

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.658	2590	564	4772	935	1.15	0.54	RQ
21.658	2590	564	3363	732	0.9325		Empc Correction
22.526	17876	2290	22633	2936	6.35	0.79	
Signal Totals:							
	20466	2854	25996	3668			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	47871	6725				0.75	RQ
	46462	6522					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 7.499 = (47871 * 100.000) / (593646 * 1.075)

Empc Amount: 7.278 = (46462 * 100.000) / (593646 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 13:00:07 Chrom Revision: 2.3 13-May-2021 07:57:40

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Lims ID:	320-76887-A-3-A		
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Inject. Date:	18-Aug-2021 08:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	23

F1 PeCDFs, RT: 24.676

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	724013	108916
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	776431	111369

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	750222	110142

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.177	290	56	68	45	0.0463	4.26	RQ
24.177	105	69	68	45	0.0224		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 13:00:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Lims ID:	320-76887-A-3-A		
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Inject. Date:	18-Aug-2021 08:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	23

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	724013	108916
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	776431	111369

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	750222	110142

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.863	12186	1952	8681	1498	2.70	1.40	
27.185	2150	477	1864	453	0.5189	1.15	RQa
27.185	2150	477	1387	307	0.4573		Empc Correction
27.918	8451	1410	5376	855	1.79	1.57	
29.147	5125	714	3222	505	1.08	1.59	
30.914	1425	221	936	164	0.3052	1.52	
Signal Totals:							
	29337	4774	19602	3329			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	49416	8249				1.46	RQa
	48939	8103					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 6.388 = (49416 * 100.000) / (750222 * 1.031)

Empc Amount: 6.327 = (48939 * 100.000) / (750222 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 13:00:07 Chrom Revision: 2.3 13-May-2021 07:57:40

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Lims ID:	320-76887-A-3-A		
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Inject. Date:	18-Aug-2021 08:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	23

Non-2,3,7,8-sub-PeCDD, RT: 28.556

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	463931	64390

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	463931	64390

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.124	685	111	2083	277	0.5701	0.33	RQ
26.124	685	111	441	71	0.2319		Empc Correction
26.924	1583	274	1195	274	0.5722	1.32	
28.549	1043	181	739	110	0.3670	1.41	
Signal Totals:							
	3311	566	2375	455			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7328	1227				0.82	RQ
	5686	1021					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.509 = (7328 * 100.000) / (463931 * 1.046)
Empc Amount: 1.171 = (5686 * 100.000) / (463931 * 1.046)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Lims ID:	320-76887-A-3-A		
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Inject. Date:	18-Aug-2021 08:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	23

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	722378	135552
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	701559	123988
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	645823	134653
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	600383	132037

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	667535	131557

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 19-Aug-2021 13:00:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Lims ID:	320-76887-A-3-A		
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Inject. Date:	18-Aug-2021 08:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	23

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	524415	114989
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	545411	114323
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	534913	114656

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.252	19270	3324	15418	2539	6.15	1.25	
35.388	7382	1489	5252	977	2.24	1.41	M
Signal Totals:							
	26652	4813	20670	3516			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	47322	8329				1.29	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 8.389 = (47322 * 100.000) / (534913 * 1.055)

QC Flag Legend

Review Flags
M - Manually Integrated

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Lims ID:	320-76887-A-3-A		
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Inject. Date:	18-Aug-2021 08:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	23

Non-2,3,7,8-sub-HpCDF, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	521768	131857
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	572983	159537

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	547375	145697

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
39.018	2240	593	2159	654	0.5842	1.04	
Signal Totals:							
	2240	593	2159	654			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4399	1247				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5842 = (4399 * 100.000) / (547375 * 1.376)

Report Date: 19-Aug-2021 13:00:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Lims ID:	320-76887-A-3-A		
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Inject. Date:	18-Aug-2021 08:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	23

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	511576	139319

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	511576	139319

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.960	81466	21801	77563	19861	29.6	1.05	
Signal Totals:							
	81466	21801	77563	19861			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	159029	41662				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 29.597 = (159029 * 100.000) / (511576 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d				
Injection Date:	18-Aug-2021 08:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-3-A	Lab Sample ID:	320-76887-3		
Client ID:	11215702-072721-BN-SJSB096 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.15- 23.68)

Signal: 1

Processing Integration Results

RT = 18.453 Area = 36273

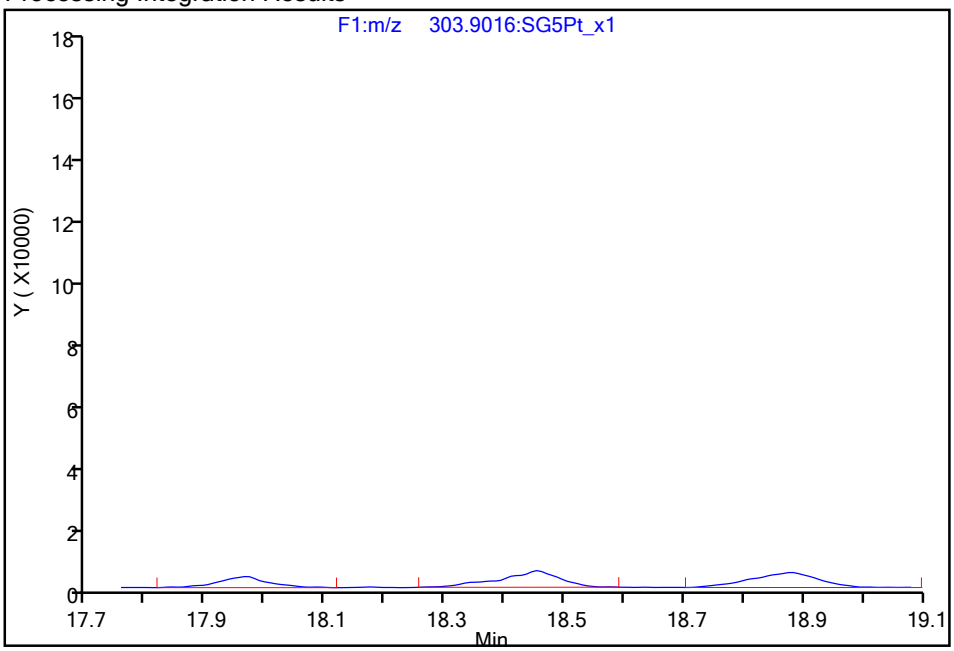

Manual Integration Results

RT = 18.453 Area = 36273

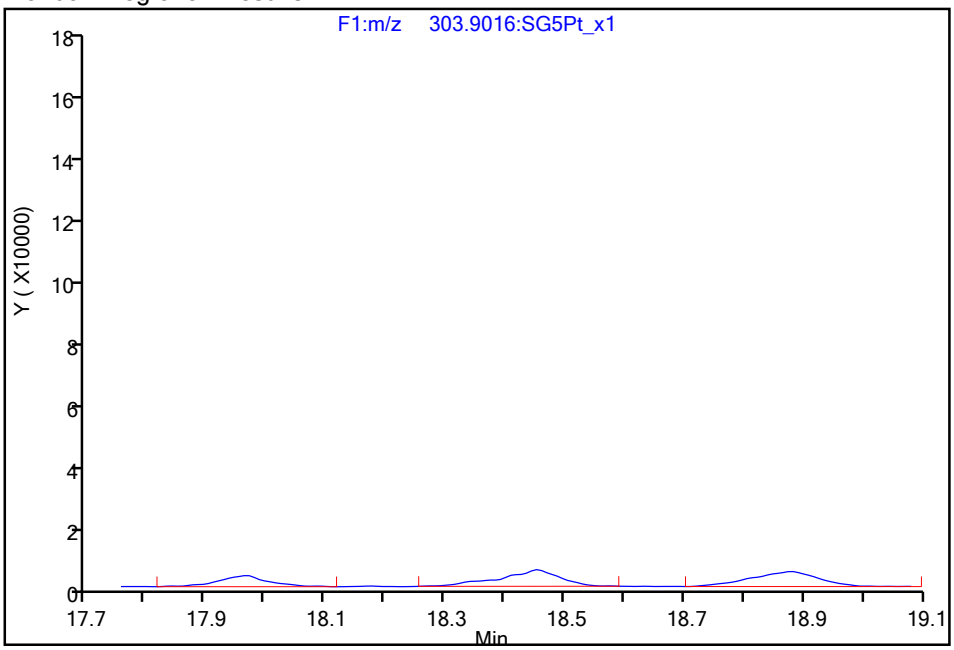

Reviewer: dadunj, 19-Aug-2021 12:56:14

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d				
Injection Date:	18-Aug-2021 08:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-3-A	Lab Sample ID:	320-76887-3		
Client ID:	11215702-072721-BN-SJSB096 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (16.15- 23.68)

Signal: 2

Processing Integration Results

RT = 18.866 Area = 25314

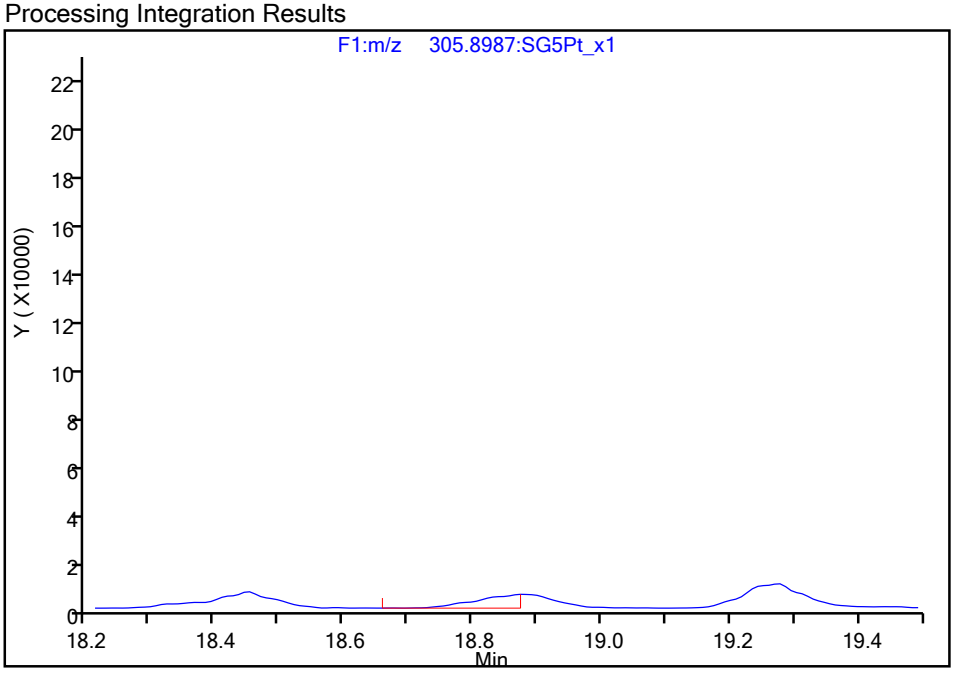

Manual Integration Results

RT = 18.874 Area = 43903 M

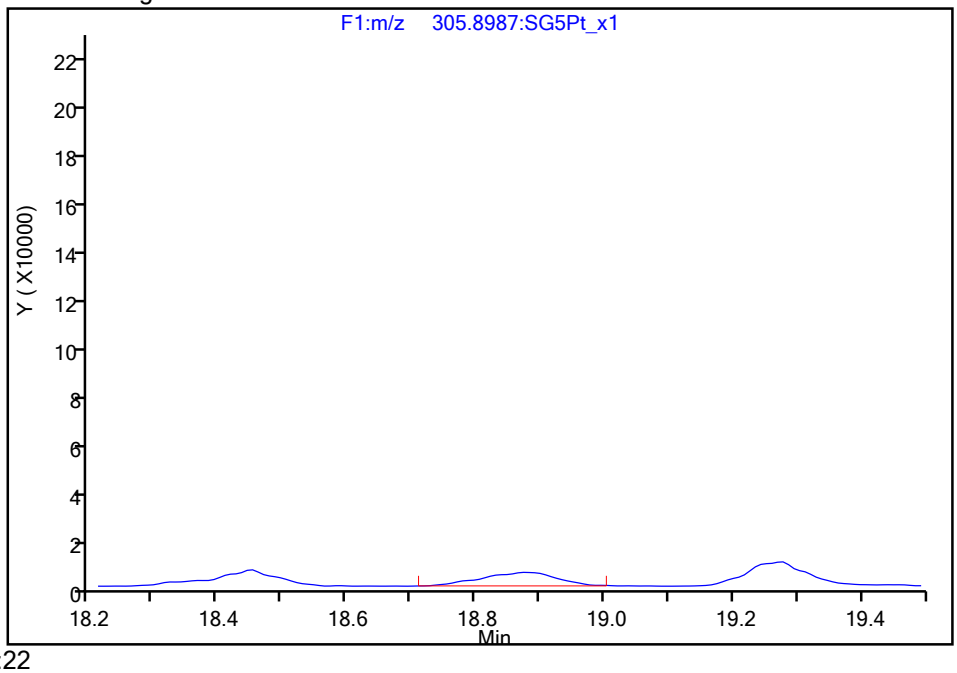

Reviewer: dadunj, 19-Aug-2021 12:55:22

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Report Date: 19-Aug-2021 13:00:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d				
Injection Date:	18-Aug-2021 08:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-3-A	Lab Sample ID:	320-76887-3		
Client ID:	11215702-072721-BN-SJSB096 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (34.24- 36.62)

Signal: 2

Processing Integration Results

RT = 35.388 Area = 5878

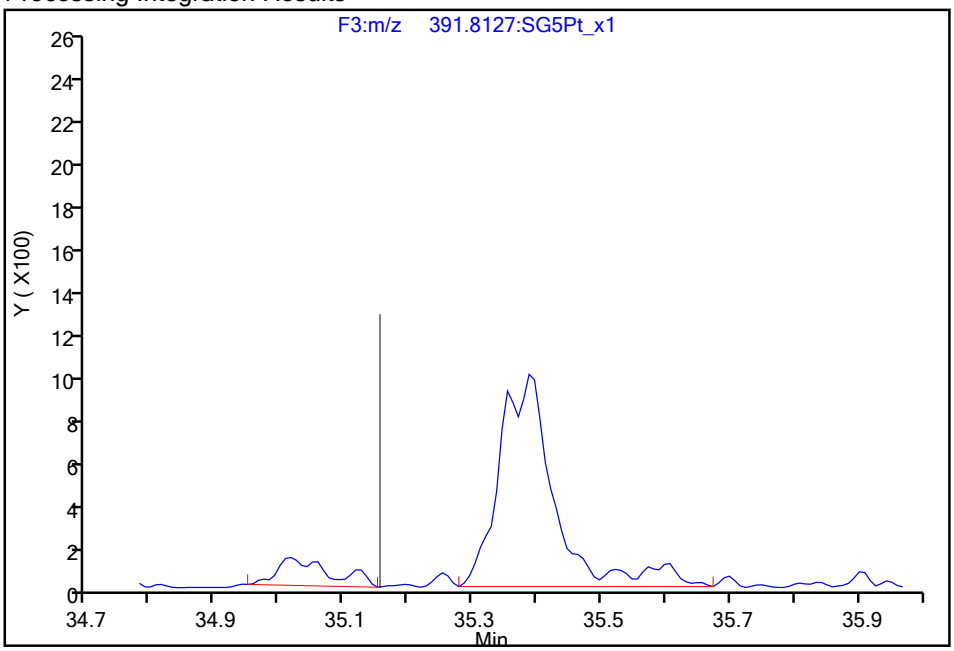

Manual Integration Results

RT = 35.388 Area = 5252 M

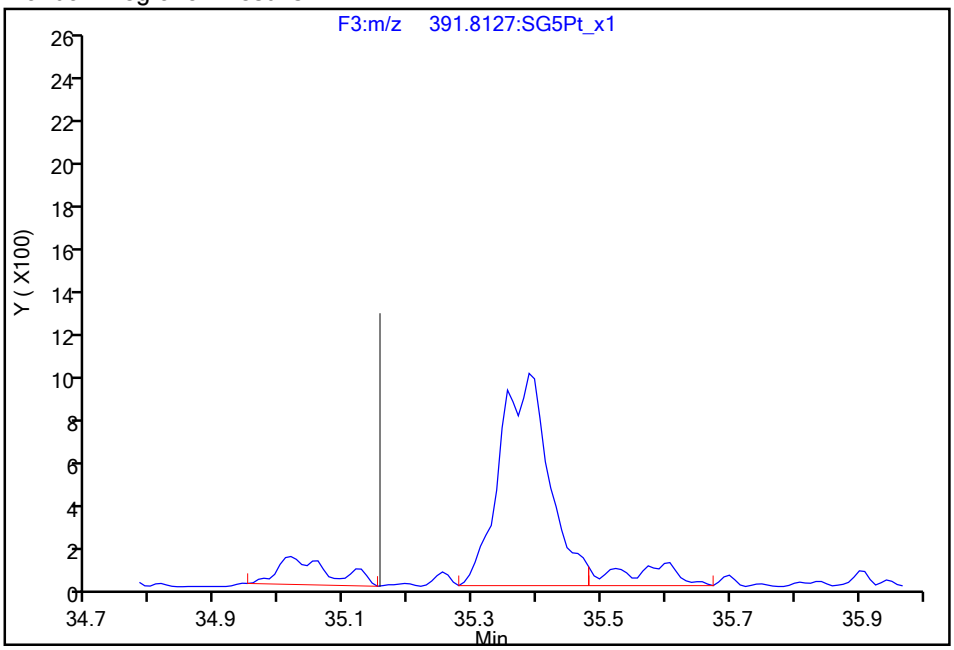

Reviewer: dadunj, 19-Aug-2021 12:59:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

782218

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d				
Injection Date:	18-Aug-2021 08:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-3-A	Lab Sample ID:	320-76887-3		
Client ID:	11215702-072721-BN-SJSB096 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 42.17
Area: 4088
Amount: 1.674712
Amount Units: pg/ul

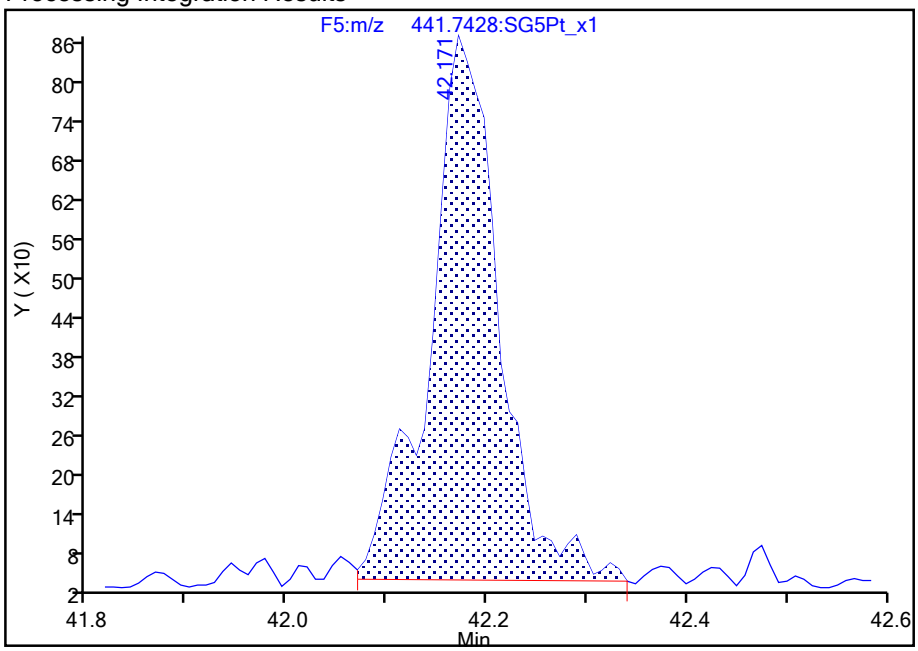

Manual Integration Results

RT: 42.17
Area: 3492
Amount: 1.383946
Amount Units: pg/ul

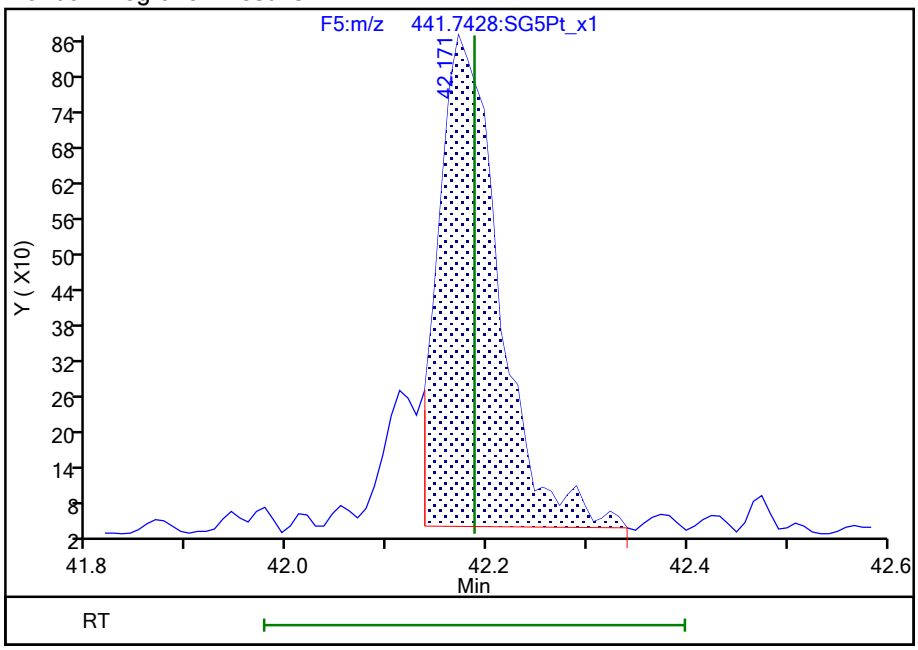

Reviewer: dadunj, 19-Aug-2021 12:59:24

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d				
Injection Date:	18-Aug-2021 08:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-3-A	Lab Sample ID:	320-76887-3		
Client ID:	11215702-072721-BN-SJSB096 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 42.17
Area: 5306
Amount: 1.674712
Amount Units: pg/ul

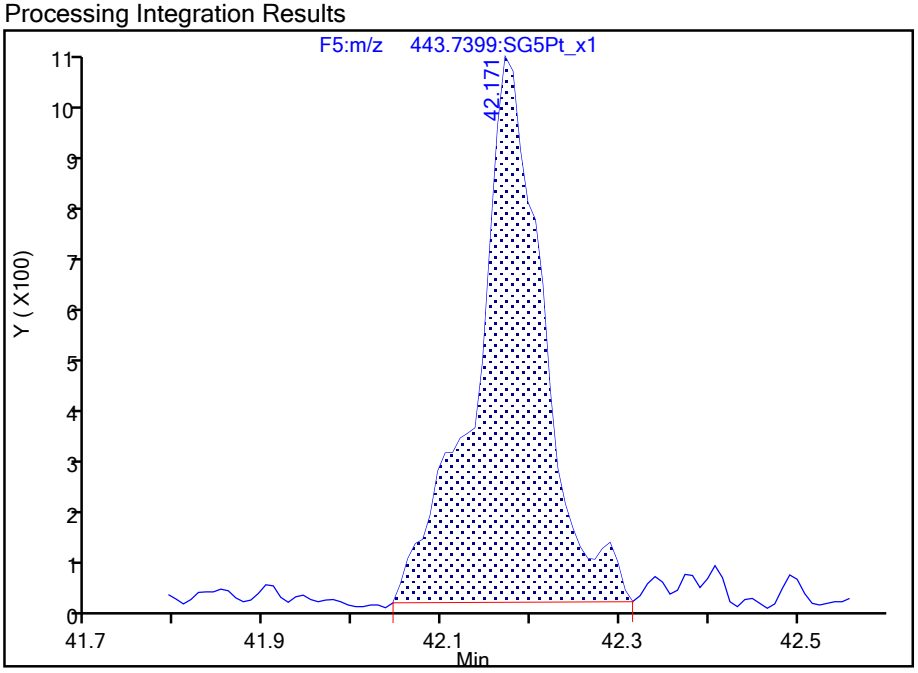

Manual Integration Results

RT: 42.17
Area: 4271
Amount: 1.383946
Amount Units: pg/ul

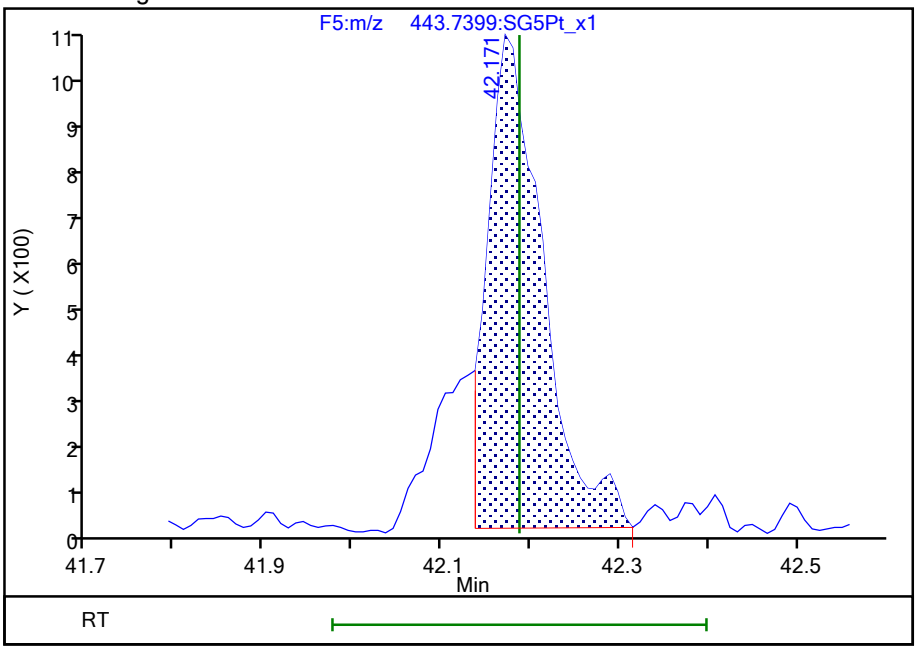

Reviewer: dadunj, 19-Aug-2021 12:59:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 19-Aug-2021 13:00:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

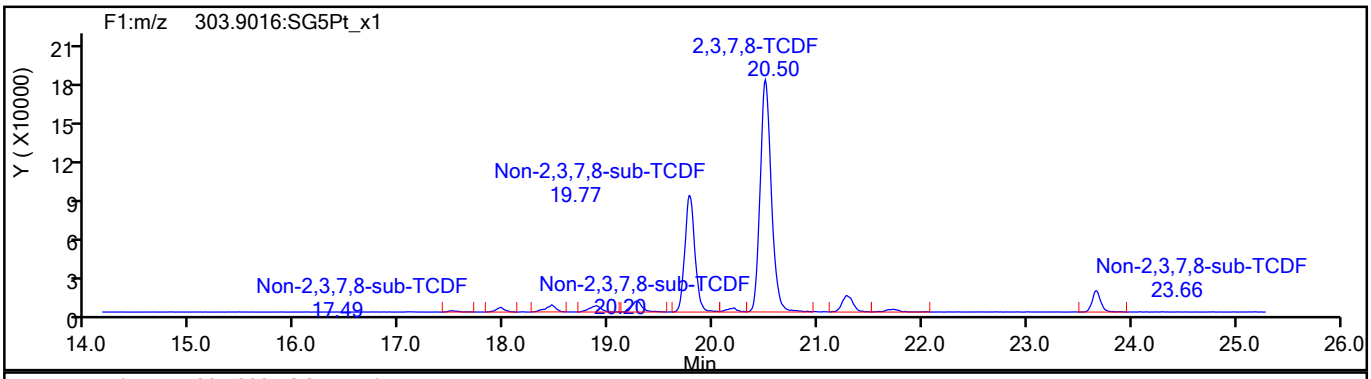

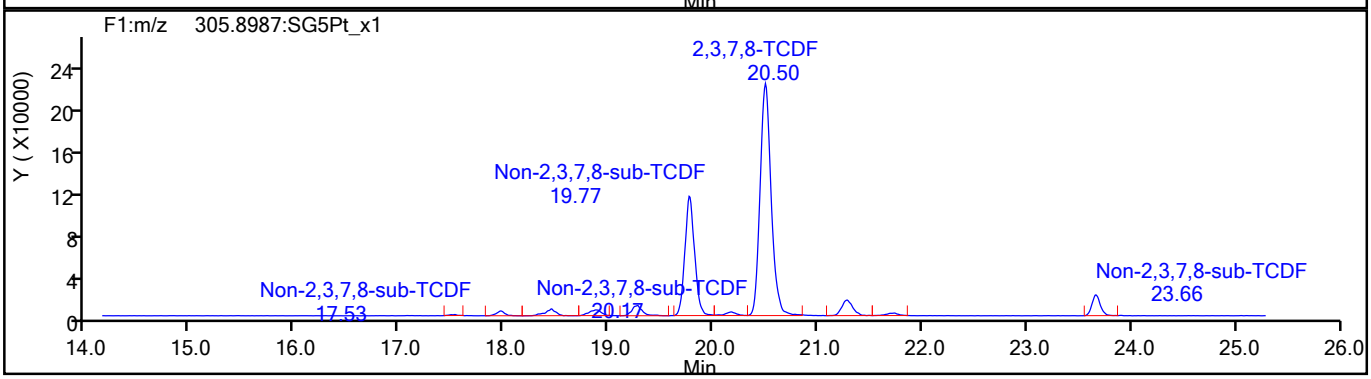

TCDF Standards

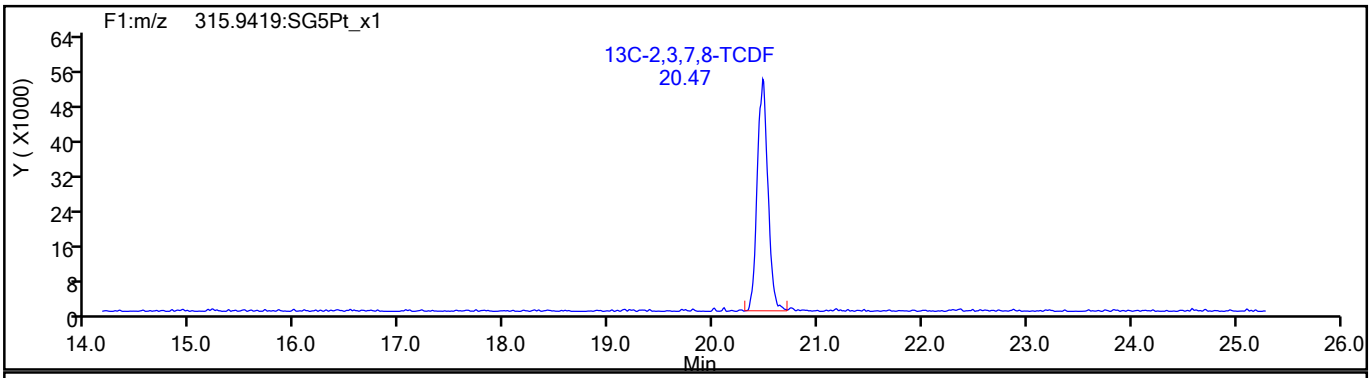

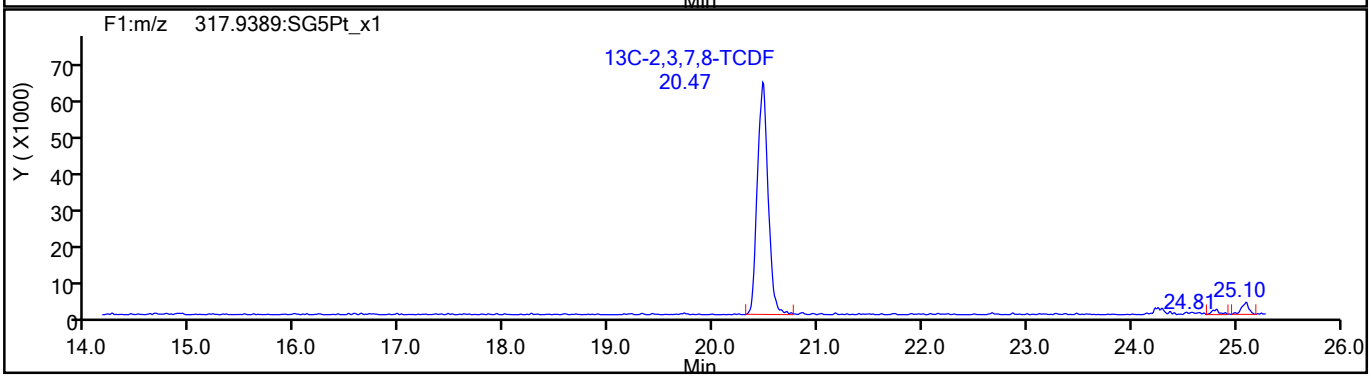

782221

Report Date: 19-Aug-2021 13:00:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

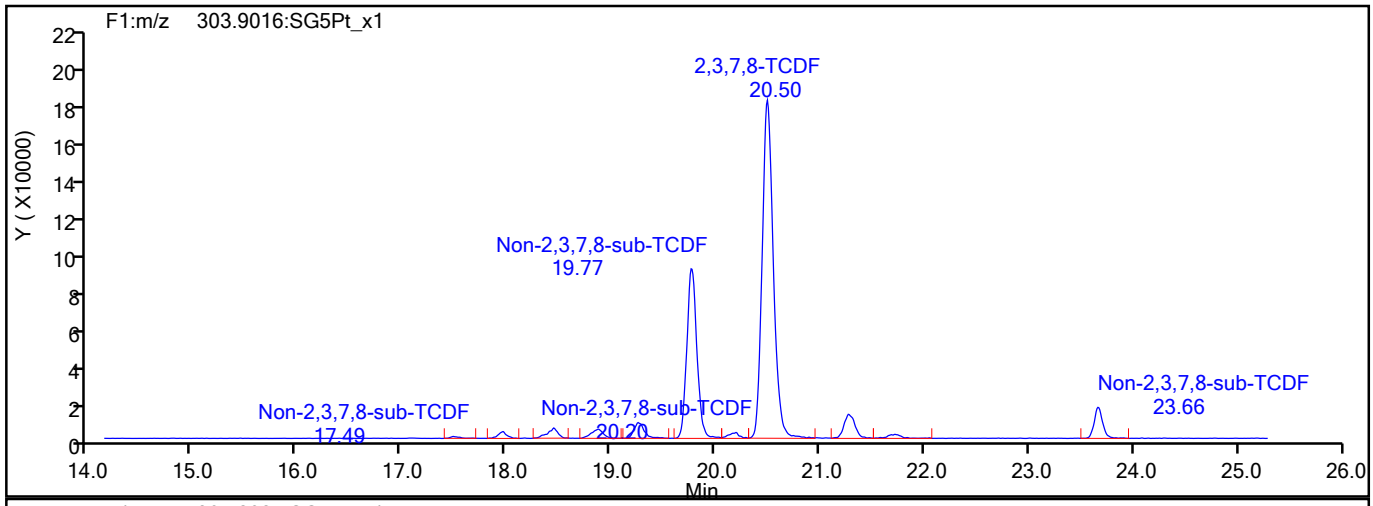

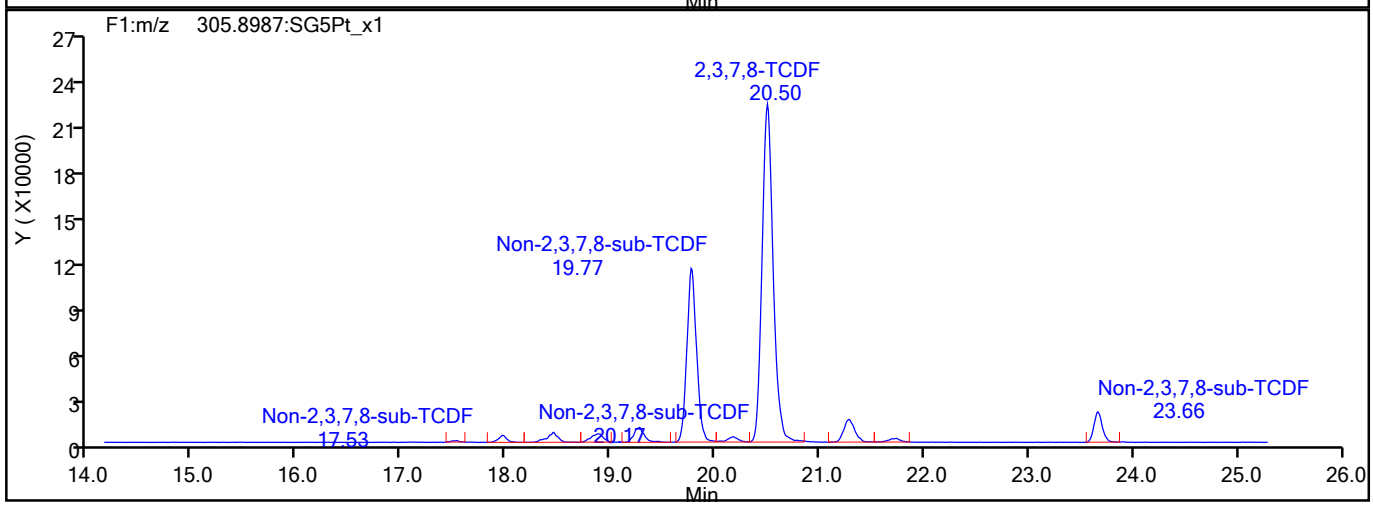

TCDF Interference Mass

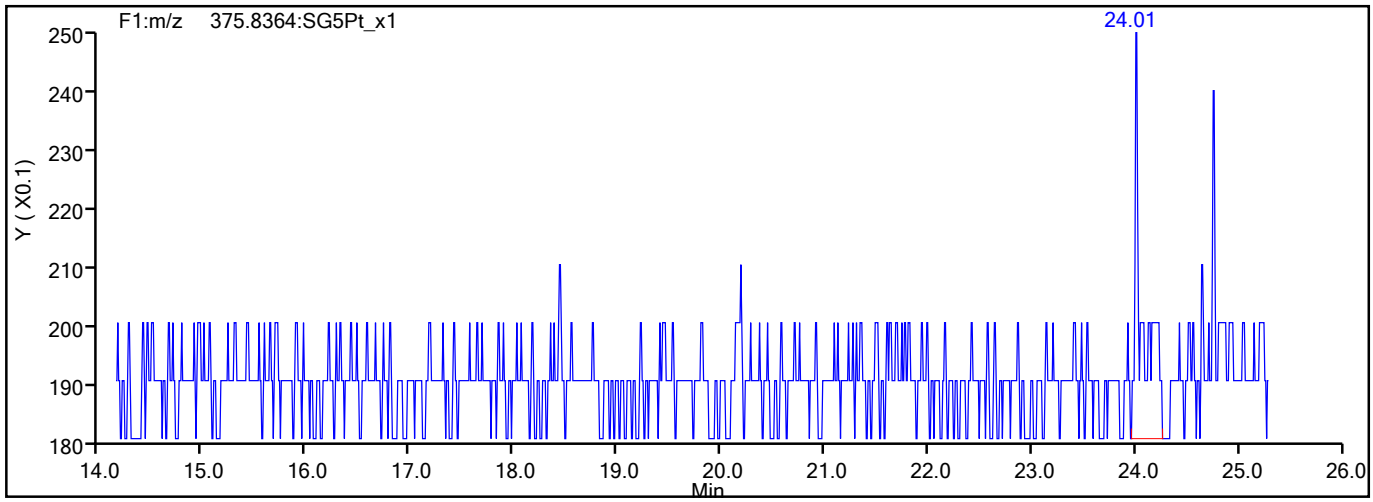

782222

Report Date: 19-Aug-2021 13:00:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

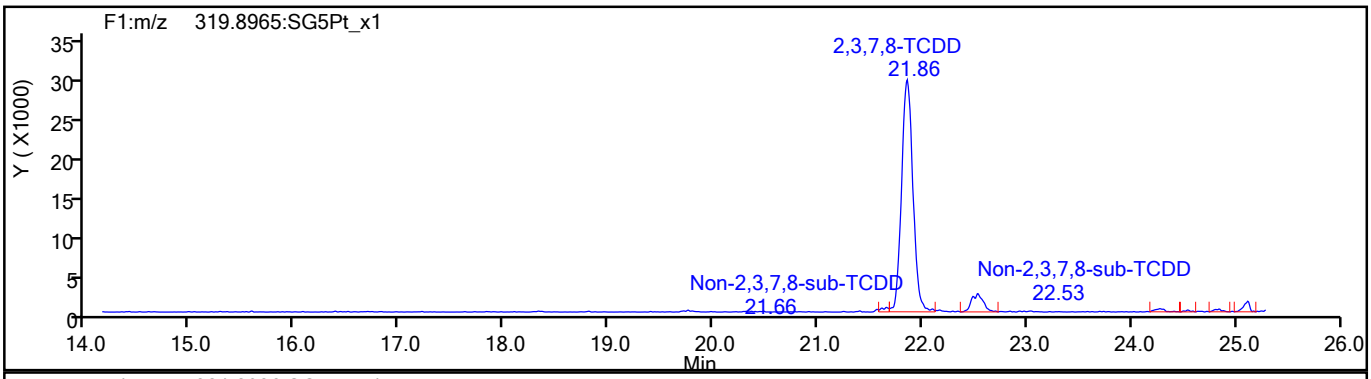

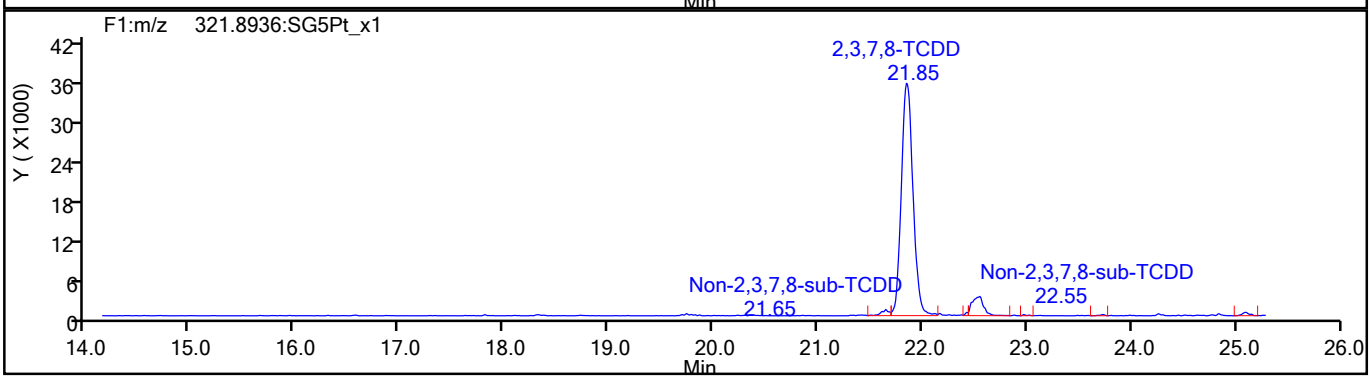

TCDD Standards

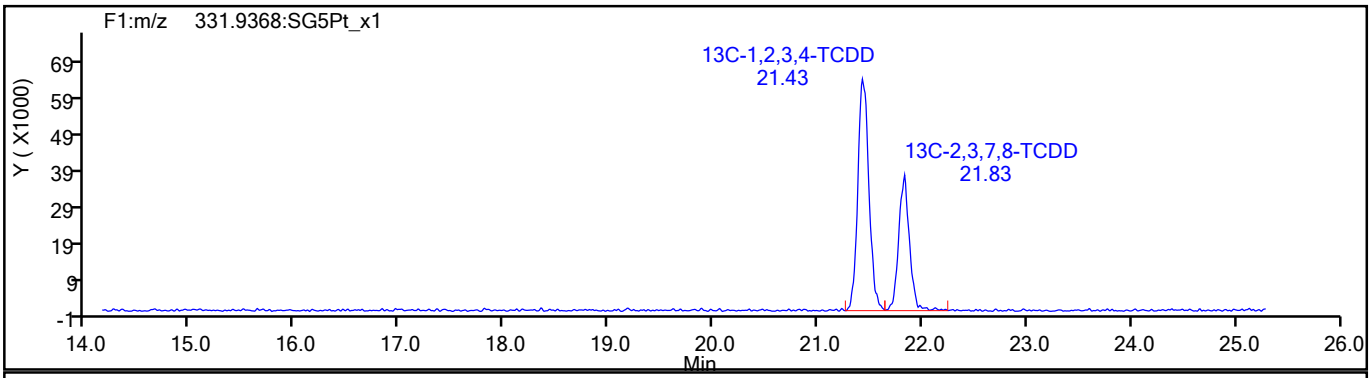

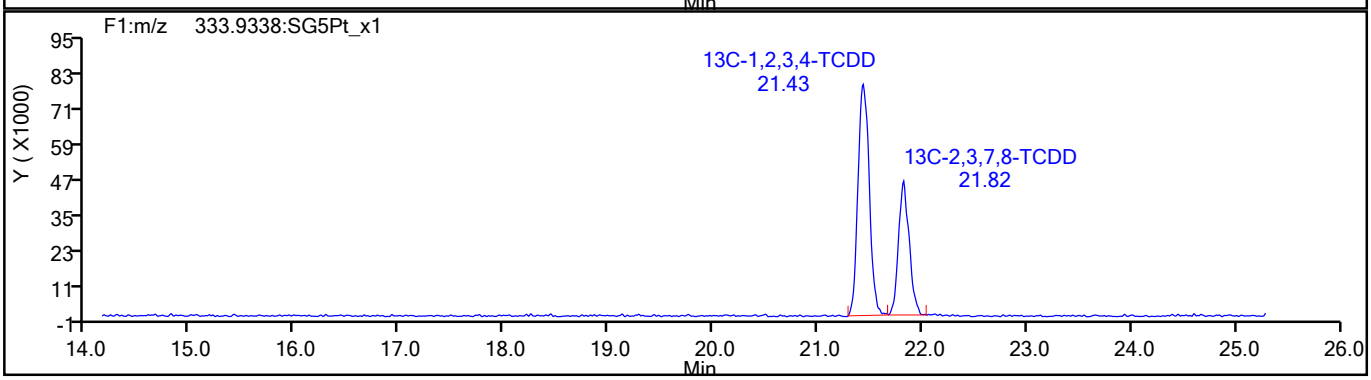

782223

Report Date: 19-Aug-2021 13:00:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

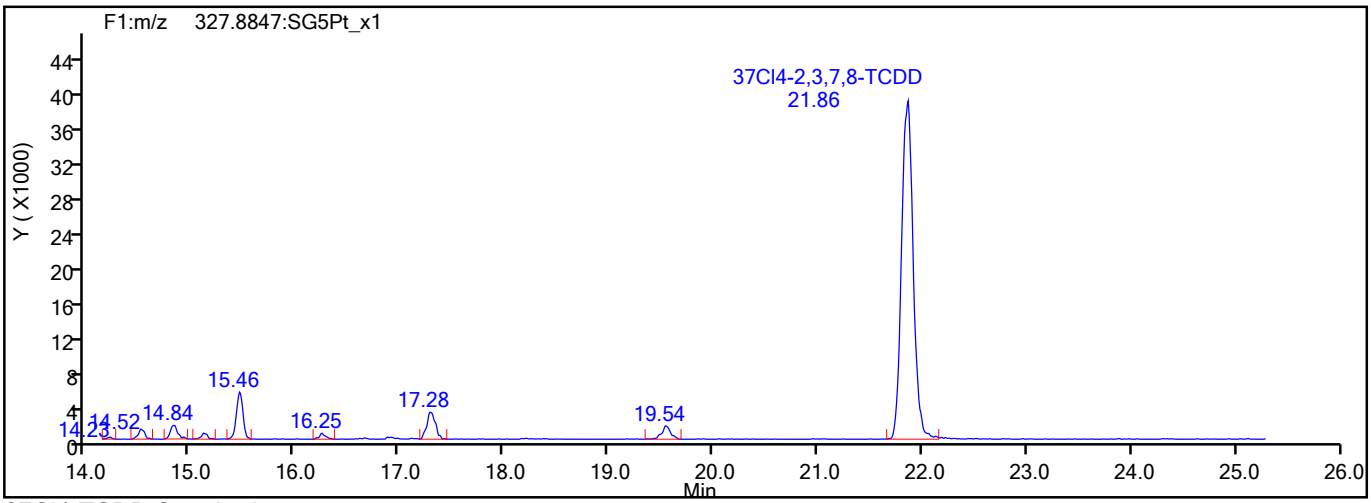

37Cl4-TCDD Standards

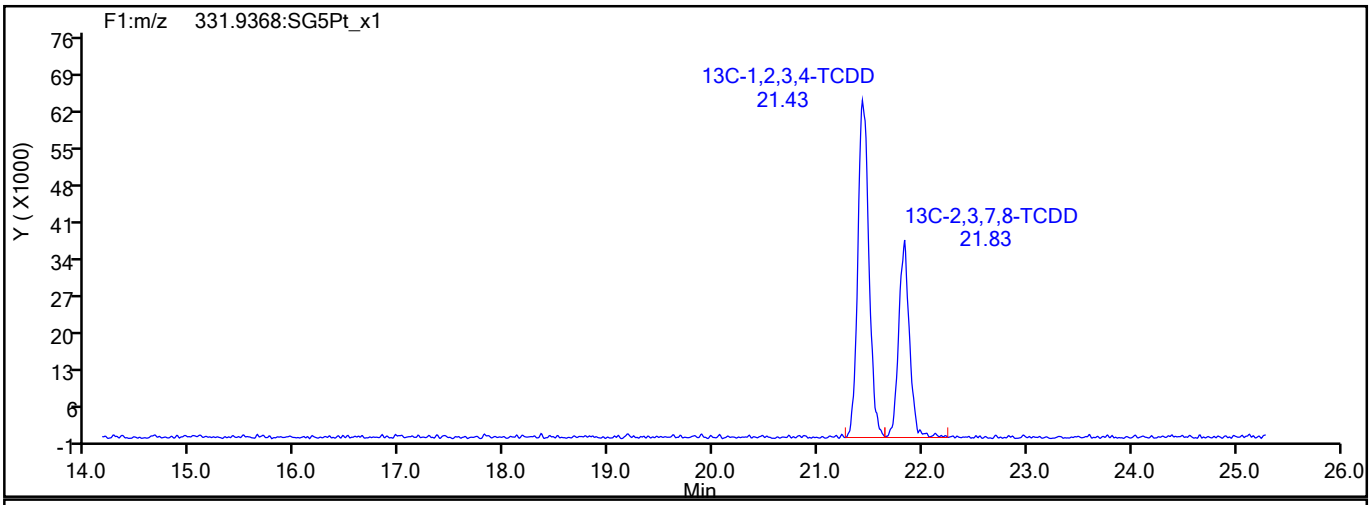

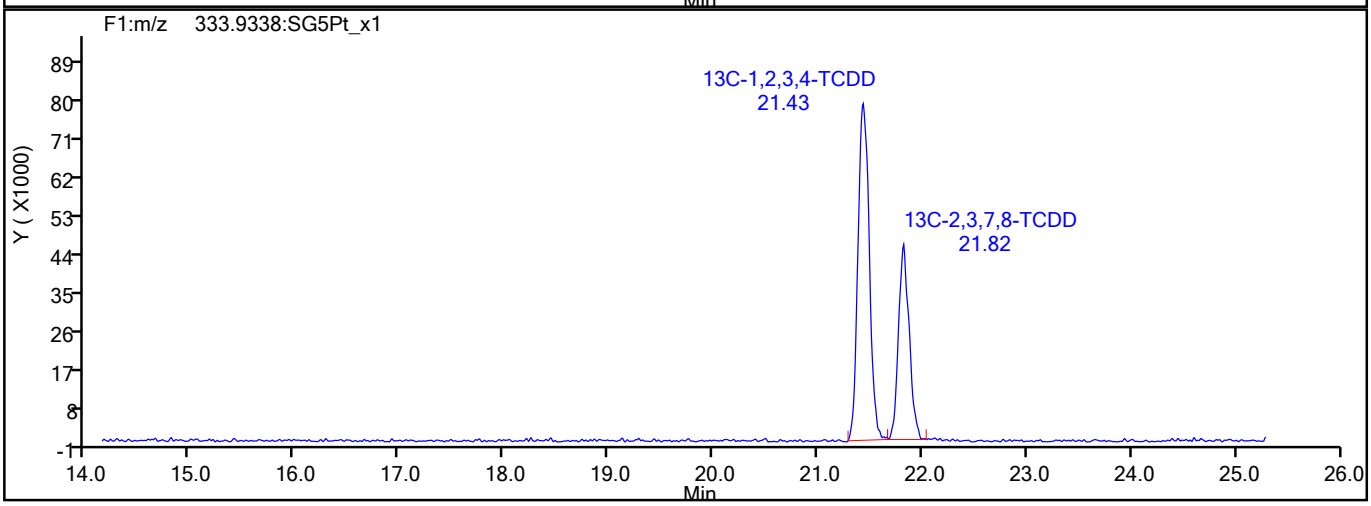

782224

Report Date: 19-Aug-2021 13:00:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

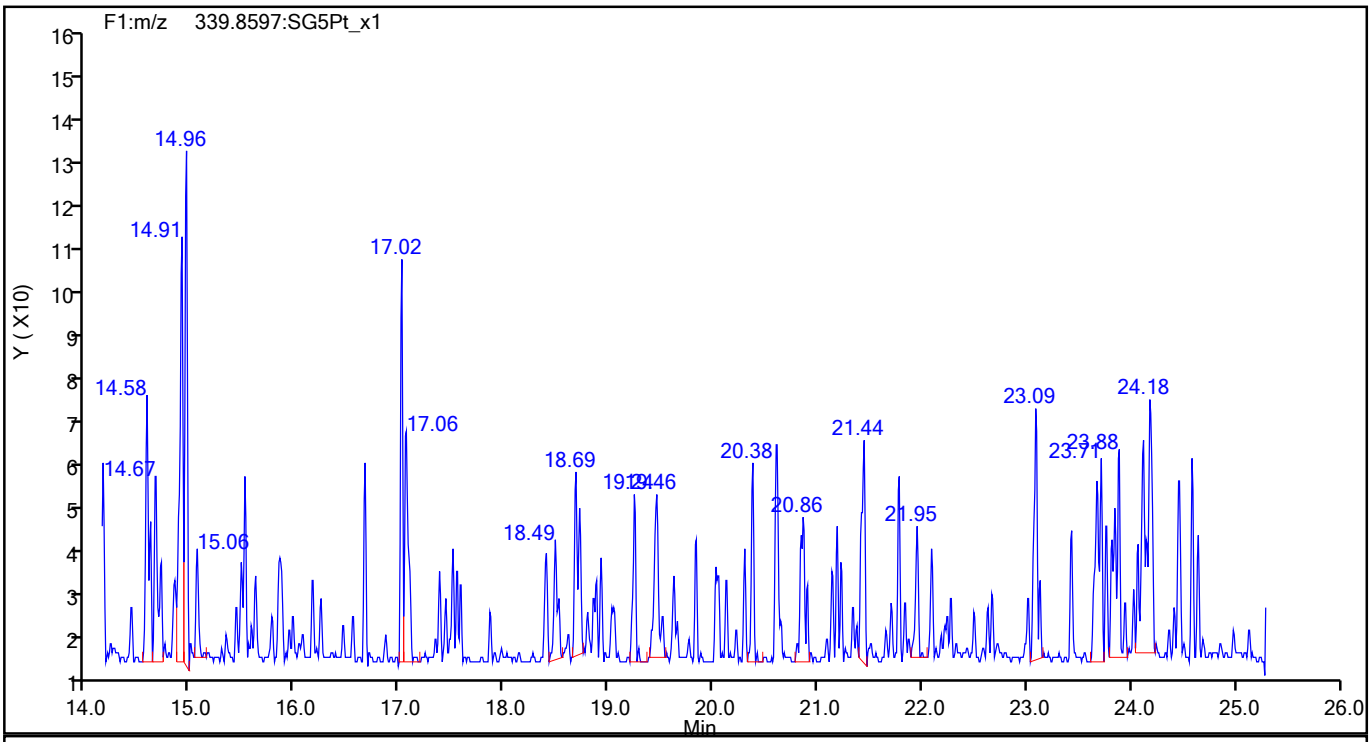

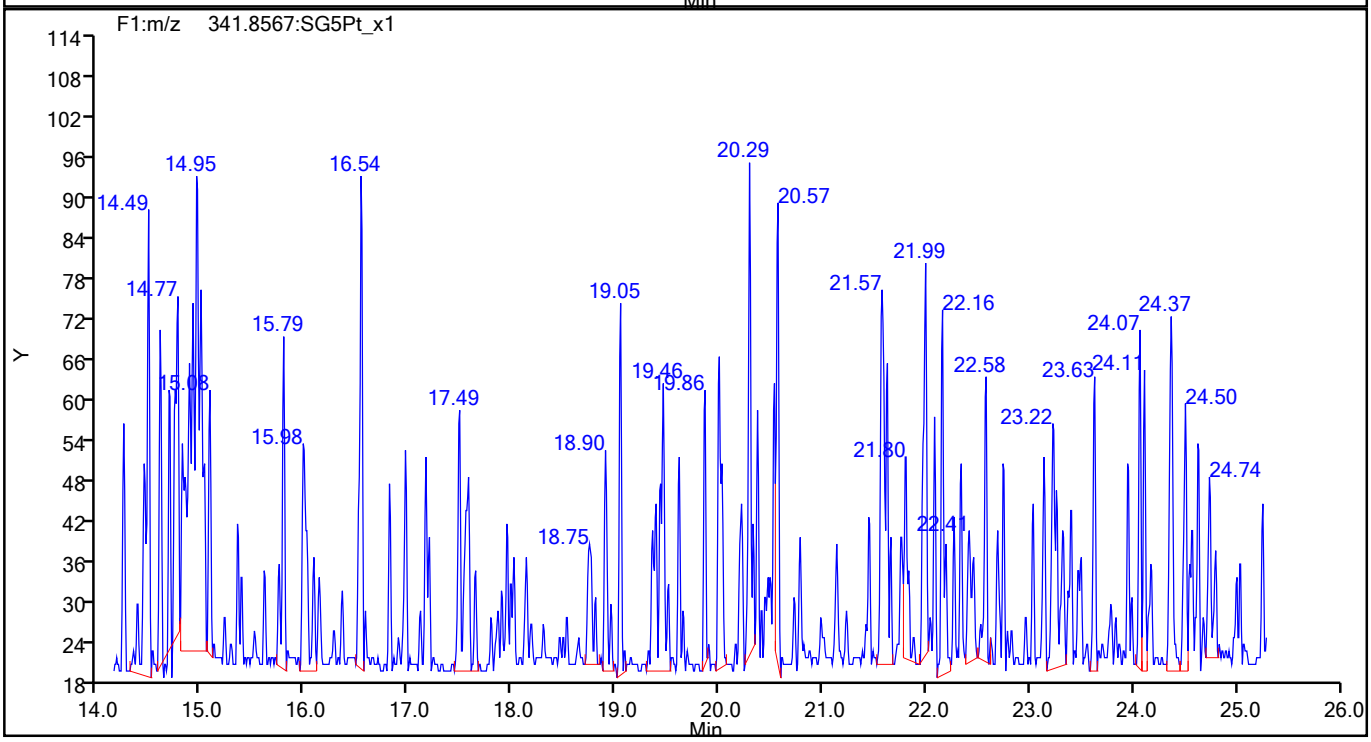

782225

Report Date: 19-Aug-2021 13:00:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

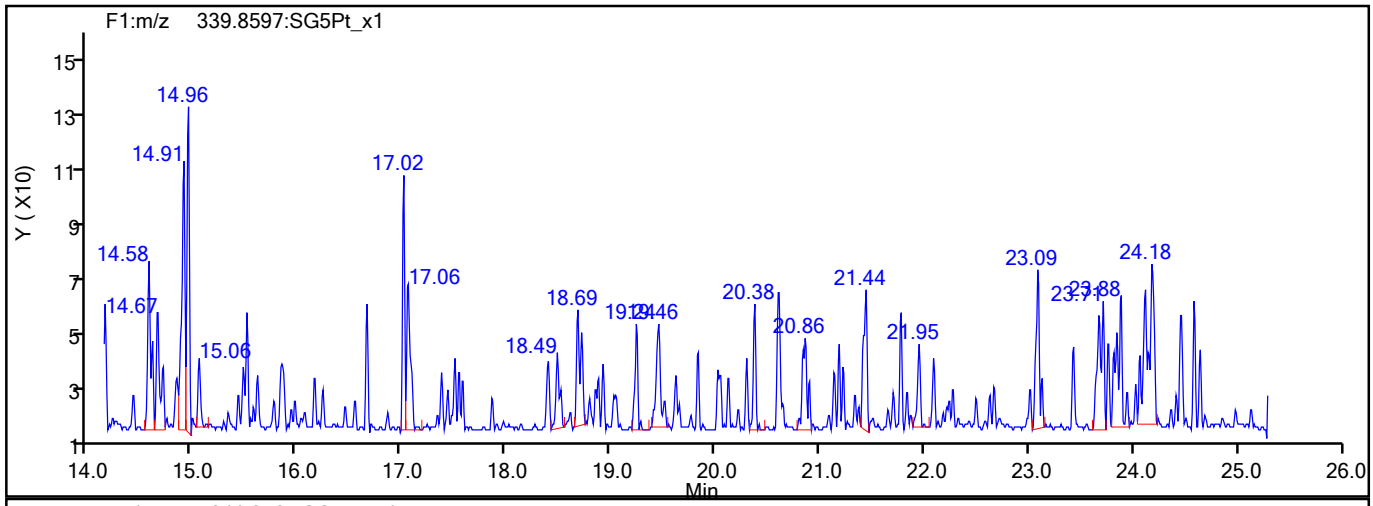

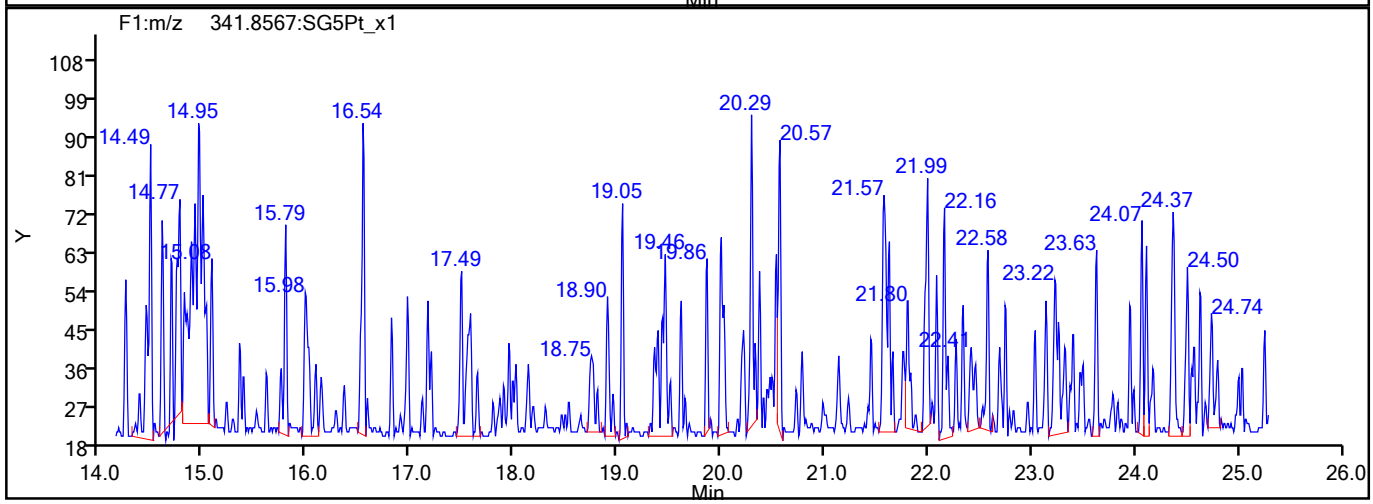

F1 PeCDFs Interference Mass

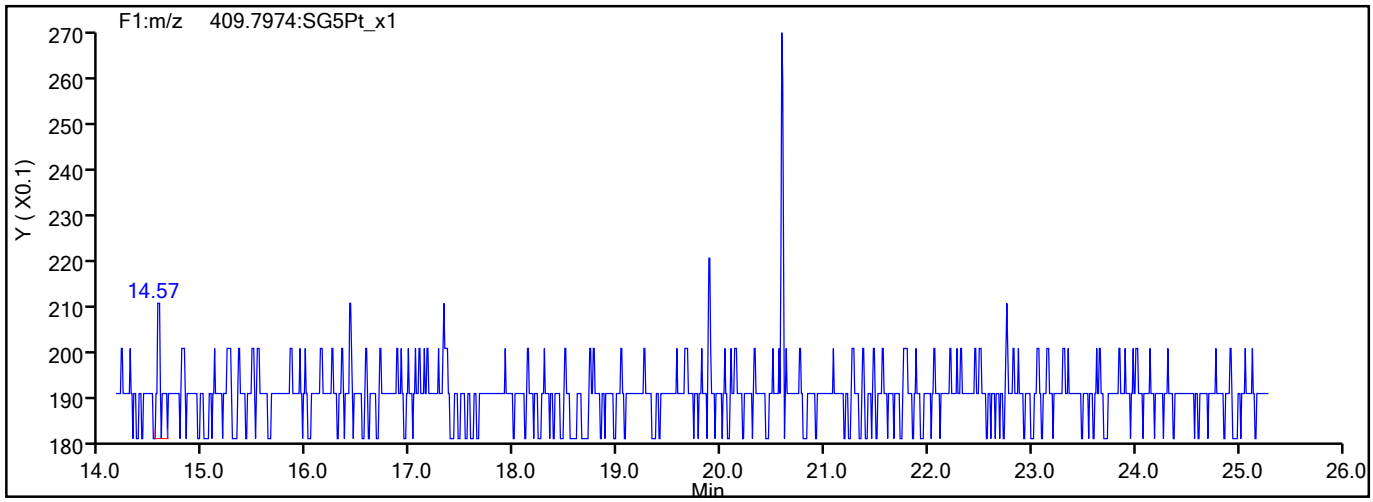

782226

Report Date: 19-Aug-2021 13:00:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

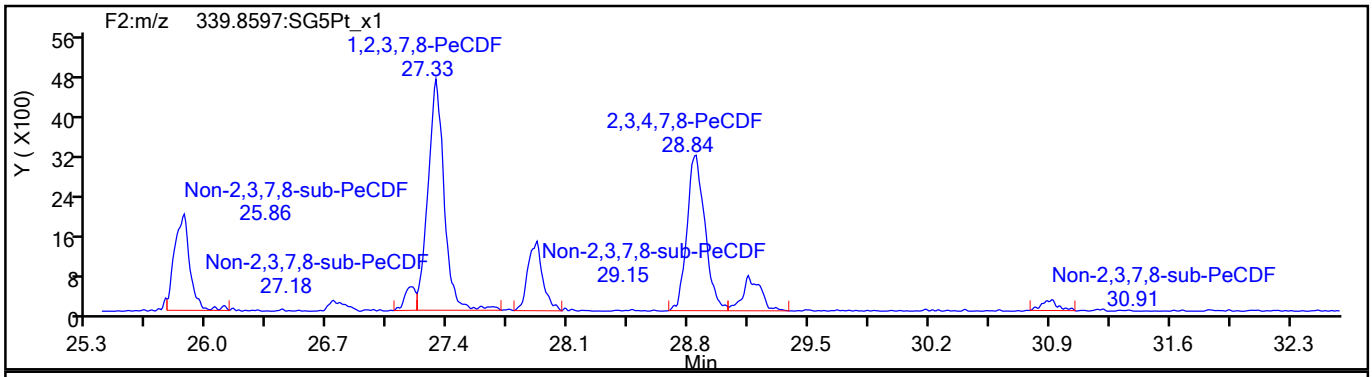

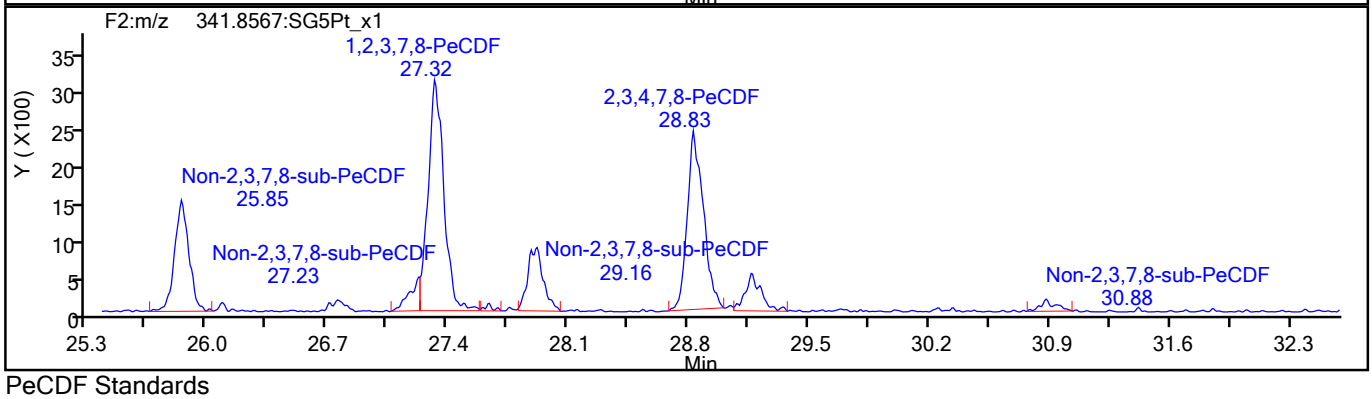

PeCDF Standards

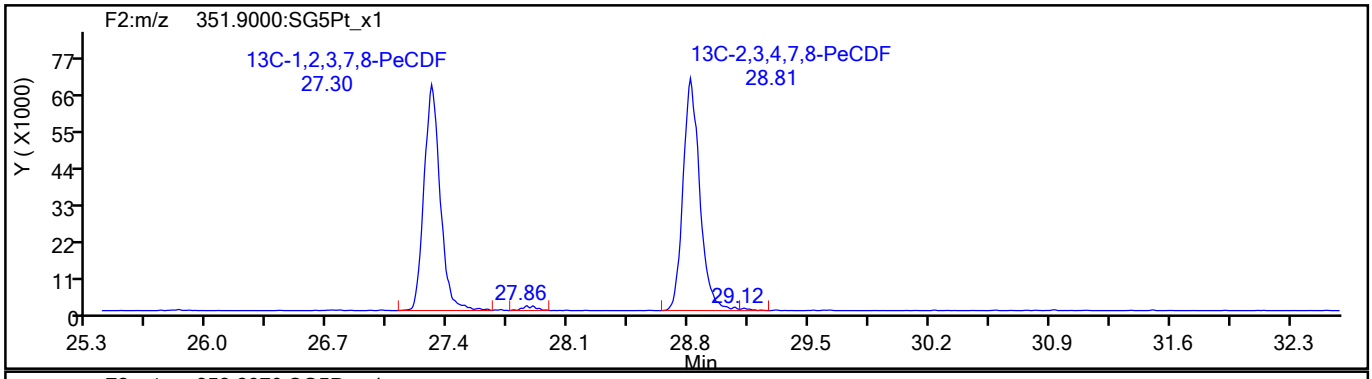

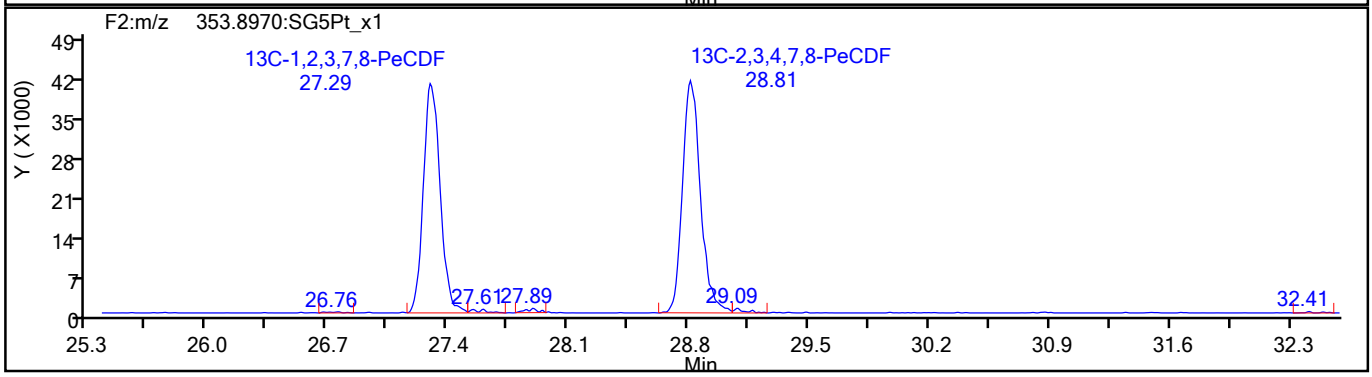

782227

Report Date: 19-Aug-2021 13:00:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

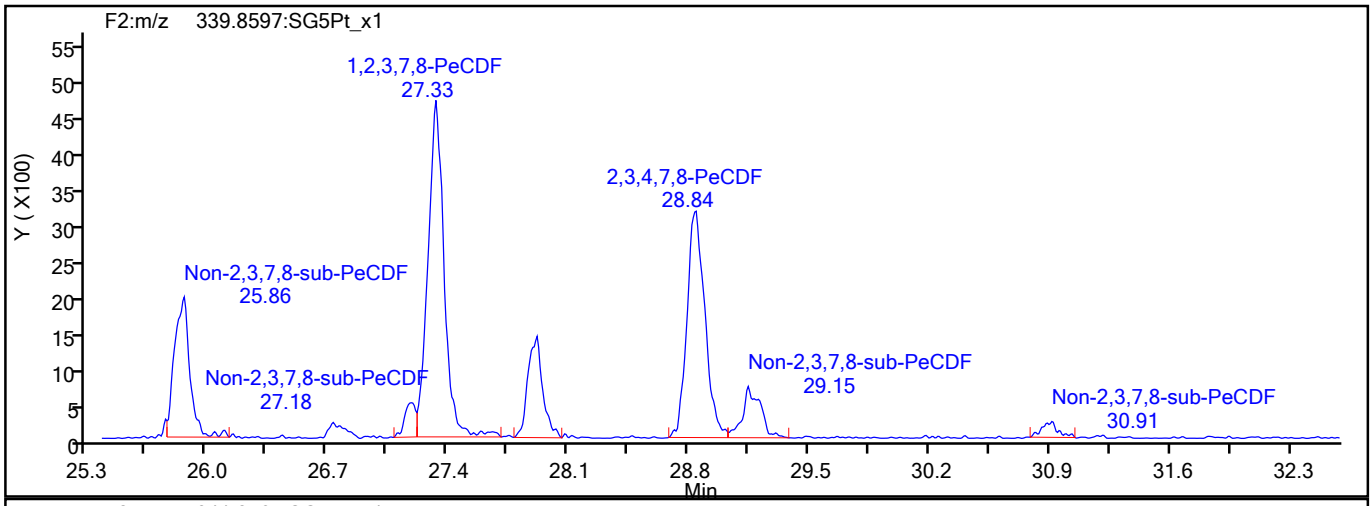

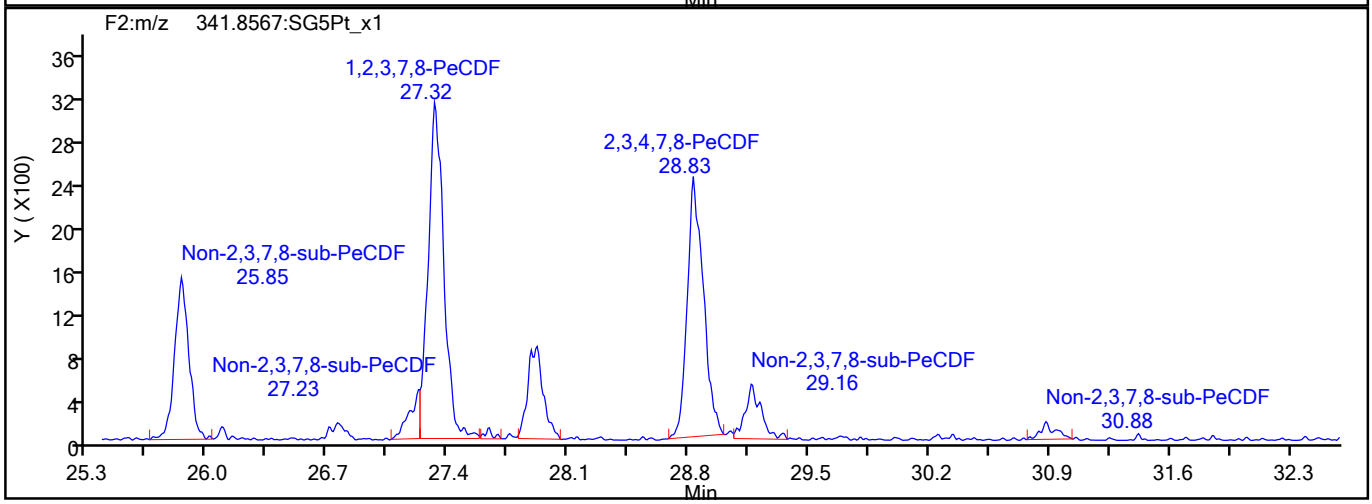

PeCDF Interference Mass

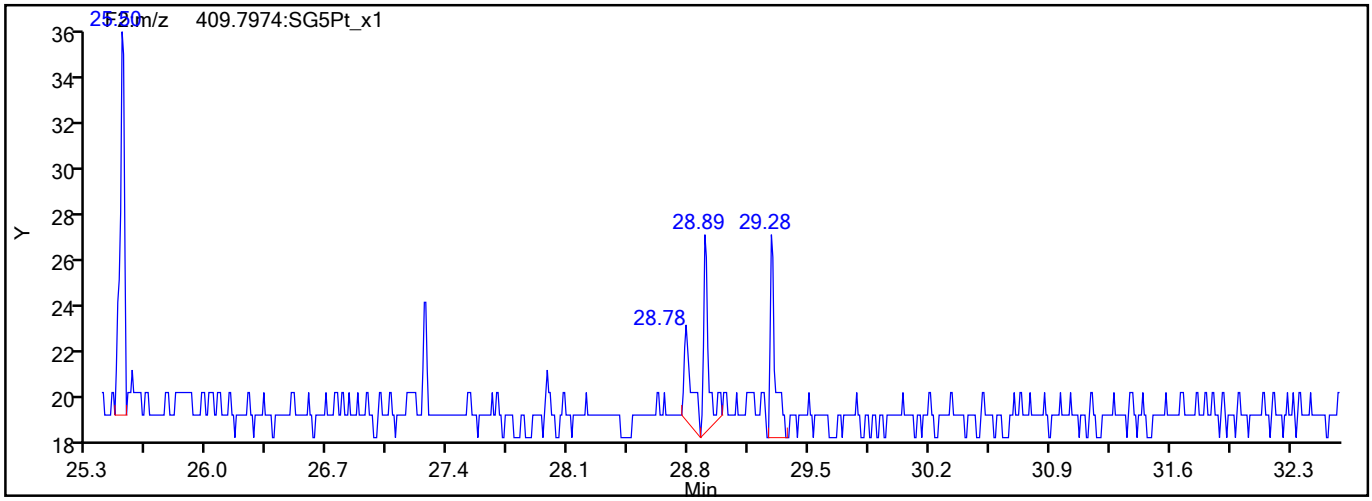

782228

Report Date: 19-Aug-2021 13:00:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

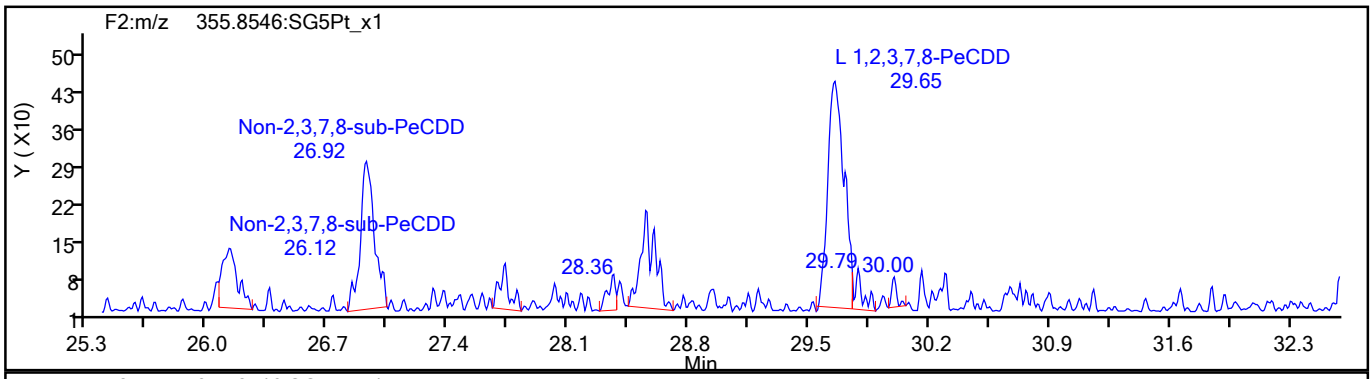

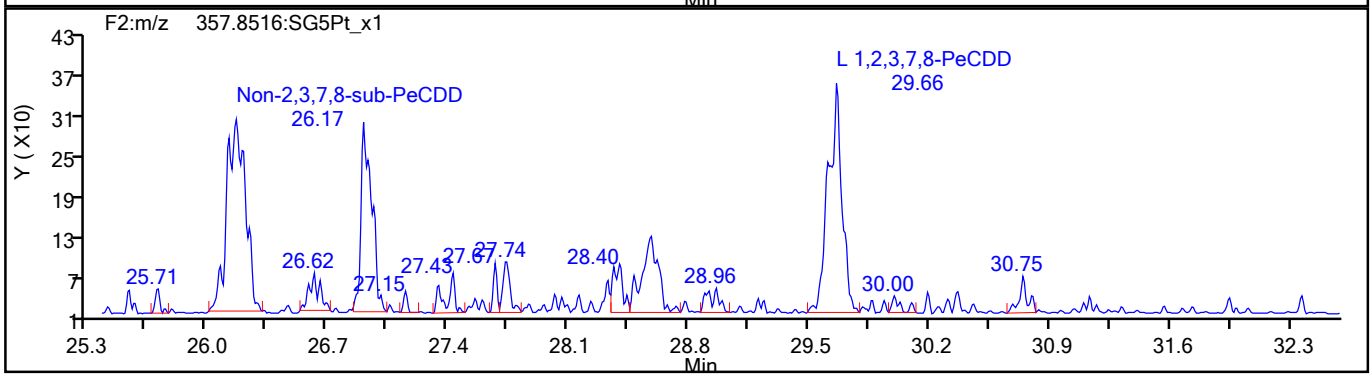

PeCDD Standards

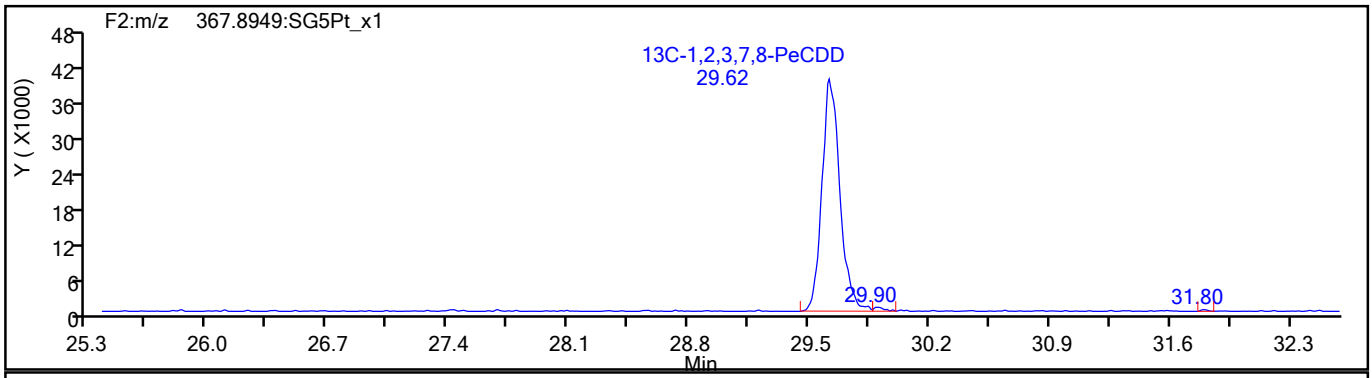

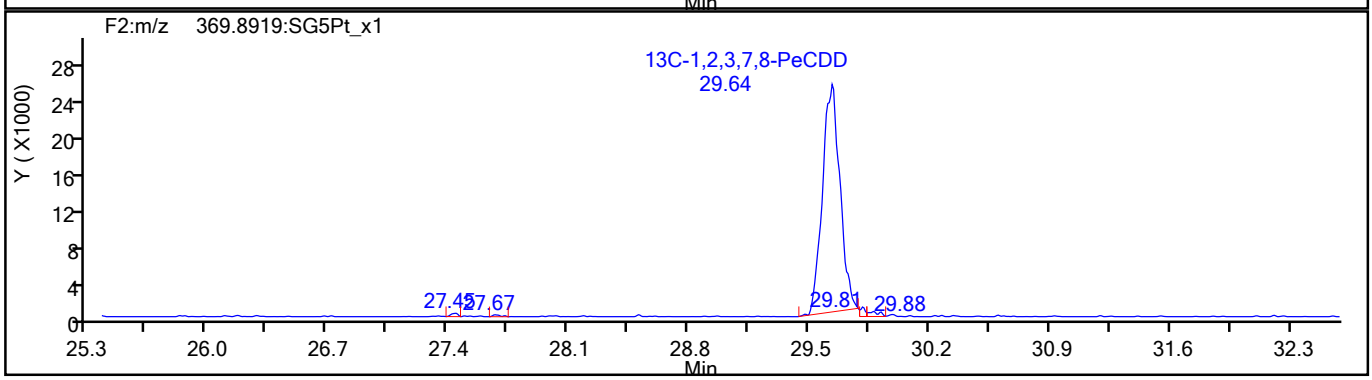

782229

Report Date: 19-Aug-2021 13:00:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

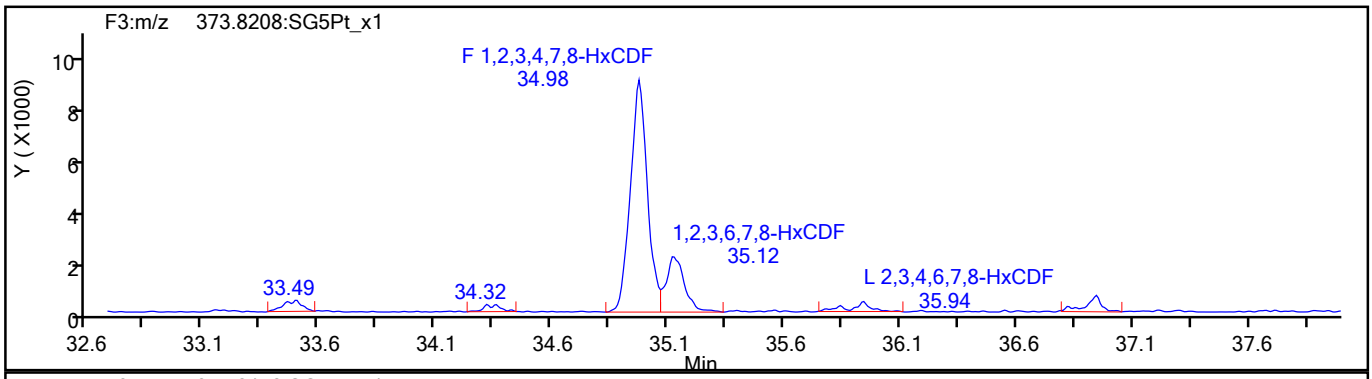

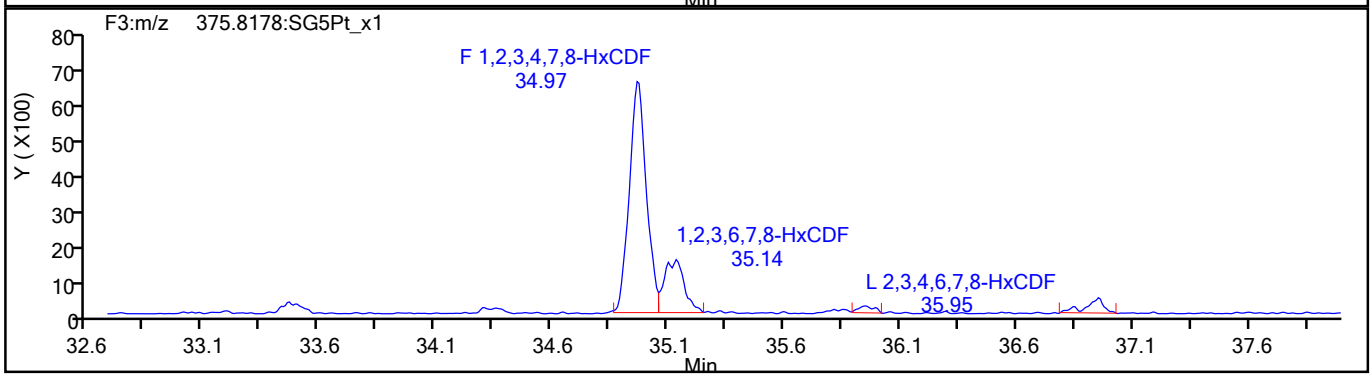

HxCDF Standards

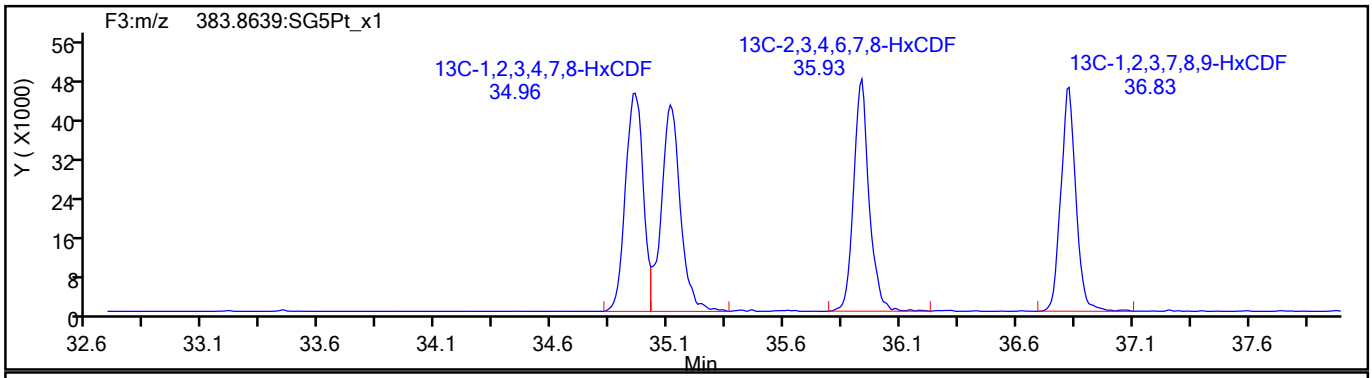

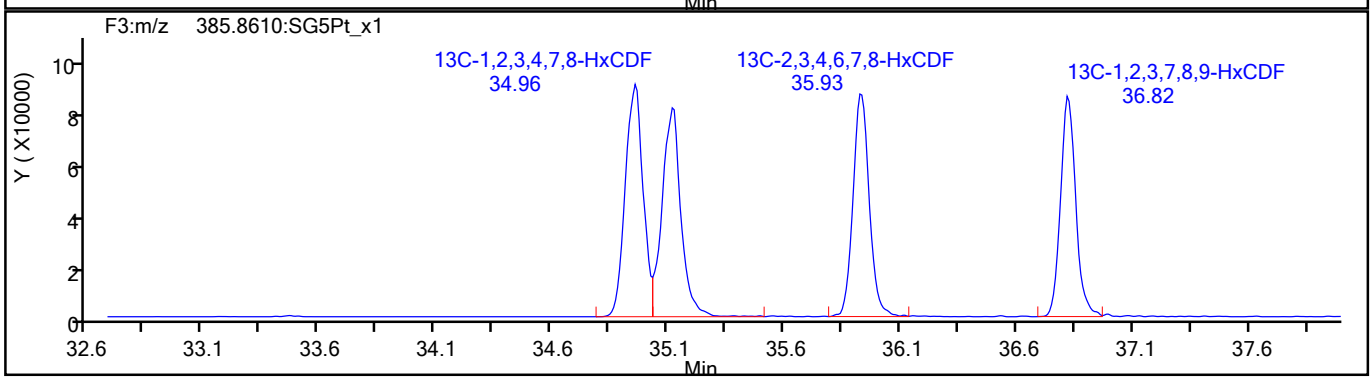

782230

Report Date: 19-Aug-2021 13:00:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

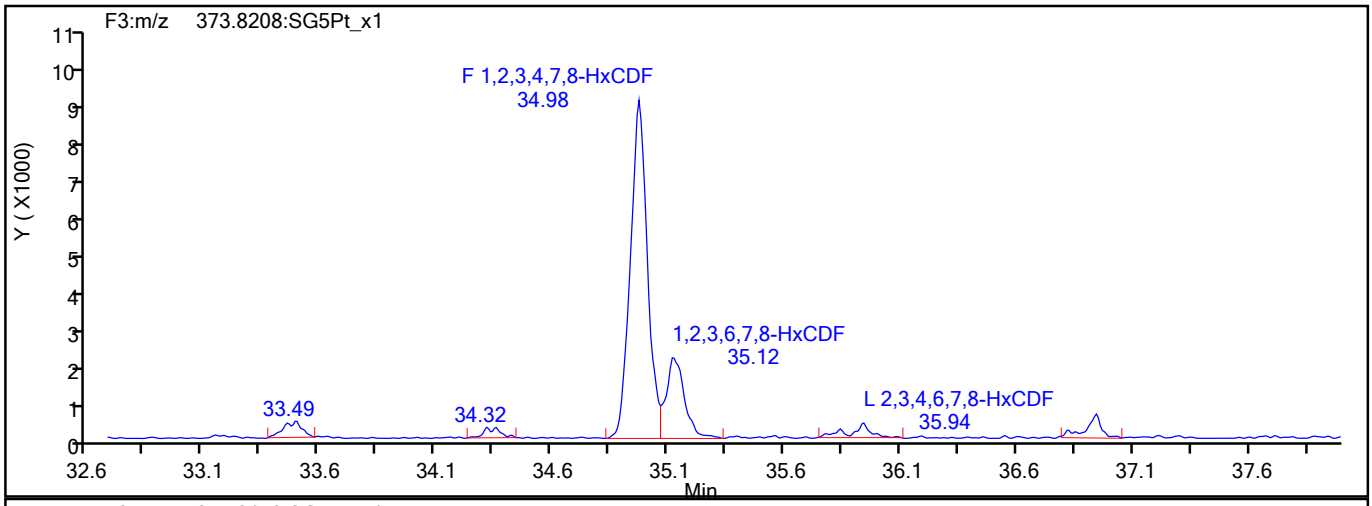

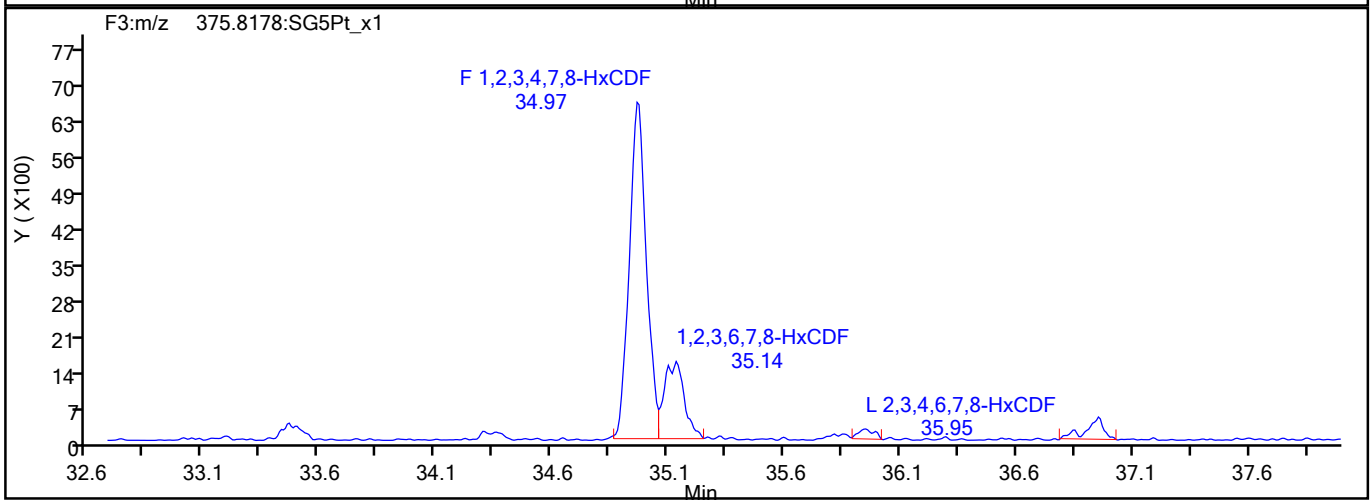

HxCDF Interference Mass

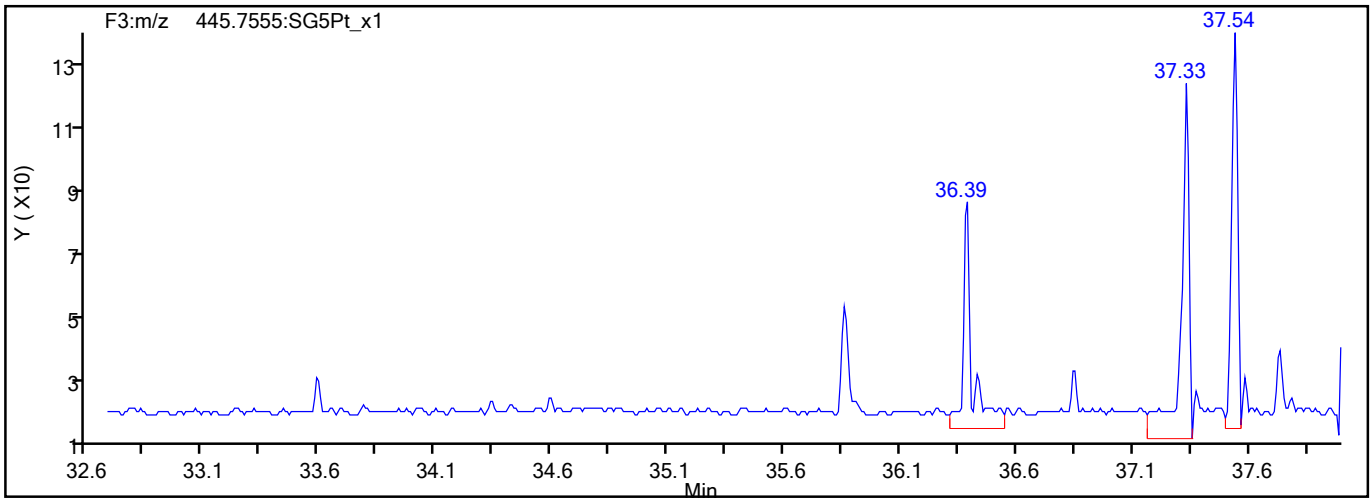

782231

Report Date: 19-Aug-2021 13:00:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

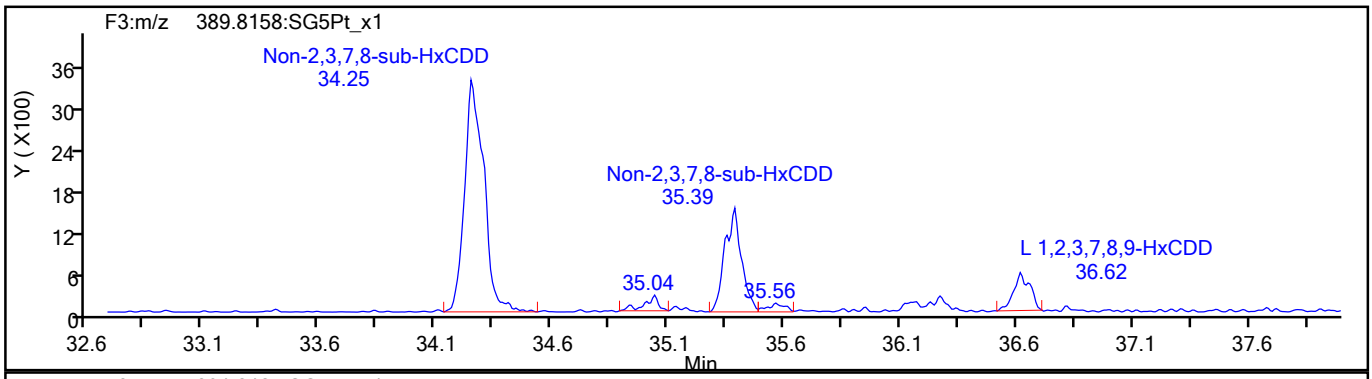

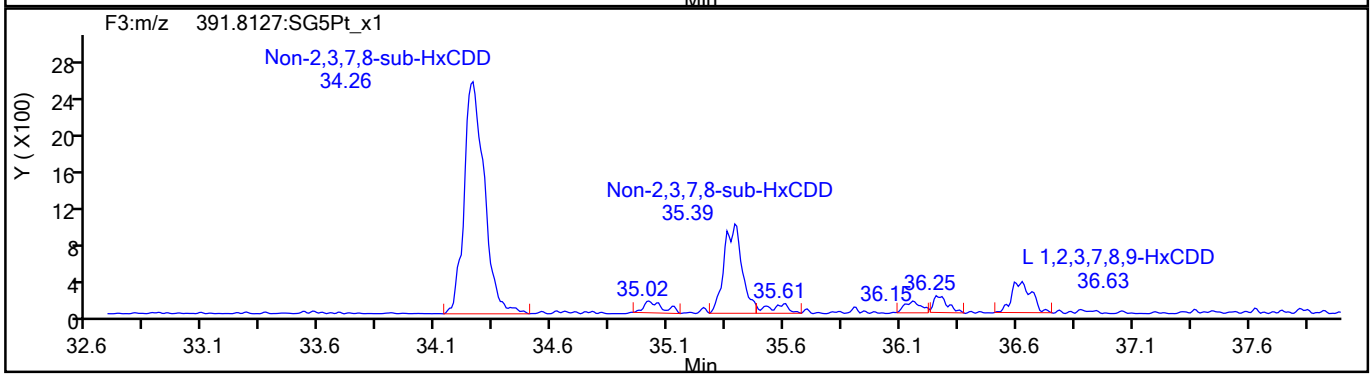

HxCDD Standards

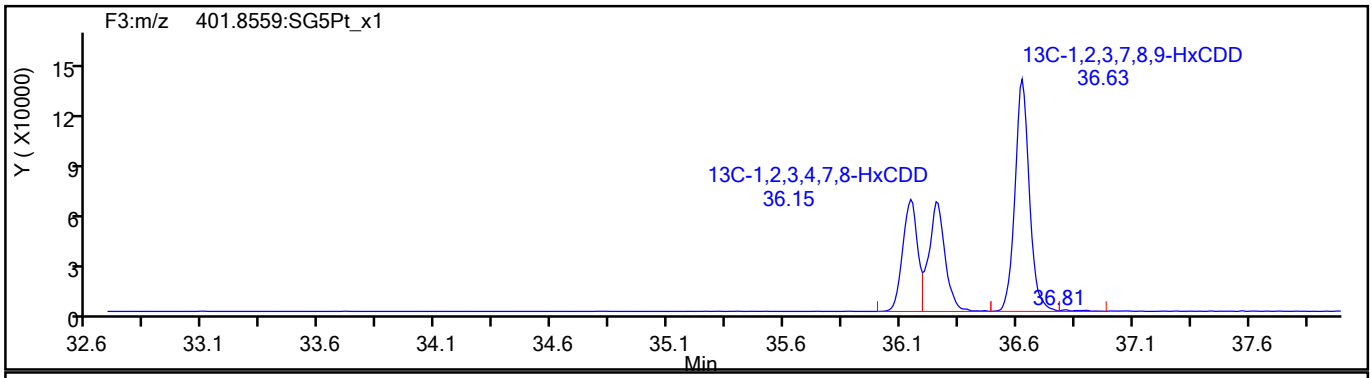

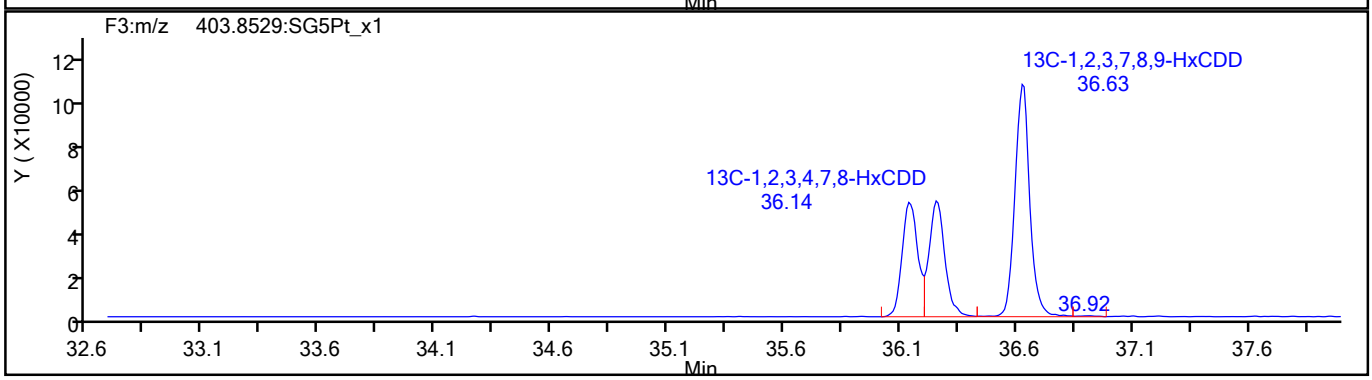

782232

Report Date: 19-Aug-2021 13:00:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

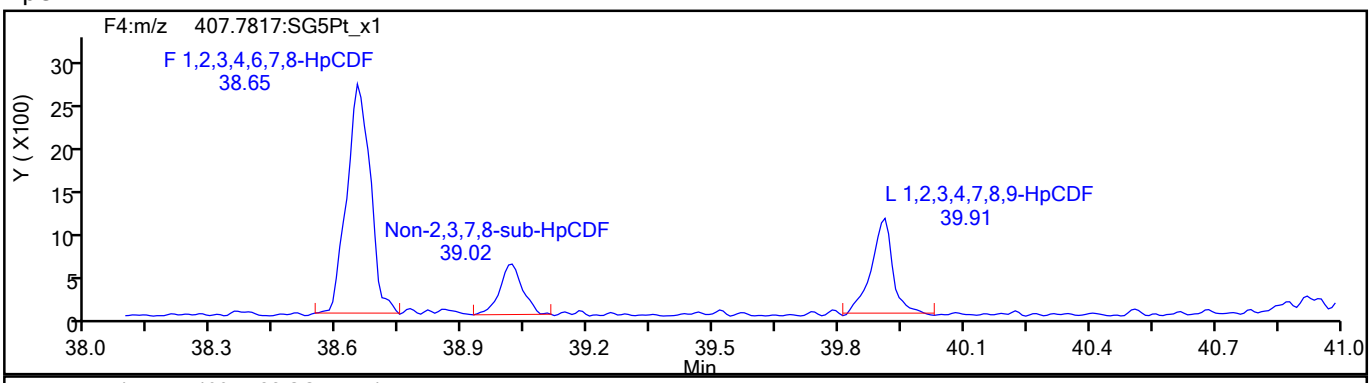

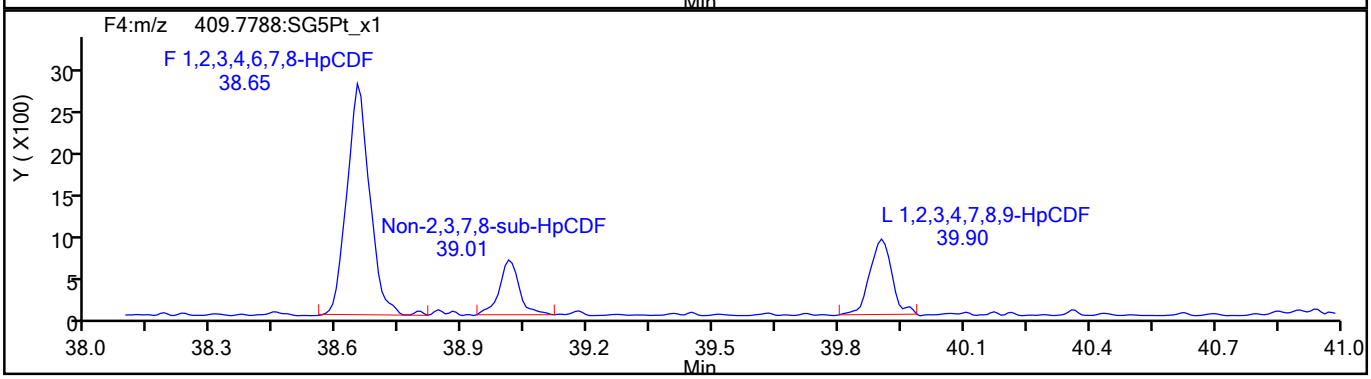

HpCDF Standards

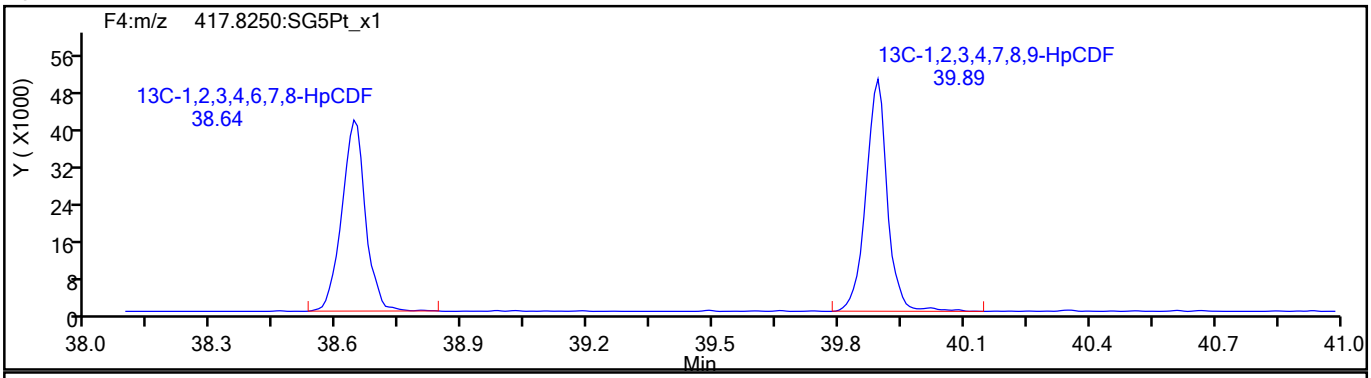

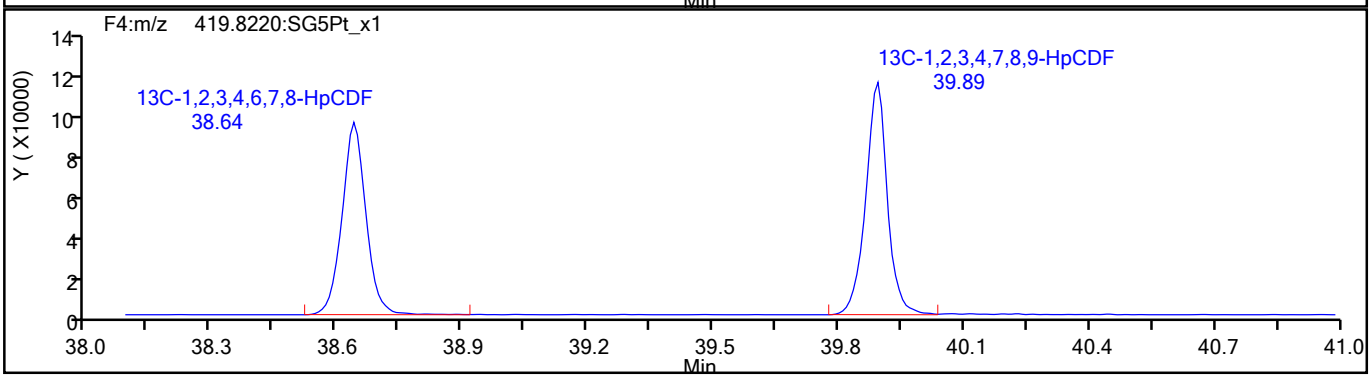

782233

Report Date: 19-Aug-2021 13:00:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

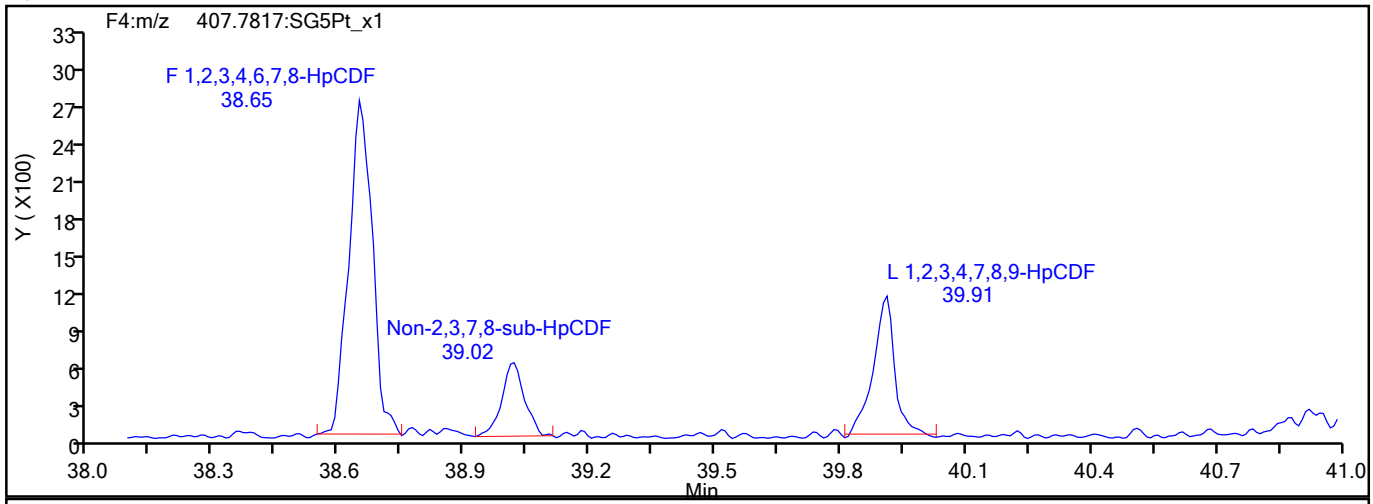

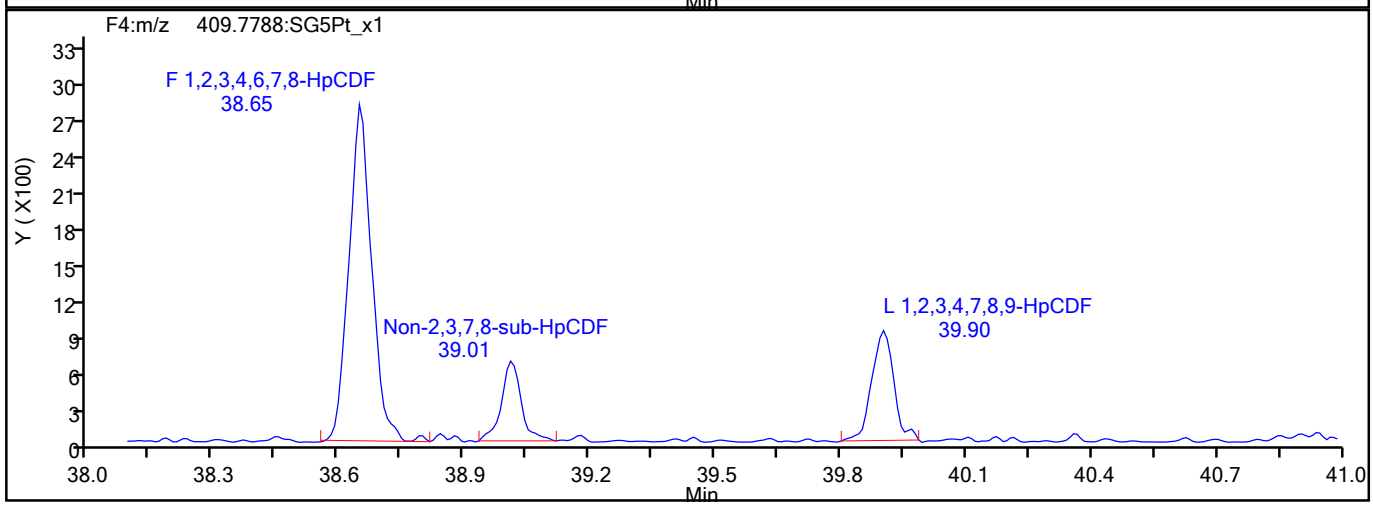

HpCDF Interference Mass

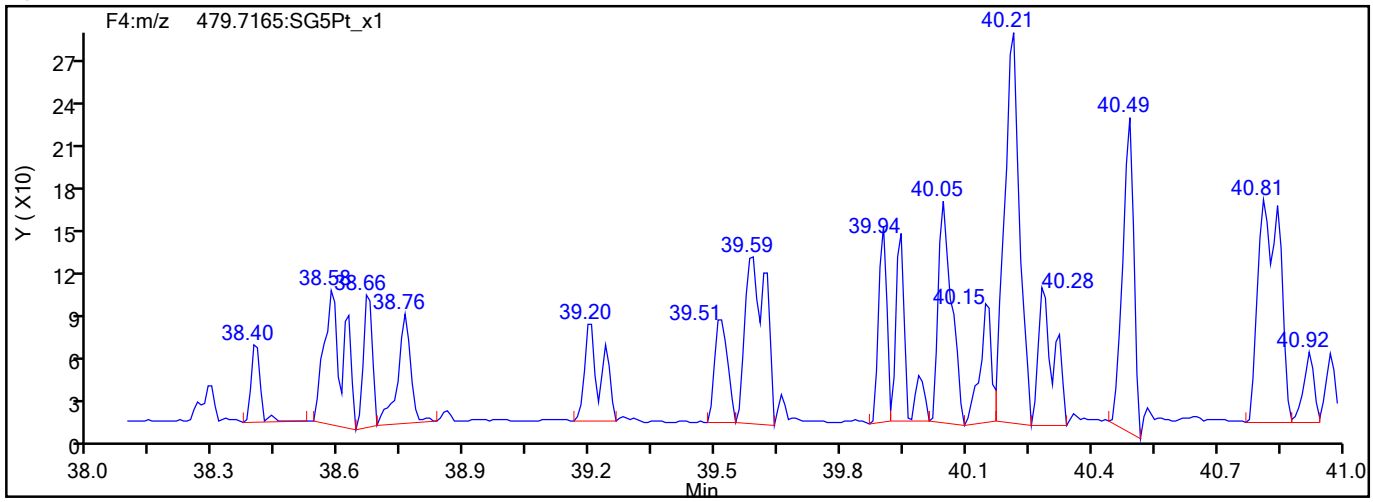

782234

Report Date: 19-Aug-2021 13:00:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

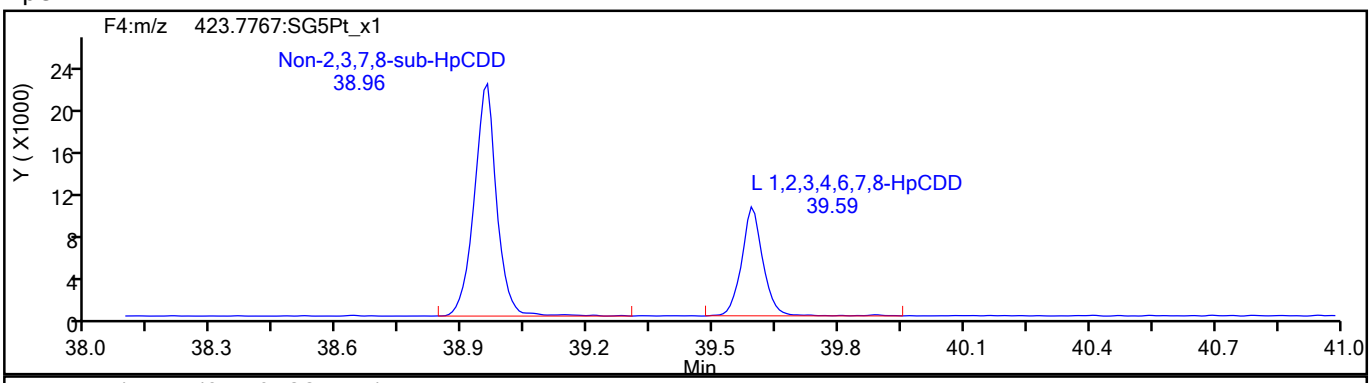

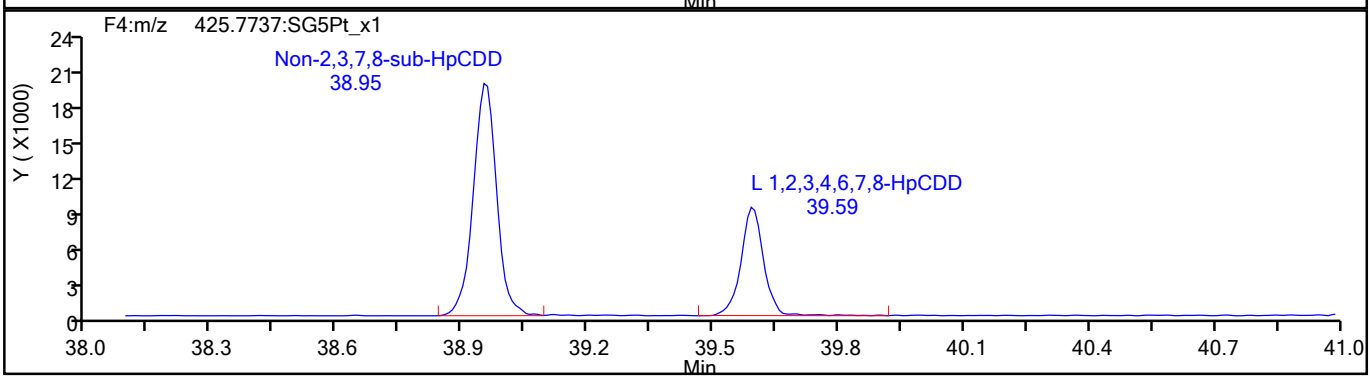

HpCDD Standards

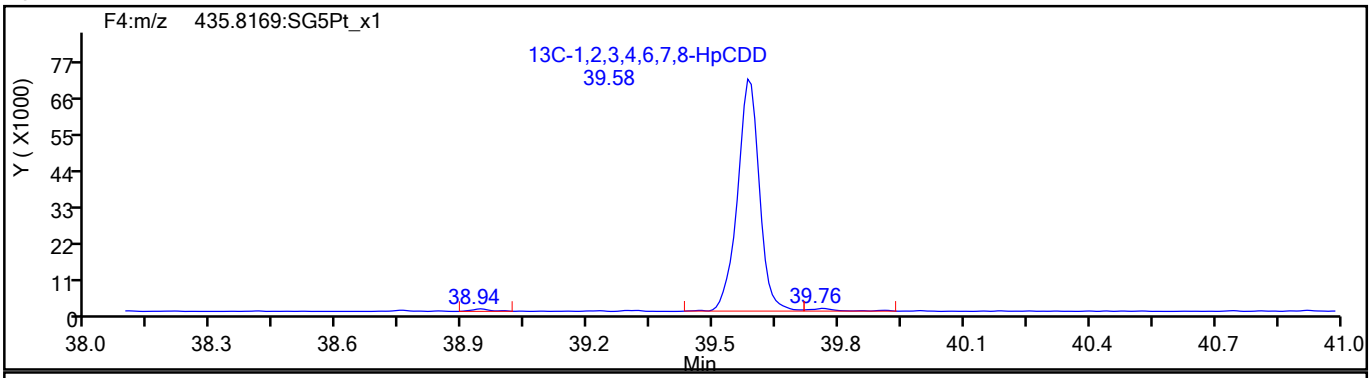

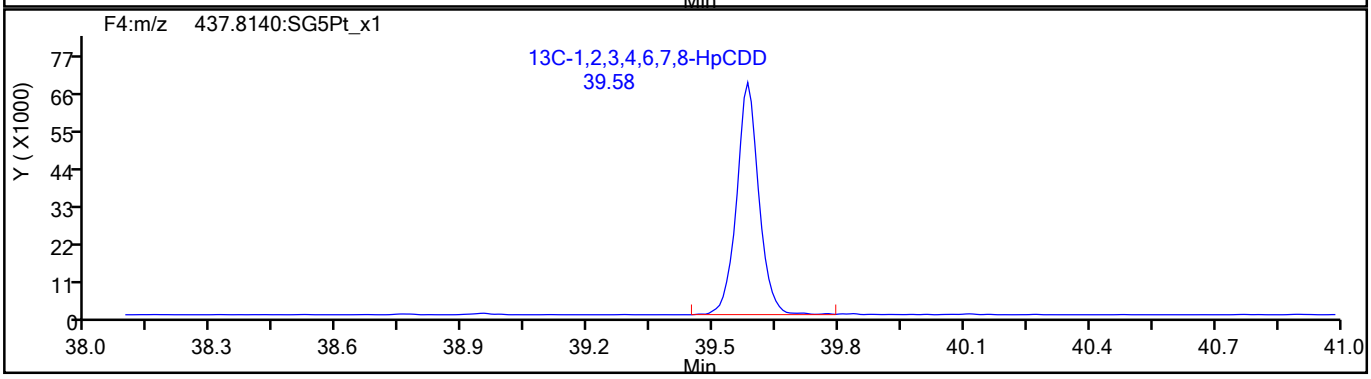

782235

Report Date: 19-Aug-2021 13:00:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

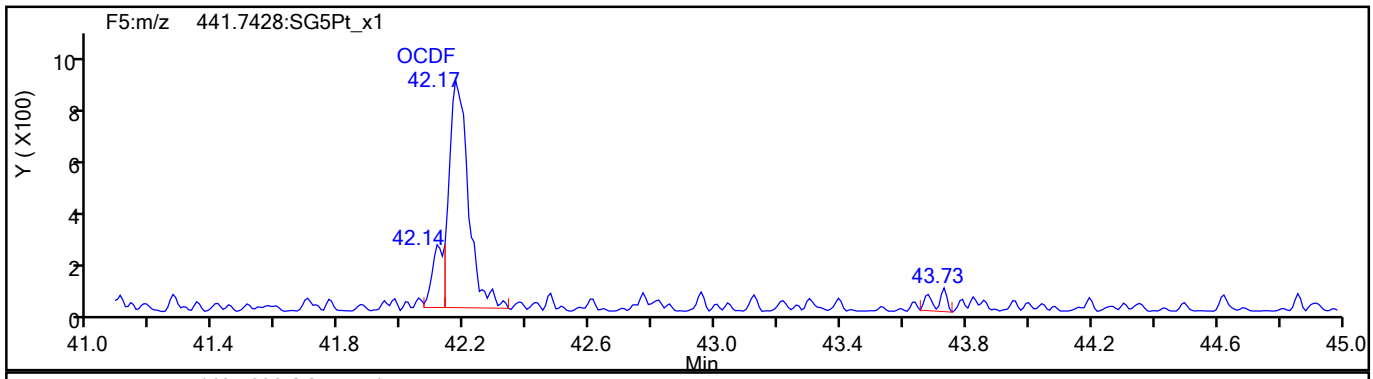

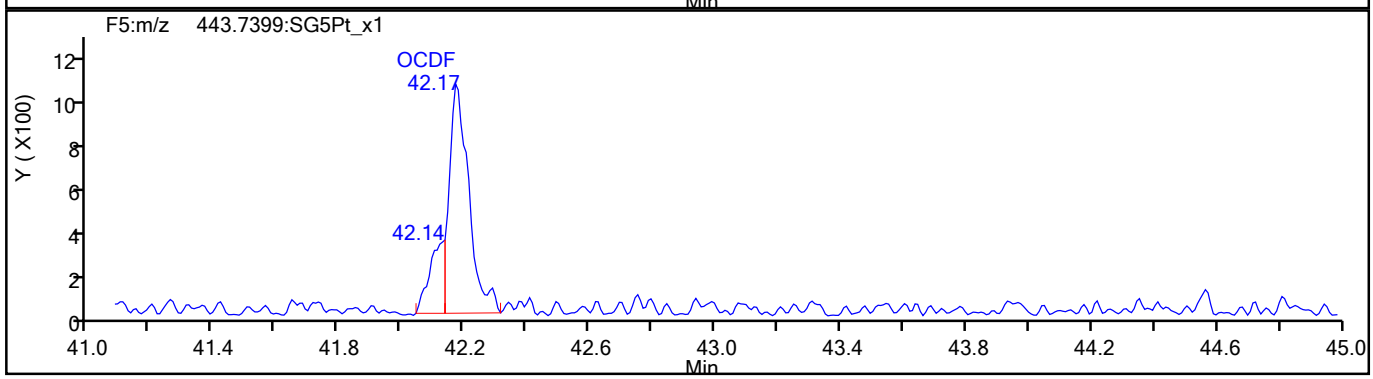

OCDF Standards

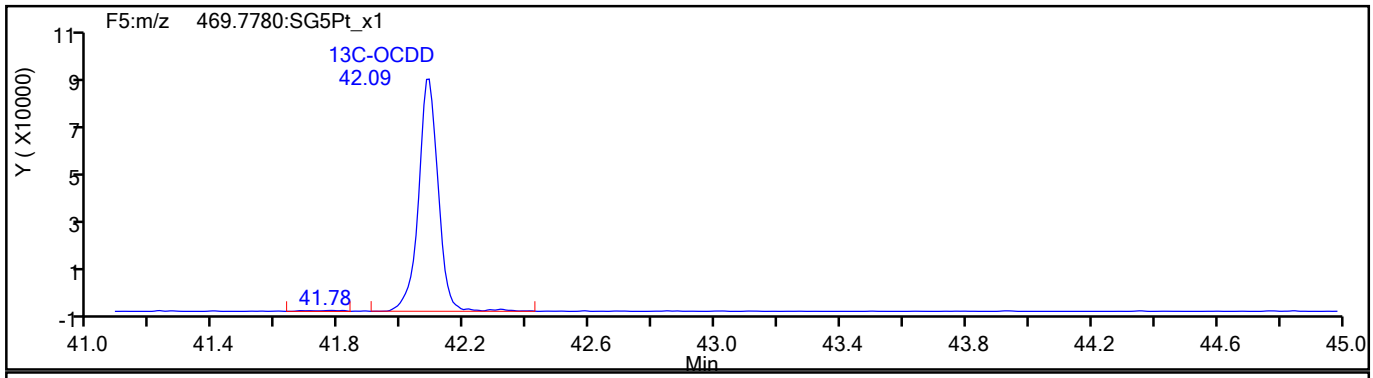

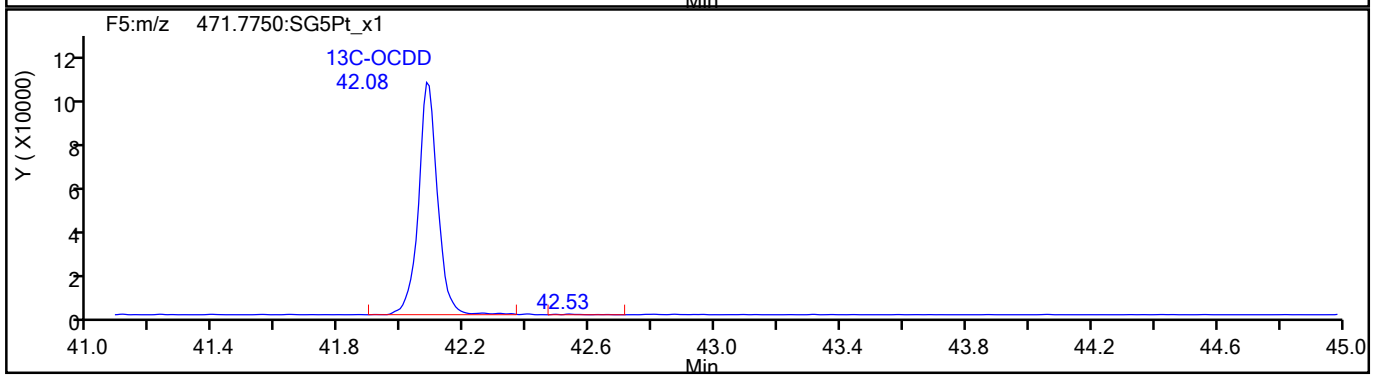

782236

Report Date: 19-Aug-2021 13:00:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

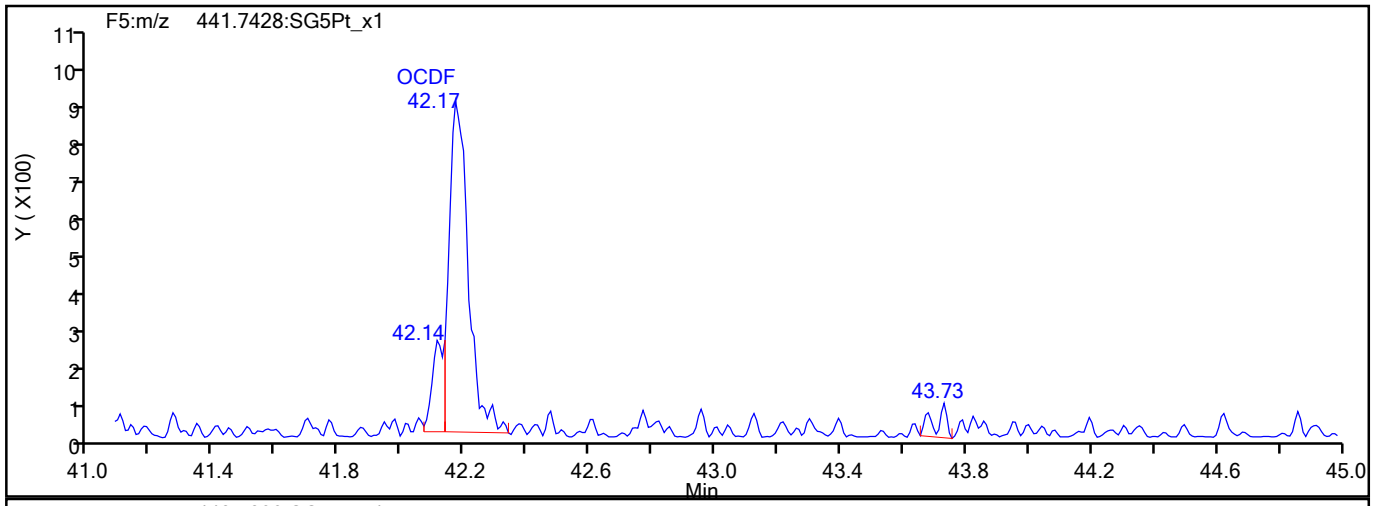

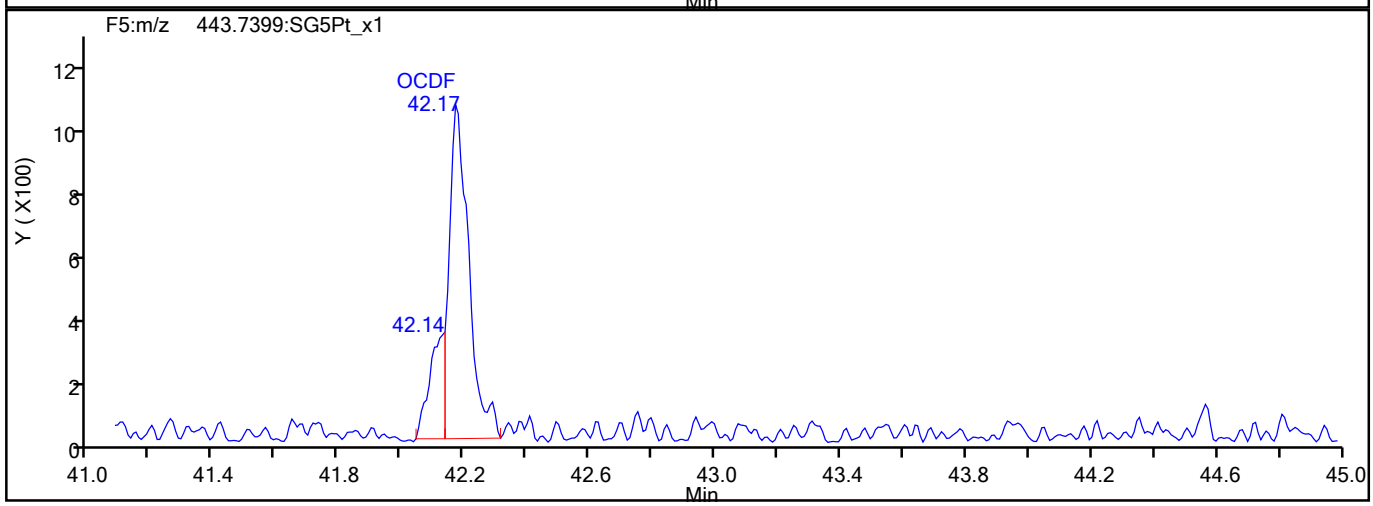

OCDF Interference Mass

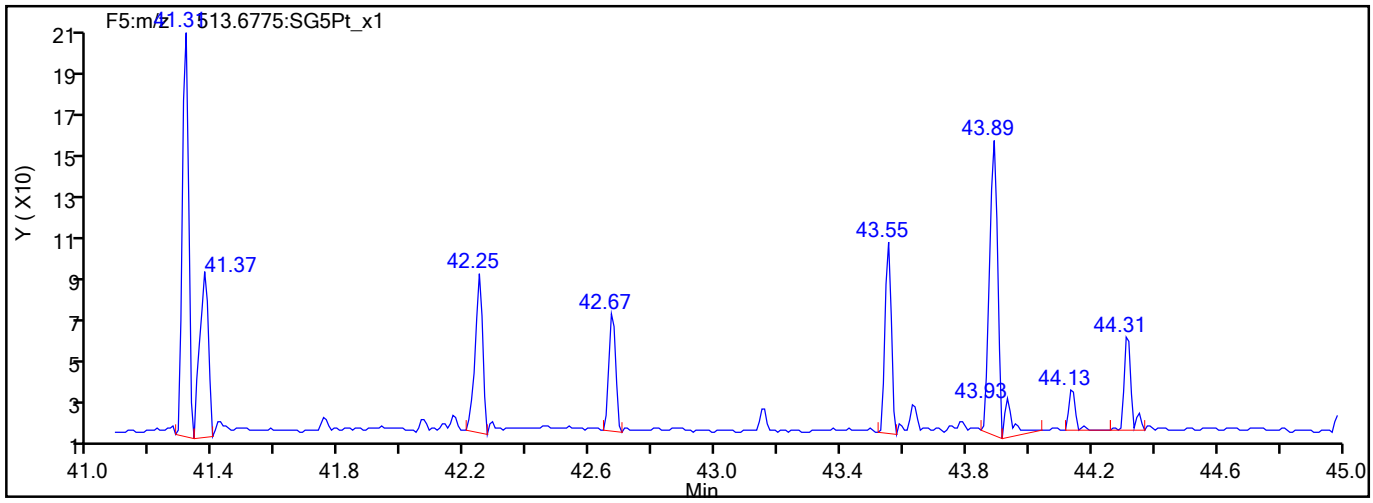

782237

Report Date: 19-Aug-2021 13:00:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

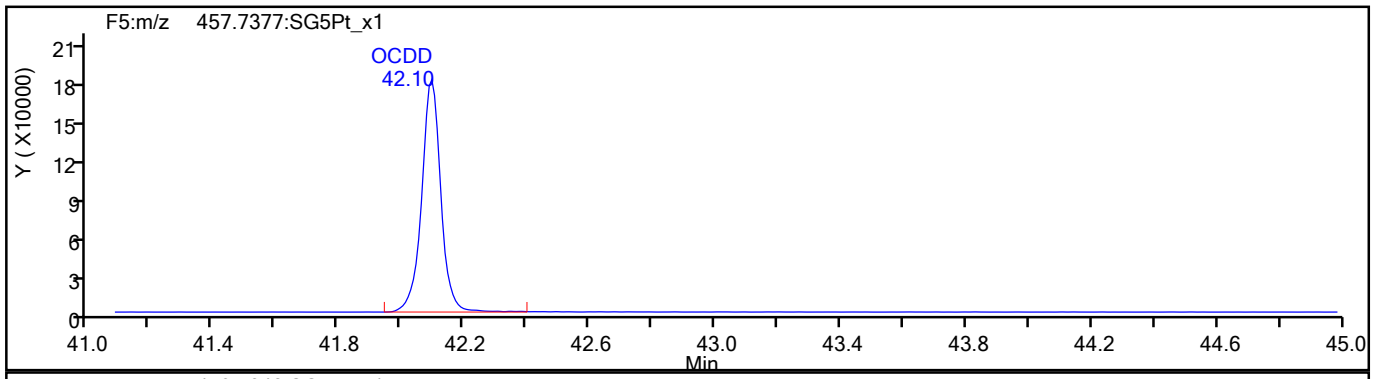

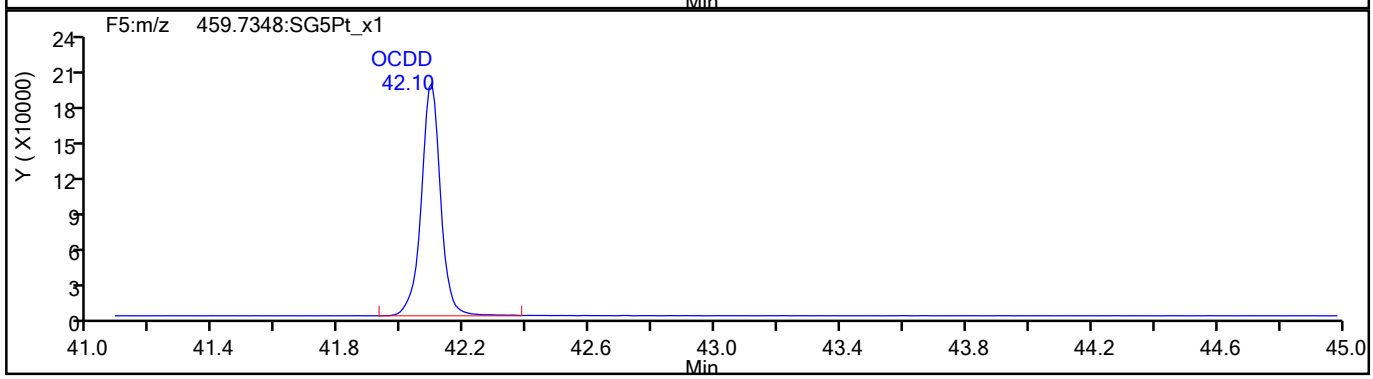

OCDD Standards

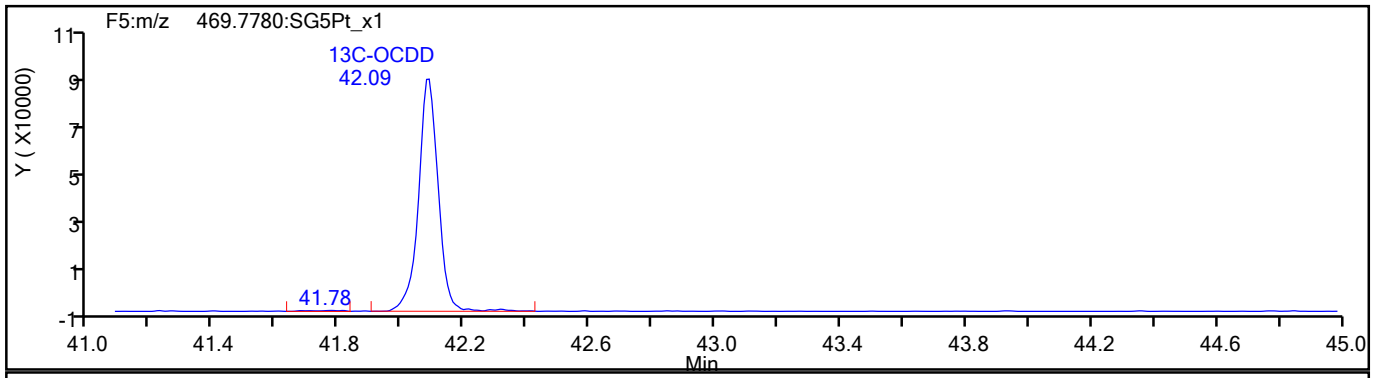

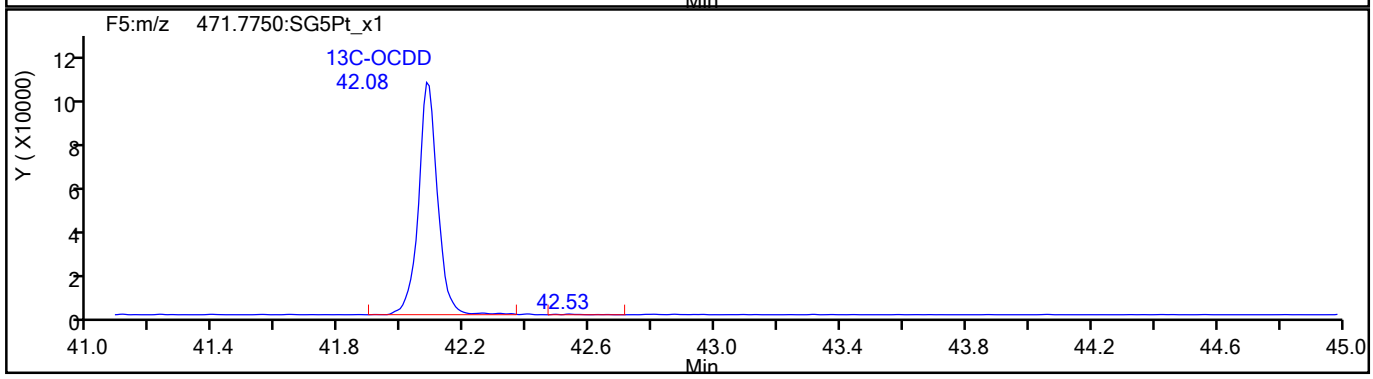

782238

Report Date: 19-Aug-2021 13:00:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

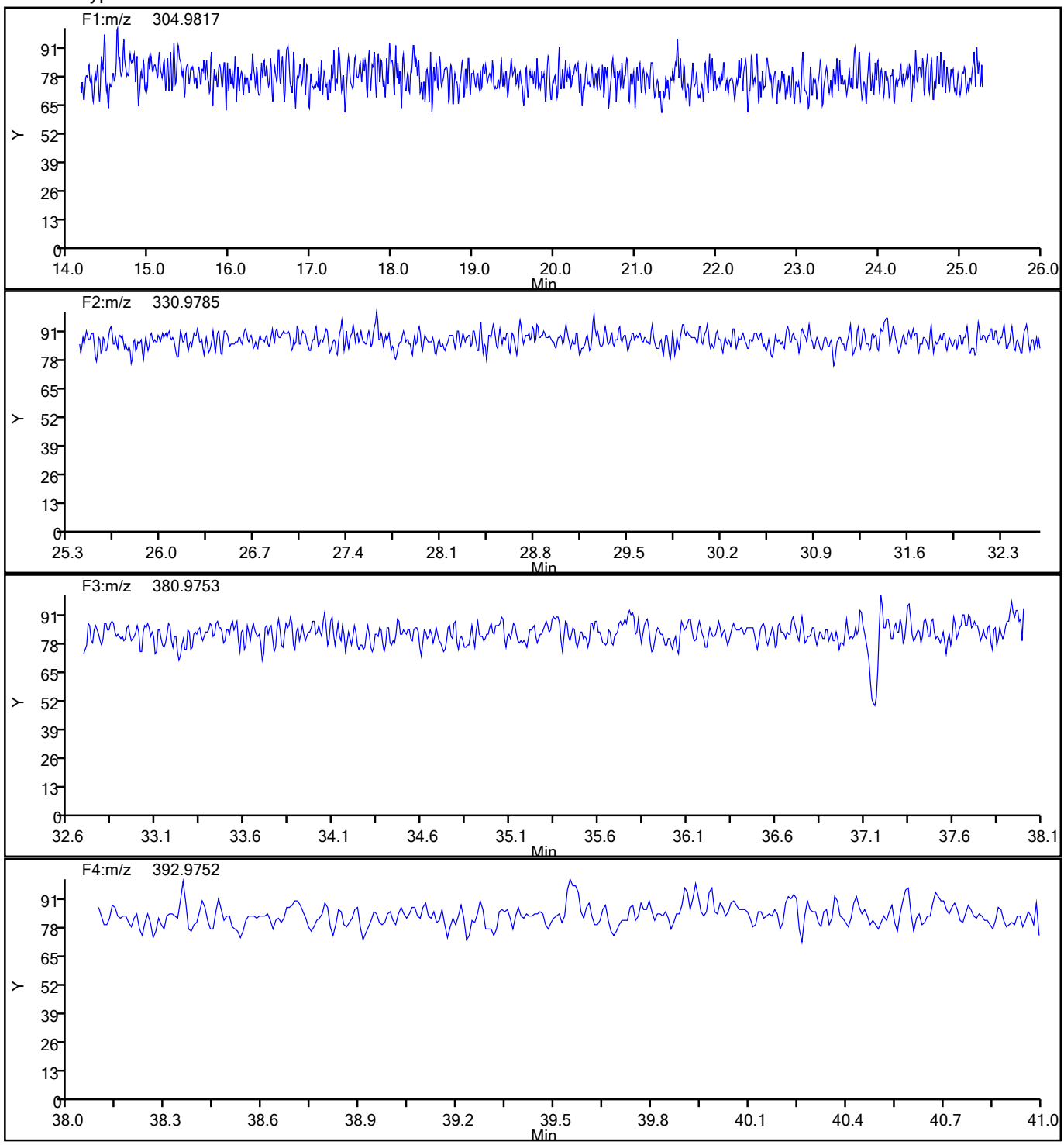

782239

Report Date: 19-Aug-2021 13:00:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_25.d		
Injection Date:	18-Aug-2021 08:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	517281	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

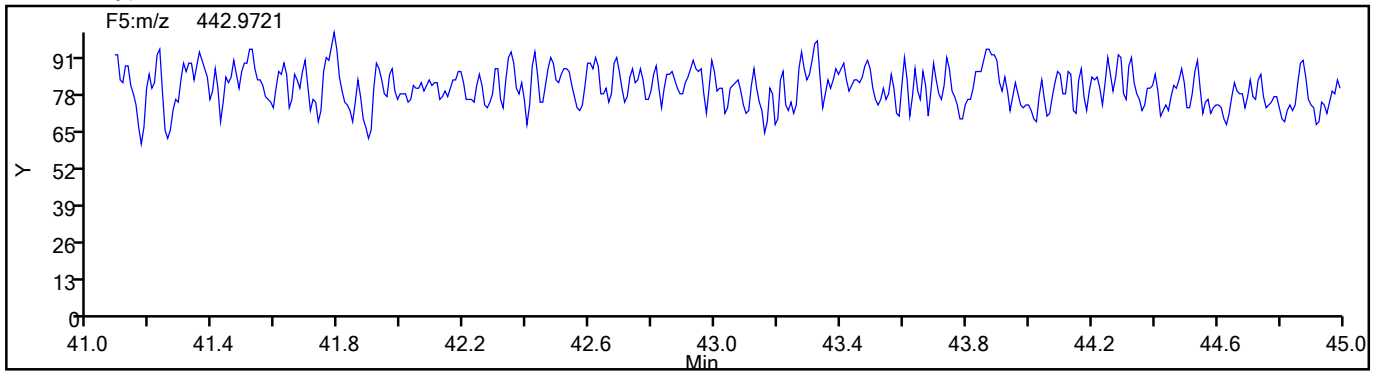

782240

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (4-6) RA
Lab Sample ID: 320-76887-3 RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_009.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:55
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.55(g)
Date Analyzed: 08/25/2021 18:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	910	E	1.4	1.1

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	63		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	74		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_009.d
Lims ID: 320-76887-A-3-A
Client ID: 11215702-072721-BN-SJSB096 (4-6)
Sample Type: Client
Inject. Date: 25-Aug-2021 18:05:31 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-3-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:06:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.274	39983944	0.70	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.590	33452704	0.81	1.3327	62.8	62.8	0.4225	0.4225	62.78	
2,3,7,8-TCDF	17.604	112202979	0.77	0.9978	336.1	336.1	0.3924	0.3924		E
D 13C-2,3,7,8-TCDD	16.040	22051247	0.79	0.8749	63.0	63.0	2.981	2.981	63.03	
2,3,7,8-TCDD	16.054	19200597	0.79	1.0570	82.4	82.4	0.4763	0.4763		
$ 37Cl4-2,3,7,8-TCDD	16.054	10220243		0.8648	29.6	29.6	0.1297	0.1297	73.89	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

782242

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_009.d
Lims ID: 320-76887-A-3-A
Client ID: 11215702-072721-BN-SJSB096 (4-6)
Sample Type: Client
Inject. Date: 25-Aug-2021 18:05:31 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-3-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:06:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.274	16.298	-1		16521293	3662931	38107	95267	96		
333.9339	16.274	16.298	-1		23462651	5109002	53416	133540	96	0.70(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.590	17.615	-1	1.081	14993679	2833684	9258	23145	306		
317.9389	17.590	17.615	-1	1.081	18459025	3431012	10498	26245	327	0.81(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.604	17.628	-1	1.001	48679508	9132259	5077	12692	1799		
305.8987	17.604	17.628	-1	1.001	63523471	12135017	4734	11835	2563	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.040	16.065	-1	0.986	9743297	2191509	38107	95267	58		
333.9339	16.040	16.065	-1	0.986	12307950	2871639	53416	133540	54	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.054	16.078	-1	1.001	8503420	1871535	6337	15842	295		
321.8936	16.054	16.078	-1	1.001	10697177	2396446	3859	9647	621	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.054	16.078	-1	0.987	10220243	2350620	3935	9837	597		

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 26-Aug-2021 09:30:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_009.d		
Injection Date:	25-Aug-2021 18:05:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	519744	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

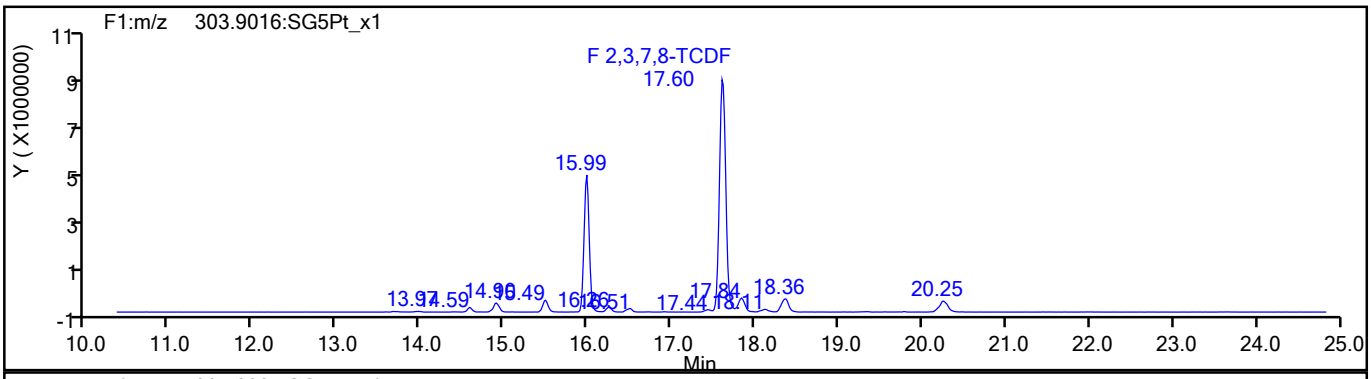

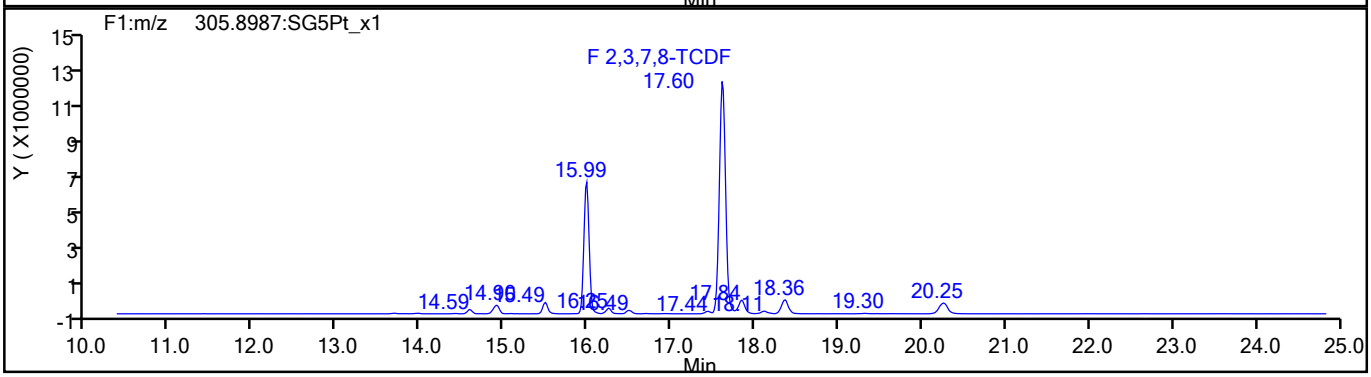

TCDF Standards

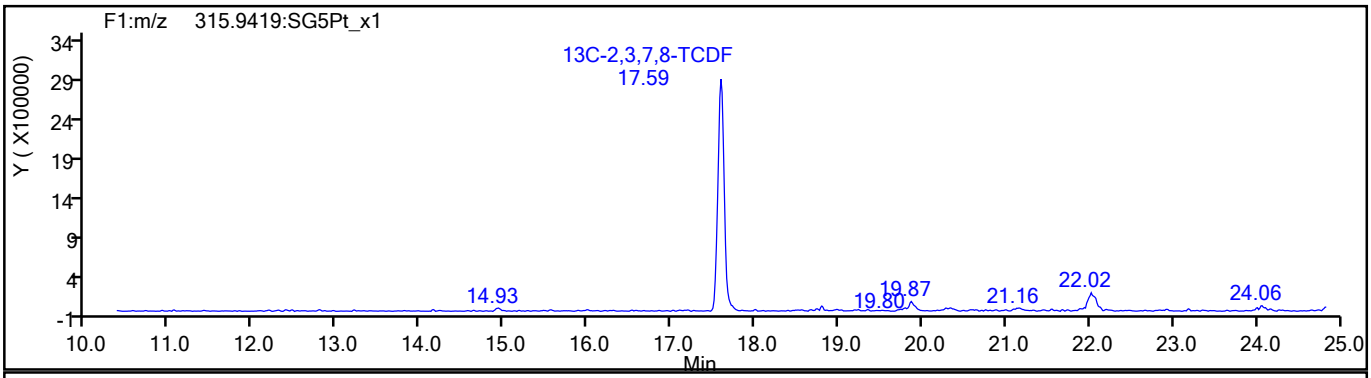

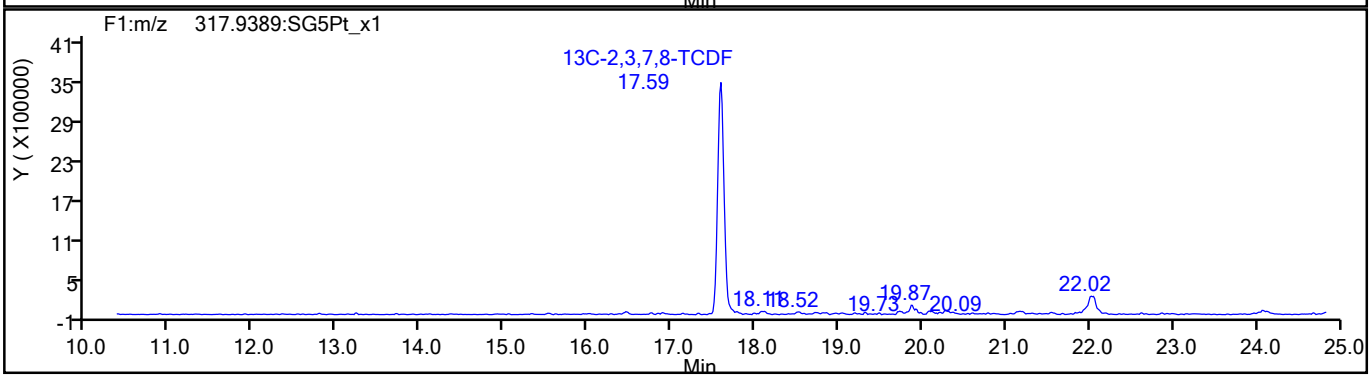

782244

Report Date: 26-Aug-2021 09:30:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_009.d		
Injection Date:	25-Aug-2021 18:05:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	519744	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

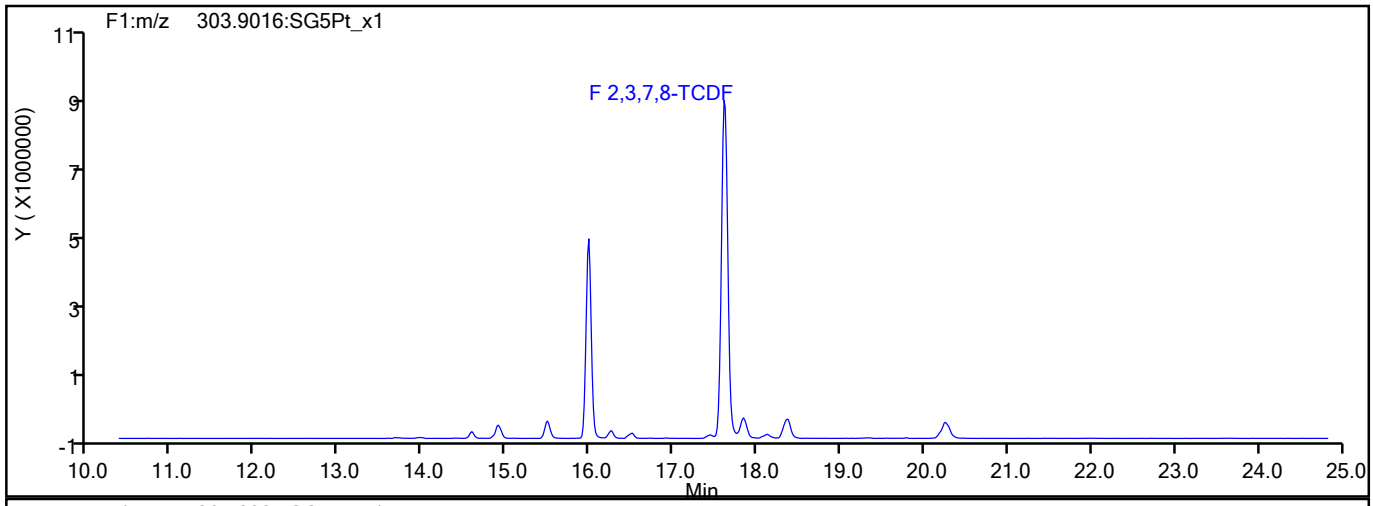

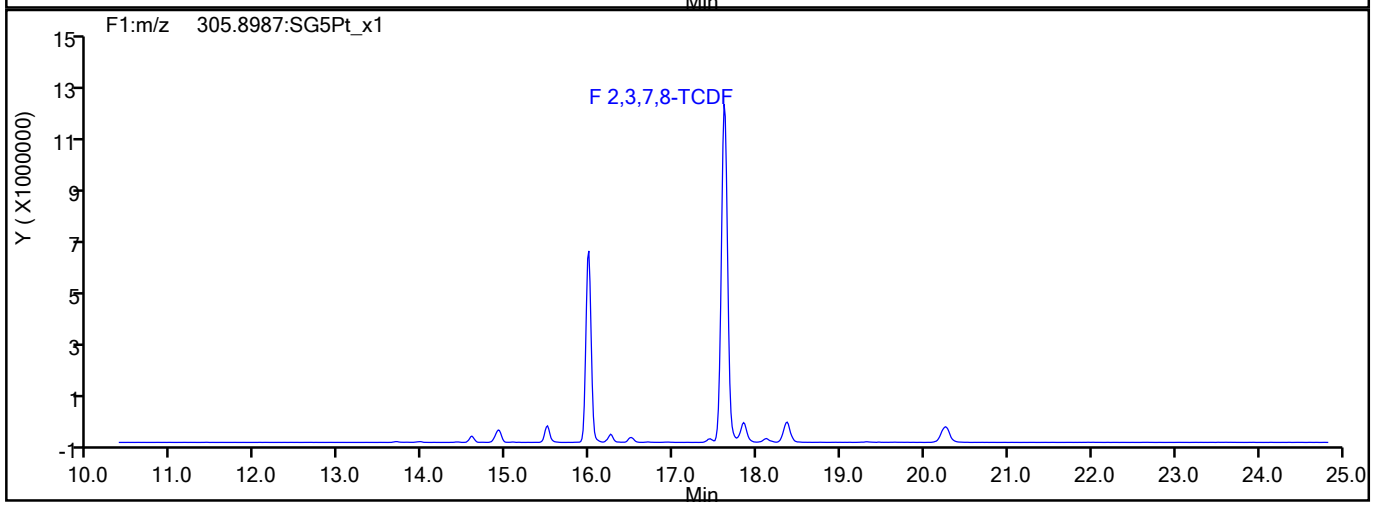

TCDF Interference Mass

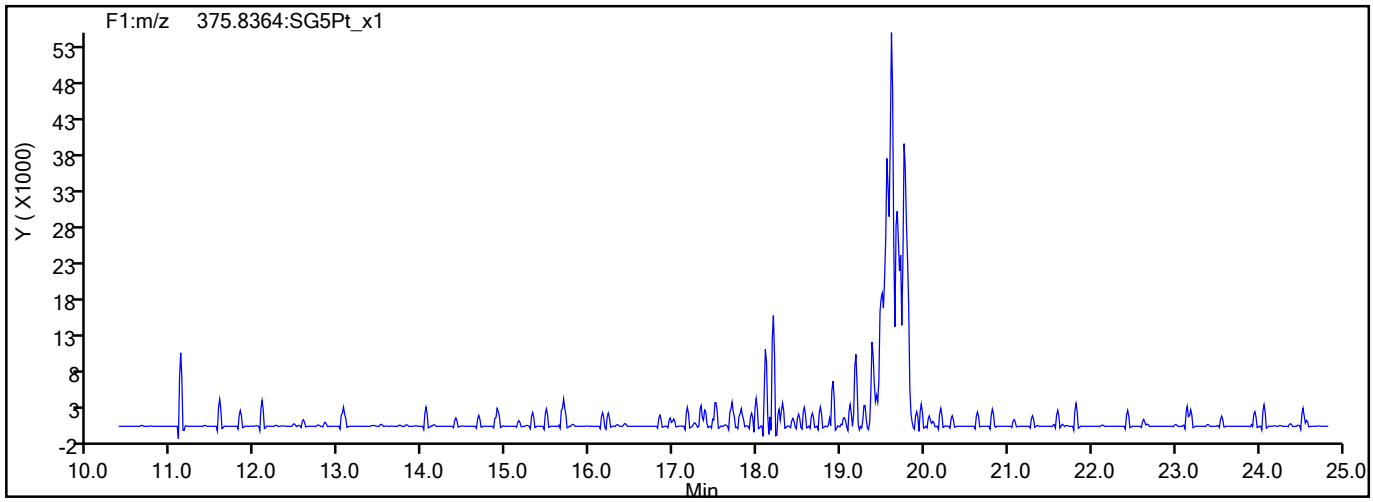

782245

Report Date: 26-Aug-2021 09:30:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_009.d		
Injection Date:	25-Aug-2021 18:05:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	519744	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

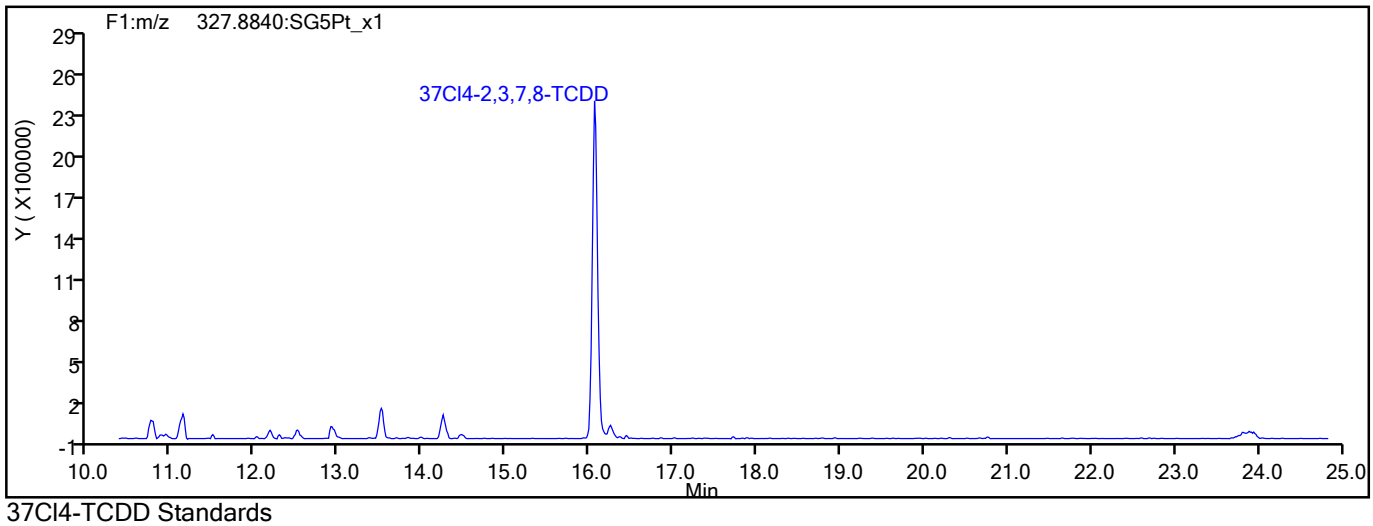

37Cl4-TCDD Standards

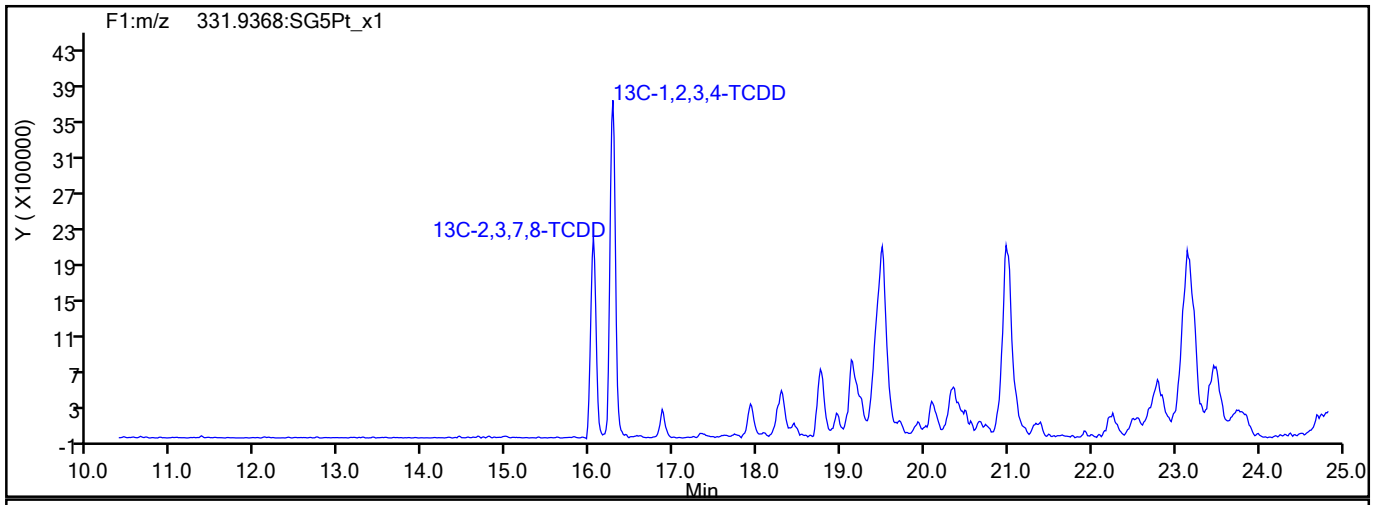

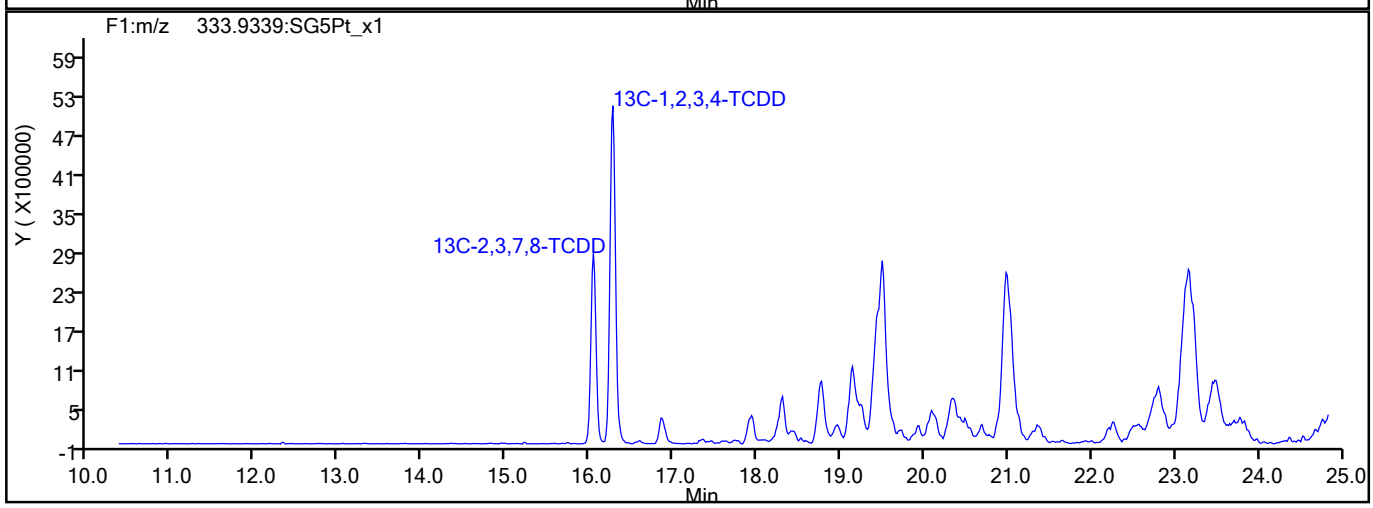

782246

Report Date: 26-Aug-2021 09:30:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_009.d		
Injection Date:	25-Aug-2021 18:05:31	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (4-6)		
Worklist#:	519744	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

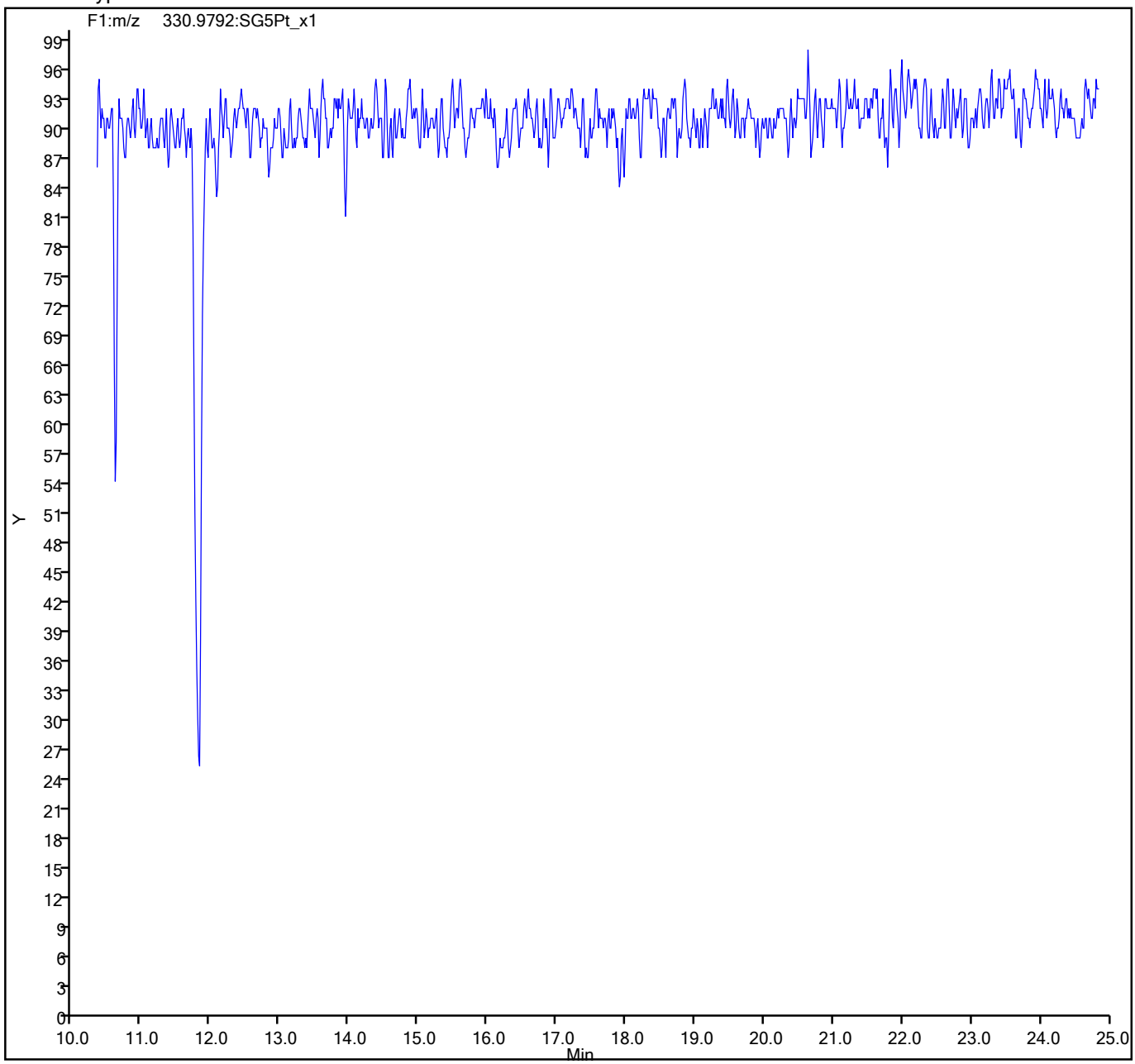

782247

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (6-8)
Lab Sample ID: 320-76887-4
Matrix: Sediment
Lab File ID: 18AU2110D5_7.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.16(g)
Date Analyzed: 08/18/2021 18:49
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 31.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2.4		1.4	0.084
40321-76-4	1,2,3,7,8-PeCDD	0.29	J	7.2	0.13
57117-41-6	1,2,3,7,8-PeCDF	0.86	J	7.2	0.047
57117-31-4	2,3,4,7,8-PeCDF	0.35	J	7.2	0.049
39227-28-6	1,2,3,4,7,8-HxCDD	0.59	J	7.2	0.13
57653-85-7	1,2,3,6,7,8-HxCDD	0.81	J q	7.2	0.13
19408-74-3	1,2,3,7,8,9-HxCDD	2.9	J	7.2	0.12
70648-26-9	1,2,3,4,7,8-HxCDF	0.74	J	7.2	0.040
57117-44-9	1,2,3,6,7,8-HxCDF	0.25	J	7.2	0.040
72918-21-9	1,2,3,7,8,9-HxCDF	0.12	J	7.2	0.031
60851-34-5	2,3,4,6,7,8-HxCDF	0.043	J q	7.2	0.031
35822-46-9	1,2,3,4,6,7,8-HpCDD	39	B	7.2	0.79
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.18	J q	7.2	0.036
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.2	0.041
3268-87-9	OCDD	980	B	14	0.88
39001-02-0	OCDF	0.51	J	14	0.039
41903-57-5	Total TCDD	7.9	q	1.4	0.084
30402-14-3	Total TCDF	15	q	1.4	0.059
36088-22-9	Total PeCDD	5.9	J	7.2	0.13
30402-15-4	Total PeCDF	1.9	J	7.2	0.048
34465-46-8	Total HxCDD	38	q	7.2	0.12
55684-94-1	Total HxCDF	1.3	J q	7.2	0.035
37871-00-4	Total HpCDD	150	B	7.2	0.79
38998-75-3	Total HpCDF	0.18	J q	7.2	0.039

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (6-8)
Lab Sample ID: 320-76887-4
Matrix: Sediment
Lab File ID: 18AU2110D5_7.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.16(g)
Date Analyzed: 08/18/2021 18:49
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 31.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	58		25-164
89059-46-1	13C-2,3,7,8-TCDF	54		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	54		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	56		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	59		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	59		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	56		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	56		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	56		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	60		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	53		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	64		26-138
114423-97-1	13C-OCDD	61		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d
Lims ID: 320-76887-A-4-A
Client ID: 11215702-072721-BN-SJSB096 (6-8)
Sample Type: Client
Inject. Date: 18-Aug-2021 18:49:29 ALS Bottle#: 8 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-4-A RI 320-76887-A-4-A RI
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 22-Aug-2021 09:24:42 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1678

First Level Reviewer: krenns Date: 22-Aug-2021 09:24:42

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.824	139721165	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.310	122526037	0.76	1.6249	54.0	54.0	0.0903	0.0903	53.97	
2,3,7,8-TCDF	17.326	3845996	0.78	1.0239	3.066	3.066	0.0205	0.0205		
A Non-2,3,7,8-sub-TCDF	17.159	2809474	0.77	1.0239	2.284	2.239	0.0205	1.411		RQM
S Total TCDF					5.350	5.305	0.0205	0.0205		RQ
D 13C-2,3,7,8-TCDD	18.021	72682631	0.83	0.8993	57.8	57.8	0.1314	0.1314	57.84	
$ 37Cl4-2,3,7,8-TCDD	18.036	44818458		1.1071	29.0	29.0	0.0258	0.0258	72.43	
2,3,7,8-TCDD	18.036	773564	0.72	1.2541	0.8486	0.8486	0.0292	0.0292		Ma
A Non-2,3,7,8-sub-TCDD	17.620	1724782	0.77	1.2541	1.923	1.892	0.0292	0.6466		RQMa
S Total TCDD					2.772	2.741	0.0292	0.0292		RQ
D 13C-1,2,3,7,8-PeCDF	22.312	90511674	1.54	1.2101	53.5	53.5	0.1368	0.1368	53.53	
1,2,3,7,8-PeCDF	22.326	287842	1.49	1.0611	0.2997	0.2997	0.0162	0.0162		M
D 13C-2,3,4,7,8-PeCDF	23.649	97680292	1.57	1.2395	56.4	56.4	0.1336	0.1336	56.40	
2,3,4,7,8-PeCDF	23.662	121195	1.38	1.0184	0.1218	0.1218	0.0171	0.0171		
A F1 PeCDFs	20.229	18307	1.39	1.0398	0.0187	0.0187	0.0126	0.0187		
A Non-2,3,7,8-sub-PeCDF	23.445	219911	1.52	1.0398	0.2248	0.2248	0.0166	0.1030		M
S Total PeCDF					0.6650	0.6650	0.0166	0.0166		
D 13C-1,2,3,7,8-PeCDD	24.371	61208890	1.63	0.7612	57.5	57.5	0.0591	0.0591	57.55	
1,2,3,7,8-PeCDD	24.399	64423	1.34	1.0484	0.1004	0.1004	0.0461	0.0461		M
A Non-2,3,7,8-sub-PeCDD	23.696	1241039	1.49	1.0484	1.934	1.934	0.0461	0.8497		Ma
S Total PeCDD					2.034	2.034	0.0461	0.0461		
D 13C-1,2,3,4,7,8-HxCDF	30.463	84877753	0.52	1.0837	59.3	59.3	0.2662	0.2662	59.32	
1,2,3,4,7,8-HxCDF	30.476	236114	1.18	1.0851	0.2564	0.2564	0.0138	0.0138		
D 13C-1,2,3,6,7,8-HxCDF	30.649	82691893	0.52	1.1279	55.5	55.5	0.2557	0.2557	55.53	
1,2,3,6,7,8-HxCDF	30.649	81214	1.34	1.1260	0.0872	0.0872	0.0140	0.0140		M
D 13C-2,3,4,6,7,8-HxCDF	31.475	78025741	0.52	1.0637	55.6	55.6	0.2711	0.2711	55.56	
2,3,4,6,7,8-HxCDF	31.501	13583	1.24	1.1675	0.0173	0.0149	0.0106	0.0106		RQM
D 13C-1,2,3,7,8,9-HxCDF	32.286	71429376	0.52	0.9676	55.9	55.9	0.2981	0.2981	55.91	
1,2,3,7,8,9-HxCDF	32.300	35788	1.28	1.1664	0.0430	0.0430	0.0106	0.0106		M
A Non-2,3,7,8-sub-HxCDF	30.410	38825	1.33	1.1363	0.0431	0.0431	0.0121	0.0431		Ma

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.4469	0.4446	0.0123	0.0123		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.100	132030568	1.20	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.674	57457217	1.21	0.7334	59.3	59.3	0.2612	0.2612	59.34	
1,2,3,4,7,8-HxCDD	31.674	124761	1.23	1.0640	0.2041	0.2041	0.0435	0.0435		M
D 13C-1,2,3,6,7,8-HxCDD	31.781	62648327	1.21	0.8802	53.9	53.9	0.2176	0.2176	53.91	
1,2,3,6,7,8-HxCDD	31.794	175192	1.24	1.0001	0.3089	0.2796	0.0448	0.0448		RQM
1,2,3,7,8,9-HxCDD	32.113	684719	1.24	1.1325	1.007	1.007	0.0402	0.0402		
A Non-2,3,7,8-sub-HxCDD	30.816	7423762	1.24	1.0655	11.6	11.6	0.0428	8.330		
S Total HxCDD					13.1	13.1	0.0429	0.0429		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.730	54345724	0.44	0.7730	53.2	53.2	0.5396	0.5396	53.25	
1,2,3,4,6,7,8-HpCDF	33.742	49548	1.04	1.4413	0.0699	0.0633	0.0125	0.0125		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	34.811	58950719	0.44	0.7008	63.7	63.7	0.5952	0.5952	63.71	
1,2,3,4,7,8,9-HpCDF	34.824						0.0143	0.0143		
A Non-2,3,7,8-sub-HpCDF	34.283						0.0133	0.0133		
S Total HpCDF					0.0699	0.0633	0.0134	0.0134		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.532	50946454	1.01	0.6472	59.6	59.6	0.2272	0.2272	59.62	
1,2,3,4,6,7,8-HpCDD	34.544	7461606	1.05	1.0943	13.4	13.4	0.2723	0.2723		
A Non-2,3,7,8-sub-HpCDD	33.504	21032754	1.03	1.0943	37.7	37.7	0.2723	37.7		a
S Total HpCDD					51.1	51.1	0.2723	0.2723		
D 13C-OCDD	36.878	72513797	0.85	0.4472	122.8	122.8	0.1252	0.1252	61.41	
OCDF	36.890	91410	0.94	1.4382	0.1753	0.1753	0.0136	0.0136		M
OCDD	36.890	136253326	0.88	1.1070	339.5	339.5	0.3049	0.3049		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d
Lims ID: 320-76887-A-4-A
Client ID: 11215702-072721-BN-SJSB096 (6-8)
Sample Type: Client
Inject. Date: 18-Aug-2021 18:49:29 ALS Bottle#: 8 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-4-A RI 320-76887-A-4-A RI
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 22-Aug-2021 09:24:42 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1678

First Level Reviewer: krenns Date: 22-Aug-2021 09:24:42

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.824	17.809	1		62720426	15255153	8945	22362	1705		
333.9339	17.824	17.809	1		77000739	18680517	7095	17737	2633	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.310	17.310	0	0.971	52715837	12571950	10513	26282	1196		
317.9389	17.310	17.310	0	0.971	69810200	16607395	9413	23532	1764	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.326	17.326	0	1.001	1687574	382359	1023	2557	374		
305.8987	17.326	17.326	0	1.001	2158422	486448	1425	3562	341	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	15.405	17.159	-105	0.890	51556	13582	1023	2557	13		
305.8987	15.405	17.159	-105	0.890	74246	20098	1425	3562	14	0.69(0.65-0.89)	
303.9016	15.920	17.159	-74	0.920	26328	6641	1023	2557	6		
	Empc Correction				21387	5336	1023	2557	5		
305.8987	15.920	17.159	-74	0.920	27776	6931	1425	3562	5	0.95(0.65-0.89)	
303.9016	16.192	17.159	-58	0.935	42734	10118	1023	2557	10		
305.8987	16.207	17.159	-57	0.936	56509	11478	1425	3562	8	0.76(0.65-0.89)	
303.9016	16.434	17.159	-43	0.949	46285	10597	1023	2557	10		
305.8987	16.434	17.159	-43	0.949	62854	14313	1425	3562	10	0.74(0.65-0.89)	
303.9016	16.676	17.159	-29	0.963	81659	18339	1023	2557	18		
305.8987	16.660	17.159	-30	0.962	99856	21986	1425	3562	15	0.82(0.65-0.89)	
303.9016	16.948	17.159	-13	0.979	783427	181091	1023	2557	177		
305.8987	16.948	17.159	-13	0.979	987057	241309	1425	3562	169	0.79(0.65-0.89)	M
303.9016	17.764	17.159	36	1.026	103901	26750	1023	2557	26		M
305.8987	17.764	17.159	36	1.026	164947	35096	1425	3562	25	0.63(0.65-0.89)	M
	Empc Correction				134936	34740	1425	3562	24		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	19.140	17.159	119	1.106	123704	24008	1023	2557	23		
	Empc Correction				102358	21392	1023	2557	21		
305.8987	19.140	17.159	119	1.106	132933	27782	1425	3562	19	0.93(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.021	18.006	1	1.011	33049823	7417746	8945	22362	829		
333.9339	18.021	18.006	1	1.011	39632808	8816563	7095	17737	1243	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.036	18.021	1	1.012	44818458	10183779	3878	9695	2626		
2,3,7,8-TCDD											Ma
319.8965	18.036	18.036	0	1.001	323463	66980	1411	3527	47		M
321.8936	18.036	18.036	0	1.001	450101	97650	970	2425	101	0.72(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	15.814	17.620	-108	0.878	20545	4507	1411	3527	3		a
321.8936	15.814	17.620	-108	0.878	28391	7422	970	2425	8	0.72(0.65-0.89)	
319.8965	16.116	17.620	-90	0.894	68587	19143	1411	3527	14		a
321.8936	16.116	17.620	-90	0.894	81905	24637	970	2425	25	0.84(0.65-0.89)	
319.8965	16.328	17.620	-77	0.906	42473	9840	1411	3527	7		a
321.8936	16.343	17.620	-77	0.907	51943	13548	970	2425	14	0.82(0.65-0.89)	
319.8965	16.902	17.620	-43	0.938	187989	48490	1411	3527	34		a
321.8936	16.887	17.620	-44	0.937	217609	51788	970	2425	53	0.86(0.65-0.89)	
319.8965	17.522	17.620	-6	0.972	35479	7119	1411	3527	5		a
	Empc Correction				21947	5412	1411	3527	4		
321.8936	17.522	17.620	-6	0.972	28503	7029	970	2425	7	1.24(0.65-0.89)	
319.8965	17.794	17.620	10	0.987	112565	25768	1411	3527	18		M
321.8936	17.779	17.620	10	0.987	132887	30556	970	2425	32	0.85(0.65-0.89)	
319.8965	17.915	17.620	18	0.994	264543	61956	1411	3527	44		M
321.8936	17.930	17.620	19	0.995	324837	71765	970	2425	74	0.81(0.65-0.89)	
319.8965	18.399	17.620	47	1.021	46541	9748	1411	3527	7		M
	Empc Correction				31801	6736	1411	3527	5		
321.8936	18.384	17.620	46	1.020	41301	8749	970	2425	9	1.13(0.65-0.89)	
319.8965	19.140	17.620	91	1.062	27764	6157	1411	3527	4		a
321.8936	19.140	17.620	91	1.062	39192	8966	970	2425	9	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.312	22.299	1	1.252	54853266	9100734	13433	33582	677		
353.8970	22.312	22.299	1	1.252	35658408	5956846	9041	22602	659	1.54(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.326	22.326	0	1.001	172408	27812	446	1115	62		M
341.8567	22.340	22.326	1	1.001	115434	19169	592	1480	32	1.49(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.649	23.635	1	1.327	59733911	9130607	13433	33582	680		
353.8970	23.649	23.635	1	1.327	37946381	5808116	9041	22602	642	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.662	23.662	0	1.001	70221	10232	446	1115	23		
341.8567	23.676	23.662	1	1.001	50974	8527	592	1480	14	1.38(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A F1 PeCDFs											
339.8597	20.667	20.229	26	0.926	10636	1968	269	672	7		
341.8567	20.682	20.229	27	0.927	7671	2013	517	1292	4	1.39(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											M
339.8597	21.003	23.445	-146	0.941	59265	9468	446	1115	21		
341.8567	21.003	23.445	-146	0.941	41514	7721	592	1480	13	1.43(1.32-1.78)	
339.8597	22.858	23.445	-35	1.024	38968	5191	446	1115	12		
341.8567	22.858	23.445	-35	1.024	22603	4017	592	1480	7	1.72(1.32-1.78)	
339.8597	24.003	23.445	33	1.076	34343	5210	446	1115	12		M
341.8567	23.990	23.445	33	1.075	23218	2996	592	1480	5	1.48(1.32-1.78)	M
13C-1,2,3,7,8-PeCDD											
367.8949	24.371	24.358	1	1.367	37979312	5565199	3770	9425	1476		
369.8919	24.371	24.358	1	1.367	23229578	3414376	2332	5830	1464	1.63(1.32-1.78)	
1,2,3,7,8-PeCDD											M
355.8546	24.399	24.385	1	1.001	36888	5496	1113	2782	5		M
357.8516	24.399	24.385	1	1.001	27535	3825	623	1557	6	1.34(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDD											Ma
355.8546	21.931	23.696	-106	0.900	332067	58253	1113	2782	52		
357.8516	21.944	23.696	-105	0.900	213214	39634	623	1557	64	1.56(1.32-1.78)	
355.8546	23.226	23.696	-28	0.953	53974	11003	1113	2782	10		M
357.8516	23.212	23.696	-29	0.952	38640	7163	623	1557	11	1.40(1.32-1.78)	
355.8546	23.417	23.696	-17	0.961	178098	24626	1113	2782	22		M
357.8516	23.417	23.696	-17	0.961	123474	16774	623	1557	27	1.44(1.32-1.78)	
355.8546	23.417	23.696	-17	0.961	178098	24626	1113	2782	22		M
357.8516	23.417	23.696	-17	0.961	123474	16774	623	1557	27	1.44(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.463	30.450	1	0.949	29161974	5152024	13536	33840	381		
385.8610	30.463	30.450	1	0.949	55715779	9891471	25636	64090	386	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.476	30.463	1	1.000	128051	22740	607	1517	37		
375.8178	30.490	30.463	2	1.001	108063	18459	297	742	62	1.18(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.649	30.636	1	0.955	28436343	4969790	13536	33840	367		
385.8610	30.649	30.636	1	0.955	54255550	9417774	25636	64090	367	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											M
373.8208	30.649	30.649	0	1.000	46471	7629	607	1517	13		
375.8178	30.649	30.649	0	1.000	34743	6576	297	742	22	1.34(1.05-1.43)	M
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.475	31.475	0	0.981	26616423	6246560	13536	33840	461		
385.8610	31.475	31.475	0	0.981	51409318	11986767	25636	64090	468	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQM
373.8208	31.501	31.488	1	1.001	9655	2186	607	1517	4		M
	Empc Correction				7519	2546	607	1517	4		
375.8178	31.488	31.488	0	1.000	6064	2054	297	742	7	1.59(1.05-1.43)	M

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.286	32.286	0	1.006	24434539	6236661	13536	33840	461		
385.8610	32.286	32.286	0	1.006	46994837	11959332	25636	64090	467	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.300	32.300	0	1.000	20111	5096	607	1517	8		
375.8178	32.313	32.300	1	1.001	15677	4328	297	742	15	1.28(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	32.393	30.410	119	1.063	22133	6095	607	1517	10		M
375.8178	32.393	30.410	119	1.063	16692	4161	297	742	14	1.33(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.100	32.100	0		72147123	18398800	14941	37352	1231		
403.8529	32.100	32.100	0		59883445	15554982	11074	27685	1405	1.20(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.674	31.661	1	0.987	31449511	8016250	14941	37352	537		
403.8529	31.674	31.661	1	0.987	26007706	6748128	11074	27685	609	1.21(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.674	31.674	0	1.000	68838	18696	1665	4162	11		M
391.8127	31.674	31.674	0	1.000	55923	14918	1071	2677	14	1.23(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.781	31.767	1	0.990	34266351	8407850	14941	37352	563		
403.8529	31.781	31.767	1	0.990	28381976	6853706	11074	27685	619	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQM
389.8157	31.794	31.781	1	1.000	115338	25254	1665	4162	15		M
	Empc Correction				96981	24548	1665	4162	15		
391.8127	31.781	31.781	0	1.000	78211	19797	1071	2677	18	1.47(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											
389.8157	32.113	32.113	0	1.014	378511	65496	1665	4162	39		
391.8127	32.113	32.113	0	1.014	306208	56262	1071	2677	53	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.478	30.816	-80	0.928	2958422	332722	1665	4162	200		
391.8127	29.465	30.816	-81	0.927	2371646	261971	1071	2677	245	1.25(1.05-1.43)	
389.8157	30.543	30.816	-16	0.961	119325	18477	1665	4162	11		
391.8127	30.556	30.816	-16	0.961	90458	15967	1071	2677	15	1.32(1.05-1.43)	
389.8157	30.916	30.816	6	0.973	936794	180428	1665	4162	108		
391.8127	30.916	30.816	6	0.973	774066	145999	1071	2677	136	1.21(1.05-1.43)	
389.8157	31.128	30.816	19	0.979	93006	19825	1665	4162	12		
391.8127	31.115	30.816	18	0.979	80045	17740	1071	2677	17	1.16(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.730	33.730	0	1.051	16526486	5283946	16976	42440	311		
419.8220	33.730	33.730	0	1.051	37819238	11754639	39672	99180	296	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7818	33.742	33.742	0	1.000	25260	8291	851	2127	10		M
409.7789	33.754	33.742	1	1.001	29511	7888	373	932	21	0.86(0.88-1.20)	M
	Empc Correction				24288	7972	373	932	21		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.811	34.811	0	1.084	17908363	4991192	16976	42440	294		
419.8220	34.811	34.811	0	1.084	41042356	11243969	39672	99180	283	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.824						851	2127			
409.7789	34.824						373	932			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.283						851	2127			
409.7789	34.283						373	932			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.532	34.520	1	1.076	25548229	7493845	9895	24737	757		
437.8140	34.532	34.520	1	1.076	25398225	7430303	10081	25202	737	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.544	34.532	1	1.000	3822124	1107745	9525	23812	116		
425.7737	34.532	34.532	0	1.000	3639482	1070450	8261	20652	130	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.985	33.504	29	0.984	10673455	3403032	9525	23812	357		a
425.7737	33.985	33.504	29	0.984	10359299	3319849	8261	20652	402	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.878	36.878	0	1.149	33365895	8594892	3683	9207	2334		
471.7750	36.878	36.878	0	1.149	39147902	10066135	3921	9802	2567	0.85(0.76-1.02)	
OCDF											M
441.7428	36.890	36.974	-5	1.000	44403	6311	317	792	20		M
443.7399	36.902	36.974	-4	1.001	47007	6667	415	1037	16	0.94(0.76-1.02)	M
OCDD											
457.7377	36.890	36.890	0	1.000	63876559	15912142	5996	14990	2654		
459.7348	36.890	36.890	0	1.000	72376767	17866358	6602	16505	2706	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 22-Aug-2021 09:24:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d
Lims ID: 320-76887-A-4-A
Client ID: 11215702-072721-BN-SJSB096 (6-8)
Inject. Date: 18-Aug-2021 18:49:29 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDF, RT: 17.159

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	122526037	29179345

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	122526037	29179345

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.405	51556	13582	74246	20098	0.1003	0.69	
15.920	26328	6641	27776	6931	0.0431	0.95	RQ
15.920	21387	5336	27776	6931	0.0392		Empc Correction
16.192	42734	10118	56509	11478	0.0791	0.76	
16.434	46285	10597	62854	14313	0.0870	0.74	
16.676	81659	18339	99856	21986	0.1447	0.82	
16.948	783427	181091	987057	241309	1.41	0.79	M
17.764	103901	26750	164947	35096	0.2143	0.63	RQM
17.764	103901	26750	134936	34740	0.1904		Empc Correction
19.140	123704	24008	132933	27782	0.2046	0.93	RQ
19.140	102358	21392	132933	27782	0.1875		Empc Correction
Signal Totals:							
	1233307	287205	1576167	378637			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2865772	670119				0.78	RQM
	2809474	665842					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.284 = (2865772 * 100.000) / (122526037 * 1.024)
Empc Amount: 2.239 = (2809474 * 100.000) / (122526037 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 22-Aug-2021 09:24:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d
Lims ID: 320-76887-A-4-A
Client ID: 11215702-072721-BN-SJSB096 (6-8)
Inject. Date: 18-Aug-2021 18:49:29 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDD, RT: 17.620

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	72682631	16234309

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	72682631	16234309

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.814	20545	4507	28391	7422	0.0537	0.72	a
16.116	68587	19143	81905	24637	0.1651	0.84	a
16.328	42473	9840	51943	13548	0.1036	0.82	a
16.902	187989	48490	217609	51788	0.4450	0.86	a
17.522	35479	7119	28503	7029	0.0702	1.24	RQa
17.522	21947	5412	28503	7029	0.0553		Empc Correction
17.794	112565	25768	132887	30556	0.2693	0.85	Ma
17.915	264543	61956	324837	71765	0.6466	0.81	Ma
18.399	46541	9748	41301	8749	0.0964	1.13	RQMa
18.399	31801	6736	41301	8749	0.0802		Empc Correction
19.140	27764	6157	39192	8966	0.0735	0.71	a
Signal Totals:							
	778214	188009	946568	224460			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1753054	417188				0.85	RQMa
	1724782	412469					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.923 = (1753054 * 100.000) / (72682631 * 1.254)
Empc Amount: 1.892 = (1724782 * 100.000) / (72682631 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 22-Aug-2021 09:24:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d
Lims ID: 320-76887-A-4-A
Client ID: 11215702-072721-BN-SJSB096 (6-8)
Inject. Date: 18-Aug-2021 18:49:29 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 7

F1 PeCDFs, RT: 20.229

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	90511674	15057580
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	97680292	14938723

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	94095983	14998151

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.667	10636	1968	7671	2013	0.0187	1.39	
Signal Totals:							
	10636	1968	7671	2013			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	18307	3981				1.39	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0187 = (18307 * 100.000) / (94095983 * 1.040)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d
Lims ID: 320-76887-A-4-A
Client ID: 11215702-072721-BN-SJSB096 (6-8)
Inject. Date: 18-Aug-2021 18:49:29 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 7

Non-2,3,7,8-sub-PeCDF, RT: 23.445

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	90511674	15057580
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	97680292	14938723

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	94095983	14998151

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.003	59265	9468	41514	7721	0.1030	1.43	
22.858	38968	5191	22603	4017	0.0629	1.72	
24.003	34343	5210	23218	2996	0.0588	1.48	M
Signal Totals:							
	132576	19869	87335	14734			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	219911	34603				1.52	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2248 = (219911 * 100.000) / (94095983 * 1.040)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 22-Aug-2021 09:24:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d
Lims ID: 320-76887-A-4-A
Client ID: 11215702-072721-BN-SJSB096 (6-8)
Inject. Date: 18-Aug-2021 18:49:29 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 7

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	61208890	8979575

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	61208890	8979575

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.931	332067	58253	213214	39634	0.8497	1.56	
23.226	53974	11003	38640	7163	0.1443	1.40	Ma
23.417	178098	24626	123474	16774	0.4699	1.44	Ma
23.417	178098	24626	123474	16774	0.4699	1.44	Ma
Signal Totals:							
	742237	118508	498802	80345			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1241039	198853				1.49	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.934 = (1241039 * 100.000) / (61208890 * 1.048)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d
Lims ID: 320-76887-A-4-A
Client ID: 11215702-072721-BN-SJSB096 (6-8)
Inject. Date: 18-Aug-2021 18:49:29 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 7

Non-2,3,7,8-sub-HxCDF, RT: 30.410

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	84877753	15043495
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	82691893	14387564
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	78025741	18233327
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	71429376	18195993

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	79256190	16465094

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
32.393	22133	6095	16692	4161	0.0431	1.33	Ma
Signal Totals:							
	22133	6095	16692	4161			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	38825	10256				1.33	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0431 = (38825 * 100.000) / (79256190 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 22-Aug-2021 09:24:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d
Lims ID: 320-76887-A-4-A
Client ID: 11215702-072721-BN-SJSB096 (6-8)
Inject. Date: 18-Aug-2021 18:49:29 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 7

Non-2,3,7,8-sub-HxCDD, RT: 30.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	57457217	14764378
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	62648327	15261556
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	60052772	15012967

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.478	2958422	332722	2371646	261971	8.33	1.25	
30.543	119325	18477	90458	15967	0.3278	1.32	
30.916	936794	180428	774066	145999	2.67	1.21	
31.128	93006	19825	80045	17740	0.2704	1.16	
Signal Totals:							
	4107547	551452	3316215	441677			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7423762	993129				1.24	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 11.602 = (7423762 * 100.000) / (60052772 * 1.066)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d
Lims ID: 320-76887-A-4-A
Client ID: 11215702-072721-BN-SJSB096 (6-8)
Inject. Date: 18-Aug-2021 18:49:29 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 7

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	50946454	14924148

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	50946454	14924148

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.985	10673455	3403032	10359299	3319849	37.7	1.03	a
Signal Totals:							
	10673455	3403032	10359299	3319849			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	21032754	6722881				1.03	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 37.726 = (21032754 * 100.000) / (50946454 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 22-Aug-2021 09:24:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.86- 19.46)

Signal: 2

Processing Integration Results

RT = 16.948 Area = 964295

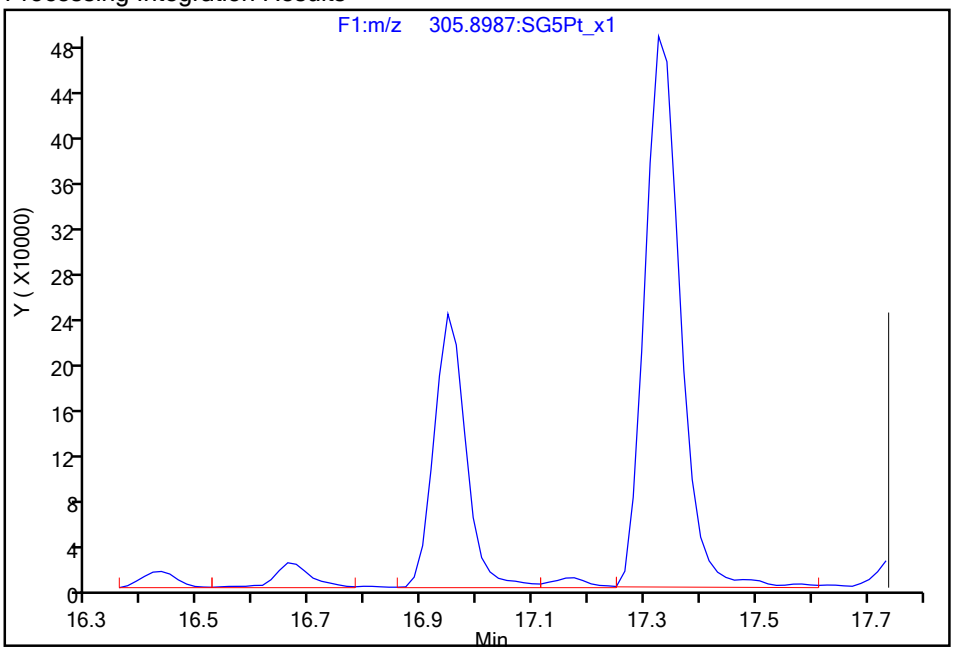

Manual Integration Results

RT = 16.948 Area = 987057 M

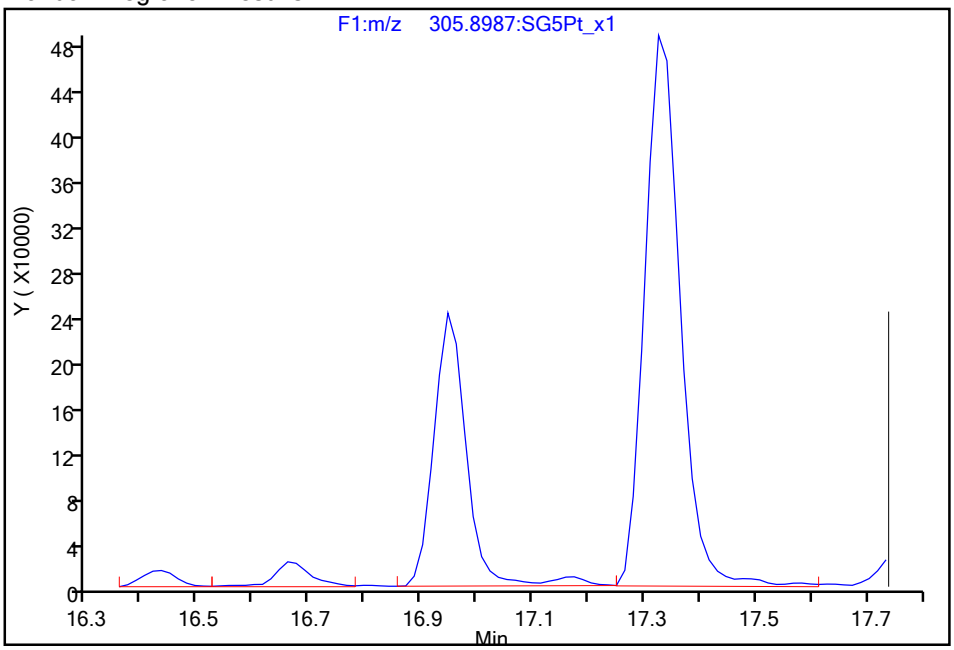

Reviewer: bennettd, 19-Aug-2021 12:44:36

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.86- 19.46)

Signal: 1

Not Detected
RT: 14.86- 19.46

Processing Integration Results

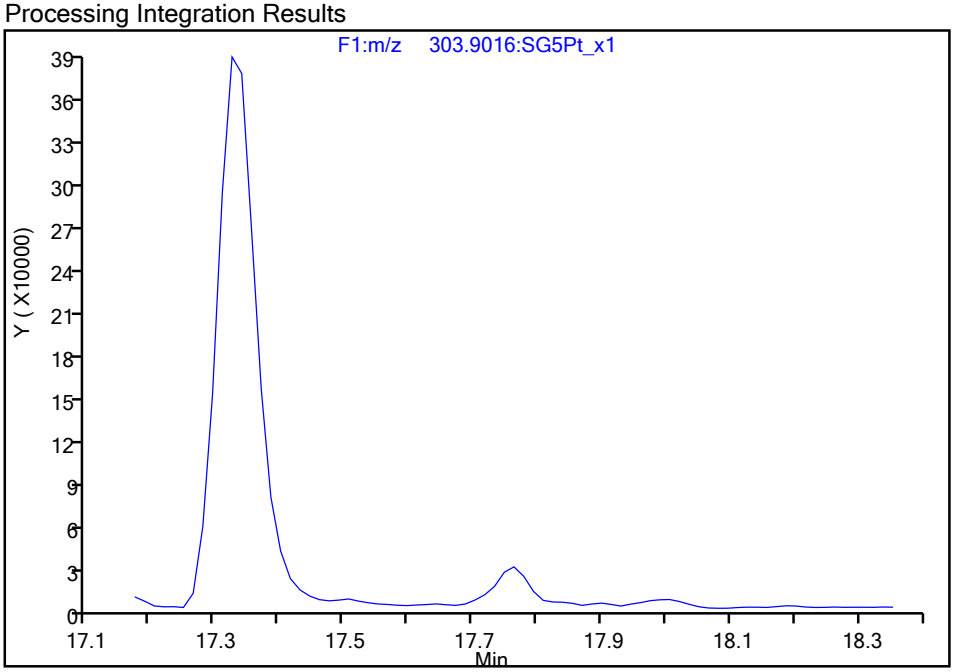

RT = 17.764 Area = 103901 M

Manual Integration Results

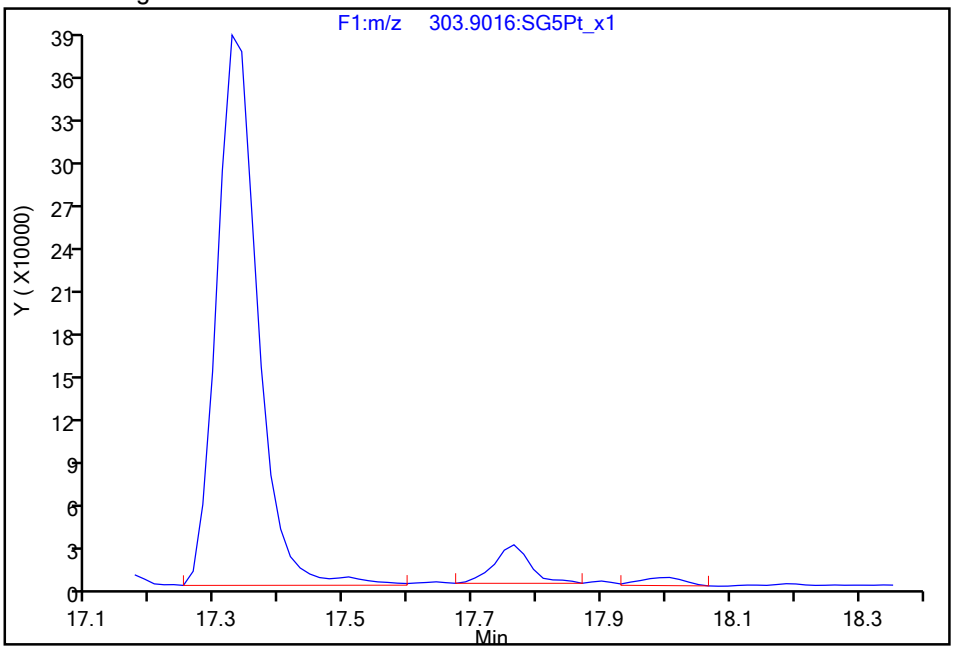

Reviewer: bennettd, 19-Aug-2021 12:44:21
Audit Action: Manually Integrated Audit Reason: Missed Peak

782268

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.86- 19.46)

Signal: 2

Processing Integration Results

RT = 17.764 Area = 170323

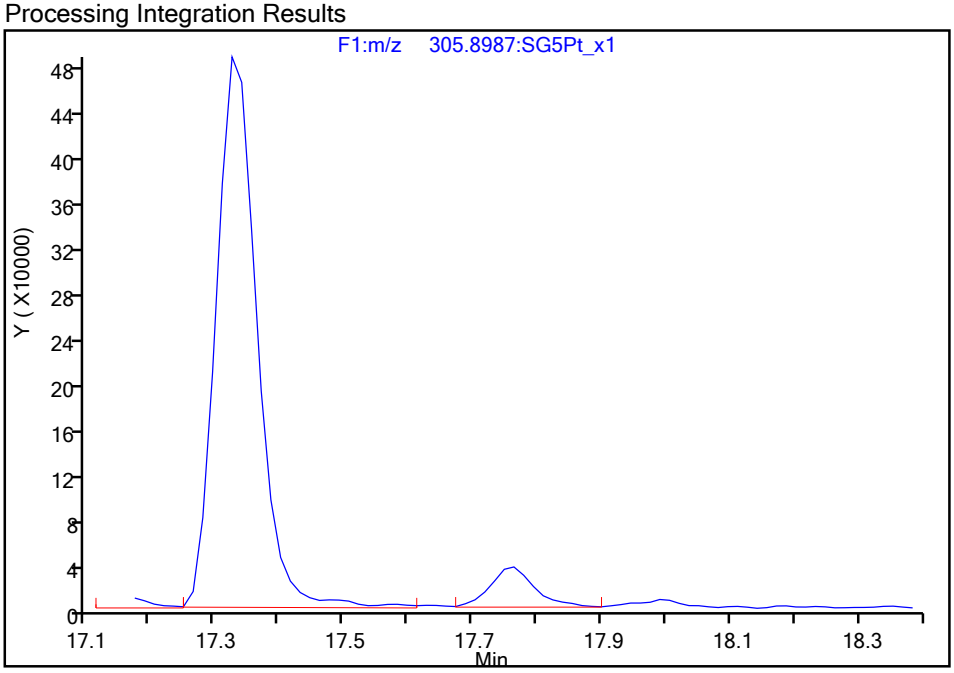

Manual Integration Results

RT = 17.764 Area = 164947 M

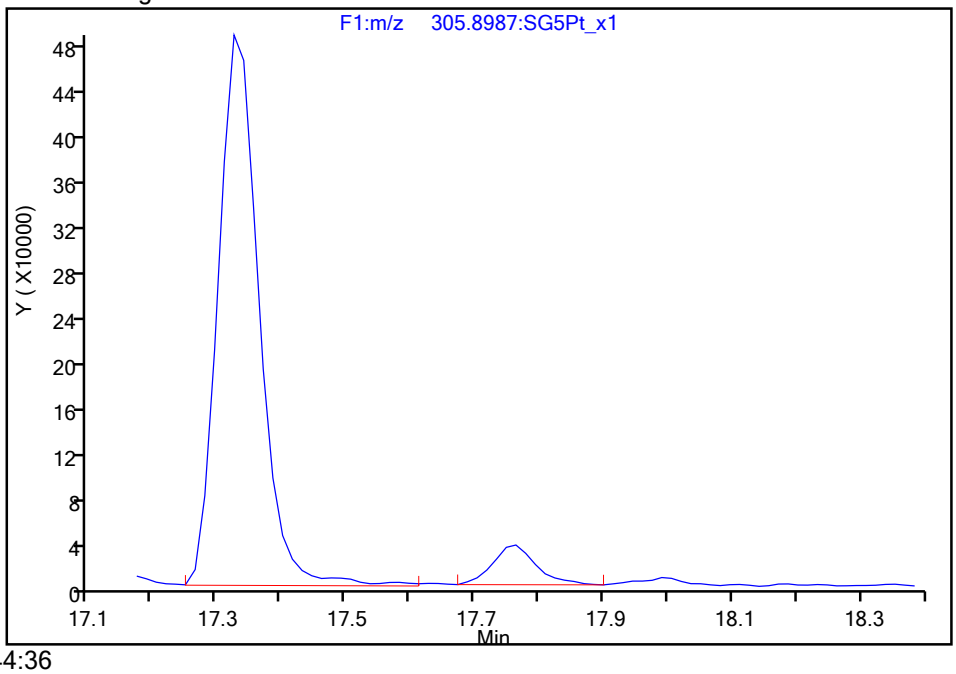

Reviewer: bennettd, 19-Aug-2021 12:44:36

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.04
Area: 452264
Amount: 0.864627
Amount Units: pg/ul

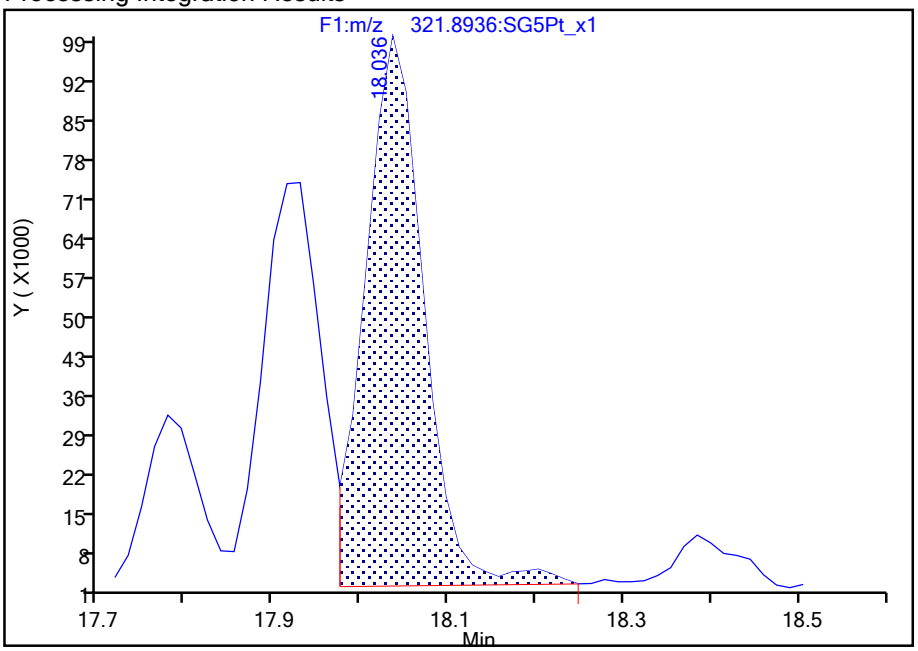

Manual Integration Results

RT: 18.04
Area: 450101
Amount: 0.848646
Amount Units: pg/ul

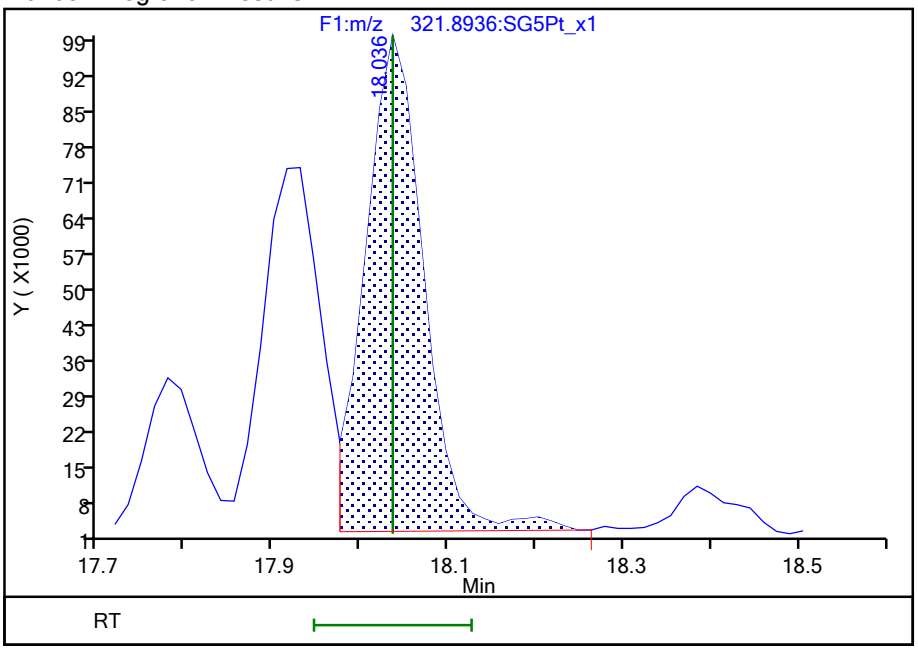

Reviewer: krenns, 22-Aug-2021 09:23:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

RT: 18.04
Area: 788131
Amount: 0.864627
Amount Units: pg/ul

Processing Integration Results

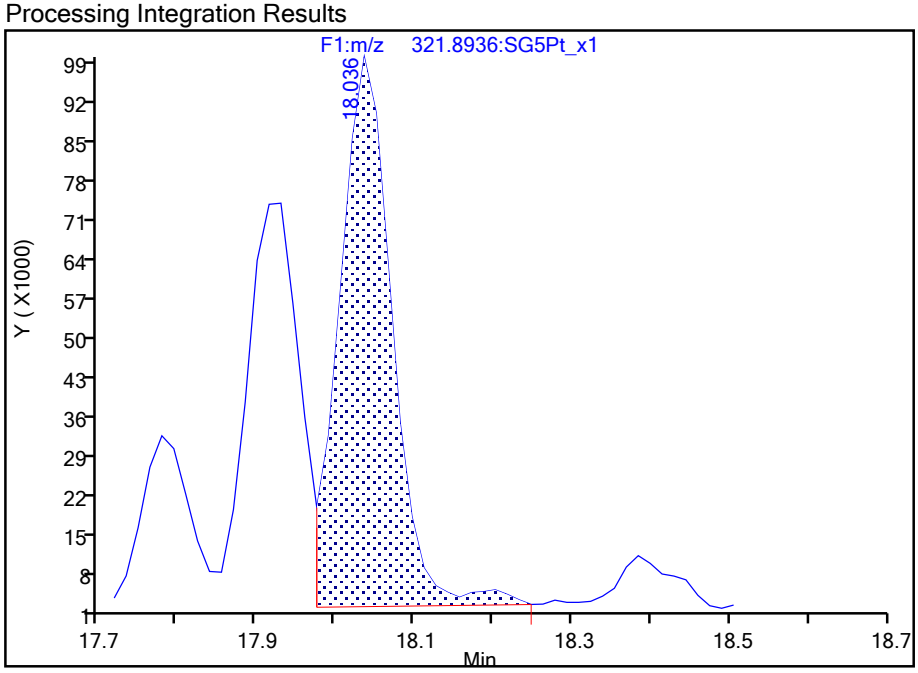

Manual Integration Results

RT: 18.04
Area: 773564
Amount: 0.848646
Amount Units: pg/ul
Reviewer: krenns, 22-Aug-2021 09:23:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 18.04
Area: 335867
Amount: 0.864627
Amount Units: pg/ul

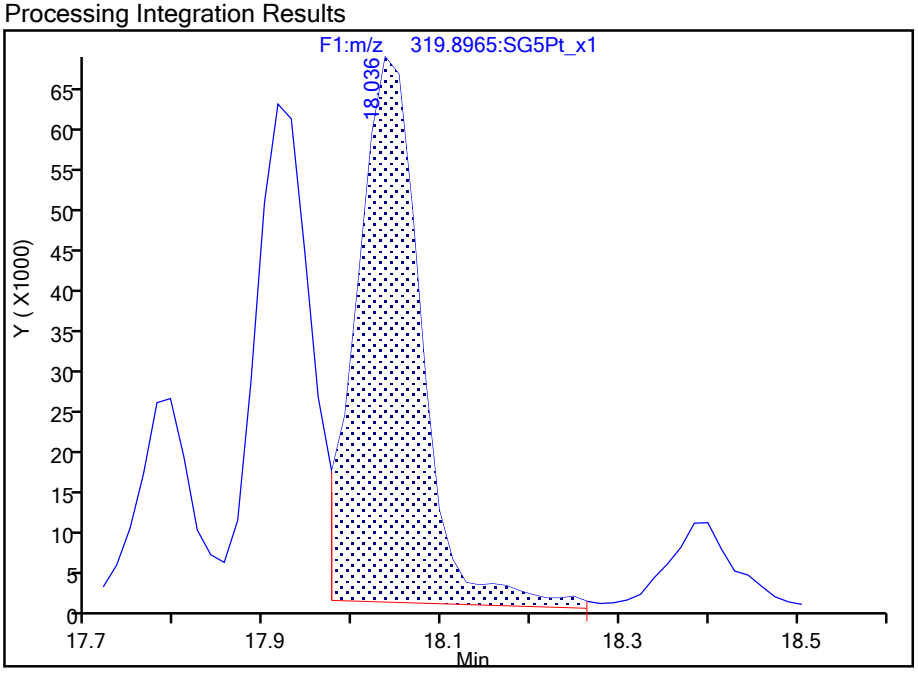

Manual Integration Results

RT: 18.04
Area: 323463
Amount: 0.848646
Amount Units: pg/ul

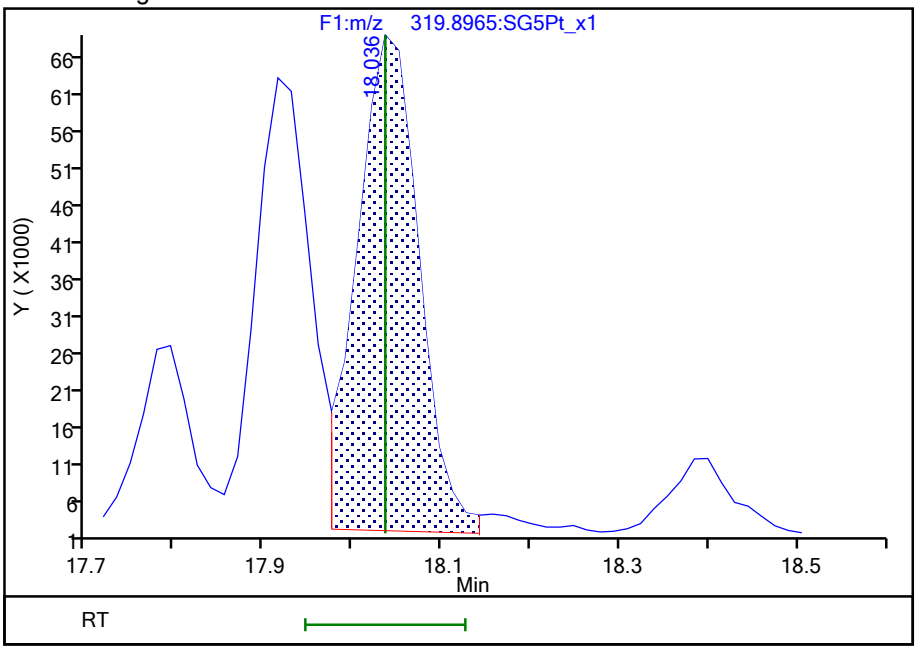

Reviewer: krenns, 22-Aug-2021 09:23:15
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

782272

Report Date: 22-Aug-2021 09:24:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.77- 19.47)

Signal: 1

Processing Integration Results

RT = 17.794 Area = 112565

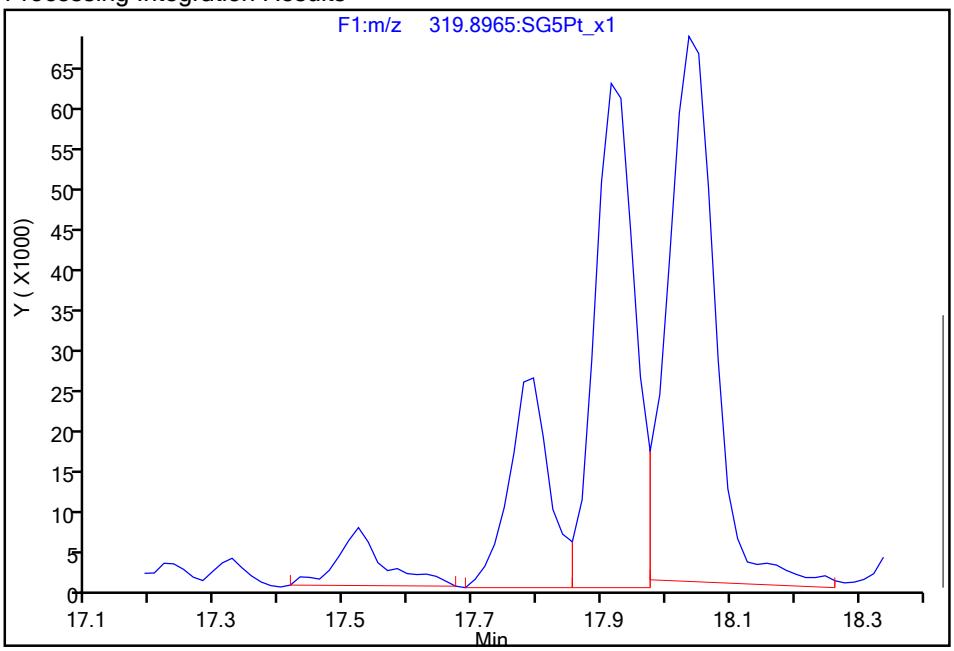

Manual Integration Results

RT = 17.794 Area = 112565

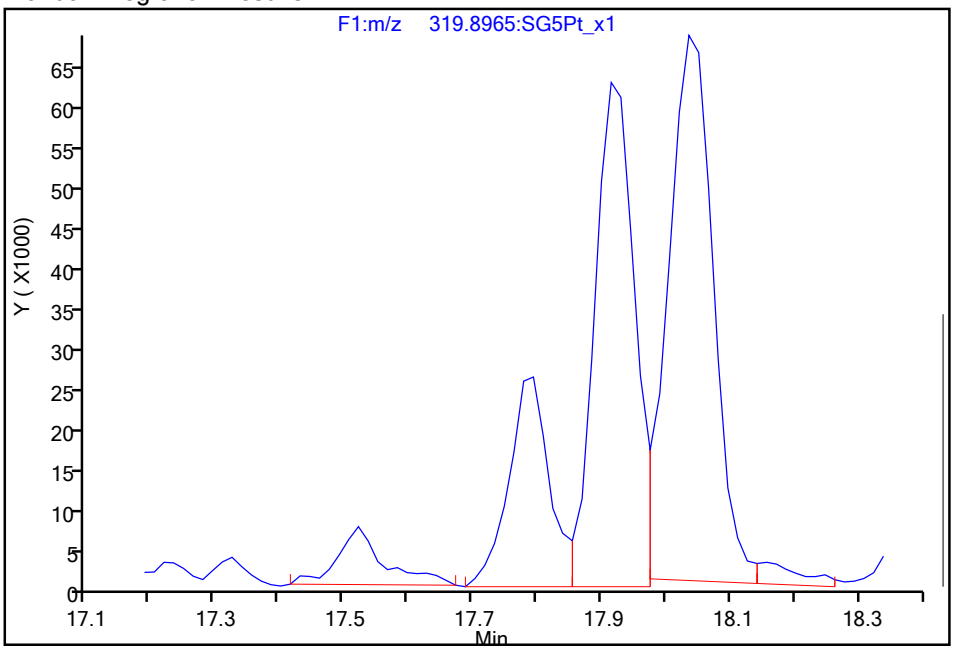

Reviewer: bennettd, 19-Aug-2021 12:48:16

Audit Action: Assigned Compound ID Audit Reason: Missed Peak

782273

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.77- 19.47)

Signal: 1

Processing Integration Results

RT = 17.915 Area = 264543

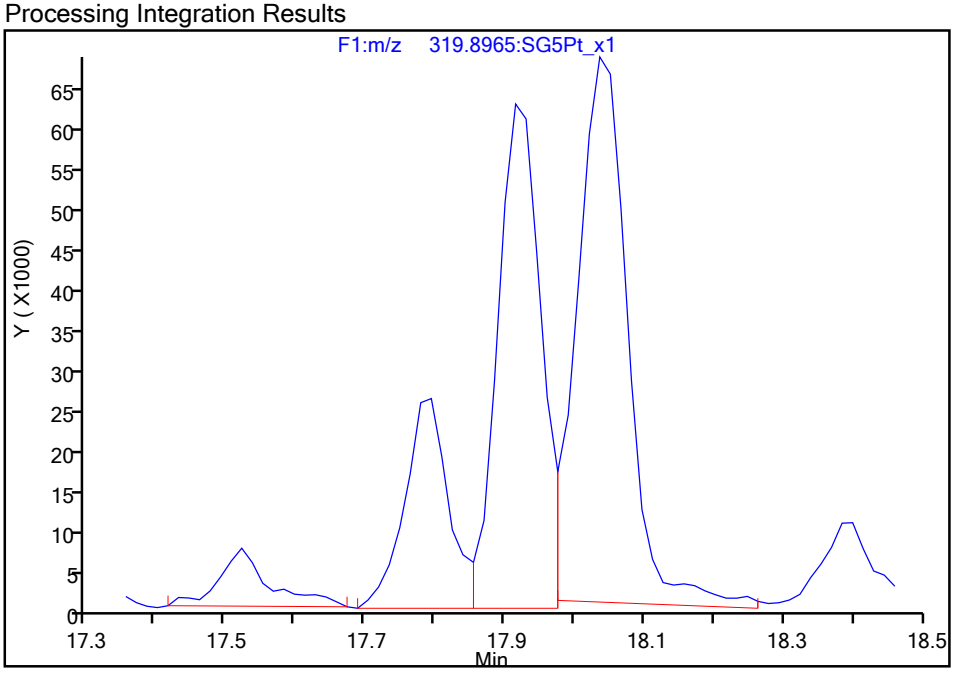

Manual Integration Results

RT = 17.915 Area = 264543

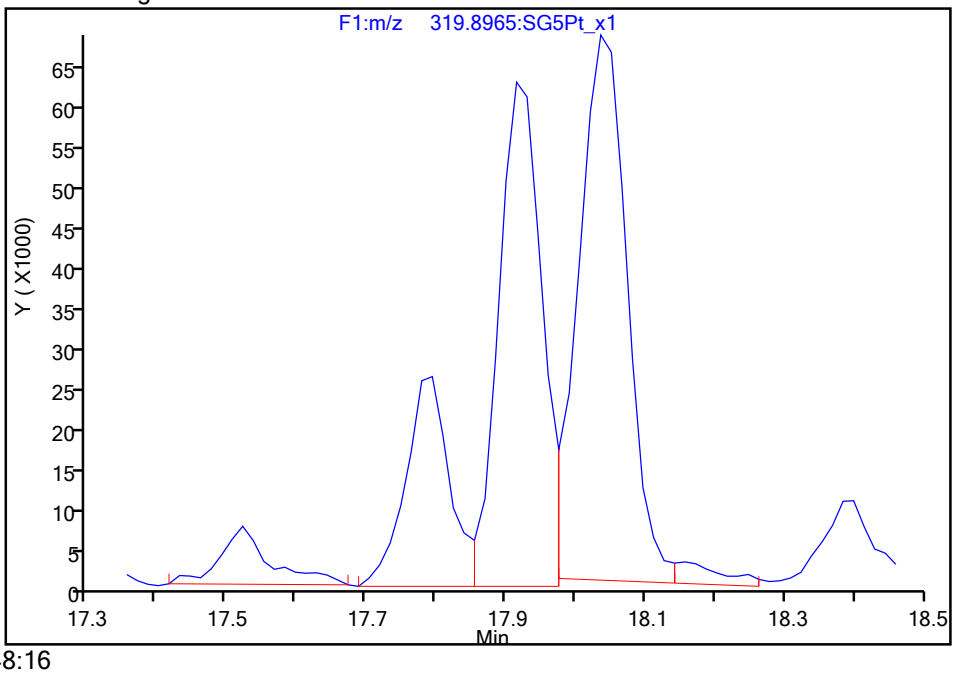

Reviewer: bennettd, 19-Aug-2021 12:48:16

Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.77- 19.47)

Signal: 1

Processing Integration Results

RT = 18.399 Area = 49454

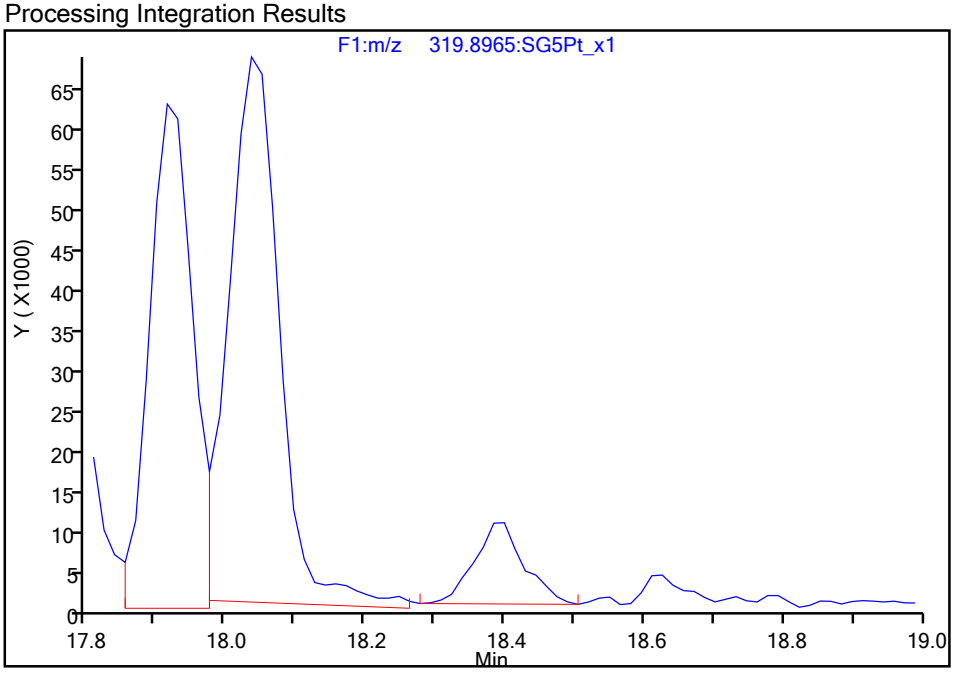

Manual Integration Results

RT = 18.399 Area = 46541 M

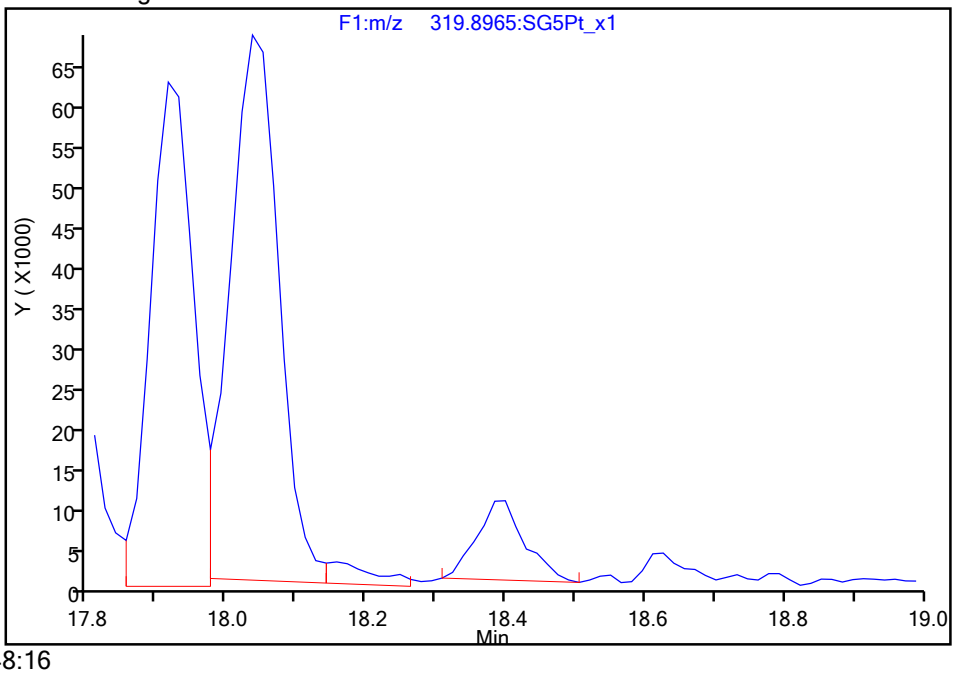

Reviewer: bennettd, 19-Aug-2021 12:48:16

Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.34
Area: 114194
Amount: 0.308102
Amount Units: pg/ul

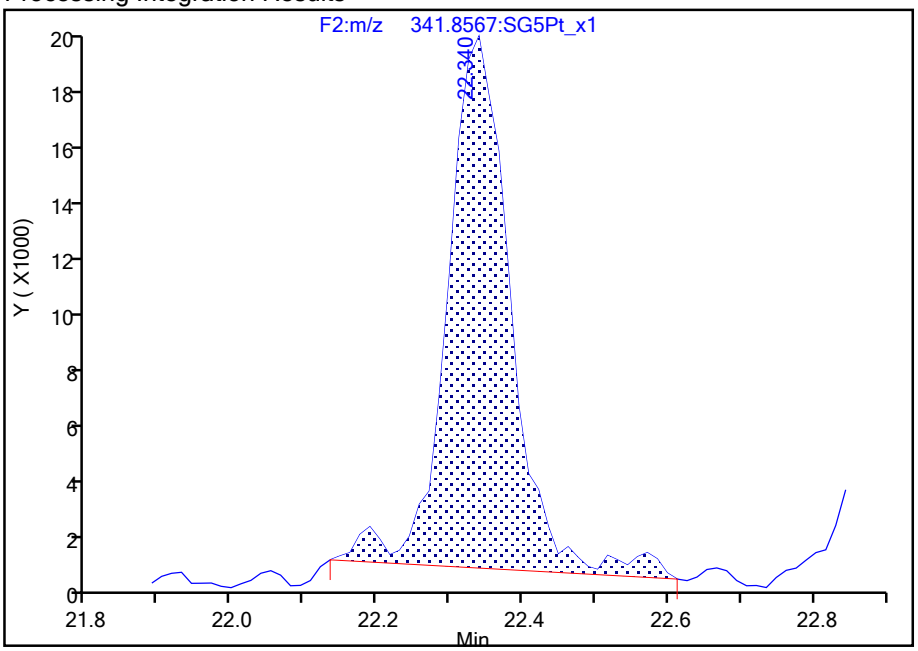

Manual Integration Results

RT: 22.34
Area: 115434
Amount: 0.299695
Amount Units: pg/ul

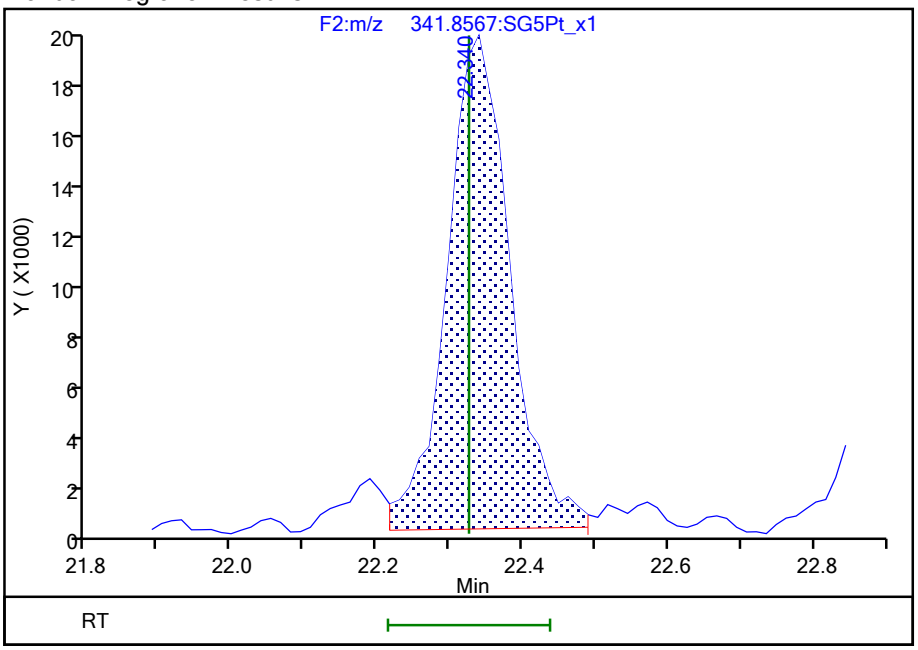

Reviewer: bennettd, 19-Aug-2021 12:48:48

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.33
Area: 181723
Amount: 0.308102
Amount Units: pg/ul

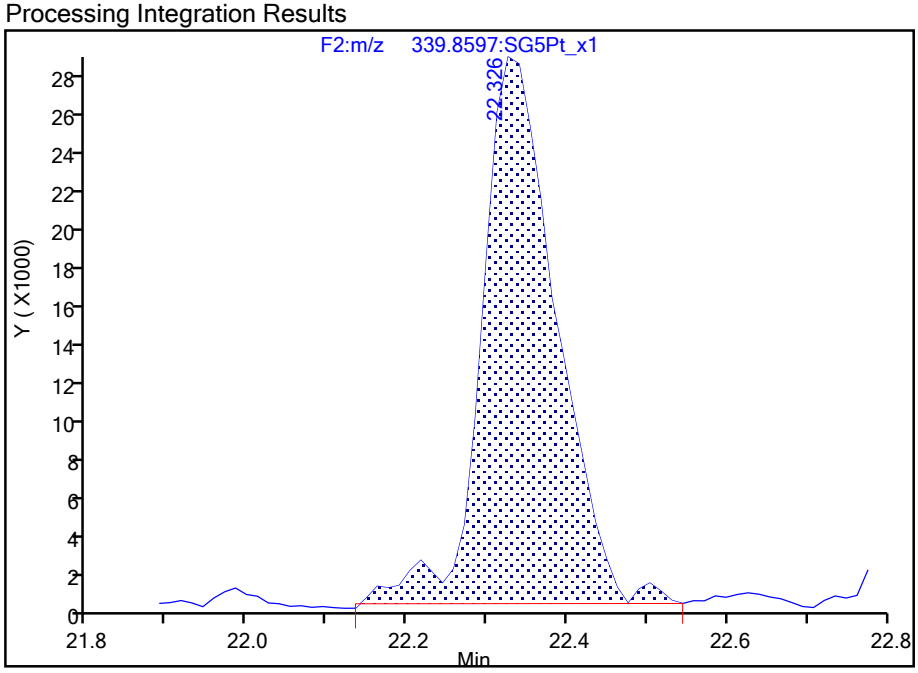

Manual Integration Results

RT: 22.33
Area: 172408
Amount: 0.299695
Amount Units: pg/ul

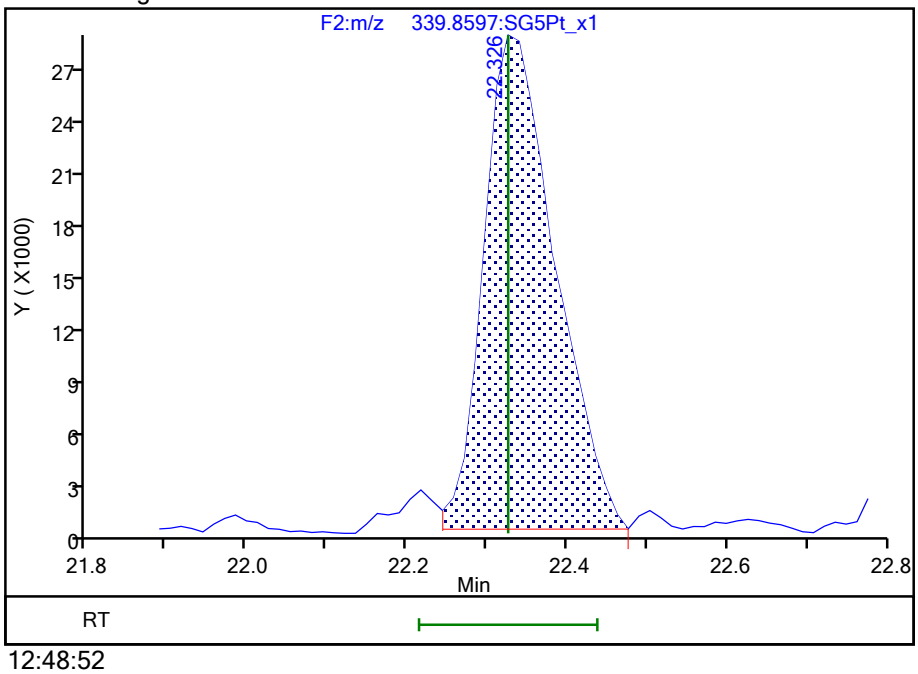

Reviewer: bennettd, 19-Aug-2021 12:48:52
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

782277

Report Date: 22-Aug-2021 09:24:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (20.77- 26.12)

Signal: 1

Processing Integration Results

RT = 24.003 Area = 42755

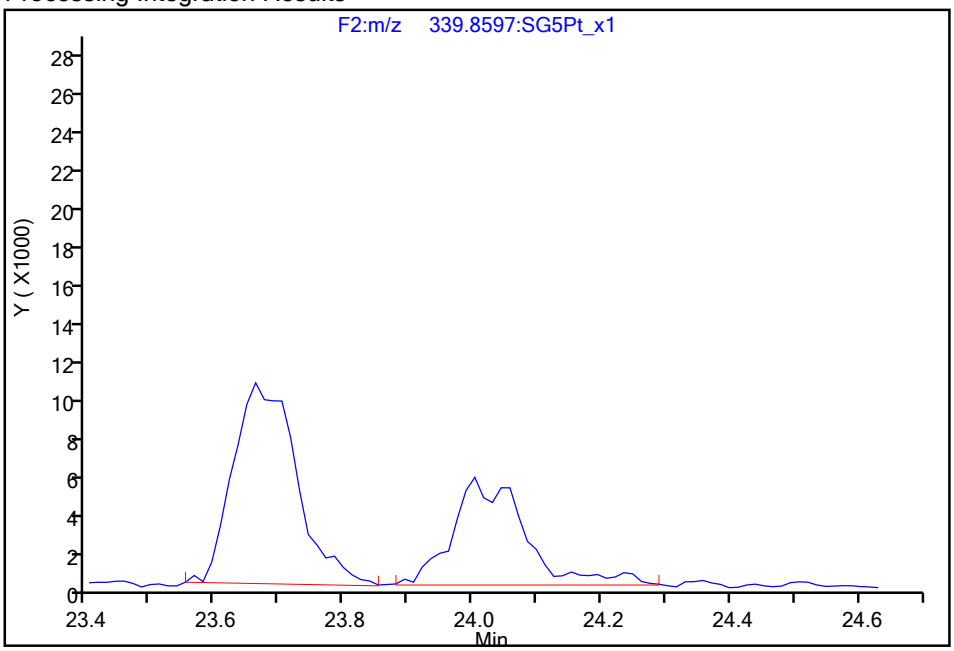

Manual Integration Results

RT = 24.003 Area = 34343 M

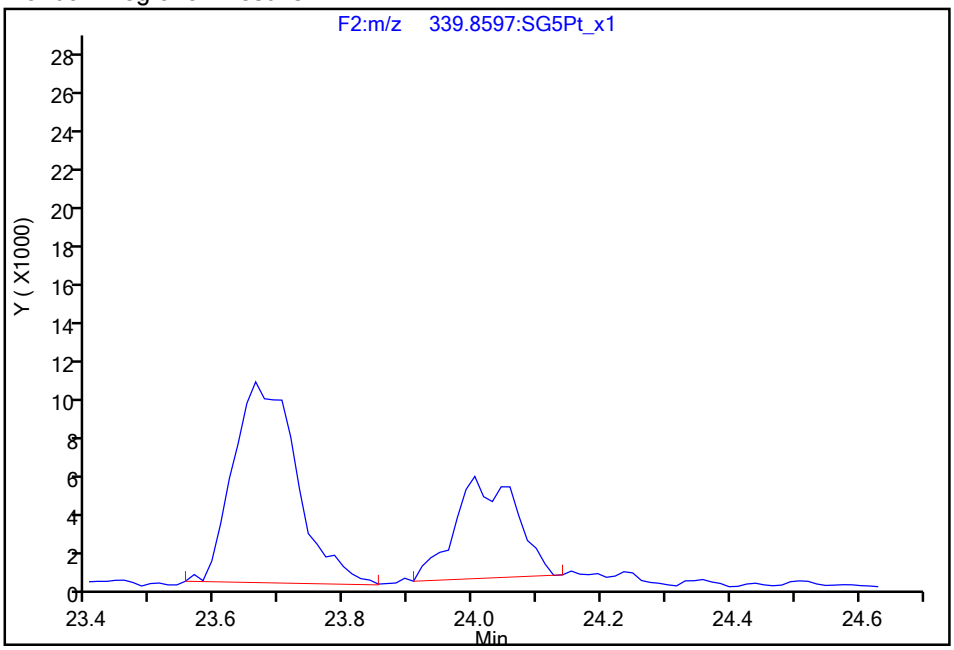

Reviewer: bennettd, 19-Aug-2021 12:49:28

Audit Action: Manually Integrated Audit Reason: Missed Peak

782278

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 2, m/z: 341.8567, RT: (20.77- 26.12)

Signal: 2

Processing Integration Results

Not Detected
RT: 20.77- 26.12

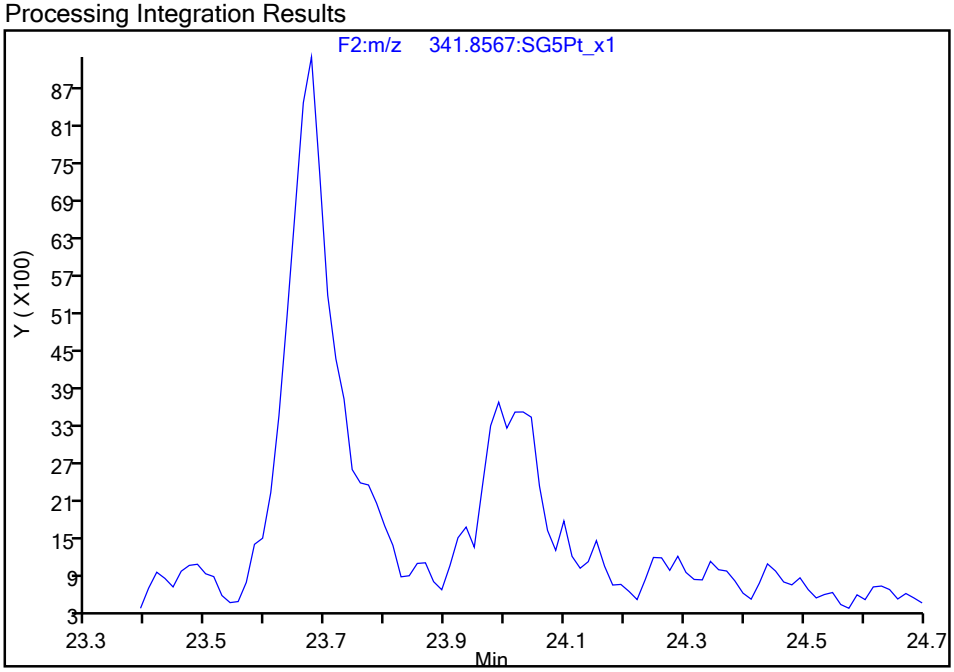

Manual Integration Results

RT = 23.990 Area = 23218 M

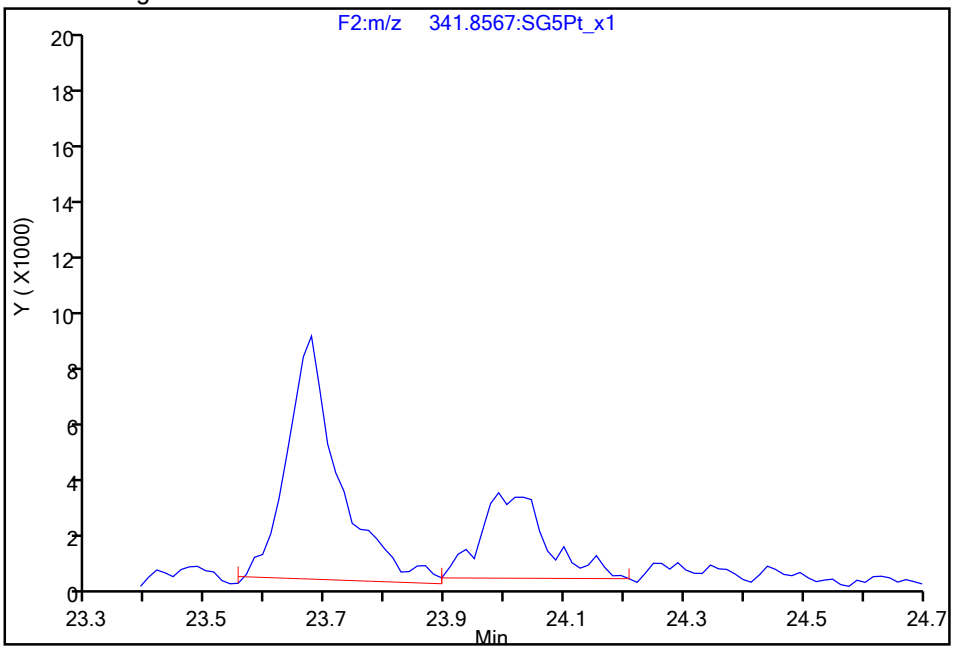

Reviewer: bennettd, 19-Aug-2021 12:49:20
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.39

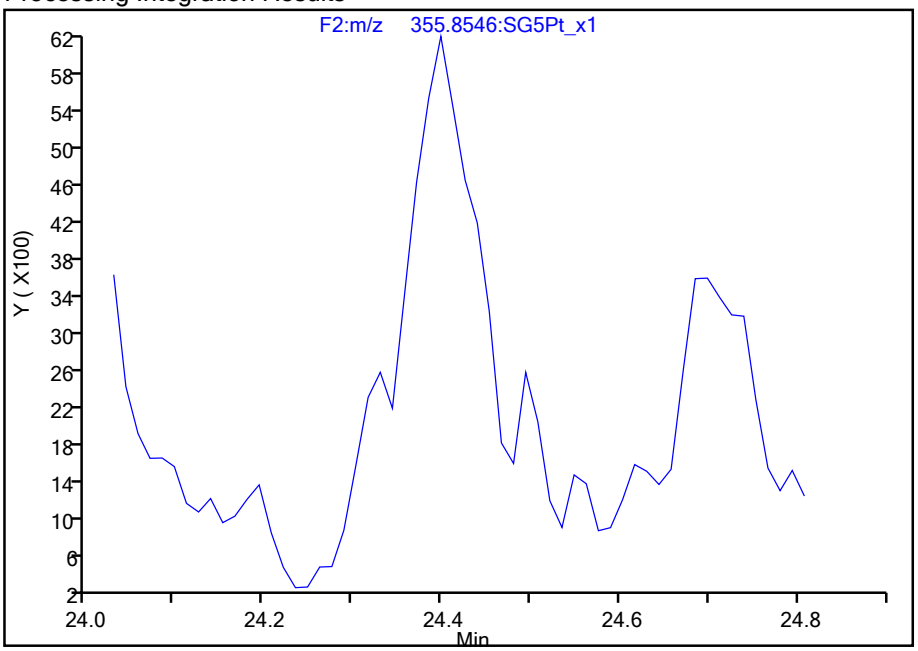

Manual Integration Results

RT: 24.40
Area: 36888
Amount: 0.100389
Amount Units: pg/ul

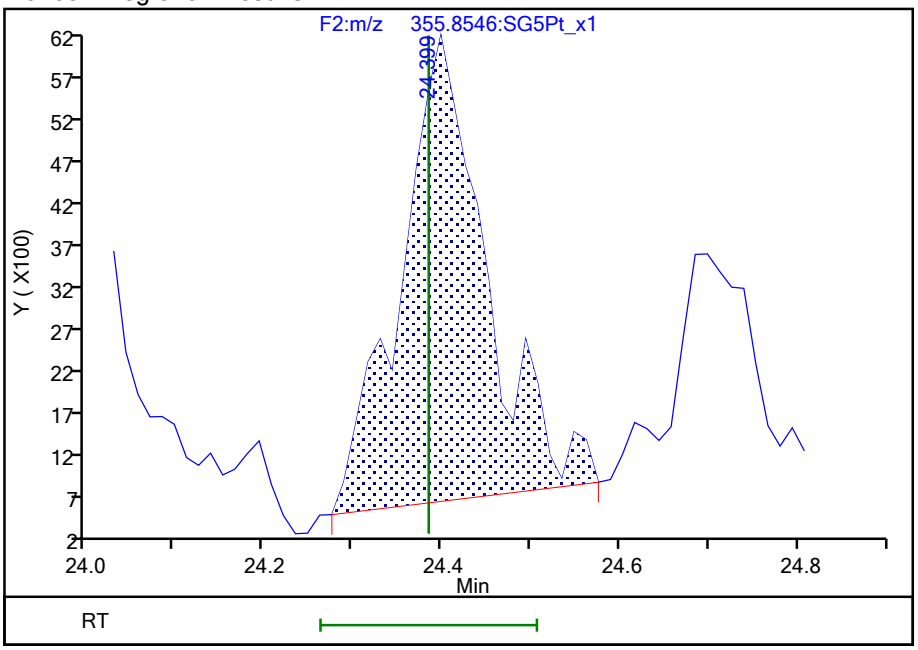

Reviewer: bennettd, 19-Aug-2021 12:49:49
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 2

Not Detected
Expected RT: 24.39

Processing Integration Results

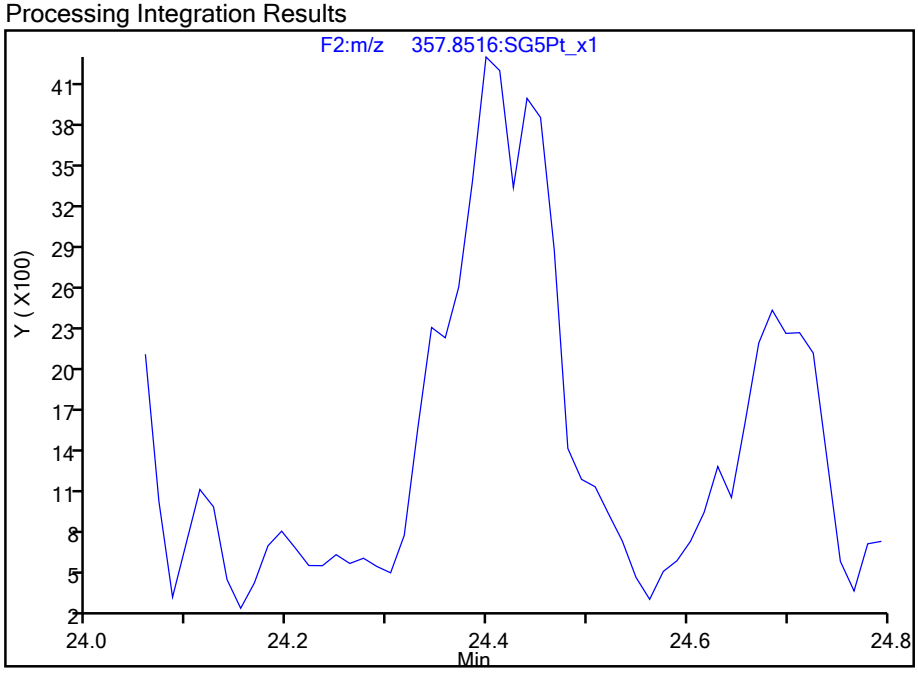

Manual Integration Results

RT: 24.40
Area: 27535
Amount: 0.100389
Amount Units: pg/ul

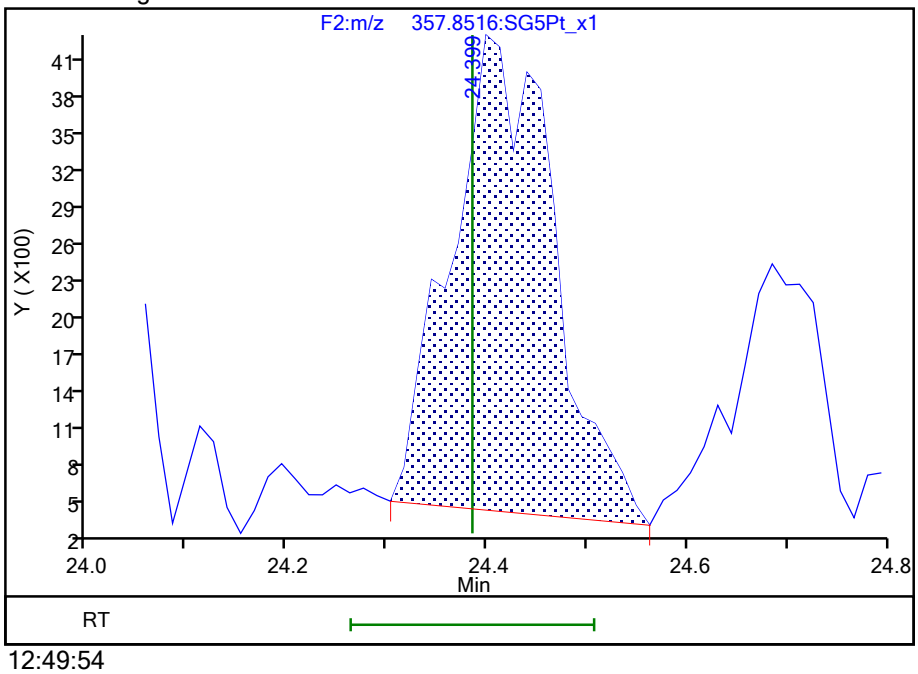

Reviewer: bennettd, 19-Aug-2021 12:49:54
Audit Action: Manually Integrated Audit Reason: Missed Peak

782281

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 23.226 Area = 53974

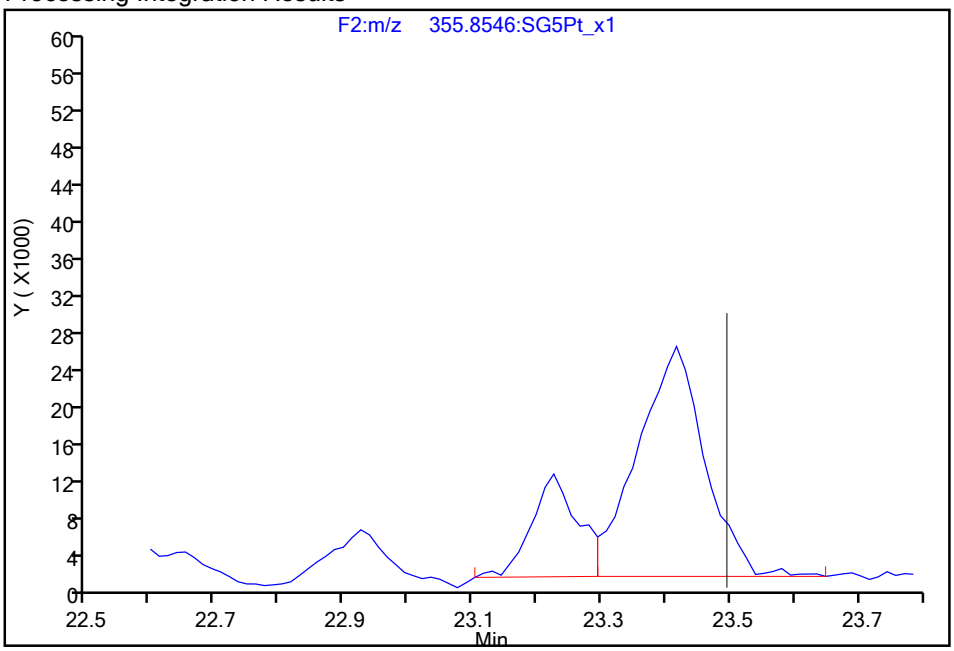

Manual Integration Results

RT = 23.226 Area = 53974

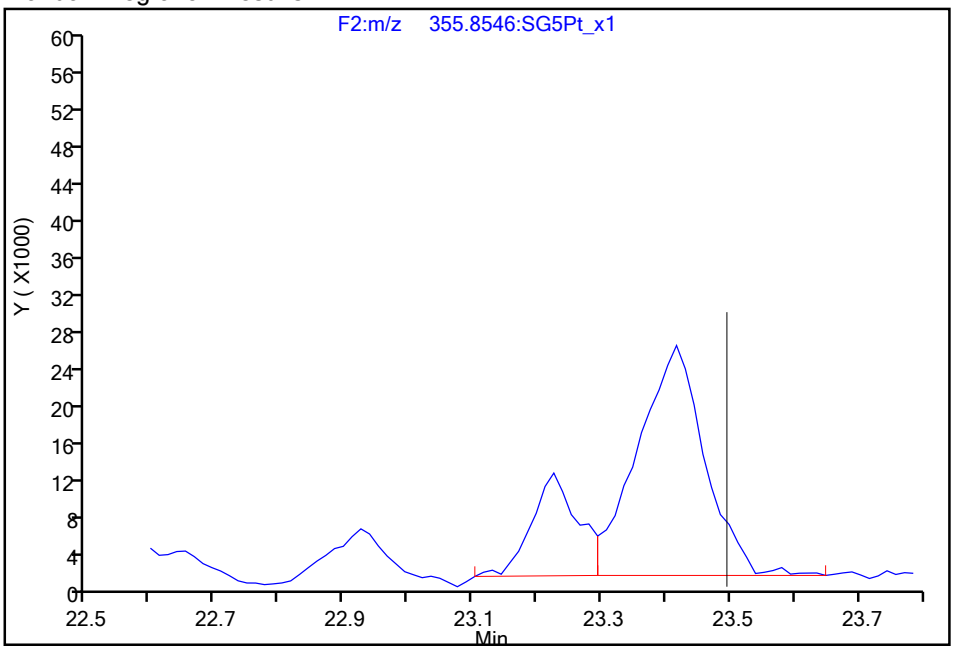

Reviewer: krenns, 22-Aug-2021 09:23:46

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

782282

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 23.417 Area = 178098

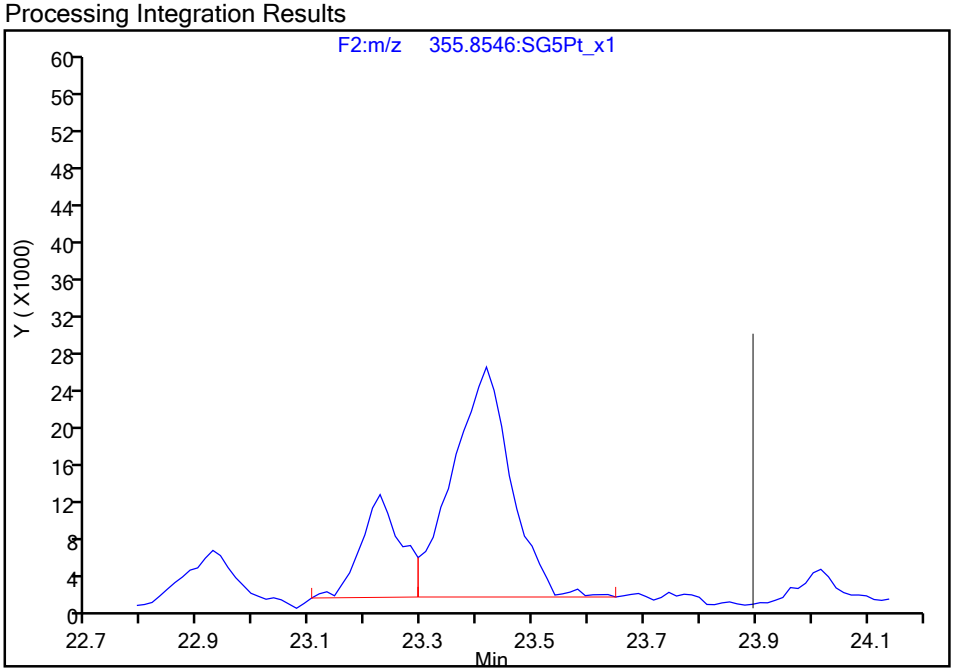

Manual Integration Results

RT = 23.417 Area = 178098

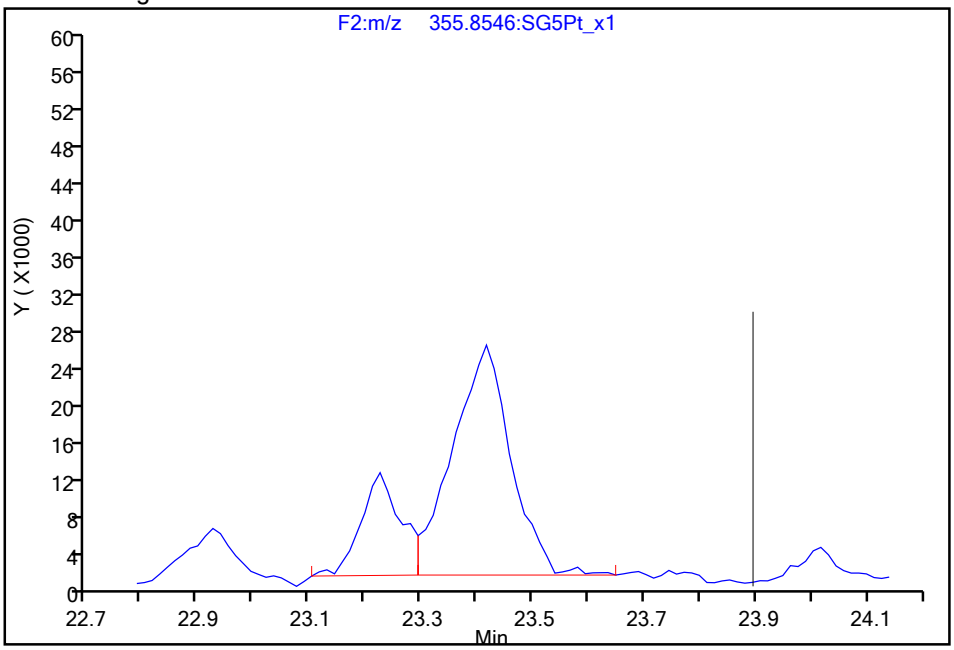

Reviewer: krenns, 22-Aug-2021 09:23:46

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

782283

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 23.417 Area = 178098

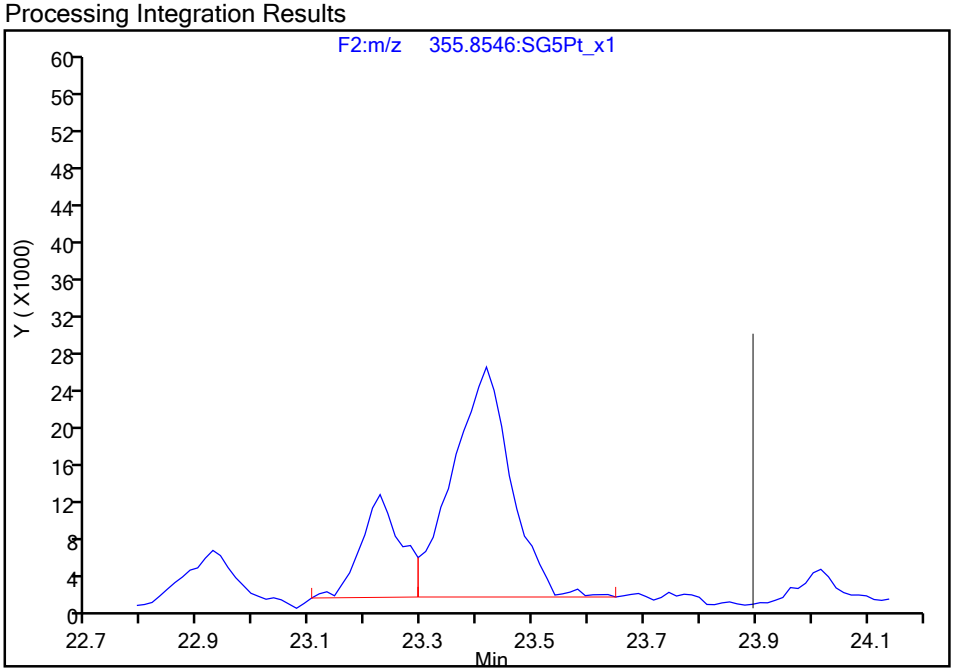

Manual Integration Results

RT = 23.417 Area = 178098

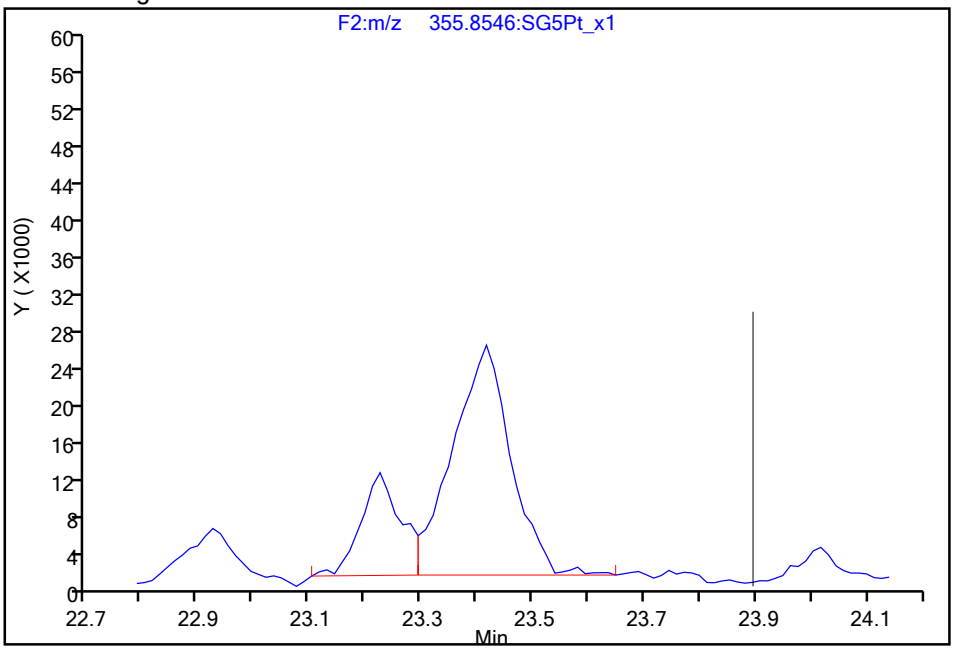

Reviewer: krenns, 22-Aug-2021 09:23:46

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 30.65
Area: 37441
Amount: 0.090119
Amount Units: pg/ul

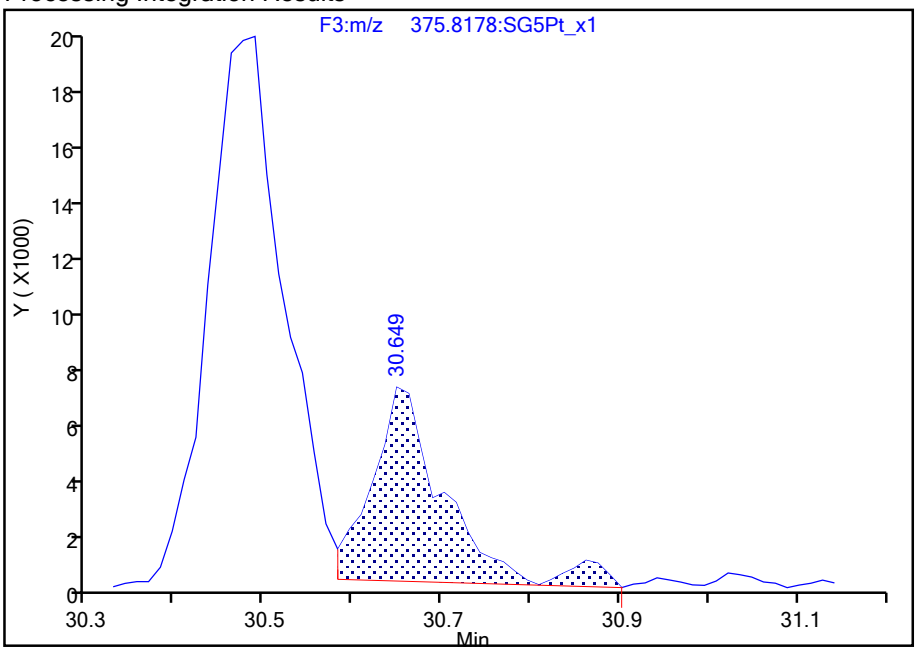

Manual Integration Results

RT: 30.65
Area: 34743
Amount: 0.087222
Amount Units: pg/ul

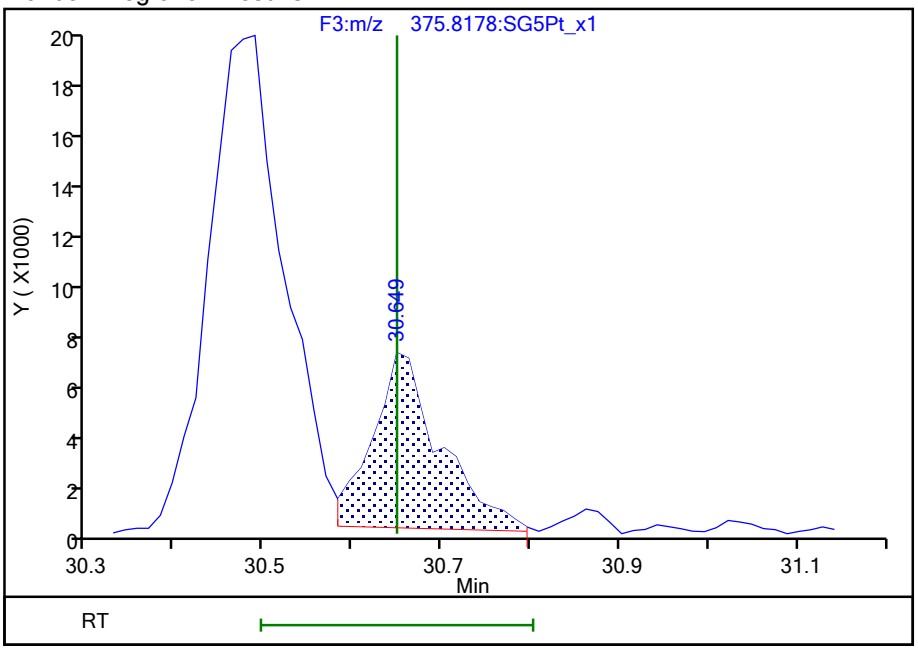

Reviewer: bennettd, 19-Aug-2021 12:50:54

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

Not Detected
Expected RT: 31.49

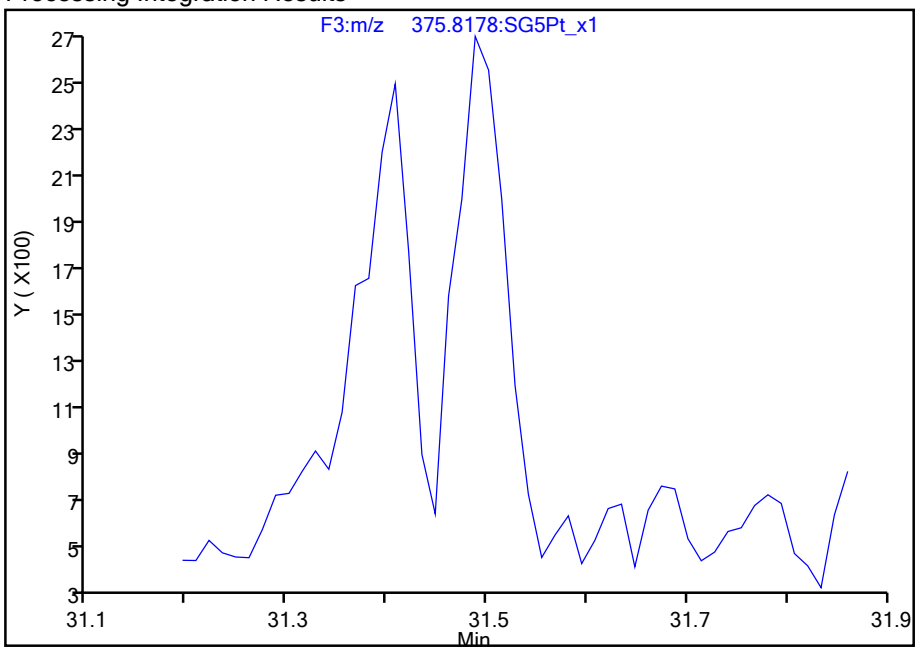

Manual Integration Results

RT: 31.49
Area: 6064
Amount: 0.017255
Amount Units: pg/ul

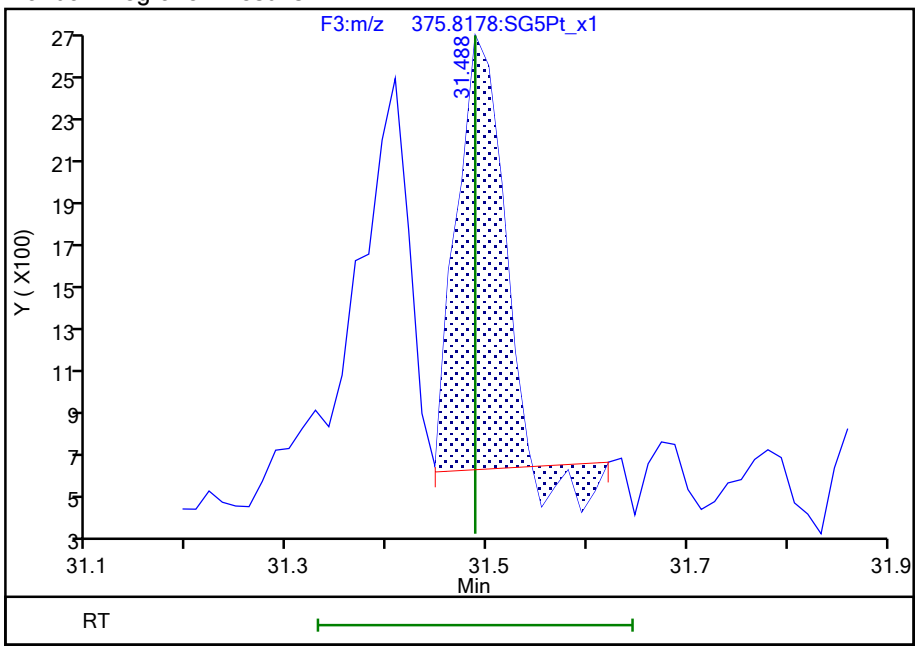

Reviewer: bennettd, 19-Aug-2021 12:51:19
Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

782286

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Not Detected
Expected RT: 31.49

Processing Integration Results

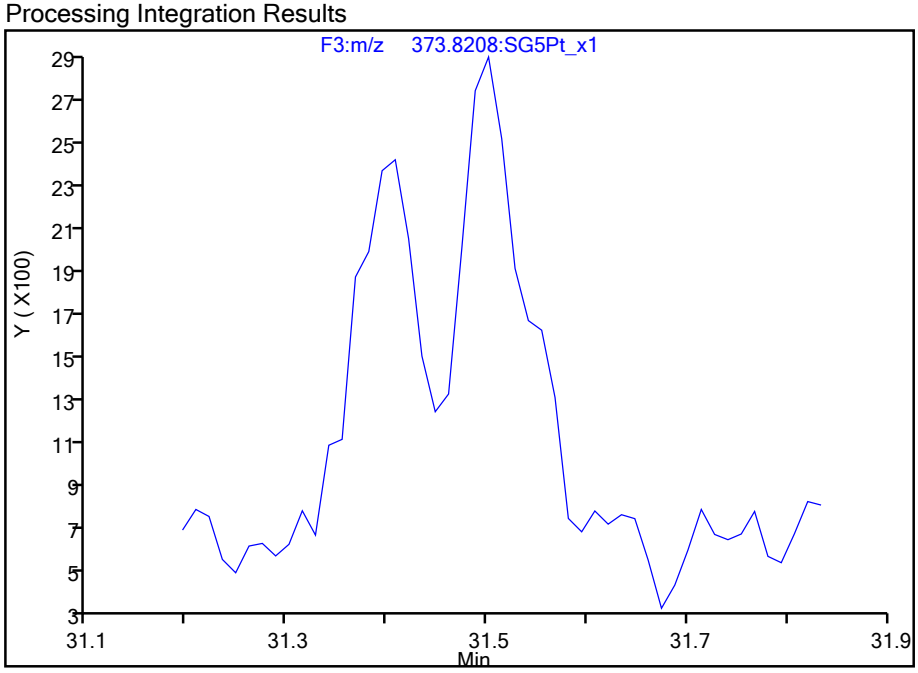

RT: 31.50
Area: 9655
Amount: 0.017255
Amount Units: pg/ul

Manual Integration Results

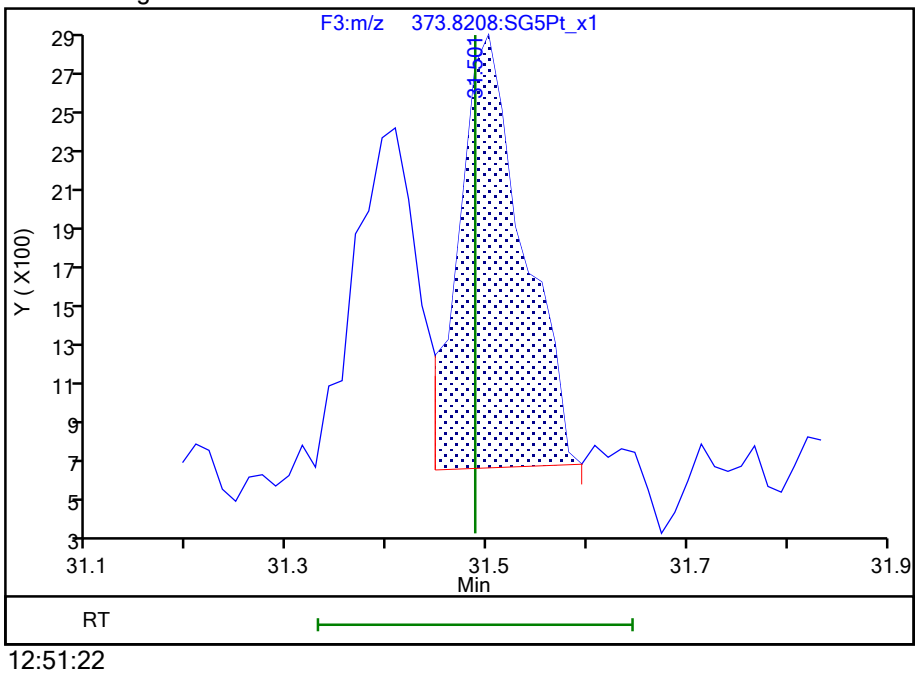

Reviewer: bennettd, 19-Aug-2021 12:51:22
Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.31
Area: 34240
Amount: 0.065238
Amount Units: pg/ul

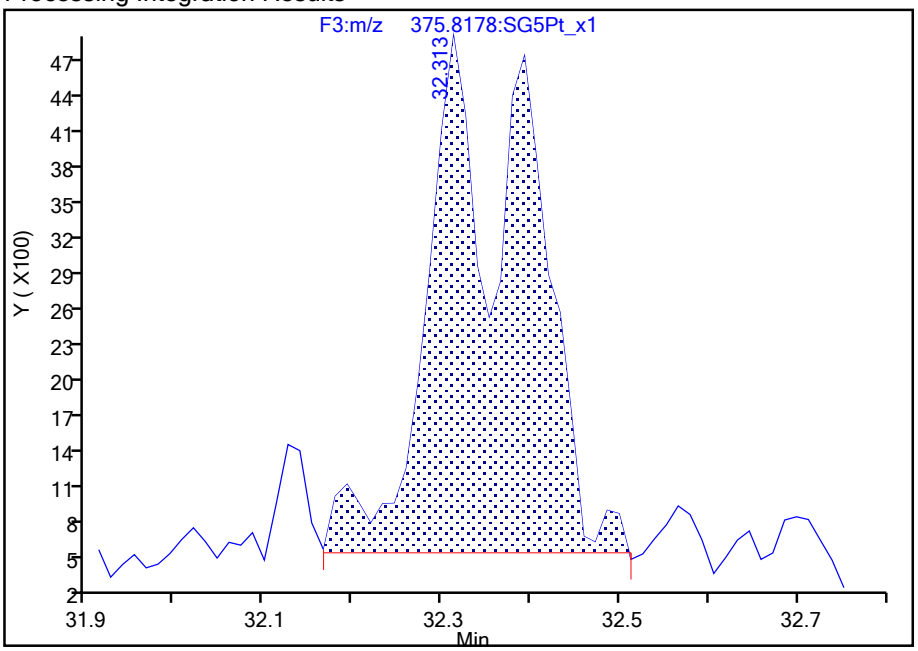

Manual Integration Results

RT: 32.31
Area: 15677
Amount: 0.042957
Amount Units: pg/ul

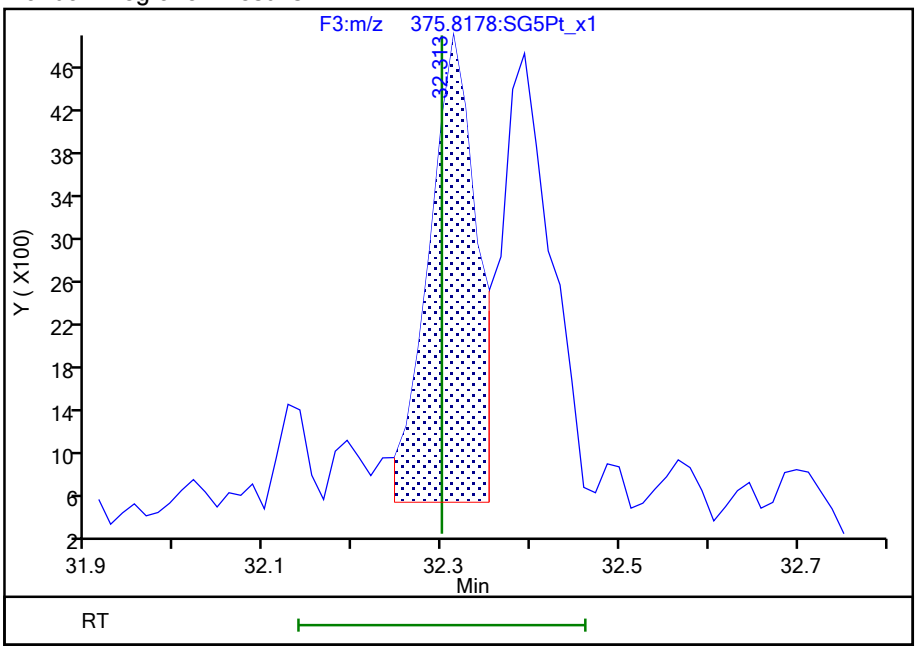

Reviewer: bennettd, 19-Aug-2021 12:51:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (28.40- 32.42)

Signal: 1

Processing Integration Results

RT = 32.393 Area = 22133

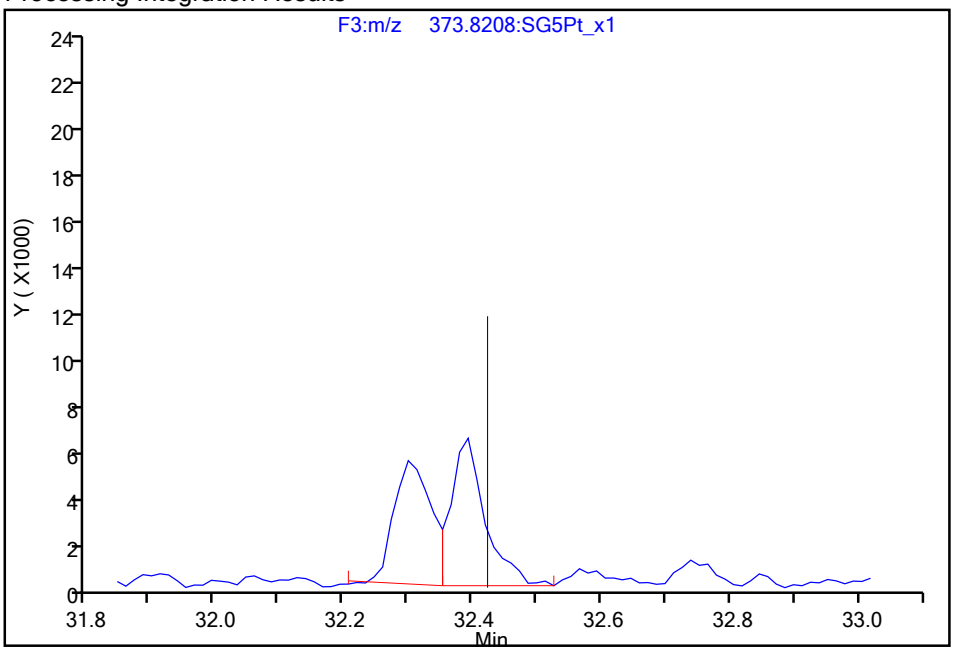

Manual Integration Results

RT = 32.393 Area = 22133

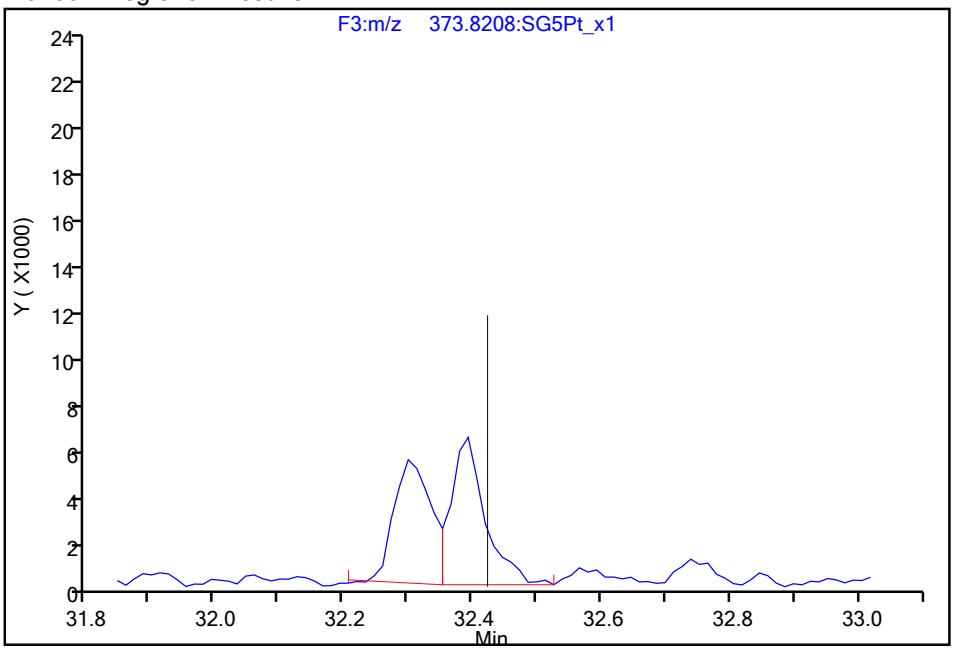

Reviewer: krenns, 22-Aug-2021 09:24:21

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.78
Area: 85776
Amount: 0.441607
Amount Units: pg/ul

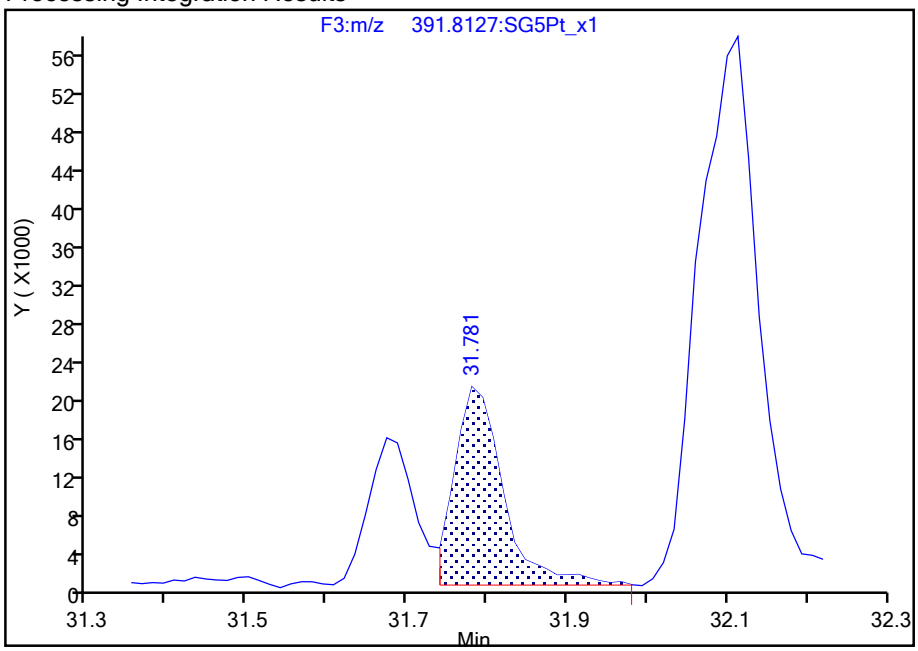

Manual Integration Results

RT: 31.67
Area: 55923
Amount: 0.204070
Amount Units: pg/ul

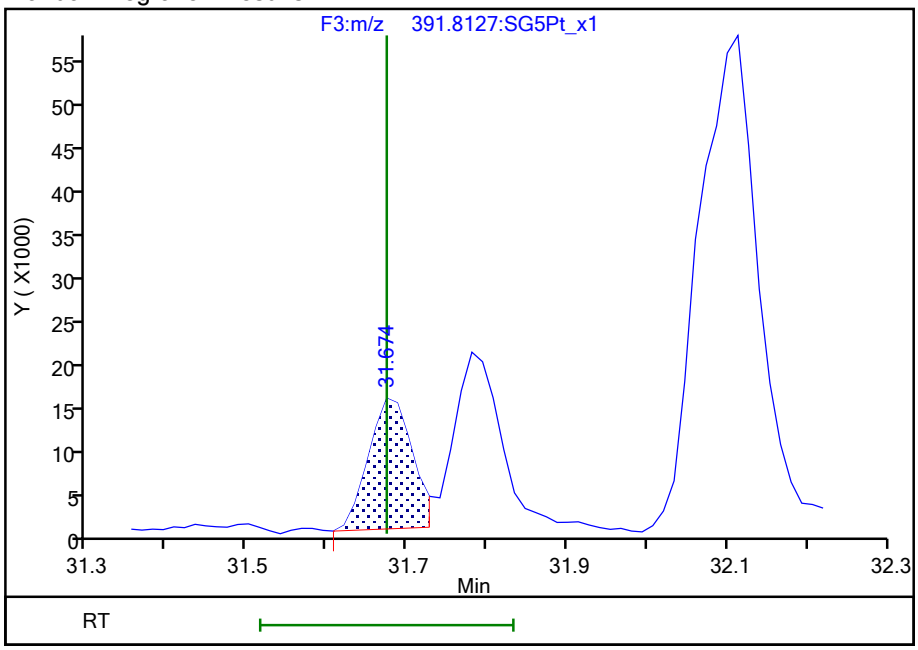

Reviewer: bennettd, 19-Aug-2021 12:52:13

Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.79
Area: 184207
Amount: 0.441607
Amount Units: pg/ul

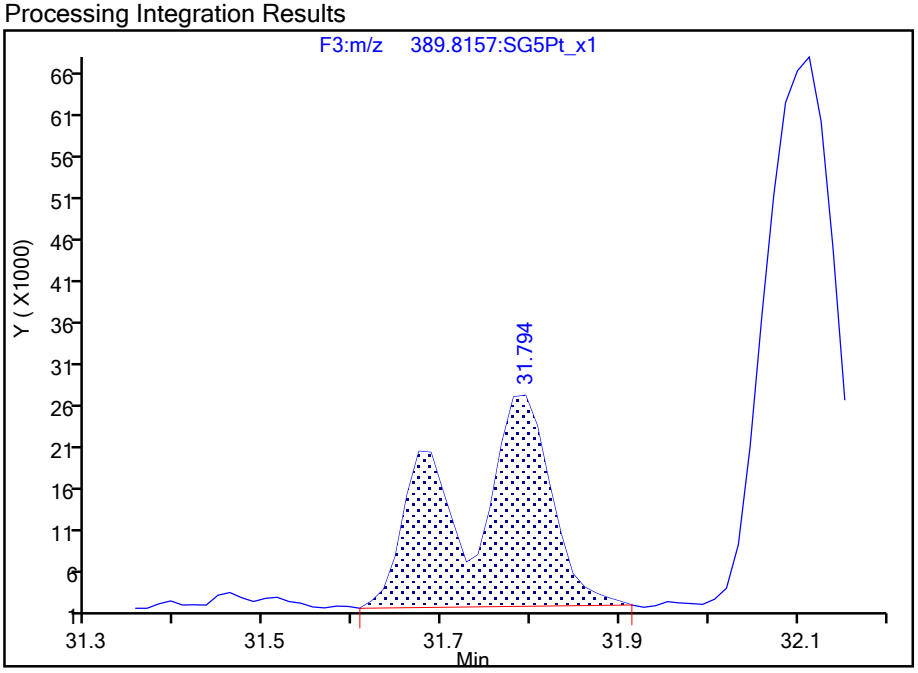

Manual Integration Results

RT: 31.67
Area: 68838
Amount: 0.204070
Amount Units: pg/ul

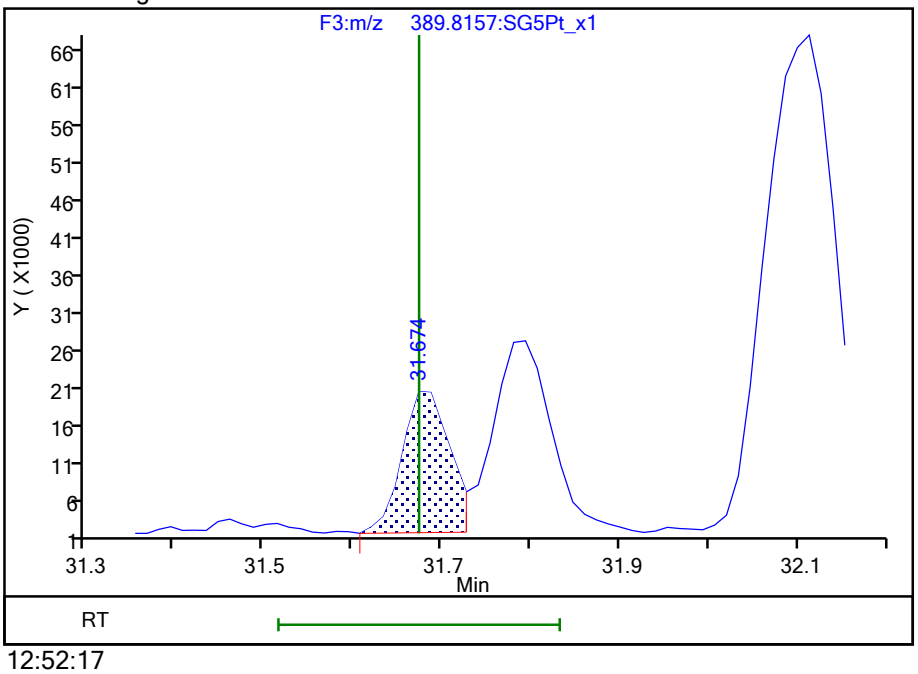

Reviewer: bennettd, 19-Aug-2021 12:52:17
Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

782291

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.78
Area: 85776
Amount: 0.430916
Amount Units: pg/ul

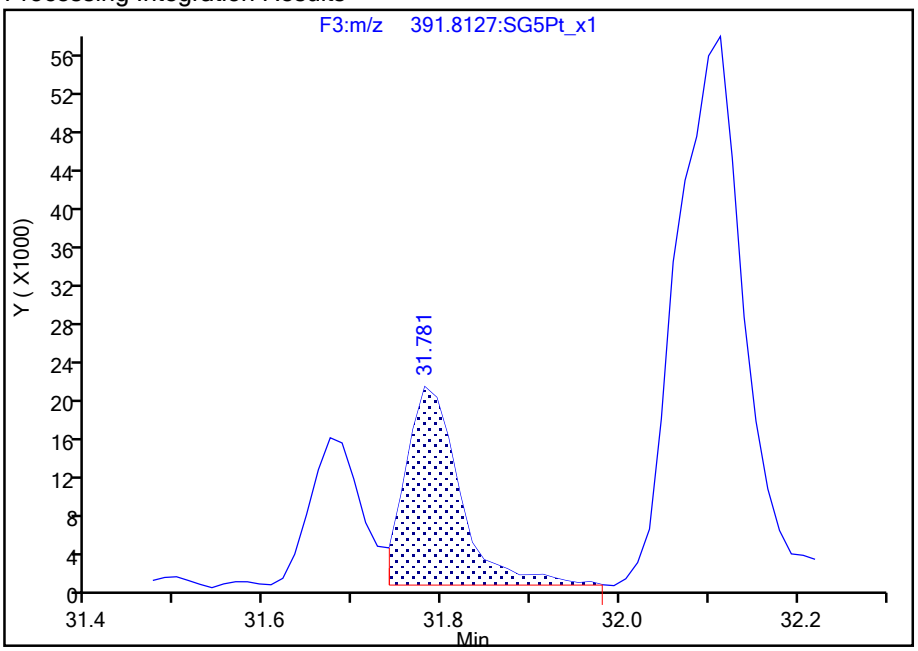

Manual Integration Results

RT: 31.78
Area: 78211
Amount: 0.308921
Amount Units: pg/ul

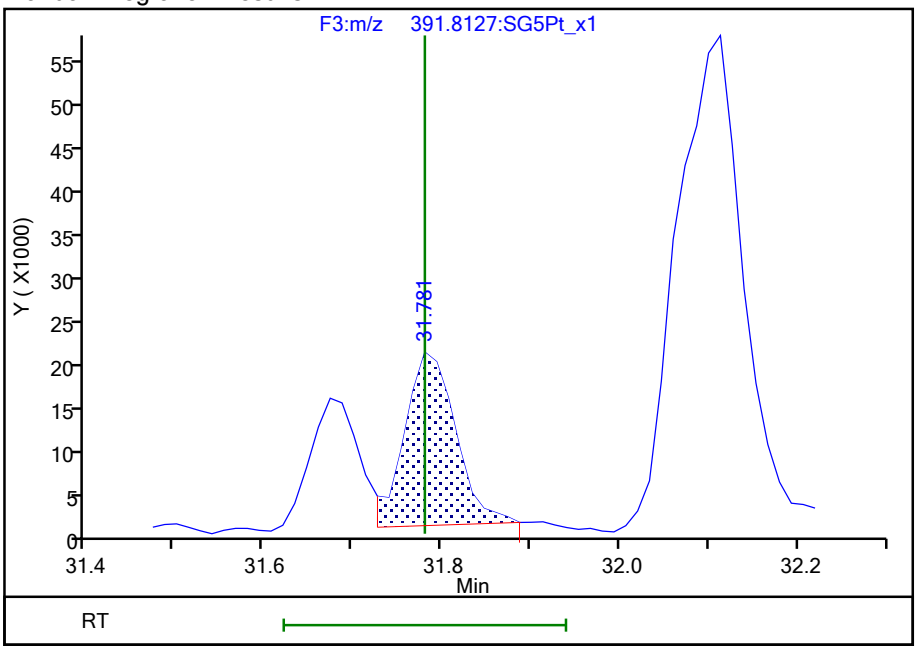

Reviewer: bennettd, 19-Aug-2021 12:52:13

Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.79
Area: 184207
Amount: 0.430916
Amount Units: pg/ul

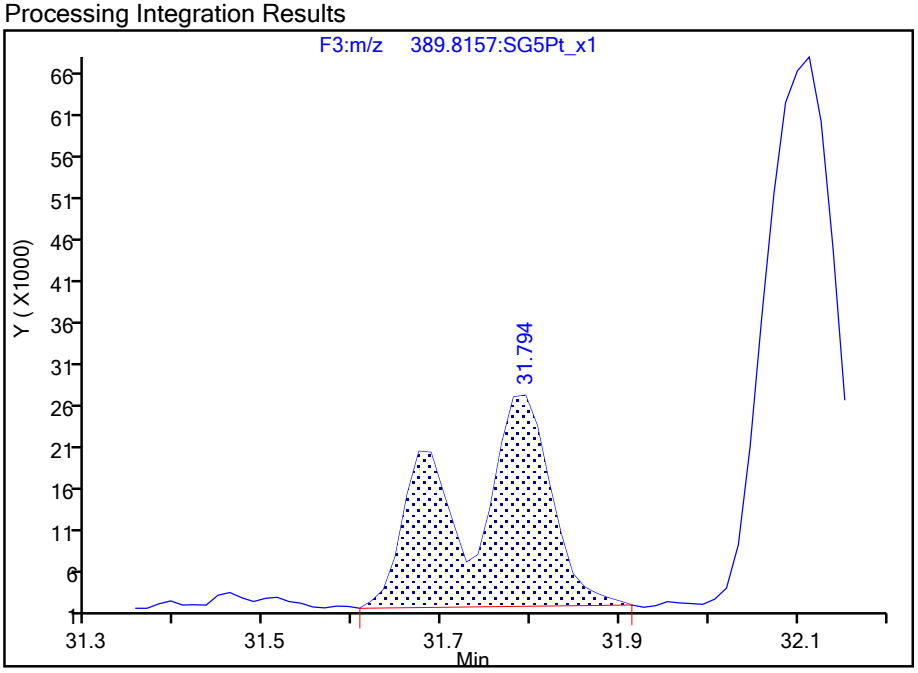

Manual Integration Results

RT: 31.79
Area: 115338
Amount: 0.308921
Amount Units: pg/ul

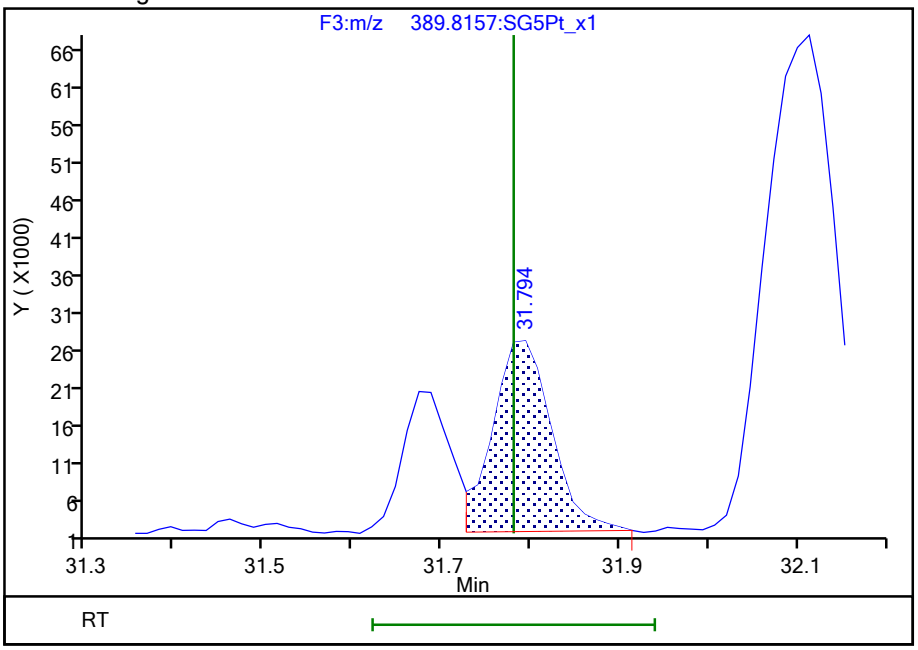

Reviewer: bennettd, 19-Aug-2021 12:52:17
Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

782293

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.74
Area: 20758
Amount: 0.059064
Amount Units: pg/ul

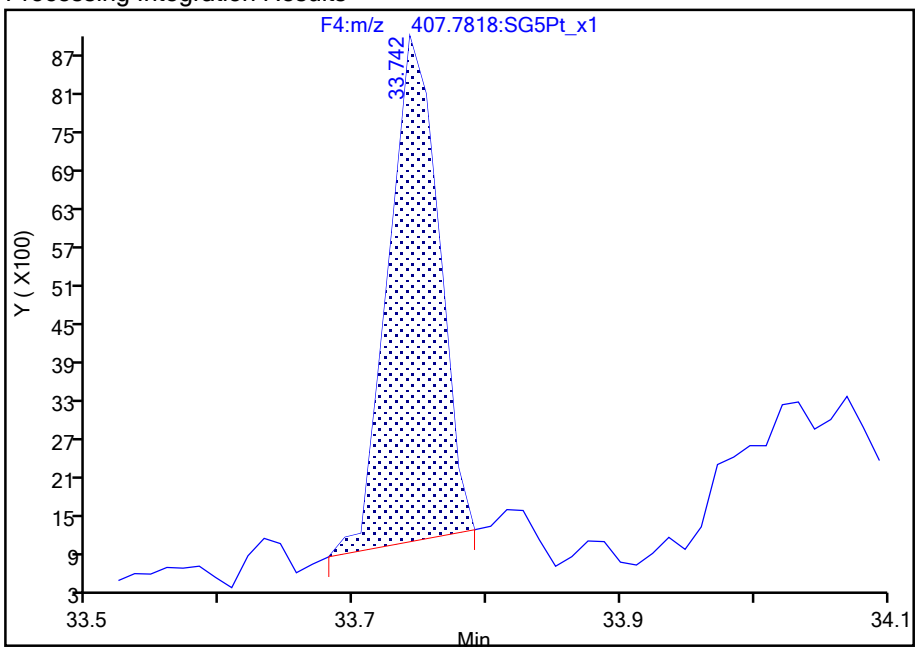

Manual Integration Results

RT: 33.74
Area: 25260
Amount: 0.069925
Amount Units: pg/ul

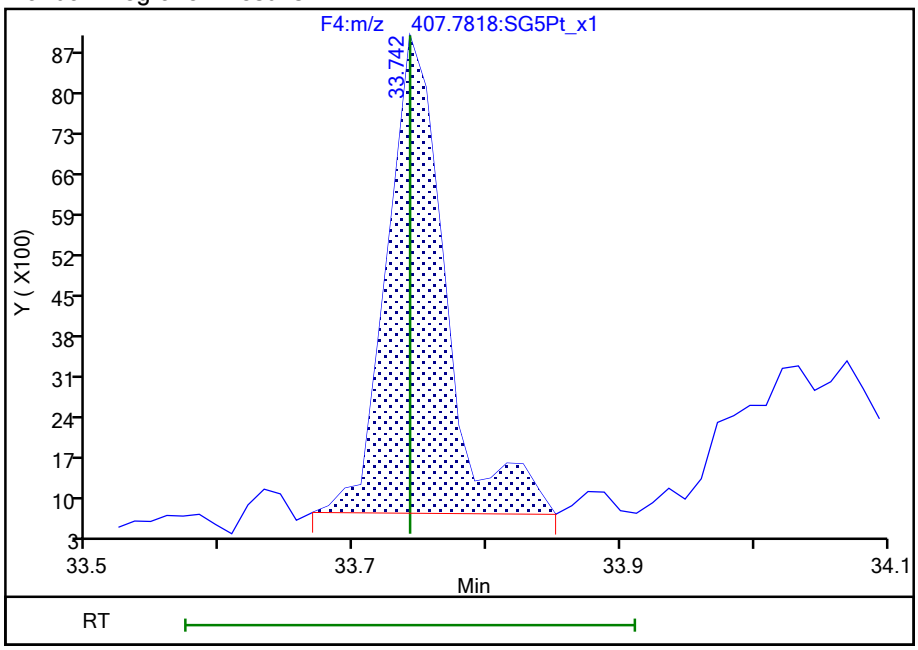

Reviewer: bennettd, 19-Aug-2021 12:52:44
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.75
Area: 25506
Amount: 0.059064
Amount Units: pg/ul

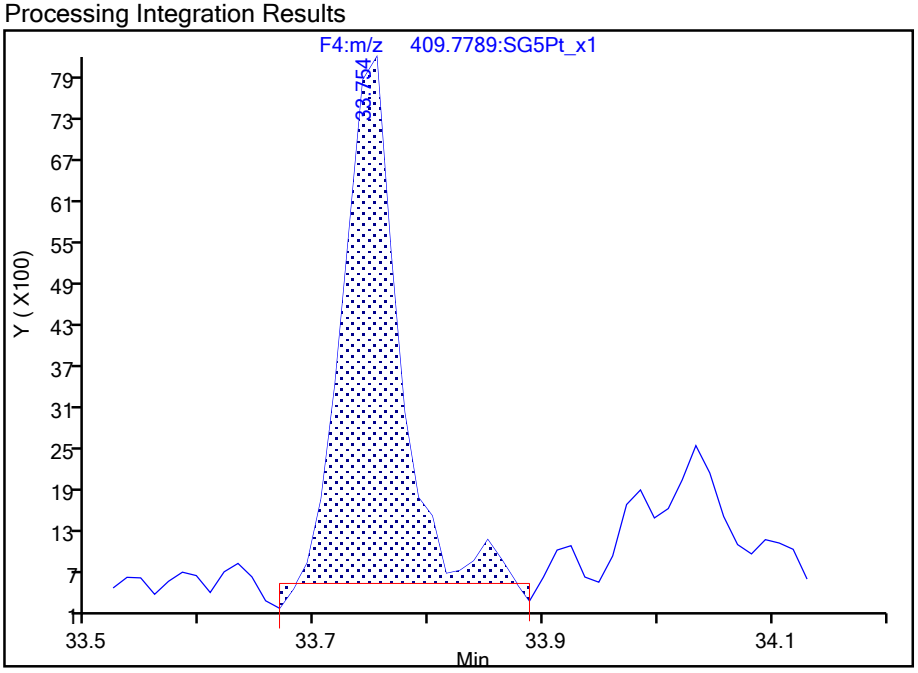

Manual Integration Results

RT: 33.75
Area: 29511
Amount: 0.069925
Amount Units: pg/ul

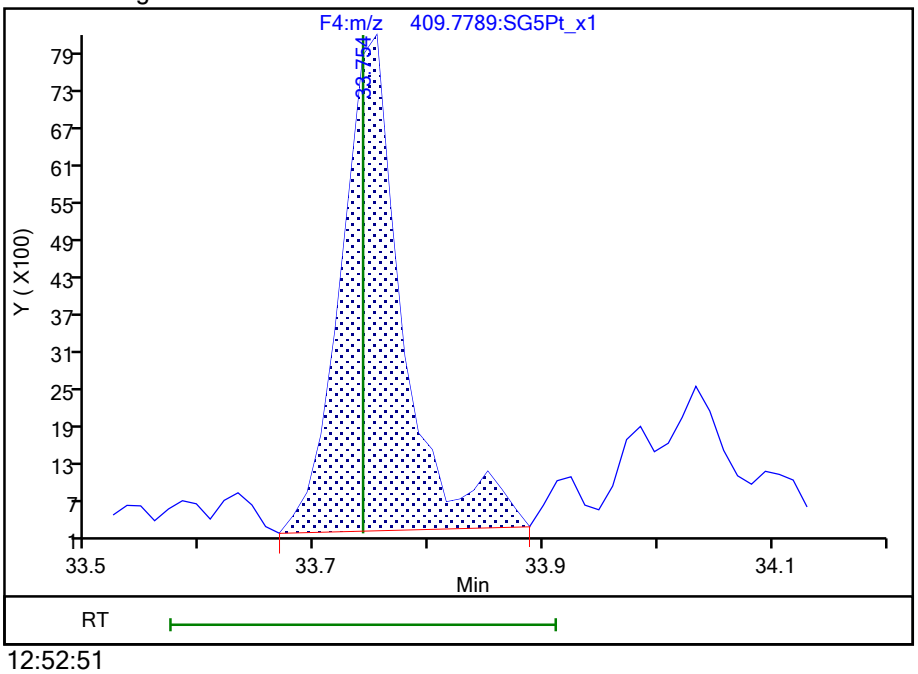

Reviewer: bennettd, 19-Aug-2021 12:52:51

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.90
Area: 45147
Amount: 0.173192
Amount Units: pg/ul

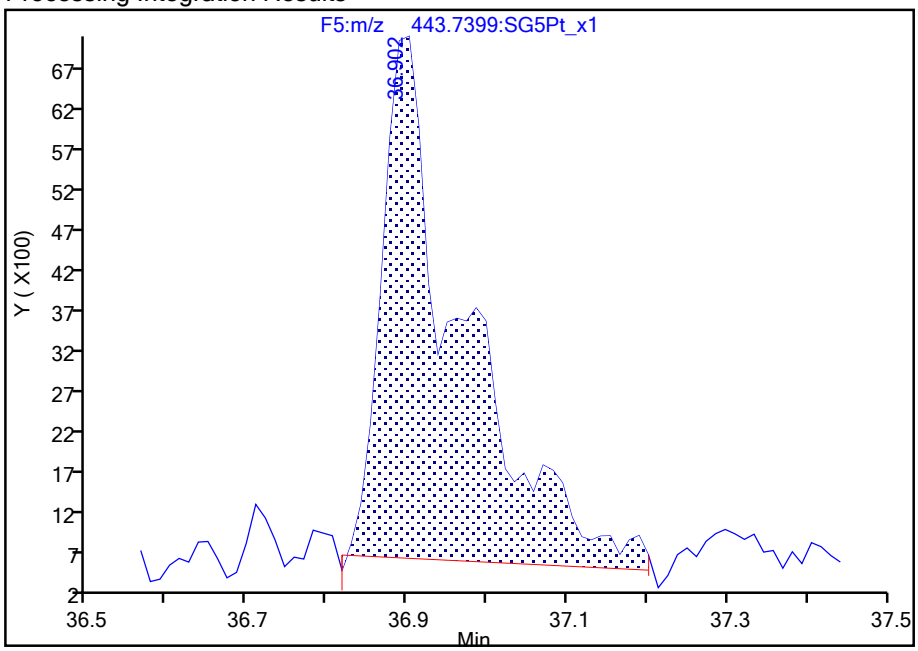

Manual Integration Results

RT: 36.90
Area: 47007
Amount: 0.175305
Amount Units: pg/ul

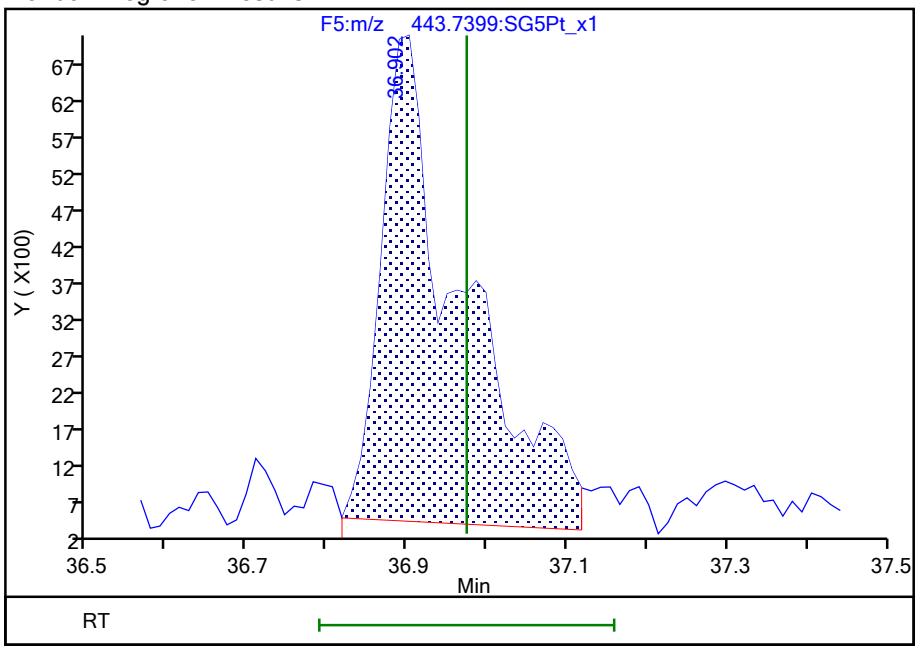

Reviewer: bennettd, 19-Aug-2021 12:53:59

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d				
Injection Date:	18-Aug-2021 18:49:29	Instrument ID:	10D5		
Lims ID:	320-76887-A-4-A	Lab Sample ID:	320-76887-4		
Client ID:	11215702-072721-BN-SJSB096 (6-8)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.89
Area: 45161
Amount: 0.173192
Amount Units: pg/ul

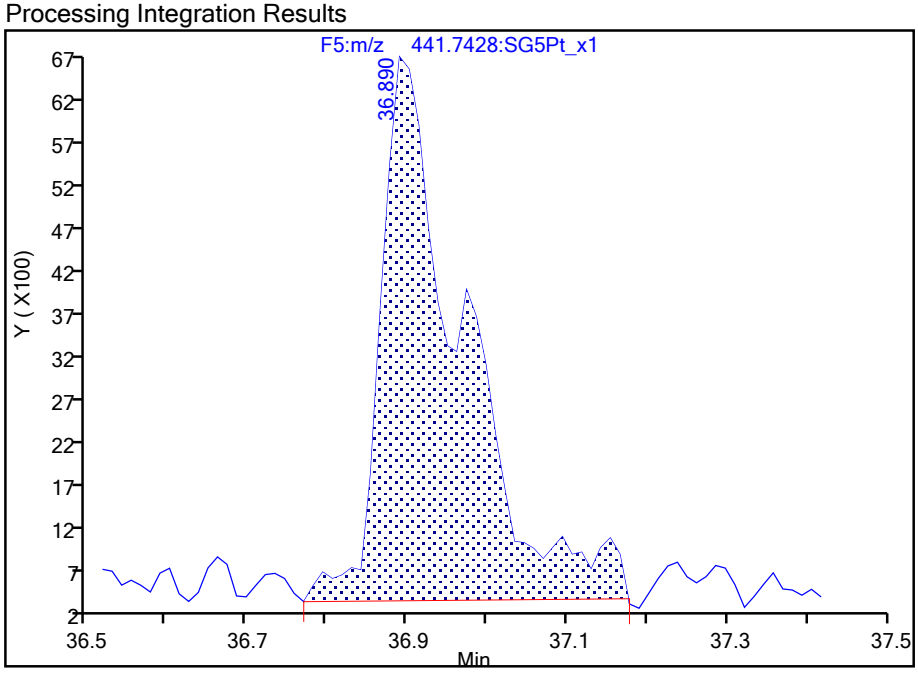

Manual Integration Results

RT: 36.89
Area: 44403
Amount: 0.175305
Amount Units: pg/ul

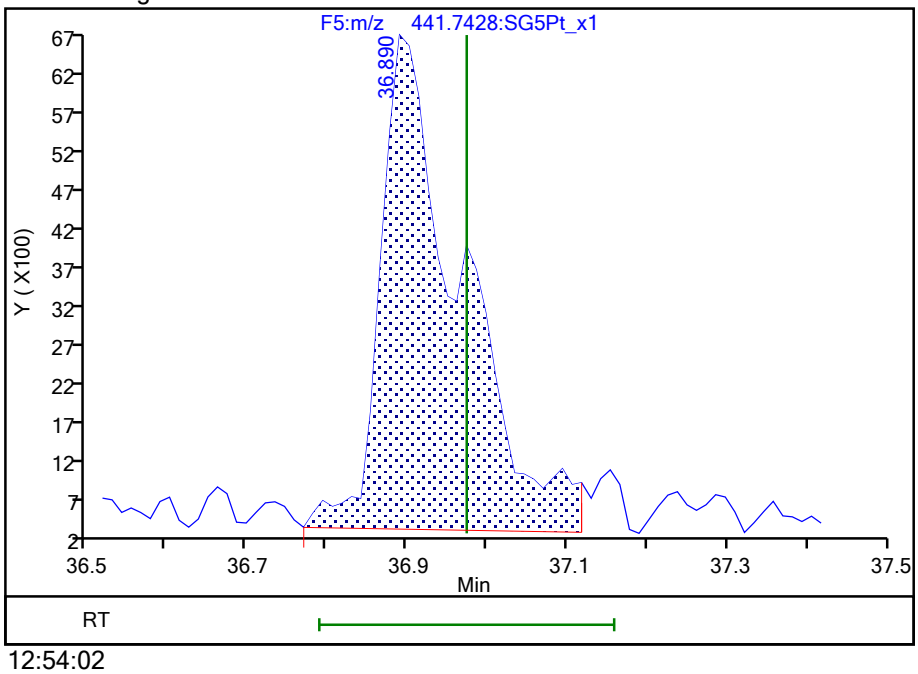

Reviewer: bennettd, 19-Aug-2021 12:54:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

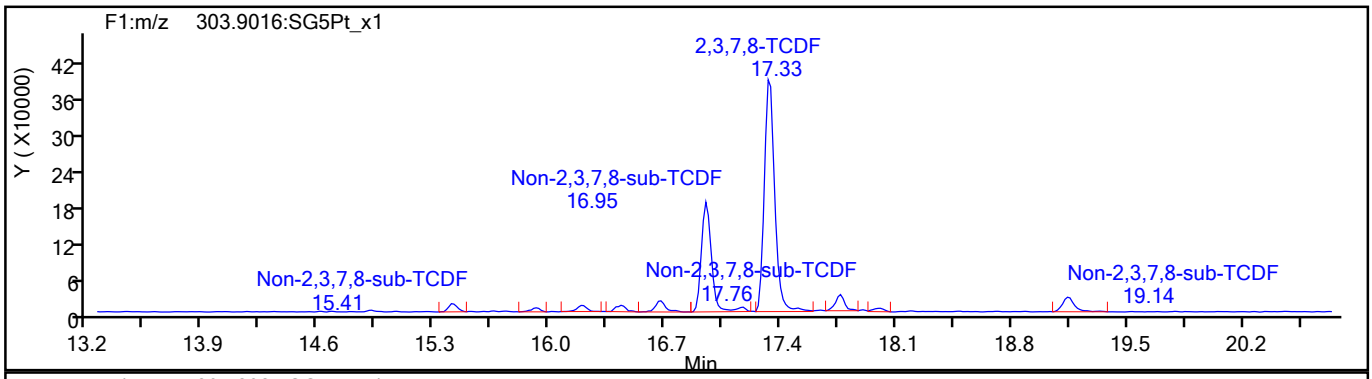

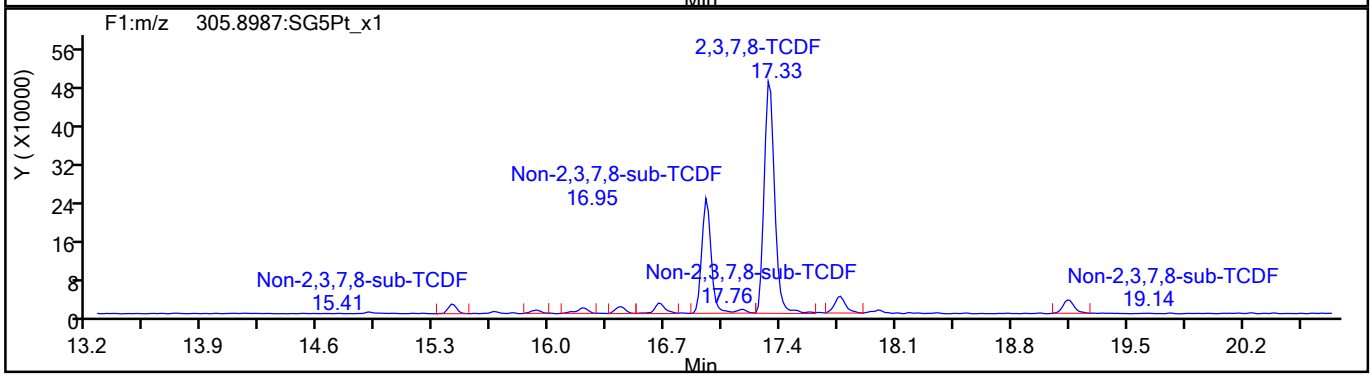

TCDF Standards

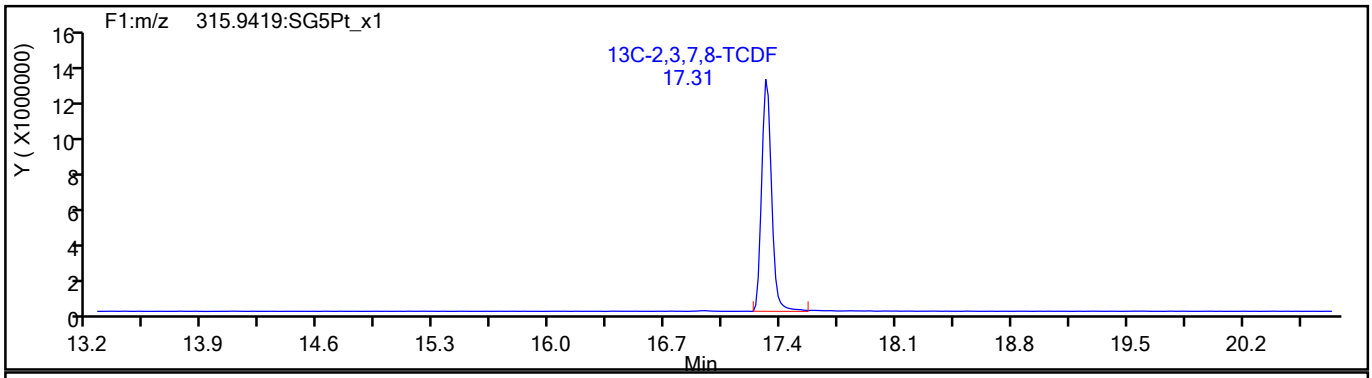

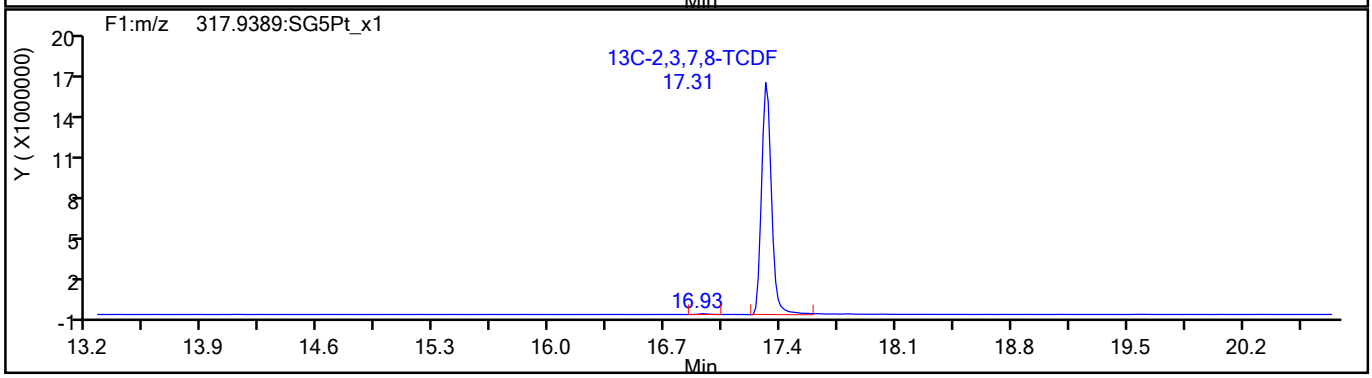

782298

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

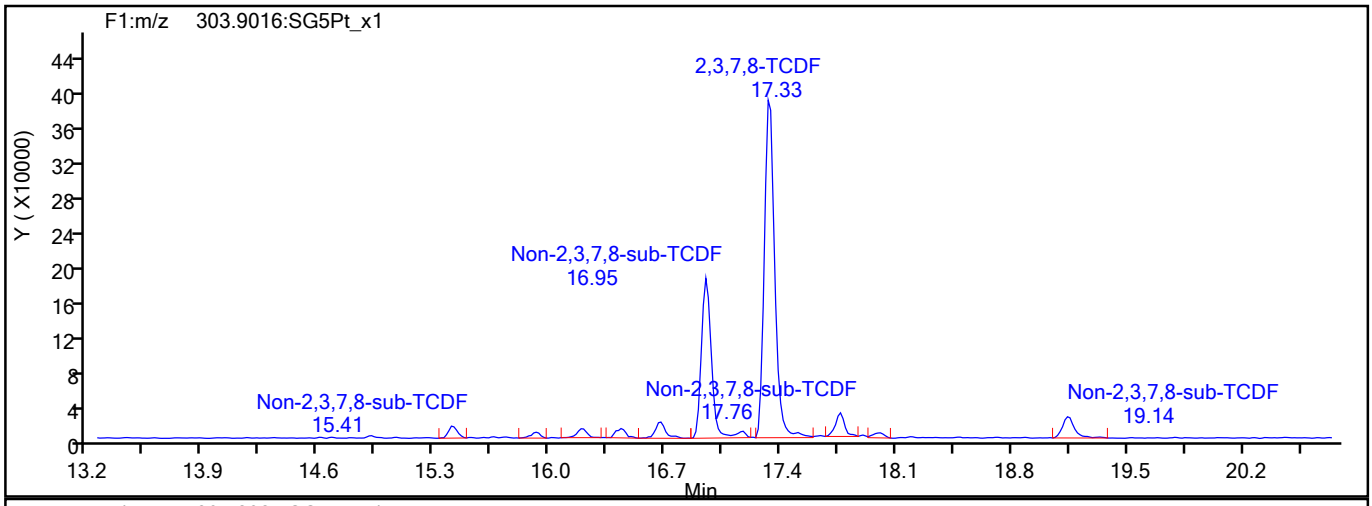

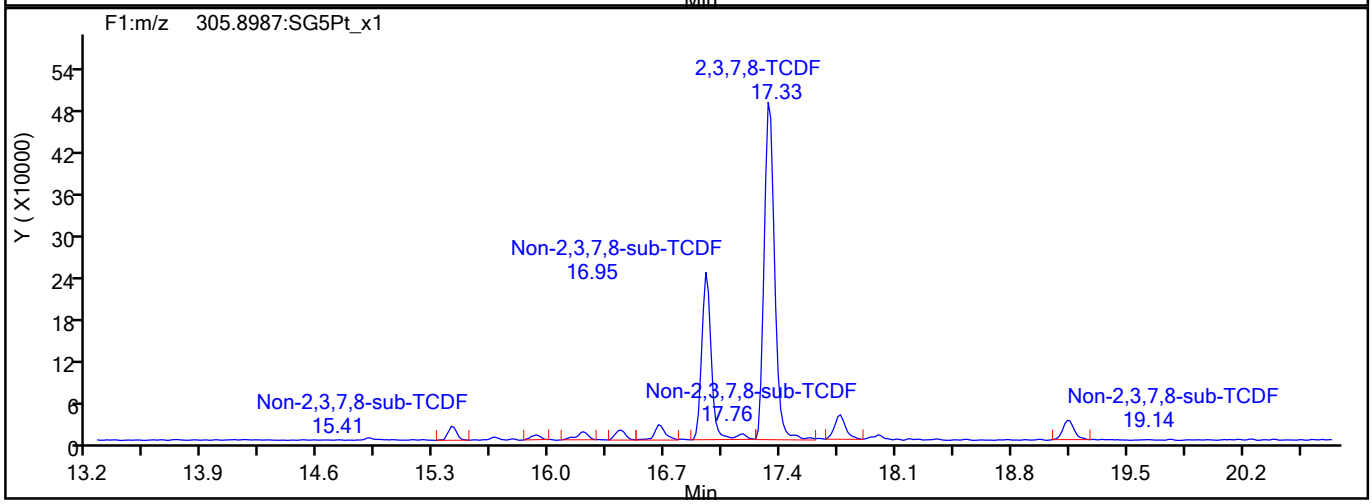

TCDF Interference Mass

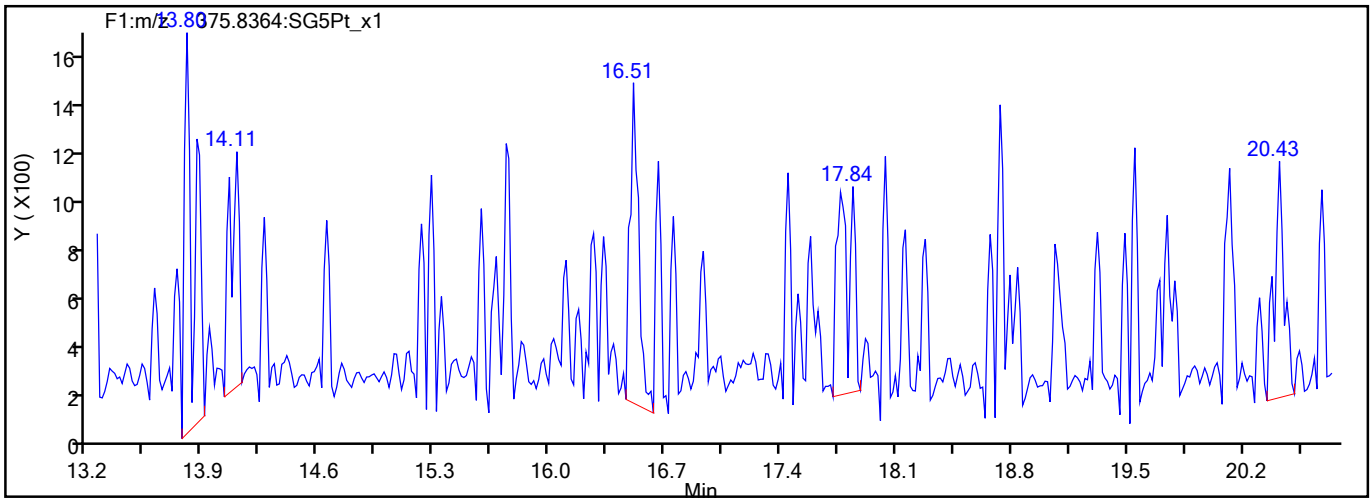

782299

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

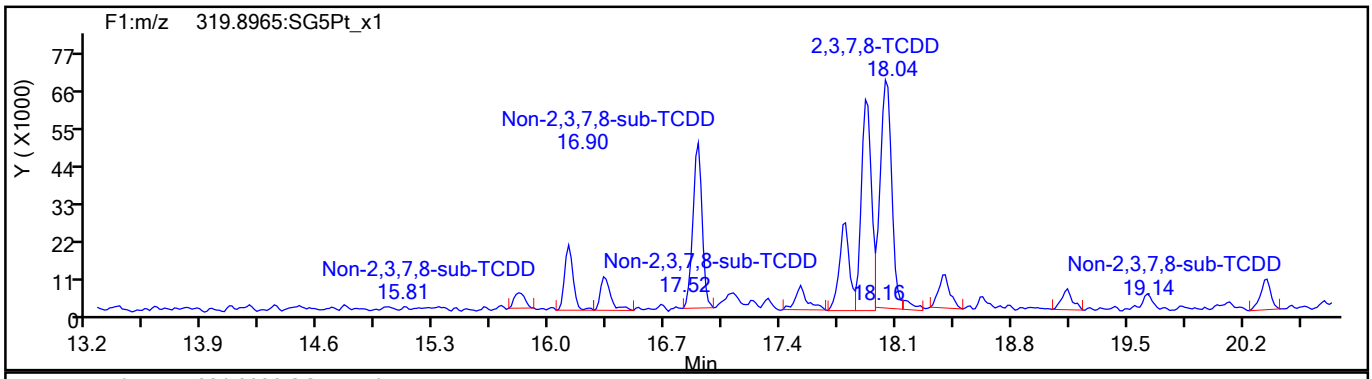

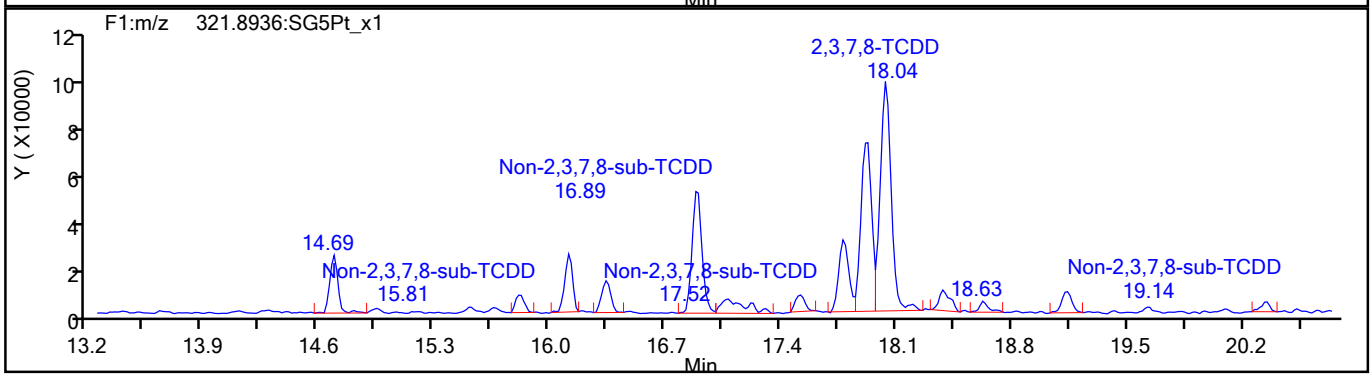

TCDD Standards

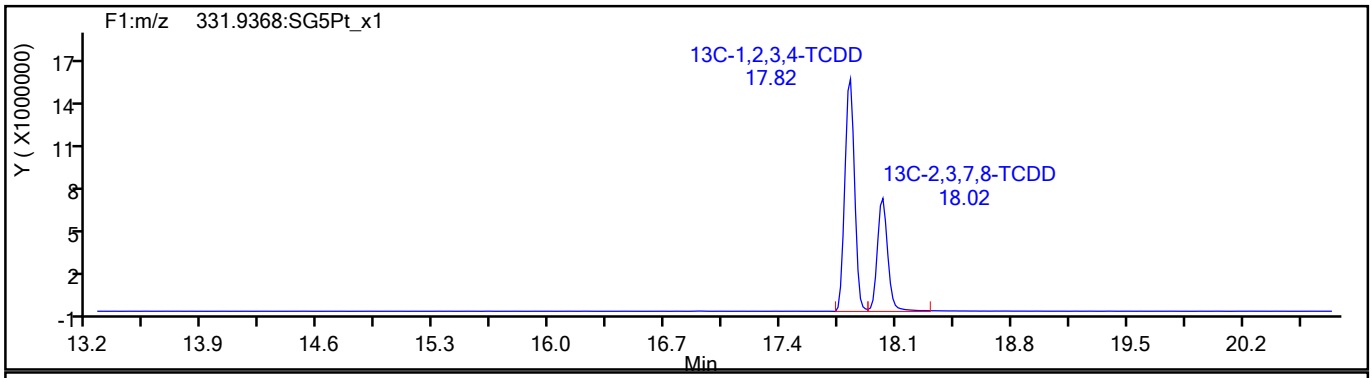

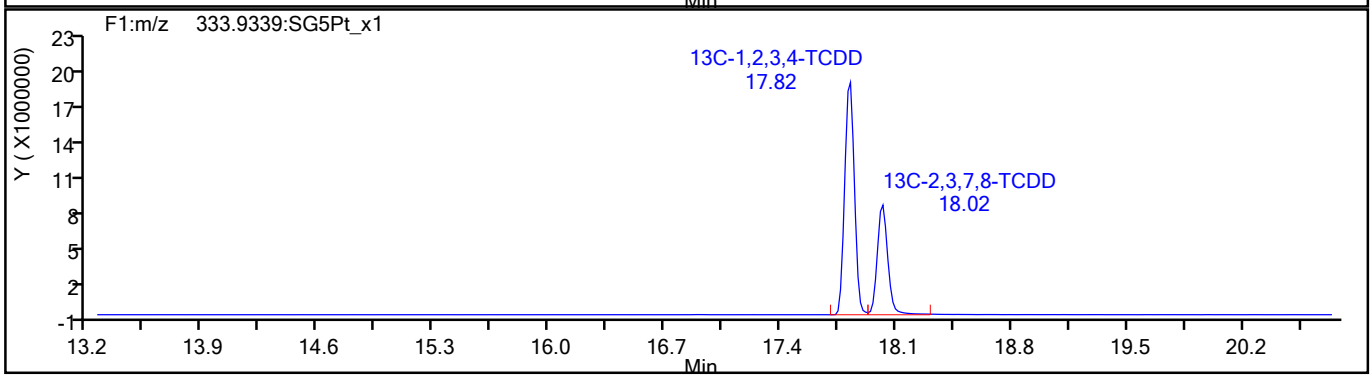

782300

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

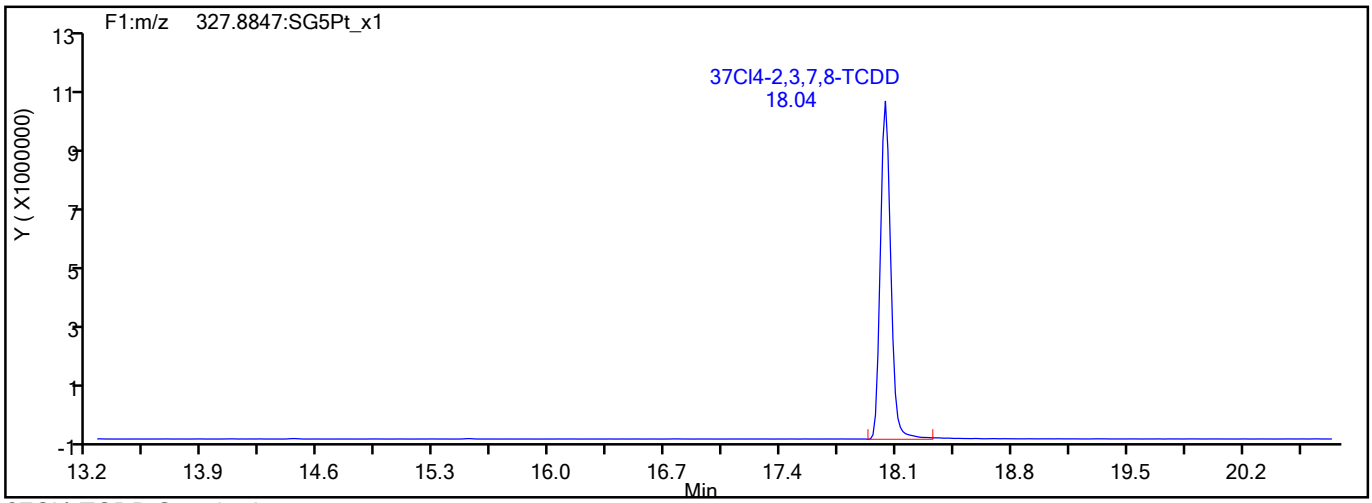

37Cl4-TCDD Standards

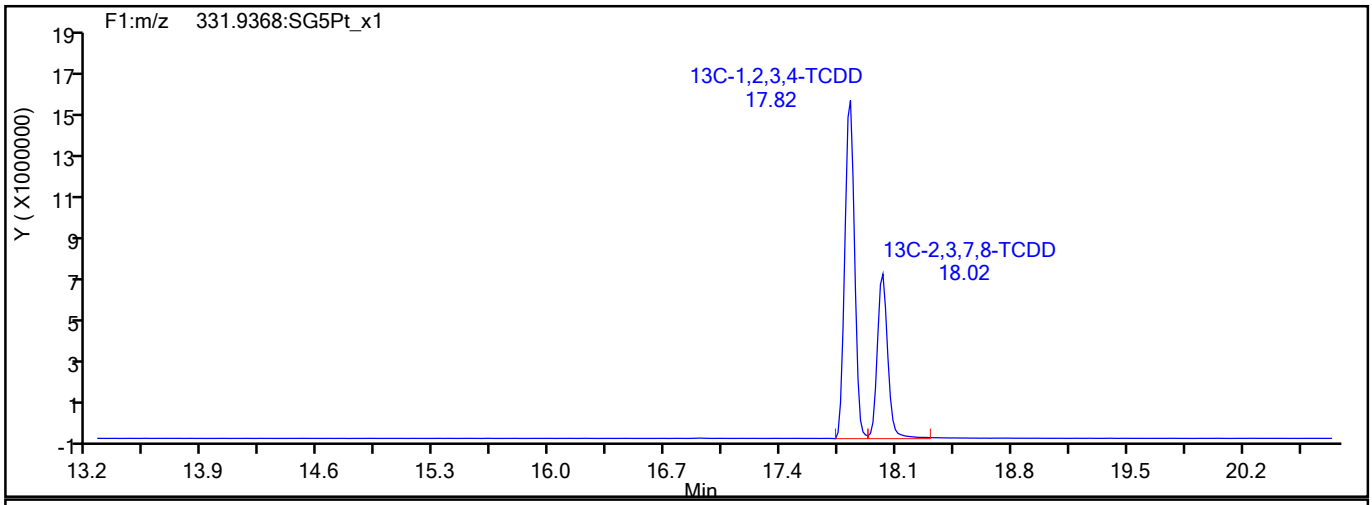

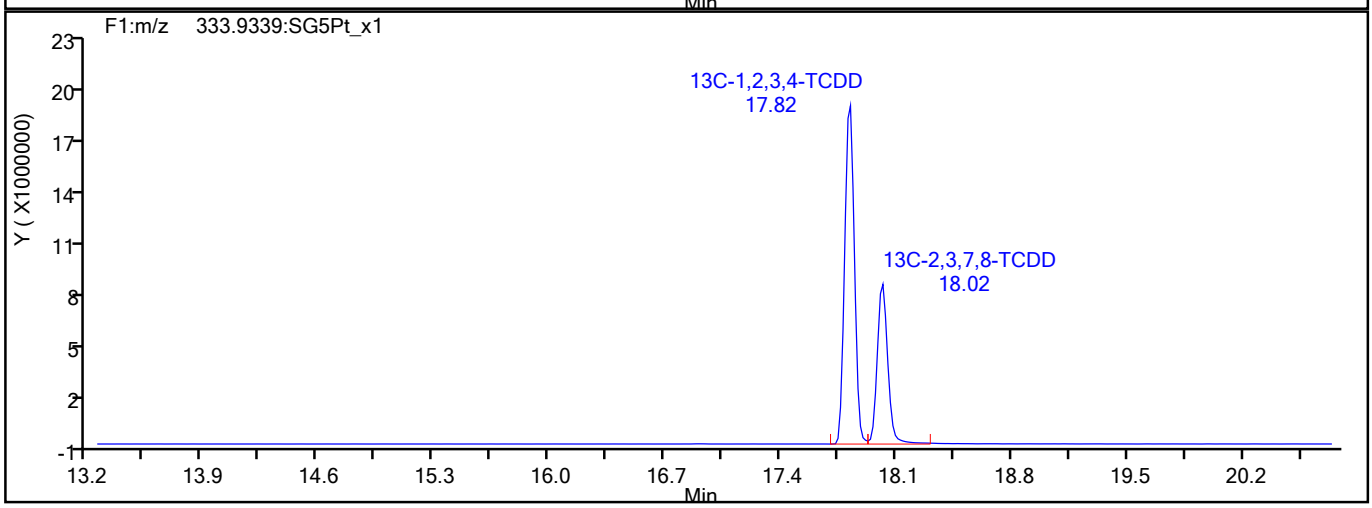

782301

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

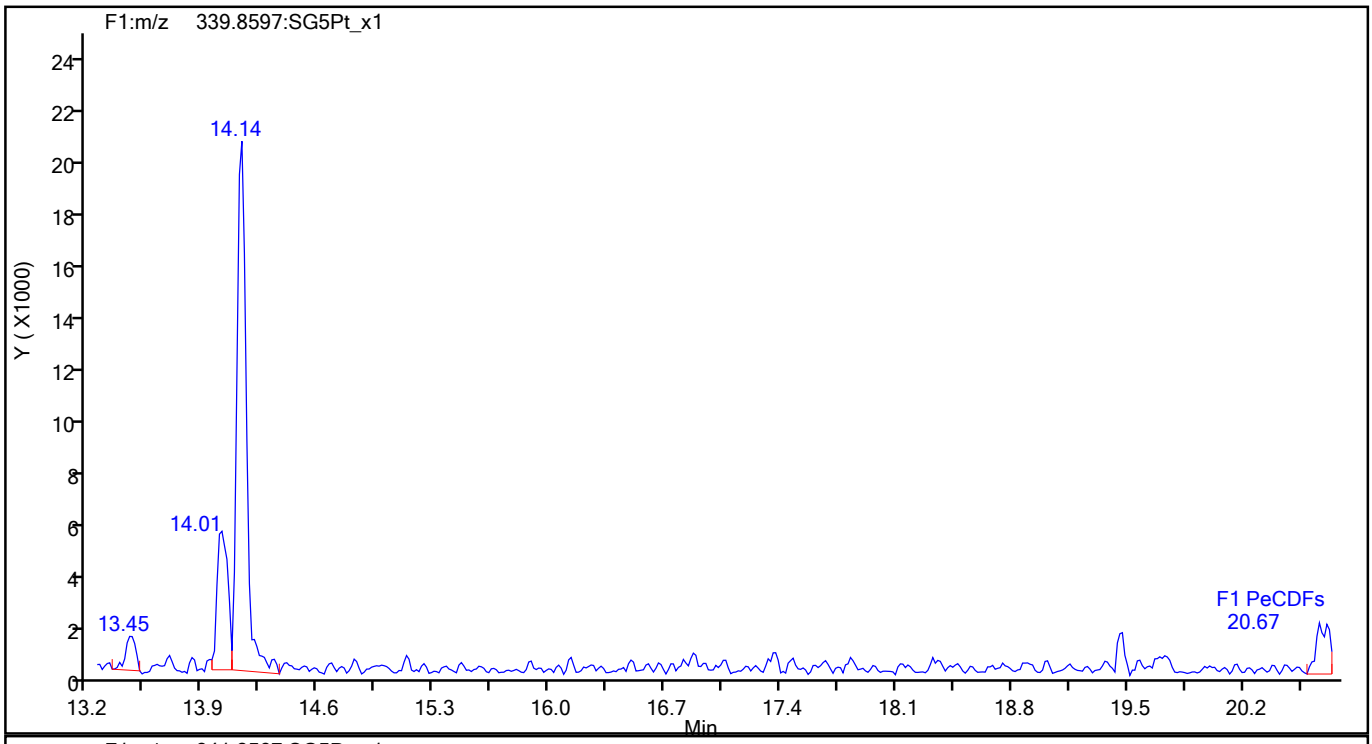

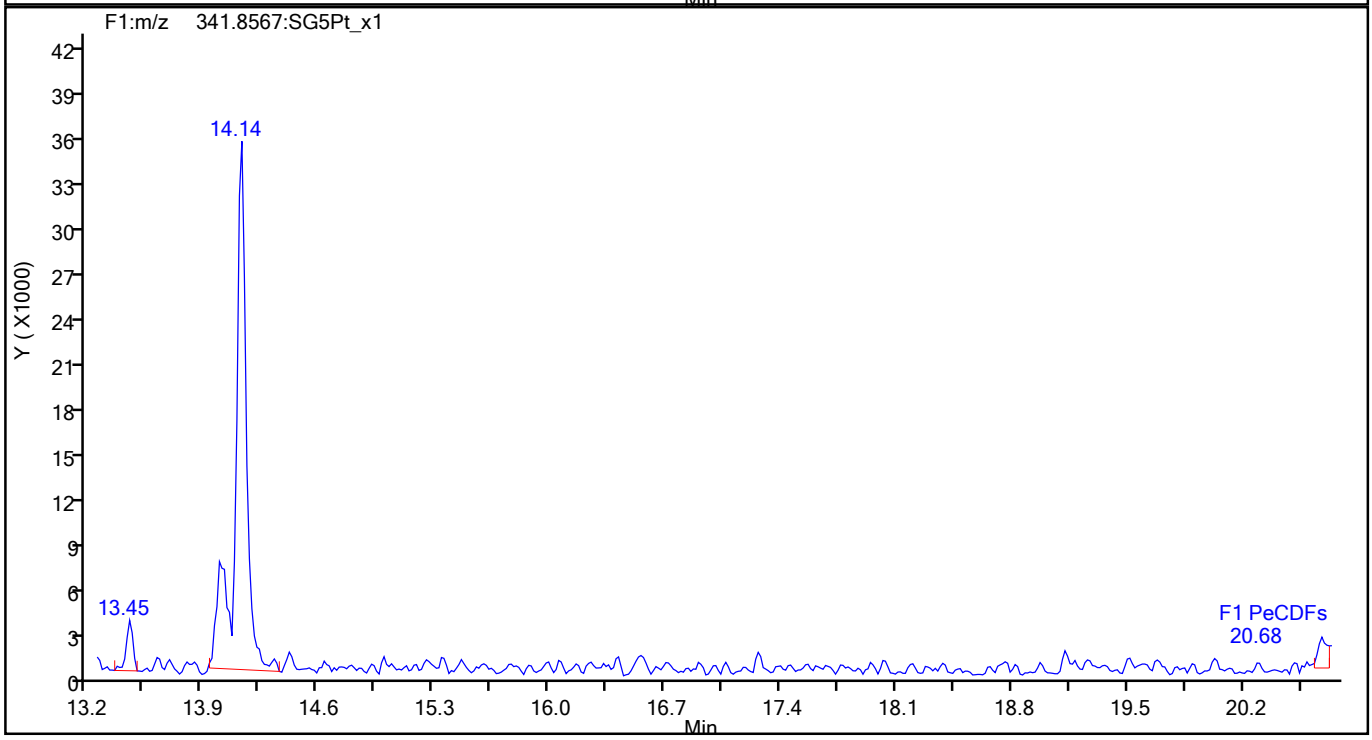

782302

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

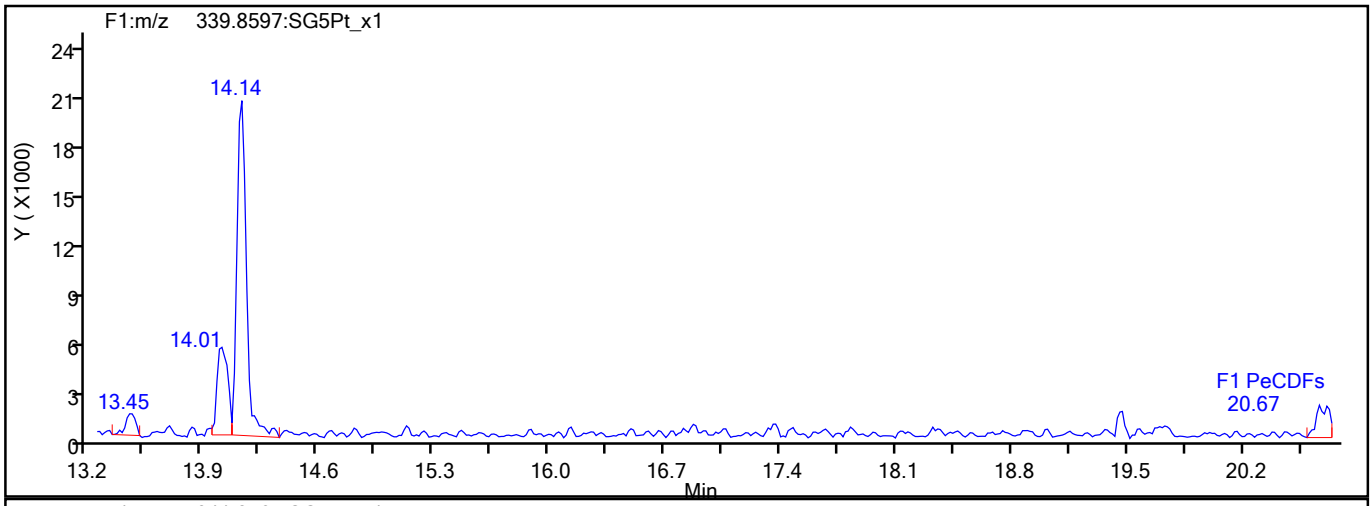

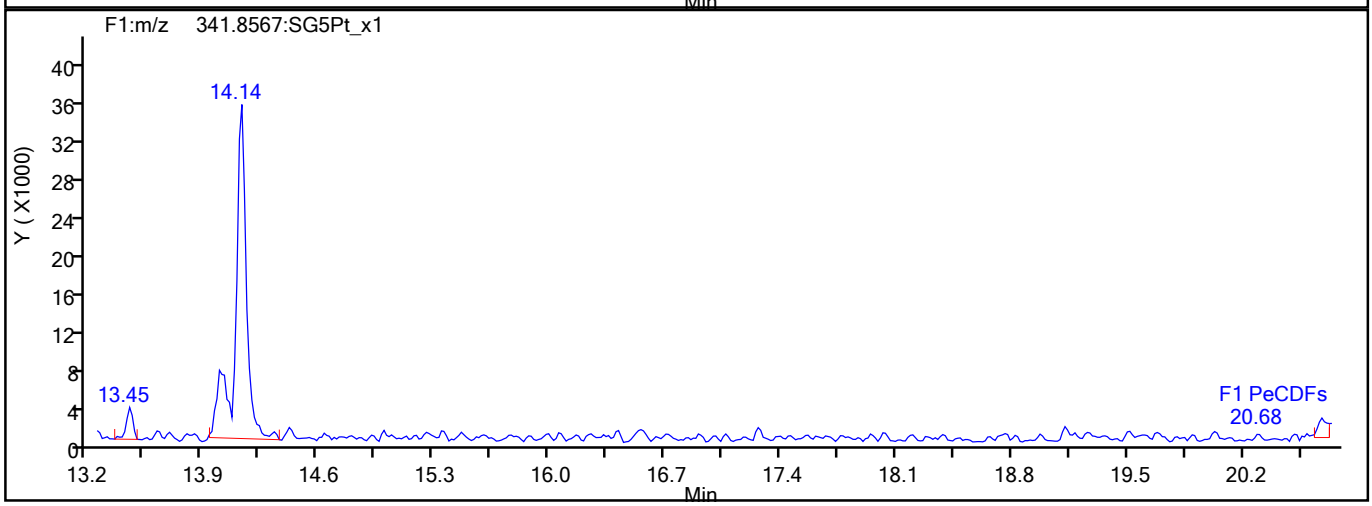

F1 PeCDFs Interference Mass

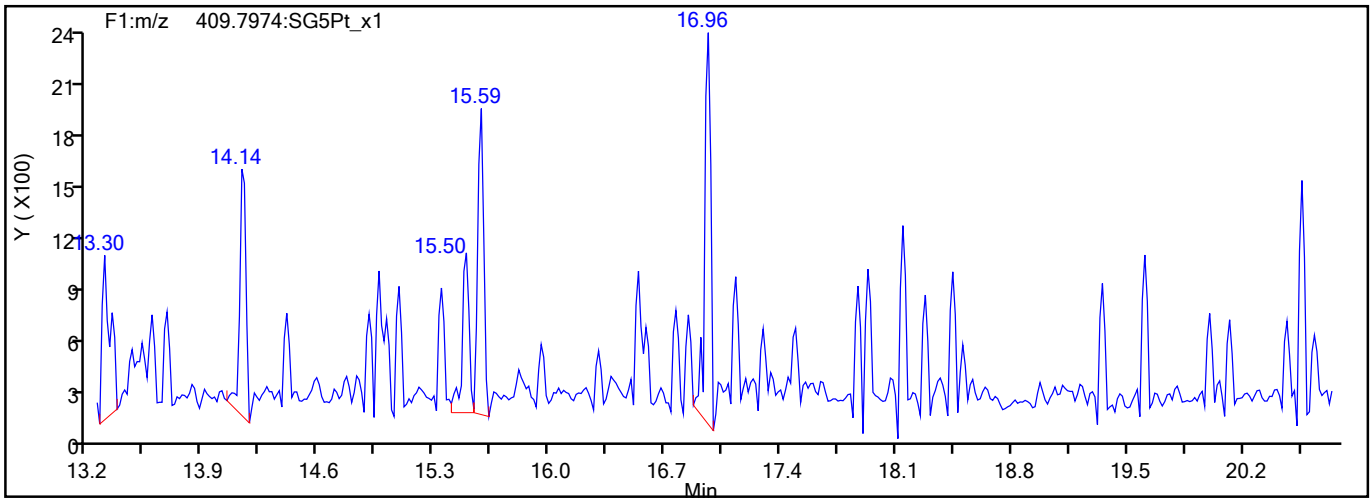

782303

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

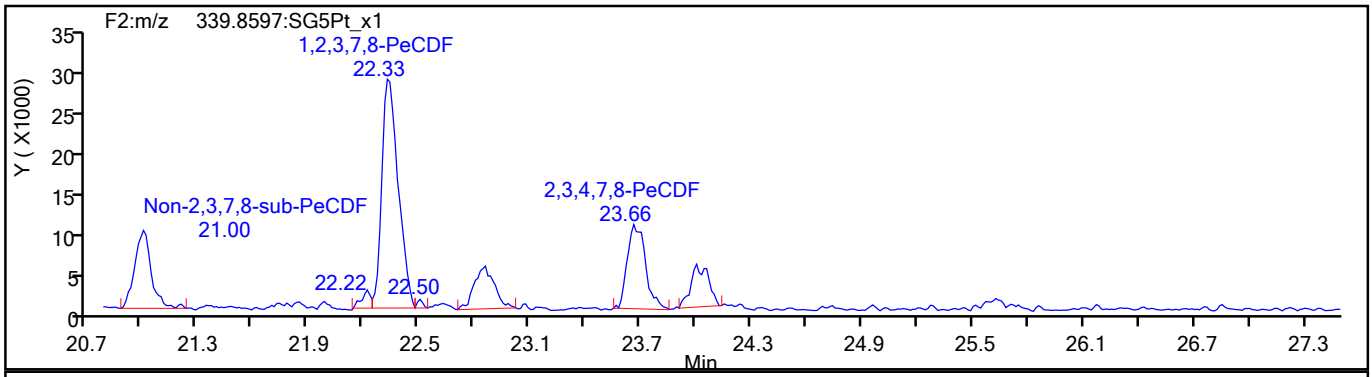

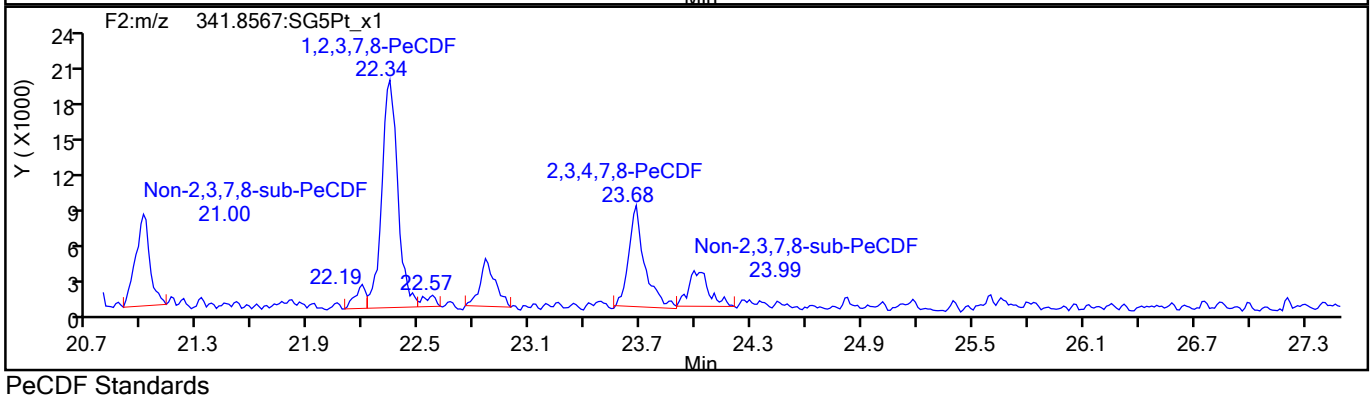

PeCDF Standards

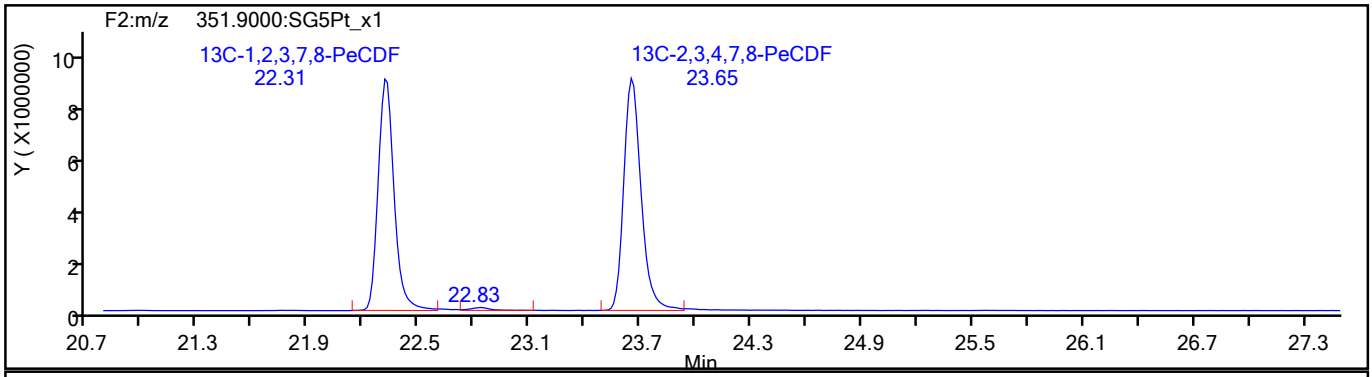

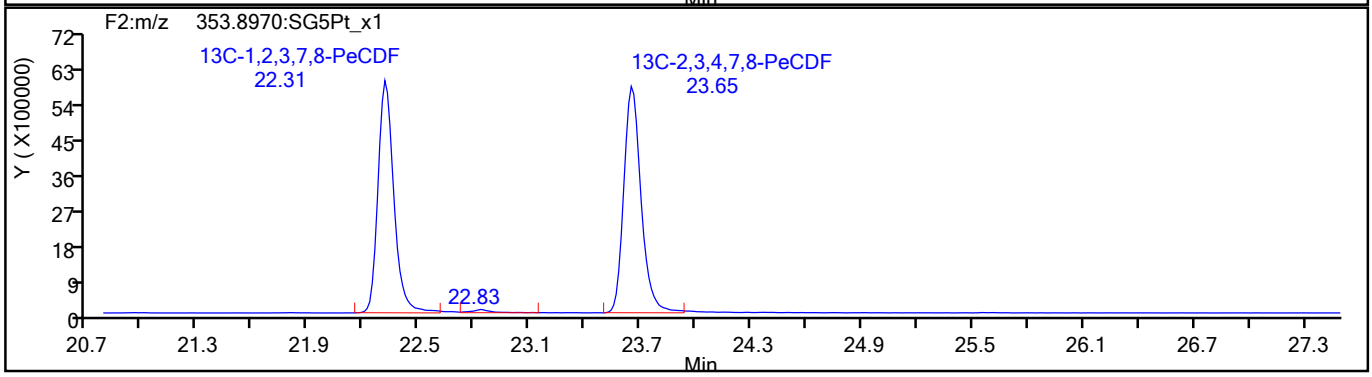

782304

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

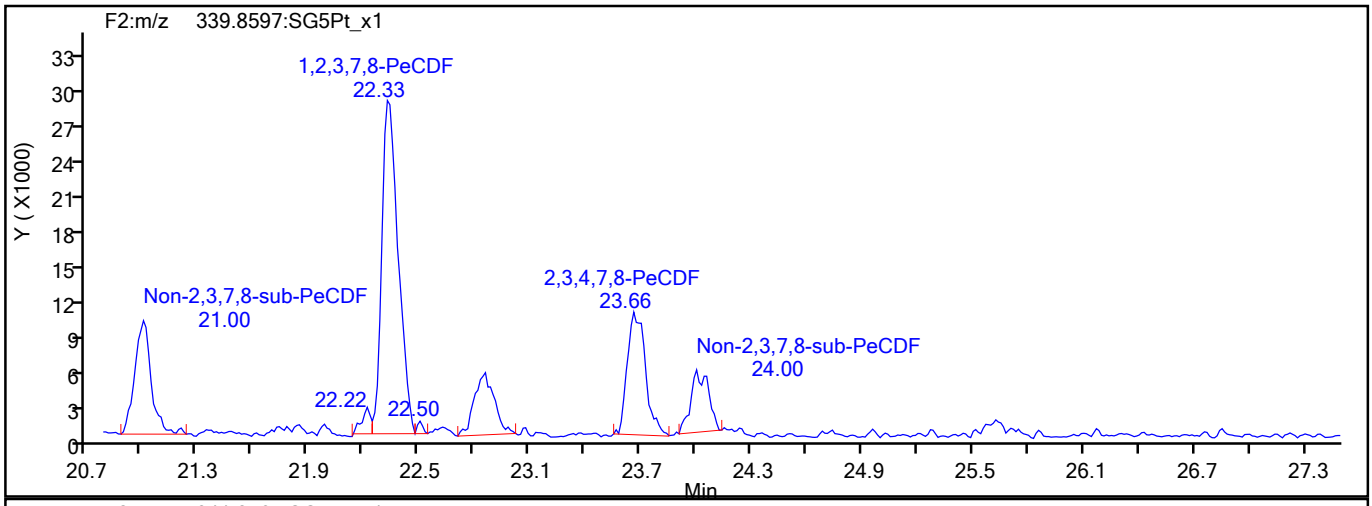

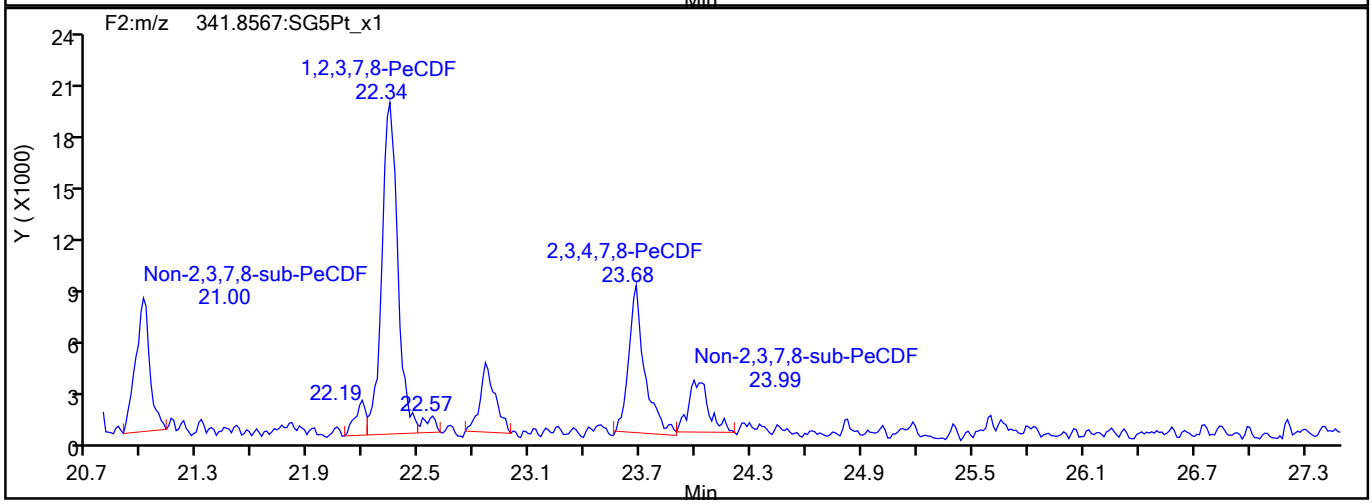

PeCDF Interference Mass

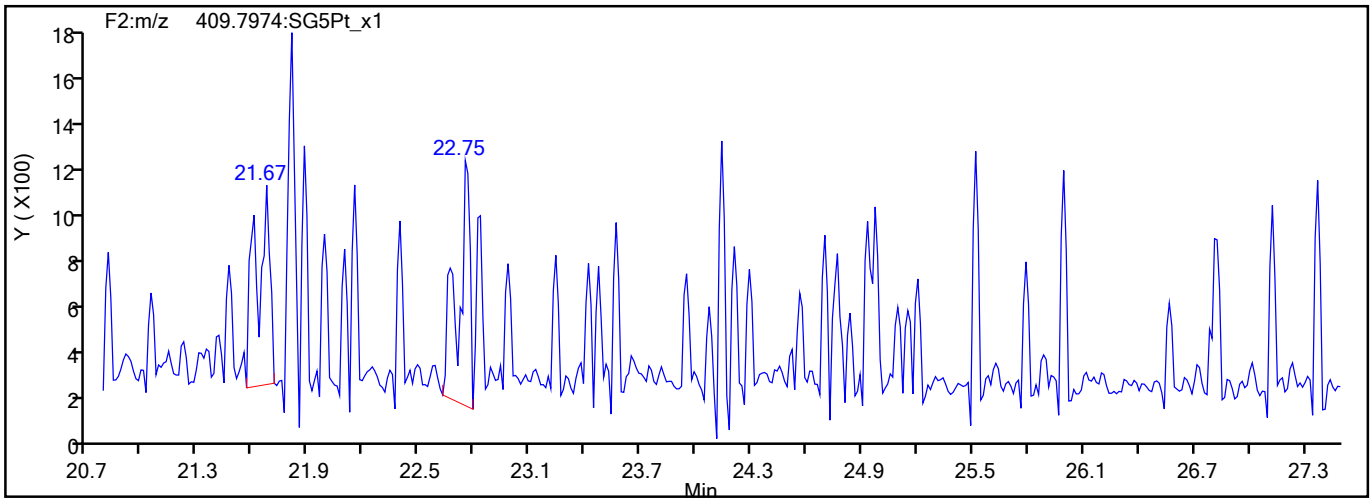

782305

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

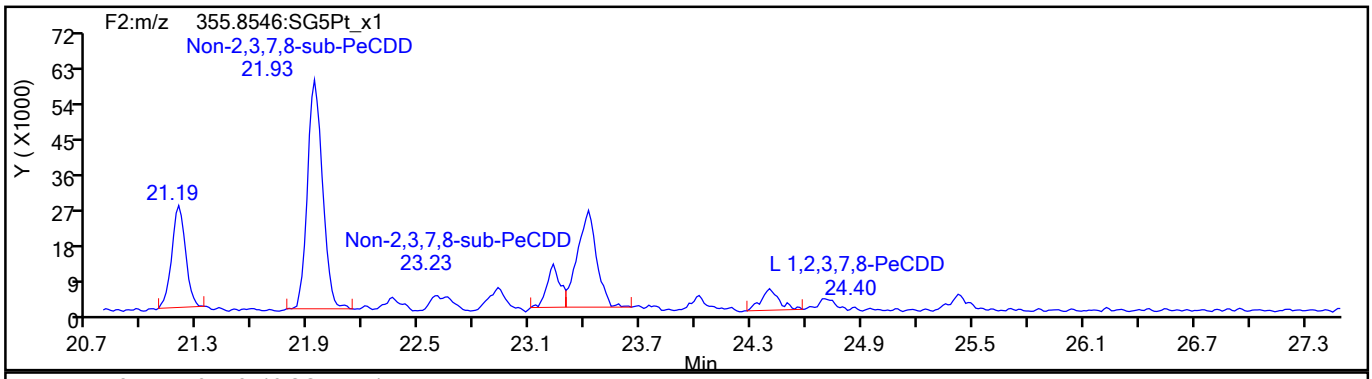

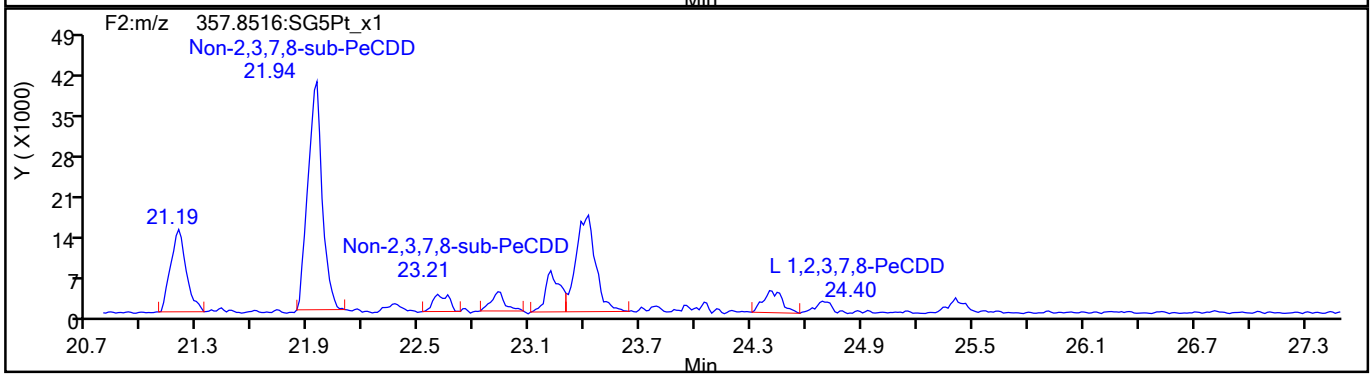

PeCDD Standards

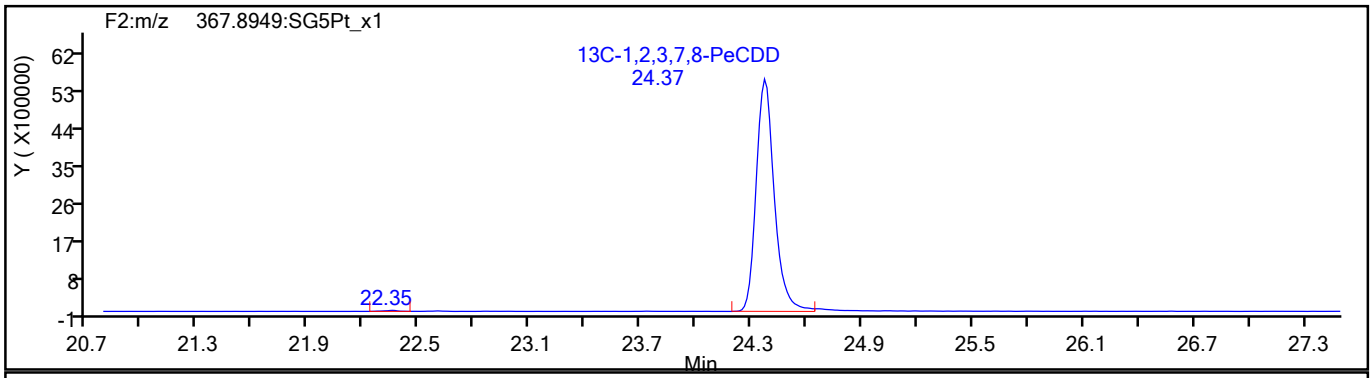

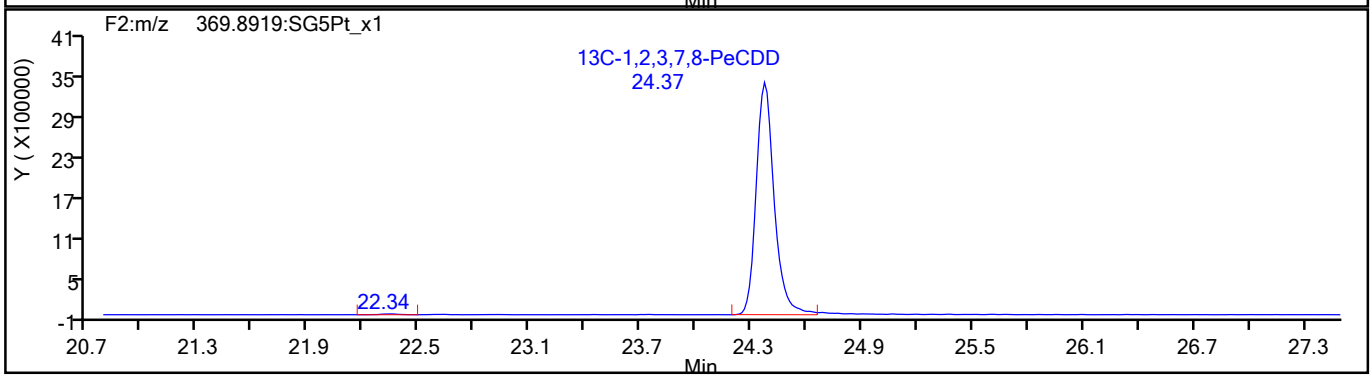

782306

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

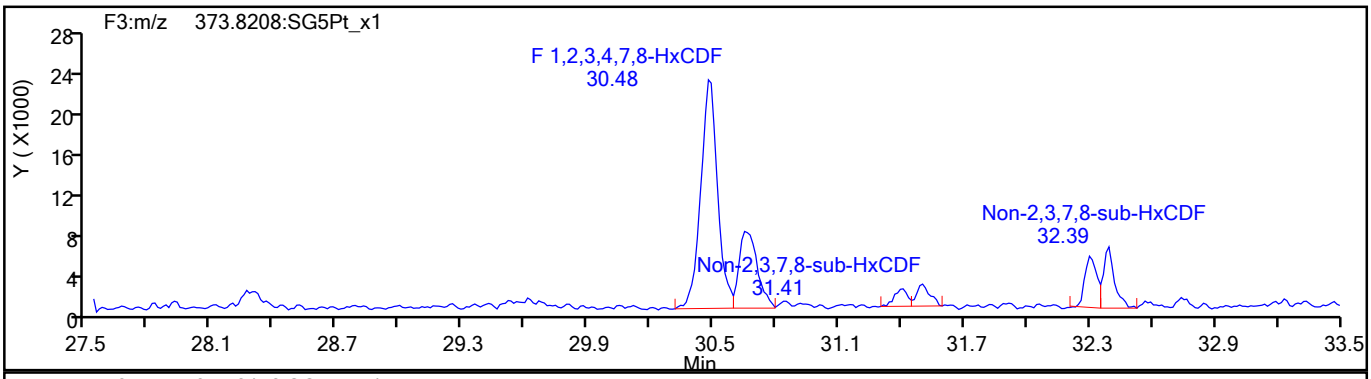

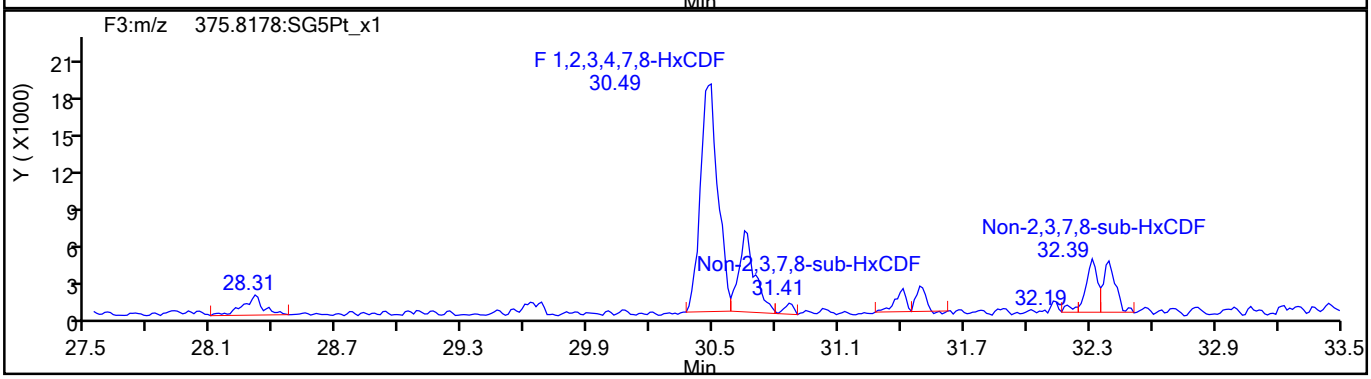

HxCDF Standards

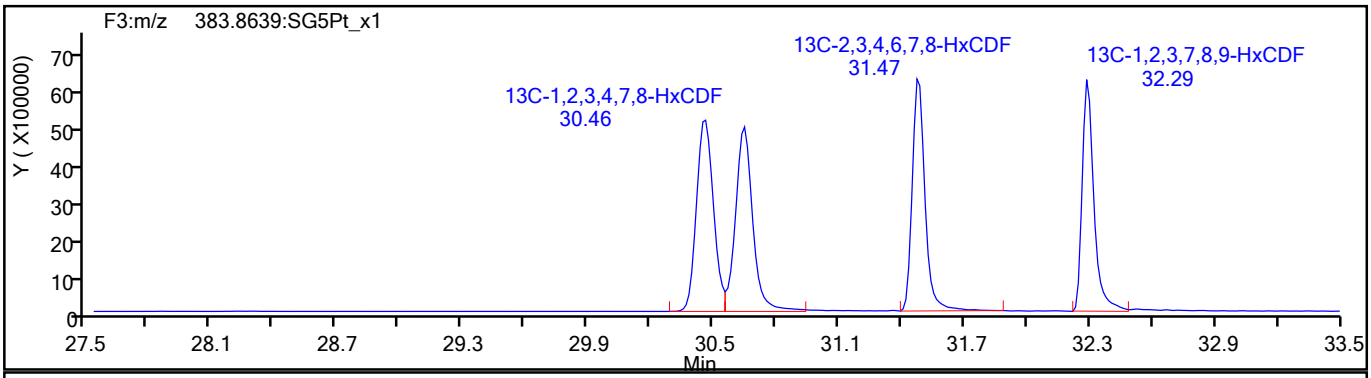

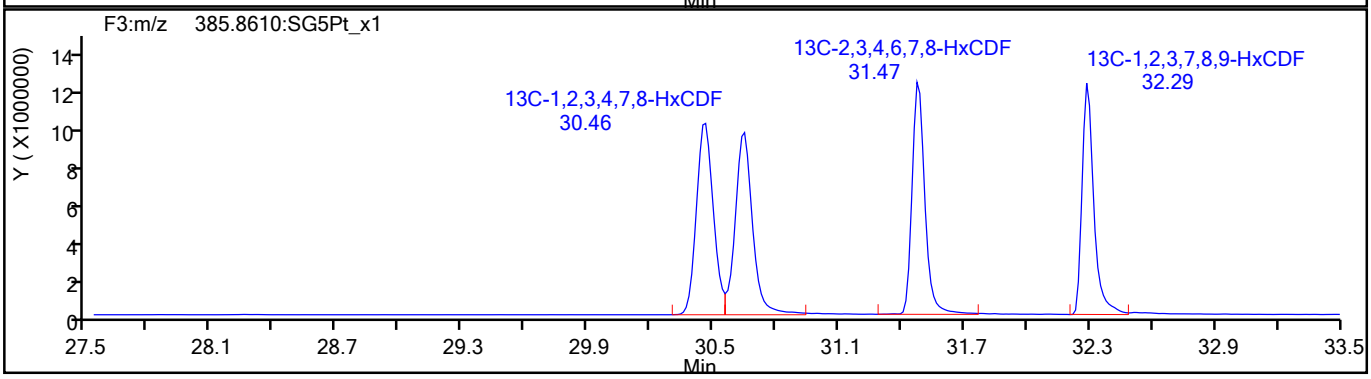

782307

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

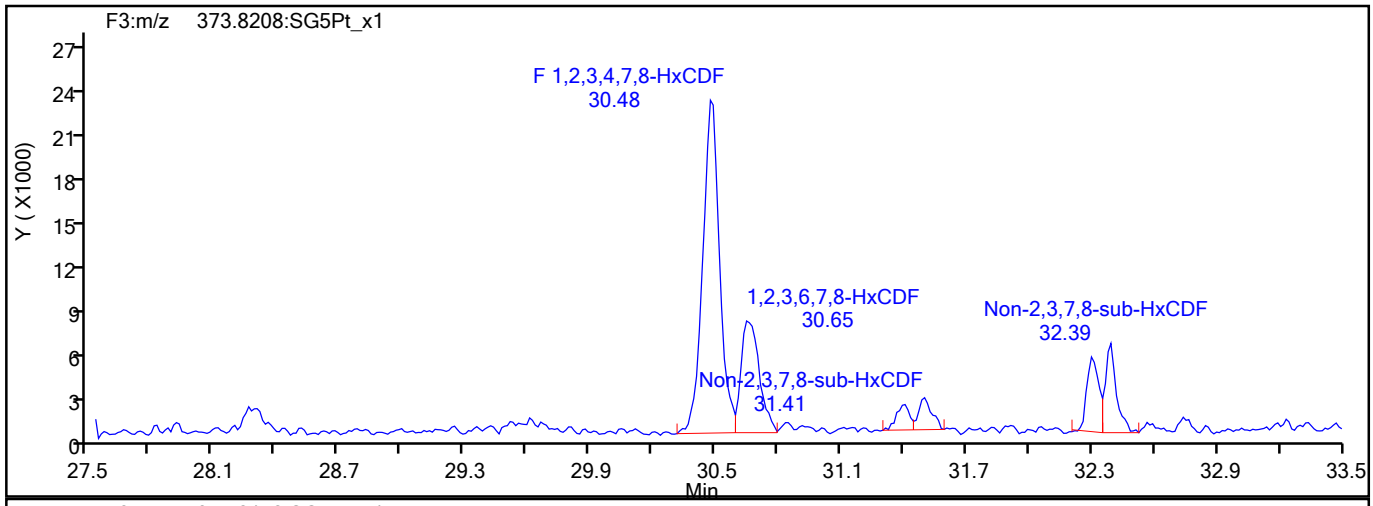

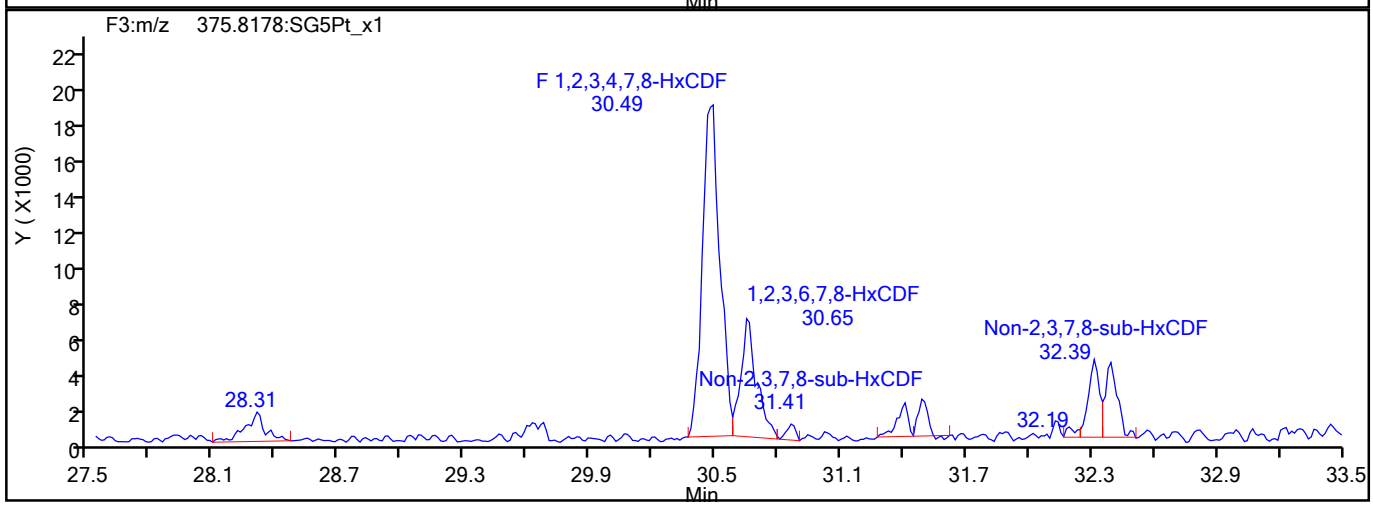

HxCDF Interference Mass

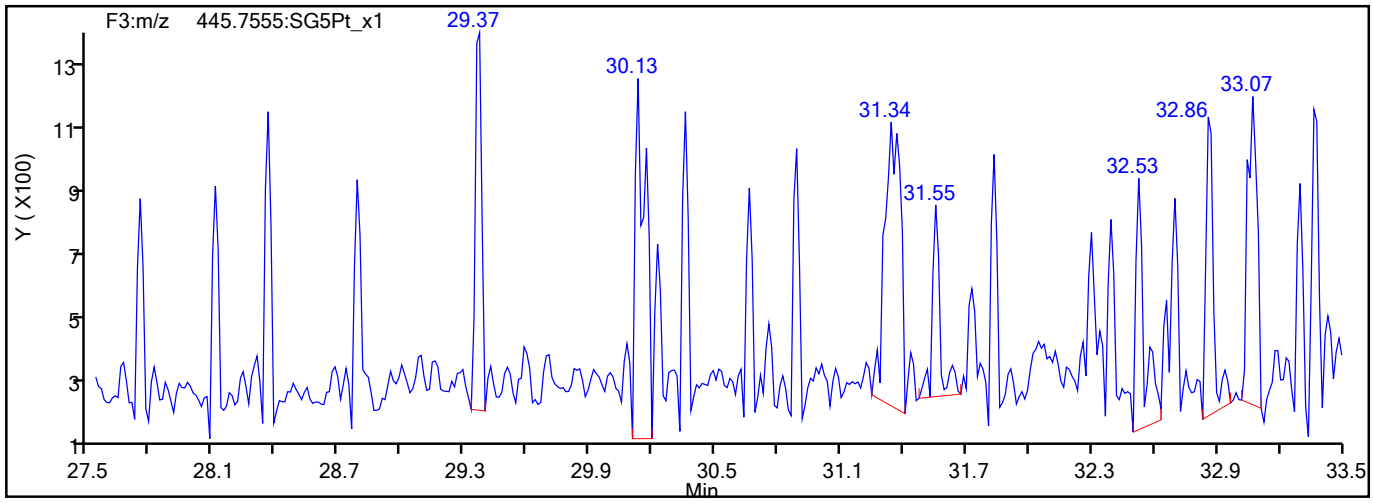

782308

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

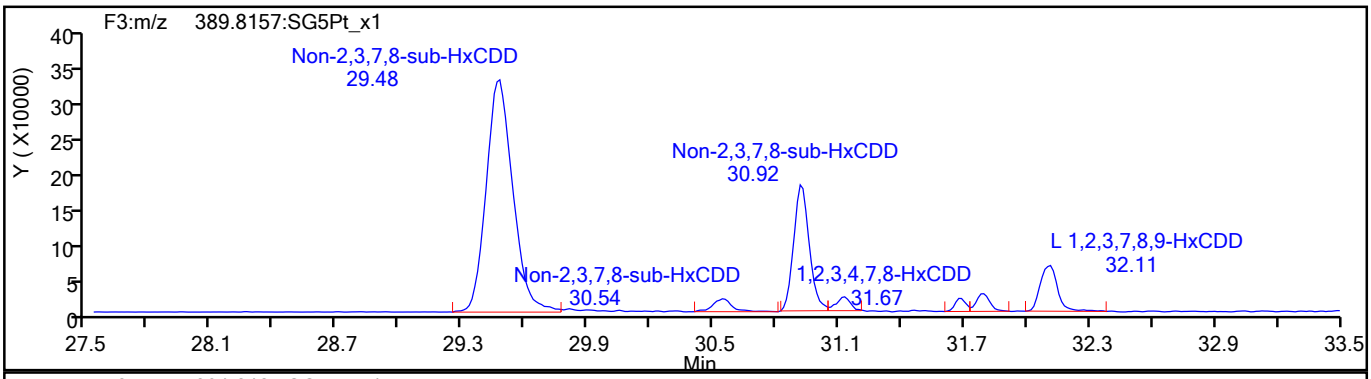

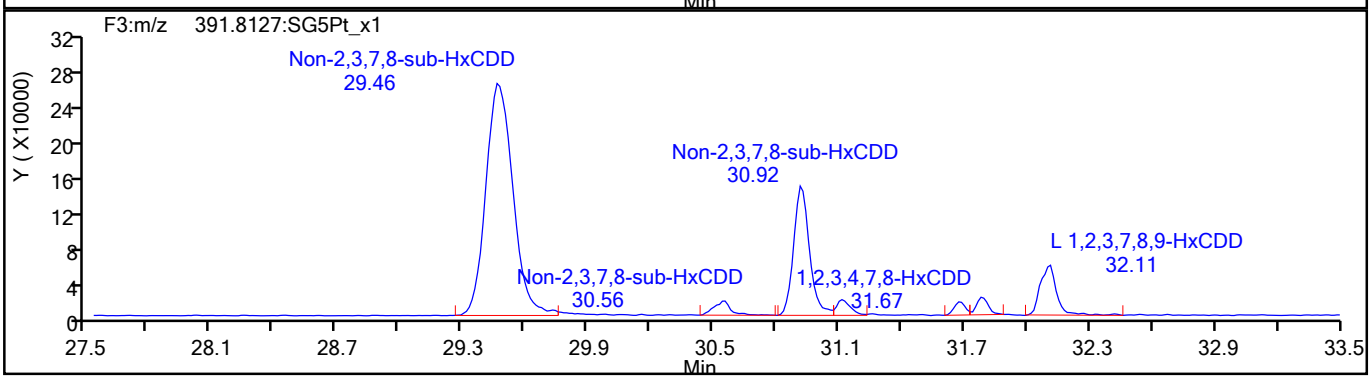

HxCDD Standards

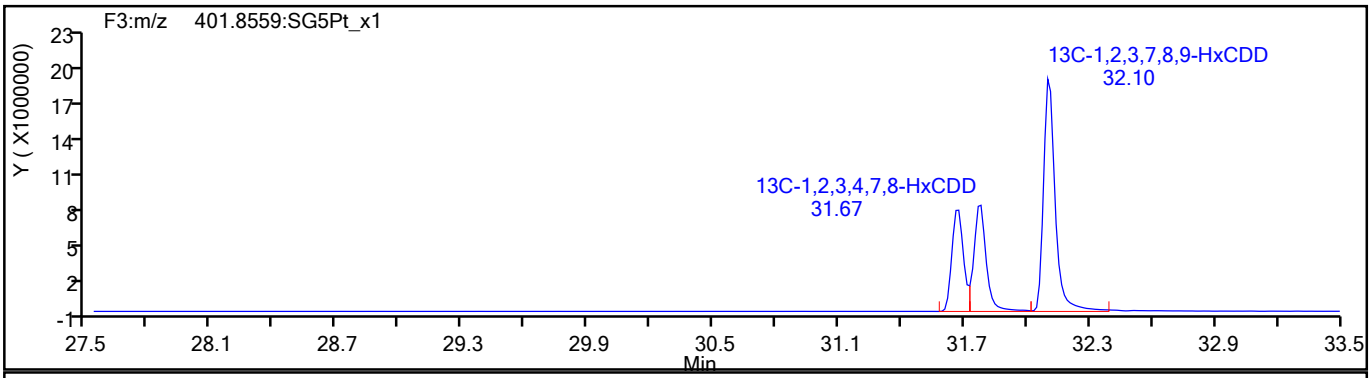

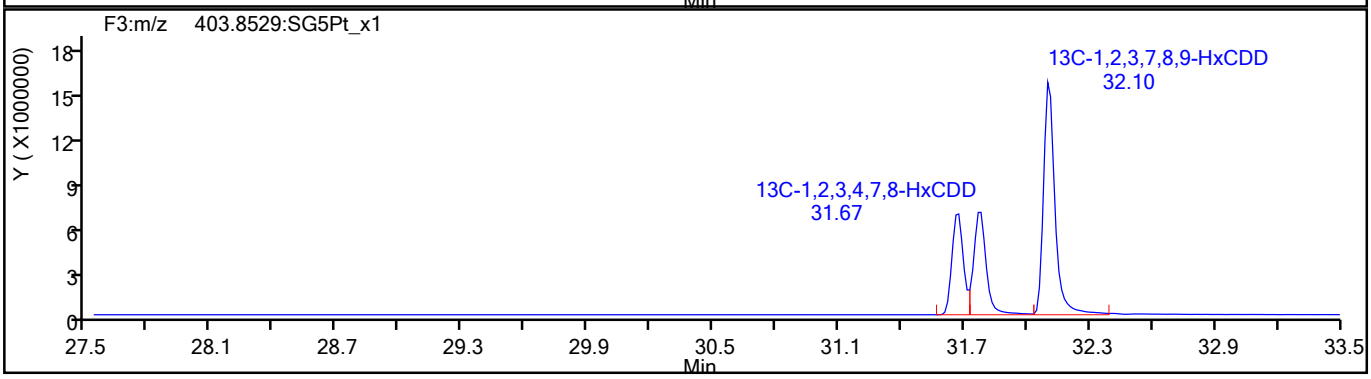

782309

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

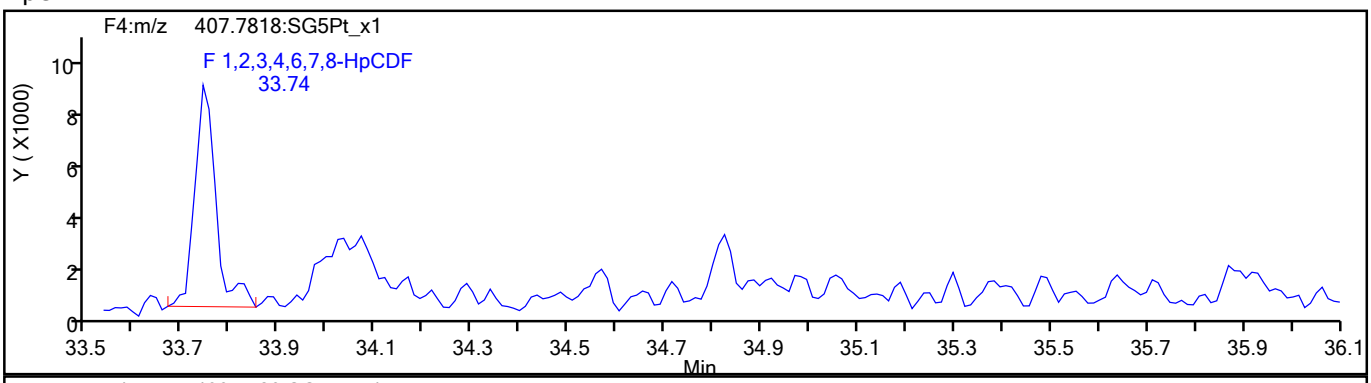

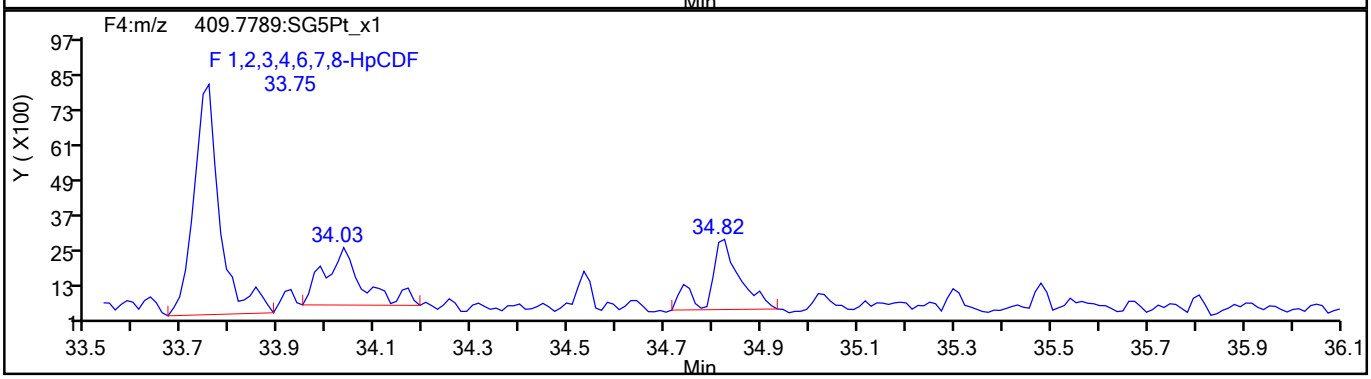

HpCDF Standards

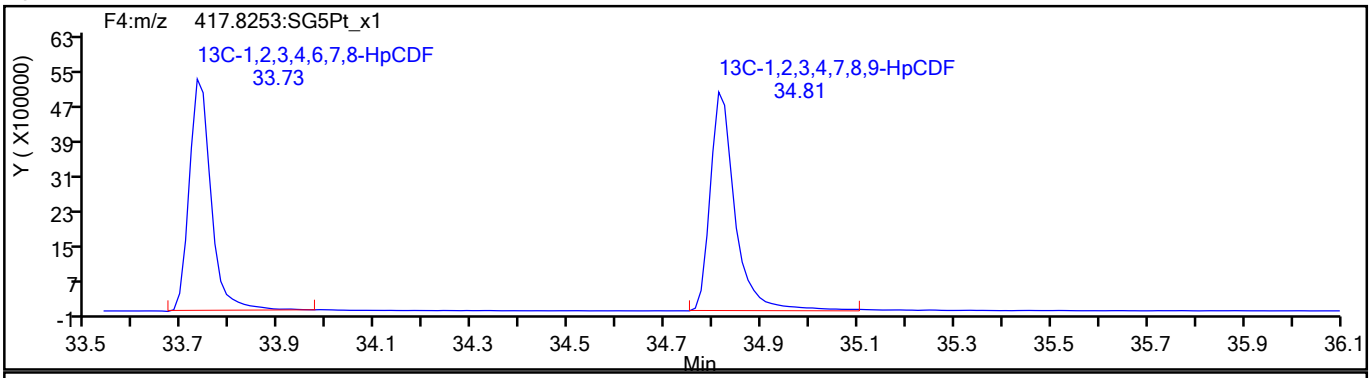

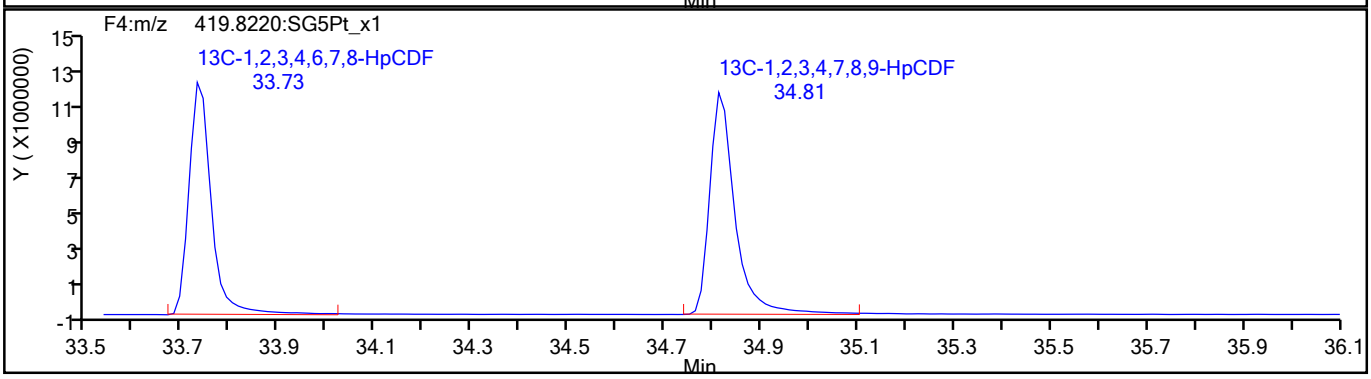

782310

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

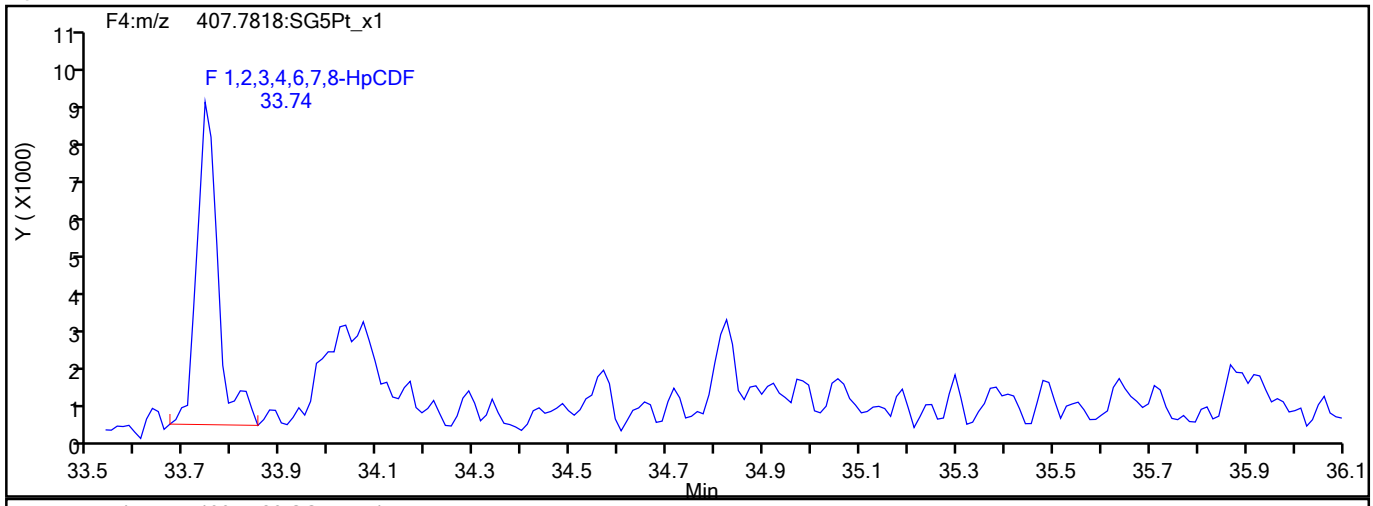

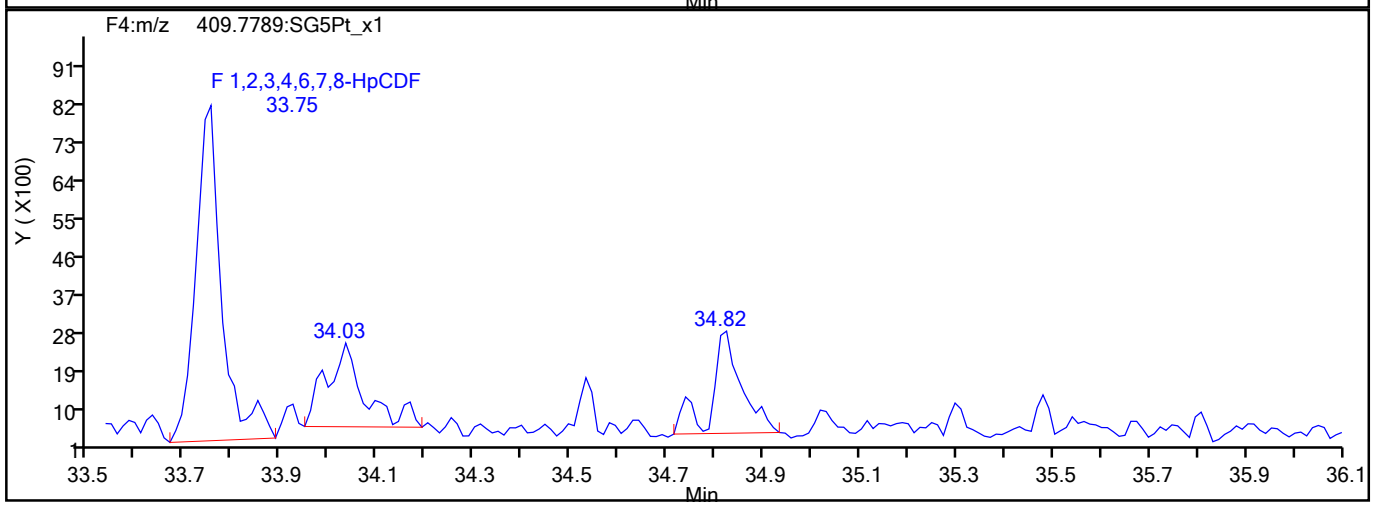

HpCDF Interference Mass

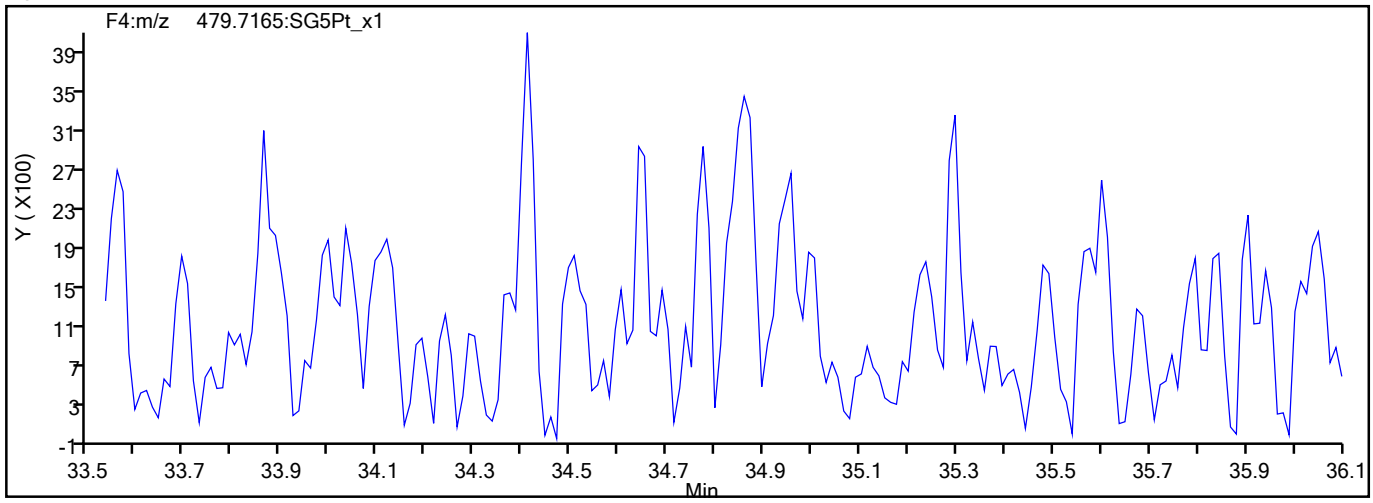

782311

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

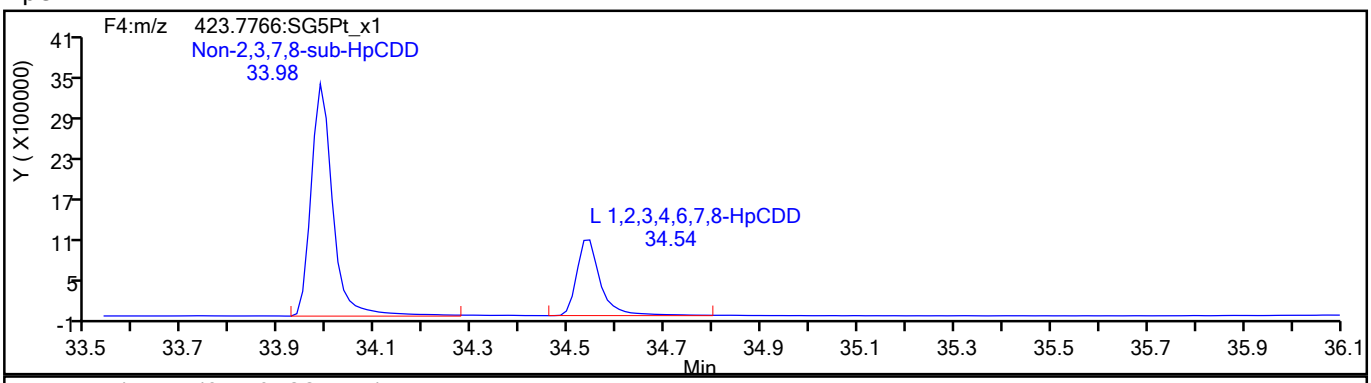

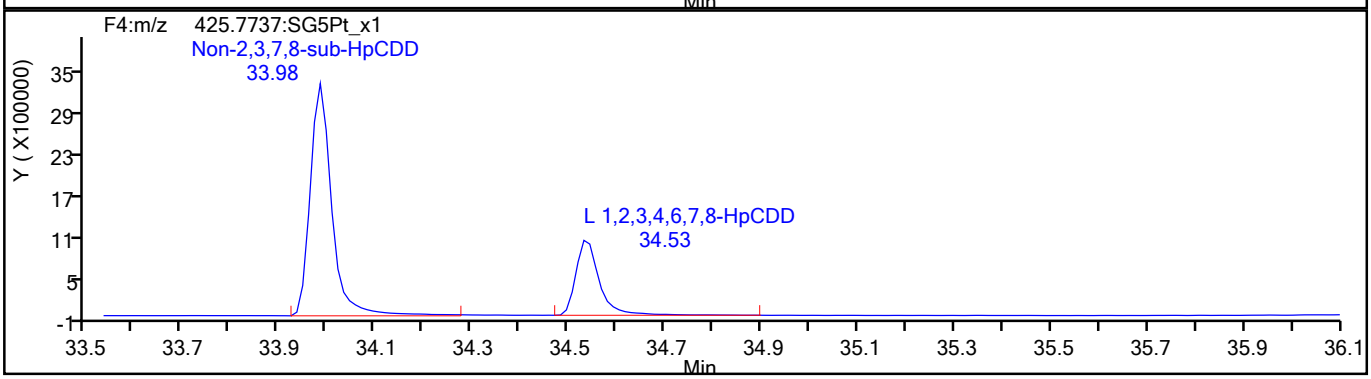

HpCDD Standards

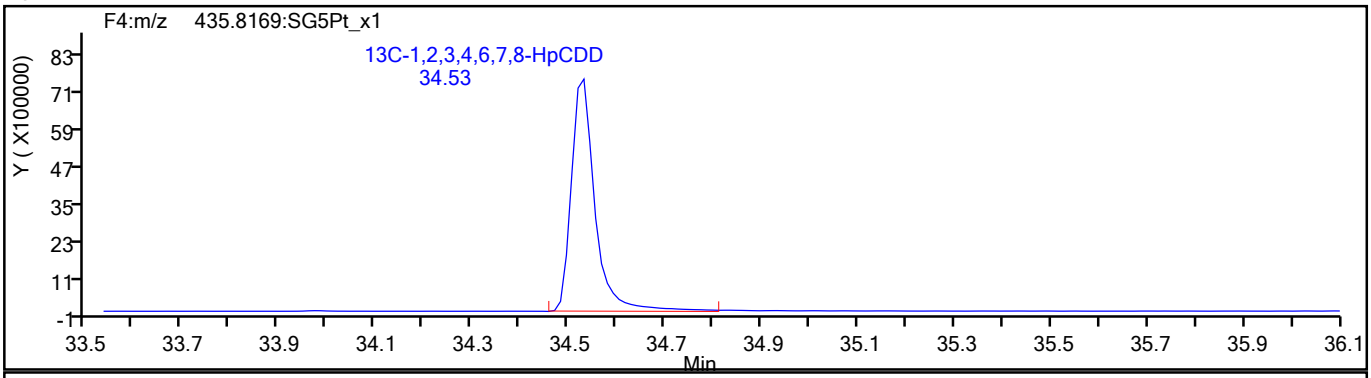

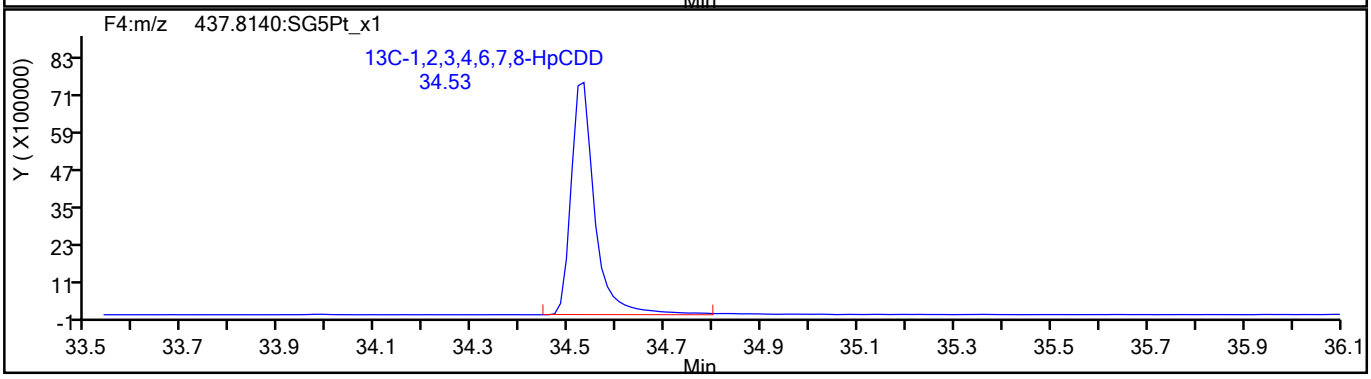

782312

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

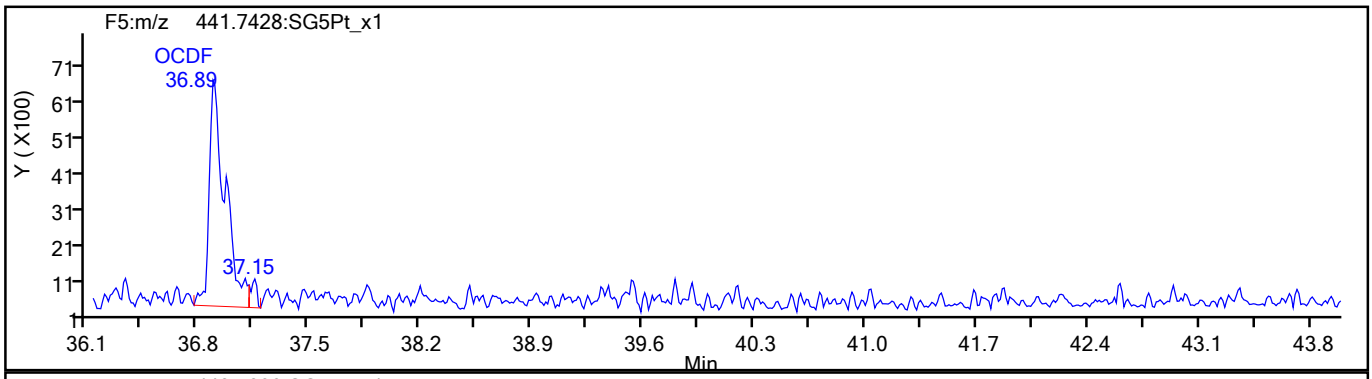

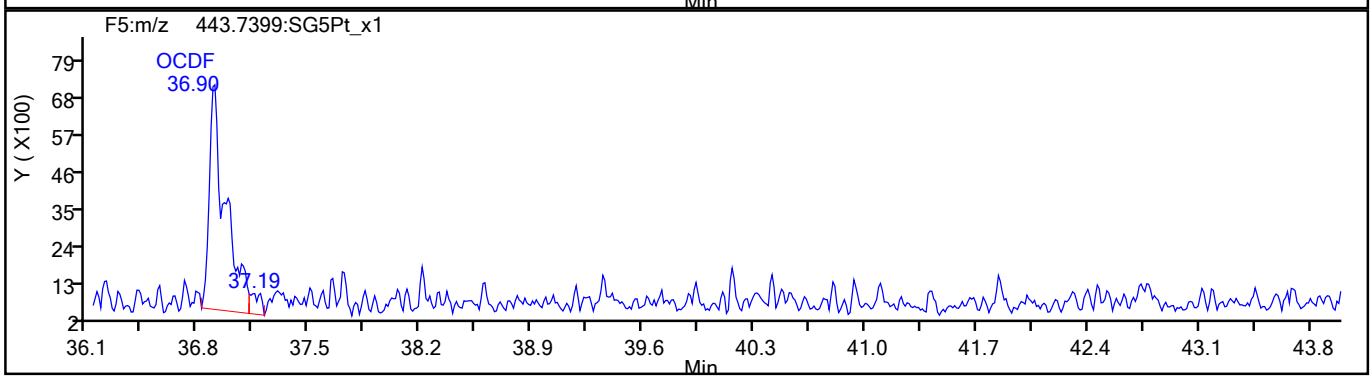

OCDF Standards

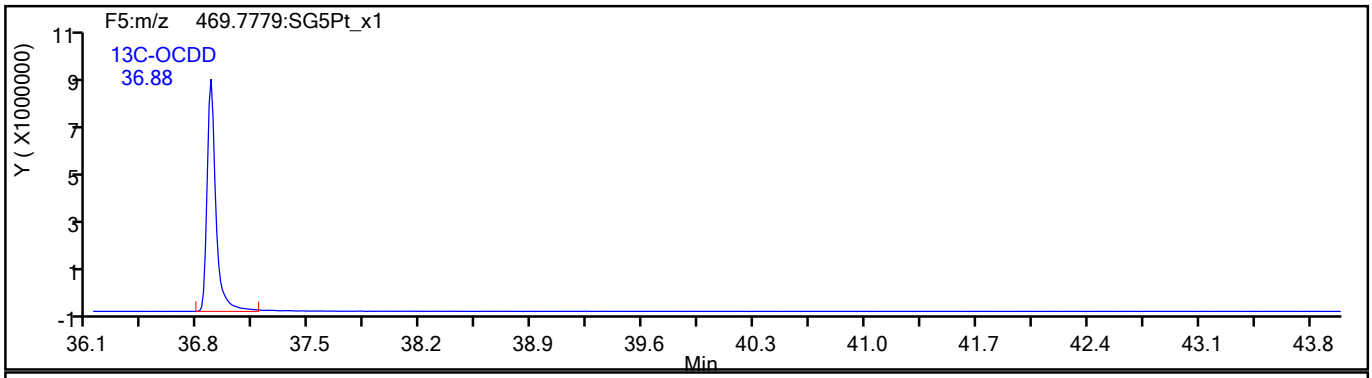

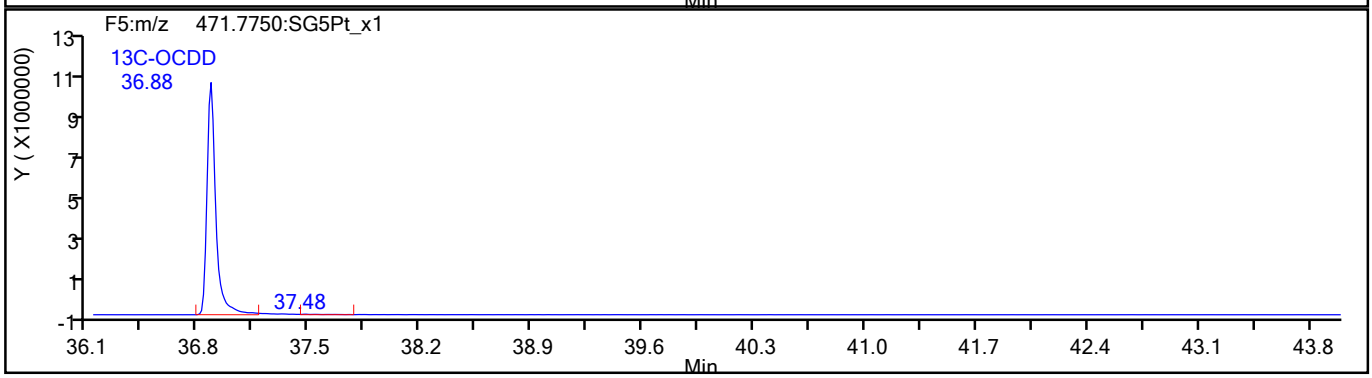

782313

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

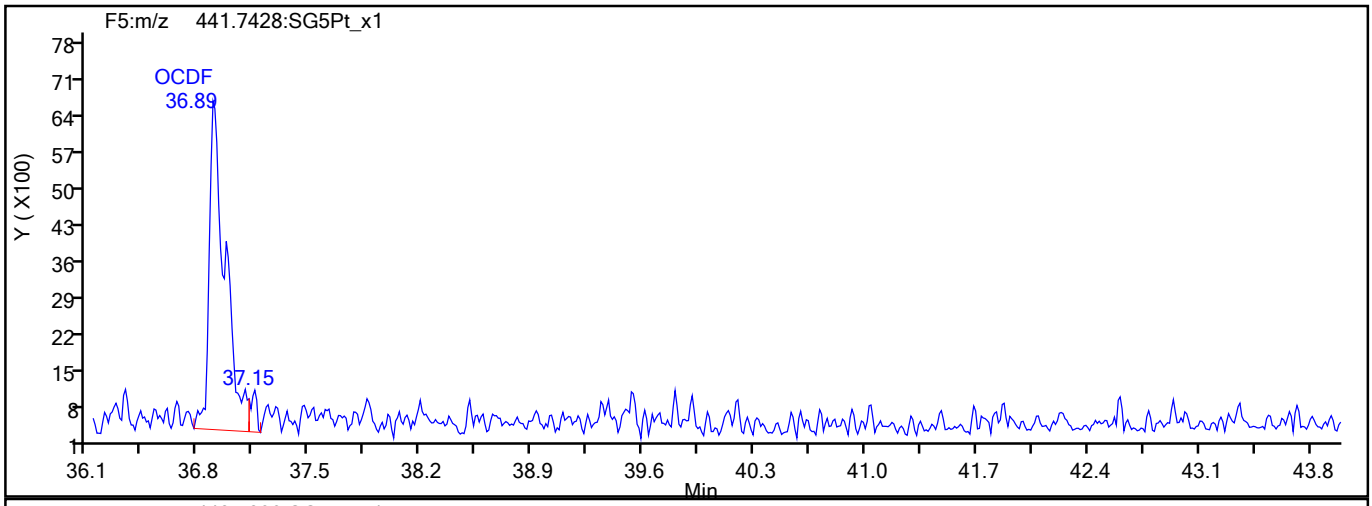

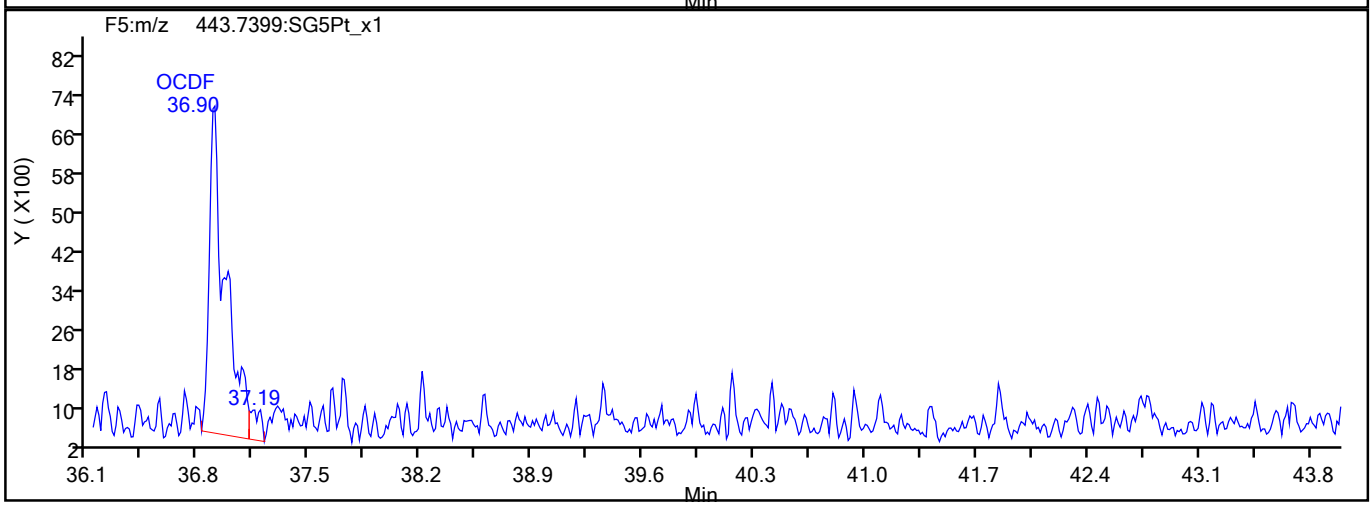

OCDF Interference Mass

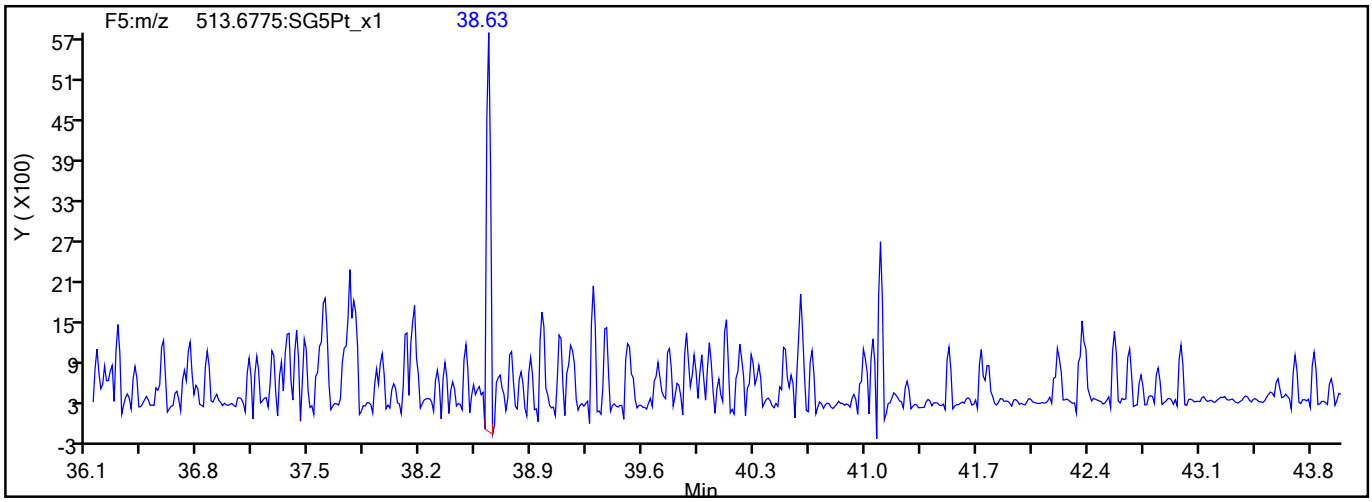

782314

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

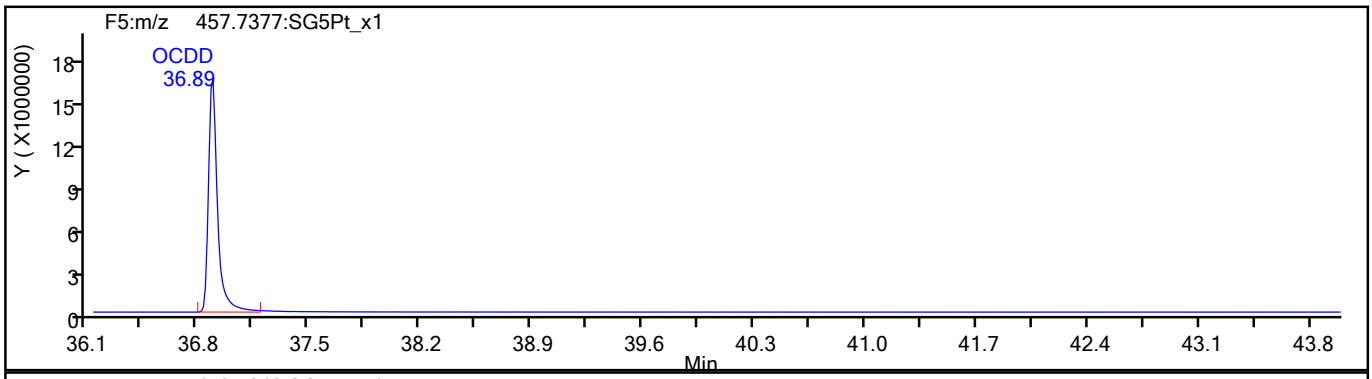

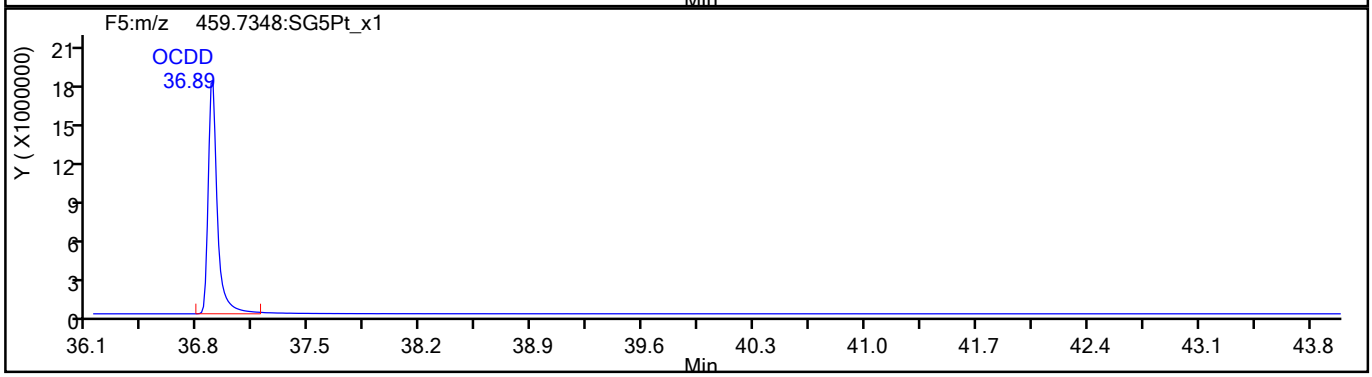

OCDD Standards

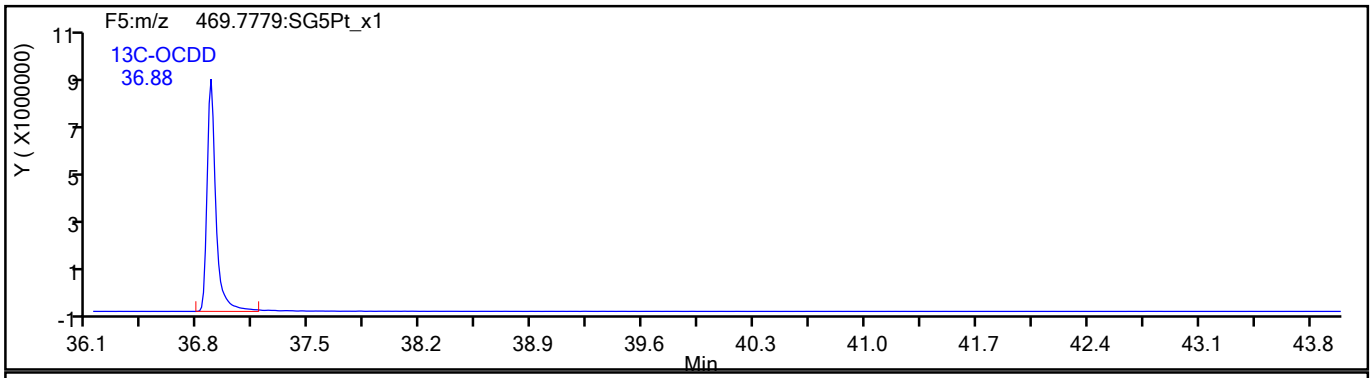

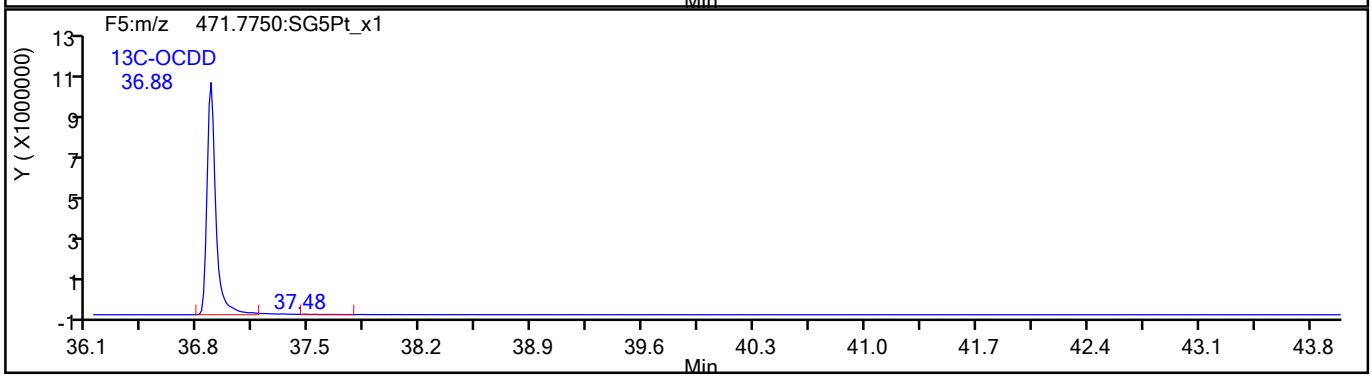

782315

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

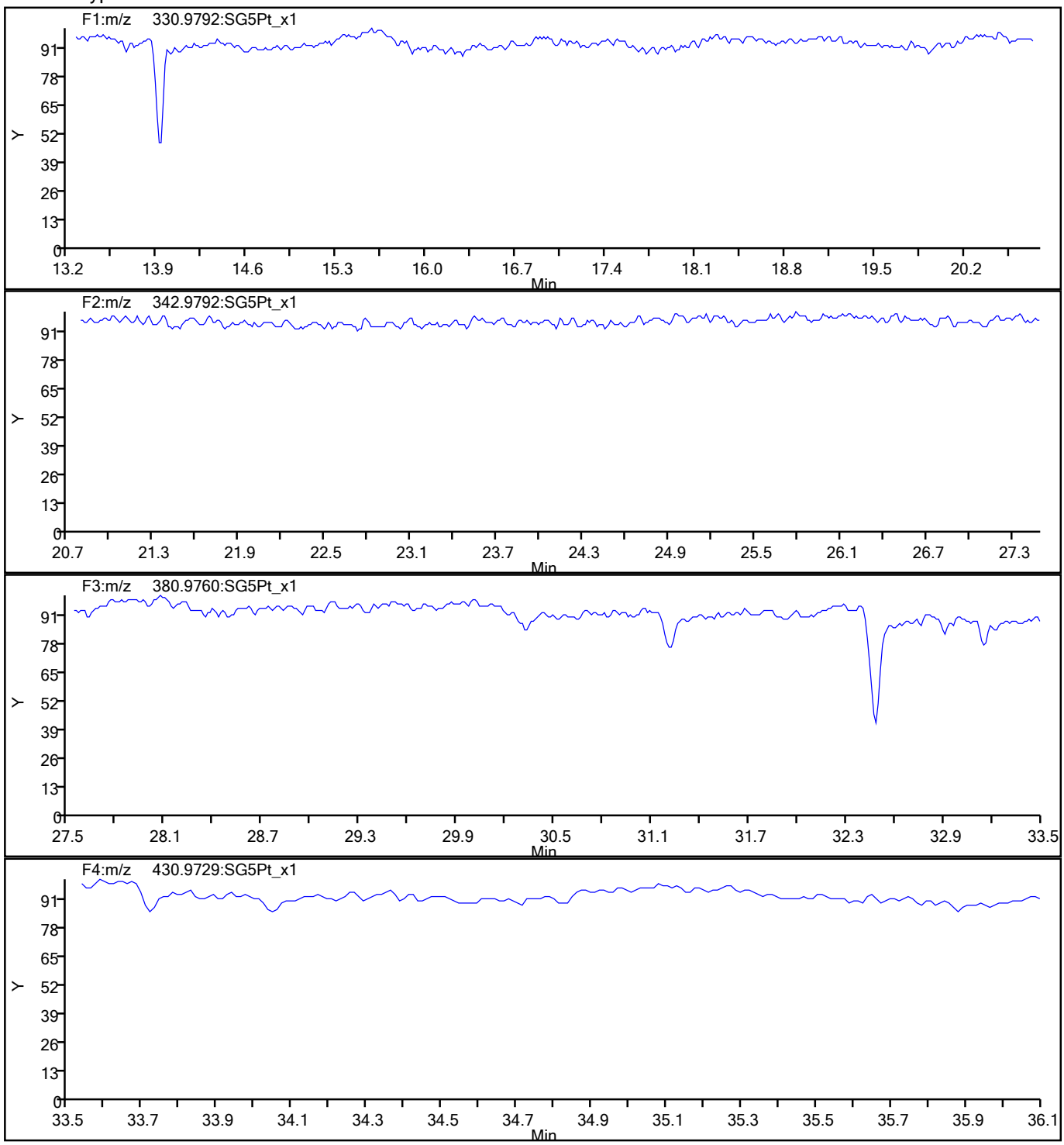

782316

Report Date: 22-Aug-2021 09:24:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_7.d		
Injection Date:	18-Aug-2021 18:49:29	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	517729	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

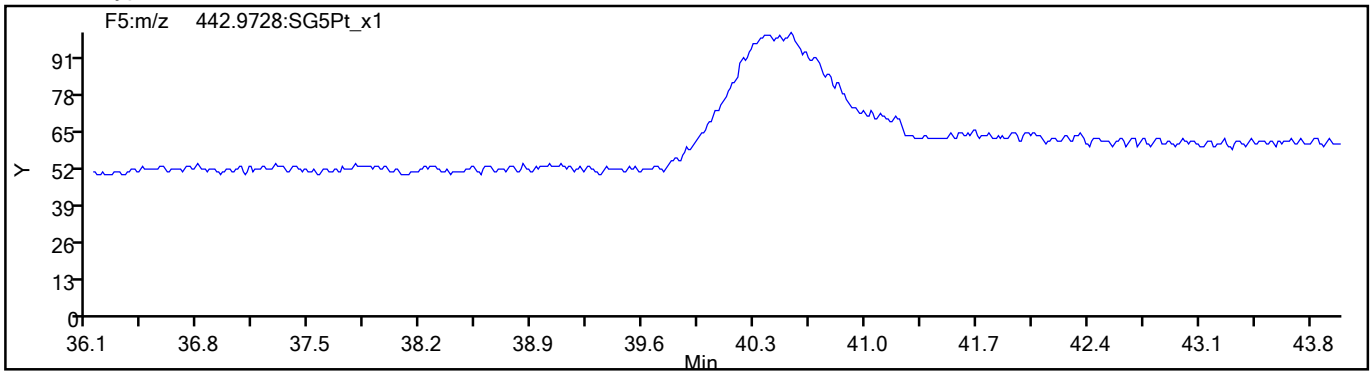

782317

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (6-8) RA
Lab Sample ID: 320-76887-4 RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_006.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.16(g)
Date Analyzed: 08/25/2021 16:10
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 31.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	8.8		1.4	0.19

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	57		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	75		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_006.d
Lims ID: 320-76887-A-4-A
Client ID: 11215702-072721-BN-SJSB096 (6-8)
Sample Type: Client
Inject. Date: 25-Aug-2021 16:10:37 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-4-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:05:15

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.286	46711105	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.616	35472509	0.81	1.3327	57.0	57.0	0.2245	0.2245	56.98	
2,3,7,8-TCDF	17.630	1075107	0.85	0.9978	3.037	3.037	0.0674	0.0674		
D 13C-2,3,7,8-TCDD	16.067	23649547	0.75	0.8749	57.9	57.9	0.3987	0.3987	57.87	
2,3,7,8-TCDD	16.094	256811	0.88	1.0570	1.027	1.027	0.0823	0.0823		
$ 37Cl4-2,3,7,8-TCDD	16.080	12054184		0.8648	29.8	29.8	0.0869	0.0869	74.60	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

782319

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_006.d
Lims ID: 320-76887-A-4-A
Client ID: 11215702-072721-BN-SJSB096 (6-8)
Sample Type: Client
Inject. Date: 25-Aug-2021 16:10:37 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-4-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:05:15

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.286	16.298	-1		19996176	4325436	7336	18340	590		
333.9339	16.300	16.298	0		26714929	5968424	7026	17565	849	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.616	17.615	0	1.082	15821381	3025689	5676	14190	533		
317.9389	17.616	17.615	0	1.082	19651128	3744582	6641	16602	564	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.630	17.628	0	1.001	492544	98529	840	2100	117		
305.8987	17.630	17.628	0	1.001	582563	117773	981	2452	120	0.85(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.065	0	0.987	10115306	2322719	7336	18340	317		
333.9339	16.067	16.065	0	0.987	13534241	2939109	7026	17565	418	0.75(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.094	16.078	1	1.002	119922	27635	837	2092	33		
321.8936	16.080	16.078	0	1.001	136889	33769	994	2485	34	0.88(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.078	0	0.987	12054184	2664669	3096	7740	861		

QC Flag Legend

Processing Flags

Report Date: 26-Aug-2021 09:30:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_006.d		
Injection Date:	25-Aug-2021 16:10:37	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	519744	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

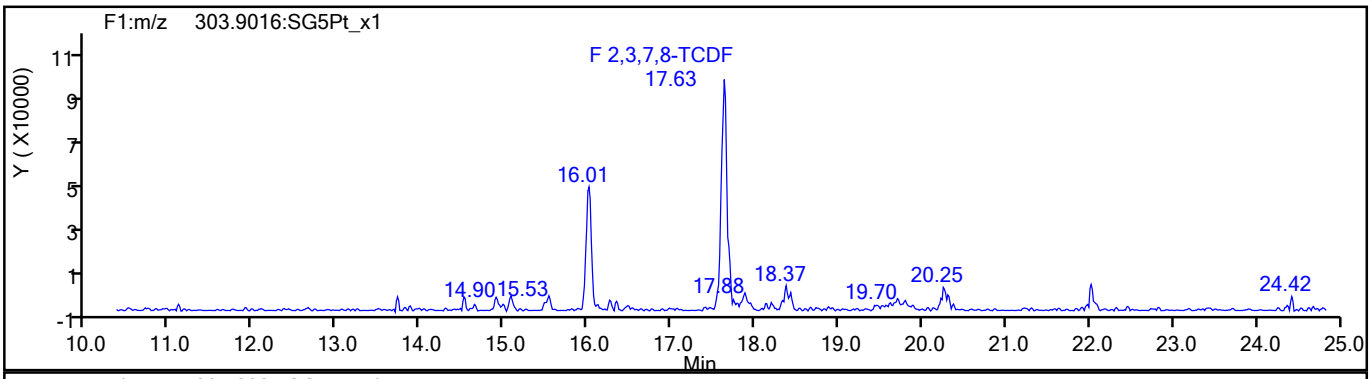

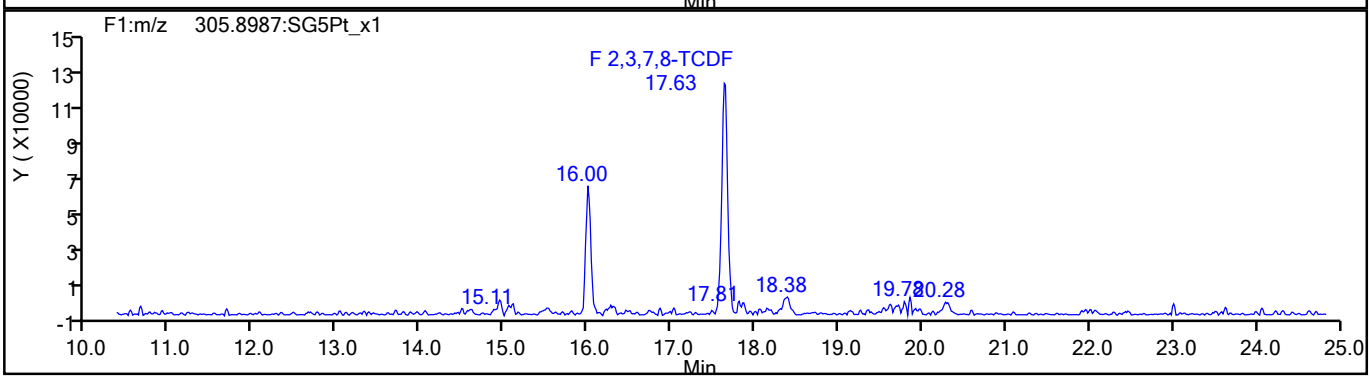

TCDF Standards

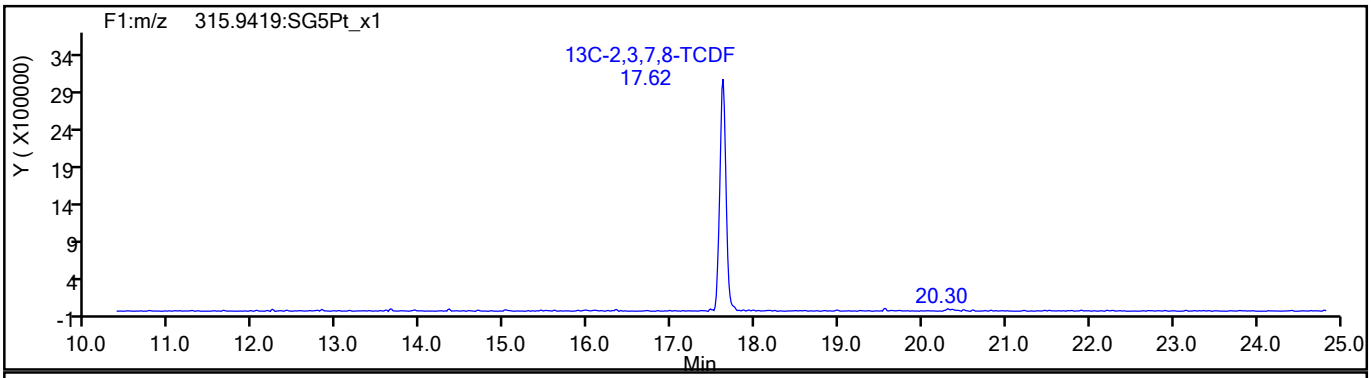

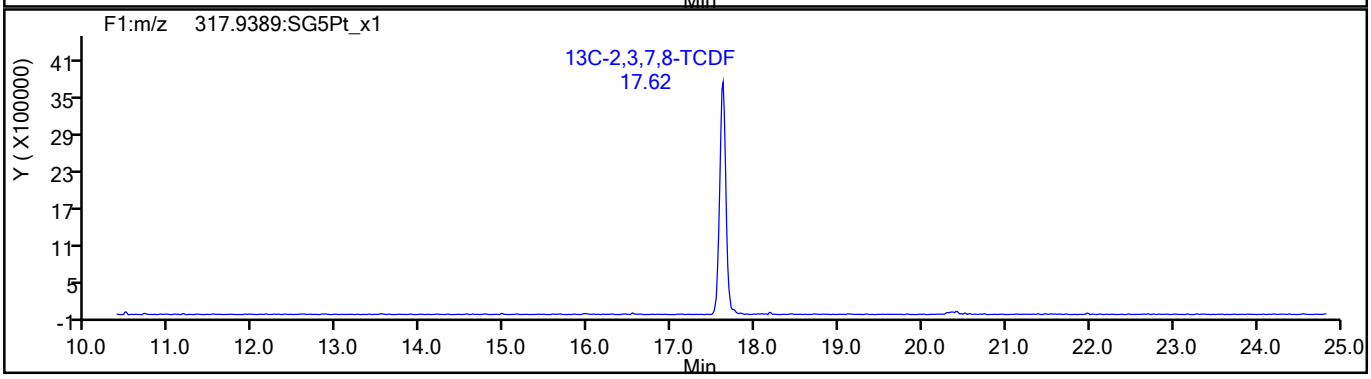

782321

Report Date: 26-Aug-2021 09:30:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_006.d		
Injection Date:	25-Aug-2021 16:10:37	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	519744	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

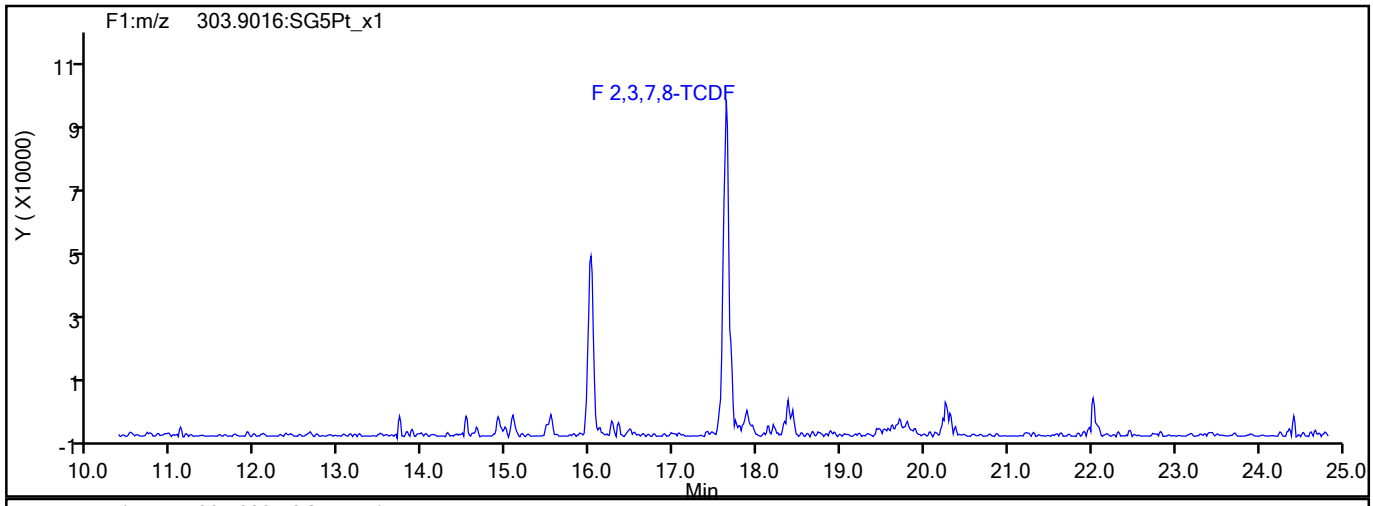

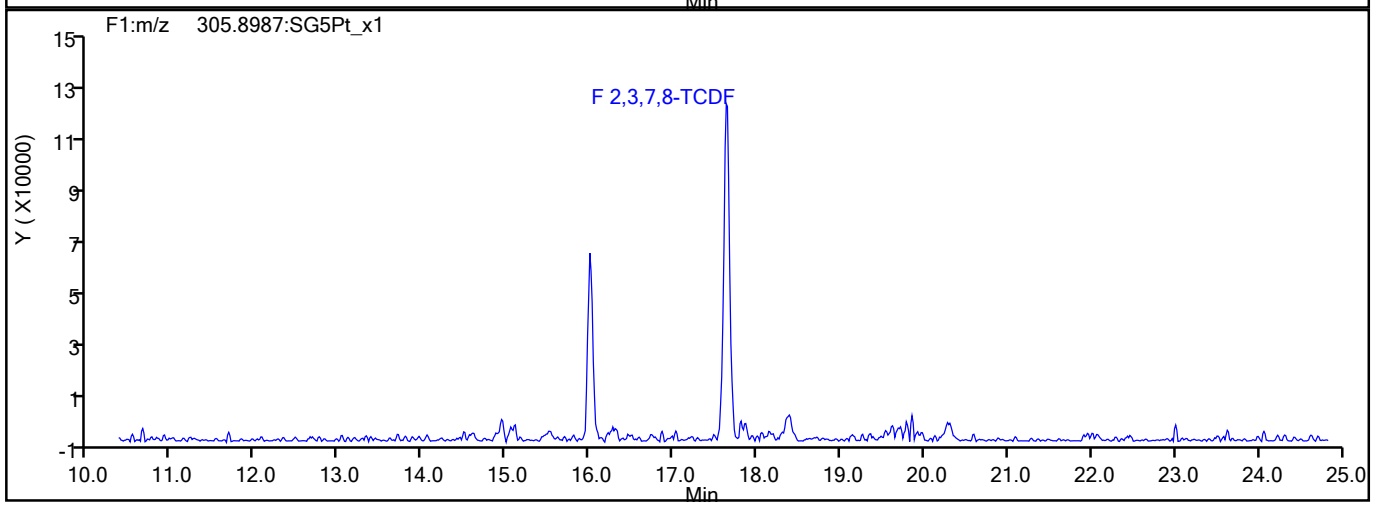

TCDF Interference Mass

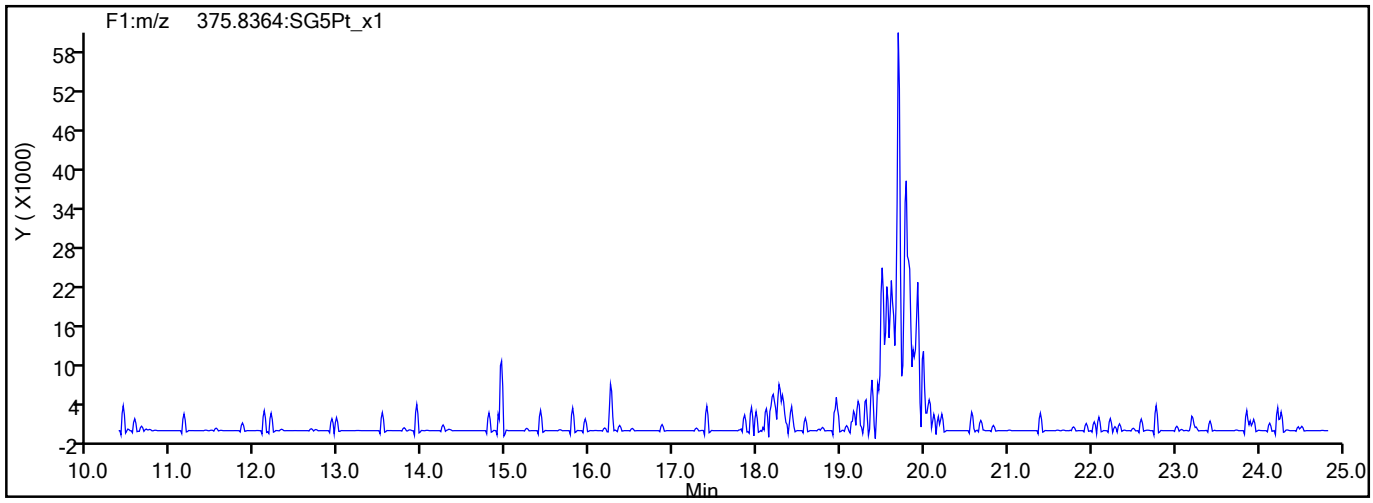

782322

Report Date: 26-Aug-2021 09:30:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_006.d		
Injection Date:	25-Aug-2021 16:10:37	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	519744	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

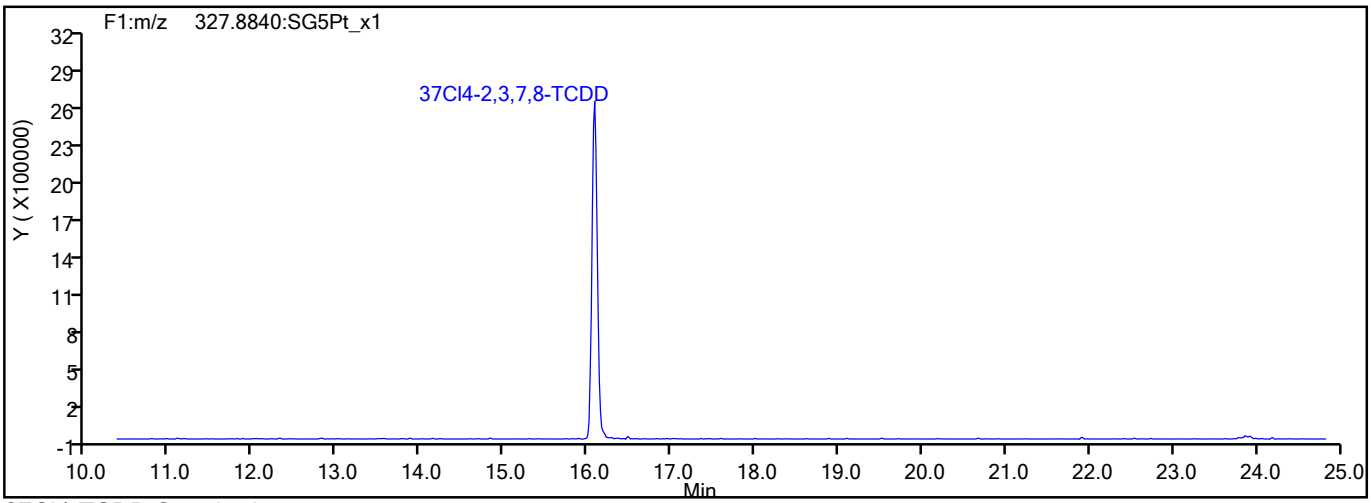

37Cl4-TCDD Standards

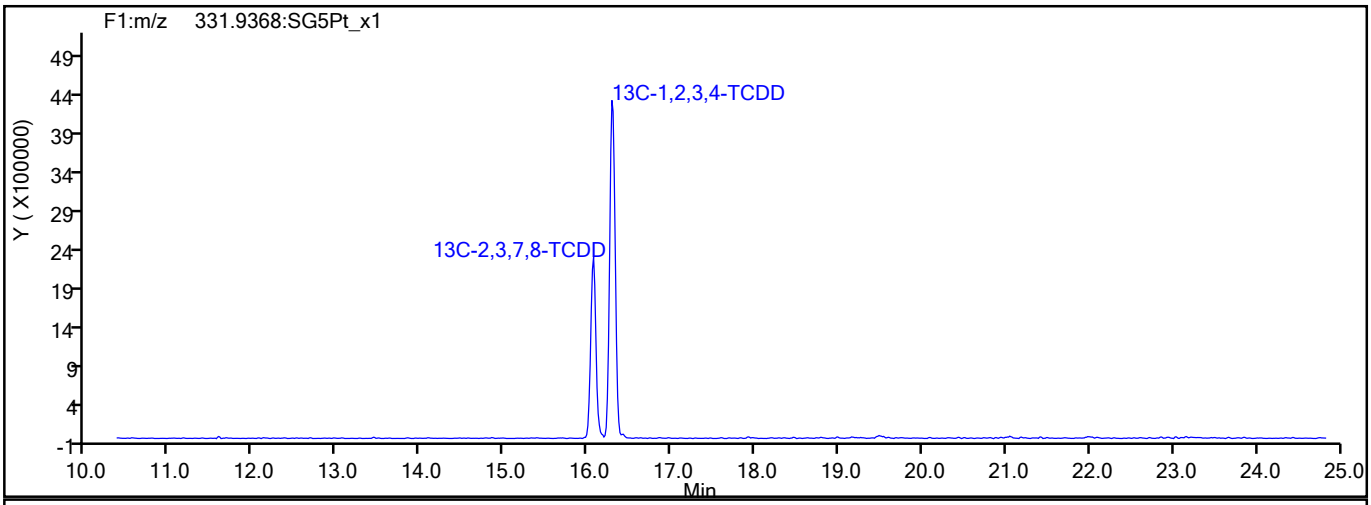

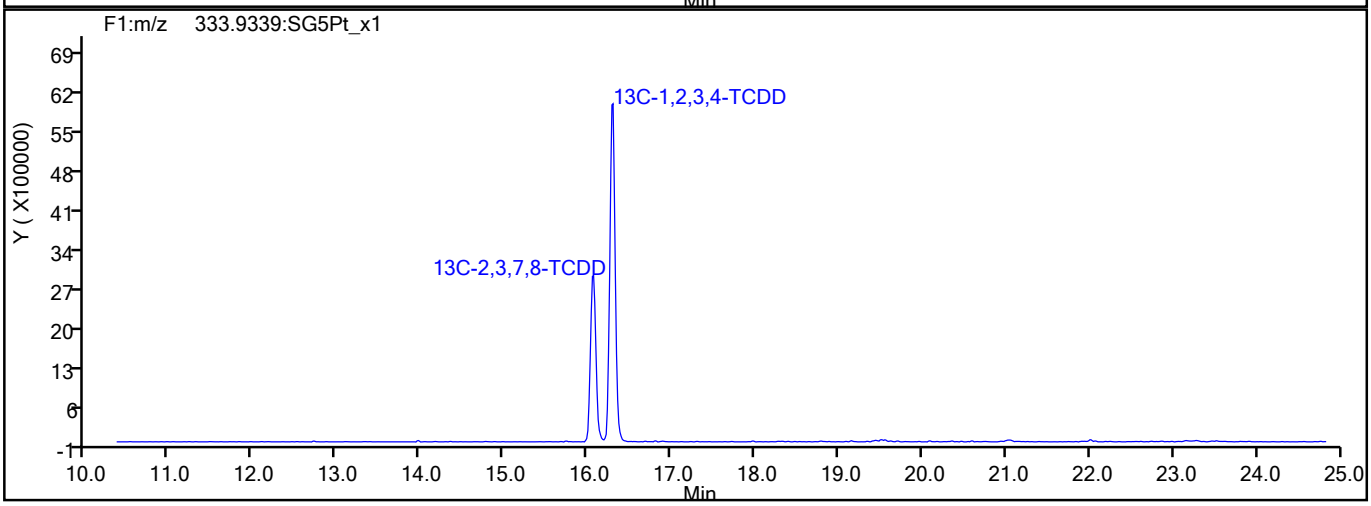

782323

Report Date: 26-Aug-2021 09:30:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_006.d		
Injection Date:	25-Aug-2021 16:10:37	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (6-8)		
Worklist#:	519744	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

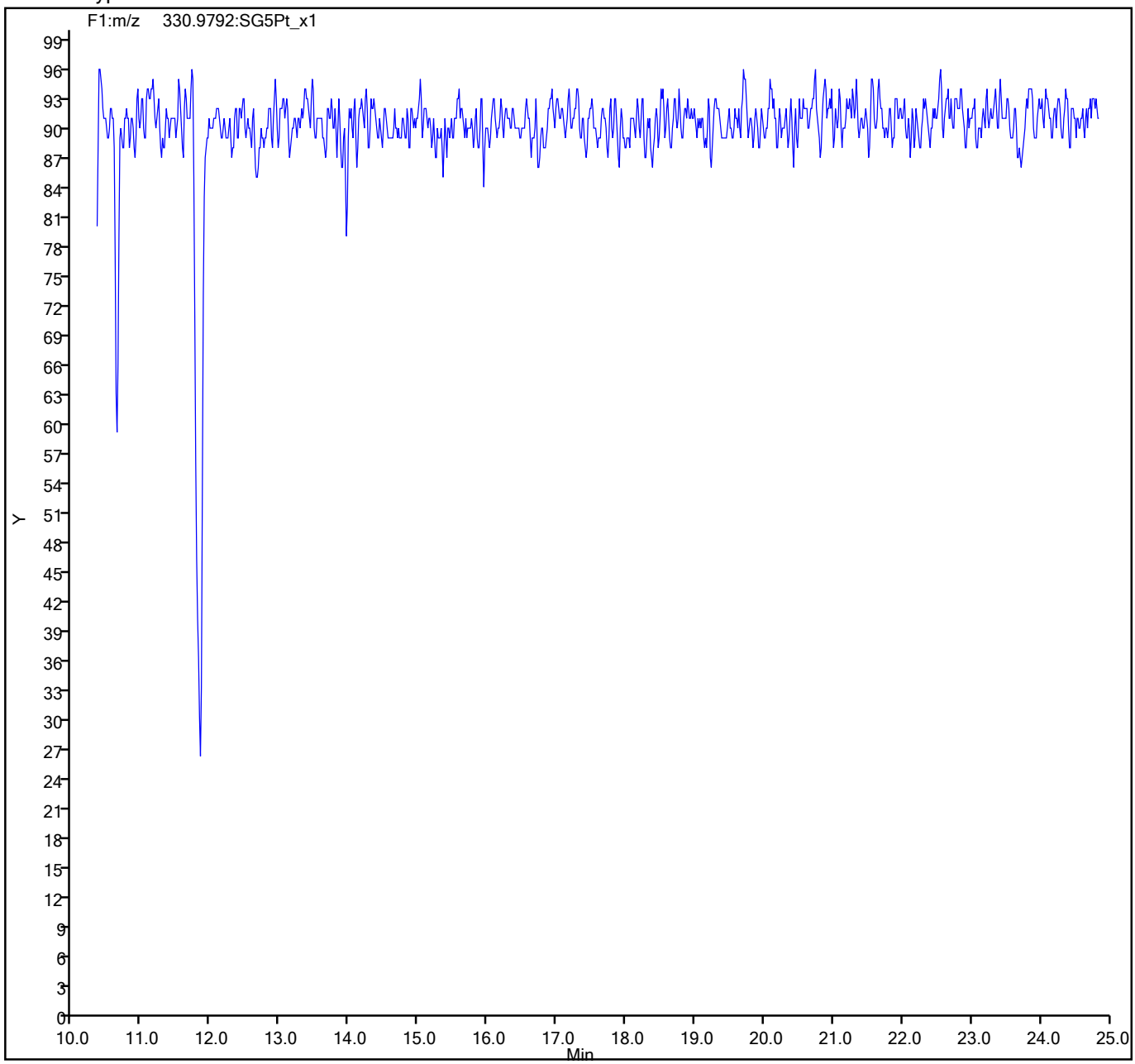

782324

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (8-10)
Lab Sample ID: 320-76887-5
Matrix: Sediment
Lab File ID: 17au21dfs1_27.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.72(g)
Date Analyzed: 08/18/2021 10:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 33.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517281
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	1900	G E	1.9	1.9
40321-76-4	1,2,3,7,8-PeCDD	24		7.0	0.70
57117-41-6	1,2,3,7,8-PeCDF	150		7.0	1.5
57117-31-4	2,3,4,7,8-PeCDF	120		7.0	1.6
39227-28-6	1,2,3,4,7,8-HxCDD	0.79	J	7.0	0.23
57653-85-7	1,2,3,6,7,8-HxCDD	1.3	J	7.0	0.26
19408-74-3	1,2,3,7,8,9-HxCDD	2.7	J	7.0	0.22
70648-26-9	1,2,3,4,7,8-HxCDF	200		7.0	0.94
57117-44-9	1,2,3,6,7,8-HxCDF	51		7.0	0.94
72918-21-9	1,2,3,7,8,9-HxCDF	3.3	J	7.0	0.89
60851-34-5	2,3,4,6,7,8-HxCDF	6.5	J	7.0	0.97
35822-46-9	1,2,3,4,6,7,8-HpCDD	41	B	7.0	0.28
67562-39-4	1,2,3,4,6,7,8-HpCDF	68		7.0	0.23
55673-89-7	1,2,3,4,7,8,9-HpCDF	22		7.0	0.22
3268-87-9	OCDD	1000	B	14	0.84
39001-02-0	OCDF	37		14	0.17
41903-57-5	Total TCDD	2100	G q	1.9	1.9
30402-14-3	Total TCDF	14000	G	13	13
36088-22-9	Total PeCDD	24		7.0	0.70
30402-15-4	Total PeCDF	400		7.0	1.5
34465-46-8	Total HxCDD	36		7.0	0.23
55684-94-1	Total HxCDF	290	q	7.0	0.93
37871-00-4	Total HpCDD	140	B	7.0	0.28
38998-75-3	Total HpCDF	100		7.0	0.22

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (8-10)
Lab Sample ID: 320-76887-5
Matrix: Sediment
Lab File ID: 17au21dfs1_27.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.72(g)
Date Analyzed: 08/18/2021 10:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 33.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517281
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	60		25-164
89059-46-1	13C-2,3,7,8-TCDF	57		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	59		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	59		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	61		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	64		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	59		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	72		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	60		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	59		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	57		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	68		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	65		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	76		26-138
114423-97-1	13C-OCDD	73		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	74		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d
Lims ID: 320-76887-A-5-A
Client ID: 11215702-072721-BN-SJSB096 (8-10)
Sample Type: Client
Inject. Date: 18-Aug-2021 10:06:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-5-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:35:00 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1618

First Level Reviewer: krenns Date: 23-Aug-2021 10:35:00

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.515	1203224	0.80	2.1E+04	100.0	100.0				a
2,3,7,8-TCDF	20.560	28666908	0.79	1.0802	2864.8	2864.8	4.763	4.763		E
D 13C-2,3,7,8-TCDF	20.526	926361	0.82	1.3459	57.2	57.2	0.4069	0.4069	57.21	
A Non-2,3,7,8-sub-TCDF	19.916	20413473	0.78	1.0802	2040.0	2040.0	4.763	1265.0		Ma
S Total TCDF					4904.9	4904.9	4.763	4.763		
D 13C-2,3,7,8-TCDD	21.911	671541	0.85	0.9317	59.9	59.9	0.7993	0.7993	59.91	
2,3,7,8-TCDD	21.946	5001263	0.79	1.0753	692.6	692.6	0.6966	0.6966		E
$ 37Cl4-2,3,7,8-TCDD	21.946	360780		1.0083	29.7	29.7	0.4176	0.4176	74.34	
A Non-2,3,7,8-sub-TCDD	20.750	426472	0.77	1.0753	59.2	59.1	0.6966	55.8		RQ
S Total TCDD					751.8	751.6	0.6966	0.6966		RQ
D 13C-1,2,3,7,8-PeCDF	27.350	808071	1.60	1.1405	58.9	58.9	0.2166	0.2166	58.89	
1,2,3,7,8-PeCDF	27.375	452886	1.58	1.0543	53.2	53.2	0.5430	0.5430		M
D 13C-2,3,4,7,8-PeCDF	28.856	832339	1.62	1.1253	61.5	61.5	0.2195	0.2195	61.47	
2,3,4,7,8-PeCDF	28.882	358592	1.58	1.0079	42.7	42.7	0.5605	0.5605		
A F1 PeCDFs	24.676	1960	1.32	1.0311	0.2318	0.2318	0.007970	0.2318		a
A Non-2,3,7,8-sub-PeCDF	28.167	390109	1.58	1.0311	46.1	46.1	0.5515	17.9		
S Total PeCDF					142.3	142.3	0.5517	0.5517		
D 13C-1,2,3,7,8-PeCDD	29.656	509929	1.59	0.7165	59.2	59.2	0.1574	0.1574	59.15	
1,2,3,7,8-PeCDD	29.698	44998	1.55	1.0465	8.432	8.432	0.2495	0.2495		M
A Non-2,3,7,8-sub-PeCDD	28.556						0.2495	0.4569		RQU
S Total PeCDD					8.432	8.432	0.2495	0.2495		
D 13C-1,2,3,4,7,8-HxCDF	34.970	753158	0.53	0.9648	71.9	71.9	0.1678	0.1678	71.86	
1,2,3,4,7,8-HxCDF	34.987	606125	1.25	1.1474	70.1	70.1	0.3355	0.3355		
D 13C-1,2,3,6,7,8-HxCDF	35.121	697211	0.52	1.0708	59.9	59.9	0.1512	0.1512	59.94	
1,2,3,6,7,8-HxCDF	35.130	155953	1.24	1.2178	18.4	18.4	0.3354	0.3354		
D 13C-2,3,4,6,7,8-HxCDF	35.938	648469	0.55	1.0413	57.3	57.3	0.1555	0.1555	57.33	
2,3,4,6,7,8-HxCDF	35.946	18435	1.27	1.2145	2.341	2.341	0.3470	0.3470		M
D 13C-1,2,3,7,8,9-HxCDF	36.821	625157	0.55	0.9731	59.1	59.1	0.1664	0.1664	59.14	
1,2,3,7,8,9-HxCDF	36.847	9137	1.22	1.2401	1.179	1.179	0.3192	0.3192		Ma
A Non-2,3,7,8-sub-HxCDF	35.074	82602	1.24	1.2049	10.7	10.1	0.3338	4.286		RQMa
S Total HxCDF					102.7	102.1	0.3343	0.3343		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.628	1086276	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.148	528953	1.26	0.7587	64.2	64.2	0.1285	0.1285	64.18	
1,2,3,4,7,8-HxCDD	36.148	1593	1.10	1.0608	0.2839	0.2839	0.0809	0.0809		Ma
D 13C-1,2,3,6,7,8-HxCDD	36.266	547758	1.28	0.8593	58.7	58.7	0.1135	0.1135	58.68	
1,2,3,6,7,8-HxCDD	36.283	2505	1.27	0.9933	0.4604	0.4604	0.0915	0.0915		M
1,2,3,7,8,9-HxCDD	36.628	5732	1.12	1.1094	0.9597	0.9597	0.0796	0.0796		
A Non-2,3,7,8-sub-HxCDD	35.432	63869	1.30	1.0545	11.3	11.3	0.0838	8.238		M
S Total HxCDD					13.0	13.0	0.0840	0.0840		
D 13C-1,2,3,4,6,7,8-HpCDF	38.637	517132	0.47	0.7359	64.7	64.7	0.2317	0.2317	64.69	
1,2,3,4,6,7,8-HpCDF	38.654	181383	1.04	1.4421	24.3	24.3	0.0831	0.0831		
1,2,3,4,7,8,9-HpCDF	39.900	57919	1.04	1.3092	7.846	7.846	0.0778	0.0778		
D 13C-1,2,3,4,7,8,9-HpCDF	39.891	563897	0.47	0.6854	75.7	75.7	0.2488	0.2488	75.74	
A Non-2,3,7,8-sub-HpCDF	39.277	34315	0.94	1.3756	4.615	4.615	0.0800	4.615		
S Total HpCDF					36.8	36.8	0.0804	0.0804		
D 13C-1,2,3,4,6,7,8-HpCDD	39.580	495091	1.01	0.6745	67.6	67.6	0.1350	0.1350	67.57	
1,2,3,4,6,7,8-HpCDD	39.588	76563	1.11	1.0503	14.7	14.7	0.0995	0.0995		
A Non-2,3,7,8-sub-HpCDD	39.277	175932	0.98	1.0503	33.8	33.8	0.0995	33.8		
S Total HpCDD					48.6	48.6	0.0995	0.0995		
D 13C-OCDD	42.085	869047	0.93	0.5446	146.9	146.9	0.1475	0.1475	73.45	
OCDF	42.177	75189	0.90	1.3168	13.1	13.1	0.0616	0.0616		
OCDD	42.093	1722245	0.90	1.0620	373.2	373.2	0.3010	0.3010		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 23-Aug-2021 10:35:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d
Lims ID: 320-76887-A-5-A
Client ID: 11215702-072721-BN-SJSB096 (8-10)
Sample Type: Client
Inject. Date: 18-Aug-2021 10:06:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-5-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 10:35:00 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1618

First Level Reviewer: krenns Date: 23-Aug-2021 10:35:00

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.515	21.483	2		533342	63671	128	320	497		a
333.9338	21.498	21.483	1		669882	80023	300	750	267	0.80(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.560	20.482	5	1.002	12682406	1685342	1127	2817	1495		
305.8987	20.560	20.482	5	1.002	15984502	2148098	1429	3572	1503	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.526	20.594	-4	0.954	416727	56528	169	422	334		
317.9389	20.526	20.594	-4	0.954	509634	67664	146	365	463	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											Ma
303.9016	17.566	19.916	-141	0.856	38501	7266	1127	2817	6		
305.8987	17.558	19.916	-141	0.855	56693	9948	1429	3572	7	0.68(0.65-0.89)	
303.9016	18.022	19.916	-113	0.878	150992	24077	1127	2817	21		
305.8987	18.014	19.916	-114	0.878	191724	31455	1429	3572	22	0.79(0.65-0.89)	
303.9016	18.504	19.916	-85	0.901	284651	32861	1127	2817	29		M
305.8987	18.504	19.916	-85	0.901	352063	41053	1429	3572	29	0.81(0.65-0.89)	
303.9016	18.943	19.916	-58	0.923	319321	40280	1127	2817	36		M
305.8987	18.943	19.916	-58	0.923	409549	51623	1429	3572	36	0.78(0.65-0.89)	
303.9016	19.321	19.916	-36	0.941	531252	80181	1127	2817	71		
305.8987	19.321	19.916	-36	0.941	674594	101026	1429	3572	71	0.79(0.65-0.89)	
303.9016	19.820	19.916	-6	0.966	5539308	798820	1127	2817	709		
305.8987	19.820	19.916	-6	0.966	7118957	1015303	1429	3572	710	0.78(0.65-0.89)	
303.9016	20.234	19.916	19	0.986	137218	17570	1127	2817	16		
305.8987	20.234	19.916	19	0.986	172793	22285	1429	3572	16	0.79(0.65-0.89)	
303.9016	21.343	19.916	85	1.040	892112	115666	1127	2817	103		
305.8987	21.343	19.916	85	1.040	1137604	146671	1429	3572	103	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.843	19.916	115	1.064	156118	17832	1127	2817	16		
305.8987	21.834	19.916	115	1.064	186758	21857	1429	3572	15	0.84(0.65-0.89)	
303.9016	23.719	19.916	228	1.156	904768	172221	1127	2817	153		a
305.8987	23.719	19.916	228	1.156	1158497	222011	1429	3572	155	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.911	21.790	7	1.018	308727	44223	128	320	345		
333.9338	21.903	21.790	7	1.018	362814	55898	300	750	186	0.85(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	21.946	21.825	7	1.002	2205844	301768	144	360	2096		
321.8936	21.946	21.825	7	1.002	2795419	381045	156	390	2443	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.946	21.905	2	1.020	360780	49139	242	605	203		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	19.838	20.750	-55	0.905	7709	1002	144	360	7		
321.8936	19.855	20.750	-54	0.906	9023	1049	156	390	7	0.85(0.65-0.89)	
319.8965	22.583	20.750	110	1.031	176994	23422	144	360	163		
321.8936	22.591	20.750	110	1.031	226150	28533	156	390	183	0.78(0.65-0.89)	
319.8965	23.047	20.750	138	1.052	3982	671	144	360	5		
	Empc Correction				2869	428	144	360	3		
321.8936	23.090	20.750	140	1.054	3727	556	156	390	4	1.07(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.350	27.343	0	1.271	496999	73613	78	195	944		
353.8970	27.350	27.343	0	1.271	311072	47278	64	160	739	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.375	27.368	0	1.001	277309	39965	151	377	265		M
341.8567	27.375	27.368	0	1.001	175577	25990	126	315	206	1.58(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.856	28.867	-1	1.341	514197	74581	78	195	956		
353.8970	28.856	28.867	-1	1.341	318142	47917	64	160	749	1.62(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.882	28.884	0	1.001	219511	33221	151	377	220		
341.8567	28.882	28.884	0	1.001	139081	21296	126	315	169	1.58(1.32-1.78)	
A F1 PeCDFs											a
339.8597	24.158	24.676	-31	0.883	1115	225	1	2	225		a
341.8567	24.149	24.676	-32	0.883	845	173	3	7	58	1.32(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	25.894	28.167	-136	0.947	93180	15682	151	377	104		
341.8567	25.886	28.167	-137	0.946	57889	9802	126	315	78	1.61(1.32-1.78)	
339.8597	26.812	28.167	-81	0.980	11006	1536	151	377	10		
341.8567	26.803	28.167	-82	0.980	6546	988	126	315	8	1.68(1.32-1.78)	
339.8597	27.232	28.167	-56	0.996	14543	3606	151	377	24		
341.8567	27.232	28.167	-56	0.996	10844	2552	126	315	20	1.34(1.32-1.78)	
339.8597	27.947	28.167	-13	1.022	63688	10232	151	377	68		
341.8567	27.939	28.167	-14	1.022	42015	6366	126	315	51	1.52(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	29.227	28.167	63	1.069	44544	5986	151	377	40		
341.8567	29.193	28.167	61	1.067	26703	3459	126	315	27	1.67(1.32-1.78)	
339.8597	30.902	28.167	164	1.130	11854	1864	151	377	12		
341.8567	30.935	28.167	166	1.131	7297	1156	126	315	9	1.62(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.656	29.667	-1	1.378	313296	41510	43	107	965		
369.8919	29.664	29.667	0	1.379	196633	28203	22	55	1282	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											M
355.8546	29.698	29.692	0	1.001	27356	3849	27	67	143		M
357.8516	29.681	29.692	-1	1.001	17642	2653	46	115	58	1.55(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.189	28.556	-142	0.883	1482	273	27	67	10		
357.8516	26.189	28.556	-142	0.883	64230	11588	46	115	252	0.02(1.32-1.78)	
	Empc Correction				956	176	46	115	4		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.970	34.974	0	0.955	260183	49647	62	155	801		
385.8610	34.962	34.974	-1	0.955	492975	95840	89	222	1077	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.987	35.000	-1	1.000	336203	65778	116	290	567		
375.8178	34.978	35.000	-1	1.000	269922	53130	108	270	492	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.121	35.134	-1	0.959	238281	48407	62	155	781		
385.8610	35.113	35.134	-1	0.959	458930	88687	89	222	996	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.130	35.151	-1	1.000	86355	16218	116	290	140		
375.8178	35.130	35.151	-1	1.000	69598	13263	108	270	123	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.938	35.951	-1	0.981	229422	48497	62	155	782		
385.8610	35.938	35.951	-1	0.981	419047	84398	89	222	948	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.946	35.968	-1	1.000	10314	2137	116	290	18		M
375.8178	35.955	35.968	-1	1.000	8121	1756	108	270	16	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.821	36.843	-1	1.005	221403	49870	62	155	804		
385.8610	36.821	36.843	-1	1.005	403754	91621	89	222	1029	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											Ma
373.8208	36.847	36.852	0	1.001	5028	1417	116	290	12		M
375.8178	36.838	36.852	-1	1.000	4109	1089	108	270	10	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.514	35.074	-93	0.958	20334	3422	116	290	30		
375.8178	33.506	35.074	-94	0.958	14834	2486	108	270	23	1.37(1.05-1.43)	
373.8208	34.372	35.074	-42	0.983	7013	1406	116	290	12		
375.8178	34.356	35.074	-43	0.982	6044	1311	108	270	12	1.16(1.05-1.43)	
373.8208	35.837	35.074	46	1.025	5386	1243	116	290	11		M
375.8178	35.828	35.074	45	1.025	4853	1098	108	270	10	1.11(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	36.939	35.074	112	1.056	18618	4396	116	290	38		M
	Empc Correction				13362	4119	116	290	36		
375.8178	36.939	35.074	112	1.056	10776	3322	108	270	31	1.73(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.628	36.641	-1		605844	128779	49	122	2628		
403.8529	36.628	36.641	-1		480432	104044	42	105	2477	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.148	36.161	-1	0.987	294980	68696	49	122	1402		
403.8529	36.148	36.161	-1	0.987	233973	53590	42	105	1276	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											Ma
389.8158	36.148	36.178	-2	1.000	834	249	22	55	11		M
391.8127	36.190	36.178	1	1.001	759	162	20	50	8	1.10(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.266	36.279	-1	0.990	307912	64576	49	122	1318		
403.8529	36.266	36.279	-1	0.990	239846	50894	42	105	1212	1.28(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8158	36.283	36.296	-1	1.000	1402	325	22	55	15		
391.8127	36.291	36.296	0	1.001	1103	275	20	50	14	1.27(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											
389.8158	36.628	36.658	-2	1.013	3028	551	22	55	25		
391.8127	36.636	36.658	-1	1.014	2704	490	20	50	25	1.12(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											M
389.8158	34.288	35.432	-68	0.945	26639	4770	22	55	217		M
391.8127	34.280	35.432	-69	0.945	20127	3822	20	50	191	1.32(1.05-1.43)	M
389.8158	35.021	35.432	-25	0.966	1216	222	22	55	10		M
391.8127	35.029	35.432	-24	0.966	884	229	20	50	11	1.38(1.05-1.43)	M
389.8158	35.391	35.432	-2	0.976	8224	1554	22	55	71		M
391.8127	35.391	35.432	-2	0.976	6779	1403	20	50	70	1.21(1.05-1.43)	M
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.637	38.647	-1	1.055	164845	43553	67	167	650		
419.8220	38.646	38.647	0	1.055	352287	90038	92	230	979	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.654	38.654	0	1.000	92604	24388	38	95	642		
409.7788	38.654	38.654	0	1.000	88779	22413	26	65	862	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.900	39.900	0	1.000	29592	8474	38	95	223		
409.7788	39.900	39.900	0	1.000	28327	8251	26	65	317	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.891	39.901	-1	1.089	181522	49553	67	167	740		
419.8220	39.891	39.901	-1	1.089	382375	107596	92	230	1170	0.47(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.016	39.277	-16	1.010	16596	4748	38	95	125		
409.7788	39.016	39.277	-16	1.010	17719	4678	26	65	180	0.94(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.580	39.590	-1	1.081	248824	68626	46	115	1492		
437.8140	39.580	39.590	-1	1.081	246267	70092	39	97	1797	1.01(0.88-1.20)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.588	39.597	-1	1.000	40200	11389	32	80	356		
425.7737	39.588	39.597	-1	1.000	36363	10176	26	65	391	1.11(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.957	39.277	-19	0.984	87077	23139	32	80	723		
425.7737	38.957	39.277	-19	0.984	88855	23579	26	65	907	0.98(0.88-1.20)	
13C-OCDD											
469.7780	42.085	42.094	-1	1.149	417863	102817	36	90	2856		
471.7750	42.076	42.094	-1	1.149	451184	106788	39	97	2738	0.93(0.76-1.02)	
OCDF											
441.7428	42.177	42.187	-1	1.002	35522	8527	9	22	947		
443.7399	42.177	42.187	-1	1.002	39667	9612	25	62	384	0.90(0.76-1.02)	
OCDD											
457.7377	42.093	42.103	-1	1.000	816261	206487	63	157	3278		
459.7348	42.093	42.103	-1	1.000	905984	220878	71	177	3111	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 23-Aug-2021 10:35:01 Chrom Revision: 2.3 13-May-2021 07:57:40

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Lims ID:	320-76887-A-5-A		
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Inject. Date:	18-Aug-2021 10:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	25

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	926361	124192

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	926361	124192

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.566	38501	7266	56693	9948	9.51	0.68	
18.022	150992	24077	191724	31455	34.2	0.79	
18.504	284651	32861	352063	41053	63.6	0.81	Ma
18.943	319321	40280	409549	51623	72.8	0.78	M
19.321	531252	80181	674594	101026	120.5	0.79	
19.820	5539308	798820	7118957	1015303	1265.0	0.78	
20.234	137218	17570	172793	22285	31.0	0.79	
21.343	892112	115666	1137604	146671	202.8	0.78	
21.843	156118	17832	186758	21857	34.3	0.84	
23.719	904768	172221	1158497	222011	206.2	0.78	a
Signal Totals:							
	8954241	1306774	11459232	1663232			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	20413473	2970006				0.78	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2040.0 = (20413473 * 100.000) / (926361 * 1.080)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 23-Aug-2021 10:35:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Lims ID:	320-76887-A-5-A		
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Inject. Date:	18-Aug-2021 10:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	25

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	671541	100121

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	671541	100121

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.838	7709	1002	9023	1049	2.32	0.85	
22.583	176994	23422	226150	28533	55.8	0.78	
23.047	3982	671	3727	556	1.07	1.07	RQ
23.047	2869	428	3727	556	0.9134		Empc Correction
Signal Totals:							
	187572	24852	238900	30138			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	427585	55233				0.79	RQ
	426472	54990					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 59.211 = (427585 * 100.000) / (671541 * 1.075)
Empc Amount: 59.057 = (426472 * 100.000) / (671541 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 23-Aug-2021 10:35:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Lims ID:	320-76887-A-5-A		
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Inject. Date:	18-Aug-2021 10:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	25

F1 PeCDFs, RT: 24.676

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	808071	120891
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	832339	122498

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	820205	121694

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.158	1115	225	845	173	0.2318	1.32	a
Signal Totals:							
	1115	225	845	173			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1960	398				1.32	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.2318 = (1960 * 100.000) / (820205 * 1.031)

QC Flag Legend

Review Flags

a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Lims ID:	320-76887-A-5-A		
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Inject. Date:	18-Aug-2021 10:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	25

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	808071	120891
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	832339	122498

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	820205	121694

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.894	93180	15682	57889	9802	17.9	1.61	
26.812	11006	1536	6546	988	2.08	1.68	
27.232	14543	3606	10844	2552	3.00	1.34	
27.947	63688	10232	42015	6366	12.5	1.52	
29.227	44544	5986	26703	3459	8.42	1.67	
30.902	11854	1864	7297	1156	2.26	1.62	
Signal Totals:							
	238815	38906	151294	24323			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	390109	63229				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 46.130 = (390109 * 100.000) / (820205 * 1.031)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Lims ID:	320-76887-A-5-A		
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Inject. Date:	18-Aug-2021 10:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	25

Non-2,3,7,8-sub-PeCDD, RT: 28.556

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	509929	69713

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	509929	69713

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.189	1482	273	64230	11588	12.3	0.02	RQ
26.189	1482	273	956	176	0.4569		Empc Correction

Compound is Marked ND

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Lims ID:	320-76887-A-5-A		
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Inject. Date:	18-Aug-2021 10:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	25

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	753158	145487
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	697211	137094
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	648469	132895
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	625157	141491

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	680998	139241

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.514	20334	3422	14834	2486	4.29	1.37	
34.372	7013	1406	6044	1311	1.59	1.16	
35.837	5386	1243	4853	1098	1.25	1.11	Ma
36.939	18618	4396	10776	3322	3.58	1.73	RQMa
36.939	13362	4119	10776	3322	2.94		Empc Correction
Signal Totals:							
	46095	10190	36507	8217			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	87858	18684				1.41	RQMa
	82602	18407					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 10.707 = (87858 * 100.000) / (680998 * 1.205)

Empc Amount: 10.067 = (82602 * 100.000) / (680998 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 23-Aug-2021 10:35:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Lims ID:	320-76887-A-5-A		
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Inject. Date:	18-Aug-2021 10:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	25

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	528953	122286
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	547758	115470
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	538355	118878

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.288	26639	4770	20127	3822	8.24	1.32	M
35.021	1216	222	884	229	0.3699	1.38	M
35.391	8224	1554	6779	1403	2.64	1.21	M
Signal Totals:							
	36079	6546	27790	5454			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63869	12000				1.30	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 11.250 = (63869 * 100.000) / (538355 * 1.055)

QC Flag Legend

Review Flags

M - Manually Integrated

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Lims ID:	320-76887-A-5-A		
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Inject. Date:	18-Aug-2021 10:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	25

Non-2,3,7,8-sub-HpCDF, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	517132	133591
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	563897	157149

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	540514	145370

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
39.016	16596	4748	17719	4678	4.62	0.94	
Signal Totals:							
	16596	4748	17719	4678			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	34315	9426				0.94	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.615 = (34315 * 100.000) / (540514 * 1.376)

Report Date: 23-Aug-2021 10:35:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Lims ID:	320-76887-A-5-A		
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Inject. Date:	18-Aug-2021 10:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	25

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	495091	138718

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	495091	138718

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.957	87077	23139	88855	23579	33.8	0.98	
Signal Totals:							
	87077	23139	88855	23579			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	175932	46718				0.98	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 33.833 = (175932 * 100.000) / (495091 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.15- 23.68)

Signal: 1

Processing Integration Results

RT = 18.504 Area = 278802

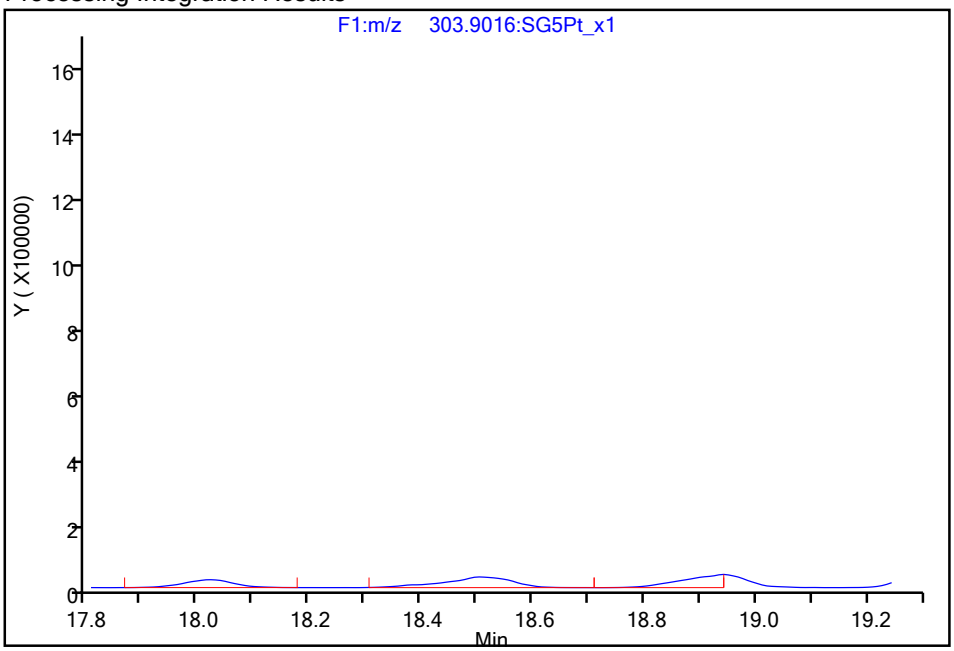

Manual Integration Results

RT = 18.504 Area = 284651 M

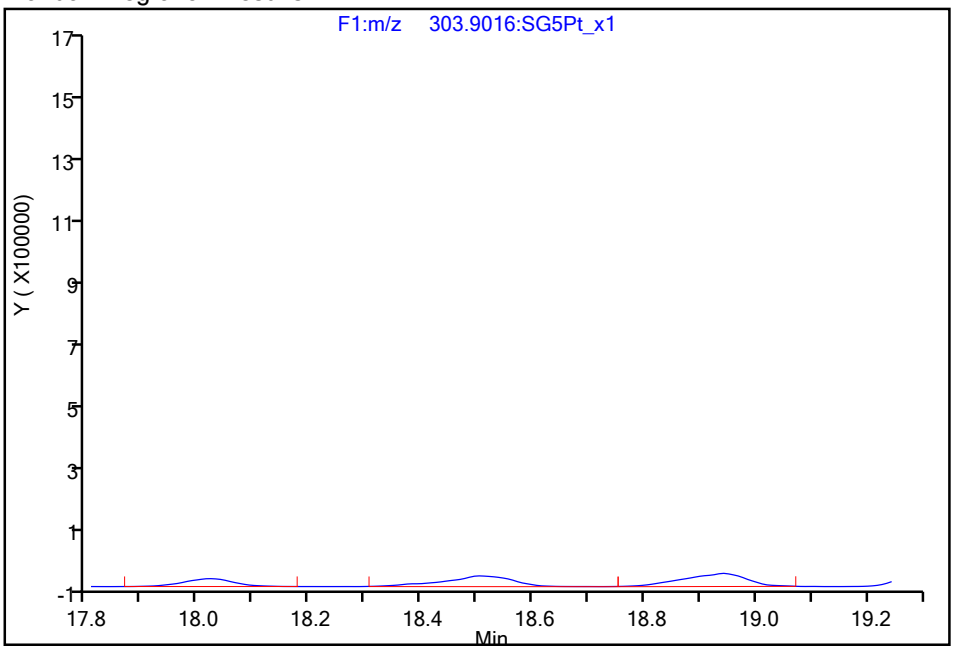

Reviewer: krenns, 23-Aug-2021 10:33:56

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.15- 23.68)

Signal: 1

Processing Integration Results

RT = 18.934 Area = 201129

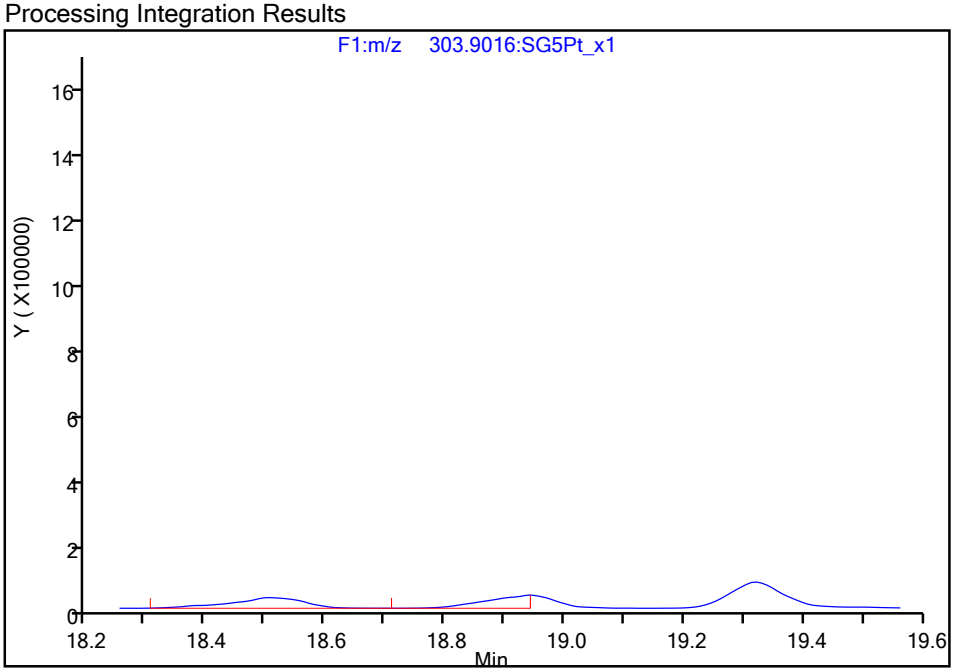

Manual Integration Results

RT = 18.943 Area = 319321 M

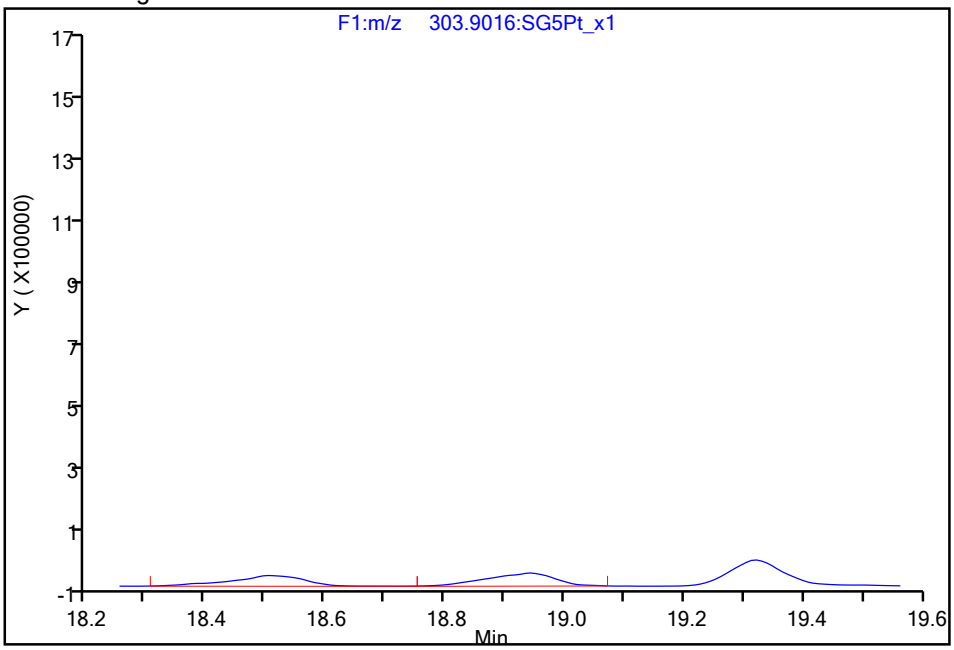

Reviewer: krenns, 23-Aug-2021 10:33:56

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.38
Area: 281519
Amount: 53.902641
Amount Units: pg/ul

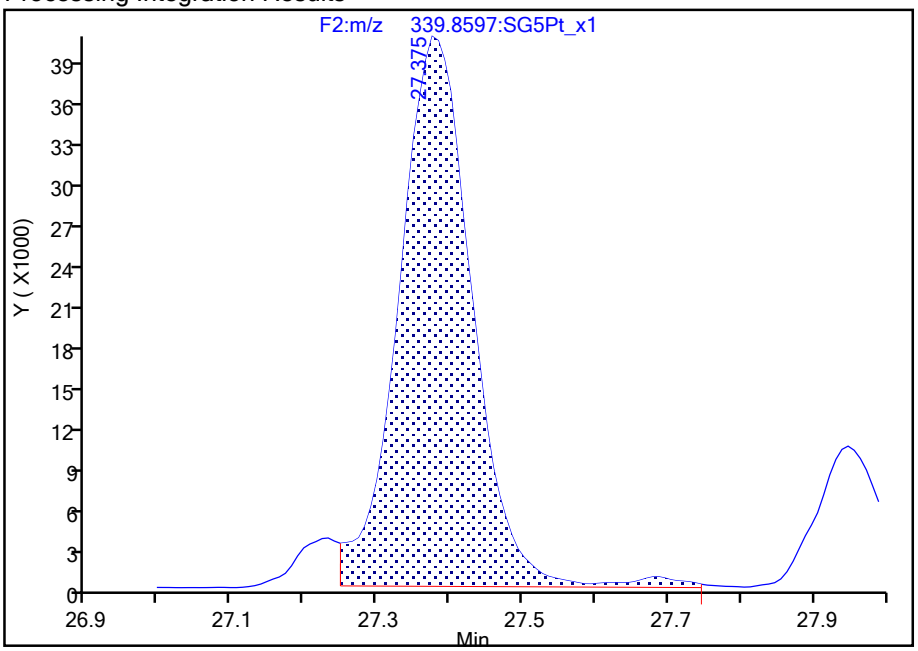

Manual Integration Results

RT: 27.38
Area: 277309
Amount: 53.160670
Amount Units: pg/ul

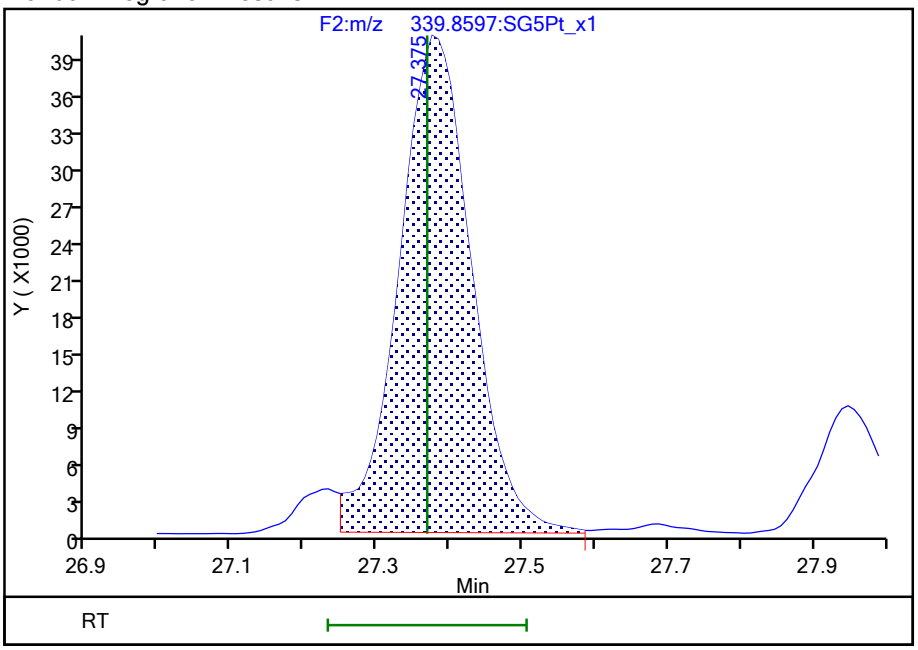

Reviewer: dadunj, 19-Aug-2021 13:01:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.38
Area: 177688
Amount: 53.902641
Amount Units: pg/ul

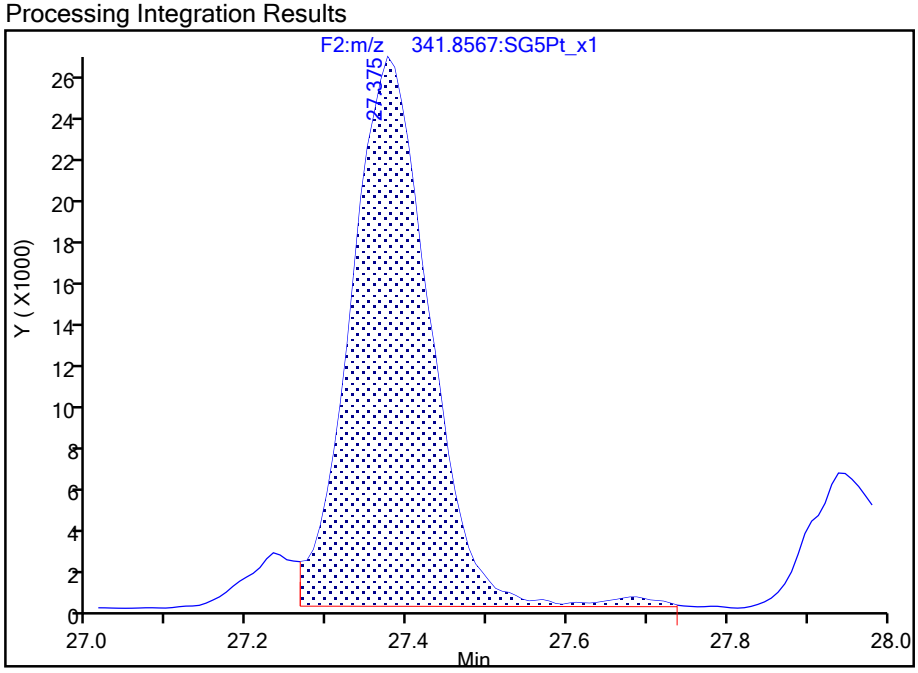

Manual Integration Results

RT: 27.38
Area: 175577
Amount: 53.160670
Amount Units: pg/ul

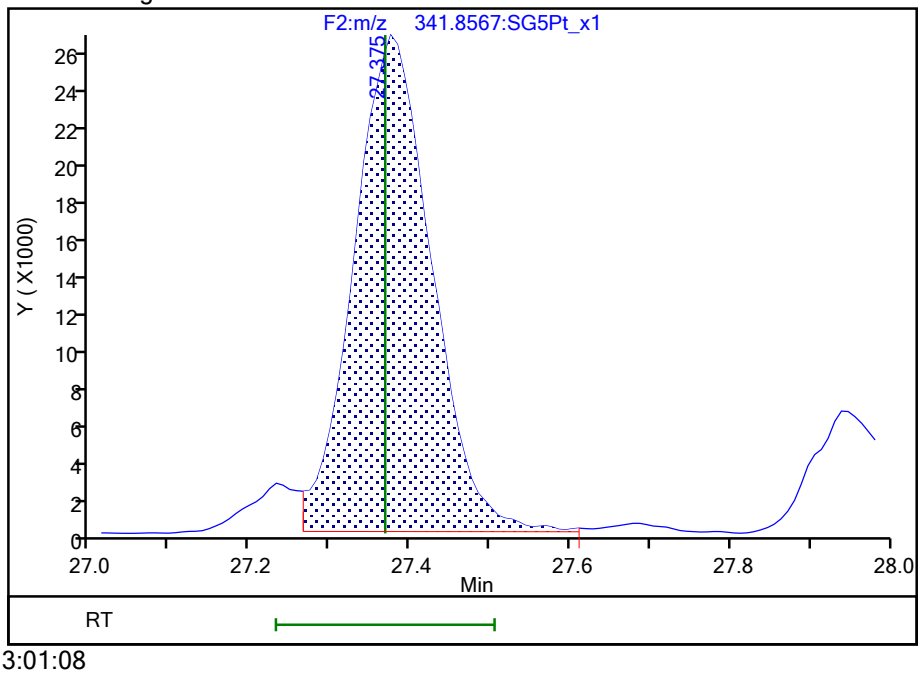

Reviewer: dadunj, 19-Aug-2021 13:01:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

RT: 29.70
Area: 28117
Amount: 8.574894
Amount Units: pg/ul

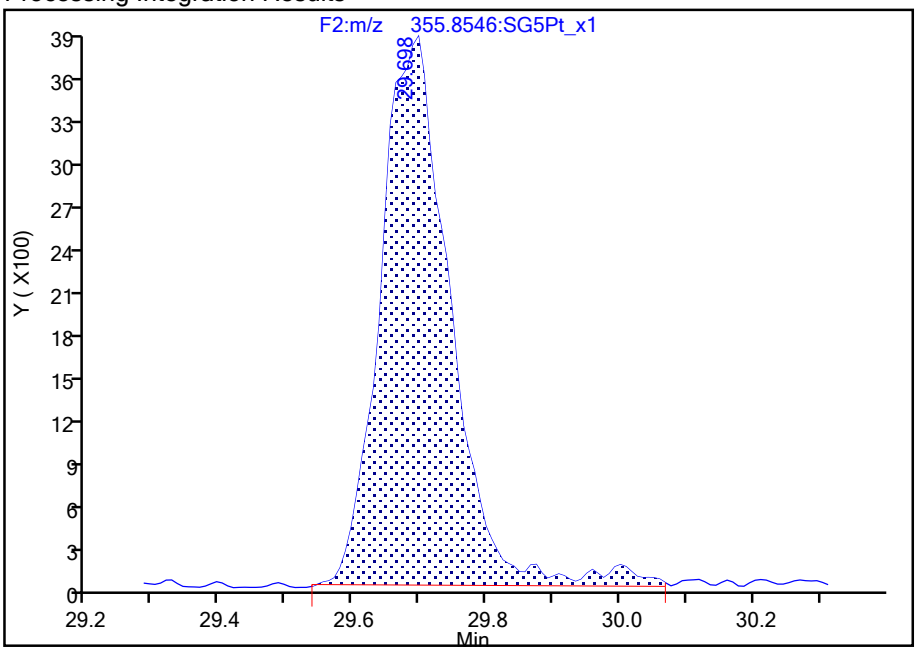

Manual Integration Results

RT: 29.70
Area: 27356
Amount: 8.432288
Amount Units: pg/ul

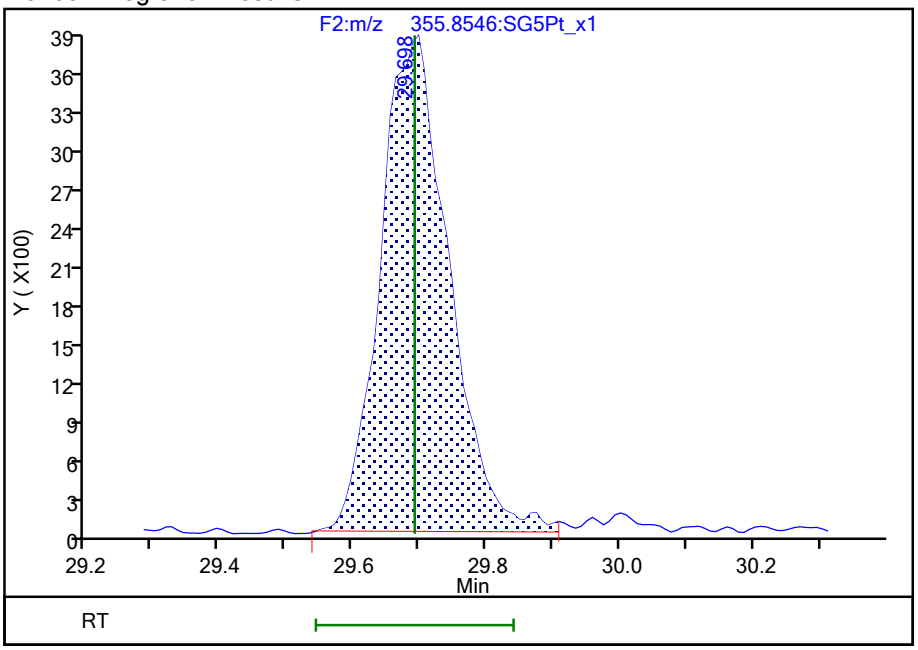

Reviewer: dadunj, 19-Aug-2021 13:01:23

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.95
Area: 15700
Amount: 3.024713
Amount Units: pg/ul

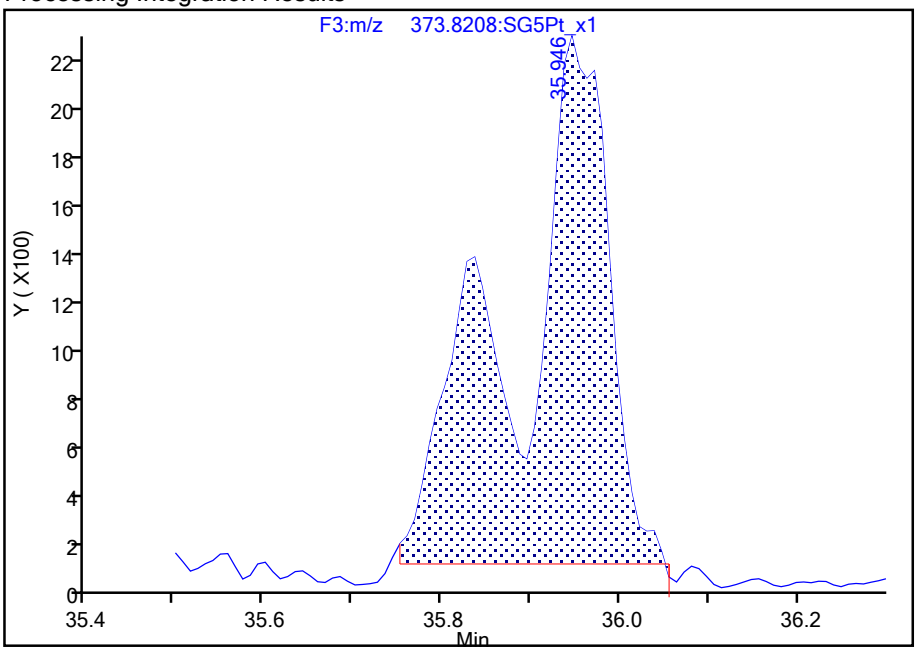

Manual Integration Results

RT: 35.95
Area: 10314
Amount: 2.340816
Amount Units: pg/ul

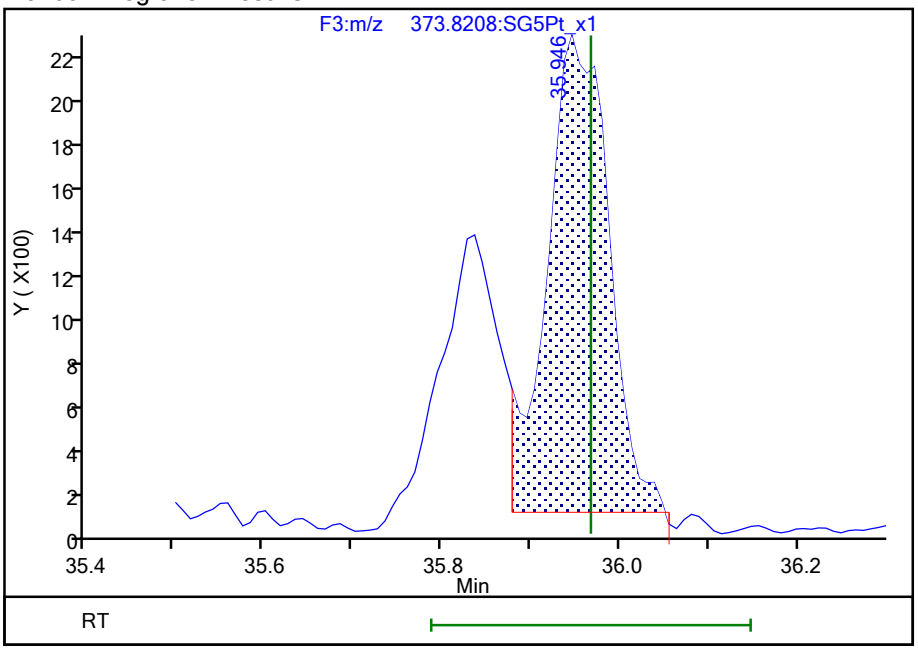

Reviewer: dadunj, 19-Aug-2021 13:01:47

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.94
Area: 10776
Amount: 4.440007
Amount Units: pg/ul

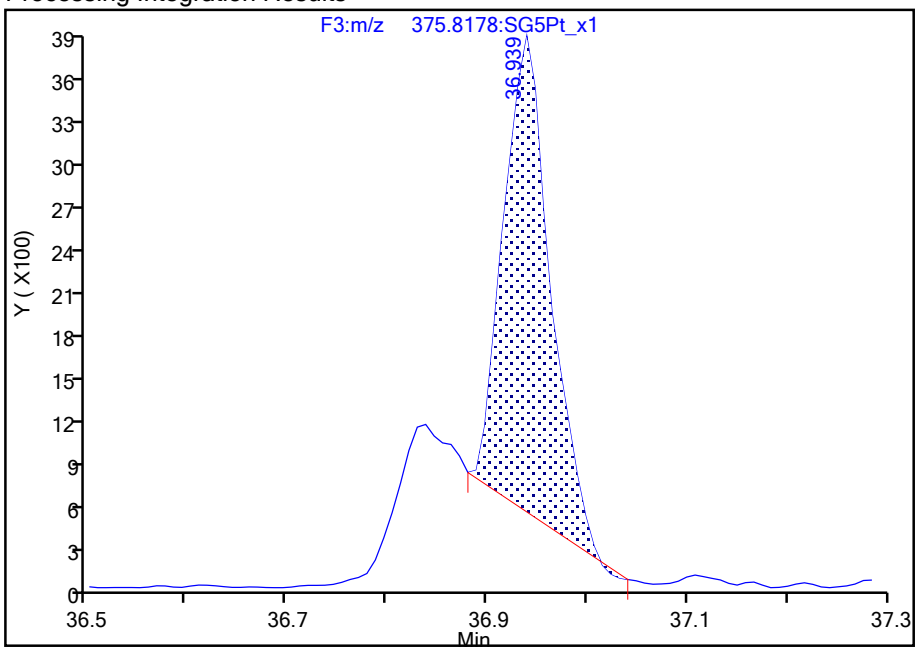

Manual Integration Results

RT: 36.84
Area: 4109
Amount: 1.178559
Amount Units: pg/ul

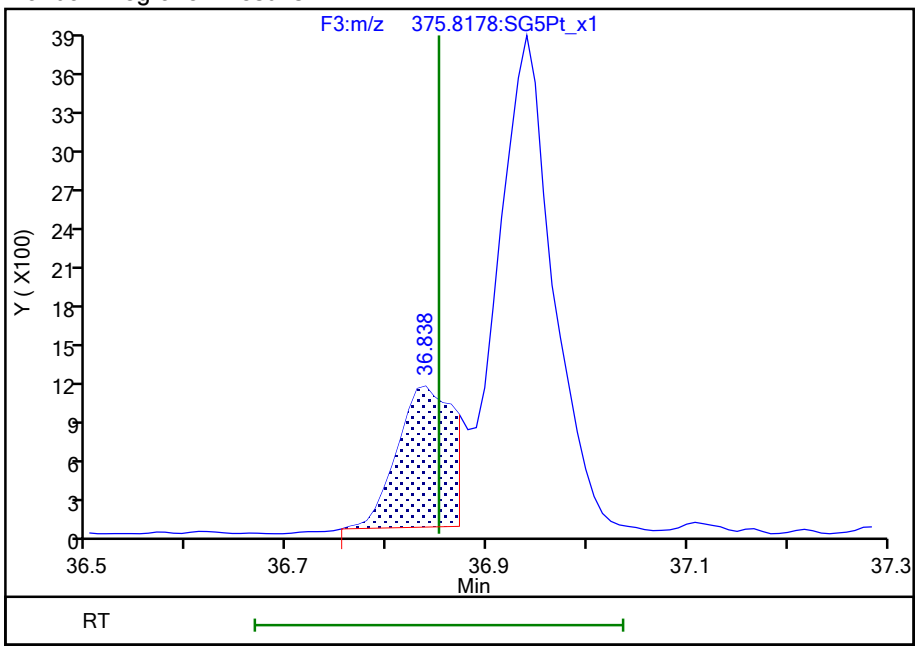

Reviewer: dadunj, 19-Aug-2021 13:01:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 3

Processing Integration Results

RT: 36.94
Area: 34422
Amount: 4.440007
Amount Units: pg/ul

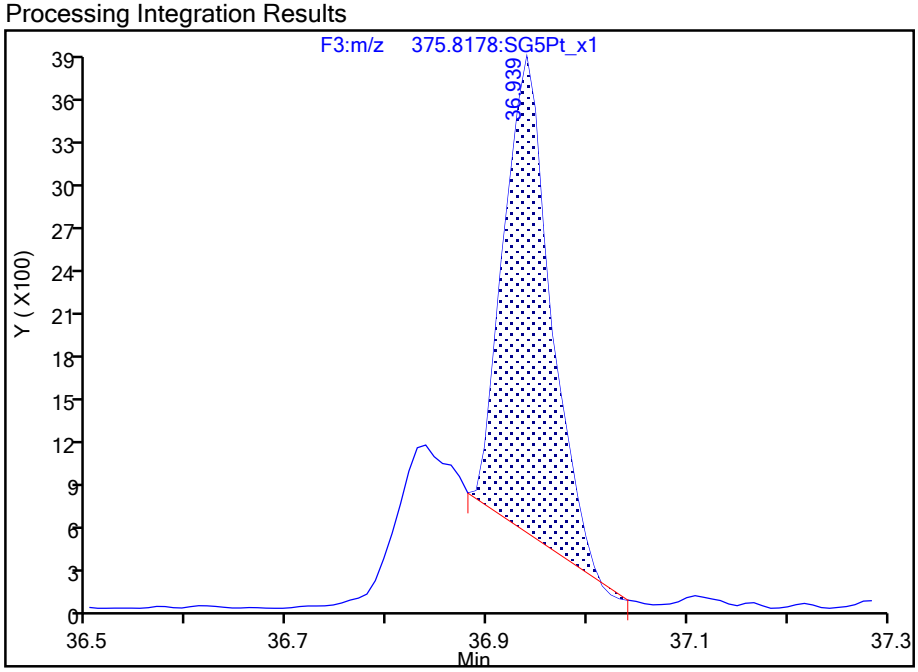

Manual Integration Results

RT: 36.85
Area: 9137
Amount: 1.178559
Amount Units: pg/ul
Reviewer: dadunj, 19-Aug-2021 13:01:52
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.94
Area: 23646
Amount: 4.440007
Amount Units: pg/ul

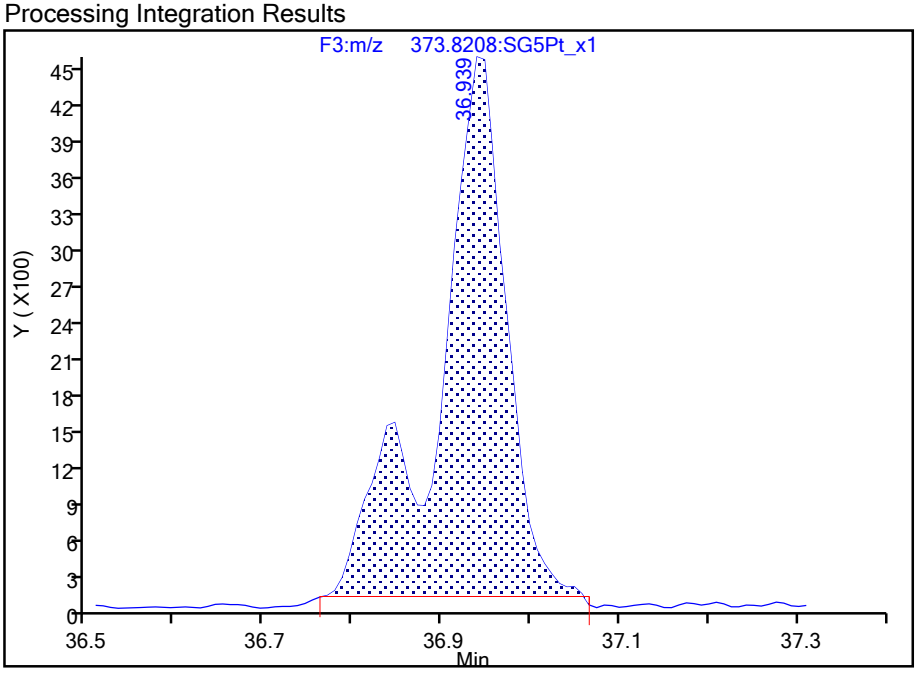

Manual Integration Results

RT: 36.85
Area: 5028
Amount: 1.178559
Amount Units: pg/ul

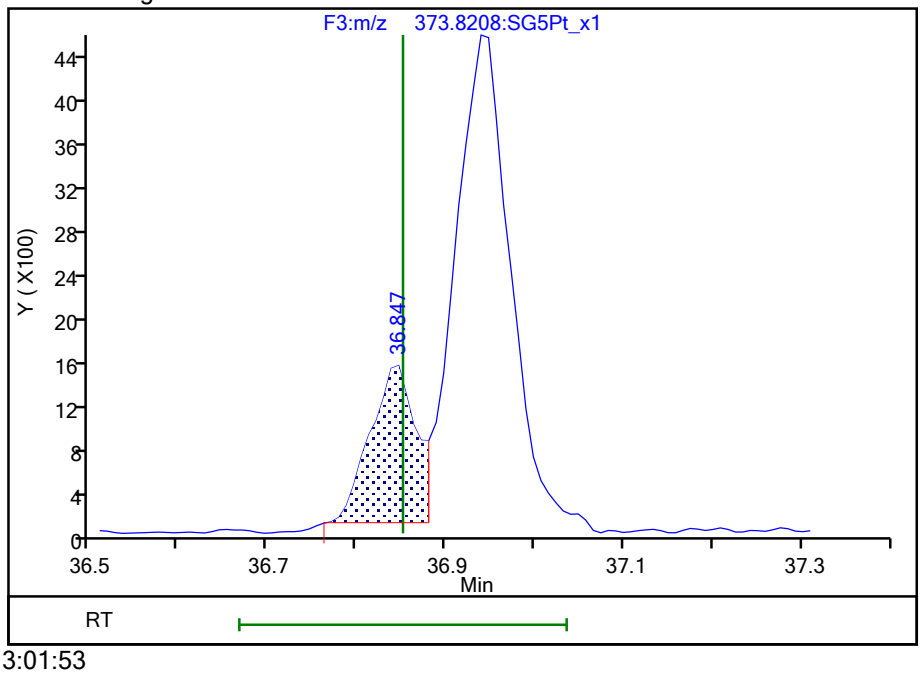

Reviewer: dadunj, 19-Aug-2021 13:01:53

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.18- 36.97)

Signal: 1

Processing Integration Results

Not Detected
RT: 33.18- 36.97

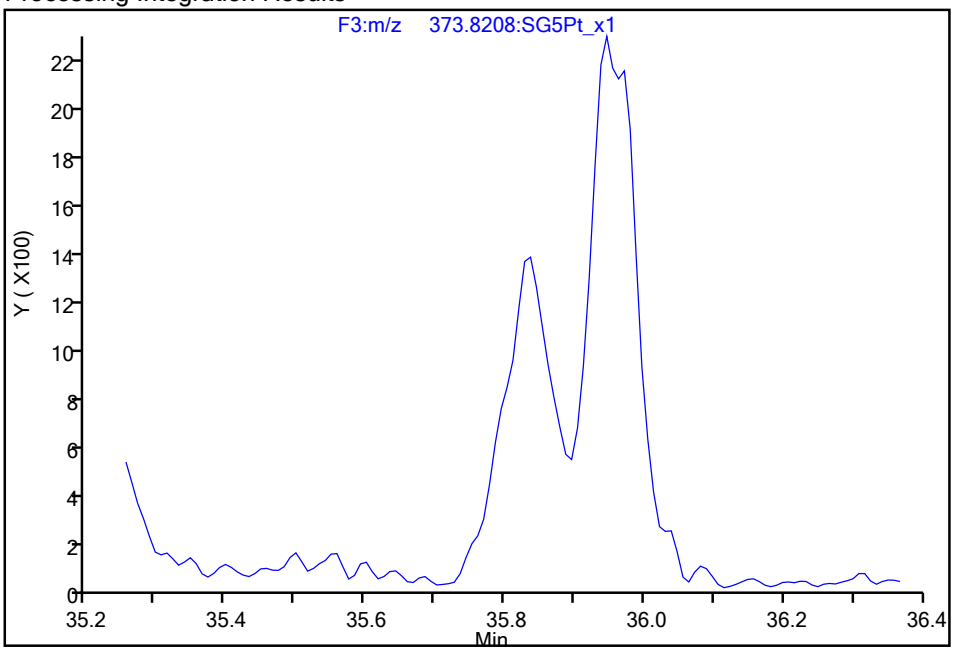

Manual Integration Results

RT = 35.837 Area = 5386 M

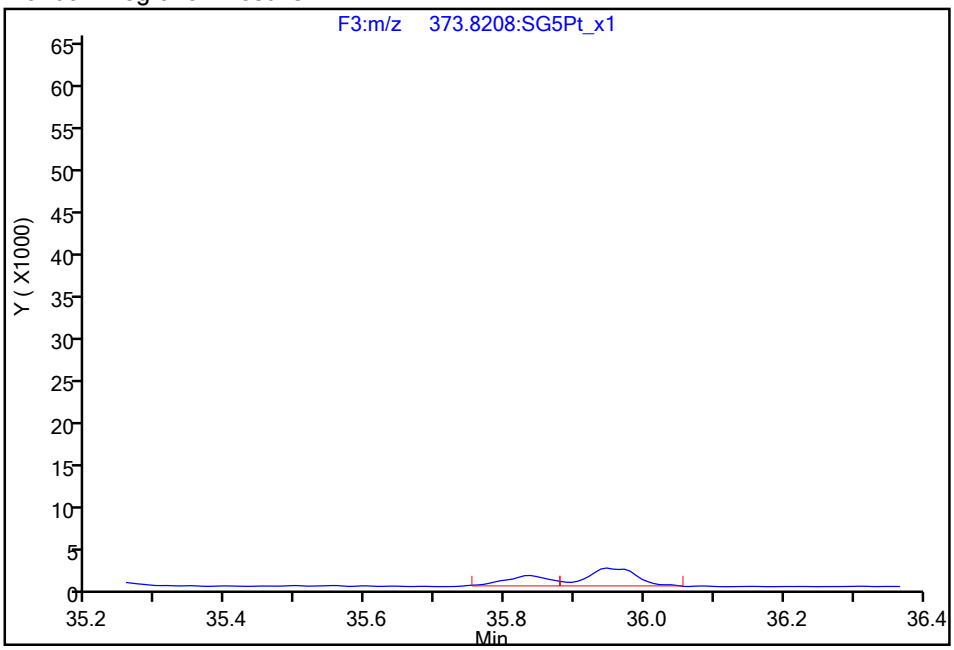

Reviewer: dadunj, 19-Aug-2021 13:02:00

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.18- 36.97)

Signal: 1

Processing Integration Results

RT = 36.939 Area = 23646

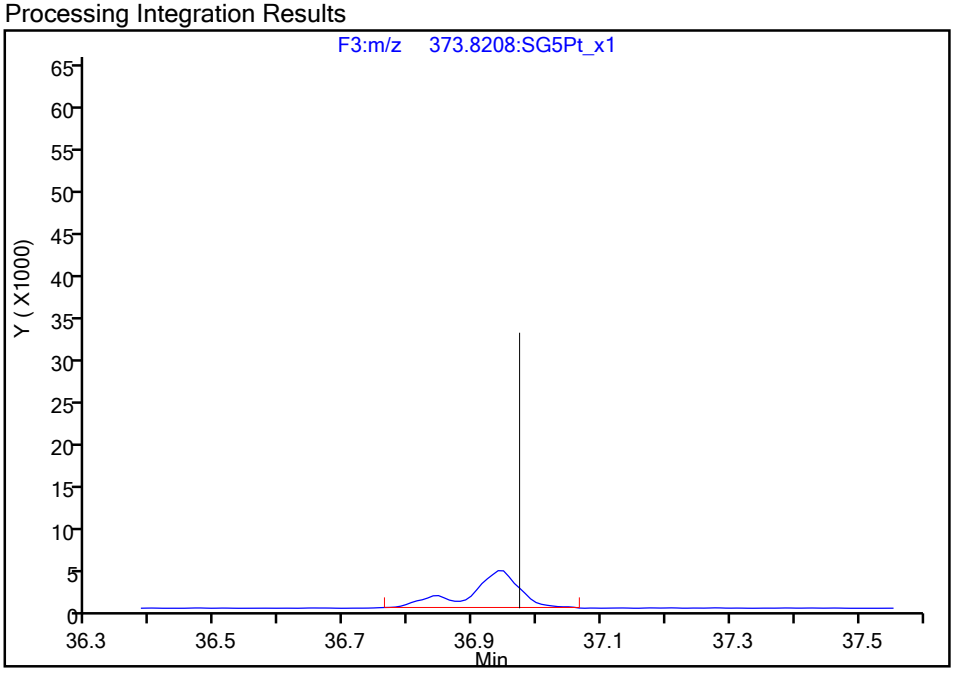

Manual Integration Results

RT = 36.939 Area = 18618 M

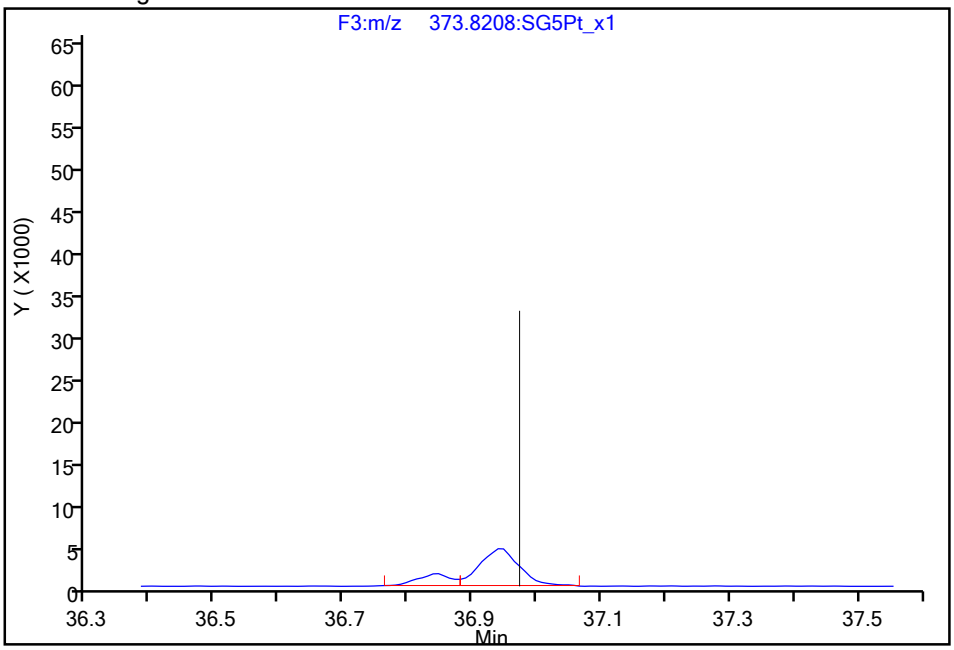

Reviewer: dadunj, 19-Aug-2021 13:02:00

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 36.29
Area: 1862
Amount: 0.581706
Amount Units: pg/ul

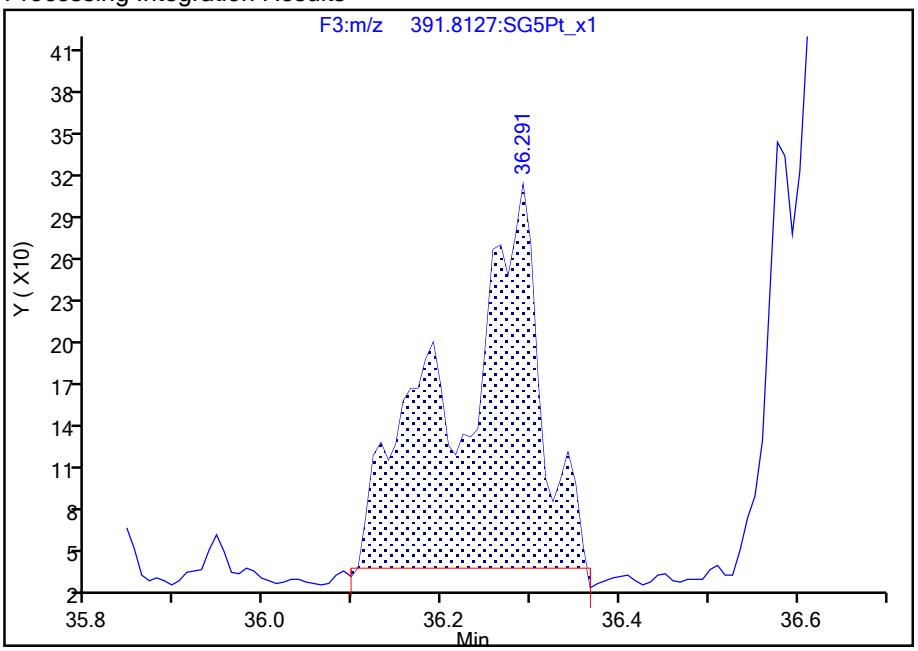

Manual Integration Results

RT: 36.19
Area: 759
Amount: 0.283903
Amount Units: pg/ul

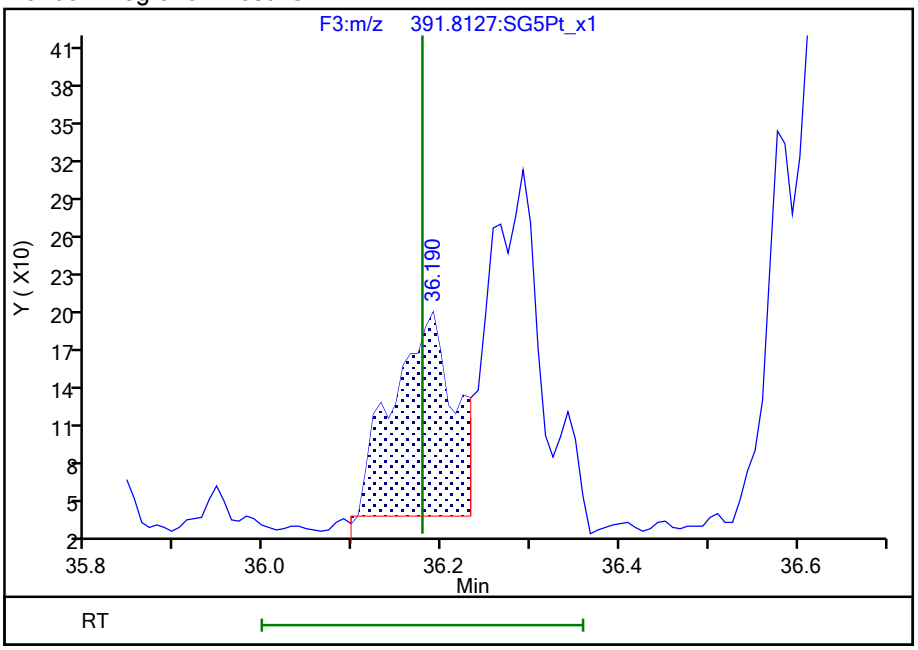

Reviewer: dadunj, 19-Aug-2021 13:02:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

782355

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

Processing Integration Results

RT: 36.28
Area: 3264
Amount: 0.581706
Amount Units: pg/ul

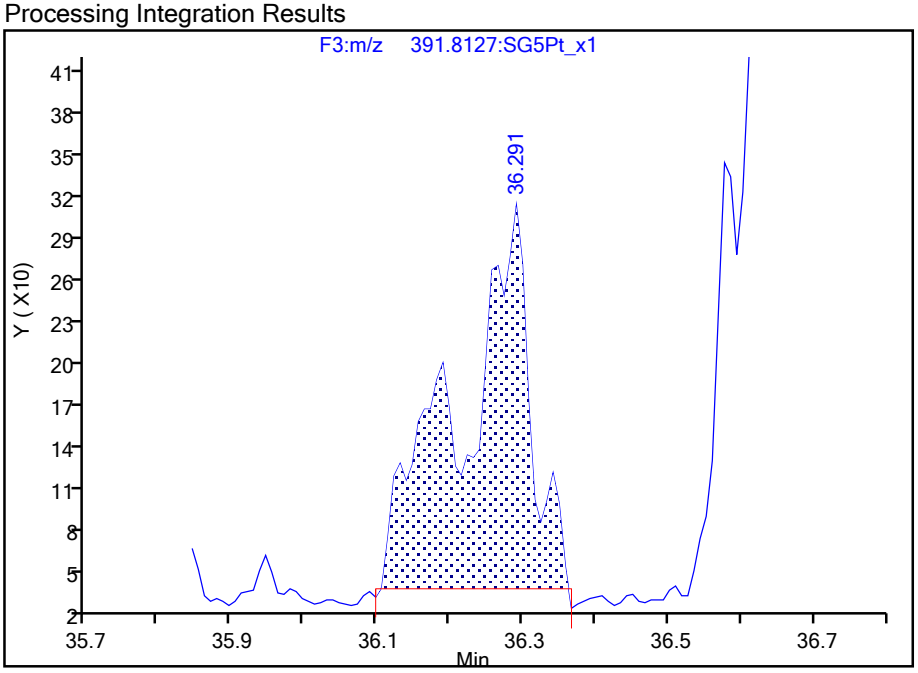

Manual Integration Results

RT: 36.15
Area: 1593
Amount: 0.283903
Amount Units: pg/ul
Reviewer: dadunj, 19-Aug-2021 13:02:13
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 36.28
Area: 1402
Amount: 0.581706
Amount Units: pg/ul

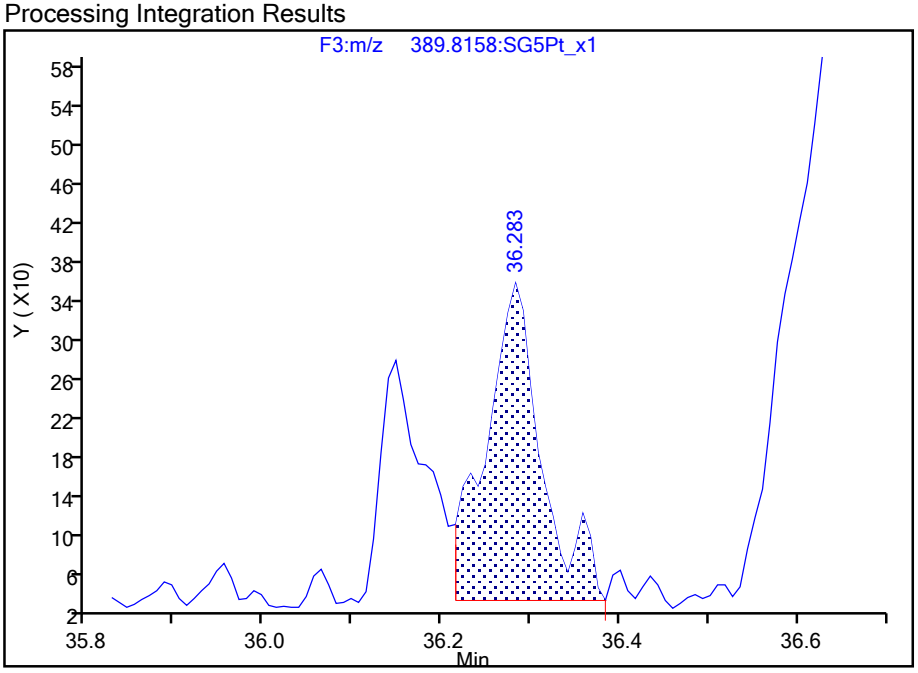

Manual Integration Results

RT: 36.15
Area: 834
Amount: 0.283903
Amount Units: pg/ul

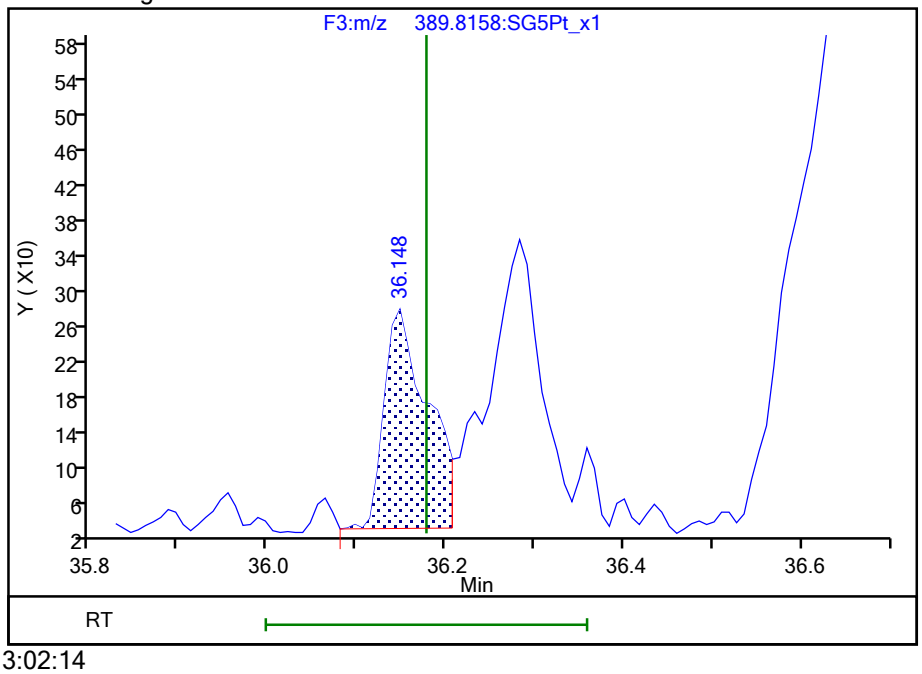

Reviewer: dadunj, 19-Aug-2021 13:02:14
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

782357

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 36.29
Area: 1862
Amount: 0.599878
Amount Units: pg/ul

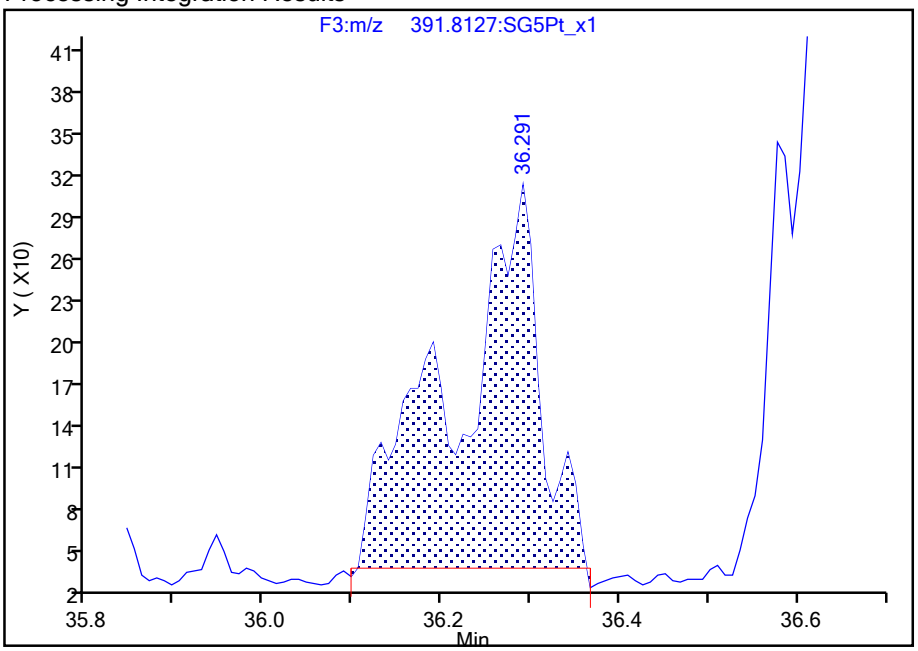

Manual Integration Results

RT: 36.29
Area: 1103
Amount: 0.460384
Amount Units: pg/ul

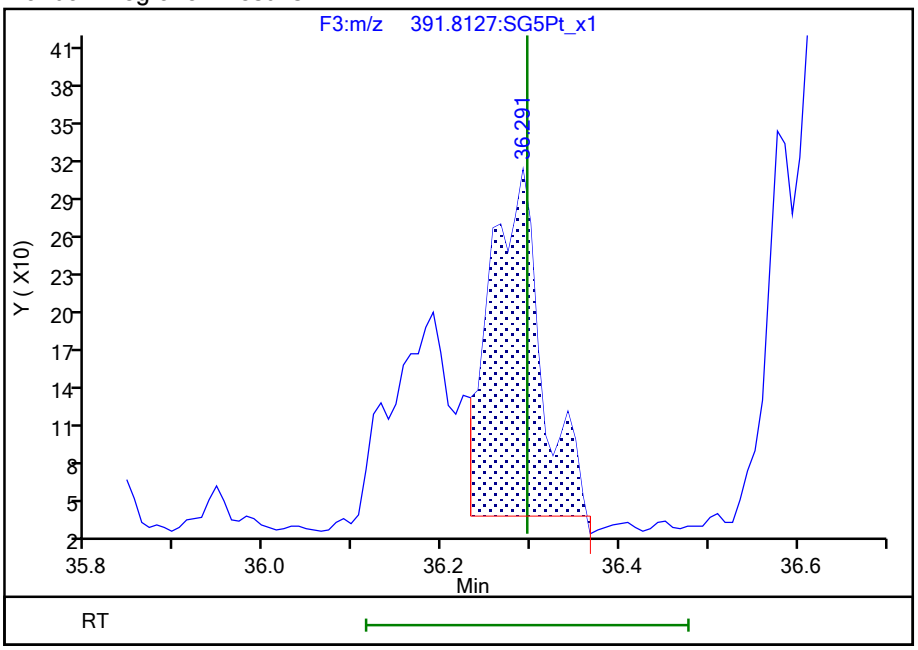

Reviewer: dadunj, 19-Aug-2021 13:02:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

782358

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.24- 36.62)

Signal: 1

Processing Integration Results

RT = 34.288 Area = 26583

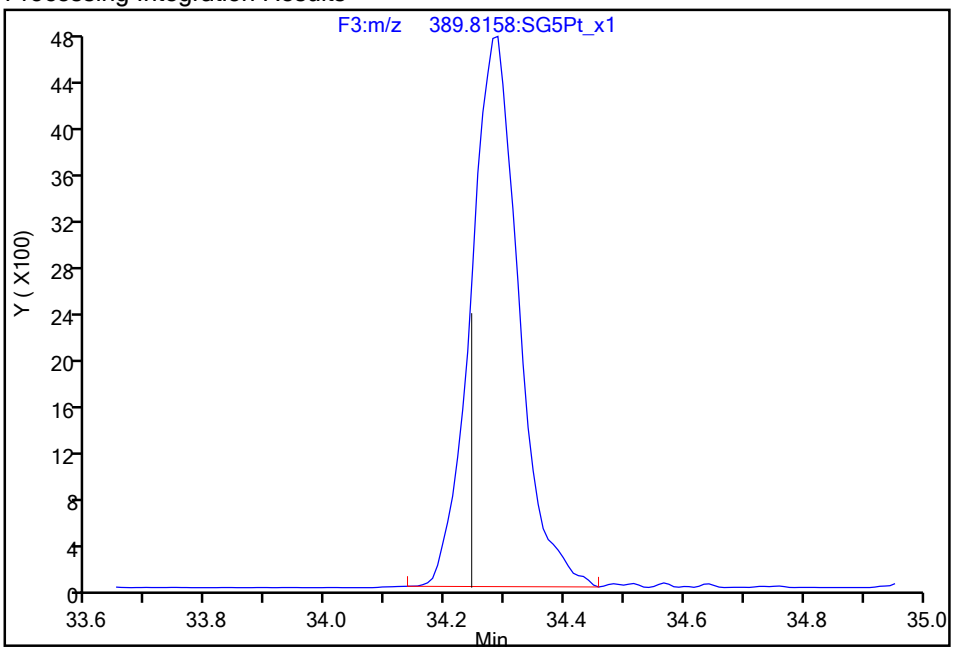

Manual Integration Results

RT = 34.288 Area = 26639 M

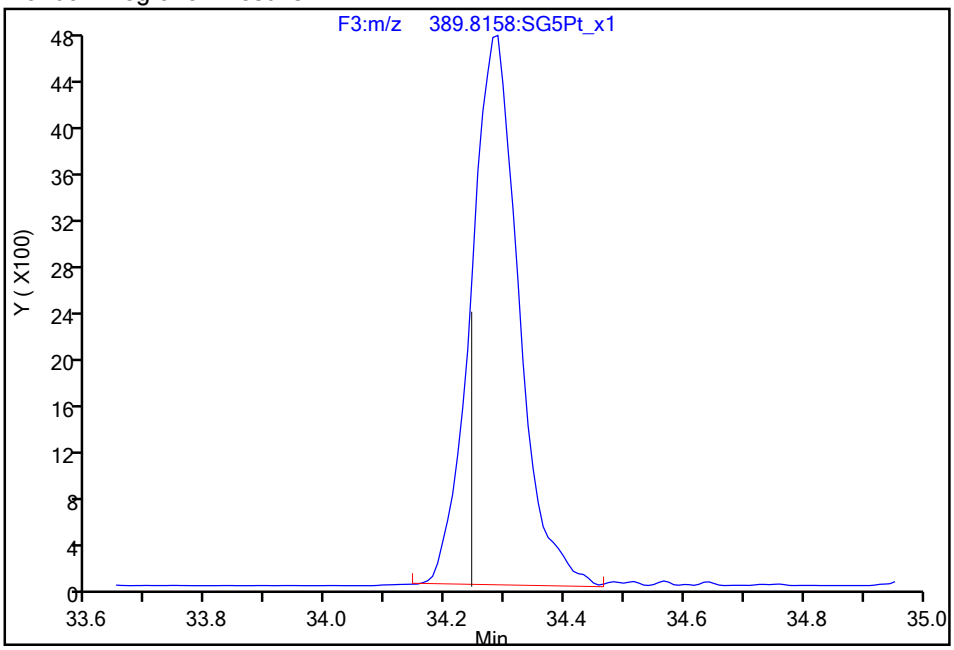

Reviewer: dadunj, 19-Aug-2021 13:02:59

Audit Action: Split an Integrated Peak Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (34.24- 36.62)

Signal: 2

Processing Integration Results

RT = 34.280 Area = 20997

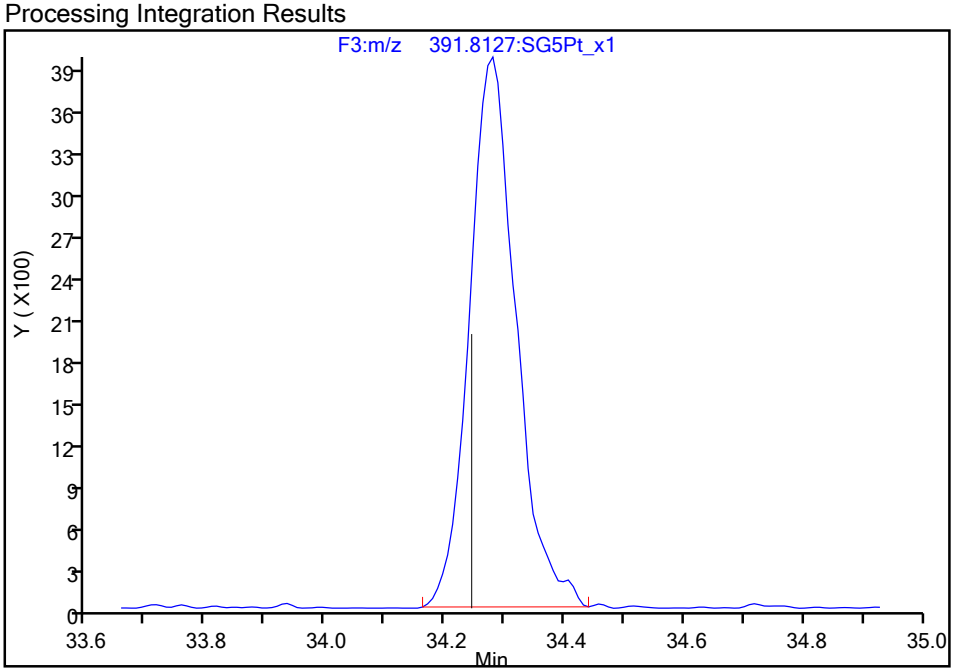

Manual Integration Results

RT = 34.280 Area = 20127 M

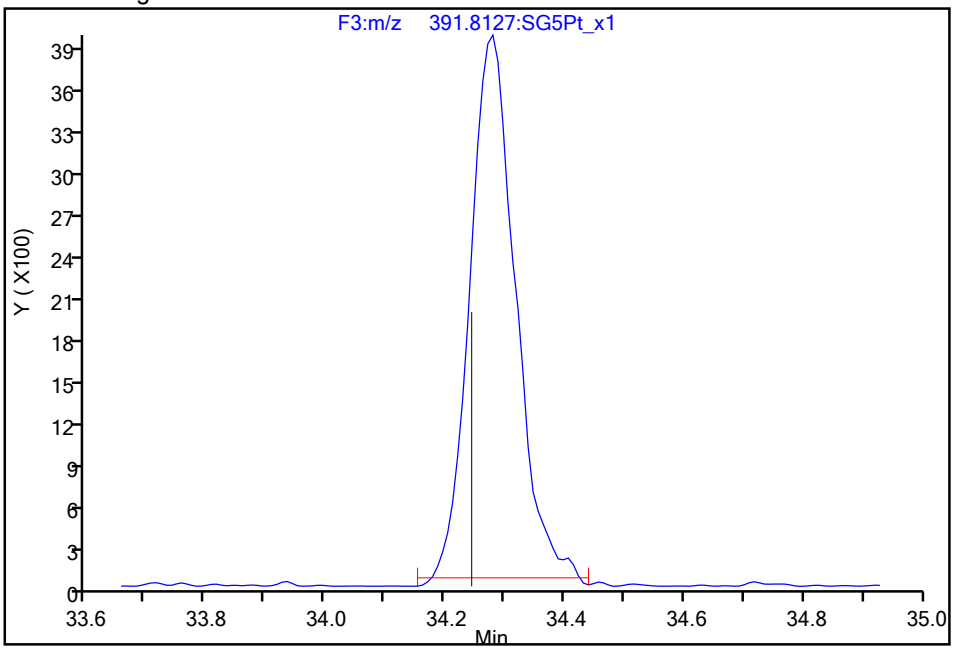

Reviewer: dadunj, 19-Aug-2021 13:03:01

Audit Action: Split an Integrated Peak Audit Reason: Assign Peak

782360

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.24- 36.62)

Signal: 1

Processing Integration Results

RT = 35.029 Area = 1281

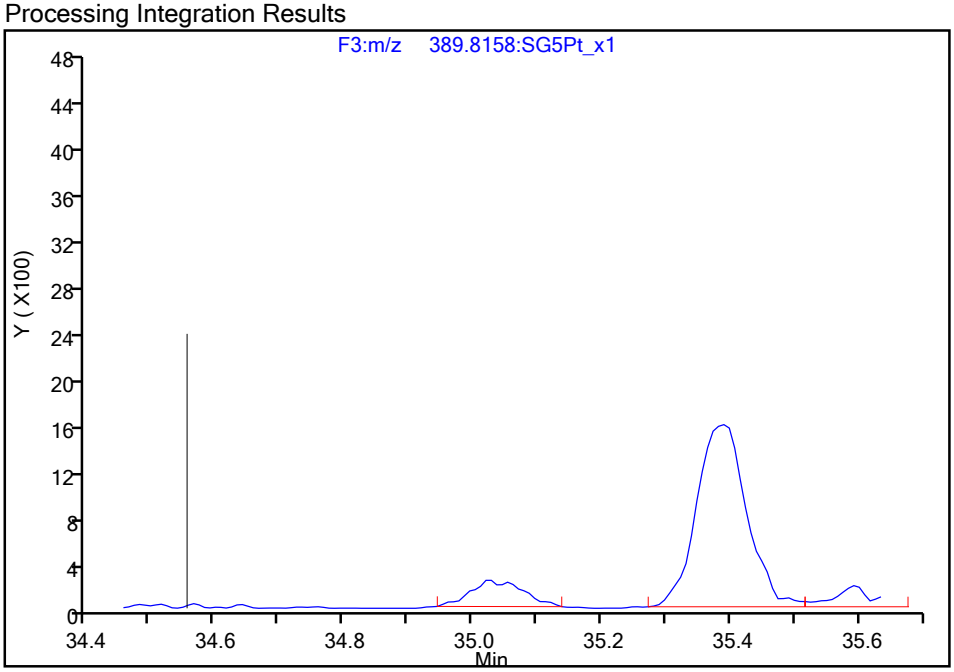

Manual Integration Results

RT = 35.021 Area = 1216 M

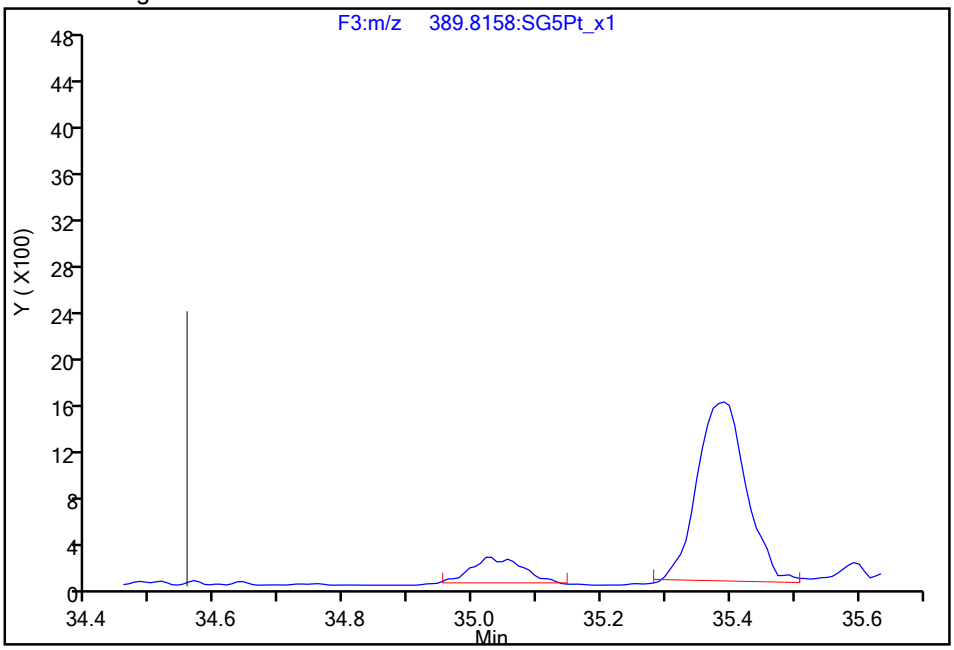

Reviewer: dadunj, 19-Aug-2021 13:02:59

Audit Action: Split an Integrated Peak Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (34.24- 36.62)

Signal: 2

Processing Integration Results

RT = 35.029 Area = 1307

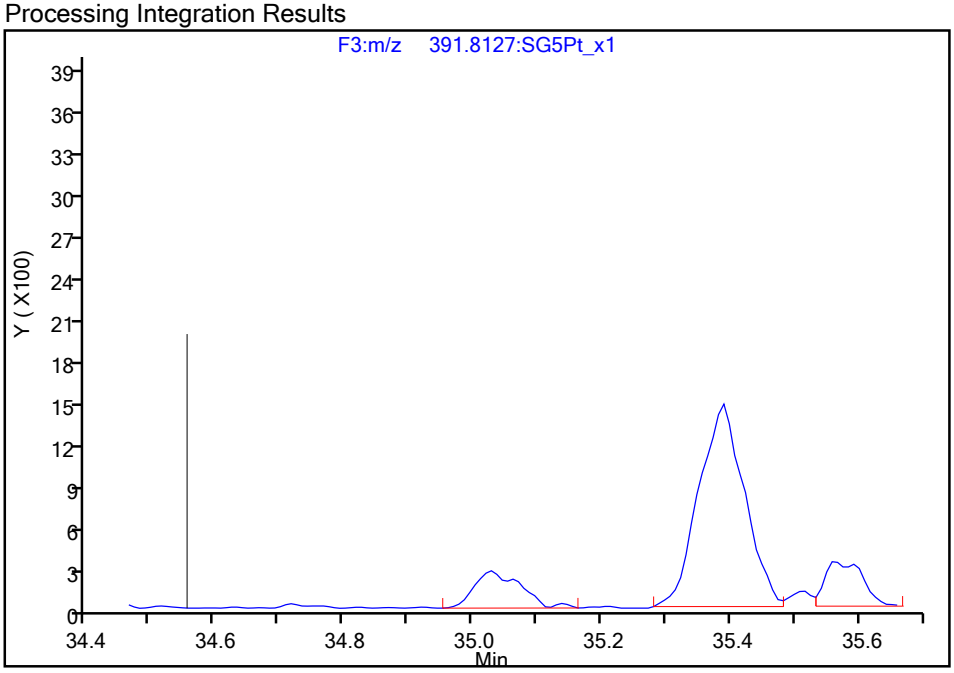

Manual Integration Results

RT = 35.029 Area = 884 M

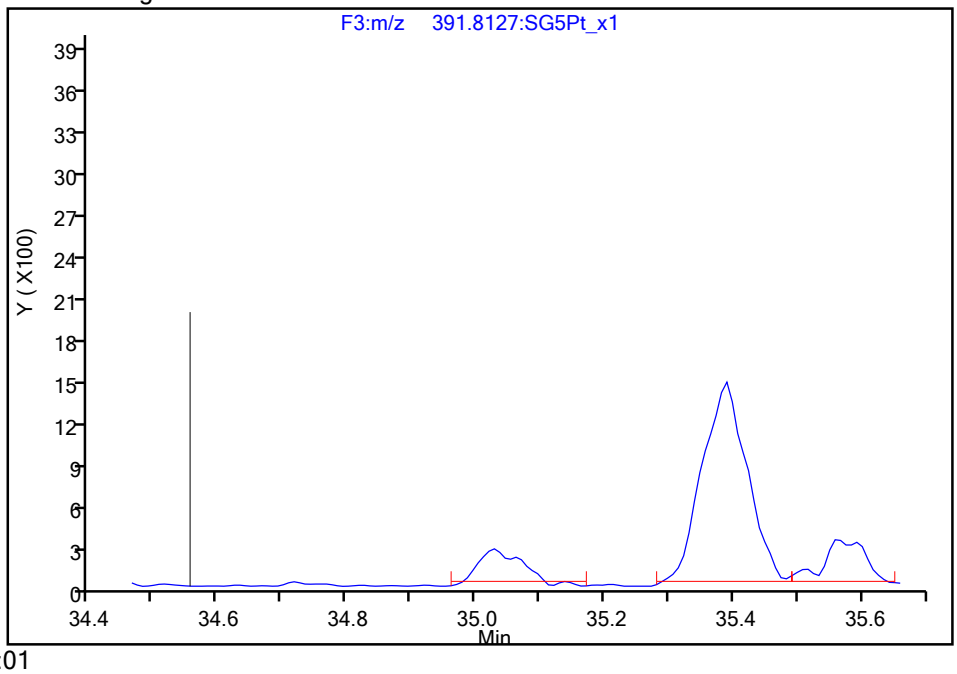

Reviewer: dadunj, 19-Aug-2021 13:03:01

Audit Action: Split an Integrated Peak Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.24- 36.62)

Signal: 1

Processing Integration Results

RT = 35.391 Area = 8569

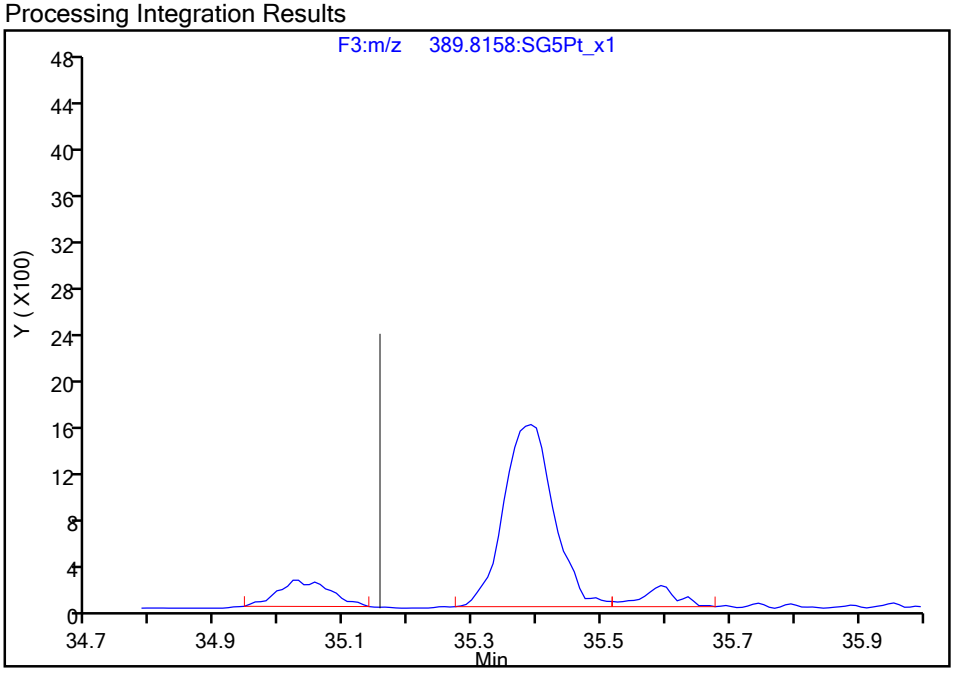

Manual Integration Results

RT = 35.391 Area = 8224 M

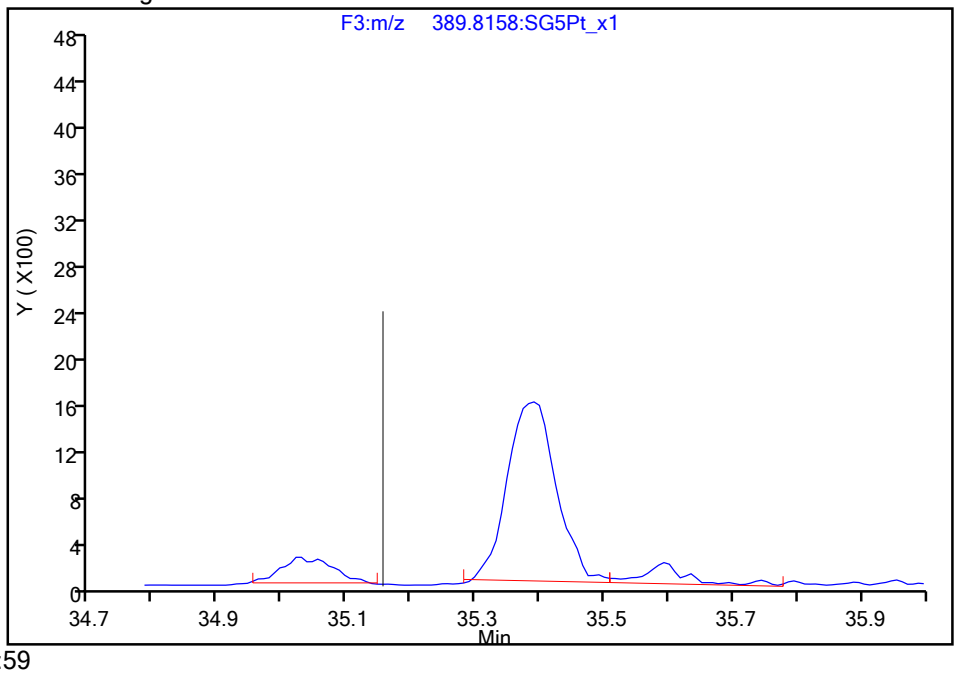

Reviewer: dadunj, 19-Aug-2021 13:02:59

Audit Action: Split an Integrated Peak Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d				
Injection Date:	18-Aug-2021 10:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-5-A	Lab Sample ID:	320-76887-5		
Client ID:	11215702-072721-BN-SJSB096 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (34.24- 36.62)

Signal: 2

Processing Integration Results

RT = 35.391 Area = 7043

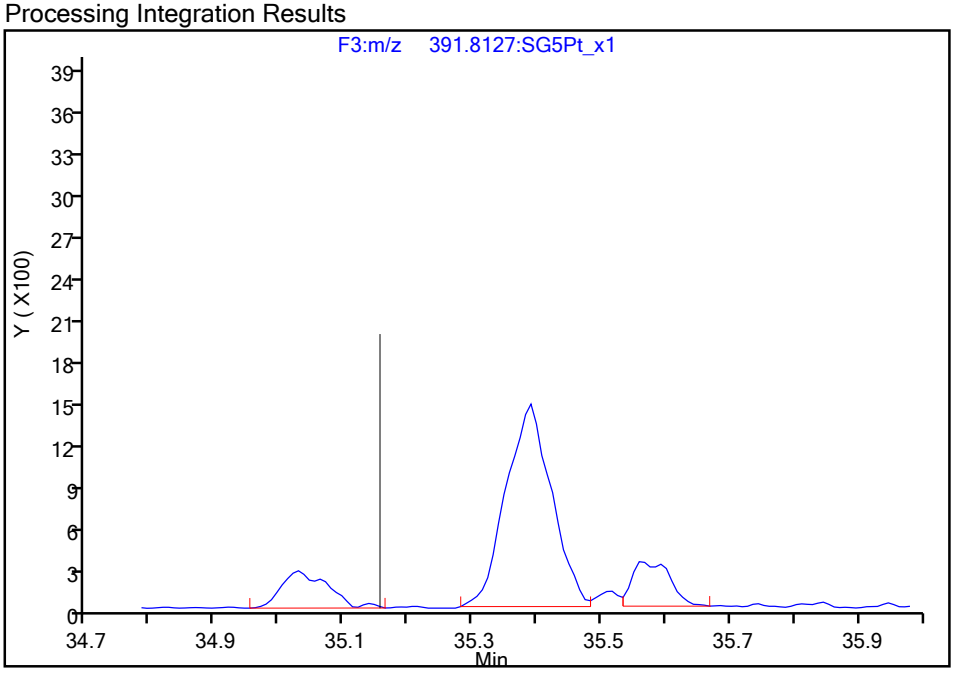

Manual Integration Results

RT = 35.391 Area = 6779 M

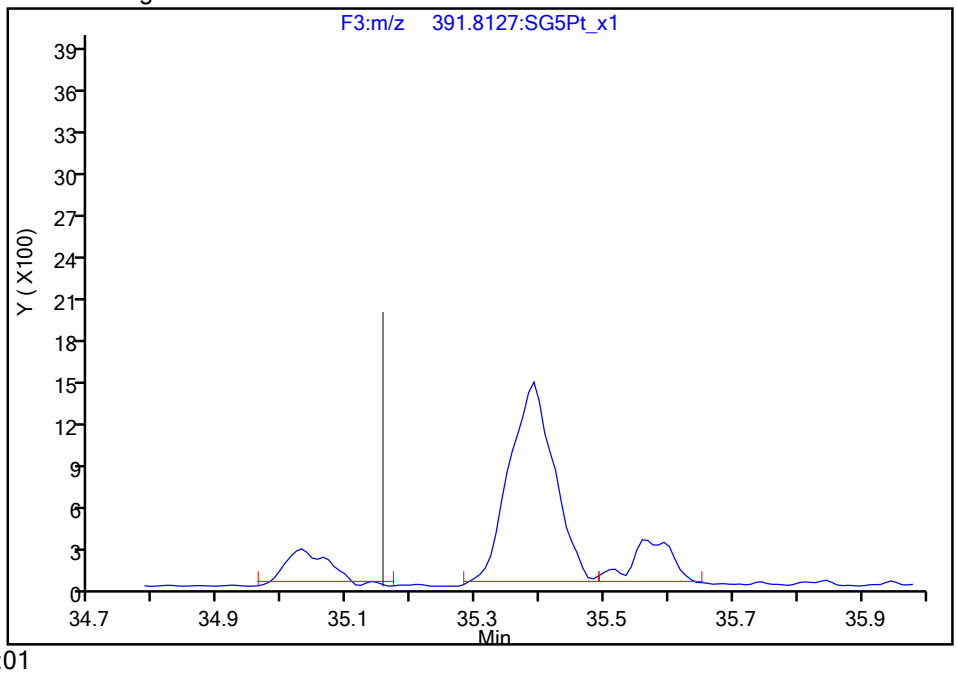

Reviewer: dadunj, 19-Aug-2021 13:03:01

Audit Action: Split an Integrated Peak Audit Reason: Assign Peak

782364

Report Date: 23-Aug-2021 10:35:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

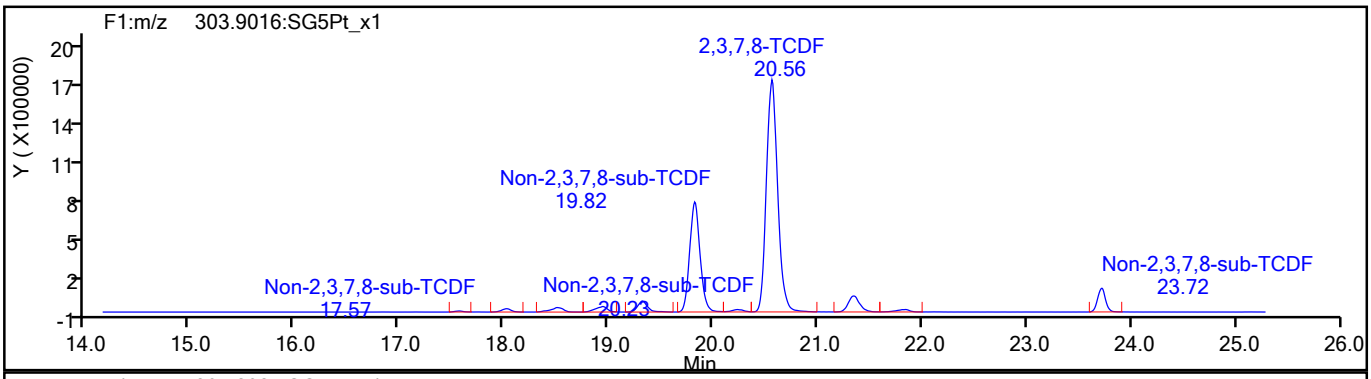

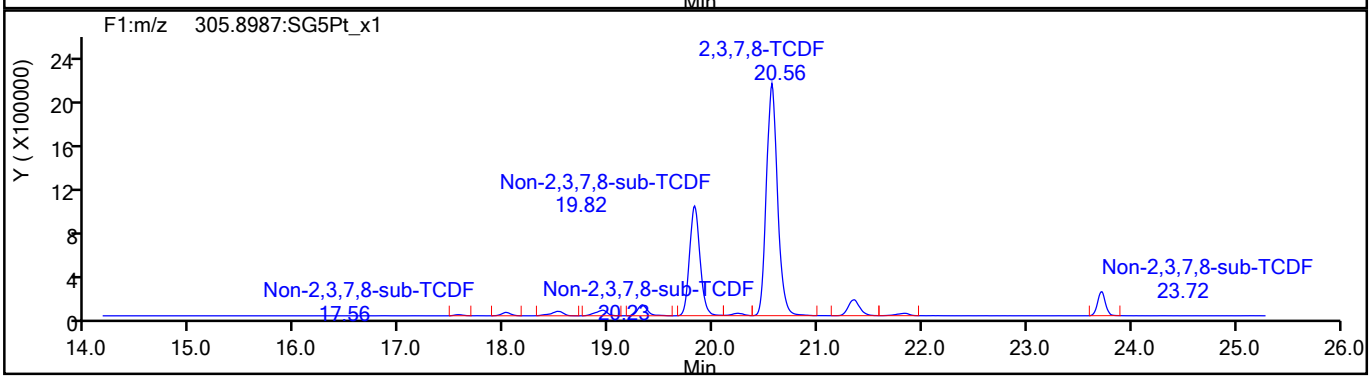

TCDF Standards

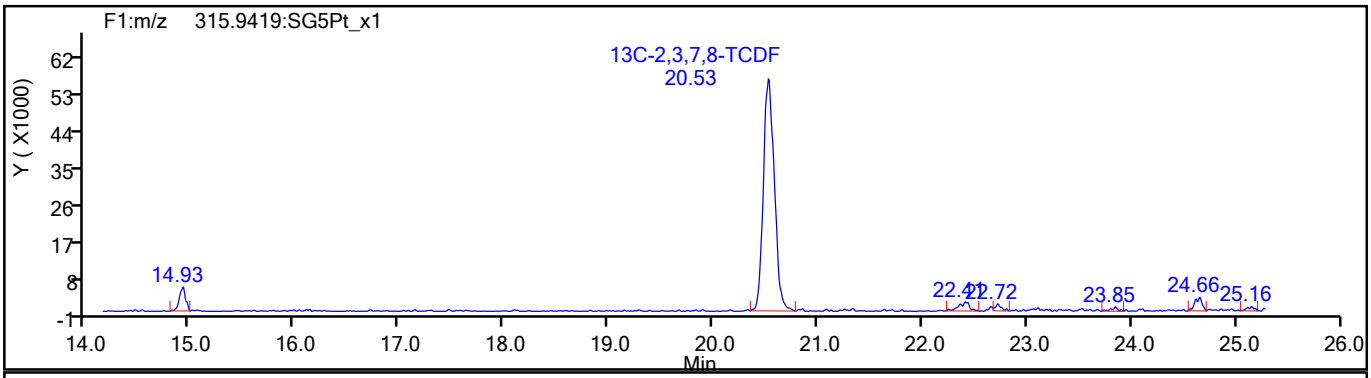

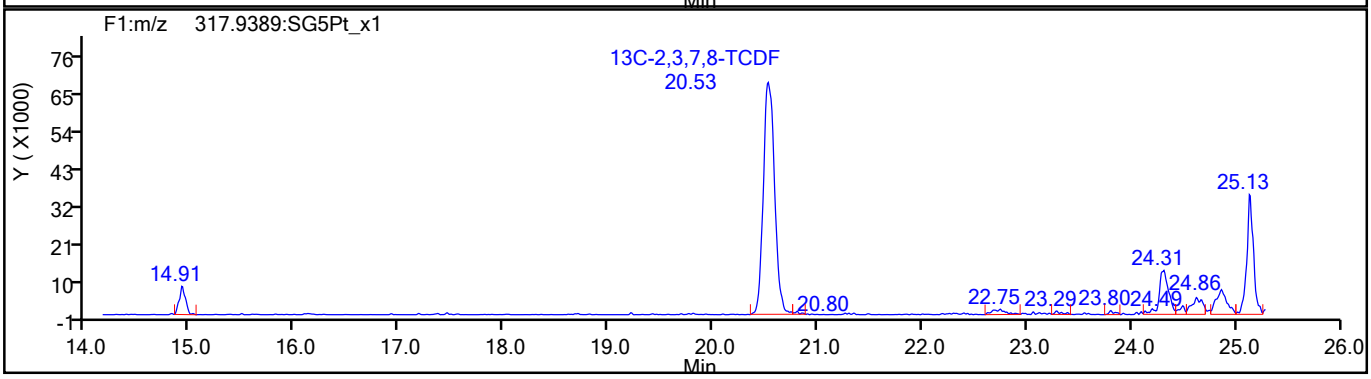

782365

Report Date: 23-Aug-2021 10:35:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

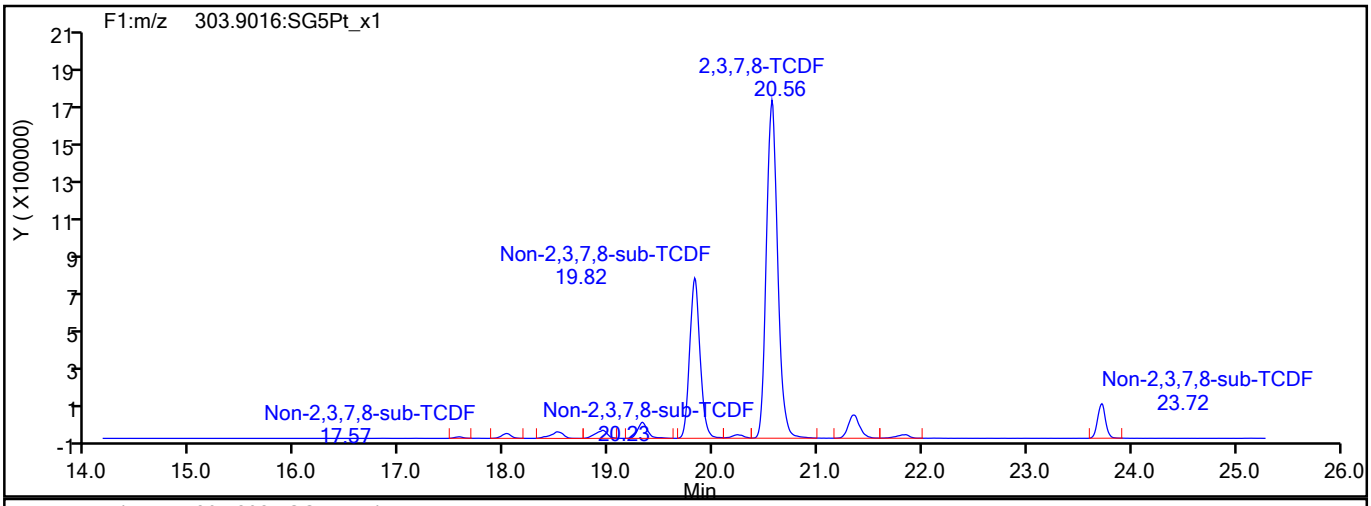

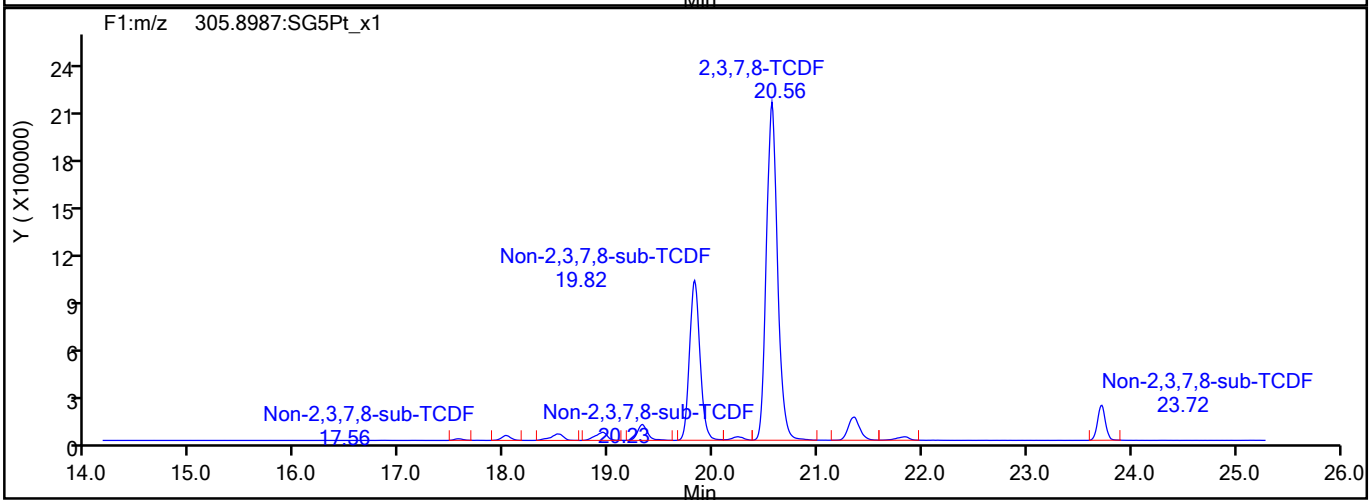

TCDF Interference Mass

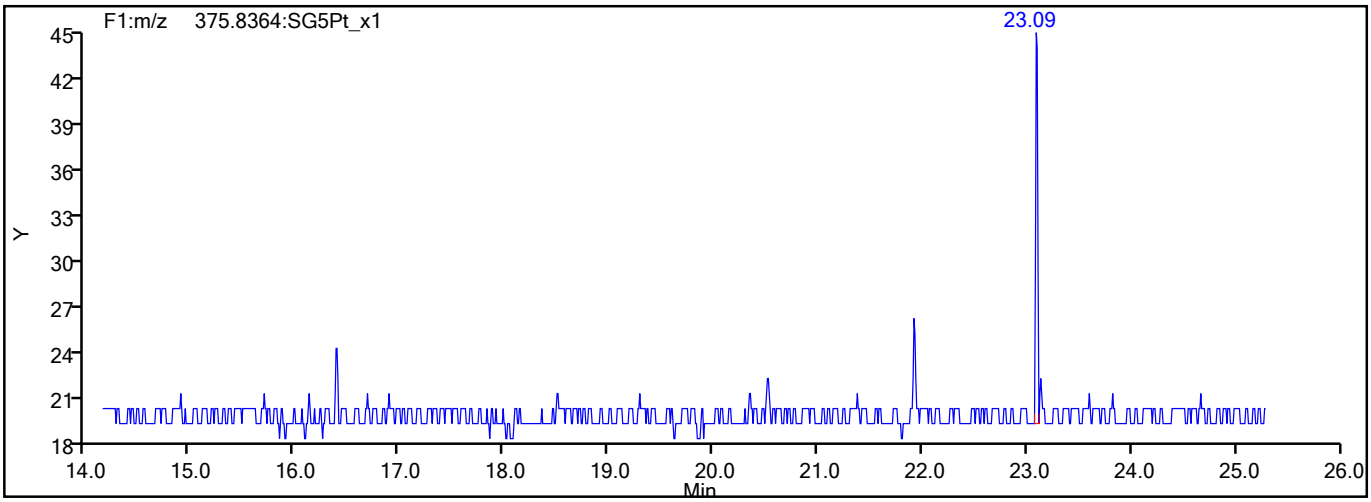

782366

Report Date: 23-Aug-2021 10:35:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

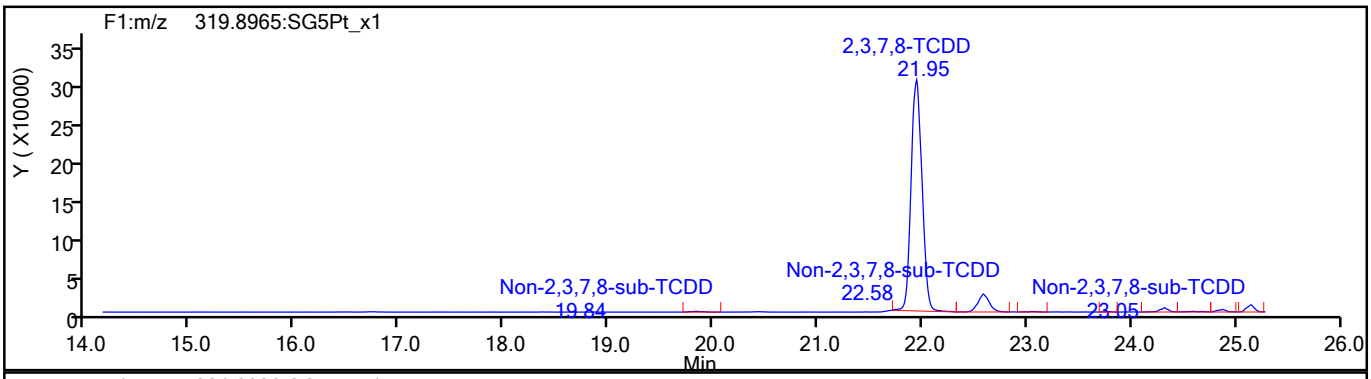

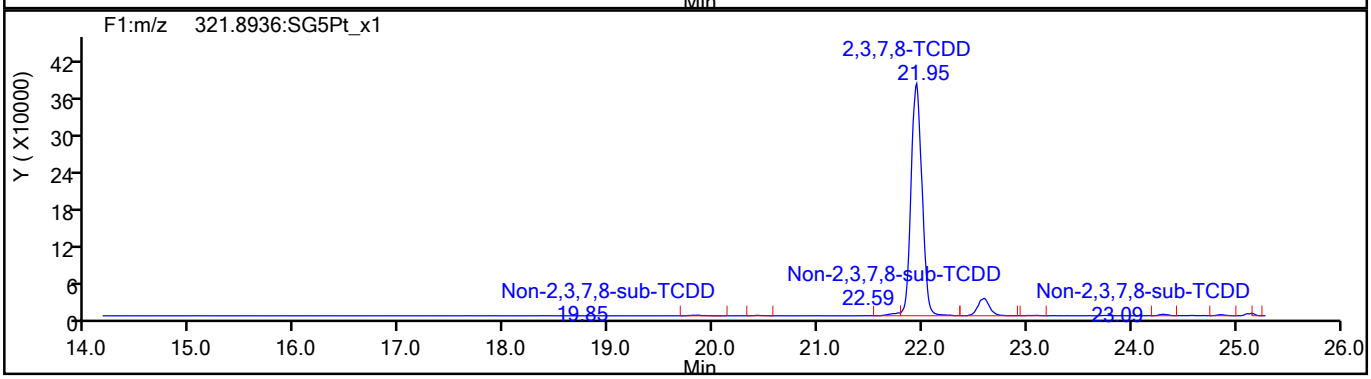

TCDD Standards

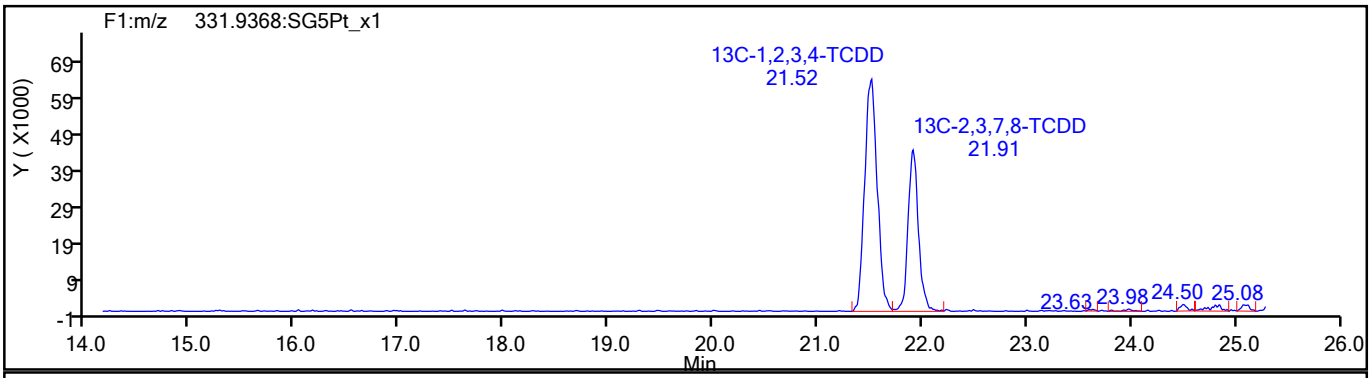

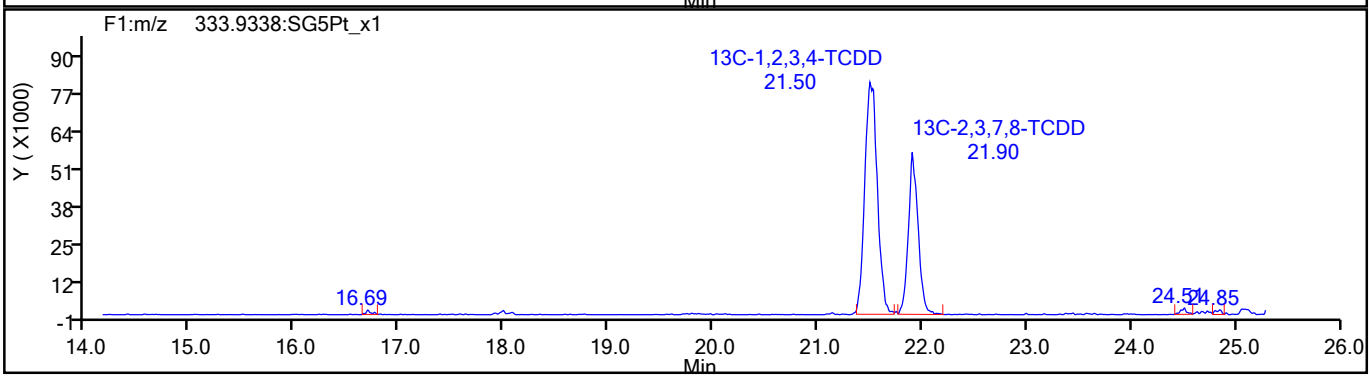

782367

Report Date: 23-Aug-2021 10:35:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

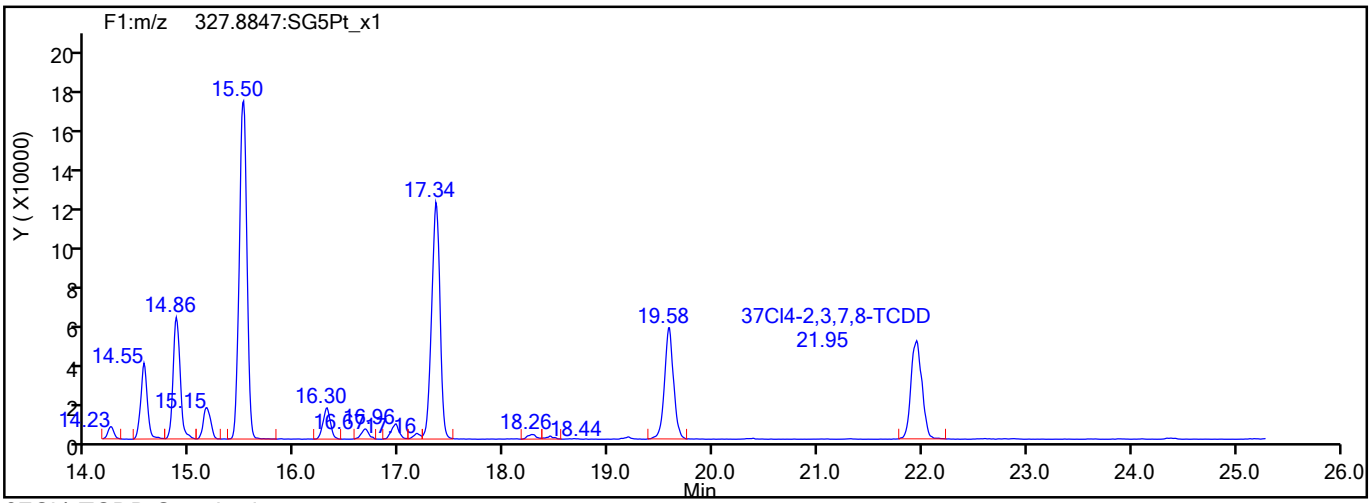

37Cl4-TCDD Standards

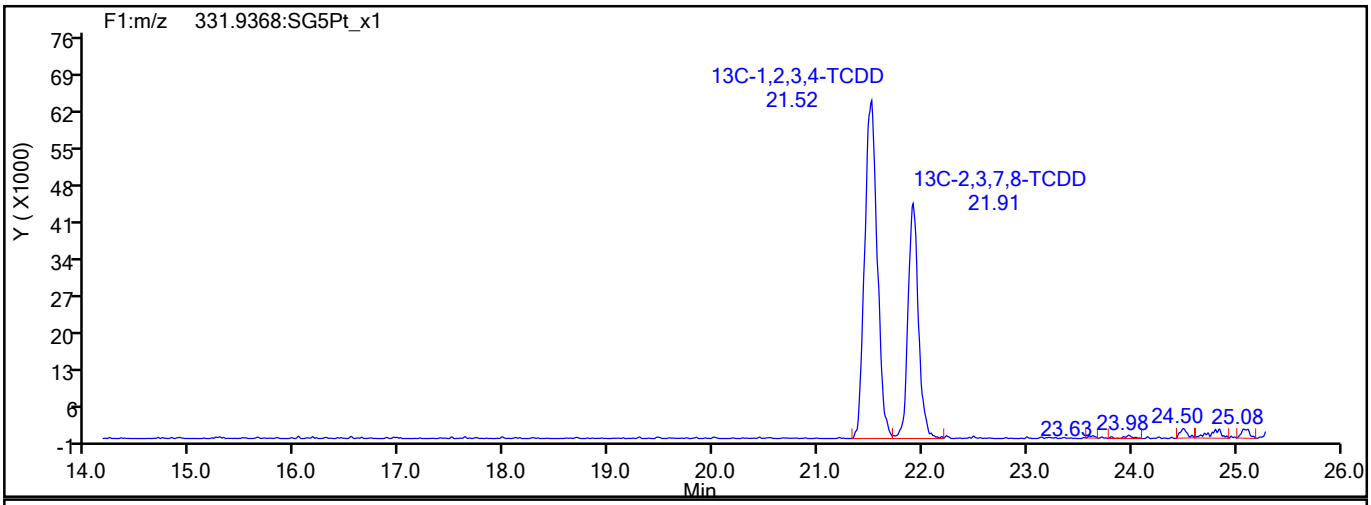

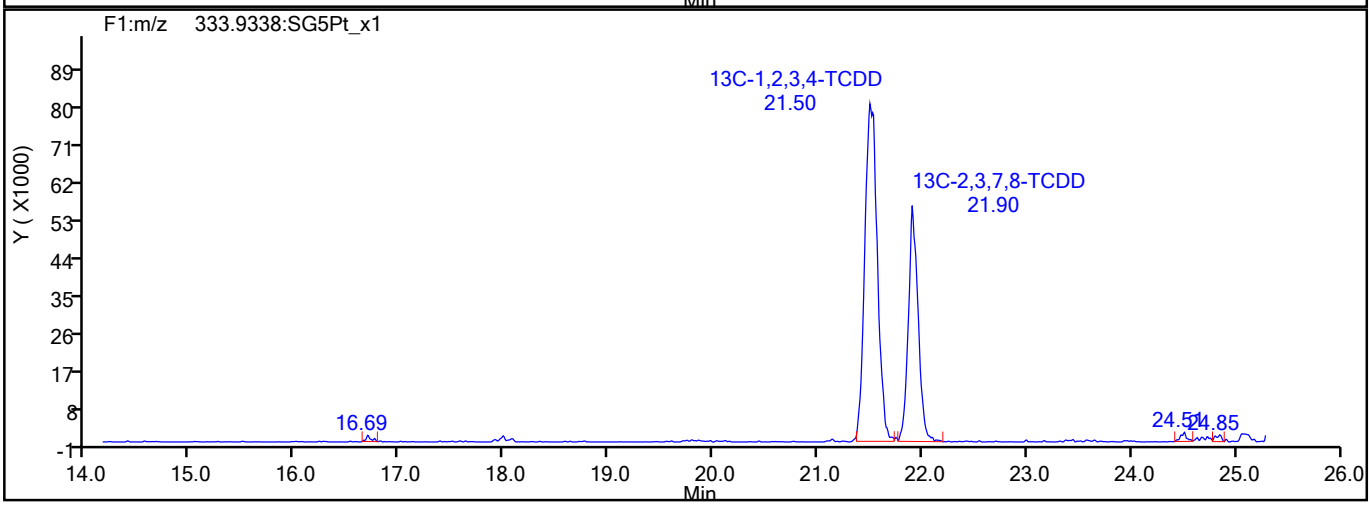

782368

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

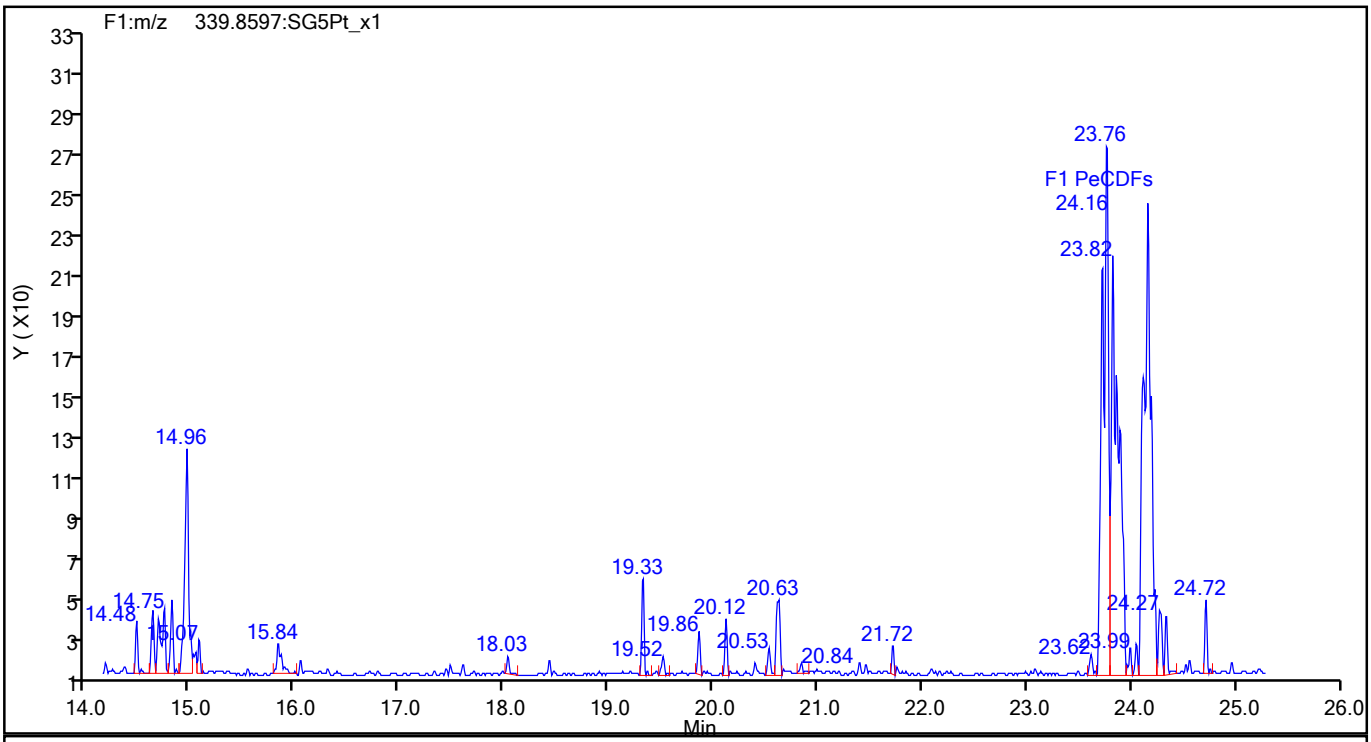

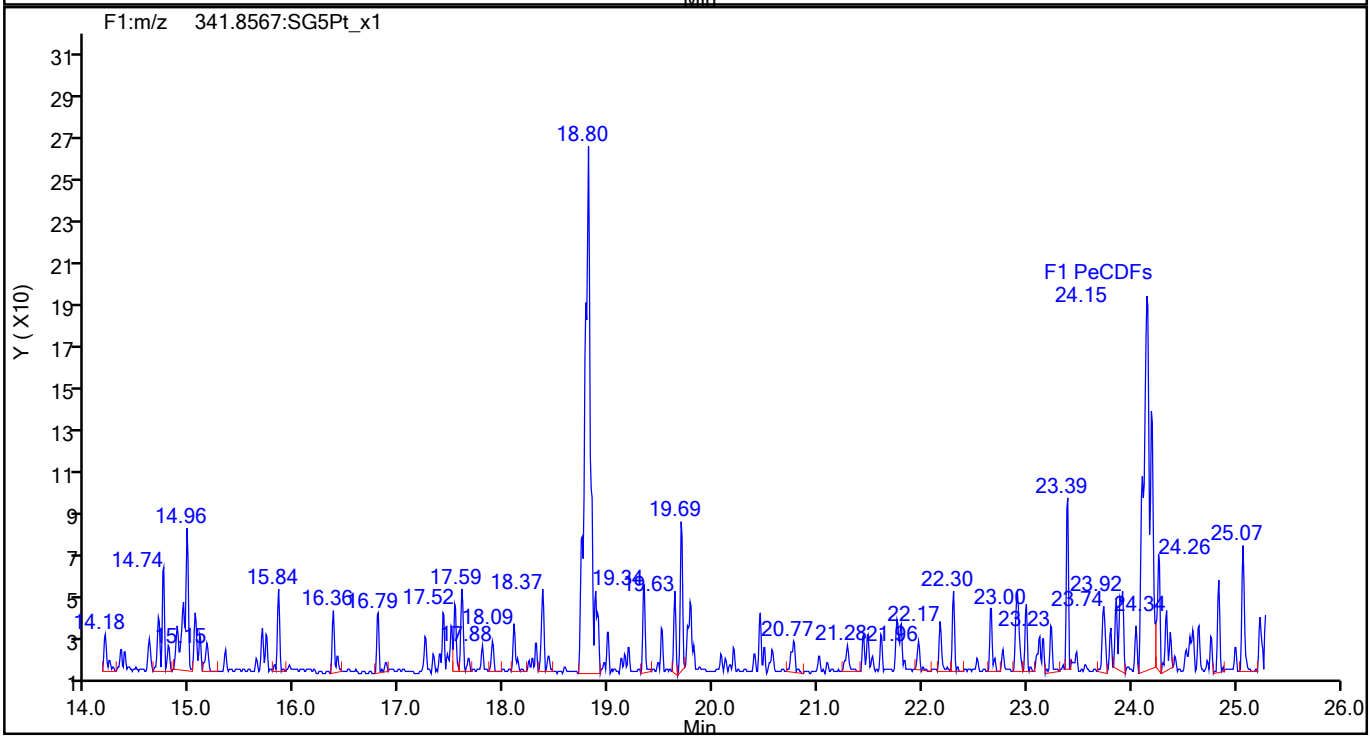

782369

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

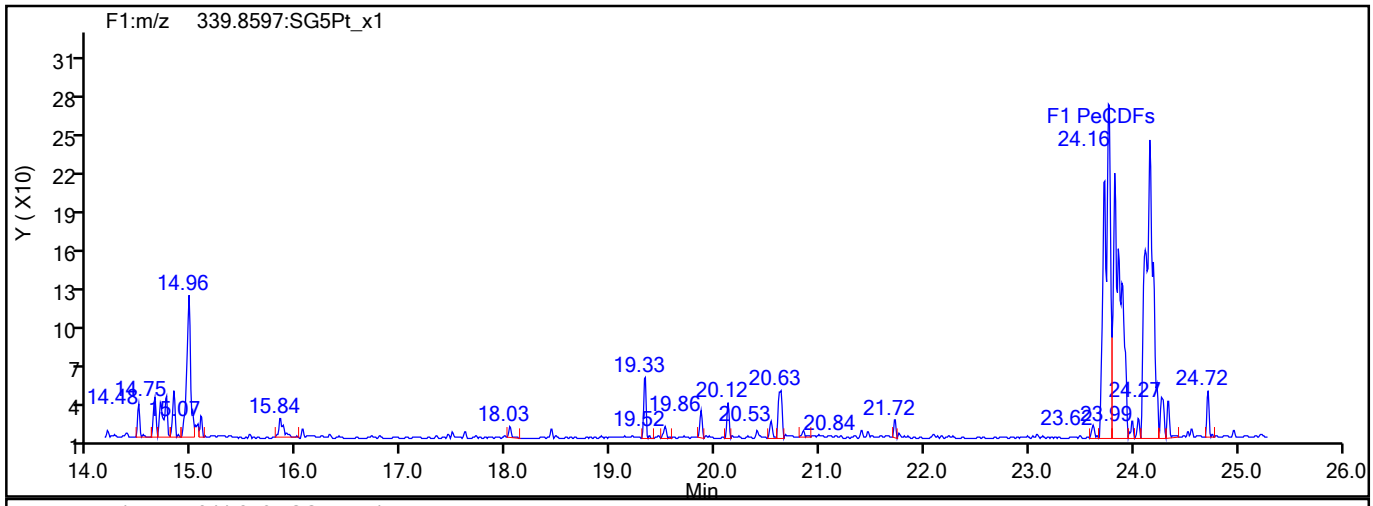

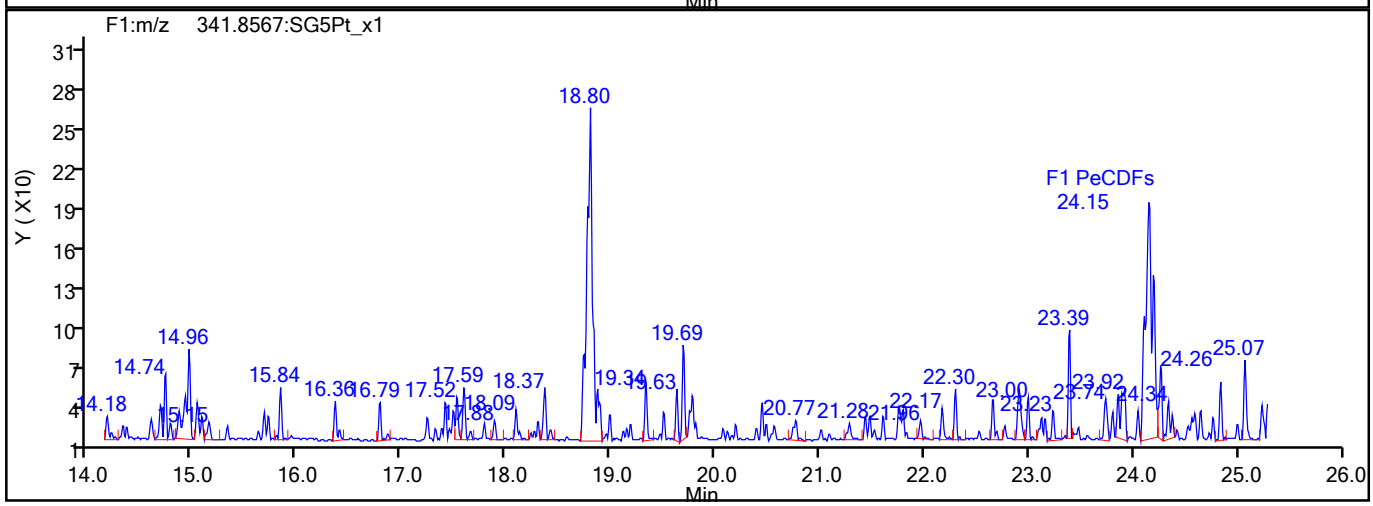

F1 PeCDFs Interference Mass

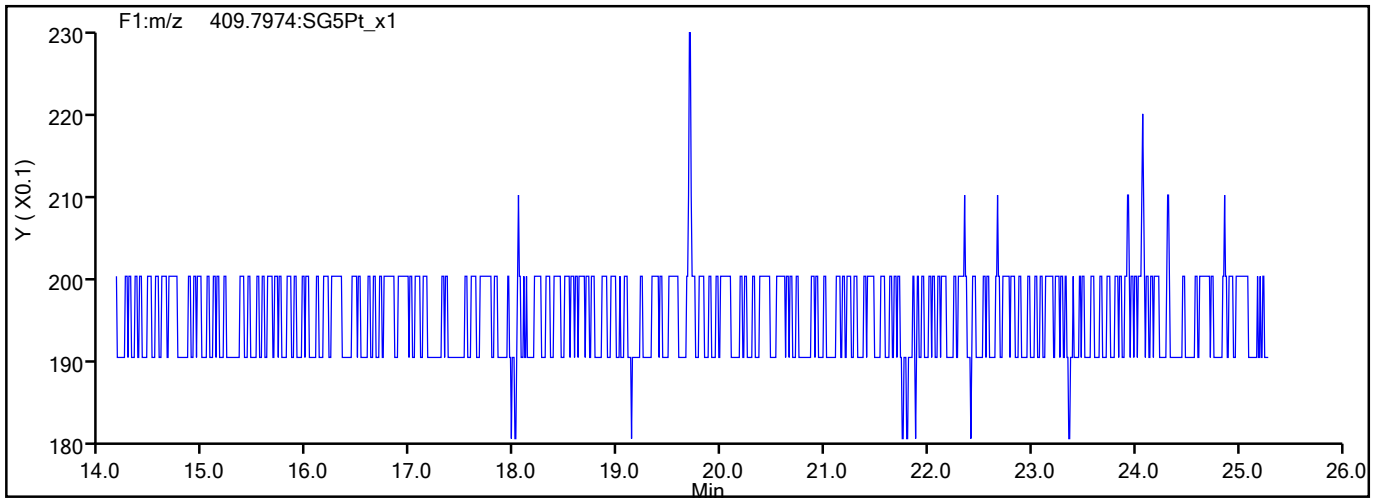

782370

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

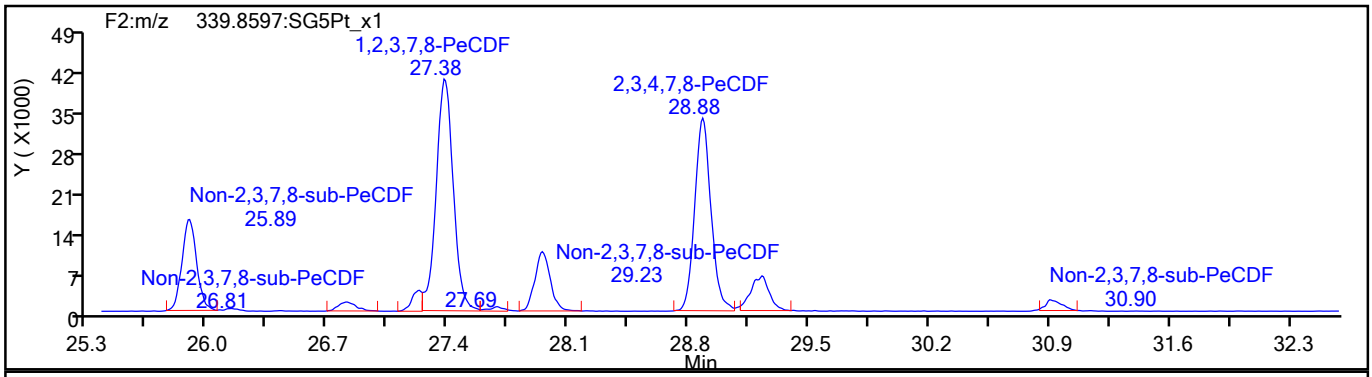

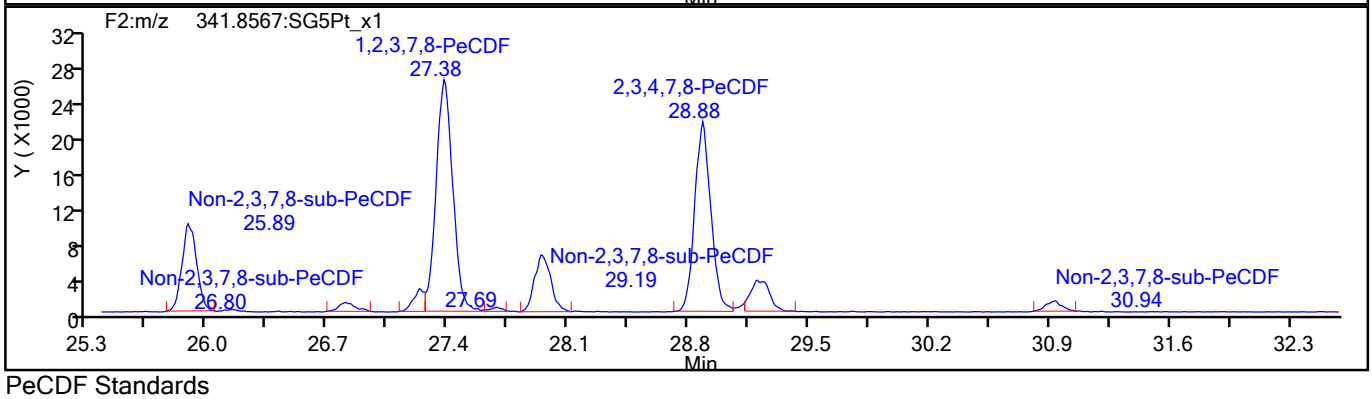

PeCDF Standards

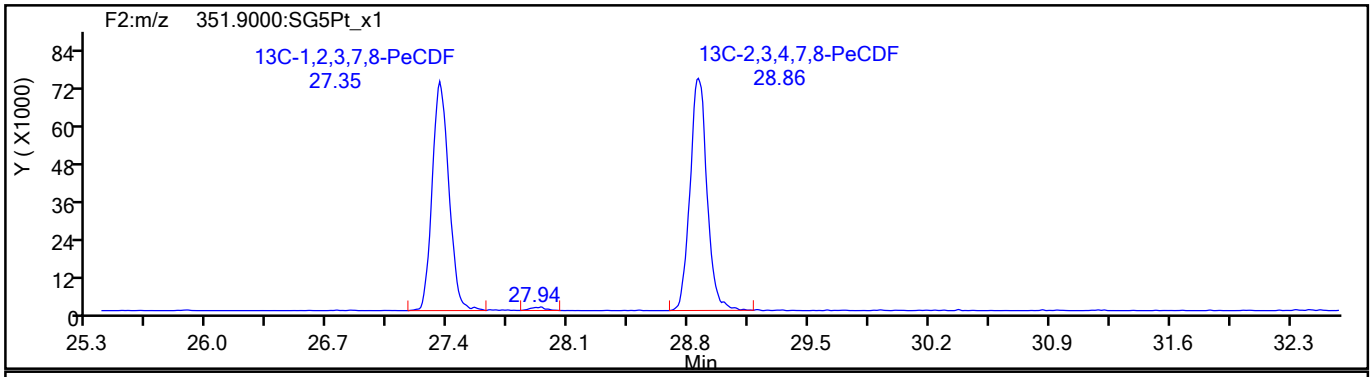

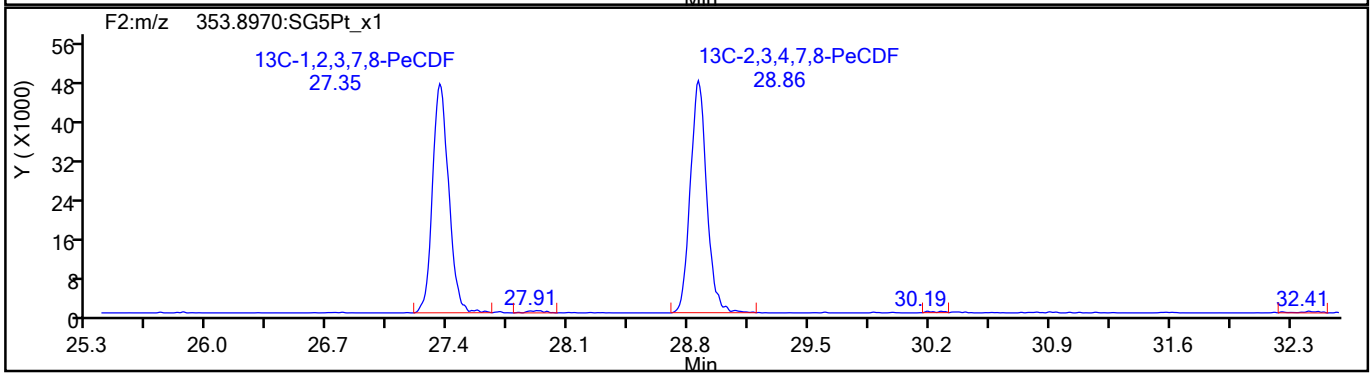

782371

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

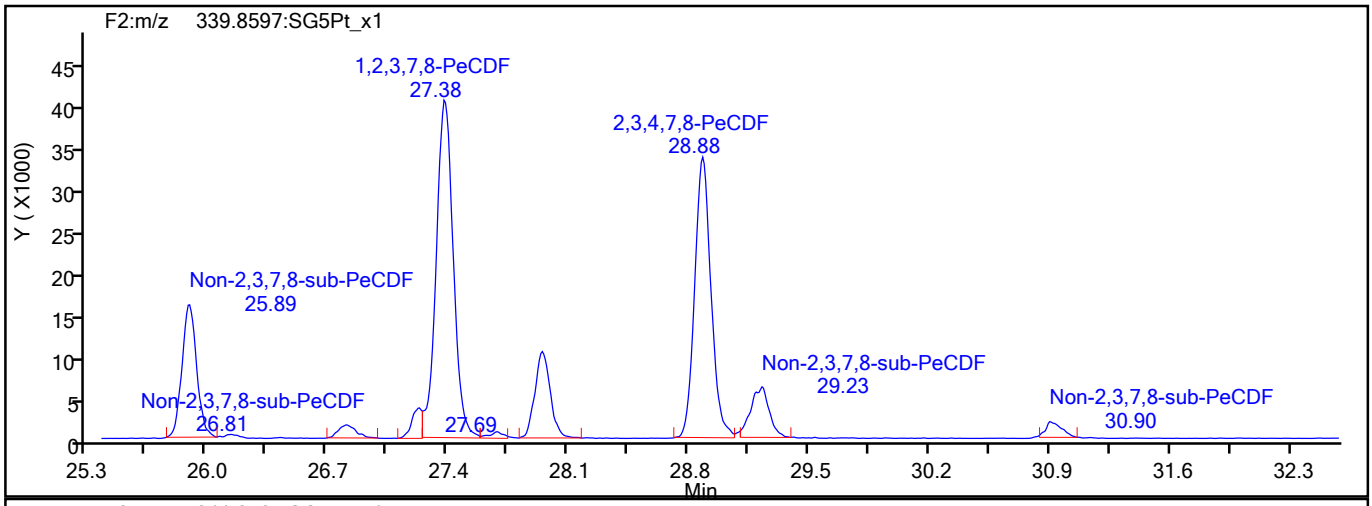

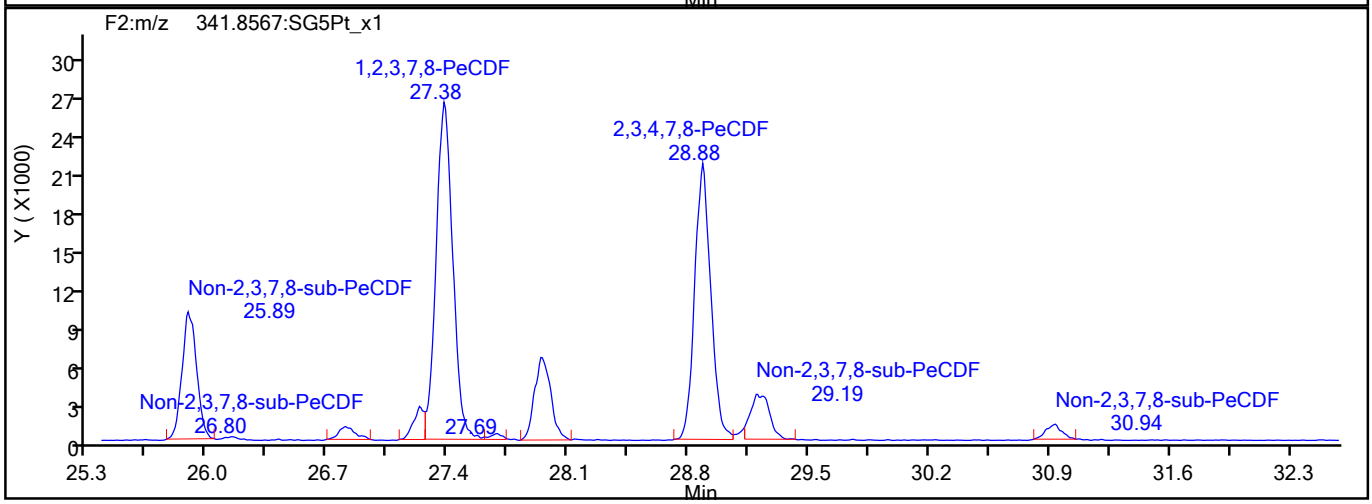

PeCDF Interference Mass

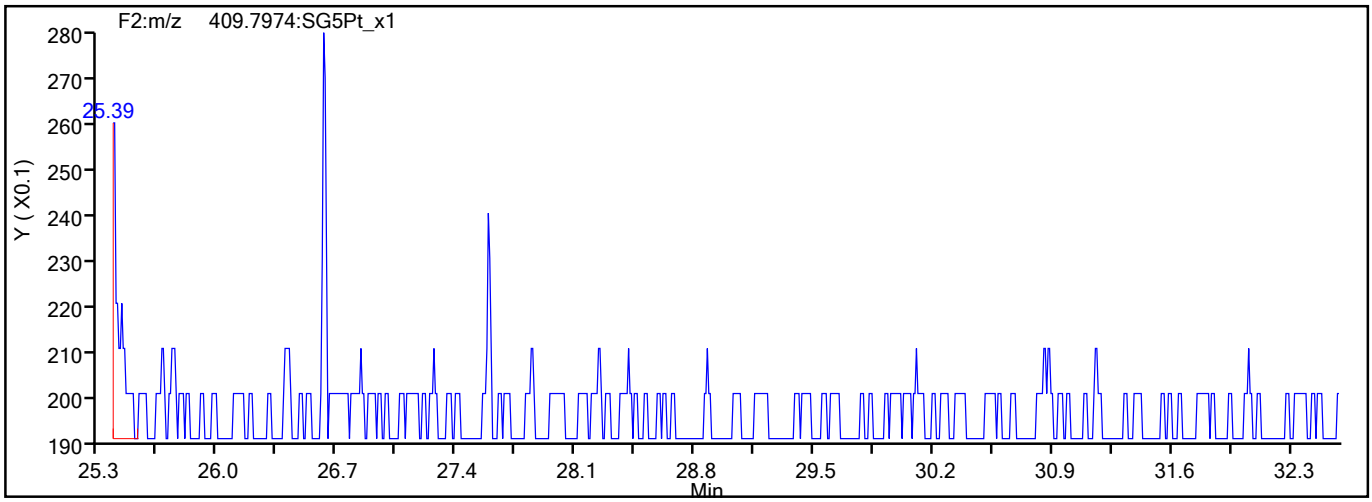

782372

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

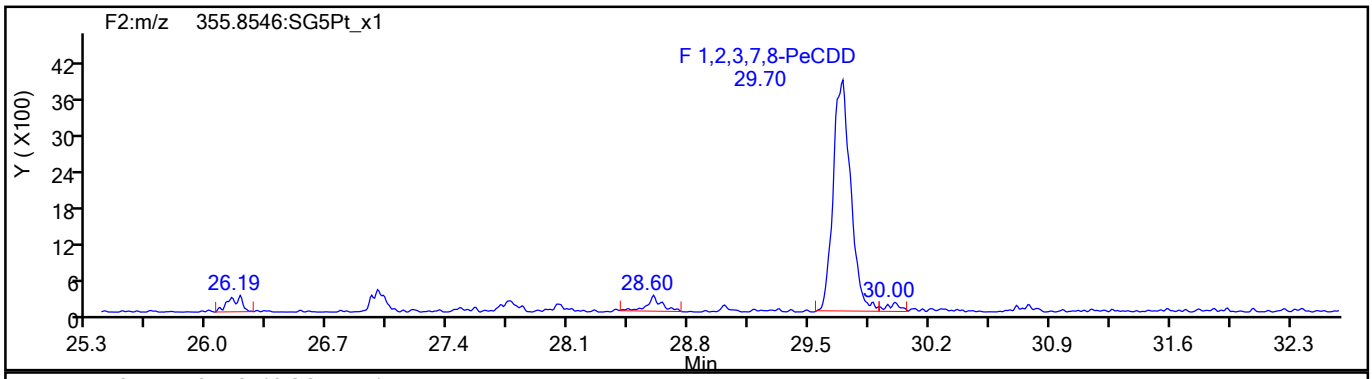

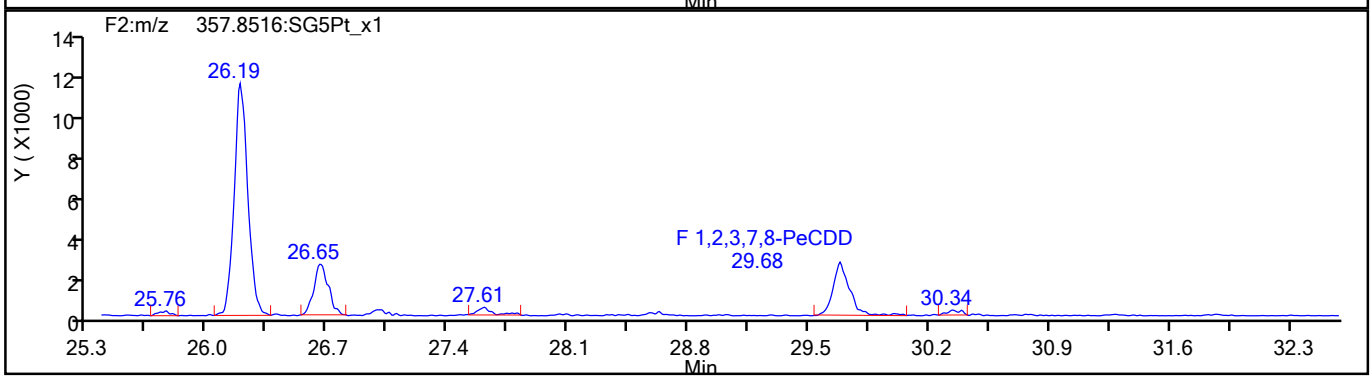

PeCDD Standards

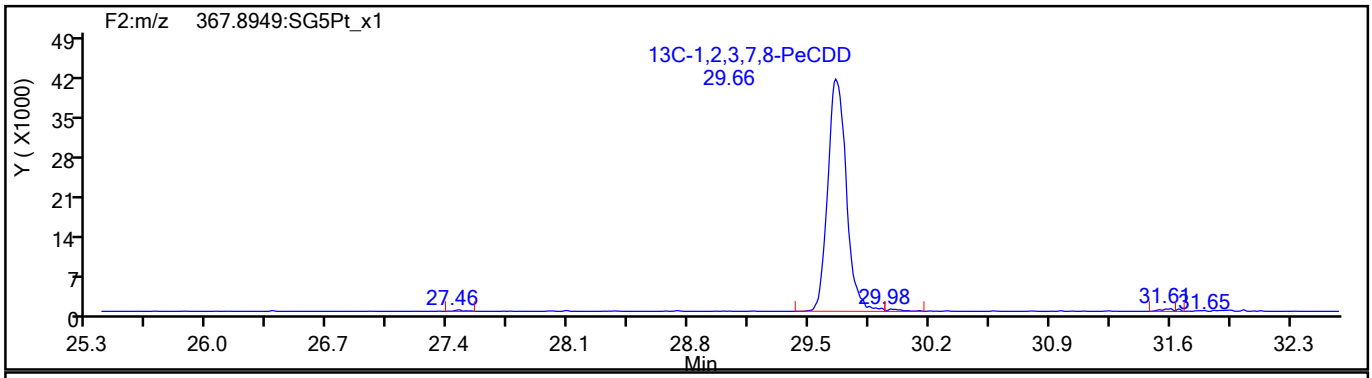

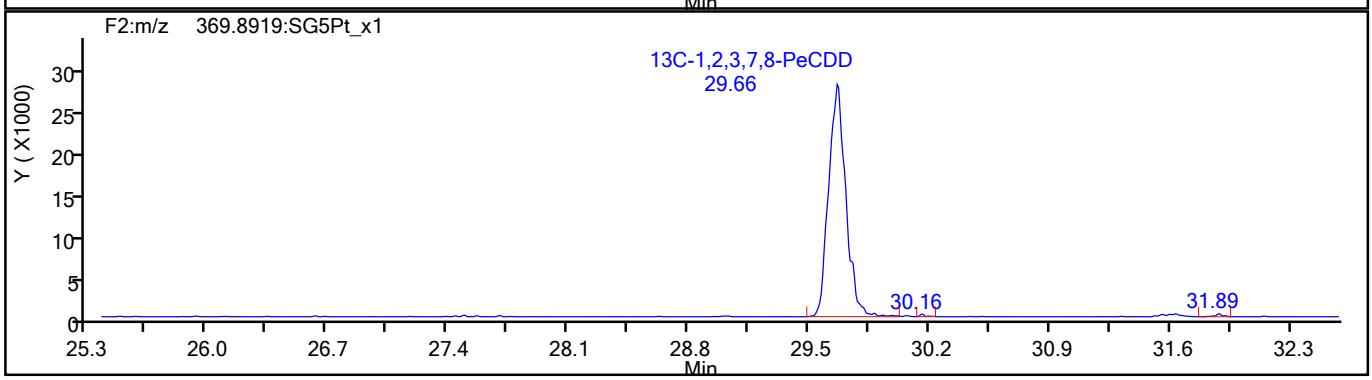

782373

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

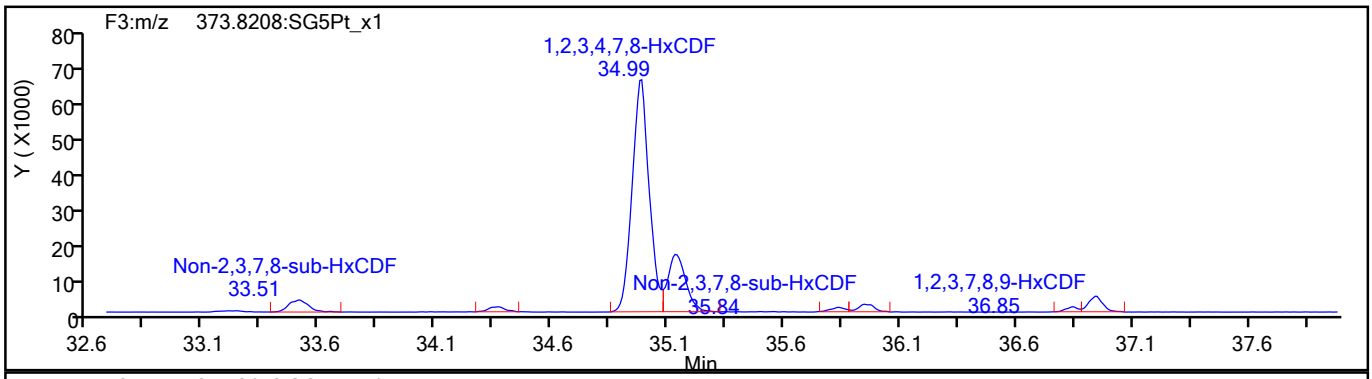

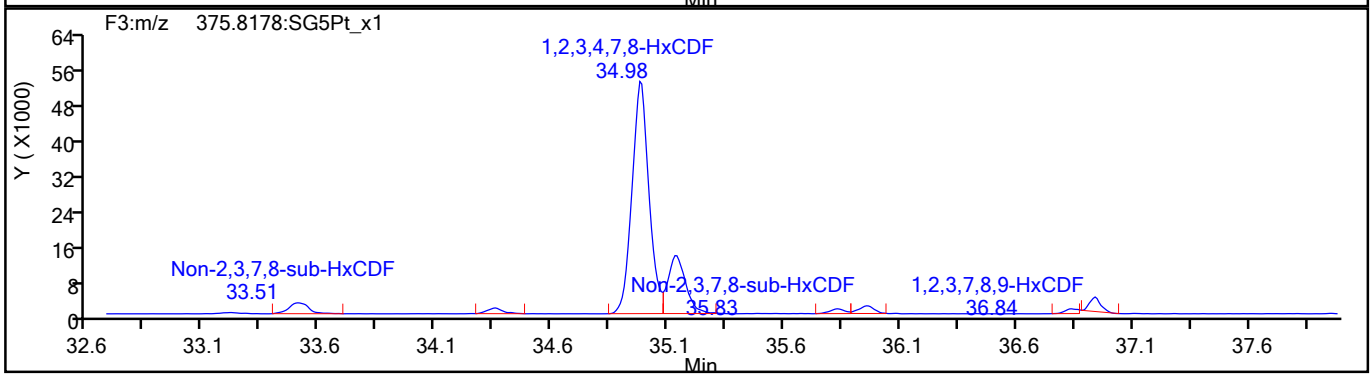

HxCDF Standards

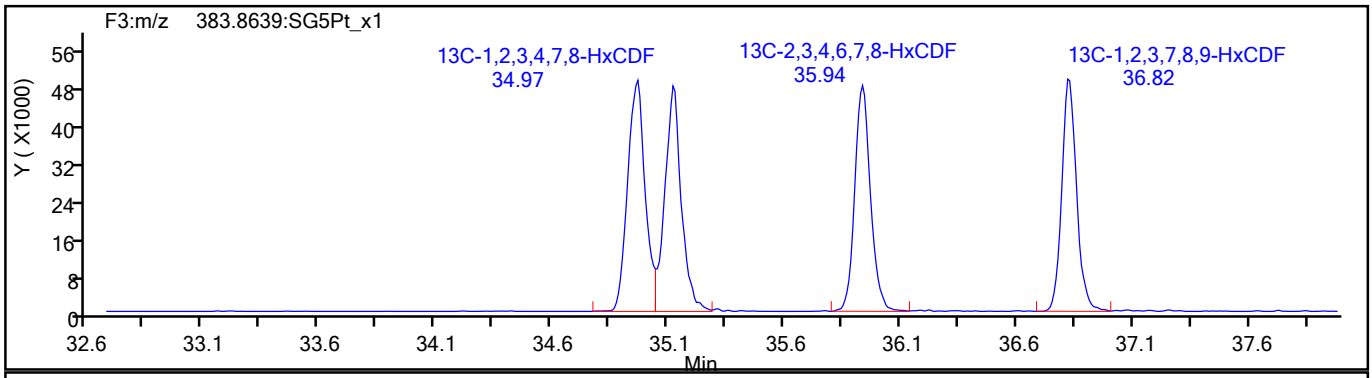

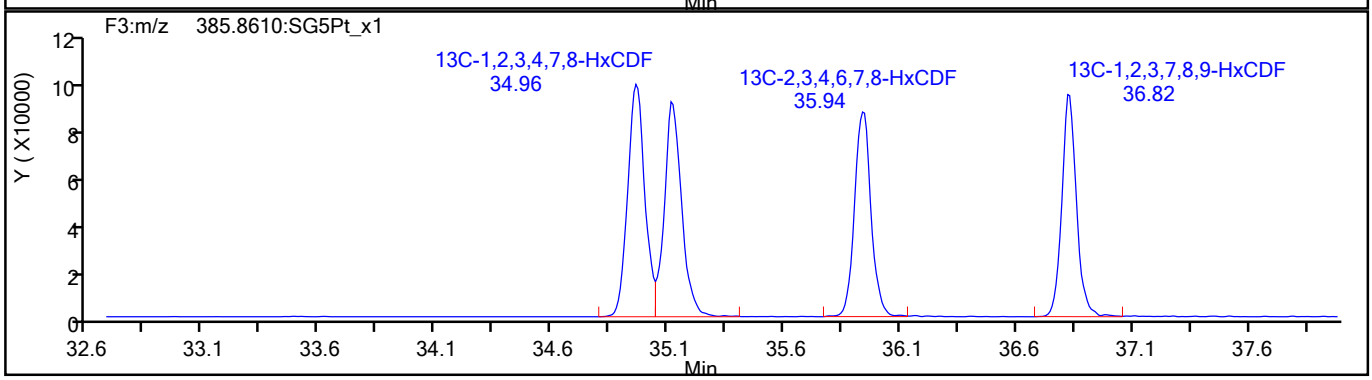

782374

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

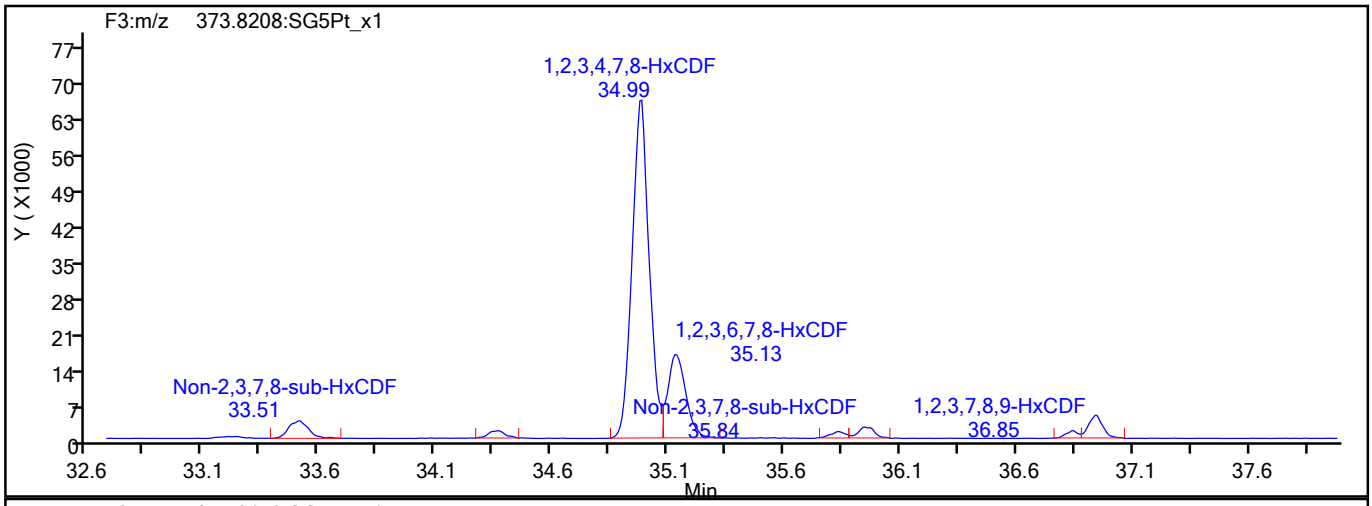

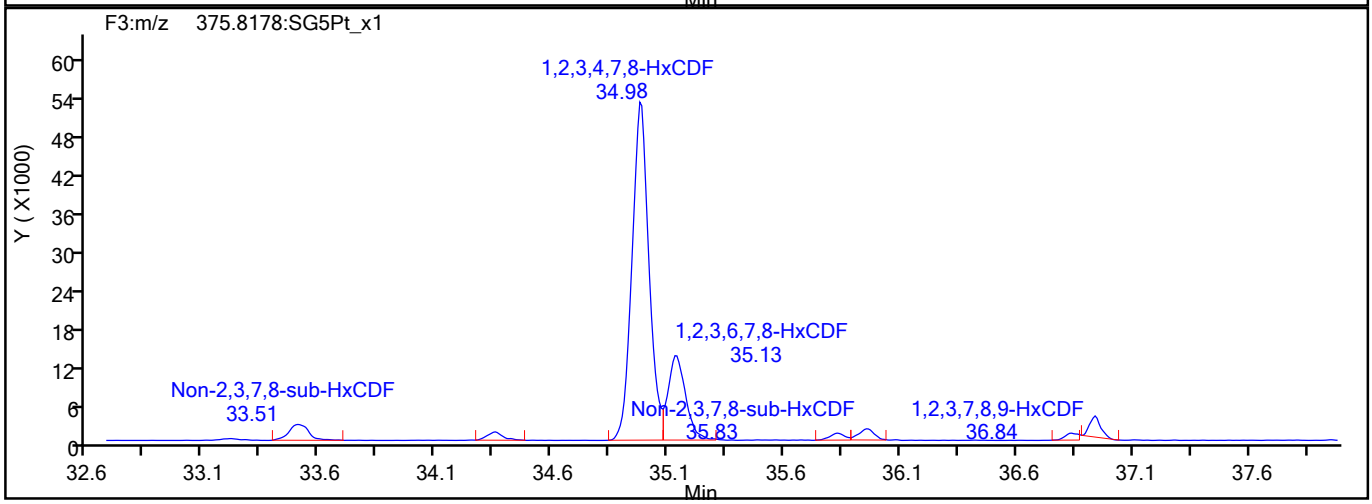

HxCDF Interference Mass

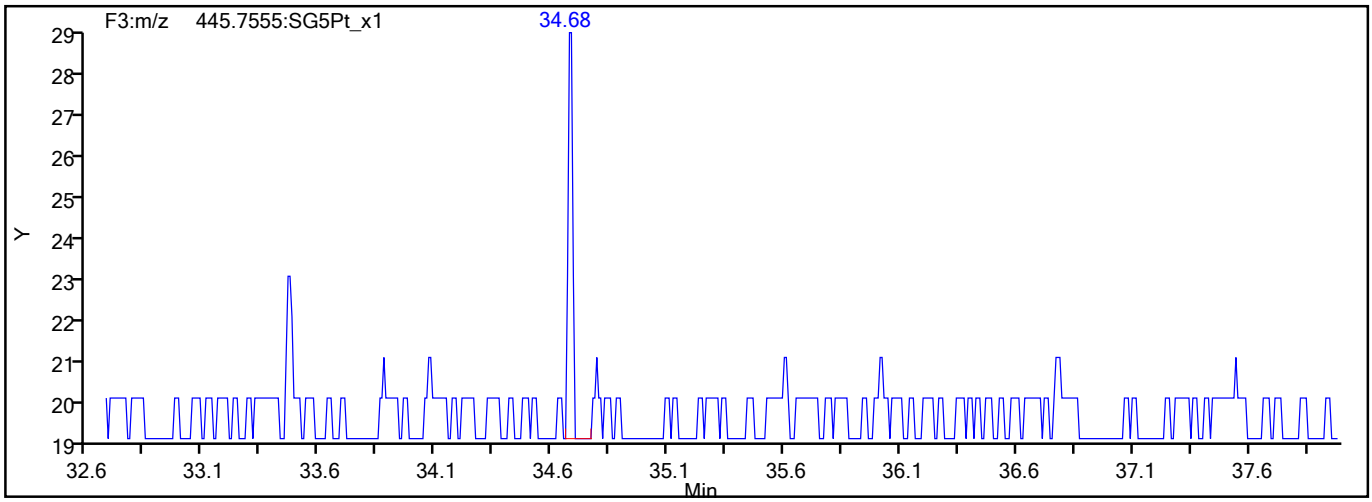

782375

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

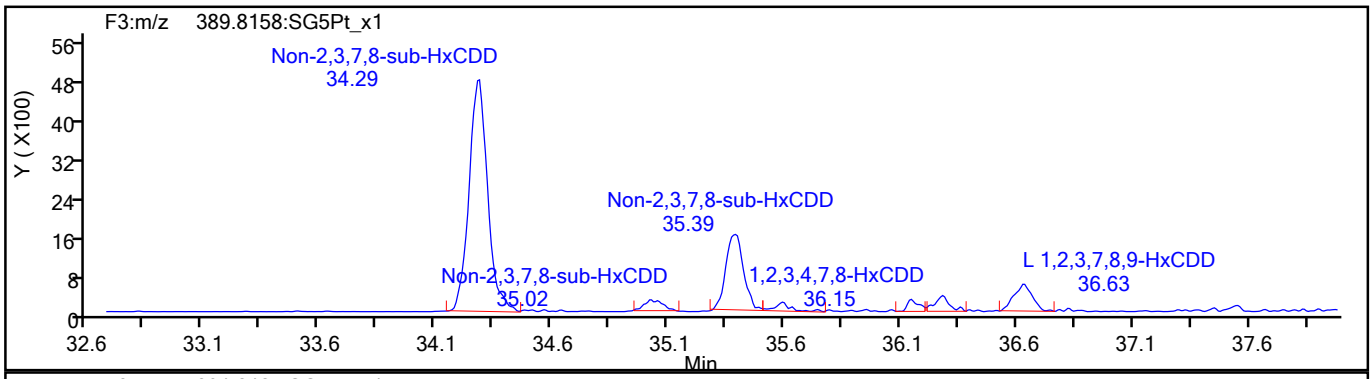

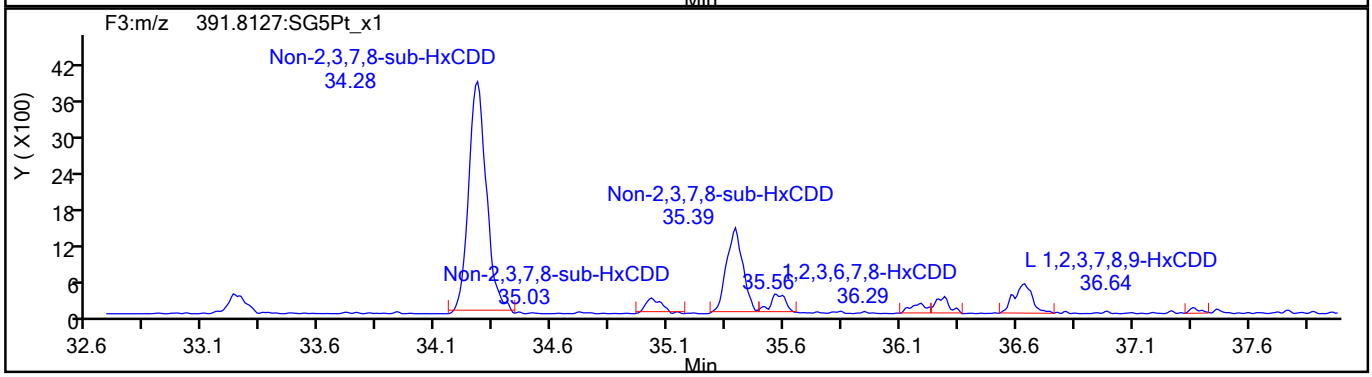

HxCDD Standards

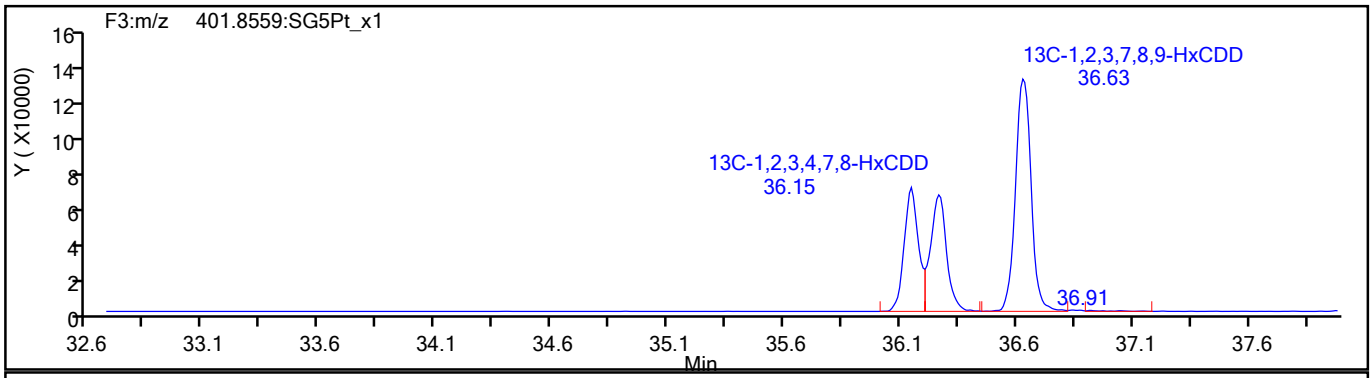

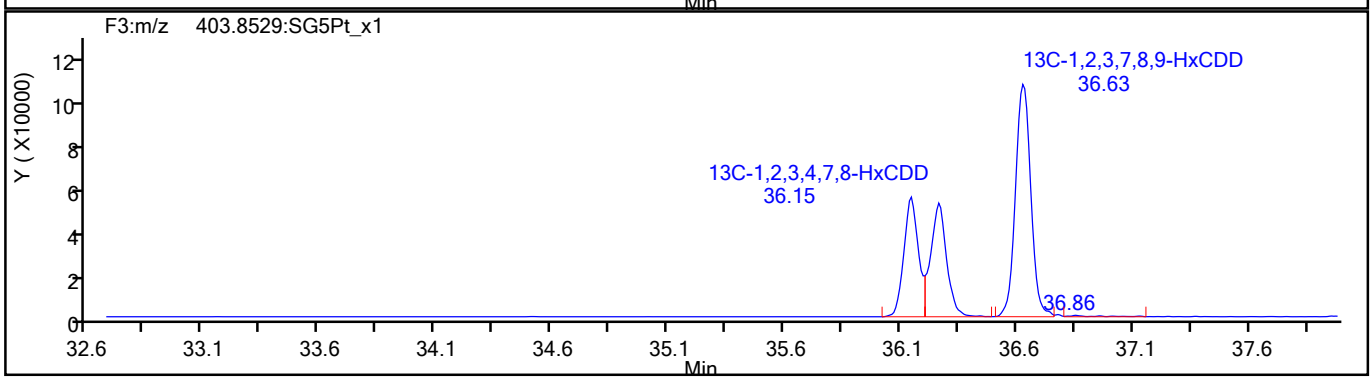

782376

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

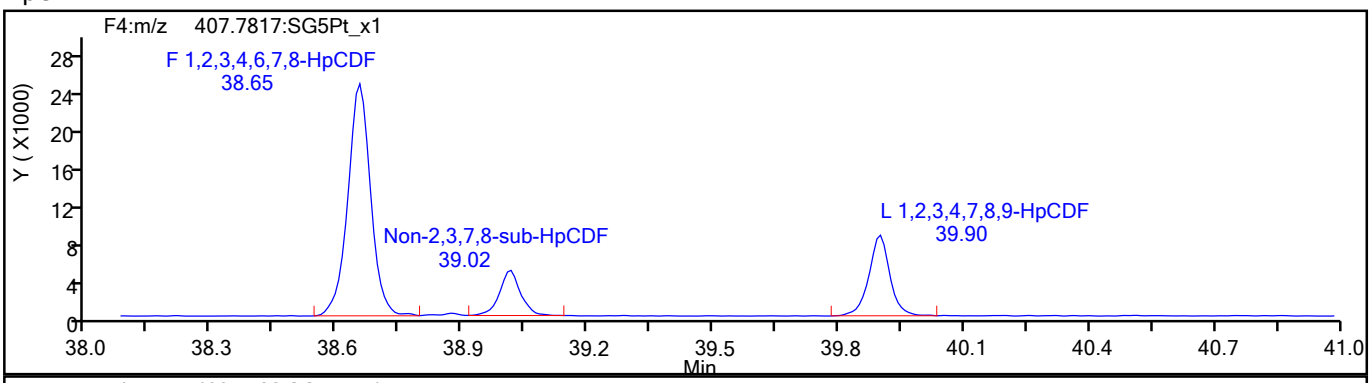

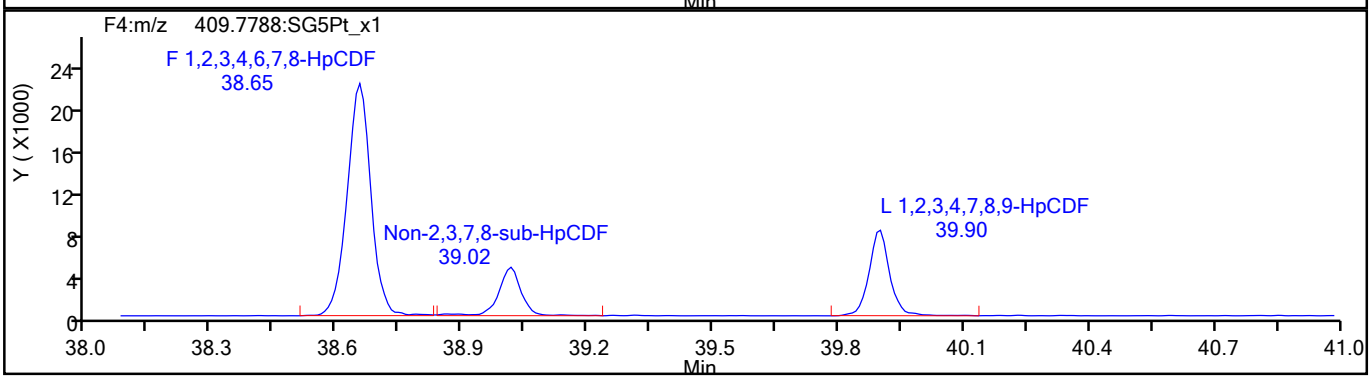

HpCDF Standards

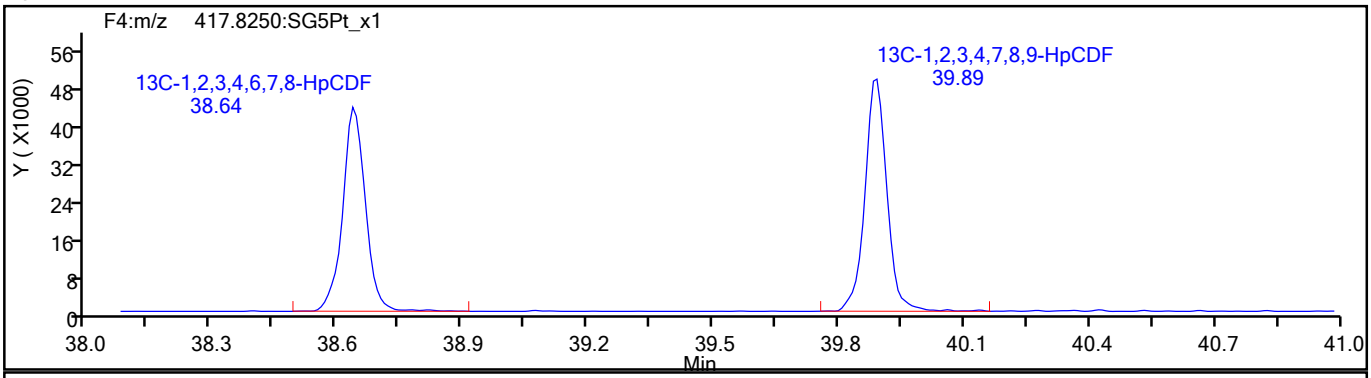

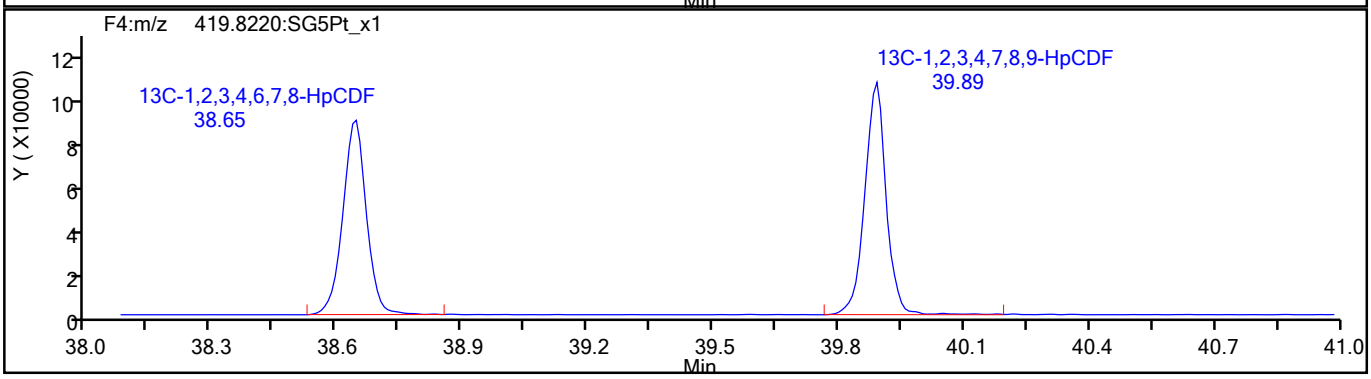

782377

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

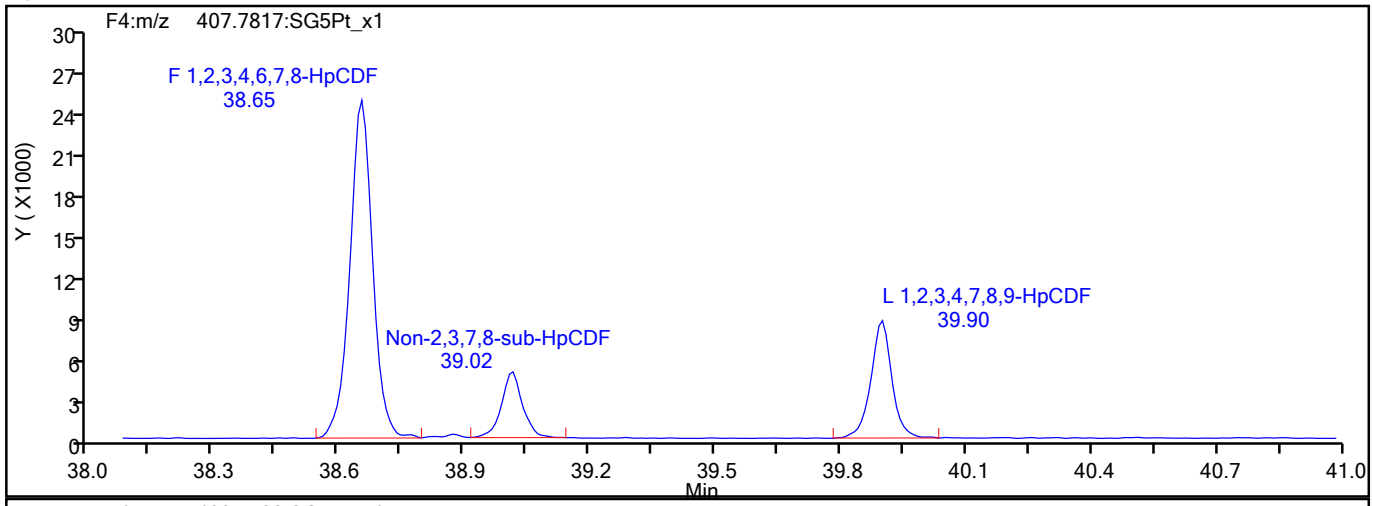

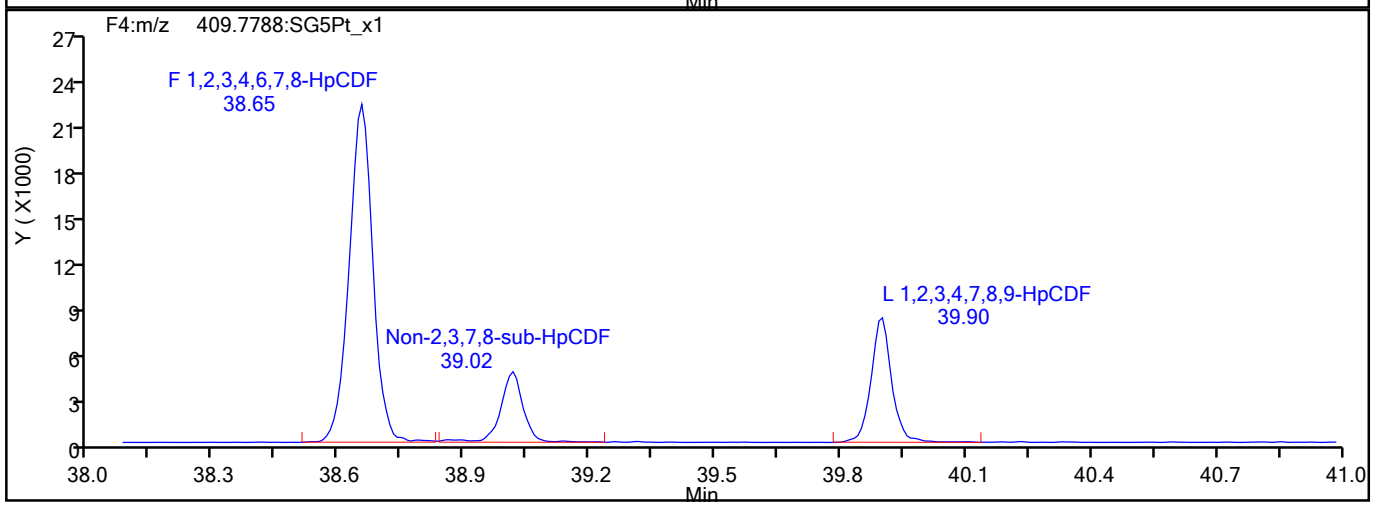

HpCDF Interference Mass

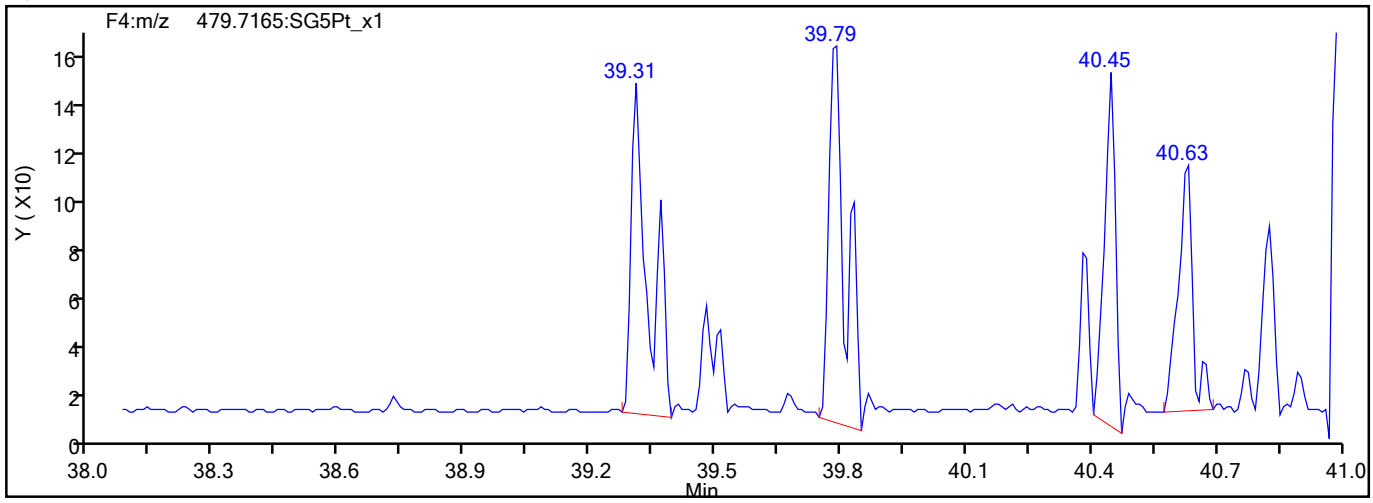

782378

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

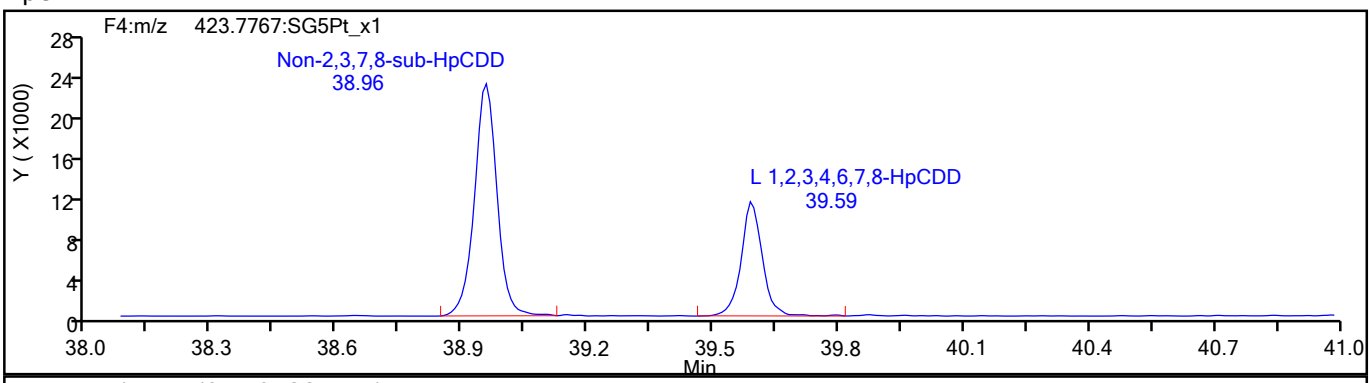

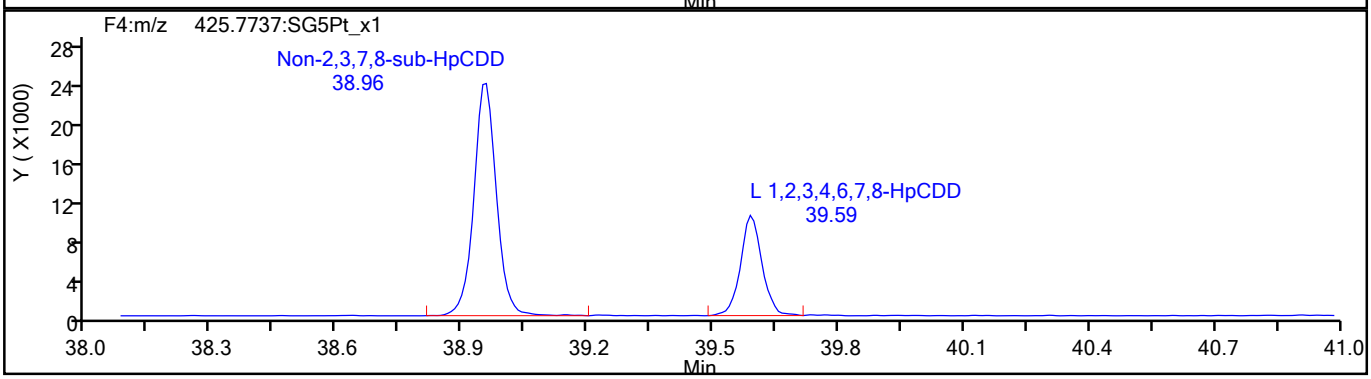

HpCDD Standards

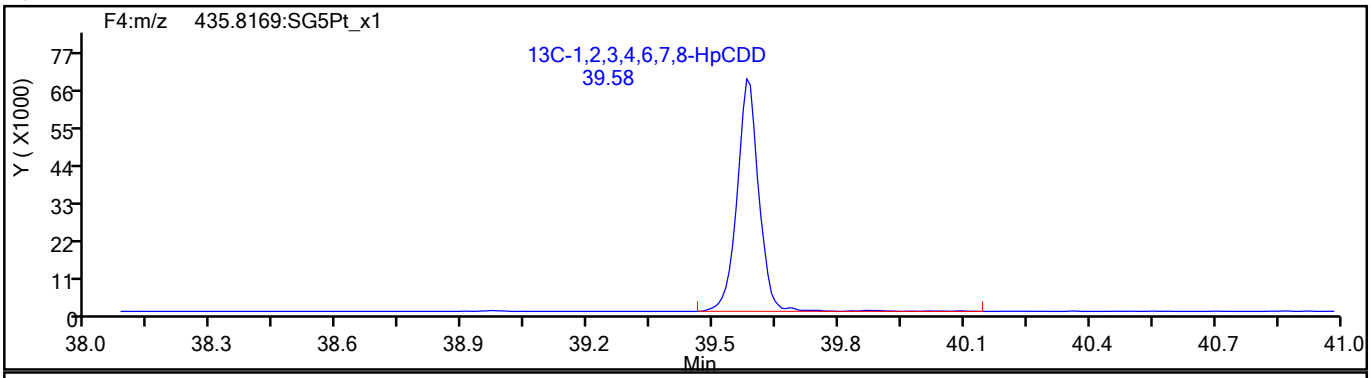

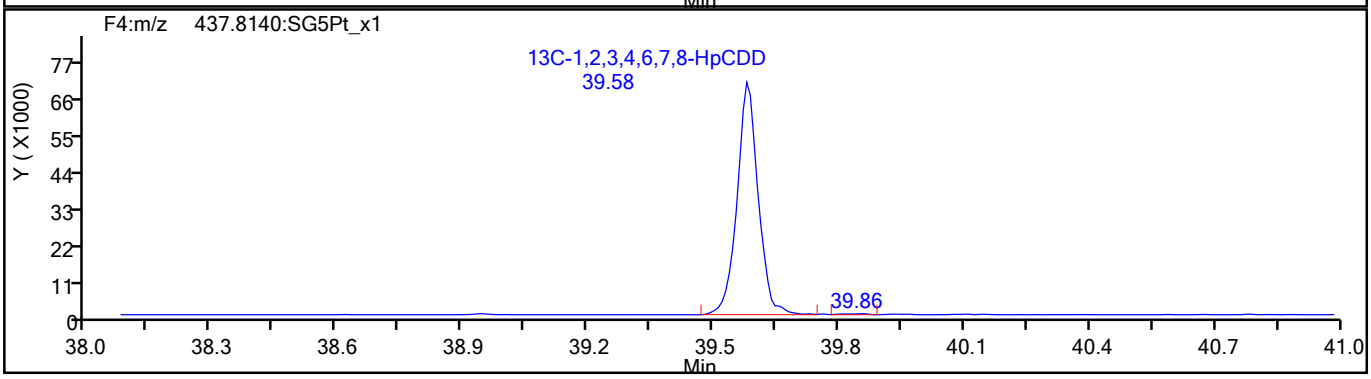

782379

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

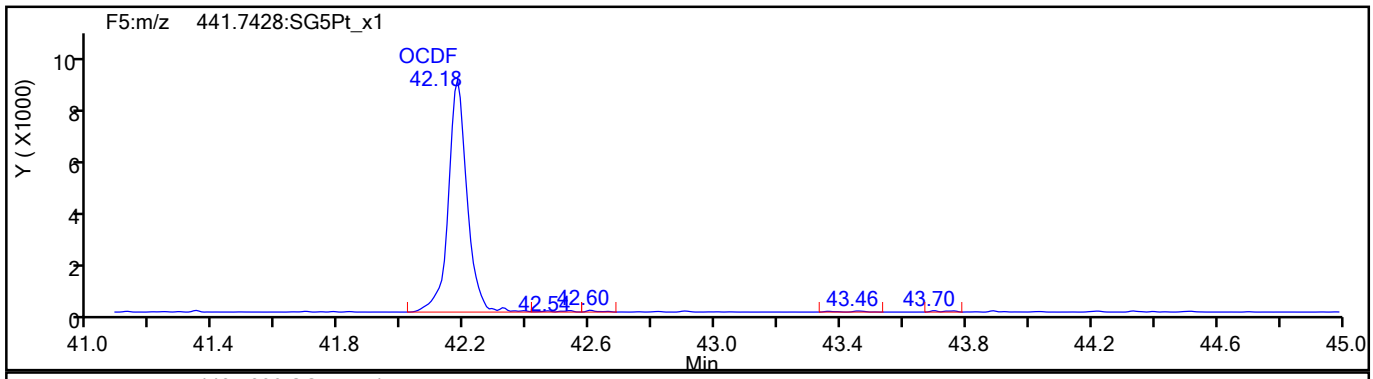

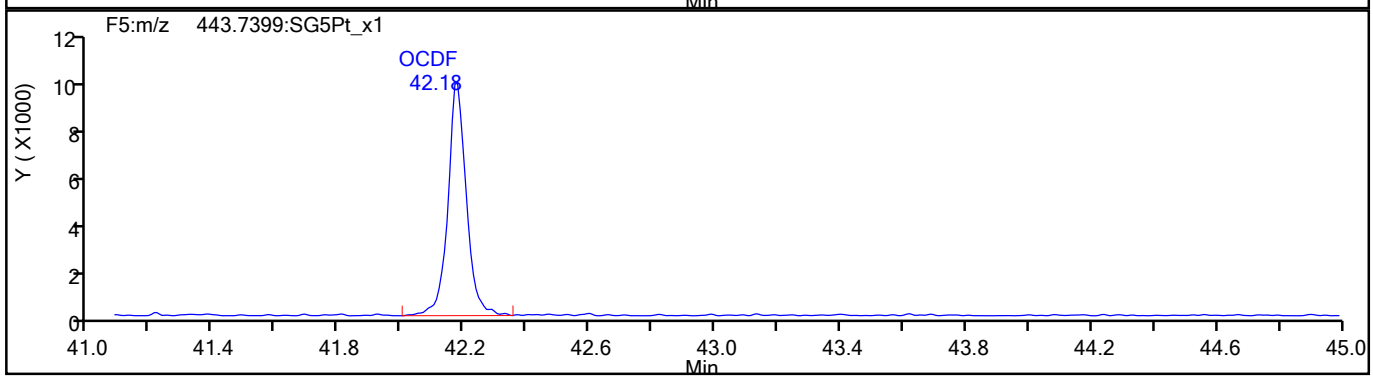

OCDF Standards

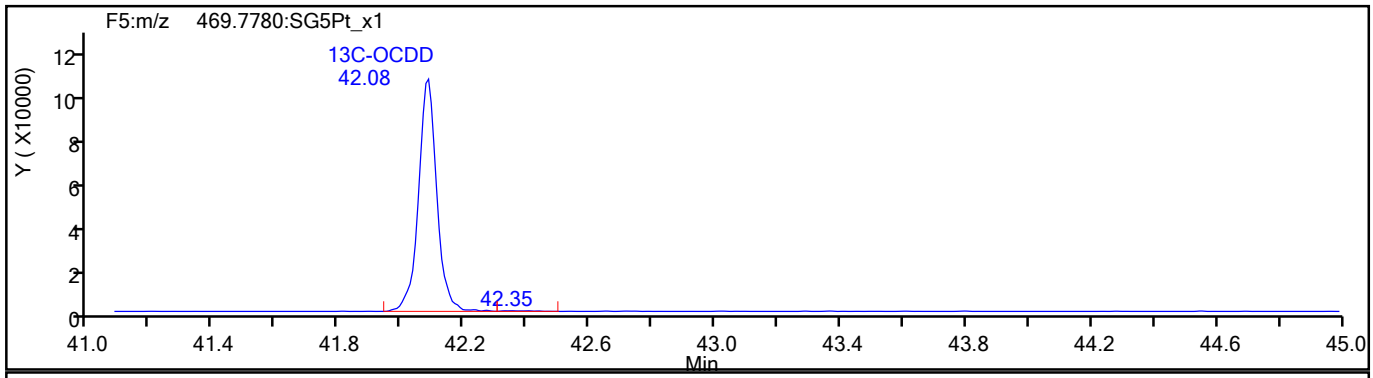

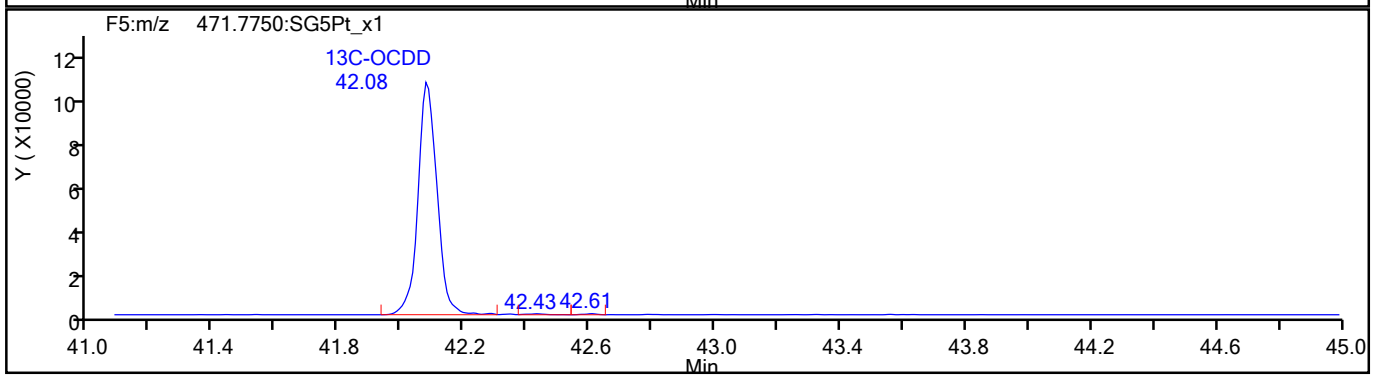

782380

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

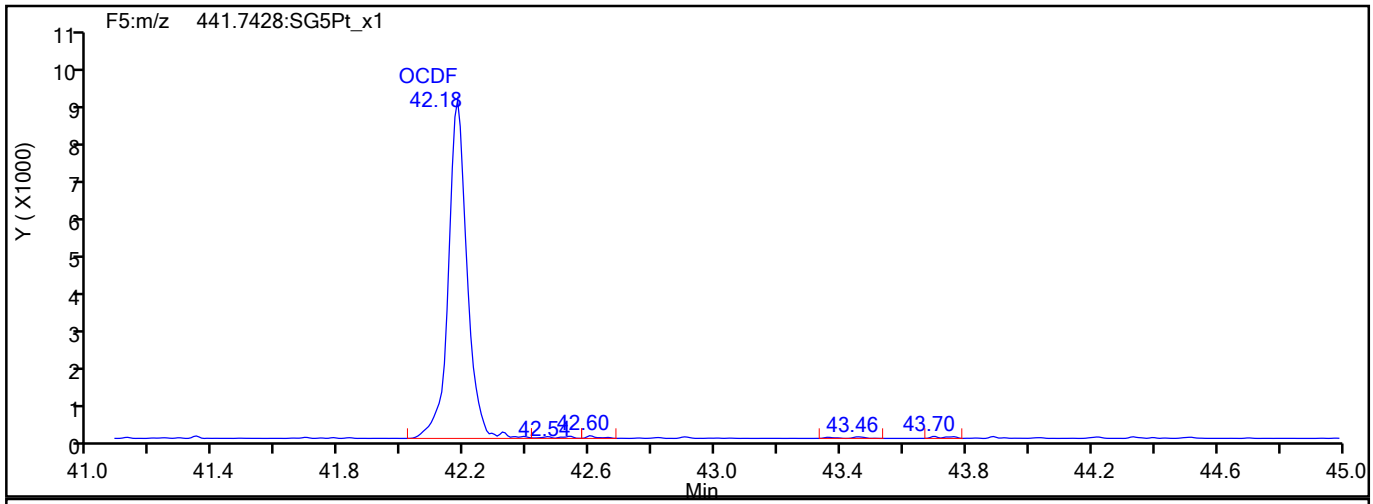

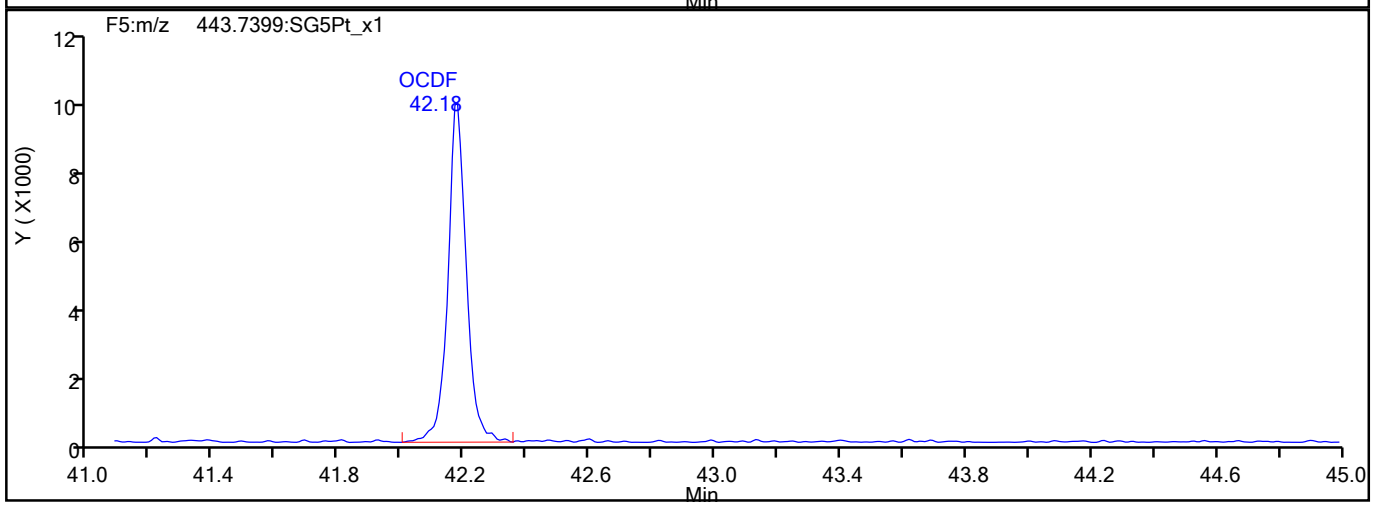

OCDF Interference Mass

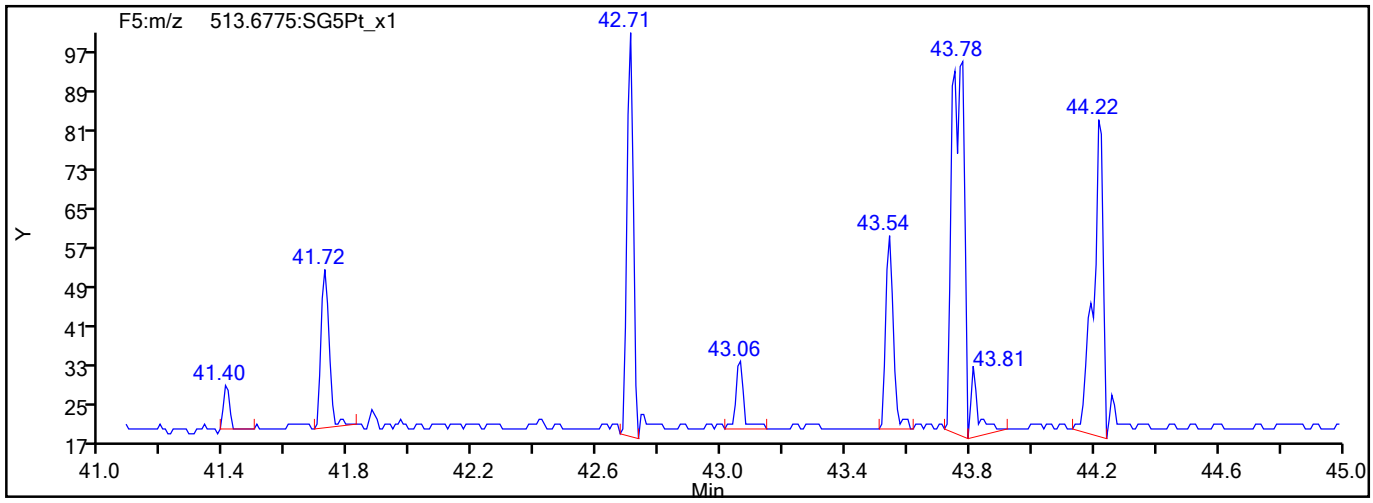

782381

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

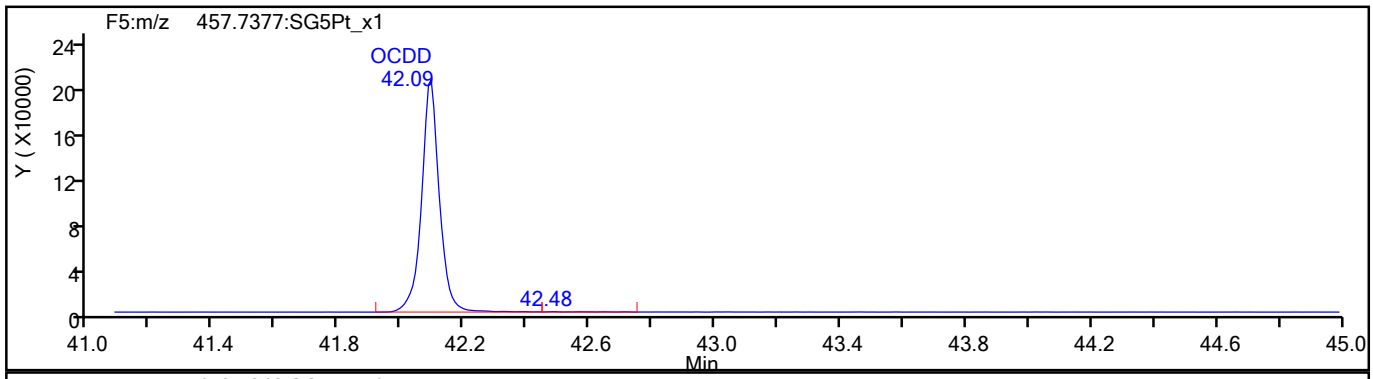

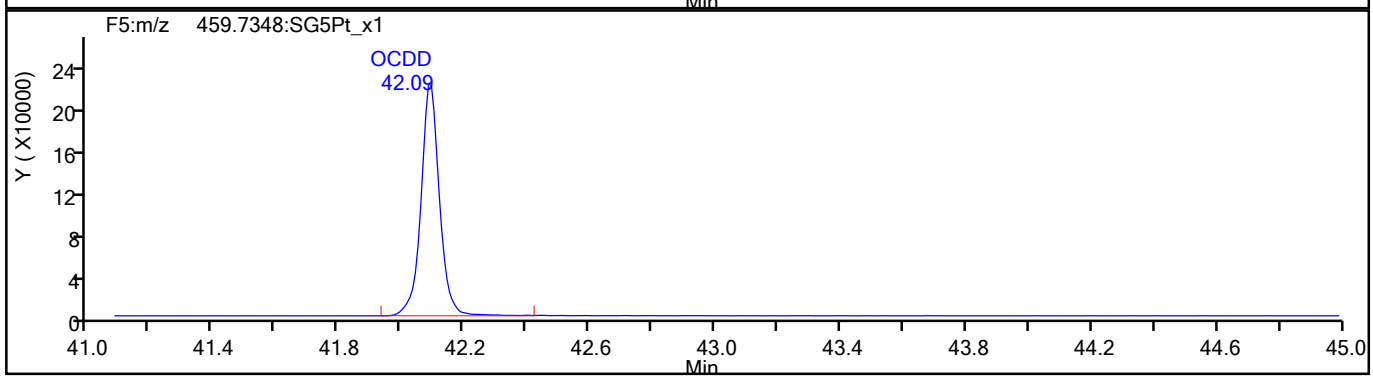

OCDD Standards

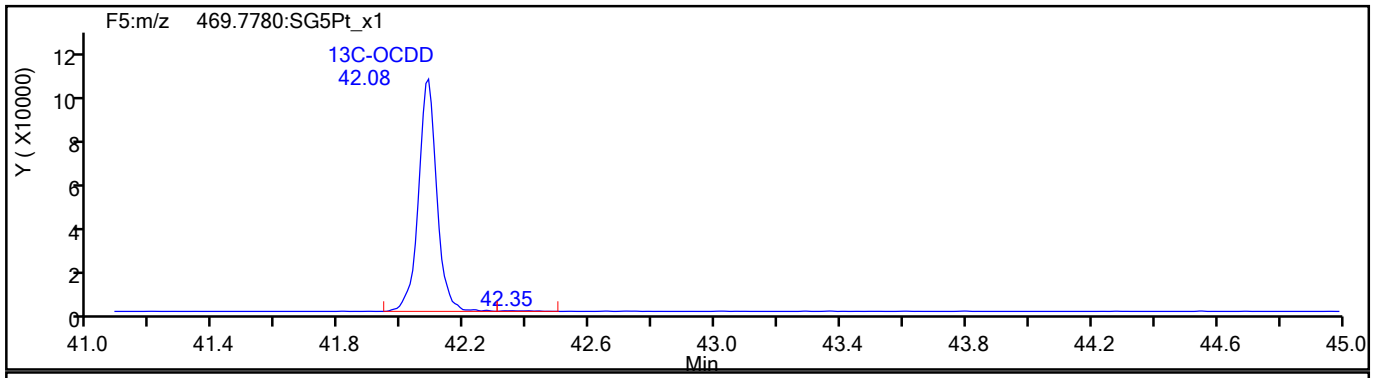

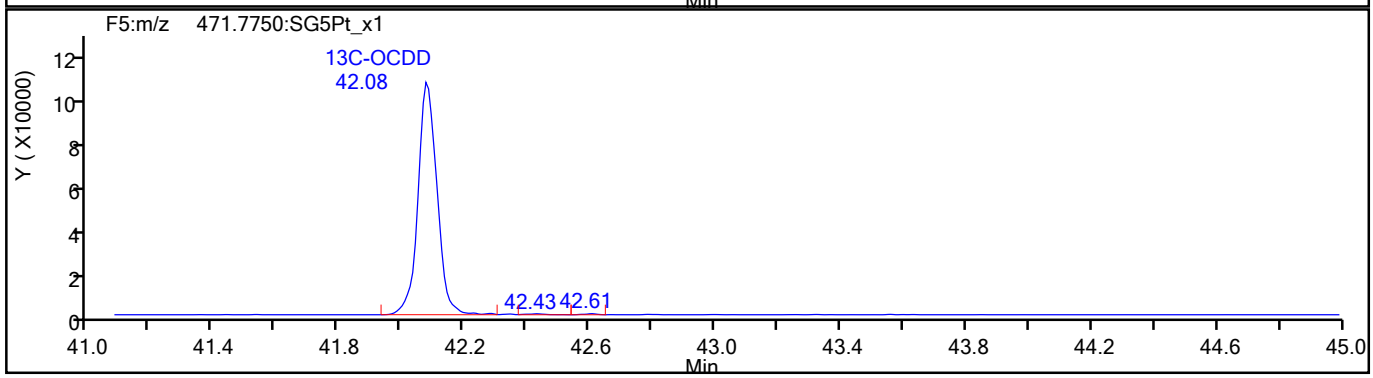

782382

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

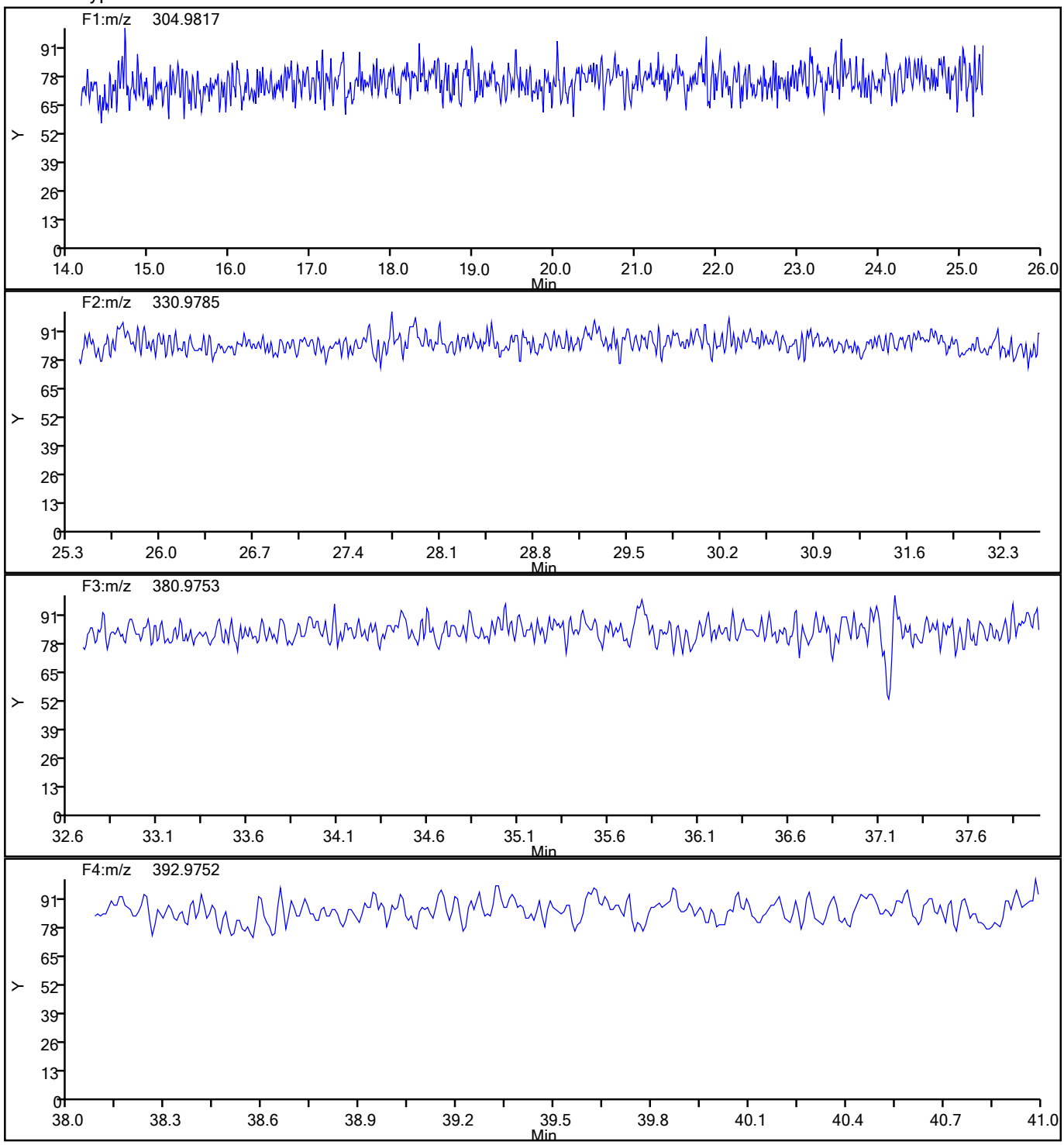

782383

Report Date: 23-Aug-2021 10:35:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_27.d		
Injection Date:	18-Aug-2021 10:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	517281	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

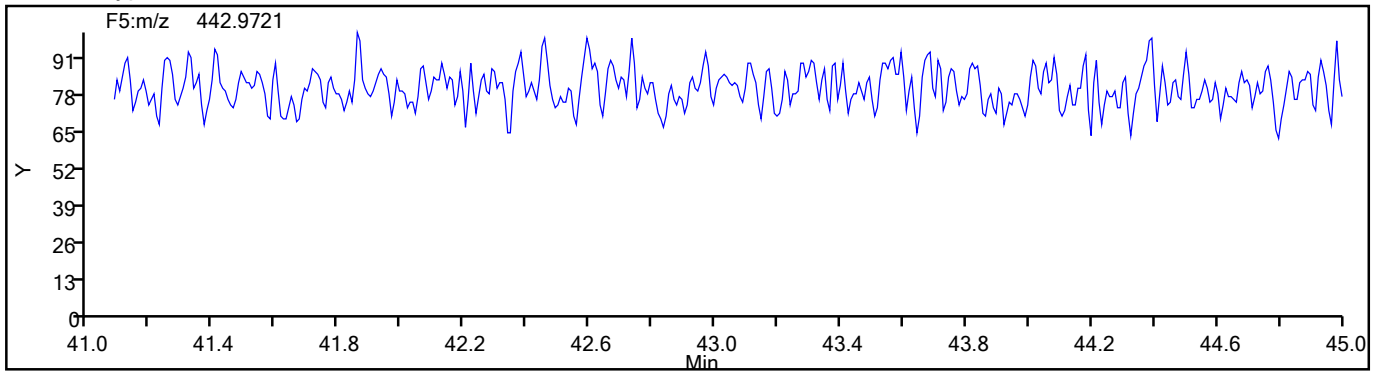

782384

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (8-10) RA
Lab Sample ID: 320-76887-5 RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_011.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.72(g)
Date Analyzed: 08/25/2021 19:22
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 33.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	8000	E G	7.6	7.6

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	67		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	79		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_011.d
Lims ID: 320-76887-A-5-A
Client ID: 11215702-072721-BN-SJSB096 (8-10)
Sample Type: Client
Inject. Date: 25-Aug-2021 19:22:07 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-5-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:07:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.300	46884788	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.630	41965600	0.72	1.3327	67.2	67.2	1.271	1.271	67.16	
2,3,7,8-TCDF	17.644	1203319622	0.79	0.9978	2873.7	2873.7	2.722	2.722		E
D 13C-2,3,7,8-TCDD	16.067	23682819	0.74	0.8749	57.7	57.7	14.3	14.3	57.73	
2,3,7,8-TCDD	16.094	213419140	0.79	1.0570	852.6	852.6	3.253	3.253		E
$ 37Cl4-2,3,7,8-TCDD	16.094	12786568		0.8648	31.5	31.5	0.6548	0.6548	78.84	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_011.d
Lims ID: 320-76887-A-5-A
Client ID: 11215702-072721-BN-SJSB096 (8-10)
Sample Type: Client
Inject. Date: 25-Aug-2021 19:22:07 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-5-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:07:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.300	16.298	0		20498946	4416357	192053	480132	23		
333.9339	16.300	16.298	0		26385842	6042593	330197	825492	18	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.630	17.615	1	1.082	17590093	3060302	33321	83302	92		
317.9389	17.630	17.615	1	1.082	24375507	4030887	37527	93817	107	0.72(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.644	17.628	1	1.001	529507529	93843081	34583	86457	2714		
305.8987	17.644	17.628	1	1.001	673812093	120117747	42458	106145	2829	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.065	0	0.986	10090170	2458284	192053	480132	13		
333.9339	16.067	16.065	0	0.986	13592649	3184323	330197	825492	10	0.74(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	16.094	16.078	1	1.002	94302640	21171262	44966	112415	471		
321.8936	16.080	16.078	0	1.001	119116500	26109533	32648	81620	800	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.094	16.078	1	0.987	12786568	2851803	23690	59225	120		

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 26-Aug-2021 09:30:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_011.d		
Injection Date:	25-Aug-2021 19:22:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	519744	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

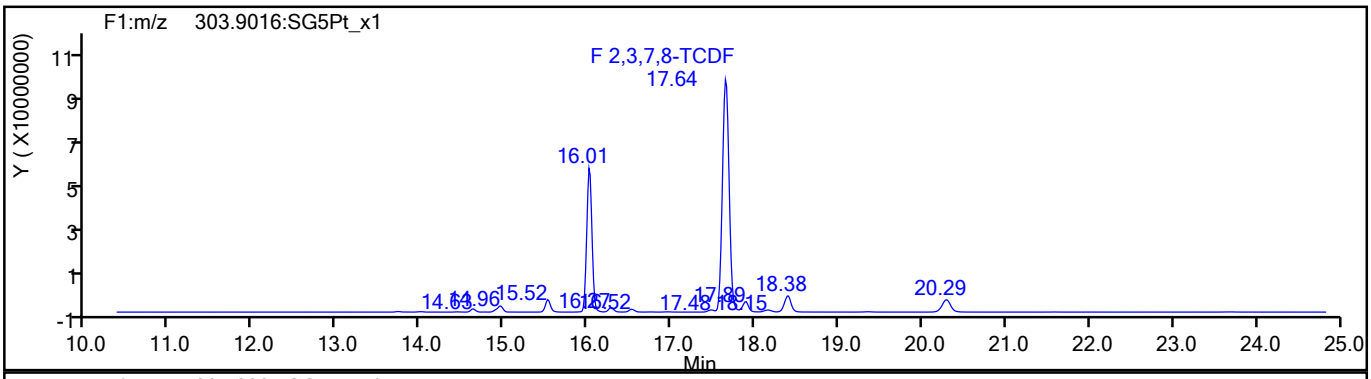

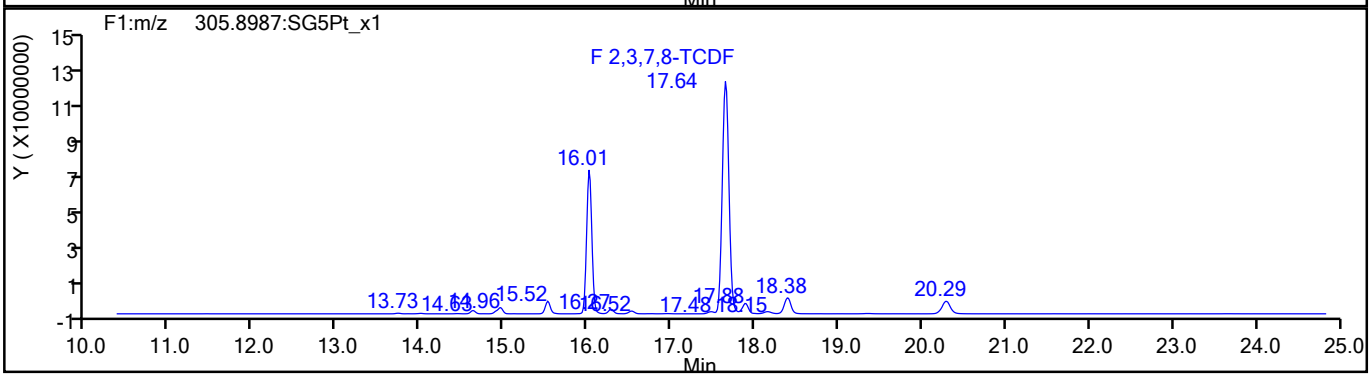

TCDF Standards

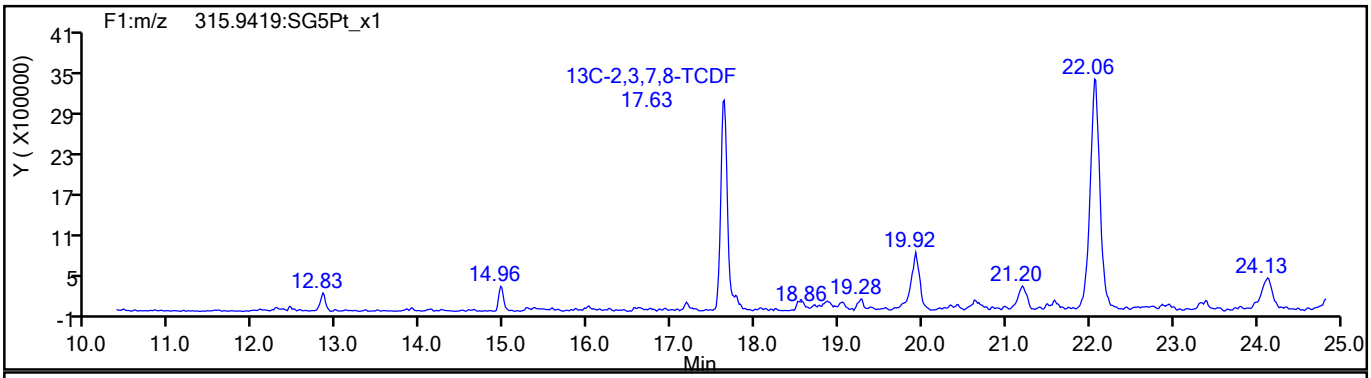

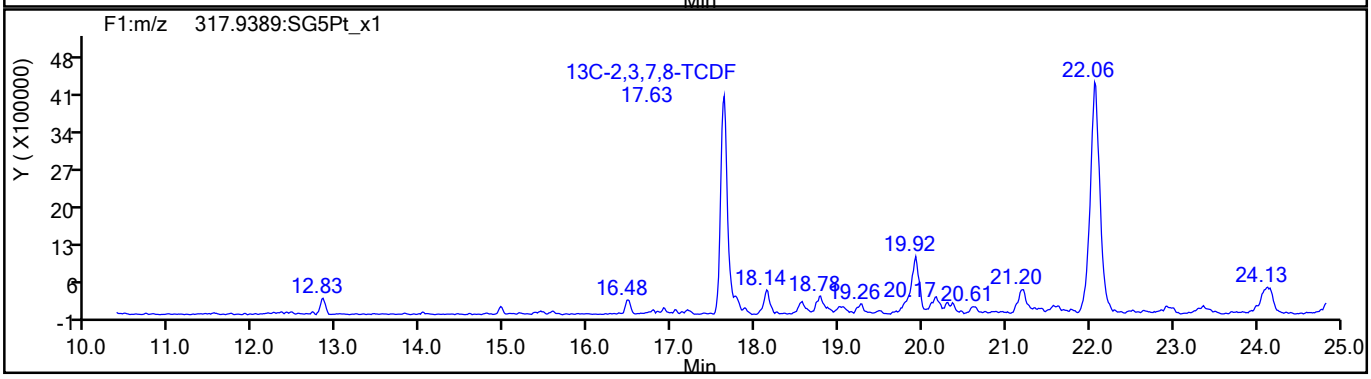

782388

Report Date: 26-Aug-2021 09:30:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_011.d		
Injection Date:	25-Aug-2021 19:22:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	519744	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

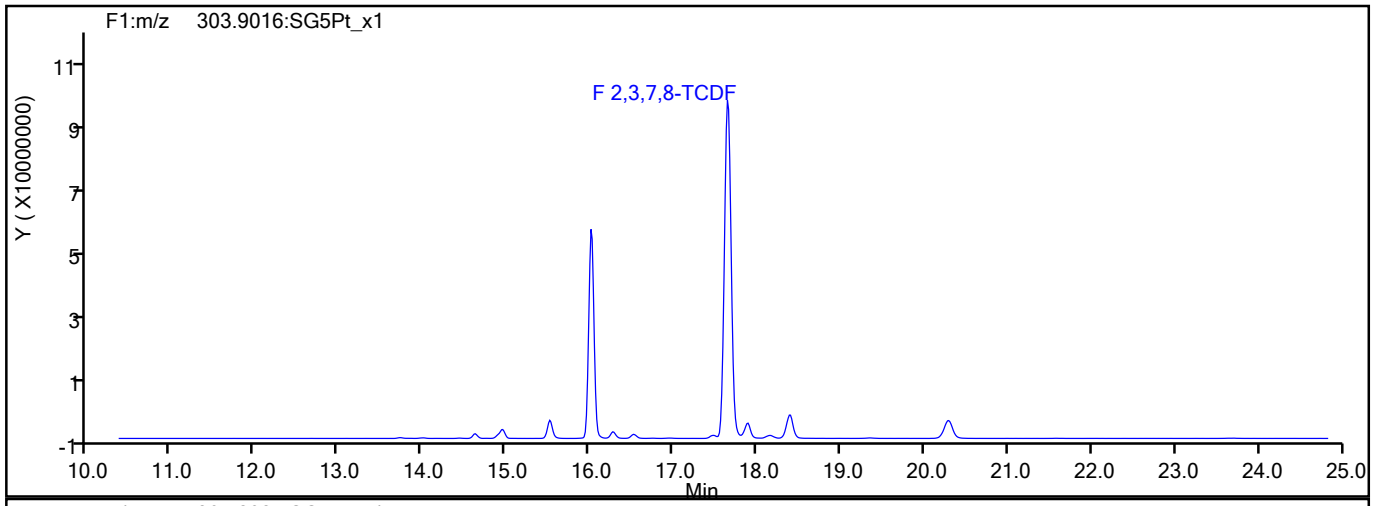

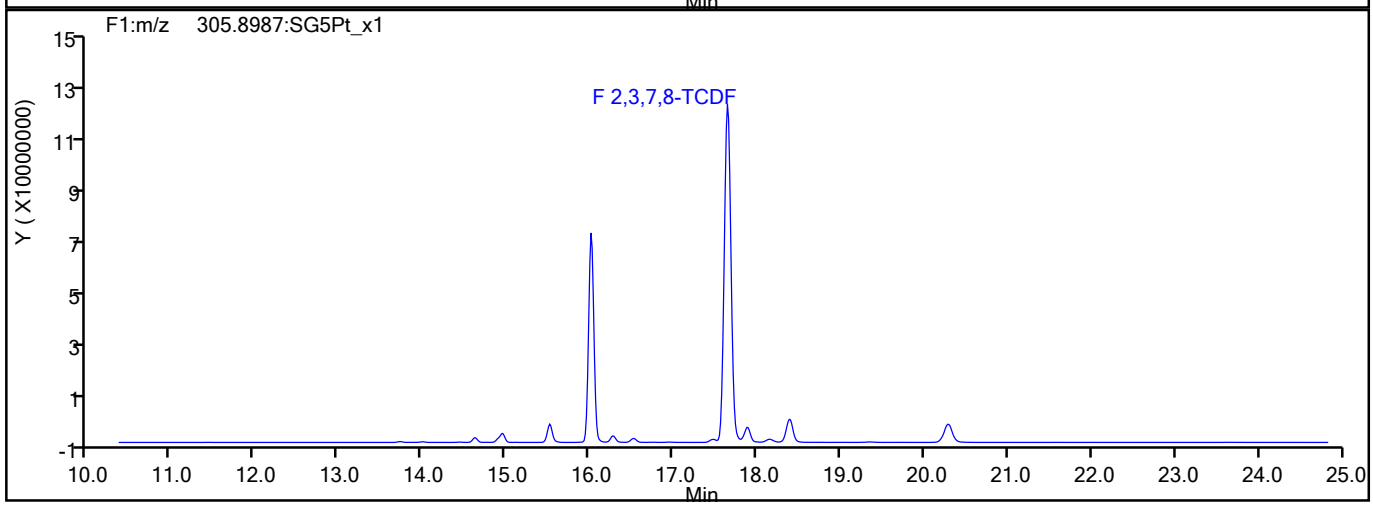

TCDF Interference Mass

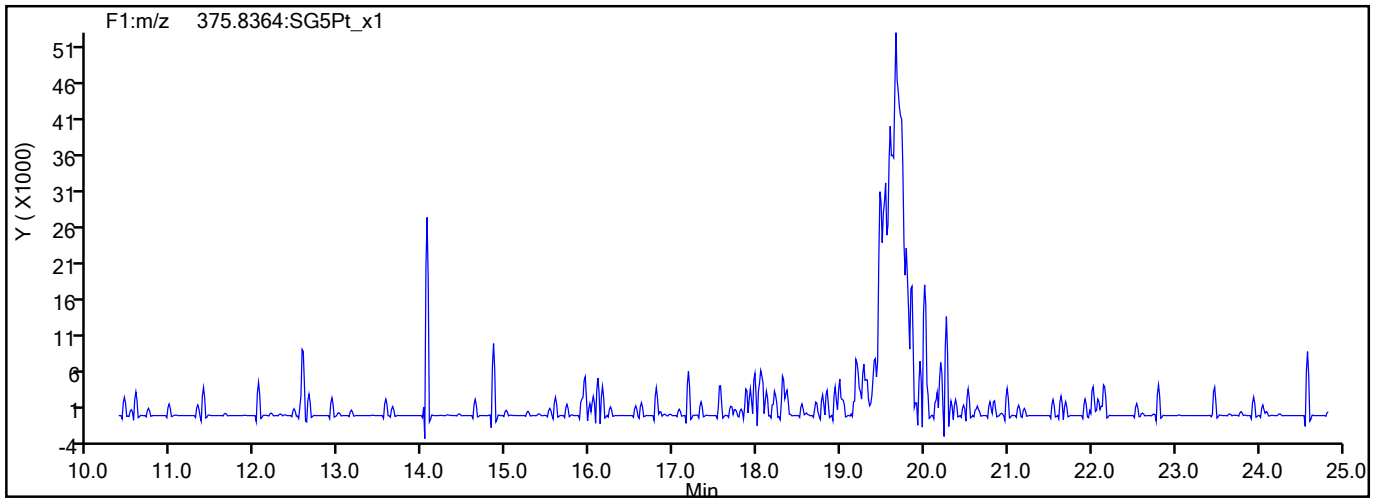

782389

Report Date: 26-Aug-2021 09:30:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_011.d		
Injection Date:	25-Aug-2021 19:22:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	519744	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

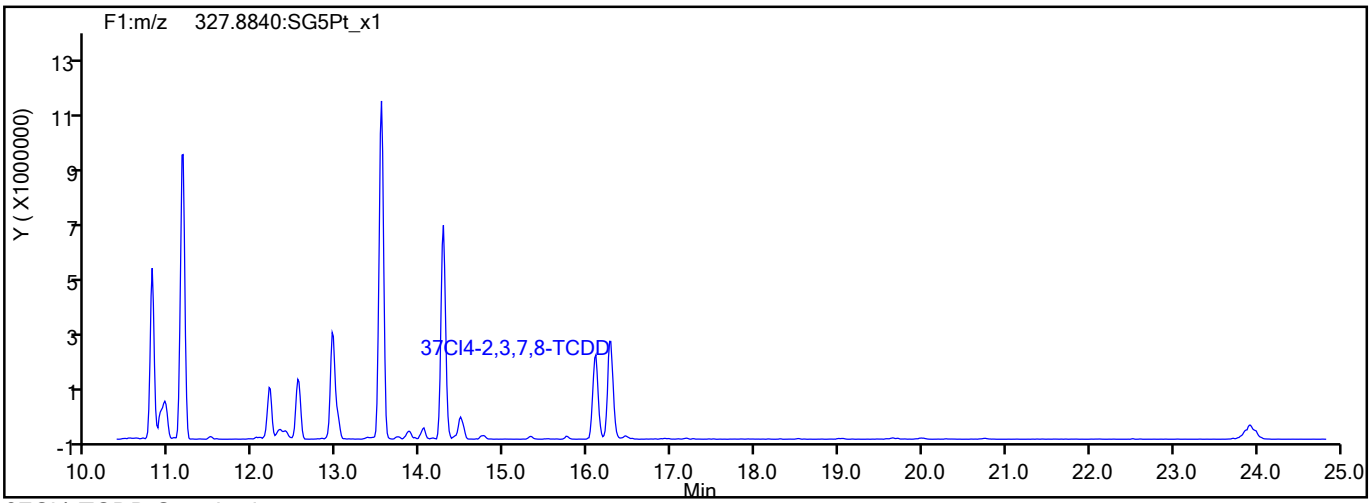

37Cl4-TCDD Standards

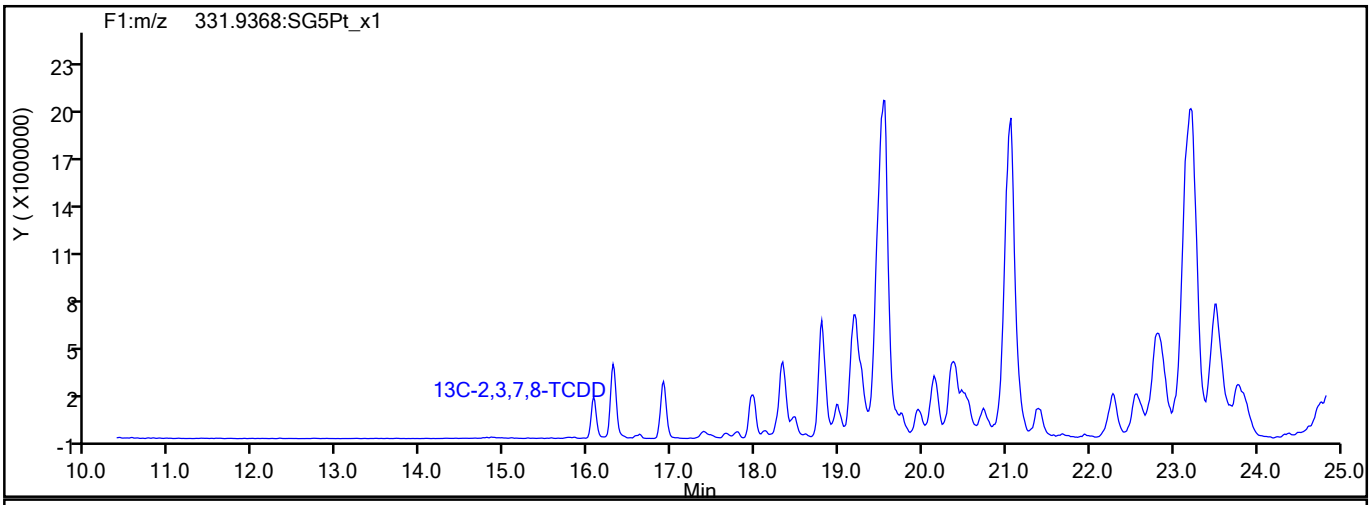

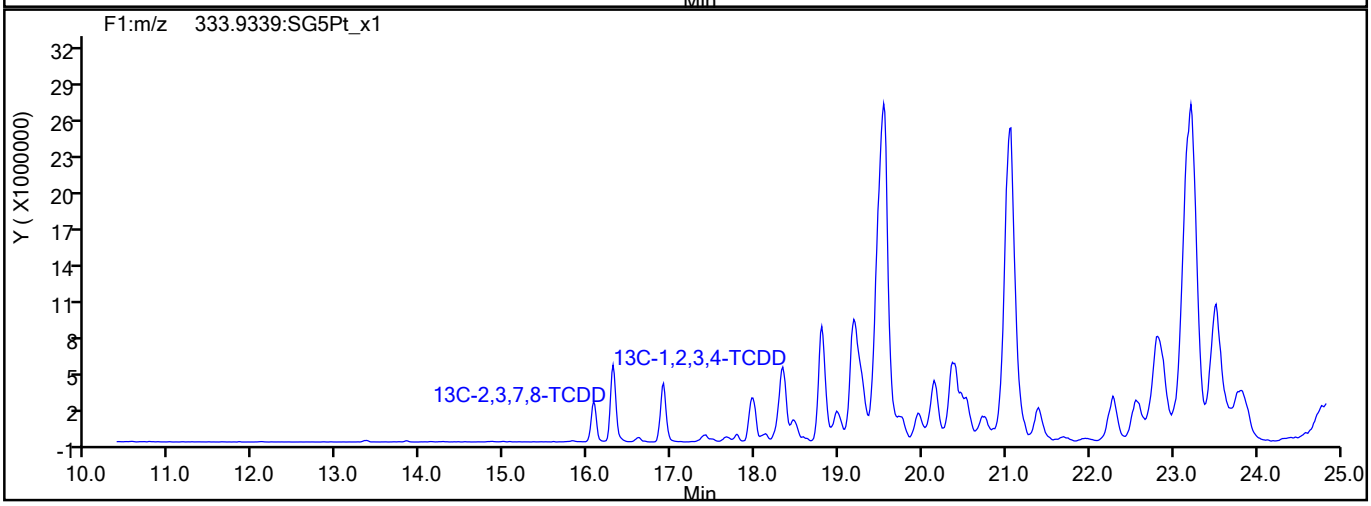

782390

Report Date: 26-Aug-2021 09:30:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_011.d		
Injection Date:	25-Aug-2021 19:22:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (8-10)		
Worklist#:	519744	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

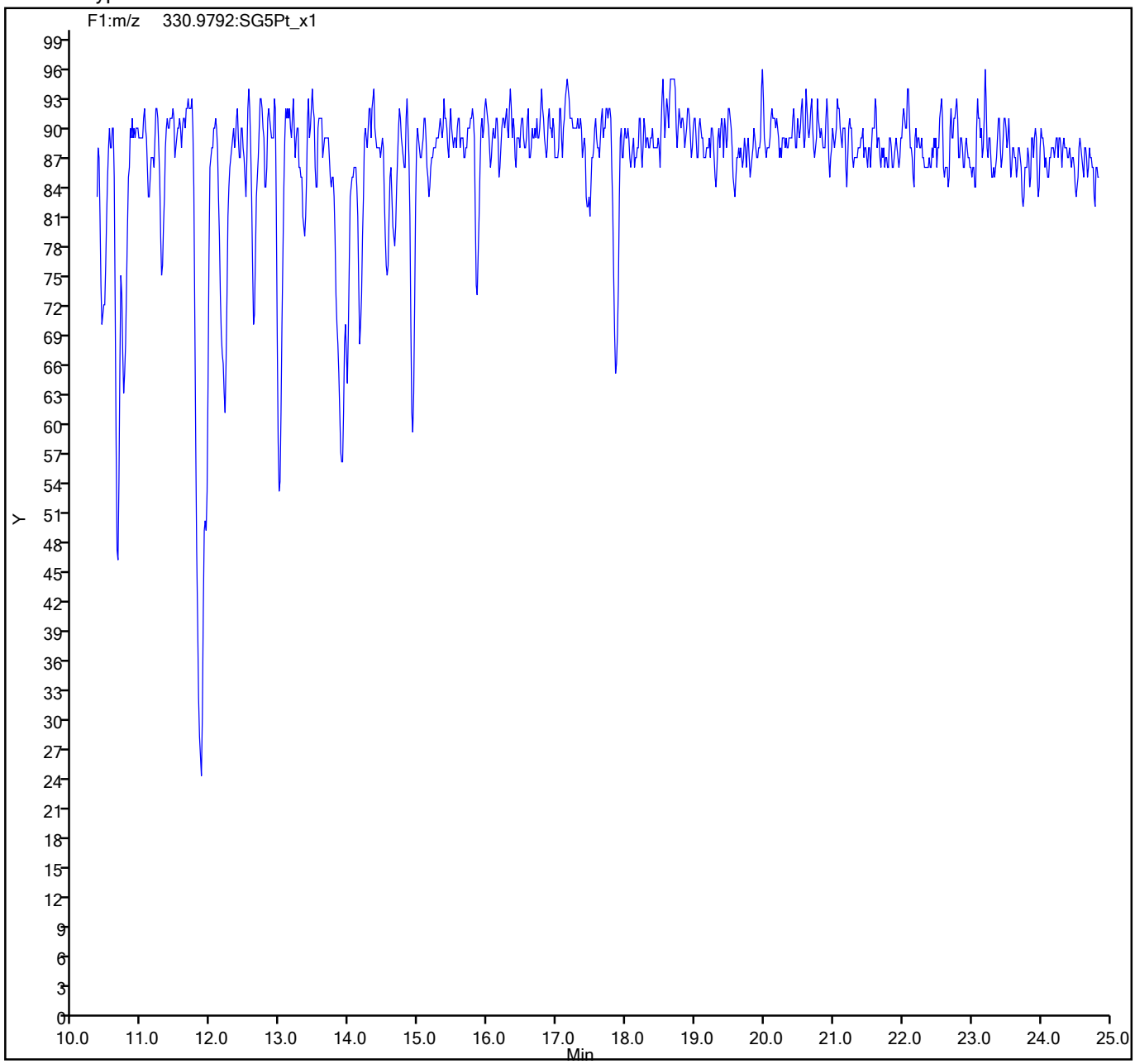

782391

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (10-12)
Lab Sample ID: 320-76887-6
Matrix: Sediment
Lab File ID: 17au21dfs1_28.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.90(g)
Date Analyzed: 08/18/2021 10:54
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 34.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517281
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	45		1.5	0.19
40321-76-4	1,2,3,7,8-PeCDD	ND		7.7	0.16
57117-41-6	1,2,3,7,8-PeCDF	3.6	J	7.7	0.13
57117-31-4	2,3,4,7,8-PeCDF	2.6	J	7.7	0.13
39227-28-6	1,2,3,4,7,8-HxCDD	0.49	J q	7.7	0.26
57653-85-7	1,2,3,6,7,8-HxCDD	1.3	J	7.7	0.29
19408-74-3	1,2,3,7,8,9-HxCDD	3.3	J	7.7	0.25
70648-26-9	1,2,3,4,7,8-HxCDF	4.9	J	7.7	0.069
57117-44-9	1,2,3,6,7,8-HxCDF	1.2	J	7.7	0.075
72918-21-9	1,2,3,7,8,9-HxCDF	0.25	J q	7.7	0.066
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.7	0.066
35822-46-9	1,2,3,4,6,7,8-HpCDD	51	B	7.7	0.33
67562-39-4	1,2,3,4,6,7,8-HpCDF	1.4	J	7.7	0.12
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.39	J	7.7	0.11
3268-87-9	OCDD	1200	B	15	0.99
39001-02-0	OCDF	0.74	J	15	0.087
41903-57-5	Total TCDD	45		1.5	0.19
30402-14-3	Total TCDF	360	q	1.5	0.70
36088-22-9	Total PeCDD	7.7	q	7.7	0.16
30402-15-4	Total PeCDF	8.5	q	7.7	0.13
34465-46-8	Total HxCDD	41	q	7.7	0.27
55684-94-1	Total HxCDF	6.4	J q	7.7	0.069
37871-00-4	Total HpCDD	160	B	7.7	0.33
38998-75-3	Total HpCDF	1.8	J	7.7	0.11

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (10-12)
Lab Sample ID: 320-76887-6
Matrix: Sediment
Lab File ID: 17au21dfs1_28.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.90(g)
Date Analyzed: 08/18/2021 10:54
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 34.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517281
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	62		25-164
89059-46-1	13C-2,3,7,8-TCDF	62		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	61		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	61		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	66		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	69		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	64		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	74		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	63		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	61		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	62		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	70		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	67		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	78		26-138
114423-97-1	13C-OCDD	74		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	68		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d
Lims ID: 320-76887-A-6-A
Client ID: 11215702-072721-BN-SJSB096 (10-12)
Sample Type: Client
Inject. Date: 18-Aug-2021 10:54:00 ALS Bottle#: 0 Worklist Smp#: 26
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-6-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:11:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 18-Aug-2021 14:18:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.414	1082678	0.79	2.1E+04	100.0	100.0				a
2,3,7,8-TCDF	20.485	665980	0.80	1.0802	68.2	68.2	0.2283	0.2283		
D 13C-2,3,7,8-TCDF	20.451	904502	0.84	1.3459	62.1	62.1	0.1991	0.1991	62.07	
A Non-2,3,7,8-sub-TCDF	19.916	469574	0.77	1.0802	48.3	48.1	0.2283	29.2		RQ
S Total TCDF					116.5	116.2	0.2283	0.2283		RQ
D 13C-2,3,7,8-TCDD	21.819	625799	0.79	0.9317	62.0	62.0	0.2688	0.2688	62.04	
2,3,7,8-TCDD	21.836	99319	0.82	1.0753	14.8	14.8	0.0635	0.0635		
$ 37Cl4-2,3,7,8-TCDD	21.845	296681		1.0083	27.2	27.2	0.0755	0.0755	67.94	
A Non-2,3,7,8-sub-TCDD	20.750						0.0635	1.170		RQU
S Total TCDD					14.8	14.8	0.0635	0.0635		
D 13C-1,2,3,7,8-PeCDF	27.295	749449	1.61	1.1405	60.7	60.7	0.1437	0.1437	60.69	
1,2,3,7,8-PeCDF	27.312	9395	1.61	1.0543	1.189	1.189	0.0420	0.0420		M
D 13C-2,3,4,7,8-PeCDF	28.793	805322	1.54	1.1253	66.1	66.1	0.1456	0.1456	66.10	
2,3,4,7,8-PeCDF	28.810	7008	1.47	1.0079	0.8634	0.8634	0.0435	0.0435		M
A F1 PeCDFs	24.676						0.0145	0.0145		RQU
A Non-2,3,7,8-sub-PeCDF	28.167	5752	1.55	1.0311	0.7704	0.7176	0.0427	0.4103		RQ
S Total PeCDF					2.823	2.770	0.0427	0.0427		RQ
D 13C-1,2,3,7,8-PeCDD	29.610	475719	1.64	0.7165	61.3	61.3	0.1244	0.1244	61.33	
1,2,3,7,8-PeCDD	29.661						0.0508	0.0508		RQU
A Non-2,3,7,8-sub-PeCDD	28.556	12452	1.55	1.0465	3.232	2.501	0.0508	1.210		RQM
S Total PeCDD					3.232	2.501	0.0508	0.0508		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.941	748830	0.53	0.9648	74.1	74.1	0.1717	0.1717	74.10	
1,2,3,4,7,8-HxCDF	34.966	13788	1.31	1.1474	1.605	1.605	0.0226	0.0226		
D 13C-1,2,3,6,7,8-HxCDF	35.101	707172	0.53	1.0708	63.0	63.0	0.1547	0.1547	63.05	
1,2,3,6,7,8-HxCDF	35.126	3398	1.12	1.2178	0.3946	0.3946	0.0243	0.0243		
D 13C-2,3,4,6,7,8-HxCDF	35.926	672710	0.55	1.0413	61.7	61.7	0.1591	0.1591	61.68	
2,3,4,6,7,8-HxCDF	35.909						0.0216	0.0216		RQU
D 13C-1,2,3,7,8,9-HxCDF	36.818	619440	0.56	0.9731	60.8	60.8	0.1703	0.1703	60.77	
1,2,3,7,8,9-HxCDF	36.818	625	1.24	1.2401	0.1002	0.0814	0.0215	0.0215		RQM
A Non-2,3,7,8-sub-HxCDF	35.074						0.0224	0.1149		RQU
S Total HxCDF					2.100	2.081	0.0225	0.0225		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.616	1047462	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.136	549741	1.23	0.7587	69.2	69.2	0.1719	0.1719	69.18	
1,2,3,4,7,8-HxCDD	36.153	939	1.24	1.0608	0.2082	0.1610	0.0846	0.0846		RQMa
D 13C-1,2,3,6,7,8-HxCDD	36.254	578824	1.20	0.8593	64.3	64.3	0.1518	0.1518	64.31	
1,2,3,6,7,8-HxCDD	36.263	2435	1.40	0.9933	0.4235	0.4235	0.0932	0.0932		M
1,2,3,7,8,9-HxCDD	36.599	6739	1.14	1.1094	1.076	1.076	0.0821	0.0821		
A Non-2,3,7,8-sub-HxCDD	35.432	69542	1.19	1.0545	11.7	11.7	0.0864	9.151		
S Total HxCDD					13.4	13.3	0.0866	0.0866		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.639	517440	0.45	0.7359	67.1	67.1	0.2251	0.2251	67.12	
1,2,3,4,6,7,8-HpCDF	38.648	3495	1.02	1.4421	0.4684	0.4684	0.0384	0.0384		M
1,2,3,4,7,8,9-HpCDF	39.893	925	1.05	1.3092	0.1258	0.1258	0.0352	0.0352		M
D 13C-1,2,3,4,7,8,9-HpCDF	39.885	561511	0.45	0.6854	78.2	78.2	0.2418	0.2418	78.21	
A Non-2,3,7,8-sub-HpCDF	39.277						0.0366	0.0366		U
S Total HpCDF					0.5942	0.5942	0.0368	0.0368		
D 13C-1,2,3,4,6,7,8-HpCDD	39.582	497438	1.03	0.6745	70.4	70.4	0.1701	0.1701	70.40	
1,2,3,4,6,7,8-HpCDD	39.590	86639	1.09	1.0503	16.6	16.6	0.1069	0.1069		
A Non-2,3,7,8-sub-HpCDD	39.277	185569	1.10	1.0503	35.5	35.5	0.1069	35.5		
S Total HpCDD					52.1	52.1	0.1069	0.1069		
D 13C-OCDD	42.085	845399	0.90	0.5446	148.2	148.2	0.2044	0.2044	74.10	
OCDF	42.178	1349	0.85	1.3168	0.2424	0.2424	0.0282	0.0282		M
OCDD	42.085	1762348	0.90	1.0620	392.6	392.6	0.3237	0.3237		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d
Lims ID: 320-76887-A-6-A
Client ID: 11215702-072721-BN-SJSB096 (10-12)
Sample Type: Client
Inject. Date: 18-Aug-2021 10:54:00 ALS Bottle#: 0 Worklist Smp#: 26
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-6-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:11:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 18-Aug-2021 14:18:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.414	21.483	-4		478727	67298	82	205	821		a
333.9338	21.414	21.483	-4		603951	86451	72	180	1201	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.485	20.482	0	1.002	295207	39735	76	190	523		
305.8987	20.485	20.482	0	1.002	370773	48552	47	117	1033	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.451	20.594	-9	0.955	414176	59422	84	210	707		
317.9389	20.476	20.594	-7	0.956	490326	65066	81	202	803	0.84(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	17.973	19.916	-116	0.879	6115	1056	76	190	14		
305.8987	17.956	19.916	-117	0.878	8096	1460	47	117	31	0.76(0.65-0.89)	
303.9016	18.429	19.916	-89	0.901	9825	1397	76	190	18		
305.8987	18.438	19.916	-89	0.902	13890	1834	47	117	39	0.71(0.65-0.89)	
303.9016	18.876	19.916	-62	0.923	8198	1003	76	190	13		
305.8987	18.868	19.916	-63	0.923	12004	1323	47	117	28	0.68(0.65-0.89)	
303.9016	19.272	19.916	-39	0.942	11135	1809	76	190	24		
305.8987	19.272	19.916	-39	0.942	17280	2675	47	117	57	0.64(0.65-0.89)	
	Empc Correction				14461	2349	47	117	50		
303.9016	19.762	19.916	-9	0.966	126744	19715	76	190	259		
305.8987	19.771	19.916	-9	0.967	158901	23641	47	117	503	0.80(0.65-0.89)	
303.9016	21.259	19.916	80	1.040	18660	2700	76	190	36		
305.8987	21.251	19.916	80	1.039	24365	3457	47	117	74	0.77(0.65-0.89)	
303.9016	21.698	19.916	107	1.061	3633	780	76	190	10		
305.8987	21.698	19.916	107	1.061	4929	622	47	117	13	0.74(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	23.661	19.916	224	1.157	22450	4202	76	190	55		
305.8987	23.652	19.916	224	1.157	26168	4501	47	117	96	0.86(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.819	21.790	2	1.019	276535	36355	82	205	443		
333.9338	21.802	21.790	1	1.018	349264	47111	72	180	654	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.836	21.825	1	1.001	44856	5806	14	35	415		
321.8936	21.836	21.825	1	1.001	54463	7310	9	22	812	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.845	21.905	-4	1.020	296681	38046	47	117	809		
A Non-2,3,7,8-sub-TCDD											U
319.8965	18.317	20.750	-146	0.840	620	180	14	35	13		
321.8936	18.317	20.750	-146	0.840	839	280	9	22	31	0.74(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.295	27.343	-3	1.275	461757	68637	68	170	1009		
353.8970	27.287	27.343	-3	1.274	287692	44248	33	82	1341	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.312	27.368	-3	1.001	5802	870	6	15	145		M
341.8567	27.312	27.368	-3	1.001	3593	635	14	35	45	1.61(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.793	28.867	-4	1.345	487782	69075	68	170	1016		
353.8970	28.785	28.867	-5	1.344	317540	45102	33	82	1367	1.54(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	28.810	28.884	-4	1.001	4172	698	6	15	116		M
341.8567	28.819	28.884	-4	1.001	2836	431	14	35	31	1.47(1.32-1.78)	M
A F1 PeCDFs											U
339.8597	24.083	24.676	-36	0.882	64	40	4	10	10		
341.8567	24.100	24.676	-35	0.883	100	62	3	7	21	0.64(1.32-1.78)	
	Empc Correction				41	25	3	7	8		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.847	28.167	-139	0.947	2422	434	6	15	72		
	Empc Correction				1999	375	6	15	63		
341.8567	25.839	28.167	-139	0.947	1290	242	14	35	17	1.88(1.32-1.78)	
339.8597	27.918	28.167	-15	1.023	1459	212	6	15	35		
341.8567	27.910	28.167	-15	1.023	1004	135	14	35	10	1.45(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.610	29.667	-3	1.383	295314	40379	36	90	1122		
369.8919	29.610	29.667	-3	1.383	180405	25492	19	47	1342	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											RQU
355.8546	29.692						9	22			
357.8516	29.692						5	12			
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	26.100	28.556	-147	0.881	1994	399	9	22	44		
357.8516	26.151	28.556	-144	0.883	3677	569	5	12	114	0.54(1.32-1.78)	M
	Empc Correction				1286	257	5	12	51		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
355.8546	26.916	28.556	-98	0.909	4529	756	9	22	84		
	Empc Correction				3661	576	9	22	64		
357.8516	26.908	28.556	-99	0.909	2362	372	5	12	74	1.92(1.32-1.78)	
355.8546	28.516	28.556	-2	0.963	2291	256	9	22	28		
	Empc Correction				1914	280	9	22	31		
357.8516	28.516	28.556	-2	0.963	1235	181	5	12	36	1.86(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.941	34.974	-2	0.954	258607	48729	59	147	826		
385.8610	34.950	34.974	-1	0.954	490223	94102	97	242	970	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.966	35.000	-2	1.001	7810	1529	9	22	170		
375.8178	34.966	35.000	-2	1.001	5978	1090	6	15	182	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.101	35.134	-2	0.959	245890	42733	59	147	724		
385.8610	35.101	35.134	-2	0.959	461282	82201	97	242	847	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.126	35.151	-1	1.001	1796	367	9	22	41		
375.8178	35.126	35.151	-1	1.001	1602	291	6	15	49	1.12(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.926	35.951	-1	0.981	239890	50964	59	147	864		
385.8610	35.926	35.951	-1	0.981	432820	89770	97	242	925	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQU
373.8208	35.968						9	22			
375.8178	35.968						6	15			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.818	36.843	-1	1.006	222021	49200	59	147	834		
385.8610	36.818	36.843	-1	1.006	397419	89605	97	242	924	0.56(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	36.818	36.852	-2	1.000	346	100	9	22	11		
375.8178	36.827	36.852	-1	1.000	424	111	6	15	19	0.82(1.05-1.43)	M
	Empc Correction				279	80	6	15	13		
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.477	35.074	-96	0.958	527	124	9	22	14		
375.8178	33.485	35.074	-95	0.958	512	116	6	15	19	1.03(1.05-1.43)	
	Empc Correction				424	99	6	15	17		
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.616	36.641	-1		584325	130768	70	175	1868		
403.8529	36.616	36.641	-1		463137	104603	53	132	1974	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.136	36.161	-1	0.987	303435	66765	70	175	954		
403.8529	36.136	36.161	-1	0.987	246306	58092	53	132	1096	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQMa
389.8158	36.153	36.178	-1	1.000	520	162	23	57	7		M
391.8127	36.153	36.178	-1	1.000	694	178	22	55	8	0.75(1.05-1.43)	
	Empc Correction				419	130	22	55	6		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.254	36.279	-1	0.990	316083	65785	70	175	940		
403.8529	36.254	36.279	-1	0.990	262741	55155	53	132	1041	1.20(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8158	36.263	36.296	-2	1.000	1419	295	23	57	13		M
391.8127	36.271	36.296	-1	1.000	1016	244	22	55	11	1.40(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.599	36.658	-4	1.013	3589	603	23	57	26		
391.8127	36.625	36.658	-2	1.014	3150	479	22	55	22	1.14(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.243	35.432	-71	0.945	29341	5137	23	57	223		
391.8127	34.251	35.432	-71	0.945	25109	4704	22	55	214	1.17(1.05-1.43)	
389.8158	35.371	35.432	-4	0.976	8448	1685	23	57	73		
391.8127	35.371	35.432	-4	0.976	6644	1402	22	55	64	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.639	38.647	0	1.055	161446	41161	66	165	624		
419.8220	38.631	38.647	-1	1.055	355994	88948	90	225	988	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7817	38.648	38.654	0	1.000	1763	413	22	55	19		M
409.7788	38.639	38.654	-1	1.000	1732	424	7	17	61	1.02(0.88-1.20)	M
1,2,3,4,7,8,9-HpCDF											M
407.7817	39.893	39.900	0	1.000	474	184	22	55	8		M
409.7788	39.893	39.900	0	1.000	451	182	7	17	26	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.885	39.901	-1	1.089	173341	47491	66	165	720		
419.8220	39.885	39.901	-1	1.089	388170	108741	90	225	1208	0.45(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											U
407.7817	39.277						22	55			
409.7788	39.277						7	17			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.582	39.590	0	1.081	252532	67674	66	165	1025		
437.8140	39.582	39.590	0	1.081	244906	67747	42	105	1613	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.590	39.597	0	1.000	45180	12958	34	85	381		
425.7737	39.590	39.597	0	1.000	41459	11382	27	67	422	1.09(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.950	39.277	-20	0.984	97269	26230	34	85	771		
425.7737	38.950	39.277	-20	0.984	88300	23501	27	67	870	1.10(0.88-1.20)	
13C-OCDD											
469.7780	42.085	42.094	-1	1.149	400261	90920	64	160	1421		
471.7750	42.077	42.094	-1	1.149	445138	108075	41	102	2636	0.90(0.76-1.02)	
OCDF											M
441.7428	42.178	42.187	-1	1.002	619	185	4	10	46		M
443.7399	42.178	42.187	-1	1.002	730	264	11	27	24	0.85(0.76-1.02)	M
OCDD											
457.7377	42.085	42.103	-1	1.000	834375	199482	66	165	3022		
459.7348	42.085	42.103	-1	1.000	927973	219360	71	177	3090	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 19-Aug-2021 13:11:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Lims ID:	320-76887-A-6-A		
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Inject. Date:	18-Aug-2021 10:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	26

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	904502	124488

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	904502	124488

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.973	6115	1056	8096	1460	1.45	0.76	
18.429	9825	1397	13890	1834	2.43	0.71	
18.876	8198	1003	12004	1323	2.07	0.68	
19.272	11135	1809	17280	2675	2.91	0.64	RQ
19.272	11135	1809	14461	2349	2.62		Empc Correction
19.762	126744	19715	158901	23641	29.2	0.80	
21.259	18660	2700	24365	3457	4.40	0.77	
21.698	3633	780	4929	622	0.8763	0.74	
23.661	22450	4202	26168	4501	4.98	0.86	
Signal Totals:							
	206760	32662	262814	39187			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	472393	72175				0.78	RQ
	469574	71849					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 48.350 = (472393 * 100.000) / (904502 * 1.080)

Empc Amount: 48.061 = (469574 * 100.000) / (904502 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 13:11:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Lims ID:	320-76887-A-6-A		
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Inject. Date:	18-Aug-2021 10:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	26

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	625799	83466

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	625799	83466

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.317	620	180	839	280	0.2168	0.74	
19.711	1787	278	2112	424	0.5794	0.85	
21.354	944	175	799	174	0.2590	1.18	RQ
21.354	615	133	799	174	0.2101		Empc Correction
21.612	1946	357	2461	380	0.6549	0.79	
22.525	3213	577	4659	580	1.17	0.69	
23.687	368	82	118	56	0.0722	3.12	RQ
23.687	90	43	118	56	0.0309		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 13:11:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Lims ID:	320-76887-A-6-A		
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Inject. Date:	18-Aug-2021 10:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	26

F1 PeCDFs, RT: 24.676

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	749449	112885
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	805322	114177

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	777385	113531

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.083	64	40	100	62	0.0205	0.64	RQ
24.083	64	40	41	25	0.0131		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Lims ID:	320-76887-A-6-A		
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Inject. Date:	18-Aug-2021 10:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	26

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	749449	112885
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	805322	114177

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	777385	113531

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.847	2422	434	1290	242	0.4631	1.88	RQ
25.847	1999	375	1290	242	0.4103		Empc Correction
27.918	1459	212	1004	135	0.3073	1.45	
Signal Totals:							
	3458	587	2294	377			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6175	1023				1.69	RQ
	5752	964					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7704 = (6175 * 100.000) / (777385 * 1.031)
Empc Amount: 0.7176 = (5752 * 100.000) / (777385 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 13:11:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Lims ID:	320-76887-A-6-A		
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Inject. Date:	18-Aug-2021 10:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	26

Non-2,3,7,8-sub-PeCDD, RT: 28.556

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	475719	65871

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	475719	65871

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.100	1994	399	3677	569	1.14	0.54	RQM
26.100	1994	399	1286	257	0.6588		Empc Correction
26.916	4529	756	2362	372	1.38	1.92	RQ
26.916	3661	576	2362	372	1.21		Empc Correction
28.516	2291	256	1235	181	0.7083	1.86	RQ
28.516	1914	280	1235	181	0.6325		Empc Correction
Signal Totals:							
	7569	1255	4883	810			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	16088	2533				1.21	RQM
	12452	2065					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.232 = (16088 * 100.000) / (475719 * 1.046)

Empc Amount: 2.501 = (12452 * 100.000) / (475719 * 1.046)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 13:11:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Lims ID:	320-76887-A-6-A		
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Inject. Date:	18-Aug-2021 10:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	26

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	748830	142831
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	707172	124934
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	672710	140734
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	619440	138805

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	687038	136826

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.477	527	124	512	116	0.1255	1.03	RQ
33.477	527	124	424	99	0.1149		Empc Correction
34.335	387	117	98	64	0.0586	3.95	RQ
34.335	121	79	98	64	0.0265		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 13:11:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Lims ID:	320-76887-A-6-A		
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Inject. Date:	18-Aug-2021 10:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	26

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	549741	124857
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	578824	120940
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	564282	122898

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.243	29341	5137	25109	4704	9.15	1.17	
35.371	8448	1685	6644	1402	2.54	1.27	
Signal Totals:							
	37789	6822	31753	6106			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	69542	12928				1.19	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 11.687 = (69542 * 100.000) / (564282 * 1.055)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Lims ID:	320-76887-A-6-A		
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Inject. Date:	18-Aug-2021 10:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	26

Non-2,3,7,8-sub-HpCDF, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	517440	130109
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	561511	156232

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	539475	143170

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 19-Aug-2021 13:11:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Lims ID:	320-76887-A-6-A		
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Inject. Date:	18-Aug-2021 10:54:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	26

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	497438	135421

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	497438	135421

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.950	97269	26230	88300	23501	35.5	1.10	
Signal Totals:							
	97269	26230	88300	23501			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	185569	49731				1.10	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 35.518 = (185569 * 100.000) / (497438 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.31
Area: 3910
Amount: 1.245386
Amount Units: pg/ul

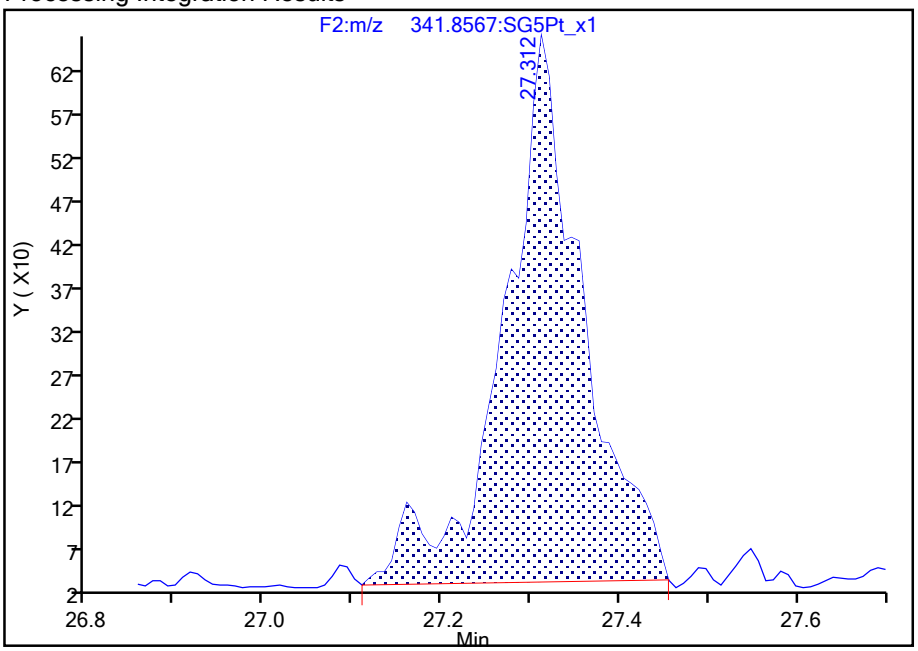

Manual Integration Results

RT: 27.31
Area: 3593
Amount: 1.189065
Amount Units: pg/ul

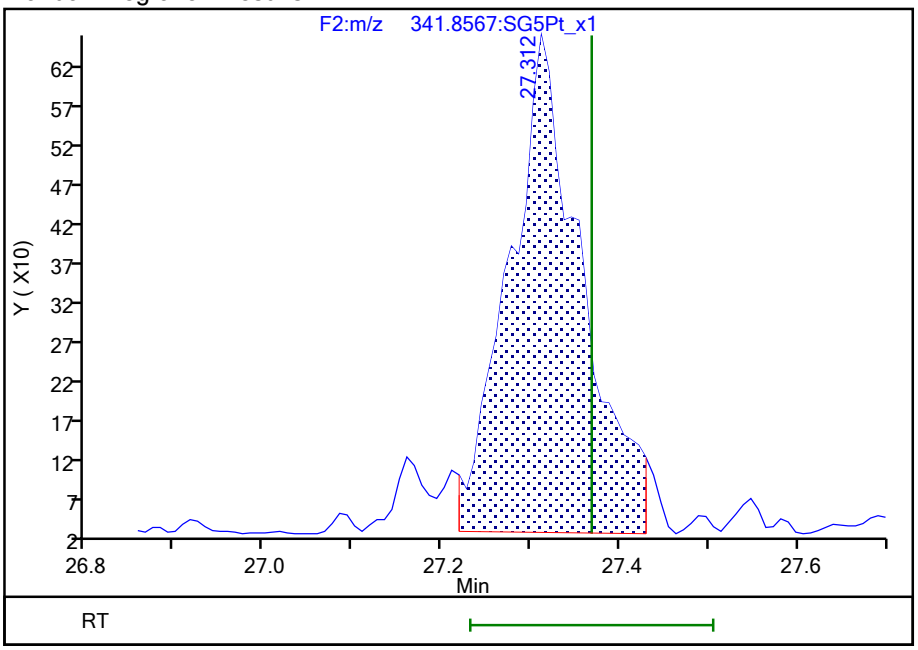

Reviewer: dadunj, 19-Aug-2021 13:10:55

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.31
Area: 5930
Amount: 1.245386
Amount Units: pg/ul

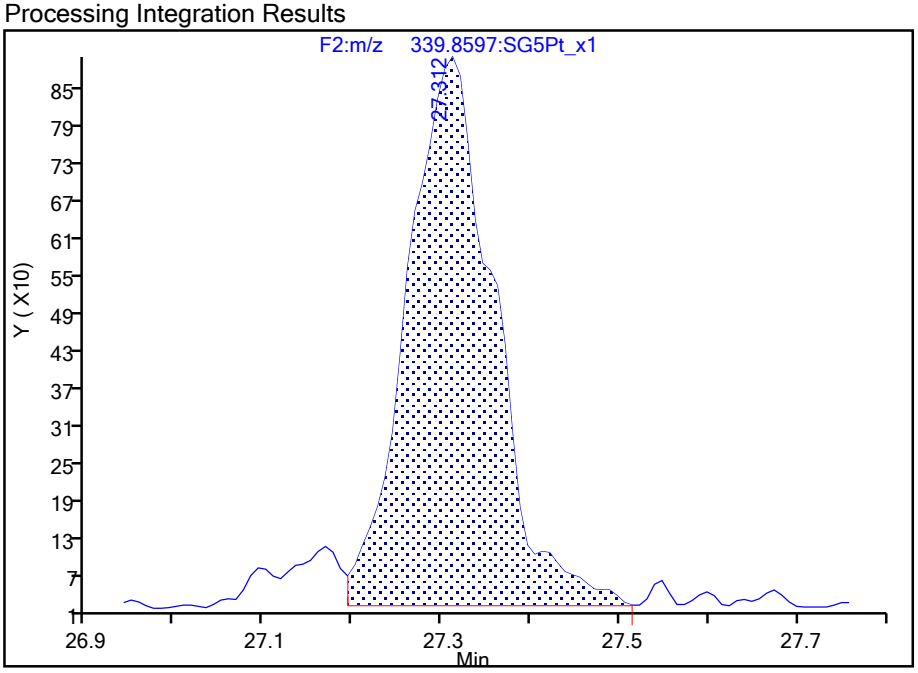

Manual Integration Results

RT: 27.31
Area: 5802
Amount: 1.189065
Amount Units: pg/ul

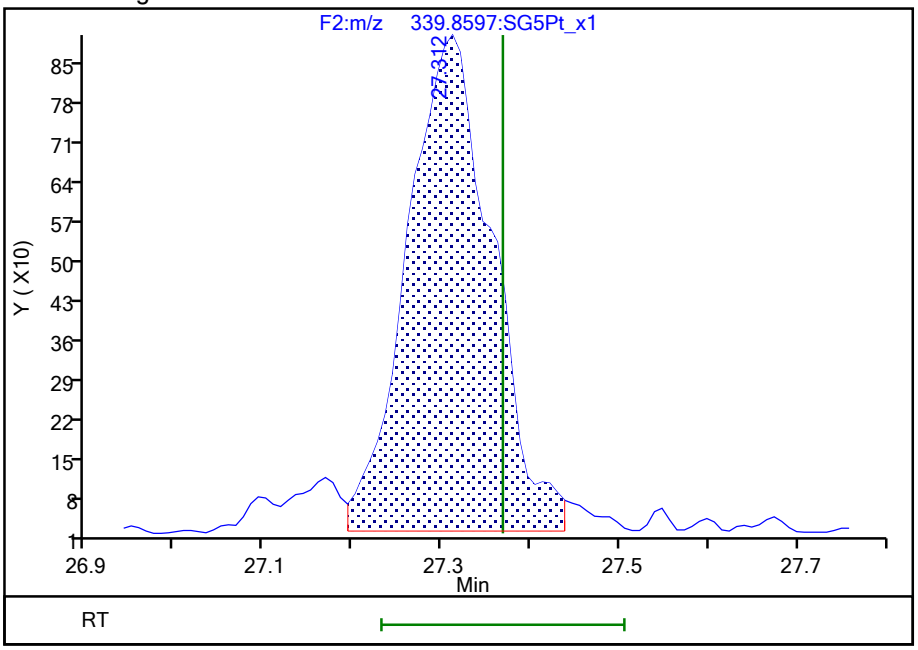

Reviewer: dadunj, 19-Aug-2021 13:10:57
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

782413

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 28.82
Area: 2798
Amount: 0.812171
Amount Units: pg/ul

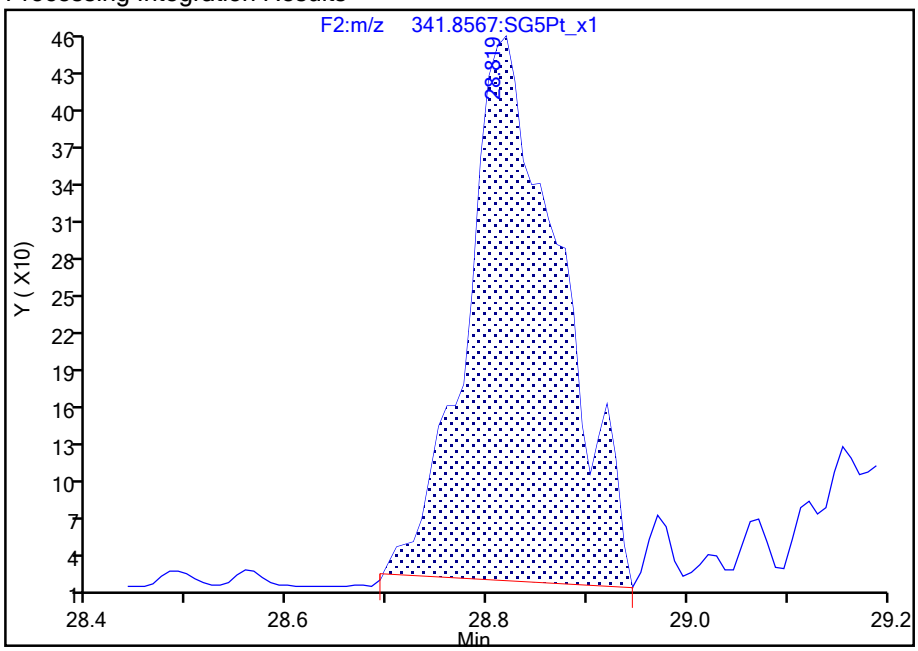

Manual Integration Results

RT: 28.82
Area: 2836
Amount: 0.863424
Amount Units: pg/ul

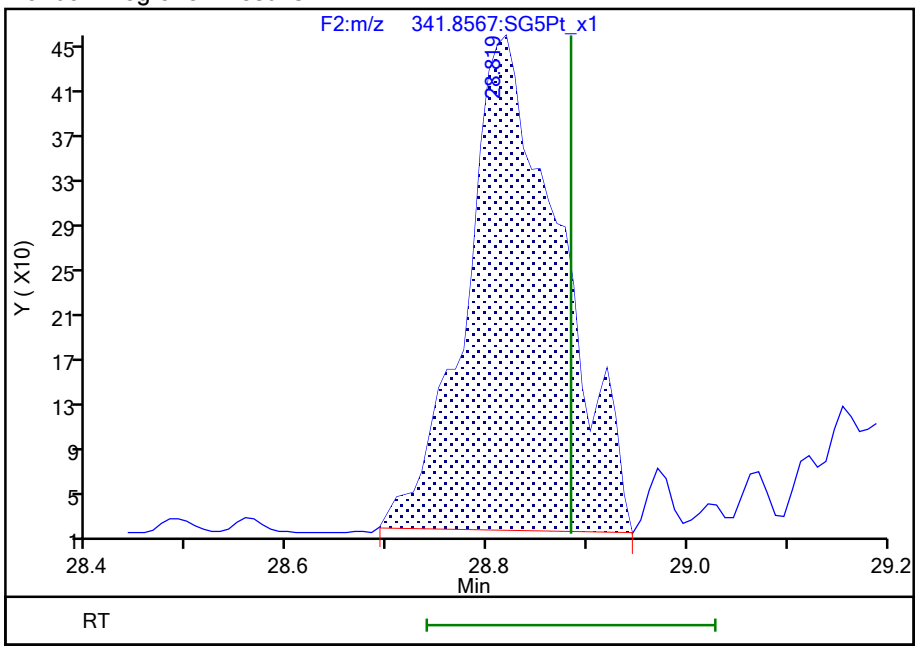

Reviewer: dadunj, 19-Aug-2021 13:07:07

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 28.81
Area: 3794
Amount: 0.812171
Amount Units: pg/ul

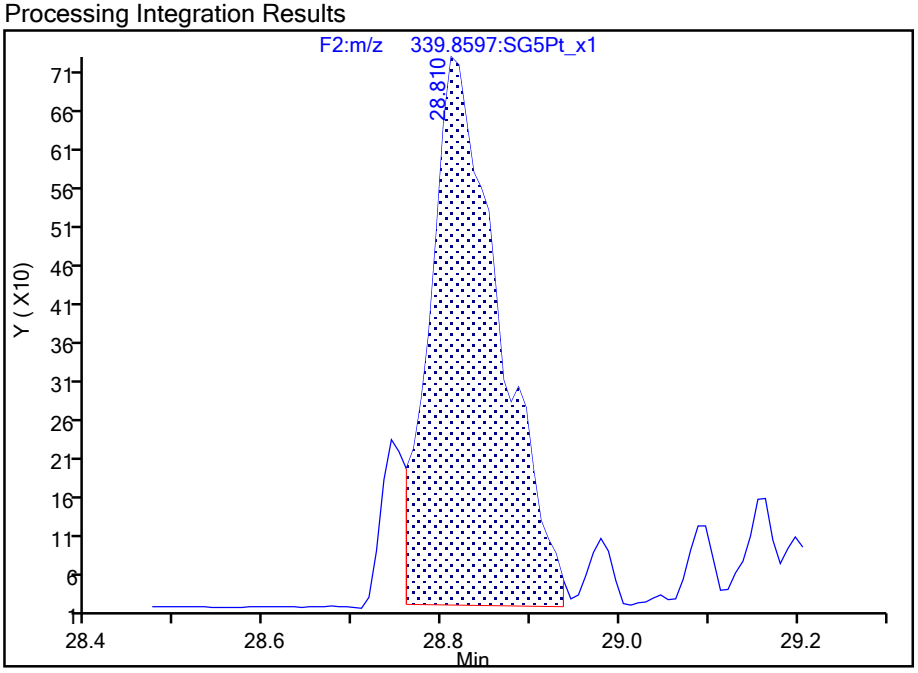

Manual Integration Results

RT: 28.81
Area: 4172
Amount: 0.863424
Amount Units: pg/ul

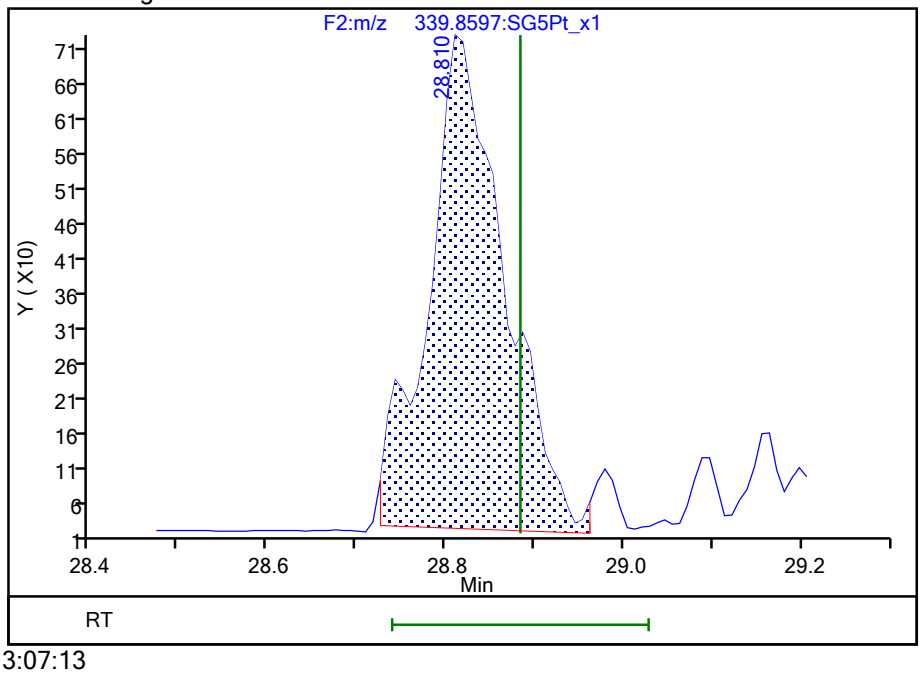

Reviewer: dadunj, 19-Aug-2021 13:07:13

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (26.03- 31.09)

Signal: 2

Processing Integration Results

RT = 26.151 Area = 3108

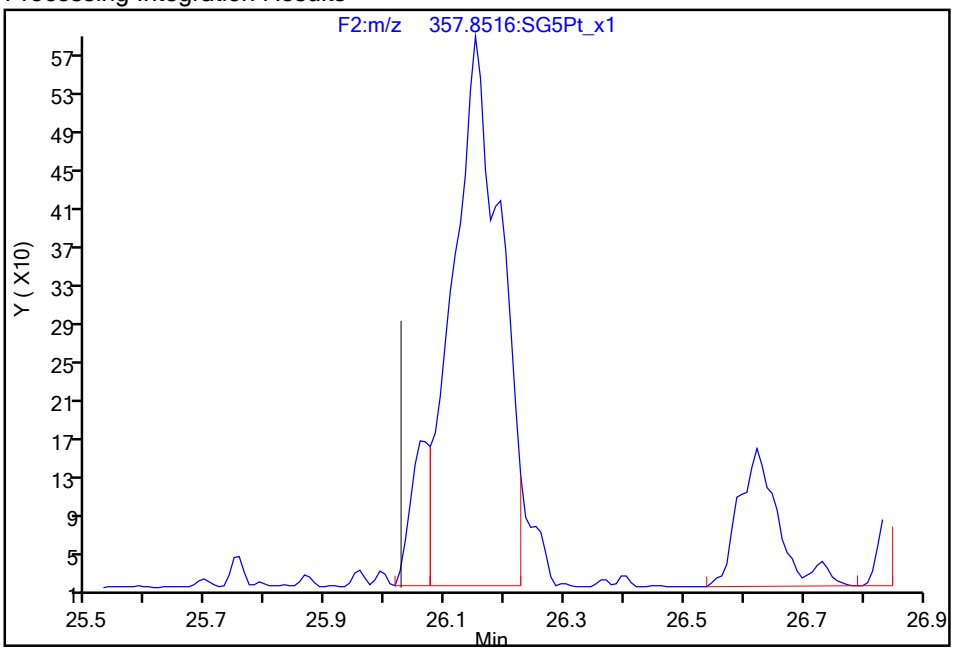

Manual Integration Results

RT = 26.151 Area = 3677 M

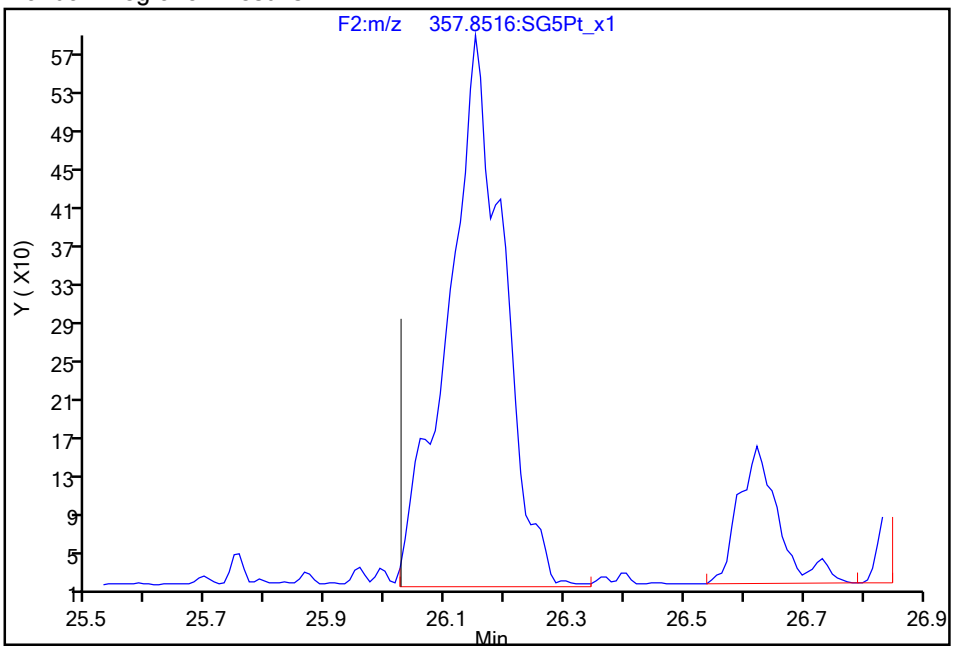

Reviewer: dadunj, 19-Aug-2021 13:07:39

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.83
Area: 797
Amount: 0.148793
Amount Units: pg/ul

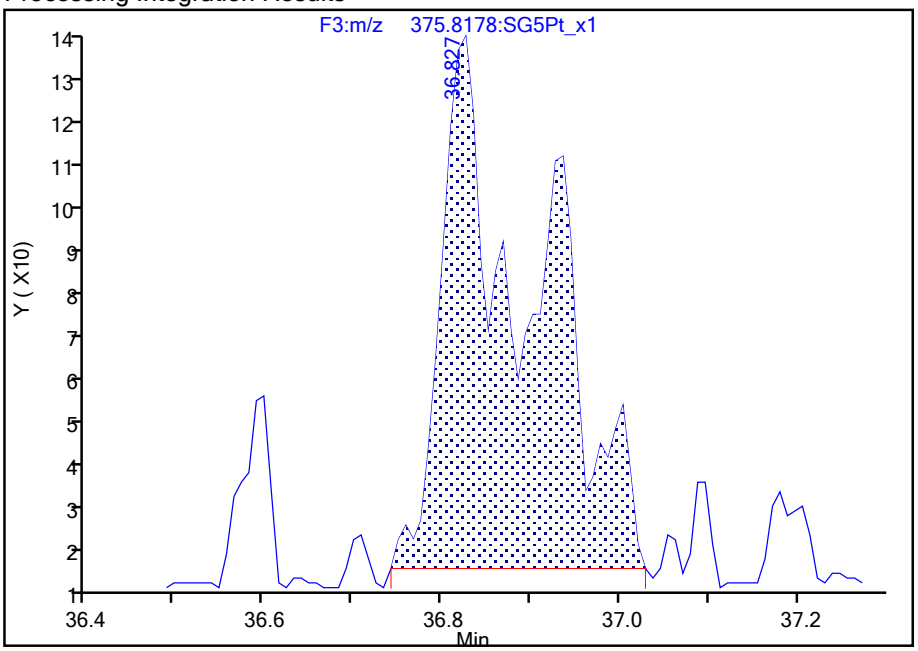

Manual Integration Results

RT: 36.83
Area: 424
Amount: 0.100237
Amount Units: pg/ul

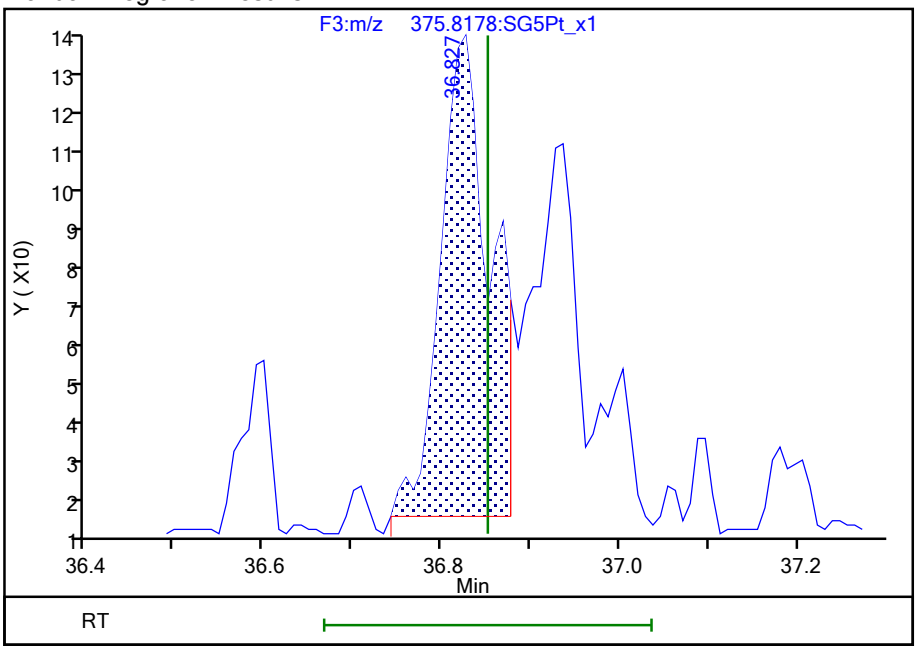

Reviewer: dadunj, 19-Aug-2021 13:08:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 36.27
Area: 1016
Amount: 0.506722
Amount Units: pg/ul

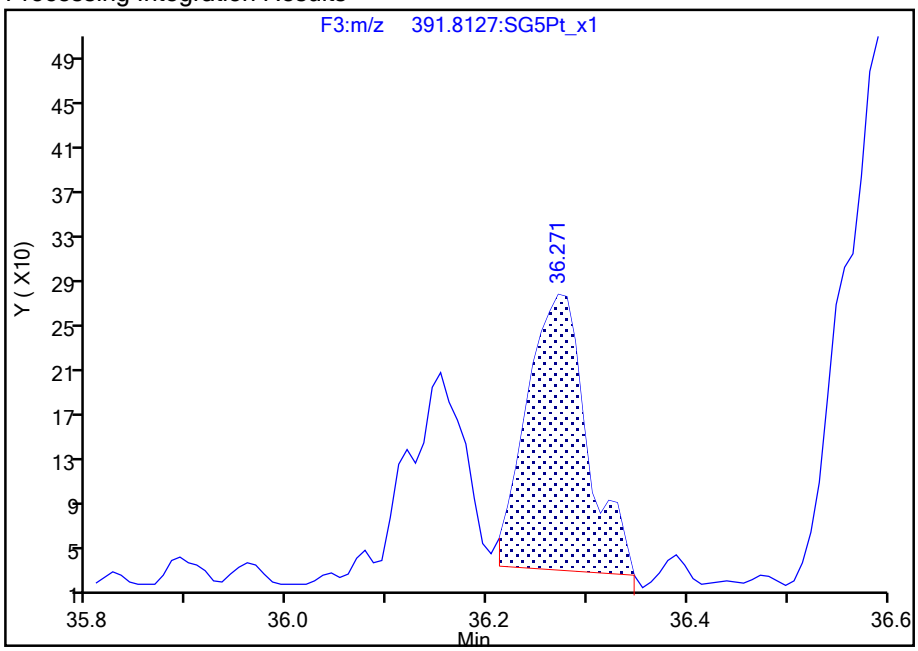

Manual Integration Results

RT: 36.15
Area: 694
Amount: 0.208176
Amount Units: pg/ul

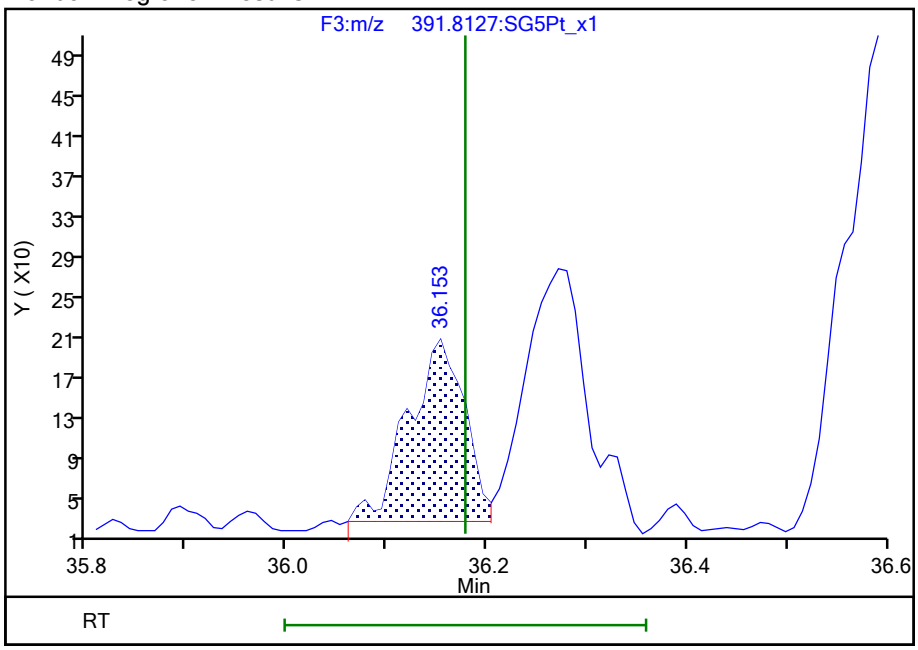

Reviewer: dadunj, 19-Aug-2021 13:09:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

RT: 36.26
Area: 2955
Amount: 0.506722
Amount Units: pg/ul

Processing Integration Results

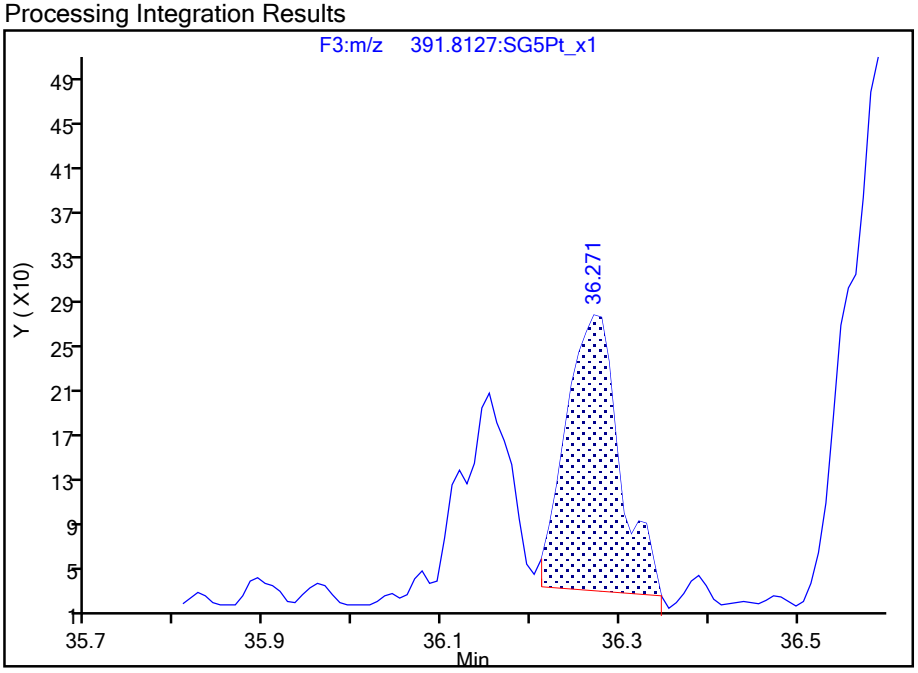

Manual Integration Results

RT: 36.15
Area: 1214
Amount: 0.208176
Amount Units: pg/ul
Reviewer: dadunj, 19-Aug-2021 13:09:12
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 36.26
Area: 1939
Amount: 0.506722
Amount Units: pg/ul

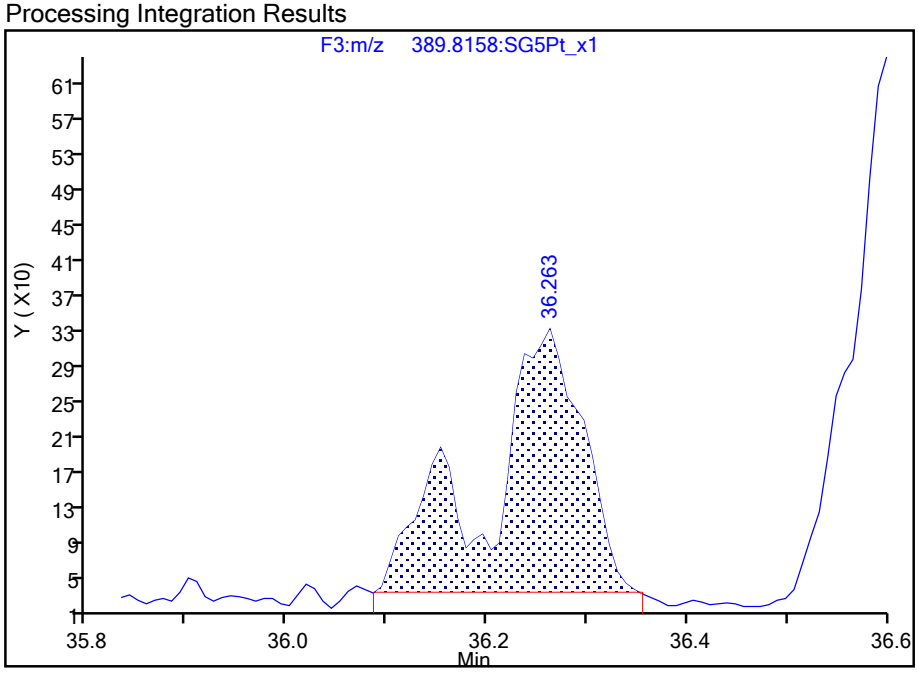

Manual Integration Results

RT: 36.15
Area: 520
Amount: 0.208176
Amount Units: pg/ul

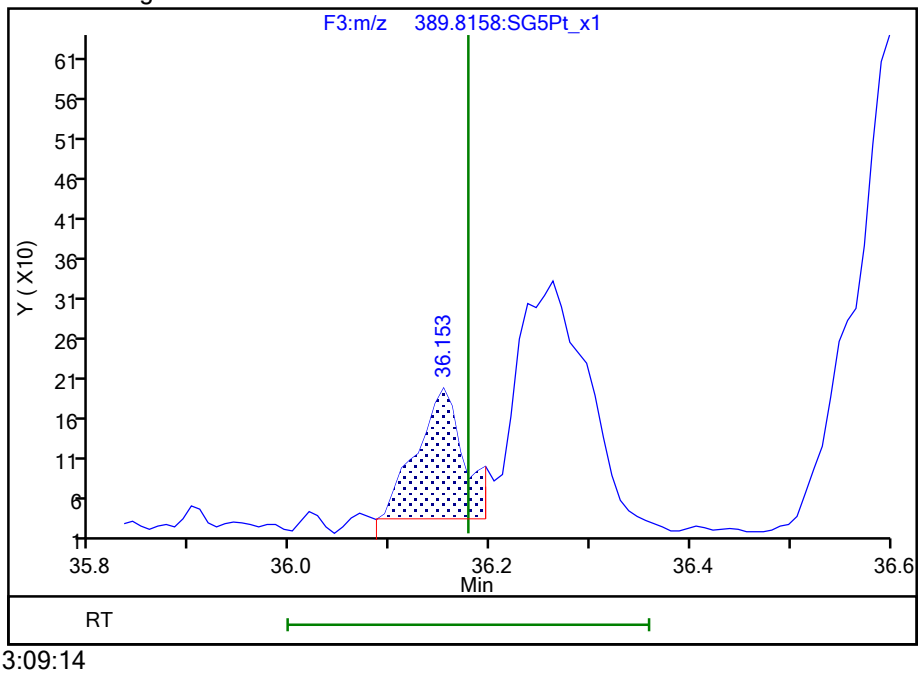

Reviewer: dadunj, 19-Aug-2021 13:09:14

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

782420

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 36.26
Area: 1939
Amount: 0.513940
Amount Units: pg/ul

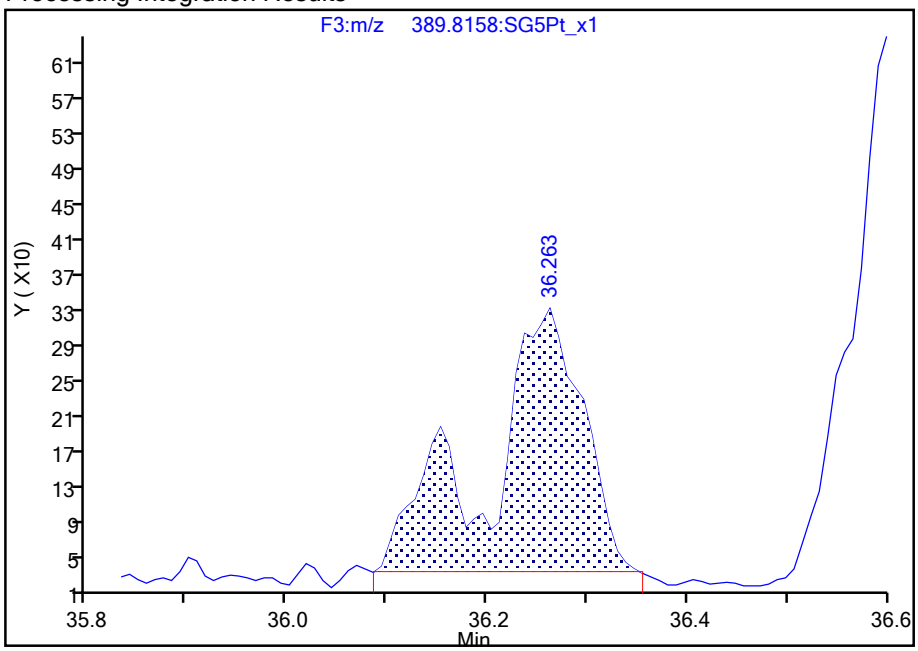

Manual Integration Results

RT: 36.26
Area: 1419
Amount: 0.423500
Amount Units: pg/ul

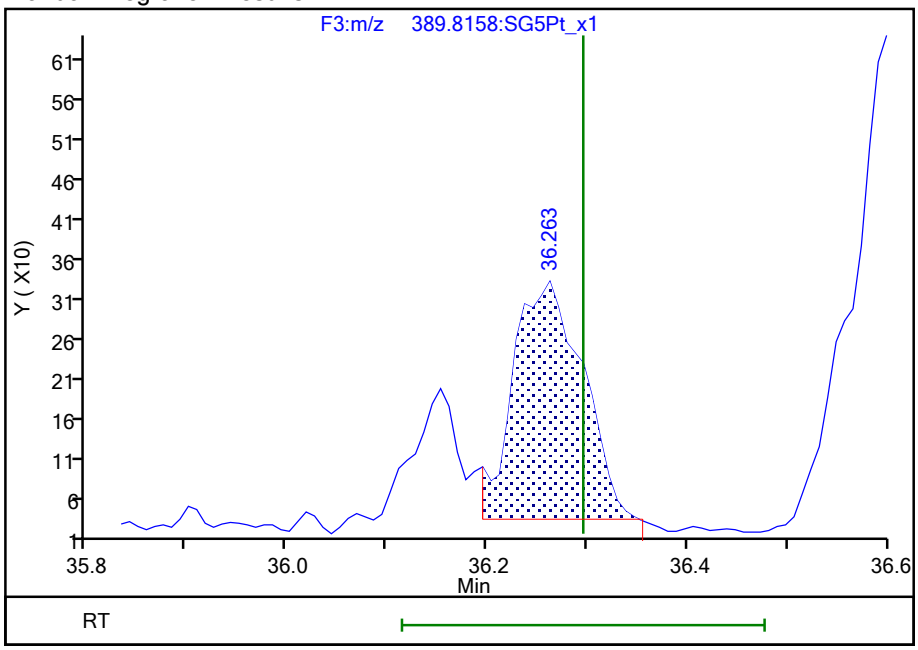

Reviewer: dadunj, 19-Aug-2021 13:09:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 38.65
Area: 1836
Amount: 0.485403
Amount Units: pg/ul

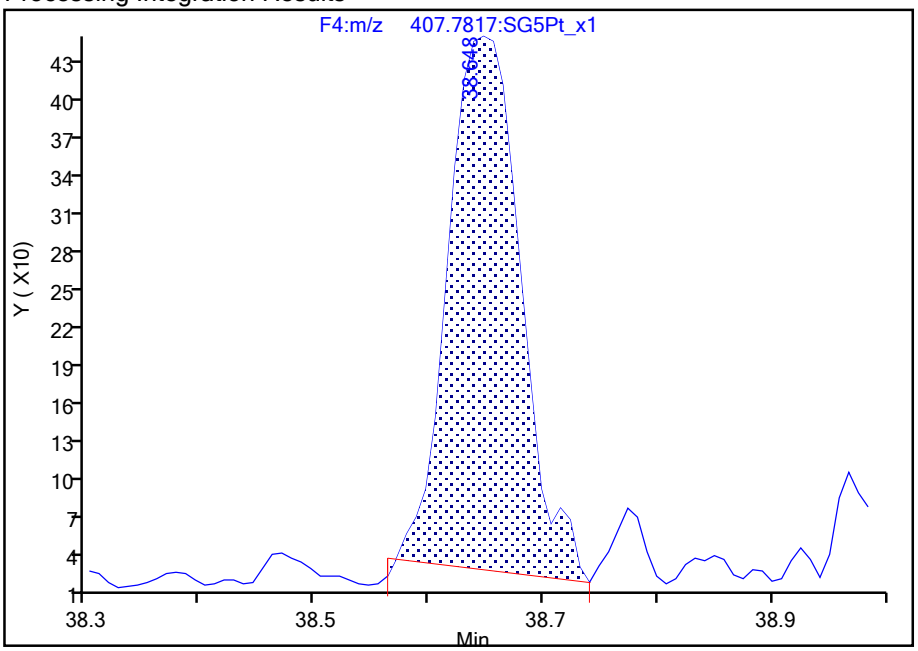

Manual Integration Results

RT: 38.65
Area: 1763
Amount: 0.468383
Amount Units: pg/ul

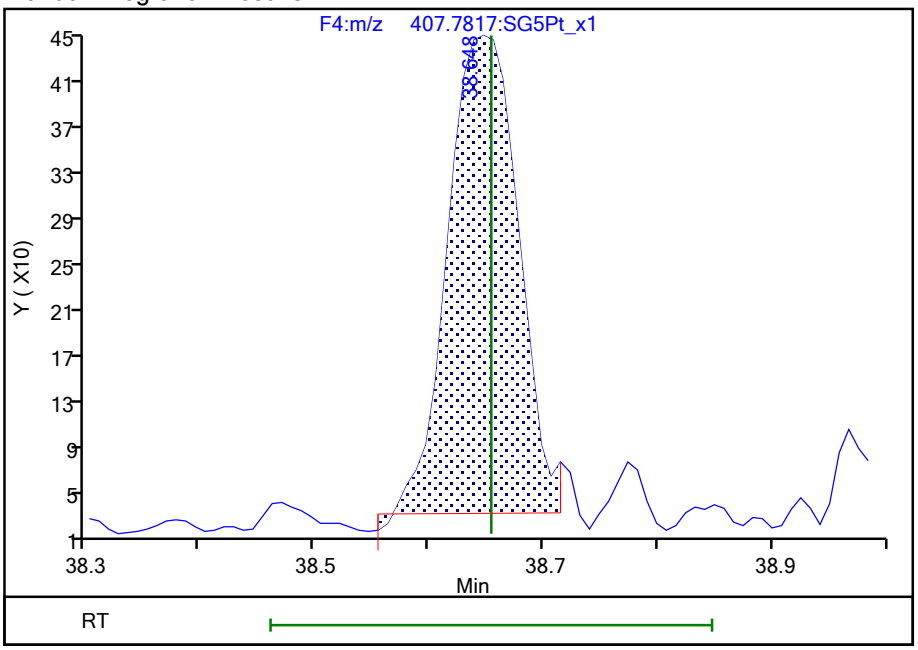

Reviewer: dadunj, 19-Aug-2021 13:09:43

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.64
Area: 1786
Amount: 0.485403
Amount Units: pg/ul

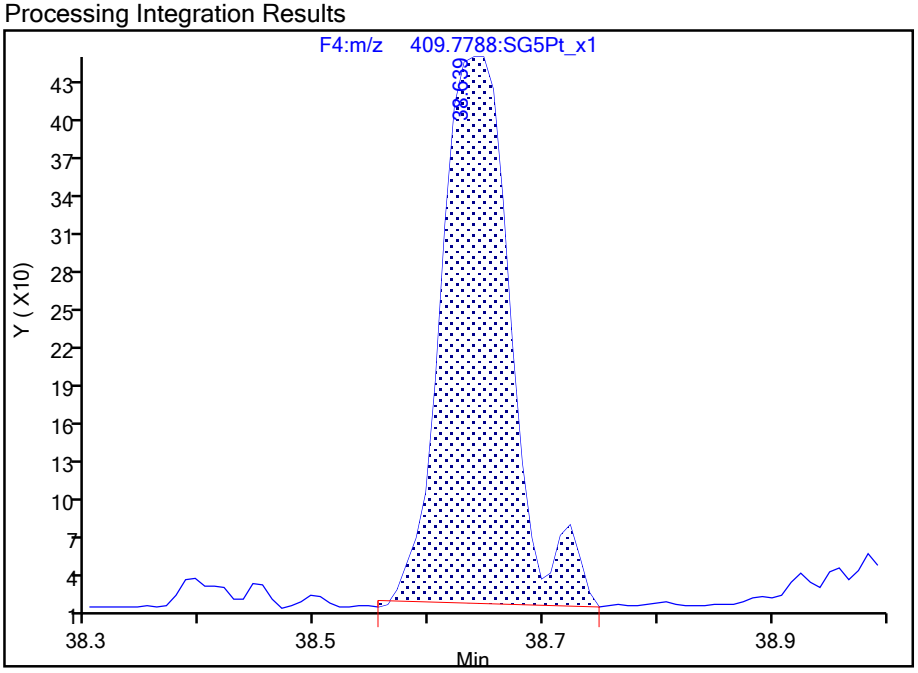

Manual Integration Results

RT: 38.64
Area: 1732
Amount: 0.468383
Amount Units: pg/ul

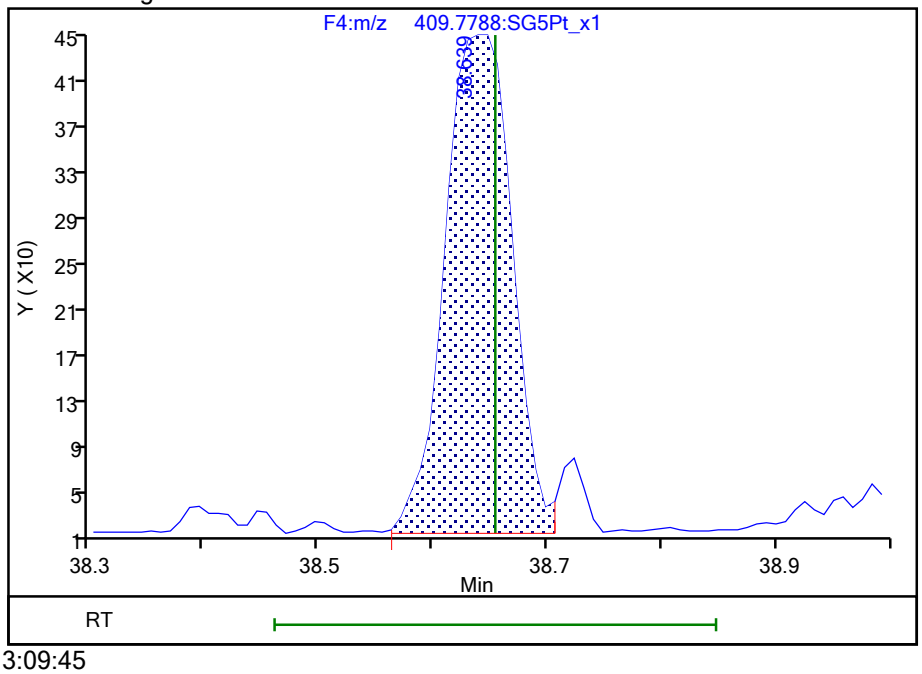

Reviewer: dadunj, 19-Aug-2021 13:09:45
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

782423

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 39.89
Area: 600
Amount: 0.142973
Amount Units: pg/ul

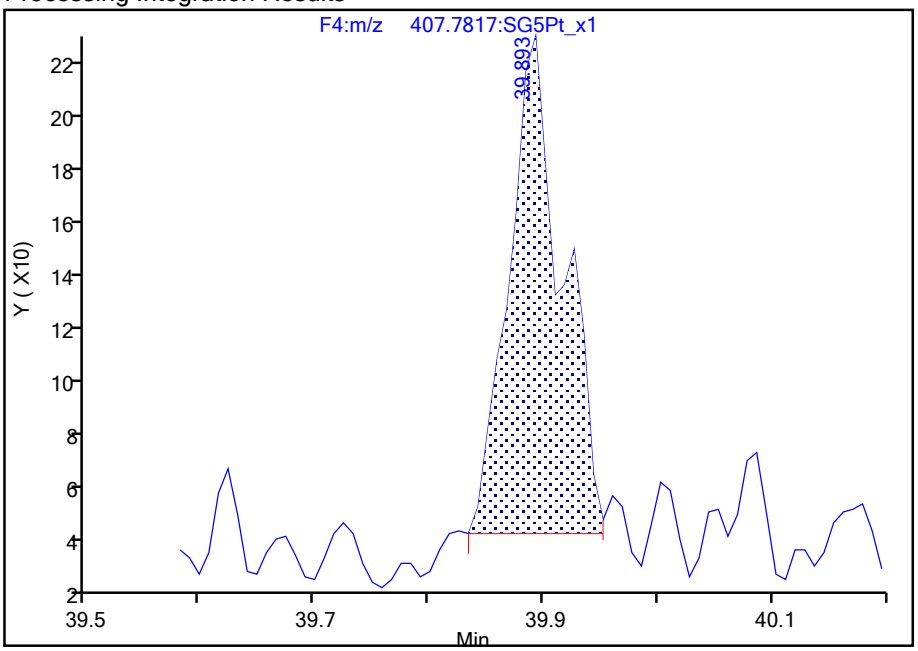

Manual Integration Results

RT: 39.89
Area: 474
Amount: 0.125832
Amount Units: pg/ul

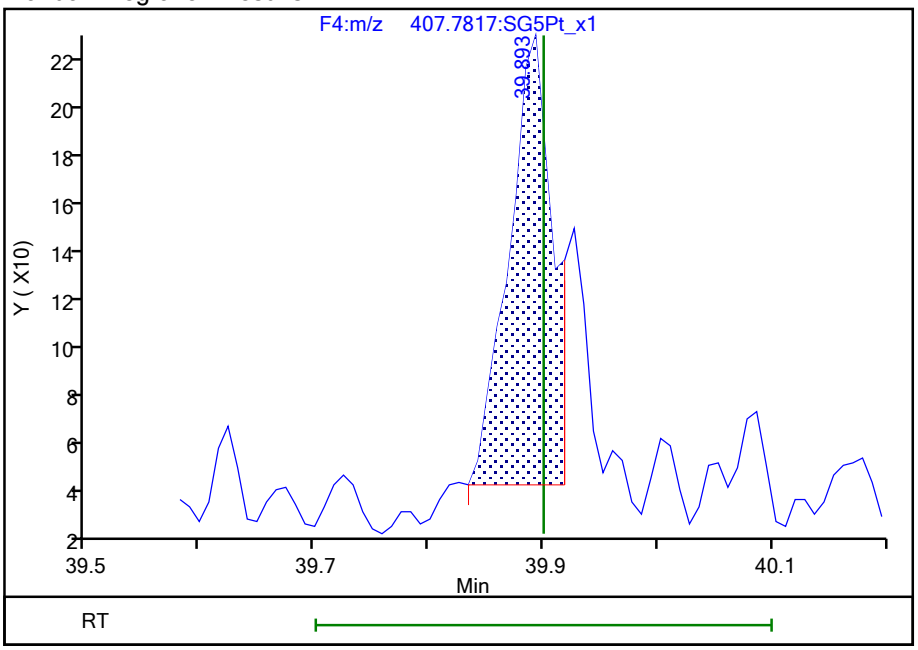

Reviewer: dadunj, 19-Aug-2021 13:09:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 42.18
Area: 1589
Amount: 0.526761
Amount Units: pg/ul

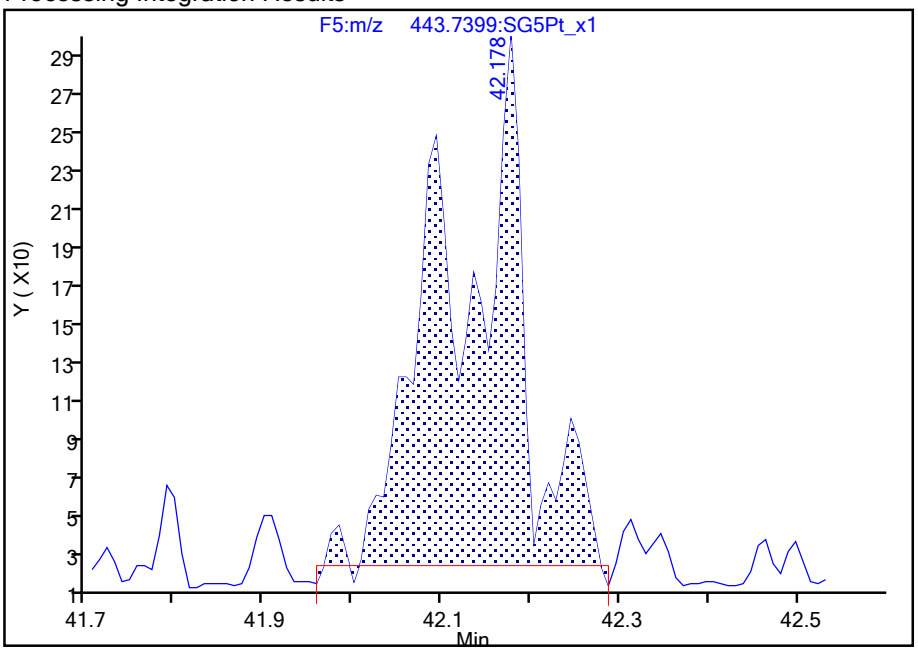

Manual Integration Results

RT: 42.18
Area: 730
Amount: 0.242360
Amount Units: pg/ul

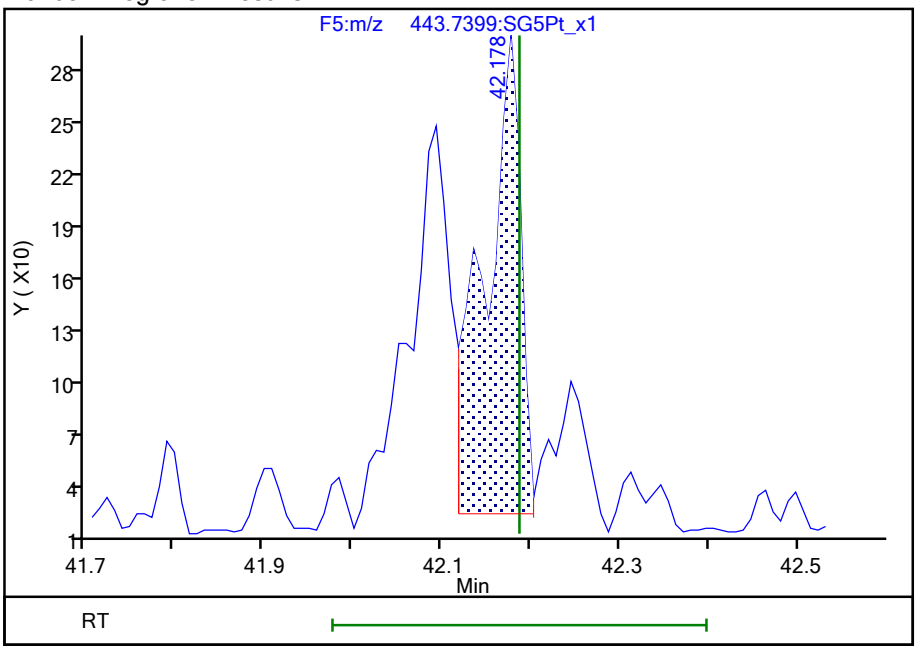

Reviewer: dadunj, 19-Aug-2021 13:10:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d				
Injection Date:	18-Aug-2021 10:54:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-6-A	Lab Sample ID:	320-76887-6		
Client ID:	11215702-072721-BN-SJSB096 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 42.18
Area: 1343
Amount: 0.526761
Amount Units: pg/ul

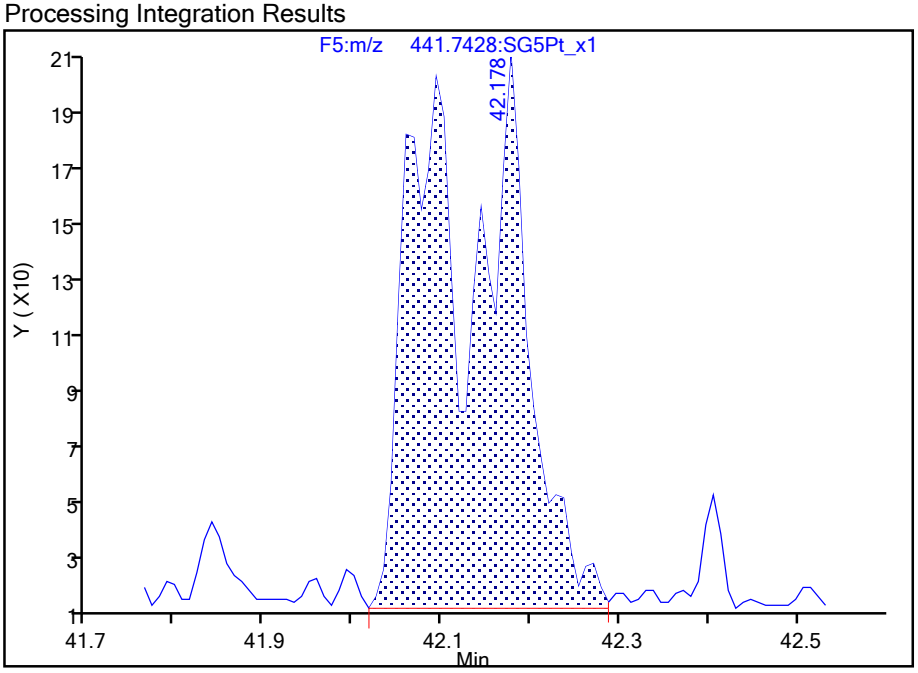

Manual Integration Results

RT: 42.18
Area: 619
Amount: 0.242360
Amount Units: pg/ul

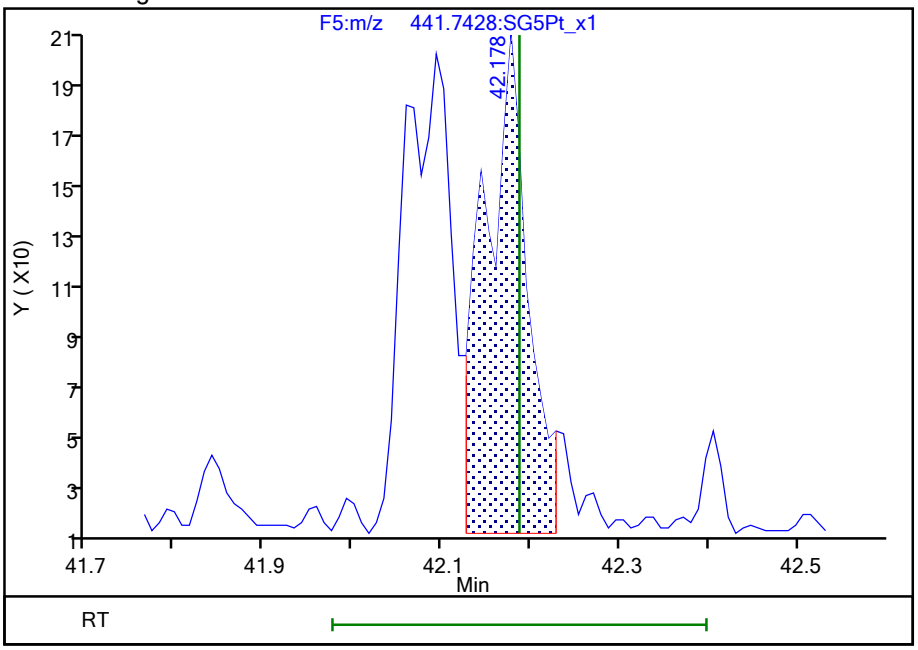

Reviewer: dadunj, 19-Aug-2021 13:10:12
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

782426

Report Date: 19-Aug-2021 13:11:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

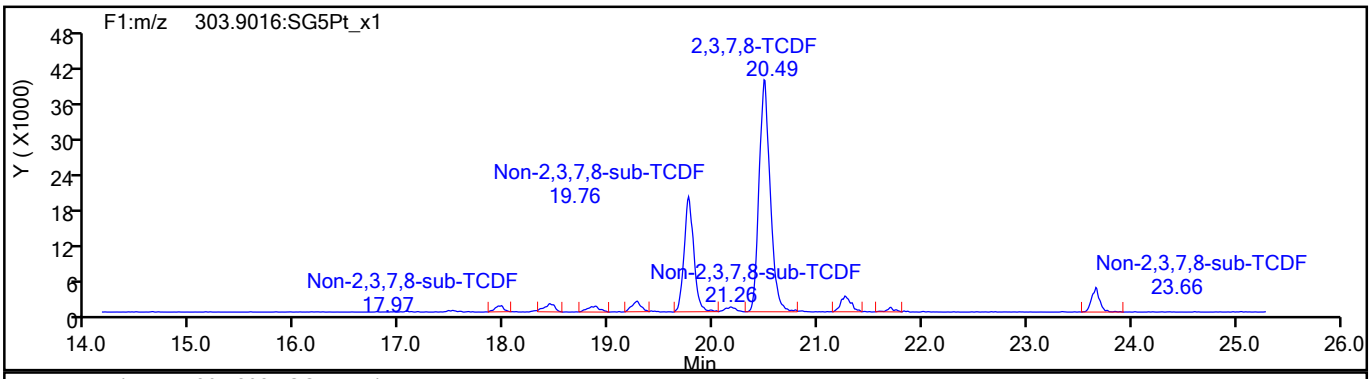

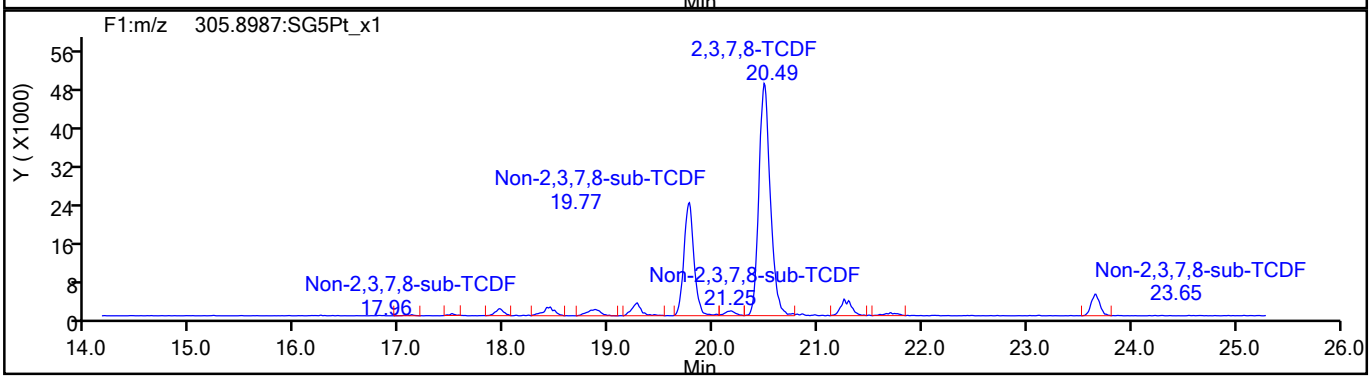

TCDF Standards

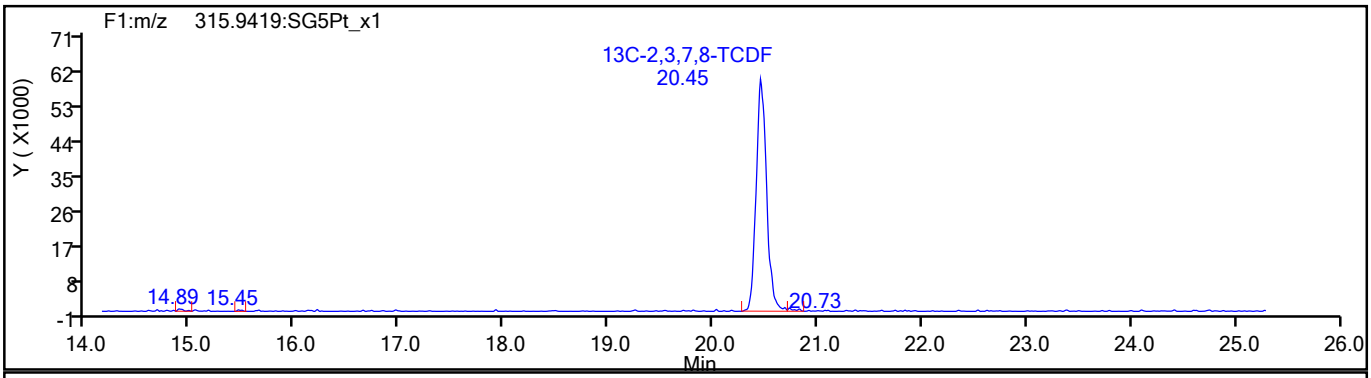

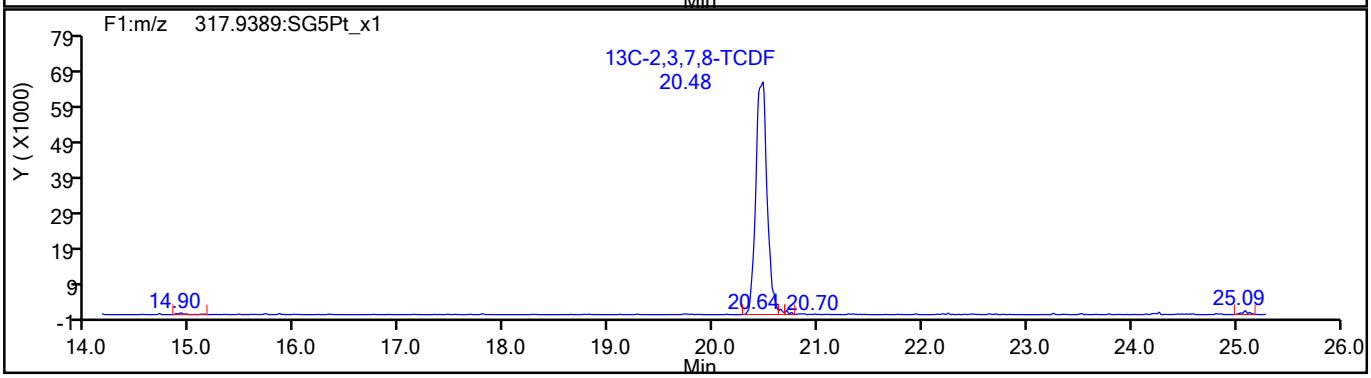

782427

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

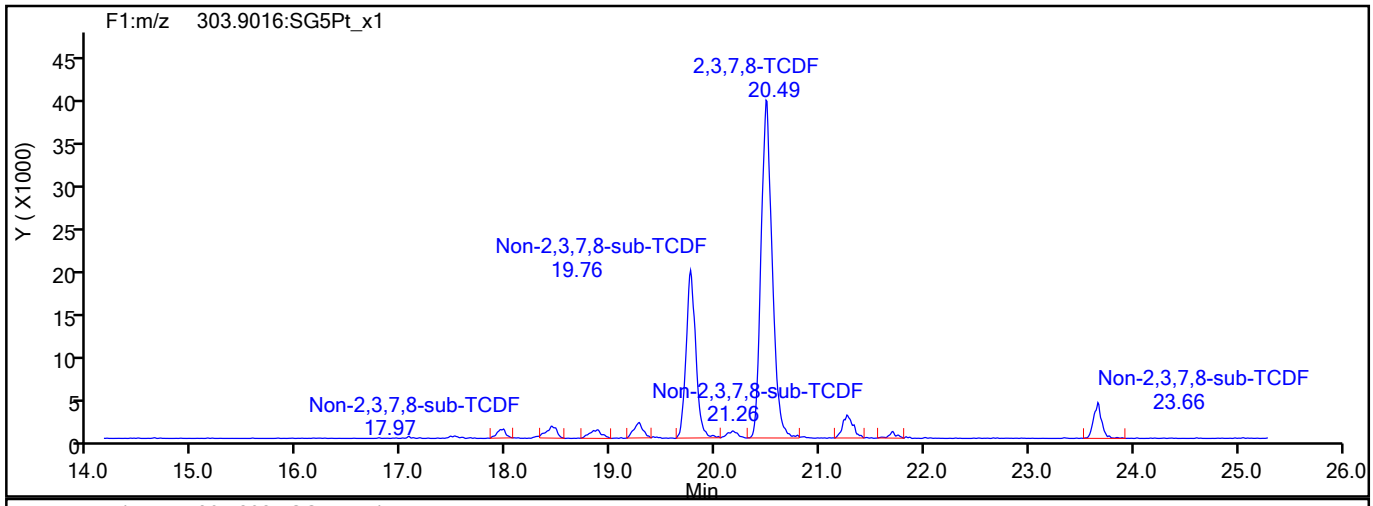

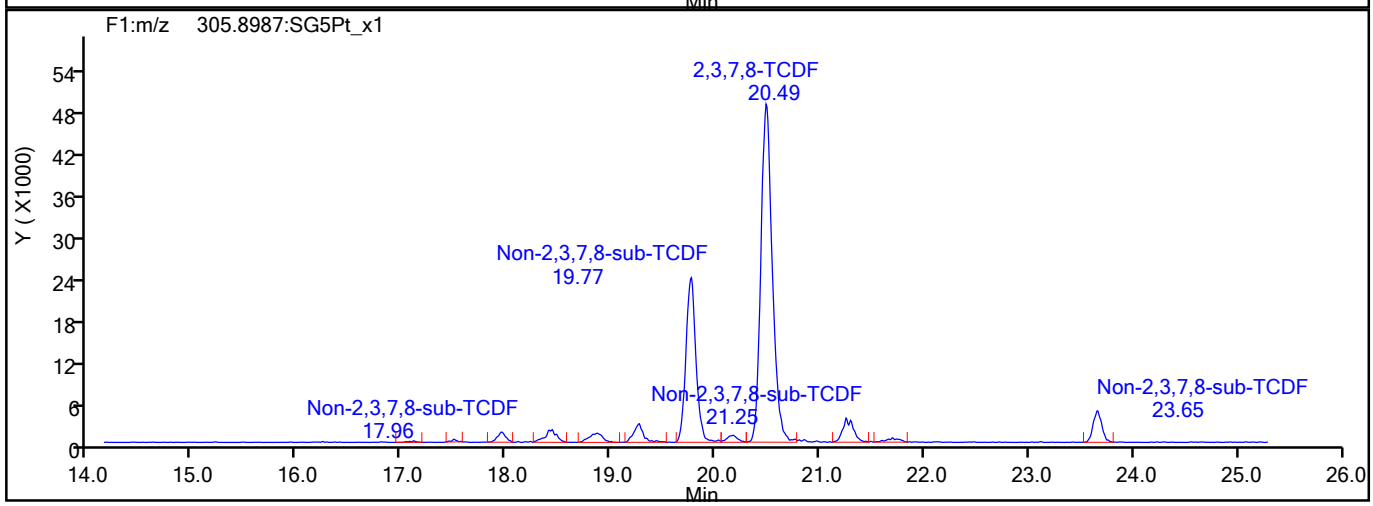

TCDF Interference Mass

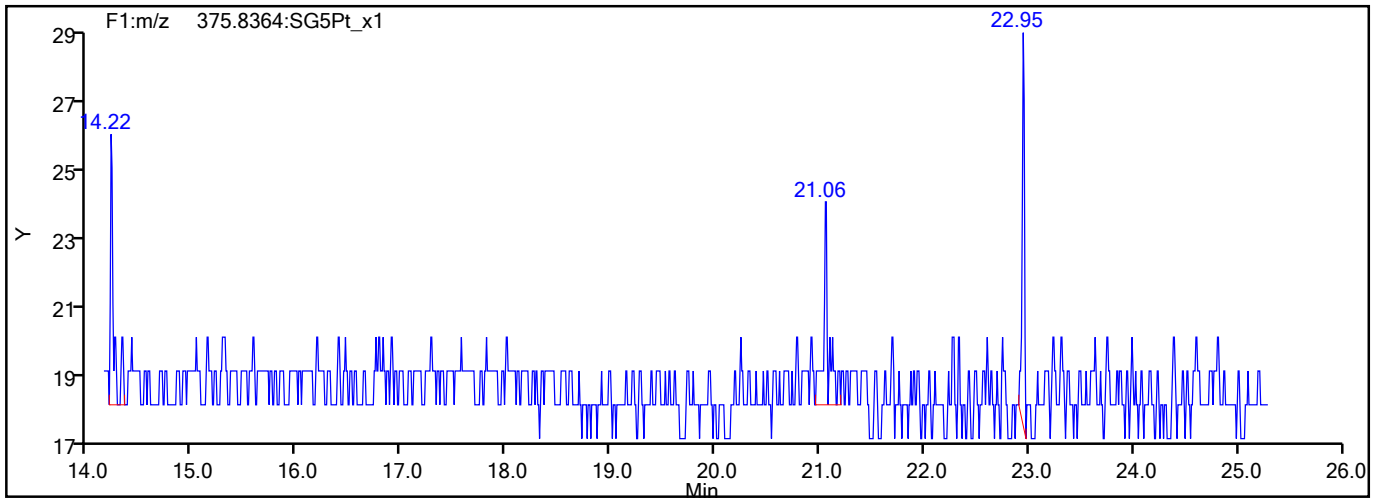

782428

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

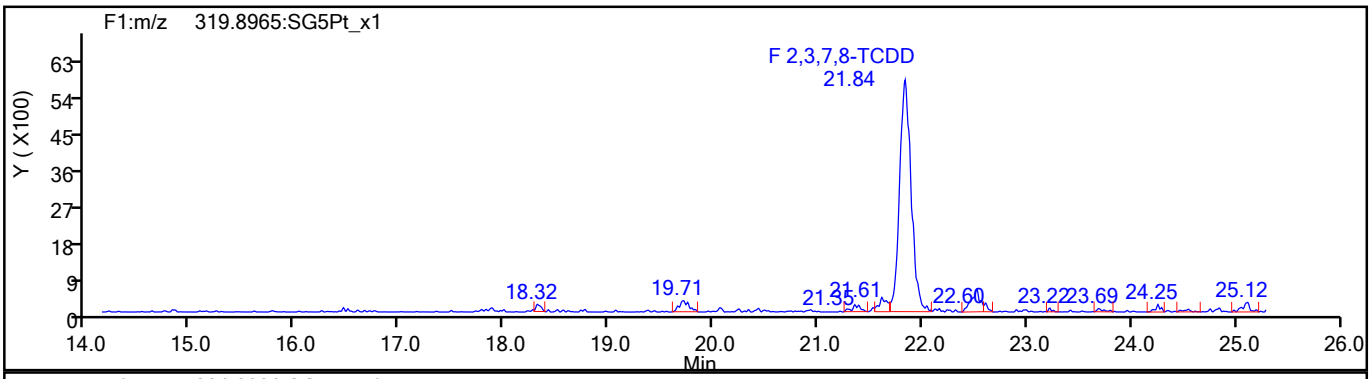

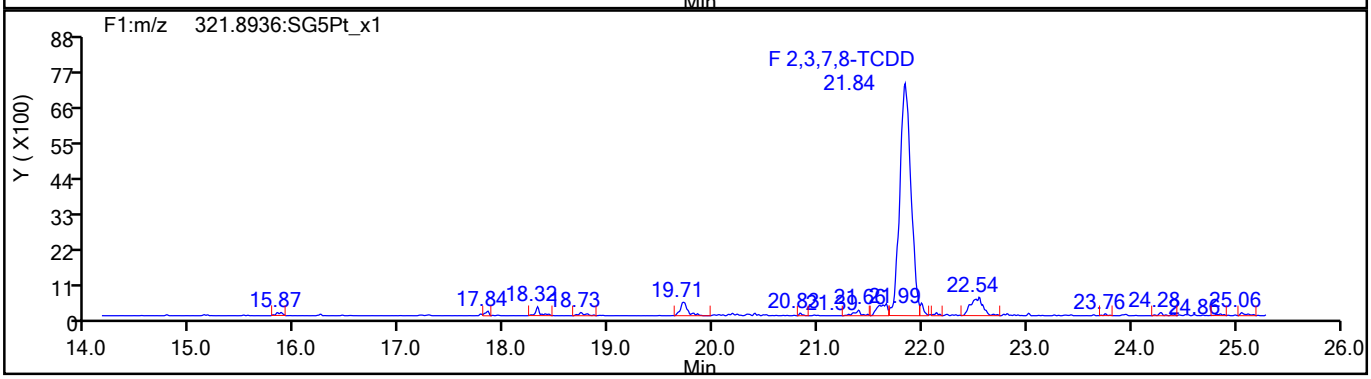

TCDD Standards

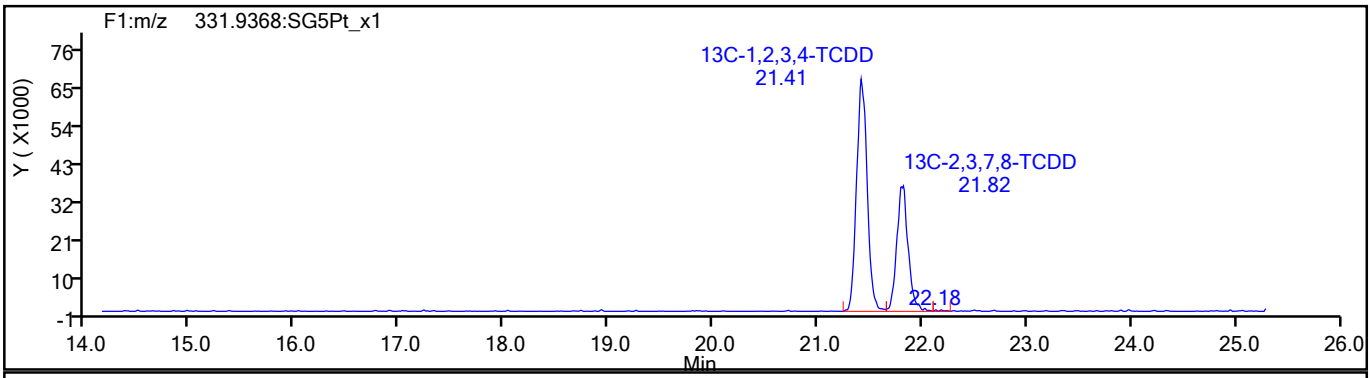

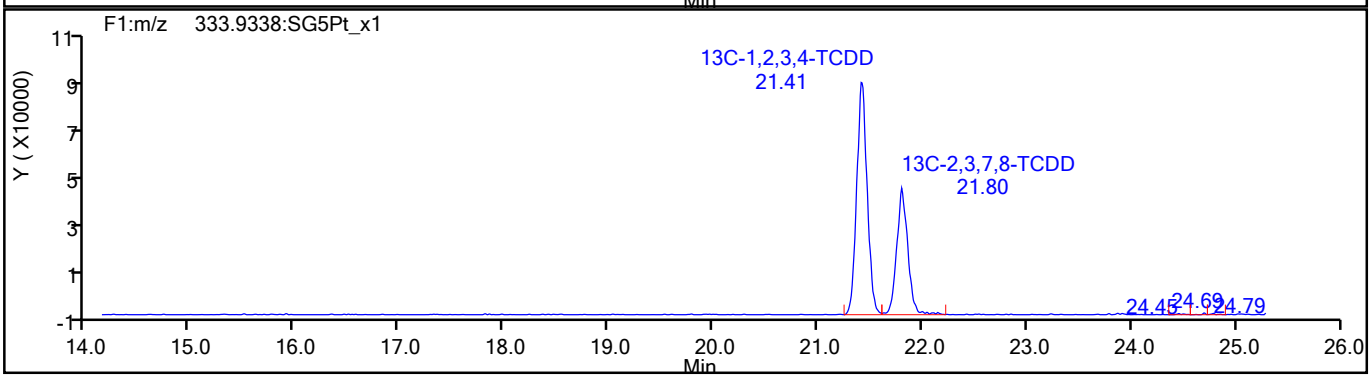

782429

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

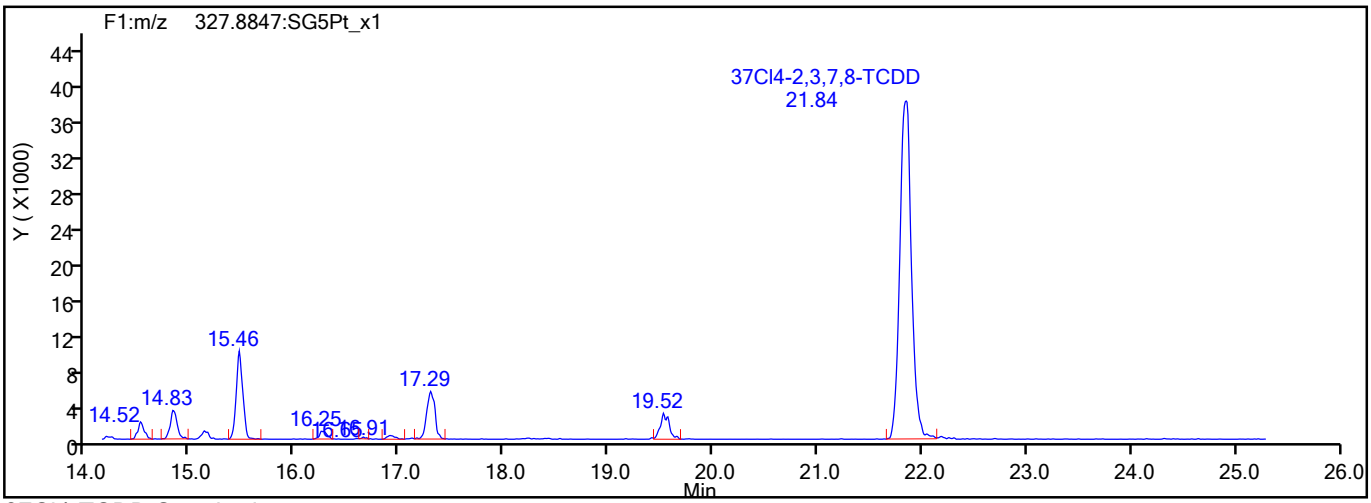

37Cl4-TCDD Standards

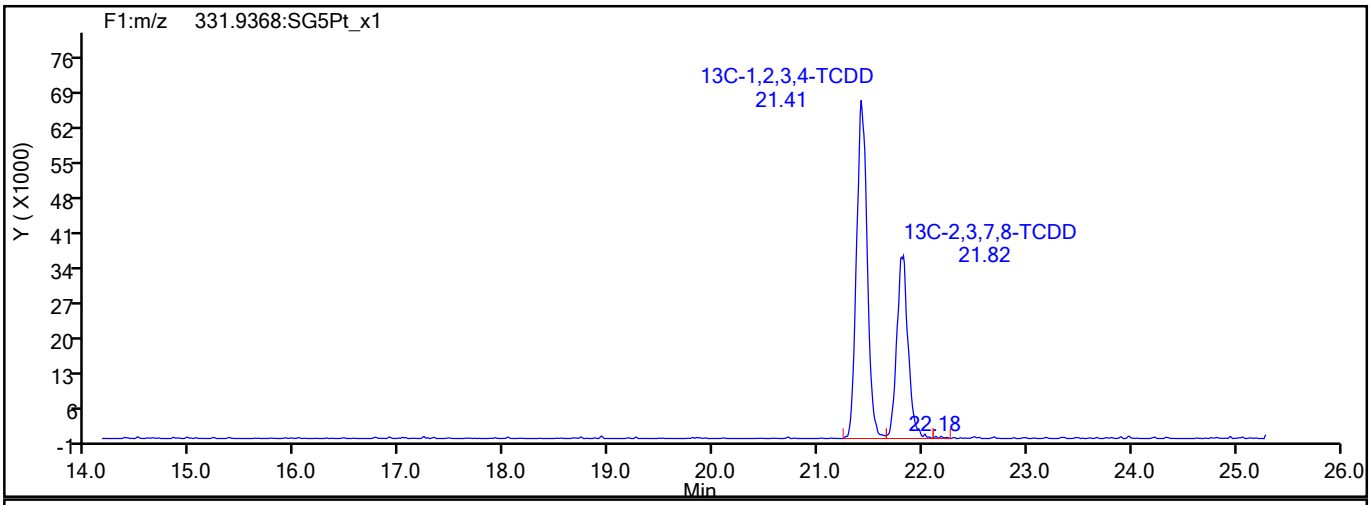

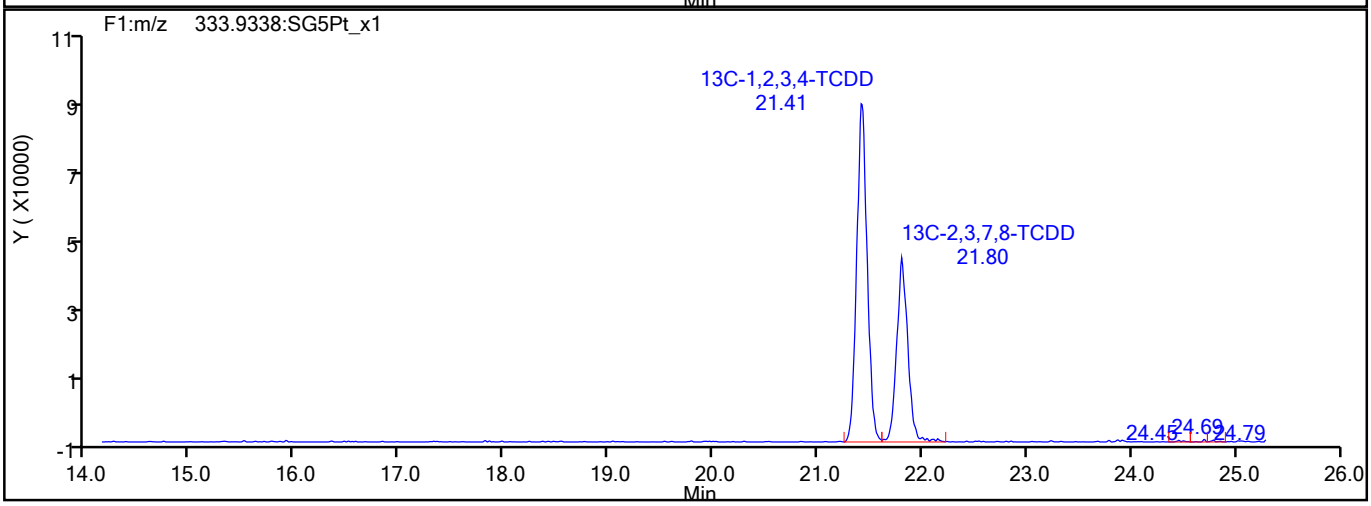

782430

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

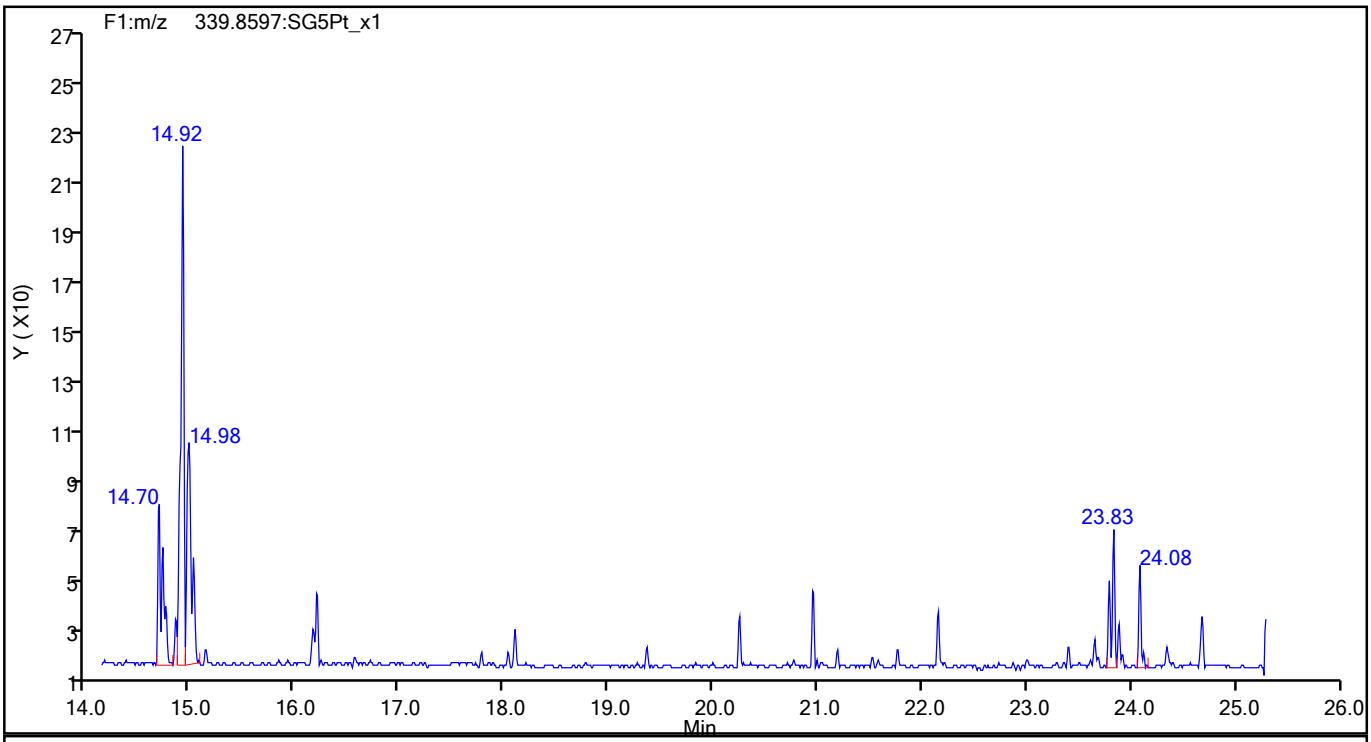

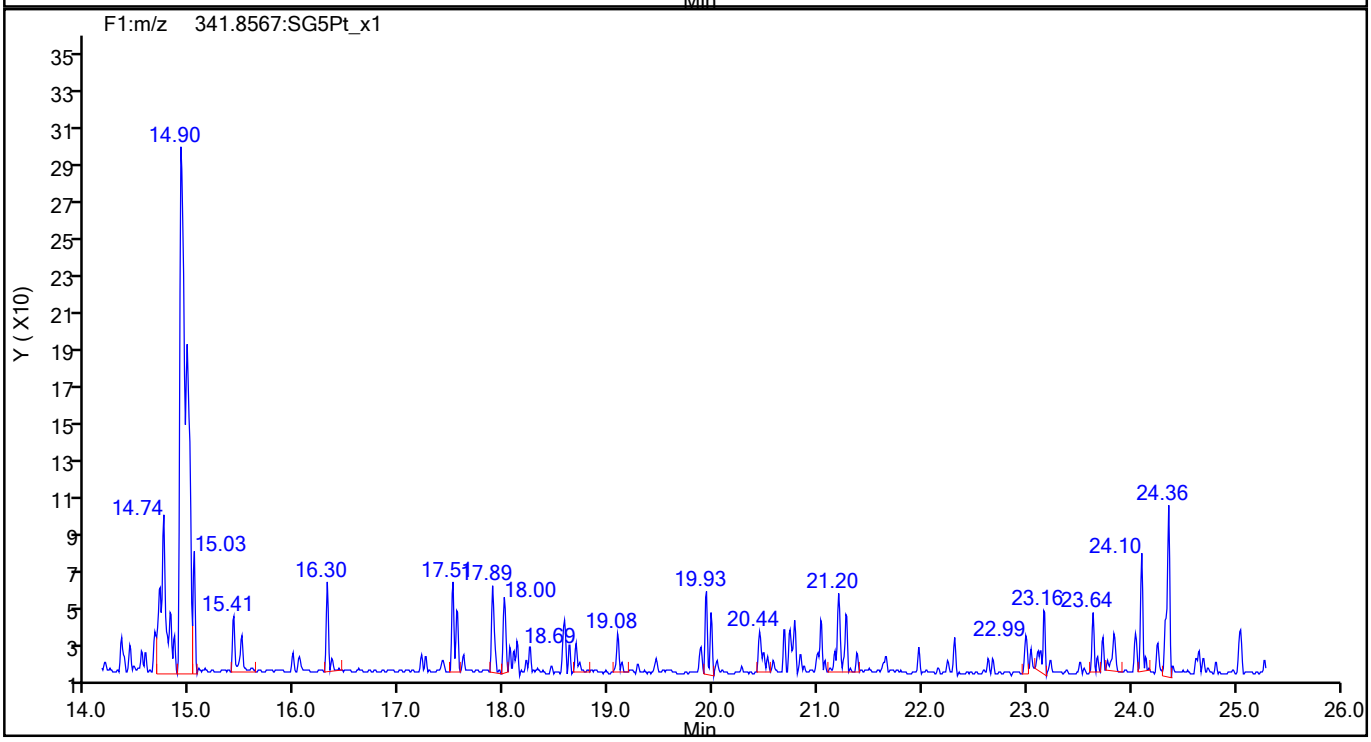

782431

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

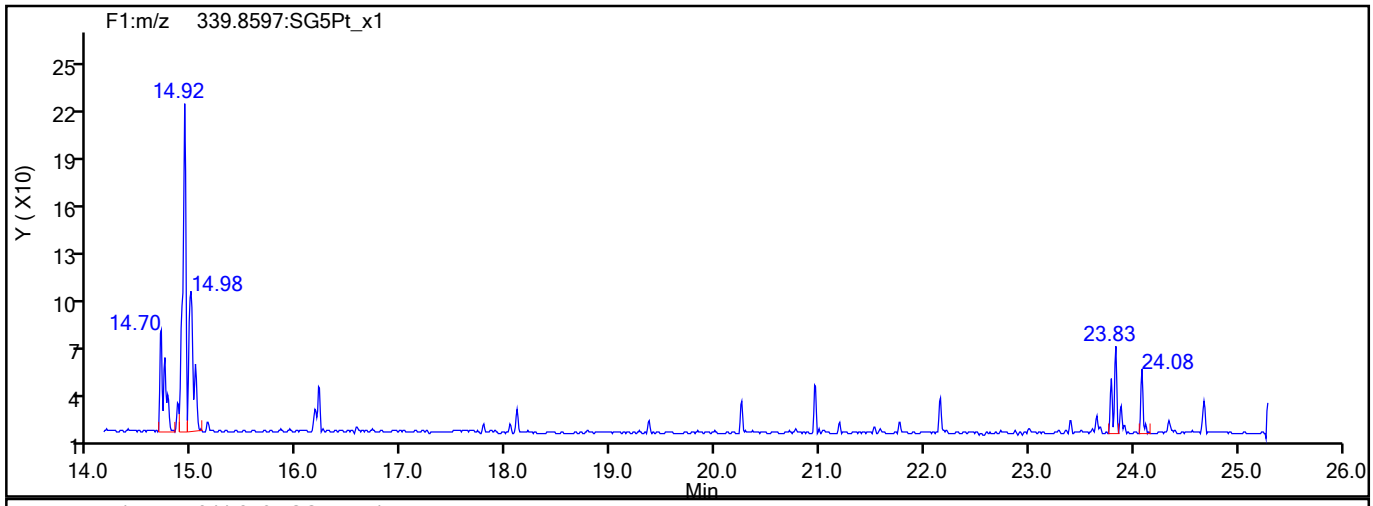

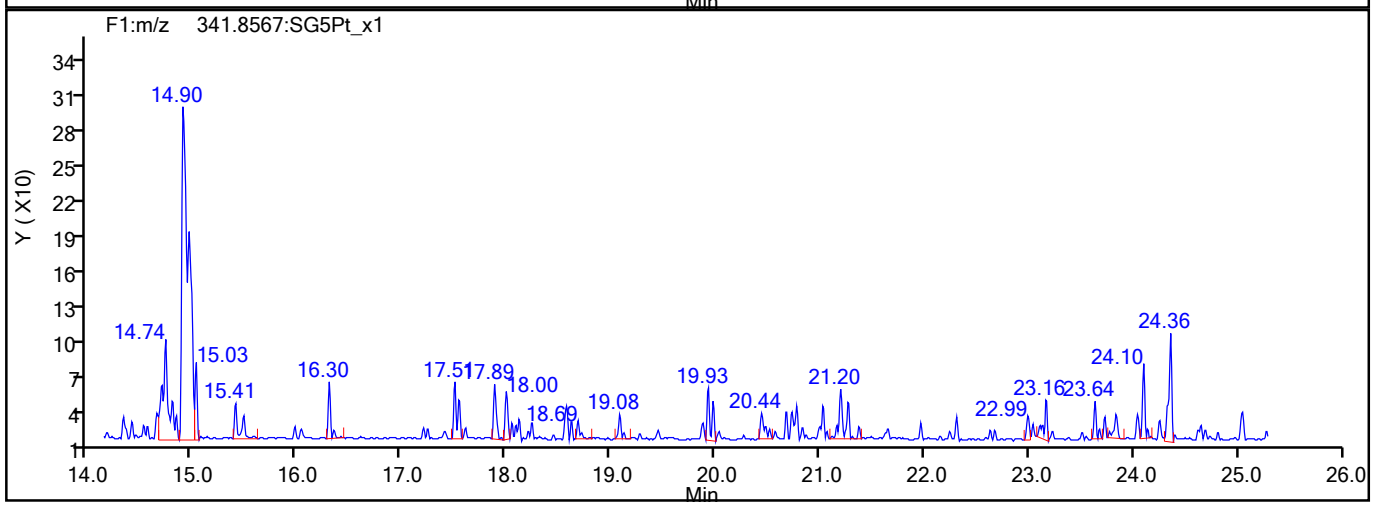

F1 PeCDFs Interference Mass

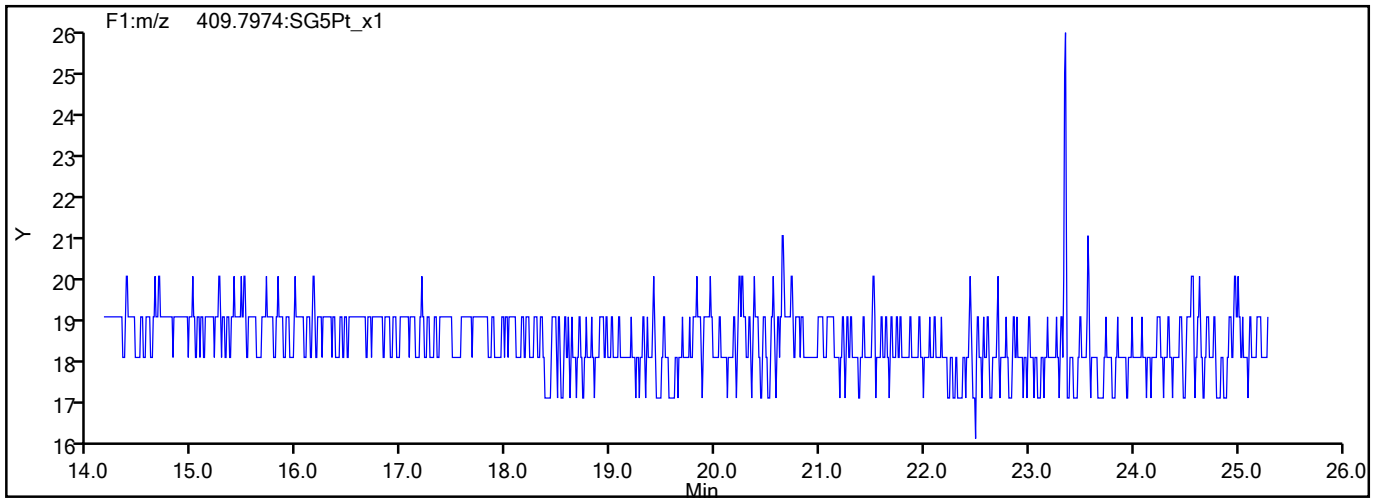

782432

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

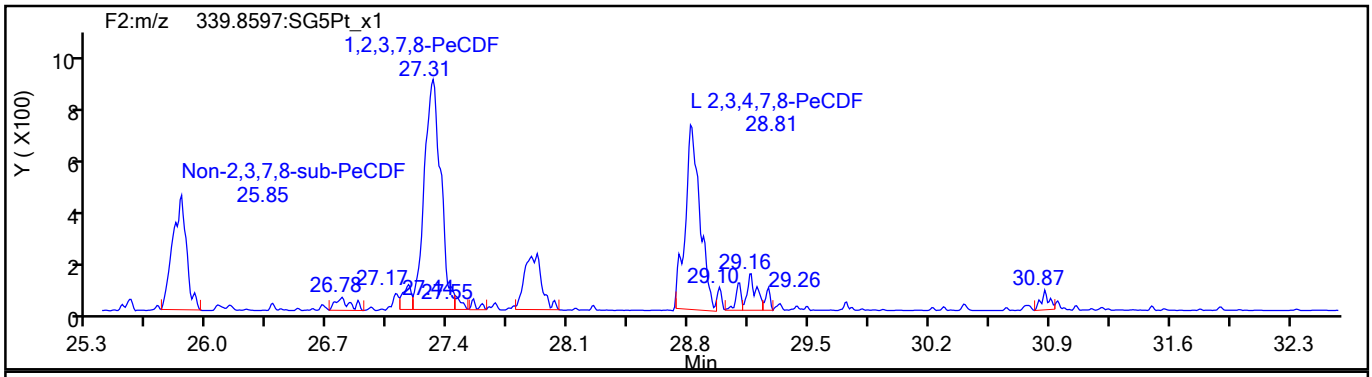

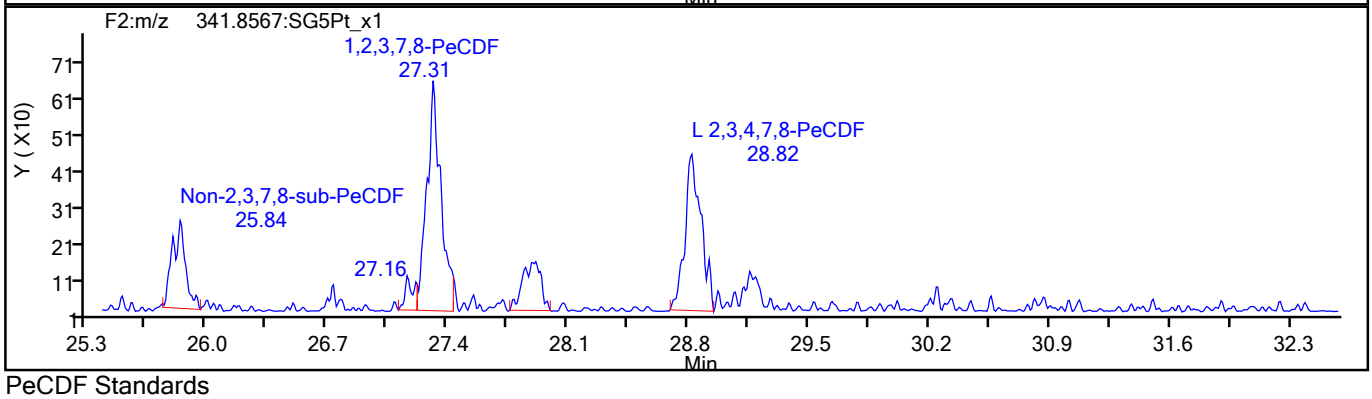

PeCDF Standards

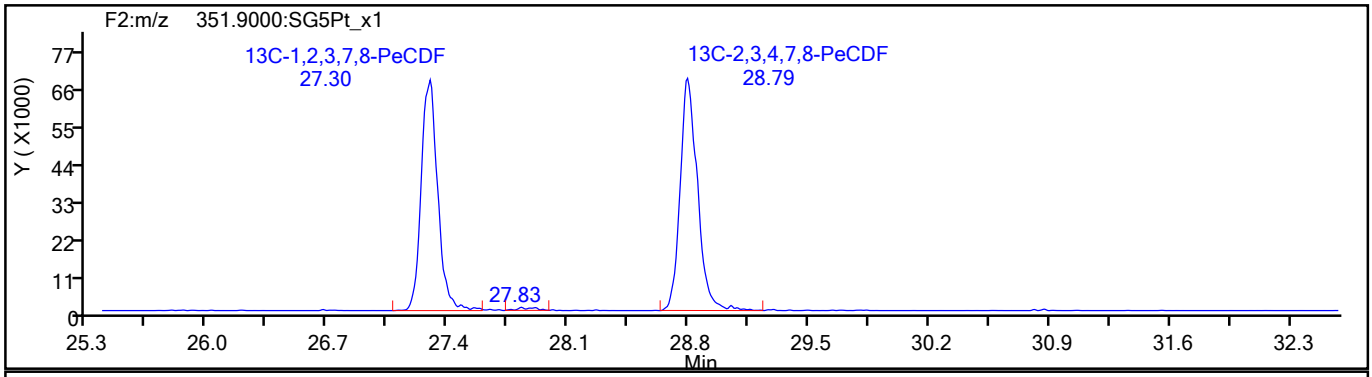

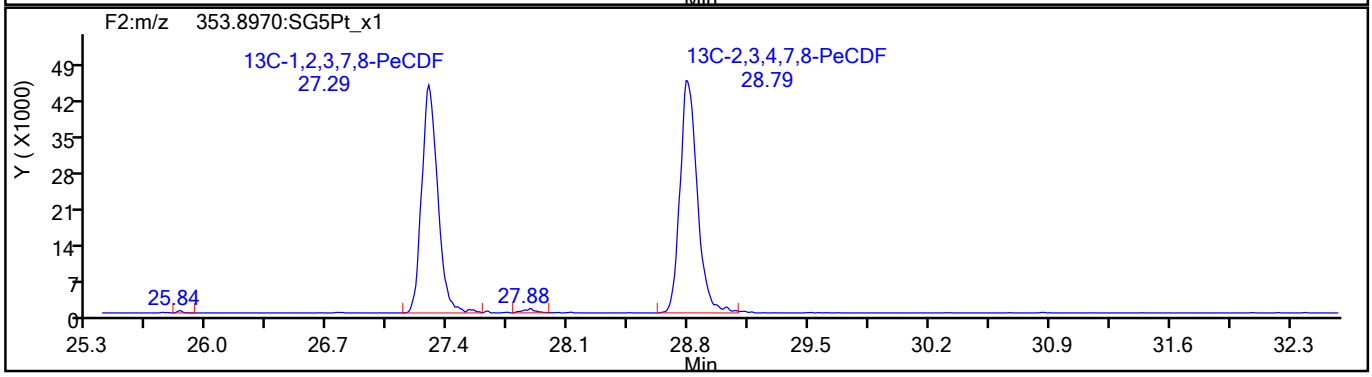

782433

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

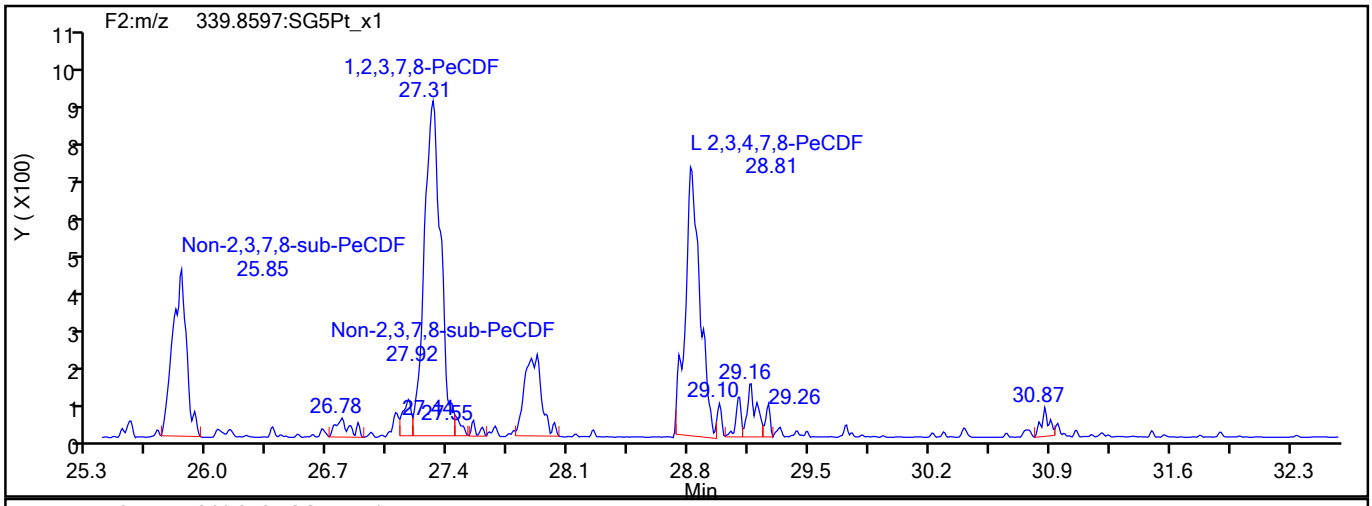

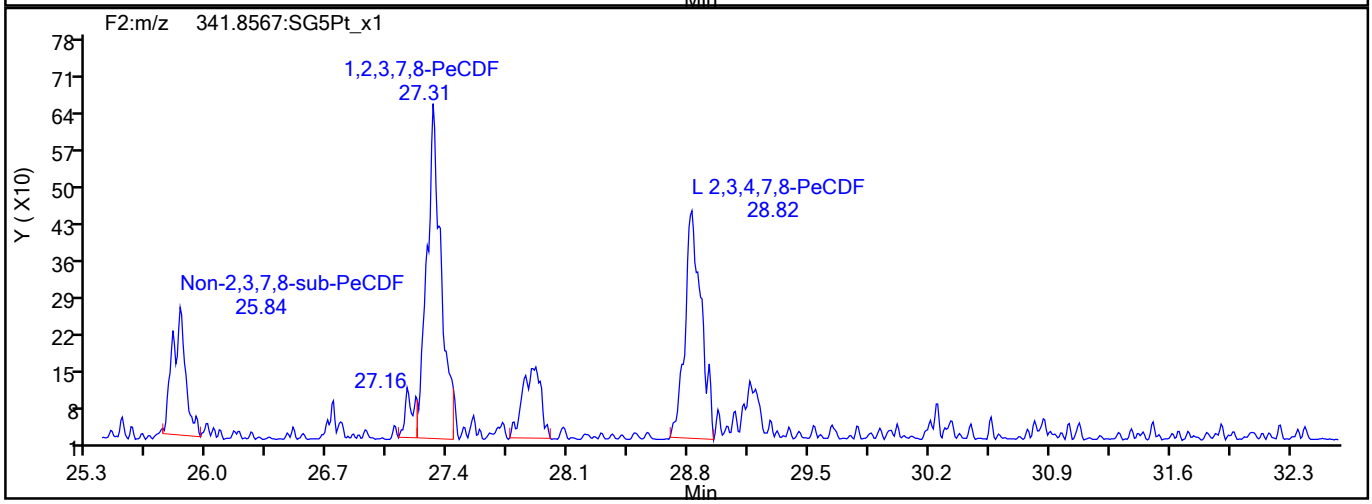

PeCDF Interference Mass

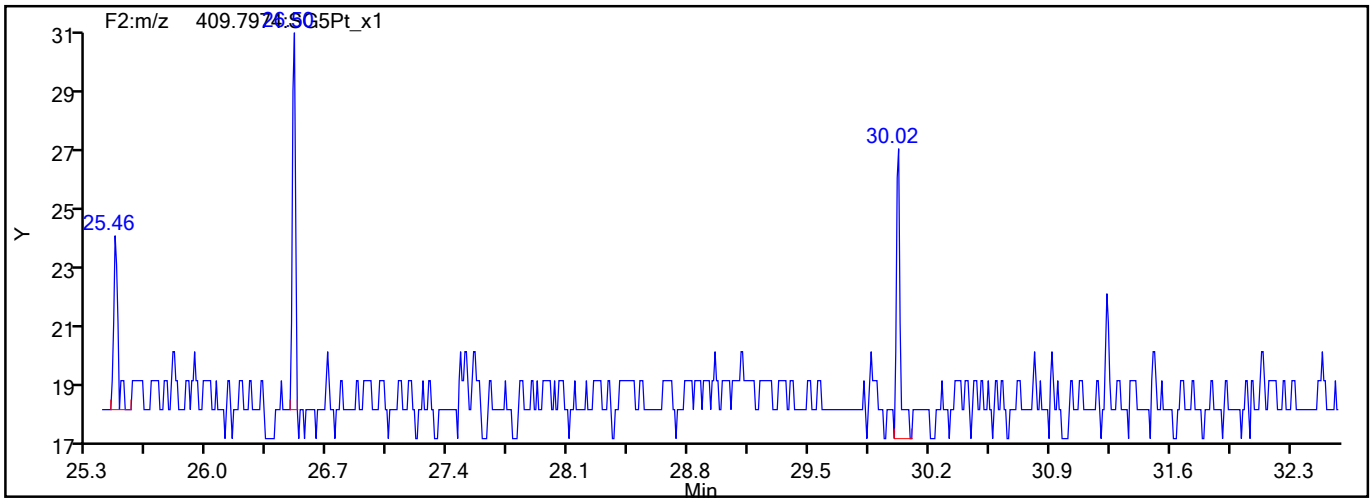

782434

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

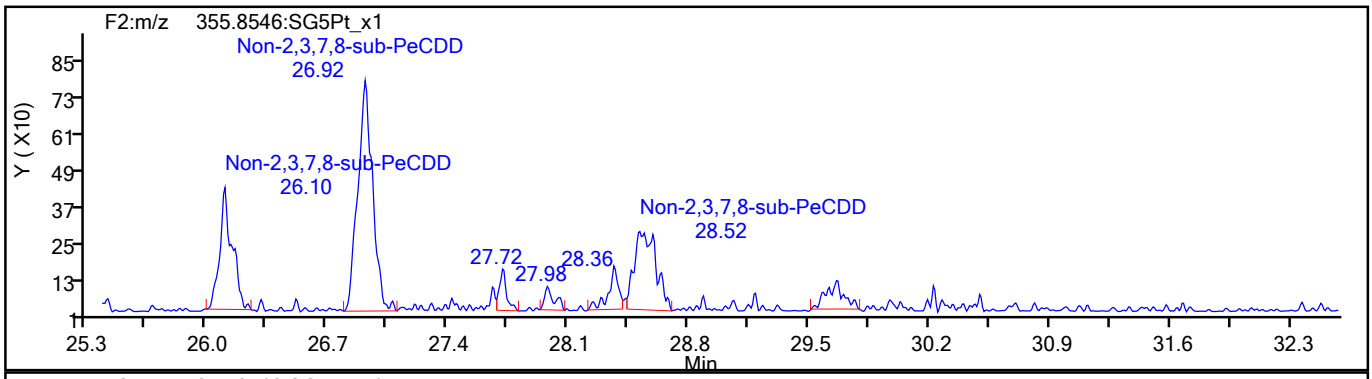

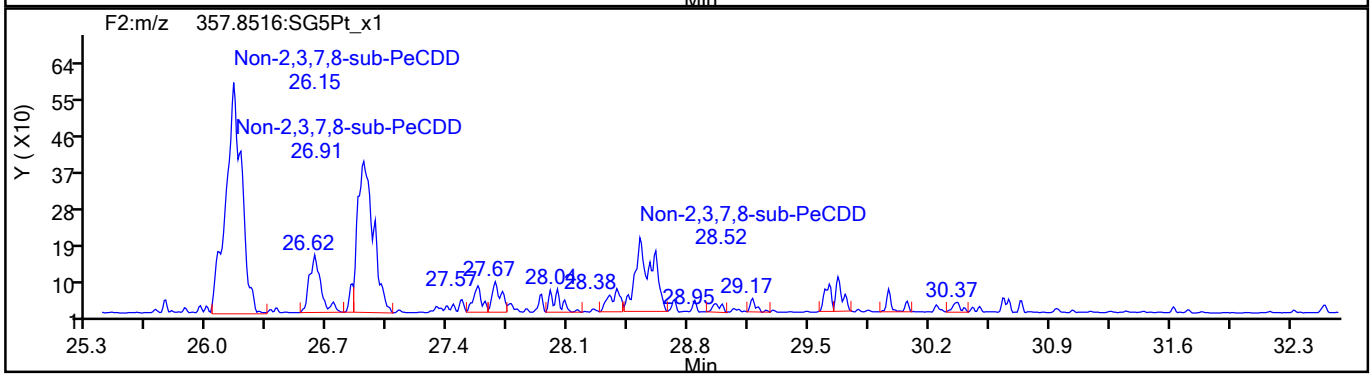

PeCDD Standards

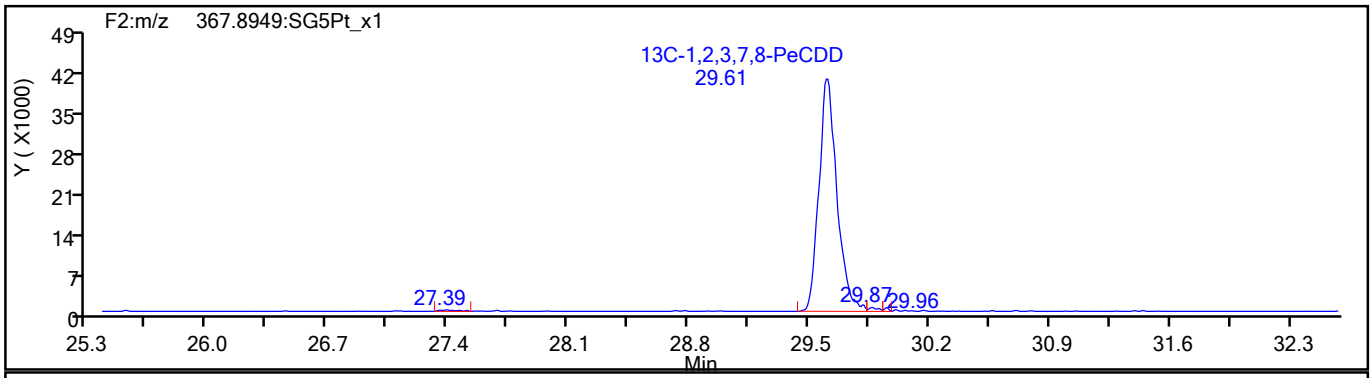

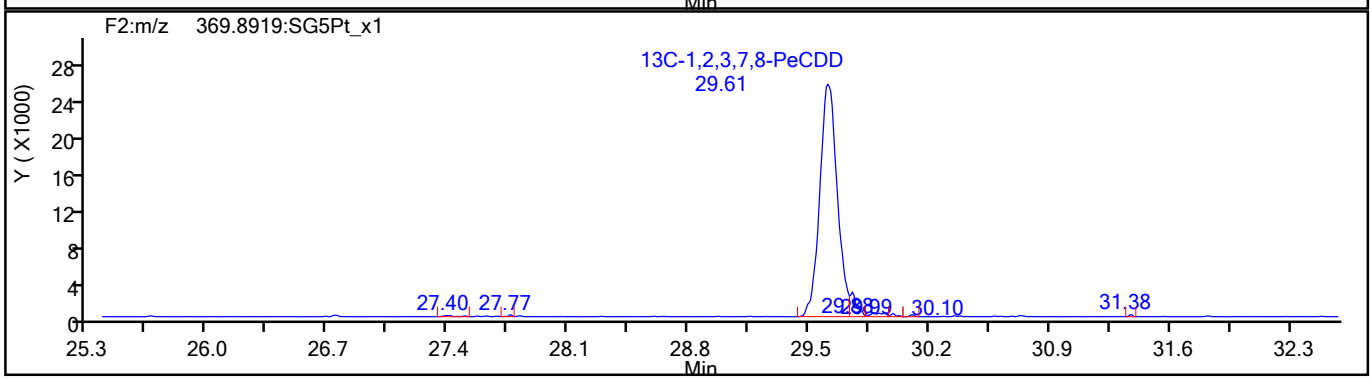

782435

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

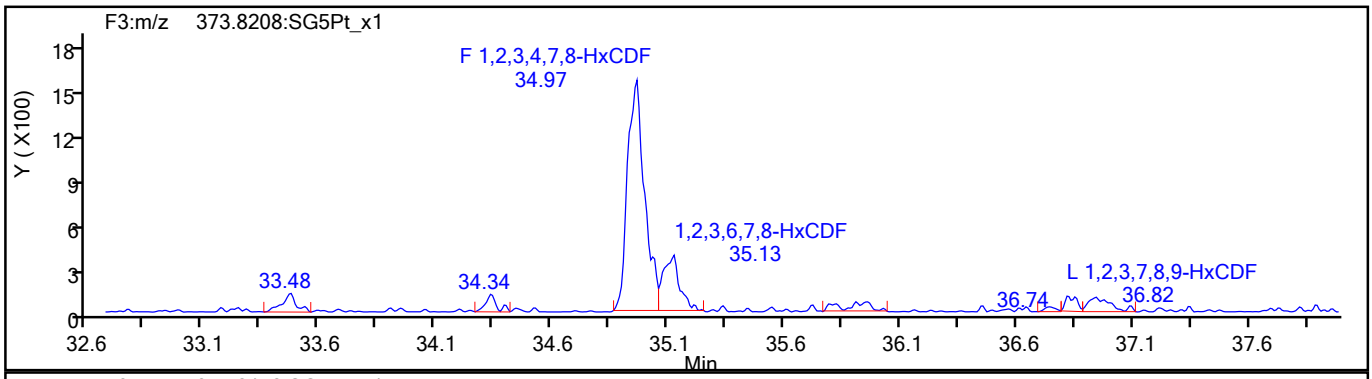

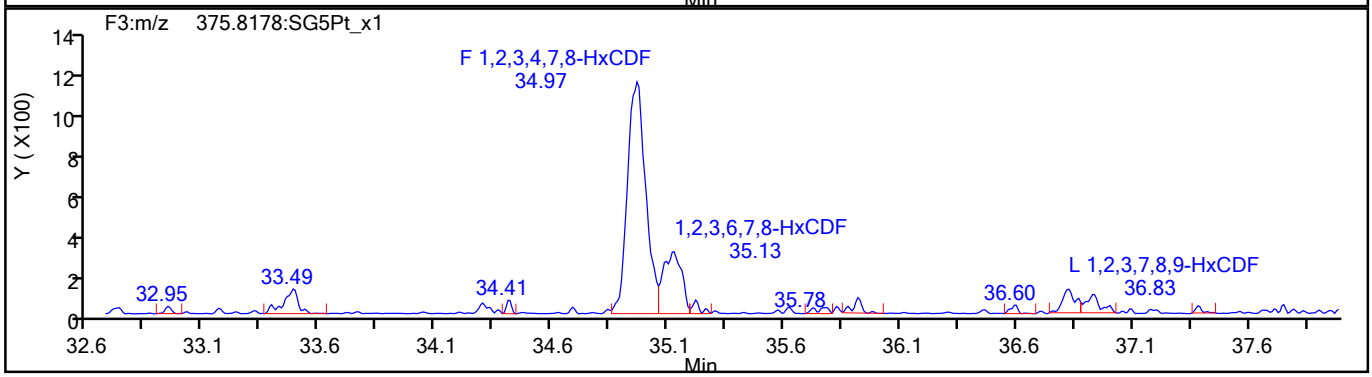

HxCDF Standards

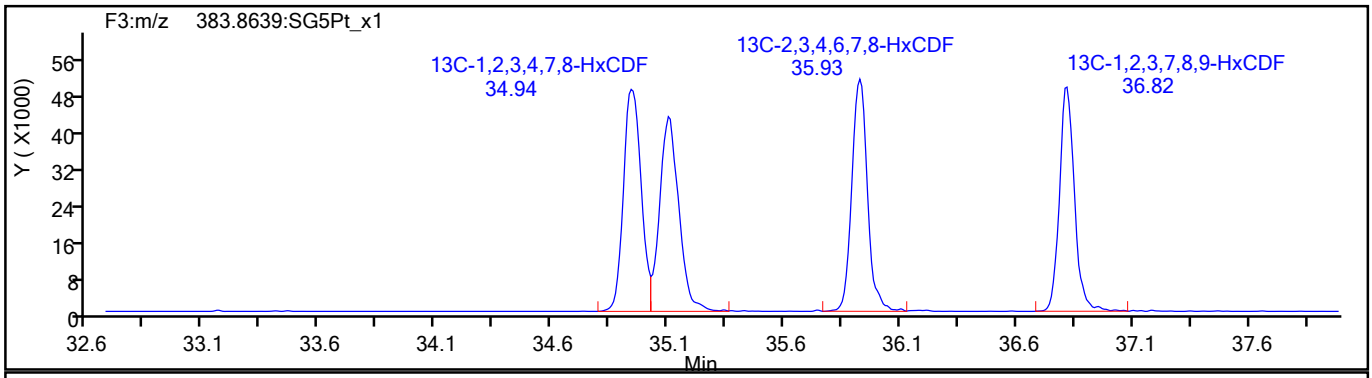

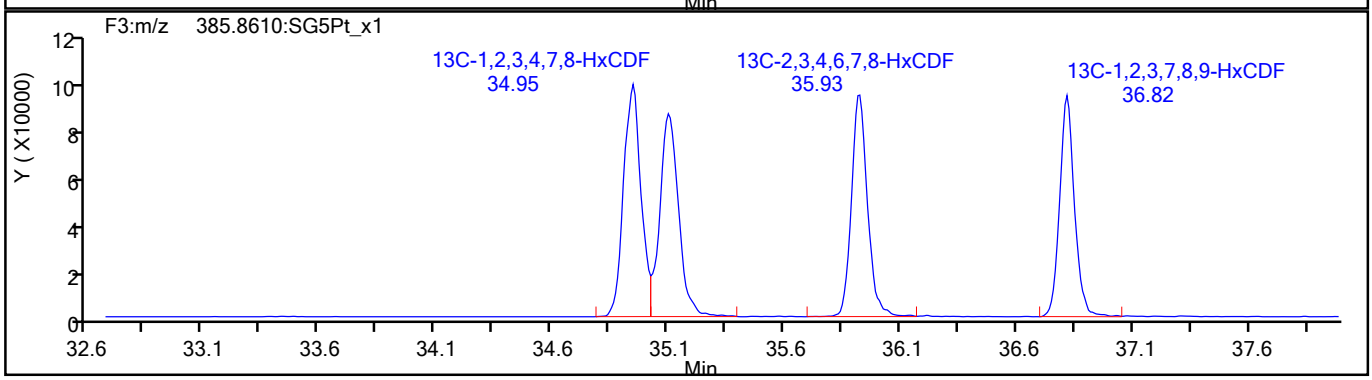

782436

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

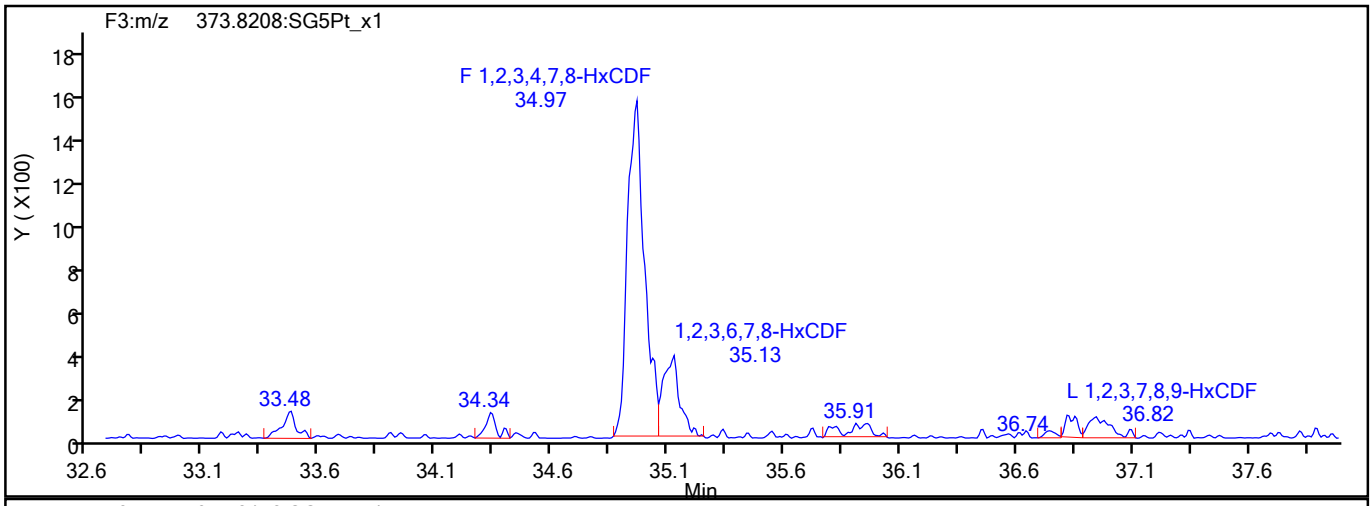

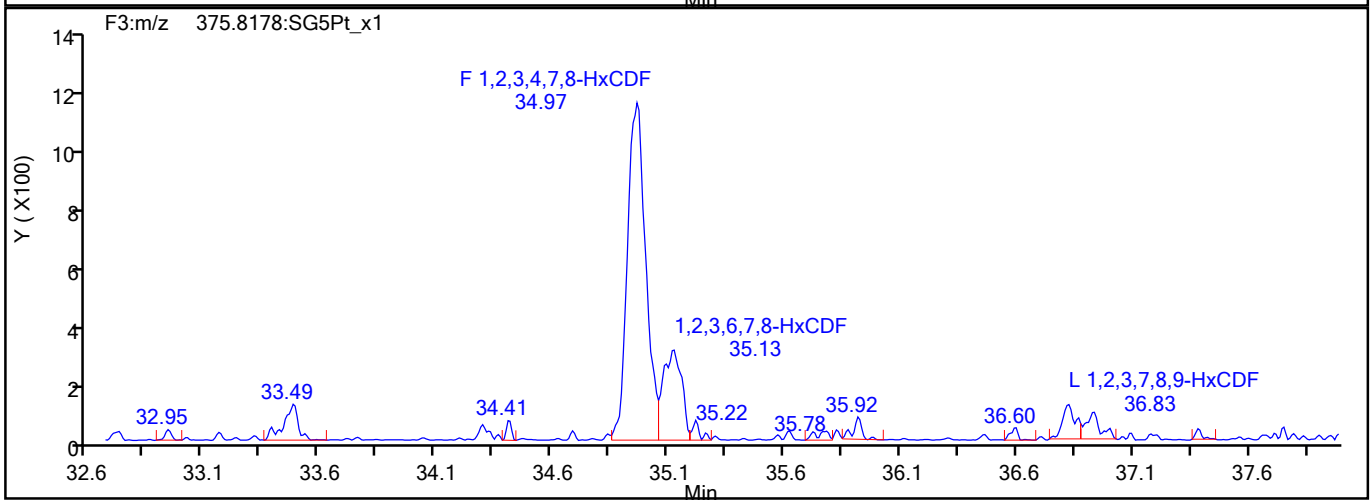

HxCDF Interference Mass

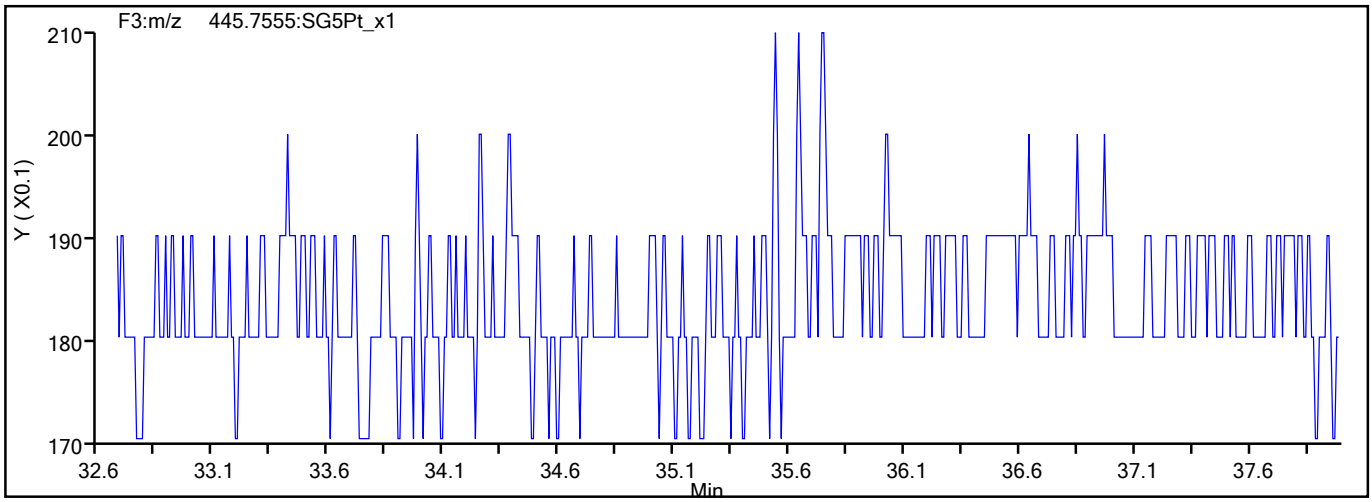

782437

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

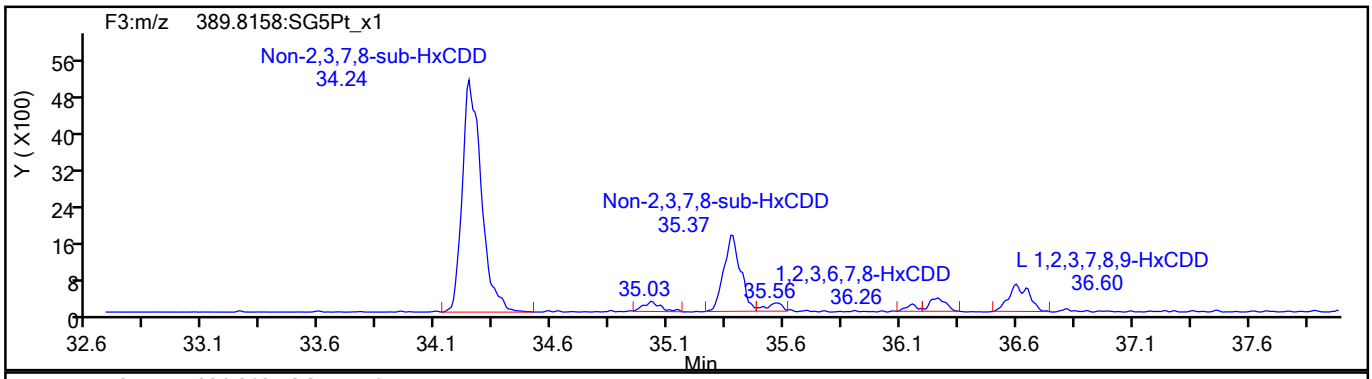

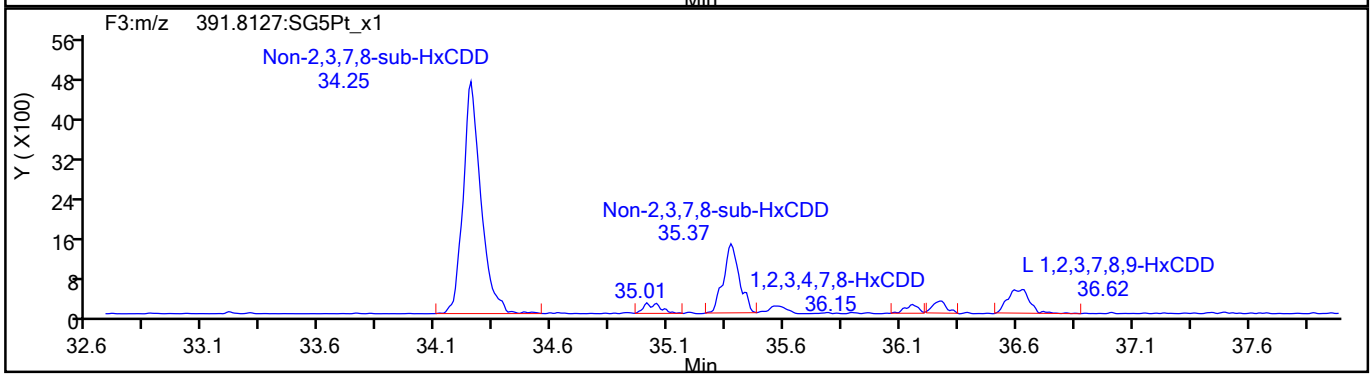

HxCDD Standards

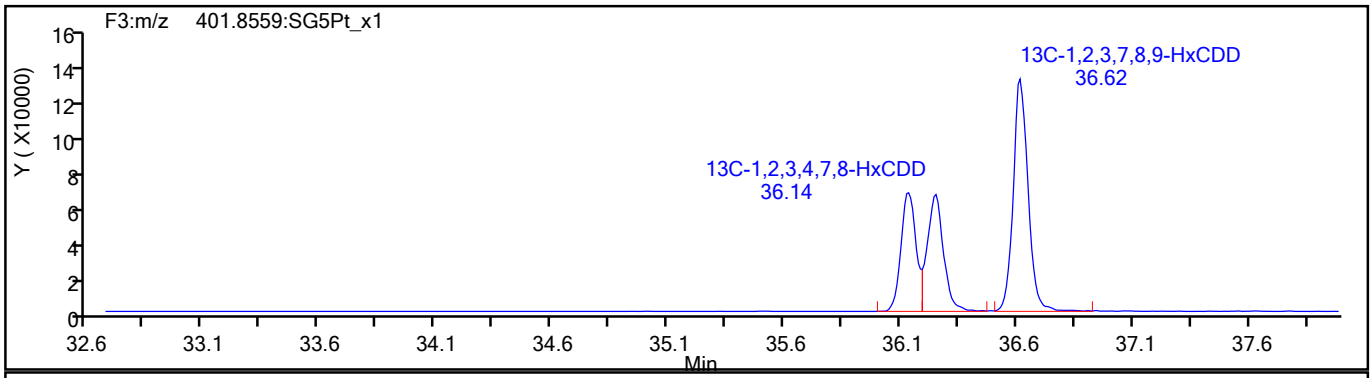

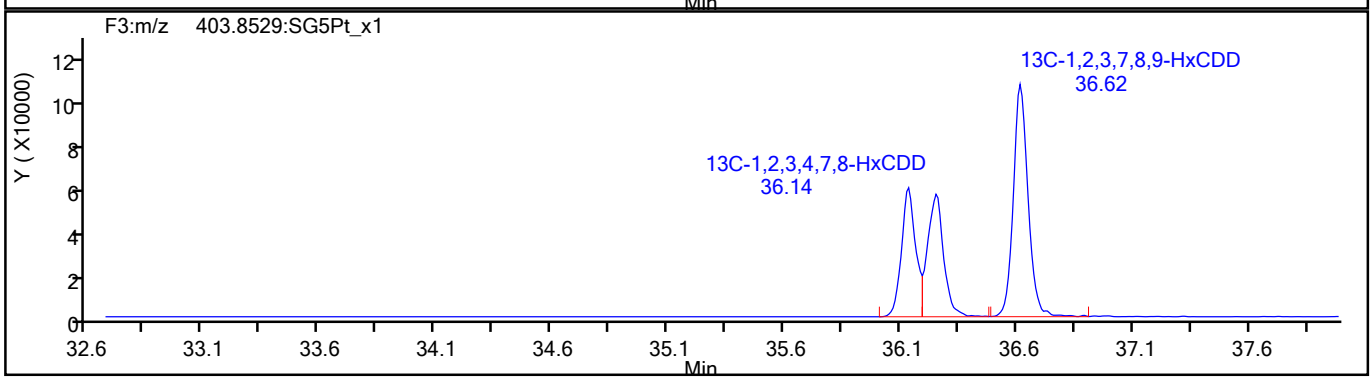

782438

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

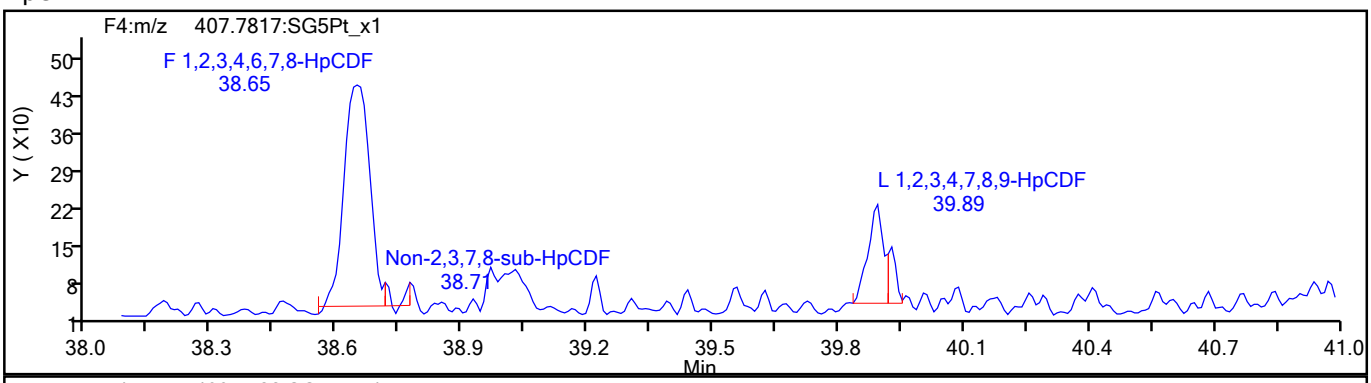

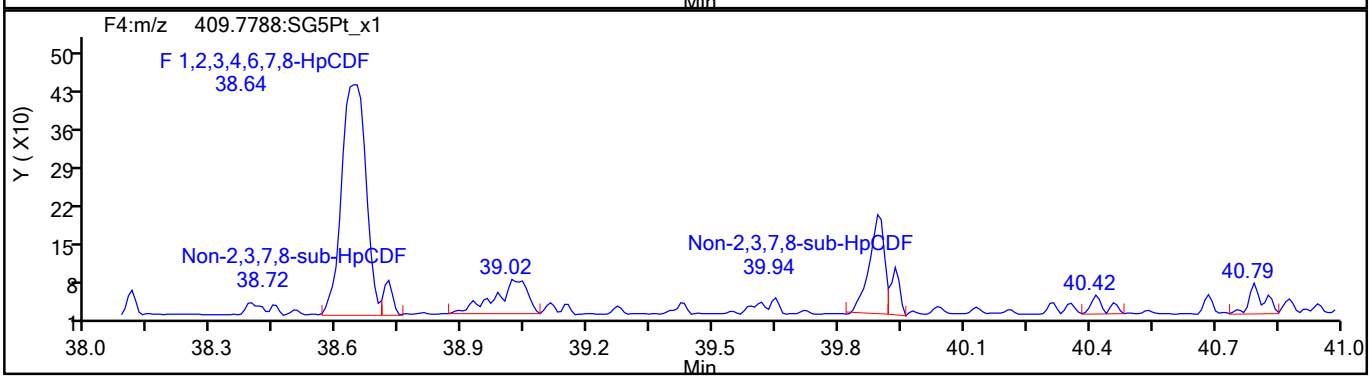

HpCDF Standards

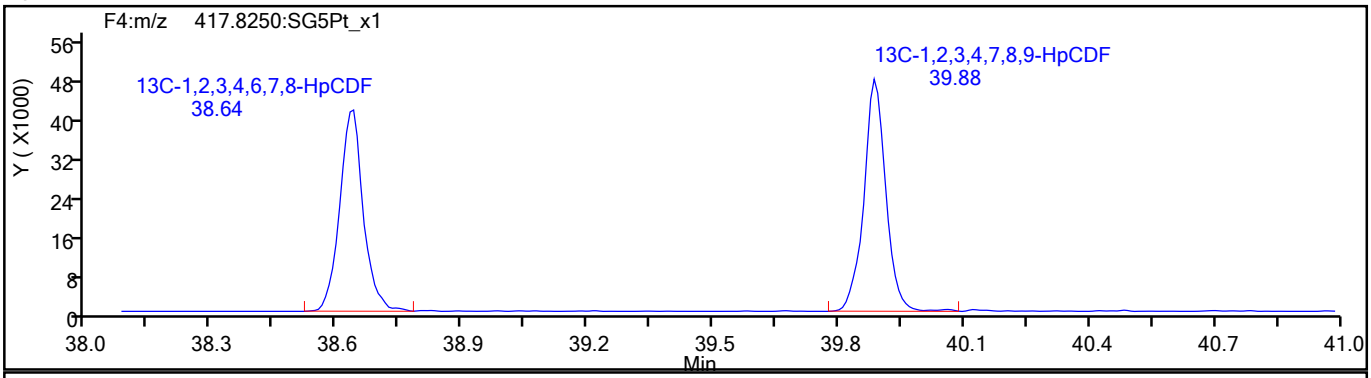

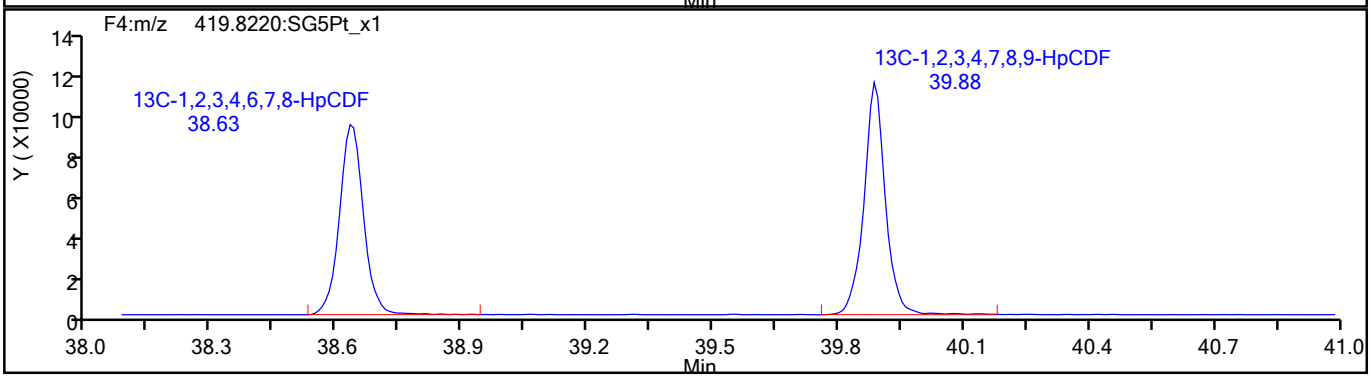

782439

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

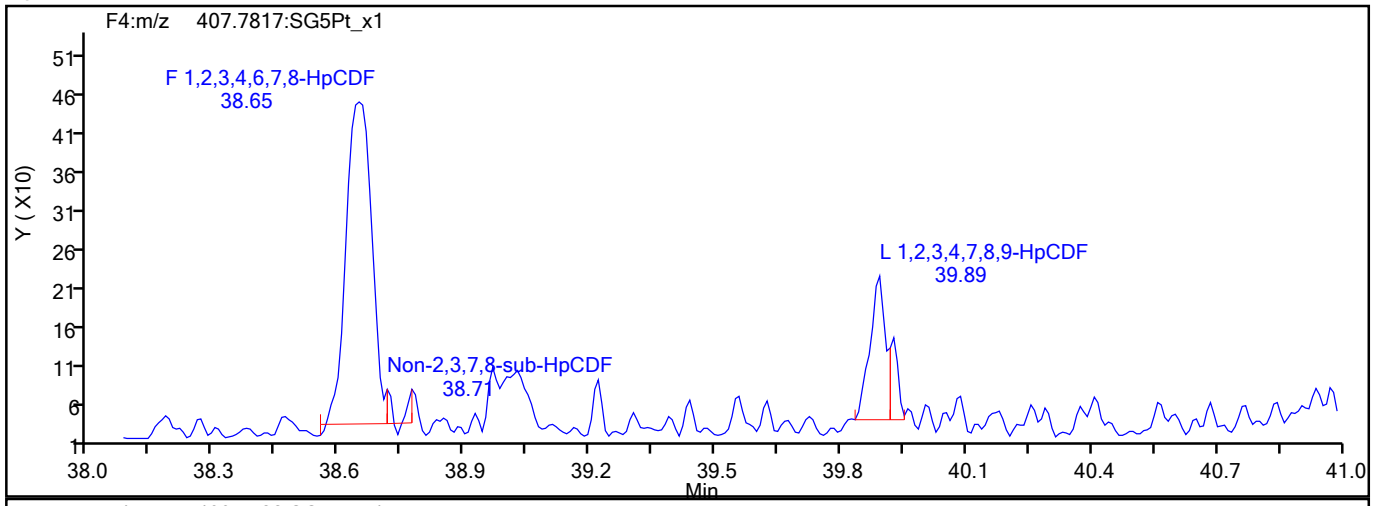

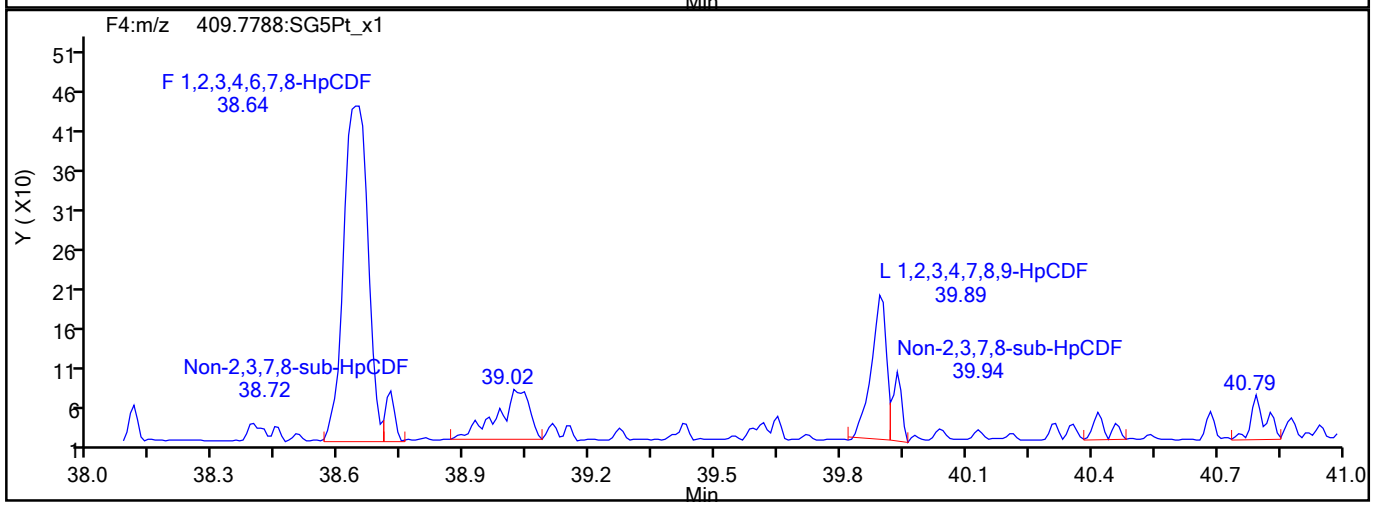

HpCDF Interference Mass

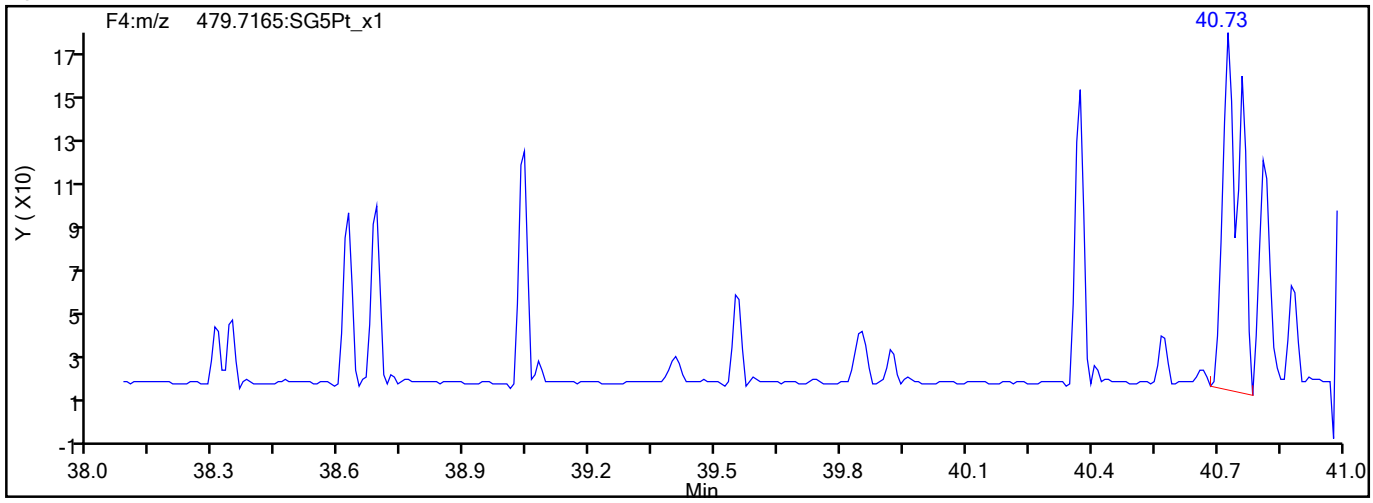

782440

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

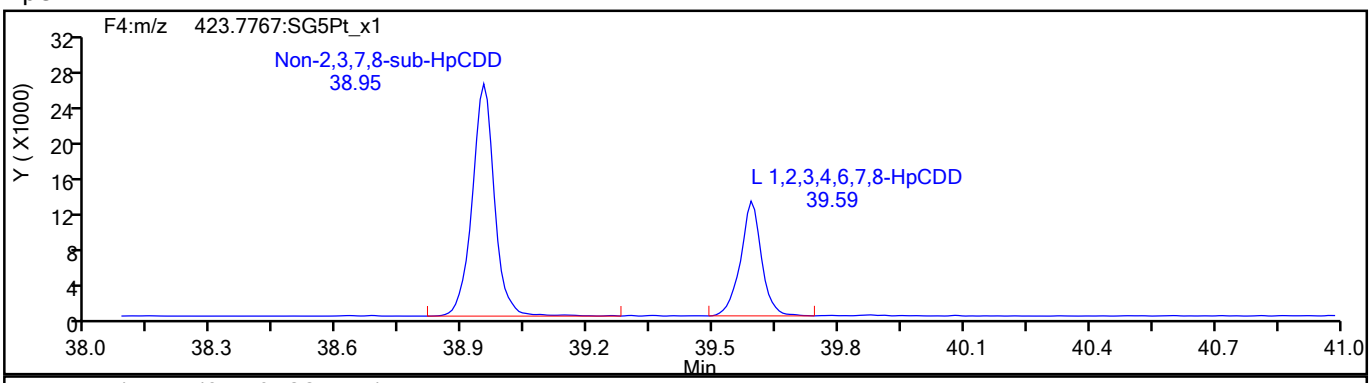

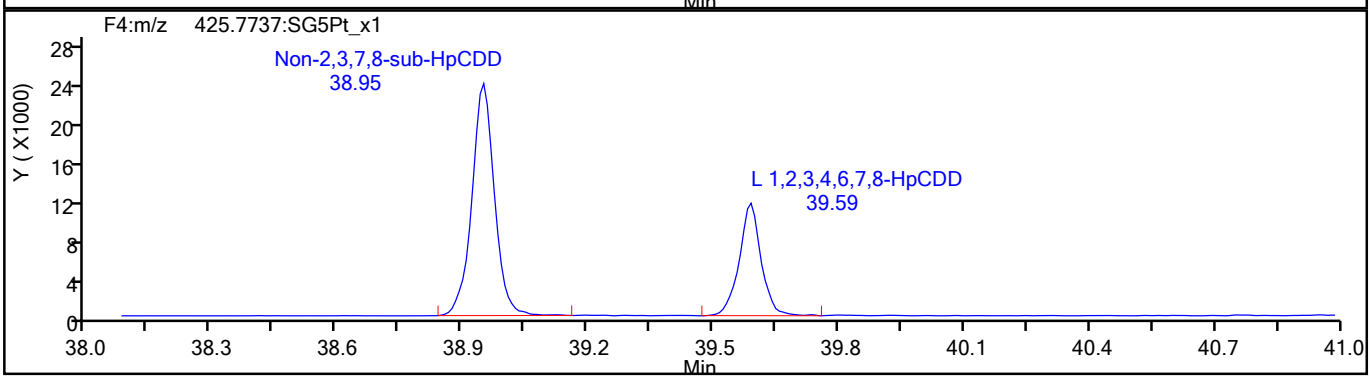

HpCDD Standards

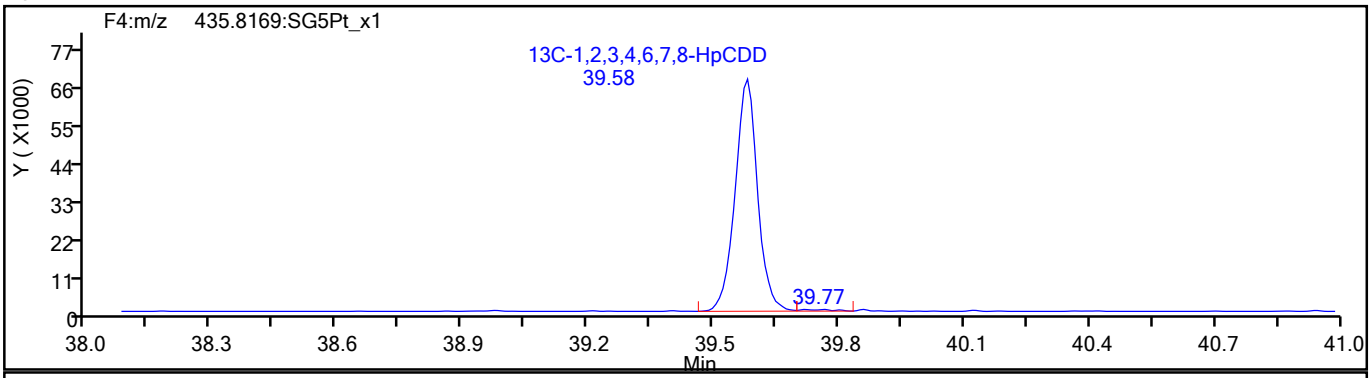

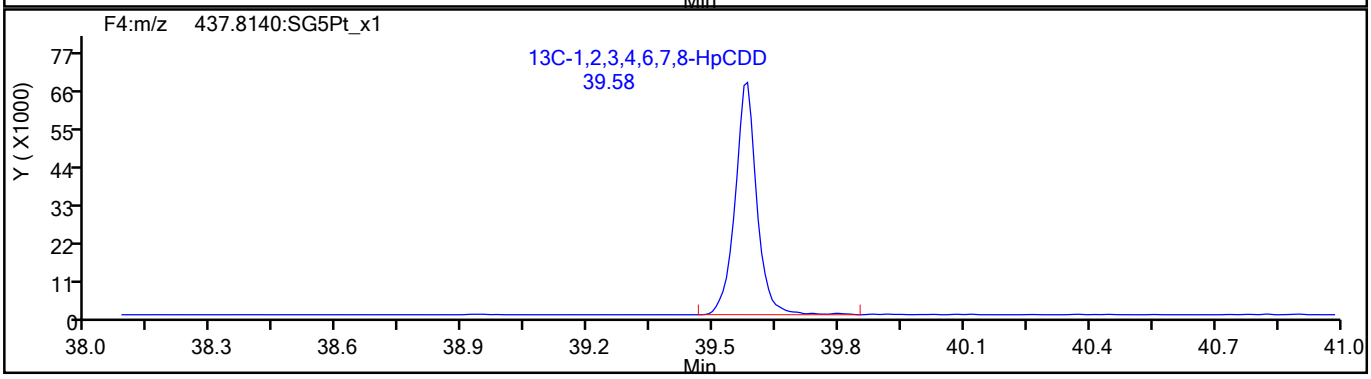

782441

Report Date: 19-Aug-2021 13:11:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

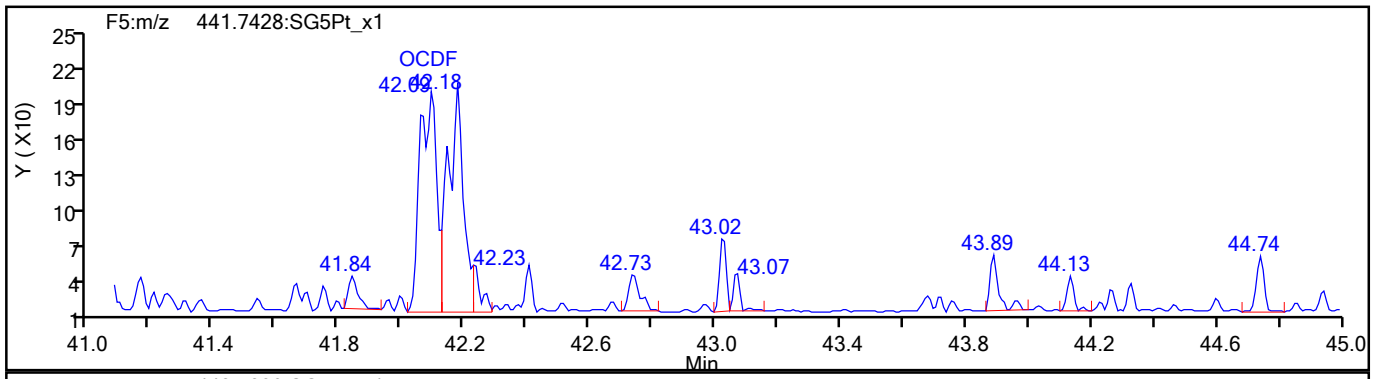

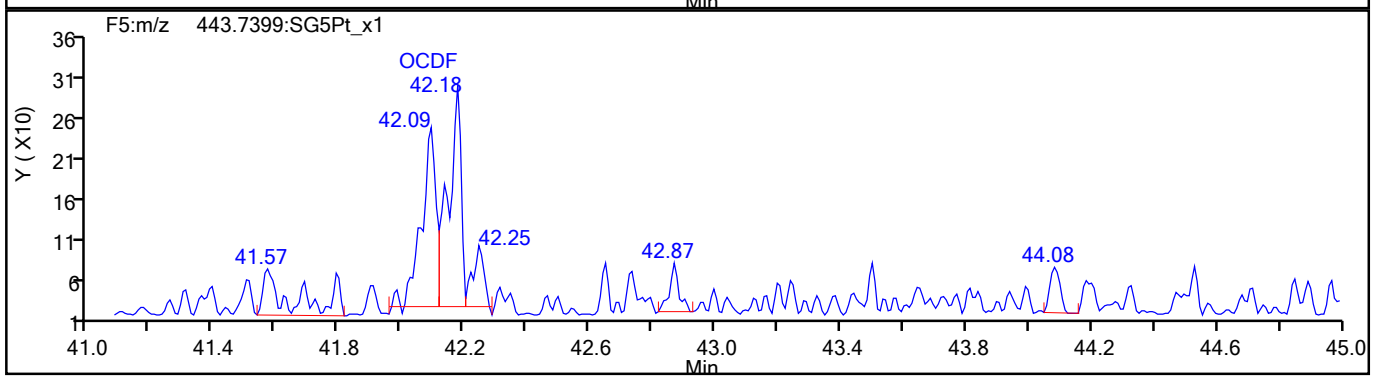

OCDF Standards

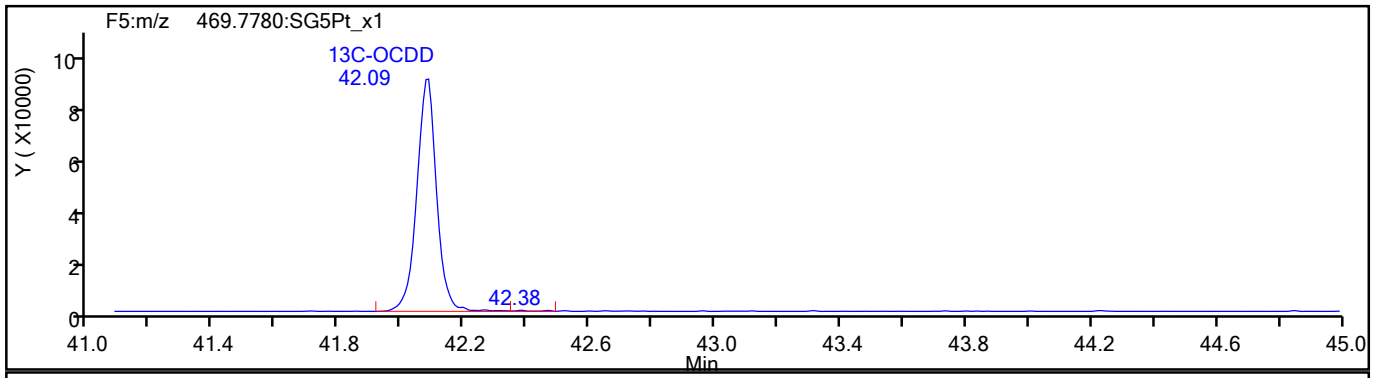

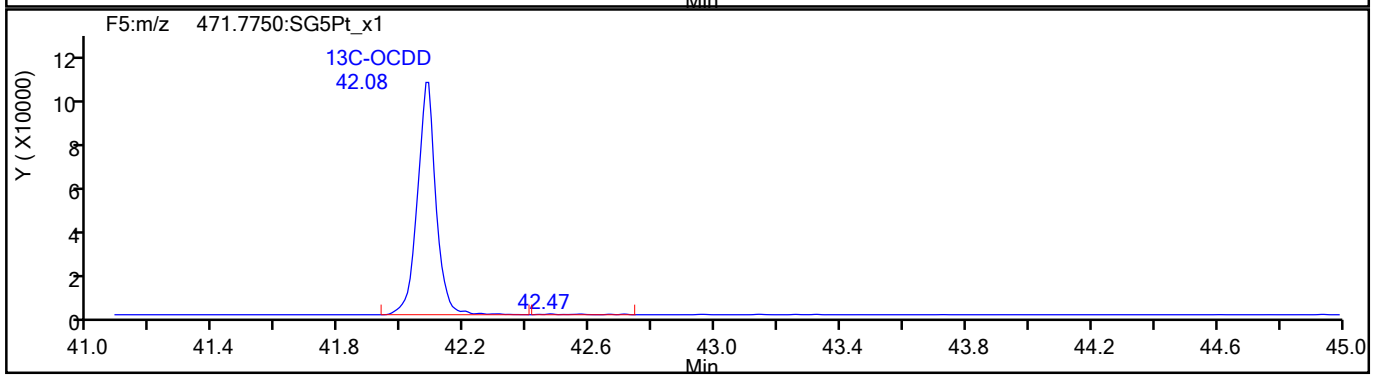

782442

Report Date: 19-Aug-2021 13:11:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

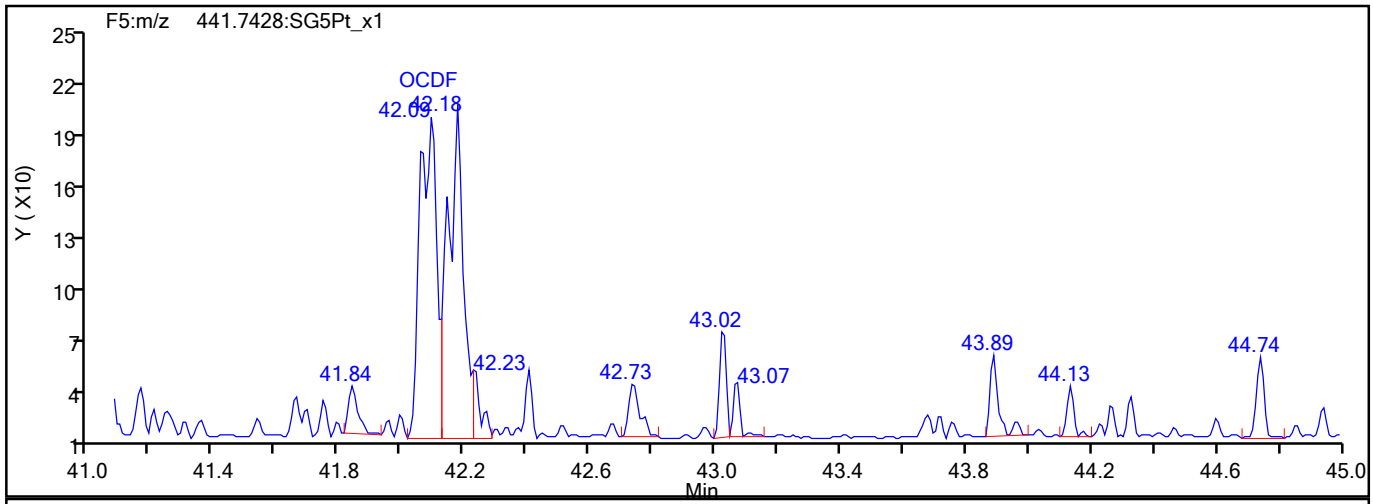

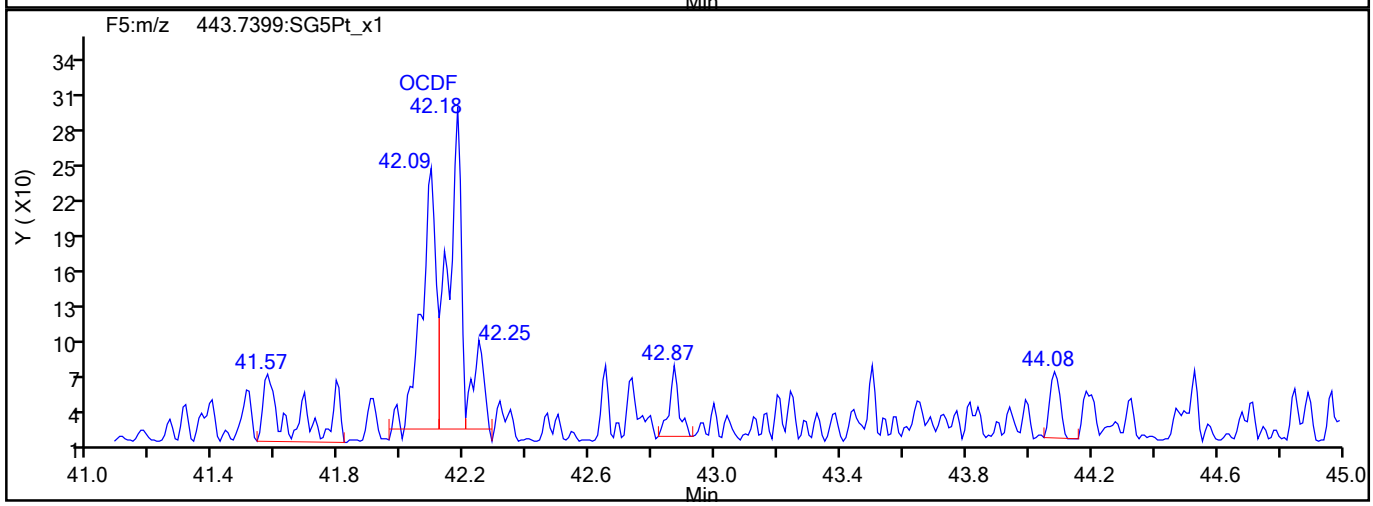

OCDF Interference Mass

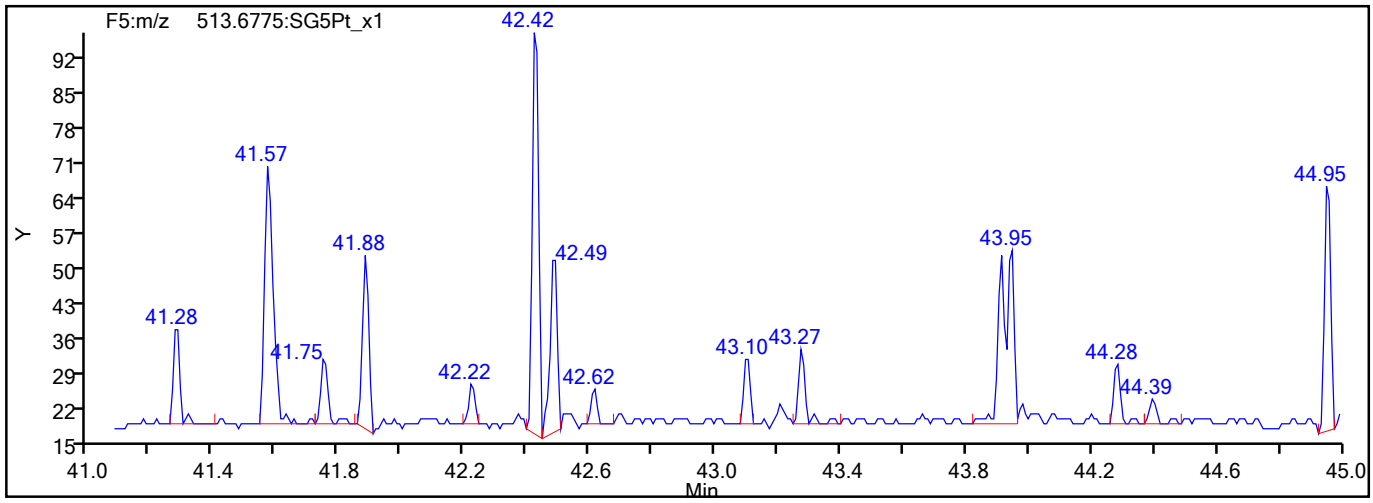

782443

Report Date: 19-Aug-2021 13:11:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

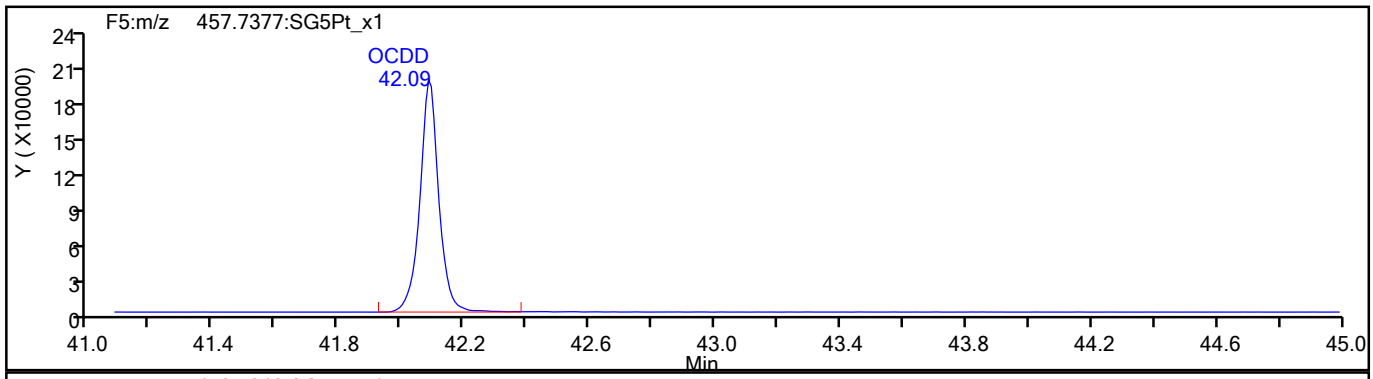

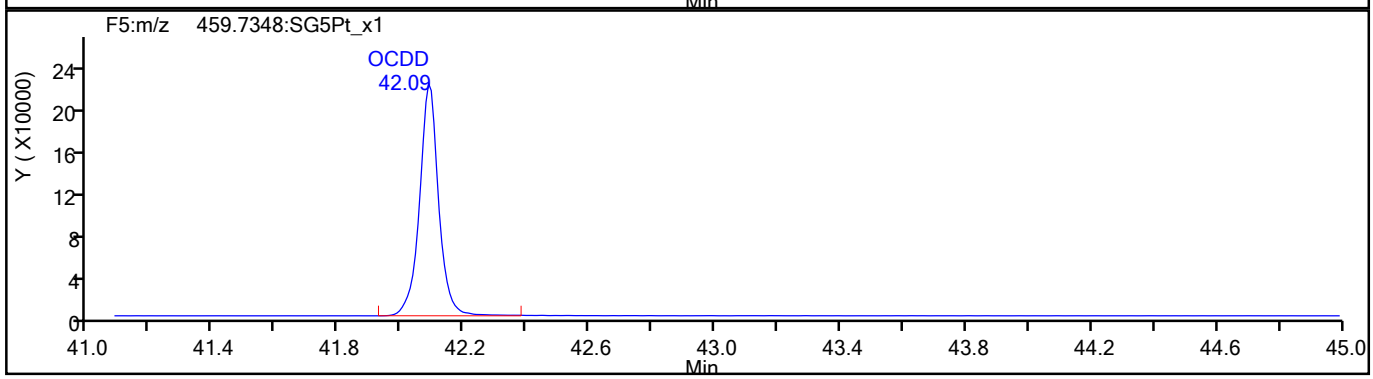

OCDD Standards

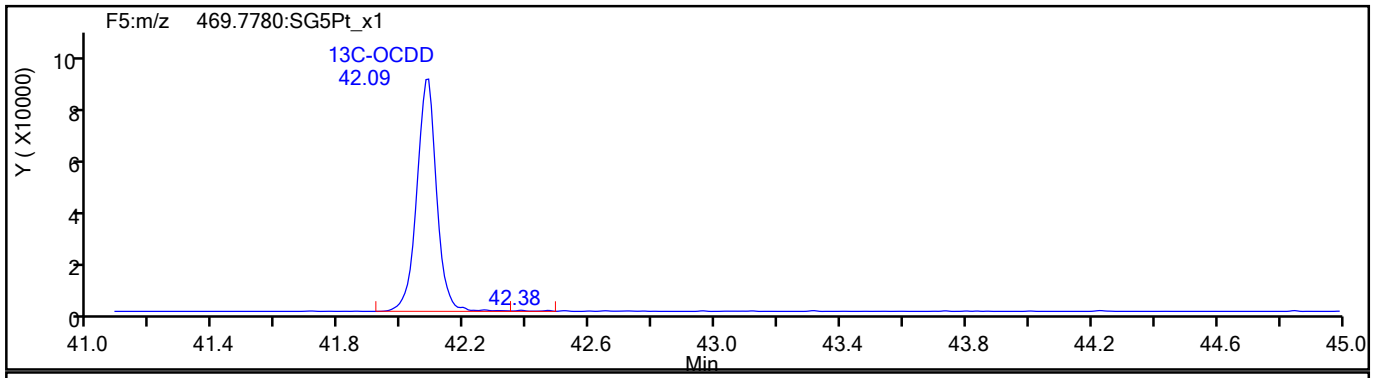

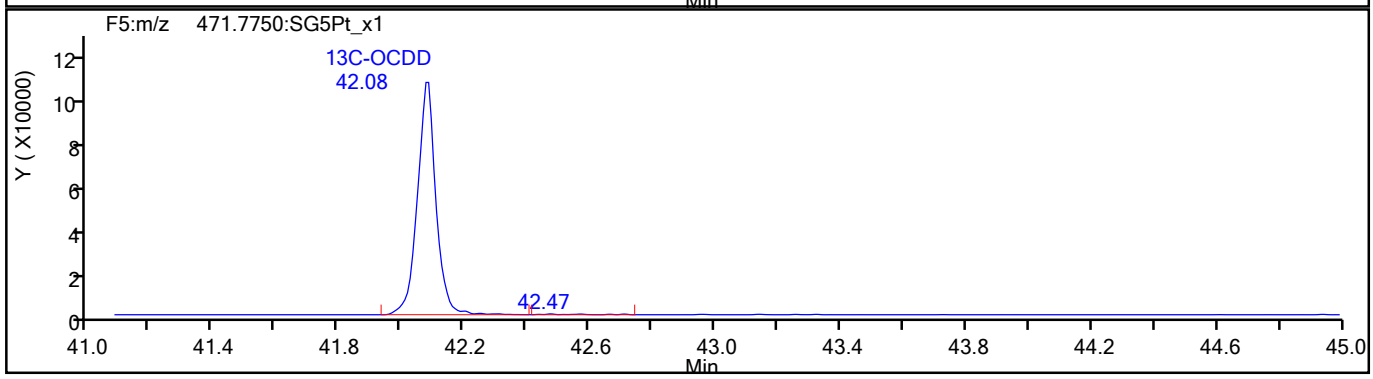

782444

Report Date: 19-Aug-2021 13:11:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

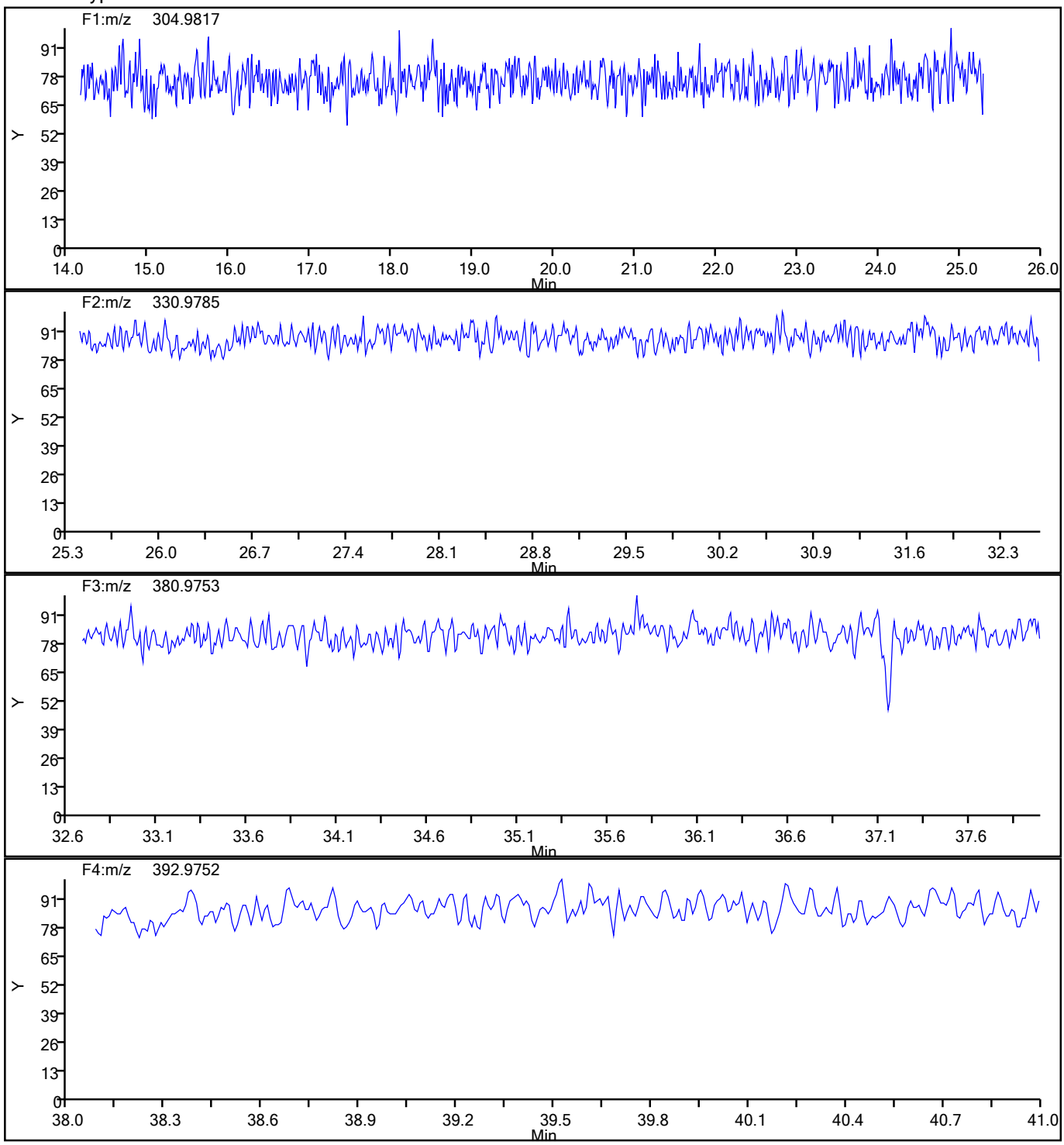

782445

Report Date: 19-Aug-2021 13:11:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_28.d		
Injection Date:	18-Aug-2021 10:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	517281	Sample Line#:	26
Column Type:	DB-5	Column Dia:	0.32 mm

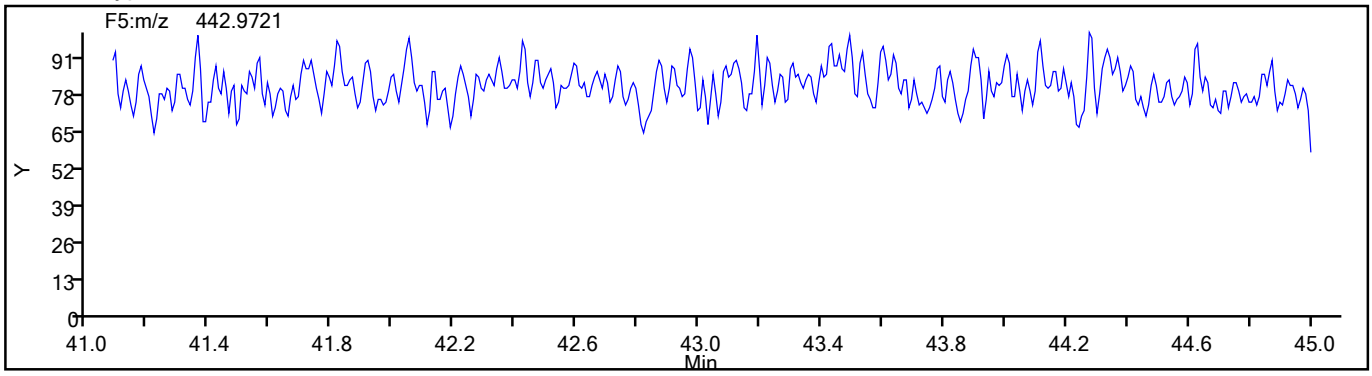

782446

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (10-12) RA
Lab Sample ID: 320-76887-6 RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_008.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.90(g)
Date Analyzed: 08/25/2021 17:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 34.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	190		1.5	0.47

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	67		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	77		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_008.d
Lims ID: 320-76887-A-6-A
Client ID: 11215702-072721-BN-SJSB096 (10-12)
Sample Type: Client
Inject. Date: 25-Aug-2021 17:27:14 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-6-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:06:22

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.274	44540231	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.591	39814559	0.80	1.3327	67.1	67.1	0.2713	0.2713	67.08	
2,3,7,8-TCDF	17.618	25161643	0.77	0.9978	63.3	63.3	0.1539	0.1539		
D 13C-2,3,7,8-TCDD	16.041	24365829	0.80	0.8749	62.5	62.5	1.342	1.342	62.53	
2,3,7,8-TCDD	16.068	4223045	0.81	1.0570	16.4	16.4	0.1860	0.1860		M
$ 37Cl4-2,3,7,8-TCDD	16.068	11914124		0.8648	30.9	30.9	0.1155	0.1155	77.33	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Report Date: 26-Aug-2021 09:30:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_008.d
Lims ID: 320-76887-A-6-A
Client ID: 11215702-072721-BN-SJSB096 (10-12)
Sample Type: Client
Inject. Date: 25-Aug-2021 17:27:14 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-6-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:06:22

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.274	16.298	-1		19325646	4147589	20987	52467	198		
333.9339	16.274	16.298	-1		25214585	5577987	24674	61685	226	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.591	17.615	-1	1.081	17703719	3404889	6475	16187	526		
317.9389	17.591	17.615	-1	1.081	22110840	4250213	7589	18972	560	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.618	17.628	-1	1.002	10928973	2127284	2232	5580	953		
305.8987	17.618	17.628	-1	1.002	14232670	2751321	2469	6172	1114	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.041	16.065	-1	0.986	10832010	2459894	20987	52467	117		
333.9339	16.041	16.065	-1	0.986	13533819	3109242	24674	61685	126	0.80(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	16.068	16.078	-1	1.002	1894220	433822	2182	5455	199		M
321.8936	16.068	16.078	-1	1.002	2328825	525803	2197	5492	239	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.068	16.078	-1	0.987	11914124	2625198	3887	9717	675		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Report Date: 26-Aug-2021 09:30:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_008.d		
Injection Date:	25-Aug-2021 17:27:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	519744	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

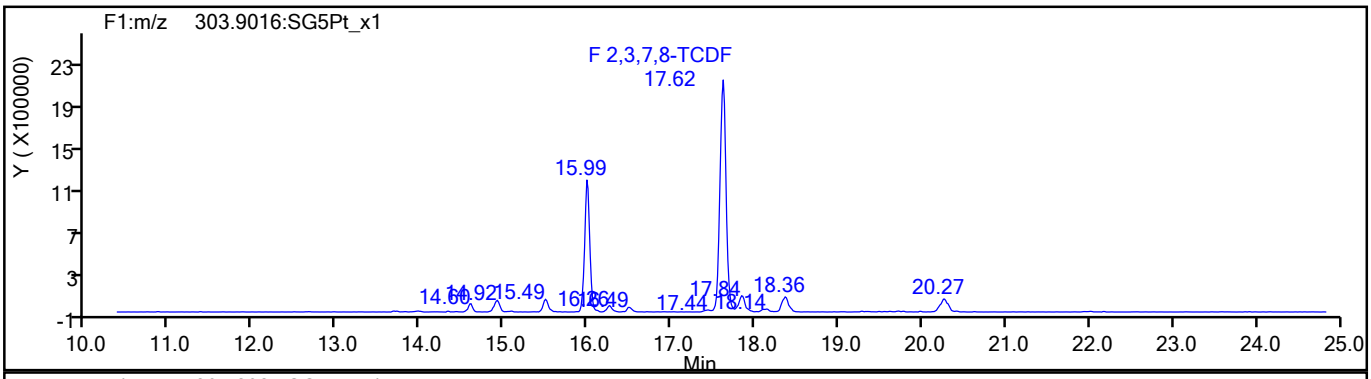

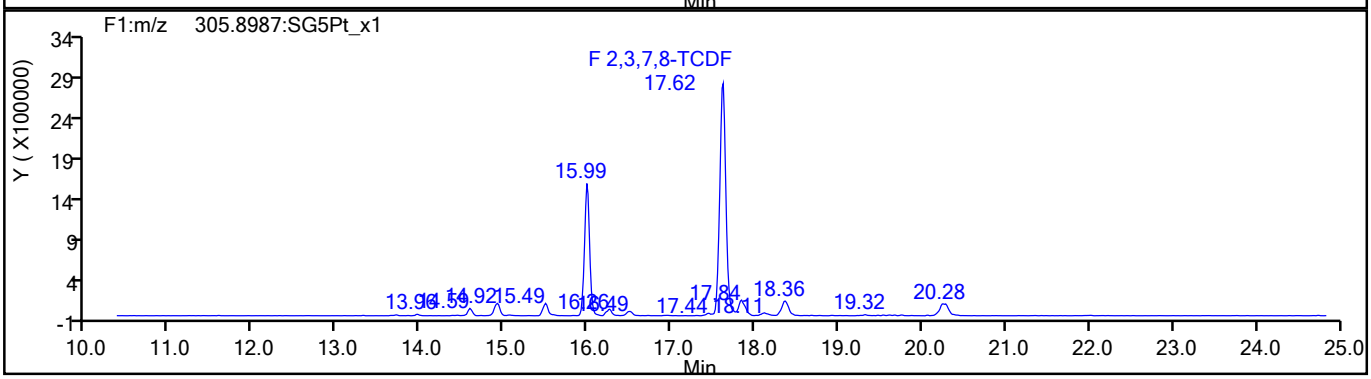

TCDF Standards

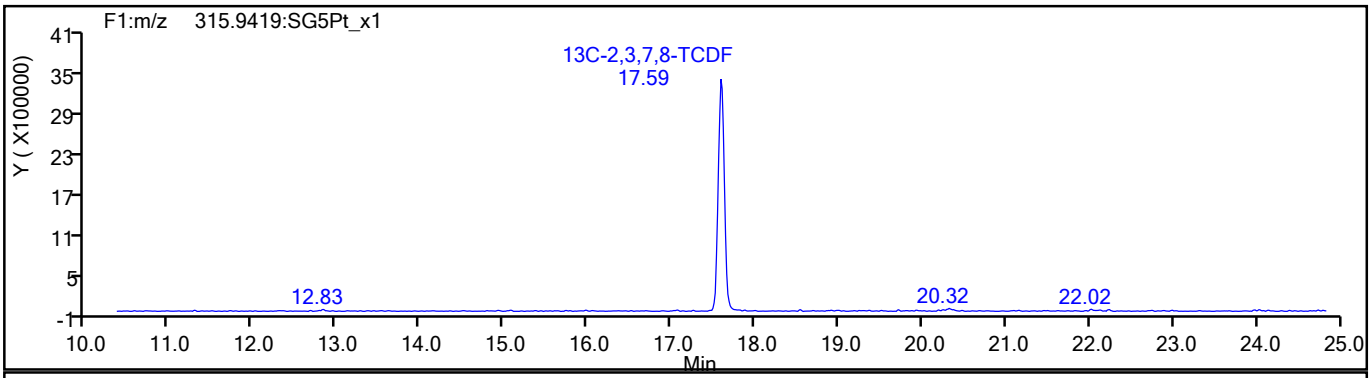

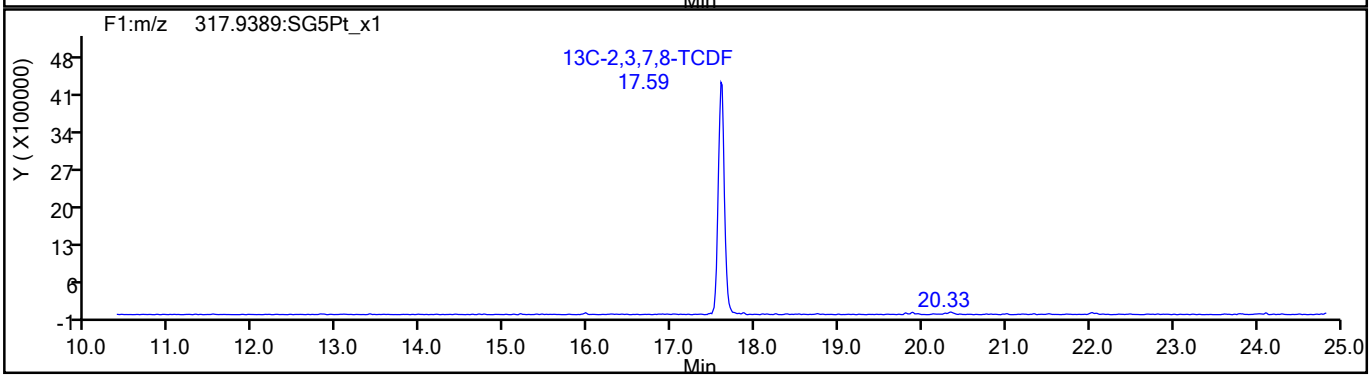

782450

Report Date: 26-Aug-2021 09:30:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_008.d		
Injection Date:	25-Aug-2021 17:27:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	519744	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

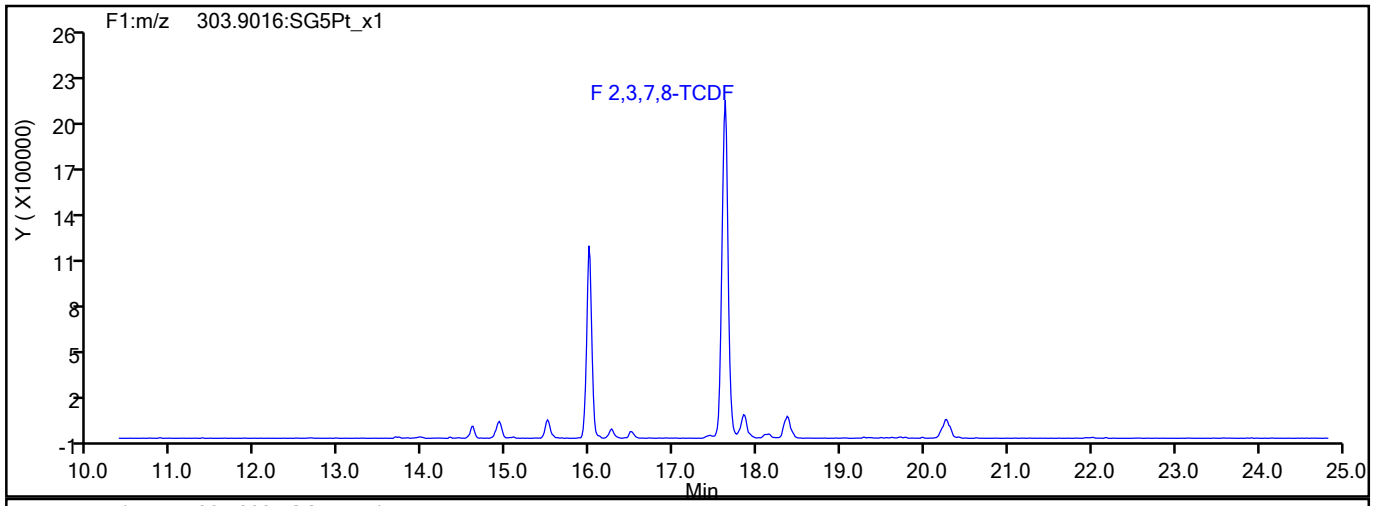

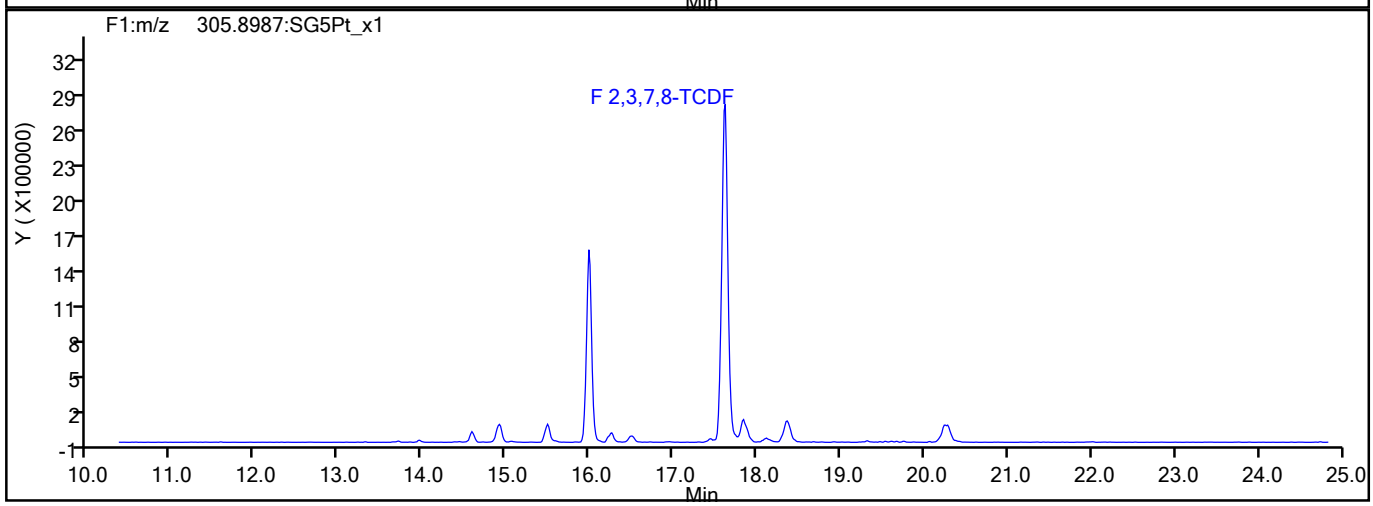

TCDF Interference Mass

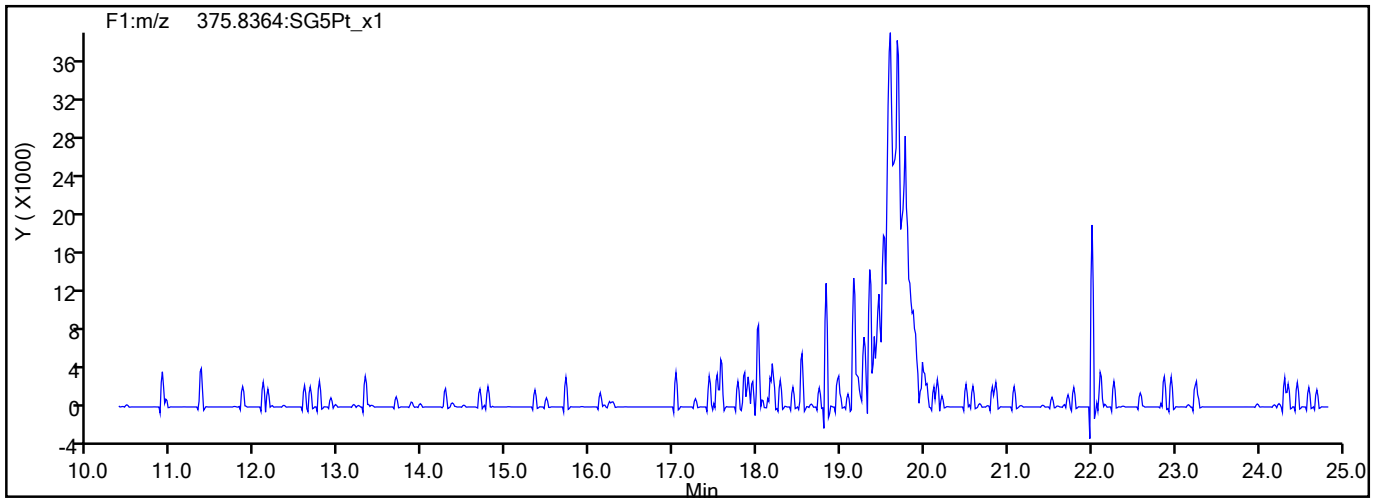

782451

Report Date: 26-Aug-2021 09:30:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_008.d		
Injection Date:	25-Aug-2021 17:27:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	519744	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

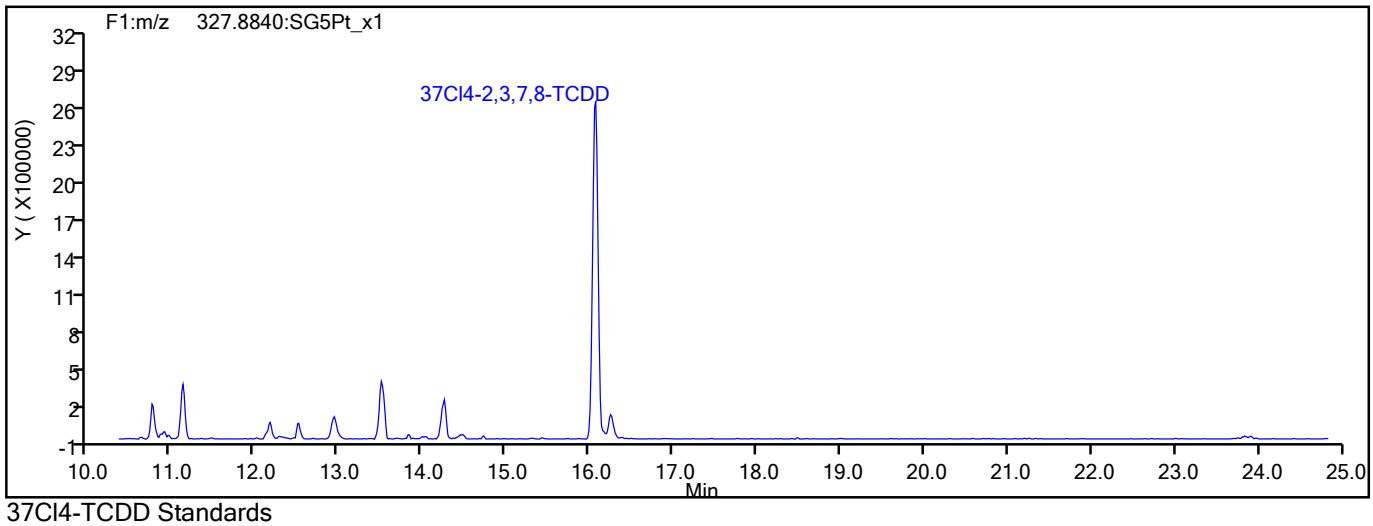

37Cl4-TCDD Standards

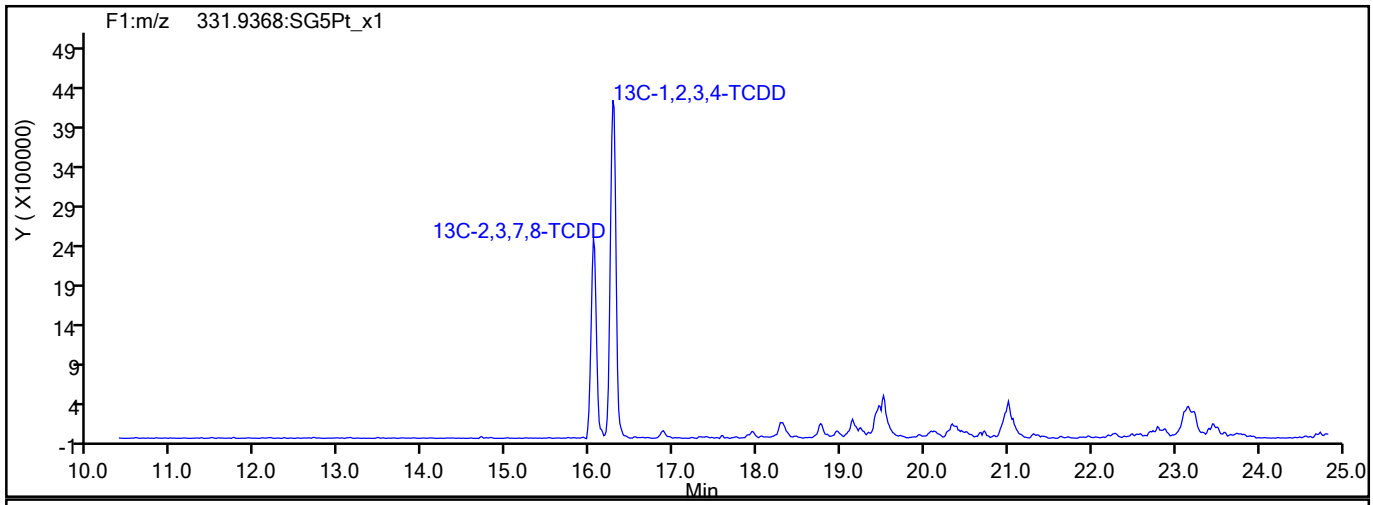

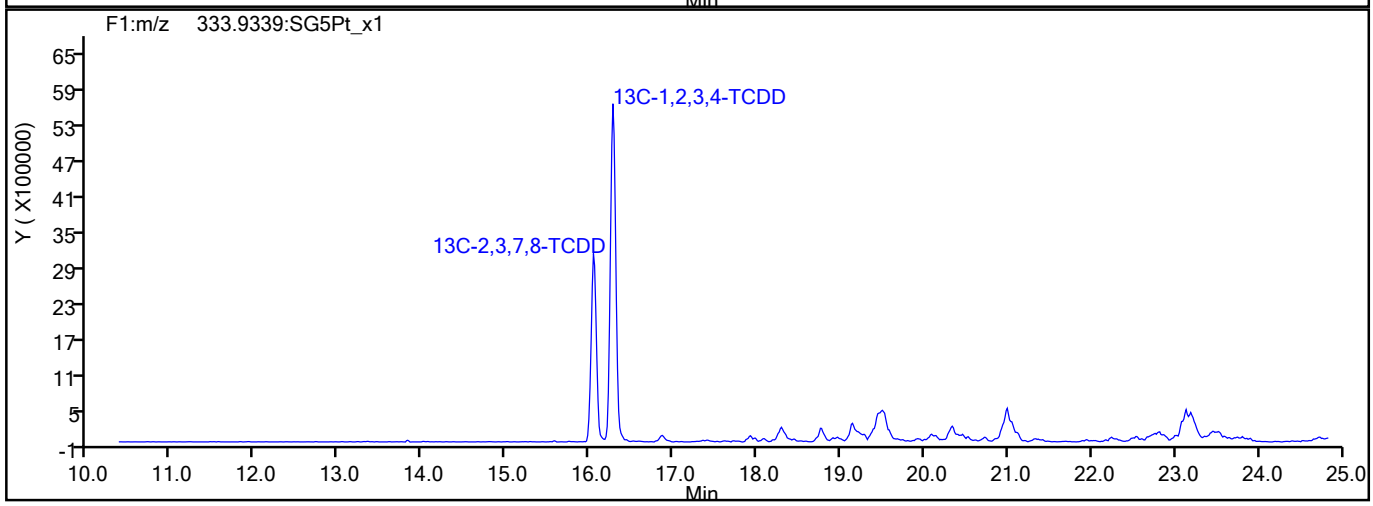

782452

Report Date: 26-Aug-2021 09:30:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_008.d		
Injection Date:	25-Aug-2021 17:27:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (10-12)		
Worklist#:	519744	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

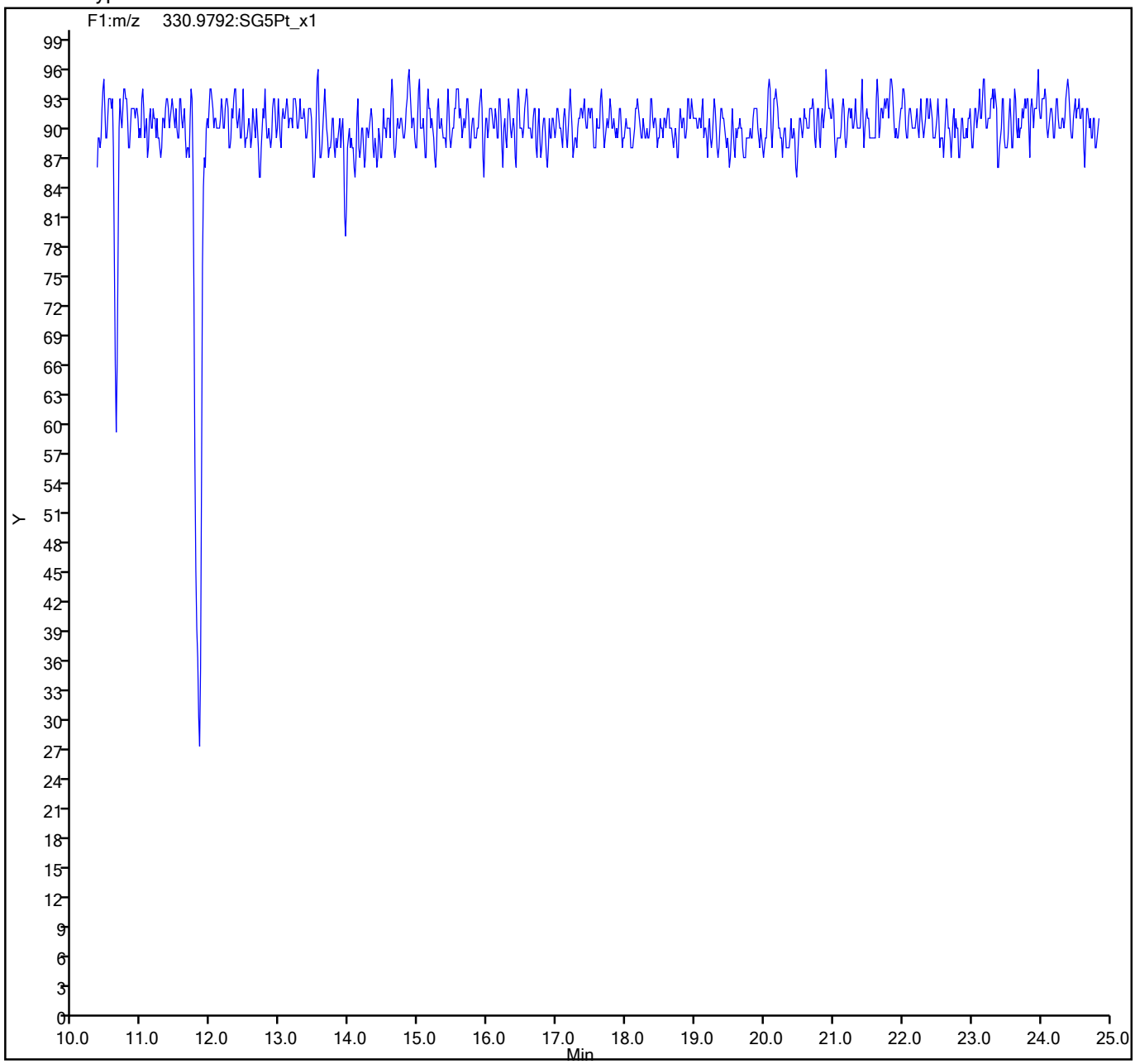

782453

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (12-14)
Lab Sample ID: 320-76887-7
Matrix: Sediment
Lab File ID: 17au21dfs1_29.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.67(g)
Date Analyzed: 08/18/2021 11:42
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 26.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517281
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	3.3		1.3	0.068
40321-76-4	1,2,3,7,8-PeCDD	ND		6.4	0.10
57117-41-6	1,2,3,7,8-PeCDF	0.26	J	6.4	0.039
57117-31-4	2,3,4,7,8-PeCDF	0.16	J q	6.4	0.040
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.4	0.19
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.4	0.21
19408-74-3	1,2,3,7,8,9-HxCDD	2.3	J	6.4	0.19
70648-26-9	1,2,3,4,7,8-HxCDF	ND		6.4	0.038
57117-44-9	1,2,3,6,7,8-HxCDF	ND		6.4	0.038
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.4	0.037
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.4	0.038
35822-46-9	1,2,3,4,6,7,8-HpCDD	24	B	6.4	0.19
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		6.4	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.4	0.048
3268-87-9	OCDD	460	B	13	0.49
39001-02-0	OCDF	ND		13	0.095
41903-57-5	Total TCDD	3.3		1.3	0.068
30402-14-3	Total TCDF	17	q	1.3	0.079
36088-22-9	Total PeCDD	3.9	J q	6.4	0.10
30402-15-4	Total PeCDF	0.43	J q	6.4	0.040
34465-46-8	Total HxCDD	28		6.4	0.20
55684-94-1	Total HxCDF	ND		6.4	0.038
37871-00-4	Total HpCDD	100	B	6.4	0.19
38998-75-3	Total HpCDF	ND		6.4	0.050

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (12-14)
Lab Sample ID: 320-76887-7
Matrix: Sediment
Lab File ID: 17au21dfs1_29.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.67(g)
Date Analyzed: 08/18/2021 11:42
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 26.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517281
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	55		25-164
89059-46-1	13C-2,3,7,8-TCDF	54		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	52		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	53		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	58		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	60		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	63		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	56		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	52		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	61		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	61		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	69		26-138
114423-97-1	13C-OCDD	66		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	68		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d
Lims ID: 320-76887-A-7-A
Client ID: 11215702-072721-BN-SJSB096 (12-14)
Sample Type: Client
Inject. Date: 18-Aug-2021 11:42:00 ALS Bottle#: 0 Worklist Smp#: 27
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-7-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:17:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 18-Aug-2021 14:21:47

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.391	1046947	0.82	2.1E+04	100.0	100.0				a
2,3,7,8-TCDF	20.435	39021	0.79	1.0802	4.763	4.763	0.0308	0.0308		M
D 13C-2,3,7,8-TCDF	20.418	758431	0.81	1.3459	53.8	53.8	0.2142	0.2142	53.83	
A Non-2,3,7,8-sub-TCDF	19.916	15955	0.77	1.0802	2.184	1.948	0.0308	1.948		RQa
S Total TCDF					6.947	6.711	0.0308	0.0308		RQ
D 13C-2,3,7,8-TCDD	21.778	540144	0.79	0.9317	55.4	55.4	0.2113	0.2113	55.38	
2,3,7,8-TCDD	21.873	7513	0.75	1.0753	1.293	1.293	0.0267	0.0267		
$ 37Cl4-2,3,7,8-TCDD	21.812	286274		1.0083	27.1	27.1	0.0199	0.0199	67.80	
A Non-2,3,7,8-sub-TCDD	20.750						0.0267	0.2424		RQU
S Total TCDD					1.293	1.293	0.0267	0.0267		
D 13C-1,2,3,7,8-PeCDF	27.280	638003	1.59	1.1405	53.4	53.4	0.1591	0.1591	53.43	
1,2,3,7,8-PeCDF	27.305	697	1.38	1.0543	0.1036	0.1036	0.0153	0.0153		M
D 13C-2,3,4,7,8-PeCDF	28.795	682205	1.61	1.1253	57.9	57.9	0.1613	0.1613	57.90	
2,3,4,7,8-PeCDF	28.879	440	1.55	1.0079	0.0948	0.0640	0.0157	0.0157		RQ
A F1 PeCDFs	24.676						0.005170	0.006024		RQU
A Non-2,3,7,8-sub-PeCDF	28.167						0.0155	0.0155		RQU
S Total PeCDF					0.1985	0.1676	0.0155	0.0155		RQ
D 13C-1,2,3,7,8-PeCDD	29.612	388249	1.57	0.7165	51.8	51.8	0.1555	0.1555	51.76	
1,2,3,7,8-PeCDD	29.746						0.0391	0.0391		U
A Non-2,3,7,8-sub-PeCDD	28.556	6131	1.55	1.0465	1.775	1.509	0.0391	0.6564		RQMa
S Total PeCDD					1.775	1.509	0.0391	0.0391		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.936	650396	0.53	0.9648	63.4	63.4	0.1994	0.1994	63.42	
1,2,3,4,7,8-HxCDF	35.000						0.0147	0.0147		
D 13C-1,2,3,6,7,8-HxCDF	35.096	631861	0.54	1.0708	55.5	55.5	0.1797	0.1797	55.51	
1,2,3,6,7,8-HxCDF	35.151						0.0150	0.0150		
D 13C-2,3,4,6,7,8-HxCDF	35.921	597400	0.53	1.0413	54.0	54.0	0.1847	0.1847	53.97	
2,3,4,6,7,8-HxCDF	35.968						0.0148	0.0148		
D 13C-1,2,3,7,8,9-HxCDF	36.805	534930	0.52	0.9731	51.7	51.7	0.1977	0.1977	51.72	
1,2,3,7,8,9-HxCDF	36.738						0.0145	0.0145		RQU
A Non-2,3,7,8-sub-HxCDF	35.074						0.0148	0.0148		U
S Total HxCDF							0.0150	0.0150		

Report Date: 19-Aug-2021 13:17:11 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.603	1062994	1.27	1.8E+04	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	36.131	480915	1.30	0.7587	59.6	59.6	0.1268	0.1268	59.63	
1,2,3,4,7,8-HxCDD	36.131						0.0754	0.0754		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.241	495857	1.31	0.8593	54.3	54.3	0.1119	0.1119	54.29	
1,2,3,6,7,8-HxCDD	36.131						0.0838	0.0838		RQU
1,2,3,7,8,9-HxCDD	36.594	4895	1.21	1.1094	0.9034	0.9034	0.0735	0.0735		
A Non-2,3,7,8-sub-HxCDD	35.432	50942	1.22	1.0545	9.891	9.891	0.0773	7.844		
S Total HxCDD					10.8	10.8	0.0776	0.0776		
D 13C-1,2,3,4,6,7,8-HpCDF	38.622	477530	0.46	0.7359	61.0	61.0	0.1891	0.1891	61.04	
1,2,3,4,6,7,8-HpCDF	38.654						0.0197	0.0197		
1,2,3,4,7,8,9-HpCDF	39.900						0.0186	0.0186		
D 13C-1,2,3,4,7,8,9-HpCDF	39.867	505804	0.45	0.6854	69.4	69.4	0.2030	0.2030	69.43	
A Non-2,3,7,8-sub-HpCDF	39.277						0.0191	0.0191		
S Total HpCDF							0.0197	0.0197		
D 13C-1,2,3,4,6,7,8-HpCDD	39.564	438575	1.10	0.6745	61.2	61.2	0.1305	0.1305	61.17	
1,2,3,4,6,7,8-HpCDD	39.573	43295	1.01	1.0503	9.399	9.399	0.0744	0.0744		
A Non-2,3,7,8-sub-HpCDD	39.277	137523	1.04	1.0503	29.9	29.9	0.0744	29.9		
S Total HpCDD					39.3	39.3	0.0744	0.0744		
D 13C-OCDD	42.061	765082	0.93	0.5446	132.2	132.2	0.1481	0.1481	66.08	
OCDF	42.187						0.0374	0.0374		
OCDD	42.069	737555	0.90	1.0620	181.6	181.6	0.1905	0.1905		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d
Lims ID: 320-76887-A-7-A
Client ID: 11215702-072721-BN-SJSB096 (12-14)
Sample Type: Client
Inject. Date: 18-Aug-2021 11:42:00 ALS Bottle#: 0 Worklist Smp#: 27
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-7-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:17:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 18-Aug-2021 14:21:47

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.391	21.483	-6		472836	66287	96	240	690		a
333.9338	21.399	21.483	-5		574111	83599	22	55	3800	0.82(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.435	20.482	-3	1.001	17228	2426	4	10	607		M
305.8987	20.453	20.482	-2	1.002	21793	3230	10	25	323	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.418	20.594	-11	0.955	340125	48318	62	155	779		
317.9389	20.410	20.594	-11	0.954	418306	56758	111	277	511	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQa
303.9016	19.730	19.916	-11	0.966	6941	1166	4	10	292		a
305.8987	19.730	19.916	-11	0.966	10951	1752	10	25	175	0.63(0.65-0.89)	
	Empc Correction				9014	1514	10	25	151		
13C-2,3,7,8-TCDD											
331.9368	21.778	21.790	-1	1.018	237917	29927	96	240	312		
333.9338	21.769	21.790	-1	1.018	302227	39710	22	55	1805	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.873	21.825	3	1.004	3226	430	6	15	72		
321.8936	21.821	21.825	0	1.002	4287	727	2	5	364	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.812	21.905	-6	1.020	286274	37492	12	30	3124		
A Non-2,3,7,8-sub-TCDD											U
319.8965	18.302	20.750	-147	0.840	441	123	6	15	21		
	Empc Correction				373	113	6	15	19		
321.8936	18.293	20.750	-147	0.840	485	147	2	5	74	0.91(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	27.280	27.343	-4	1.275	391612	56888	66	165	862		
353.8970	27.288	27.343	-3	1.276	246391	35856	43	107	834	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.305	27.368	-4	1.001	404	125	2	5	63		M
341.8567	27.297	27.368	-4	1.001	293	78	4	10	20	1.38(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.795	28.867	-4	1.346	421224	57192	66	165	867		
353.8970	28.803	28.867	-4	1.347	260981	37663	43	107	876	1.61(1.32-1.78)	
2,3,4,7,8-PeCDF											RQ
339.8597	28.879	28.884	0	1.003	268	47	2	5	24		
341.8567	28.879	28.884	0	1.003	384	72	4	10	18	0.70(1.32-1.78)	
	Empc Correction				172	30	4	10	8		
A F1 PeCDFs											U
339.8597	24.420	24.676	-15	0.895	25	10	1	2	10		
341.8567	24.437	24.676	-14	0.896	94	53	1	2	53	0.27(1.32-1.78)	
	Empc Correction				16	6	1	2	6		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	25.824	28.167	-140	0.947	115	30	2	5	15		
	Empc Correction				63	24	2	5	12		
341.8567	25.790	28.167	-142	0.945	41	16	4	10	4	2.80(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.612	29.667	-3	1.384	237326	33080	35	87	945		
369.8919	29.620	29.667	-3	1.385	150923	20713	32	80	647	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											U
355.8546	29.692						7	17			
357.8516	29.692						2	5			
A Non-2,3,7,8-sub-PeCDD											RQMa
355.8546	26.085	28.556	-148	0.881	1084	241	7	17	34		M
357.8516	26.085	28.556	-148	0.881	844	164	2	5	82	1.28(1.32-1.78)	M
	Empc Correction				699	155	2	5	78		
355.8546	26.918	28.556	-98	0.909	2227	379	7	17	54		M
	Empc Correction				1621	313	7	17	45		
357.8516	26.918	28.556	-98	0.909	1046	202	2	5	101	2.13(1.32-1.78)	
355.8546	28.534	28.556	-1	0.964	1022	152	7	17	22		a
357.8516	28.526	28.556	-2	0.963	989	151	2	5	76	1.03(1.32-1.78)	M
	Empc Correction				659	98	2	5	49		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.936	34.974	-2	0.954	226650	45667	64	160	714		
385.8610	34.936	34.974	-2	0.954	423746	84348	124	310	680	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.000						3	7			
375.8178	35.000						6	15			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.096	35.134	-2	0.959	221856	41458	64	160	648		
385.8610	35.096	35.134	-2	0.959	410005	78871	124	310	636	0.54(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDF											
373.8208	35.151						3	7			
375.8178	35.151						6	15			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.921	35.951	-2	0.981	207368	42628	64	160	666		
385.8610	35.913	35.951	-2	0.981	390032	79515	124	310	641	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.968						3	7			
375.8178	35.968						6	15			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.805	36.843	-2	1.006	183628	43485	64	160	679		
385.8610	36.805	36.843	-2	1.006	351302	78741	124	310	635	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQU
373.8208	36.852						3	7			
375.8178	36.852						6	15			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	35.074						3	7			
375.8178	35.074						6	15			
13C-1,2,3,7,8,9-HxCDD											a
401.8559	36.603	36.641	-2		594503	137785	56	140	2460		a
403.8529	36.611	36.641	-2		468491	106534	38	95	2804	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.131	36.161	-2	0.987	271946	61096	56	140	1091		
403.8529	36.123	36.161	-2	0.987	208969	47663	38	95	1254	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.178						18	45			
391.8127	36.178						17	42			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.241	36.279	-2	0.990	280760	58811	56	140	1050		
403.8529	36.241	36.279	-2	0.990	215097	45759	38	95	1204	1.31(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8158	36.296						18	45			
391.8127	36.296						17	42			
1,2,3,7,8,9-HxCDD											
389.8158	36.594	36.658	-4	1.013	2683	448	18	45	25		
391.8127	36.611	36.658	-3	1.013	2212	391	17	42	23	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.254	35.432	-70	0.945	22471	3637	18	45	202		
391.8127	34.246	35.432	-71	0.945	17925	3123	17	42	184	1.25(1.05-1.43)	
389.8158	35.029	35.432	-24	0.967	1287	222	18	45	12		
391.8127	35.012	35.432	-25	0.966	1153	245	17	42	14	1.12(1.05-1.43)	
389.8158	35.366	35.432	-4	0.976	4259	879	18	45	49		
391.8127	35.357	35.432	-4	0.976	3847	718	17	42	42	1.11(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.622	38.647	-2	1.055	149684	39464	49	122	805		
419.8220	38.622	38.647	-2	1.055	327846	83448	87	217	959	0.46(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											
407.7817	38.654						12	30			
409.7788	38.654						2	5			
1,2,3,4,7,8,9-HpCDF											
407.7817	39.900						12	30			
409.7788	39.900						2	5			
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.867	39.901	-2	1.089	156634	43329	49	122	884		
419.8220	39.867	39.901	-2	1.089	349170	100134	87	217	1151	0.45(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.277						12	30			
409.7788	39.277						2	5			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.564	39.590	-2	1.081	230209	64886	37	92	1754		
437.8140	39.564	39.590	-2	1.081	208366	56657	49	122	1156	1.10(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.573	39.597	-1	1.000	21759	5630	21	52	268		
425.7737	39.573	39.597	-1	1.000	21536	5693	17	42	335	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.933	39.277	-21	0.984	69999	18149	21	52	864		
425.7737	38.933	39.277	-21	0.984	67524	18205	17	42	1071	1.04(0.88-1.20)	
13C-OCDD											
469.7780	42.061	42.094	-2	1.149	368227	88075	47	117	1874		
471.7750	42.052	42.094	-3	1.149	396855	94824	32	80	2963	0.93(0.76-1.02)	
OCDF											
441.7428	42.187						3	7			
443.7399	42.187						15	37			
OCDD											
457.7377	42.069	42.103	-2	1.000	350115	84016	35	87	2400		
459.7348	42.069	42.103	-2	1.000	387440	91771	39	97	2353	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 19-Aug-2021 13:17:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Lims ID:	320-76887-A-7-A		
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Inject. Date:	18-Aug-2021 11:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	27

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	758431	105076

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	758431	105076

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.730	6941	1166	10951	1752	2.18	0.63	RQa
19.730	6941	1166	9014	1514	1.95		Empc Correction
Signal Totals:							
	6941	1166	9014	1514			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	17892	2918				0.63	RQa
	15955	2680					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.184 = (17892 * 100.000) / (758431 * 1.080)

Empc Amount: 1.948 = (15955 * 100.000) / (758431 * 1.080)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Report Date: 19-Aug-2021 13:17:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Lims ID:	320-76887-A-7-A		
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Inject. Date:	18-Aug-2021 11:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	27

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	540144	69637

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	540144	69637

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.302	441	123	485	147	0.1594	0.91	RQ
18.302	373	113	485	147	0.1477		Empc Correction
19.712	386	113	869	147	0.2161	0.44	RQ
19.712	386	113	501	146	0.1527		Empc Correction
20.263	464	51	86	34	0.0947	5.40	RQ
20.263	66	26	86	34	0.0262		Empc Correction
20.547	169	69	28	15	0.0339	6.04	RQ
20.547	21	11	28	15	0.008436		Empc Correction
20.840	194	73	49	29	0.0418	3.96	RQ
20.840	37	22	49	29	0.0148		Empc Correction
21.382	579	91	677	154	0.2162	0.86	
21.537	601	159	807	129	0.2424	0.74	
22.148	136	36	84	20	0.0379	1.62	RQ
22.148	64	15	84	20	0.0255		Empc Correction
22.466	170	35	370	66	0.0930	0.46	RQ
22.466	170	35	220	45	0.0671		Empc Correction
22.957	79	45	74	48	0.0263	1.07	RQ
22.957	56	36	74	48	0.0224		Empc Correction
23.576	308	49	72	30	0.0654	4.28	RQ
23.576	55	23	72	30	0.0219		Empc Correction
23.680	338	136	166	37	0.0868	2.04	RQ
23.680	127	28	166	37	0.0504		Empc Correction

Compound is Marked ND

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Lims ID:	320-76887-A-7-A		
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Inject. Date:	18-Aug-2021 11:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	27

F1 PeCDFs, RT: 24.676

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	638003	92744
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	682205	94855

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	660104	93799

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.420	25	10	94	53	0.0175	0.27	RQ
24.420	25	10	16	6	0.006024		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 13:17:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Lims ID:	320-76887-A-7-A		
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Inject. Date:	18-Aug-2021 11:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	27

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	638003	92744
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	682205	94855

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	660104	93799

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.824	115	30	41	16	0.0229	2.80	RQ
25.824	63	24	41	16	0.0153		Empc Correction
29.157	33	12	65	21	0.0144	0.51	RQ
29.157	33	12	21	7	0.007934		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 13:17:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Lims ID:	320-76887-A-7-A		
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Inject. Date:	18-Aug-2021 11:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	27

Non-2,3,7,8-sub-PeCDD, RT: 28.556

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	388249	53793

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	388249	53793

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.085	1084	241	844	164	0.4745	1.28	RQM
26.085	1084	241	699	155	0.4388		Empc Correction
26.918	2227	379	1046	202	0.8056	2.13	RQM
26.918	1621	313	1046	202	0.6564		Empc Correction
28.534	1022	152	989	151	0.4950	1.03	RQM
28.534	1022	152	659	98	0.4137		Empc Correction
Signal Totals:							
	3727	706	2404	455			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7212	1289				1.51	RQM
	6131	1161					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.775 = (7212 * 100.000) / (388249 * 1.046)

Empc Amount: 1.509 = (6131 * 100.000) / (388249 * 1.046)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Lims ID:	320-76887-A-7-A		
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Inject. Date:	18-Aug-2021 11:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	27

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	650396	130015
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	631861	120329
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	597400	122143
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	534930	122226

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	603646	123678

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 19-Aug-2021 13:17:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Lims ID:	320-76887-A-7-A		
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Inject. Date:	18-Aug-2021 11:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	27

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	480915	108759
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	495857	104570
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	488386	106664

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.254	22471	3637	17925	3123	7.84	1.25	
35.029	1287	222	1153	245	0.4738	1.12	
35.366	4259	879	3847	718	1.57	1.11	
Signal Totals:							
	28017	4738	22925	4086			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	50942	8824				1.22	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 9.891 = (50942 * 100.000) / (488386 * 1.055)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Lims ID:	320-76887-A-7-A		
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Inject. Date:	18-Aug-2021 11:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	27

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	438575	121543

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	438575	121543

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.933	69999	18149	67524	18205	29.9	1.04	
Signal Totals:							
	69999	18149	67524	18205			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	137523	36354				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 29.855 = (137523 * 100.000) / (438575 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d				
Injection Date:	18-Aug-2021 11:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-7-A	Lab Sample ID:	320-76887-7		
Client ID:	11215702-072721-BN-SJSB096 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.44
Area: 15250
Amount: 4.521565
Amount Units: pg/ul

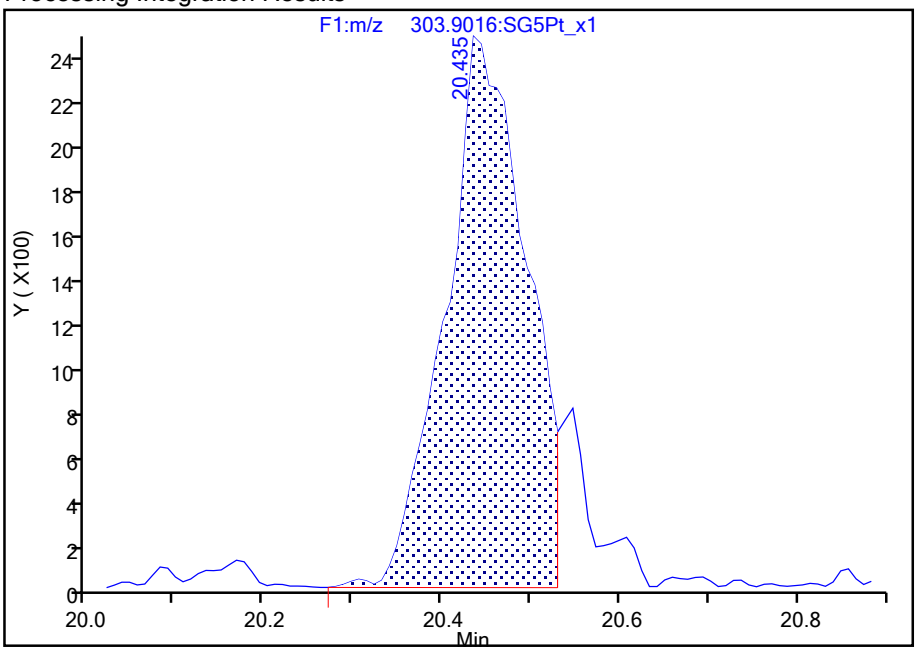

Manual Integration Results

RT: 20.44
Area: 17228
Amount: 4.763005
Amount Units: pg/ul

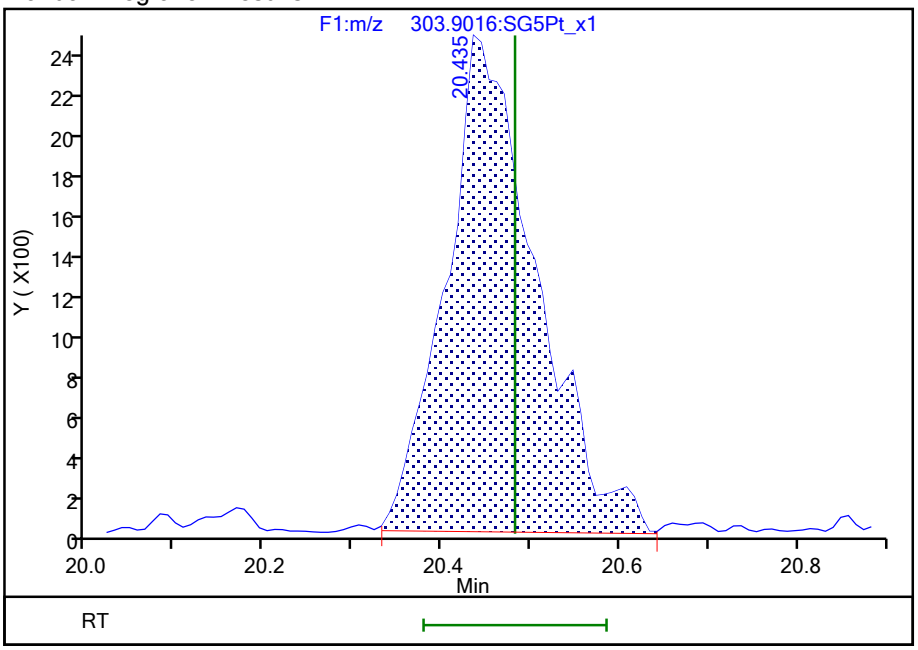

Reviewer: dadunj, 19-Aug-2021 13:14:23

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d				
Injection Date:	18-Aug-2021 11:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-7-A	Lab Sample ID:	320-76887-7		
Client ID:	11215702-072721-BN-SJSB096 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.31
Area: 250
Amount: 0.080729
Amount Units: pg/ul

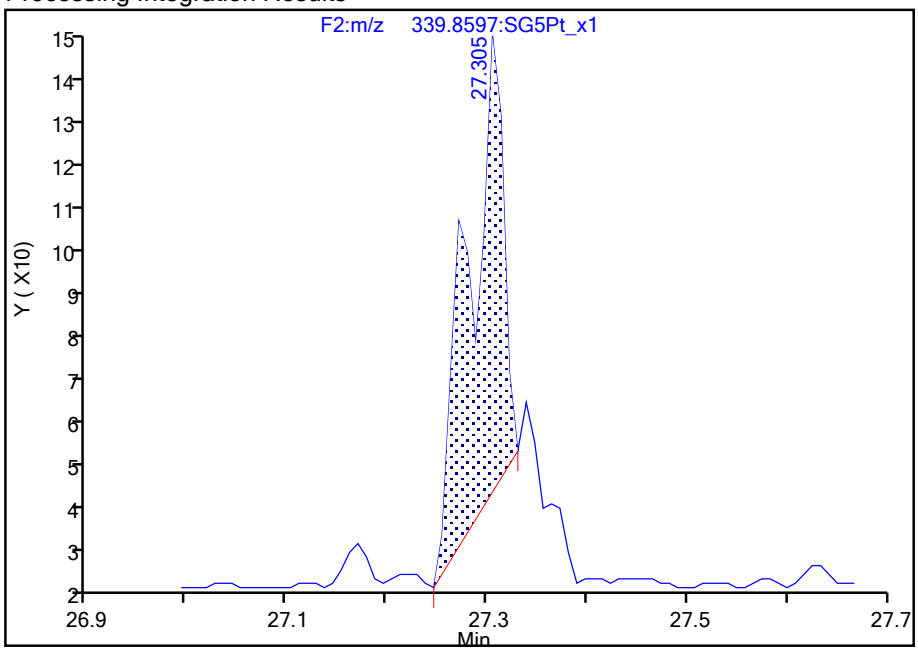

Manual Integration Results

RT: 27.31
Area: 404
Amount: 0.103624
Amount Units: pg/ul

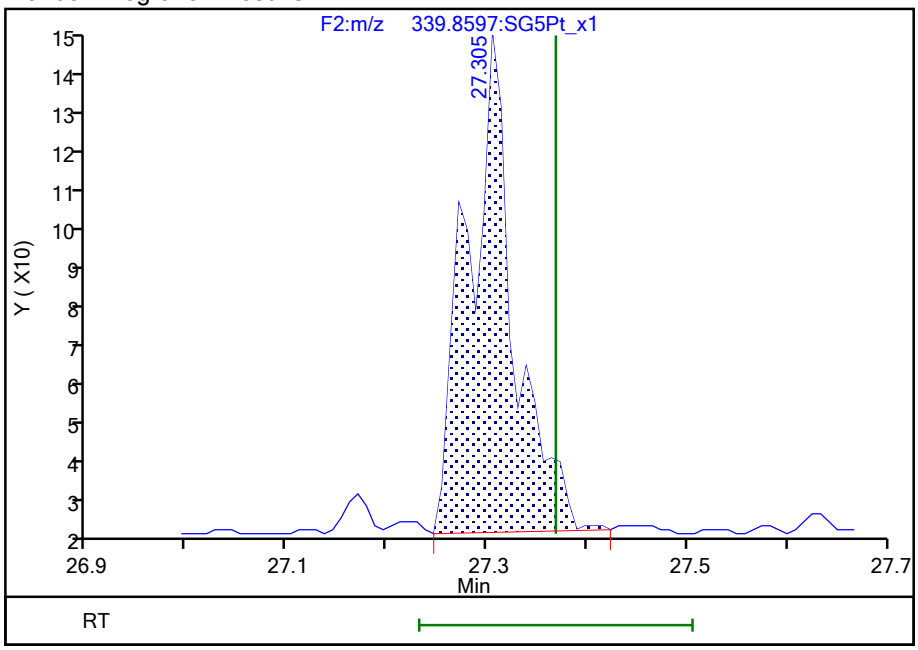

Reviewer: dadunj, 19-Aug-2021 13:14:44

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d				
Injection Date:	18-Aug-2021 11:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-7-A	Lab Sample ID:	320-76887-7		
Client ID:	11215702-072721-BN-SJSB096 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (26.03- 31.09)

Signal: 1

Processing Integration Results

RT = 26.085 Area = 1084

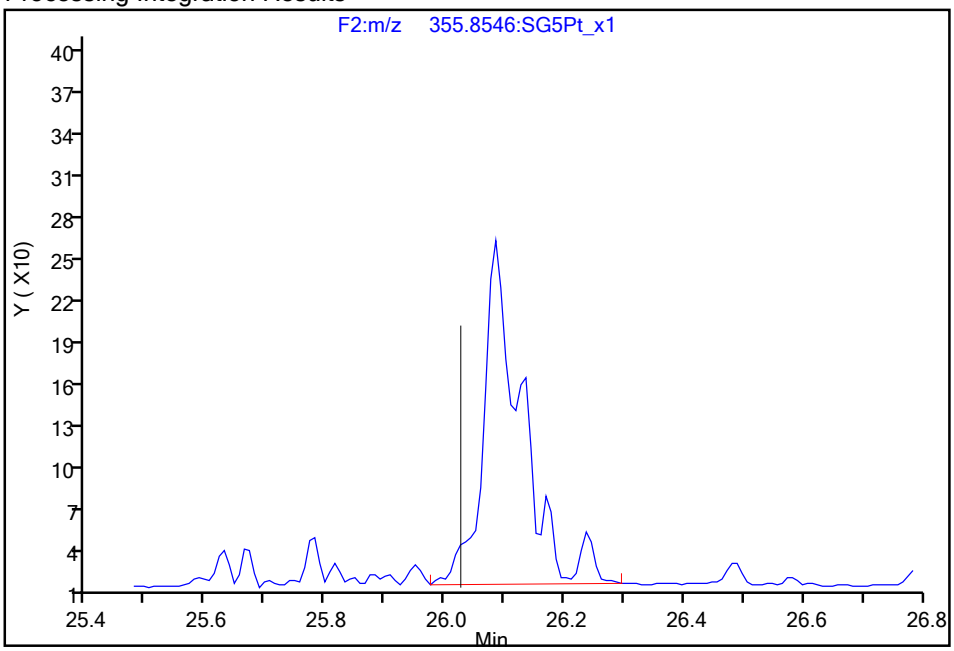

Manual Integration Results

RT = 26.085 Area = 1084

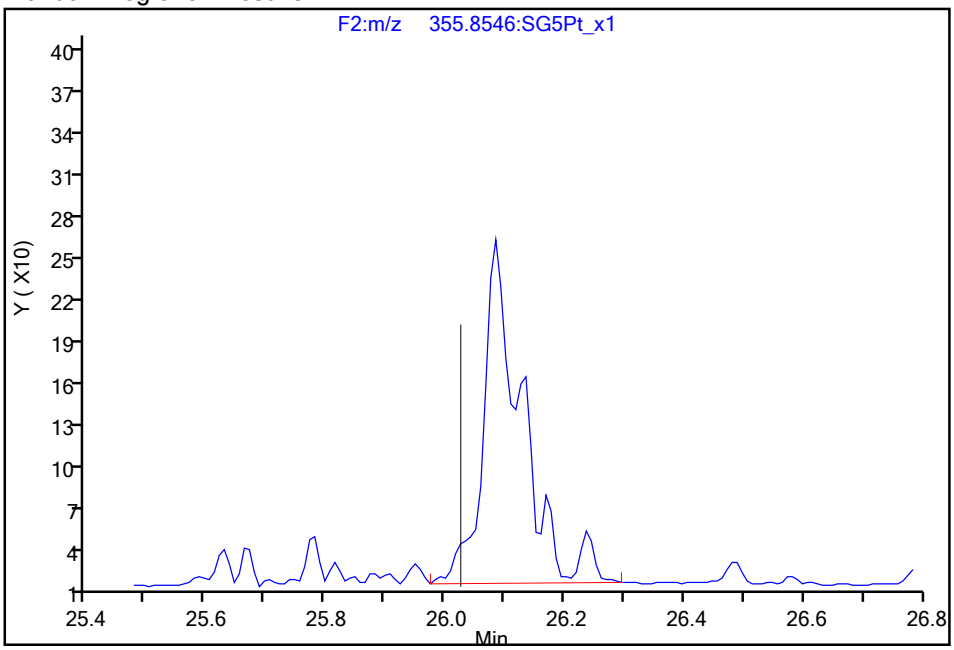

Reviewer: dadunj, 19-Aug-2021 13:15:19

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d				
Injection Date:	18-Aug-2021 11:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-7-A	Lab Sample ID:	320-76887-7		
Client ID:	11215702-072721-BN-SJSB096 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (26.03- 31.09)

Signal: 2

Processing Integration Results

RT = 26.085 Area = 445

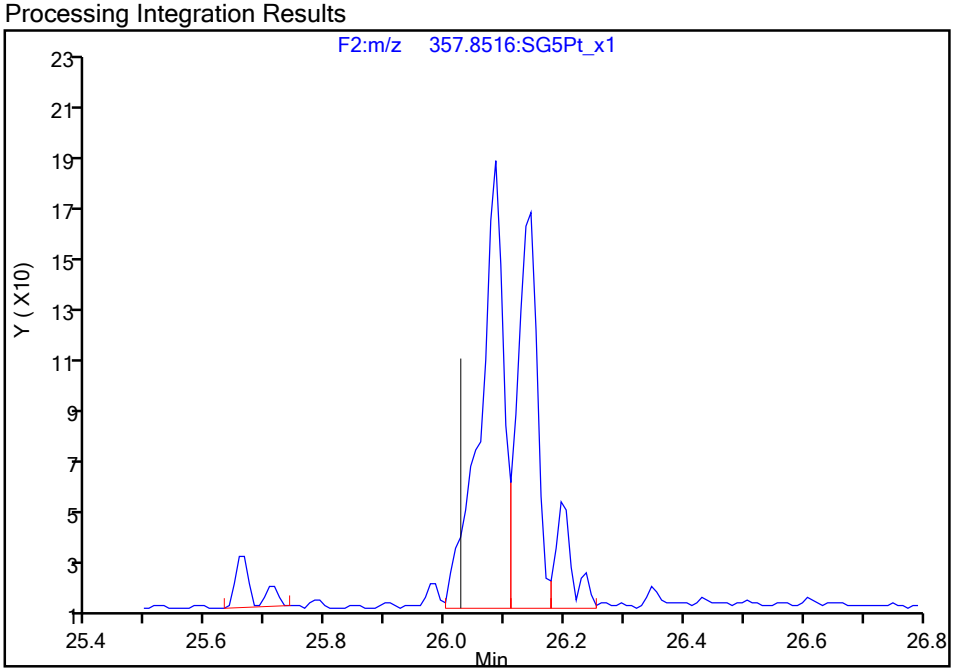

Manual Integration Results

RT = 26.085 Area = 844 M

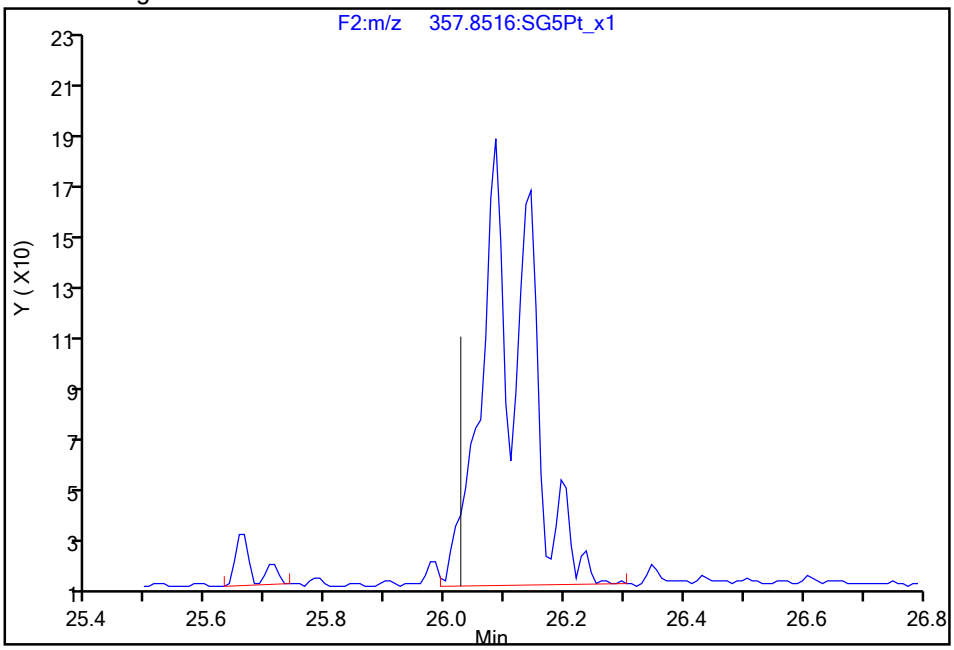

Reviewer: dadunj, 19-Aug-2021 13:15:23

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d				
Injection Date:	18-Aug-2021 11:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-7-A	Lab Sample ID:	320-76887-7		
Client ID:	11215702-072721-BN-SJSB096 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (26.03- 31.09)

Signal: 1

Processing Integration Results

RT = 26.918 Area = 1965

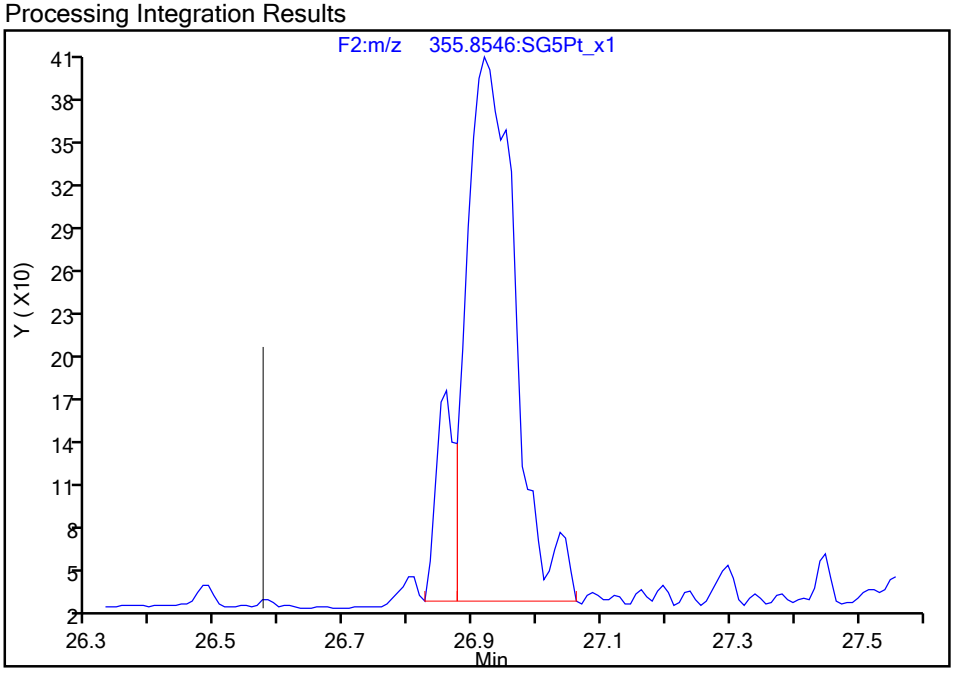

Manual Integration Results

RT = 26.918 Area = 2227 M

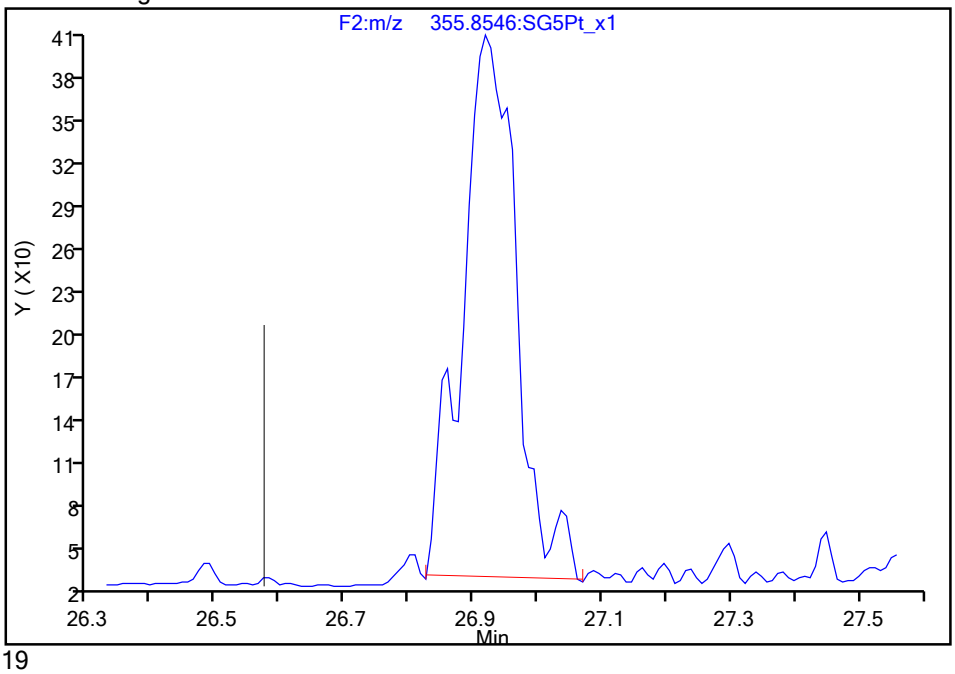

Reviewer: dadunj, 19-Aug-2021 13:15:19

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 19-Aug-2021 13:17:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d				
Injection Date:	18-Aug-2021 11:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-7-A	Lab Sample ID:	320-76887-7		
Client ID:	11215702-072721-BN-SJSB096 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (26.03- 31.09)

Signal: 2

Processing Integration Results

RT = 28.526 Area = 1077

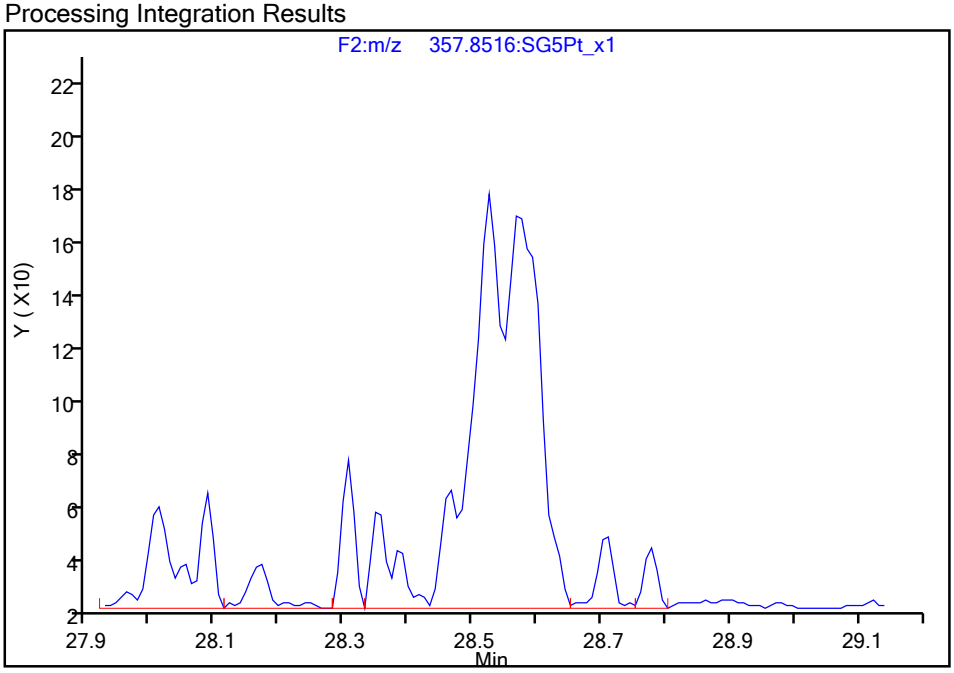

Manual Integration Results

RT = 28.526 Area = 989 M

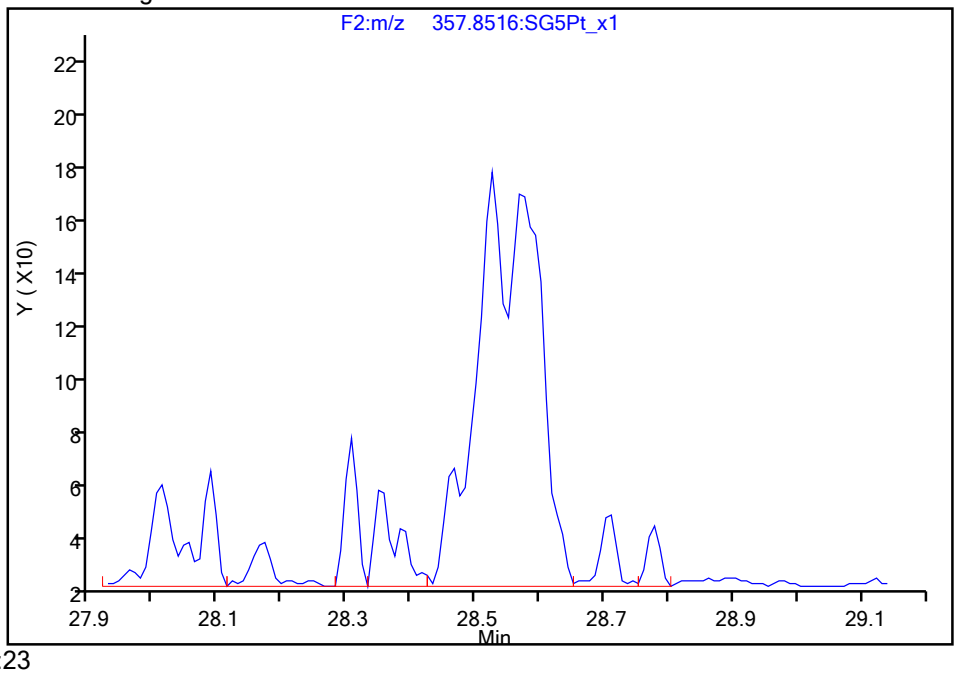

Reviewer: dadunj, 19-Aug-2021 13:15:23

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Report Date: 19-Aug-2021 13:17:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

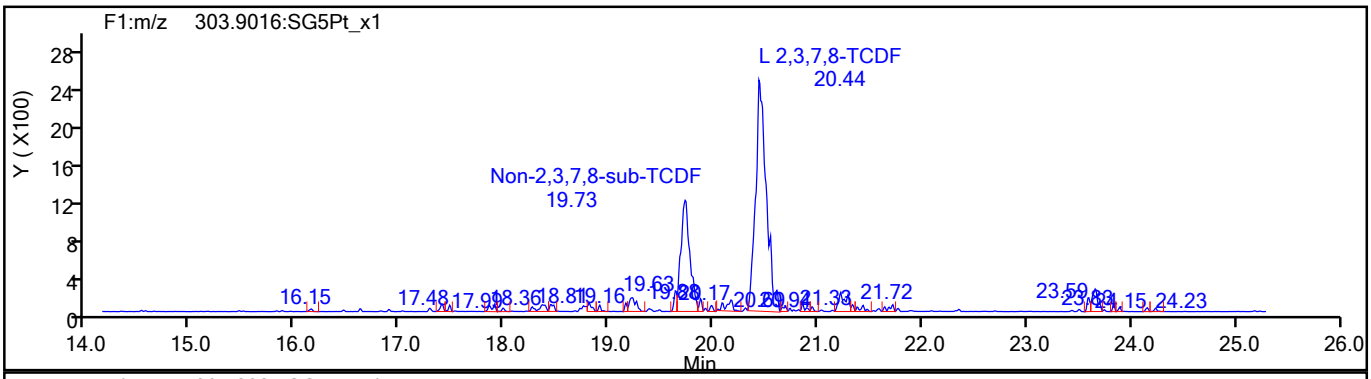

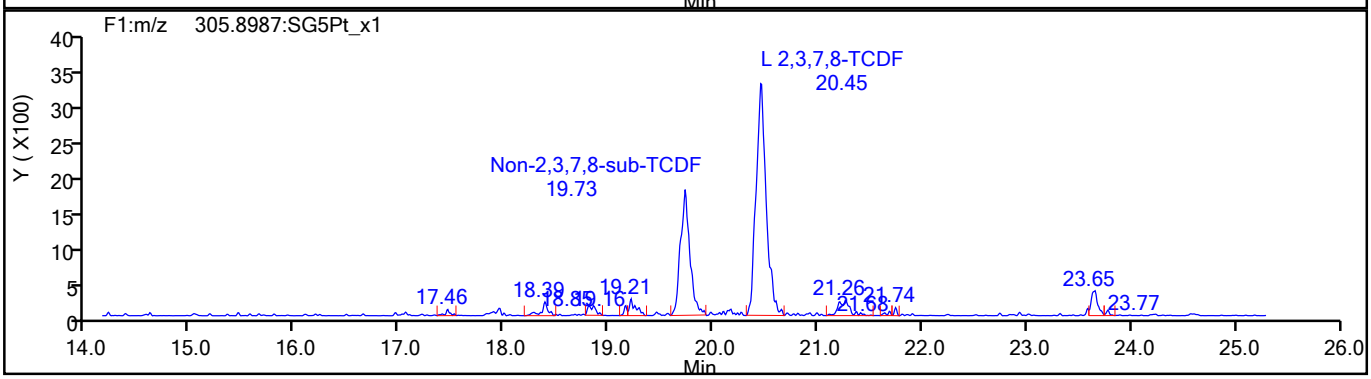

TCDF Standards

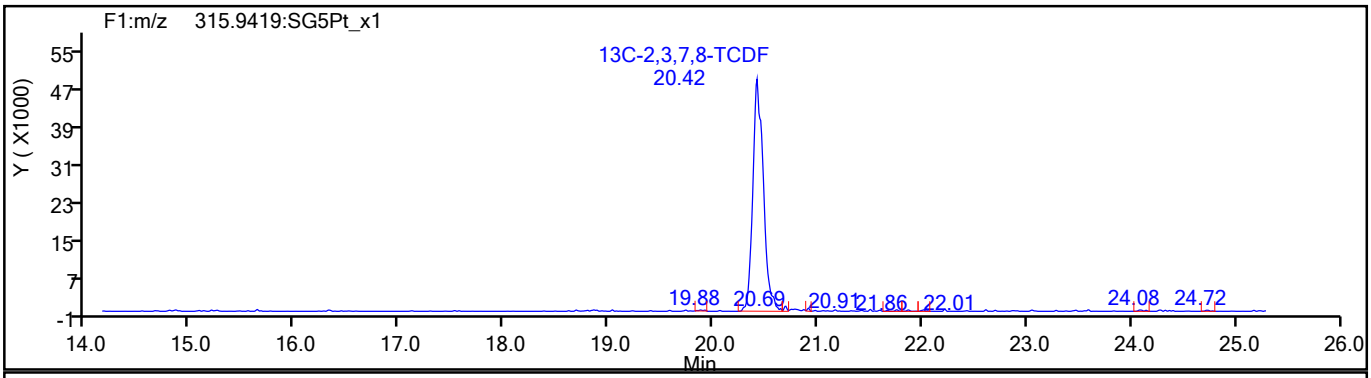

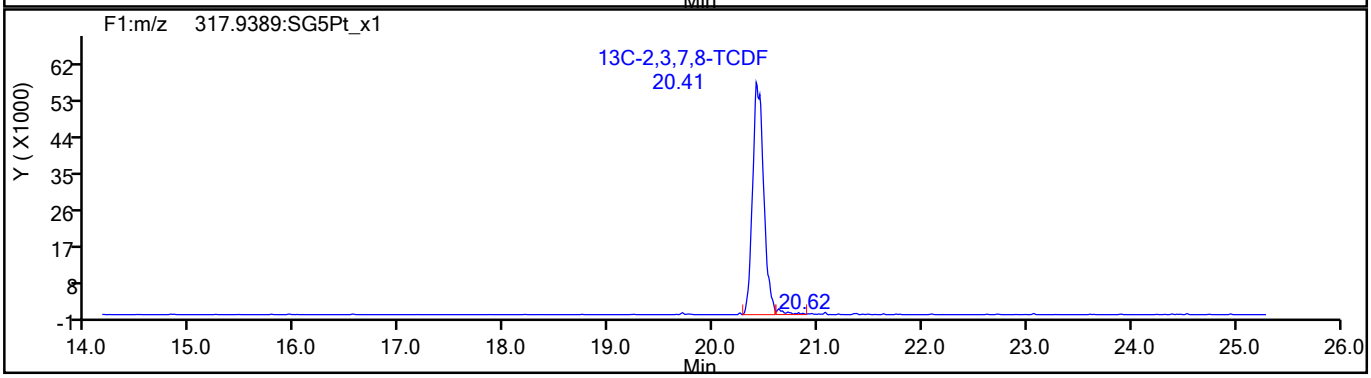

782477

Report Date: 19-Aug-2021 13:17:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

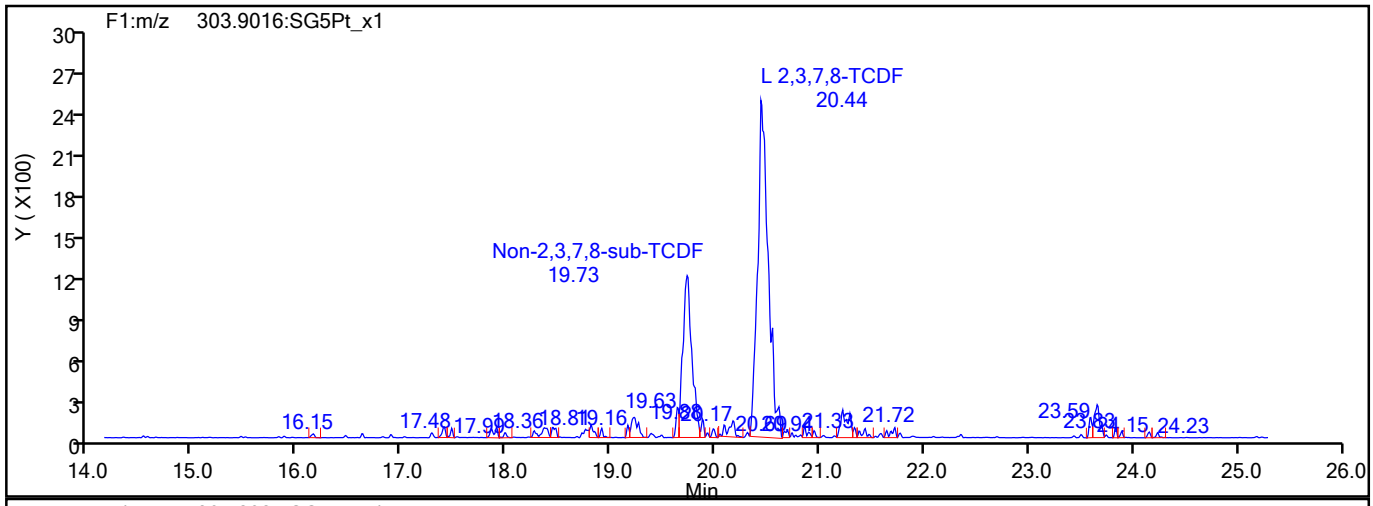

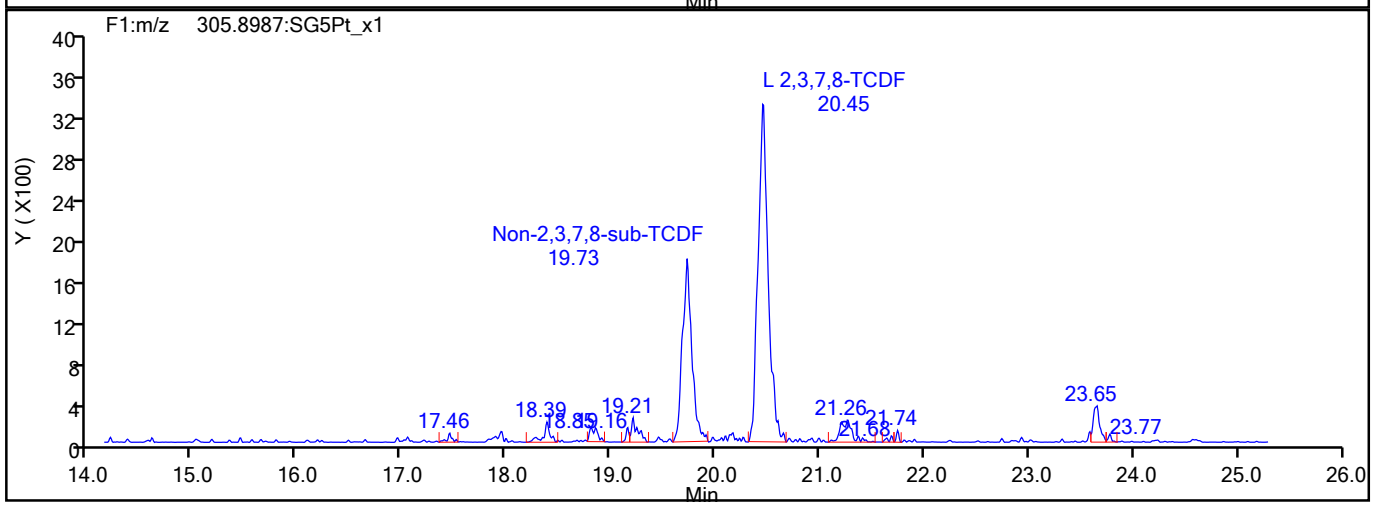

TCDF Interference Mass

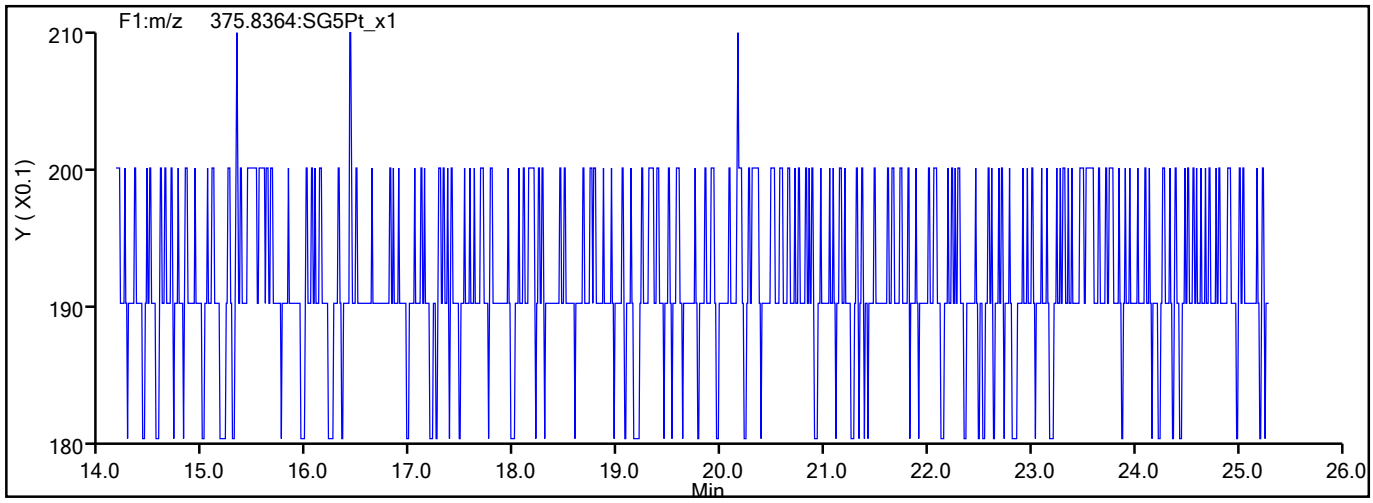

782478

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

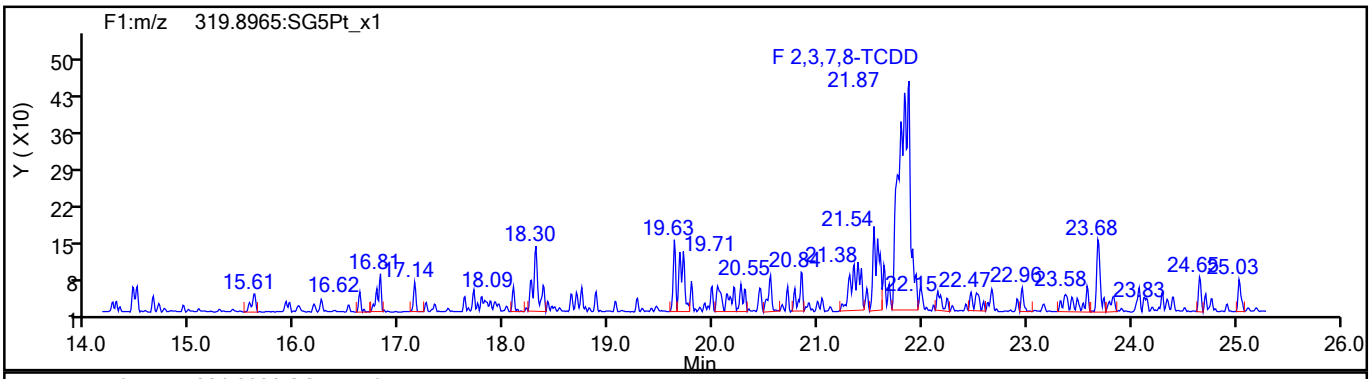

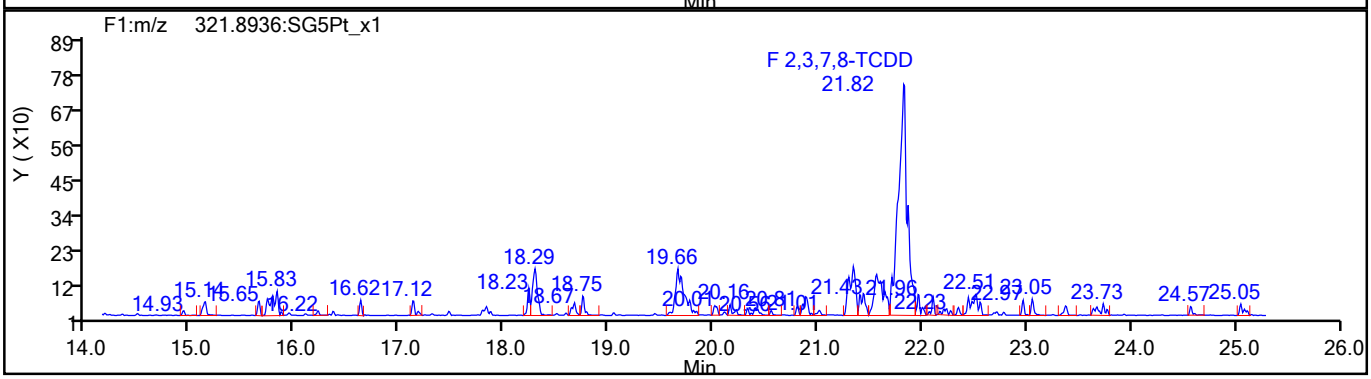

TCDD Standards

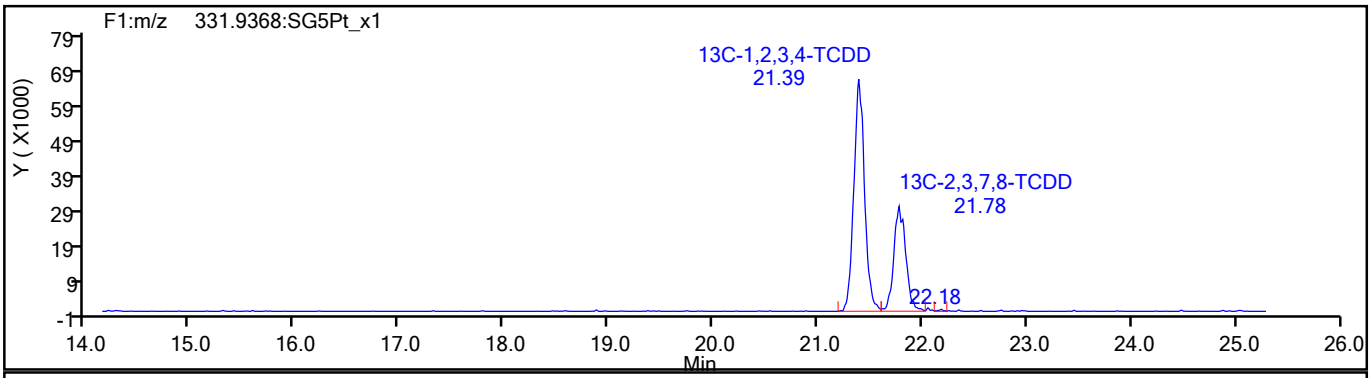

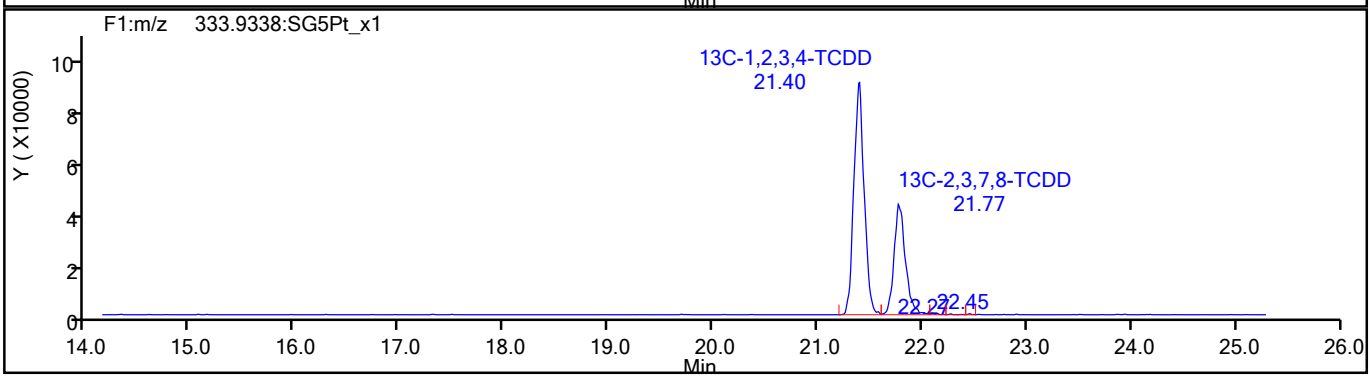

782479

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

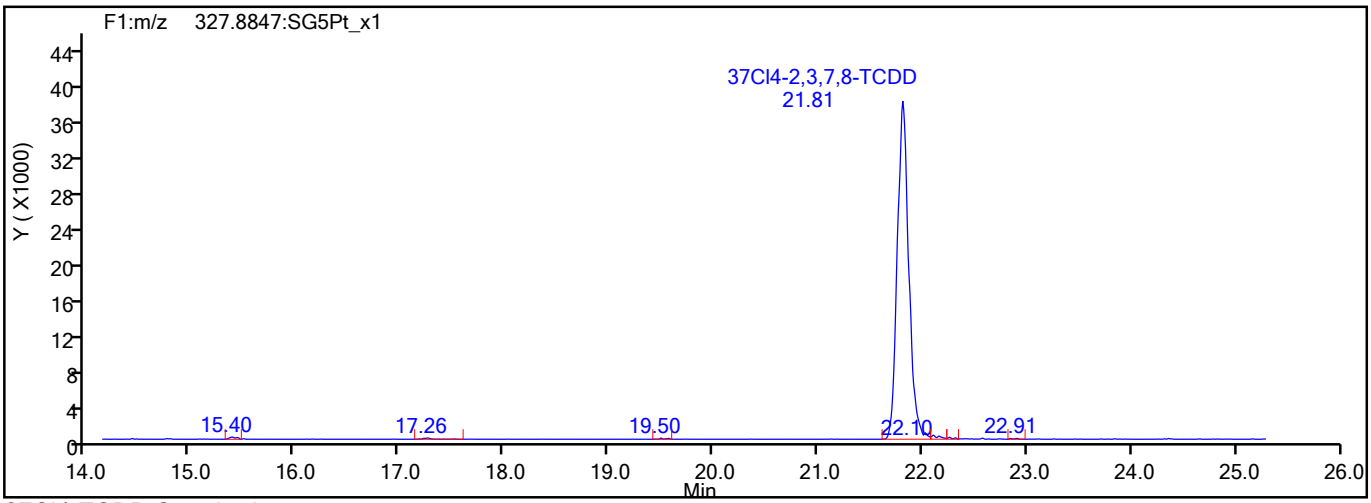

37Cl4-TCDD Standards

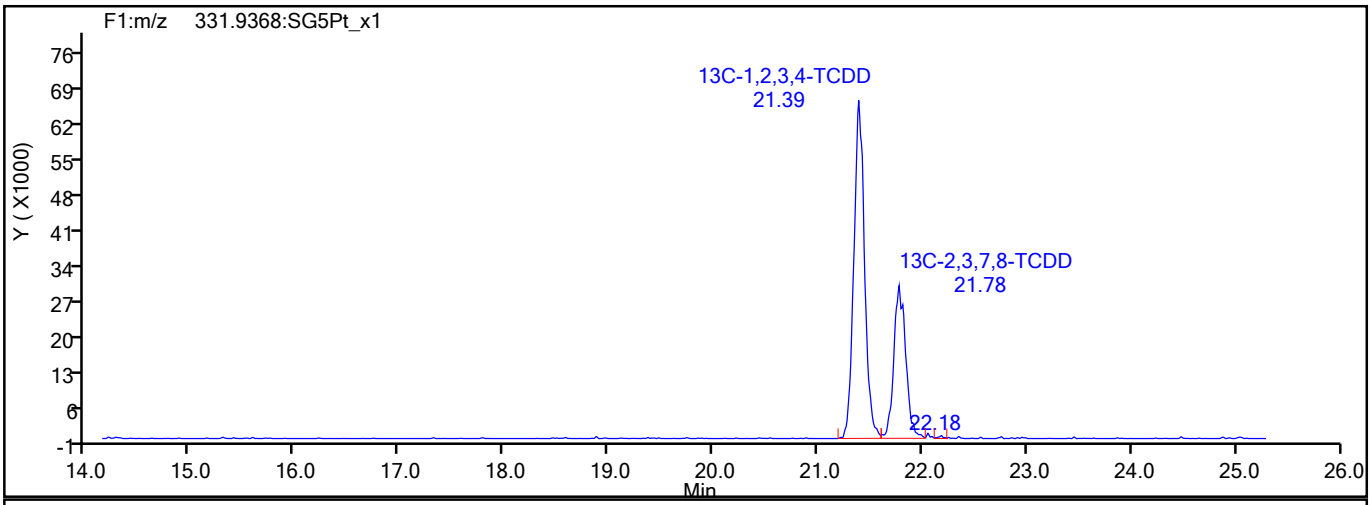

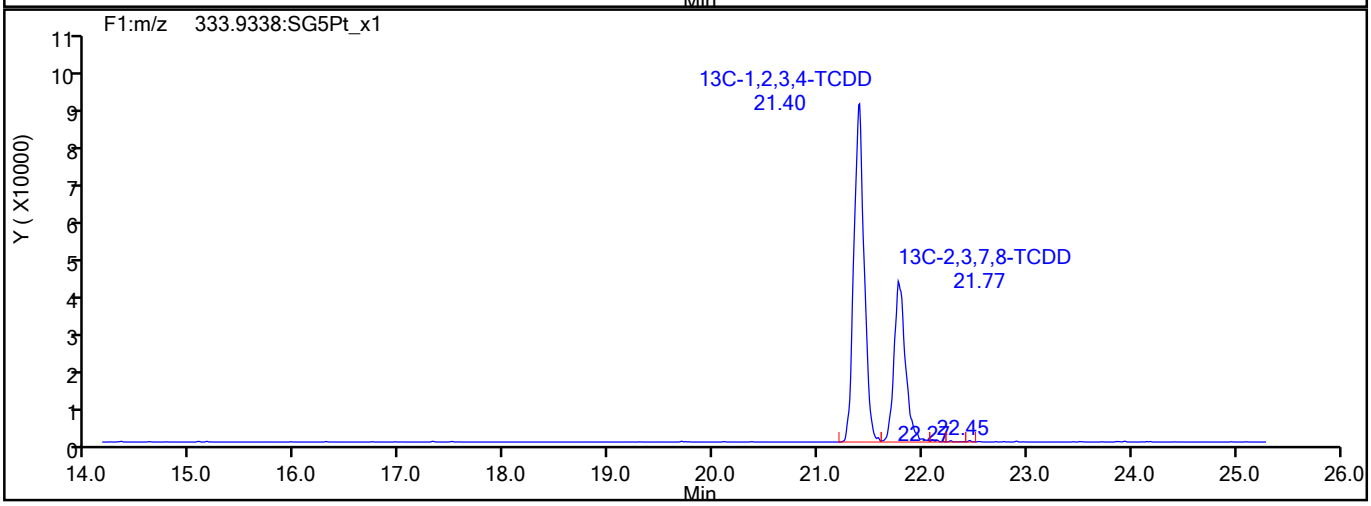

782480

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

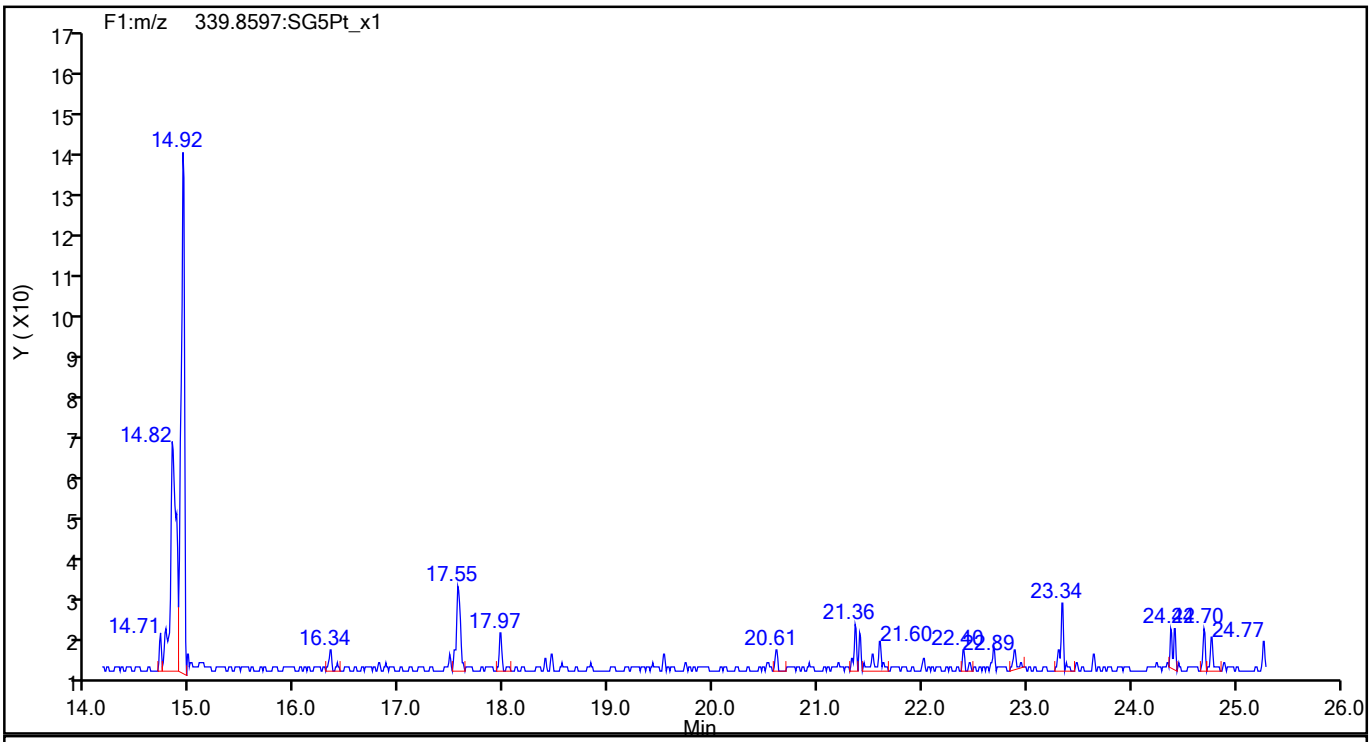

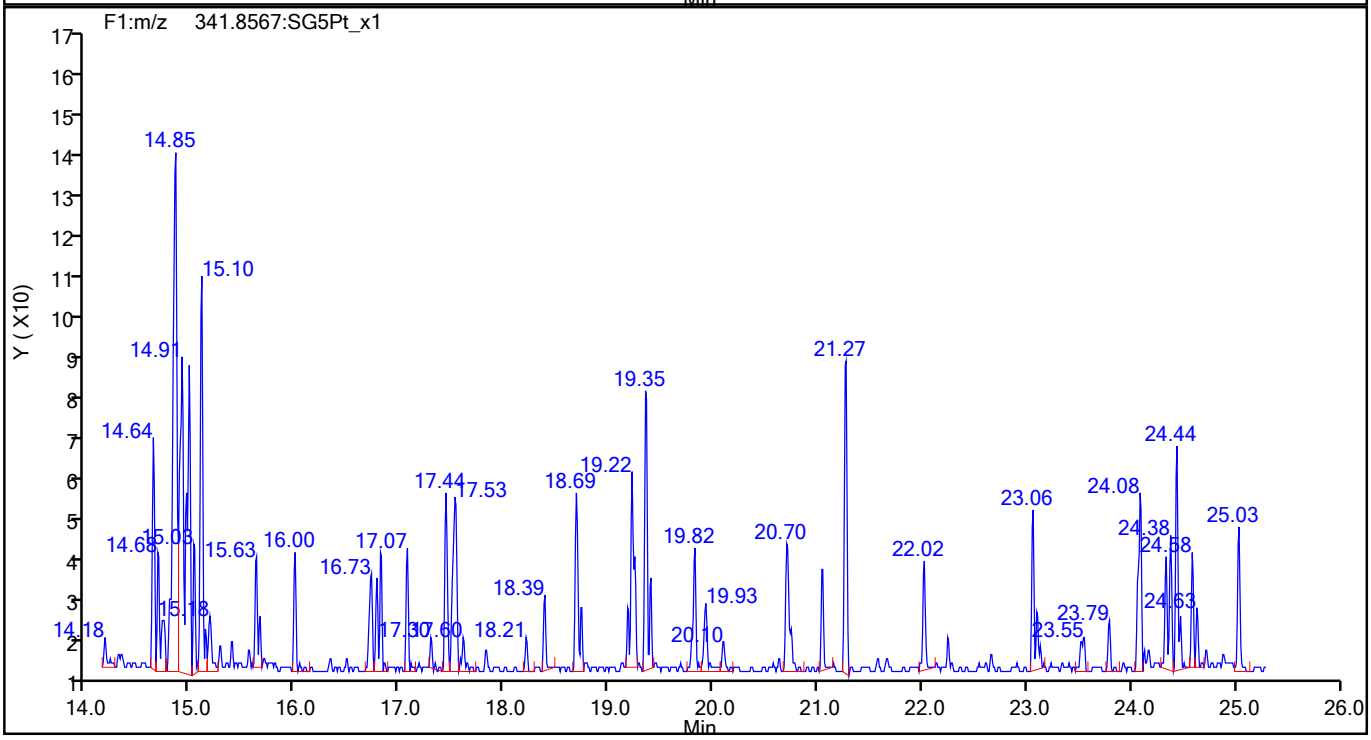

782481

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

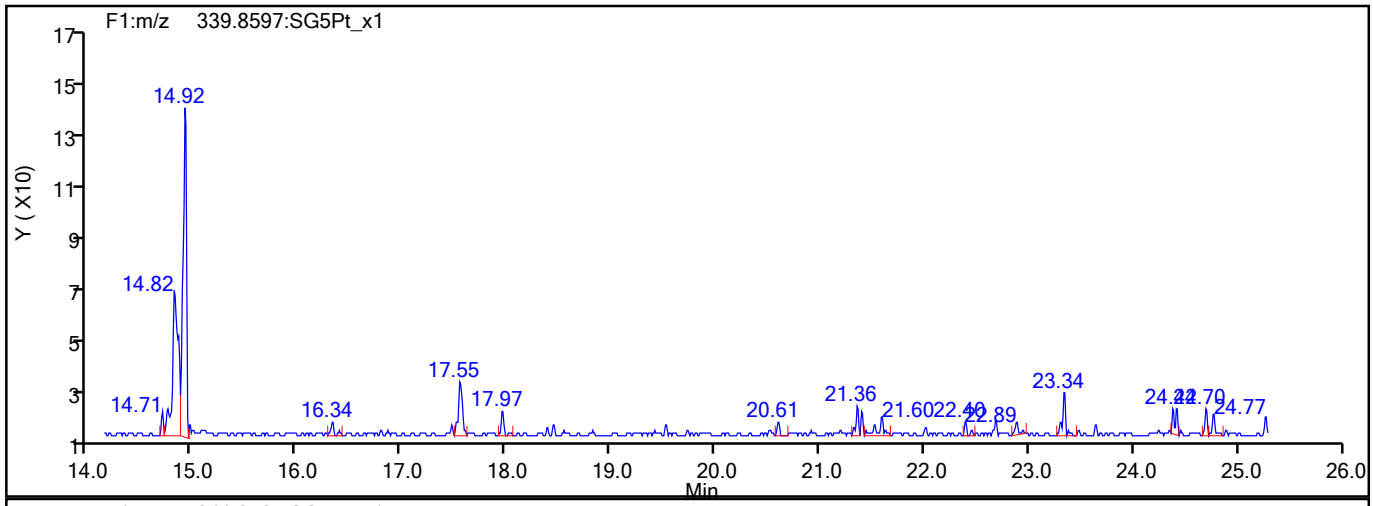

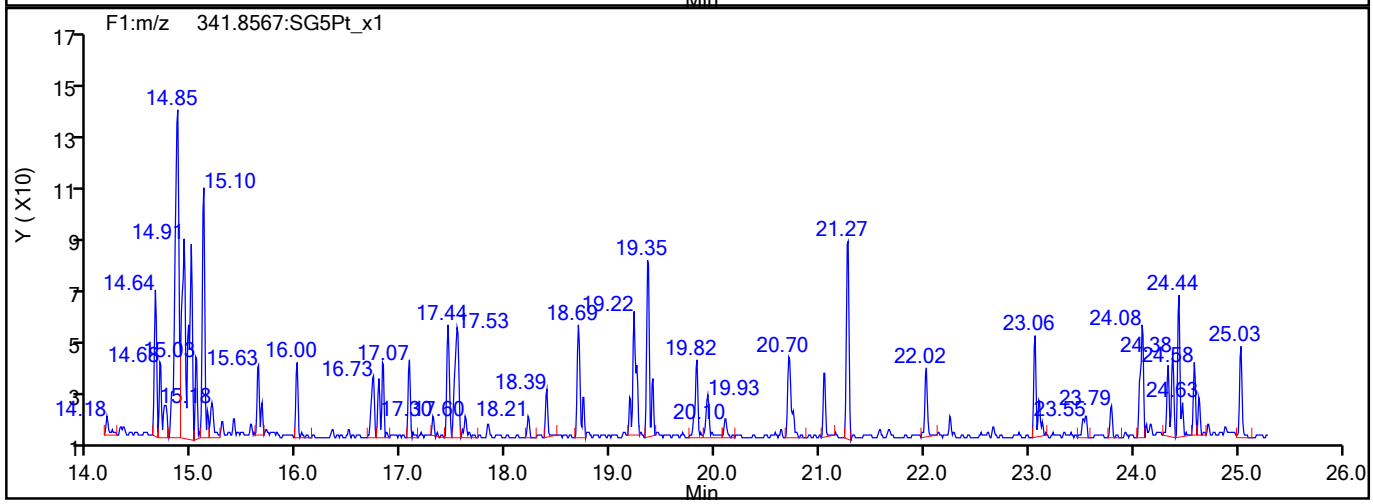

F1 PeCDFs Interference Mass

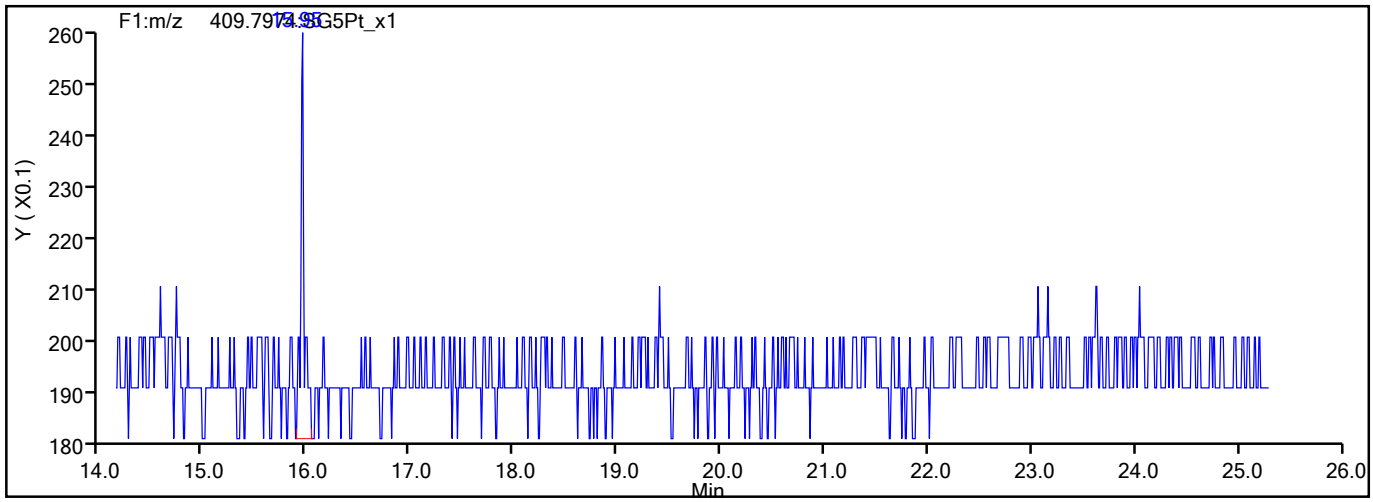

782482

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

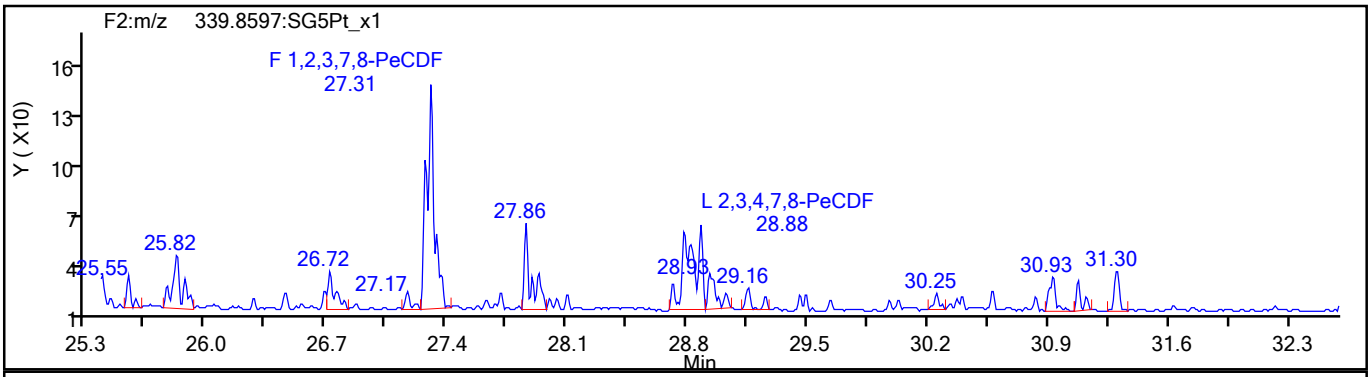

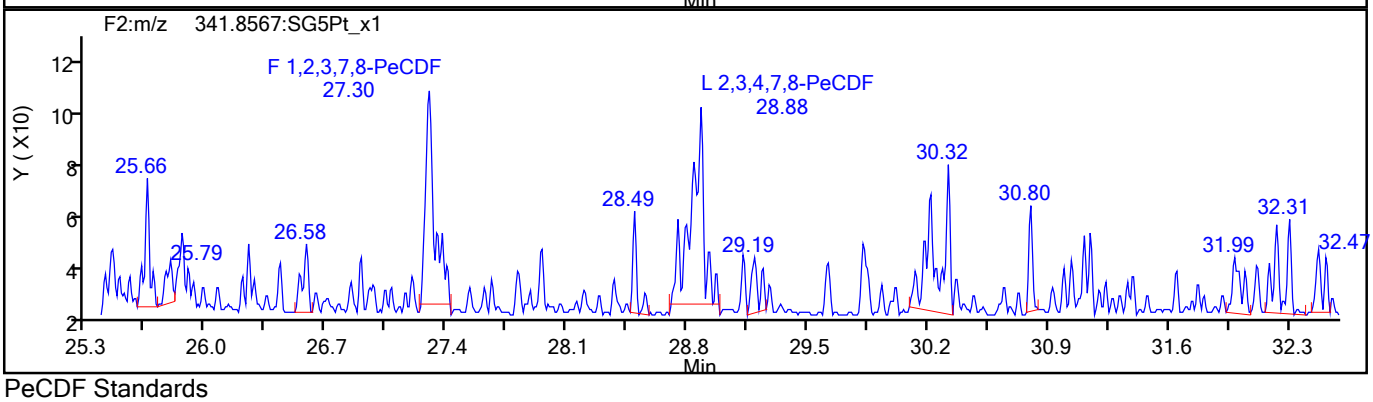

PeCDF Standards

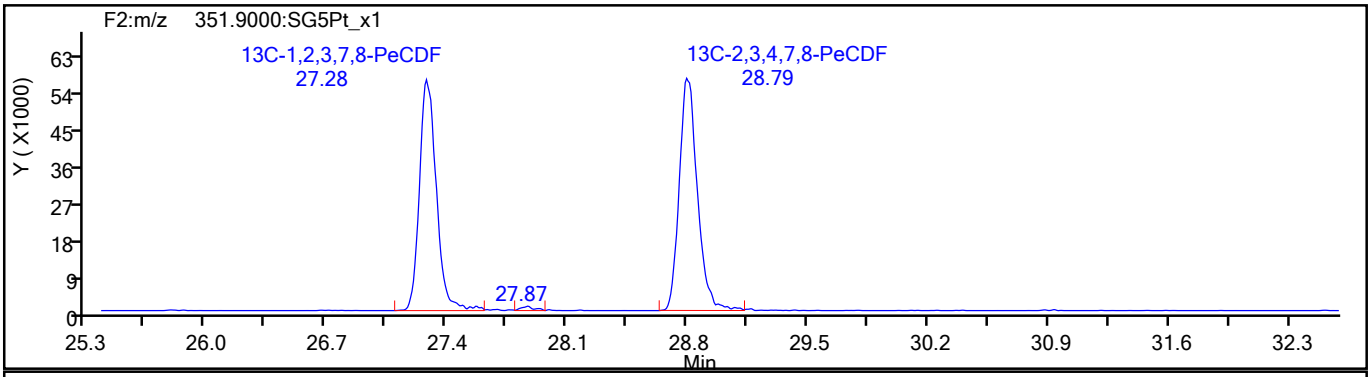

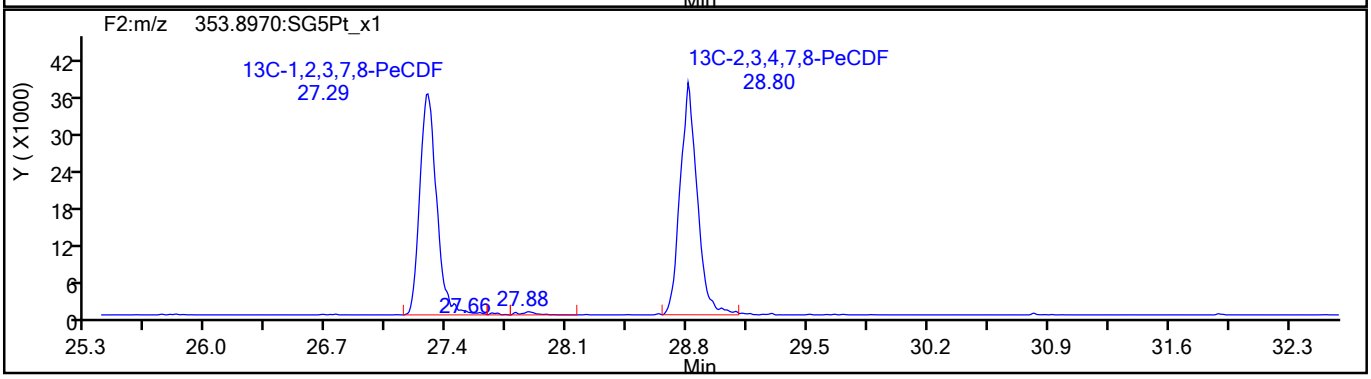

782483

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

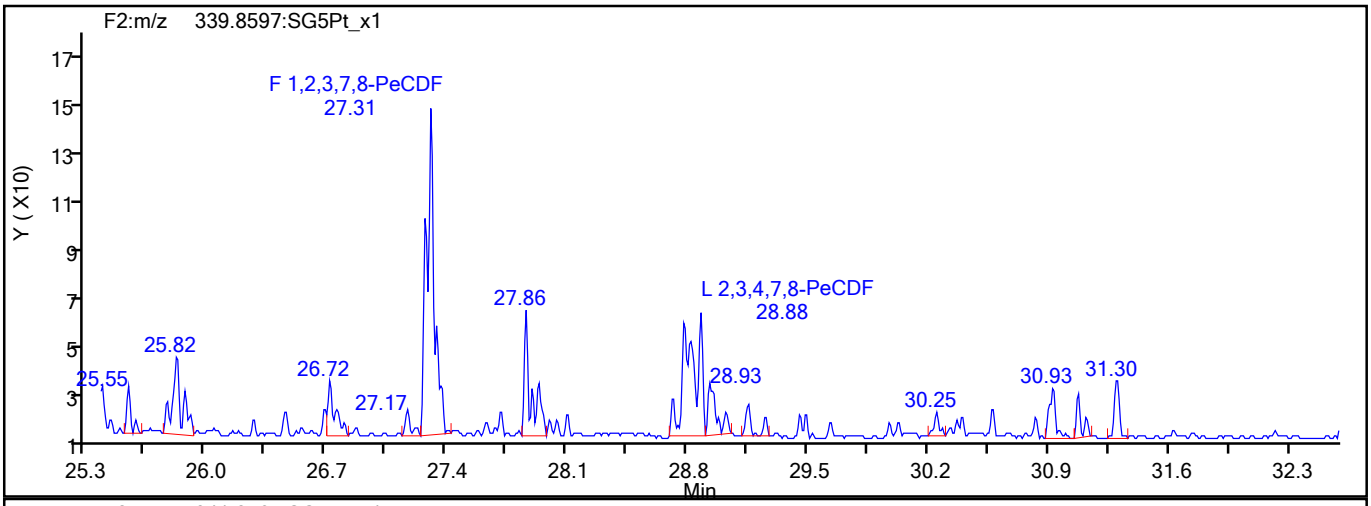

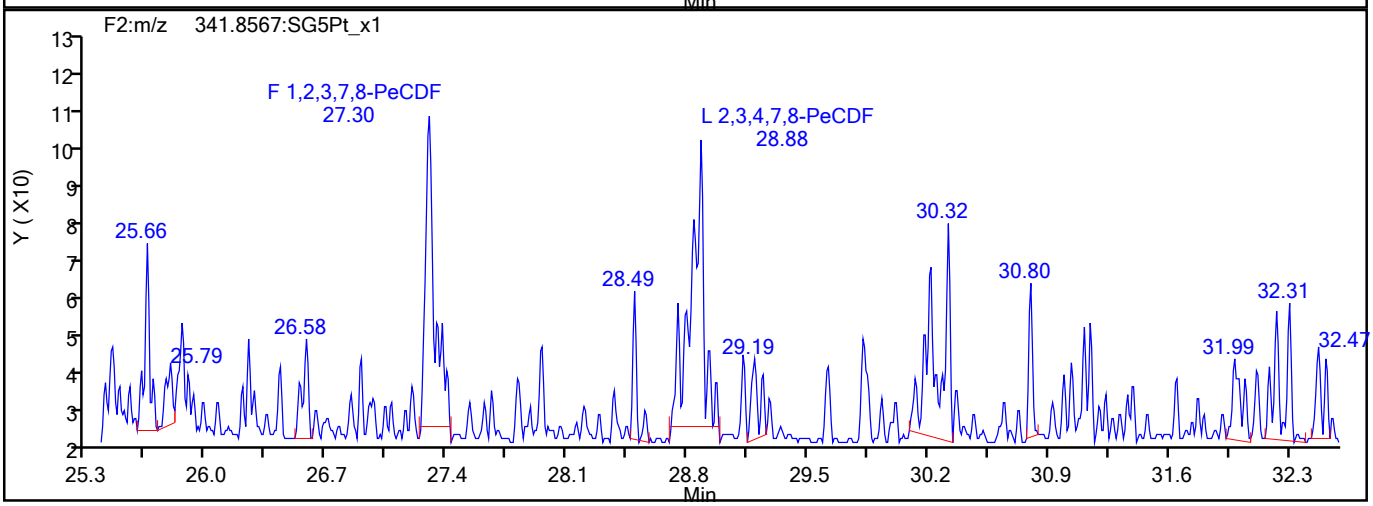

PeCDF Interference Mass

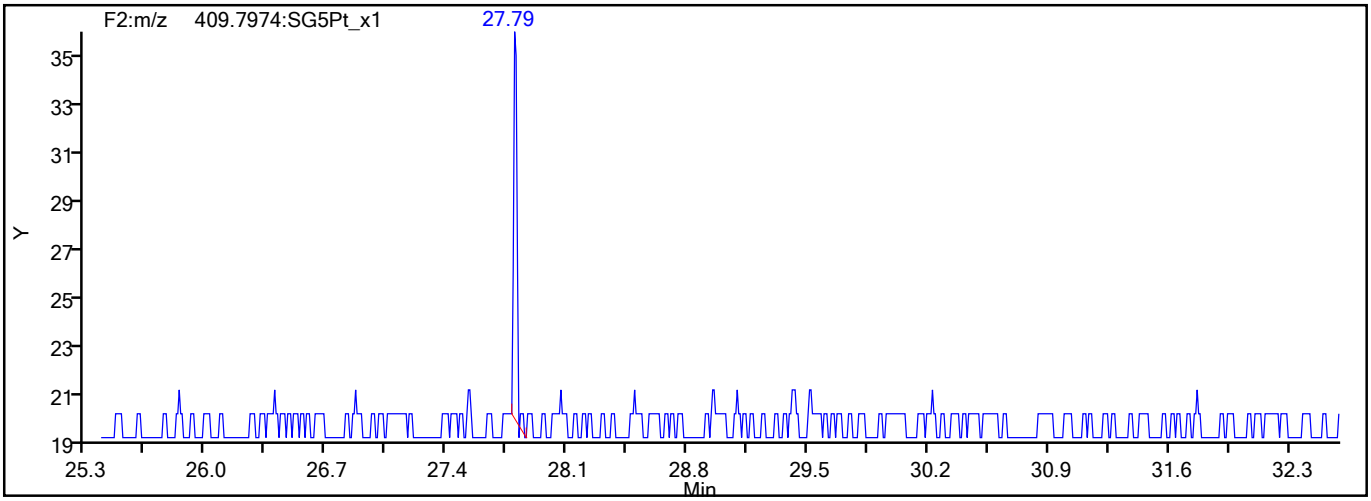

782484

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

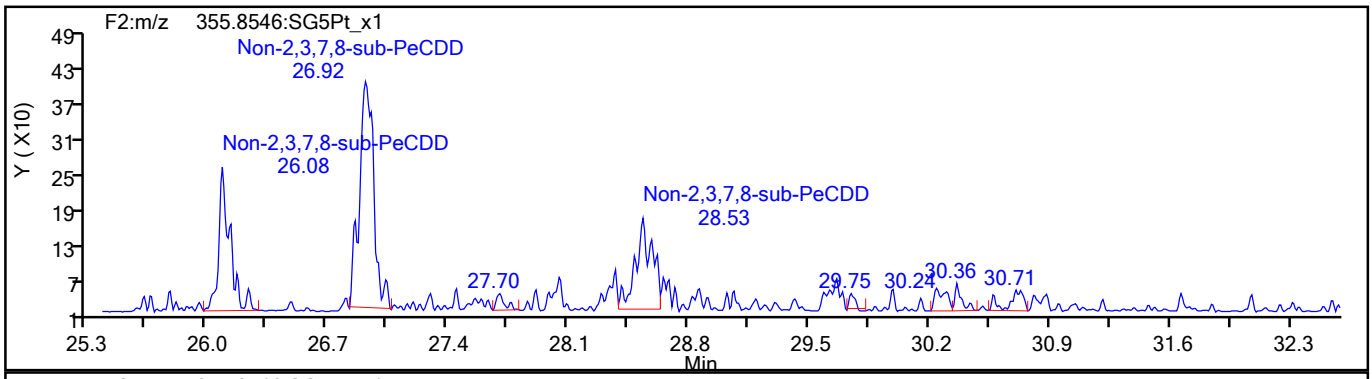

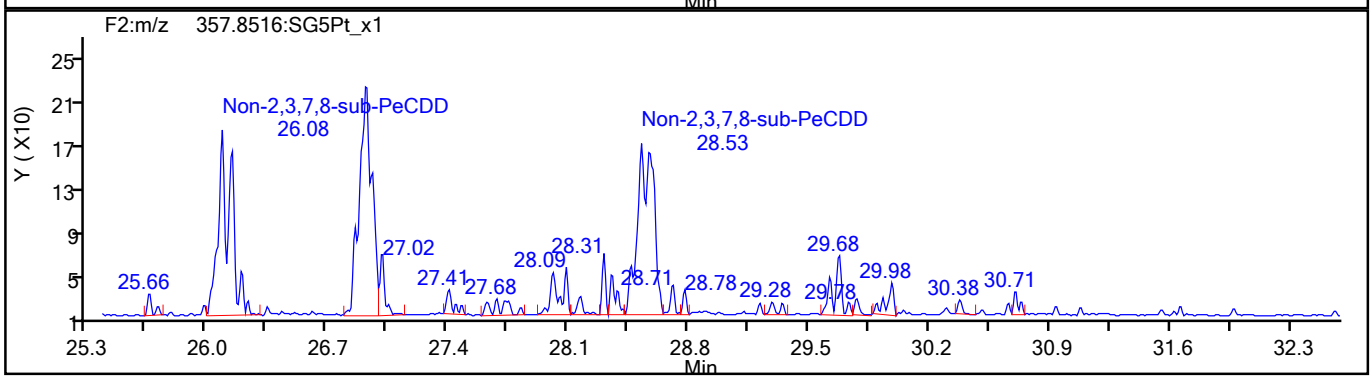

PeCDD Standards

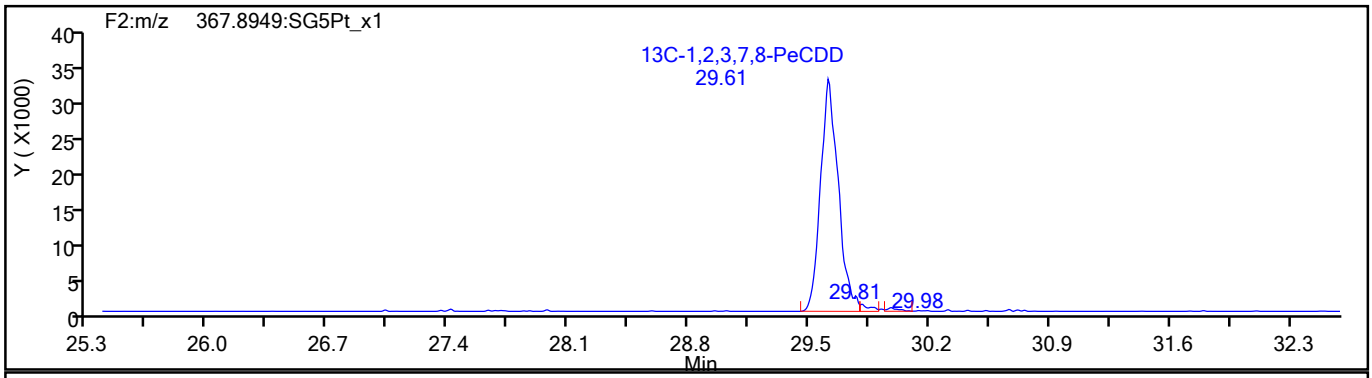

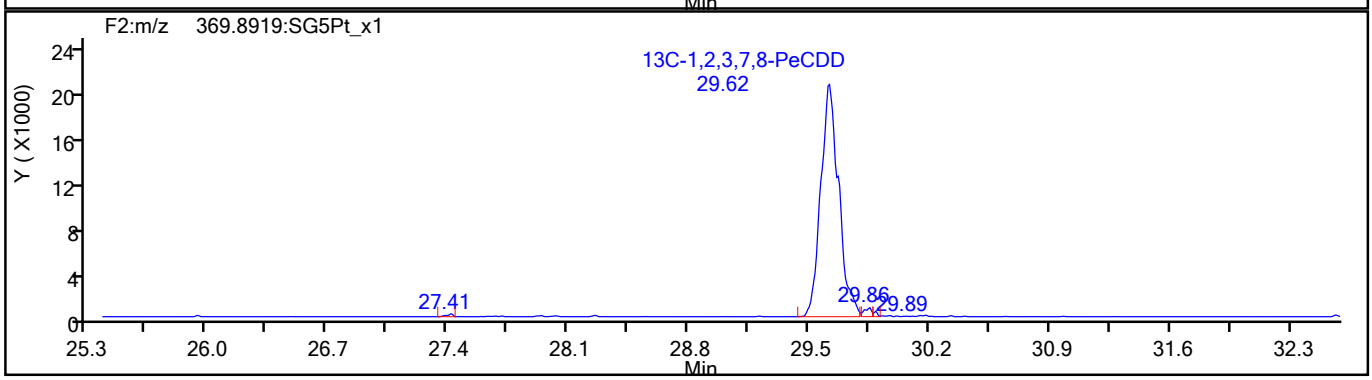

782485

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

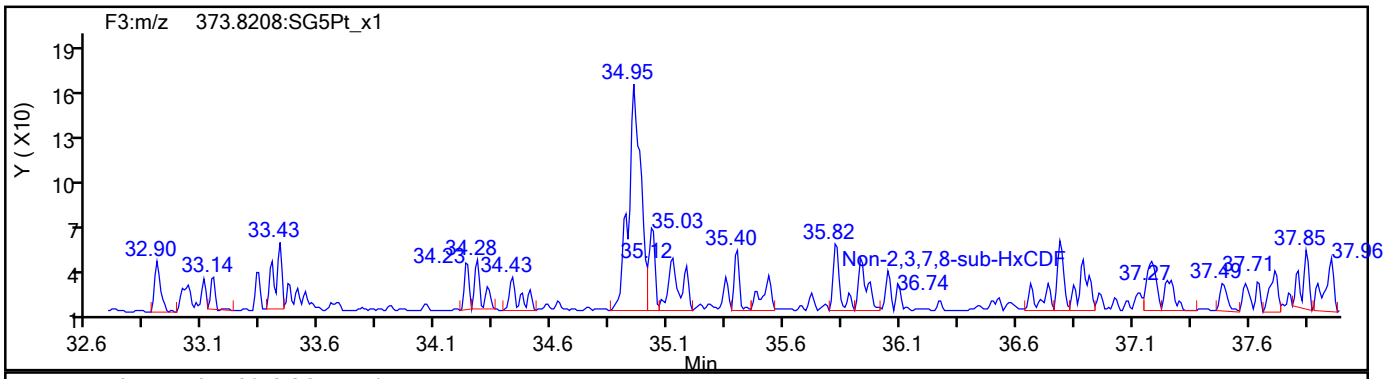

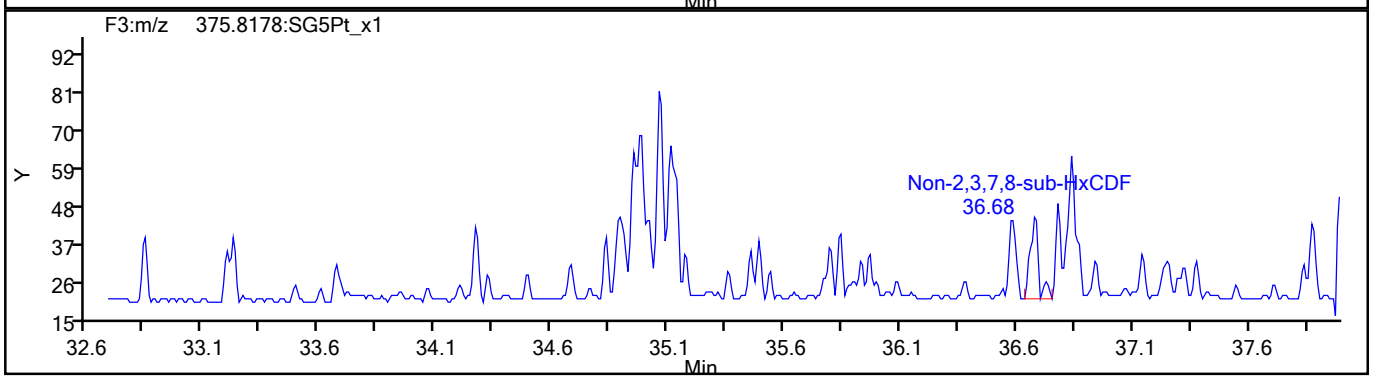

HxCDF Standards

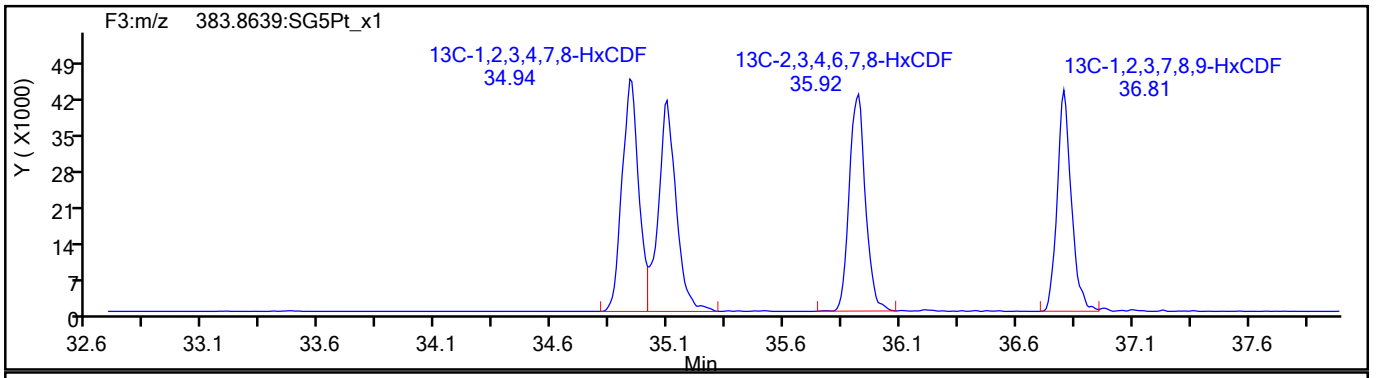

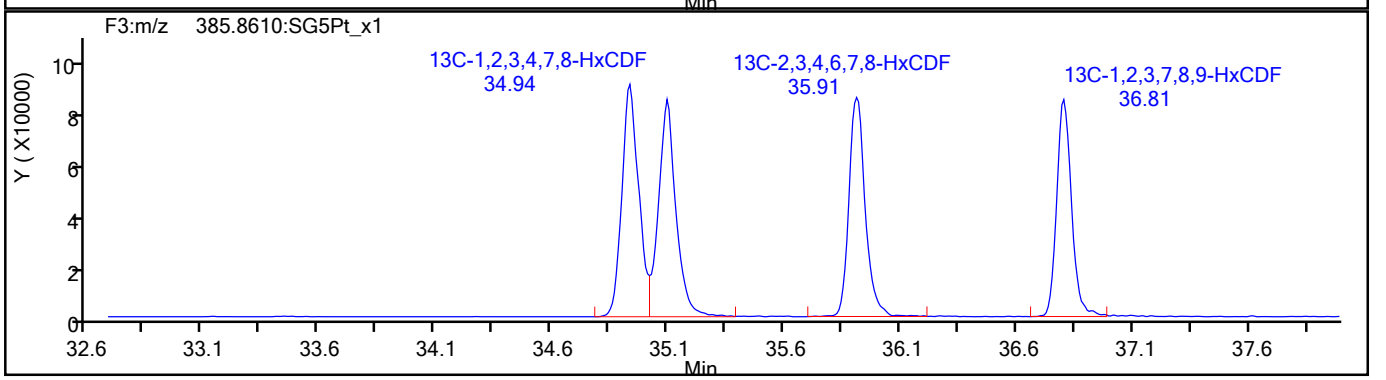

782486

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

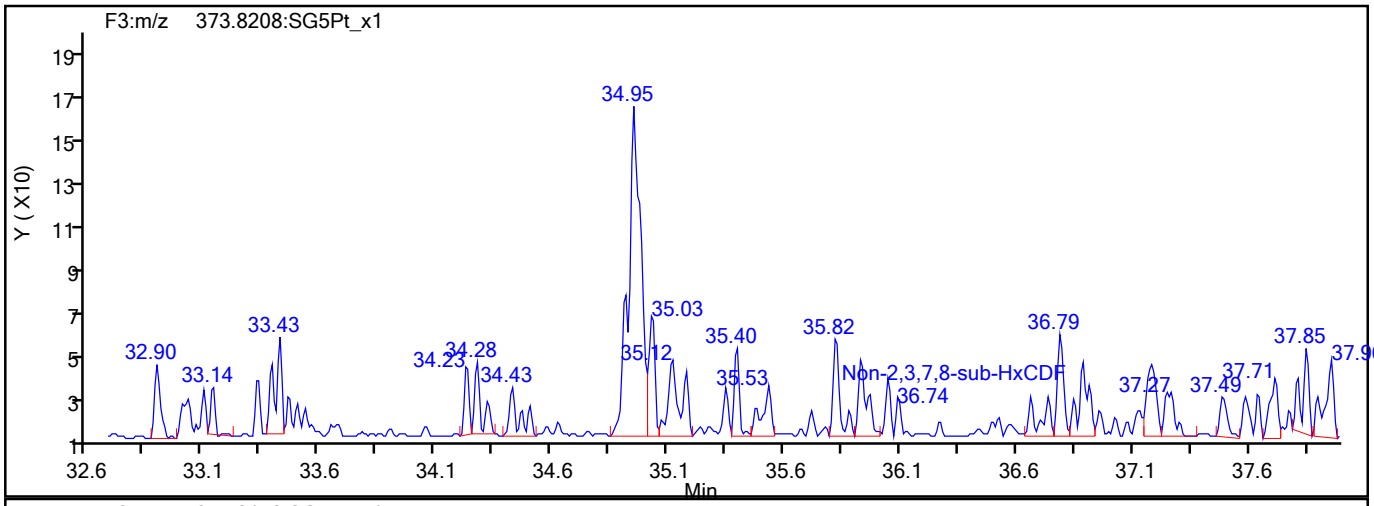

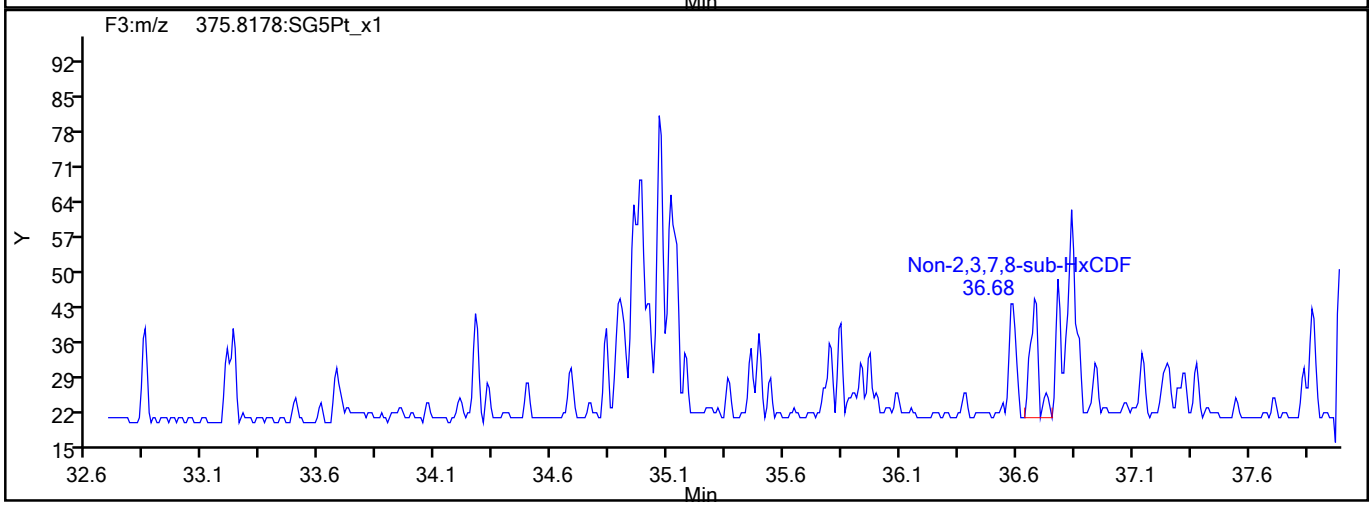

HxCDF Interference Mass

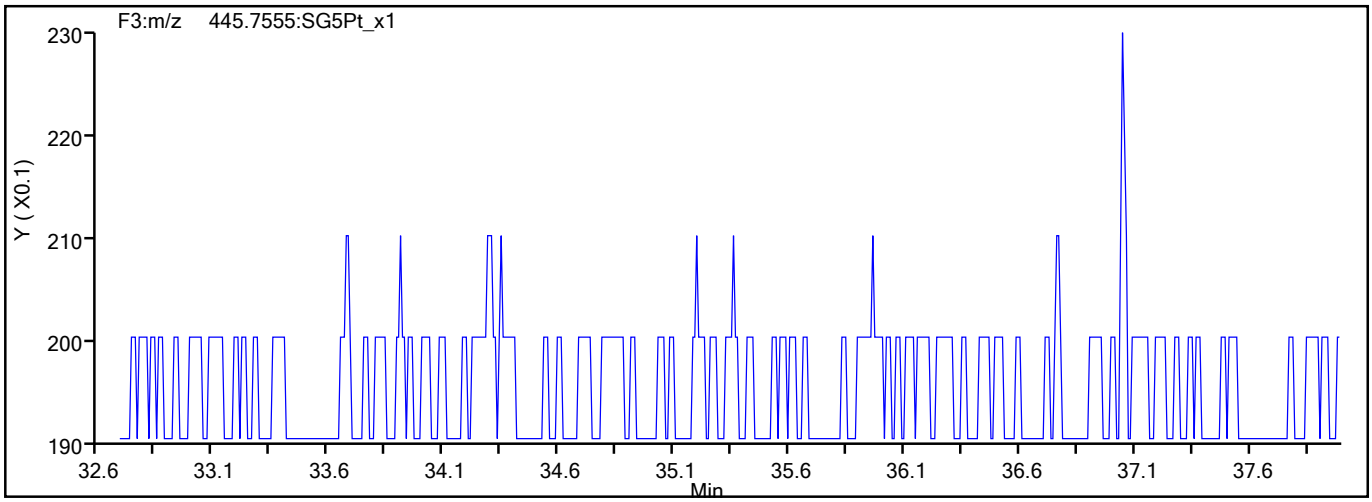

782487

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

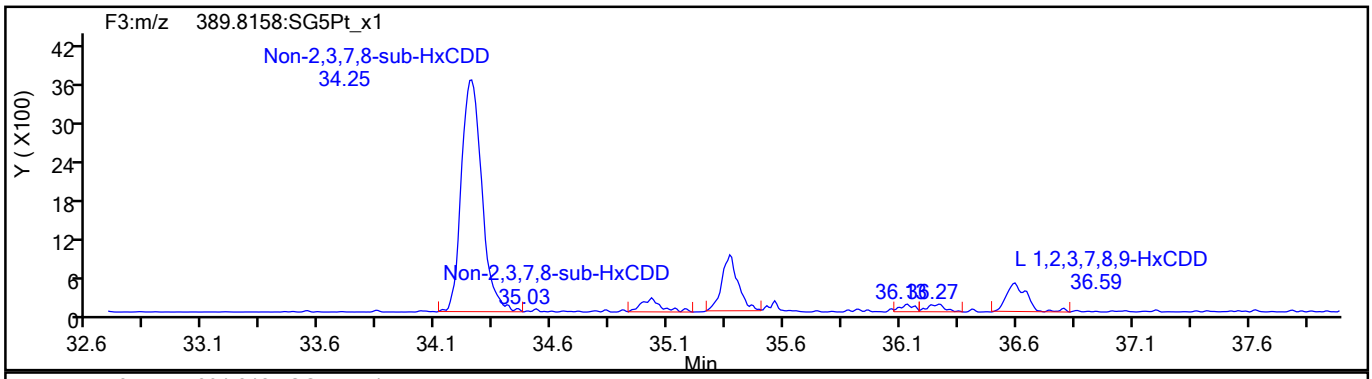

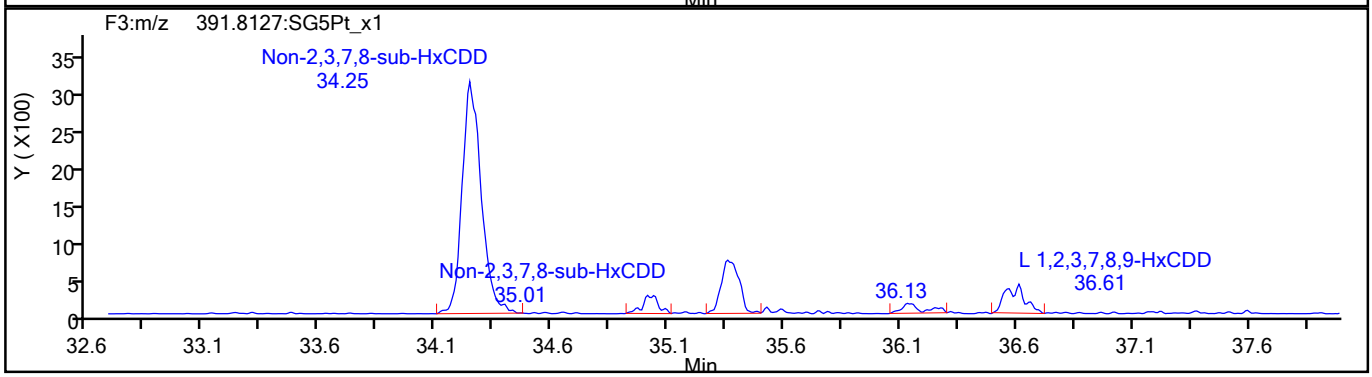

HxCDD Standards

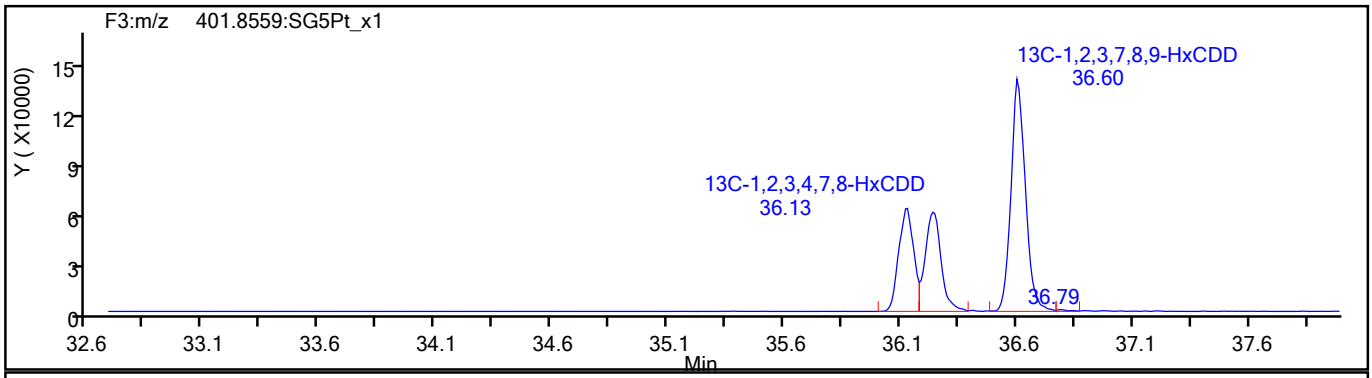

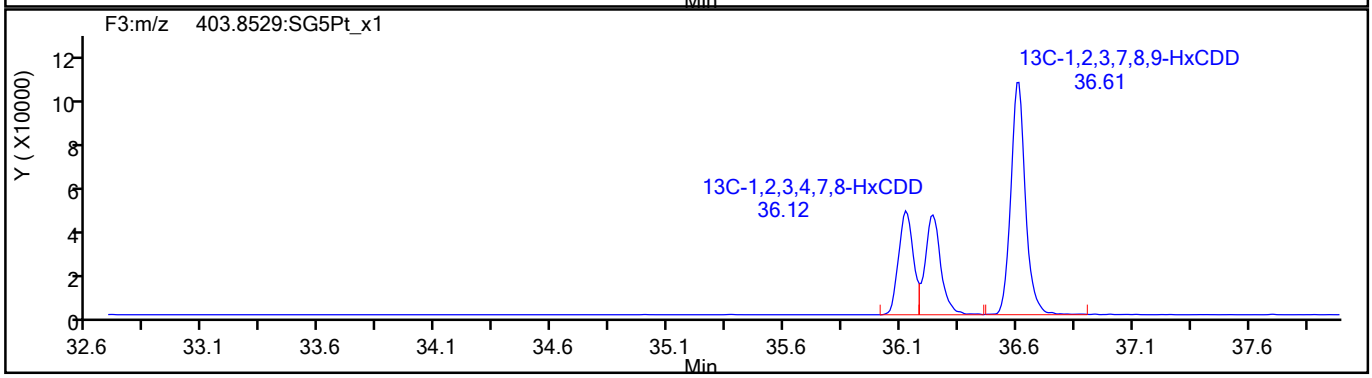

782488

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

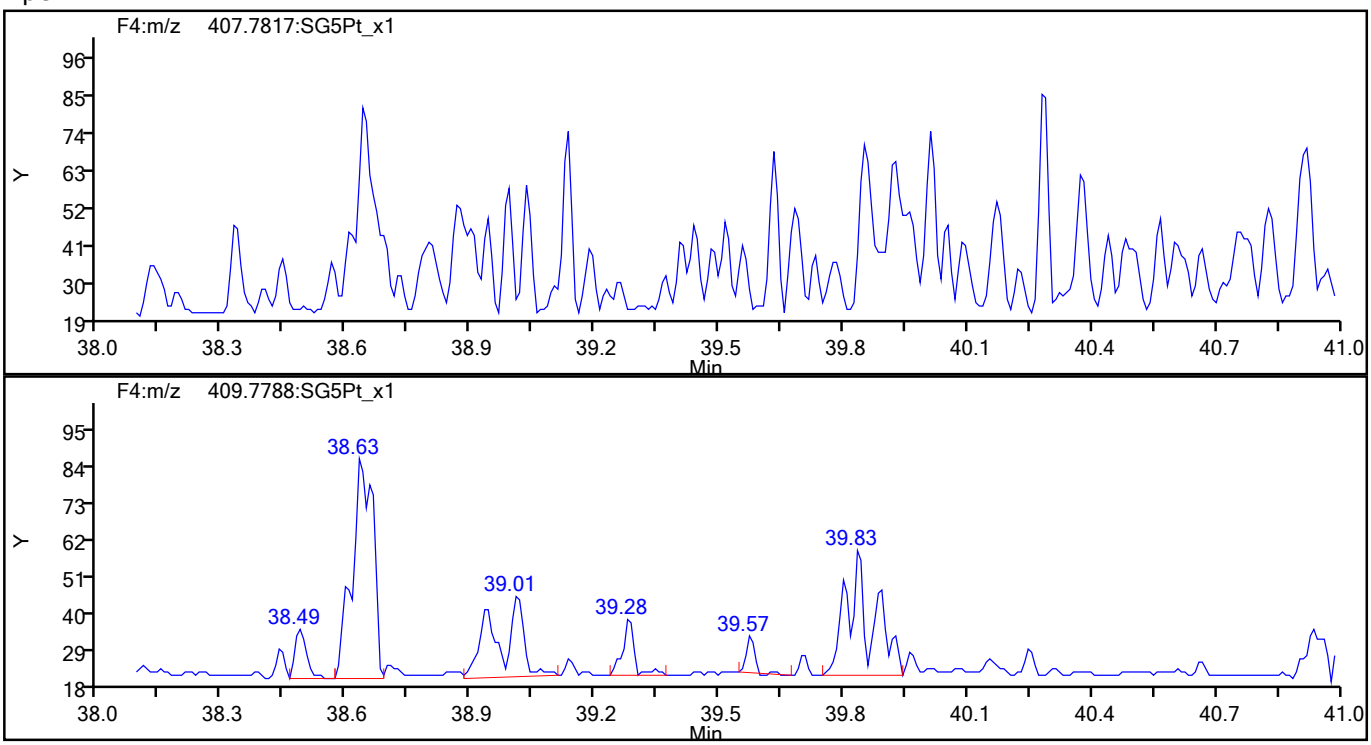

HpCDF Standards

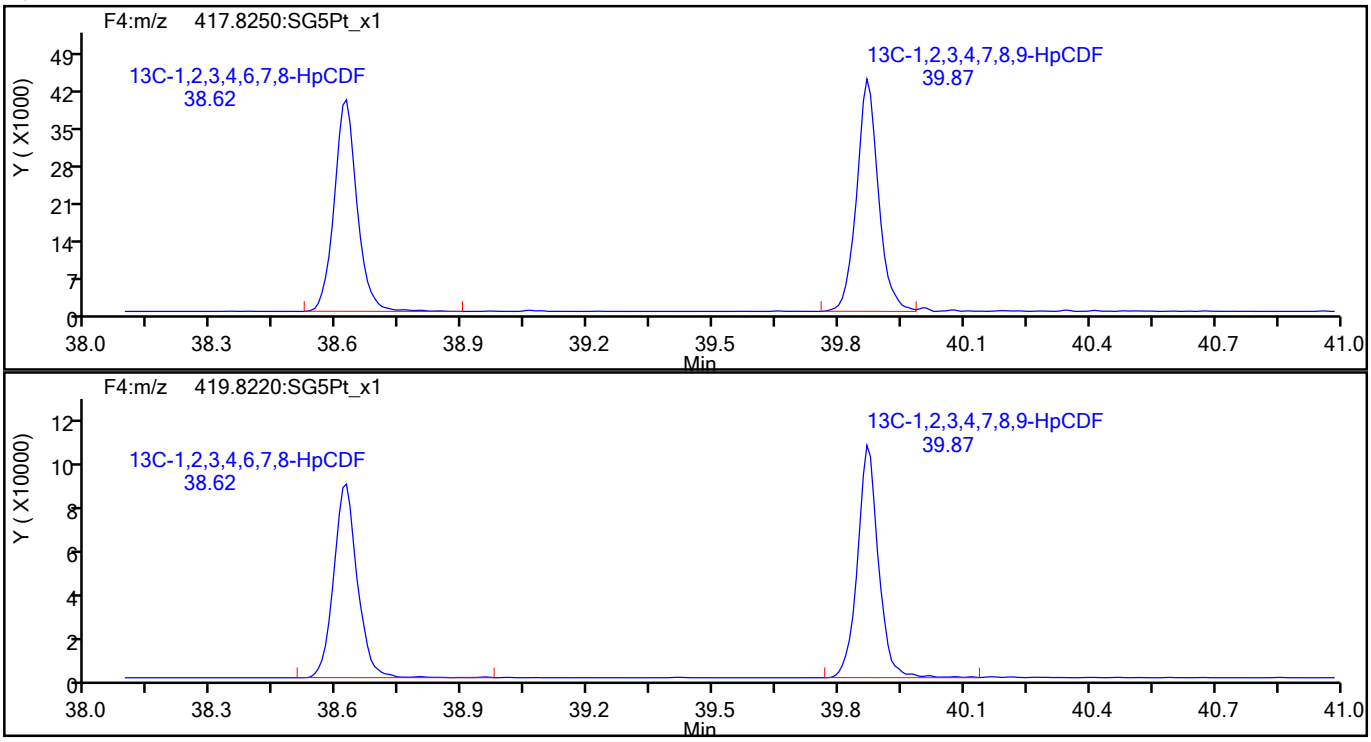

782489

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

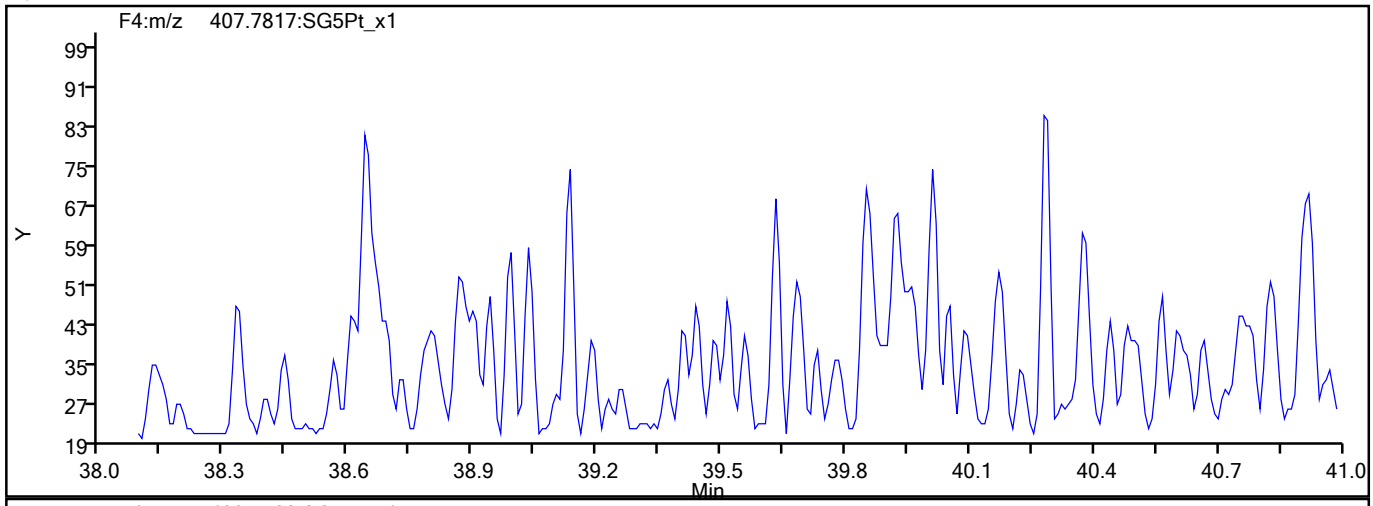

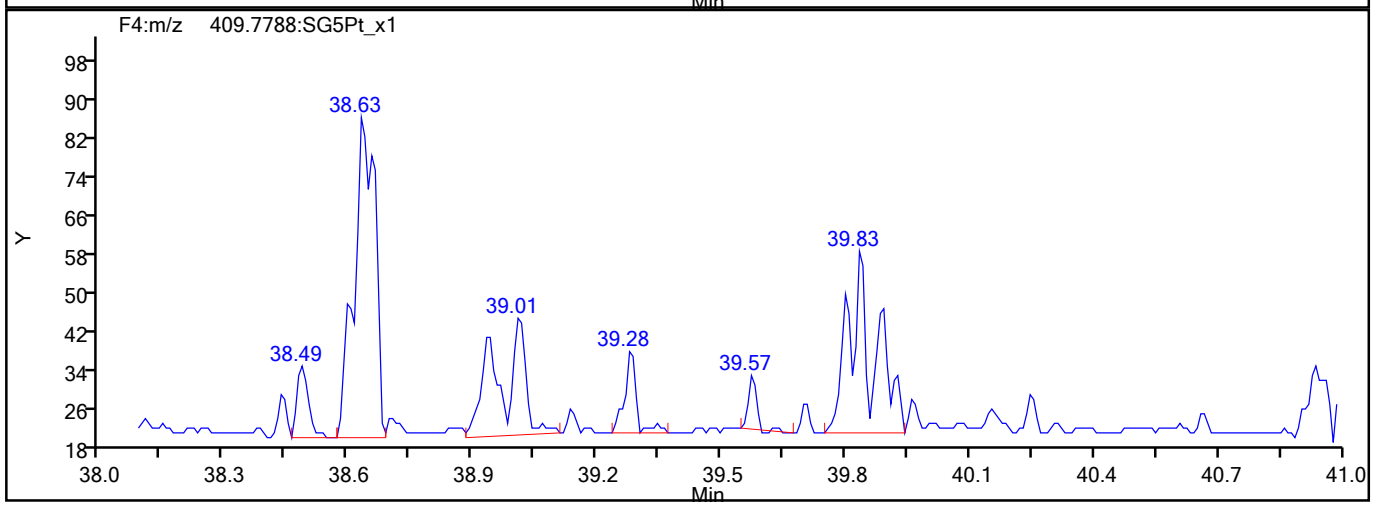

HpCDF Interference Mass

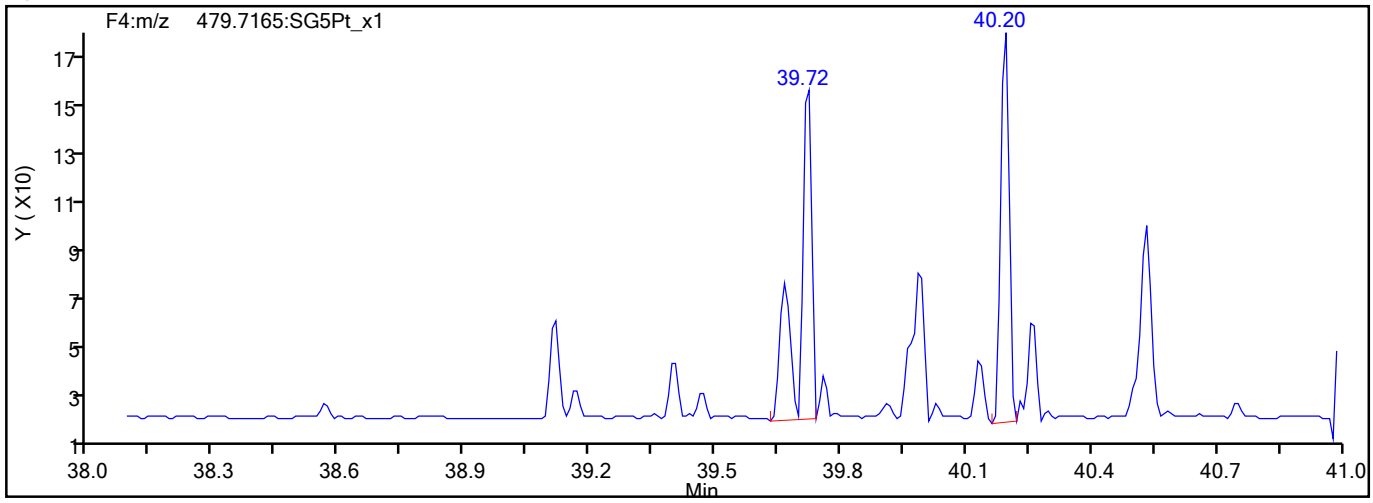

782490

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

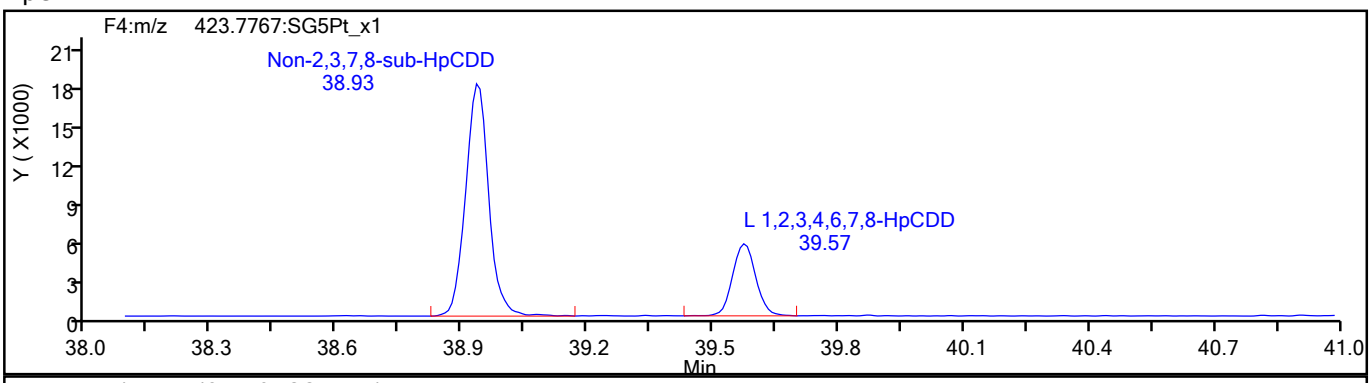

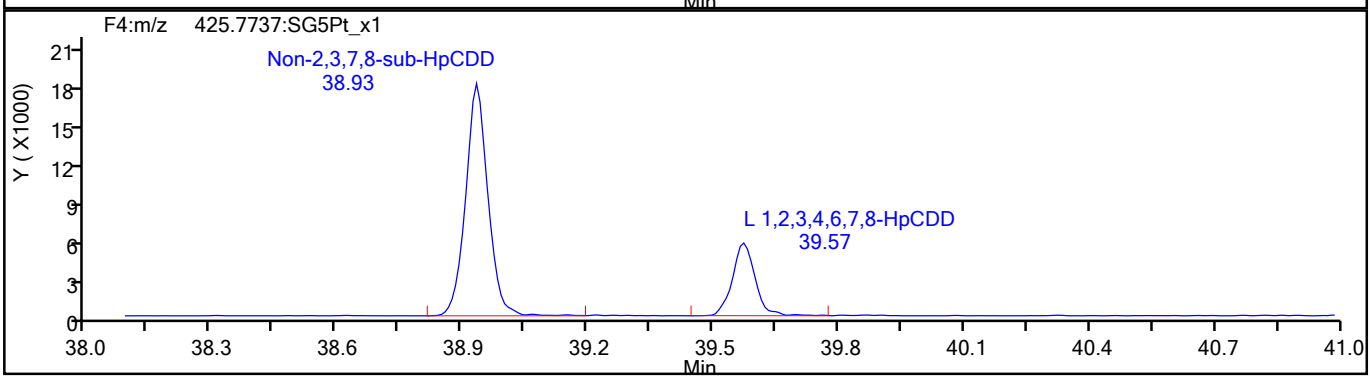

HpCDD Standards

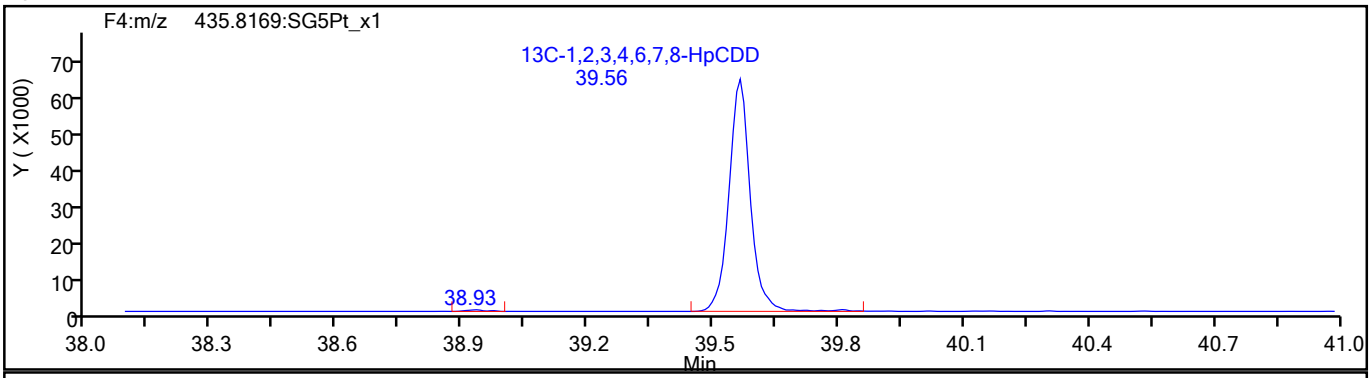

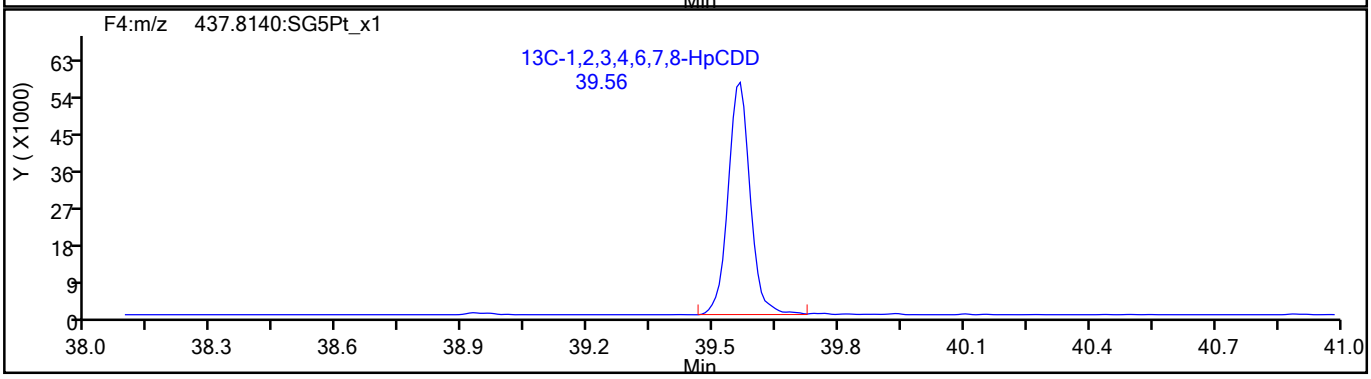

782491

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

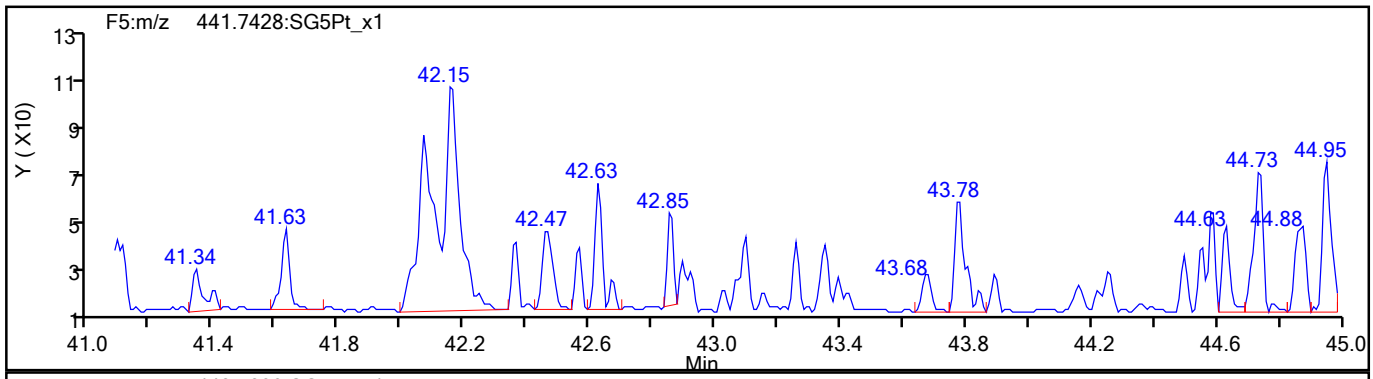

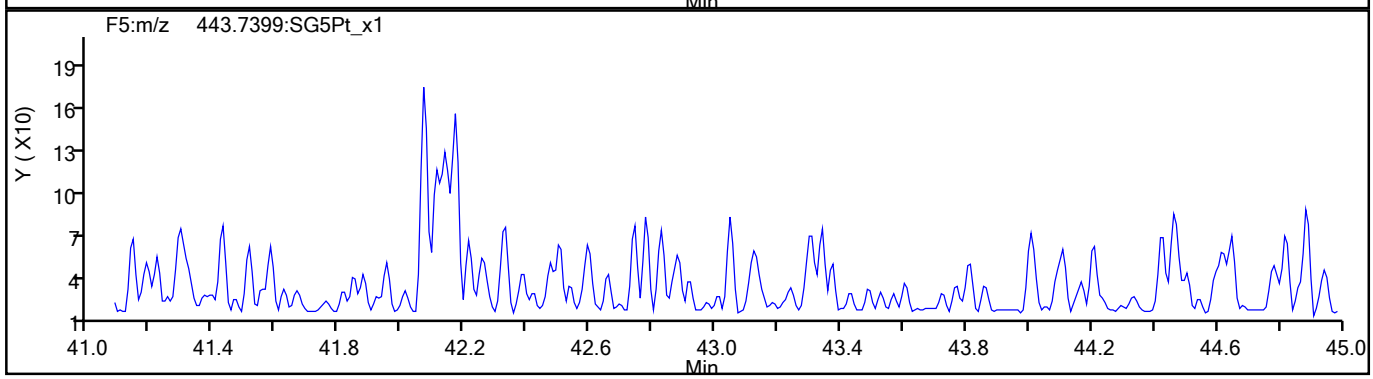

OCDF Standards

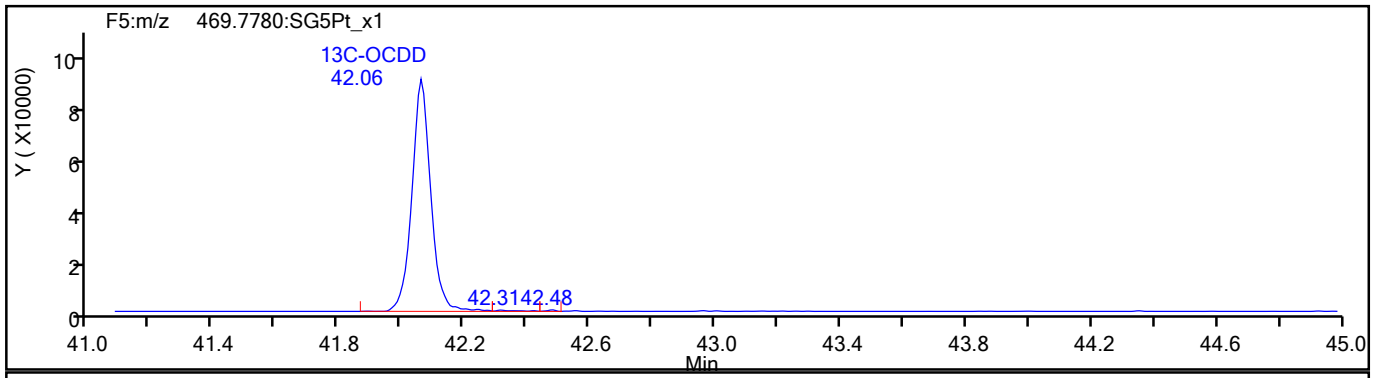

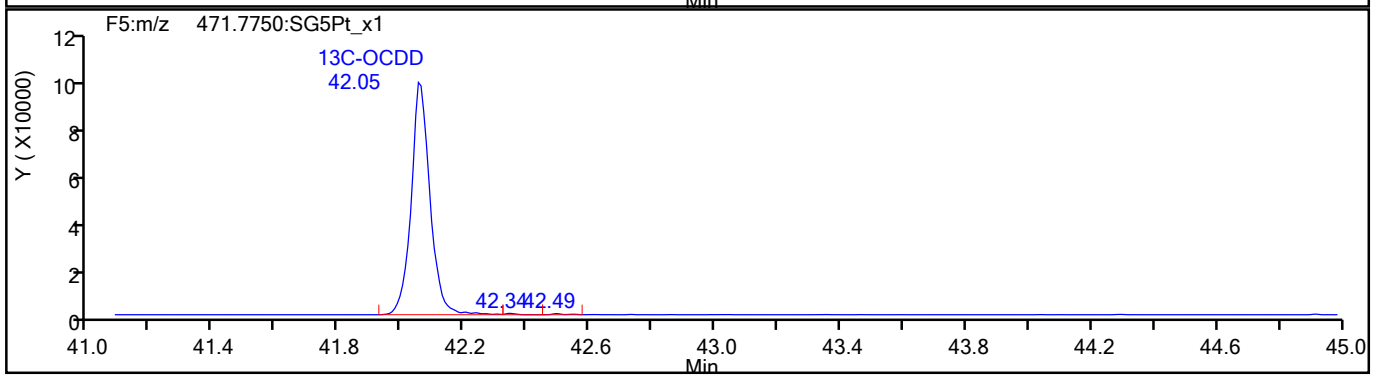

782492

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

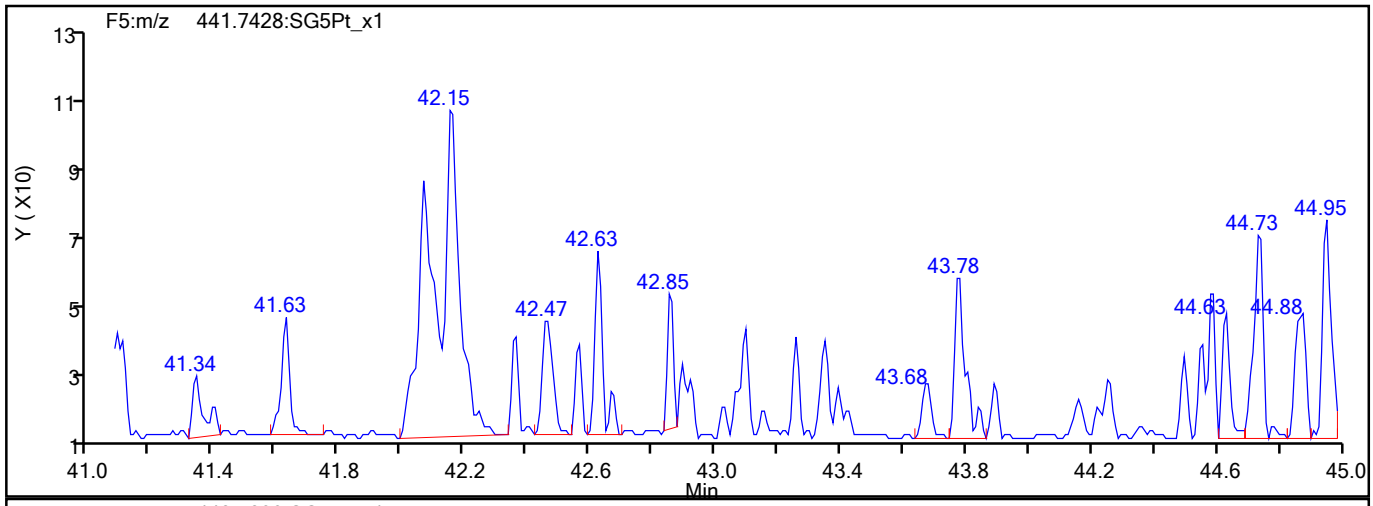

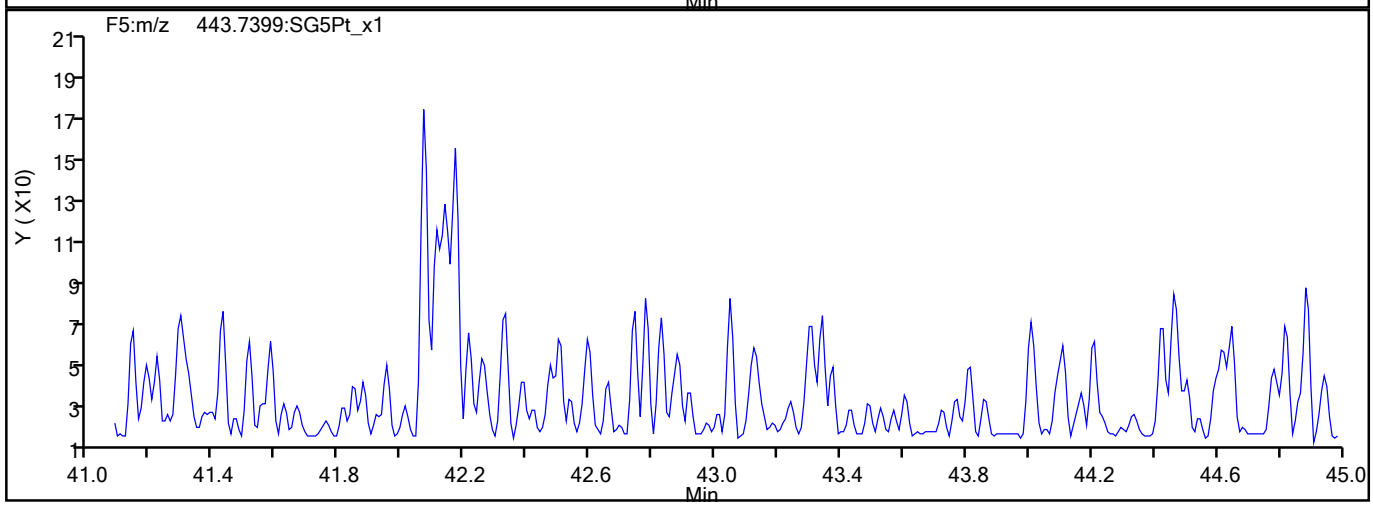

OCDF Interference Mass

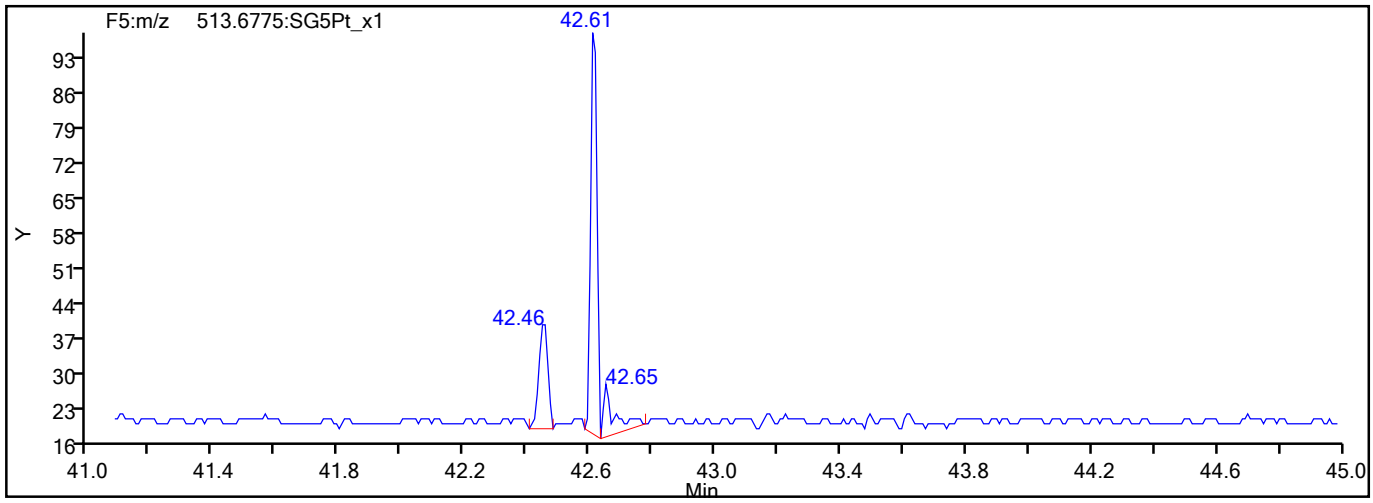

782493

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

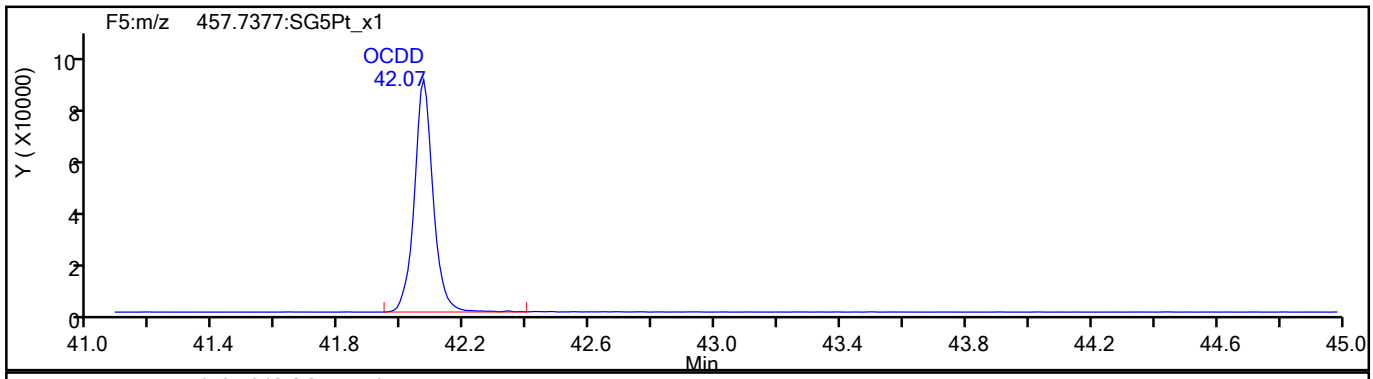

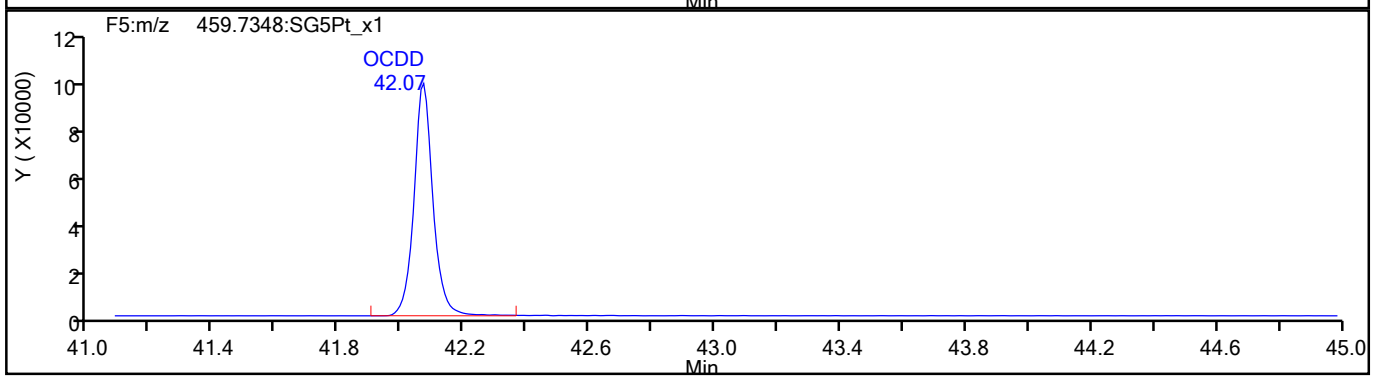

OCDD Standards

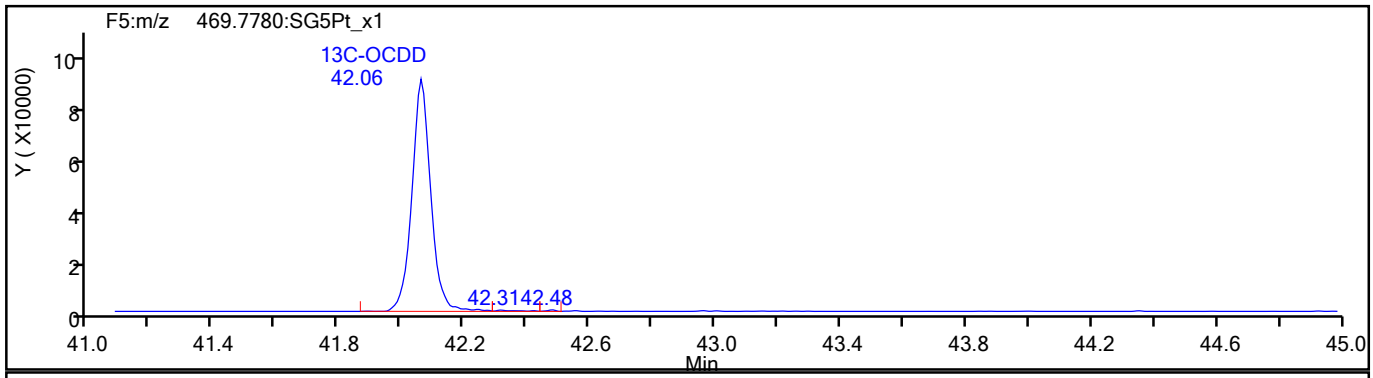

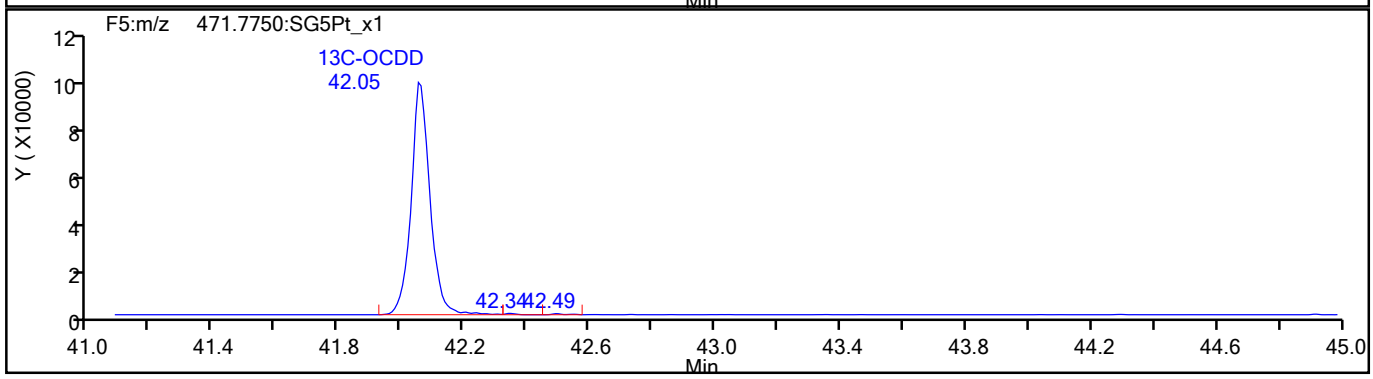

782494

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

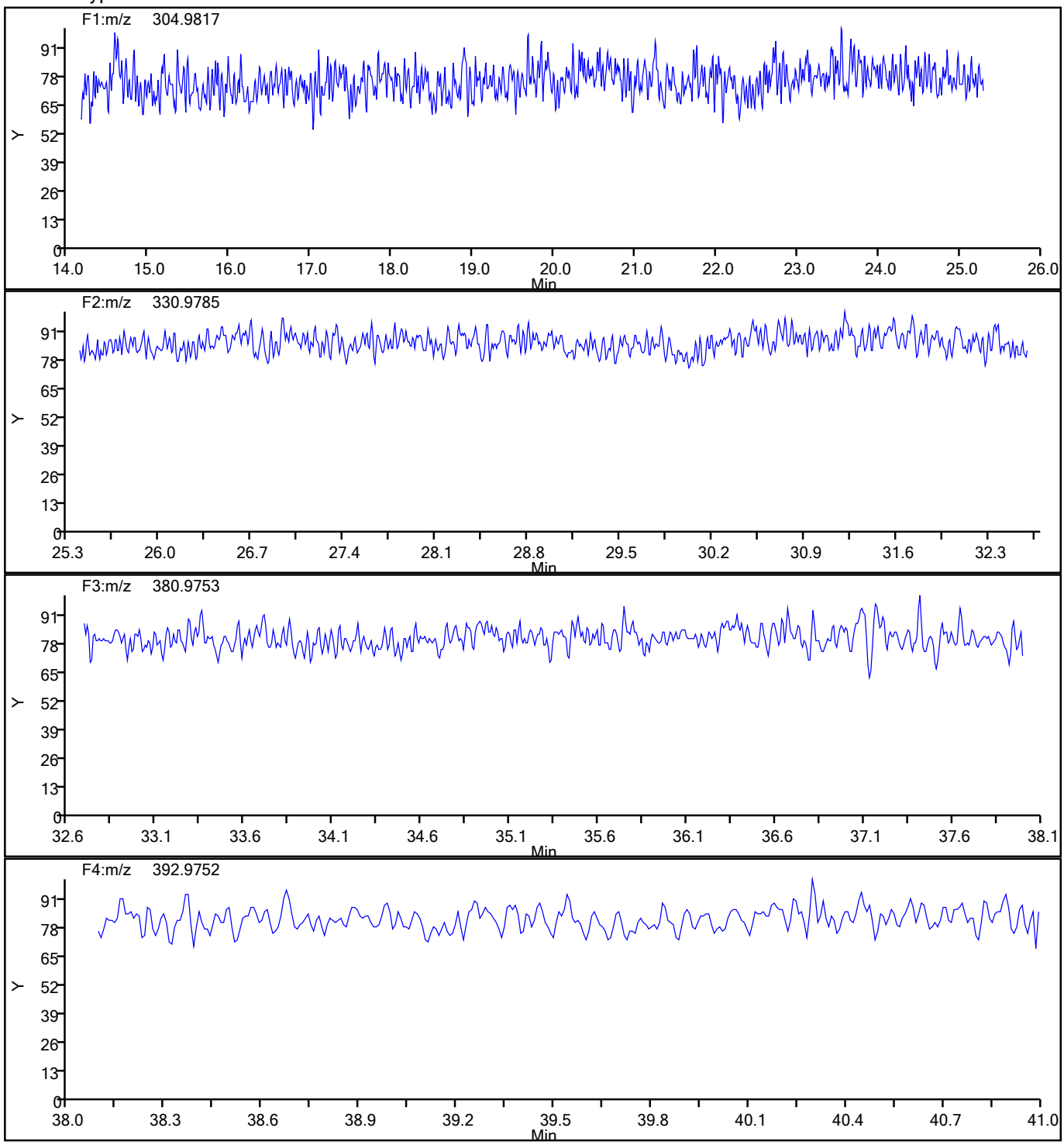

782495

Report Date: 19-Aug-2021 13:17:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_29.d		
Injection Date:	18-Aug-2021 11:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	517281	Sample Line#:	27
Column Type:	DB-5	Column Dia:	0.32 mm

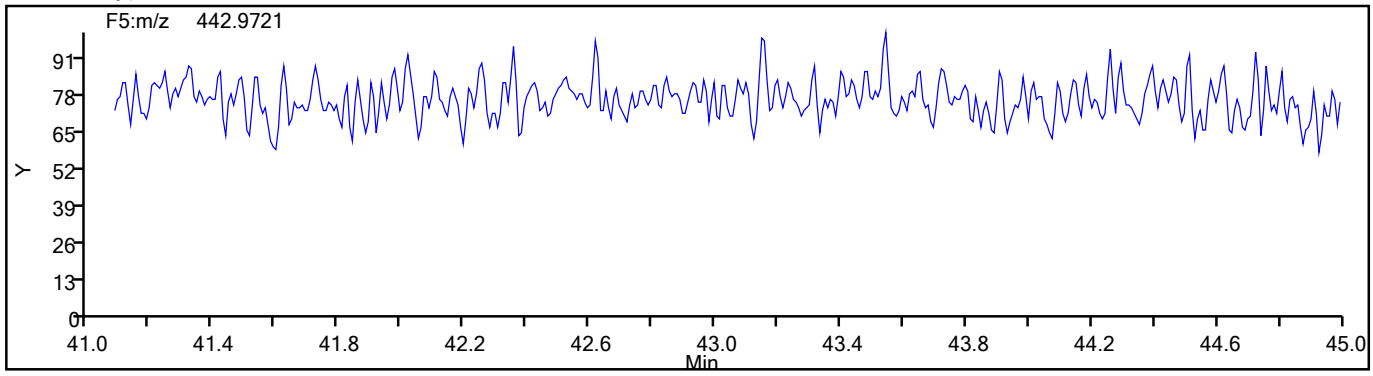

782496

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (12-14) RA
Lab Sample ID: 320-76887-7 RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_007.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.67(g)
Date Analyzed: 08/25/2021 16:48
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 26.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	11		1.3	0.17

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	59		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	77		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_007.d
Lims ID: 320-76887-A-7-A
Client ID: 11215702-072721-BN-SJSB096 (12-14)
Sample Type: Client
Inject. Date: 25-Aug-2021 16:48:55 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-7-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:05:53

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.284	46806298	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.587	36988708	0.83	1.3327	59.3	59.3	0.2860	0.2860	59.30	
2,3,7,8-TCDF	17.615	1536449	0.71	0.9978	4.163	4.163	0.0683	0.0683		M
D 13C-2,3,7,8-TCDD	16.051	23280271	0.78	0.8749	56.8	56.8	0.3599	0.3599	56.85	
2,3,7,8-TCDD	16.079	356581	0.86	1.0570	1.449	1.449	0.0859	0.0859		M
$ 37Cl4-2,3,7,8-TCDD	16.065	12413174		0.8648	30.7	30.7	0.0551	0.0551	76.66	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Report Date: 26-Aug-2021 09:30:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_007.d
Lims ID: 320-76887-A-7-A
Client ID: 11215702-072721-BN-SJSB096 (12-14)
Sample Type: Client
Inject. Date: 25-Aug-2021 16:48:55 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-7-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:05:53

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.284	16.298	-1		20099042	4524544	6680	16700	677		
333.9339	16.271	16.298	-2		26707256	5687967	6183	15457	920	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.587	17.615	-2	1.080	16817293	3072887	9590	23975	320		
317.9389	17.601	17.615	-1	1.081	20171415	3670152	5981	14952	614	0.83(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.615	17.628	-1	1.002	638143	117486	760	1900	155		M
305.8987	17.615	17.628	-1	1.002	898306	170884	1079	2697	158	0.71(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.051	16.065	-1	0.986	10219302	2293603	6680	16700	343		
333.9339	16.051	16.065	-1	0.986	13060969	2983912	6183	15457	483	0.78(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	16.079	16.078	0	1.002	165260	39863	824	2060	48		
321.8936	16.079	16.078	0	1.002	191321	40382	1092	2730	37	0.86(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8840	16.065	16.078	-1	0.987	12413174	2695062	1947	4867	1384		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_007.d				
Injection Date:	25-Aug-2021 16:48:55	Instrument ID:	11D2		
Lims ID:	320-76887-A-7-A	Lab Sample ID:	320-76887-7		
Client ID:	11215702-072721-BN-SJSB096 (12-14)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.61
Area: 643713
Amount: 4.326108
Amount Units: pg/ul

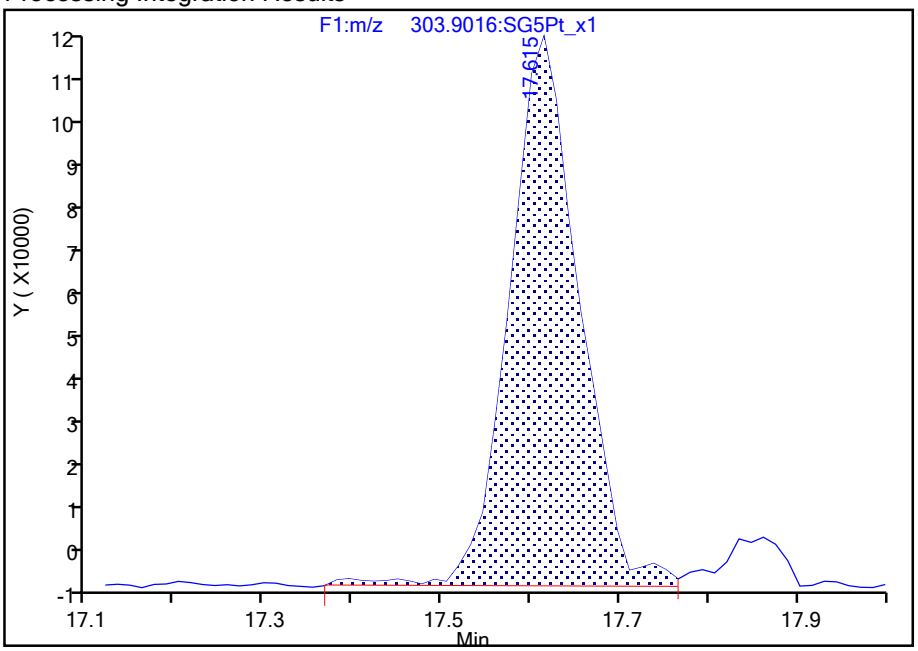

Manual Integration Results

RT: 17.61
Area: 638143
Amount: 4.162963
Amount Units: pg/ul

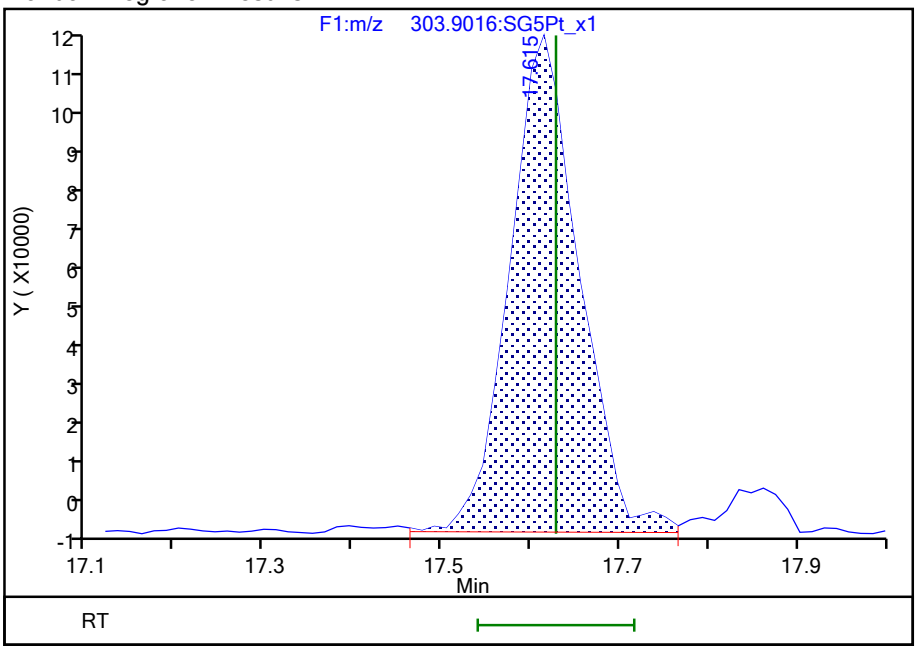

Reviewer: stephensk, 26-Aug-2021 09:05:26

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_007.d				
Injection Date:	25-Aug-2021 16:48:55	Instrument ID:	11D2		
Lims ID:	320-76887-A-7-A	Lab Sample ID:	320-76887-7		
Client ID:	11215702-072721-BN-SJSB096 (12-14)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.61
Area: 952949
Amount: 4.326108
Amount Units: pg/ul

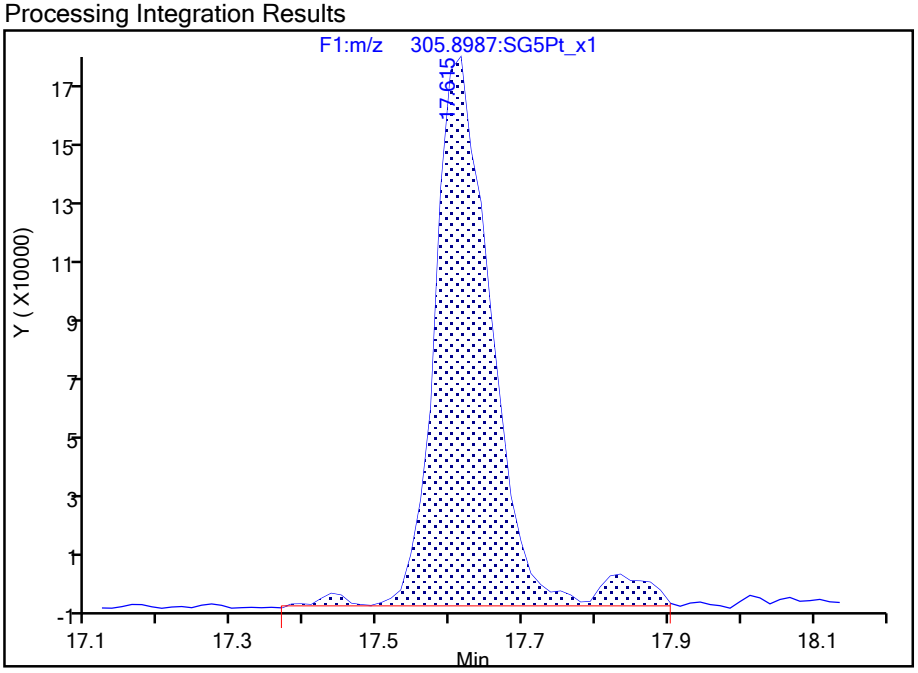

Manual Integration Results

RT: 17.61
Area: 898306
Amount: 4.162963
Amount Units: pg/ul

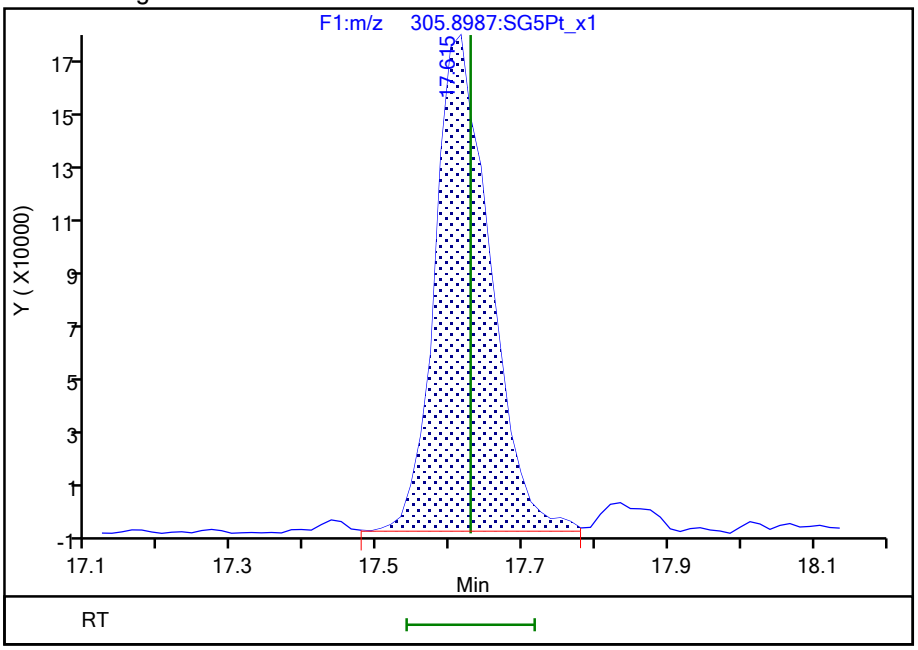

Reviewer: stephensk, 26-Aug-2021 09:05:29

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Report Date: 26-Aug-2021 09:30:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_007.d		
Injection Date:	25-Aug-2021 16:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	519744	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

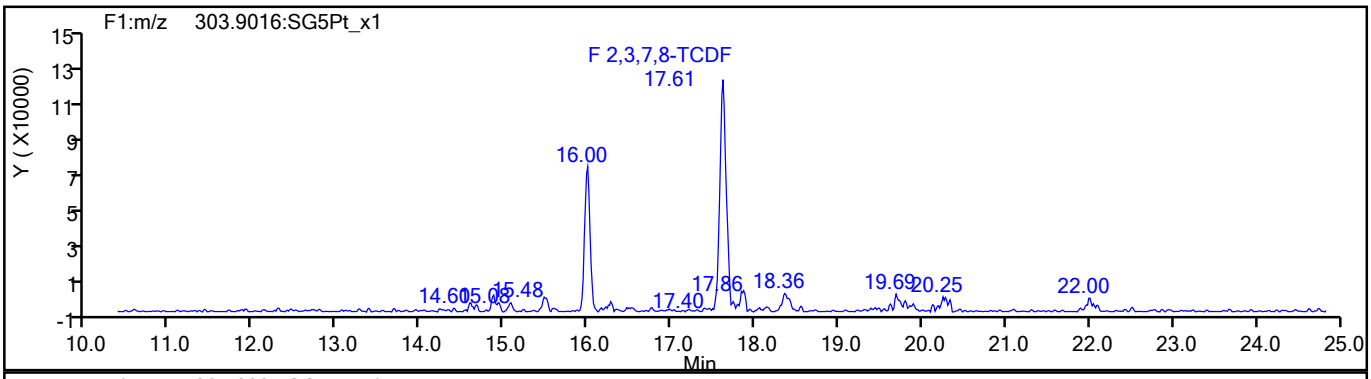

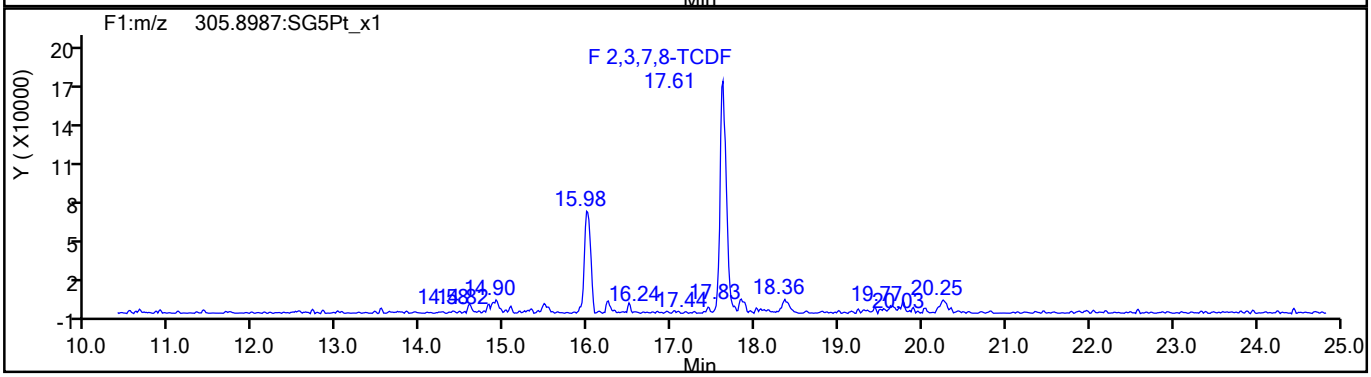

TCDF Standards

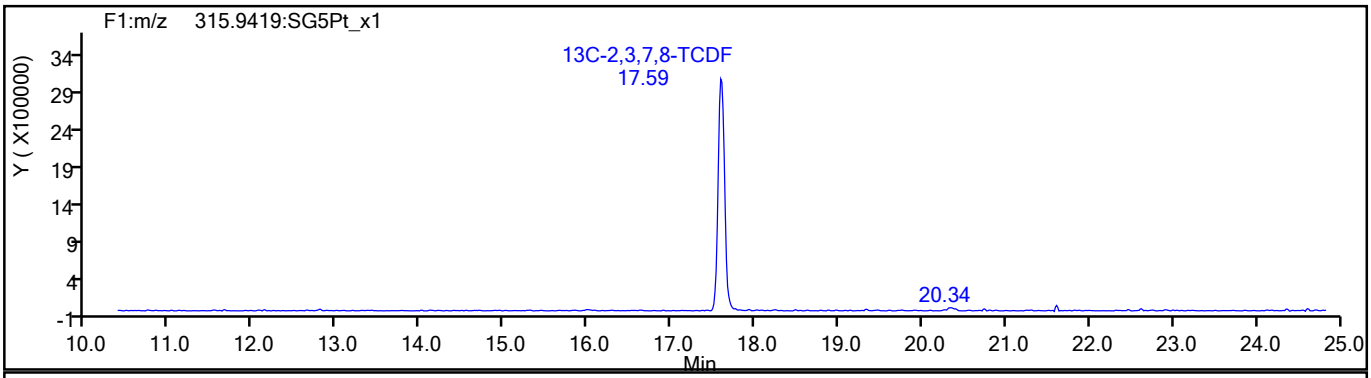

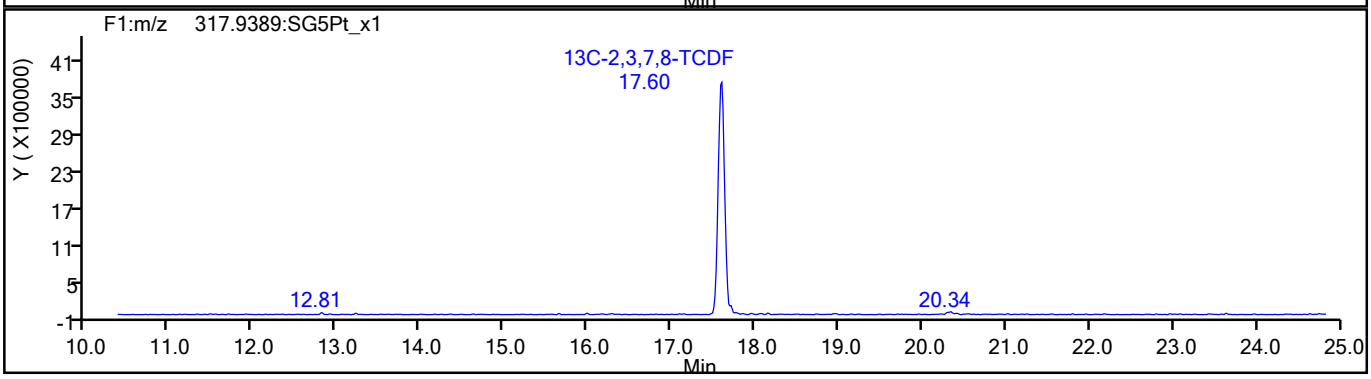

782502

Report Date: 26-Aug-2021 09:30:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_007.d		
Injection Date:	25-Aug-2021 16:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	519744	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

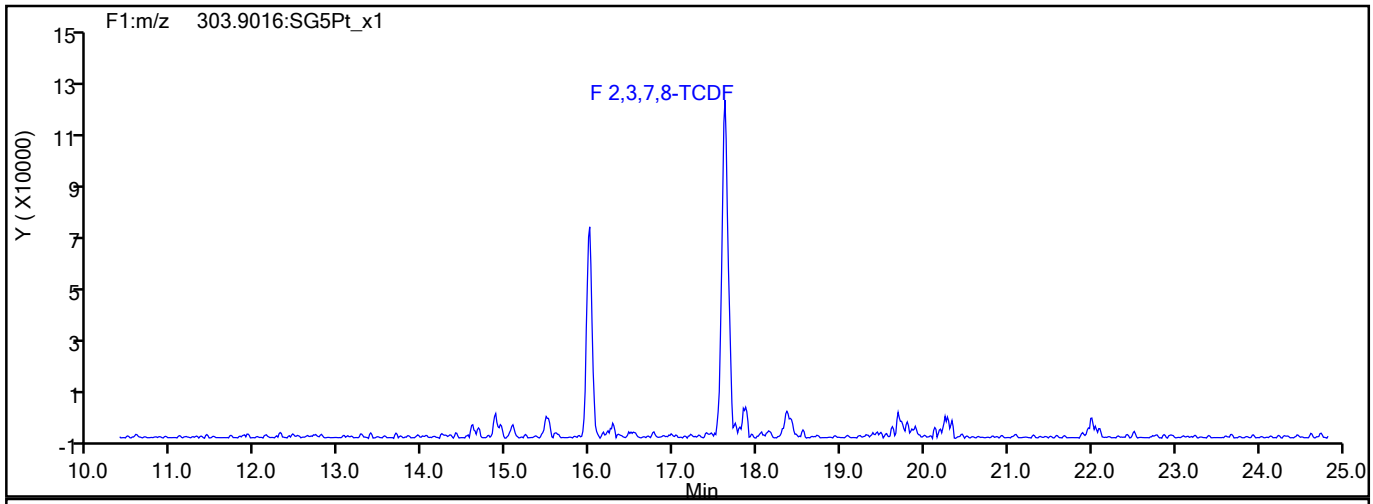

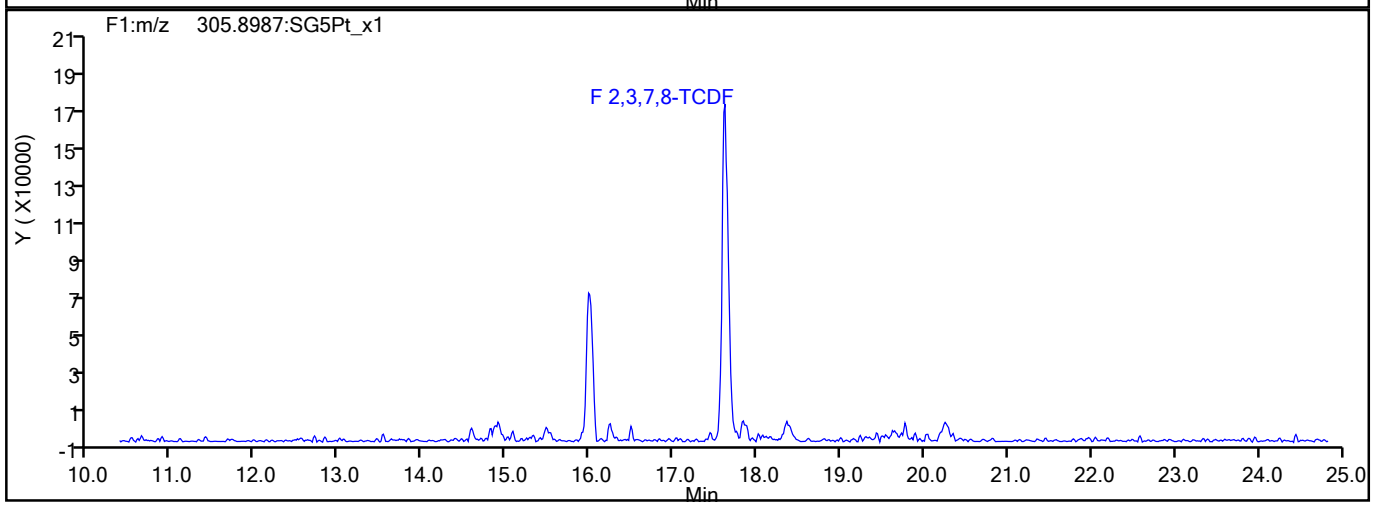

TCDF Interference Mass

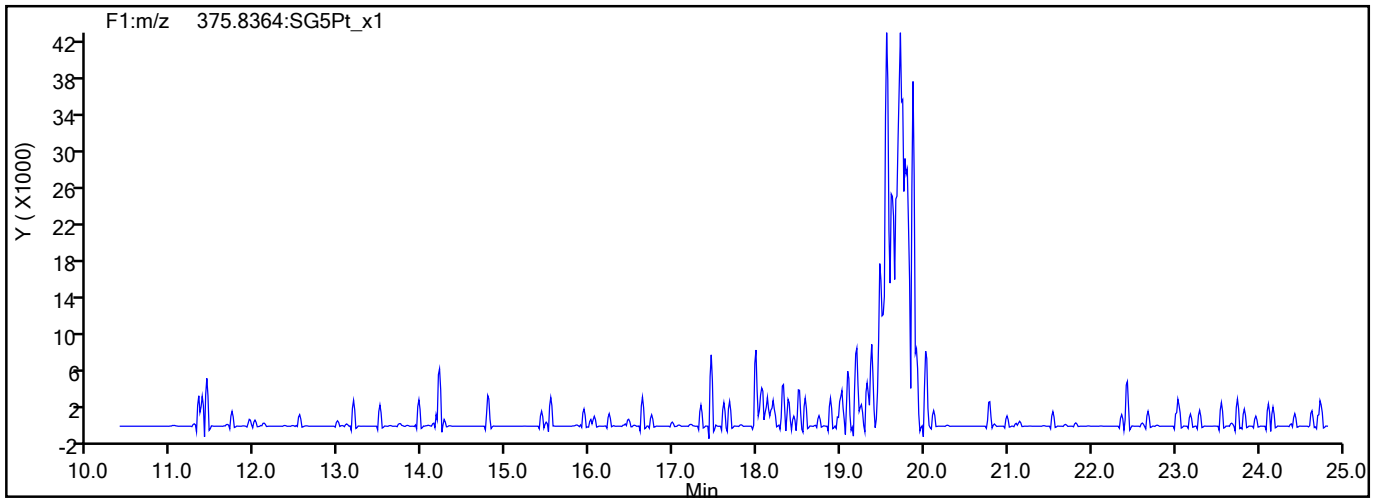

782503

Report Date: 26-Aug-2021 09:30:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_007.d		
Injection Date:	25-Aug-2021 16:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	519744	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

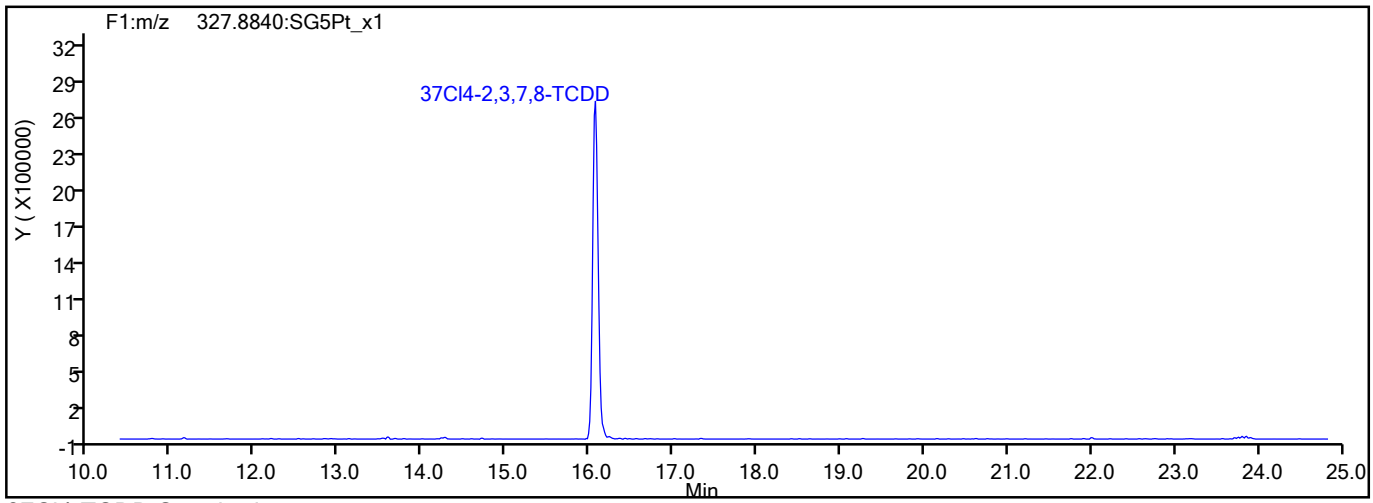

37Cl4-TCDD Standards

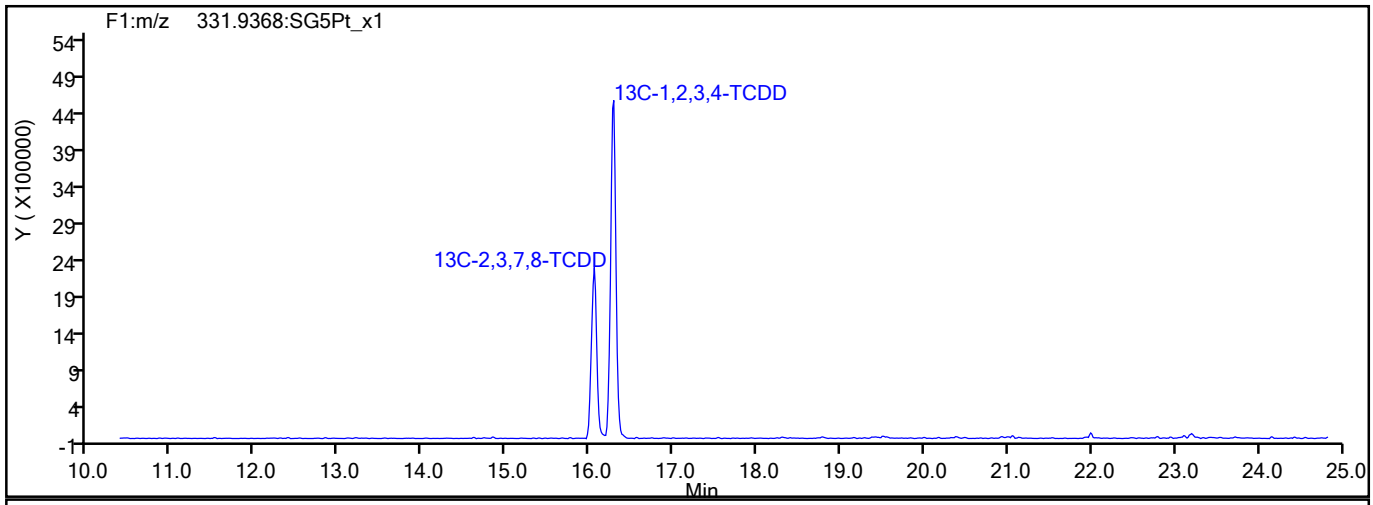

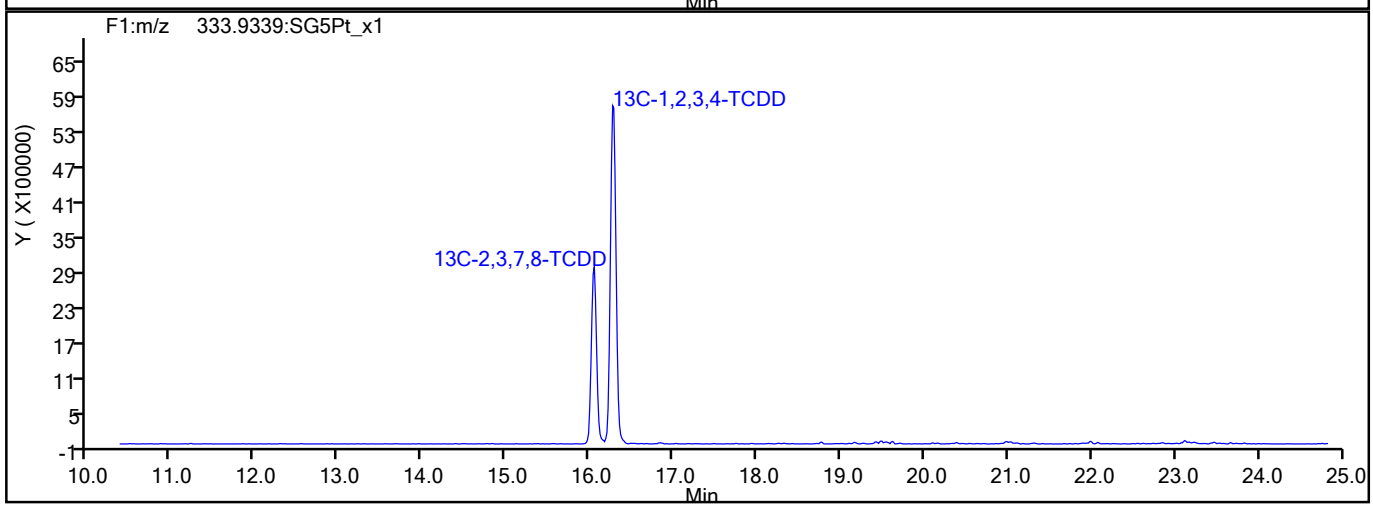

782504

Report Date: 26-Aug-2021 09:30:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_007.d		
Injection Date:	25-Aug-2021 16:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (12-14)		
Worklist#:	519744	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

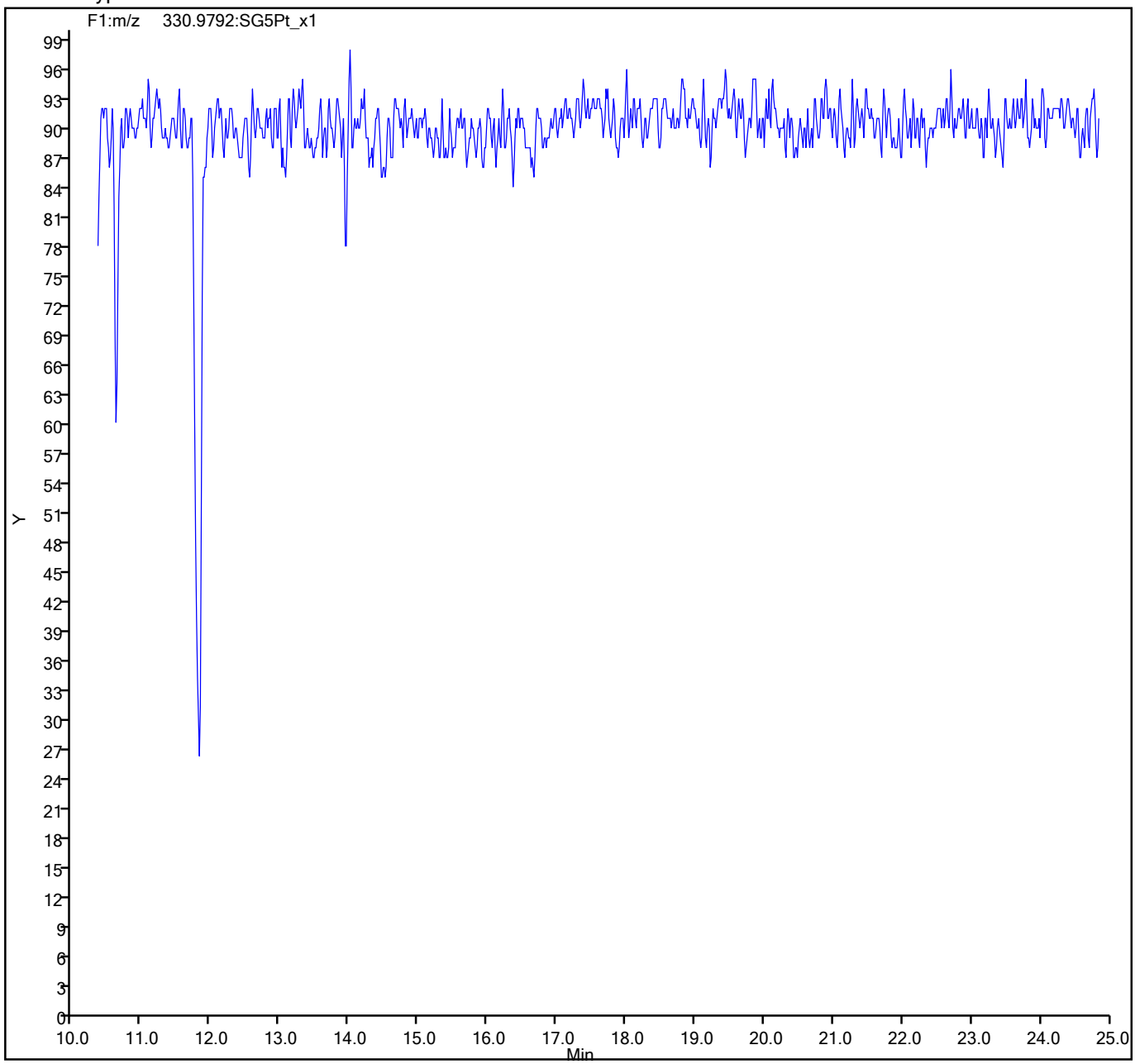

782505

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (14-16)
Lab Sample ID: 320-76887-8
Matrix: Sediment
Lab File ID: 17au21dfs1_36.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.09(g)
Date Analyzed: 08/18/2021 17:13
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.95	J q	1.4	0.12
40321-76-4	1,2,3,7,8-PeCDD	ND		6.9	0.11
57117-41-6	1,2,3,7,8-PeCDF	ND		6.9	0.037
57117-31-4	2,3,4,7,8-PeCDF	ND		6.9	0.040
39227-28-6	1,2,3,4,7,8-HxCDD	0.29	J q	6.9	0.15
57653-85-7	1,2,3,6,7,8-HxCDD	0.54	J	6.9	0.17
19408-74-3	1,2,3,7,8,9-HxCDD	1.6	J q	6.9	0.15
70648-26-9	1,2,3,4,7,8-HxCDF	ND		6.9	0.024
57117-44-9	1,2,3,6,7,8-HxCDF	ND		6.9	0.025
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.9	0.024
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.9	0.024
35822-46-9	1,2,3,4,6,7,8-HpCDD	18	B	6.9	0.16
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		6.9	0.039
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.9	0.036
3268-87-9	OCDD	360	B	14	0.35
39001-02-0	OCDF	0.74	J q	14	0.057
41903-57-5	Total TCDD	2.2	q	1.4	0.12
30402-14-3	Total TCDF	5.6	q	1.4	0.091
36088-22-9	Total PeCDD	4.8	J q	6.9	0.11
30402-15-4	Total PeCDF	ND		6.9	0.040
34465-46-8	Total HxCDD	24	q	6.9	0.15
55684-94-1	Total HxCDF	ND		6.9	0.027
37871-00-4	Total HpCDD	71	B	6.9	0.16
38998-75-3	Total HpCDF	ND		6.9	0.039

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (14-16)
Lab Sample ID: 320-76887-8
Matrix: Sediment
Lab File ID: 17au21dfs1_36.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.09(g)
Date Analyzed: 08/18/2021 17:13
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	60		25-164
89059-46-1	13C-2,3,7,8-TCDF	58		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	56		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	63		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	68		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	61		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	72		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	62		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	57		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	60		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	65		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	66		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	74		26-138
114423-97-1	13C-OCDD	69		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	67		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d
Lims ID: 320-76887-A-8-A
Client ID: 11215702-072721-BN-SJSB096 (14-16)
Sample Type: Client
Inject. Date: 18-Aug-2021 17:13:00 ALS Bottle#: 0 Worklist Smp#: 33
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-8-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 08:30:23 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: dadunj Date: 20-Aug-2021 08:30:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.390	1238299	0.81	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.410	969723	0.86	1.3459	58.2	58.2	0.1551	0.1551	58.19	
2,3,7,8-TCDF	20.462	15083	0.74	1.0802	1.440	1.440	0.0331	0.0331		M
A Non-2,3,7,8-sub-TCDF	19.878	6236	0.77	1.0802	0.7211	0.5953	0.0331	0.5953		RQa
S Total TCDF					2.161	2.035	0.0331	0.0331		RQ
D 13C-2,3,7,8-TCDD	21.785	692943	0.76	0.9317	60.1	60.1	0.1184	0.1184	60.06	
2,3,7,8-TCDD	21.777	2572	0.77	1.0753	0.4160	0.3452	0.0424	0.0424		RQM
$ 37Cl4-2,3,7,8-TCDD	21.803	336415		1.0083	26.9	26.9	0.0160	0.0160	67.36	
A Non-2,3,7,8-sub-TCDD	20.707	3408	0.77	1.0753	0.5765	0.4574	0.0424	0.2469		RQa
S Total TCDD					0.993	0.8025	0.0424	0.0424		RQ
D 13C-1,2,3,7,8-PeCDF	27.248	796096	1.61	1.1405	56.4	56.4	0.1412	0.1412	56.37	
1,2,3,7,8-PeCDF	27.282						0.0133	0.0133		RQU
D 13C-2,3,4,7,8-PeCDF	28.765	879929	1.57	1.1253	63.1	63.1	0.1431	0.1431	63.15	
2,3,4,7,8-PeCDF	28.845						0.0146	0.0146		
A F1 PeCDFs	24.648						0.005745	0.005745		
A Non-2,3,7,8-sub-PeCDF	28.125						0.0140	0.0140		RQU
S Total PeCDF							0.0146	0.0146		
D 13C-1,2,3,7,8-PeCDD	29.590	513549	1.64	0.7165	57.9	57.9	0.1207	0.1207	57.88	
1,2,3,7,8-PeCDD	29.616						0.0418	0.0418		RQU
A Non-2,3,7,8-sub-PeCDD	28.489	9455	1.55	1.0465	1.869	1.759	0.0418	0.8959		RQ
S Total PeCDD					1.869	1.759	0.0418	0.0418		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.916	774882	0.55	0.9648	71.7	71.7	0.2193	0.2193	71.68	
1,2,3,4,7,8-HxCDF	34.933						0.008673	0.008673		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.076	747518	0.52	1.0708	62.3	62.3	0.1976	0.1976	62.30	
1,2,3,6,7,8-HxCDF	34.983						0.009023	0.009023		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.901	703122	0.56	1.0413	60.3	60.3	0.2032	0.2032	60.26	
2,3,4,6,7,8-HxCDF	35.936						0.008787	0.008787		
D 13C-1,2,3,7,8,9-HxCDF	36.786	626904	0.52	0.9731	57.5	57.5	0.2174	0.2174	57.50	
1,2,3,7,8,9-HxCDF	36.760						0.008839	0.008839		RQU
A Non-2,3,7,8-sub-HxCDF	35.028						0.008819	0.009776		RQU
S Total HxCDF							0.009776	0.009776		

Report Date: 20-Aug-2021 08:30:23 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.592	1120504	1.27	1.8E+04	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	36.103	578723	1.28	0.7587	68.1	68.1	0.1652	0.1652	68.08	
1,2,3,4,7,8-HxCDD	36.120	650	1.24	1.0608	0.1347	0.1059	0.0547	0.0547		RQ
D 13C-1,2,3,6,7,8-HxCDD	36.221	585355	1.22	0.8593	60.8	60.8	0.1459	0.1459	60.80	
1,2,3,6,7,8-HxCDD	36.238	1145	1.35	0.9933	0.1969	0.1969	0.0613	0.0613		
1,2,3,7,8,9-HxCDD	36.567	3742	1.24	1.1094	0.6283	0.5795	0.0535	0.0535		RQ
A Non-2,3,7,8-sub-HxCDD	35.394	48870	1.24	1.0545	8.090	7.962	0.0563	6.490		RQ
S Total HxCDD					9.050	8.845	0.0565	0.0565		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.608	540893	0.44	0.7359	65.6	65.6	0.1854	0.1854	65.59	
1,2,3,4,6,7,8-HpCDF	38.634						0.0142	0.0142		RQU
D 13C-1,2,3,4,7,8,9-HpCDF	39.855	569273	0.46	0.6854	74.1	74.1	0.1991	0.1991	74.13	
1,2,3,4,7,8,9-HpCDF	39.885						0.0131	0.0131		
A Non-2,3,7,8-sub-HpCDF	39.258						0.0136	0.0136		U
S Total HpCDF							0.0142	0.0142		
D 13C-1,2,3,4,6,7,8-HpCDD	39.551	489426	1.04	0.6745	64.8	64.8	0.1888	0.1888	64.76	
1,2,3,4,6,7,8-HpCDD	39.560	34068	1.04	1.0503	6.627	6.627	0.0602	0.0602		
A Non-2,3,7,8-sub-HpCDD	39.258	99933	1.04	1.0503	19.4	19.4	0.0602	19.4		
S Total HpCDD					26.1	26.1	0.0602	0.0602		
D 13C-OCDD	42.050	838197	0.93	0.5446	137.4	137.4	0.1815	0.1815	68.68	
OCDF	42.067	1497	0.89	1.3168	0.3106	0.2713	0.0207	0.0207		RQM
OCDD	42.058	578412	0.90	1.0620	130.0	130.0	0.1282	0.1282		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d
Lims ID: 320-76887-A-8-A
Client ID: 11215702-072721-BN-SJSB096 (14-16)
Sample Type: Client
Inject. Date: 18-Aug-2021 17:13:00 ALS Bottle#: 0 Worklist Smp#: 33
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-8-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 08:30:23 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: dadunj Date: 20-Aug-2021 08:30:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.390	21.427	-2		553799	75549	54	135	1399		a
333.9338	21.390	21.427	-2		684500	92144	20	50	4607	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.410	20.401	1	0.954	447120	60192	95	237	634		
317.9389	20.427	20.401	2	0.955	522603	71323	45	112	1585	0.86(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.462	20.436	2	1.003	6423	838	2	5	419		M
305.8987	20.496	20.436	4	1.004	8660	1017	17	42	60	0.74(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											RQa
303.9016	19.731	19.878	-9	0.967	2713	451	2	5	226		a
305.8987	19.739	19.878	-8	0.967	4840	754	17	42	44	0.56(0.65-0.89)	
	Empc Correction				3523	585	17	42	34		
13C-2,3,7,8-TCDD											
331.9368	21.785	21.743	3	1.018	299936	38755	54	135	718		
333.9338	21.777	21.743	2	1.018	393007	49060	20	50	2453	0.76(0.65-0.89)	
2,3,7,8-TCDD											RQM
319.8965	21.777	21.777	0	1.000	1119	197	13	32	15		M
321.8936	21.837	21.777	4	1.002	1981	291	3	7	97	0.56(0.65-0.89)	
	Empc Correction				1453	255	3	7	85		
37Cl4-2,3,7,8-TCDD											
327.8847	21.803	21.849	-3	1.019	336415	42927	11	27	3902		
A Non-2,3,7,8-sub-TCDD											RQa
319.8965	19.688	20.707	-61	0.904	1351	192	13	32	15		a
	Empc Correction				800	139	13	32	11		
321.8936	19.671	20.707	-62	0.903	1040	181	3	7	60	1.30(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	21.390	20.707	41	0.982	1019	149	13	32	11		a
	Empc Correction				682	116	13	32	9		
321.8936	21.364	20.707	39	0.981	886	151	3	7	50	1.15(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.248	27.288	-2	1.274	491492	75779	70	175	1083		
353.8970	27.248	27.288	-2	1.274	304604	45278	38	95	1192	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											RQU
339.8597	27.313						1	2			
341.8567	27.313						6	15			
13C-2,3,4,7,8-PeCDF											
351.9000	28.765	28.795	-2	1.345	537300	69302	70	175	990		
353.8970	28.773	28.795	-1	1.345	342629	45992	38	95	1210	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.820						1	2			
341.8567	28.820						6	15			
A F1 PeCDFs											
339.8597	24.648						1	2			
341.8567	24.648						2	5			
A Non-2,3,7,8-sub-PeCDF											U
339.8597	25.480	28.125	-158	0.935	5	4	1	2	4		
341.8567	25.488	28.125	-158	0.935	104	39	6	15	7	0.05(1.32-1.78)	
	Empc Correction				3	2	6	15	0		
13C-1,2,3,7,8-PeCDD											
367.8949	29.590	29.612	-1	1.383	318655	41750	35	87	1193		
369.8919	29.582	29.612	-2	1.383	194894	26807	23	57	1166	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											RQU
355.8546	29.637						9	22			
357.8516	29.637						3	7			
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.069	28.489	-145	0.881	1679	243	9	22	27		
	Empc Correction				1350	243	9	22	27		
357.8516	26.094	28.489	-143	0.882	871	157	3	7	52	1.93(1.32-1.78)	
355.8546	26.878	28.489	-96	0.908	3023	585	9	22	65		
357.8516	26.869	28.489	-97	0.908	1792	345	3	7	115	1.69(1.32-1.78)	
355.8546	28.537	28.489	3	0.964	1731	180	9	22	20		
	Empc Correction				1470	224	9	22	25		
357.8516	28.521	28.489	2	0.964	949	145	3	7	48	1.82(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.916	34.942	-2	0.954	273371	53250	52	130	1024		
385.8610	34.916	34.942	-2	0.954	501511	97488	162	405	602	0.55(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	34.959						4	10			
375.8178	34.959						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.076	35.111	-2	0.959	257231	46862	52	130	901		
385.8610	35.076	35.111	-2	0.959	490287	89649	162	405	553	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.119						4	10			
375.8178	35.119						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.901	35.919	-1	0.981	252823	50844	52	130	978		
385.8610	35.893	35.919	-2	0.981	450299	89714	162	405	554	0.56(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.936						4	10			
375.8178	35.936						2	5			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.786	36.811	-2	1.005	215751	46775	52	130	900		
385.8610	36.786	36.811	-2	1.005	411153	90062	162	405	556	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQU
373.8208	36.828						4	10			
375.8178	36.828						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	35.028	35.028	0	1.003	88	38	4	10			
375.8178	35.028	35.028	0	1.003	138	70	2	5		0.64(1.05-1.43)	
	Empc Correction				70	30	2	5	0		
13C-1,2,3,7,8,9-HxCDD											a
401.8559	36.592	36.609	-1		627454	140084	66	165	2122		a
403.8529	36.583	36.609	-2		493050	112797	61	152	1849	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.103	36.129	-2	0.987	324362	72610	66	165	1100		
403.8529	36.103	36.129	-2	0.987	254361	60207	61	152	987	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQ
389.8158	36.120	36.146	-2	1.000	360	113	16	40	7		
391.8127	36.112	36.146	-2	1.000	467	143	15	37	10	0.77(1.05-1.43)	
	Empc Correction				290	91	15	37	6		
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.221	36.247	-2	0.990	321647	69811	66	165	1058		
403.8529	36.221	36.247	-2	0.990	263708	56686	61	152	929	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.238	36.264	-2	1.000	657	144	16	40	9		
391.8127	36.246	36.264	-1	1.001	488	115	15	37	8	1.35(1.05-1.43)	
1,2,3,7,8,9-HxCDD											RQ
389.8158	36.567	36.626	-4	1.013	2072	329	16	40	21		
391.8127	36.583	36.626	-3	1.013	1985	350	15	37	23	1.04(1.05-1.43)	
	Empc Correction				1670	265	15	37	18		
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	34.226	35.394	-70	0.945	22361	3961	16	40	248		
391.8127	34.226	35.394	-70	0.945	17474	3143	15	37	210	1.28(1.05-1.43)	
389.8158	35.009	35.394	-23	0.967	1511	330	16	40	21		
	Empc Correction				729	151	16	40	9		
391.8127	35.025	35.394	-22	0.967	588	122	15	37	8	2.57(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
389.8158	35.345	35.394	-3	0.976	4132	823	16	40	51		
391.8127	35.329	35.394	-4	0.975	3586	762	15	37	51	1.15(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.608	38.626	-1	1.055	164870	40994	62	155	661		
419.8220	38.600	38.626	-2	1.055	376023	90965	76	190	1197	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQU
407.7817	38.630						9	22			
409.7788	38.630						2	5			
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.855	39.880	-2	1.089	178962	48706	62	155	786		
419.8220	39.855	39.880	-2	1.089	390311	108658	76	190	1430	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885						9	22			
409.7788	39.885						2	5			
A Non-2,3,7,8-sub-HpCDF											U
407.7817	39.258						9	22			
409.7788	39.258						2	5			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.551	39.569	-1	1.081	249427	70055	56	140	1251		
437.8140	39.551	39.569	-1	1.081	239999	64455	73	182	883	1.04(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.560	39.582	-1	1.000	17349	4774	20	50	239		
425.7737	39.560	39.582	-1	1.000	16719	4575	14	35	327	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.920	39.258	-20	0.984	51063	12835	20	50	642		
425.7737	38.920	39.258	-20	0.984	48870	11895	14	35	850	1.04(0.88-1.20)	
13C-OCDD											
469.7780	42.050	42.072	-1	1.149	402957	93169	29	72	3213		
471.7750	42.050	42.072	-1	1.149	435240	105123	71	177	1481	0.93(0.76-1.02)	
OCDF											RQM
441.7428	42.067	42.165	-6	1.000	705	118	2	5	59		
443.7399	42.151	42.165	-1	1.002	1009	167	9	22	19	0.70(0.76-1.02)	M
	Empc Correction				792	132	9	22	15		
OCDD											
457.7377	42.058	42.081	-1	1.000	273447	63778	26	65	2453		
459.7348	42.058	42.081	-1	1.000	304965	71343	28	70	2548	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 08:30:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Lims ID:	320-76887-A-8-A		
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Inject. Date:	18-Aug-2021 17:13:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	33

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	969723	131515

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	969723	131515

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.731	2713	451	4840	754	0.7211	0.56	RQa
19.731	2713	451	3523	585	0.5953		Empc Correction
Signal Totals:							
	2713	451	3523	585			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7553	1205				0.56	RQa
	6236	1036					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.7211 = (7553 * 100.000) / (969723 * 1.080)

Empc Amount: 0.5953 = (6236 * 100.000) / (969723 * 1.080)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Report Date: 20-Aug-2021 08:30:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Lims ID:	320-76887-A-8-A		
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Inject. Date:	18-Aug-2021 17:13:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	33

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	692943	87815

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	692943	87815

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.688	1351	192	1040	181	0.3209	1.30	RQa
19.688	800	139	1040	181	0.2469		Empc Correction
21.390	1019	149	886	151	0.2557	1.15	RQa
21.390	682	116	886	151	0.2104		Empc Correction
Signal Totals:							
	1482	255	1926	332			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4296	673				1.23	RQa
	3408	587					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5765 = (4296 * 100.000) / (692943 * 1.075)
Empc Amount: 0.4574 = (3408 * 100.000) / (692943 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 20-Aug-2021 08:30:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Lims ID:	320-76887-A-8-A		
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Inject. Date:	18-Aug-2021 17:13:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	33

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	796096	121057
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	879929	115294

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	838012	118175

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.480	5	4	104	39	0.0126	0.05	RQ
25.480	5	4	3	2	0.000926		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 08:30:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Lims ID:	320-76887-A-8-A		
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Inject. Date:	18-Aug-2021 17:13:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	33

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	513549	68557

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	513549	68557

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.069	1679	243	871	157	0.4745	1.93	RQ
26.069	1350	243	871	157	0.4133		Empc Correction
26.878	3023	585	1792	345	0.8959	1.69	
28.537	1731	180	949	145	0.4987	1.82	RQ
28.537	1470	224	949	145	0.4501		Empc Correction
Signal Totals:							
	5843	1052	3612	647			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10045	1655				1.78	RQ
	9455	1699					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.869 = (10045 * 100.000) / (513549 * 1.046)

Empc Amount: 1.759 = (9455 * 100.000) / (513549 * 1.046)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Lims ID:	320-76887-A-8-A		
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Inject. Date:	18-Aug-2021 17:13:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	33

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	774882	150738
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	747518	136511
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	703122	140558
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	626904	136837

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	713106	141161

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
35.287	41	15	88	42	0.0150	0.47	RQ
35.287	41	15	33	12	0.008612		Empc Correction
35.480	47	23	50	28	0.0113	0.94	RQ
35.480	47	23	37	18	0.009776		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 08:30:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Lims ID:	320-76887-A-8-A		
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Inject. Date:	18-Aug-2021 17:13:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	33

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	578723	132817
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	585355	126497
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	582039	129657

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.226	22361	3961	17474	3143	6.49	1.28	
35.009	1511	330	588	122	0.3420	2.57	RQ
35.009	729	151	588	122	0.2146		Empc Correction
35.345	4132	823	3586	762	1.26	1.15	
Signal Totals:							
	27222	4935	21648	4027			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	49652	9141				1.29	RQ
	48870	8962					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 8.090 = (49652 * 100.000) / (582039 * 1.055)

Empc Amount: 7.962 = (48870 * 100.000) / (582039 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 08:30:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Lims ID:	320-76887-A-8-A		
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Inject. Date:	18-Aug-2021 17:13:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	33

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	540893	131959
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	569273	157364

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	555083	144661

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 20-Aug-2021 08:30:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Lims ID:	320-76887-A-8-A		
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Inject. Date:	18-Aug-2021 17:13:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	33

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	489426	134510

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	489426	134510

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.920	51063	12835	48870	11895	19.4	1.04	
Signal Totals:							
	51063	12835	48870	11895			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	99933	24730				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 19.441 = (99933 * 100.000) / (489426 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d				
Injection Date:	18-Aug-2021 17:13:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-8-A	Lab Sample ID:	320-76887-8		
Client ID:	11215702-072721-BN-SJSB096 (14-16)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 20.50
Area: 7448
Amount: 1.285552
Amount Units: pg/ul

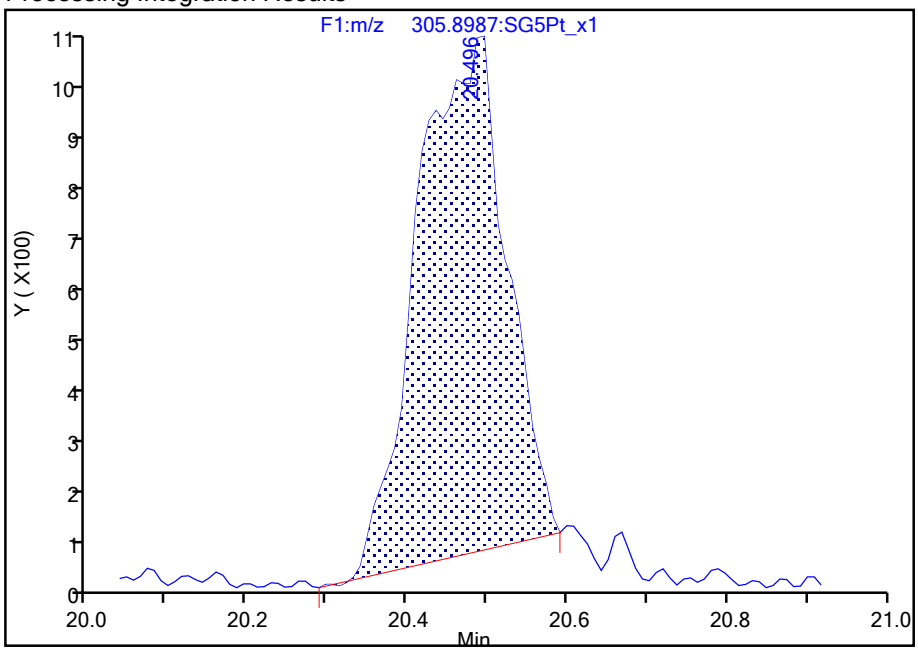

Manual Integration Results

RT: 20.50
Area: 8660
Amount: 1.439921
Amount Units: pg/ul

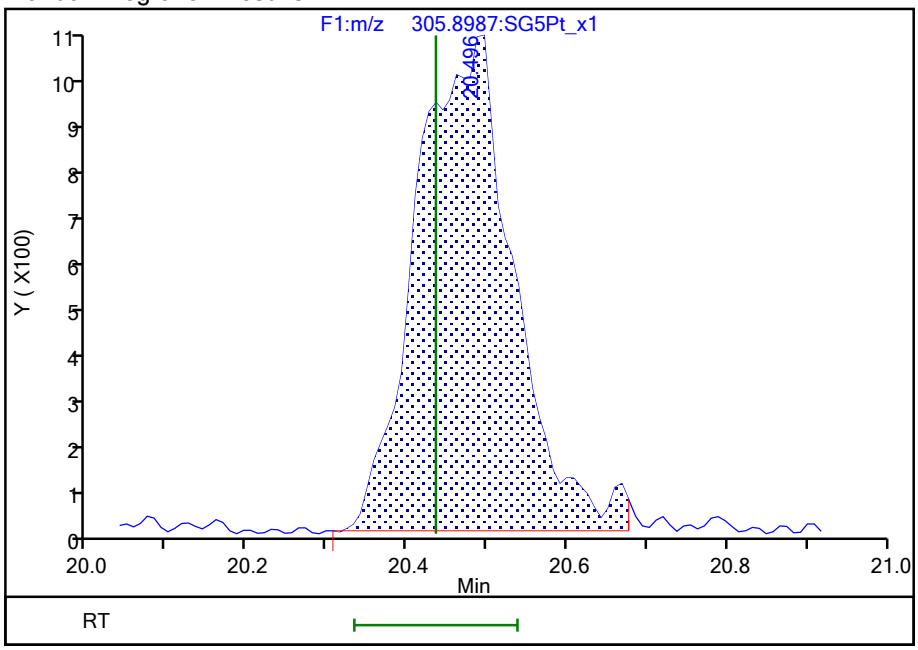

Reviewer: stephensk, 18-Aug-2021 18:11:35

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d				
Injection Date:	18-Aug-2021 17:13:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-8-A	Lab Sample ID:	320-76887-8		
Client ID:	11215702-072721-BN-SJSB096 (14-16)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.46
Area: 6018
Amount: 1.285552
Amount Units: pg/ul

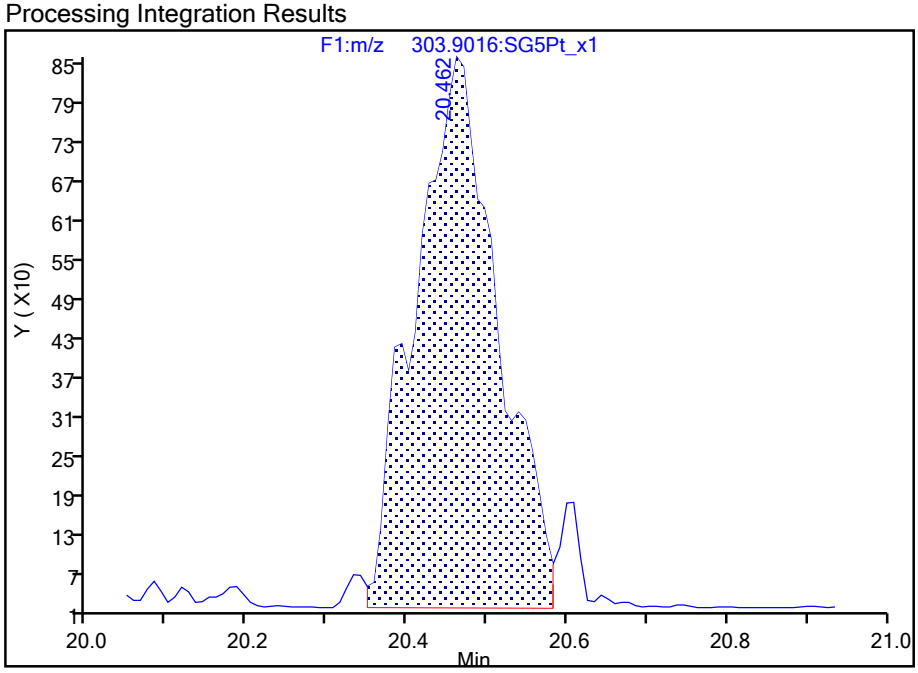

Manual Integration Results

RT: 20.46
Area: 6423
Amount: 1.439921
Amount Units: pg/ul

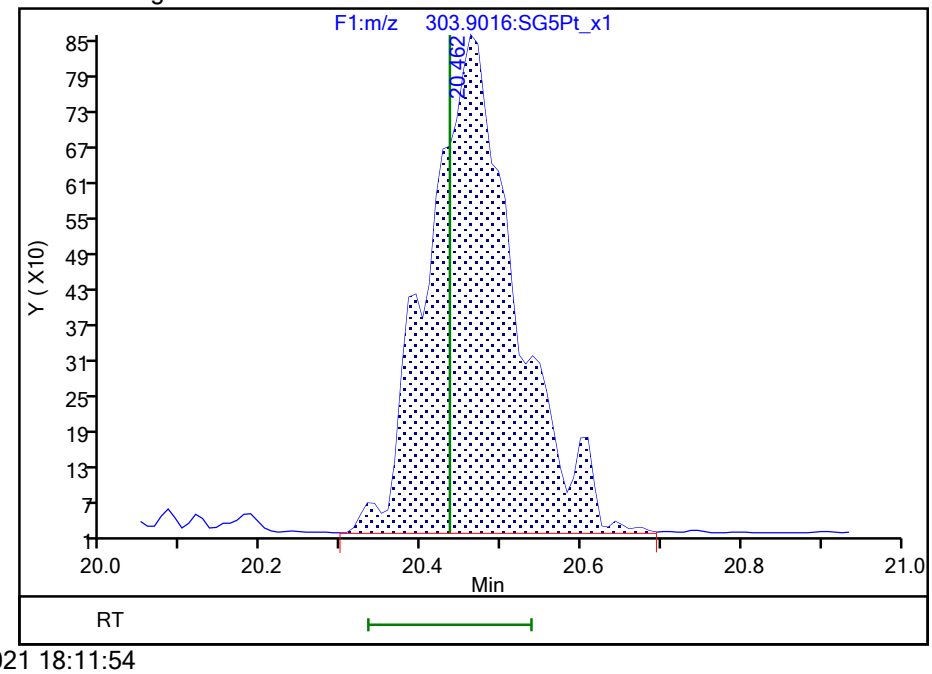

Reviewer: stephensk, 18-Aug-2021 18:11:54

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

782523

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d				
Injection Date:	18-Aug-2021 17:13:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-8-A	Lab Sample ID:	320-76887-8		
Client ID:	11215702-072721-BN-SJSB096 (14-16)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.85
Area: 495
Amount: 0.332280
Amount Units: pg/ul

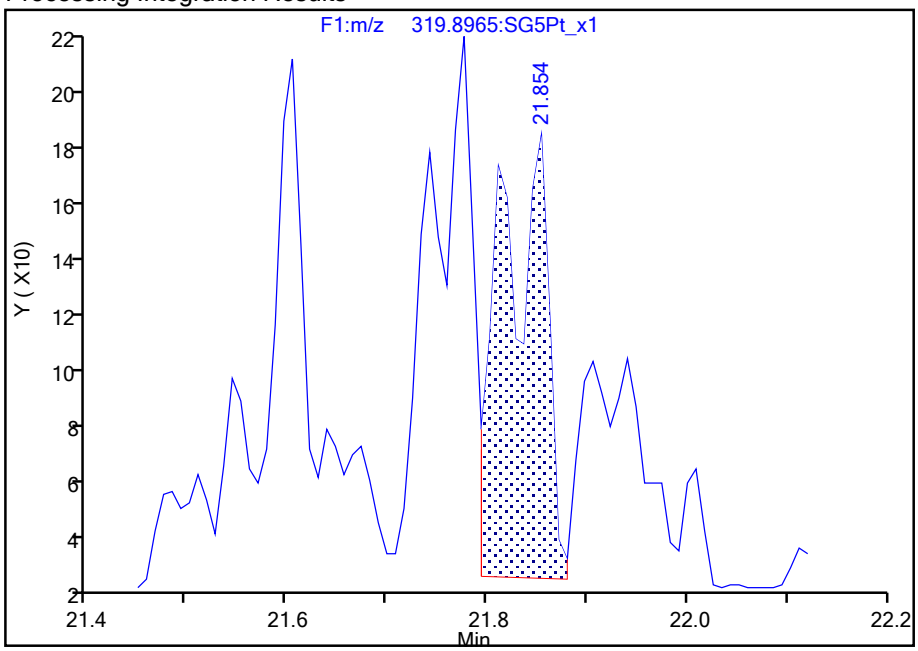

Manual Integration Results

RT: 21.78
Area: 1119
Amount: 0.416022
Amount Units: pg/ul

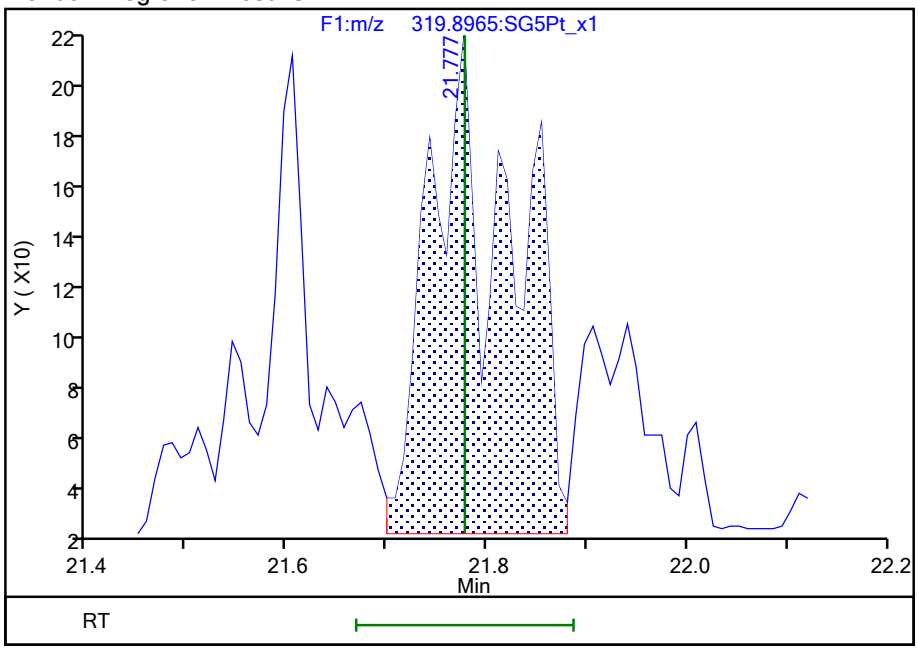

Reviewer: stephensk, 18-Aug-2021 18:12:35

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d				
Injection Date:	18-Aug-2021 17:13:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-8-A	Lab Sample ID:	320-76887-8		
Client ID:	11215702-072721-BN-SJSB096 (14-16)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 36.11
Area: 467
Amount: 0.134712
Amount Units: pg/ul

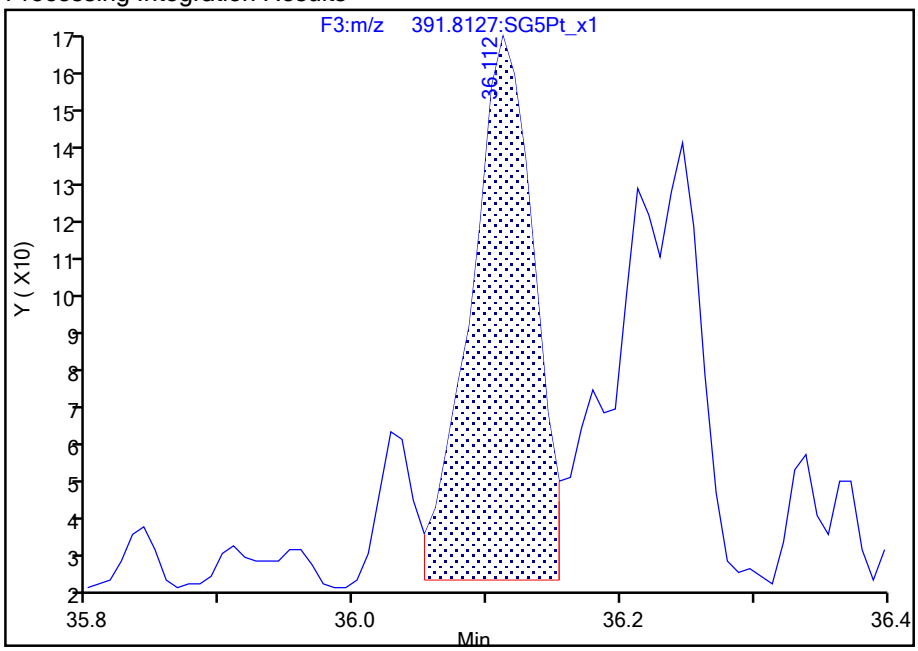

Manual Integration Results

RT: 36.11
Area: 467
Amount: 0.134712
Amount Units: pg/ul

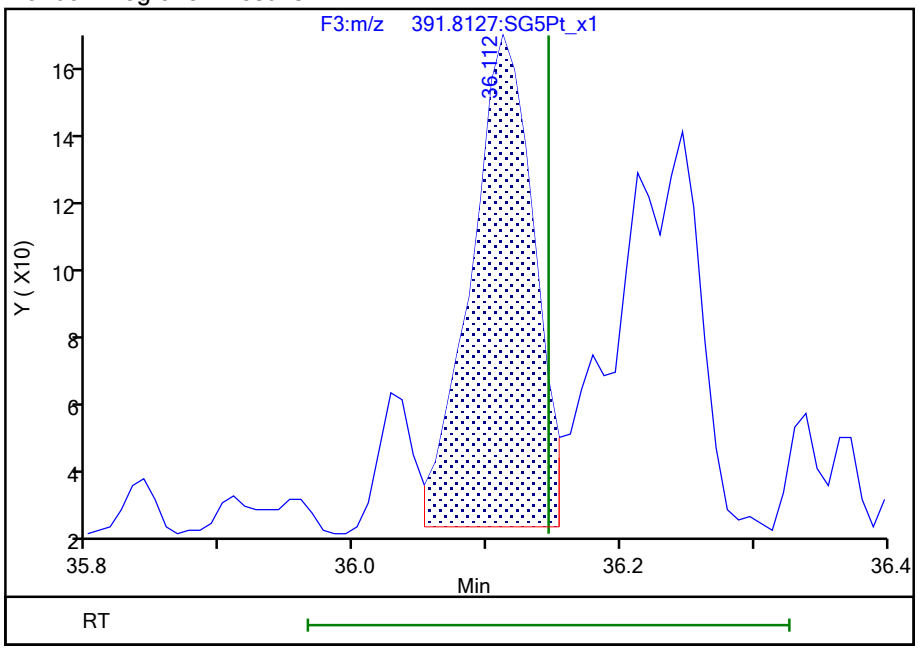

Reviewer: dadunj, 20-Aug-2021 08:29:11

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d				
Injection Date:	18-Aug-2021 17:13:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-8-A	Lab Sample ID:	320-76887-8		
Client ID:	11215702-072721-BN-SJSB096 (14-16)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

Processing Integration Results

RT: 36.12
Area: 827
Amount: 0.134712
Amount Units: pg/ul

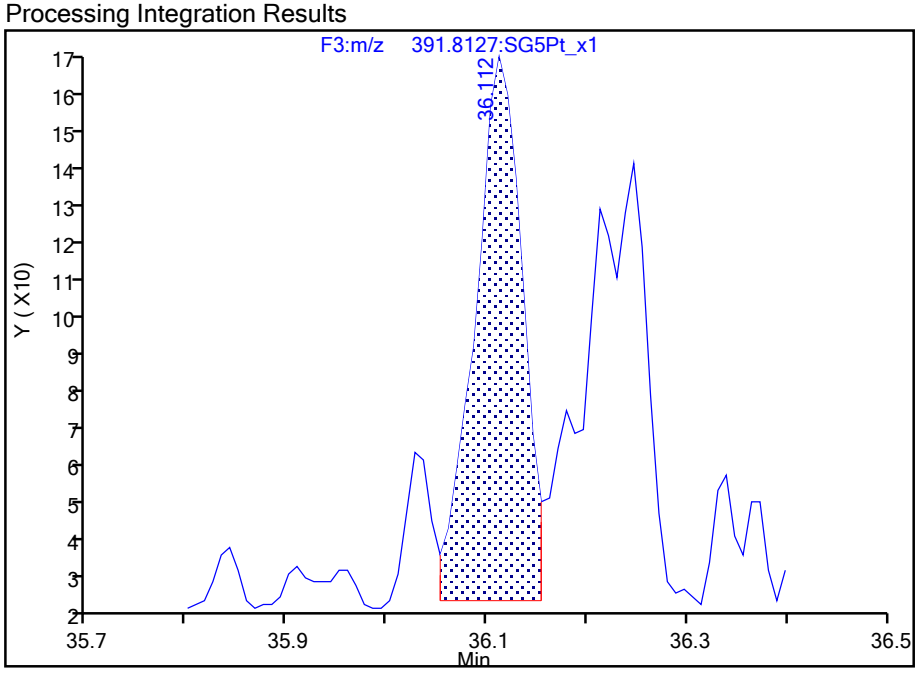

Manual Integration Results

RT: 36.12
Area: 827
Amount: 0.134712
Amount Units: pg/ul
Reviewer: dadunj, 20-Aug-2021 08:29:11
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d				
Injection Date:	18-Aug-2021 17:13:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-8-A	Lab Sample ID:	320-76887-8		
Client ID:	11215702-072721-BN-SJSB096 (14-16)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 42.15
Area: 1009
Amount: 0.310582
Amount Units: pg/ul

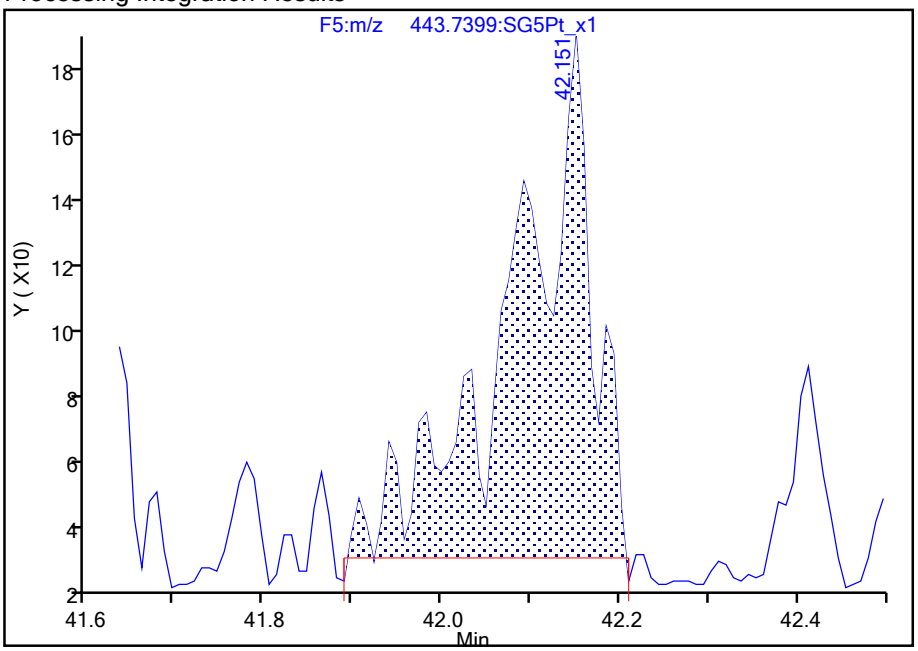

Manual Integration Results

RT: 42.15
Area: 1009
Amount: 0.310582
Amount Units: pg/ul

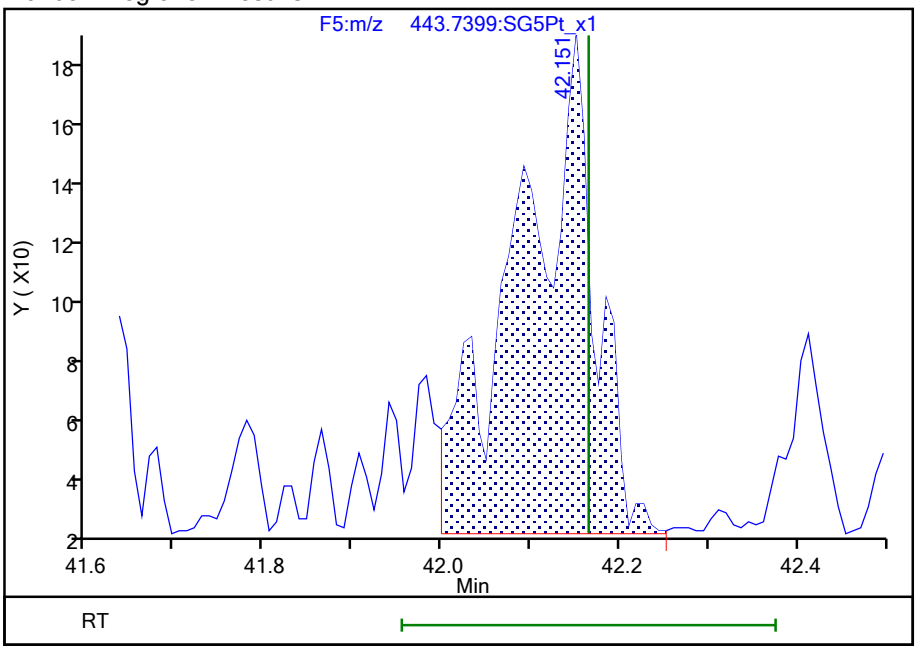

Reviewer: stephensk, 18-Aug-2021 18:14:02

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Report Date: 20-Aug-2021 08:30:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

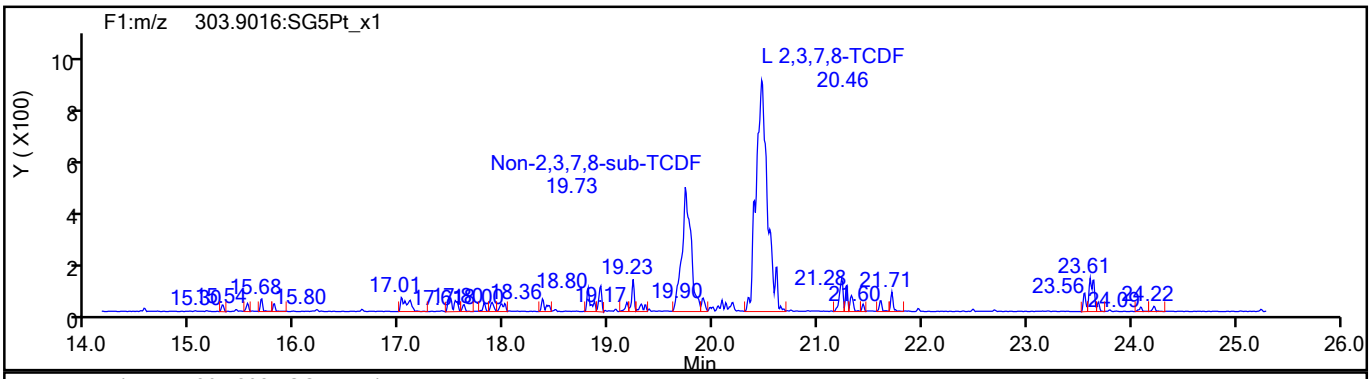

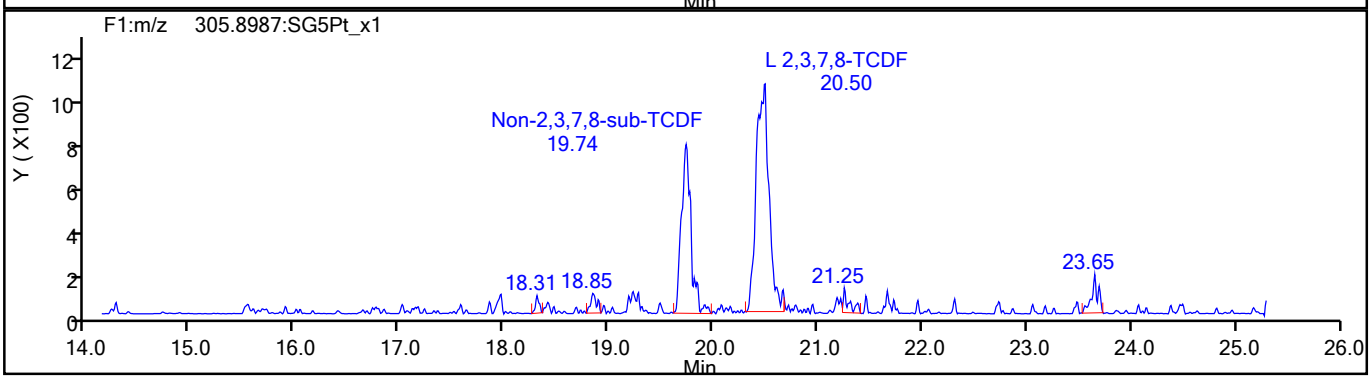

TCDF Standards

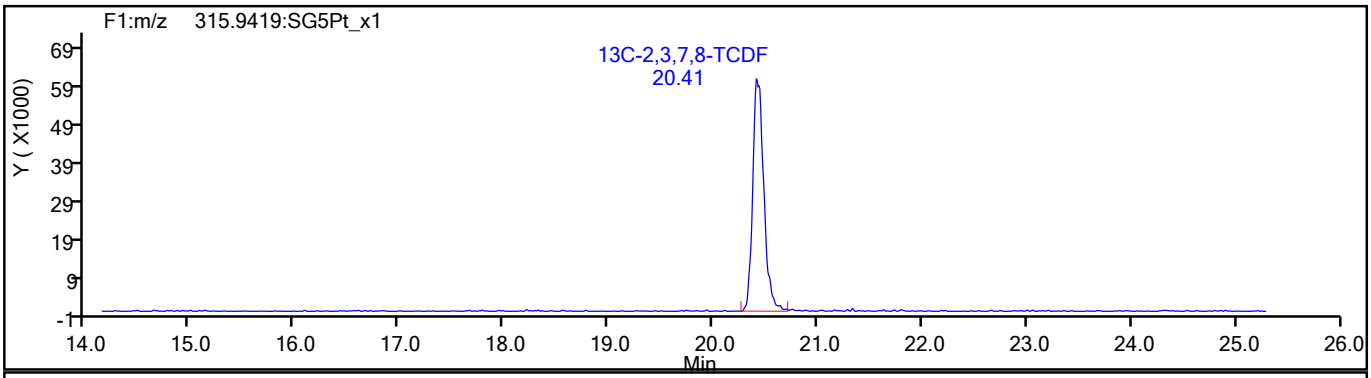

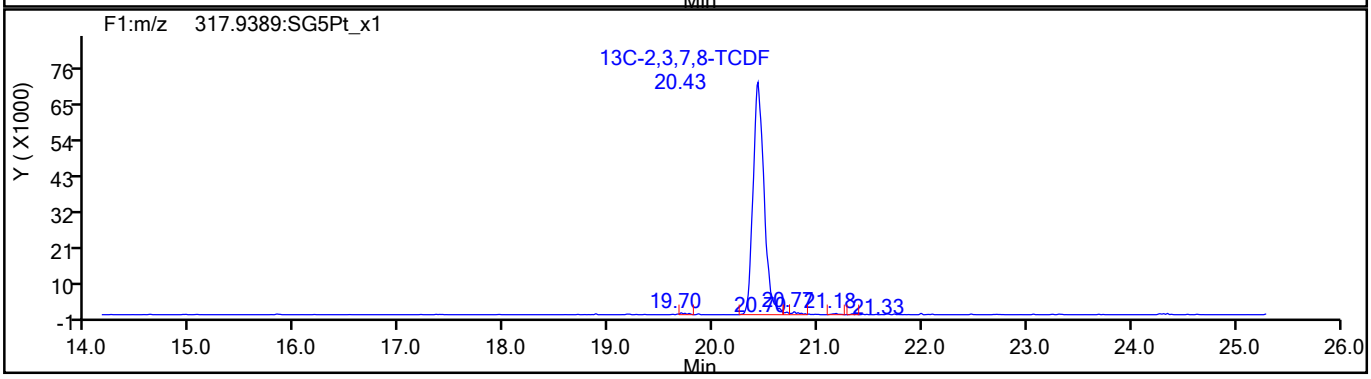

782528

Report Date: 20-Aug-2021 08:30:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

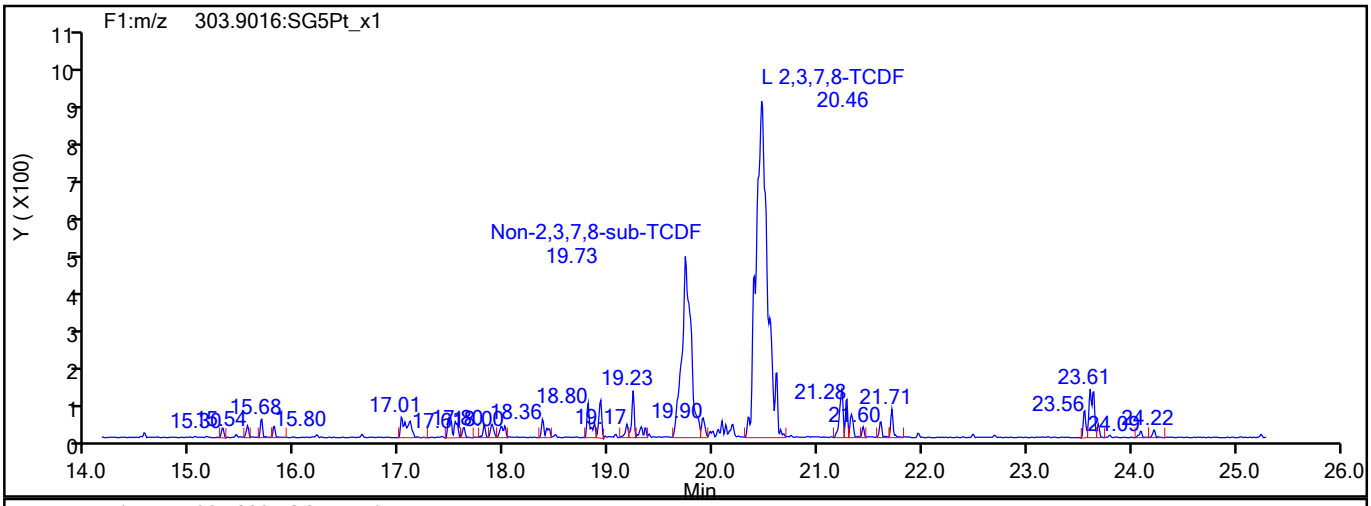

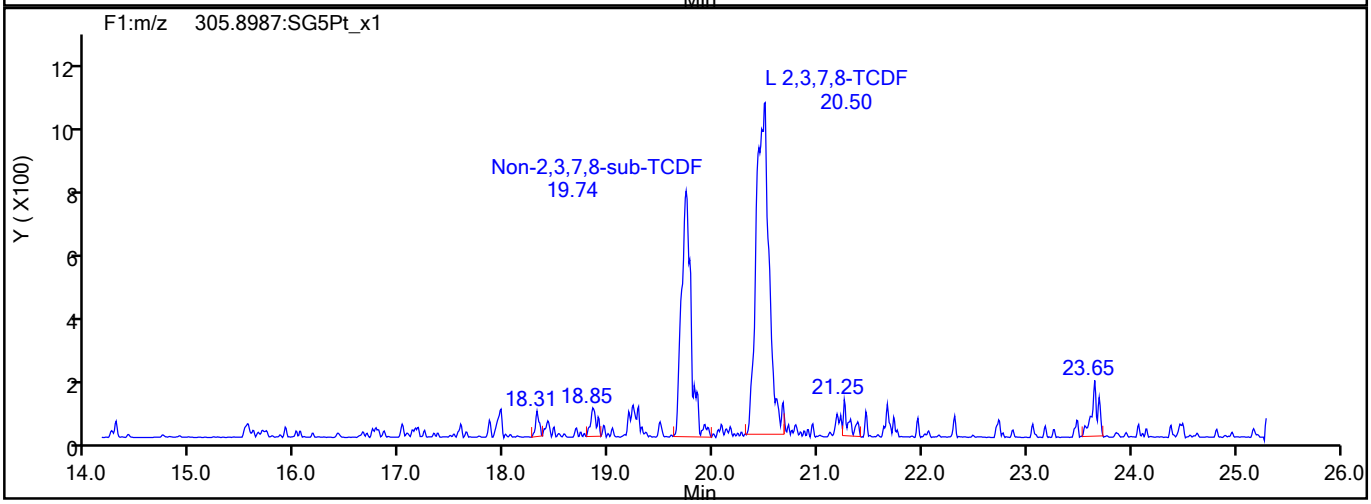

TCDF Interference Mass

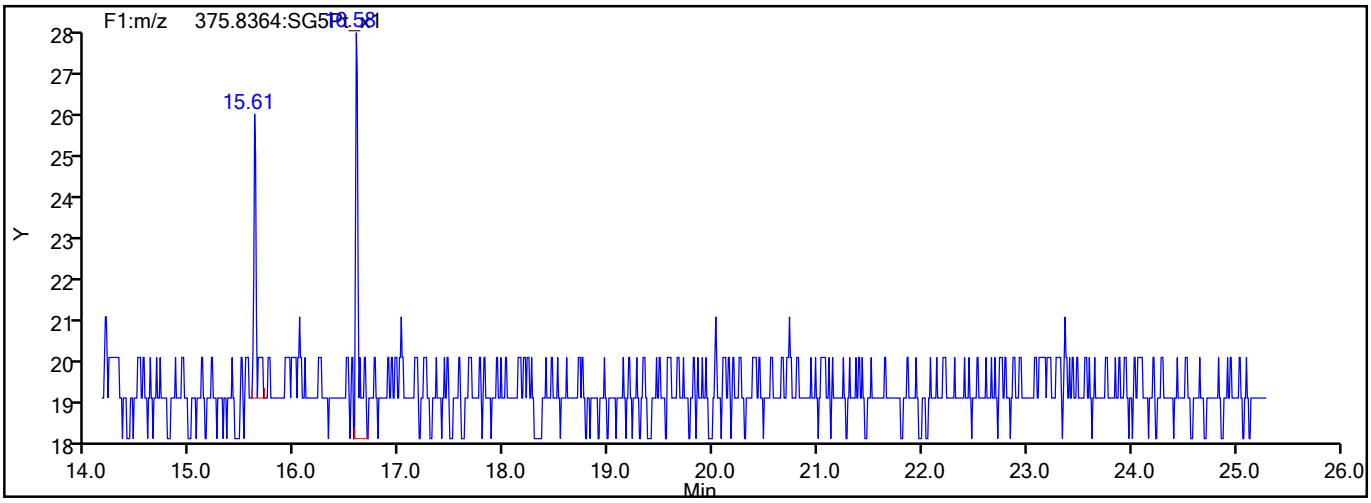

782529

Report Date: 20-Aug-2021 08:30:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

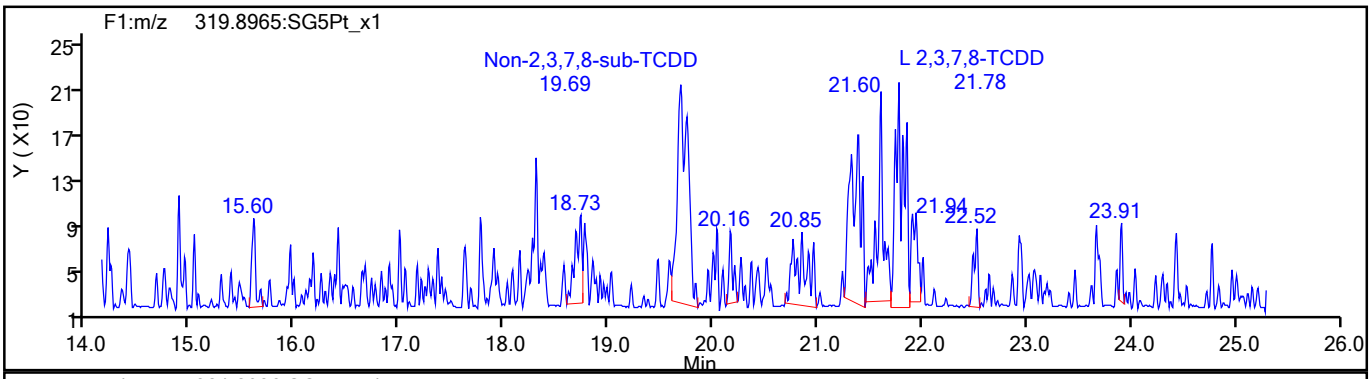

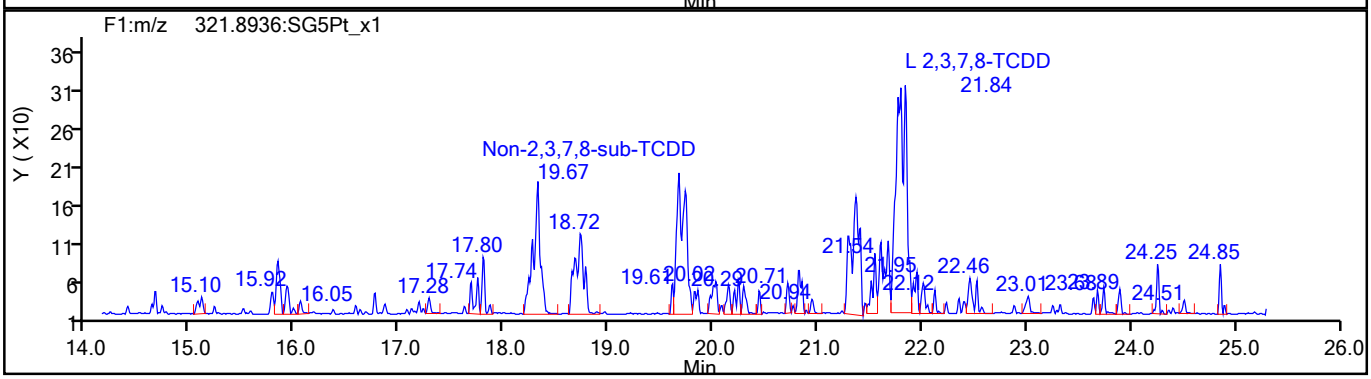

TCDD Standards

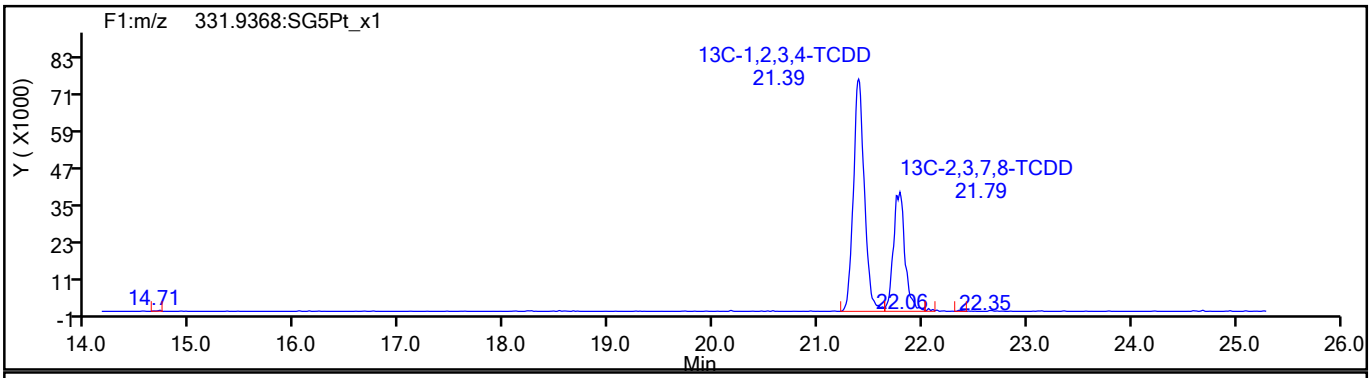

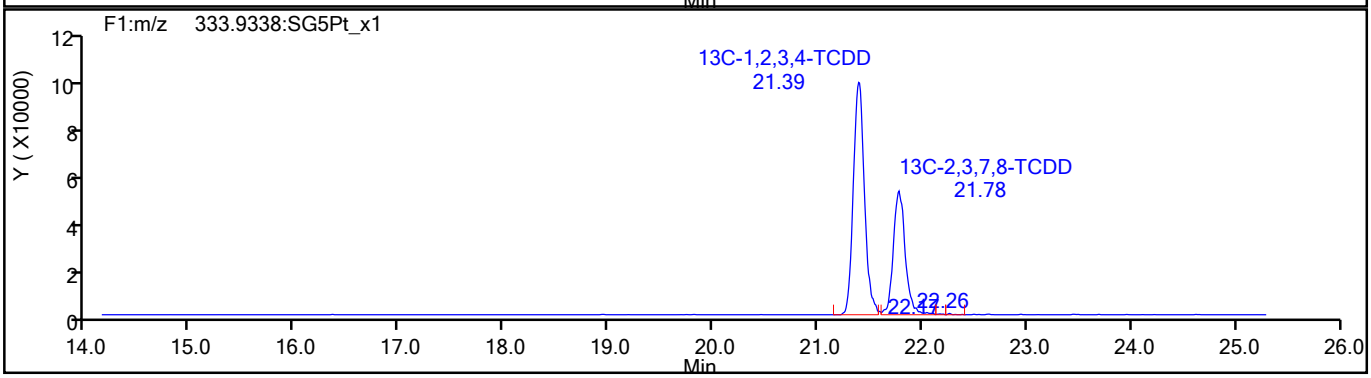

782530

Report Date: 20-Aug-2021 08:30:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

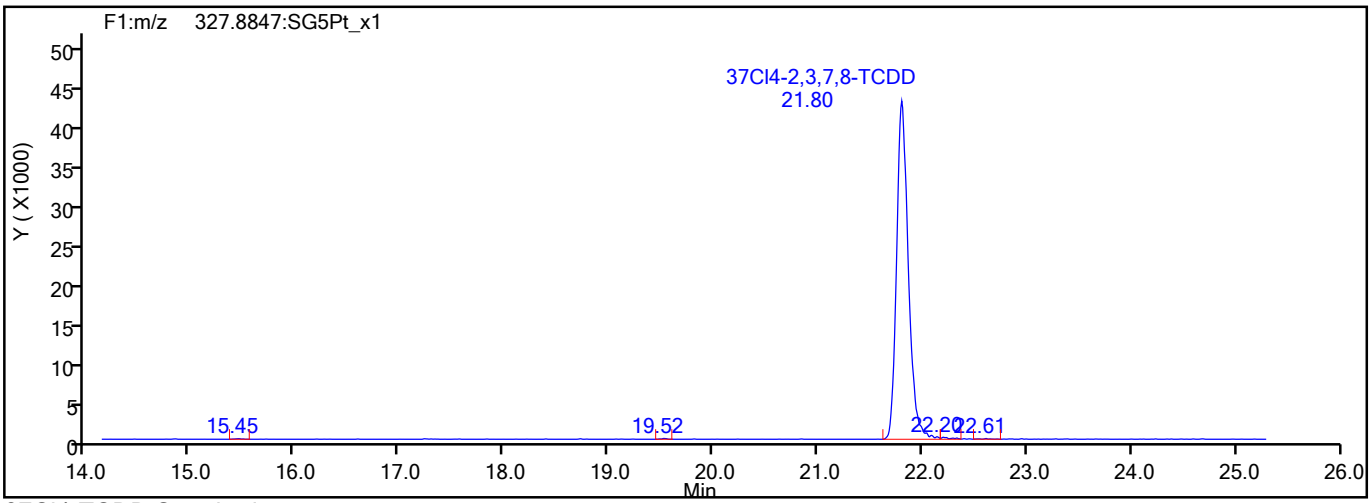

37Cl4-TCDD Standards

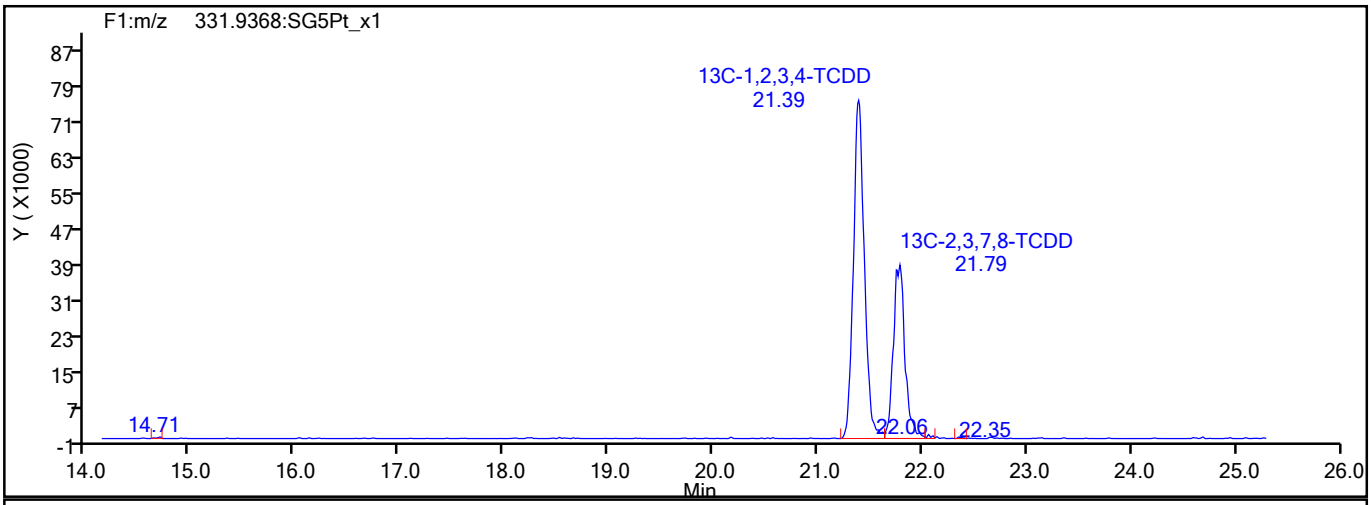

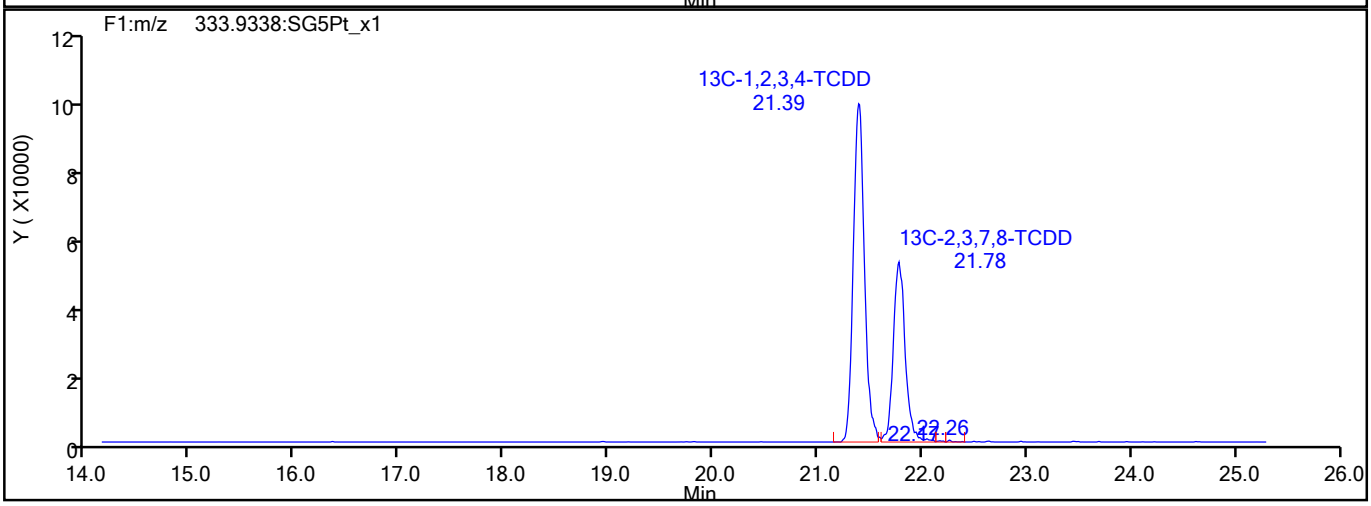

782531

Report Date: 20-Aug-2021 08:30:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

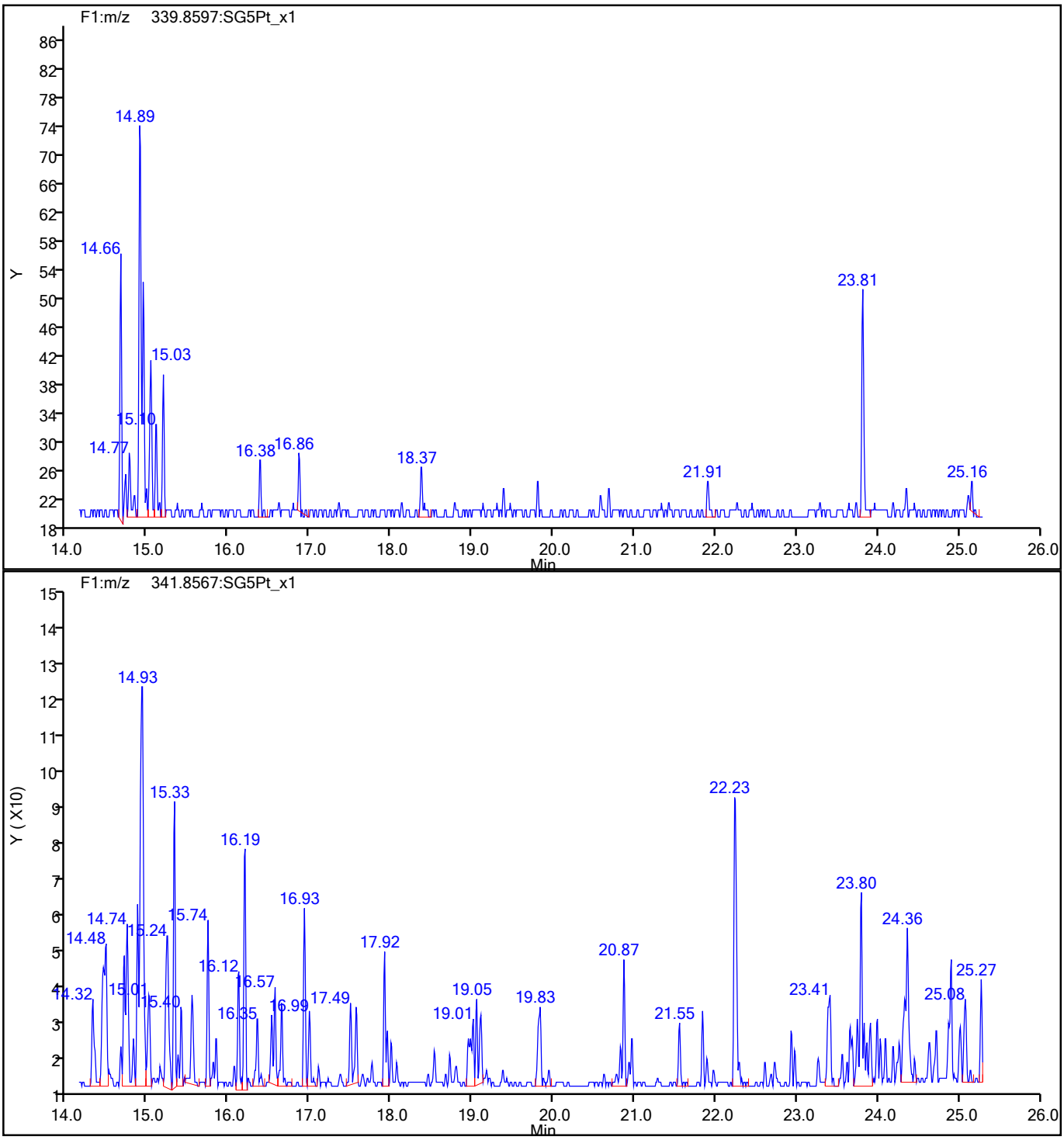

782532

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

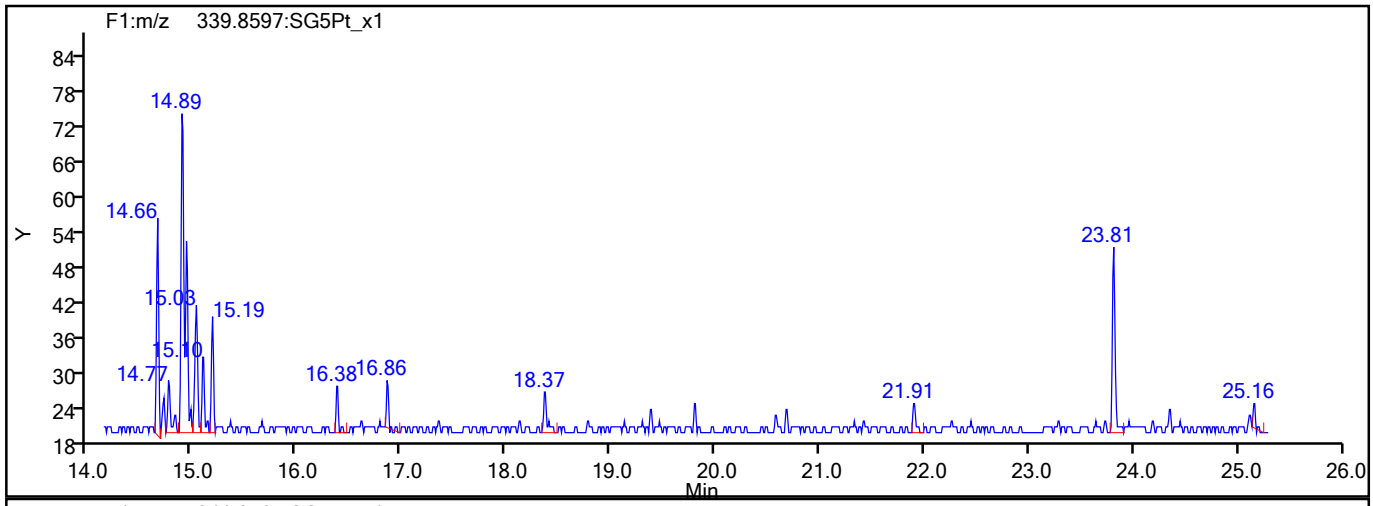

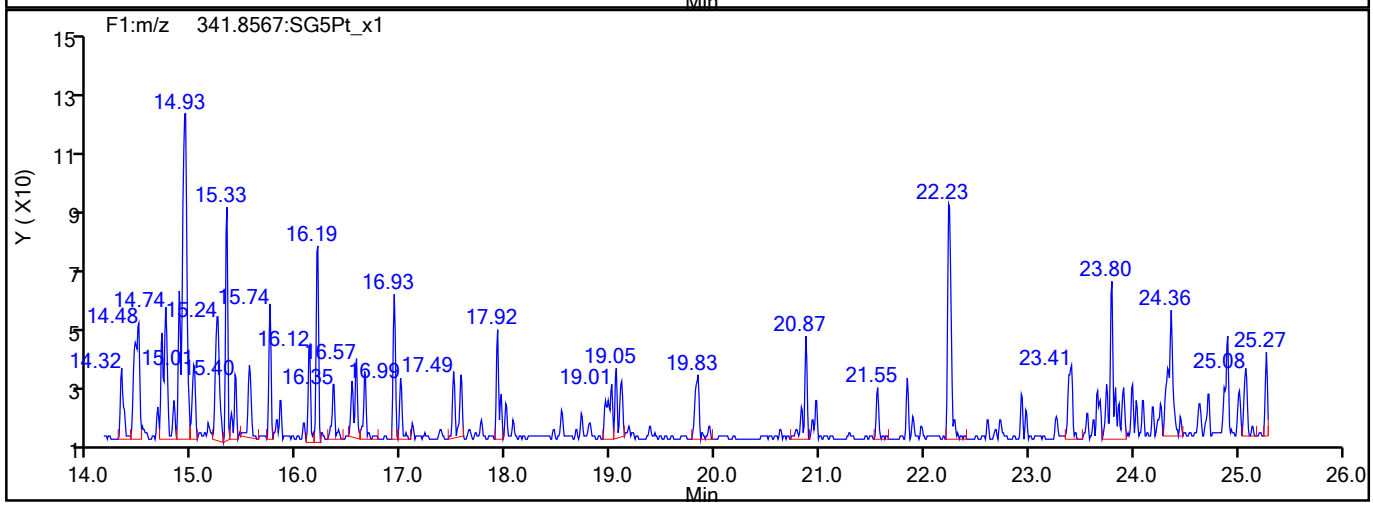

F1 PeCDFs Interference Mass

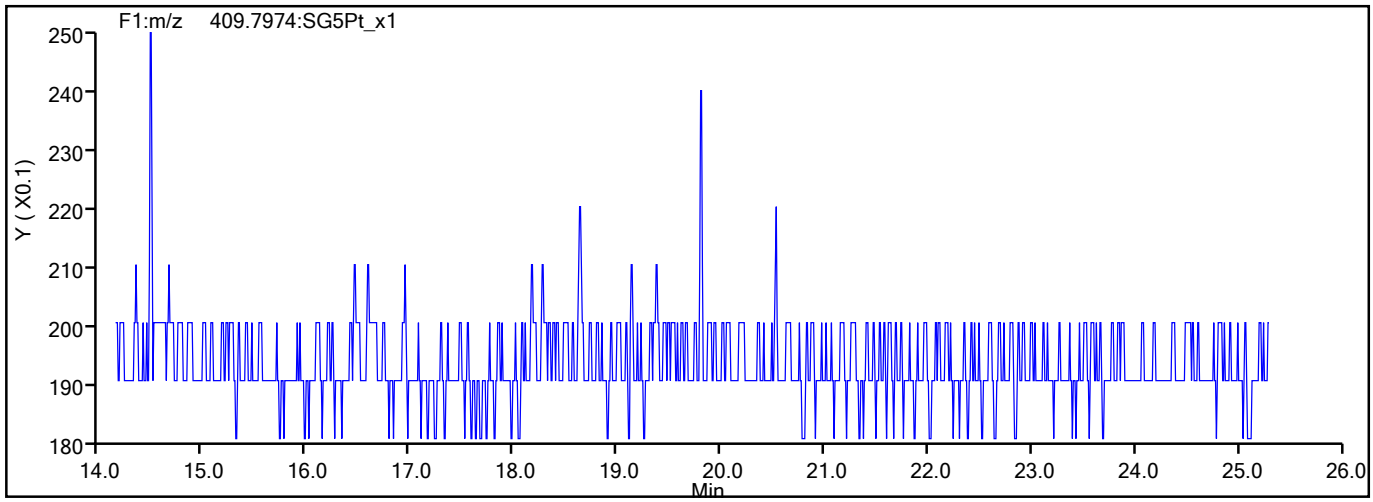

782533

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

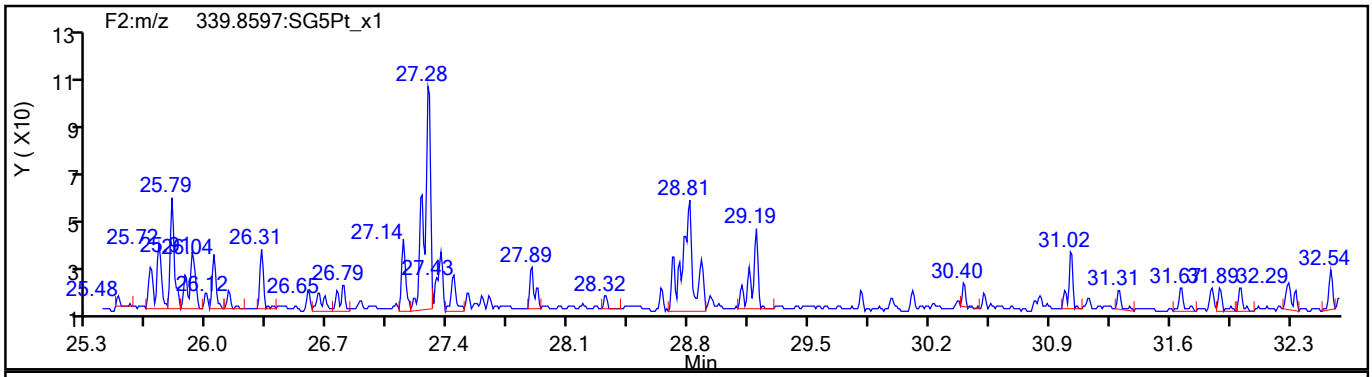

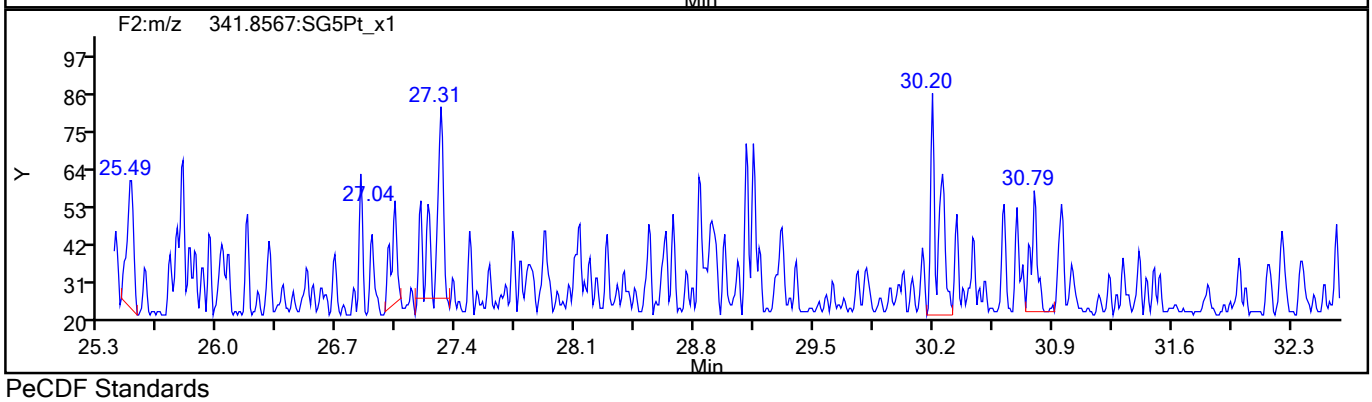

PeCDF Standards

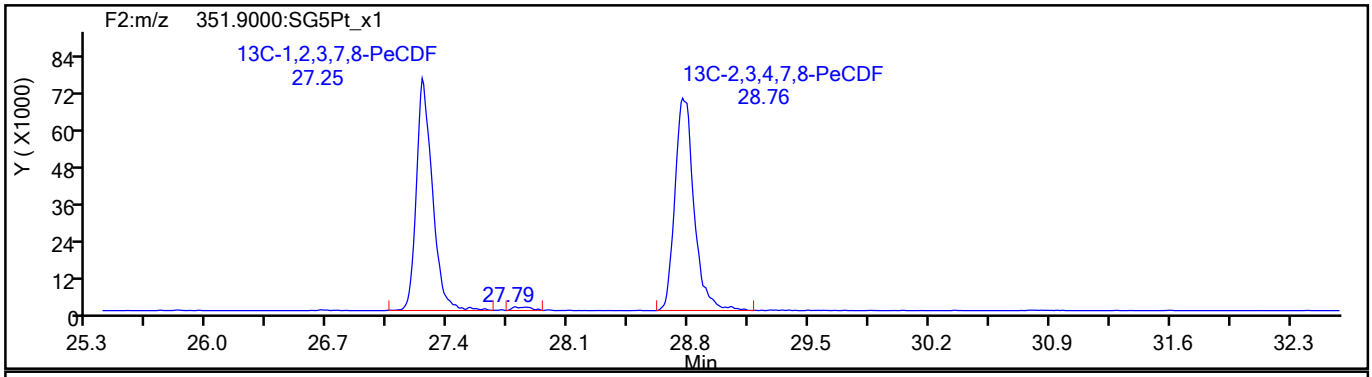

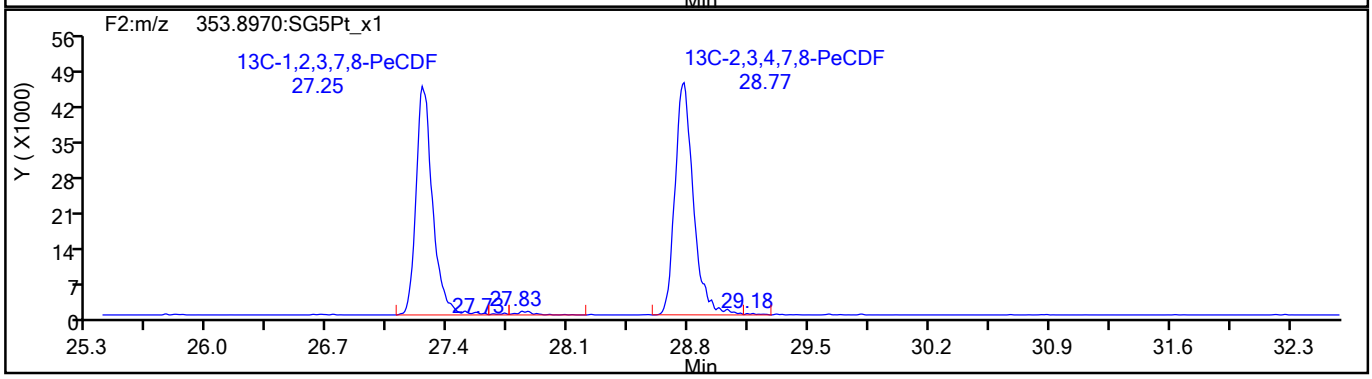

782534

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

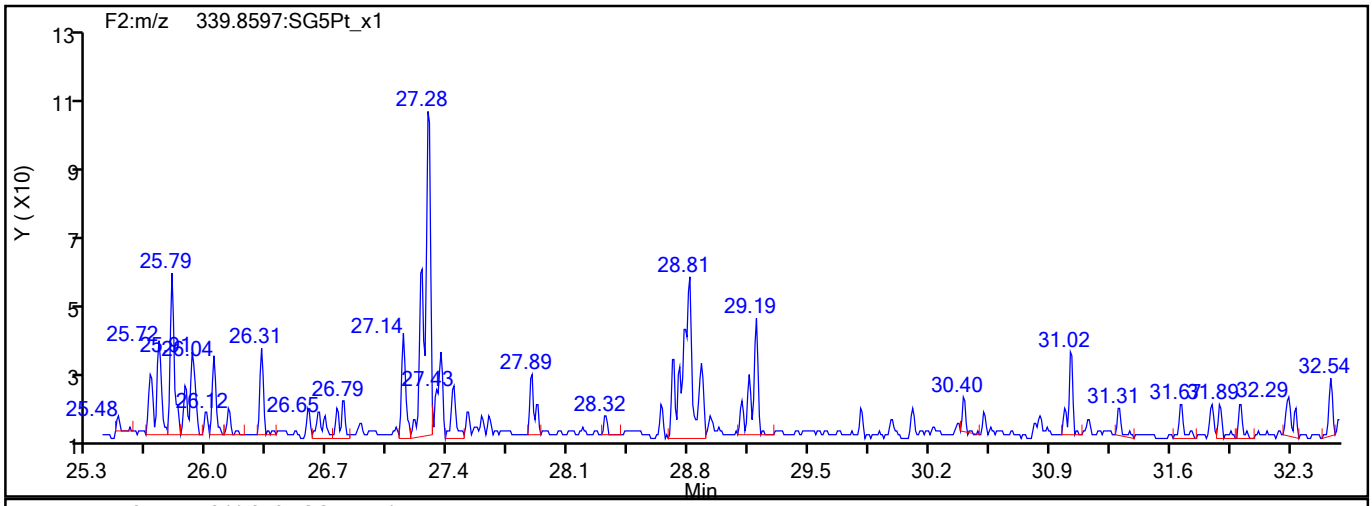

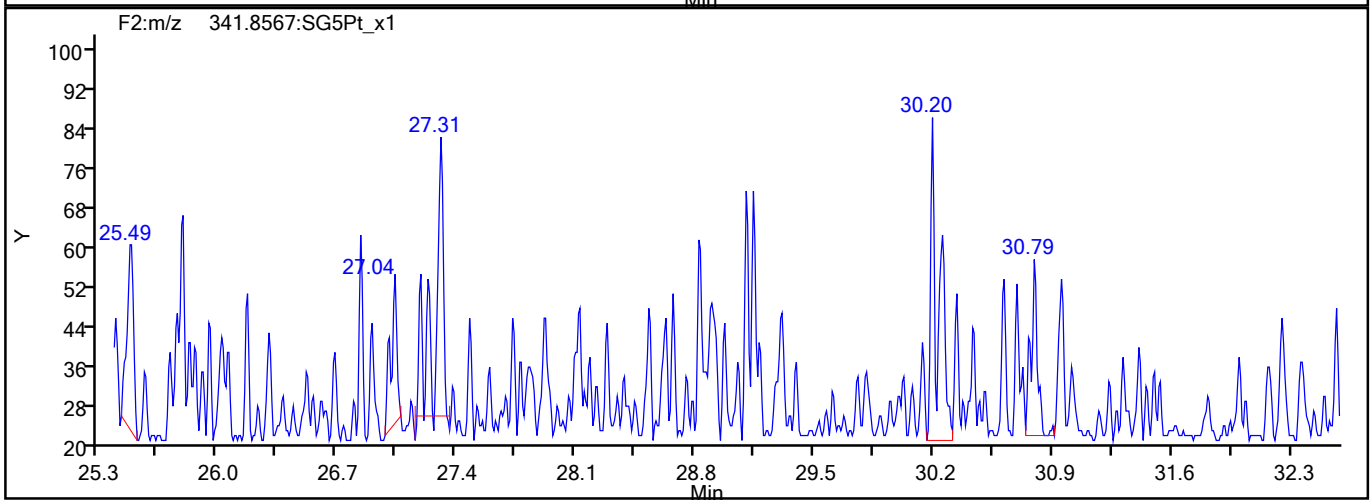

PeCDF Interference Mass

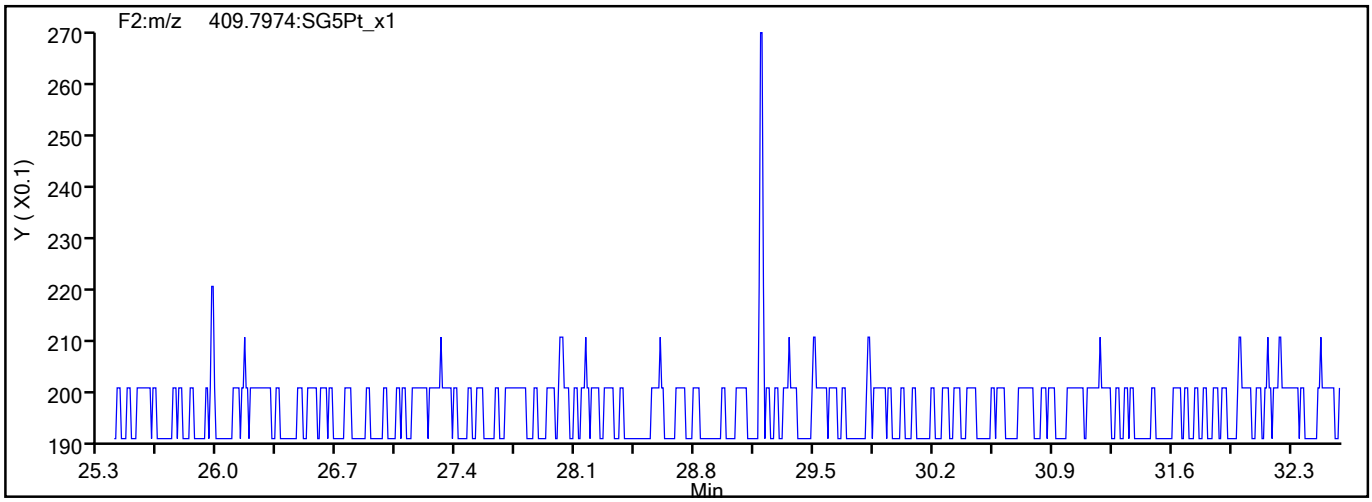

782535

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

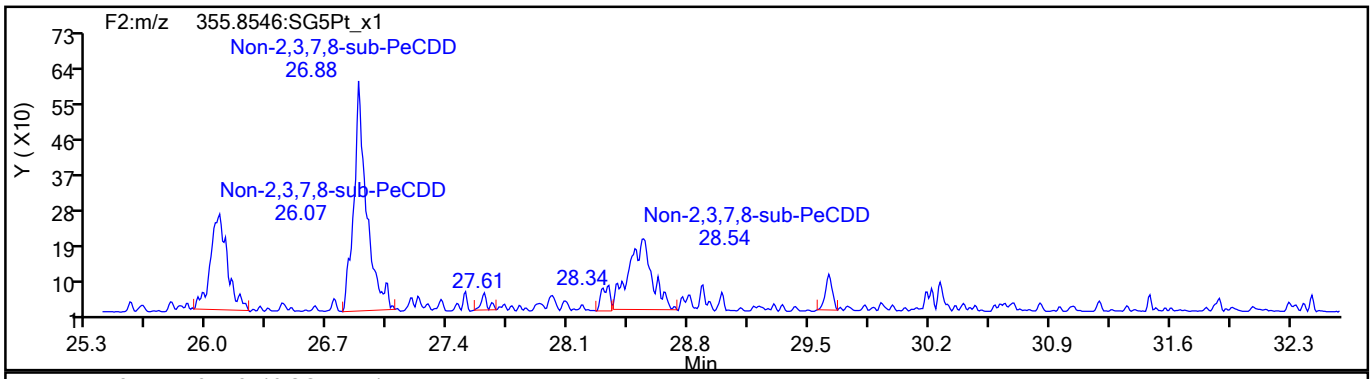

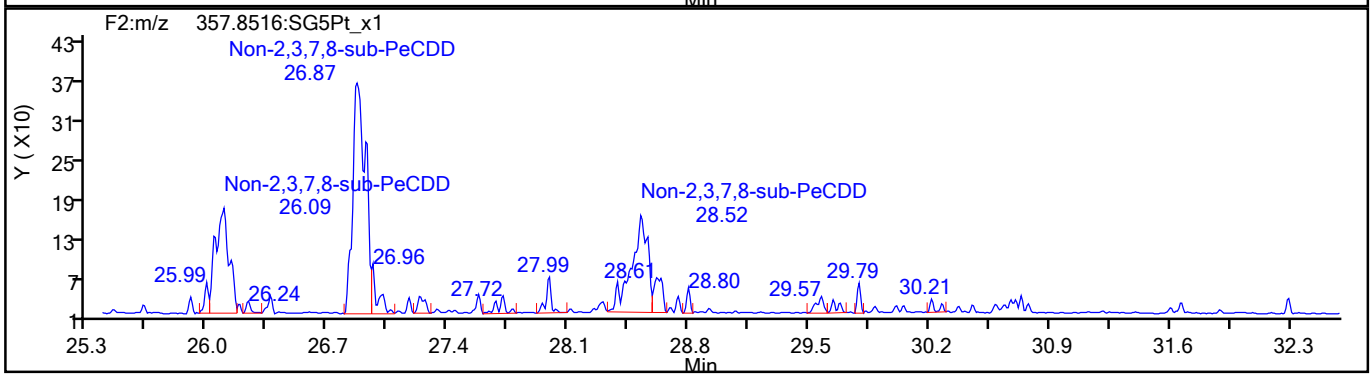

PeCDD Standards

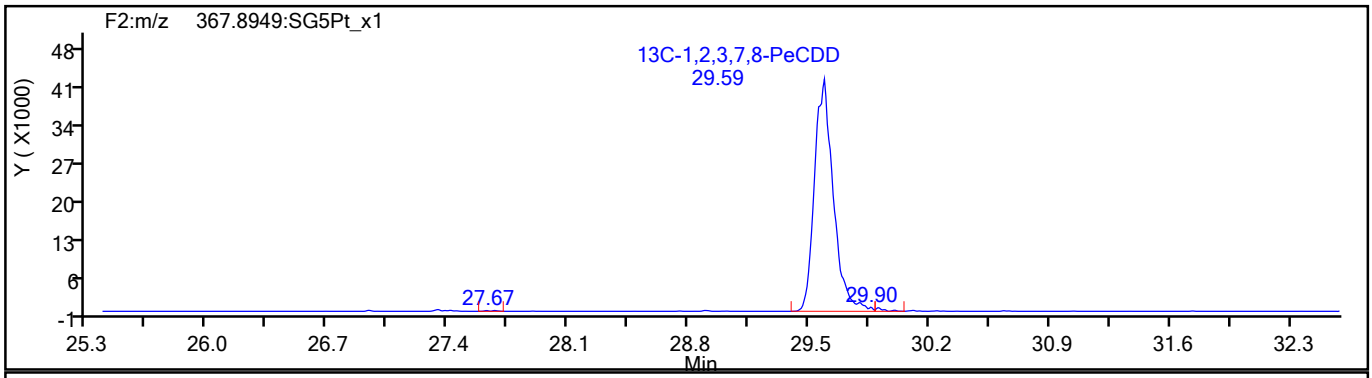

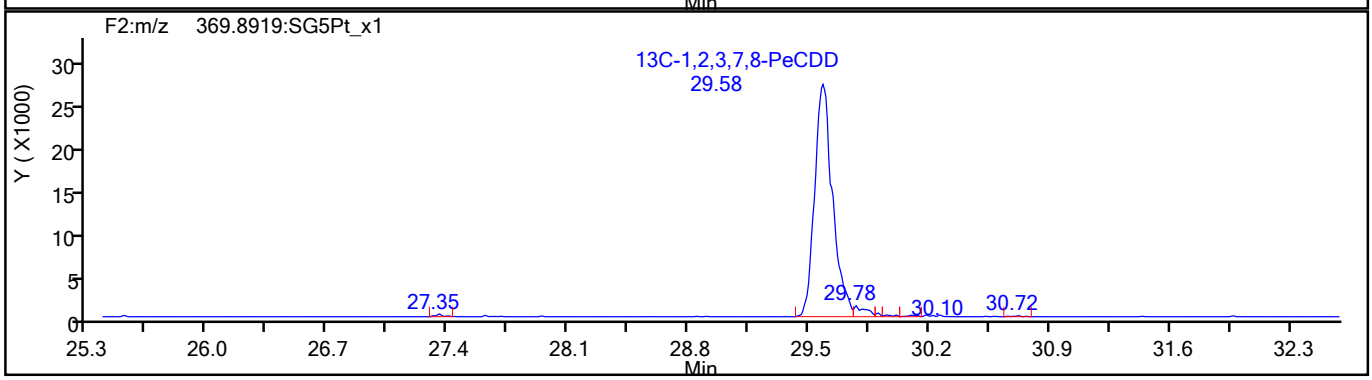

782536

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

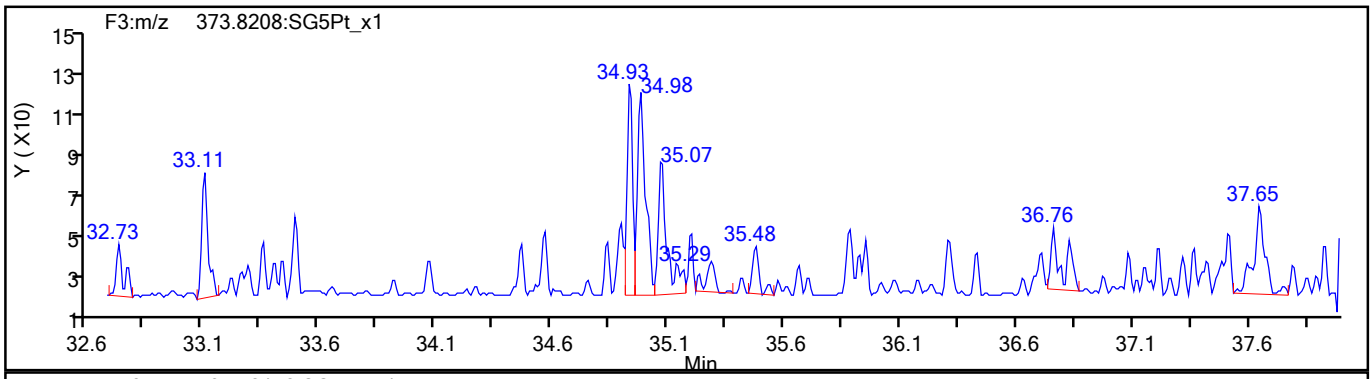

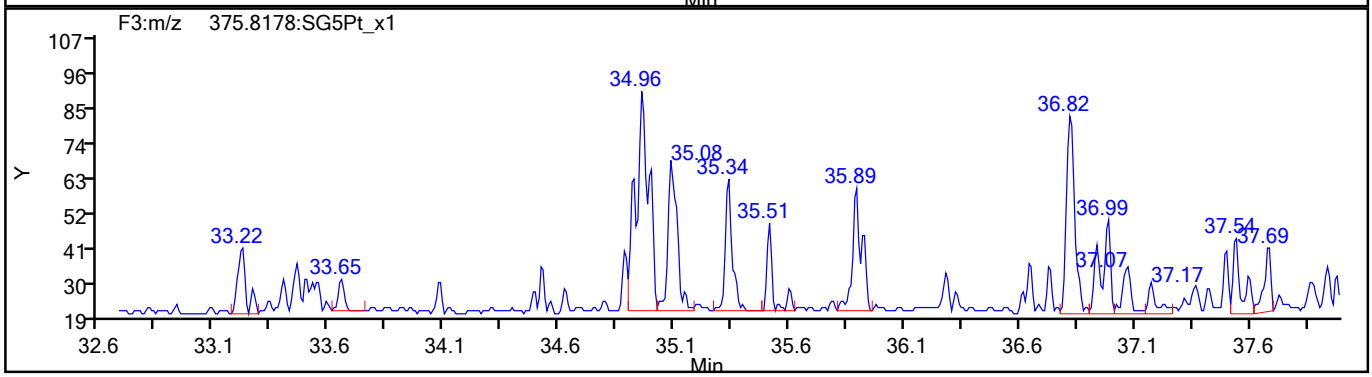

HxCDF Standards

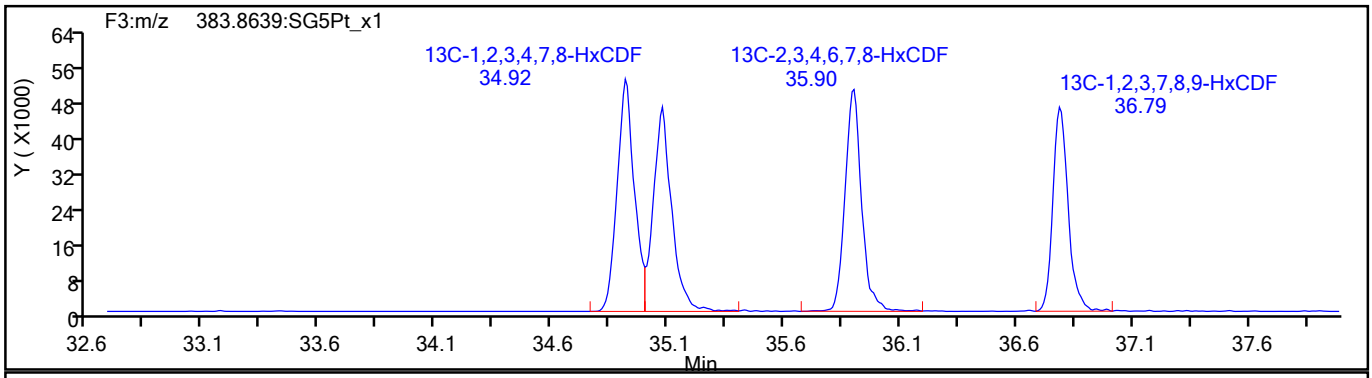

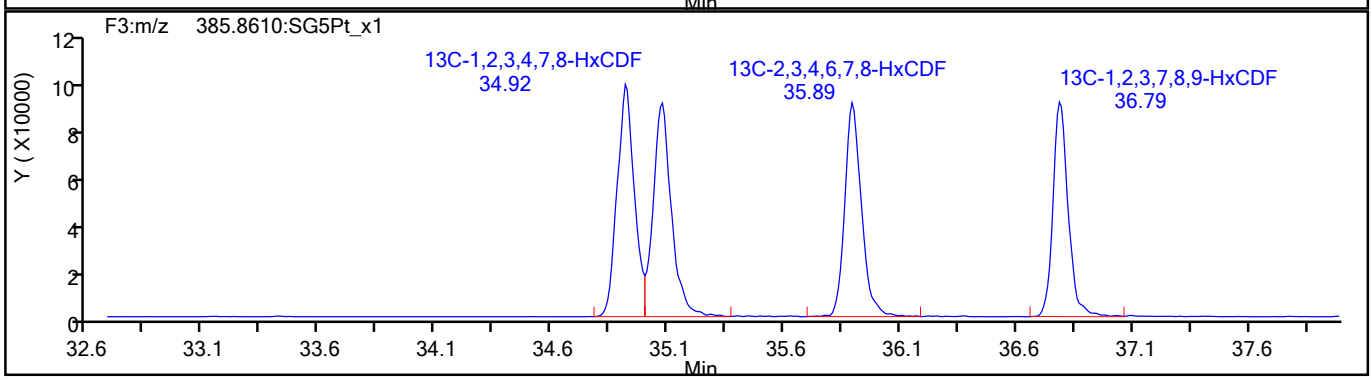

782537

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

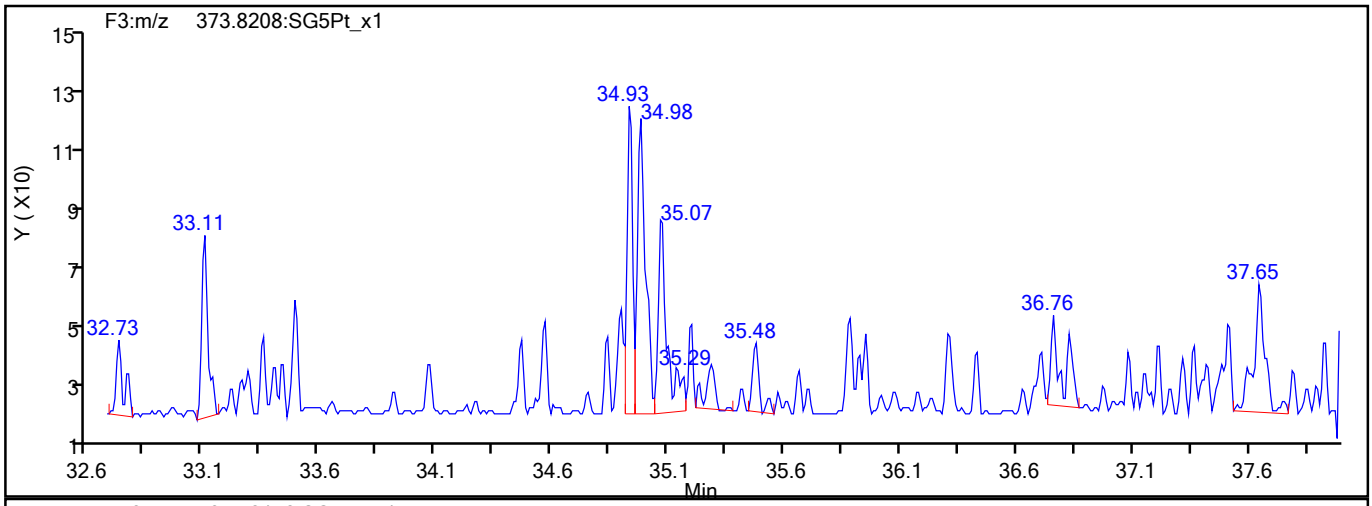

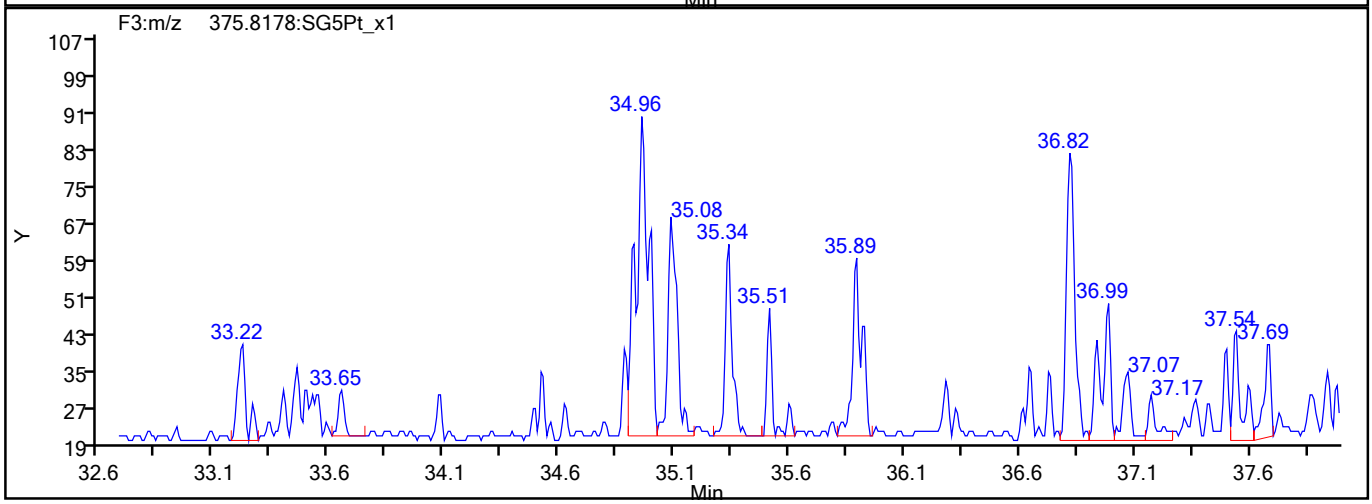

HxCDF Interference Mass

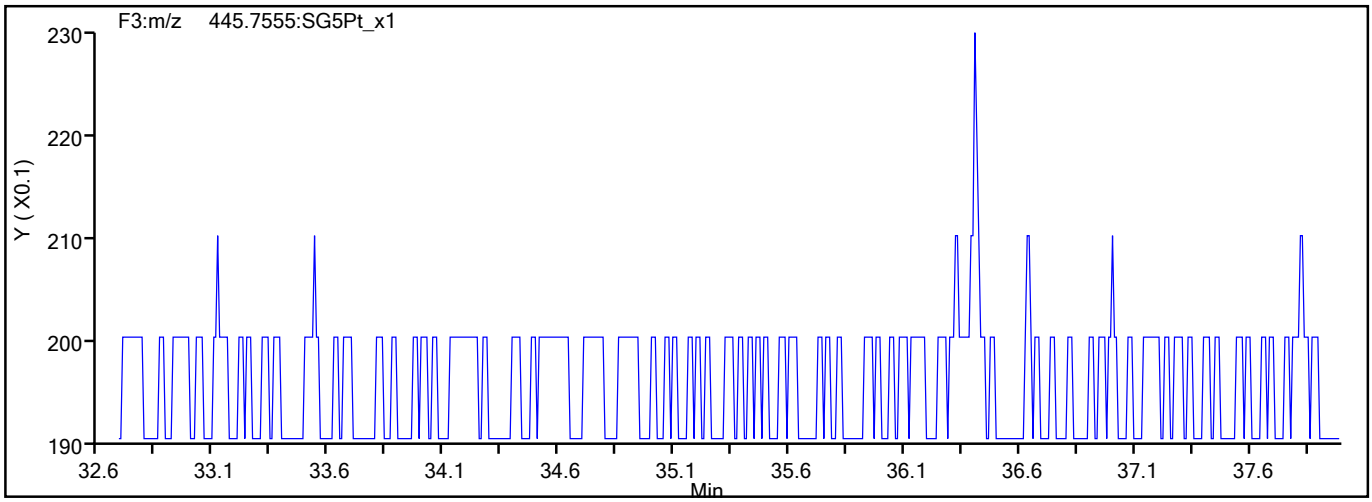

782538

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

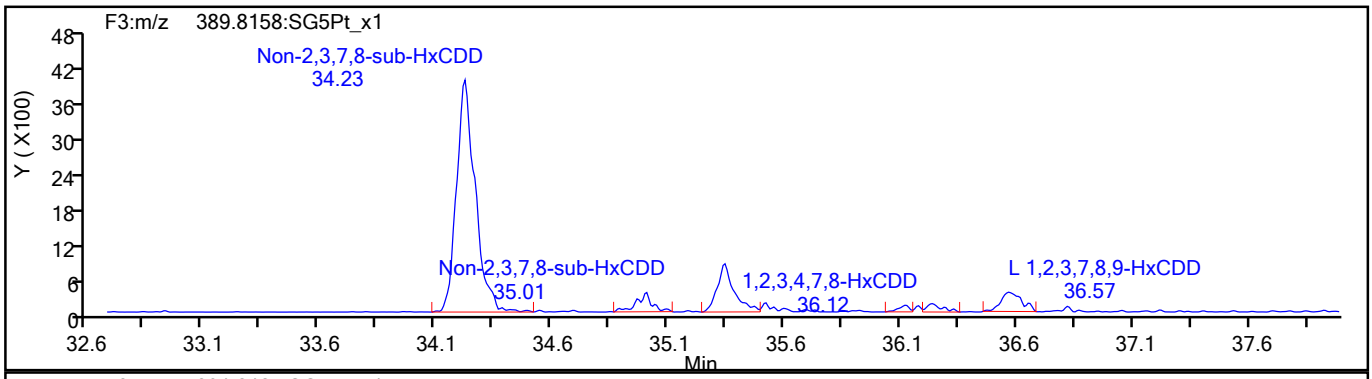

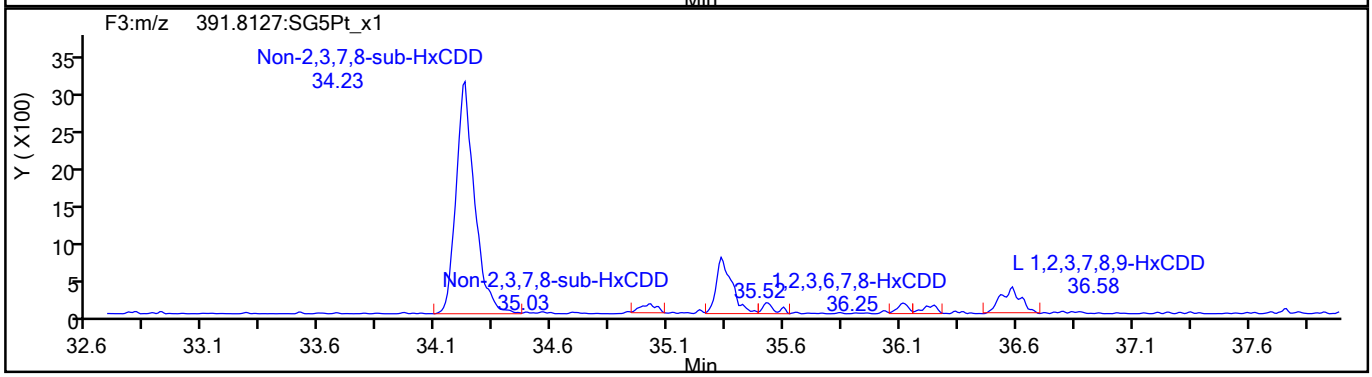

HxCDD Standards

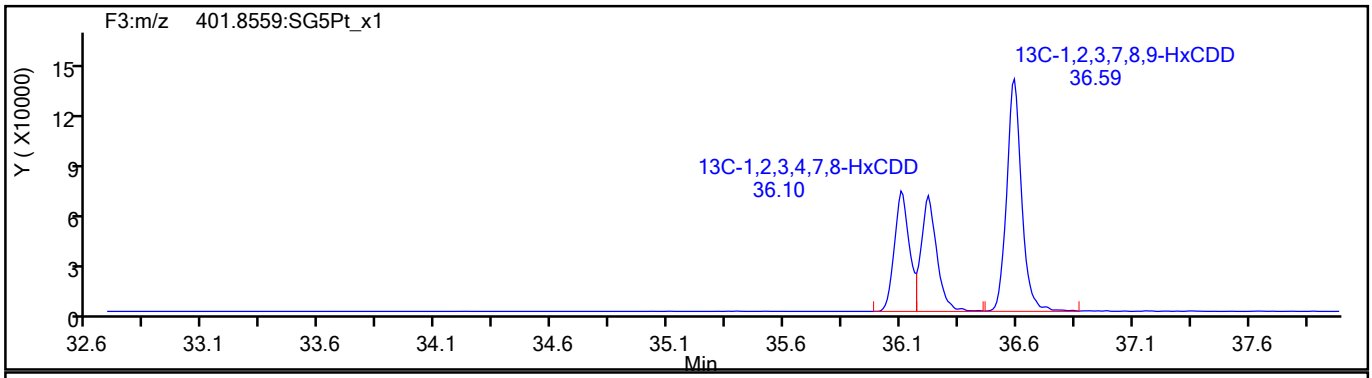

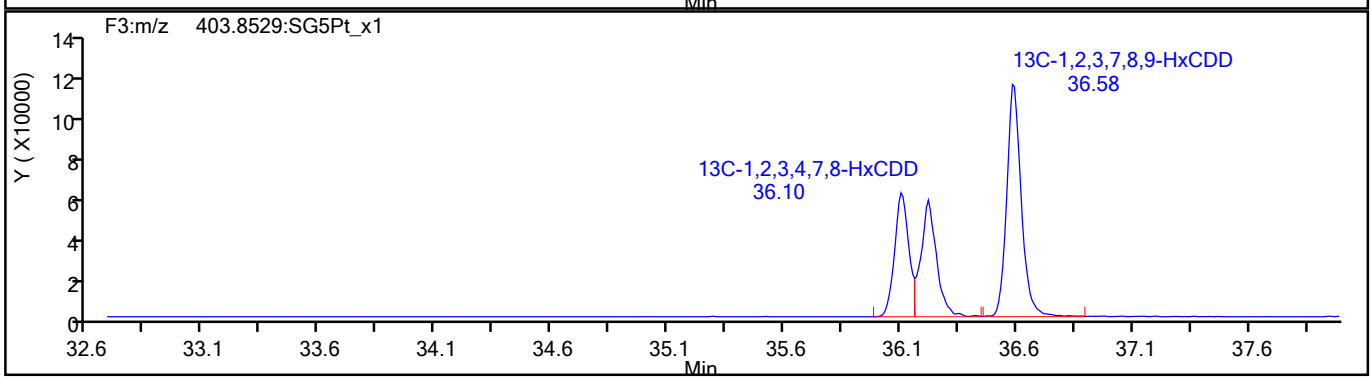

782539

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

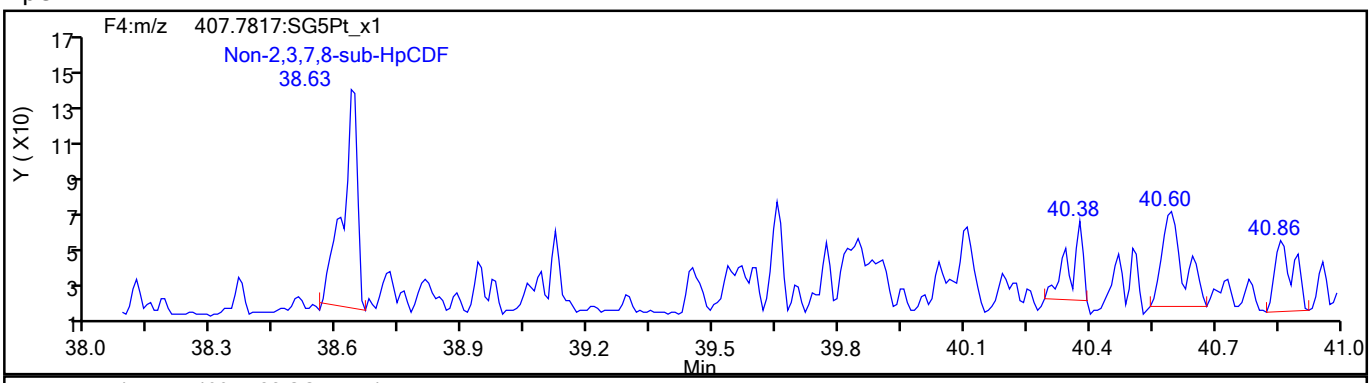

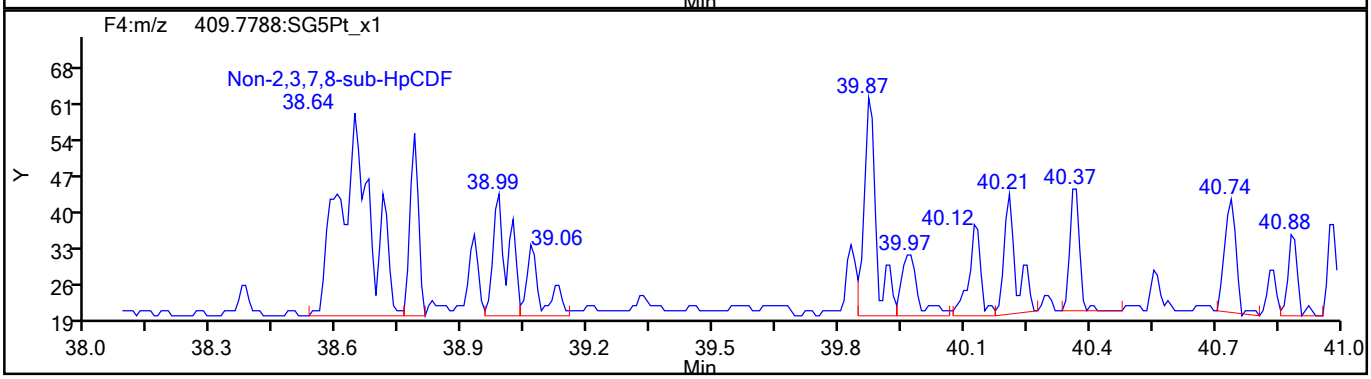

HpCDF Standards

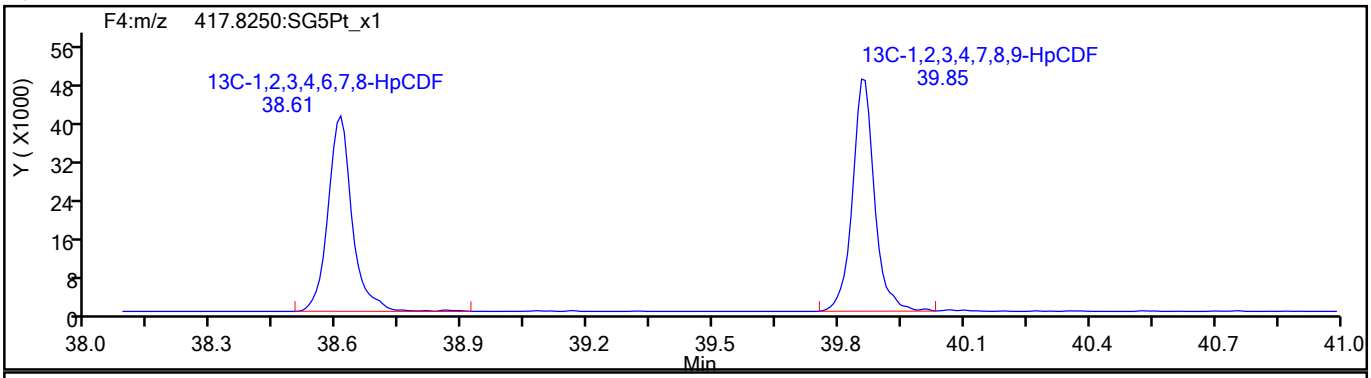

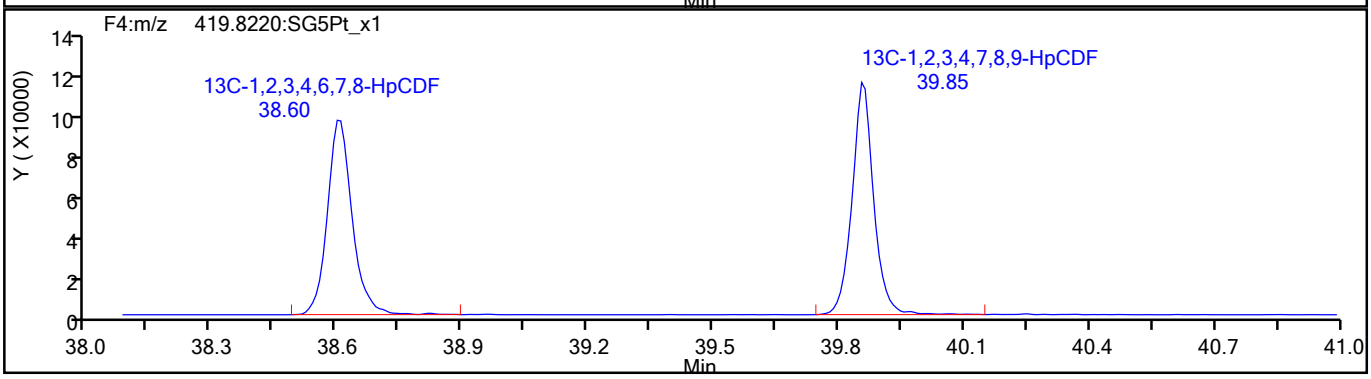

782540

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

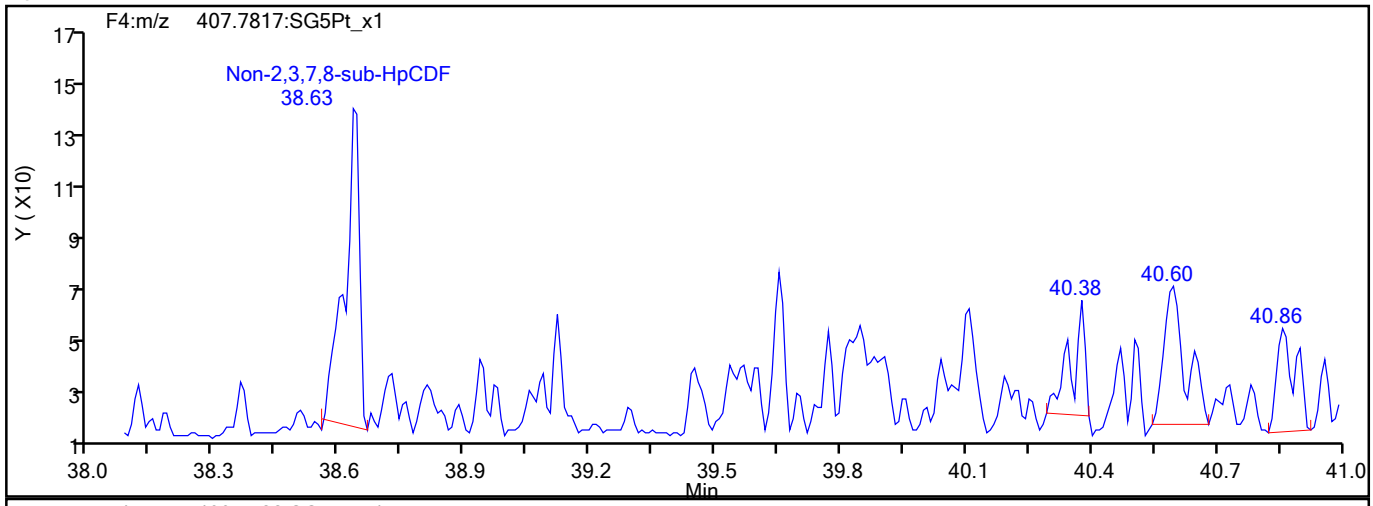

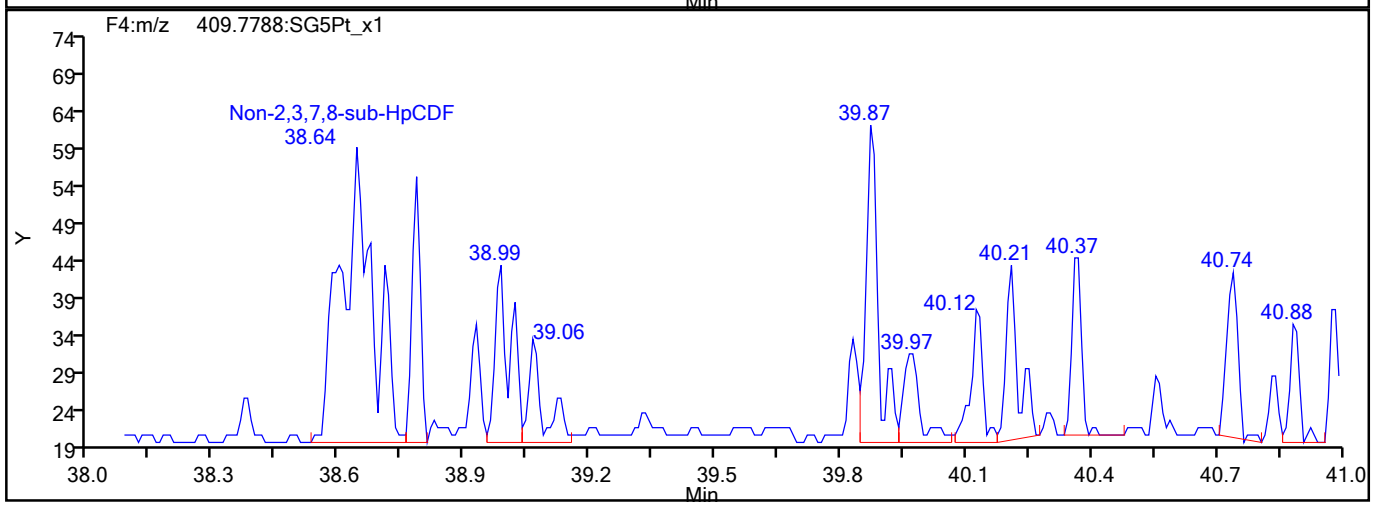

HpCDF Interference Mass

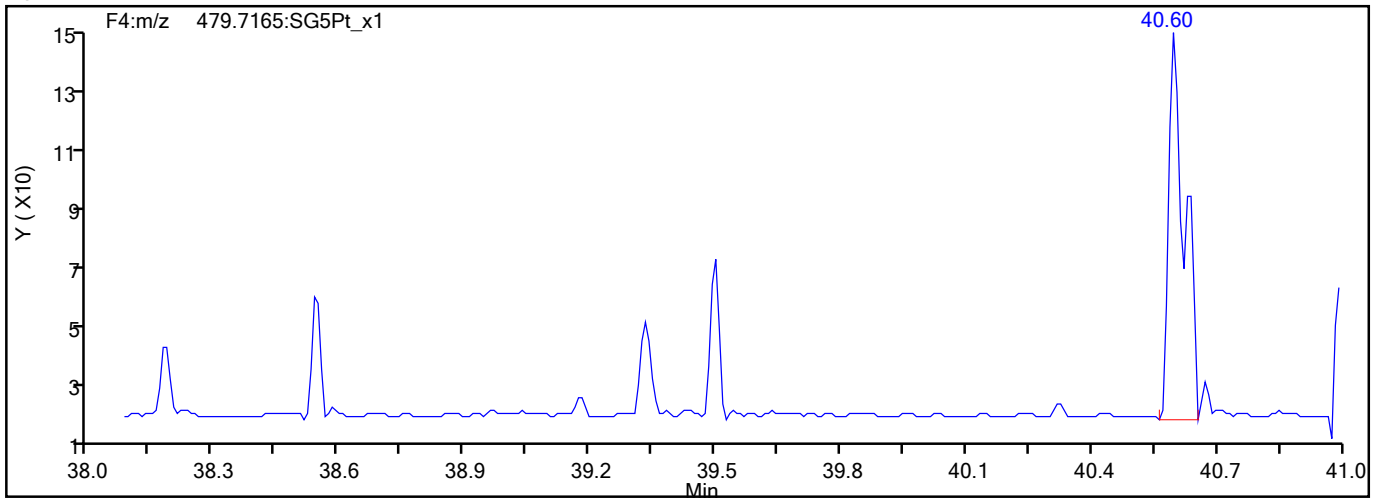

782541

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

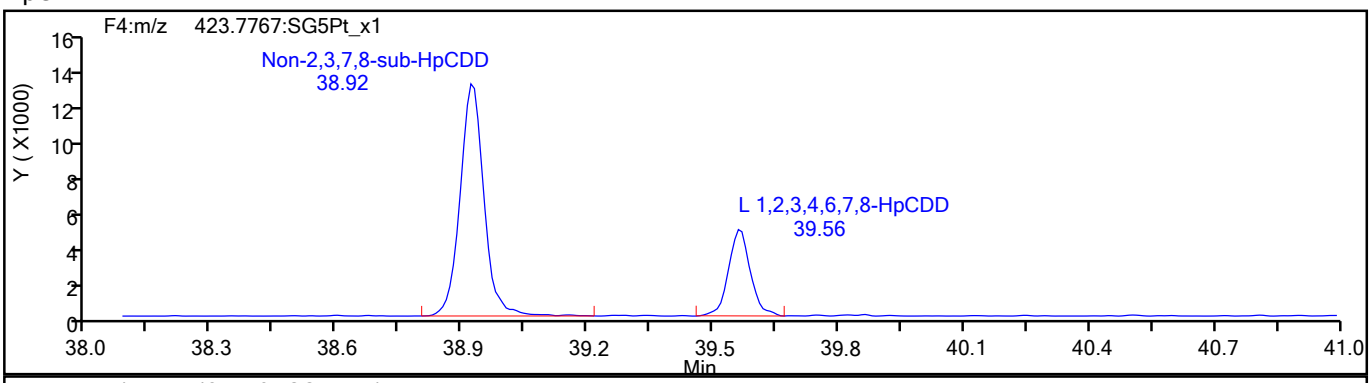

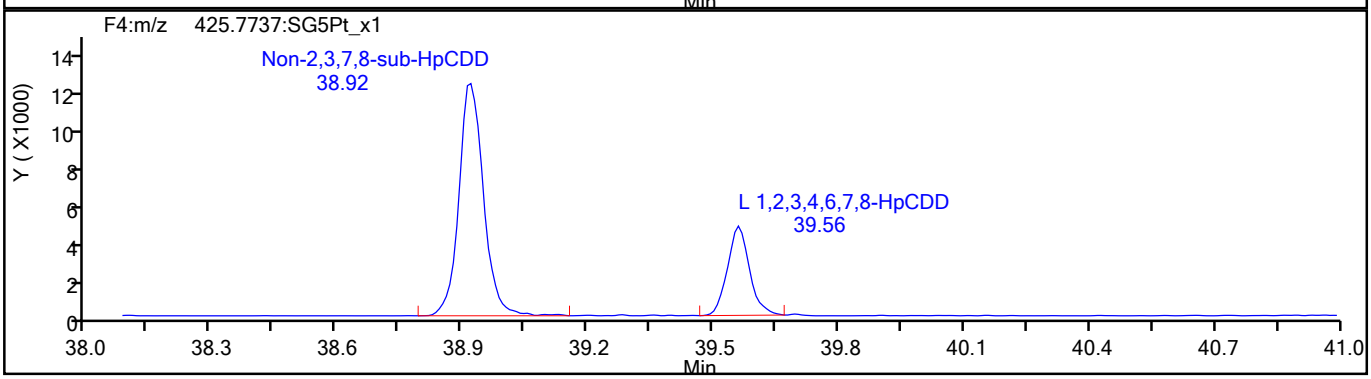

HpCDD Standards

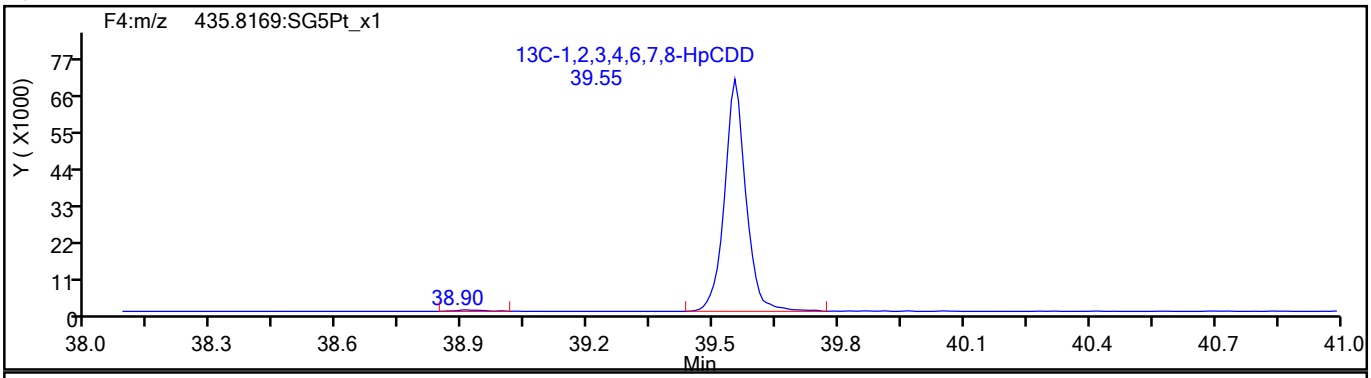

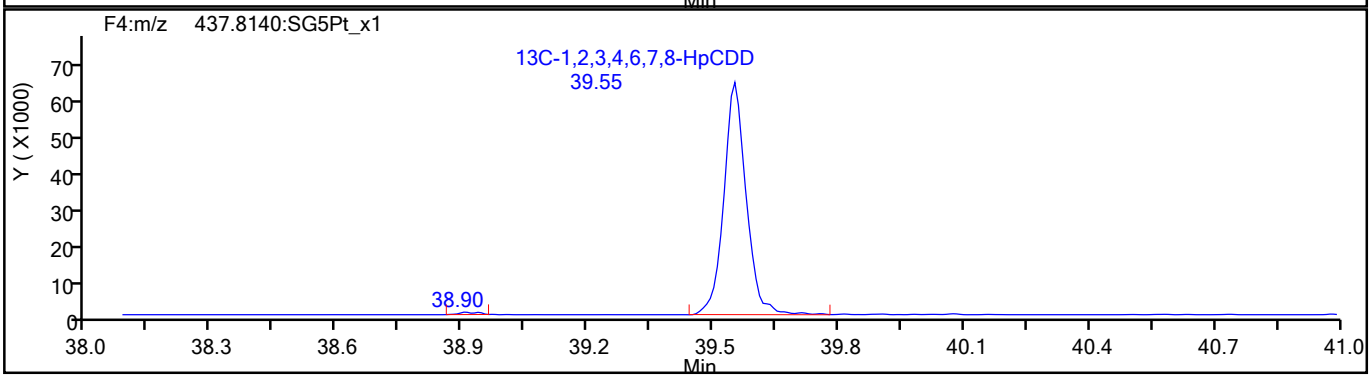

782542

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

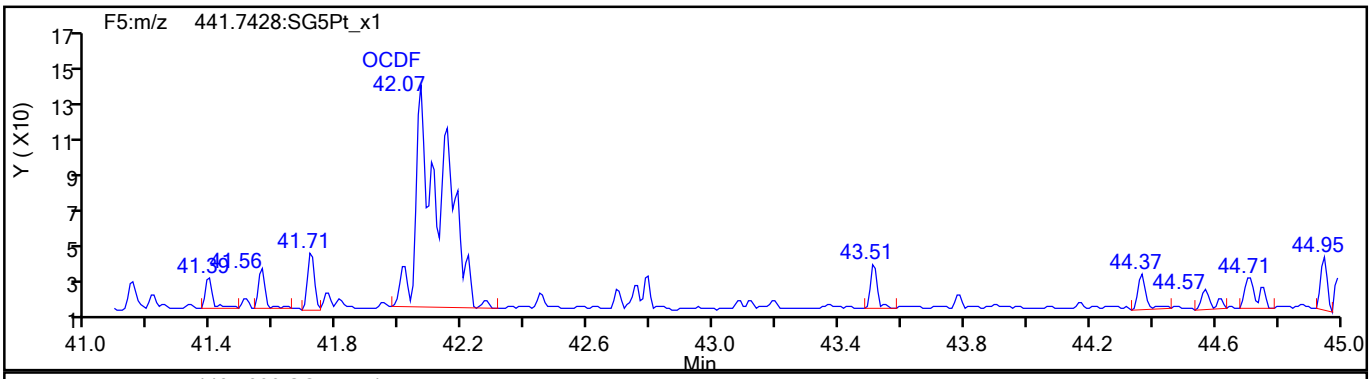

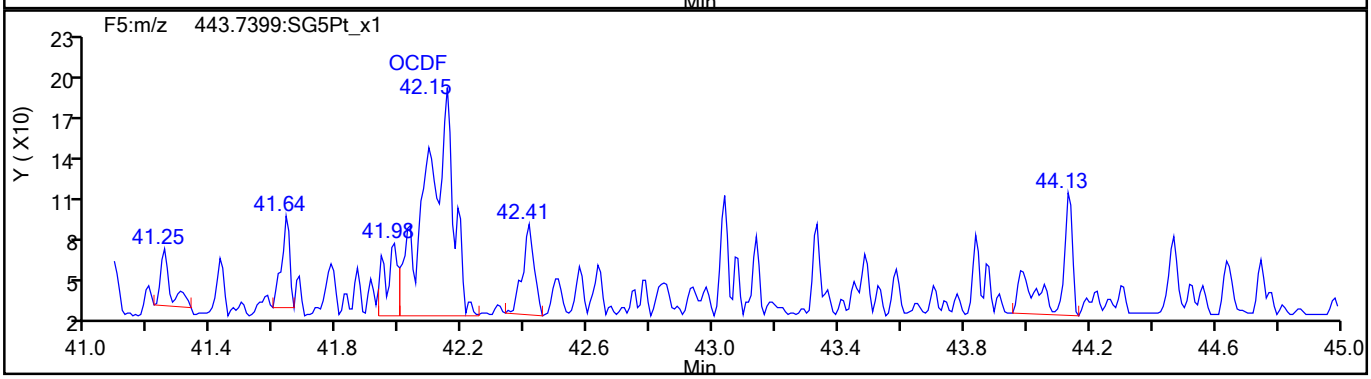

OCDF Standards

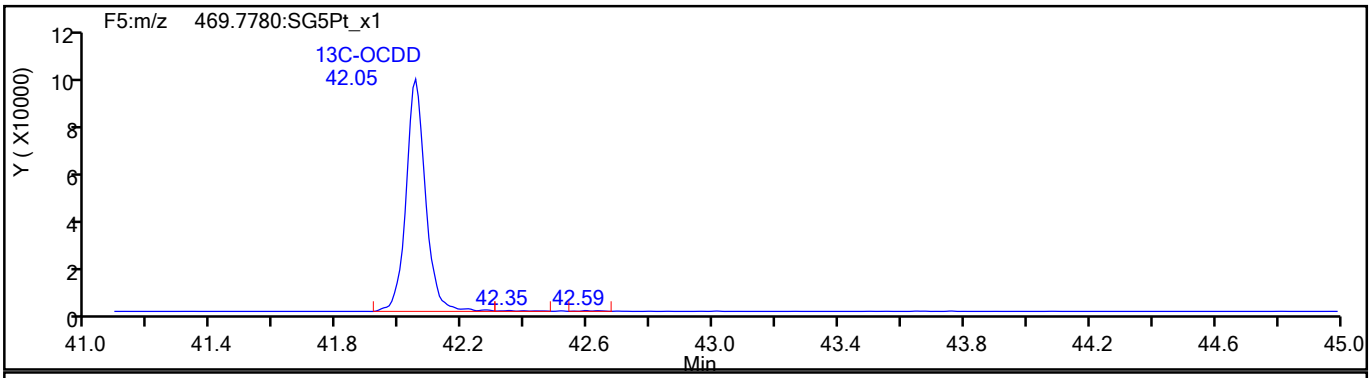

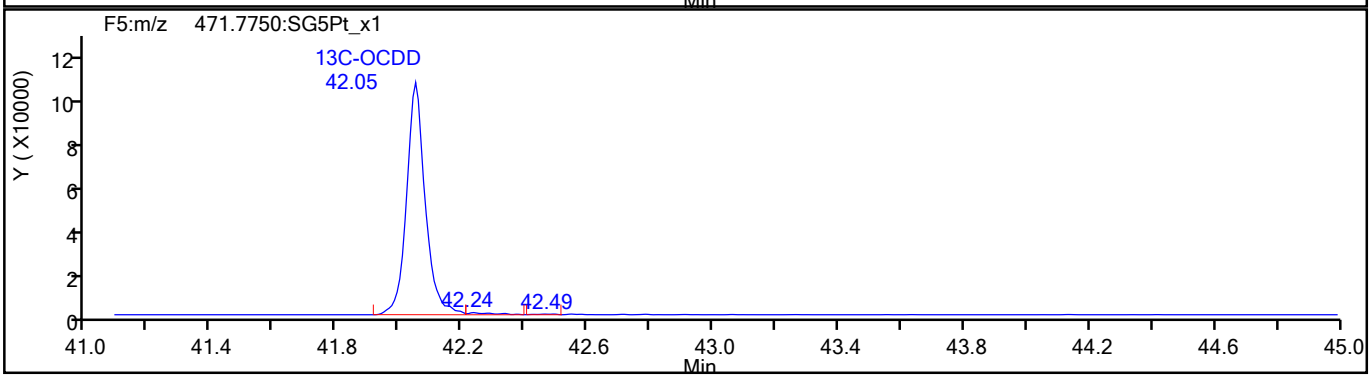

782543

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

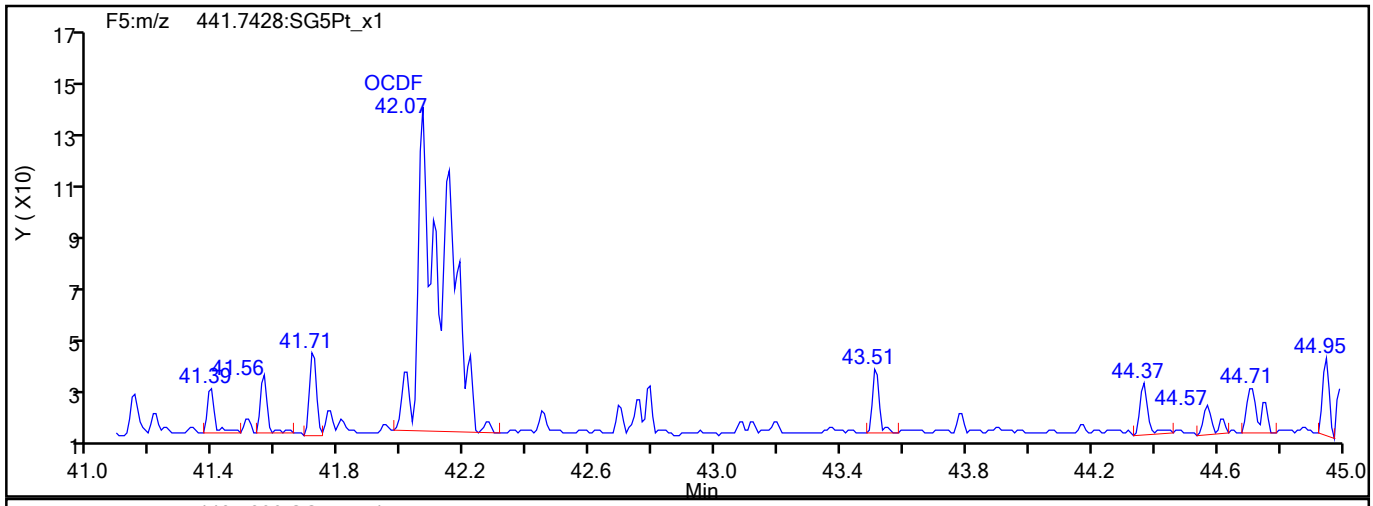

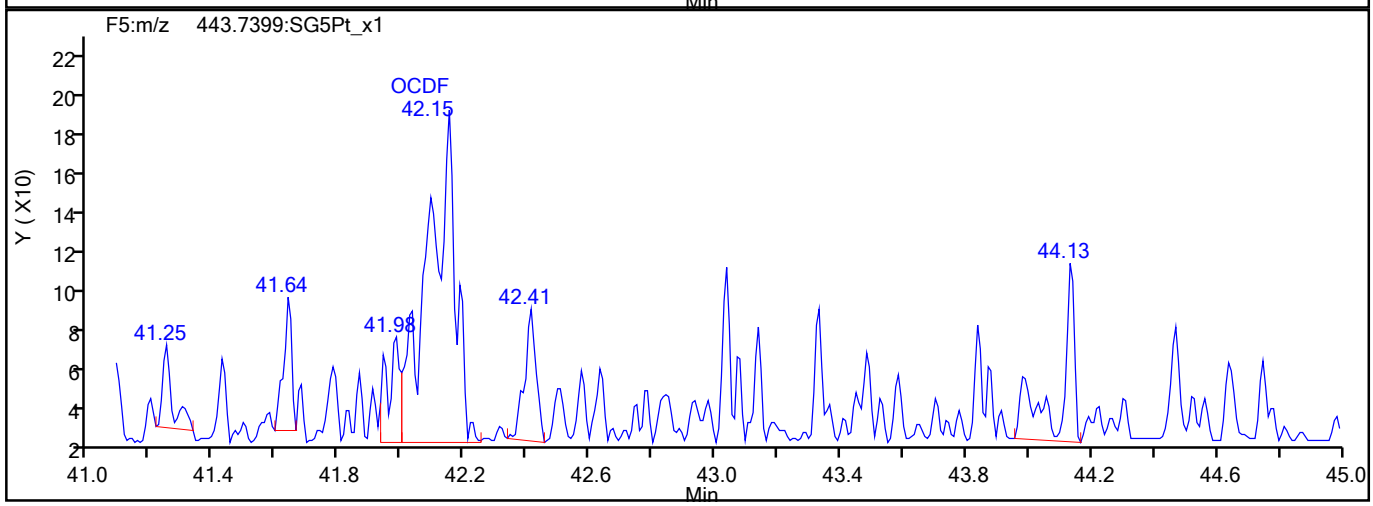

OCDF Interference Mass

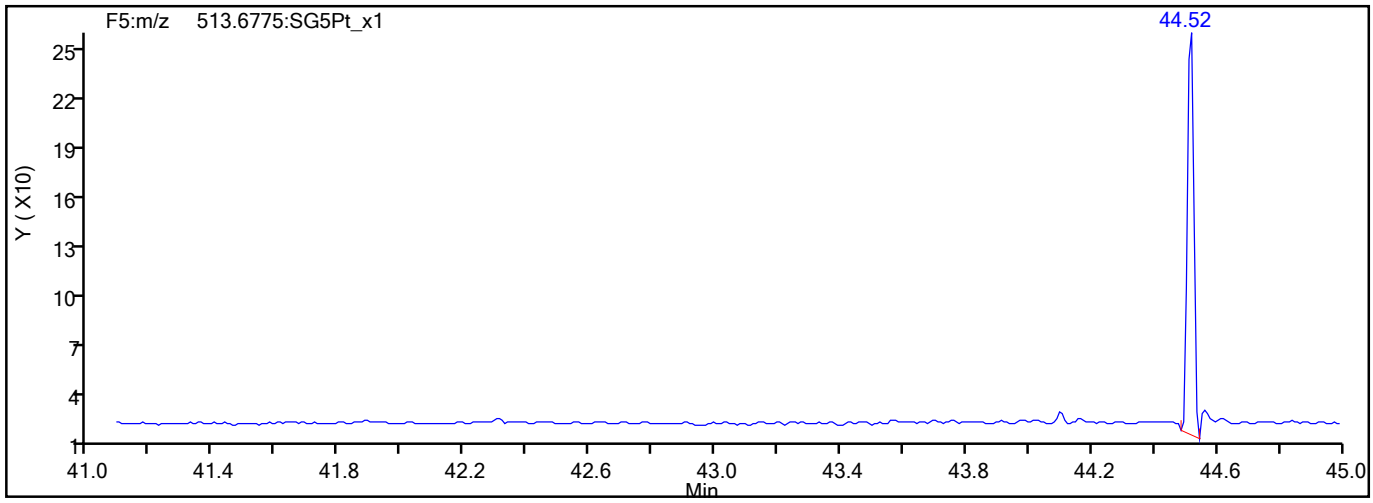

782544

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

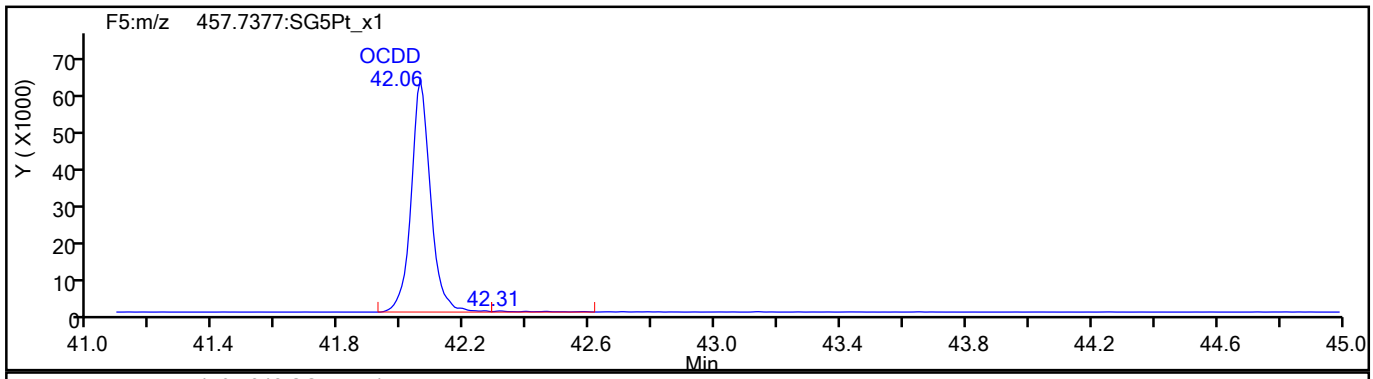

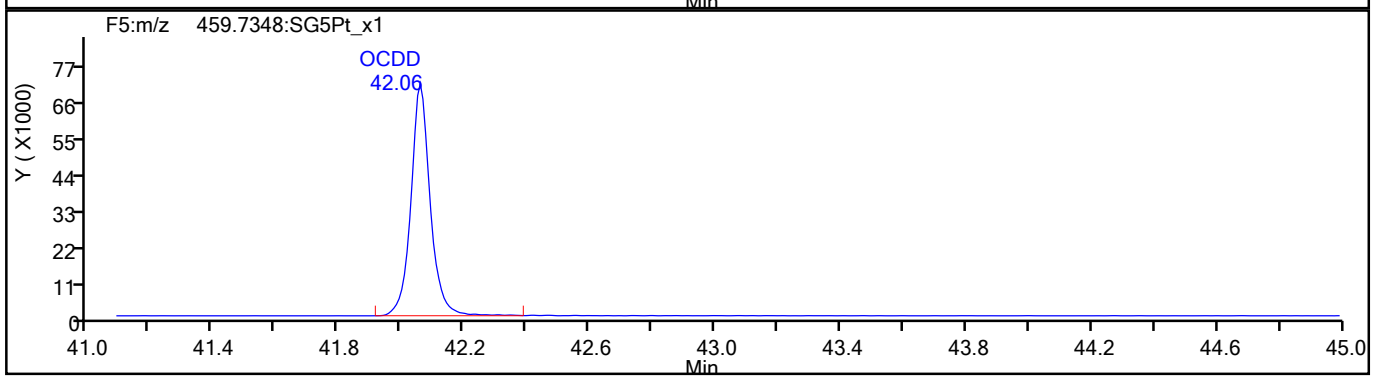

OCDD Standards

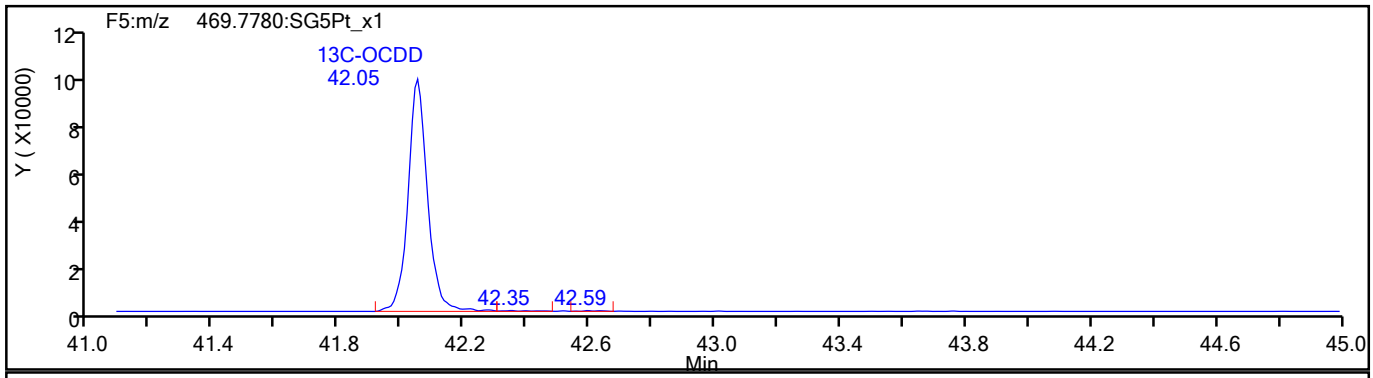

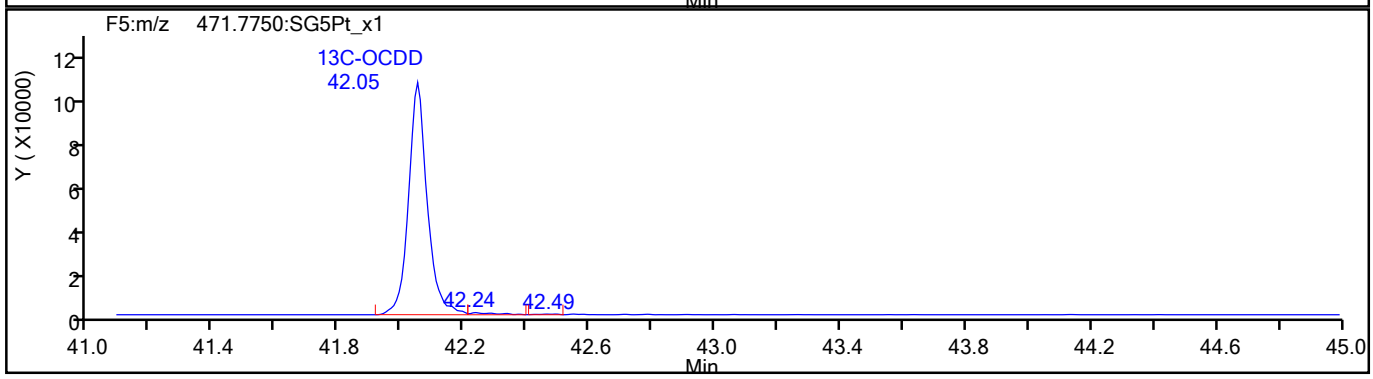

782545

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

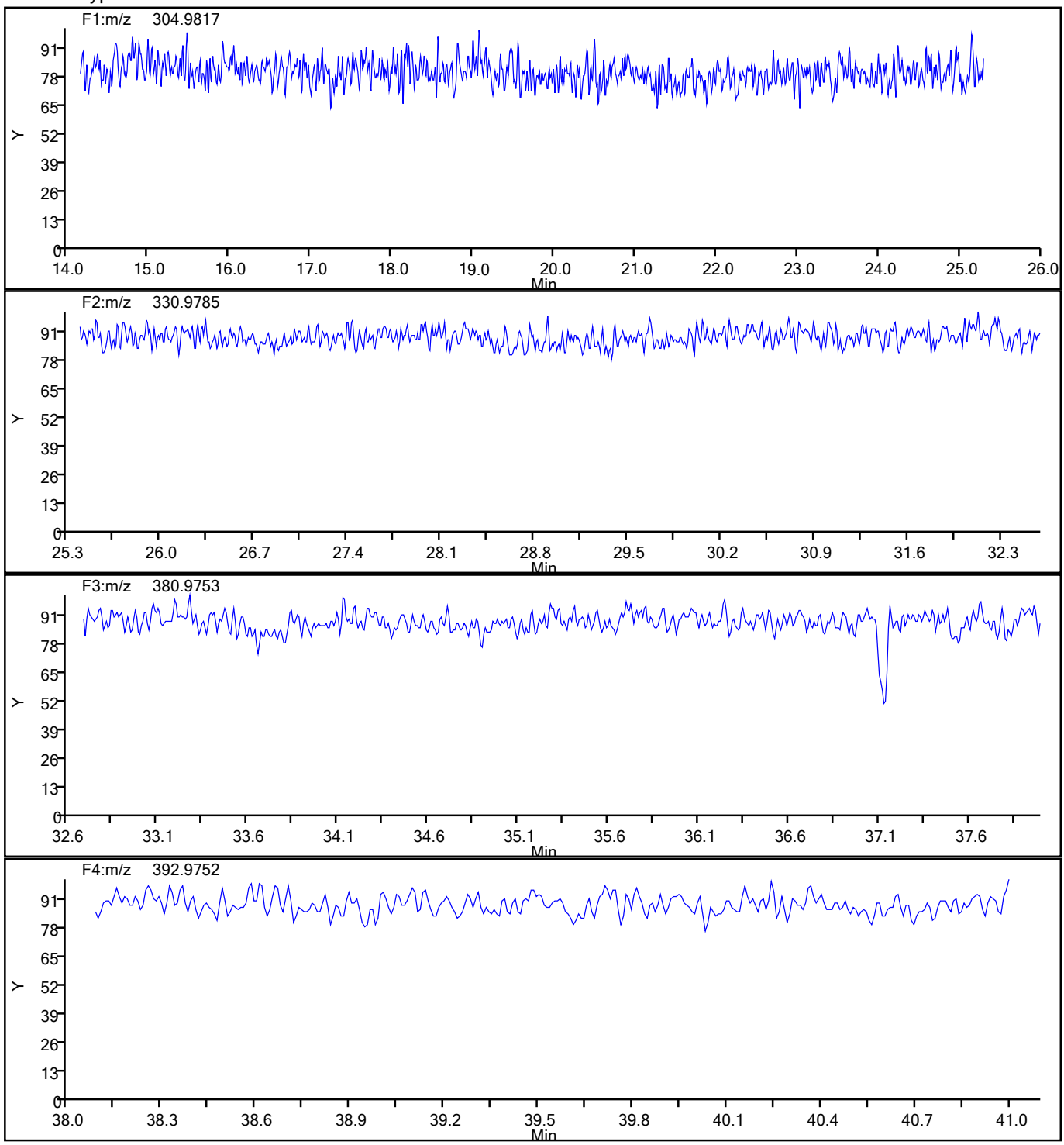

782546

Report Date: 20-Aug-2021 08:30:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_36.d		
Injection Date:	18-Aug-2021 17:13:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	517461	Sample Line#:	33
Column Type:	DB-5	Column Dia:	0.32 mm

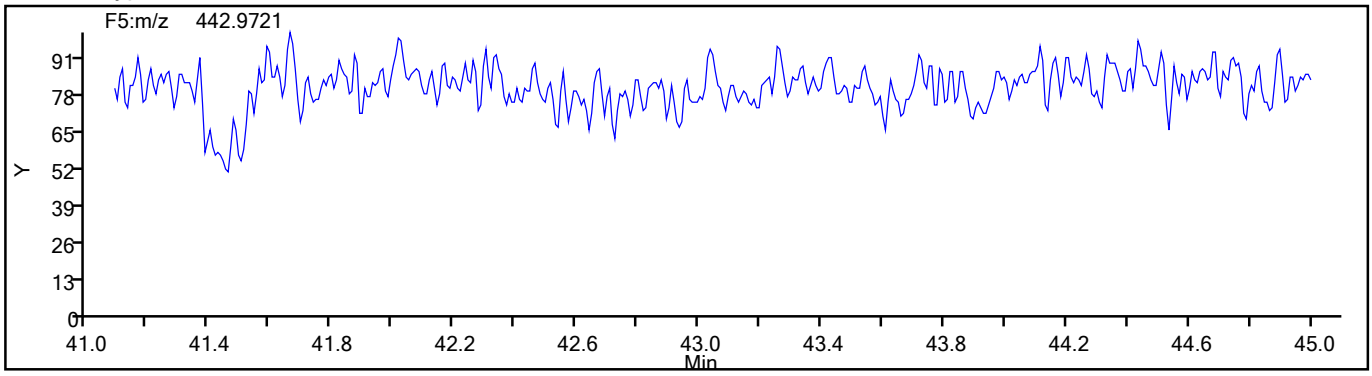

782547

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (14-16) RA
Lab Sample ID: 320-76887-8 RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_004.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.09(g)
Date Analyzed: 08/25/2021 14:54
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	3.9		1.4	0.17

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	62		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	75		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_004.d
Lims ID: 320-76887-A-8-A
Client ID: 11215702-072721-BN-SJSB096 (14-16)
Sample Type: Client
Inject. Date: 25-Aug-2021 14:54:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-8-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:04:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.297	44213147	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.614	36792249	0.79	1.3327	62.4	62.4	0.2468	0.2468	62.44	
2,3,7,8-TCDF	17.628	525782	0.84	0.9978	1.432	1.432	0.0615	0.0615		M
D 13C-2,3,7,8-TCDD	16.064	23229658	0.79	0.8749	60.1	60.1	0.3119	0.3119	60.05	
2,3,7,8-TCDD	16.105	140316	0.66	1.0570	0.5715	0.5715	0.0674	0.0674		
$ 37Cl4-2,3,7,8-TCDD	16.078	11521586		0.8648	30.1	30.1	0.0678	0.0678	75.33	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_004.d
Lims ID: 320-76887-A-8-A
Client ID: 11215702-072721-BN-SJSB096 (14-16)
Sample Type: Client
Inject. Date: 25-Aug-2021 14:54:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-8-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:04:31

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.297	16.298	0		19003181	4251740	6361	15902	668		
333.9339	16.297	16.298	0		25209966	5397570	4173	10432	1293	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.614	17.615	0	1.081	16182988	3050975	6196	15490	492		
317.9389	17.614	17.615	0	1.081	20609261	3888374	6498	16245	598	0.79(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.628	17.628	0	1.001	240065	43558	757	1892	58		
305.8987	17.628	17.628	0	1.001	285717	52639	945	2362	56	0.84(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.064	16.065	0	0.986	10275434	2264943	6361	15902	356		
333.9339	16.064	16.065	0	0.986	12954224	3167075	4173	10432	759	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.105	16.078	2	1.003	55626	11782	720	1800	16		
321.8936	16.078	16.078	0	1.001	84690	20160	829	2072	24	0.66(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.078	0	0.987	11521586	2529846	2263	5657	1118		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_004.d				
Injection Date:	25-Aug-2021 14:54:00	Instrument ID:	11D2		
Lims ID:	320-76887-A-8-A	Lab Sample ID:	320-76887-8		
Client ID:	11215702-072721-BN-SJSB096 (14-16)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.63
Area: 315166
Amount: 1.512415
Amount Units: pg/ul

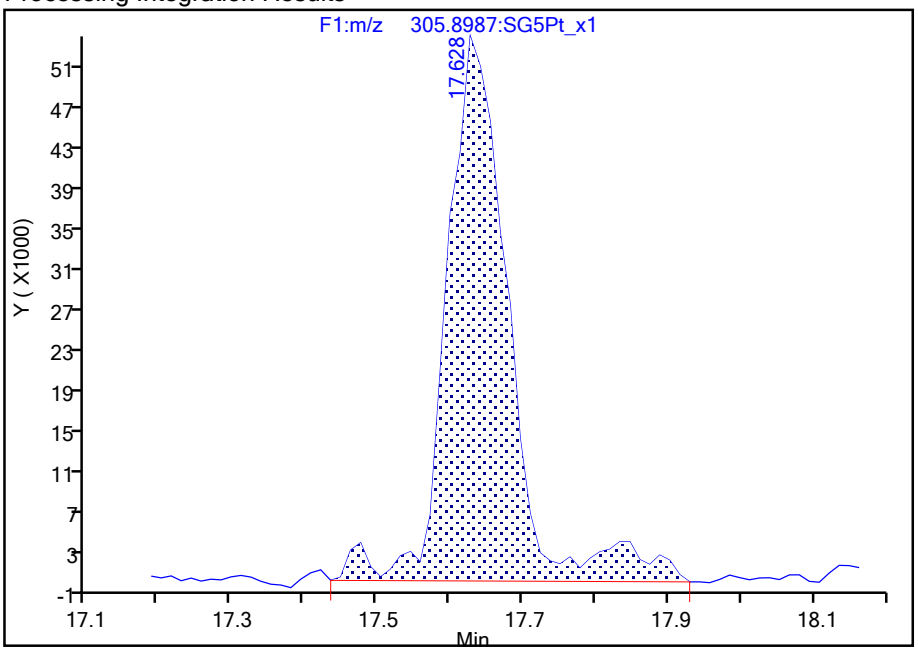

Manual Integration Results

RT: 17.63
Area: 285717
Amount: 1.432198
Amount Units: pg/ul

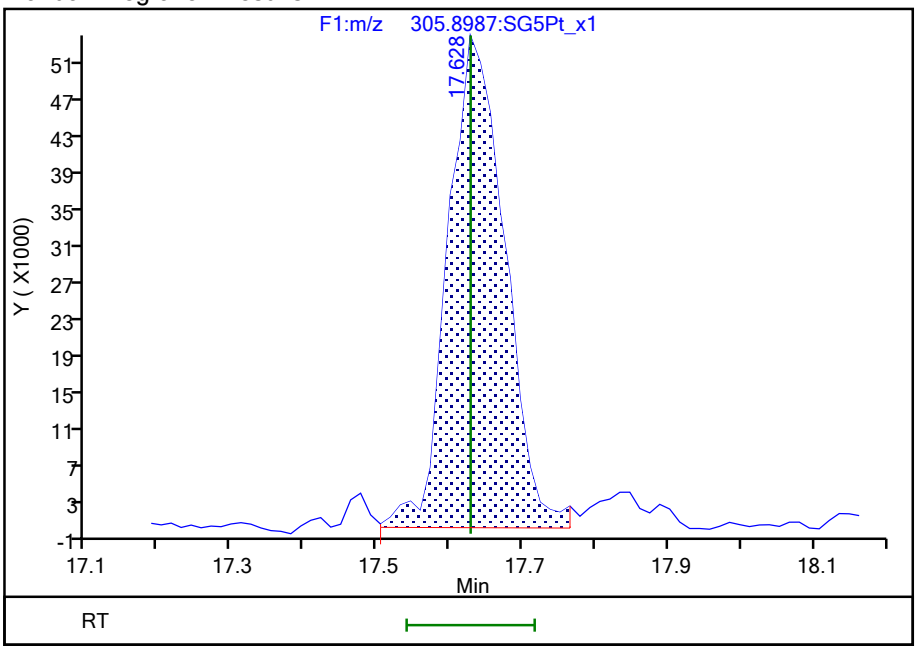

Reviewer: stephensk, 26-Aug-2021 09:04:19

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Report Date: 26-Aug-2021 09:30:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_004.d		
Injection Date:	25-Aug-2021 14:54:00	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	519744	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

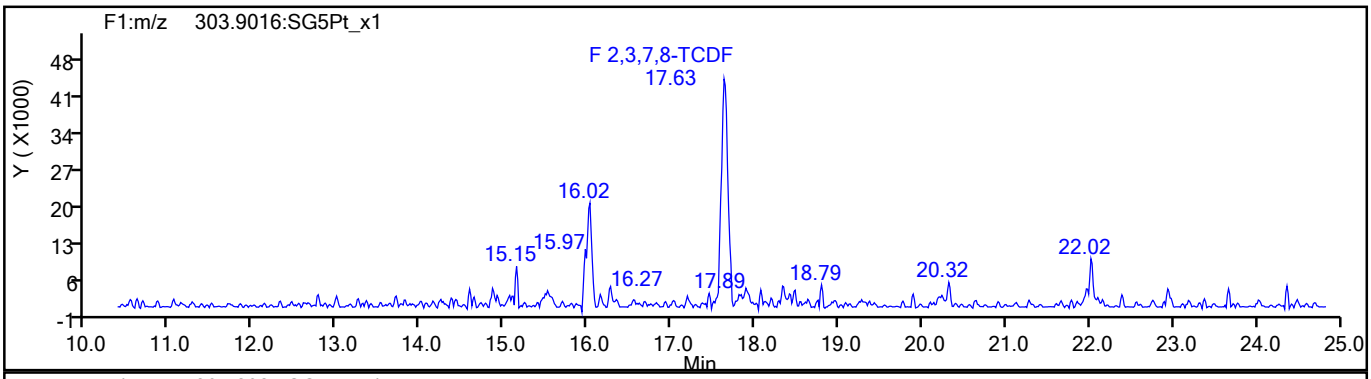

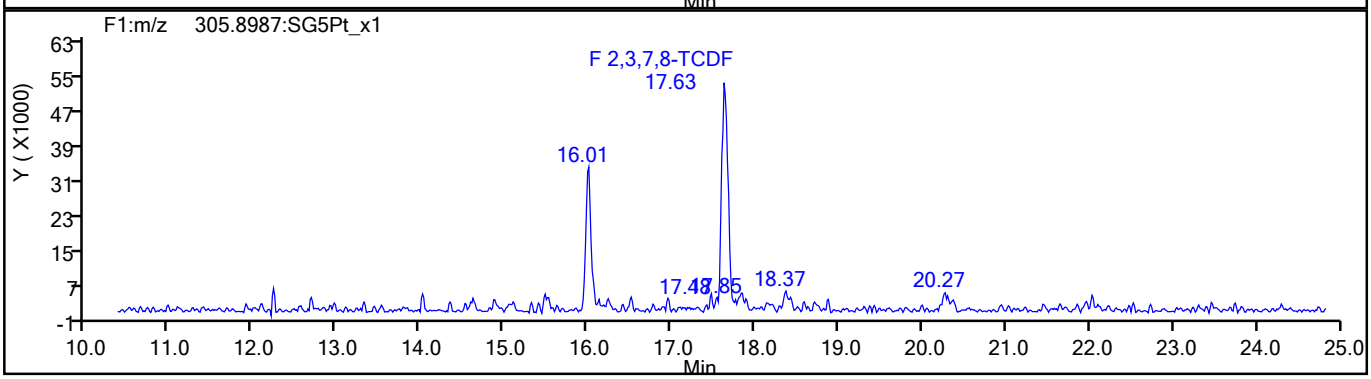

TCDF Standards

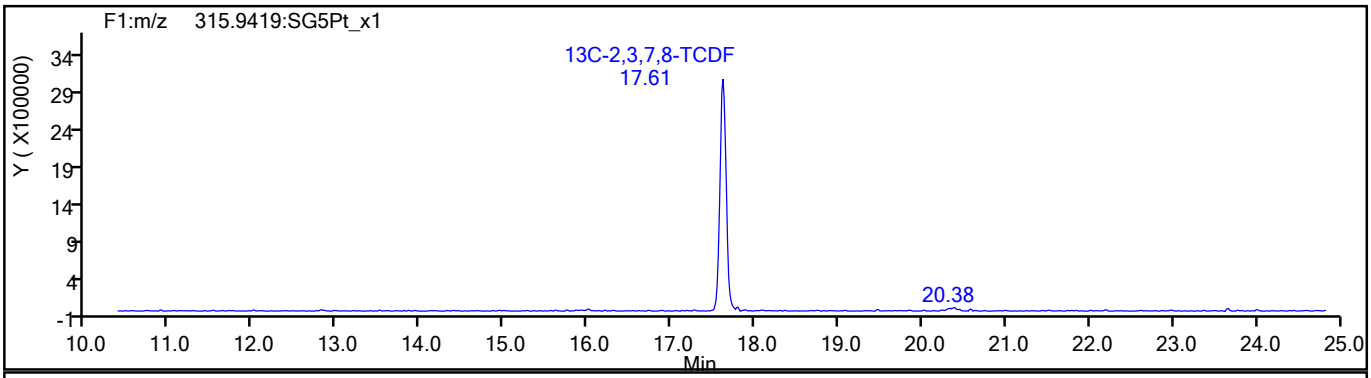

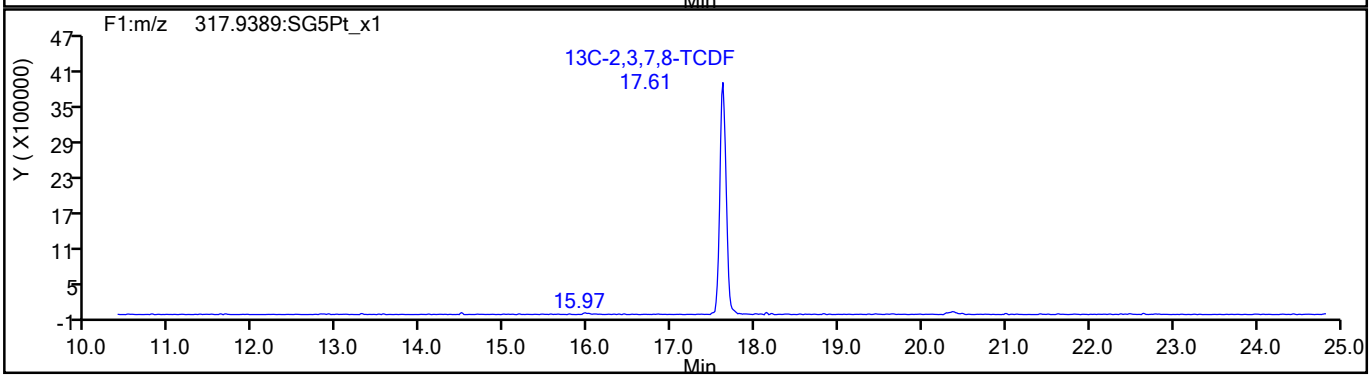

782552

Report Date: 26-Aug-2021 09:30:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_004.d		
Injection Date:	25-Aug-2021 14:54:00	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	519744	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

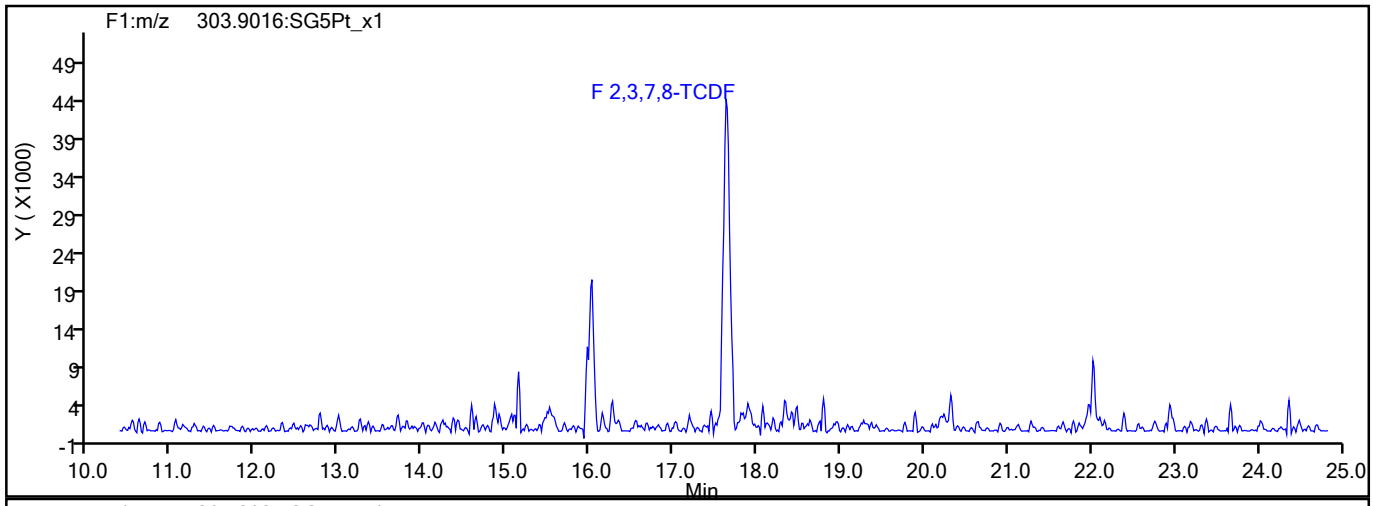

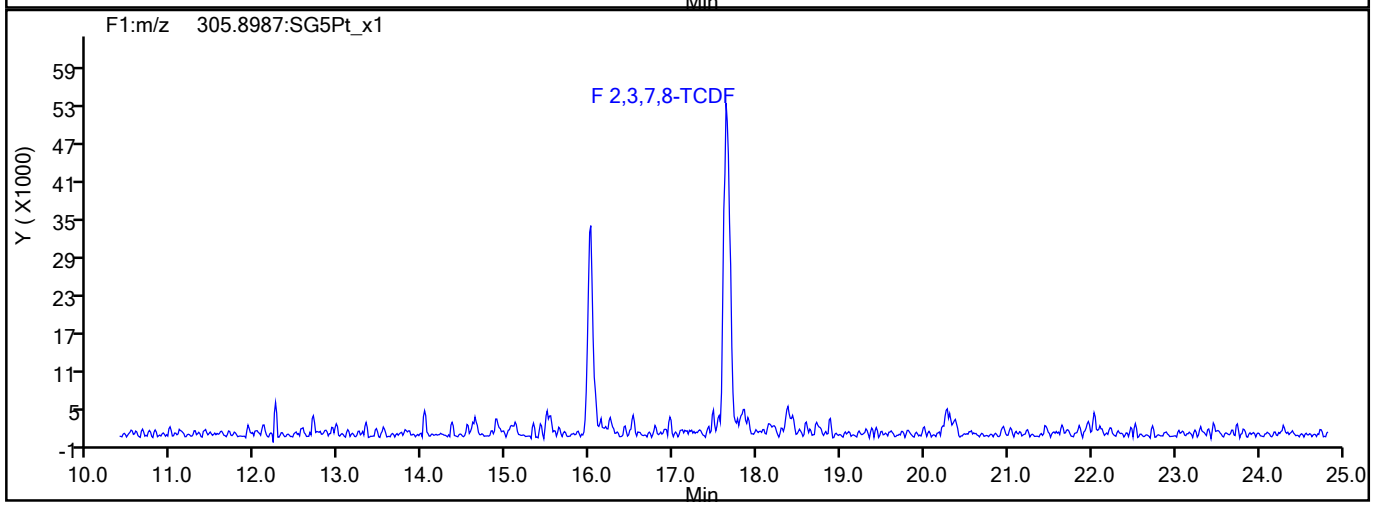

TCDF Interference Mass

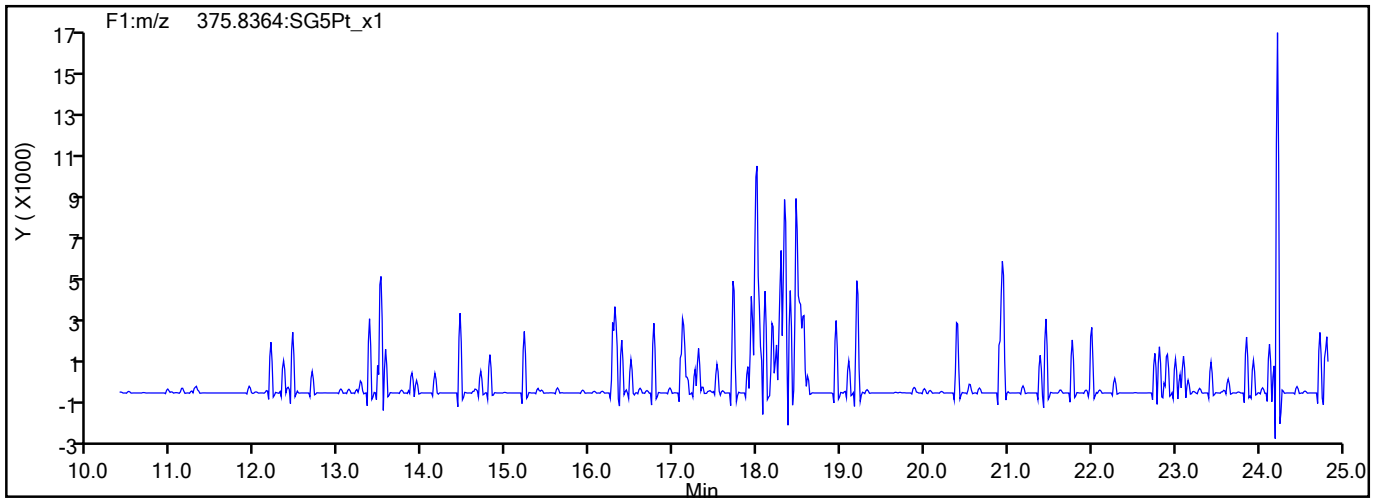

782553

Report Date: 26-Aug-2021 09:30:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_004.d		
Injection Date:	25-Aug-2021 14:54:00	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	519744	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

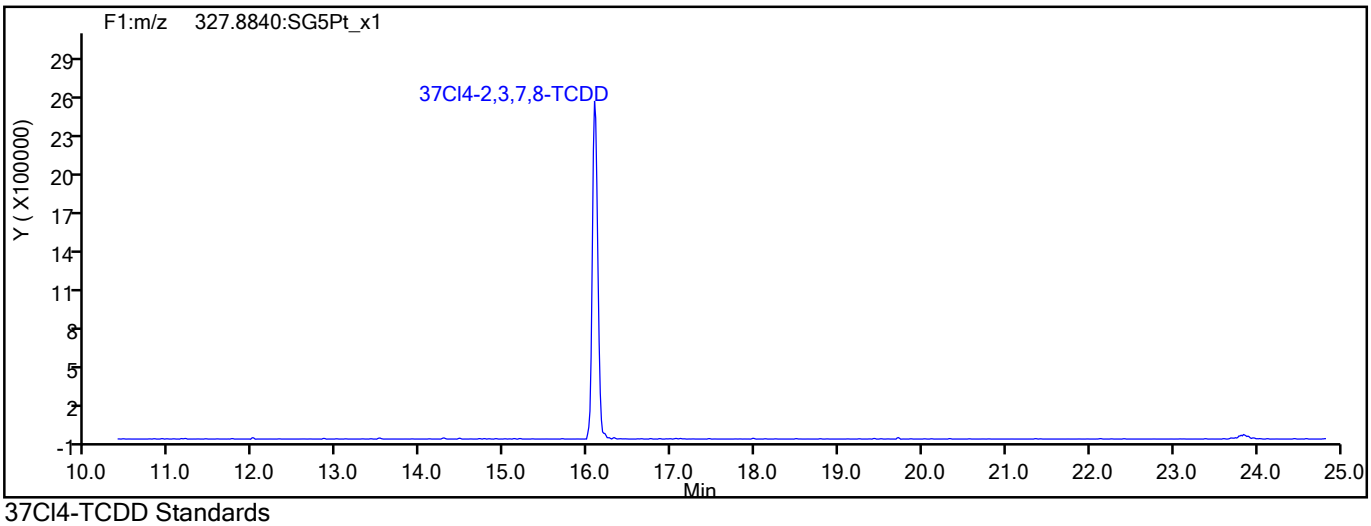

37Cl4-TCDD Standards

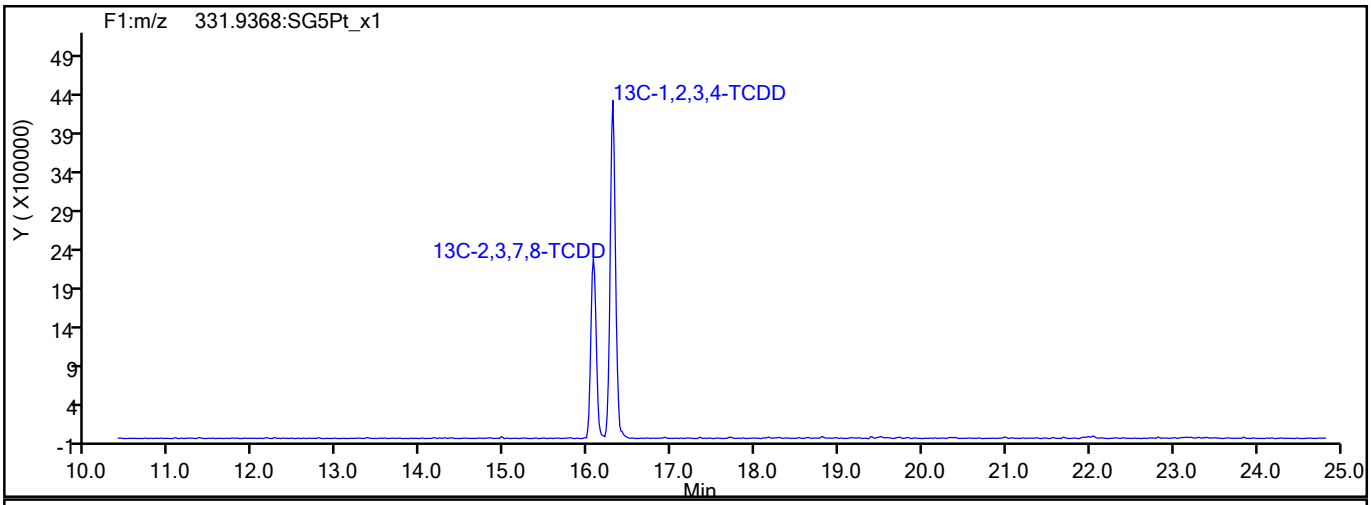

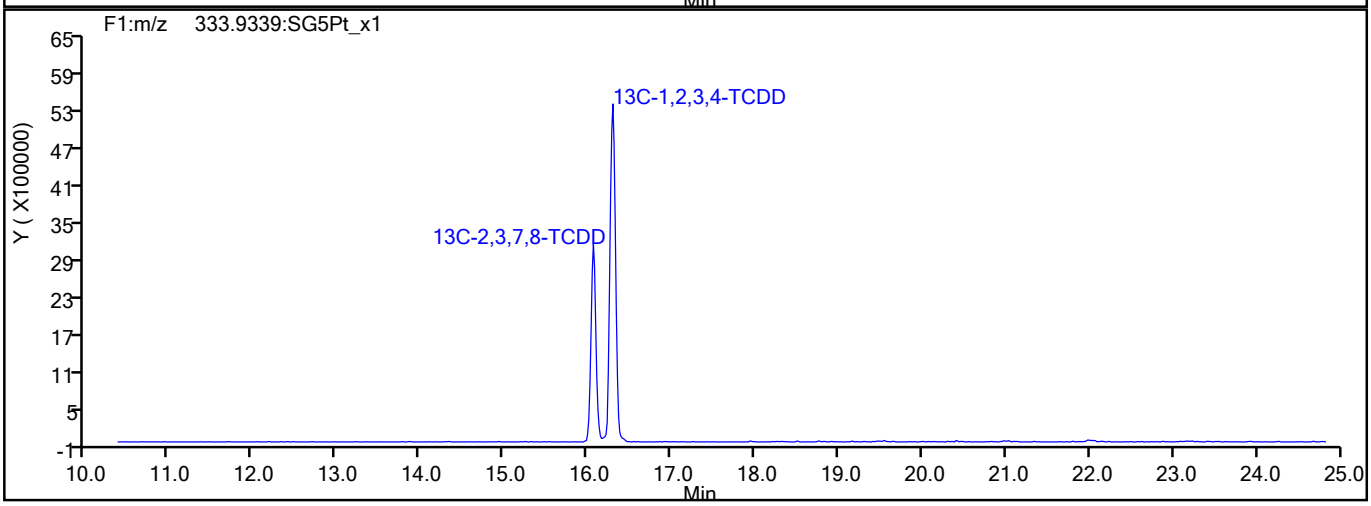

782554

Report Date: 26-Aug-2021 09:30:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_004.d		
Injection Date:	25-Aug-2021 14:54:00	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (14-16)		
Worklist#:	519744	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

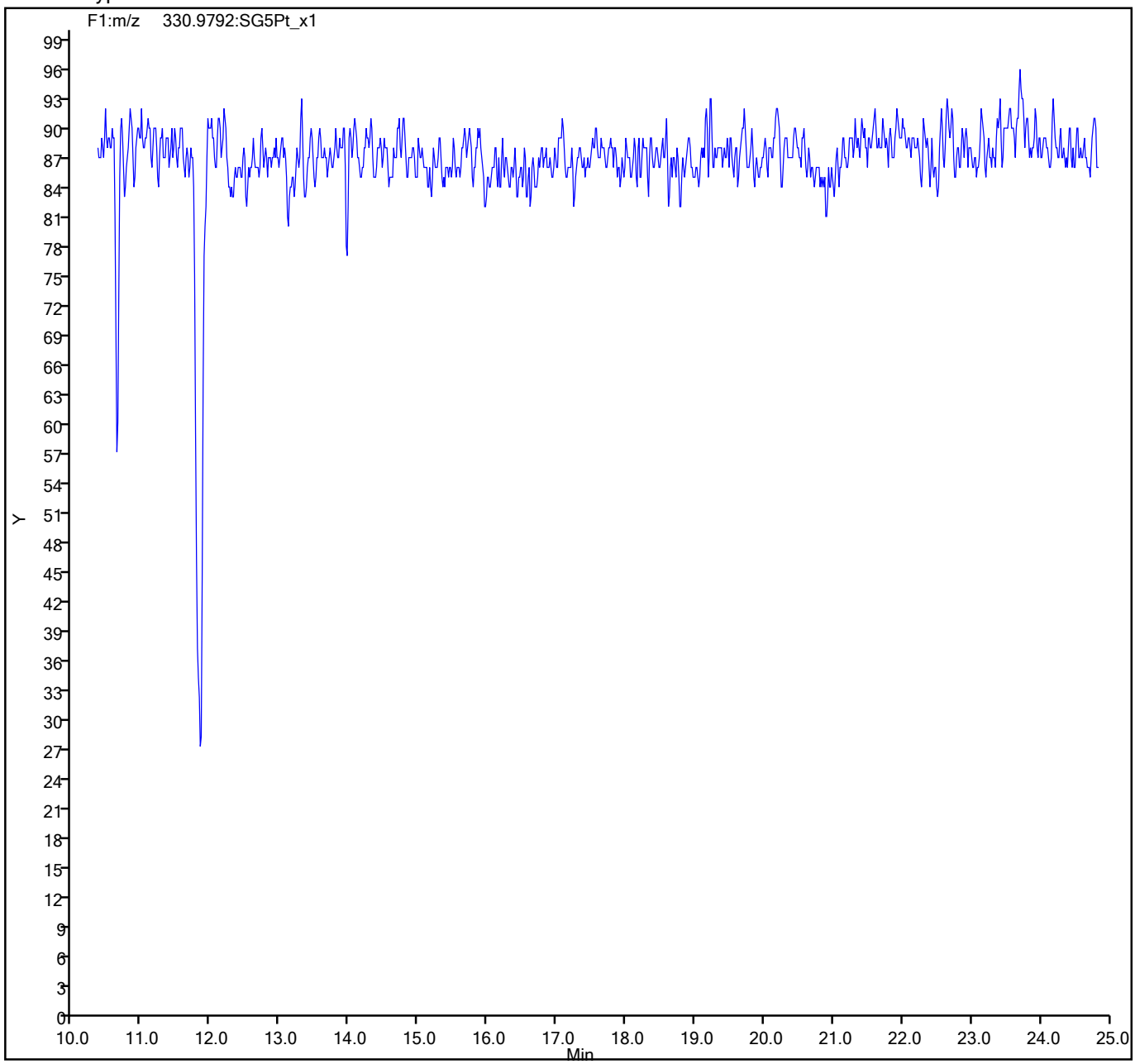

782555

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Client Sample ID: 11215702-072721-BN-DUP-9 Lab Sample ID: 320-76887-13

Matrix: Sediment Lab File ID: 17au21dfs1_38.d

Analysis Method: 1613B Date Collected: 07/27/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 9.59(g) Date Analyzed: 08/18/2021 18:49

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 34.9 GPC Cleanup:(Y/N) N

Analysis Batch No.: 517461 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2.5		1.6	0.12
40321-76-4	1,2,3,7,8-PeCDD	ND		8.0	0.15
57117-41-6	1,2,3,7,8-PeCDF	ND		8.0	0.042
57117-31-4	2,3,4,7,8-PeCDF	ND		8.0	0.041
39227-28-6	1,2,3,4,7,8-HxCDD	ND		8.0	0.23
57653-85-7	1,2,3,6,7,8-HxCDD	0.82	J q	8.0	0.26
19408-74-3	1,2,3,7,8,9-HxCDD	ND		8.0	0.23
70648-26-9	1,2,3,4,7,8-HxCDF	0.29	J	8.0	0.032
57117-44-9	1,2,3,6,7,8-HxCDF	ND		8.0	0.033
72918-21-9	1,2,3,7,8,9-HxCDF	ND		8.0	0.034
60851-34-5	2,3,4,6,7,8-HxCDF	ND		8.0	0.032
35822-46-9	1,2,3,4,6,7,8-HpCDD	34	B	8.0	0.35
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		8.0	0.071
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		8.0	0.072
3268-87-9	OCDD	820	B	16	0.70
39001-02-0	OCDF	ND		16	0.13
41903-57-5	Total TCDD	4.1		1.6	0.12
30402-14-3	Total TCDF	14		1.6	0.12
36088-22-9	Total PeCDD	5.0	J q	8.0	0.15
30402-15-4	Total PeCDF	ND		8.0	0.057
34465-46-8	Total HxCDD	30	q	8.0	0.24
55684-94-1	Total HxCDF	0.29	J	8.0	0.032
37871-00-4	Total HpCDD	130	B	8.0	0.35
38998-75-3	Total HpCDF	ND		8.0	0.072

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Client Sample ID: 11215702-072721-BN-DUP-9 Lab Sample ID: 320-76887-13

Matrix: Sediment Lab File ID: 17au21dfs1_38.d

Analysis Method: 1613B Date Collected: 07/27/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 9.59(g) Date Analyzed: 08/18/2021 18:49

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 34.9 GPC Cleanup:(Y/N) N

Analysis Batch No.: 517461 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	60		25-164
89059-46-1	13C-2,3,7,8-TCDF	57		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	56		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	57		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	62		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	70		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	64		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	77		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	66		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	58		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	61		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	69		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	66		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	74		26-138
114423-97-1	13C-OCDD	68		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	67		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d
Lims ID: 320-76887-A-13-A
Client ID: 11215702-072721-BN-DUP-9
Sample Type: Client
Inject. Date: 18-Aug-2021 18:49:00 ALS Bottle#: 0 Worklist Smp#: 35
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-13-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:17:42 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:03:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.406	1180840	0.82	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.443	908874	0.79	1.3459	57.2	57.2	0.1493	0.1493	57.19	
2,3,7,8-TCDF	20.460	29225	0.78	1.0802	2.977	2.977	0.0360	0.0360		
A Non-2,3,7,8-sub-TCDF	19.878	12325	0.83	1.0802	1.255	1.255	0.0360	1.255		a
S Total TCDF					4.232	4.232	0.0360	0.0360		
D 13C-2,3,7,8-TCDD	21.784	655739	0.75	0.9317	59.6	59.6	0.1275	0.1275	59.60	
2,3,7,8-TCDD	21.793	5603	0.79	1.0753	0.7946	0.7946	0.0366	0.0366		M
$ 37Cl4-2,3,7,8-TCDD	21.827	316894		1.0083	26.6	26.6	0.0193	0.0193	66.54	
A Non-2,3,7,8-sub-TCDD	20.707	3377	0.75	1.0753	0.4789	0.4789	0.0366	0.4789		a
S Total TCDD					1.273	1.273	0.0366	0.0366		
D 13C-1,2,3,7,8-PeCDF	27.272	766277	1.63	1.1405	56.9	56.9	0.1549	0.1549	56.90	
1,2,3,7,8-PeCDF	27.264						0.0130	0.0130		RQU
D 13C-2,3,4,7,8-PeCDF	28.780	820057	1.58	1.1253	61.7	61.7	0.1570	0.1570	61.71	
2,3,4,7,8-PeCDF	28.845						0.0128	0.0128		
A F1 PeCDFs	24.648						0.008594	0.008594		
A Non-2,3,7,8-sub-PeCDF	28.125						0.0129	0.0179		RQU
S Total PeCDF							0.0179	0.0179		
D 13C-1,2,3,7,8-PeCDD	29.597	475200	1.53	0.7165	56.2	56.2	0.0978	0.0978	56.17	
1,2,3,7,8-PeCDD	29.637						0.0458	0.0458		
A Non-2,3,7,8-sub-PeCDD	28.489	7716	1.55	1.0465	1.719	1.552	0.0458	0.6445		RQ
S Total PeCDD					1.719	1.552	0.0458	0.0458		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.935	709679	0.53	0.9648	77.0	77.0	0.2890	0.2890	76.98	
1,2,3,4,7,8-HxCDF	34.943	745	1.24	1.1474	0.0915	0.0915	0.009834	0.009834		
D 13C-1,2,3,6,7,8-HxCDF	35.095	680123	0.54	1.0708	66.5	66.5	0.2604	0.2604	66.47	
1,2,3,6,7,8-HxCDF	35.095						0.0103	0.0103		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.912	611291	0.53	1.0413	61.4	61.4	0.2678	0.2678	61.44	
2,3,4,6,7,8-HxCDF	35.936						0.009869	0.009869		
D 13C-1,2,3,7,8,9-HxCDF	36.813	539833	0.54	0.9731	58.1	58.1	0.2866	0.2866	58.06	
1,2,3,7,8,9-HxCDF	36.828						0.0105	0.0105		
A Non-2,3,7,8-sub-HxCDF	35.028						0.0101	0.0182		RQU
S Total HxCDF					0.0915	0.0915	0.0101	0.0101		

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.602	955518	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.131	507706	1.36	0.7587	70.0	70.0	0.1680	0.1680	70.03	
1,2,3,4,7,8-HxCDD	36.274						0.0720	0.0720		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.240	524702	1.22	0.8593	63.9	63.9	0.1483	0.1483	63.91	
1,2,3,6,7,8-HxCDD	36.274	1336	1.24	0.9933	0.3054	0.2563	0.0810	0.0810		RQM
1,2,3,7,8,9-HxCDD	36.626						0.0706	0.0706		
A Non-2,3,7,8-sub-HxCDD	35.394	50007	1.24	1.0545	9.459	9.187	0.0743	7.023		RQM
S Total HxCDD					9.764	9.443	0.0745	0.0745		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.627	461801	0.47	0.7359	65.7	65.7	0.2528	0.2528	65.67	
1,2,3,4,6,7,8-HpCDF	38.652						0.0222	0.0222		RQMU
D 13C-1,2,3,4,7,8,9-HpCDF	39.874	483722	0.49	0.6854	73.9	73.9	0.2715	0.2715	73.86	
1,2,3,4,7,8,9-HpCDF	39.885						0.0224	0.0224		
A Non-2,3,7,8-sub-HpCDF	39.258						0.0222	0.0222		U
S Total HpCDF							0.0224	0.0224		
D 13C-1,2,3,4,6,7,8-HpCDD	39.571	443561	1.06	0.6745	68.8	68.8	0.1889	0.1889	68.82	
1,2,3,4,6,7,8-HpCDD	39.579	48955	1.04	1.0503	10.5	10.5	0.1080	0.1080		
A Non-2,3,7,8-sub-HpCDD	39.258	141443	1.01	1.0503	30.4	30.4	0.1080	30.4		
S Total HpCDD					40.9	40.9	0.1080	0.1080		
D 13C-OCDD	42.067	706590	0.92	0.5446	135.8	135.8	0.1217	0.1217	67.89	
OCDF	42.076						0.0415	0.0415		RQU
OCDD	42.076	962079	0.89	1.0620	256.4	256.4	0.2191	0.2191		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d
Lims ID: 320-76887-A-13-A
Client ID: 11215702-072721-BN-DUP-9
Sample Type: Client
Inject. Date: 18-Aug-2021 18:49:00 ALS Bottle#: 0 Worklist Smp#: 35
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-13-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:17:42 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:03:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.406	21.427	-1		532348	72694	54	135	1346		a
333.9338	21.406	21.427	-1		648492	91492	24	60	3812	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.443	20.401	2	0.955	401856	55847	98	245	570		
317.9389	20.451	20.401	3	0.955	507018	72674	34	85	2137	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.460	20.436	1	1.001	12792	1821	9	22	202		
305.8987	20.494	20.436	4	1.003	16433	2326	11	27	211	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	19.746	19.878	-8	0.966	5599	882	9	22	98		a
305.8987	19.746	19.878	-8	0.966	6726	981	11	27	89	0.83(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.784	21.743	2	1.018	281526	35963	54	135	666		
333.9338	21.784	21.743	2	1.018	374213	45293	24	60	1887	0.75(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.793	21.777	1	1.000	2472	337	9	22	37		M
321.8936	21.827	21.777	3	1.002	3131	585	4	10	146	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.827	21.849	-1	1.020	316894	38821	13	32	2986		
A Non-2,3,7,8-sub-TCDD											a
319.8965	21.604	20.707	54	0.992	1451	296	9	22	33		a
321.8936	21.621	20.707	55	0.992	1926	251	4	10	63	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.272	27.288	-1	1.274	474471	67804	78	195	869		
353.8970	27.281	27.288	0	1.274	291806	41664	38	95	1096	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											RQU
339.8597	27.313						2	5			
341.8567	27.313						4	10			
13C-2,3,4,7,8-PeCDF											
351.9000	28.780	28.795	-1	1.345	502598	71258	78	195	914		
353.8970	28.780	28.795	-1	1.345	317459	44978	38	95	1184	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.820						2	5			
341.8567	28.820						4	10			
A F1 PeCDFs											
339.8597	24.648						1	2			
341.8567	24.648						3	7			
A Non-2,3,7,8-sub-PeCDF											U
339.8597	25.883	28.125	-134	0.949	89	26	2	5	13		
341.8567	25.824	28.125	-138	0.947	147	50	4	10	13	0.61(1.32-1.78)	
	Empc Correction				57	16	4	10	4		
13C-1,2,3,7,8-PeCDD											
367.8949	29.597	29.612	-1	1.383	287394	38408	34	85	1130		
369.8919	29.597	29.612	-1	1.383	187806	24149	12	30	2012	1.53(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.637						9	22			
357.8516	29.637						3	7			
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.102	28.489	-143	0.882	1313	270	9	22	30		
357.8516	26.110	28.489	-142	0.882	862	163	3	7	54	1.52(1.32-1.78)	
355.8546	26.902	28.489	-95	0.909	2257	399	9	22	44		
	Empc Correction				1948	415	9	22	46		
357.8516	26.894	28.489	-96	0.909	1257	268	3	7	89	1.80(1.32-1.78)	
355.8546	28.343	28.489	-9	0.958	675	145	9	22	16		
	Empc Correction				554	83	9	22	9		
357.8516	28.326	28.489	-10	0.957	358	54	3	7	18	1.89(1.32-1.78)	
355.8546	28.545	28.489	3	0.964	866	142	9	22	16		
357.8516	28.553	28.489	4	0.965	962	126	3	7	42	0.90(1.32-1.78)	
	Empc Correction				558	91	3	7	30		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.935	34.942	0	0.954	246430	46945	88	220	533		
385.8610	34.935	34.942	0	0.954	463249	85988	131	327	656	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.943	34.959	-1	1.000	413	92	4	10	23		
375.8178	34.952	34.959	0	1.000	332	78	2	5	39	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.095	35.111	-1	0.959	238960	41798	88	220	475		
385.8610	35.095	35.111	-1	0.959	441163	77576	131	327	592	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.119						4	10			
375.8178	35.119						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.912	35.919	0	0.981	212625	45753	88	220	520		
385.8610	35.912	35.919	0	0.981	398666	79399	131	327	606	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.936						4	10			
375.8178	35.936						2	5			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.813	36.811	0	1.006	190324	41229	88	220	469		
385.8610	36.813	36.811	0	1.006	349509	73910	131	327	564	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.828						4	10			
375.8178	36.828						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.435	35.028	-95	0.957	77	47	4	10	12		
375.8178	33.460	35.028	-94	0.958	101	34	2	5	17	0.76(1.05-1.43)	
	Empc Correction				62	37	2	5	19		
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.602	36.609	0		532883	109814	64	160	1716		
403.8529	36.602	36.609	0		422635	86349	36	90	2399	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.131	36.129	0	0.987	292213	64321	64	160	1005		
403.8529	36.122	36.129	0	0.987	215493	49632	36	90	1379	1.36(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.146						20	50			
391.8127	36.146						15	37			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.240	36.247	0	0.990	287889	60407	64	160	944		
403.8529	36.240	36.247	0	0.990	236813	47757	36	90	1327	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQM
389.8158	36.274	36.264	1	1.001	740	164	20	50	8		
391.8127	36.265	36.264	0	1.001	852	182	15	37	12	0.87(1.05-1.43)	
	Empc Correction				596	132	15	37	9		
1,2,3,7,8,9-HxCDD											
389.8158	36.626						20	50			
391.8127	36.626						15	37			
A Non-2,3,7,8-sub-HxCDD											RQM
389.8158	34.227	35.394	-70	0.944	21053	3305	20	50	165		
391.8127	34.235	35.394	-69	0.945	17174	2561	15	37	171	1.23(1.05-1.43)	
389.8158	35.356	35.394	-2	0.976	8002	1322	20	50	66		
	Empc Correction				6521	1396	20	50	70		
391.8127	35.364	35.394	-2	0.976	5259	1126	15	37	75	1.52(1.05-1.43)	M
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.627	38.626	0	1.055	148187	36488	50	125	730		
419.8220	38.627	38.626	0	1.055	313614	79337	96	240	826	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQMU
407.7817	38.630						13	32			
409.7788	38.630						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.874	39.880	0	1.089	158018	39089	50	125	782		
419.8220	39.874	39.880	0	1.089	325704	87176	96	240	908	0.49(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885						13	32			
409.7788	39.885						2	5			
A Non-2,3,7,8-sub-HpCDF											U
407.7817	39.258						13	32			
409.7788	39.258						2	5			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.571	39.569	0	1.081	228761	57521	75	187	767		
437.8140	39.571	39.569	0	1.081	214800	57055	25	62	2282	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.579	39.582	0	1.000	24912	6831	27	67	253		
425.7737	39.579	39.582	0	1.000	24043	6248	25	62	250	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.939	39.258	-19	0.984	71205	18811	27	67	697		
425.7737	38.939	39.258	-19	0.984	70238	17799	25	62	712	1.01(0.88-1.20)	
13C-OCDD											
469.7780	42.067	42.072	0	1.149	339123	82086	28	70	2932		
471.7750	42.067	42.072	0	1.149	367467	89835	24	60	3743	0.92(0.76-1.02)	
OCDF											RQU
441.7428	42.165						6	15			
443.7399	42.165						13	32			
OCDD											
457.7377	42.076	42.081	0	1.000	452068	103466	37	92	2796		
459.7348	42.076	42.081	0	1.000	510011	116847	43	107	2717	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Lims ID:	320-76887-A-13-A		
Client ID:	11215702-072721-BN-DUP-9		
Inject. Date:	18-Aug-2021 18:49:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	35

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	908874	128521

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	908874	128521

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.746	5599	882	6726	981	1.26	0.83	a
Signal Totals:							
	5599	882	6726	981			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12325	1863				0.83	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.255 = (12325 * 100.000) / (908874 * 1.080)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Lims ID:	320-76887-A-13-A		
Client ID:	11215702-072721-BN-DUP-9		
Inject. Date:	18-Aug-2021 18:49:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	35

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	655739	81256

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	655739	81256

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.604	1451	296	1926	251	0.4789	0.75	a
Signal Totals:							
	1451	296	1926	251			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3377	547				0.75	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4789 = (3377 * 100.000) / (655739 * 1.075)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Lims ID:	320-76887-A-13-A		
Client ID:	11215702-072721-BN-DUP-9		
Inject. Date:	18-Aug-2021 18:49:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	35

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	766277	109468
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	820057	116236

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	793167	112852

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.883	89	26	147	50	0.0289	0.61	RQ
25.883	89	26	57	16	0.0179		Empc Correction
30.919	119	31	50	28	0.0207	2.38	RQ
30.919	77	43	50	28	0.0155		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Lims ID:	320-76887-A-13-A		
Client ID:	11215702-072721-BN-DUP-9		
Inject. Date:	18-Aug-2021 18:49:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	35

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	475200	62557

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	475200	62557

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.102	1313	270	862	163	0.4374	1.52	
26.902	2257	399	1257	268	0.7066	1.80	RQ
26.902	1948	415	1257	268	0.6445		Empc Correction
28.343	675	145	358	54	0.2077	1.89	RQ
28.343	554	83	358	54	0.1834		Empc Correction
28.545	866	142	962	126	0.3676	0.90	RQ
28.545	866	142	558	91	0.2863		Empc Correction
Signal Totals:							
	4681	910	3035	576			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8550	1567				1.49	RQ
	7716	1486					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.719 = (8550 * 100.000) / (475200 * 1.046)
Empc Amount: 1.552 = (7716 * 100.000) / (475200 * 1.046)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Lims ID:	320-76887-A-13-A		
Client ID:	11215702-072721-BN-DUP-9		
Inject. Date:	18-Aug-2021 18:49:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	35

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	709679	132933
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	680123	119374
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	611291	125152
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	539833	115139

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	635231	123149

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.435	77	47	101	34	0.0233	0.76	RQ
33.435	77	47	62	37	0.0182		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Lims ID:	320-76887-A-13-A		
Client ID:	11215702-072721-BN-DUP-9		
Inject. Date:	18-Aug-2021 18:49:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	35

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	507706	113953
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	524702	108164
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	516204	111058

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.227	21053	3305	17174	2561	7.02	1.23	
35.356	8002	1322	5259	1126	2.44	1.52	RQM
35.356	6521	1396	5259	1126	2.16		Empc Correction
Signal Totals:							
	27574	4701	22433	3687			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	51488	8314				1.30	RQM
	50007	8388					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 9.459 = (51488 * 100.000) / (516204 * 1.055)

Empc Amount: 9.187 = (50007 * 100.000) / (516204 * 1.055)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Lims ID:	320-76887-A-13-A		
Client ID:	11215702-072721-BN-DUP-9		
Inject. Date:	18-Aug-2021 18:49:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	35

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	461801	115825
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	483722	126265

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	472761	121045

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Lims ID:	320-76887-A-13-A		
Client ID:	11215702-072721-BN-DUP-9		
Inject. Date:	18-Aug-2021 18:49:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	35

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	443561	114576

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	443561	114576

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.939	71205	18811	70238	17799	30.4	1.01	
Signal Totals:							
	71205	18811	70238	17799			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141443	36610				1.01	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 30.361 = (141443 * 100.000) / (443561 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d				
Injection Date:	18-Aug-2021 18:49:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-13-A	Lab Sample ID:	320-76887-13		
Client ID:	11215702-072721-BN-DUP-9				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	35
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.79
Area: 2531
Amount: 0.802954
Amount Units: pg/ul

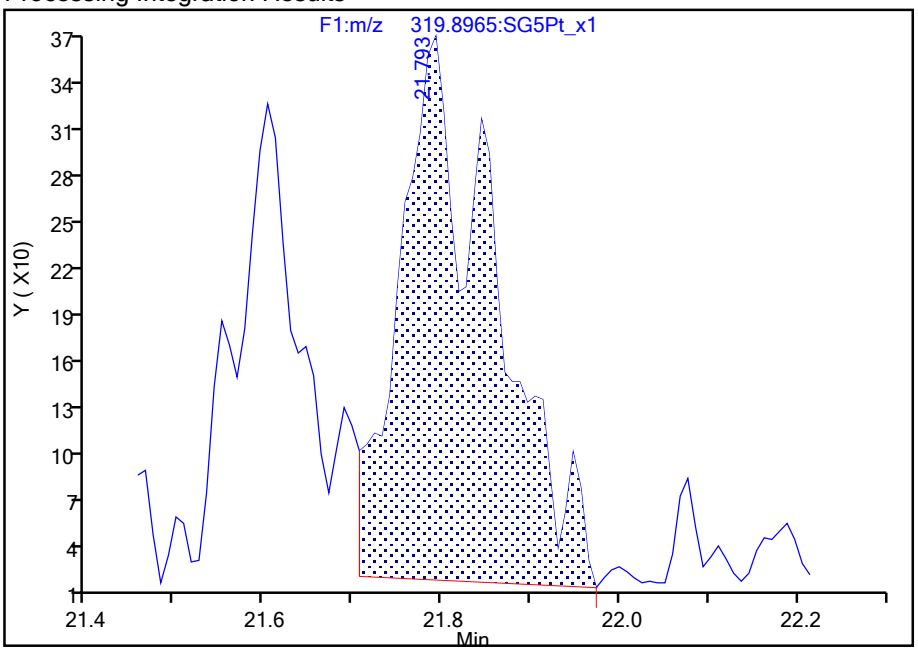

Manual Integration Results

RT: 21.79
Area: 2472
Amount: 0.794587
Amount Units: pg/ul

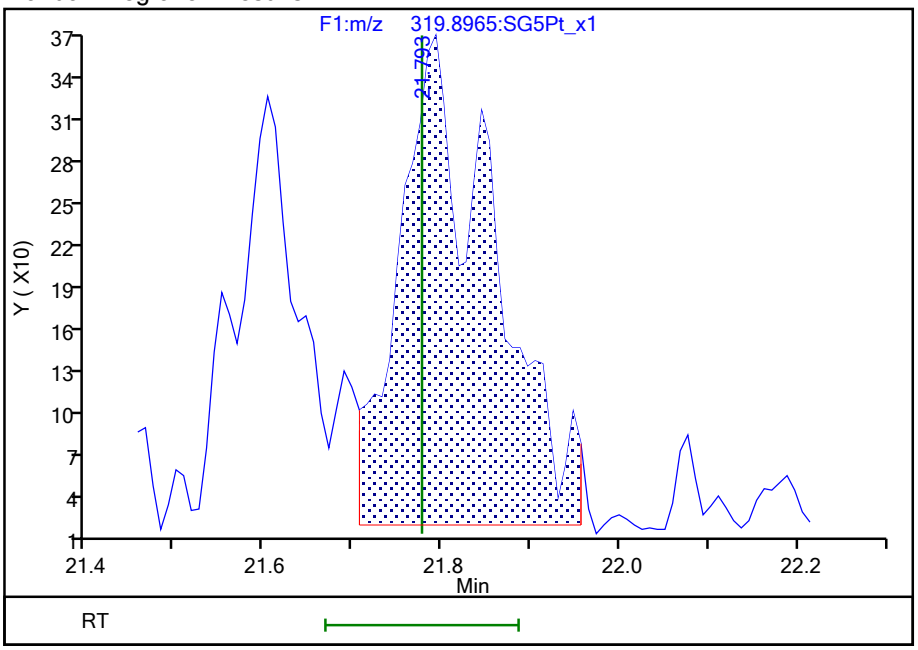

Reviewer: dadunj, 20-Aug-2021 09:13:43

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d				
Injection Date:	18-Aug-2021 18:49:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-13-A	Lab Sample ID:	320-76887-13		
Client ID:	11215702-072721-BN-DUP-9				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	35
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 36.27
Area: 1172
Amount: 0.366840
Amount Units: pg/ul

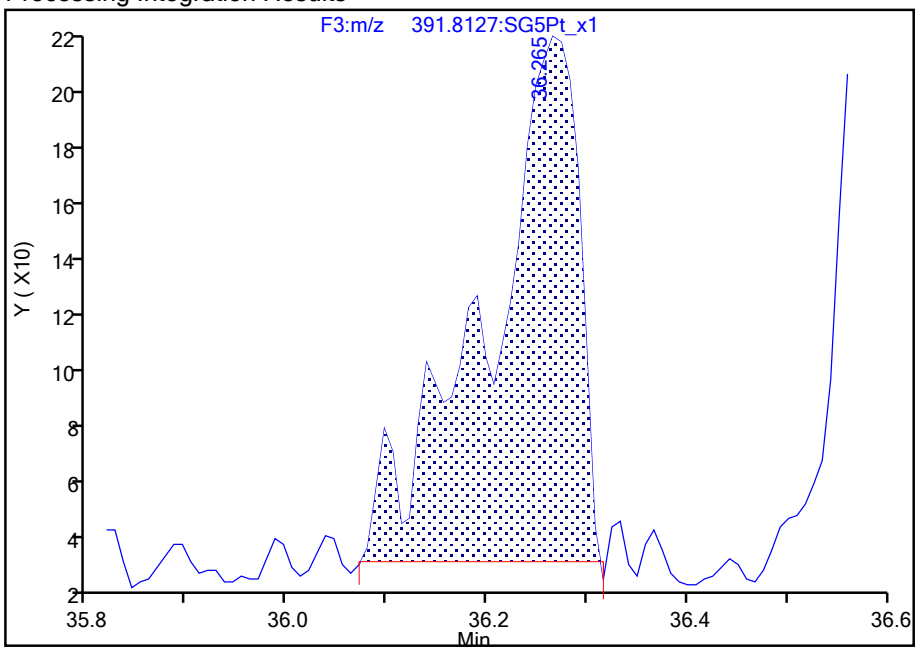

Manual Integration Results

RT: 36.27
Area: 852
Amount: 0.305444
Amount Units: pg/ul

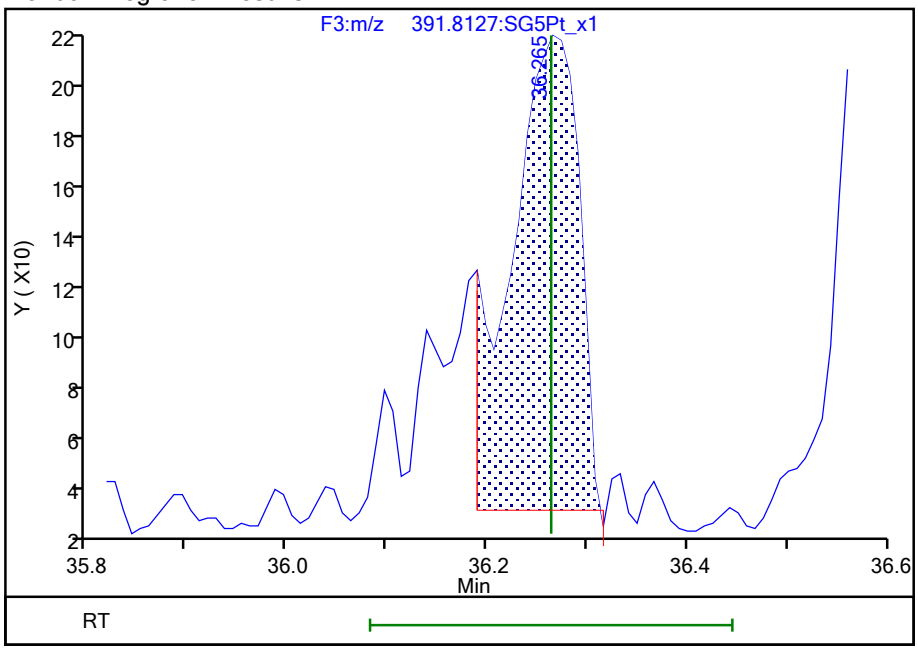

Reviewer: dadunj, 20-Aug-2021 09:15:20

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d				
Injection Date:	18-Aug-2021 18:49:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-13-A	Lab Sample ID:	320-76887-13		
Client ID:	11215702-072721-BN-DUP-9				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	35
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 3

Processing Integration Results

RT: 36.27
Area: 1912
Amount: 0.366840
Amount Units: pg/ul

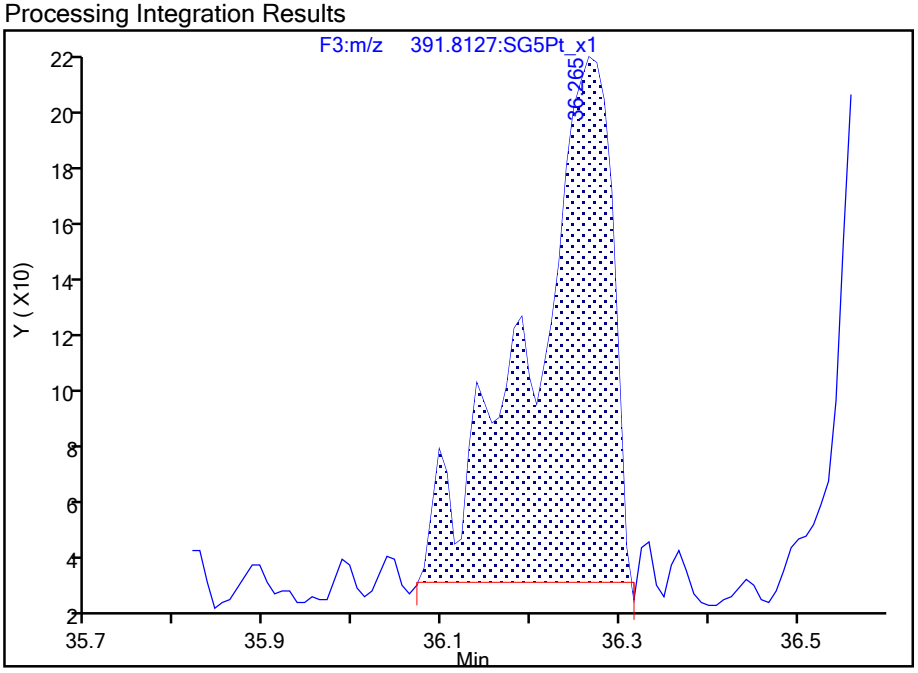

Manual Integration Results

RT: 36.27
Area: 1592
Amount: 0.305444
Amount Units: pg/ul
Reviewer: dadunj, 20-Aug-2021 09:15:20
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d				
Injection Date:	18-Aug-2021 18:49:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-13-A	Lab Sample ID:	320-76887-13		
Client ID:	11215702-072721-BN-DUP-9				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	35
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (34.19- 36.59)

Signal: 2

Processing Integration Results

RT = 35.364 Area = 6008

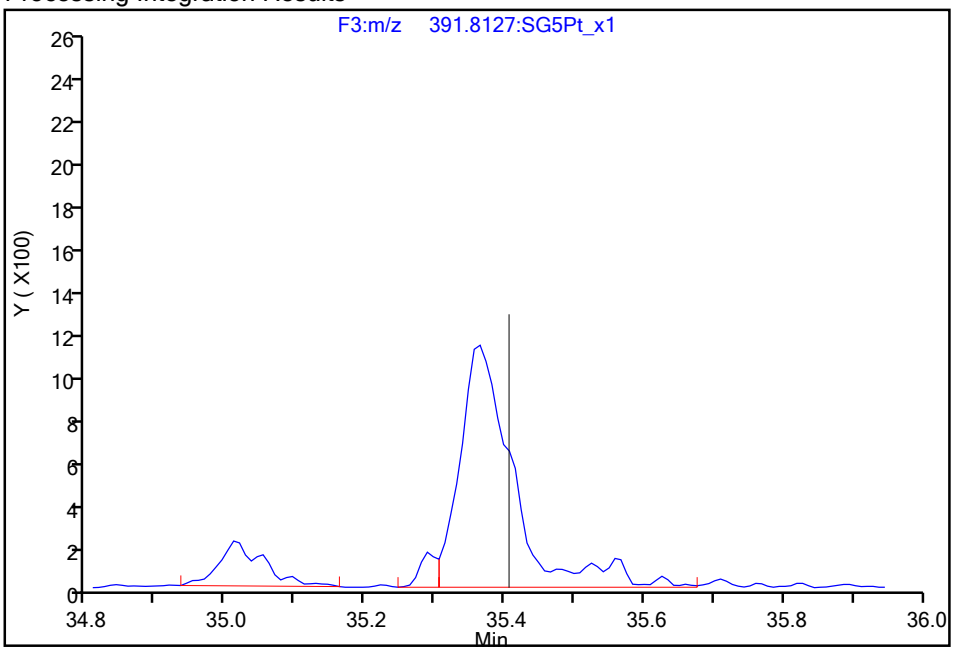

Manual Integration Results

RT = 35.364 Area = 5259 M

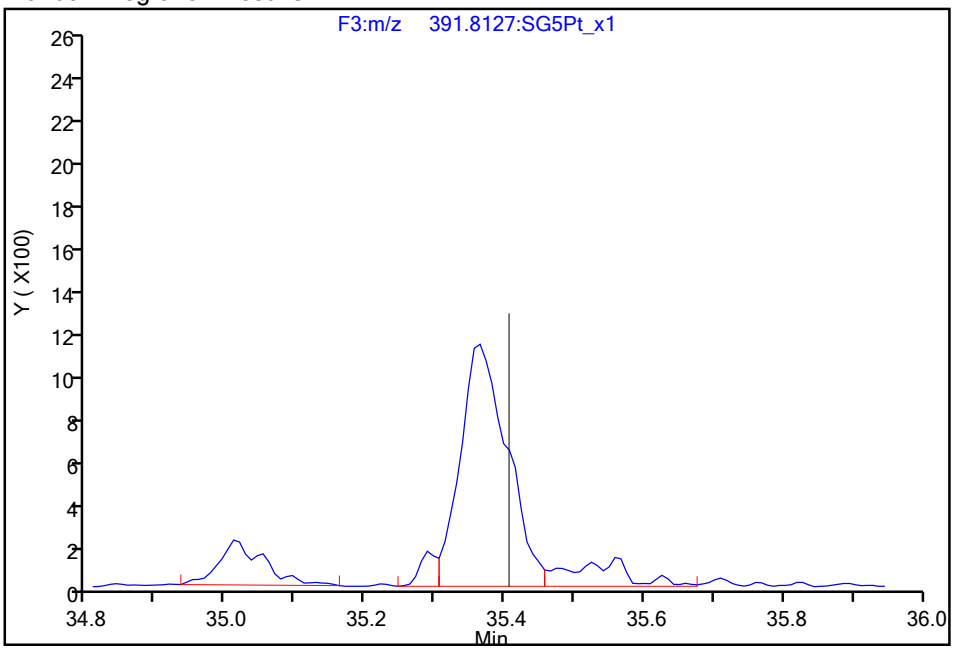

Reviewer: dadunj, 20-Aug-2021 09:15:17

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Injection Date:	18-Aug-2021 18:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

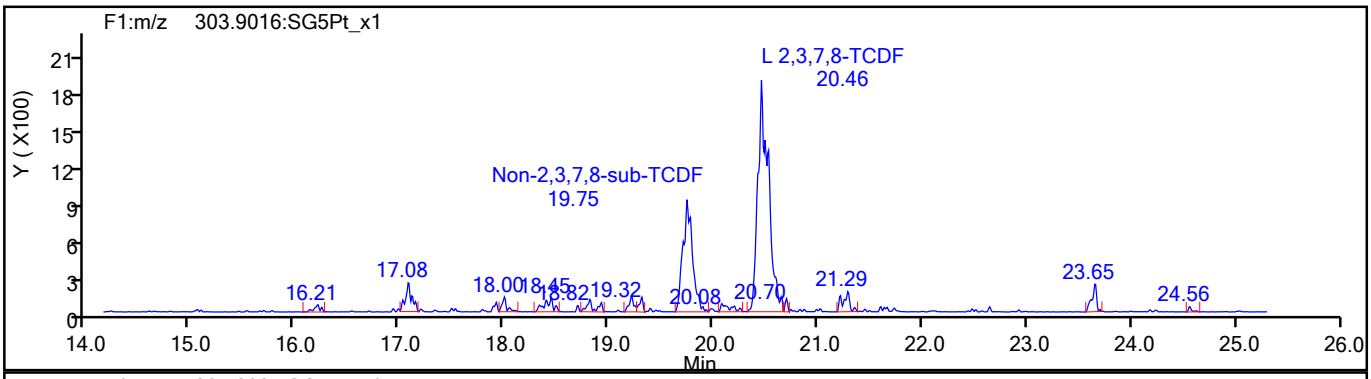

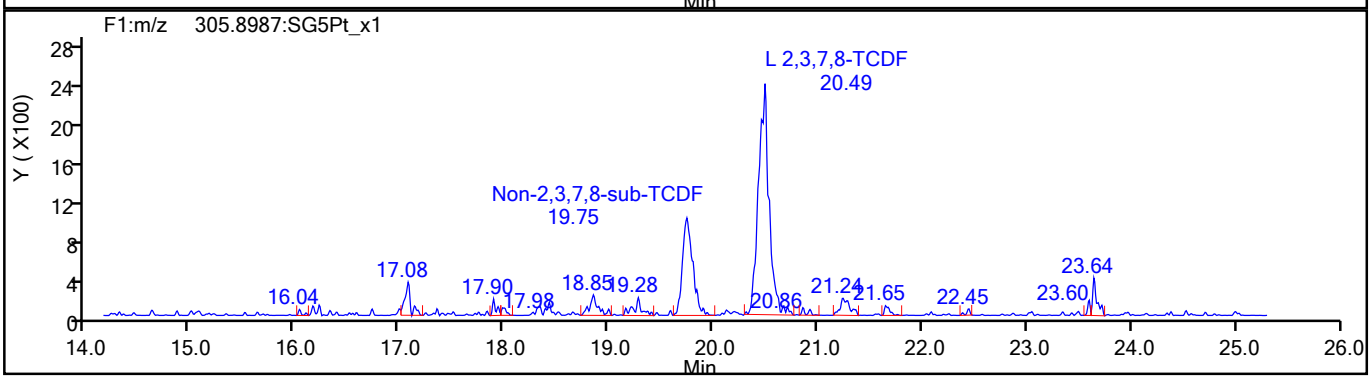

TCDF Standards

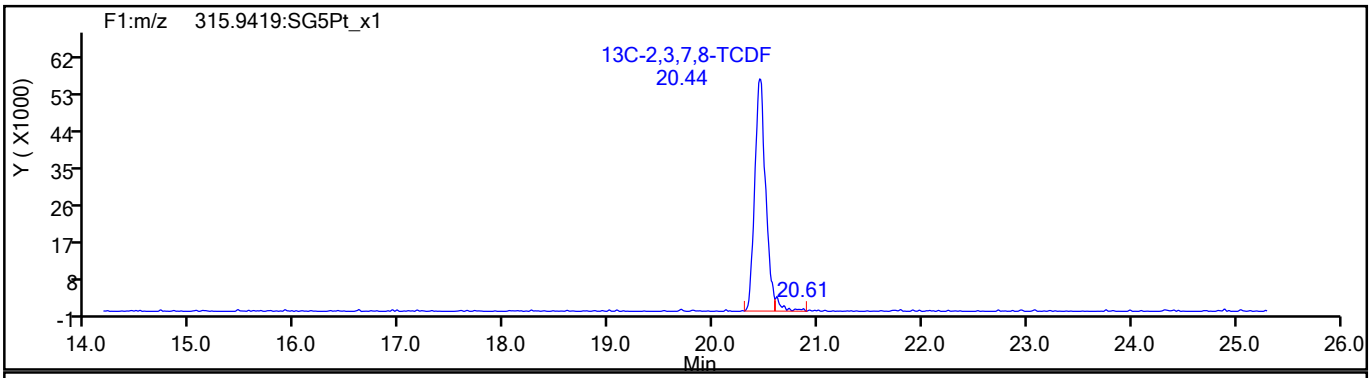

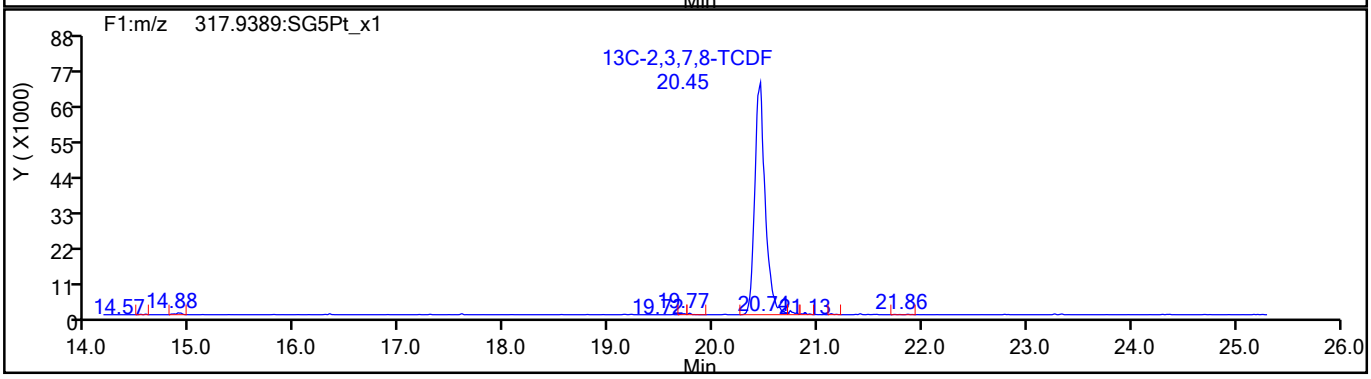

782577

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Injection Date:	18-Aug-2021 18:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

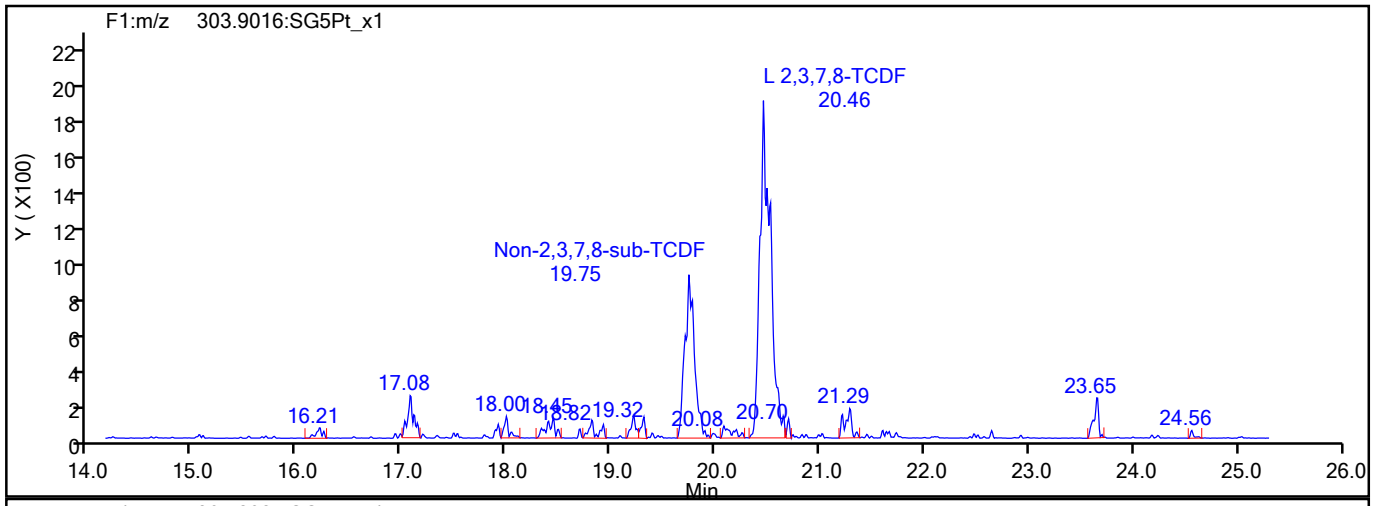

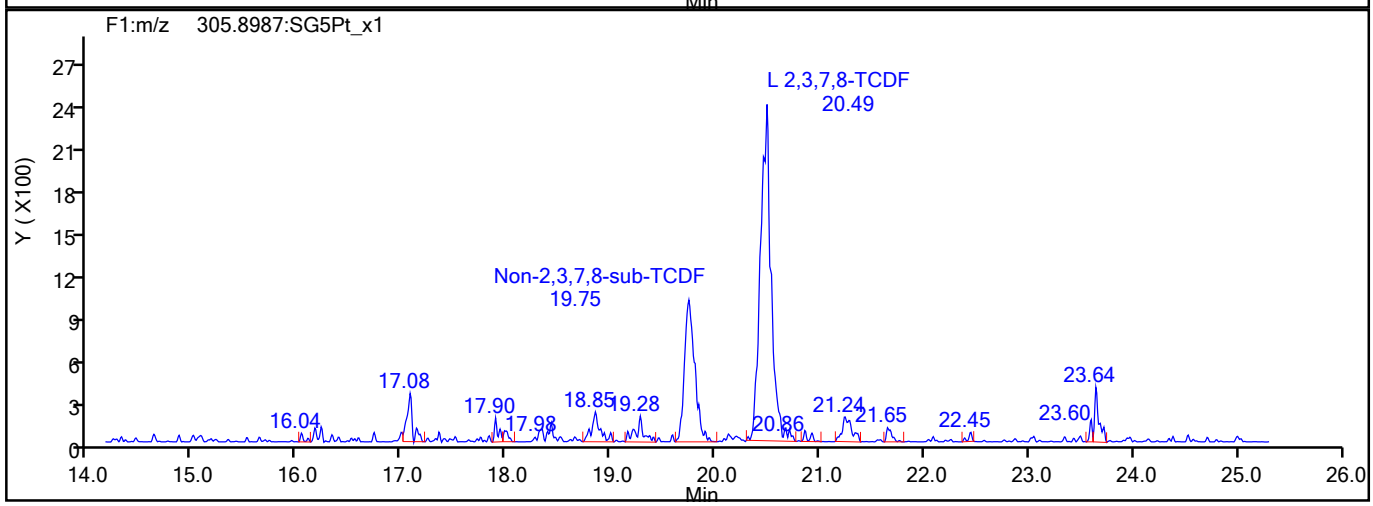

TCDF Interference Mass

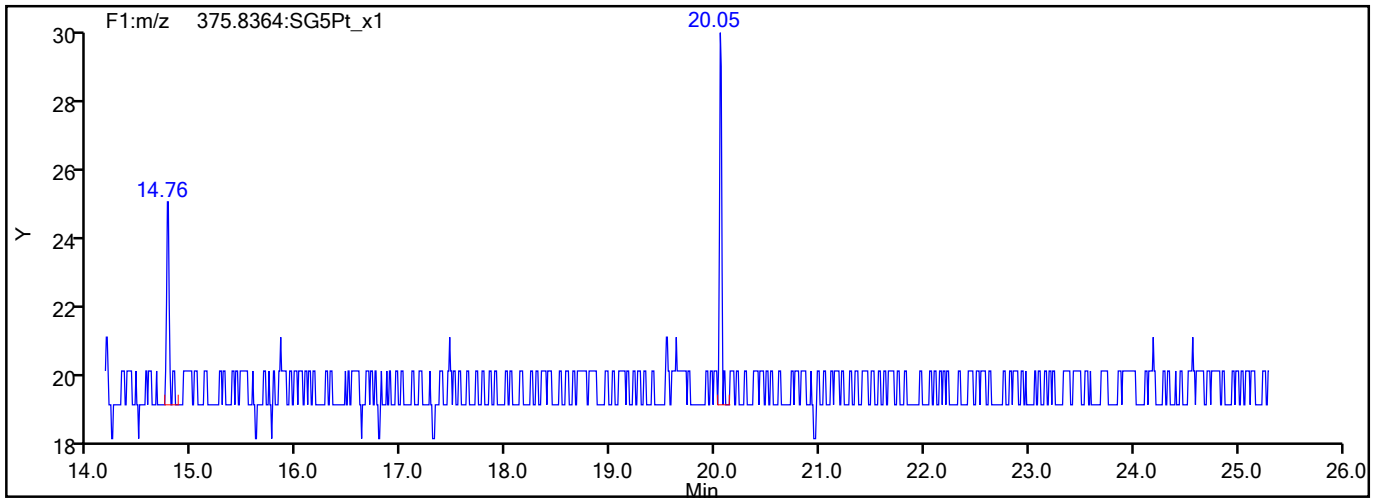

782578

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Injection Date:	18-Aug-2021 18:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

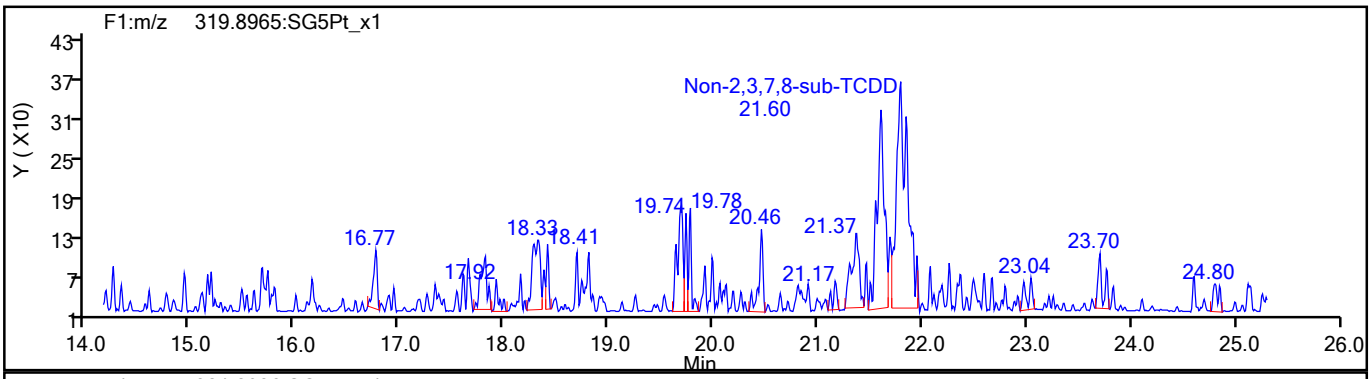

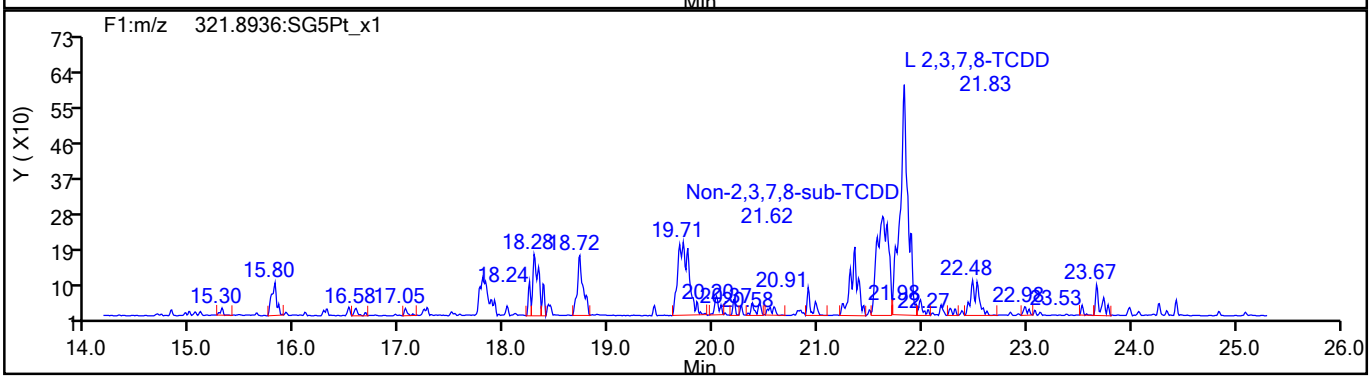

TCDD Standards

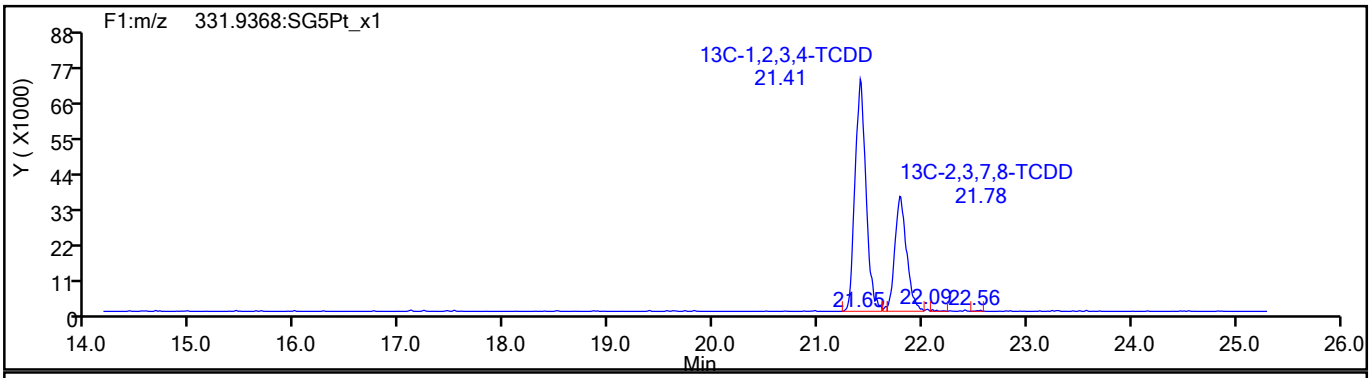

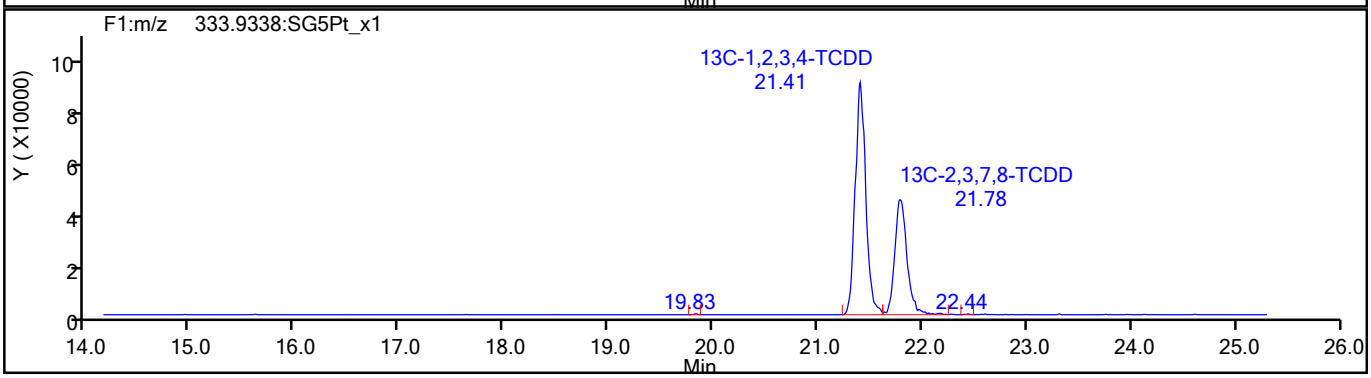

782579

Report Date: 20-Aug-2021 09:17:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Injection Date:	18-Aug-2021 18:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

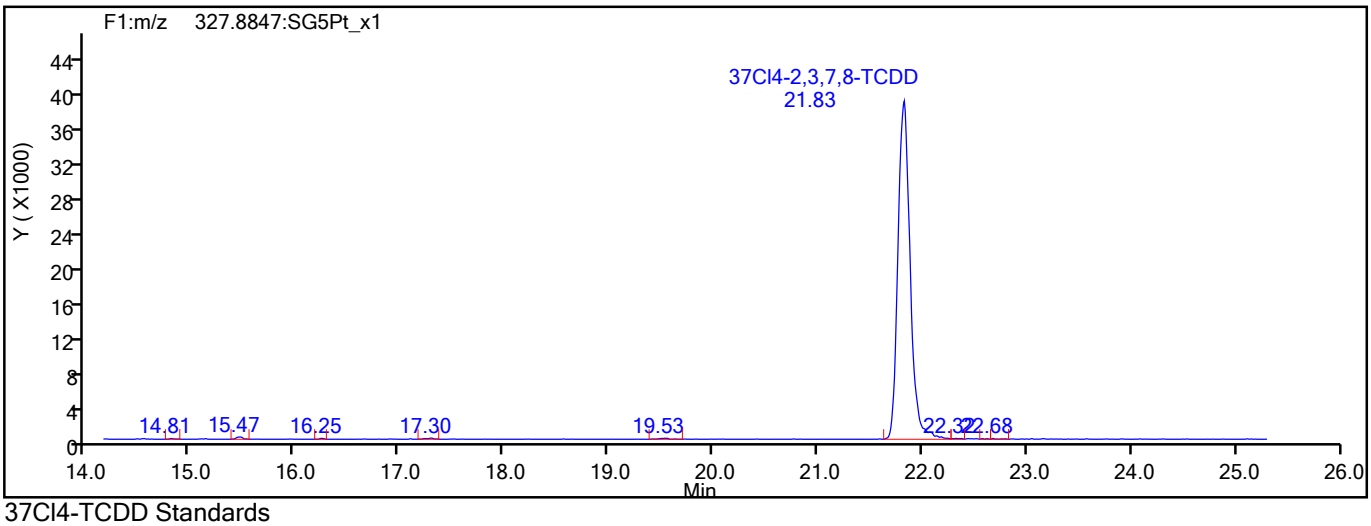

37Cl4-TCDD Standards

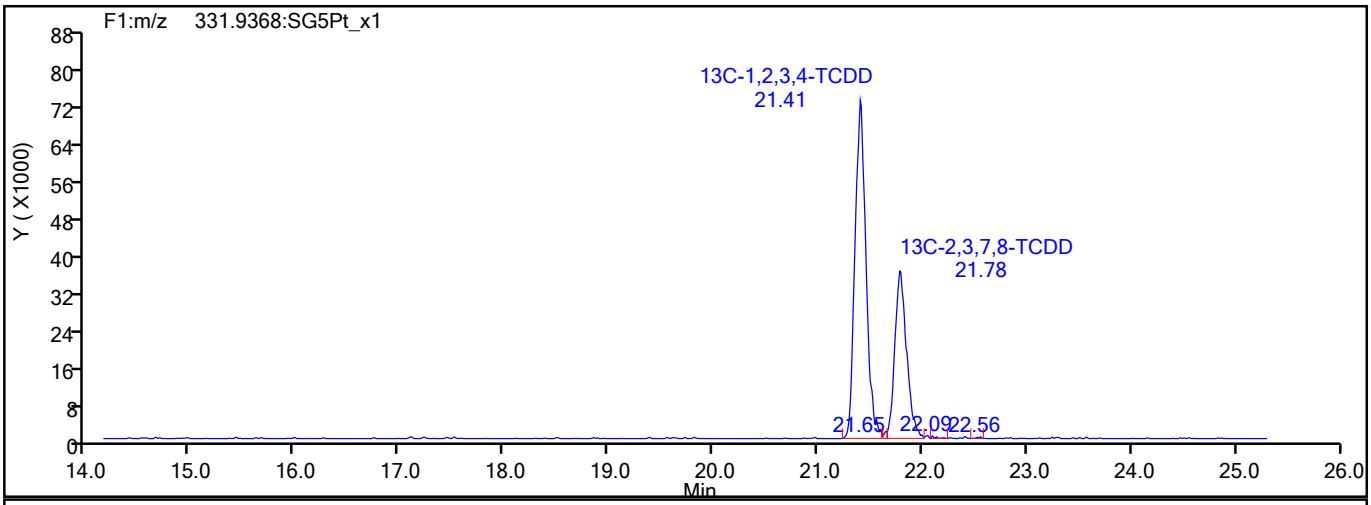

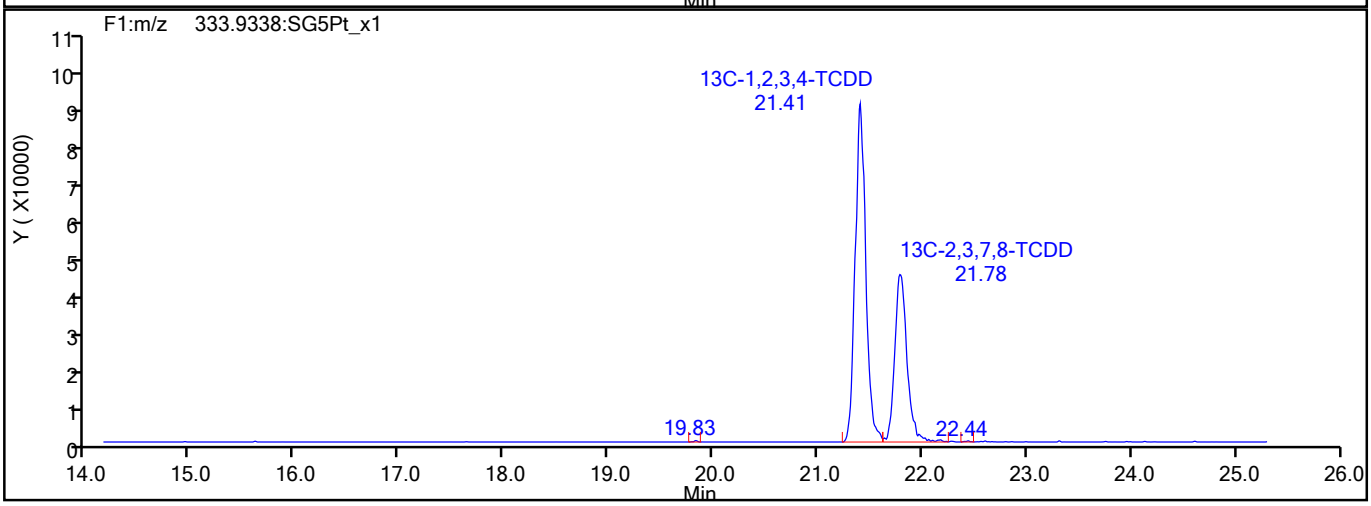

782580

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Injection Date:	18-Aug-2021 18:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

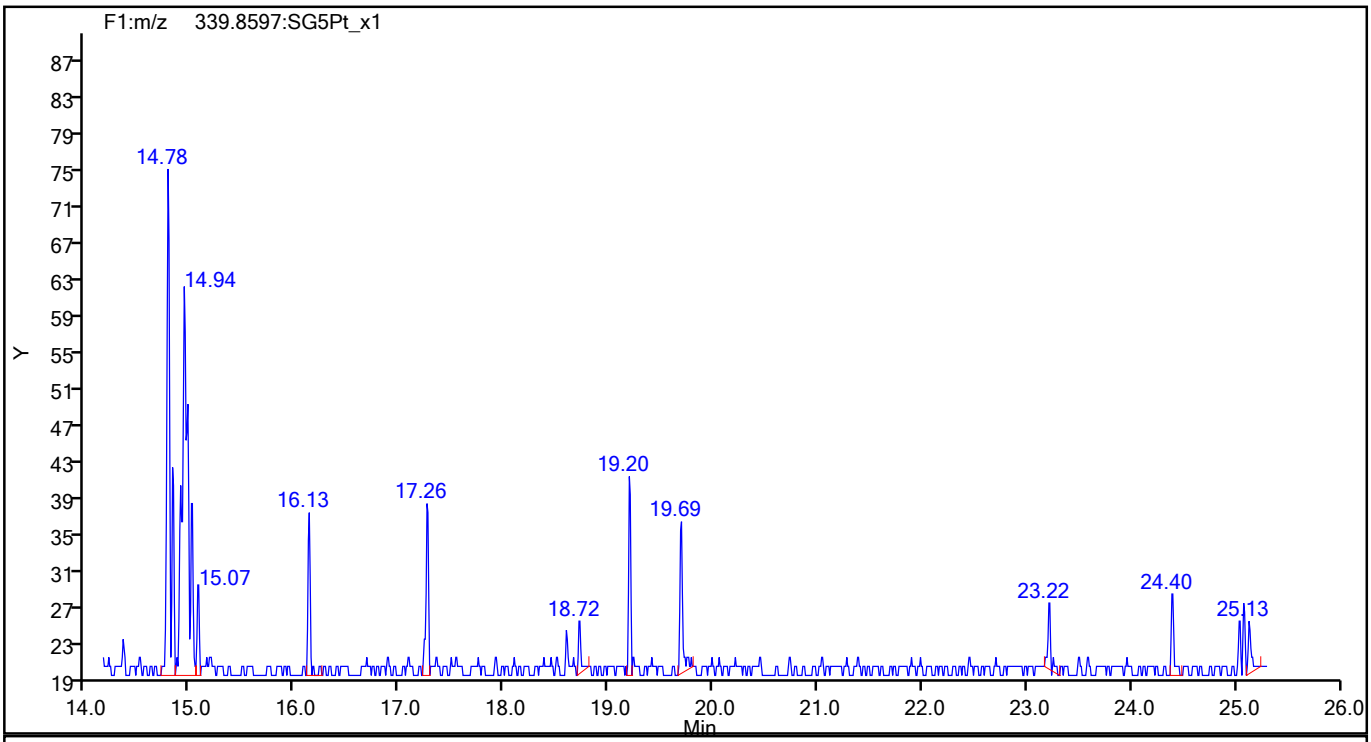

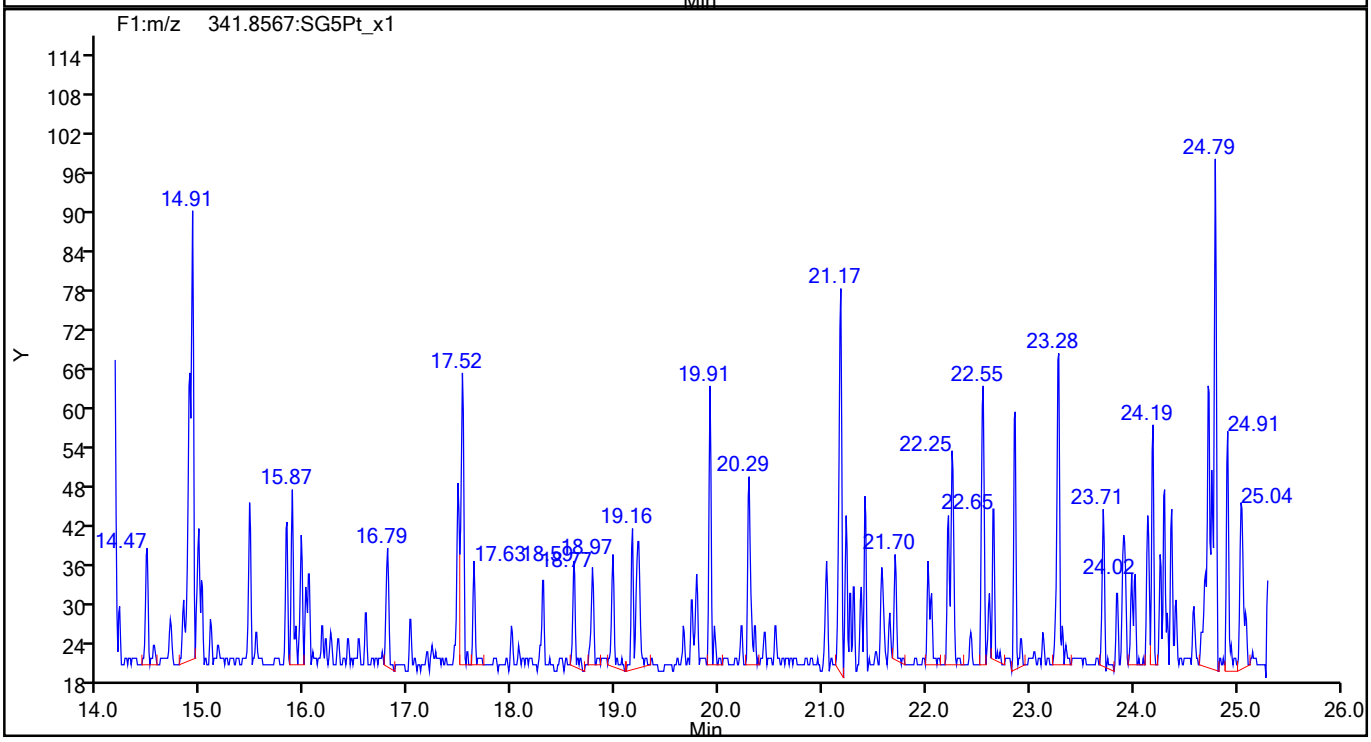

782581

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Injection Date:	18-Aug-2021 18:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

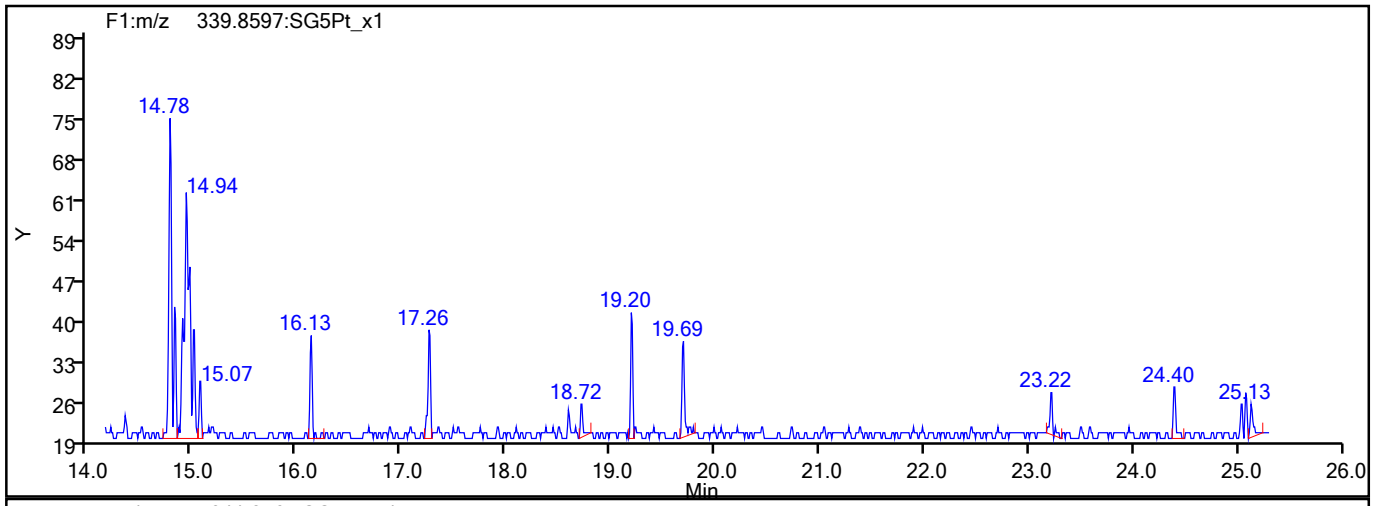

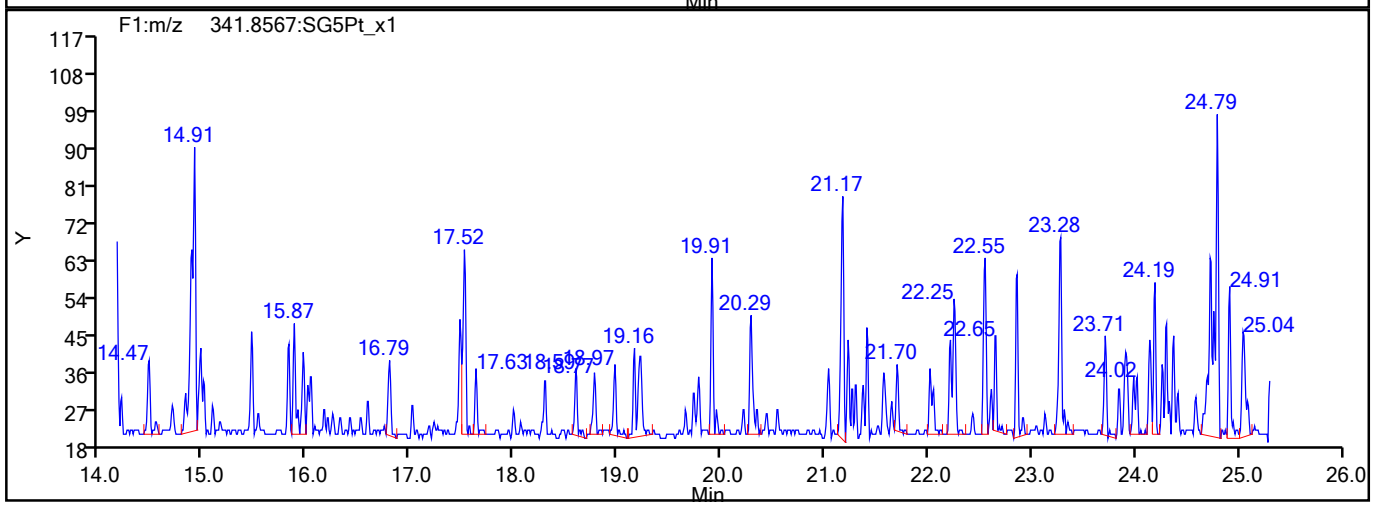

F1 PeCDFs Interference Mass

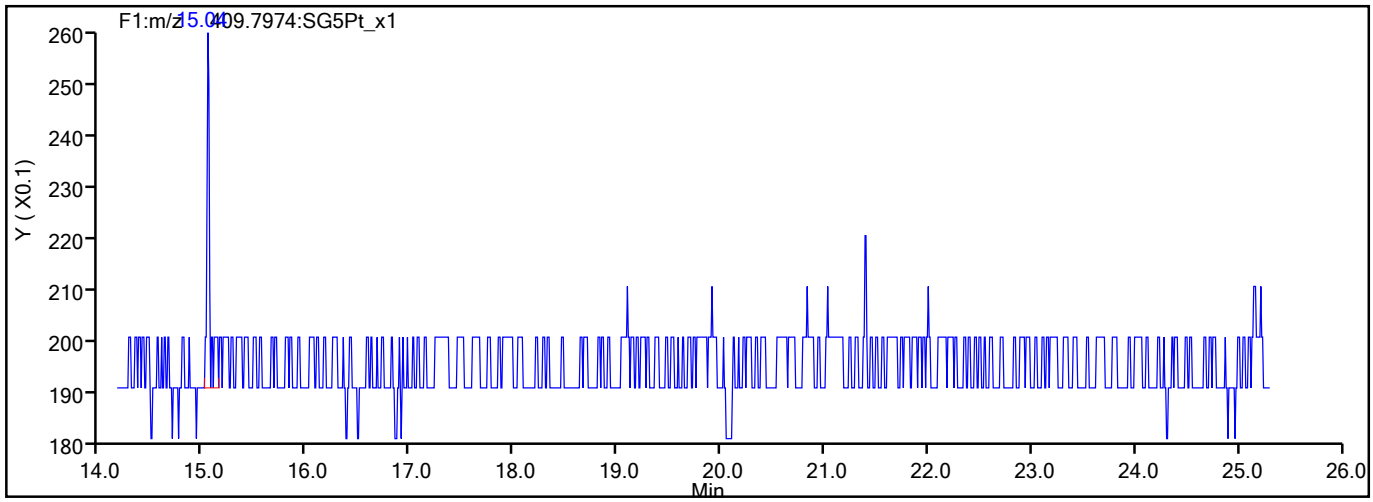

782582

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Injection Date:	18-Aug-2021 18:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

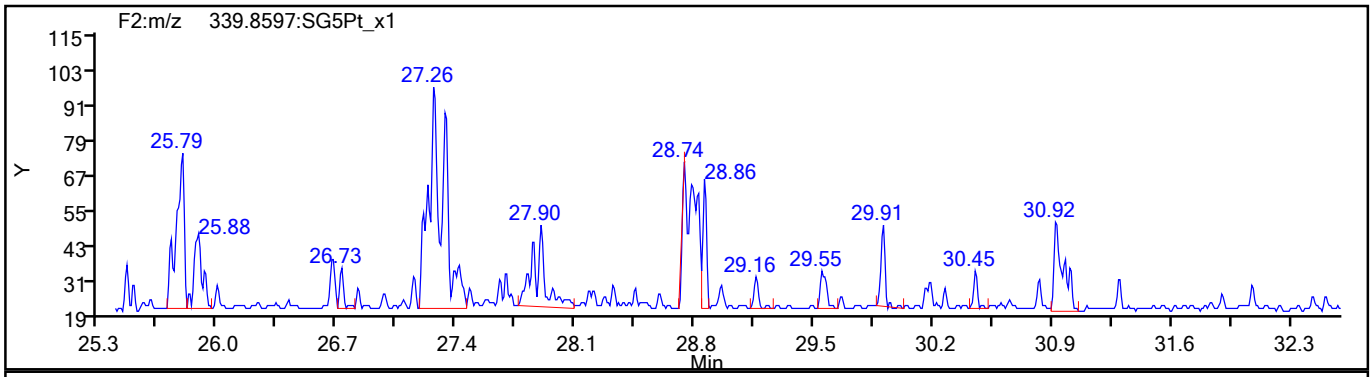

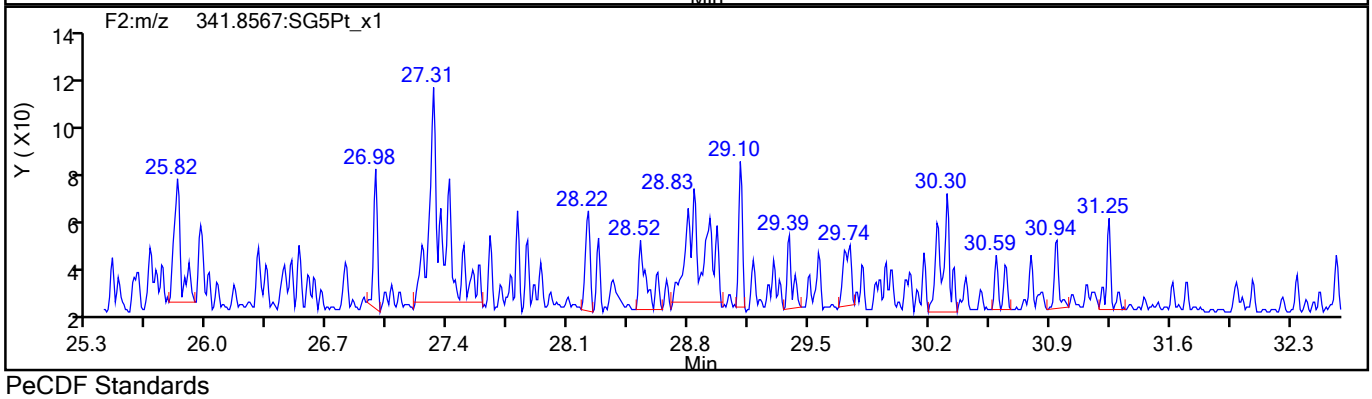

PeCDF Standards

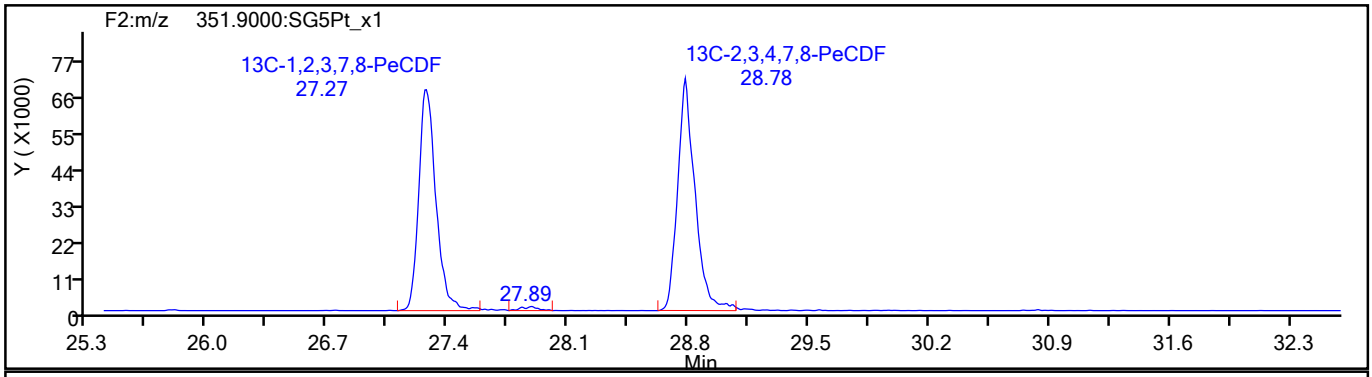

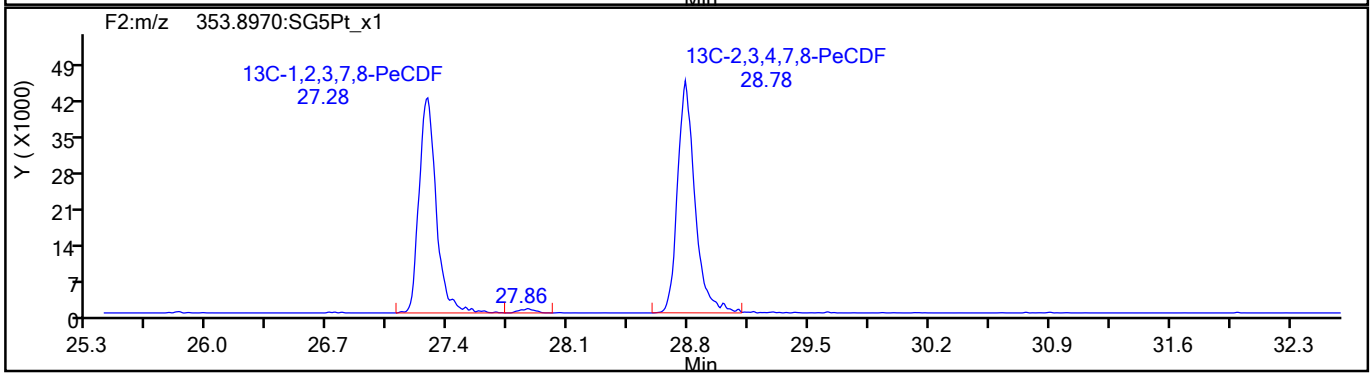

782583

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Injection Date:	18-Aug-2021 18:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

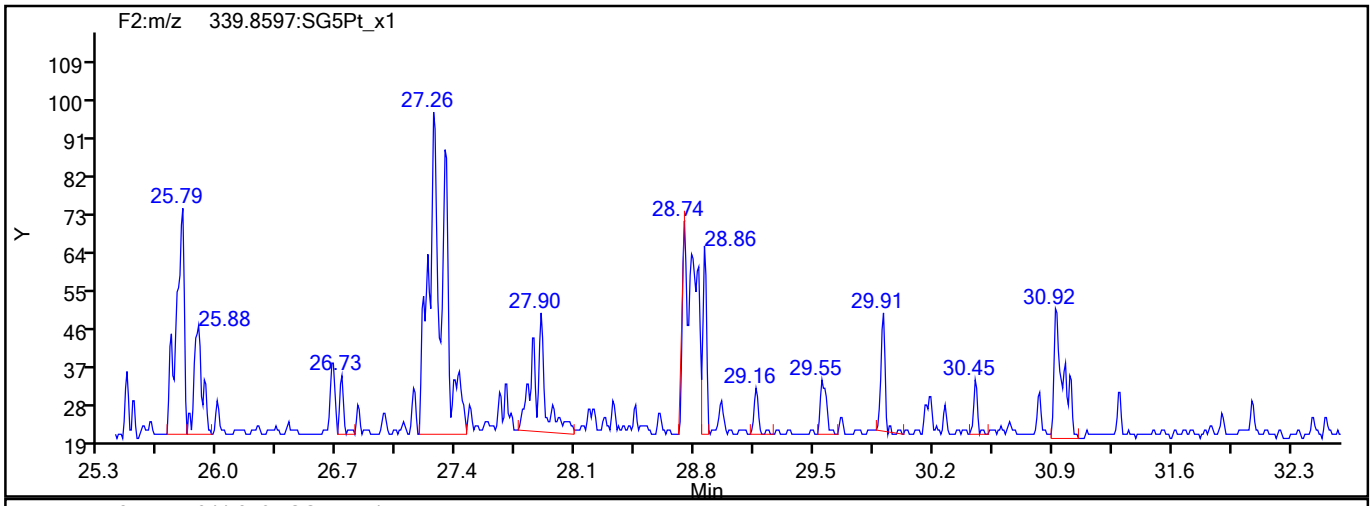

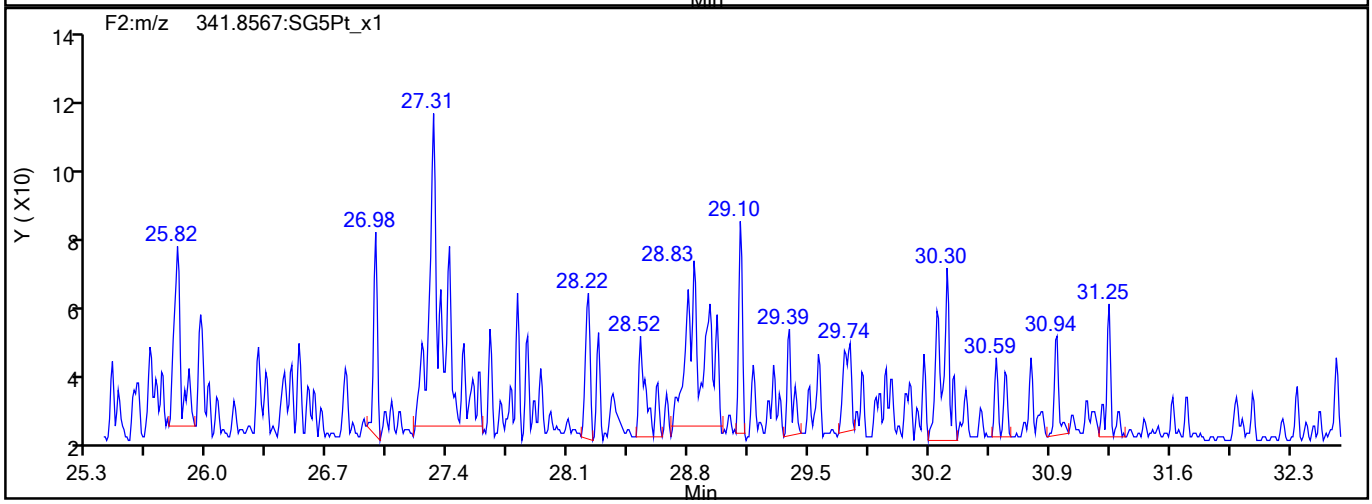

PeCDF Interference Mass

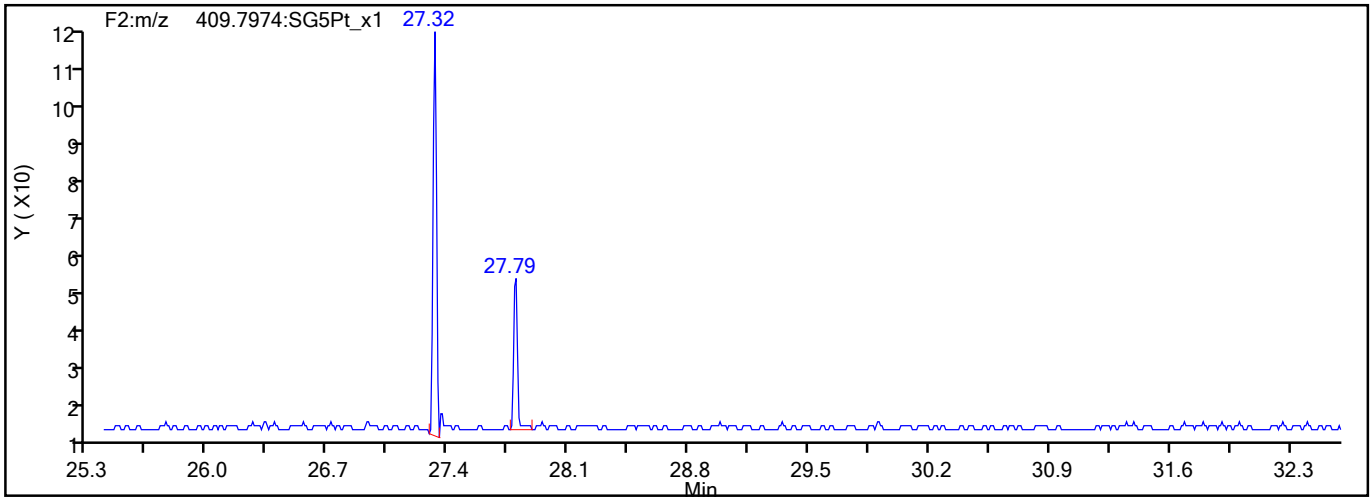

782584

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

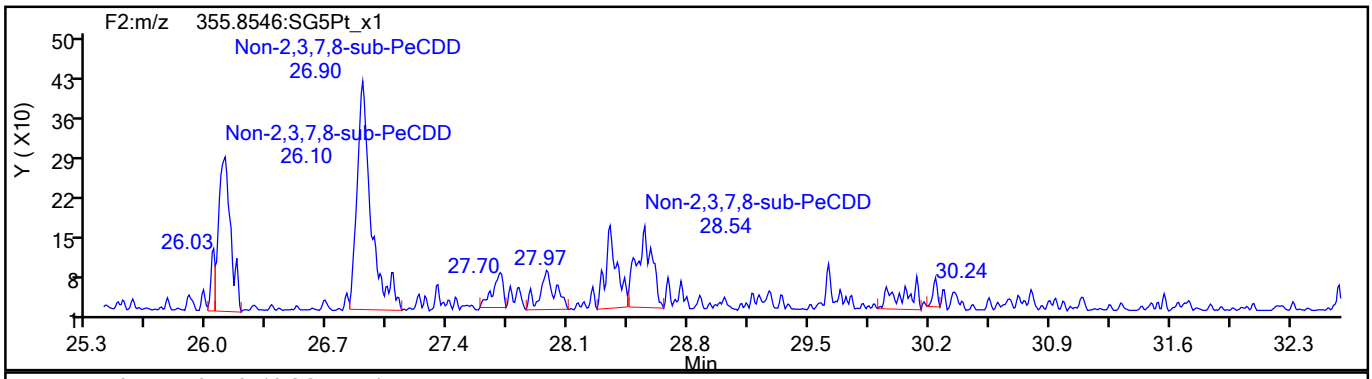

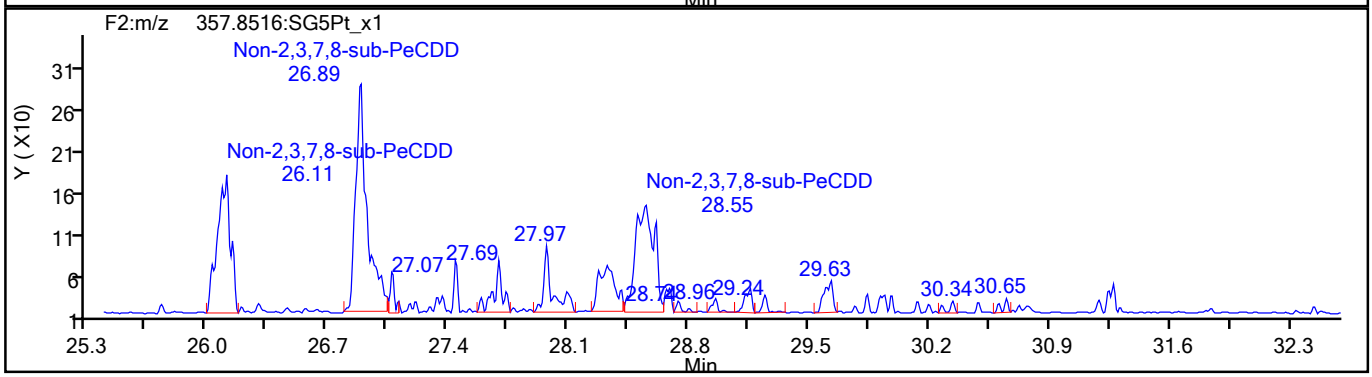

PeCDD Standards

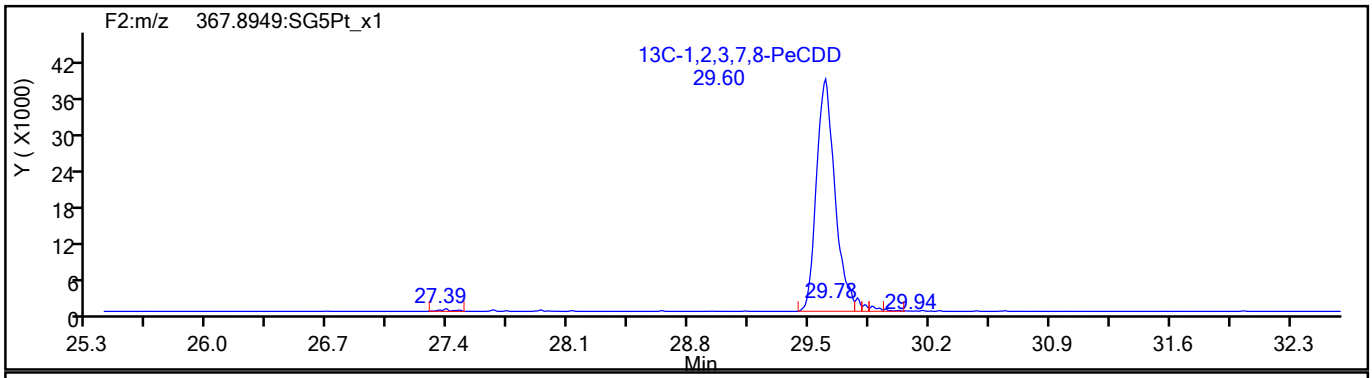

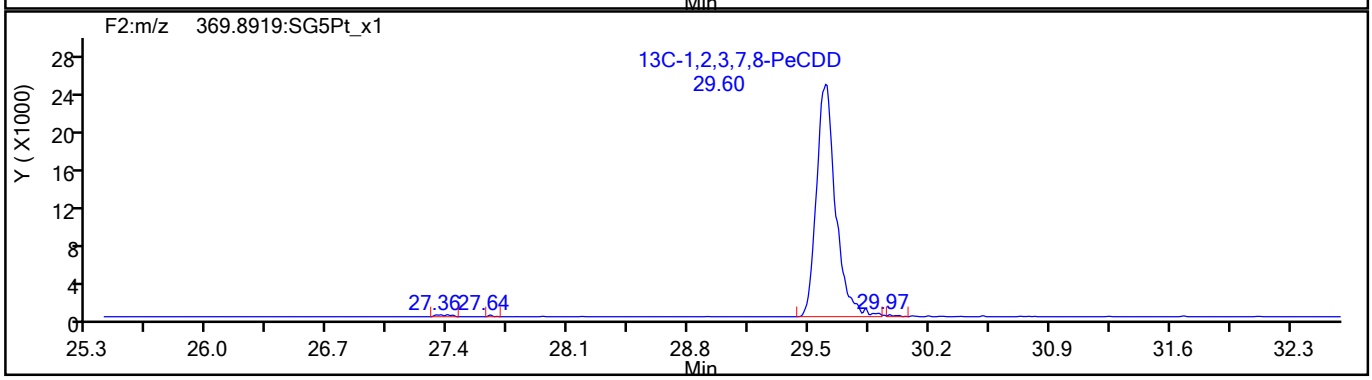

782585

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

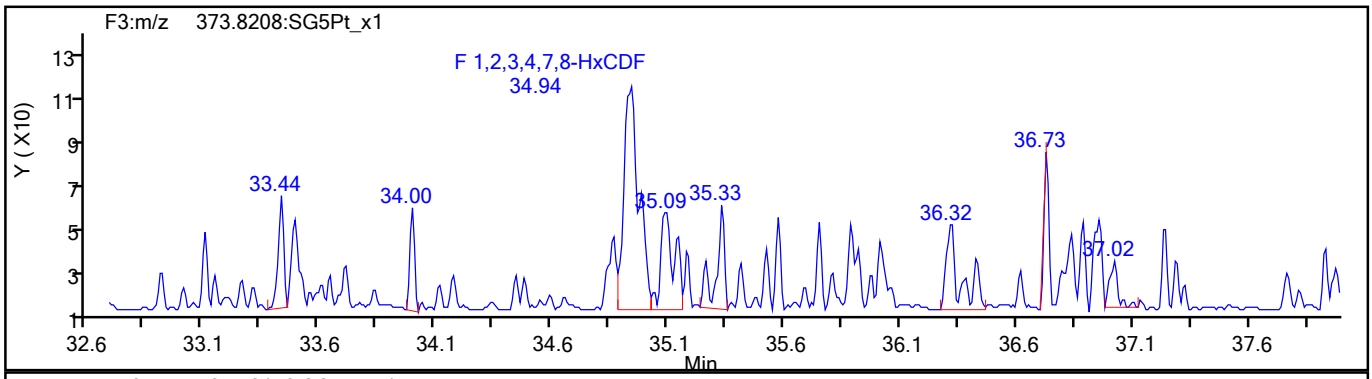

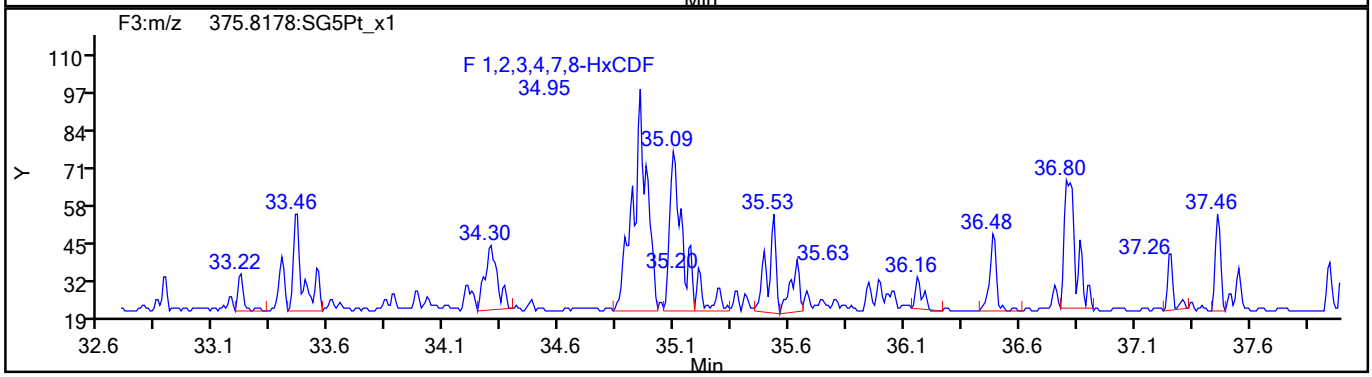

HxCDF Standards

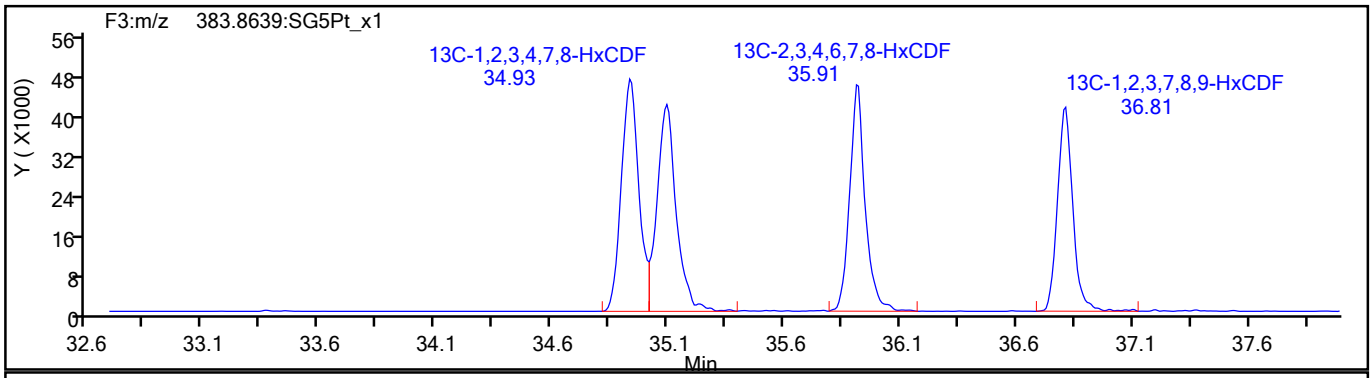

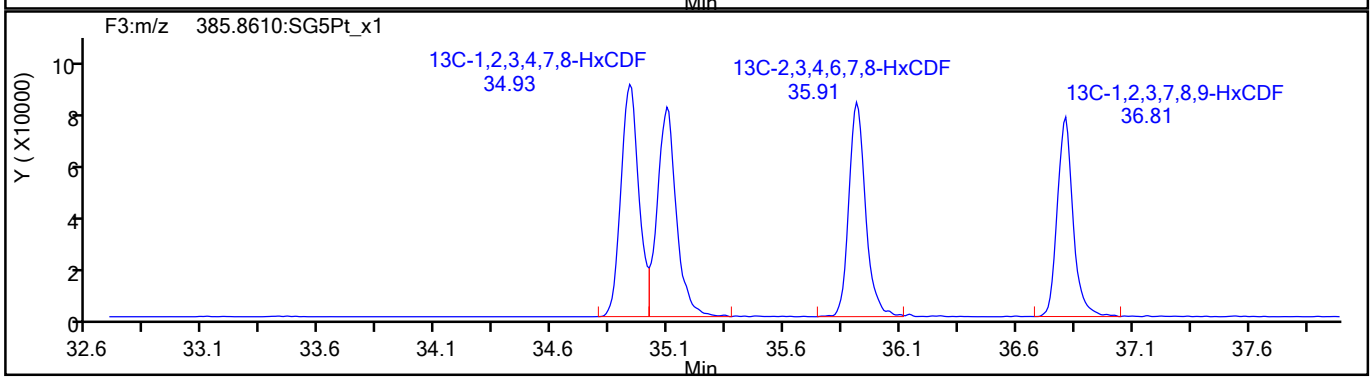

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Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

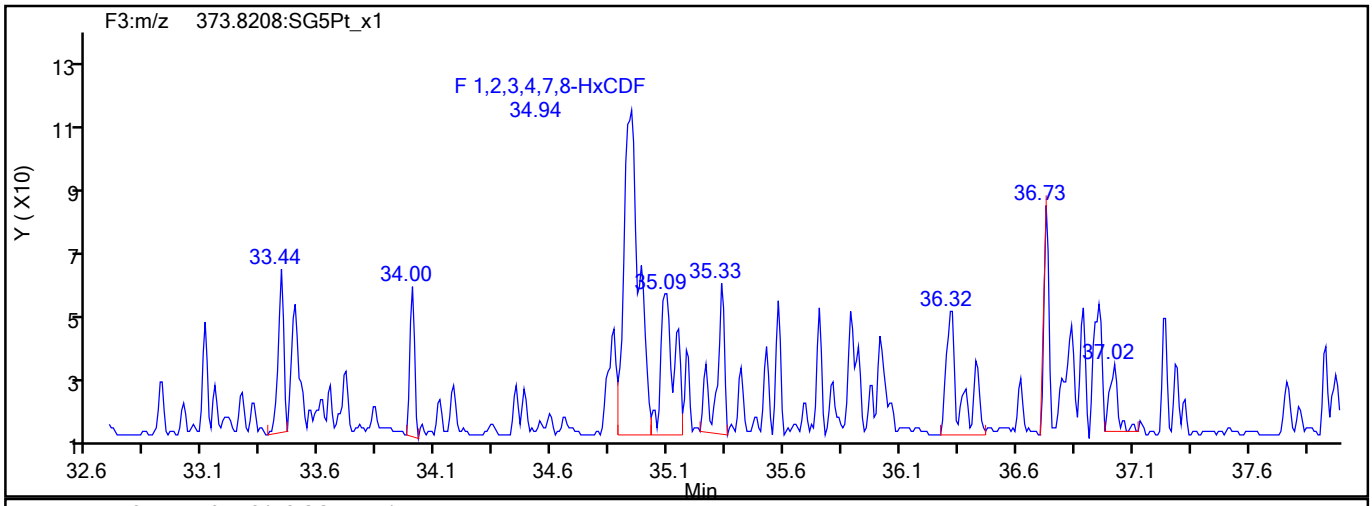

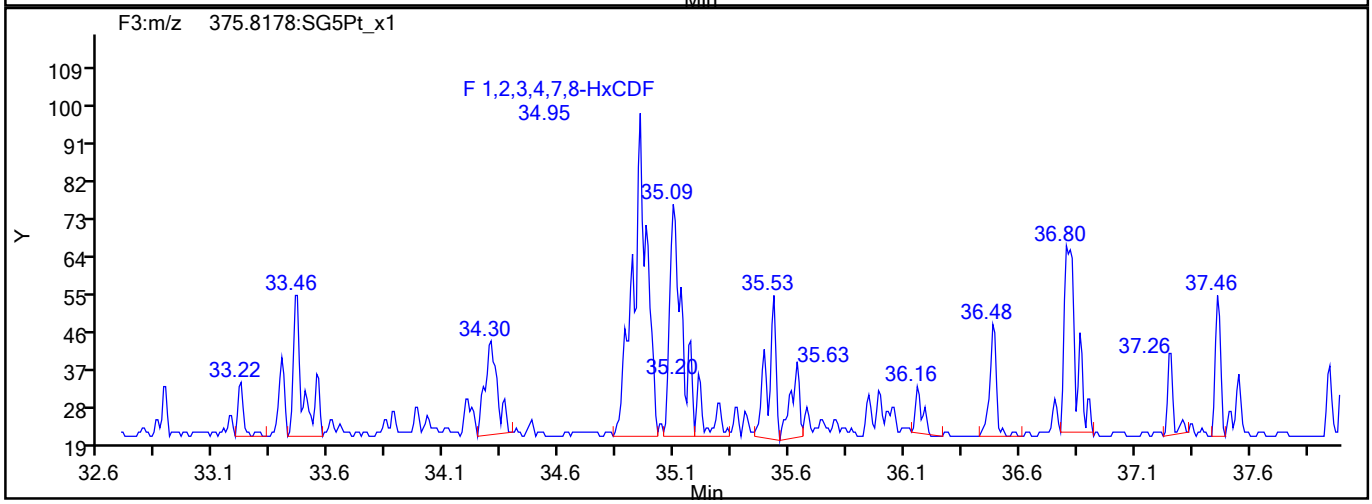

HxCDF Interference Mass

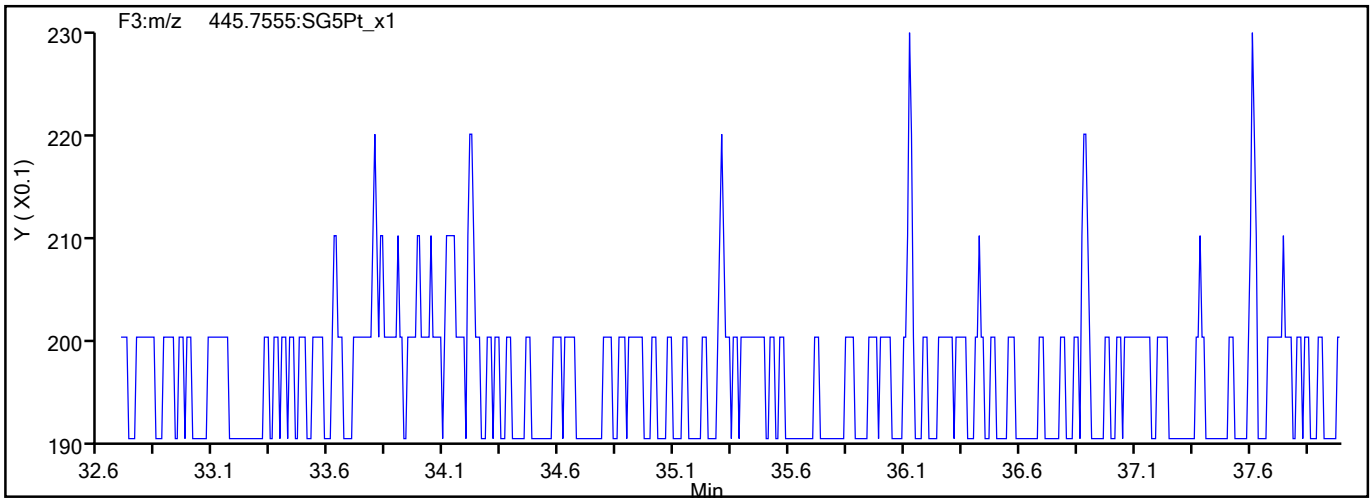

782587

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

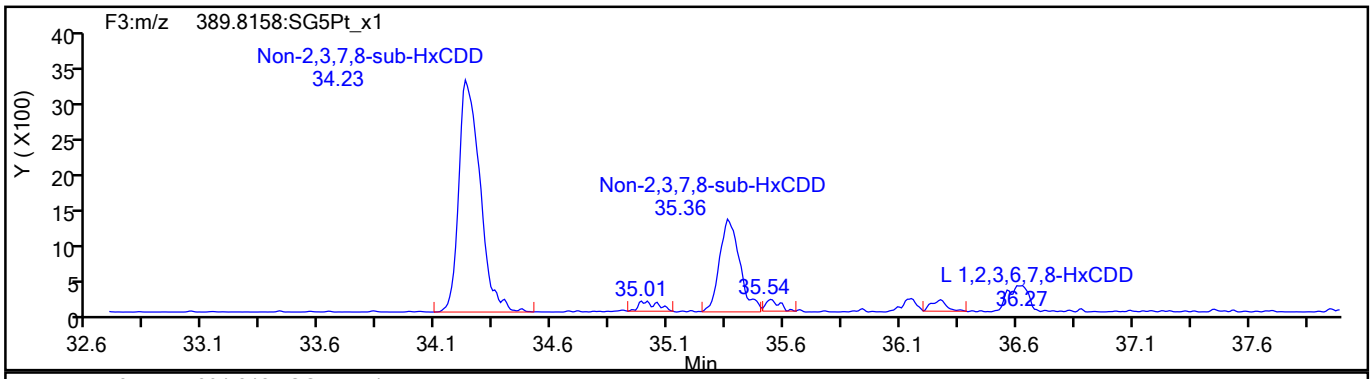

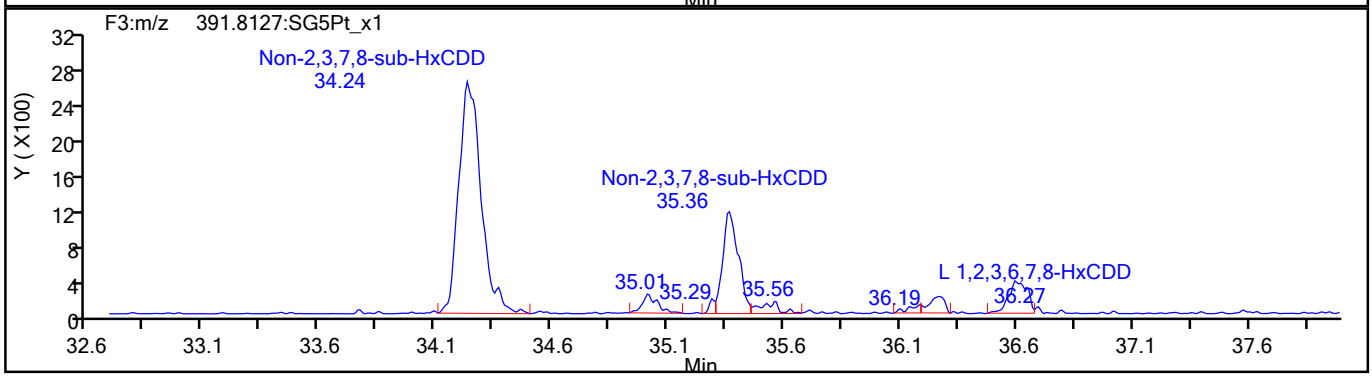

HxCDD Standards

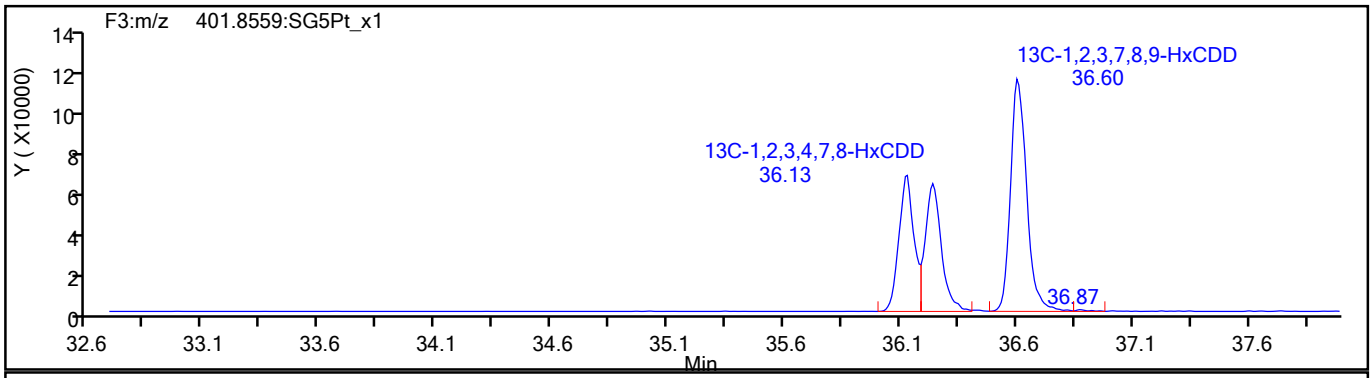

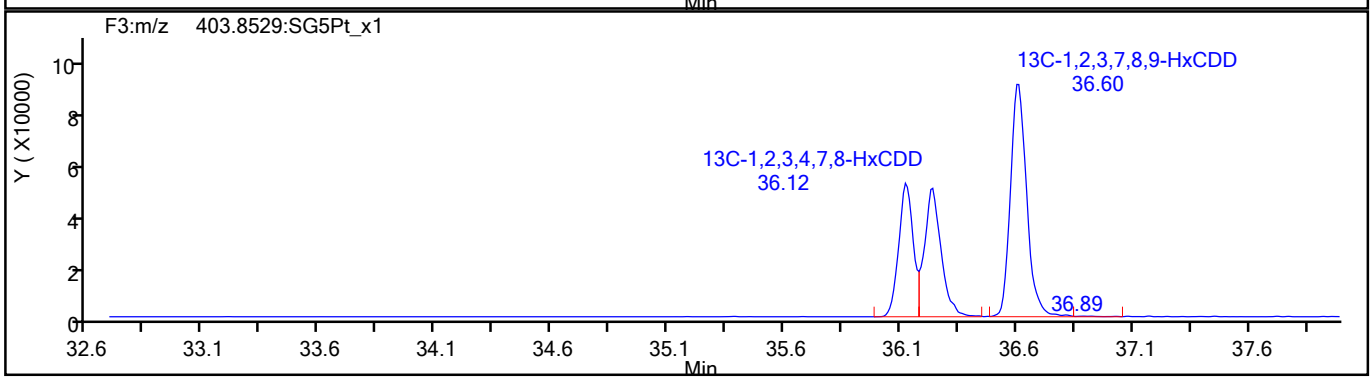

782588

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

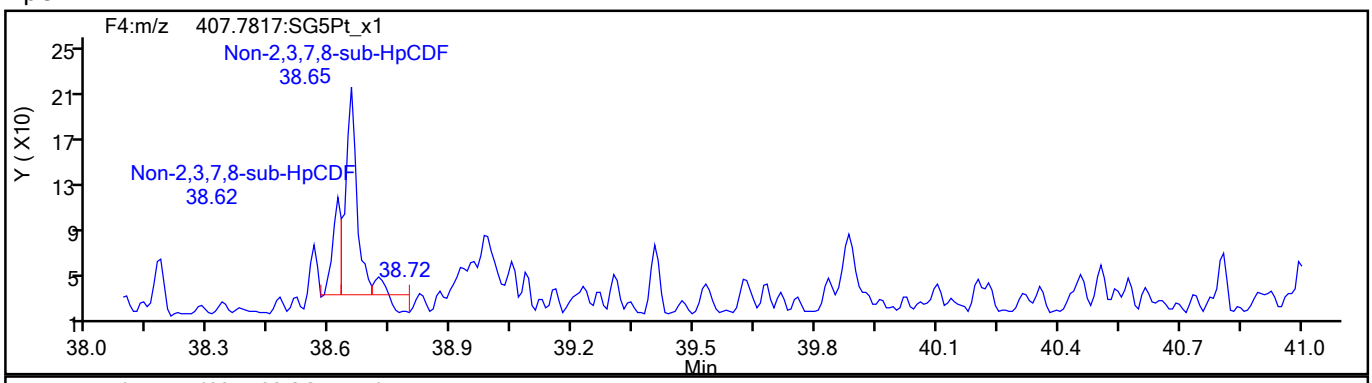

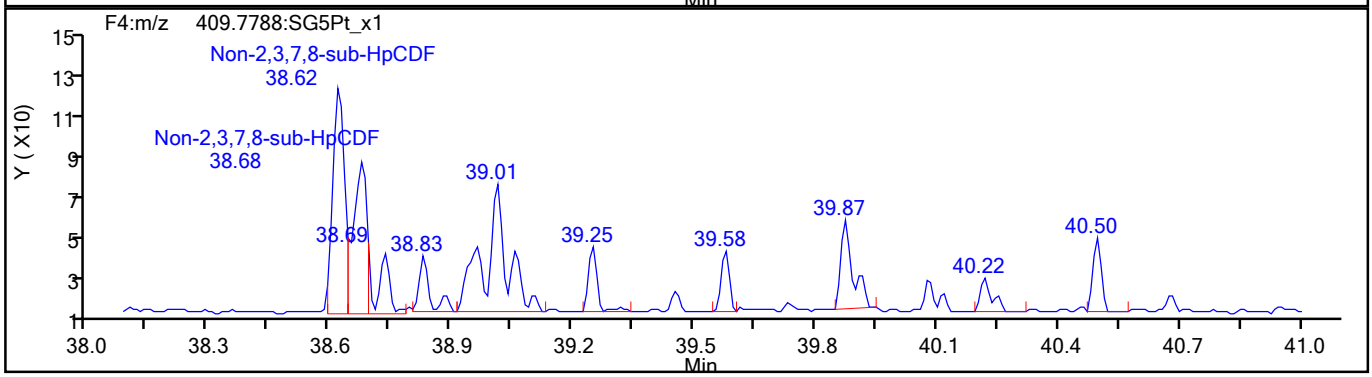

HpCDF Standards

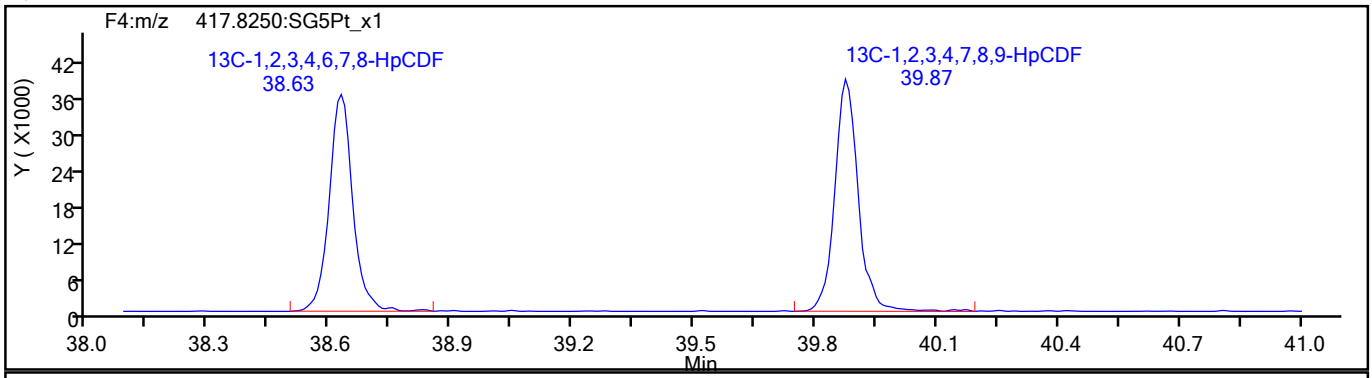

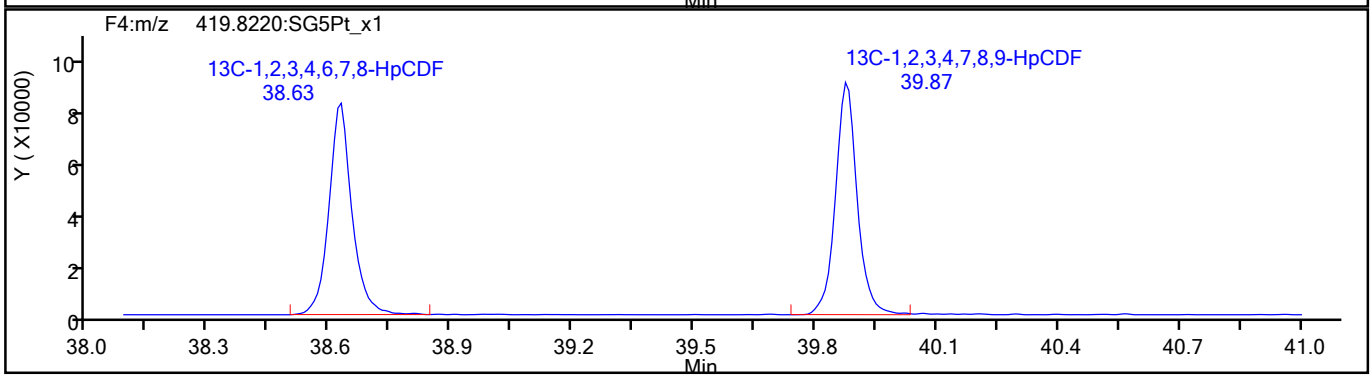

782589

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
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HpCDF

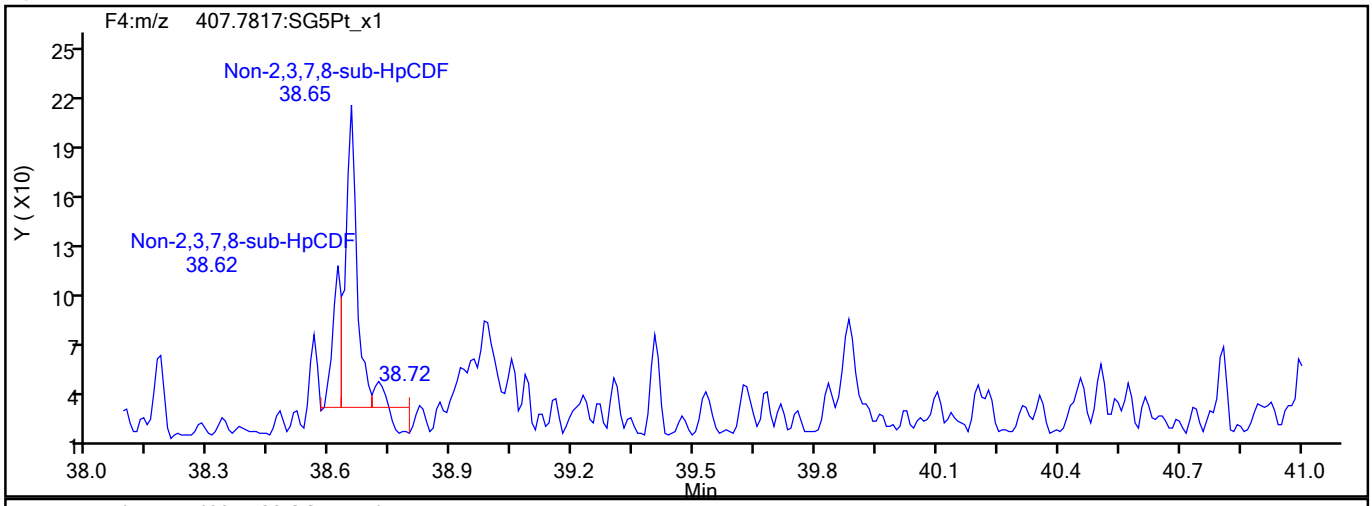

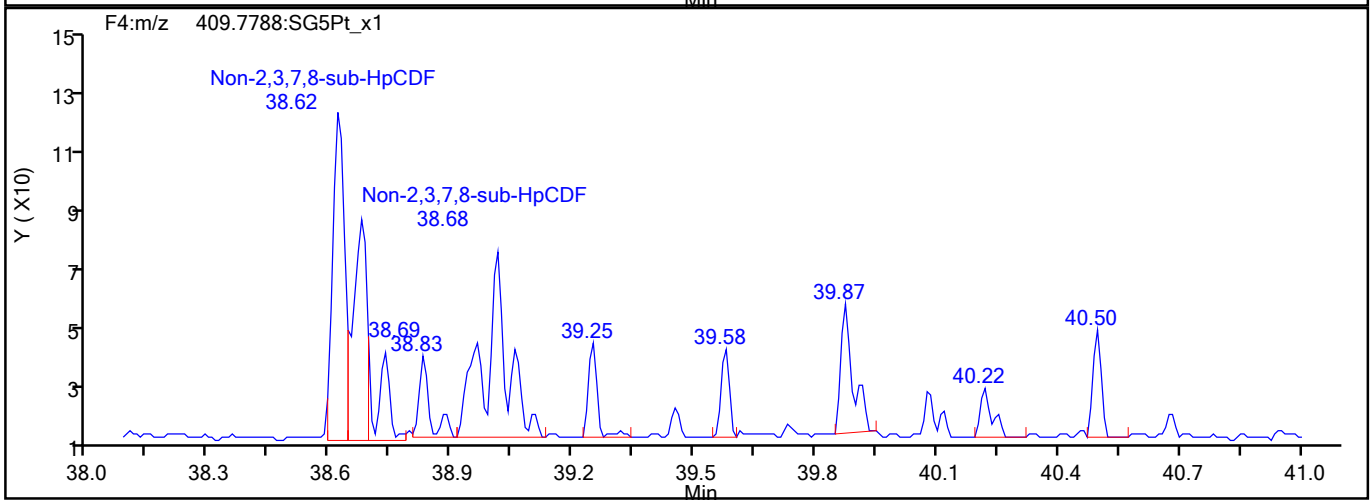

HpCDF Interference Mass

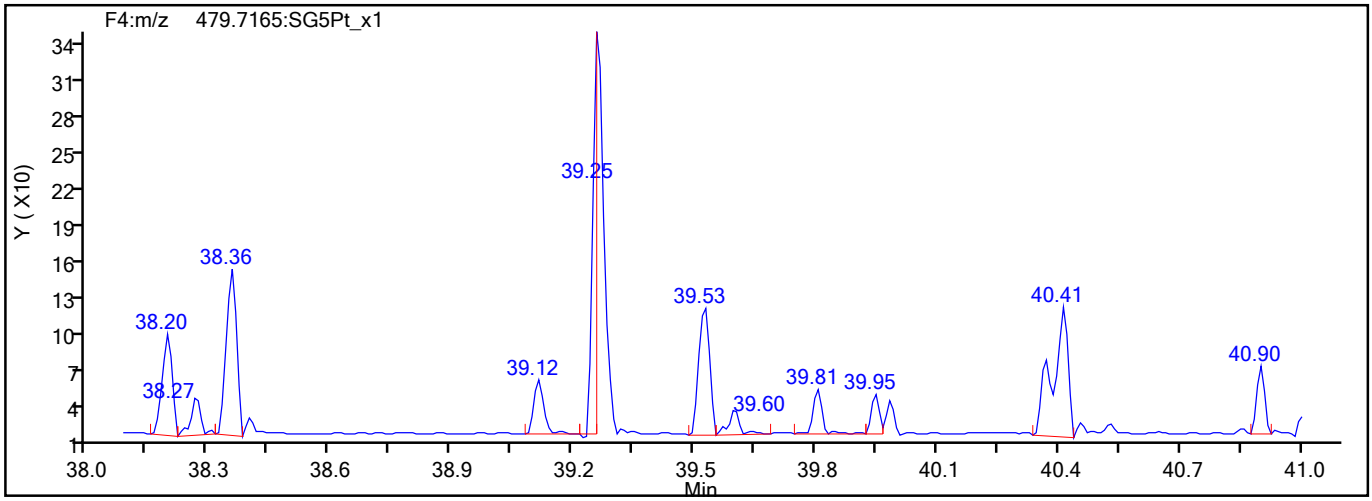

782590

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDD

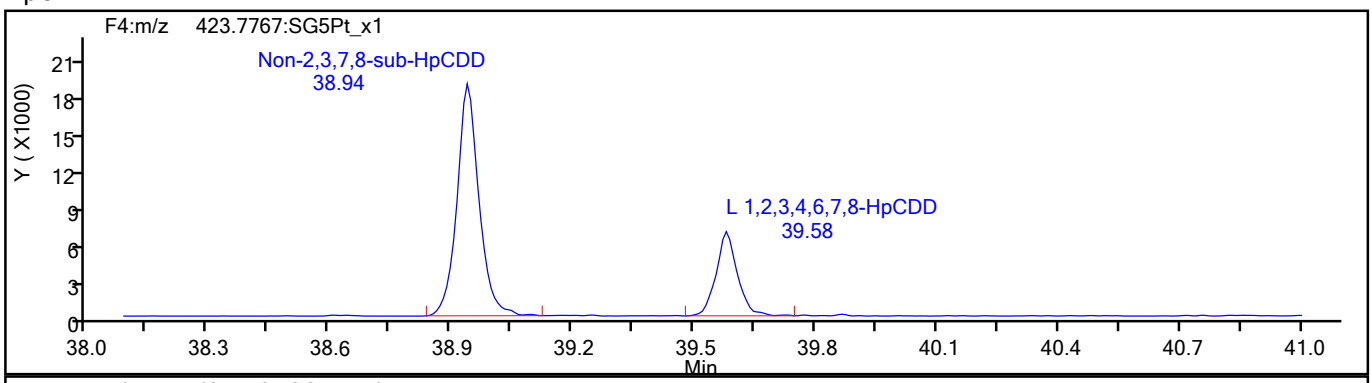

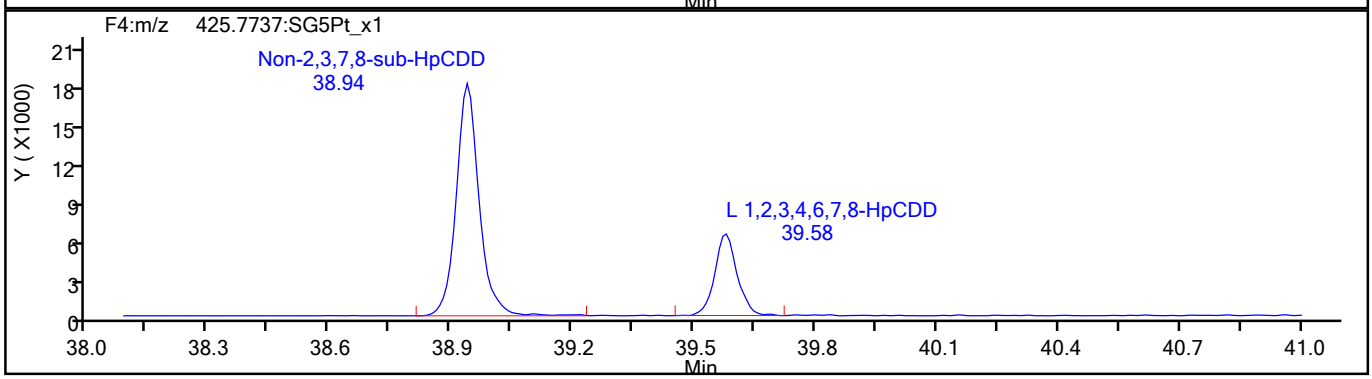

HpCDD Standards

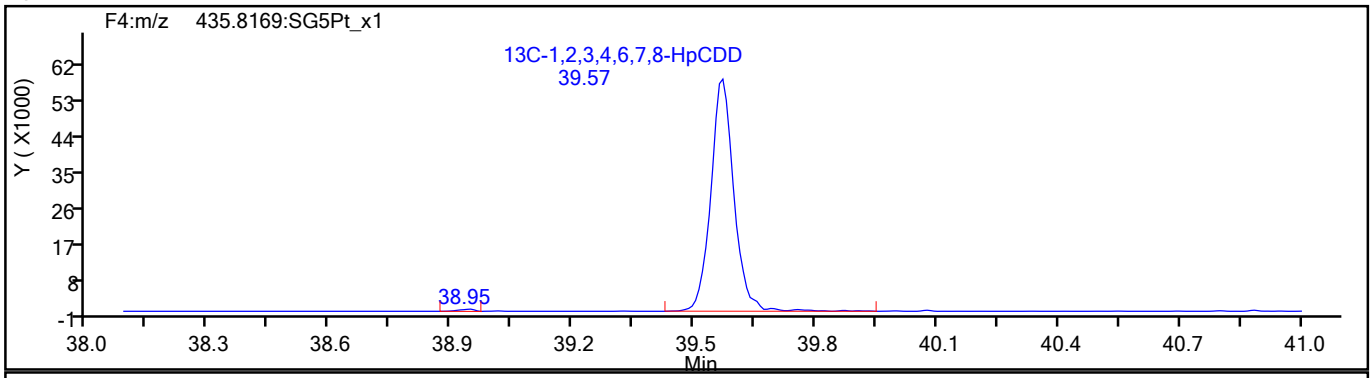

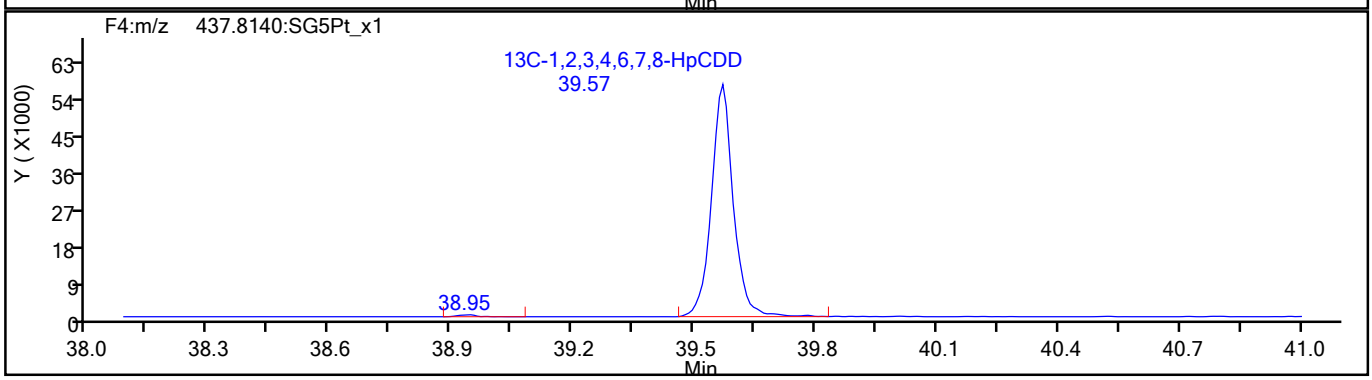

782591

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 18:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
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OCDF

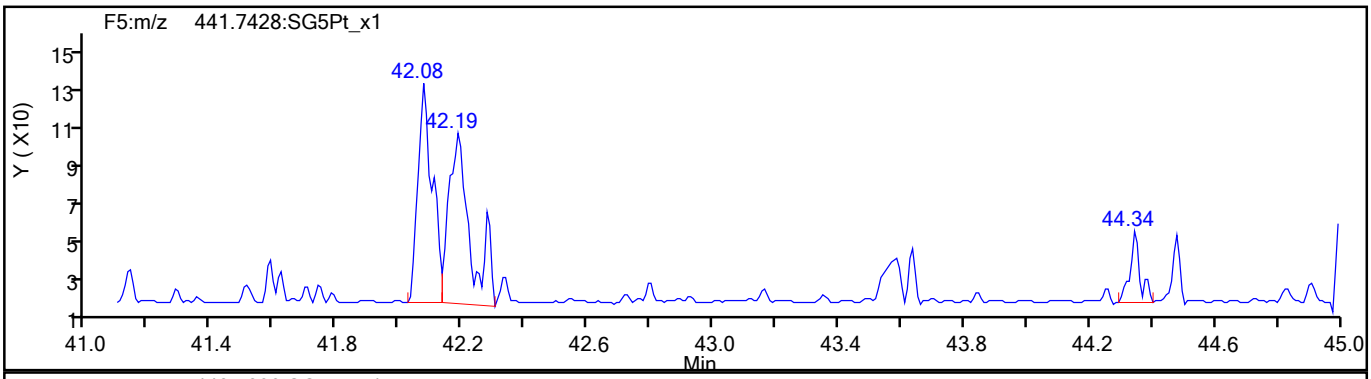

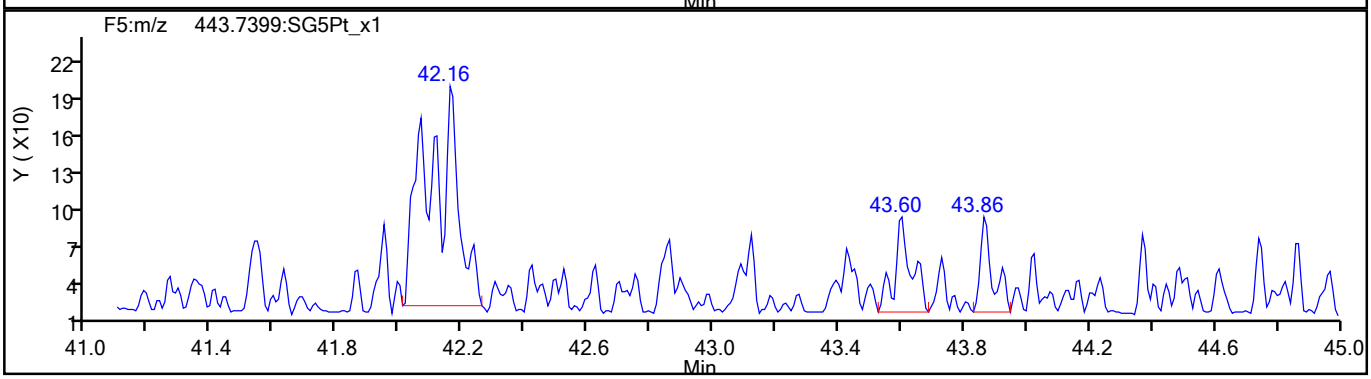

OCDF Standards

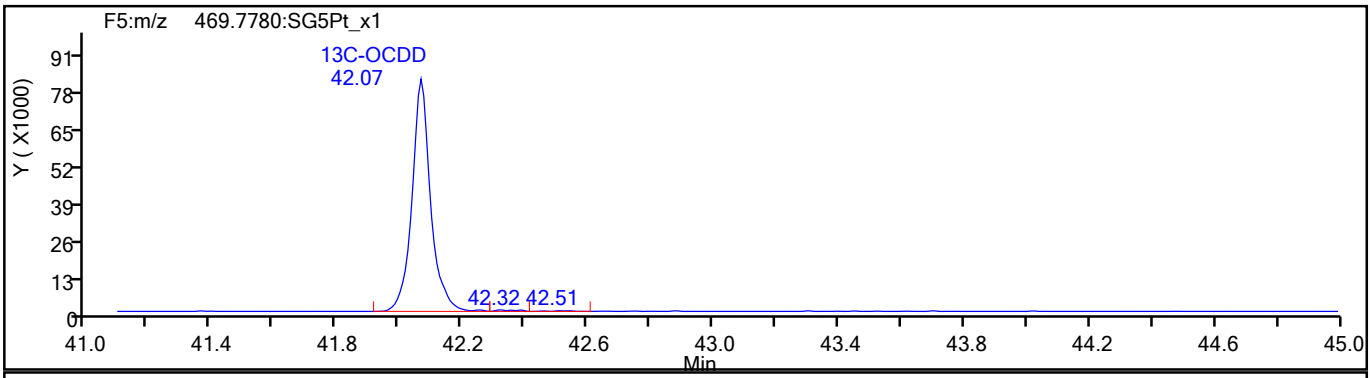

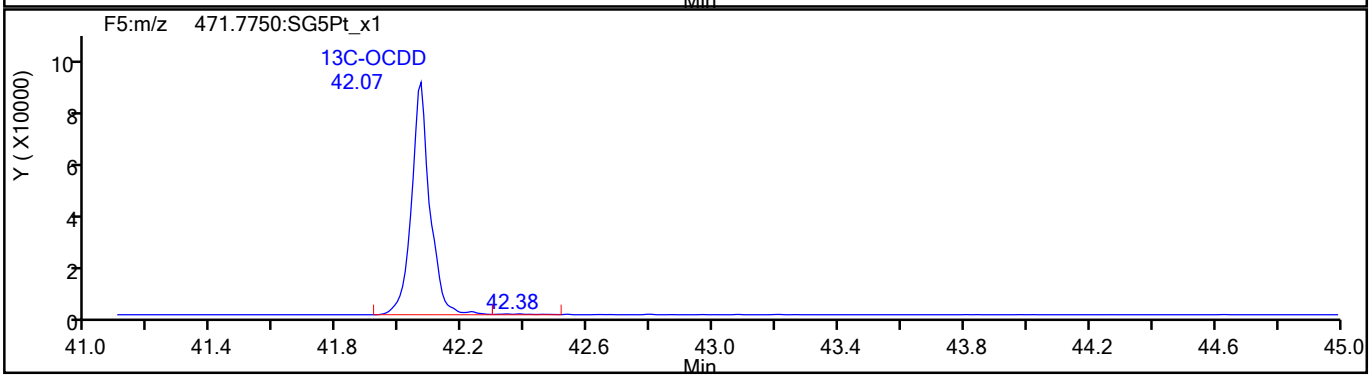

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Injection Date:	18-Aug-2021 18:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

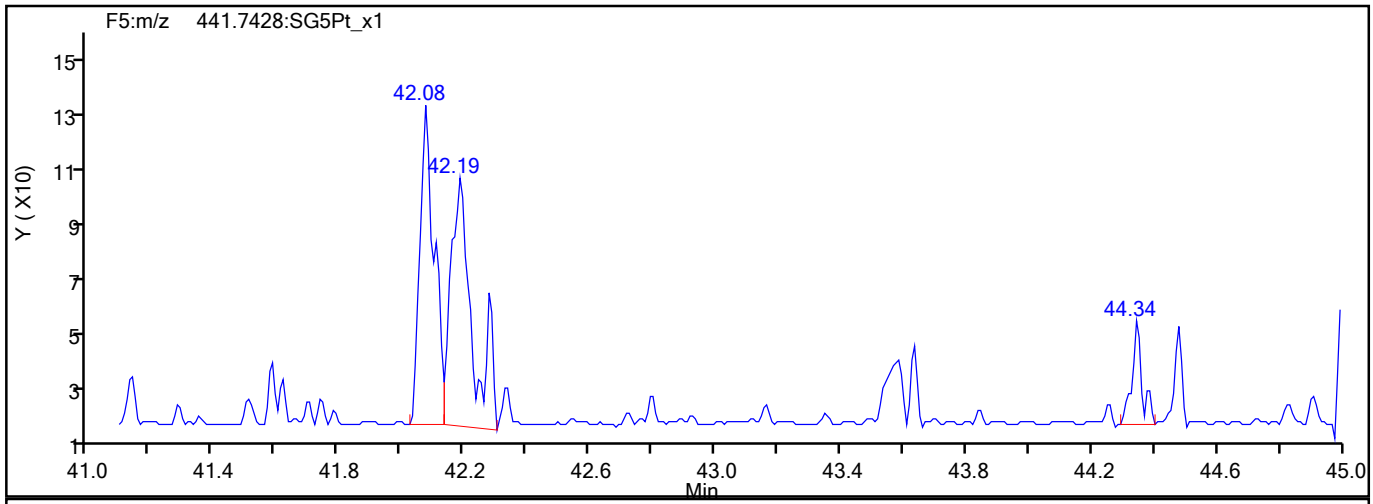

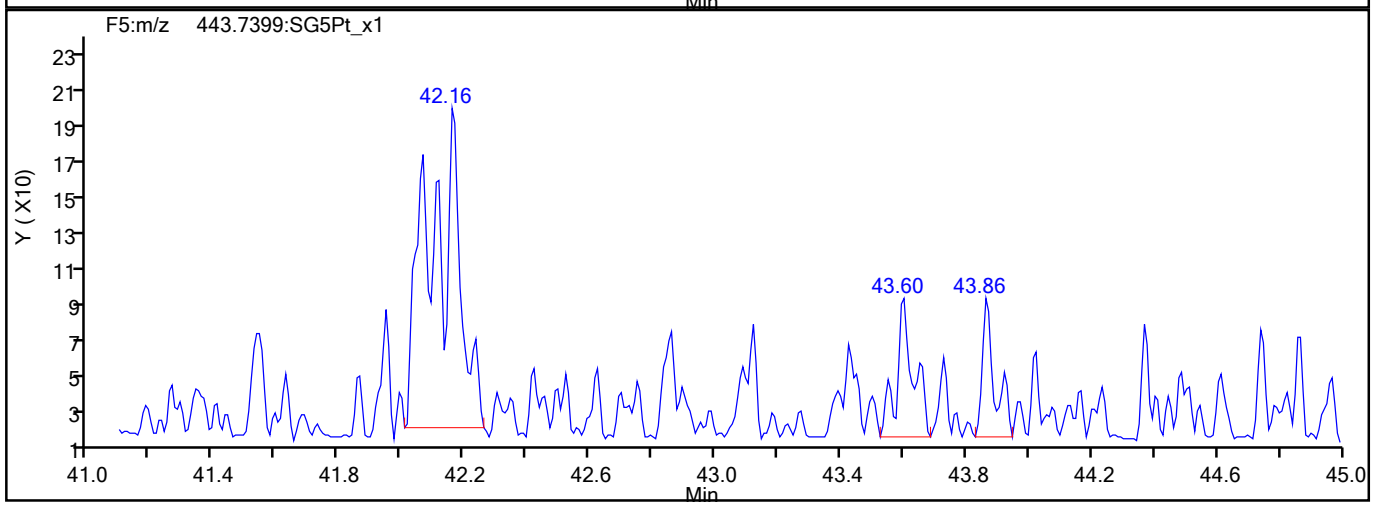

OCDF Interference Mass

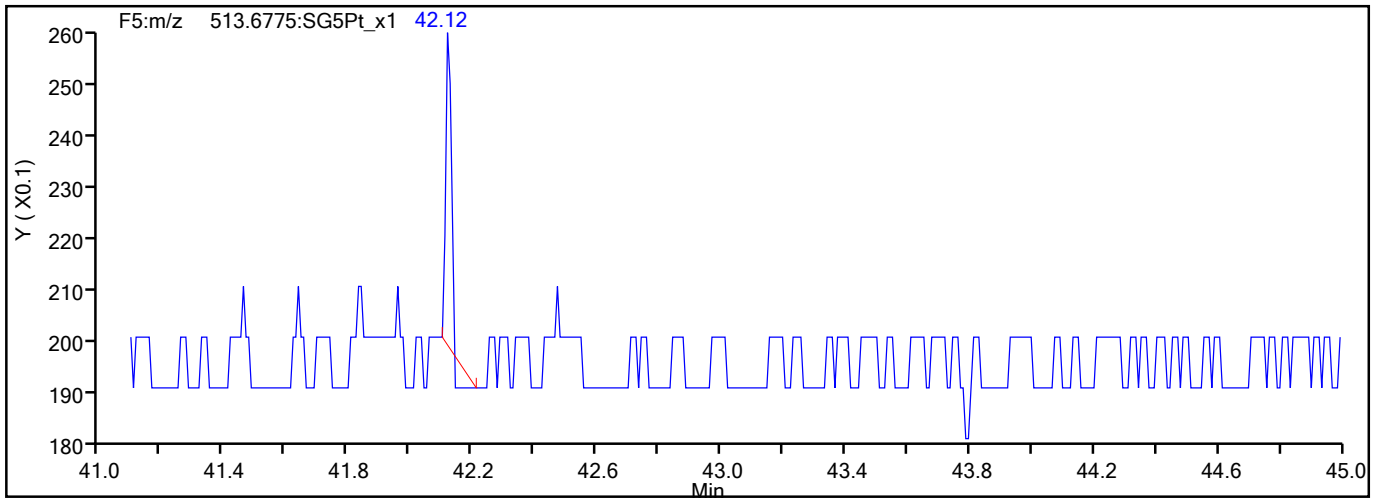

782593

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

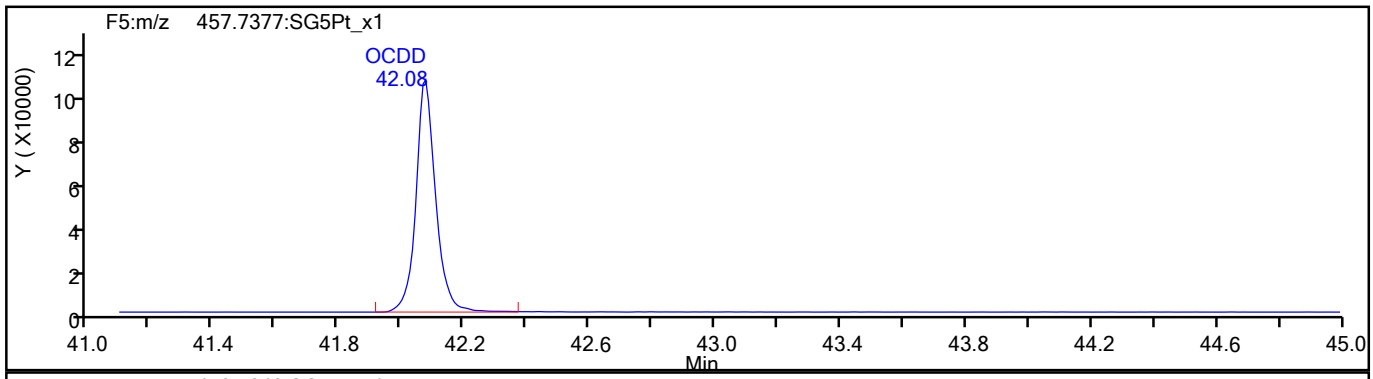

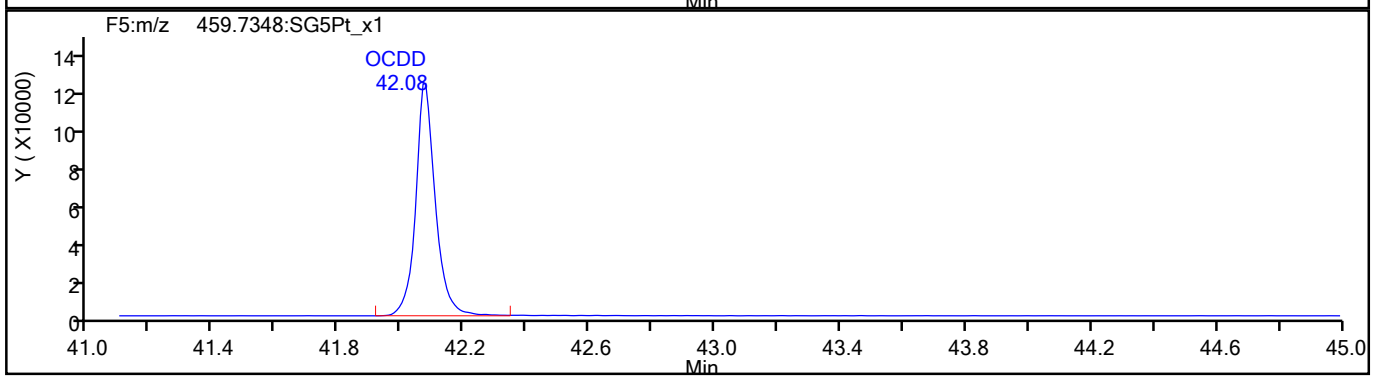

OCDD Standards

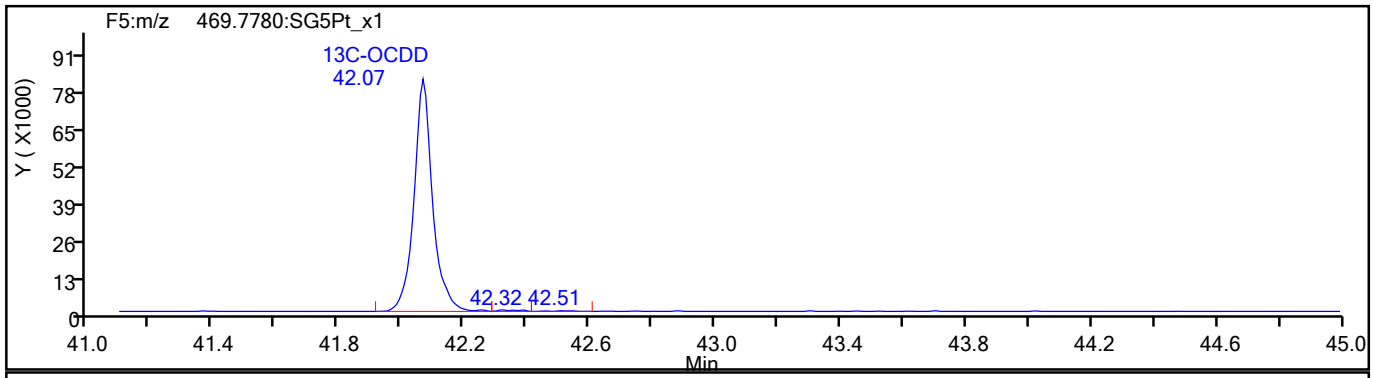

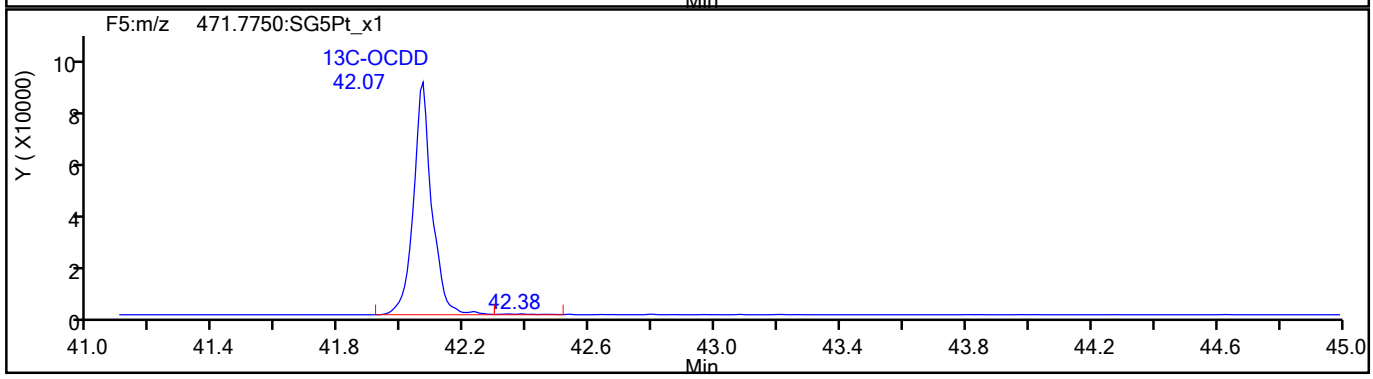

782594

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Injection Date:	18-Aug-2021 18:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

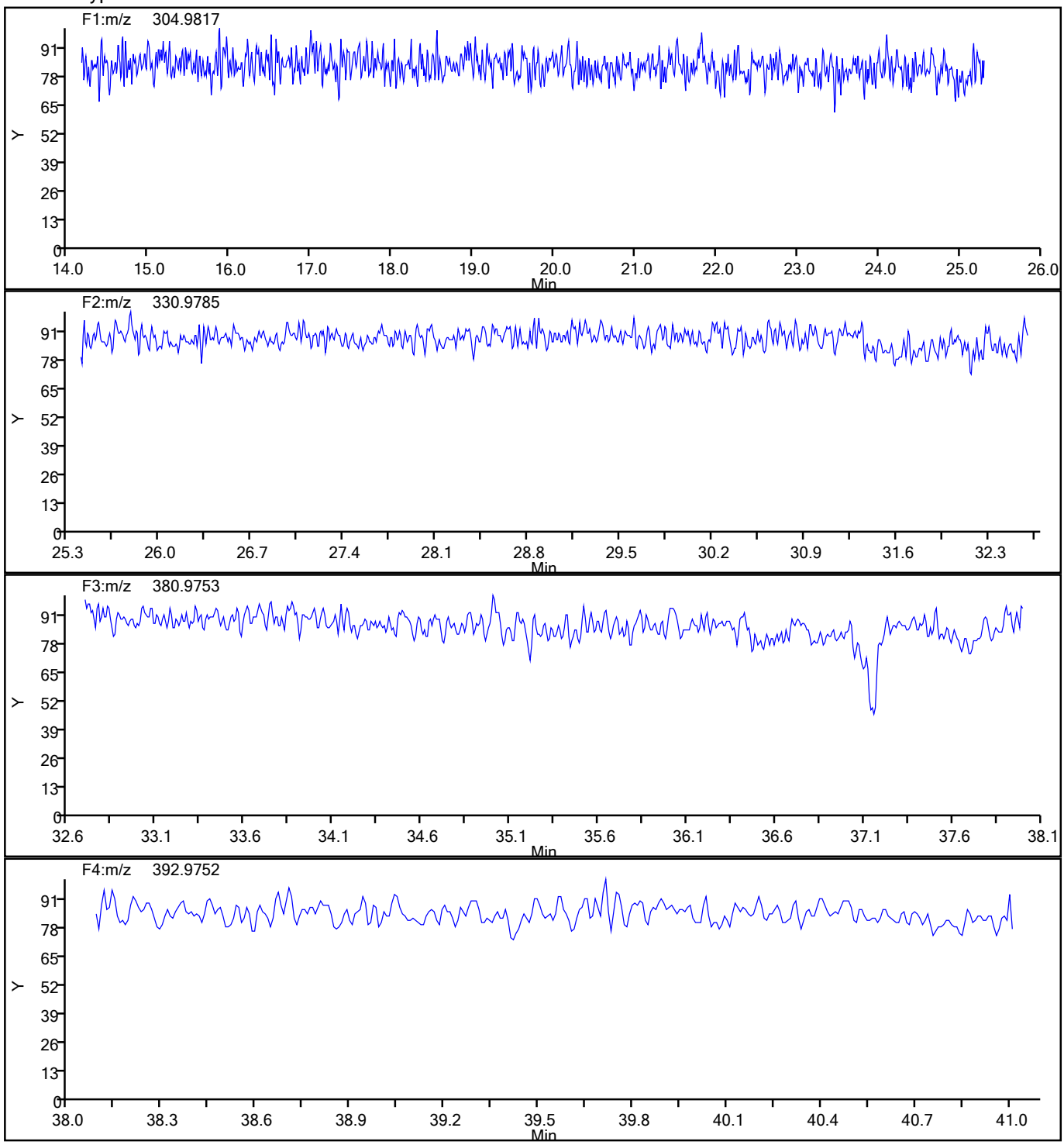

782595

Report Date: 20-Aug-2021 09:17:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_38.d		
Injection Date:	18-Aug-2021 18:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	517461	Sample Line#:	35
Column Type:	DB-5	Column Dia:	0.32 mm

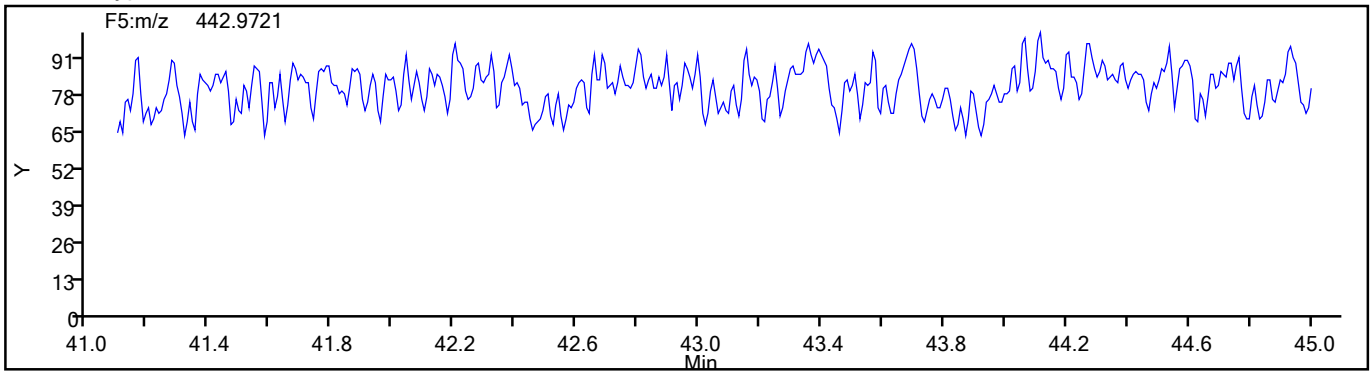

782596

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-DUP-9 RA
Lab Sample ID: 320-76887-13 RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_005.d
Analysis Method: 1613B
Date Collected: 07/27/2021 00:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.59(g)
Date Analyzed: 08/25/2021 15:32
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 34.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	8.6		1.6	0.20

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	61		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	73		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_005.d
Lims ID: 320-76887-A-13-A
Client ID: 11215702-072721-BN-DUP-9
Sample Type: Client
Inject. Date: 25-Aug-2021 15:32:20 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-13-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:04:55

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.284	43334503	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.614	35368438	0.77	1.3327	61.2	61.2	0.2258	0.2258	61.24	
2,3,7,8-TCDF	17.614	942635	0.74	0.9978	2.671	2.671	0.0615	0.0615		
D 13C-2,3,7,8-TCDD	16.051	22849619	0.78	0.8749	60.3	60.3	0.4529	0.4529	60.27	
2,3,7,8-TCDD	16.064	266368	0.86	1.0570	1.103	1.103	0.0865	0.0865		
$ 37Cl4-2,3,7,8-TCDD	16.078	10951609		0.8648	29.2	29.2	0.0674	0.0674	73.06	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

782598

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_005.d
Lims ID: 320-76887-A-13-A
Client ID: 11215702-072721-BN-DUP-9
Sample Type: Client
Inject. Date: 25-Aug-2021 15:32:20 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-13-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:04:55

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.284	16.298	-1		18829386	4135040	7428	18570	557		
333.9339	16.284	16.298	-1		24505117	5376906	7648	19120	703	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.614	17.615	0	1.082	15373245	3064743	6732	16830	455		
317.9389	17.614	17.615	0	1.082	19995193	3798355	4719	11797	805	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.614	17.628	-1	1.000	399348	72590	759	1897	96		
305.8987	17.628	17.628	0	1.001	543287	95656	925	2312	103	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.051	16.065	-1	0.986	9998701	2177075	7428	18570	293		
333.9339	16.051	16.065	-1	0.986	12850918	2990700	7648	19120	391	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.064	16.078	-1	1.001	123462	28398	1033	2582	27		
321.8936	16.078	16.078	0	1.002	142906	36049	857	2142	42	0.86(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.078	0	0.987	10951609	2595749	2217	5542	1171		

QC Flag Legend

Processing Flags

Report Date: 26-Aug-2021 09:30:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_005.d		
Injection Date:	25-Aug-2021 15:32:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	519744	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

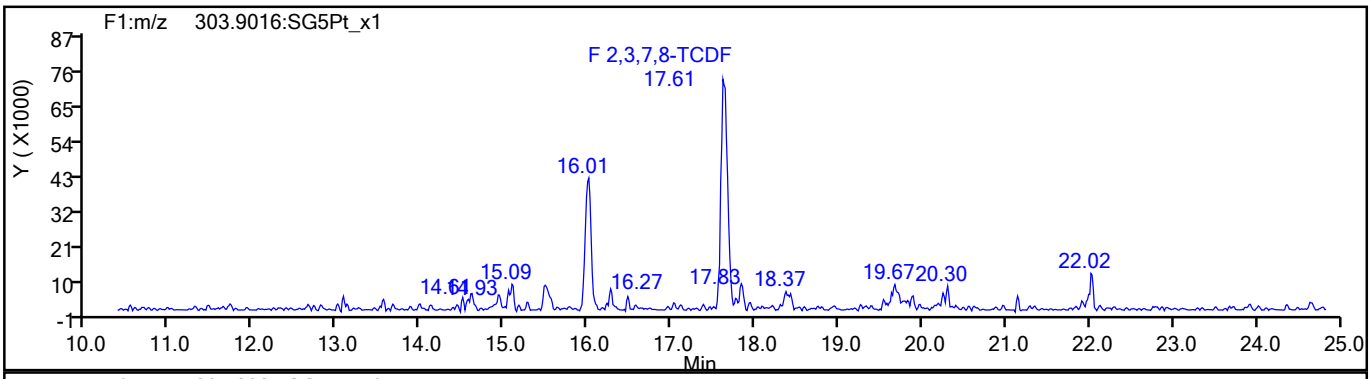

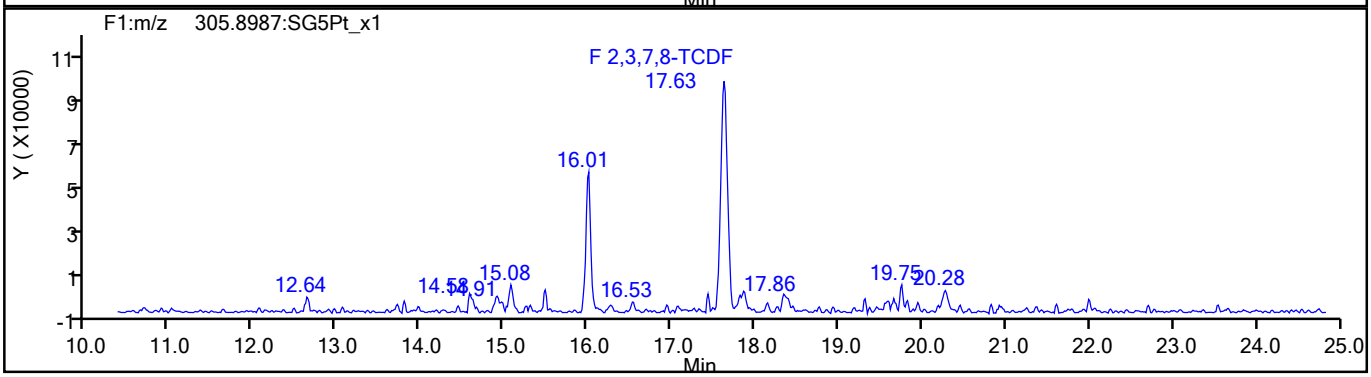

TCDF Standards

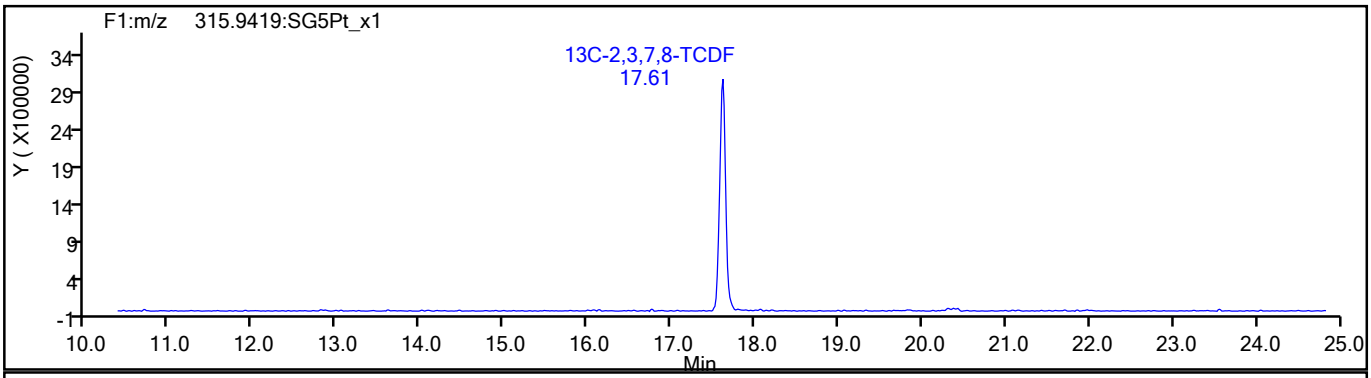

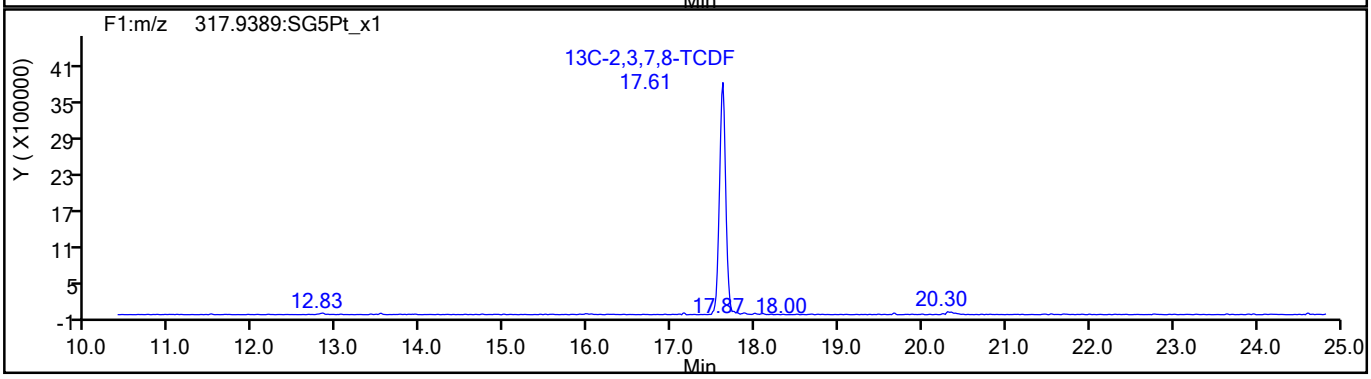

782600

Report Date: 26-Aug-2021 09:30:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_005.d		
Injection Date:	25-Aug-2021 15:32:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	519744	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

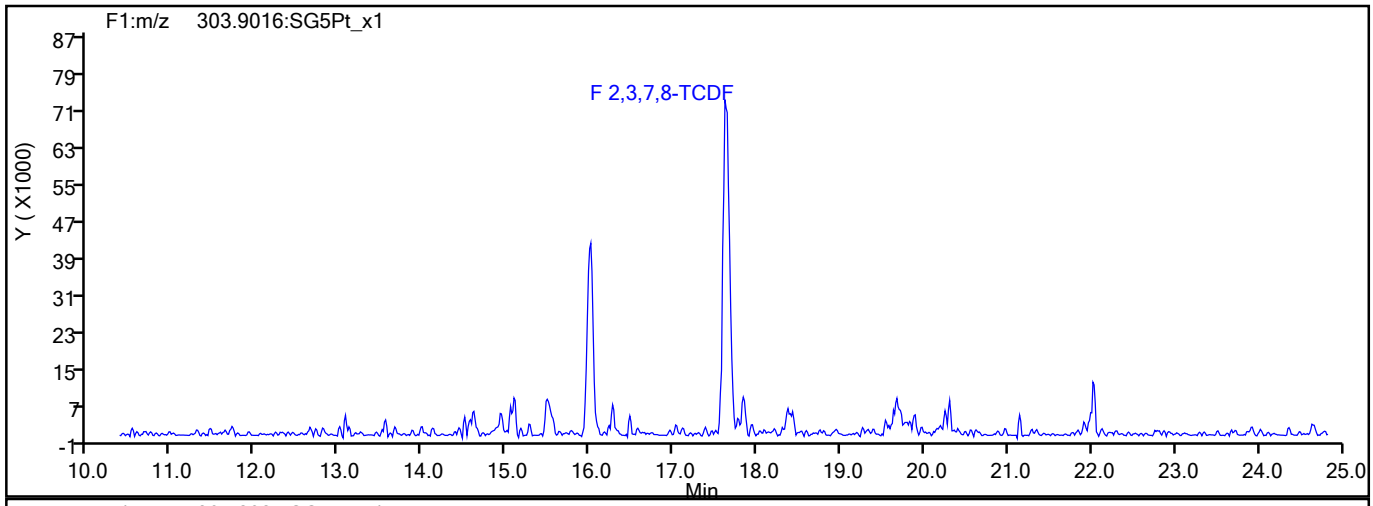

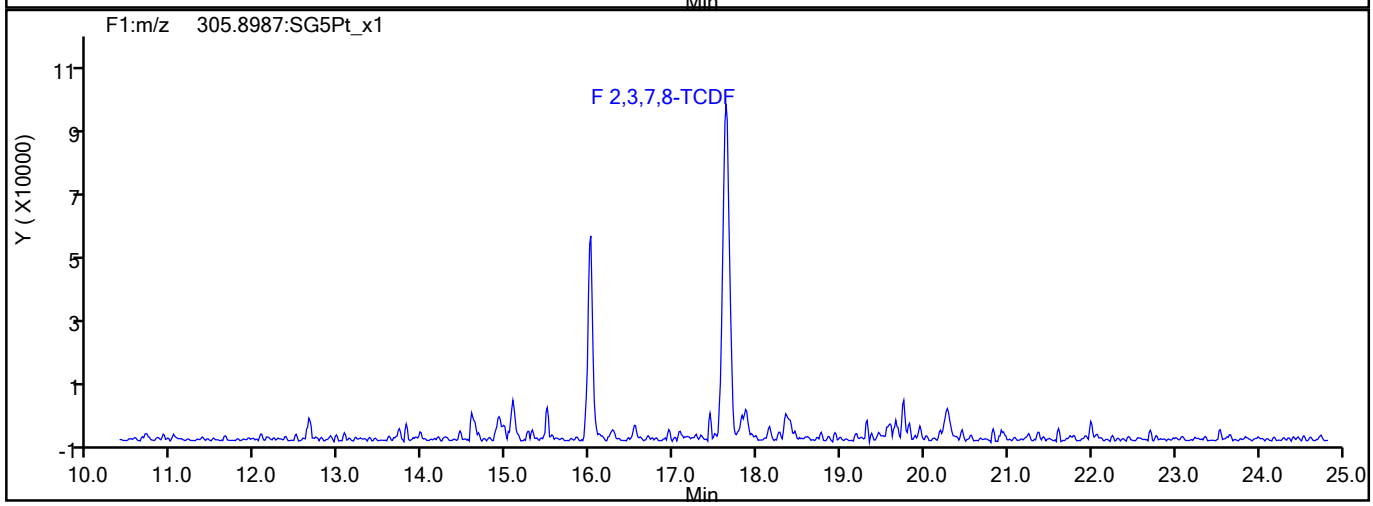

TCDF Interference Mass

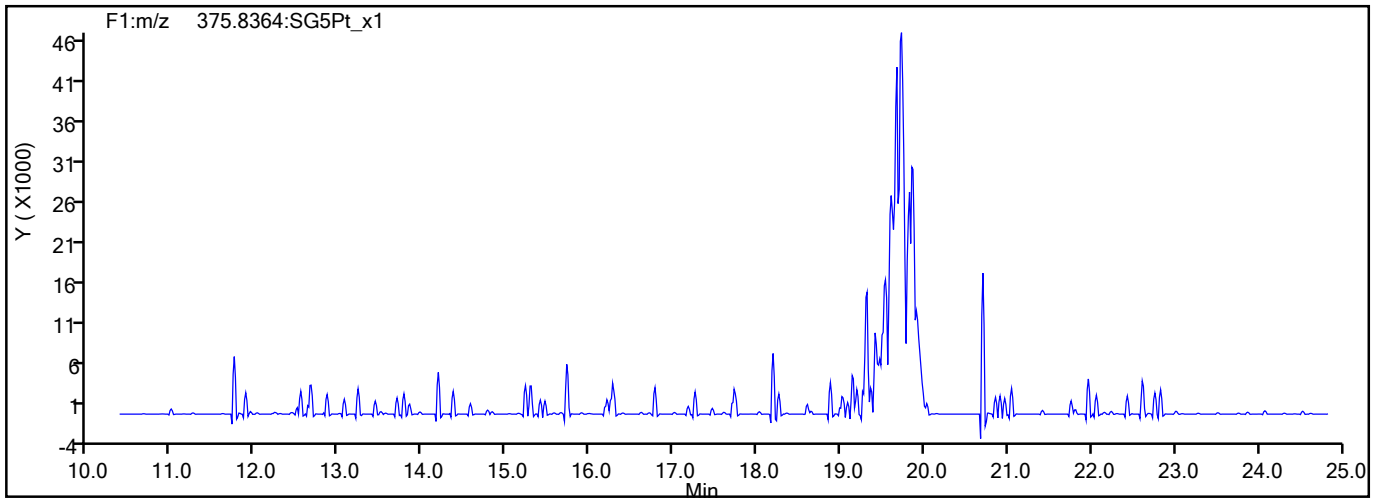

782601

Report Date: 26-Aug-2021 09:30:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_005.d		
Injection Date:	25-Aug-2021 15:32:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	519744	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

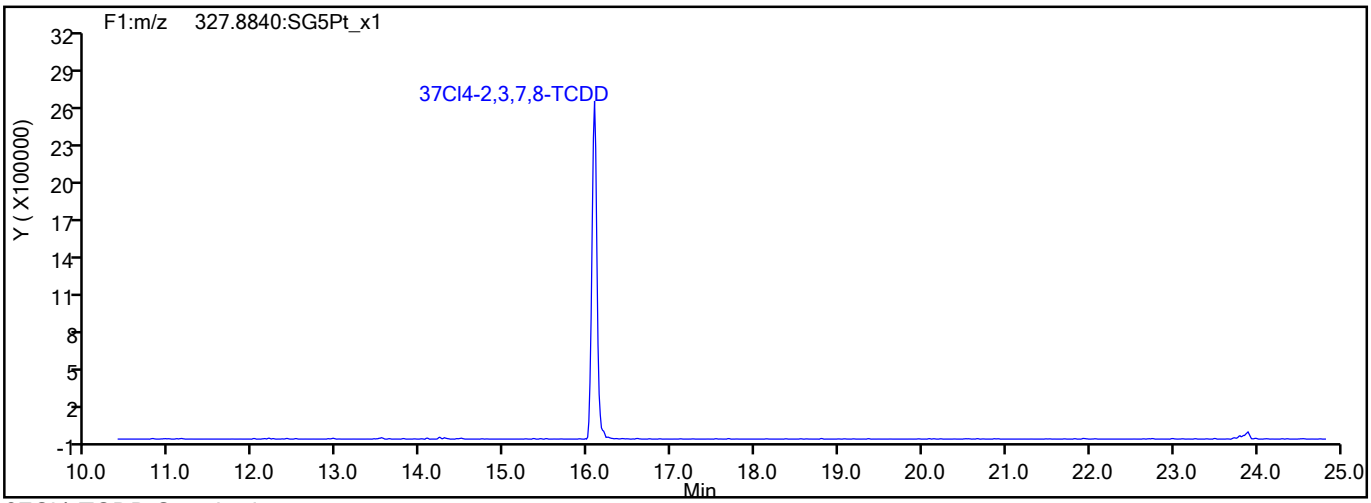

37Cl4-TCDD Standards

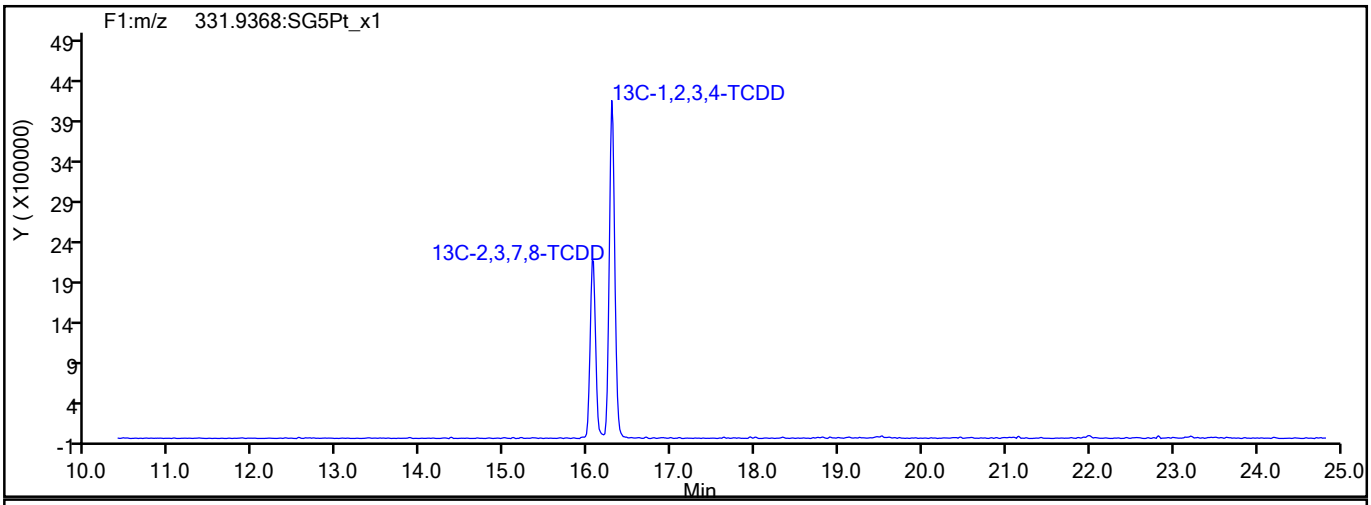

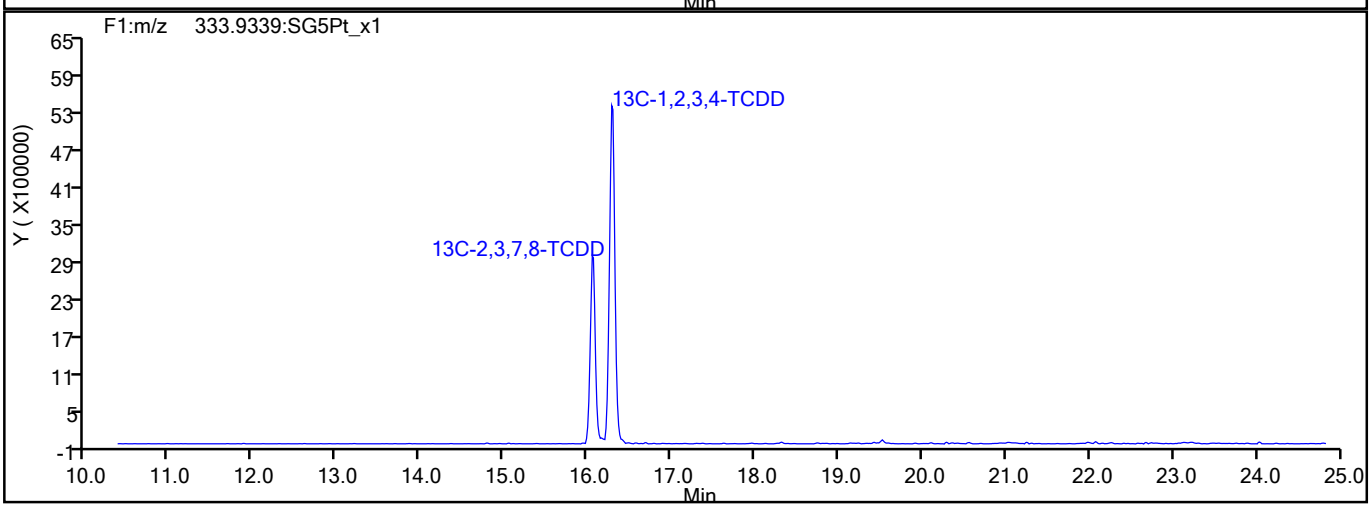

782602

Report Date: 26-Aug-2021 09:30:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_005.d		
Injection Date:	25-Aug-2021 15:32:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-DUP-9		
Worklist#:	519744	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

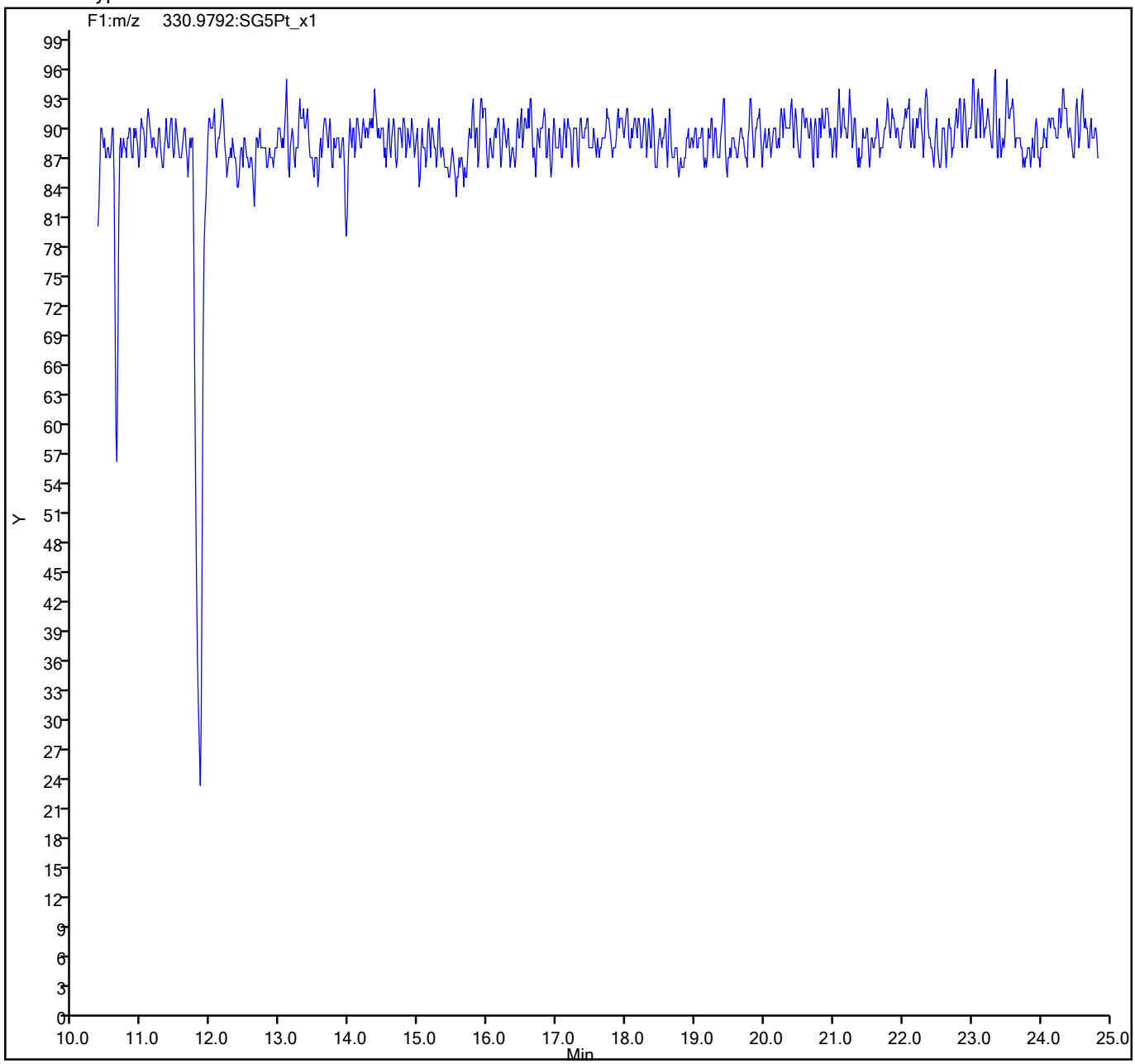

782603

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.0287	0.8698	1.0458	1.1094	1.0657	AveID		1.0239				8.9		20.0			
2,3,7,8-TCDD	1.2575	1.0971	1.2651	1.3434	1.3075	AveID		1.2541				7.5		20.0			
1,2,3,7,8-PeCDF	1.0739	0.9128	1.0891	1.1370	1.0928	AveID		1.0611				8.1		20.0			
2,3,4,7,8-PeCDF	1.0408	0.8610	1.0466	1.1082	1.0356	AveID		1.0184				9.1		20.0			
1,2,3,7,8-PeCDD	1.0578	0.9031	1.0680	1.1310	1.0823	AveID		1.0484				8.2		20.0			
1,2,3,4,7,8-HxCDF	1.1222	0.9192	1.1025	1.1936	1.0881	AveID		1.0851				9.3		20.0			
1,2,3,6,7,8-HxCDF	1.1488	0.9637	1.1546	1.1966	1.1664	AveID		1.1260				8.2		20.0			
2,3,4,6,7,8-HxCDF	1.2223	0.9863	1.1858	1.2415	1.2018	AveID		1.1675				8.9		20.0			
1,2,3,4,7,8-HxCDD	1.0979	0.8906	1.1304	1.1671	1.0341	AveID		1.0640				10.2		20.0			
1,2,3,6,7,8-HxCDD	1.0294	0.8529	1.0113	1.0930	1.0138	AveID		1.0001				8.9		20.0			
1,2,3,7,8,9-HxCDD	1.1551	0.9428	1.1999	1.2421	1.1227	AveID		1.1325				10.2		20.0			
1,2,3,7,8,9-HxCDF	1.1733	1.0136	1.1898	1.2479	1.2072	AveID		1.1664				7.7		20.0			
1,2,3,4,6,7,8-HpCDF	1.4474	1.2413	1.4986	1.5485	1.4706	AveID		1.4413				8.2		20.0			
1,2,3,4,6,7,8-HpCDD	1.1119	0.9539	1.1176	1.1675	1.1205	AveID		1.0943				7.5		20.0			
1,2,3,4,7,8,9-HpCDF	1.3136	1.1269	1.3622	1.4520	1.3321	AveID		1.3174				9.0		20.0			
OCDD	1.1009	0.9635	1.1652	1.1829	1.1226	AveID		1.1070				7.8		20.0			
OCDF	1.3863	1.1912	1.5145	1.5858	1.5129	AveID		1.4382				10.8		20.0			
13C-2,3,7,8-TCDF	1.6500	1.5631	1.6241	1.6170	1.6703	Ave		1.6249				2.5		35.0			
13C-2,3,7,8-TCDD	0.9128	0.8588	0.8965	0.8940	0.9345	Ave		0.8993				3.1		35.0			
13C-1,2,3,7,8-PeCDF	1.1977	1.1539	1.2193	1.2121	1.2674	Ave		1.2101				3.4		35.0			
13C-2,3,4,7,8-PeCDF	1.2269	1.1924	1.2487	1.2129	1.3165	Ave		1.2395				3.8		35.0			
13C-1,2,3,7,8-PeCDD	0.7558	0.7433	0.7524	0.7498	0.8049	Ave		0.7612				3.3		35.0			
13C-1,2,3,4,7,8-HxCDF	1.0875	1.1006	1.0706	1.0371	1.1225	Ave		1.0837				3.0		35.0			
13C-1,2,3,6,7,8-HxCDF	1.1466	1.1401	1.1115	1.1251	1.1163	Ave		1.1279				1.3		35.0			
13C-2,3,4,6,7,8-HxCDF	1.0781	1.0785	1.0541	1.0562	1.0518	Ave		1.0637				1.3		35.0			
13C-1,2,3,4,7,8-HxCDD	0.7413	0.7515	0.6926	0.7049	0.7769	Ave		0.7334				4.7		35.0			
13C-1,2,3,6,7,8-HxCDD	0.8884	0.8870	0.8694	0.8685	0.8876	Ave		0.8802				1.2		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9787	0.9851	0.9497	0.9522	0.9722	Ave		0.9676				1.6		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.8030	0.7818	0.7501	0.7625	0.7677	Ave		0.7730				2.6		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6554	0.6478	0.6343	0.6458	0.6528	Ave		0.6472				1.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6985	0.7093	0.6800	0.6816	0.7346	Ave		0.7008				3.2		35.0			
13C-OCDD	0.4462	0.4357	0.4273	0.4575	0.4691	Ave		0.4472				3.7		35.0			
37Cl4-2,3,7,8-TCDD	0.9705	0.9794	1.1718	1.1876	1.2264	Ave		1.1071				11.1					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	557485	1709191	10638776	44524782	204575642	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	376984	1184284	7104238	29808948	140421448	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	2112140	6620354	41588176	171023920	795873691	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	2096967	6452410	40928436	166805723	783403837	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	1312779	4219570	25165054	105236005	500555284	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	1949462	6041767	37525146	155057762	737075796	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	2104086	6561860	40802767	168618976	785709889	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	2104896	6352404	39741365	164241378	762810877	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	1300030	3996910	24891170	103044220	484857042	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	1460747	4517909	27953752	118900298	543061818	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	1503407	4612548	29794954	122394998	563888565	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	1834100	5963032	35924190	148834491	708280047	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	1856599	5795616	35740964	147892240	681312007	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	1164074	3690749	22538791	94435922	441437476	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	1465634	4773949	29450636	123968724	590555312	2.50	10.0	50.0	200	1000
OCDD		AveID	1569338	5013385	31656667	135570174	635652839	5.00	20.0	100	400	2000
OCDF		AveID	1976175	6198469	41147202	181747068	856685987	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	108384725	98246522	101724636	100332269	95980421	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	59957723	53975587	56155483	55471422	53698206	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	78674290	72525655	76368219	75205597	72829681	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	80591659	74944110	78214582	75259591	75649463	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	49643581	46721712	47124414	46524396	46251010	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	69484482	65726932	68075509	64951889	67741189	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	73262388	68089005	70677463	70459920	67363664	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	68885161	64406928	67028498	66145684	63471184	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	47363504	44877133	44039927	44144841	46886171	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	56759108	52974056	55284532	54392394	53564396	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	62528954	58828058	60389284	59636084	58669892	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	51308225	46691158	47697671	47752972	46328151	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	41876556	38689128	40333717	40442950	39395832	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	44628352	42362179	43238622	42687625	44333848	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	57018462	52034518	54338243	57303880	56623863	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	318727	1231219	7339670	29474361	140953034	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\26JL2110D5.SPL
Last Modified: Monday, July 26, 2021 16:58:03 Pacific Daylight Time
Printed: Tuesday, July 27, 2021 07:40:45 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	26JL2110D5_1	WDM HRDXNCP_00042	WDM 072621	Tray01:1	Dioxin		SMA
2	26JL2110D5_2	SB Solvent Blank C-14	SB 072621	Tray01:3			SMA
3	26JL2110D5_3	CS-2 HRDXNL2_00032	IC 072621	Tray01:4	Dioxin		SMA
4	26JL2110D5_4	CS-3 HRDXNL3_00029	IC 072621A	Tray01:5	Dioxin		SMA
5	26JL2110D5_5	CS-4 HRDXNL4_00099	IC 072621B	Tray01:2	Dioxin		SMA
6	26JL2110D5_6	CS-5 HRDXNL5_00032	IC 072621C	Tray01:6	Dioxin		SMA
7	26JL2110D5_7	CS-6 HRDXNL6_00028	IC 072621D	Tray01:7	Dioxin		SMA
8	26JL2110D5_8	SB Solvent Blank C-14	SB 072621A	Tray01:3			SMA
9	26JL2110D5_9	ICV HRDXNIC_00047	ICV 072621	Tray01:8	Dioxin		SMA
10	26JL2110D5_10	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS
11	26JL2110D5_11	WDM HRDXNCP_00042	WDM 031621C	Tray01:1	Dioxin		KSS
12	26JL2110D5_12	SB Solvent Blank C-14	SB 072621B	Tray01:3			KSS
13	26JL2110D5_13	mb 320-508015/1-a	mb 320-508015/1-a	Tray01:9	1613B/8290/Water	D255	KSS
14	26JL2110D5_14	lcs 320-508015/2-a	lcs 320-508015/2-a	Tray01:10	1613B/8290/Water		KSS
15	26JL2110D5_15	lcsd 320-508015/3-a	lcsd 320-508015/3-a	Tray01:11	1613B/8290/Water		KSS
16	26JL2110D5_16	320-76081-a-3-c	320-76081-a-3-c	Tray01:12	1613B/8290/Water		KSS
17	26JL2110D5_17	SB Solvent Blank C-14	SB 072621C	Tray01:3			KSS
18	26JL2110D5_18	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS

LOGFILE CHECKED
DB 7/27/21

782609

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:18:21 Pacific Daylight Time

M 292.9824 R 12499

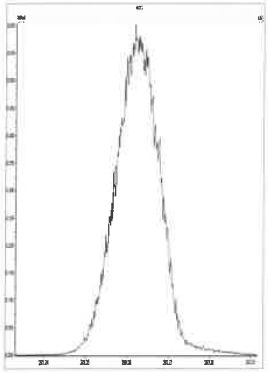

M 304.9824 R 12752

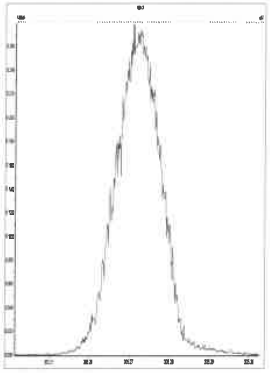

M 318.9792 R 13230

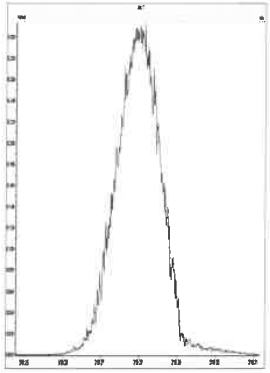

M 330.9792 R 12691

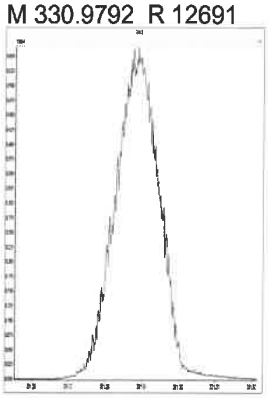

M 342.9792 R 12885

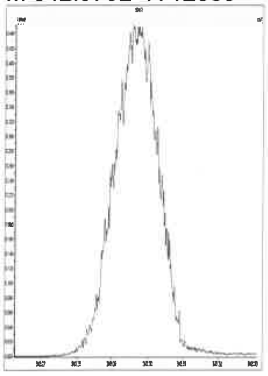

M 354.9792 R 12138

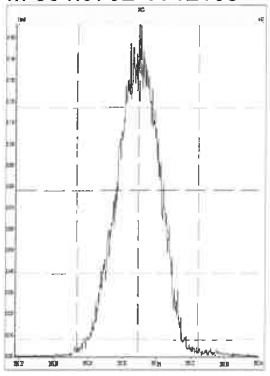

M 366.9792 R 13090

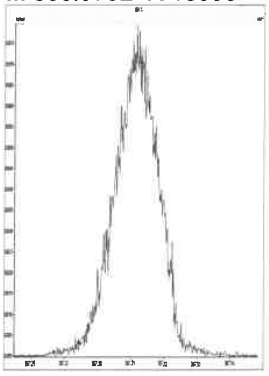

M 380.9760 R 12562

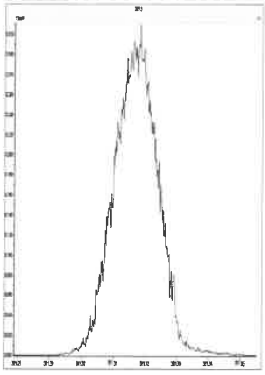

M 392.9760 R 12753

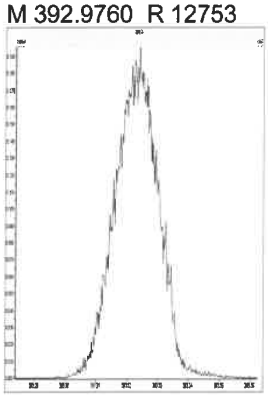

M 404.9760 R 12137

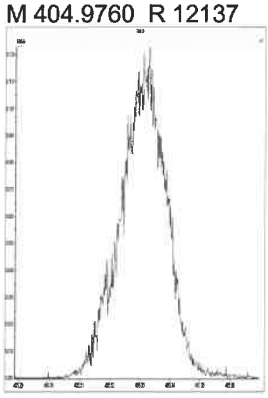

M 416.9760 R 12563

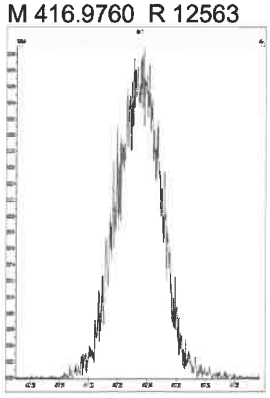

782610

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:04 Pacific Daylight Time

M 318.9792 R 13300

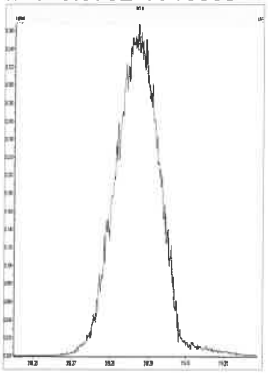

M 330.9792 R 12691

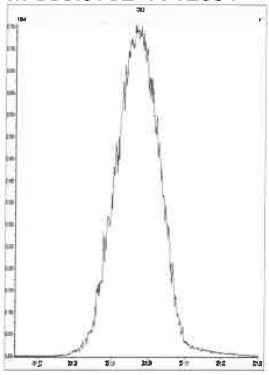

M 342.9792 R 12499

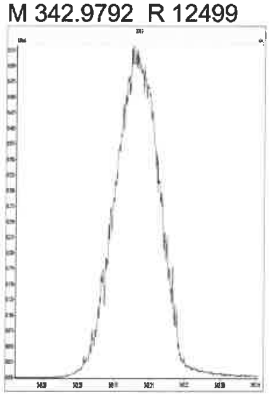

M 354.9792 R 12374

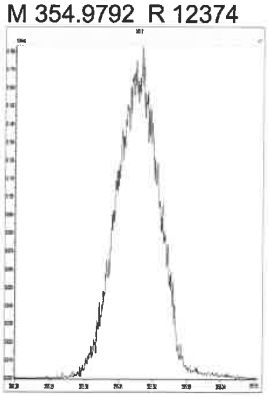

M 366.9792 R 12691

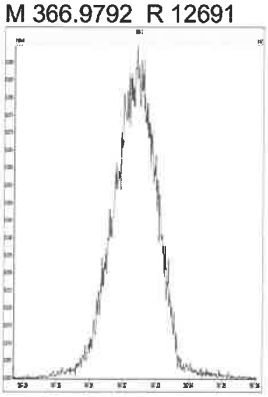

M 380.9760 R 12690

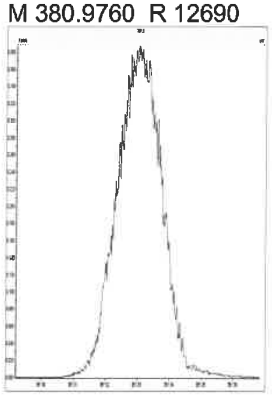

M 392.9760 R 12885

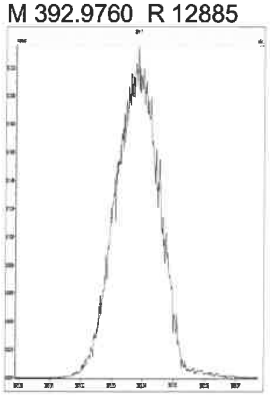

M 404.9760 R 12817

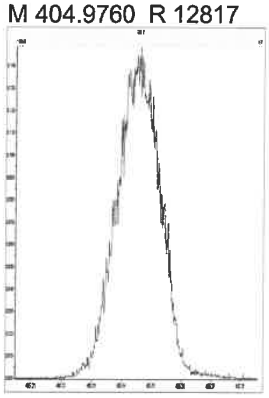

M 416.9760 R 12954

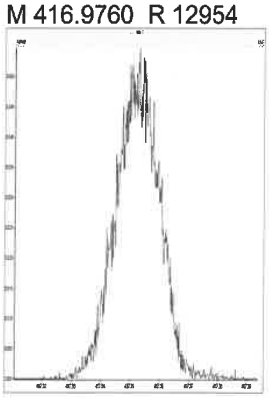

782611

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:43 Pacific Daylight Time

M 366.9792 R 12440

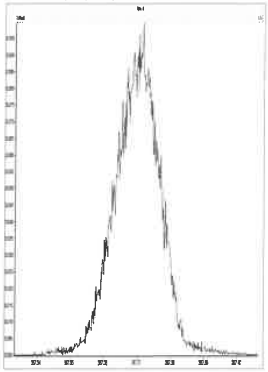

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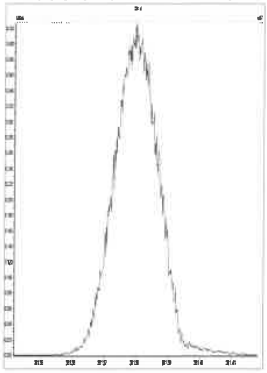

M 392.9760 R 12690

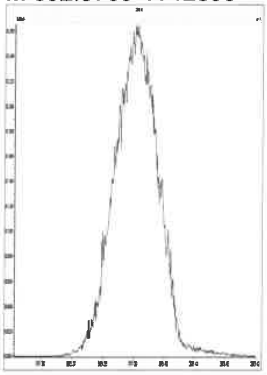

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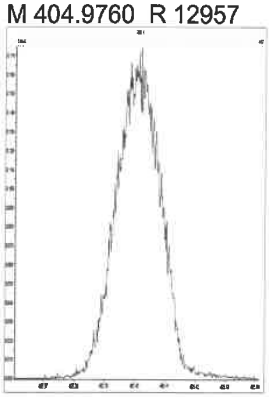

M 416.9760 R 13516

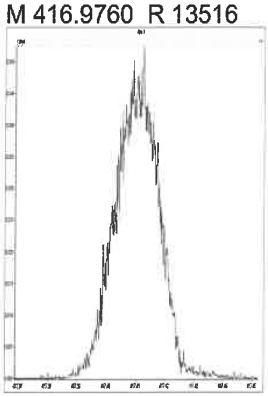

M 430.9728 R 12564

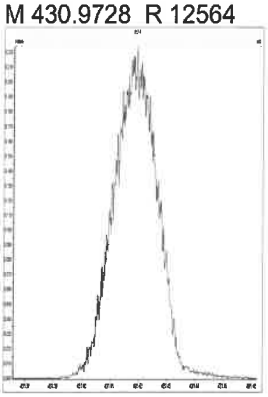

M 442.9728 R 12953

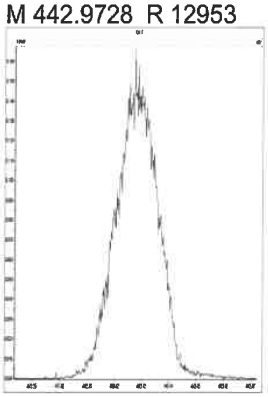

M 454.9728 R 13226

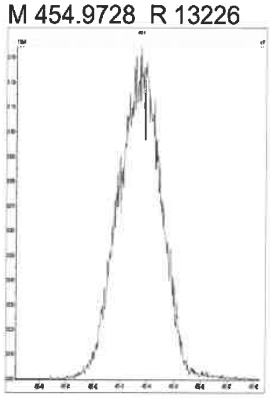

782612

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:20:01 Pacific Daylight Time

M 380.9760 R 12885

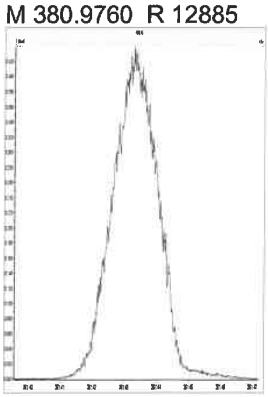

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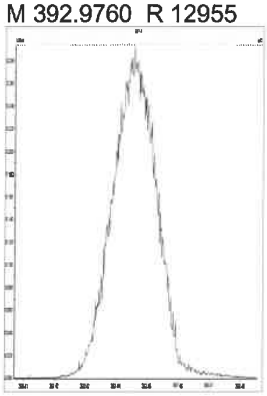

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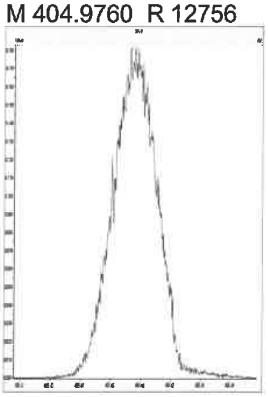

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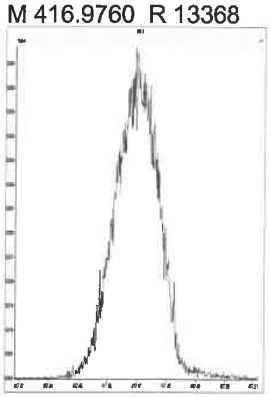

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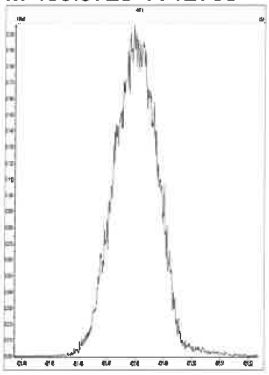

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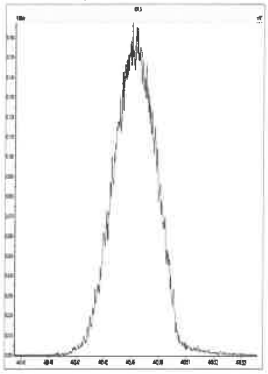

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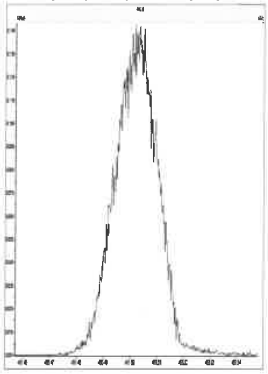

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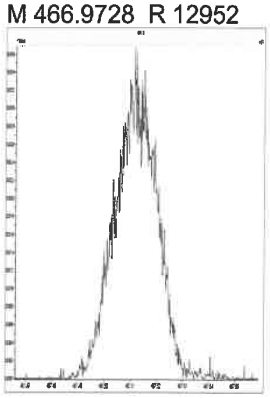

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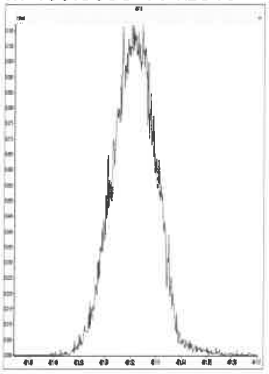

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Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

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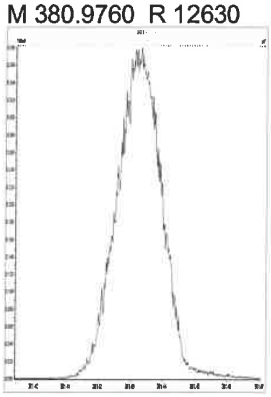

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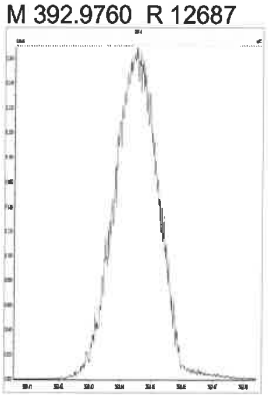

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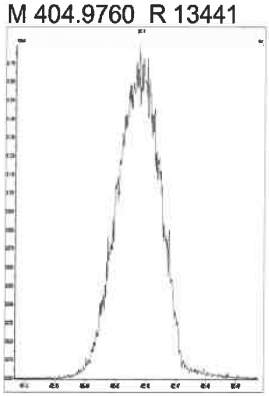

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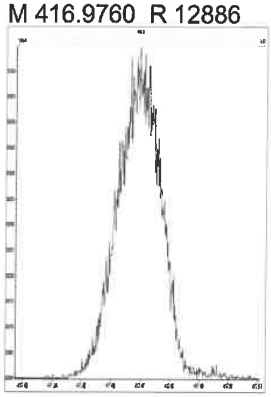

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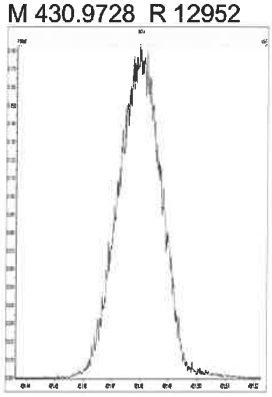

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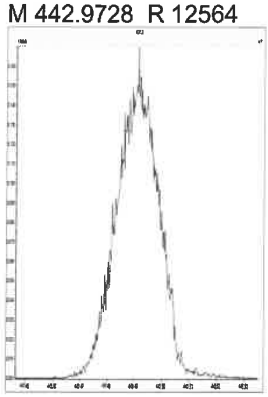

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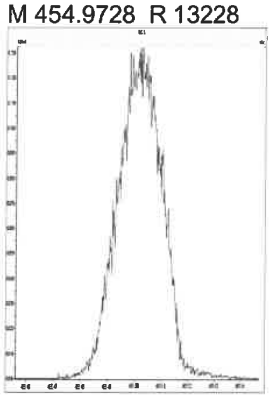

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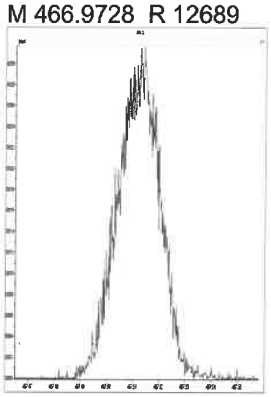

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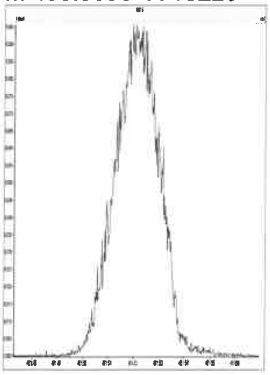

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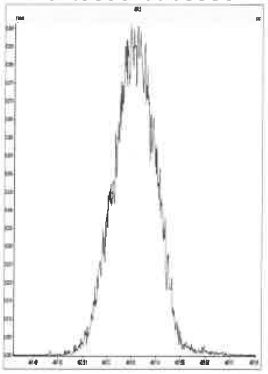

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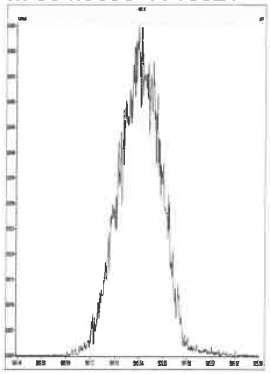

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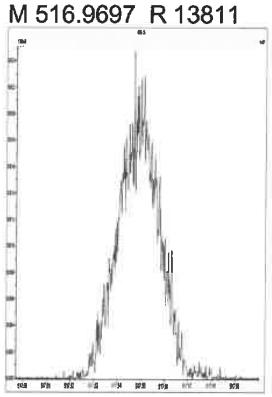

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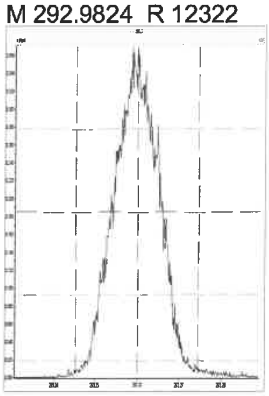

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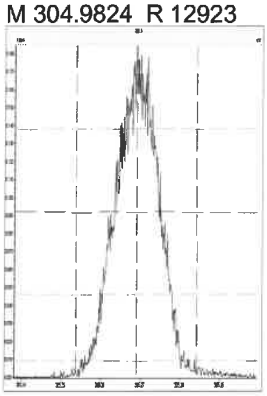

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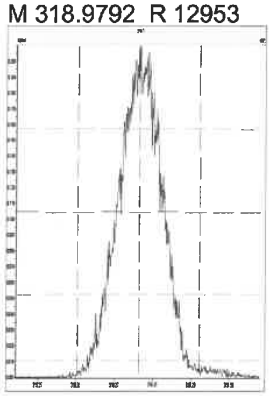

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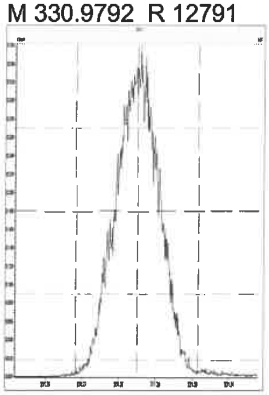

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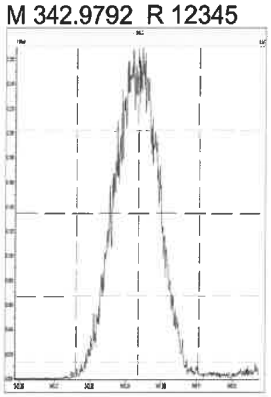

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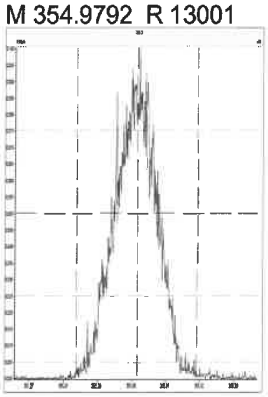

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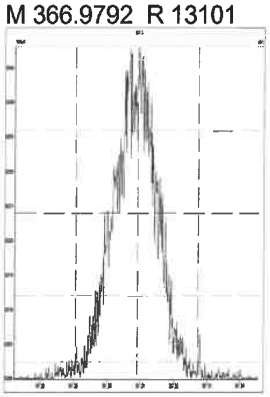

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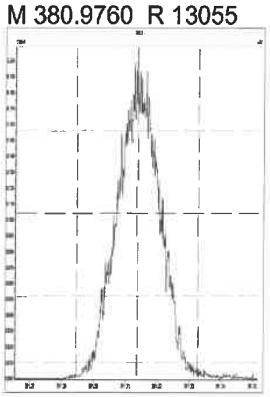

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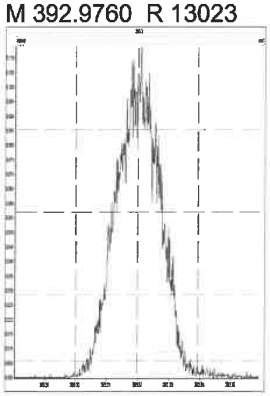

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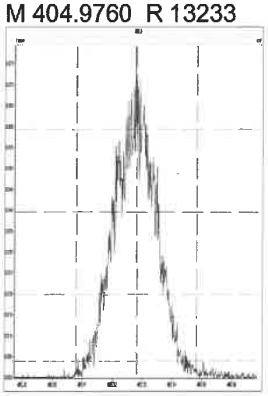

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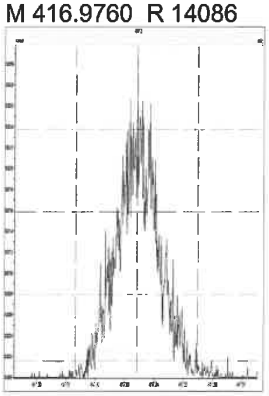

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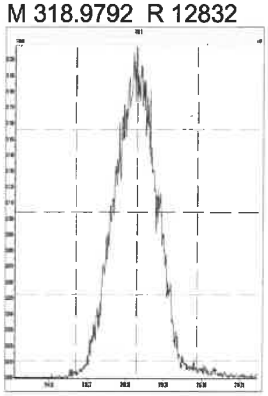

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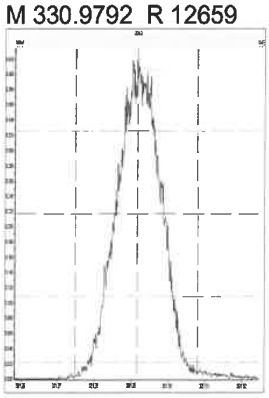

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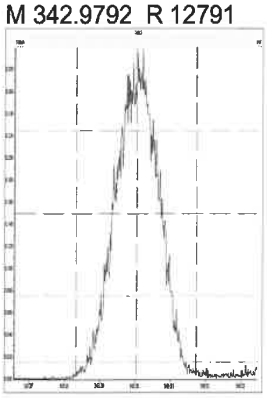

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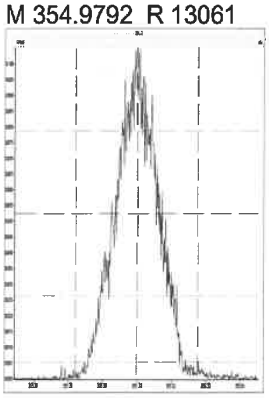

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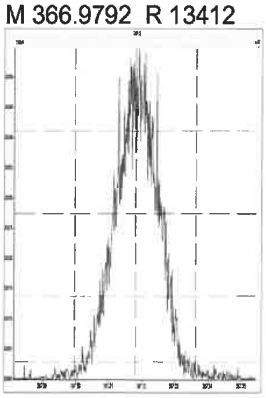

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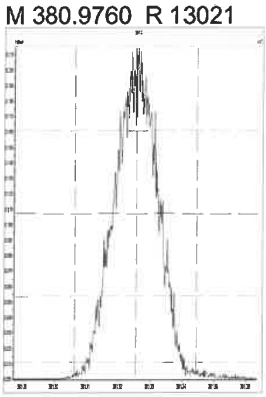

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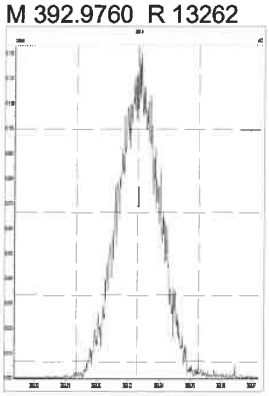

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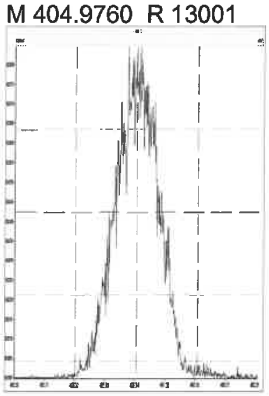

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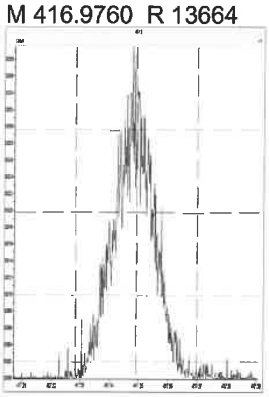

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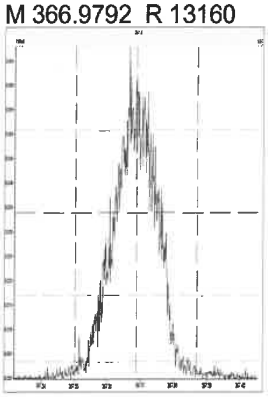

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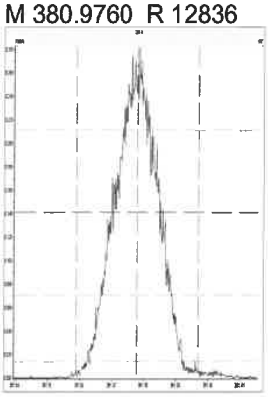

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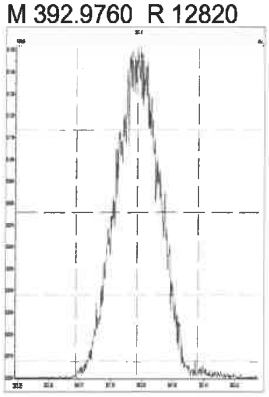

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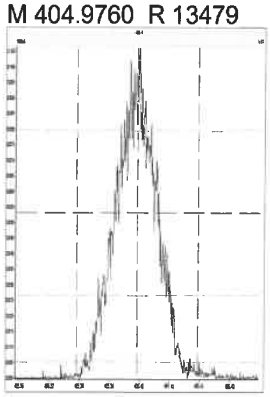

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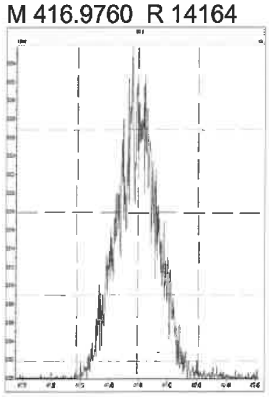

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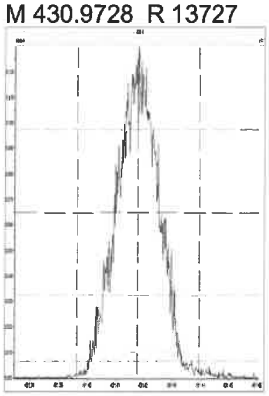

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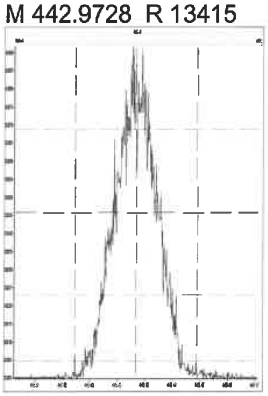

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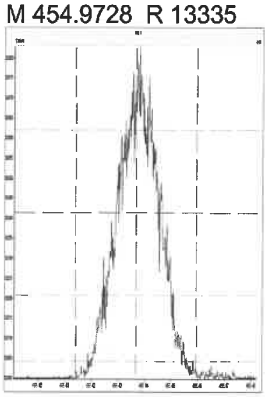

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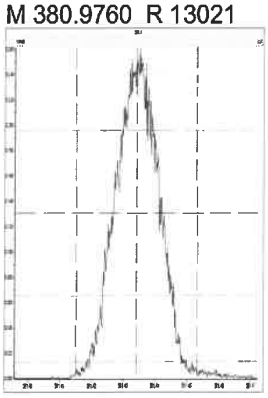

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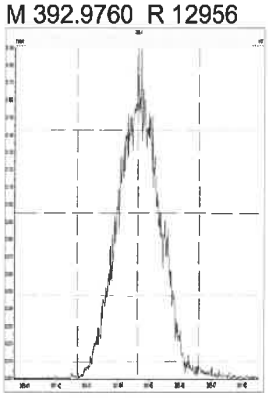

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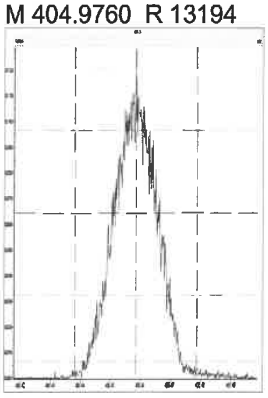

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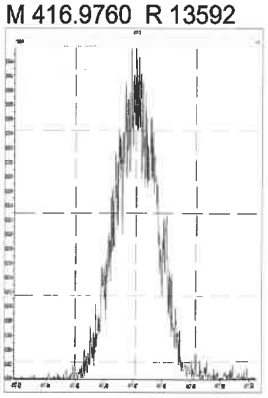

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M 430.9728_R 13192

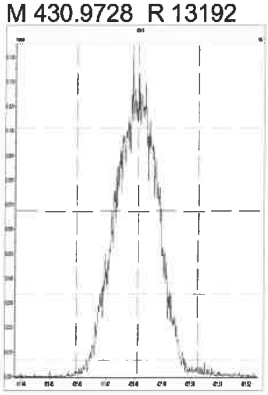

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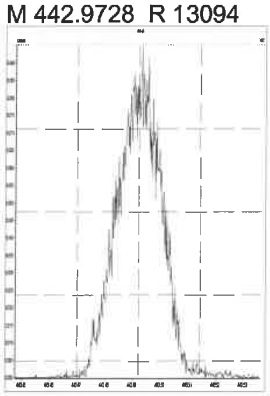

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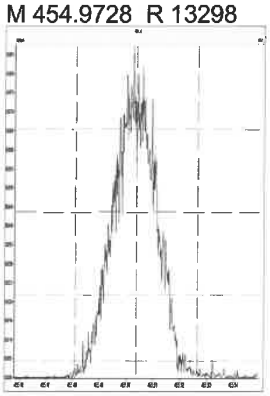

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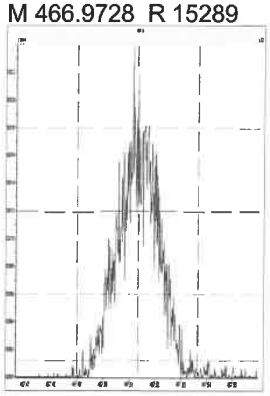

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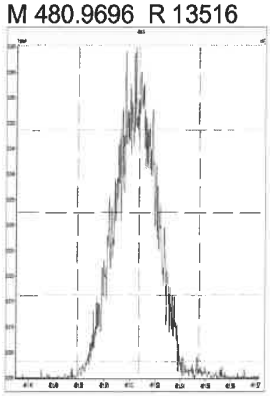

M 380.9760_R 12762

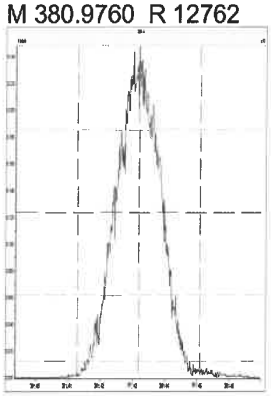

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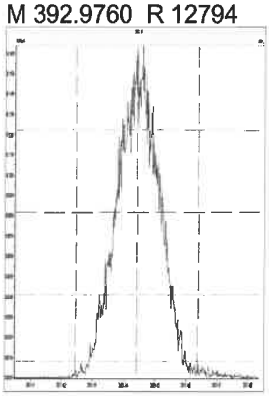

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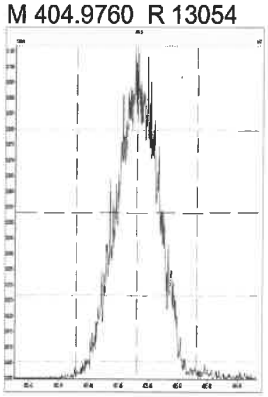

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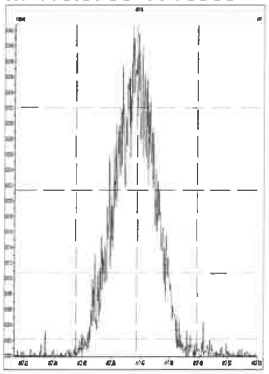

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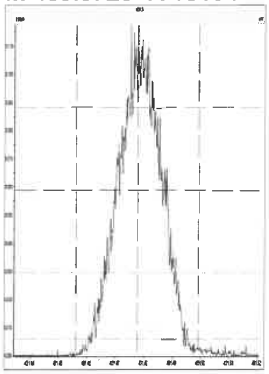

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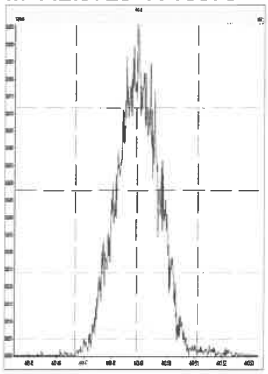

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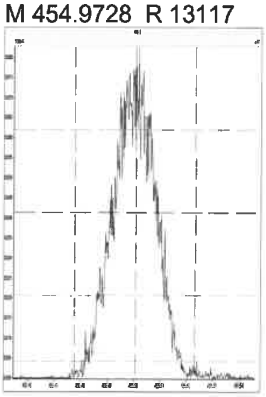

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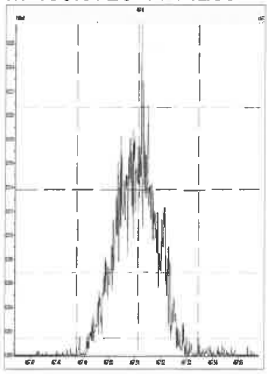

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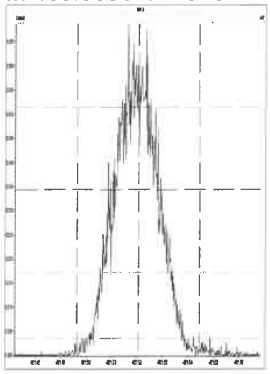

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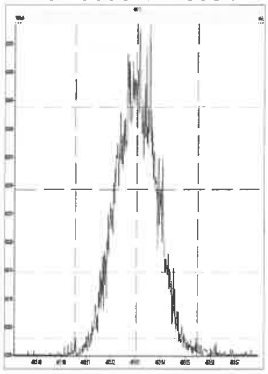

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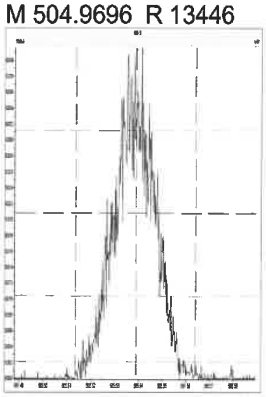

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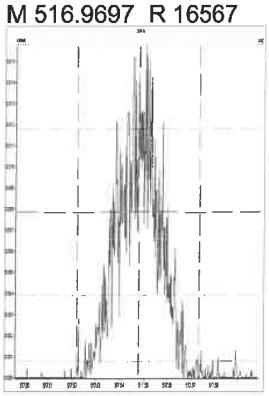

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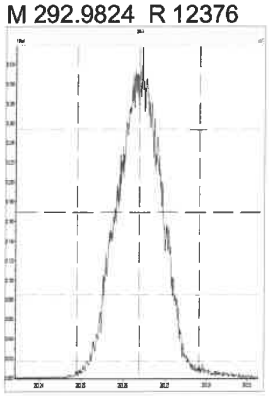

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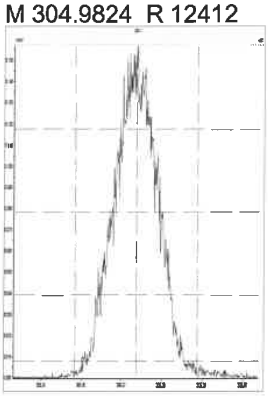

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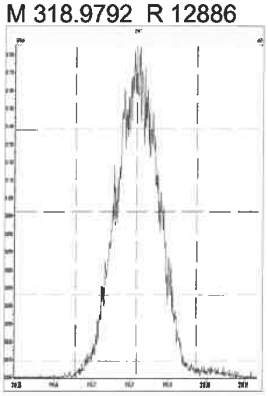

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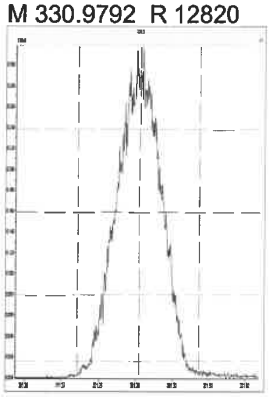

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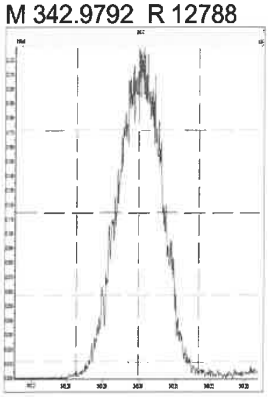

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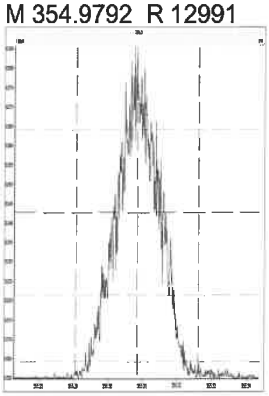

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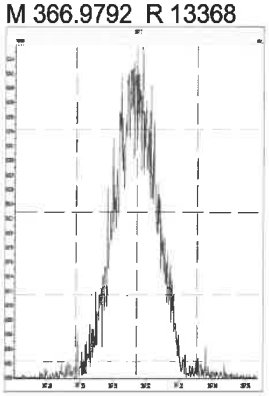

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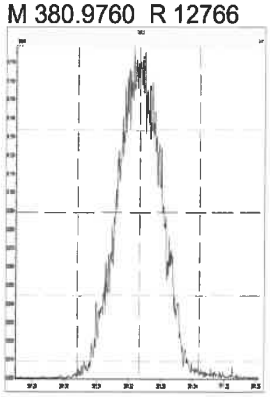

M 392.9760 R 13080

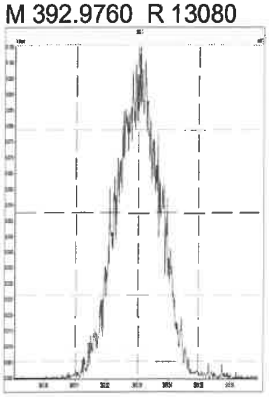

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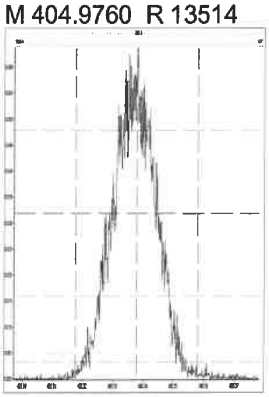

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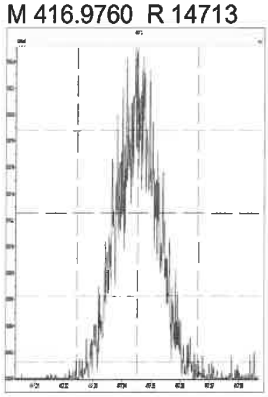

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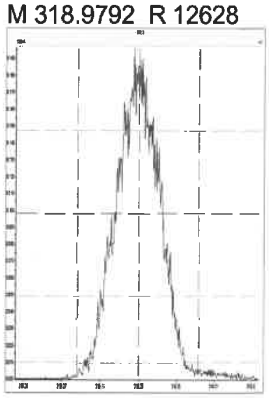

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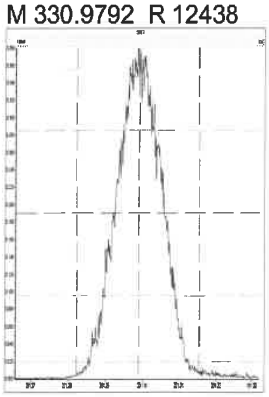

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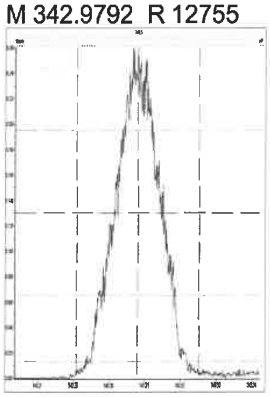

M 354.9792 R 12755

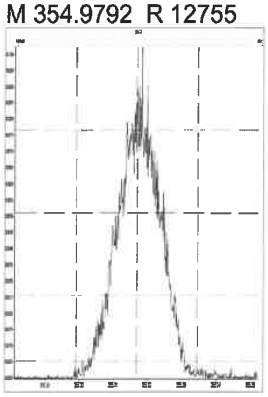

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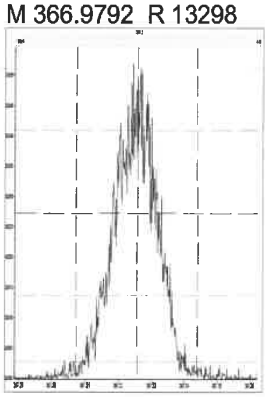

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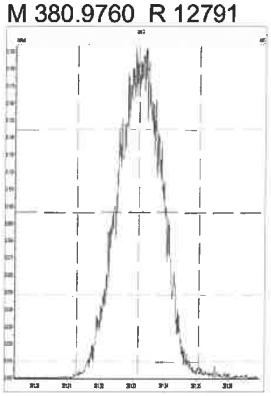

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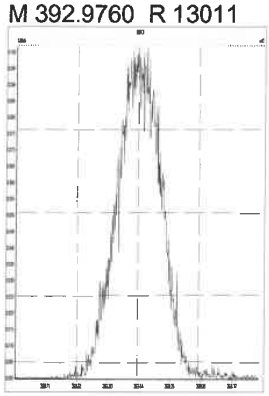

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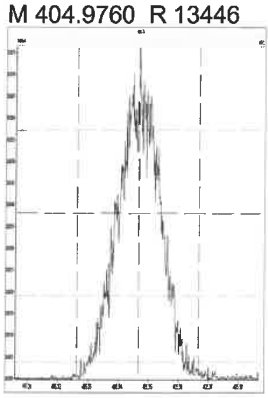

M 416.9760 R 13368

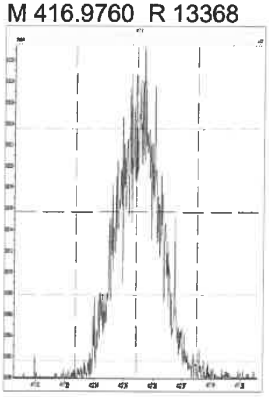

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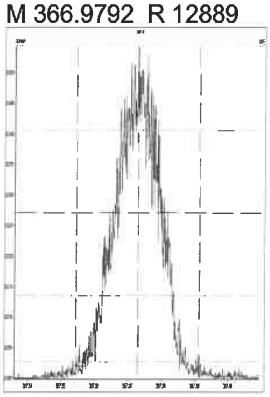

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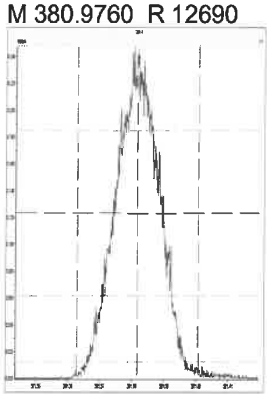

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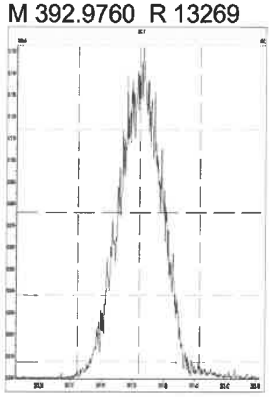

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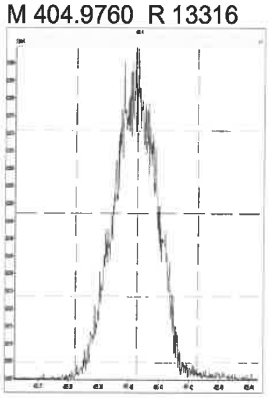

M 416.9760 R 13670

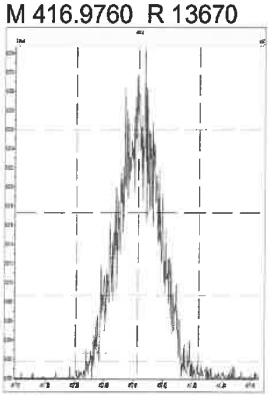

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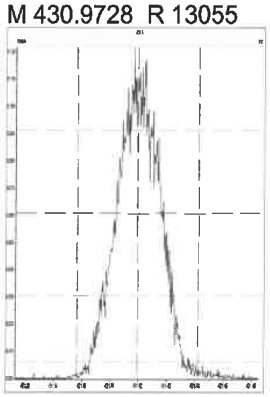

M 442.9728 R 13227

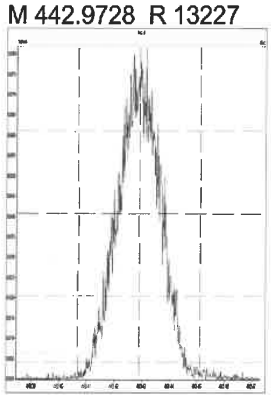

M 454.9728 R 13756

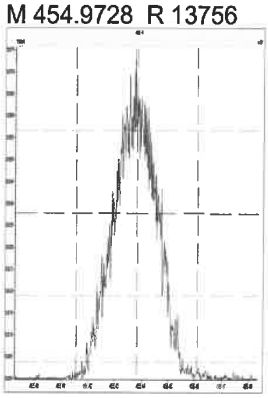

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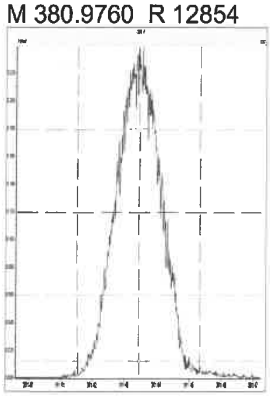

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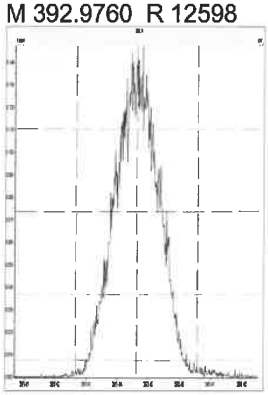

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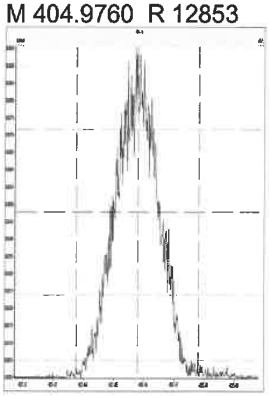

M 416.9760 R 13928

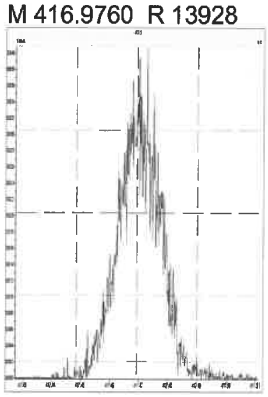

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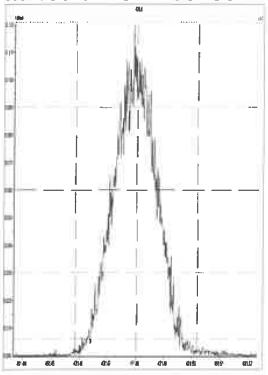

M 442.9728 R 13264

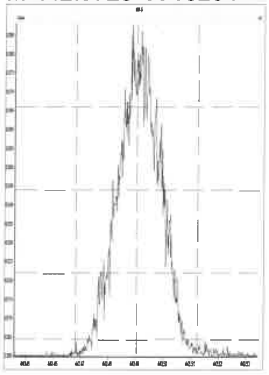

M 454.9728 R 13652

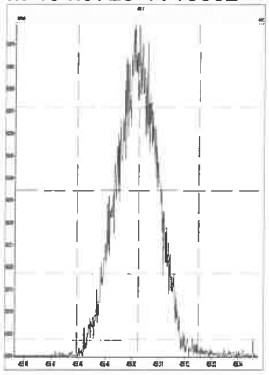

M 466.9728 R 14749

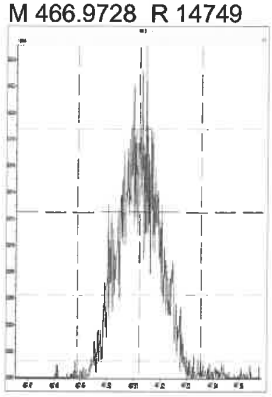

M 480.9696 R 13412

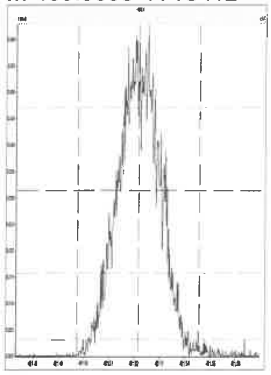

M 380.9760 R 12692

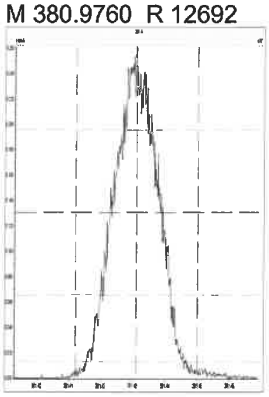

M 392.9760 R 13061

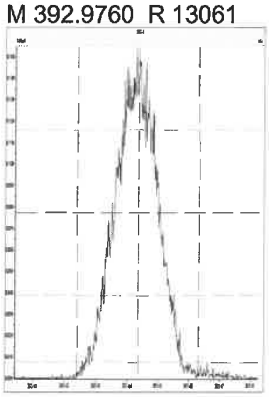

M 404.9760 R 12887

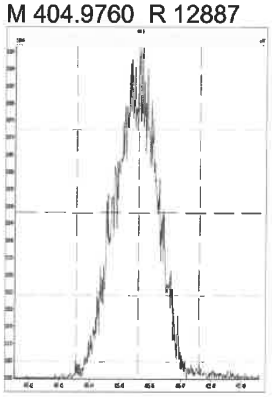

M 416.9760 R 13706

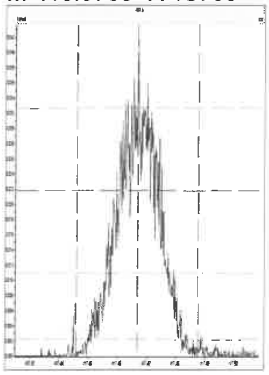

M 430.9728 R 12760

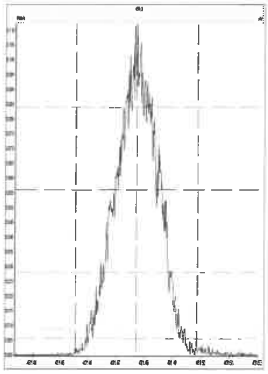

M 442.9728 R 13122

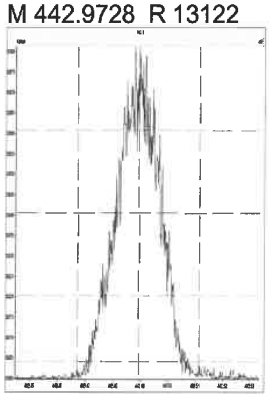

M 454.9728 R 13710

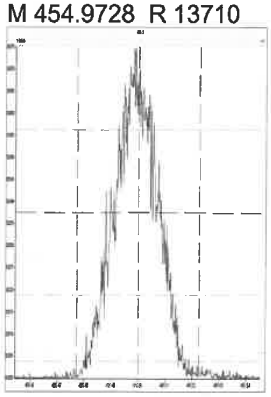

M 466.9728 R 14205

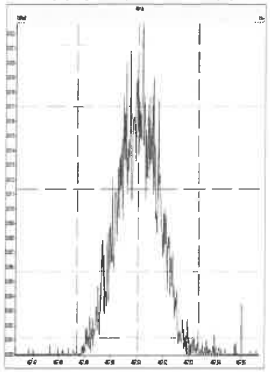

M 480.9696 R 13298

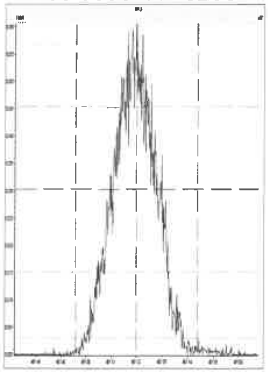

M 492.9696 R 12886

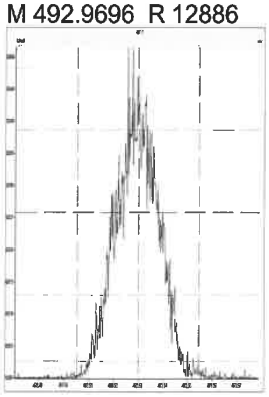

M 504.9696 R 13600

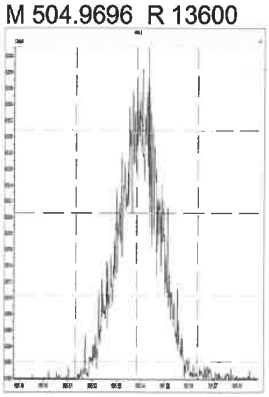

782621

Printed: Monday, July 26, 2021 16:26:55 Pacific Daylight Time

M 516.9697 R 15872

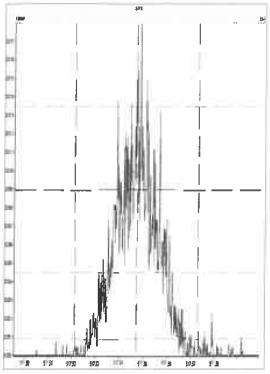

782622

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	65685883	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	108384725	0.78	1.6249	101.5	101.5	0.1385	0.1385	102	
2,3,7,8-TCDF	17.628	557485	0.78	1.0239	0.5023	0.5023	0.009259	0.009259	100	
S Total TCDF					0.5023	0.5023	0.009259	0.009259		
D 13C-2,3,7,8-TCDD	18.338	59957723	0.80	0.8993	101.5	101.5	0.1222	0.1222	101	
$ 37Cl4-2,3,7,8-TCDD	18.338	318727		1.1071	0.4383	0.4383	0.006072	0.006072	87.65	
2,3,7,8-TCDD	18.354	376984	0.89	1.2541	0.5013	0.5013	0.0150	0.0150	100	M
S Total TCDD					0.5013	0.5013	0.0150	0.0150		
D 13C-1,2,3,7,8-PeCDF	22.749	78674290	1.60	1.2101	99.0	99.0	0.2282	0.2282	98.98	
1,2,3,7,8-PeCDF	22.776	2112140	1.63	1.0611	2.530	2.530	0.0220	0.0220	101	
D 13C-2,3,4,7,8-PeCDF	24.126	80591659	1.57	1.2395	99.0	99.0	0.2228	0.2228	98.99	
2,3,4,7,8-PeCDF	24.153	2096967	1.56	1.0184	2.555	2.555	0.0245	0.0245	102	
S Total PeCDF					5.085	5.085	0.0233	0.0233		
D 13C-1,2,3,7,8-PeCDD	24.862	49643581	1.62	0.7612	99.3	99.3	0.1197	0.1197	99.28	
1,2,3,7,8-PeCDD	24.889	1312779	1.42	1.0484	2.522	2.522	0.0218	0.0218	101	
S Total PeCDD					2.522	2.522	0.0218	0.0218		
D 13C-1,2,3,4,7,8-HxCDF	30.835	69484482	0.52	1.0837	100.4	100.4	0.5299	0.5299	100	
1,2,3,4,7,8-HxCDF	30.849	1949462	1.23	1.0851	2.586	2.586	0.0289	0.0289	103	
D 13C-1,2,3,6,7,8-HxCDF	30.995	73262388	0.52	1.1279	101.7	101.7	0.5091	0.5091	102	
1,2,3,6,7,8-HxCDF	31.022	2104086	1.18	1.1260	2.551	2.551	0.0273	0.0273	102	
D 13C-2,3,4,6,7,8-HxCDF	31.754	68885161	0.52	1.0637	101.4	101.4	0.5398	0.5398	101	
2,3,4,6,7,8-HxCDF	31.767	2104896	1.20	1.1675	2.617	2.617	0.0225	0.0225	105	
D 13C-1,2,3,7,8,9-HxCDF	32.512	62528954	0.51	0.9676	101.1	101.1	0.5935	0.5935	101	
1,2,3,7,8,9-HxCDF	32.526	1834100	1.21	1.1664	2.515	2.515	0.0244	0.0244	101	
S Total HxCDF					10.3	10.3	0.0258	0.0258		
* 13C-1,2,3,7,8,9-HxCDD	32.339	63892665	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	47363504	1.27	0.7334	101.1	101.1	0.5001	0.5001	101	
1,2,3,4,7,8-HxCDD	31.940	1300030	1.26	1.0640	2.580	2.580	0.0268	0.0268	103	
D 13C-1,2,3,6,7,8-HxCDD	32.033	56759108	1.25	0.8802	100.9	100.9	0.4167	0.4167	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	1460747	1.28	1.0001	2.573	2.573	0.0268	0.0268	103	
1,2,3,7,8,9-HxCDD	32.353	1503407	1.26	1.1325	2.550	2.550	0.0244	0.0244	102	
S Total HxCDD					7.703	7.703	0.0260	0.0260		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	51308225	0.44	0.7730	103.9	103.9	1.147	1.147	104	
1,2,3,4,6,7,8-HpCDF	33.924	1856599	1.05	1.4413	2.511	2.511	0.0321	0.0321	100	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44628352	0.44	0.7008	99.7	99.7	1.266	1.266	99.67	
1,2,3,4,7,8,9-HpCDF	35.017	1465634	1.06	1.3174	2.493	2.493	0.0442	0.0442	99.72	
S Total HpCDF					5.003	5.003	0.0381	0.0381		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	41876556	1.01	0.6472	101.3	101.3	0.6709	0.6709	101	
1,2,3,4,6,7,8-HpCDD	34.726	1164074	1.06	1.0943	2.540	2.540	0.0284	0.0284	102	
S Total HpCDD					2.540	2.540	0.0284	0.0284		
D 13C-OCDD	37.093	57018462	0.89	0.4472	199.6	199.6	0.2479	0.2479	99.79	
OCDF	37.201	1976175	0.91	1.4382	4.820	4.820	0.0196	0.0196	96.40	
OCDD	37.105	1569338	0.92	1.1070	4.973	4.973	0.0246	0.0246	99.45	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		29725607	7464659	4167	10417	1791		
333.9339	18.142	18.142	0		35960276	9003139	3074	7685	2929	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	47438761	11992473	9243	23107	1297		
317.9389	17.613	17.616	0	0.971	60945964	15328013	5578	13945	2748	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	244966	62557	418	1045	150		
305.8987	17.628	17.631	0	1.001	312519	74119	618	1545	120	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	26677109	6242710	4167	10417	1498		
333.9339	18.338	18.338	0	1.011	33280614	7789380	3074	7685	2534	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.011	318727	66577	443	1107	150		
2,3,7,8-TCDD											M
319.8965	18.354	18.357	0	1.001	177891	43427	698	1745	62		M
321.8936	18.354	18.357	0	1.001	199093	47894	356	890	135	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	48367116	8680931	10780	26950	805		
353.8970	22.749	22.754	0	1.254	30307174	5346402	7413	18532	721	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	1307686	232308	692	1730	336		
341.8567	22.762	22.779	-1	1.001	804454	137466	619	1547	222	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	49186157	7929286	10780	26950	736		
353.8970	24.126	24.129	0	1.330	31405502	5197836	7413	18532	701	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	1276283	202864	692	1730	293		
341.8567	24.153	24.156	0	1.001	820684	134634	619	1547	218	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	30684379	4744795	3870	9675	1226		
369.8919	24.862	24.865	0	1.370	18959202	2913489	2133	5332	1366	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	770345	123302	470	1175	262		
357.8516	24.889	24.892	0	1.001	542434	83964	231	577	363	1.42(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23885791	5080702	12413	31032	409		
385.8610	30.835	30.838	0	0.953	45598691	9653525	24179	60447	399	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.857	0	1.000	1073816	228005	1130	2825	202		
375.8178	30.849	30.857	0	1.000	875646	183719	720	1800	255	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	25163610	5186426	12413	31032	418		
385.8610	30.995	31.003	0	0.958	48098778	9847658	24179	60447	407	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.001	1138605	230252	1130	2825	204		
375.8178	31.008	31.022	-1	1.000	965481	194261	720	1800	270	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	23545536	6005512	12413	31032	484		
385.8610	31.754	31.756	0	0.982	45339625	11622590	24179	60447	481	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	1148495	290976	1130	2825	258		
375.8178	31.767	31.772	0	1.000	956401	245408	720	1800	341	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.512	32.523	-1	1.005	21115296	5525344	12413	31032	445		
385.8610	32.512	32.523	-1	1.005	41413658	10740911	24179	60447	444	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	1004237	260741	1130	2825	231		
375.8178	32.526	32.534	0	1.000	829863	215930	720	1800	300	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		35492157	8840472	14115	35287	626		
403.8529	32.339	32.342	0		28400508	7090007	9259	23147	766	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	26497467	7547113	14115	35287	535		
403.8529	31.927	31.929	0	0.987	20866037	5954906	9259	23147	643	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	725563	201392	885	2212	228		
391.8127	31.940	31.945	0	1.000	574467	160999	657	1642	245	1.26(1.05-1.43)	

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	31586686	7983088	14115	35287	566		
403.8529	32.033	32.033	0	0.991	25172422	6406461	9259	23147	692	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	819435	207367	885	2212	234		
391.8127	32.047	32.047	0	1.000	641312	163363	657	1642	249	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	837706	208716	885	2212	236		
391.8127	32.353	32.355	0	1.013	665701	168193	657	1642	256	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	15666898	4905580	16994	42485	289		
419.8220	33.912	33.914	0	1.049	35641327	11012481	39521	98802	279	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	949994	280926	1603	4007	175		
409.7789	33.924	33.926	0	1.000	906605	280503	1346	3365	208	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13532847	3927195	16994	42485	231		
419.8220	35.005	35.010	0	1.082	31095505	8744356	39521	98802	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	755406	231092	1603	4007	144		
409.7789	35.017	35.020	0	1.000	710228	201627	1346	3365	150	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	21029381	6108519	13979	34947	437		
437.8140	34.714	34.716	0	1.073	20847175	6052425	13690	34225	442	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	599401	178801	821	2052	218		
425.7737	34.726	34.726	0	1.000	564673	160703	693	1732	232	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26904388	6653832	3548	8870	1875		
471.7750	37.093	37.094	0	1.147	30114074	7334467	3515	8787	2087	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	941996	224700	300	750	749		
443.7399	37.189	37.199	-1	1.003	1034179	253612	487	1217	521	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	750544	177364	389	972	456		
459.7348	37.105	37.106	0	1.000	818794	206090	374	935	551	0.92(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.35
Area: 201476
Amount: 0.545465
Amount Units: pg/ul

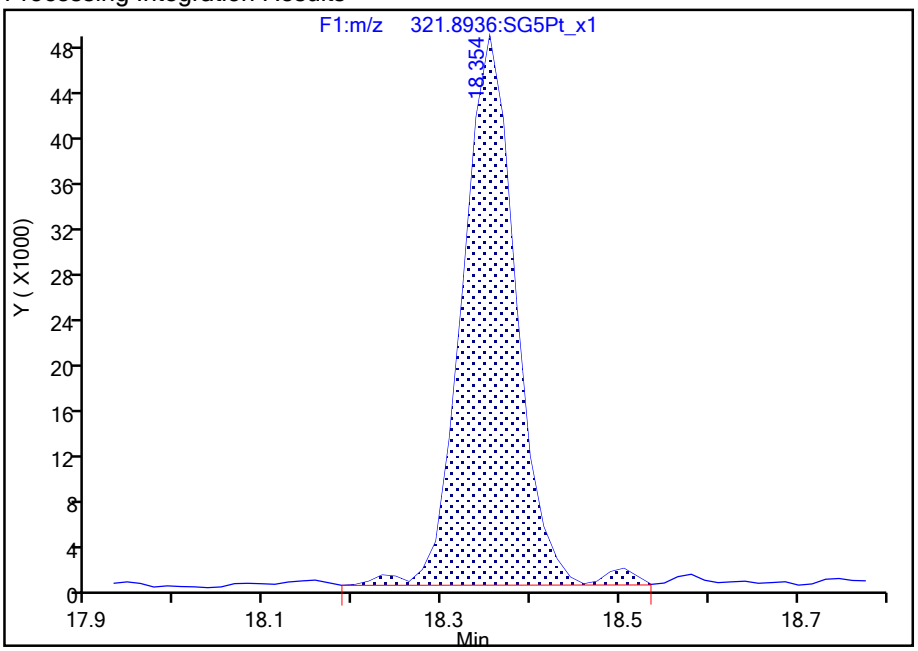

Manual Integration Results

RT: 18.35
Area: 199093
Amount: 0.501347
Amount Units: pg/ul

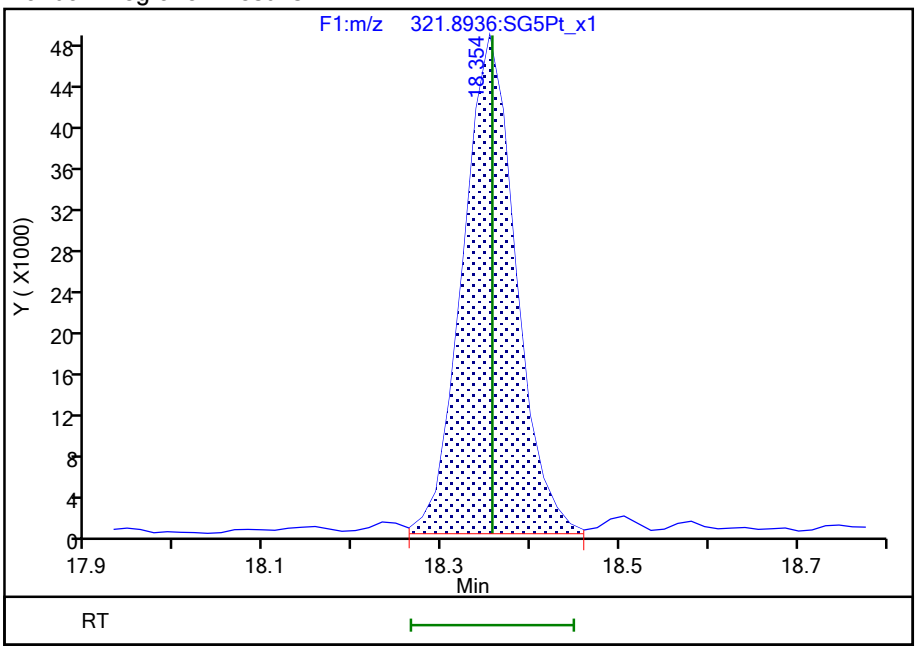

Reviewer: stephensk, 27-Jul-2021 08:15:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

782628

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

Processing Integration Results

RT: 18.35
Area: 394678
Amount: 0.545465
Amount Units: pg/ul

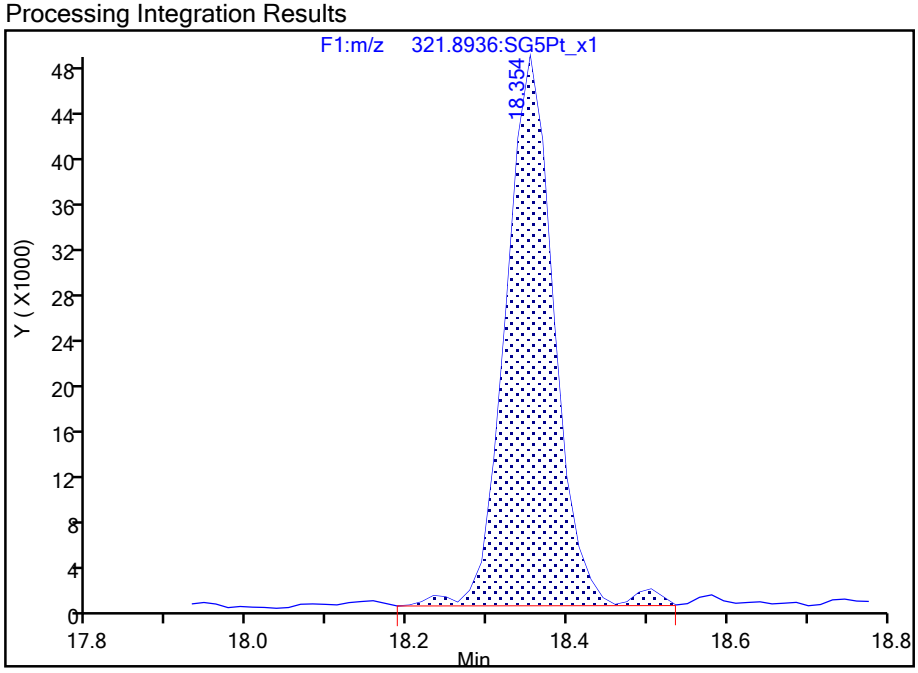

Manual Integration Results

RT: 18.35
Area: 376984
Amount: 0.501347
Amount Units: pg/ul
Reviewer: stephensk, 27-Jul-2021 08:15:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

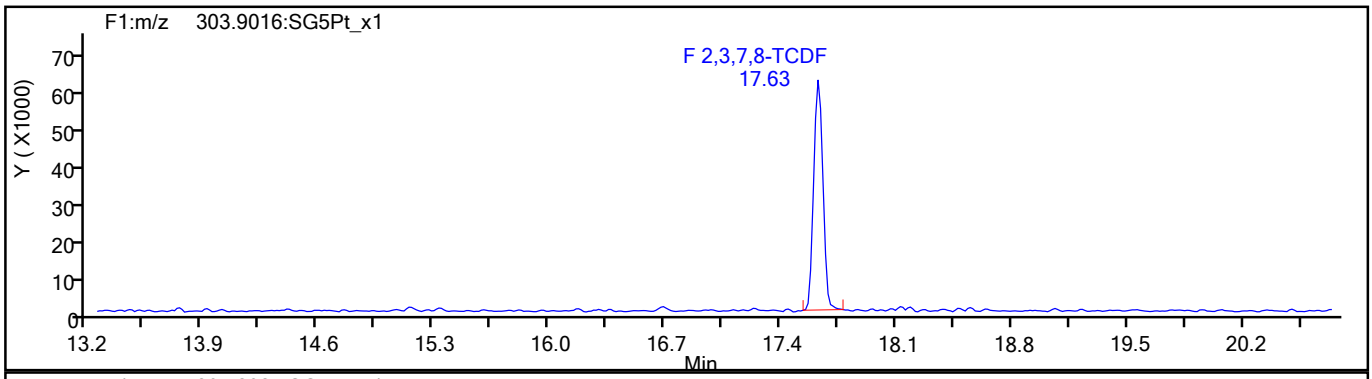

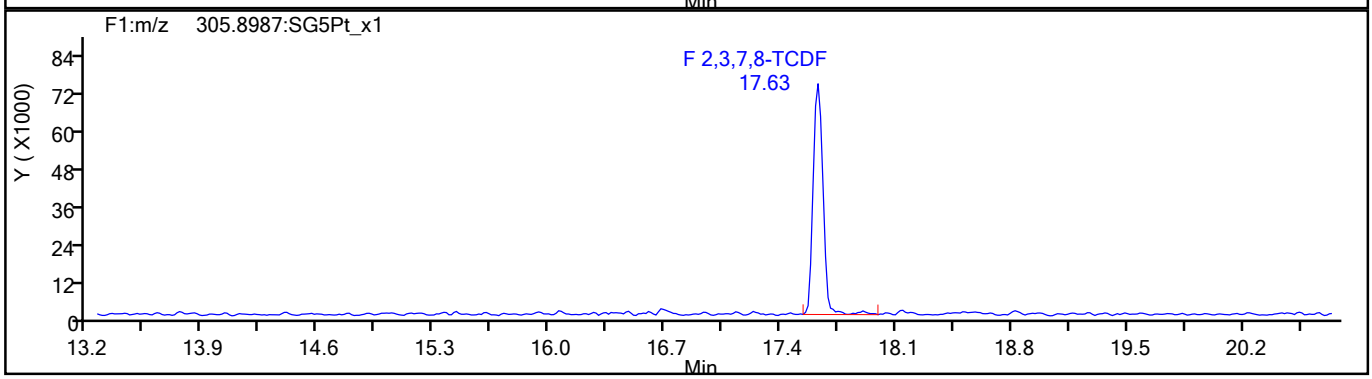

TCDF Standards

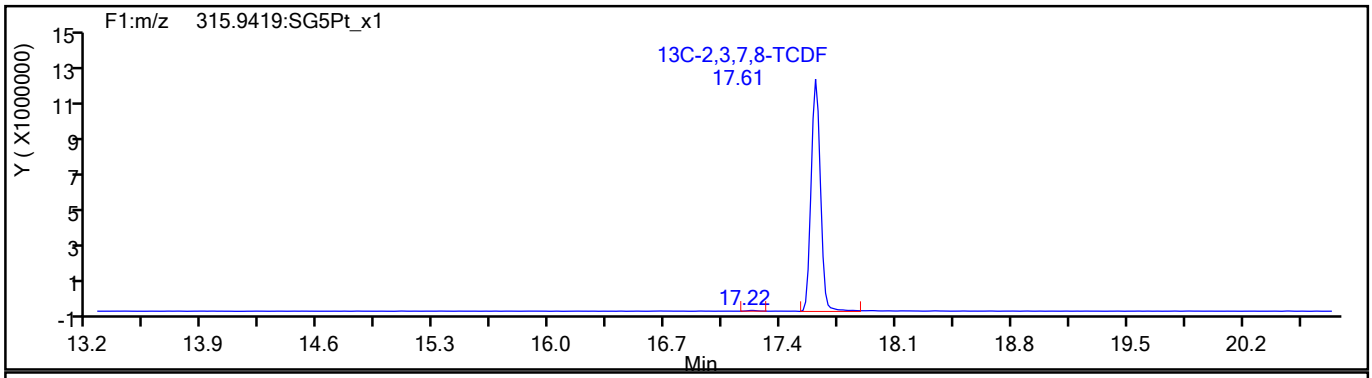

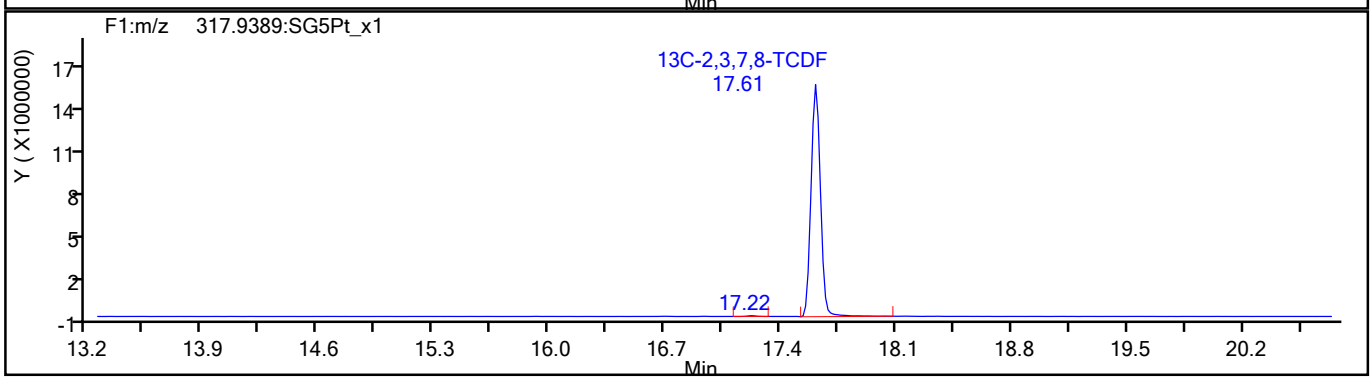

782630

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

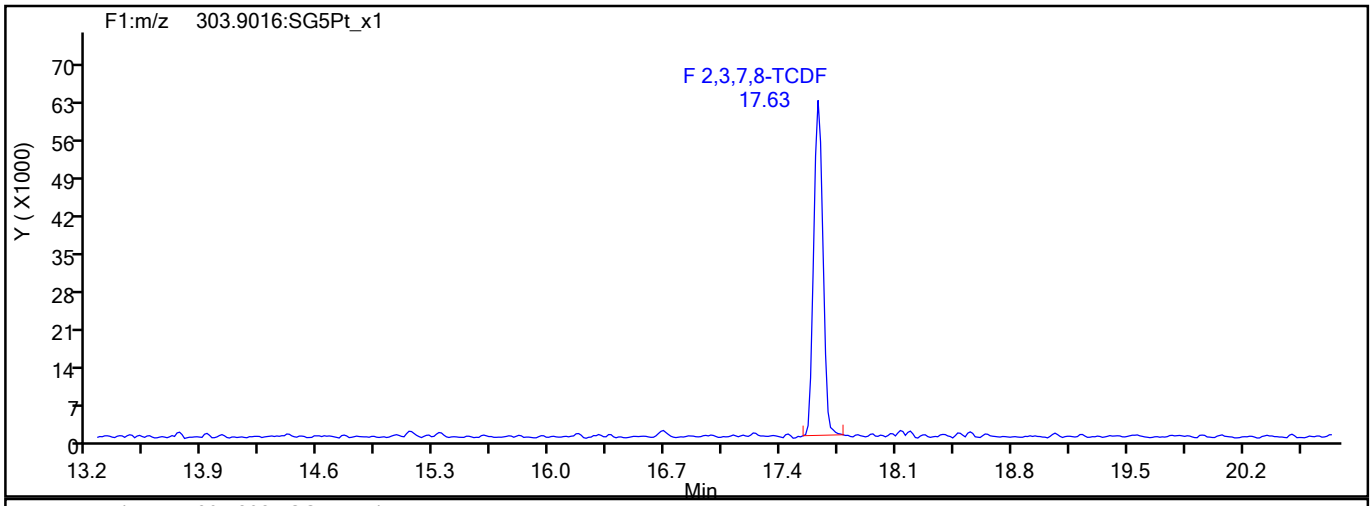

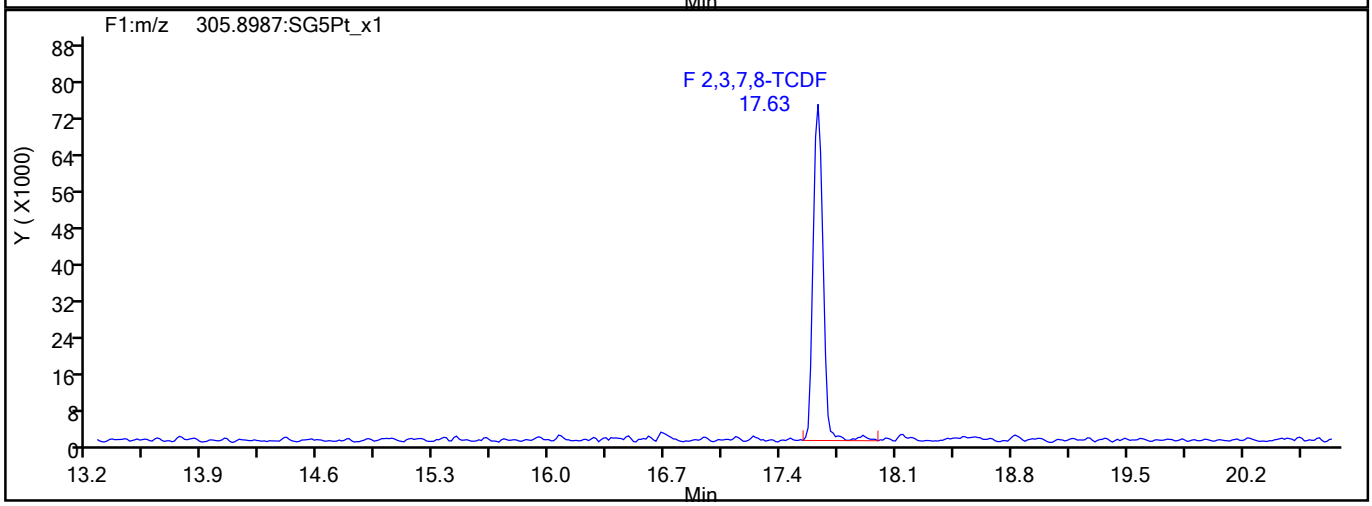

TCDF Interference Mass

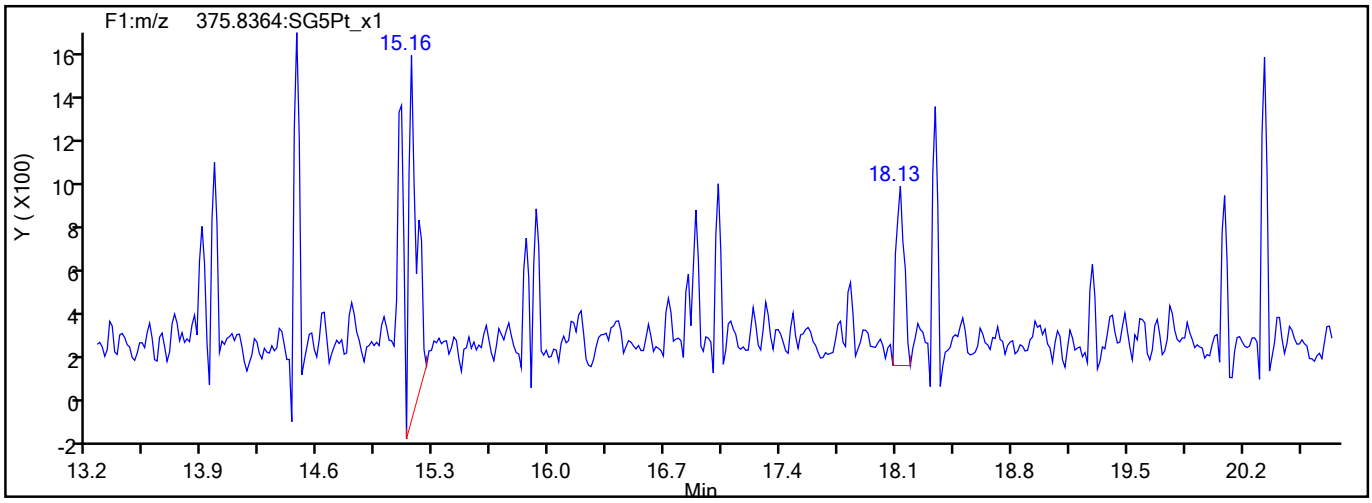

782631

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

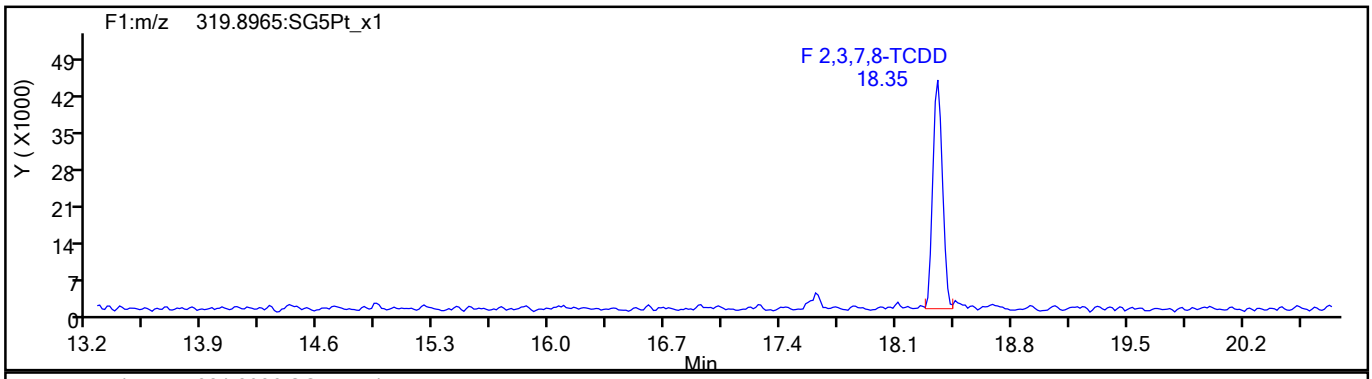

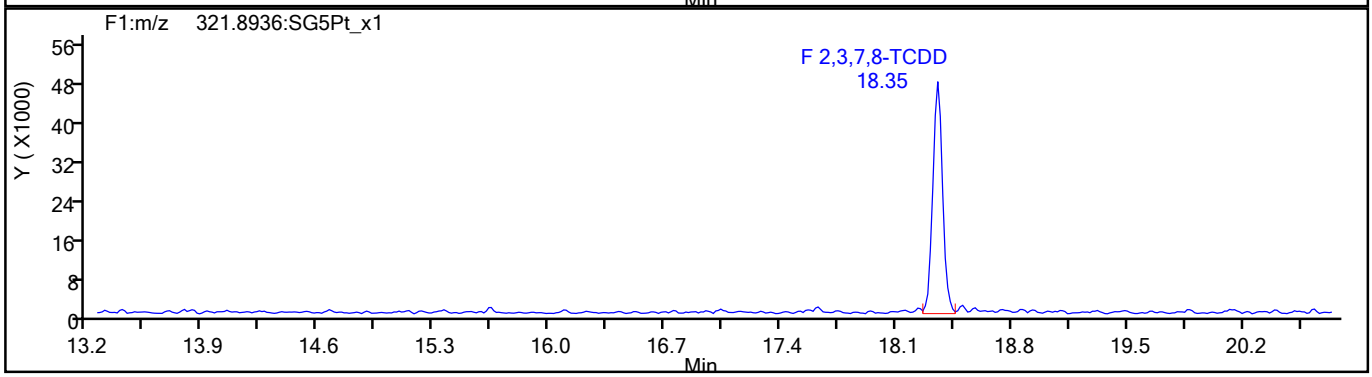

TCDD Standards

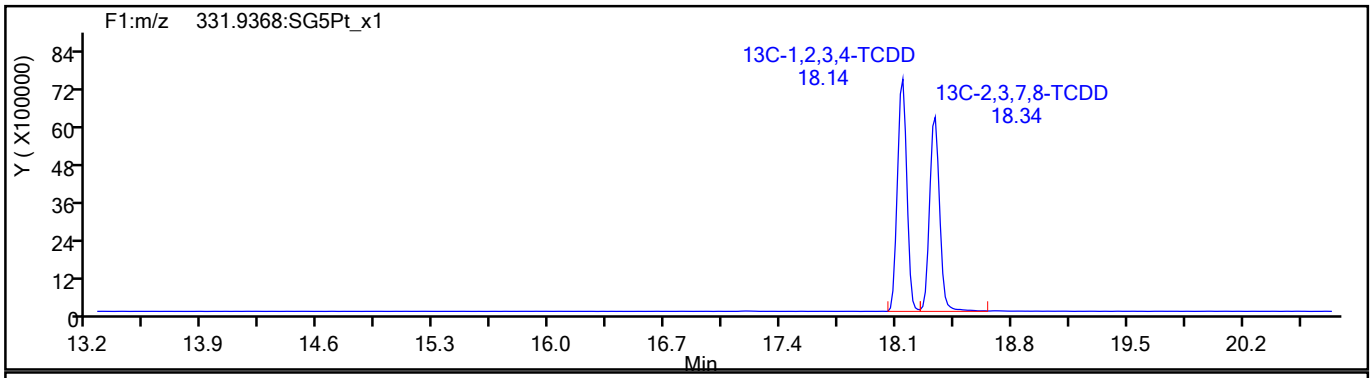

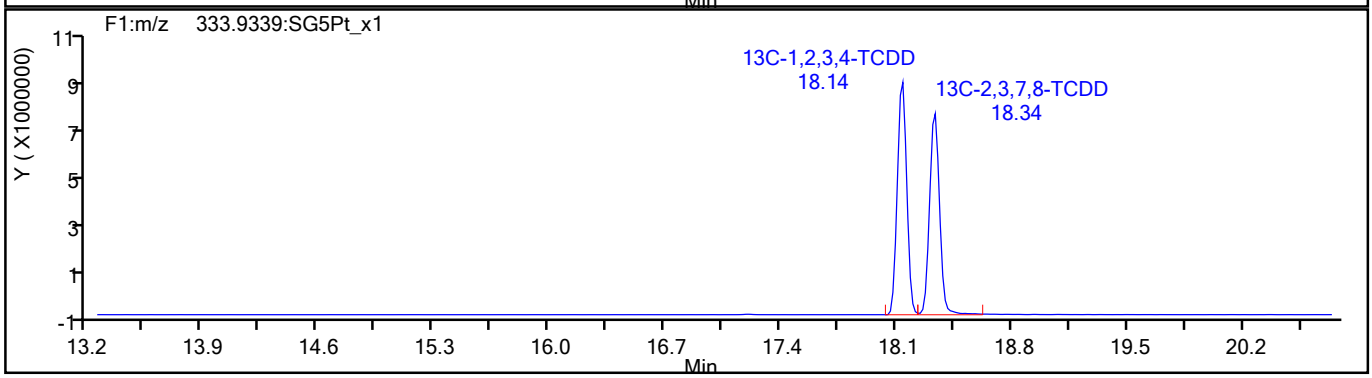

782632

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

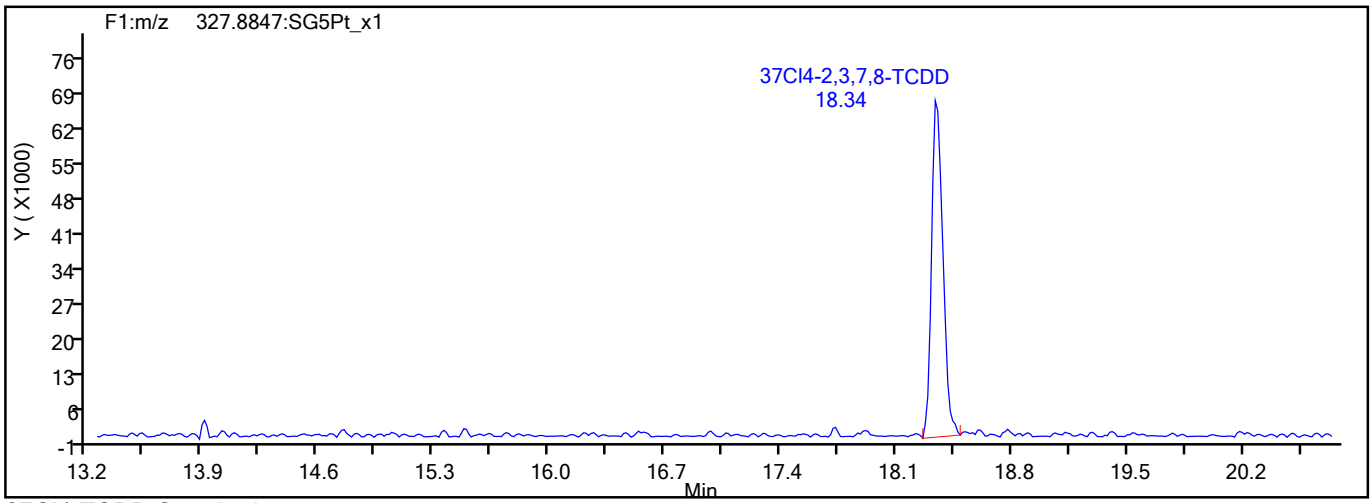

37Cl4-TCDD Standards

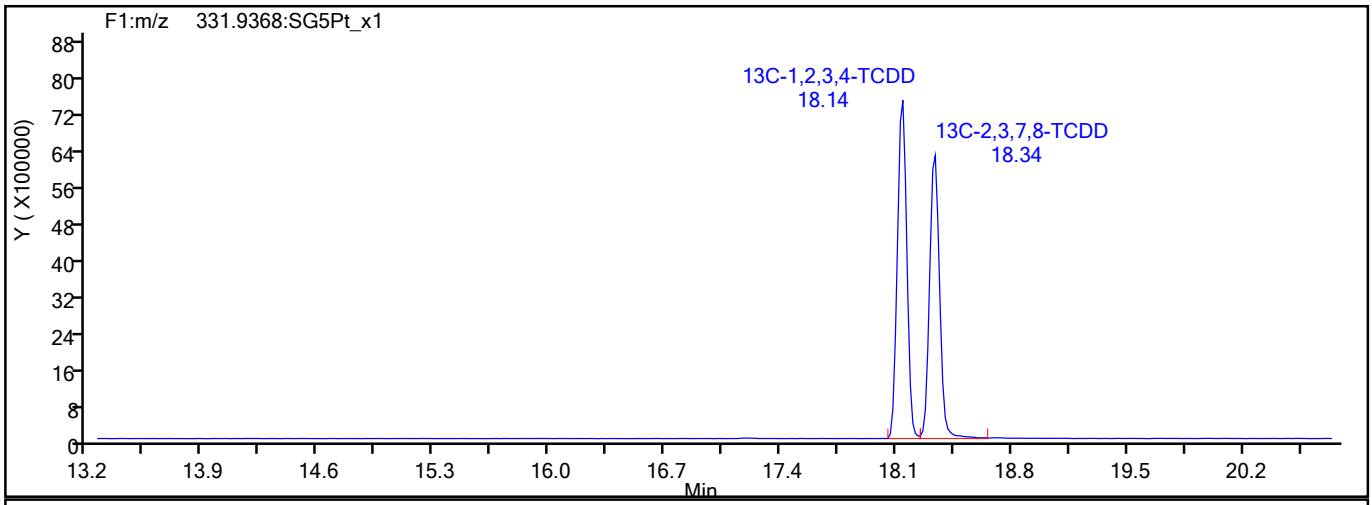

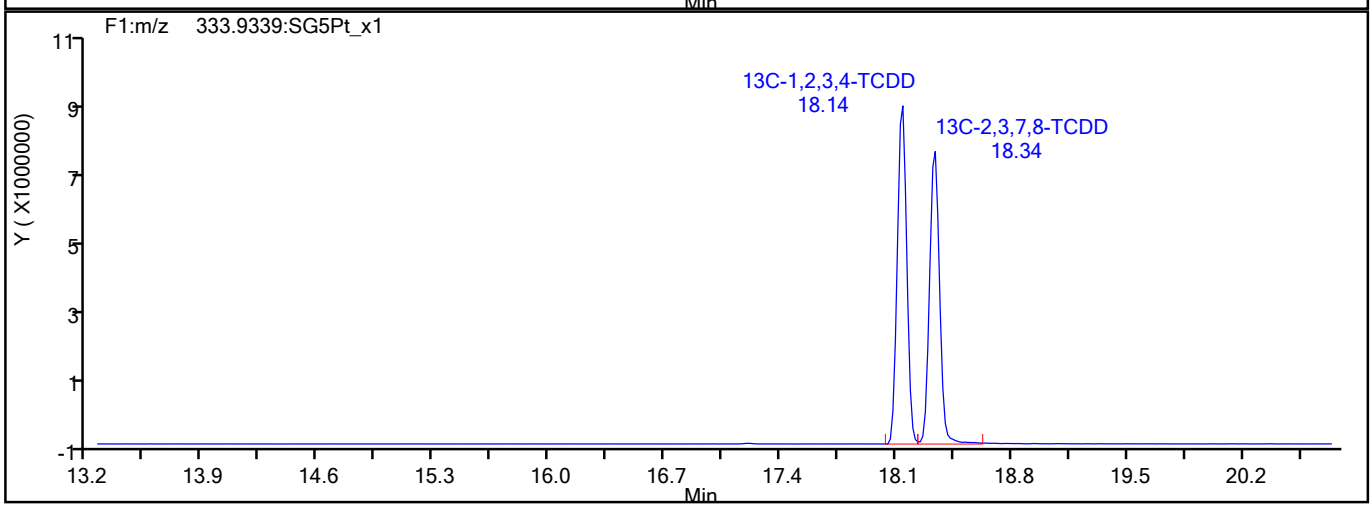

782633

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

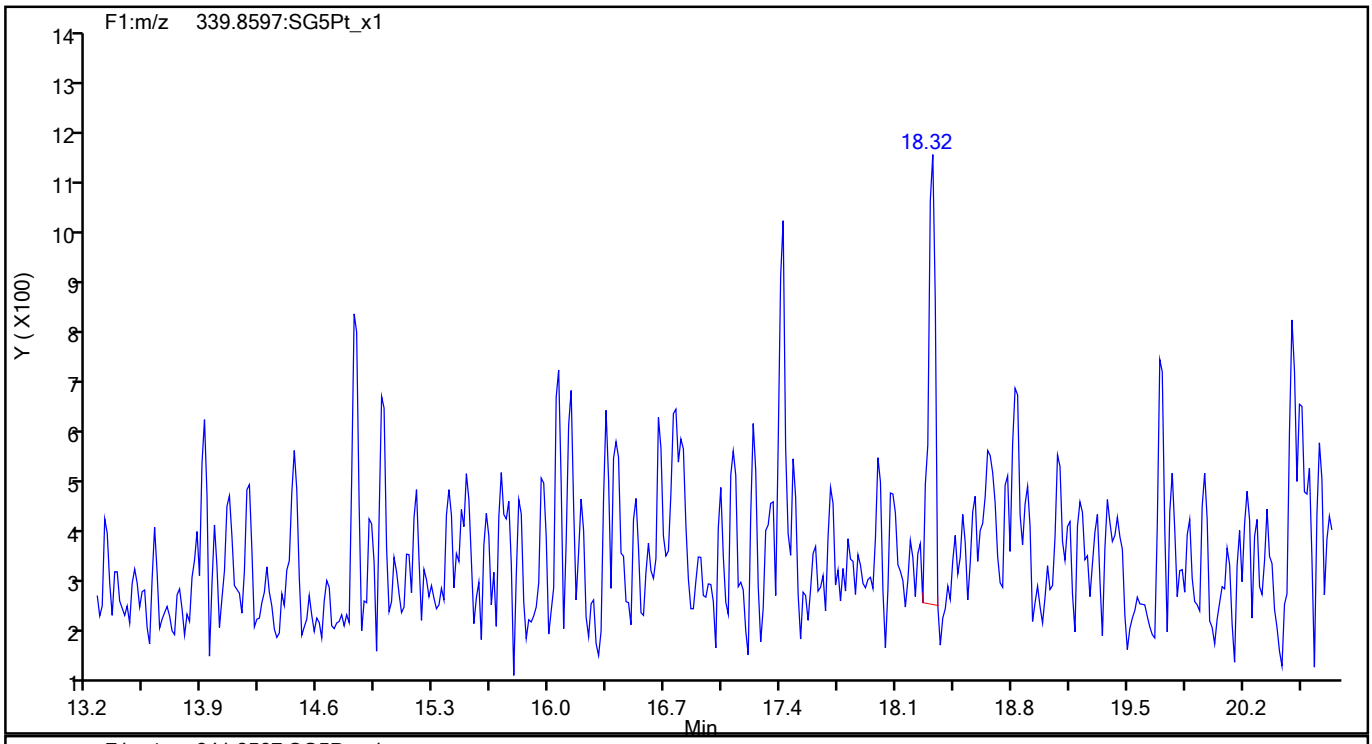

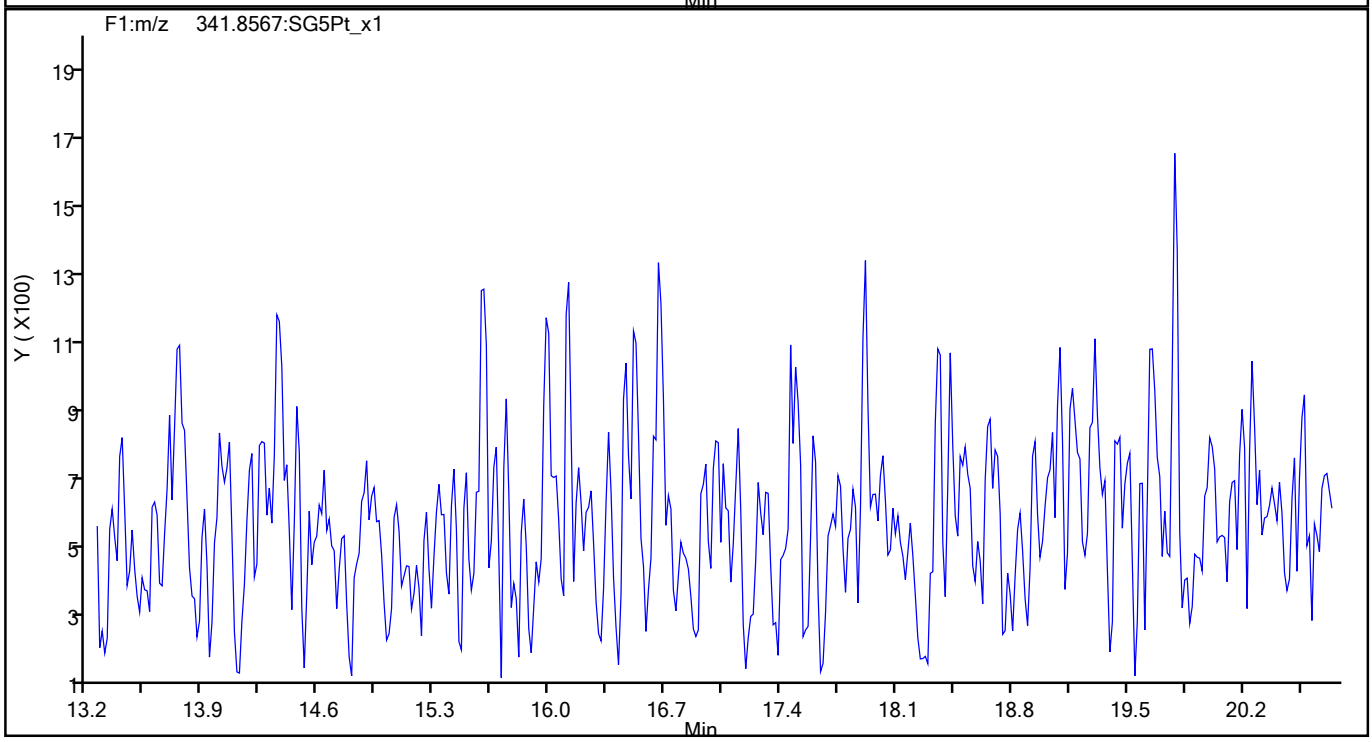

782634

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

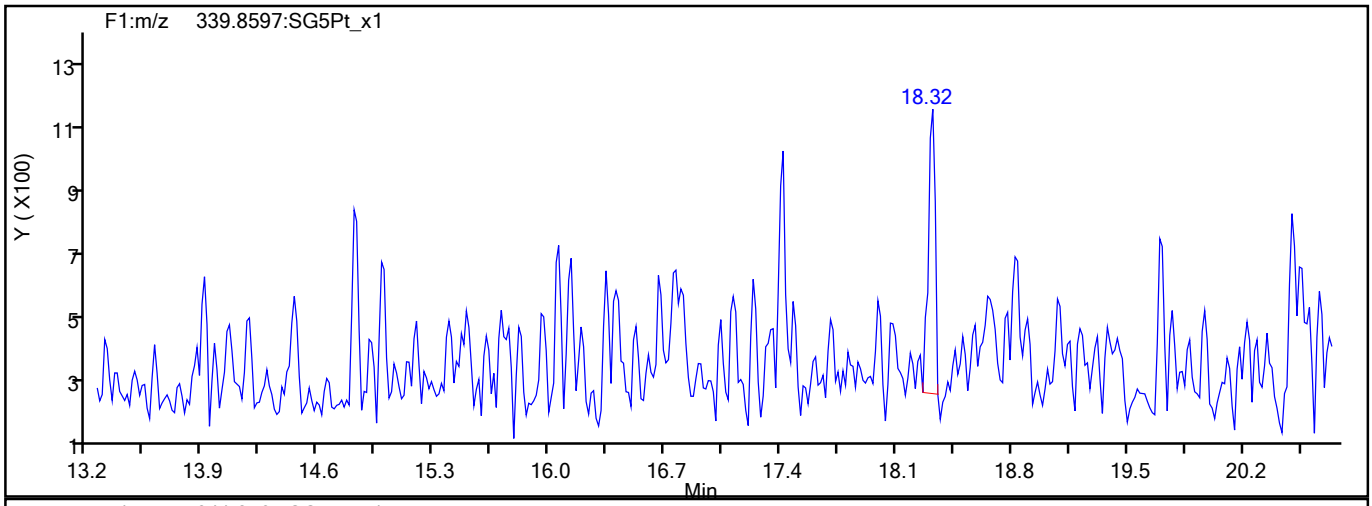

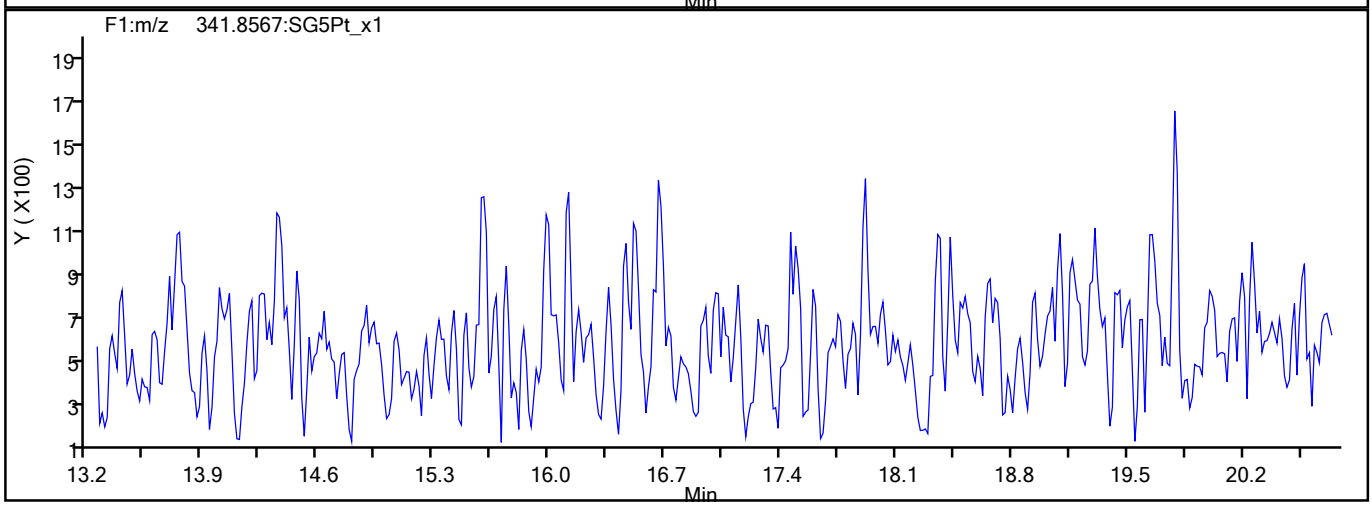

F1 PeCDFs Interference Mass

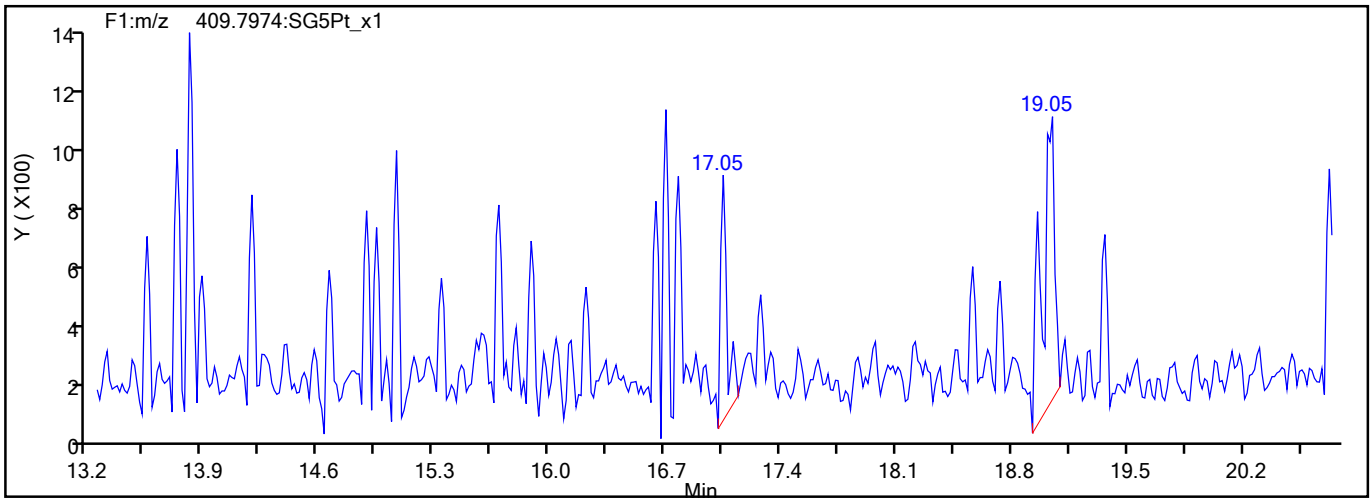

782635

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

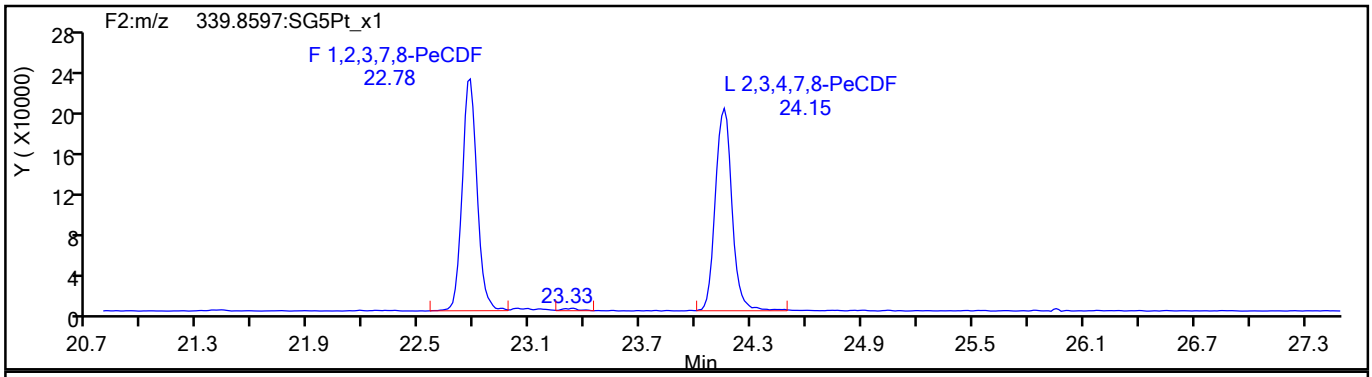

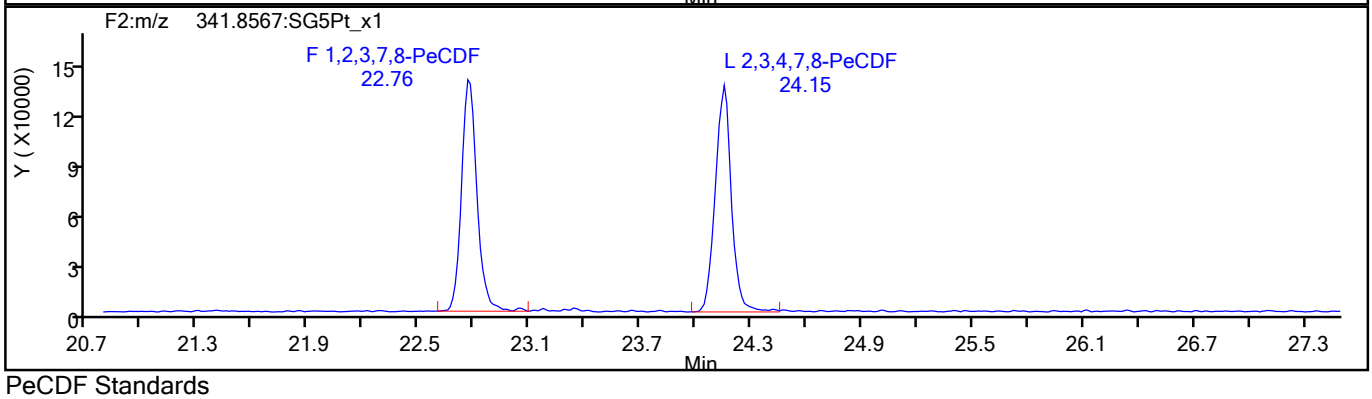

PeCDF Standards

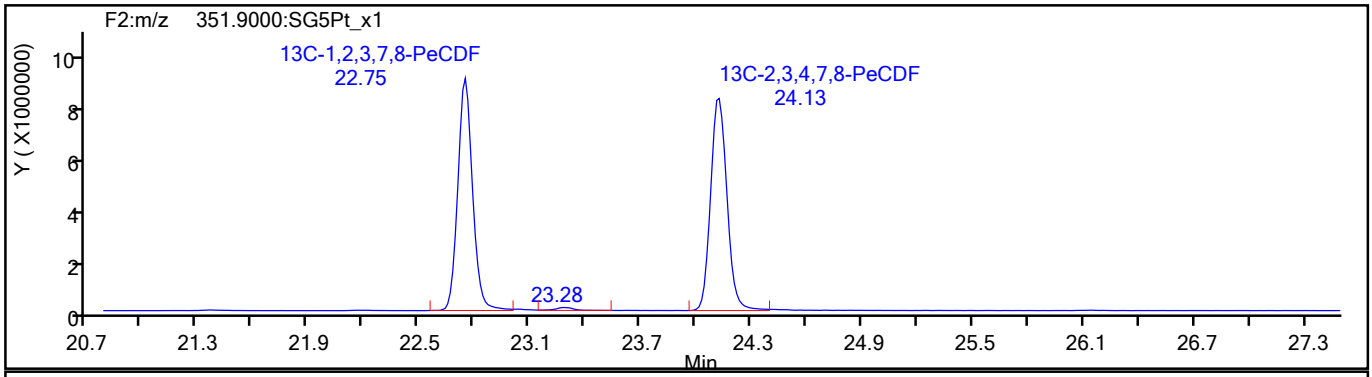

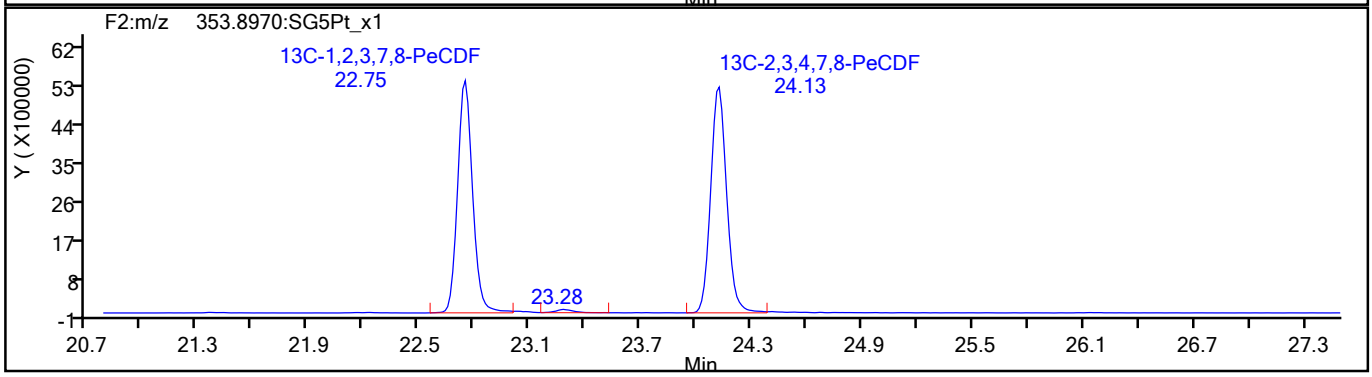

782636

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

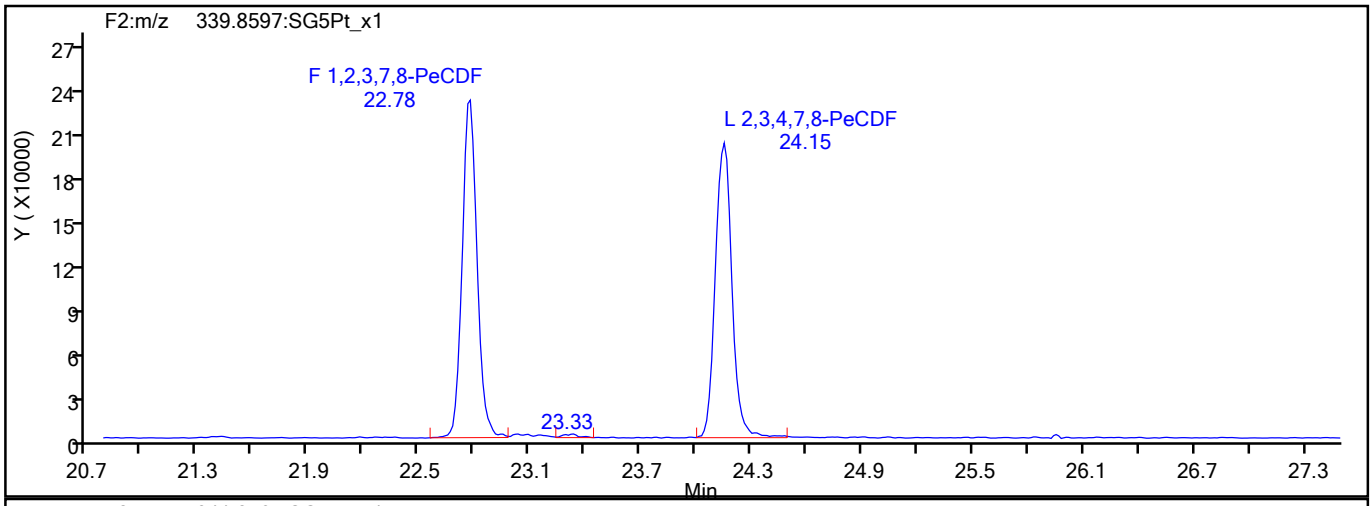

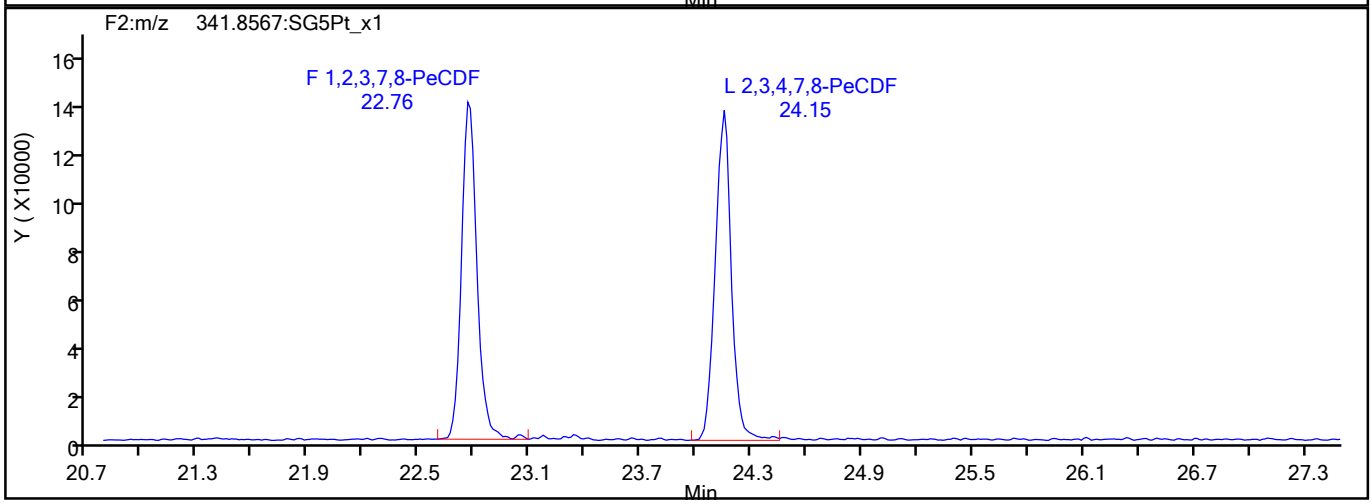

PeCDF Interference Mass

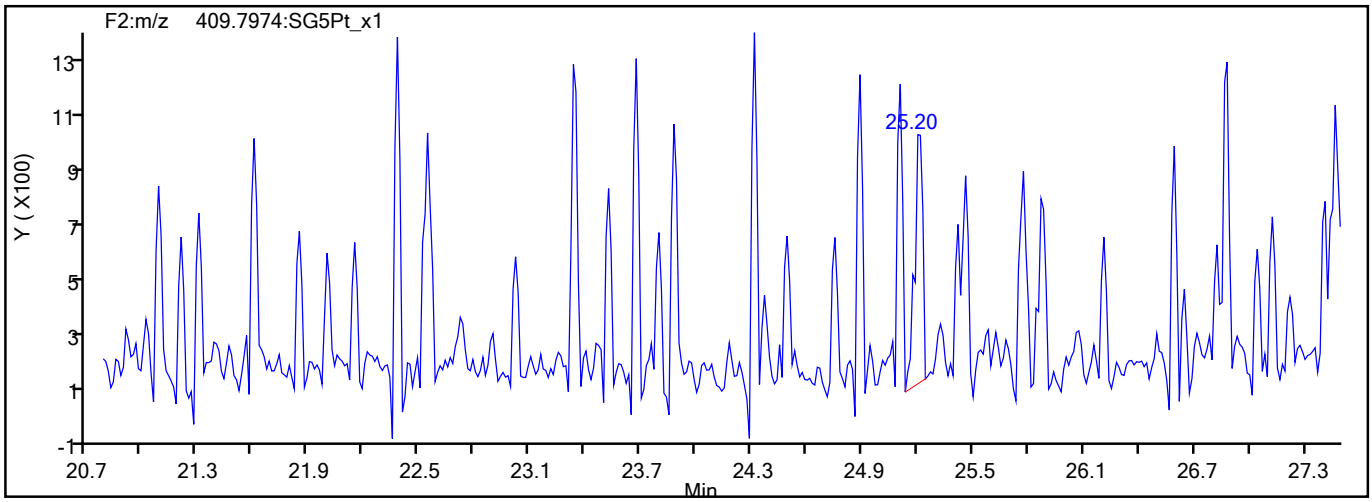

782637

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

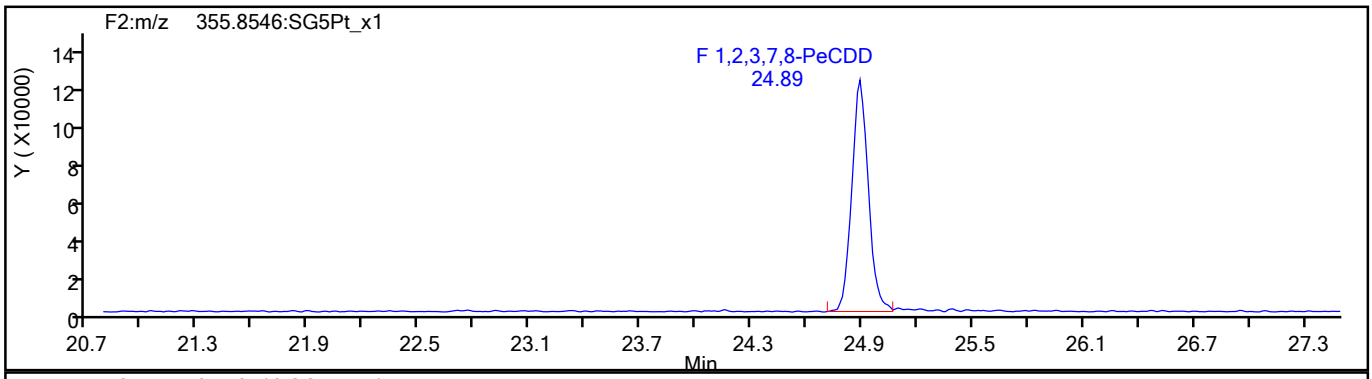

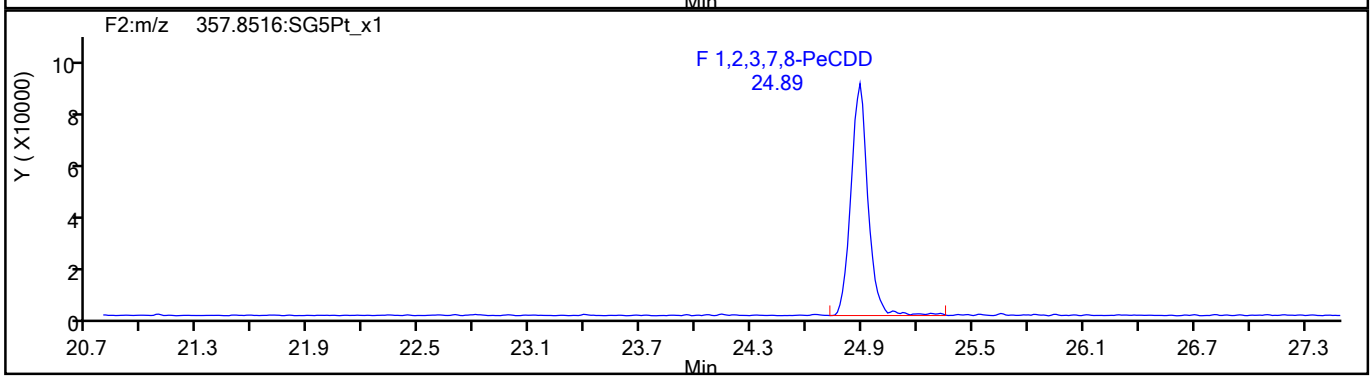

PeCDD Standards

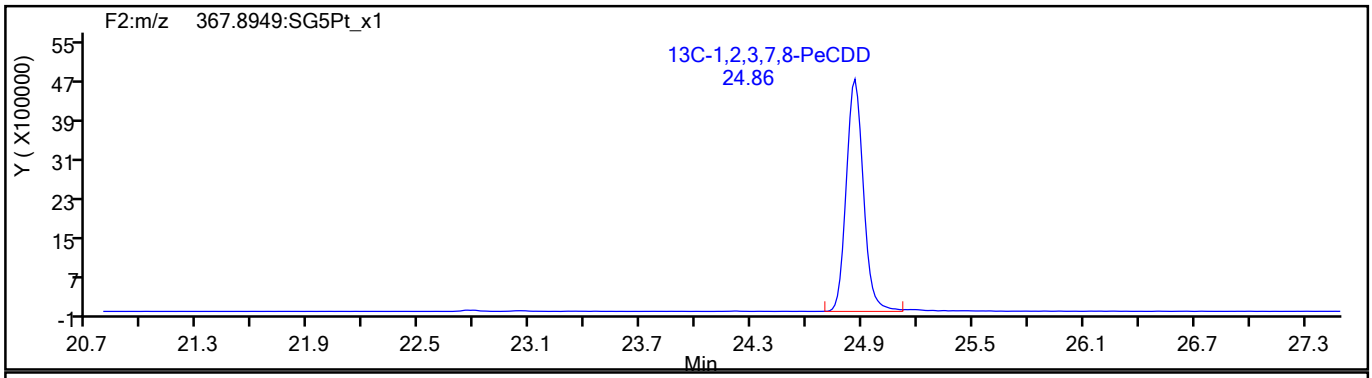

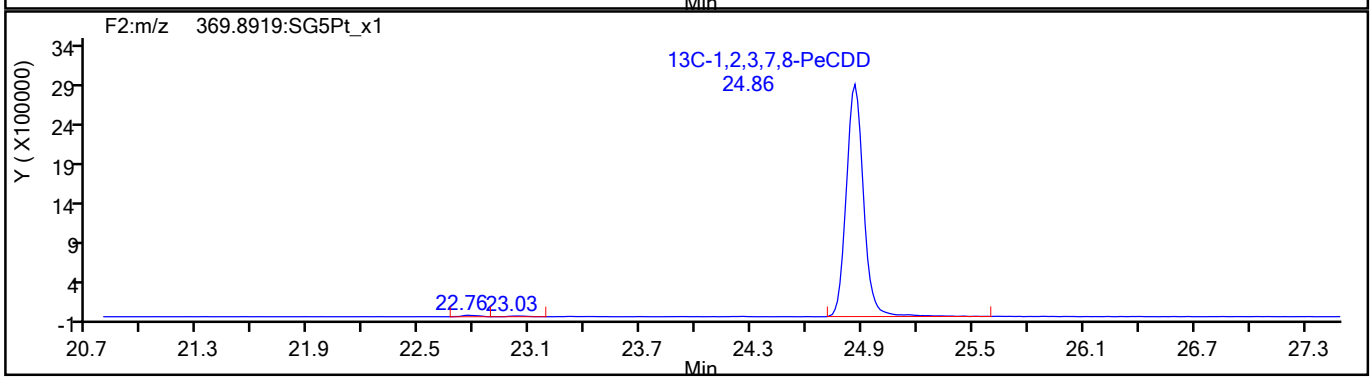

782638

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

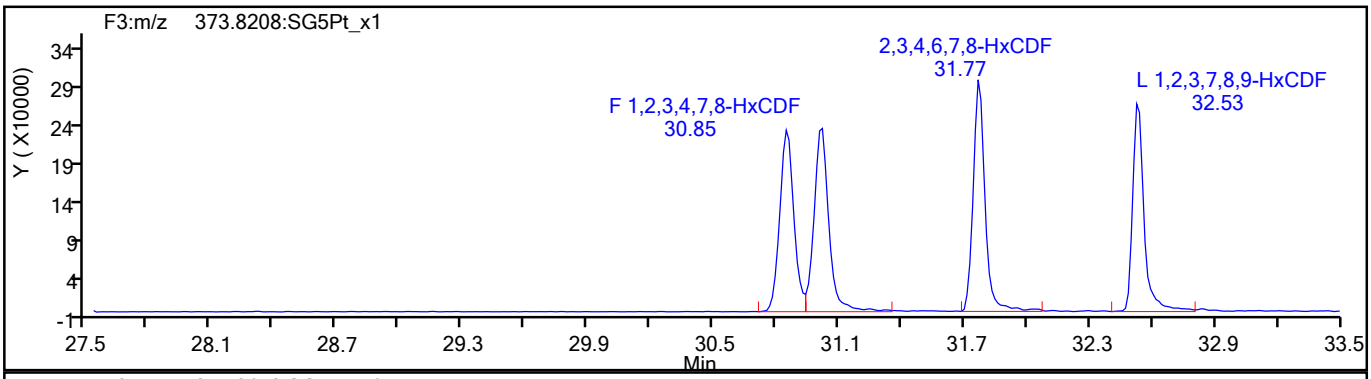

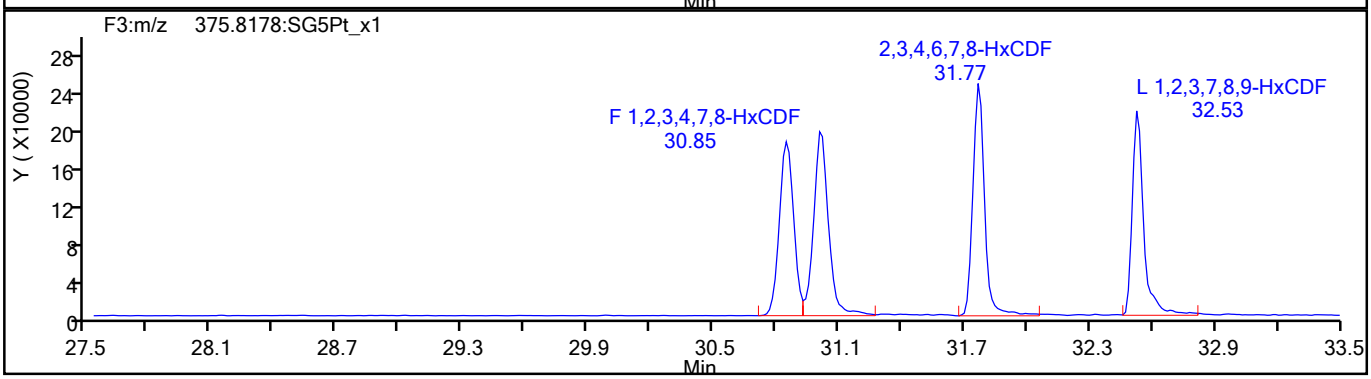

HxCDF Standards

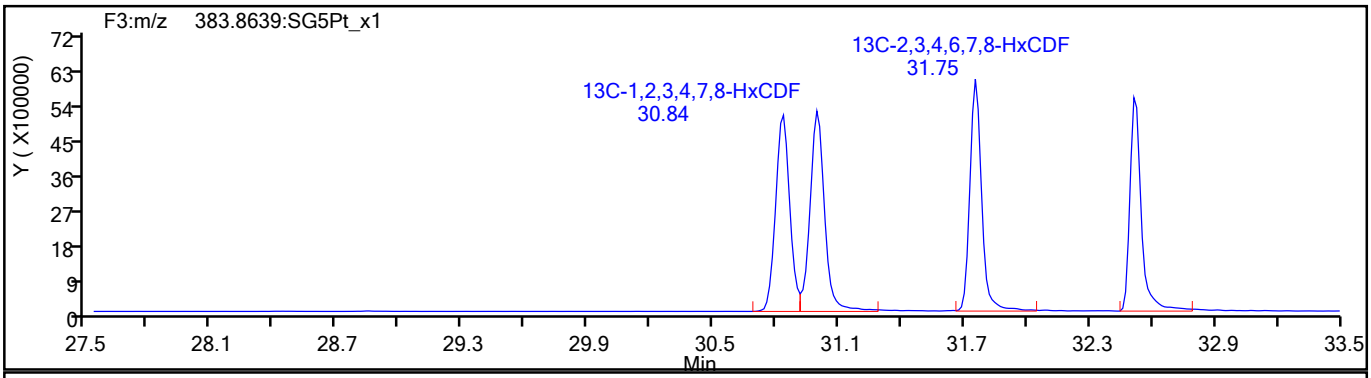

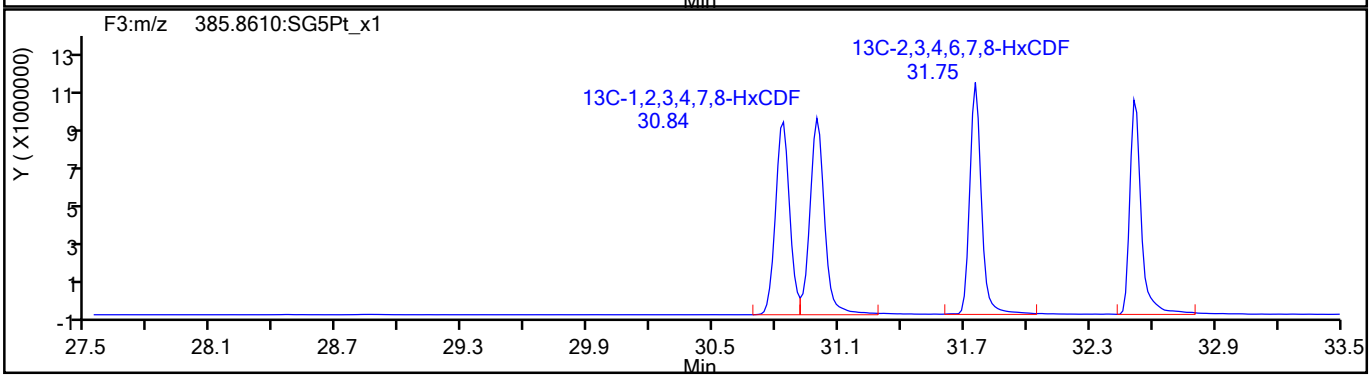

782639

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

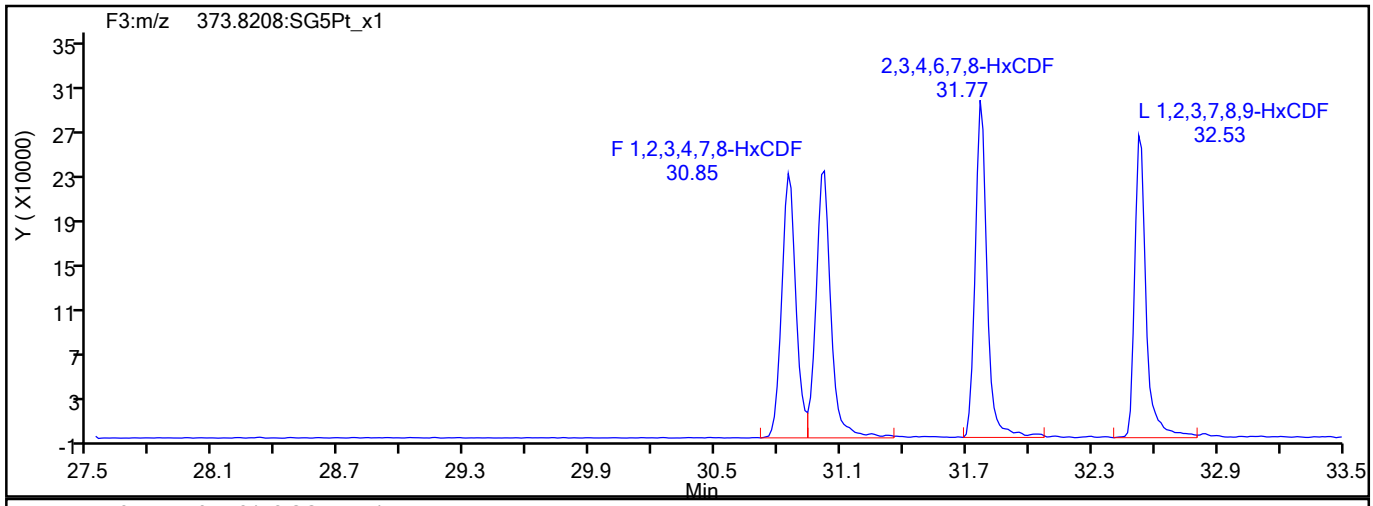

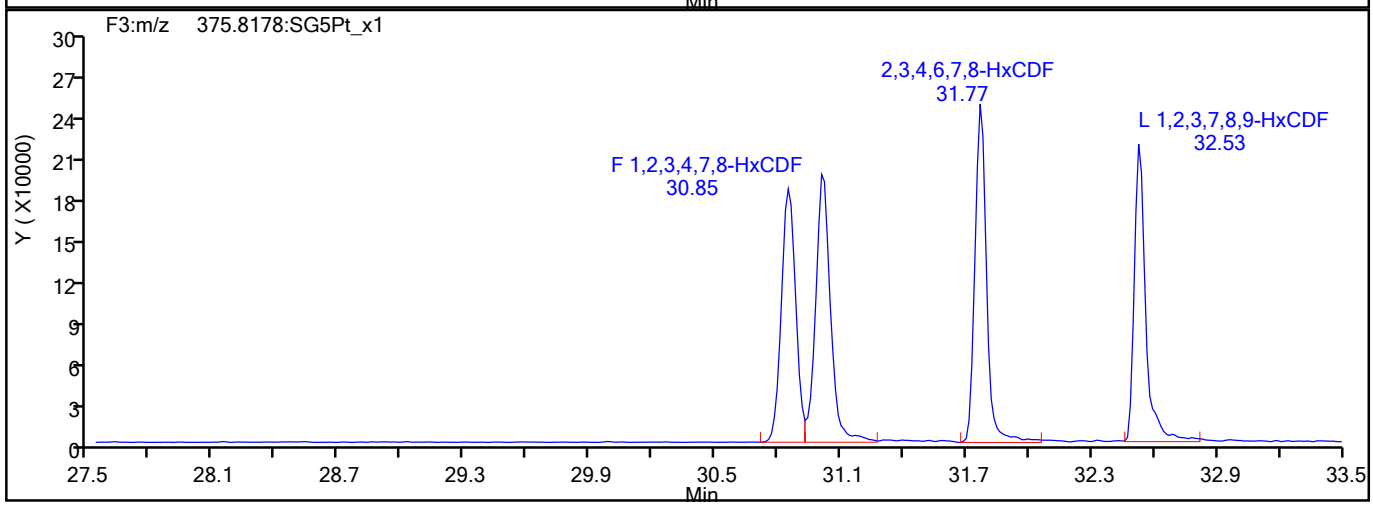

HxCDF Interference Mass

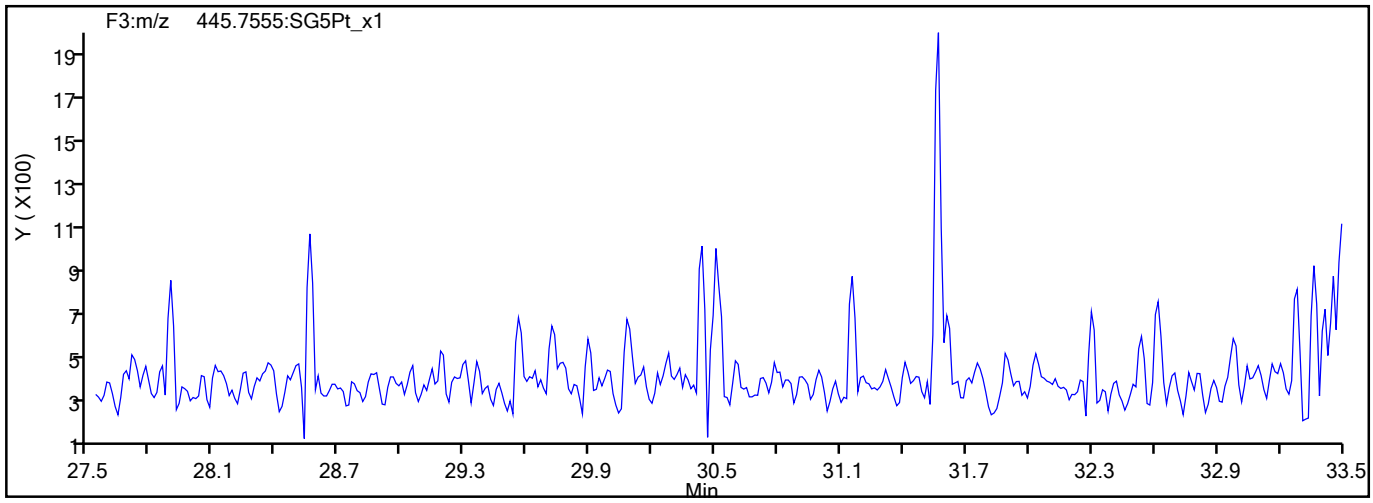

782640

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

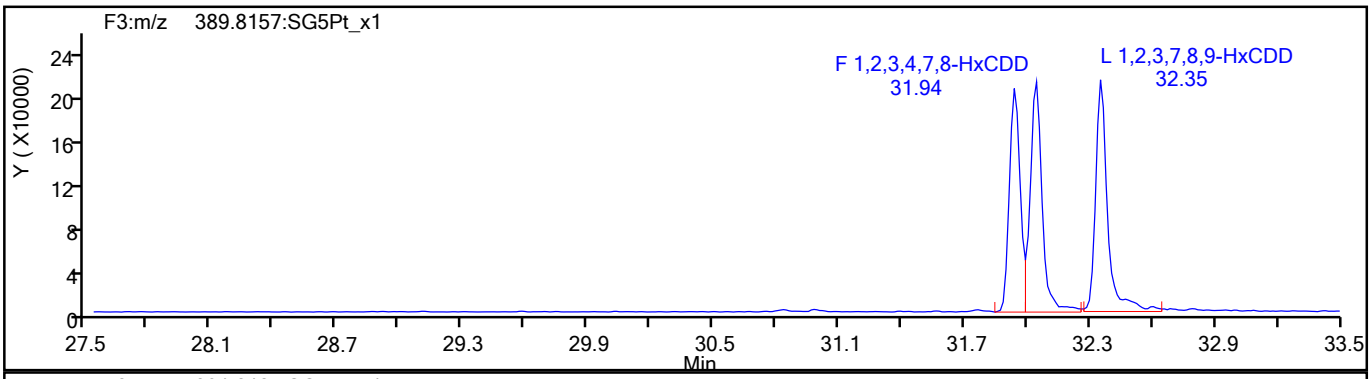

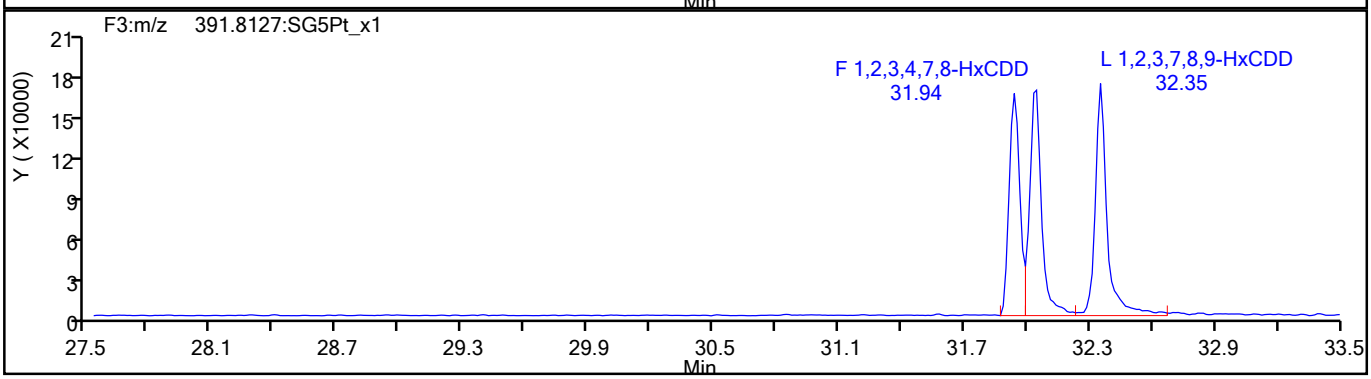

HxCDD Standards

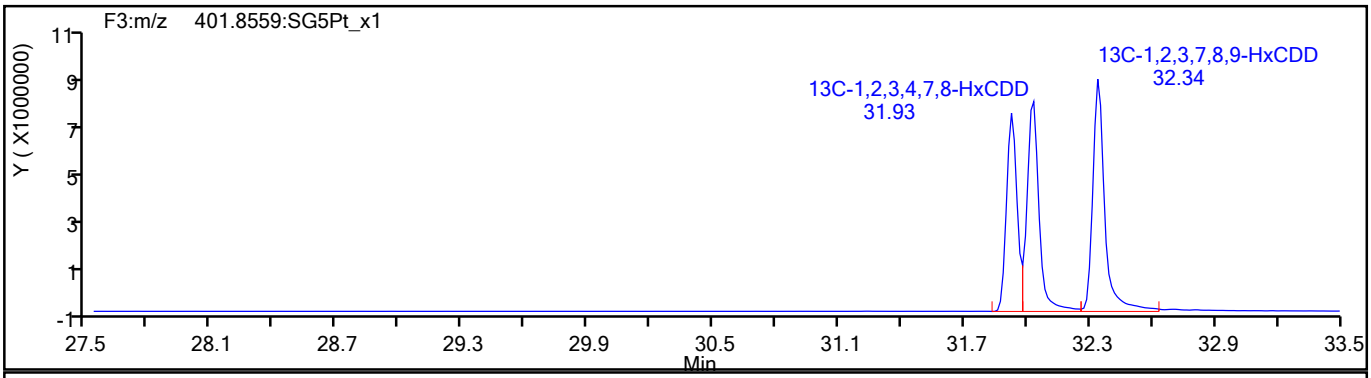

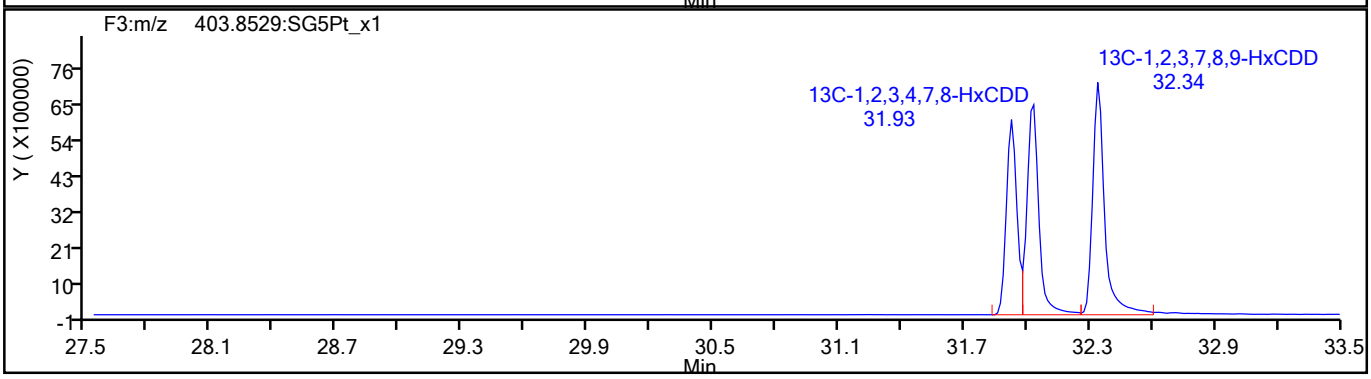

782641

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

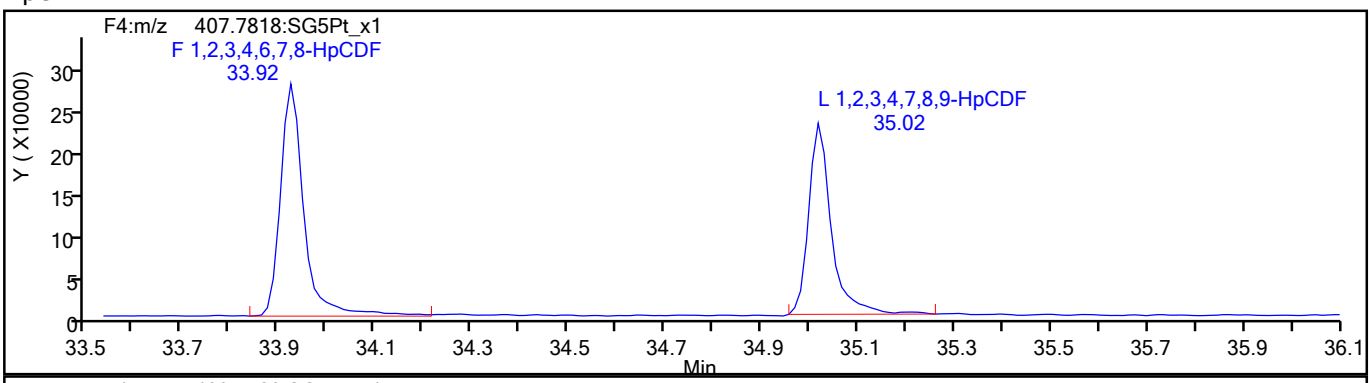

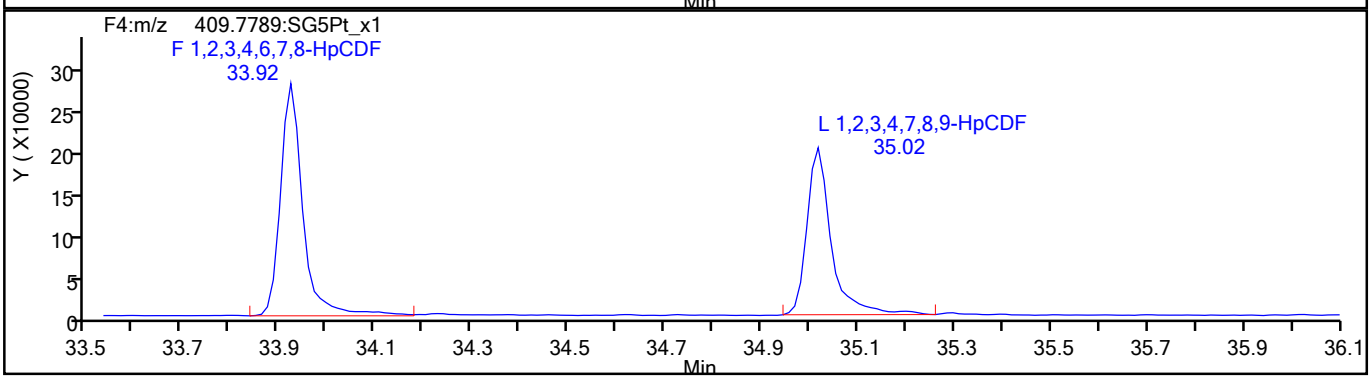

HpCDF Standards

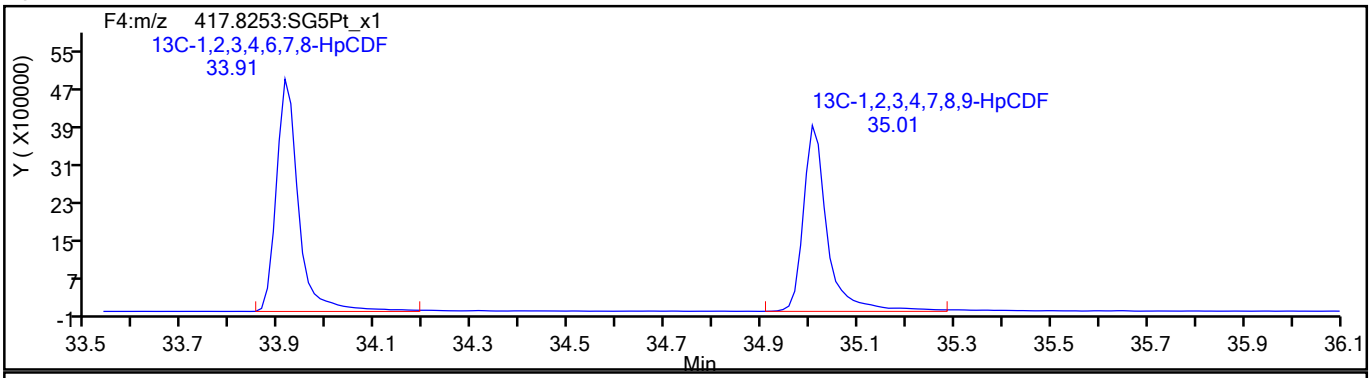

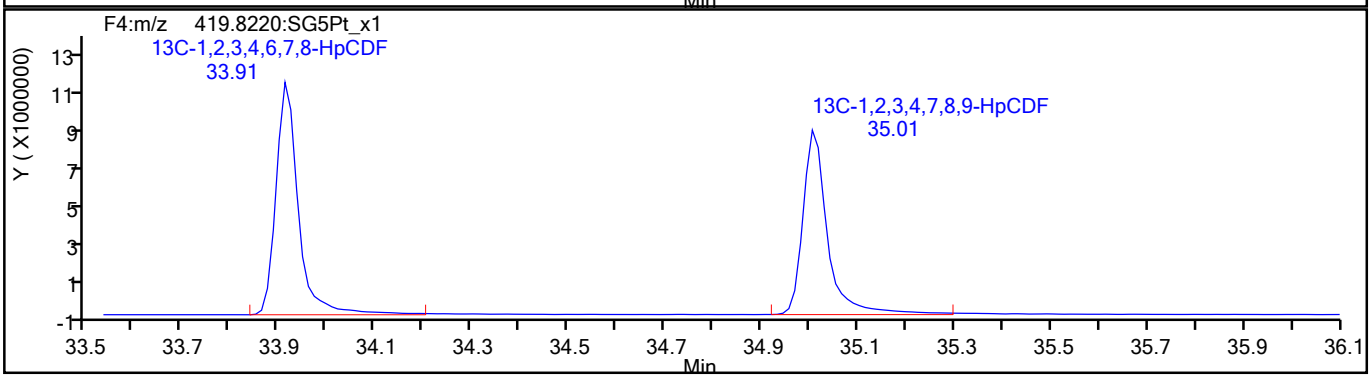

782642

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

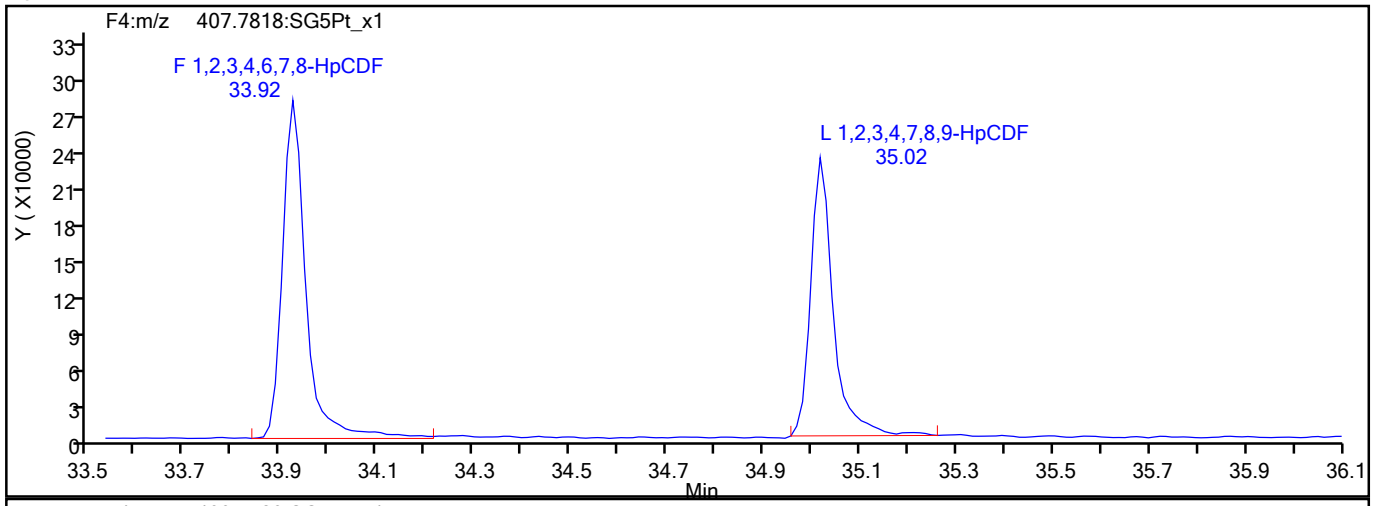

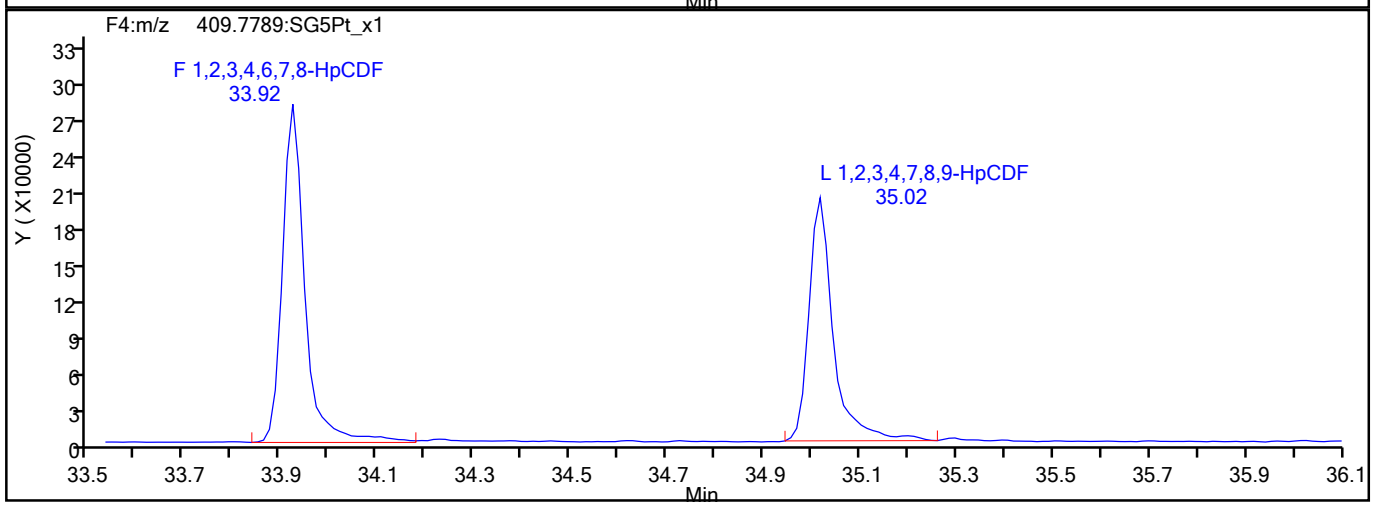

HpCDF Interference Mass

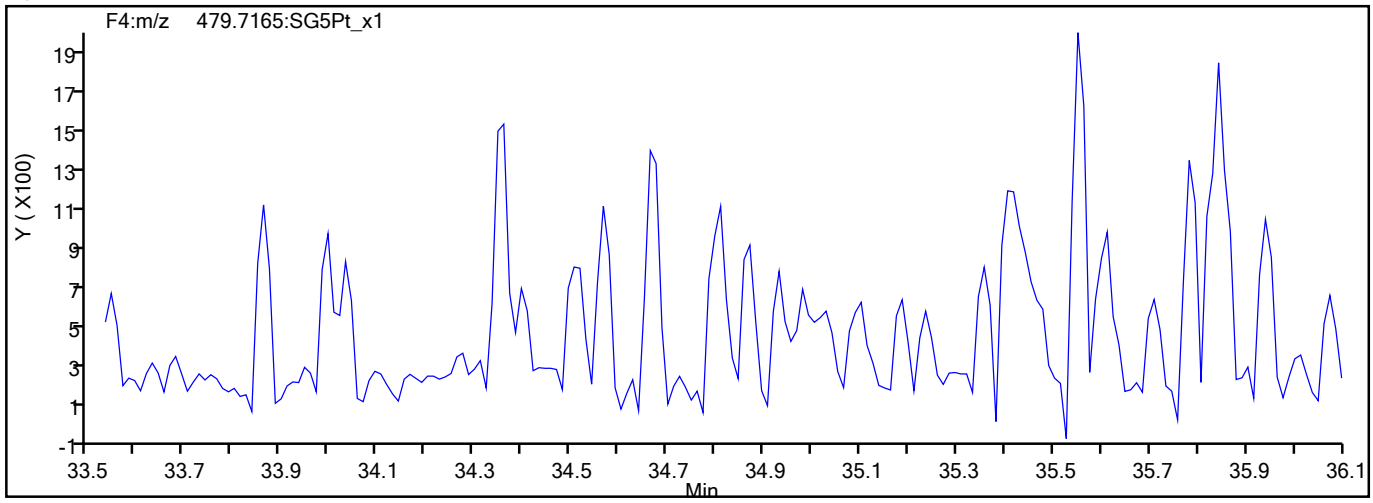

782643

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

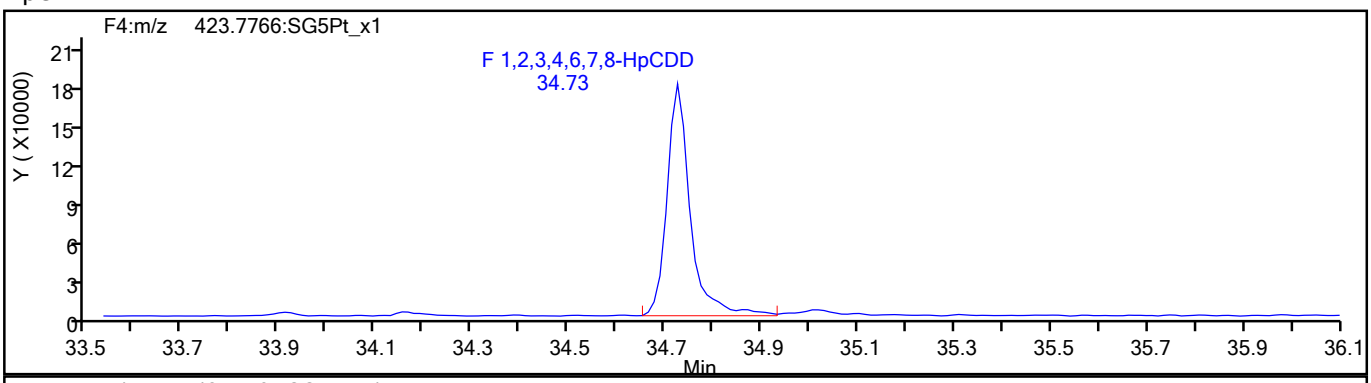

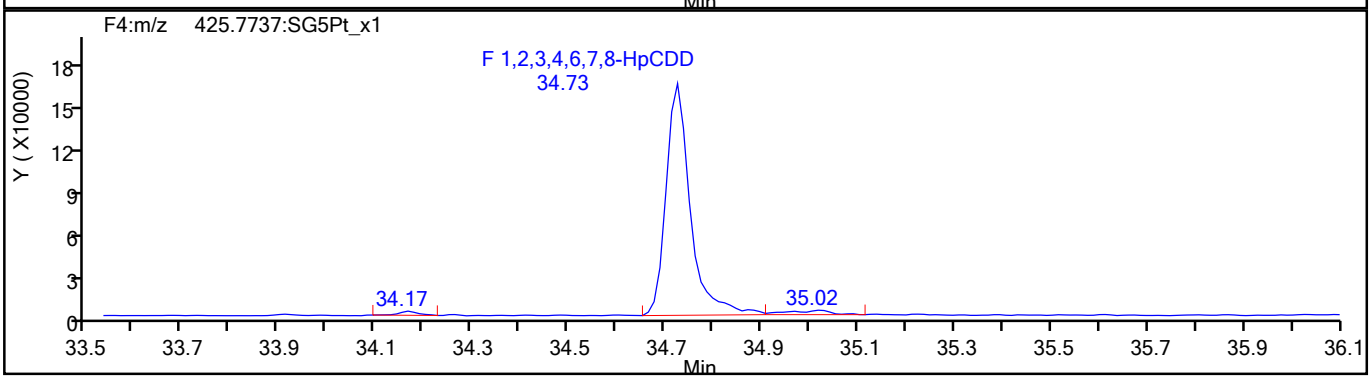

HpCDD Standards

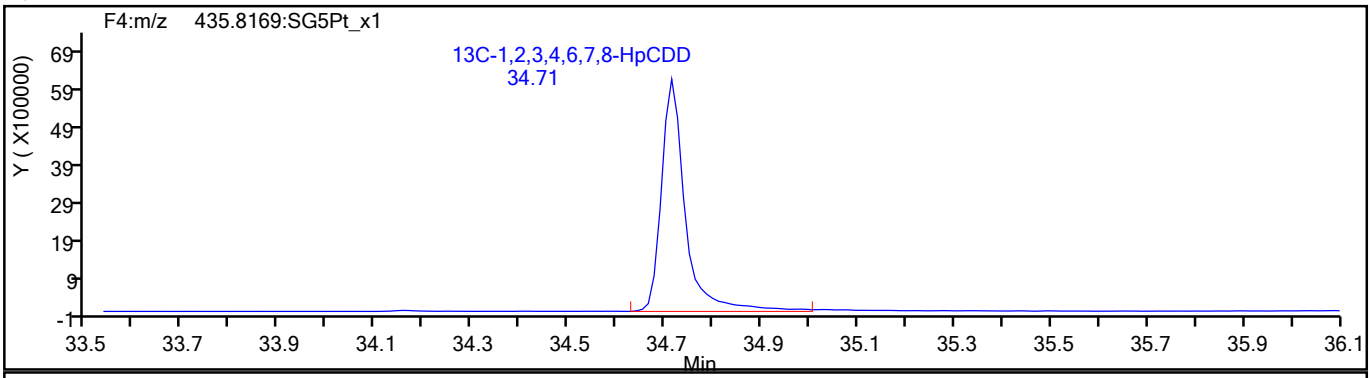

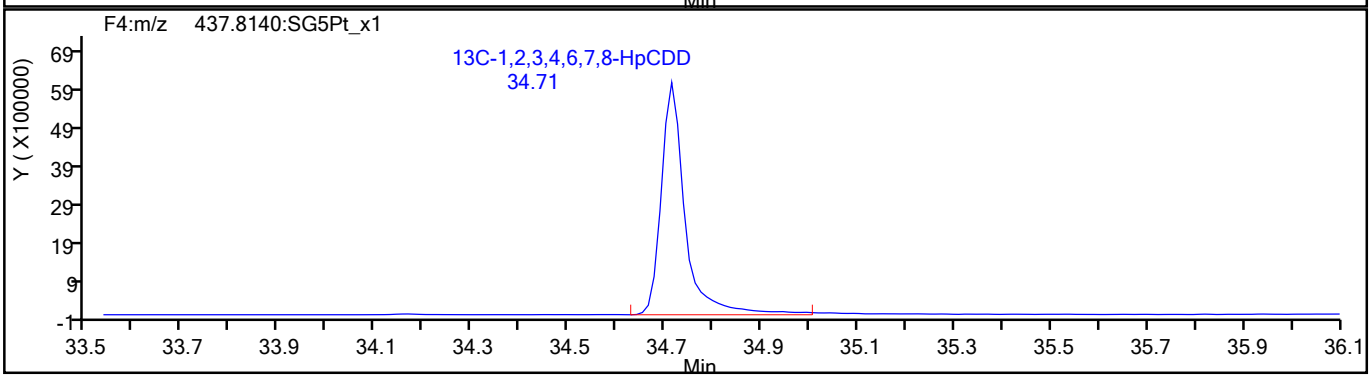

782644

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

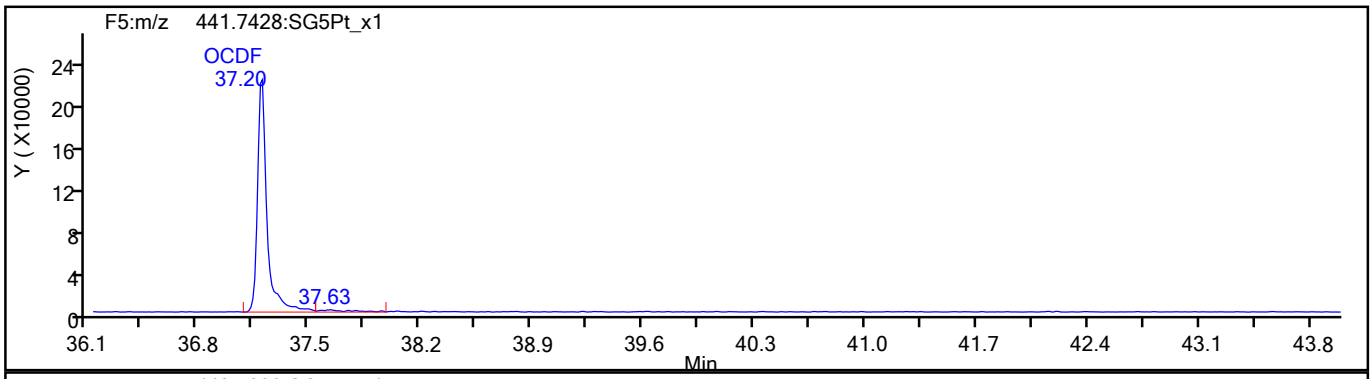

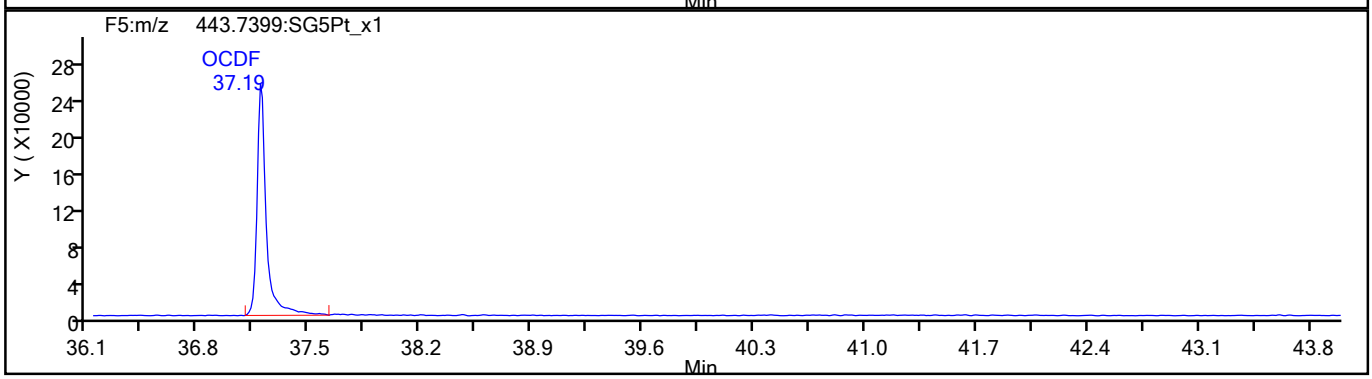

OCDF Standards

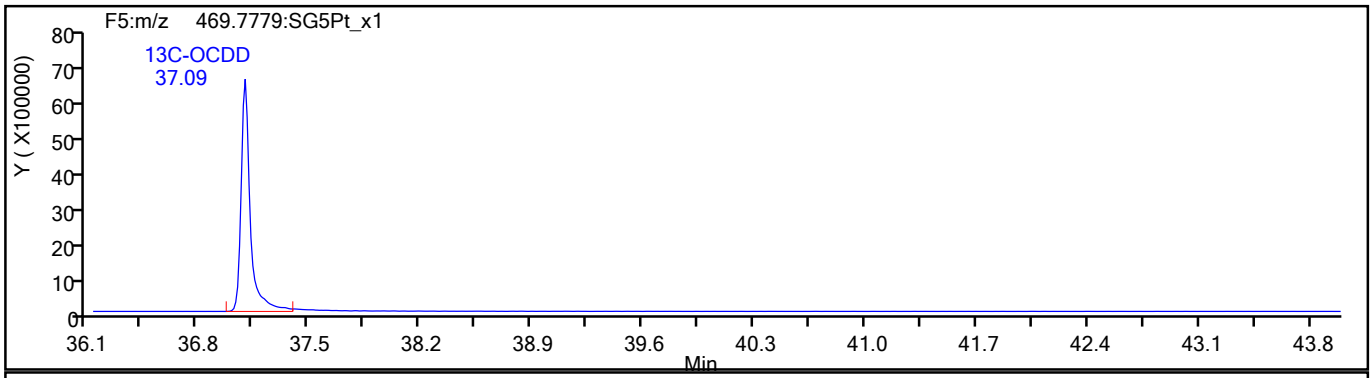

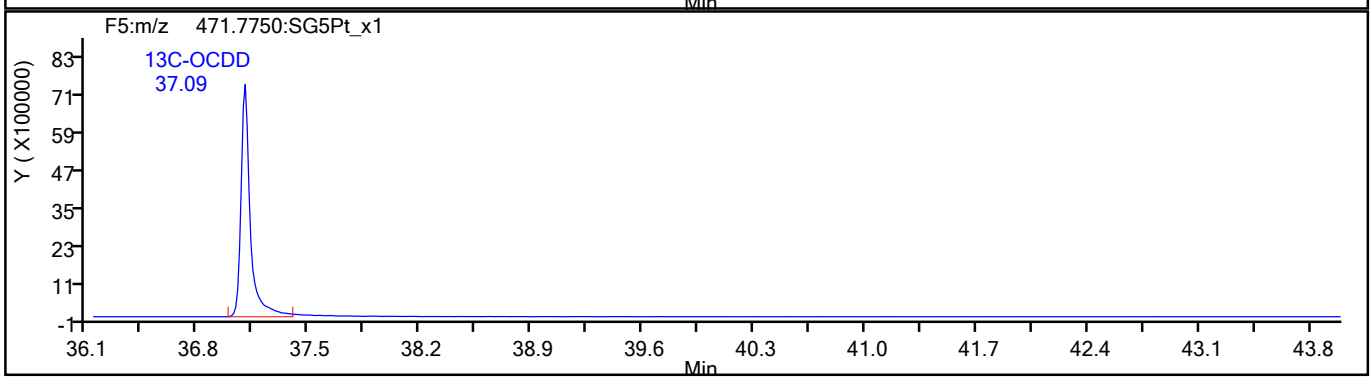

782645

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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OCDF

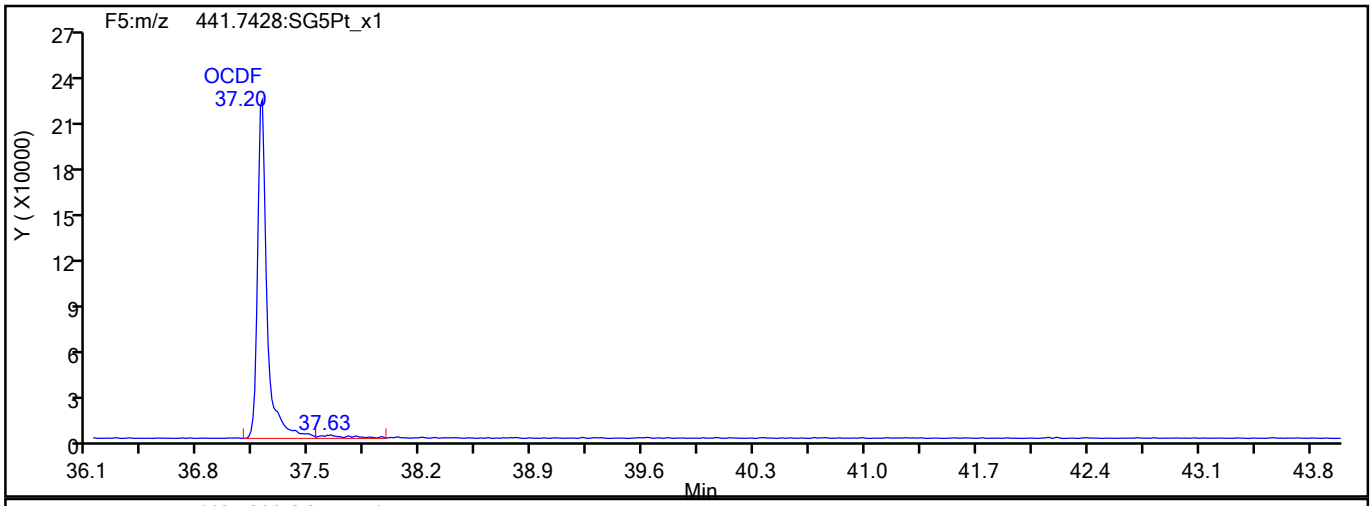

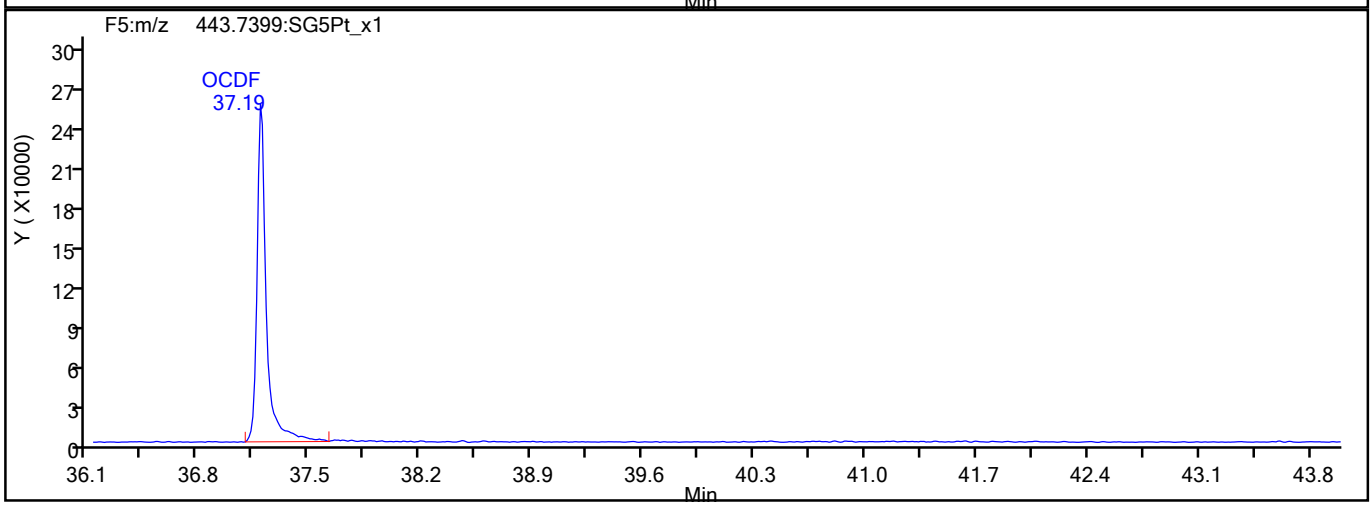

OCDF Interference Mass

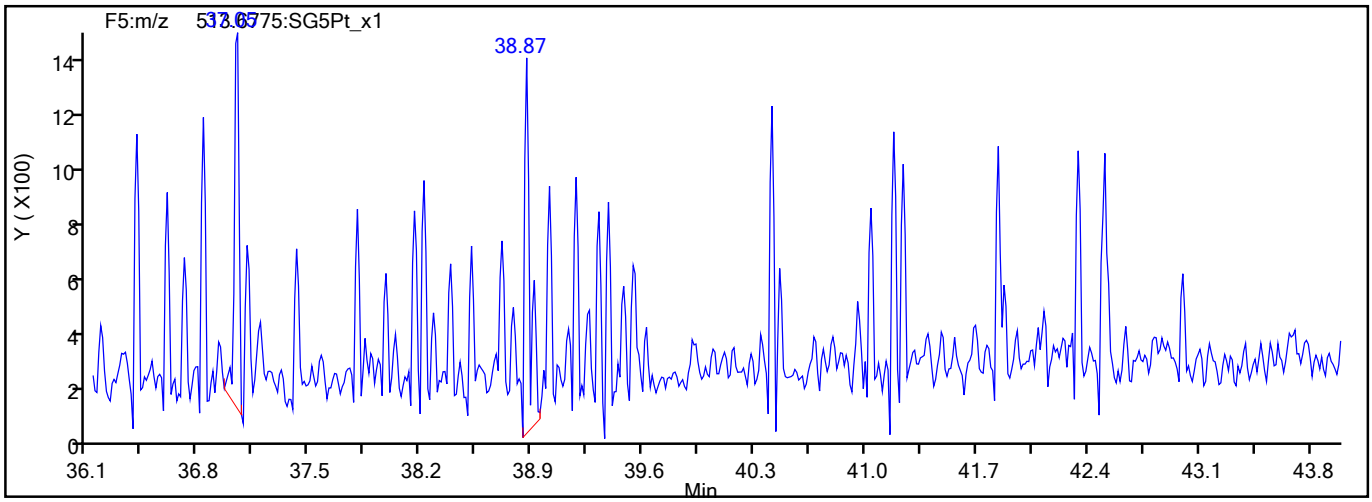

782646

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

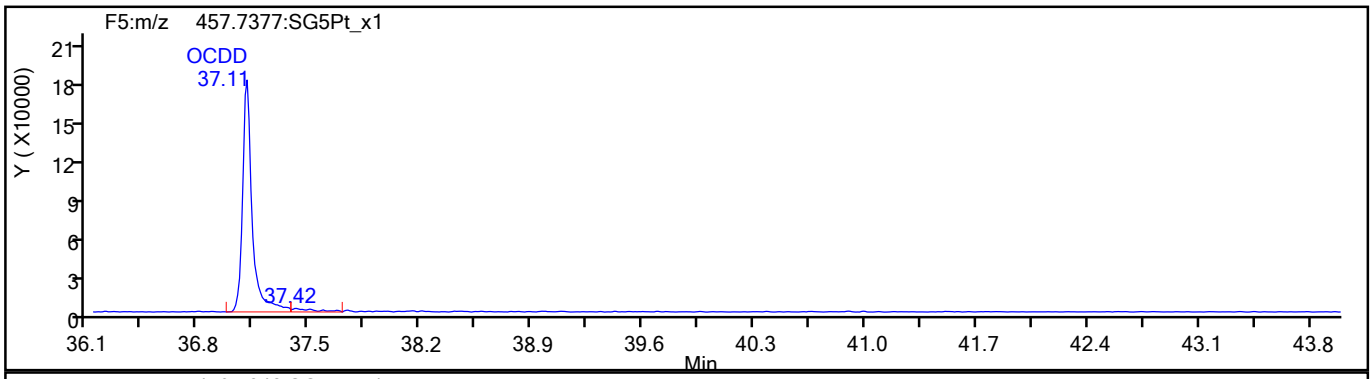

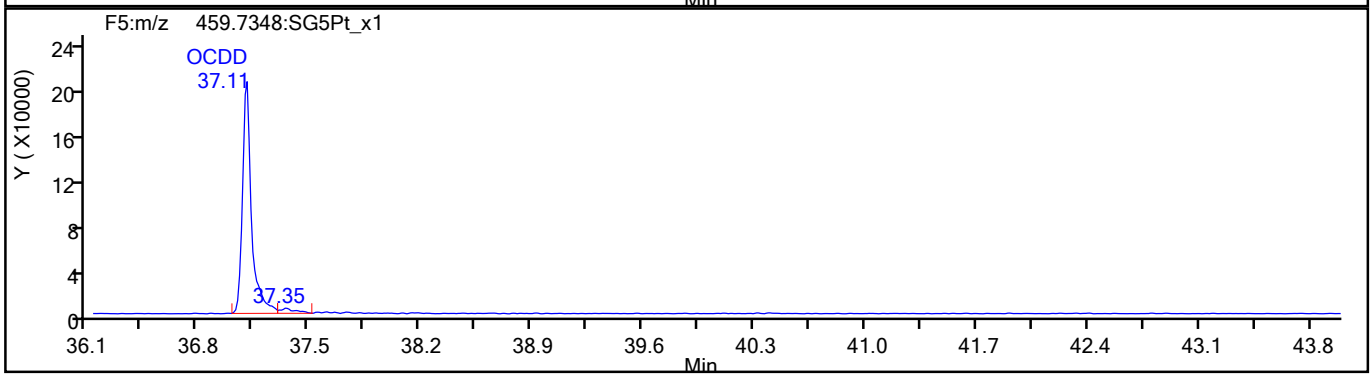

OCDD Standards

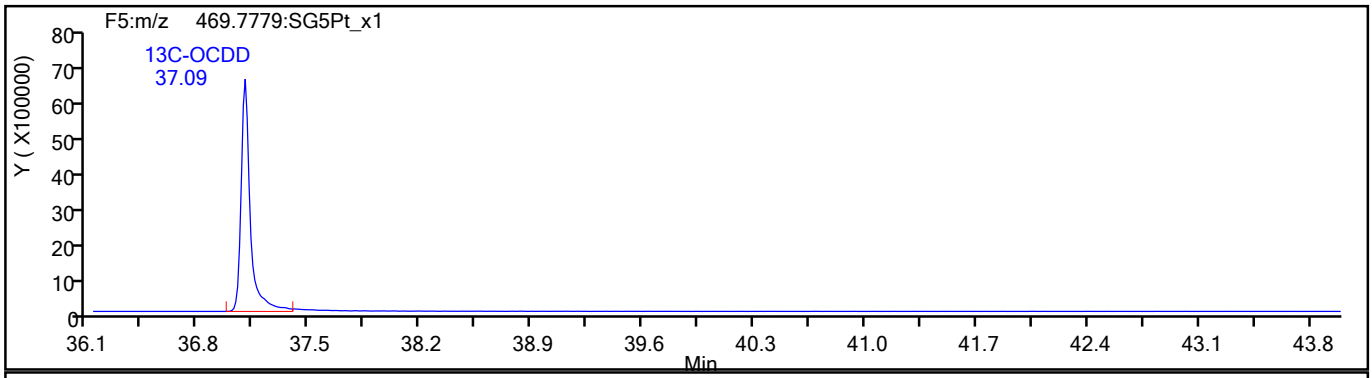

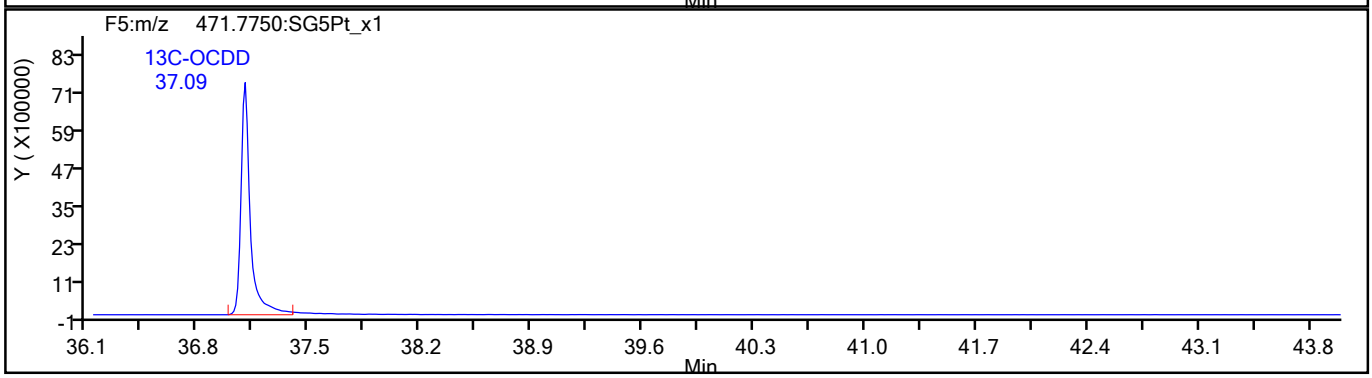

782647

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

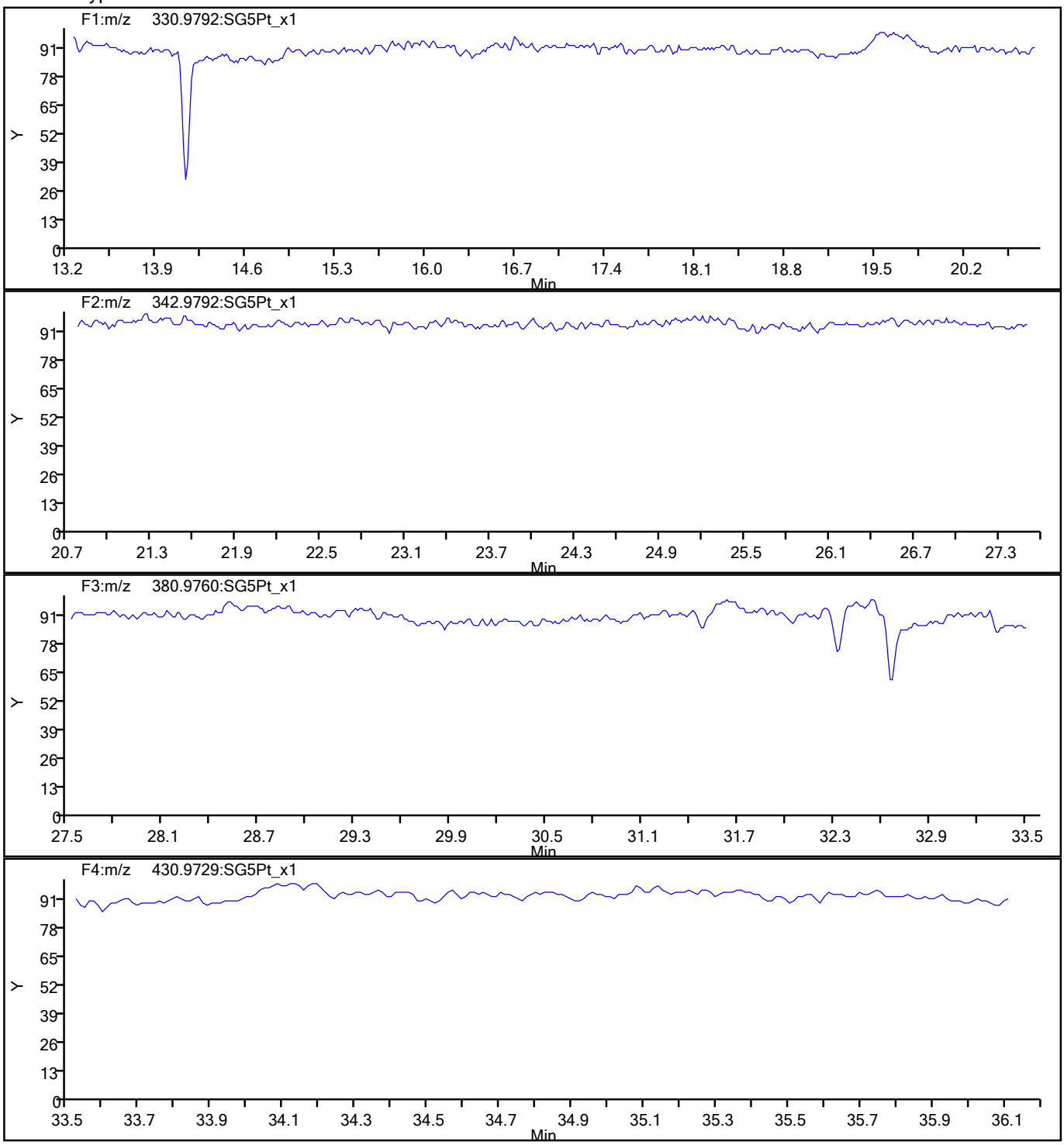

782648

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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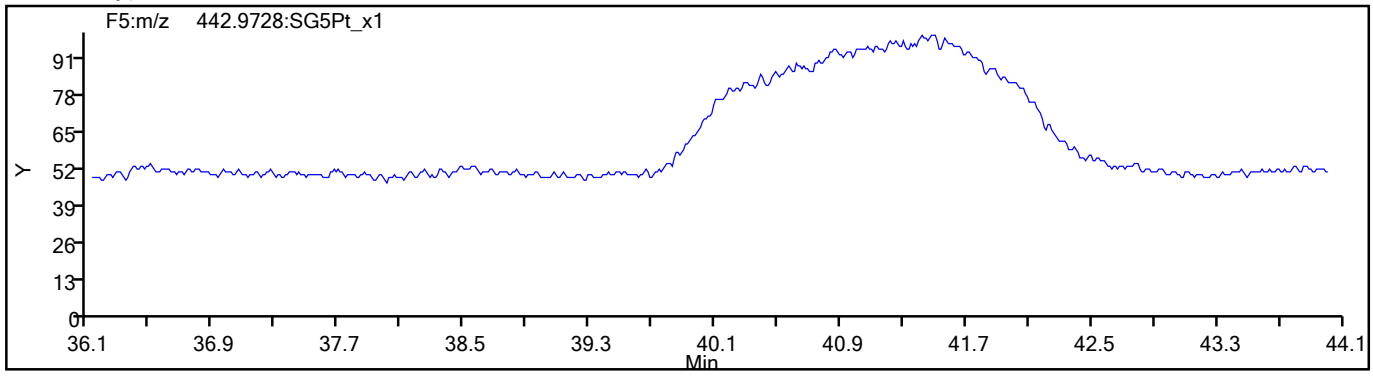

782649

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62853211	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	98246522	0.78	1.6249	96.2	96.2	0.1370	0.1370	96.20	
2,3,7,8-TCDF	17.628	1709191	0.74	1.0239	1.699	1.699	0.0115	0.0115	84.95	
S Total TCDF					1.699	1.699	0.0115	0.0115		
D 13C-2,3,7,8-TCDD	18.338	53975587	0.81	0.8993	95.5	95.5	0.1627	0.1627	95.49	
$ 37Cl4-2,3,7,8-TCDD	18.354	1231219		1.1071	1.769	1.769	0.009070	0.009070	88.47	
2,3,7,8-TCDD	18.354	1184284	0.77	1.2541	1.750	1.750	0.0187	0.0187	87.48	
S Total TCDD					1.750	1.750	0.0187	0.0187		
D 13C-1,2,3,7,8-PeCDF	22.749	72525655	1.59	1.2101	95.4	95.4	0.2163	0.2163	95.36	
1,2,3,7,8-PeCDF	22.776	6620354	1.62	1.0611	8.602	8.602	0.0369	0.0369	86.02	
D 13C-2,3,4,7,8-PeCDF	24.126	74944110	1.59	1.2395	96.2	96.2	0.2111	0.2111	96.20	a
2,3,4,7,8-PeCDF	24.153	6452410	1.61	1.0184	8.454	8.454	0.0398	0.0398	84.54	
S Total PeCDF					17.1	17.1	0.0383	0.0383		
D 13C-1,2,3,7,8-PeCDD	24.862	46721712	1.62	0.7612	97.7	97.7	0.1174	0.1174	97.65	
1,2,3,7,8-PeCDD	24.889	4219570	1.58	1.0484	8.614	8.614	0.0282	0.0282	86.14	
S Total PeCDD					8.614	8.614	0.0282	0.0282		
D 13C-1,2,3,4,7,8-HxCDF	30.835	65726932	0.51	1.0837	101.6	101.6	0.5284	0.5284	102	a
1,2,3,4,7,8-HxCDF	30.848	6041767	1.22	1.0851	8.471	8.471	0.0611	0.0611	84.71	
D 13C-1,2,3,6,7,8-HxCDF	30.995	68089005	0.53	1.1279	101.1	101.1	0.5077	0.5077	101	
1,2,3,6,7,8-HxCDF	31.021	6561860	1.24	1.1260	8.559	8.559	0.0596	0.0596	85.59	
D 13C-2,3,4,6,7,8-HxCDF	31.753	64406928	0.52	1.0637	101.4	101.4	0.5383	0.5383	101	
2,3,4,6,7,8-HxCDF	31.767	6352404	1.21	1.1675	8.448	8.448	0.0492	0.0492	84.48	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58828058	0.51	0.9676	101.8	101.8	0.5918	0.5918	102	
1,2,3,7,8,9-HxCDF	32.526	5963032	1.22	1.1664	8.691	8.691	0.0536	0.0536	86.91	
S Total HxCDF					34.2	34.2	0.0559	0.0559		
* 13C-1,2,3,7,8,9-HxCDD	32.339	59719891	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44877133	1.26	0.7334	102.5	102.5	0.4904	0.4904	102	a
1,2,3,4,7,8-HxCDD	31.940	3996910	1.25	1.0640	8.370	8.370	0.0541	0.0541	83.70	
D 13C-1,2,3,6,7,8-HxCDD	32.033	52974056	1.27	0.8802	100.8	100.8	0.4087	0.4087	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.046	4517909	1.28	1.0001	8.528	8.528	0.0541	0.0541	85.28	
1,2,3,7,8,9-HxCDD	32.353	4612548	1.27	1.1325	8.324	8.324	0.0492	0.0492	83.24	
S Total HxCDD					25.2	25.2	0.0525	0.0525		
D 13C-1,2,3,4,6,7,8-HpCDF	33.911	46691158	0.44	0.7730	101.1	101.1	1.219	1.219	101	
1,2,3,4,6,7,8-HpCDF	33.924	5795616	1.06	1.4413	8.612	8.612	0.0908	0.0908	86.12	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	42362179	0.44	0.7008	101.2	101.2	1.344	1.344	101	a
1,2,3,4,7,8,9-HpCDF	35.017	4773949	1.04	1.3174	8.554	8.554	0.1198	0.1198	85.54	
S Total HpCDF					17.2	17.2	0.1053	0.1053		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	38689128	1.01	0.6472	100.1	100.1	0.6644	0.6644	100	
1,2,3,4,6,7,8-HpCDD	34.725	3690749	1.06	1.0943	8.717	8.717	0.0588	0.0588	87.17	
S Total HpCDD					8.717	8.717	0.0588	0.0588		
D 13C-OCDD	37.093	52034518	0.88	0.4472	194.9	194.9	0.3057	0.3057	97.43	
OCDF	37.189	6198469	0.89	1.4382	16.6	16.6	0.0331	0.0331	82.83	
OCDD	37.105	5013385	0.90	1.1070	17.4	17.4	0.0477	0.0477	87.03	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28386456	7046087	6003	15007	1174		
333.9339	18.142	18.142	0		34466755	8558284	3128	7820	2736	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42972486	10763336	8679	21697	1240		
317.9389	17.613	17.616	0	0.971	55274036	13878642	5218	13045	2660	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	725190	178427	386	965	462		
305.8987	17.628	17.631	0	1.001	984001	248871	771	1927	323	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24153490	5697854	6003	15007	949		
333.9339	18.338	18.338	0	1.011	29822097	7031837	3128	7820	2248	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	1231219	295748	627	1567	472		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	516509	120344	727	1817	166		
321.8936	18.354	18.357	0	1.001	667775	162973	470	1175	347	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44514928	7853181	9659	24147	813		
353.8970	22.749	22.754	0	1.254	28010727	4960984	6675	16687	743	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	4089215	716349	1056	2640	678		
341.8567	22.776	22.779	0	1.001	2531139	446464	949	2372	470	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											a
351.9000	24.126	24.129	0	1.330	46033296	7621284	9659	24147	789		a
353.8970	24.126	24.129	0	1.330	28910814	4739818	6675	16687	710	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	3984657	653372	1056	2640	619		
341.8567	24.153	24.156	0	1.001	2467753	411895	949	2372	434	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28869986	4442492	3510	8775	1266		
369.8919	24.862	24.865	0	1.370	17851726	2719251	2068	5170	1315	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	2584600	398905	491	1227	812		
357.8516	24.889	24.892	0	1.001	1634970	246537	355	887	694	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											a
383.8639	30.835	30.838	0	0.953	22324815	4908430	11721	29302	419		a
385.8610	30.835	30.838	0	0.953	43402117	9487505	22146	55365	428	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.848	30.857	0	1.000	3322045	734549	2125	5312	346		
375.8178	30.848	30.857	0	1.000	2719722	584076	1696	4240	344	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	23443638	4852452	11721	29302	414		
385.8610	30.995	31.003	0	0.958	44645367	9390378	22146	55365	424	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.001	3628802	774738	2125	5312	365		
375.8178	31.021	31.022	0	1.001	2933058	621989	1696	4240	367	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.753	31.756	0	0.982	22116278	5724833	11721	29302	488		
385.8610	31.753	31.756	0	0.982	42290650	10891641	22146	55365	492	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	3476984	900887	2125	5312	424		
375.8178	31.767	31.772	0	1.000	2875420	748664	1696	4240	441	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	19952155	5224965	11721	29302	446		
385.8610	32.512	32.523	-1	1.005	38875903	10047992	22146	55365	454	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	3272570	870864	2125	5312	410		
375.8178	32.526	32.534	0	1.000	2690462	702575	1696	4240	414	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33208186	8207924	11753	29382	698		
403.8529	32.339	32.342	0		26511705	6578059	9521	23802	691	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	31.927	31.929	0	0.987	24991401	7247079	11753	29382	617		a
403.8529	31.927	31.929	0	0.987	19885732	5749736	9521	23802	604	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	2220855	634454	1798	4495	353		
391.8127	31.940	31.945	0	1.000	1776055	520388	1195	2987	435	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29637474	7731021	11753	29382	658		
403.8529	32.033	32.033	0	0.991	23336582	6105317	9521	23802	641	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.046	32.047	0	1.000	2539756	681391	1798	4495	379		
391.8127	32.046	32.047	0	1.000	1978153	525440	1195	2987	440	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	2578931	681238	1798	4495	379		
391.8127	32.353	32.355	0	1.013	2033617	530890	1195	2987	444	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.911	33.914	0	1.049	14324046	4548819	17096	42740	266		
419.8220	33.911	33.914	0	1.049	32367112	10373412	38619	96547	269	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	2984390	989226	3939	9847	251		
409.7789	33.924	33.926	0	1.000	2811226	912647	3871	9677	236	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											a
417.8253	35.005	35.010	0	1.082	12913204	3817815	17096	42740	223		a
419.8220	35.005	35.010	0	1.082	29448975	8551787	38619	96547	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	2430692	699814	3939	9847	178		
409.7789	35.017	35.020	0	1.000	2343257	686031	3871	9677	177	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19472945	5796031	12697	31742	456		
437.8140	34.714	34.716	0	1.073	19216183	5692167	12738	31845	447	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.725	34.726	0	1.000	1901971	557241	1605	4012	347		
425.7737	34.725	34.726	0	1.000	1788778	518346	1352	3380	383	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	24422535	6155132	2912	7280	2114		
471.7750	37.093	37.094	0	1.147	27611983	6845350	5172	12930	1324	0.88(0.76-1.02)	
OCDF											
441.7428	37.189	37.199	-1	1.003	2921445	715883	635	1587	1127		
443.7399	37.189	37.199	-1	1.003	3277024	845078	603	1507	1401	0.89(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	2373314	577341	633	1582	912		
459.7348	37.105	37.106	0	1.000	2640071	638330	739	1847	864	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.13

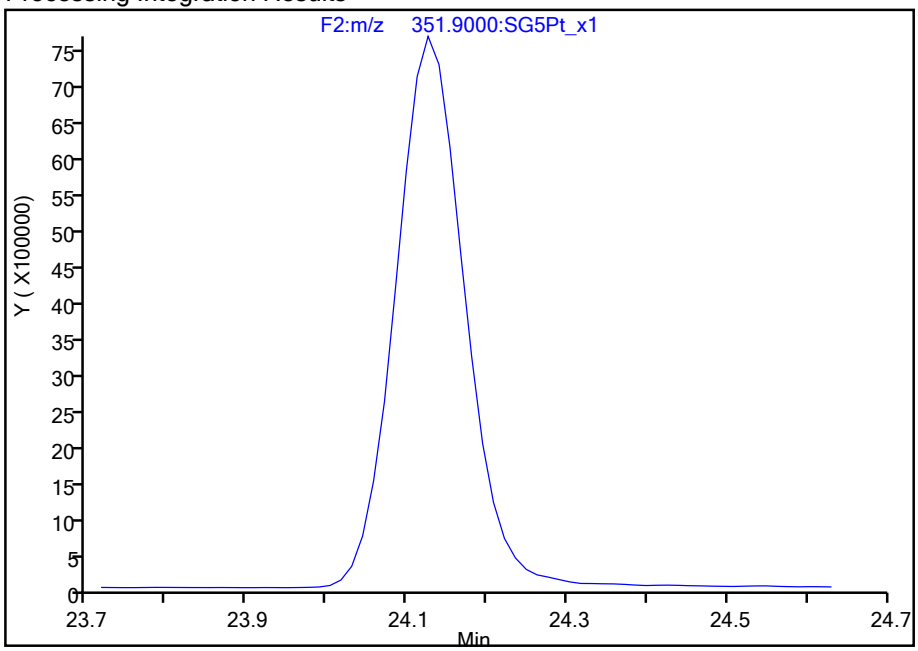

Manual Integration Results

RT: 24.13
Area: 46033296
Amount: 96.198549
Amount Units: pg/ul

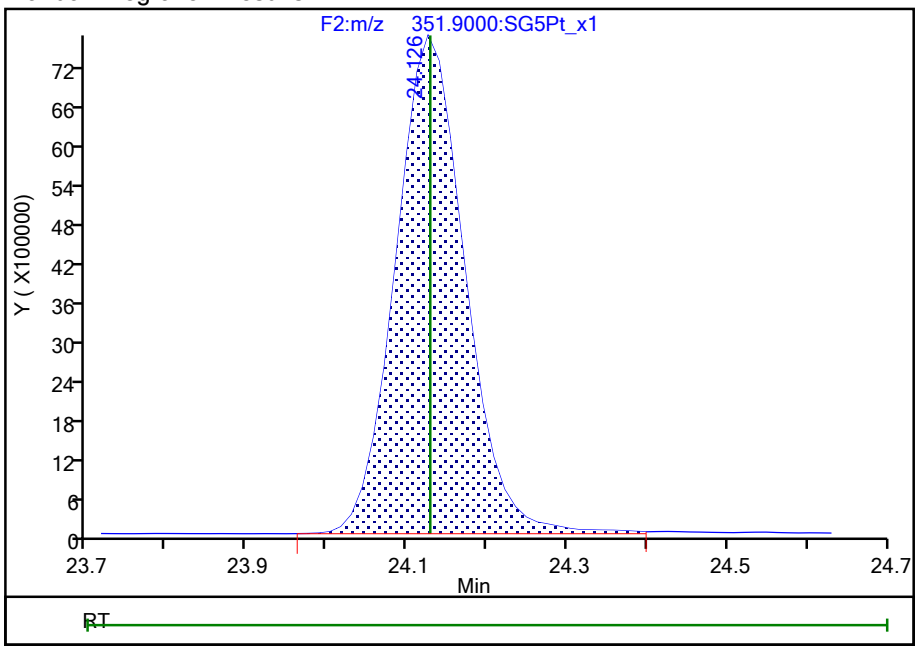

Reviewer: arghestanis, 26-Jul-2021 12:30:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

782655

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDF, CAS: 114423-98-2

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.84

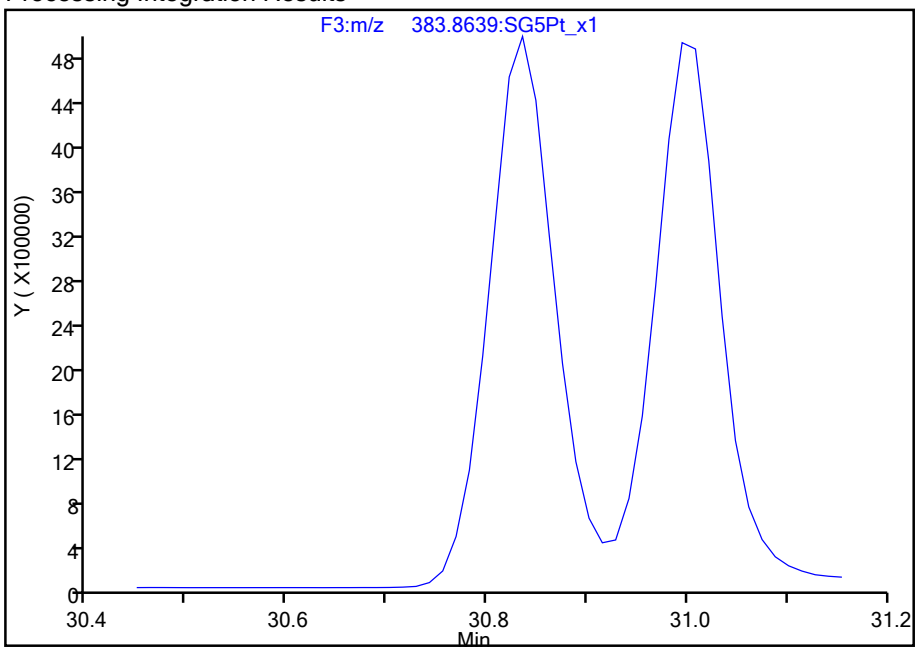

Manual Integration Results

RT: 30.84
Area: 22324815
Amount: 101.5622
Amount Units: pg/ul

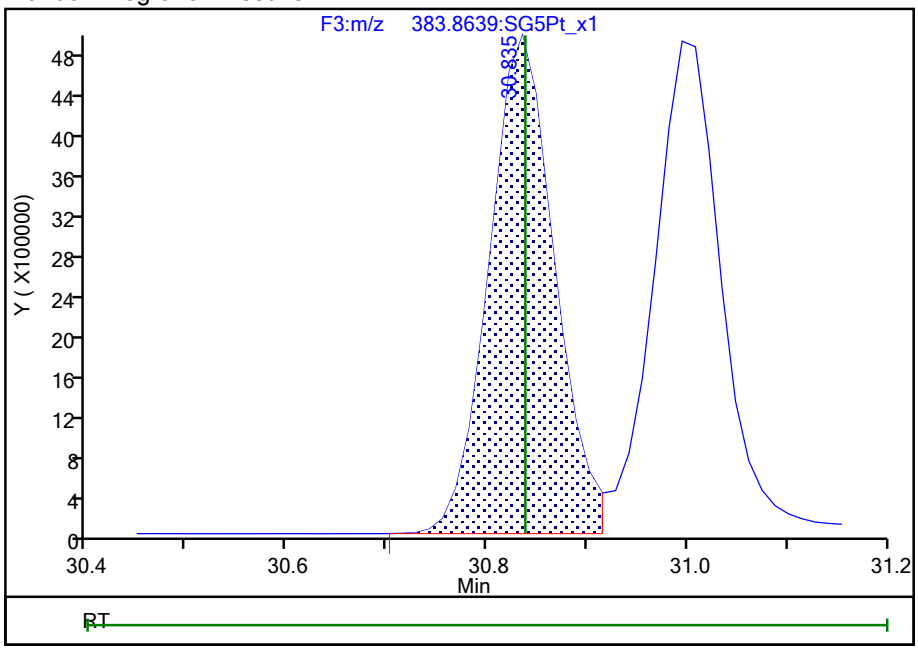

Reviewer: arghestanis, 26-Jul-2021 12:30:40
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

782656

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.93

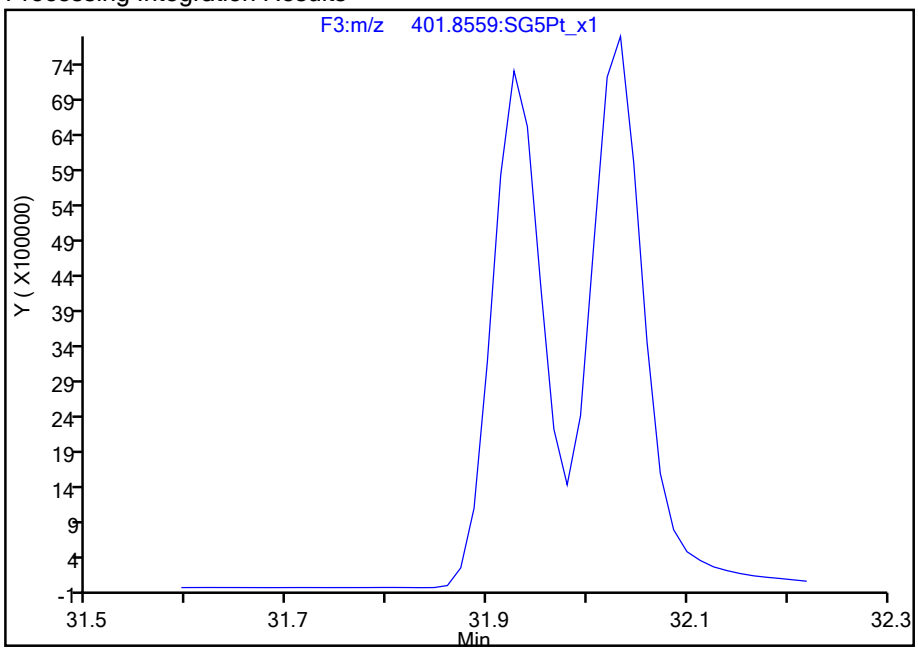

Manual Integration Results

RT: 31.93
Area: 24991401
Amount: 102.4585
Amount Units: pg/ul

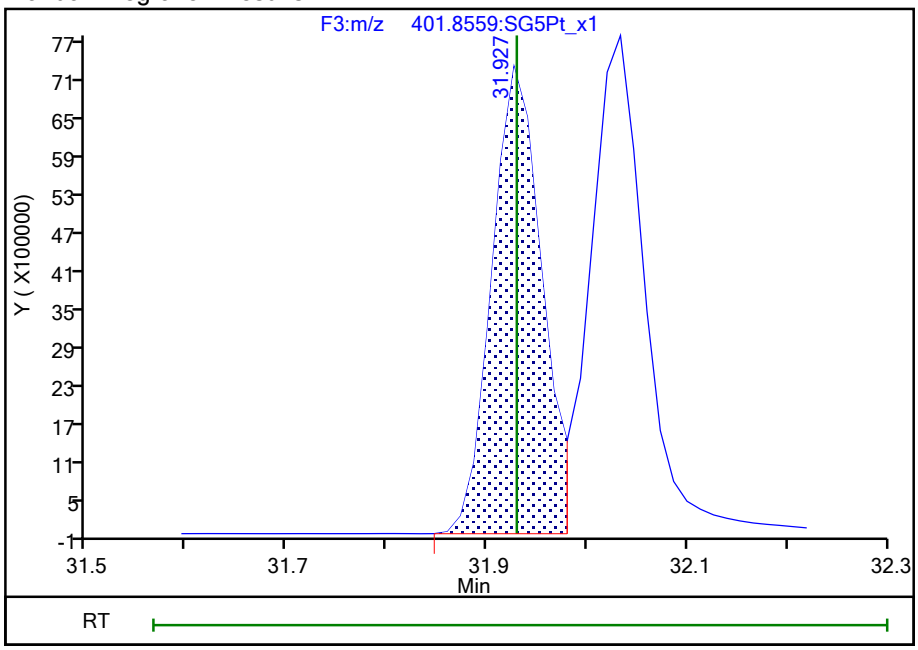

Reviewer: arghestanis, 26-Jul-2021 12:30:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

782657

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.01

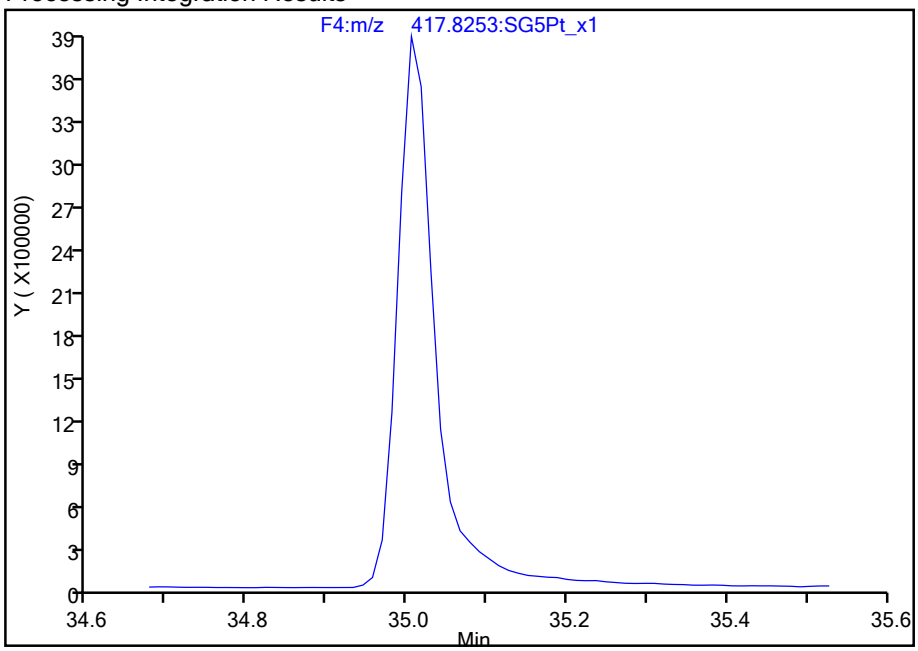

Manual Integration Results

RT: 35.01
Area: 12913204
Amount: 101.2180
Amount Units: pg/ul

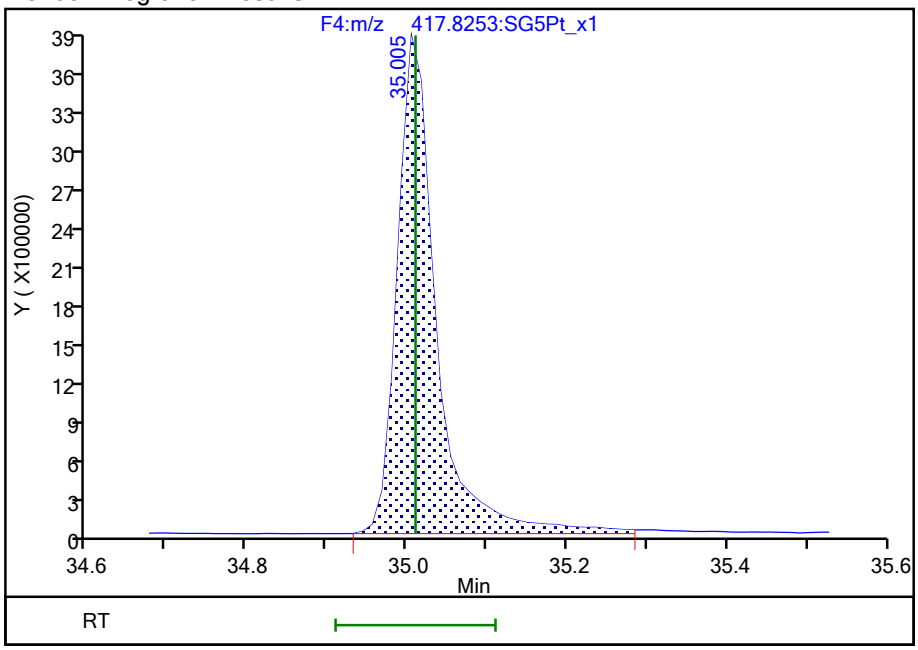

Reviewer: arghestanis, 26-Jul-2021 12:31:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

782658

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

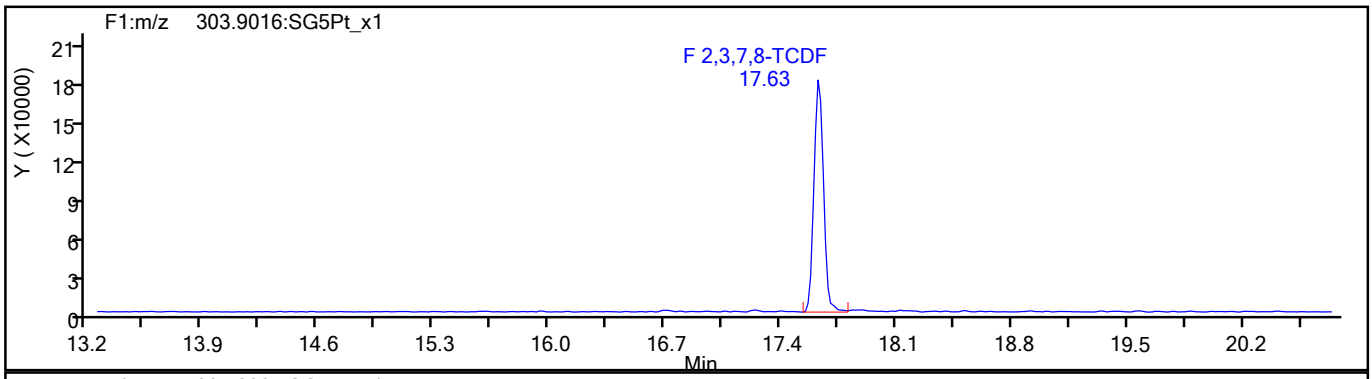

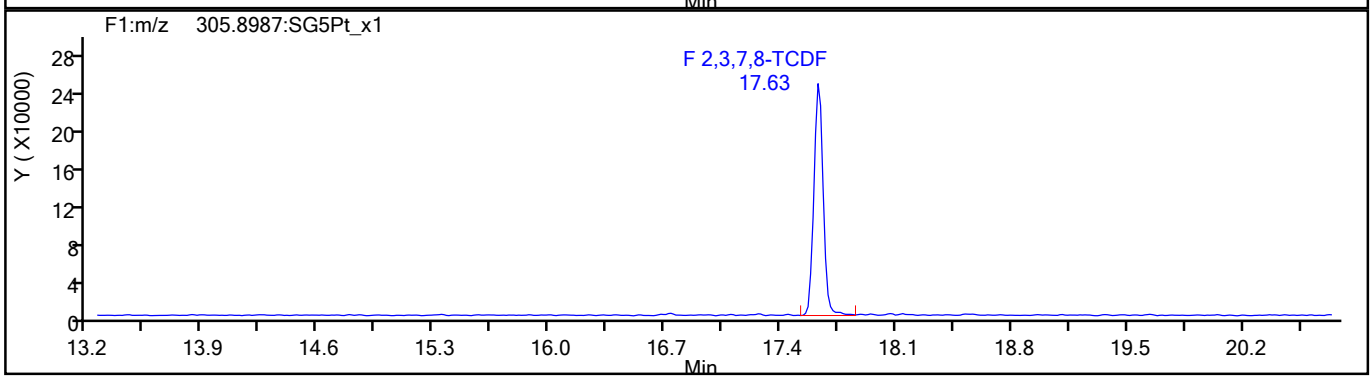

TCDF Standards

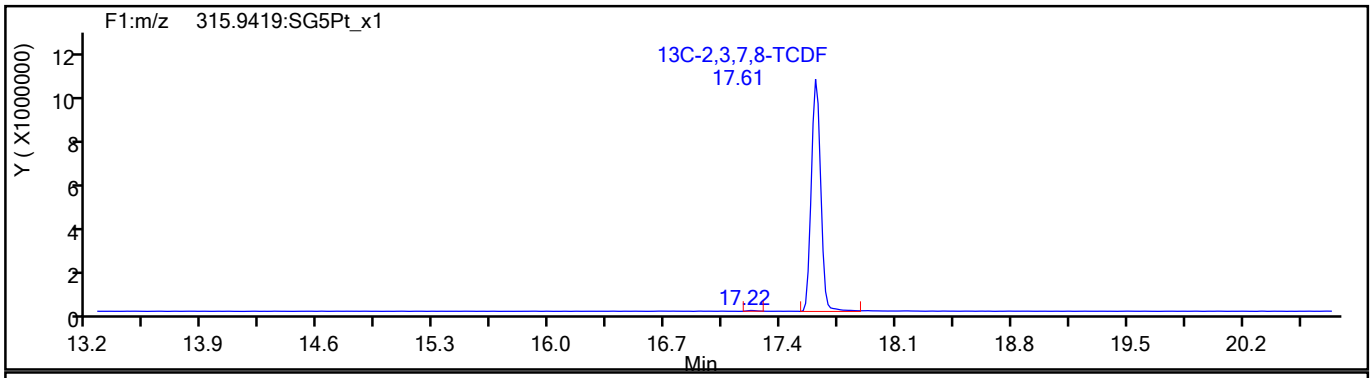

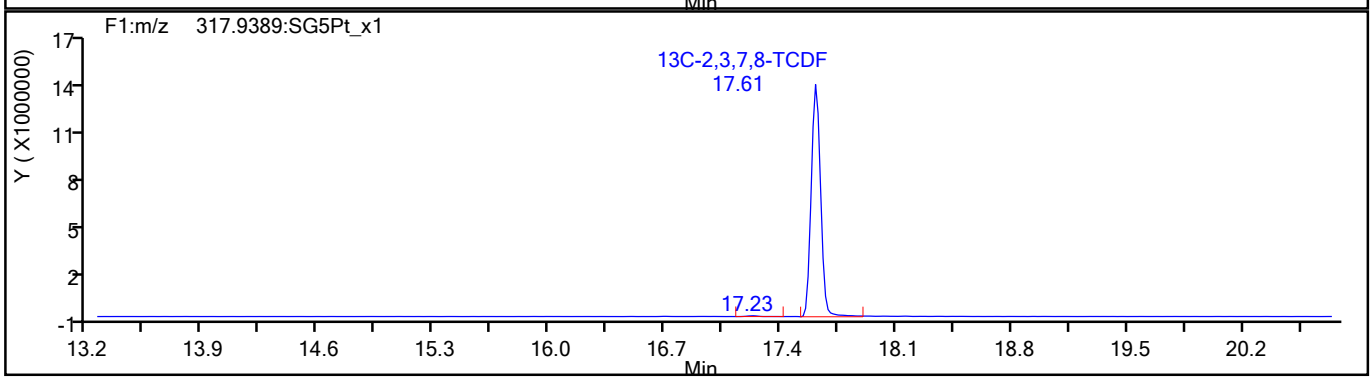

782659

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

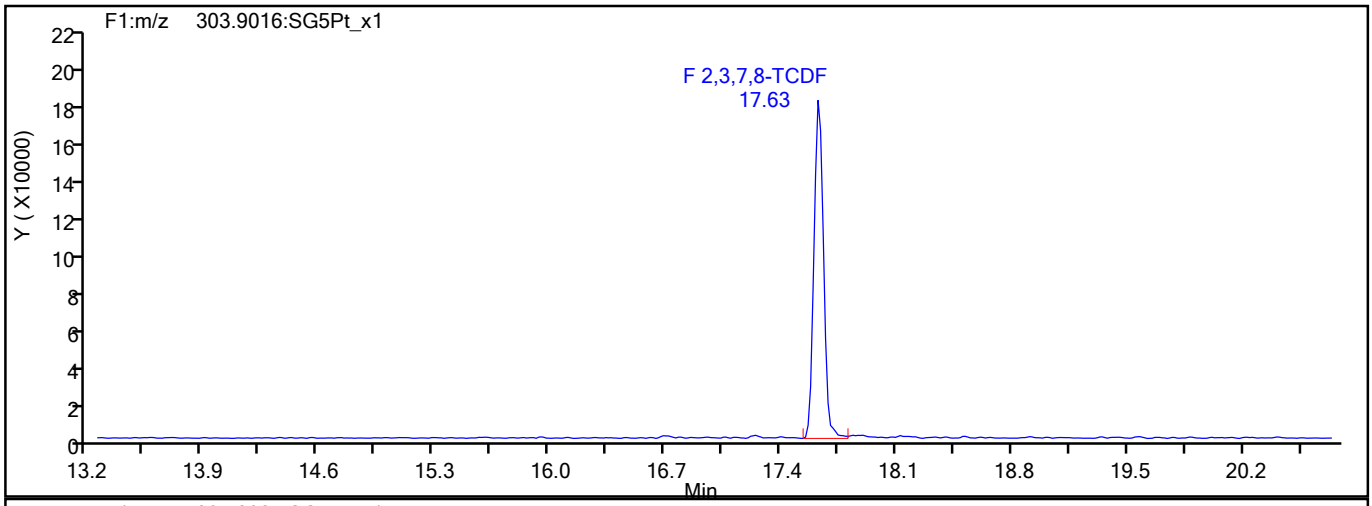

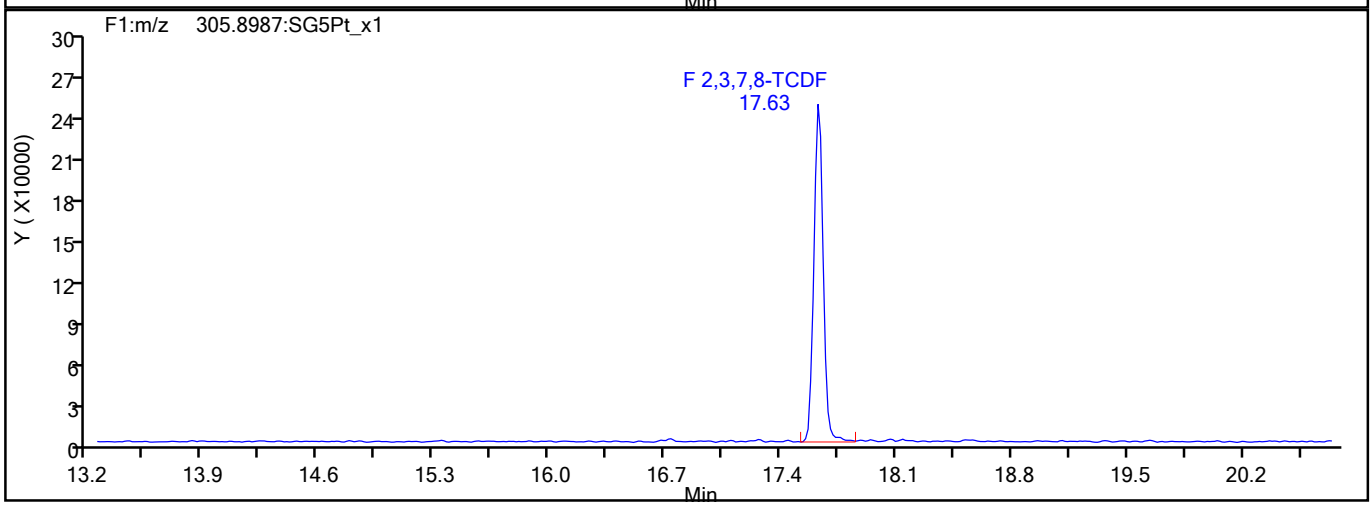

TCDF Interference Mass

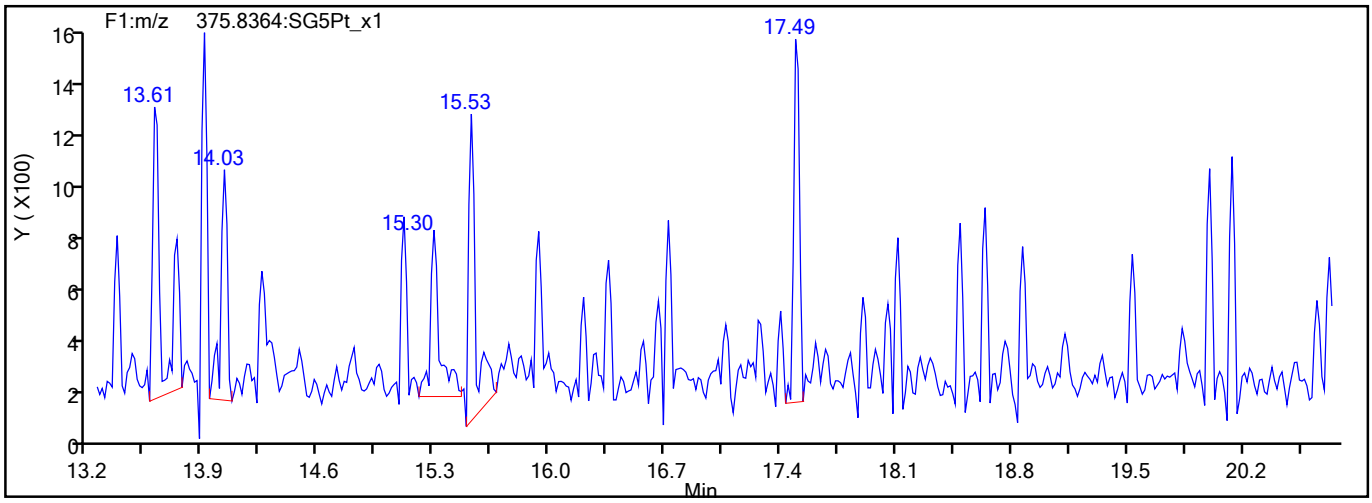

782660

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

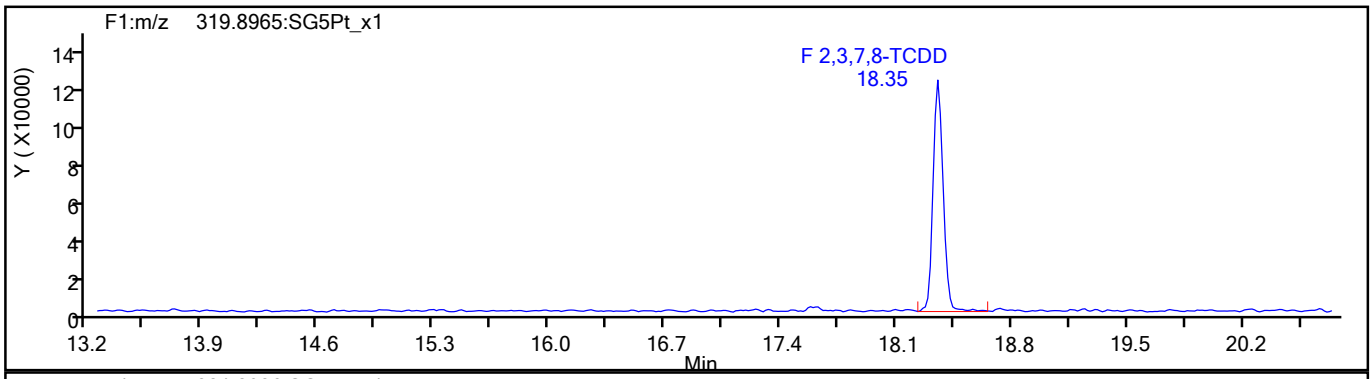

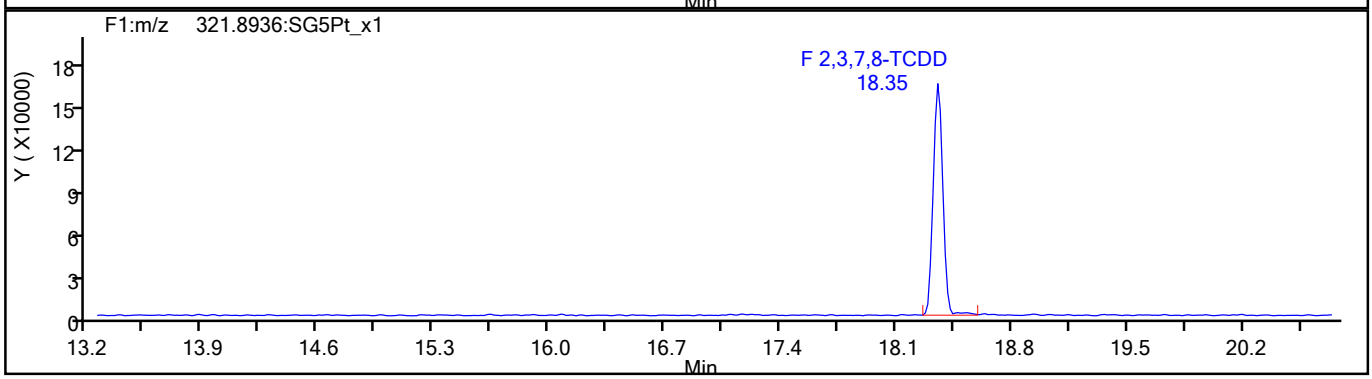

TCDD Standards

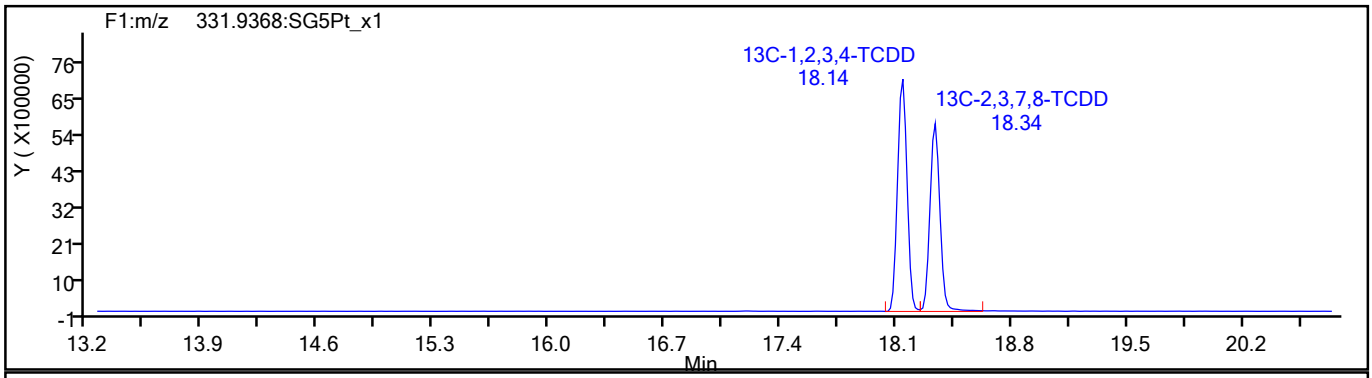

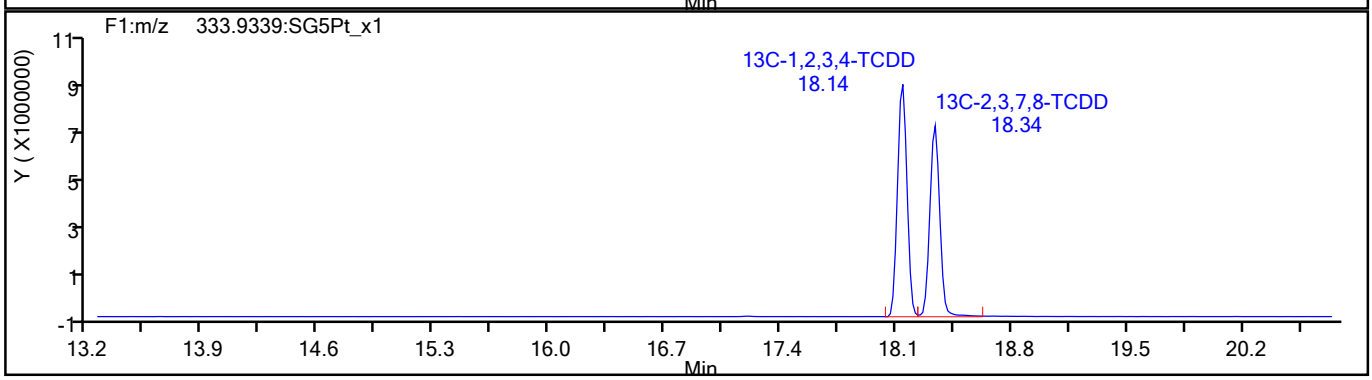

782661

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

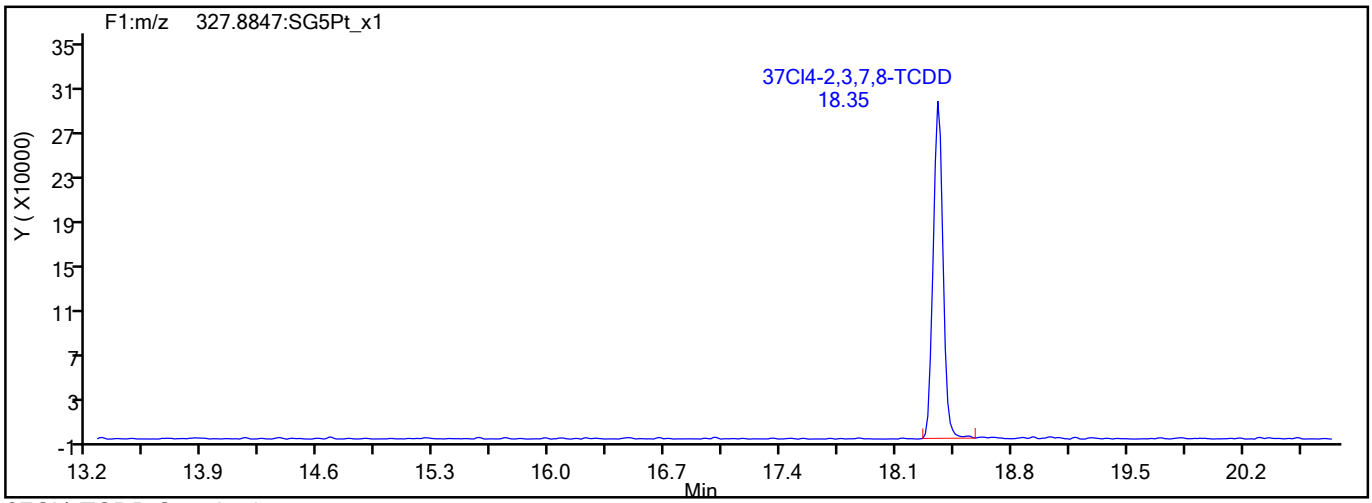

37Cl4-TCDD Standards

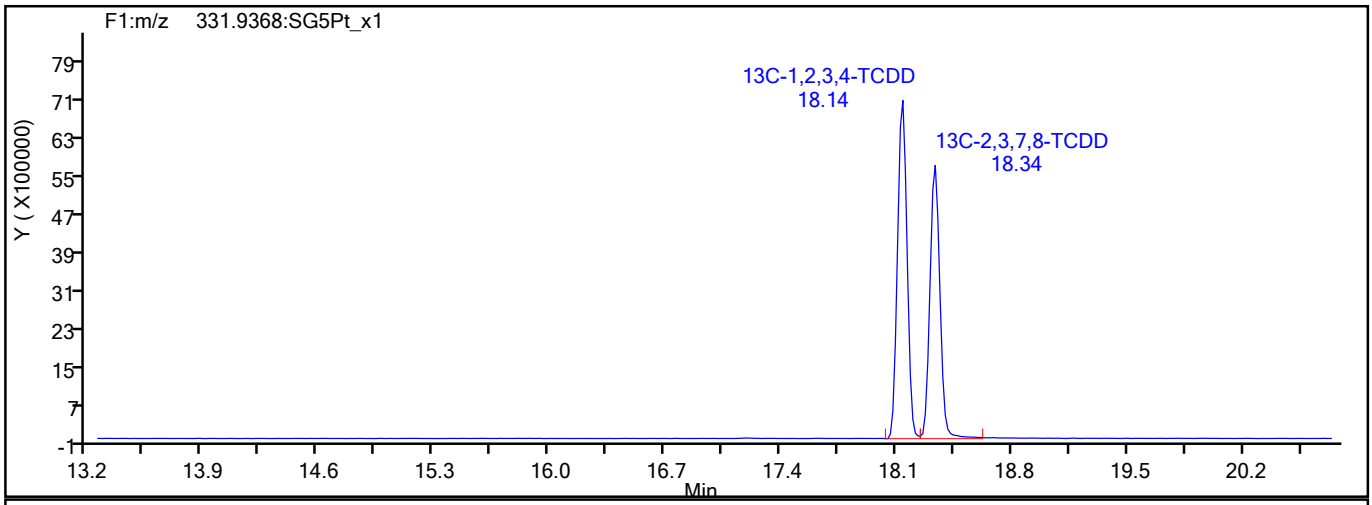

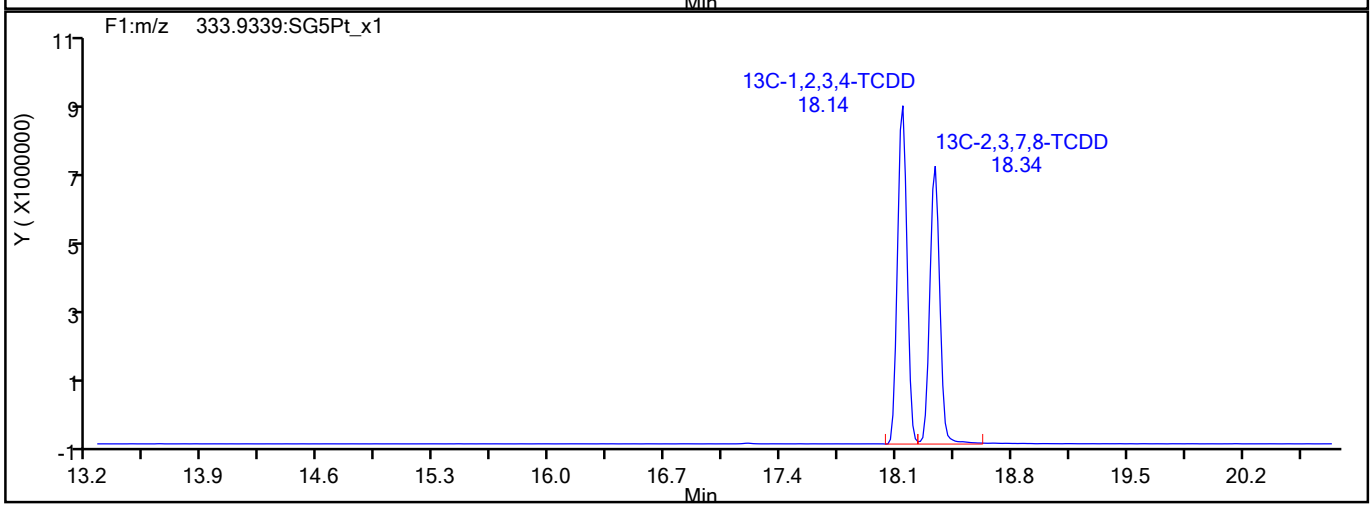

782662

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

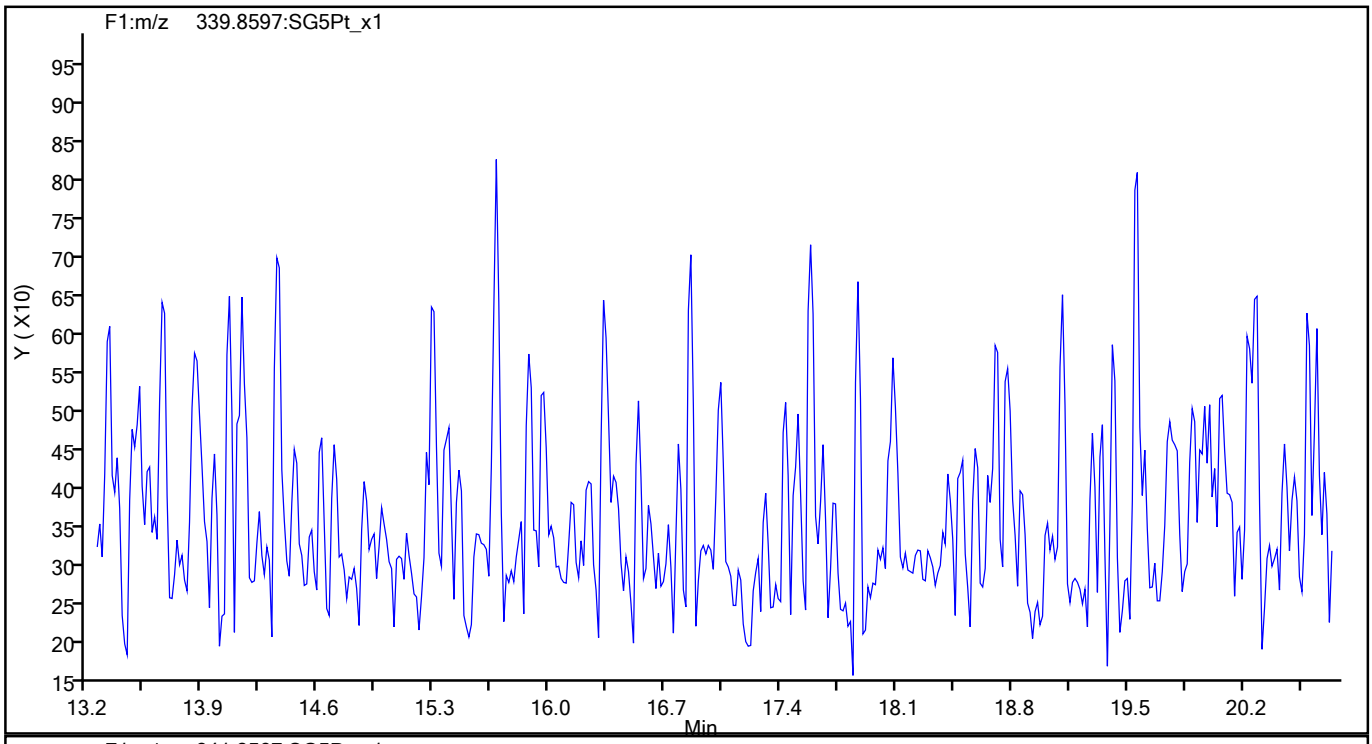

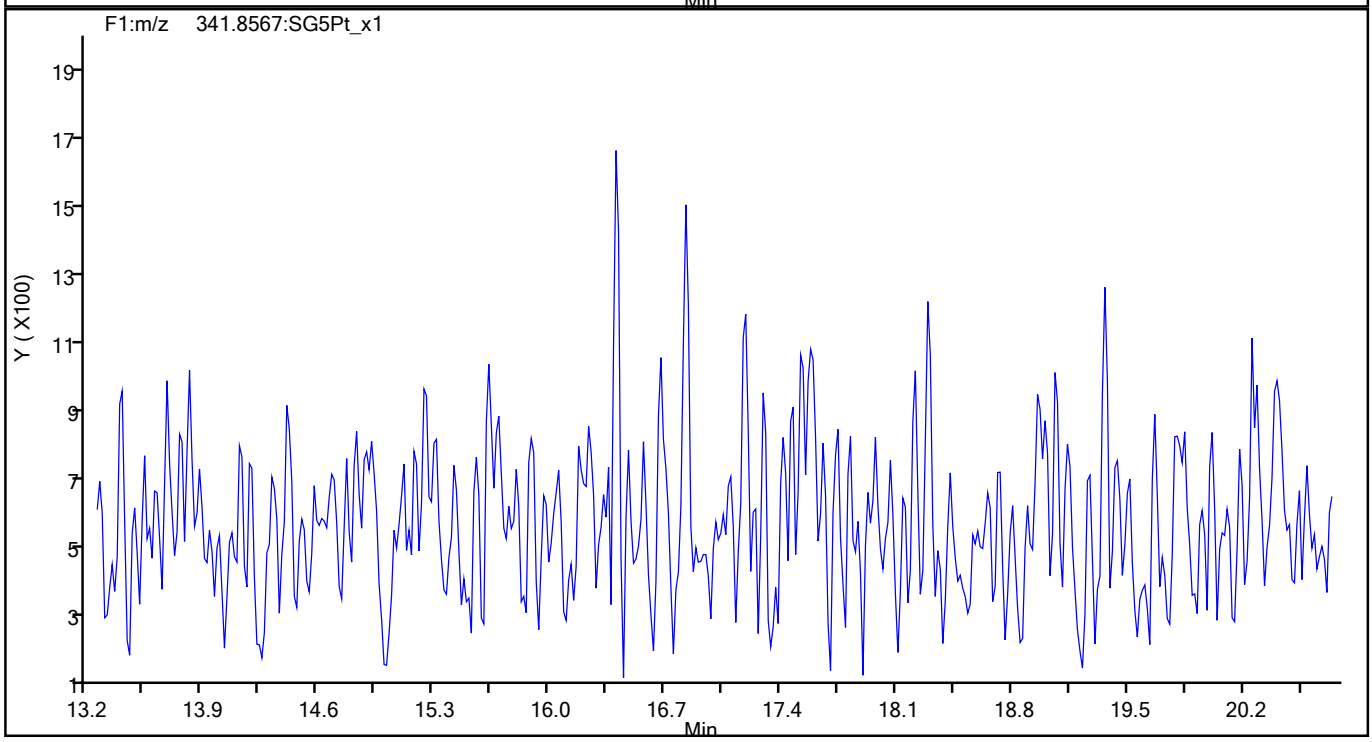

782663

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

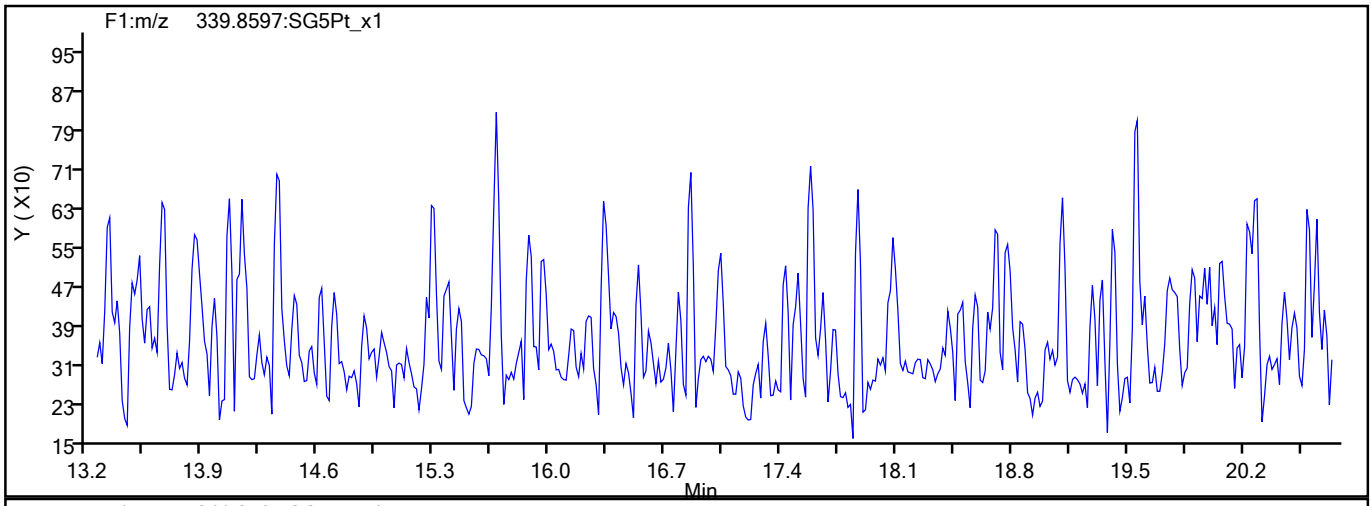

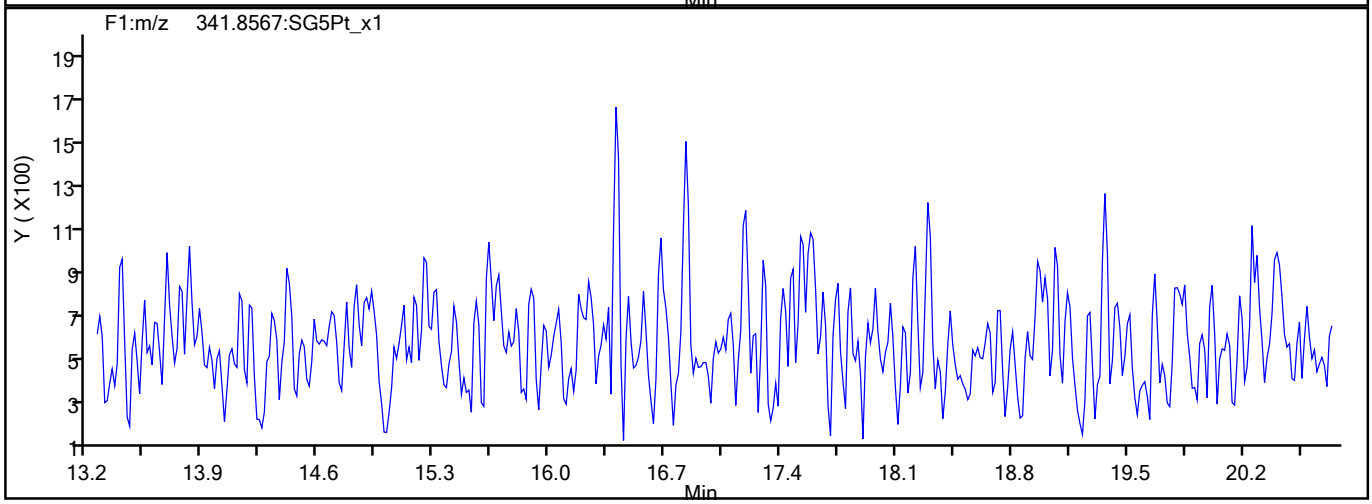

F1 PeCDFs Interference Mass

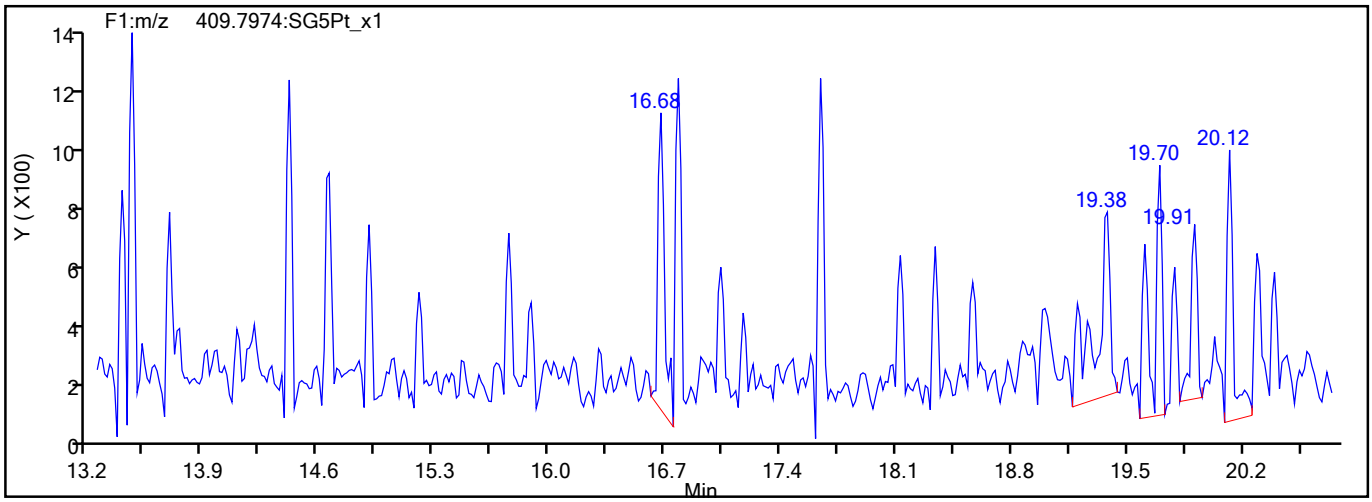

782664

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

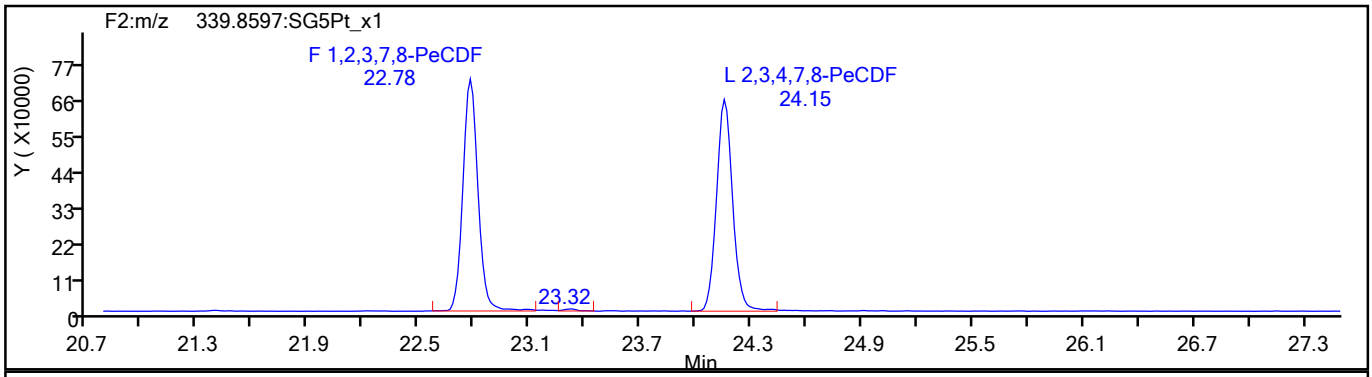

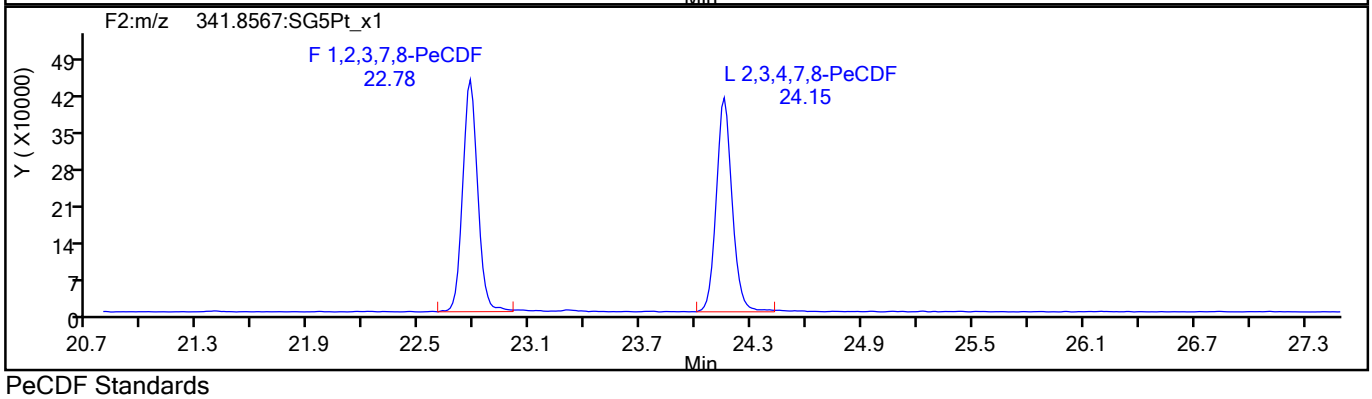

PeCDF Standards

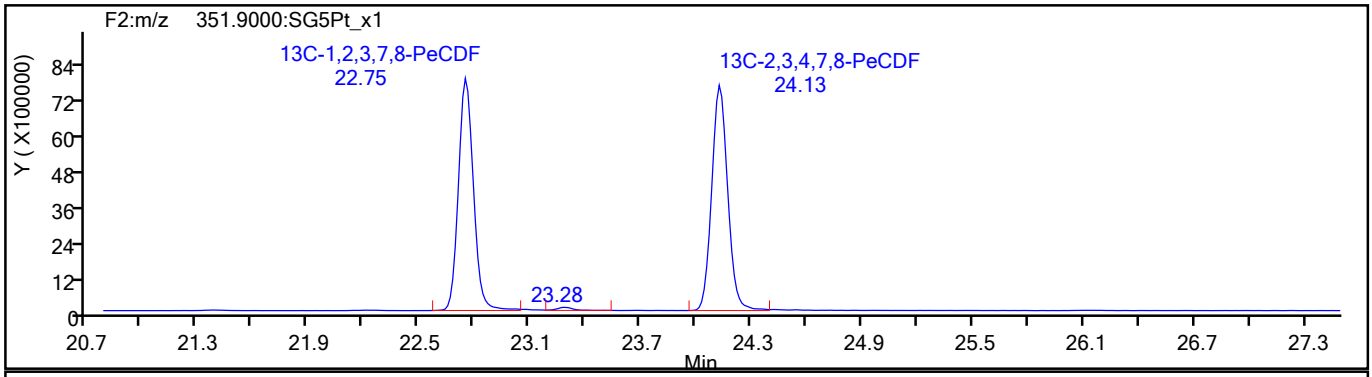

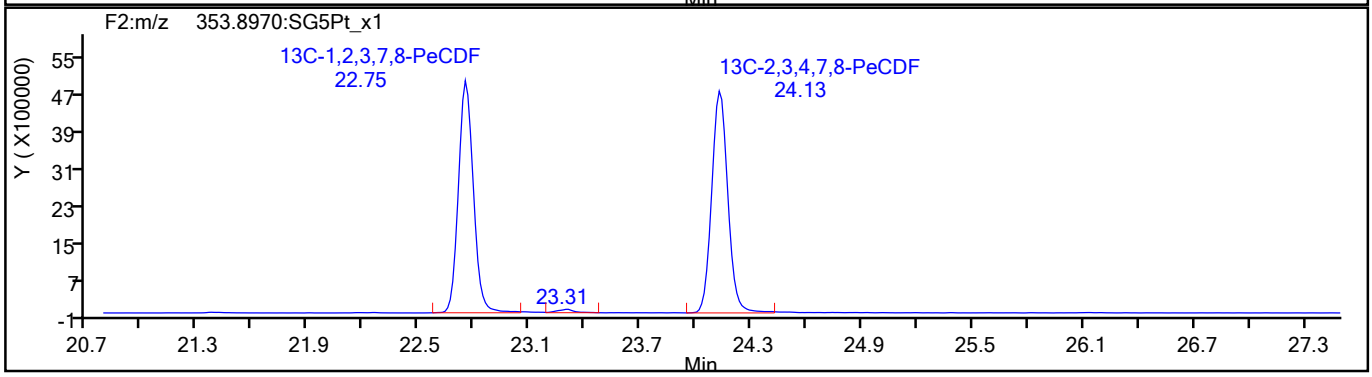

782665

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

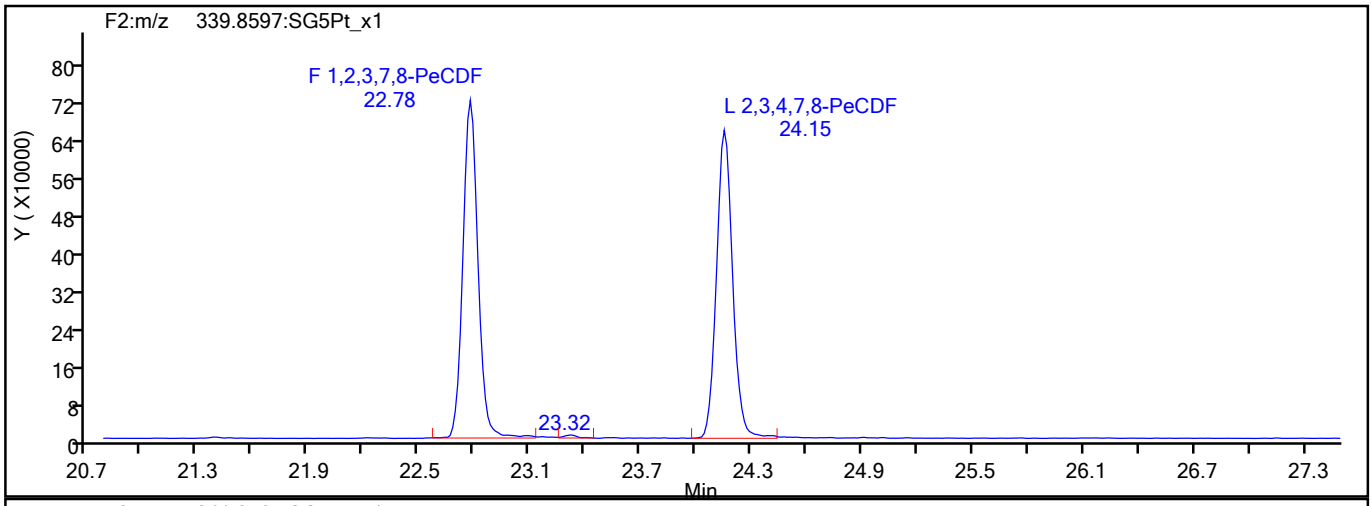

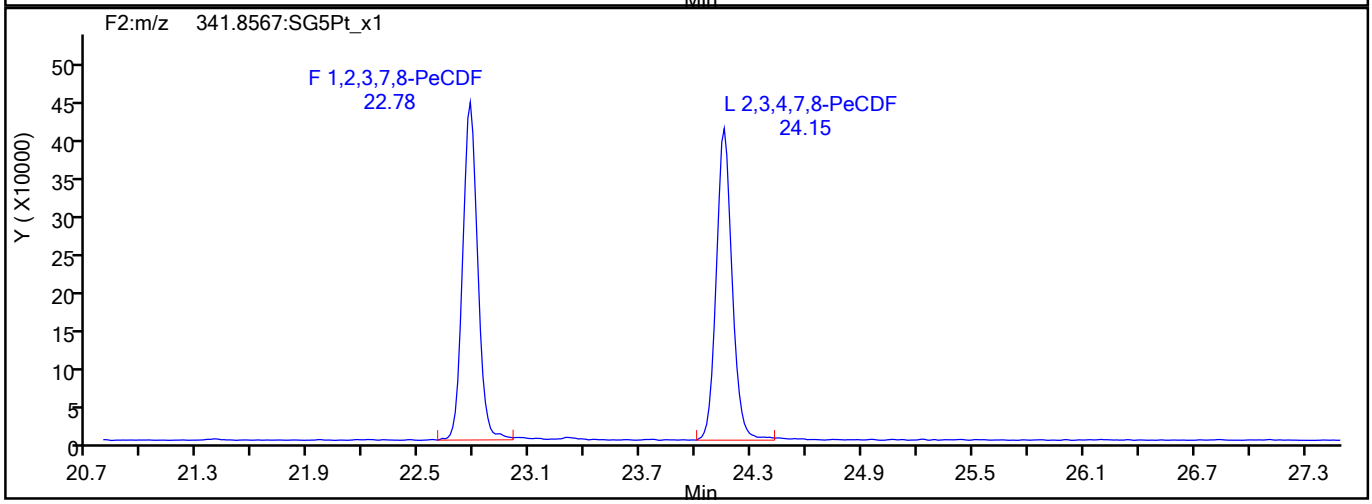

PeCDF Interference Mass

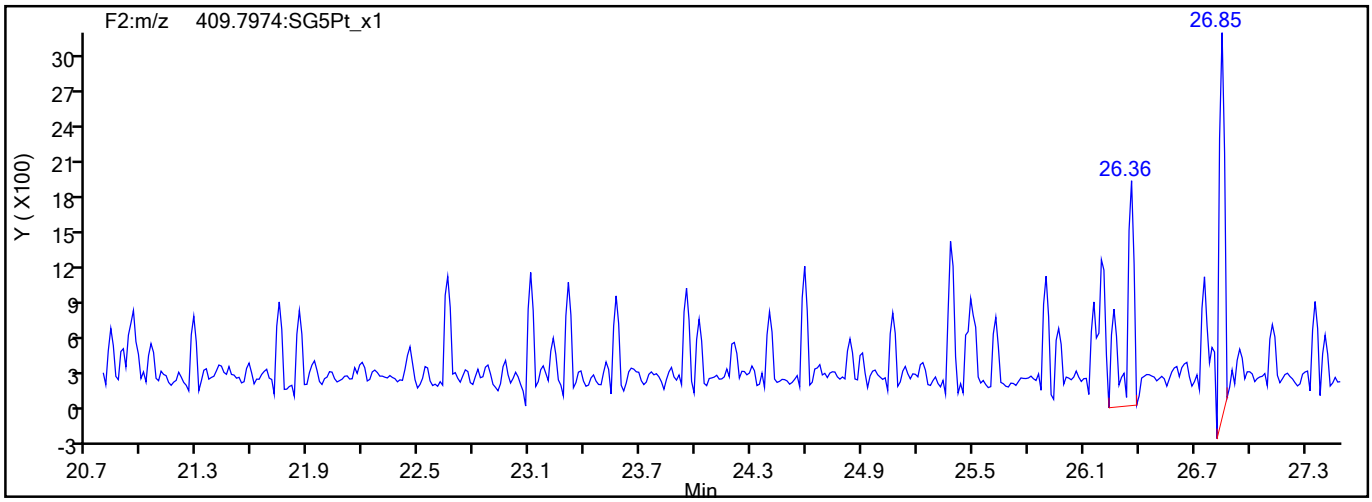

782666

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

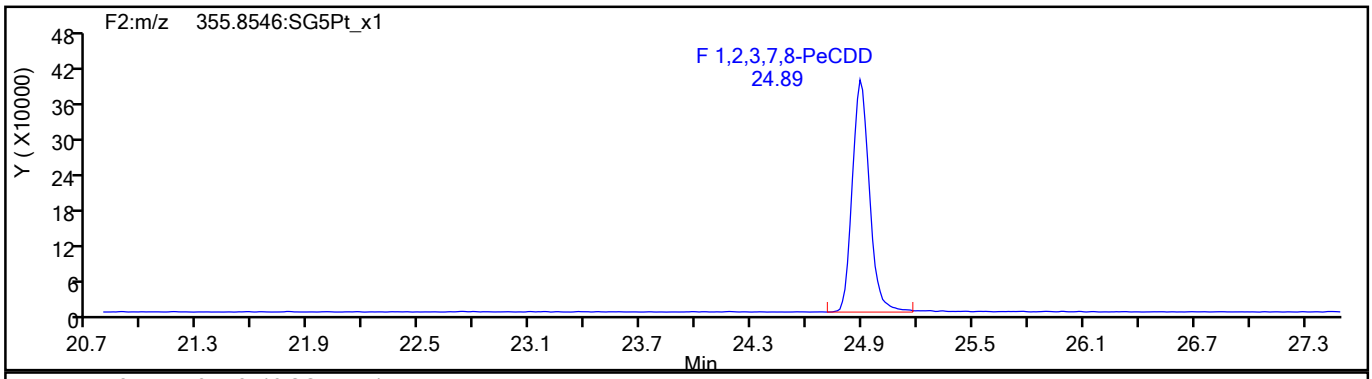

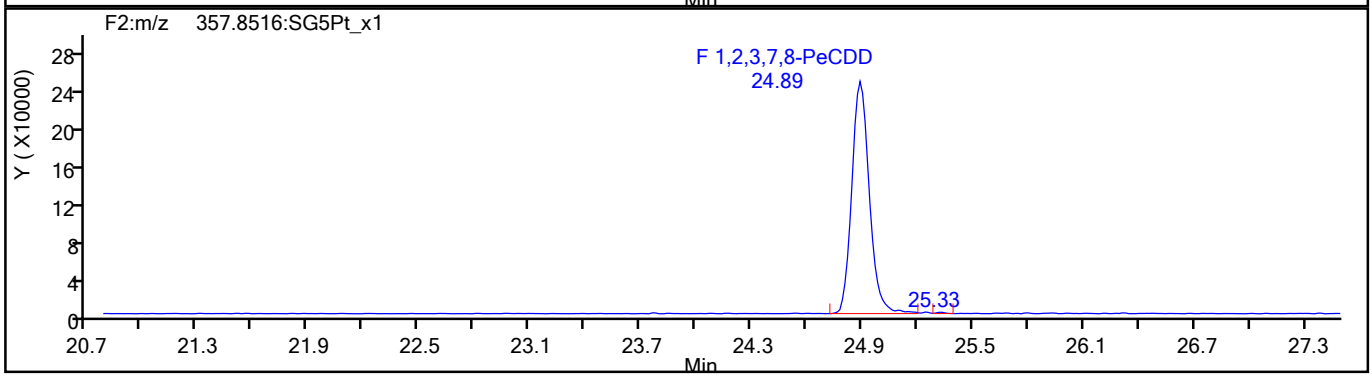

PeCDD Standards

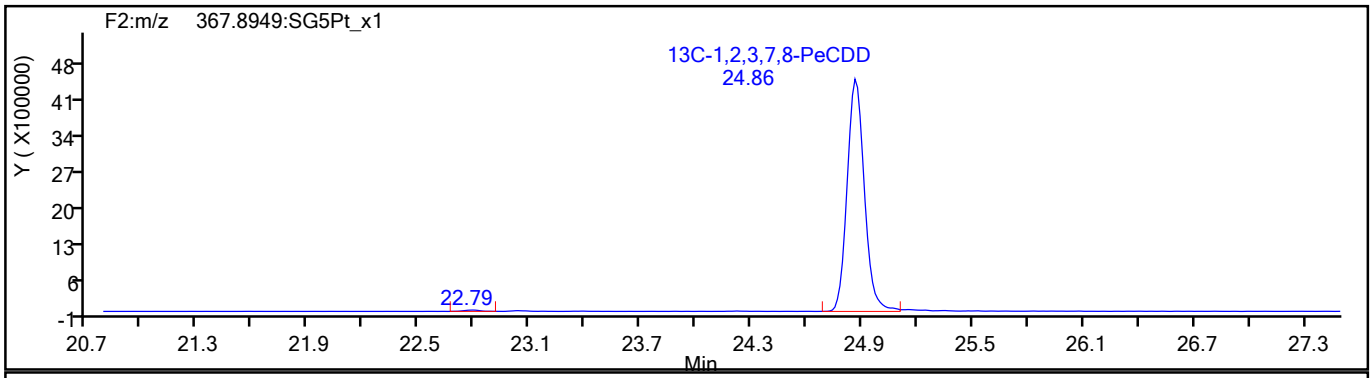

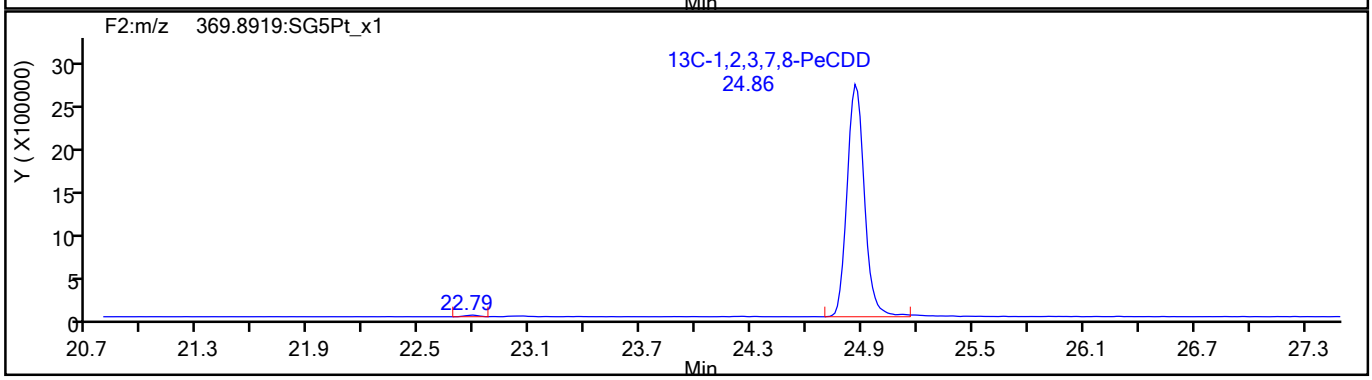

782667

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

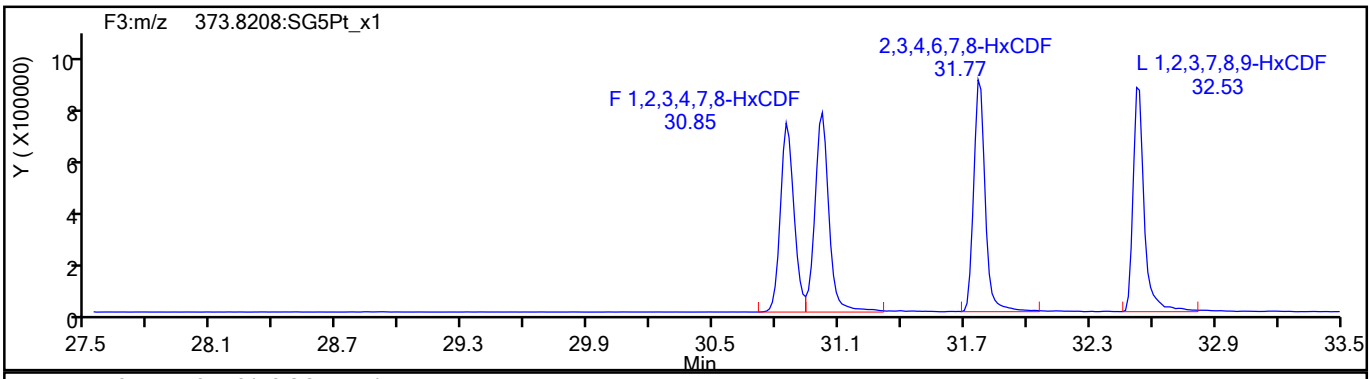

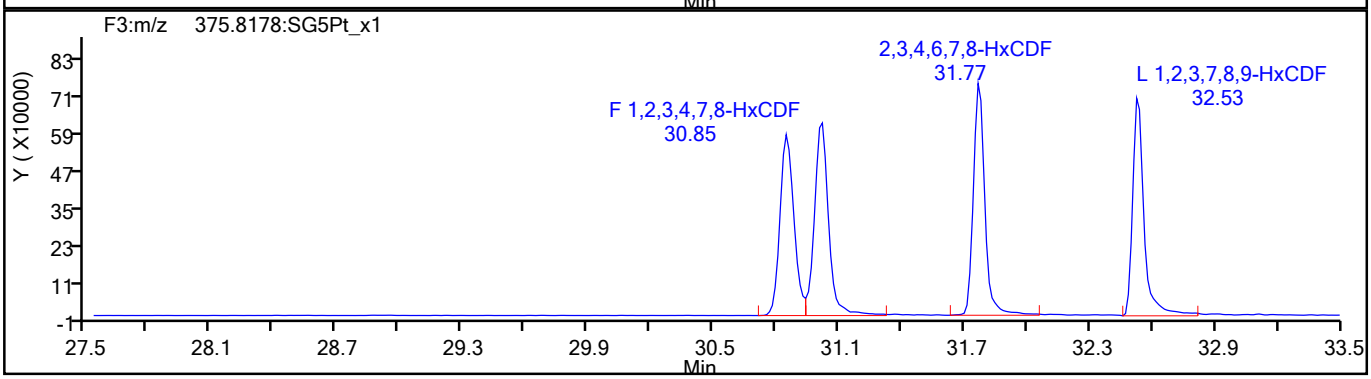

HxCDF Standards

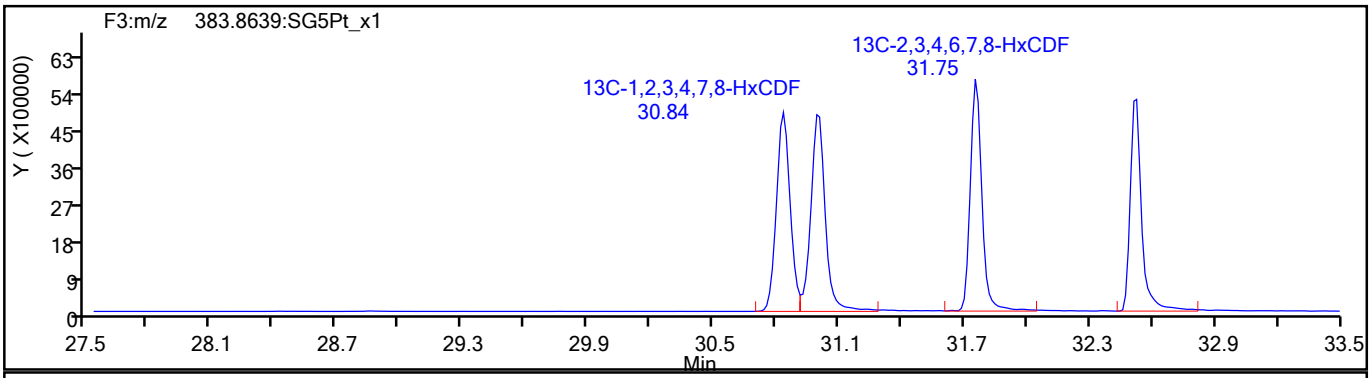

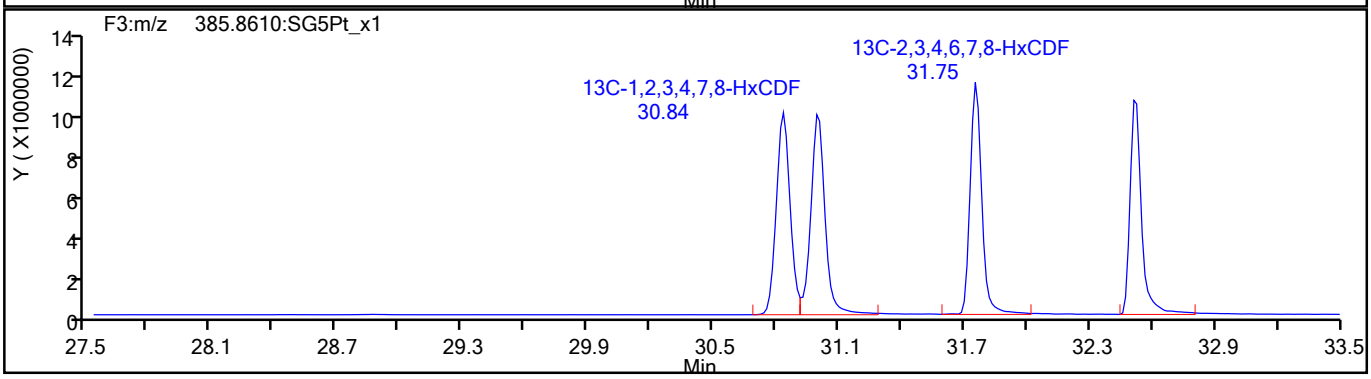

782668

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

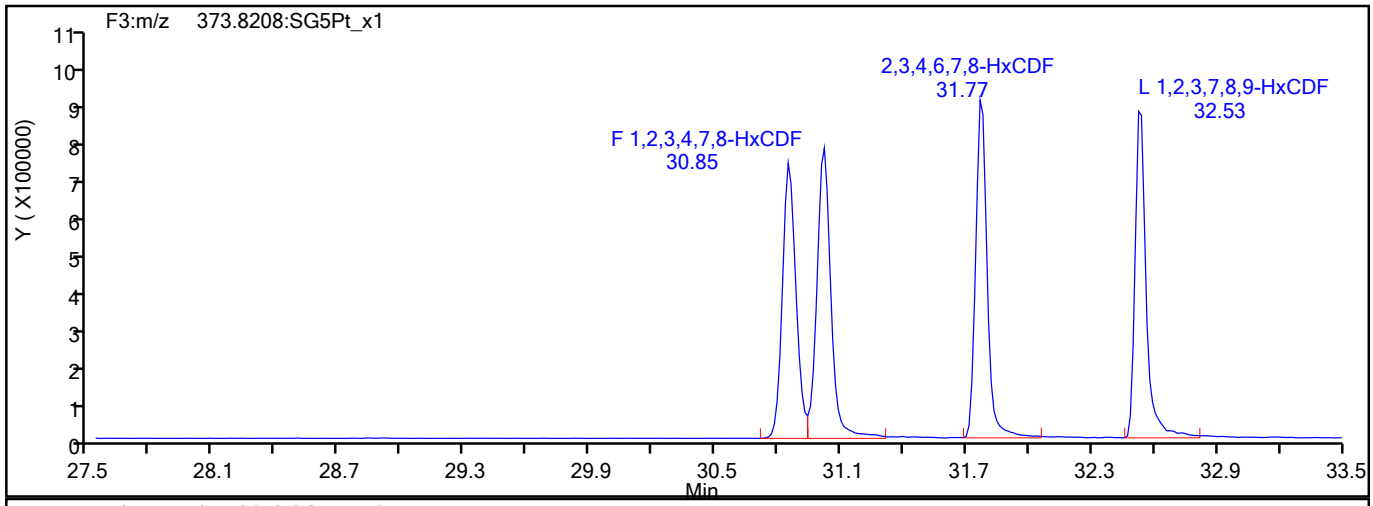

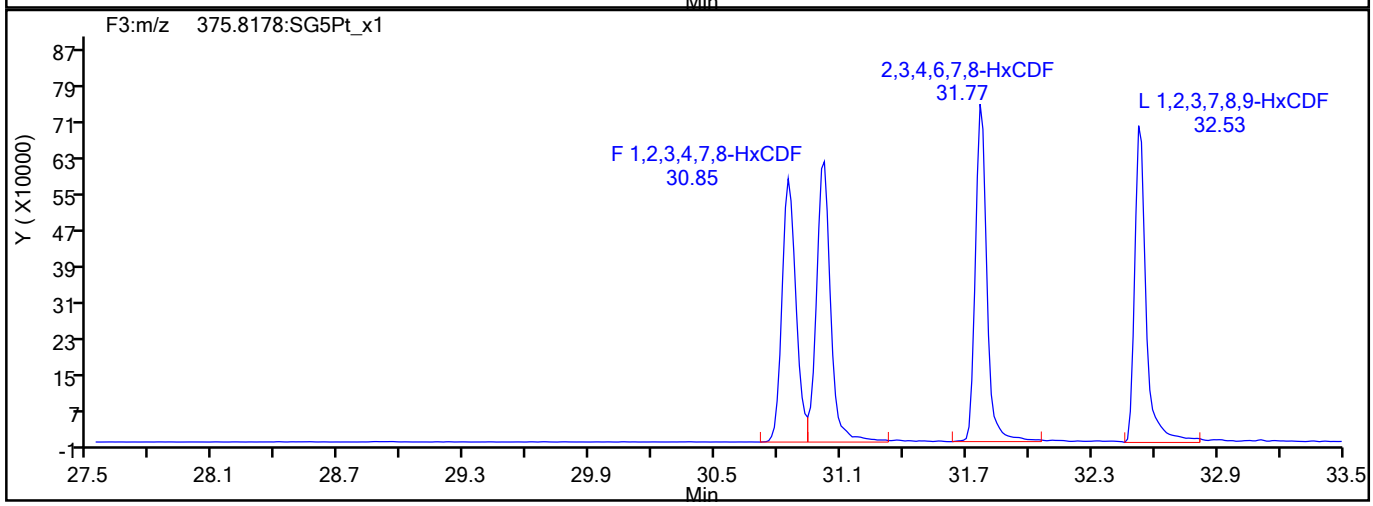

HxCDF Interference Mass

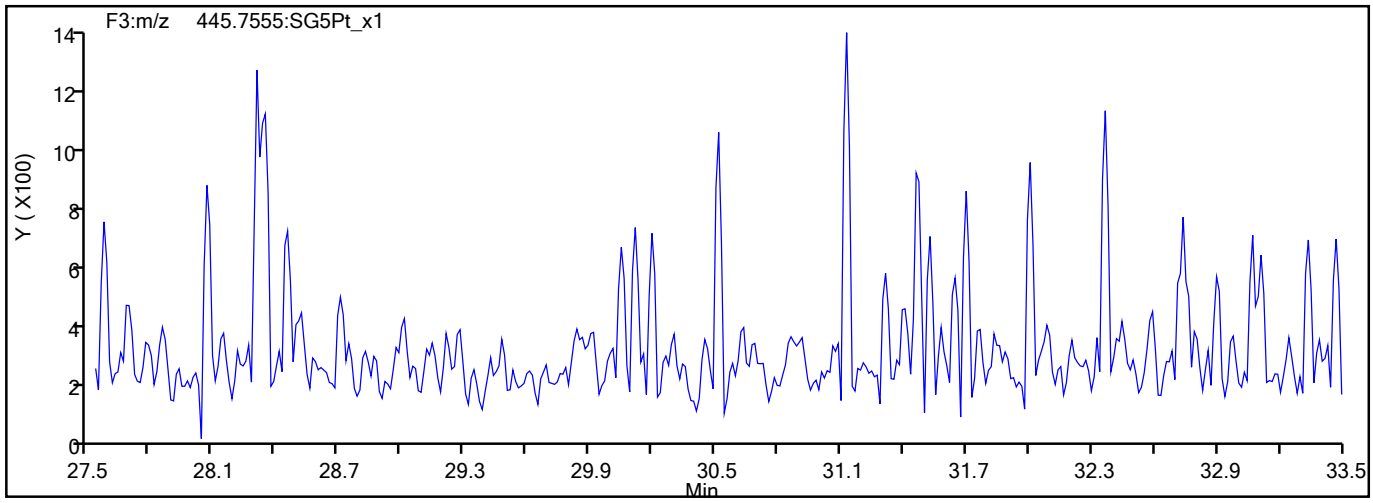

782669

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

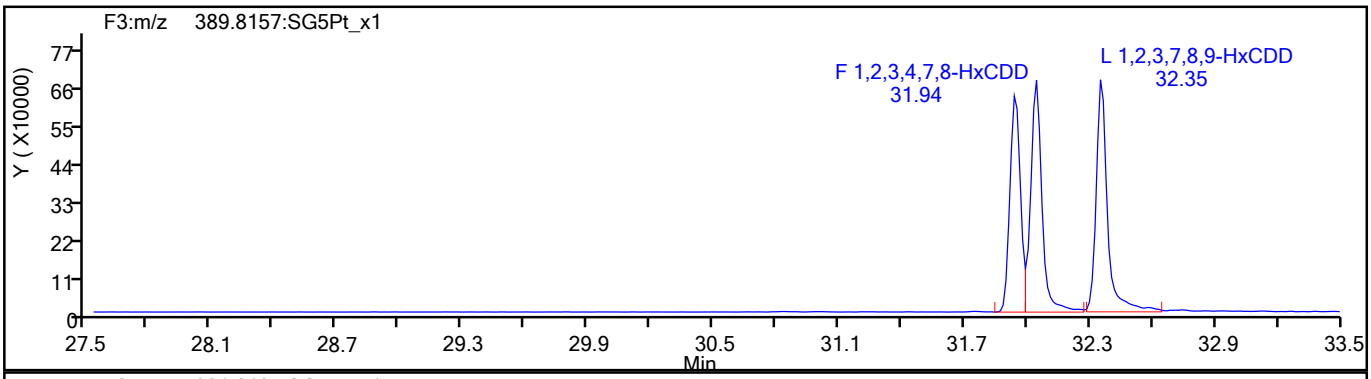

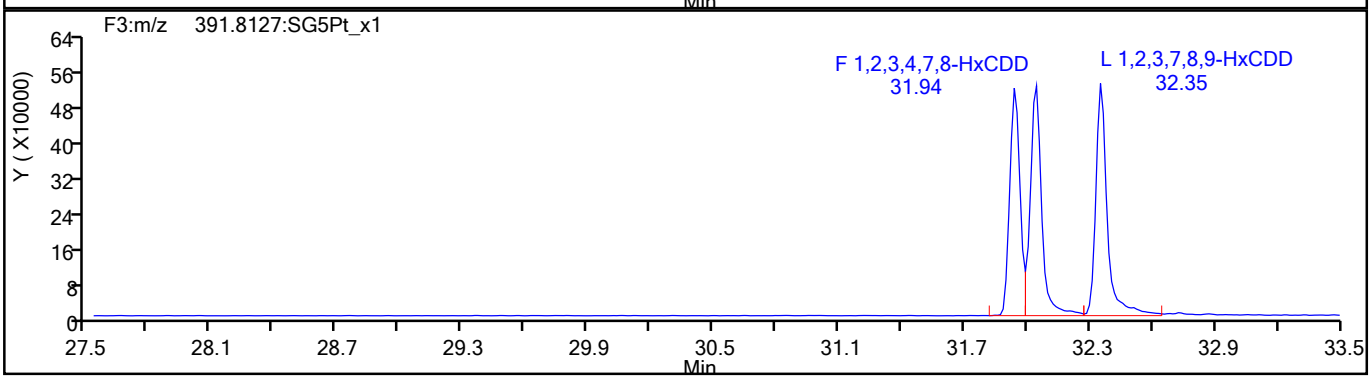

HxCDD Standards

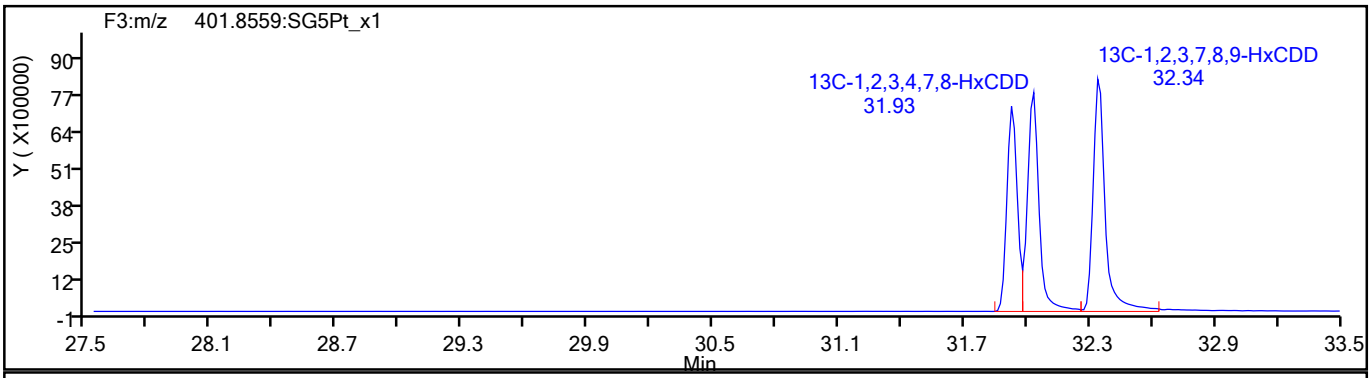

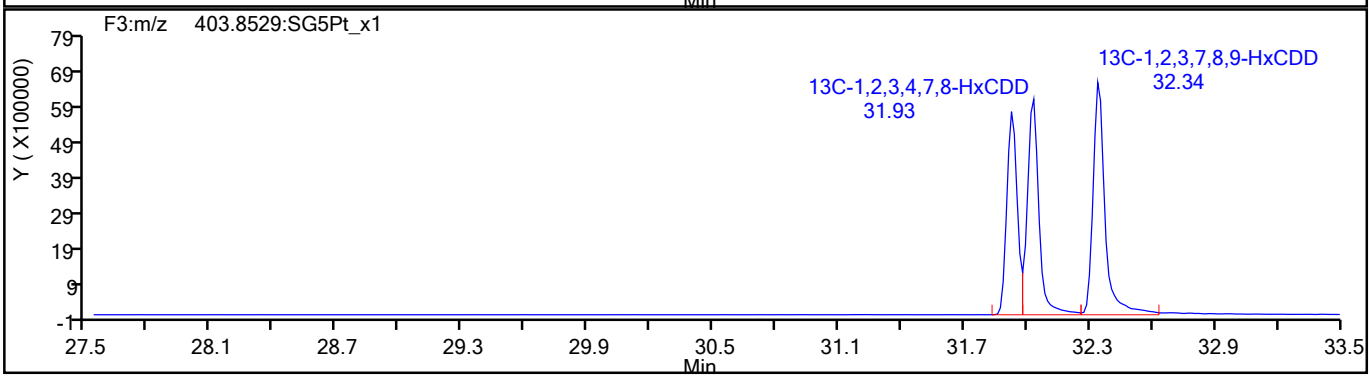

782670

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

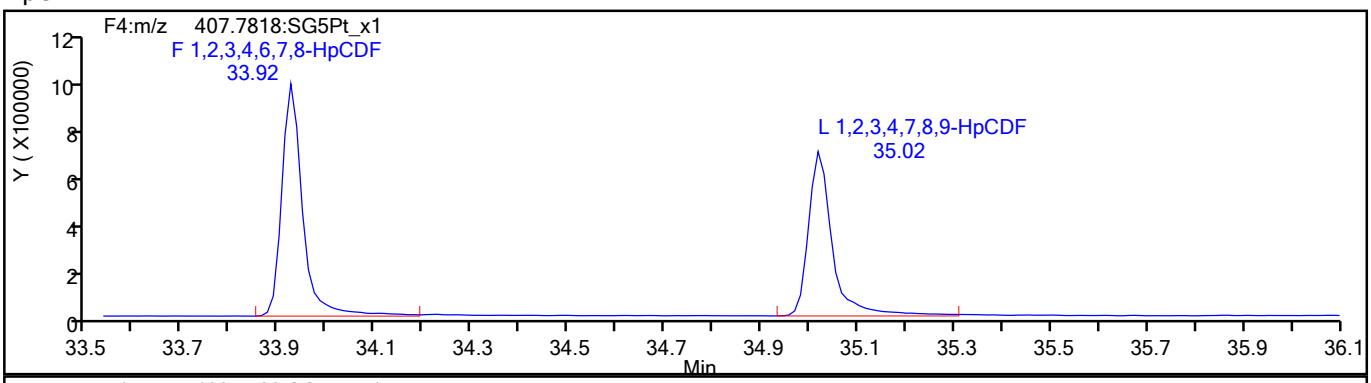

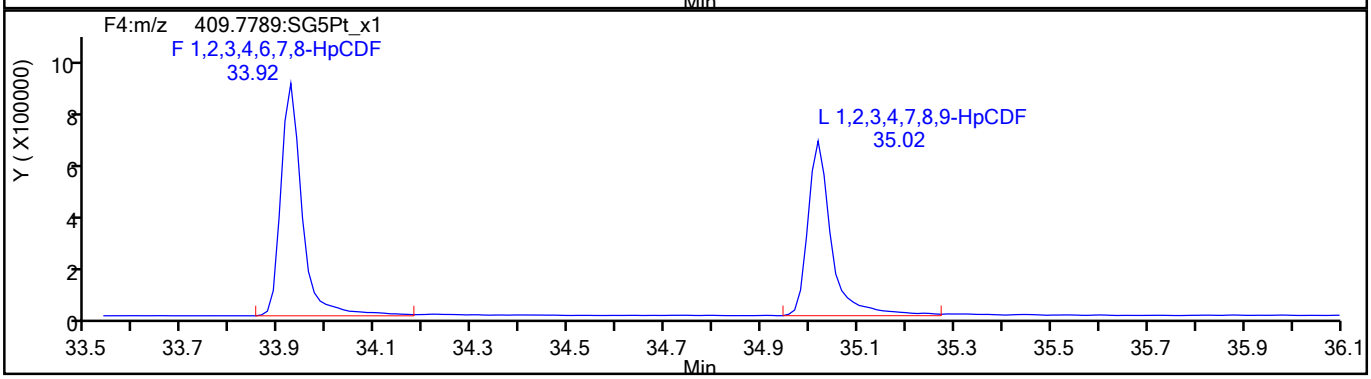

HpCDF Standards

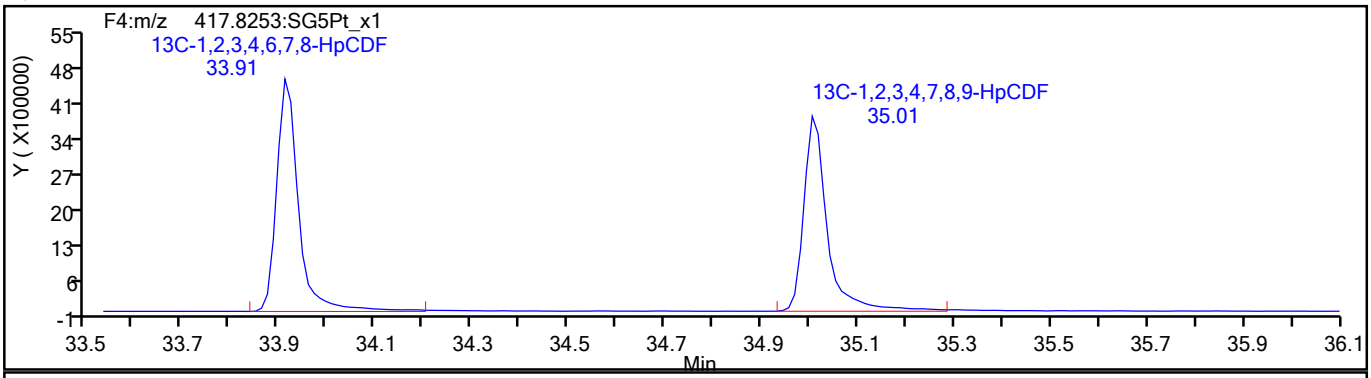

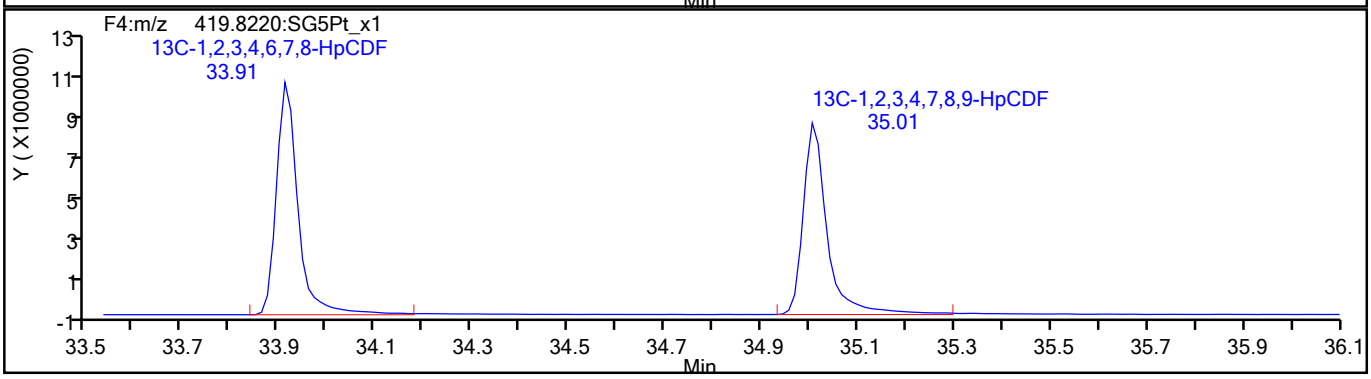

782671

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

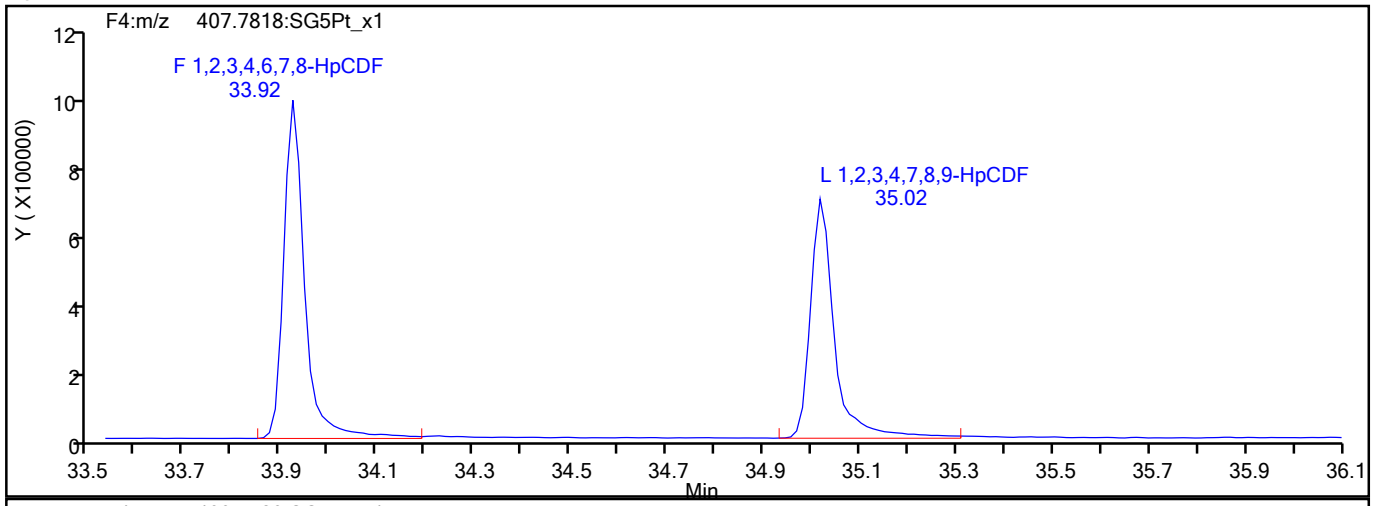

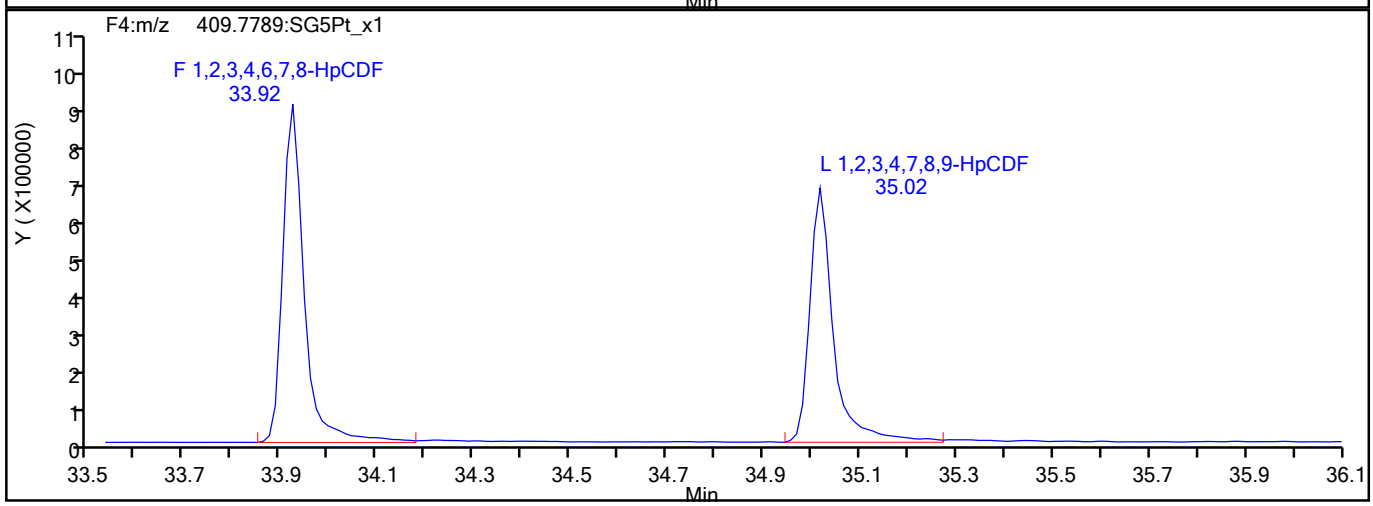

HpCDF Interference Mass

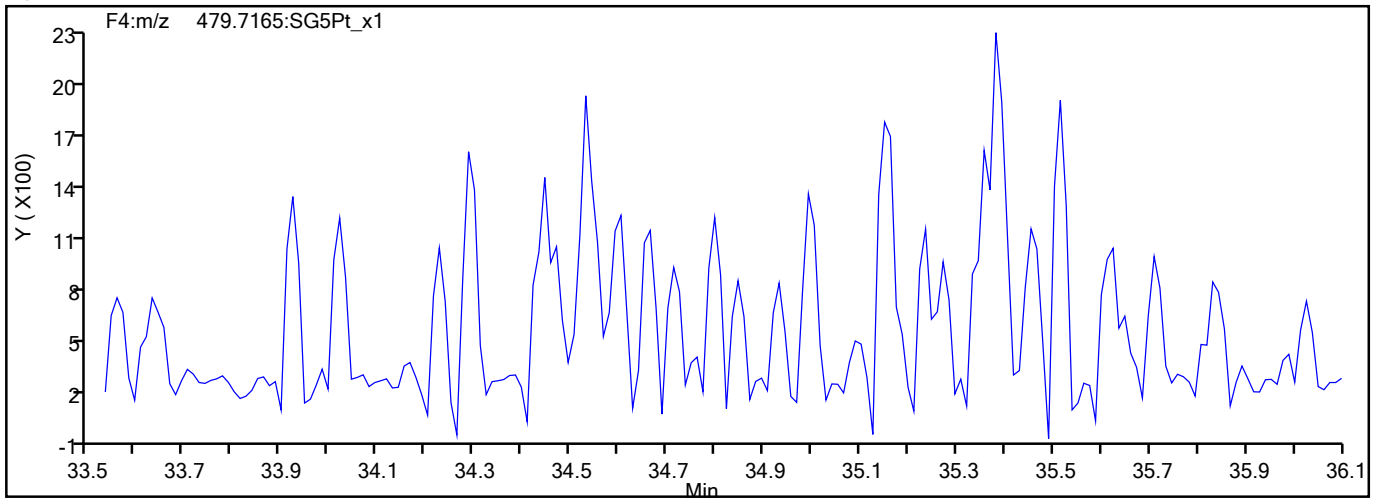

782672

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

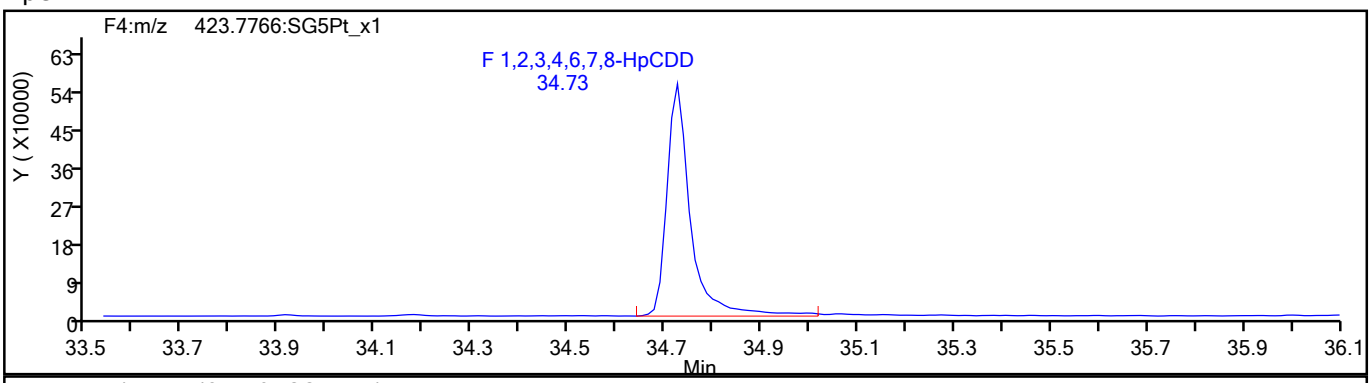

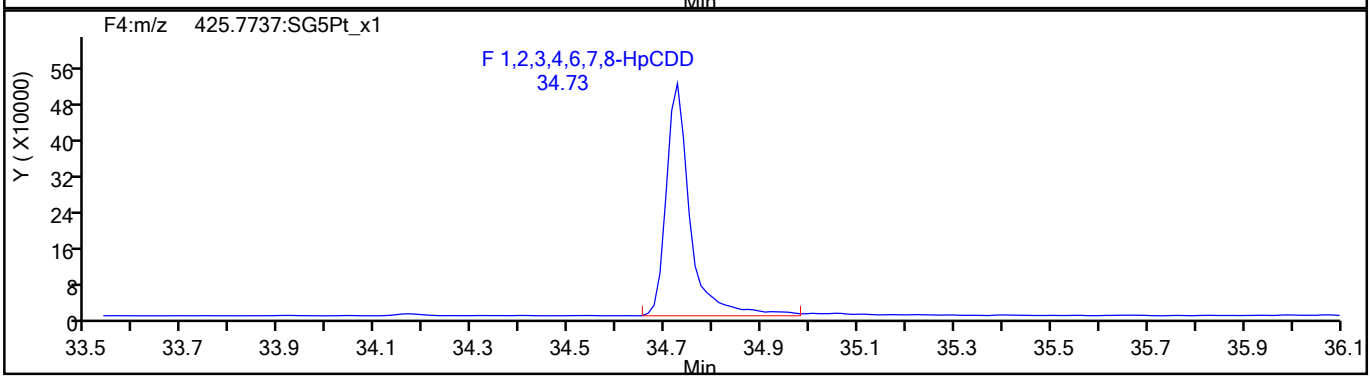

HpCDD Standards

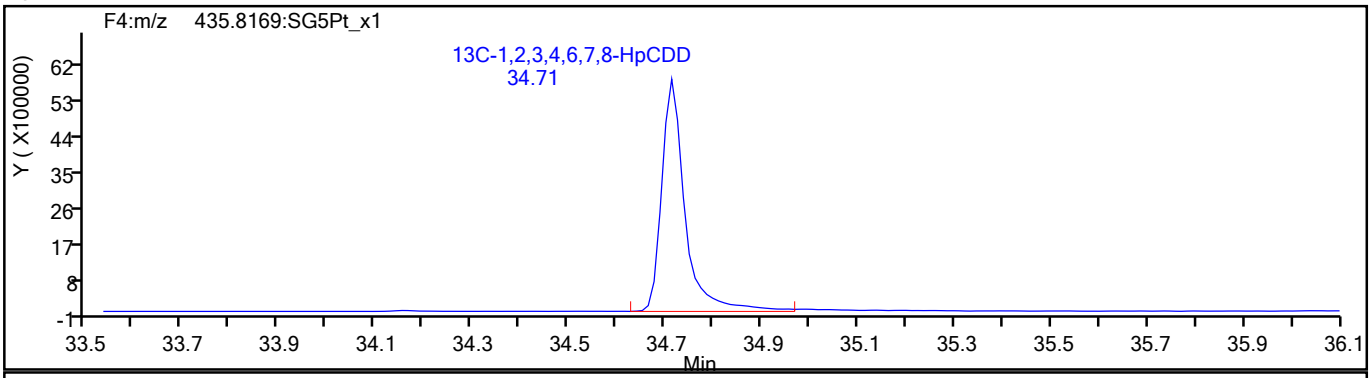

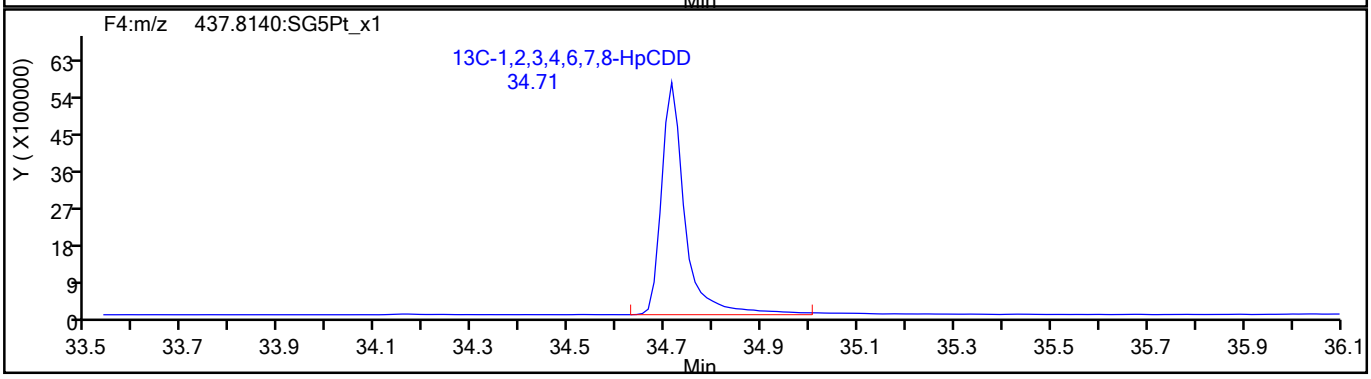

782673

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

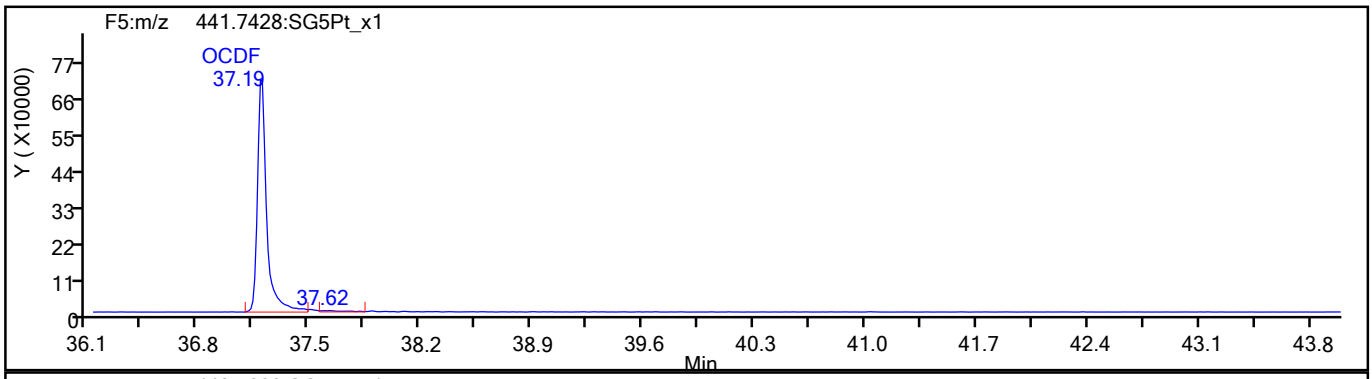

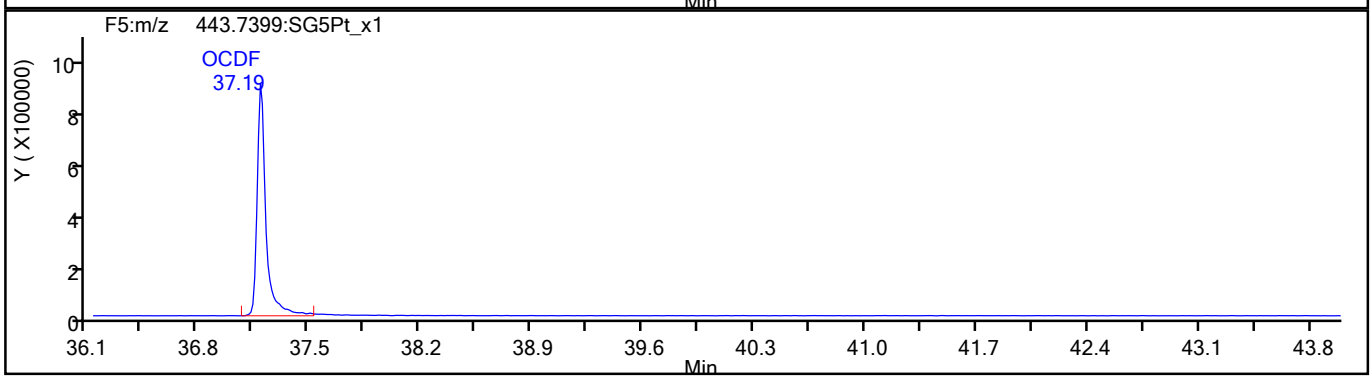

OCDF Standards

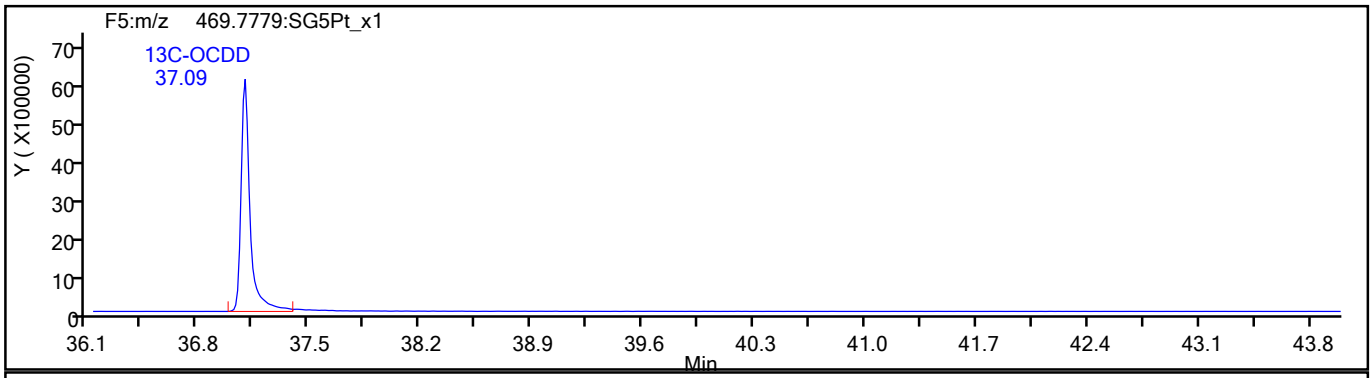

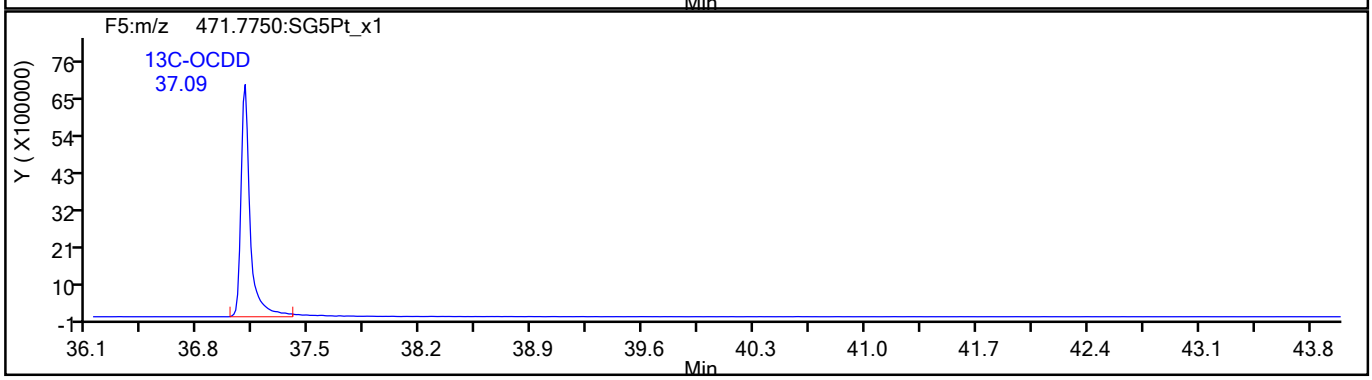

782674

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

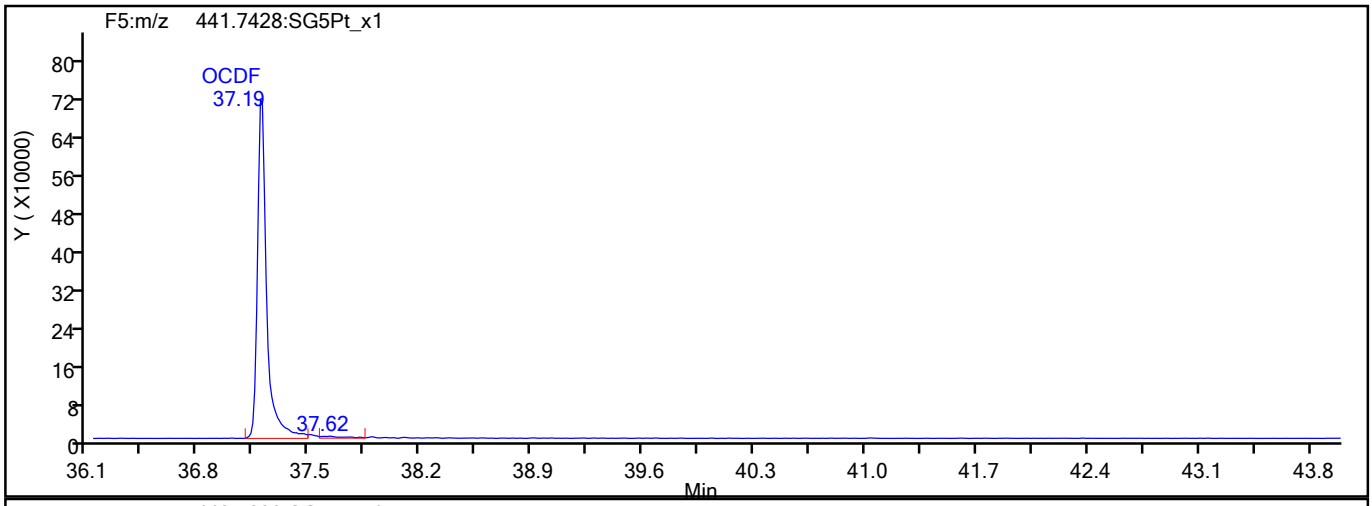

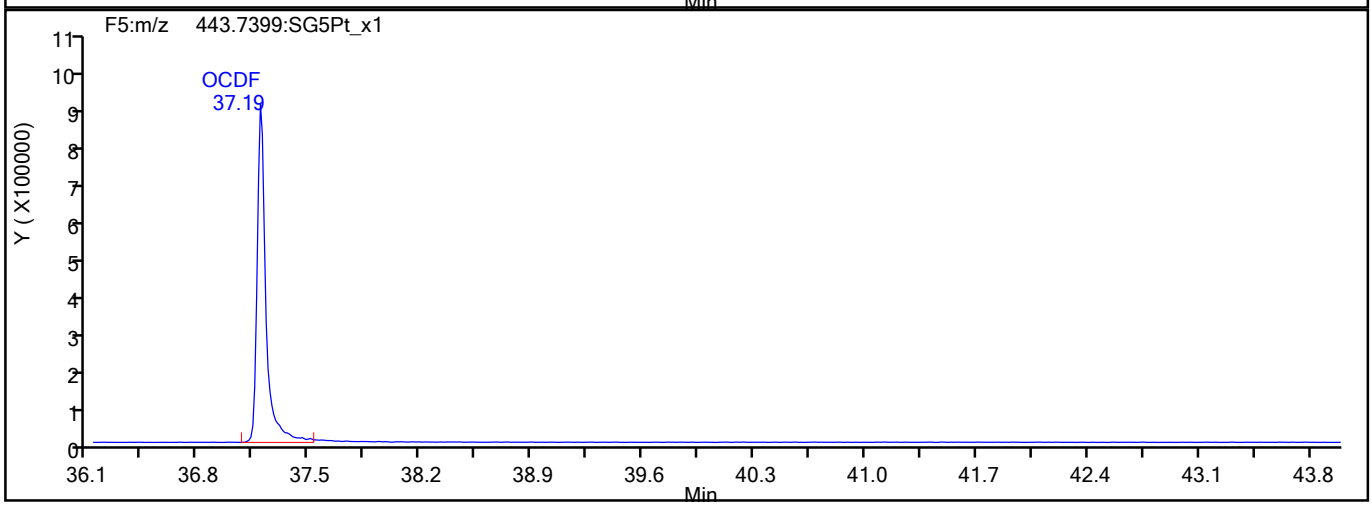

OCDF Interference Mass

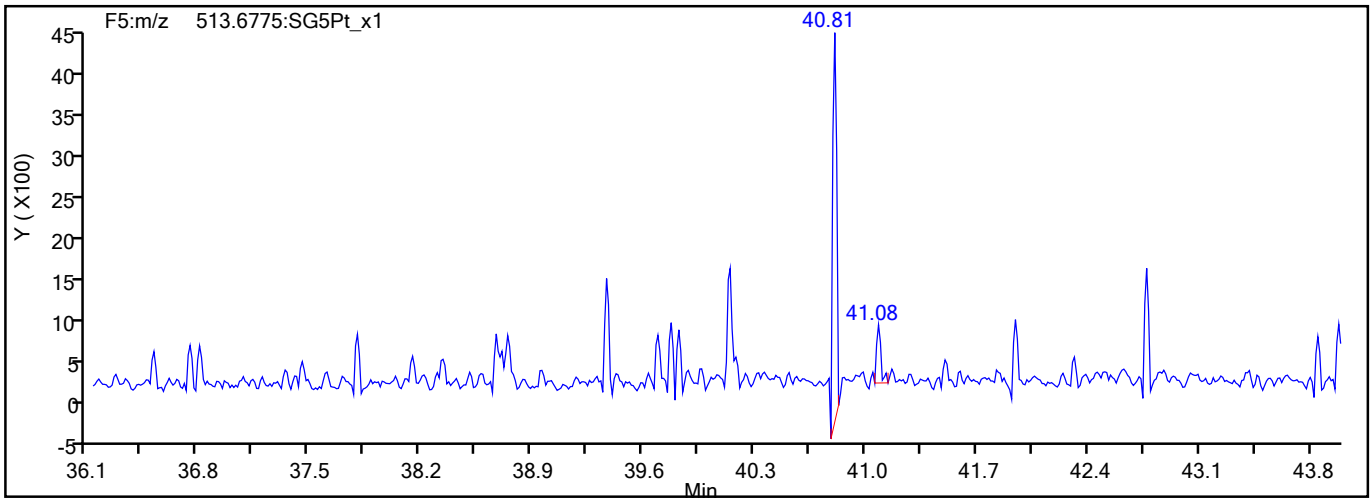

782675

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

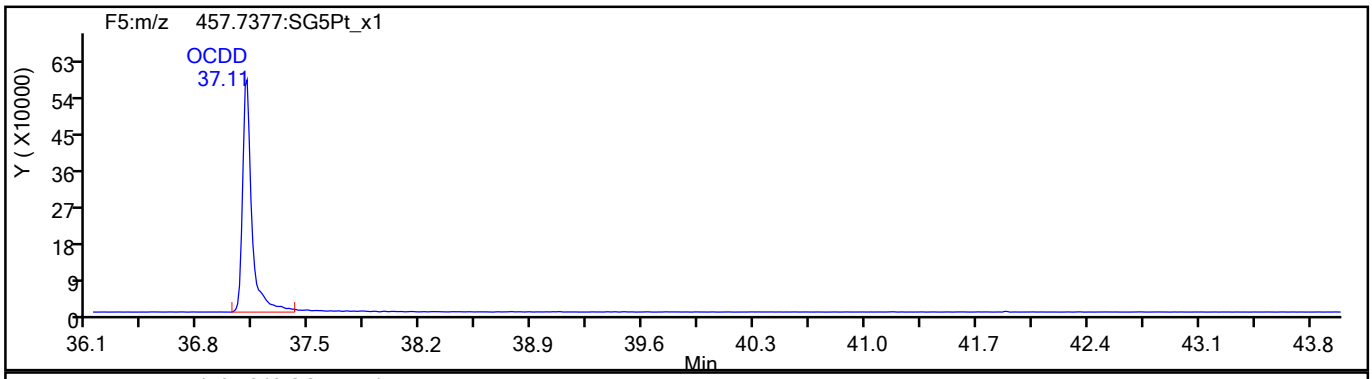

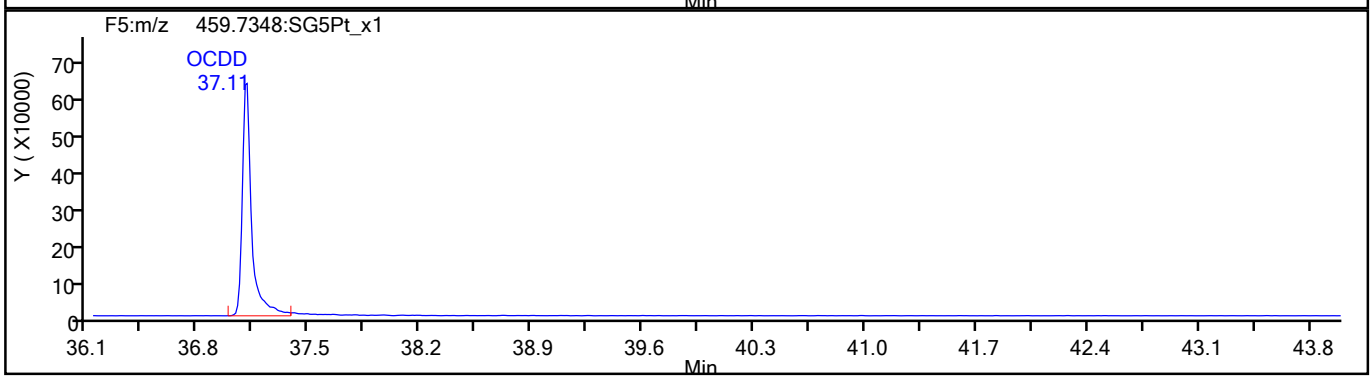

OCDD Standards

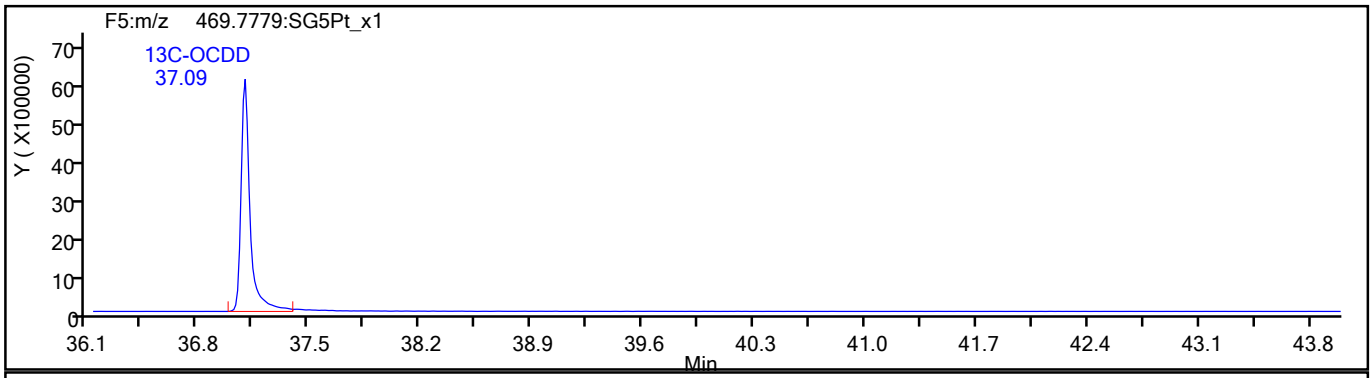

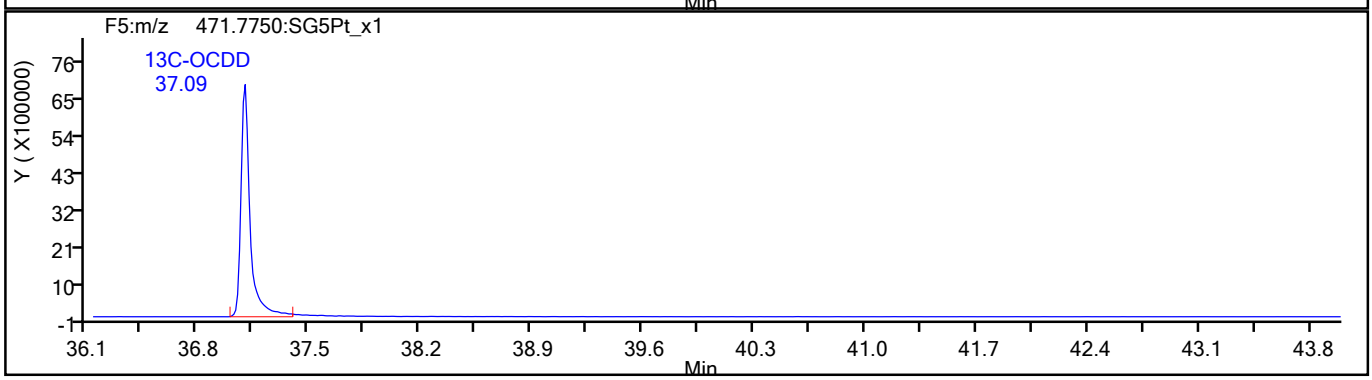

782676

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

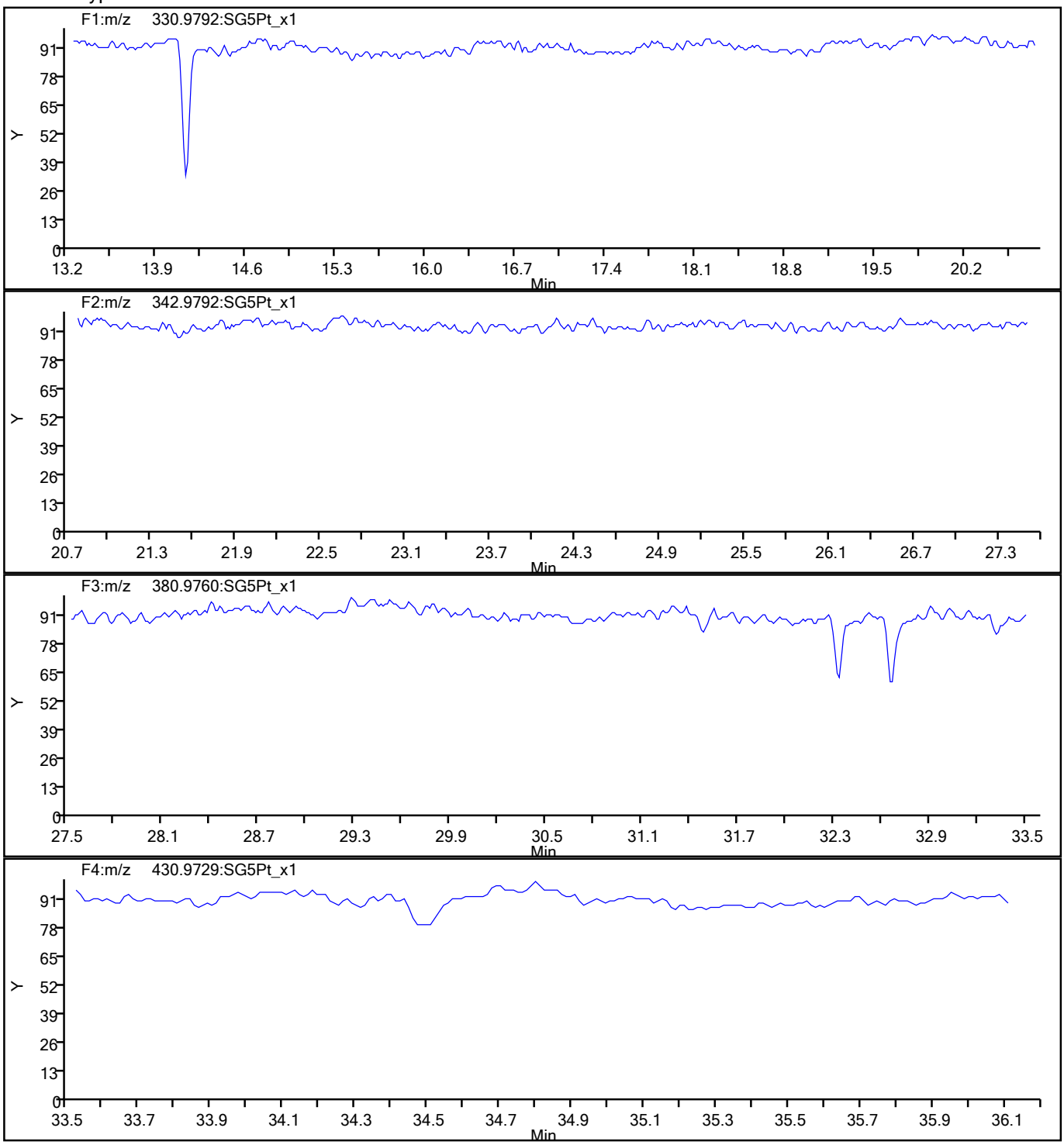

782677

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

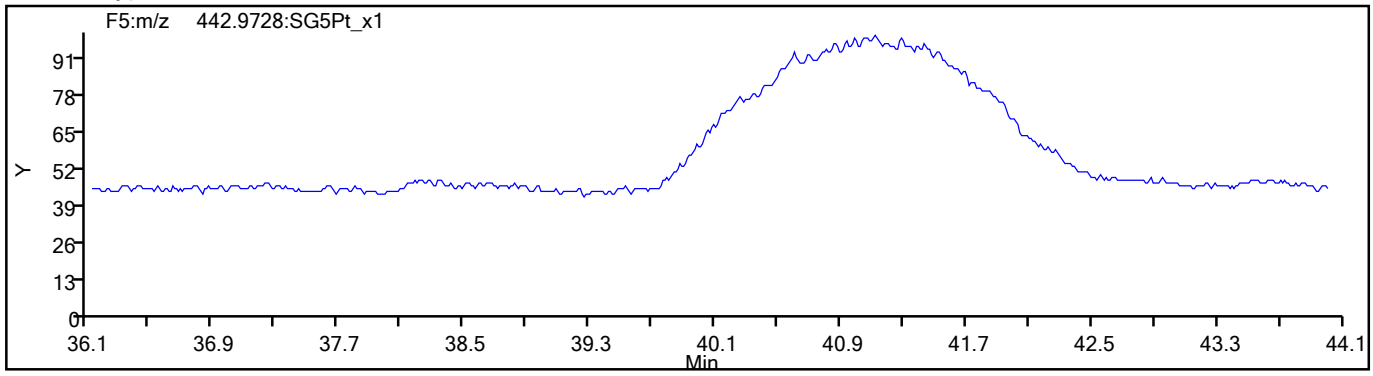

782678

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62635225	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	101724636	0.78	1.6249	99.9	99.9	0.2242	0.2242	99.95	
2,3,7,8-TCDF	17.643	10638776	0.78	1.0239	10.2	10.2	0.0283	0.0283	102	
S Total TCDF					10.2	10.2	0.0283	0.0283		
D 13C-2,3,7,8-TCDD	18.338	56155483	0.81	0.8993	99.7	99.7	0.1510	0.1510	99.69	
$ 37Cl4-2,3,7,8-TCDD	18.369	7339670		1.1071	10.6	10.6	0.0132	0.0132	106	
2,3,7,8-TCDD	18.369	7104238	0.76	1.2541	10.1	10.1	0.0224	0.0224	101	
S Total TCDD					10.1	10.1	0.0224	0.0224		
D 13C-1,2,3,7,8-PeCDF	22.762	76368219	1.58	1.2101	100.8	100.8	0.2109	0.2109	101	
1,2,3,7,8-PeCDF	22.789	41588176	1.62	1.0611	51.3	51.3	0.1508	0.1508	103	
D 13C-2,3,4,7,8-PeCDF	24.139	78214582	1.58	1.2395	100.7	100.7	0.2059	0.2059	101	
2,3,4,7,8-PeCDF	24.167	40928436	1.60	1.0184	51.4	51.4	0.1656	0.1656	103	
S Total PeCDF					102.7	102.7	0.1582	0.1582		
D 13C-1,2,3,7,8-PeCDD	24.876	47124414	1.60	0.7612	98.8	98.8	0.1214	0.1214	98.83	
1,2,3,7,8-PeCDD	24.903	25165054	1.62	1.0484	50.9	50.9	0.0669	0.0669	102	
S Total PeCDD					50.9	50.9	0.0669	0.0669		
D 13C-1,2,3,4,7,8-HxCDF	30.849	68075509	0.52	1.0837	98.8	98.8	0.4389	0.4389	98.79	
1,2,3,4,7,8-HxCDF	30.862	37525146	1.24	1.0851	50.8	50.8	0.2914	0.2914	102	
D 13C-1,2,3,6,7,8-HxCDF	31.009	70677463	0.52	1.1279	98.5	98.5	0.4217	0.4217	98.54	
1,2,3,6,7,8-HxCDF	31.022	40802767	1.21	1.1260	51.3	51.3	0.2729	0.2729	103	
D 13C-2,3,4,6,7,8-HxCDF	31.767	67028498	0.52	1.0637	99.1	99.1	0.4471	0.4471	99.10	
2,3,4,6,7,8-HxCDF	31.781	39741365	1.22	1.1675	50.8	50.8	0.2260	0.2260	102	
D 13C-1,2,3,7,8,9-HxCDF	32.526	60389284	0.52	0.9676	98.2	98.2	0.4916	0.4916	98.15	
1,2,3,7,8,9-HxCDF	32.540	35924190	1.21	1.1664	51.0	51.0	0.2363	0.2363	102	
S Total HxCDF					203.9	203.9	0.2566	0.2566		
* 13C-1,2,3,7,8,9-HxCDD	32.353	63588089	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.941	44039927	1.25	0.7334	94.4	94.4	0.3731	0.3731	94.43	
1,2,3,4,7,8-HxCDD	31.954	24891170	1.33	1.0640	53.1	53.1	0.1747	0.1747	106	
D 13C-1,2,3,6,7,8-HxCDD	32.034	55284532	1.26	0.8802	98.8	98.8	0.3109	0.3109	98.78	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	27953752	1.21	1.0001	50.6	50.6	0.1666	0.1666	101	
1,2,3,7,8,9-HxCDD	32.367	29794954	1.26	1.1325	53.0	53.0	0.1552	0.1552	106	
S Total HxCDD					156.7	156.7	0.1655	0.1655		
D 13C-1,2,3,4,6,7,8-HpCDF	33.924	47697671	0.44	0.7730	97.0	97.0	1.328	1.328	97.03	
1,2,3,4,6,7,8-HpCDF	33.937	35740964	1.05	1.4413	52.0	52.0	0.5190	0.5190	104	
D 13C-1,2,3,4,7,8,9-HpCDF	35.018	43238622	0.44	0.7008	97.0	97.0	1.465	1.465	97.03	
1,2,3,4,7,8,9-HpCDF	35.030	29450636	1.07	1.3174	51.7	51.7	0.6741	0.6741	103	
S Total HpCDF					103.7	103.7	0.5966	0.5966		
D 13C-1,2,3,4,6,7,8-HpCDD	34.726	40333717	1.03	0.6472	98.0	98.0	0.5563	0.5563	98.00	
1,2,3,4,6,7,8-HpCDD	34.726	22538791	1.03	1.0943	51.1	51.1	0.2539	0.2539	102	
S Total HpCDD					51.1	51.1	0.2539	0.2539		
D 13C-OCDD	37.094	54338243	0.87	0.4472	191.1	191.1	0.2612	0.2612	95.55	
OCDF	37.202	41147202	0.91	1.4382	105.3	105.3	0.1155	0.1155	105	
OCDD	37.106	31656667	0.89	1.1070	105.3	105.3	0.1572	0.1572	105	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28287778	7074314	3903	9757	1813		
333.9339	18.142	18.142	0		34347447	8672273	4653	11632	1864	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.616	1	0.972	44652675	10978931	8756	21890	1254		
317.9389	17.628	17.616	1	0.972	57071961	13787474	14192	35480	971	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.631	1	1.001	4665898	1145703	1759	4397	651		
305.8987	17.643	17.631	1	1.001	5972878	1458593	1111	2777	1313	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	25132336	5946858	3903	9757	1524		
333.9339	18.338	18.338	0	1.011	31023147	7337223	4653	11632	1577	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.369	18.354	1	1.012	7339670	1703834	921	2302	1850		
2,3,7,8-TCDD											
319.8965	18.369	18.357	1	1.002	3077636	720367	906	2265	795		
321.8936	18.369	18.357	1	1.002	4026602	947792	588	1470	1612	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46742521	8181774	9794	24485	835		
353.8970	22.762	22.754	0	1.255	29625698	5225925	6278	15695	832	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.789	22.779	1	1.001	25738852	4452039	5088	12720	875		
341.8567	22.789	22.779	1	1.001	15849324	2731041	3494	8735	782	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.139	24.129	1	1.331	47906018	7878060	9794	24485	804		
353.8970	24.139	24.129	1	1.331	30308564	4845446	6278	15695	772	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.167	24.156	1	1.001	25185293	4111601	5088	12720	808		
341.8567	24.167	24.156	1	1.001	15743143	2618923	3494	8735	750	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.876	24.865	1	1.371	29023498	4508866	3701	9252	1218		
369.8919	24.876	24.865	1	1.371	18100916	2812844	2121	5302	1326	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.903	24.892	1	1.001	15548746	2422000	1286	3215	1883		
357.8516	24.903	24.892	1	1.001	9616308	1489099	768	1920	1939	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.849	30.838	1	0.954	23323404	5008910	10853	27132	462		
385.8610	30.849	30.838	1	0.954	44752105	9511743	20971	52427	454	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.000	20753403	4584464	10058	25145	456		
375.8178	30.862	30.857	0	1.000	16771743	3729681	8311	20777	449	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.009	31.003	0	0.958	24213048	5206646	10853	27132	480		
385.8610	31.009	31.003	0	0.958	46464415	9739576	20971	52427	464	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	22352739	4771379	10058	25145	474		
375.8178	31.022	31.022	0	1.000	18450028	3943683	8311	20777	475	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.767	31.756	1	0.982	22835025	6015846	10853	27132	554		
385.8610	31.767	31.756	1	0.982	44193473	11391437	20971	52427	543	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.781	31.772	1	1.000	21800962	5788708	10058	25145	576		
375.8178	31.781	31.772	1	1.000	17940403	4765095	8311	20777	573	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.005	20681548	5801162	10853	27132	535		
385.8610	32.526	32.523	0	1.005	39707736	10862121	20971	52427	518	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.540	32.534	0	1.000	19691436	5514300	10058	25145	548		
375.8178	32.540	32.534	0	1.000	16232754	4594829	8311	20777	553	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.353	32.342	1		35642869	9349119	10403	26007	899		
403.8529	32.353	32.342	1		27945220	7378163	7908	19770	933	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.941	31.929	1	0.987	24473480	7240164	10403	26007	696		
403.8529	31.941	31.929	1	0.987	19566447	5775722	7908	19770	730	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.954	31.945	1	1.000	14220855	4121905	5566	13915	741		
391.8127	31.954	31.945	1	1.000	10670315	3199272	4114	10285	778	1.33(1.05-1.43)	

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.034	32.033	0	0.990	30876044	8117648	10403	26007	780		
403.8529	32.034	32.033	0	0.990	24408488	6404371	7908	19770	810	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	15327109	4211681	5566	13915	757		
391.8127	32.047	32.047	0	1.000	12626643	3343117	4114	10285	813	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.367	32.355	1	1.013	16583478	4368640	5566	13915	785		
391.8127	32.353	32.355	0	1.013	13211476	3519862	4114	10285	856	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.924	33.914	1	1.049	14460337	4683854	18083	45207	259		
419.8220	33.924	33.914	1	1.049	33237334	10568693	50629	126572	209	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.937	33.926	1	1.000	18301949	5790856	23497	58742	246		
409.7789	33.924	33.926	0	1.000	17439015	5585138	22139	55347	252	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.018	35.010	0	1.082	13111896	3936331	18083	45207	218		
419.8220	35.018	35.010	0	1.082	30126726	8910423	50629	126572	176	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.030	35.020	1	1.000	15206712	4448229	23497	58742	189		
409.7789	35.018	35.020	0	1.000	14243924	4117019	22139	55347	186	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.726	34.716	1	1.073	20474082	5927612	12552	31380	472		
437.8140	34.714	34.716	0	1.073	19859635	5735510	11540	28850	497	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	11412485	3410093	6511	16277	524		
425.7737	34.726	34.726	0	1.000	11126306	3358586	6451	16127	521	1.03(0.88-1.20)	
13C-OCDD											
469.7779	37.094	37.094	0	1.147	25234291	6398501	3020	7550	2119		
471.7750	37.094	37.094	0	1.147	29103952	7389026	4794	11985	1541	0.87(0.76-1.02)	
OCDF											
441.7428	37.202	37.199	0	1.003	19626693	5149784	2565	6412	2008		
443.7399	37.202	37.199	0	1.003	21520509	5563126	2015	5037	2761	0.91(0.76-1.02)	
OCDD											
457.7377	37.106	37.106	0	1.000	14916504	3846231	2276	5690	1690		
459.7348	37.106	37.106	0	1.000	16740163	4277323	2524	6310	1695	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

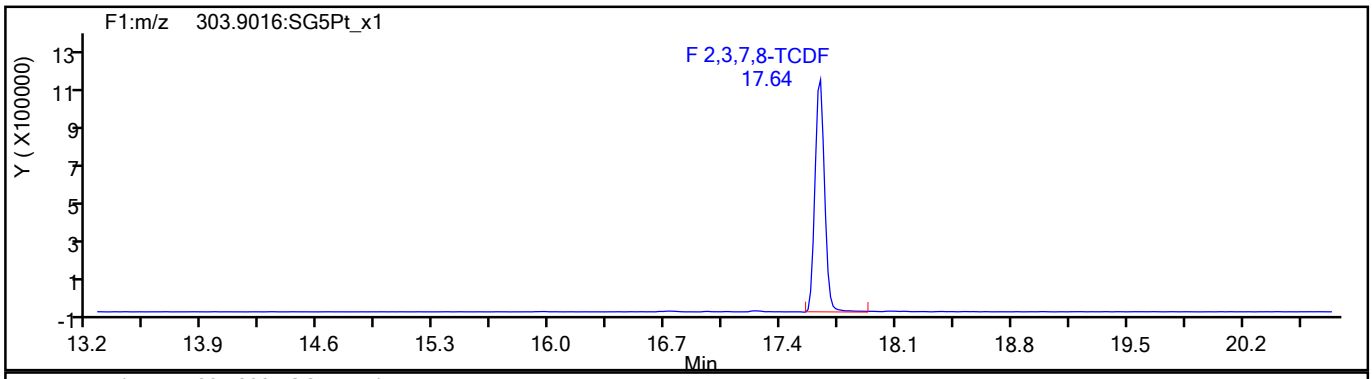

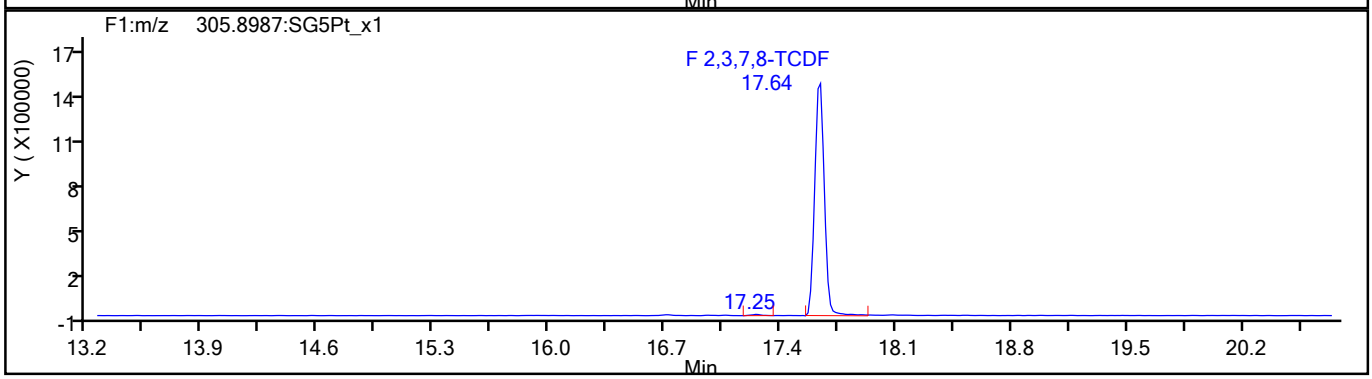

TCDF Standards

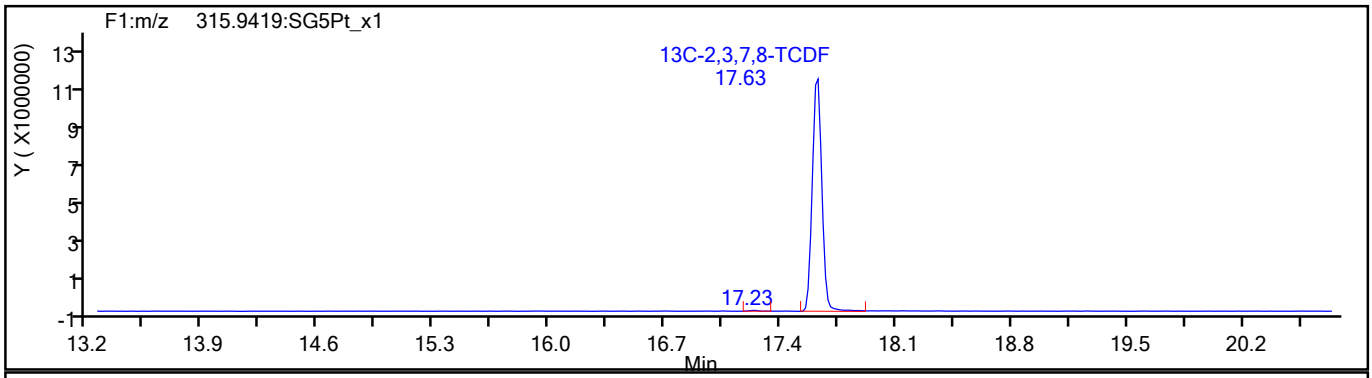

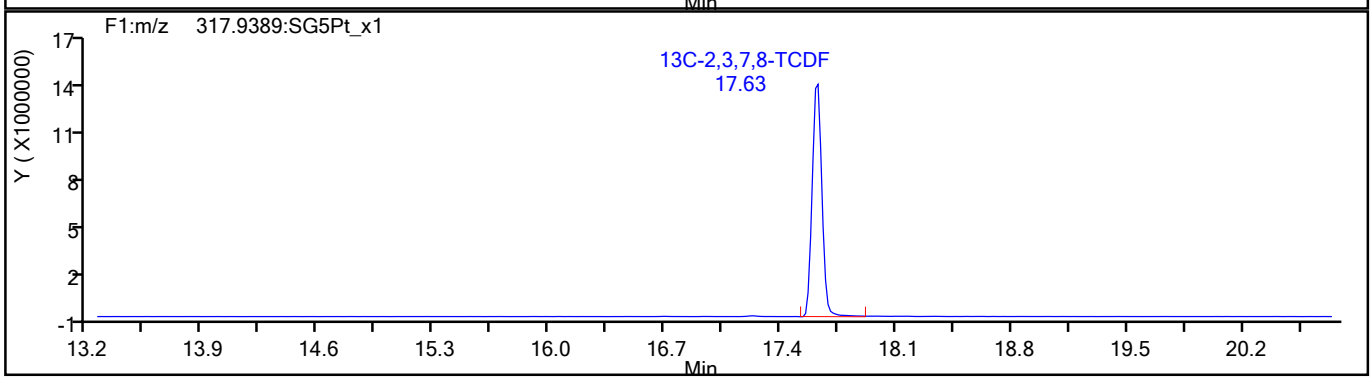

782684

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

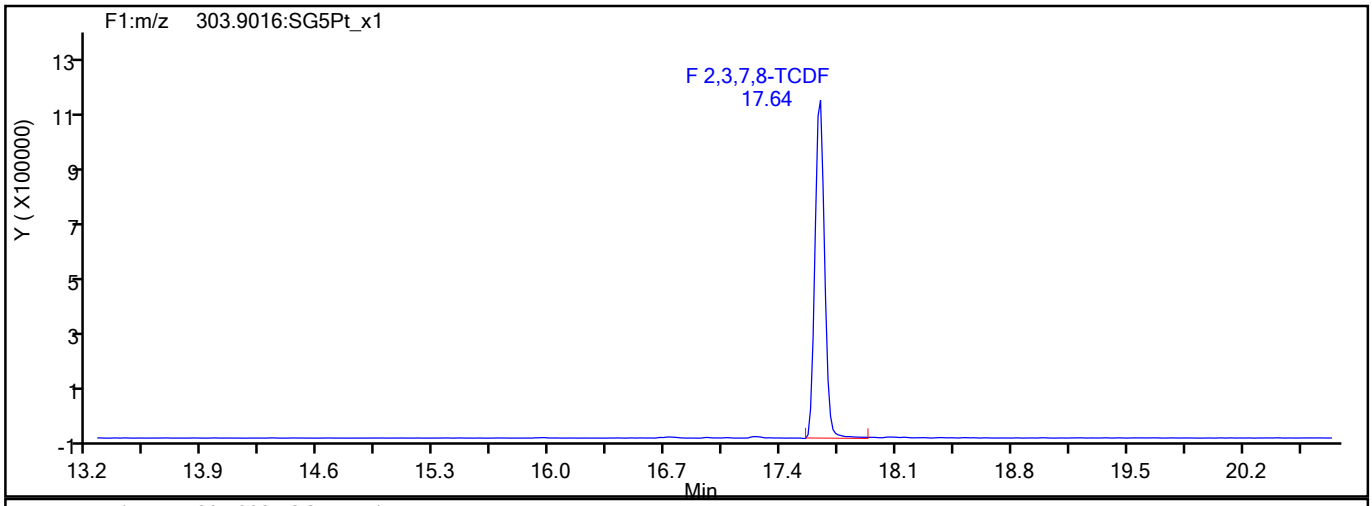

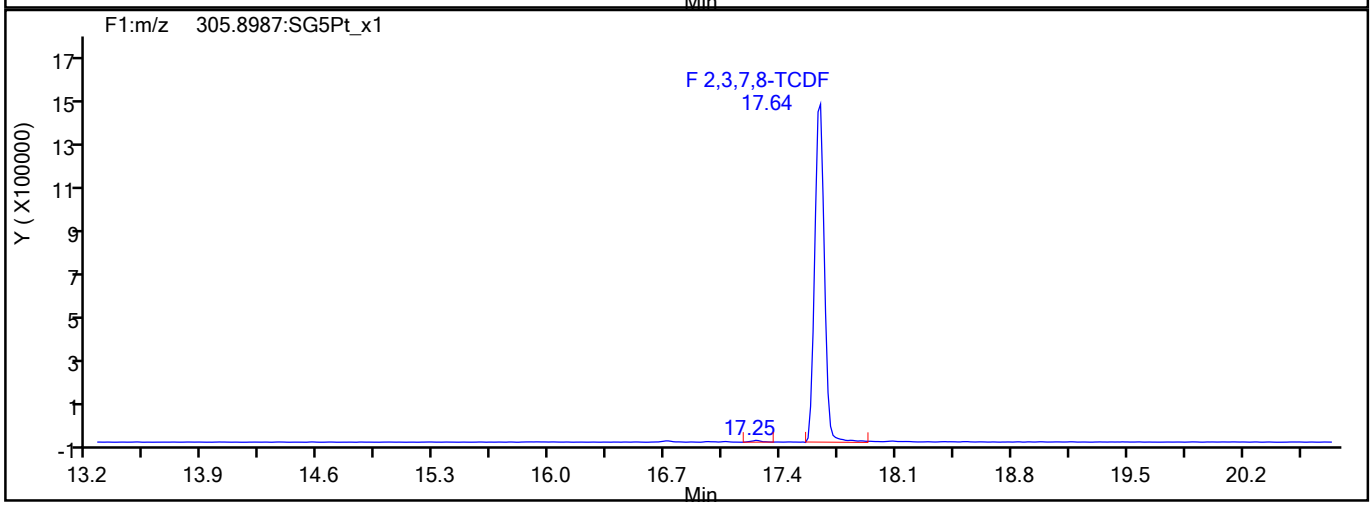

TCDF Interference Mass

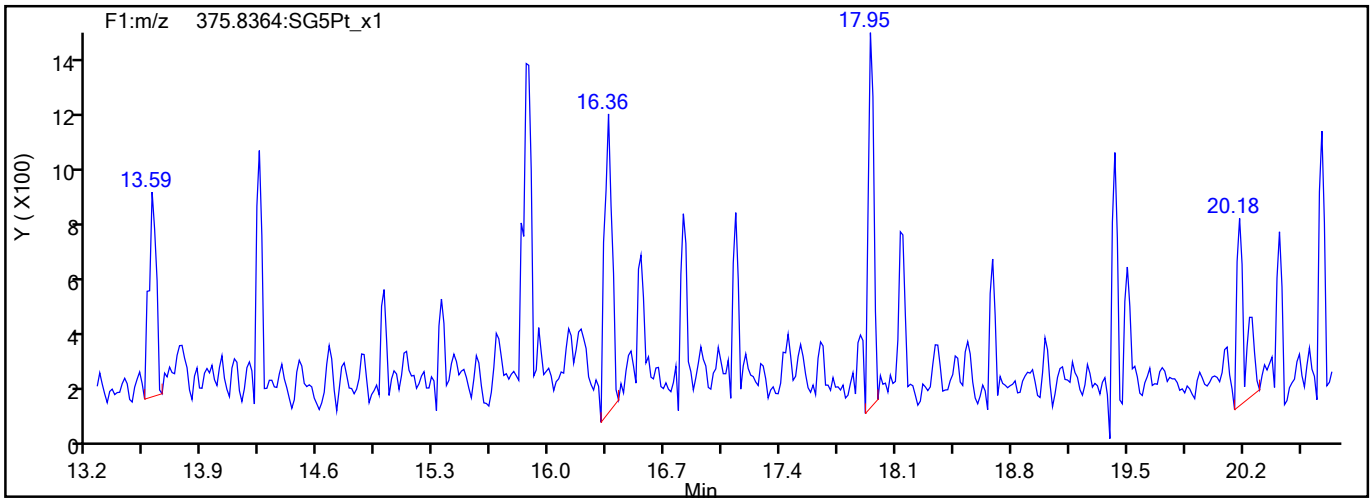

782685

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

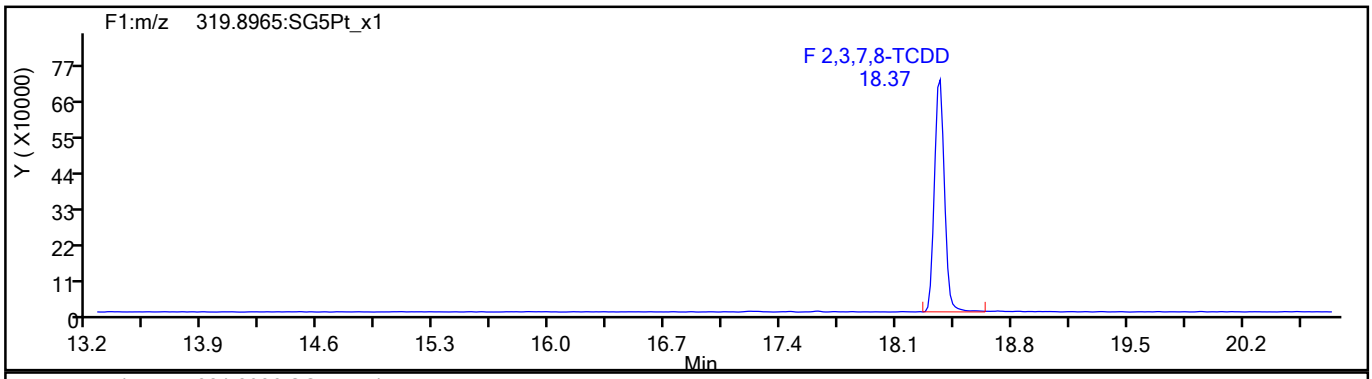

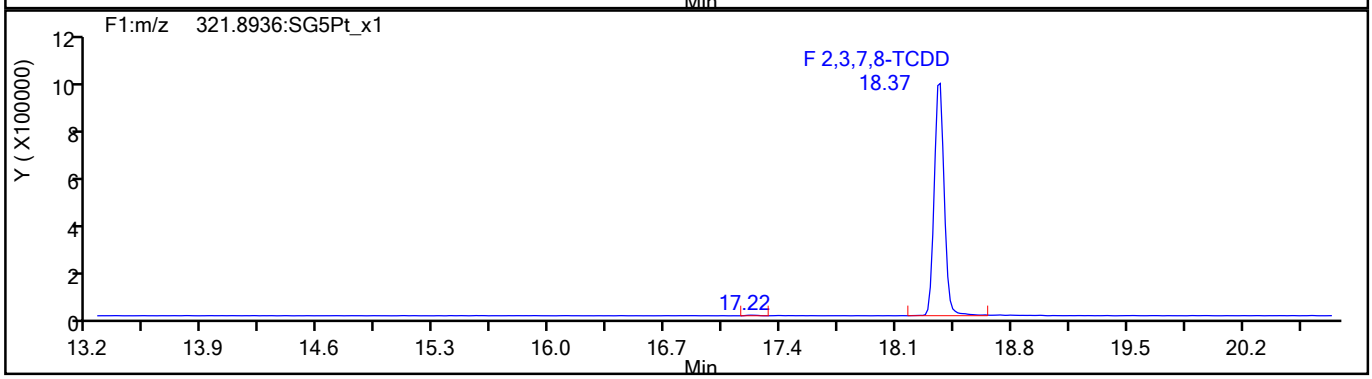

TCDD Standards

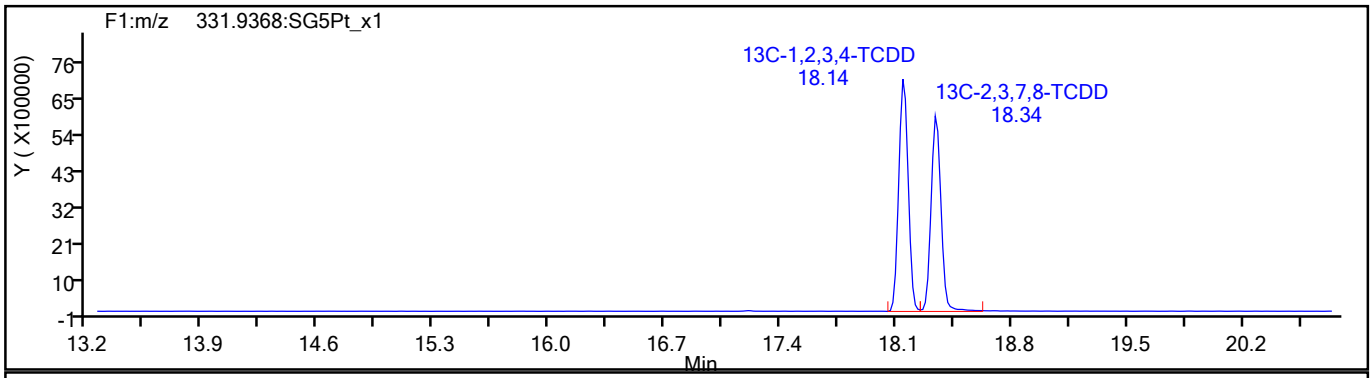

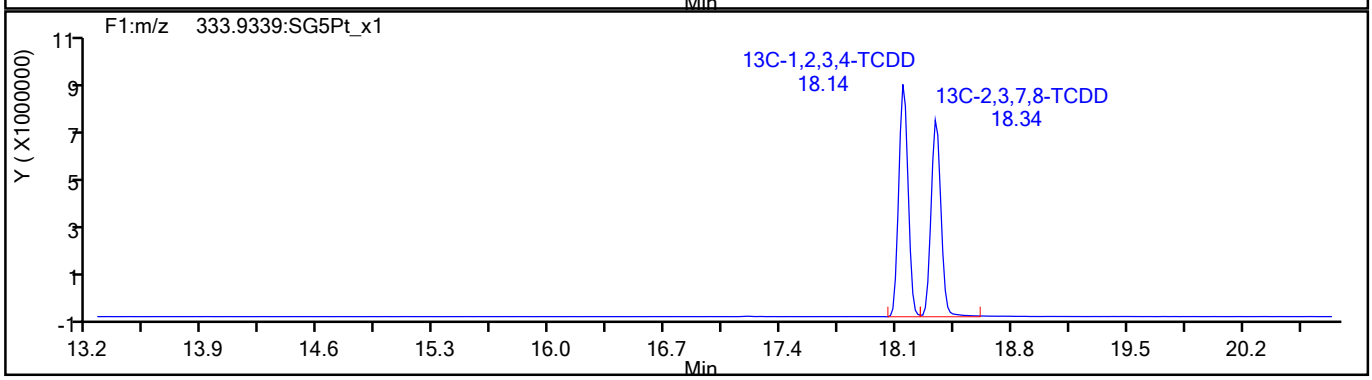

782686

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

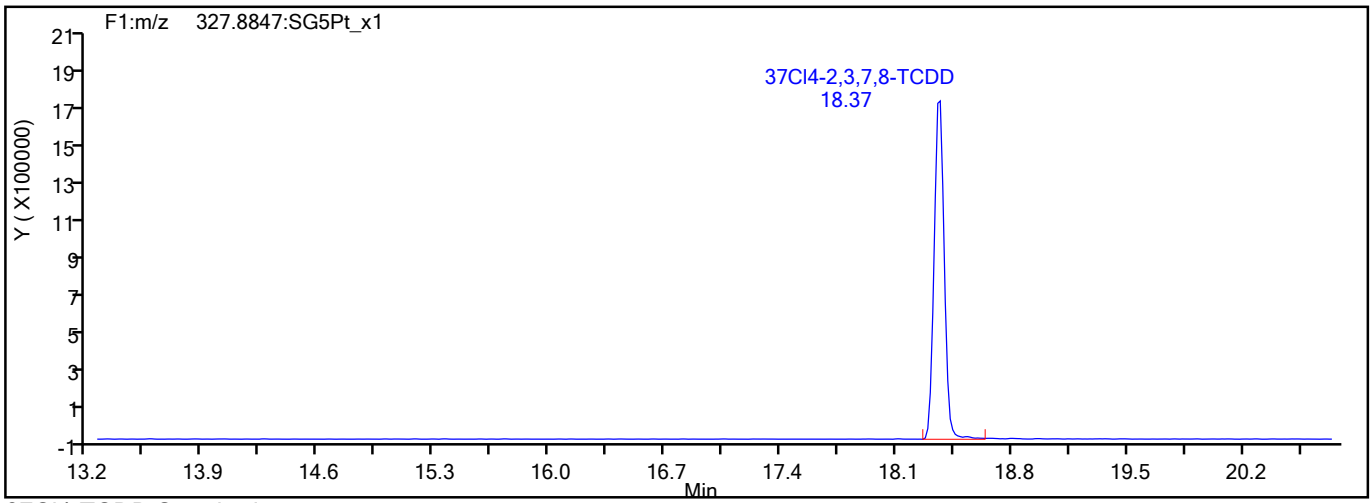

37Cl4-TCDD Standards

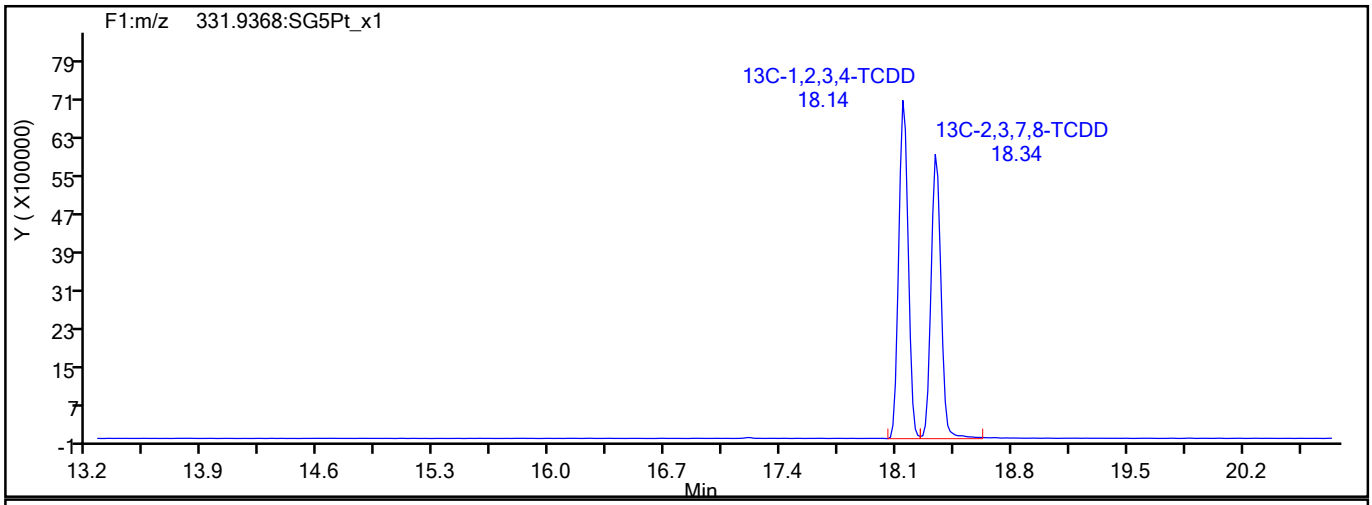

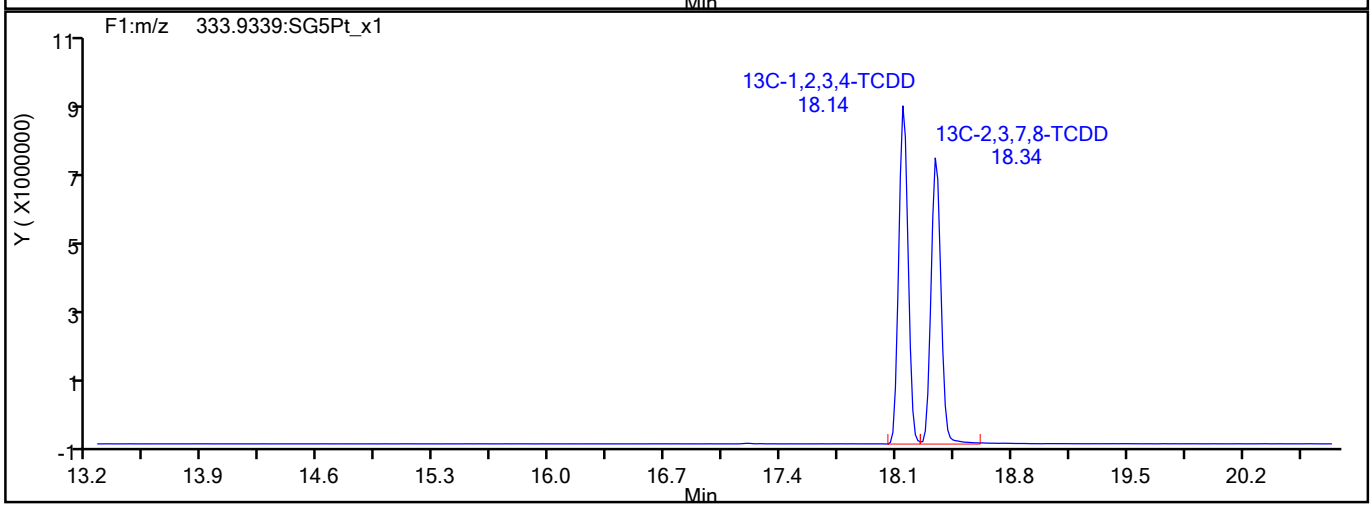

782687

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

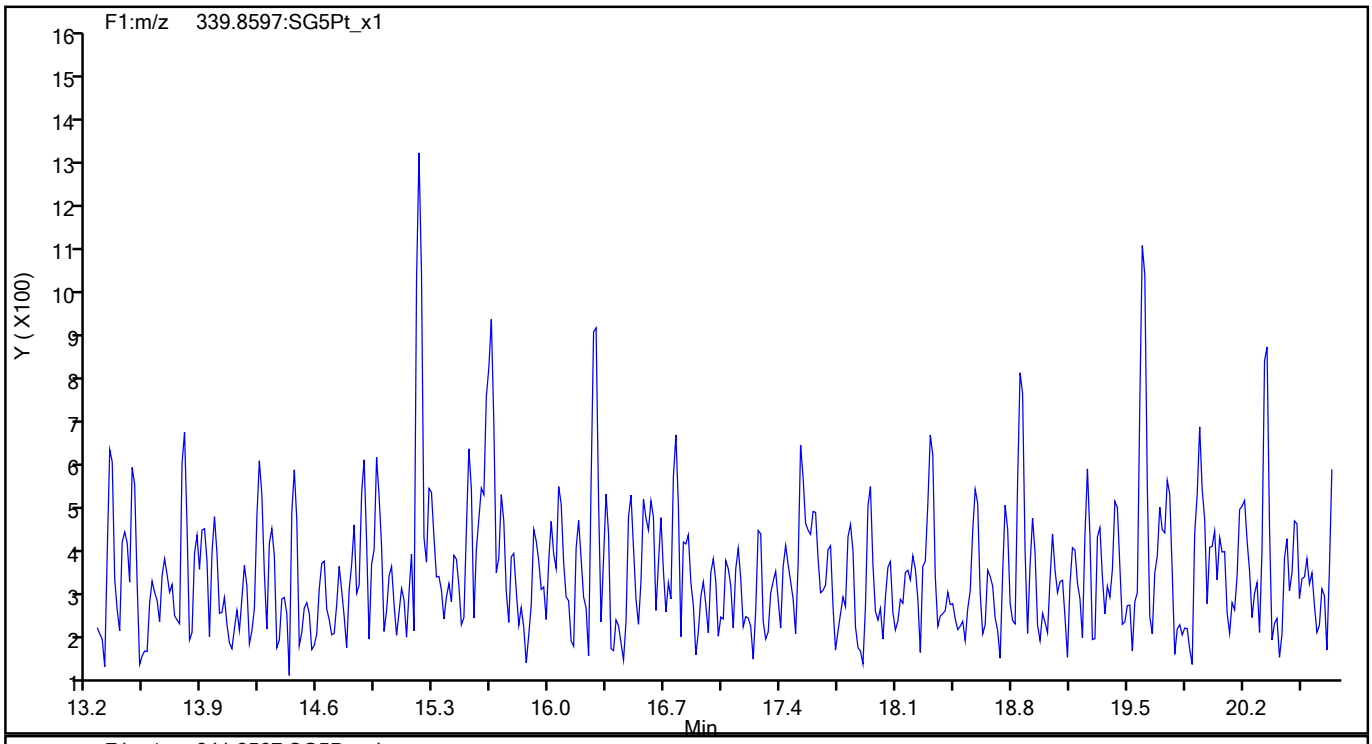

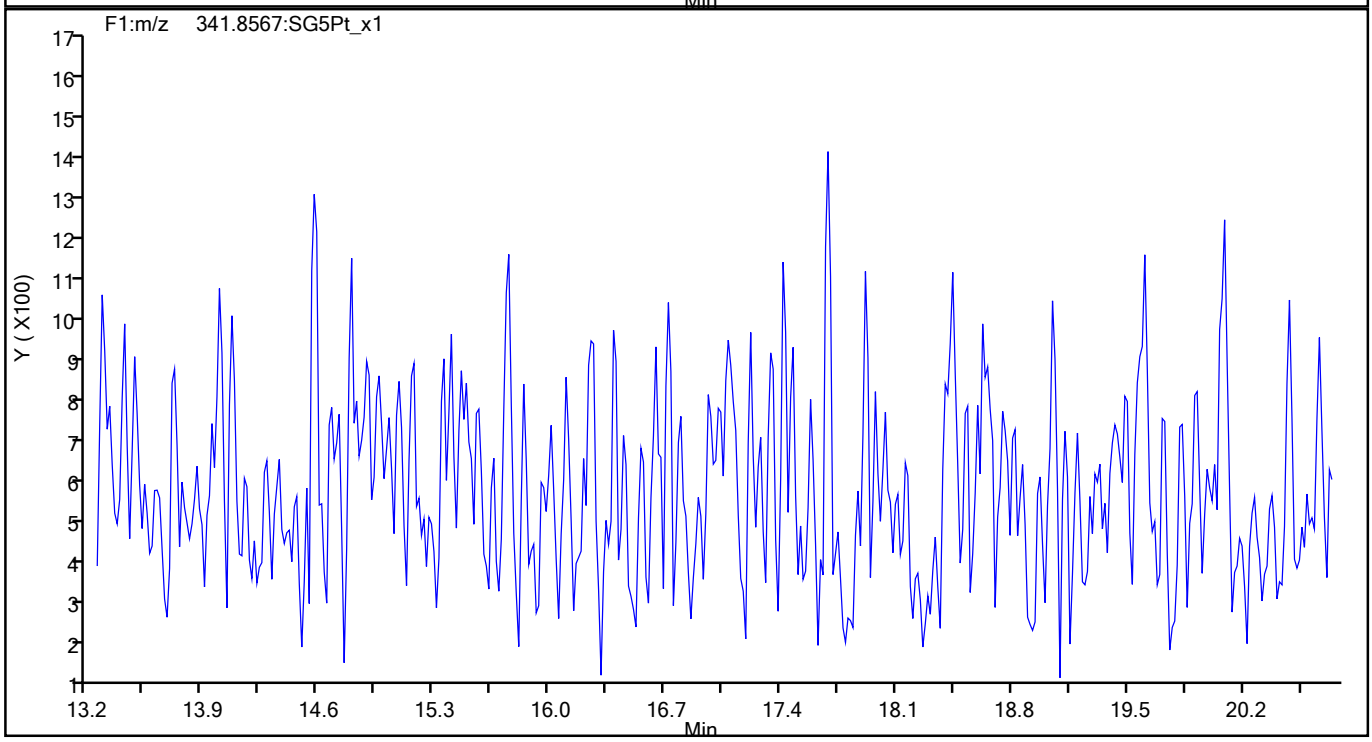

782688

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

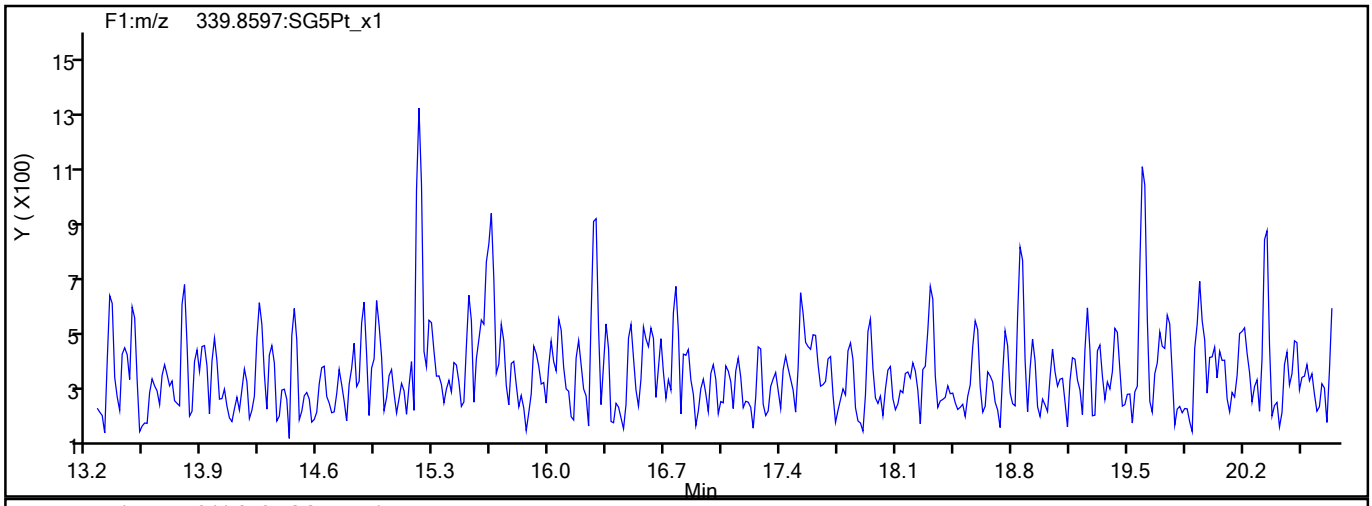

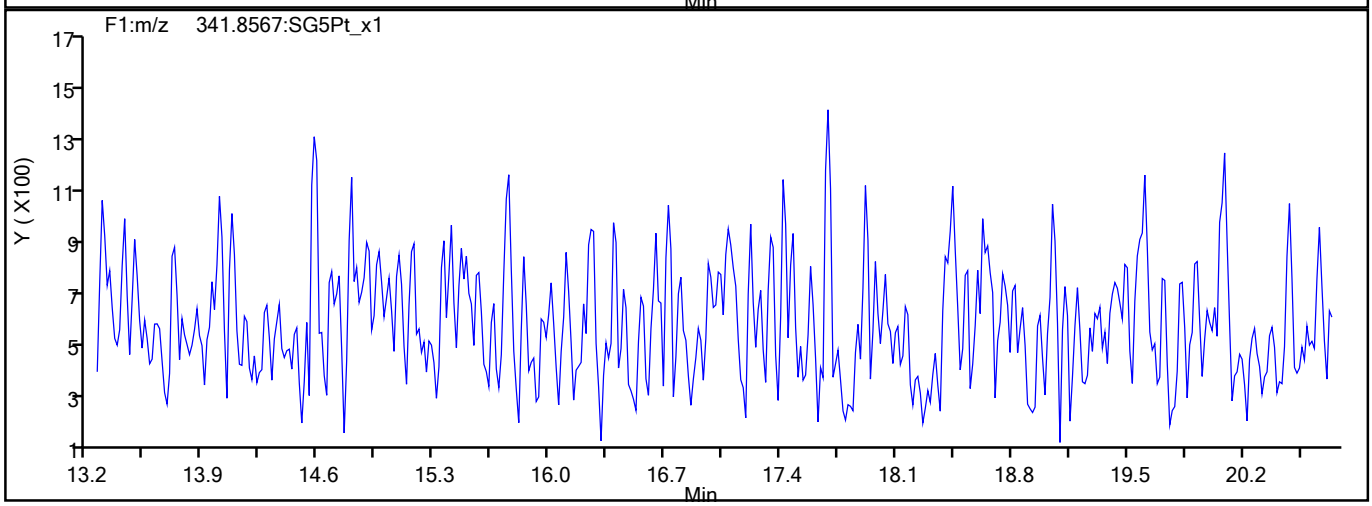

F1 PeCDFs Interference Mass

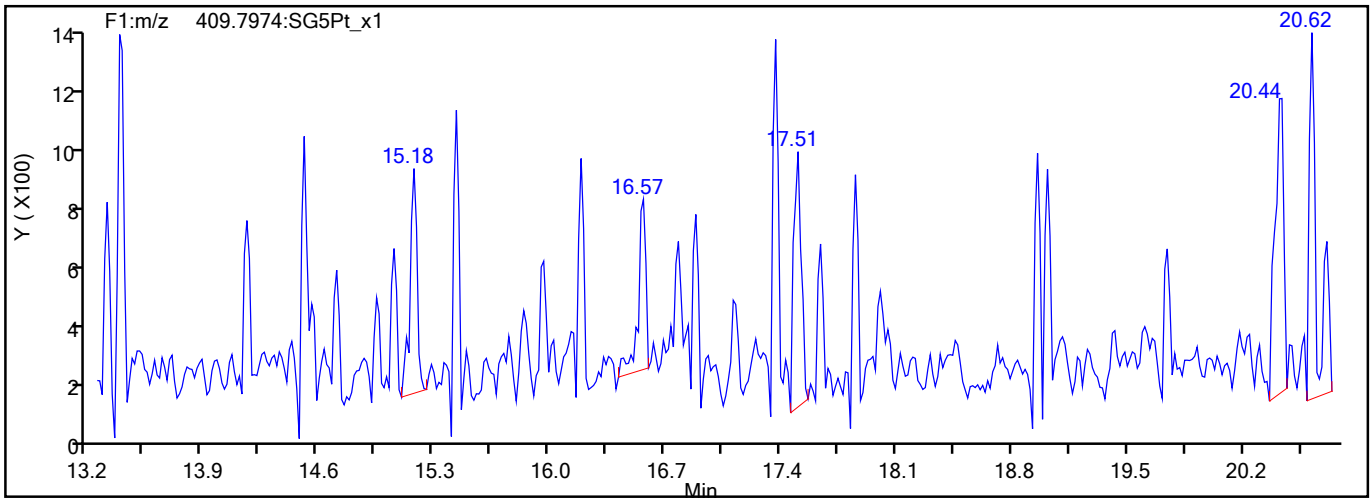

782689

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

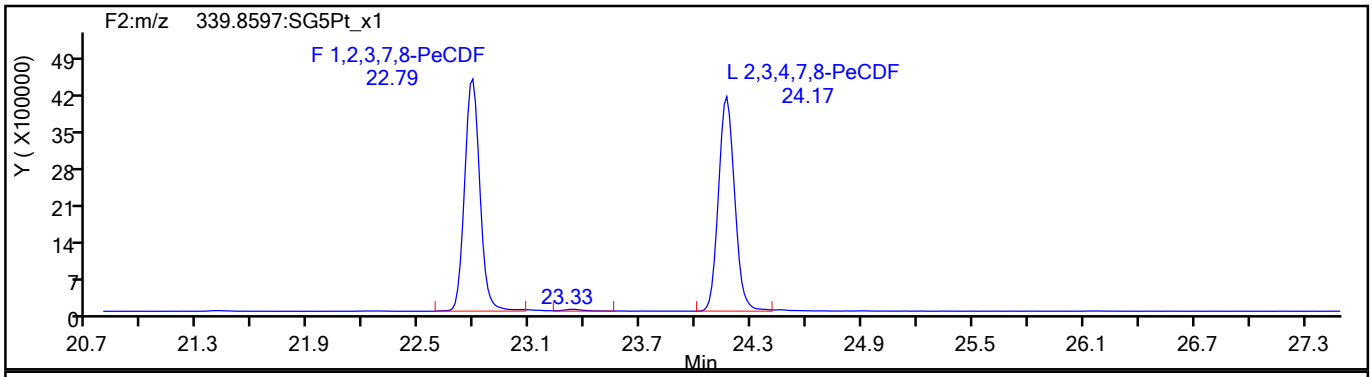

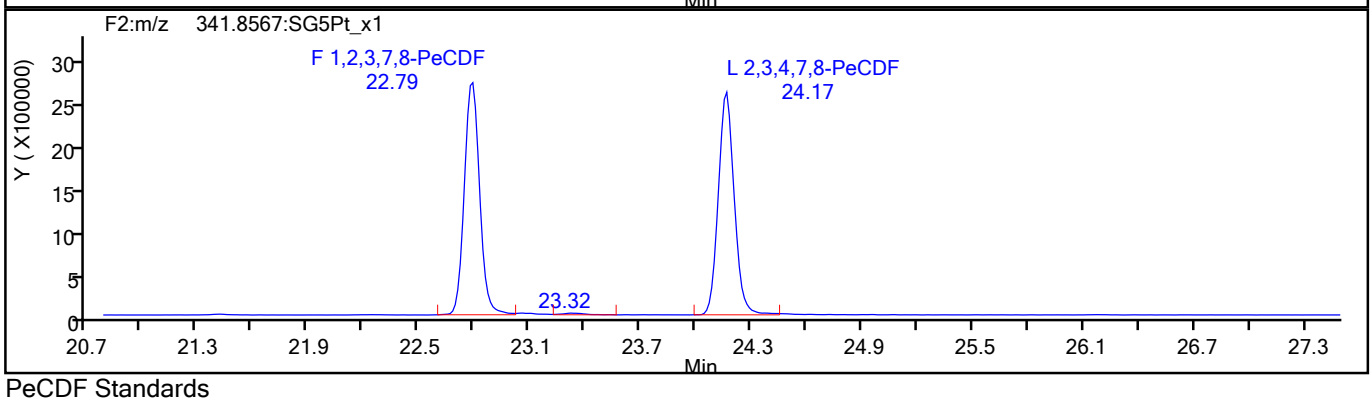

PeCDF Standards

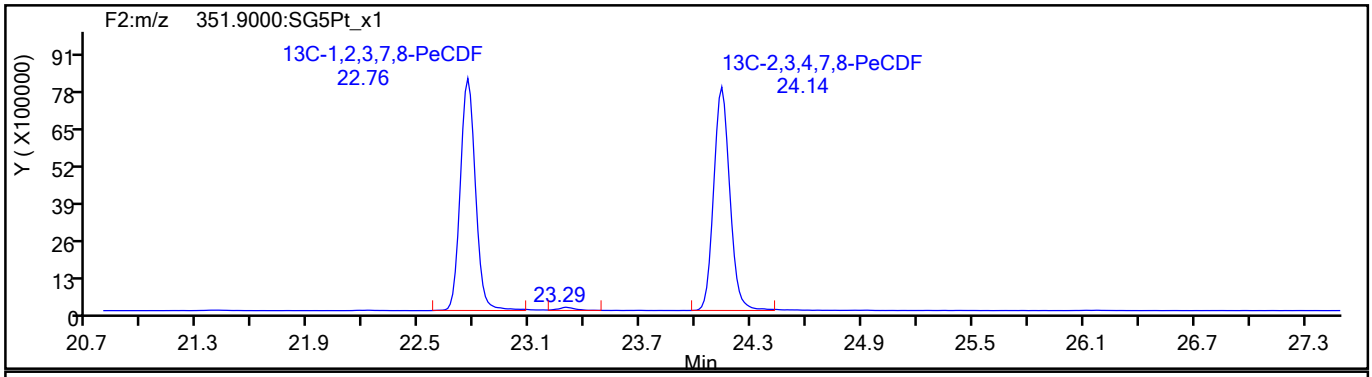

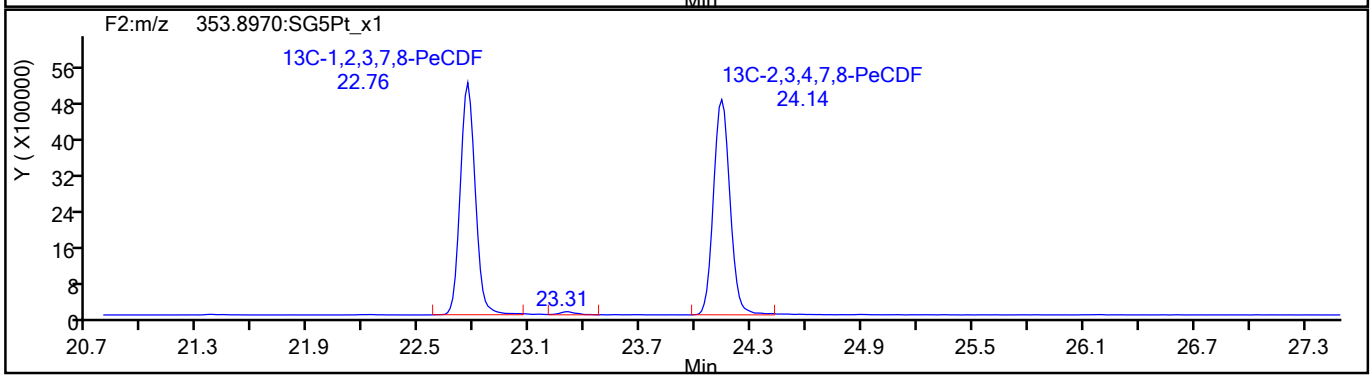

782690

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

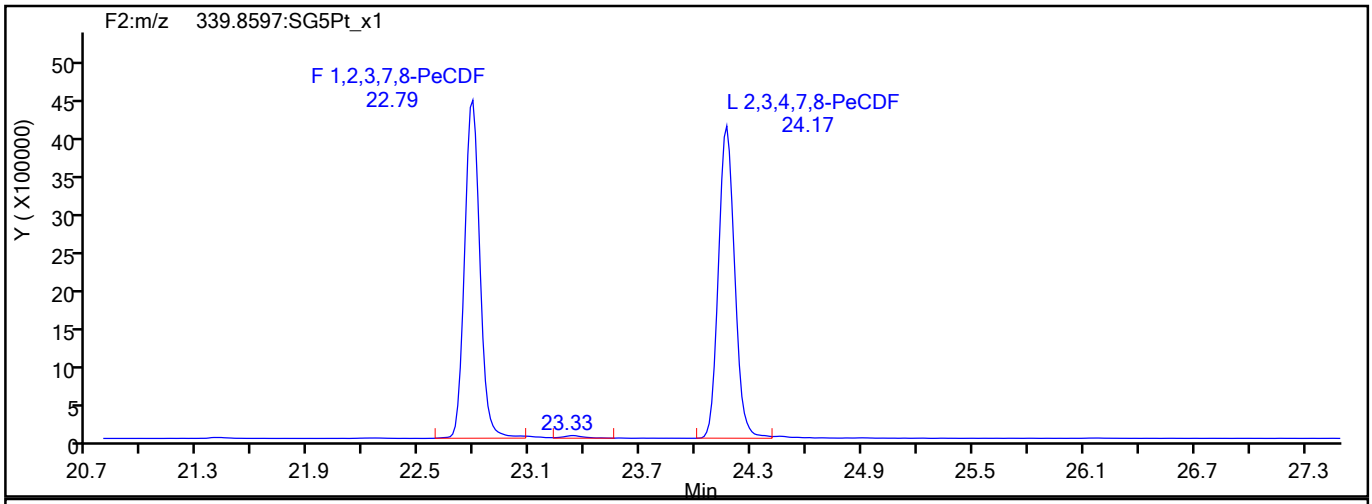

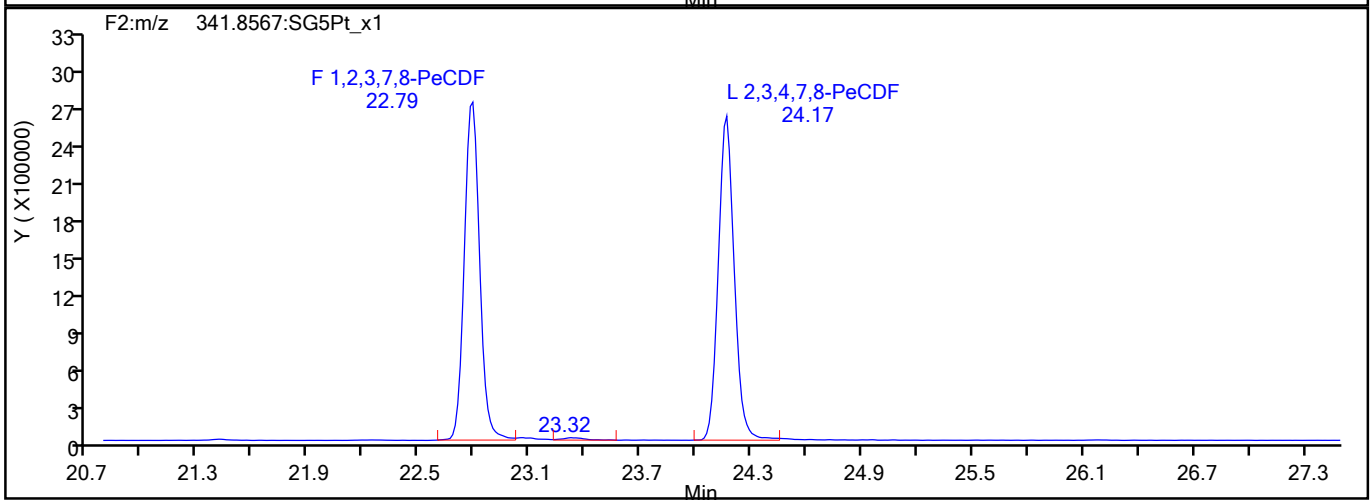

PeCDF Interference Mass

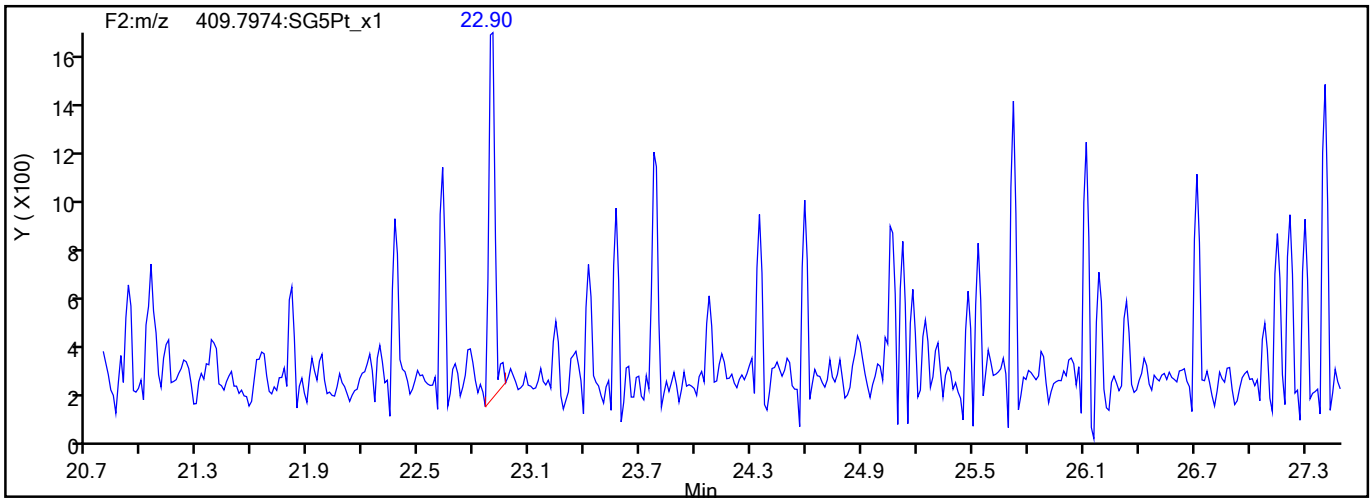

782691

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDD

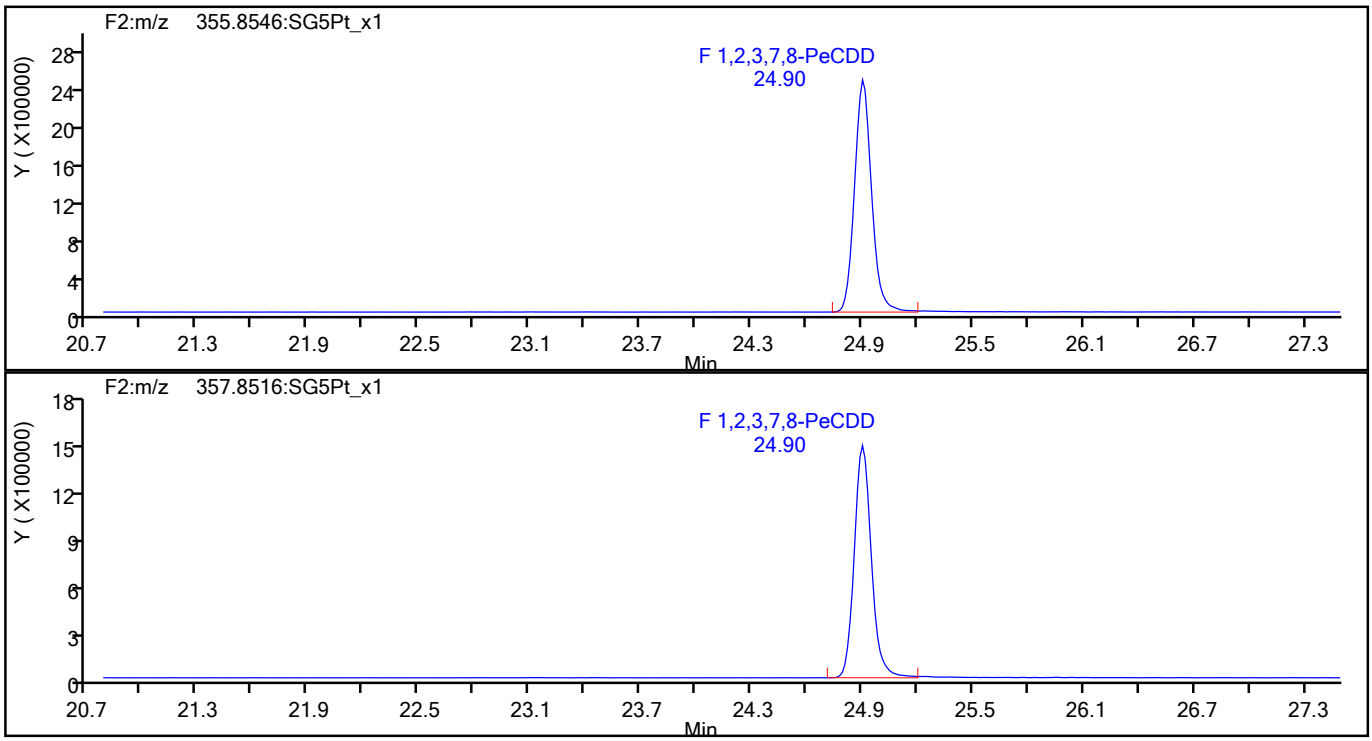

PeCDD Standards

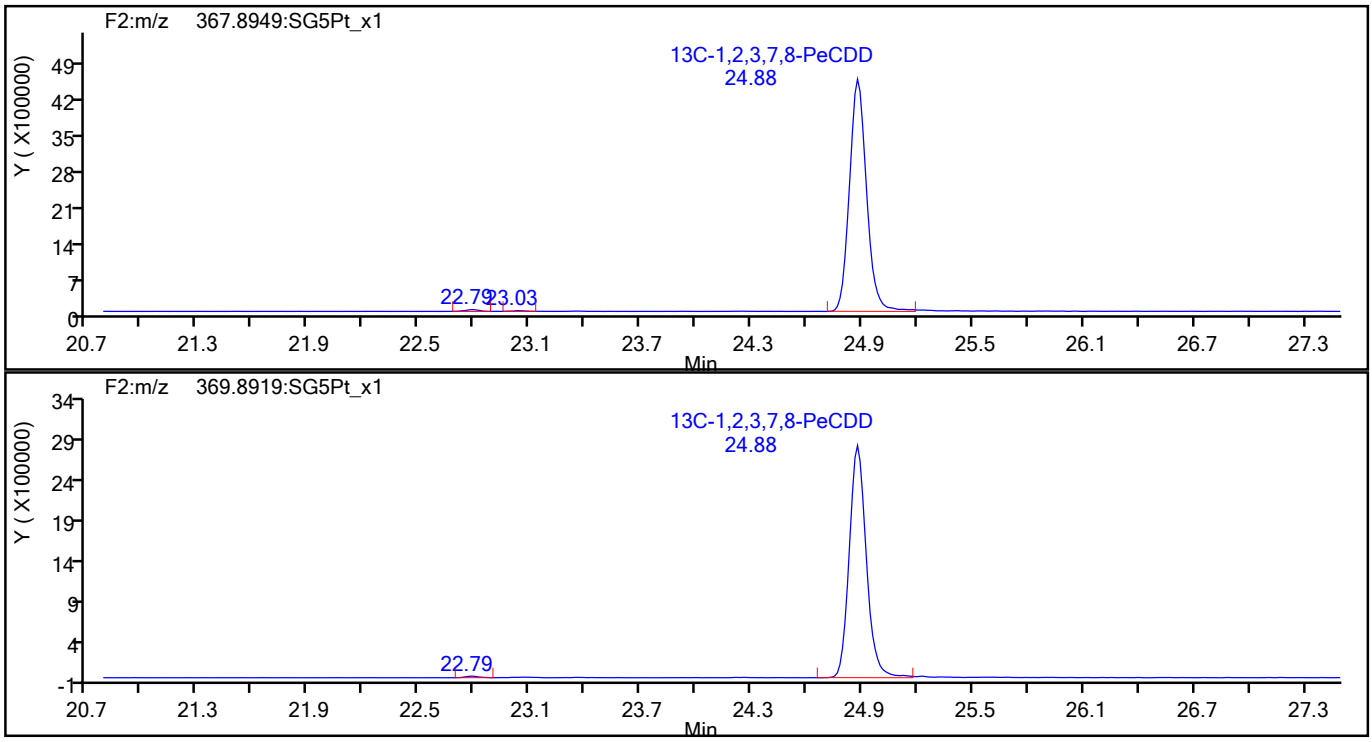

782692

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Eurofins TestAmerica, Sacramento

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HxCDF

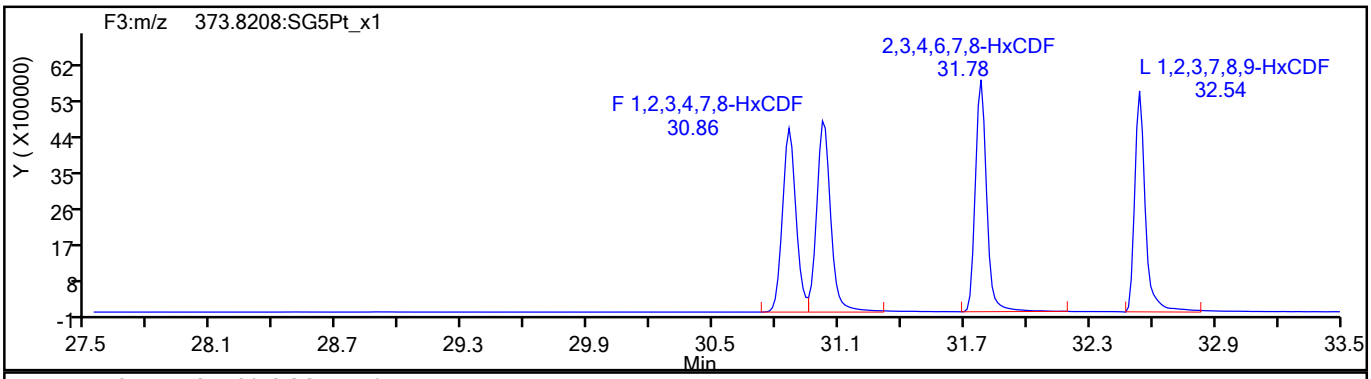

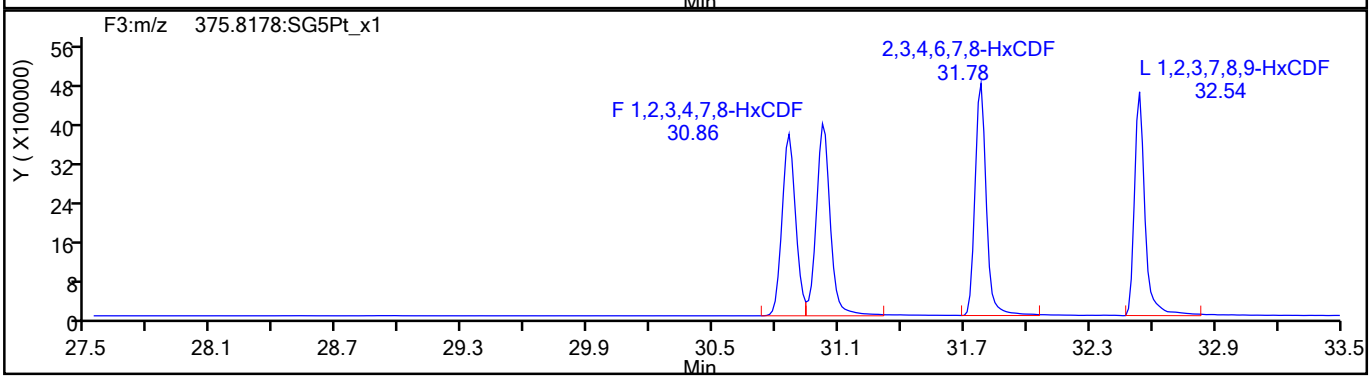

HxCDF Standards

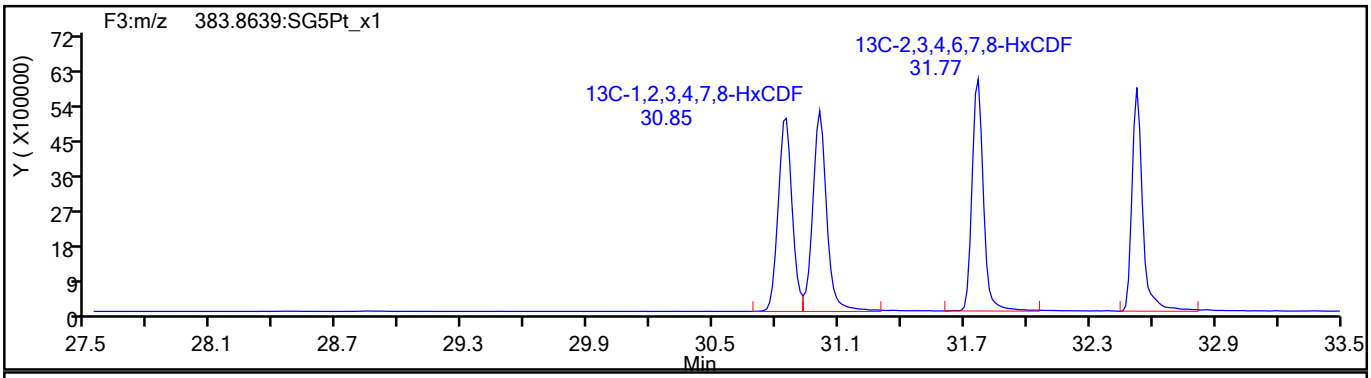

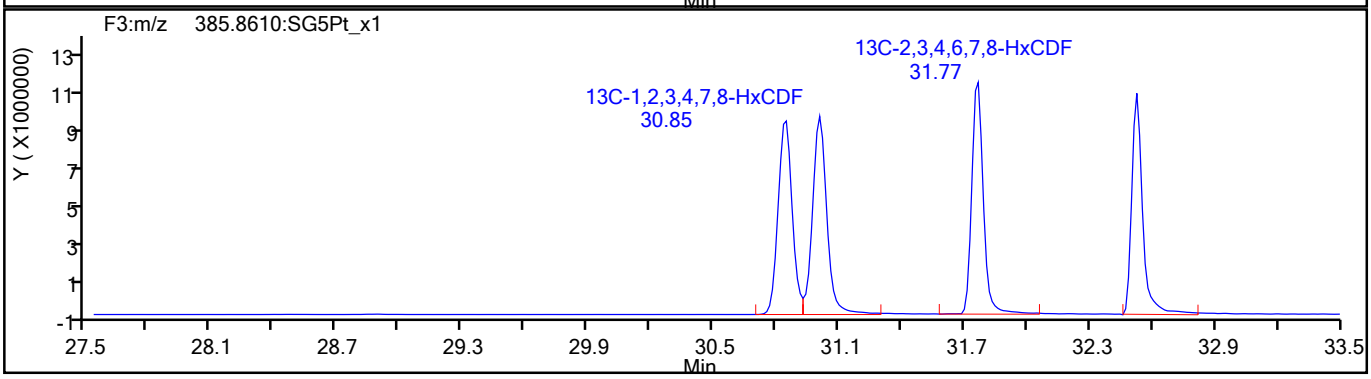

782693

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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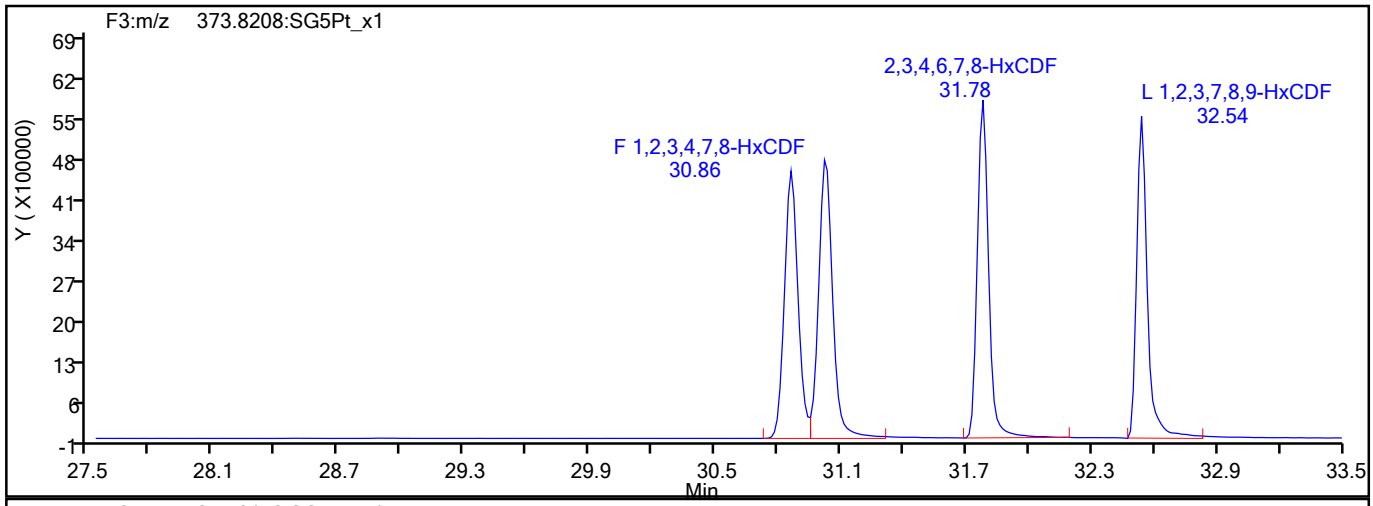

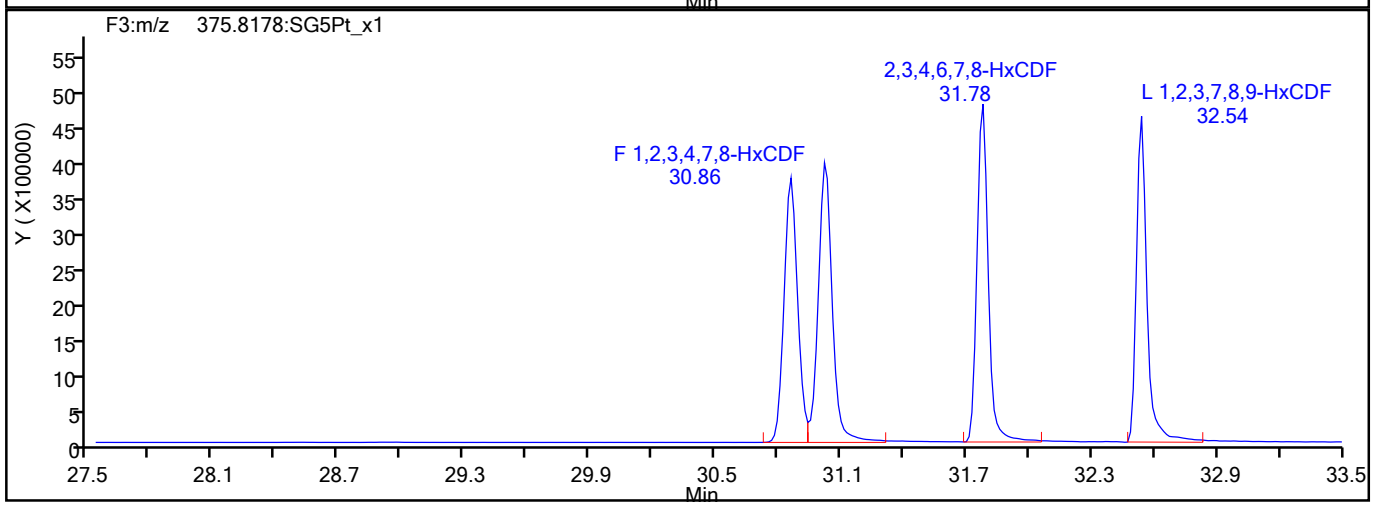

HxCDF Interference Mass

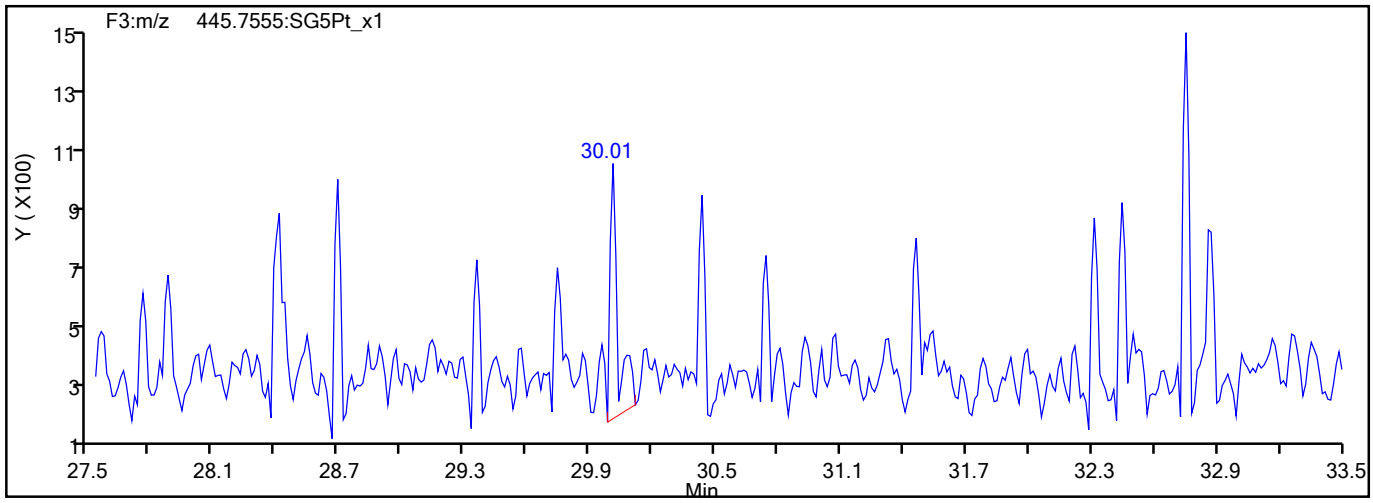

782694

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Eurofins TestAmerica, Sacramento

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HxCDD

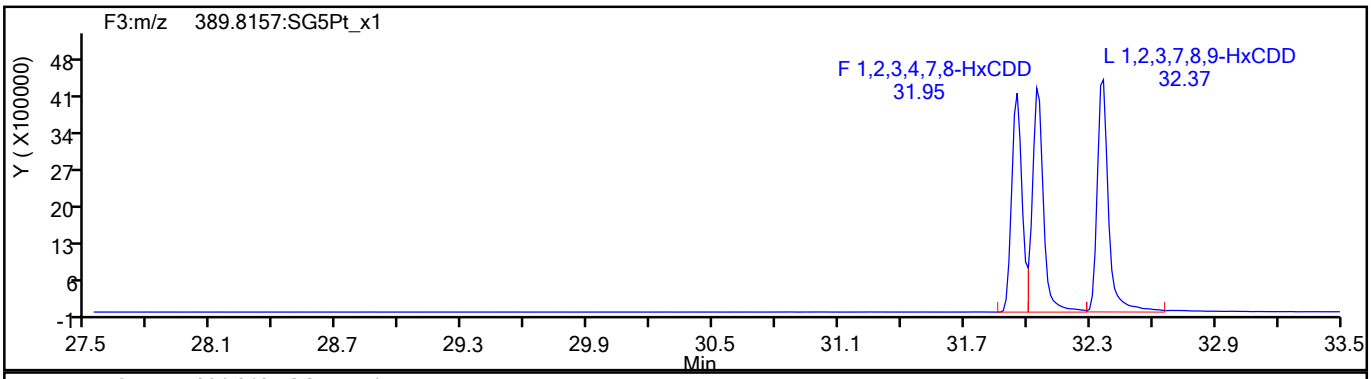

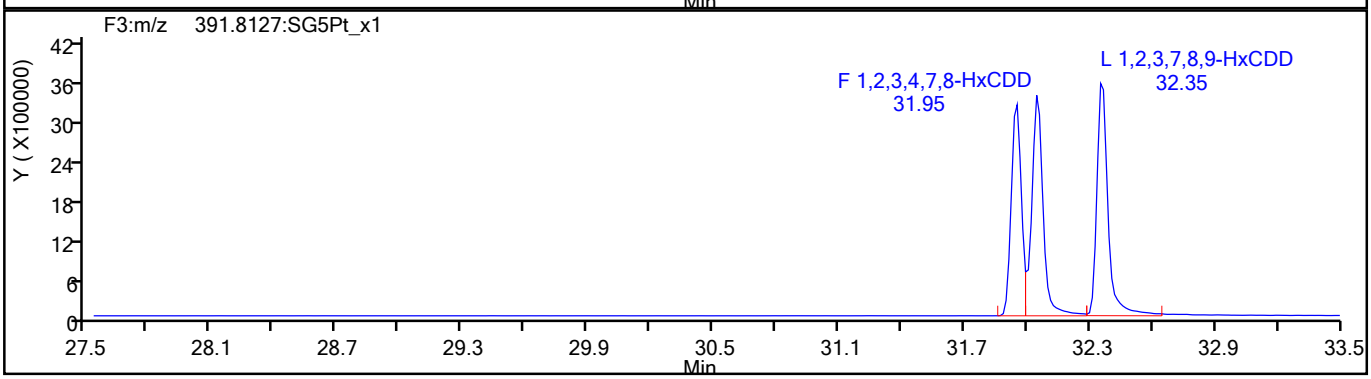

HxCDD Standards

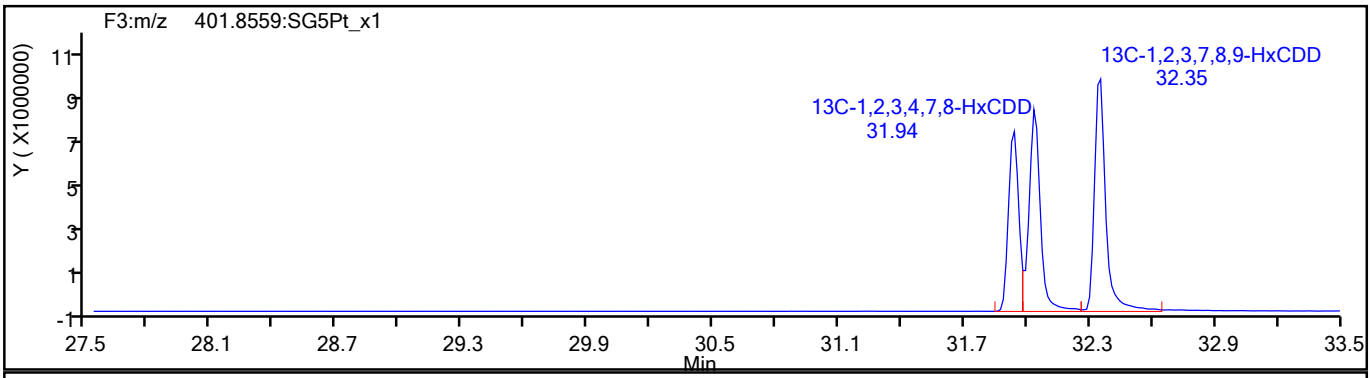

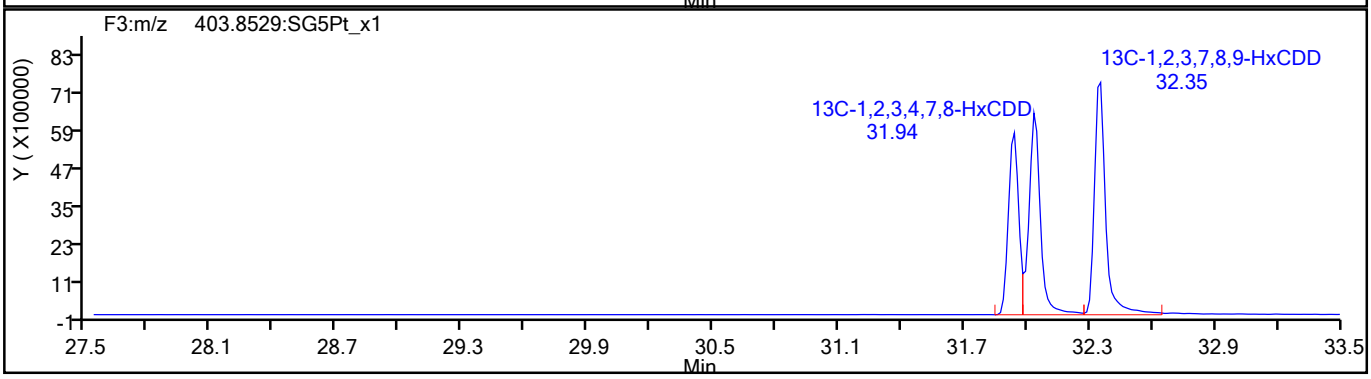

782695

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

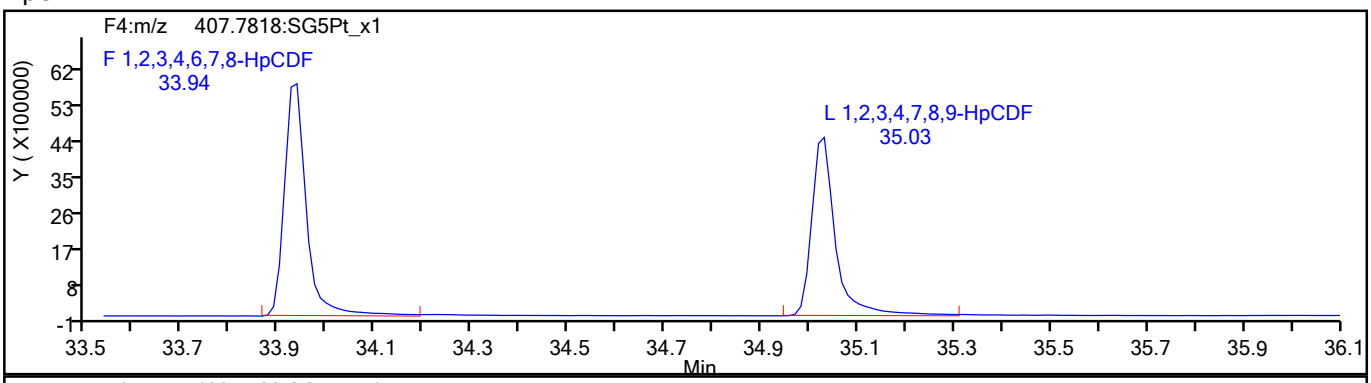

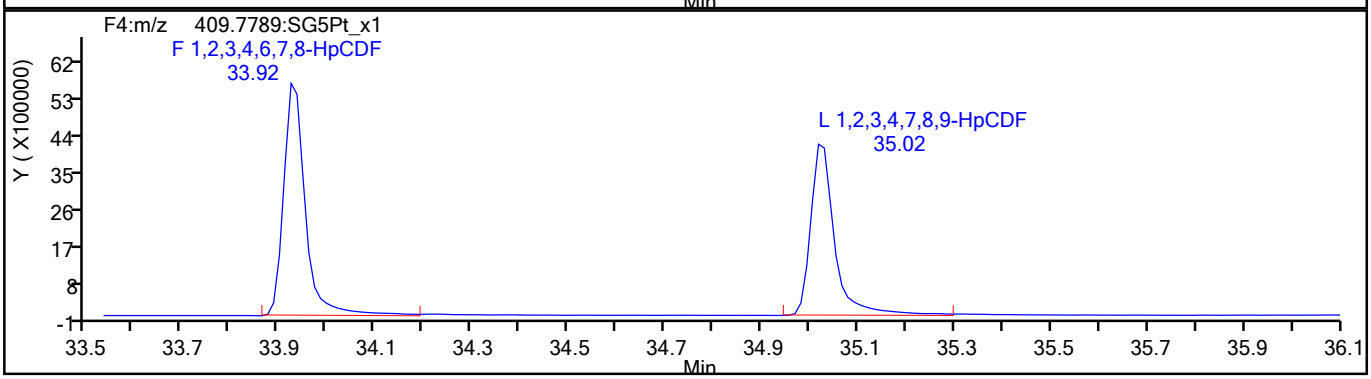

HpCDF Standards

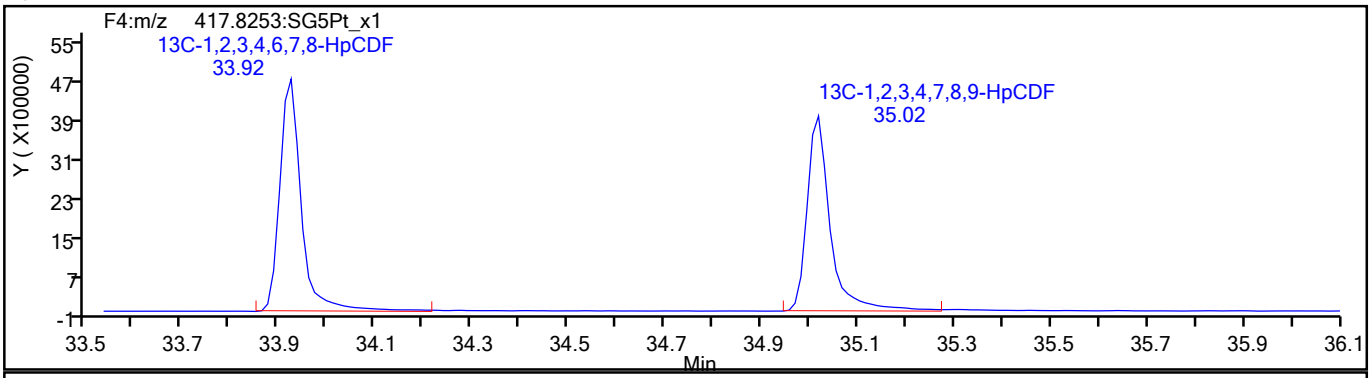

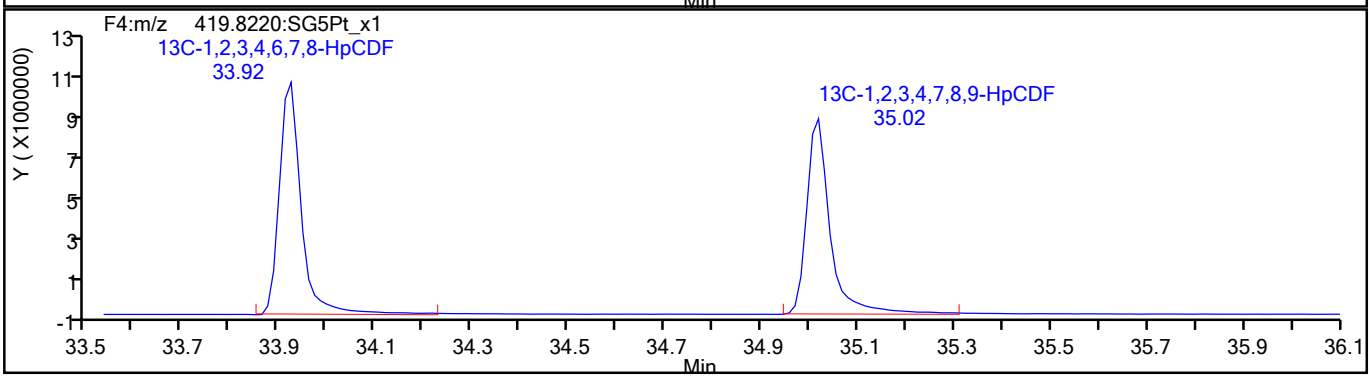

782696

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

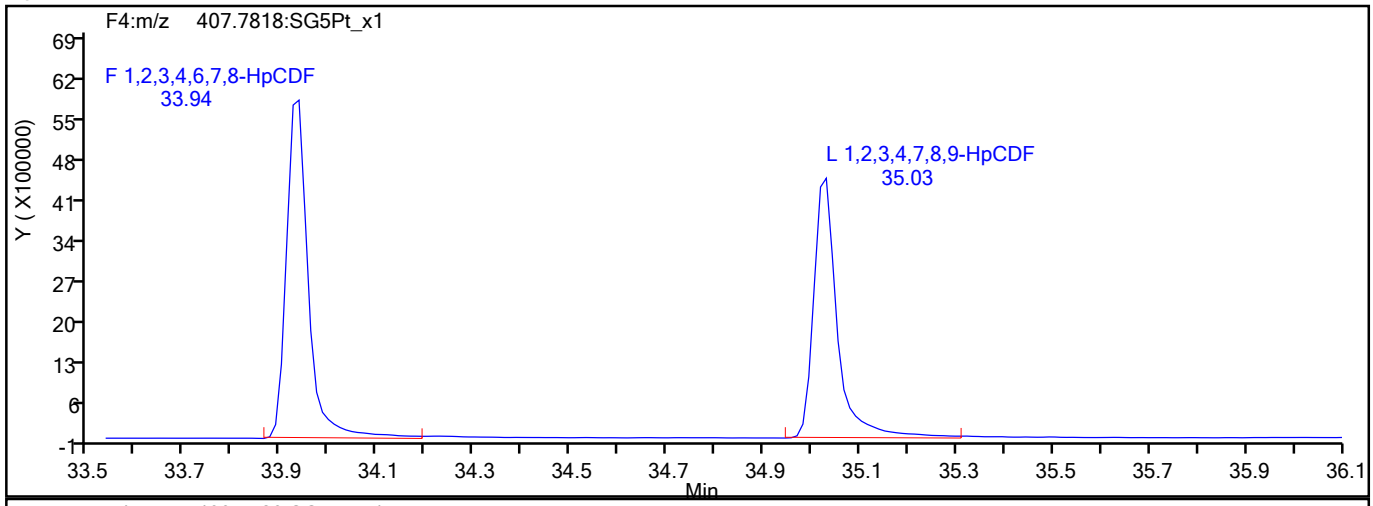

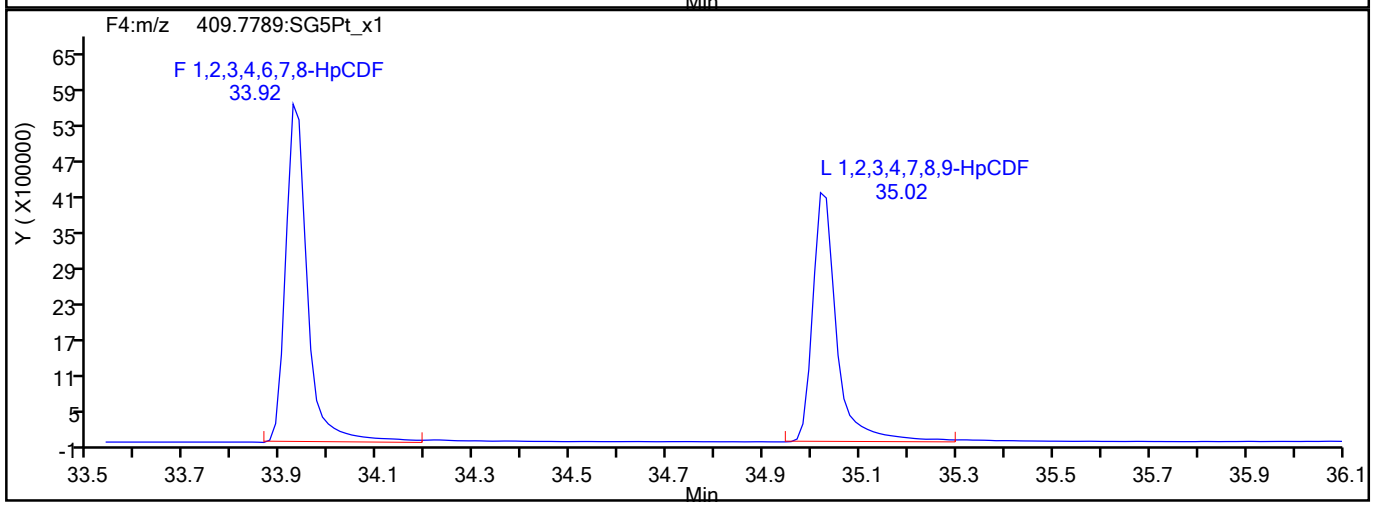

HpCDF Interference Mass

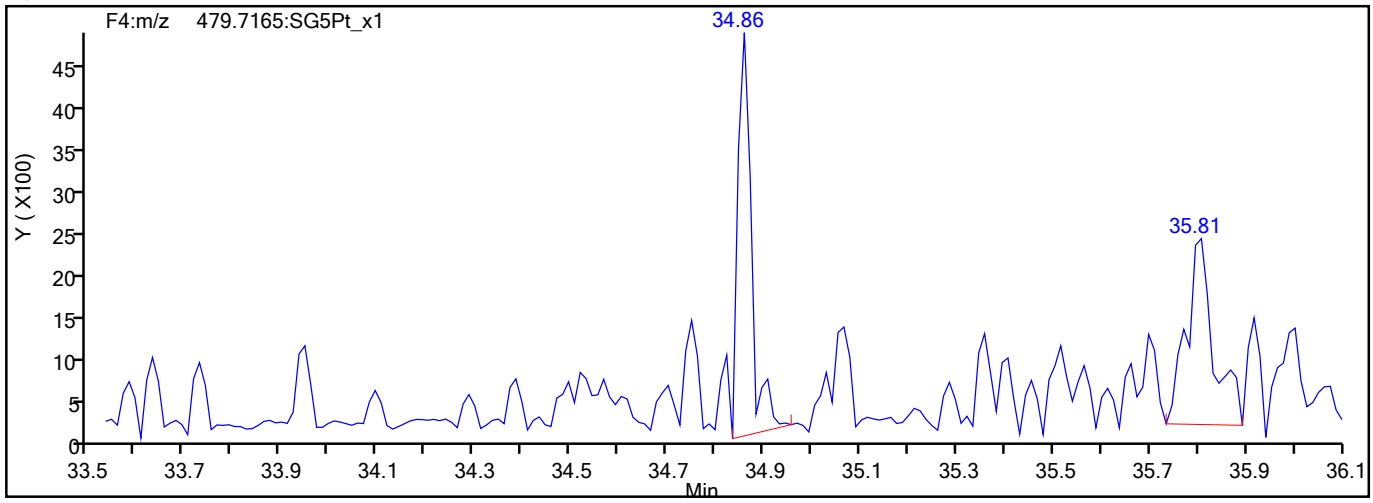

782697

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDD

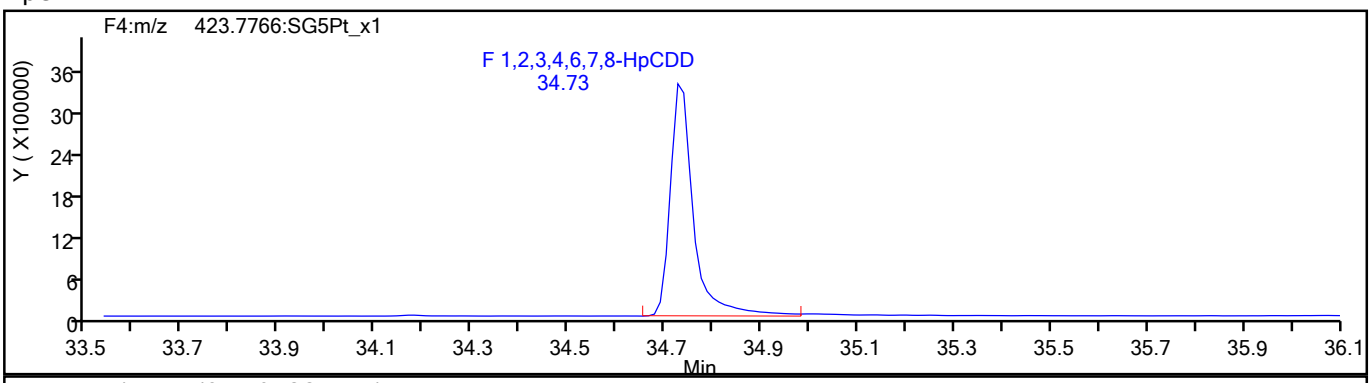

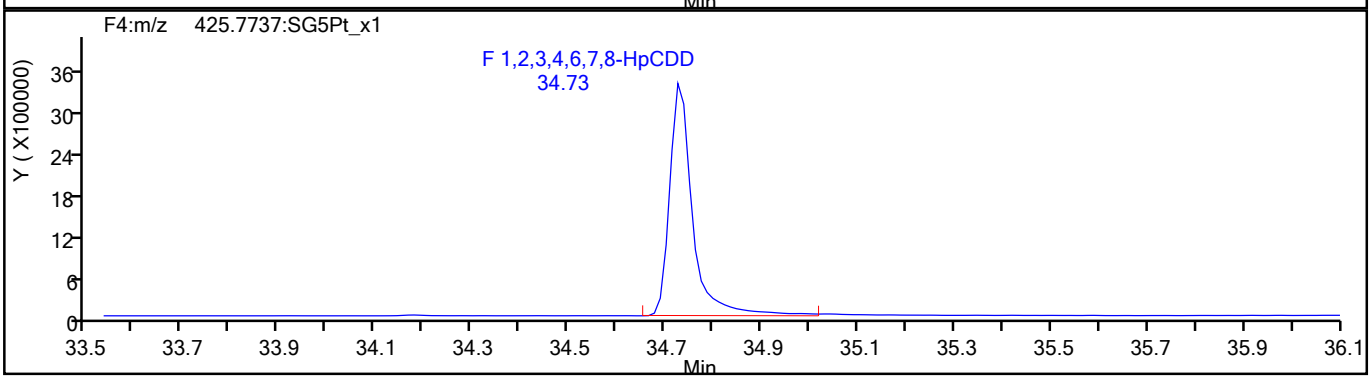

HpCDD Standards

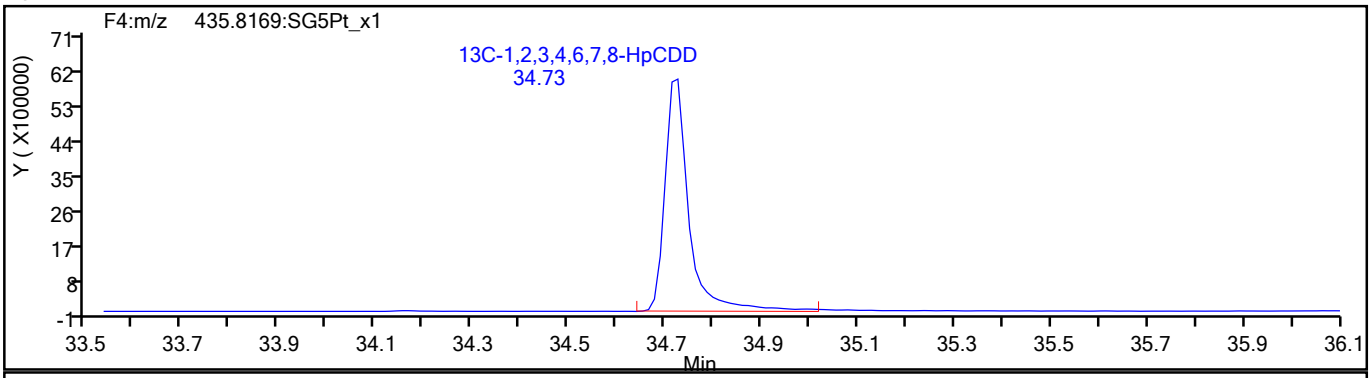

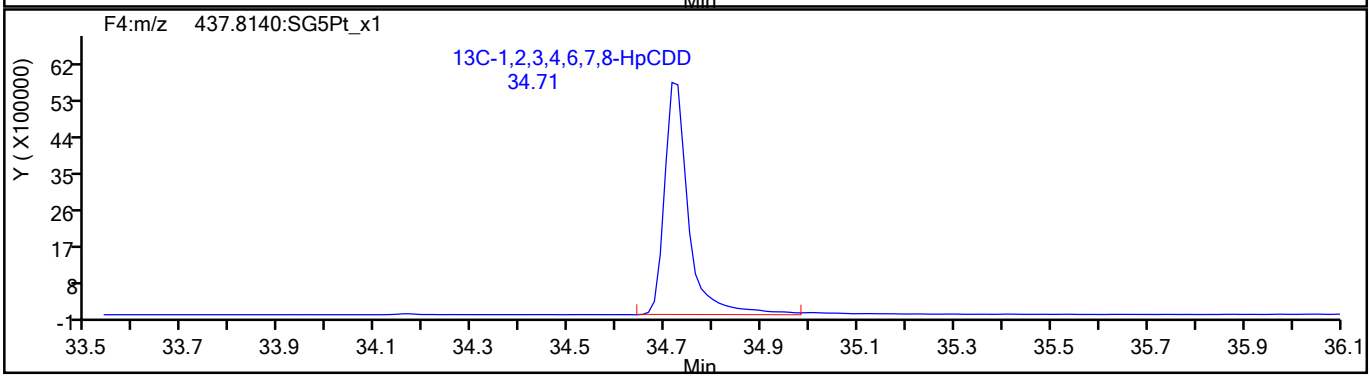

782698

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

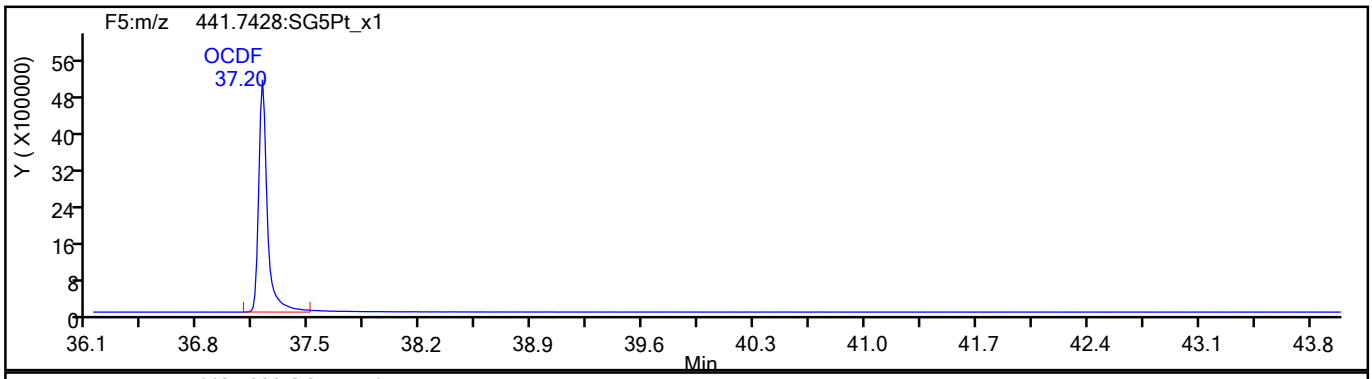

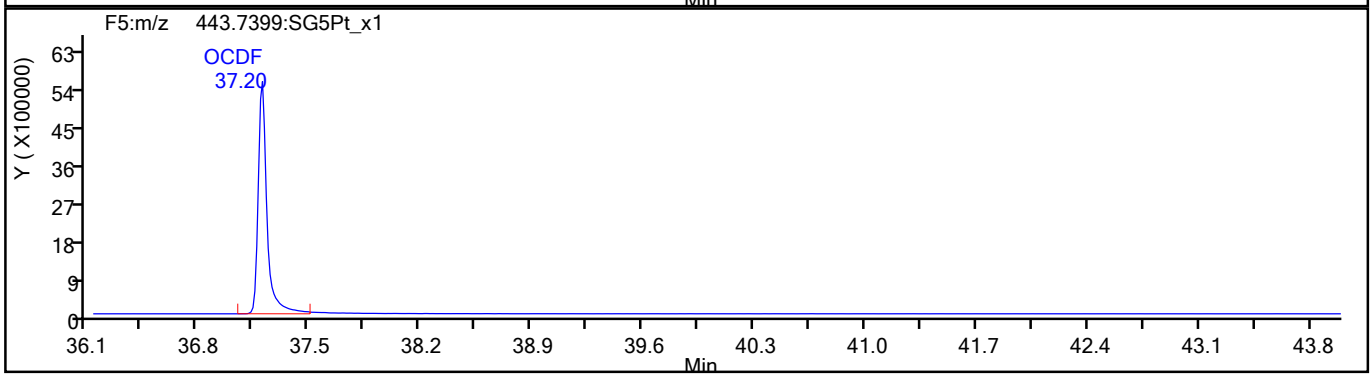

OCDF Standards

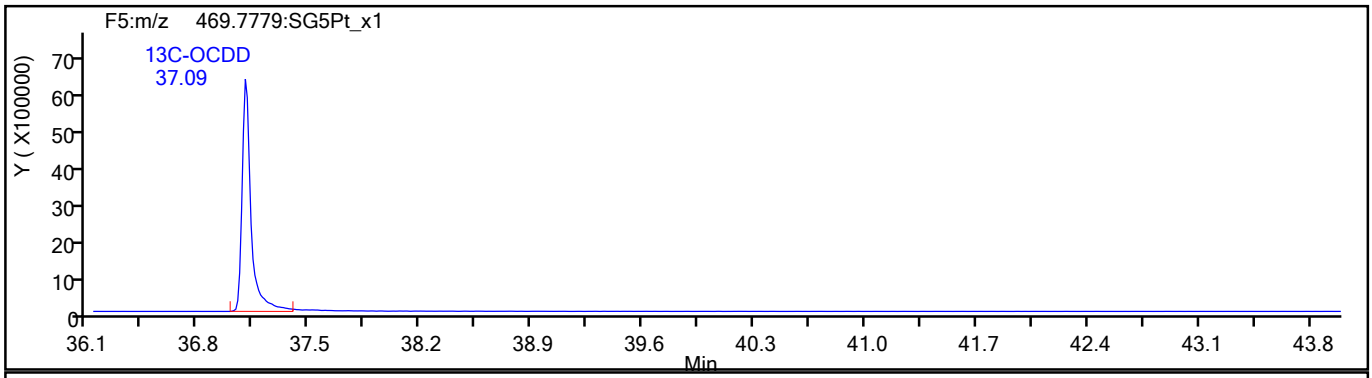

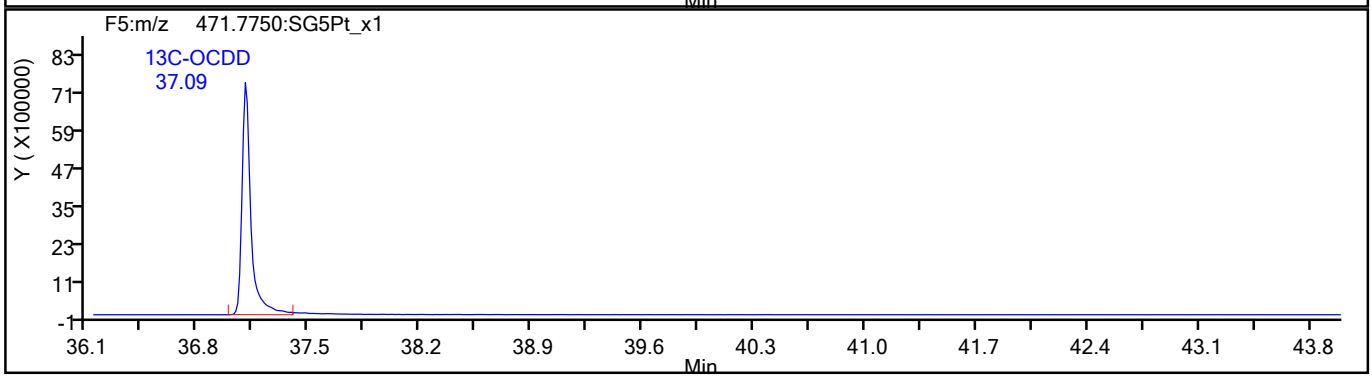

782699

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

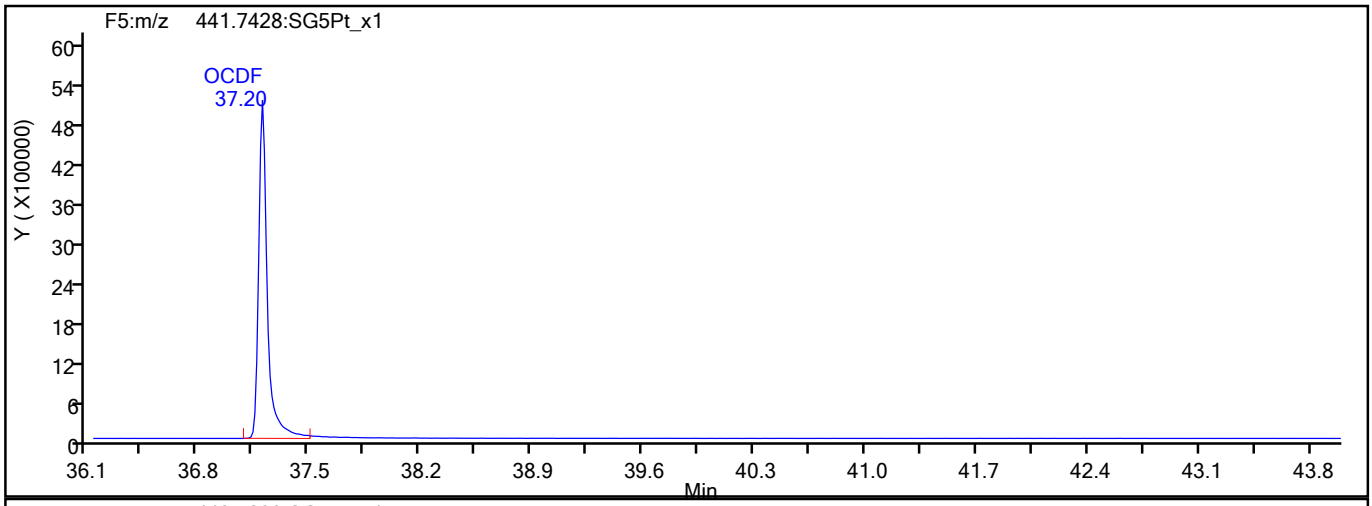

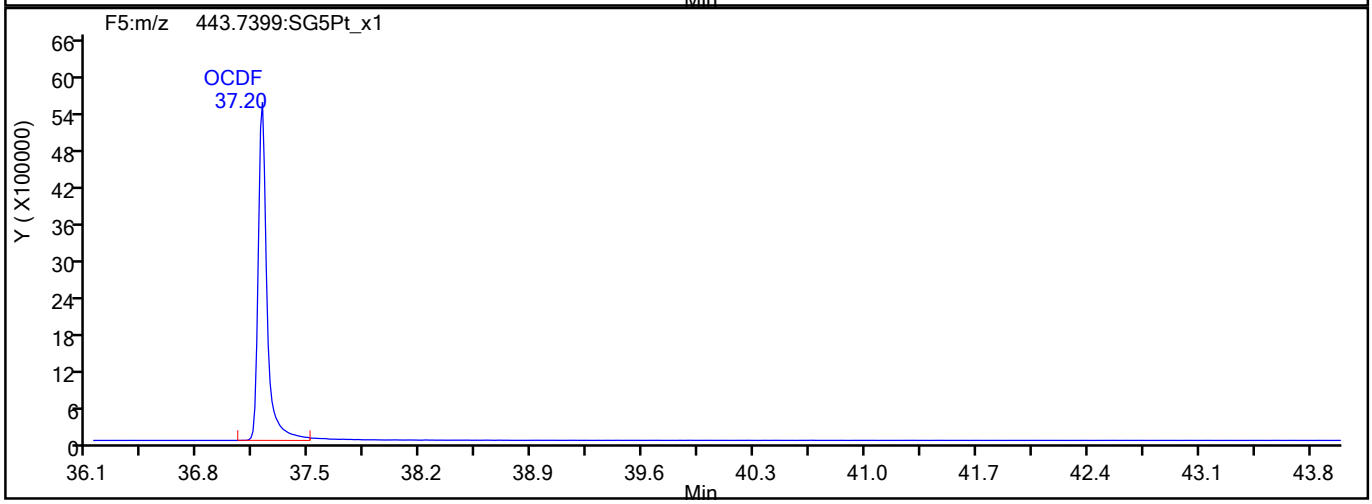

OCDF Interference Mass

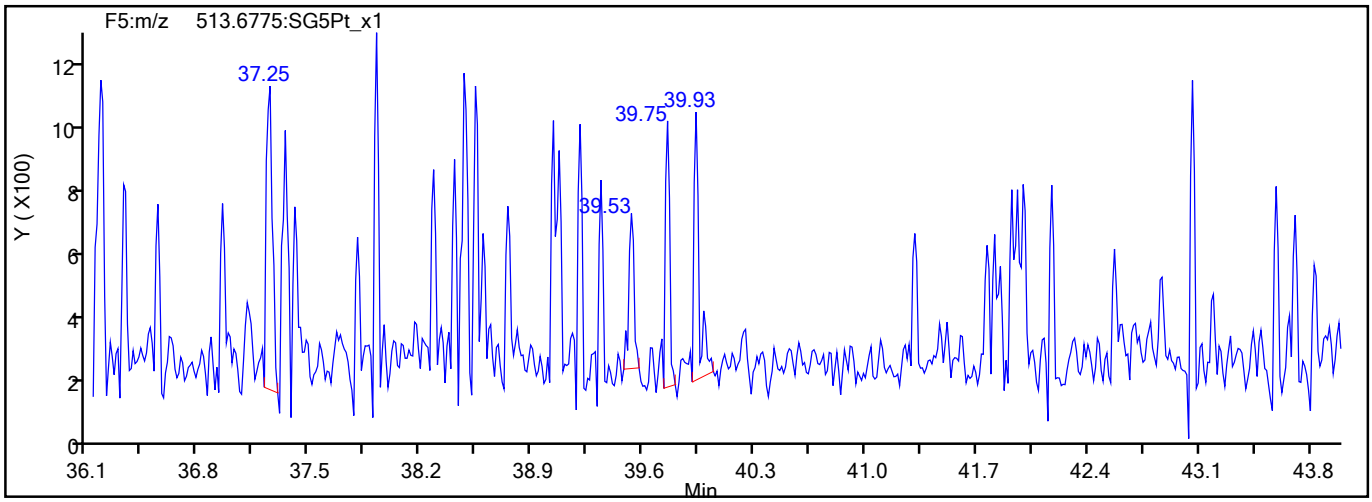

782700

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

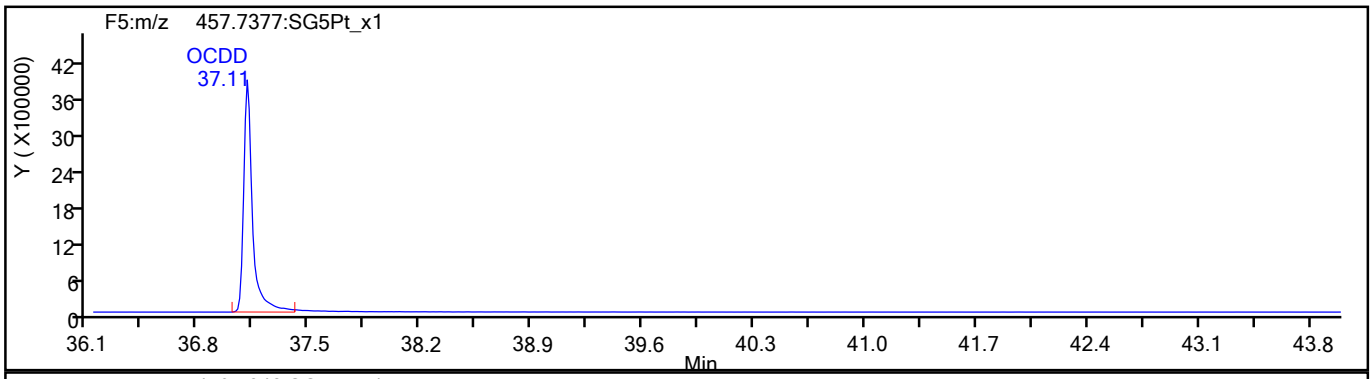

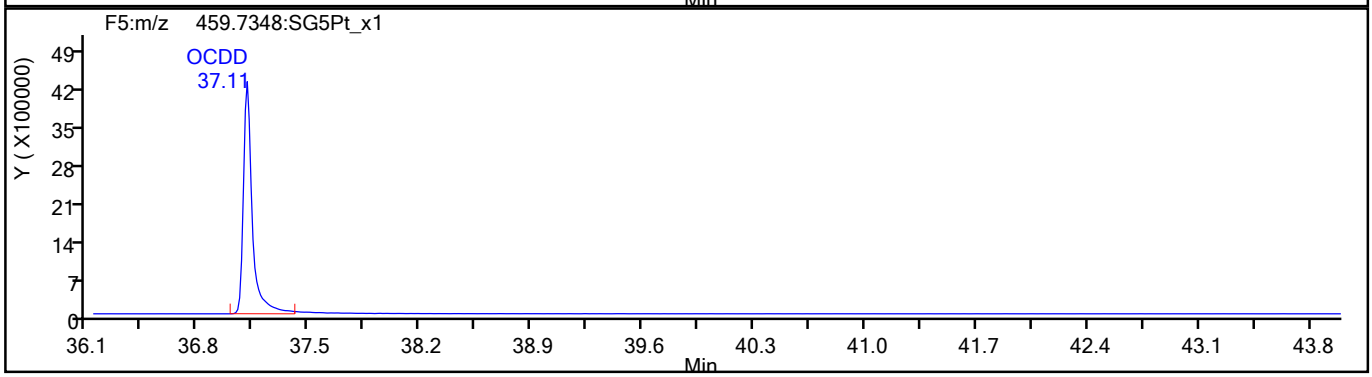

OCDD Standards

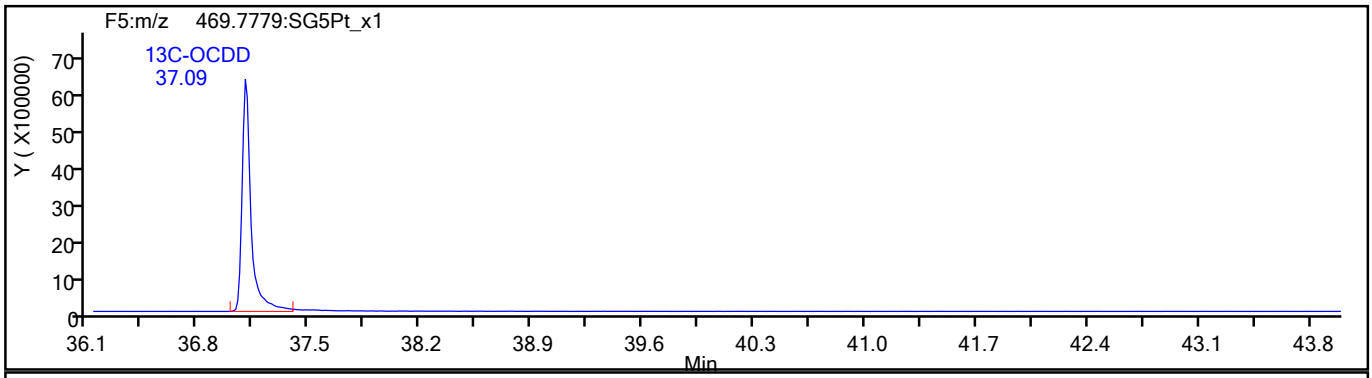

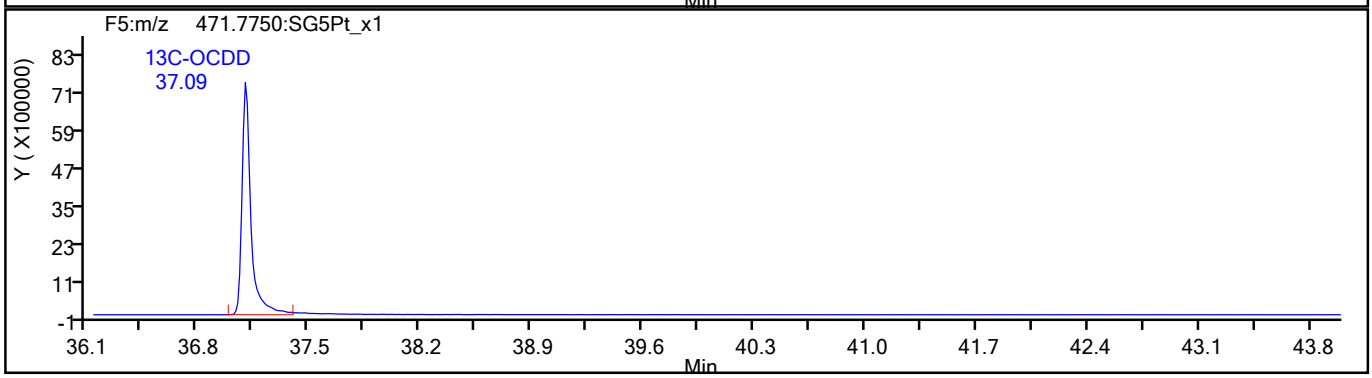

782701

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

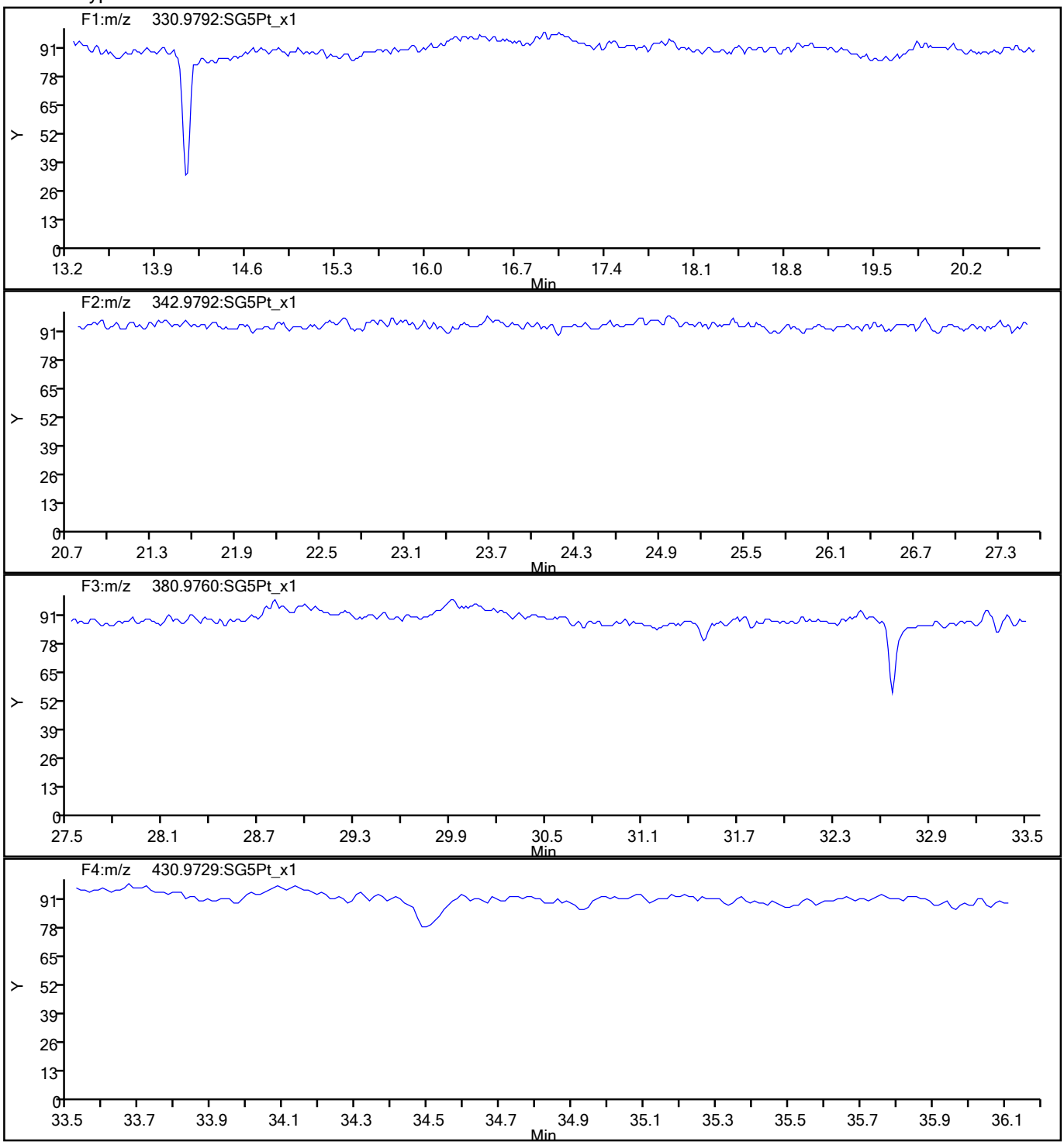

782702

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

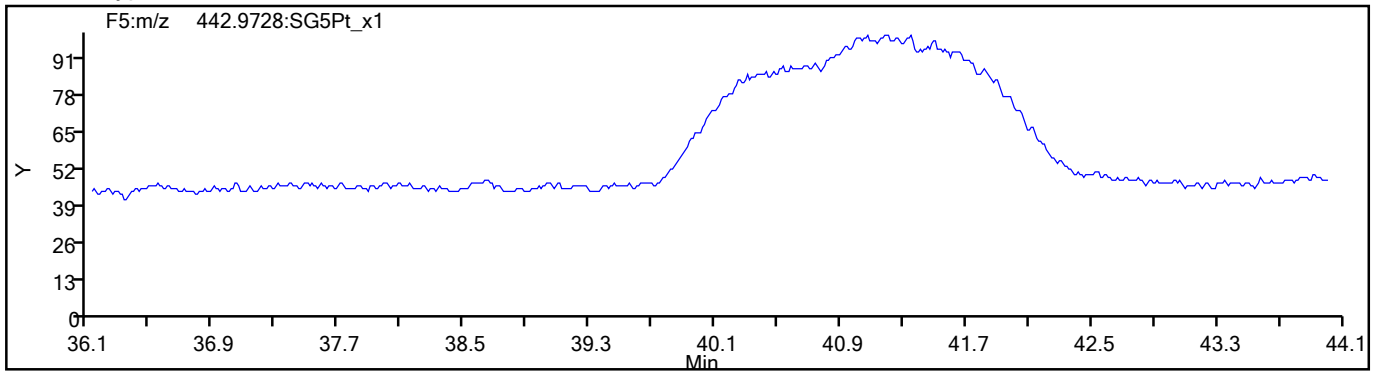

782703

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62046988	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	100332269	0.78	1.6249	99.5	99.5	0.1367	0.1367	99.52	
2,3,7,8-TCDF	17.628	44524782	0.76	1.0239	43.3	43.3	0.0503	0.0503	108	
S Total TCDF					43.3	43.3	0.0503	0.0503		
D 13C-2,3,7,8-TCDD	18.338	55471422	0.81	0.8993	99.4	99.4	0.1780	0.1780	99.41	
$ 37Cl4-2,3,7,8-TCDD	18.354	29474361		1.1071	42.9	42.9	0.0363	0.0363	107	
2,3,7,8-TCDD	18.354	29808948	0.78	1.2541	42.8	42.8	0.0471	0.0471	107	
S Total TCDD					42.8	42.8	0.0471	0.0471		
D 13C-1,2,3,7,8-PeCDF	22.762	75205597	1.60	1.2101	100.2	100.2	0.2087	0.2087	100	
1,2,3,7,8-PeCDF	22.776	171023920	1.60	1.0611	214.3	214.3	0.5904	0.5904	107	
D 13C-2,3,4,7,8-PeCDF	24.126	75259591	1.60	1.2395	97.9	97.9	0.2038	0.2038	97.86	
2,3,4,7,8-PeCDF	24.153	166805723	1.58	1.0184	217.6	217.6	0.6563	0.6563	109	
S Total PeCDF					431.9	431.9	0.6233	0.6233		
D 13C-1,2,3,7,8-PeCDD	24.862	46524396	1.64	0.7612	98.5	98.5	0.1093	0.1093	98.50	
1,2,3,7,8-PeCDD	24.889	105236005	1.57	1.0484	215.7	215.7	0.2317	0.2317	108	
S Total PeCDD					215.7	215.7	0.2317	0.2317		
D 13C-1,2,3,4,7,8-HxCDF	30.835	64951889	0.52	1.0837	95.7	95.7	0.4366	0.4366	95.70	
1,2,3,4,7,8-HxCDF	30.862	155057762	1.22	1.0851	220.0	220.0	1.165	1.165	110	
D 13C-1,2,3,6,7,8-HxCDF	31.008	70459920	0.52	1.1279	99.7	99.7	0.4194	0.4194	99.75	
1,2,3,6,7,8-HxCDF	31.022	168618976	1.23	1.1260	212.5	212.5	1.081	1.081	106	
D 13C-2,3,4,6,7,8-HxCDF	31.754	66145684	0.53	1.0637	99.3	99.3	0.4448	0.4448	99.29	
2,3,4,6,7,8-HxCDF	31.780	164241378	1.21	1.1675	212.7	212.7	0.8912	0.8912	106	
D 13C-1,2,3,7,8,9-HxCDF	32.526	59636084	0.52	0.9676	98.4	98.4	0.4890	0.4890	98.41	
1,2,3,7,8,9-HxCDF	32.539	148834491	1.23	1.1664	214.0	214.0	0.9364	0.9364	107	
S Total HxCDF					859.2	859.2	1.018	1.018		
* 13C-1,2,3,7,8,9-HxCDD	32.339	62627787	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44144841	1.25	0.7334	96.1	96.1	0.3745	0.3745	96.11	
1,2,3,4,7,8-HxCDD	31.953	103044220	1.27	1.0640	219.4	219.4	0.6488	0.6488	110	
D 13C-1,2,3,6,7,8-HxCDD	32.033	54392394	1.25	0.8802	98.7	98.7	0.3120	0.3120	98.67	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	118900298	1.28	1.0001	218.6	218.6	0.5965	0.5965	109	
1,2,3,7,8,9-HxCDD	32.353	122394998	1.26	1.1325	219.4	219.4	0.5651	0.5651	110	
S Total HxCDD					657.3	657.3	0.6034	0.6034		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	47752972	0.44	0.7730	98.6	98.6	1.001	1.001	98.64	
1,2,3,4,6,7,8-HpCDF	33.924	147892240	1.06	1.4413	214.9	214.9	2.024	2.024	107	
D 13C-1,2,3,4,7,8,9-HpCDF	35.017	42687625	0.44	0.7008	97.3	97.3	1.104	1.104	97.26	
1,2,3,4,7,8,9-HpCDF	35.017	123968724	1.06	1.3174	220.4	220.4	2.743	2.743	110	
S Total HpCDF					435.3	435.3	2.383	2.383		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	40442950	1.02	0.6472	99.8	99.8	0.5241	0.5241	99.77	
1,2,3,4,6,7,8-HpCDD	34.726	94435922	1.04	1.0943	213.4	213.4	0.9683	0.9683	107	
S Total HpCDD					213.4	213.4	0.9683	0.9683		
D 13C-OCDD	37.093	57303880	0.88	0.4472	204.6	204.6	0.2753	0.2753	102	
OCDF	37.201	181747068	0.91	1.4382	441.1	441.1	0.4159	0.4159	110	
OCDD	37.105	135570174	0.90	1.1070	427.4	427.4	0.4029	0.4029	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		27754917	7076779	4201	10502	1685		
333.9339	18.142	18.142	0		34292071	8691565	5896	14740	1474	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	43967601	10754823	8470	21175	1270		
317.9389	17.613	17.616	0	0.971	56364668	13840834	5538	13845	2499	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	19278962	4714580	2218	5545	2126		
305.8987	17.628	17.631	0	1.001	25245820	6261705	2854	7135	2194	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24807018	5848000	4201	10502	1392		
333.9339	18.338	18.338	0	1.011	30664404	7186127	5896	14740	1219	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	29474361	7040079	2537	6342	2775		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	13088265	3099418	1571	3927	1973		
321.8936	18.354	18.357	0	1.001	16720683	3961925	1508	3770	2627	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46265218	8069932	9479	23697	851		
353.8970	22.749	22.754	0	1.254	28940379	5072009	6452	16130	786	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	105236981	18677381	20013	50032	933		
341.8567	22.776	22.779	0	1.001	65786939	11693027	12919	32297	905	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46298187	7561650	9479	23697	798		
353.8970	24.126	24.129	0	1.330	28961404	4756017	6452	16130	737	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	102234081	17002363	20013	50032	850		
341.8567	24.153	24.156	0	1.001	64571642	10773383	12919	32297	834	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28884955	4397104	3175	7937	1385		
369.8919	24.862	24.865	0	1.370	17639441	2717935	2071	5177	1312	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	64347111	9837651	3945	9862	2494		
357.8516	24.889	24.892	0	1.001	40888894	6265054	2969	7422	2110	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	22237957	4900100	10775	26937	455		
385.8610	30.835	30.838	0	0.953	42713932	9213265	21190	52975	435	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	85201859	18424877	39257	98142	469		
375.8178	30.849	30.857	0	1.000	69855903	15011303	32096	80240	468	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	23996455	5001651	10775	26937	464		
385.8610	31.008	31.003	0	0.959	46463465	9659865	21190	52975	456	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	92842545	20075526	39257	98142	511		
375.8178	31.022	31.022	0	1.000	75776431	16178695	32096	80240	504	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	22792396	5861290	10775	26937	544		
385.8610	31.754	31.756	0	0.982	43353288	11282982	21190	52975	532	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.780	31.772	0	1.001	89865159	23412461	39257	98142	596		
375.8178	31.767	31.772	0	1.000	74376219	19191516	32096	80240	598	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20506438	5659225	10775	26937	525		
385.8610	32.526	32.523	0	1.006	39129646	10674002	21190	52975	504	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	82057134	22664755	39257	98142	577		
375.8178	32.539	32.534	0	1.000	66777357	17875439	32096	80240	557	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		34509982	9306847	9505	23762	979		
403.8529	32.339	32.342	0		28117805	7584182	9052	22630	838	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	24560847	6976899	9505	23762	734		
403.8529	31.927	31.929	0	0.987	19583994	5667072	9052	22630	626	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.953	31.945	0	1.001	57595942	16510469	19316	48290	855		
391.8127	31.940	31.945	0	1.000	45448278	13107381	15598	38995	840	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	30198617	8138784	9505	23762	856		
403.8529	32.033	32.033	0	0.991	24193777	6493948	9052	22630	717	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	66690137	17959920	19316	48290	930		
391.8127	32.047	32.047	0	1.000	52210161	14135061	15598	38995	906	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	68169382	18483699	19316	48290	957		
391.8127	32.353	32.355	0	1.013	54225616	14872863	15598	38995	954	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14610497	4589210	16388	40970	280		
419.8220	33.912	33.914	0	1.049	33142475	10497182	35883	89707	293	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	75936953	24520194	90693	226732	270		
409.7789	33.924	33.926	0	1.000	71955287	23549459	85368	213420	276	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.017	35.010	0	1.083	12971814	3739945	16388	40970	228		
419.8220	35.017	35.010	0	1.083	29715811	8442322	35883	89707	235	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	63647403	18553677	90693	226732	205		
409.7789	35.017	35.020	0	1.000	60321321	17850429	85368	213420	209	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	20381379	6053926	11567	28917	523		
437.8140	34.714	34.716	0	1.073	20061571	5957434	11351	28377	525	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	48165795	14539111	26079	65197	558		
425.7737	34.726	34.726	0	1.000	46270127	14041663	24831	62077	565	1.04(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26901378	6693523	3896	9740	1718		
471.7750	37.093	37.094	0	1.147	30402502	7661603	4420	11050	1733	0.88(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	86562223	22814939	9244	23110	2468		
443.7399	37.201	37.199	0	1.003	95184845	24785143	7929	19822	3126	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	64116469	16176091	6061	15152	2669		
459.7348	37.105	37.106	0	1.000	71453705	17977820	6746	16865	2665	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

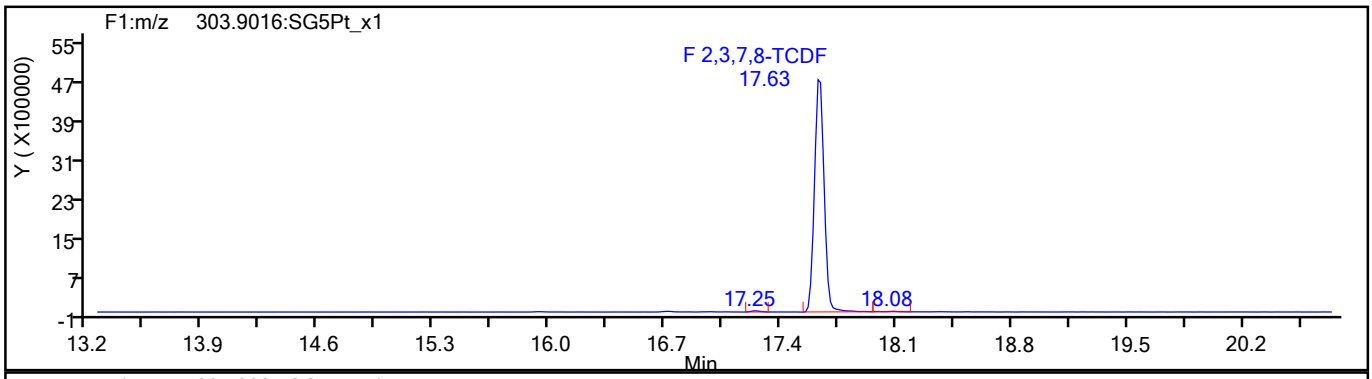

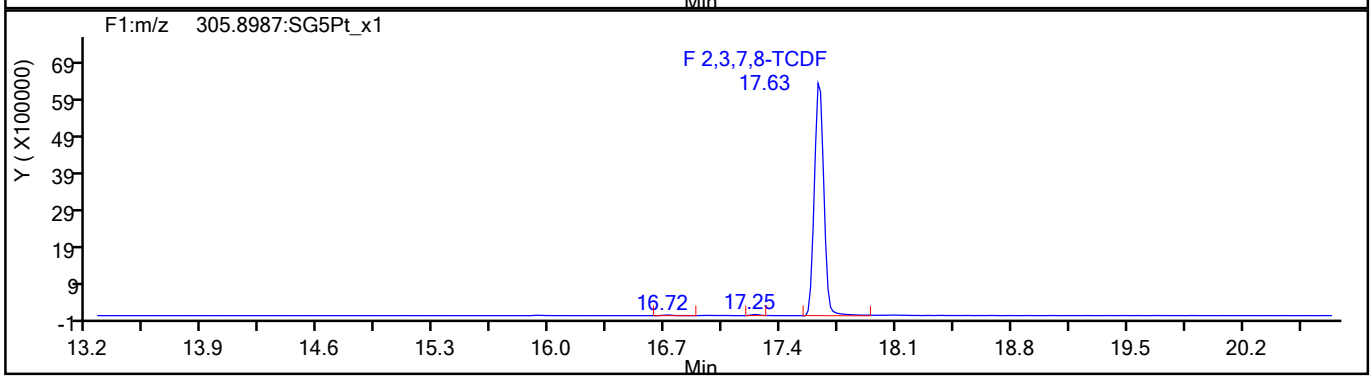

TCDF Standards

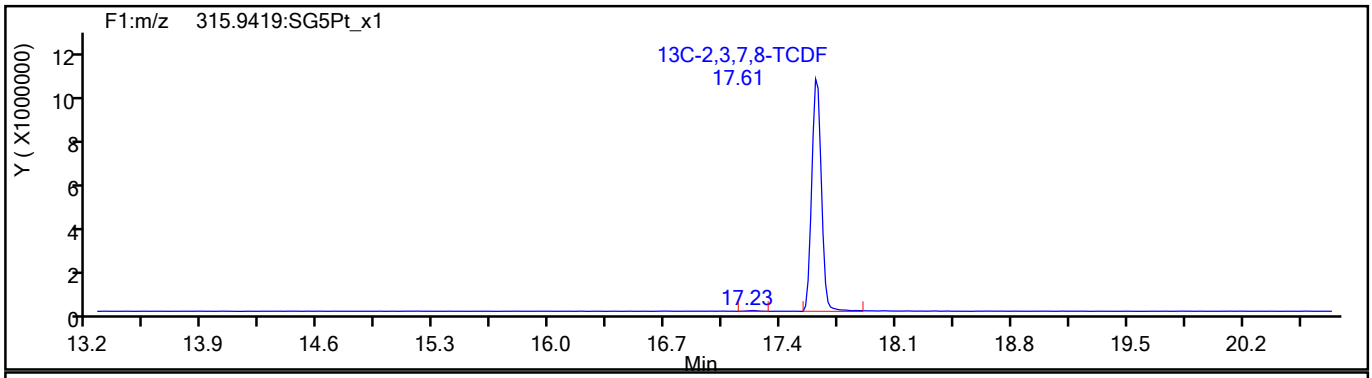

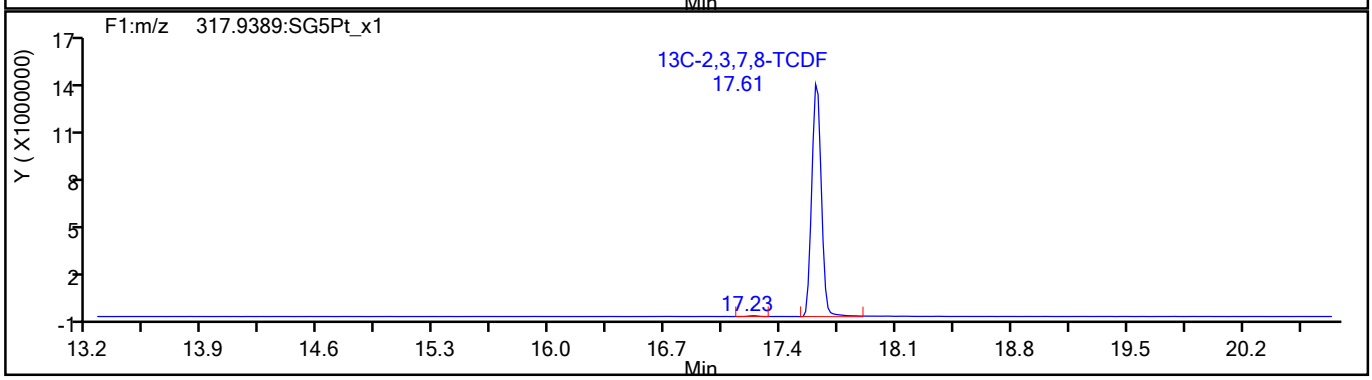

782709

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

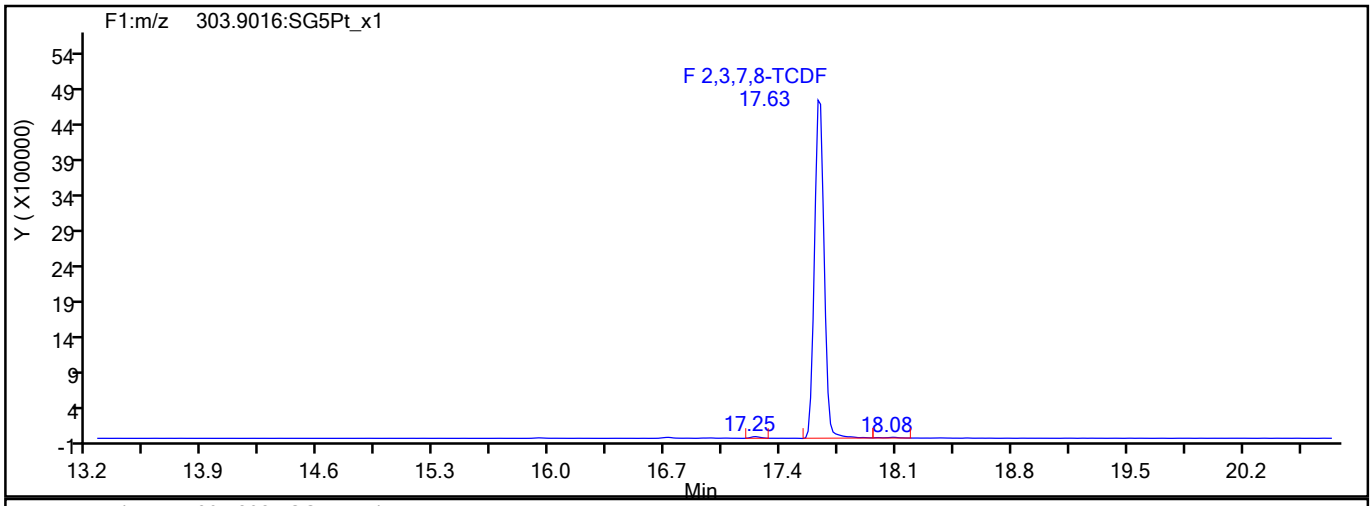

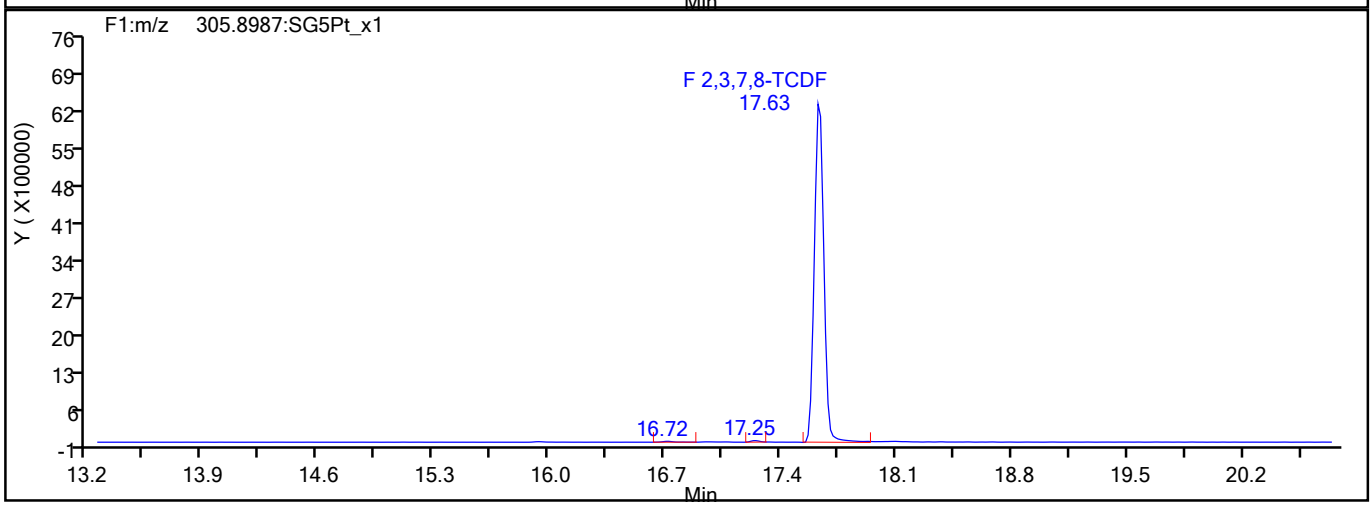

TCDF Interference Mass

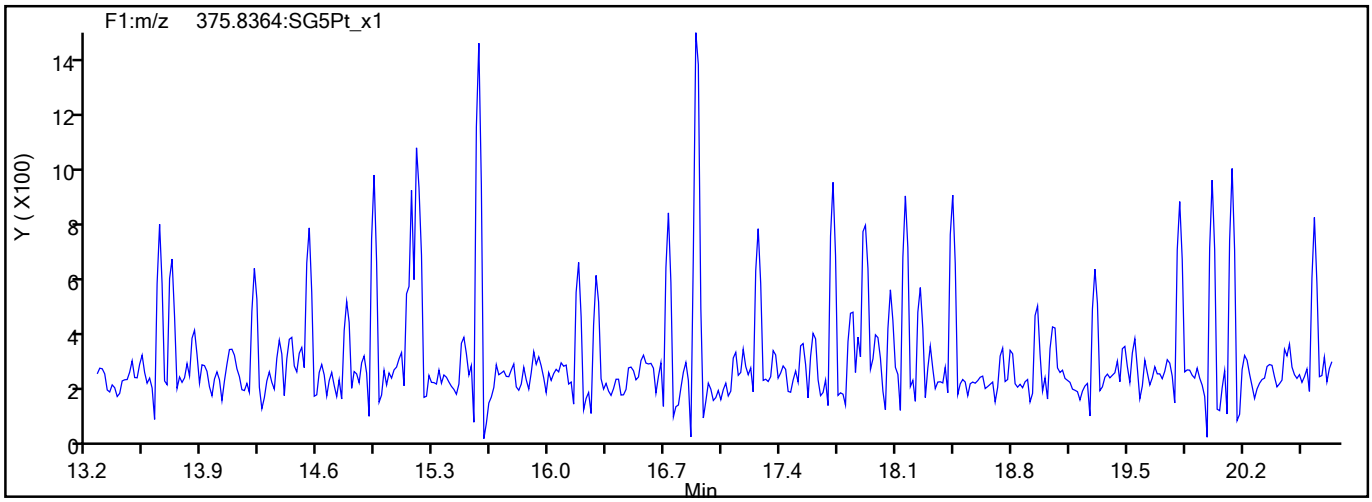

782710

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

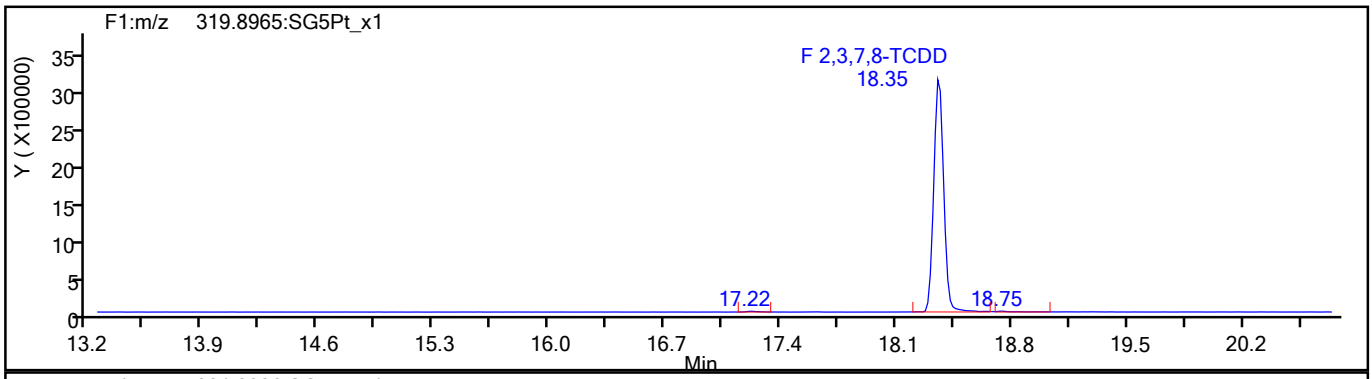

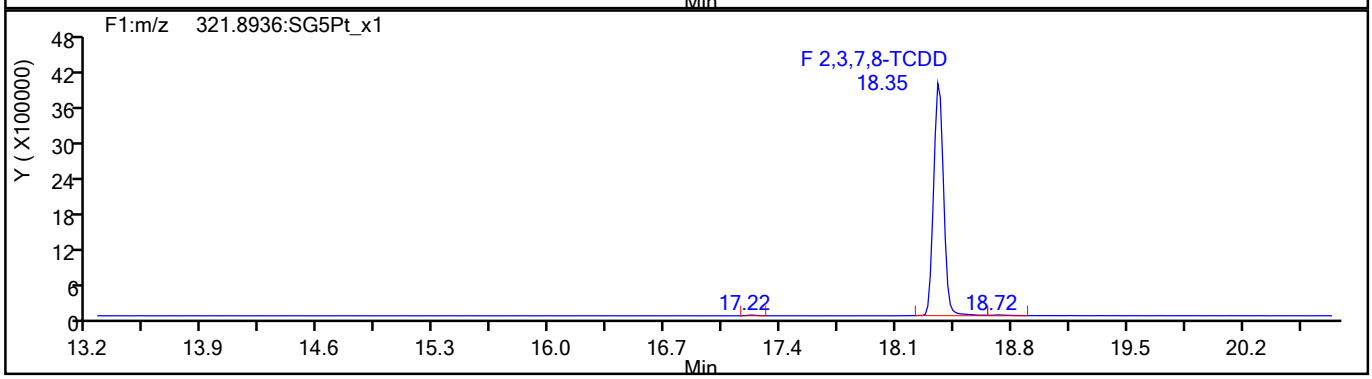

TCDD Standards

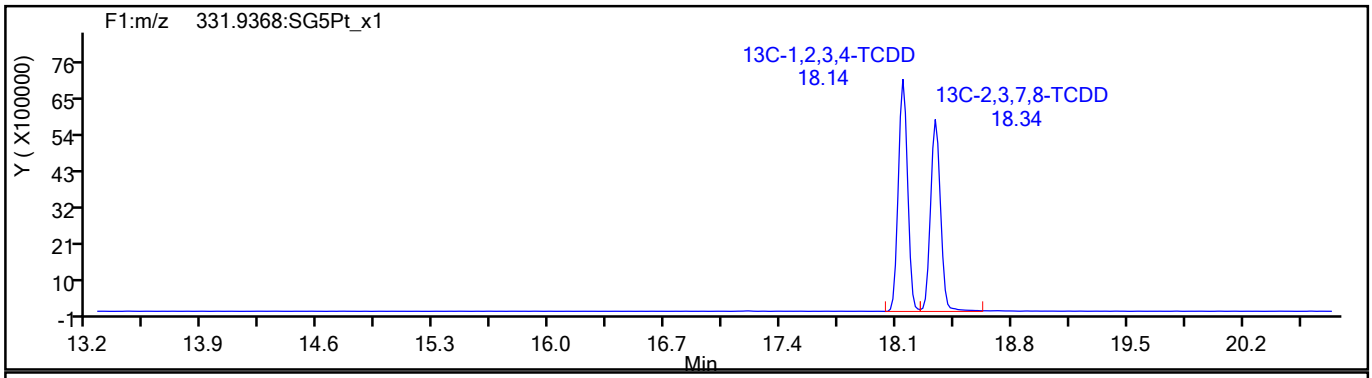

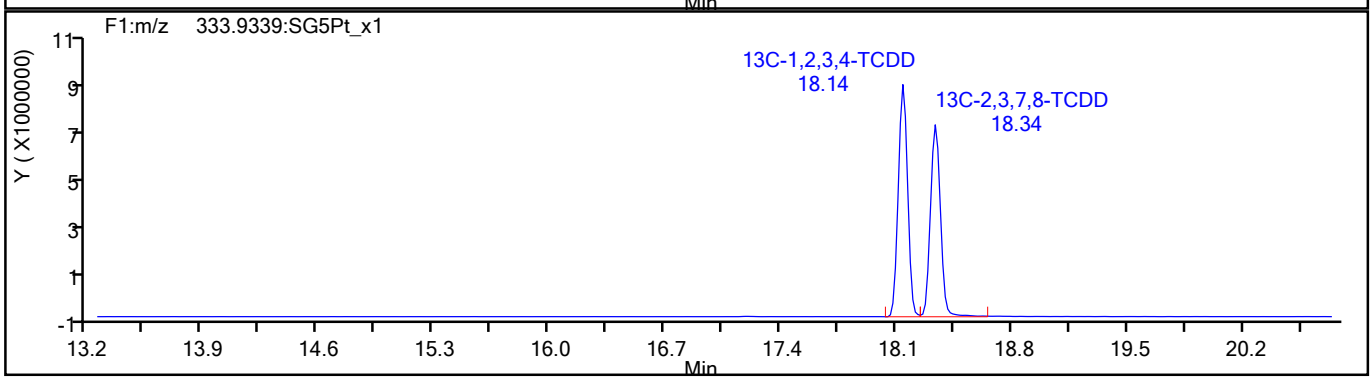

782711

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

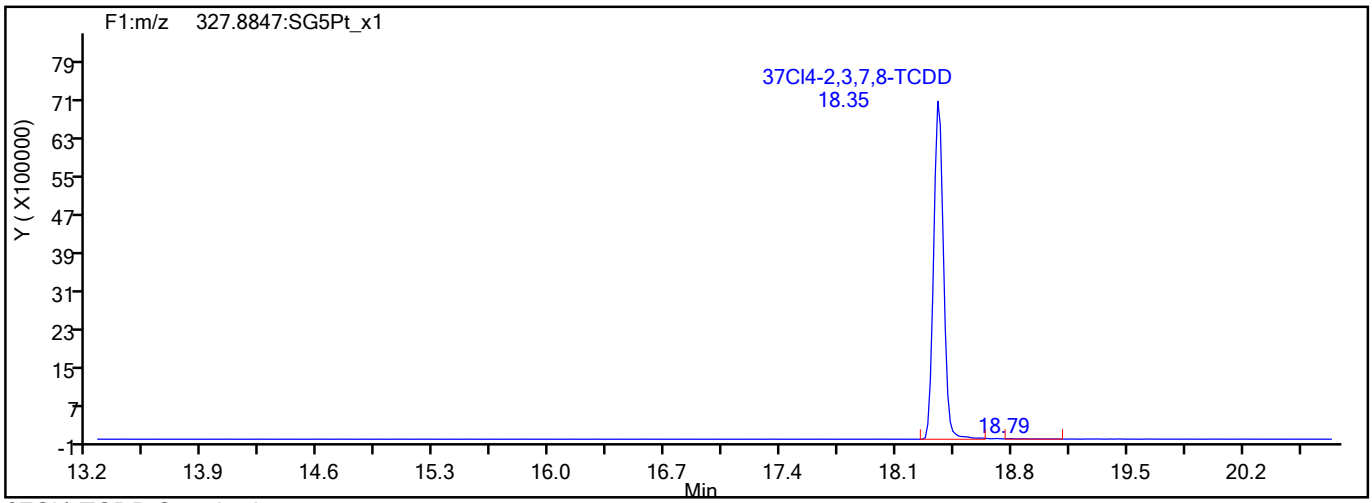

37Cl4-TCDD Standards

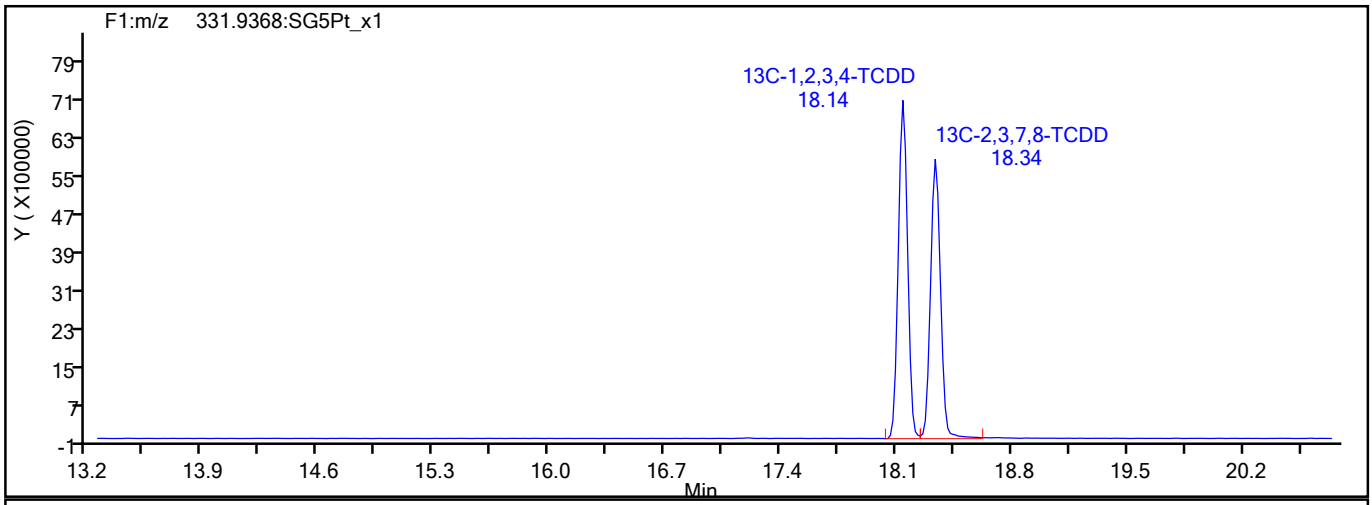

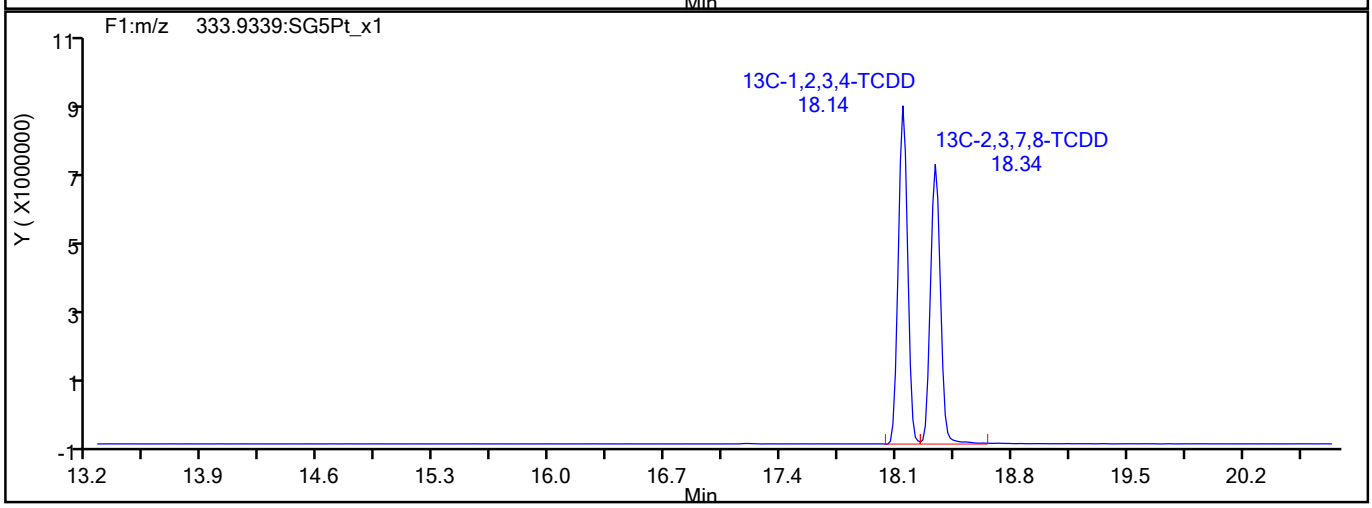

782712

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

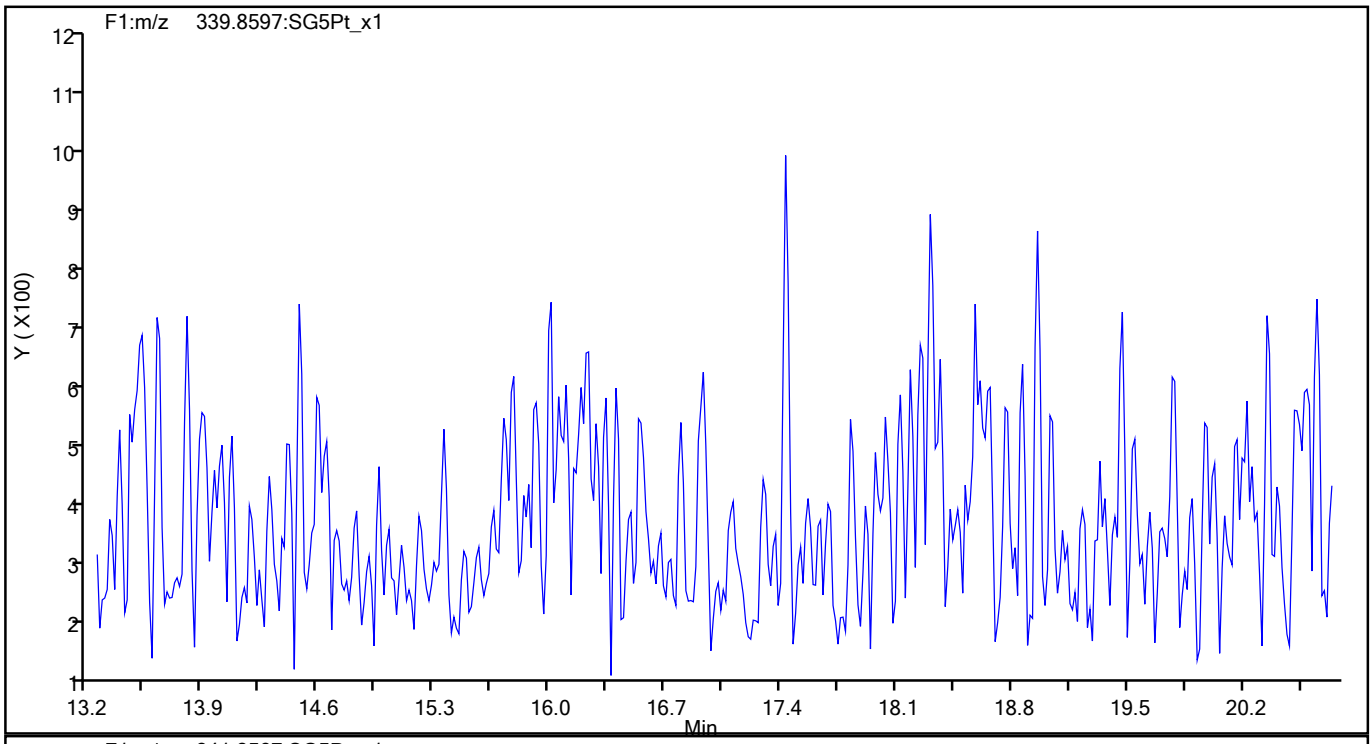

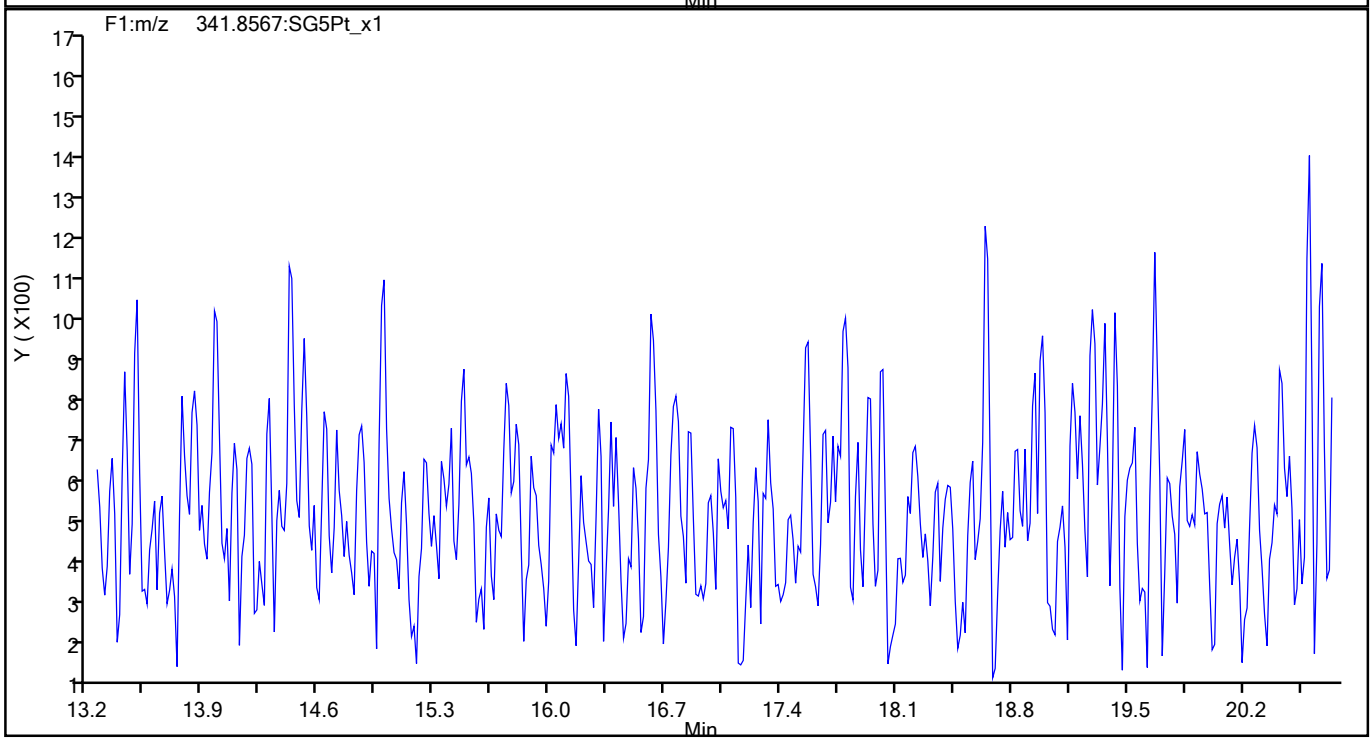

782713

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

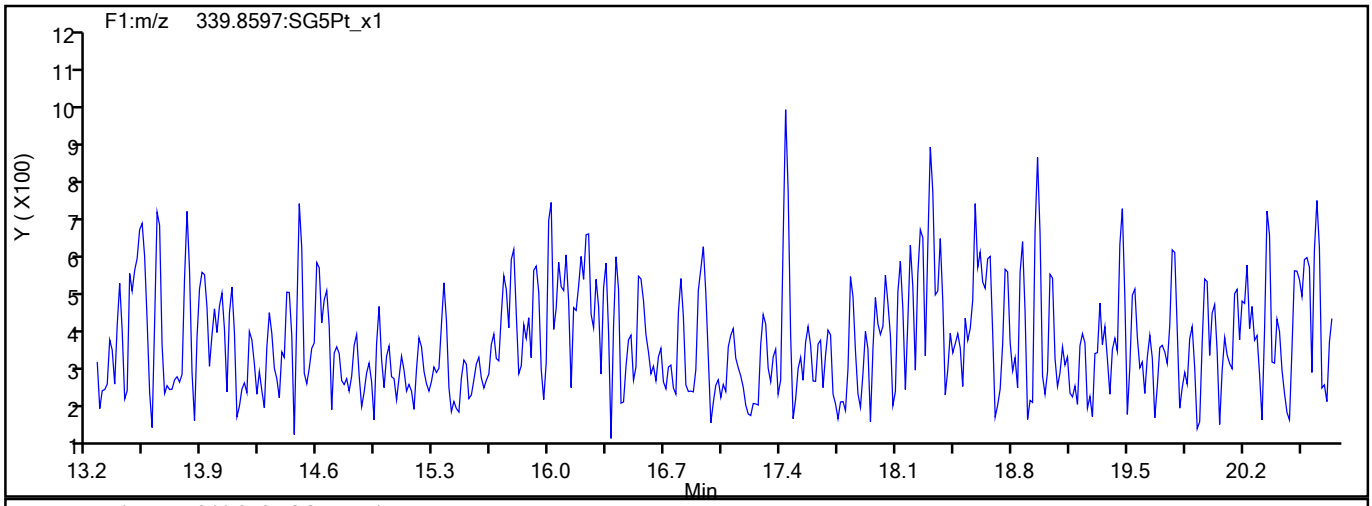

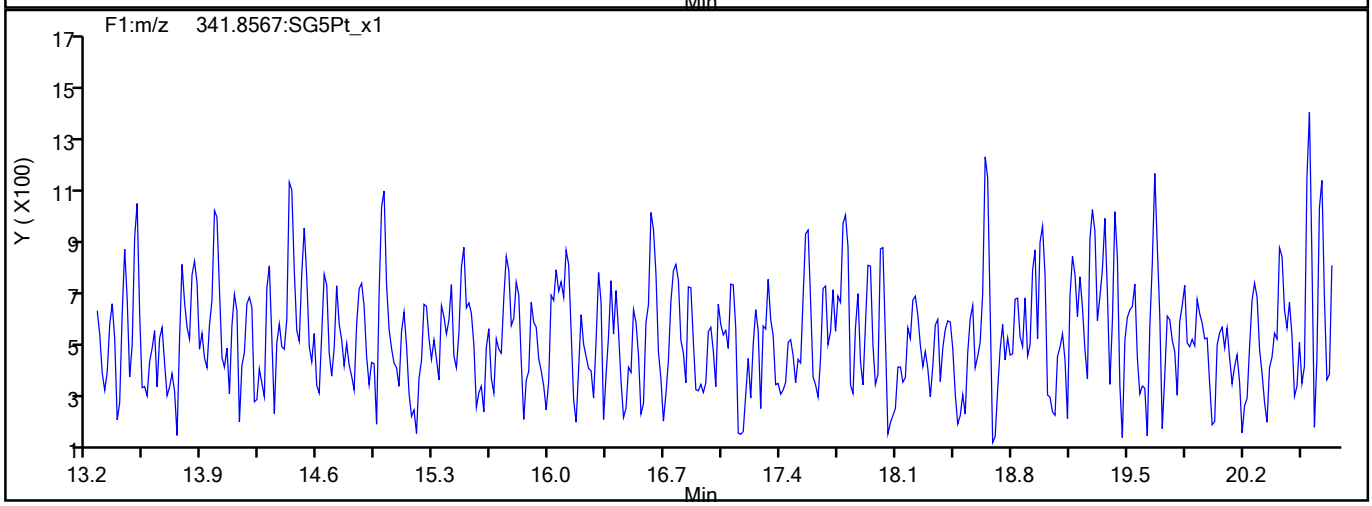

F1 PeCDFs Interference Mass

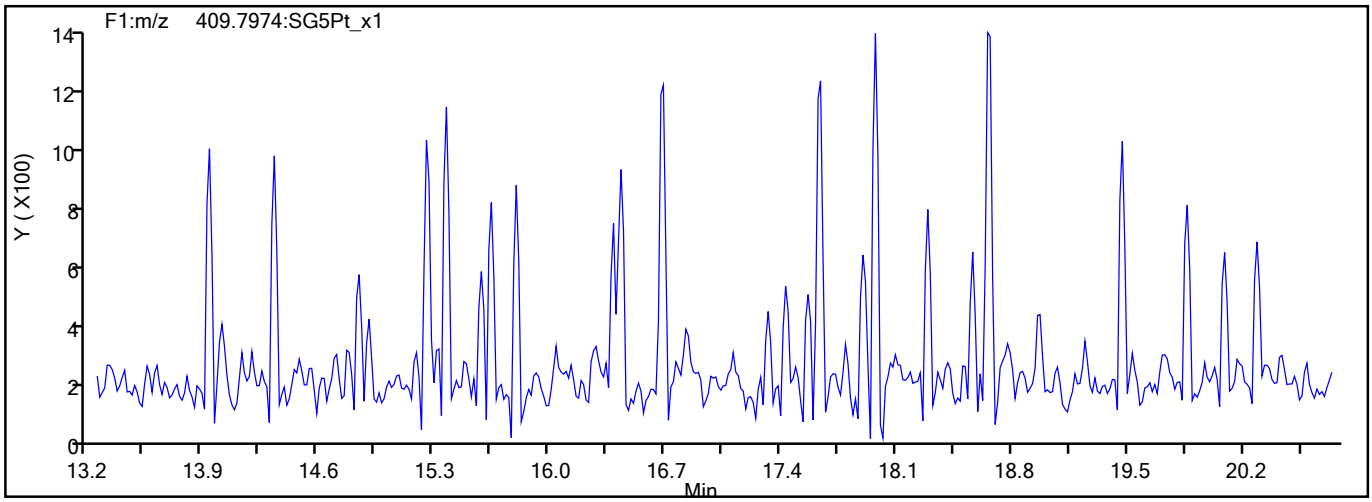

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

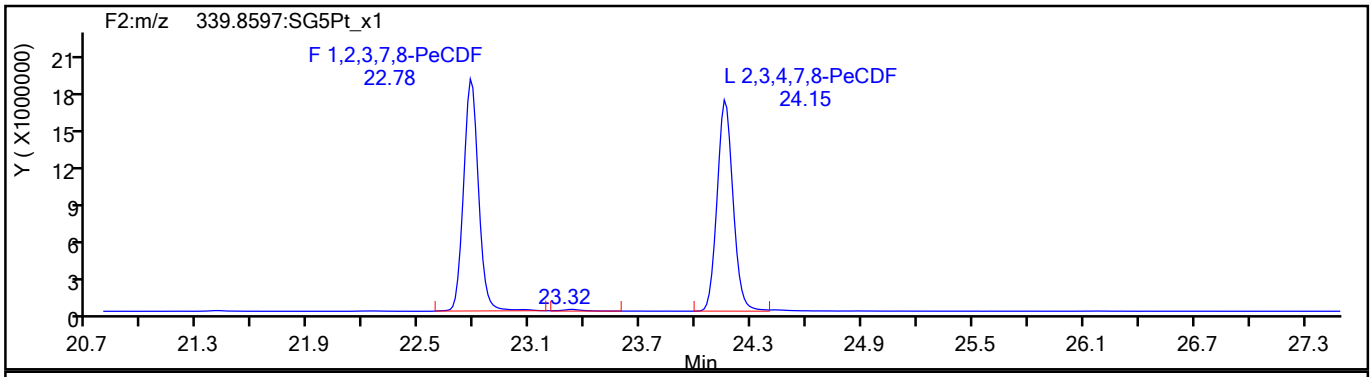

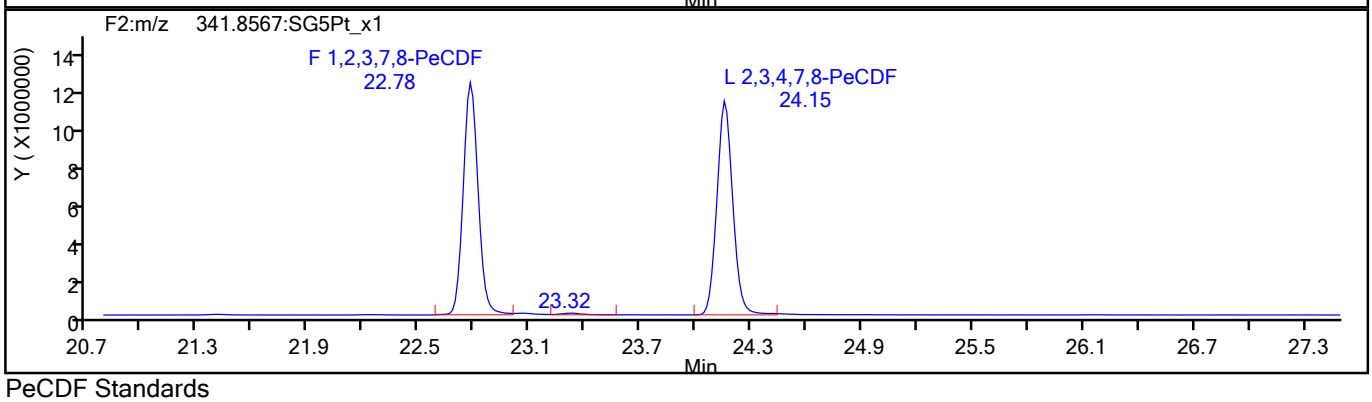

PeCDF Standards

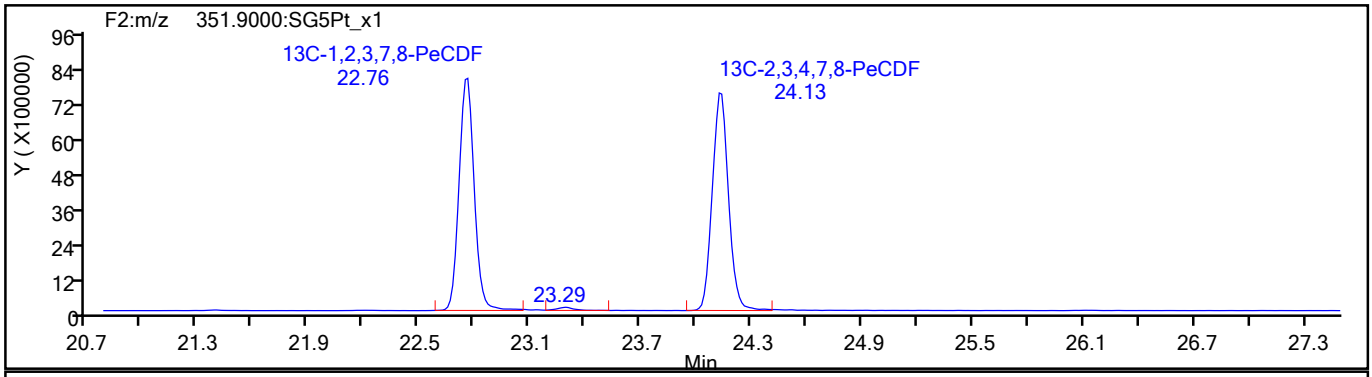

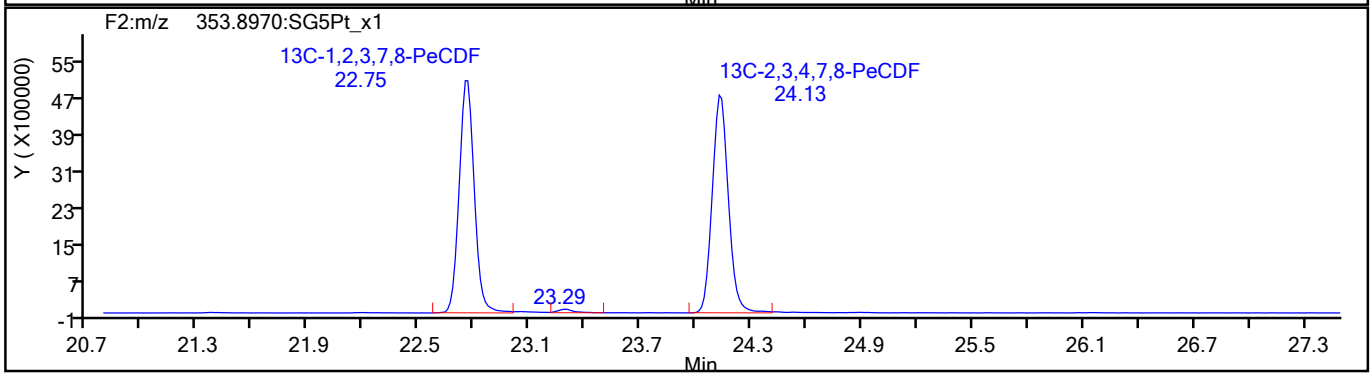

782715

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

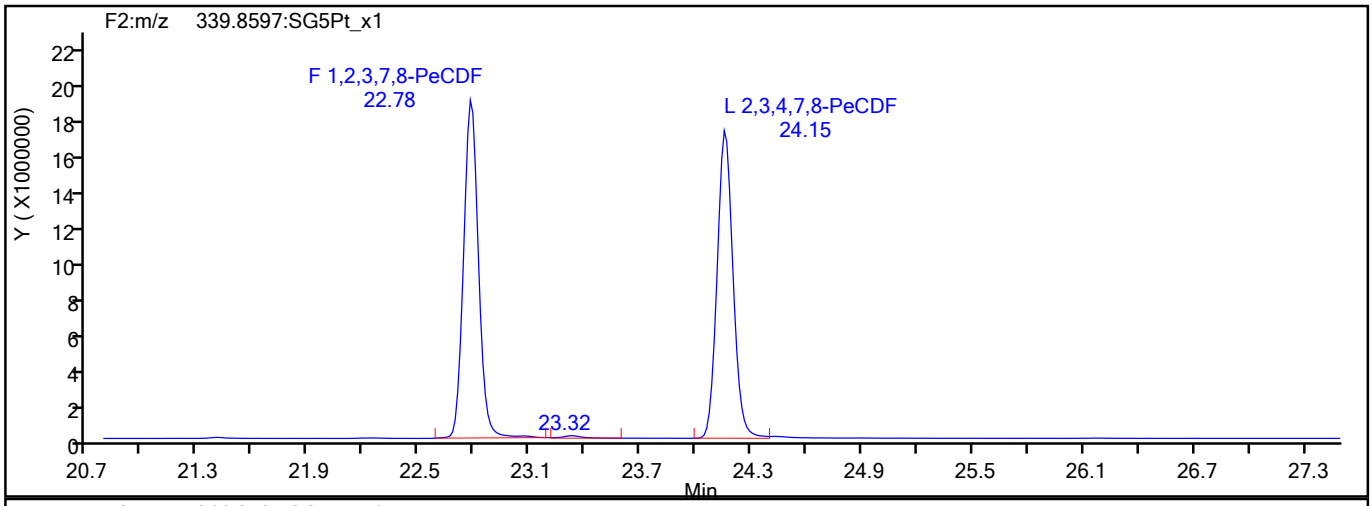

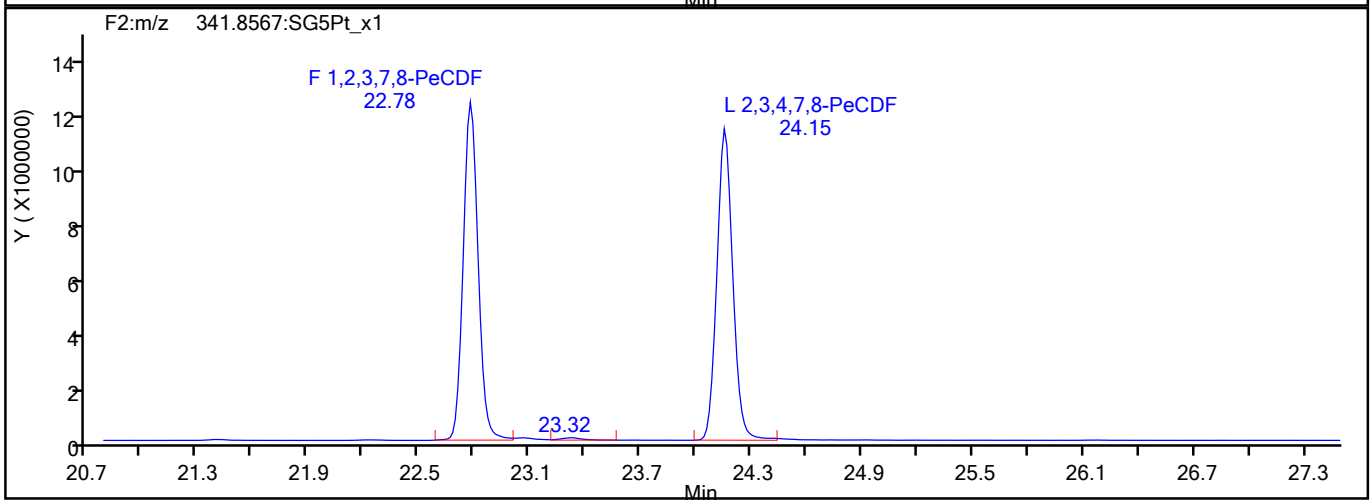

PeCDF Interference Mass

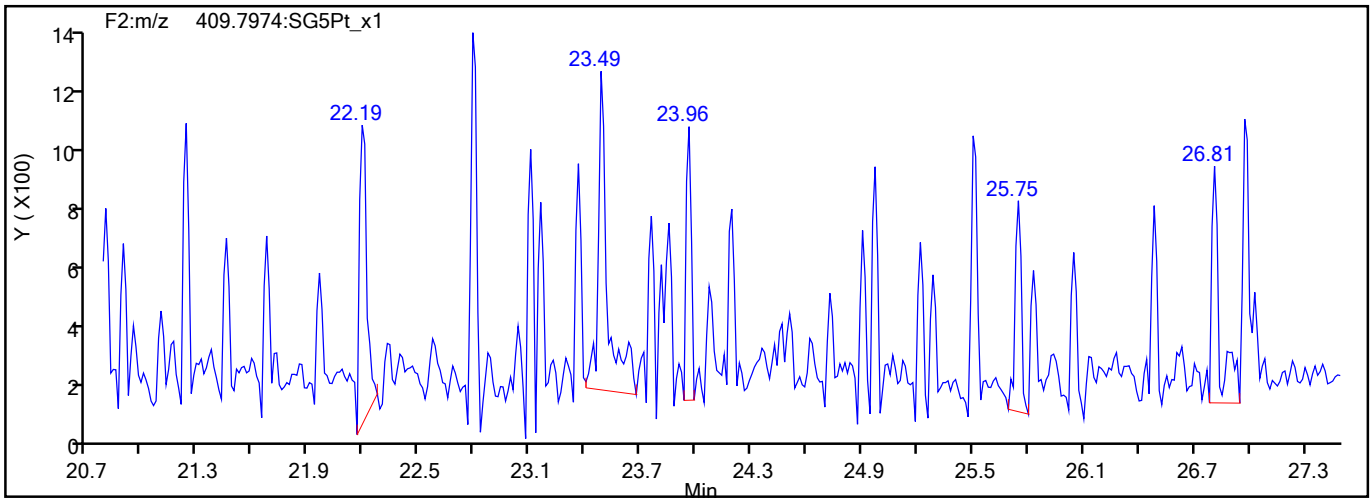

782716

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

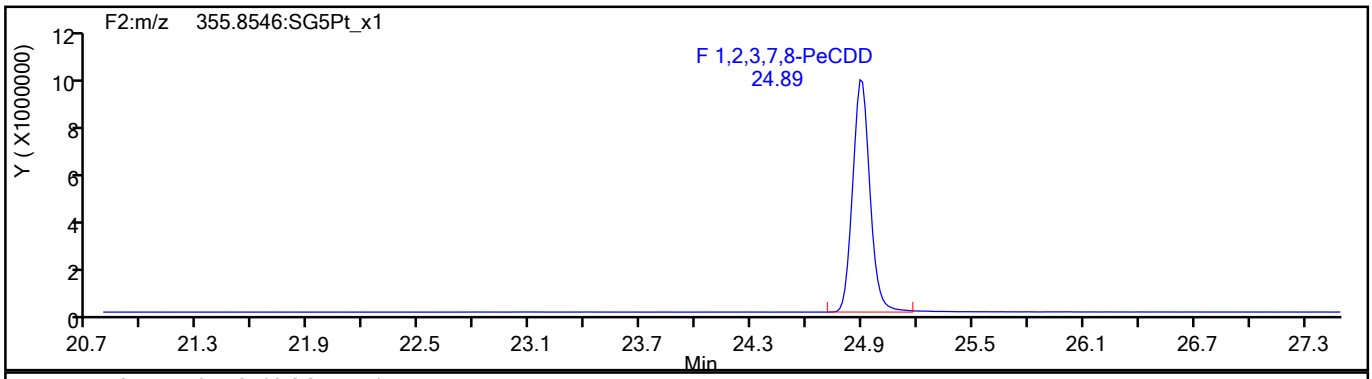

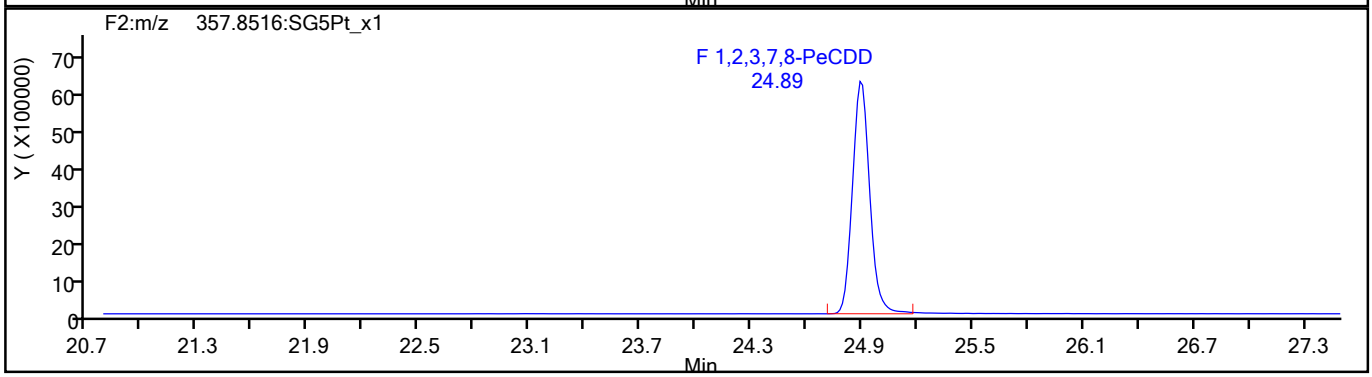

PeCDD Standards

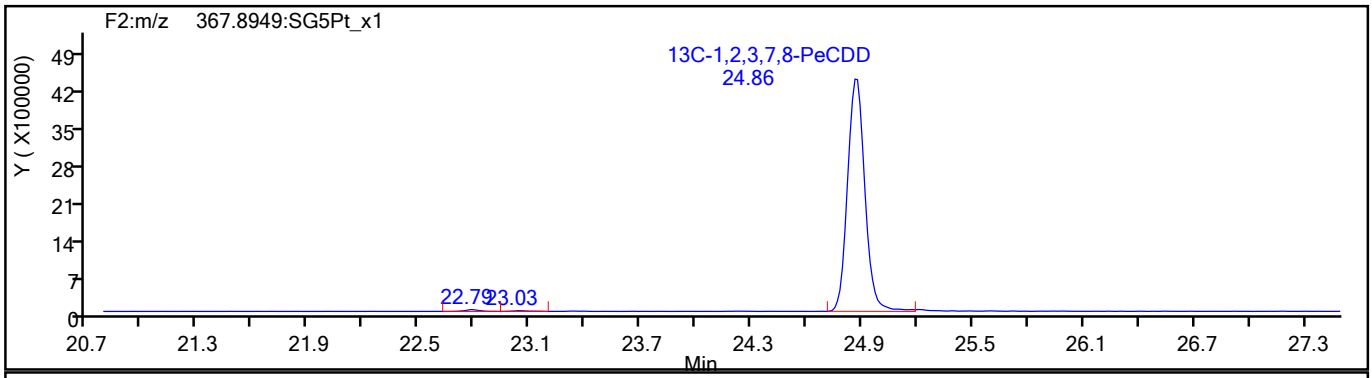

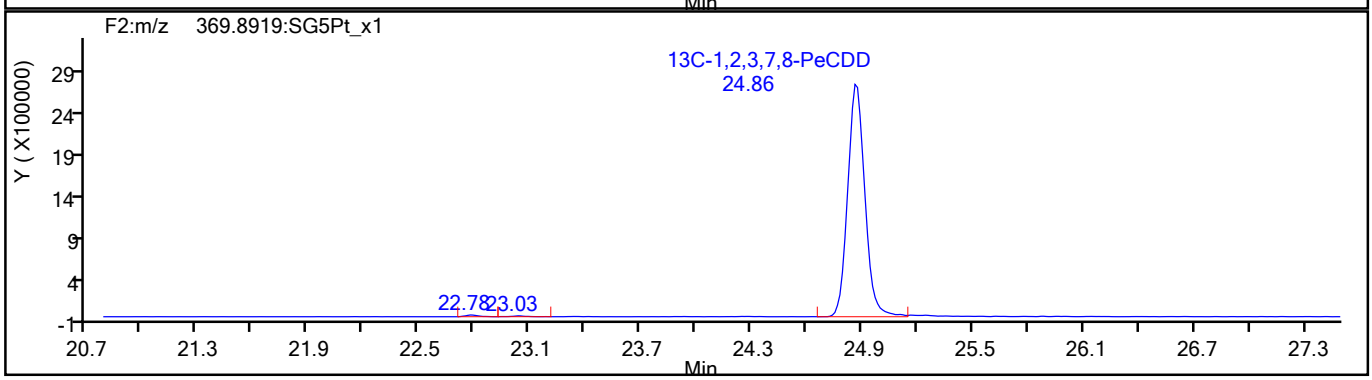

782717

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

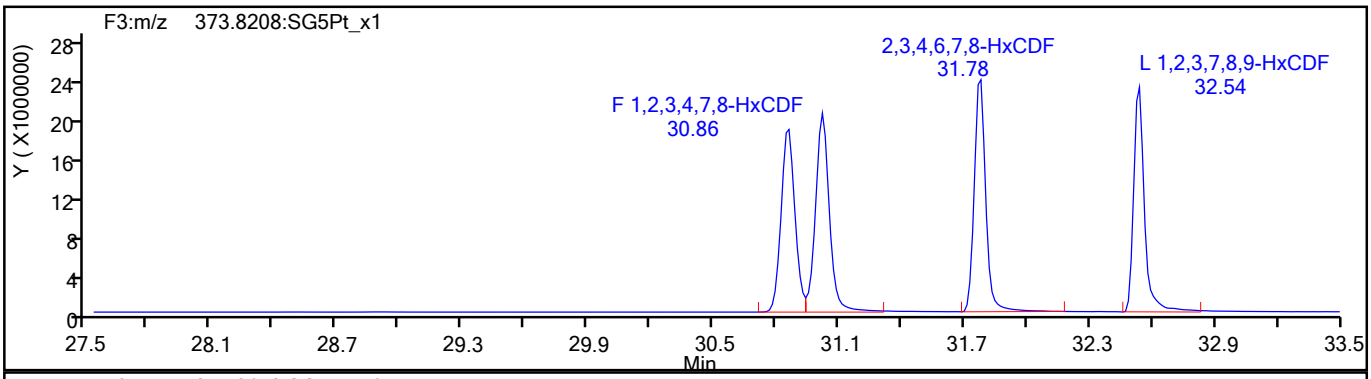

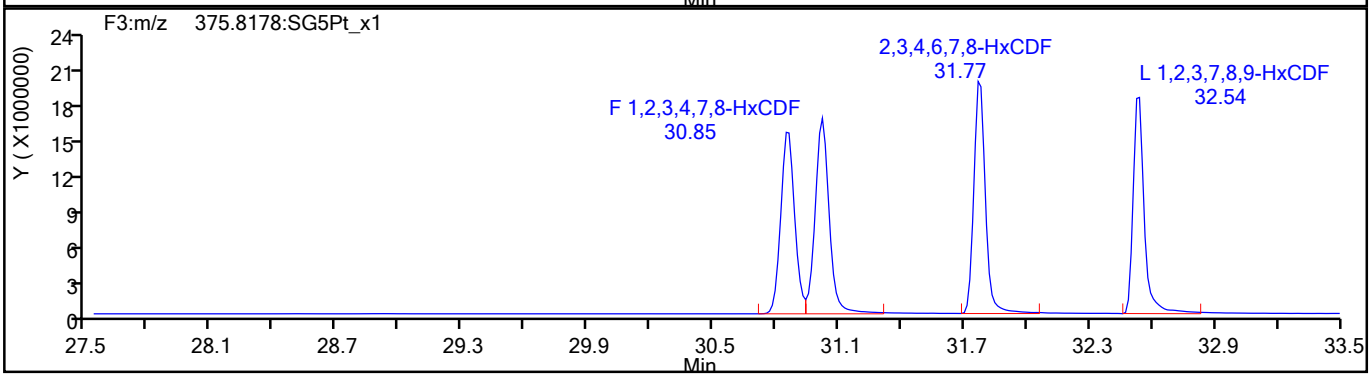

HxCDF Standards

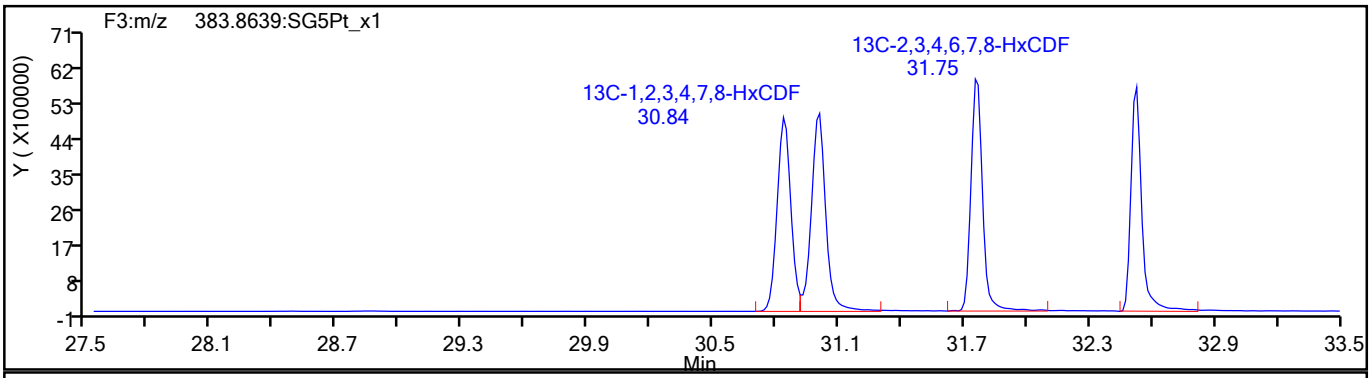

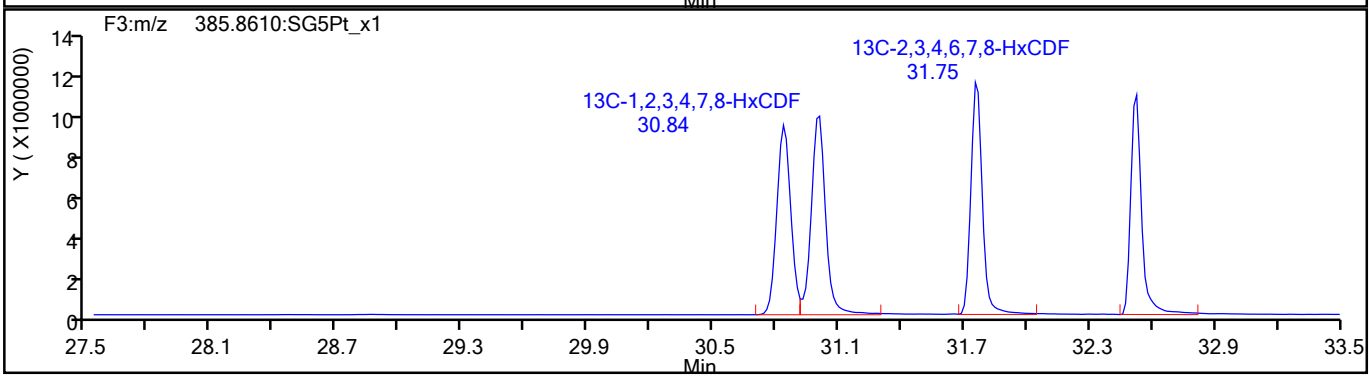

782718

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

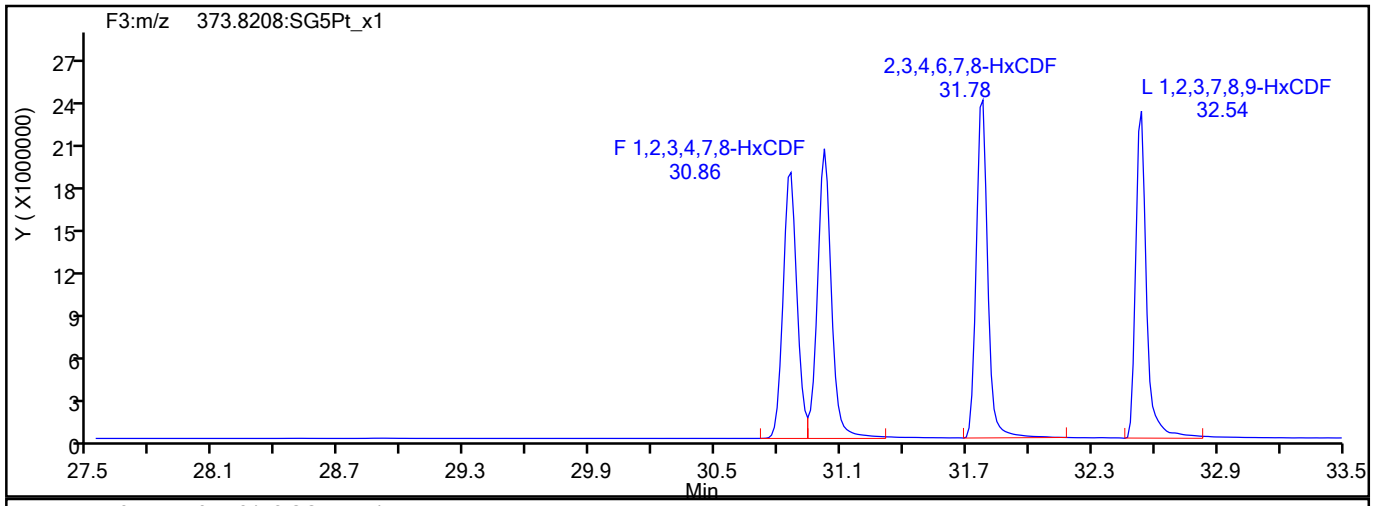

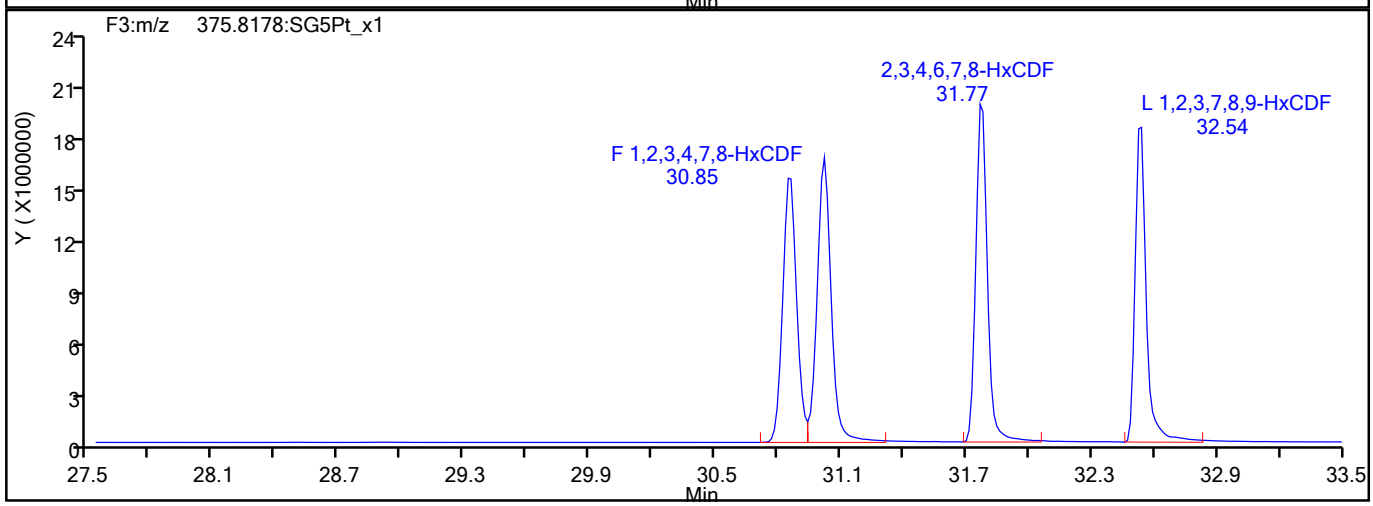

HxCDF Interference Mass

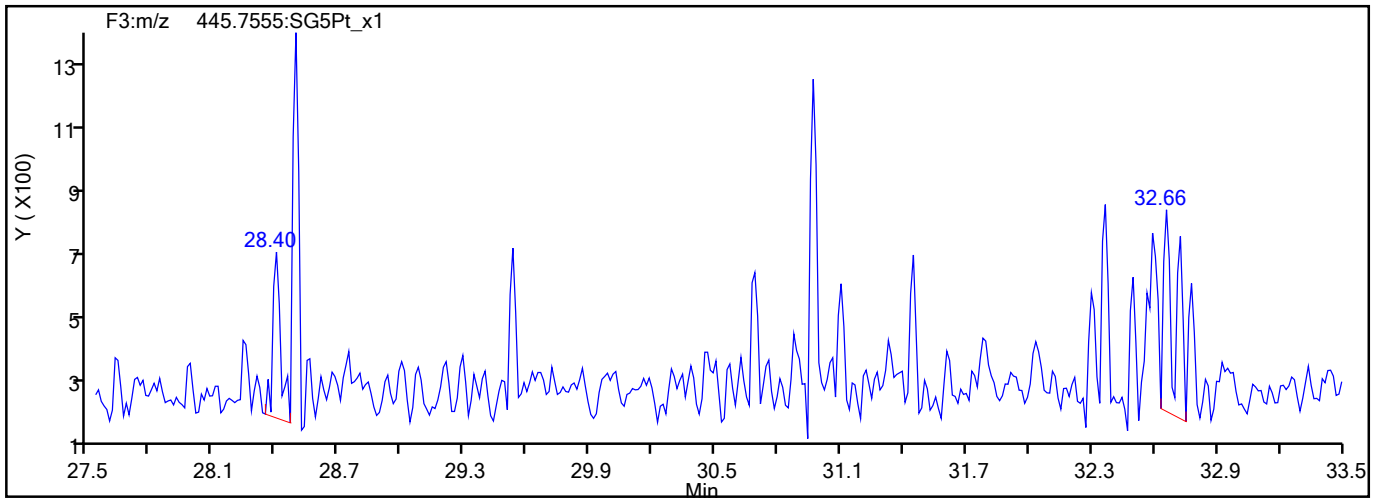

782719

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

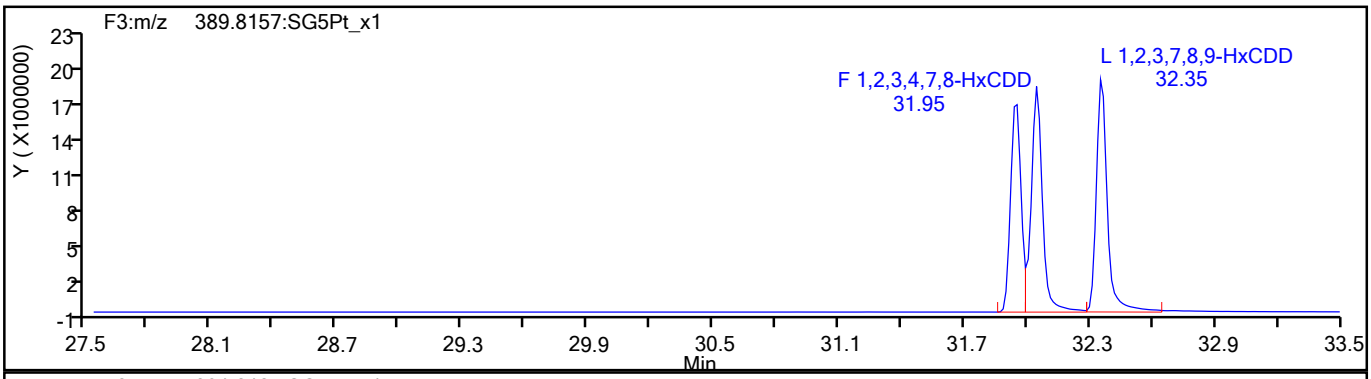

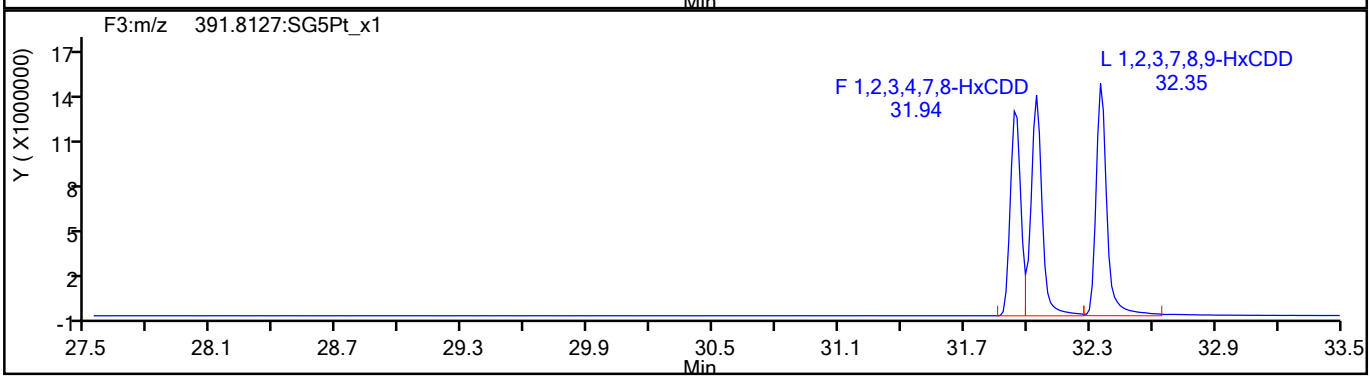

HxCDD Standards

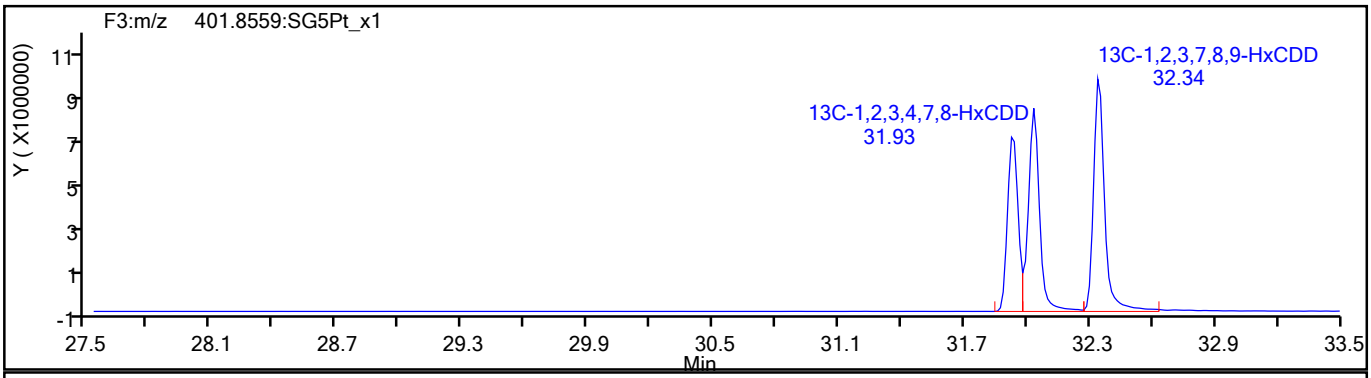

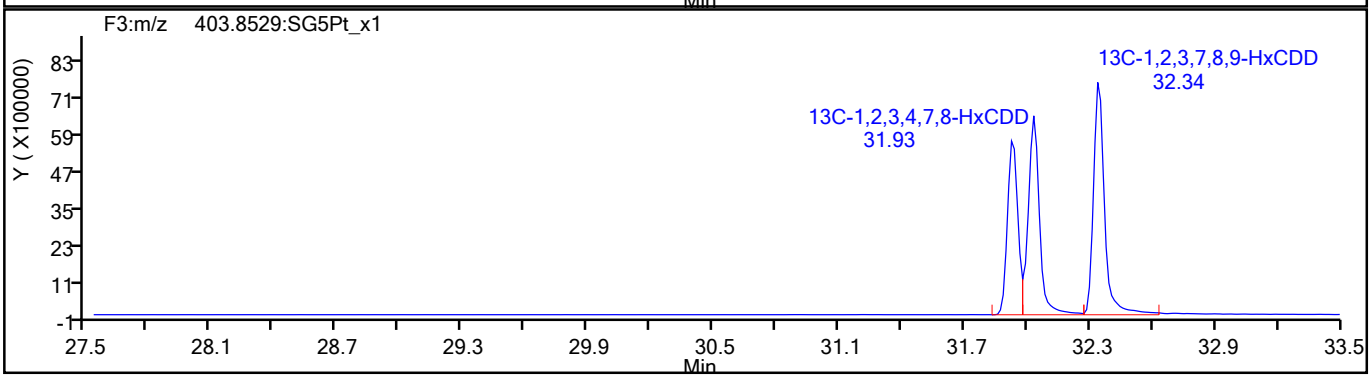

782720

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

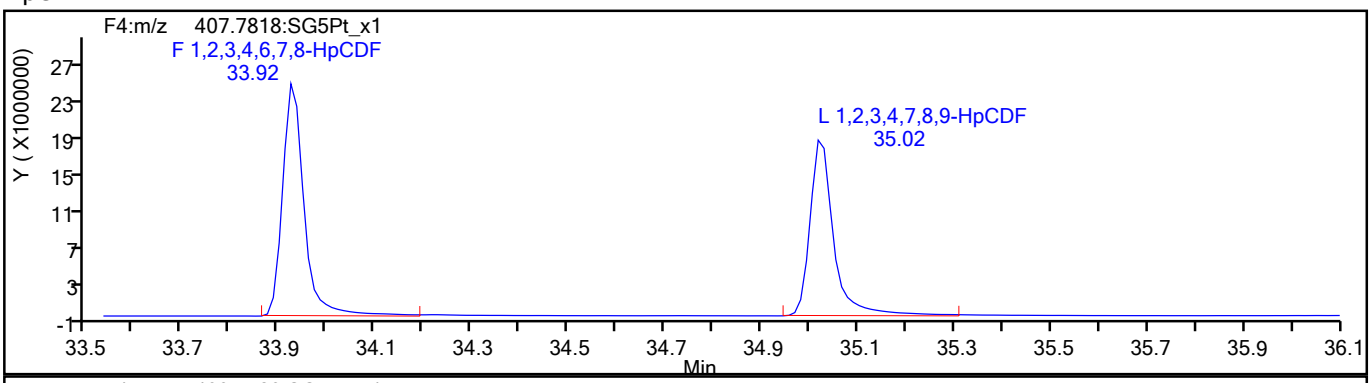

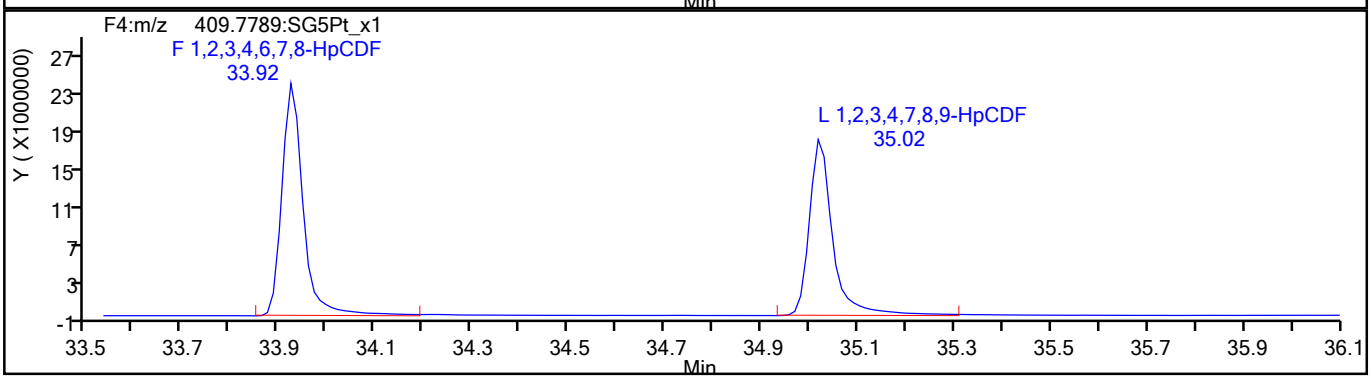

HpCDF Standards

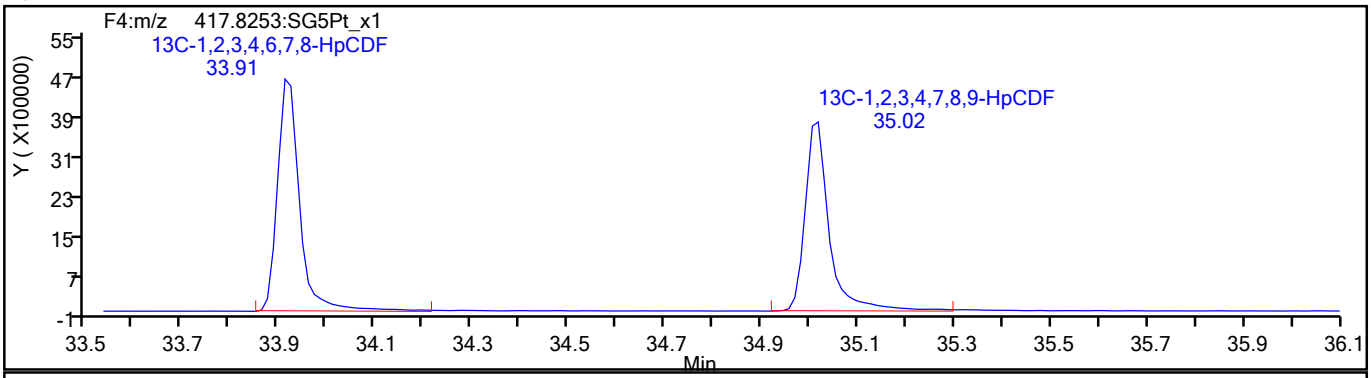

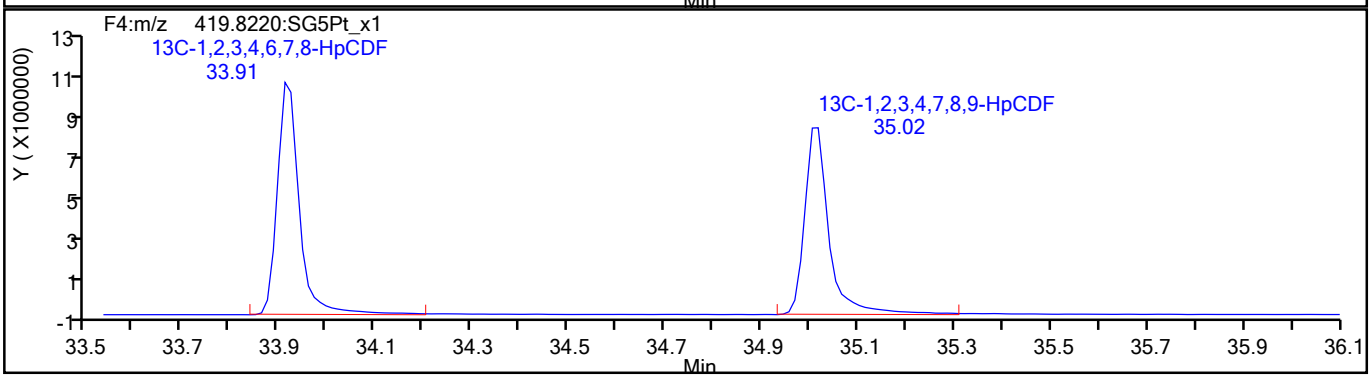

782721

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

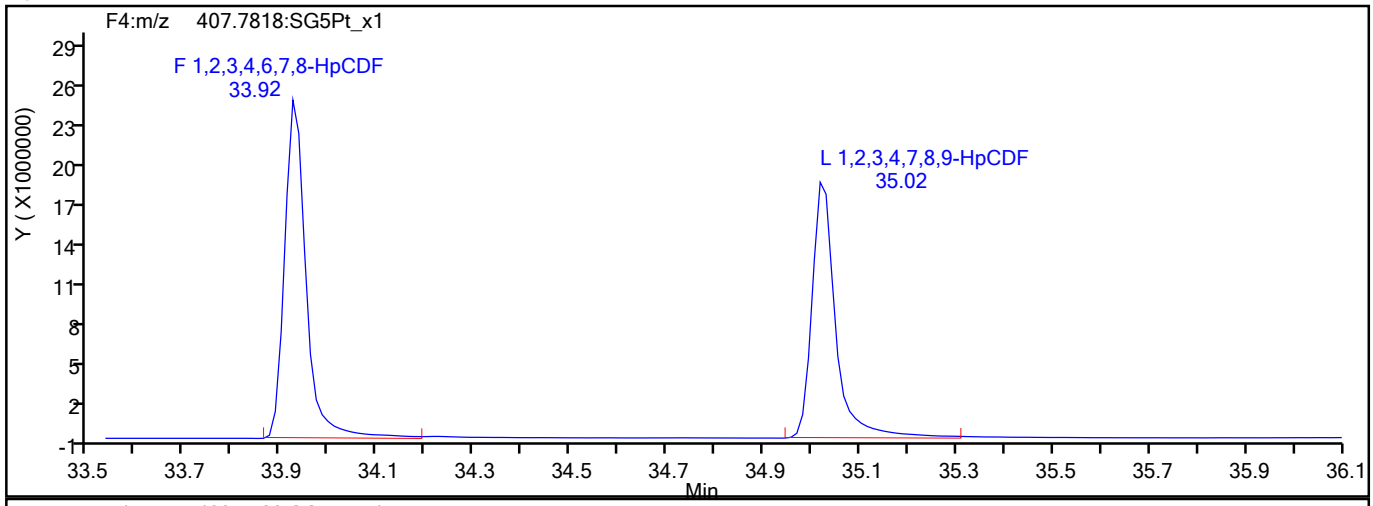

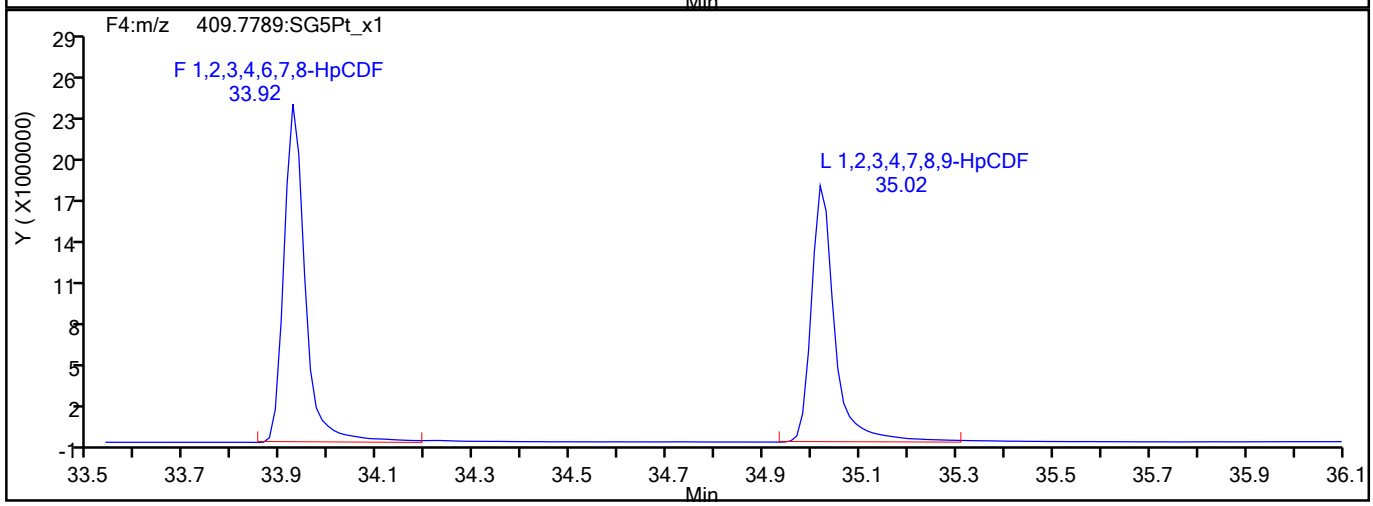

HpCDF Interference Mass

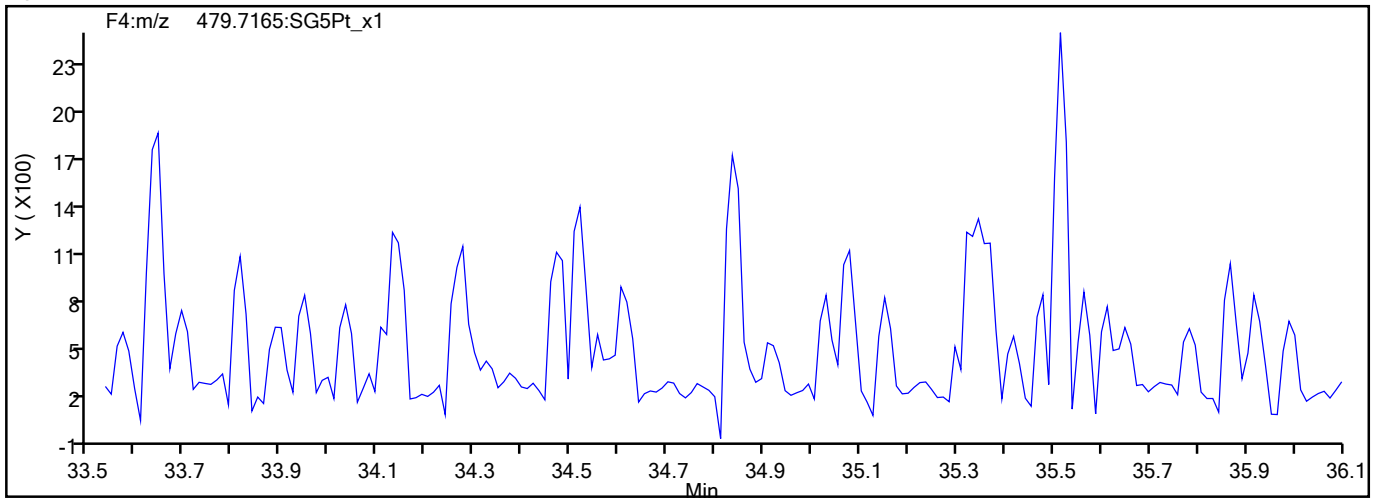

782722

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

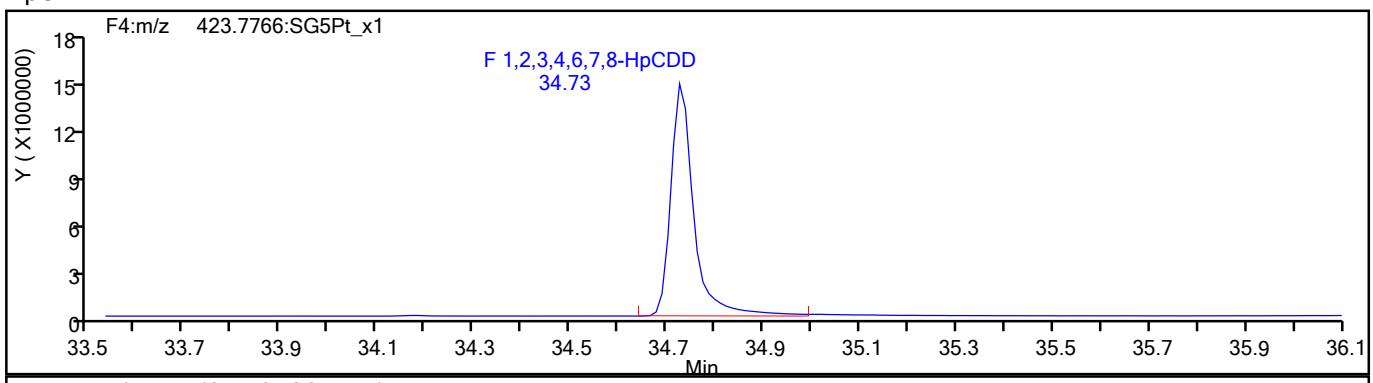

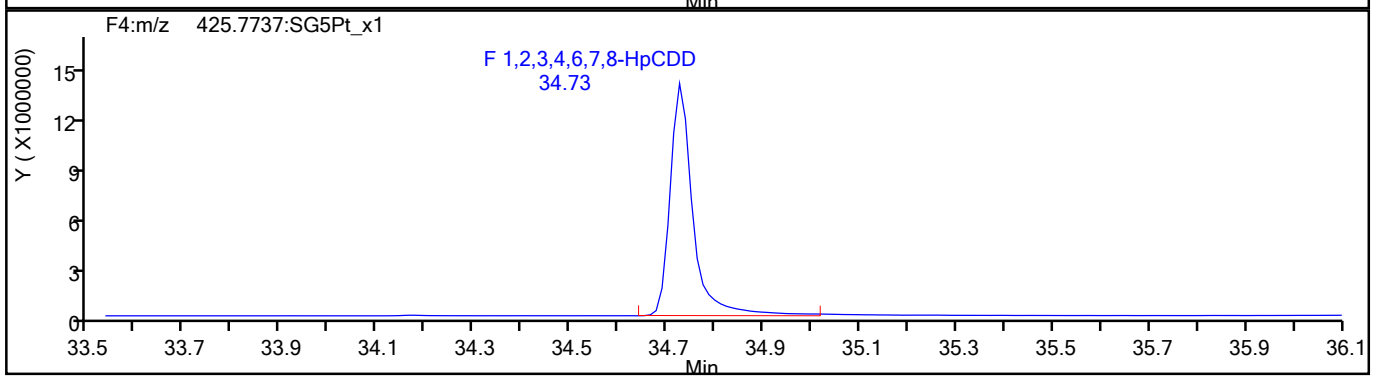

HpCDD Standards

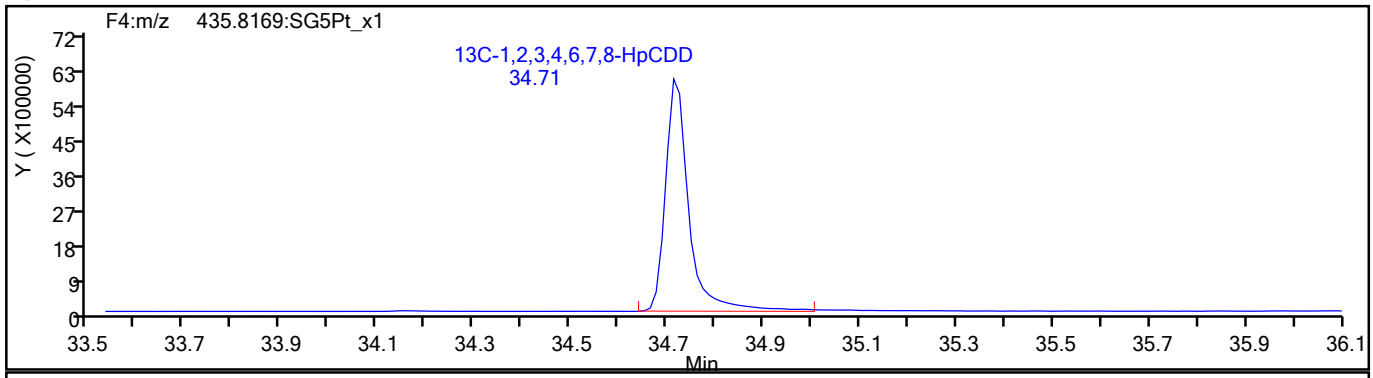

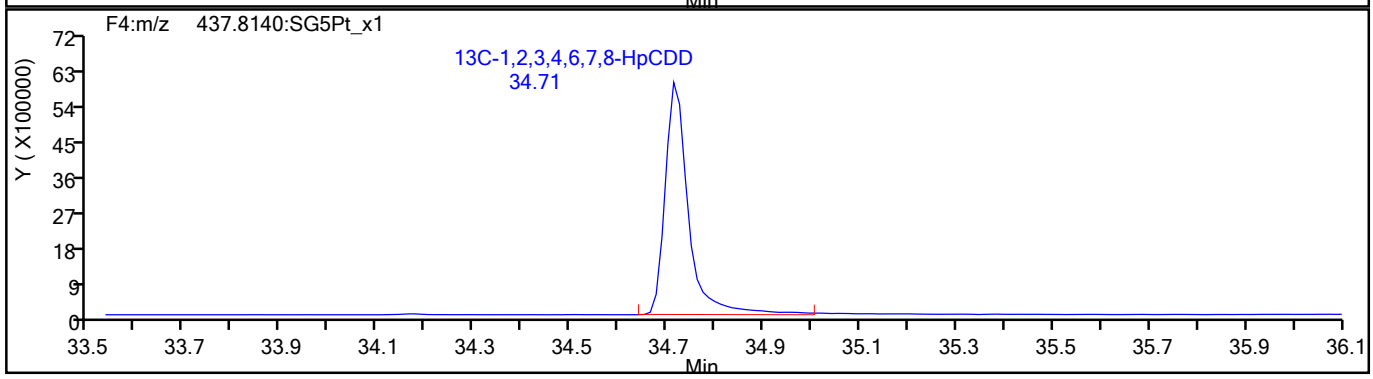

782723

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

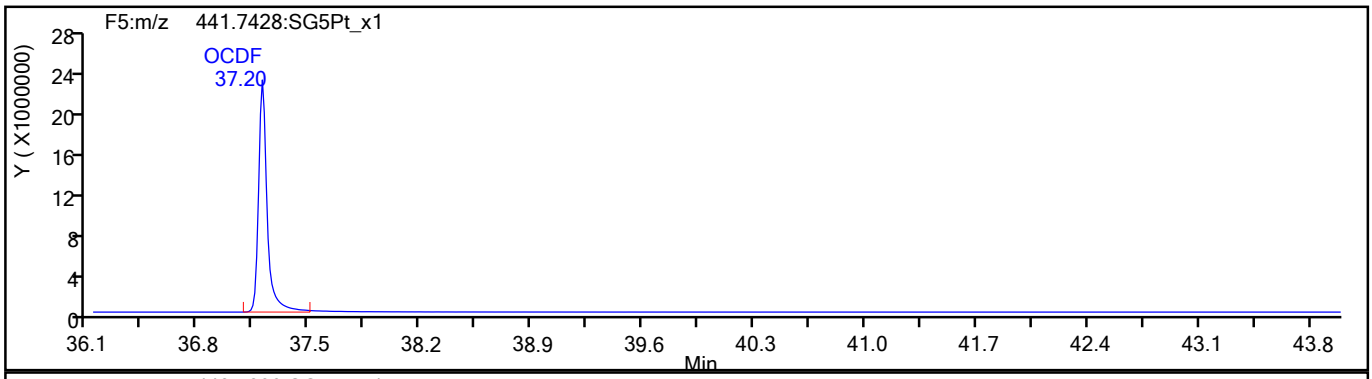

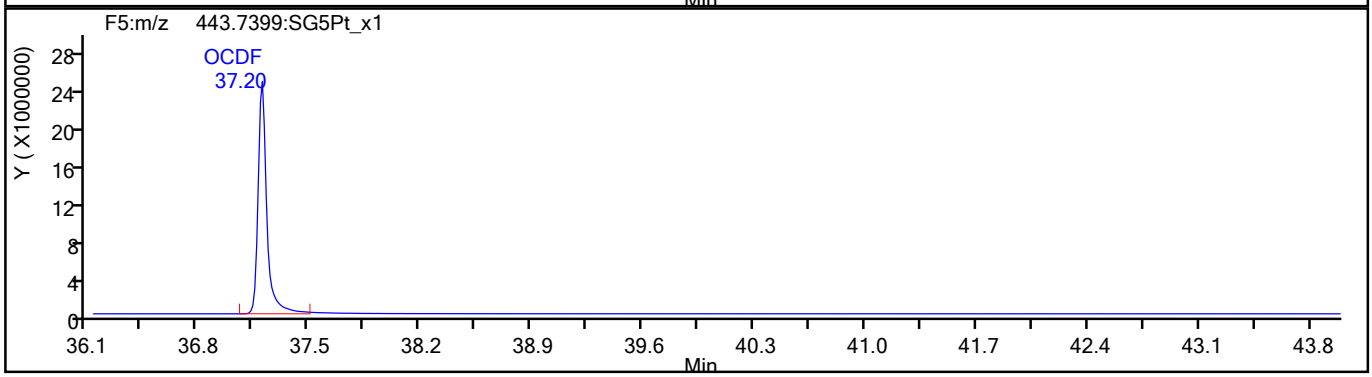

OCDF Standards

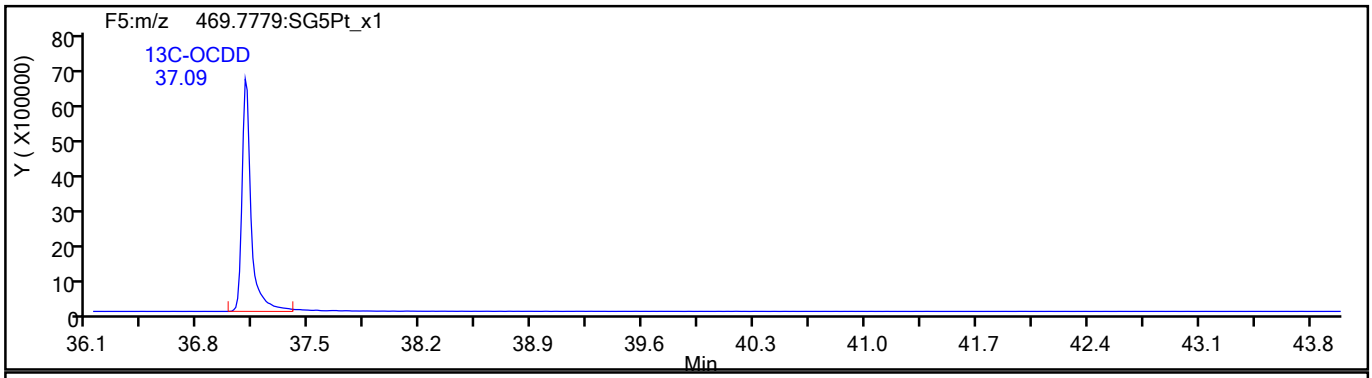

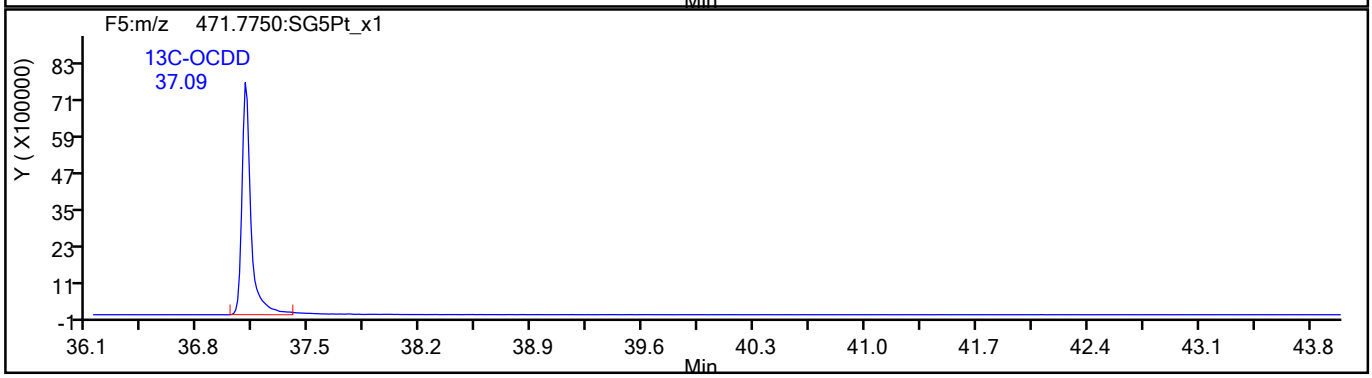

782724

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

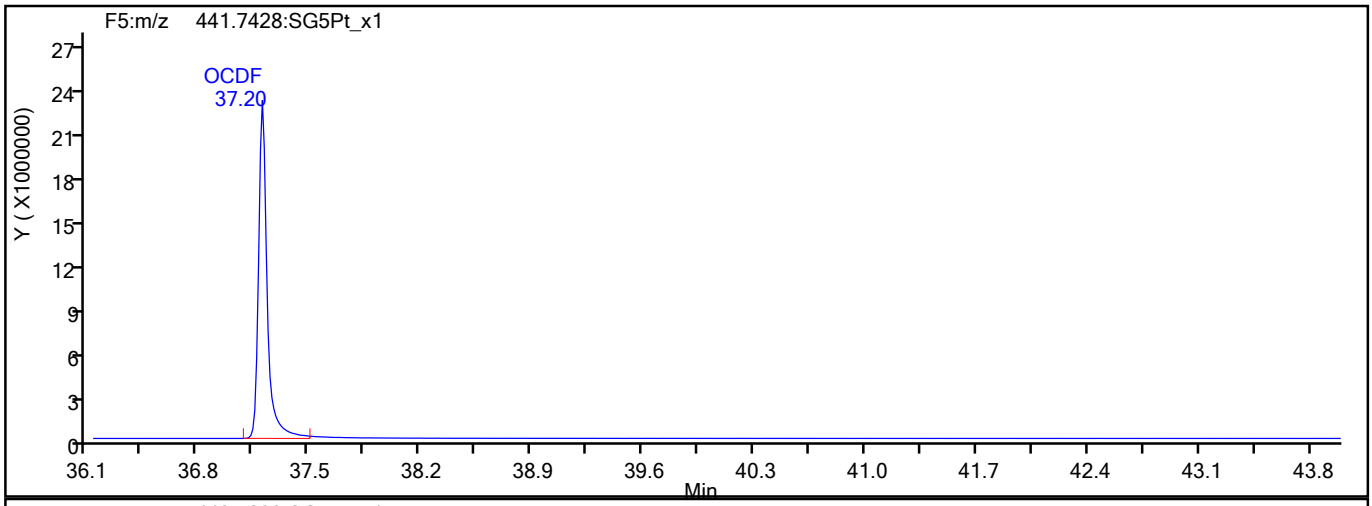

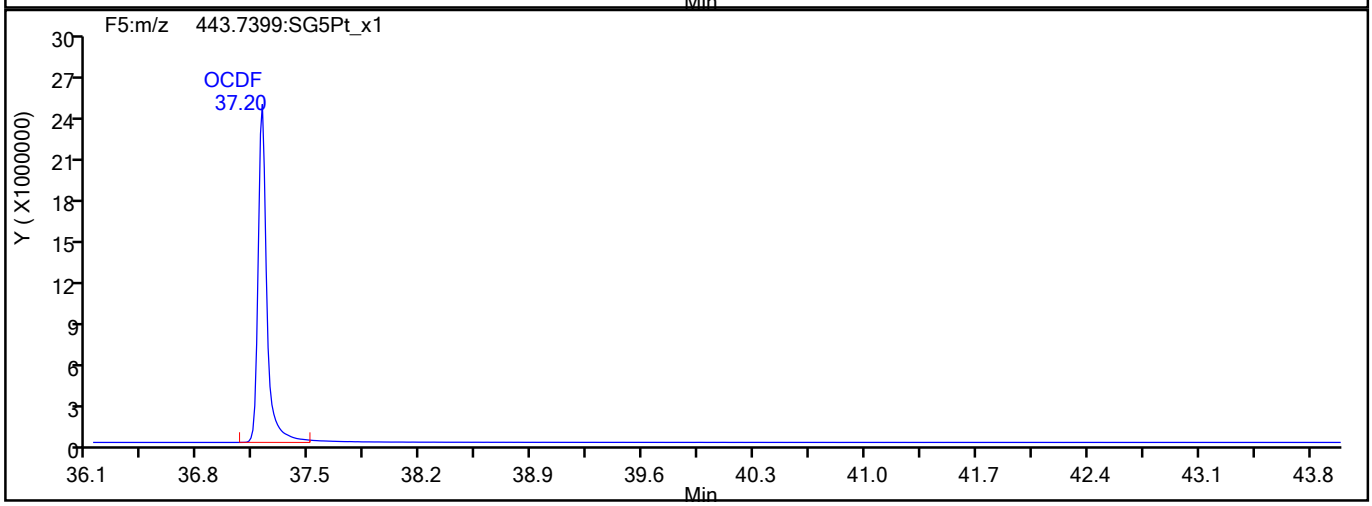

OCDF Interference Mass

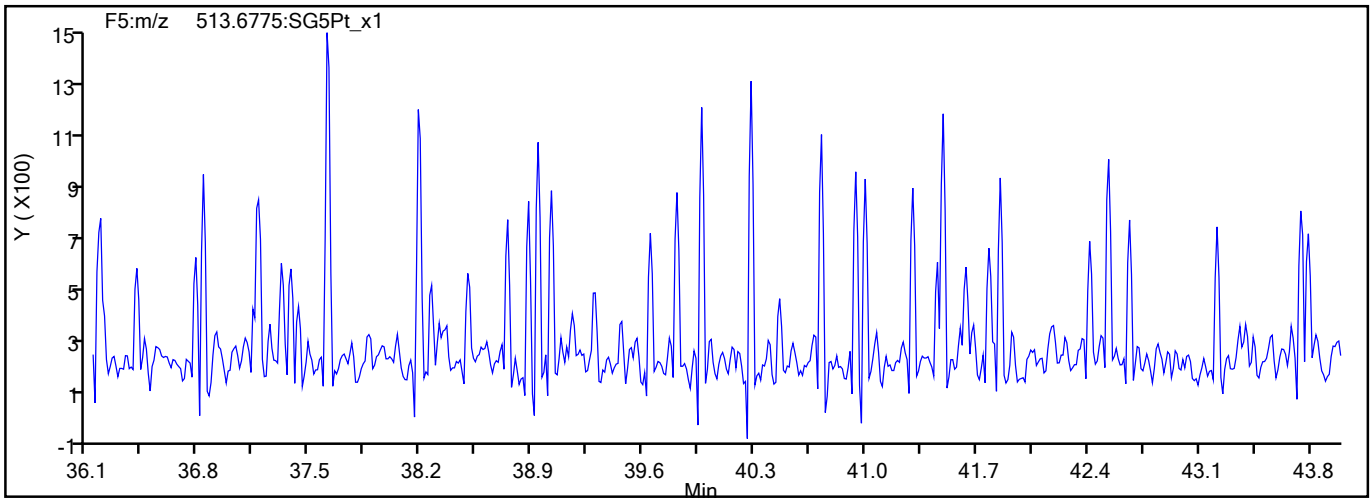

782725

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

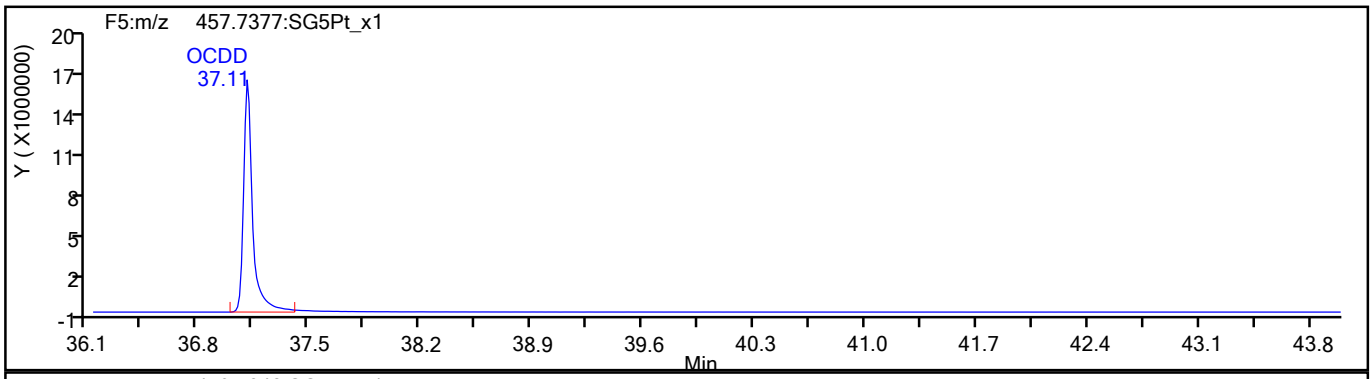

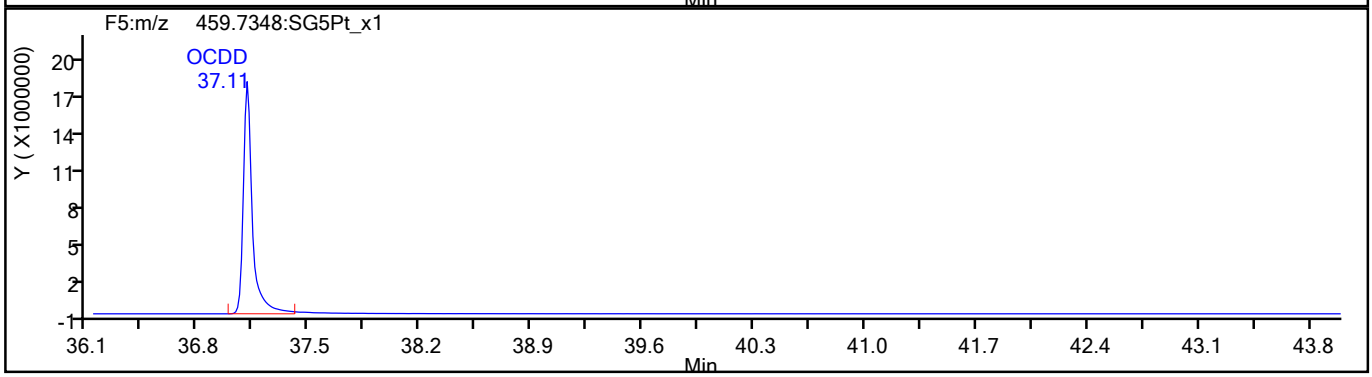

OCDD Standards

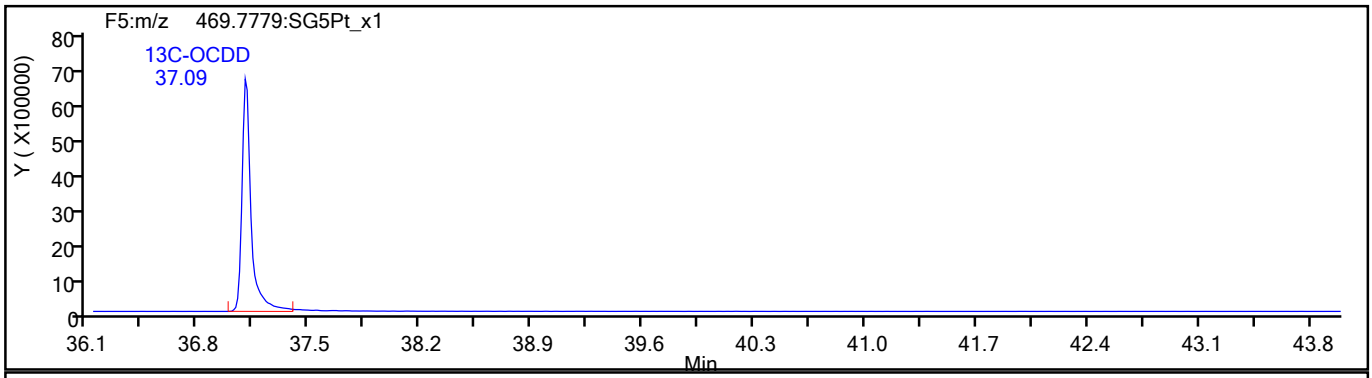

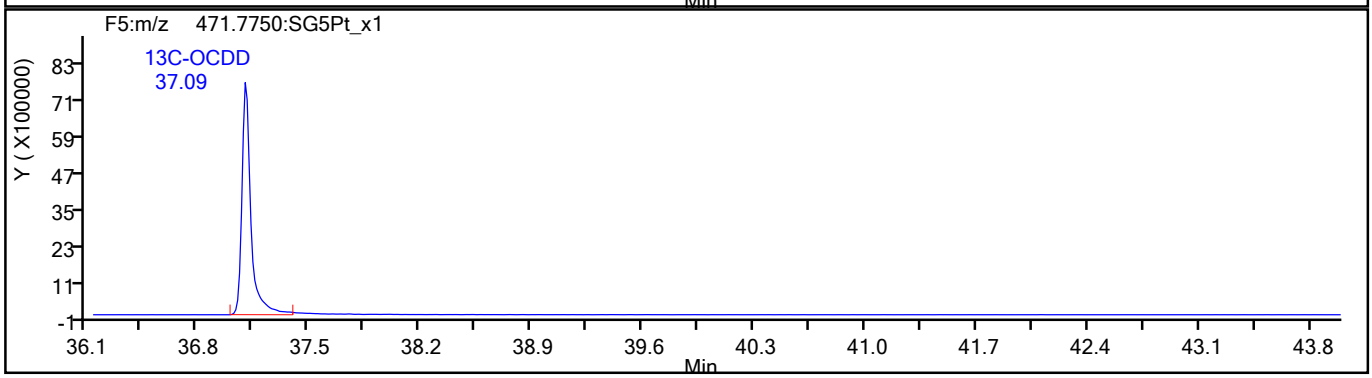

782726

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

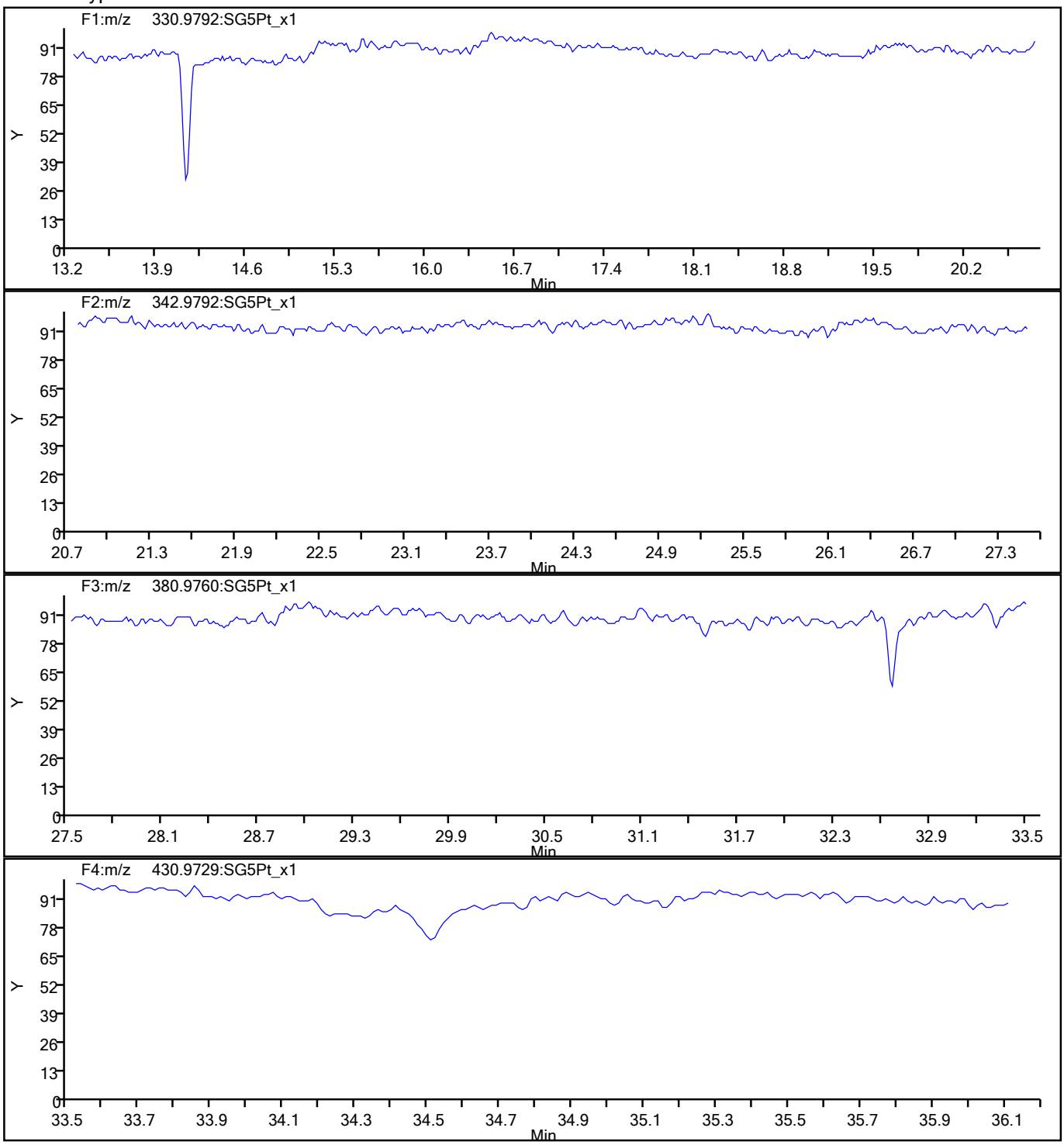

782727

Report Date: 27-Jul-2021 15:17:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

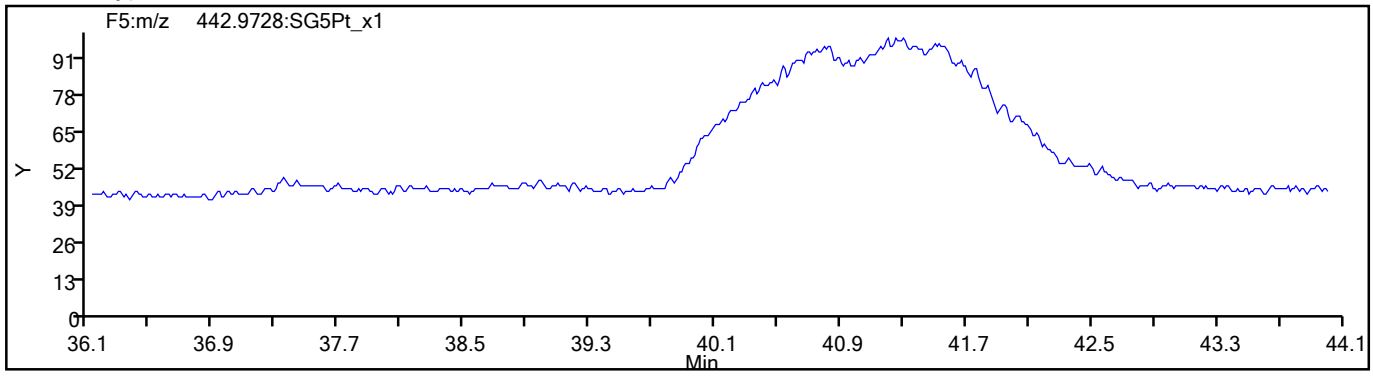

782728

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	57464333	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	95980421	0.79	1.6249	102.8	102.8	0.1660	0.1660	103	
2,3,7,8-TCDF	17.628	204575642	0.78	1.0239	208.2	208.2	0.2336	0.2336	104	
S Total TCDF					208.2	208.2	0.2336	0.2336		
D 13C-2,3,7,8-TCDD	18.338	53698206	0.83	0.8993	103.9	103.9	0.1396	0.1396	104	
$ 37Cl4-2,3,7,8-TCDD	18.354	140953034		1.1071	221.5	221.5	0.1318	0.1318	111	
2,3,7,8-TCDD	18.354	140421448	0.79	1.2541	208.5	208.5	0.1362	0.1362	104	
S Total TCDD					208.5	208.5	0.1362	0.1362		
D 13C-1,2,3,7,8-PeCDF	22.749	72829681	1.58	1.2101	104.7	104.7	0.2112	0.2112	105	
1,2,3,7,8-PeCDF	22.776	795873691	1.61	1.0611	1029.8	1029.8	2.482	2.482	103	
D 13C-2,3,4,7,8-PeCDF	24.126	75649463	1.61	1.2395	106.2	106.2	0.2062	0.2062	106	
2,3,4,7,8-PeCDF	24.153	783403837	1.59	1.0184	1016.8	1016.8	2.723	2.723	102	
S Total PeCDF					2046.7	2046.7	2.602	2.602		
D 13C-1,2,3,7,8-PeCDD	24.862	46251010	1.64	0.7612	105.7	105.7	0.1196	0.1196	106	
1,2,3,7,8-PeCDD	24.889	500555284	1.58	1.0484	1032.3	1032.3	0.8910	0.8910	103	
S Total PeCDD					1032.3	1032.3	0.8910	0.8910		
D 13C-1,2,3,4,7,8-HxCDF	30.835	67741189	0.53	1.0837	103.6	103.6	0.3784	0.3784	104	
1,2,3,4,7,8-HxCDF	30.862	737075796	1.21	1.0851	1002.7	1002.7	4.903	4.903	100	
D 13C-1,2,3,6,7,8-HxCDF	31.008	67363664	0.51	1.1279	99.0	99.0	0.3636	0.3636	98.97	
1,2,3,6,7,8-HxCDF	31.021	785709889	1.22	1.1260	1035.8	1035.8	4.873	4.873	104	
D 13C-2,3,4,6,7,8-HxCDF	31.754	63471184	0.52	1.0637	98.9	98.9	0.3855	0.3855	98.87	
2,3,4,6,7,8-HxCDF	31.767	762810877	1.21	1.1675	1029.4	1029.4	3.909	3.909	103	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58669892	0.52	0.9676	100.5	100.5	0.4238	0.4238	100	
1,2,3,7,8,9-HxCDF	32.539	708280047	1.22	1.1664	1035.0	1035.0	4.123	4.123	104	
S Total HxCDF					4103.0	4103.0	4.452	4.452		
* 13C-1,2,3,7,8,9-HxCDD	32.339	60348148	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	46886171	1.24	0.7334	105.9	105.9	0.3391	0.3391	106	
1,2,3,4,7,8-HxCDD	31.940	484857042	1.26	1.0640	971.9	971.9	2.786	2.786	97.19	
D 13C-1,2,3,6,7,8-HxCDD	32.033	53564396	1.27	0.8802	100.8	100.8	0.2826	0.2826	101	
1,2,3,6,7,8-HxCDD	32.047	543061818	1.27	1.0001	1013.8	1013.8	2.795	2.795	101	
1,2,3,7,8,9-HxCDD	32.353	563888565	1.26	1.1325	991.3	991.3	2.541	2.541	99.13	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDD					2977.0	2977.0	2.707	2.707		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	46328151	0.45	0.7730	99.3	99.3	0.9693	0.9693	99.31	
1,2,3,4,6,7,8-HpCDF	33.924	681312007	1.05	1.4413	1020.4	1020.4	8.187	8.187	102	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44333848	0.44	0.7008	104.8	104.8	1.069	1.069	105	
1,2,3,4,7,8,9-HpCDF	35.017	590555312	1.06	1.3174	1011.1	1011.1	10.5	10.5	101	
S Total HpCDF					2031.5	2031.5	9.356	9.356		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	39395832	1.02	0.6472	100.9	100.9	0.4739	0.4739	101	
1,2,3,4,6,7,8-HpCDD	34.726	441437476	1.05	1.0943	1024.0	1024.0	3.855	3.855	102	
S Total HpCDD					1024.0	1024.0	3.855	3.855		
D 13C-OCDD	37.093	56623863	0.89	0.4472	209.8	209.8	0.2327	0.2327	105	
OCDF	37.201	856685987	0.91	1.4382	2104.0	2104.0	1.905	1.905	105	
OCDD	37.105	635652839	0.90	1.1070	2028.1	2028.1	1.855	1.855	101	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		26125466	6597193	4577	11442	1441		
333.9339	18.142	18.142	0		31338867	7893522	2702	6755	2921	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42243137	10877420	7832	19580	1389		
317.9389	17.613	17.616	0	0.971	53737284	13863668	7802	19505	1777	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	89710432	22799700	10338	25845	2205		
305.8987	17.628	17.631	0	1.001	114865210	29189675	13335	33337	2189	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24360997	5757558	4577	11442	1258		
333.9339	18.338	18.338	0	1.011	29337209	6914283	2702	6755	2559	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	140953034	33738158	8459	21147	3988		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	62065087	14965631	3913	9782	3825		
321.8936	18.354	18.357	0	1.001	78356361	18744482	4747	11867	3949	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44649559	7939527	8573	21432	926		
353.8970	22.749	22.754	0	1.254	28180122	5062354	6242	15605	811	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	490871580	87021007	84135	210337	1034		
341.8567	22.776	22.779	0	1.001	305002111	54503599	52854	132135	1031	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46717935	7613965	8573	21432	888		
353.8970	24.126	24.129	0	1.330	28931528	4737188	6242	15605	759	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	480352978	79104825	84135	210337	940		
341.8567	24.153	24.156	0	1.001	303050859	50060127	52854	132135	947	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28720712	4433240	3087	7717	1436		
369.8919	24.862	24.865	0	1.370	17530298	2751802	2189	5472	1257	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	306292917	47311146	15348	38370	3083		
357.8516	24.889	24.892	0	1.001	194262367	30133208	11499	28747	2621	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23491874	5084915	9674	24185	526		
385.8610	30.835	30.838	0	0.953	44249315	9441190	17790	44475	531	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	404173144	87133654	170642	426605	511		
375.8178	30.848	30.857	0	1.000	332902652	71216591	138478	346195	514	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	22854682	4877346	9674	24185	504		
385.8610	31.008	31.003	0	0.959	44508982	9206926	17790	44475	518	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.000	431948071	93438031	170642	426605	548		
375.8178	31.021	31.022	0	1.000	353761818	76246532	138478	346195	551	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	21747421	5871662	9674	24185	607		
385.8610	31.754	31.756	0	0.982	41723763	11062051	17790	44475	622	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	417841952	110026703	170642	426605	645		
375.8178	31.767	31.772	0	1.000	344968925	92108448	138478	346195	665	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20172563	5575575	9674	24185	576		
385.8610	32.512	32.523	-1	1.005	38497329	10495423	17790	44475	590	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	388834443	107441652	170642	426605	630		
375.8178	32.526	32.534	0	1.000	319445604	89819128	138478	346195	649	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33485933	9289499	8951	22377	1038		
403.8529	32.339	32.342	0		26862215	7454274	7708	19270	967	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	25994948	7598983	8951	22377	849		
403.8529	31.927	31.929	0	0.987	20891223	6054958	7708	19270	786	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	270288224	77533273	86149	215372	900		
391.8127	31.940	31.945	0	1.000	214568818	61952830	75747	189367	818	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29946566	8106259	8951	22377	906		
403.8529	32.033	32.033	0	0.991	23617830	6373294	7708	19270	827	1.27(1.05-1.43)	

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	303387935	83103965	86149	215372	965		
391.8127	32.047	32.047	0	1.000	239673883	65565020	75747	189367	866	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	314172702	87971106	86149	215372	1021		
391.8127	32.353	32.355	0	1.013	249715863	70210414	75747	189367	927	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14282220	4787635	15981	39952	300		
419.8220	33.912	33.914	0	1.049	32045931	10687518	34202	85505	312	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	349397605	118035783	389676	974190	303		
409.7789	33.924	33.926	0	1.000	331914402	111658032	340706	851765	328	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13509696	4047534	15981	39952	253		
419.8220	35.005	35.010	0	1.082	30824152	9120201	34202	85505	267	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	303260617	91538482	389676	974190	235		
409.7789	35.017	35.020	0	1.000	287294695	87143866	340706	851765	256	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19890119	6131671	10444	26110	587		
437.8140	34.714	34.716	0	1.073	19505713	6051375	10100	25250	599	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	225857690	69087451	102453	256132	674		
425.7737	34.726	34.726	0	1.000	215579786	65898474	103127	257817	639	1.05(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26710485	6689918	2659	6647	2516		
471.7750	37.093	37.094	0	1.147	29913378	7452640	4311	10777	1729	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	409115360	108366645	37076	92690	2923		
443.7399	37.201	37.199	0	1.003	447570627	117808946	40434	101085	2914	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	300559615	76562352	27801	69502	2754		
459.7348	37.105	37.106	0	1.000	335093224	85854399	30277	75692	2836	0.90(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

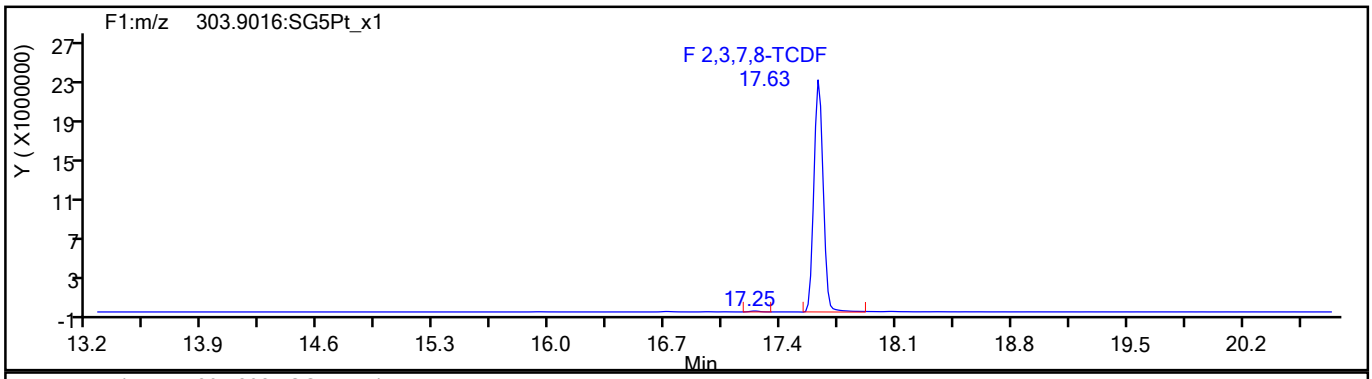

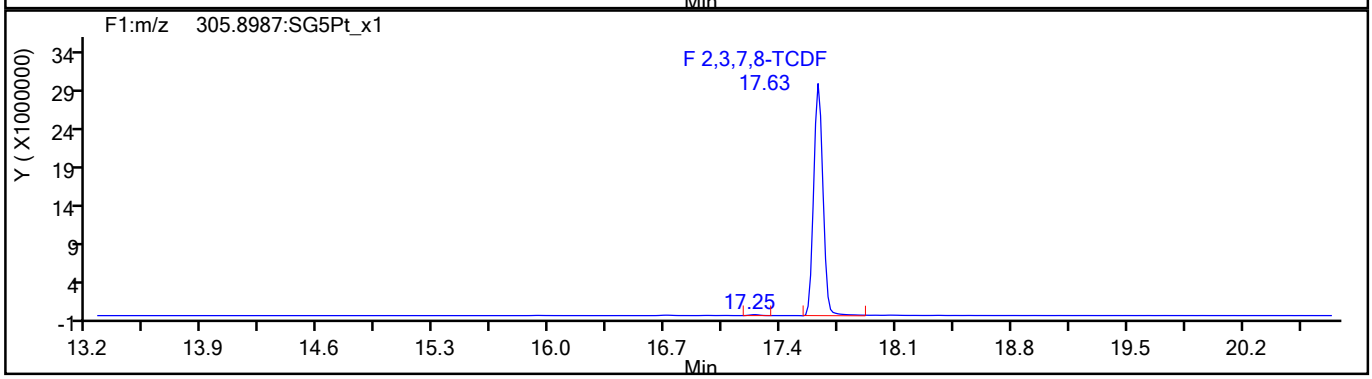

TCDF Standards

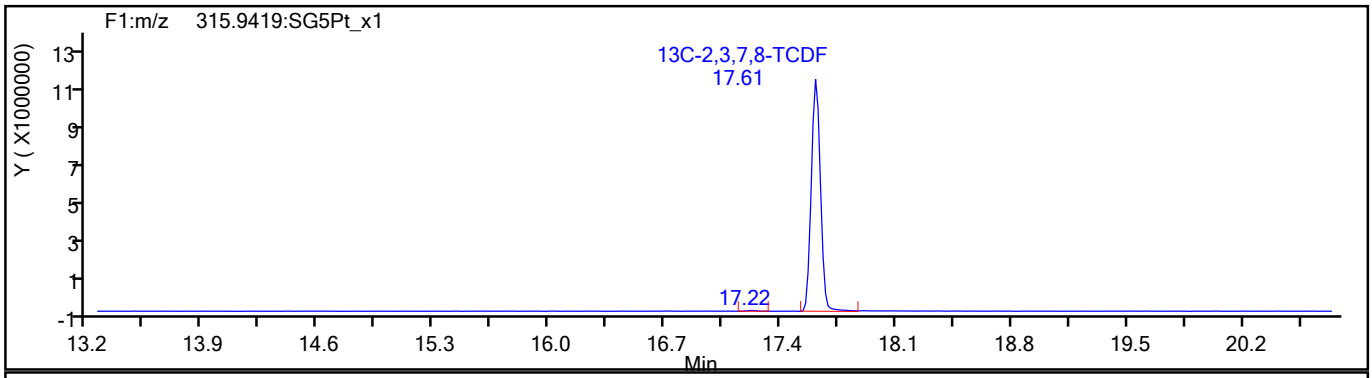

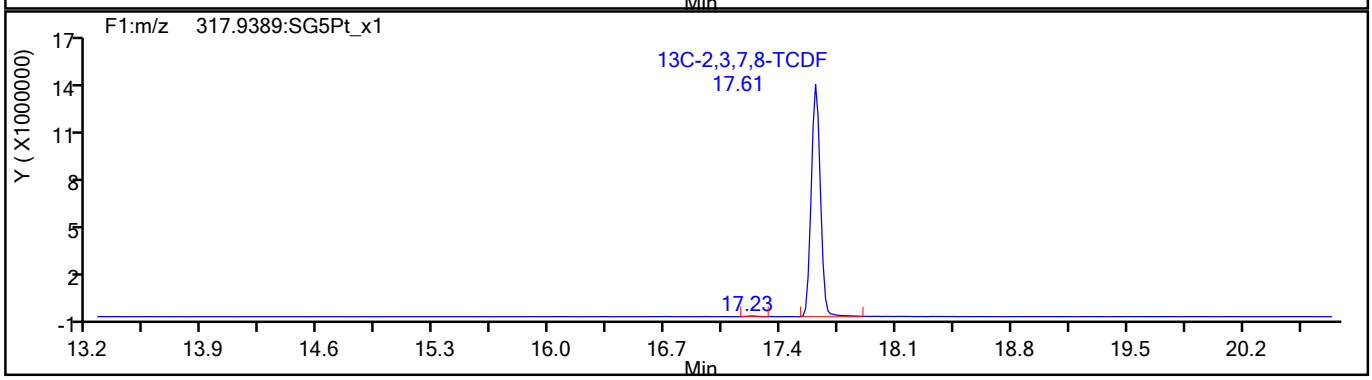

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Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

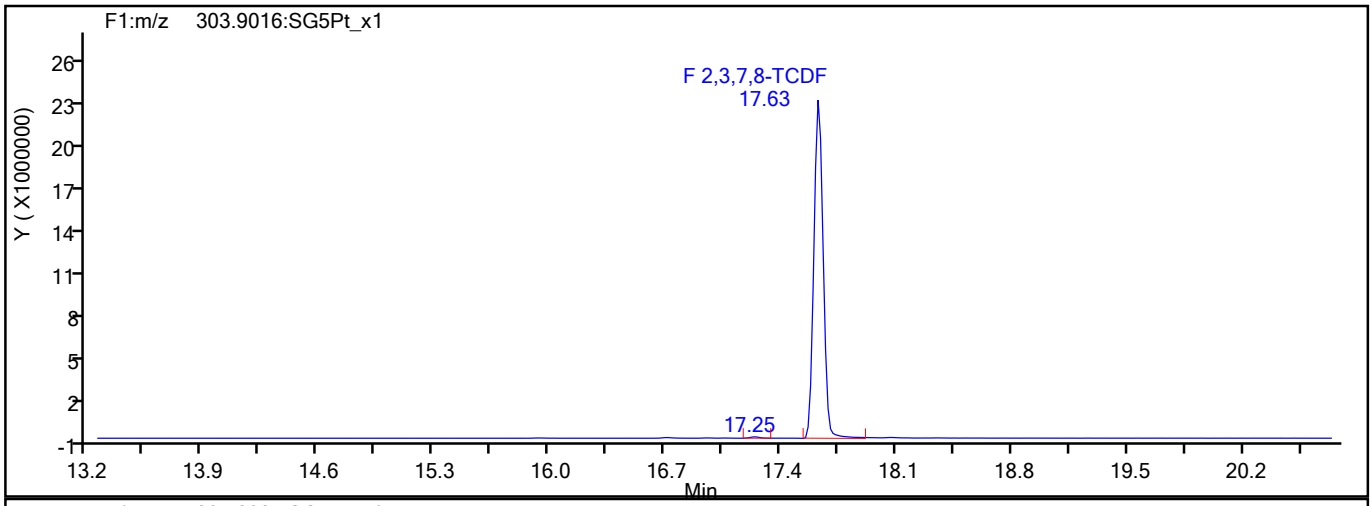

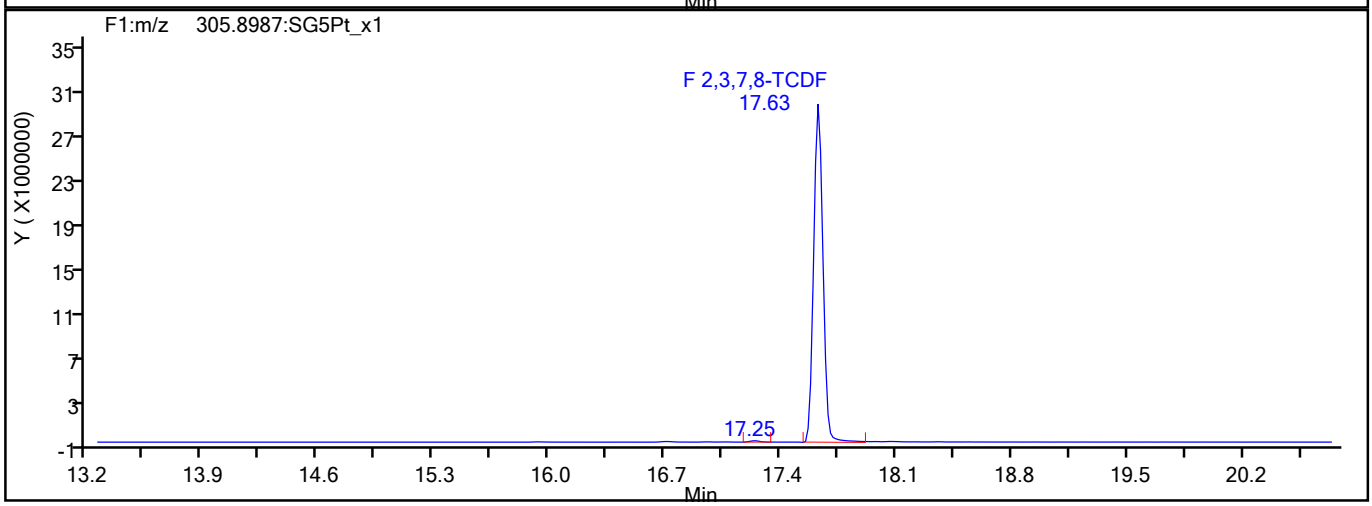

TCDF Interference Mass

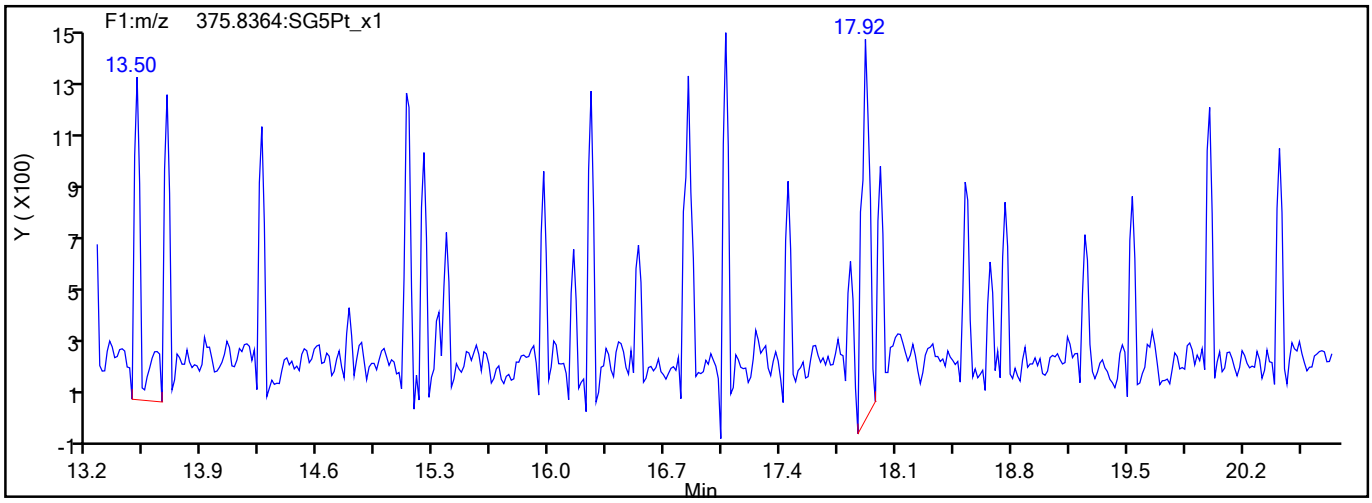

782735

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

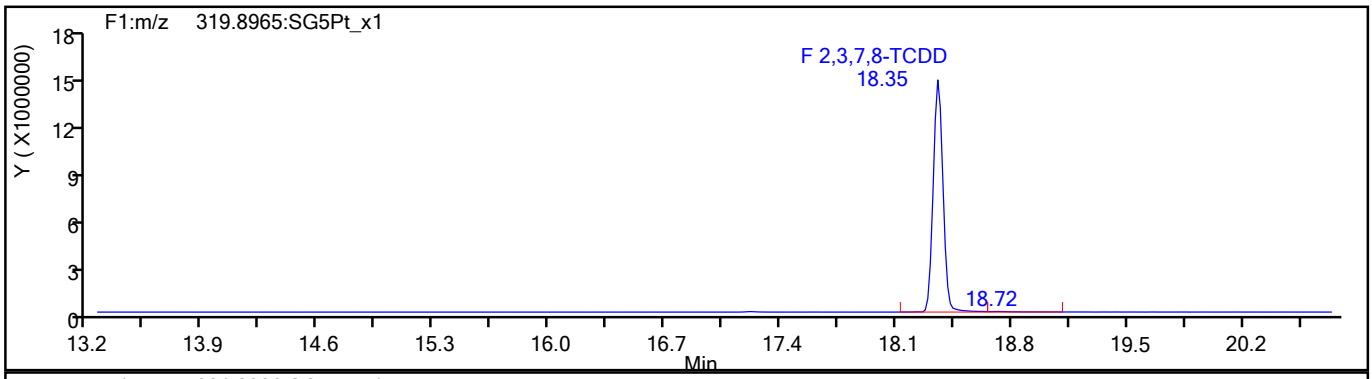

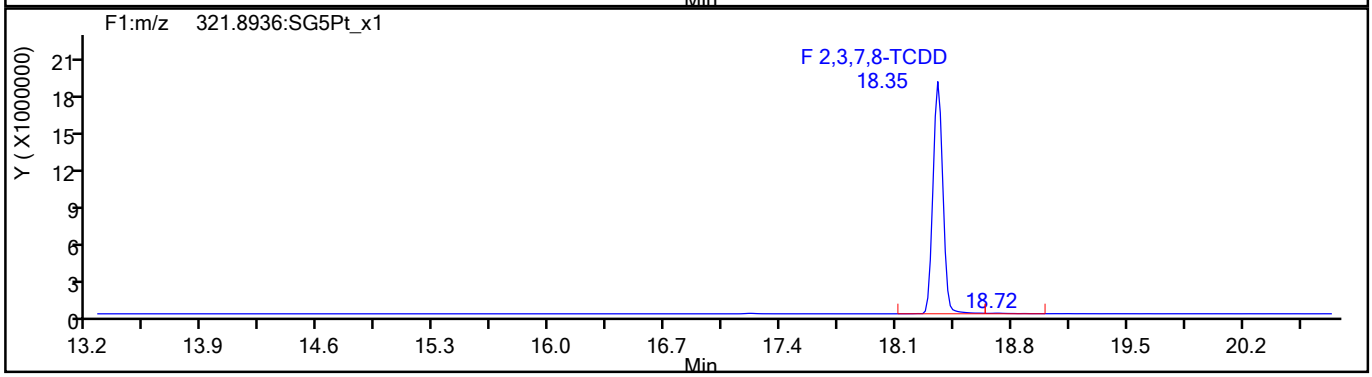

TCDD Standards

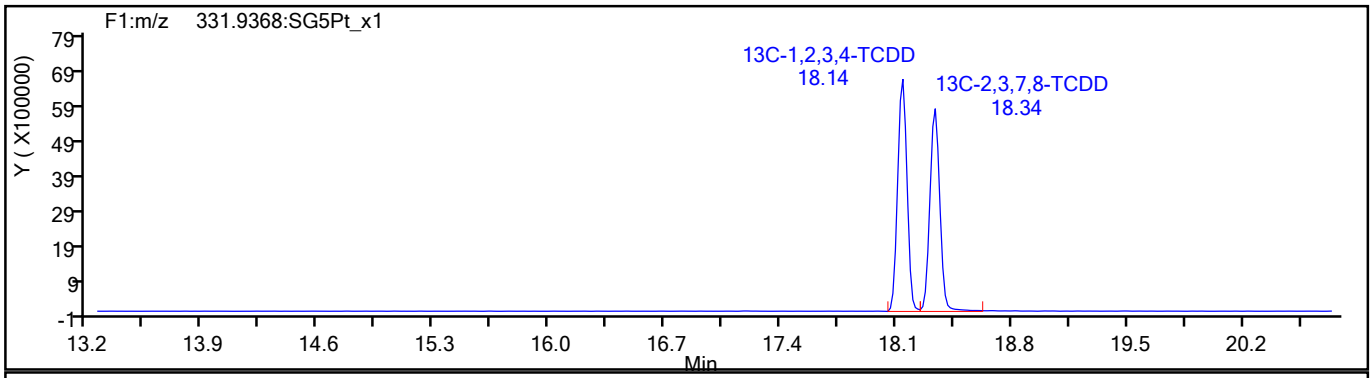

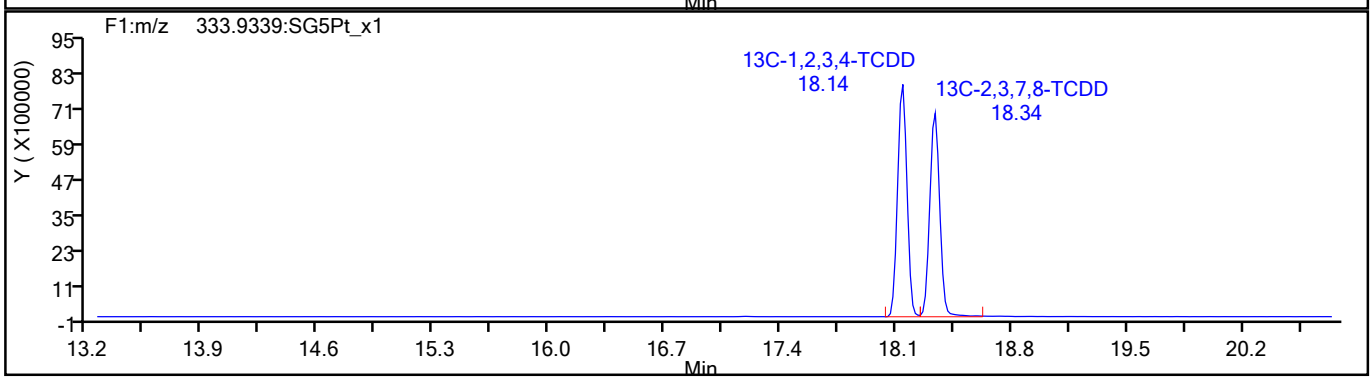

782736

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

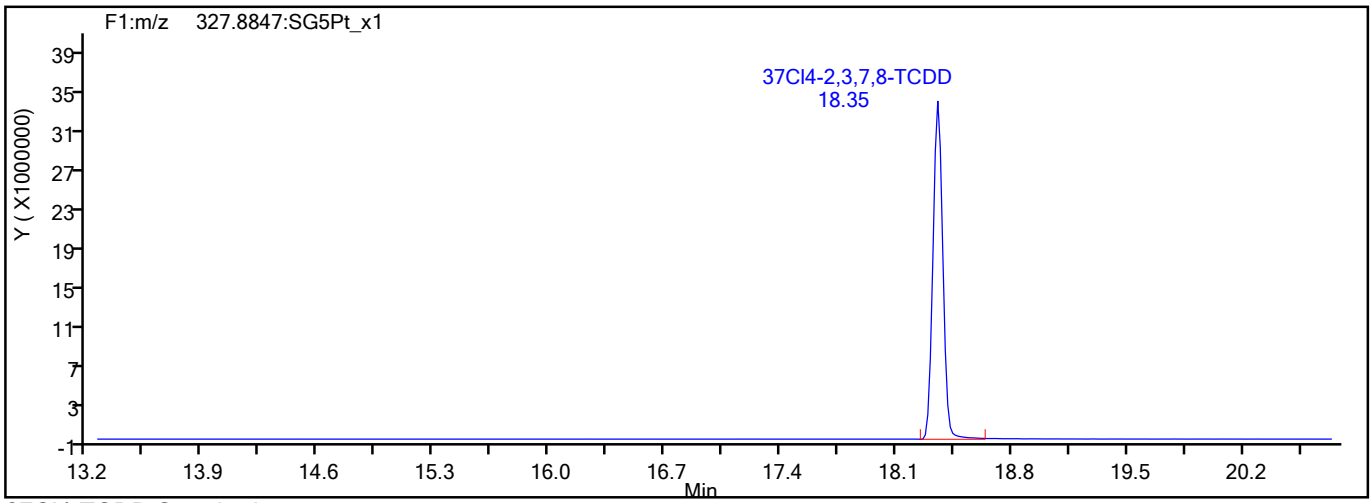

37Cl4-TCDD Standards

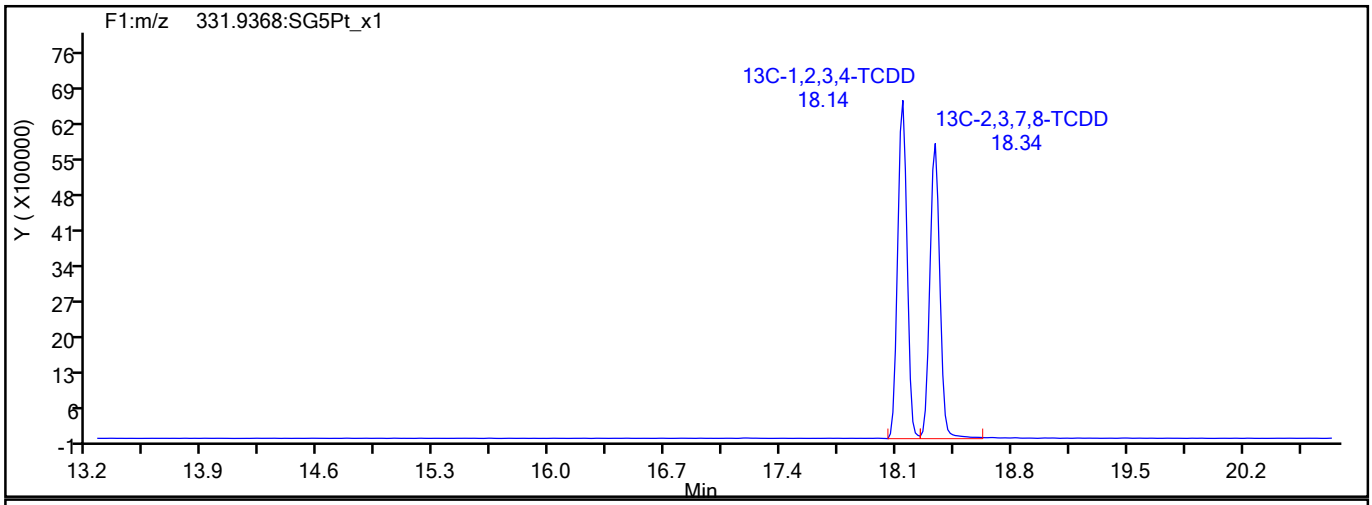

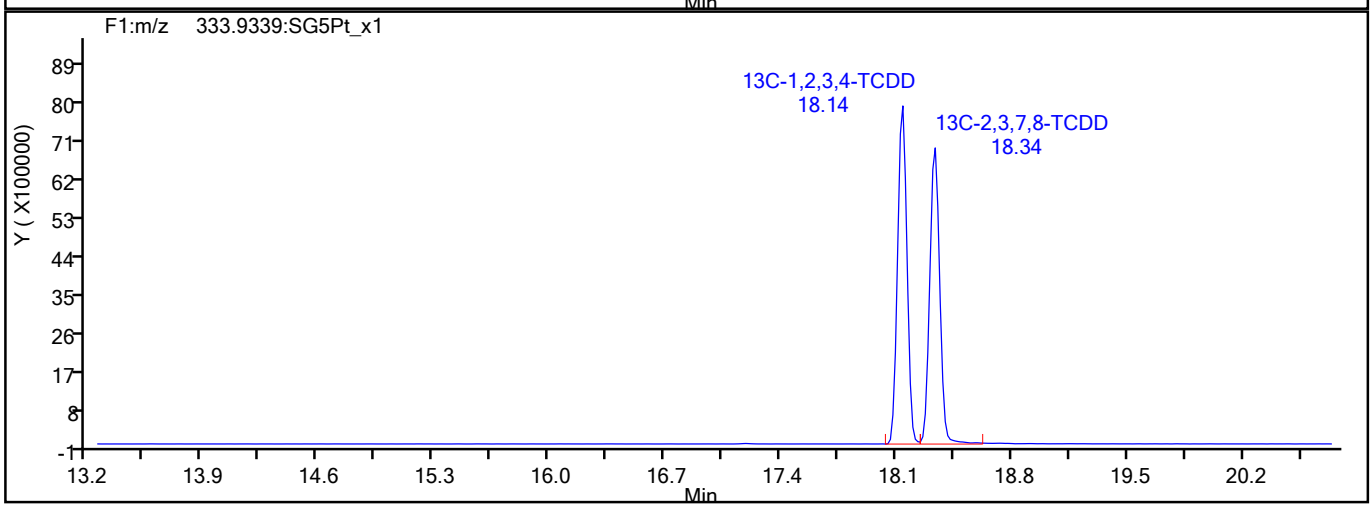

782737

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

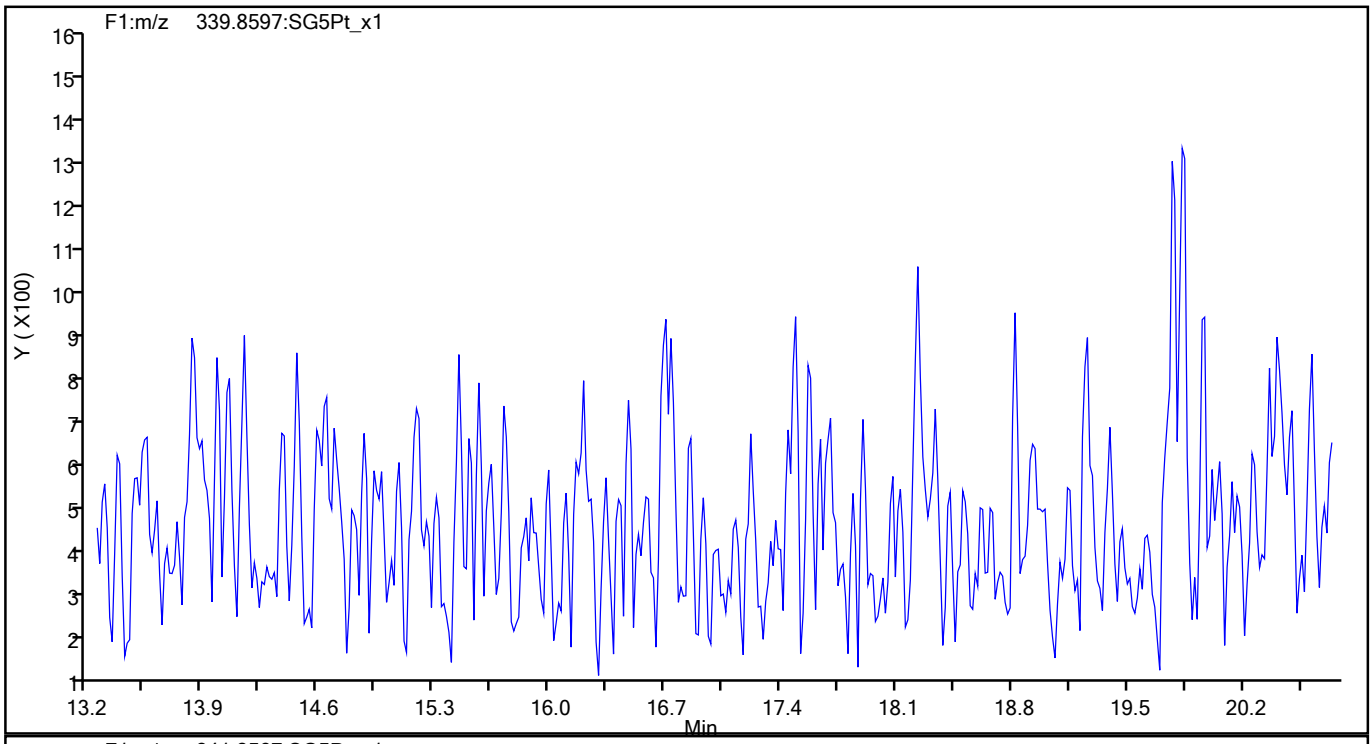

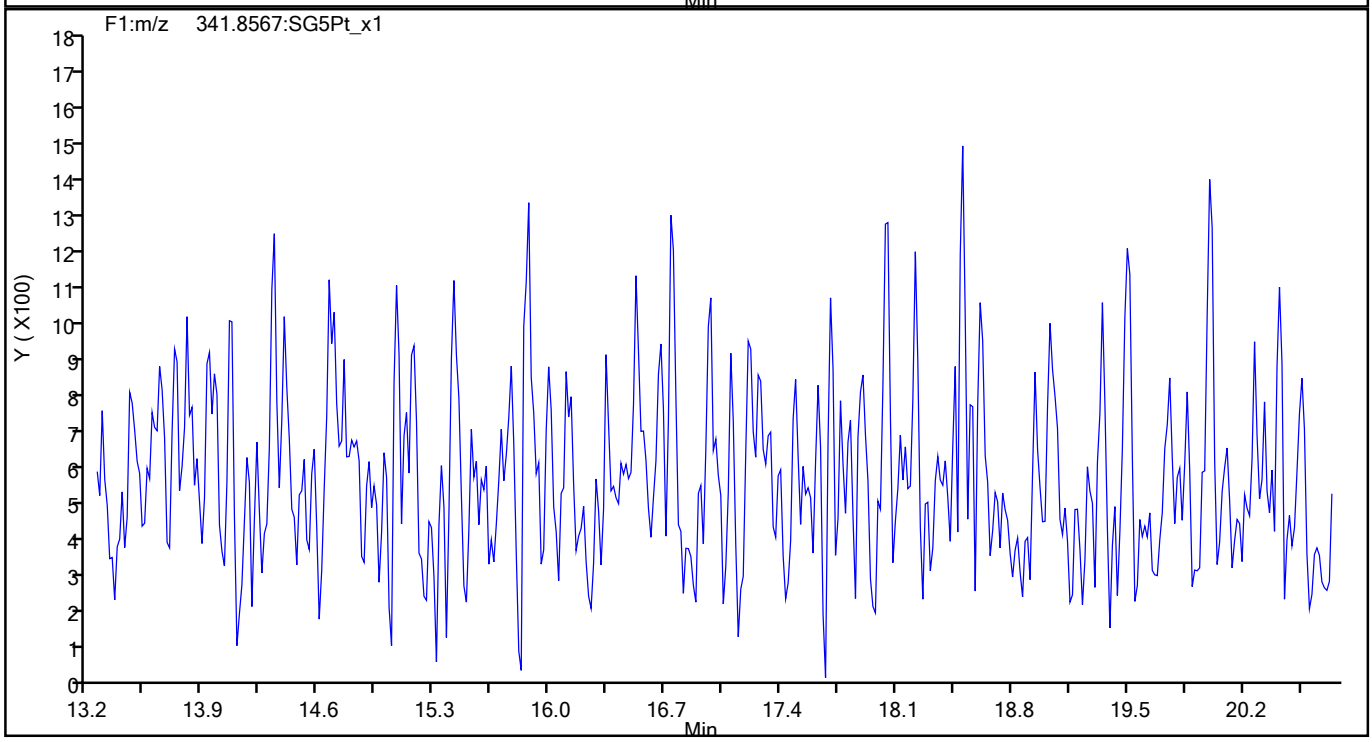

782738

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

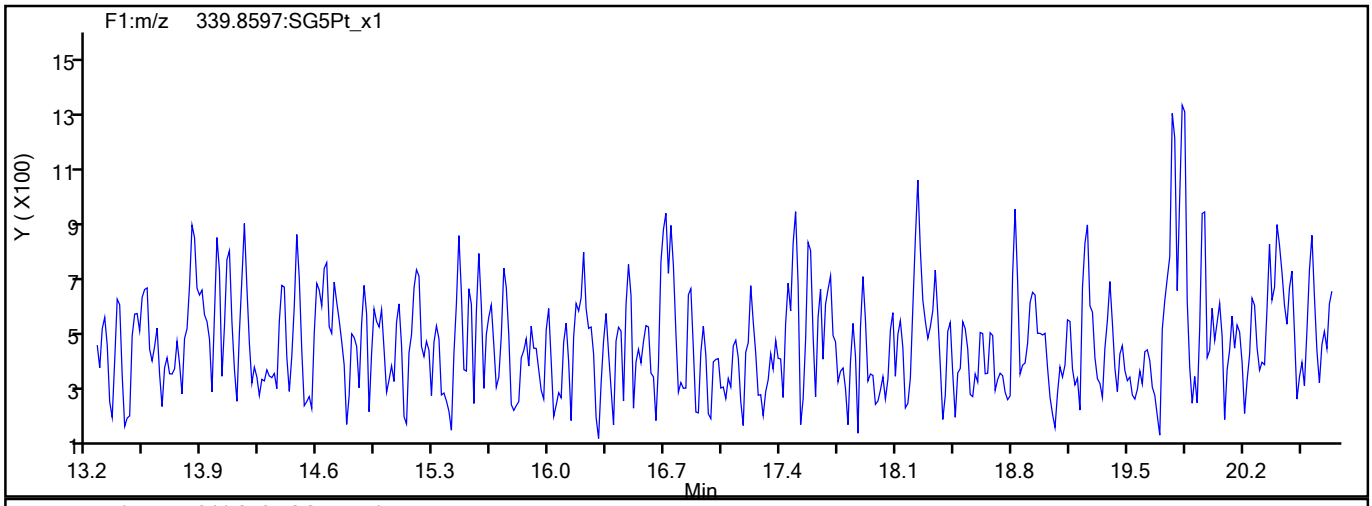

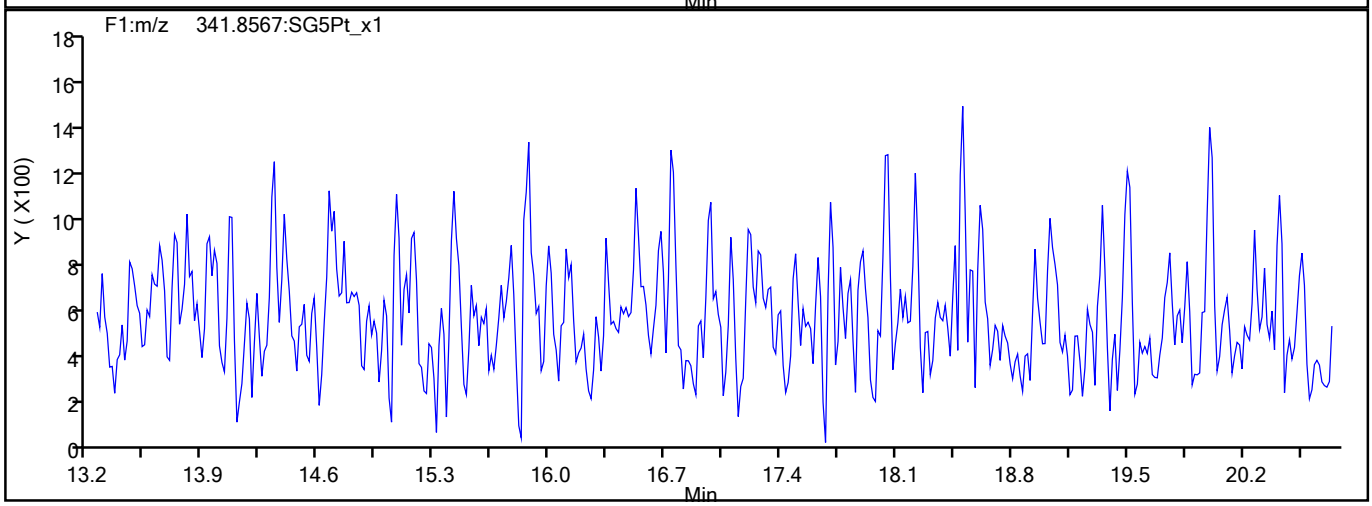

F1 PeCDFs Interference Mass

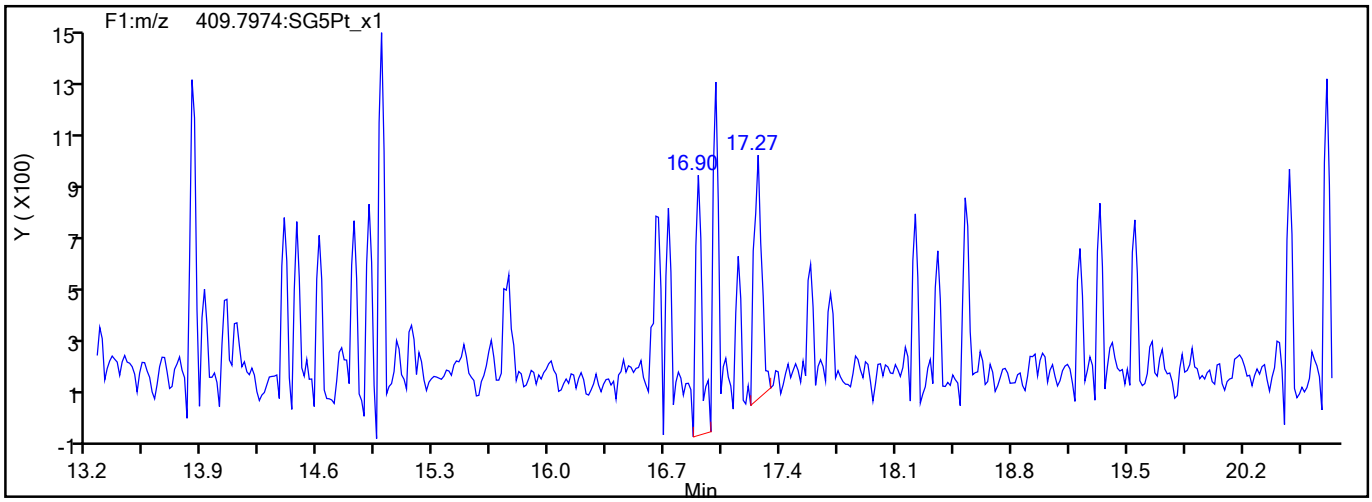

782739

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

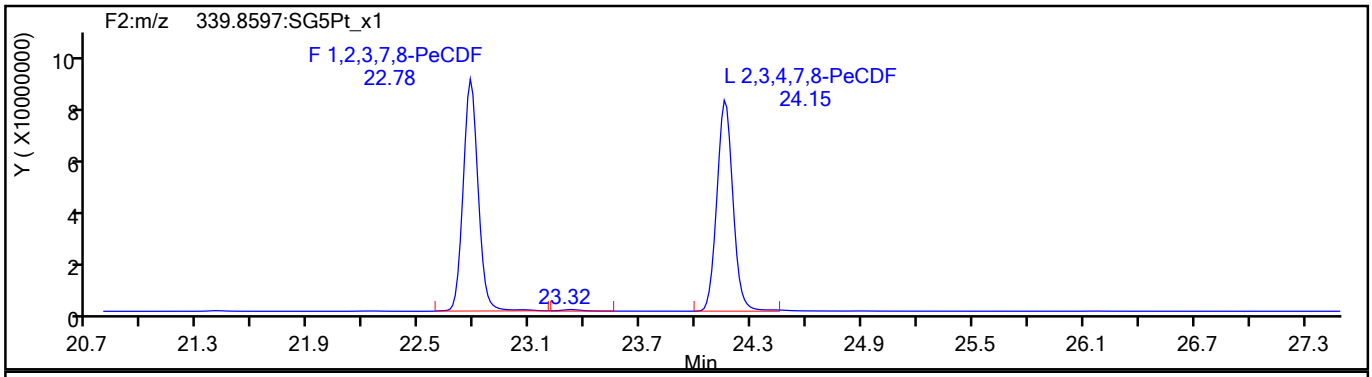

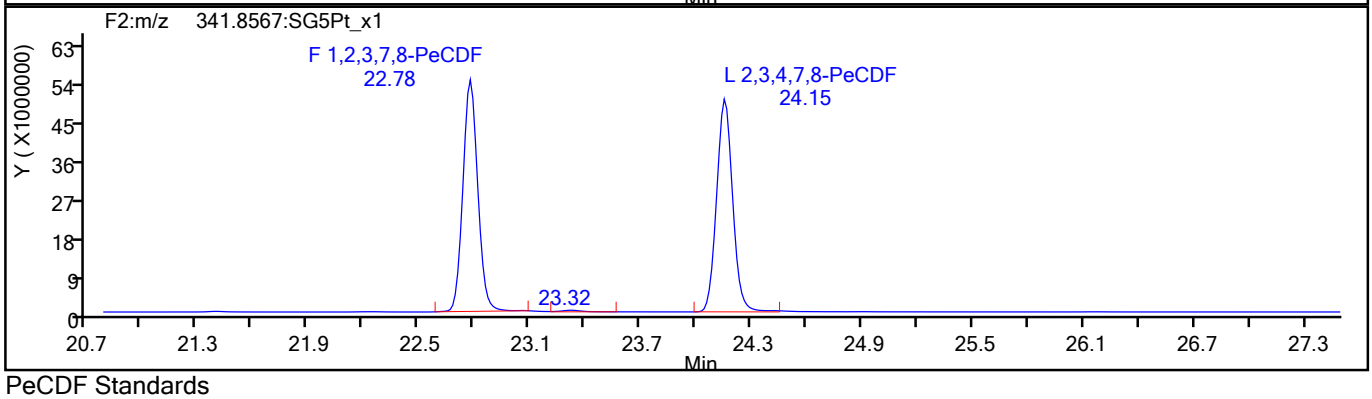

PeCDF Standards

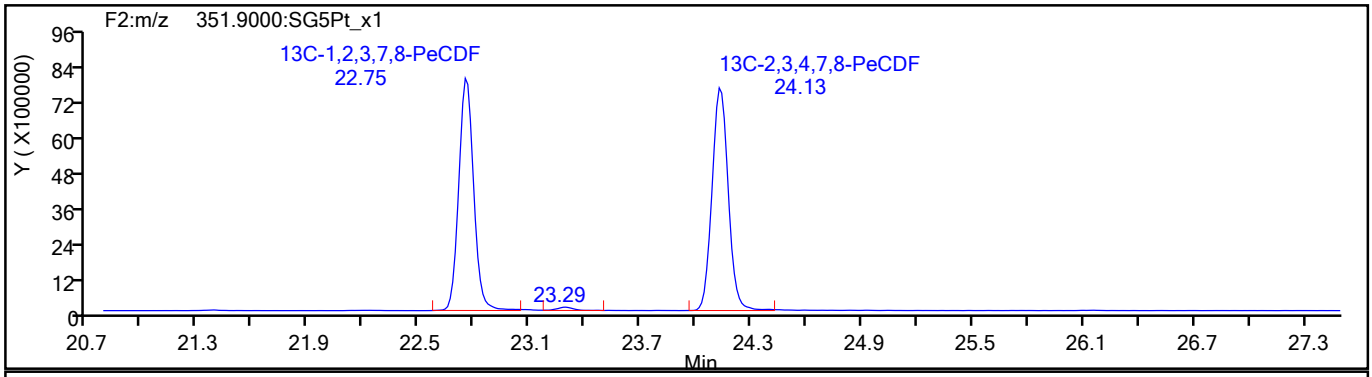

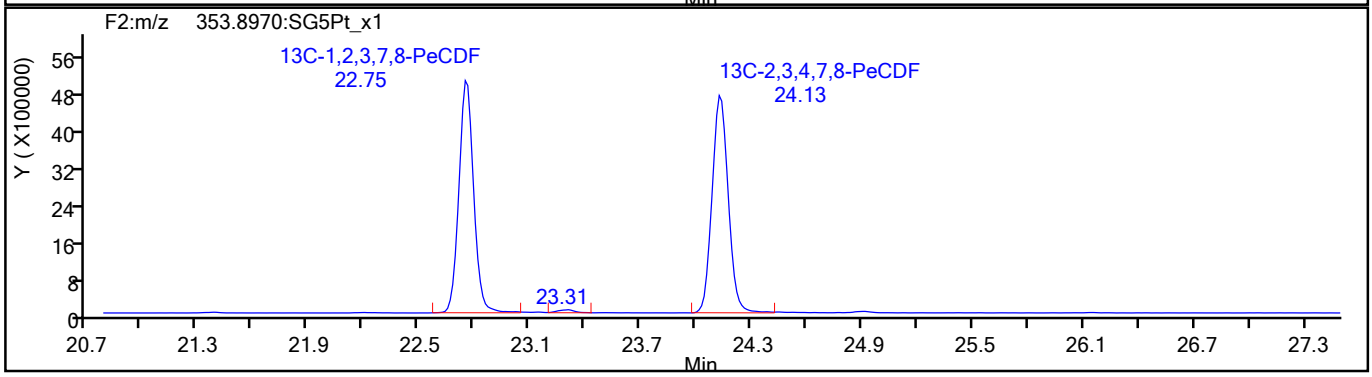

782740

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

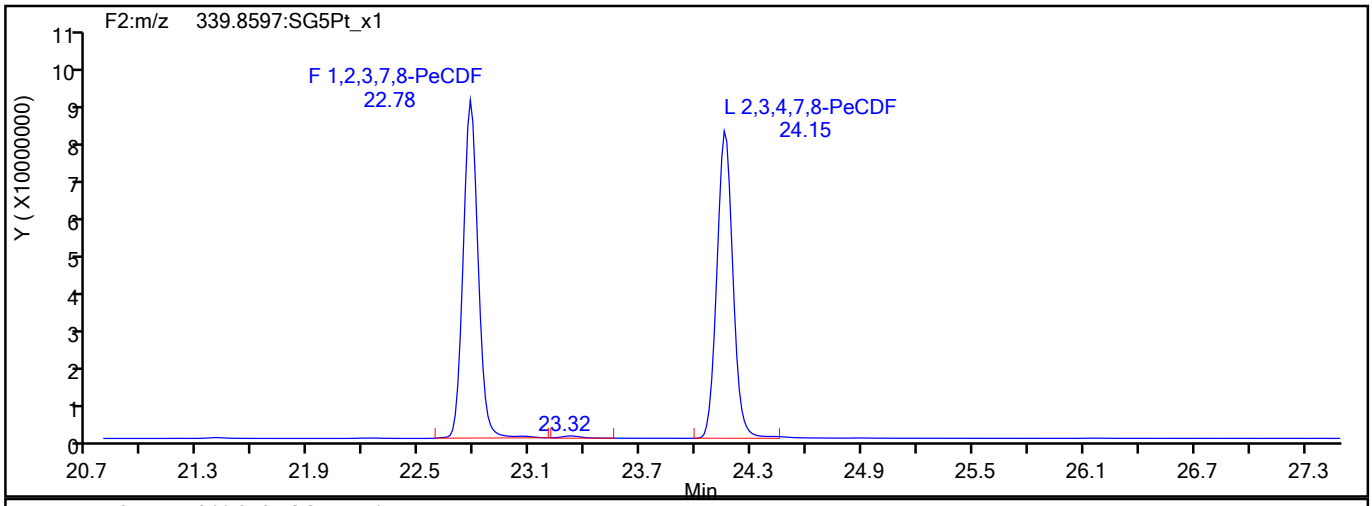

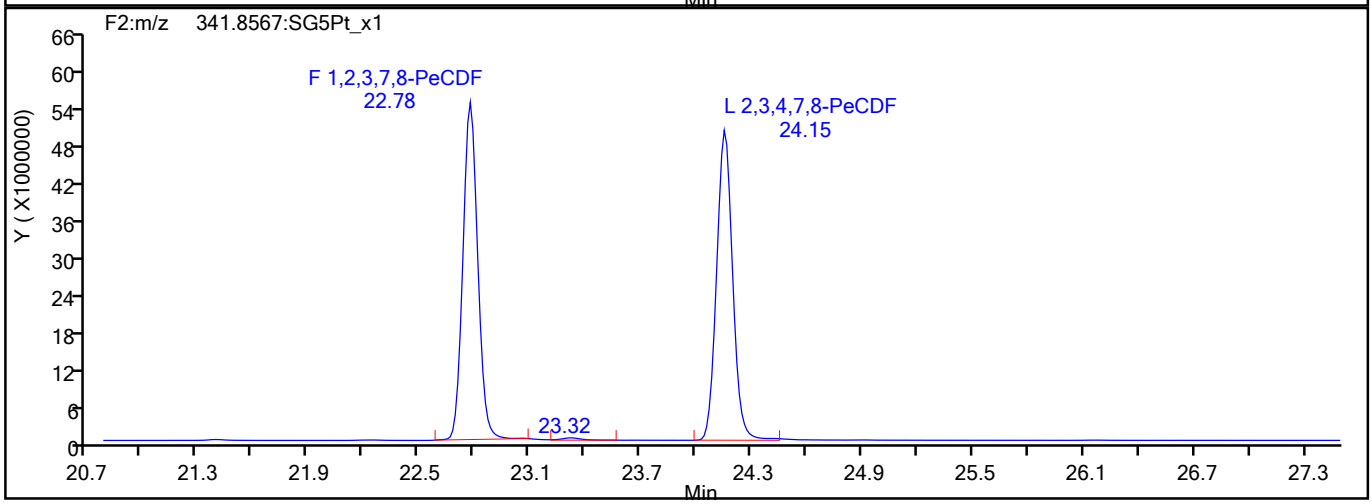

PeCDF Interference Mass

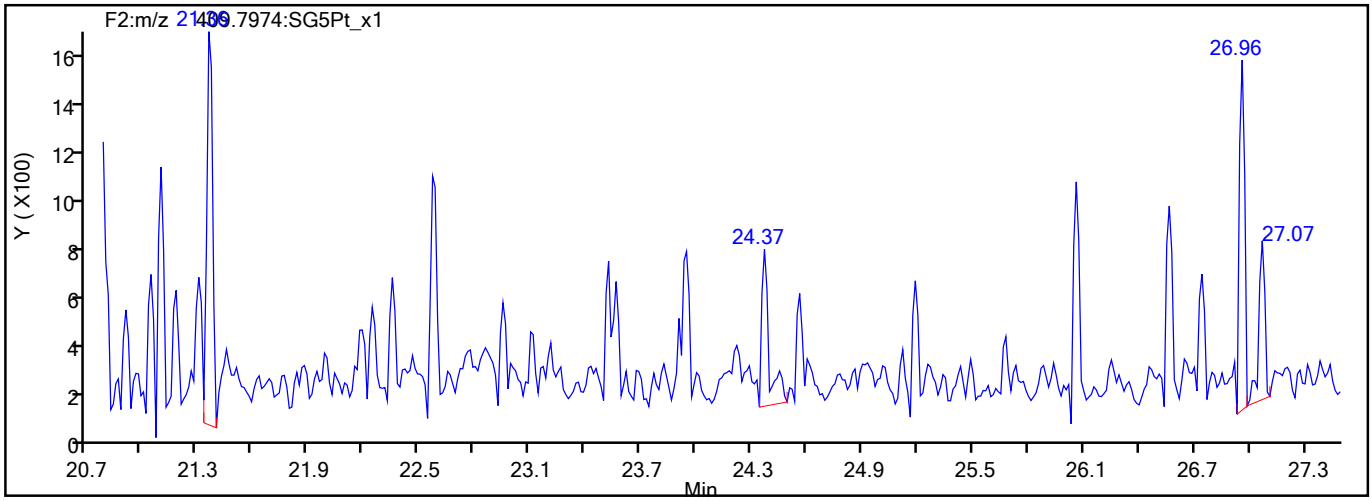

782741

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

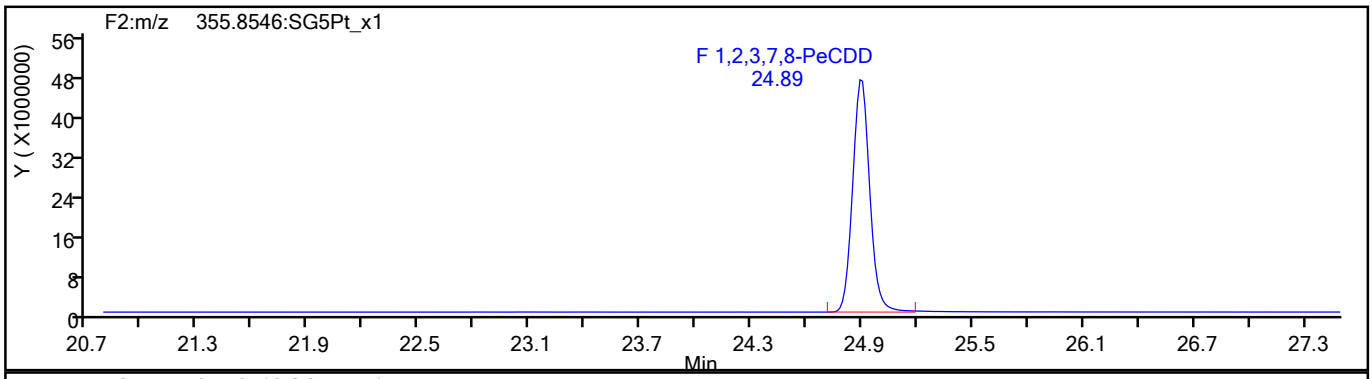

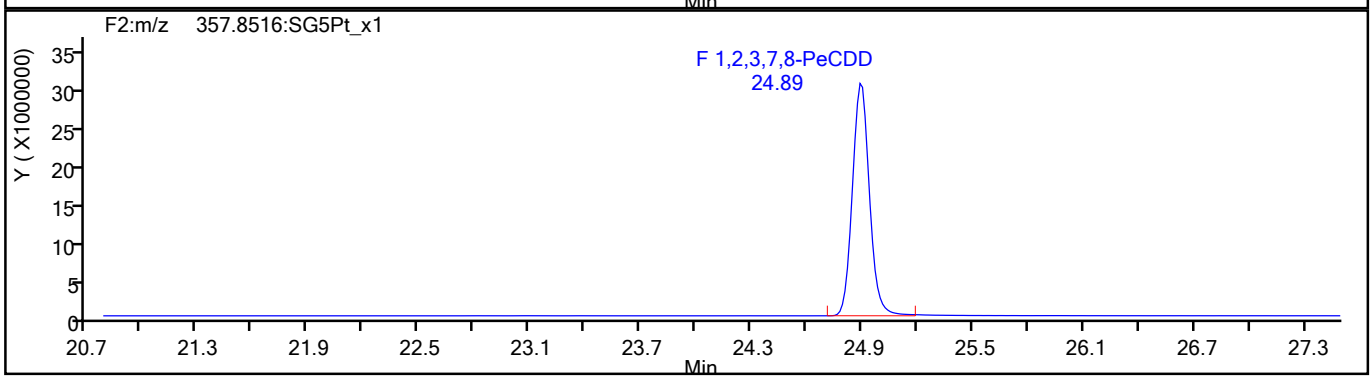

PeCDD Standards

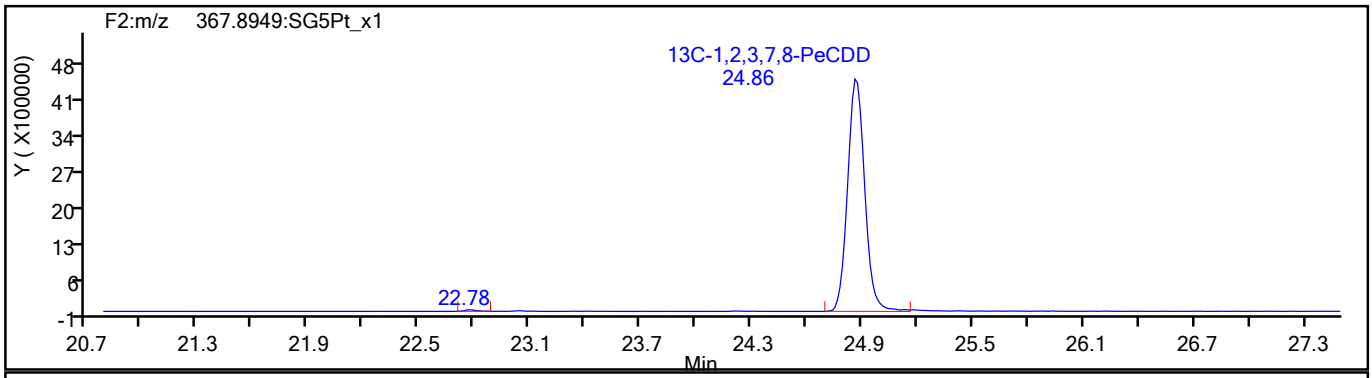

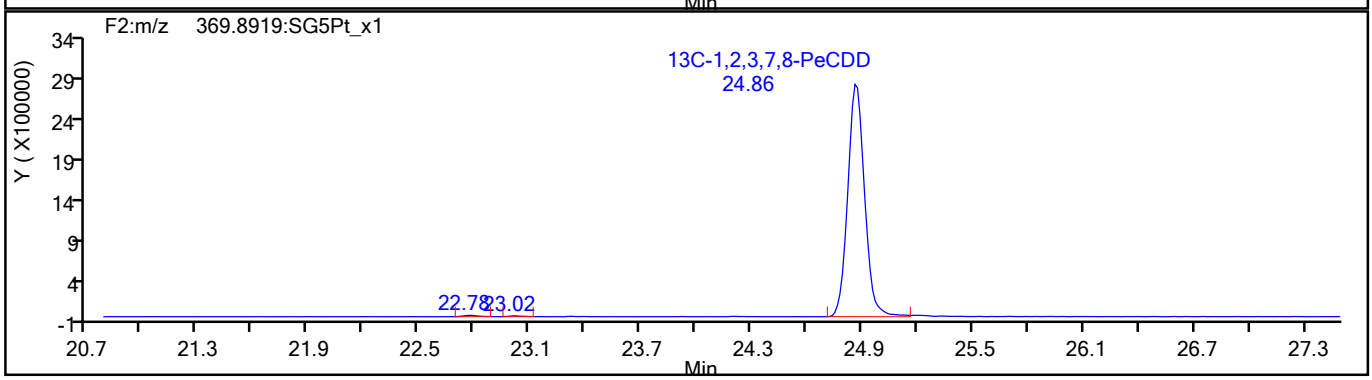

782742

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

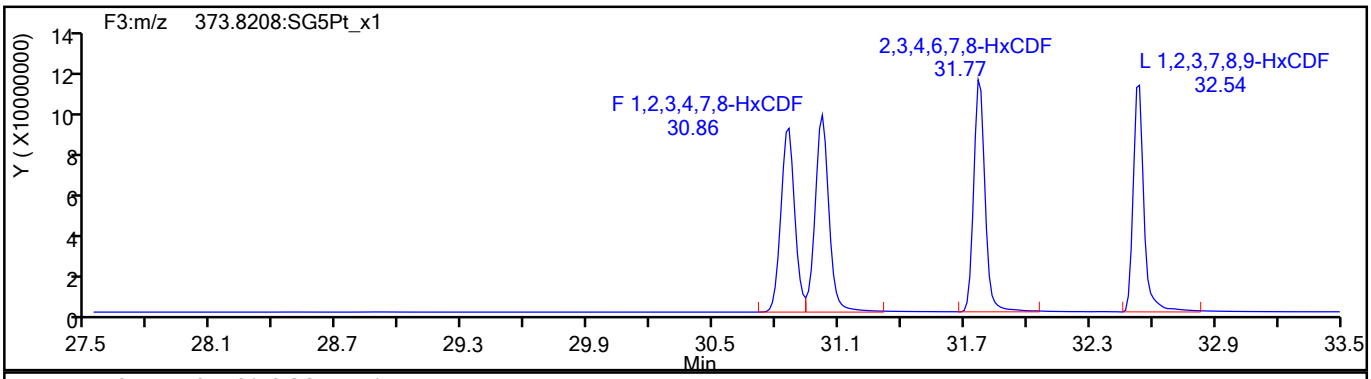

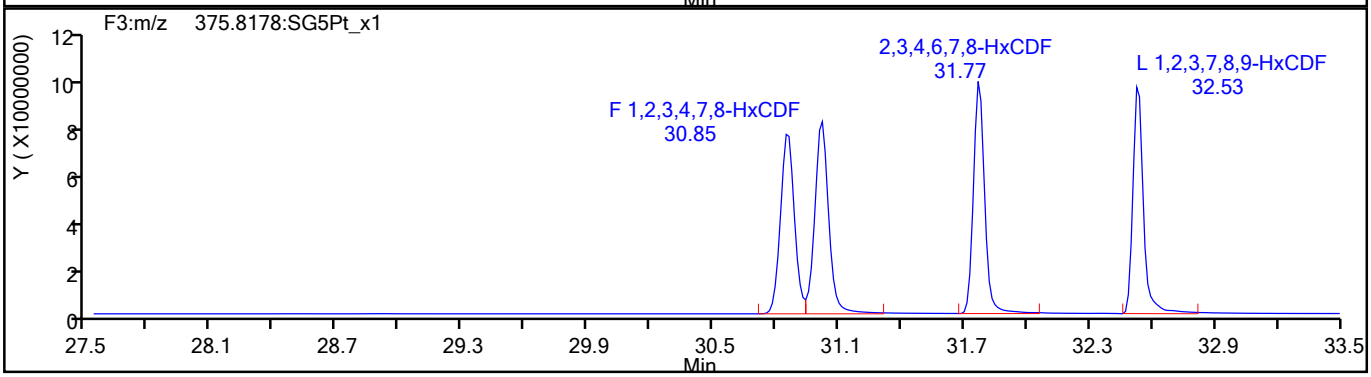

HxCDF Standards

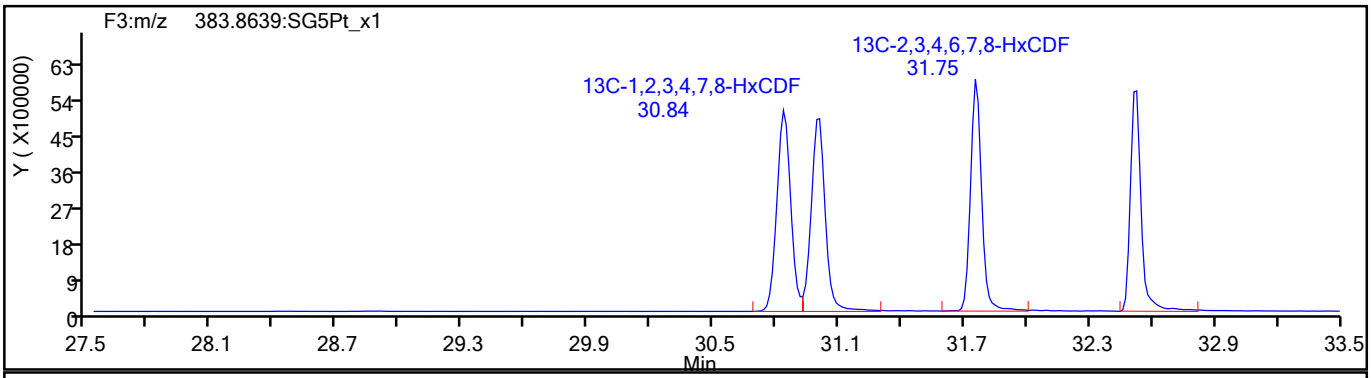

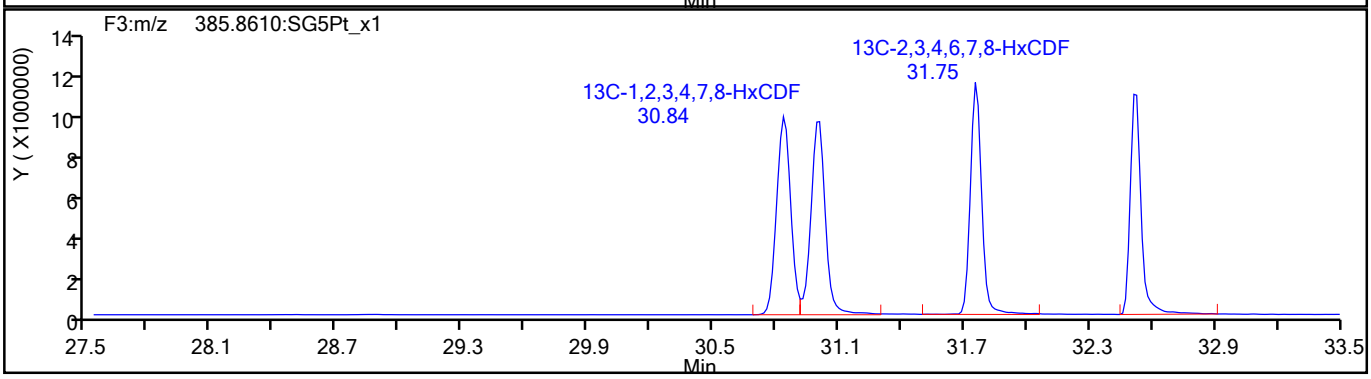

782743

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

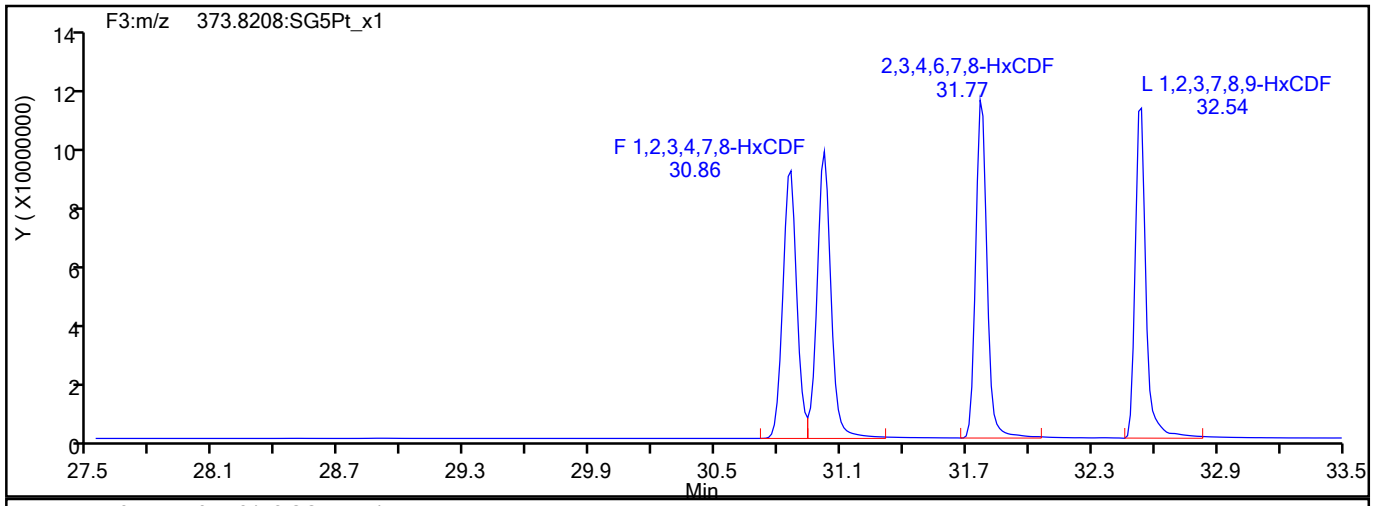

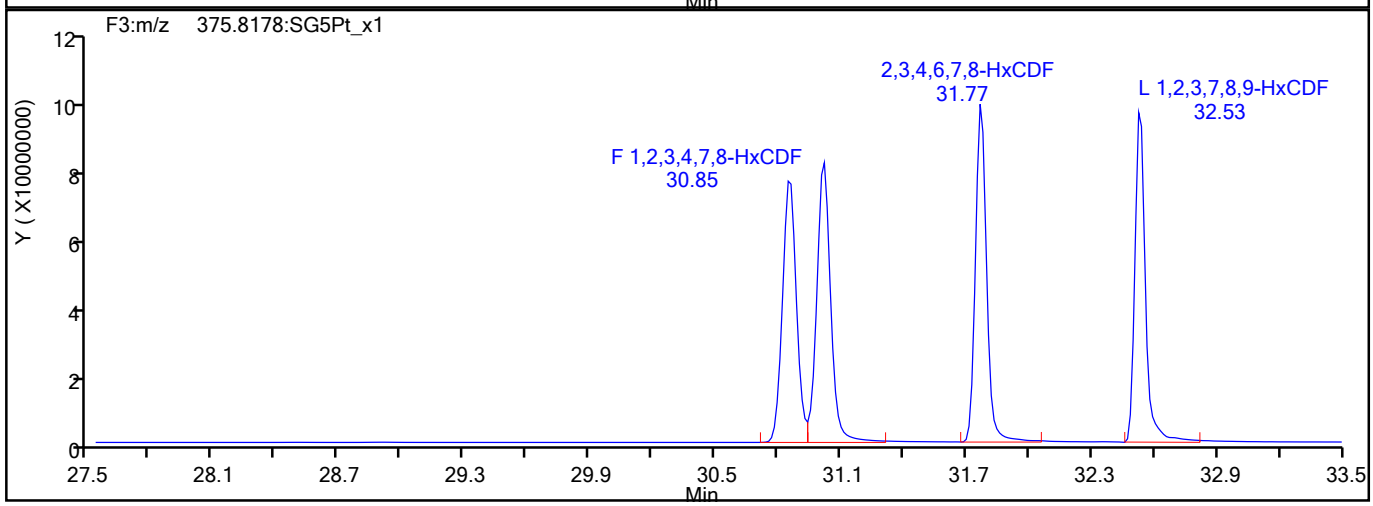

HxCDF Interference Mass

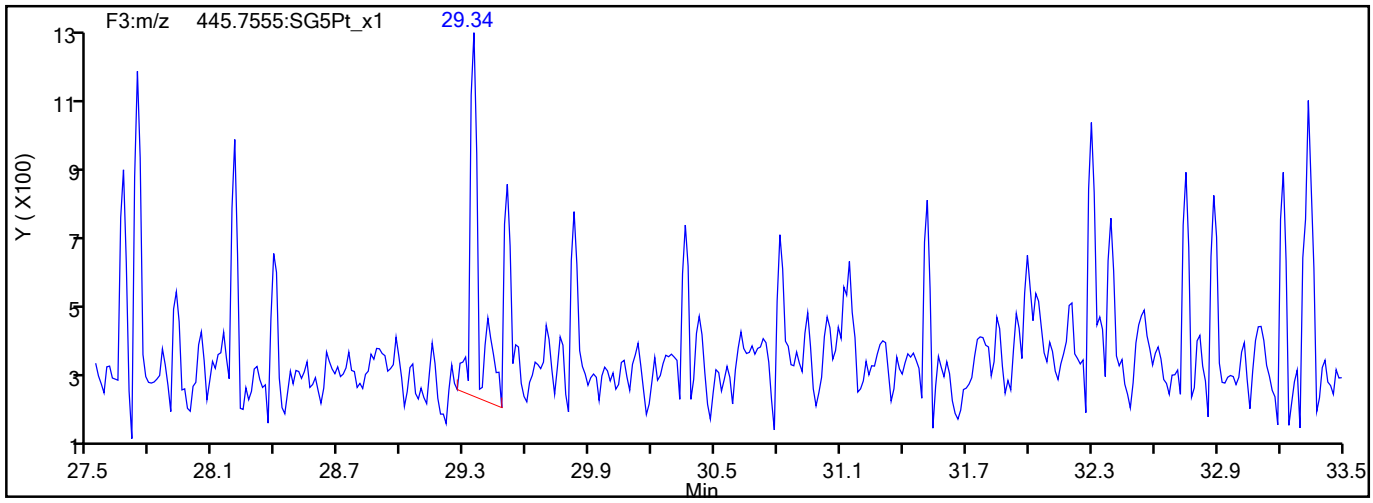

782744

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

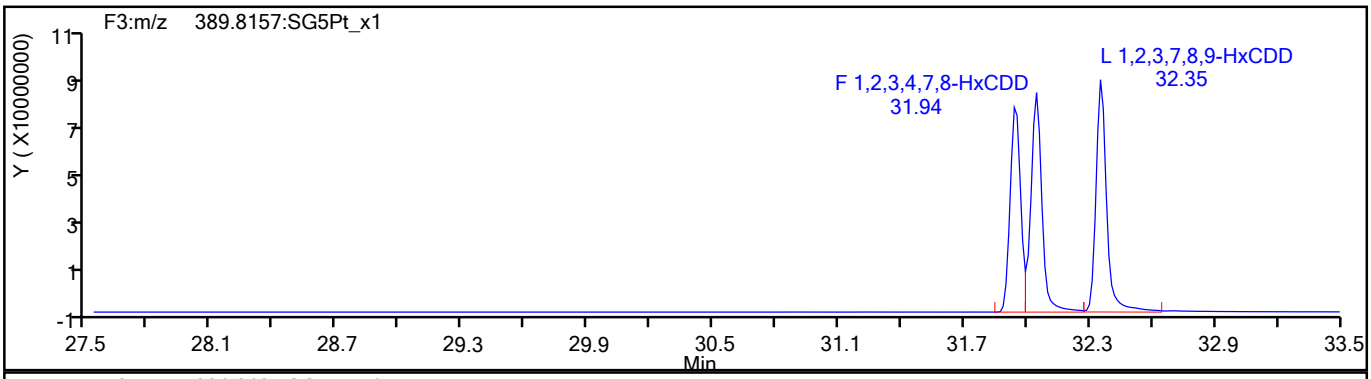

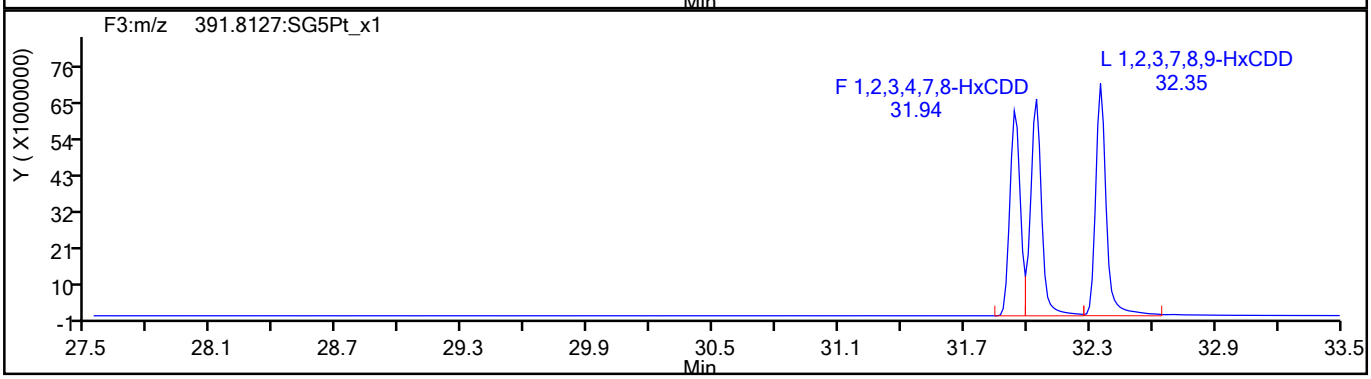

HxCDD Standards

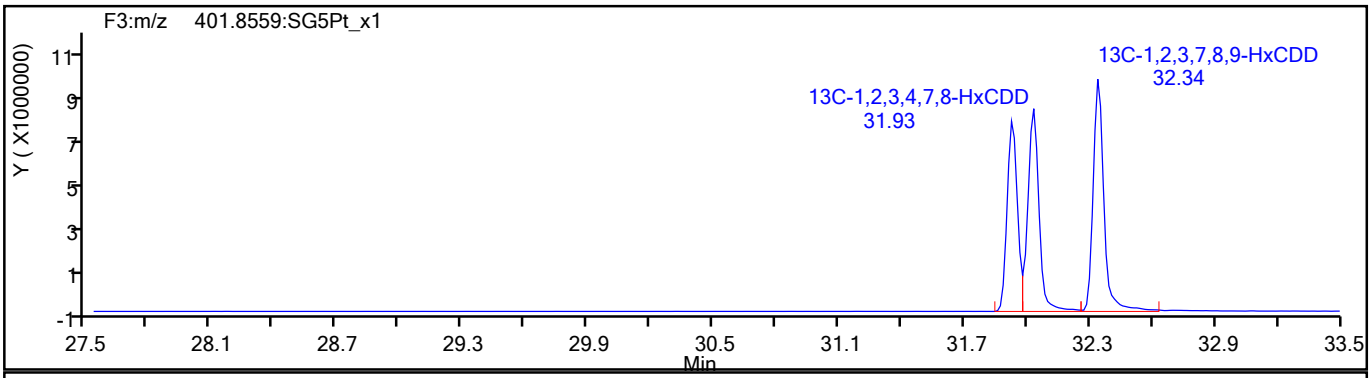

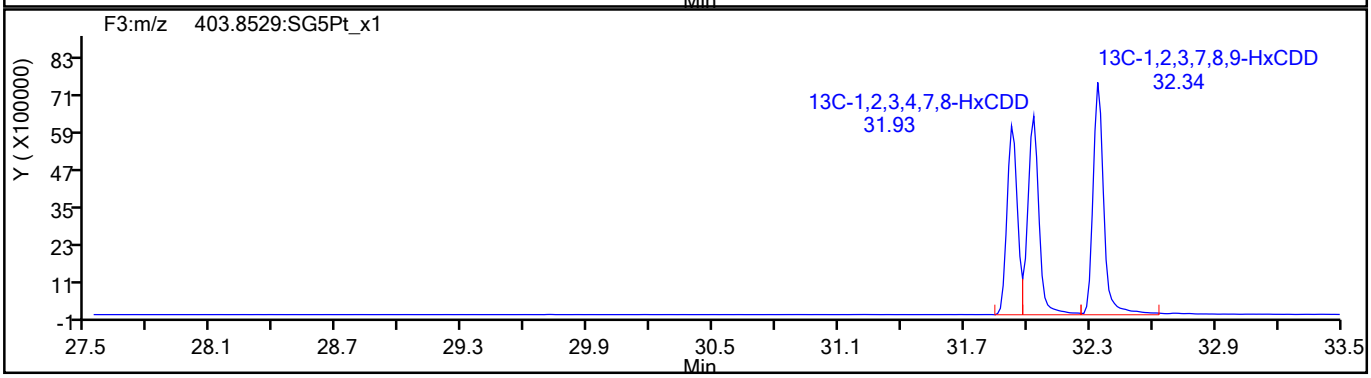

782745

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

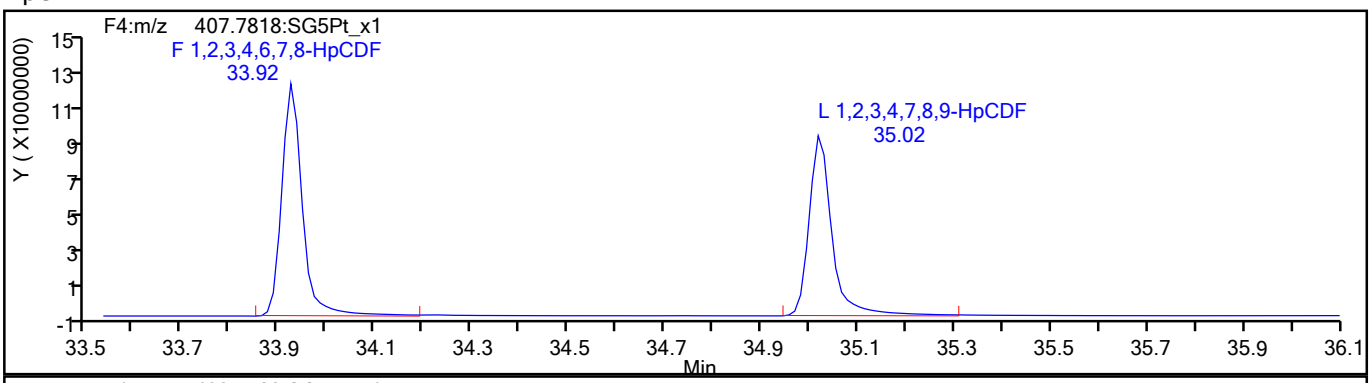

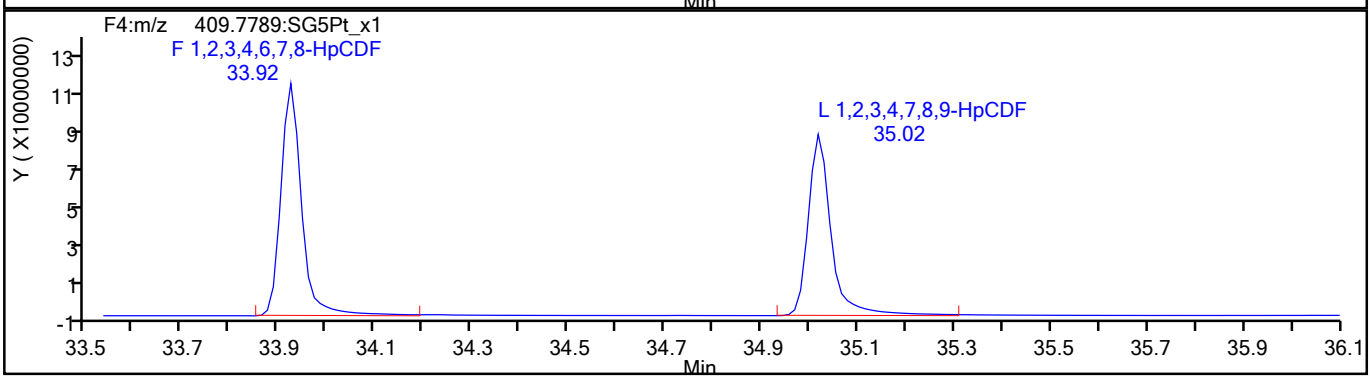

HpCDF Standards

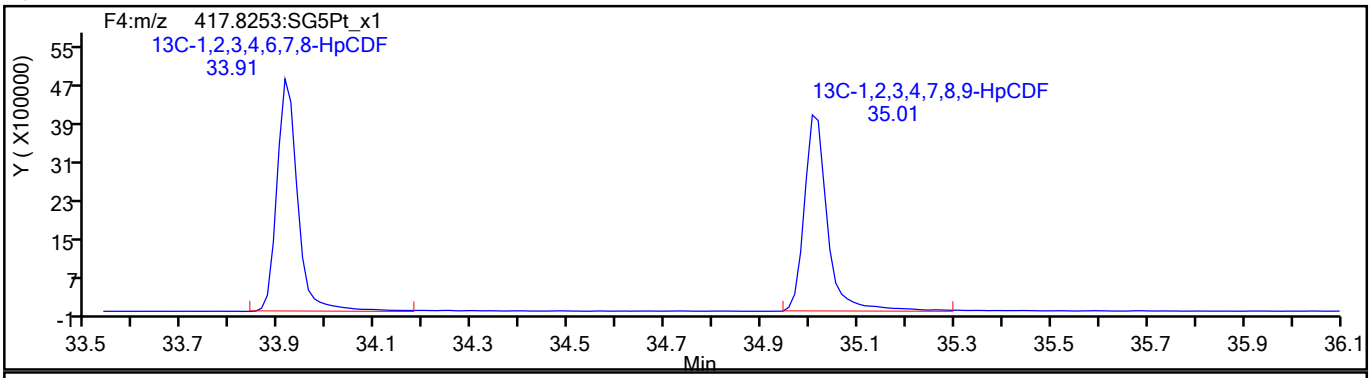

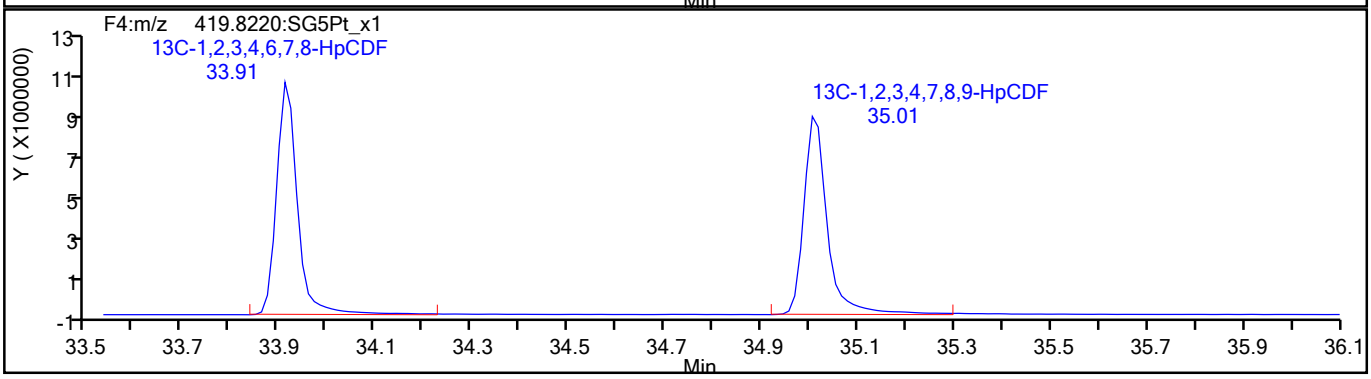

782746

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

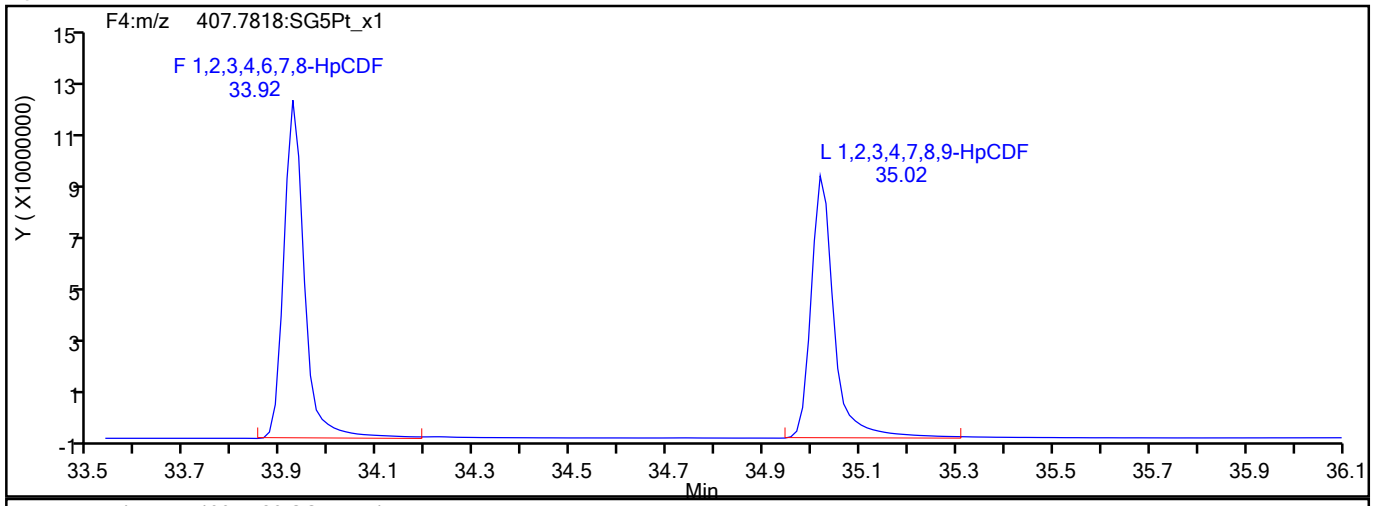

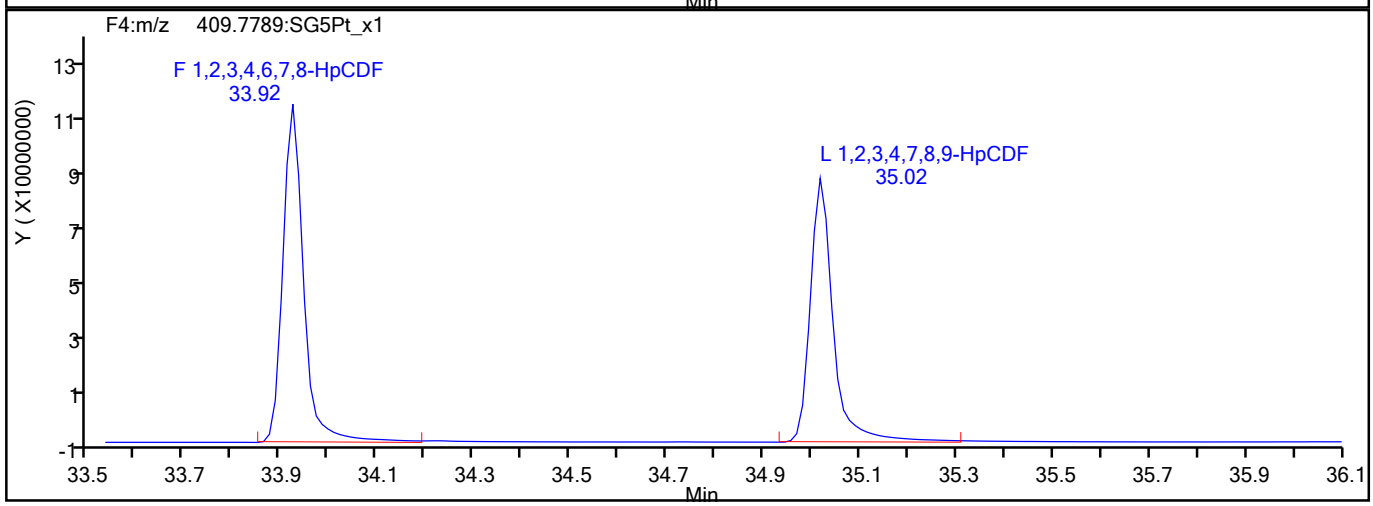

HpCDF Interference Mass

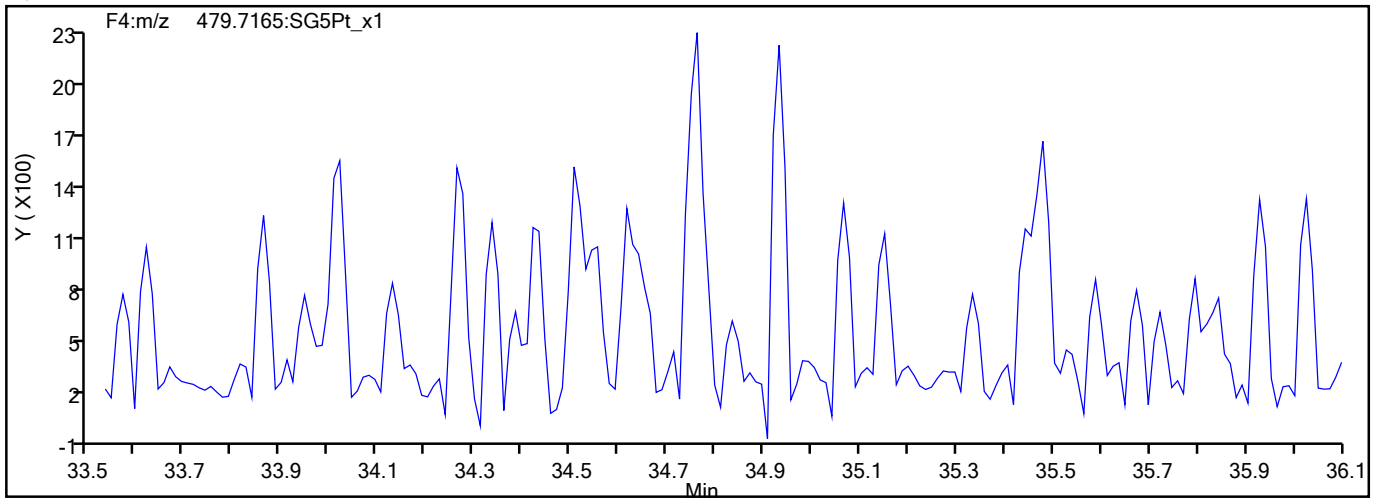

782747

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

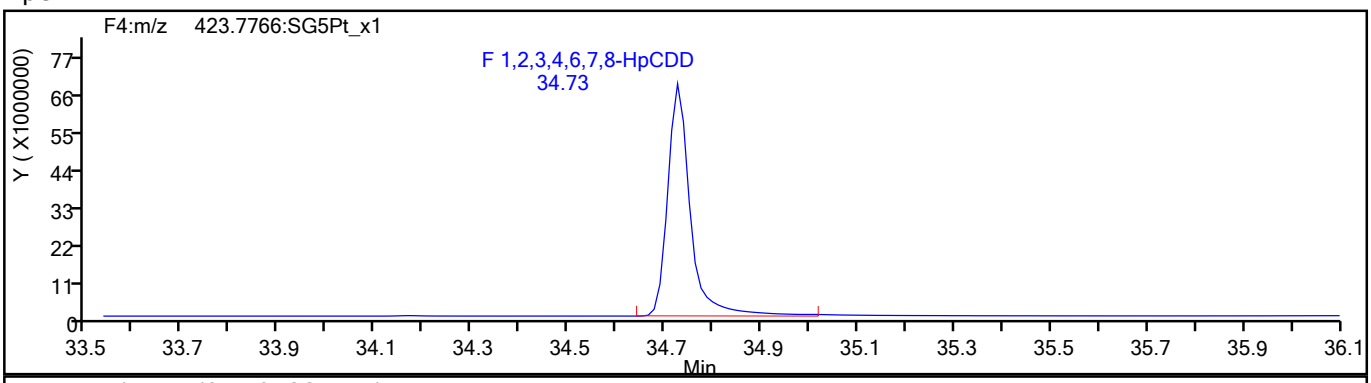

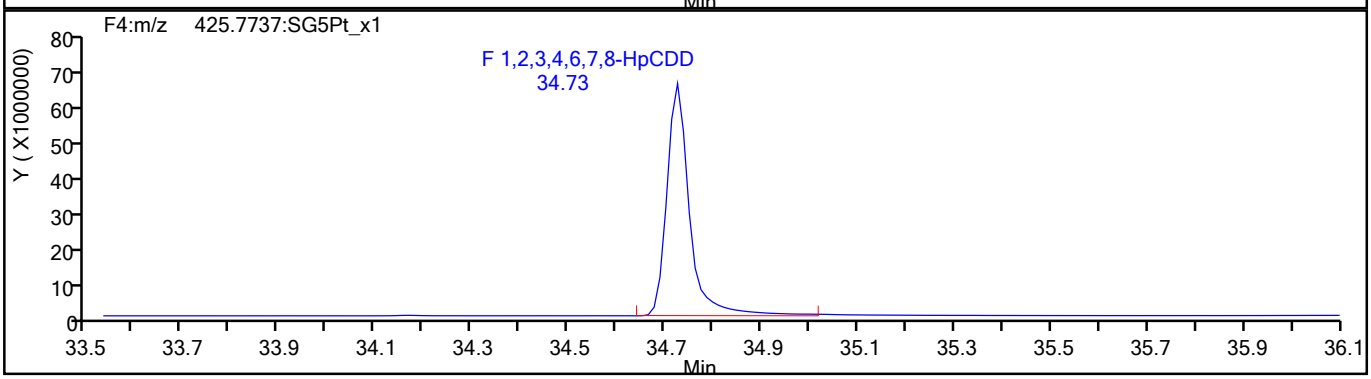

HpCDD Standards

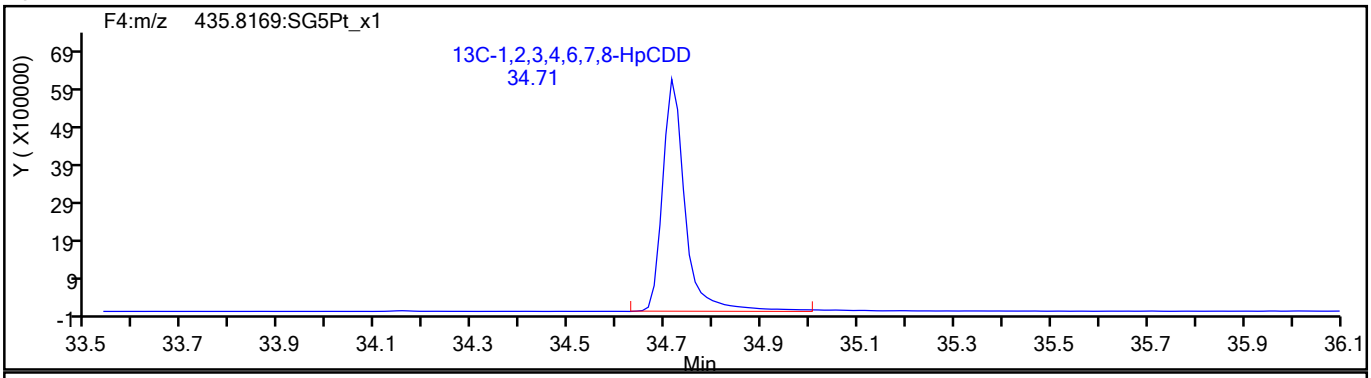

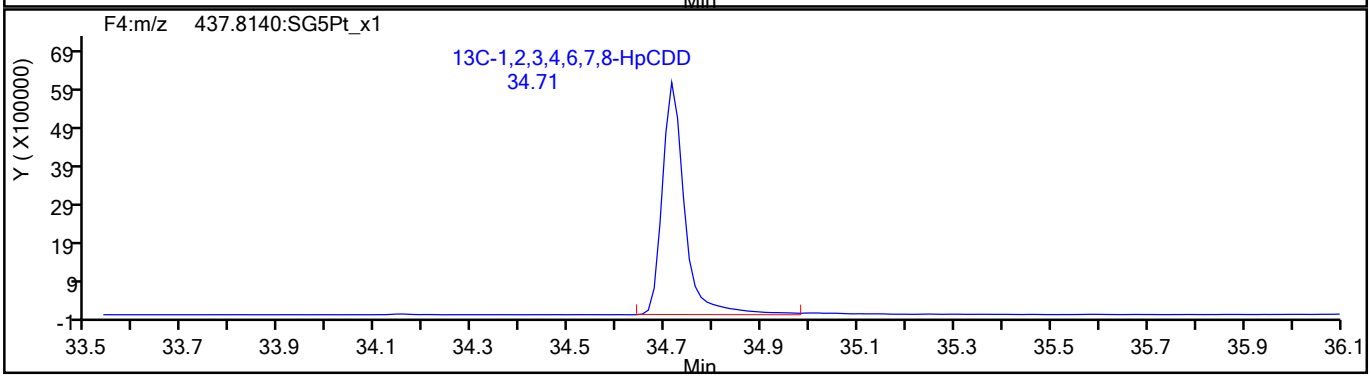

782748

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

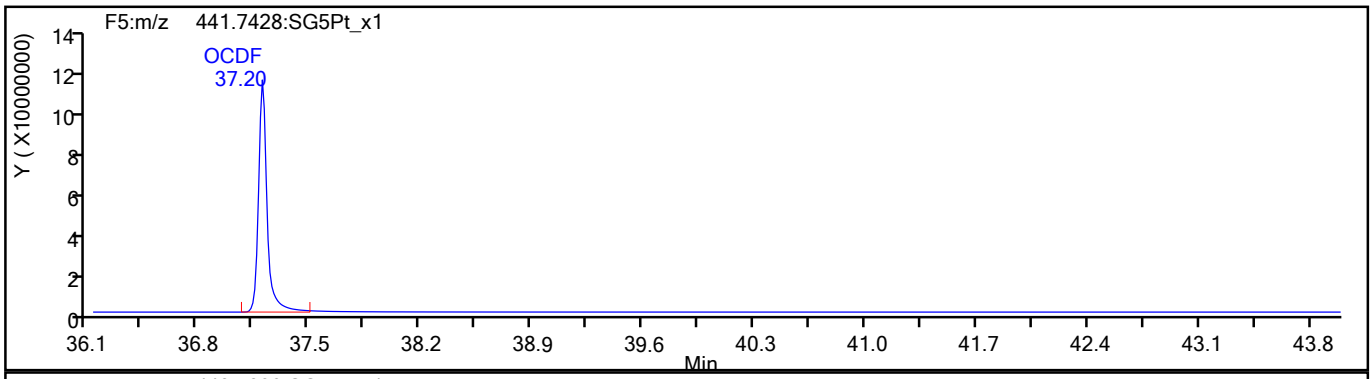

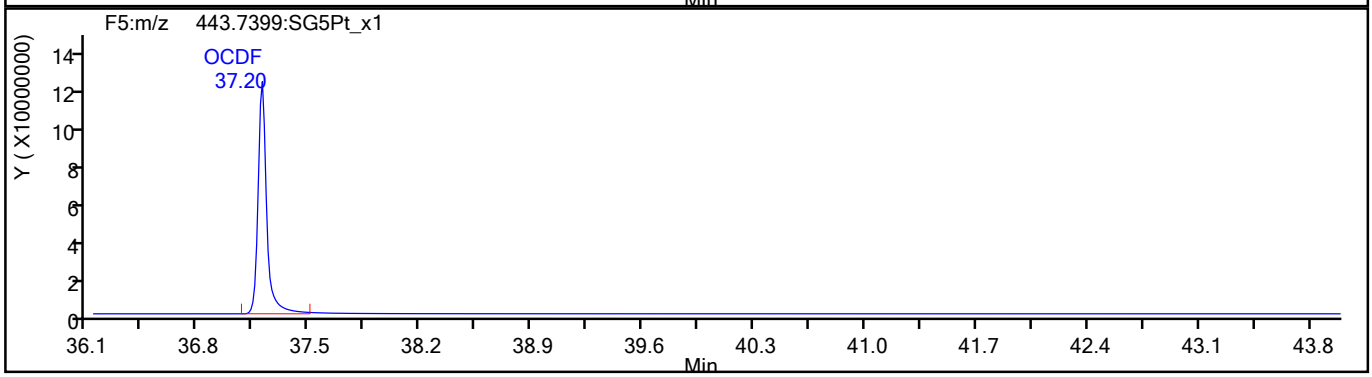

OCDF Standards

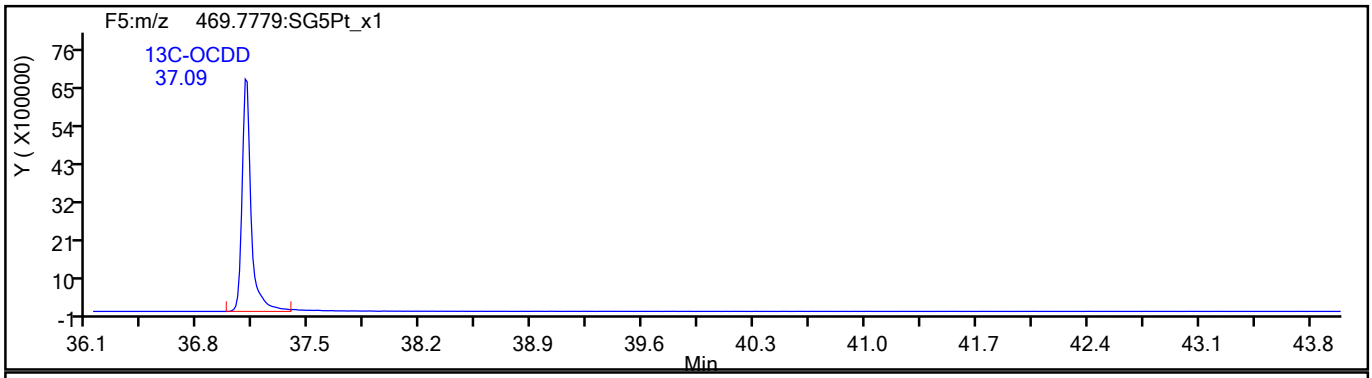

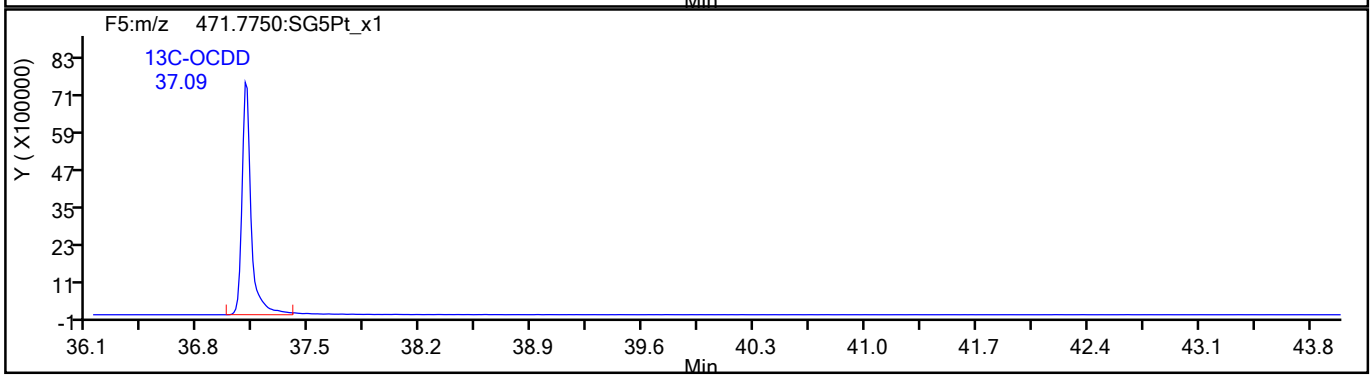

782749

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

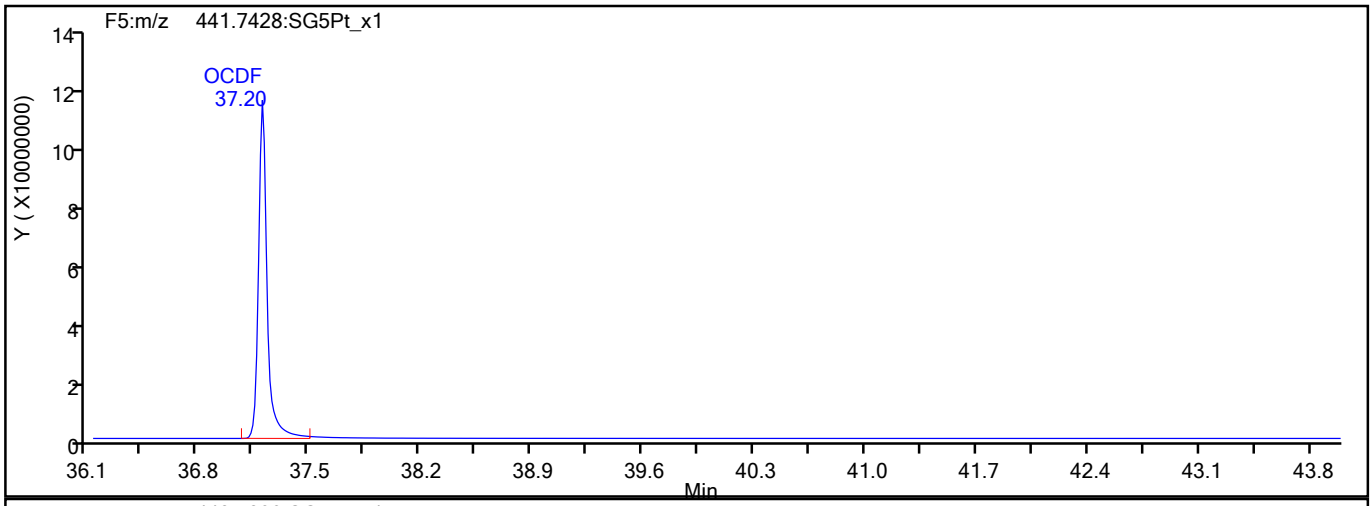

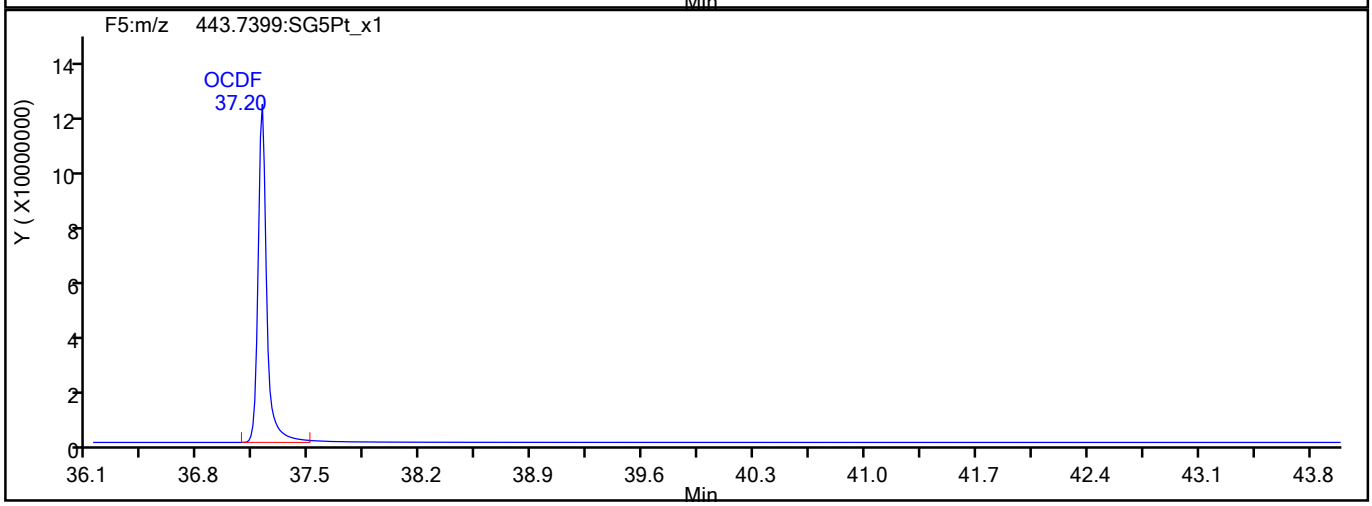

OCDF Interference Mass

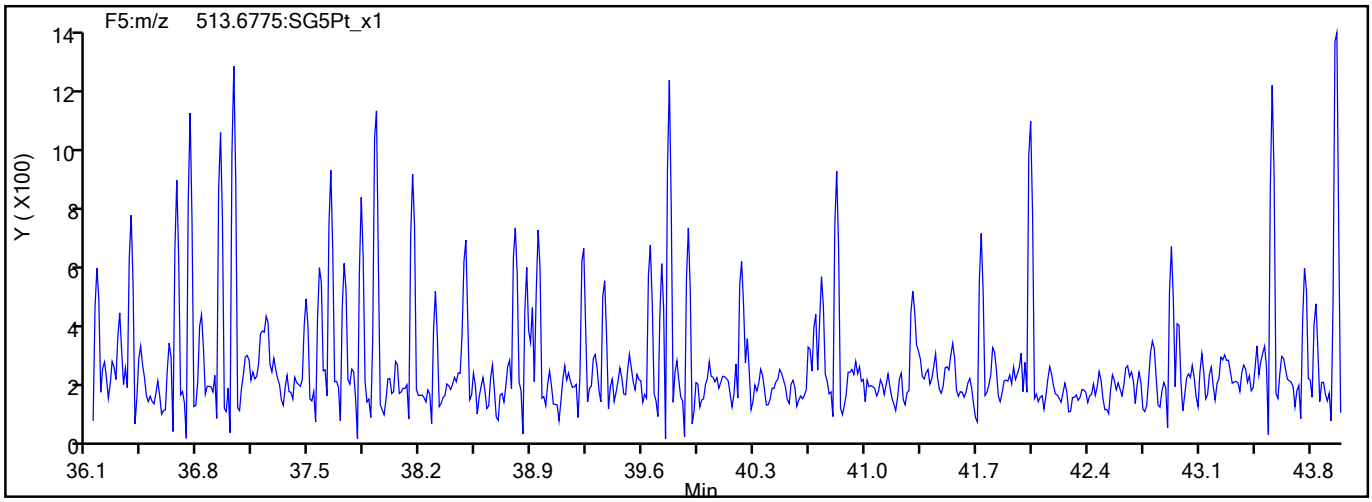

782750

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

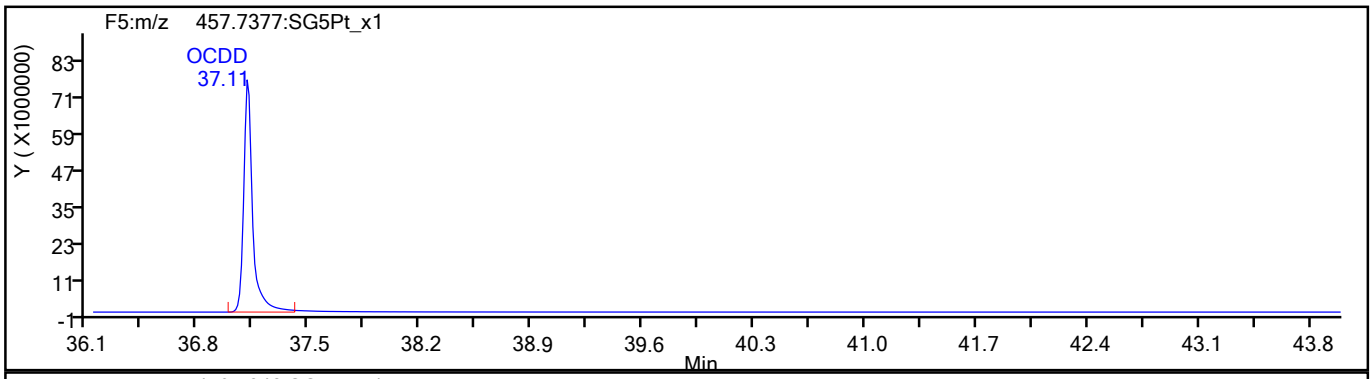

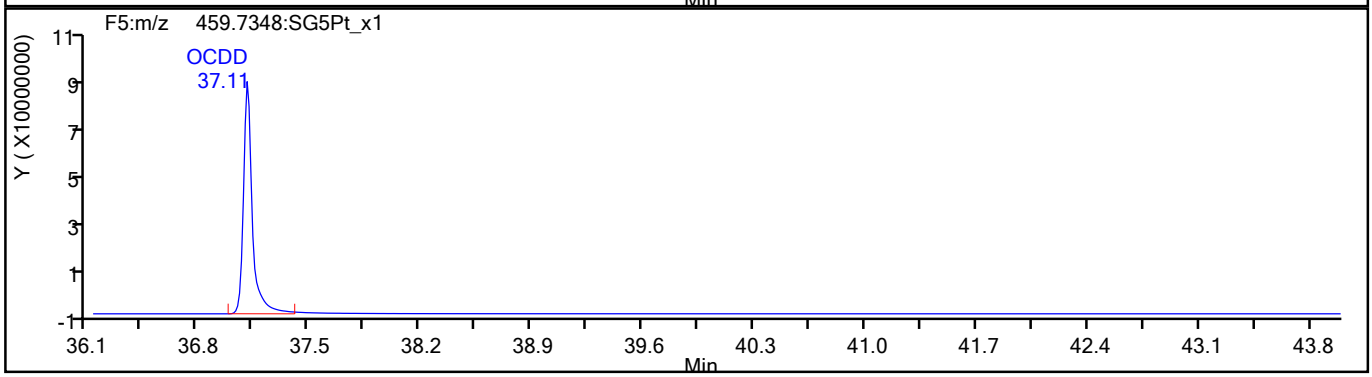

OCDD Standards

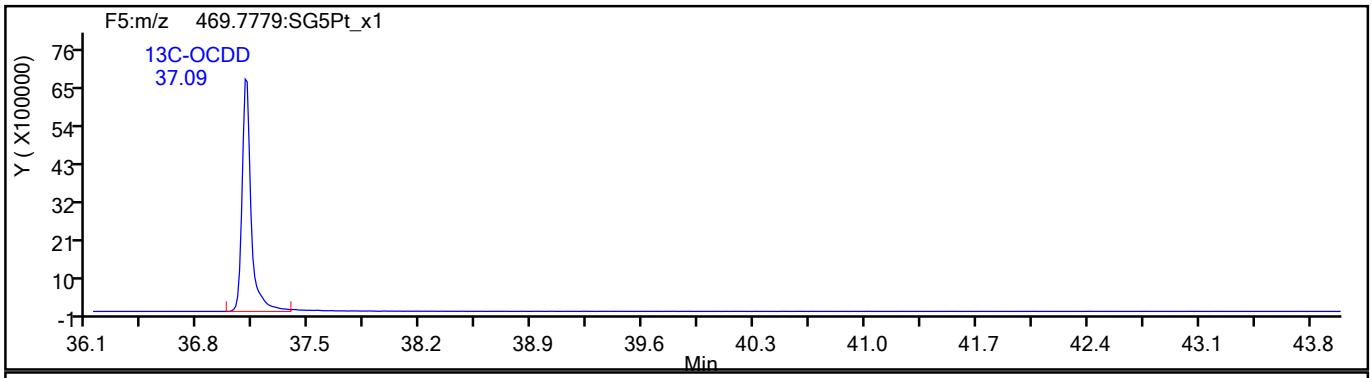

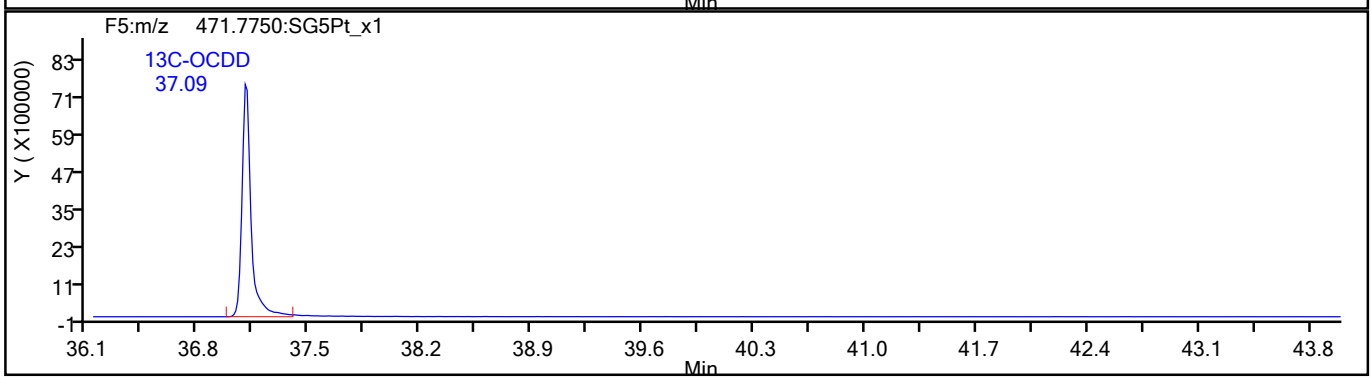

782751

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

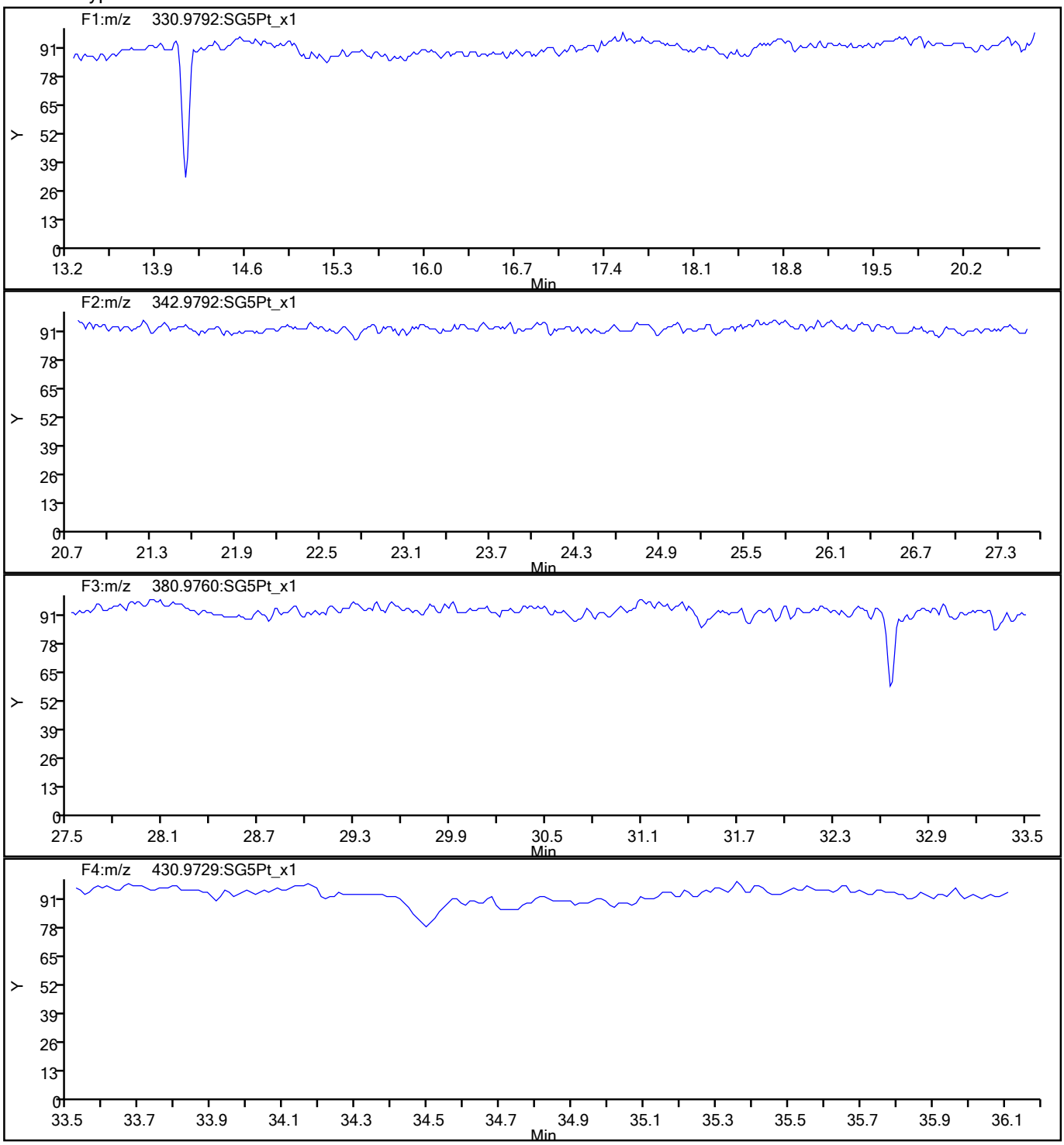

782752

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

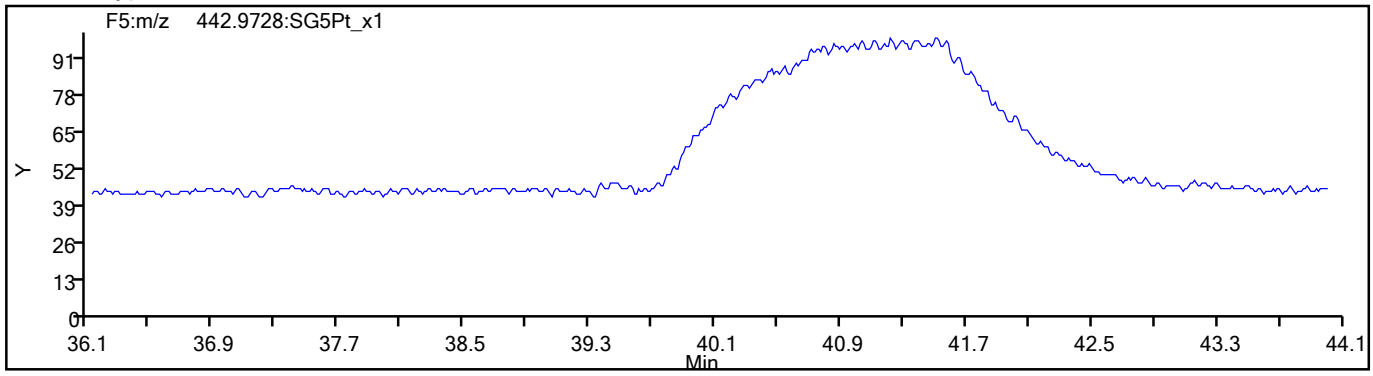

782753

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.094

Error Coefficients

Standard Error:	226000000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.779775	100.0	41876556.0	1.11191	Y
2	IC 320-510264/4	10.0	9.539499	100.0	38689128.0	0.95395	Y
3	IC 320-510264/5	50.0	55.880768	100.0	40333717.0	1.117615	Y
4	IC 320-510264/6	200.0	233.50404	100.0	40442950.0	1.16752	Y
5	IC 320-510264/7	1000.0	1120.518221	100.0	39395832.0	1.120518	Y

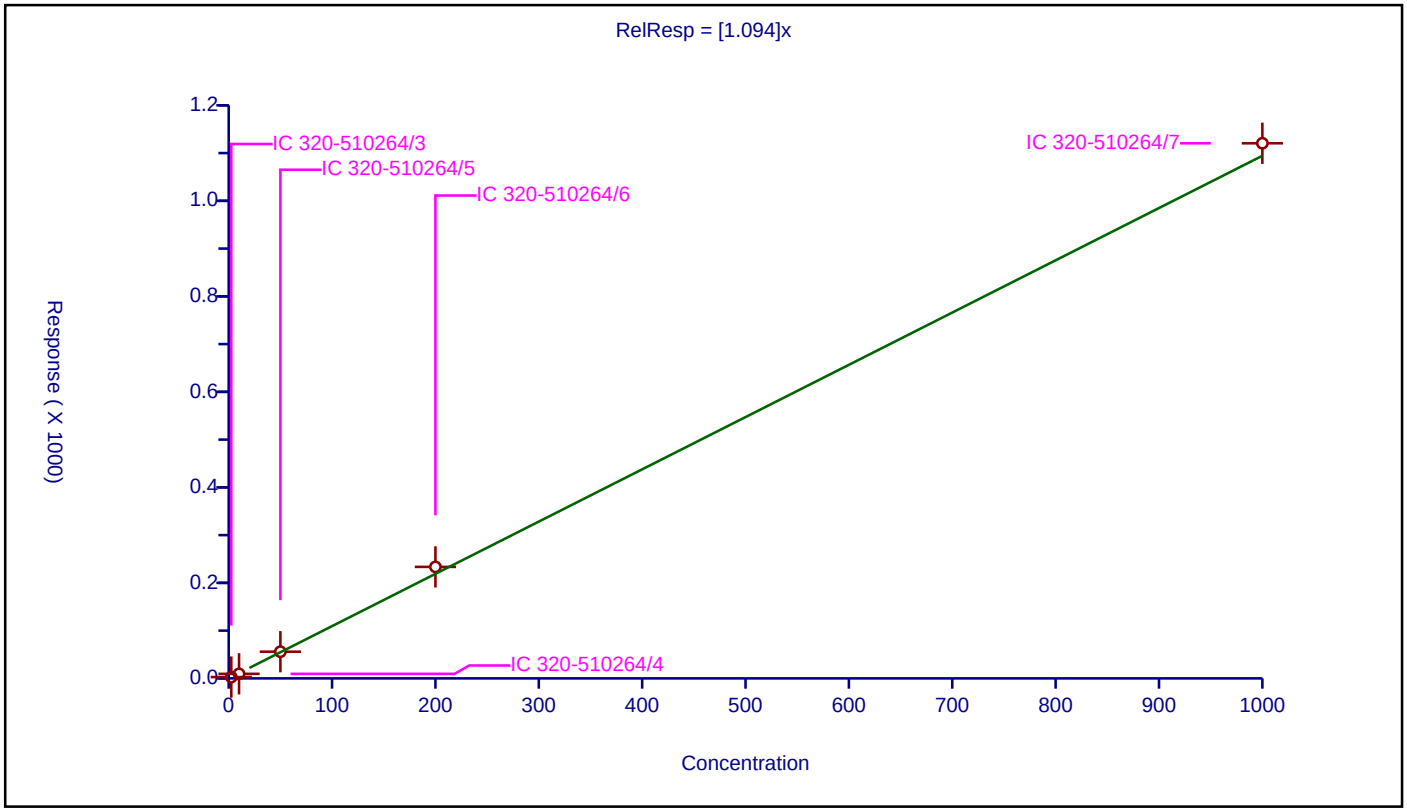

782754

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.441

Error Coefficients

Standard Error:	349000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.618521	100.0	51308225.0	1.447408	Y
2	IC 320-510264/4	10.0	12.412663	100.0	46691158.0	1.241266	Y
3	IC 320-510264/5	50.0	74.932304	100.0	47697671.0	1.498646	Y
4	IC 320-510264/6	200.0	309.702692	100.0	47752972.0	1.548513	Y
5	IC 320-510264/7	1000.0	1470.622057	100.0	46328151.0	1.470622	Y

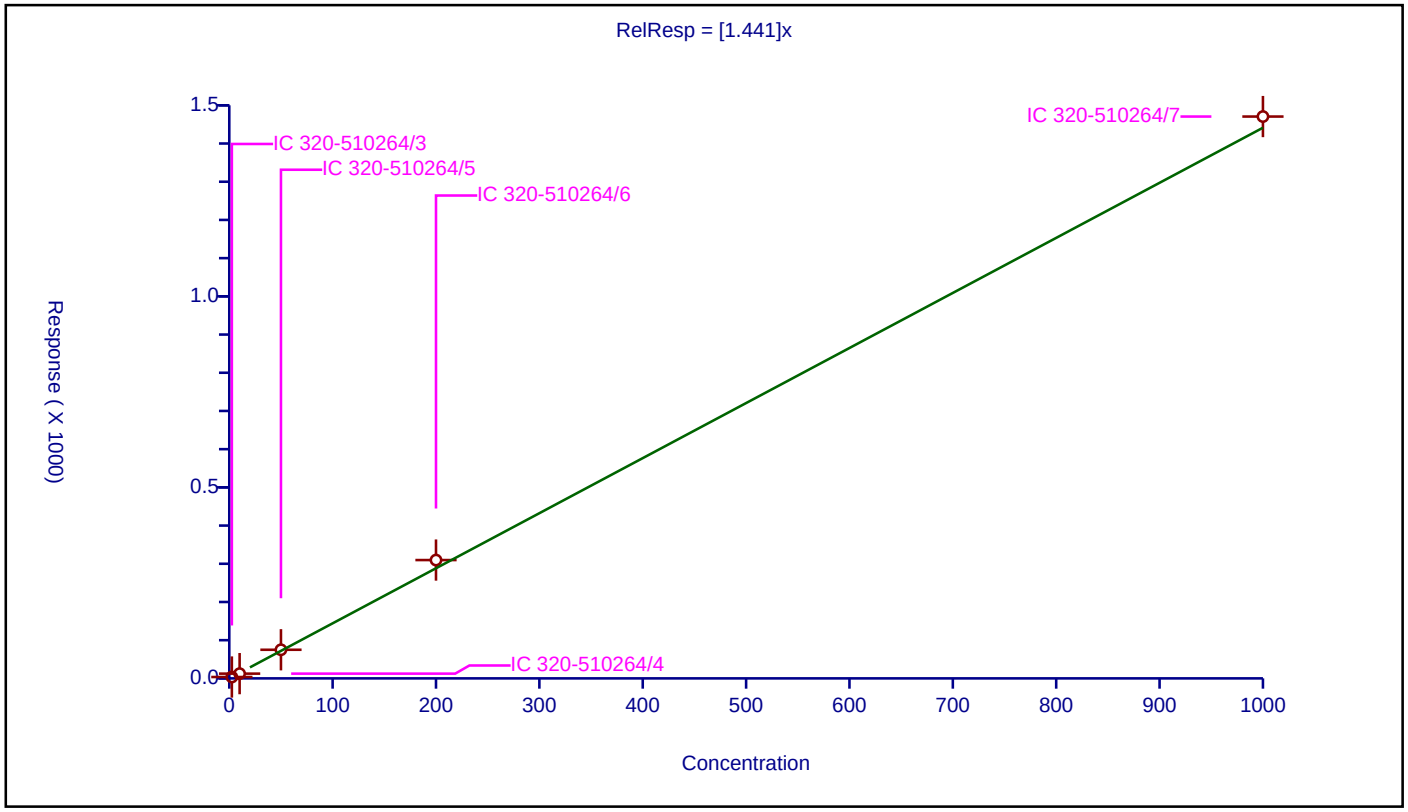

782755

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	302000000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.284087	100.0	44628352.0	1.313635	Y
2	IC 320-510264/4	10.0	11.269366	100.0	42362179.0	1.126937	Y
3	IC 320-510264/5	50.0	68.111875	100.0	43238622.0	1.362237	Y
4	IC 320-510264/6	200.0	290.409045	100.0	42687625.0	1.452045	Y
5	IC 320-510264/7	1000.0	1332.064187	100.0	44333848.0	1.332064	Y

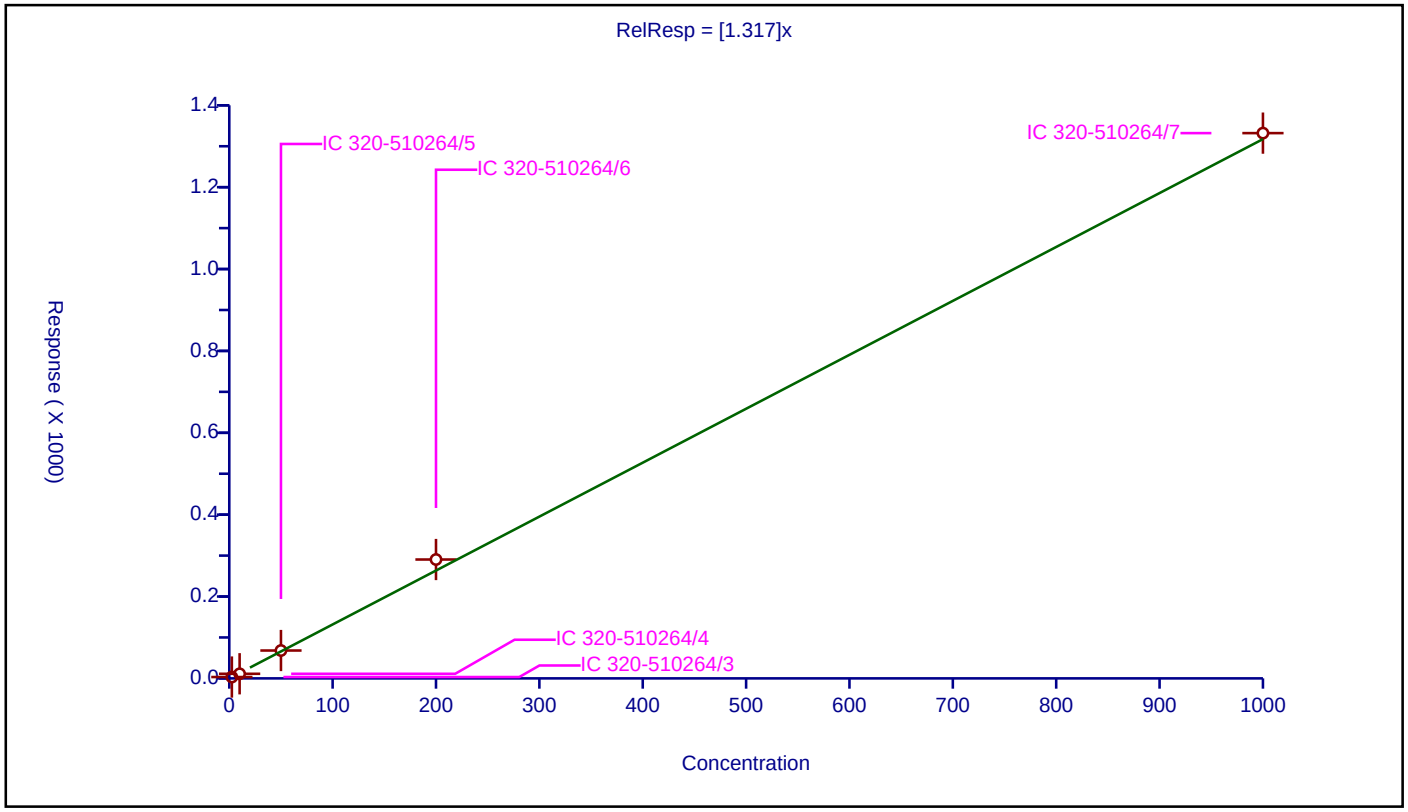

782756

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	248000000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.744793	100.0	47363504.0	1.097917	Y
2	IC 320-510264/4	10.0	8.90634	100.0	44877133.0	0.890634	Y
3	IC 320-510264/5	50.0	56.519553	100.0	44039927.0	1.130391	Y
4	IC 320-510264/6	200.0	233.423018	100.0	44144841.0	1.167115	Y
5	IC 320-510264/7	1000.0	1034.115245	100.0	46886171.0	1.034115	Y

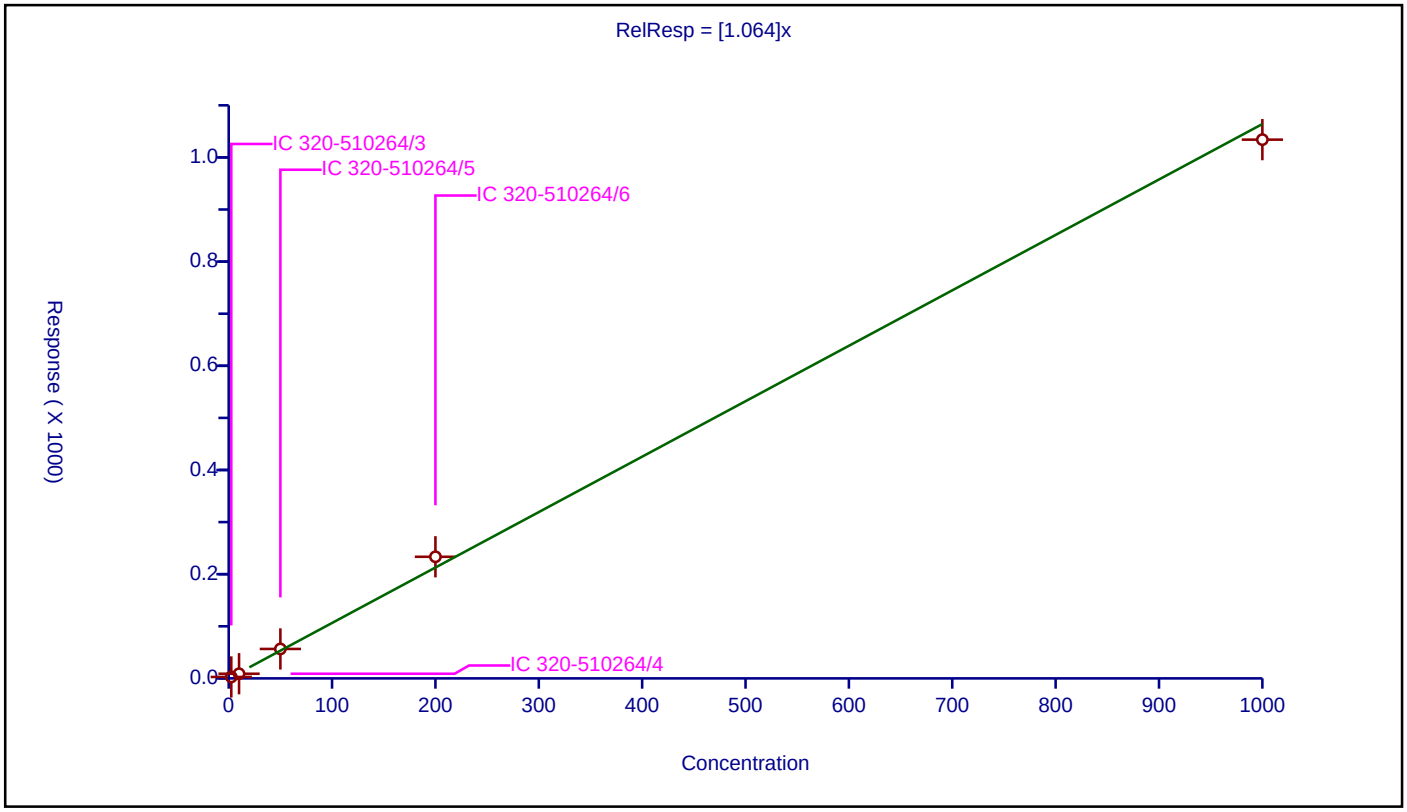

782757

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.085

Error Coefficients

Standard Error:	377000000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.805608	100.0	69484482.0	1.122243	Y
2	IC 320-510264/4	10.0	9.192224	100.0	65726932.0	0.919222	Y
3	IC 320-510264/5	50.0	55.122828	100.0	68075509.0	1.102457	Y
4	IC 320-510264/6	200.0	238.727102	100.0	64951889.0	1.193636	Y
5	IC 320-510264/7	1000.0	1088.07626	100.0	67741189.0	1.088076	Y

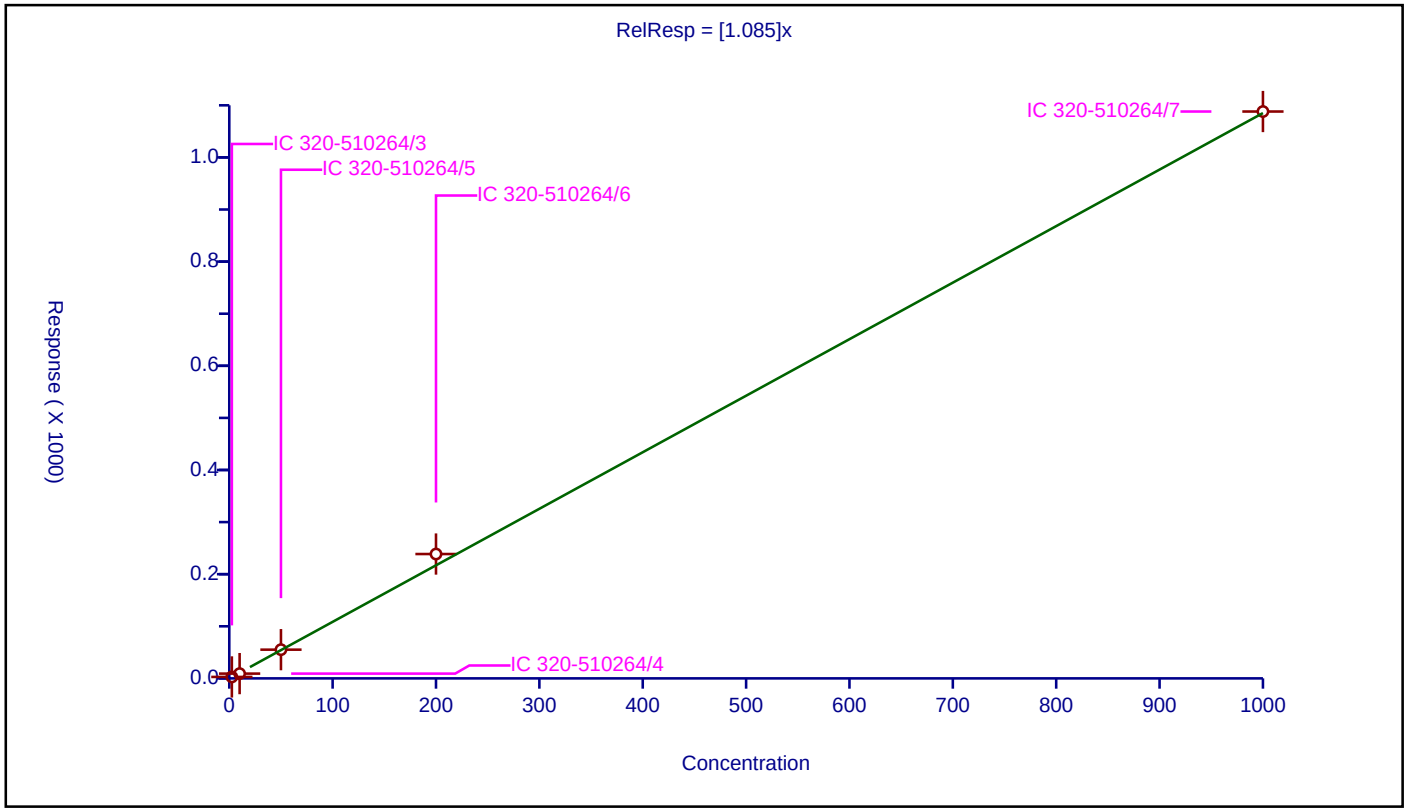

782758

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1

Error Coefficients

Standard Error:	278000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.57359	100.0	56759108.0	1.029436	Y
2	IC 320-510264/4	10.0	8.528531	100.0	52974056.0	0.852853	Y
3	IC 320-510264/5	50.0	50.563423	100.0	55284532.0	1.011268	Y
4	IC 320-510264/6	200.0	218.597288	100.0	54392394.0	1.092986	Y
5	IC 320-510264/7	1000.0	1013.848486	100.0	53564396.0	1.013848	Y

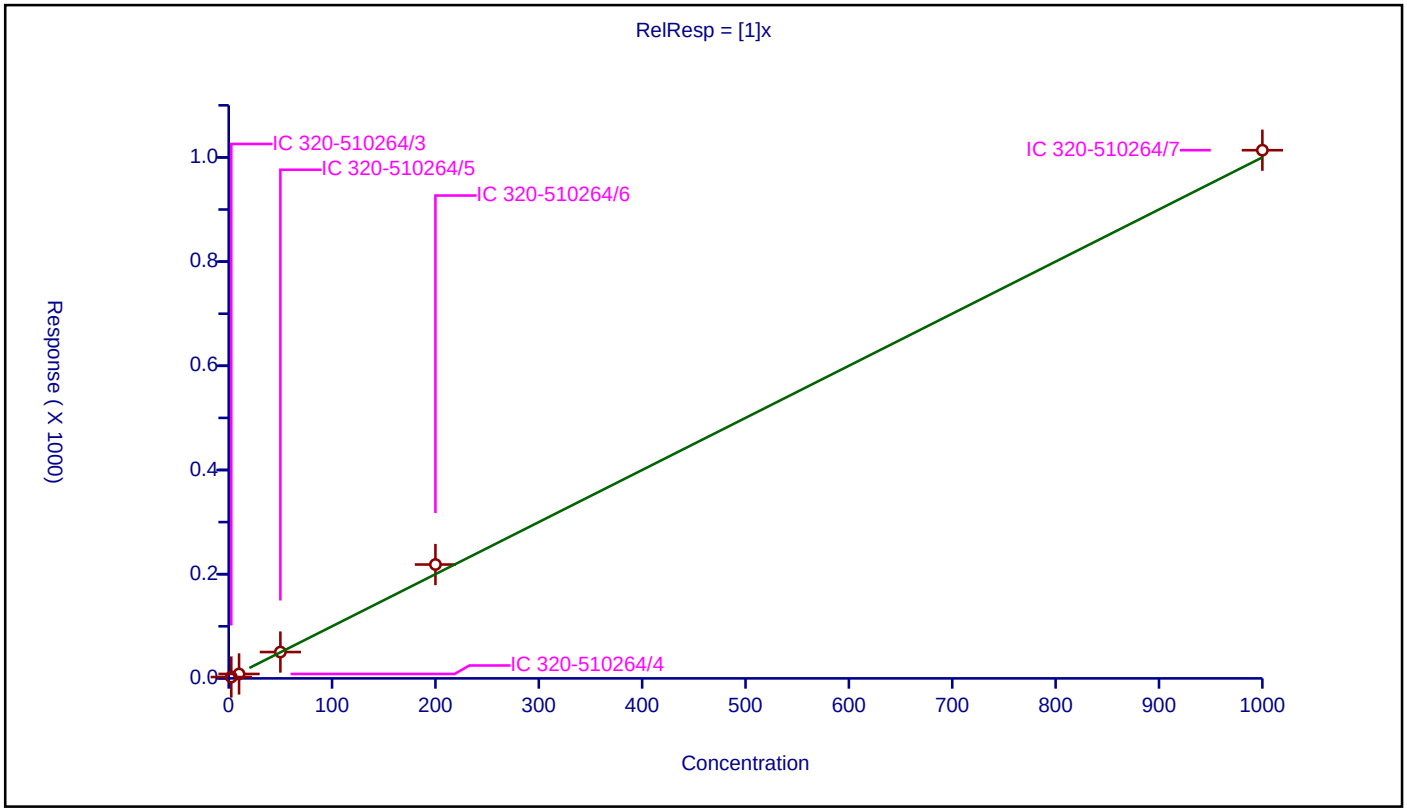

782759

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.126

Error Coefficients

Standard Error:	402000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.871987	100.0	73262388.0	1.148795	Y
2	IC 320-510264/4	10.0	9.63718	100.0	68089005.0	0.963718	Y
3	IC 320-510264/5	50.0	57.730945	100.0	70677463.0	1.154619	Y
4	IC 320-510264/6	200.0	239.311904	100.0	70459920.0	1.19656	Y
5	IC 320-510264/7	1000.0	1166.370477	100.0	67363664.0	1.16637	Y

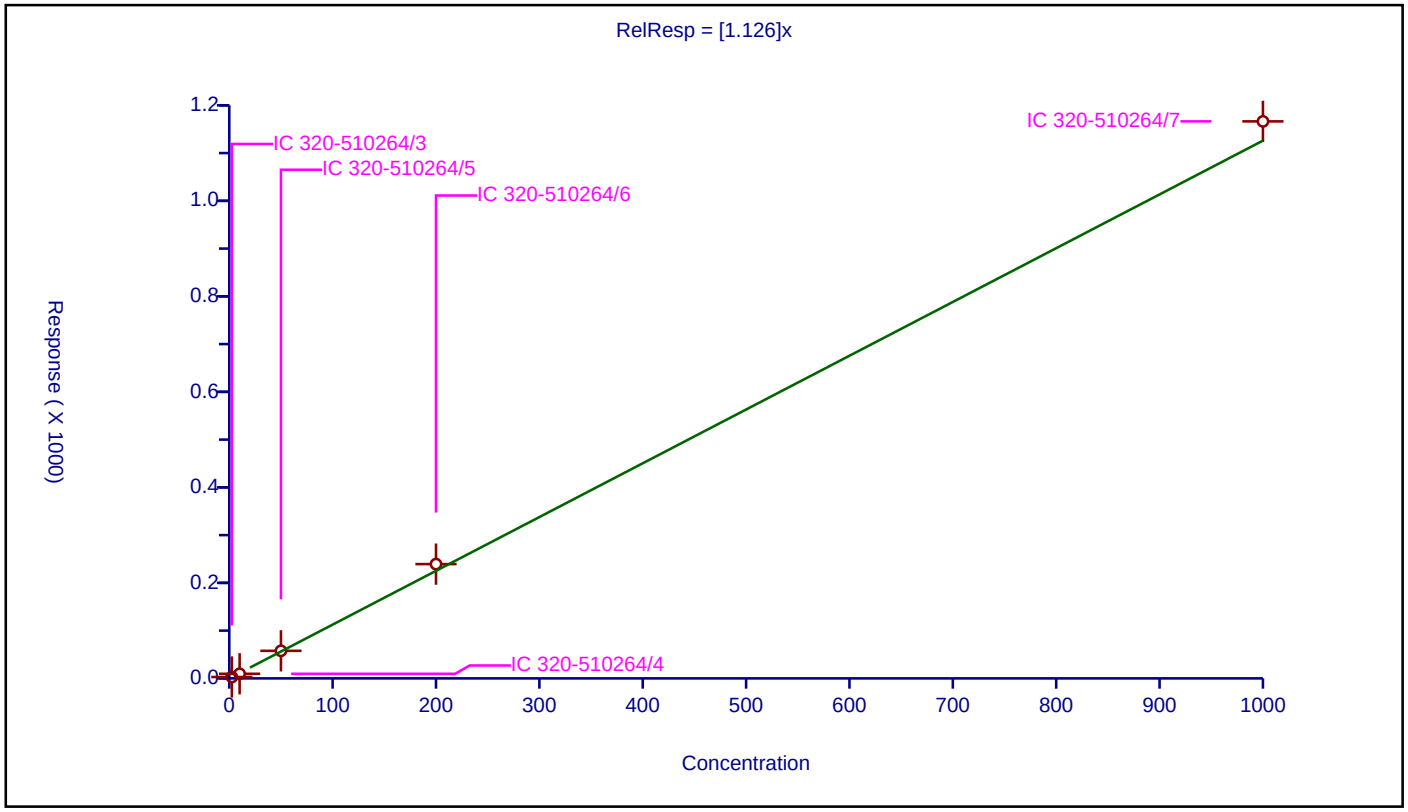

782760

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.248

Error Coefficients

Standard Error:	289000000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.174189	100.0	47363504.0	1.269675	Y
2	IC 320-510264/4	10.0	10.27817	100.0	44877133.0	1.027817	Y
3	IC 320-510264/5	50.0	67.654413	100.0	44039927.0	1.353088	Y
4	IC 320-510264/6	200.0	277.257762	100.0	44144841.0	1.386289	Y
5	IC 320-510264/7	1000.0	1202.675657	100.0	46886171.0	1.202676	Y

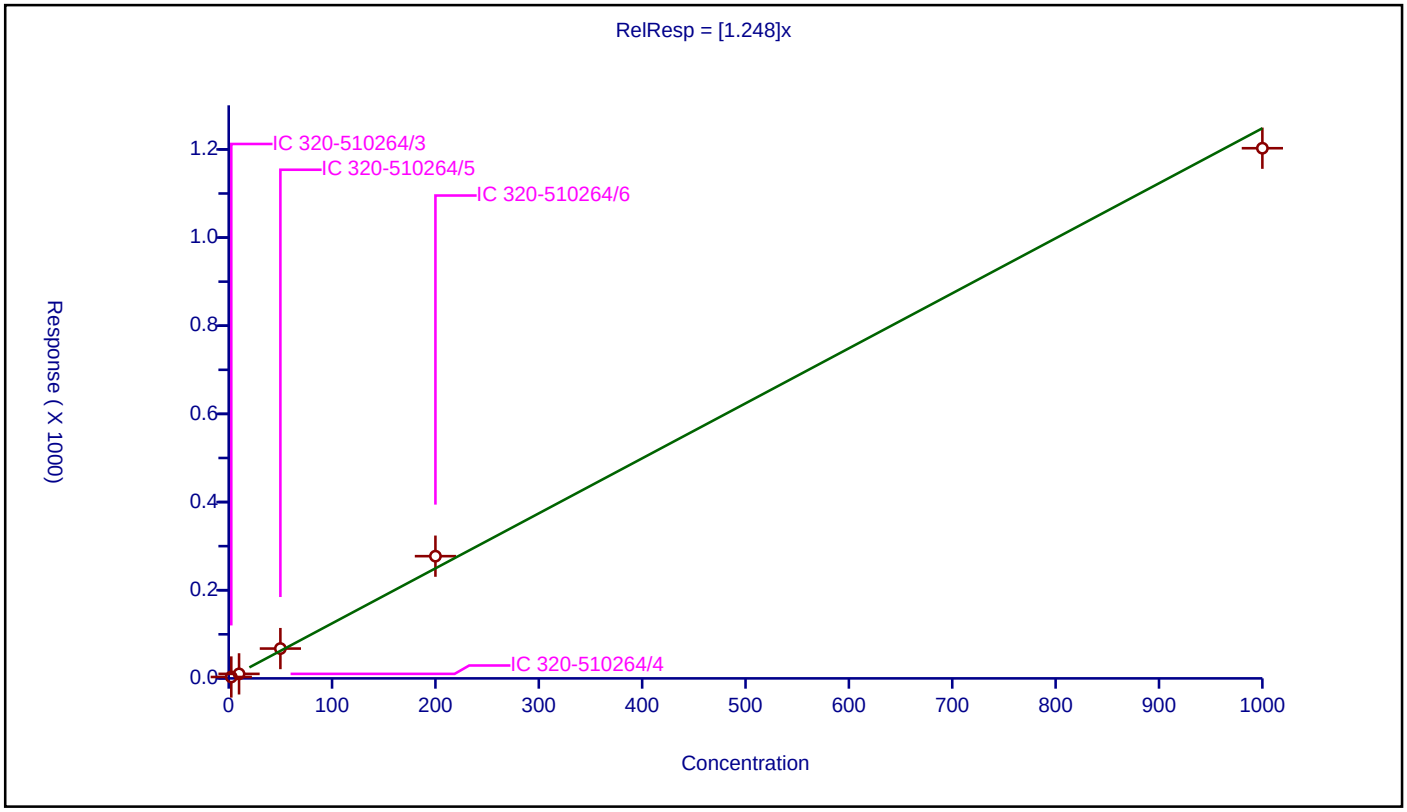

782761

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.166

Error Coefficients

Standard Error:	362000000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.933201	100.0	62528954.0	1.17328	Y
2	IC 320-510264/4	10.0	10.136374	100.0	58828058.0	1.013637	Y
3	IC 320-510264/5	50.0	59.48769	100.0	60389284.0	1.189754	Y
4	IC 320-510264/6	200.0	249.571201	100.0	59636084.0	1.247856	Y
5	IC 320-510264/7	1000.0	1207.229164	100.0	58669892.0	1.207229	Y

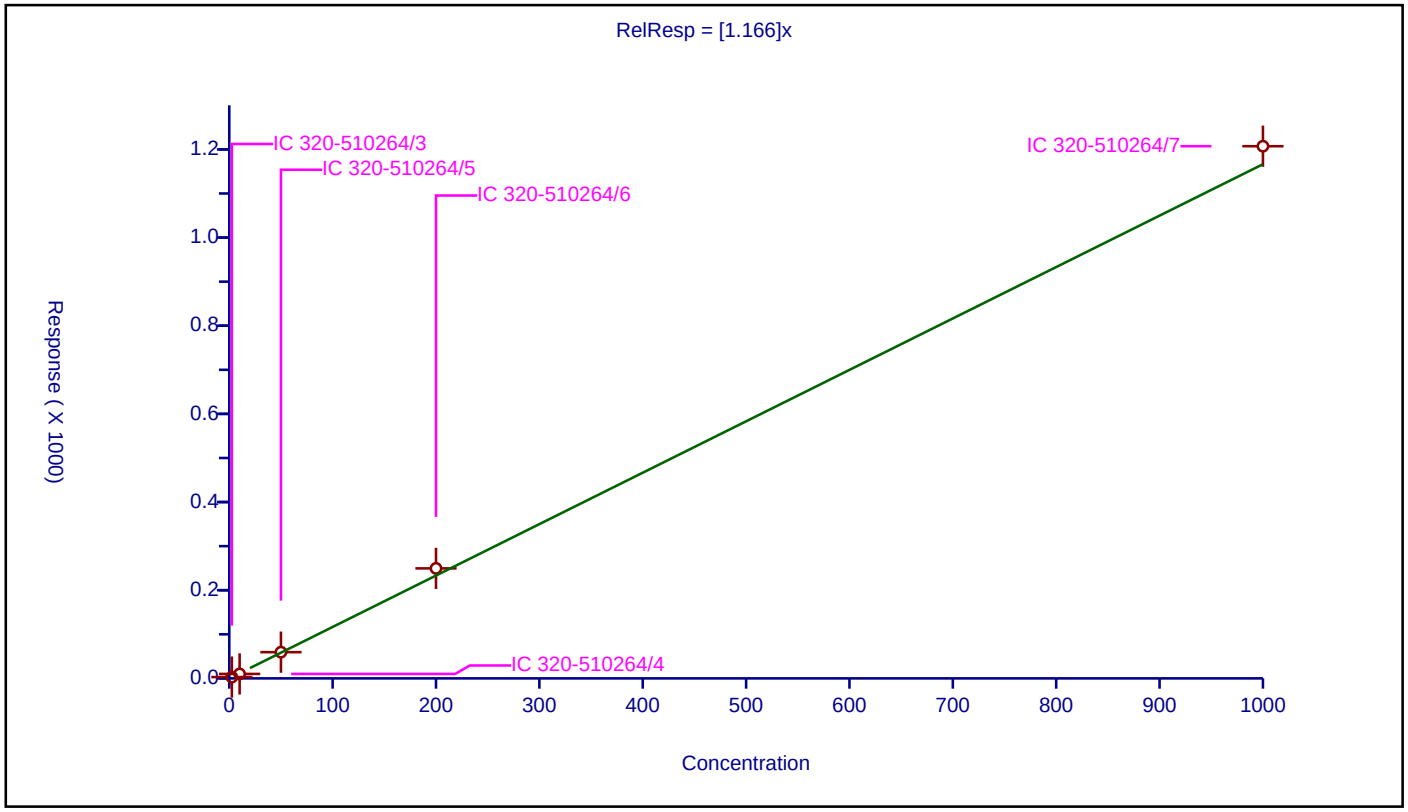

782762

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.048

Error Coefficients

Standard Error:	256000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.644408	100.0	49643581.0	1.057763	Y
2	IC 320-510264/4	10.0	9.031283	100.0	46721712.0	0.903128	Y
3	IC 320-510264/5	50.0	53.401309	100.0	47124414.0	1.068026	Y
4	IC 320-510264/6	200.0	226.195317	100.0	46524396.0	1.130977	Y
5	IC 320-510264/7	1000.0	1082.258061	100.0	46251010.0	1.082258	Y

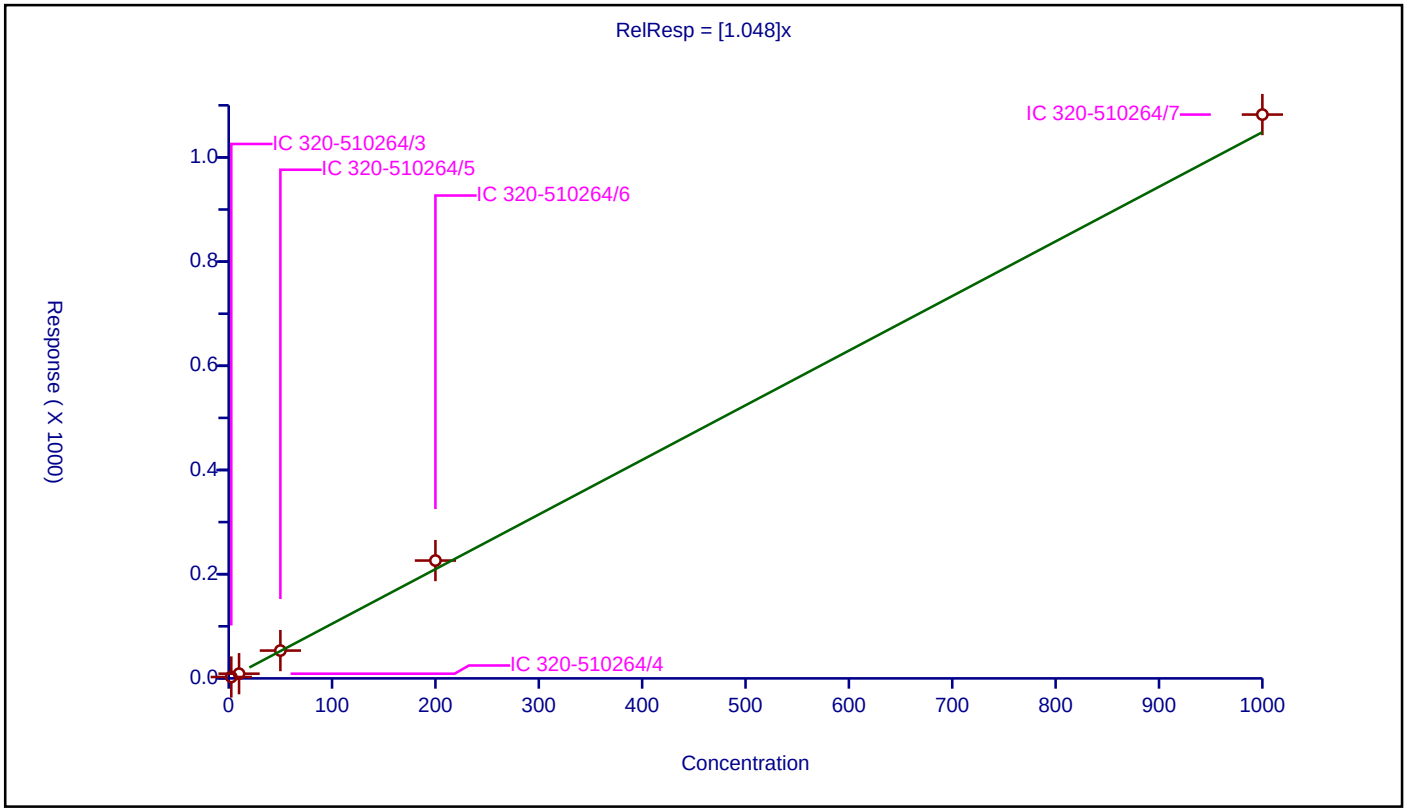

782763

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	408000000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.684664	100.0	78674290.0	1.073865	Y
2	IC 320-510264/4	10.0	9.128293	100.0	72525655.0	0.912829	Y
3	IC 320-510264/5	50.0	54.457439	100.0	76368219.0	1.089149	Y
4	IC 320-510264/6	200.0	227.4085	100.0	75205597.0	1.137042	Y
5	IC 320-510264/7	1000.0	1092.787556	100.0	72829681.0	1.092788	Y

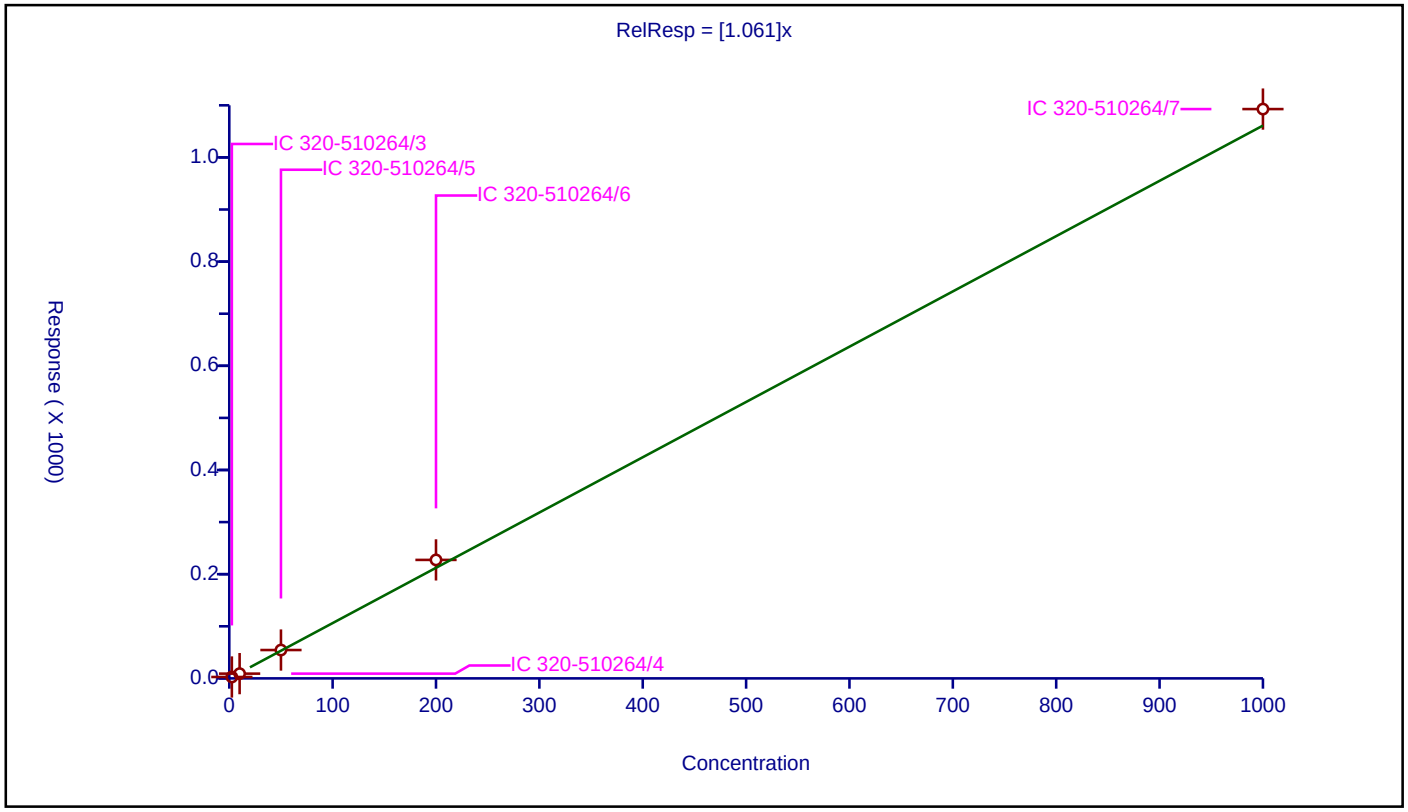

782764

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	391000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.05566	100.0	68885161.0	1.222264	Y
2	IC 320-510264/4	10.0	9.86292	100.0	64406928.0	0.986292	Y
3	IC 320-510264/5	50.0	59.290251	100.0	67028498.0	1.185805	Y
4	IC 320-510264/6	200.0	248.302486	100.0	66145684.0	1.241512	Y
5	IC 320-510264/7	1000.0	1201.822353	100.0	63471184.0	1.201822	Y

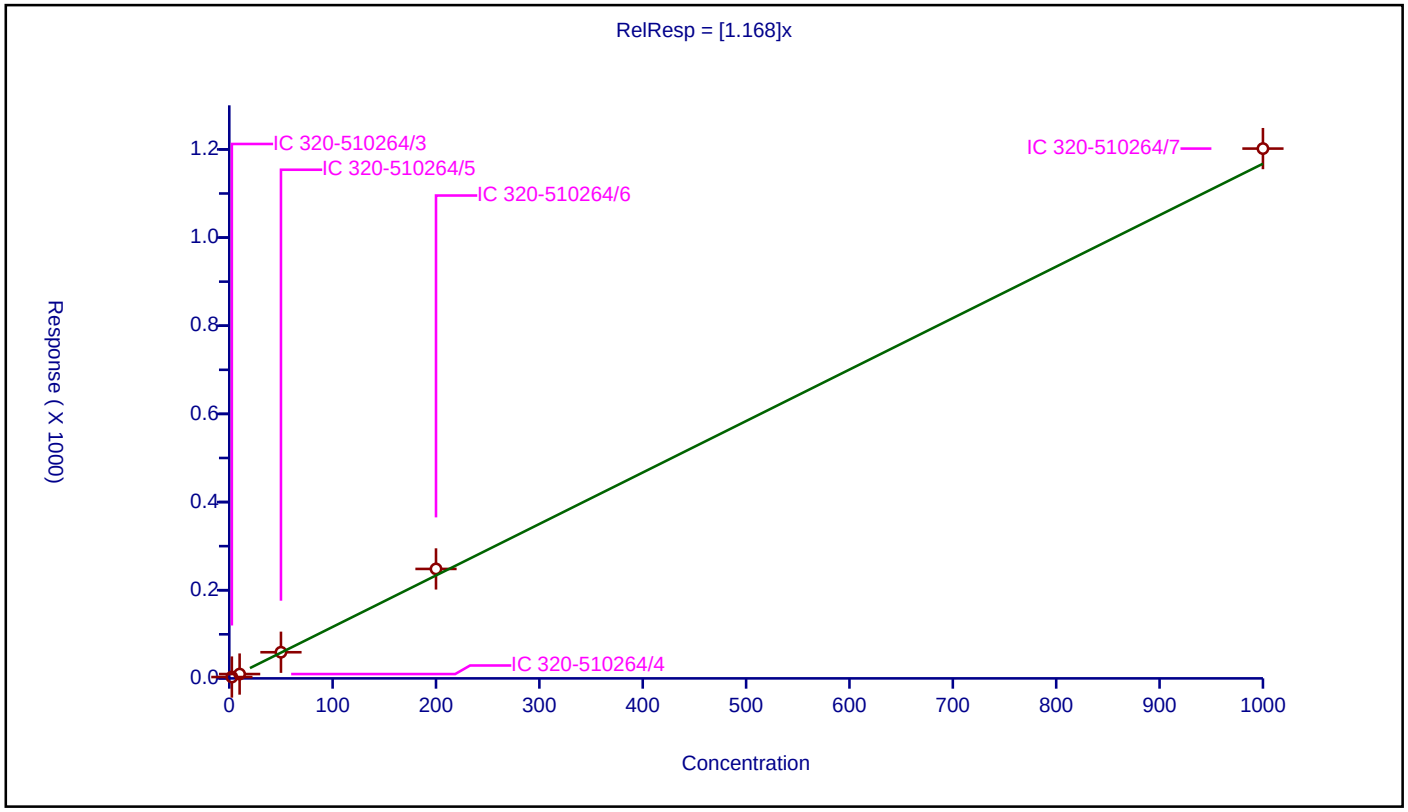

782765

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.018

Error Coefficients

Standard Error:	401000000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.601965	100.0	80591659.0	1.040786	Y
2	IC 320-510264/4	10.0	8.609629	100.0	74944110.0	0.860963	Y
3	IC 320-510264/5	50.0	52.328396	100.0	78214582.0	1.046568	Y
4	IC 320-510264/6	200.0	221.640486	100.0	75259591.0	1.108202	Y
5	IC 320-510264/7	1000.0	1035.570916	100.0	75649463.0	1.035571	Y

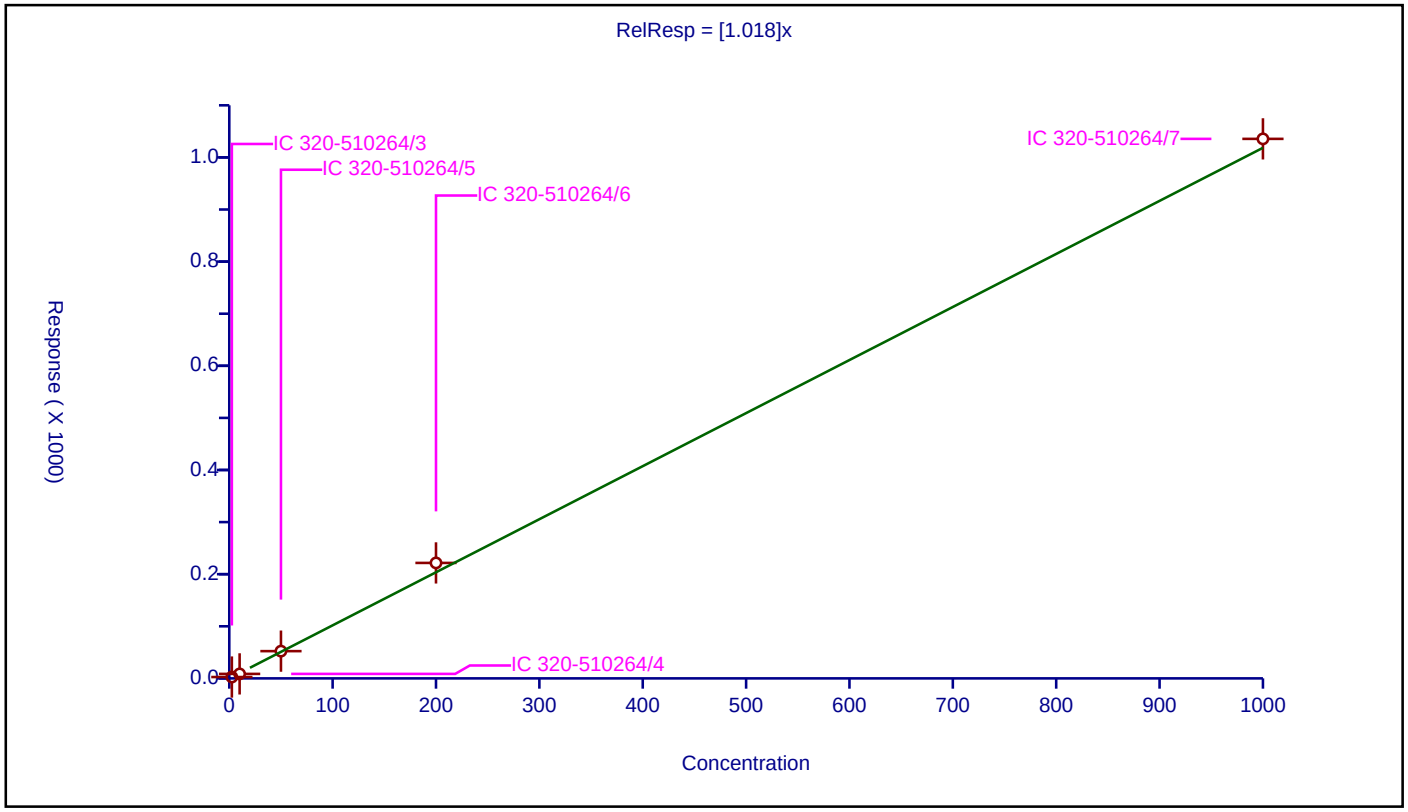

782766

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.254

Error Coefficients

Standard Error:	71900000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.62875	100.0	59957723.0	1.257499	Y
2	IC 320-510264/4	2.0	2.19411	100.0	53975587.0	1.097055	Y
3	IC 320-510264/5	10.0	12.651014	100.0	56155483.0	1.265101	Y
4	IC 320-510264/6	40.0	53.737487	100.0	55471422.0	1.343437	Y
5	IC 320-510264/7	200.0	261.501191	100.0	53698206.0	1.307506	Y

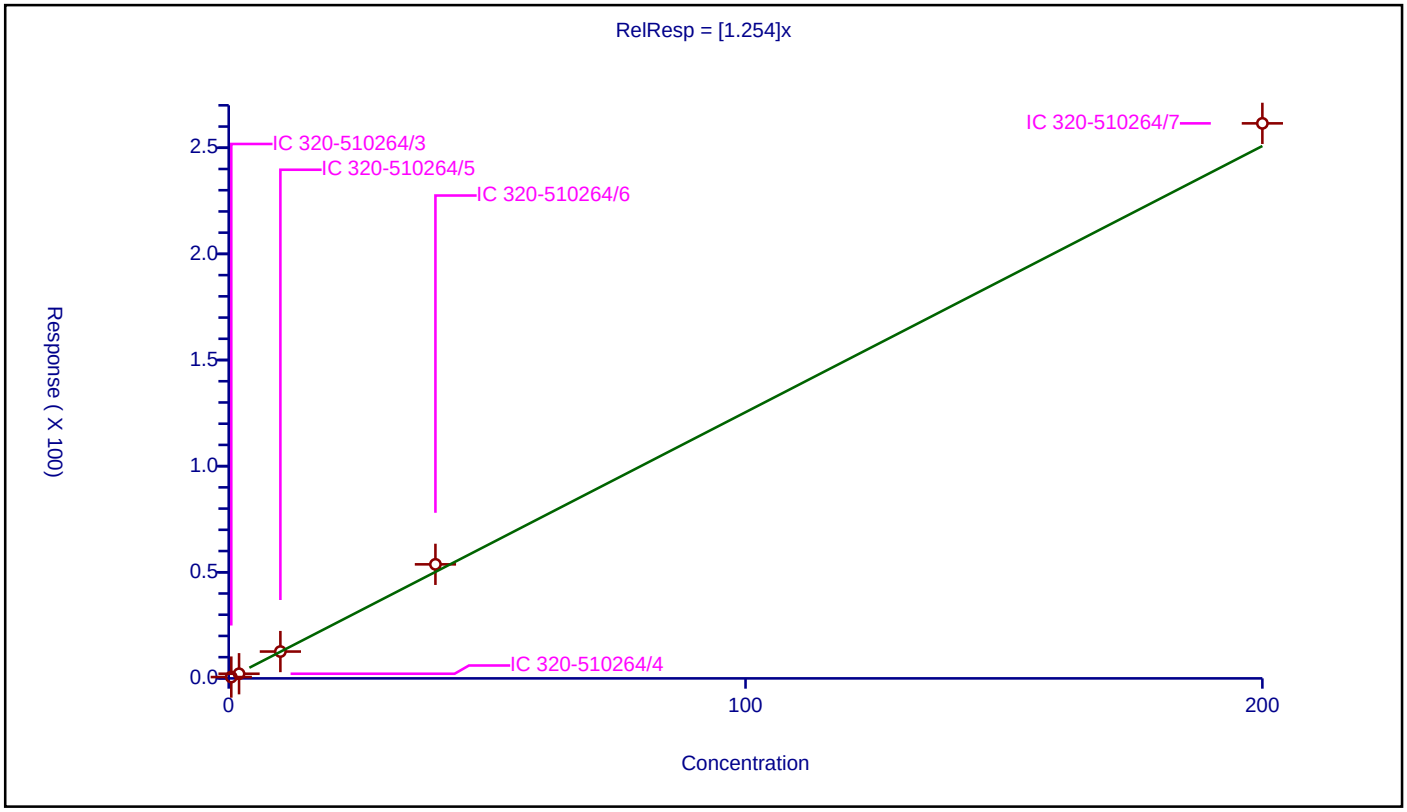

782767

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.024

Error Coefficients

Standard Error:	105000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.514358	100.0	108384725.0	1.028715	Y
2	IC 320-510264/4	2.0	1.739696	100.0	98246522.0	0.869848	Y
3	IC 320-510264/5	10.0	10.458407	100.0	101724636.0	1.045841	Y
4	IC 320-510264/6	40.0	44.37733	100.0	100332269.0	1.109433	Y
5	IC 320-510264/7	200.0	213.143097	100.0	95980421.0	1.065715	Y

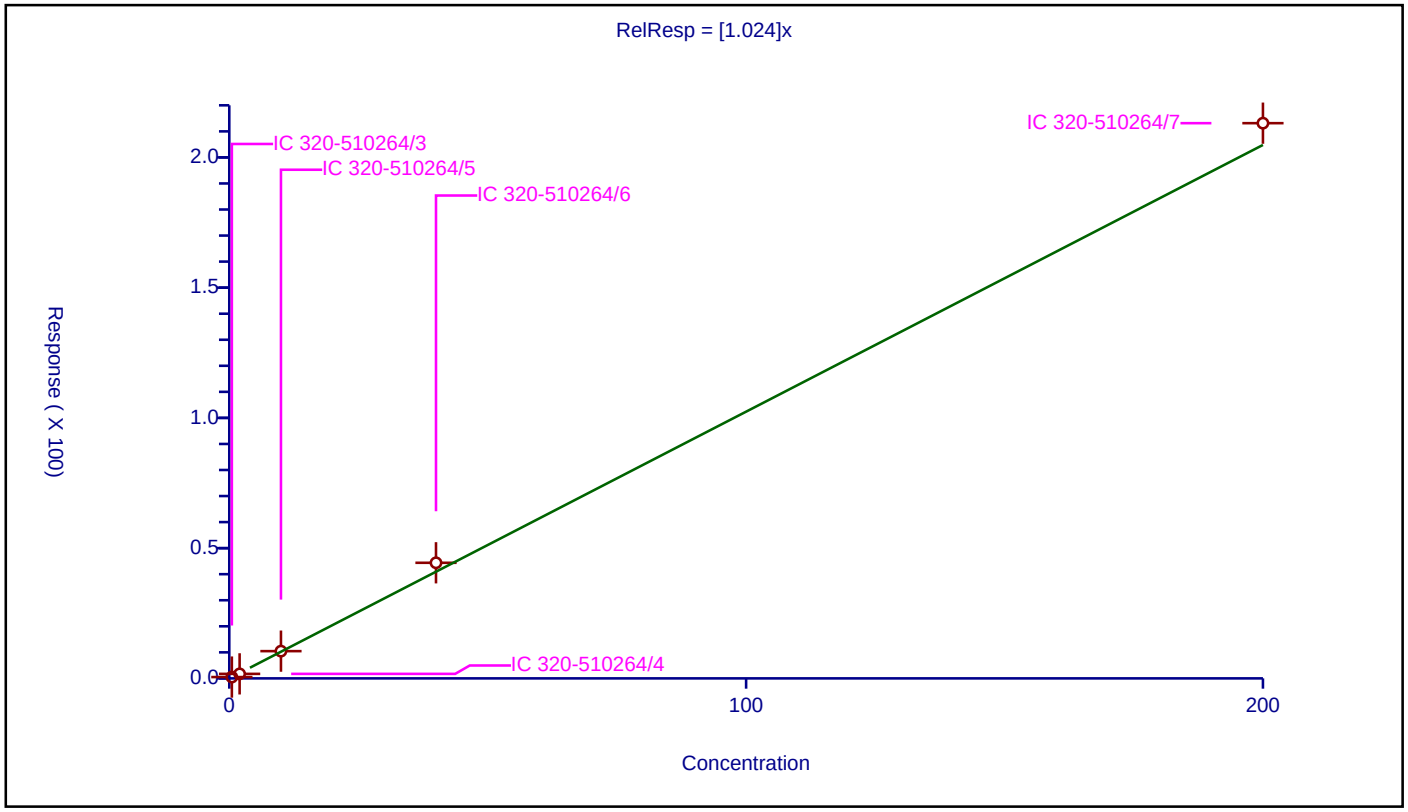

782768

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	72100000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.485229	100.0	65685883.0	0.970458	Y
2	IC 320-510264/4	2.0	1.95888	100.0	62853211.0	0.97944	Y
3	IC 320-510264/5	10.0	11.718119	100.0	62635225.0	1.171812	Y
4	IC 320-510264/6	40.0	47.503291	100.0	62046988.0	1.187582	Y
5	IC 320-510264/7	200.0	245.287862	100.0	57464333.0	1.226439	Y

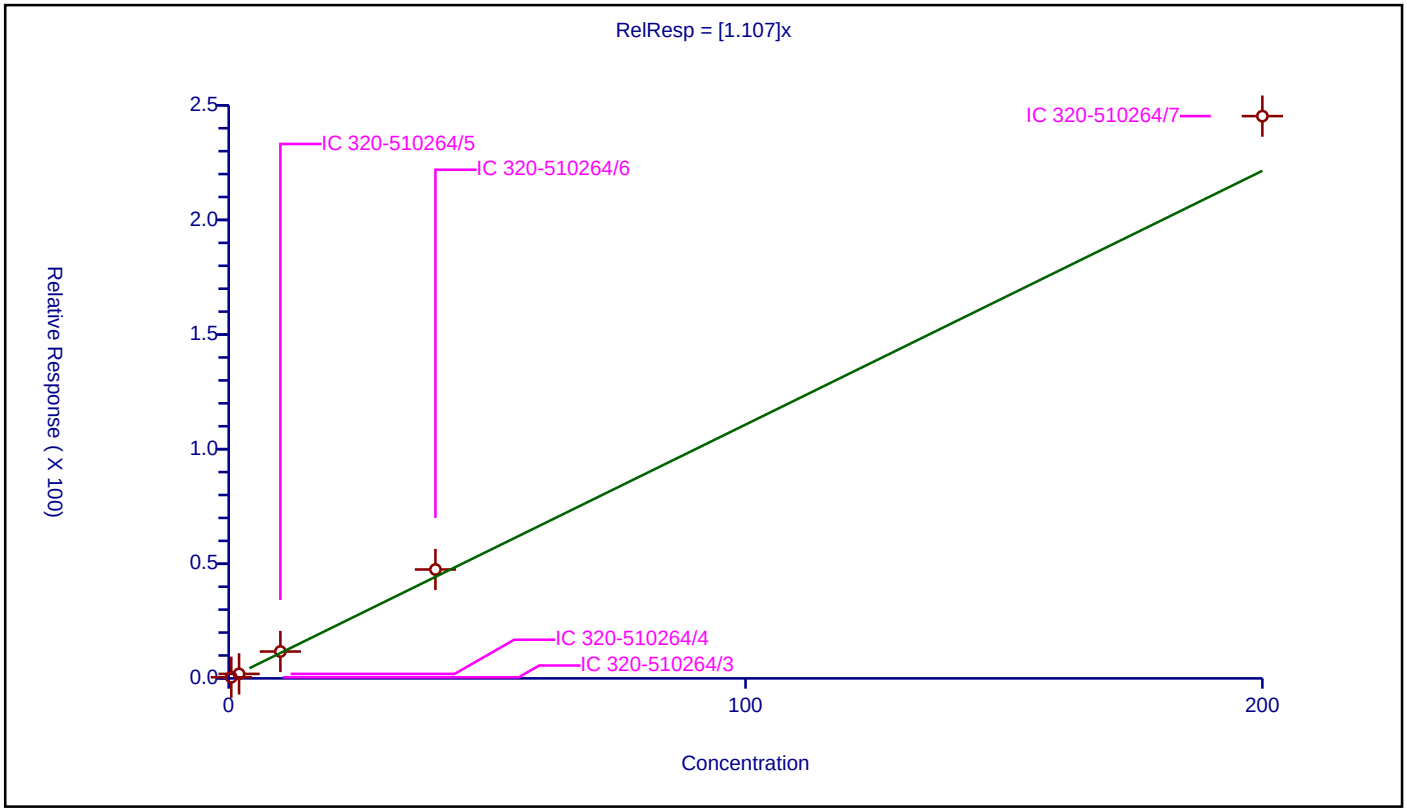

782769

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	325000000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	5.504666	200.0	57018462.0	1.100933	Y
2	IC 320-510264/4	20.0	19.269459	200.0	52034518.0	0.963473	Y
3	IC 320-510264/5	100.0	116.51708	200.0	54338243.0	1.165171	Y
4	IC 320-510264/6	400.0	473.162285	200.0	57303880.0	1.182906	Y
5	IC 320-510264/7	2000.0	2245.176522	200.0	56623863.0	1.122588	Y

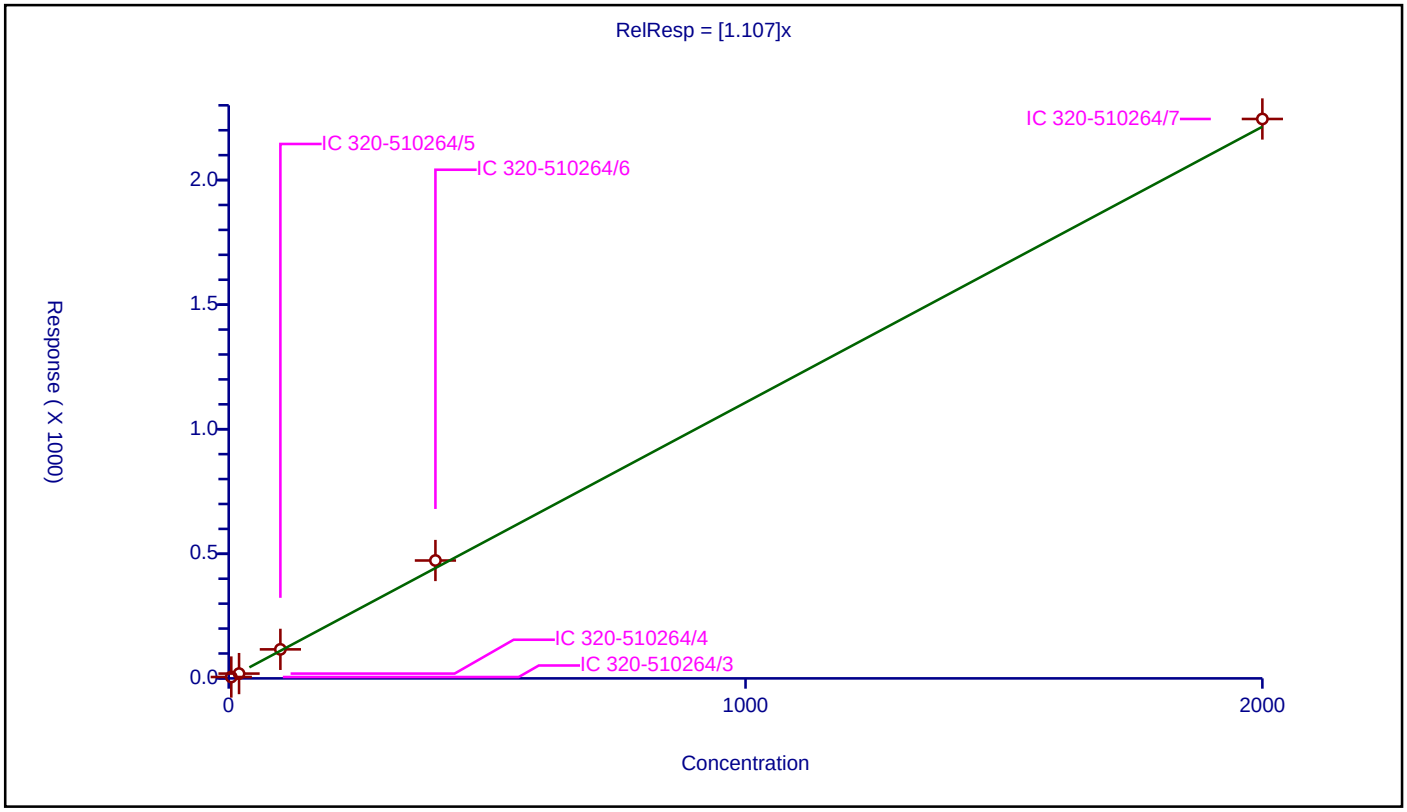

782770

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.438

Error Coefficients

Standard Error:	438000000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	6.931702	200.0	57018462.0	1.38634	Y
2	IC 320-510264/4	20.0	23.824451	200.0	52034518.0	1.191223	Y
3	IC 320-510264/5	100.0	151.448408	200.0	54338243.0	1.514484	Y
4	IC 320-510264/6	400.0	634.327267	200.0	57303880.0	1.585818	Y
5	IC 320-510264/7	2000.0	3025.883229	200.0	56623863.0	1.512942	Y

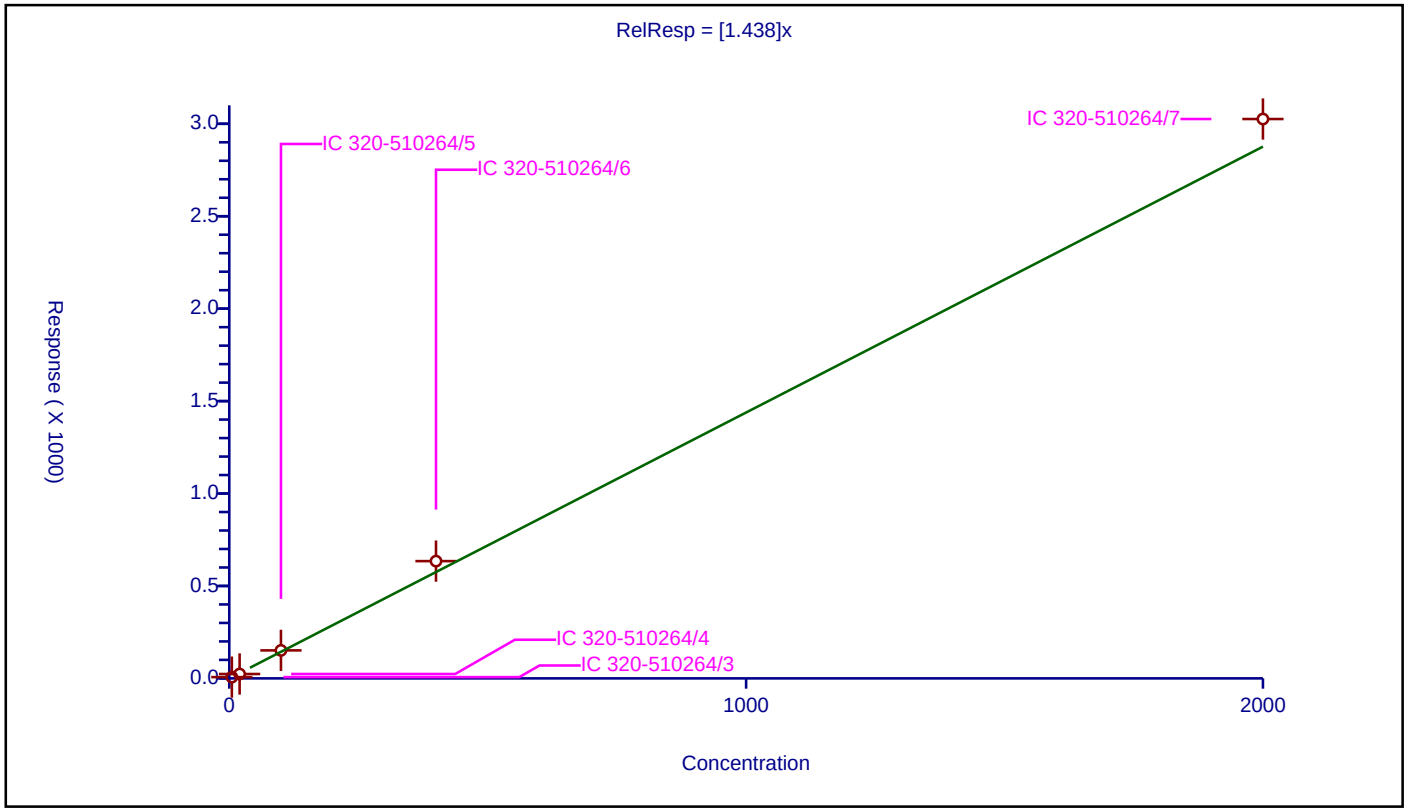

782771

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

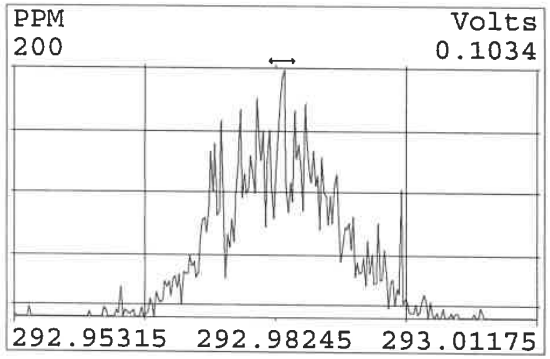

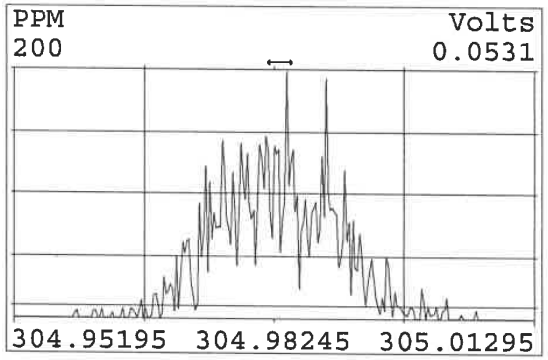

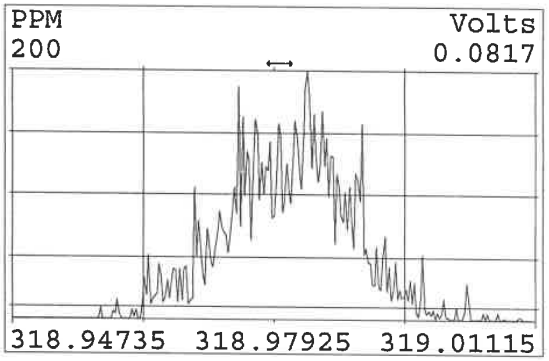

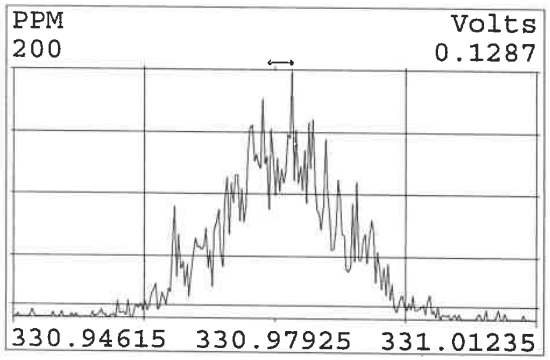

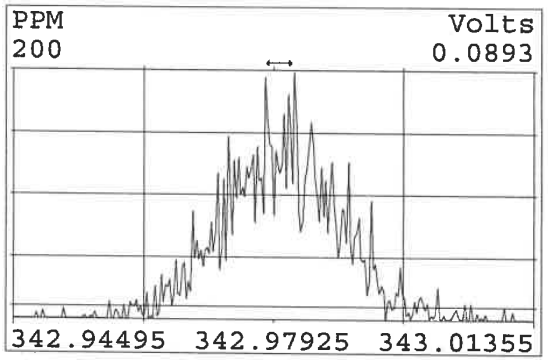

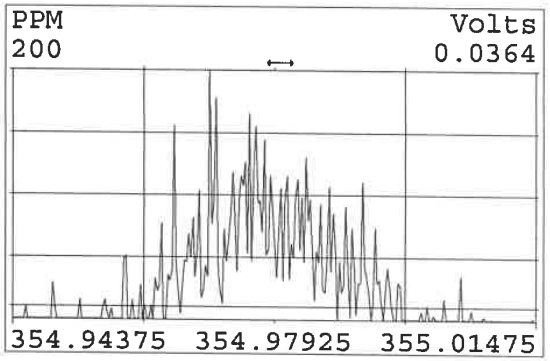

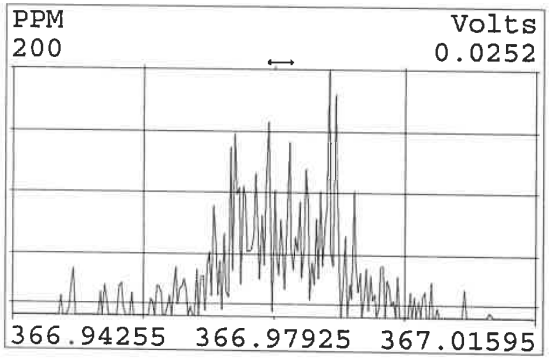

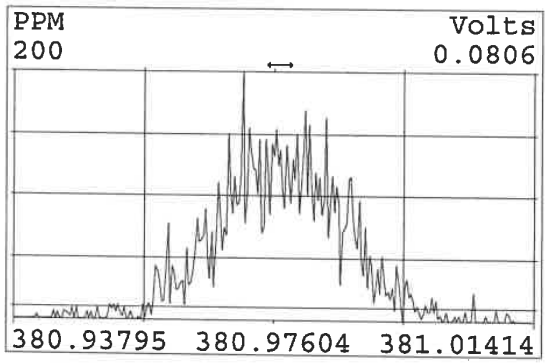

782775

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

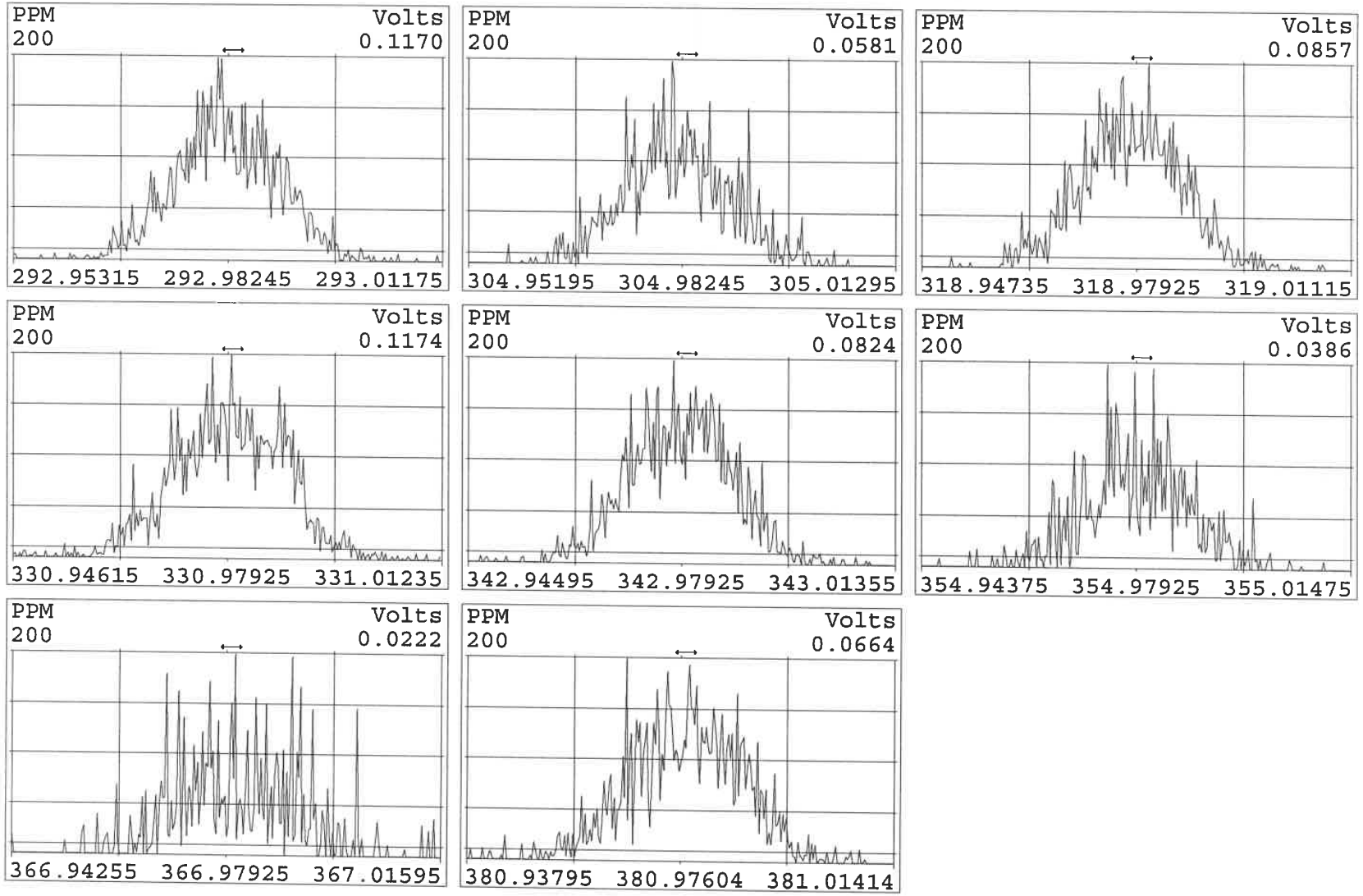

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

782777

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

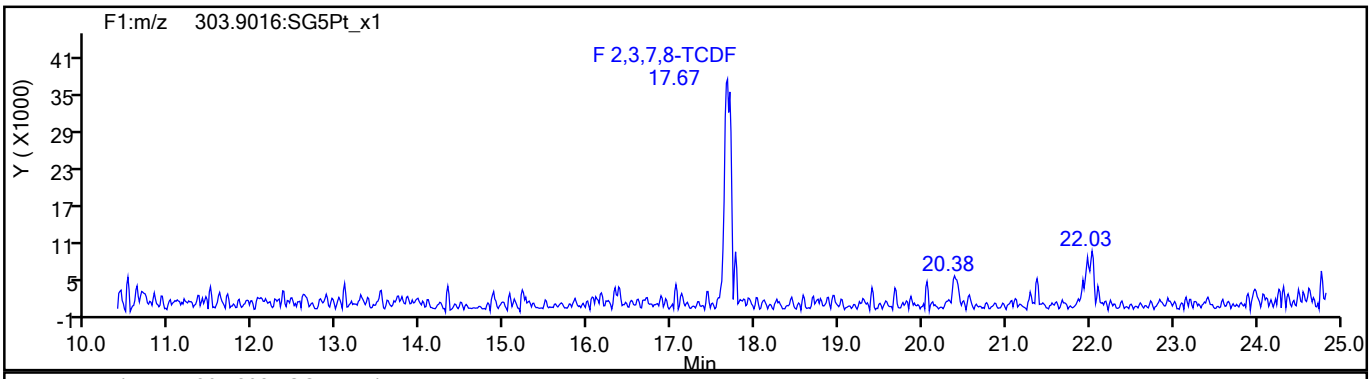

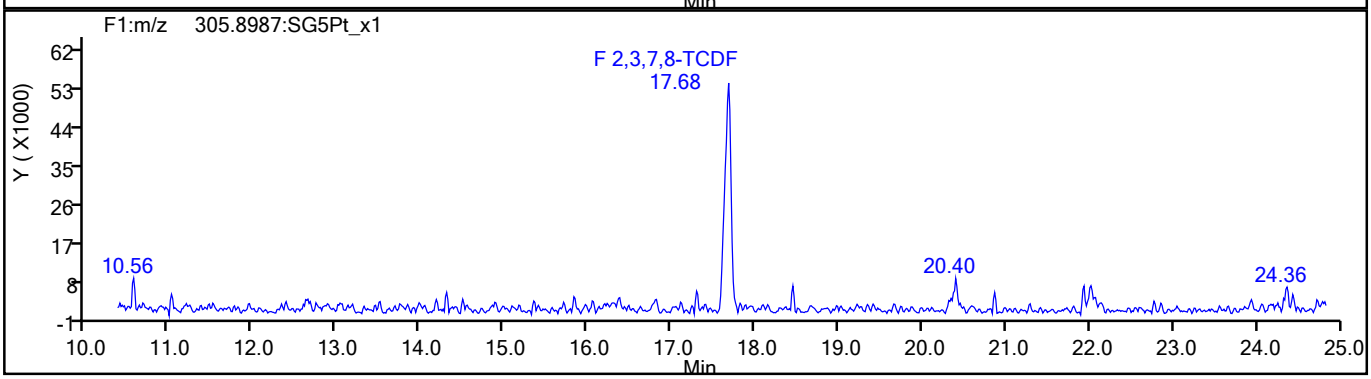

TCDF Standards

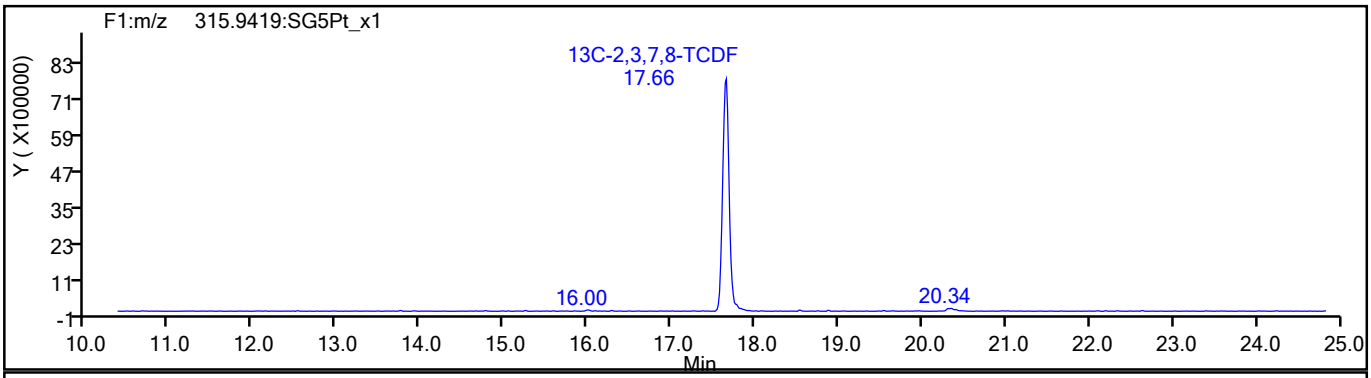

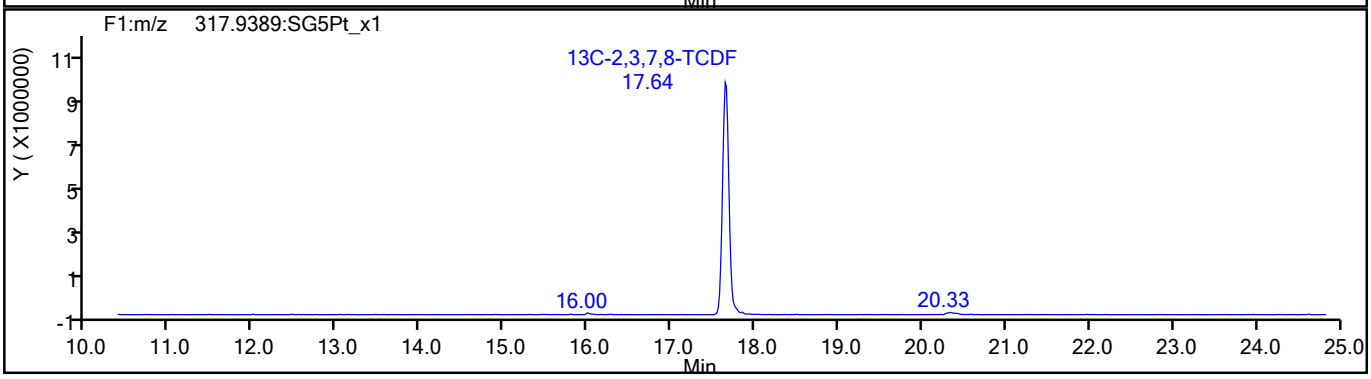

782779

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

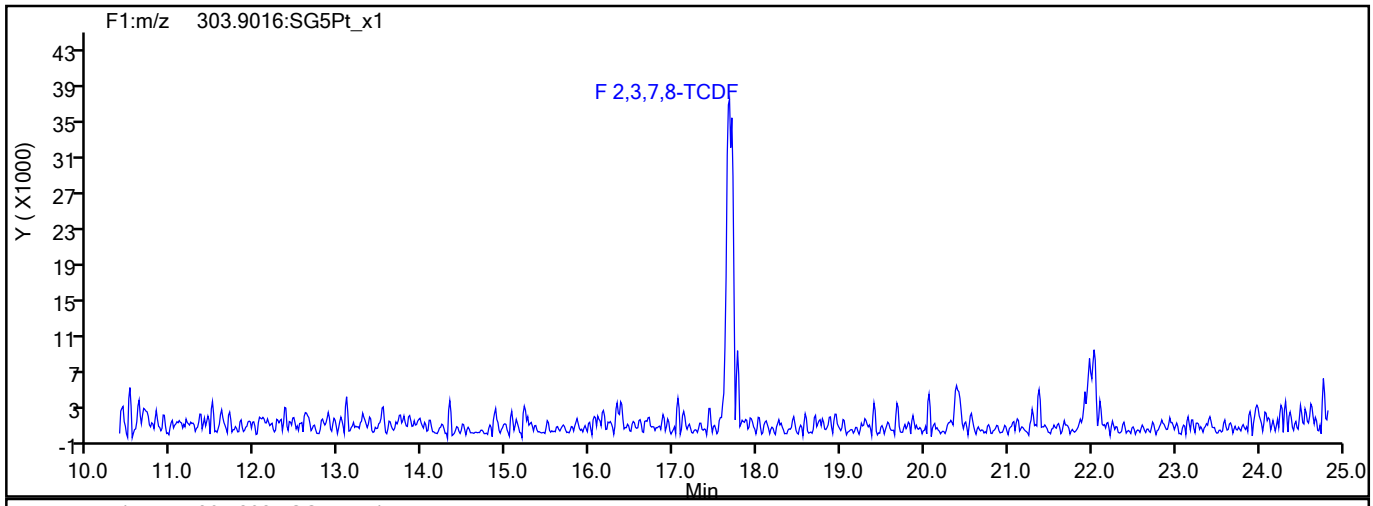

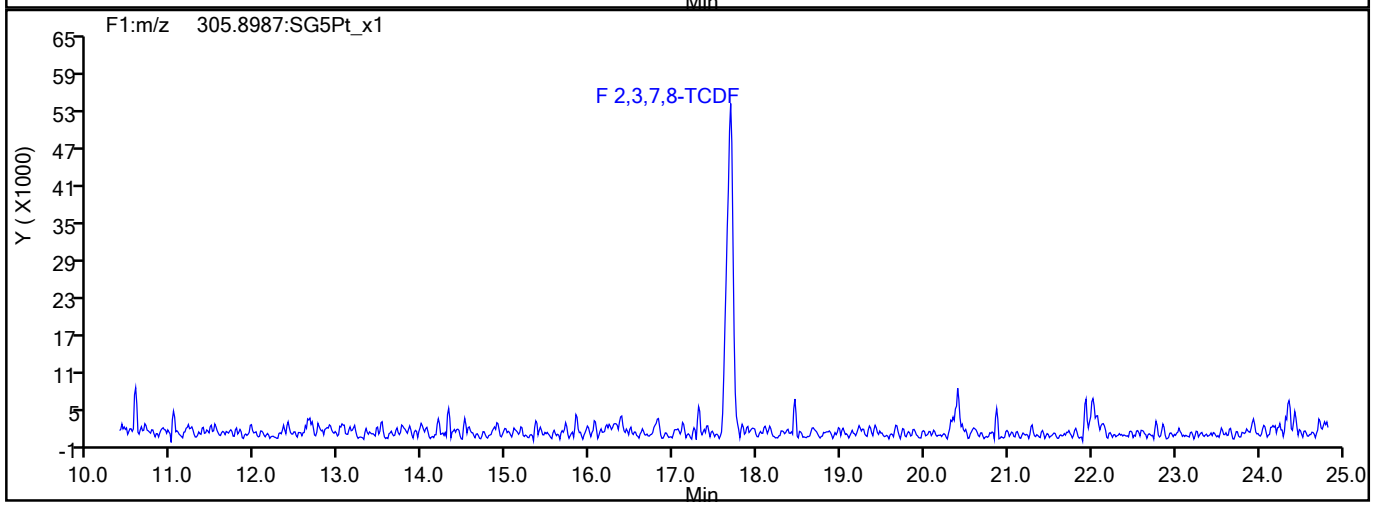

TCDF Interference Mass

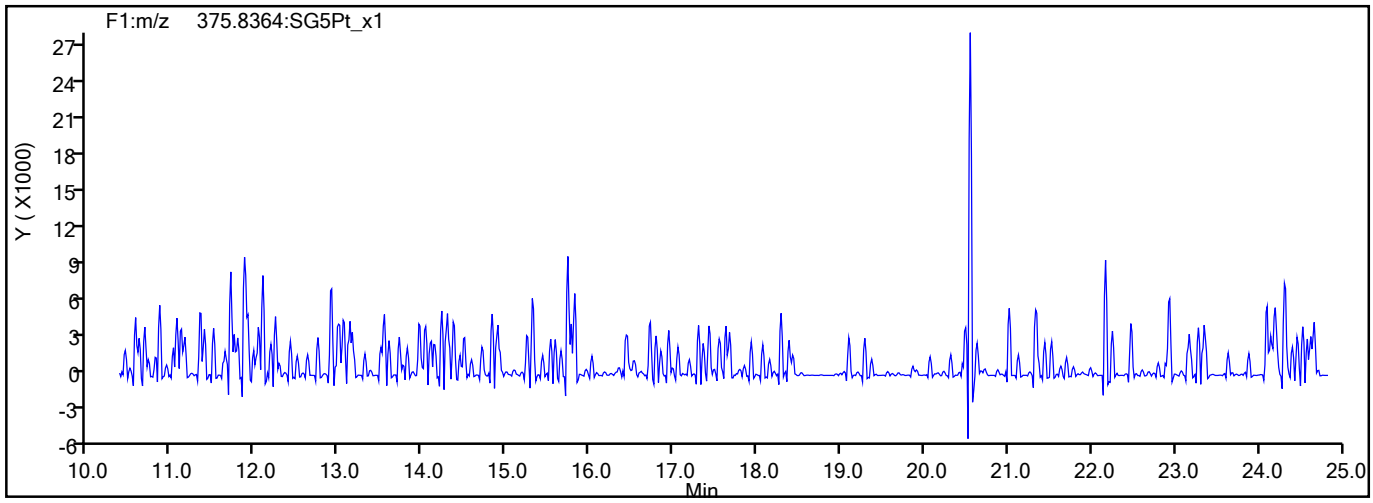

782780

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

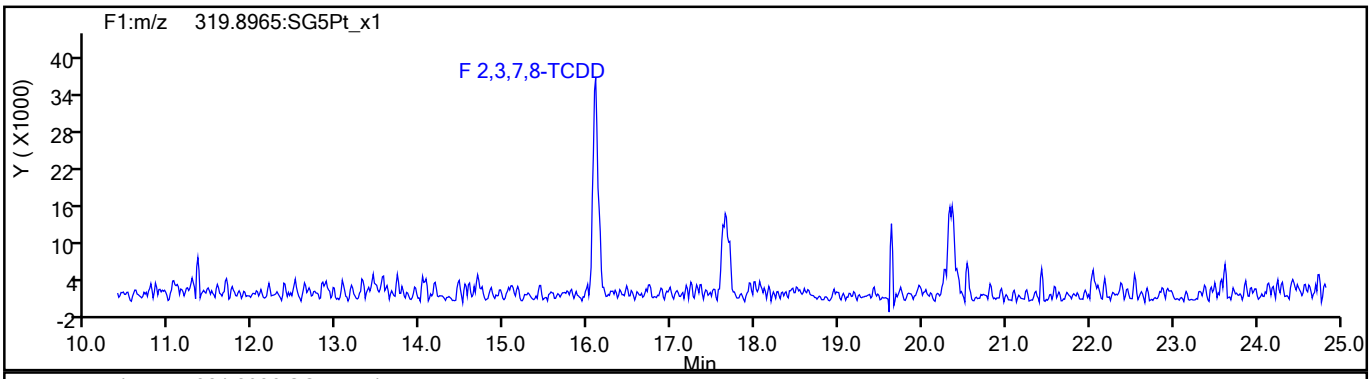

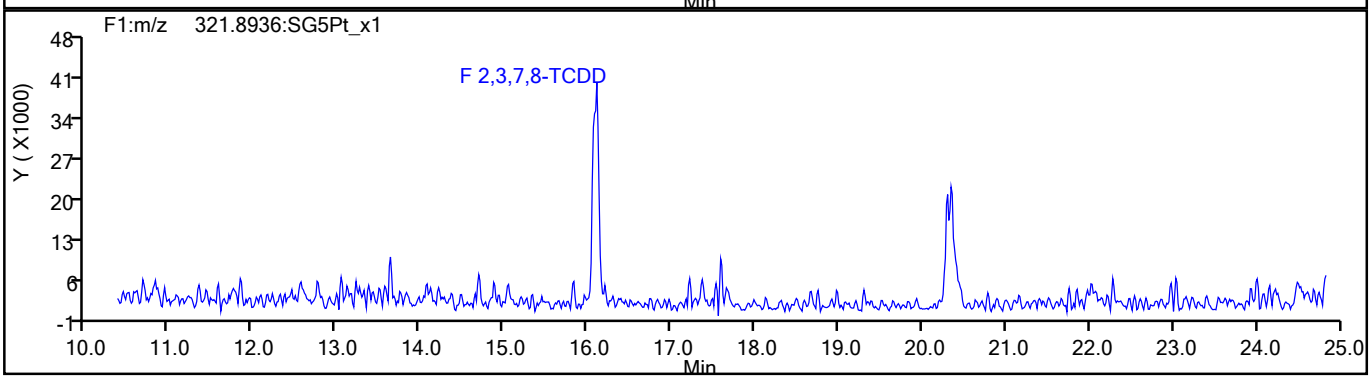

TCDD Standards

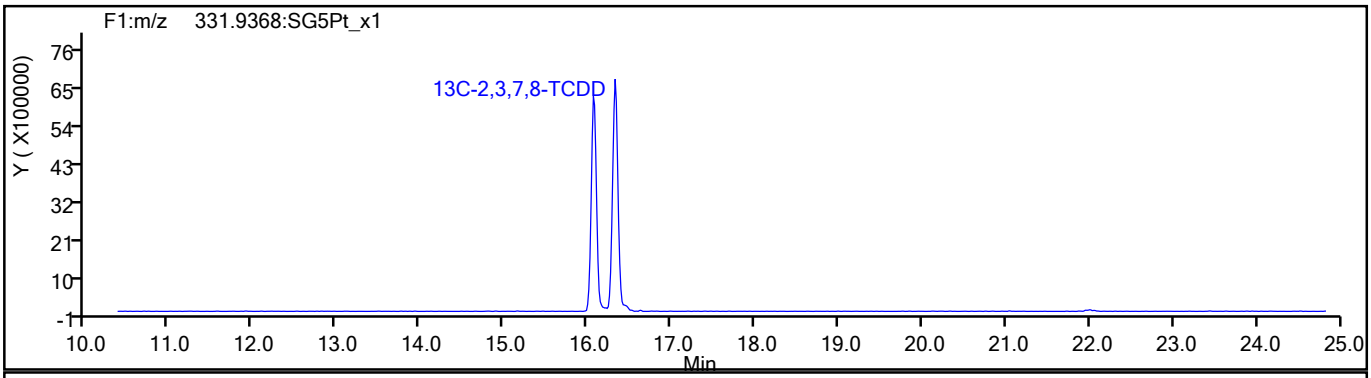

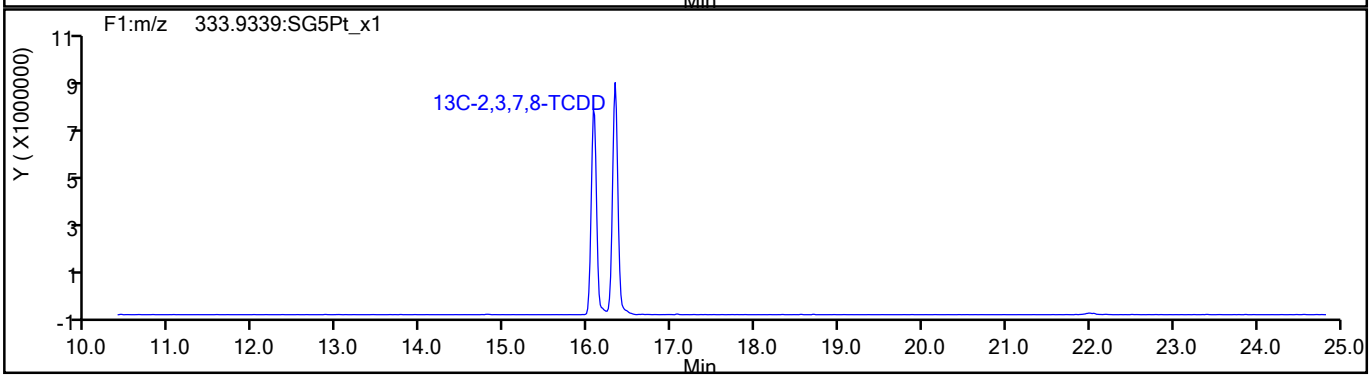

782781

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

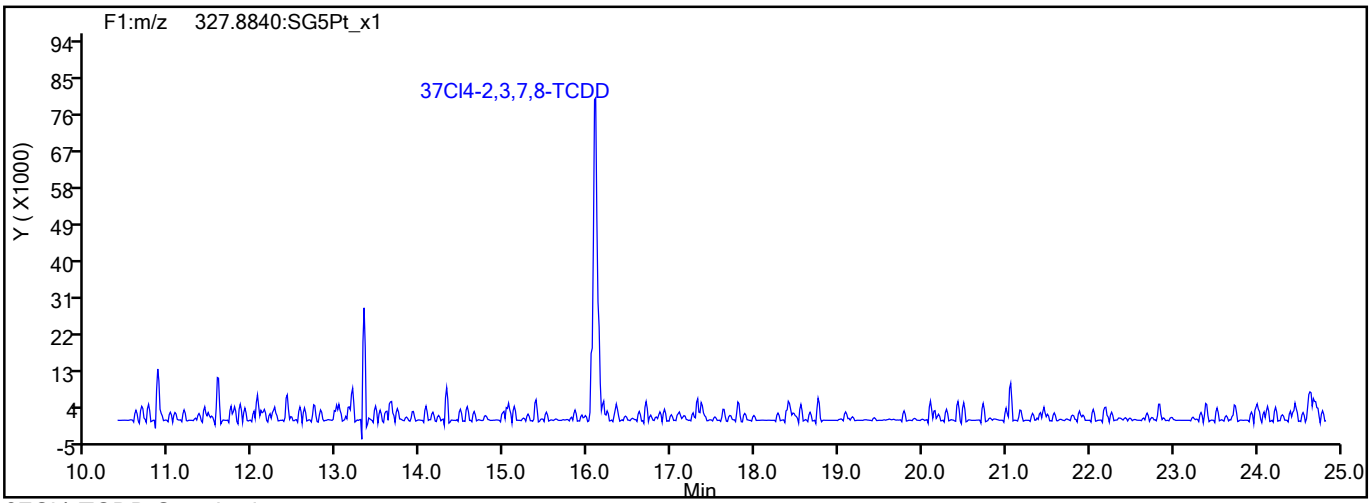

37Cl4-TCDD Standards

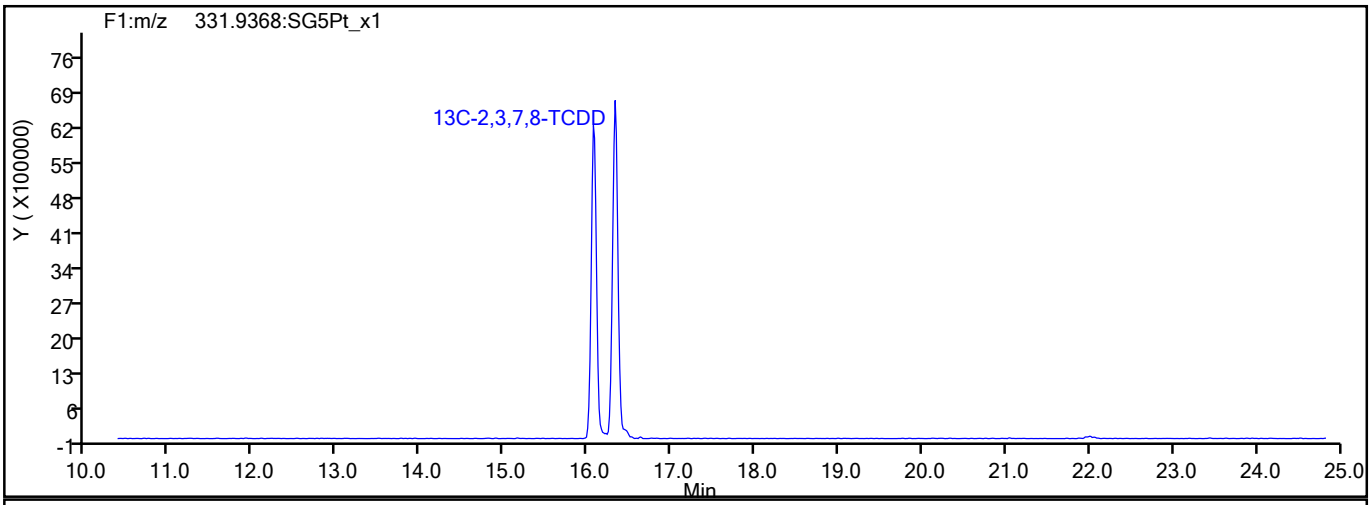

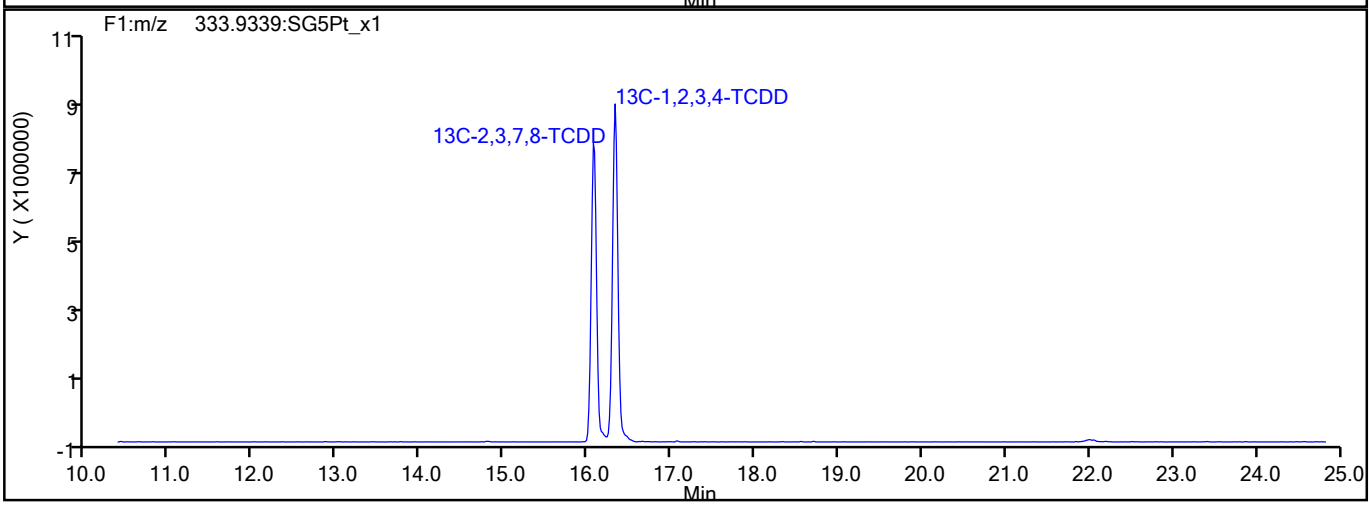

782782

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

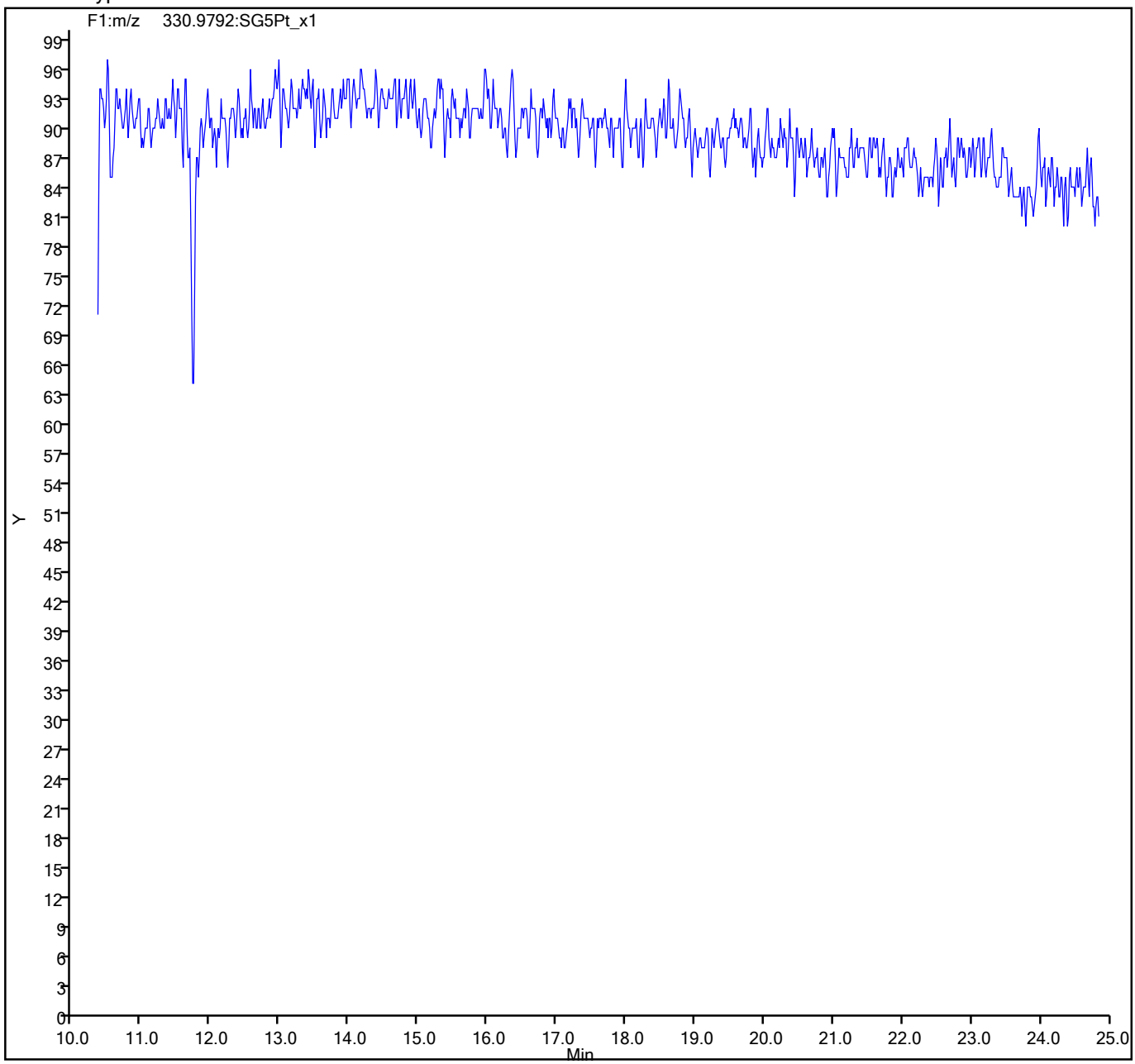

782783

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

782785

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

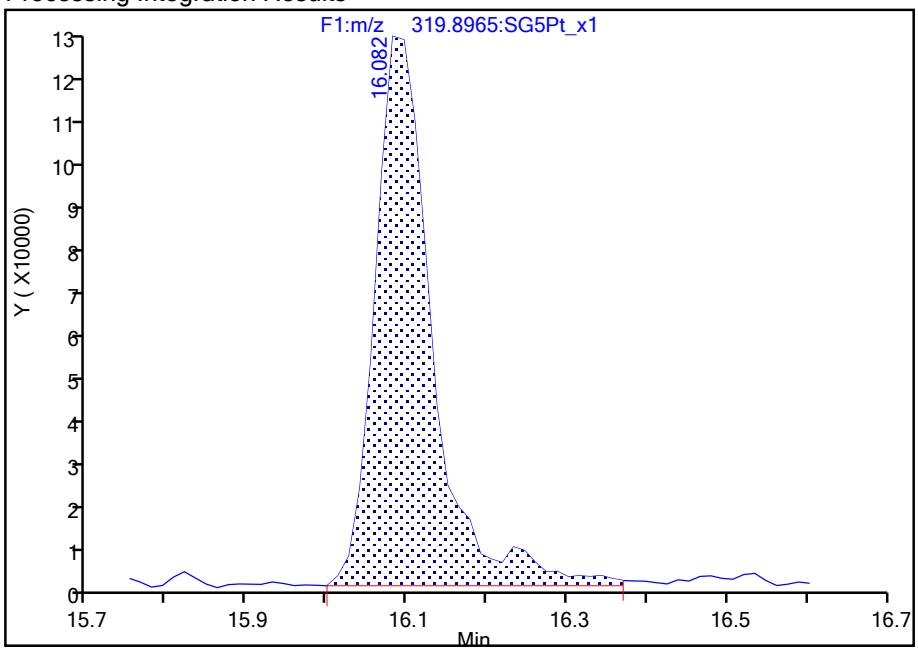

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

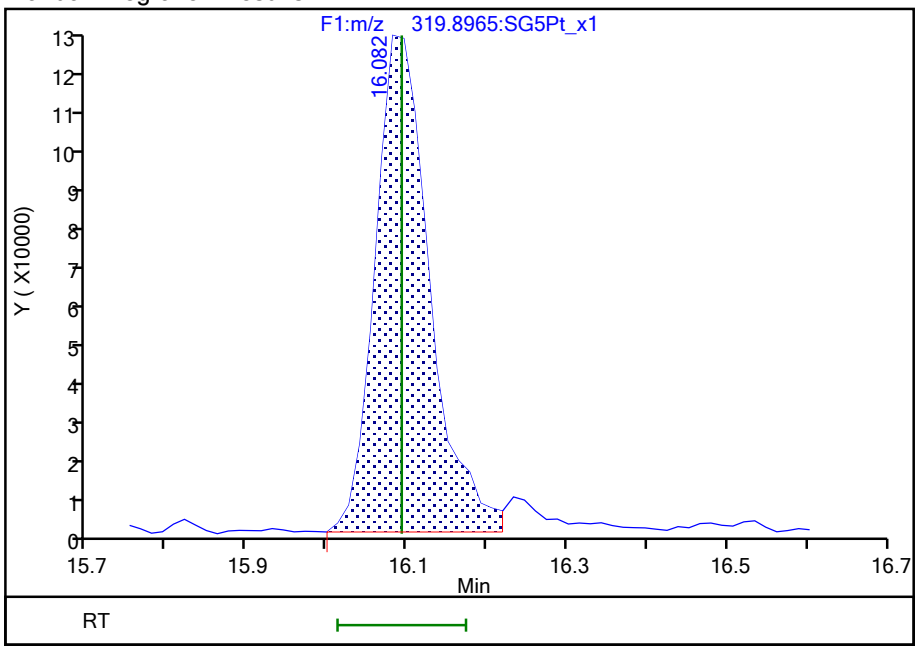

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

782786

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

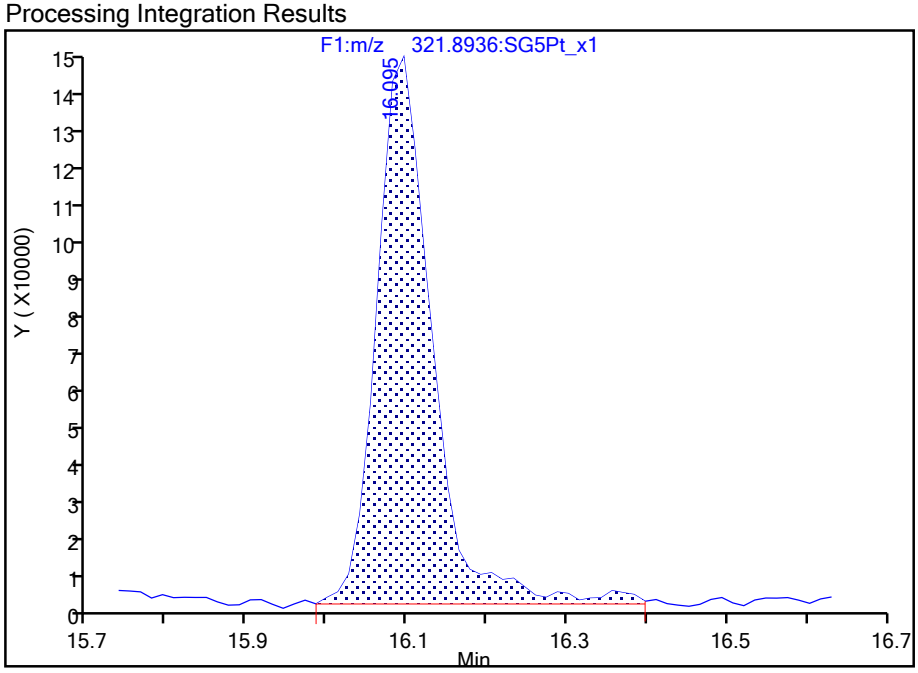

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

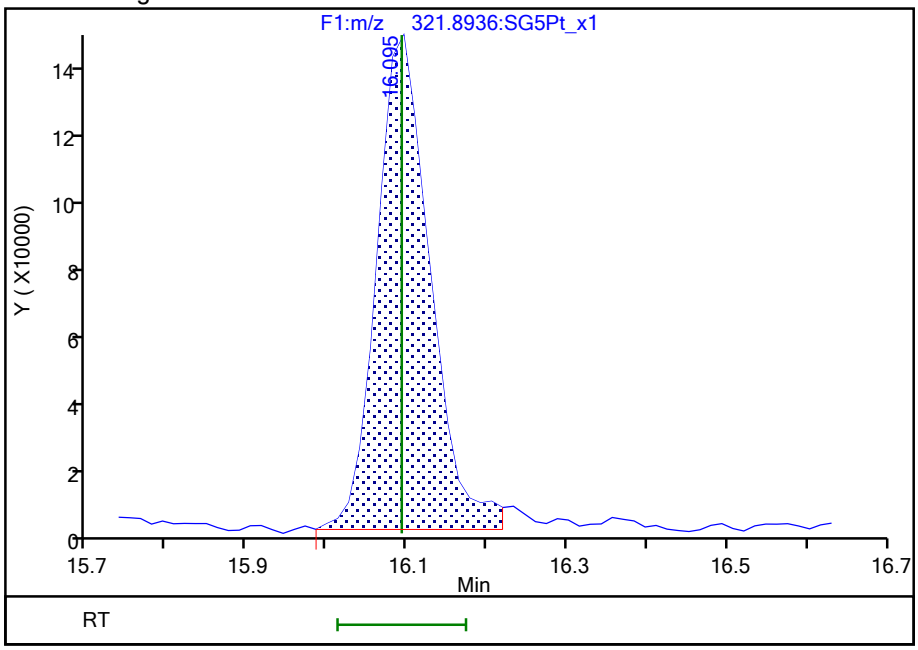

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

782787

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

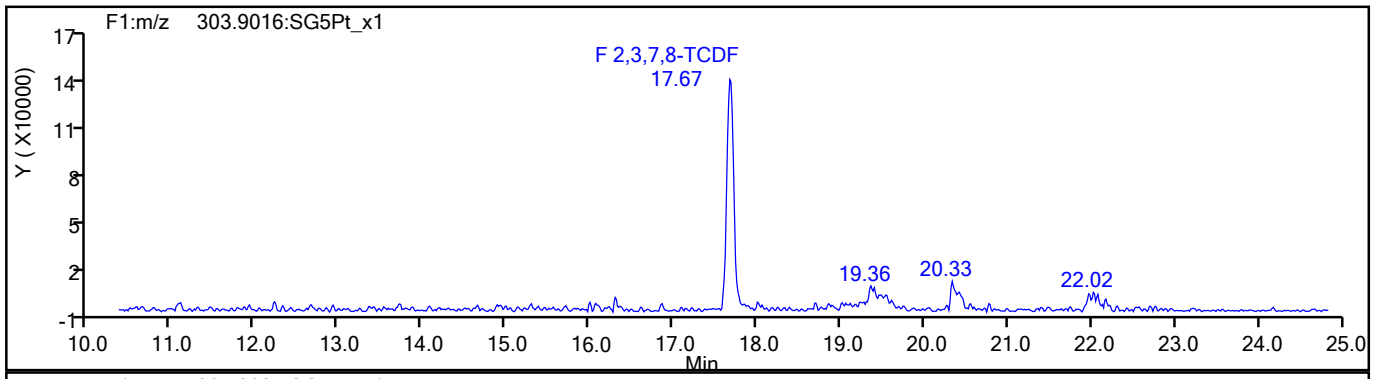

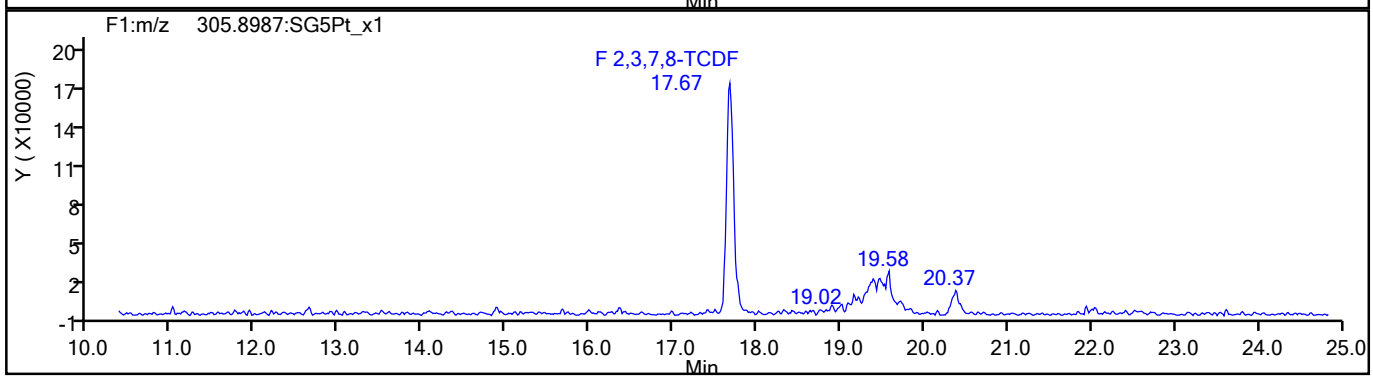

TCDF Standards

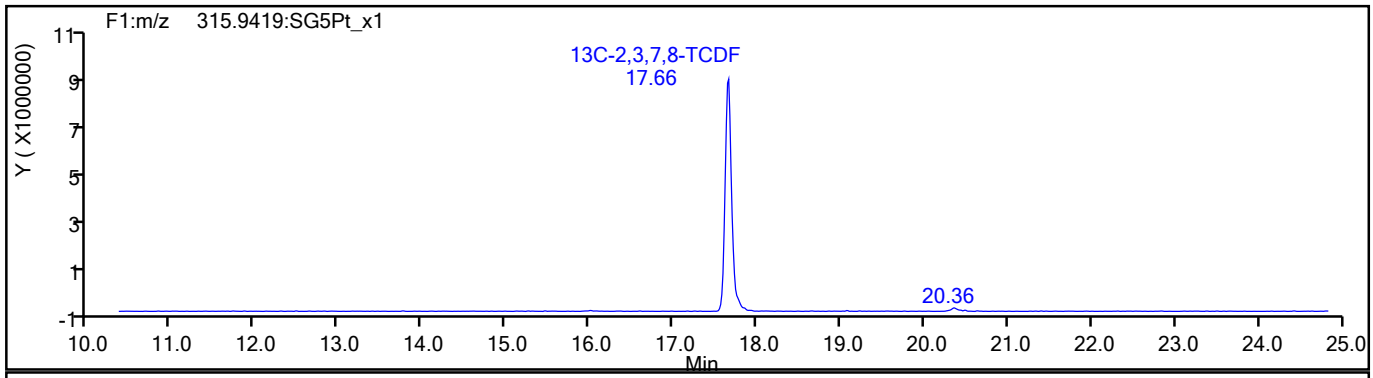

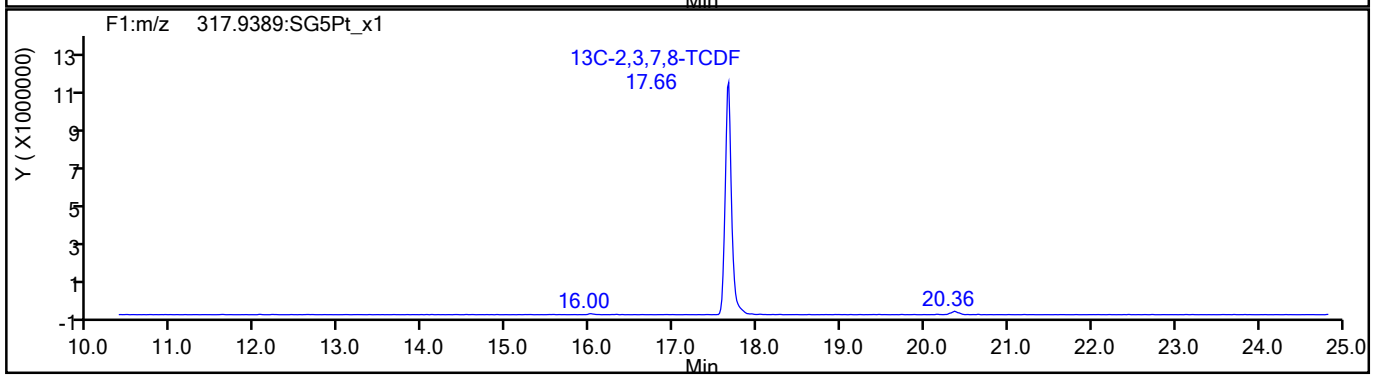

782788

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

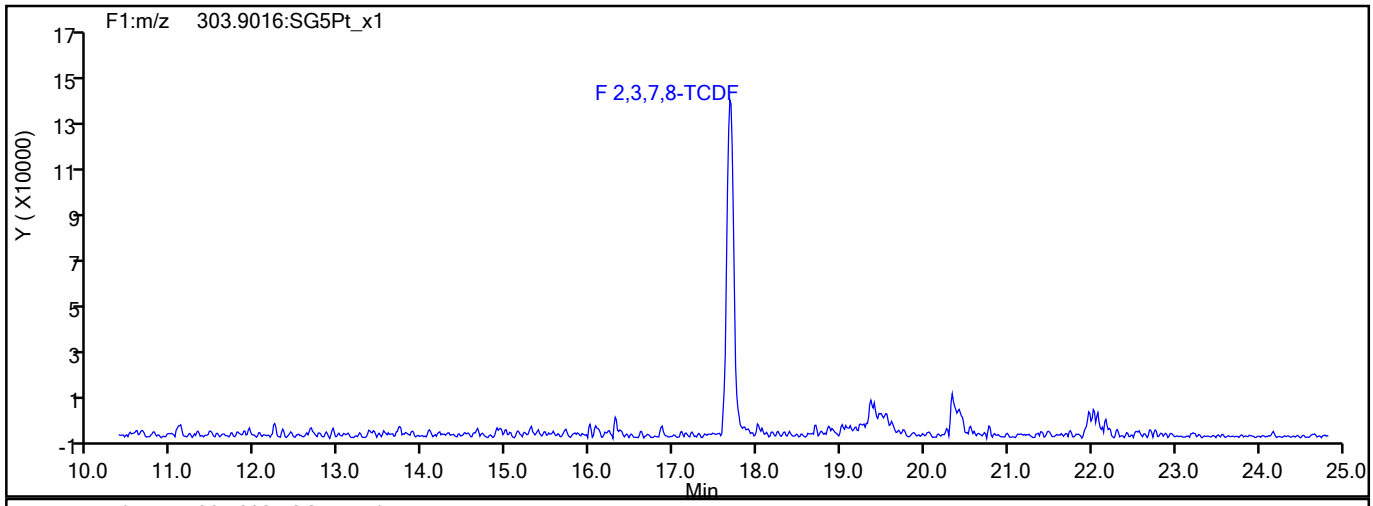

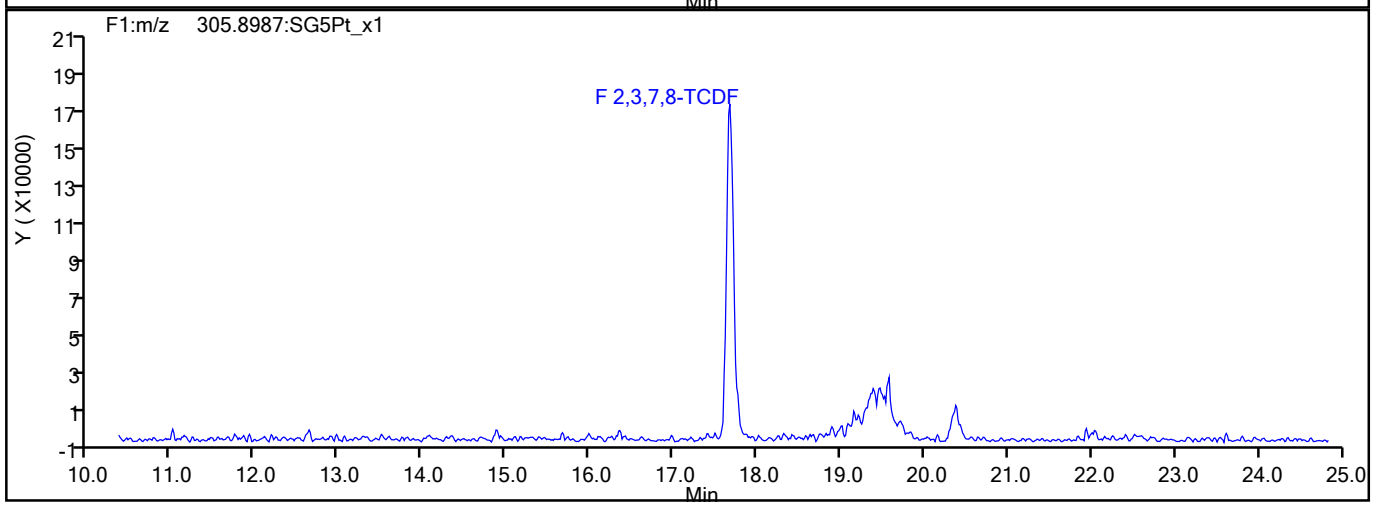

TCDF Interference Mass

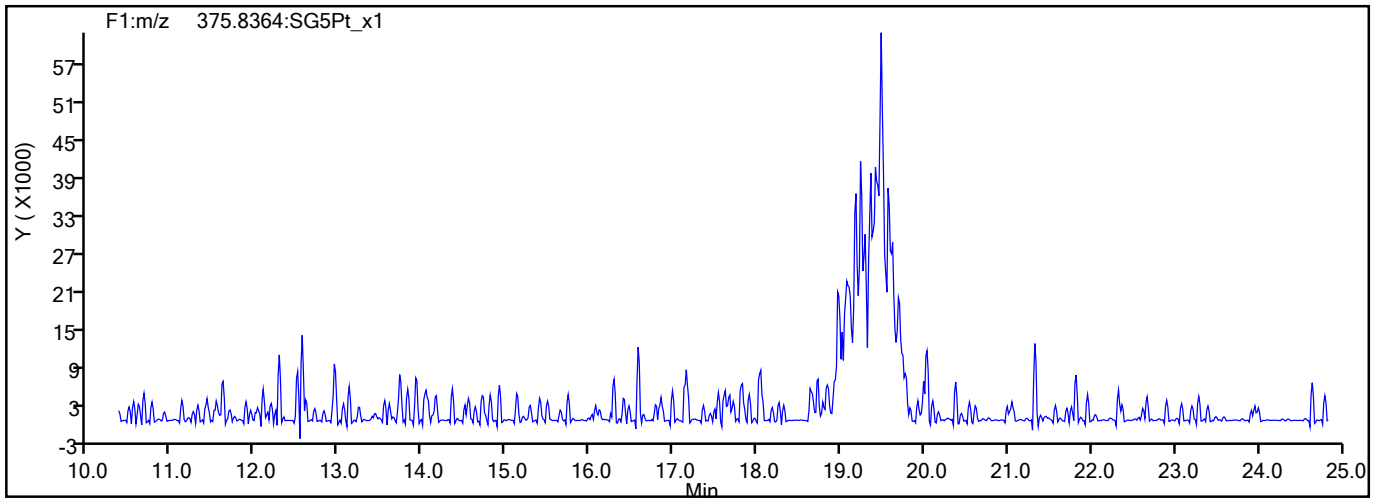

782789

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

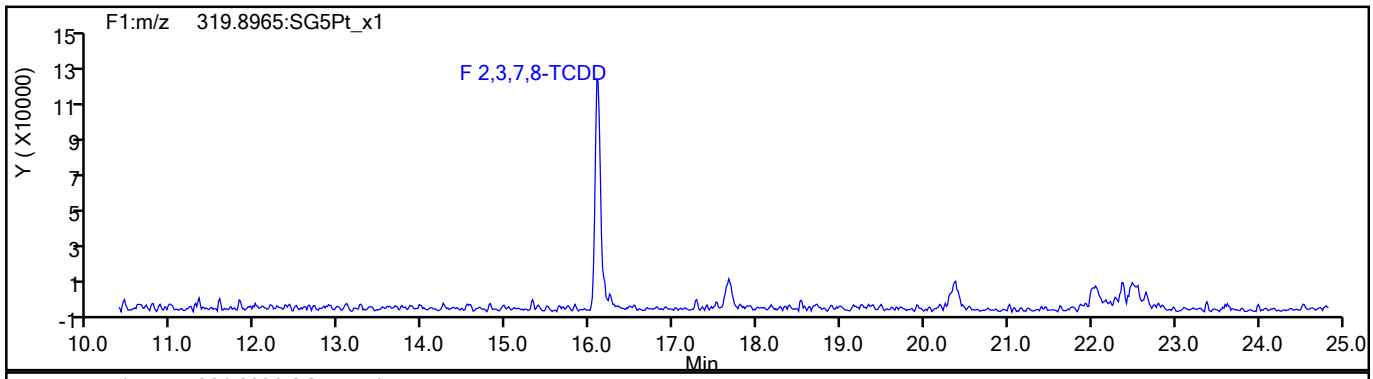

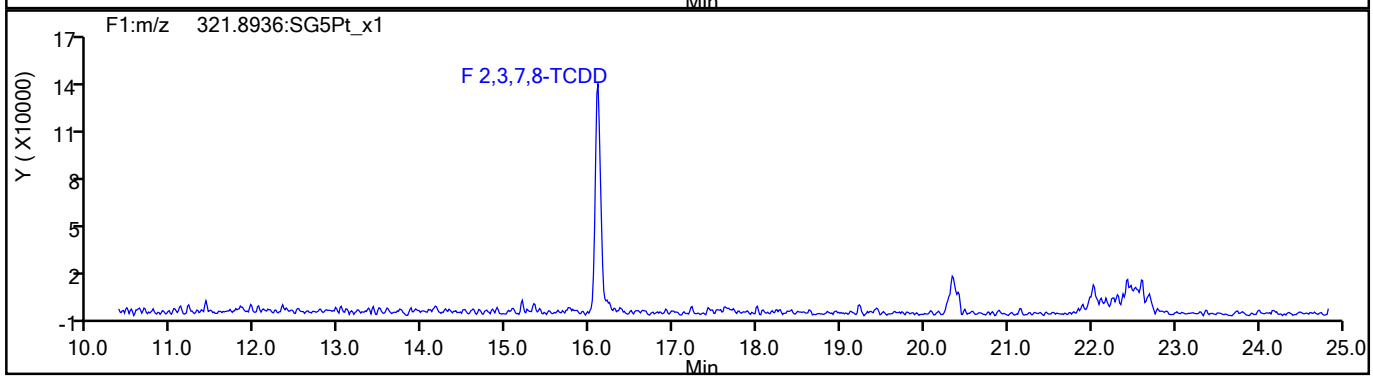

TCDD Standards

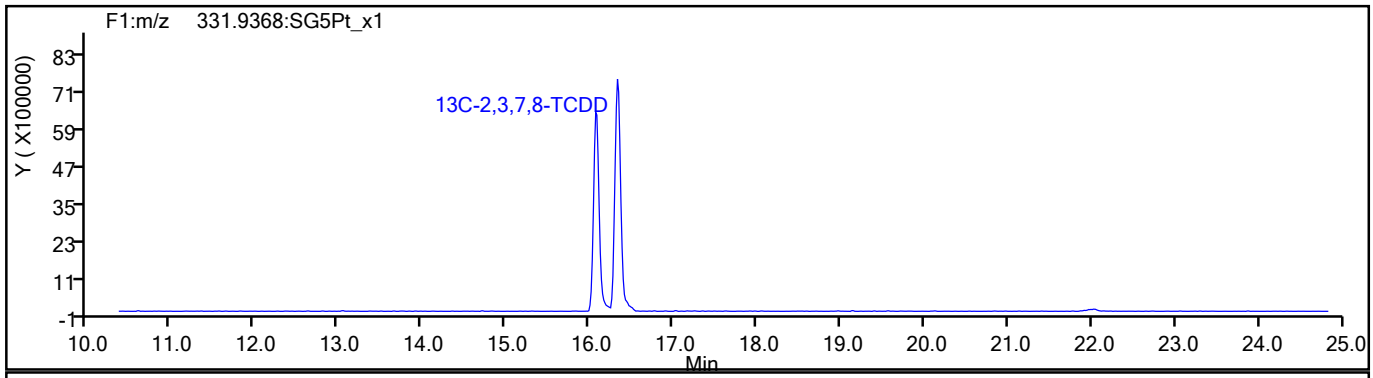

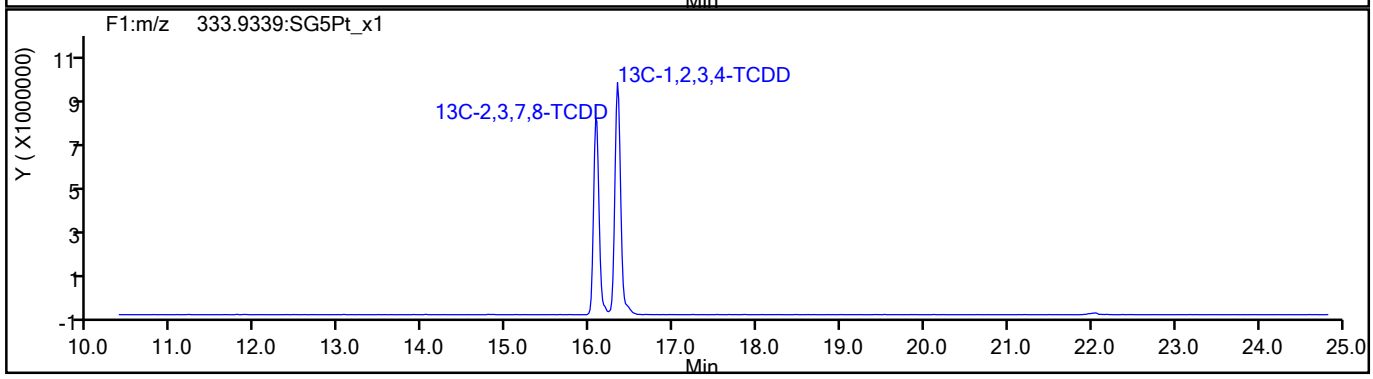

782790

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

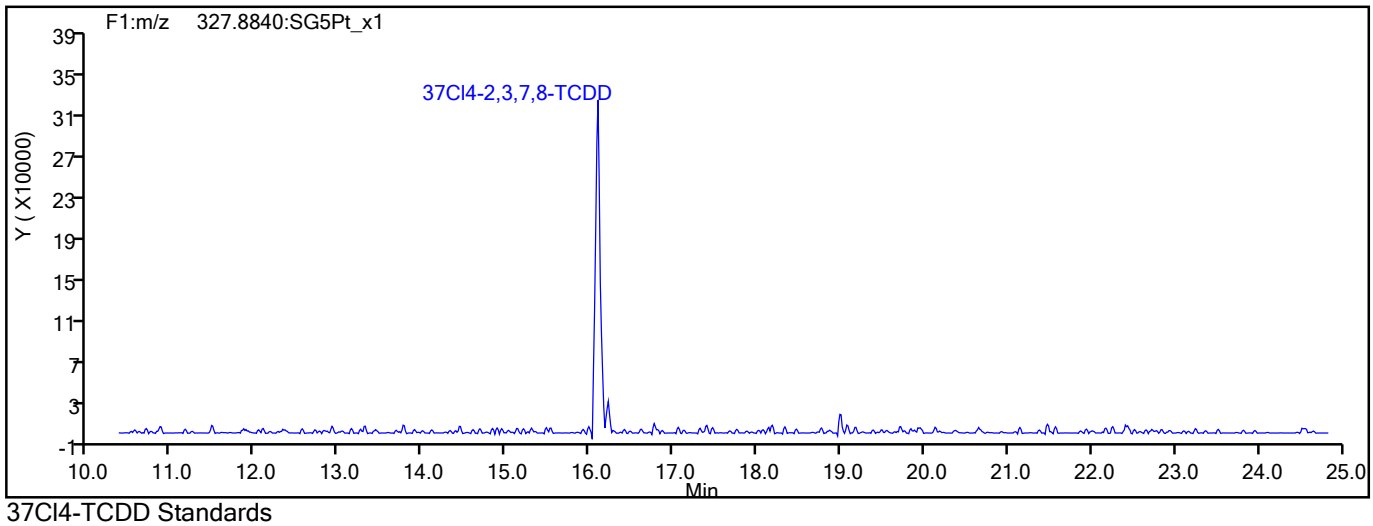

37Cl4-TCDD Standards

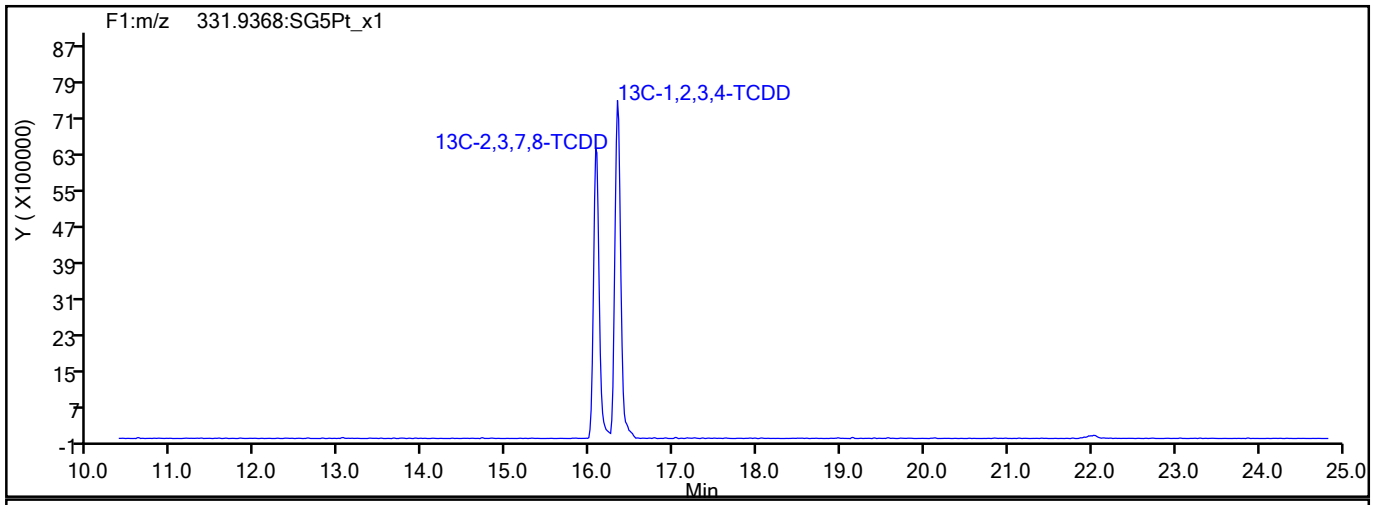

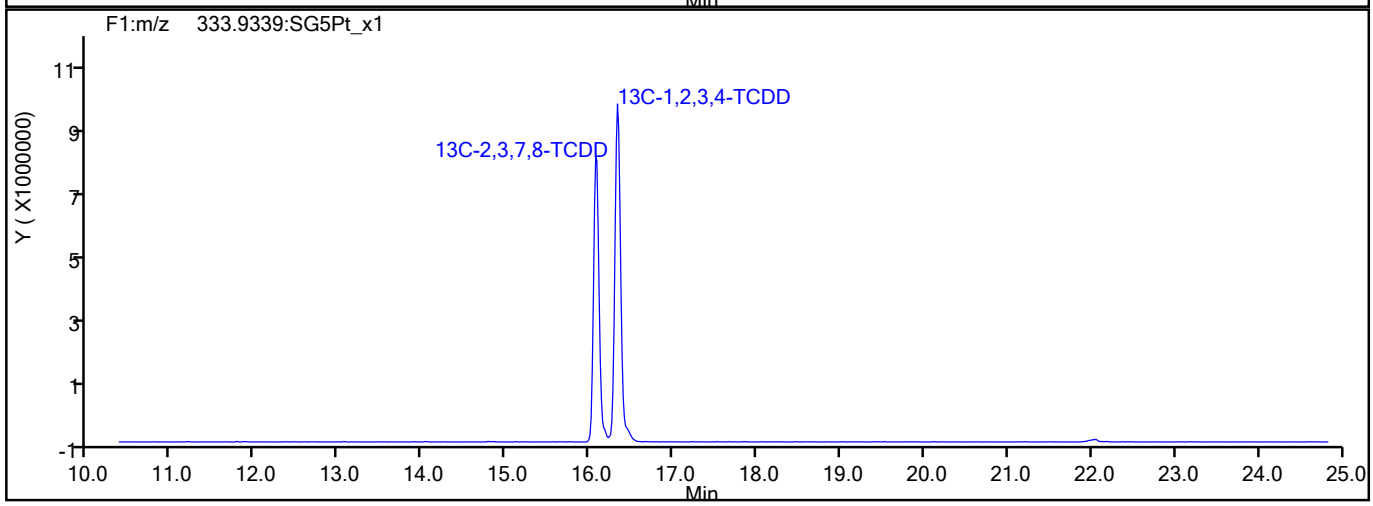

782791

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

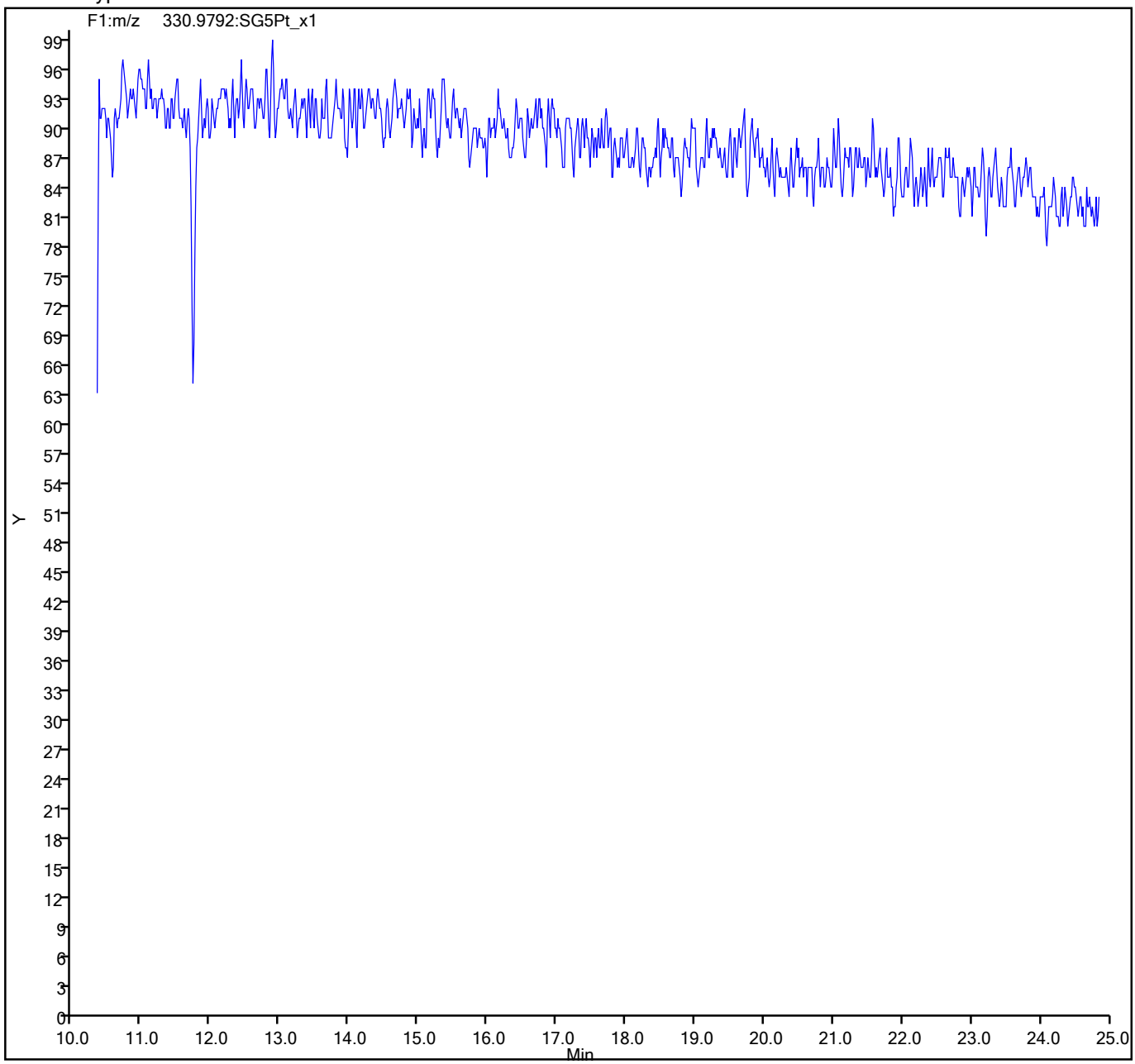

782792

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

782793

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

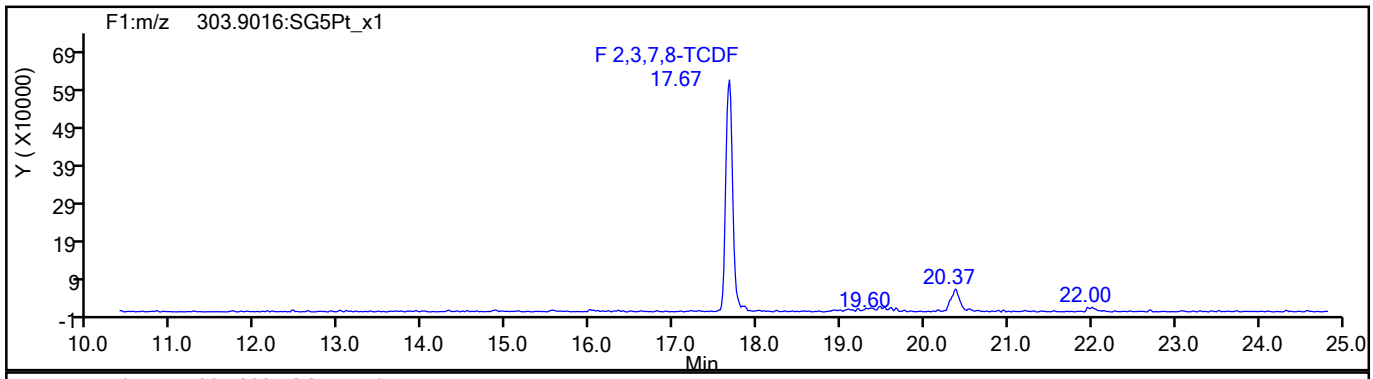

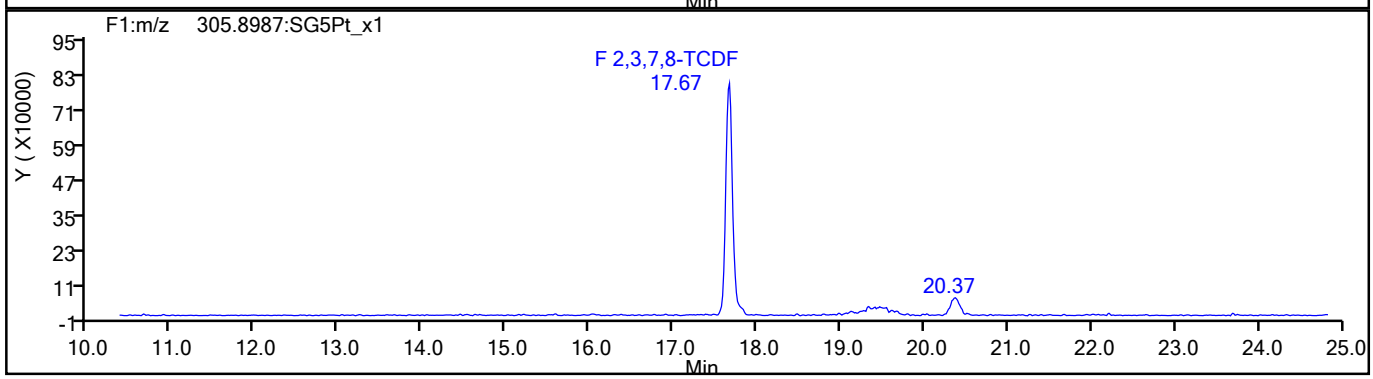

TCDF Standards

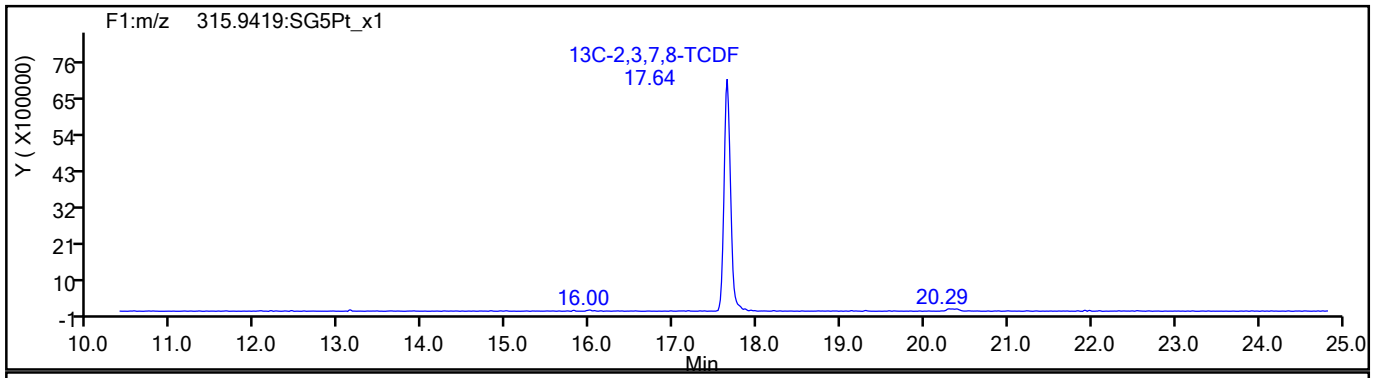

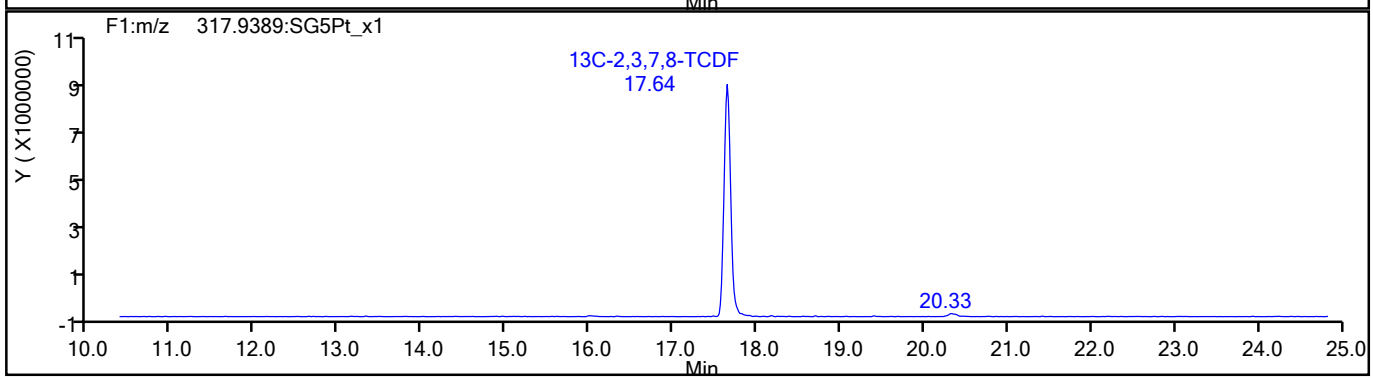

782795

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

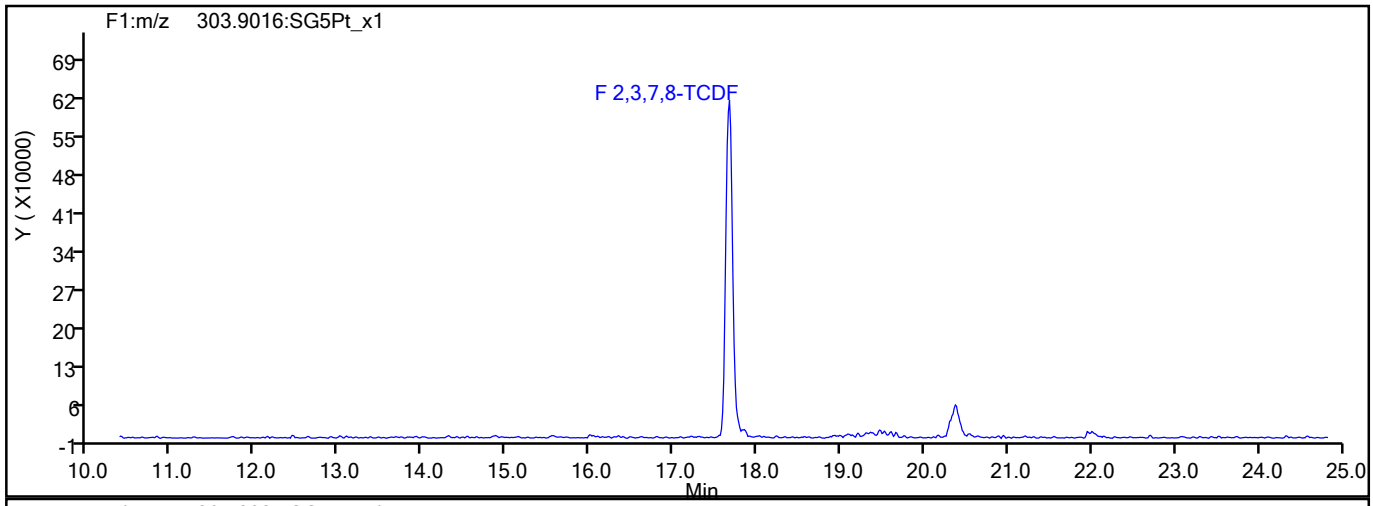

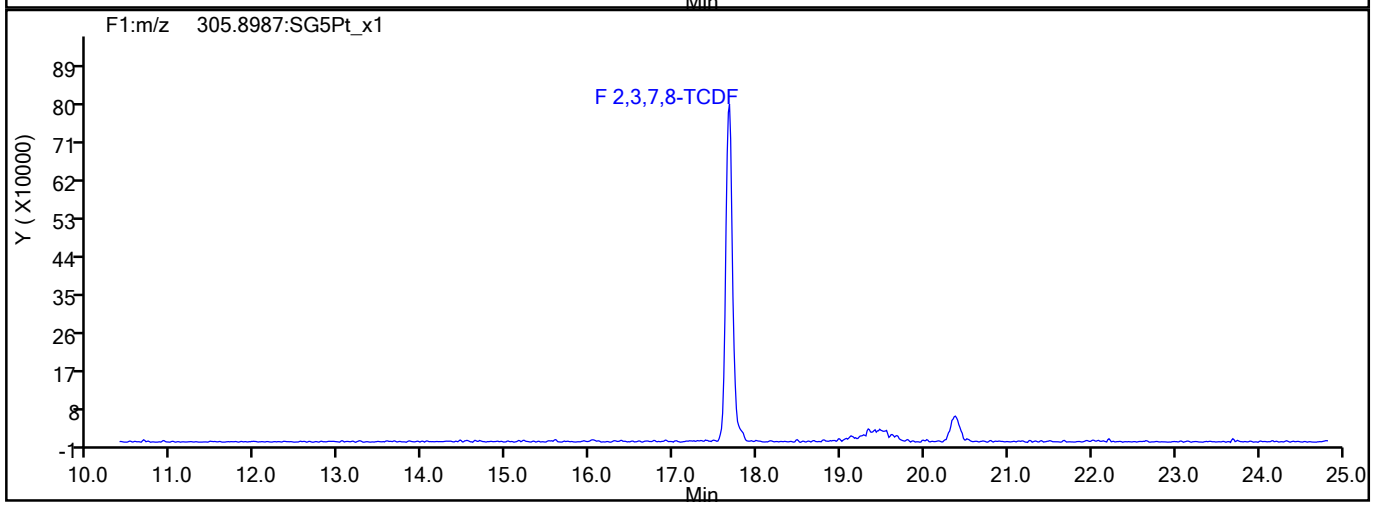

TCDF Interference Mass

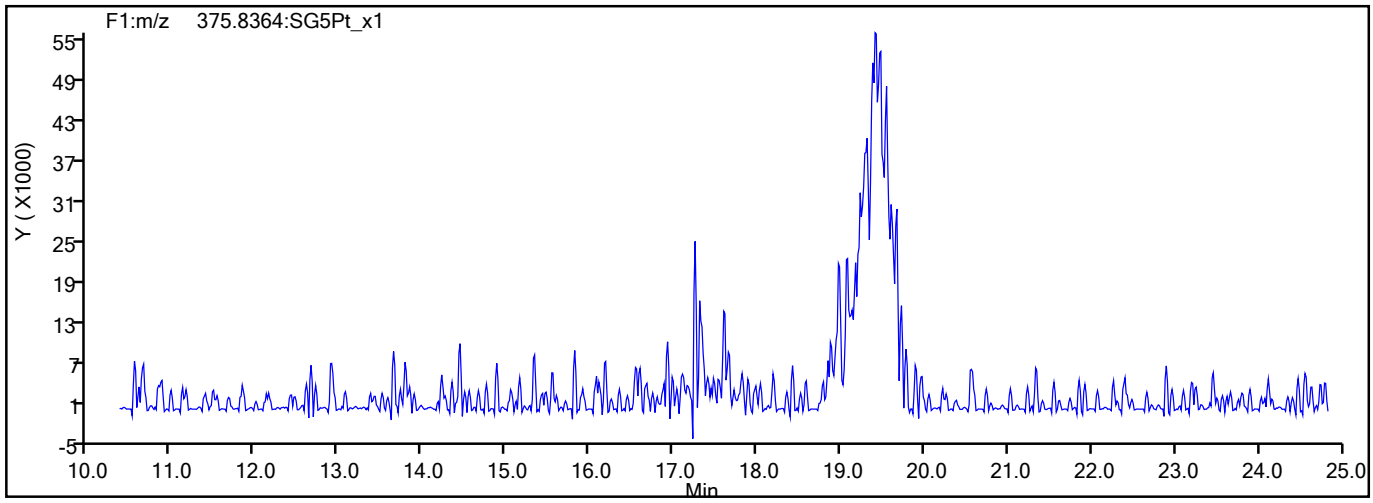

782796

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

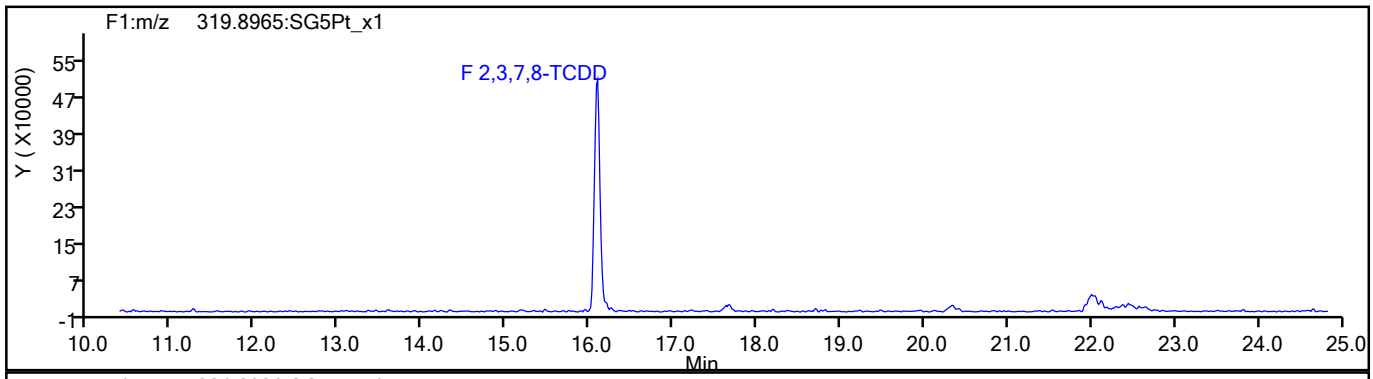

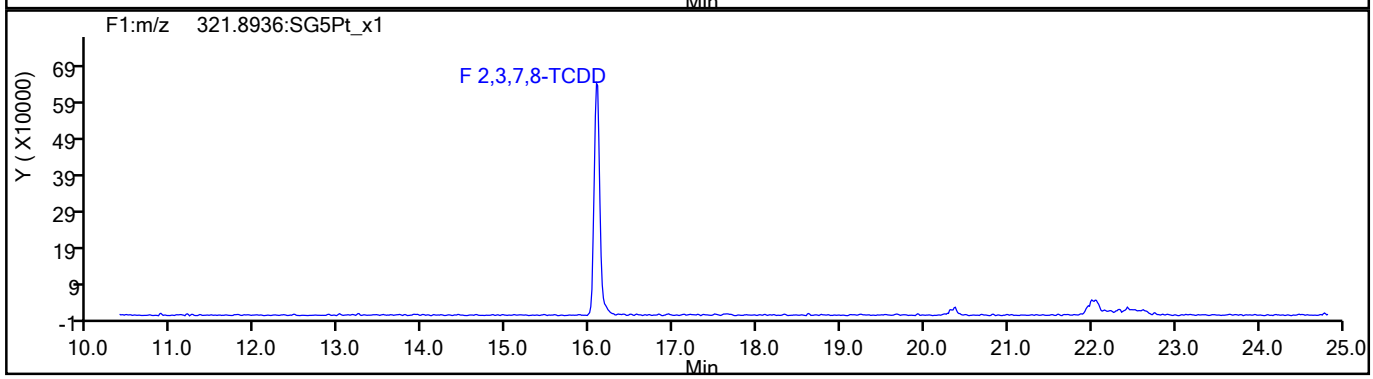

TCDD Standards

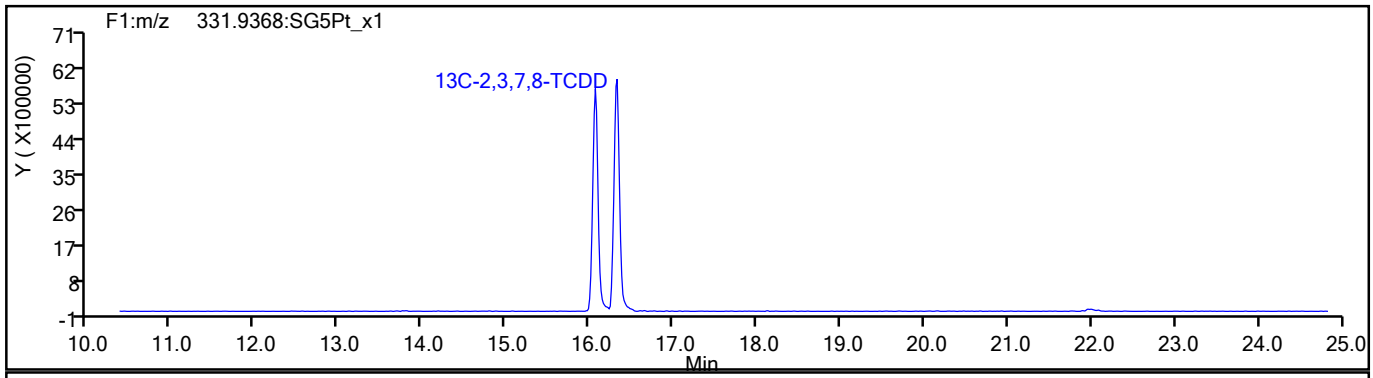

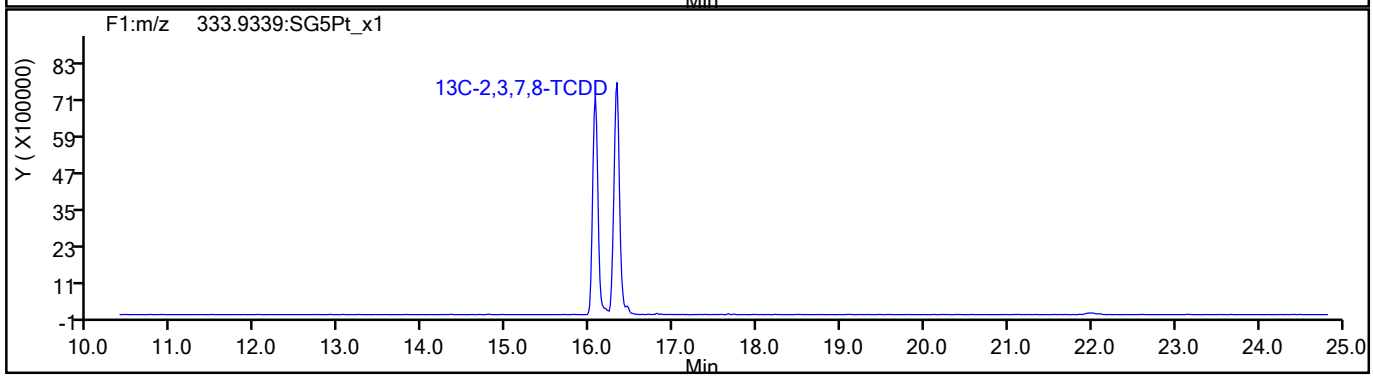

782797

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

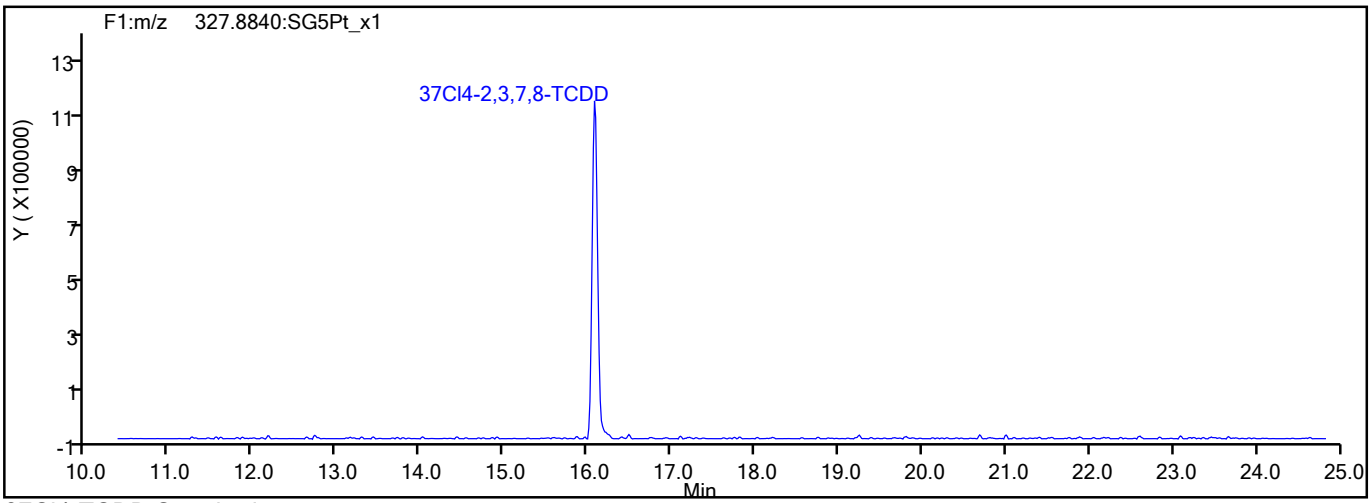

37Cl4-TCDD Standards

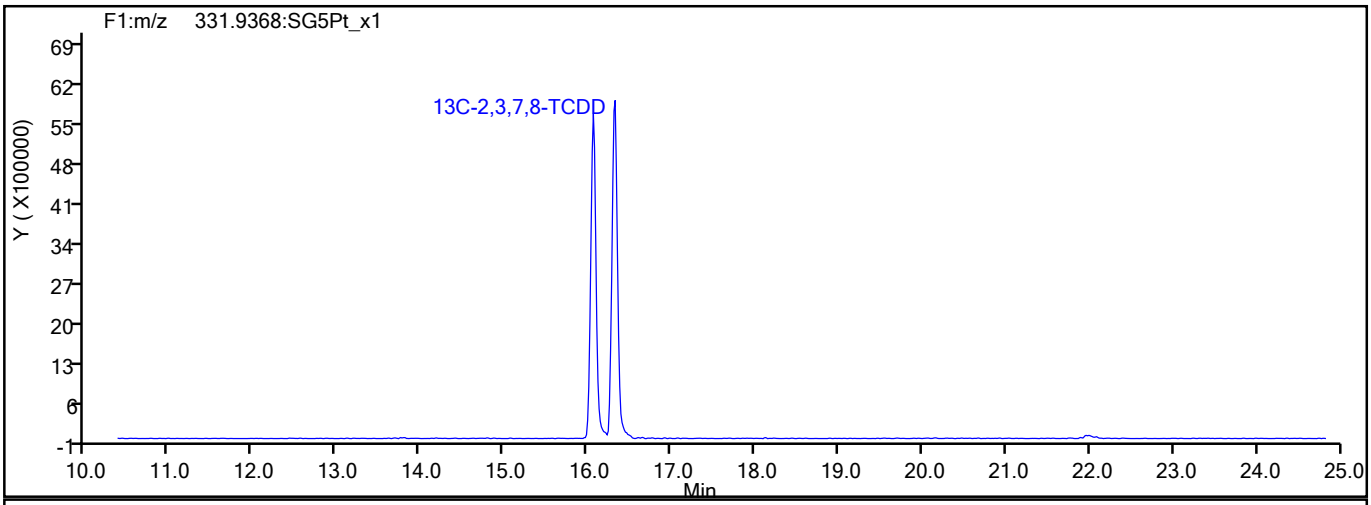

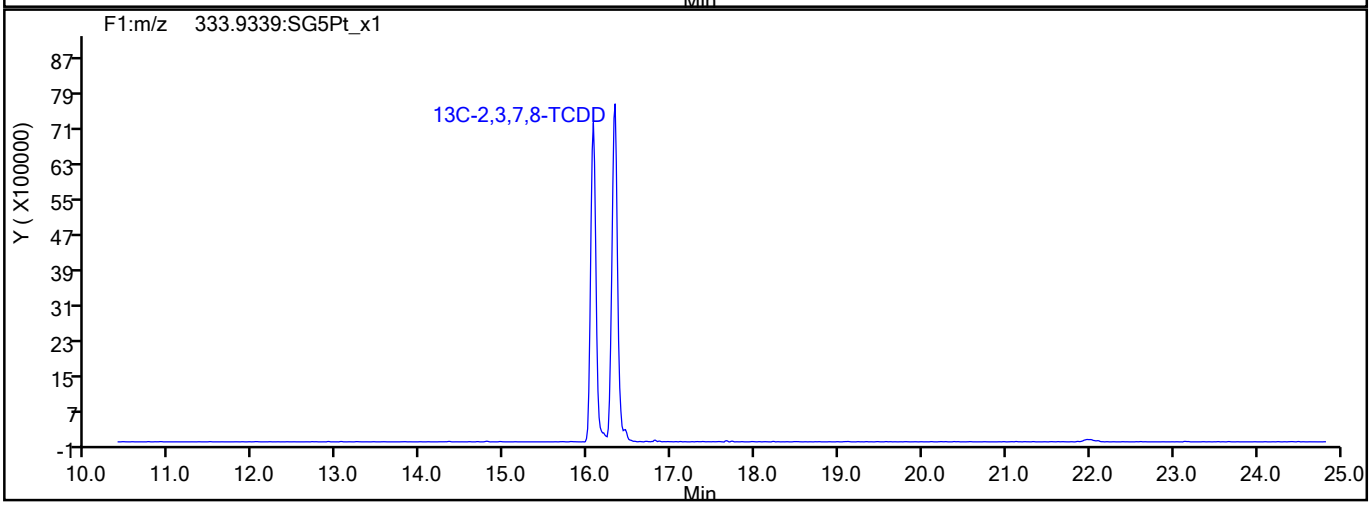

782798

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

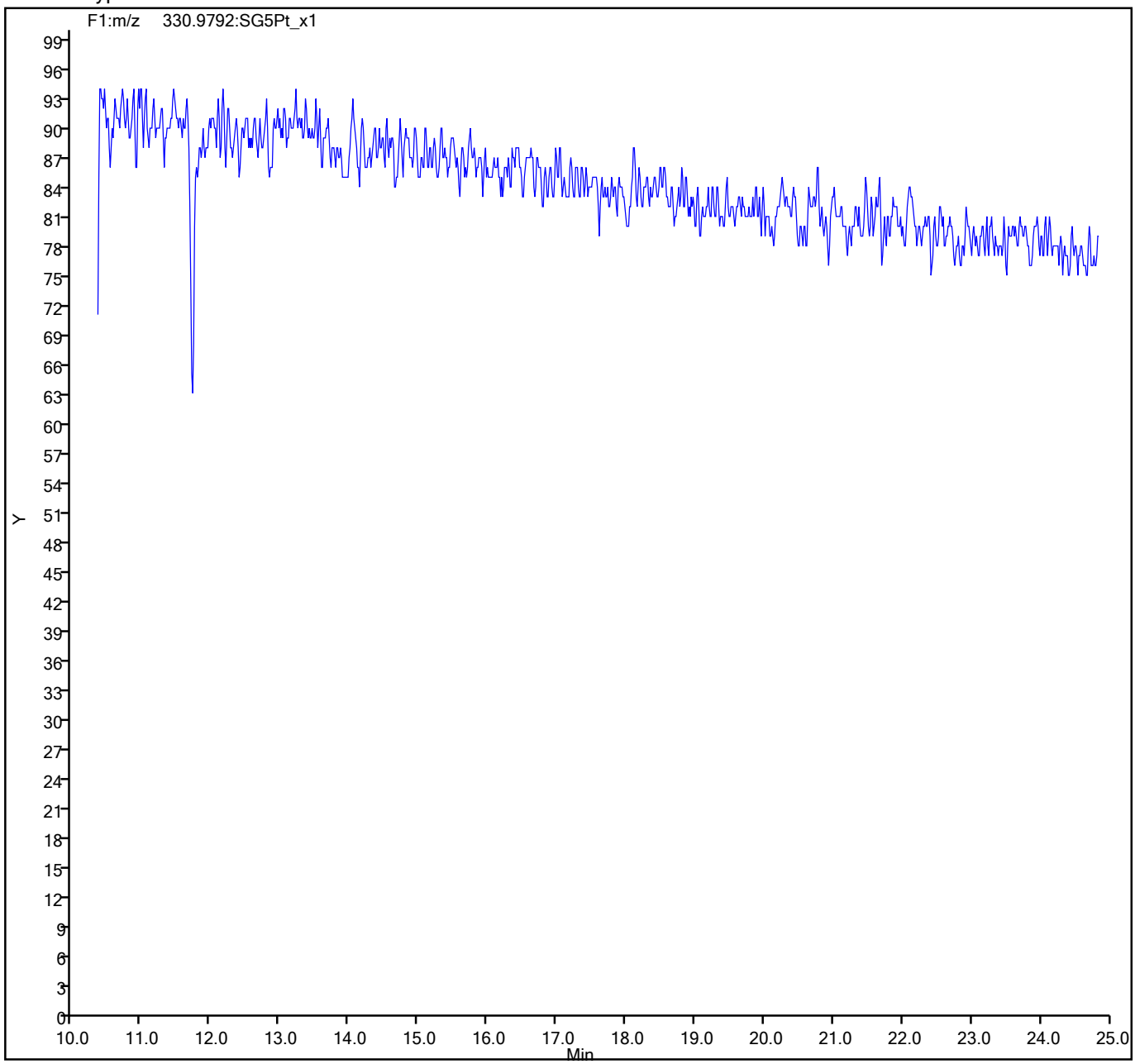

782799

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

782800

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

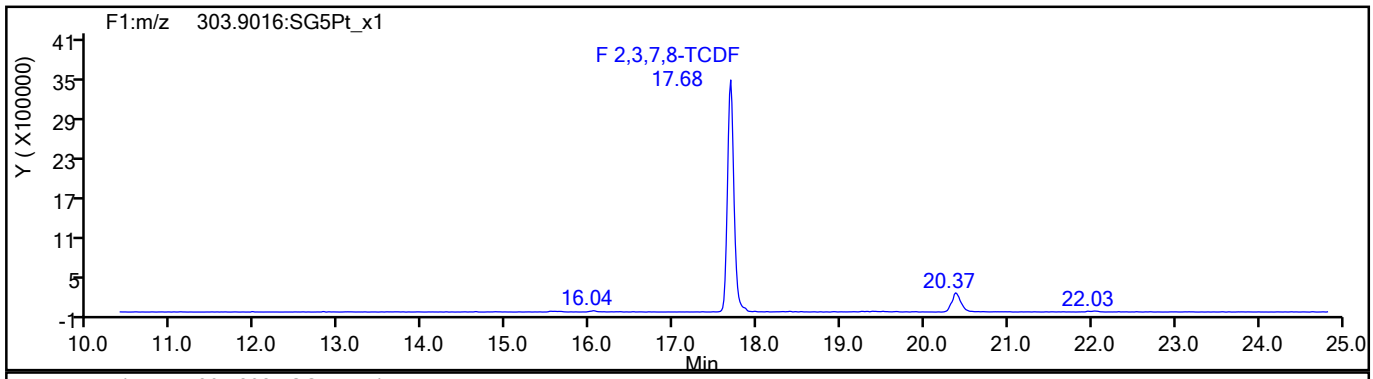

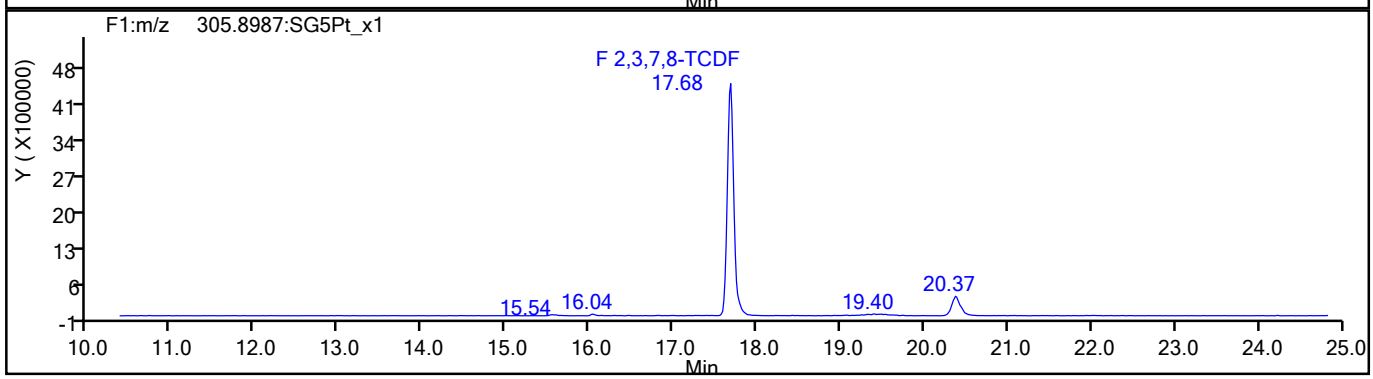

TCDF Standards

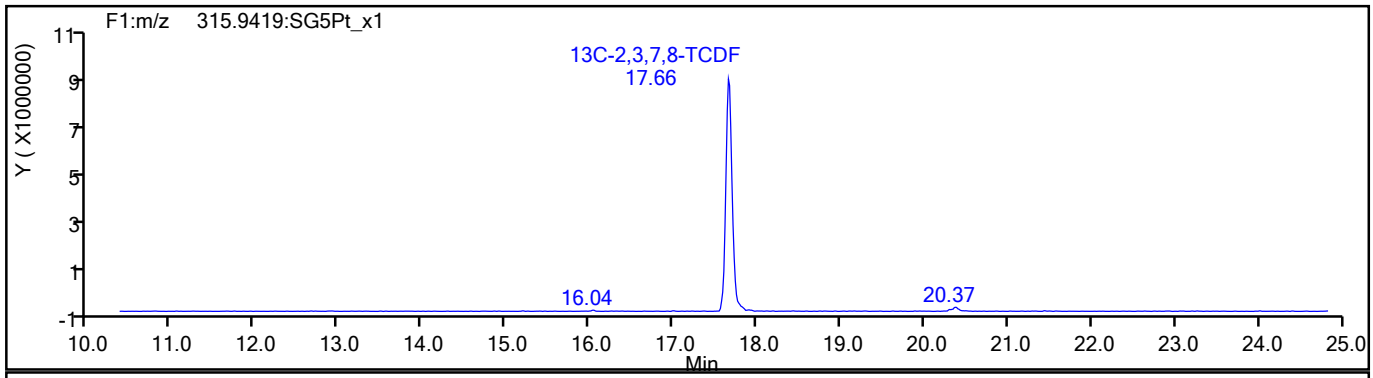

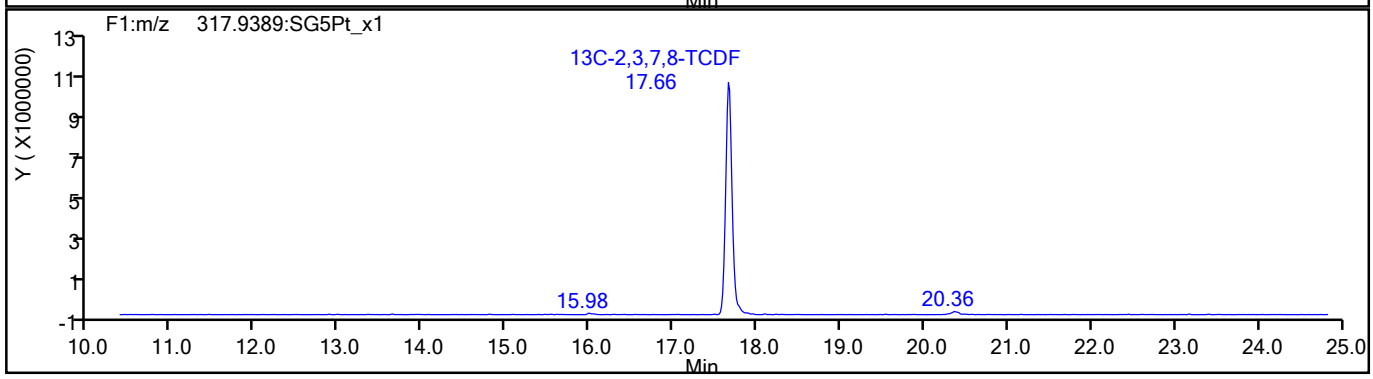

782802

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

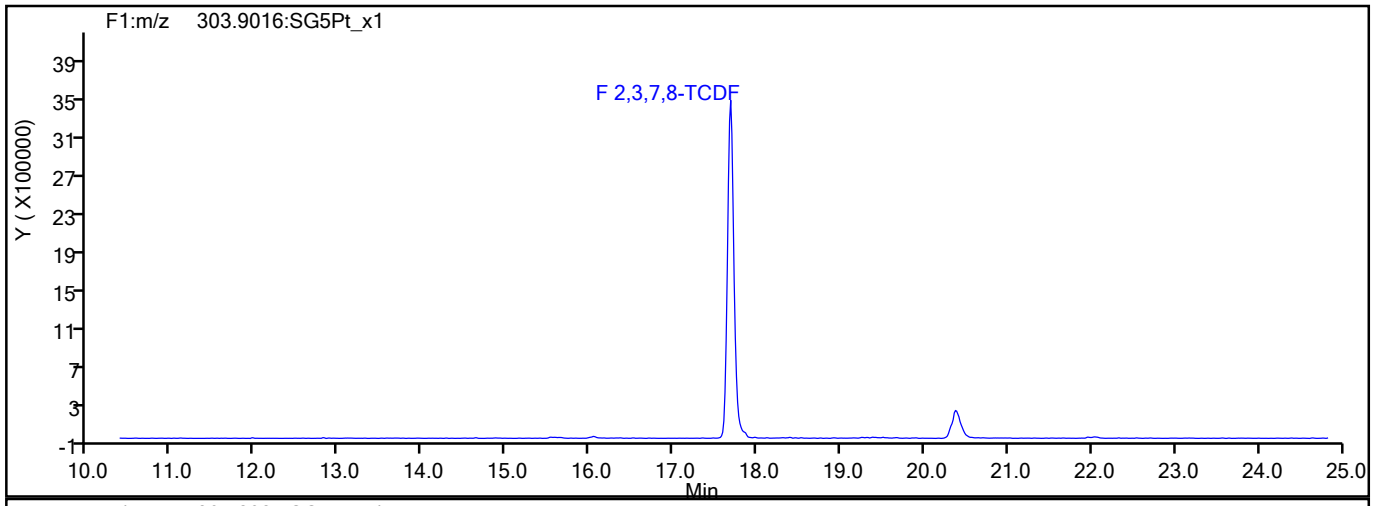

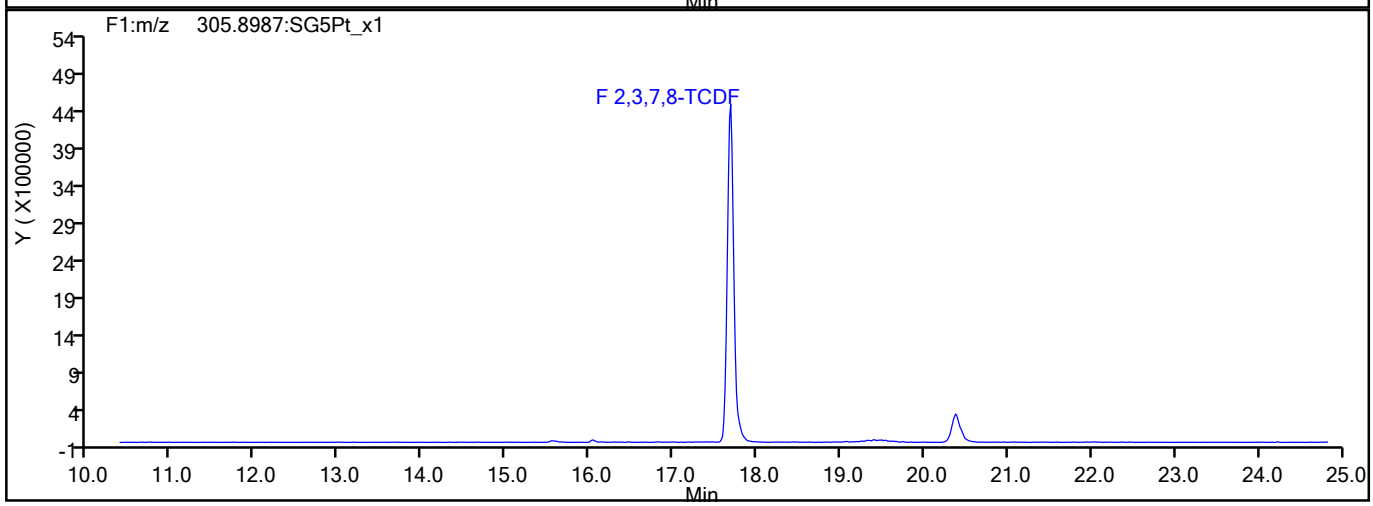

TCDF Interference Mass

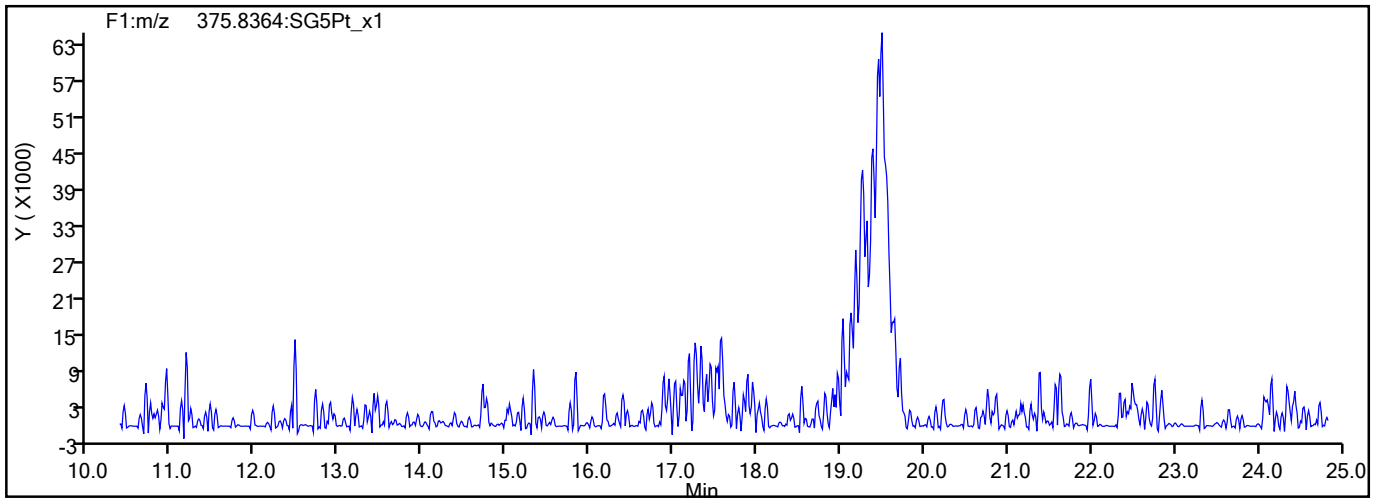

782803

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

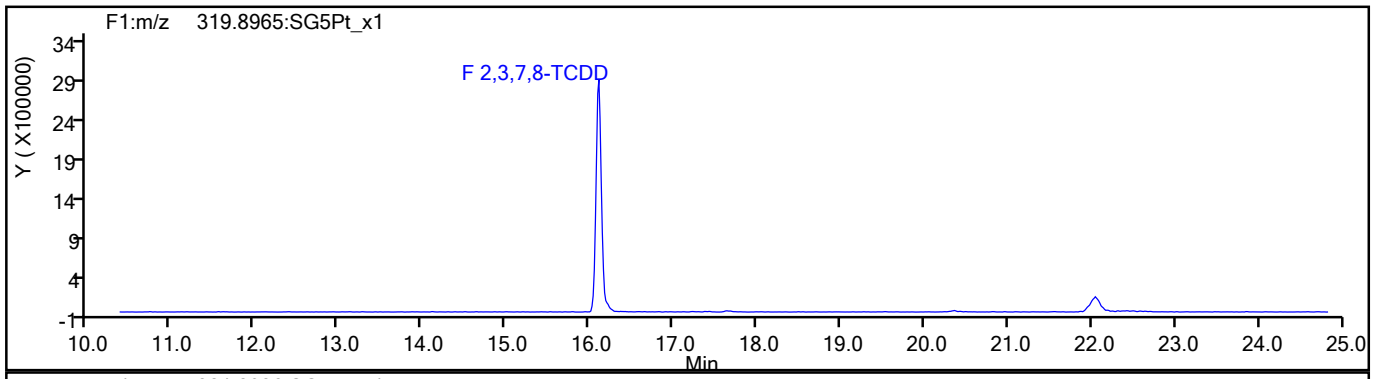

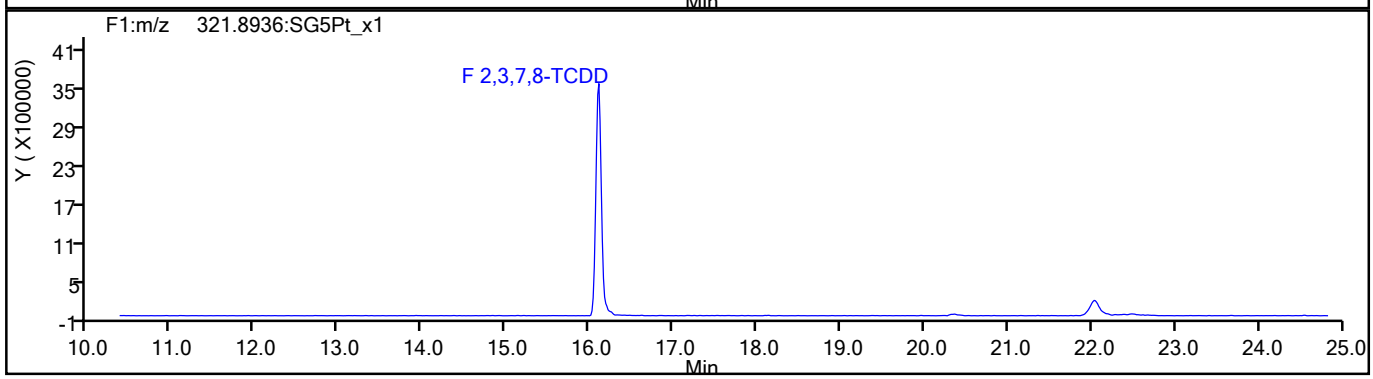

TCDD Standards

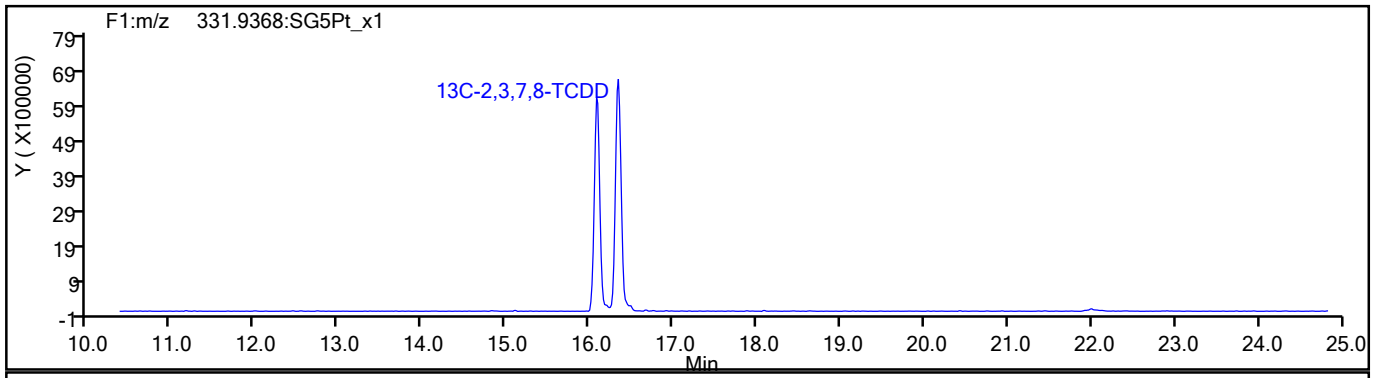

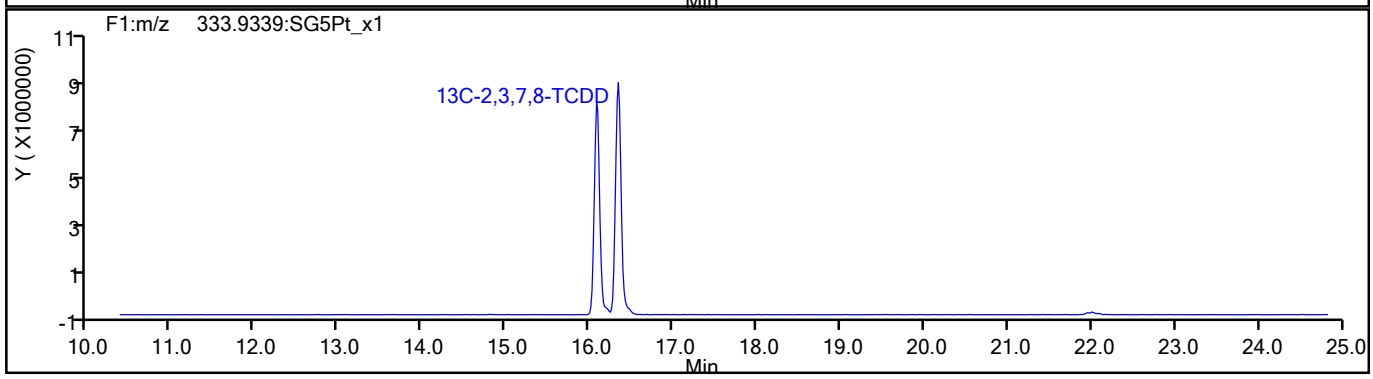

782804

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

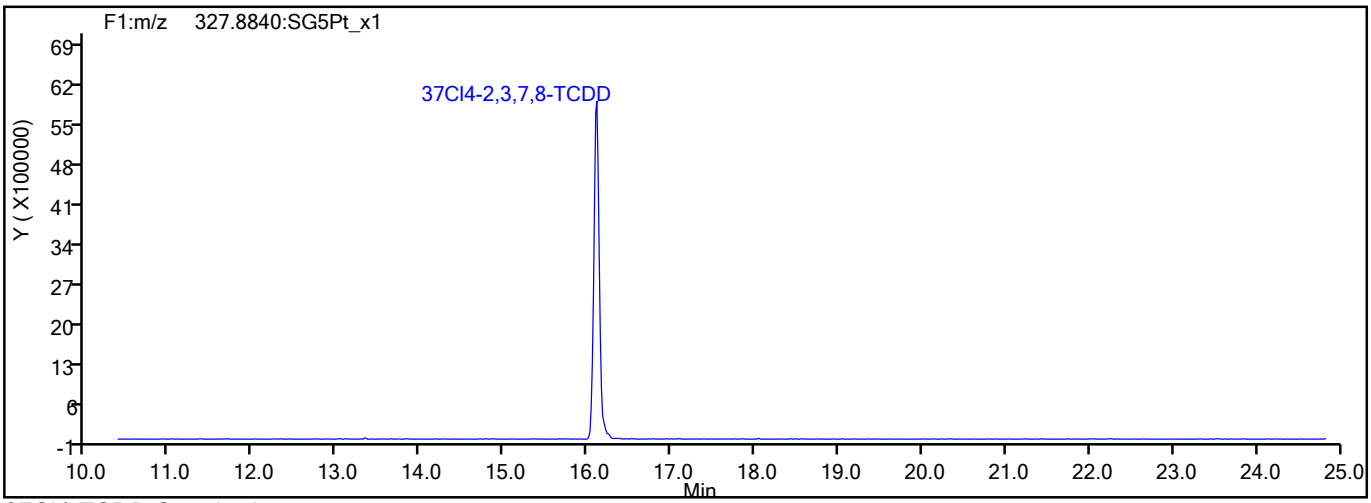

37Cl4-TCDD Standards

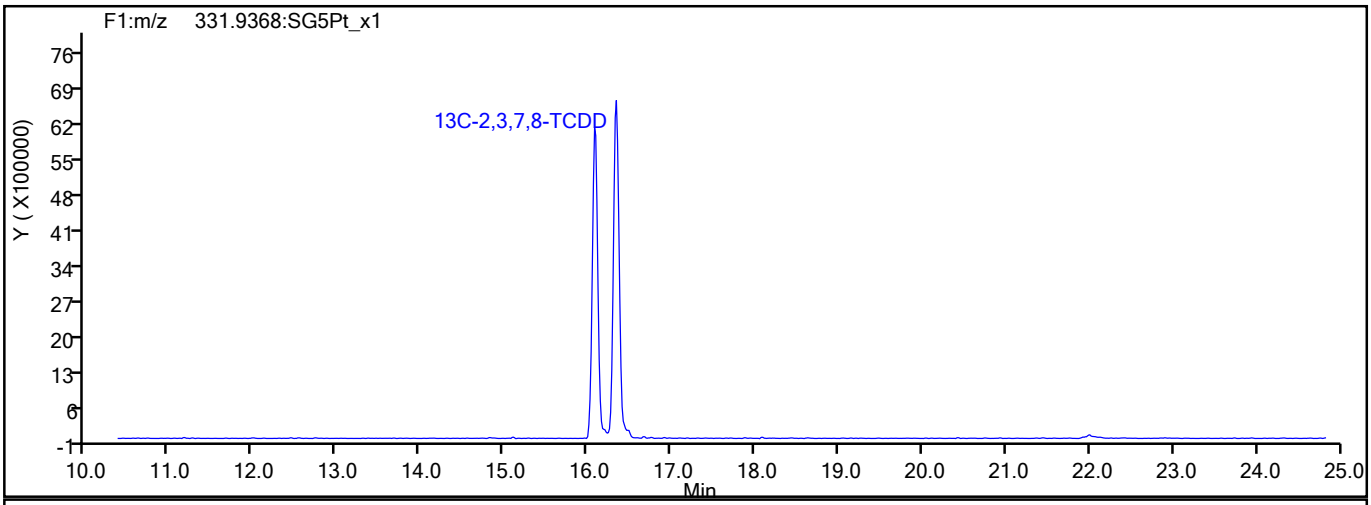

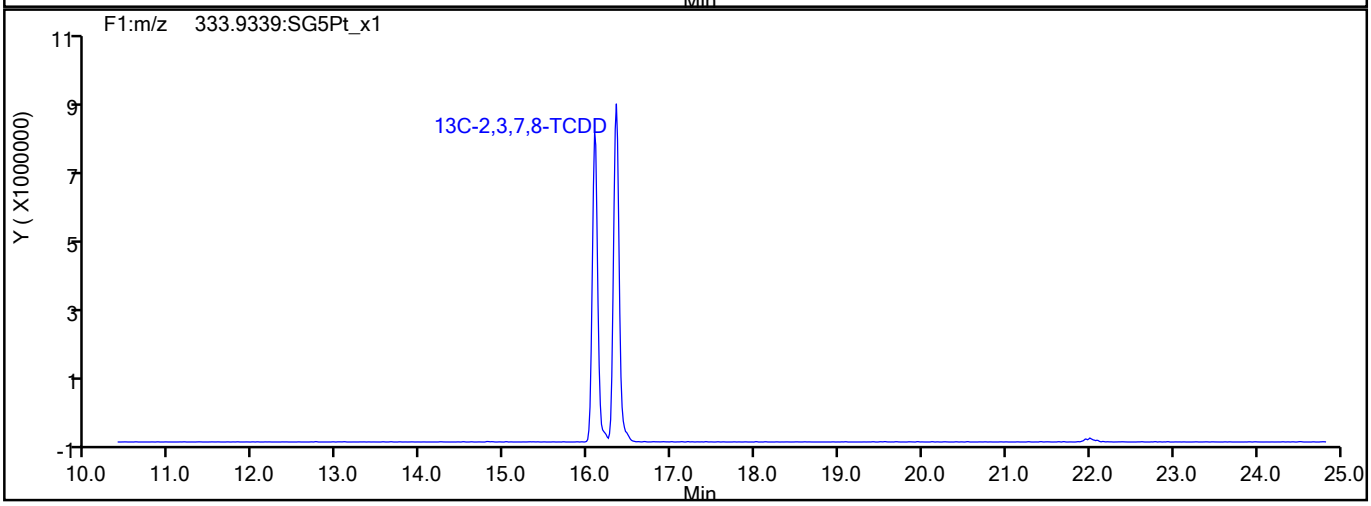

782805

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

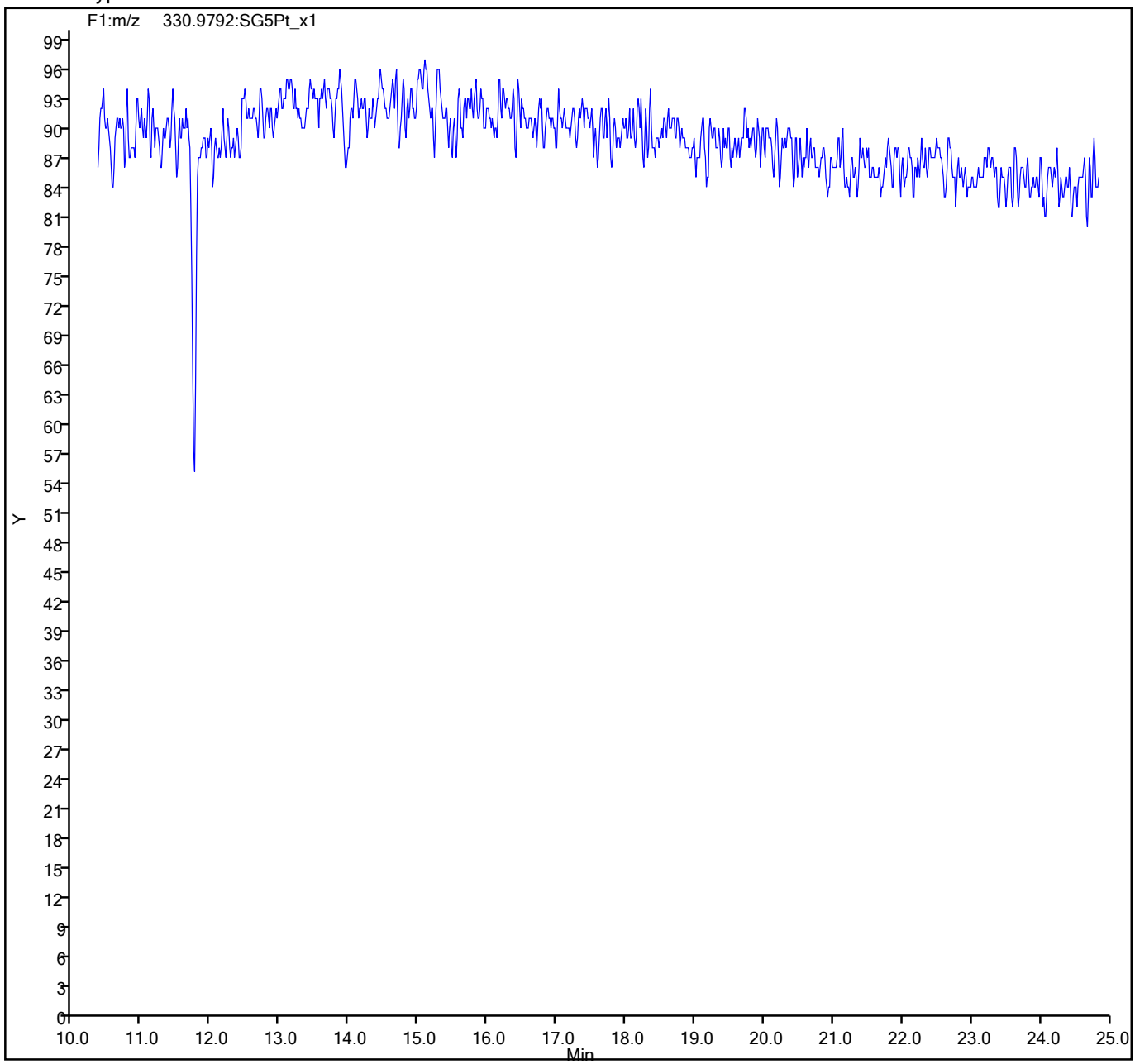

782806

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

782807

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

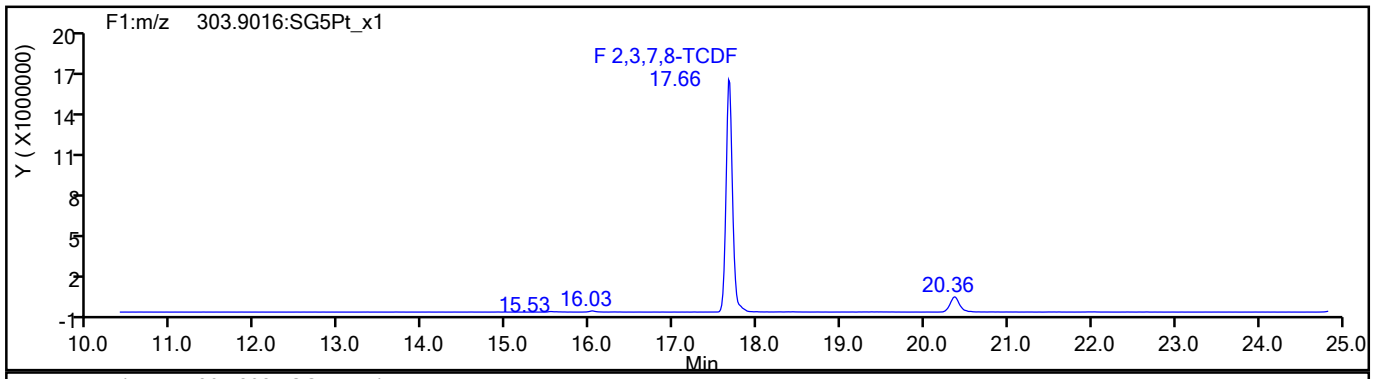

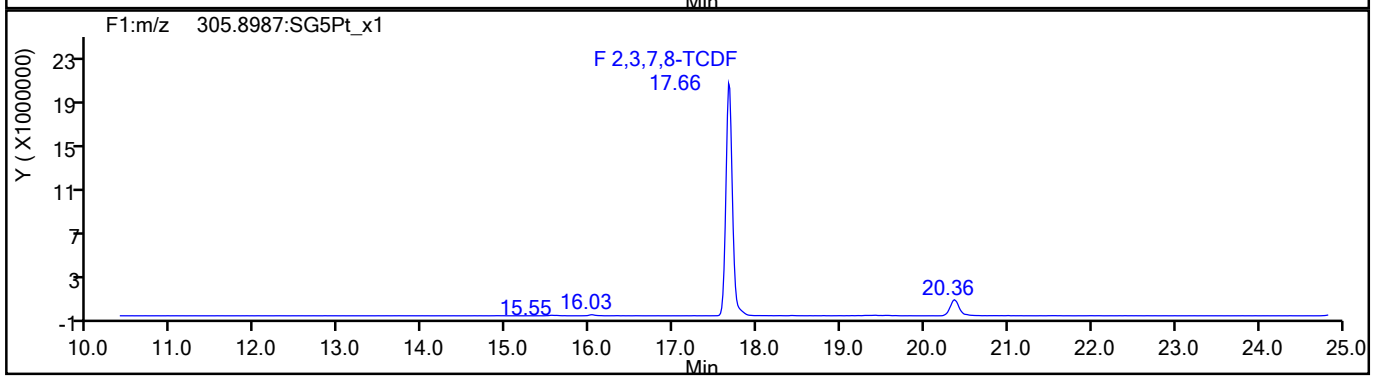

TCDF Standards

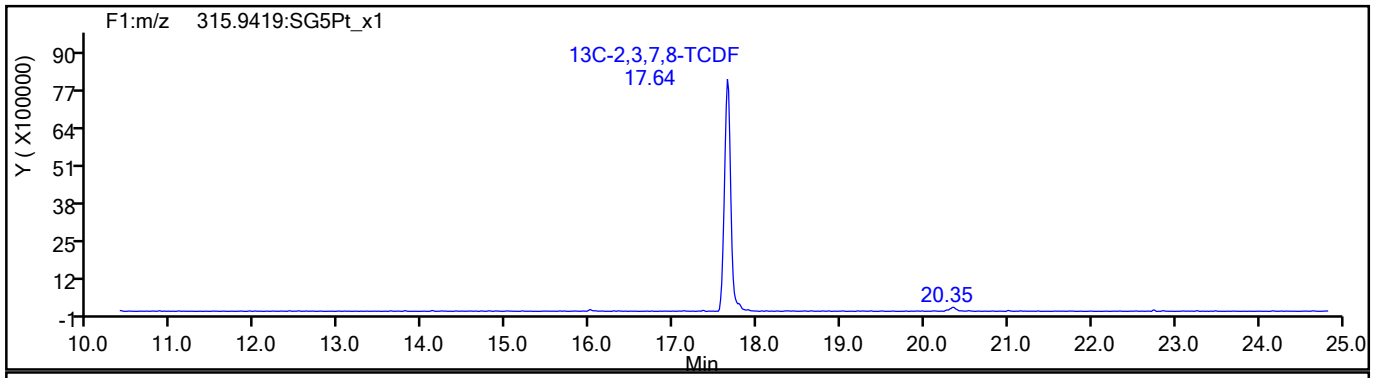

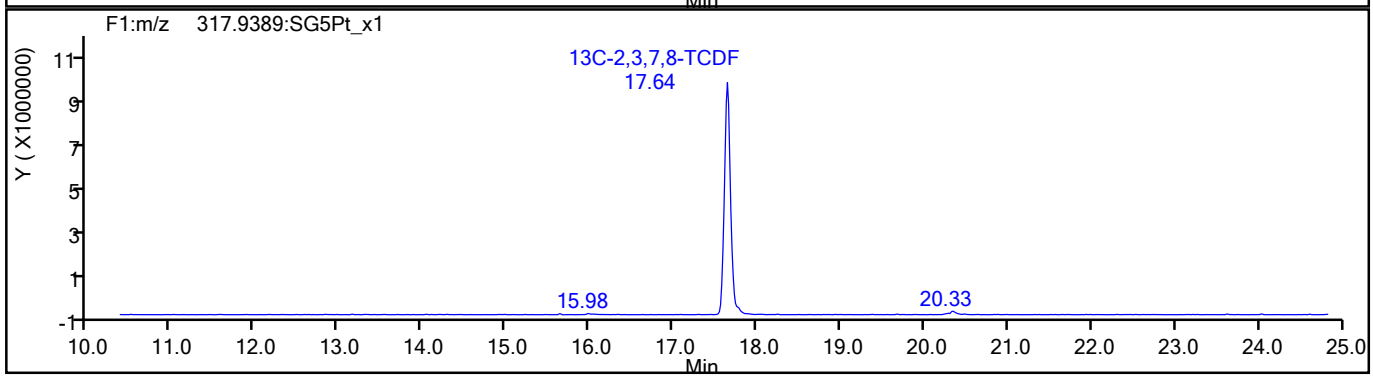

782809

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

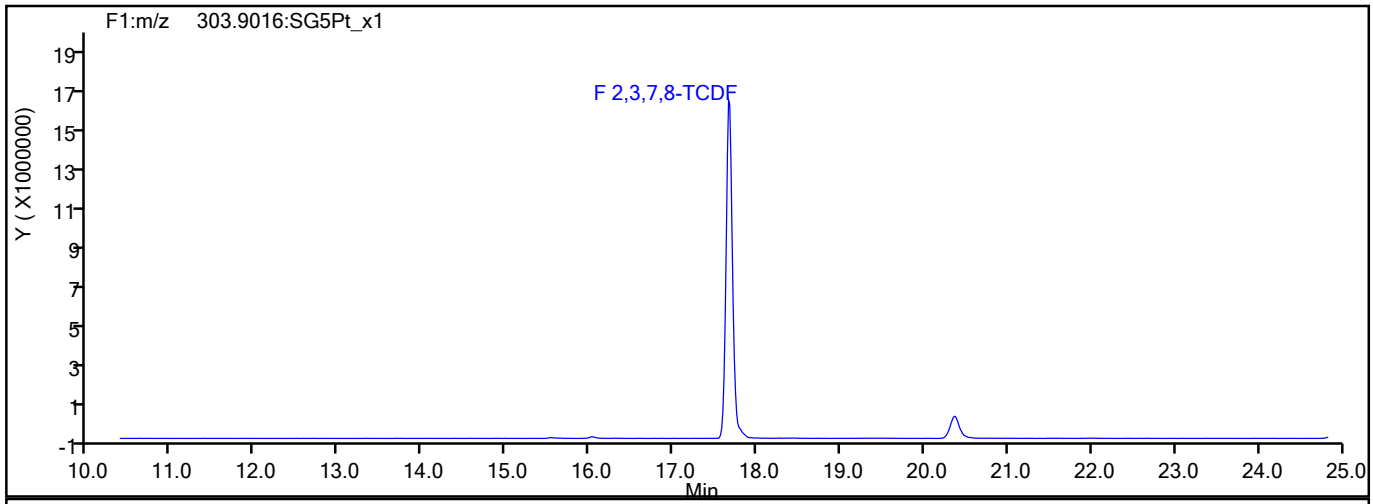

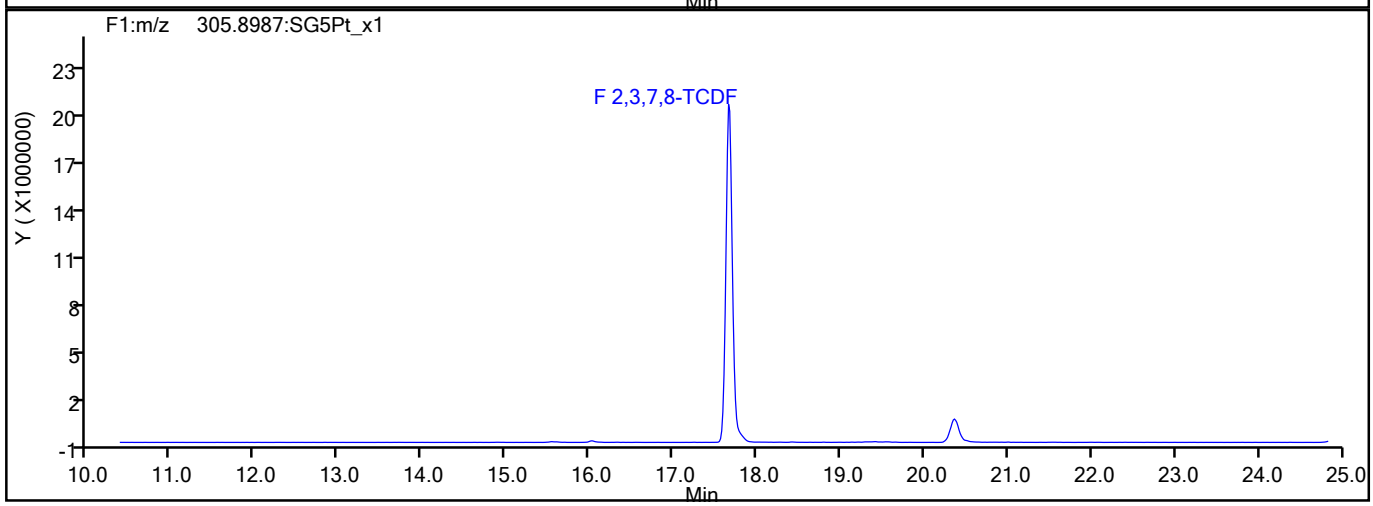

TCDF Interference Mass

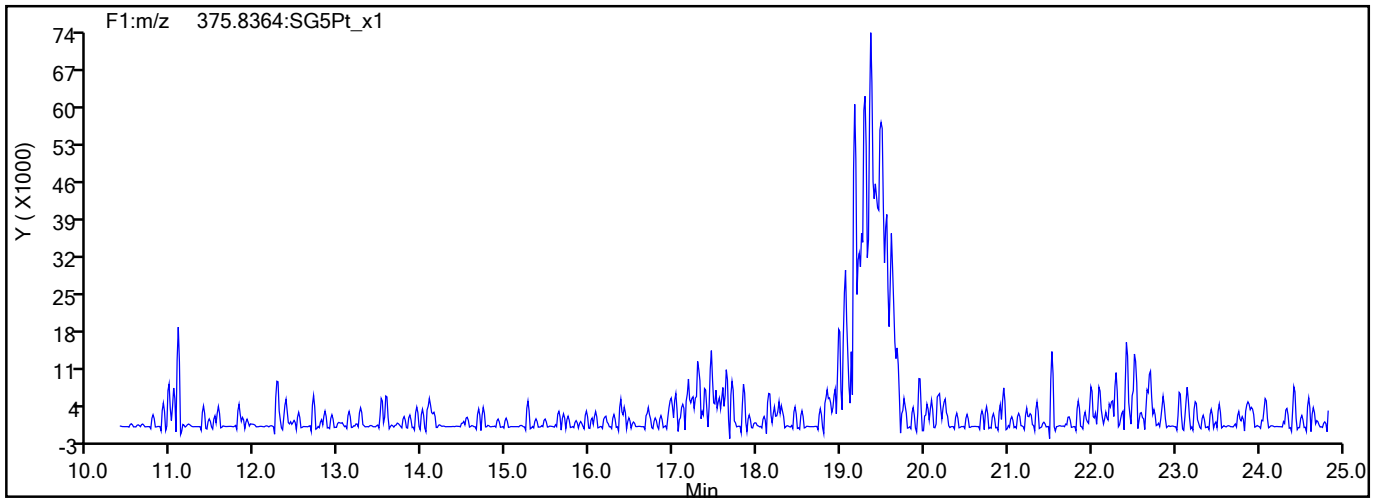

782810

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

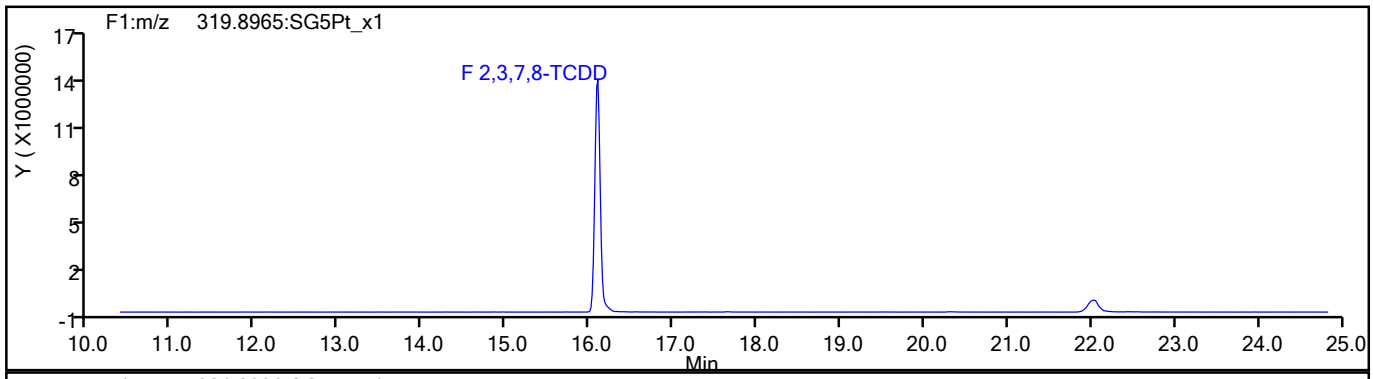

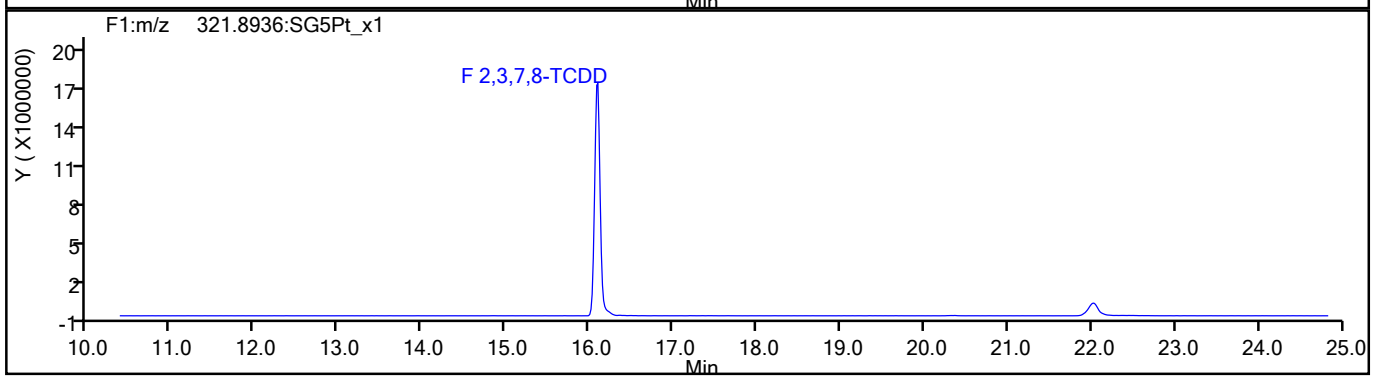

TCDD Standards

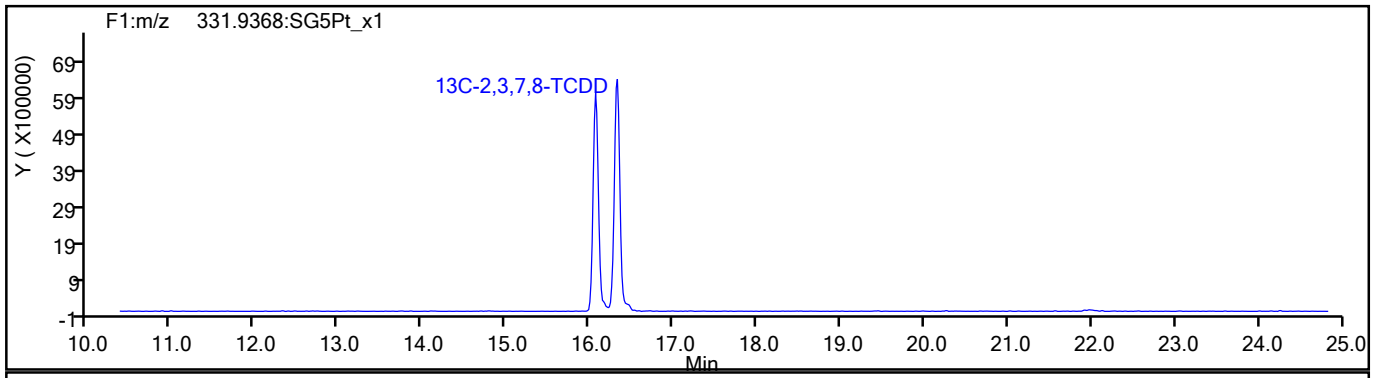

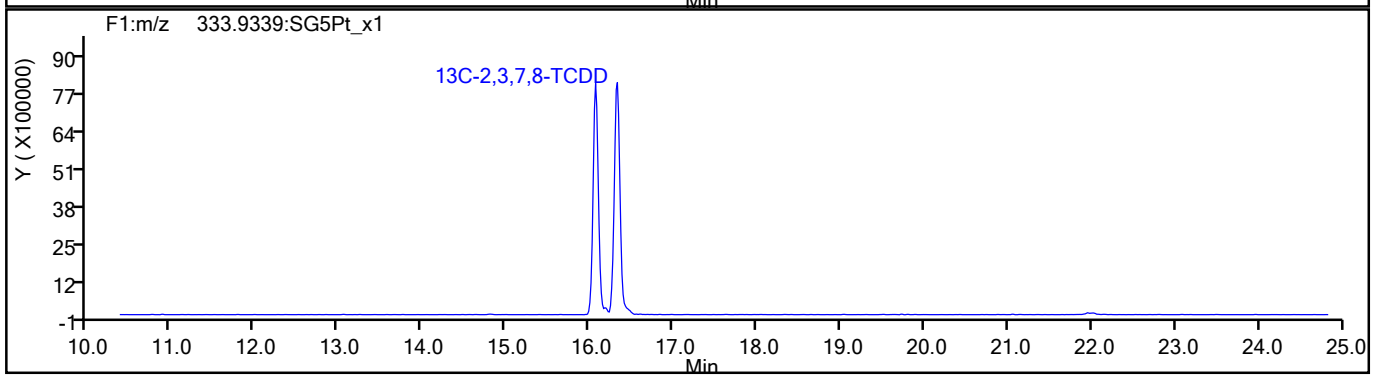

782811

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

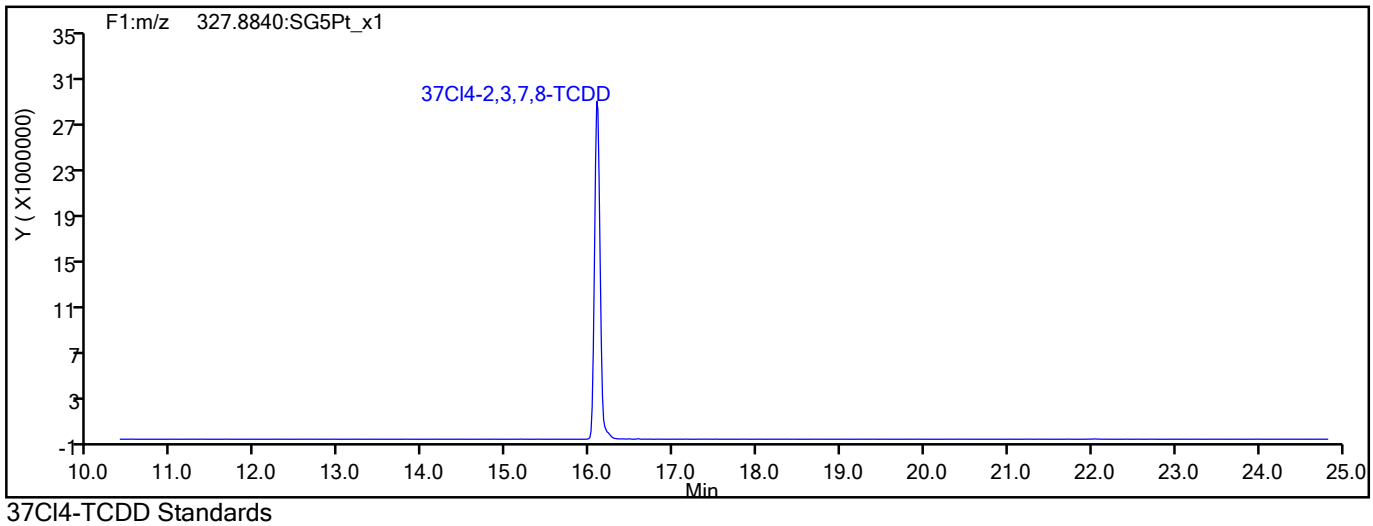

37Cl4-TCDD Standards

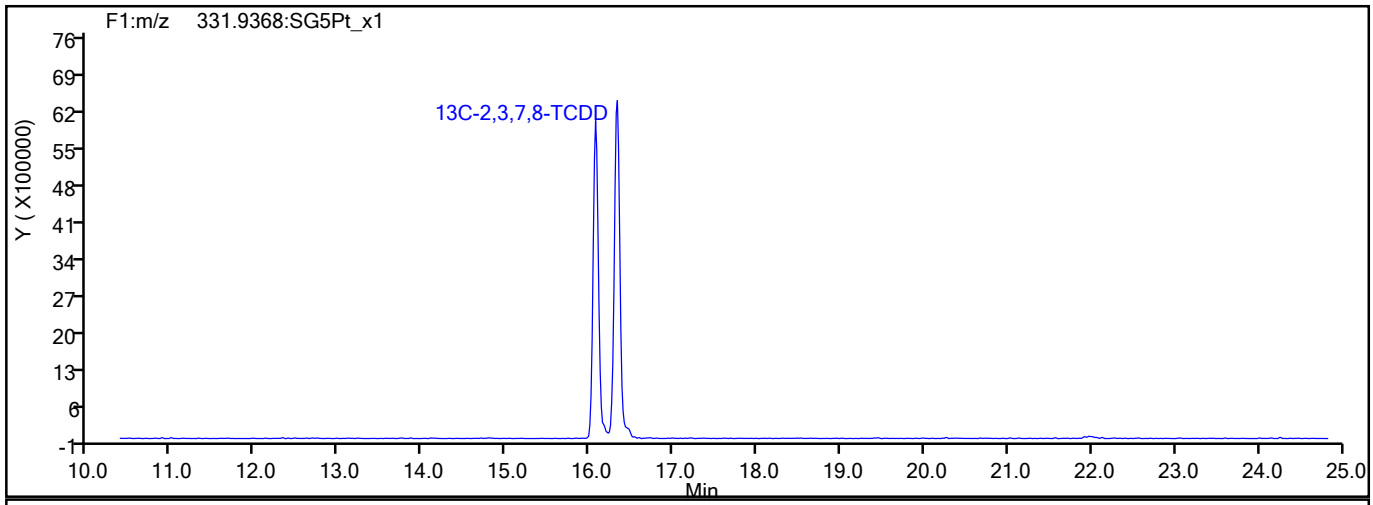

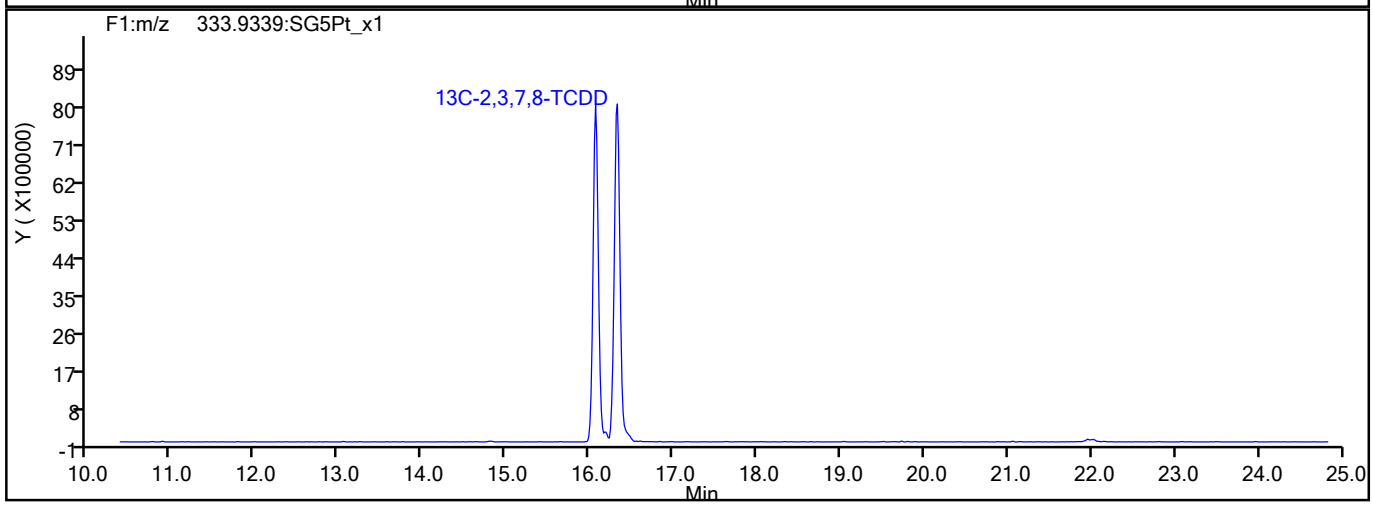

782812

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

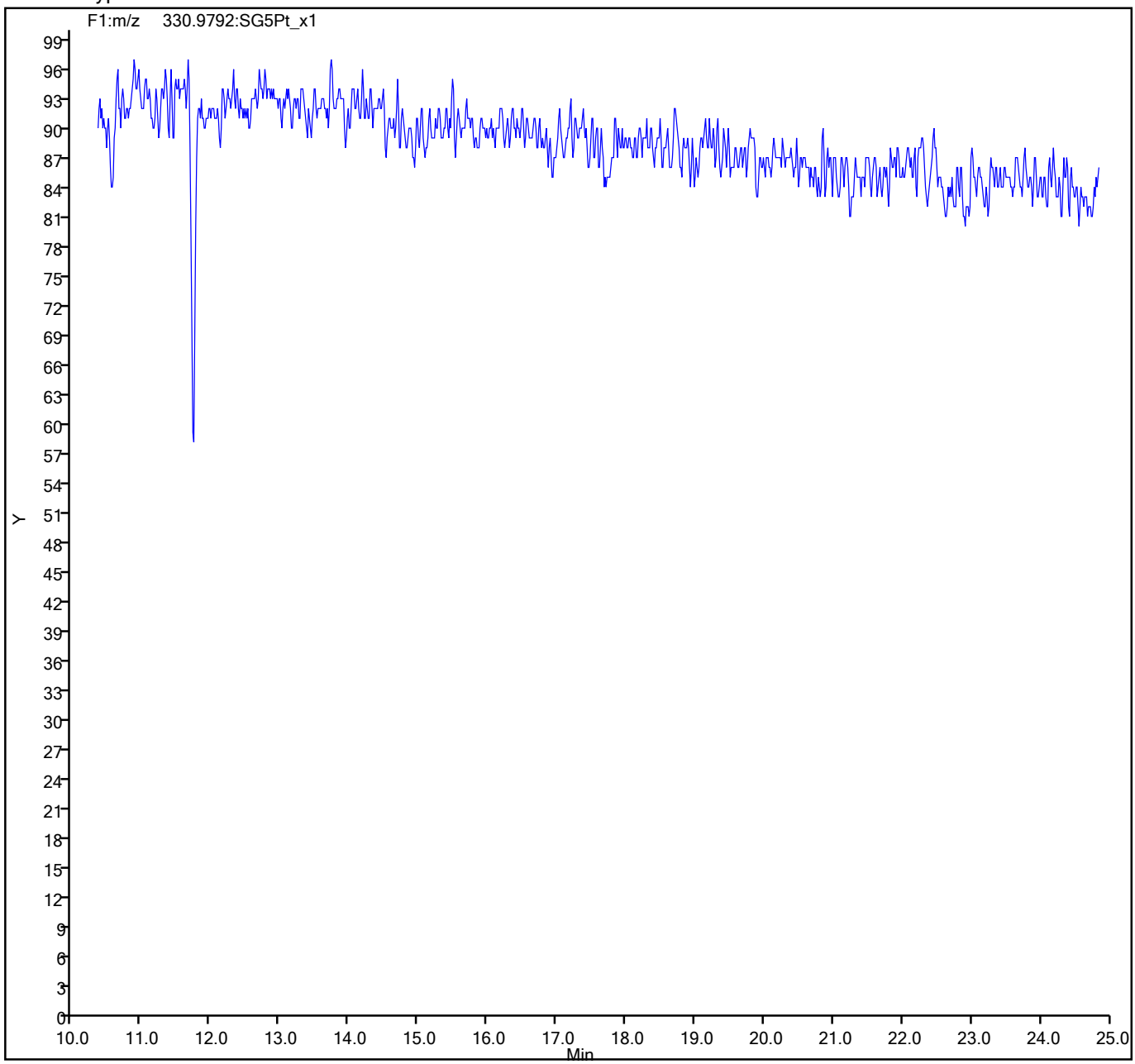

782813

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

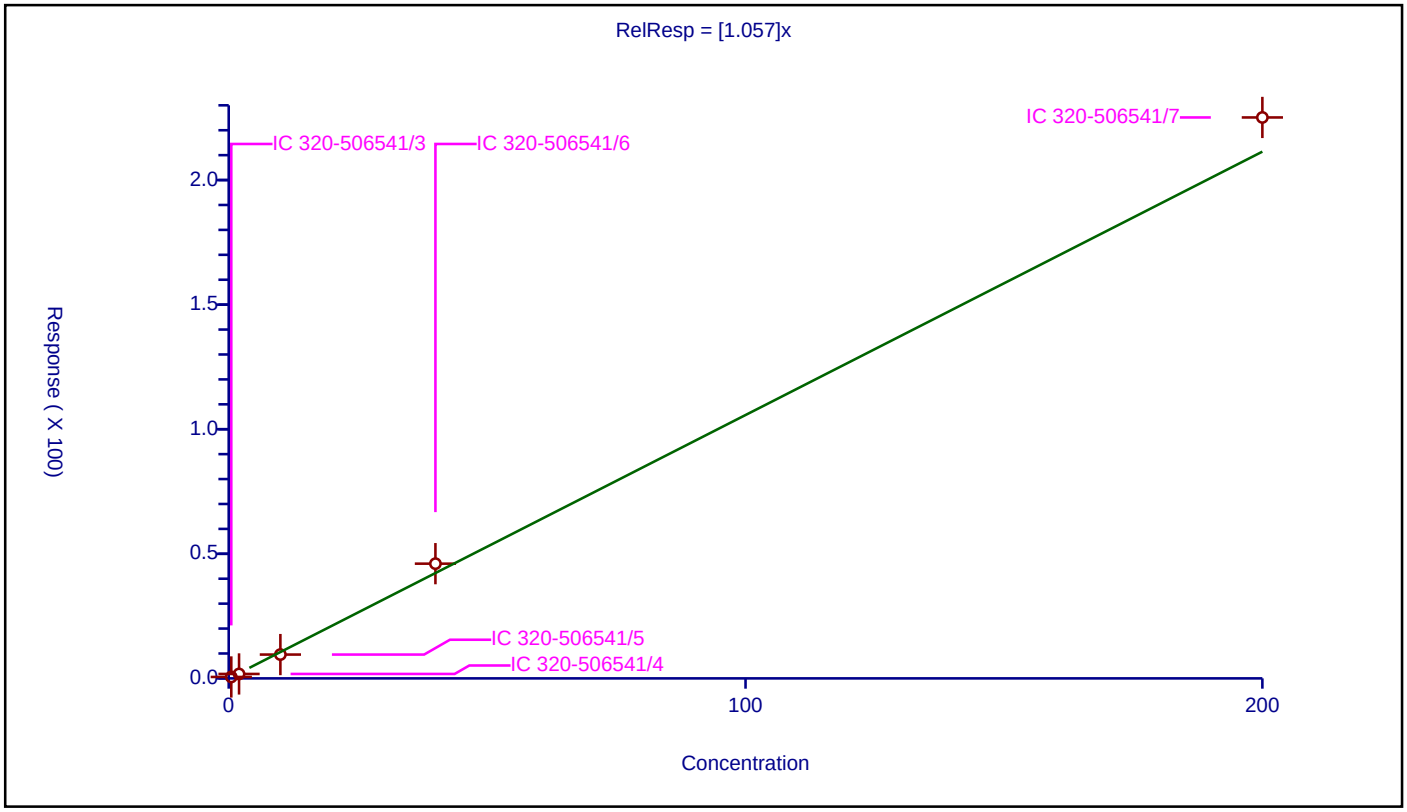

782814

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

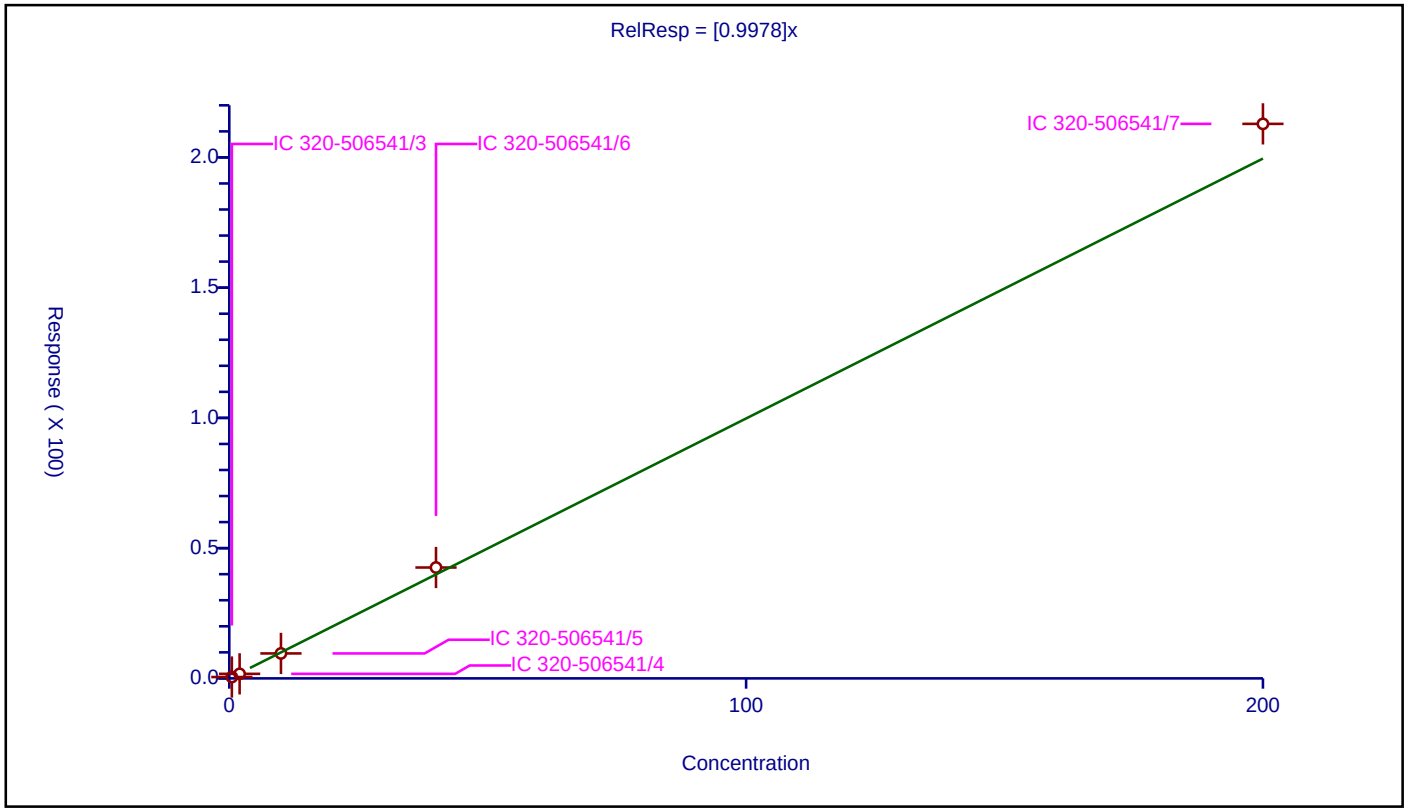

782815

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

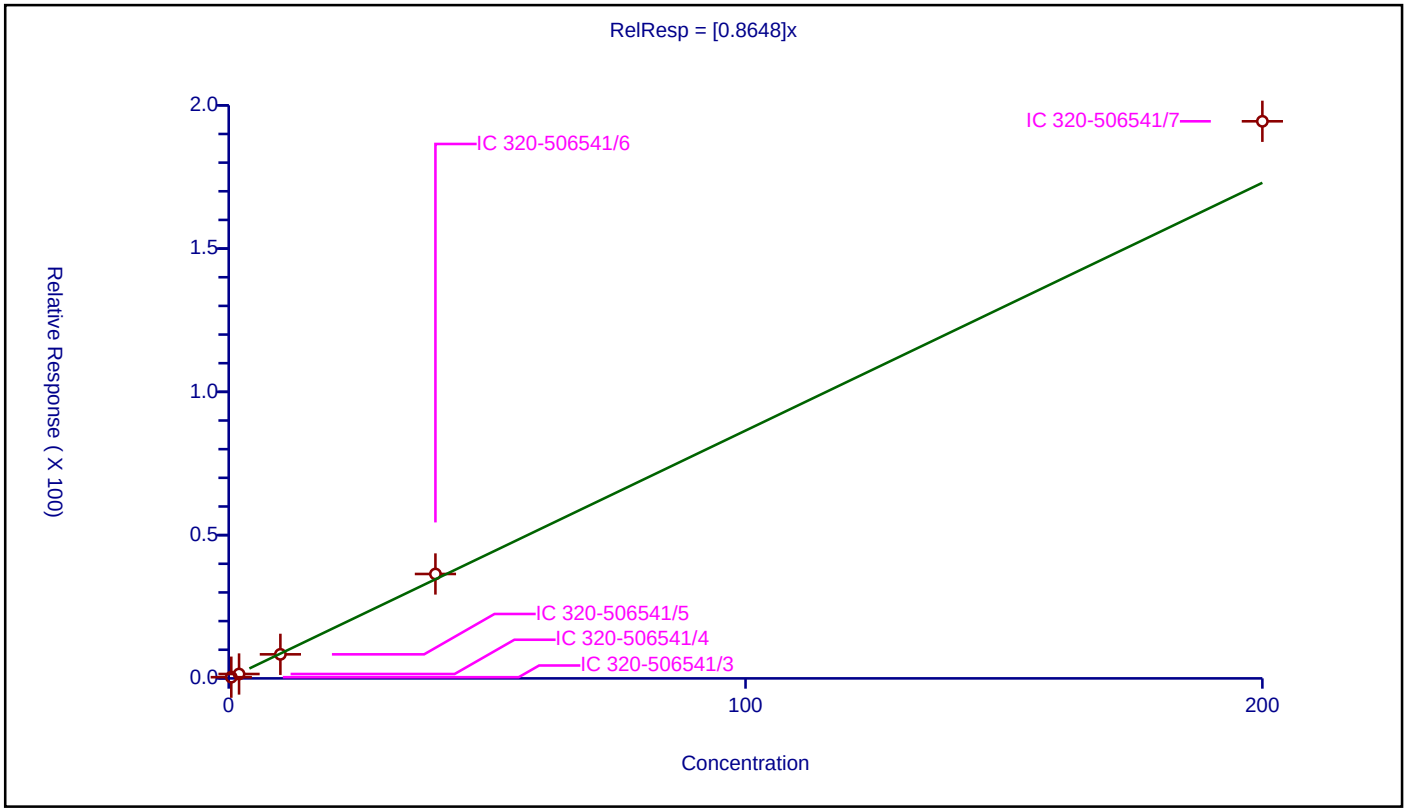

782816

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.2335	0.9635	1.0464	1.1217	1.0358	AveID		1.0802				9.5		20.0			
2,3,7,8-TCDD	1.1335	0.9559	1.0998	1.1237	1.0638	AveID		1.0753				6.7		20.0			
1,2,3,7,8-PeCDF	1.1920	0.9412	1.0373	1.0897	1.0112	AveID		1.0543				8.9		20.0			
2,3,4,7,8-PeCDF	1.1233	0.8984	0.9921	1.0636	0.9619	AveID		1.0079				8.7		20.0			
1,2,3,7,8-PeCDD	1.0719	0.9520	1.0685	1.1015	1.0385	AveID		1.0465				5.5		20.0			
1,2,3,4,7,8-HxCDF	1.2226	1.0072	1.1873	1.2073	1.1126	AveID		1.1474				7.8		20.0			
1,2,3,6,7,8-HxCDF	1.3374	1.0951	1.2359	1.2506	1.1700	AveID		1.2178				7.5		20.0			
2,3,4,6,7,8-HxCDF	1.3135	1.1007	1.2368	1.2623	1.1590	AveID		1.2145				7.0		20.0			
1,2,3,4,7,8-HxCDD	1.1235	0.9702	1.0749	1.1249	1.0104	AveID		1.0608				6.5		20.0			
1,2,3,6,7,8-HxCDD	1.0557	0.8863	1.0416	1.0264	0.9567	AveID		0.9933				7.1		20.0			
1,2,3,7,8,9-HxCDD	1.3093	0.9566	1.1202	1.1079	1.0532	AveID		1.1094				11.6		20.0			
1,2,3,7,8,9-HxCDF	1.3581	1.1239	1.2532	1.2757	1.1897	AveID		1.2401				7.1		20.0			
1,2,3,4,6,7,8-HpCDF	1.5412	1.2896	1.4855	1.5240	1.3700	AveID		1.4421				7.5		20.0			
1,2,3,4,6,7,8-HpCDD	1.1377	0.9531	1.0459	1.0970	1.0178	AveID		1.0503				6.8		20.0			
1,2,3,4,7,8,9-HpCDF	1.4057	1.1770	1.3459	1.3937	1.2235	AveID		1.3092				7.9		20.0			
OCDD	1.1328	0.9954	1.0870	1.1027	0.9920	AveID		1.0620				6.1		20.0			
OCDF	1.3392	1.1863	1.3349	1.3964	1.3271	AveID		1.3168				5.9		20.0			
13C-2,3,7,8-TCDF	1.3569	1.2925	1.2977	1.3484	1.4339	Ave		1.3459				4.2		35.0			
13C-2,3,7,8-TCDD	0.9164	0.8941	0.9478	0.9250	0.9750	Ave		0.9317				3.3		35.0			
13C-1,2,3,7,8-PeCDF	1.0773	1.0923	1.1314	1.1553	1.2461	Ave		1.1405				5.8		35.0			
13C-2,3,4,7,8-PeCDF	1.1109	1.0890	1.0480	1.1277	1.2510	Ave		1.1253				6.8		35.0			
13C-1,2,3,7,8-PeCDD	0.6866	0.6668	0.7308	0.7224	0.7758	Ave		0.7165				5.9		35.0			
13C-1,2,3,4,7,8-HxCDF	0.8656	0.8706	1.1172	0.9651	1.0057	Ave		0.9648				10.8		35.0			
13C-1,2,3,6,7,8-HxCDF	0.9280	0.9536	1.2227	1.0830	1.1668	Ave		1.0708				12.0		35.0			
13C-2,3,4,6,7,8-HxCDF	0.8692	0.9805	1.1292	1.1087	1.1190	Ave		1.0413				10.9		35.0			
13C-1,2,3,4,7,8-HxCDD	0.6435	0.7681	0.8180	0.7773	0.7866	Ave		0.7587				8.8		35.0			
13C-1,2,3,6,7,8-HxCDD	0.7368	0.8783	0.8857	0.9060	0.8896	Ave		0.8593				8.1		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9679	0.9781	1.0054	0.9456	0.9684	Ave		0.9731				2.2		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.7002	0.7170	0.7171	0.7555	0.7898	Ave		0.7359				4.9		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6351	0.6548	0.6640	0.7261	0.6926	Ave		0.6745				5.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6394	0.6623	0.6557	0.7259	0.7437	Ave		0.6854				6.8		35.0			
13C-OCDD	0.5202	0.5165	0.5084	0.5910	0.5871	Ave		0.5446				7.5		35.0			
37Cl4-2,3,7,8-TCDD	0.9654	0.9590	1.0722	1.0074	1.0375	Ave		1.0083				4.8					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	19533	50956	258022	1274052	6137031	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	12122	34971	198062	875630	4286034	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	74934	210335	1114982	5302236	26032333	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	72817	200175	987812	5051373	24861382	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	42943	129872	741897	3351337	16645947	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	46374	155611	1093397	4293581	21902419	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	54388	185321	1245549	4991420	26721257	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	50026	191527	1151149	5157631	25388405	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	31680	132244	724729	3222329	15558498	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	34082	138142	760446	3426727	16661405	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	39595	139741	786511	3436144	17279185	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	57602	195077	1038574	4445357	22553786	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	47287	164108	878086	4243438	21181967	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	31661	110761	572466	2935203	13800004	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	39382	138335	727362	3728415	17812004	2.50	10.0	50.0	200	1000
OCDD		AveID	51642	182470	910980	4803166	22803823	5.00	20.0	100	400	2000
OCDF		AveID	61051	217473	1118740	6082696	30505464	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	3167014	2644389	2465726	2839435	2962515	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	2138853	1829253	1800864	1948011	2014532	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	2514489	2234847	2149791	2432949	2574521	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	2592947	2228025	1991303	2374722	2584740	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	1602476	1364144	1388641	1521254	1602880	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	1517222	1545033	1841825	1778238	1968615	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	1626653	1692336	2015594	1995567	2283961	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	1523436	1740015	1861559	2042874	2190509	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	1127895	1363103	1348471	1432215	1539784	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	1291365	1558668	1460100	1669337	1741498	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	1696557	1735785	1657413	1742331	1895740	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	1227279	1272526	1182209	1392194	1546113	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	1113145	1162117	1094713	1337869	1355803	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	1120663	1175351	1080883	1337573	1455766	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	1823492	1833139	1676139	2177938	2298668	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	11266	39241	203726	848616	4287059	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	08JN21ADFS1_1	Resolution Check	RC 060821A	46			GRB	1.000	
2	08JN21ADFS1_2	WDM HRDXNCP_00042	WDM 060821A	1	Dioxin		GRB	1.000	
3	08JN21ADFS1_3	SB Solvent Blank C-14	SB 060821	3			GRB	1.000	
4	08JN21ADFS1_4	CS-2 HRDXNL2_00032	IC 060821	4	Dioxin		GRB	1.000	
5	08JN21ADFS1_5	CS-3 HRDXNL3_00029	IC 060821A	5	Dioxin		GRB	1.000	
6	08JN21ADFS1_6	CS-4 HRDXNL4_00099	IC 060821B	2	Dioxin		GRB	1.000	
7	08JN21ADFS1_7	CS-5 HRDXNL5_00032	IC 060821C	6	Dioxin		GRB	1.000	
8	08JN21ADFS1_8	CS-6 HRDXNL6_00028	IC 060821D	7	Dioxin		GRB	1.000	
9	08JN21ADFS1_9	Resolution Check	RC 060821B	46			GRB	1.000	
10	08JN21ADFS1_10	SB Solvent Blank C-14	SB 060821A	3			GRB	1.000	
11	08JN21ADFS1_11	ICV HRDXNIC_00047	ICV 060821	8	Dioxin		GRB	1.000	
12	08JN21ADFS1_12	Resolution Check	RC 060821C	46			GRB	1.000	
13	08JN21ADFS1_13	CCV CS-4 HRDXNL4_00099	CCV 060821A	2	Dioxin		GRB	1.000	
14	08JN21ADFS1_14	WDM HRDXNCP_00042	WDM 060821B	1	Dioxin		GRB	1.000	
15	08JN21ADFS1_15	mb 320-482224/1-a RI	mb 320-482224/1-a	10	8290/Solid	100	GRB	20.000	g
16	08JN21ADFS1_16	320-72057-a-23-a mdlv RI (7)	320-72057-a-23-a mdlv	11	8290/Solid		GRB	20.000	g
17	08JN21ADFS1_17	320-72057-a-24-a mdlv RI (8)	320-72057-a-24-a mdlv	12	8290/Solid		GRB	20.000	g
18	08JN21ADFS1_18	320-72057-a-25-a mdlv RI (9)	320-72057-a-25-a mdlv	13	8290/Solid		GRB	20.000	g
19	08JN21ADFS1_19	320-72057-a-26-a loqv RI (10)	320-72057-a-26-a loqv	14	8290/Solid		GRB	20.000	g
20	08JN21ADFS1_20	320-74542-b-3-a	320-74542-b-3-a	15	8290A/Solid	D245	GRB	10.000	g
21	08JN21ADFS1_21	320-74542-b-2-a	320-74542-b-2-a	16	8290A/Solid		GRB	10.000	g
22	08JN21ADFS1_22	320-74542-b-1-a	320-74542-b-1-a	17	8290A/Solid		GRB	10.000	g
23	08JN21ADFS1_23	lcs 320-496101/2-a	lcs 320-496101/2-a	18	8290A/Solid		GRB	10.000	g
24	08JN21ADFS1_24	lcsd 320-496101/3-a	lcsd 320-496101/3-a	19	8290A/Solid		GRB	10.000	g
25	08JN21ADFS1_25	mb 320-496101/1-a	mb 320-496101/1-a	20	8290A/Solid		GRB	10.000	
26	08JN21ADFS1_26	Resolution Check	RC 060821D	46			GRB	1.000	
27	08JN21ADFS1_27	CCV CS-4 HRDXNL4_00099	CCV 060821B	2	Dioxin		GRB	1.000	
28	08JN21ADFS1_28	Resolution Check	RC 060821E	46			GRB	1.000	
29	08JN21ADFS1_29	WDM HRDXNCP_00042	WDM 060821C	1	Dioxin		GRB	1.000	
30	08JN21ADFS1_30	SB Solvent Blank C-14	SB 060821B	3			GRB	1.000	
31	08JN21ADFS1_31	320-74542-b-4-a	320-74542-b-4-a	21	8290A/Solid	D245	GRB	10.000	g
32	08JN21ADFS1_32	320-74542-b-5-a	320-74542-b-5-a	22	8290A/Solid		GRB	10.000	g
33	08JN21ADFS1_33	320-74542-b-6-a	320-74542-b-6-a	23	8290A/Solid		GRB	10.000	g
34	08JN21ADFS1_34	320-74542-b-7-a	320-74542-b-7-a	24	8290A/Solid		GRB	10.000	g
35	08JN21ADFS1_35	320-74542-b-8-a	320-74542-b-8-a	25	8290A/Solid		GRB	10.000	g
36	08JN21ADFS1_36	320-74542-b-9-a	320-74542-b-9-a	26	8290A/Solid		GRB	10.000	g
37	08JN21ADFS1_37	SB Solvent Blank C-14	SB 060821C	3			GRB	1.000	
38	08JN21ADFS1_38	Resolution Check	RC 060821F	46			GRB	1.000	
39	08JN21ADFS1_39	CCV CS-4 HRDXNL4_00099	CCV 060821C	2	Dioxin		GRB	1.000	
40	08JN21ADFS1_40	Resolution Check	RC 060821G	46			GRB	1.000	

LOG FILE ✓'d
06/09/21
GRB

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 12:20
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10809 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10359 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10673 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10724 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10609 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10694 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10161 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10386 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10328 [5%height]

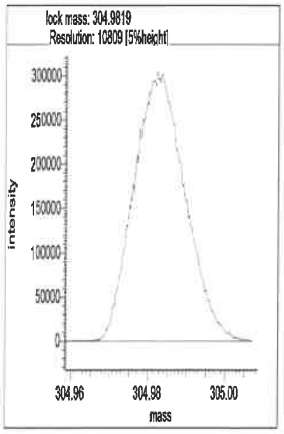

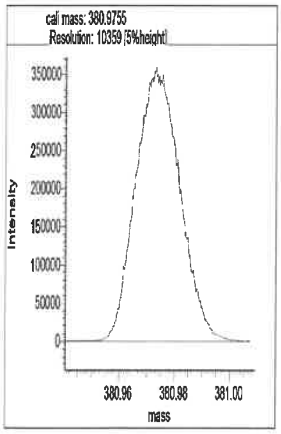

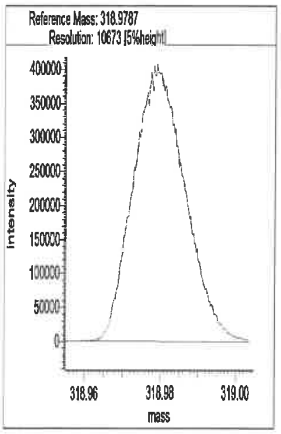

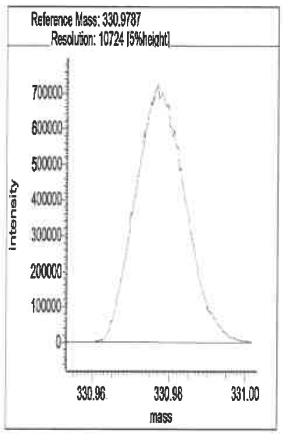

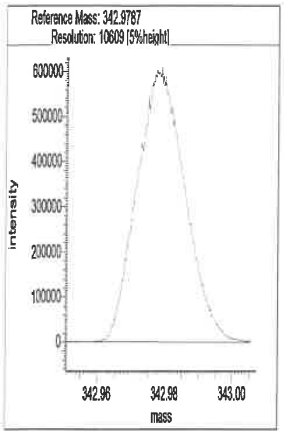

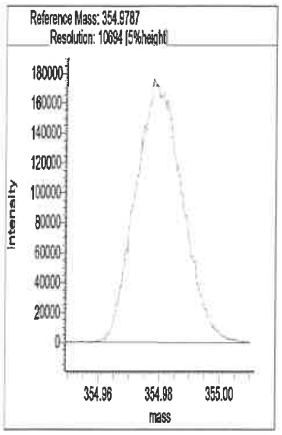

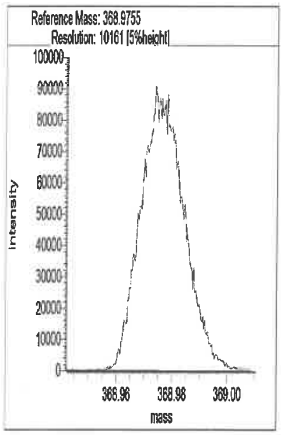

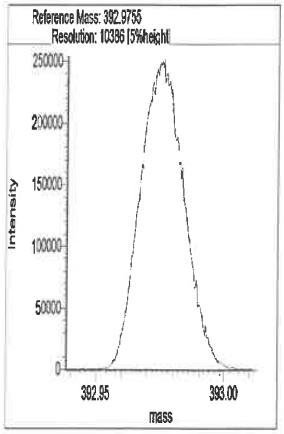

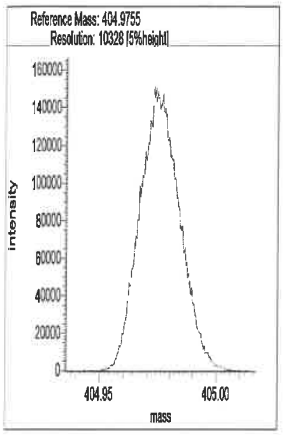

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10749 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10650 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10687 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10661 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10183 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10343 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10397 [5%height]

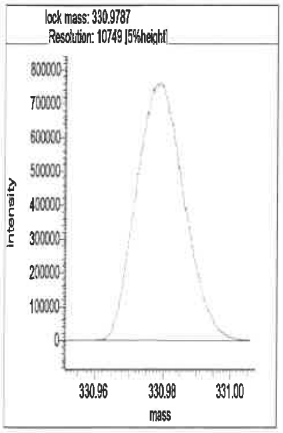

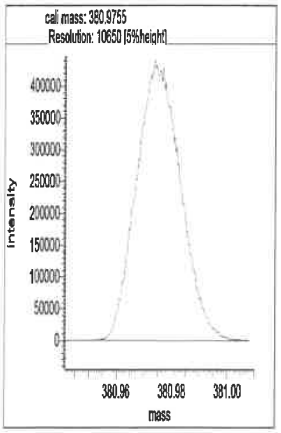

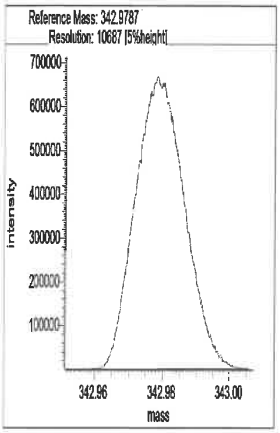

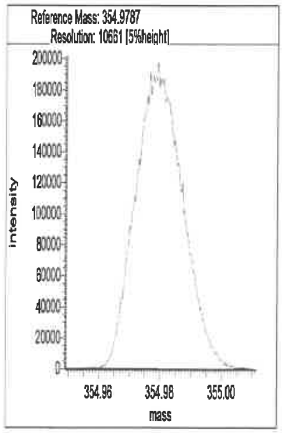

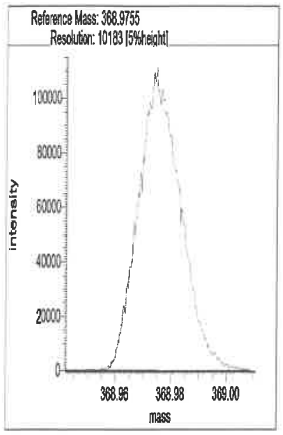

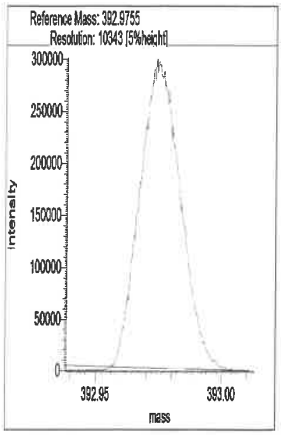

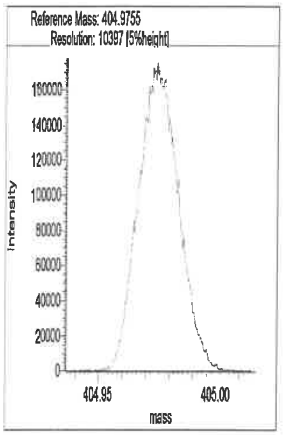

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10665 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10632 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10792 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10868 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10680 [5%height]

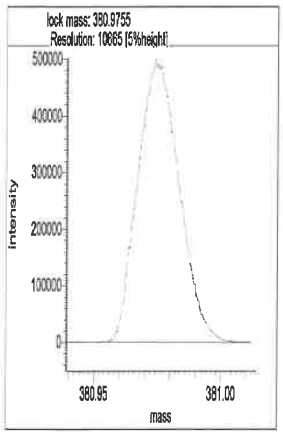

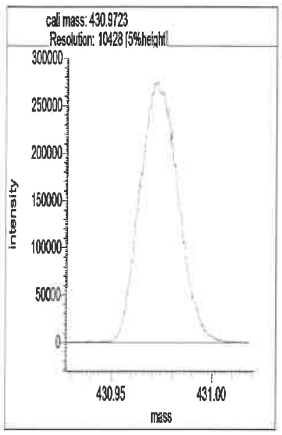

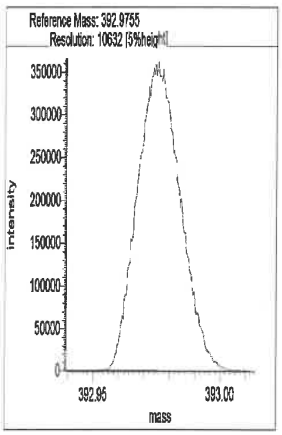

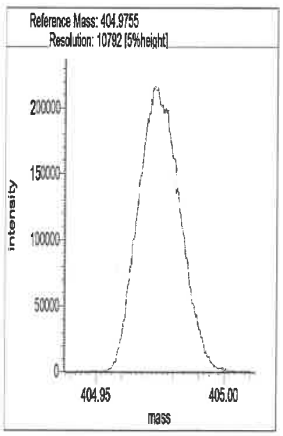

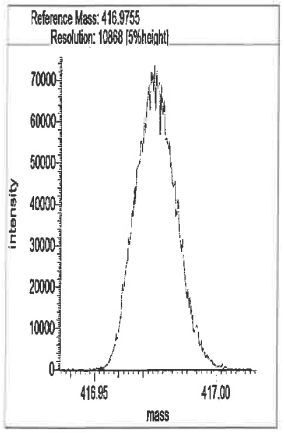

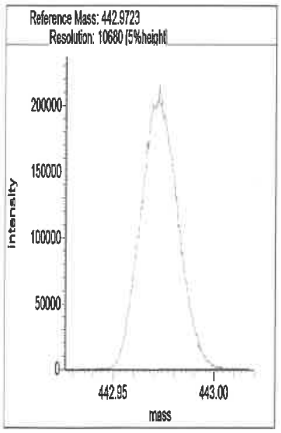

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10780 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10428 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10519 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10746 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10596 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10599 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10334 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10486 [5%height]

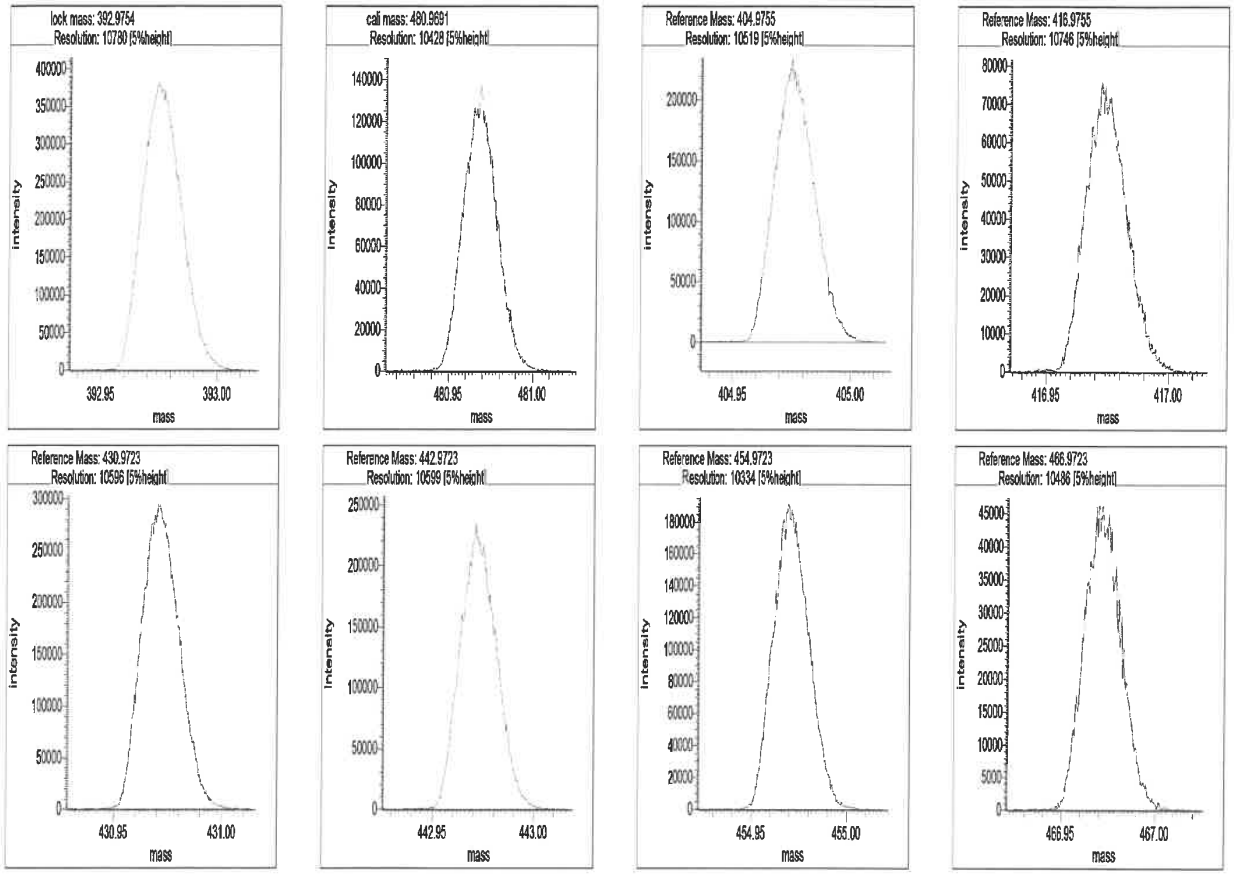

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10812 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10576 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10586 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10905 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10543 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10541 [5%height]

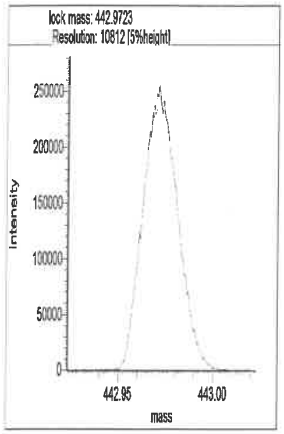
lock mass: 442.9723
Resolution: 10812 [5%height]
Intensity
mass

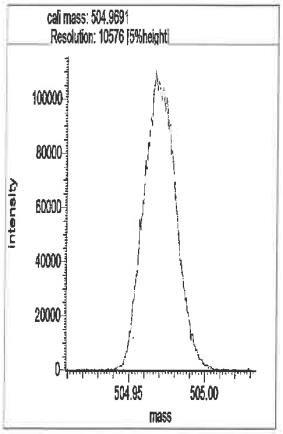
cali mass: 504.9691
Resolution: 10576 [5%height]
Intensity
mass

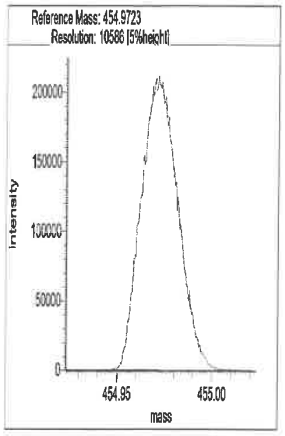
Reference Mass: 454.9723
Resolution: 10566 [5%height]
Intensity
mass

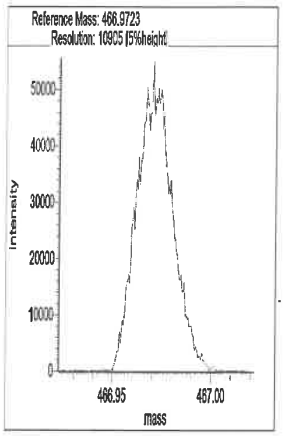
Reference Mass: 466.9723
Resolution: 10905 [5%height]
Intensity
mass

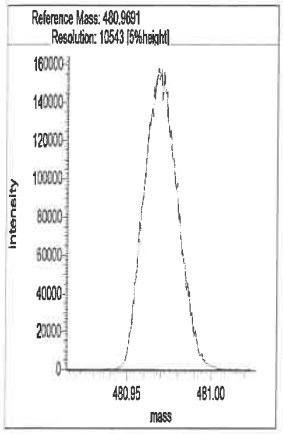
Reference Mass: 480.9691
Resolution: 10543 [5%height]
Intensity
mass

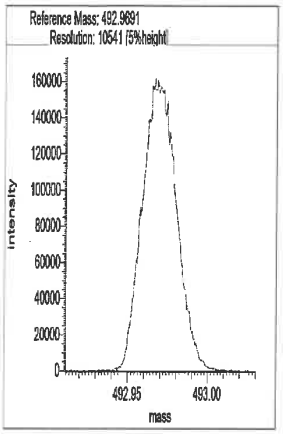
Reference Mass: 492.9691
Resolution: 10541 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 18:18
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11138 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10557 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10815 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11047 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10923 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10964 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10533 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10381 [5%height]

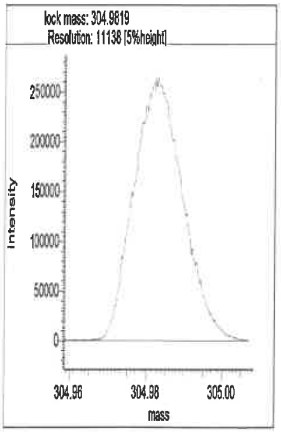

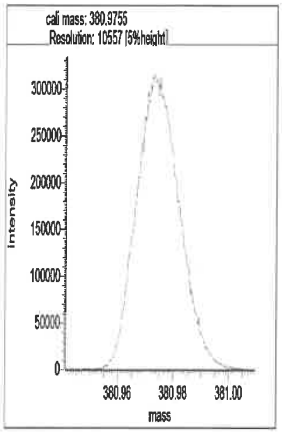

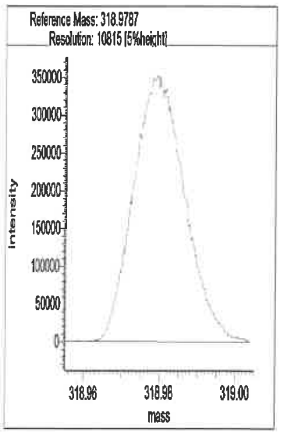

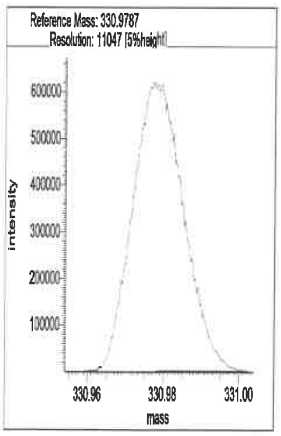

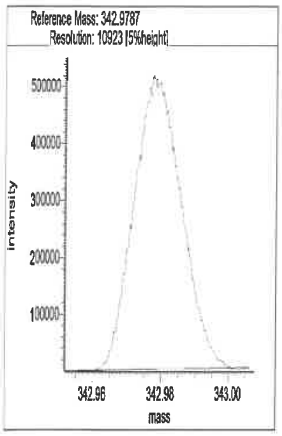

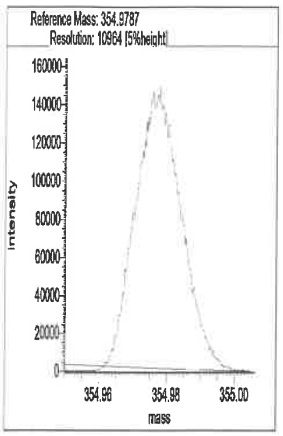

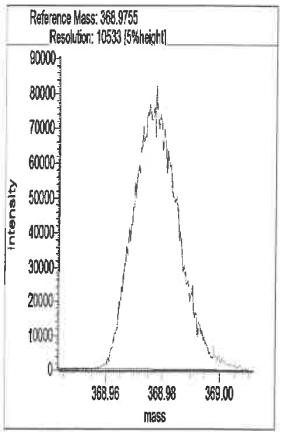

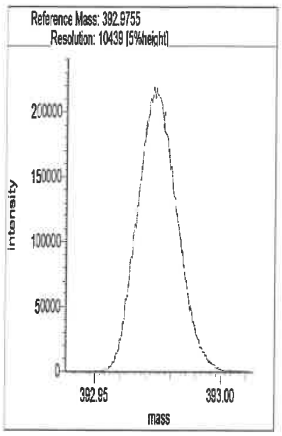

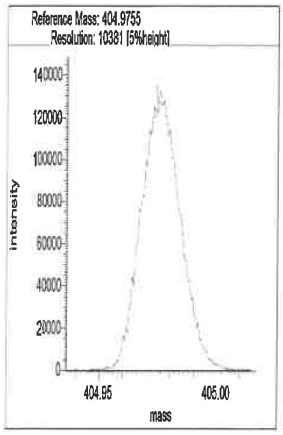

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10931 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10771 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11049 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10941 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10429 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10942 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10794 [5%height]

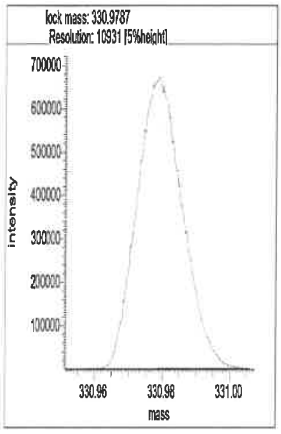

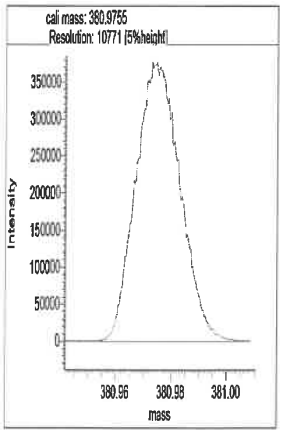

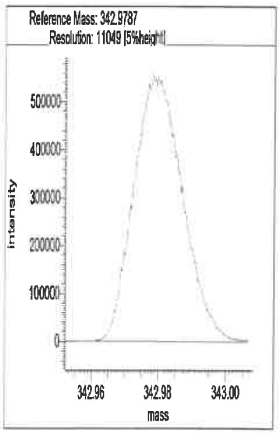

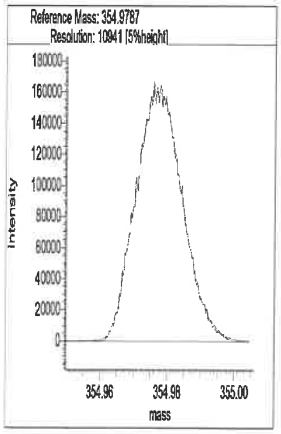

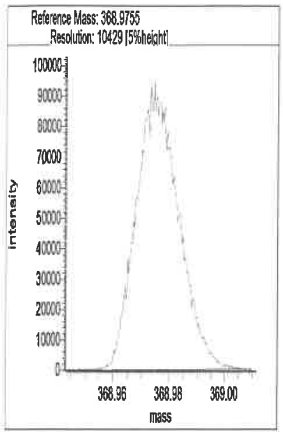

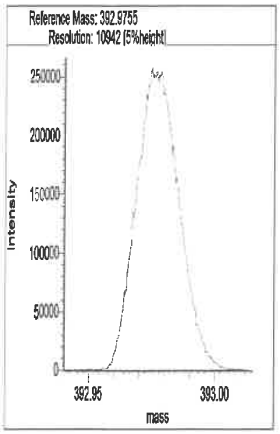

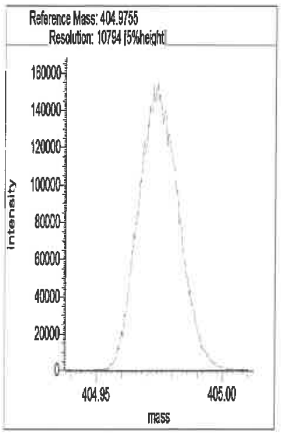

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10885 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10505 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10981 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10838 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11244 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10864 [5%height]

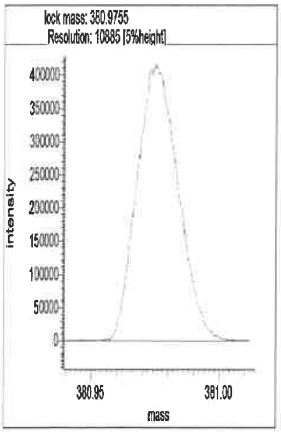

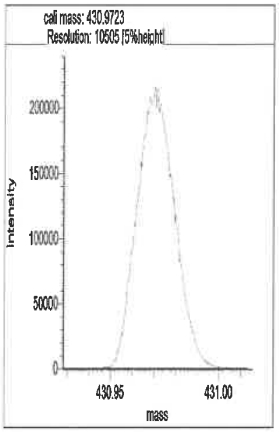

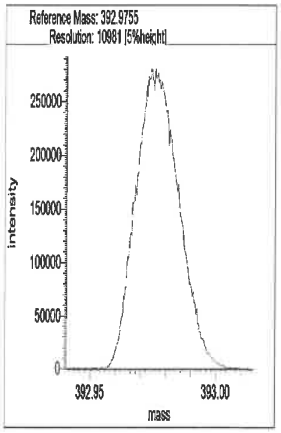

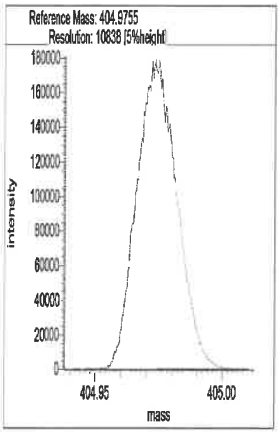

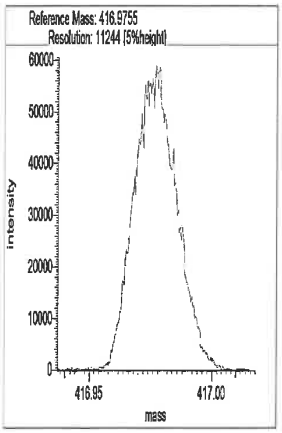

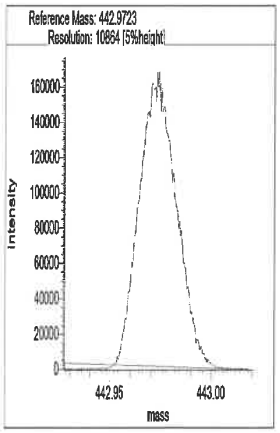

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10912 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10920 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10645 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11021 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10722 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10705 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10886 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11473 [5%height]

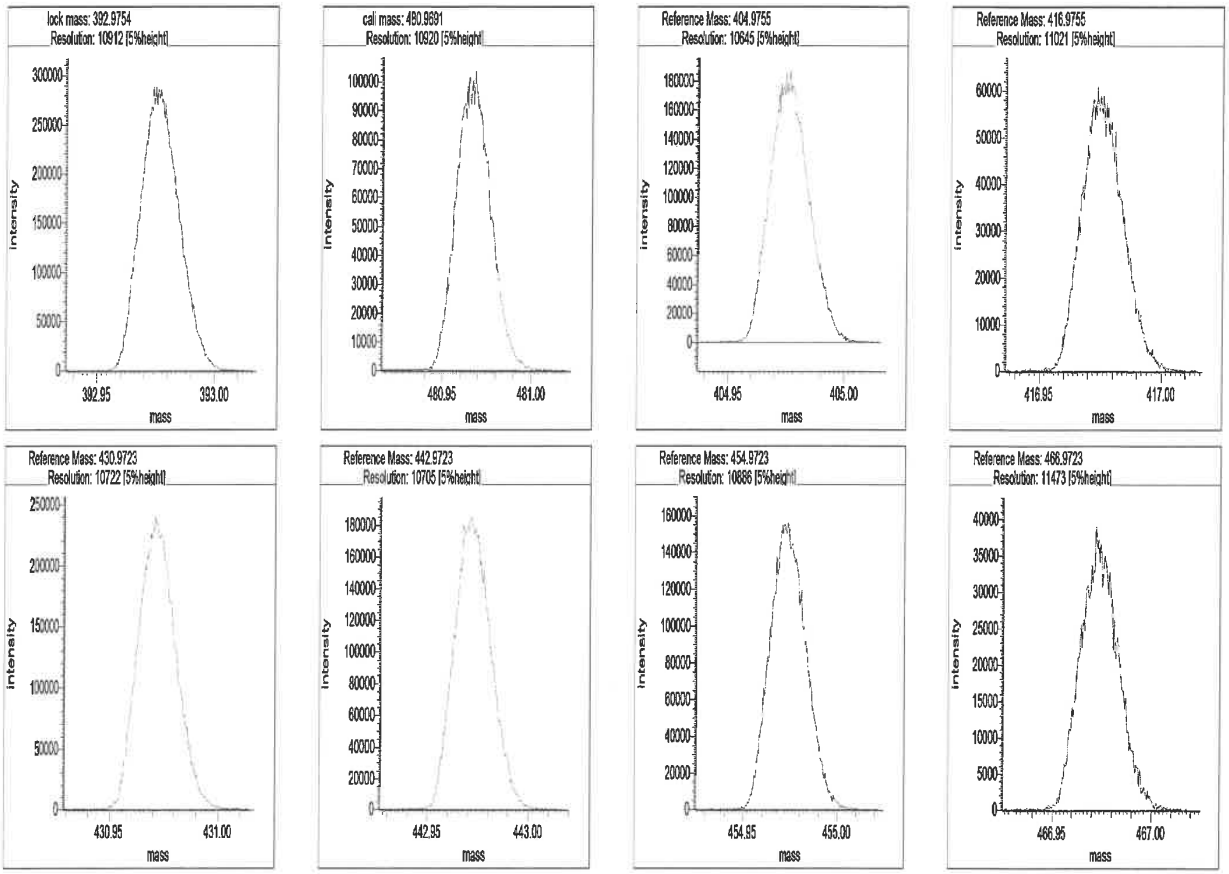

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11094 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10852 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11104 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11145 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10592 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10719 [5%height]

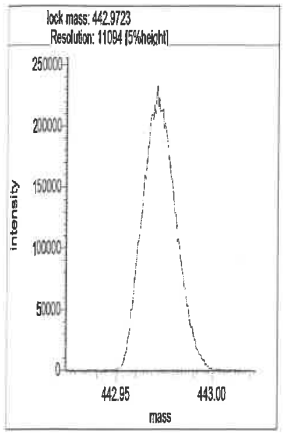
lock mass: 442.9723
Resolution: 11094 [5%height]
Intensity
mass

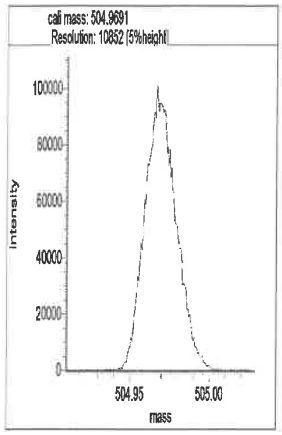
cali mass: 504.9691
Resolution: 10852 [5%height]
Intensity
mass

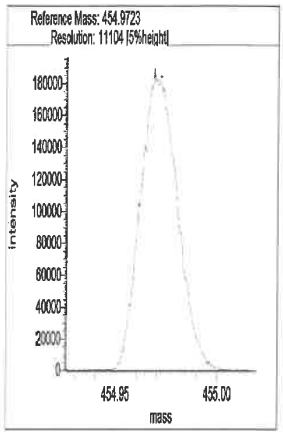
Reference Mass: 454.9723
Resolution: 11104 [5%height]
Intensity
mass

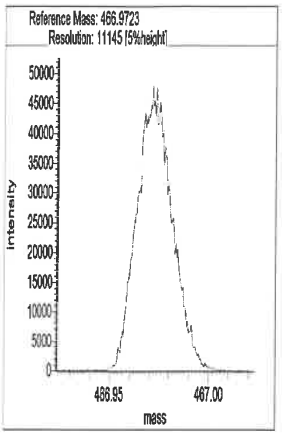
Reference Mass: 466.9723
Resolution: 11145 [5%height]
Intensity
mass

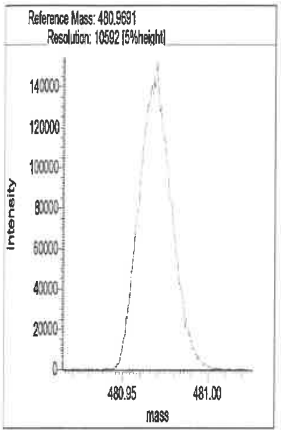
Reference Mass: 480.9691
Resolution: 10592 [5%height]
Intensity
mass

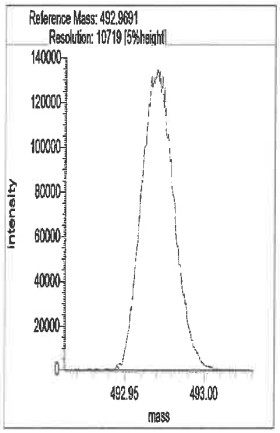
Reference Mass: 492.9691
Resolution: 10719 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 20:13
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11228 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10780 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10868 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10774 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10877 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10591 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10487 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10710 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10243 [5%height]

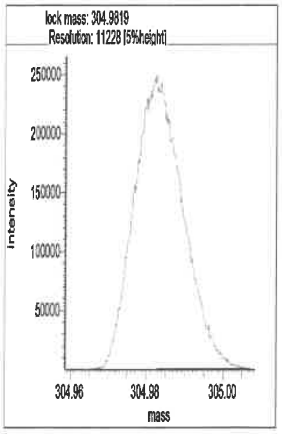

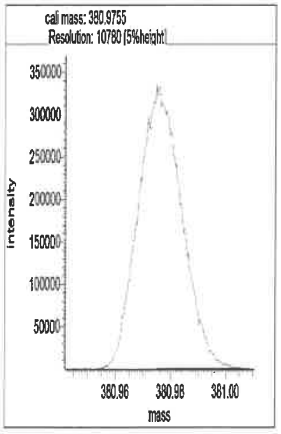

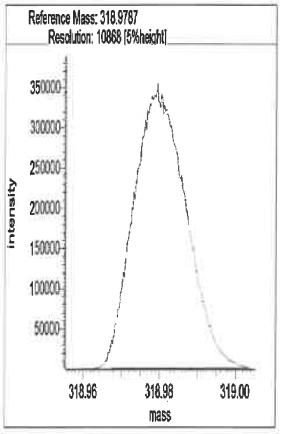

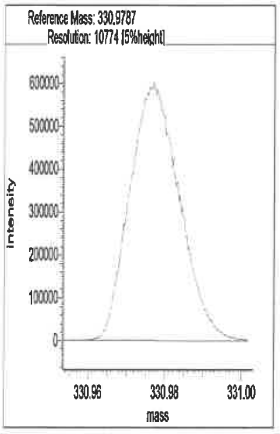

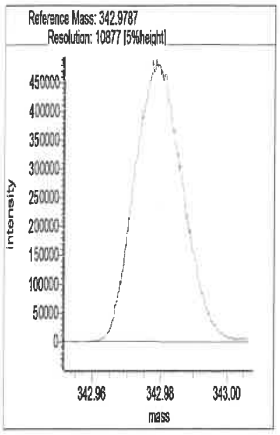

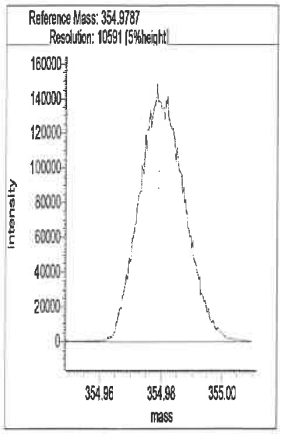

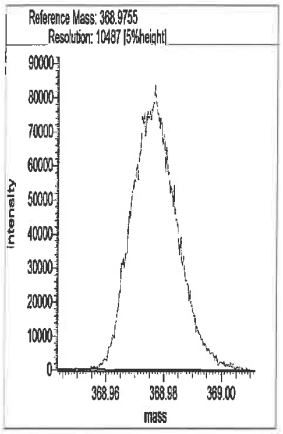

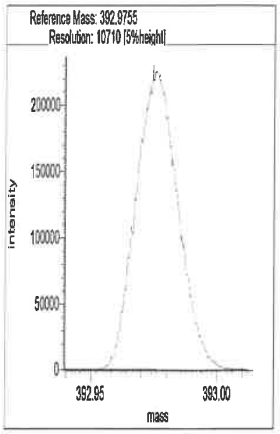

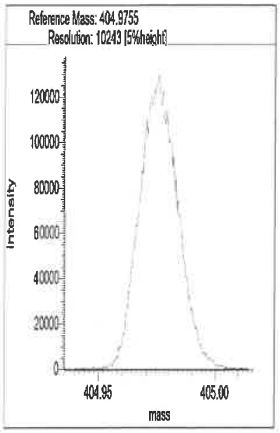

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10867 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10936 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10948 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10910 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10174 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10675 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10514 [5%height]

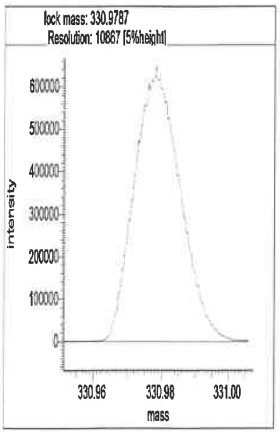

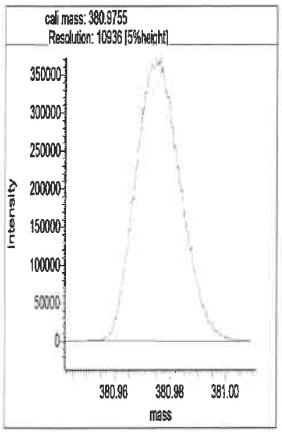

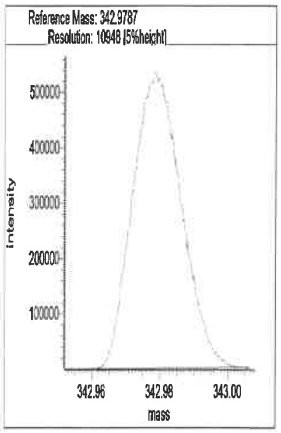

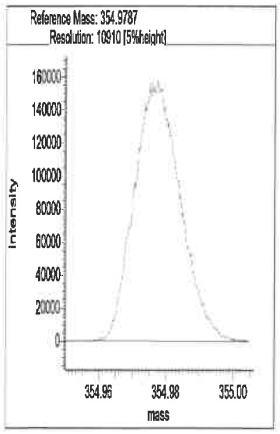

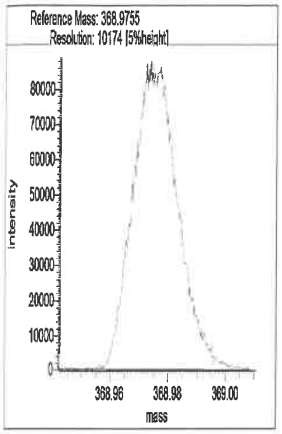

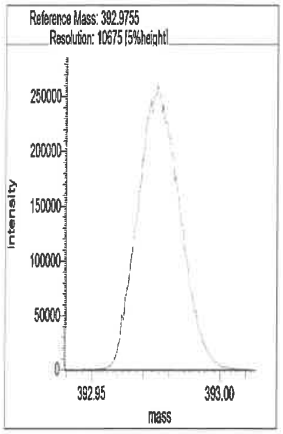

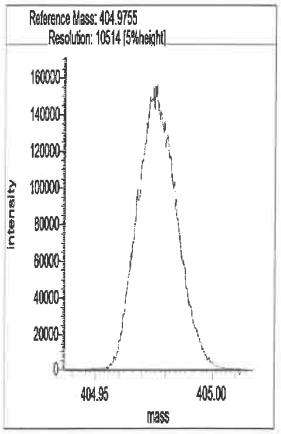

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10898 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10782 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11034 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11134 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10786 [5%height]

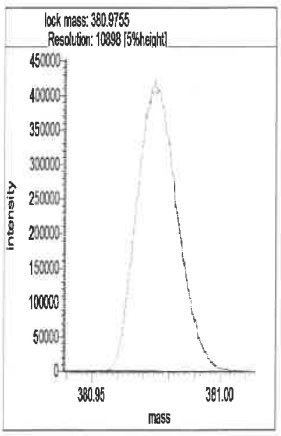

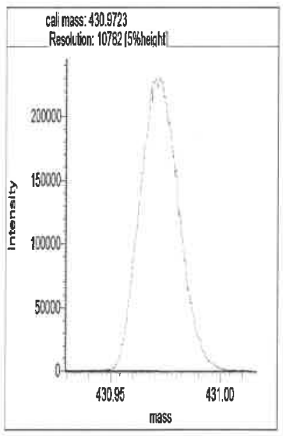

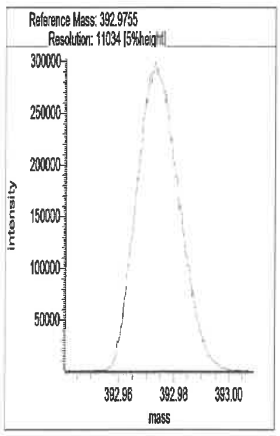

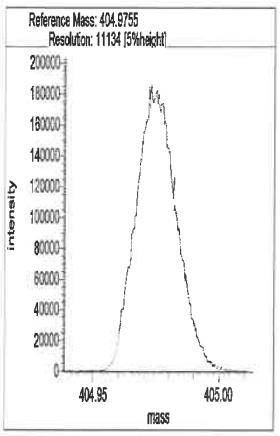

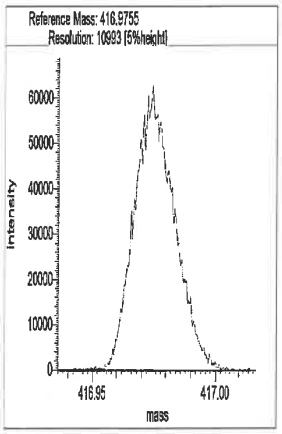

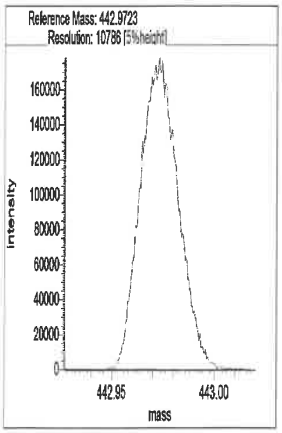

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11155 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10418 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10767 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10954 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10613 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11028 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10950 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10877 [5%height]

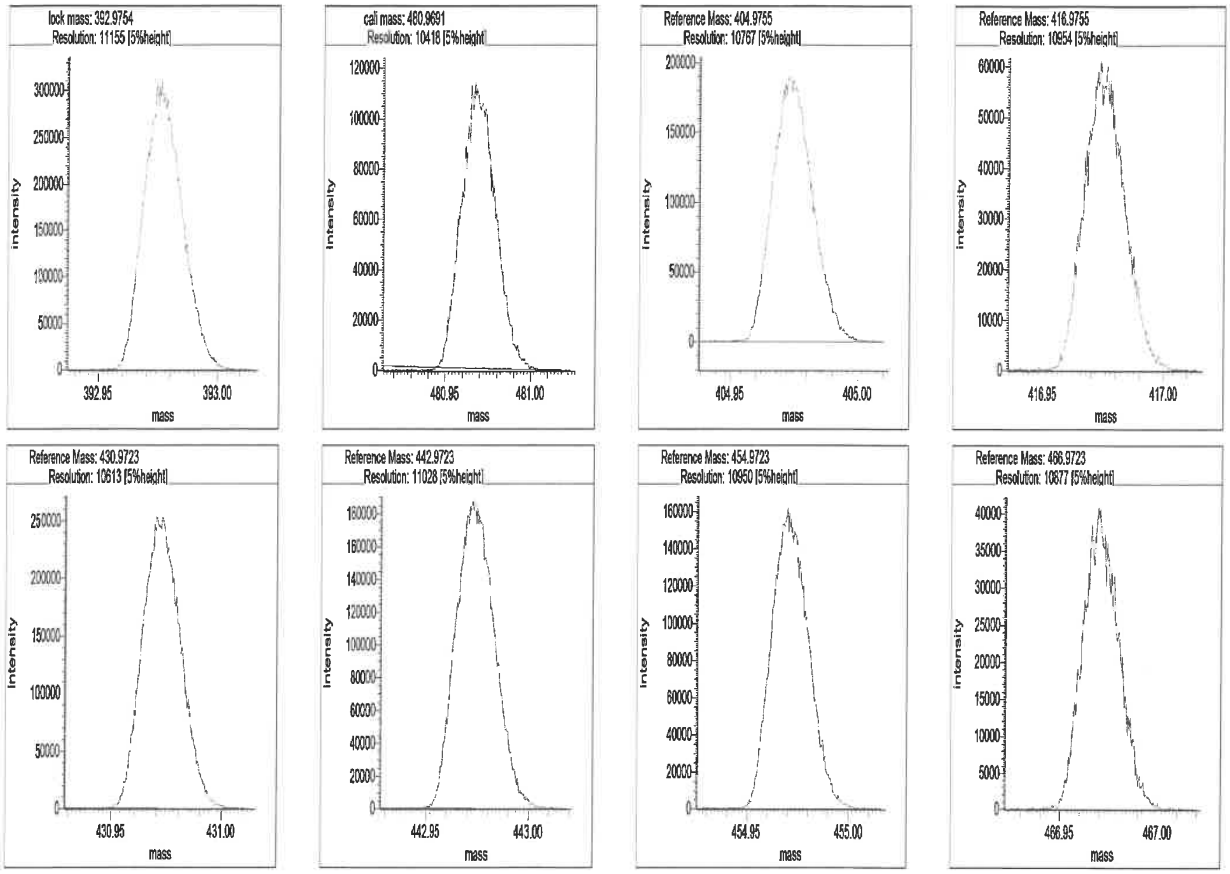

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10985 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10829 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11149 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11382 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11128 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11097 [5%height]

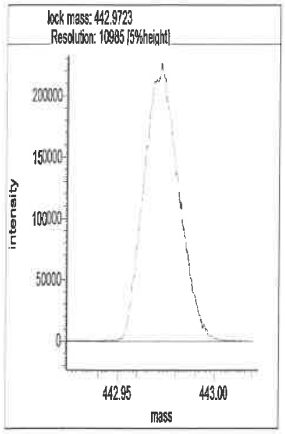
lock mass: 442.9723
Resolution: 10985 [5%height]
intensity
mass

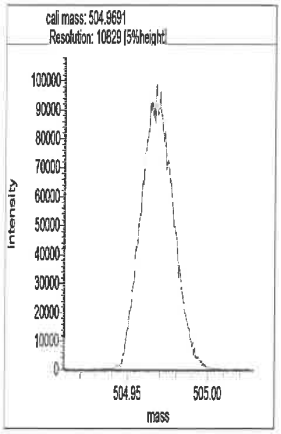
cali mass: 504.9691
Resolution: 10629 [5%height]
intensity
mass

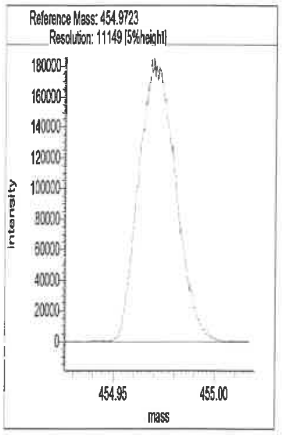
Reference Mass: 454.9723
Resolution: 11149 [5%height]
intensity
mass

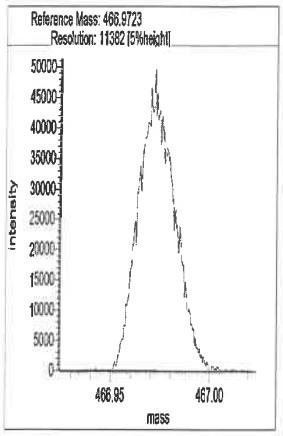
Reference Mass: 466.9723
Resolution: 11382 [5%height]
intensity
mass

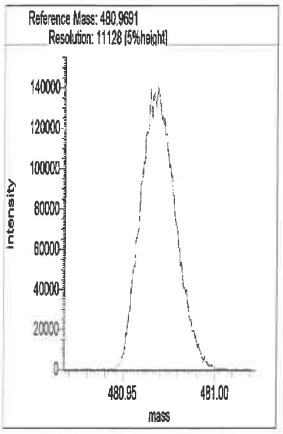
Reference Mass: 480.9691
Resolution: 11128 [5%height]
intensity
mass

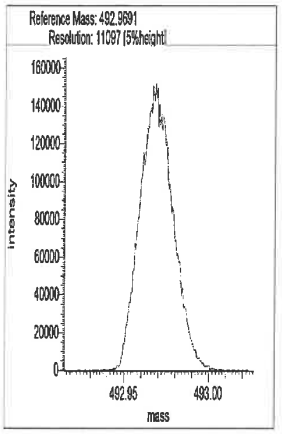
Reference Mass: 492.9691
Resolution: 11097 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.564	2334037	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.628	3167014	0.81	1.3459	100.8	100.8	0.1546	0.1546	101	
2,3,7,8-TCDF	19.662	19533	0.82	1.0802	0.5710	0.5710	0.007637	0.007637	114	
S Total TCDF					0.5710	0.5710	0.007637	0.007637		
D 13C-2,3,7,8-TCDD	20.933	2138853	0.81	0.9317	98.4	98.4	0.1772	0.1772	98.36	
$ 37Cl4-2,3,7,8-TCDD	20.941	11266		1.0083	0.4787	0.4787	0.005933	0.005933	95.74	
2,3,7,8-TCDD	20.967	12122	0.71	1.0753	0.5270	0.5270	0.0223	0.0223	105	
S Total TCDD					0.5270	0.5270	0.0223	0.0223		
D 13C-1,2,3,7,8-PeCDF	26.587	2514489	1.59	1.1405	94.5	94.5	0.3469	0.3469	94.46	
1,2,3,7,8-PeCDF	26.613	74934	1.71	1.0543	2.827	2.827	0.0199	0.0199	113	
D 13C-2,3,4,7,8-PeCDF	28.046	2592947	1.57	1.1253	98.7	98.7	0.3516	0.3516	98.72	
2,3,4,7,8-PeCDF	28.071	72817	1.61	1.0079	2.786	2.786	0.0219	0.0219	111	
S Total PeCDF					5.613	5.613	0.0209	0.0209		
D 13C-1,2,3,7,8-PeCDD	28.830	1602476	1.59	0.7165	95.8	95.8	0.1271	0.1271	95.83	
1,2,3,7,8-PeCDD	28.855	42943	1.72	1.0465	2.561	2.561	0.0215	0.0215	102	
S Total PeCDD					2.561	2.561	0.0215	0.0215		
D 13C-1,2,3,4,7,8-HxCDF	34.406	1517222	0.52	0.9648	89.7	89.7	0.3358	0.3358	89.72	
1,2,3,4,7,8-HxCDF	34.431	46374	1.30	1.1474	2.664	2.664	0.0219	0.0219	107	
D 13C-1,2,3,6,7,8-HxCDF	34.583	1626653	0.54	1.0708	86.7	86.7	0.3026	0.3026	86.67	
1,2,3,6,7,8-HxCDF	34.608	54388	1.19	1.2178	2.746	2.746	0.0201	0.0201	110	
D 13C-2,3,4,6,7,8-HxCDF	35.468	1523436	0.53	1.0413	83.5	83.5	0.3112	0.3112	83.47	
2,3,4,6,7,8-HxCDF	35.485	50026	1.25	1.2145	2.704	2.704	0.0183	0.0183	108	
D 13C-1,2,3,7,8,9-HxCDF	36.404	1696557	0.52	0.9731	99.5	99.5	0.3330	0.3330	99.47	
1,2,3,7,8,9-HxCDF	36.421	57602	1.21	1.2401	2.738	2.738	0.0145	0.0145	110	
S Total HxCDF					10.9	10.9	0.0187	0.0187		
* 13C-1,2,3,7,8,9-HxCDD	36.210	1752780	1.29	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.695	1127895	1.27	0.7587	84.8	84.8	0.2005	0.2005	84.82	
1,2,3,4,7,8-HxCDD	35.712	31680	1.20	1.0608	2.648	2.648	0.0198	0.0198	106	
D 13C-1,2,3,6,7,8-HxCDD	35.822	1291365	1.29	0.8593	85.7	85.7	0.1770	0.1770	85.74	
1,2,3,6,7,8-HxCDD	35.839	34082	1.16	0.9933	2.657	2.657	0.0196	0.0196	106	

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.227	39595	1.15	1.1094	2.950	2.950	0.0182	0.0182	118	
S Total HxCDD					8.255	8.255	0.0192	0.0192		
D 13C-1,2,3,4,6,7,8-HpCDF	38.321	1227279	0.46	0.7359	95.1	95.1	0.3550	0.3550	95.14	
1,2,3,4,6,7,8-HpCDF	38.329	47287	1.05	1.4421	2.672	2.672	0.0138	0.0138	107	
D 13C-1,2,3,4,7,8,9-HpCDF	39.611	1120663	0.46	0.6854	93.3	93.3	0.3812	0.3812	93.29	
1,2,3,4,7,8,9-HpCDF	39.619	39382	1.04	1.3092	2.684	2.684	0.0149	0.0149	107	
S Total HpCDF					5.356	5.356	0.0144	0.0144		
D 13C-1,2,3,4,6,7,8-HpCDD	39.307	1113145	1.06	0.6745	94.2	94.2	0.2577	0.2577	94.15	
1,2,3,4,6,7,8-HpCDD	39.316	31661	0.99	1.0503	2.708	2.708	0.0190	0.0190	108	
S Total HpCDD					2.708	2.708	0.0190	0.0190		
D 13C-OCDD	41.797	1823492	0.90	0.5446	191.0	191.0	0.3325	0.3325	95.51	
OCDF	41.890	61051	0.95	1.3168	5.085	5.085	0.0322	0.0322	102	
OCDD	41.805	51642	0.88	1.0620	5.333	5.333	0.0182	0.0182	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.564	20.547	1		1041449	163457	148	370	1104		
333.9338	20.564	20.547	1		1292588	204311	95	237	2151	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.628	19.616	1	0.954	1415927	226149	197	492	1148		
317.9389	19.628	19.616	1	0.954	1751087	282985	109	272	2596	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.662	19.646	1	1.002	8785	1472	3	7	491		
305.8987	19.662	19.646	1	1.002	10748	1598	14	35	114	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.933	20.910	1	1.018	956834	140160	148	370	947		
333.9338	20.924	20.910	1	1.018	1182019	172842	95	237	1819	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.941	20.935	0	1.018	11266	1696	9	22	188		
2,3,7,8-TCDD											
319.8965	20.967	20.939	2	1.002	5046	703	25	62	28		
321.8936	20.950	20.939	1	1.001	7076	1165	5	12	233	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.587	26.560	2	1.293	1544614	271650	354	885	767		
353.8970	26.587	26.560	2	1.293	969875	166951	228	570	732	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.613	26.584	2	1.001	47325	8180	13	32	629		
341.8567	26.596	26.584	1	1.000	27609	5058	24	60	211	1.71(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.046	28.014	2	1.364	1584958	253357	354	885	716		
353.8970	28.037	28.014	1	1.363	1007989	162868	228	570	714	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.071	28.039	2	1.001	44929	7445	13	32	573		
341.8567	28.063	28.039	1	1.001	27888	4385	24	60	183	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.830	28.801	2	1.402	983567	149258	81	202	1843		
369.8919	28.830	28.801	2	1.402	618909	95647	53	132	1805	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.855	28.828	2	1.001	27146	4327	17	42	255		
357.8516	28.863	28.828	2	1.001	15797	2500	5	12	500	1.72(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.406	34.384	1	0.950	521957	103110	186	465	554		
385.8610	34.406	34.384	1	0.950	995265	195967	351	877	558	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.431	34.405	2	1.001	26220	5205	19	47	274		
375.8178	34.431	34.405	2	1.001	20154	4061	11	27	369	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.583	34.562	1	0.955	567371	107545	186	465	578		
385.8610	34.583	34.562	1	0.955	1059282	198264	351	877	565	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.608	34.582	2	1.001	29510	5690	19	47	299		
375.8178	34.600	34.582	1	1.000	24878	4701	11	27	427	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.468	35.444	1	0.980	527302	117266	186	465	630		
385.8610	35.468	35.444	1	0.980	996134	220962	351	877	630	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.485	35.461	1	1.000	27767	6035	19	47	318		
375.8178	35.476	35.461	1	1.000	22259	4941	11	27	449	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.404	36.388	1	1.005	582391	143633	186	465	772		
385.8610	36.404	36.388	1	1.005	1114166	273141	351	877	778	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.421	36.402	1	1.000	31508	7777	19	47	409		
375.8178	36.421	36.402	1	1.000	26094	6045	11	27	550	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.210	36.192	1		987922	232825	142	355	1640		
403.8529	36.210	36.192	1		764858	181339	110	275	1649	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.695	35.680	1	0.986	630506	153231	142	355	1079		
403.8529	35.695	35.680	1	0.986	497389	118761	110	275	1080	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.712	35.695	1	1.000	17291	4375	12	30	365		
391.8127	35.712	35.695	1	1.000	14389	3541	11	27	322	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.822	35.805	1	0.989	727495	166749	142	355	1174		
403.8529	35.822	35.805	1	0.989	563870	125792	110	275	1144	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.839	35.820	1	1.000	18295	4156	12	30	346		
391.8127	35.830	35.820	1	1.000	15787	3353	11	27	305	1.16(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.227	36.208	1	1.015	21159	5138	12	30	428		
391.8127	36.218	36.208	1	1.015	18436	4550	11	27	414	1.15(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.321	38.305	1	1.058	389255	110351	150	375	736		
419.8220	38.321	38.305	1	1.058	838024	240182	283	707	849	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.329	38.317	1	1.000	24164	7010	18	45	389		
409.7788	38.329	38.317	1	1.000	23123	6463	10	25	646	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.611	39.600	1	1.094	351407	112029	150	375	747		
419.8220	39.611	39.600	1	1.094	769256	246420	283	707	871	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.619	39.608	1	1.000	20064	6267	18	45	348		
409.7788	39.628	39.608	1	1.000	19318	5891	10	25	589	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.307	39.293	1	1.086	574080	172930	147	367	1176		
437.8140	39.307	39.293	1	1.086	539065	163690	141	352	1161	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.316	39.301	1	1.000	15770	4799	17	42	282		
425.7737	39.316	39.301	1	1.000	15891	4656	10	25	466	0.99(0.88-1.20)	
13C-OCDD											
469.7780	41.797	41.785	1	1.154	864827	245324	148	370	1658		
471.7750	41.797	41.785	1	1.154	958665	273299	152	380	1798	0.90(0.76-1.02)	
OCDF											
441.7428	41.890	41.875	1	1.002	29681	8172	14	35	584		
443.7399	41.881	41.875	0	1.002	31370	8963	30	75	299	0.95(0.76-1.02)	
OCDD											
457.7377	41.805	41.794	1	1.000	24122	6775	8	20	847		
459.7348	41.805	41.794	1	1.000	27520	7850	12	30	654	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

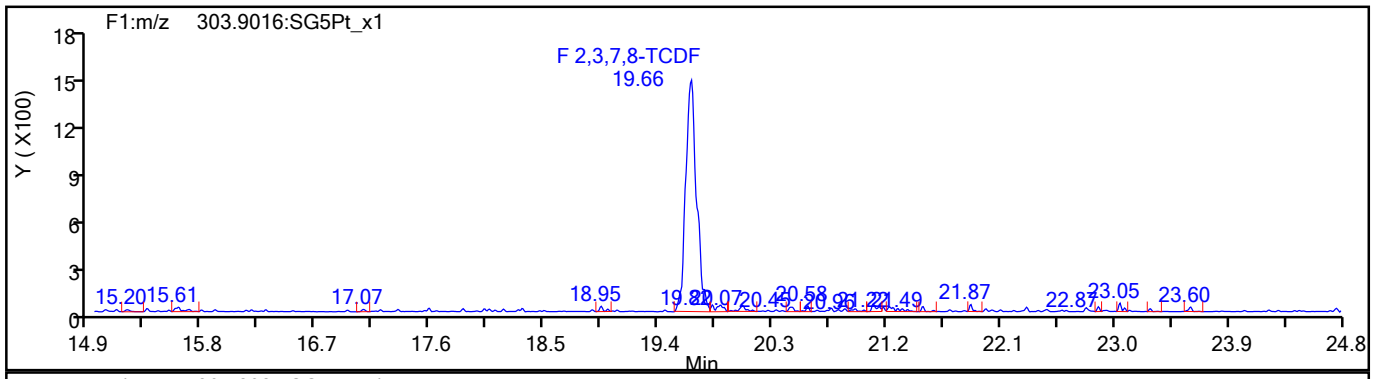

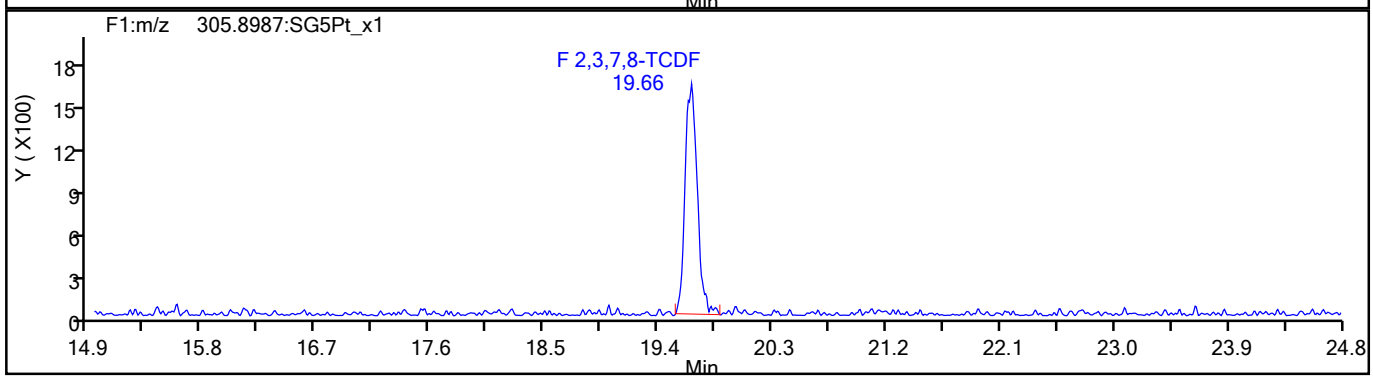

TCDF Standards

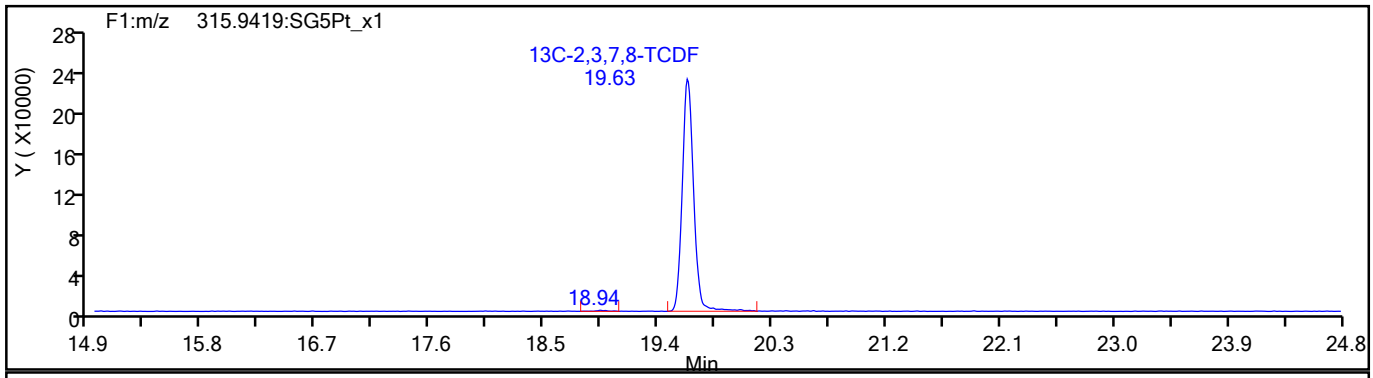

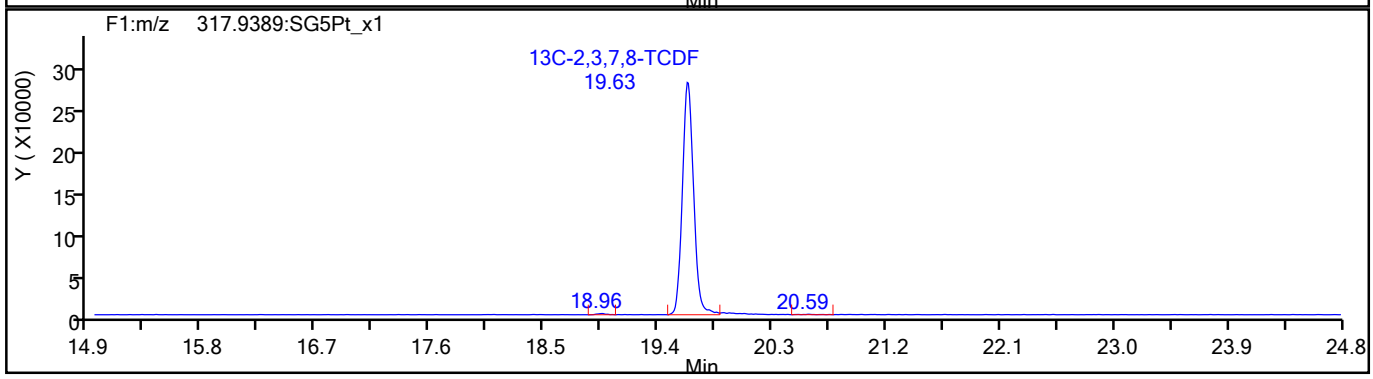

782843

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

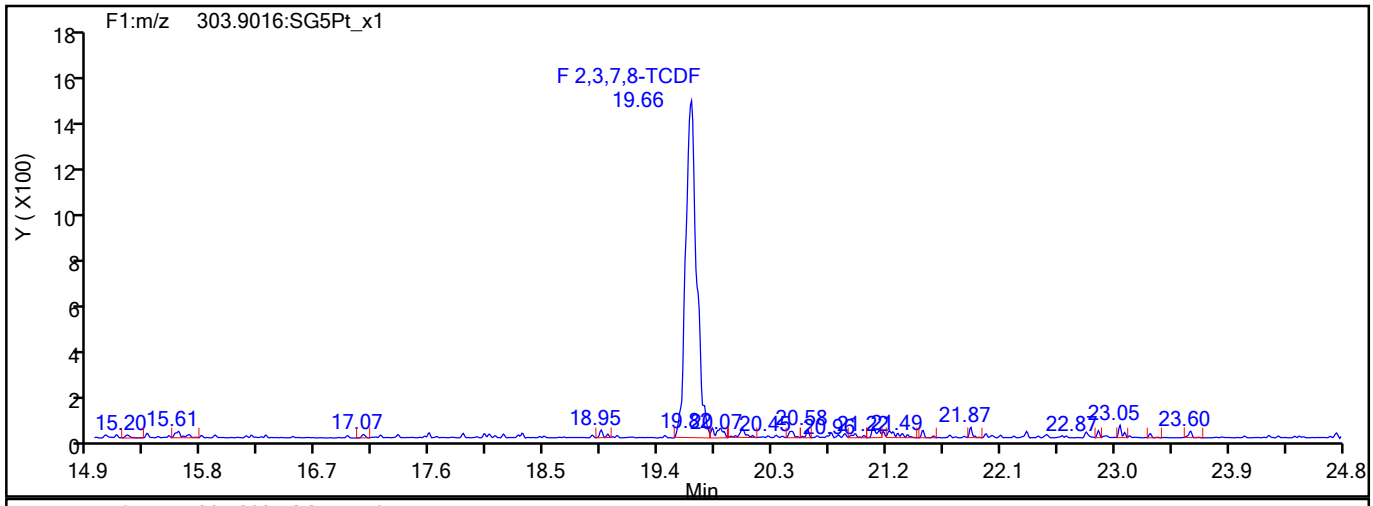

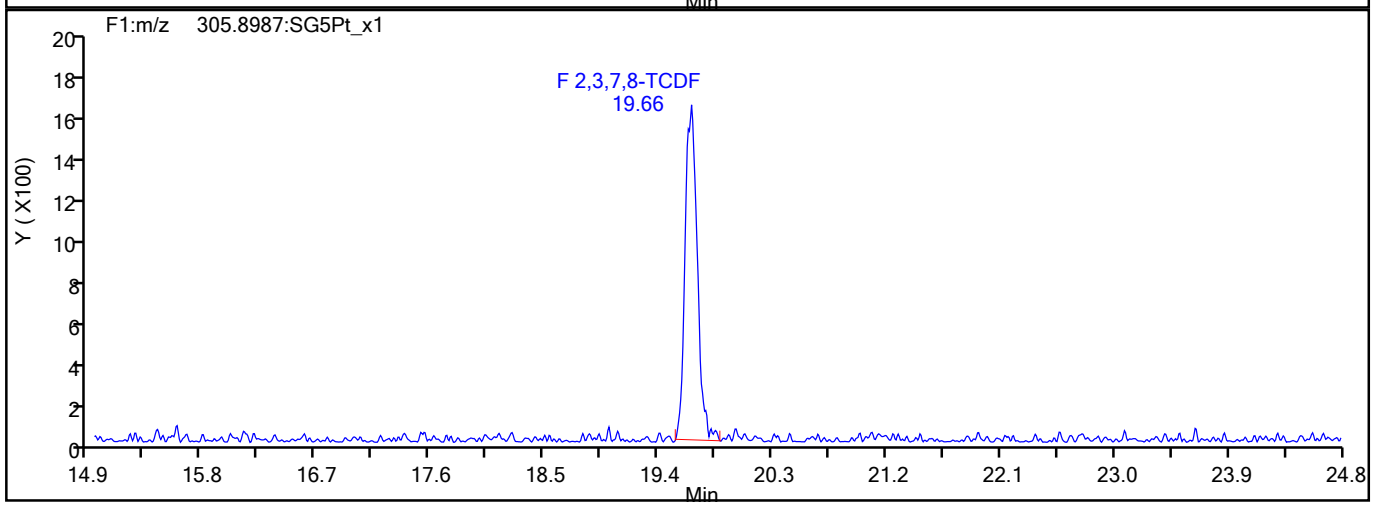

TCDF Interference Mass

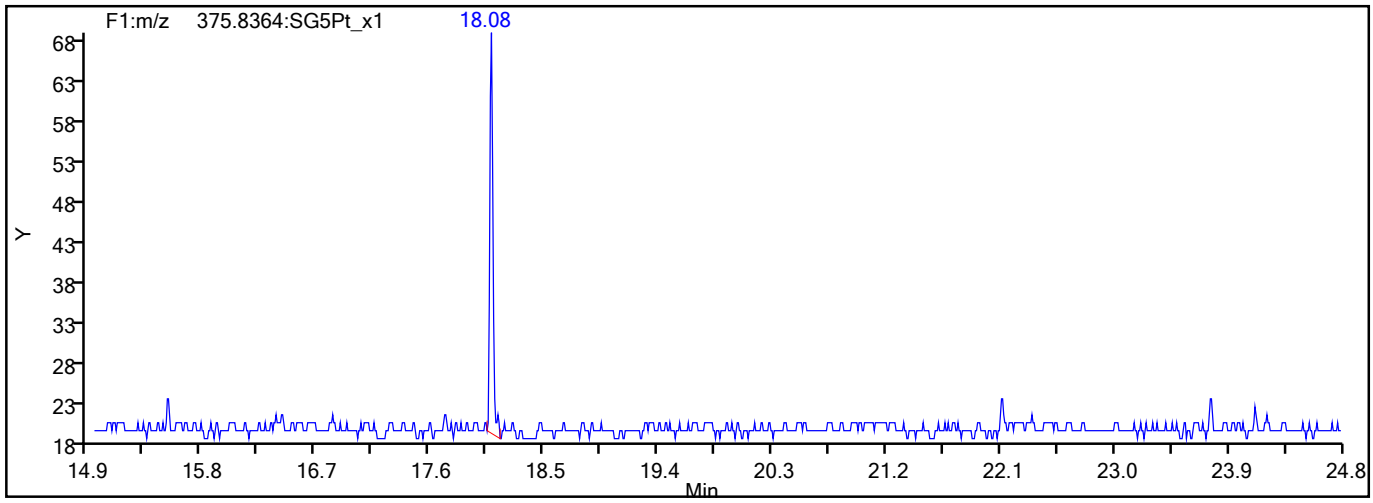

782844

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

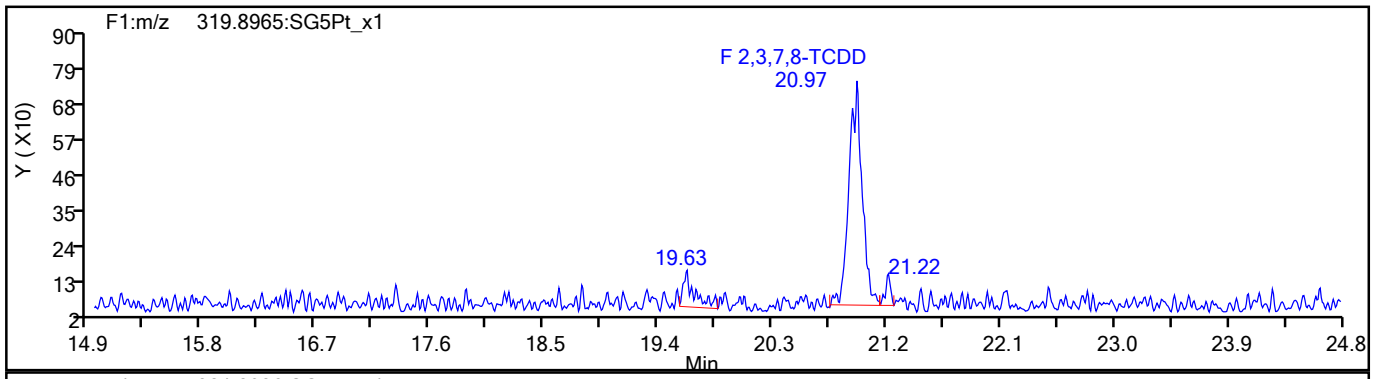

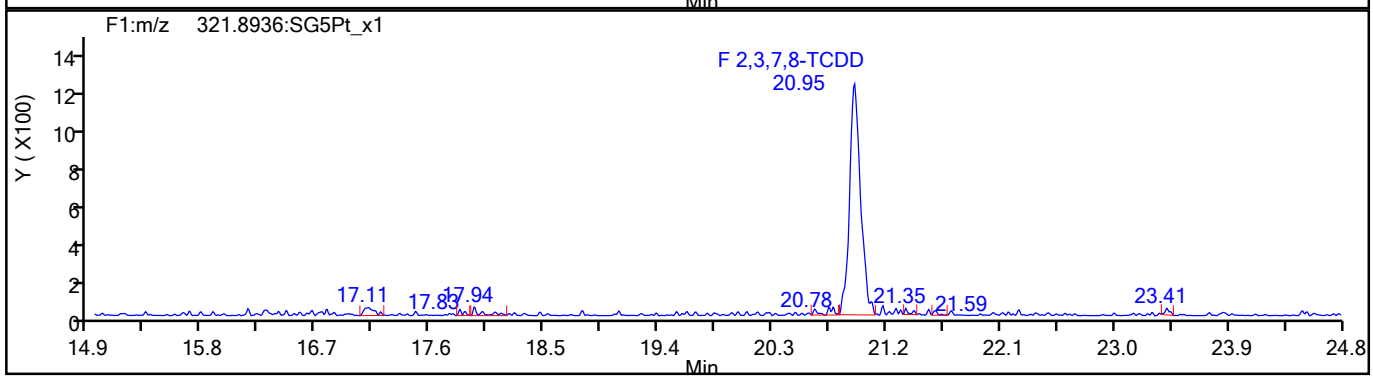

TCDD Standards

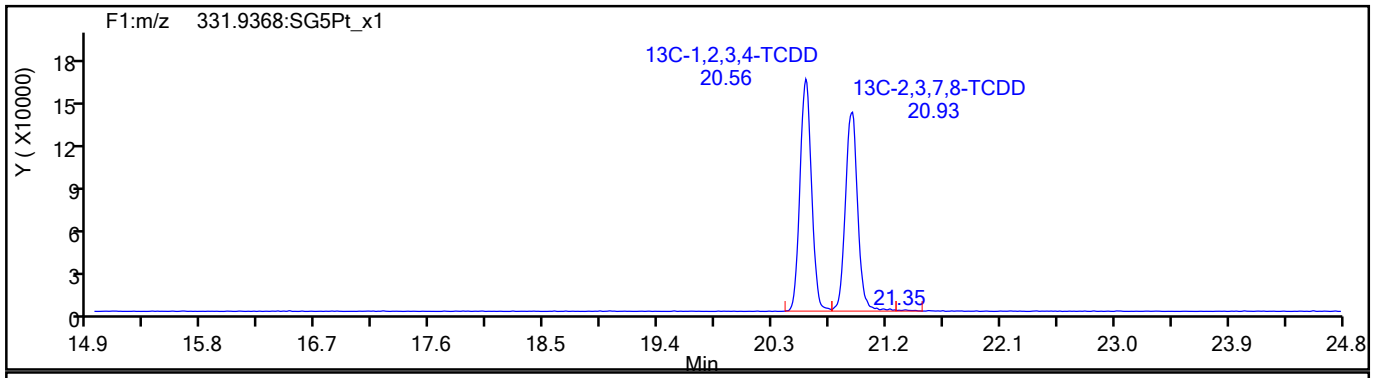

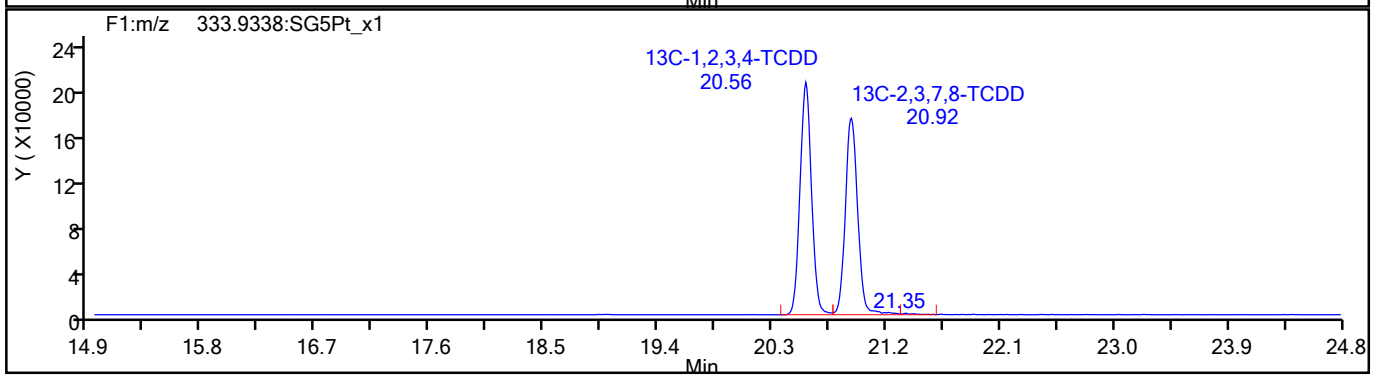

782845

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

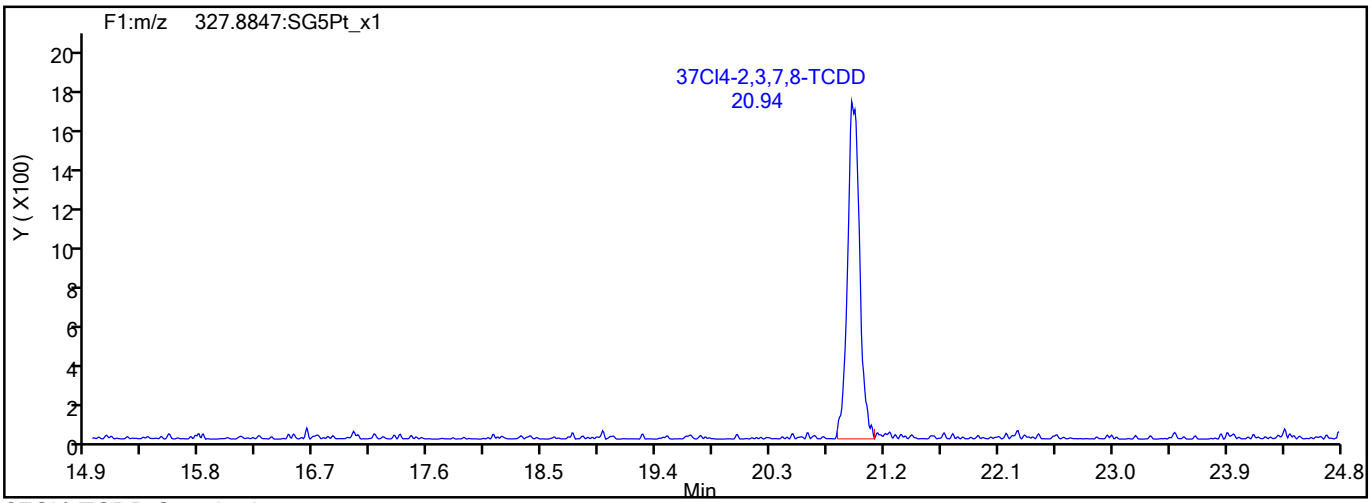

37Cl4-TCDD Standards

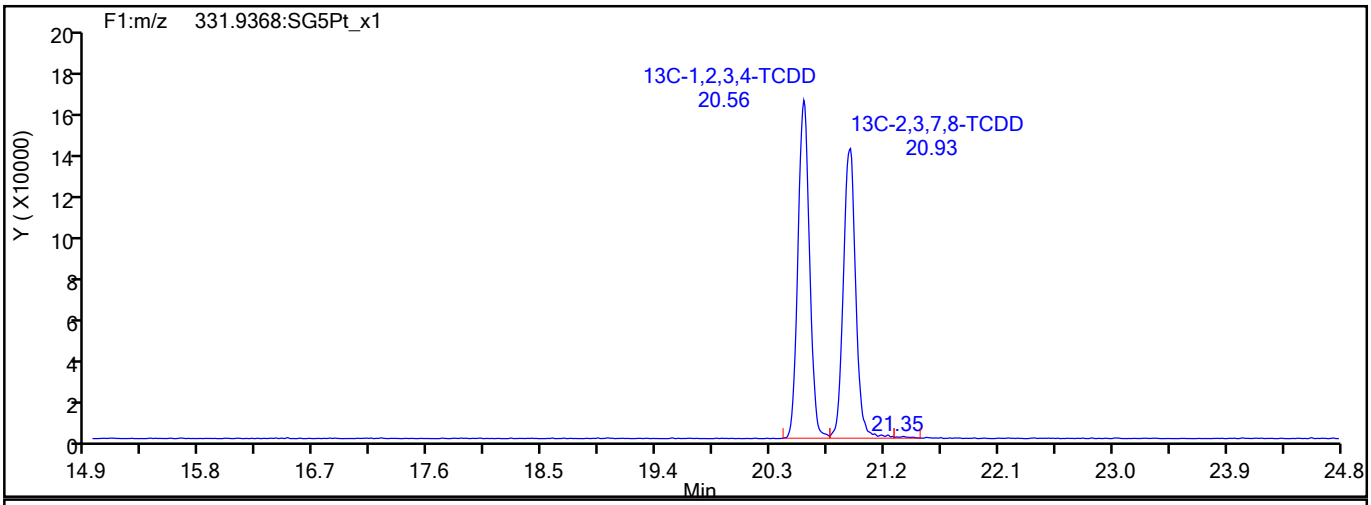

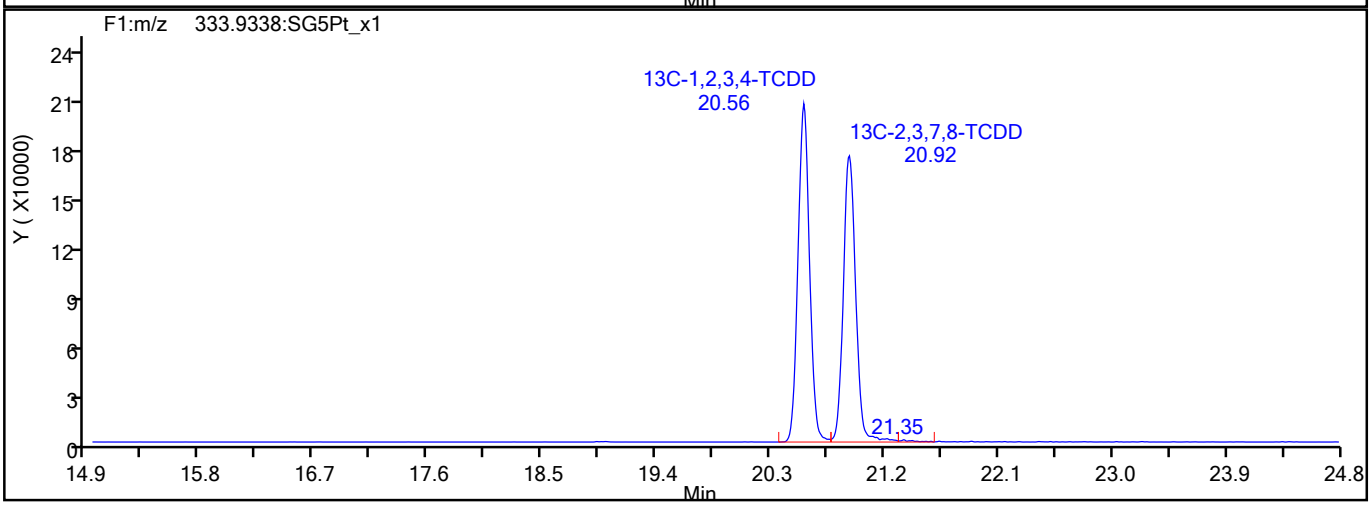

782846

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

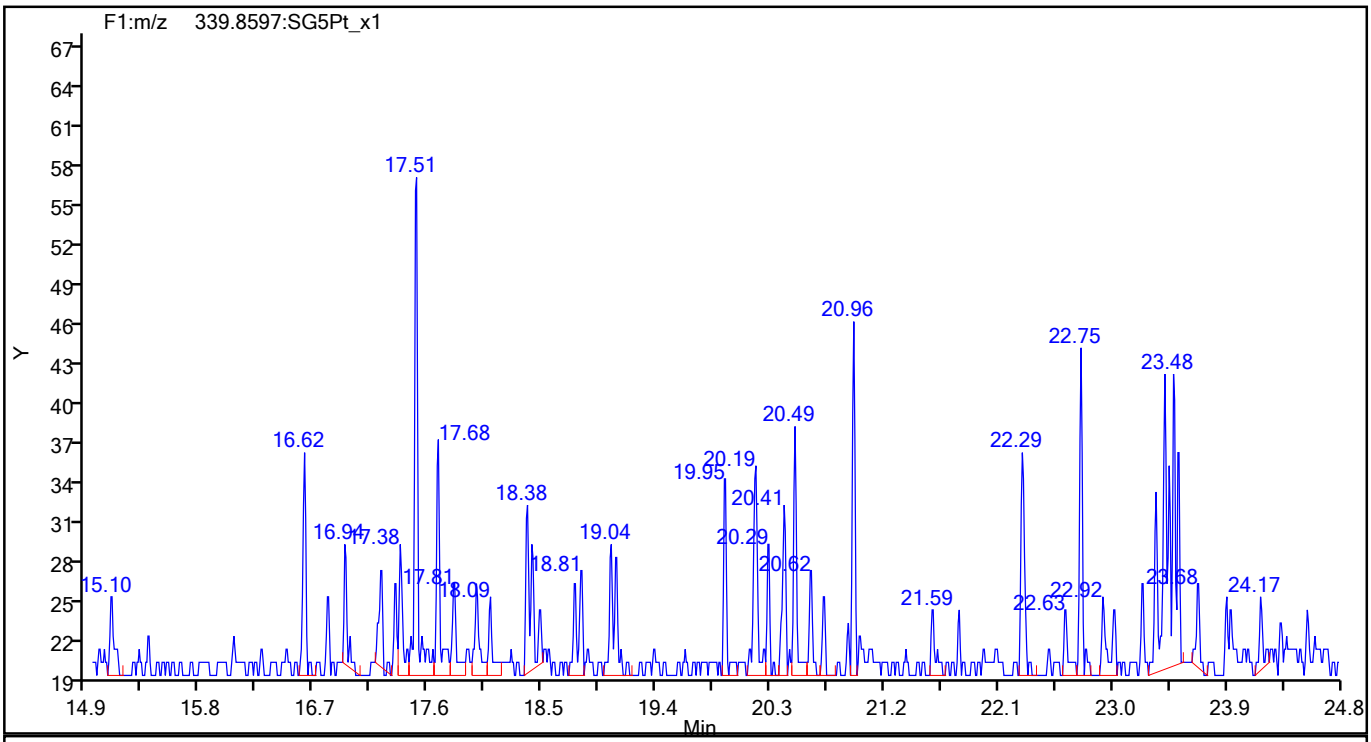

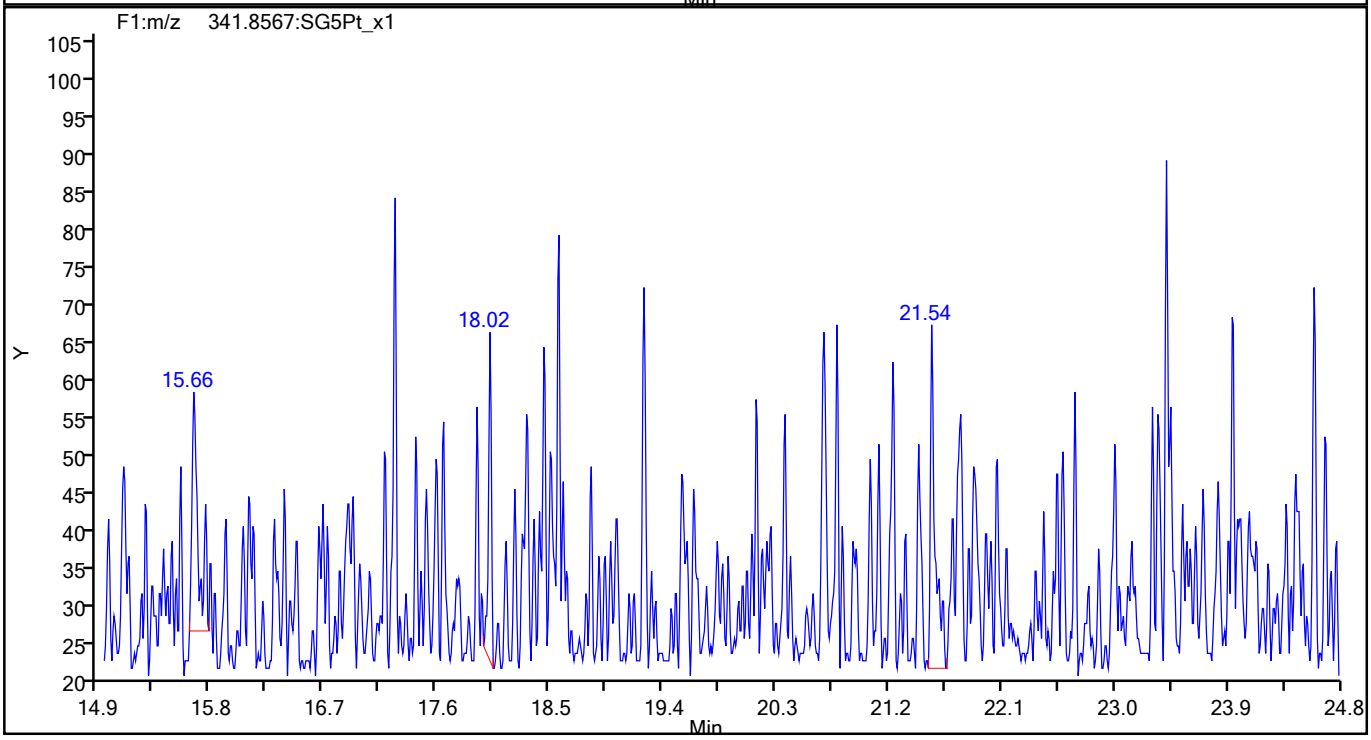

782847

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

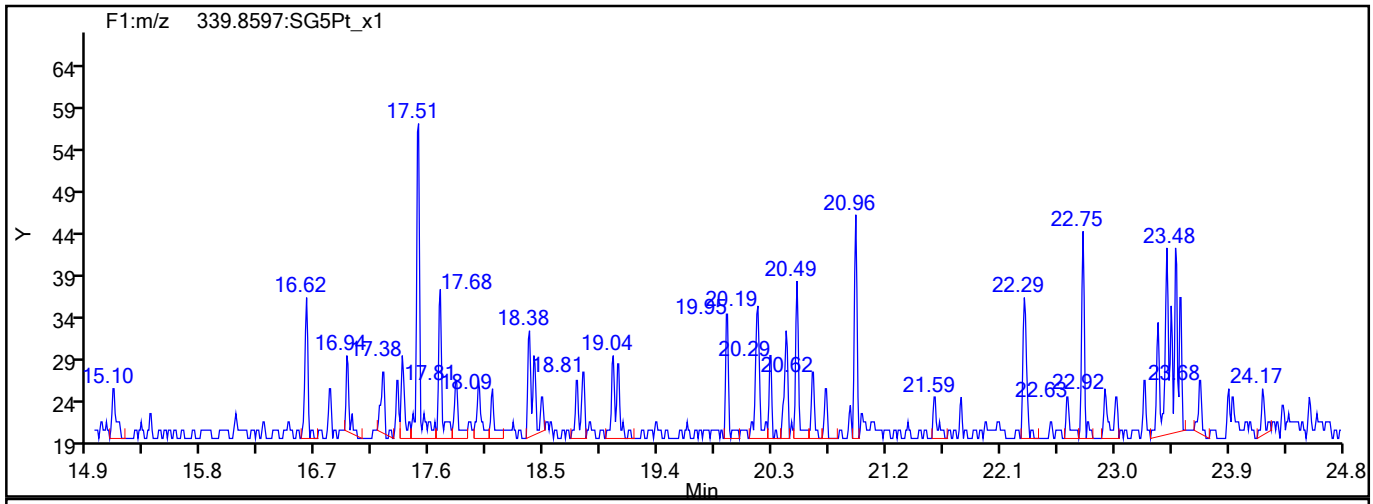

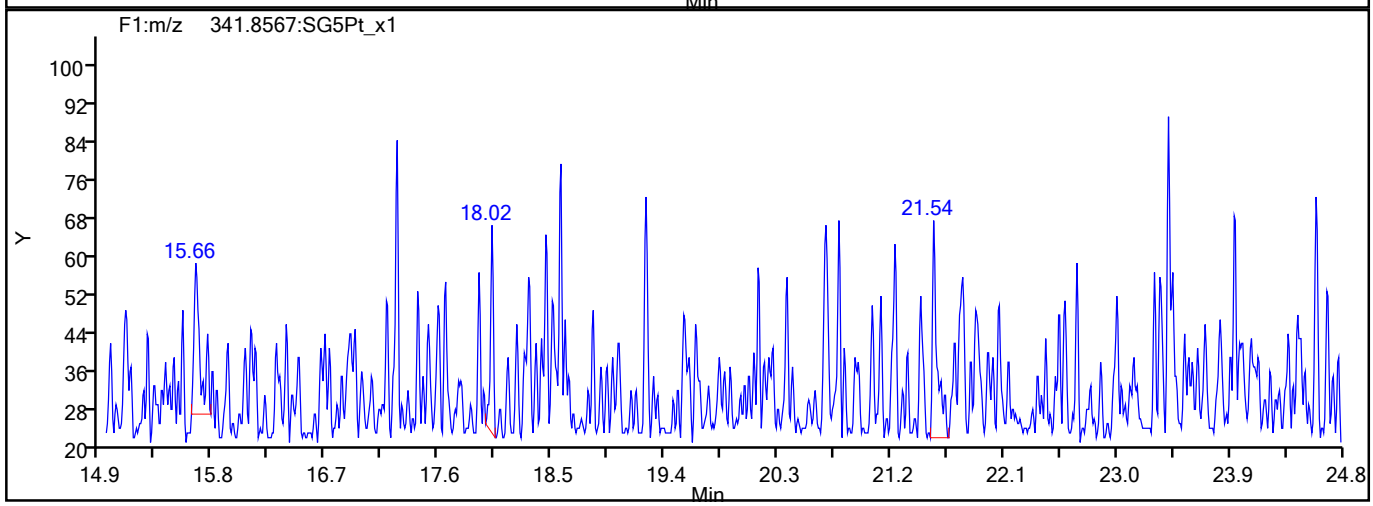

F1 PeCDFs Interference Mass

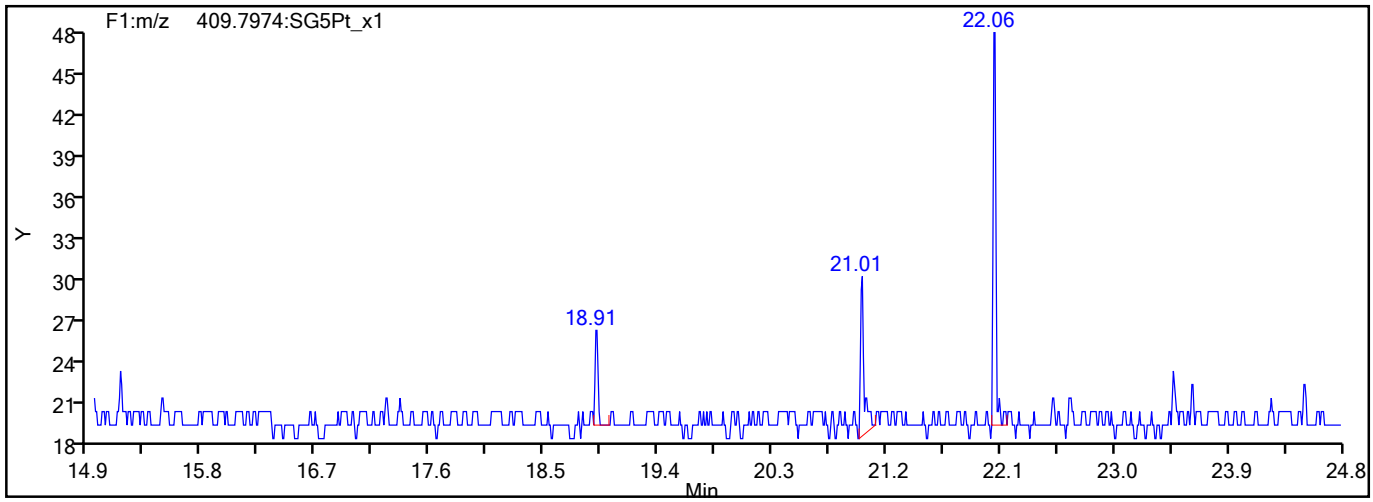

782848

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

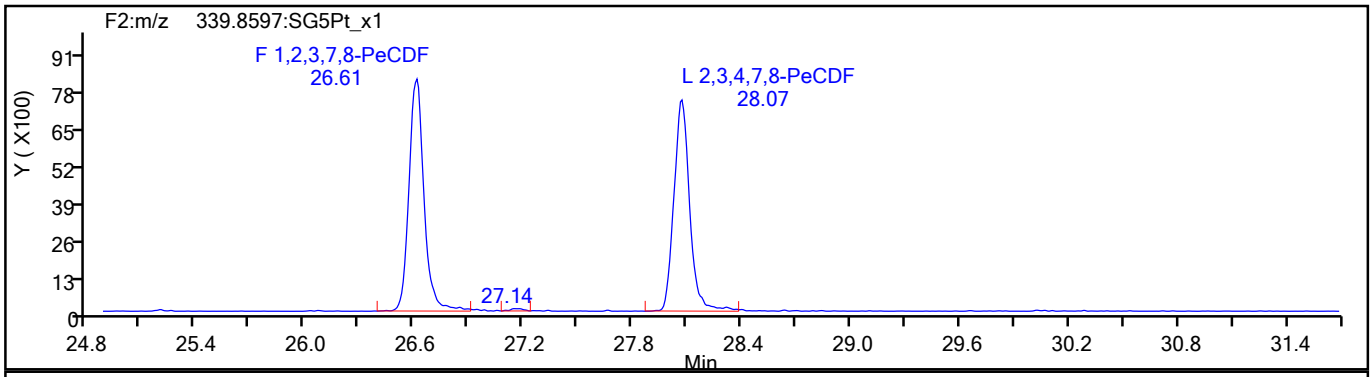

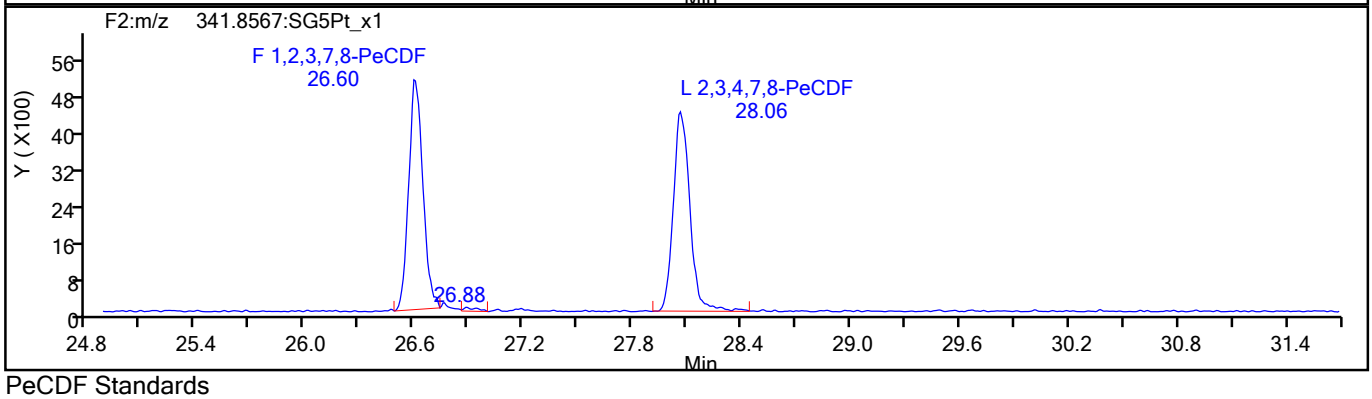

PeCDF Standards

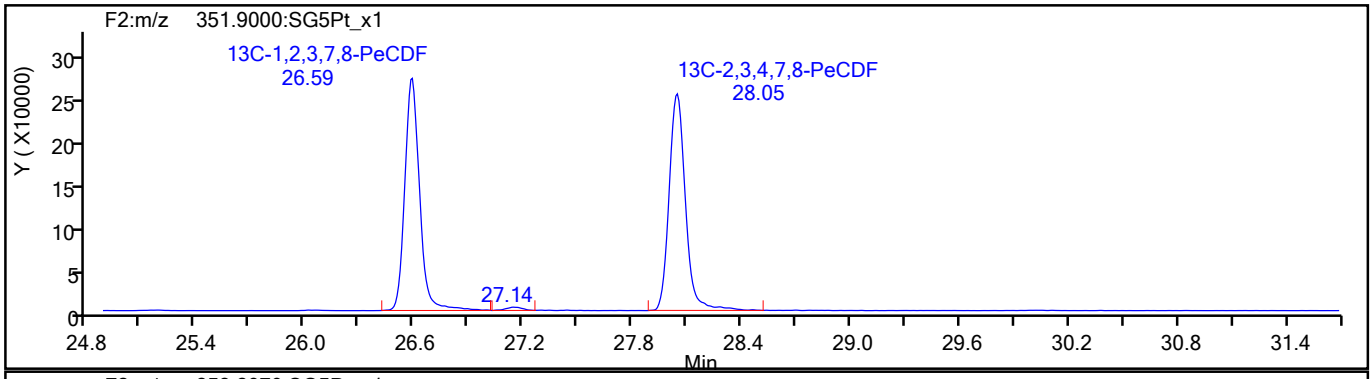

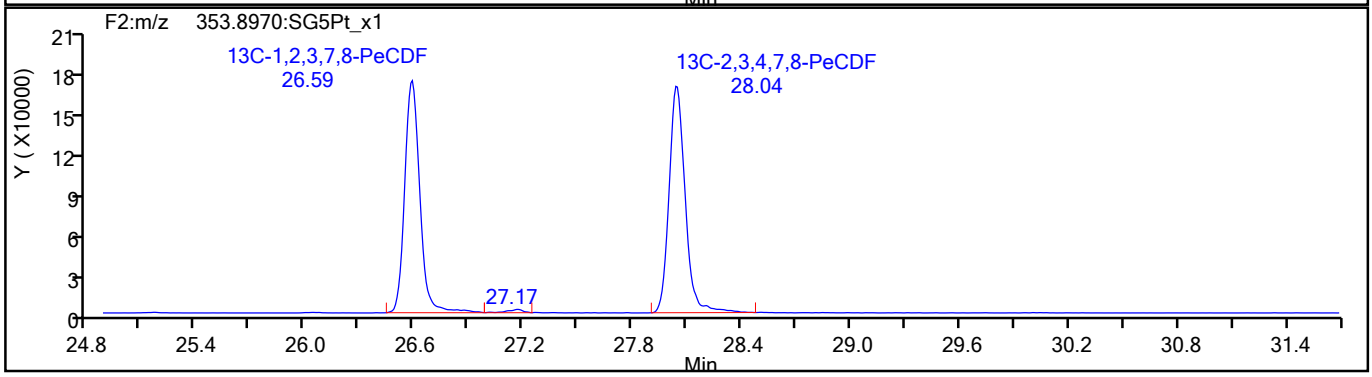

782849

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

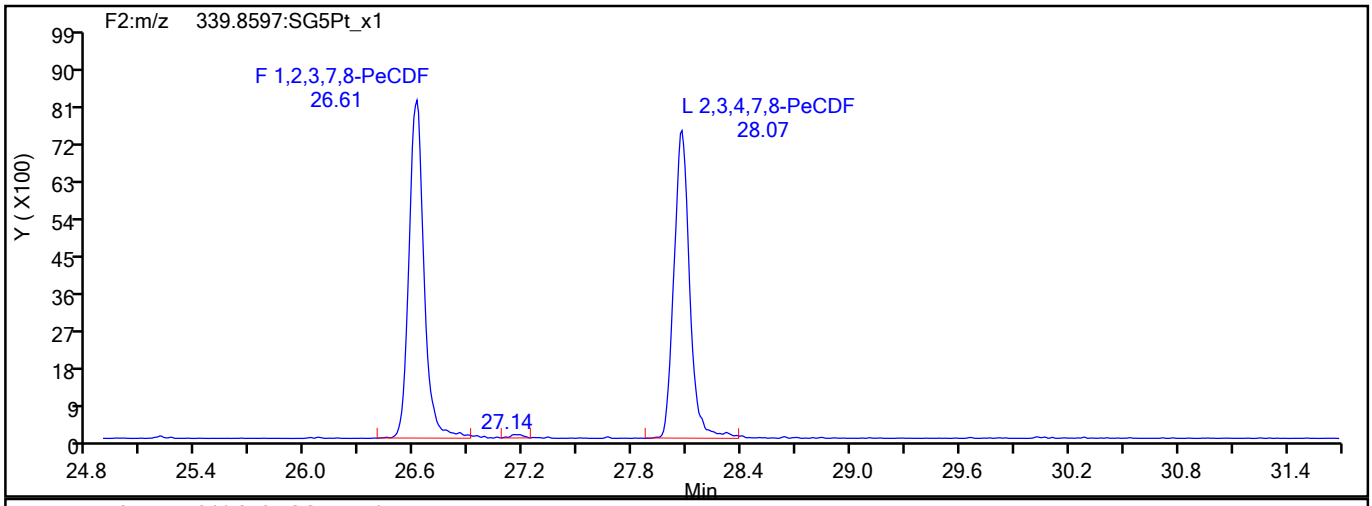

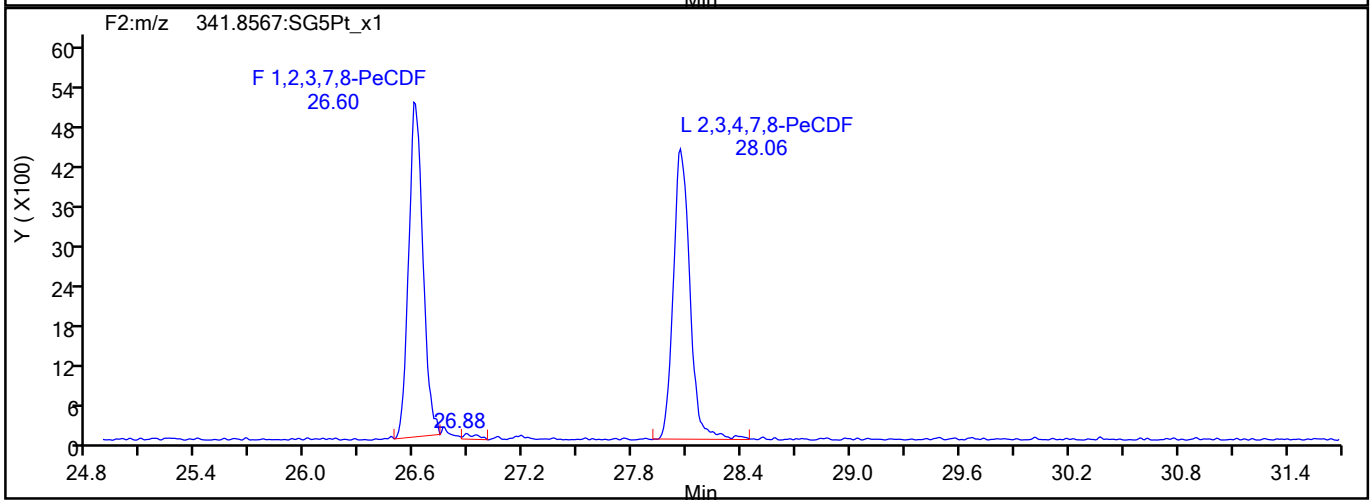

PeCDF Interference Mass

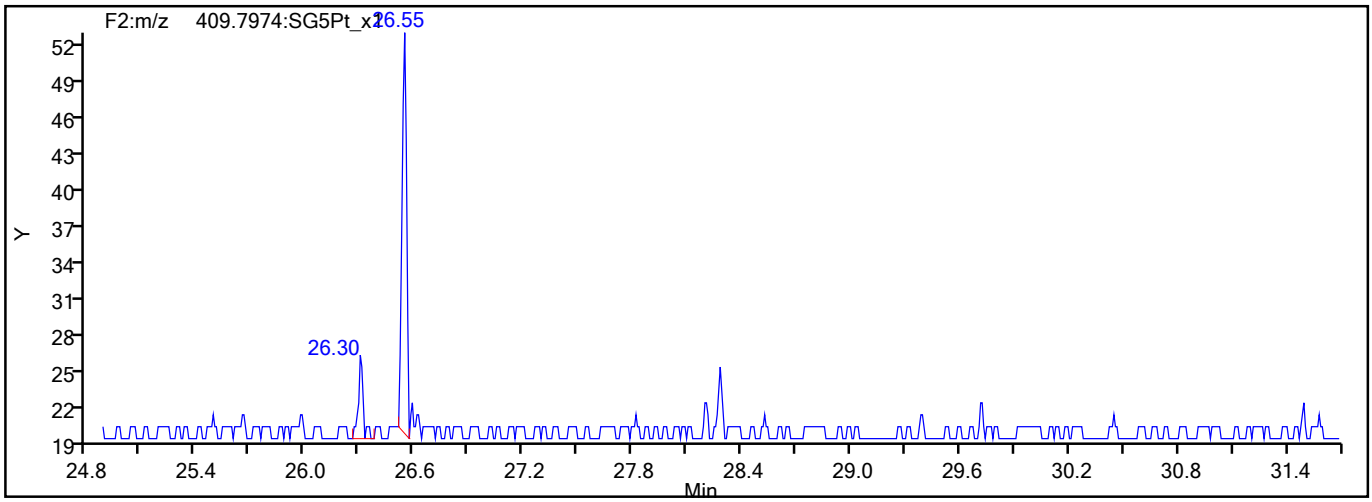

782850

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

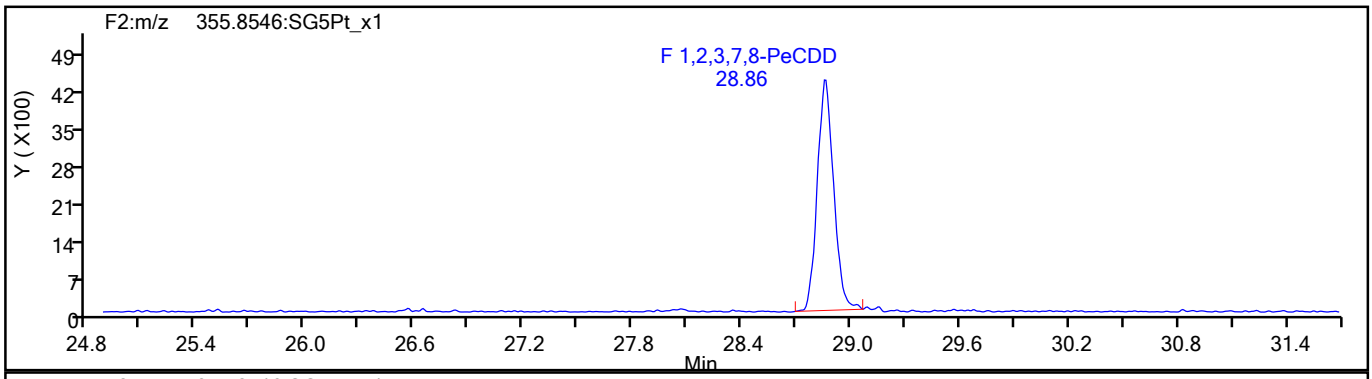

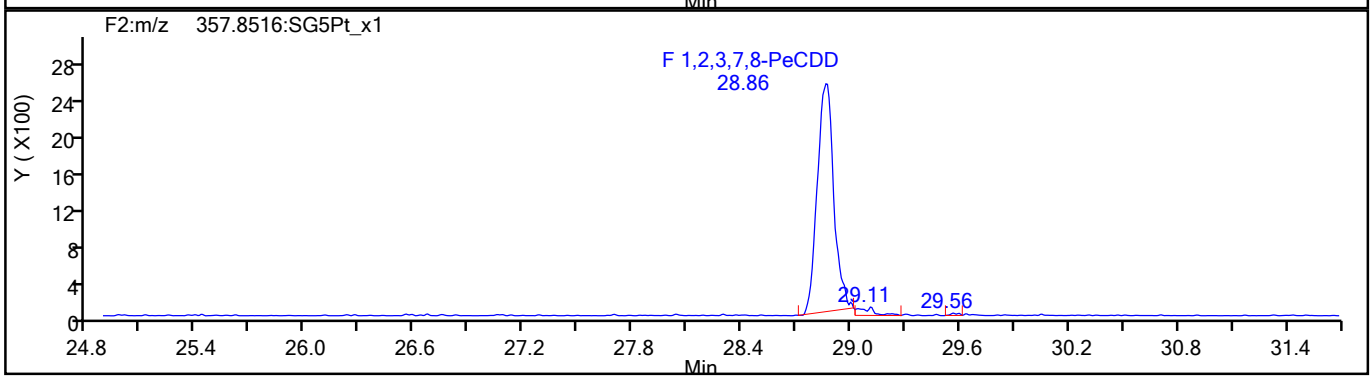

PeCDD Standards

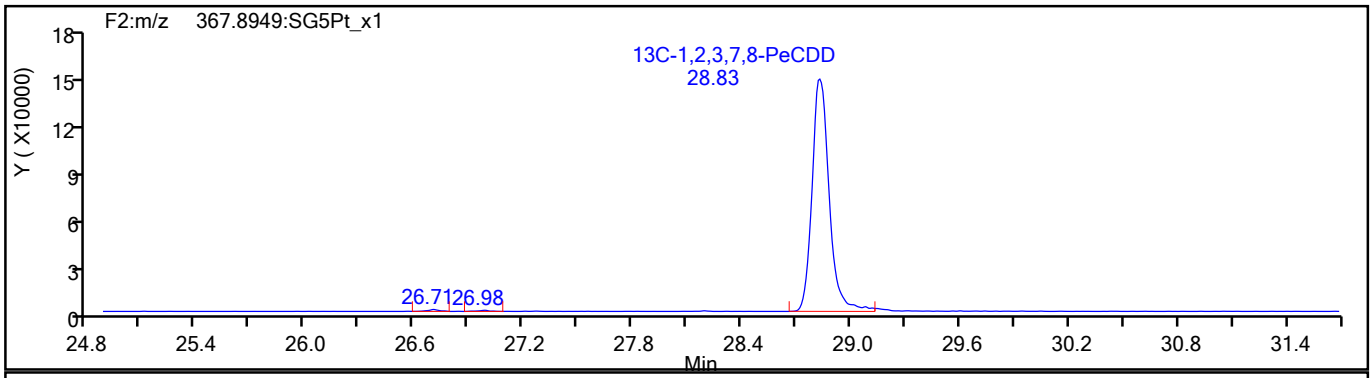

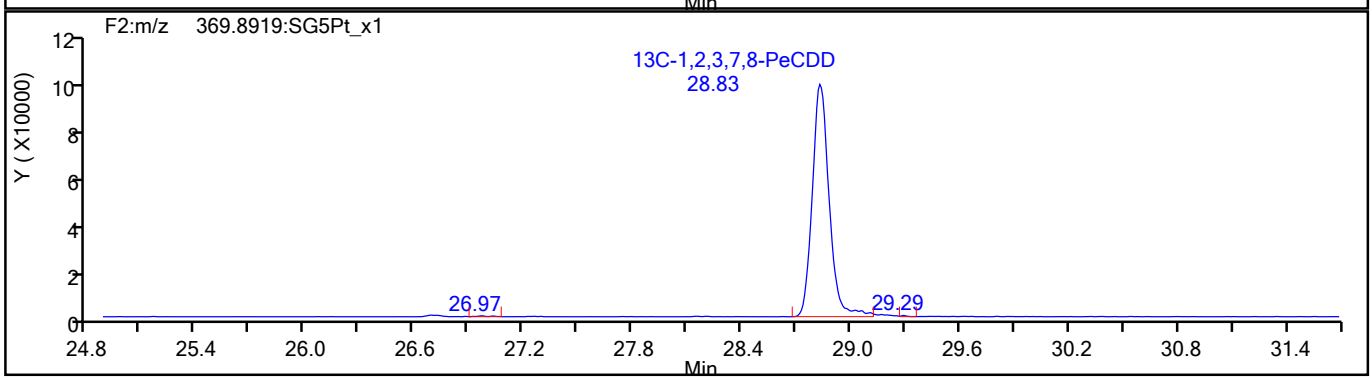

782851

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

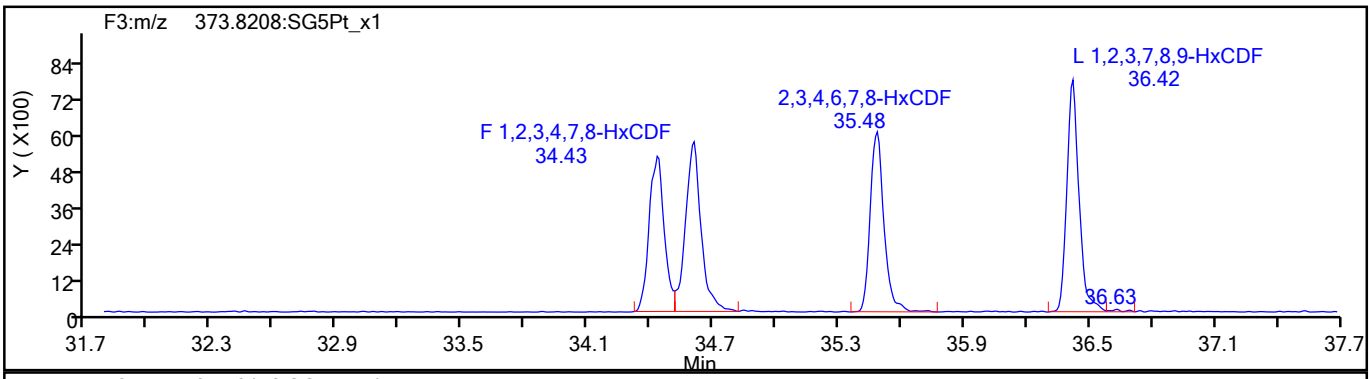

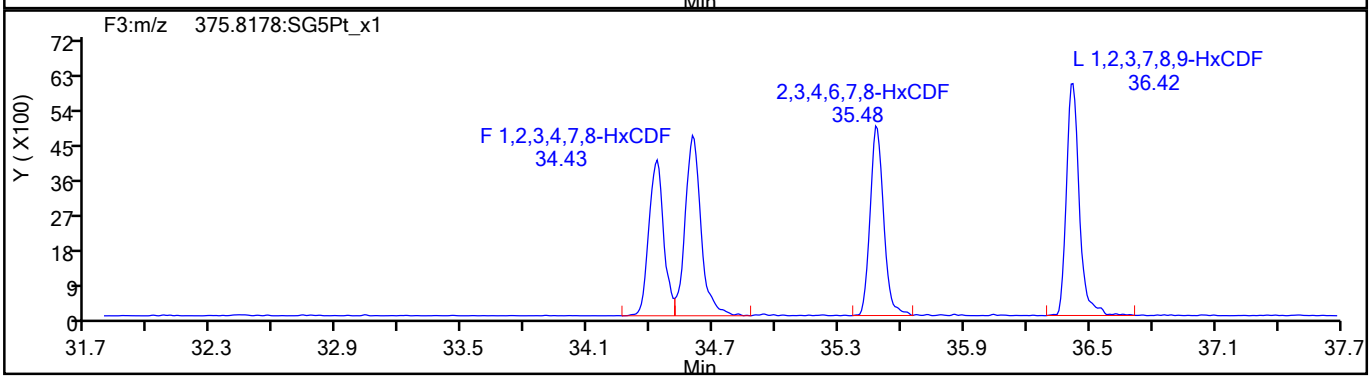

HxCDF Standards

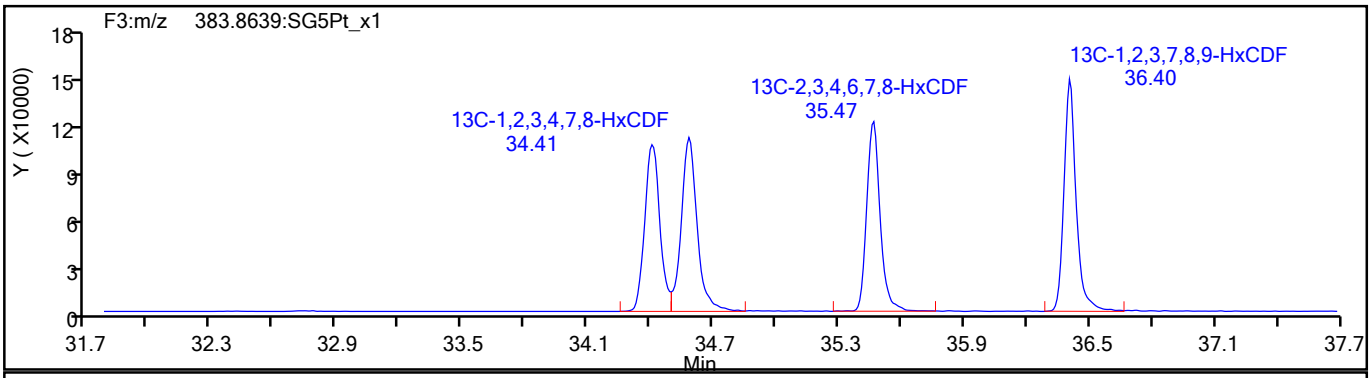

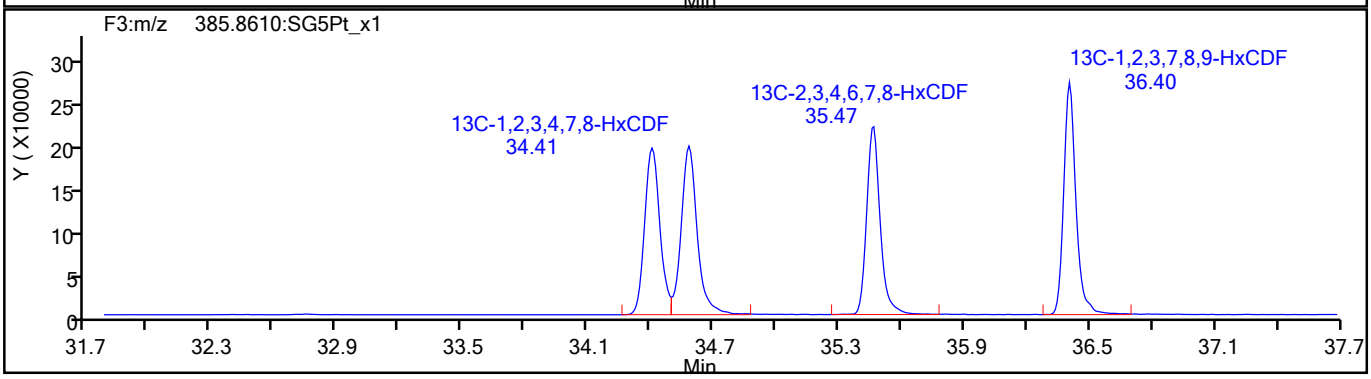

782852

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

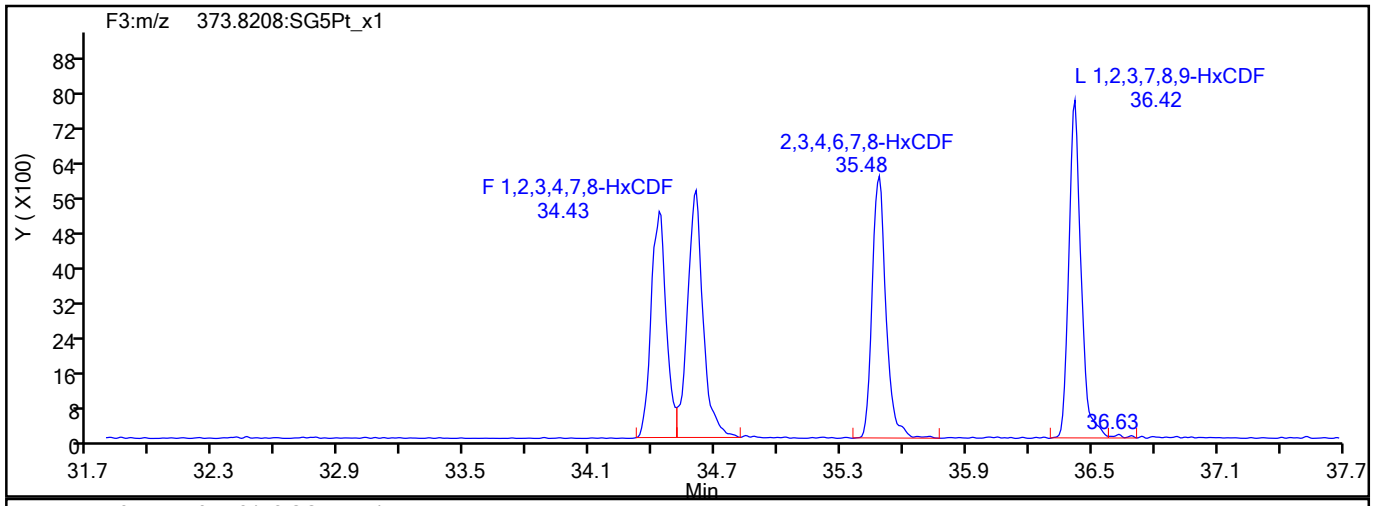

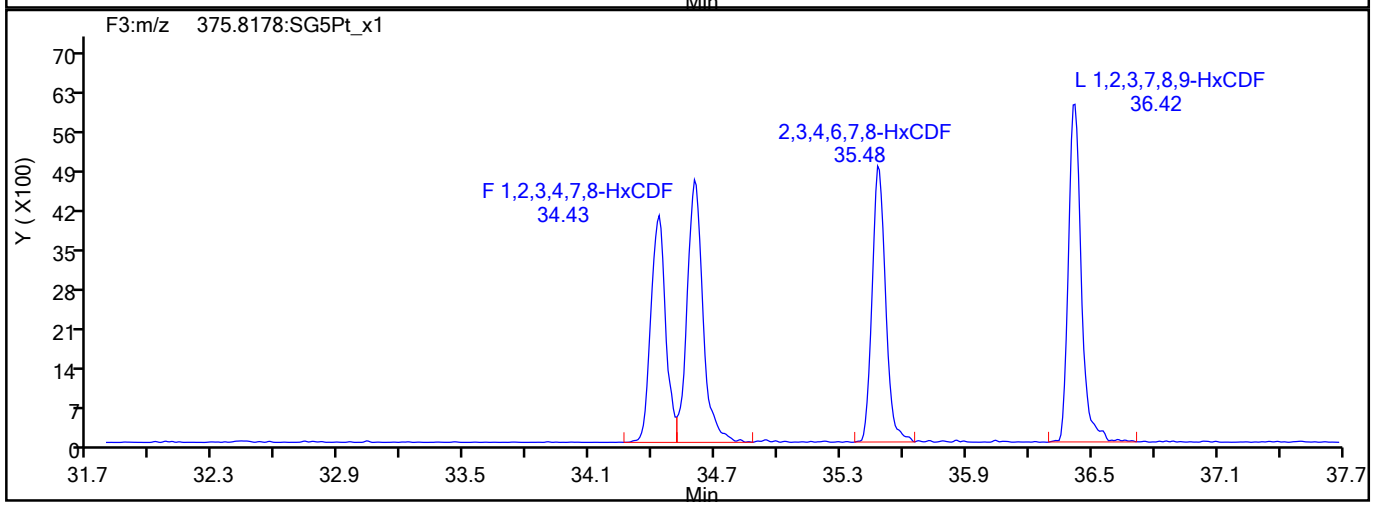

HxCDF Interference Mass

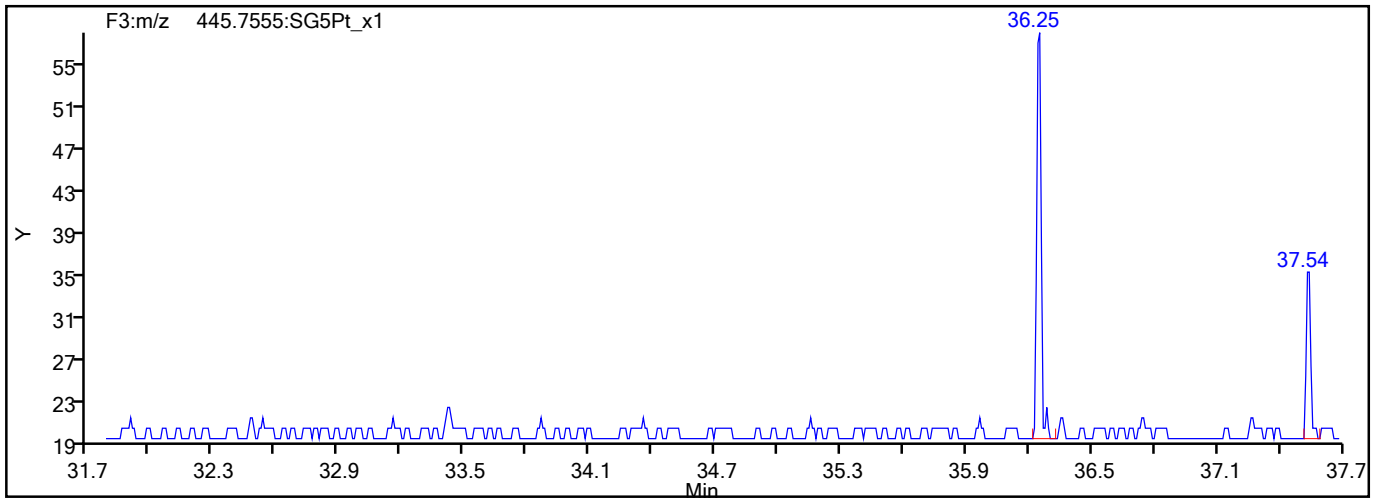

782853

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

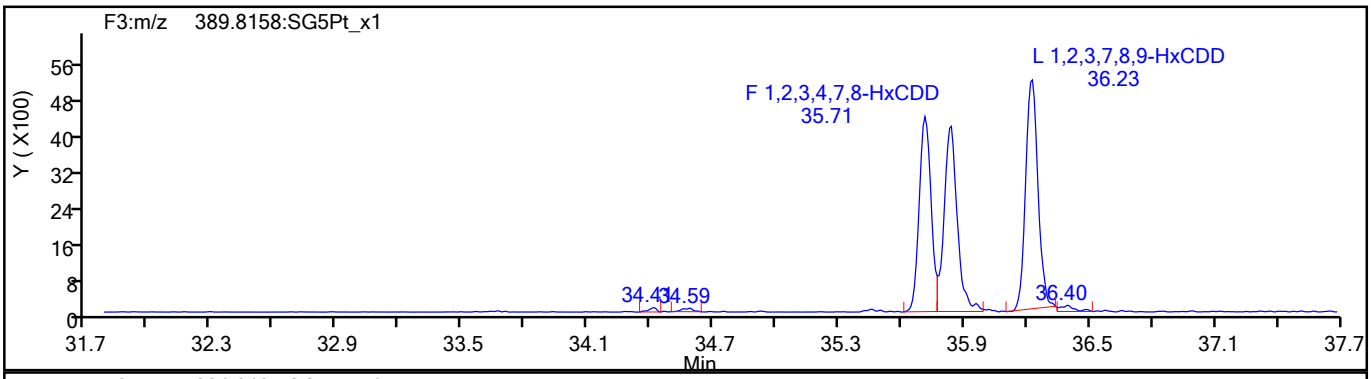

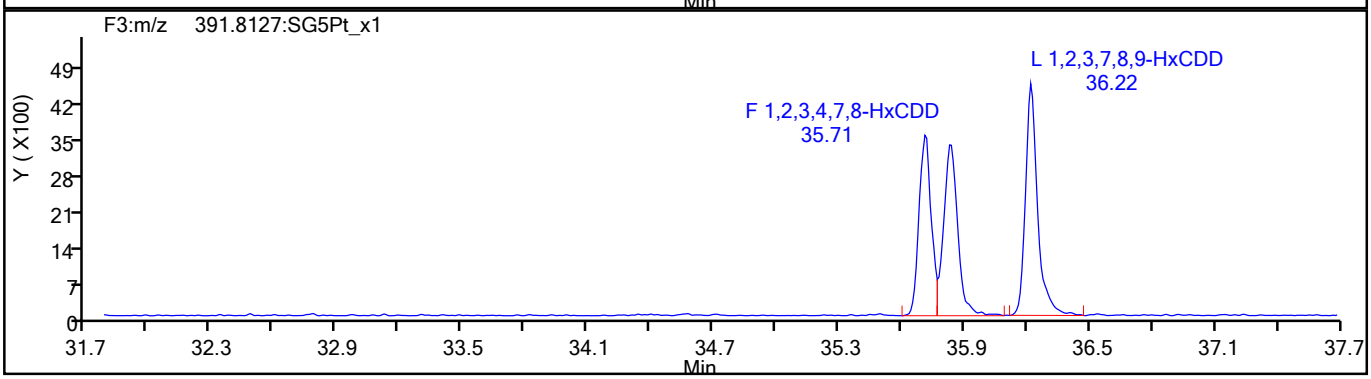

HxCDD Standards

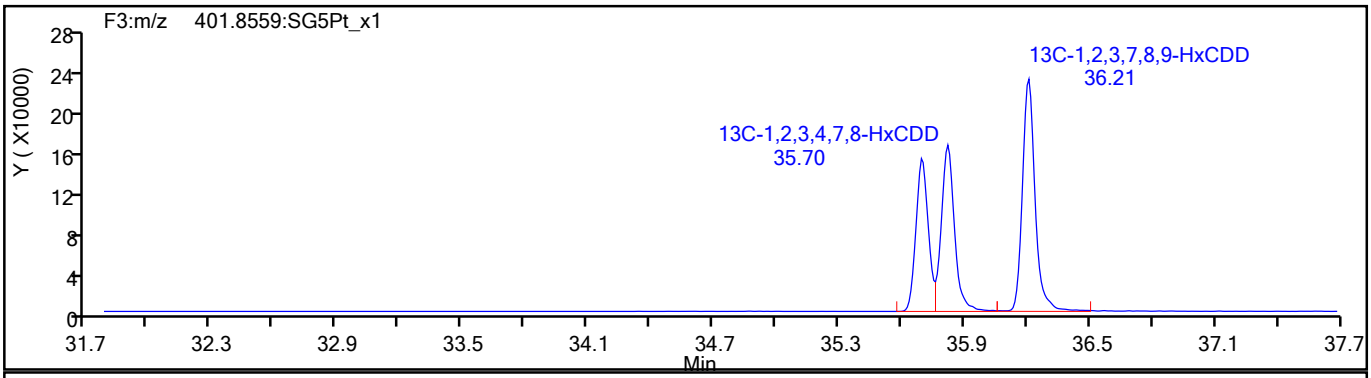

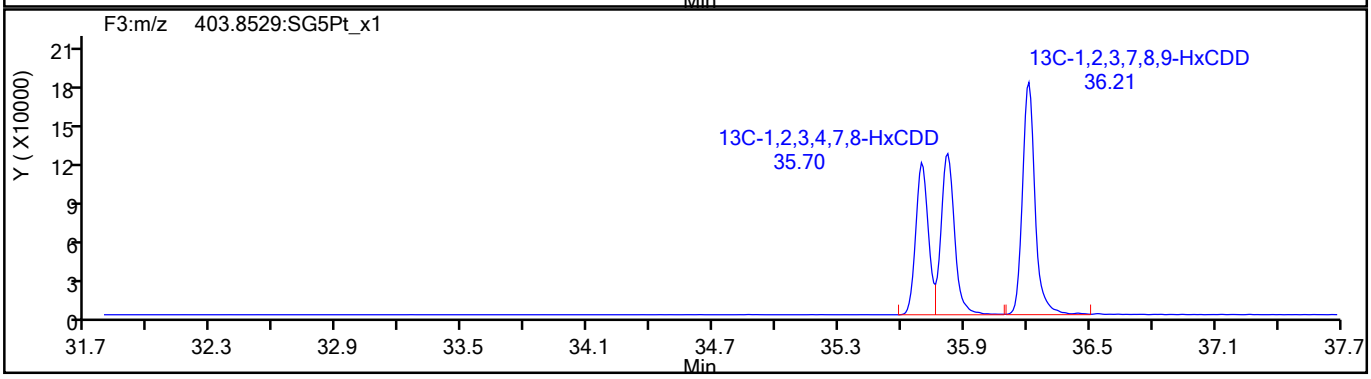

782854

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

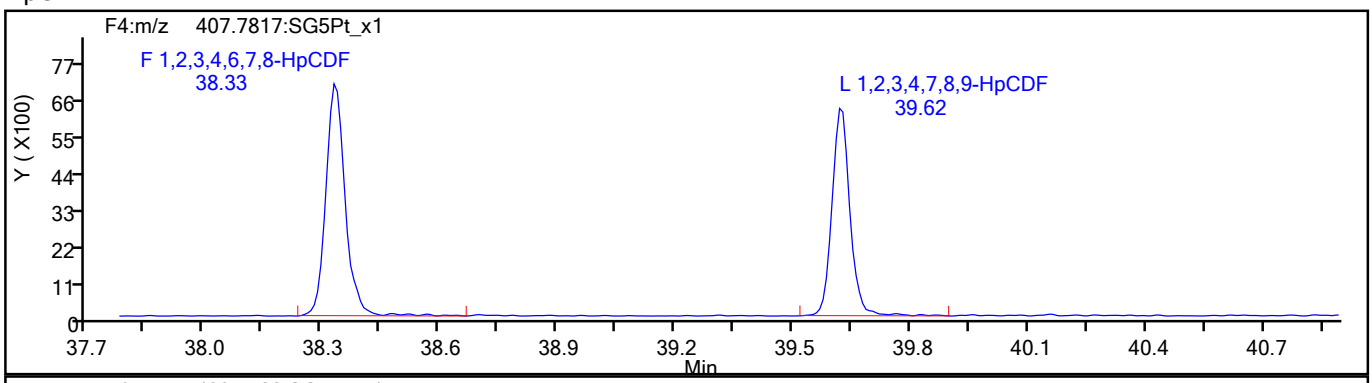

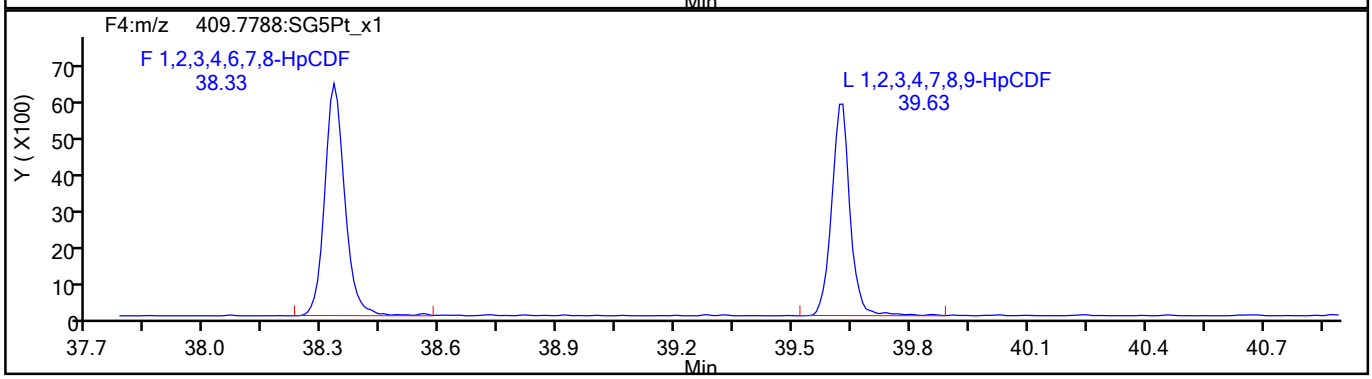

HpCDF Standards

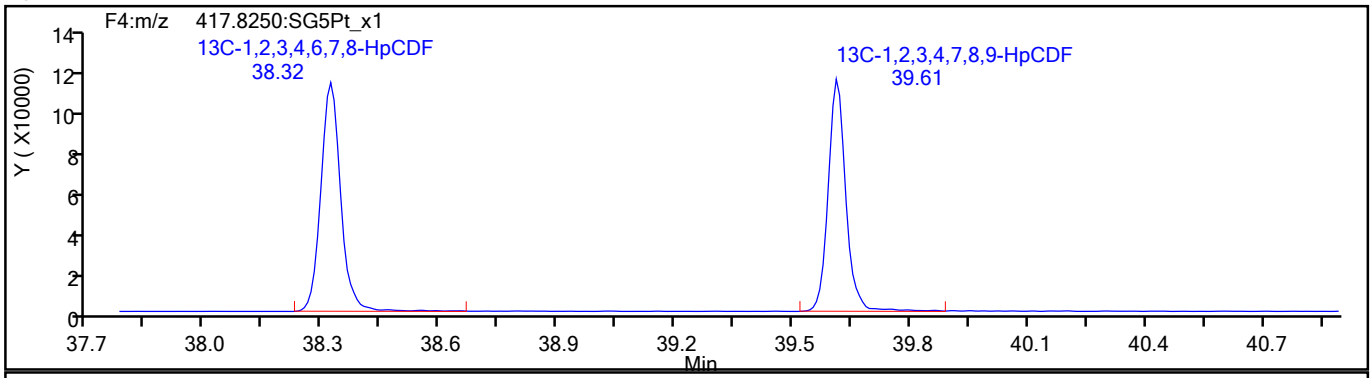

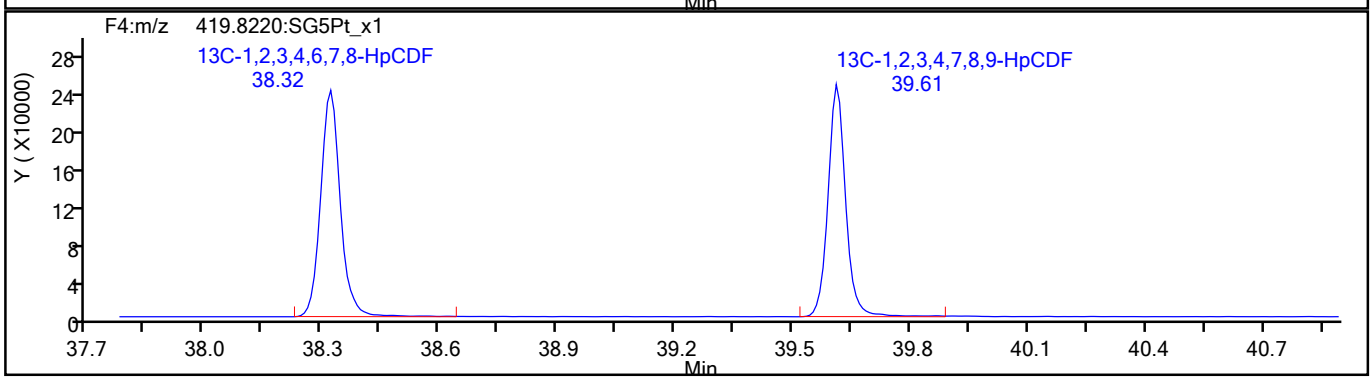

782855

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

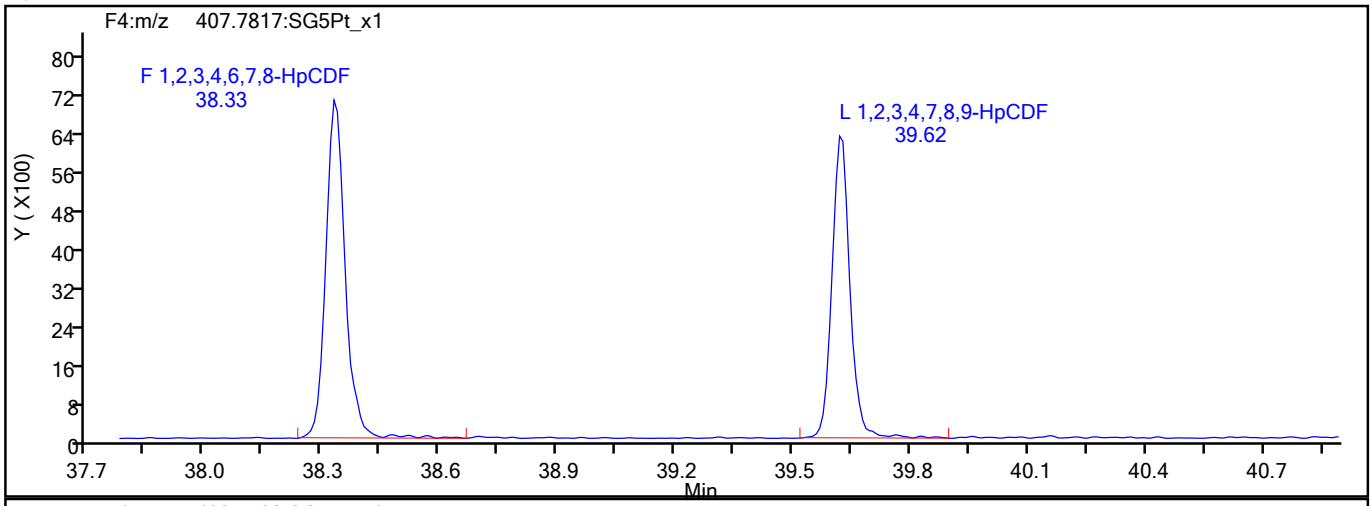

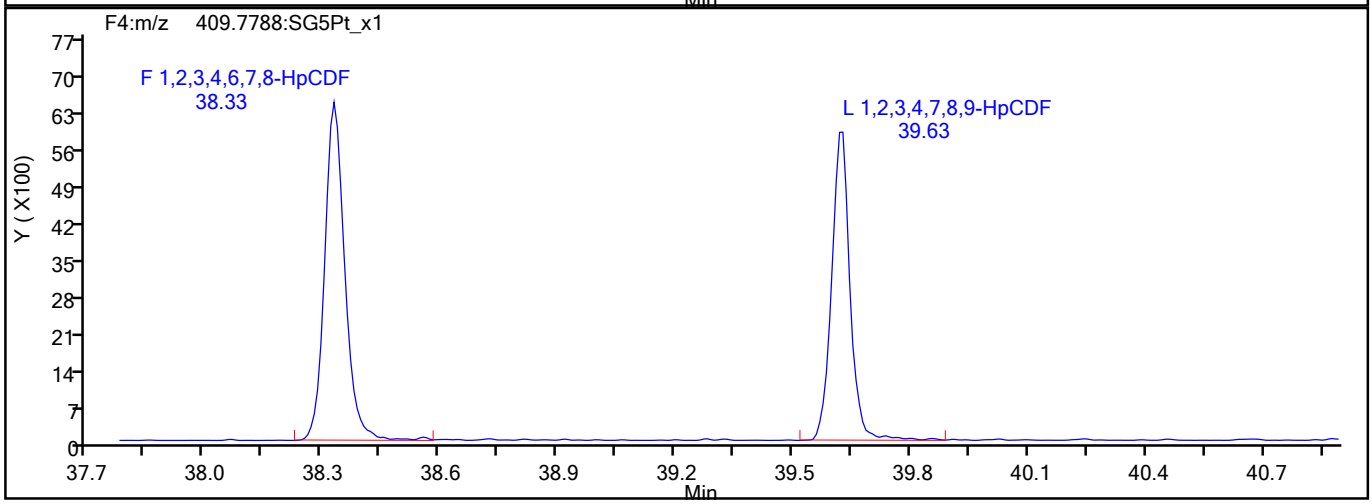

HpCDF Interference Mass

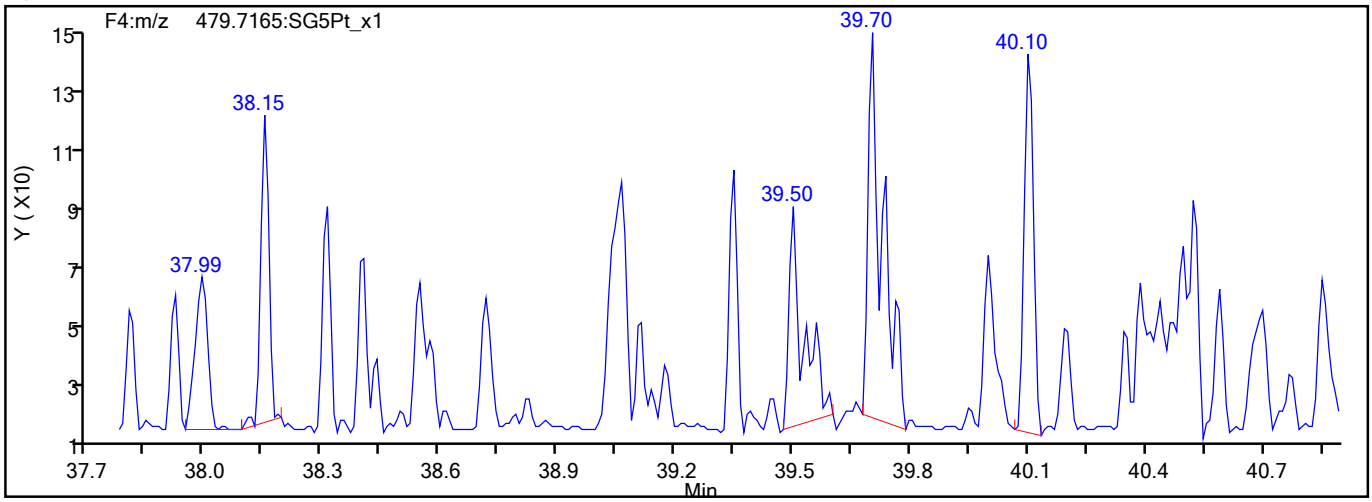

782856

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

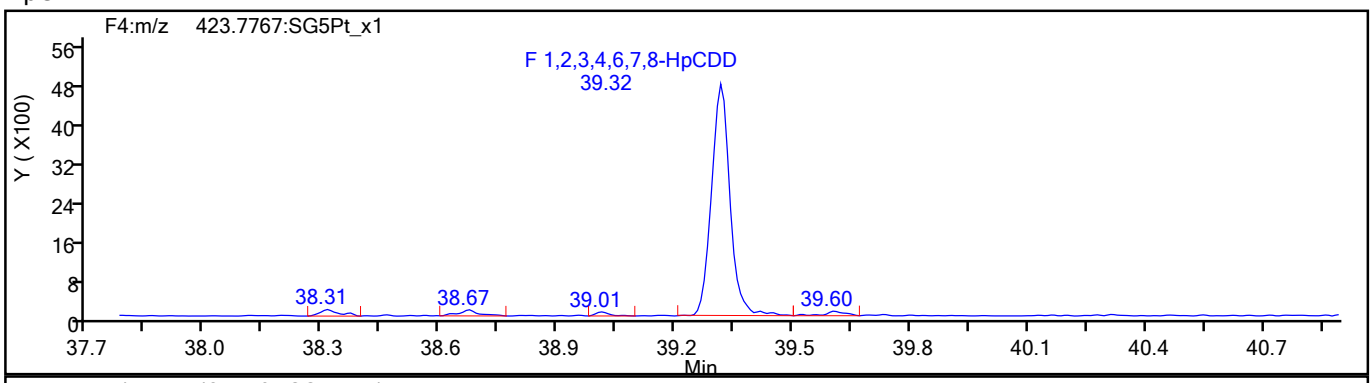

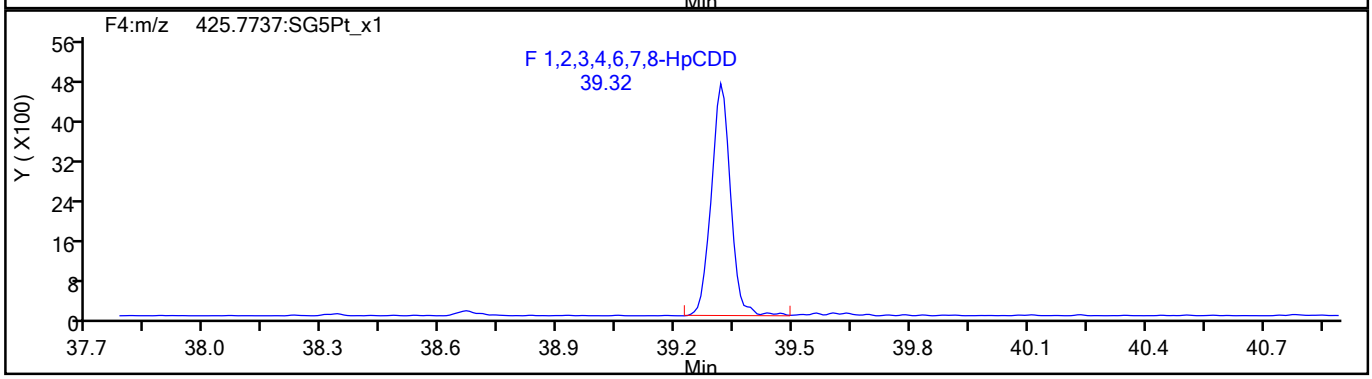

HpCDD Standards

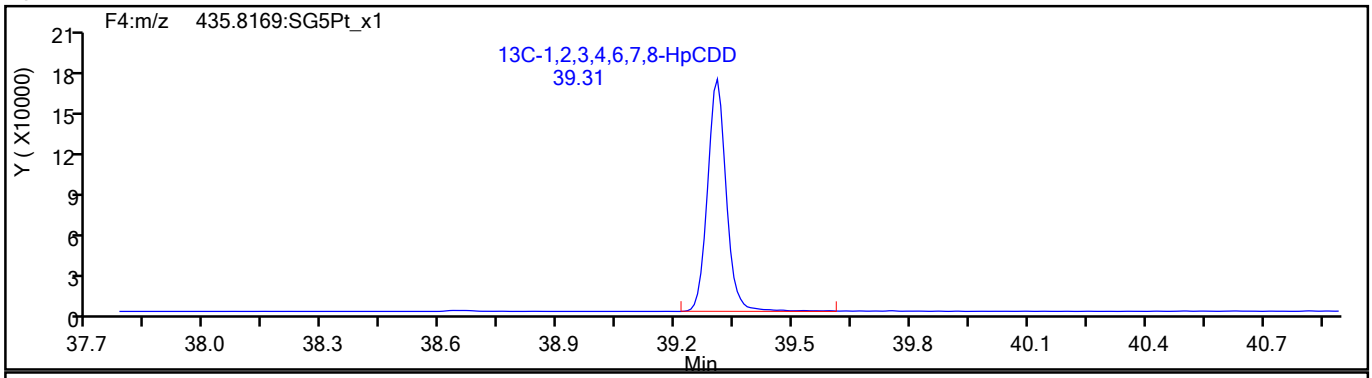

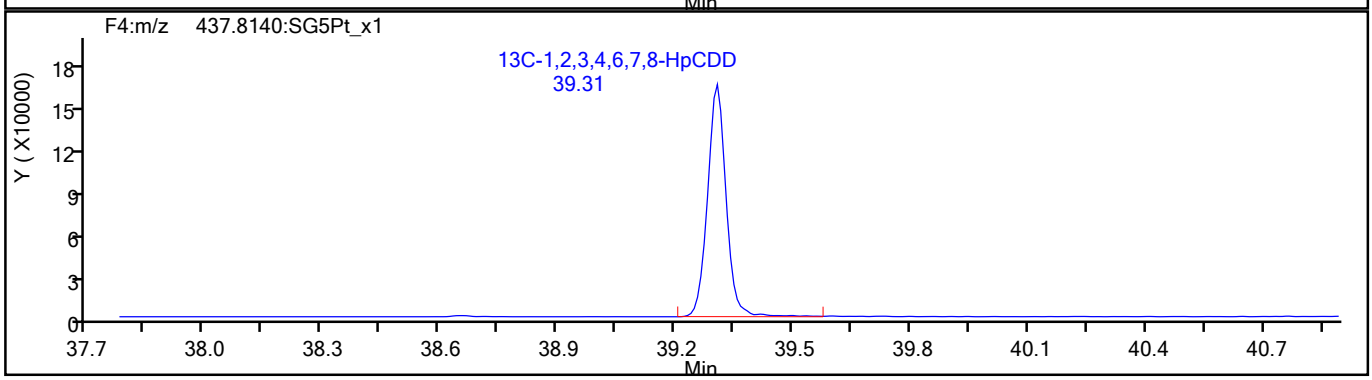

782857

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

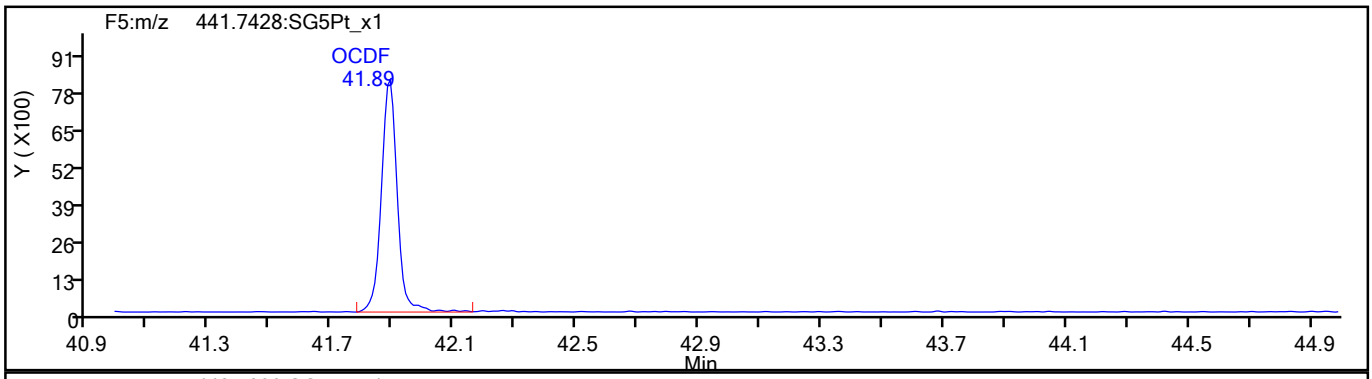

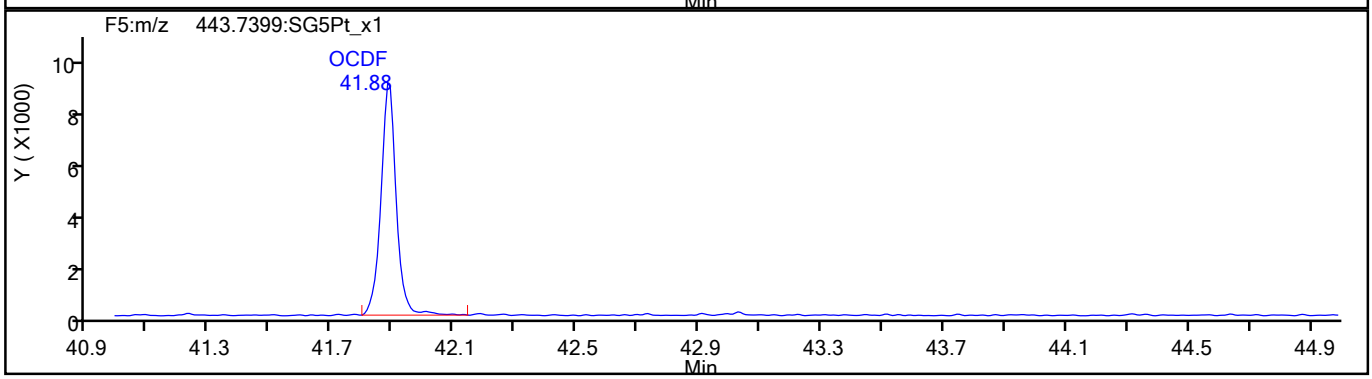

OCDF Standards

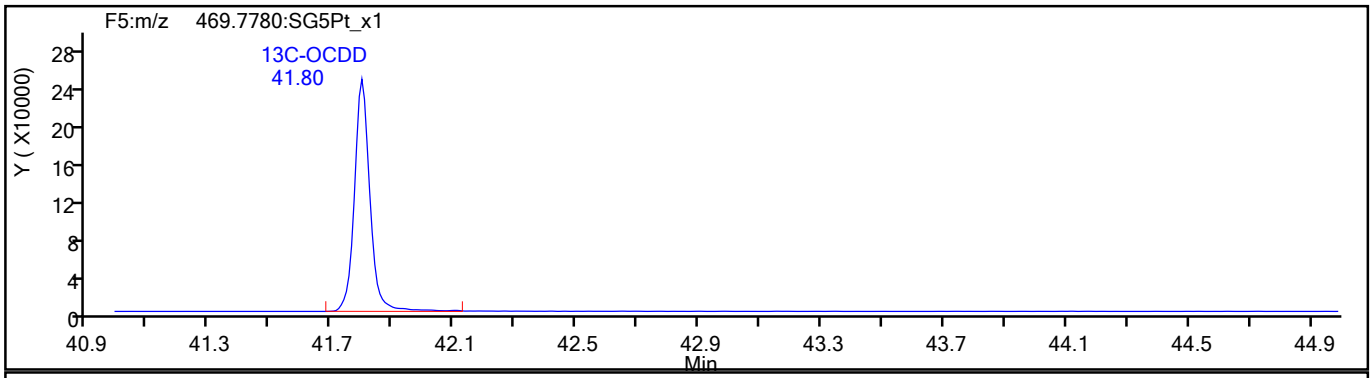

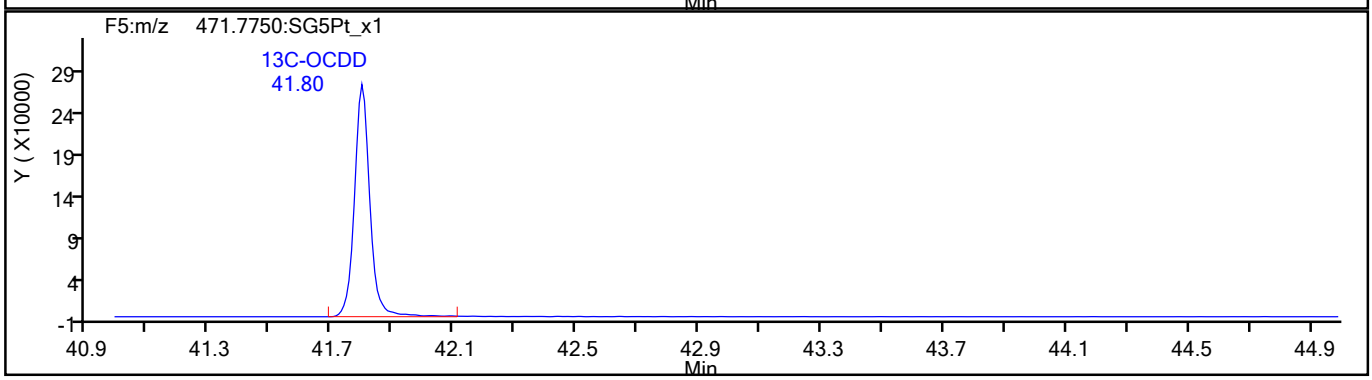

782858

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

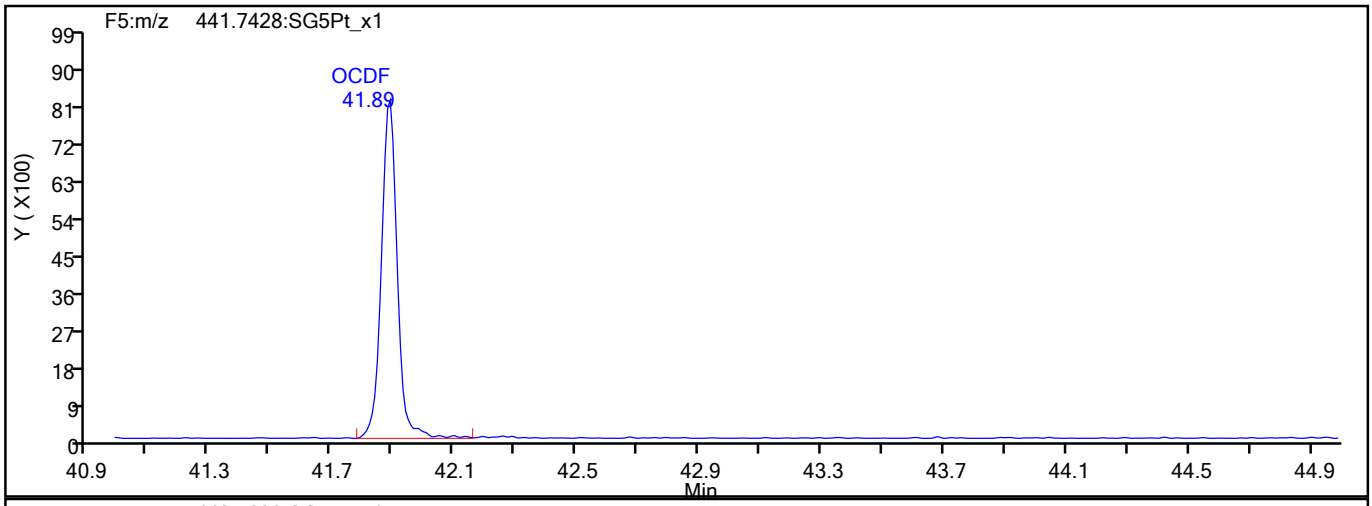

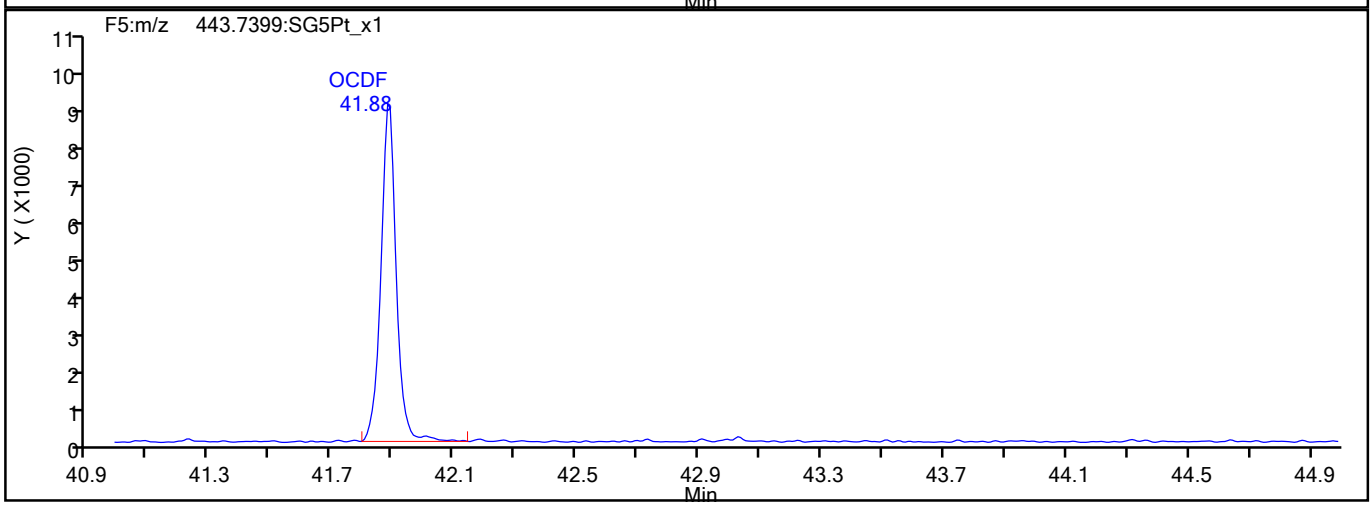

OCDF Interference Mass

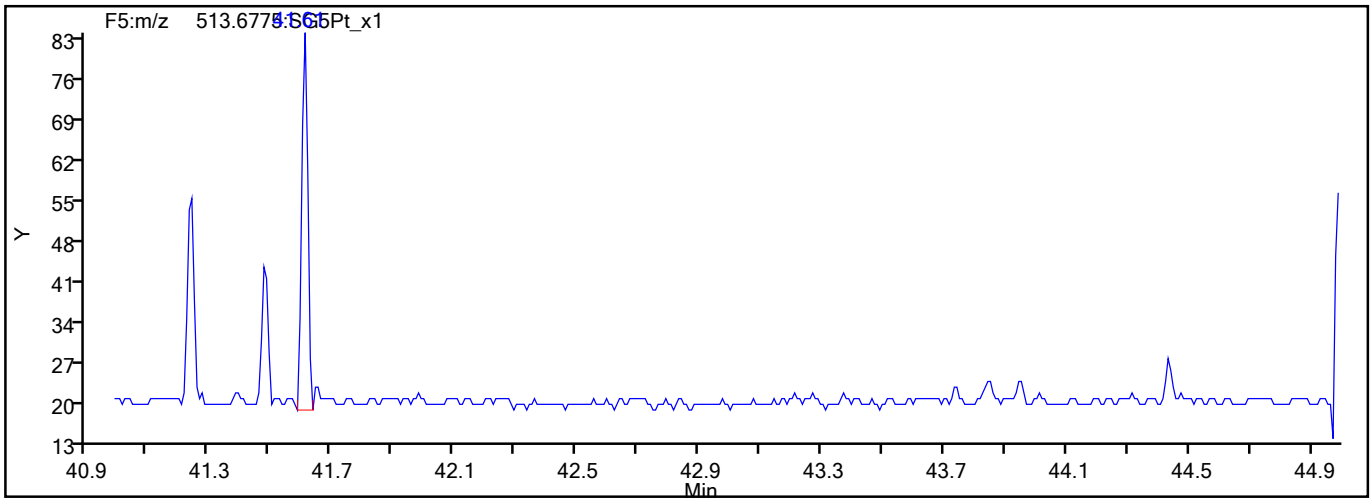

782859

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

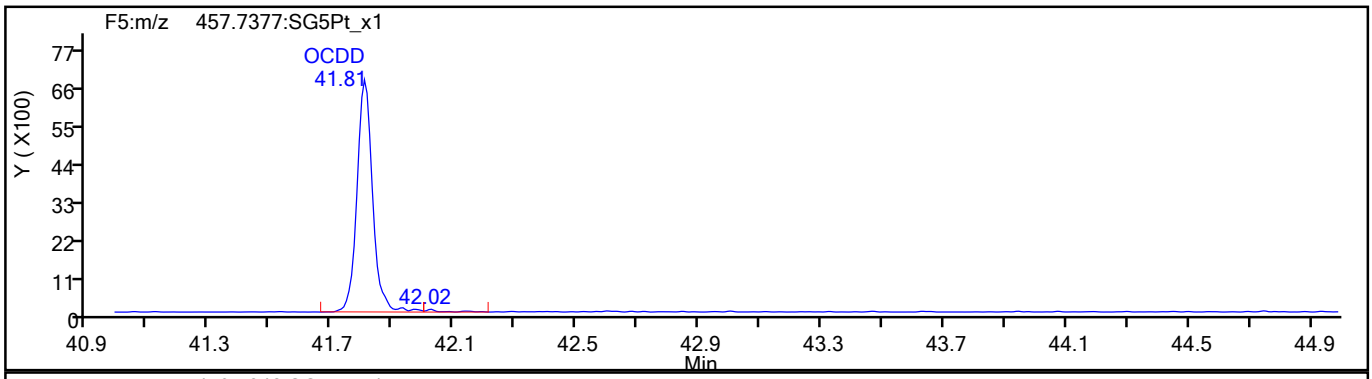

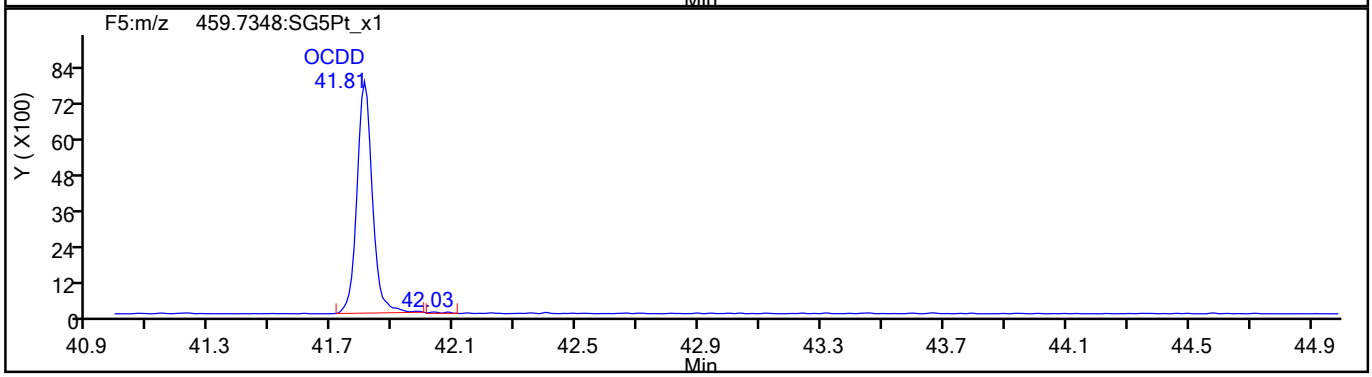

OCDD Standards

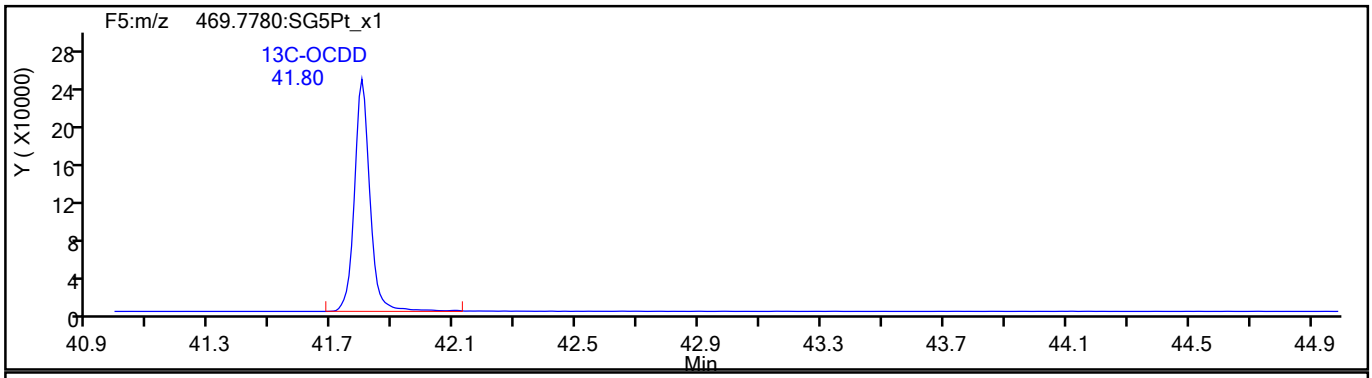

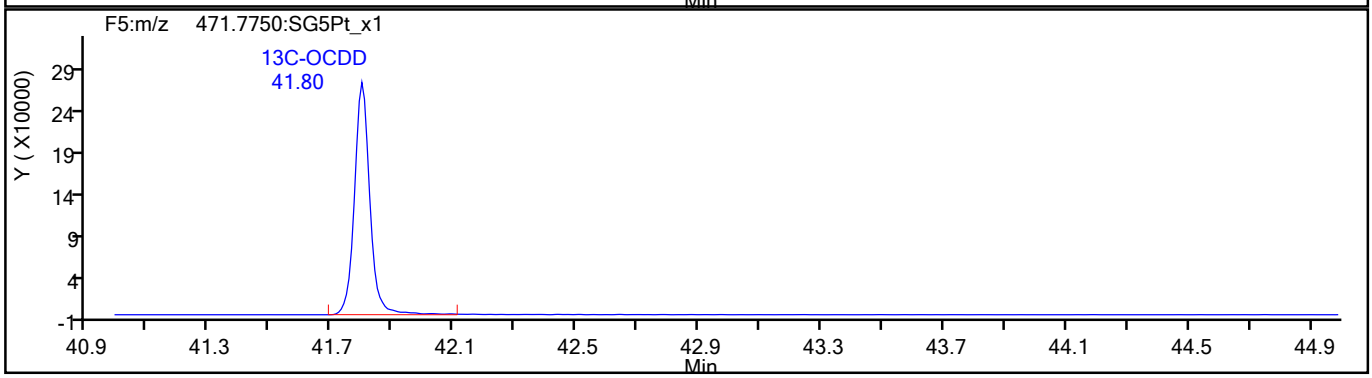

782860

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

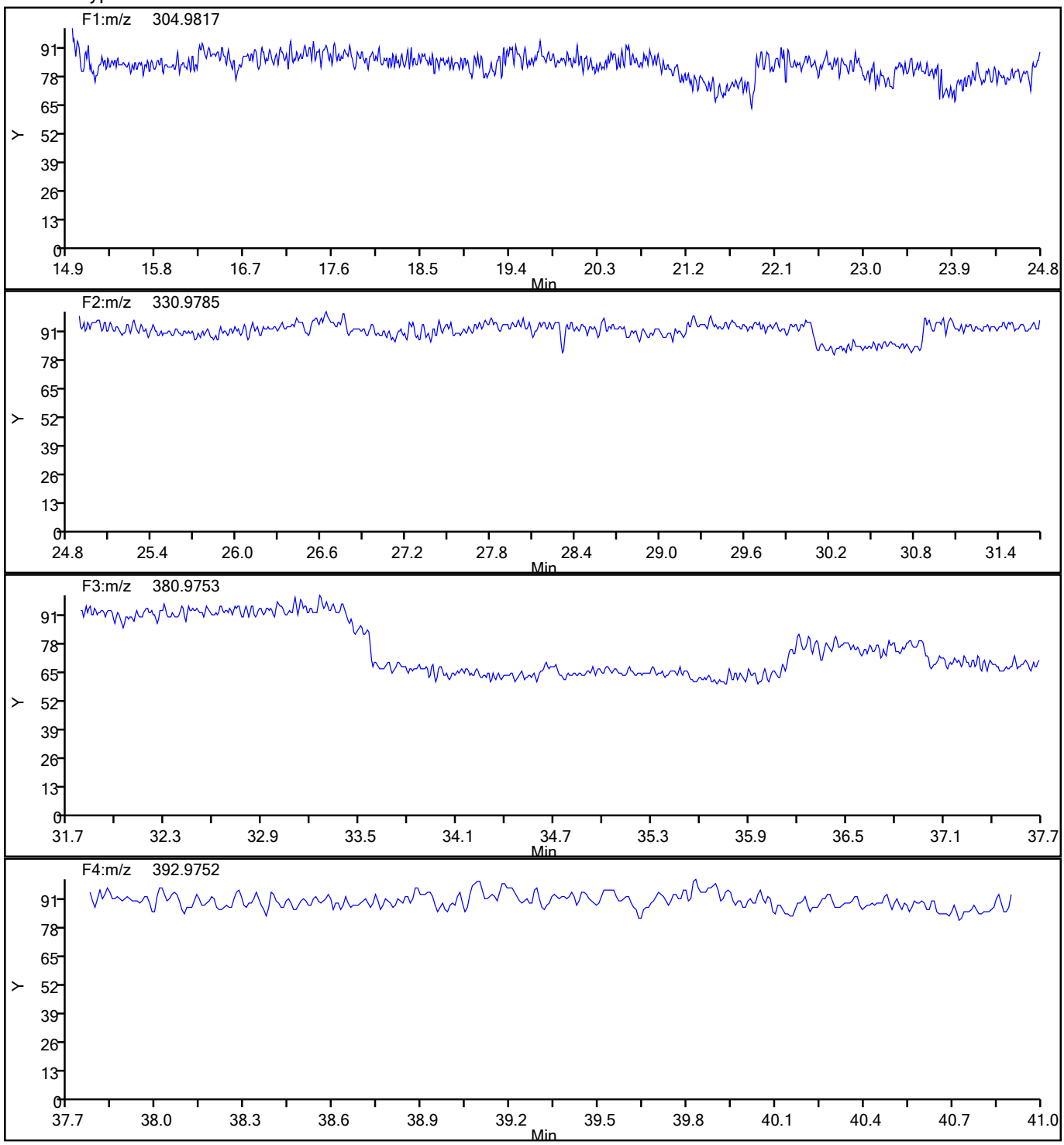

782861

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

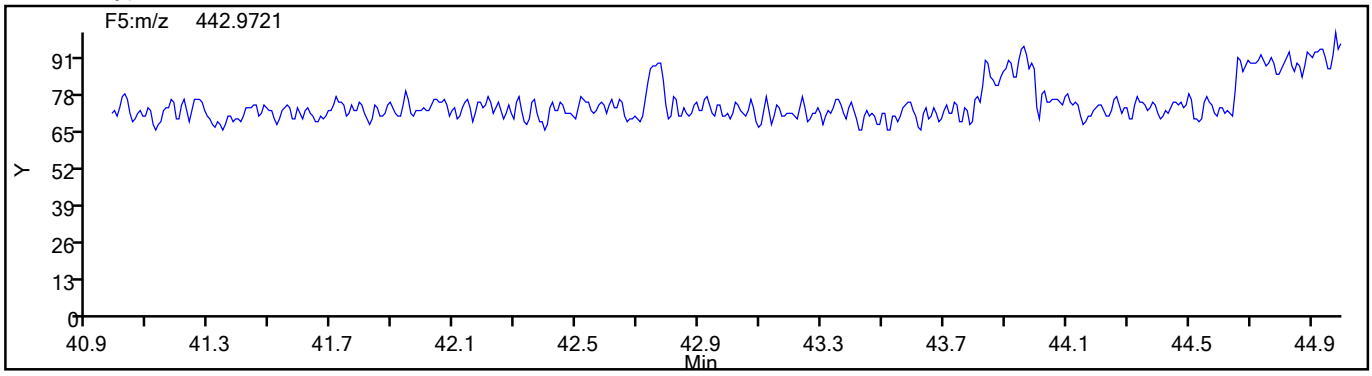

782862

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.534	2045939	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.606	2644389	0.79	1.3459	96.0	96.0	0.2067	0.2067	96.04	
2,3,7,8-TCDF	19.641	50956	0.80	1.0802	1.784	1.784	0.0111	0.0111	89.19	
S Total TCDF					1.784	1.784	0.0111	0.0111		
D 13C-2,3,7,8-TCDD	20.886	1829253	0.79	0.9317	96.0	96.0	0.1871	0.1871	95.97	
$ 37Cl4-2,3,7,8-TCDD	20.929	39241		1.0083	1.902	1.902	0.006151	0.006151	95.11	
2,3,7,8-TCDD	20.929	34971	0.82	1.0753	1.778	1.778	0.0298	0.0298	88.89	
S Total TCDD					1.778	1.778	0.0298	0.0298		
D 13C-1,2,3,7,8-PeCDF	26.541	2234847	1.61	1.1405	95.8	95.8	0.3208	0.3208	95.78	
1,2,3,7,8-PeCDF	26.566	210335	1.55	1.0543	8.927	8.927	0.0325	0.0325	89.27	
D 13C-2,3,4,7,8-PeCDF	27.991	2228025	1.61	1.1253	96.8	96.8	0.3252	0.3252	96.77	
2,3,4,7,8-PeCDF	28.016	200175	1.56	1.0079	8.914	8.914	0.0356	0.0356	89.14	
S Total PeCDF					17.8	17.8	0.0341	0.0341		
D 13C-1,2,3,7,8-PeCDD	28.784	1364144	1.60	0.7165	93.1	93.1	0.1177	0.1177	93.06	
1,2,3,7,8-PeCDD	28.809	129872	1.62	1.0465	9.097	9.097	0.0251	0.0251	90.97	
S Total PeCDD					9.097	9.097	0.0251	0.0251		
D 13C-1,2,3,4,7,8-HxCDF	34.367	1545033	0.52	0.9648	90.2	90.2	0.3810	0.3810	90.23	
1,2,3,4,7,8-HxCDF	34.384	155611	1.20	1.1474	8.778	8.778	0.0522	0.0522	87.78	
D 13C-1,2,3,6,7,8-HxCDF	34.544	1692336	0.52	1.0708	89.1	89.1	0.3433	0.3433	89.05	
1,2,3,6,7,8-HxCDF	34.569	185321	1.24	1.2178	8.992	8.992	0.0483	0.0483	89.92	
D 13C-2,3,4,6,7,8-HxCDF	35.429	1740015	0.54	1.0413	94.2	94.2	0.3530	0.3530	94.16	
2,3,4,6,7,8-HxCDF	35.446	191527	1.25	1.2145	9.063	9.063	0.0405	0.0405	90.63	
D 13C-1,2,3,7,8,9-HxCDF	36.374	1735785	0.52	0.9731	100.5	100.5	0.3778	0.3778	101	
1,2,3,7,8,9-HxCDF	36.390	195077	1.27	1.2401	9.062	9.062	0.0369	0.0369	90.62	
S Total HxCDF					35.9	35.9	0.0445	0.0445		
* 13C-1,2,3,7,8,9-HxCDD	36.180	1774694	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.665	1363103	1.28	0.7587	101.2	101.2	0.1971	0.1971	101	
1,2,3,4,7,8-HxCDD	35.682	132244	1.27	1.0608	9.146	9.146	0.0258	0.0258	91.46	
D 13C-1,2,3,6,7,8-HxCDD	35.792	1558668	1.27	0.8593	102.2	102.2	0.1740	0.1740	102	
1,2,3,6,7,8-HxCDD	35.809	138142	1.21	0.9933	8.922	8.922	0.0262	0.0262	89.22	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.196	139741	1.27	1.1094	8.622	8.622	0.0240	0.0240	86.22	
S Total HxCDD					26.7	26.7	0.0253	0.0253		
D 13C-1,2,3,4,6,7,8-HpCDF	38.291	1272526	0.47	0.7359	97.4	97.4	0.3733	0.3733	97.43	
1,2,3,4,6,7,8-HpCDF	38.308	164108	1.06	1.4421	8.943	8.943	0.0378	0.0378	89.43	
D 13C-1,2,3,4,7,8,9-HpCDF	39.589	1175351	0.46	0.6854	96.6	96.6	0.4008	0.4008	96.63	
1,2,3,4,7,8,9-HpCDF	39.598	138335	1.04	1.3092	8.990	8.990	0.0420	0.0420	89.90	
S Total HpCDF					17.9	17.9	0.0399	0.0399		
D 13C-1,2,3,4,6,7,8-HpCDD	39.286	1162117	1.05	0.6745	97.1	97.1	0.2422	0.2422	97.08	
1,2,3,4,6,7,8-HpCDD	39.294	110761	1.07	1.0503	9.075	9.075	0.0319	0.0319	90.75	
S Total HpCDD					9.075	9.075	0.0319	0.0319		
D 13C-OCDD	41.775	1833139	0.91	0.5446	189.7	189.7	0.2857	0.2857	94.83	
OCDF	41.868	217473	0.91	1.3168	18.0	18.0	0.0452	0.0452	90.09	
OCDD	41.784	182470	0.91	1.0620	18.7	18.7	0.0368	0.0368	93.73	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.534	20.547	-1		908781	140893	128	320	1101		
333.9338	20.542	20.547	0		1137158	181590	97	242	1872	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.606	19.616	-1	0.955	1167638	192853	232	580	831		
317.9389	19.615	19.616	0	0.955	1476751	240851	127	317	1896	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.641	19.646	0	1.002	22722	3787	5	12	757		
305.8987	19.632	19.646	-1	1.001	28234	4422	16	40	276	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.886	20.910	-1	1.017	809102	120100	128	320	938		
333.9338	20.895	20.910	-1	1.018	1020151	151021	97	242	1557	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.929	20.935	0	1.019	39241	6110	8	20	764		
2,3,7,8-TCDD											
319.8965	20.929	20.939	-1	1.002	15743	2433	27	67	90		
321.8936	20.929	20.939	-1	1.002	19228	3031	8	20	379	0.82(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.541	26.560	-1	1.293	1380136	237735	280	700	849		
353.8970	26.549	26.560	-1	1.293	854711	147619	192	480	769	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.566	26.584	-1	1.001	127910	22847	25	62	914		
341.8567	26.566	26.584	-1	1.001	82425	14553	28	70	520	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	27.991	28.014	-1	1.363	1373543	227507	280	700	813		
353.8970	27.991	28.014	-1	1.363	854482	140253	192	480	730	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.016	28.039	-1	1.001	121955	19987	25	62	799		
341.8567	28.016	28.039	-1	1.001	78220	12878	28	70	460	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.784	28.801	-1	1.402	839338	134094	55	137	2438		
369.8919	28.775	28.801	-2	1.401	524806	82953	54	135	1536	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.809	28.828	-1	1.001	80255	12276	18	45	682		
357.8516	28.809	28.828	-1	1.001	49617	7332	5	12	1466	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.367	34.384	-1	0.950	530041	107506	195	487	551		
385.8610	34.367	34.384	-1	0.950	1014992	209541	410	1025	511	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.384	34.405	-1	1.000	84954	17499	46	115	380		
375.8178	34.384	34.405	-1	1.000	70657	14926	30	75	498	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.544	34.562	-1	0.955	582468	111482	195	487	572		
385.8610	34.544	34.562	-1	0.955	1109868	211659	410	1025	516	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.569	34.582	-1	1.001	102510	19443	46	115	423		
375.8178	34.561	34.582	-1	1.000	82811	15785	30	75	526	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.429	35.444	-1	0.979	608469	136128	195	487	698		
385.8610	35.429	35.444	-1	0.979	1131546	250431	410	1025	611	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.446	35.461	-1	1.000	106373	23069	46	115	502		
375.8178	35.446	35.461	-1	1.000	85154	19256	30	75	642	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.374	36.388	-1	1.005	597532	142559	195	487	731		
385.8610	36.374	36.388	-1	1.005	1138253	273050	410	1025	666	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.390	36.402	-1	1.000	109103	26446	46	115	575		
375.8178	36.390	36.402	-1	1.000	85974	20436	30	75	681	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.180	36.192	-1		992912	228100	138	345	1653		
403.8529	36.180	36.192	-1		781782	183211	108	270	1696	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.665	35.680	-1	0.986	765726	187664	138	345	1360		
403.8529	35.665	35.680	-1	0.986	597377	148078	108	270	1371	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.682	35.695	-1	1.000	73908	17289	18	45	961		
391.8127	35.682	35.695	-1	1.000	58336	14382	19	47	757	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.792	35.805	-1	0.989	870562	199612	138	345	1446		
403.8529	35.792	35.805	-1	0.989	688106	154356	108	270	1429	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.809	35.820	-1	1.000	75558	17193	18	45	955		
391.8127	35.809	35.820	-1	1.000	62584	14006	19	47	737	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.196	36.208	-1	1.015	78157	18353	18	45	1020		
391.8127	36.196	36.208	-1	1.015	61584	14405	19	47	758	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.291	38.305	-1	1.058	404086	116332	150	375	776		
419.8220	38.291	38.305	-1	1.058	868440	254106	302	755	841	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.308	38.317	-1	1.000	84325	24268	44	110	552		
409.7788	38.299	38.317	-1	1.000	79783	22737	37	92	615	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.589	39.600	-1	1.094	368476	114509	150	375	763		
419.8220	39.589	39.600	-1	1.094	806875	252758	302	755	837	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	70636	21558	44	110	490		
409.7788	39.598	39.608	-1	1.000	67699	21216	37	92	573	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.286	39.293	0	1.086	594894	185269	137	342	1352		
437.8140	39.286	39.293	0	1.086	567223	172933	132	330	1310	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.294	39.301	0	1.000	57275	17734	30	75	591		
425.7737	39.294	39.301	0	1.000	53486	17016	18	45	945	1.07(0.88-1.20)	
13C-OCDD											
469.7780	41.775	41.785	-1	1.155	873143	243136	128	320	1900		
471.7750	41.775	41.785	-1	1.155	959996	268180	128	320	2095	0.91(0.76-1.02)	
OCDF											
441.7428	41.868	41.875	0	1.002	103359	30074	20	50	1504		
443.7399	41.859	41.875	-1	1.002	114114	32506	41	102	793	0.91(0.76-1.02)	
OCDD											
457.7377	41.784	41.794	-1	1.000	86745	24118	17	42	1419		
459.7348	41.784	41.794	-1	1.000	95725	27065	23	57	1177	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

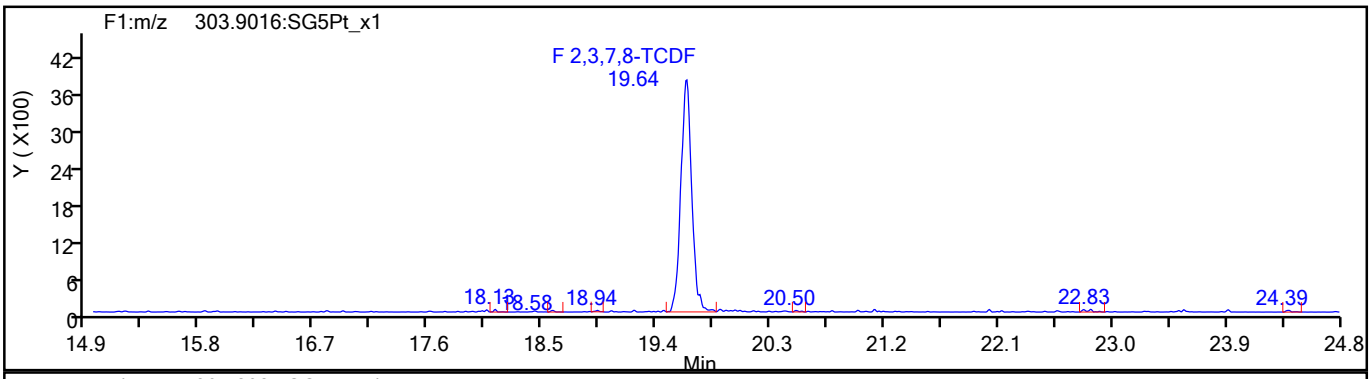

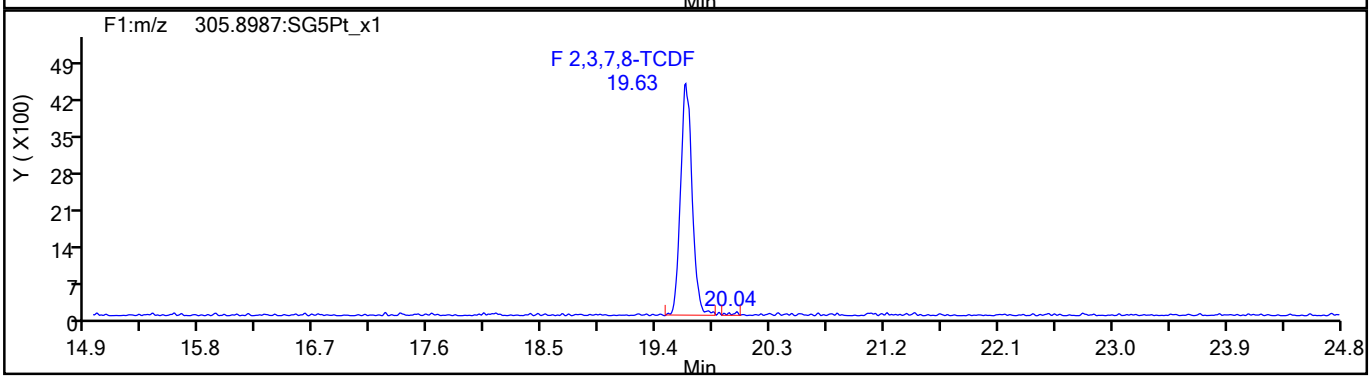

TCDF Standards

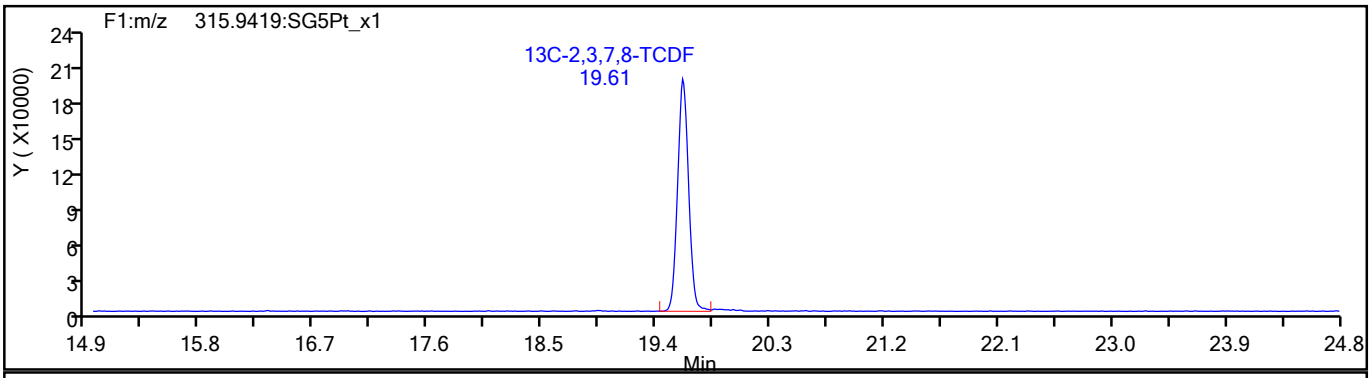

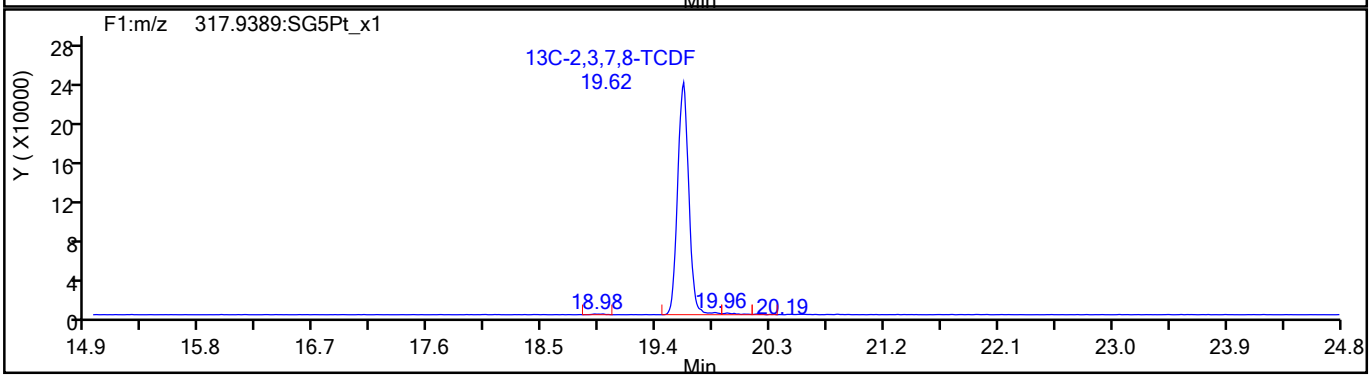

782868

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

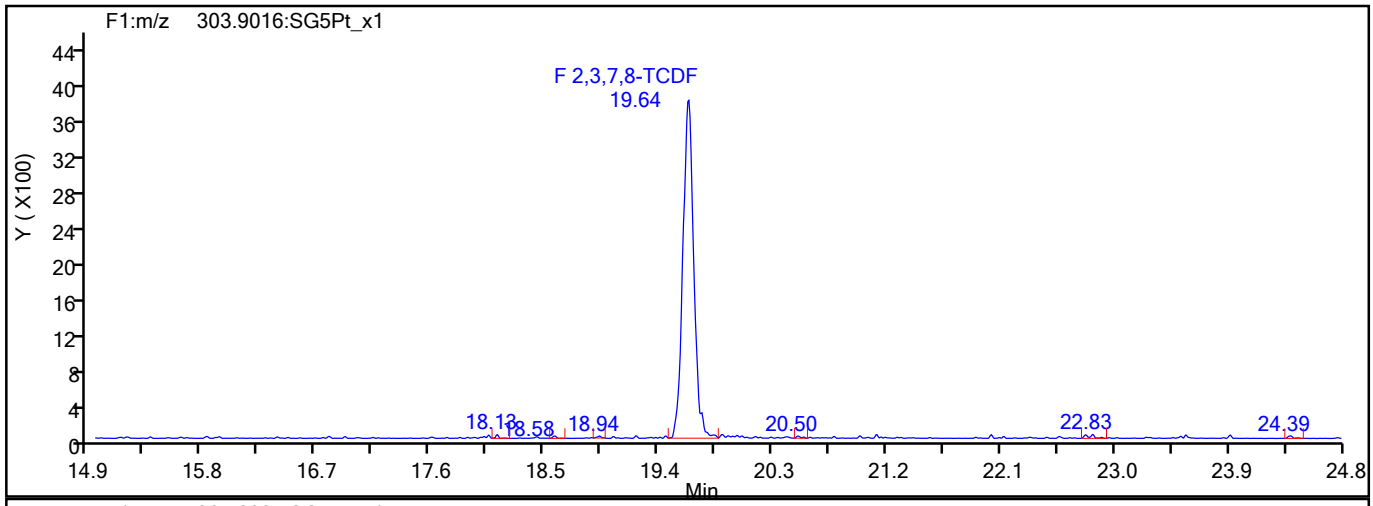

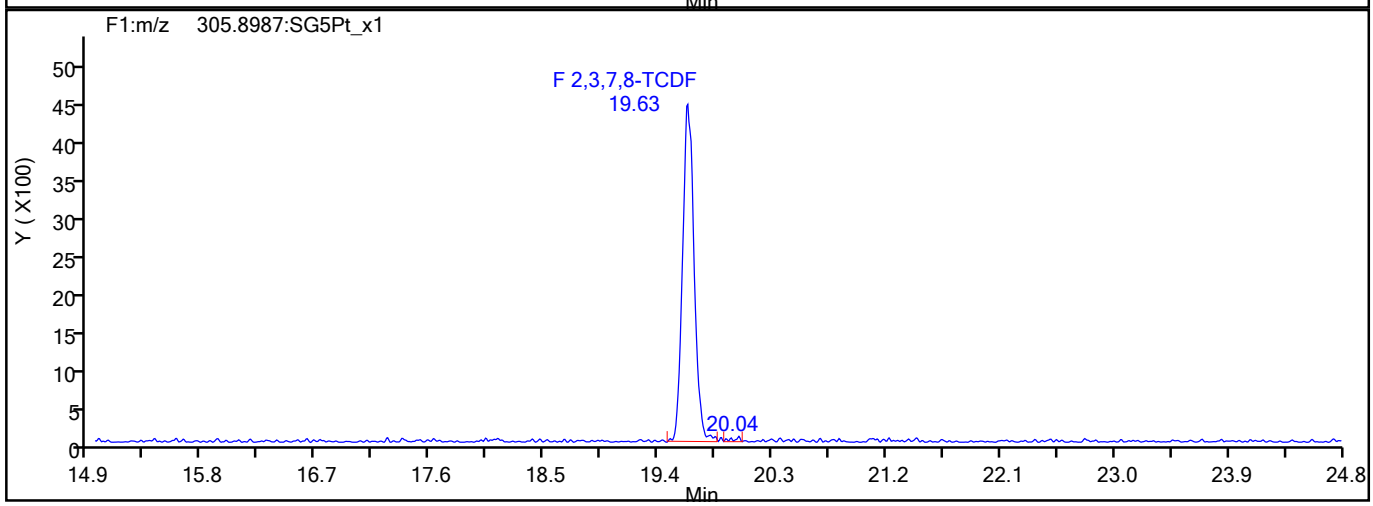

TCDF Interference Mass

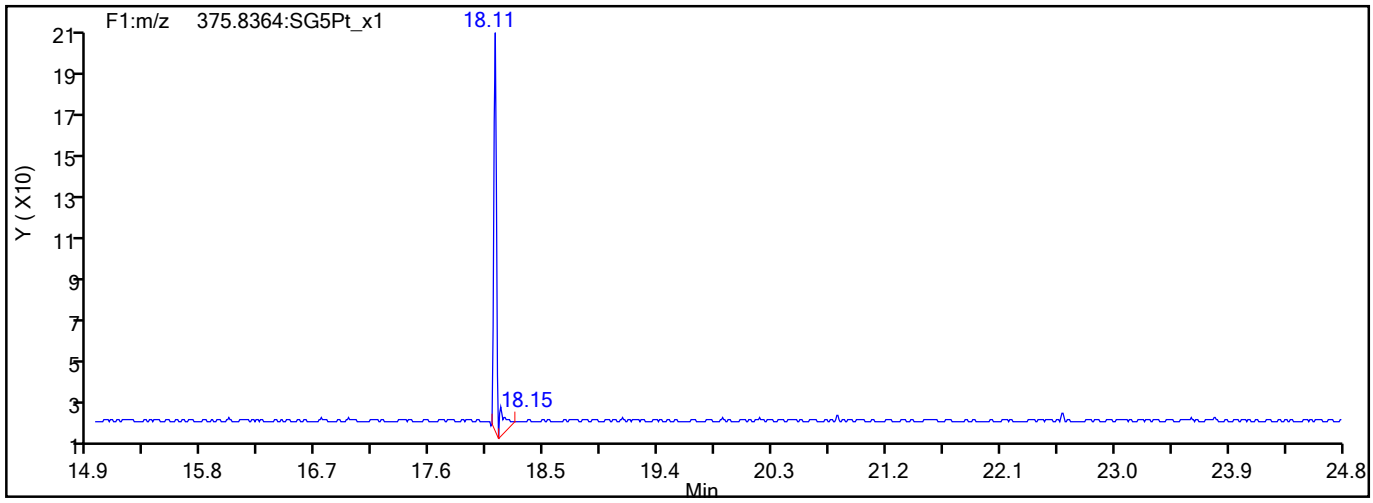

782869

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

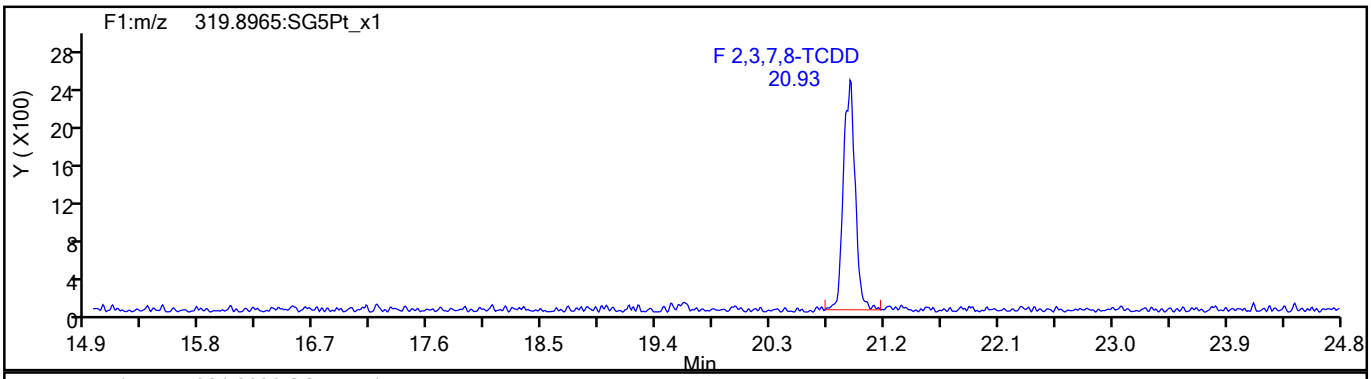

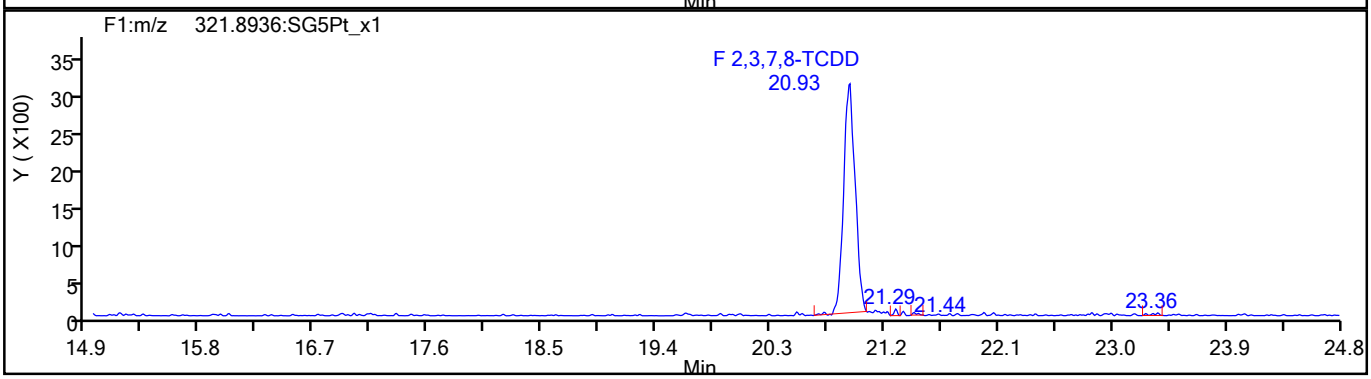

TCDD Standards

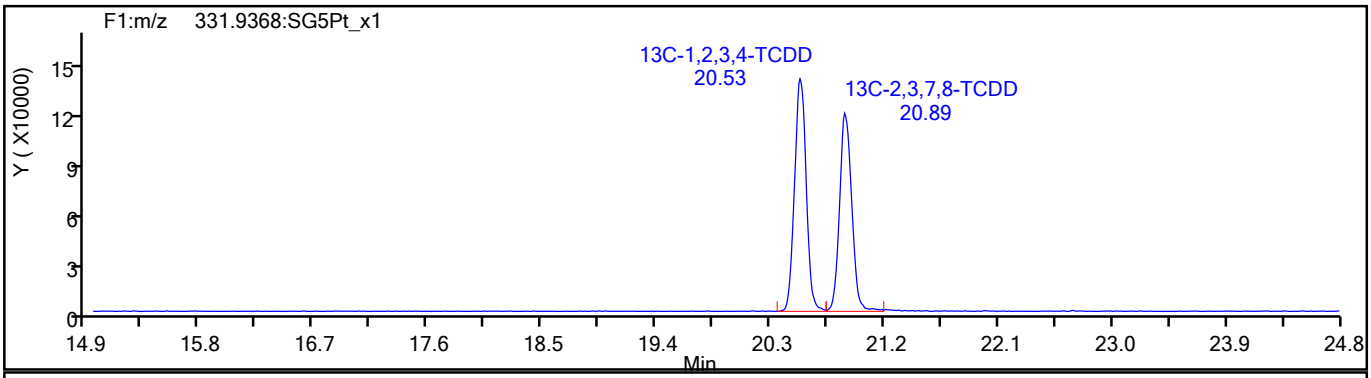

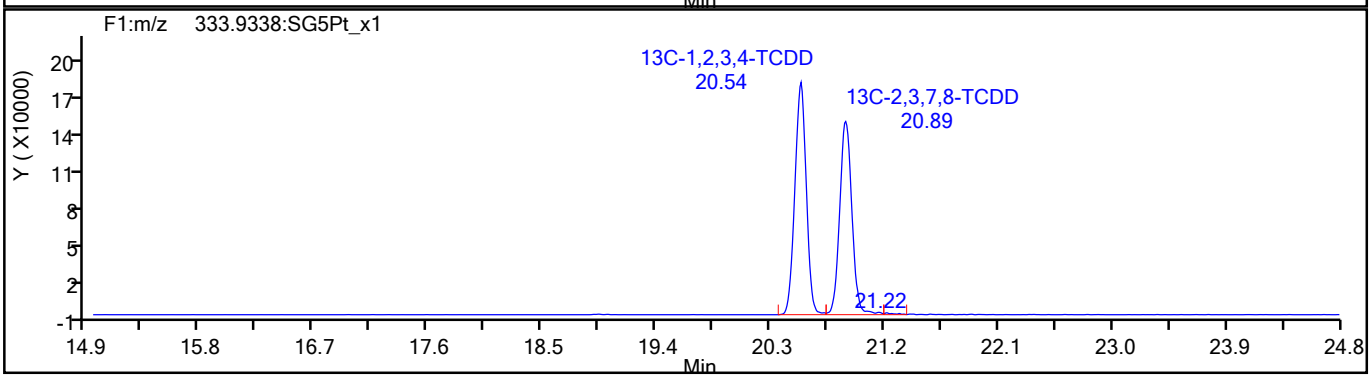

782870

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

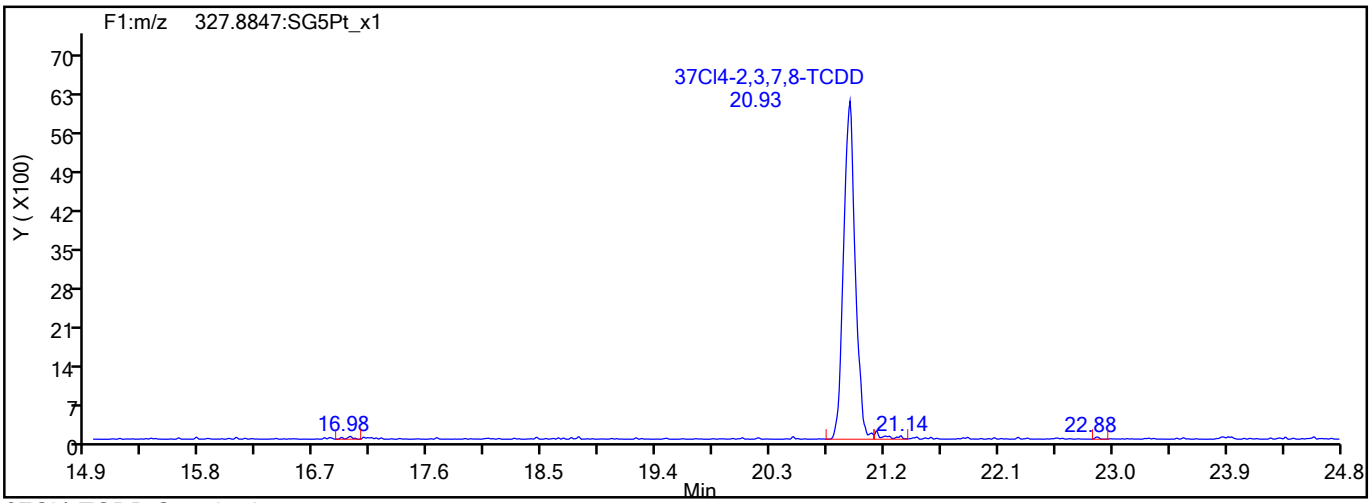

37Cl4-TCDD Standards

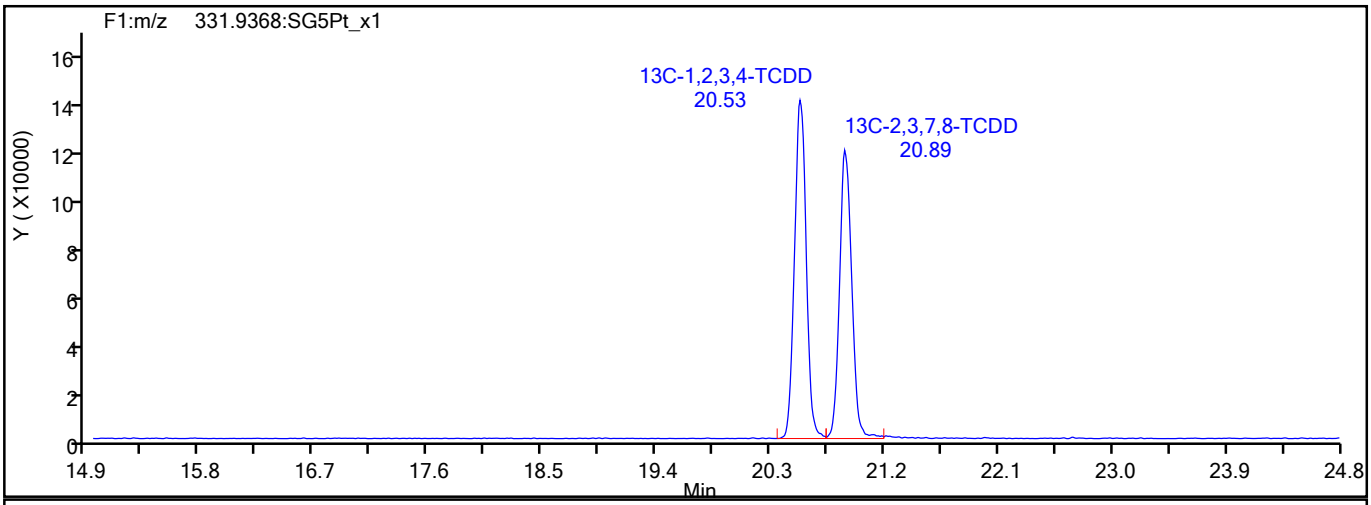

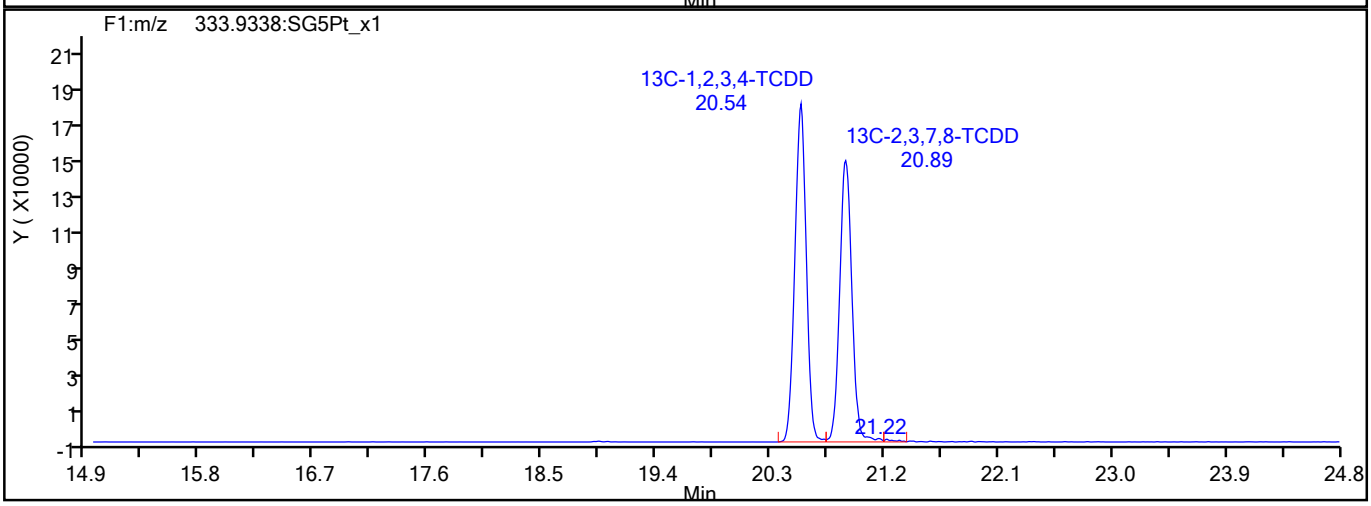

782871

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

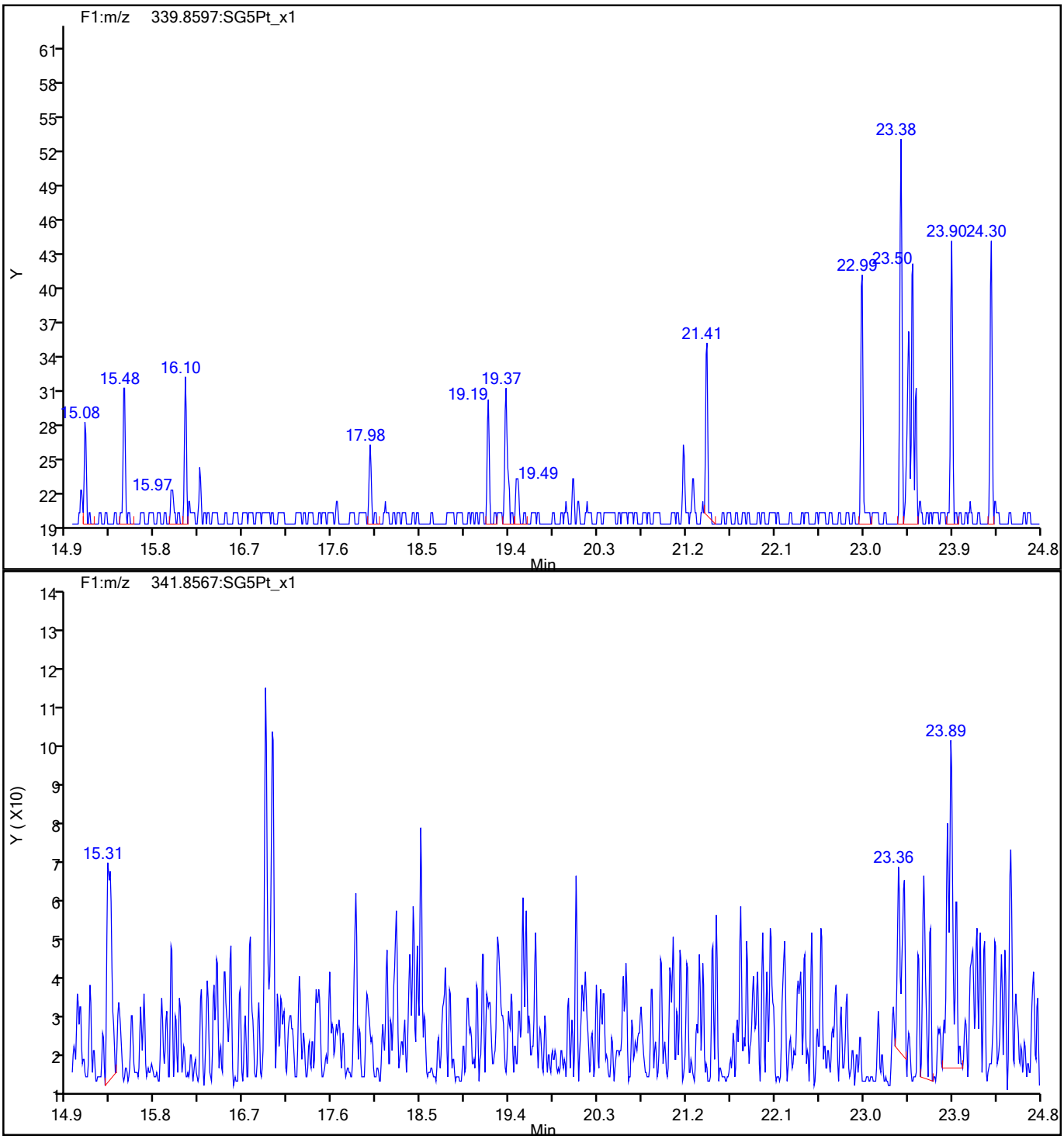

782872

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

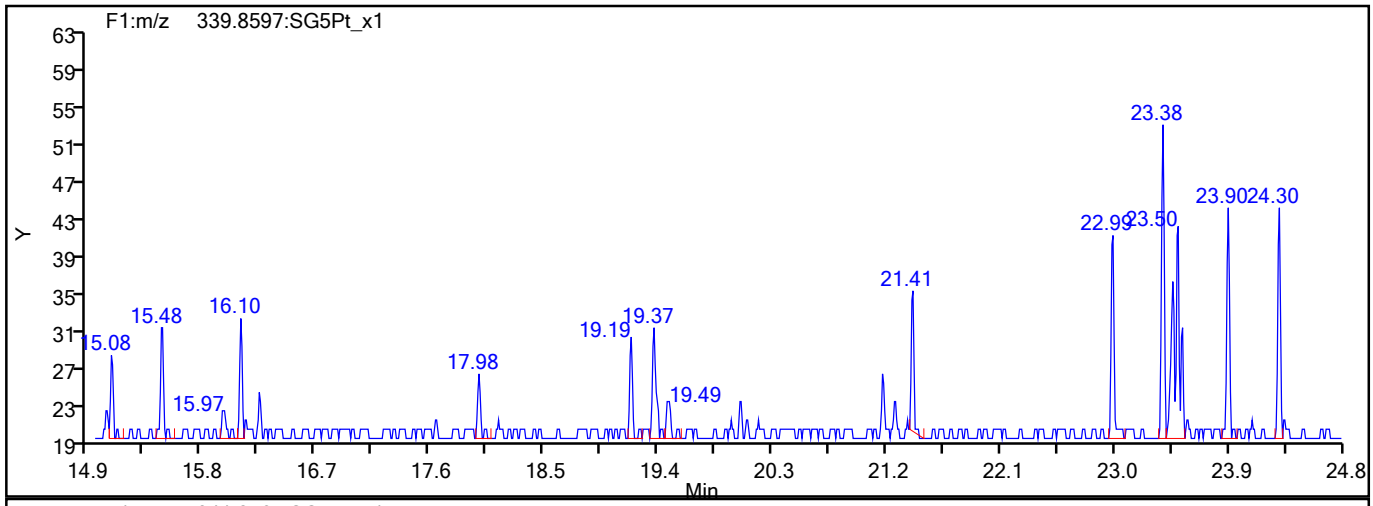

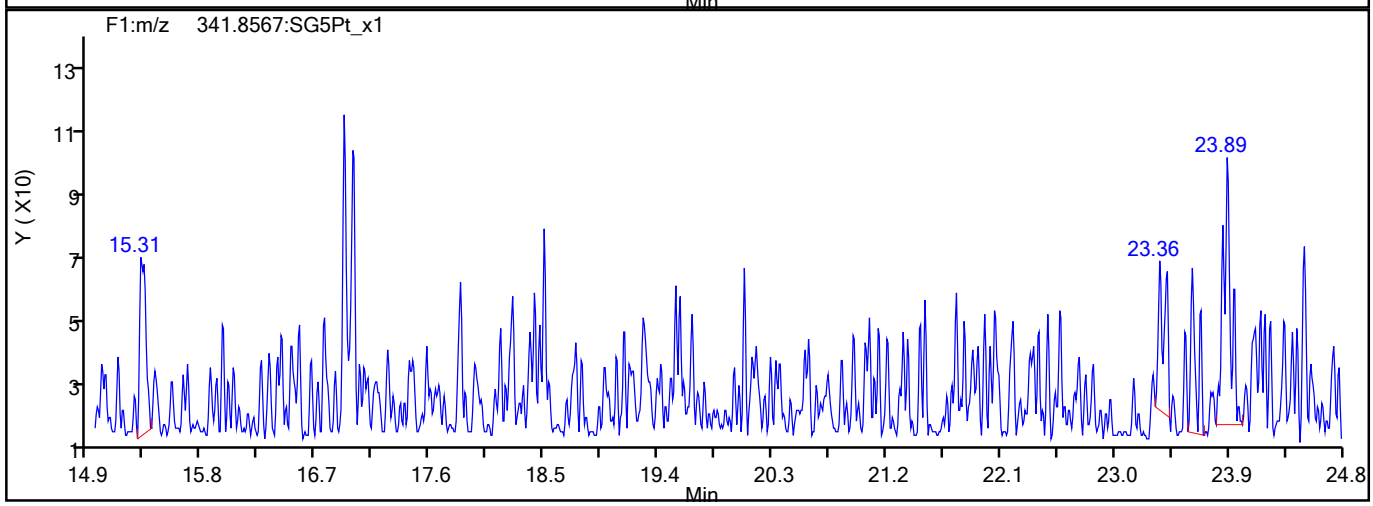

F1 PeCDFs Interference Mass

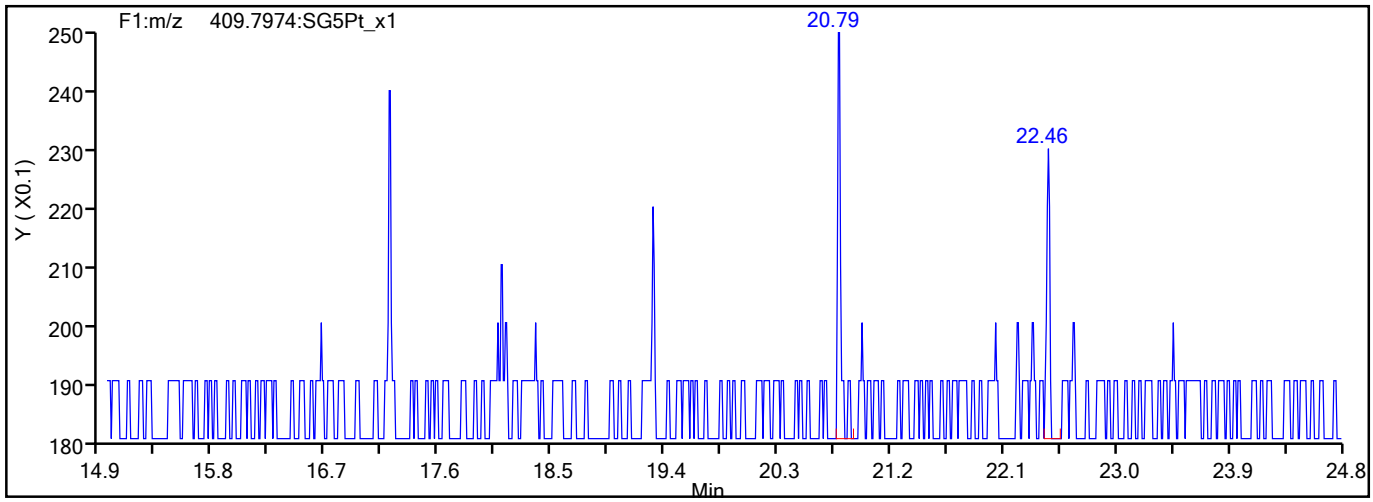

782873

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

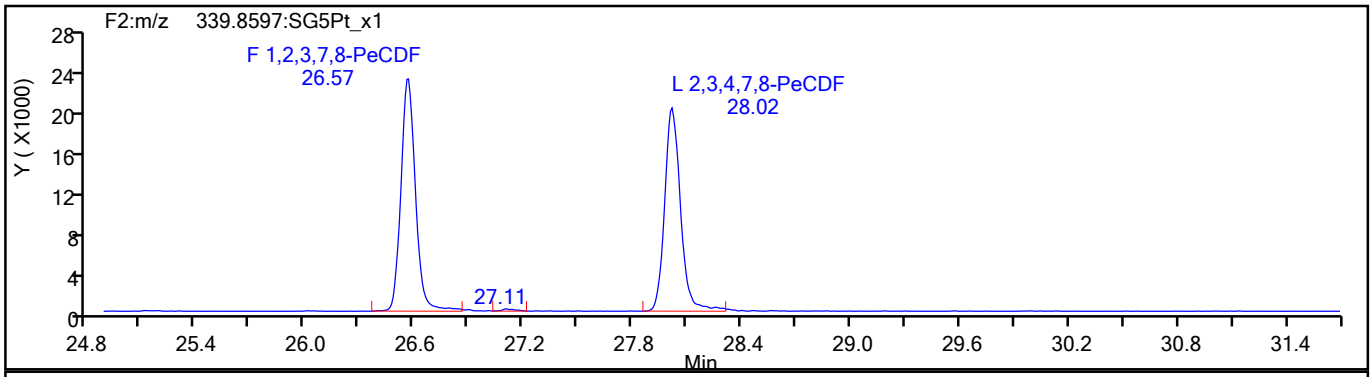

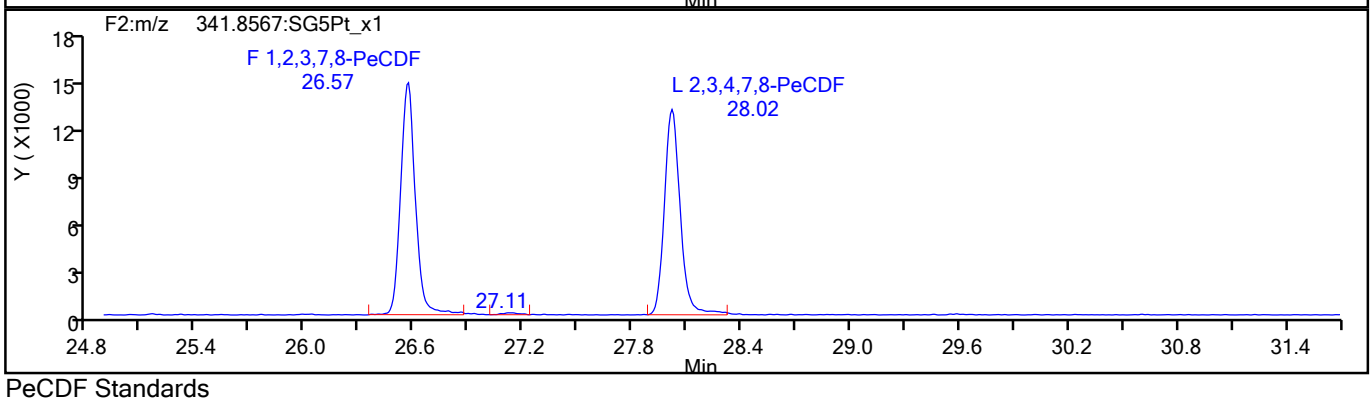

PeCDF Standards

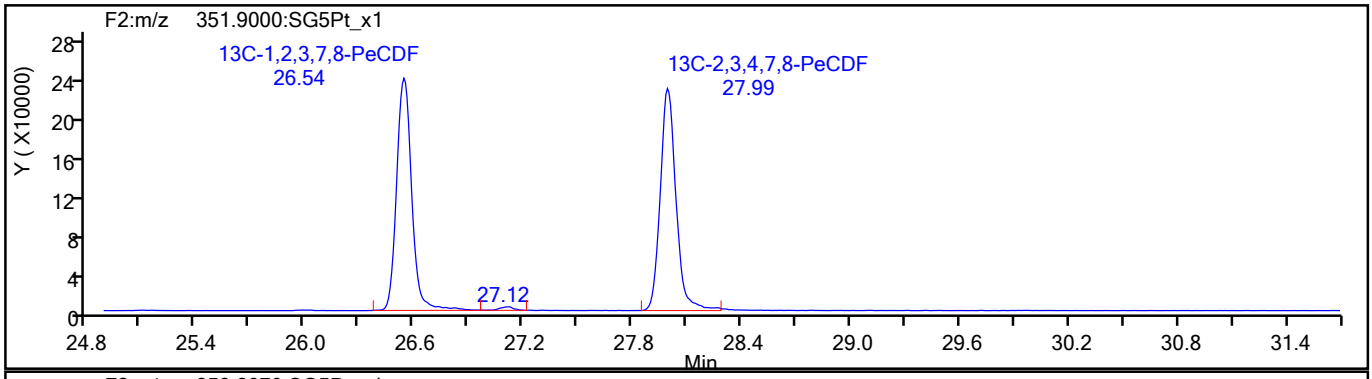

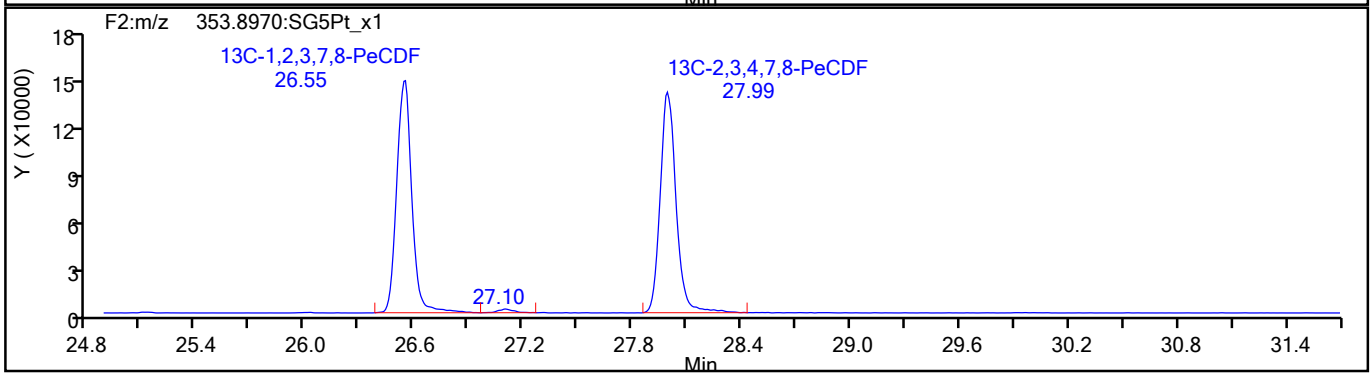

782874

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

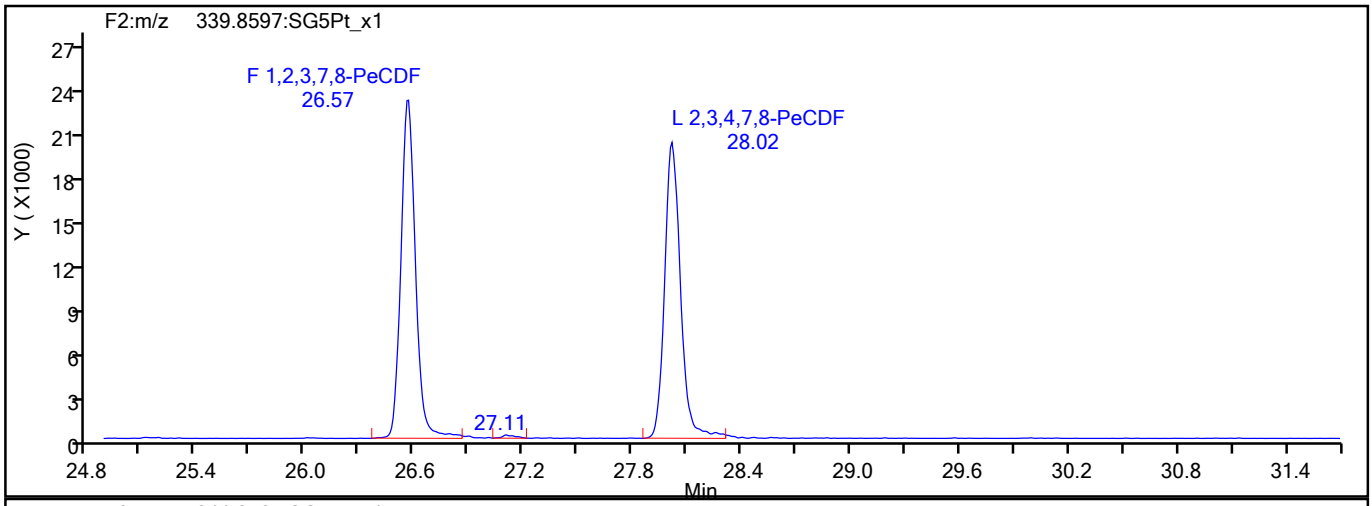

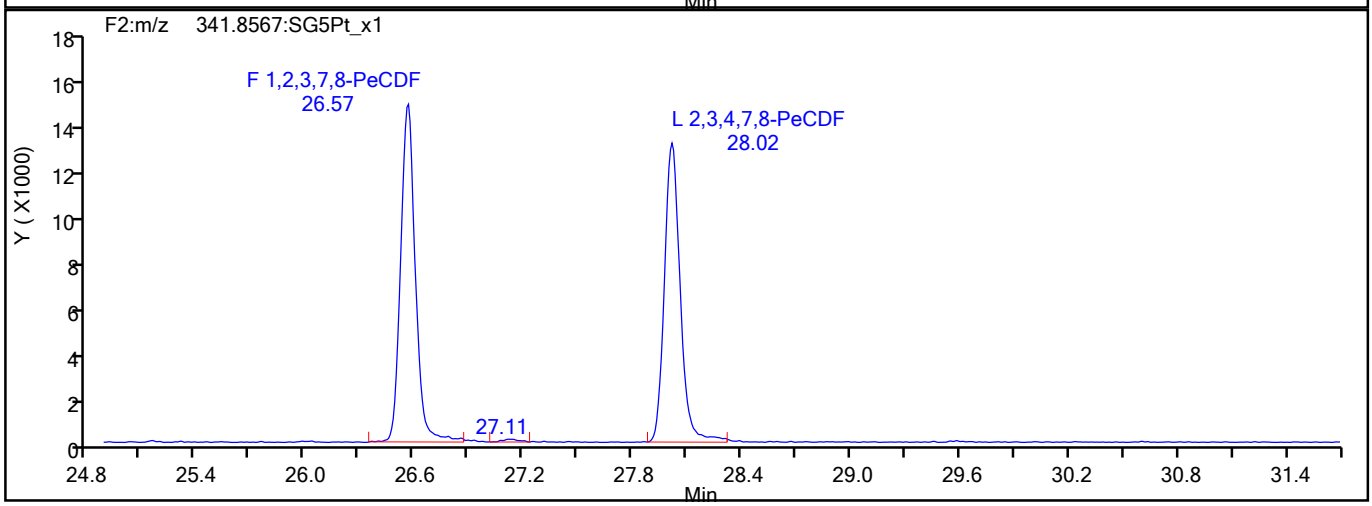

PeCDF Interference Mass

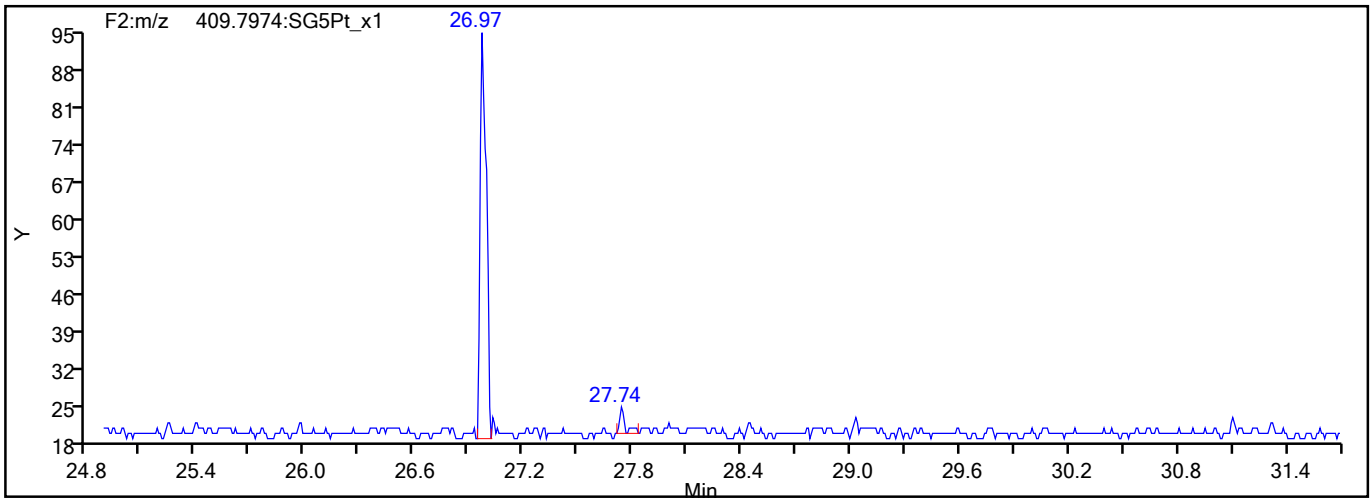

782875

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

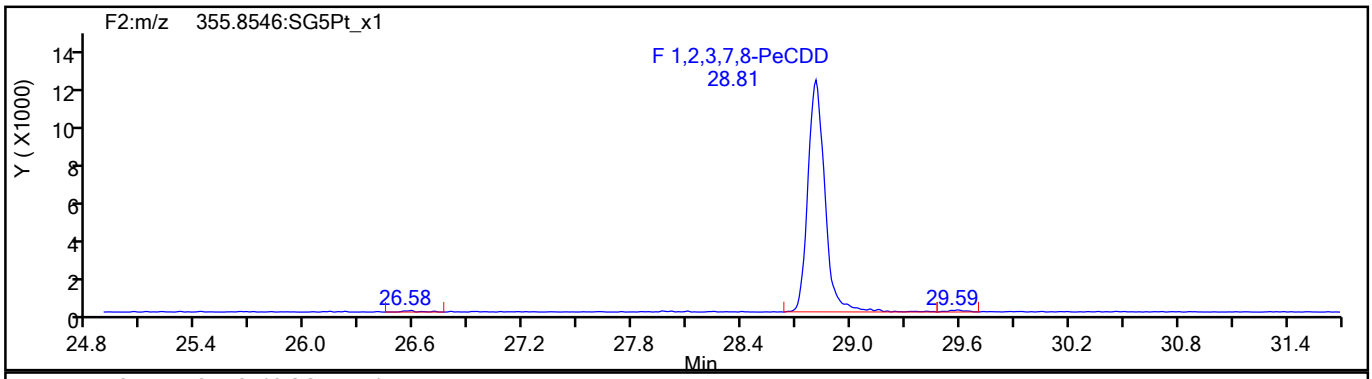

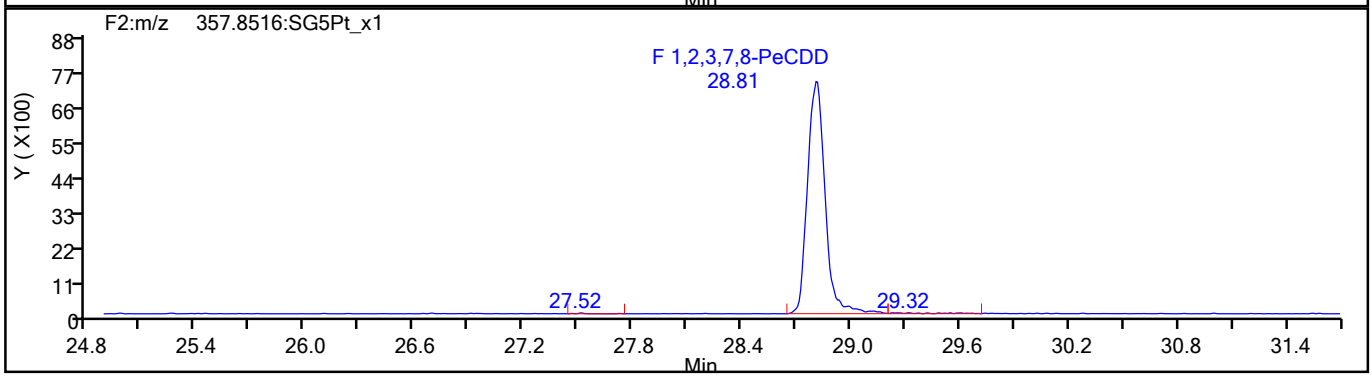

PeCDD Standards

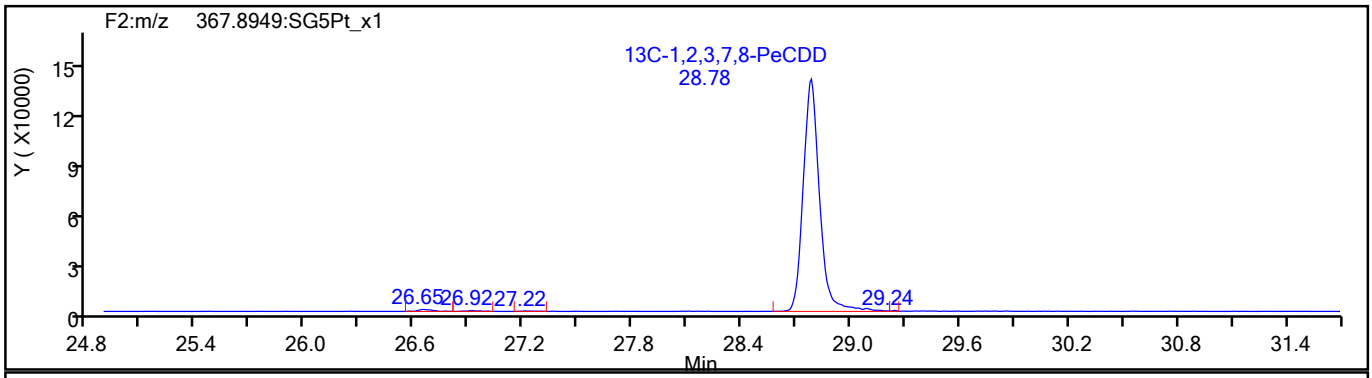

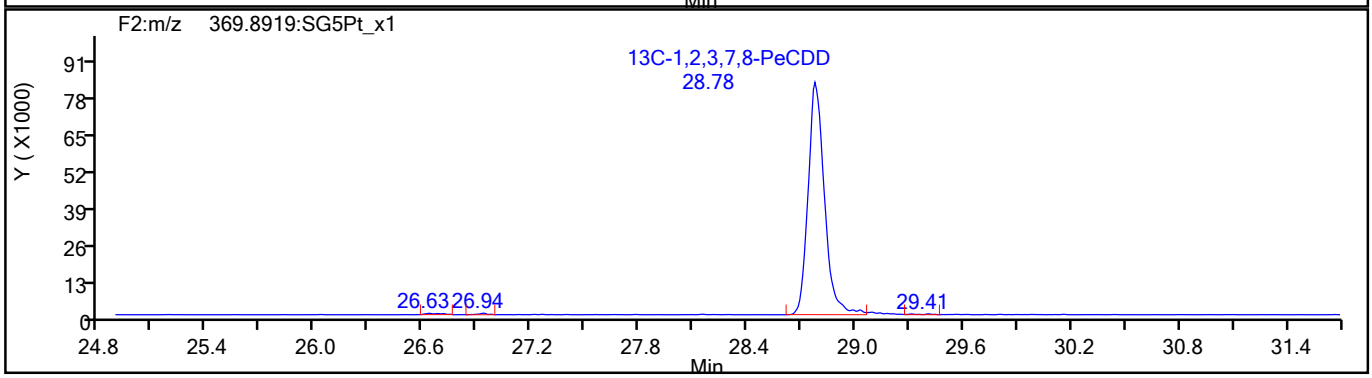

782876

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

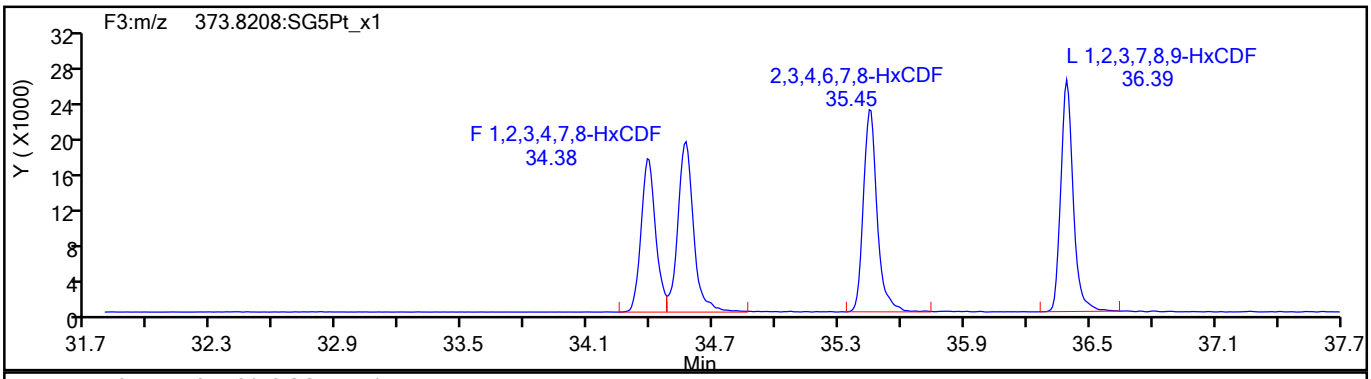

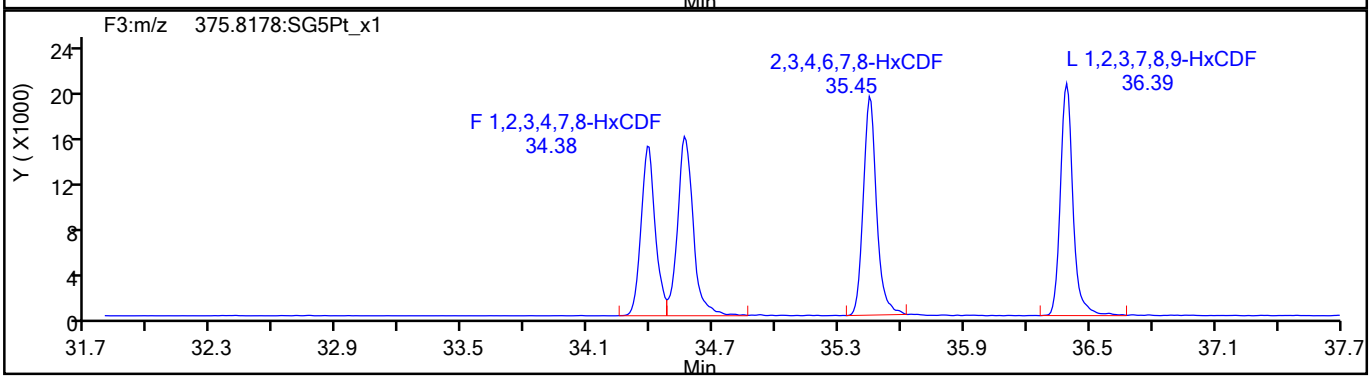

HxCDF Standards

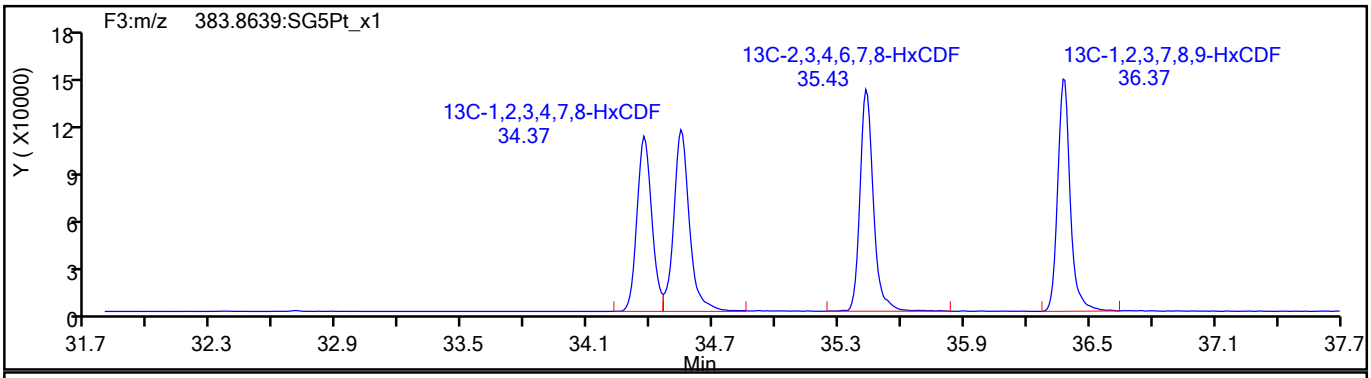

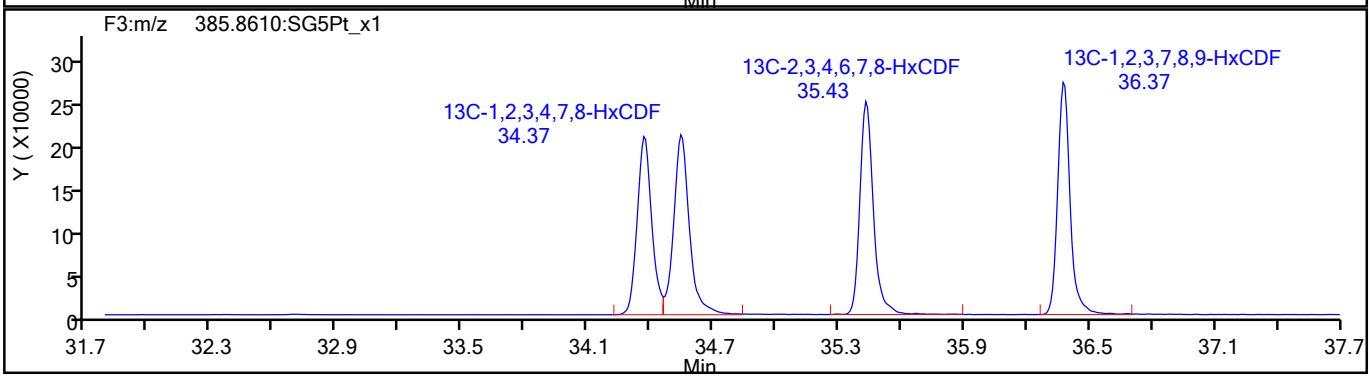

782877

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
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HxCDF

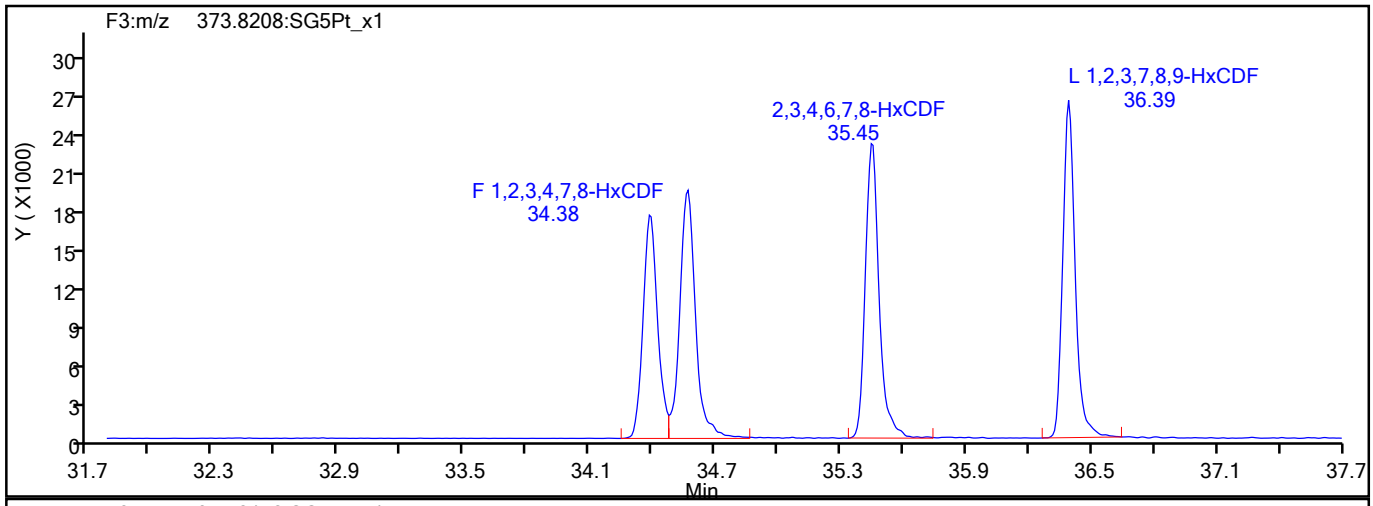

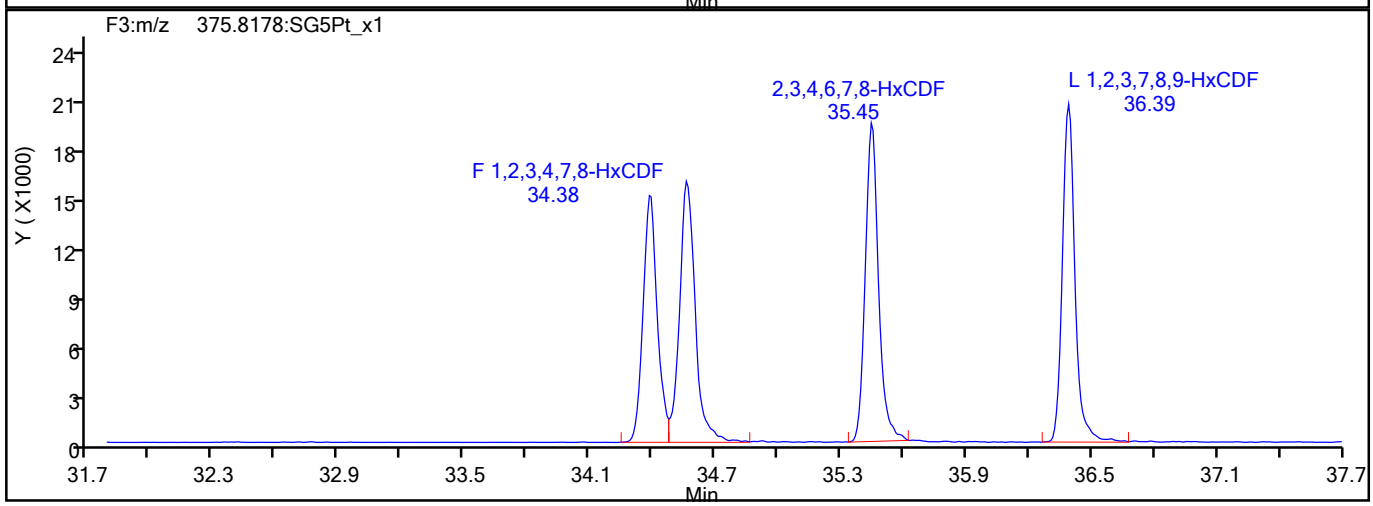

HxCDF Interference Mass

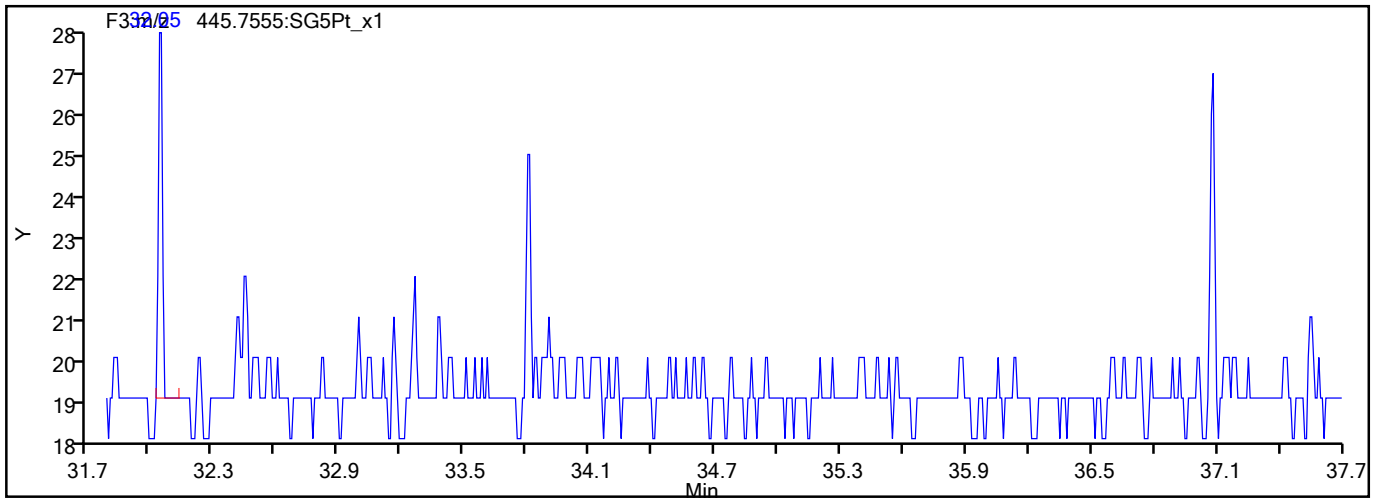

782878

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

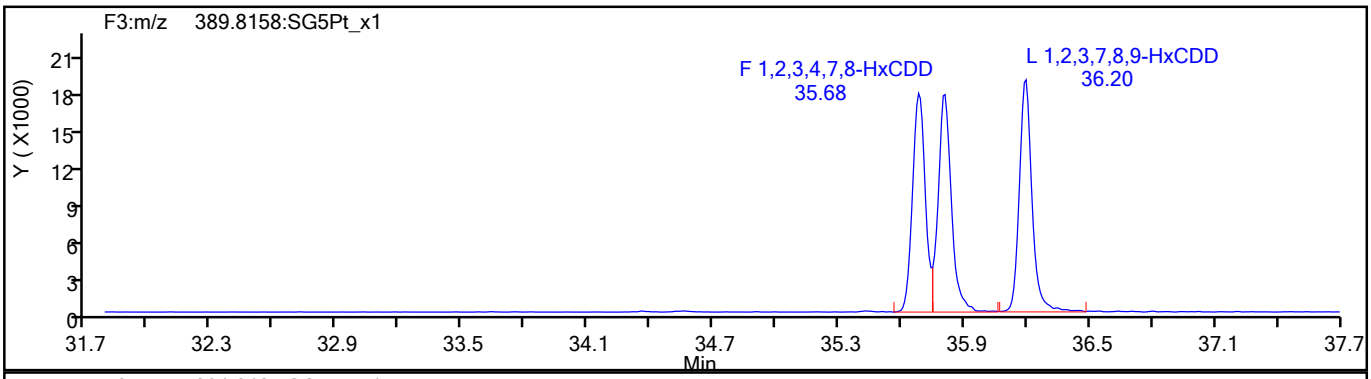

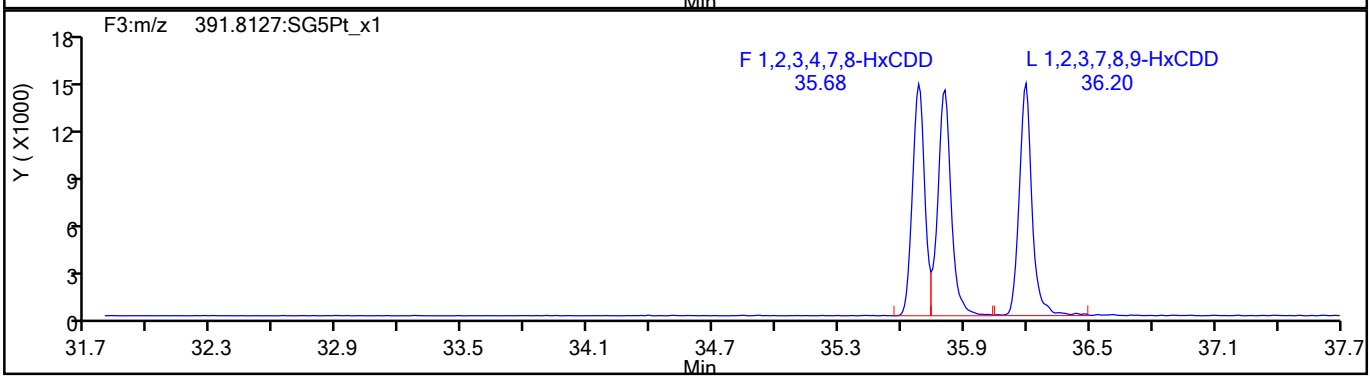

HxCDD Standards

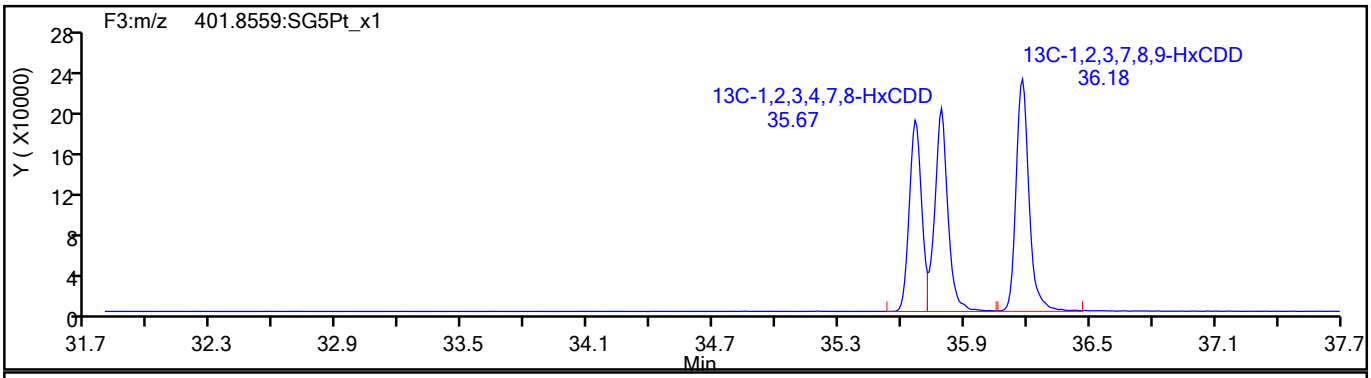

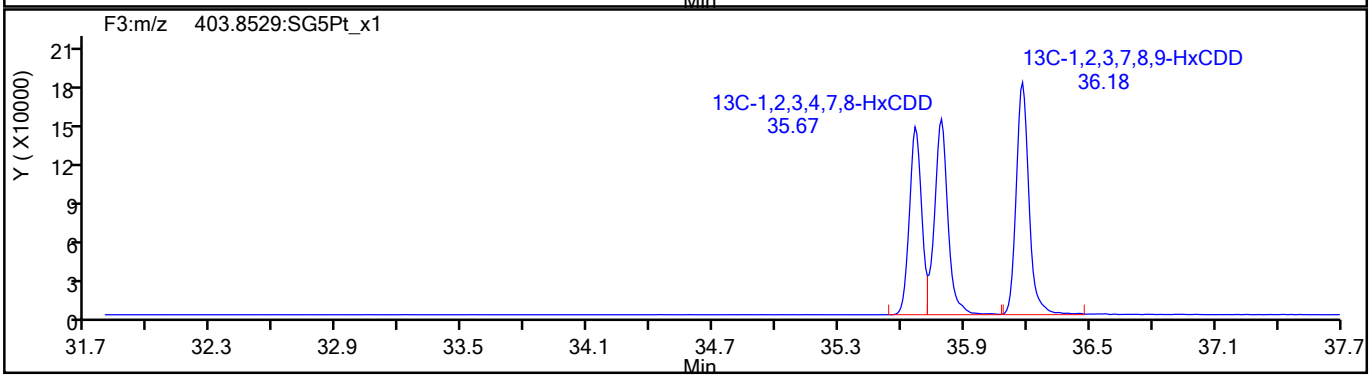

782879

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

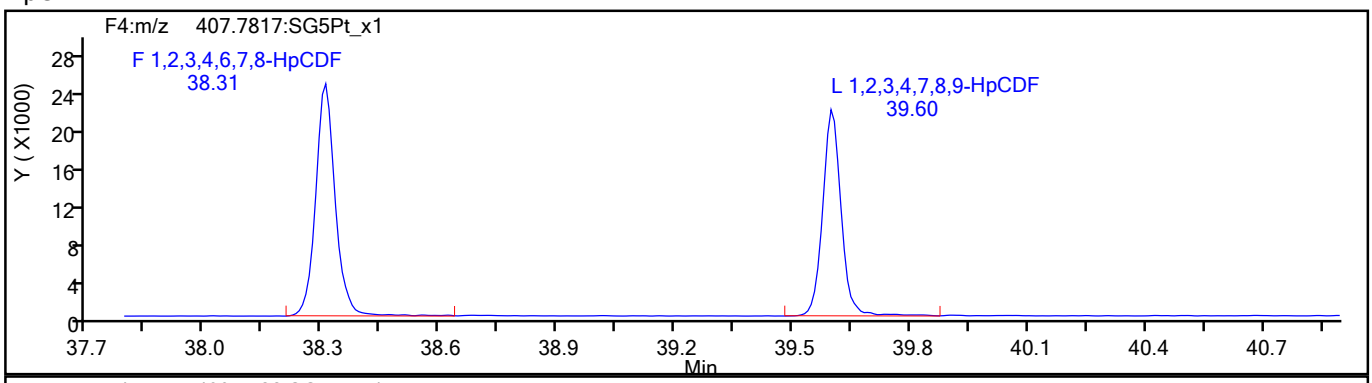

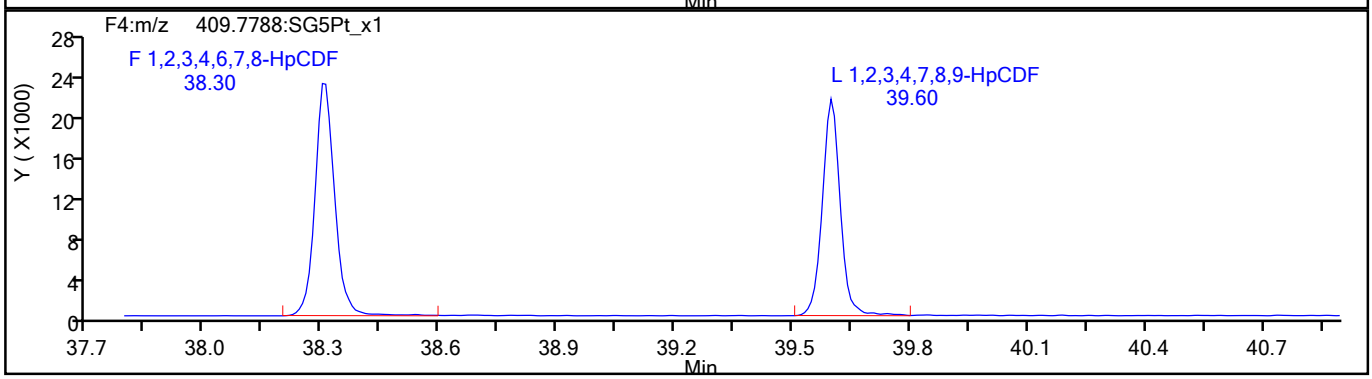

HpCDF Standards

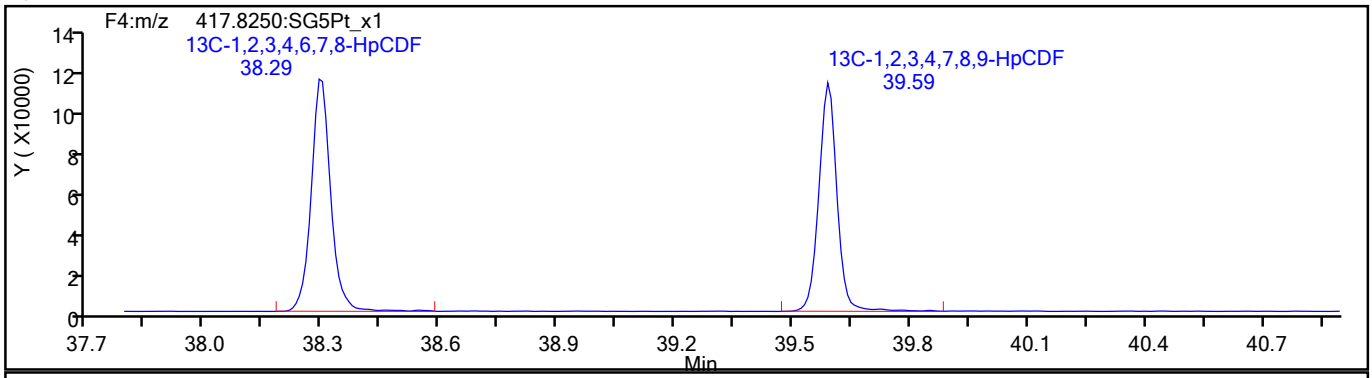

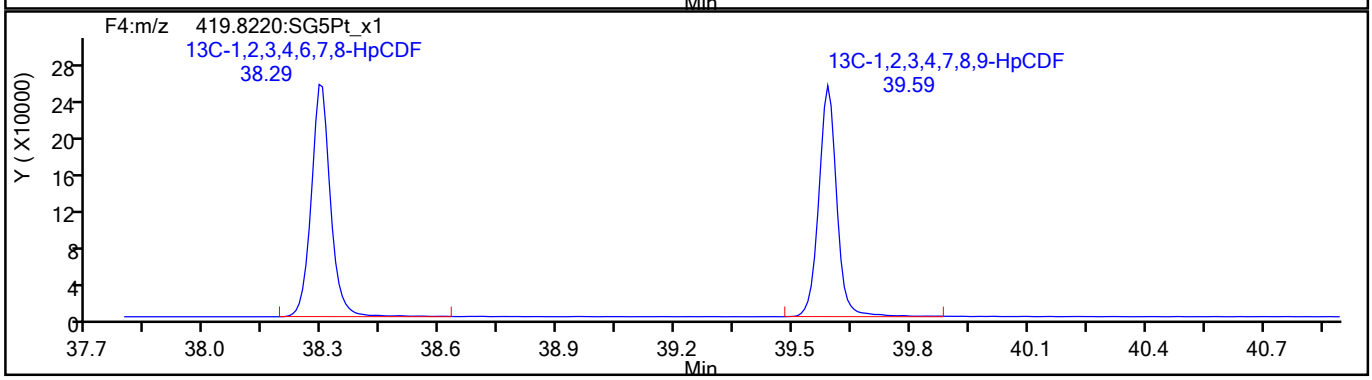

782880

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

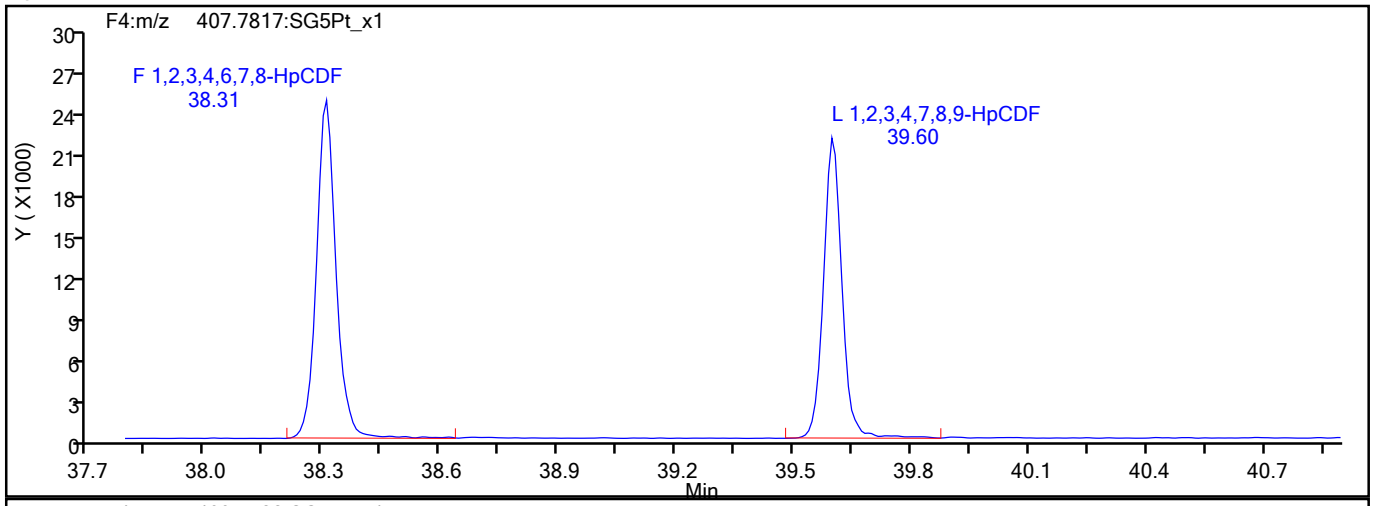

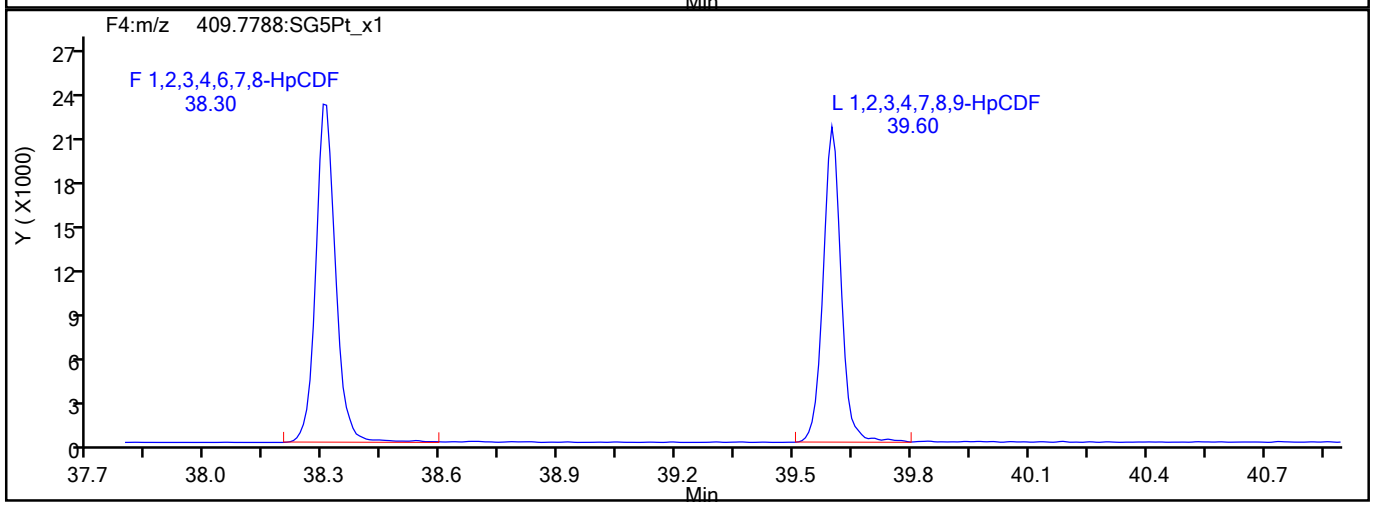

HpCDF Interference Mass

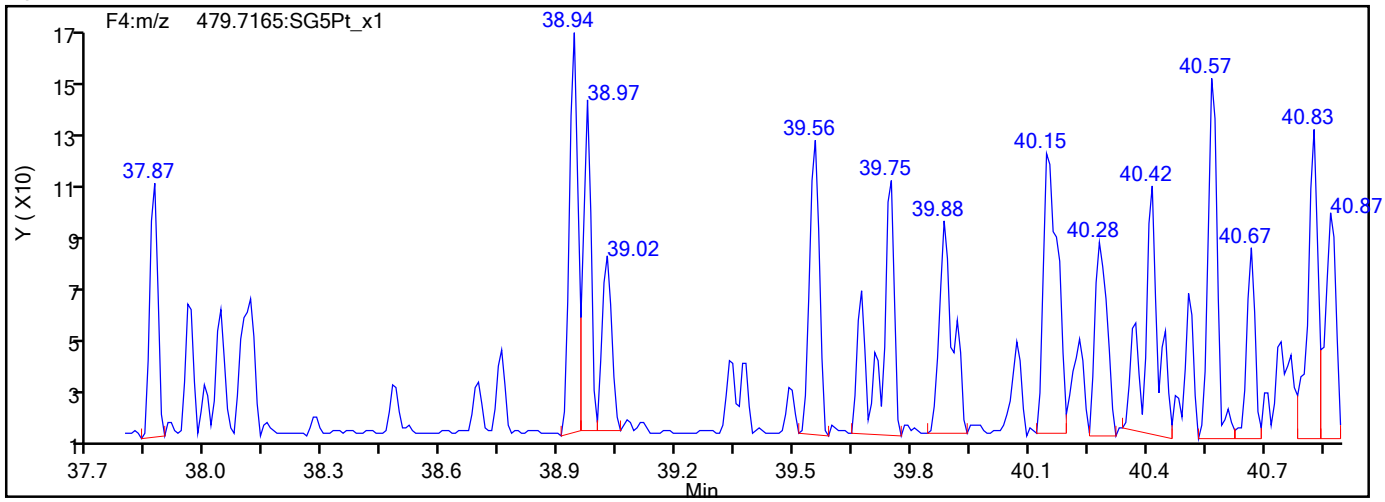

782881

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

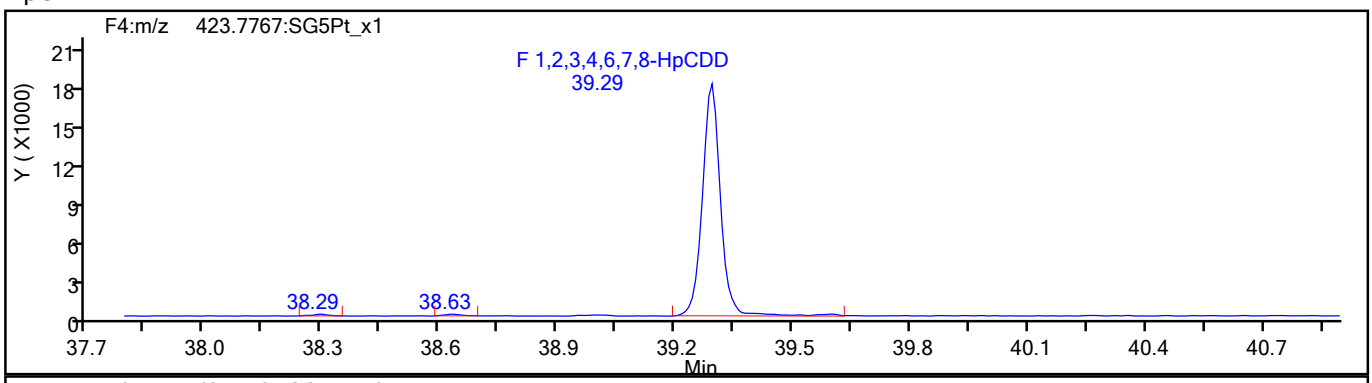

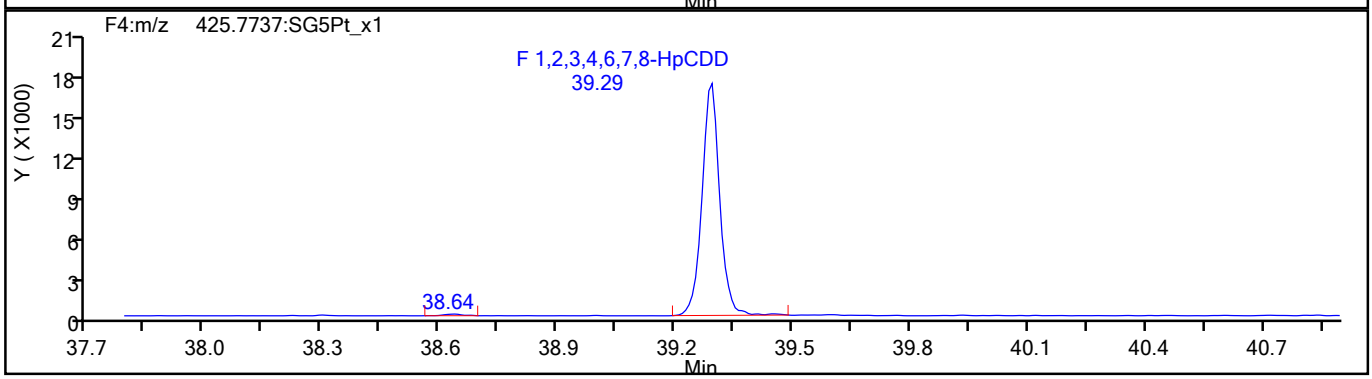

HpCDD Standards

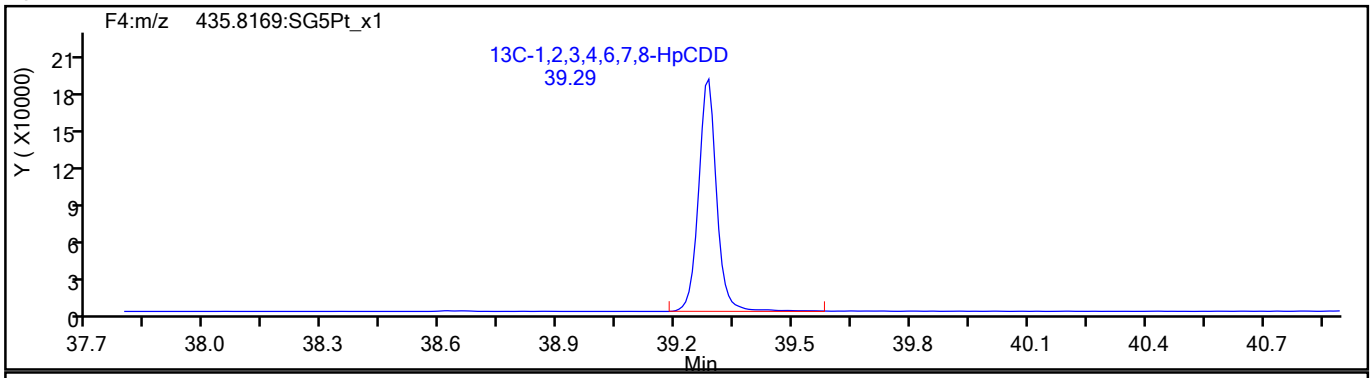

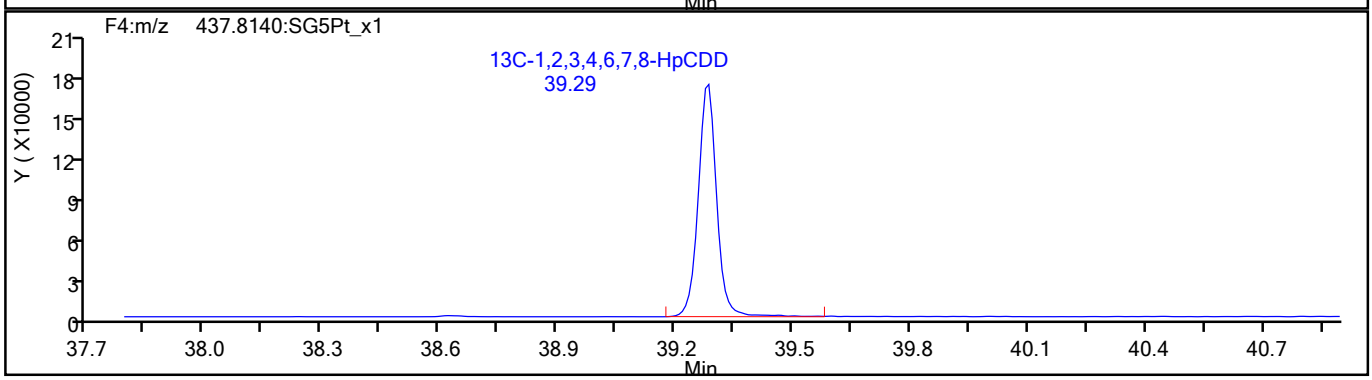

782882

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

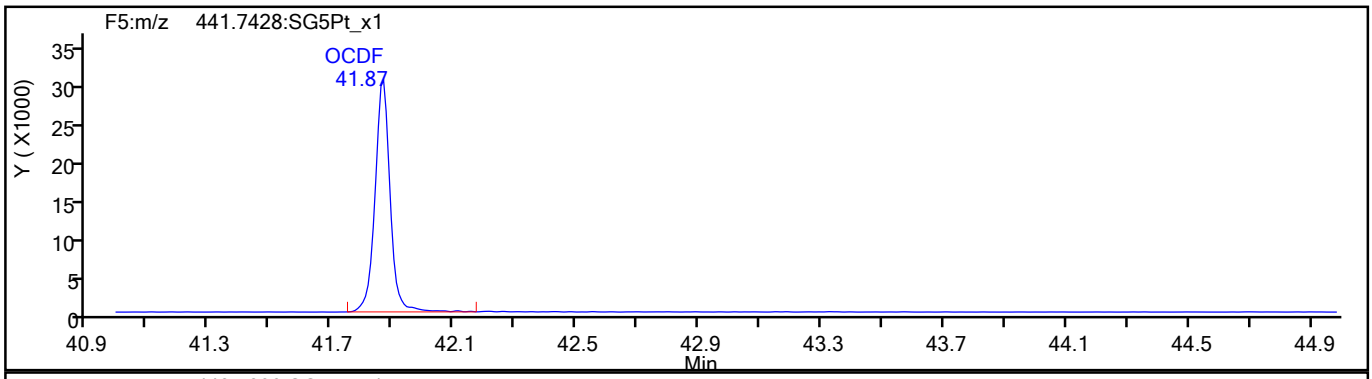

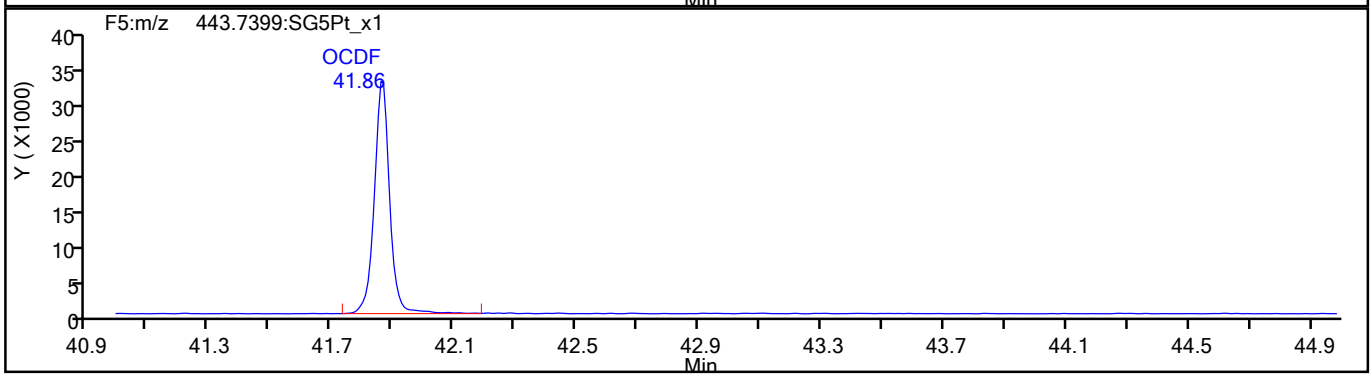

OCDF Standards

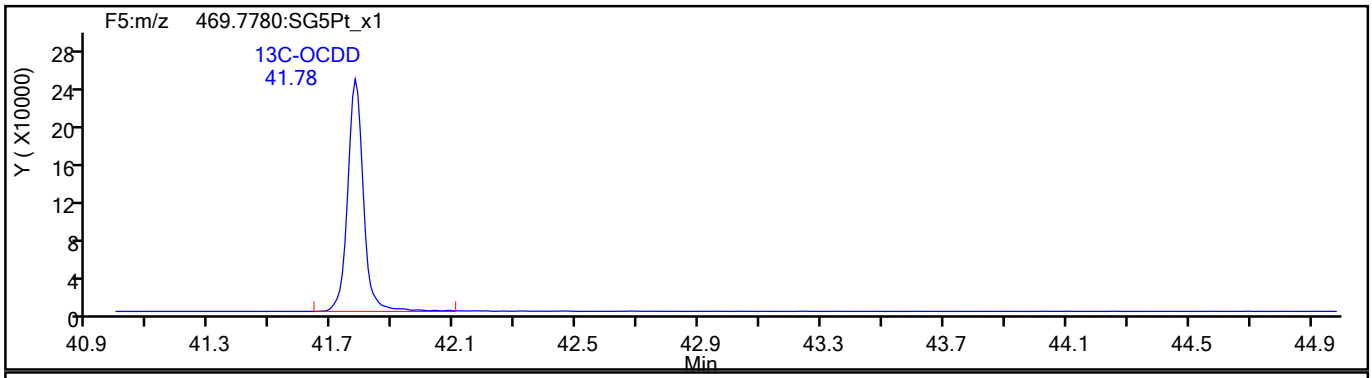

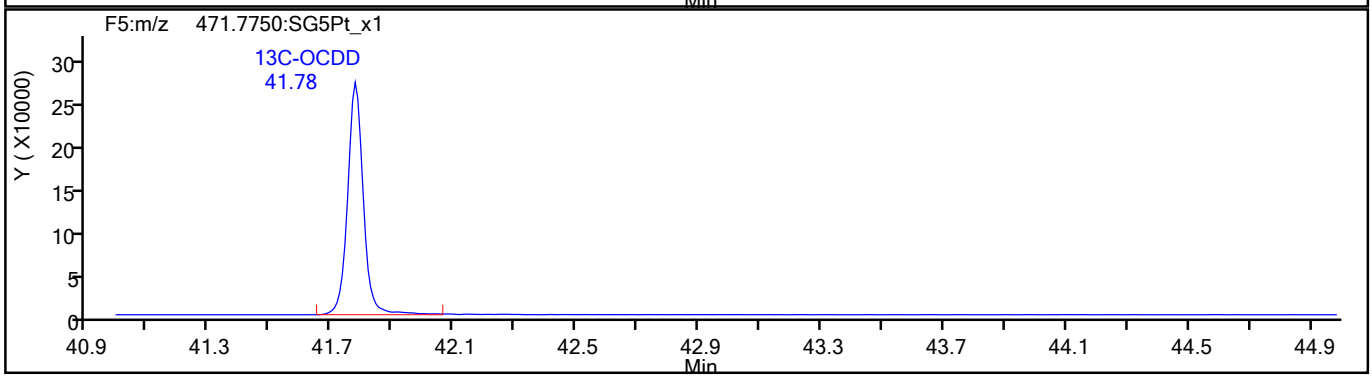

782883

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

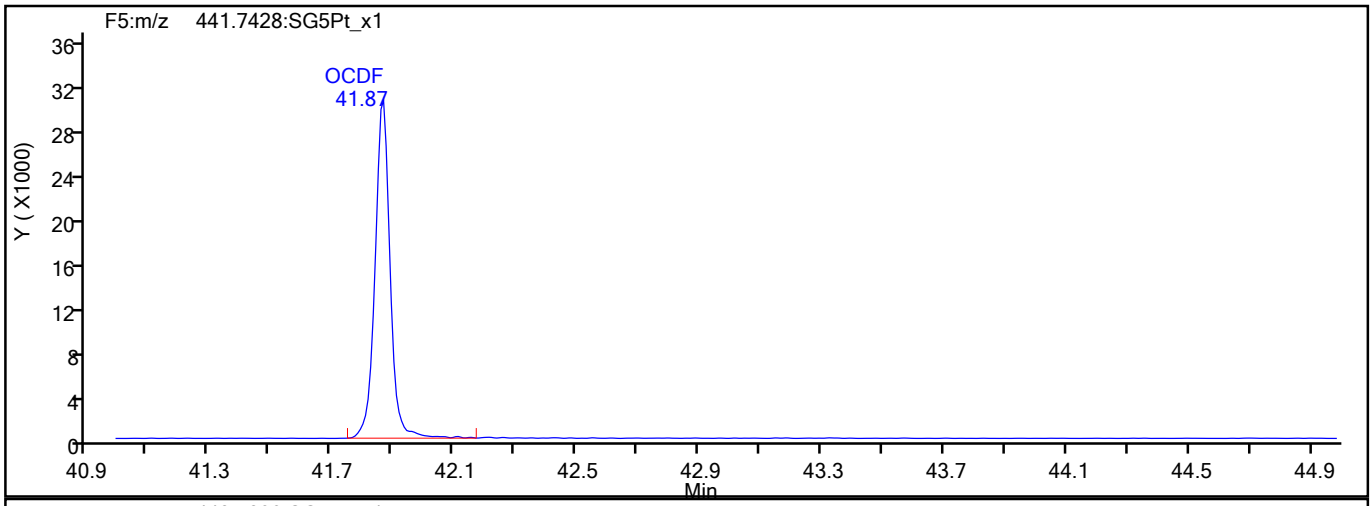

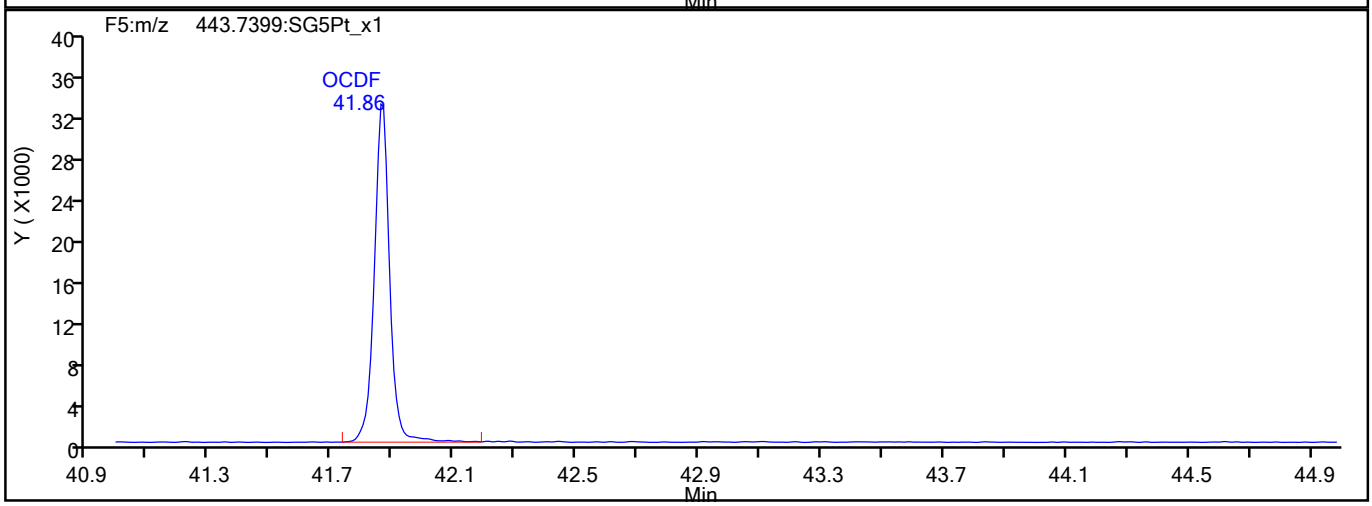

OCDF Interference Mass

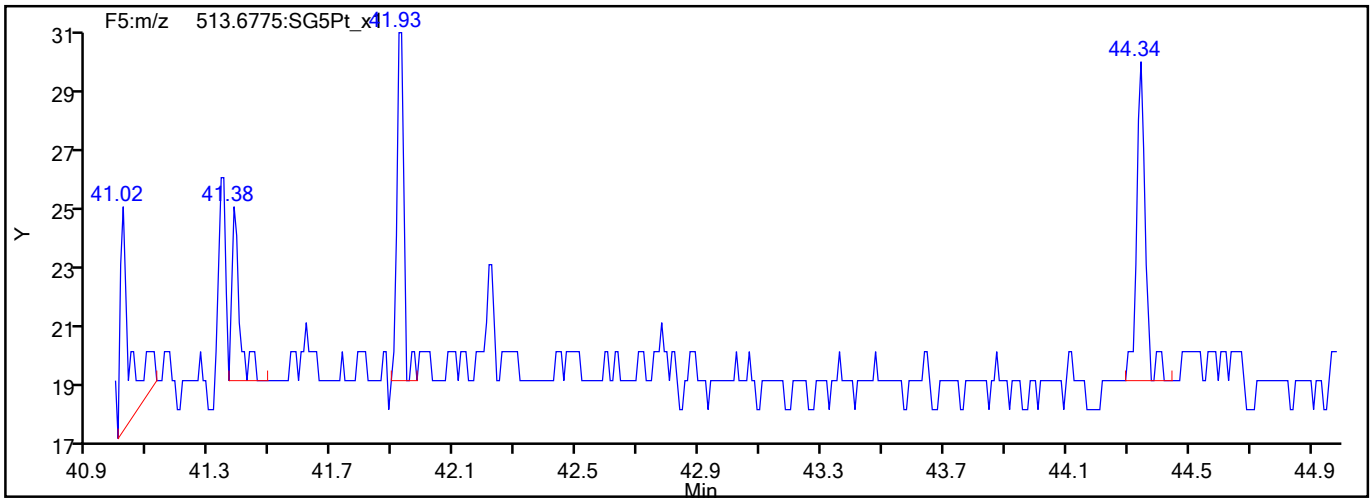

782884

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

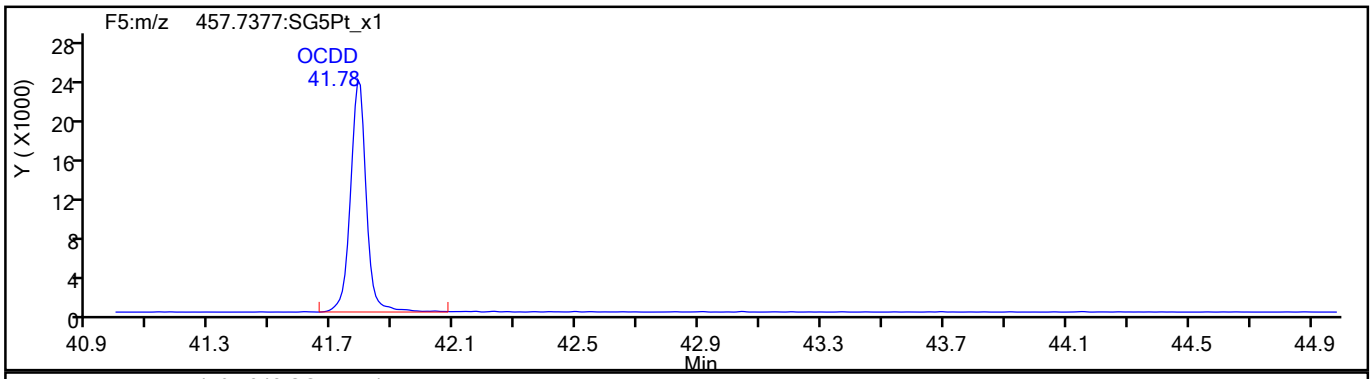

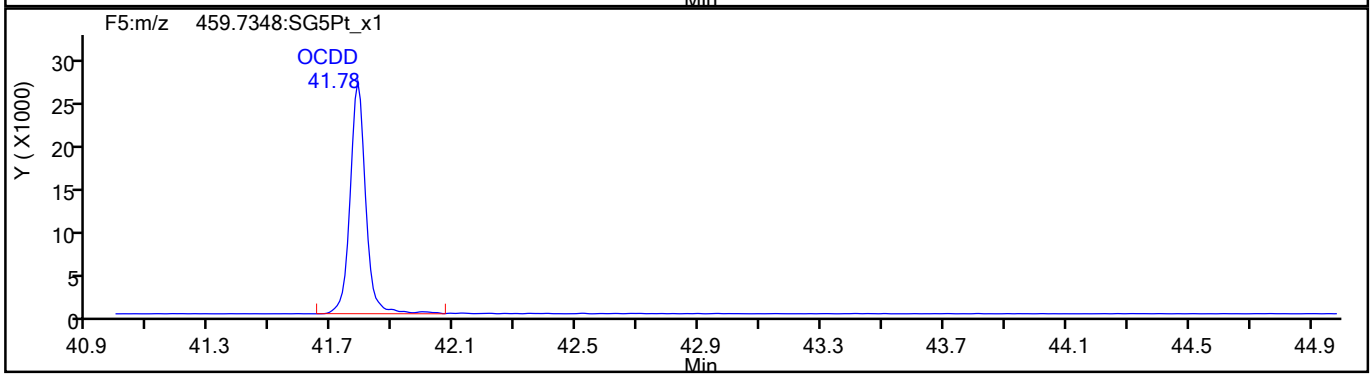

OCDD Standards

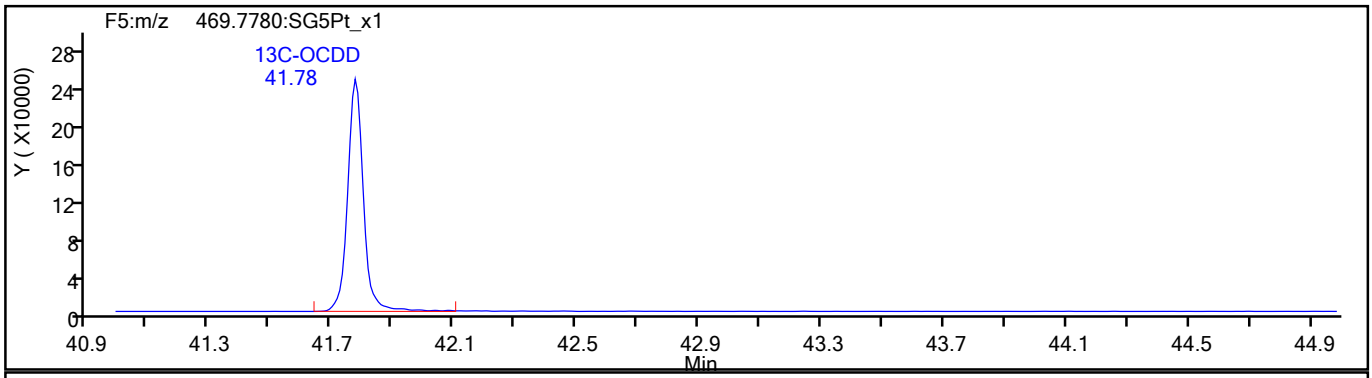

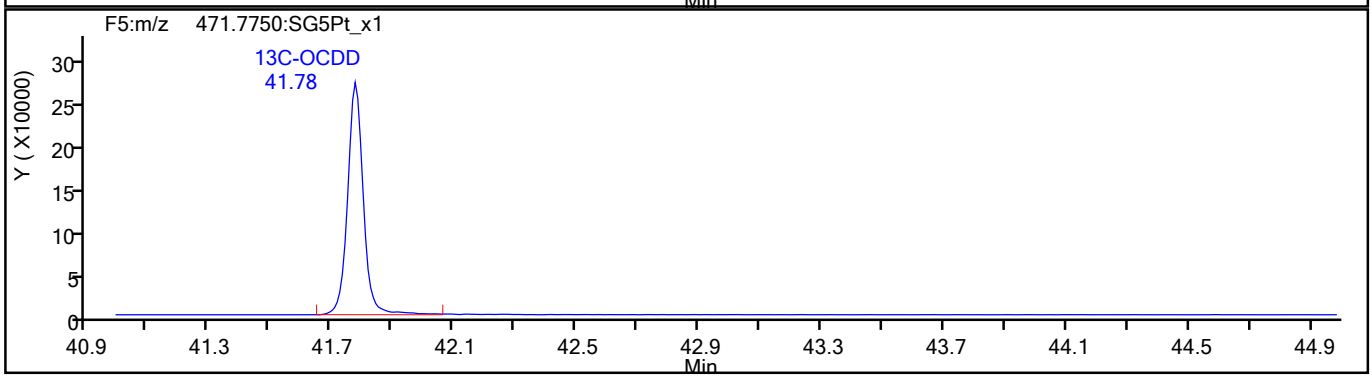

782885

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

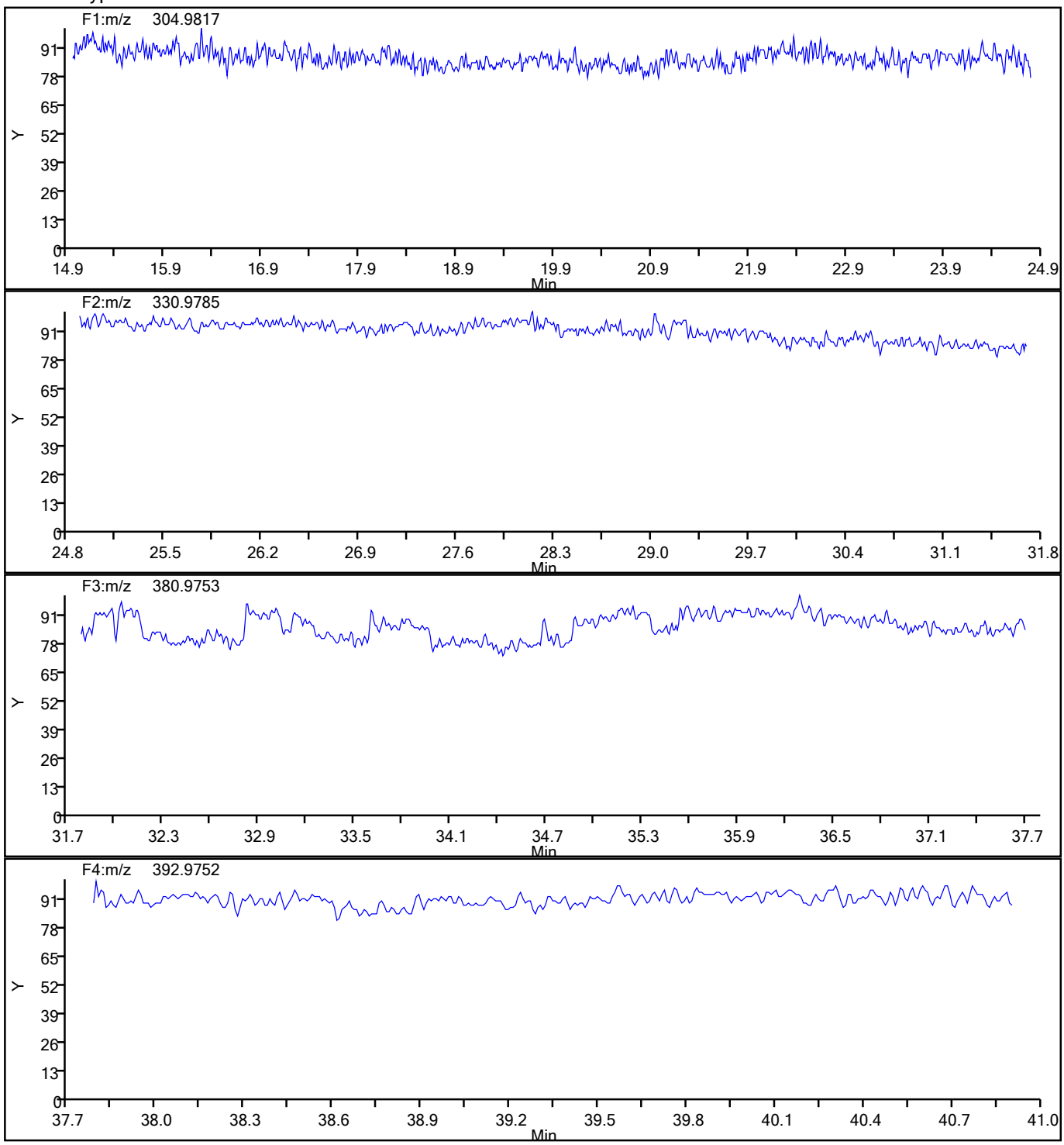

782886

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

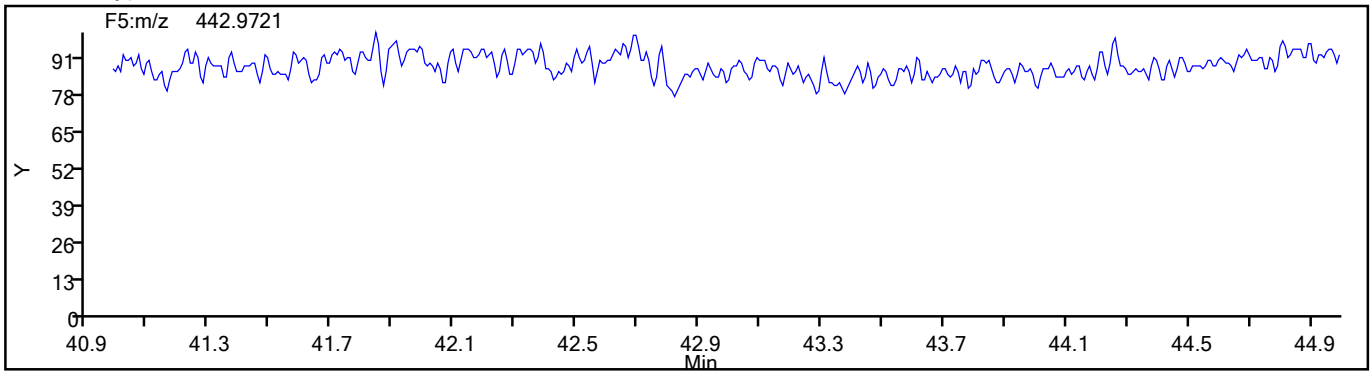

782887

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.546	1900111	0.78	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.619	2465726	0.79	1.3459	96.4	96.4	0.1978	0.1978	96.42	
2,3,7,8-TCDF	19.645	258022	0.78	1.0802	9.687	9.687	0.0168	0.0168	96.87	
S Total TCDF					9.687	9.687	0.0168	0.0168		
D 13C-2,3,7,8-TCDD	20.907	1800864	0.81	0.9317	101.7	101.7	0.1641	0.1641	102	
$ 37Cl4-2,3,7,8-TCDD	20.933	203726		1.0083	10.6	10.6	0.0134	0.0134	106	
2,3,7,8-TCDD	20.924	198062	0.75	1.0753	10.2	10.2	0.0351	0.0351	102	
S Total TCDD					10.2	10.2	0.0351	0.0351		
D 13C-1,2,3,7,8-PeCDF	26.556	2149791	1.60	1.1405	99.2	99.2	0.3269	0.3269	99.20	
1,2,3,7,8-PeCDF	26.573	1114982	1.57	1.0543	49.2	49.2	0.1379	0.1379	98.39	
D 13C-2,3,4,7,8-PeCDF	28.006	1991303	1.58	1.1253	93.1	93.1	0.3313	0.3313	93.13	
2,3,4,7,8-PeCDF	28.031	987812	1.58	1.0079	49.2	49.2	0.1665	0.1665	98.44	
S Total PeCDF					98.4	98.4	0.1522	0.1522		
D 13C-1,2,3,7,8-PeCDD	28.790	1388641	1.58	0.7165	102.0	102.0	0.1629	0.1629	102	
1,2,3,7,8-PeCDD	28.824	741897	1.57	1.0465	51.1	51.1	0.0499	0.0499	102	
S Total PeCDD					51.1	51.1	0.0499	0.0499		
D 13C-1,2,3,4,7,8-HxCDF	34.384	1841825	0.54	0.9648	115.8	115.8	0.3936	0.3936	116	
1,2,3,4,7,8-HxCDF	34.401	1093397	1.25	1.1474	51.7	51.7	0.1928	0.1928	103	
D 13C-1,2,3,6,7,8-HxCDF	34.561	2015594	0.53	1.0708	114.2	114.2	0.3547	0.3547	114	
1,2,3,6,7,8-HxCDF	34.578	1245549	1.24	1.2178	50.7	50.7	0.1720	0.1720	101	
D 13C-2,3,4,6,7,8-HxCDF	35.447	1861559	0.53	1.0413	108.4	108.4	0.3647	0.3647	108	
2,3,4,6,7,8-HxCDF	35.463	1151149	1.26	1.2145	50.9	50.9	0.1650	0.1650	102	
D 13C-1,2,3,7,8,9-HxCDF	36.399	1657413	0.54	0.9731	103.3	103.3	0.3903	0.3903	103	
1,2,3,7,8,9-HxCDF	36.408	1038574	1.24	1.2401	50.5	50.5	0.1718	0.1718	101	
S Total HxCDF					203.9	203.9	0.1754	0.1754		
* 13C-1,2,3,7,8,9-HxCDD	36.197	1648545	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.691	1348471	1.27	0.7587	107.8	107.8	0.2143	0.2143	108	
1,2,3,4,7,8-HxCDD	35.699	724729	1.28	1.0608	50.7	50.7	0.0918	0.0918	101	
D 13C-1,2,3,6,7,8-HxCDD	35.809	1460100	1.24	0.8593	103.1	103.1	0.1892	0.1892	103	
1,2,3,6,7,8-HxCDD	35.826	760446	1.23	0.9933	52.4	52.4	0.0967	0.0967	105	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.214	786511	1.27	1.1094	50.5	50.5	0.0872	0.0872	101	
S Total HxCDD					153.6	153.6	0.0919	0.0919		
D 13C-1,2,3,4,6,7,8-HpCDF	38.316	1182209	0.45	0.7359	97.4	97.4	0.3866	0.3866	97.44	
1,2,3,4,6,7,8-HpCDF	38.324	878086	1.05	1.4421	51.5	51.5	0.1699	0.1699	103	
D 13C-1,2,3,4,7,8,9-HpCDF	39.614	1080883	0.46	0.6854	95.7	95.7	0.4151	0.4151	95.66	
1,2,3,4,7,8,9-HpCDF	39.622	727362	1.05	1.3092	51.4	51.4	0.1875	0.1875	103	
S Total HpCDF					102.9	102.9	0.1787	0.1787		
D 13C-1,2,3,4,6,7,8-HpCDD	39.302	1094713	1.07	0.6745	98.4	98.4	0.2448	0.2448	98.45	
1,2,3,4,6,7,8-HpCDD	39.310	572466	1.05	1.0503	49.8	49.8	0.1044	0.1044	99.58	
S Total HpCDD					49.8	49.8	0.1044	0.1044		
D 13C-OCDD	41.794	1676139	0.90	0.5446	186.7	186.7	0.2845	0.2845	93.34	
OCDF	41.887	1118740	0.90	1.3168	101.4	101.4	0.1189	0.1189	101	
OCDD	41.803	910980	0.89	1.0620	102.4	102.4	0.1082	0.1082	102	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.546	20.547	0		832498	129736	116	290	1118		
333.9338	20.546	20.547	0		1067613	165878	65	162	2552	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.619	19.616	0	0.955	1091704	180342	213	532	847		
317.9389	19.619	19.616	0	0.955	1374022	217372	102	255	2131	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.645	19.646	0	1.001	113254	18239	10	25	1824		
305.8987	19.645	19.646	0	1.001	144768	23858	19	47	1256	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.907	20.910	0	1.018	803279	117913	116	290	1016		
333.9338	20.907	20.910	0	1.018	997585	152094	65	162	2340	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.933	20.935	0	1.019	203726	29833	16	40	1865		
2,3,7,8-TCDD											
319.8965	20.924	20.939	-1	1.001	85173	13080	31	77	422		
321.8936	20.941	20.939	0	1.002	112889	16258	10	25	1626	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.556	26.560	0	1.292	1323851	238814	266	665	898		
353.8970	26.556	26.560	0	1.292	825940	146442	175	437	837	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.573	26.584	-1	1.001	680306	120693	132	330	914		
341.8567	26.573	26.584	-1	1.001	434676	76404	92	230	830	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.006	28.014	0	1.363	1219332	203015	266	665	763		
353.8970	28.006	28.014	0	1.363	771971	130766	175	437	747	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.031	28.039	0	1.001	604266	98138	132	330	743		
341.8567	28.031	28.039	0	1.001	383546	62644	92	230	681	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.790	28.801	-1	1.401	851334	132655	82	205	1618		
369.8919	28.790	28.801	-1	1.401	537307	81623	56	140	1458	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.824	28.828	0	1.001	452903	70092	31	77	2261		
357.8516	28.824	28.828	0	1.001	288994	44853	14	35	3204	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.384	34.384	0	0.950	645542	131022	198	495	662		
385.8610	34.384	34.384	0	0.950	1196283	248690	400	1000	622	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.401	34.405	0	1.000	607111	119877	181	452	662		
375.8178	34.401	34.405	0	1.000	486286	95304	155	387	615	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.561	34.562	0	0.955	696119	139607	198	495	705		
385.8610	34.561	34.562	0	0.955	1319475	261396	400	1000	653	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.578	34.582	0	1.000	690624	134257	181	452	742		
375.8178	34.578	34.582	0	1.000	554925	106932	155	387	690	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.447	35.444	0	0.979	648311	145832	198	495	737		
385.8610	35.447	35.444	0	0.979	1213248	273234	400	1000	683	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.463	35.461	0	1.000	640849	139500	181	452	771		
375.8178	35.463	35.461	0	1.000	510300	111840	155	387	722	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.399	36.388	1	1.006	579583	134604	198	495	680		
385.8610	36.399	36.388	1	1.006	1077830	259553	400	1000	649	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.408	36.402	0	1.000	575769	139453	181	452	770		
375.8178	36.408	36.402	0	1.000	462805	111702	155	387	721	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.197	36.192	0		918631	219913	146	365	1506		
403.8529	36.197	36.192	0		729914	173739	110	275	1579	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.691	35.680	1	0.986	754120	185149	146	365	1268		
403.8529	35.691	35.680	1	0.986	594351	145418	110	275	1322	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.699	35.695	0	1.000	407415	100236	71	177	1412		
391.8127	35.699	35.695	0	1.000	317314	80745	58	145	1392	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.809	35.805	0	0.989	809032	182963	146	365	1253		
403.8529	35.809	35.805	0	0.989	651068	152224	110	275	1384	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.826	35.820	0	1.000	419224	96522	71	177	1359		
391.8127	35.826	35.820	0	1.000	341222	77256	58	145	1332	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.214	36.208	0	1.015	440686	104923	71	177	1478		
391.8127	36.214	36.208	0	1.015	345825	82846	58	145	1428	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.316	38.305	1	1.059	366846	105531	154	385	685		
419.8220	38.316	38.305	1	1.059	815363	231224	294	735	786	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.324	38.317	0	1.000	449936	128816	169	422	762		
409.7788	38.324	38.317	0	1.000	428150	123728	161	402	768	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.614	39.600	1	1.094	340338	106309	154	385	690		
419.8220	39.606	39.600	0	1.094	740545	229697	294	735	781	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.622	39.608	1	1.000	372140	117961	169	422	698		
409.7788	39.622	39.608	1	1.000	355222	111585	161	402	693	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.302	39.293	1	1.086	567057	176920	136	340	1301		
437.8140	39.302	39.293	1	1.086	527656	171361	124	310	1382	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.310	39.301	1	1.000	293602	91347	77	192	1186		
425.7737	39.310	39.301	1	1.000	278864	87962	76	190	1157	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.794	41.785	1	1.155	795323	226496	132	330	1716		
471.7750	41.794	41.785	1	1.155	880816	252365	112	280	2253	0.90(0.76-1.02)	
OCDF											
441.7428	41.887	41.875	1	1.002	530577	155278	73	182	2127		
443.7399	41.887	41.875	1	1.002	588163	168537	77	192	2189	0.90(0.76-1.02)	
OCDD											
457.7377	41.803	41.794	1	1.000	427984	122796	54	135	2274		
459.7348	41.803	41.794	1	1.000	482996	140394	56	140	2507	0.89(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

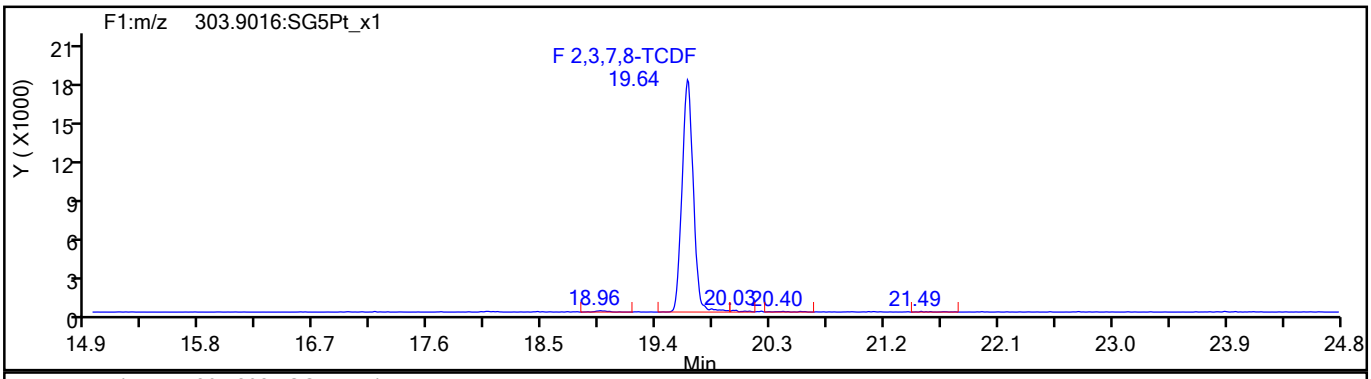

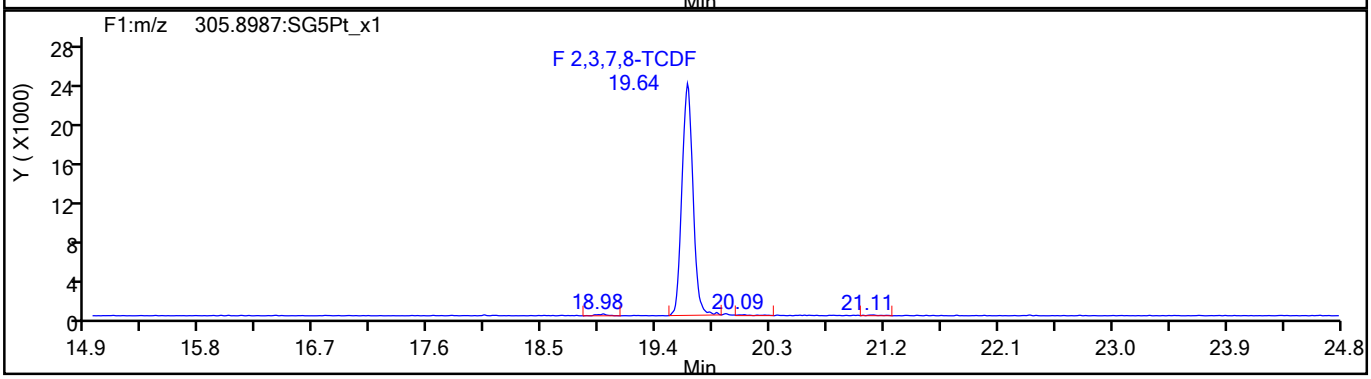

TCDF Standards

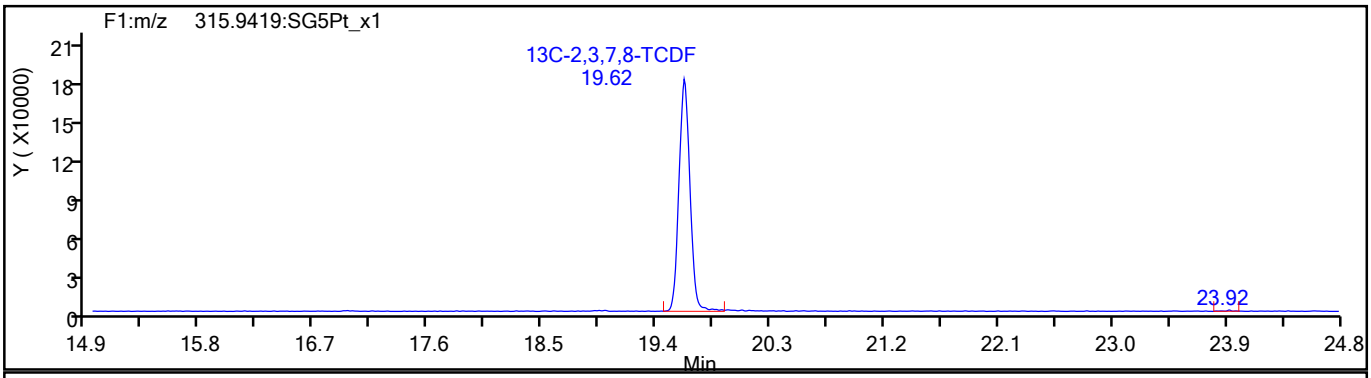

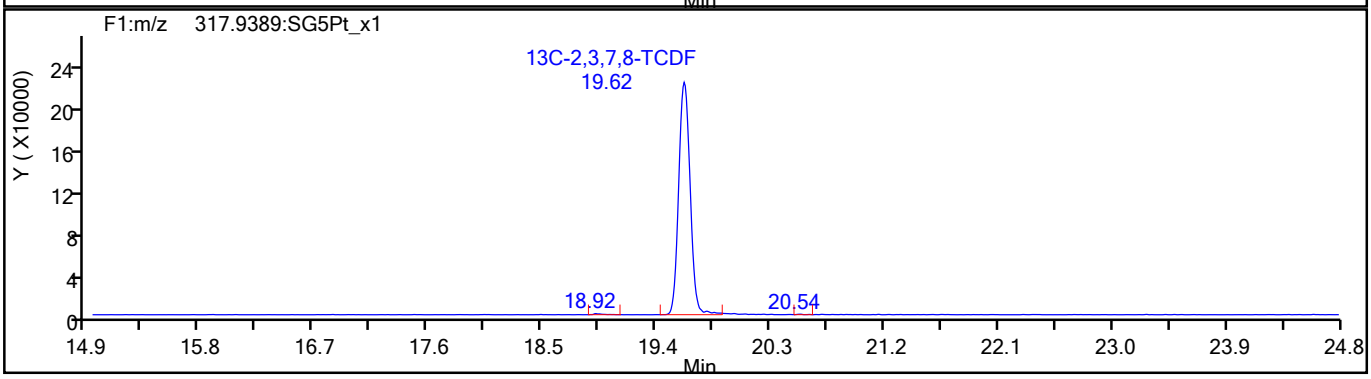

782893

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

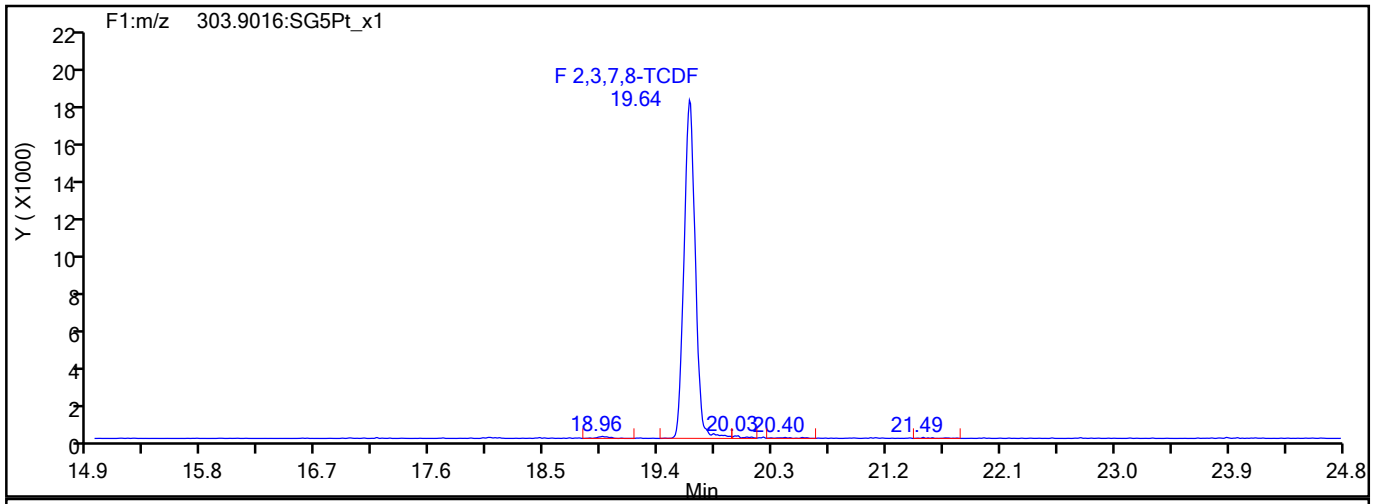

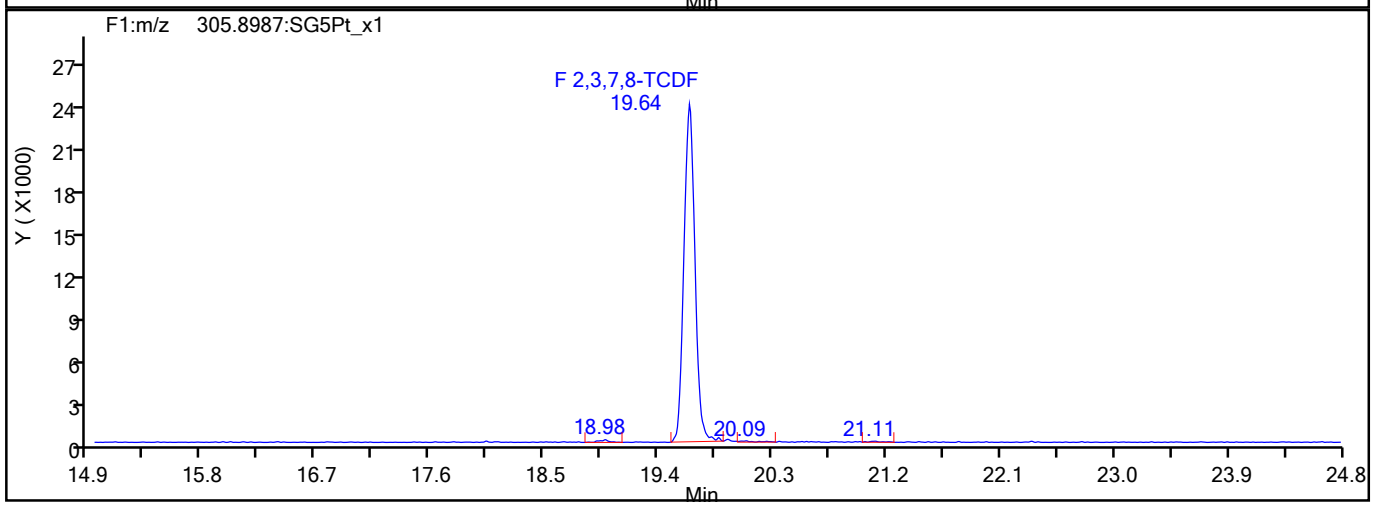

TCDF Interference Mass

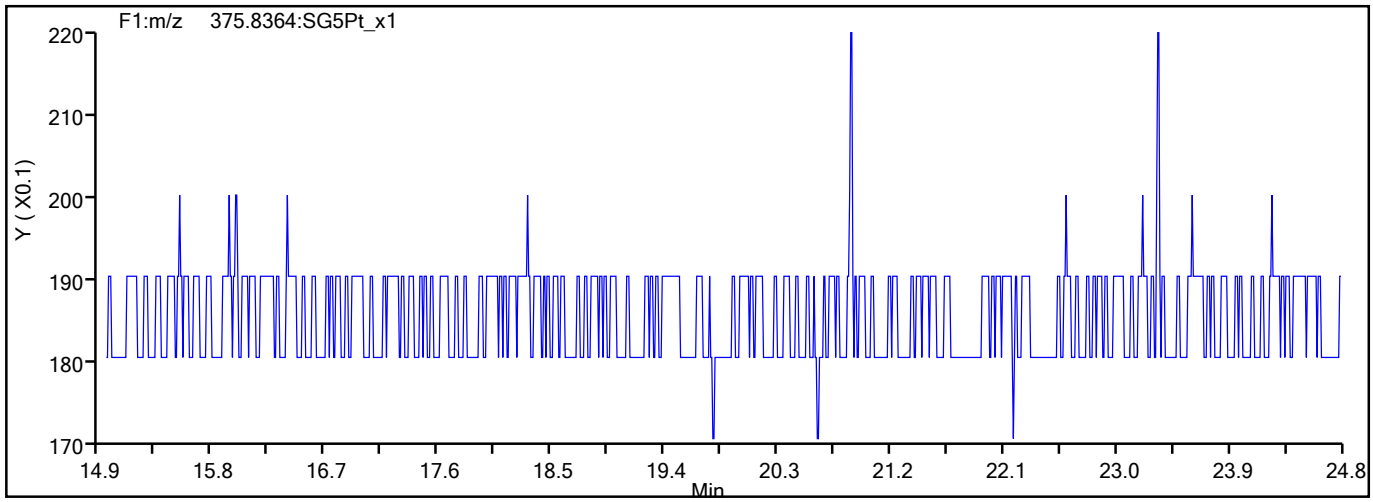

782894

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

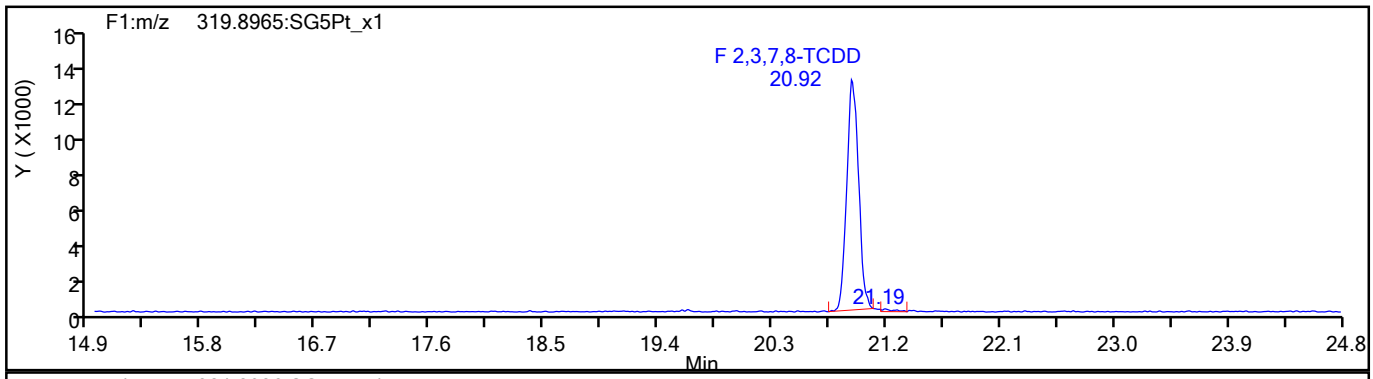

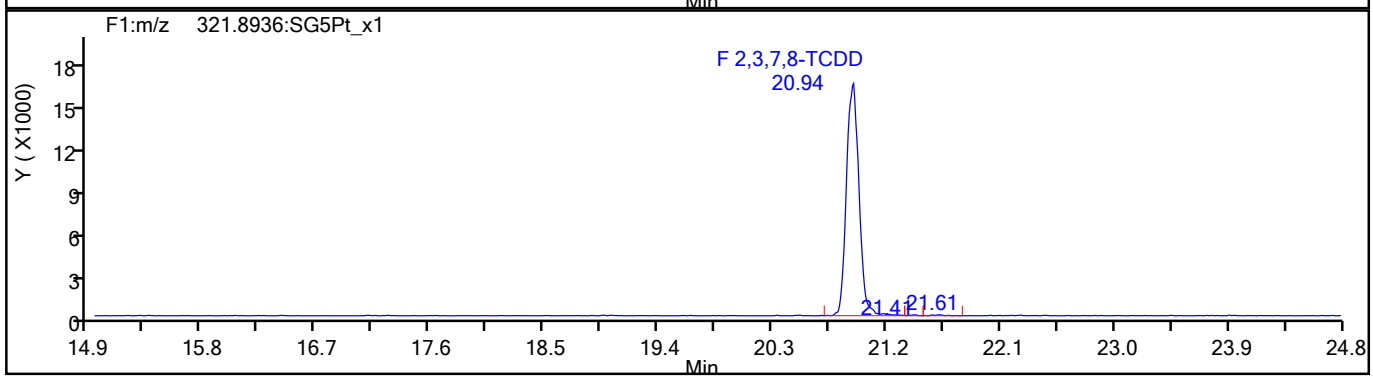

TCDD Standards

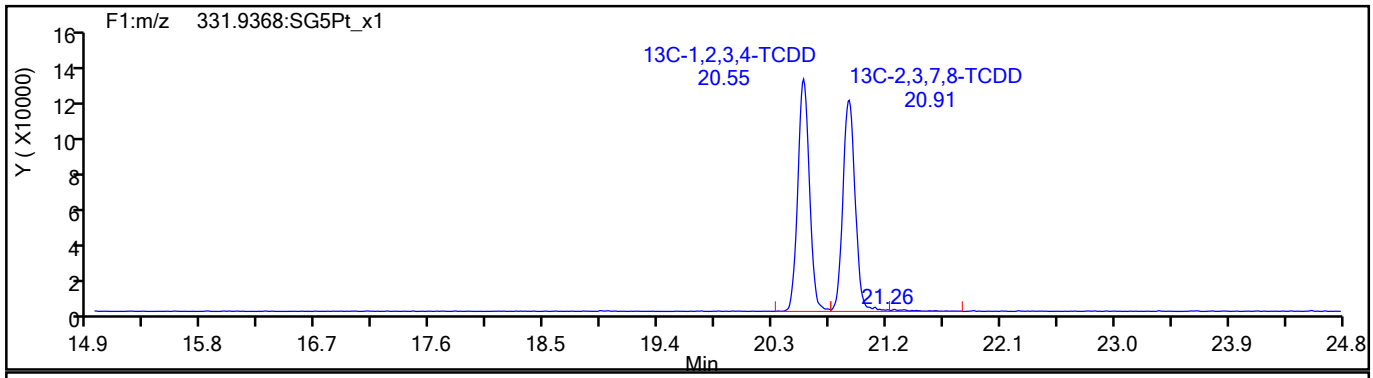

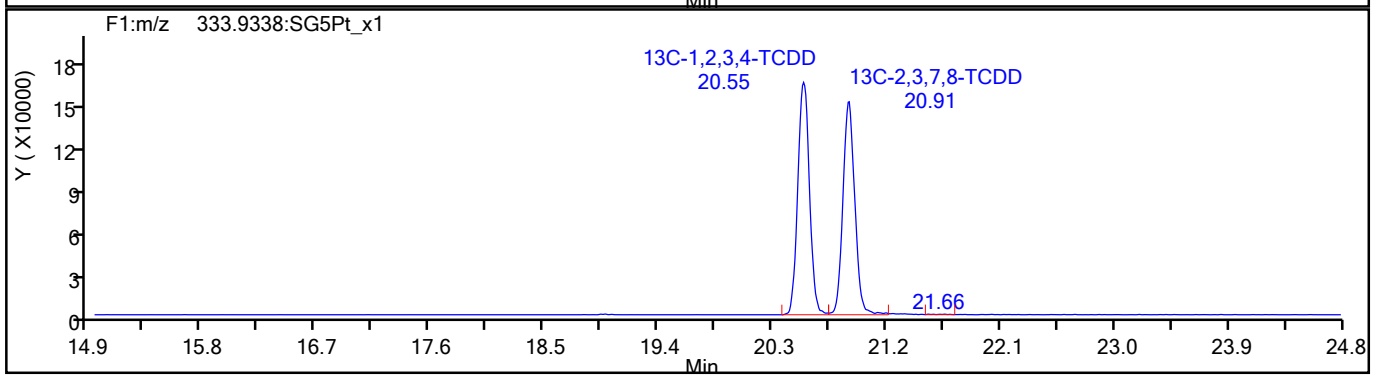

782895

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

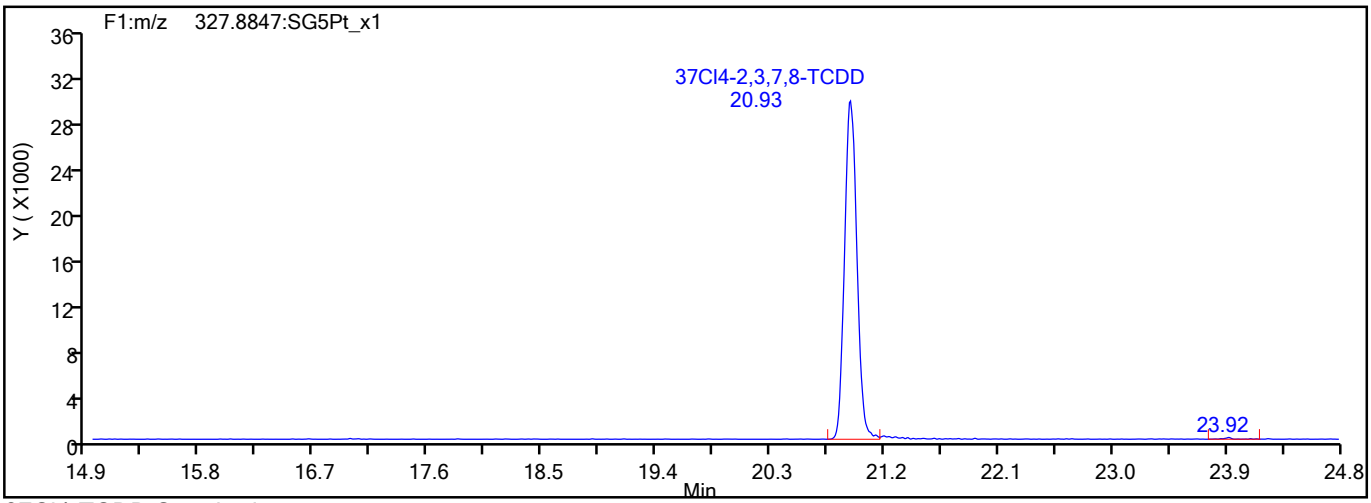

37Cl4-TCDD Standards

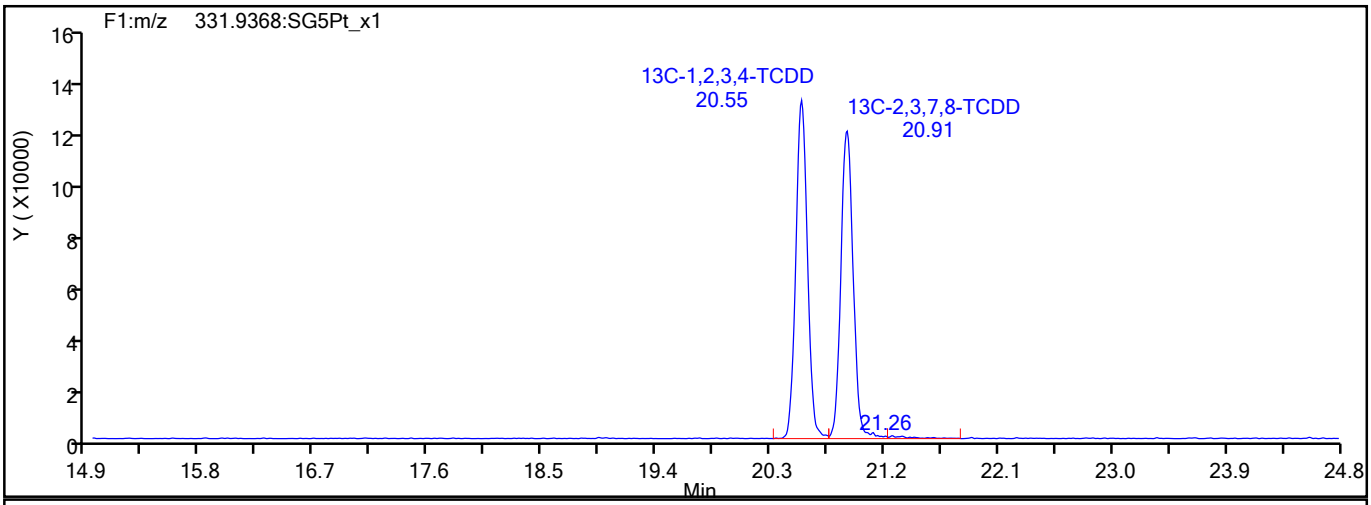

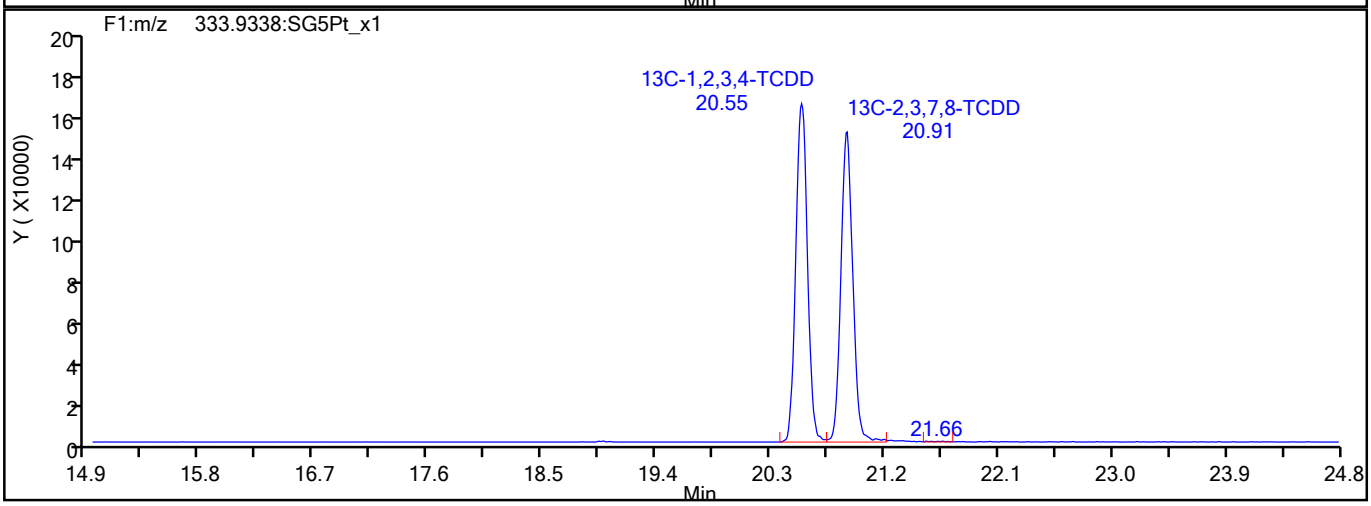

782896

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

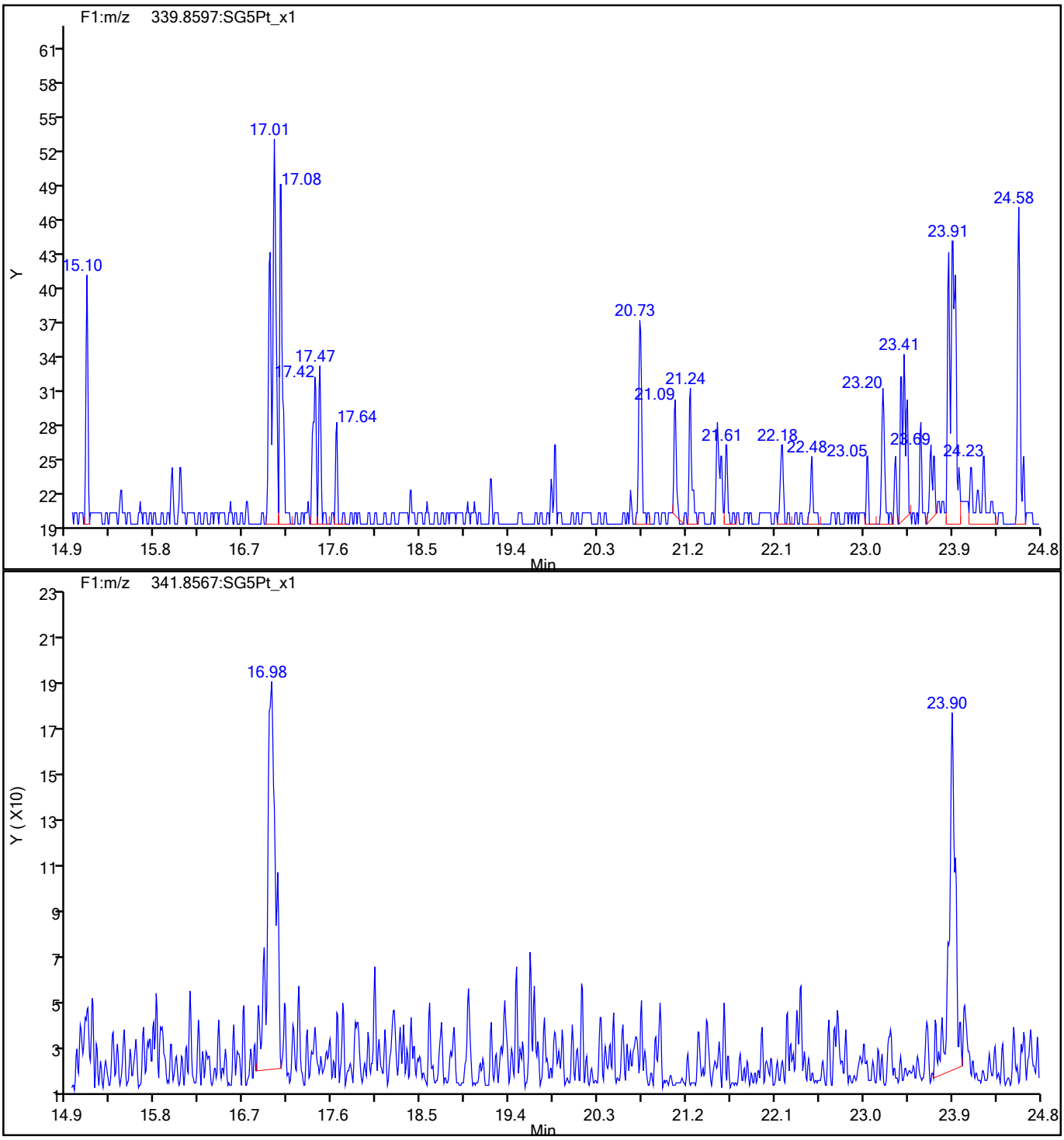

782897

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

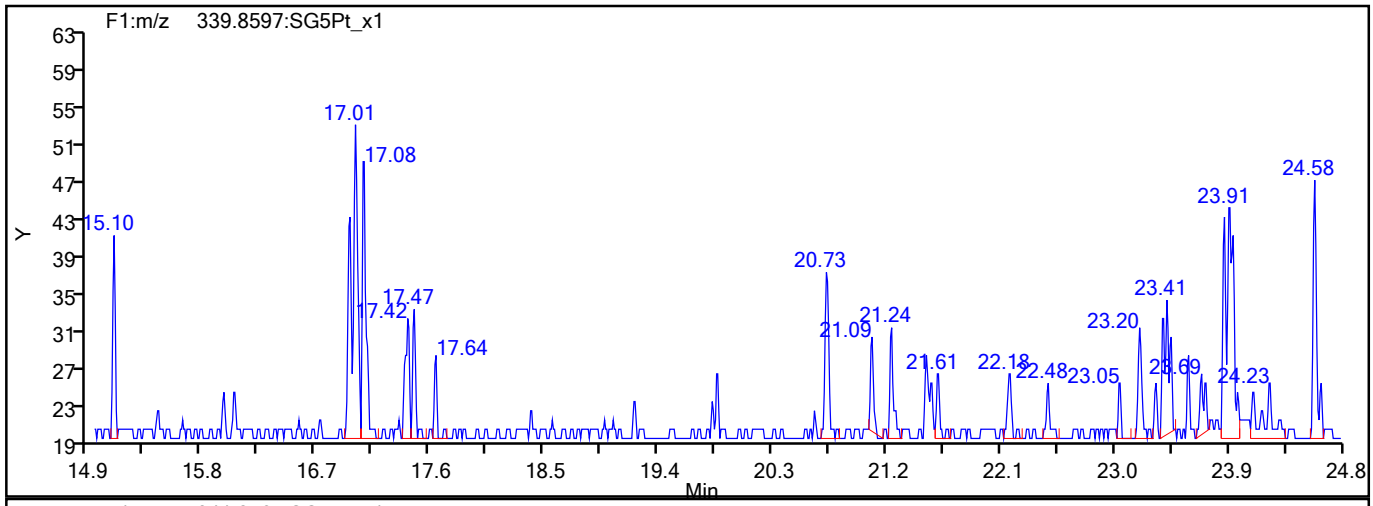

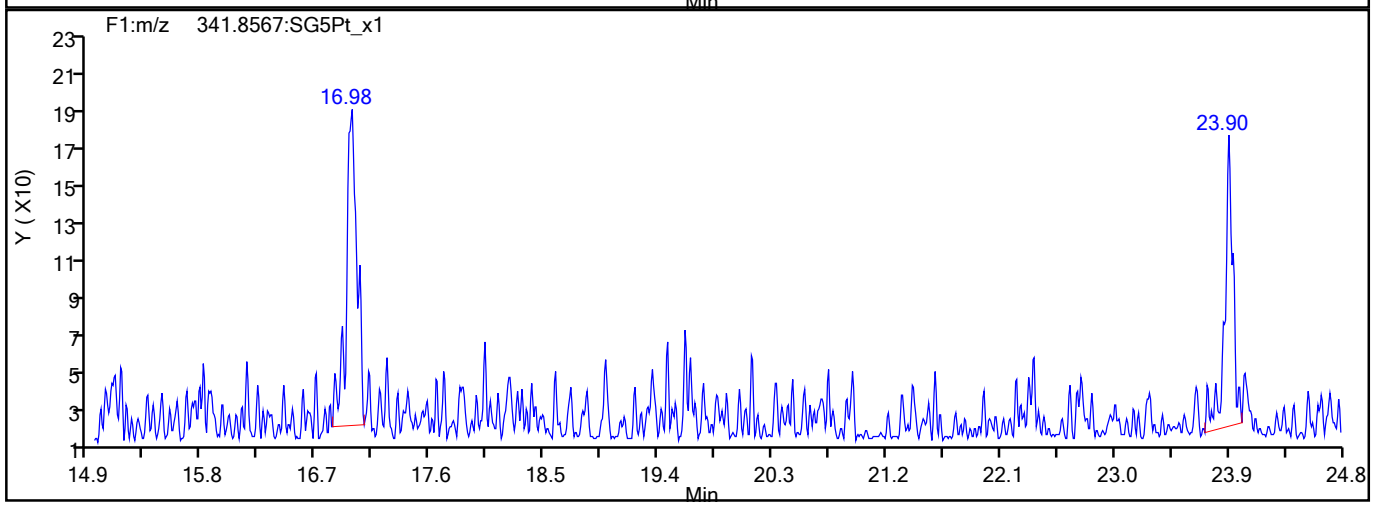

F1 PeCDFs Interference Mass

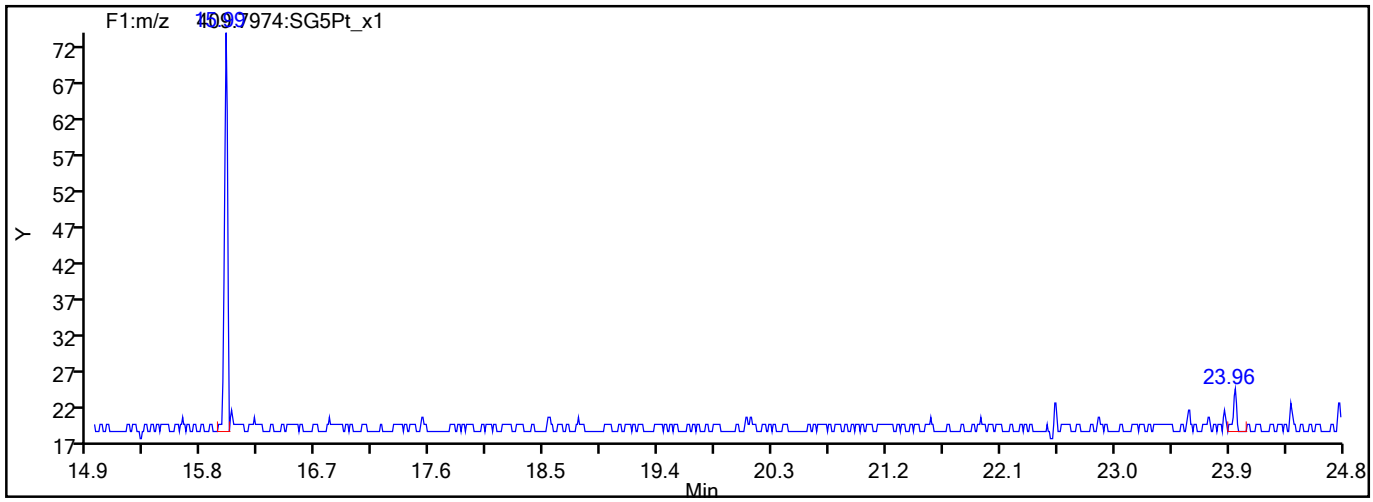

782898

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

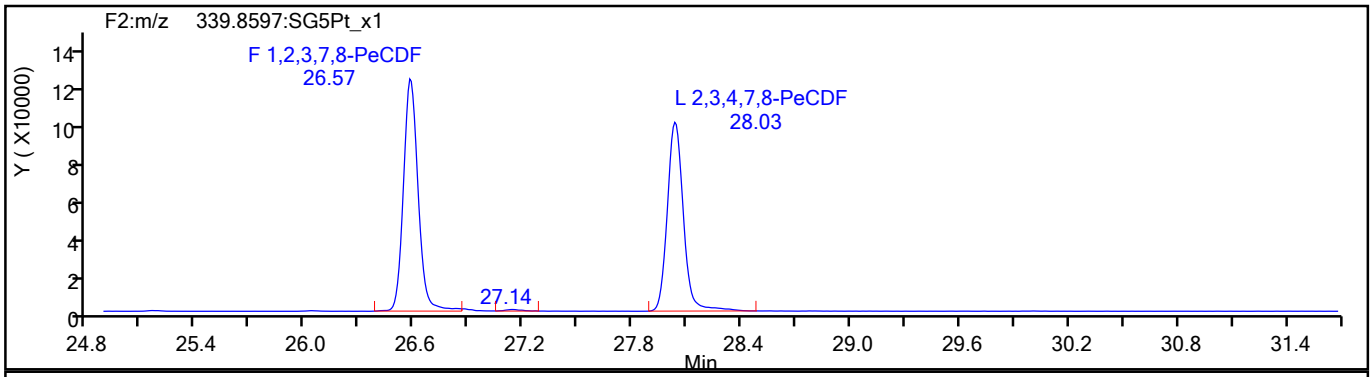

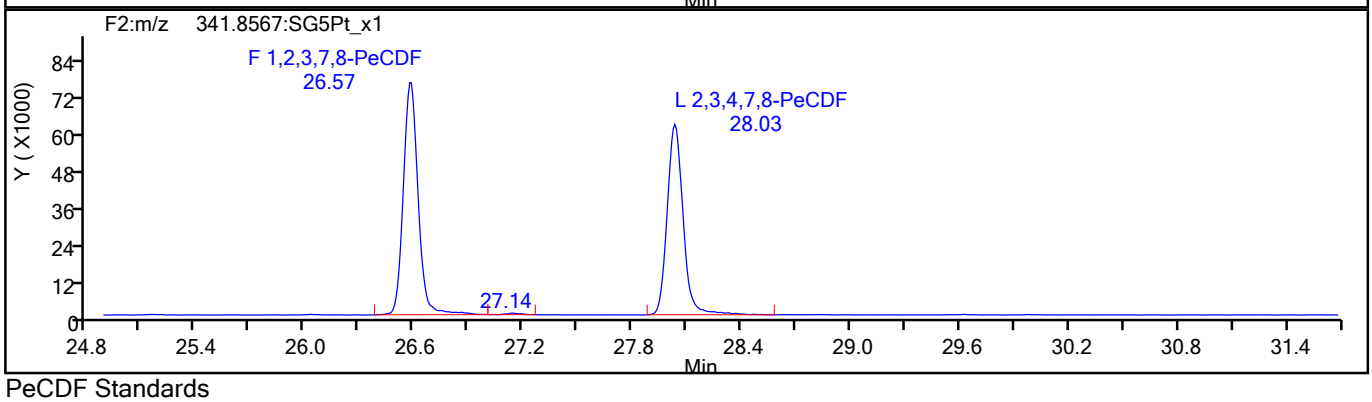

PeCDF Standards

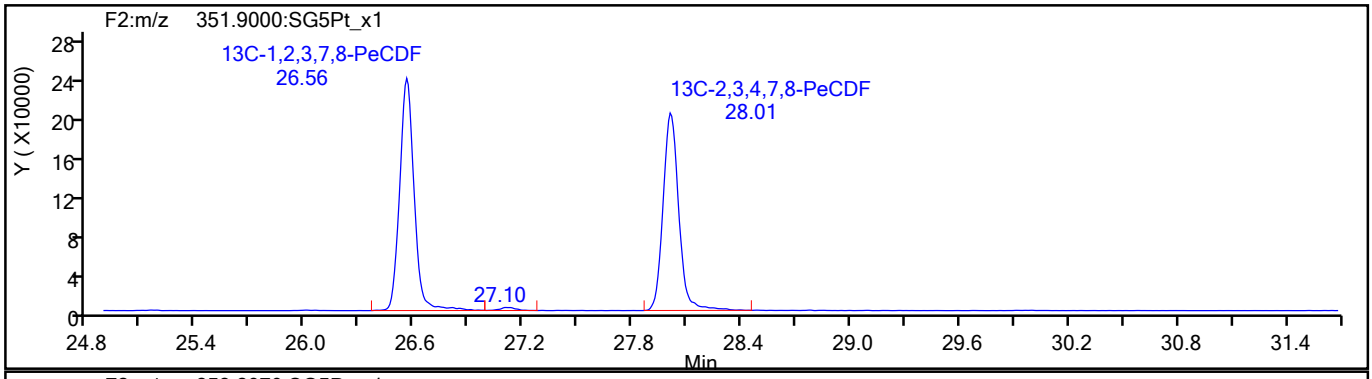

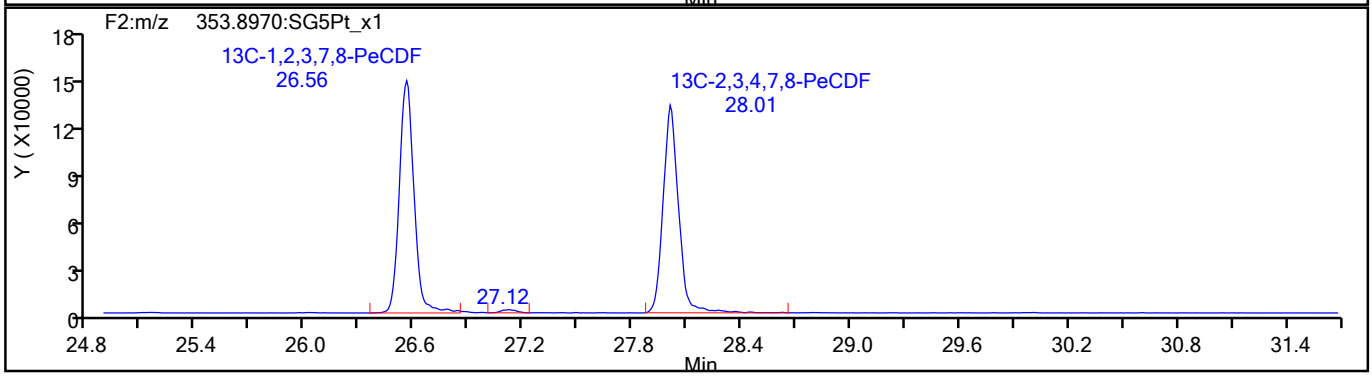

782899

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

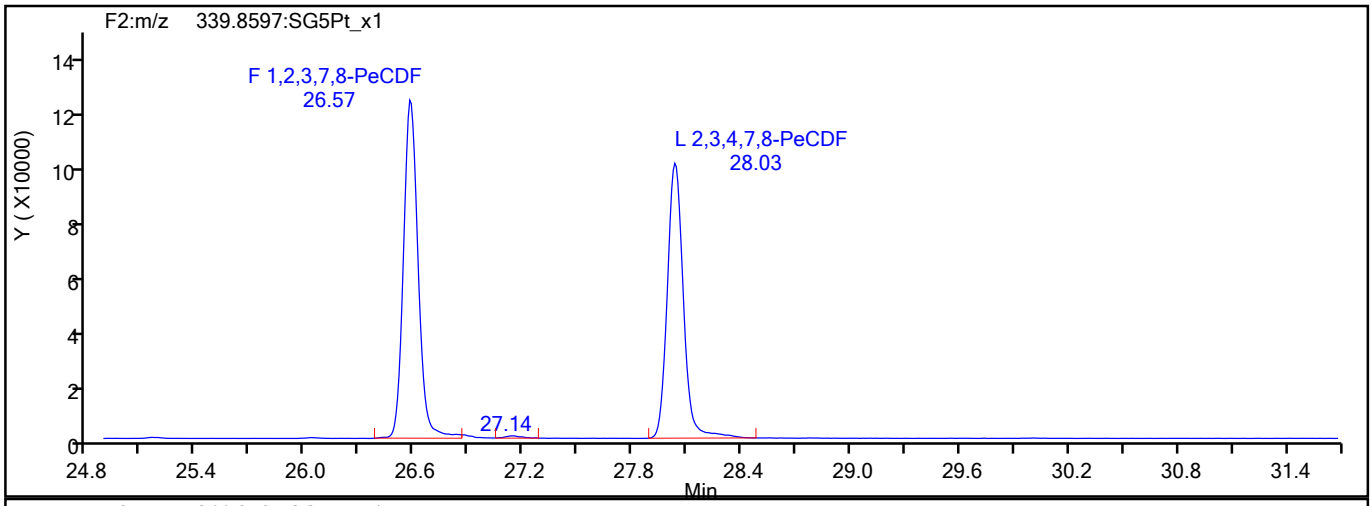

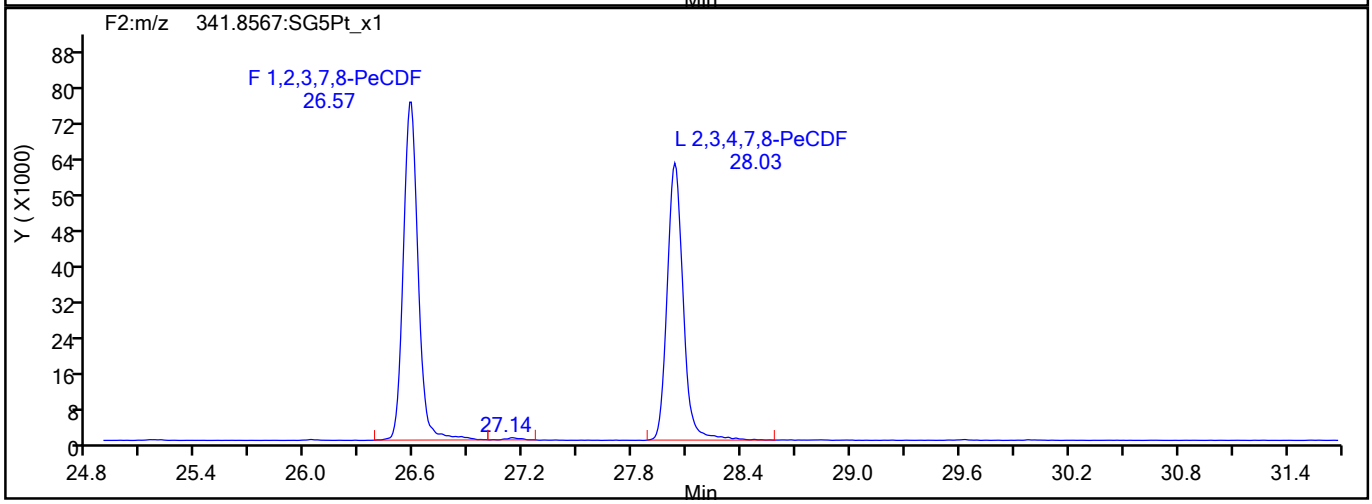

PeCDF Interference Mass

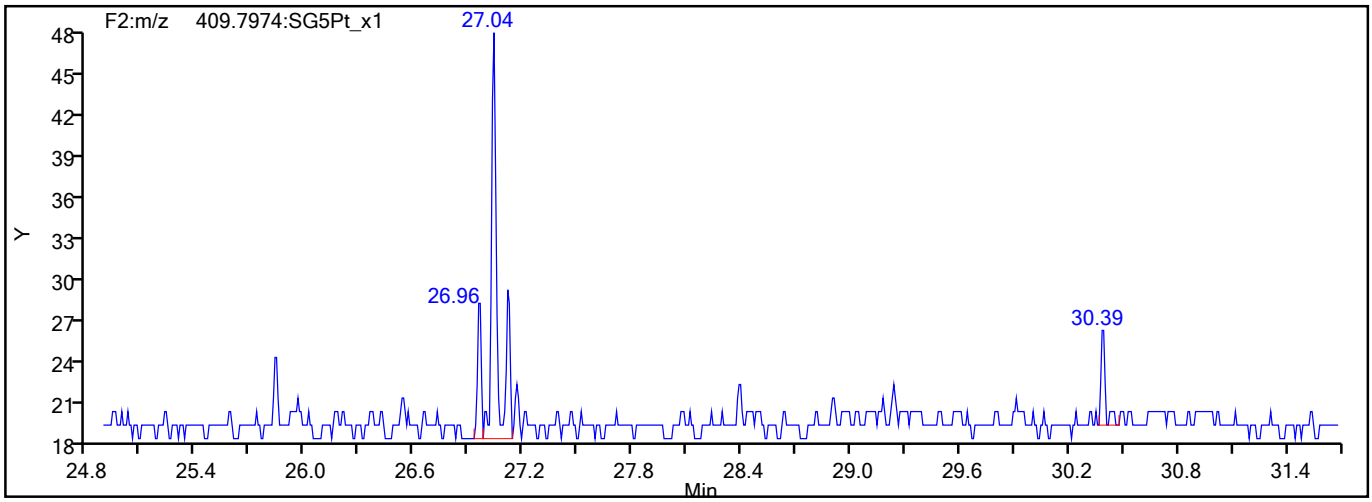

782900

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

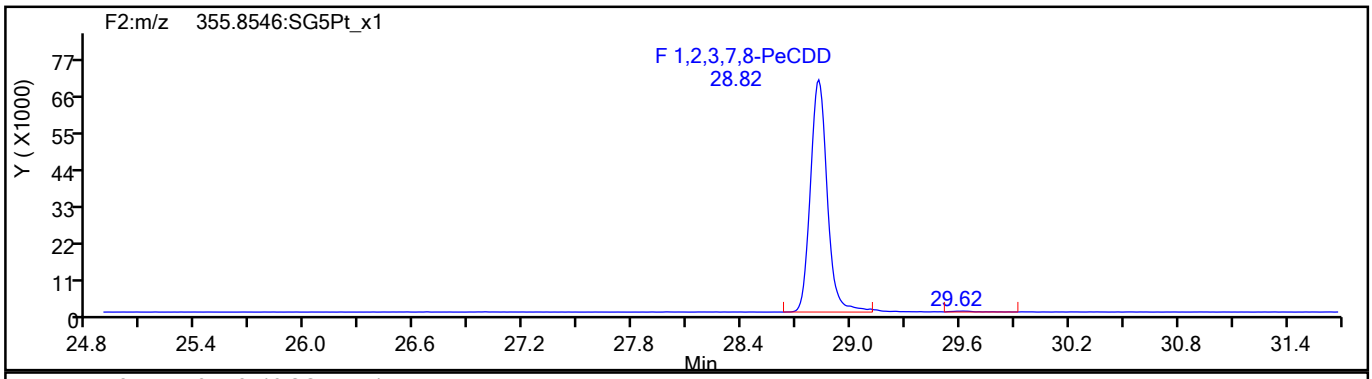

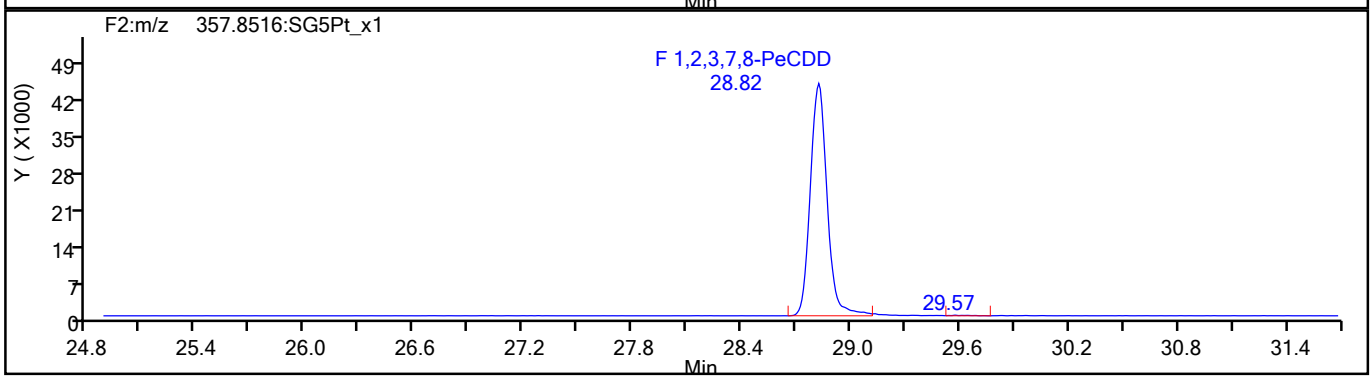

PeCDD Standards

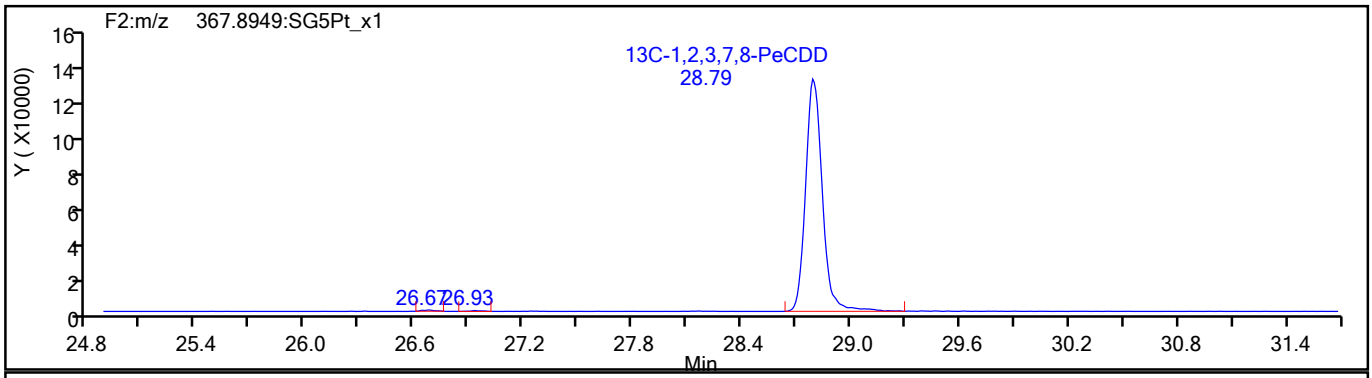

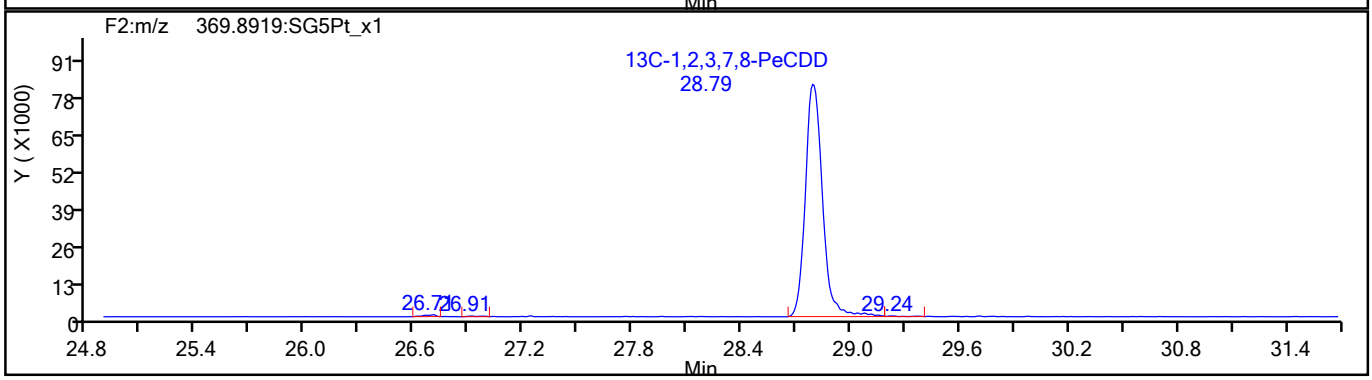

782901

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

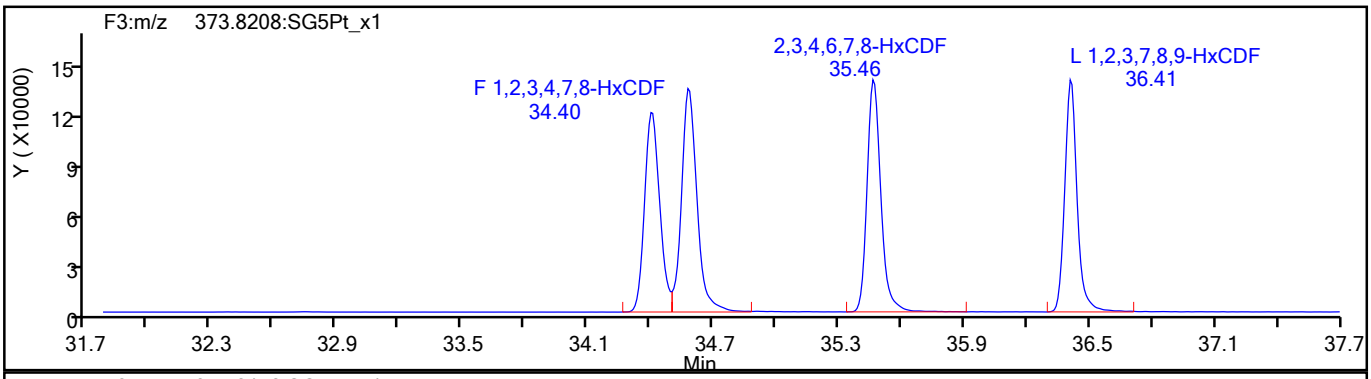

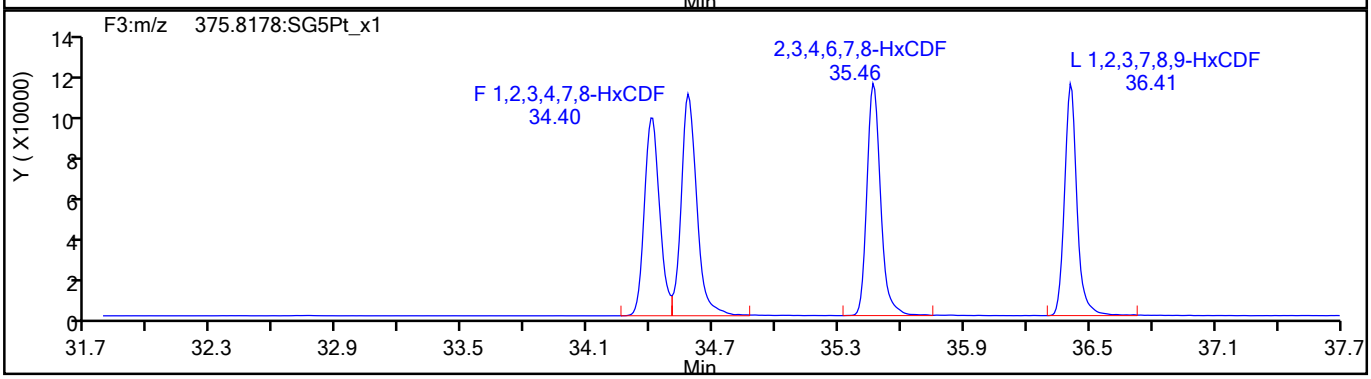

HxCDF Standards

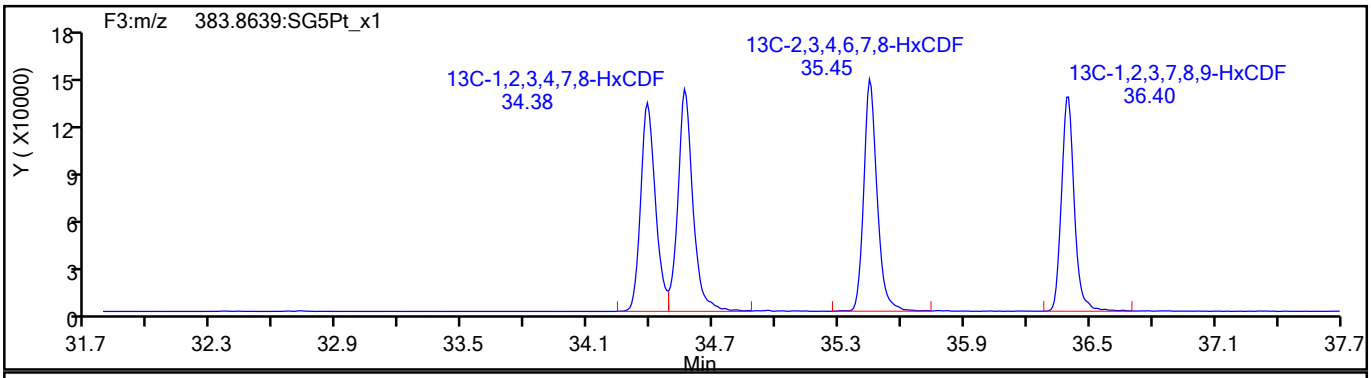

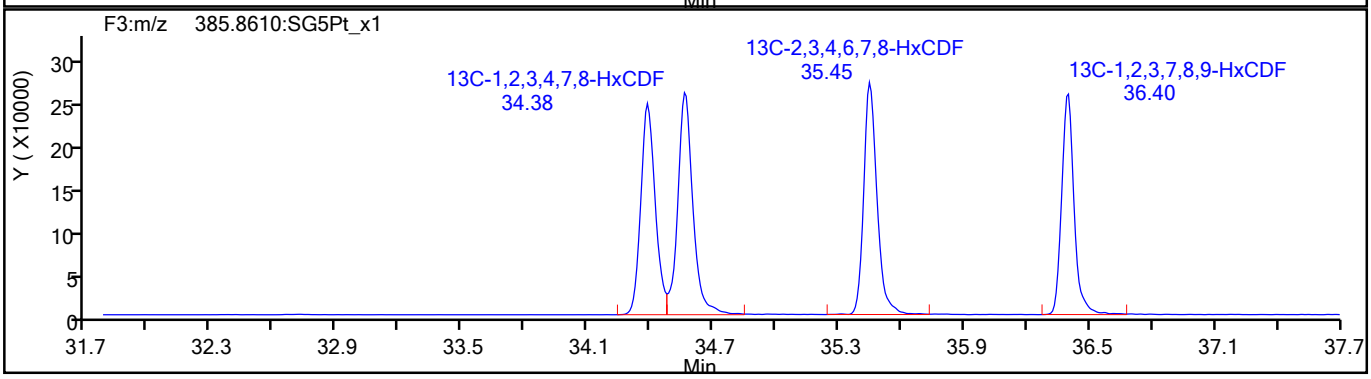

782902

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

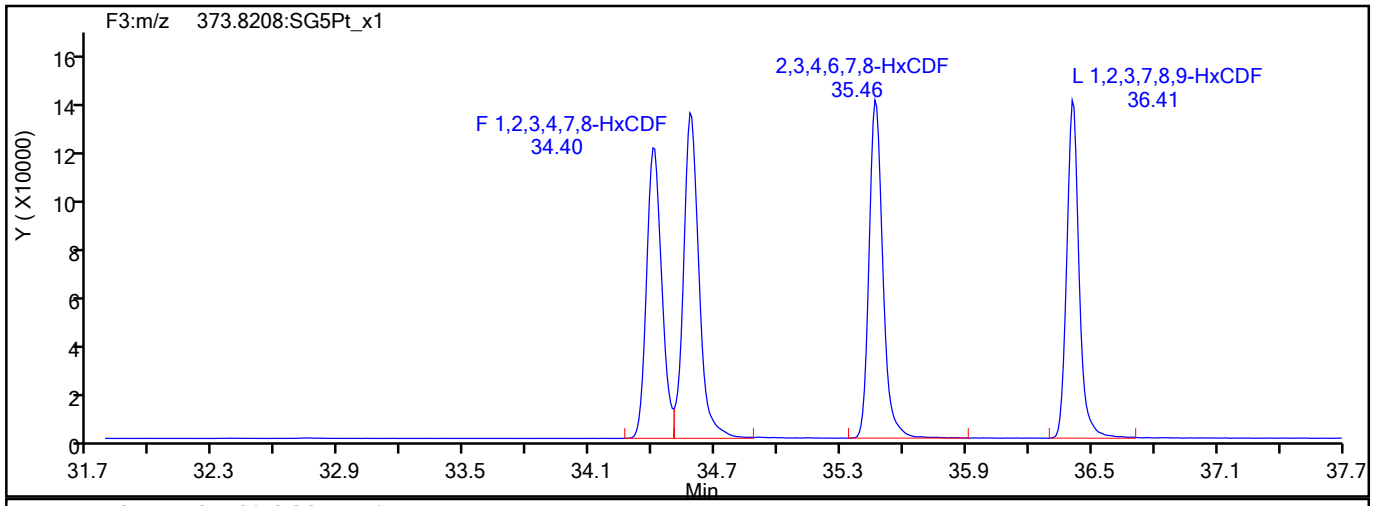

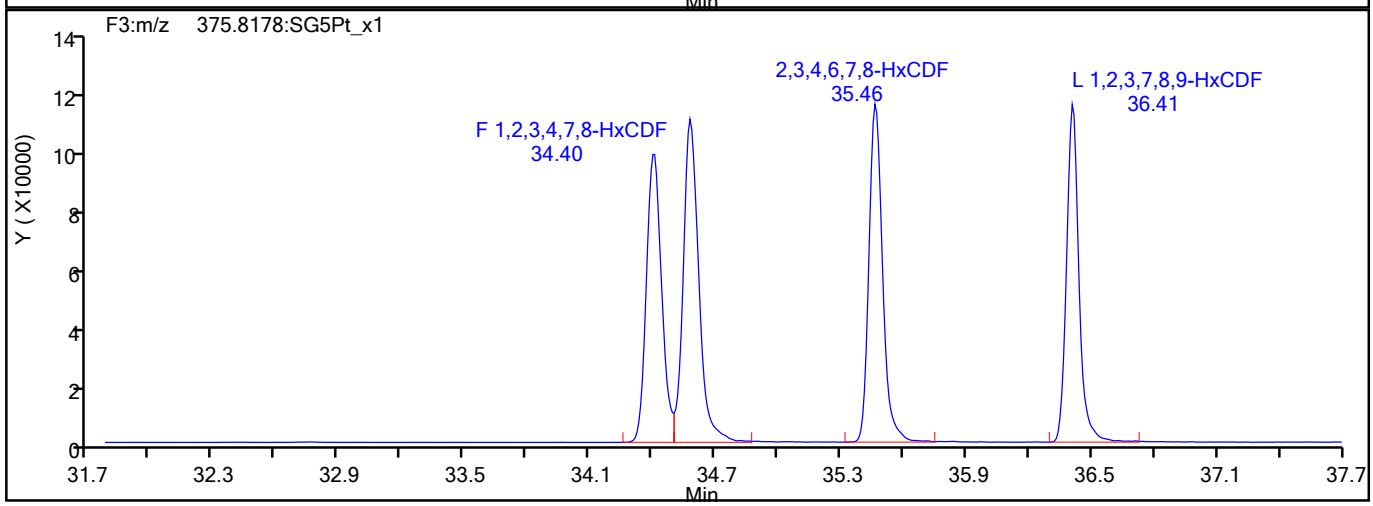

HxCDF Interference Mass

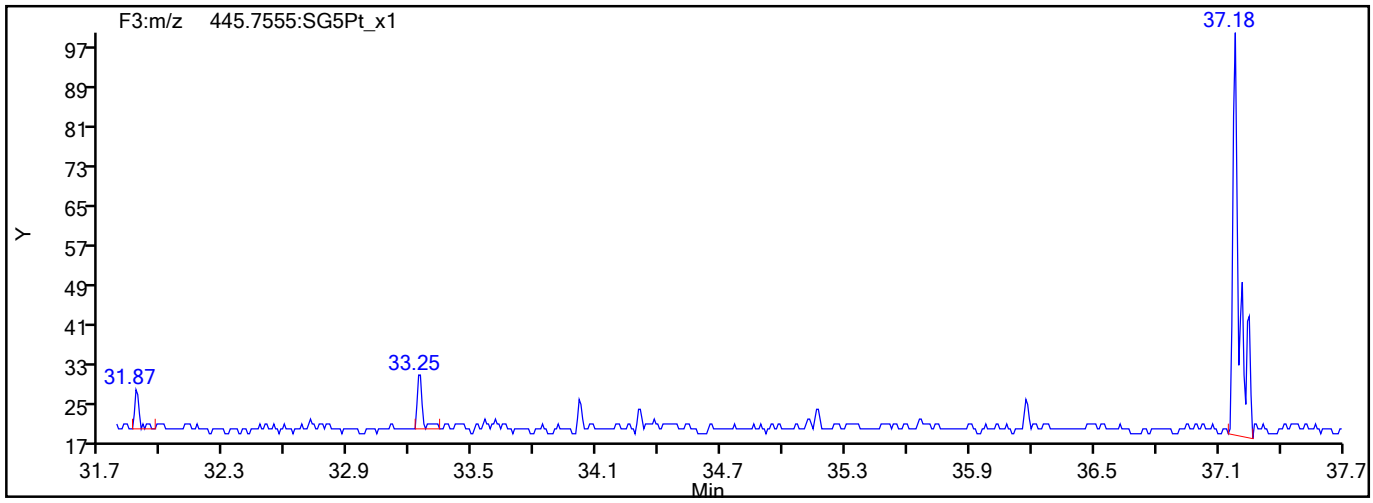

782903

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

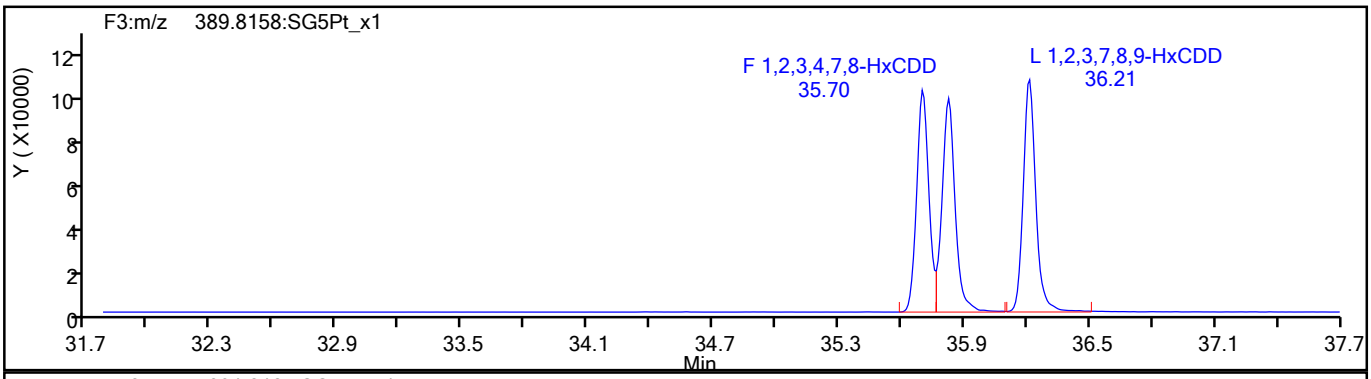

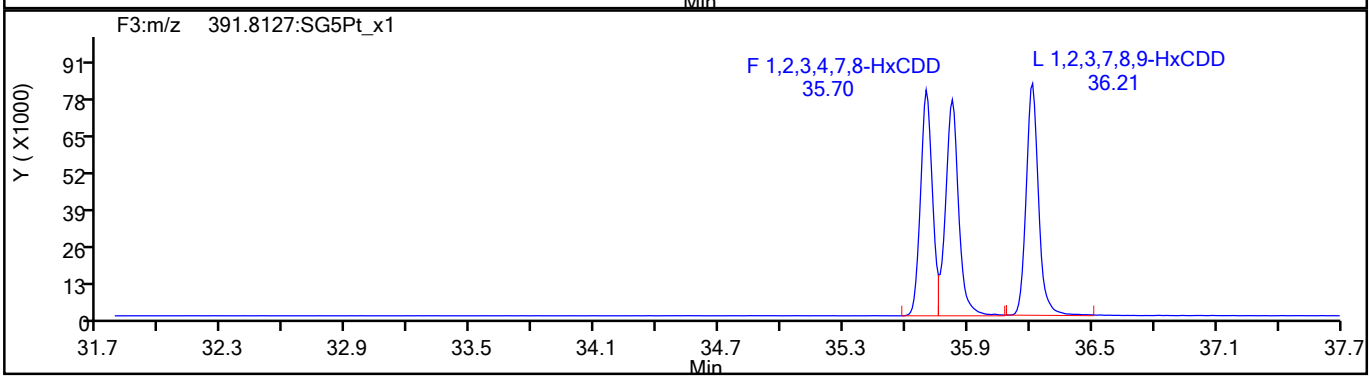

HxCDD Standards

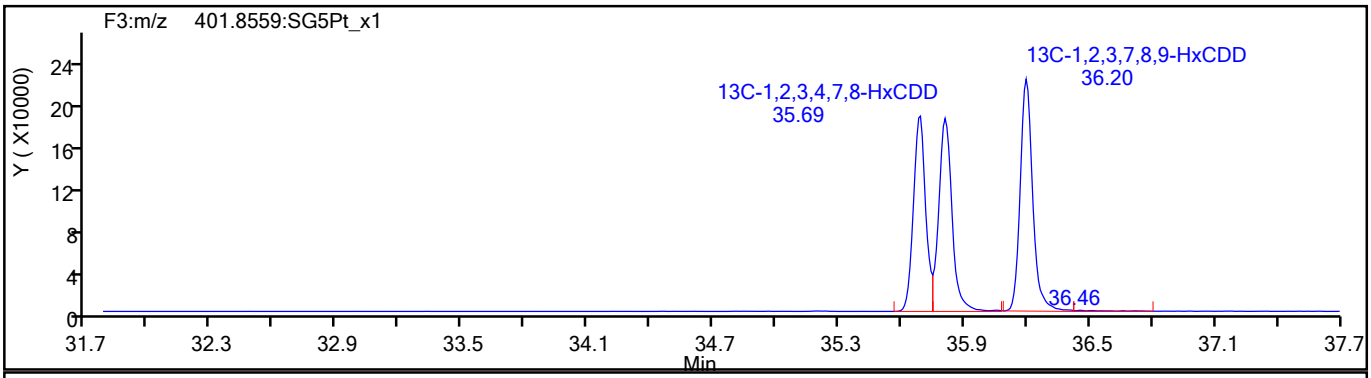

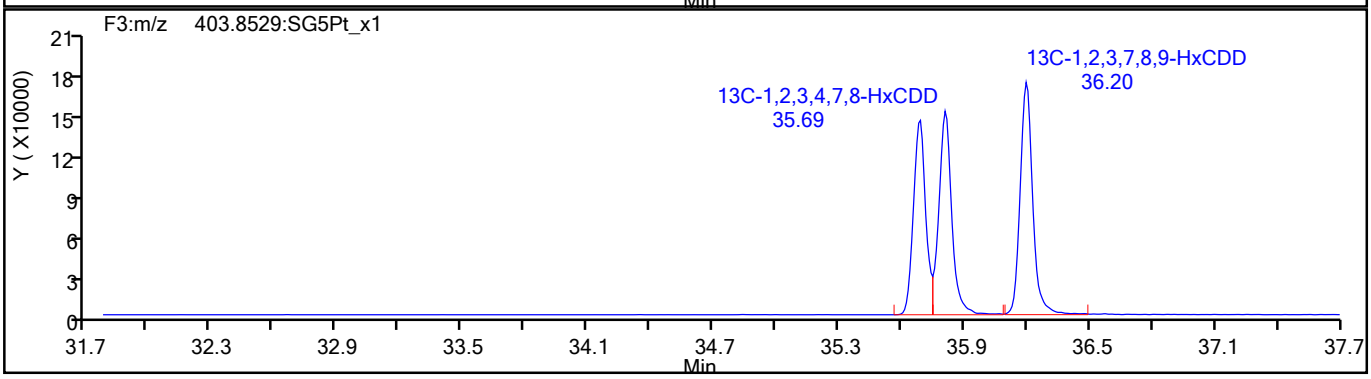

782904

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

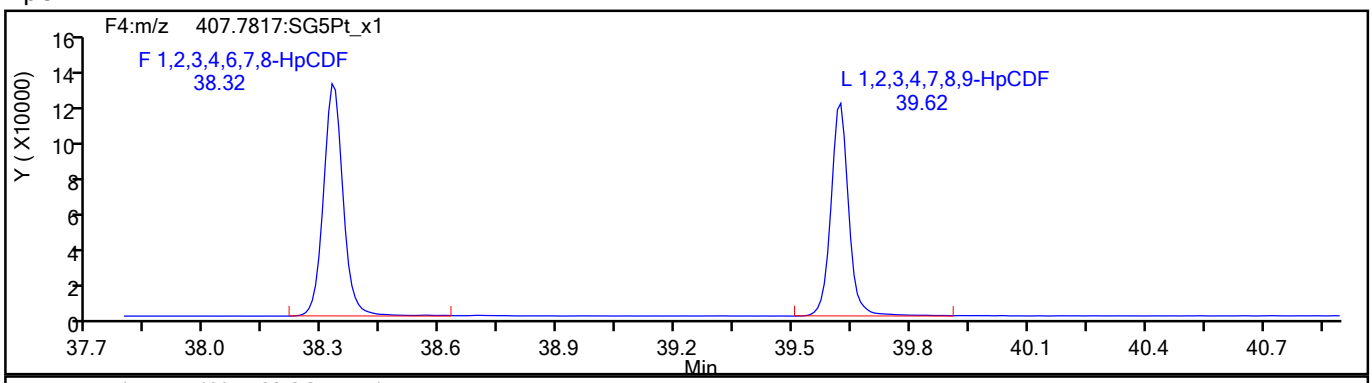

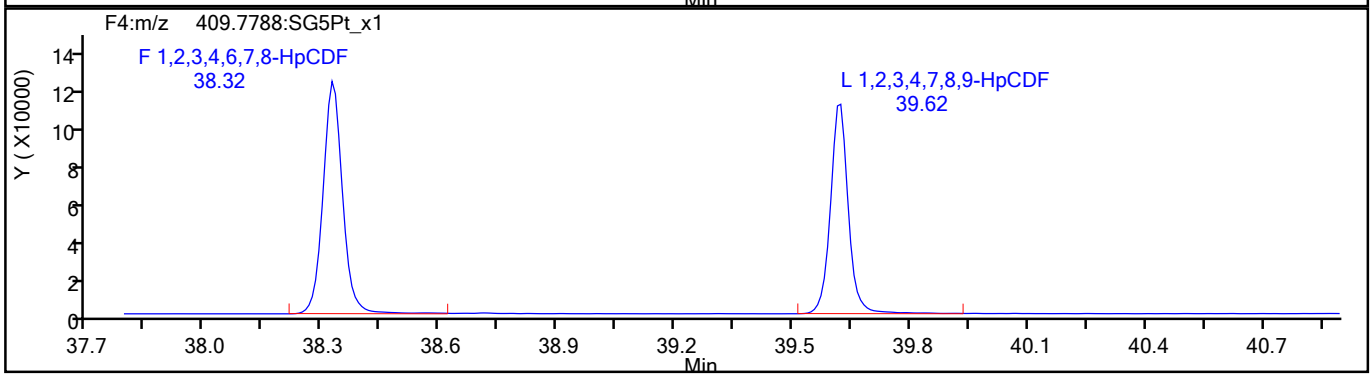

HpCDF Standards

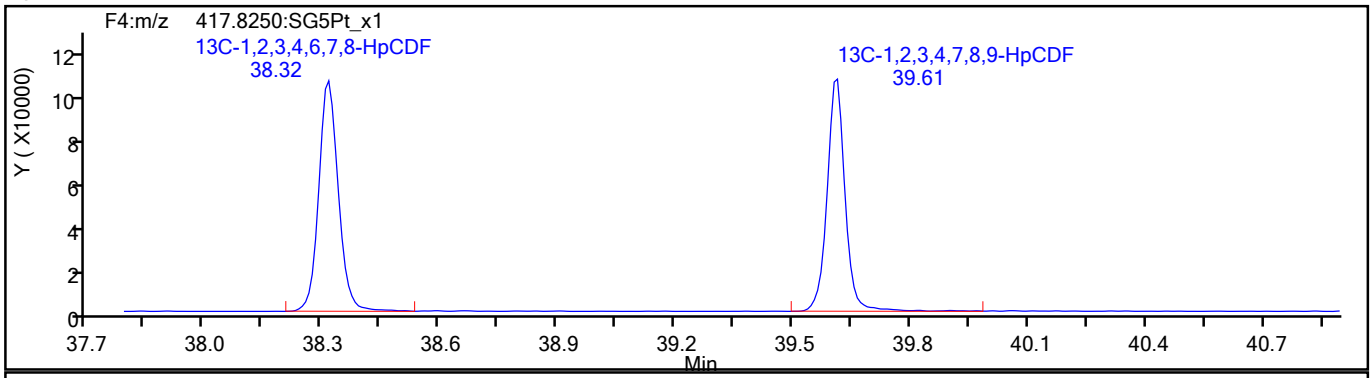

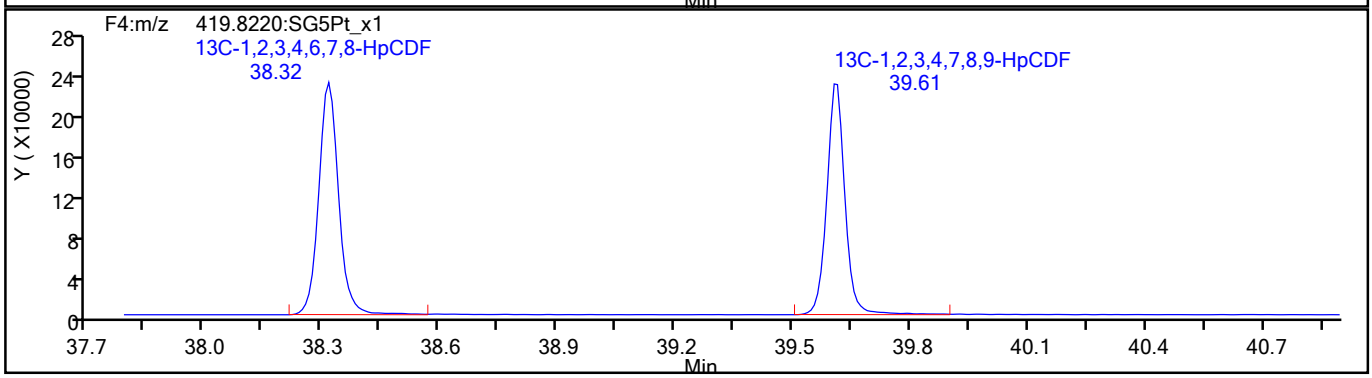

782905

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

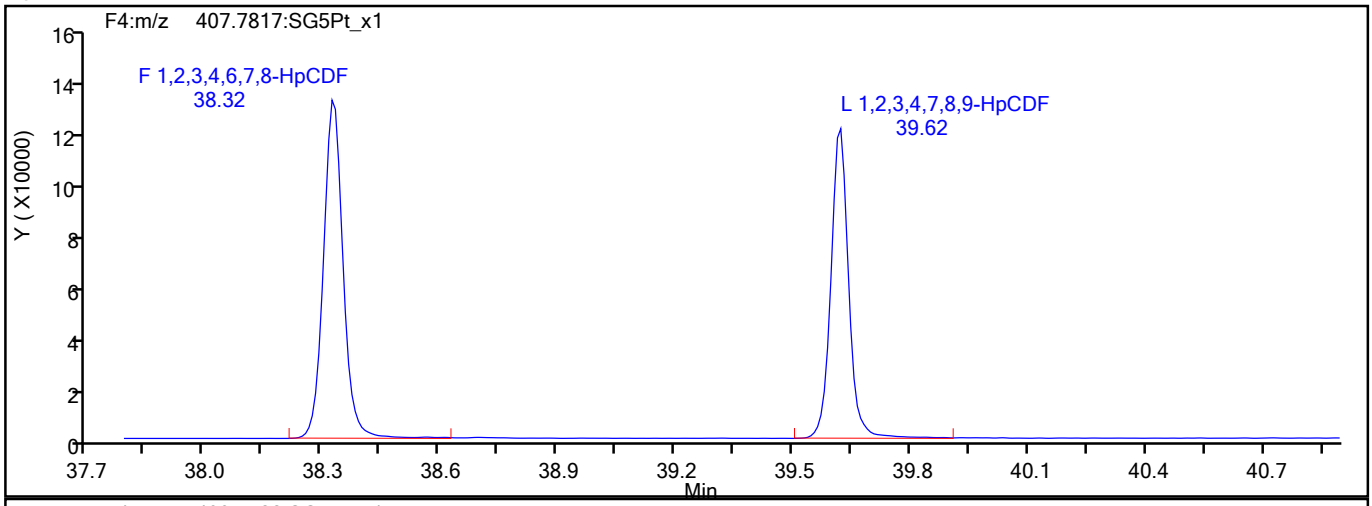

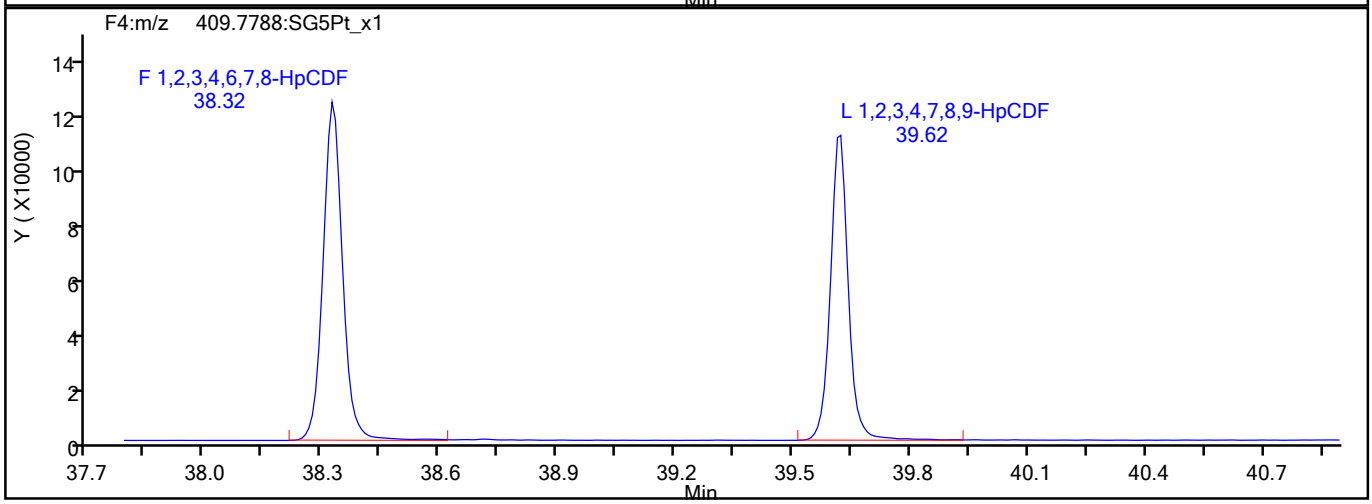

HpCDF Interference Mass

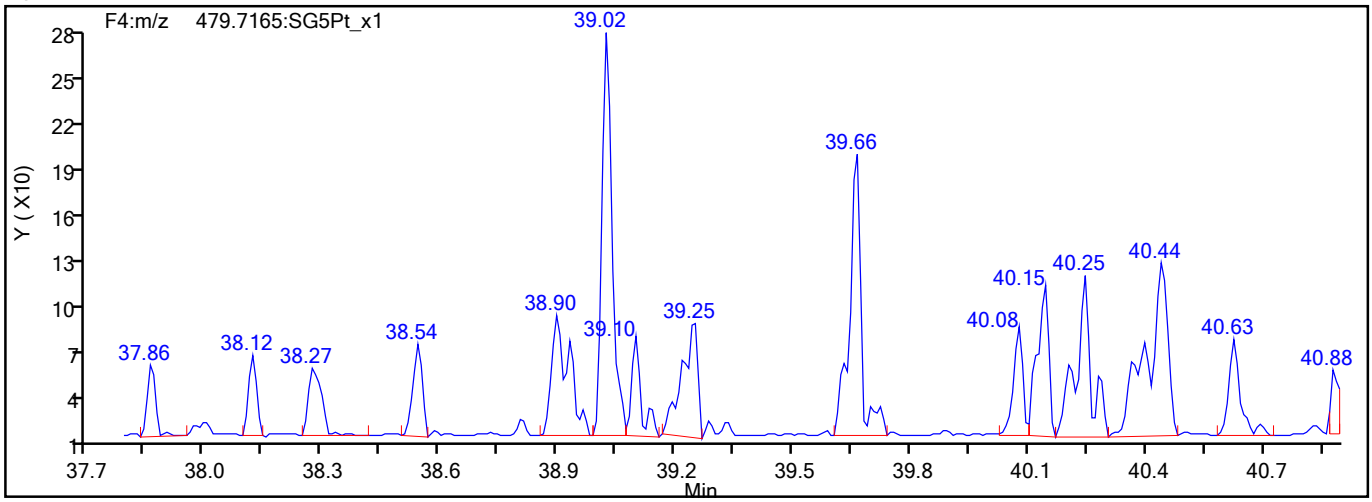

782906

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

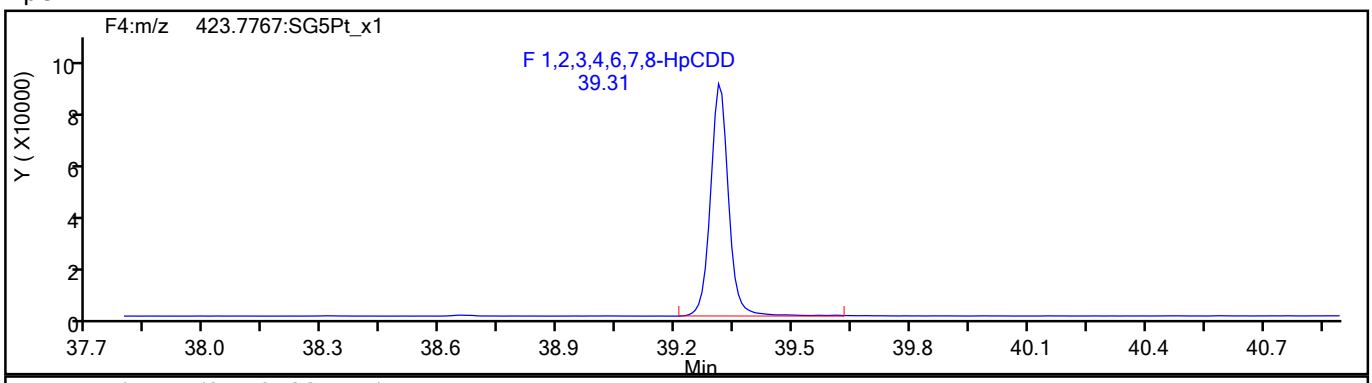

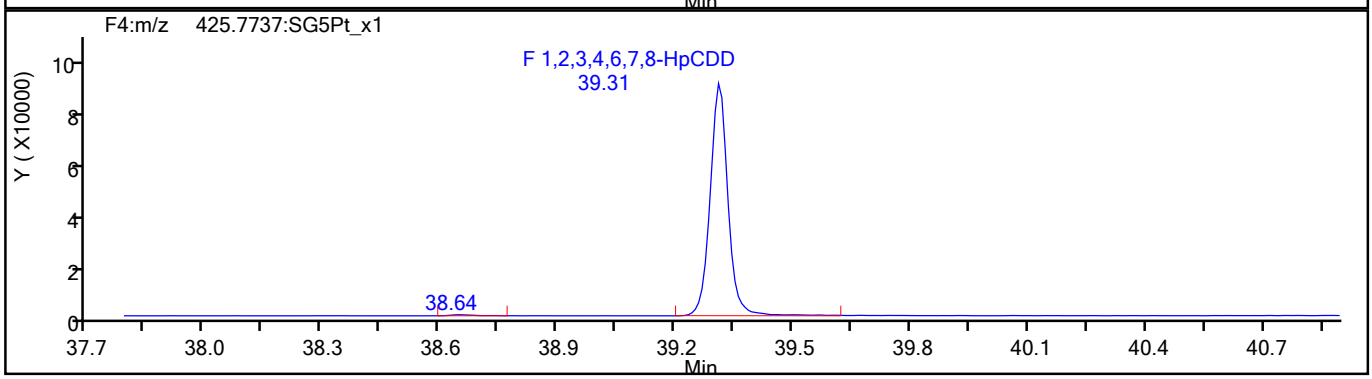

HpCDD Standards

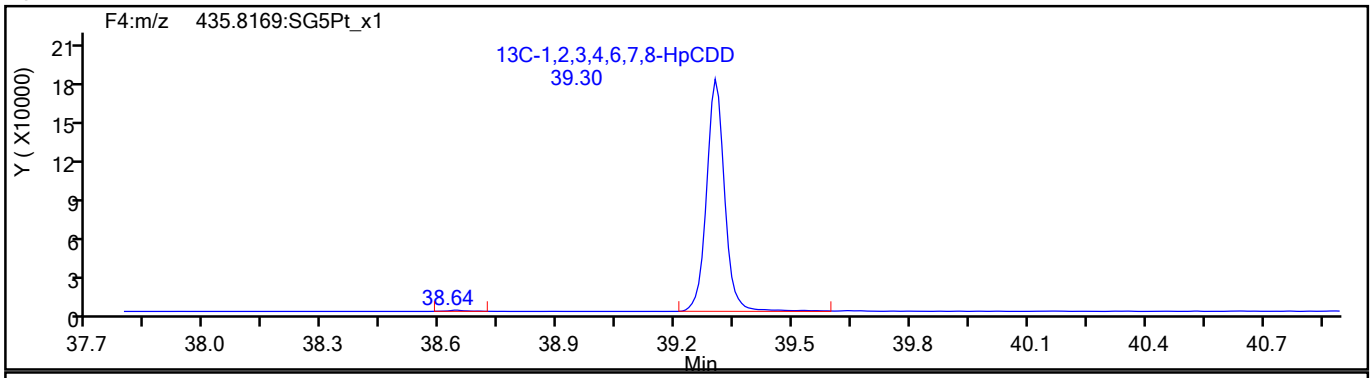

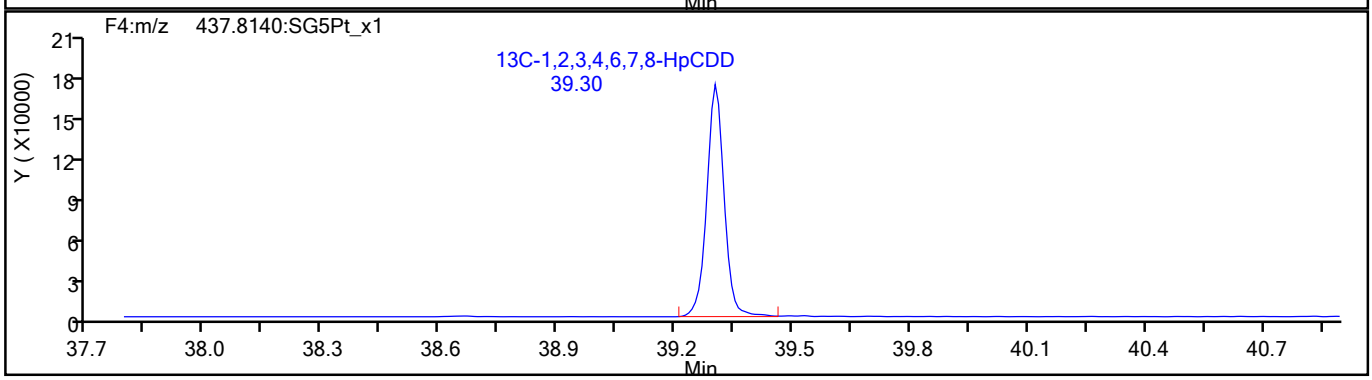

782907

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

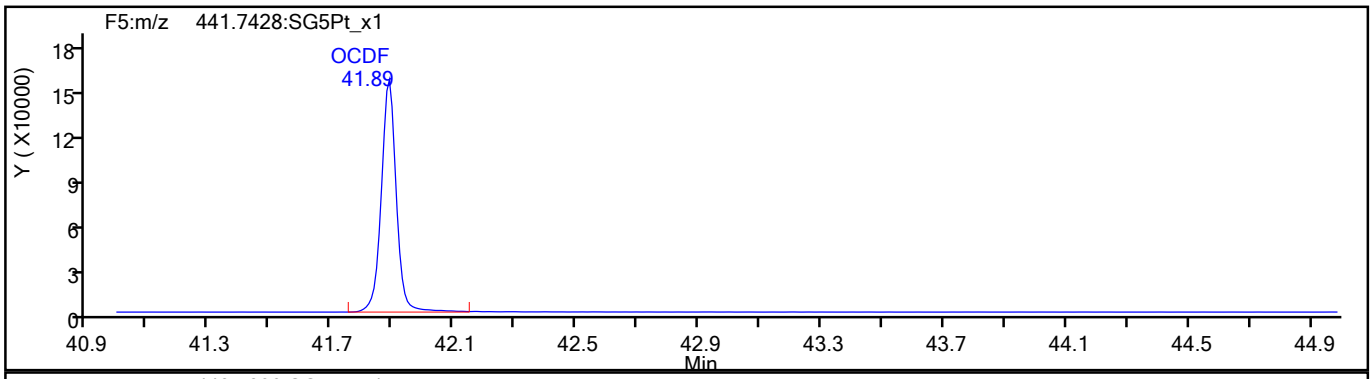

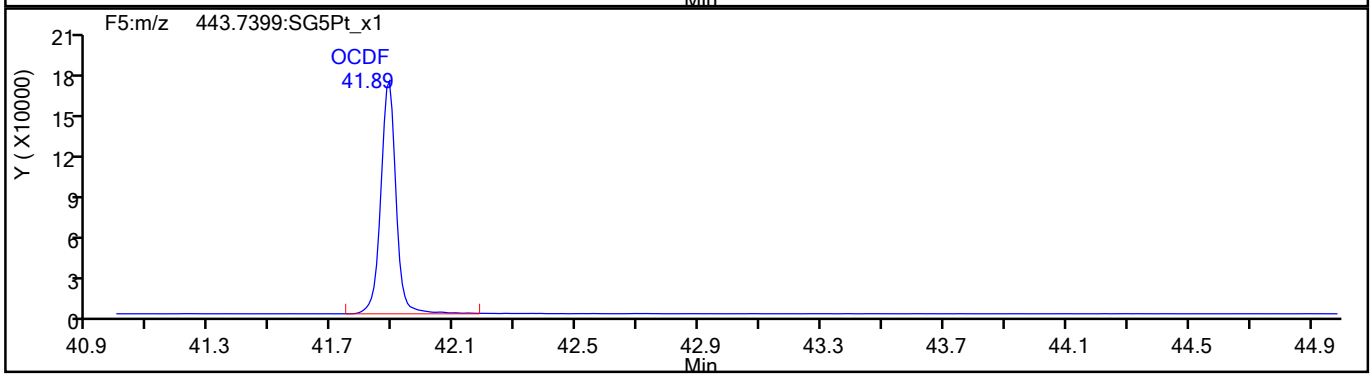

OCDF Standards

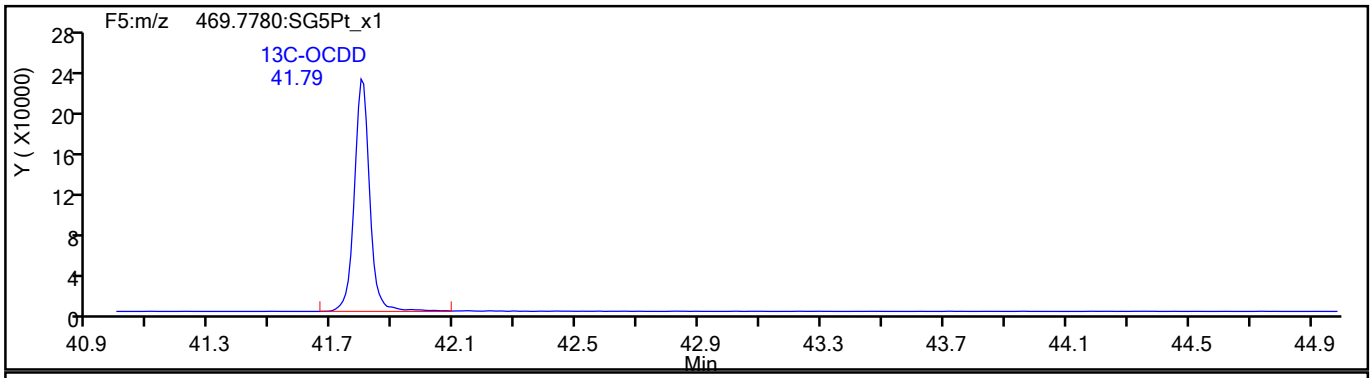

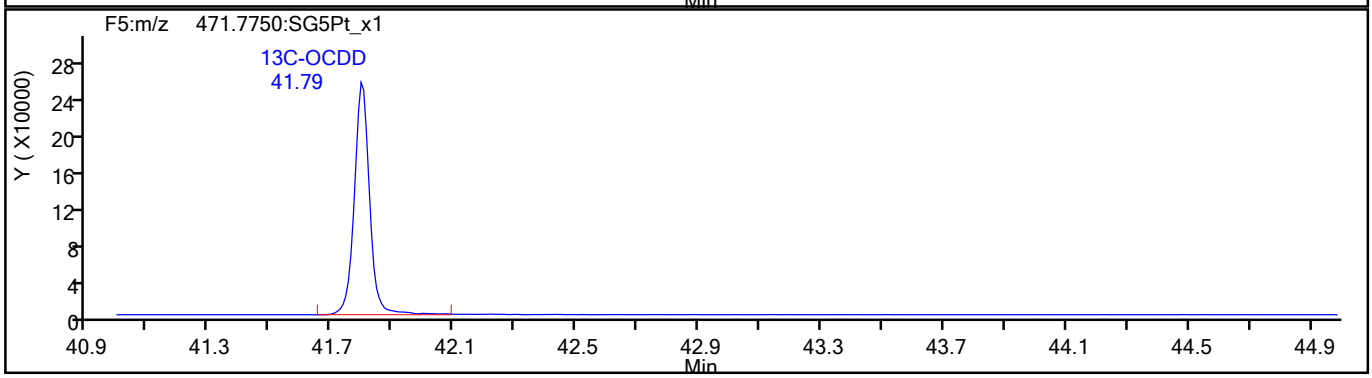

782908

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

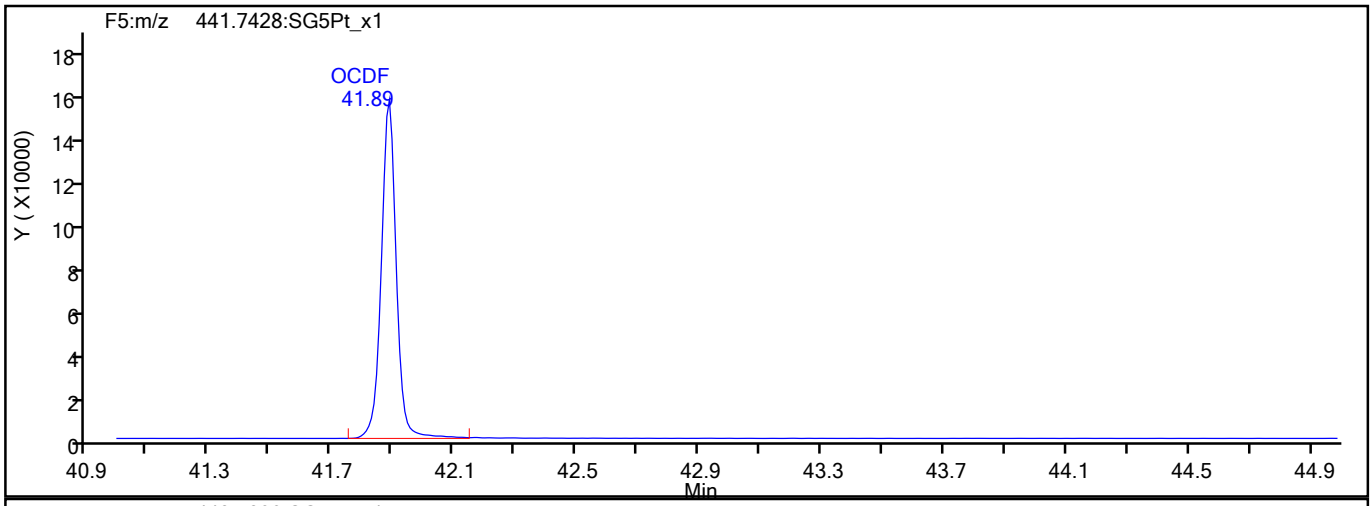

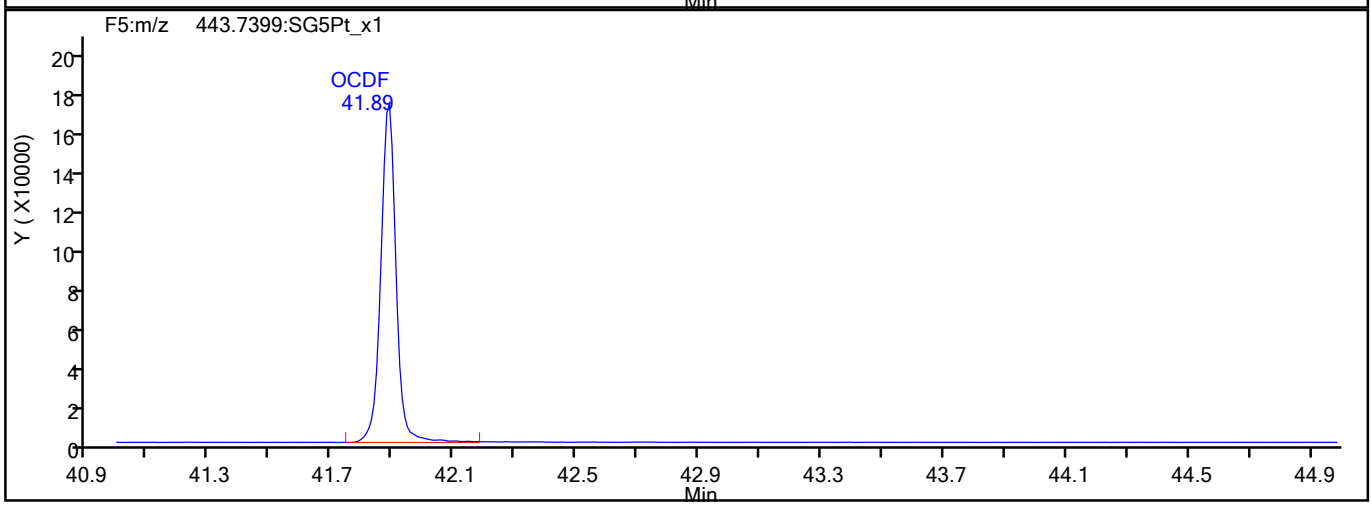

OCDF Interference Mass

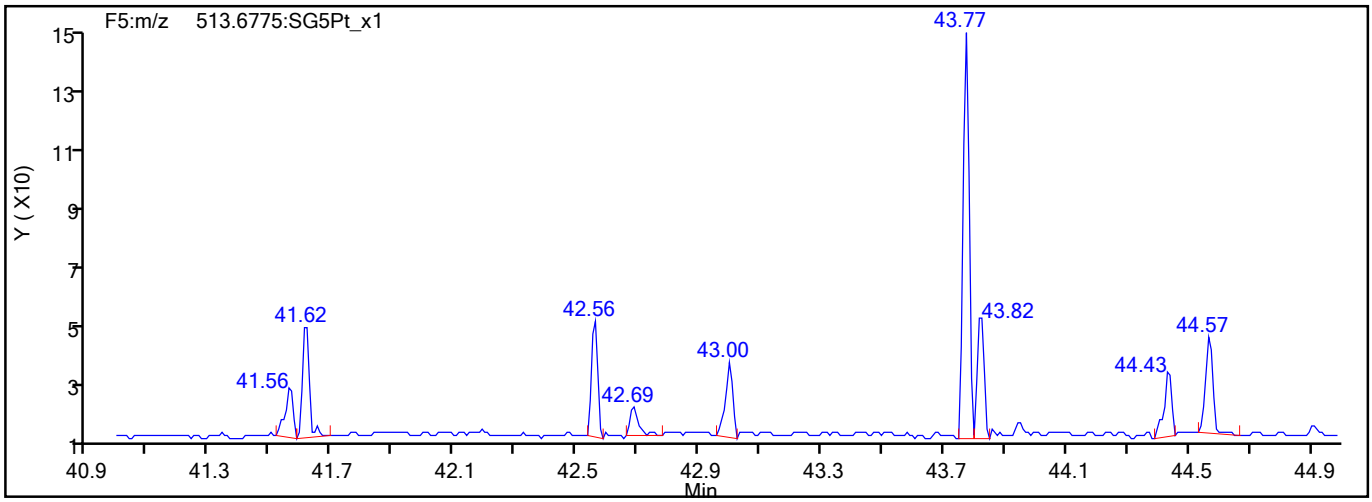

782909

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

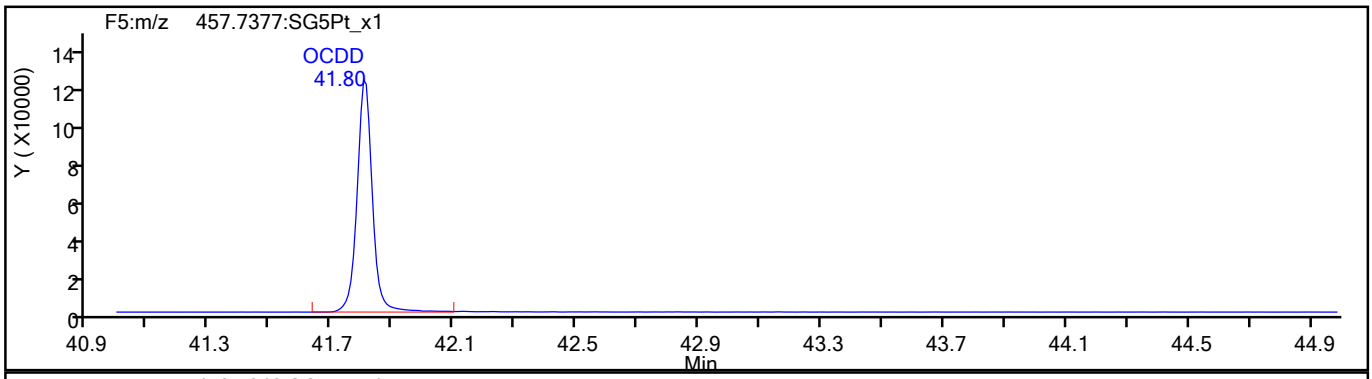

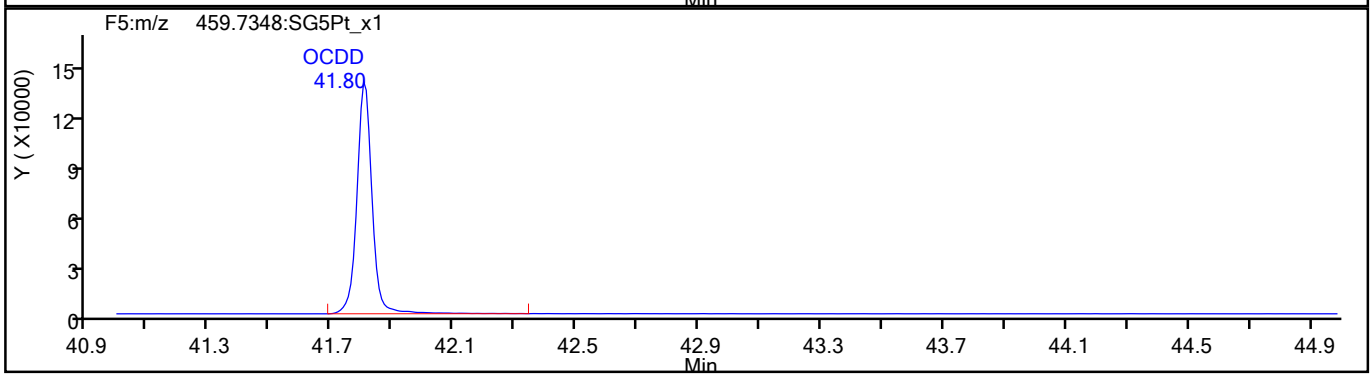

OCDD Standards

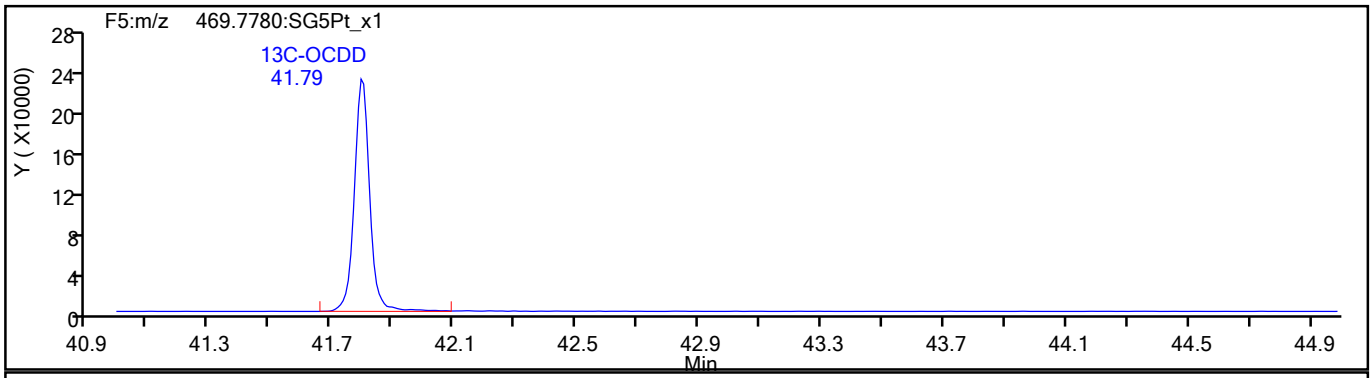

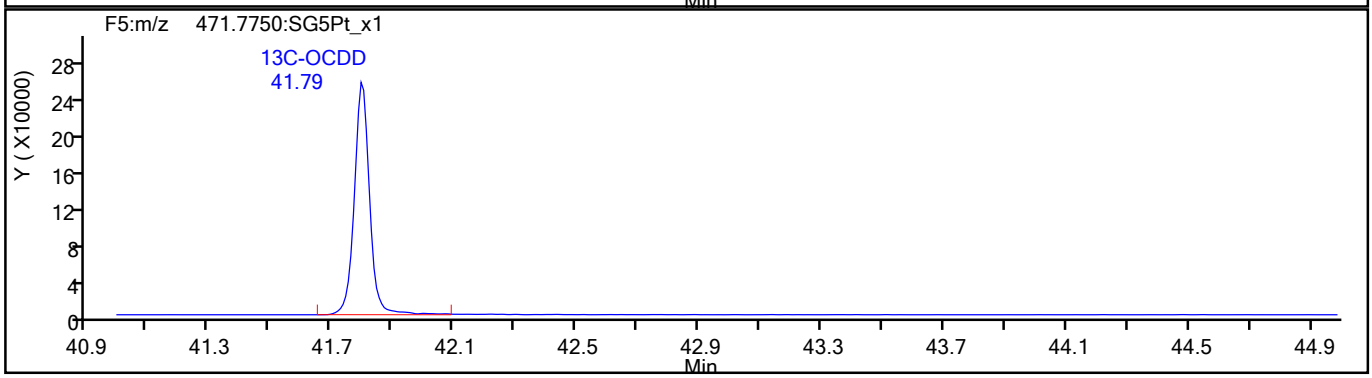

782910

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

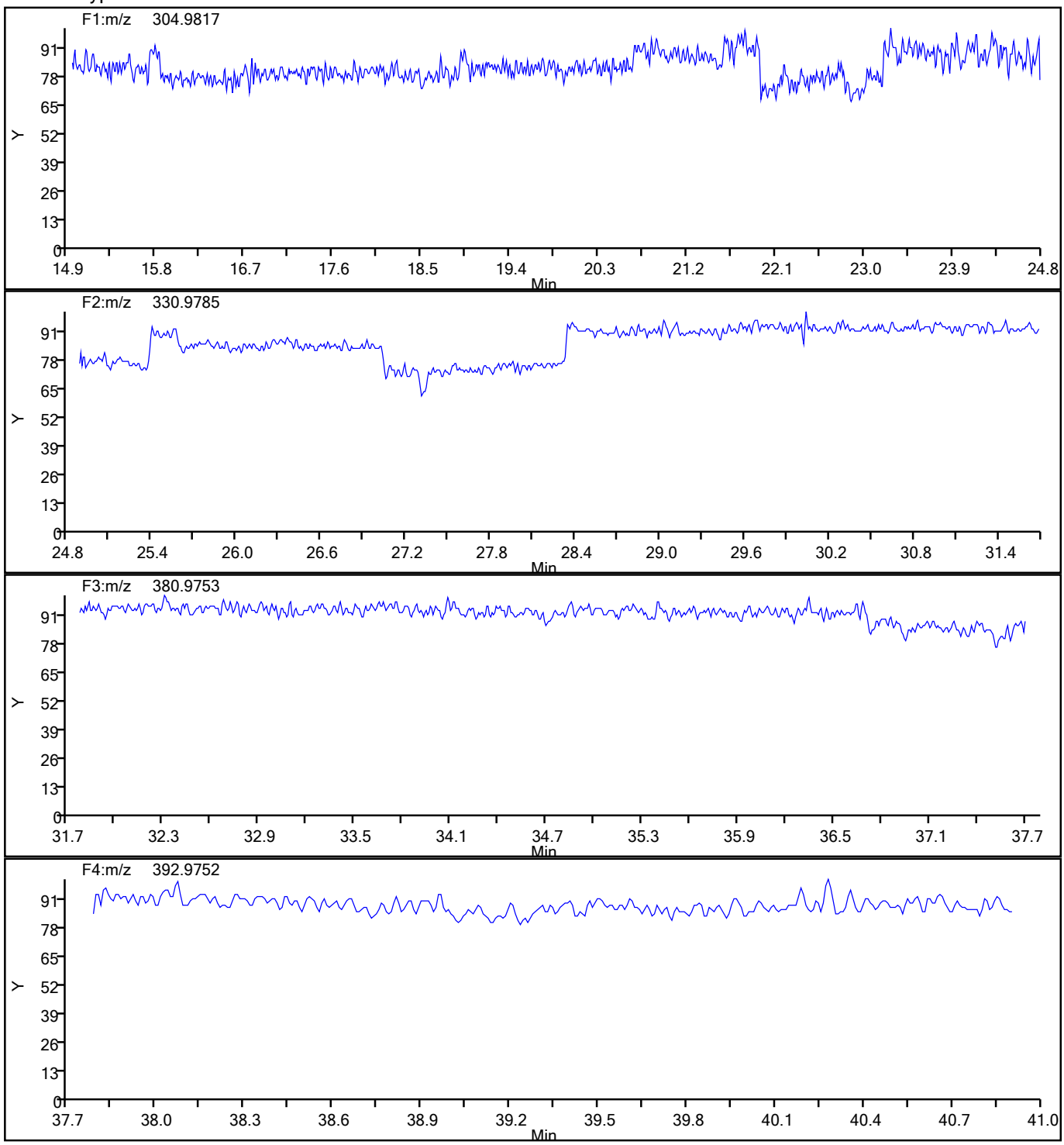

782911

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

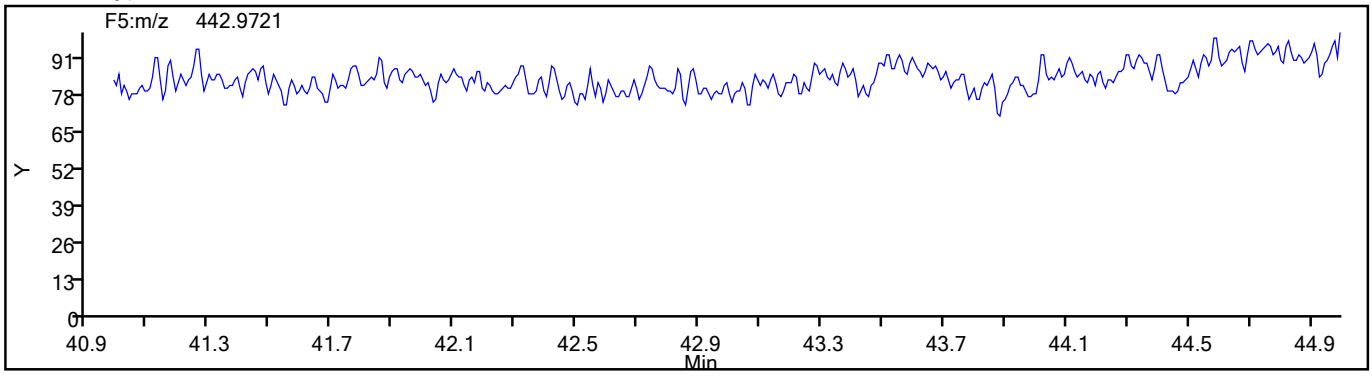

782912

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.548	2105852	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.612	2839435	0.79	1.3459	100.2	100.2	0.1786	0.1786	100	
2,3,7,8-TCDF	19.638	1274052	0.79	1.0802	41.5	41.5	0.0460	0.0460	104	
S Total TCDF					41.5	41.5	0.0460	0.0460		
D 13C-2,3,7,8-TCDD	20.909	1948011	0.81	0.9317	99.3	99.3	0.1662	0.1662	99.29	
$ 37Cl4-2,3,7,8-TCDD	20.935	848616		1.0083	40.0	40.0	0.0168	0.0168	99.92	
2,3,7,8-TCDD	20.935	875630	0.79	1.0753	41.8	41.8	0.0546	0.0546	105	
S Total TCDD					41.8	41.8	0.0546	0.0546		
D 13C-1,2,3,7,8-PeCDF	26.564	2432949	1.58	1.1405	101.3	101.3	0.3082	0.3082	101	
1,2,3,7,8-PeCDF	26.589	5302236	1.57	1.0543	206.7	206.7	0.5886	0.5886	103	
D 13C-2,3,4,7,8-PeCDF	28.023	2374722	1.60	1.1253	100.2	100.2	0.3123	0.3123	100	
2,3,4,7,8-PeCDF	28.048	5051373	1.58	1.0079	211.1	211.1	0.6756	0.6756	106	
S Total PeCDF					417.8	417.8	0.6321	0.6321		
D 13C-1,2,3,7,8-PeCDD	28.806	1521254	1.60	0.7165	100.8	100.8	0.1214	0.1214	101	
1,2,3,7,8-PeCDD	28.832	3351337	1.58	1.0465	210.5	210.5	0.1088	0.1088	105	
S Total PeCDD					210.5	210.5	0.1088	0.1088		
D 13C-1,2,3,4,7,8-HxCDF	34.391	1778238	0.53	0.9648	100.0	100.0	0.3266	0.3266	100	
1,2,3,4,7,8-HxCDF	34.407	4293581	1.24	1.1474	210.4	210.4	0.7958	0.7958	105	
D 13C-1,2,3,6,7,8-HxCDF	34.568	1995567	0.54	1.0708	101.1	101.1	0.2943	0.2943	101	
1,2,3,6,7,8-HxCDF	34.584	4991420	1.25	1.2178	205.4	205.4	0.6778	0.6778	103	
D 13C-2,3,4,6,7,8-HxCDF	35.444	2042874	0.53	1.0413	106.5	106.5	0.3026	0.3026	106	
2,3,4,6,7,8-HxCDF	35.461	5157631	1.25	1.2145	207.9	207.9	0.5811	0.5811	104	
D 13C-1,2,3,7,8,9-HxCDF	36.388	1742331	0.52	0.9731	97.2	97.2	0.3238	0.3238	97.17	
1,2,3,7,8,9-HxCDF	36.397	4445357	1.26	1.2401	205.7	205.7	0.6020	0.6020	103	
S Total HxCDF					829.5	829.5	0.6642	0.6642		
* 13C-1,2,3,7,8,9-HxCDD	36.194	1842630	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.680	1432215	1.28	0.7587	102.4	102.4	0.1598	0.1598	102	
1,2,3,4,7,8-HxCDD	35.697	3222329	1.26	1.0608	212.1	212.1	0.2911	0.2911	106	
D 13C-1,2,3,6,7,8-HxCDD	35.806	1669337	1.24	0.8593	105.4	105.4	0.1411	0.1411	105	
1,2,3,6,7,8-HxCDD	35.815	3426727	1.26	0.9933	206.7	206.7	0.2773	0.2773	103	

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.203	3436144	1.26	1.1094	199.7	199.7	0.2625	0.2625	99.86	
S Total HxCDD					618.5	618.5	0.2770	0.2770		
D 13C-1,2,3,4,6,7,8-HpCDF	38.305	1392194	0.46	0.7359	102.7	102.7	0.3327	0.3327	103	
1,2,3,4,6,7,8-HpCDF	38.314	4243438	1.05	1.4421	211.4	211.4	0.6211	0.6211	106	
D 13C-1,2,3,4,7,8,9-HpCDF	39.595	1337573	0.45	0.6854	105.9	105.9	0.3573	0.3573	106	
1,2,3,4,7,8,9-HpCDF	39.603	3728415	1.05	1.3092	212.9	212.9	0.6974	0.6974	106	
S Total HpCDF					424.3	424.3	0.6592	0.6592		
D 13C-1,2,3,4,6,7,8-HpCDD	39.291	1337869	1.09	0.6745	107.6	107.6	0.2398	0.2398	108	
1,2,3,4,6,7,8-HpCDD	39.300	2935203	1.04	1.0503	208.9	208.9	0.3525	0.3525	104	
S Total HpCDD					208.9	208.9	0.3525	0.3525		
D 13C-OCDD	41.782	2177938	0.90	0.5446	217.0	217.0	0.3019	0.3019	109	
OCDF	41.866	6082696	0.91	1.3168	424.2	424.2	0.3916	0.3916	106	
OCDD	41.790	4803166	0.89	1.0620	415.3	415.3	0.3872	0.3872	104	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.548	20.547	0		944131	150571	127	317	1186		
333.9338	20.548	20.547	0		1161721	185169	81	202	2286	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.612	19.616	0	0.954	1253649	203983	215	537	949		
317.9389	19.621	19.616	0	0.955	1585786	258903	108	270	2397	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.638	19.646	0	1.001	561539	89311	44	110	2030		
305.8987	19.638	19.646	0	1.001	712513	111913	48	120	2332	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.909	20.910	0	1.018	869542	131887	127	317	1038		
333.9338	20.909	20.910	0	1.018	1078469	161266	81	202	1991	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.935	20.935	0	1.019	848616	126683	23	57	5508		
2,3,7,8-TCDD											
319.8965	20.935	20.939	0	1.001	385954	58537	36	90	1626		
321.8936	20.935	20.939	0	1.001	489676	72800	33	82	2206	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.564	26.560	0	1.293	1489826	258263	302	755	855		
353.8970	26.564	26.560	0	1.293	943123	164307	170	425	967	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.589	26.584	0	1.001	3241988	556504	638	1595	872		
341.8567	26.589	26.584	0	1.001	2060248	355863	411	1027	866	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.023	28.014	1	1.364	1460304	235761	302	755	781		
353.8970	28.023	28.014	1	1.364	914418	149333	170	425	878	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.048	28.039	1	1.001	3094556	515182	638	1595	807		
341.8567	28.048	28.039	1	1.001	1956817	323488	411	1027	787	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.806	28.801	0	1.402	936578	147383	82	205	1797		
369.8919	28.806	28.801	0	1.402	584676	95987	35	87	2742	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.832	28.828	0	1.001	2051590	320770	72	180	4455		
357.8516	28.832	28.828	0	1.001	1299747	208335	39	97	5342	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.391	34.384	0	0.950	617675	123602	191	477	647		
385.8610	34.382	34.384	0	0.950	1160563	234726	378	945	621	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.407	34.405	0	1.000	2381065	482843	745	1862	648		
375.8178	34.407	34.405	0	1.000	1912516	389022	564	1410	690	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.568	34.562	0	0.955	696940	140400	191	477	735		
385.8610	34.568	34.562	0	0.955	1298627	255987	378	945	677	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.584	34.582	0	1.000	2775629	556827	745	1862	747		
375.8178	34.584	34.582	0	1.000	2215791	440544	564	1410	781	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.444	35.444	0	0.979	707399	160237	191	477	839		
385.8610	35.444	35.444	0	0.979	1335475	303406	378	945	803	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.461	35.461	0	1.000	2866027	647502	745	1862	869		
375.8178	35.461	35.461	0	1.000	2291604	520419	564	1410	923	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.388	36.388	0	1.005	598306	148820	191	477	779		
385.8610	36.388	36.388	0	1.005	1144025	289476	378	945	766	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.397	36.402	0	1.000	2476452	605954	745	1862	813		
375.8178	36.397	36.402	0	1.000	1968905	483719	564	1410	858	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.194	36.192	0		1026134	250783	116	290	2162		
403.8529	36.186	36.192	0		816496	200495	103	257	1947	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.680	35.680	0	0.986	804332	193336	116	290	1667		
403.8529	35.680	35.680	0	0.986	627883	151493	103	257	1471	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.697	35.695	0	1.000	1795969	436602	241	602	1812		
391.8127	35.697	35.695	0	1.000	1426360	347066	185	462	1876	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.806	35.805	0	0.989	925744	214247	116	290	1847		
403.8529	35.806	35.805	0	0.989	743593	172424	103	257	1674	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.815	35.820	0	1.000	1911971	434863	241	602	1804		
391.8127	35.815	35.820	0	1.000	1514756	347831	185	462	1880	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.203	36.208	0	1.015	1913013	474198	241	602	1968		
391.8127	36.203	36.208	0	1.015	1523131	377483	185	462	2040	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.305	38.305	0	1.058	436356	136587	154	385	887		
419.8220	38.305	38.305	0	1.058	955838	295474	288	720	1026	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.314	38.317	0	1.000	2176116	664265	789	1972	842		
409.7788	38.314	38.317	0	1.000	2067322	632606	759	1897	833	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.595	39.600	0	1.094	416057	129213	154	385	839		
419.8220	39.595	39.600	0	1.094	921516	294690	288	720	1023	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.603	39.608	0	1.000	1911190	607125	789	1972	769		
409.7788	39.603	39.608	0	1.000	1817225	579552	759	1897	764	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.291	39.293	0	1.086	696483	219725	150	375	1465		
437.8140	39.291	39.293	0	1.086	641386	202177	142	355	1424	1.09(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.300	39.301	0	1.000	1499524	478443	315	787	1519		
425.7737	39.300	39.301	0	1.000	1435679	451932	310	775	1458	1.04(0.88-1.20)	
13C-OCDD											
469.7780	41.782	41.785	0	1.154	1033665	317462	144	360	2205		
471.7750	41.782	41.785	0	1.154	1144273	352280	153	382	2302	0.90(0.76-1.02)	
OCDF											
441.7428	41.866	41.875	-1	1.002	2905097	900371	326	815	2762		
443.7399	41.866	41.875	-1	1.002	3177599	981356	365	912	2689	0.91(0.76-1.02)	
OCDD											
457.7377	41.790	41.794	0	1.000	2268006	705330	257	642	2744		
459.7348	41.790	41.794	0	1.000	2535160	785518	294	735	2672	0.89(0.76-1.02)	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

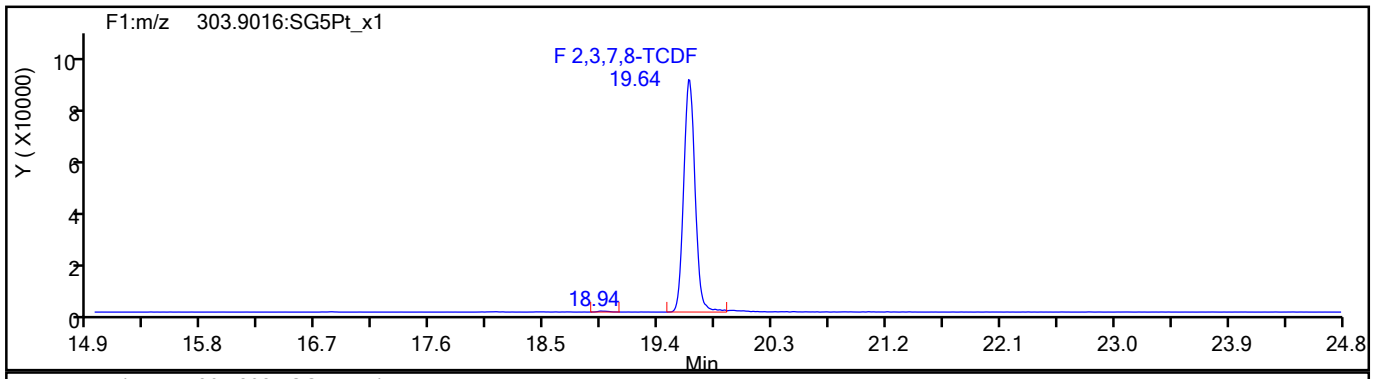

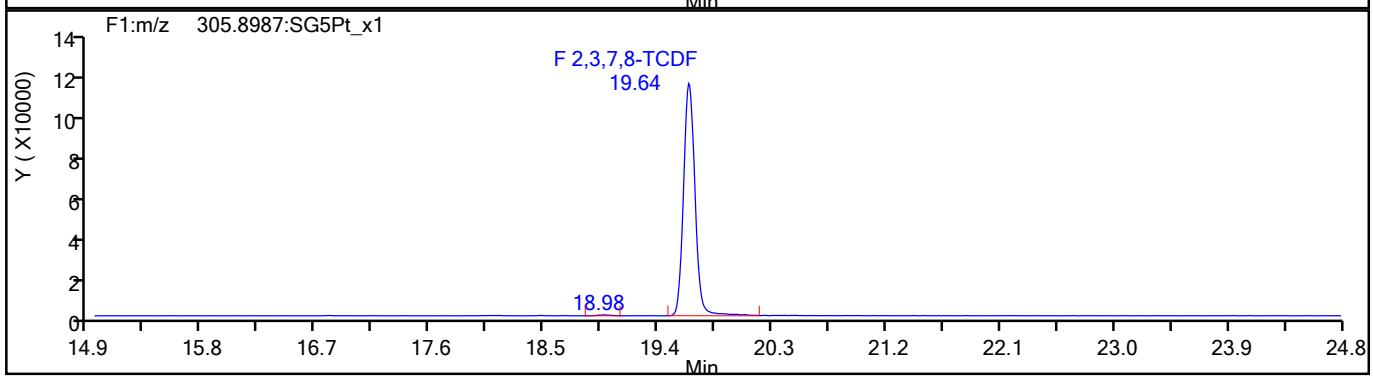

TCDF Standards

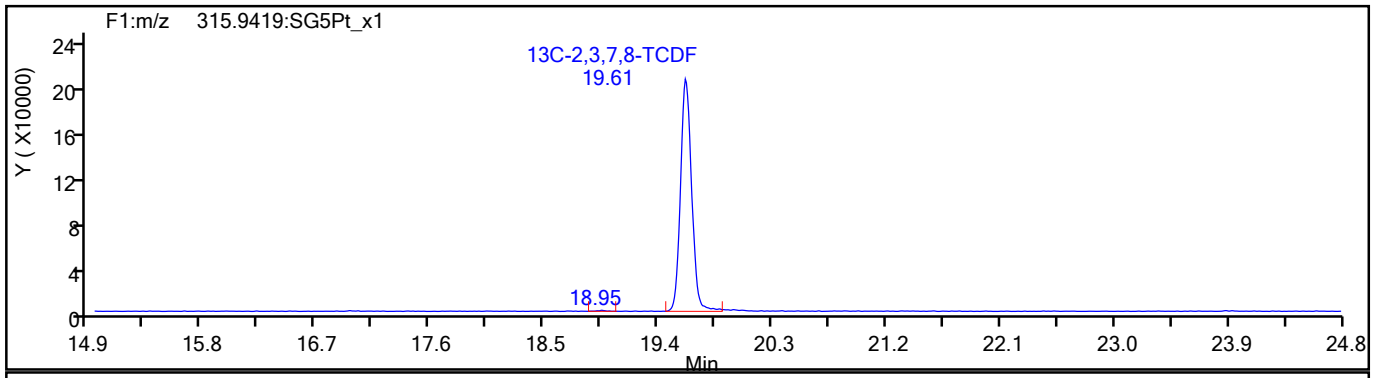

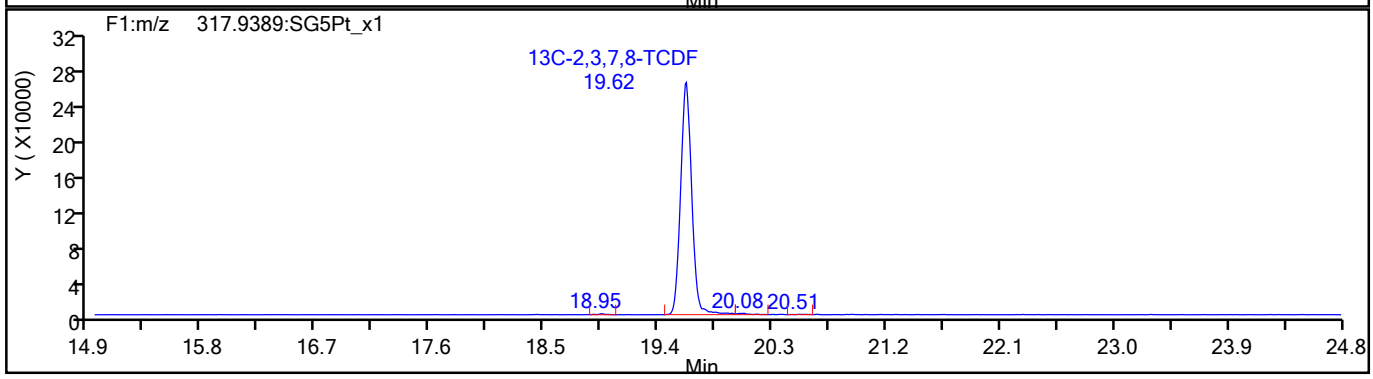

782918

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

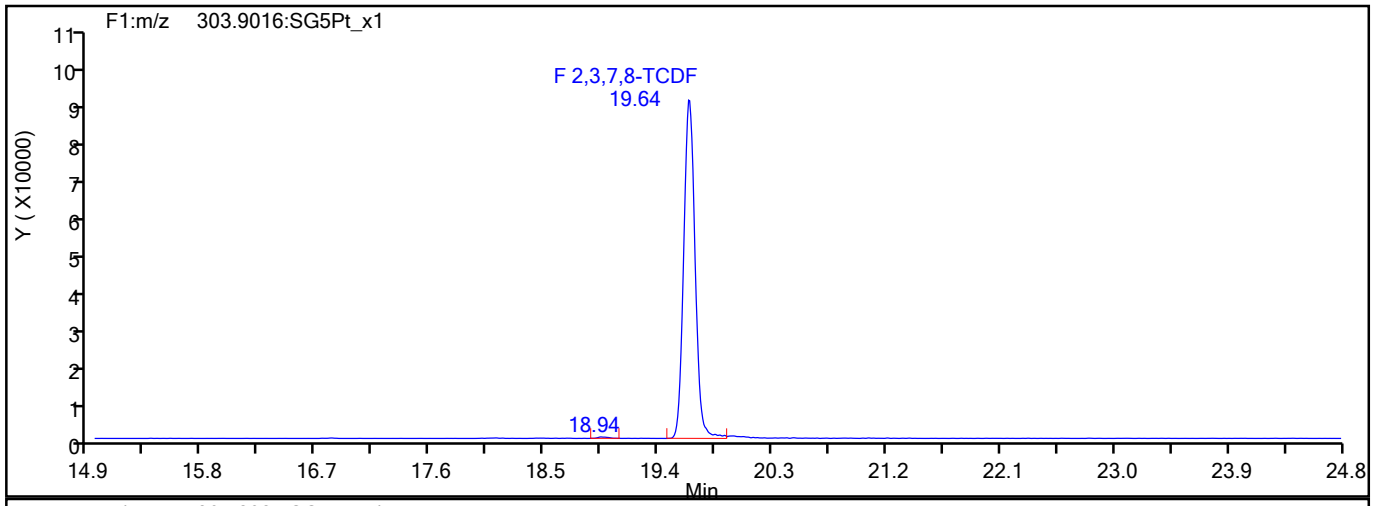

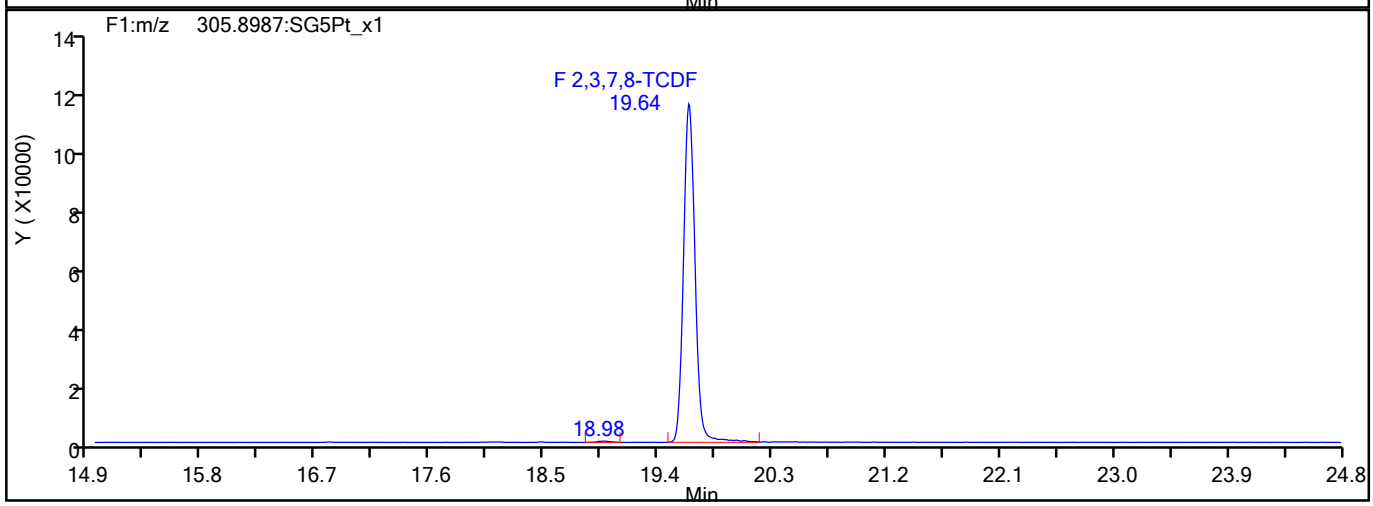

TCDF Interference Mass

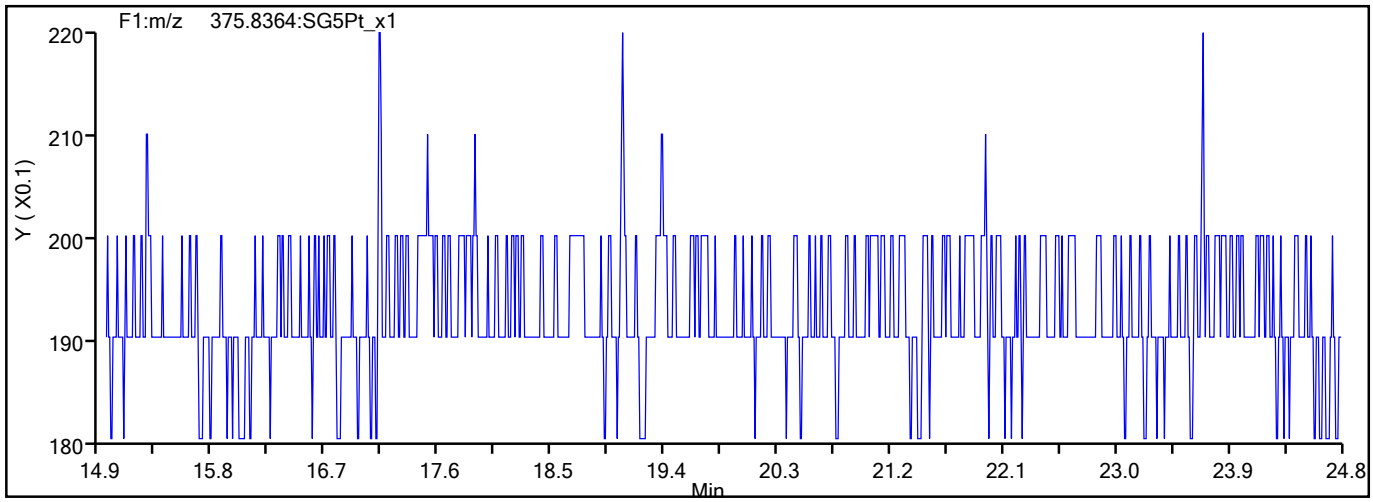

782919

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

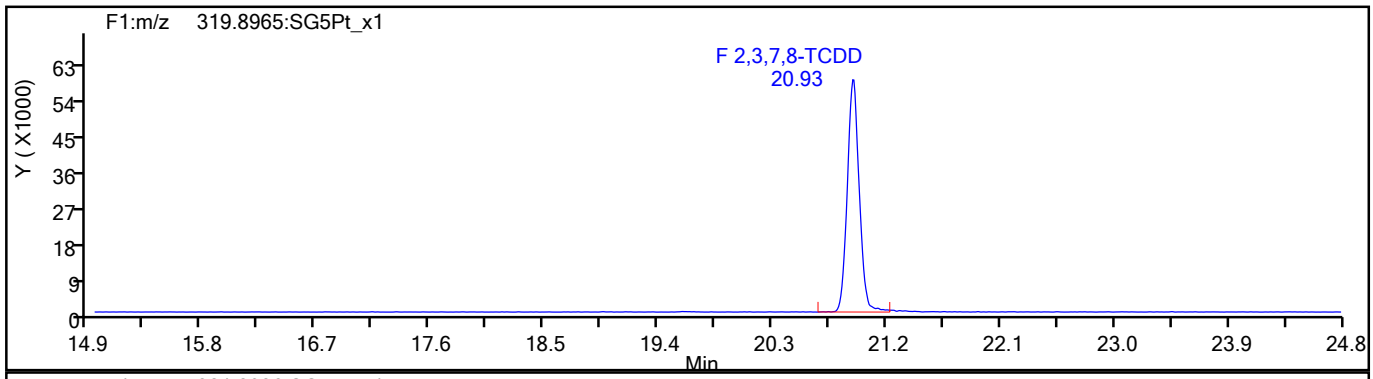

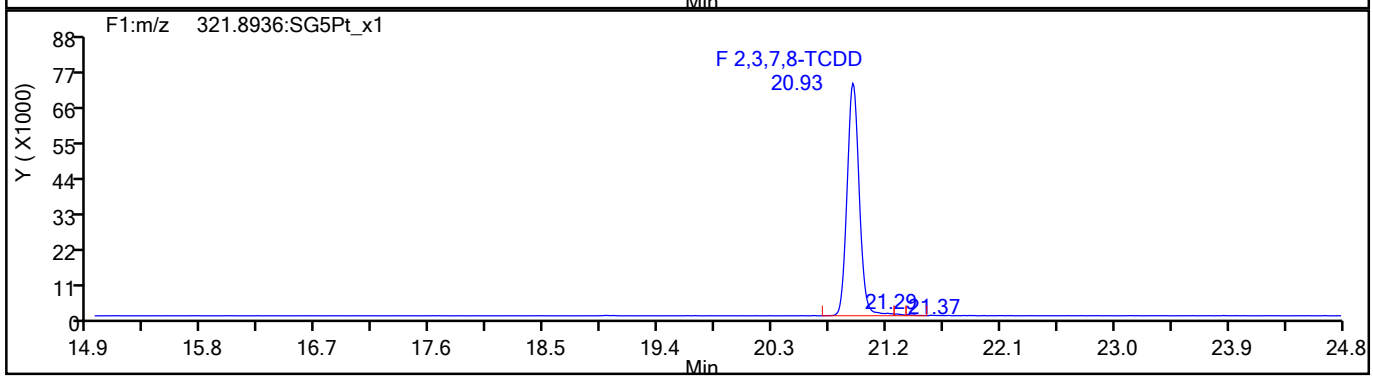

TCDD Standards

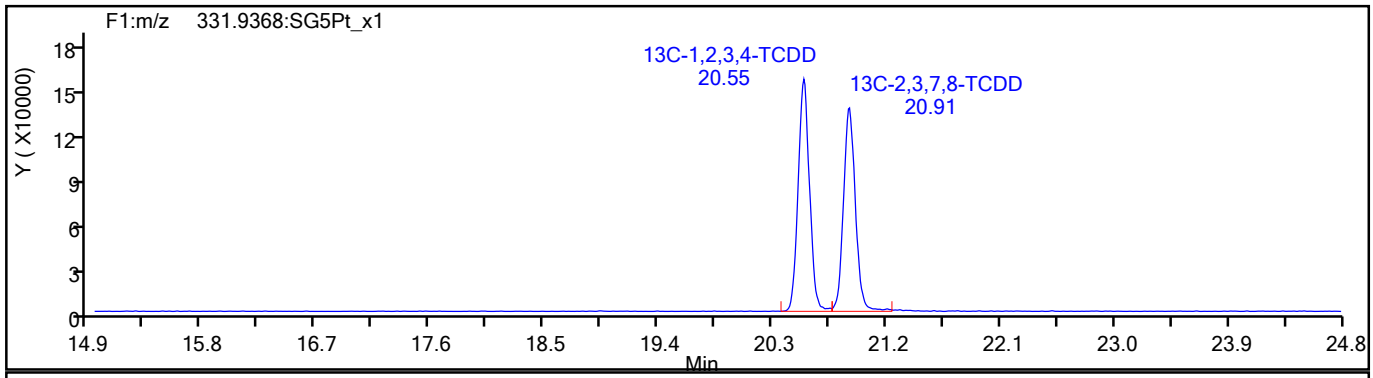

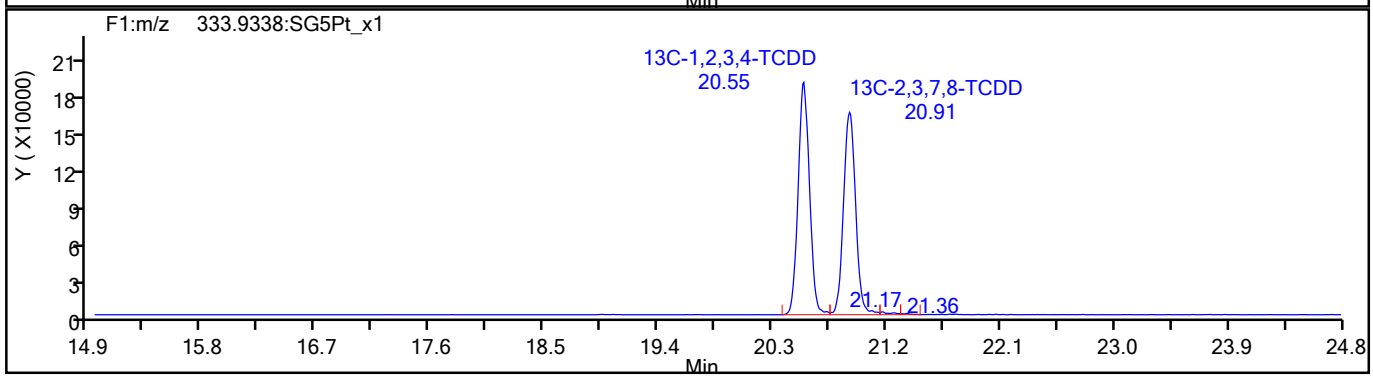

782920

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

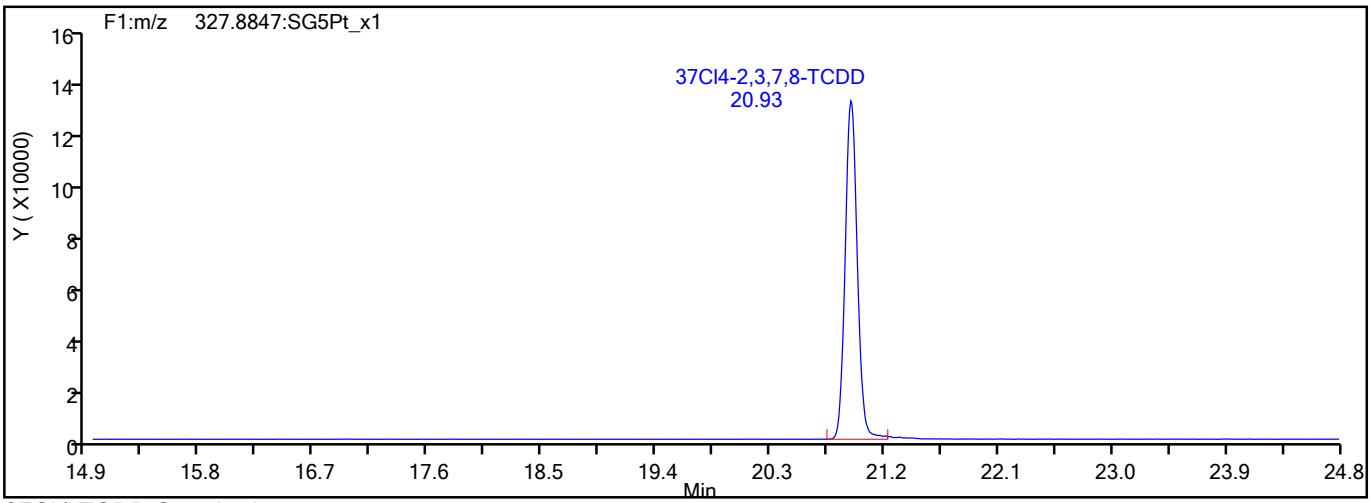

37Cl4-TCDD Standards

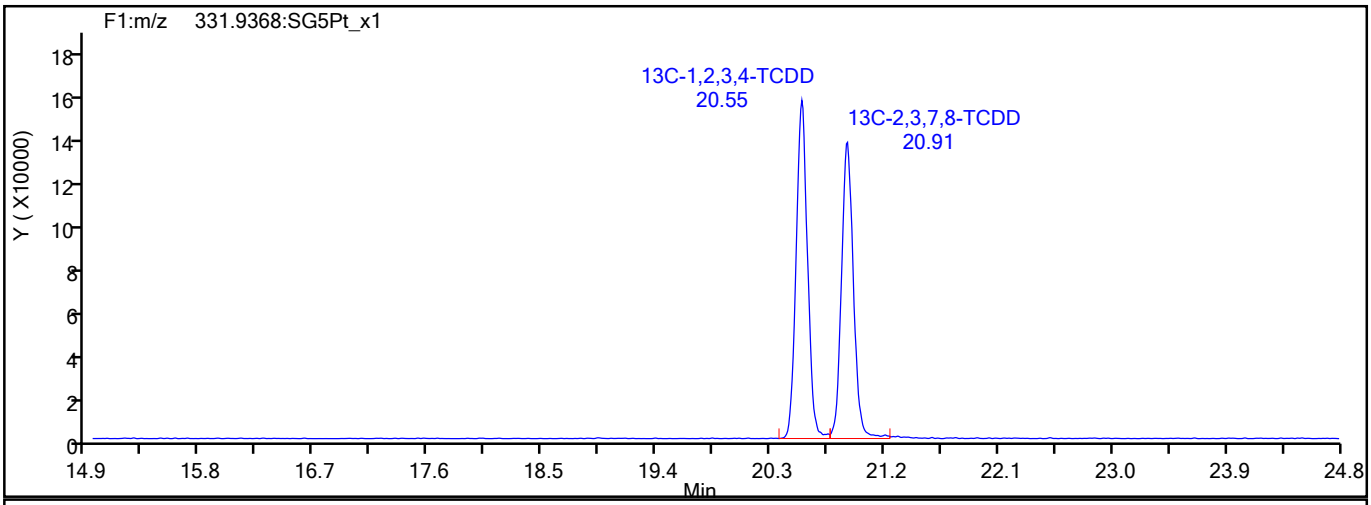

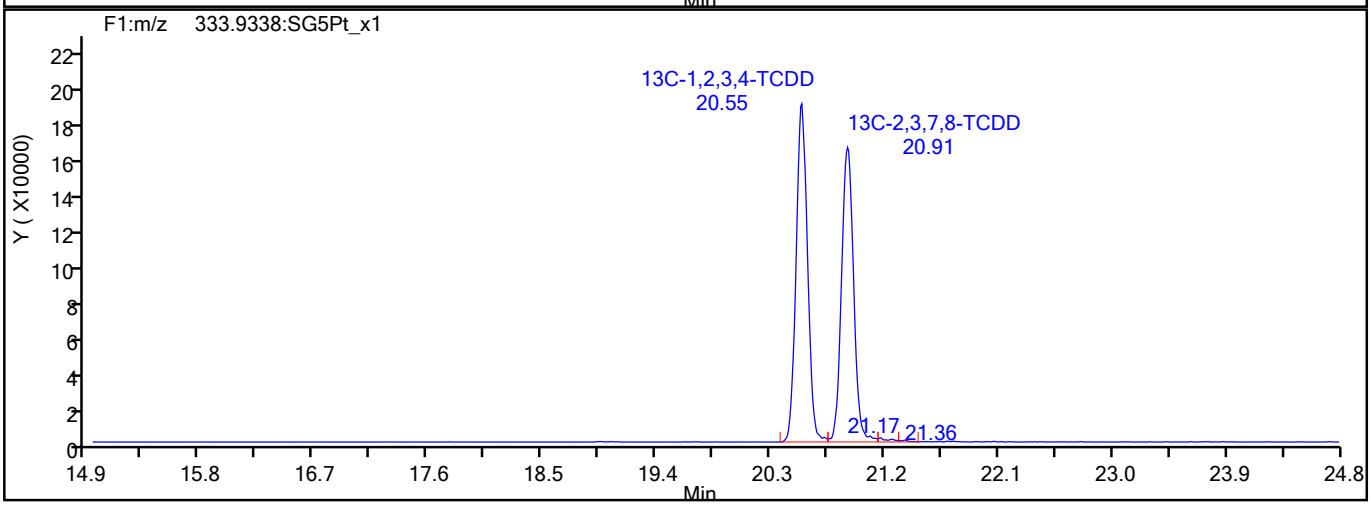

782921

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

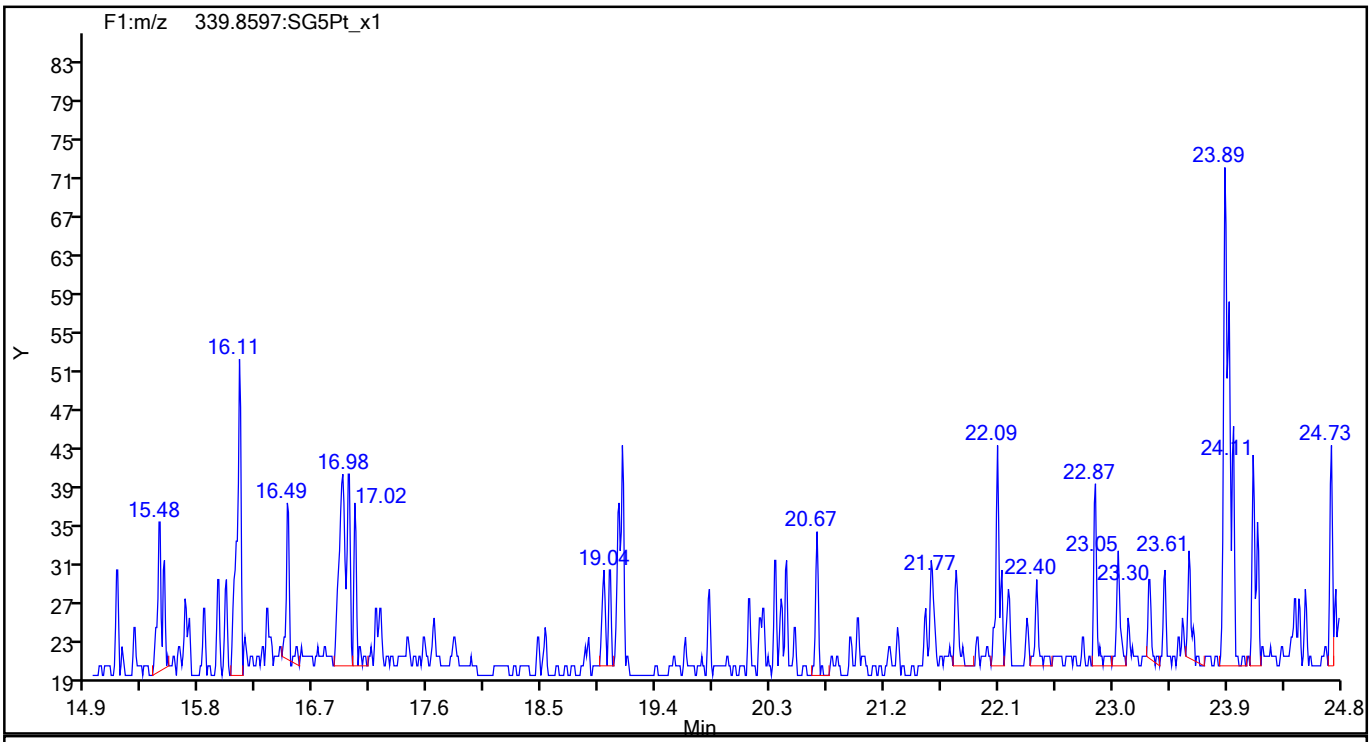

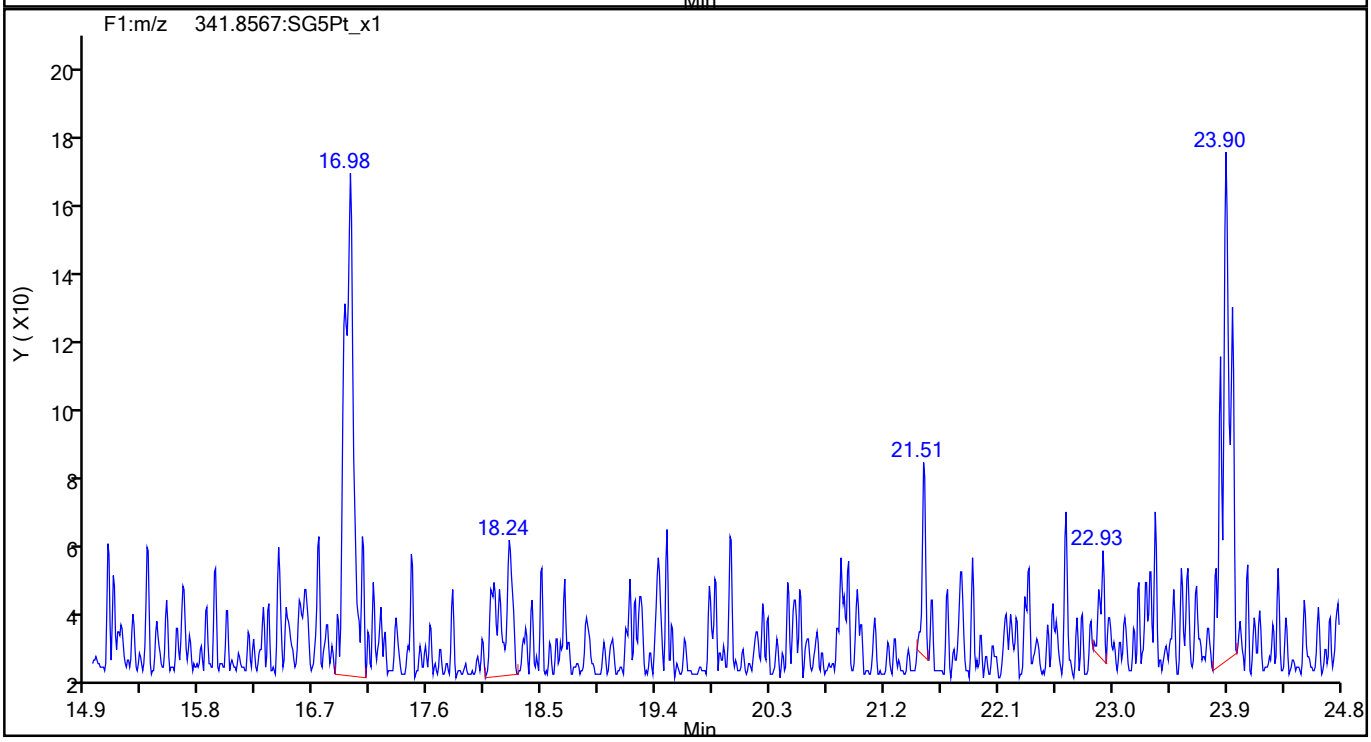

782922

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

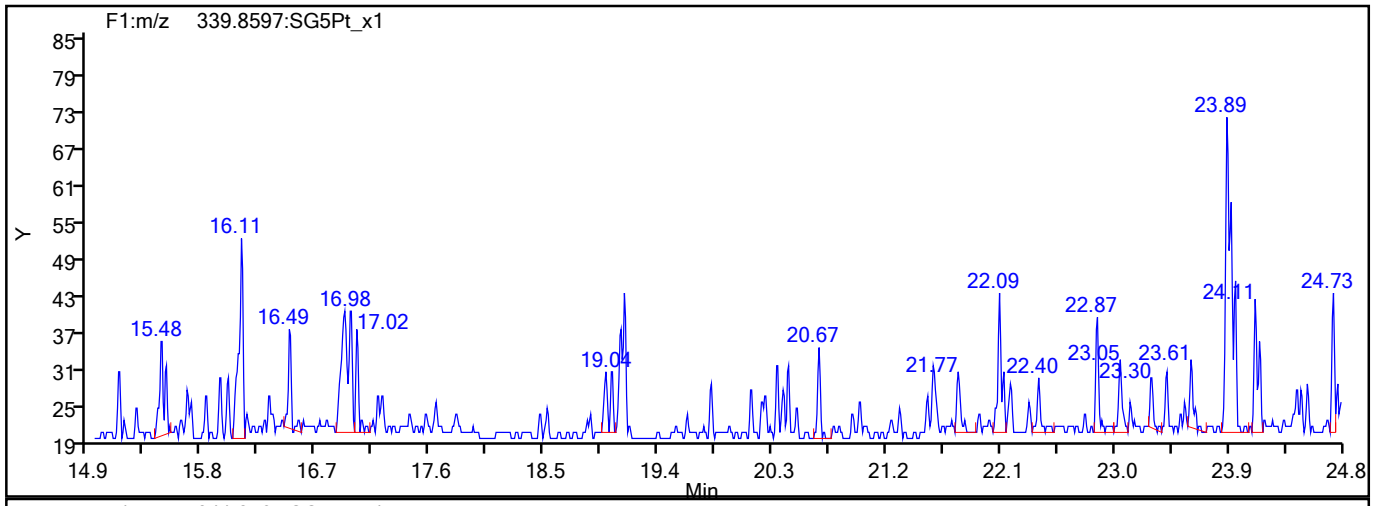

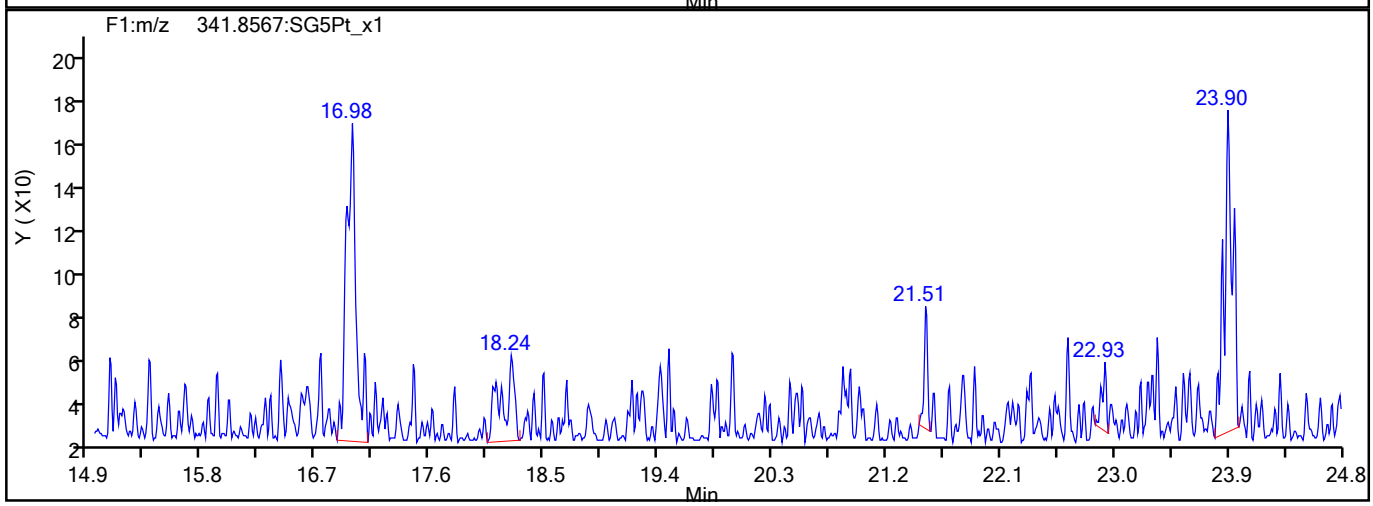

F1 PeCDFs Interference Mass

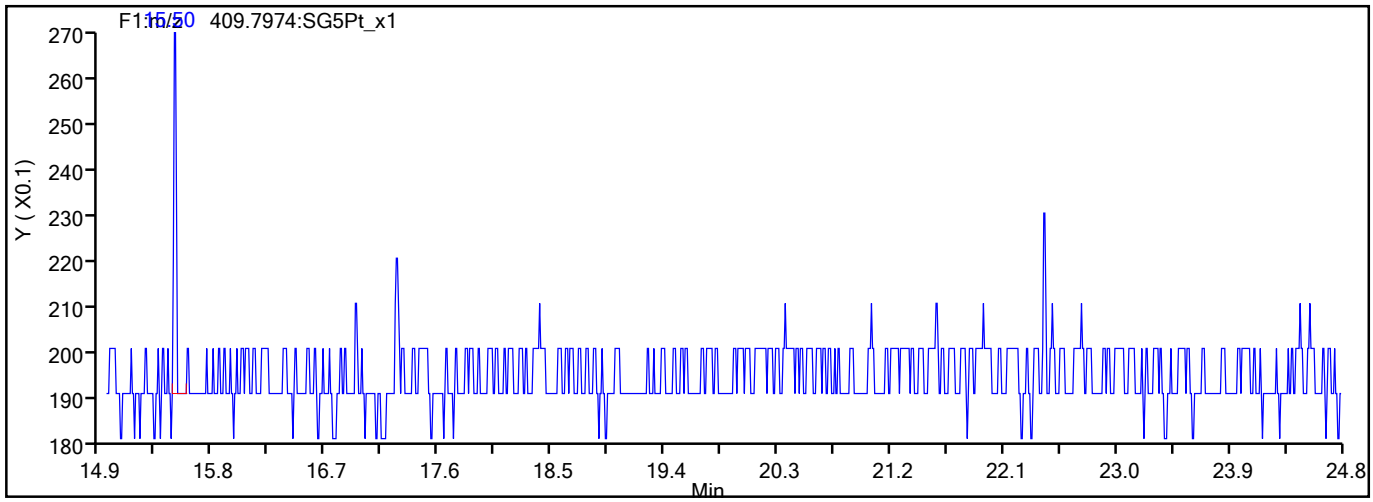

782923

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

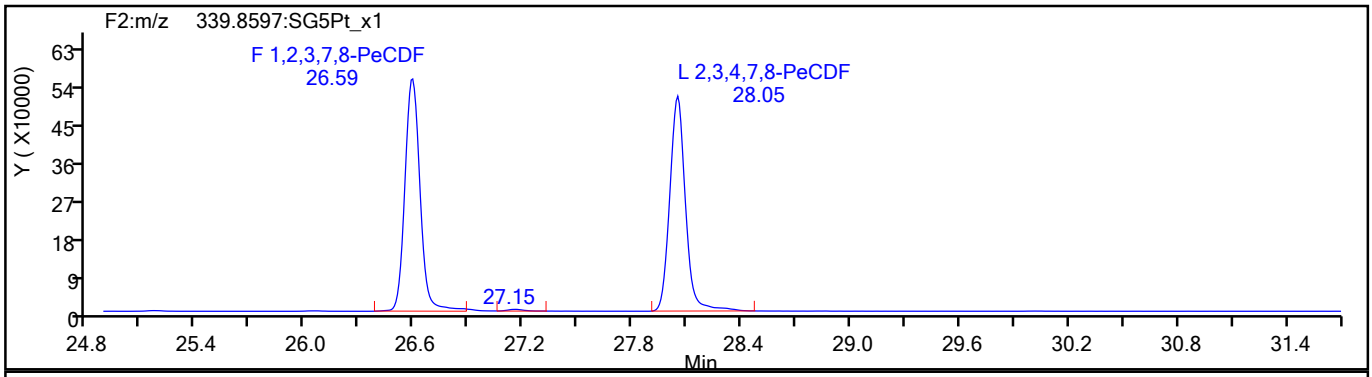

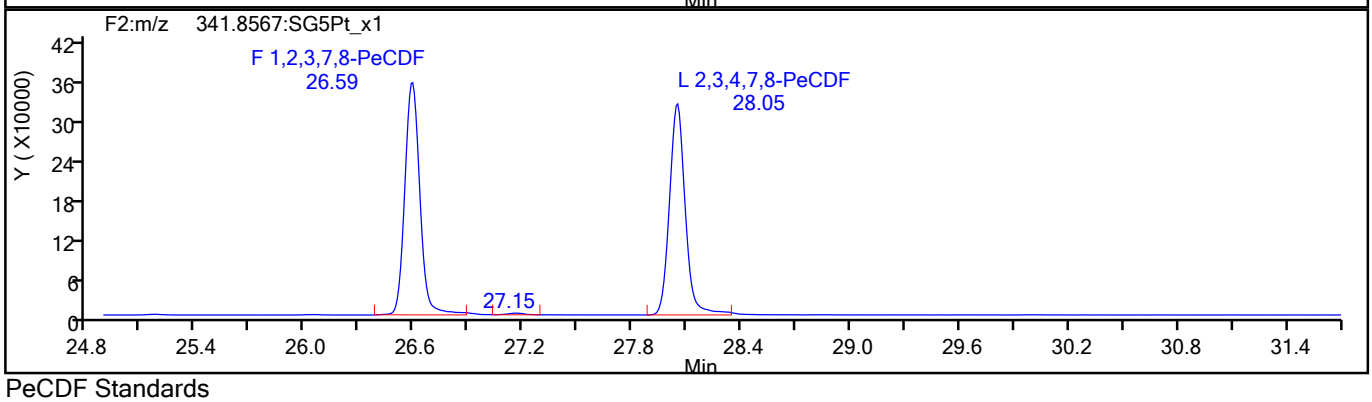

PeCDF Standards

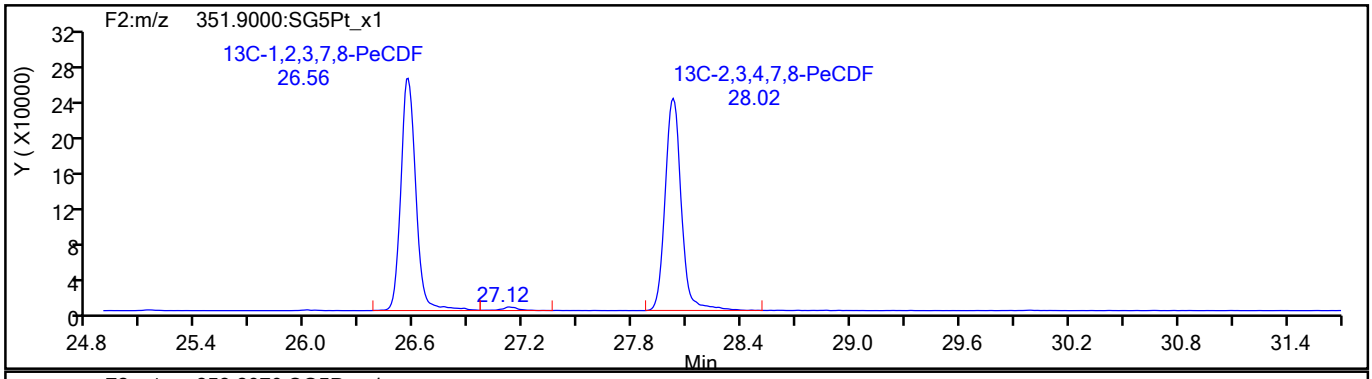

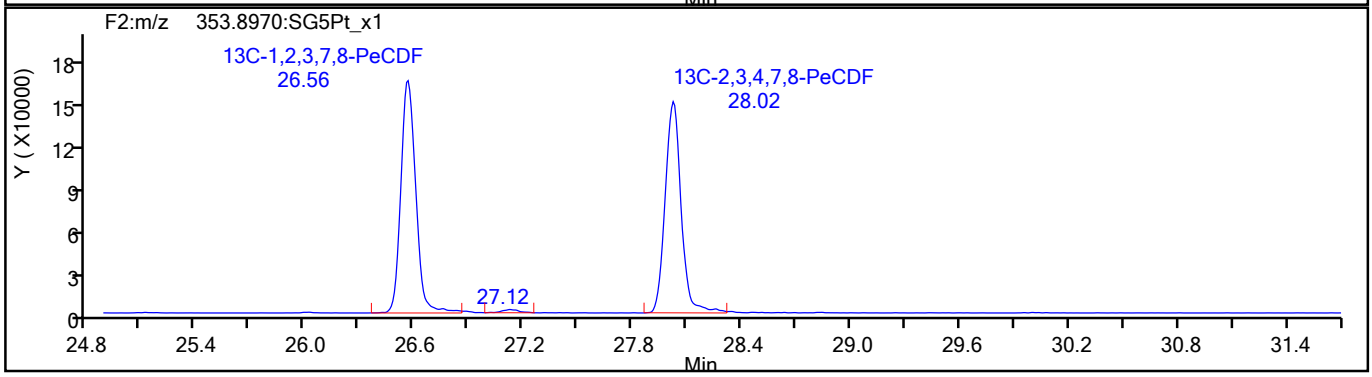

782924

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

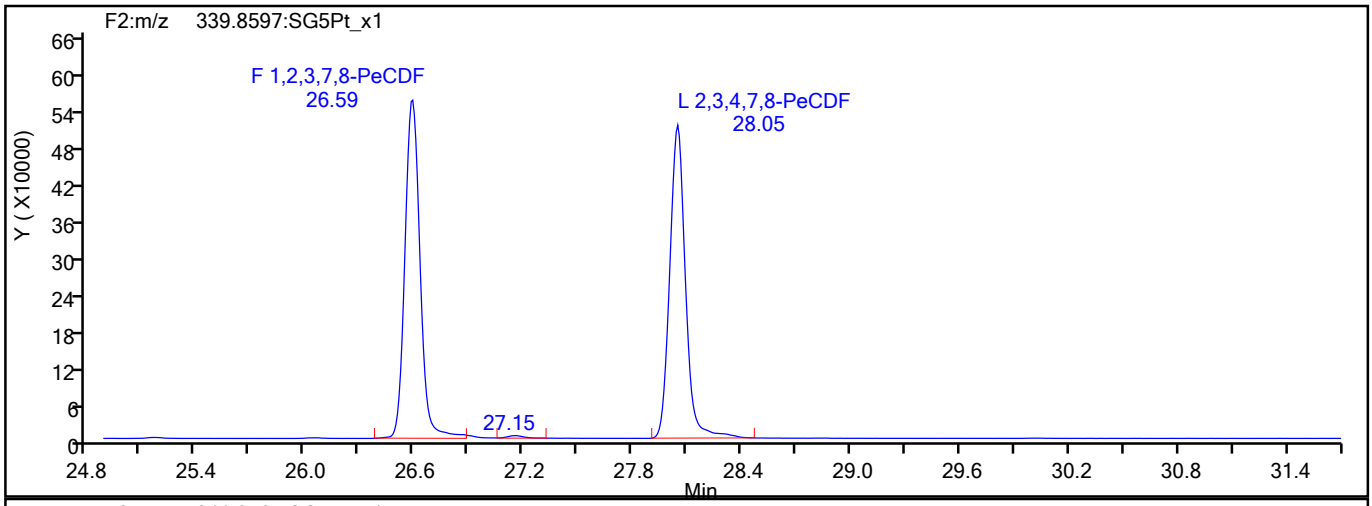

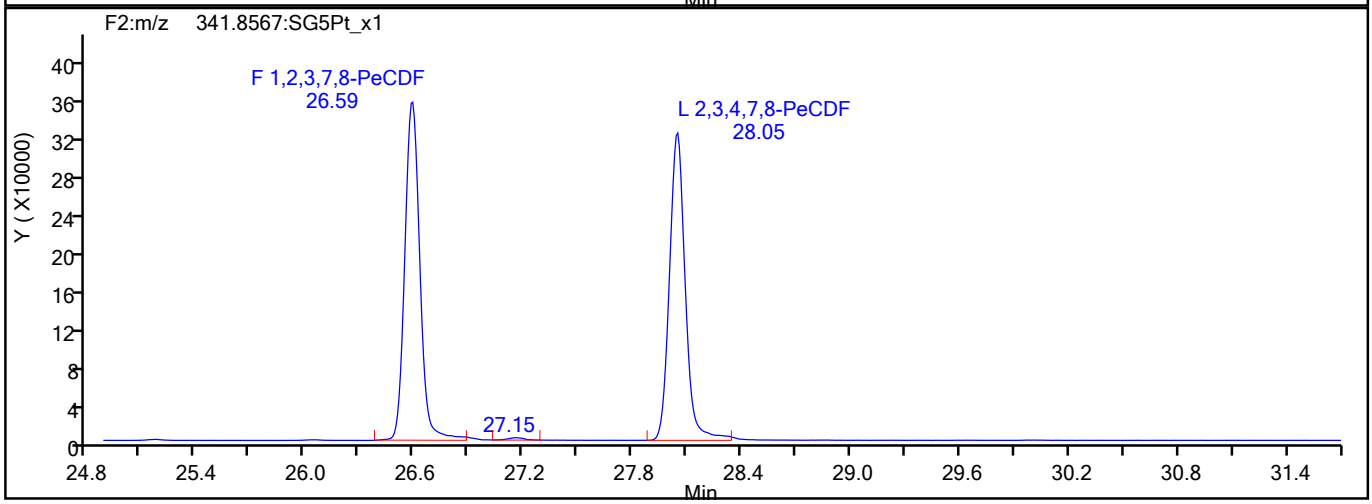

PeCDF Interference Mass

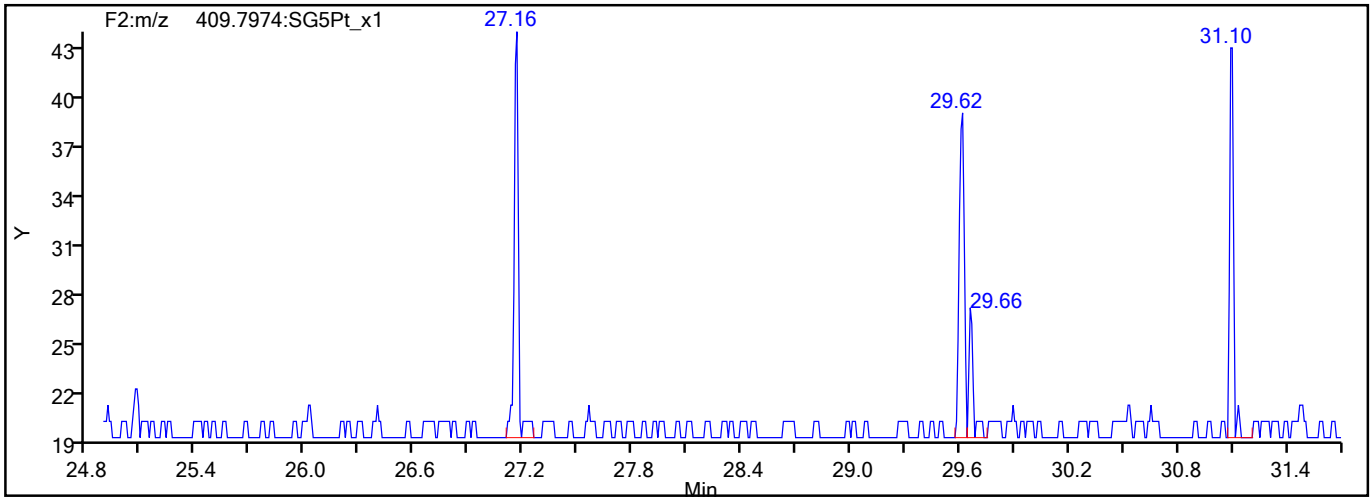

782925

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

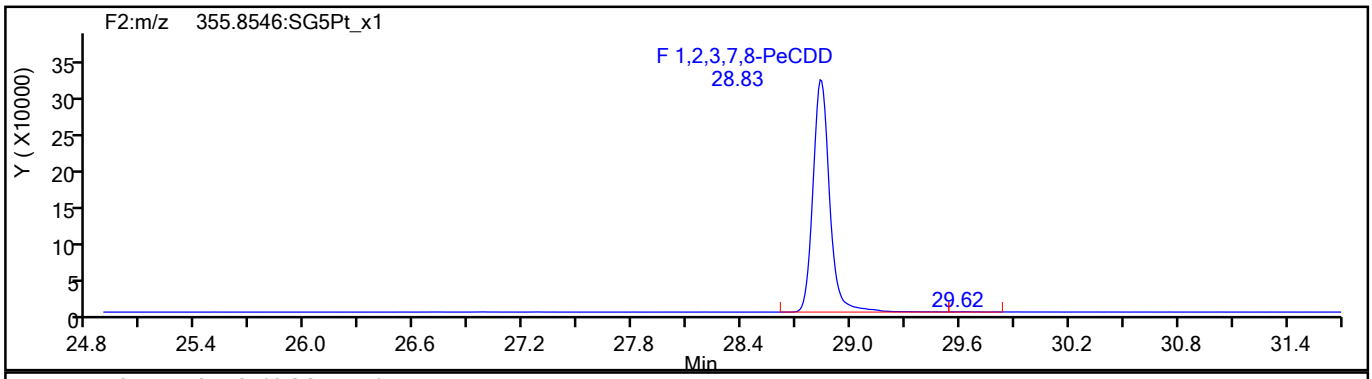

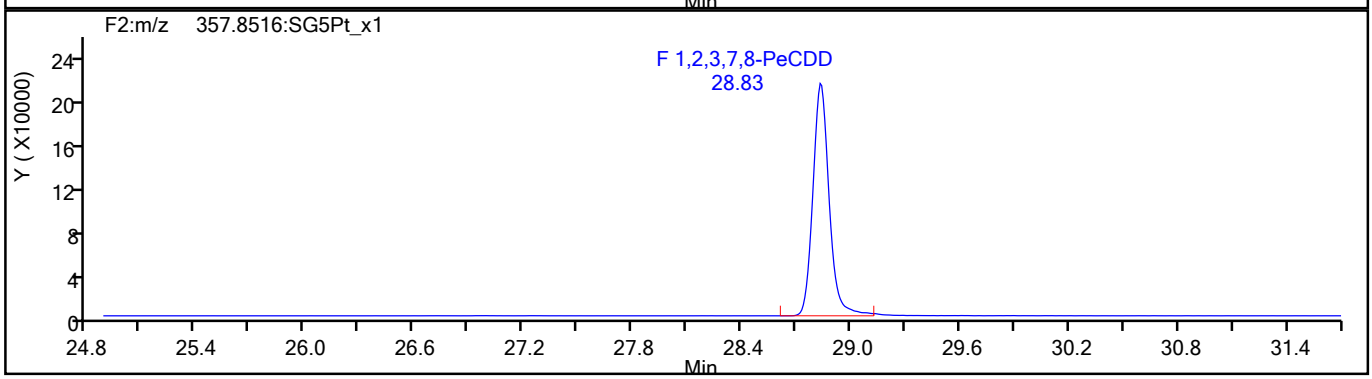

PeCDD Standards

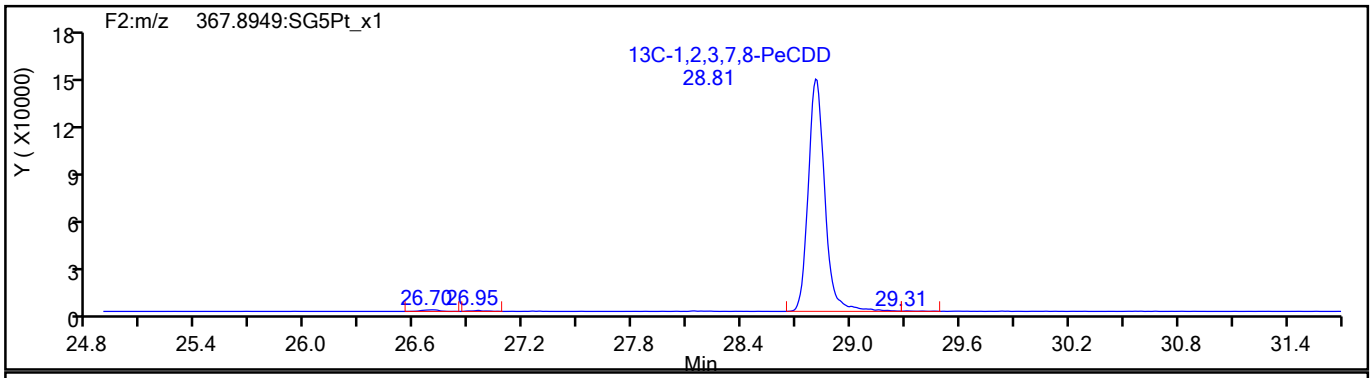

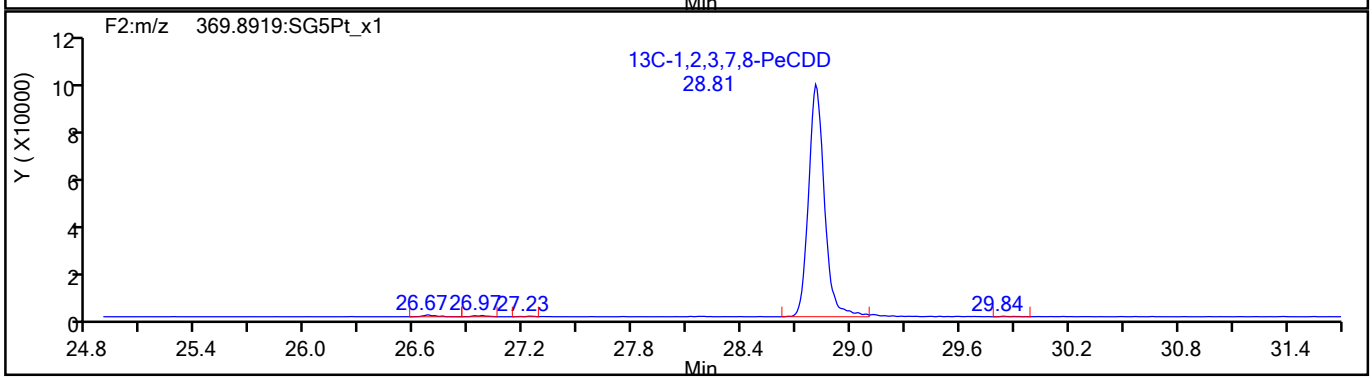

782926

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

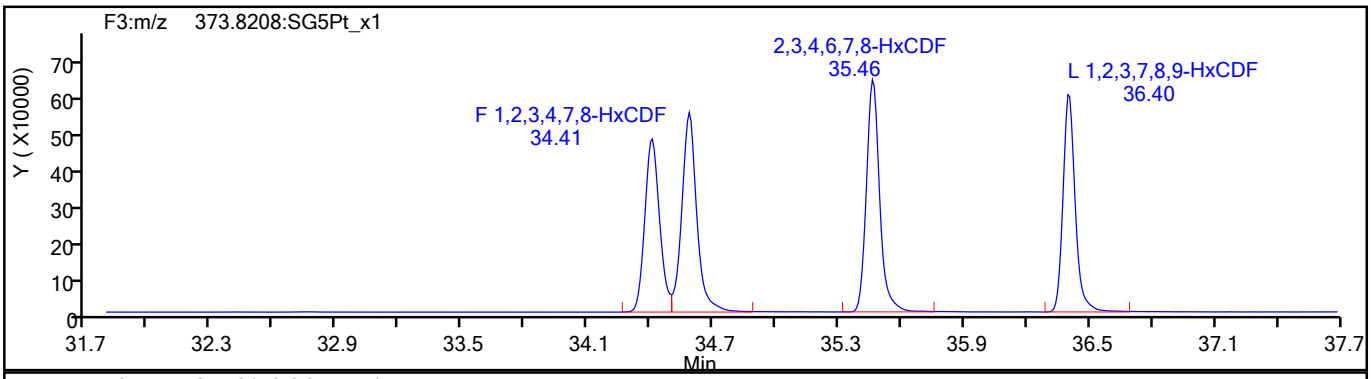

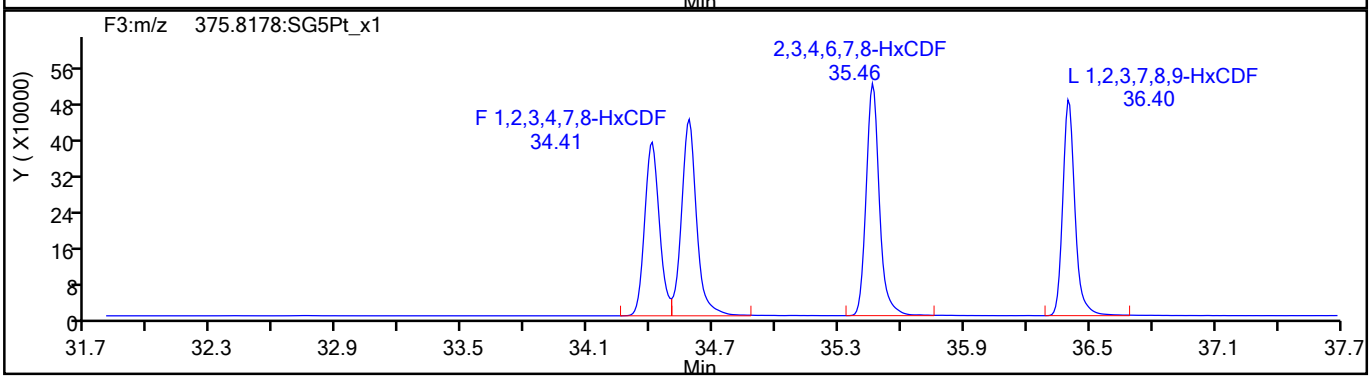

HxCDF Standards

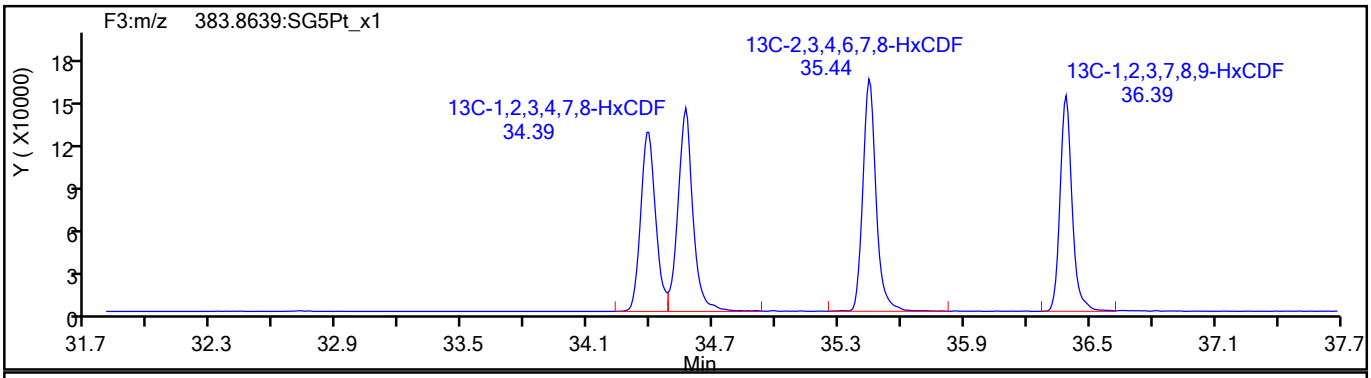

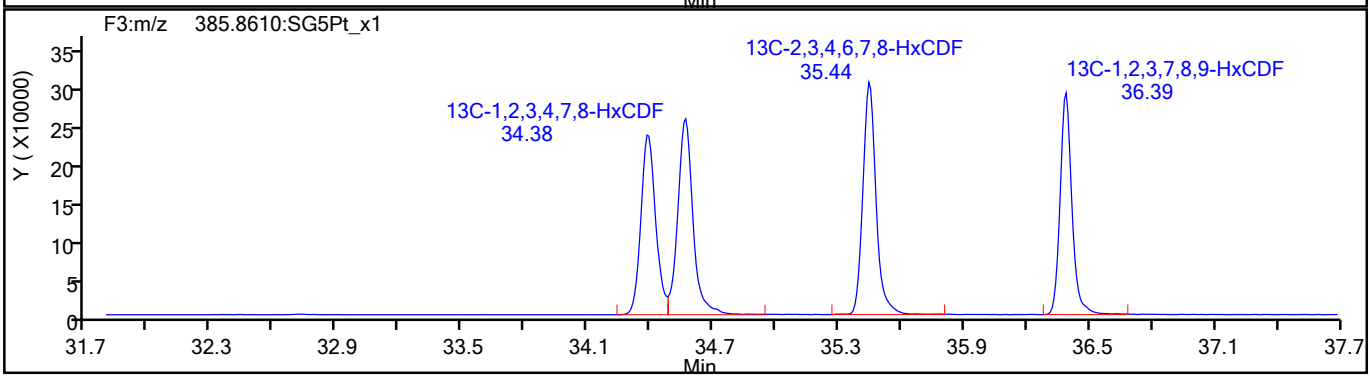

782927

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

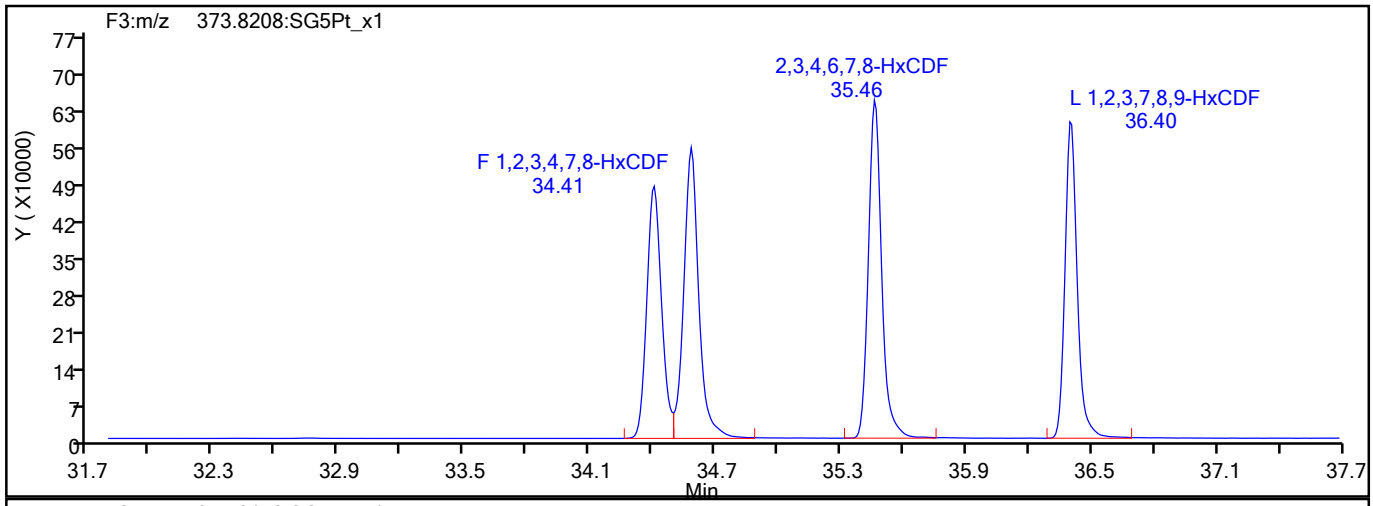

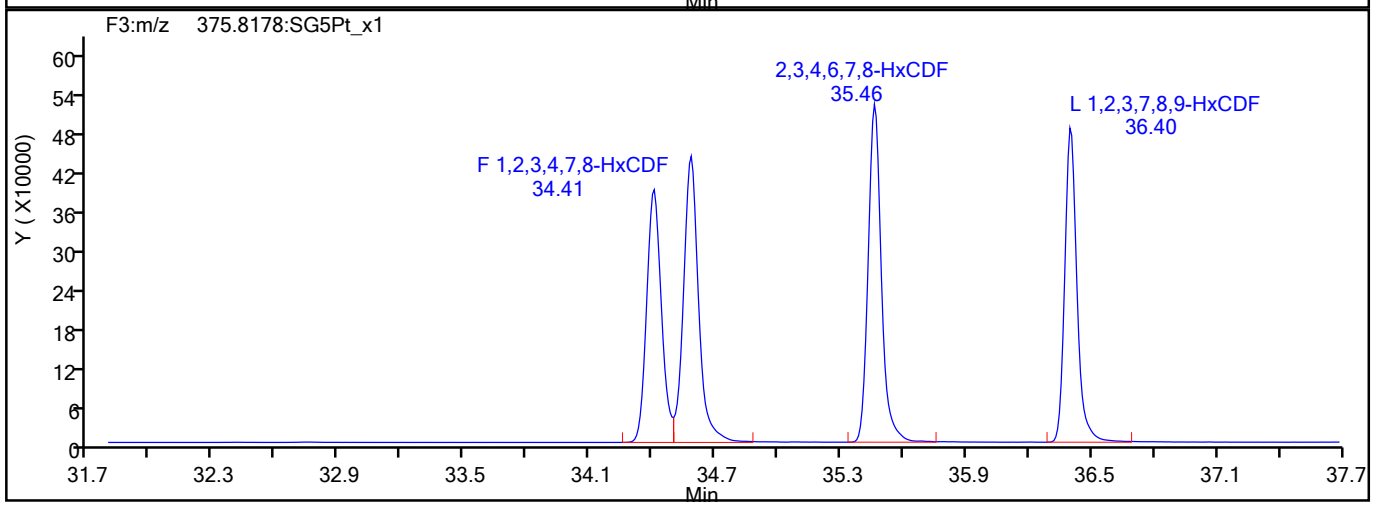

HxCDF Interference Mass

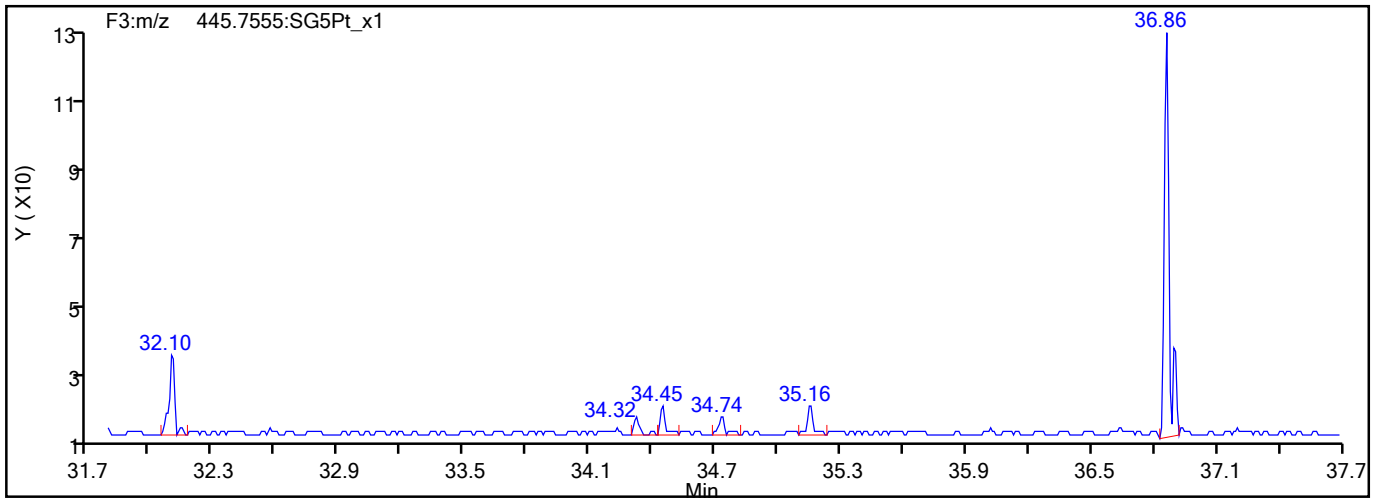

782928

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

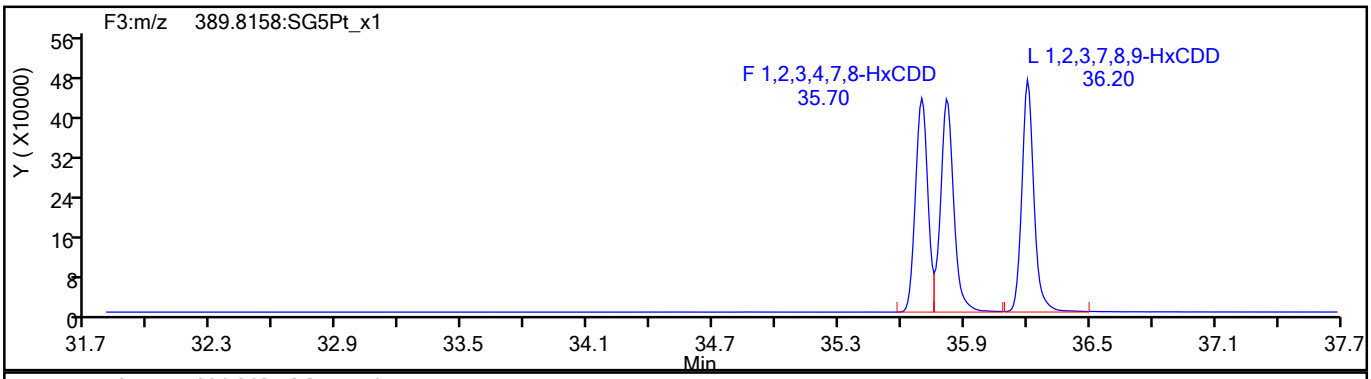

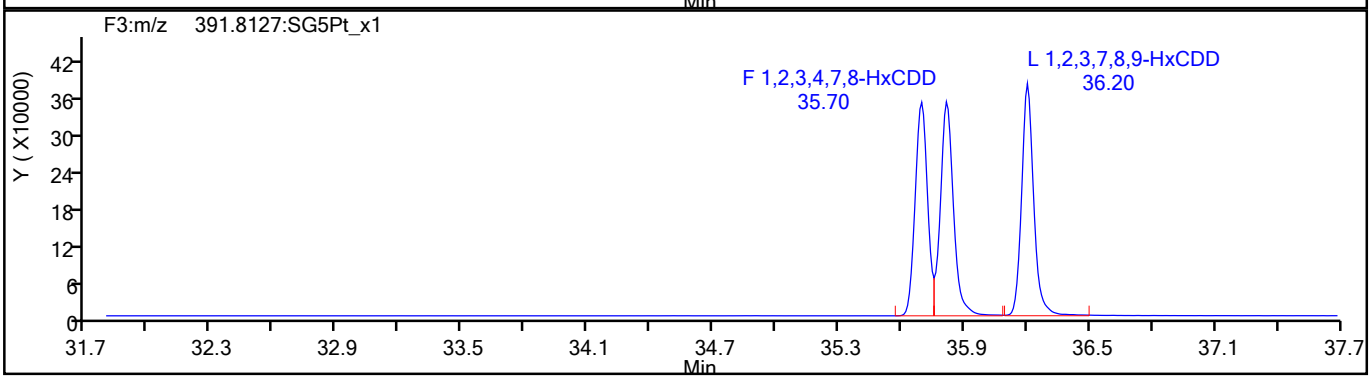

HxCDD Standards

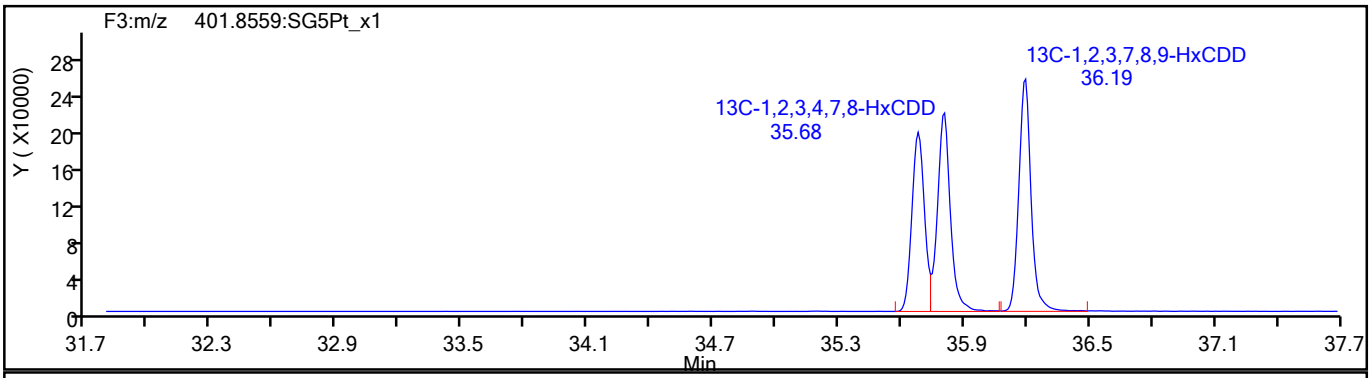

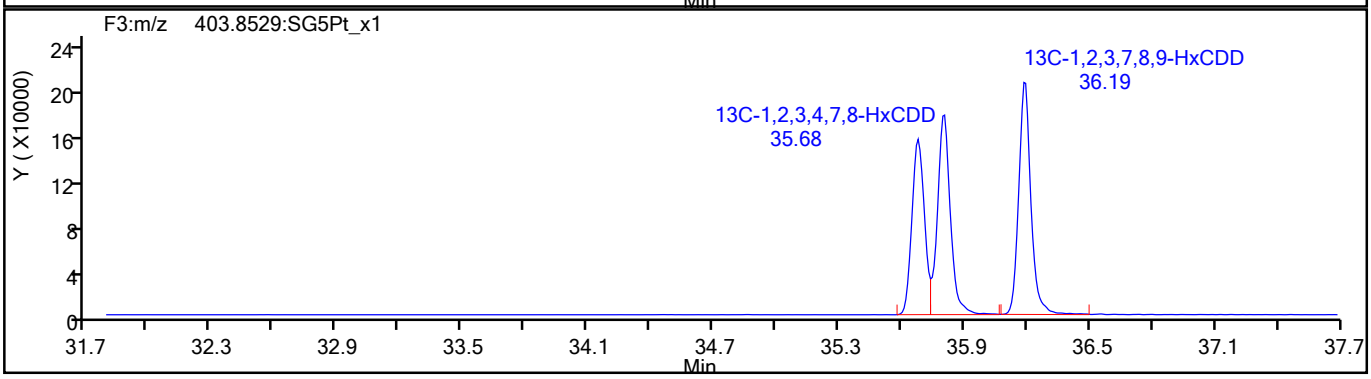

782929

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

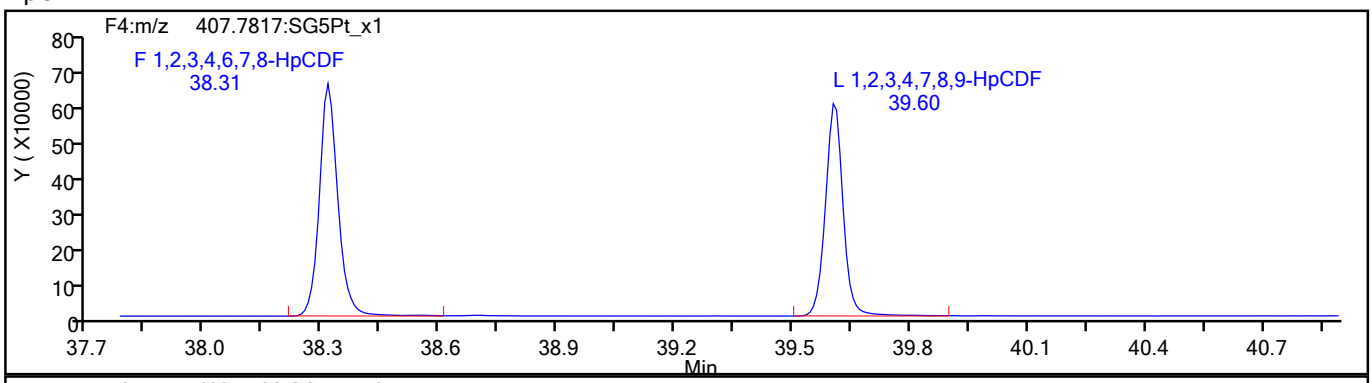

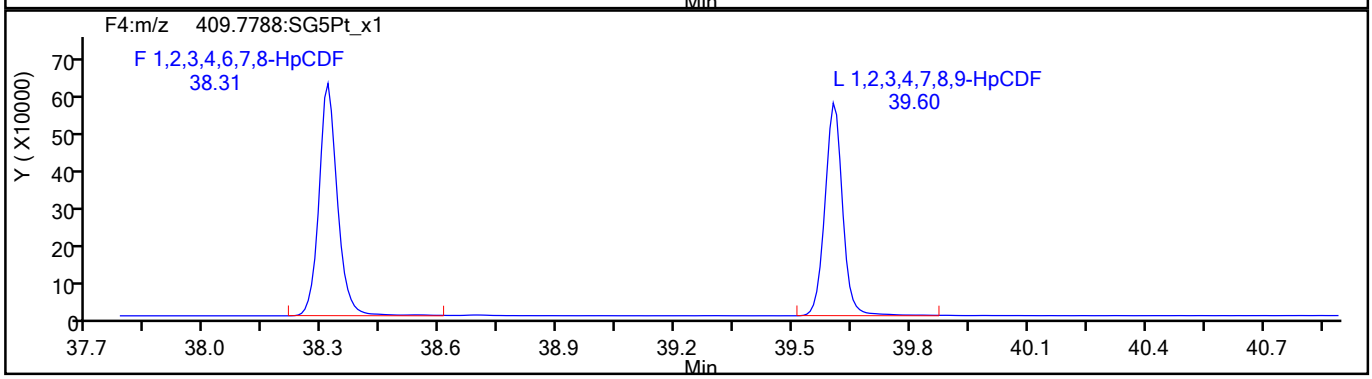

HpCDF Standards

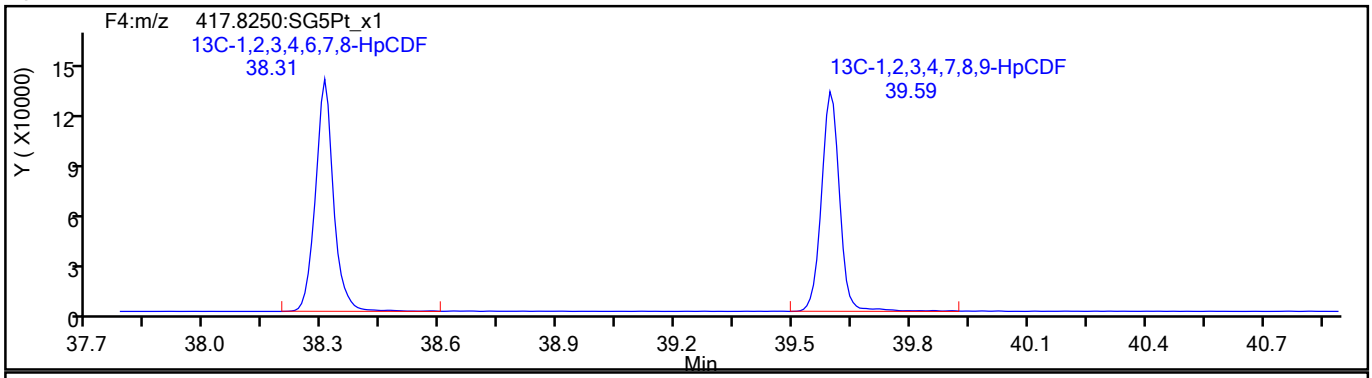

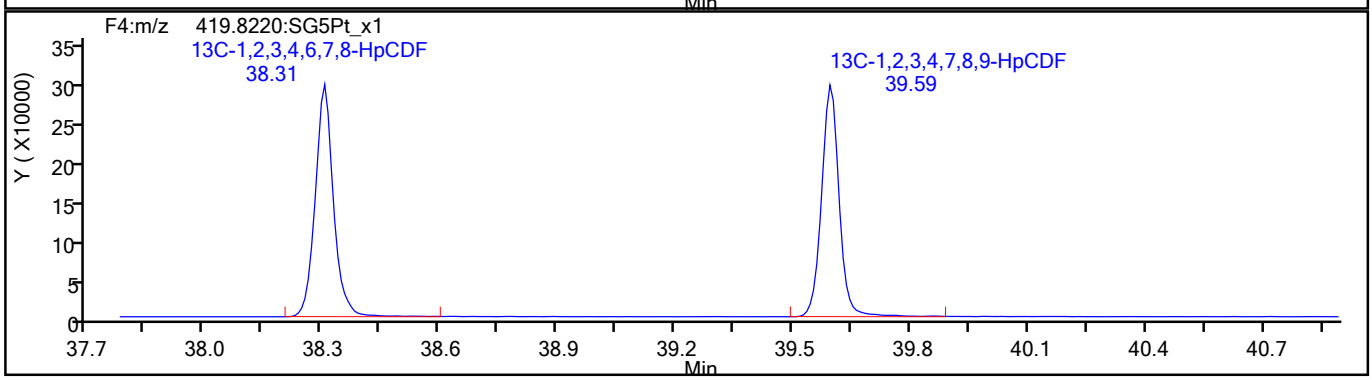

782930

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

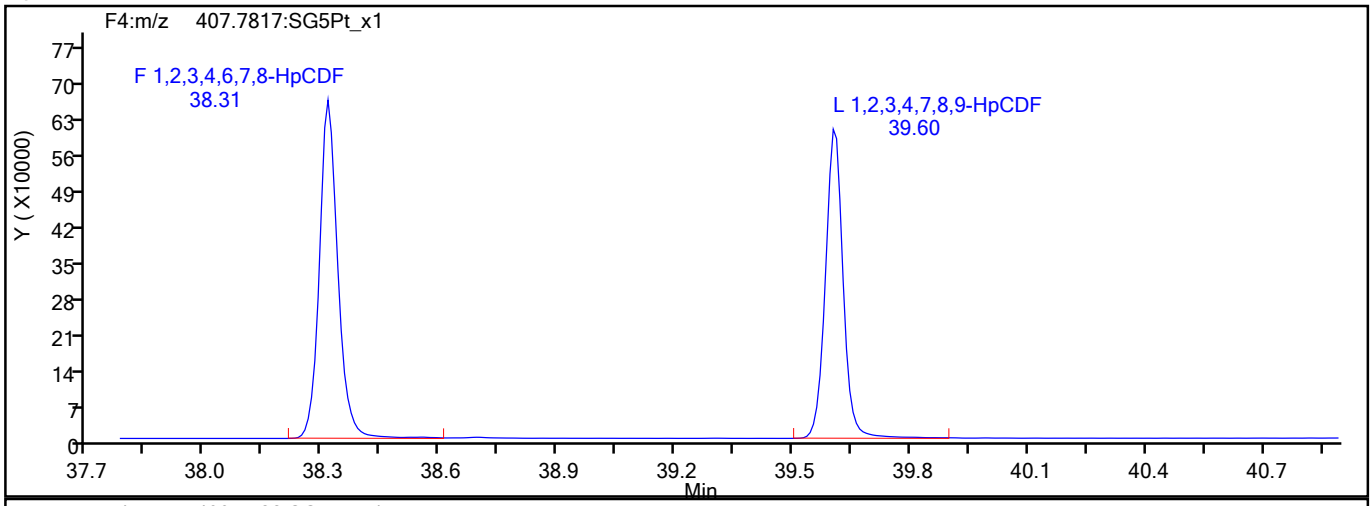

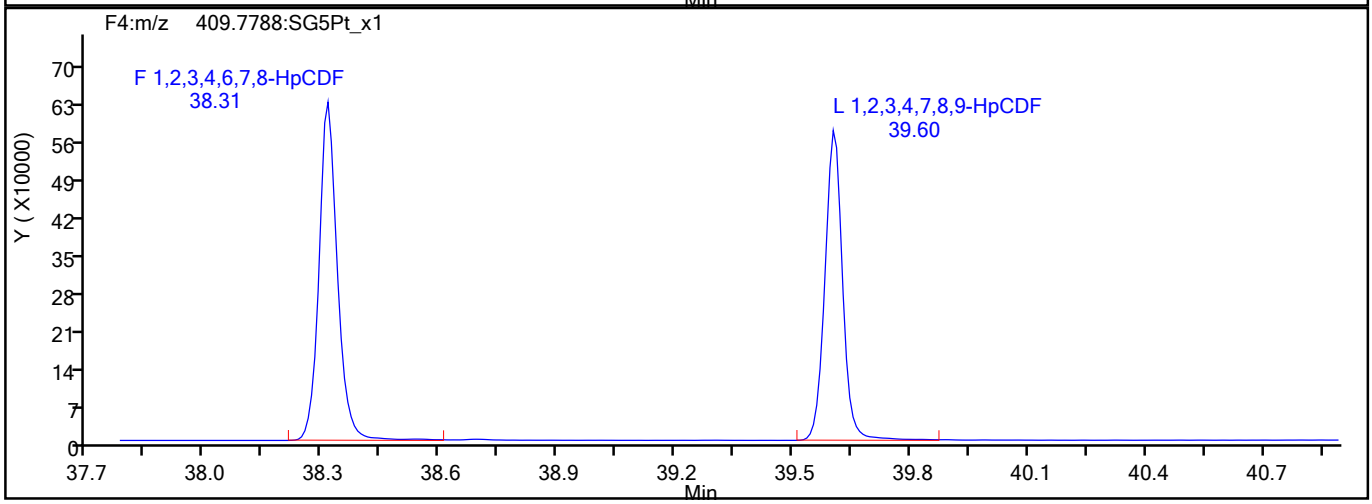

HpCDF Interference Mass

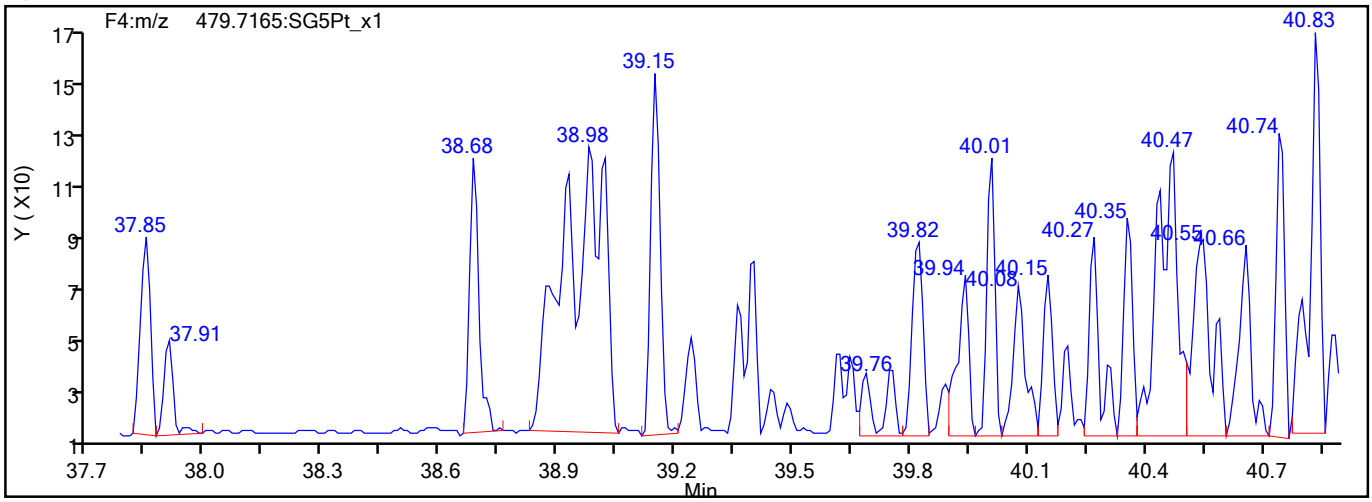

782931

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

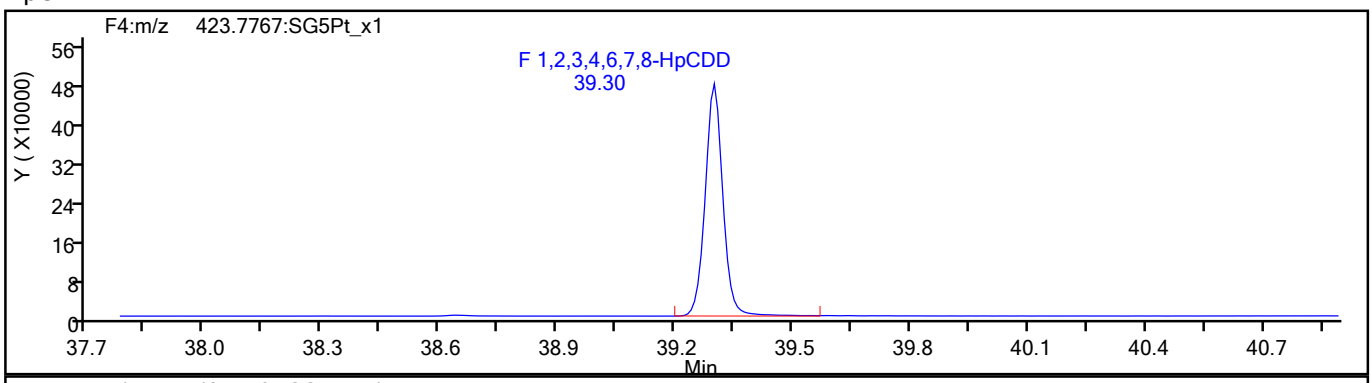

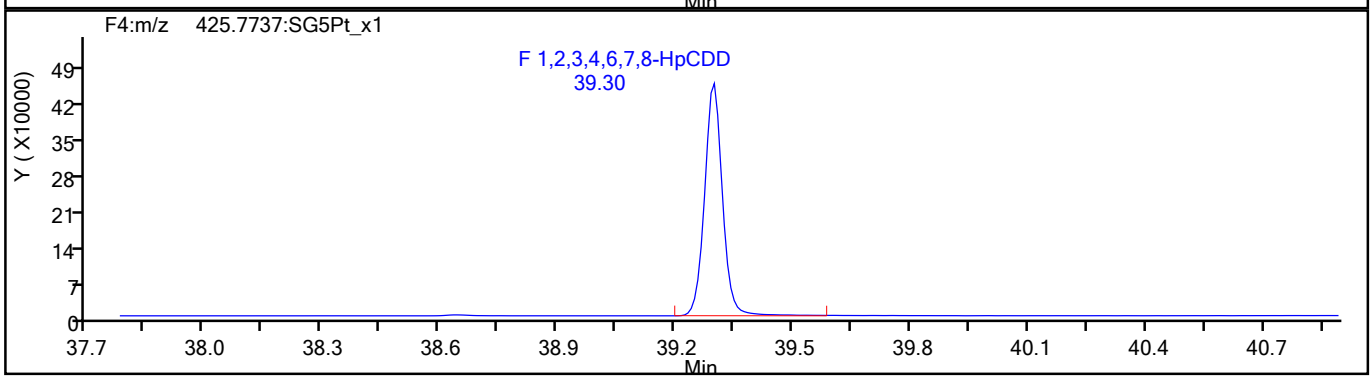

HpCDD Standards

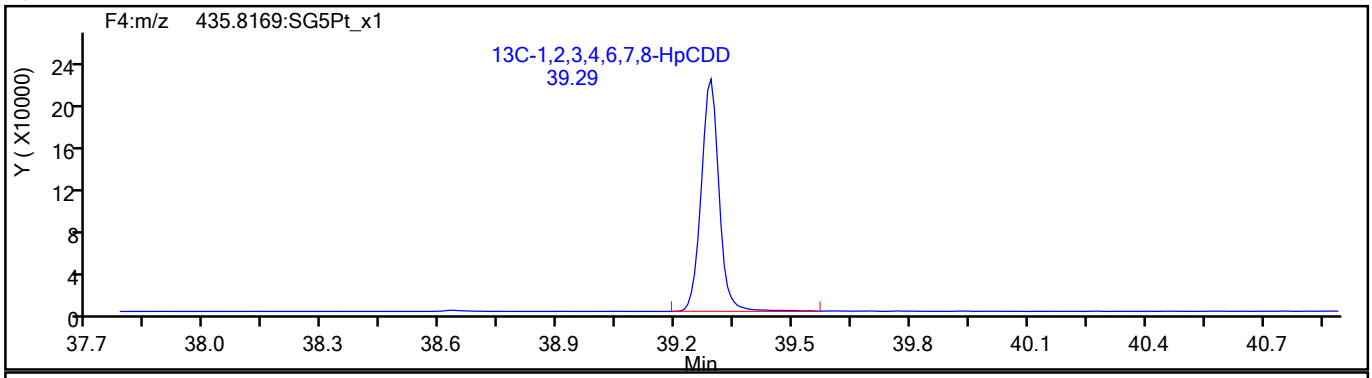

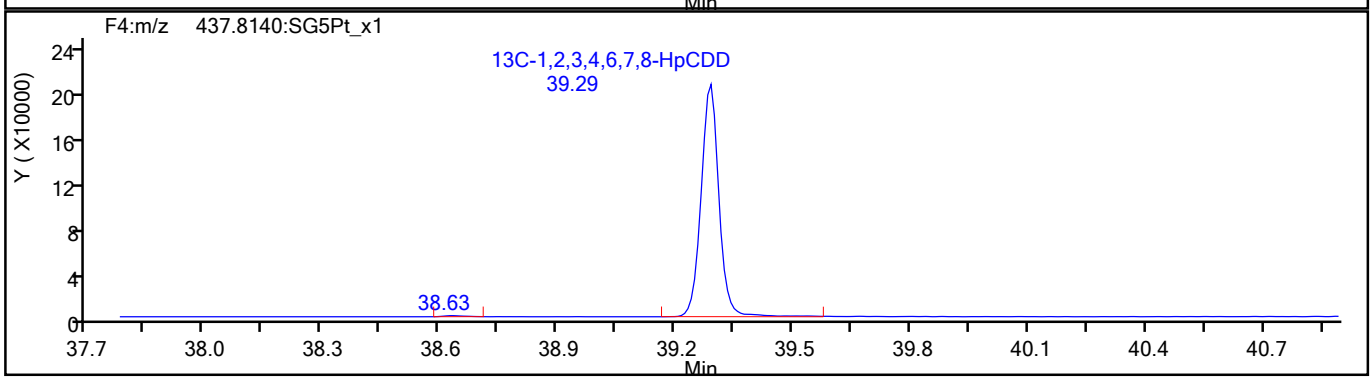

782932

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

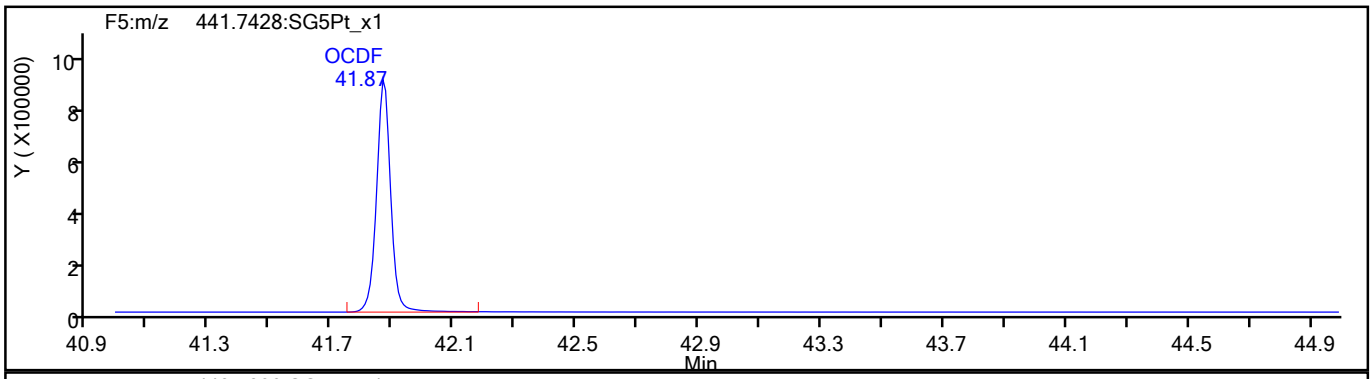

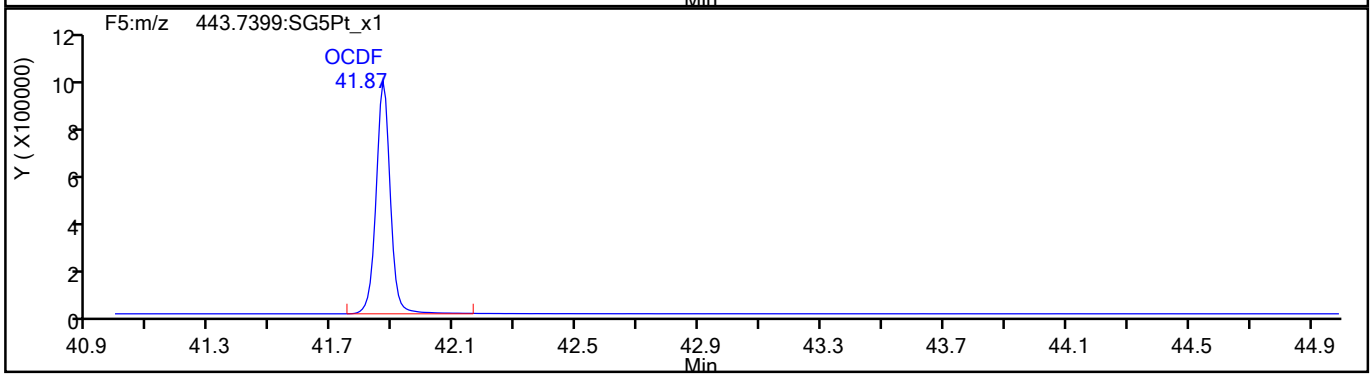

OCDF Standards

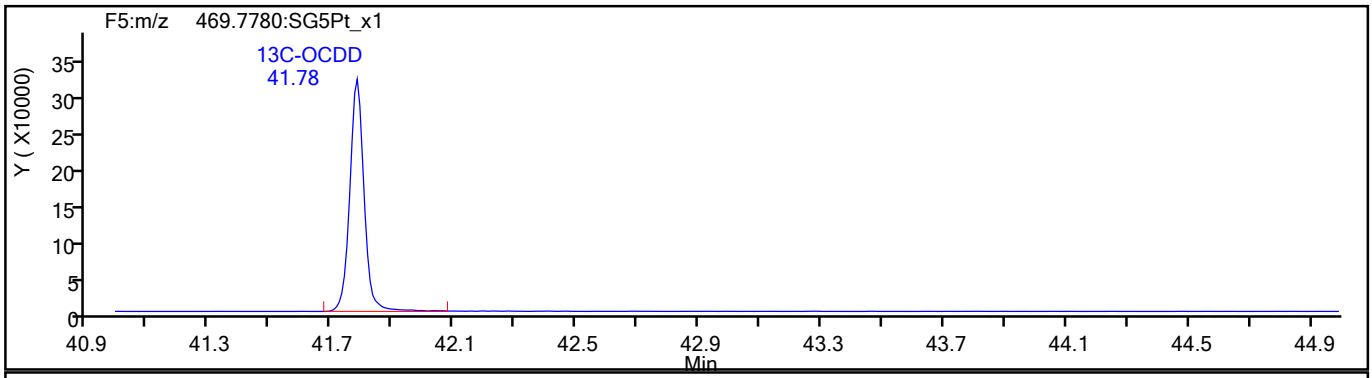

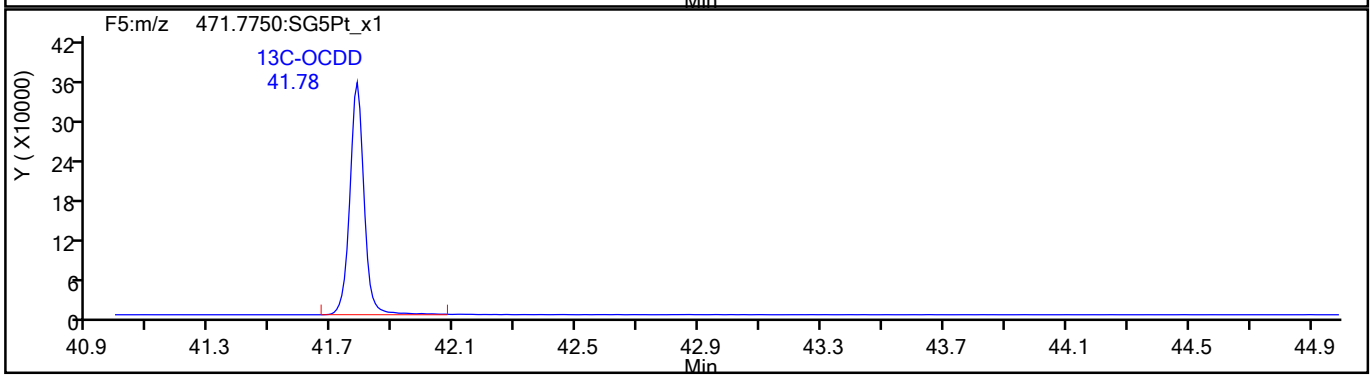

782933

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

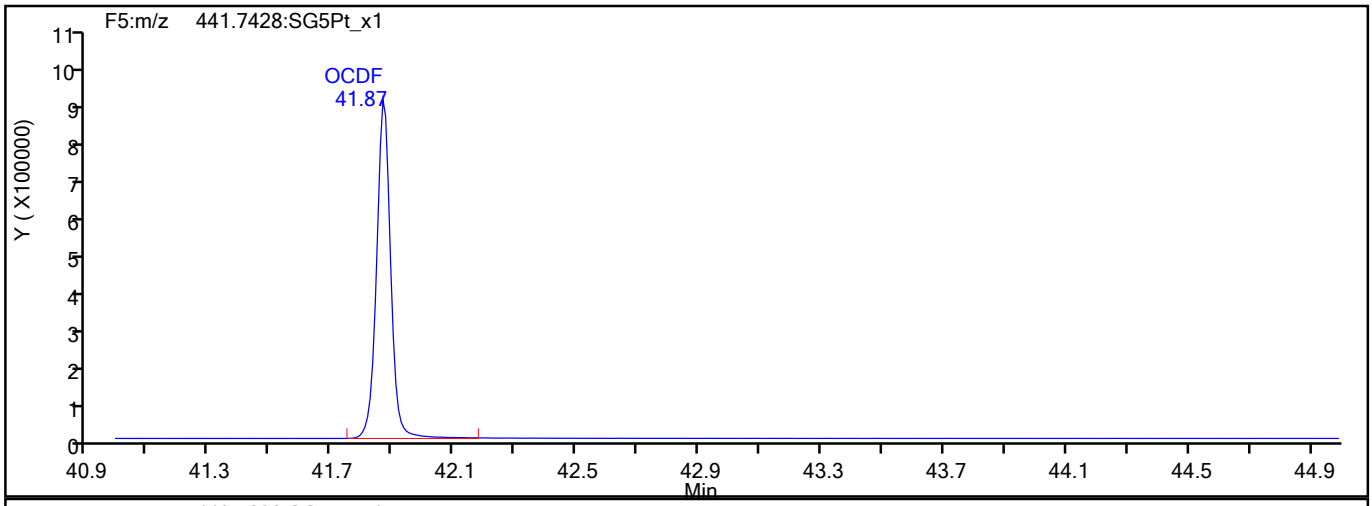

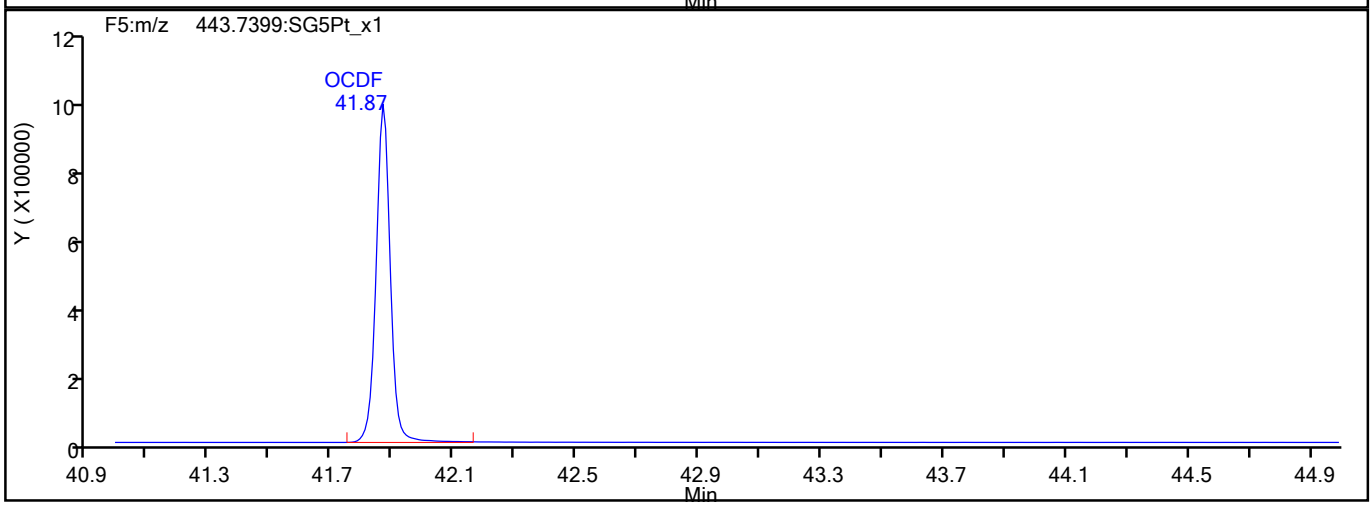

OCDF Interference Mass

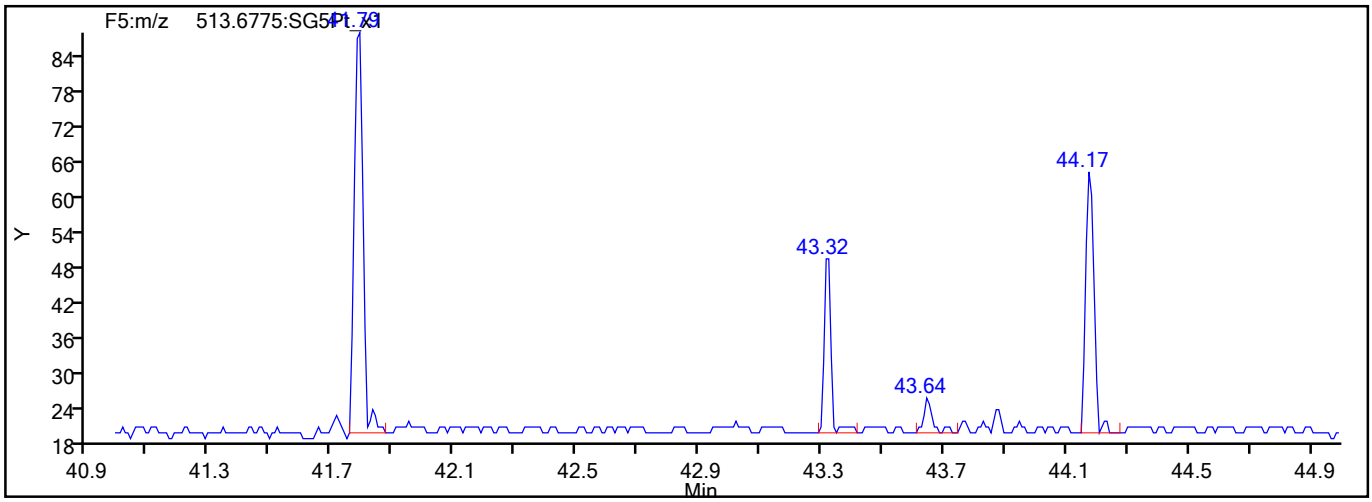

782934

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

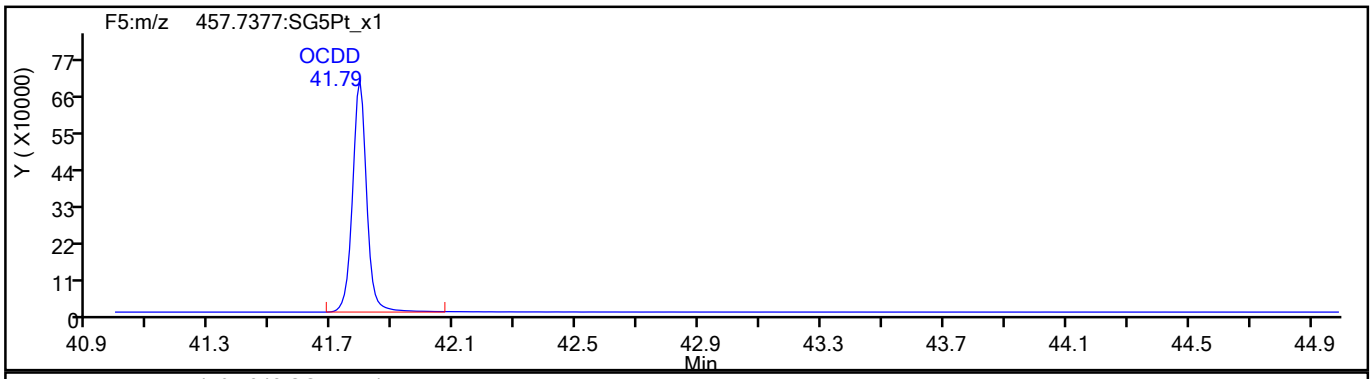

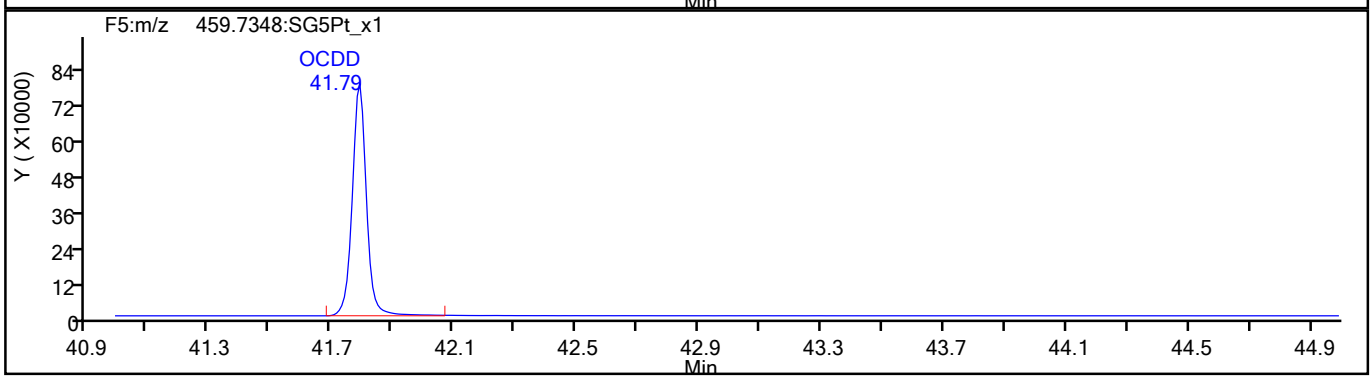

OCDD Standards

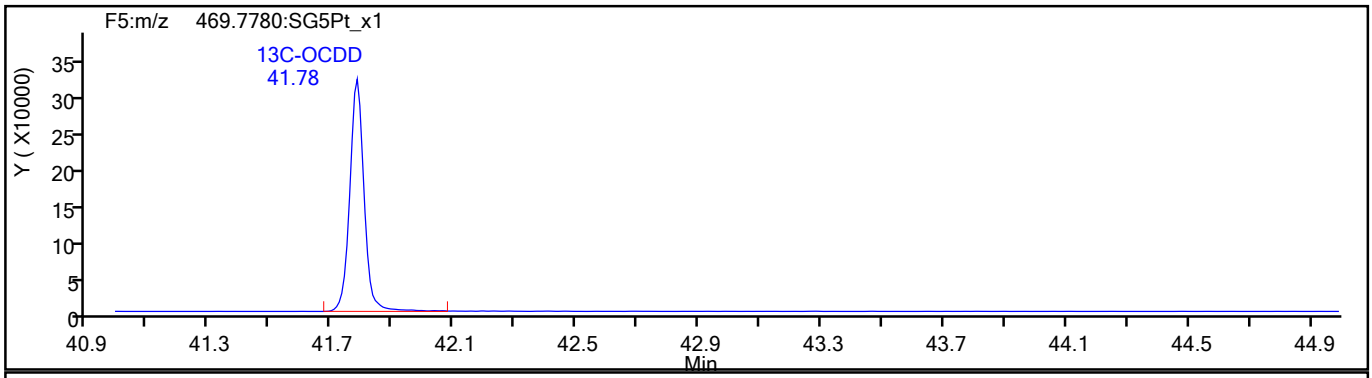

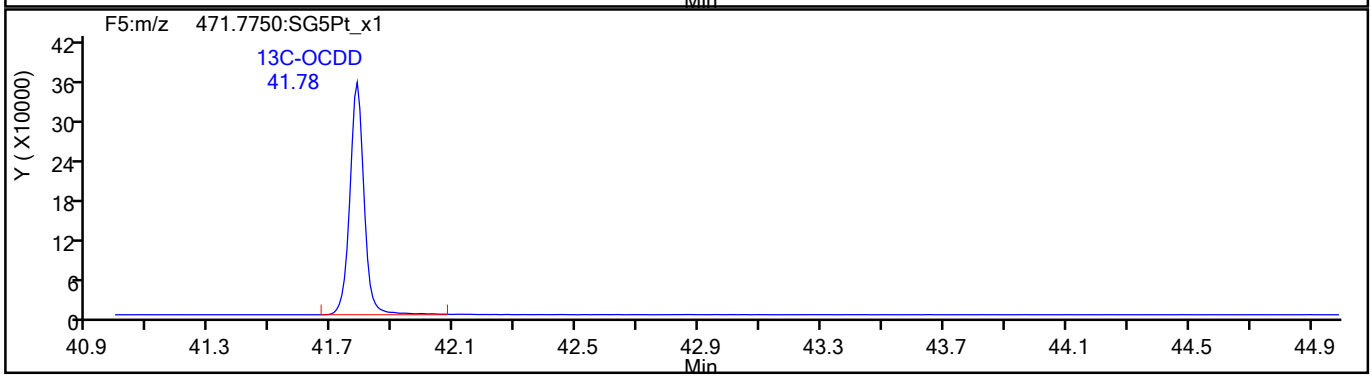

782935

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

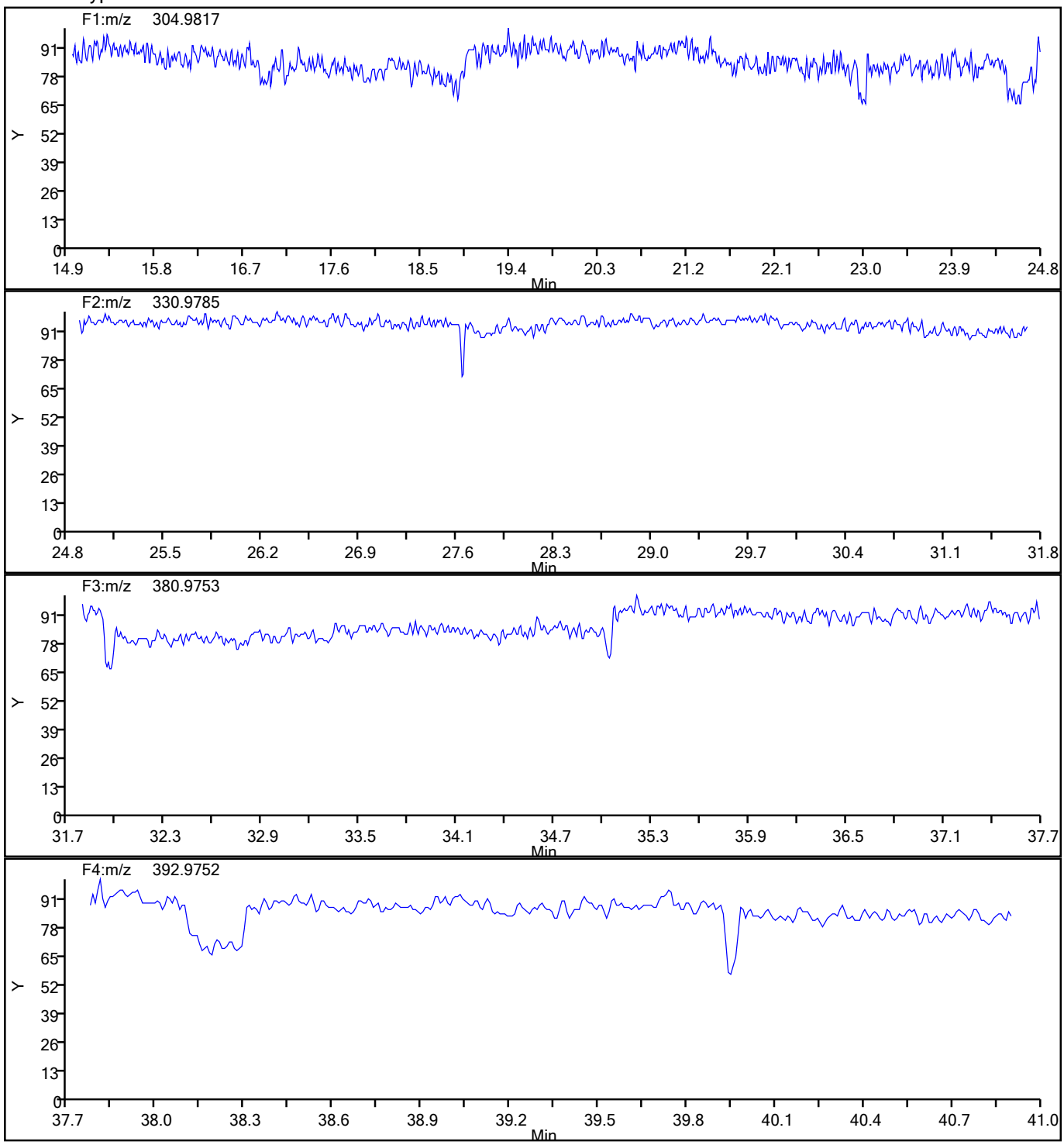

782936

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

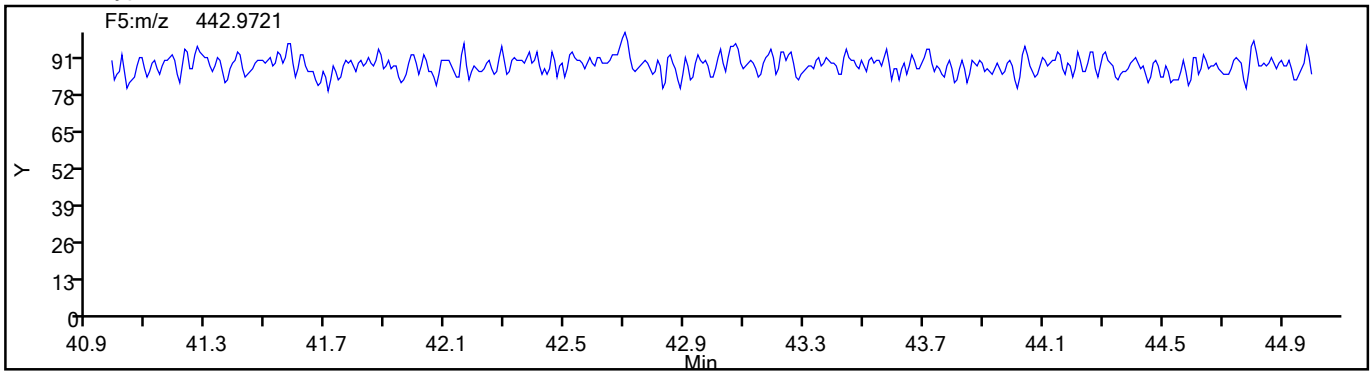

782937

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.544	2066088	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.616	2962515	0.80	1.3459	106.5	106.5	0.1844	0.1844	107	
2,3,7,8-TCDF	19.642	6137031	0.79	1.0802	191.8	191.8	0.1493	0.1493	95.89	
S Total TCDF					191.8	191.8	0.1493	0.1493		
D 13C-2,3,7,8-TCDD	20.913	2014532	0.80	0.9317	104.7	104.7	0.1455	0.1455	105	
$ 37Cl4-2,3,7,8-TCDD	20.939	4287059		1.0083	205.8	205.8	0.0958	0.0958	103	
2,3,7,8-TCDD	20.939	4286034	0.79	1.0753	197.8	197.8	0.1041	0.1041	98.92	
S Total TCDD					197.8	197.8	0.1041	0.1041		
D 13C-1,2,3,7,8-PeCDF	26.552	2574521	1.60	1.1405	109.3	109.3	0.2956	0.2956	109	
1,2,3,7,8-PeCDF	26.578	26032333	1.55	1.0543	959.1	959.1	2.101	2.101	95.91	
D 13C-2,3,4,7,8-PeCDF	28.002	2584740	1.63	1.1253	111.2	111.2	0.2996	0.2996	111	
2,3,4,7,8-PeCDF	28.028	24861382	1.54	1.0079	954.4	954.4	2.393	2.393	95.44	
S Total PeCDF					1913.5	1913.5	2.247	2.247		
D 13C-1,2,3,7,8-PeCDD	28.795	1602880	1.57	0.7165	108.3	108.3	0.1169	0.1169	108	
1,2,3,7,8-PeCDD	28.820	16645947	1.55	1.0465	992.4	992.4	0.3154	0.3154	99.24	
S Total PeCDD					992.4	992.4	0.3154	0.3154		
D 13C-1,2,3,4,7,8-HxCDF	34.370	1968615	0.53	0.9648	104.2	104.2	0.2764	0.2764	104	
1,2,3,4,7,8-HxCDF	34.404	21902419	1.26	1.1474	969.7	969.7	2.964	2.964	96.97	
D 13C-1,2,3,6,7,8-HxCDF	34.555	2283961	0.53	1.0708	109.0	109.0	0.2490	0.2490	109	
1,2,3,6,7,8-HxCDF	34.572	26721257	1.24	1.2178	960.7	960.7	2.280	2.280	96.07	
D 13C-2,3,4,6,7,8-HxCDF	35.432	2190509	0.53	1.0413	107.5	107.5	0.2561	0.2561	107	
2,3,4,6,7,8-HxCDF	35.449	25388405	1.26	1.2145	954.3	954.3	2.195	2.195	95.43	
D 13C-1,2,3,7,8,9-HxCDF	36.376	1895740	0.54	0.9731	99.5	99.5	0.2741	0.2741	99.52	
1,2,3,7,8,9-HxCDF	36.393	22553786	1.25	1.2401	959.4	959.4	2.206	2.206	95.94	
S Total HxCDF					3844.1	3844.1	2.411	2.411		
* 13C-1,2,3,7,8,9-HxCDD	36.182	1957513	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.668	1539784	1.30	0.7587	103.7	103.7	0.1260	0.1260	104	
1,2,3,4,7,8-HxCDD	35.685	15558498	1.24	1.0608	952.5	952.5	0.9710	0.9710	95.25	
D 13C-1,2,3,6,7,8-HxCDD	35.794	1741498	1.29	0.8593	103.5	103.5	0.1112	0.1112	104	
1,2,3,6,7,8-HxCDD	35.811	16661405	1.25	0.9933	963.1	963.1	0.9604	0.9604	96.31	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.198	17279185	1.24	1.1094	949.3	949.3	0.8929	0.8929	94.93	
S Total HxCDD					2865.0	2865.0	0.9414	0.9414		
D 13C-1,2,3,4,6,7,8-HpCDF	38.292	1546113	0.45	0.7359	107.3	107.3	0.2883	0.2883	107	
1,2,3,4,6,7,8-HpCDF	38.309	21181967	1.05	1.4421	950.0	950.0	2.277	2.277	95.00	
D 13C-1,2,3,4,7,8,9-HpCDF	39.591	1455766	0.46	0.6854	108.5	108.5	0.3095	0.3095	109	
1,2,3,4,7,8,9-HpCDF	39.600	17812004	1.04	1.3092	934.6	934.6	2.410	2.410	93.46	
S Total HpCDF					1884.6	1884.6	2.344	2.344		
D 13C-1,2,3,4,6,7,8-HpCDD	39.279	1355803	1.07	0.6745	102.7	102.7	0.1997	0.1997	103	
1,2,3,4,6,7,8-HpCDD	39.287	13800004	1.05	1.0503	969.1	969.1	1.263	1.263	96.91	
S Total HpCDD					969.1	969.1	1.263	1.263		
D 13C-OCDD	41.778	2298668	0.91	0.5446	215.6	215.6	0.2297	0.2297	108	
OCDF	41.862	30505464	0.91	1.3168	2015.6	2015.6	1.318	1.318	101	
OCDD	41.786	22803823	0.89	1.0620	1868.3	1868.3	1.408	1.408	93.41	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.544	20.547	0		920603	150087	115	287	1305		
333.9338	20.544	20.547	0		1145485	178229	63	157	2829	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.616	19.616	0	0.955	1315625	222528	203	507	1096		
317.9389	19.625	19.616	1	0.955	1646890	273662	123	307	2225	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.642	19.646	0	1.001	2713655	446561	138	345	3236		
305.8987	19.642	19.646	0	1.001	3423376	567597	182	455	3119	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.913	20.910	0	1.018	893612	134635	115	287	1171		
333.9338	20.913	20.910	0	1.018	1120920	170916	63	157	2713	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.939	20.935	0	1.019	4287059	670067	127	317	5276		
2,3,7,8-TCDD											
319.8965	20.939	20.939	0	1.001	1891754	292983	63	157	4651		
321.8936	20.939	20.939	0	1.001	2394280	370217	74	185	5003	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.552	26.560	0	1.292	1583459	282119	248	620	1138		
353.8970	26.552	26.560	0	1.292	991062	177690	195	487	911	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.578	26.584	0	1.001	15809872	2840843	2484	6210	1144		
341.8567	26.578	26.584	0	1.001	10222461	1821485	1590	3975	1146	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.002	28.014	-1	1.363	1602860	260320	248	620	1050		
353.8970	28.002	28.014	-1	1.363	981880	162024	195	487	831	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.028	28.039	-1	1.001	15085675	2478093	2484	6210	998		
341.8567	28.028	28.039	-1	1.001	9775707	1618127	1590	3975	1018	1.54(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.795	28.801	0	1.402	978472	153717	62	155	2479		
369.8919	28.795	28.801	0	1.402	624408	97747	48	120	2036	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.820	28.828	0	1.001	10130500	1566899	211	527	7426		
357.8516	28.820	28.828	0	1.001	6515447	1012500	121	302	8368	1.55(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.370	34.384	-1	0.950	681535	131177	206	515	637		
385.8610	34.370	34.384	-1	0.950	1287080	241920	293	732	826	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.404	34.405	0	1.001	12221224	2429393	2850	7125	852		
375.8178	34.404	34.405	0	1.001	9681195	1938109	2226	5565	871	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.555	34.562	0	0.955	787279	159086	206	515	772		
385.8610	34.555	34.562	0	0.955	1496682	297889	293	732	1017	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.572	34.582	-1	1.000	14789206	2955884	2850	7125	1037		
375.8178	34.572	34.582	-1	1.000	11932051	2355841	2226	5565	1058	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.432	35.444	-1	0.979	755749	165004	206	515	801		
385.8610	35.432	35.444	-1	0.979	1434760	311089	293	732	1062	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.449	35.461	-1	1.000	14140079	3143736	2850	7125	1103		
375.8178	35.449	35.461	-1	1.000	11248326	2509936	2226	5565	1128	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.376	36.388	-1	1.005	661276	161798	206	515	785		
385.8610	36.376	36.388	-1	1.005	1234464	302164	293	732	1031	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.393	36.402	-1	1.000	12520528	3053286	2850	7125	1071		
375.8178	36.393	36.402	-1	1.000	10033258	2435227	2226	5565	1094	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.182	36.192	-1		1094886	260943	101	252	2584		
403.8529	36.182	36.192	-1		862627	206665	78	195	2650	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.668	35.680	-1	0.986	871516	210376	101	252	2083		
403.8529	35.668	35.680	-1	0.986	668268	161161	78	195	2066	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.685	35.695	-1	1.000	8624435	2104573	873	2182	2411		
391.8127	35.685	35.695	-1	1.000	6934063	1696812	658	1645	2579	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.794	35.805	-1	0.989	980230	223296	101	252	2211		
403.8529	35.794	35.805	-1	0.989	761268	177860	78	195	2280	1.29(1.05-1.43)	

Report Date: 09-Jun-2021 08:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.811	35.820	-1	1.000	9246987	2090881	873	2182	2395		
391.8127	35.811	35.820	-1	1.000	7414418	1678531	658	1645	2551	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.198	36.208	-1	1.015	9564246	2295203	873	2182	2629		
391.8127	36.198	36.208	-1	1.015	7714939	1845750	658	1645	2805	1.24(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.292	38.305	-1	1.058	482843	137759	141	352	977		
419.8220	38.292	38.305	-1	1.058	1063270	304088	256	640	1188	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	10831802	3065791	3002	7505	1021		
409.7788	38.309	38.317	0	1.000	10350165	2906390	2802	7005	1037	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.591	39.600	-1	1.094	458518	146875	141	352	1042		
419.8220	39.591	39.600	-1	1.094	997248	313009	256	640	1223	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.600	39.608	-1	1.000	9086557	2852631	3002	7505	950		
409.7788	39.600	39.608	-1	1.000	8725447	2728020	2802	7005	974	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.279	39.293	-1	1.086	700550	219811	138	345	1593		
437.8140	39.279	39.293	-1	1.086	655253	202475	114	285	1776	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.287	39.301	-1	1.000	7071387	2141109	1133	2832	1890		
425.7737	39.287	39.301	-1	1.000	6728617	2063900	1107	2767	1864	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.778	41.785	0	1.155	1096060	330168	115	287	2871		
471.7750	41.778	41.785	0	1.155	1202608	365220	119	297	3069	0.91(0.76-1.02)	
OCDF											
441.7428	41.862	41.875	-1	1.002	14551716	4304688	1153	2882	3733		
443.7399	41.862	41.875	-1	1.002	15953748	4798066	1261	3152	3805	0.91(0.76-1.02)	
OCDD											
457.7377	41.786	41.794	0	1.000	10735225	3226535	983	2457	3282		
459.7348	41.786	41.794	0	1.000	12068598	3663774	1097	2742	3340	0.89(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

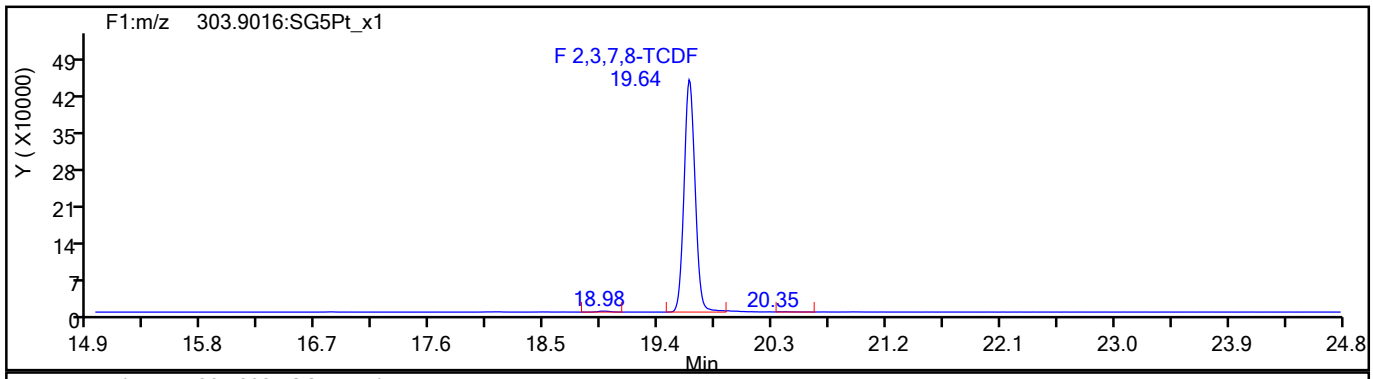

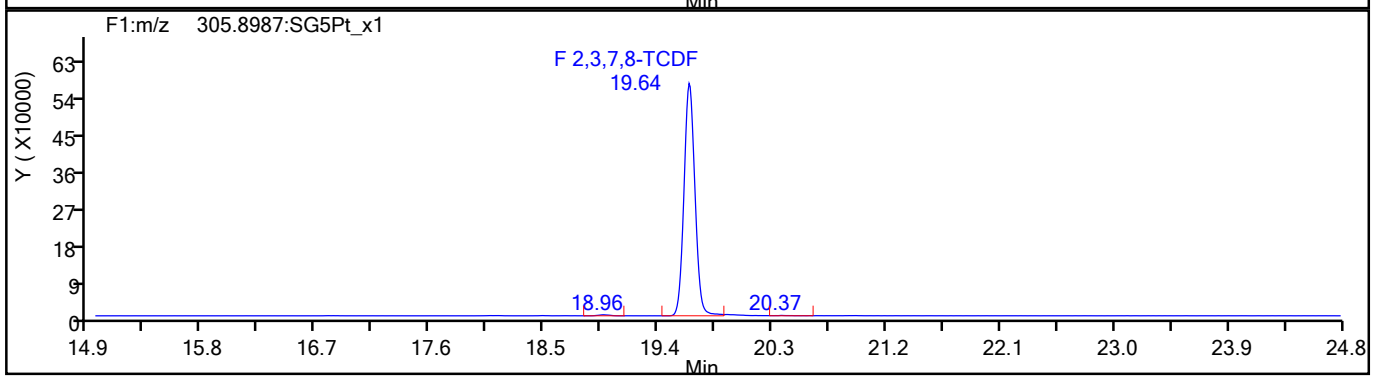

TCDF Standards

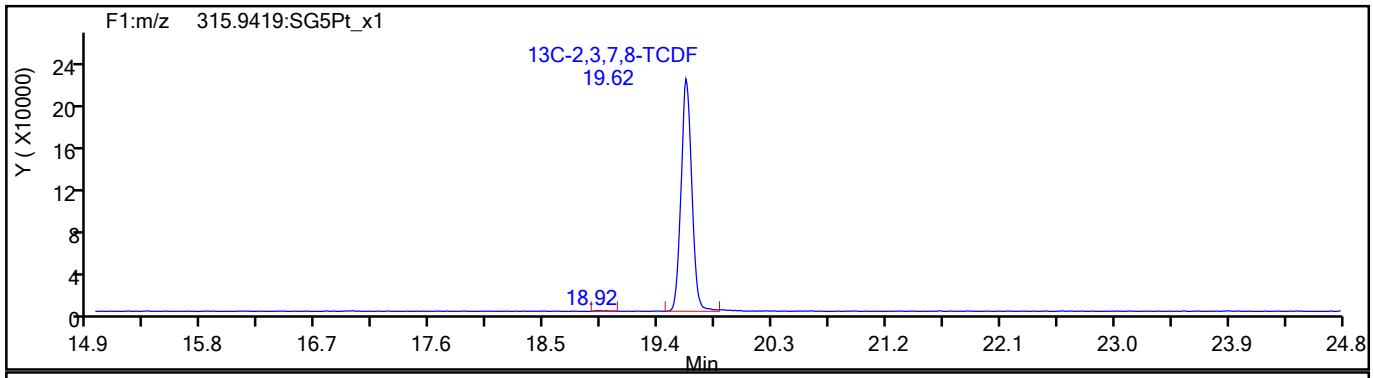

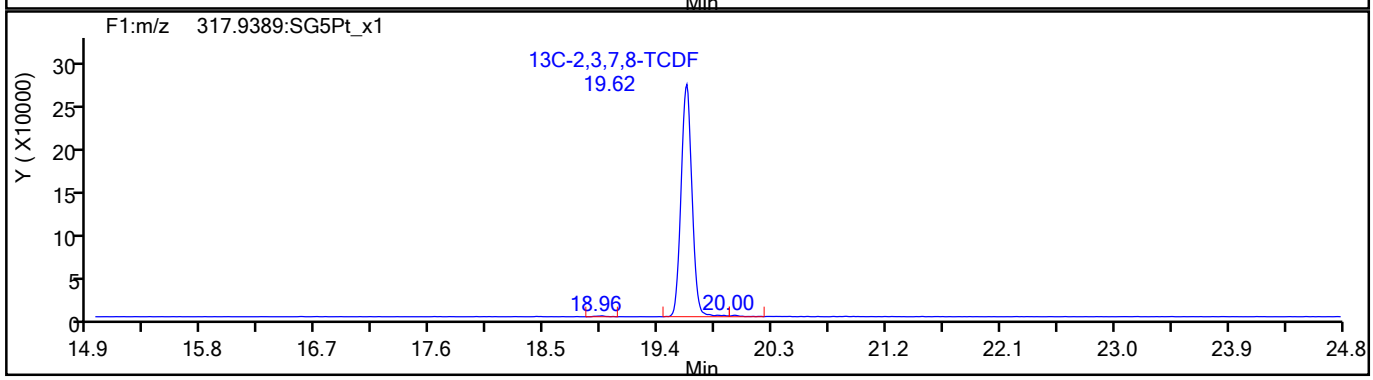

782943

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

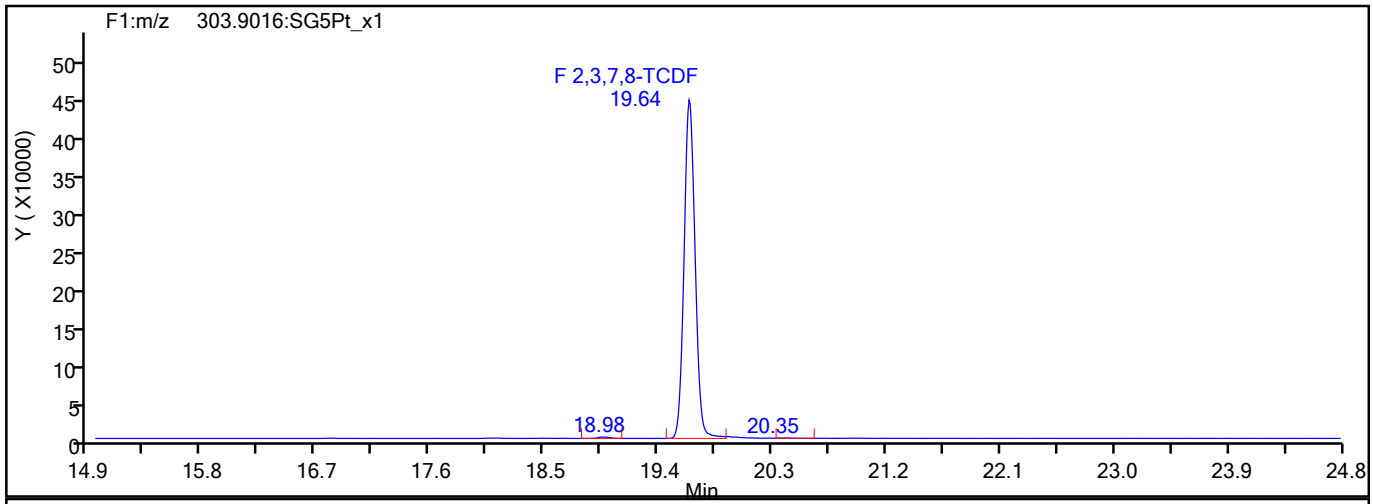

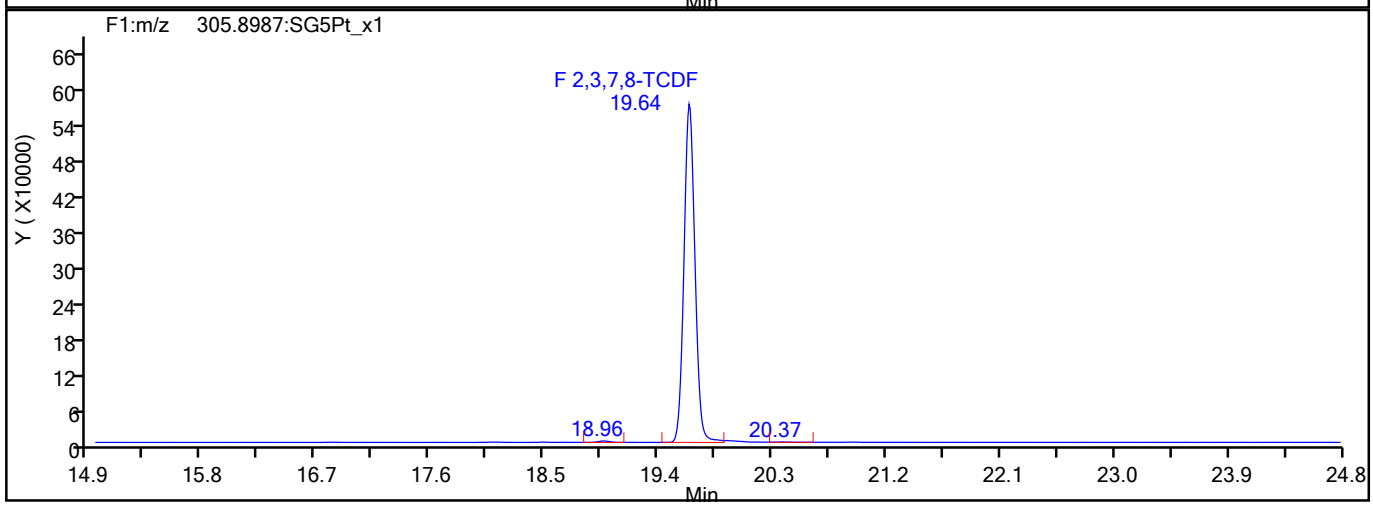

TCDF Interference Mass

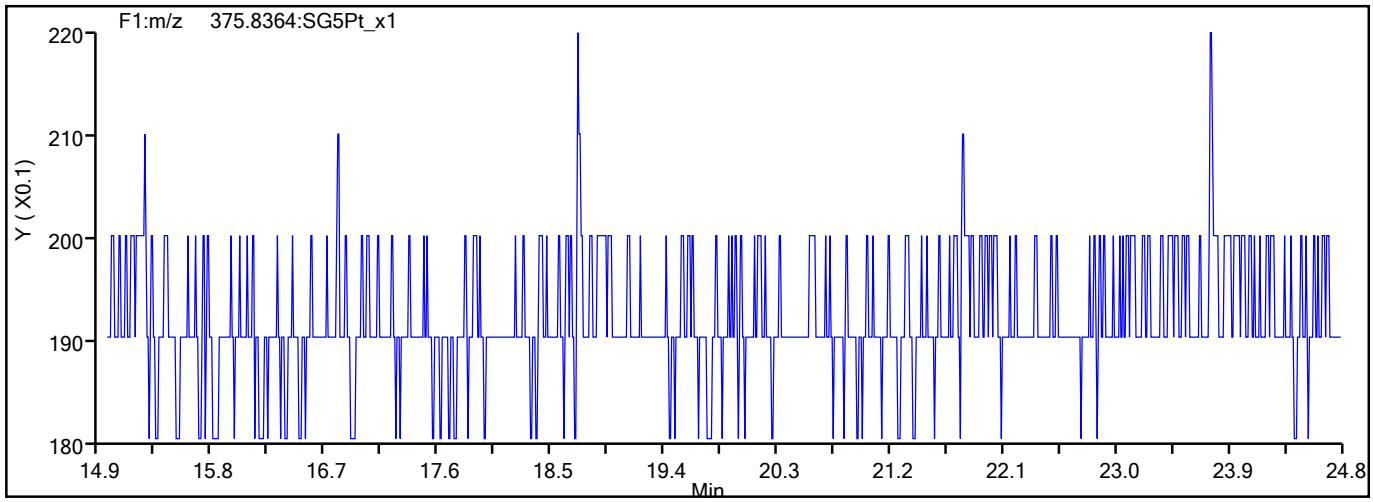

782944

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

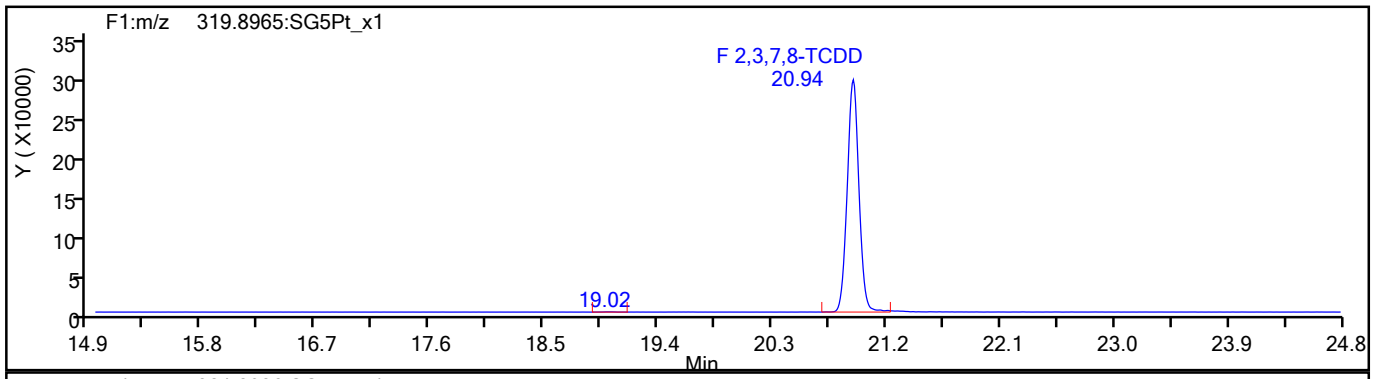

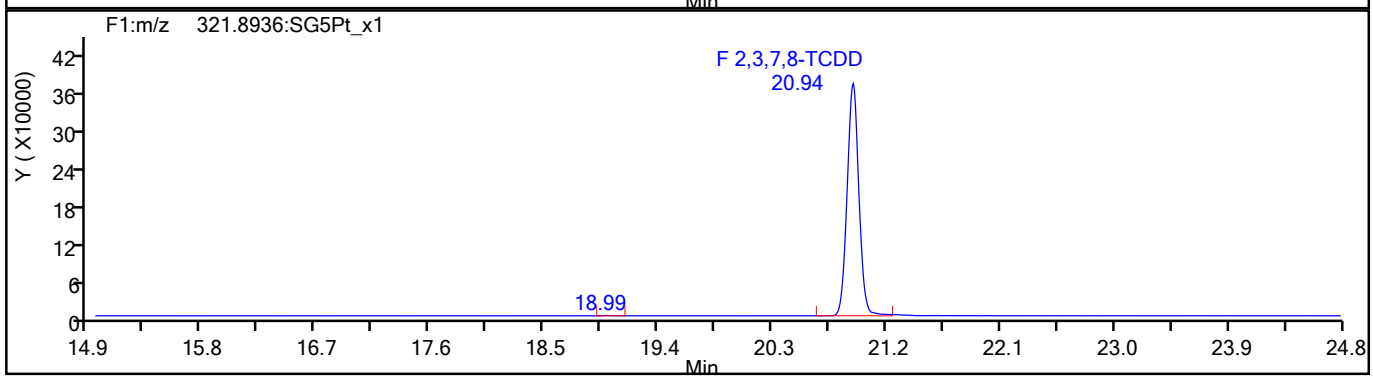

TCDD Standards

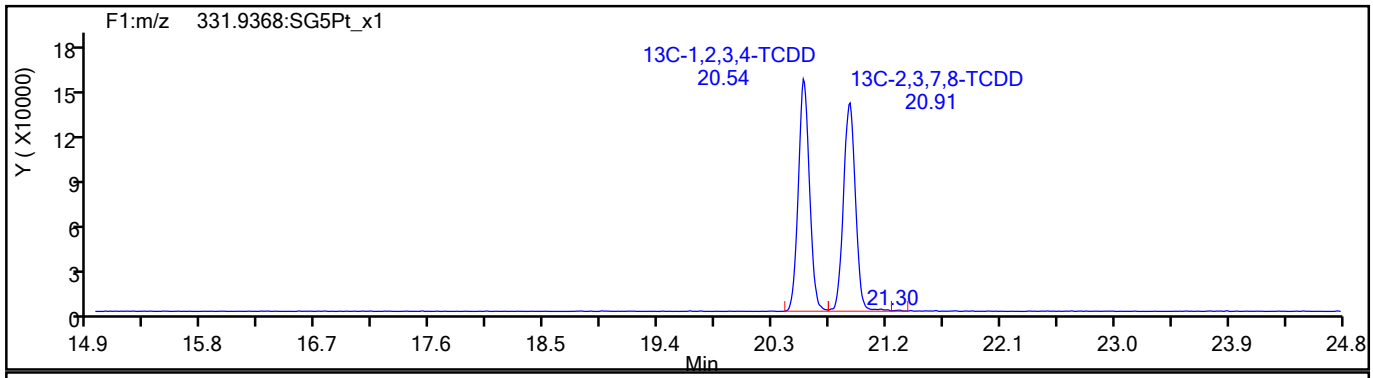

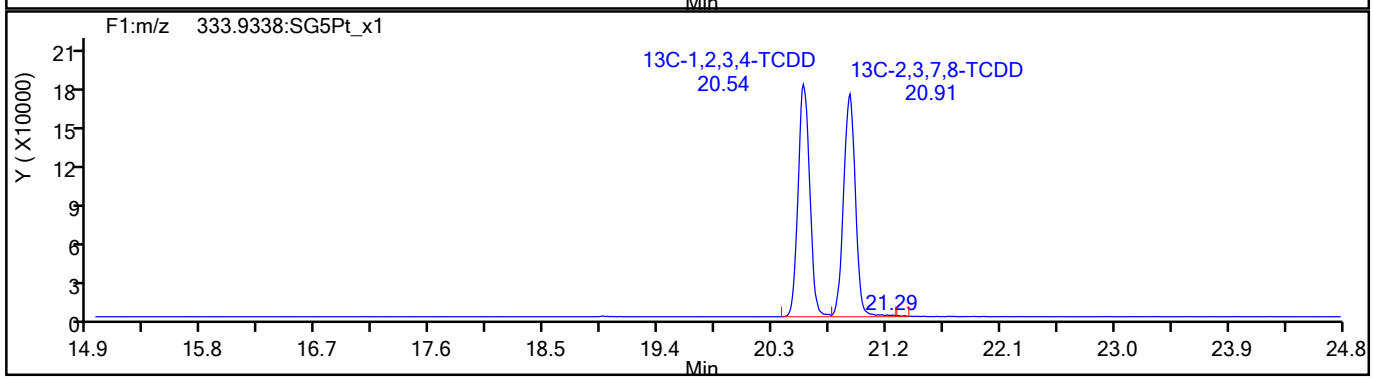

782945

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

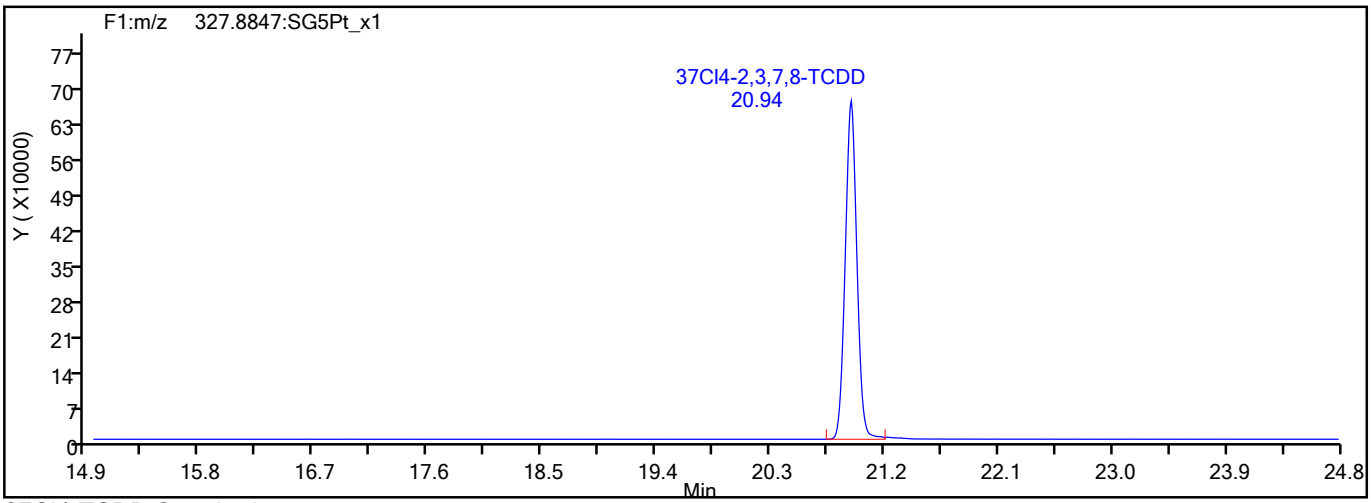

37Cl4-TCDD Standards

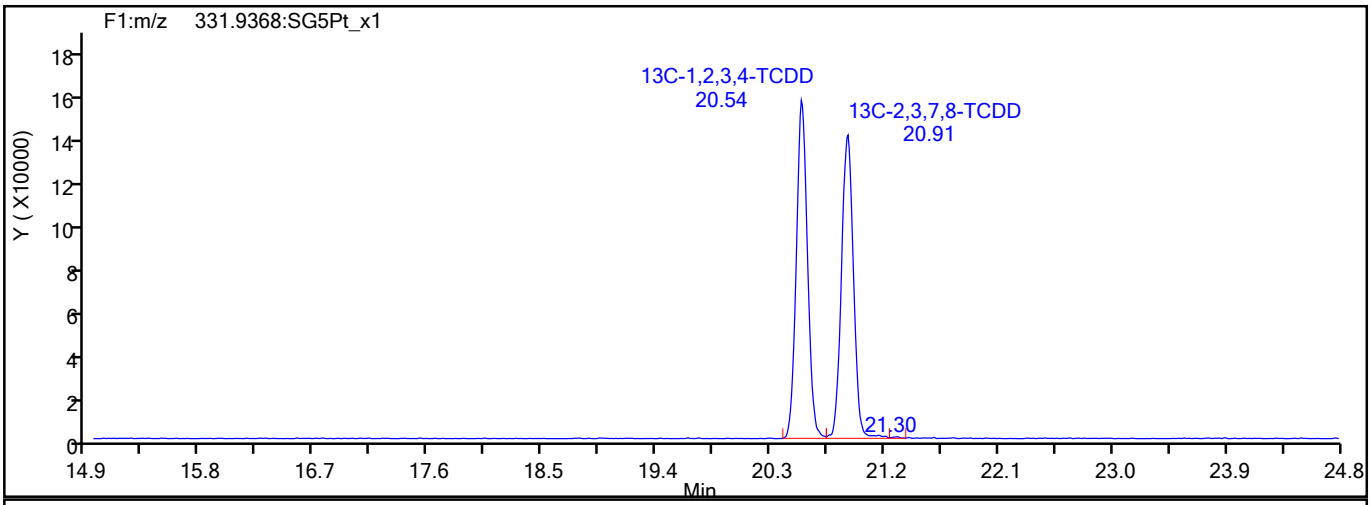

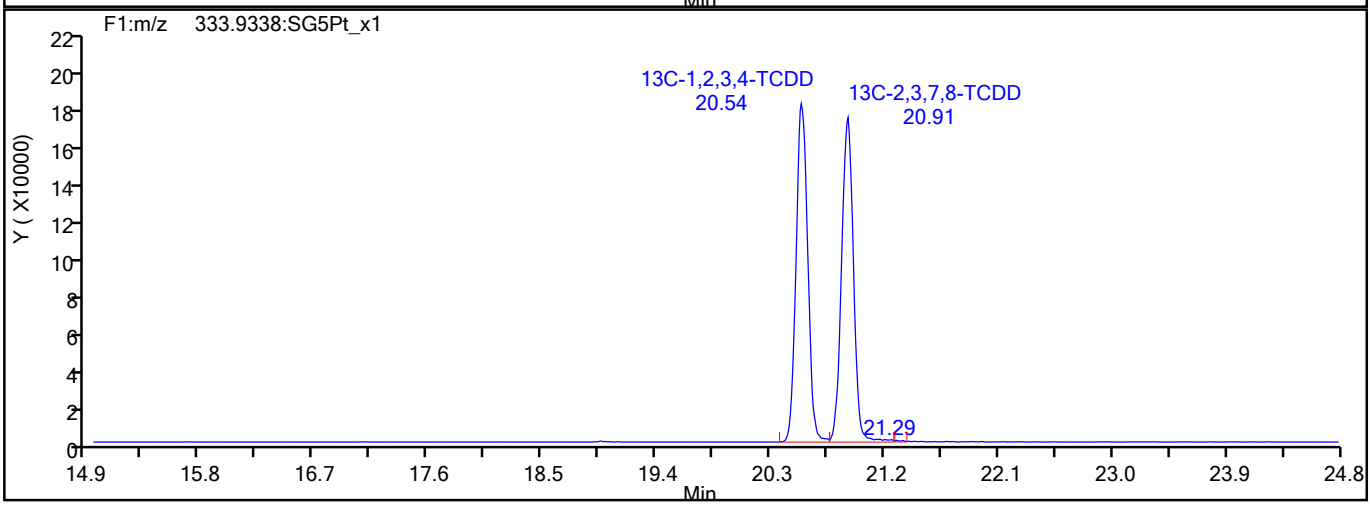

782946

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

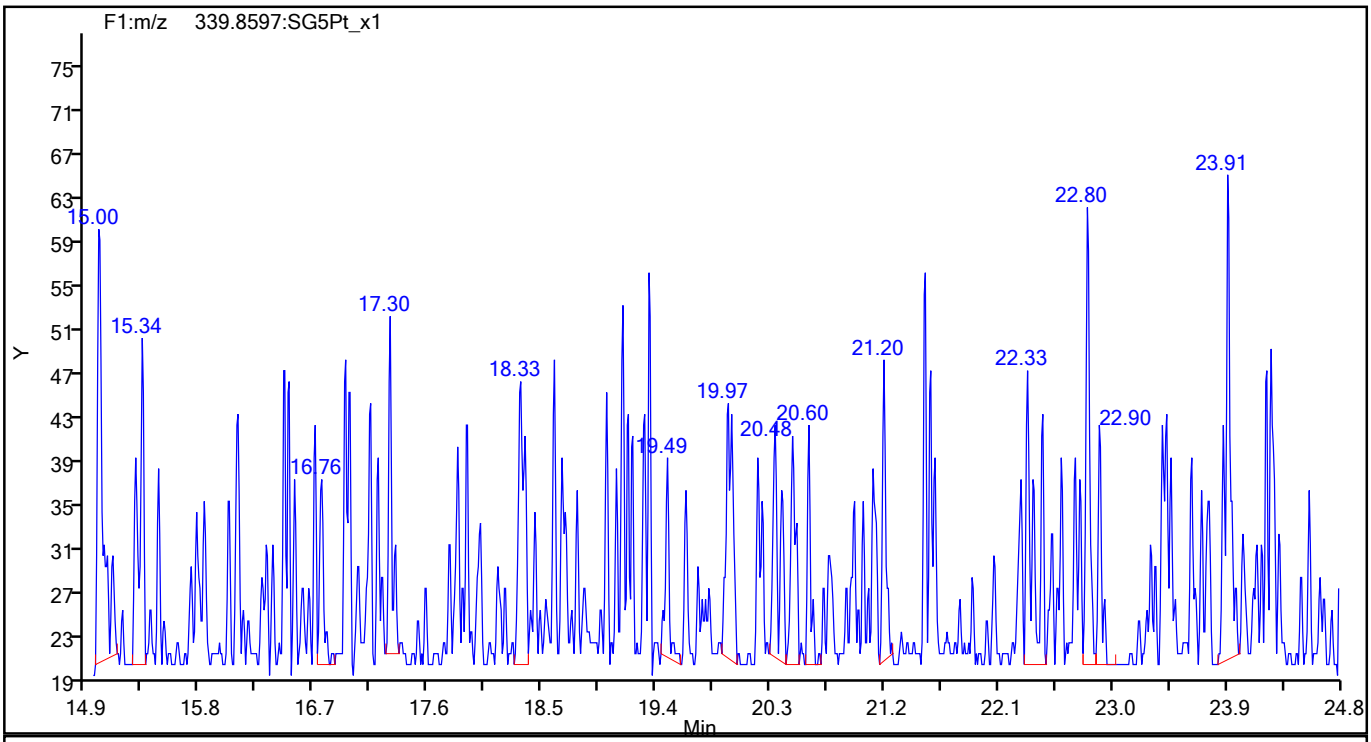

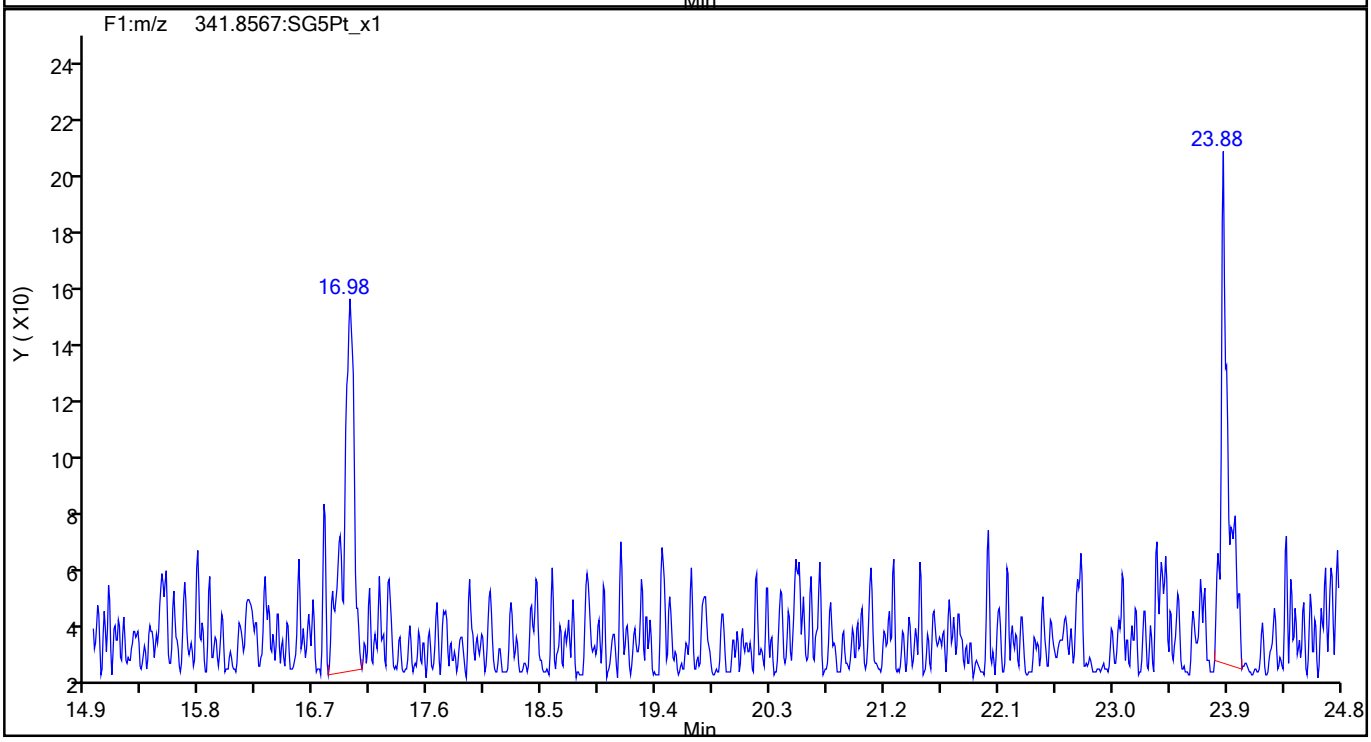

782947

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

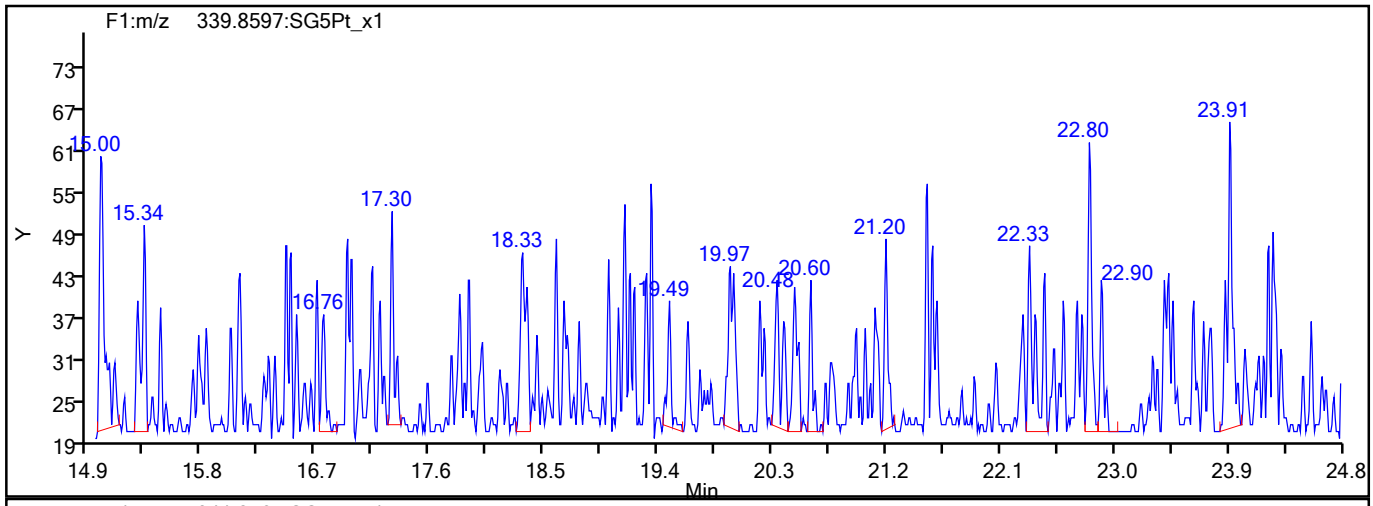

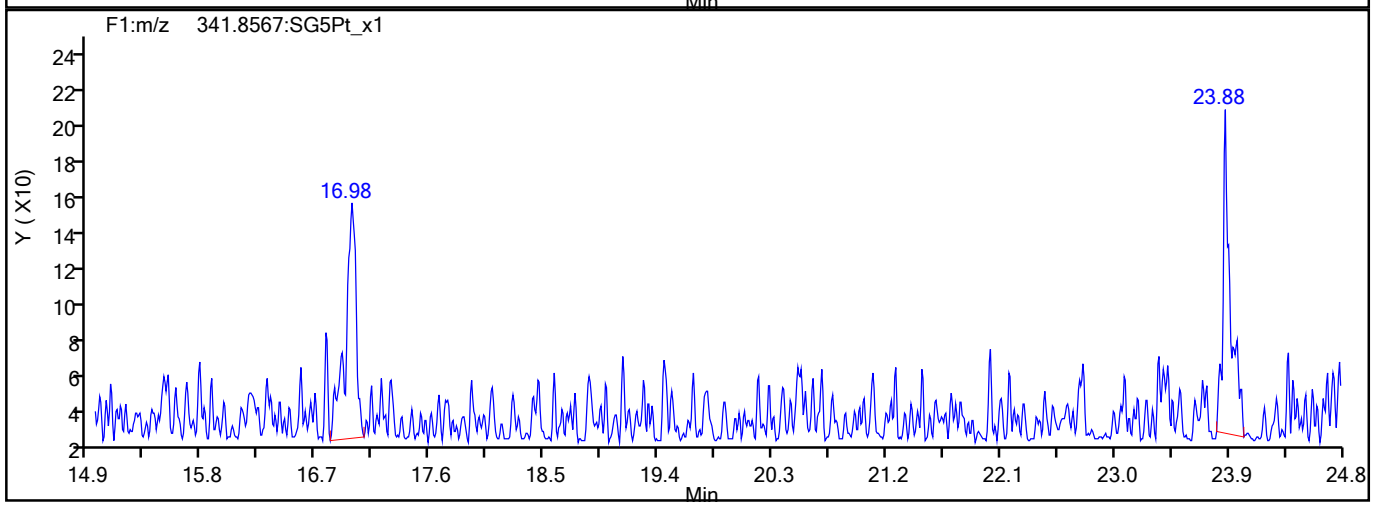

F1 PeCDFs Interference Mass

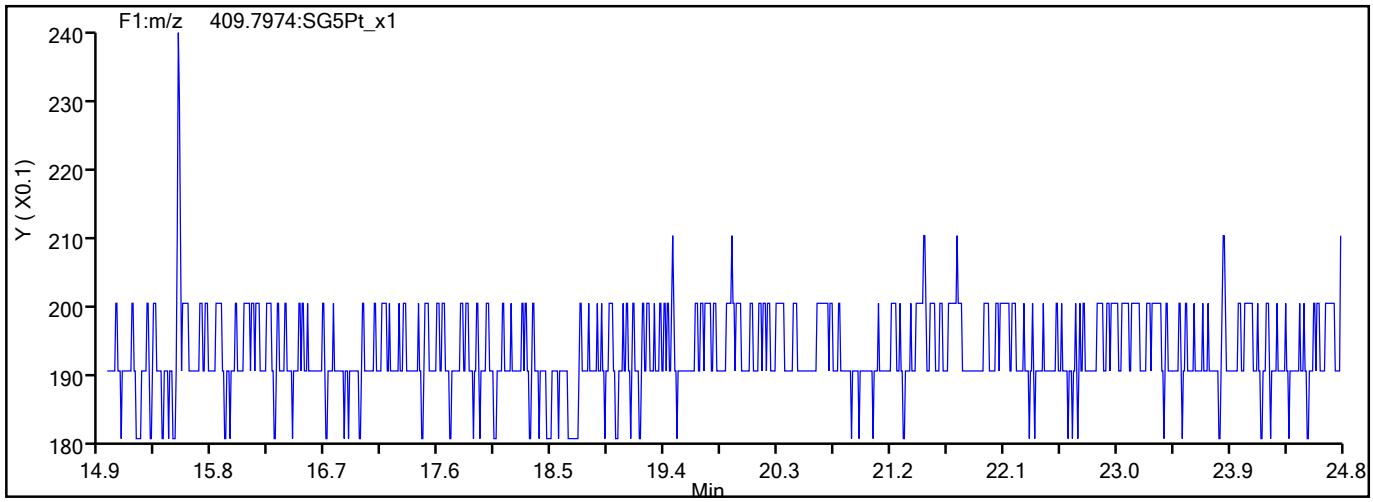

782948

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

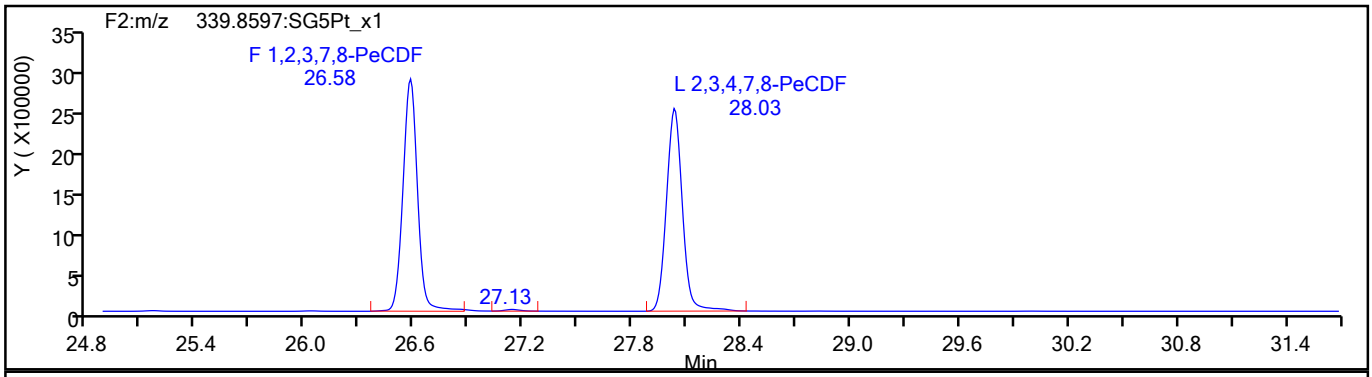

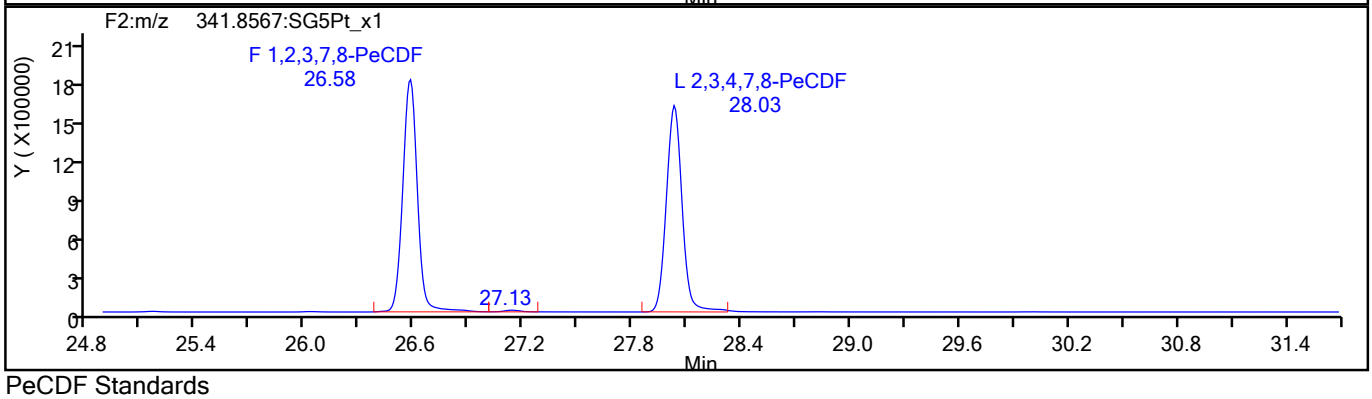

PeCDF Standards

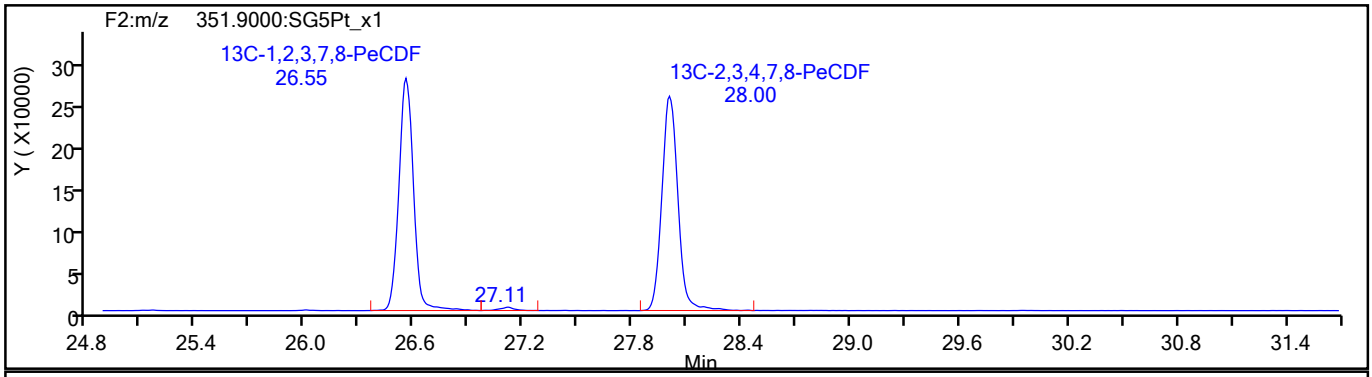

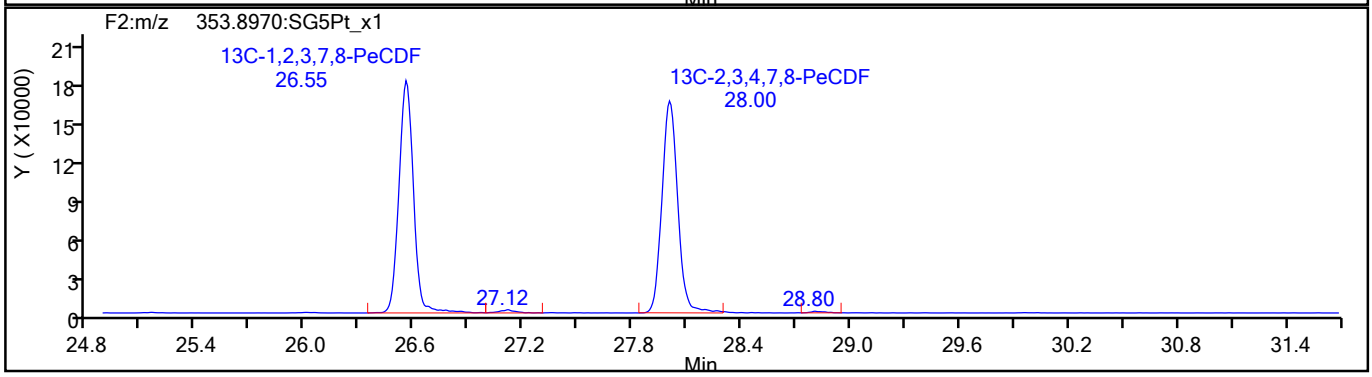

782949

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

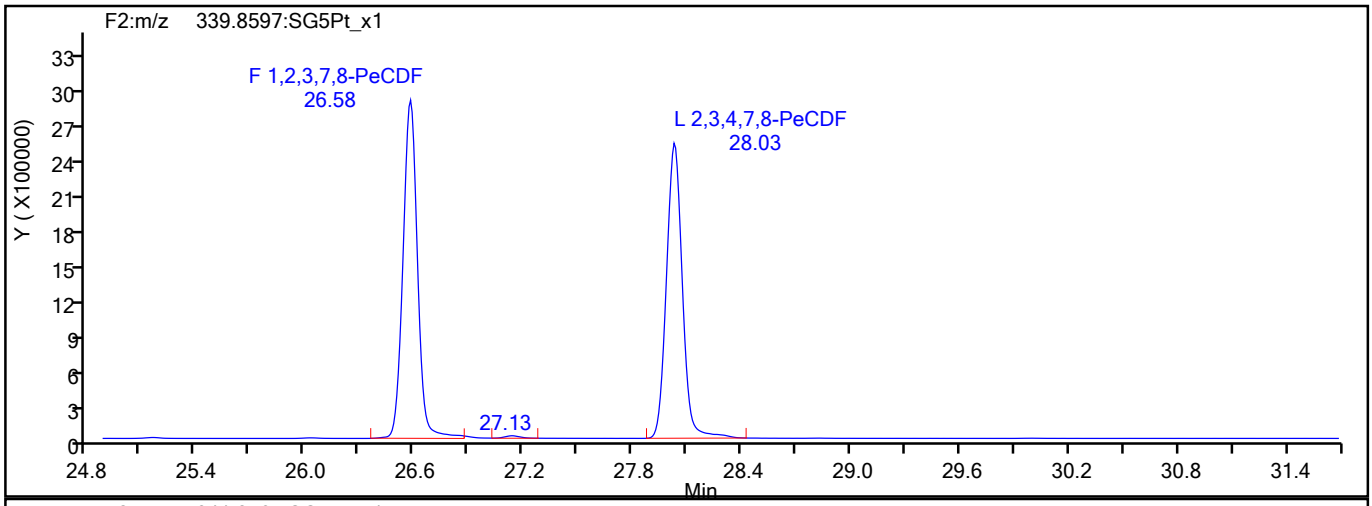

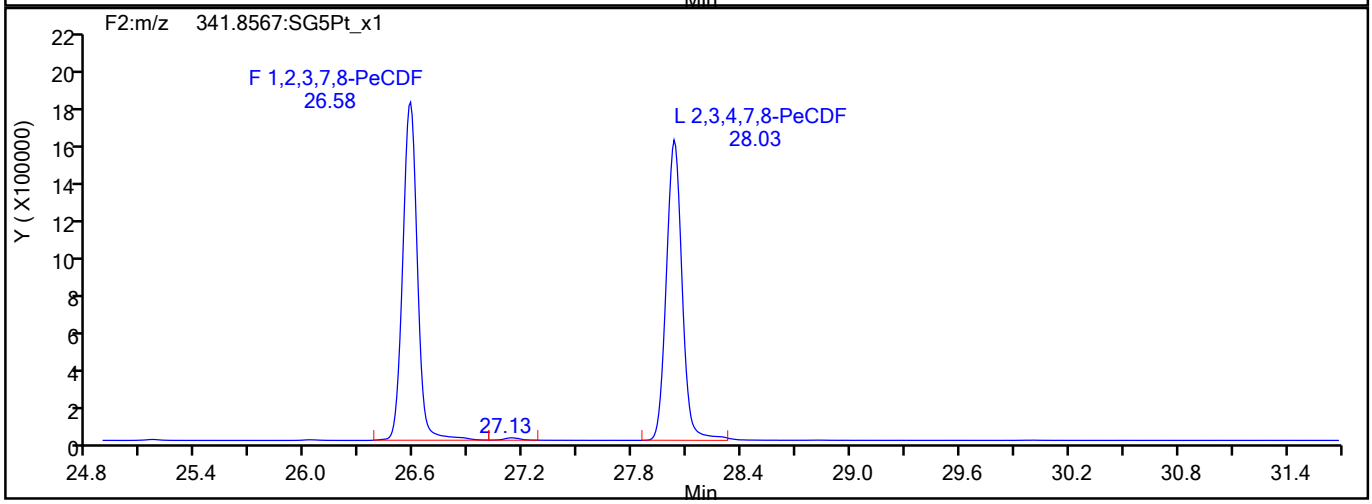

PeCDF Interference Mass

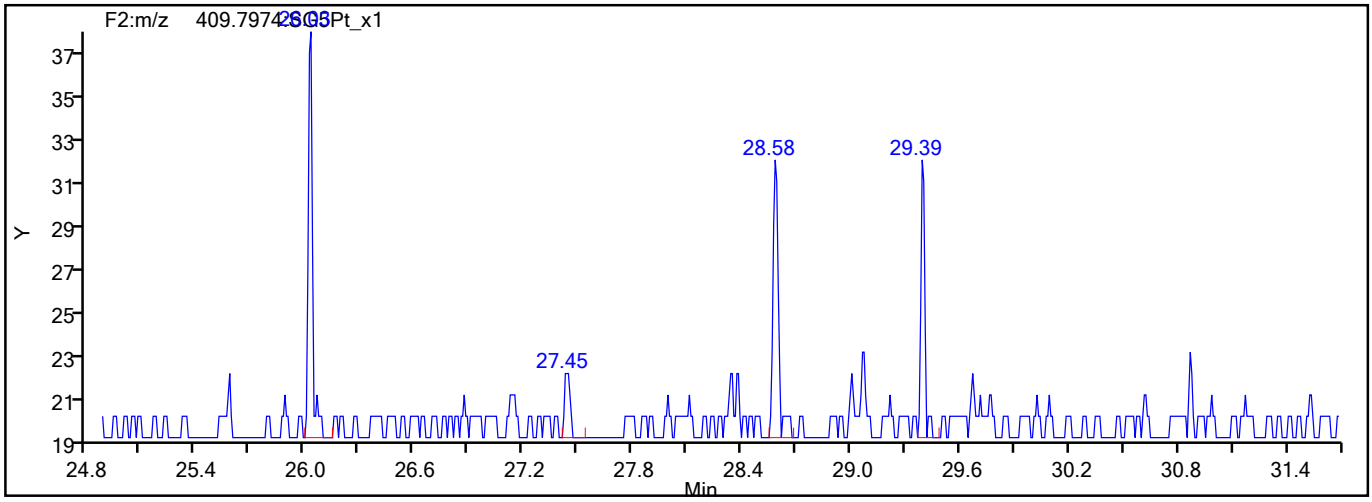

782950

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

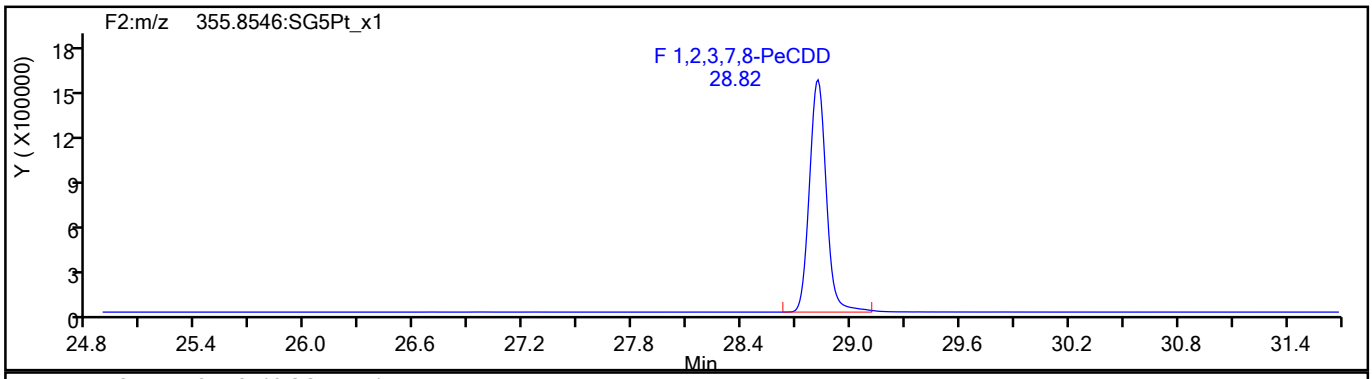

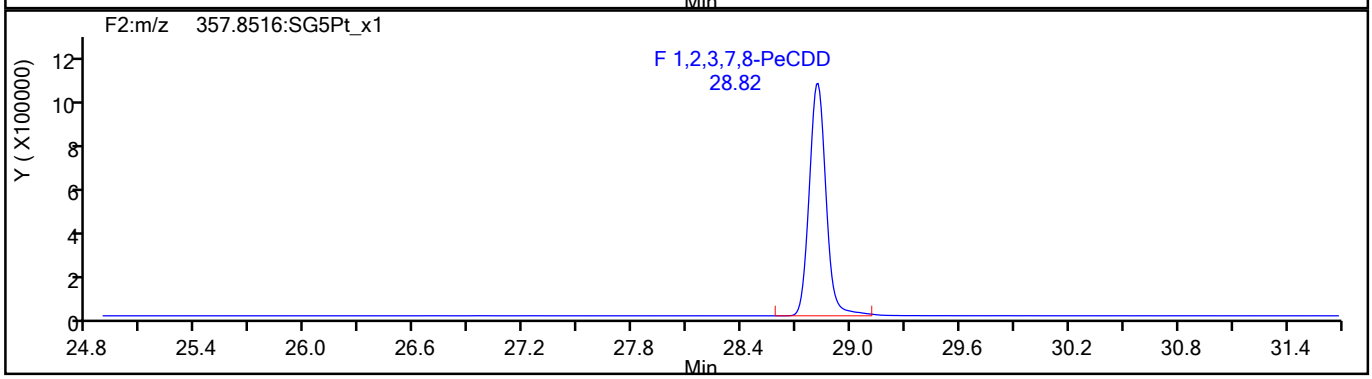

PeCDD Standards

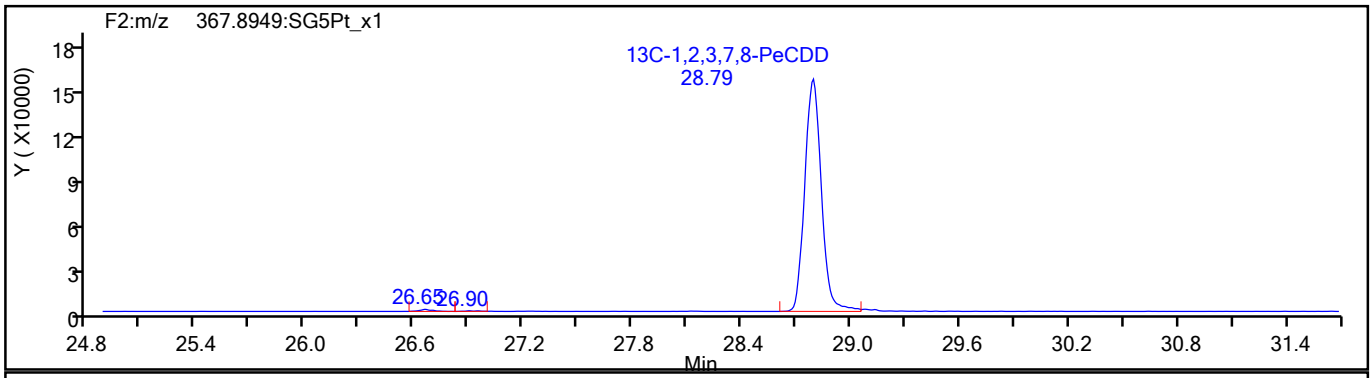

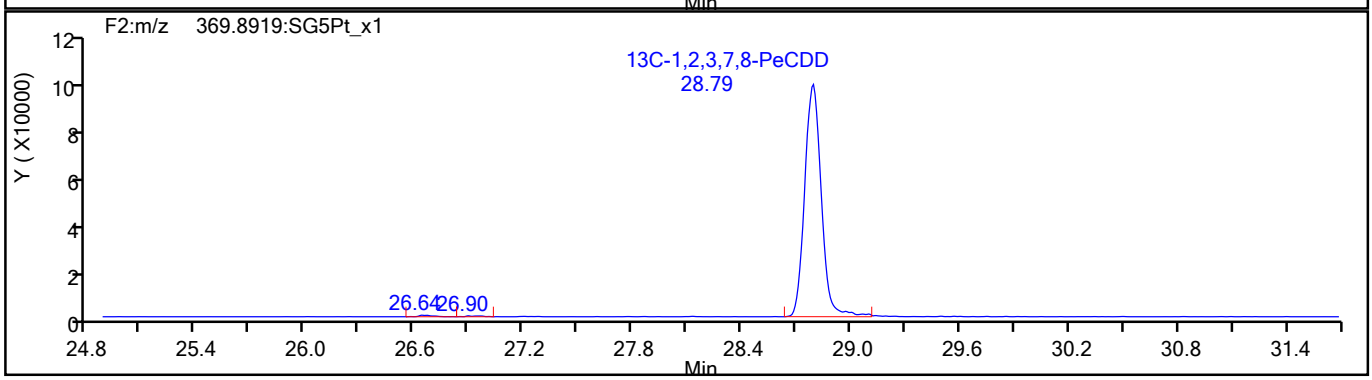

782951

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

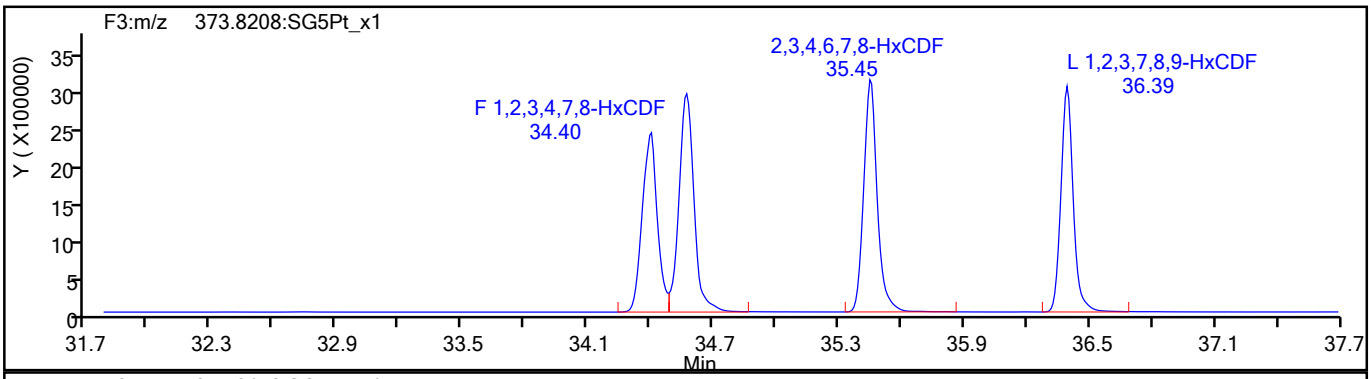

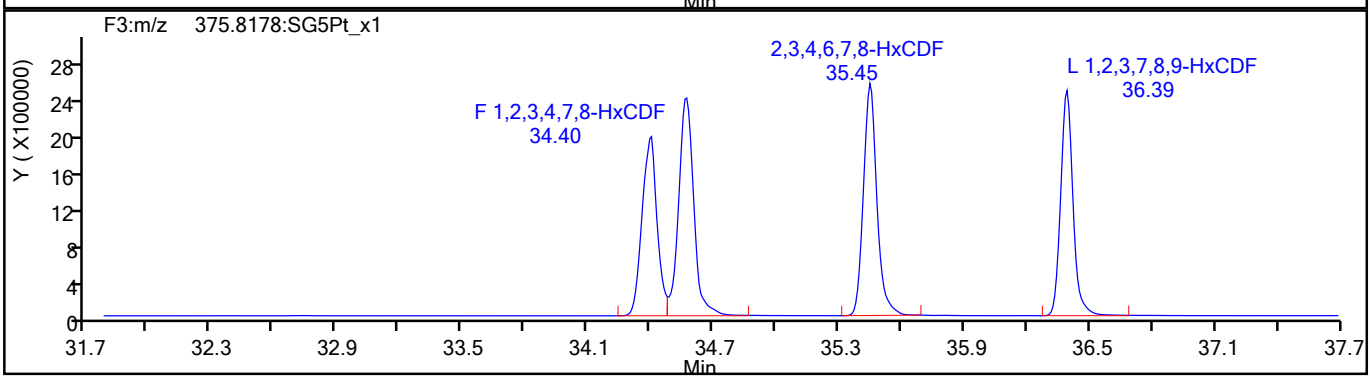

HxCDF Standards

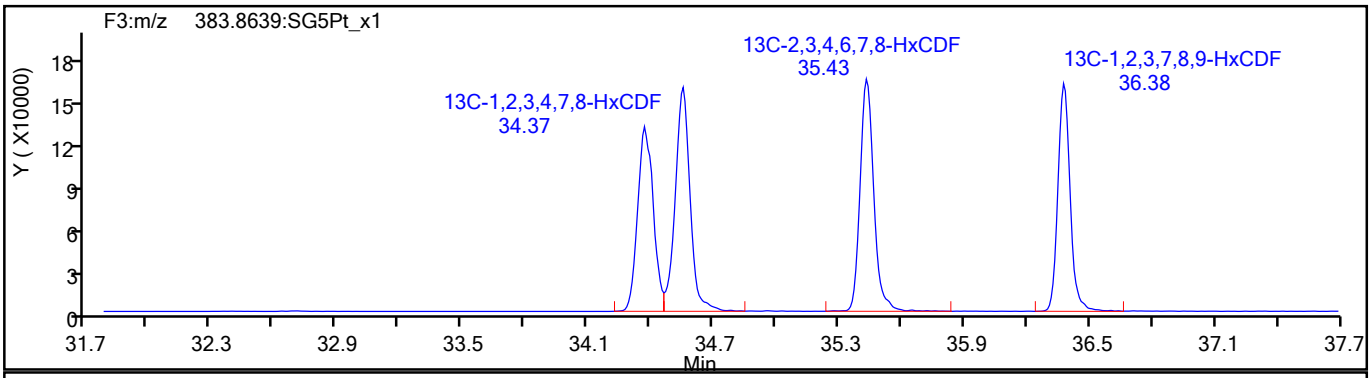

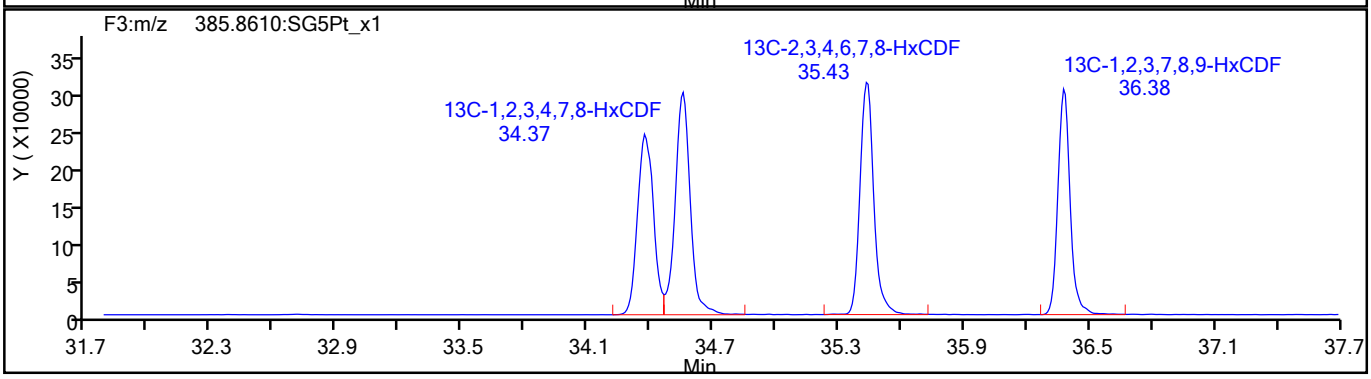

782952

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

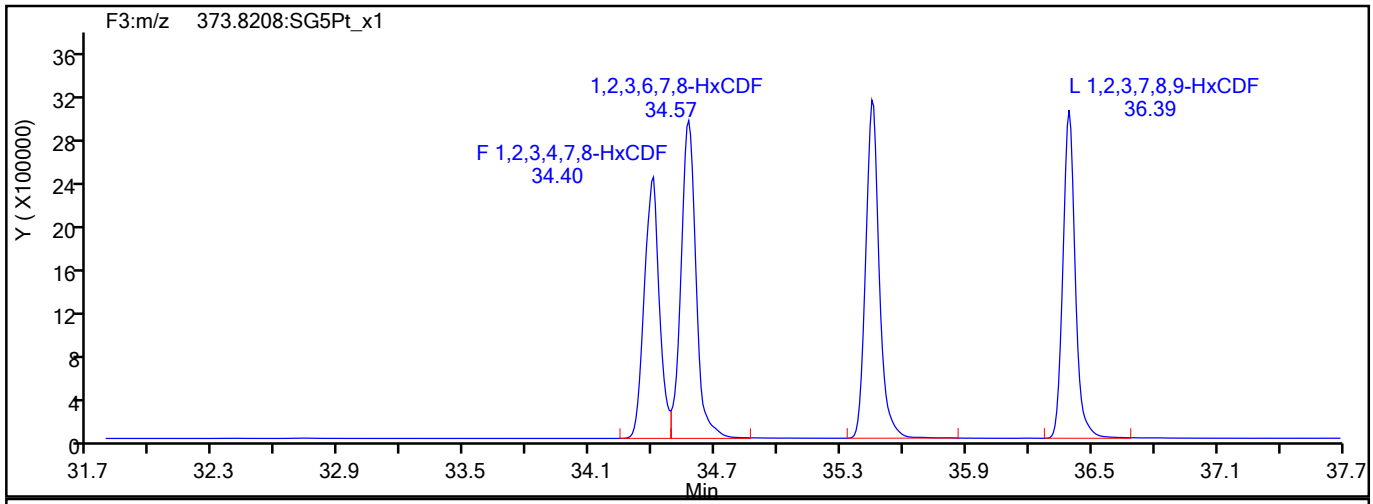

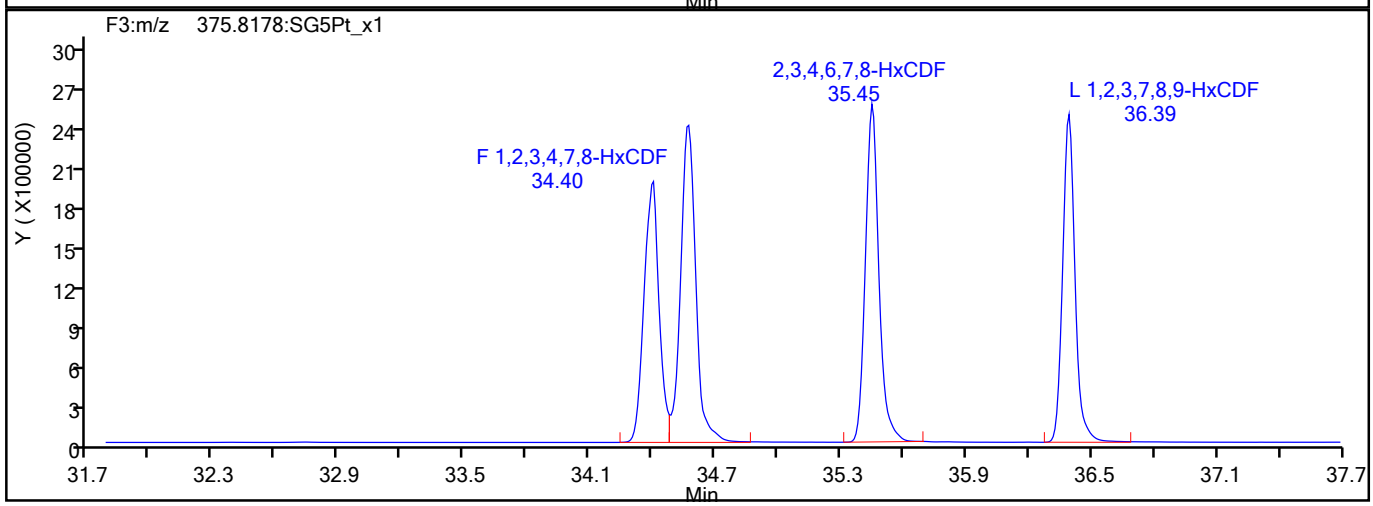

HxCDF Interference Mass

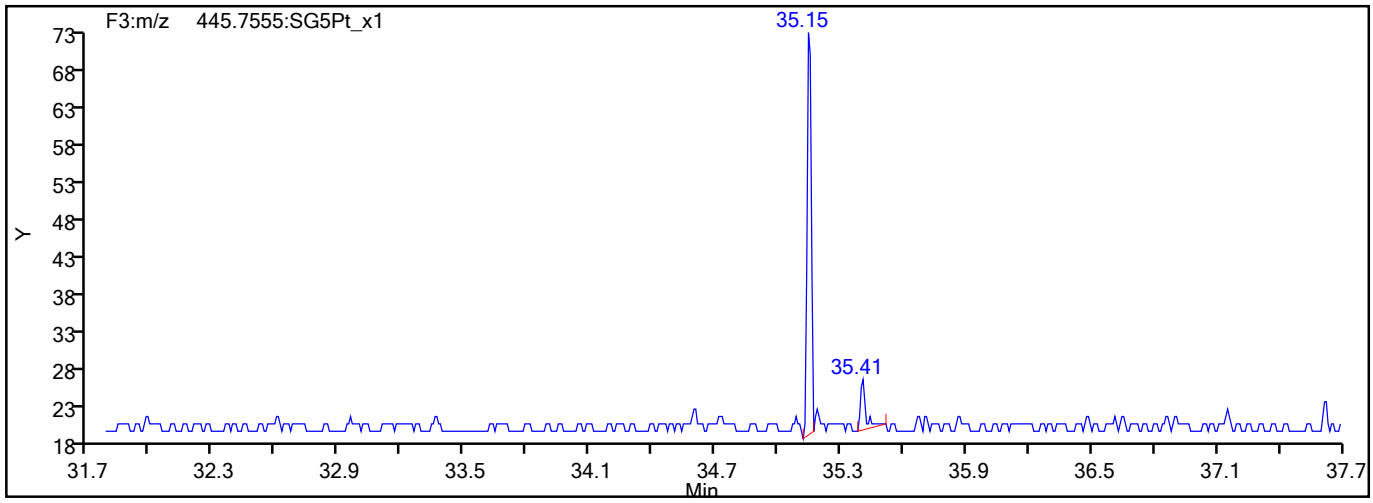

782953

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

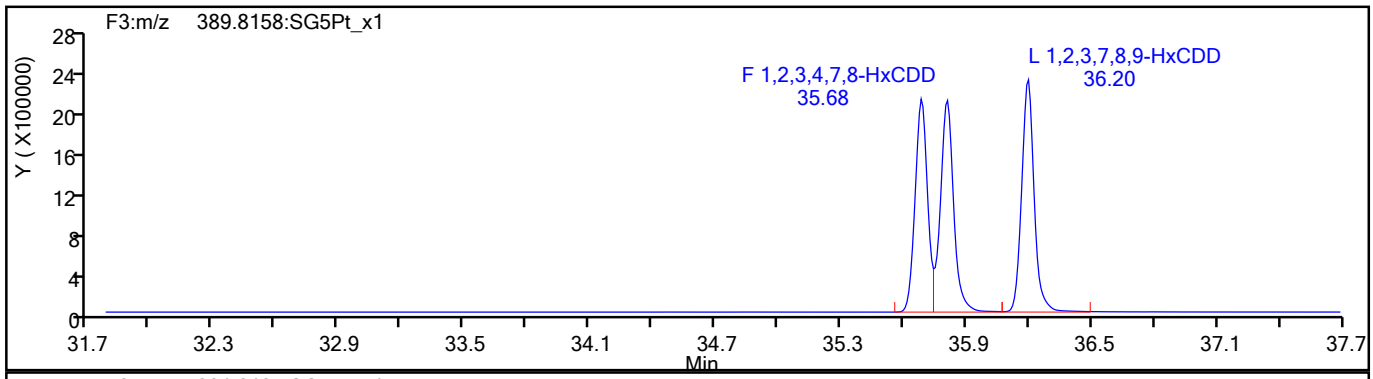

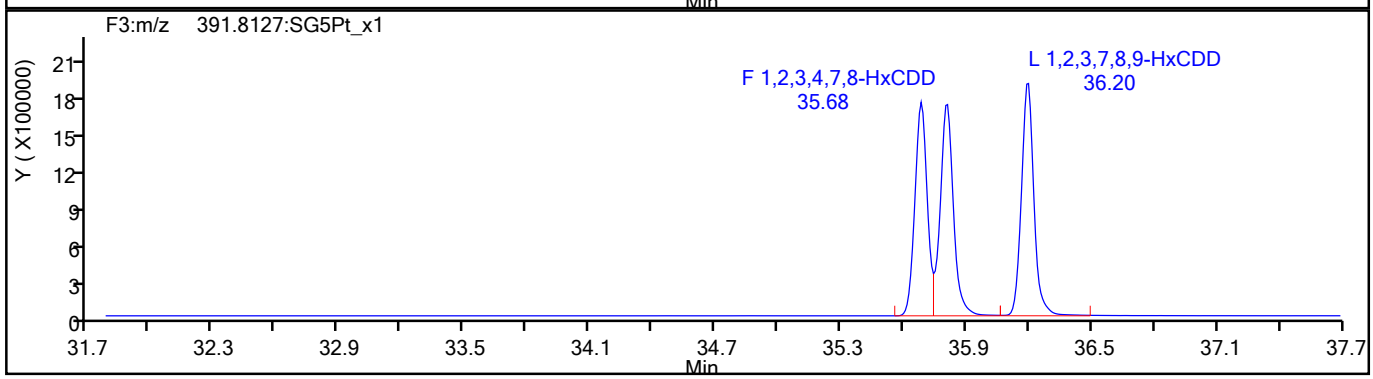

HxCDD Standards

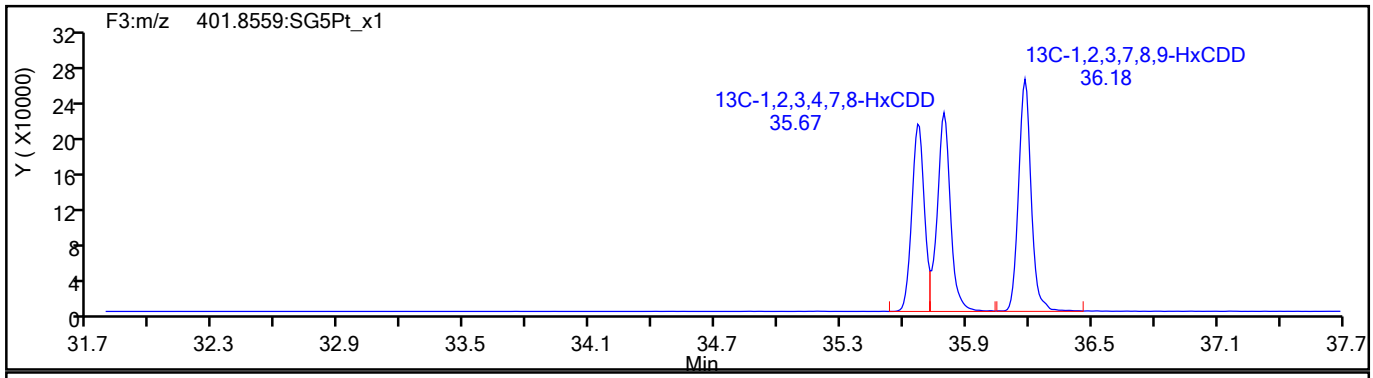

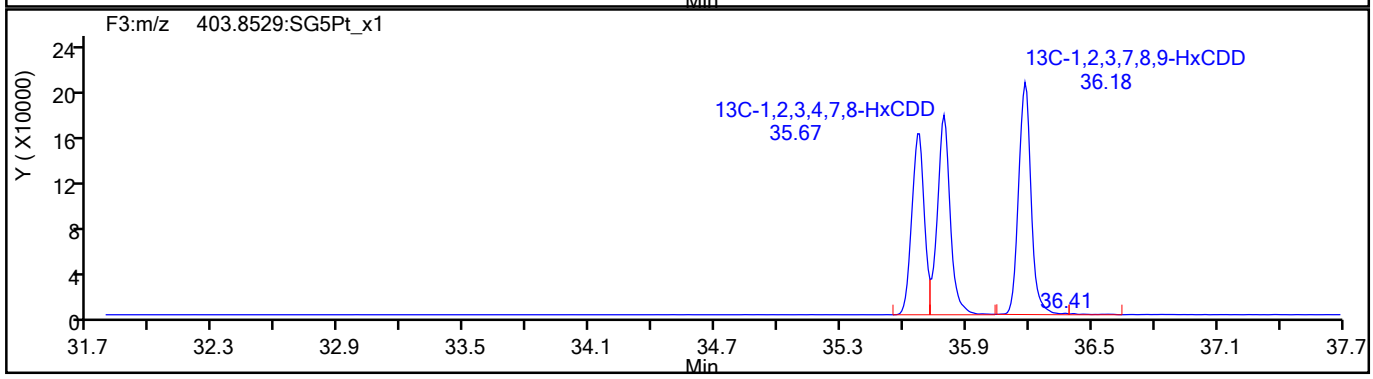

782954

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

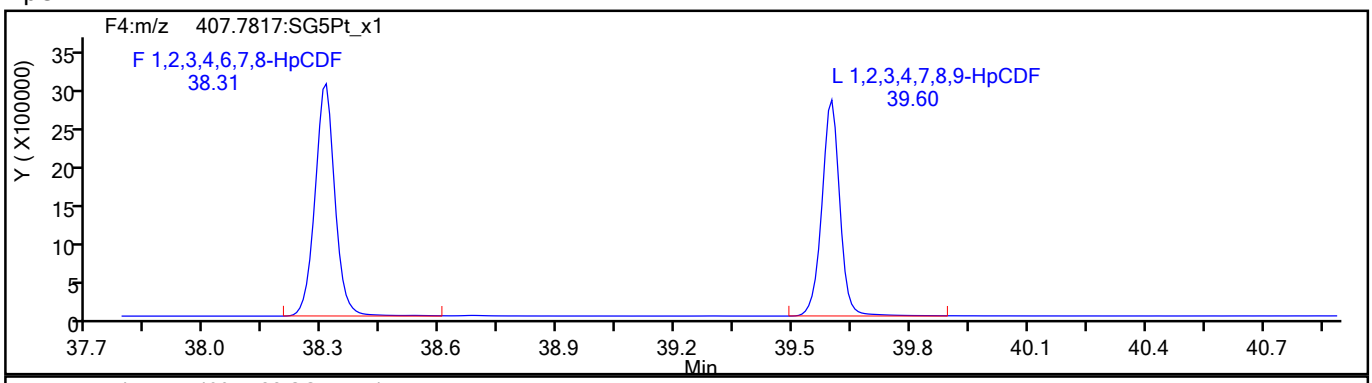

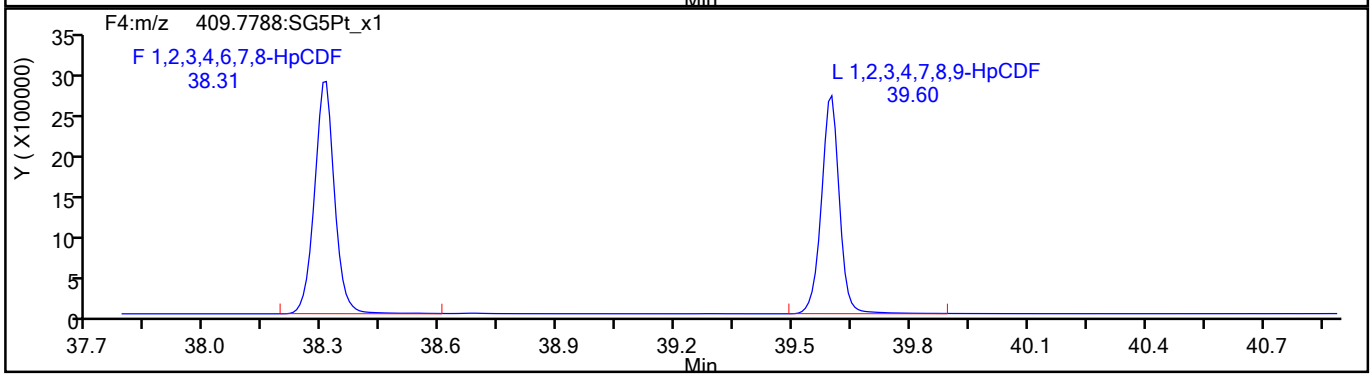

HpCDF Standards

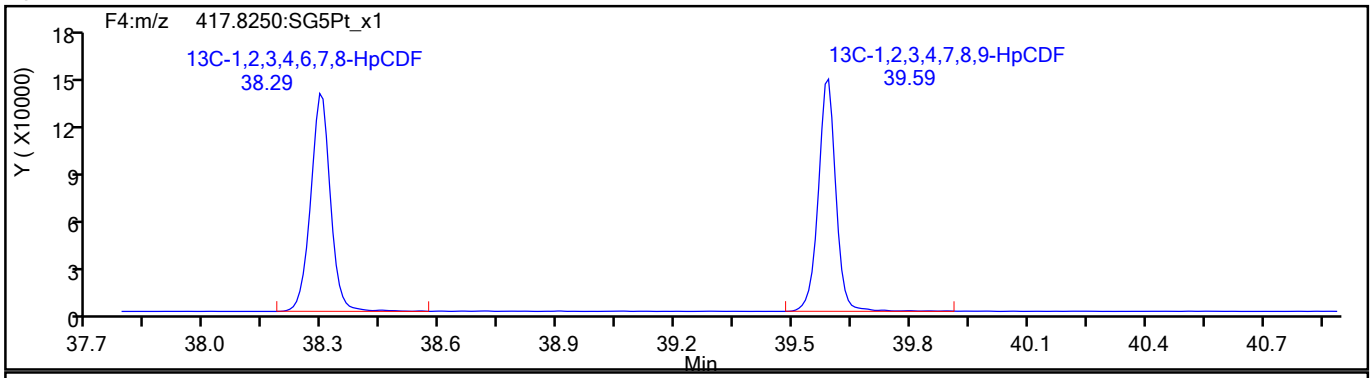

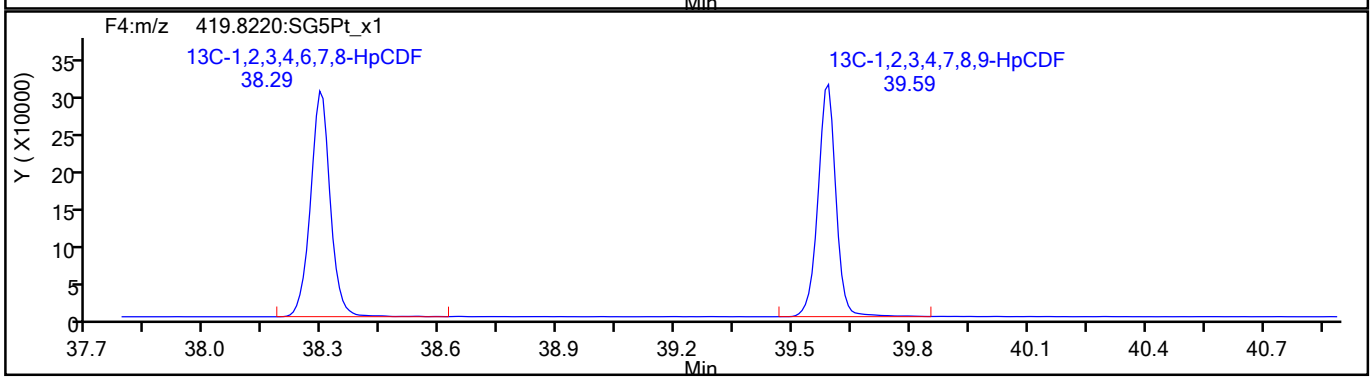

782955

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

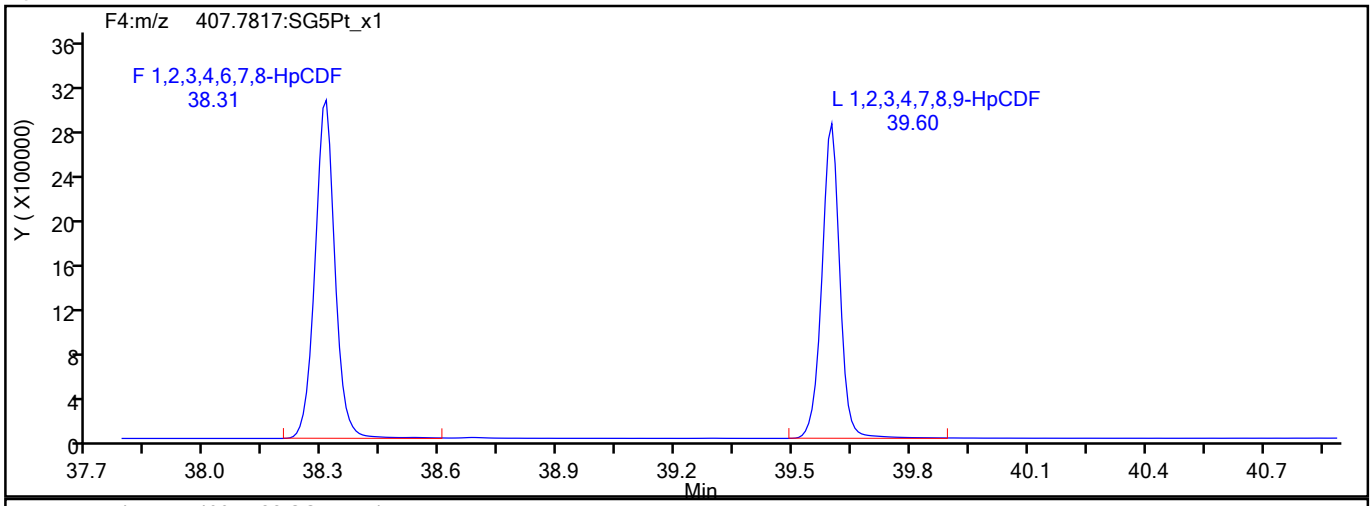

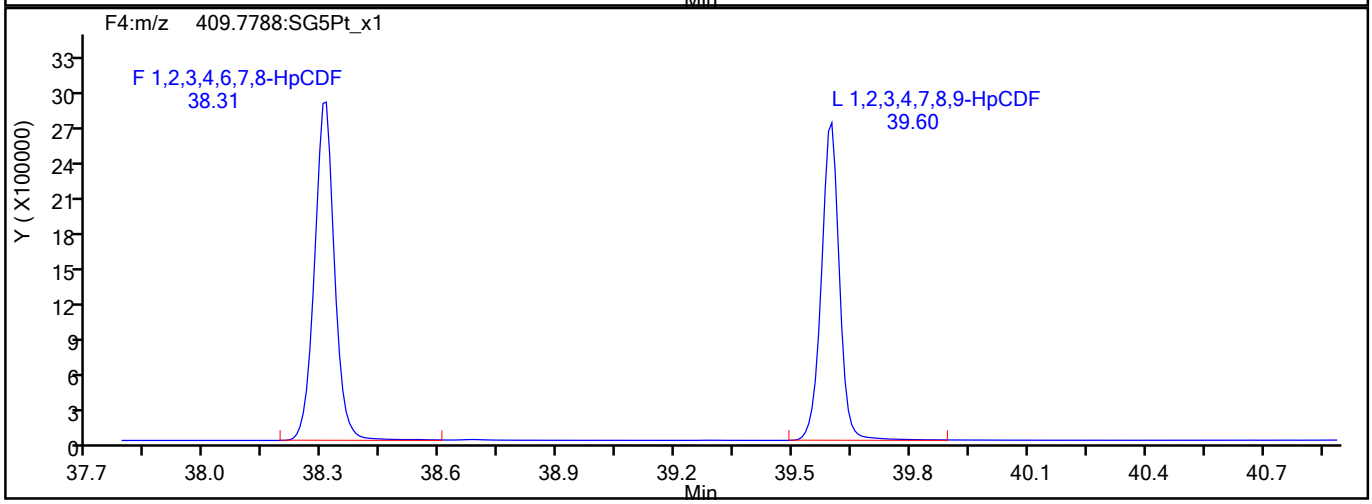

HpCDF Interference Mass

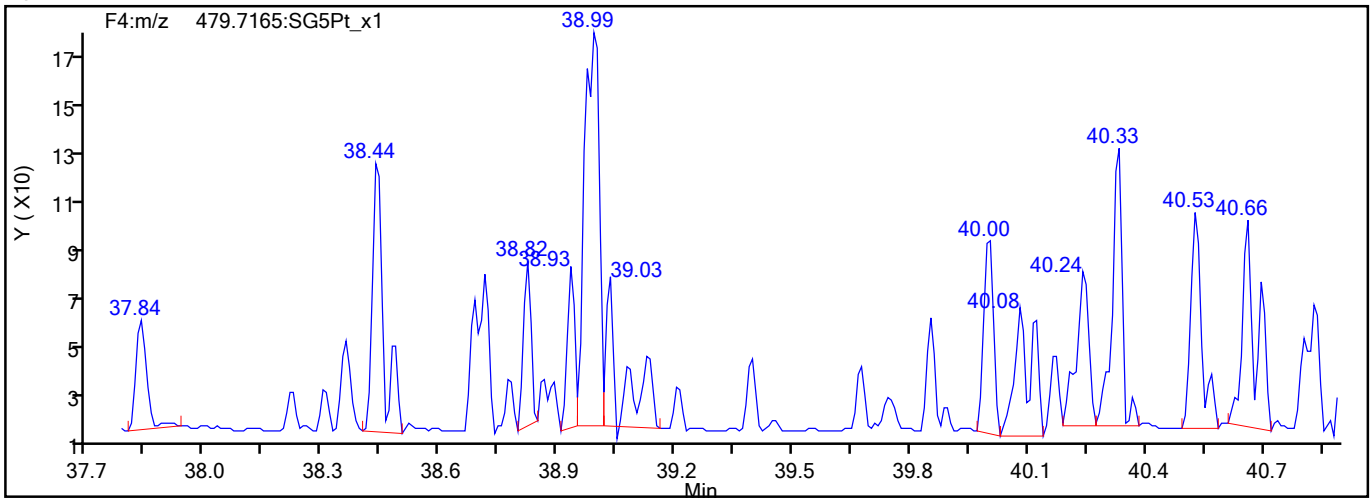

782956

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

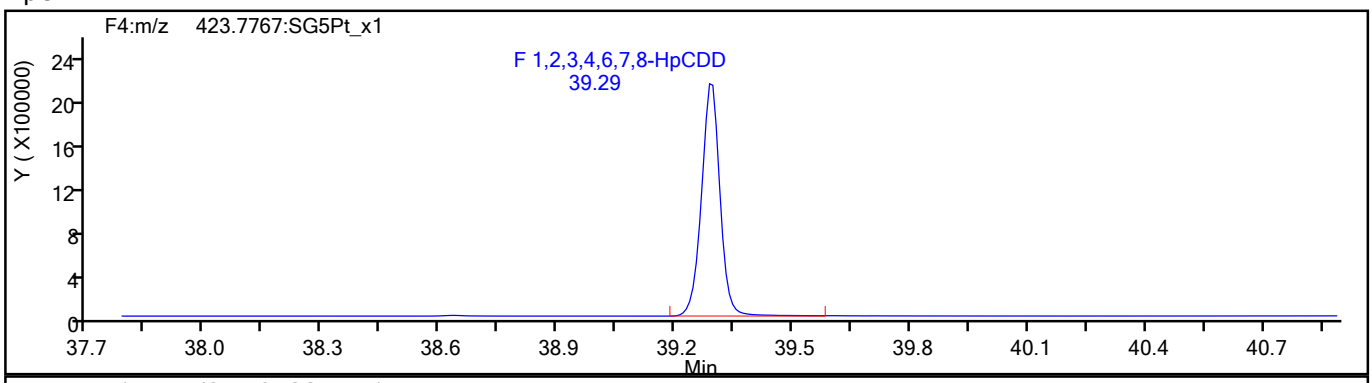

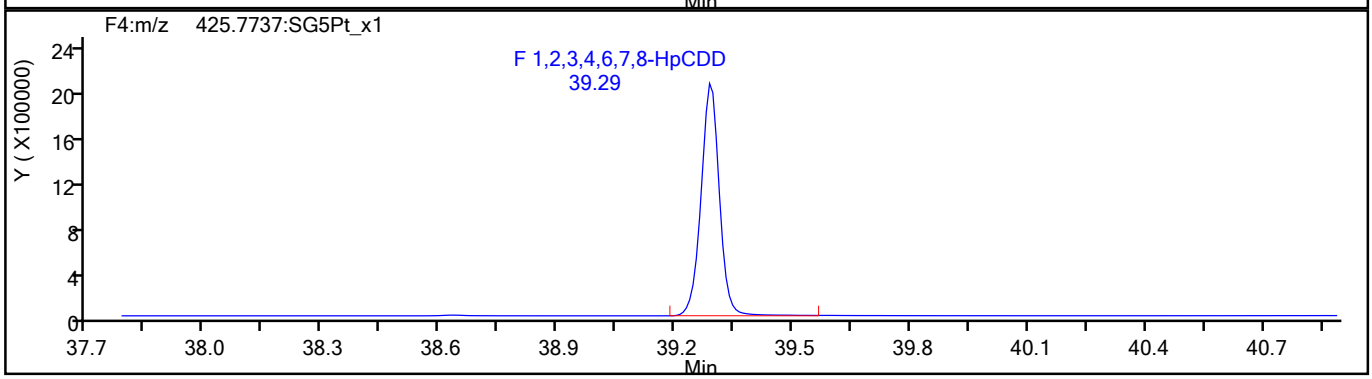

HpCDD Standards

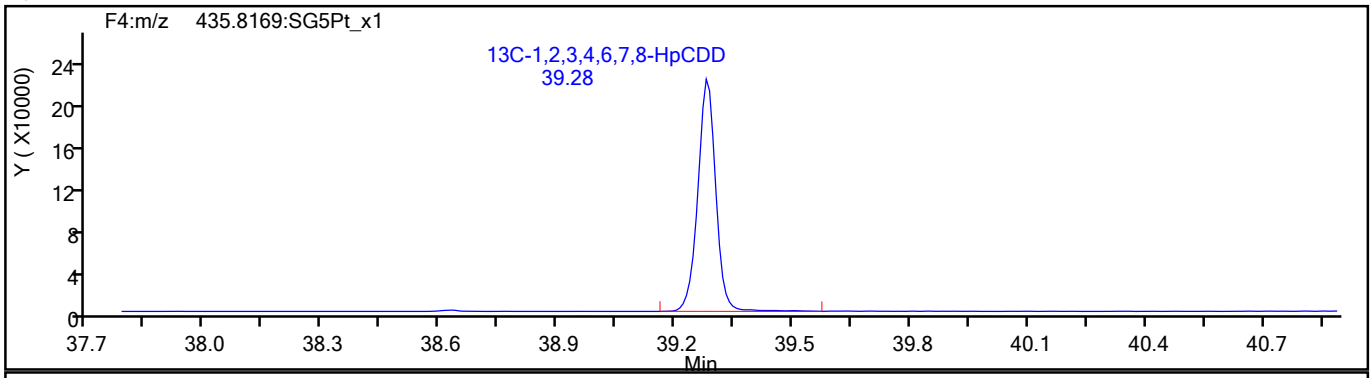

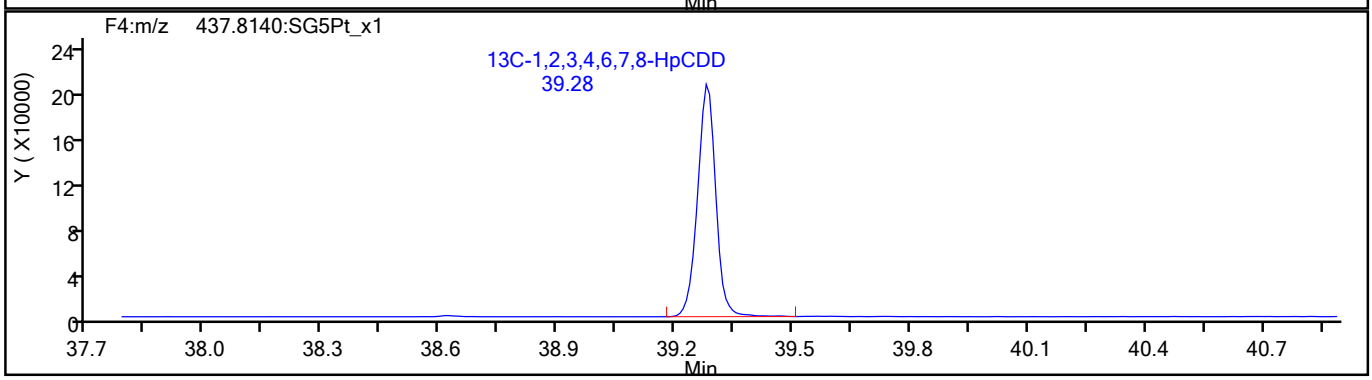

782957

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

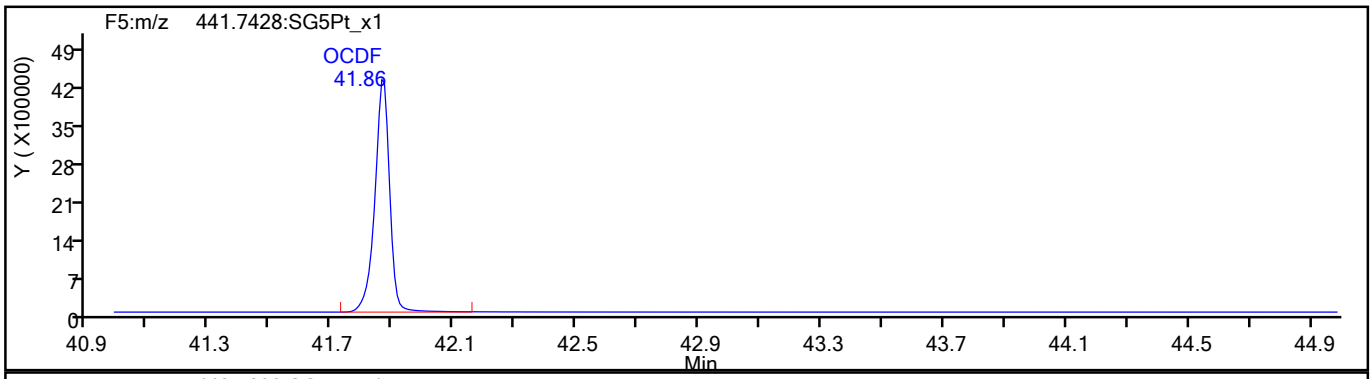

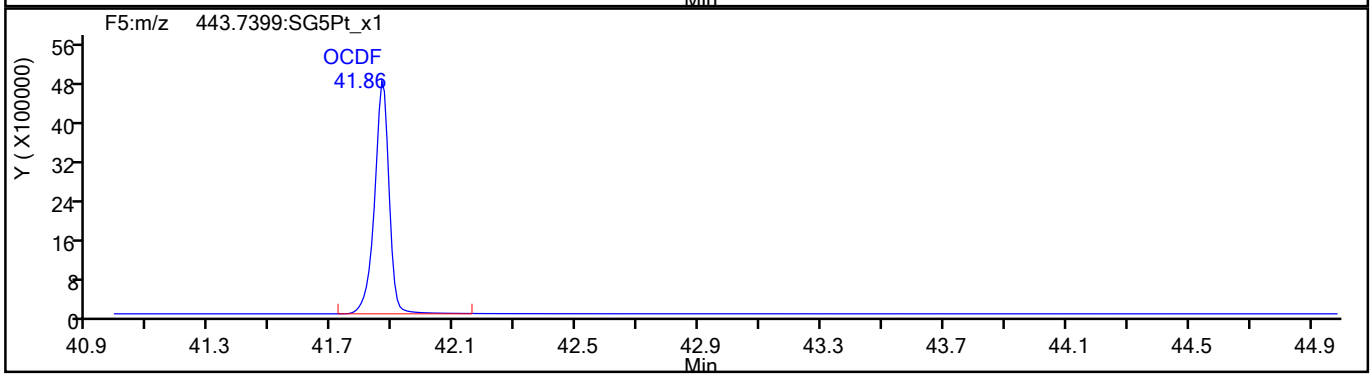

OCDF Standards

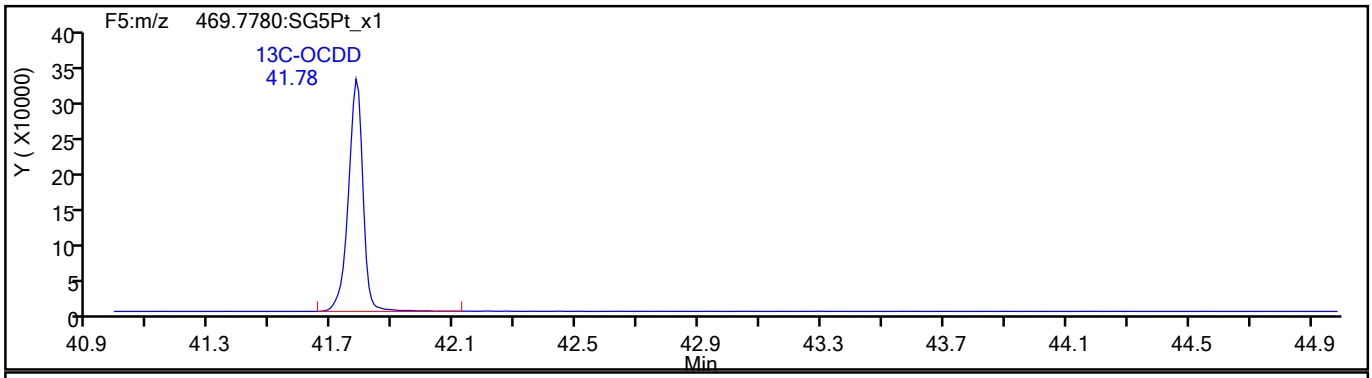

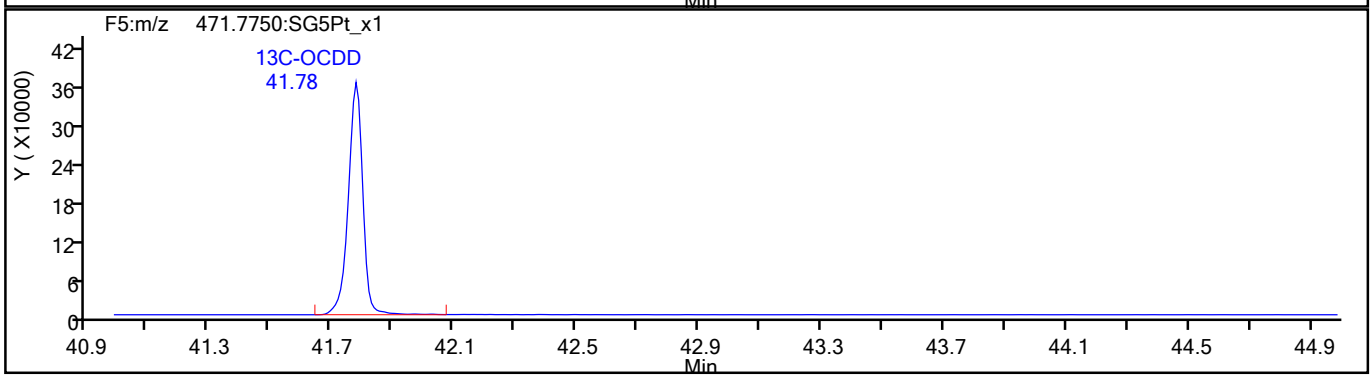

782958

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

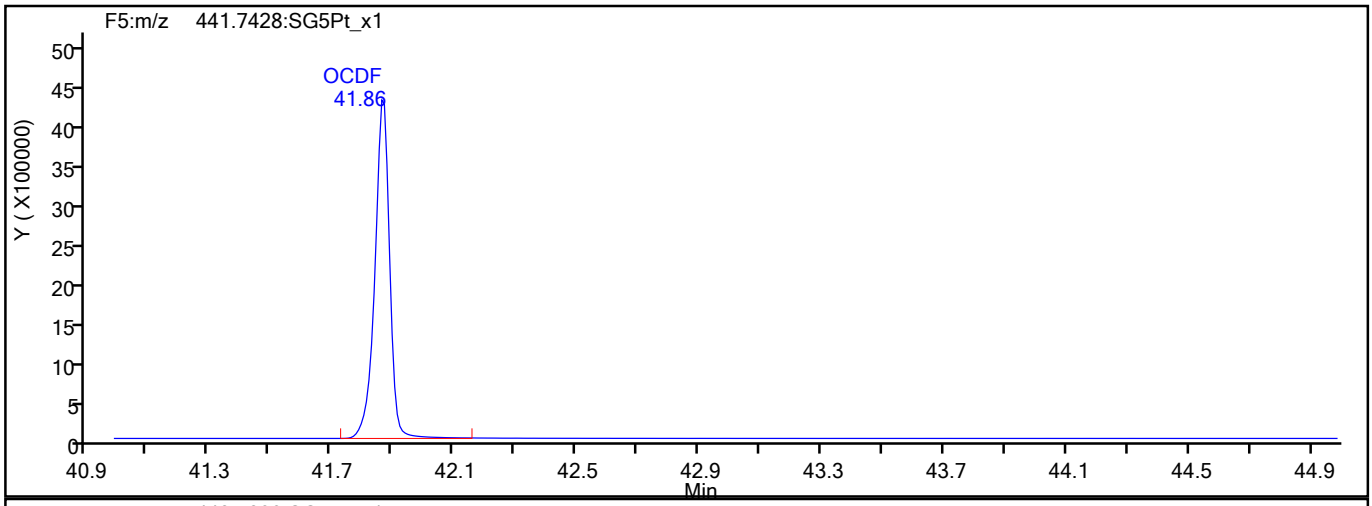

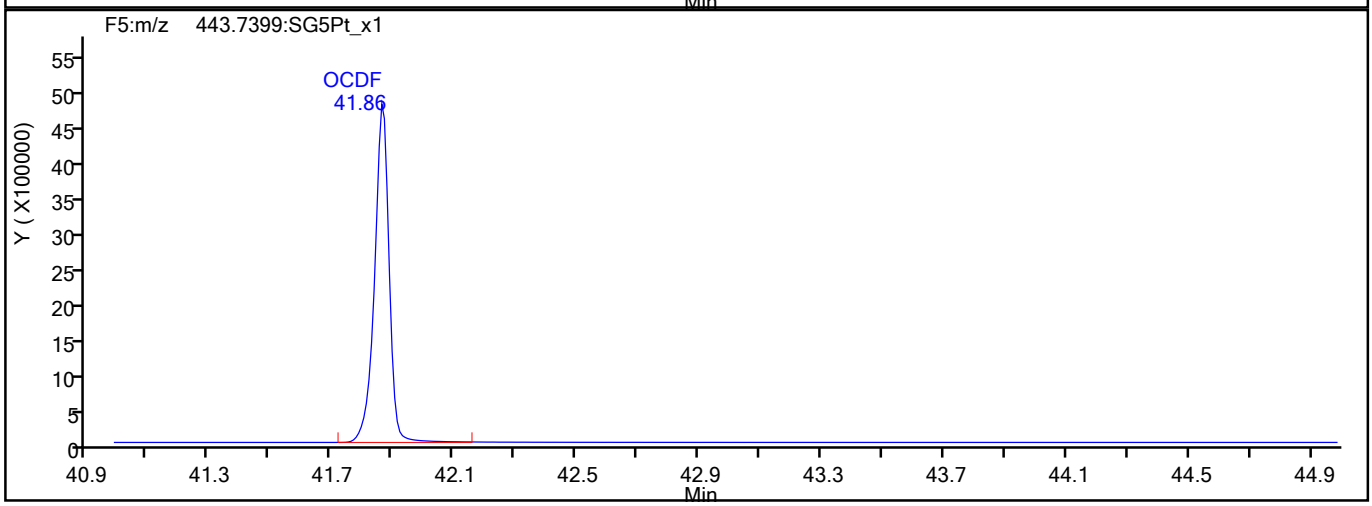

OCDF Interference Mass

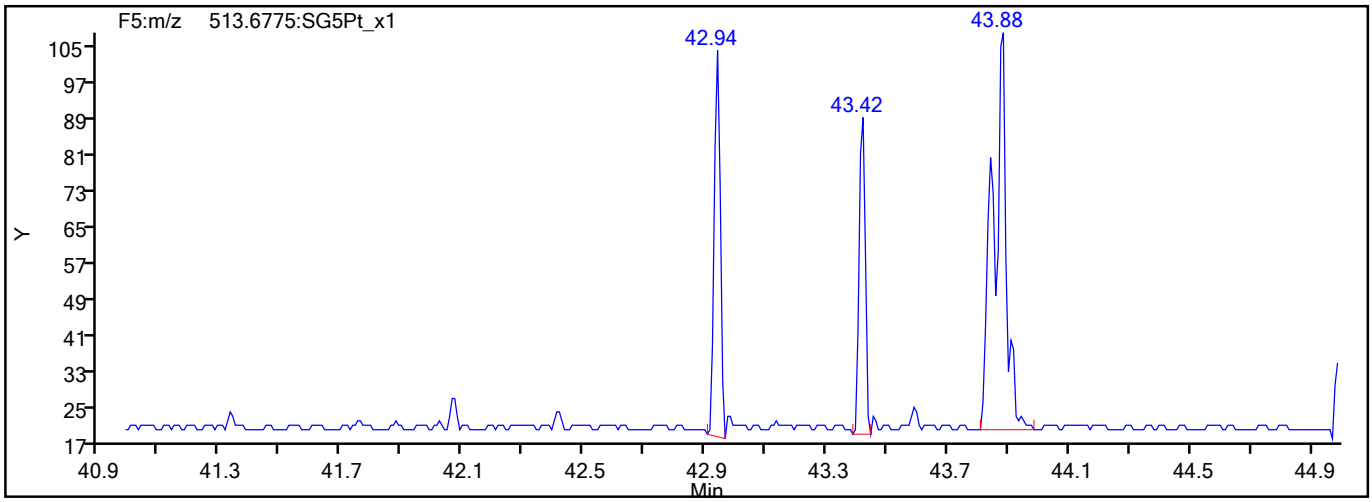

782959

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

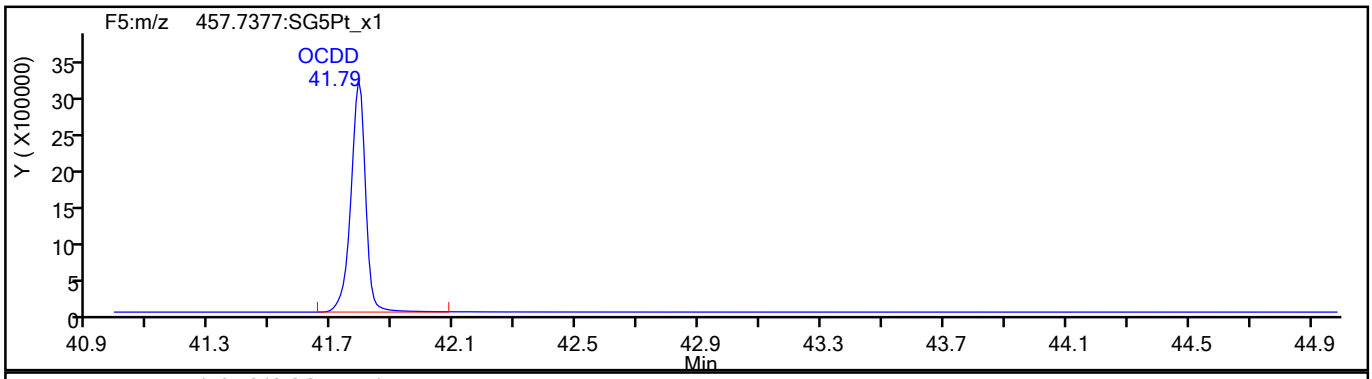

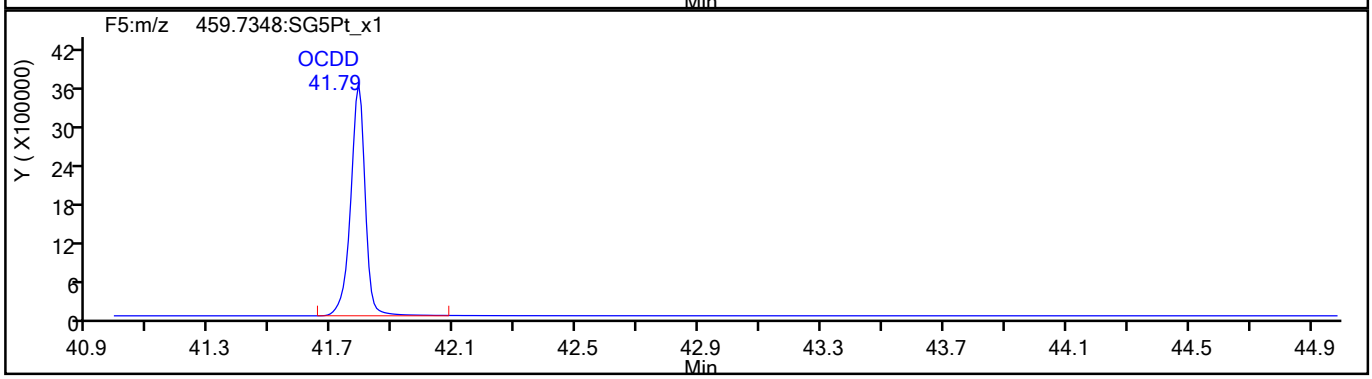

OCDD Standards

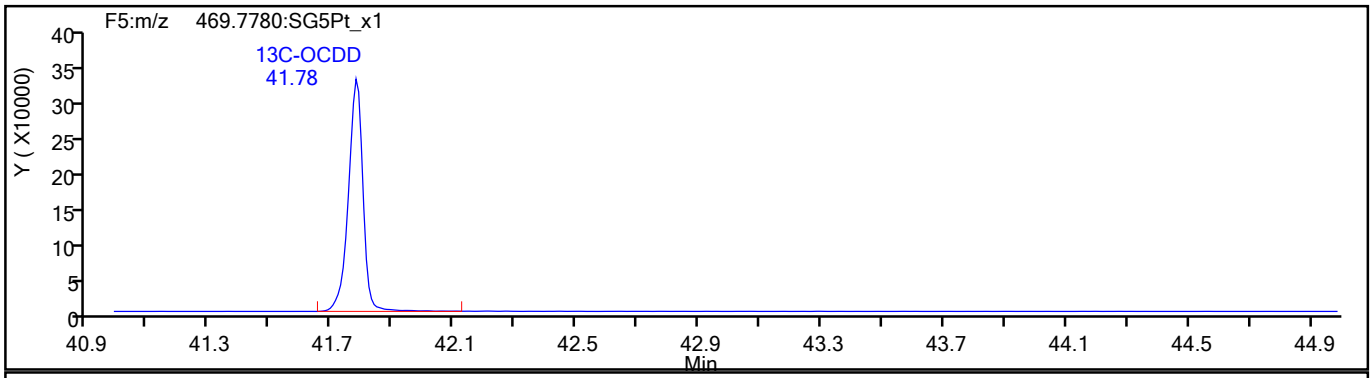

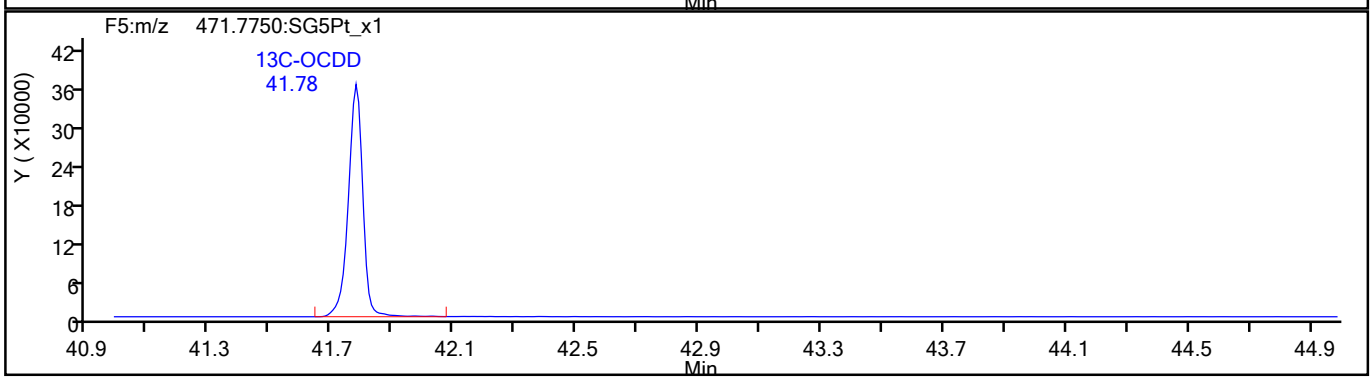

782960

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

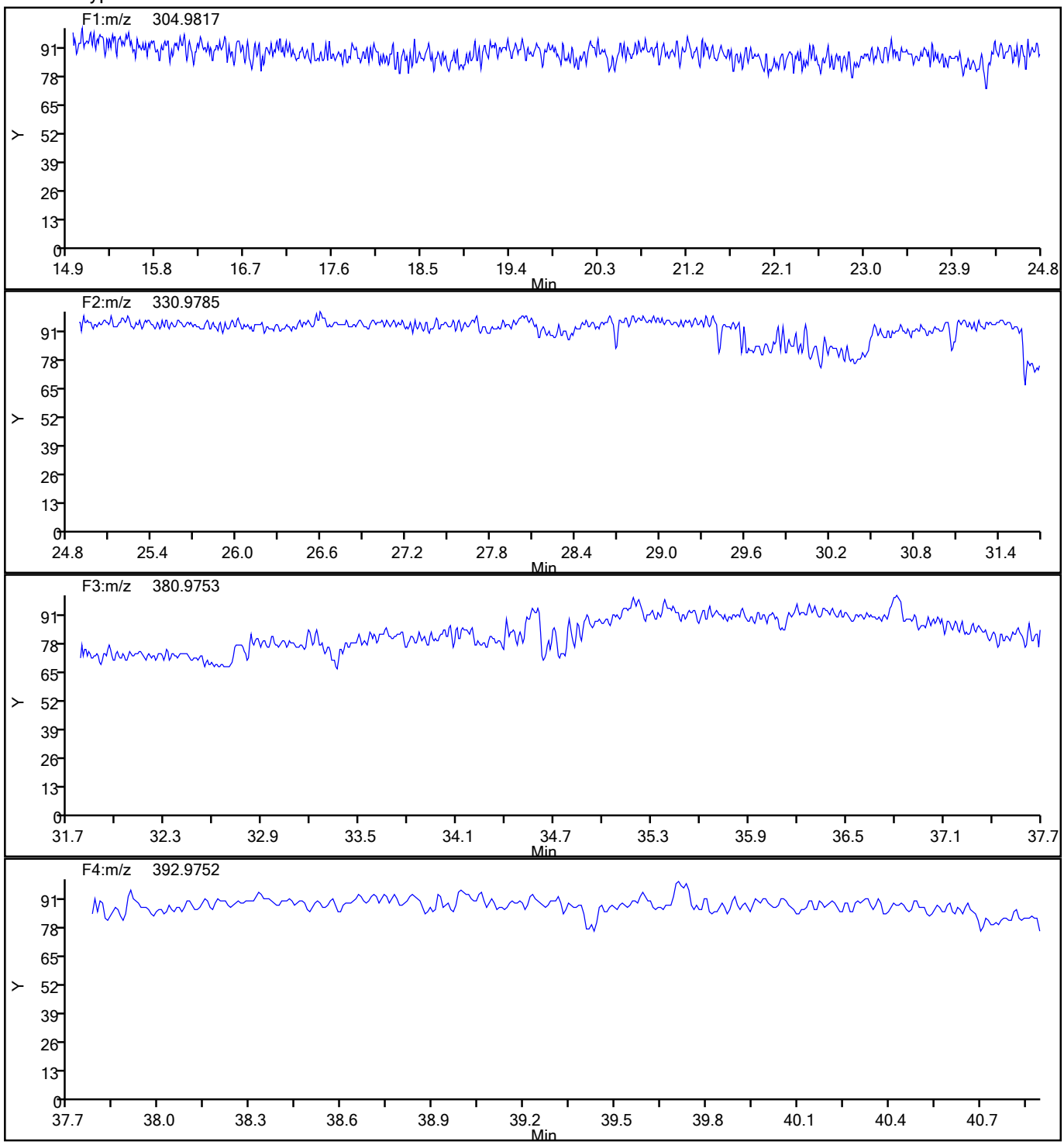

782961

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

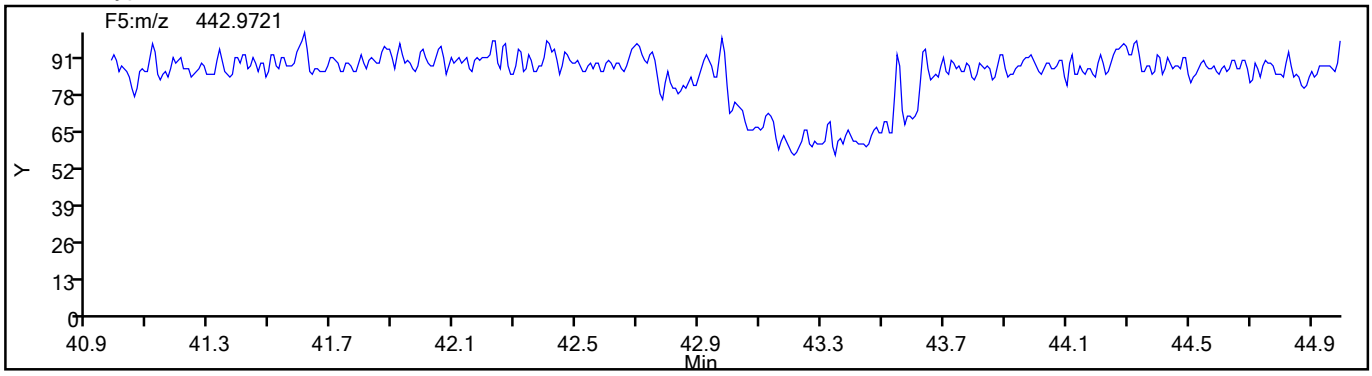

782962

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.05

Error Coefficients

Standard Error:	7060000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.844284	100.0	1113145.0	1.137713	Y
2	IC 320-496688/4	10.0	9.530968	100.0	1162117.0	0.953097	Y
3	IC 320-496688/5	50.0	52.293706	100.0	1094713.0	1.045874	Y
4	IC 320-496688/6	200.0	219.393902	100.0	1337869.0	1.09697	Y
5	IC 320-496688/7	1000.0	1017.847283	100.0	1355803.0	1.017847	Y

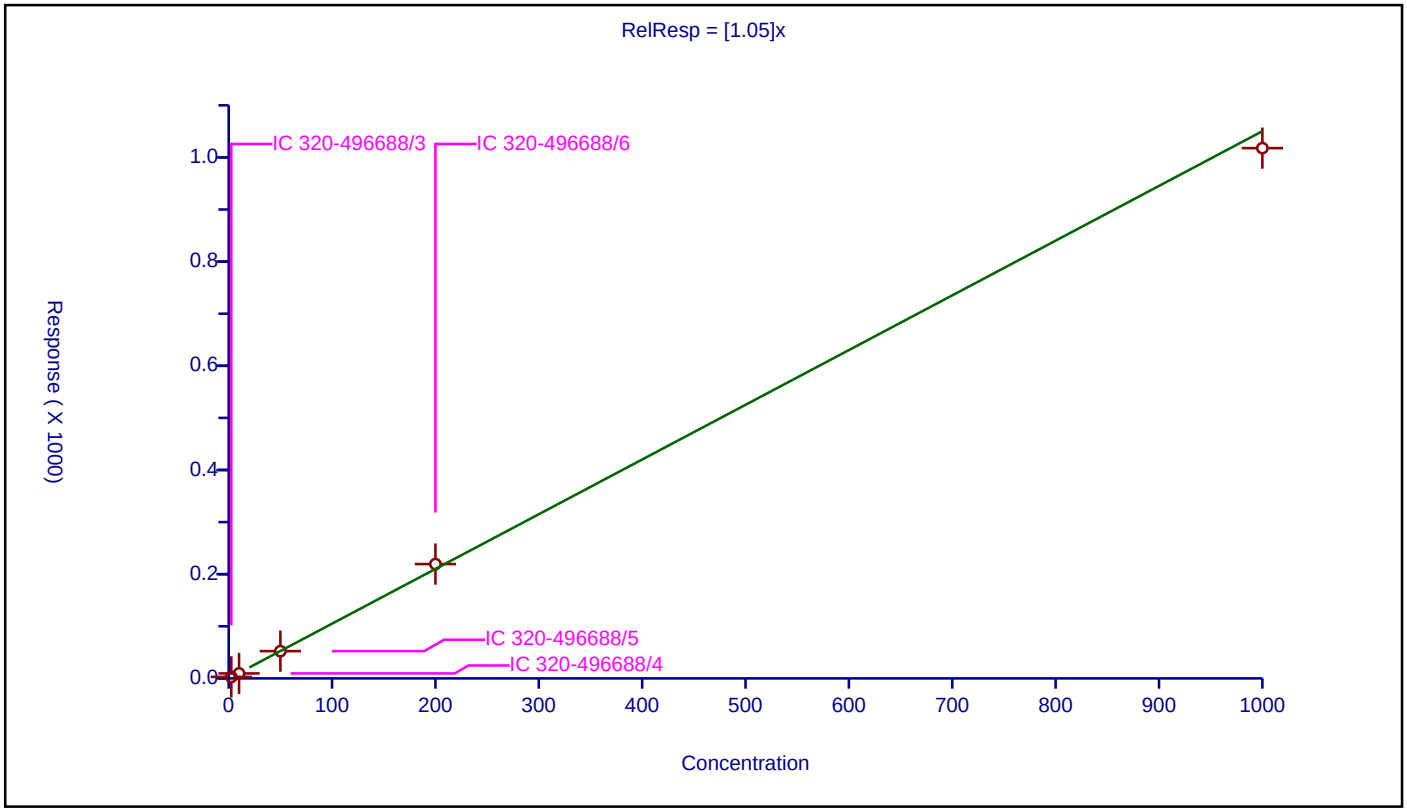

782963

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.442

Error Coefficients

Standard Error:	10800000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.852995	100.0	1227279.0	1.541198	Y
2	IC 320-496688/4	10.0	12.896239	100.0	1272526.0	1.289624	Y
3	IC 320-496688/5	50.0	74.275022	100.0	1182209.0	1.4855	Y
4	IC 320-496688/6	200.0	304.802204	100.0	1392194.0	1.524011	Y
5	IC 320-496688/7	1000.0	1370.014158	100.0	1546113.0	1.370014	Y

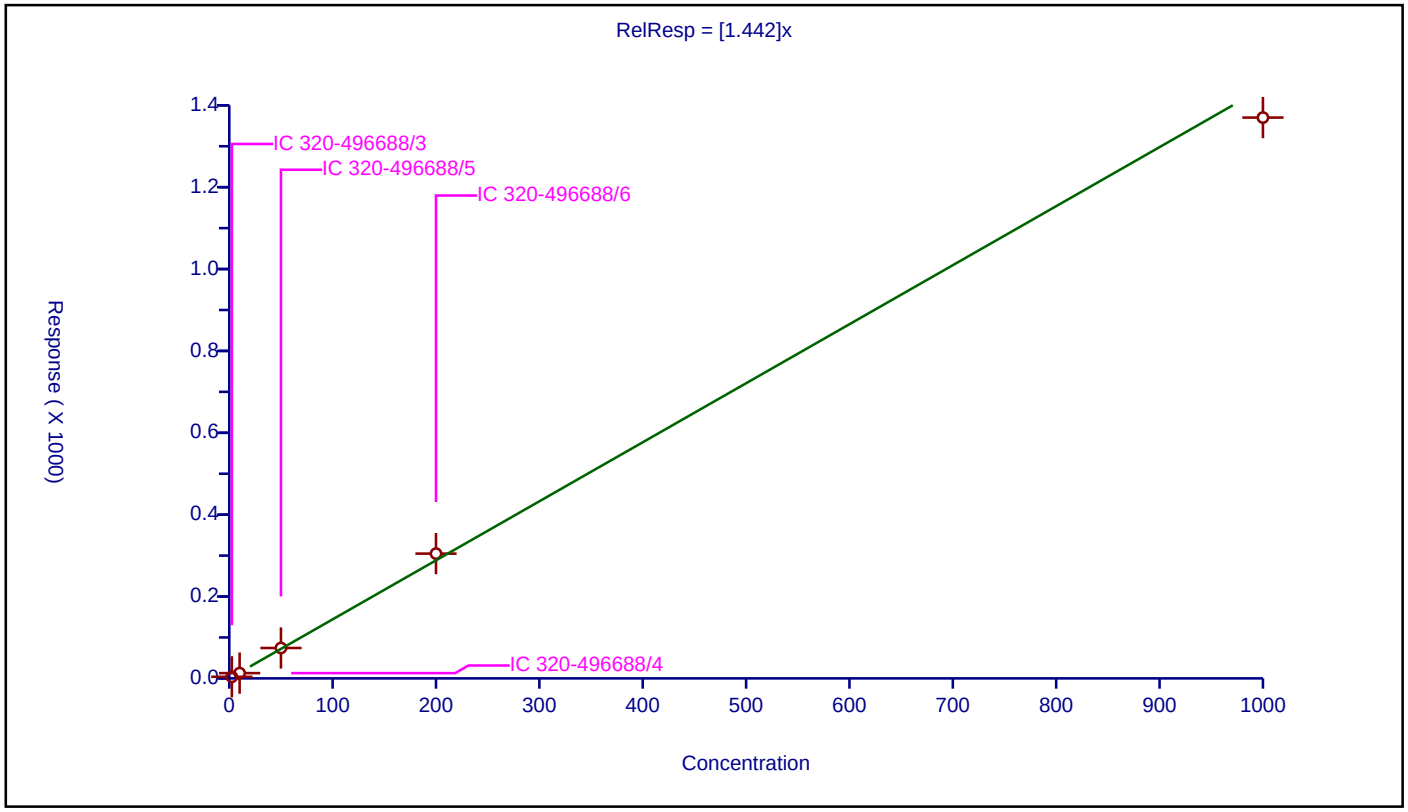

782964

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.309

Error Coefficients

Standard Error:	9110000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.51417	100.0	1120663.0	1.405668	Y
2	IC 320-496688/4	10.0	11.769676	100.0	1175351.0	1.176968	Y
3	IC 320-496688/5	50.0	67.293315	100.0	1080883.0	1.345866	Y
4	IC 320-496688/6	200.0	278.744786	100.0	1337573.0	1.393724	Y
5	IC 320-496688/7	1000.0	1223.548565	100.0	1455766.0	1.223549	Y

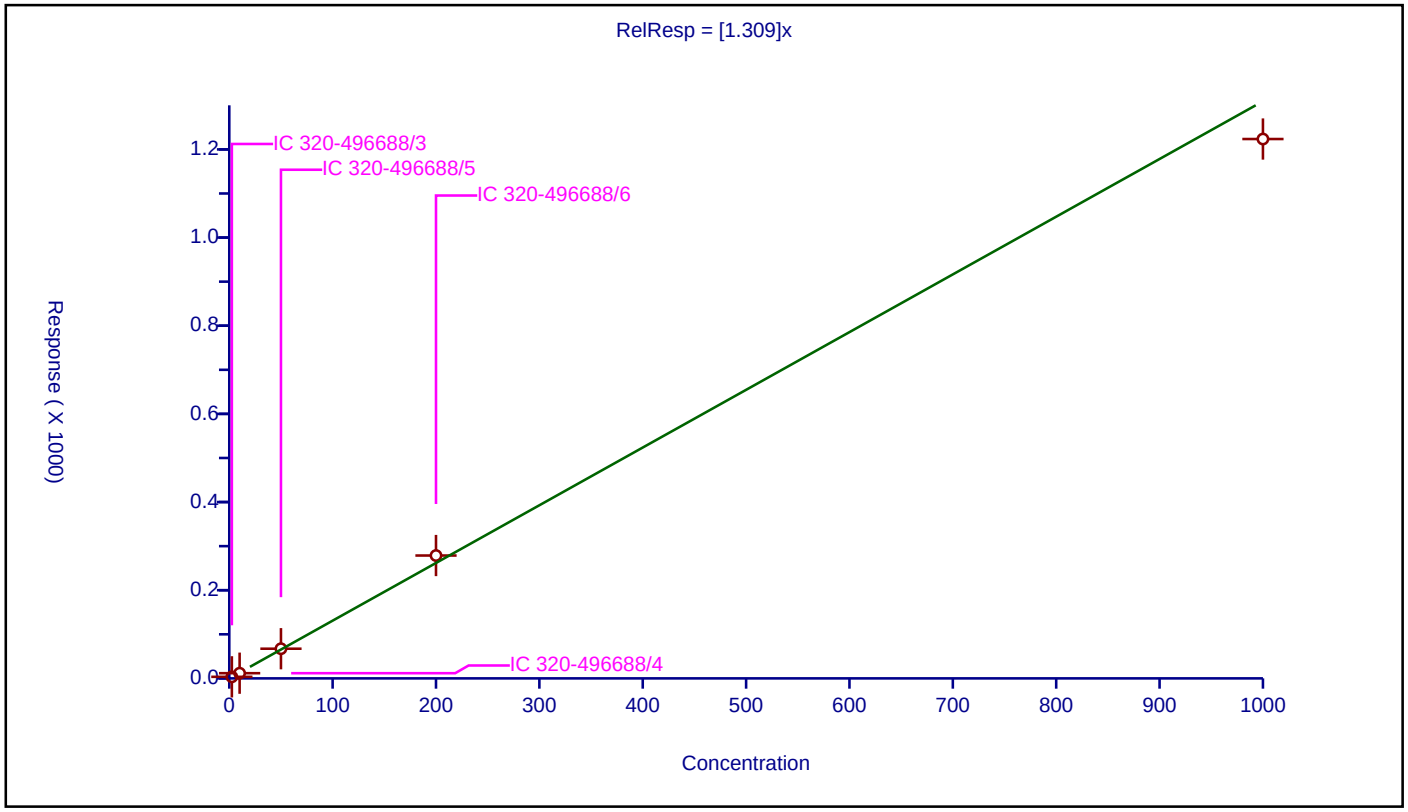

782965

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	7950000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808772	100.0	1127895.0	1.123509	Y
2	IC 320-496688/4	10.0	9.701688	100.0	1363103.0	0.970169	Y
3	IC 320-496688/5	50.0	53.7445	100.0	1348471.0	1.07489	Y
4	IC 320-496688/6	200.0	224.989195	100.0	1432215.0	1.124946	Y
5	IC 320-496688/7	1000.0	1010.433801	100.0	1539784.0	1.010434	Y

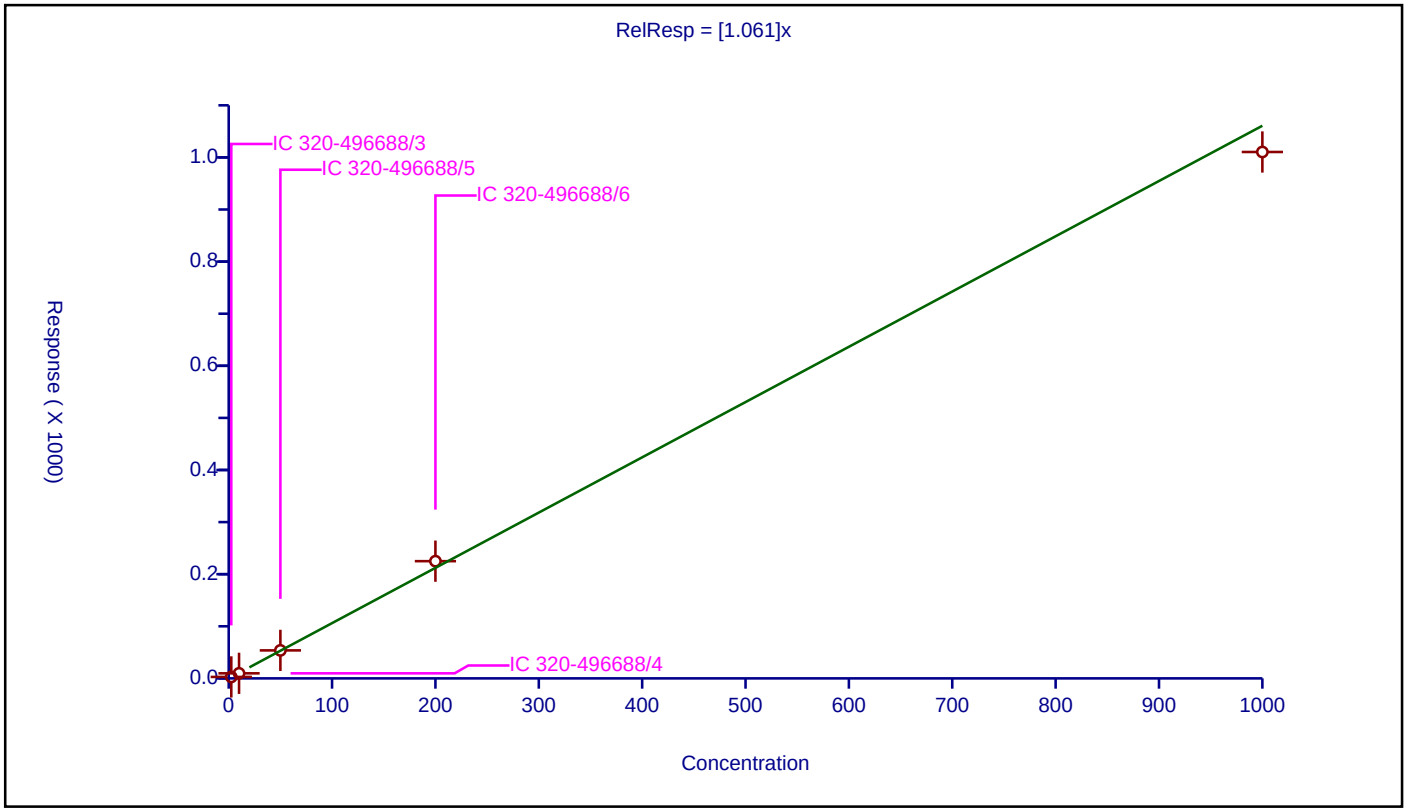

782966

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.147

Error Coefficients

Standard Error:	11200000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.056507	100.0	1517222.0	1.222603	Y
2	IC 320-496688/4	10.0	10.071694	100.0	1545033.0	1.007169	Y
3	IC 320-496688/5	50.0	59.364869	100.0	1841825.0	1.187297	Y
4	IC 320-496688/6	200.0	241.451426	100.0	1778238.0	1.207257	Y
5	IC 320-496688/7	1000.0	1112.580113	100.0	1968615.0	1.11258	Y

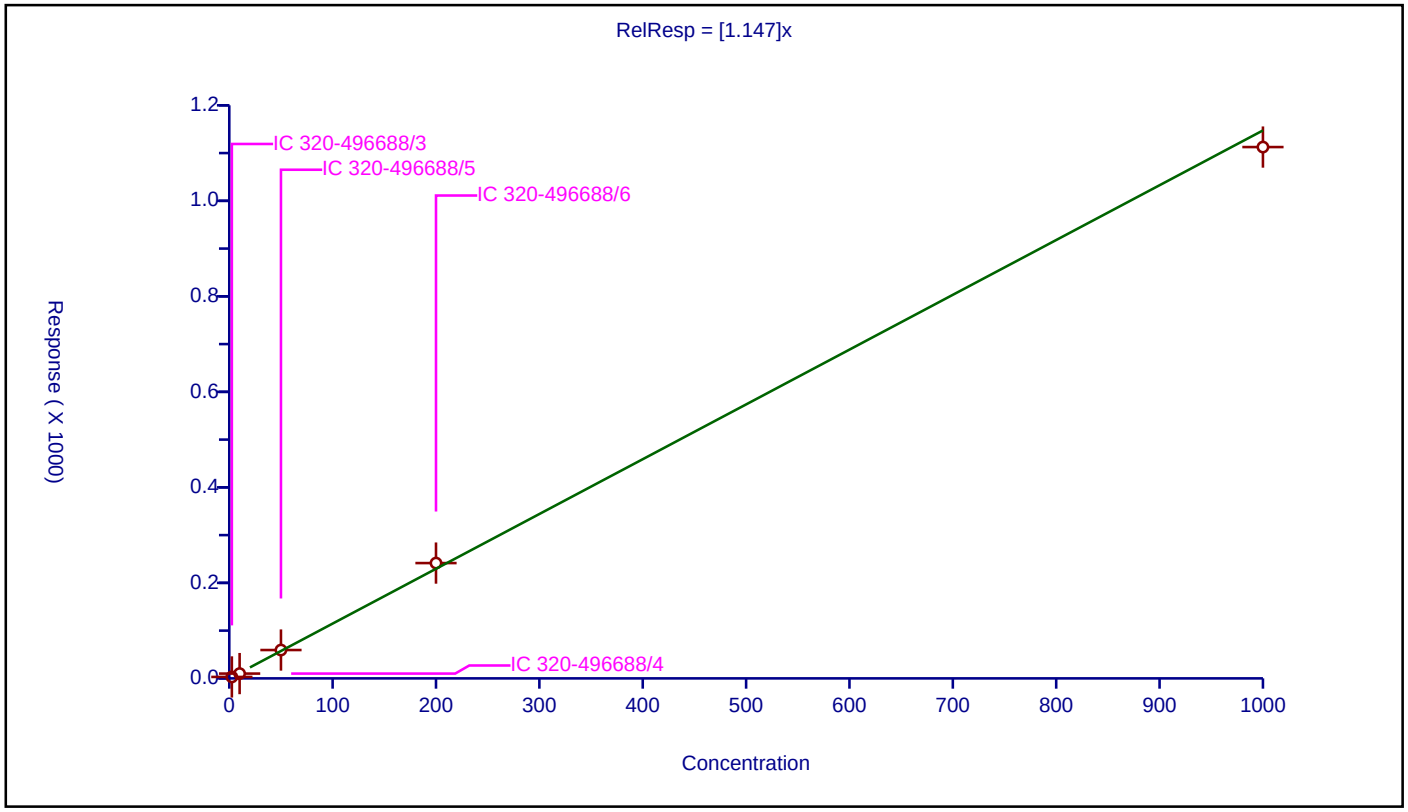

782967

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9933

Error Coefficients

Standard Error:	8510000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.639223	100.0	1291365.0	1.055689	Y
2	IC 320-496688/4	10.0	8.862824	100.0	1558668.0	0.886282	Y
3	IC 320-496688/5	50.0	52.081775	100.0	1460100.0	1.041636	Y
4	IC 320-496688/6	200.0	205.274729	100.0	1669337.0	1.026374	Y
5	IC 320-496688/7	1000.0	956.728345	100.0	1741498.0	0.956728	Y

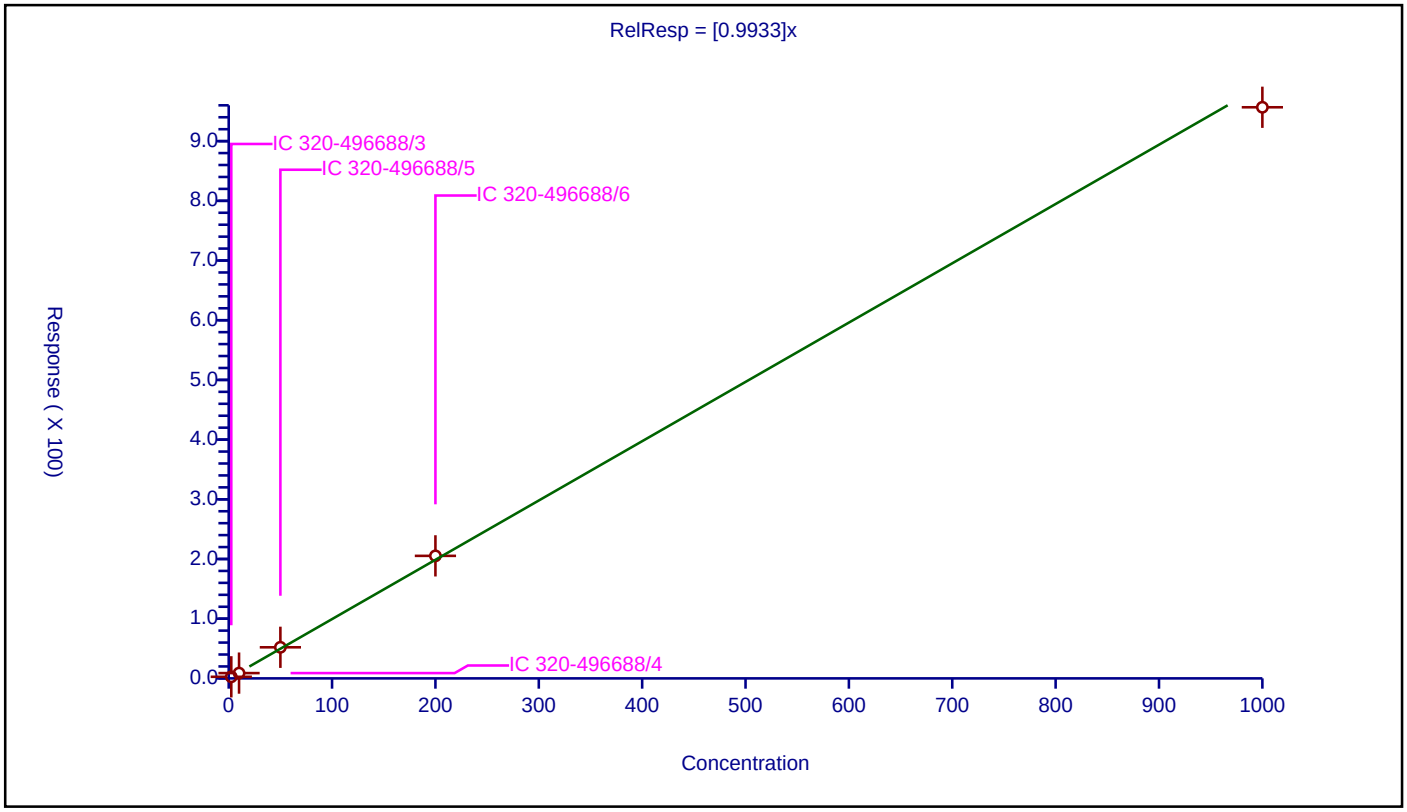

782968

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.218

Error Coefficients

Standard Error:	13600000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.343553	100.0	1626653.0	1.337421	Y
2	IC 320-496688/4	10.0	10.950603	100.0	1692336.0	1.09506	Y
3	IC 320-496688/5	50.0	61.795629	100.0	2015594.0	1.235913	Y
4	IC 320-496688/6	200.0	250.125403	100.0	1995567.0	1.250627	Y
5	IC 320-496688/7	1000.0	1169.95242	100.0	2283961.0	1.169952	Y

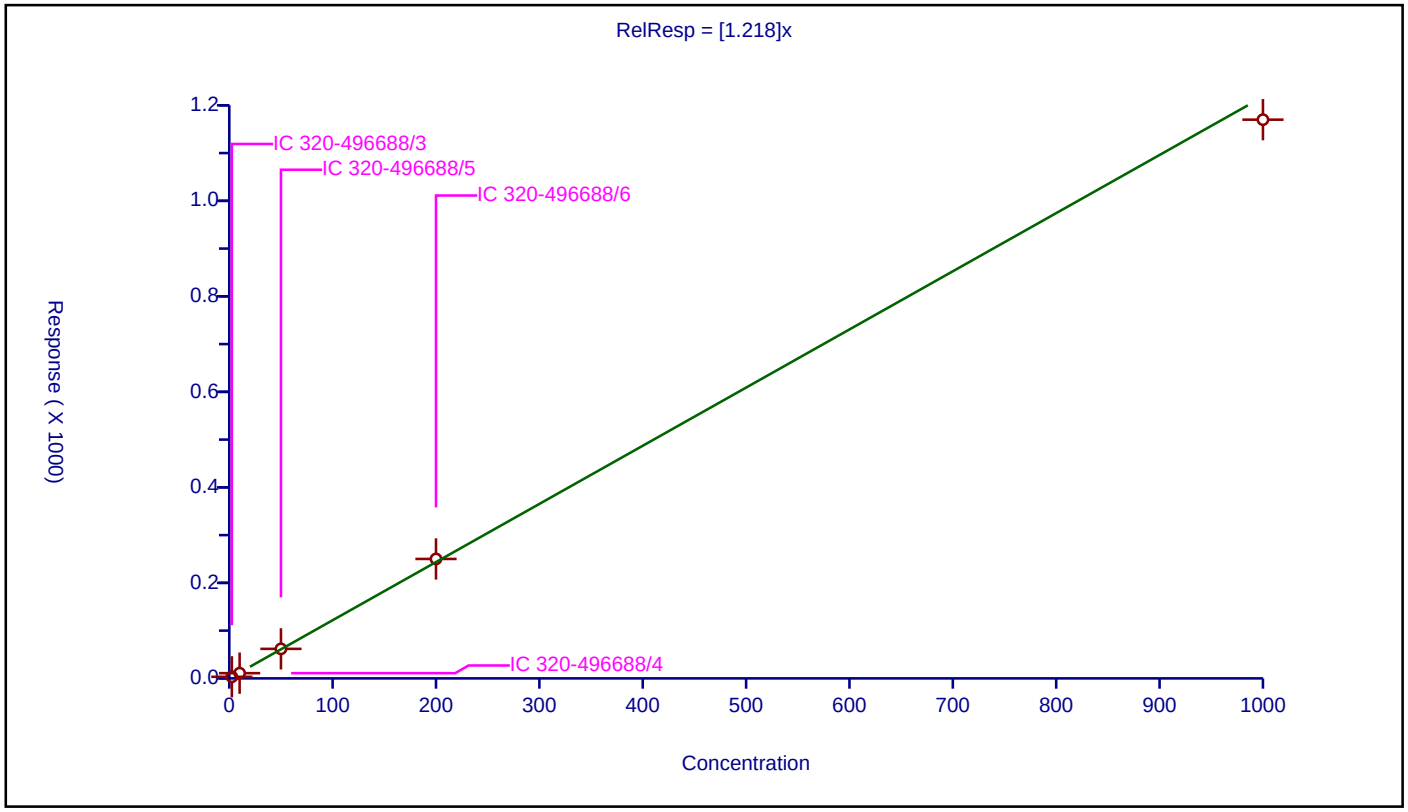

782969

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.184

Error Coefficients

Standard Error:	8820000
Relative Standard Error:	11.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.510522	100.0	1127895.0	1.404209	Y
2	IC 320-496688/4	10.0	10.251683	100.0	1363103.0	1.025168	Y
3	IC 320-496688/5	50.0	58.326134	100.0	1348471.0	1.166523	Y
4	IC 320-496688/6	200.0	239.918169	100.0	1432215.0	1.199591	Y
5	IC 320-496688/7	1000.0	1122.182397	100.0	1539784.0	1.122182	Y

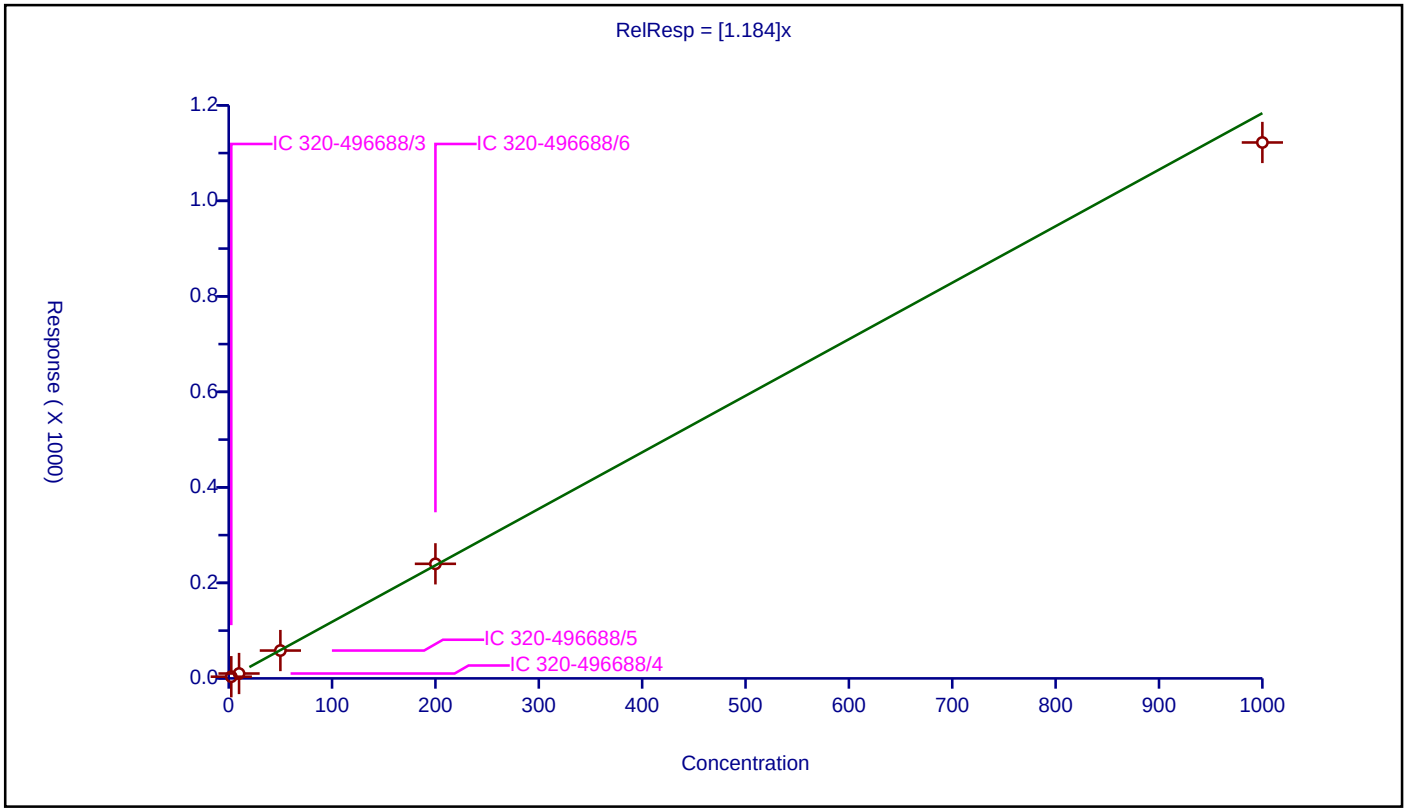

782970

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.24

Error Coefficients

Standard Error:	11500000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.395229	100.0	1696557.0	1.358092	Y
2	IC 320-496688/4	10.0	11.238546	100.0	1735785.0	1.123855	Y
3	IC 320-496688/5	50.0	62.662354	100.0	1657413.0	1.253247	Y
4	IC 320-496688/6	200.0	255.13849	100.0	1742331.0	1.275692	Y
5	IC 320-496688/7	1000.0	1189.708821	100.0	1895740.0	1.189709	Y

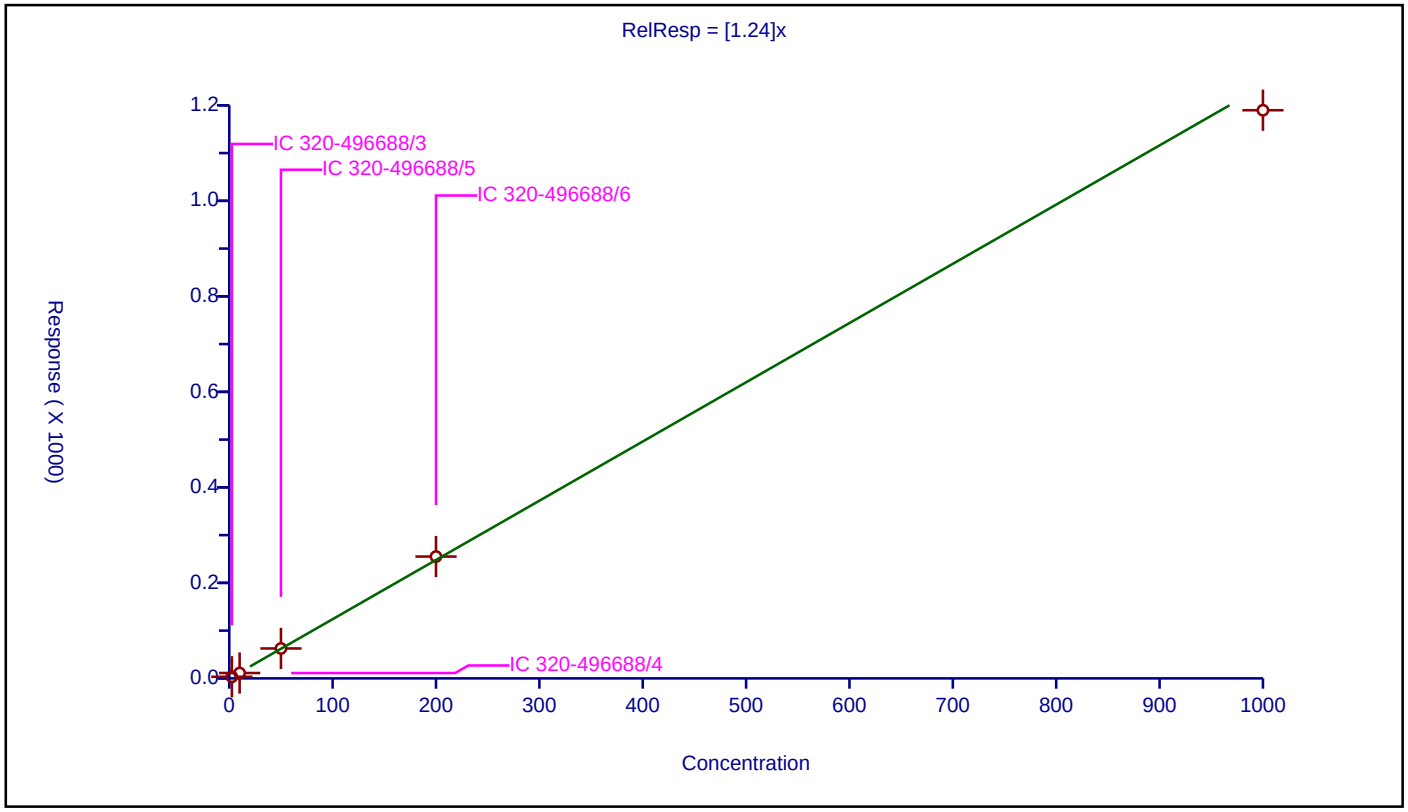

782971

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.046

Error Coefficients

Standard Error:	8500000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.679791	100.0	1602476.0	1.071916	Y
2	IC 320-496688/4	10.0	9.520403	100.0	1364144.0	0.95204	Y
3	IC 320-496688/5	50.0	53.426119	100.0	1388641.0	1.068522	Y
4	IC 320-496688/6	200.0	220.300949	100.0	1521254.0	1.101505	Y
5	IC 320-496688/7	1000.0	1038.502383	100.0	1602880.0	1.038502	Y

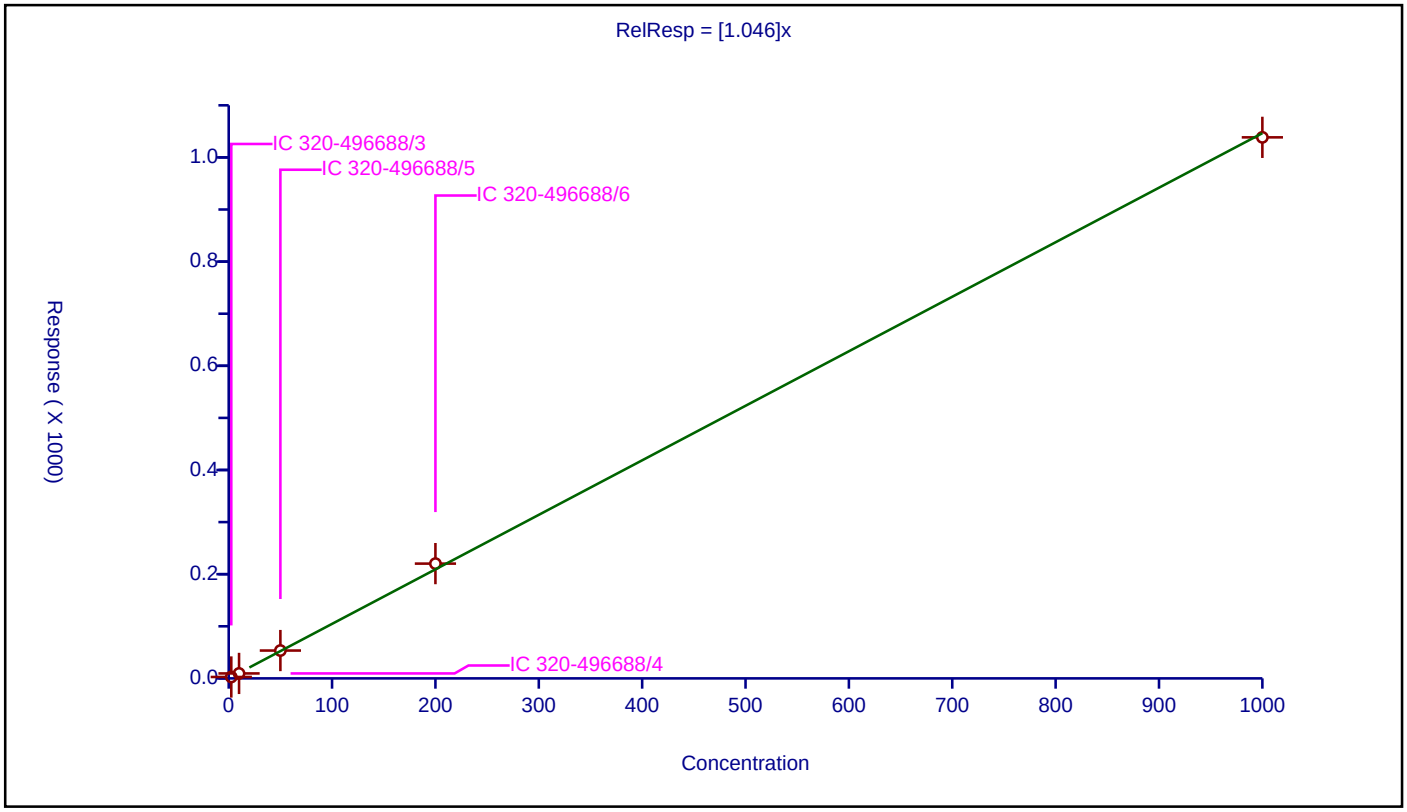

782972

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.054

Error Coefficients

Standard Error:	13300000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.980089	100.0	2514489.0	1.192035	Y
2	IC 320-496688/4	10.0	9.411606	100.0	2234847.0	0.941161	Y
3	IC 320-496688/5	50.0	51.86467	100.0	2149791.0	1.037293	Y
4	IC 320-496688/6	200.0	217.934531	100.0	2432949.0	1.089673	Y
5	IC 320-496688/7	1000.0	1011.152482	100.0	2574521.0	1.011152	Y

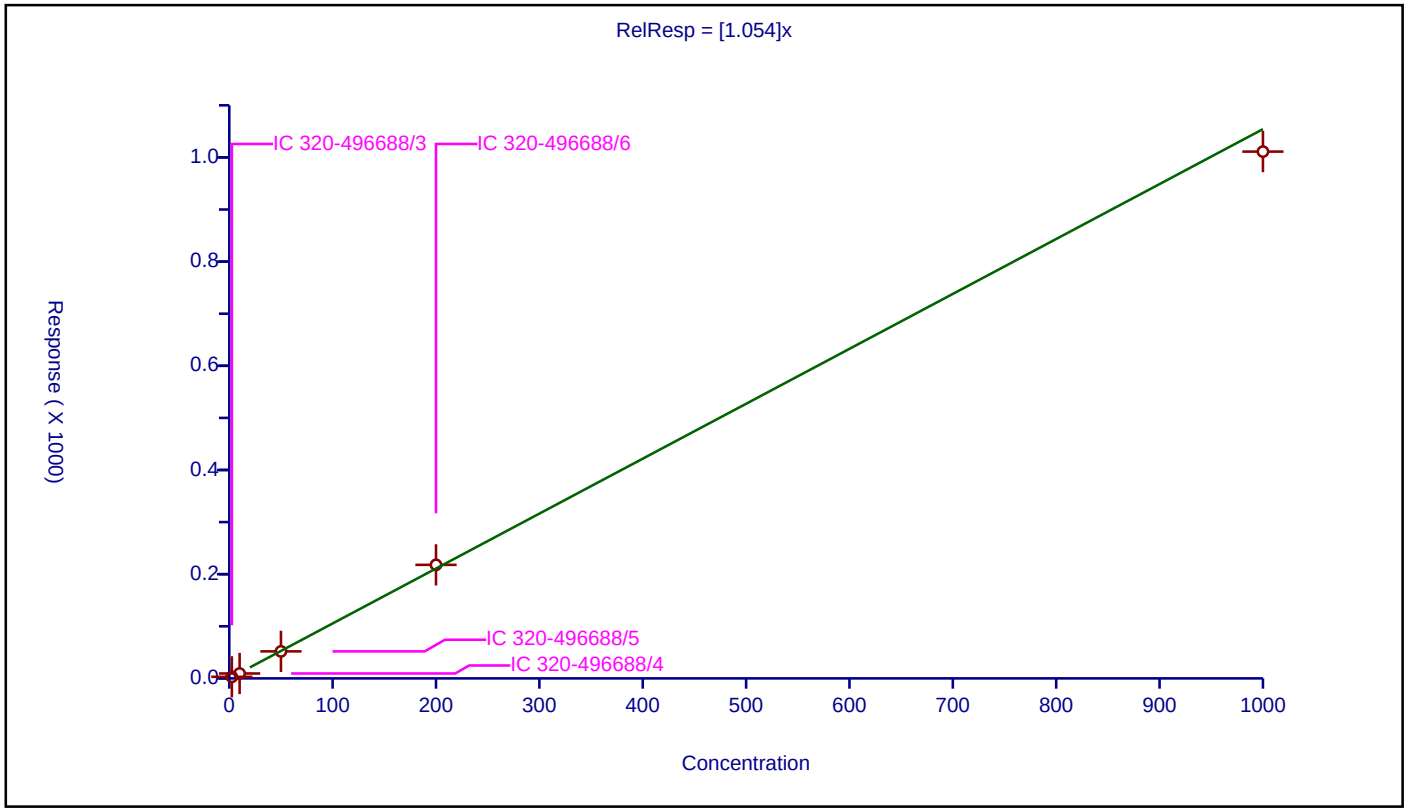

782973

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.214

Error Coefficients

Standard Error:	13000000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.283761	100.0	1523436.0	1.313504	Y
2	IC 320-496688/4	10.0	11.007204	100.0	1740015.0	1.10072	Y
3	IC 320-496688/5	50.0	61.8379	100.0	1861559.0	1.236758	Y
4	IC 320-496688/6	200.0	252.469364	100.0	2042874.0	1.262347	Y
5	IC 320-496688/7	1000.0	1159.01852	100.0	2190509.0	1.159019	Y

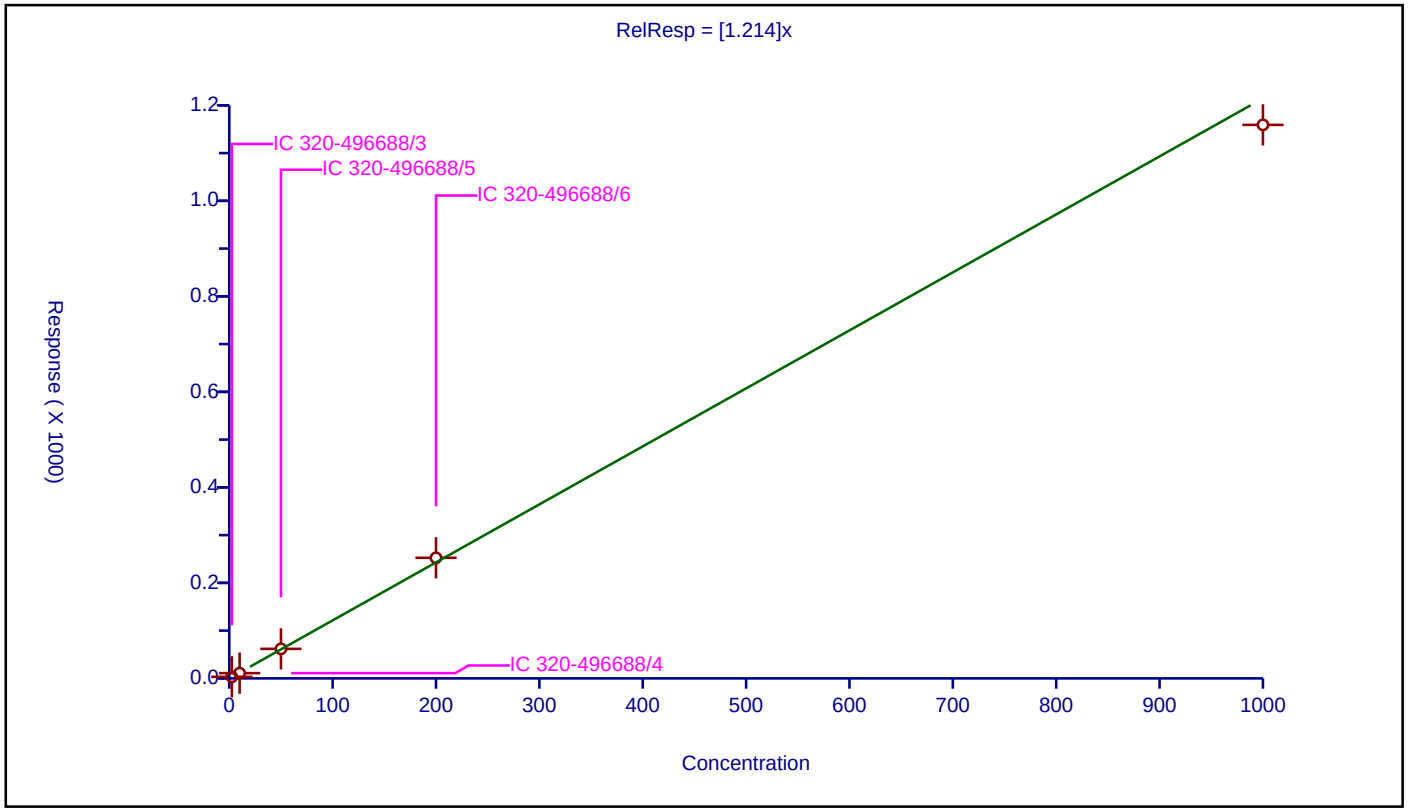

782974

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	12700000
Relative Standard Error:	8.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808272	100.0	2592947.0	1.123309	Y
2	IC 320-496688/4	10.0	8.984414	100.0	2228025.0	0.898441	Y
3	IC 320-496688/5	50.0	49.606313	100.0	1991303.0	0.992126	Y
4	IC 320-496688/6	200.0	212.714288	100.0	2374722.0	1.063571	Y
5	IC 320-496688/7	1000.0	961.852333	100.0	2584740.0	0.961852	Y

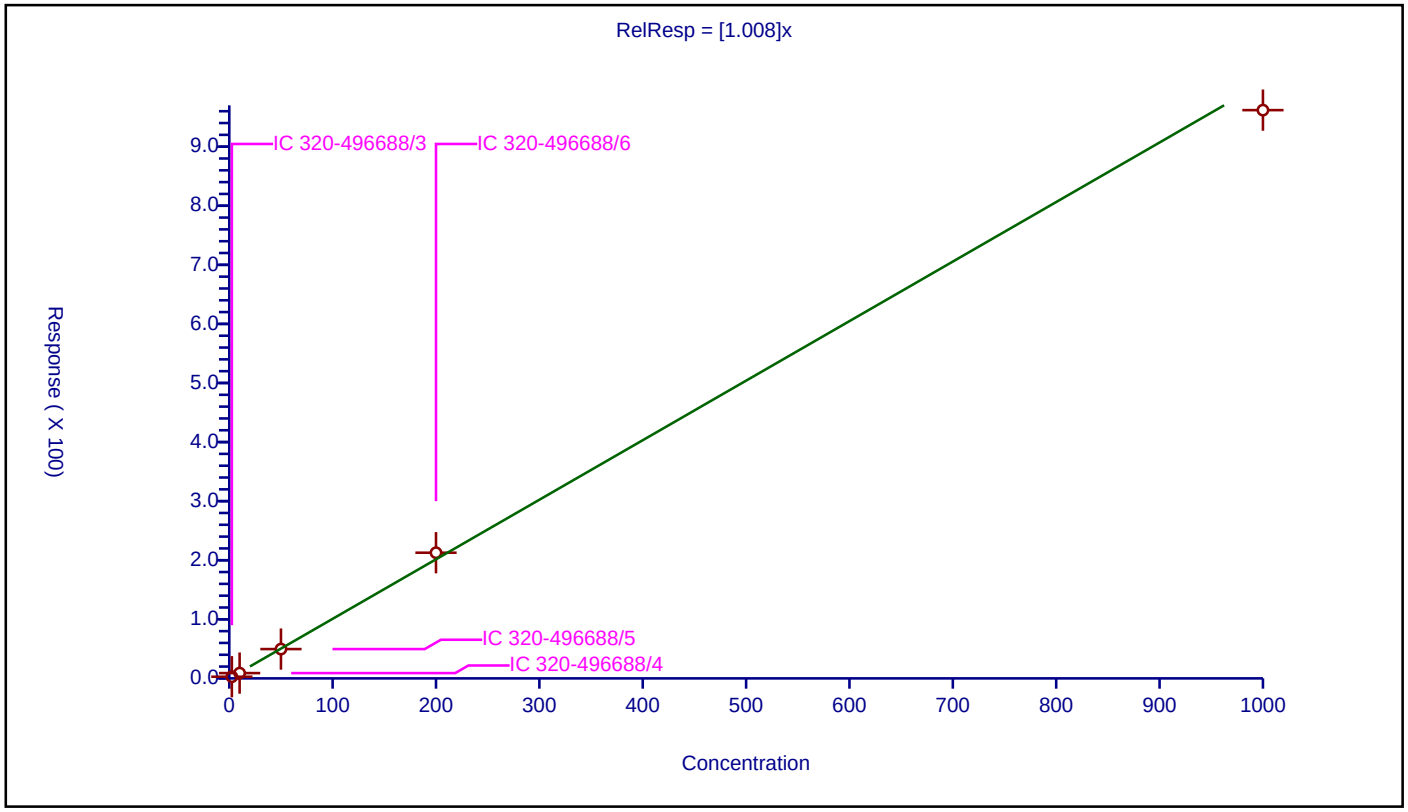

782975

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.075

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.566752	100.0	2138853.0	1.133505	Y
2	IC 320-496688/4	2.0	1.911764	100.0	1829253.0	0.955882	Y
3	IC 320-496688/5	10.0	10.998165	100.0	1800864.0	1.099817	Y
4	IC 320-496688/6	40.0	44.949952	100.0	1948011.0	1.123749	Y
5	IC 320-496688/7	200.0	212.755816	100.0	2014532.0	1.063779	Y

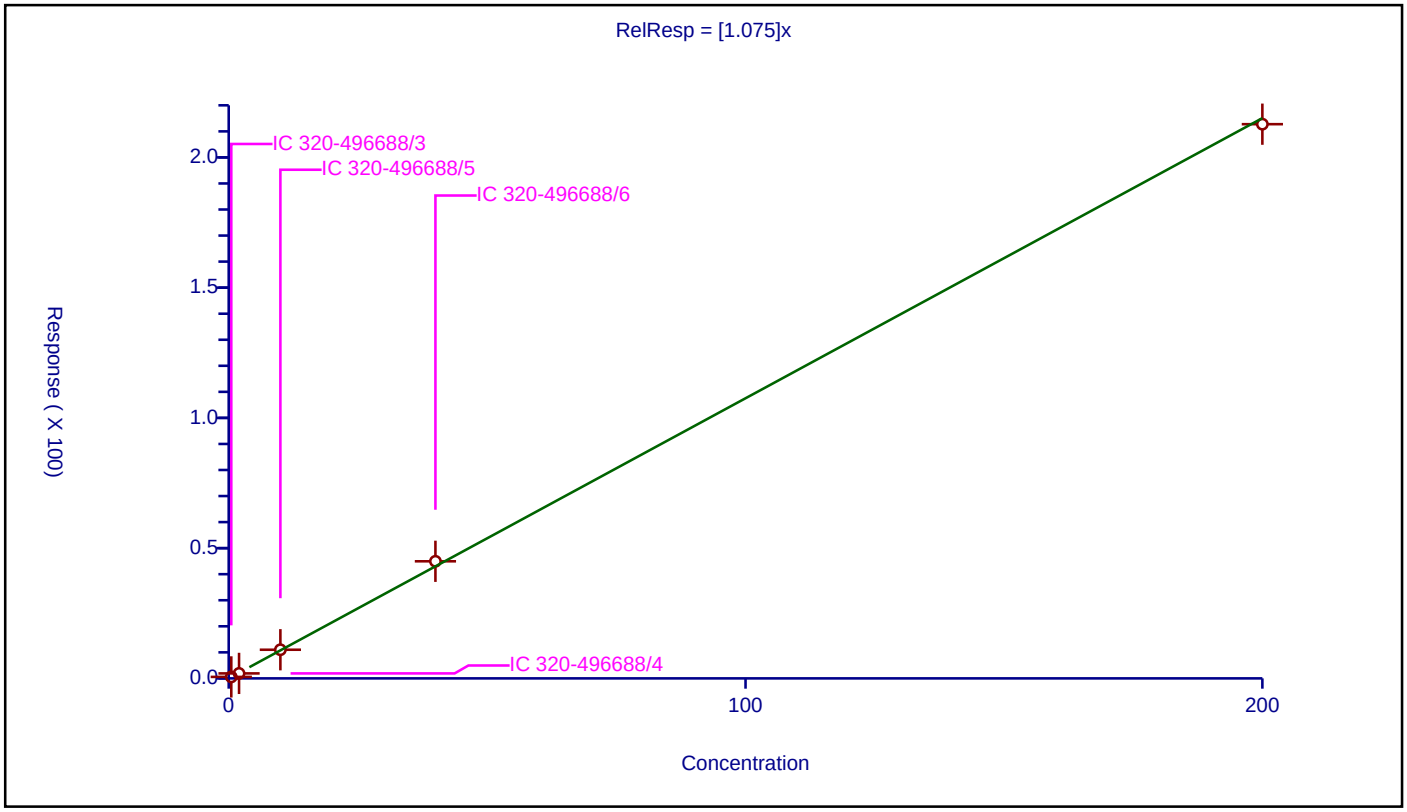

782976

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.08

Error Coefficients

Standard Error:	3140000
Relative Standard Error:	9.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.616764	100.0	3167014.0	1.233528	Y
2	IC 320-496688/4	2.0	1.926948	100.0	2644389.0	0.963474	Y
3	IC 320-496688/5	10.0	10.464342	100.0	2465726.0	1.046434	Y
4	IC 320-496688/6	40.0	44.869913	100.0	2839435.0	1.121748	Y
5	IC 320-496688/7	200.0	207.156116	100.0	2962515.0	1.035781	Y

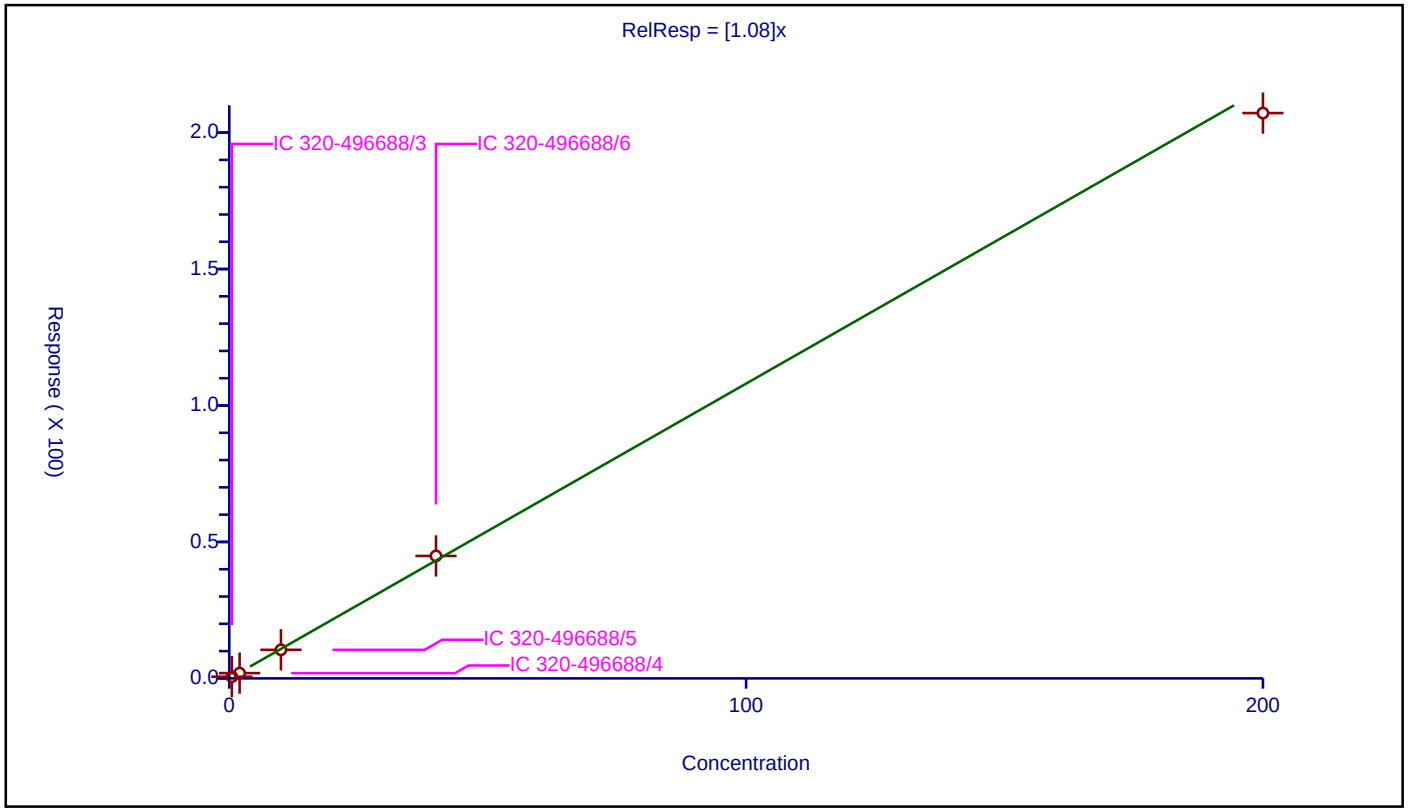

782977

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.482683	100.0	2334037.0	0.965366	Y
2	IC 320-496688/4	2.0	1.917995	100.0	2045939.0	0.958997	Y
3	IC 320-496688/5	10.0	10.721795	100.0	1900111.0	1.072179	Y
4	IC 320-496688/6	40.0	40.297989	100.0	2105852.0	1.00745	Y
5	IC 320-496688/7	200.0	207.496438	100.0	2066088.0	1.037482	Y

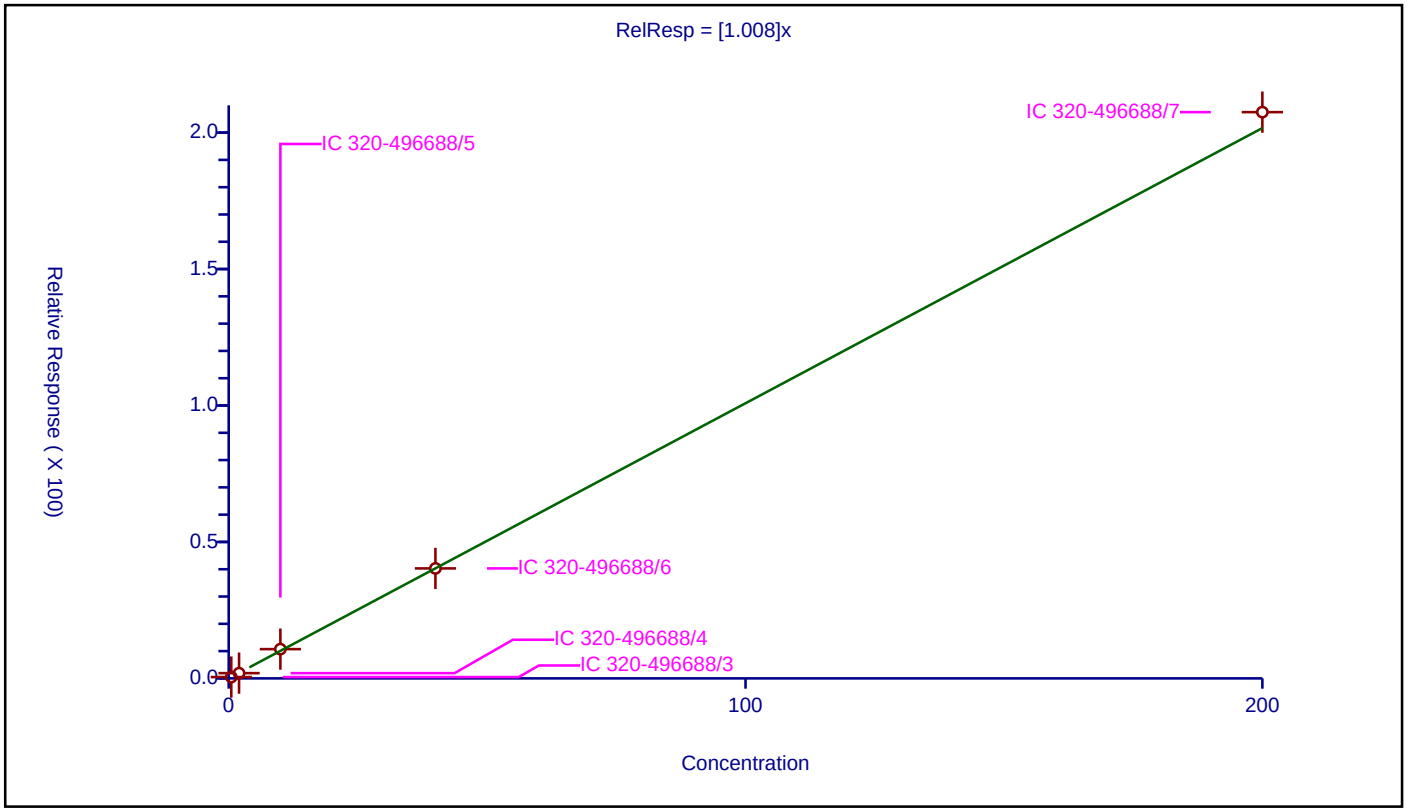

782978

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.062

Error Coefficients

Standard Error:	11700000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	5.664077	200.0	1823492.0	1.132815	Y
2	IC 320-496688/4	20.0	19.907928	200.0	1833139.0	0.995396	Y
3	IC 320-496688/5	100.0	108.699815	200.0	1676139.0	1.086998	Y
4	IC 320-496688/6	400.0	441.074631	200.0	2177938.0	1.102687	Y
5	IC 320-496688/7	2000.0	1984.090177	200.0	2298668.0	0.992045	Y

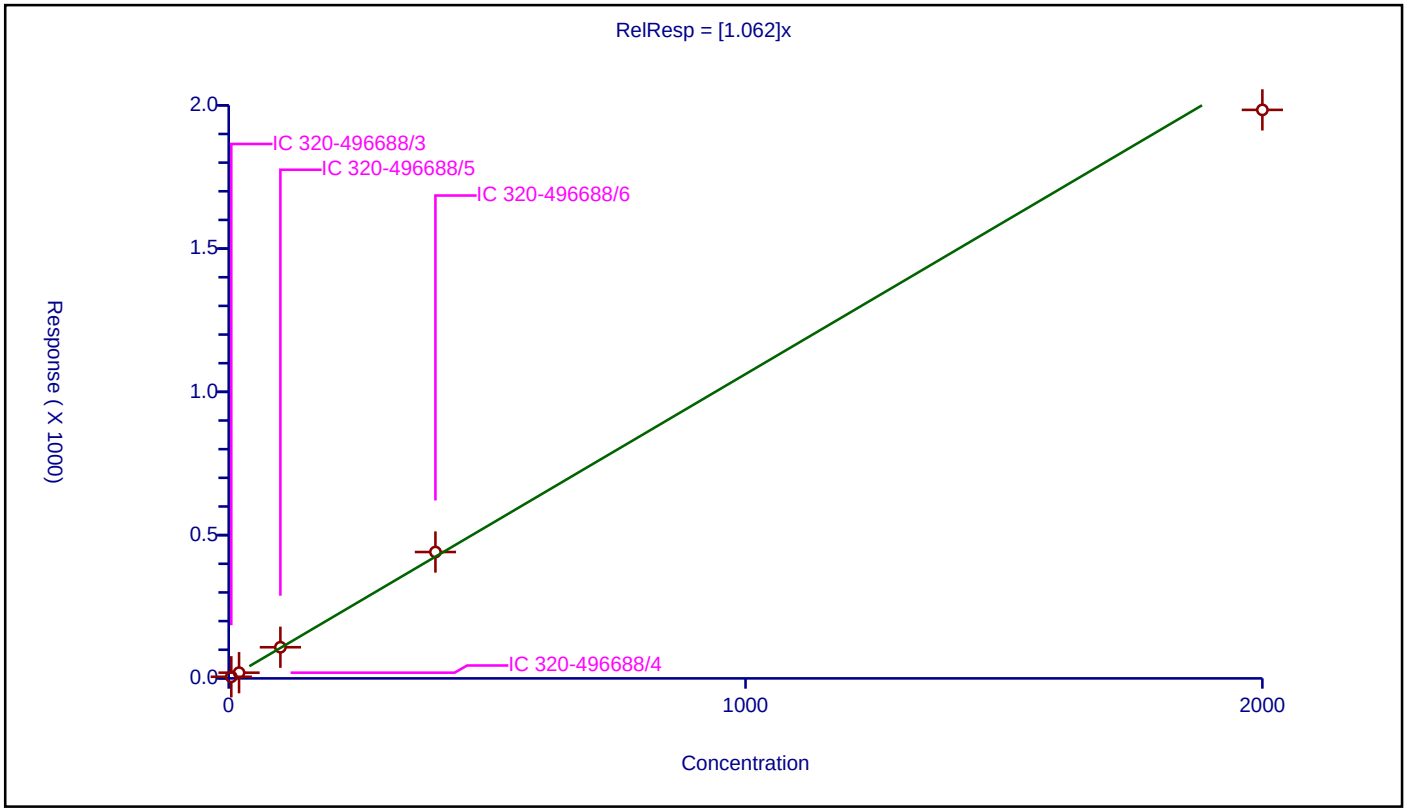

782979

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	15600000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	6.696054	200.0	1823492.0	1.339211	Y
2	IC 320-496688/4	20.0	23.726842	200.0	1833139.0	1.186342	Y
3	IC 320-496688/5	100.0	133.490122	200.0	1676139.0	1.334901	Y
4	IC 320-496688/6	400.0	558.573844	200.0	2177938.0	1.396435	Y
5	IC 320-496688/7	2000.0	2654.186163	200.0	2298668.0	1.327093	Y

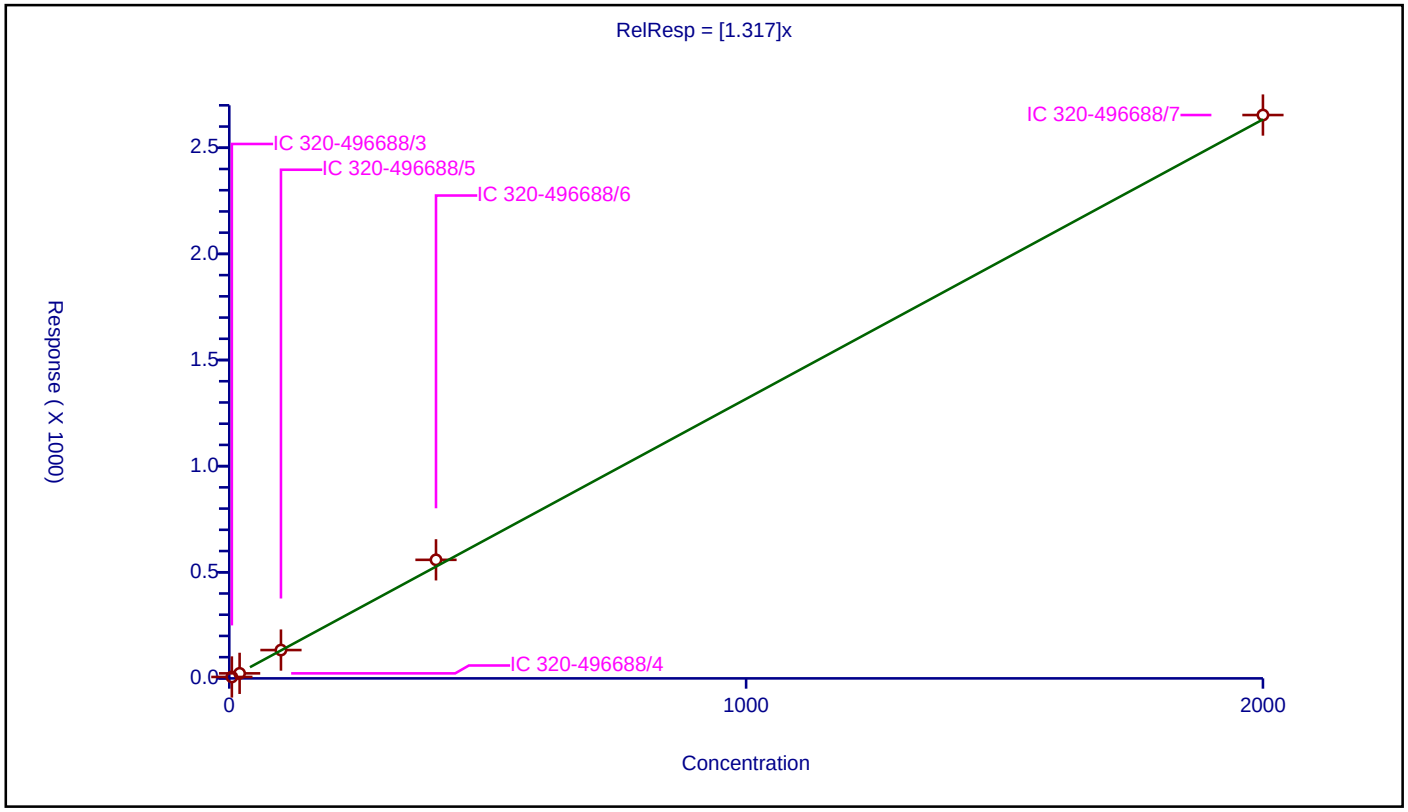

782980

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID (1): WDM 320-496688/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 06/08/2021 12:40

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	20.95	13

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d				
Injection Date:	08-Jun-2021 12:40:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 7095
H (Peak Height) = 55991

%R = 13 <= 25
Passed

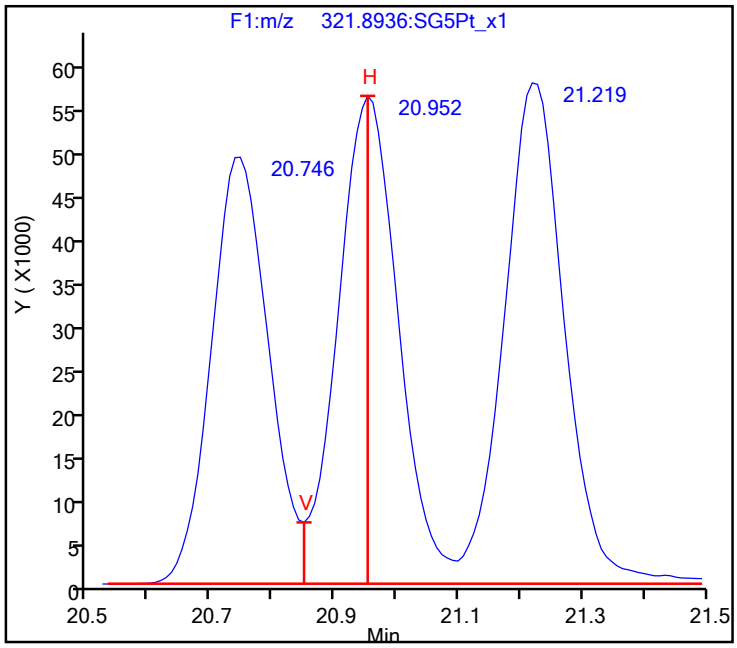

782982

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

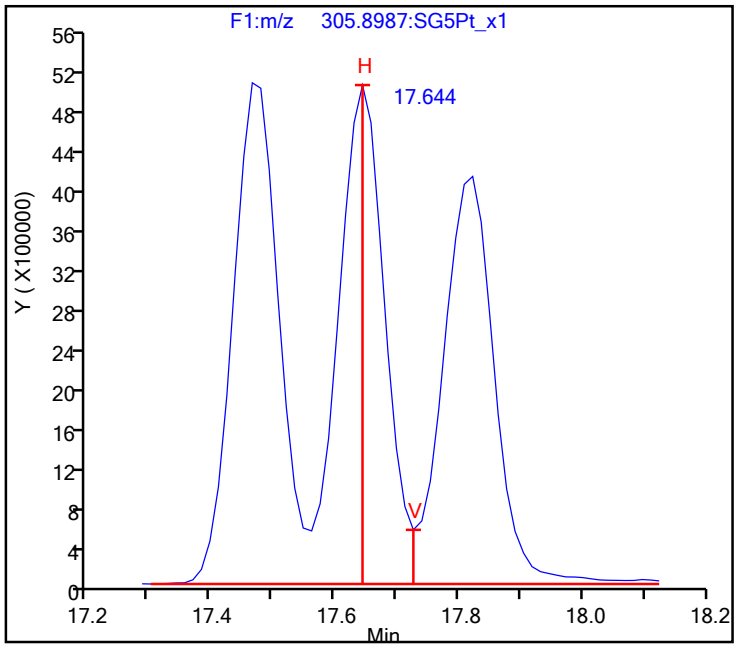

782984

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID (1): WDM 320-510264/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 07/26/2021 09:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.34	18

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d				
Injection Date:	26-Jul-2021 09:21:58	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 725696
H (Peak Height) = 4136533

%R = 18 <= 25
Passed

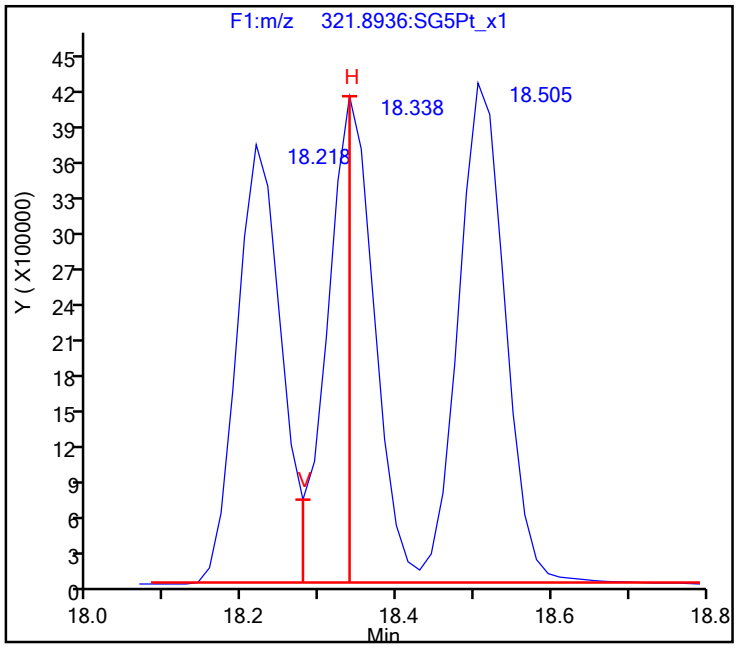

782986

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID (1): WDM 320-517196/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/17/2021 14:27

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.93	19

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d				
Injection Date:	17-Aug-2021 14:27:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 3883
H (Peak Height) = 20212

%R = 19 <= 25
Passed

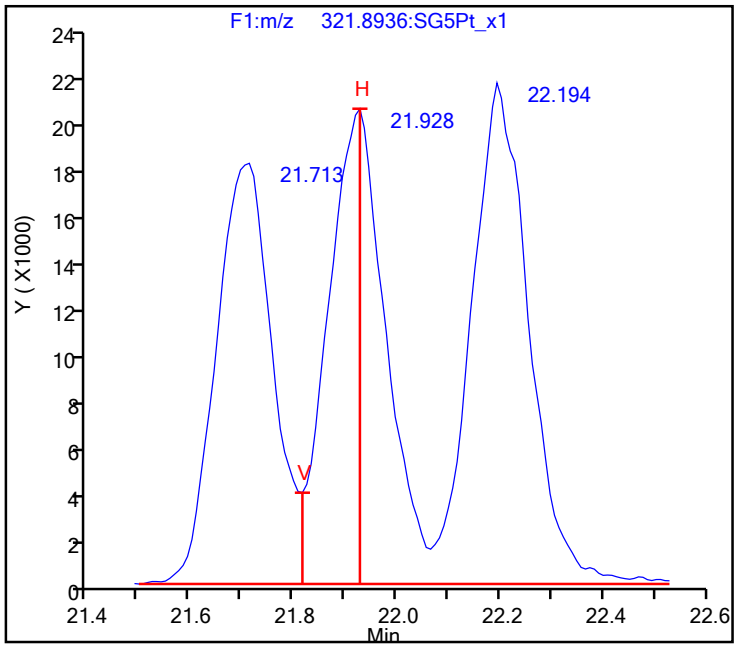

782988

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID (1): WDM 320-517281/16 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/18/2021 02:55

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.83	19

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d				
Injection Date:	18-Aug-2021 02:55:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 2249
H (Peak Height) = 11648

%R = 19 <= 25
Passed

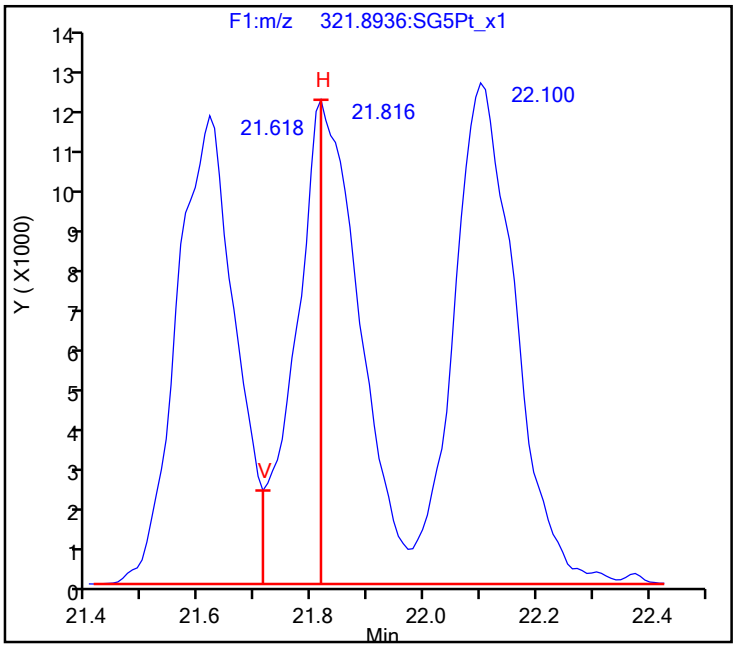

782990

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID (1): WDM 320-517461/30 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/18/2021 14:50

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.89	18

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d				
Injection Date:	18-Aug-2021 14:50:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 791
H (Peak Height) = 4354

%R = 18 <= 25
Passed

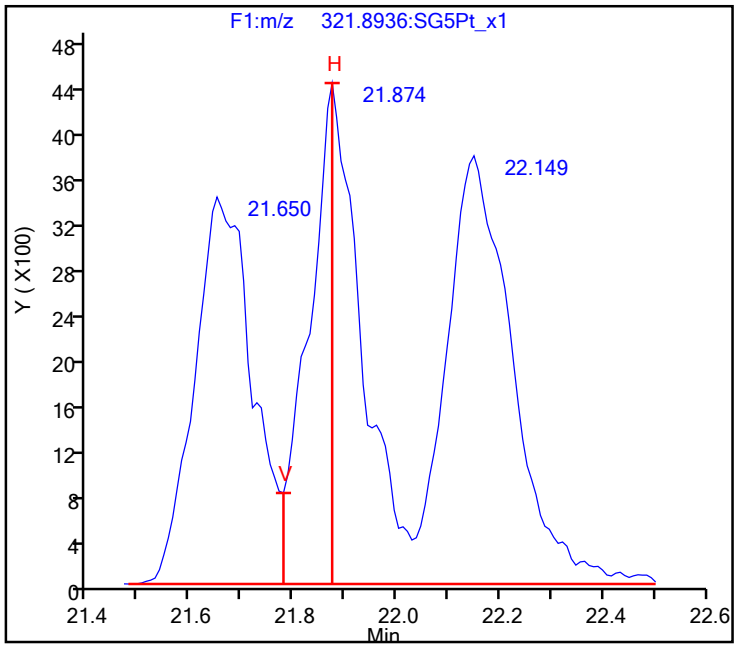

782992

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID (1): WDM 320-517729/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/18/2021 14:15

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.02	23

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d				
Injection Date:	18-Aug-2021 14:15:56	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1518972
H (Peak Height) = 6483954

%R = 23 <= 25
Passed

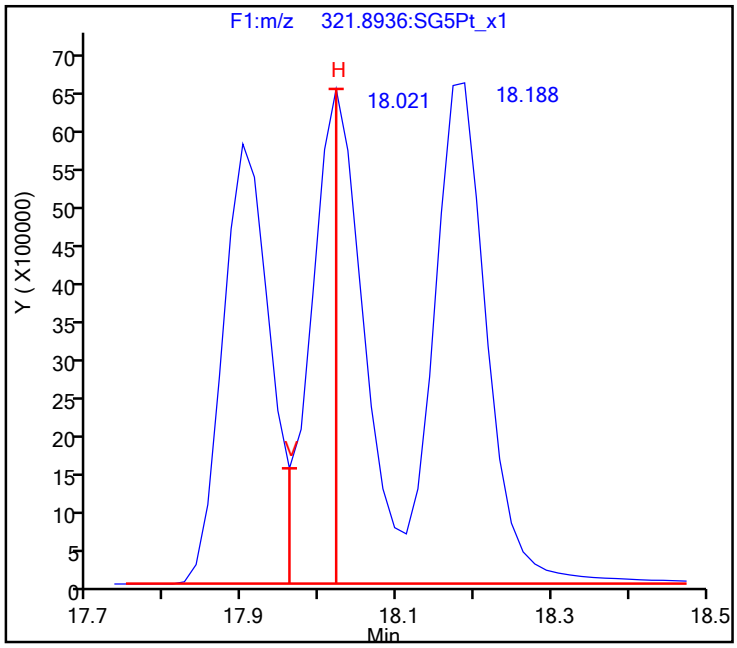

782994

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID (1): CPS 320-519744/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 12:59

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	14

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d				
Injection Date:	25-Aug-2021 12:59:07	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 447420
H (Peak Height) = 3303038

%R = 14 <= 25
Passed

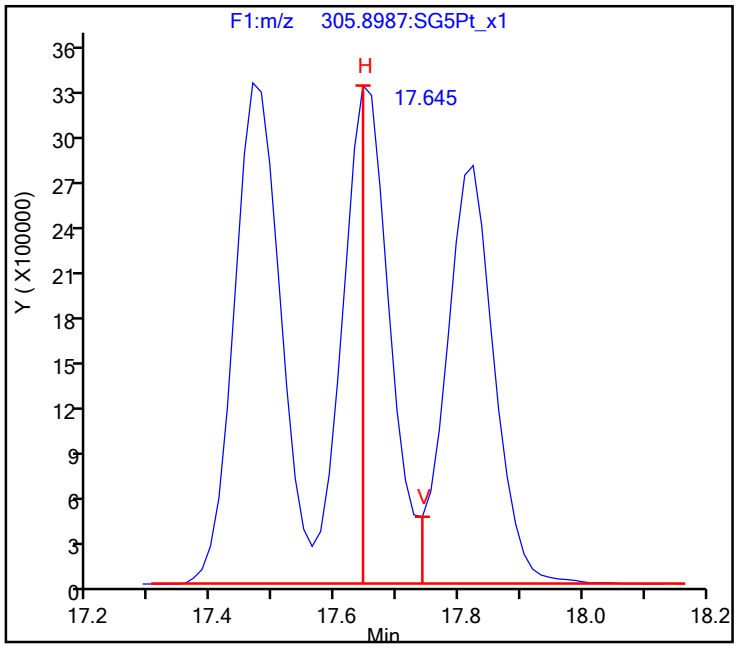

782996

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d				
Injection Date:	25-Aug-2021 12:59:07	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID (1): WDM 320-520325/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/26/2021 18:40

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	17.78	19

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d				
Injection Date:	26-Aug-2021 18:40:59	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	2	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1396089
H (Peak Height) = 7204079

%R = 19 <= 25
Passed

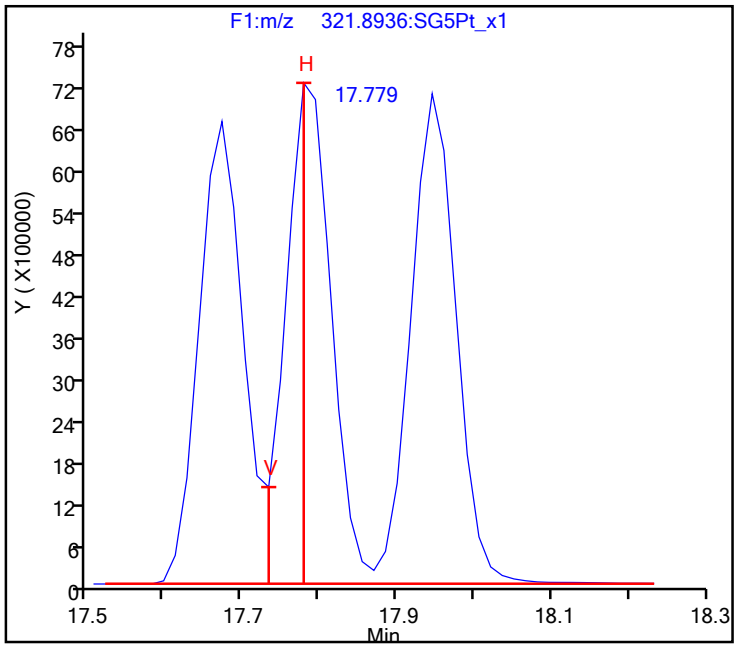

782999

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID: ICV 320-510264/9 Calibration Date: 07/26/2021 15:31

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 26JL2110D5_9.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.105		43.2	40.0	108	70-130
2,3,7,8-TCDD	AveID	1.254	1.380		44.0	40.0	110	70-130
1,2,3,7,8-PeCDF	AveID	1.061	1.081		204	200	102	70-130
2,3,4,7,8-PeCDF	AveID	1.018	1.151		226	200	113	70-130
1,2,3,7,8-PeCDD	AveID	1.048	1.044		199	200	100	70-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.128		208	200	104	70-130
1,2,3,6,7,8-HxCDF	AveID	1.126	1.227		218	200	109	70-130
2,3,4,6,7,8-HxCDF	AveID	1.168	1.283		220	200	110	70-130
1,2,3,4,7,8-HxCDD	AveID	1.064	1.151		216	200	108	70-130
1,2,3,6,7,8-HxCDD	AveID	1.000	1.082		216	200	108	70-130
1,2,3,7,8,9-HxCDD	AveID	1.133	1.182		209	200	104	70-130
1,2,3,7,8,9-HxCDF	AveID	1.166	1.200		206	200	103	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.576		219	200	109	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.167		213	200	107	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.373		209	200	104	70-130
OCDD	AveID	1.107	1.211		438	400	109	70-130
OCDF	AveID	1.438	1.574		438	400	109	70-130
13C-2,3,7,8-TCDF	Ave	1.625	1.611		99.2	100	99	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9123		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.236		102	100	102	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.300		105	100	105	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7764		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.089		101	100	101	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.093		96.9	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.036		97.4	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7216		98.4	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8697		98.8	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9447		97.6	100	98	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7492		96.9	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6354		98.2	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7065		101	100	101	77-129
13C-OCDD	Ave	0.4472	0.4464		200	200	100	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.177		42.5	40.0	106	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	55225241	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.598	88976883	0.79	1.6249	99.2	99.2	0.1479	0.1479	99.15	
2,3,7,8-TCDF	17.613	39324874	0.78	1.0239	43.2	43.2	0.0666	0.0666	108	
A Non-2,3,7,8-sub-TCDF	17.311	524958	0.77	1.0239	0.6411	0.5762	0.0666	0.3057		RQ
S Total TCDF					43.8	43.7	0.0666	0.0666		RQ
D 13C-2,3,7,8-TCDD	18.323	50383801	0.80	0.8993	101.4	101.4	0.1314	0.1314	101	
2,3,7,8-TCDD	18.338	27801852	0.78	1.2541	44.0	44.0	0.0443	0.0443	110	
$ 37Cl4-2,3,7,8-TCDD	18.338	26006351		1.1071	42.5	42.5	0.0388	0.0388	106	
A Non-2,3,7,8-sub-TCDD	17.772	551726	0.77	1.2541	0.8732	0.8732	0.0443	0.8732		
S Total TCDD					44.9	44.9	0.0443	0.0443		
D 13C-1,2,3,7,8-PeCDF	22.749	68252478	1.57	1.2101	102.1	102.1	0.2097	0.2097	102	
1,2,3,7,8-PeCDF	22.762	147560573	1.57	1.0611	203.7	203.7	0.7454	0.7454	102	
D 13C-2,3,4,7,8-PeCDF	24.126	71797373	1.60	1.2395	104.9	104.9	0.2047	0.2047	105	
2,3,4,7,8-PeCDF	24.153	165293469	1.59	1.0184	226.1	226.1	0.7930	0.7930	113	
A F1 PeCDFs	20.244						0.0162	0.0162		
A Non-2,3,7,8-sub-PeCDF	23.473	3443801	1.55	1.0398	4.730	4.730	0.7686	4.730		
S Total PeCDF					434.5	434.5	0.7692	0.7692		
D 13C-1,2,3,7,8-PeCDD	24.862	42878117	1.62	0.7612	102.0	102.0	0.1090	0.1090	102	
1,2,3,7,8-PeCDD	24.889	89555111	1.58	1.0484	199.2	199.2	0.2271	0.2271	99.61	
A Non-2,3,7,8-sub-PeCDD	23.744						0.2271	0.2271		
S Total PeCDD					199.2	199.2	0.2271	0.2271		
D 13C-1,2,3,4,7,8-HxCDF	30.836	62488487	0.52	1.0837	100.5	100.5	0.4386	0.4386	101	
1,2,3,4,7,8-HxCDF	30.849	141029922	1.22	1.0851	208.0	208.0	1.073	1.073	104	
D 13C-1,2,3,6,7,8-HxCDF	30.995	62719524	0.52	1.1279	96.9	96.9	0.4214	0.4214	96.91	
1,2,3,6,7,8-HxCDF	31.008	153925065	1.22	1.1260	218.0	218.0	1.035	1.035	109	
D 13C-2,3,4,6,7,8-HxCDF	31.754	59440166	0.52	1.0637	97.4	97.4	0.4468	0.4468	97.39	
2,3,4,6,7,8-HxCDF	31.767	152499923	1.22	1.1675	219.7	219.7	0.8510	0.8510	110	
D 13C-1,2,3,7,8,9-HxCDF	32.513	54205090	0.51	0.9676	97.6	97.6	0.4912	0.4912	97.64	
1,2,3,7,8,9-HxCDF	32.526	130040433	1.23	1.1664	205.7	205.7	0.8755	0.8755	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
A Non-2,3,7,8-sub-HxCDF	30.542						0.9509	0.9509		
S Total HxCDF					851.4	851.4	0.9587	0.9587		
* 13C-1,2,3,7,8,9-HxCDD	32.340	57376962	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	41405543	1.26	0.7334	98.4	98.4	0.3599	0.3599	98.39	
1,2,3,4,7,8-HxCDD	31.940	95311816	1.31	1.0640	216.3	216.3	0.7396	0.7396	108	
D 13C-1,2,3,6,7,8-HxCDD	32.020	49899921	1.25	0.8802	98.8	98.8	0.2999	0.2999	98.81	
1,2,3,6,7,8-HxCDD	32.034	107959577	1.21	1.0001	216.3	216.3	0.7456	0.7456	108	
1,2,3,7,8,9-HxCDD	32.340	107964188	1.26	1.1325	208.8	208.8	0.6762	0.6762	104	
A Non-2,3,7,8-sub-HxCDD	31.215						0.7187	0.7187		
S Total HxCDD					641.5	641.5	0.7205	0.7205		
1,2,3,4,6,7,8-HpCDF	33.912	135529943	1.05	1.4413	218.8	218.8	2.088	2.088	109	
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	42985413	0.44	0.7730	96.9	96.9	0.9749	0.9749	96.91	
D 13C-1,2,3,4,7,8,9-HpCDF	35.006	40537577	0.44	0.7008	100.8	100.8	1.075	1.075	101	
1,2,3,4,7,8,9-HpCDF	35.018	111348980	1.06	1.3174	208.5	208.5	2.580	2.580	104	
A Non-2,3,7,8-sub-HpCDF	34.458						2.314	2.314		
S Total HpCDF					427.3	427.3	2.334	2.334		
D 13C-1,2,3,4,6,7,8-HpCDD	34.702	36455330	1.02	0.6472	98.2	98.2	0.5132	0.5132	98.17	
1,2,3,4,6,7,8-HpCDD	34.714	85115851	1.05	1.0943	213.4	213.4	1.044	1.044	107	
A Non-2,3,7,8-sub-HpCDD	33.504						1.044	1.044		
S Total HpCDD					213.4	213.4	1.044	1.044		
D 13C-OCDD	37.082	51228940	0.89	0.4472	199.7	199.7	0.2232	0.2232	99.84	
OCDF	37.189	161294219	0.91	1.4382	437.9	437.9	0.4409	0.4409	109	
OCDD	37.094	124067491	0.90	1.1070	437.5	437.5	0.5859	0.5859	109	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.127	18.142	-1		24811260	6334063	3297	8242	1921		
333.9339	18.127	18.142	-1		30413981	7612051	3296	8240	2309	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	0.971	39276583	9941961	7868	19670	1264		
317.9389	17.598	17.598	0	0.971	49700300	12596795	5536	13840	2275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.613	17.628	-1	1.001	17265923	4373947	2358	5895	1855		
305.8987	17.613	17.628	-1	1.001	22058951	5573170	3788	9470	1471	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.933	17.311	-23	0.962	161517	37808	2358	5895	16		
	Empc Correction				121157	34090	2358	5895	14		
305.8987	16.933	17.311	-23	0.962	157347	44274	3788	9470	12	1.03(0.65-0.89)	
303.9016	17.235	17.311	-5	0.979	125955	28258	2358	5895	12		
	Empc Correction				107214	28155	2358	5895	12		
305.8987	17.220	17.311	-5	0.979	139240	36566	3788	9470	10	0.90(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.011	22418240	5434734	3297	8242	1648		
333.9339	18.323	18.323	0	1.011	27965561	6697610	3296	8240	2032	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.338	0	1.001	12170563	2933733	1303	3257	2252		
321.8936	18.338	18.338	0	1.001	15631289	3775919	1394	3485	2709	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.012	26006351	6295077	2398	5995	2625		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											
319.8965	18.233	17.772	28	0.995	239239	60004	1303	3257	46		
321.8936	18.233	17.772	28	0.995	312487	80578	1394	3485	58	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.749	0	1.255	41668599	7333690	8485	21212	864		
353.8970	22.749	22.749	0	1.255	26583879	4652625	5670	14175	821	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.762	22.776	-1	1.001	90206138	15696498	23147	57867	678		
341.8567	22.762	22.776	-1	1.001	57354435	10012296	14777	36942	678	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.126	0	1.331	44217600	7271382	8485	21212	857		
353.8970	24.126	24.126	0	1.331	27579773	4468756	5670	14175	788	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.153	0	1.001	101392394	16526277	23147	57867	714		
341.8567	24.153	24.153	0	1.001	63901075	10428415	14777	36942	706	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.244						338	845			
341.8567	20.244						462	1155			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.308	23.473	-10	1.025	2092429	352488	23147	57867	15		
341.8567	23.308	23.473	-10	1.025	1351372	223195	14777	36942	15	1.55(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.862	0	1.372	26514155	4045355	2631	6577	1538		
369.8919	24.862	24.862	0	1.372	16363962	2537743	2000	5000	1269	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.889	0	1.001	54803563	8416527	3860	9650	2180		
357.8516	24.889	24.889	0	1.001	34751548	5423049	2410	6025	2250	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.744						3860	9650			
357.8516	23.744						2410	6025			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.836	30.835	0	0.953	21423741	4602993	10138	25345	454		
385.8610	30.836	30.835	0	0.953	41064746	8805011	18904	47260	466	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.862	-1	1.000	77446041	17056861	34028	85070	501		
375.8178	30.849	30.862	-1	1.000	63583881	14029731	28421	71052	494	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.008	-1	0.958	21527343	4645676	10138	25345	458		
385.8610	30.995	31.008	-1	0.958	41192181	8744916	18904	47260	463	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.008	31.021	-1	1.000	84458486	18178004	34028	85070	534		
375.8178	31.008	31.021	-1	1.000	69466579	15063201	28421	71052	530	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.754	0	0.982	20418672	5425134	10138	25345	535		
385.8610	31.754	31.754	0	0.982	39021494	10287607	18904	47260	544	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.767	0	1.000	83657687	22340712	34028	85070	657		
375.8178	31.767	31.767	0	1.000	68842236	18269489	28421	71052	643	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.513	32.526	-1	1.005	18351639	5227320	10138	25345	516		
385.8610	32.513	32.526	-1	1.005	35853451	10061715	18904	47260	532	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.539	-1	1.000	71665418	20282625	34028	85070	596		
375.8178	32.526	32.539	-1	1.000	58375015	16239209	28421	71052	571	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.542						34028	85070			
375.8178	30.542						28421	71052			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.340	32.339	0		32156760	8544429	8352	20880	1023		
403.8529	32.326	32.339	-1		25220202	6731682	7778	19445	865	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.927	0	0.987	23052563	6987052	8352	20880	837		
403.8529	31.927	31.927	0	0.987	18352980	5468630	7778	19445	703	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.940	0	1.000	54057818	15589077	22398	55995	696		
391.8127	31.940	31.940	0	1.000	41253998	12285721	16811	42027	731	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.020	32.033	-1	0.990	27736555	7273068	8352	20880	871		
403.8529	32.020	32.033	-1	0.990	22163366	5871752	7778	19445	755	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.034	32.047	-1	1.000	59116629	16185483	22398	55995	723		
391.8127	32.034	32.047	-1	1.000	48842948	13061351	16811	42027	777	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.340	32.353	-1	1.013	60106510	15800454	22398	55995	705		
391.8127	32.340	32.353	-1	1.013	47857678	12979231	16811	42027	772	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	31.215						22398	55995			
391.8127	31.215						16811	42027			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.912	33.911	0	1.000	69518297	21985720	82461	206152	267		
409.7789	33.912	33.911	0	1.000	66011646	21358881	78734	196835	271	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.912	0	1.049	13138473	4149229	14216	35540	292		
419.8220	33.900	33.912	-1	1.048	29846940	9243997	31835	79587	290	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.006	35.005	0	1.082	12375038	3705586	14216	35540	261		
419.8220	35.006	35.005	0	1.082	28162539	8151296	31835	79587	256	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.018	35.005	1	1.000	57298984	16523888	82461	206152	200		
409.7789	35.006	35.005	0	1.000	54049996	15559126	78734	196835	198	1.06(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						82461	206152			
409.7789	34.458						78734	196835			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.702	34.714	-1	1.073	18400619	5331850	10315	25787	517		
437.8140	34.702	34.714	-1	1.073	18054711	5313047	9982	24955	532	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.714	0	1.000	43603241	12970820	24860	62150	522		
425.7737	34.714	34.714	0	1.000	41512610	12528364	23796	59490	526	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						24860	62150			
425.7737	33.504						23796	59490			
13C-OCDD											
469.7779	37.082	37.093	-1	1.147	24118371	6015882	2552	6380	2357		
471.7750	37.082	37.093	-1	1.147	27110569	6692443	3547	8867	1887	0.89(0.76-1.02)	
OCDF											
441.7428	37.189	37.201	-1	1.003	76746145	20468133	7616	19040	2688		
443.7399	37.189	37.201	-1	1.003	84548074	22394214	8501	21252	2634	0.91(0.76-1.02)	
OCDD											
457.7377	37.094	37.105	-1	1.000	58682484	14688537	7599	18997	1933		
459.7348	37.094	37.105	-1	1.000	65385007	16510536	8885	22212	1858	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	88976883	22538756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	88976883	22538756

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.933	161517	37808	157347	44274	0.3500	1.03	RQ
16.933	121157	34090	157347	44274	0.3057		Empc Correction
17.235	125955	28258	139240	36566	0.2911	0.90	RnQ
17.235	107214	28155	139240	36566	0.2705		Empc Correction
Signal Totals:							
	228371	62245	296587	80840			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	584059	146906				0.97	RQ
	524958	143085					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6411 = (584059 * 100.000) / (88976883 * 1.024)
Empc Amount: 0.5762 = (524958 * 100.000) / (88976883 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50383801	12132344

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50383801	12132344

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.233	239239	60004	312487	80578	0.8732	0.77	
Signal Totals:							
	239239	60004	312487	80578			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	551726	140582				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8732 = (551726 * 100.000) / (50383801 * 1.254)

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68252478	11986315
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71797373	11740138

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70024925	11863226

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
23.308	2092429	352488	1351372	223195	4.73	1.55	
Signal Totals:							
	2092429	352488	1351372	223195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3443801	575683				1.55	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.730 = (3443801 * 100.000) / (70024925 * 1.040)

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

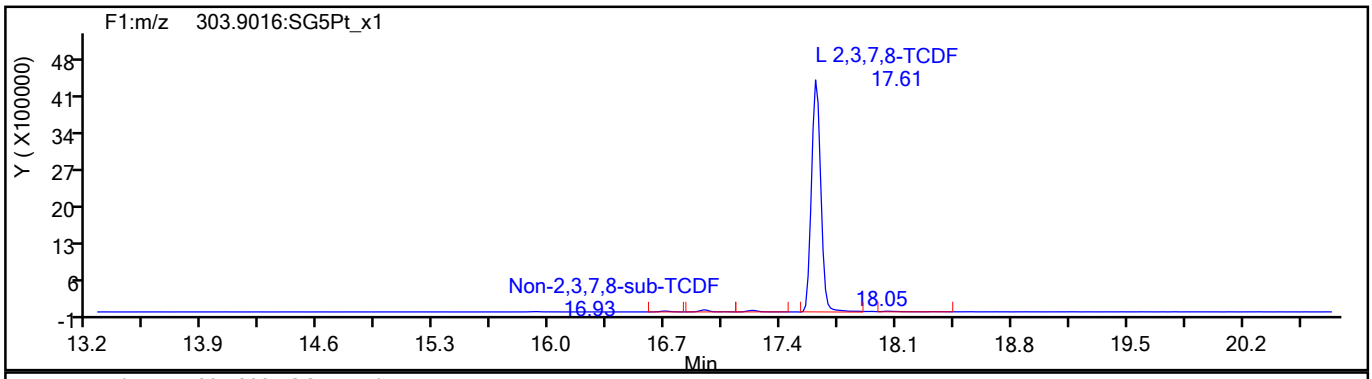

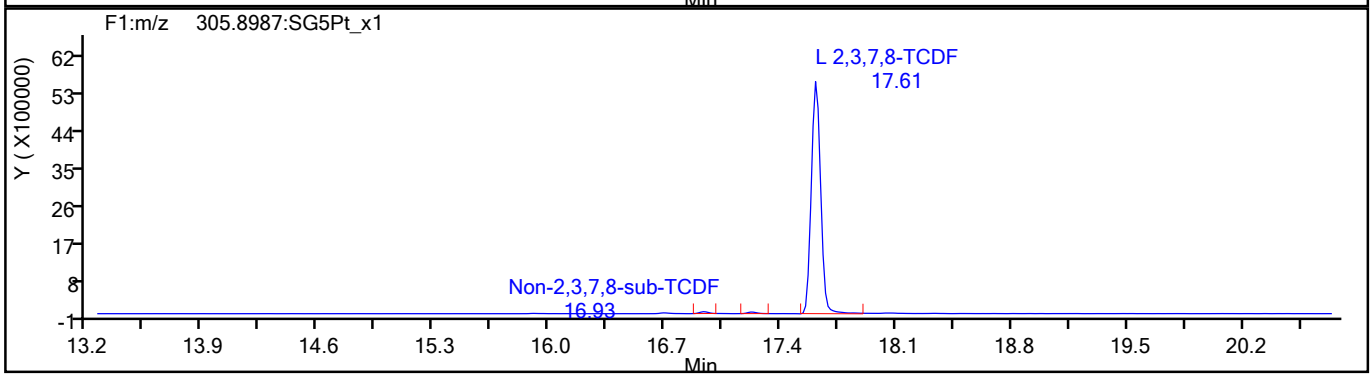

TCDF Standards

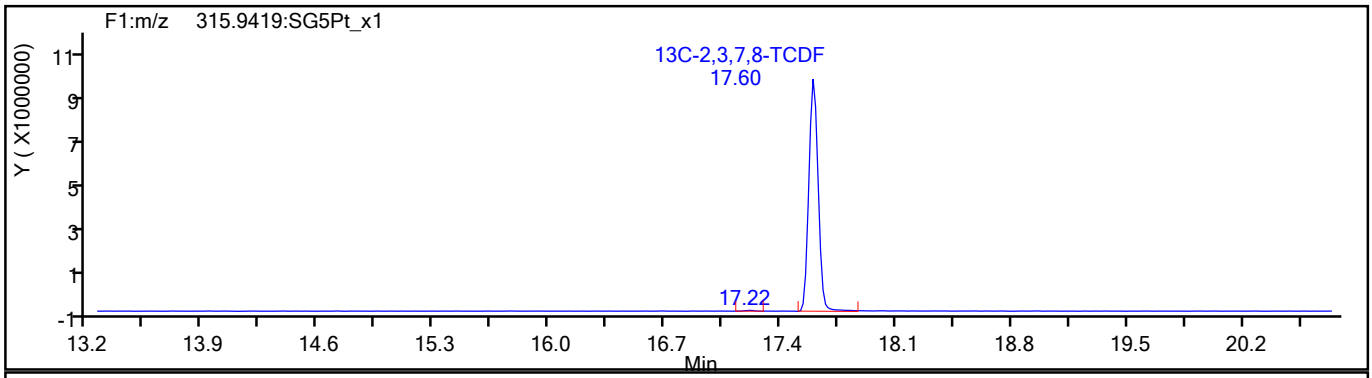

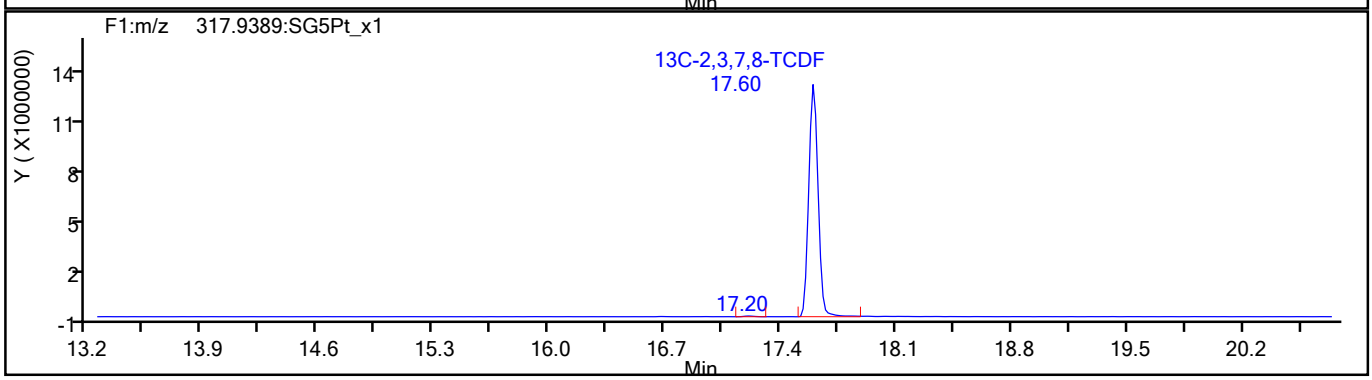

783010

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

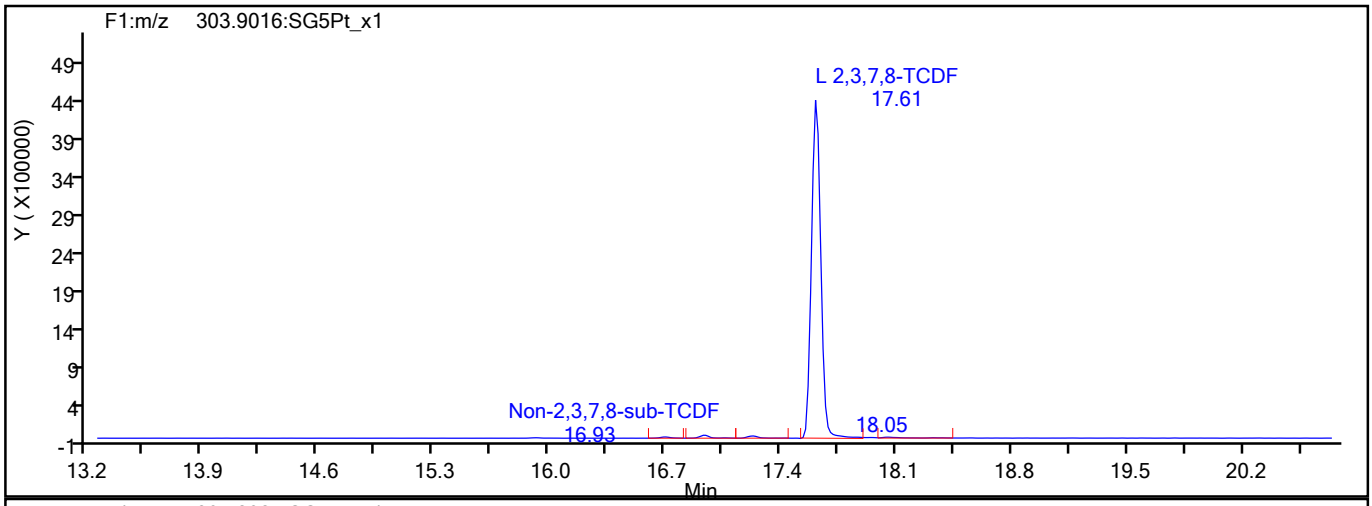

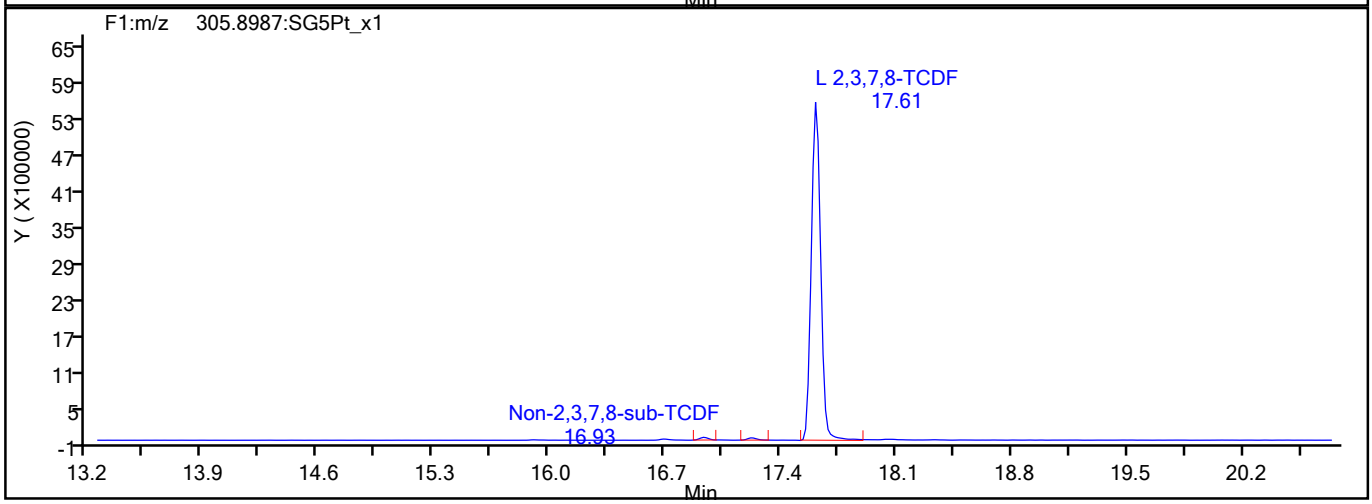

TCDF Interference Mass

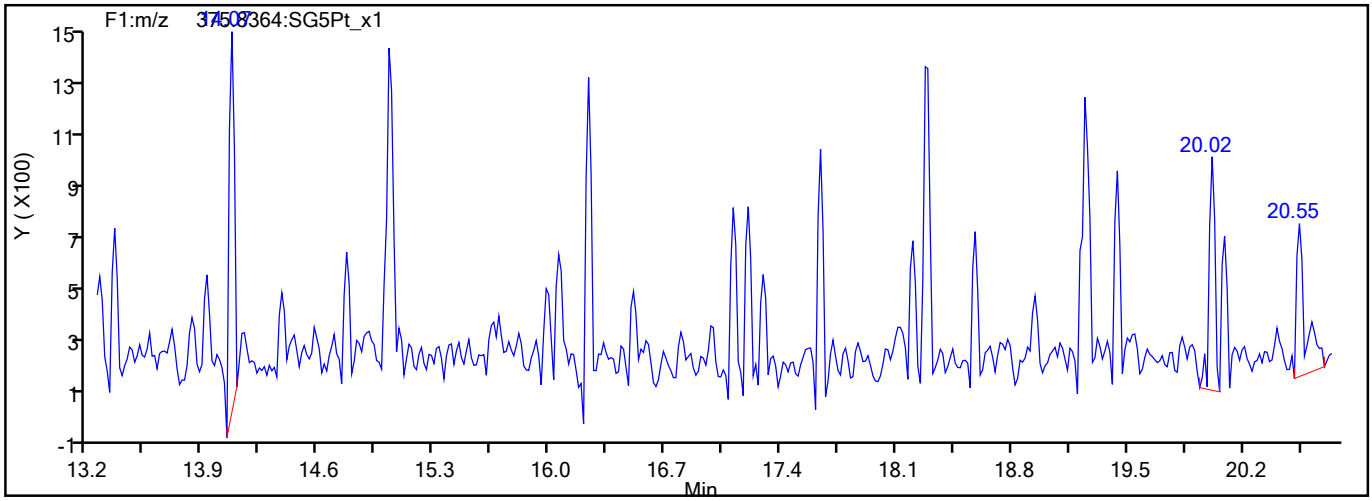

783011

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

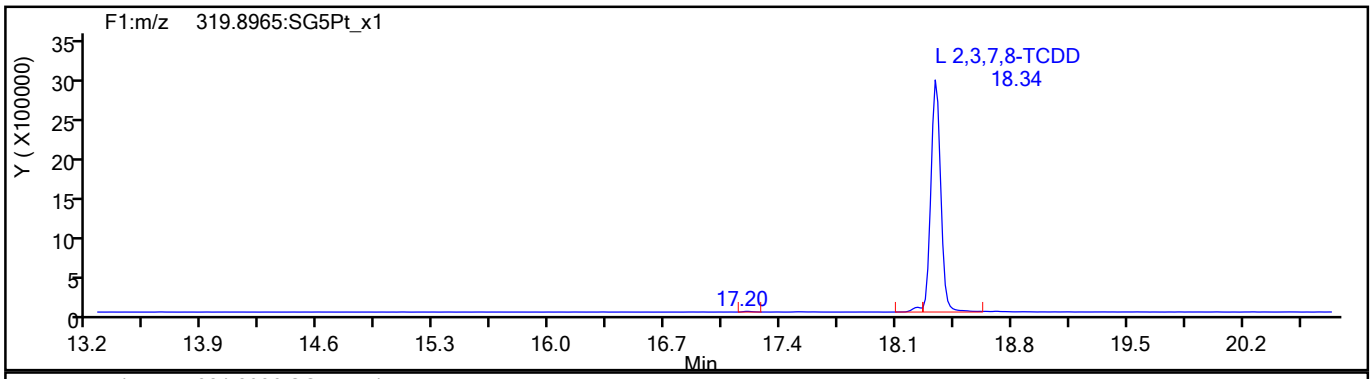

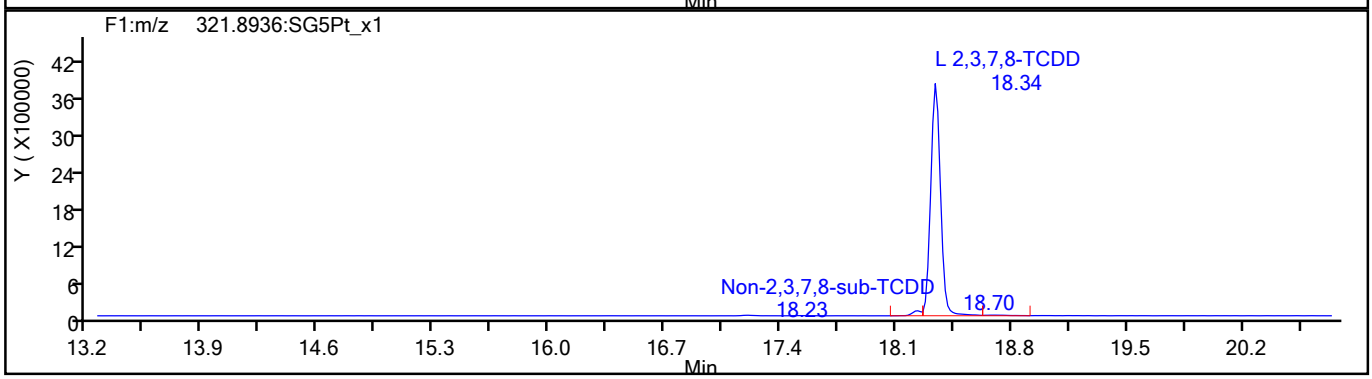

TCDD Standards

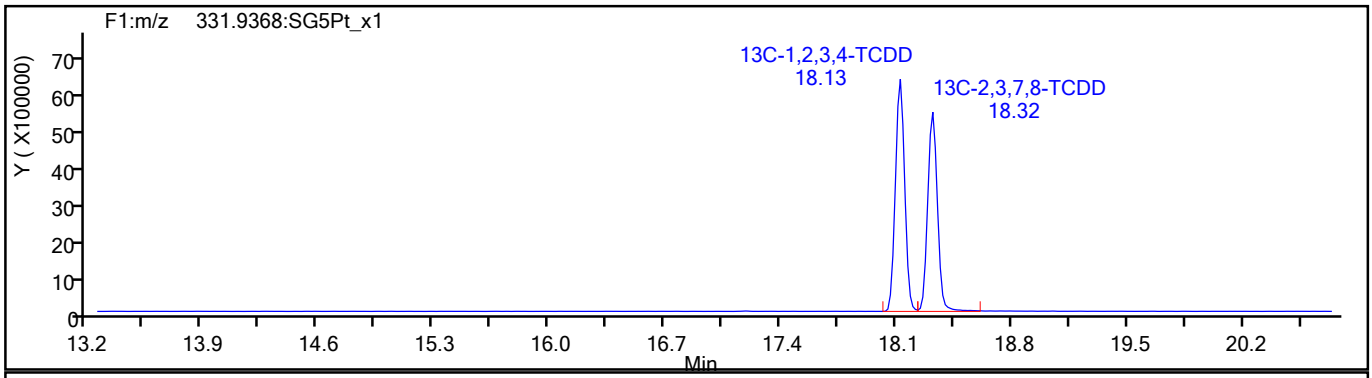

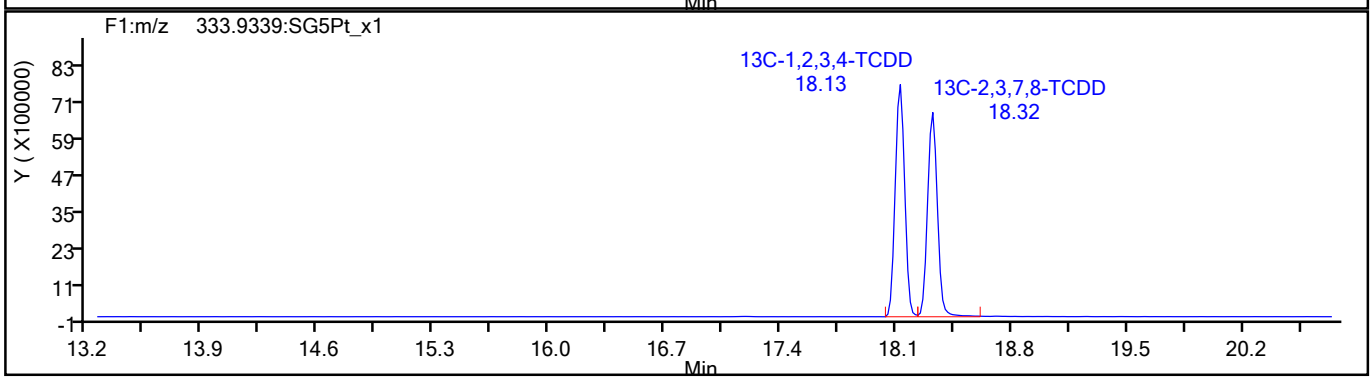

783012

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

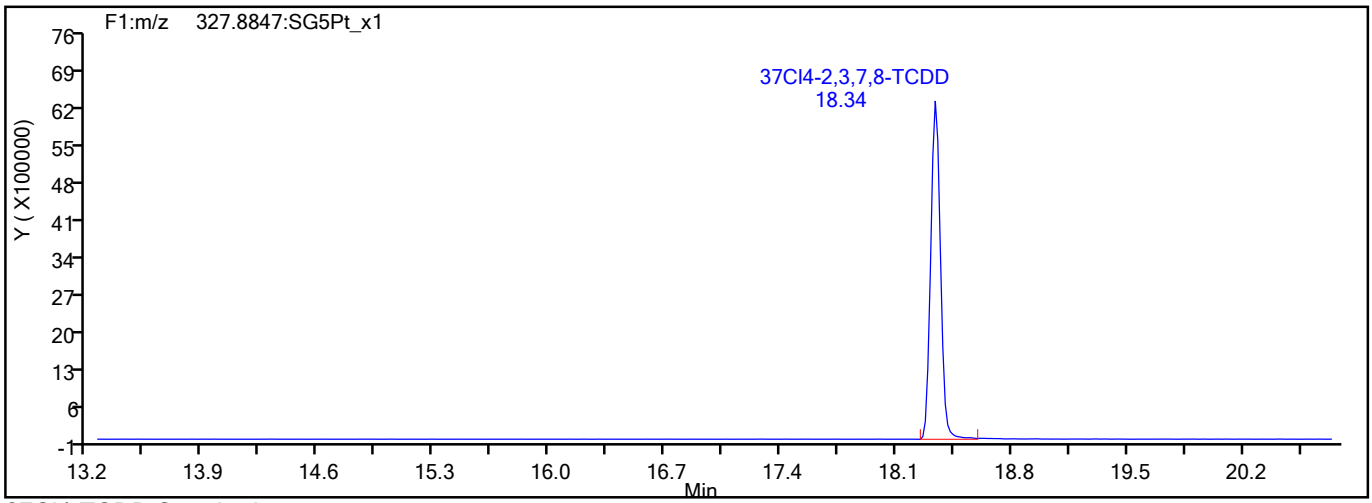

37Cl4-TCDD Standards

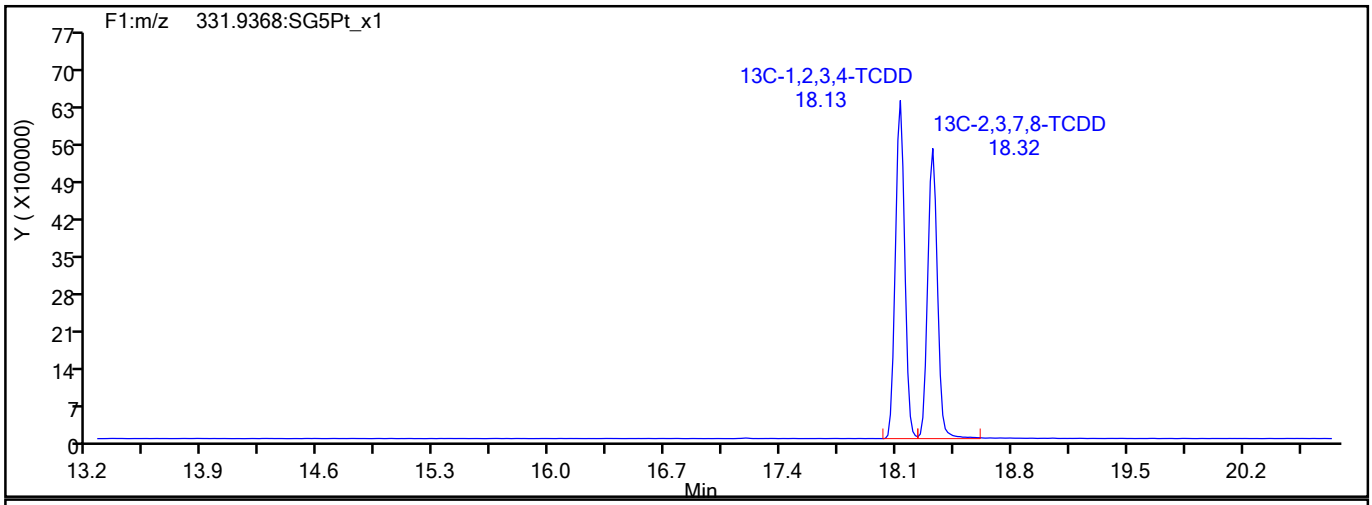

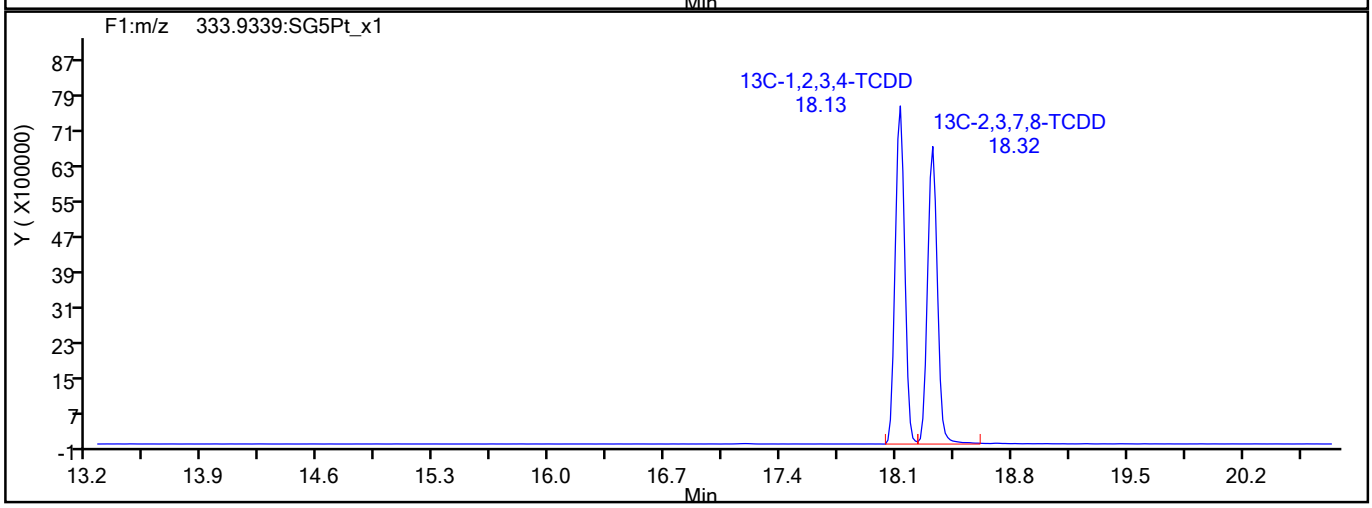

783013

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

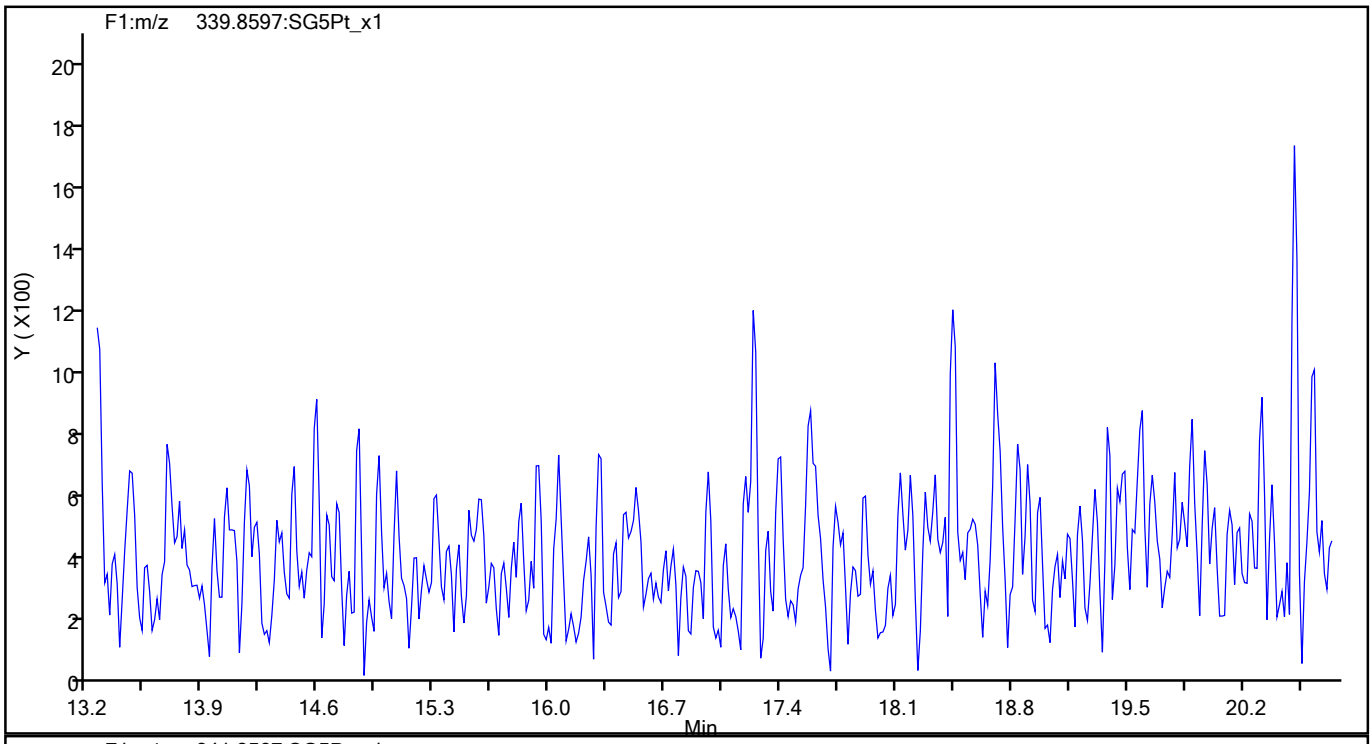

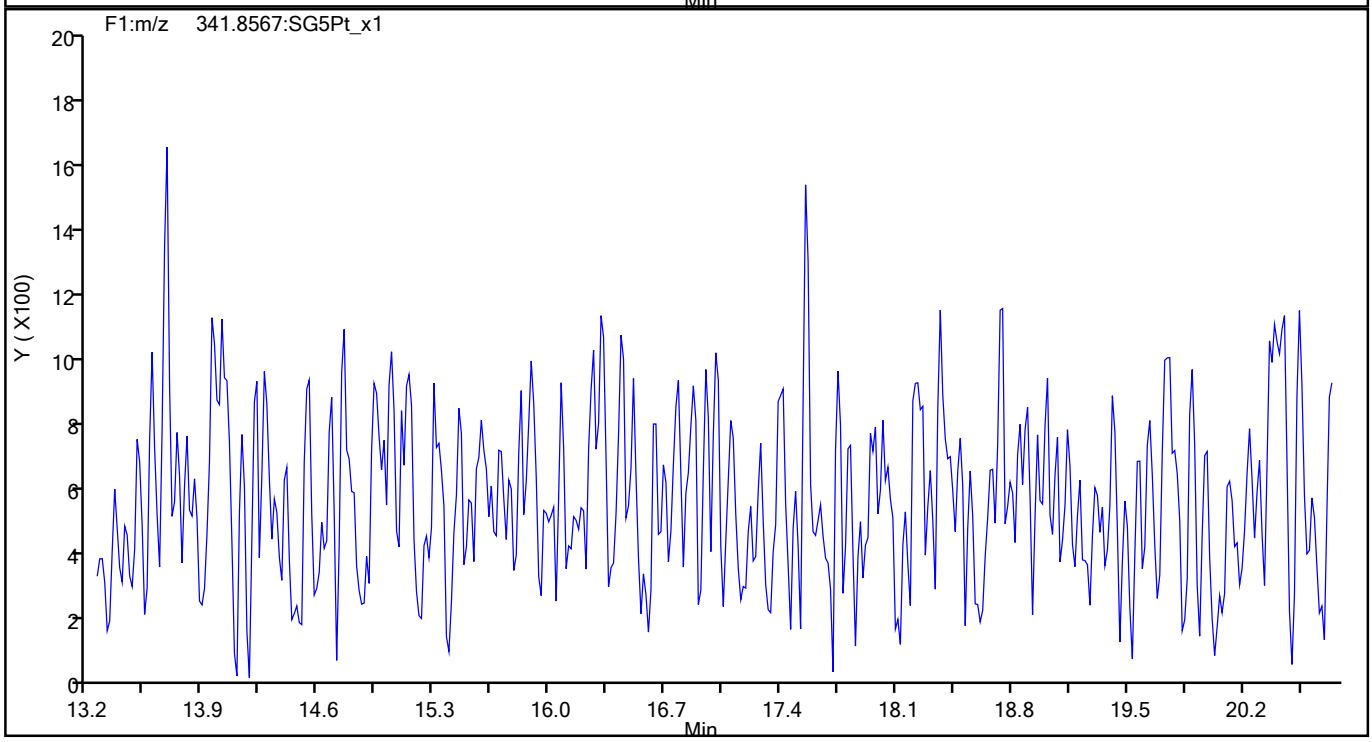

783014

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

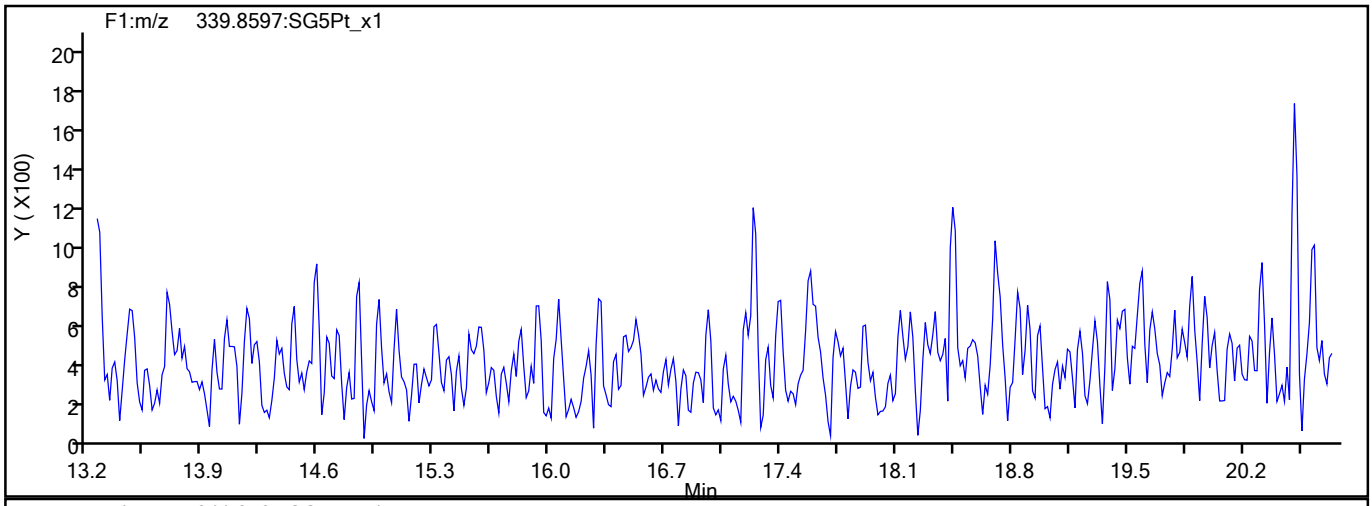

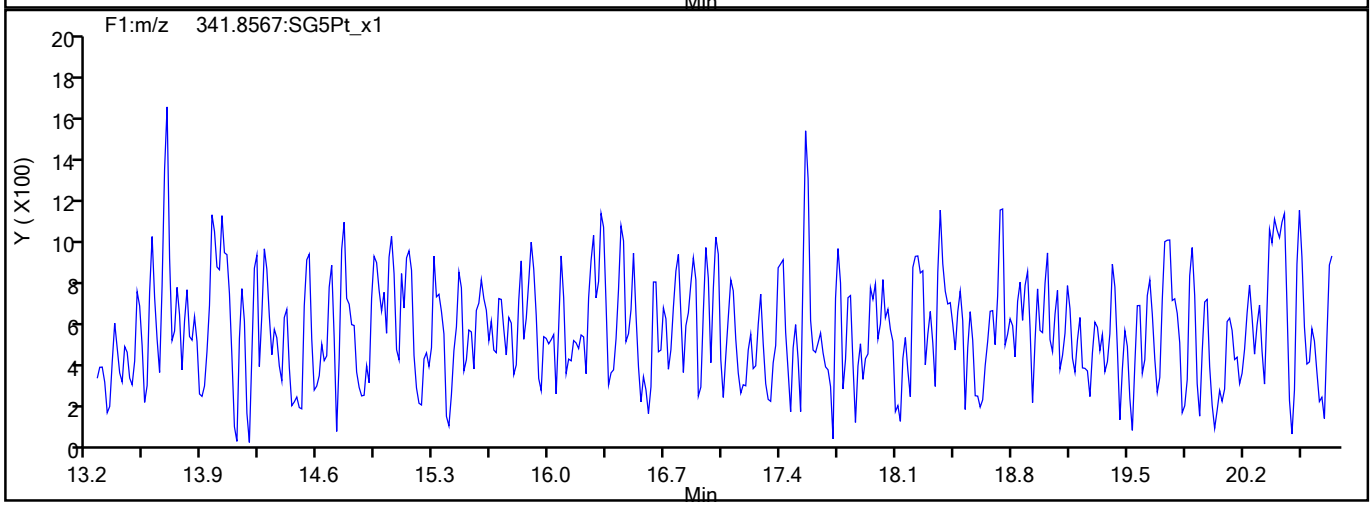

F1 PeCDFs Interference Mass

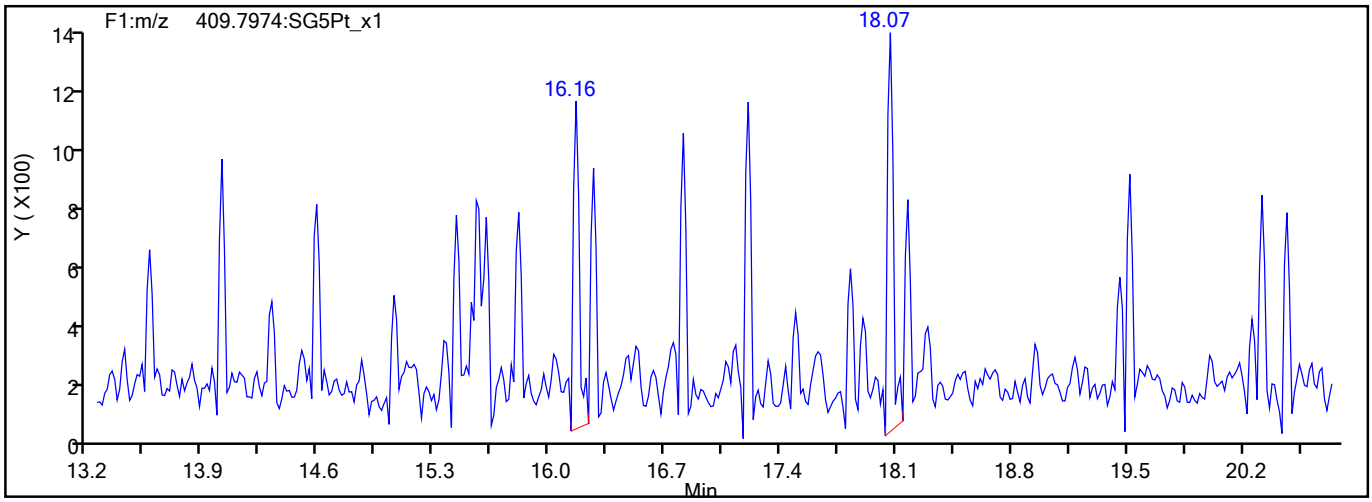

783015

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

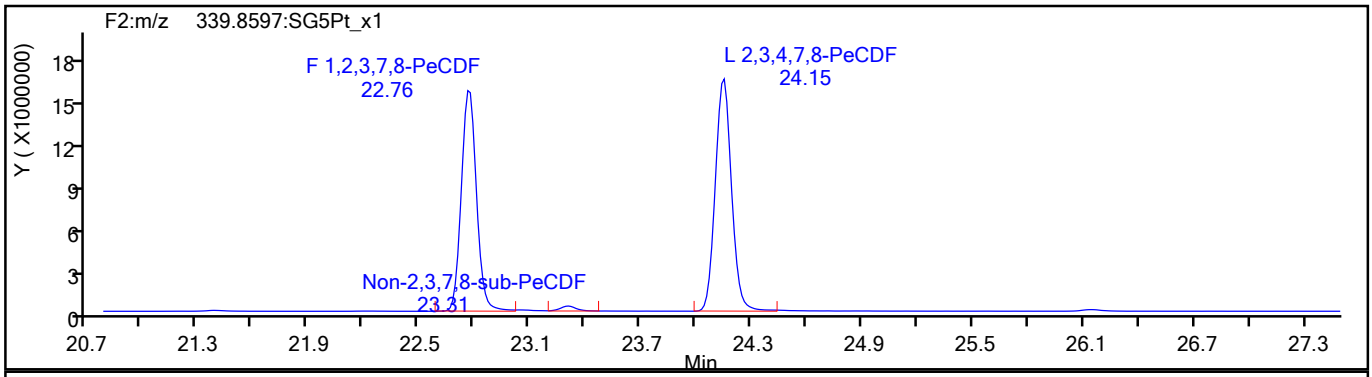

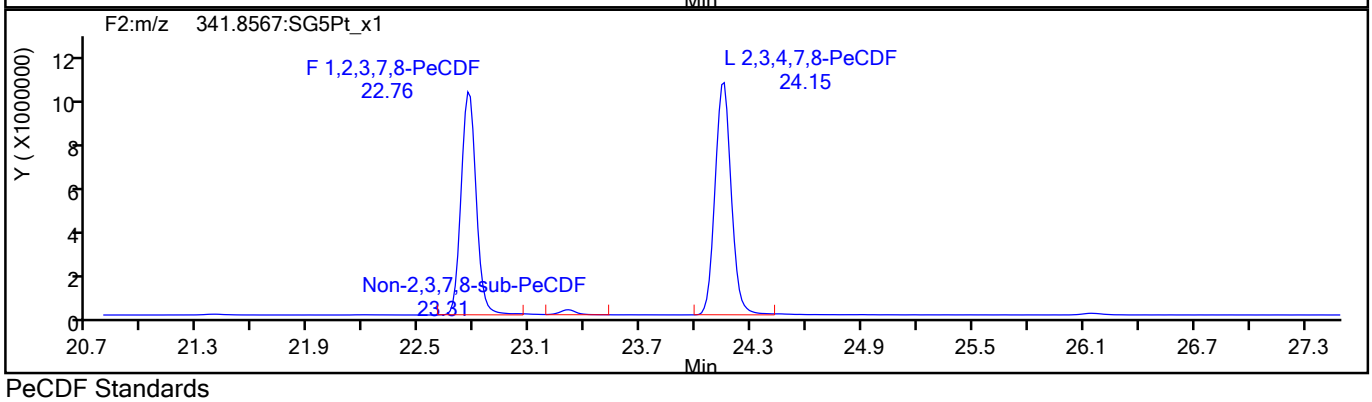

PeCDF Standards

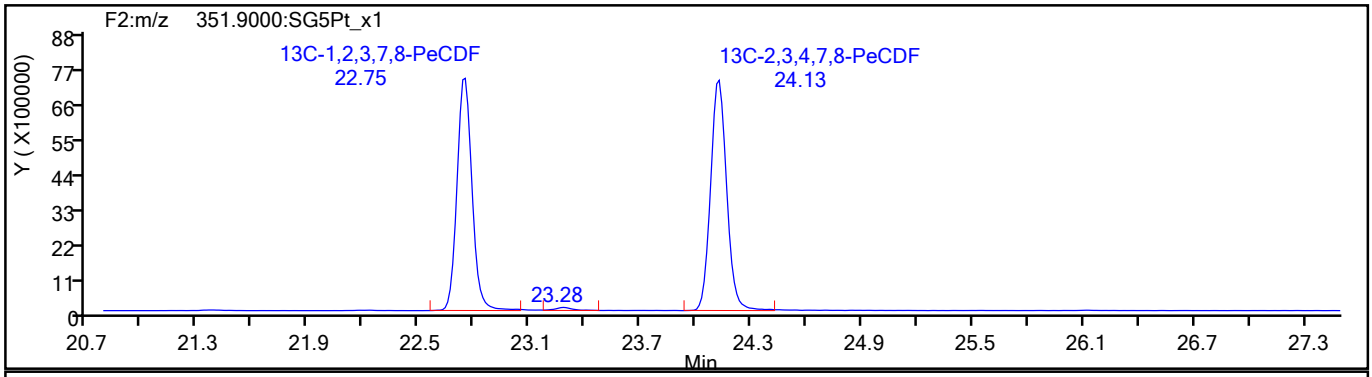

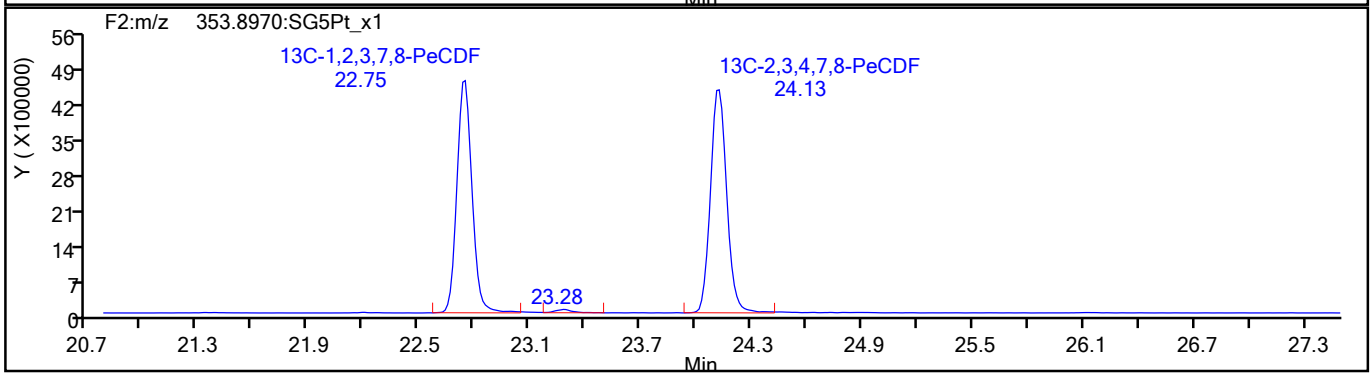

783016

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

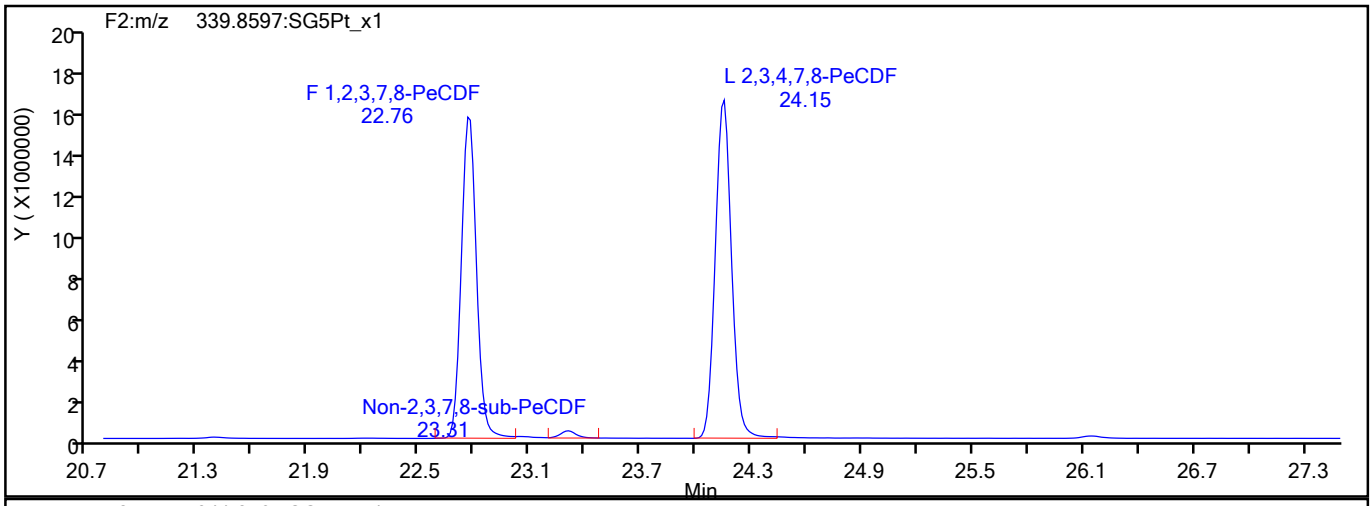

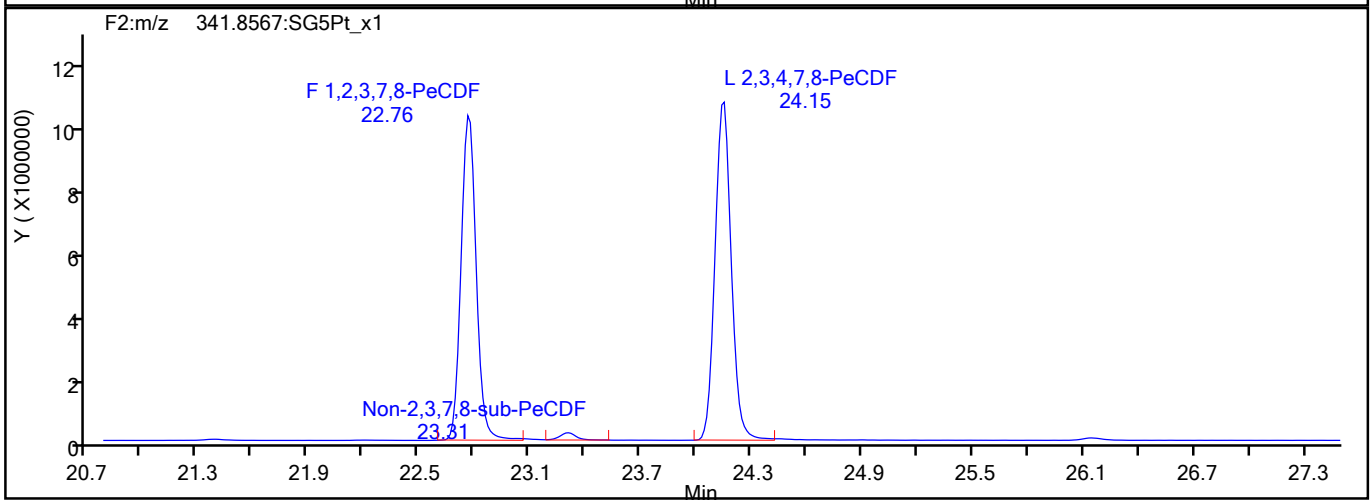

PeCDF Interference Mass

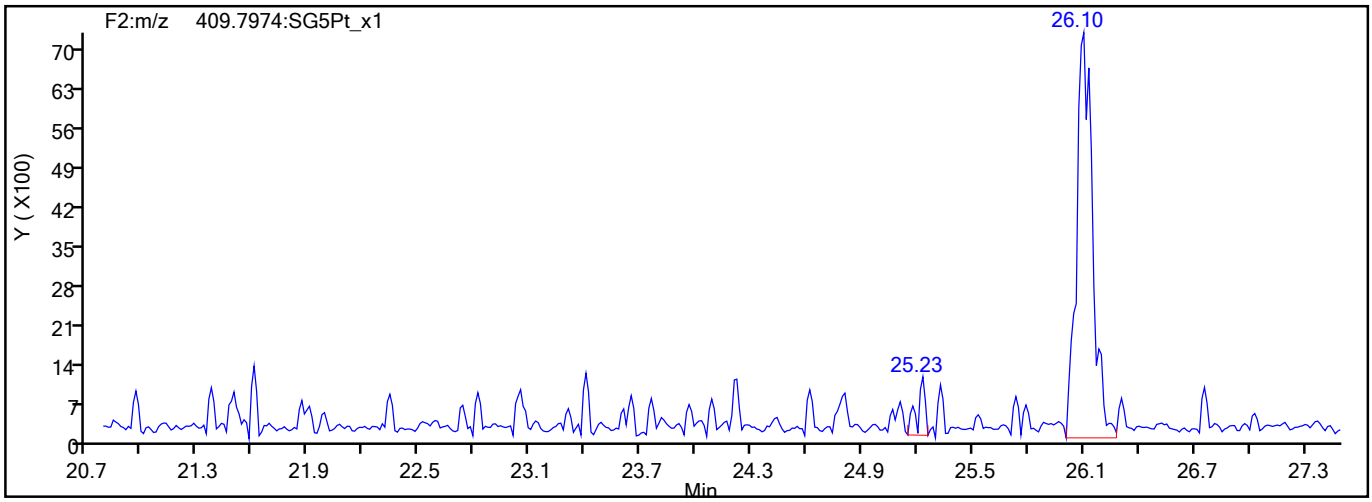

783017

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

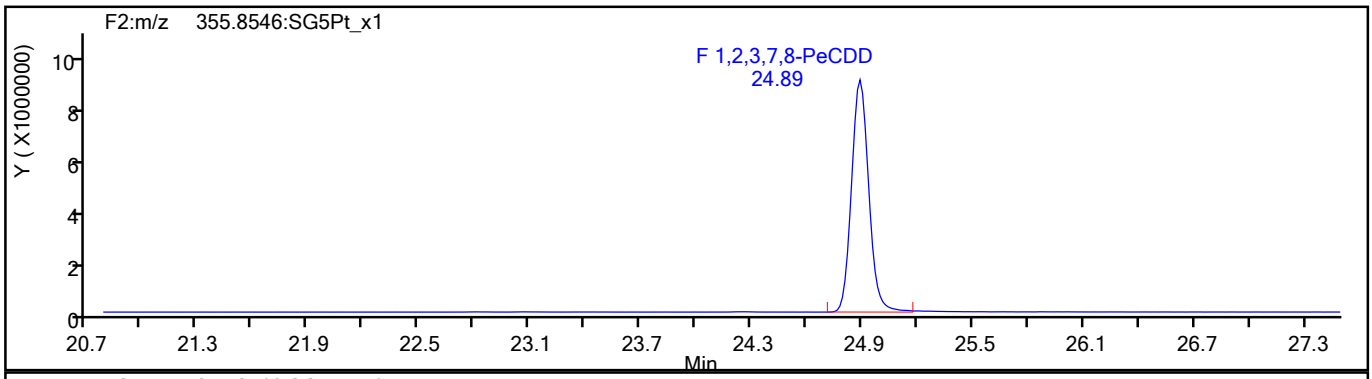

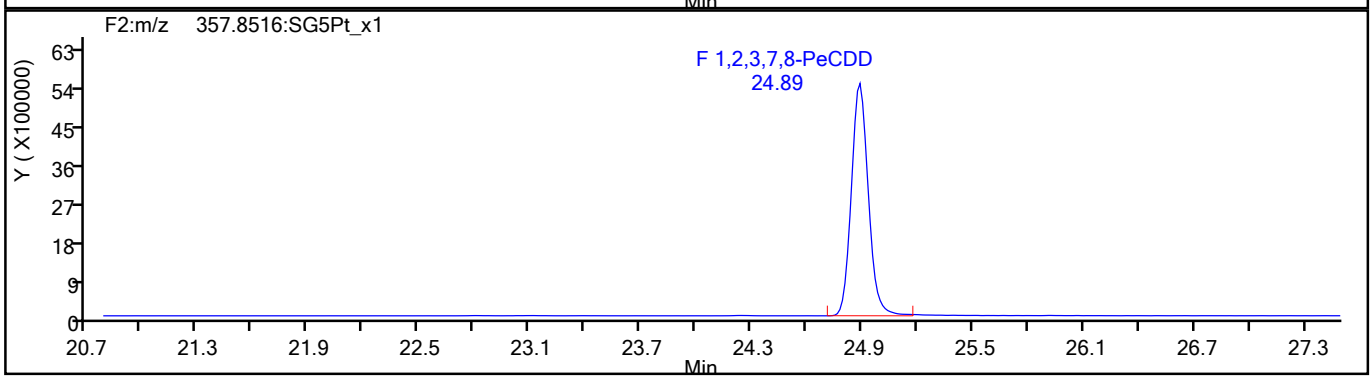

PeCDD Standards

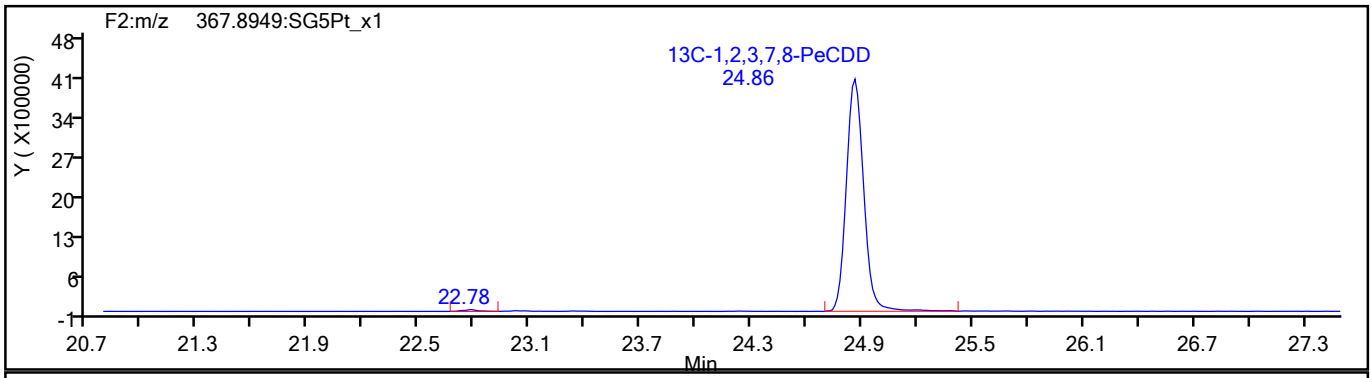

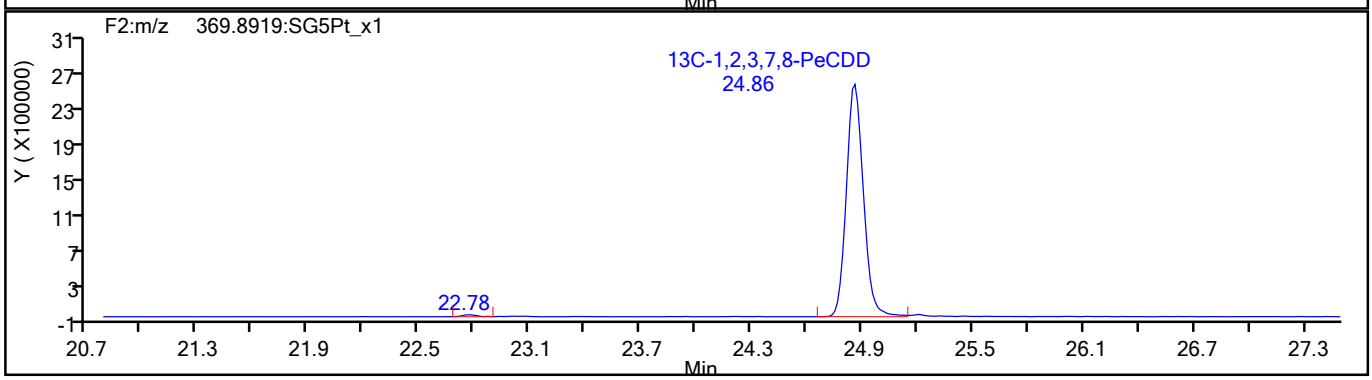

783018

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

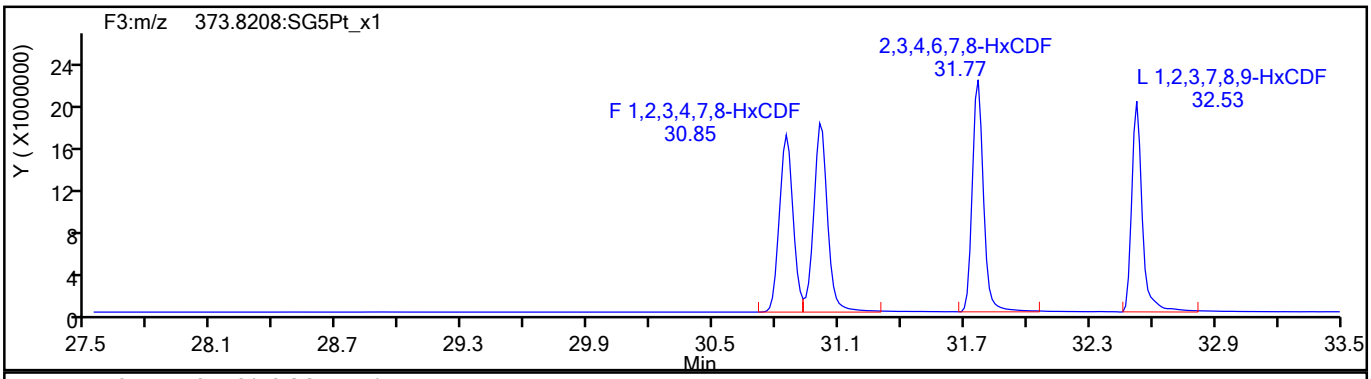

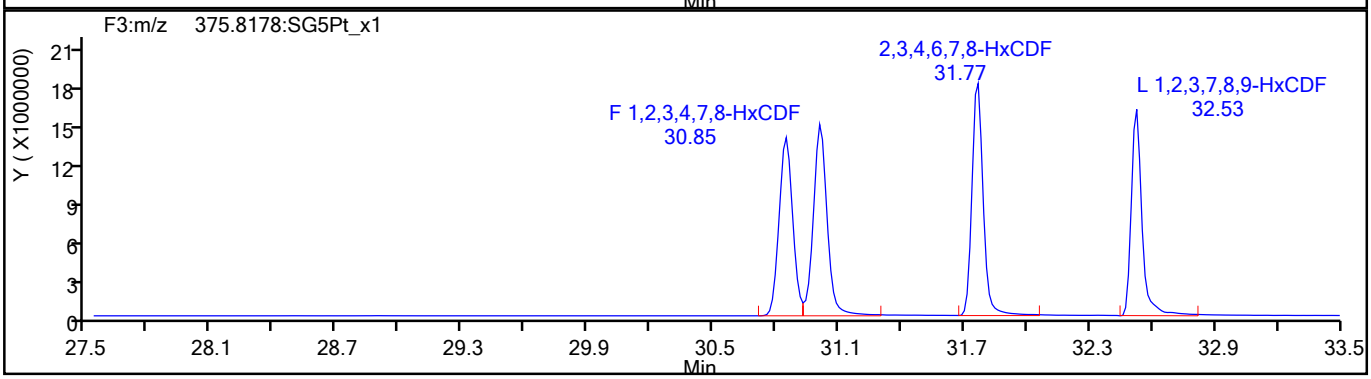

HxCDF Standards

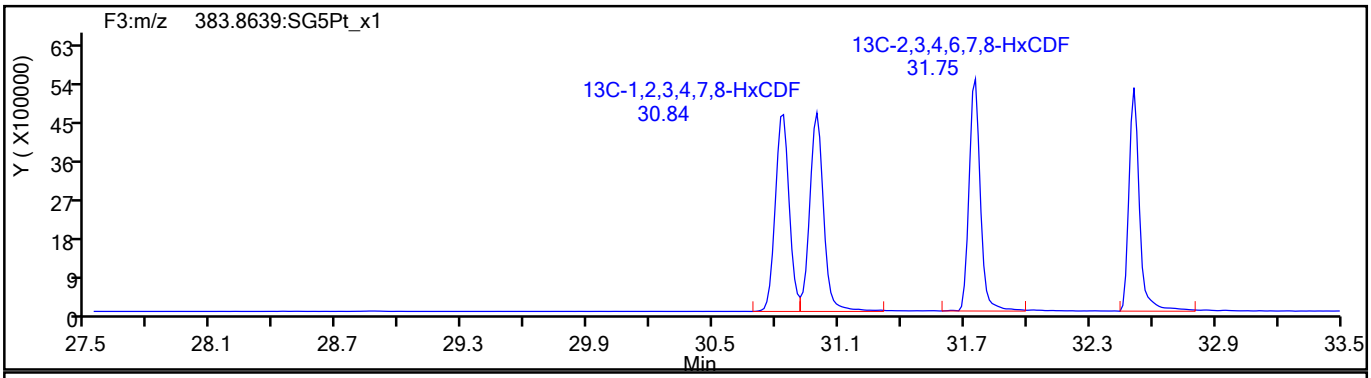

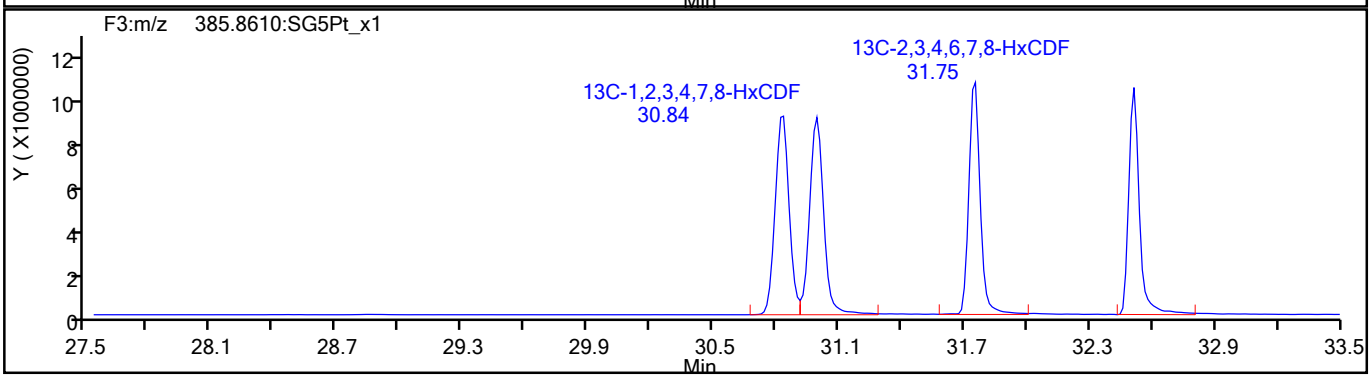

783019

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

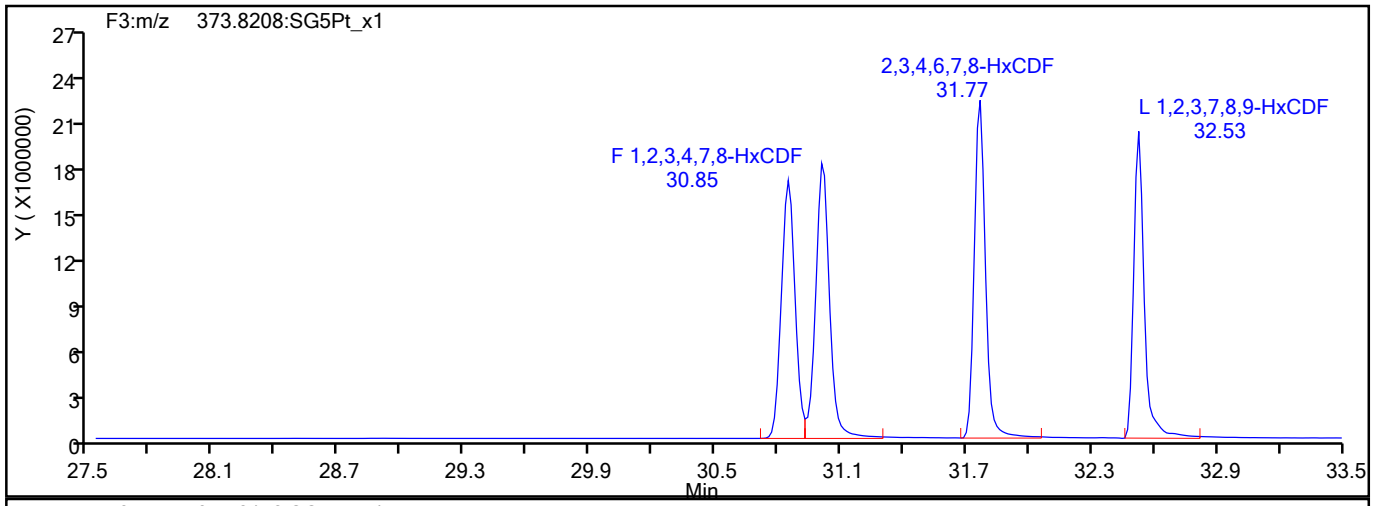

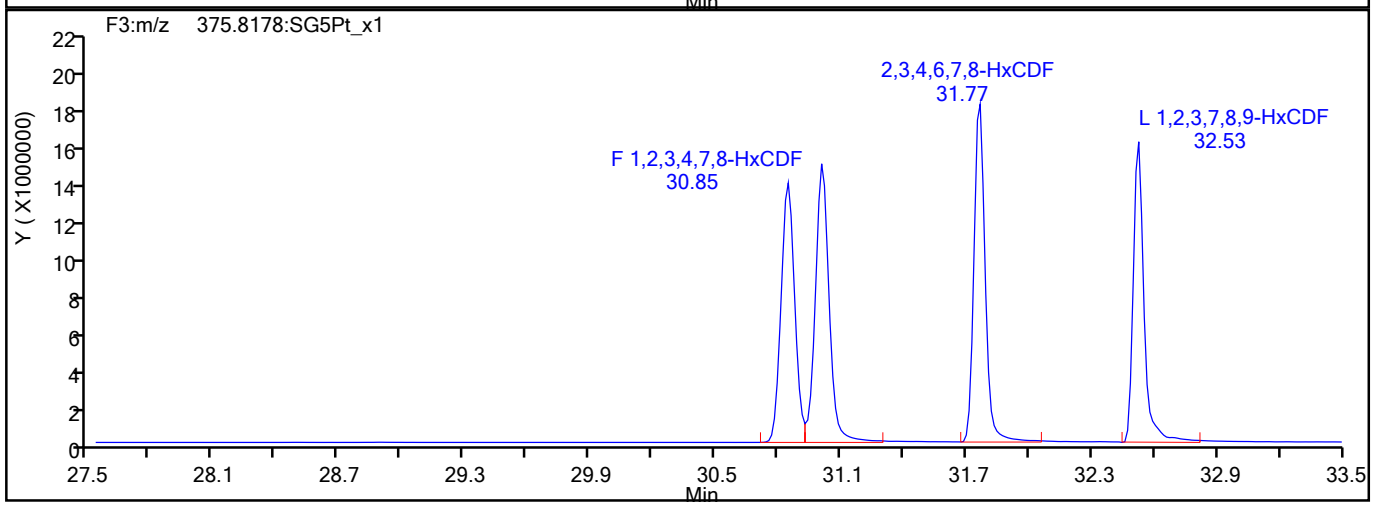

HxCDF Interference Mass

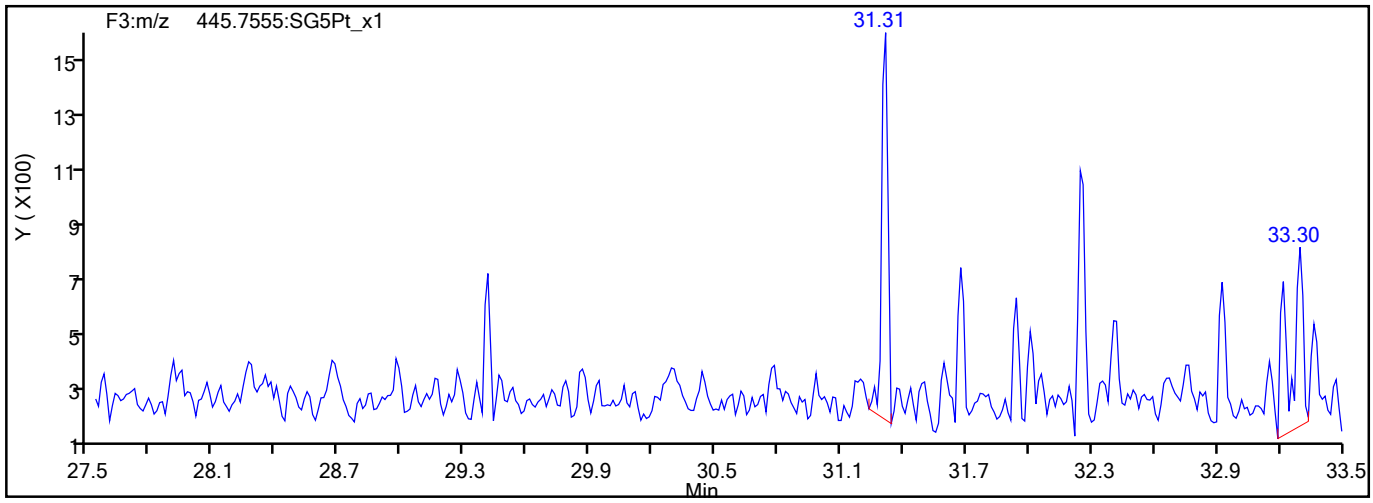

783020

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

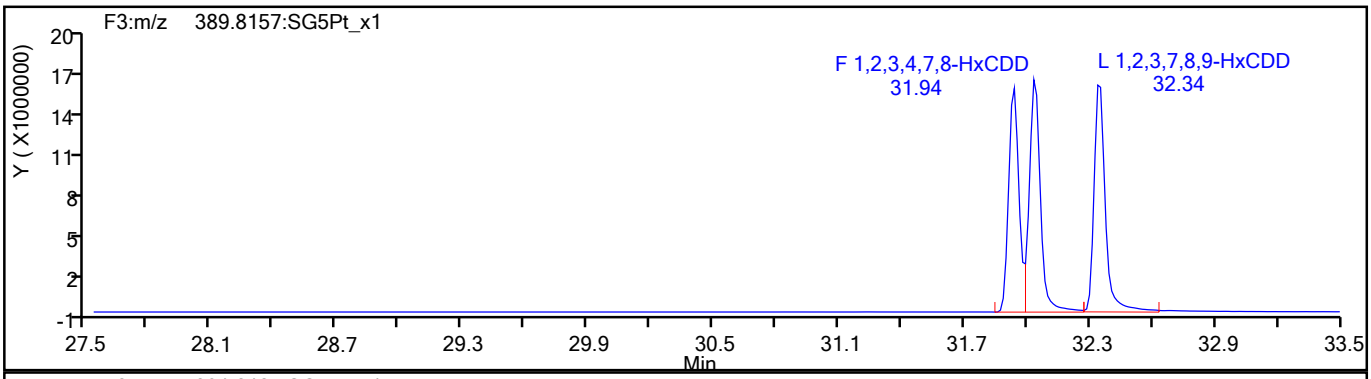

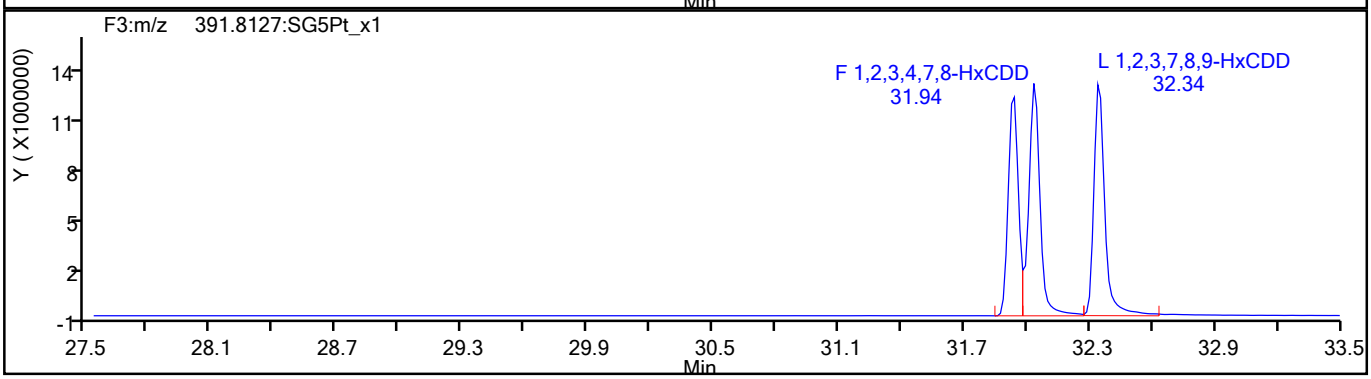

HxCDD Standards

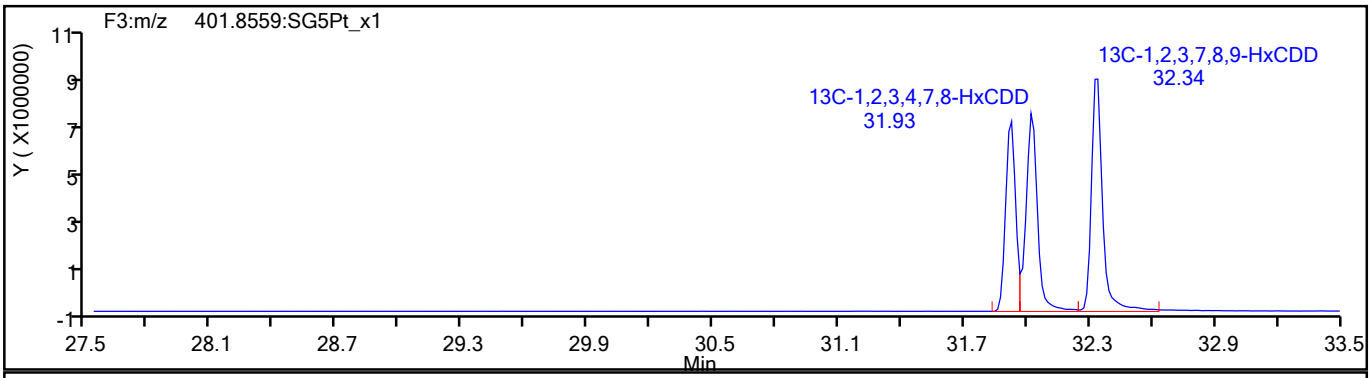

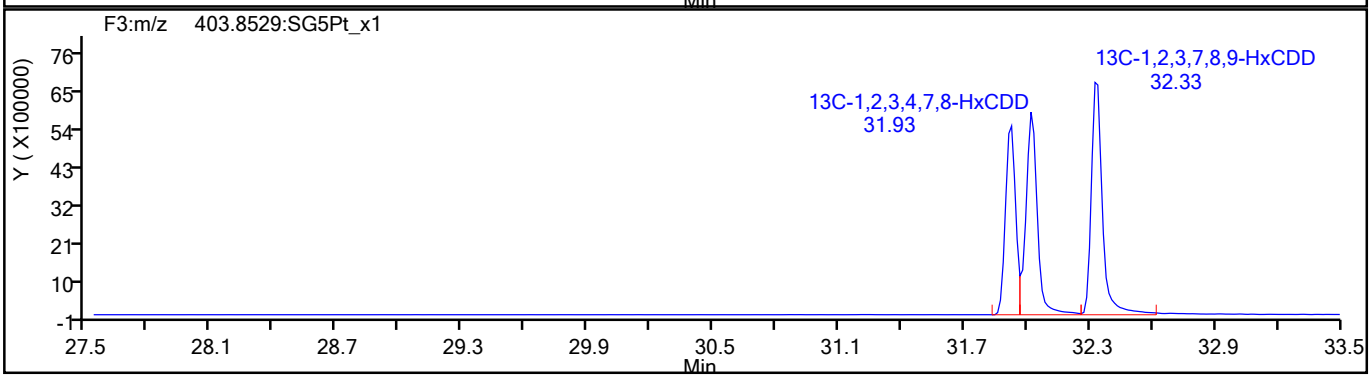

783021

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

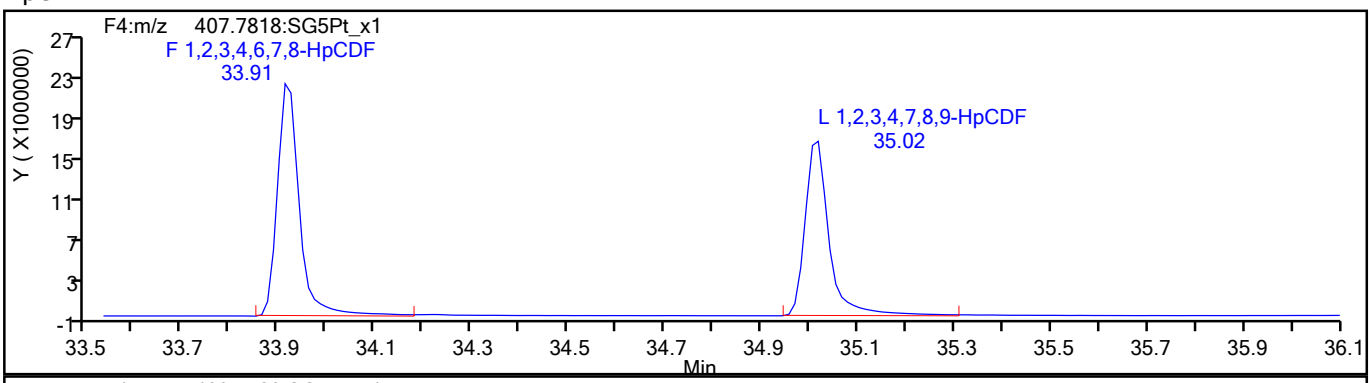

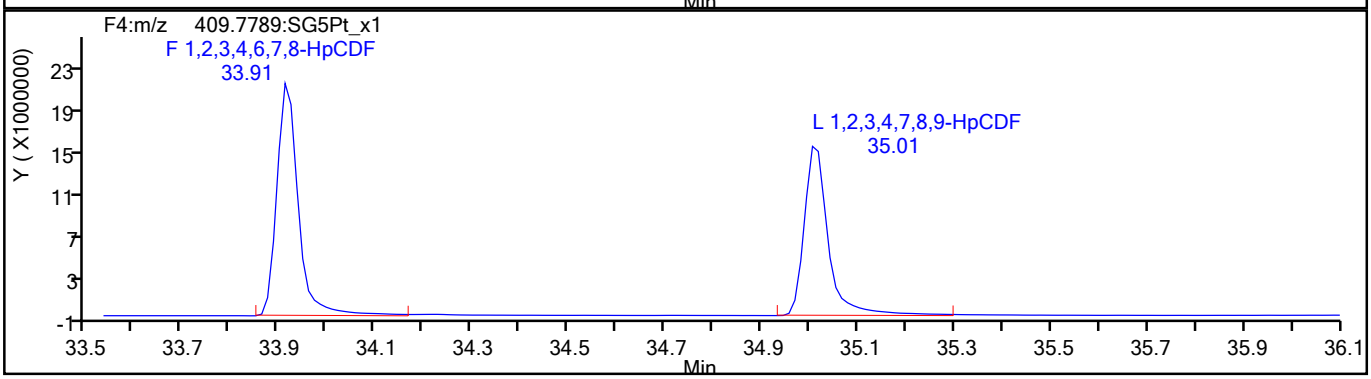

HpCDF Standards

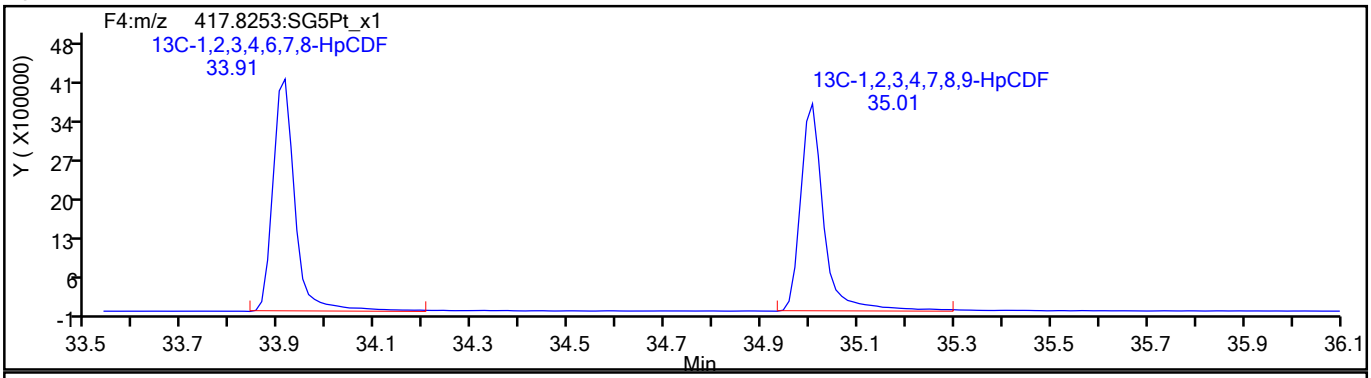

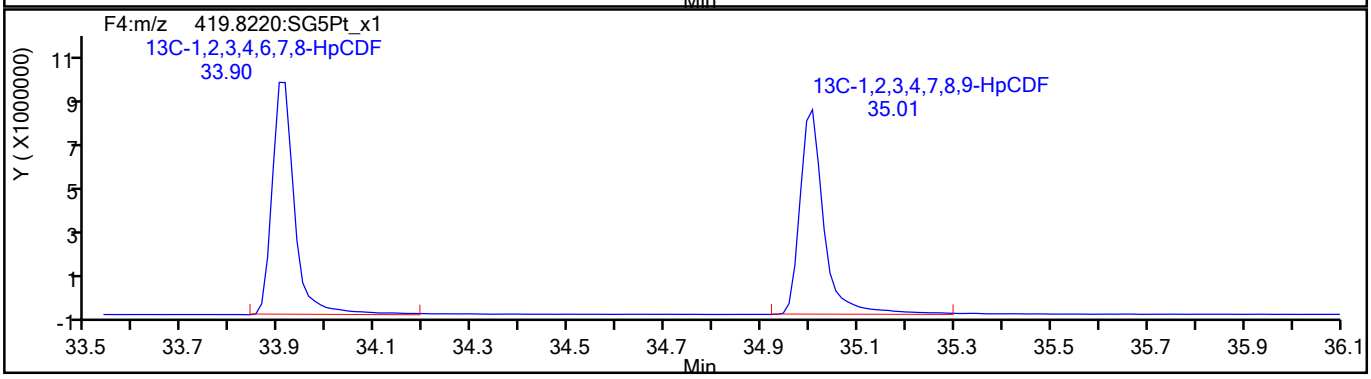

783022

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

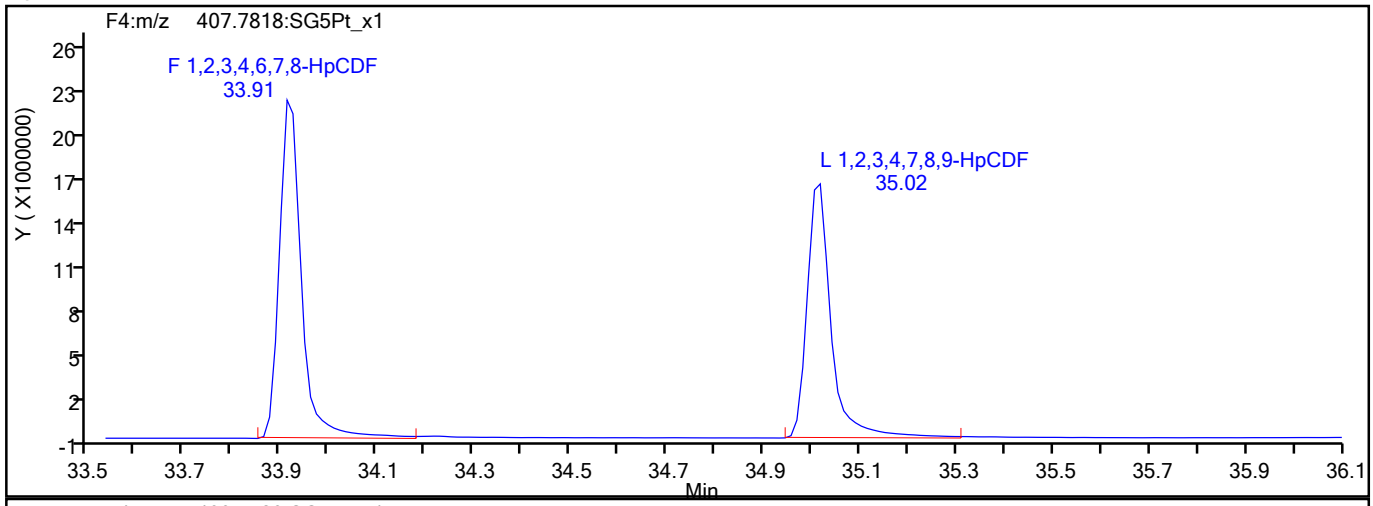

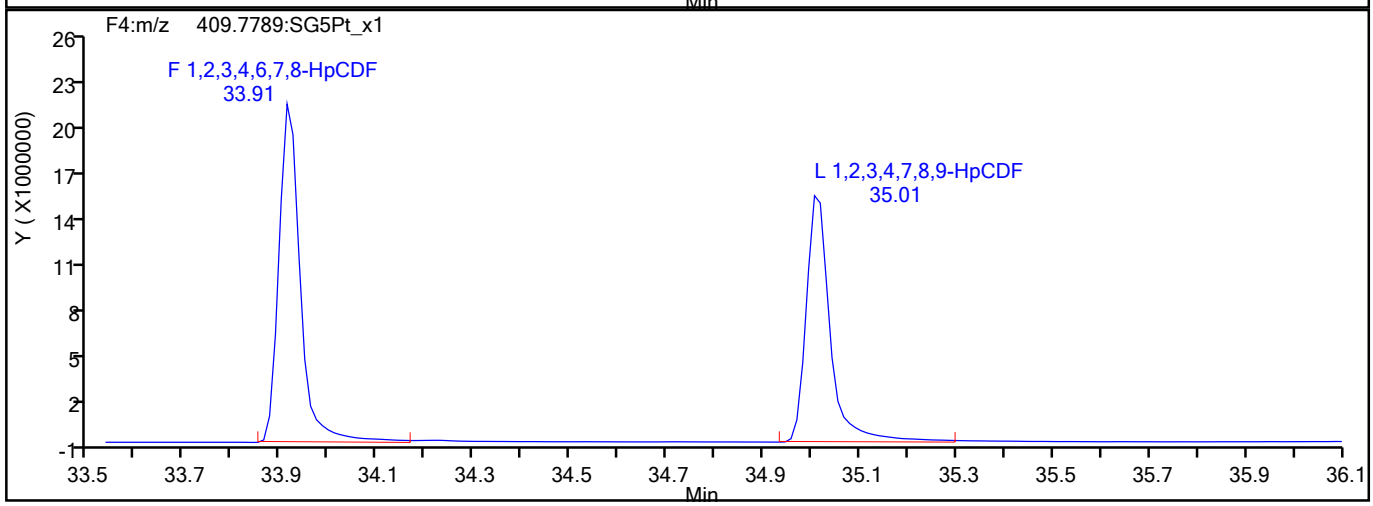

HpCDF Interference Mass

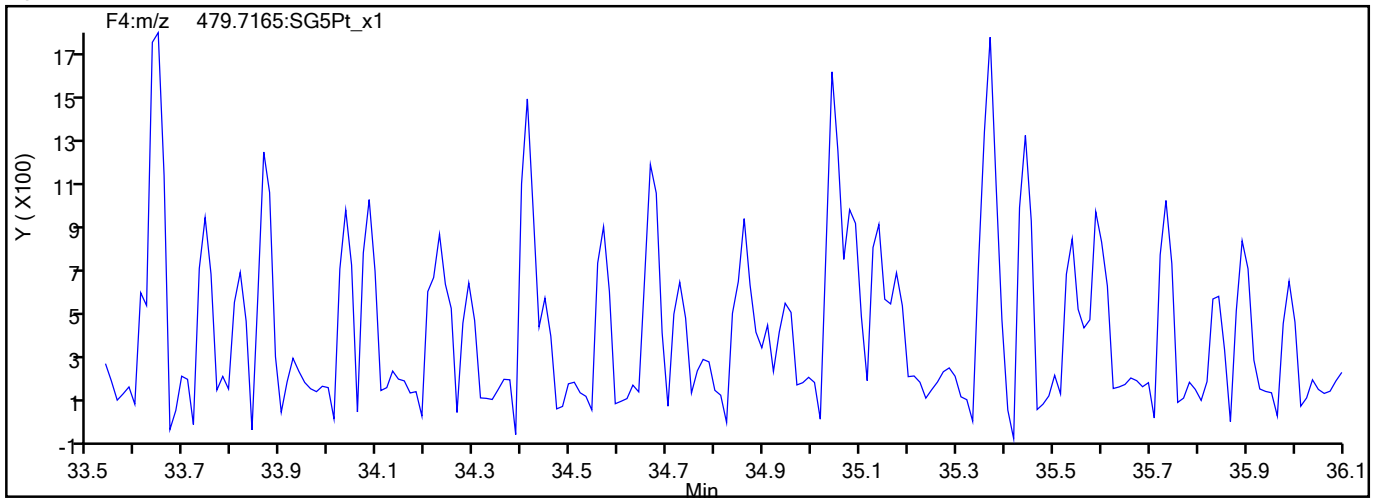

783023

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

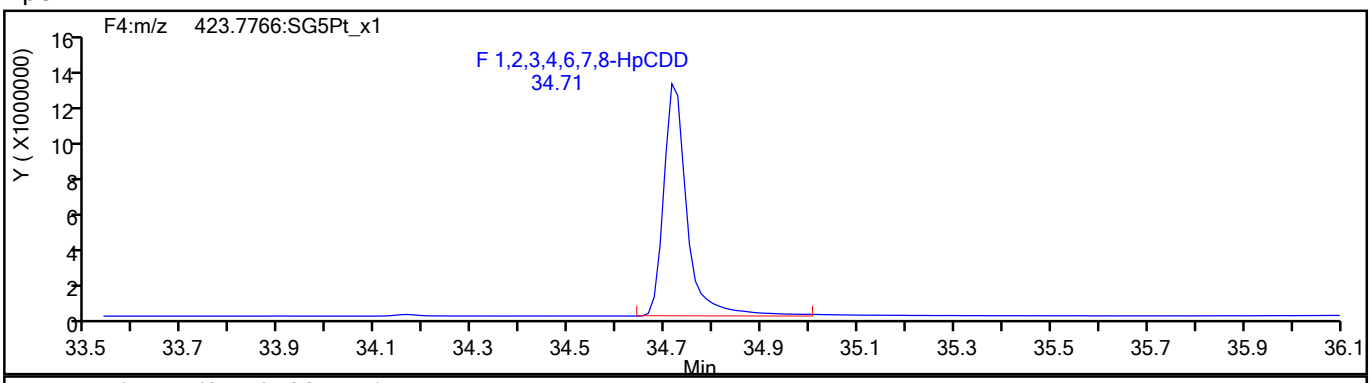

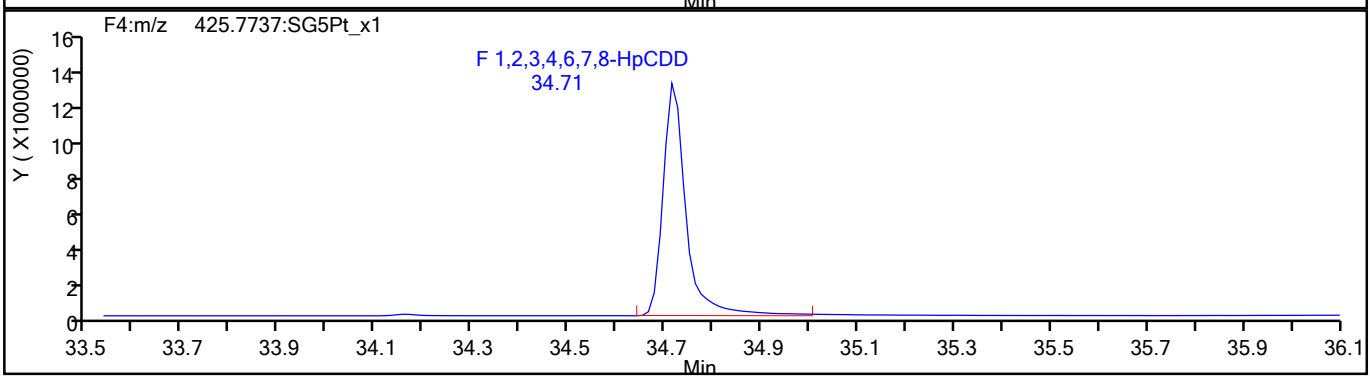

HpCDD Standards

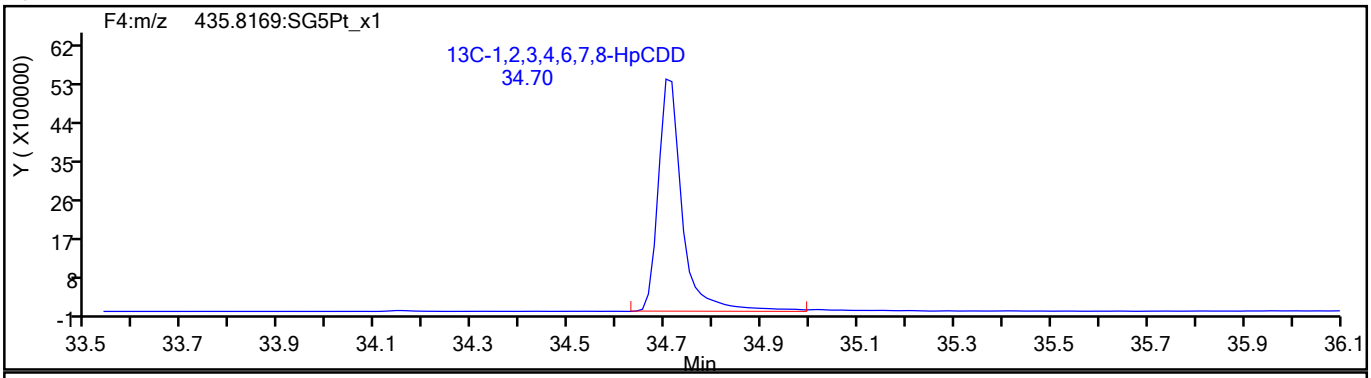

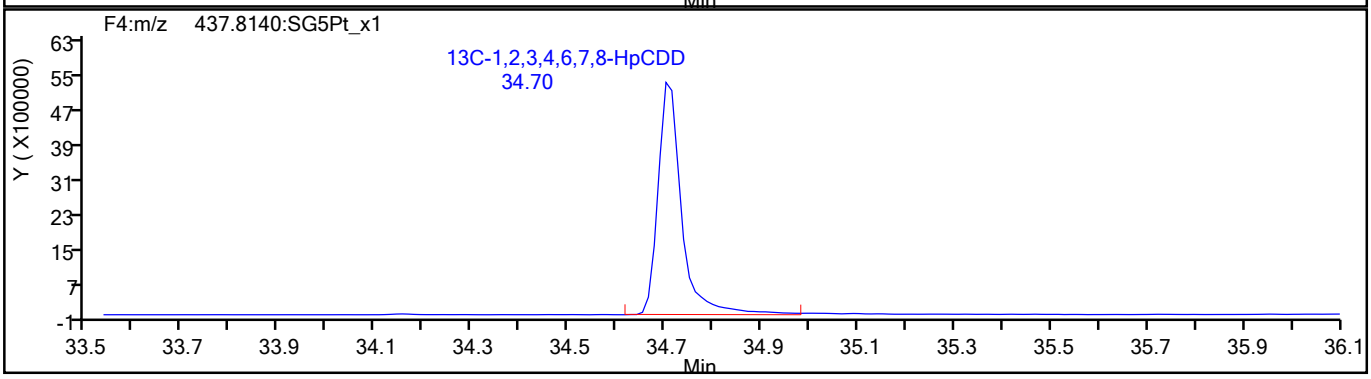

783024

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

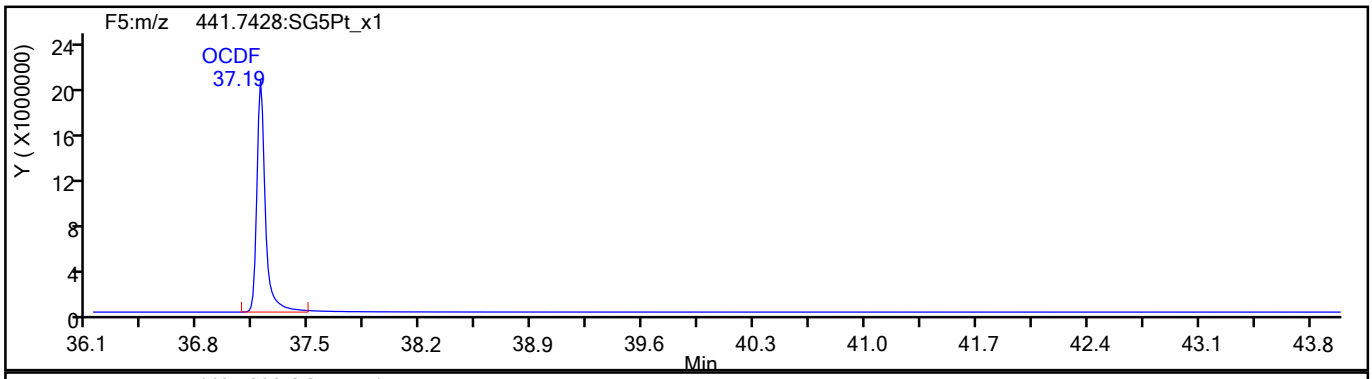

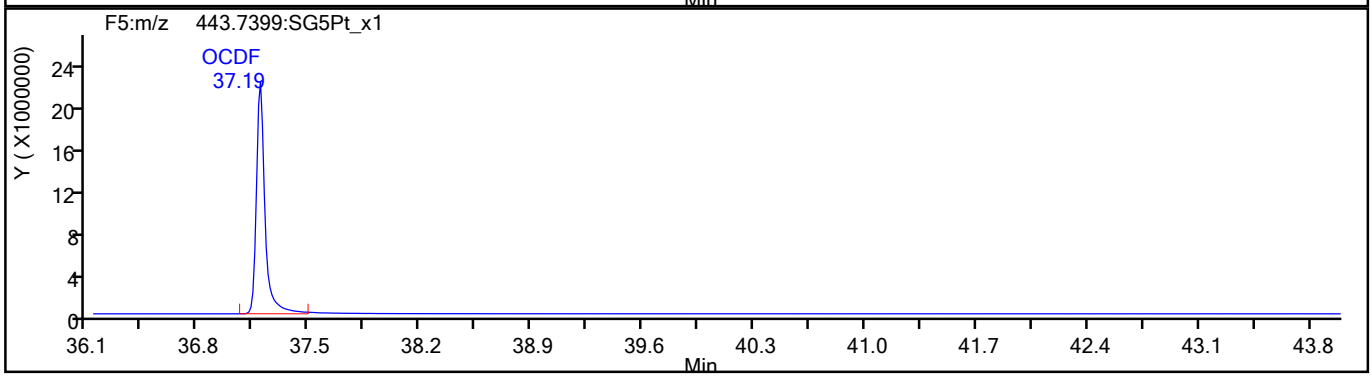

OCDF Standards

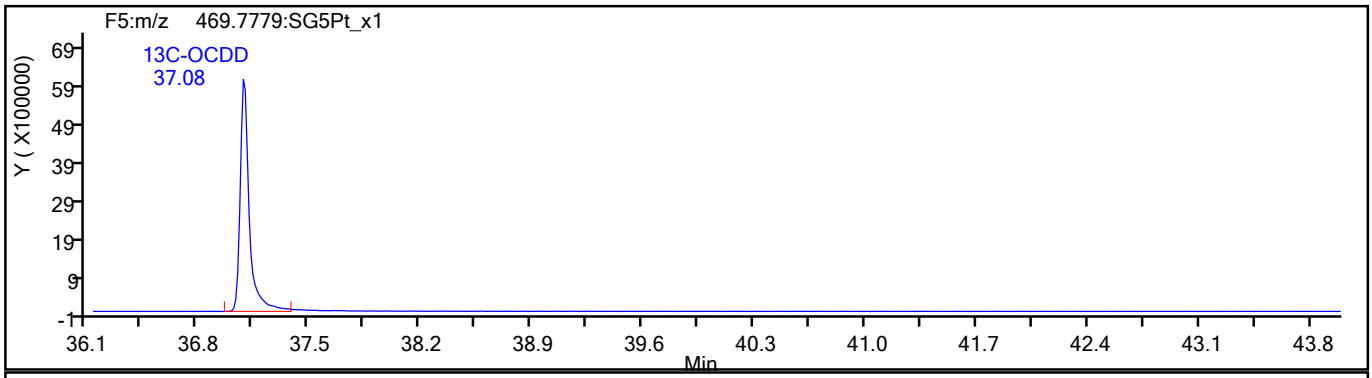

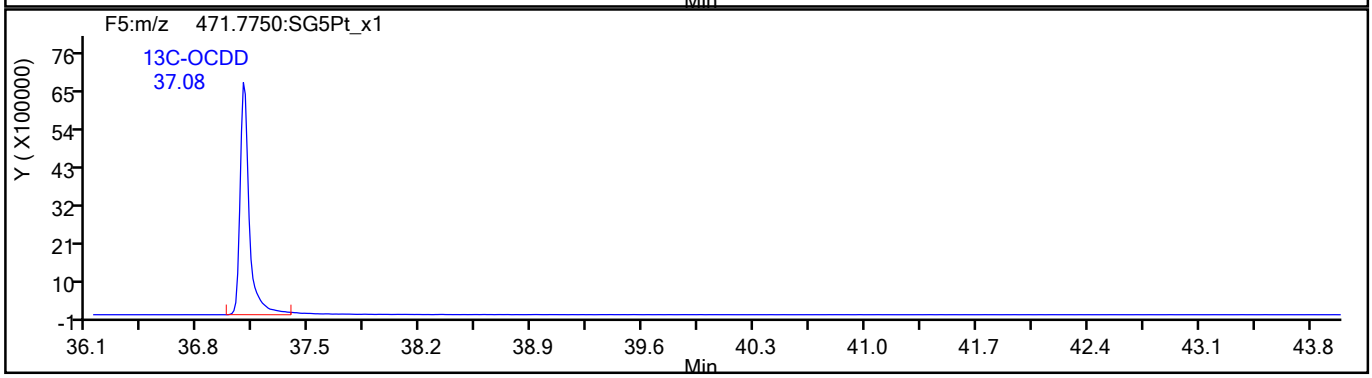

783025

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

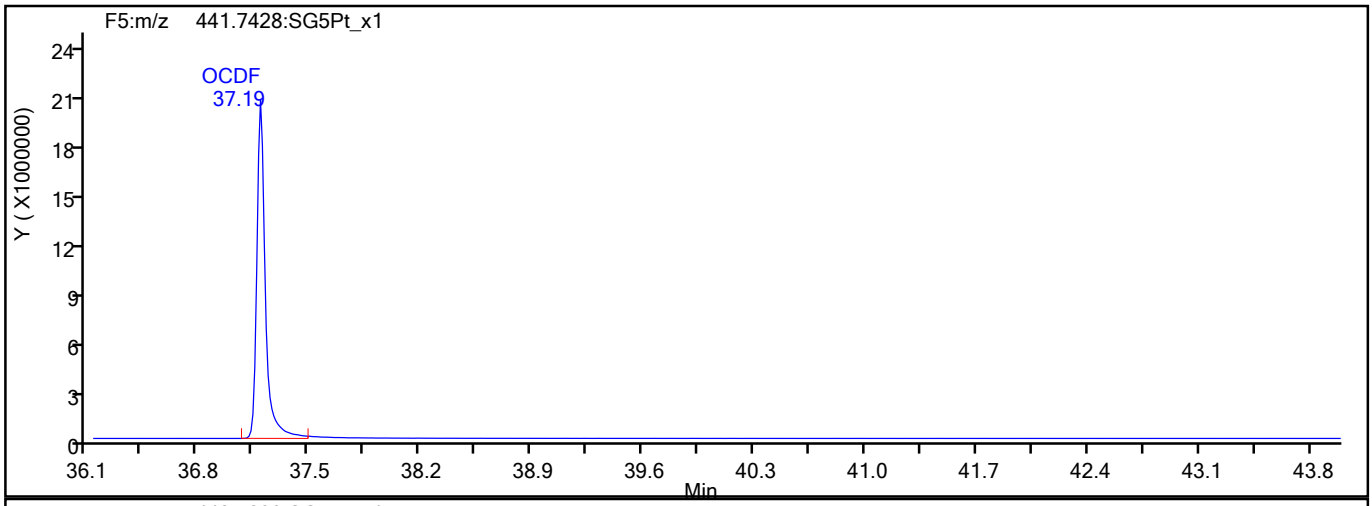

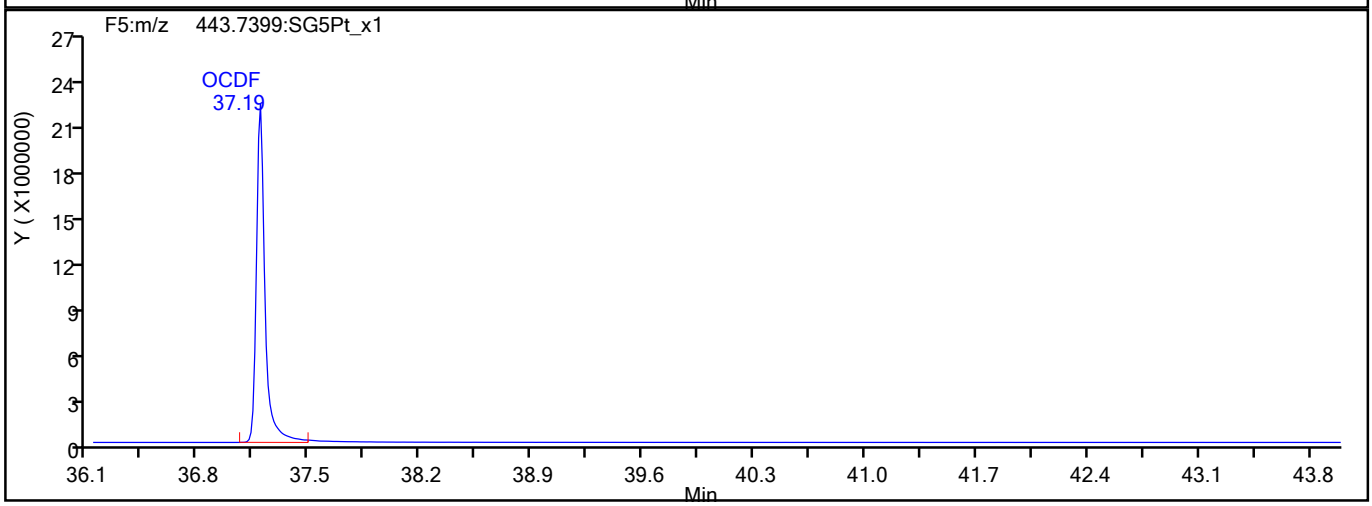

OCDF Interference Mass

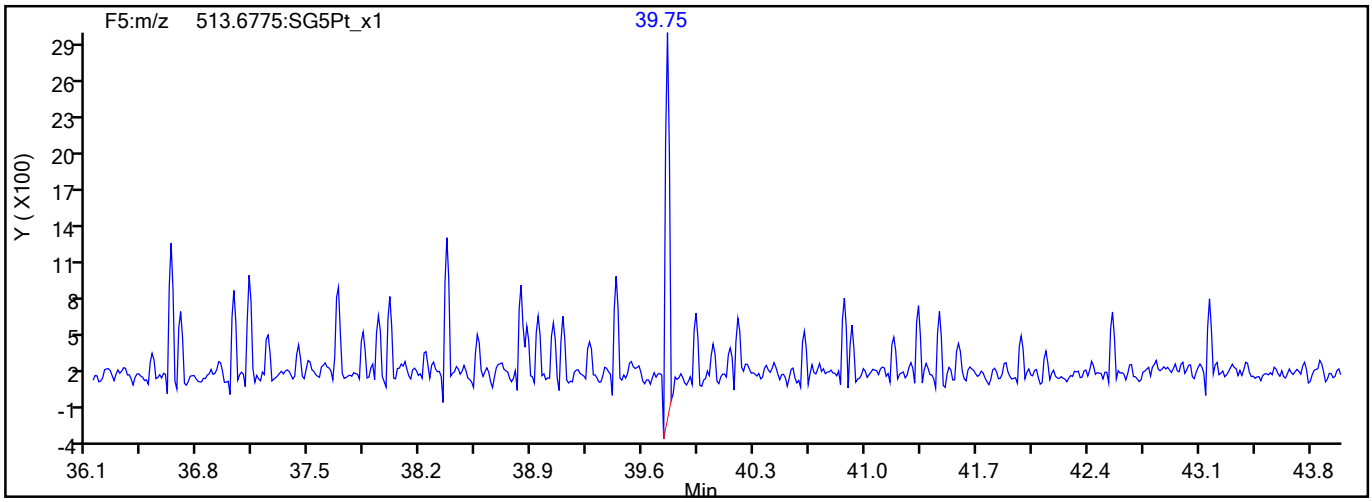

783026

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

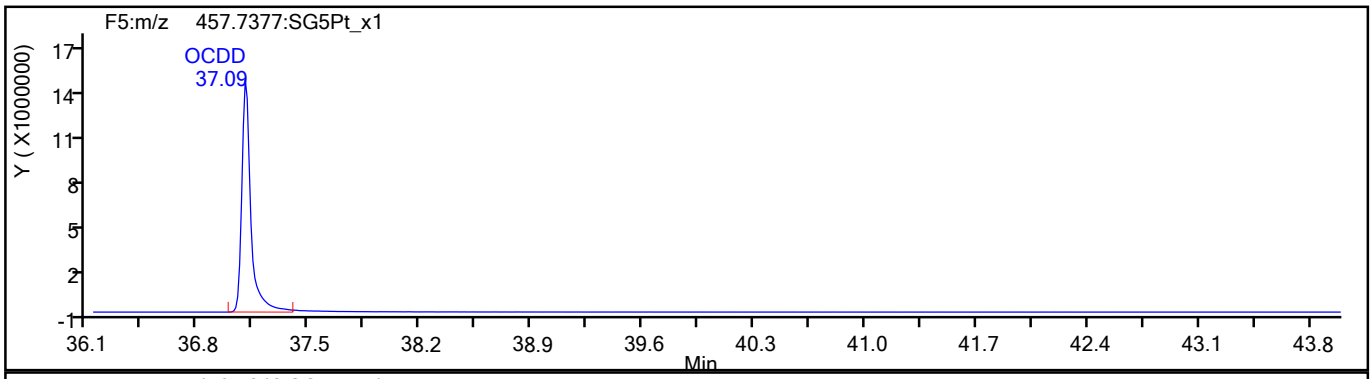

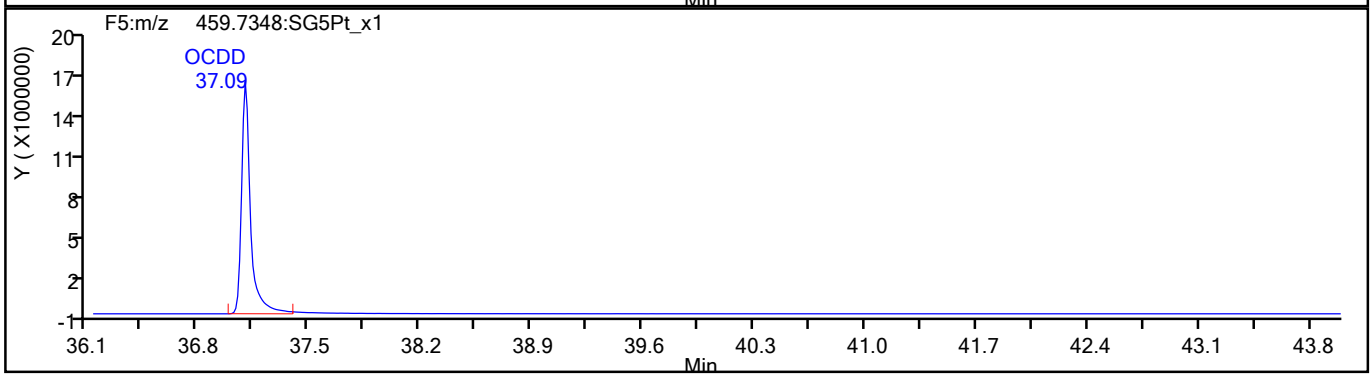

OCDD Standards

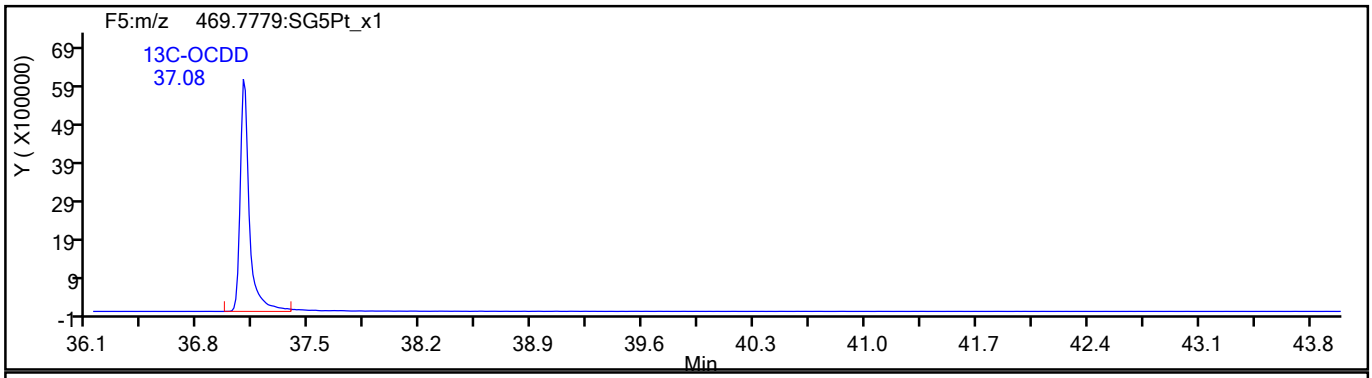

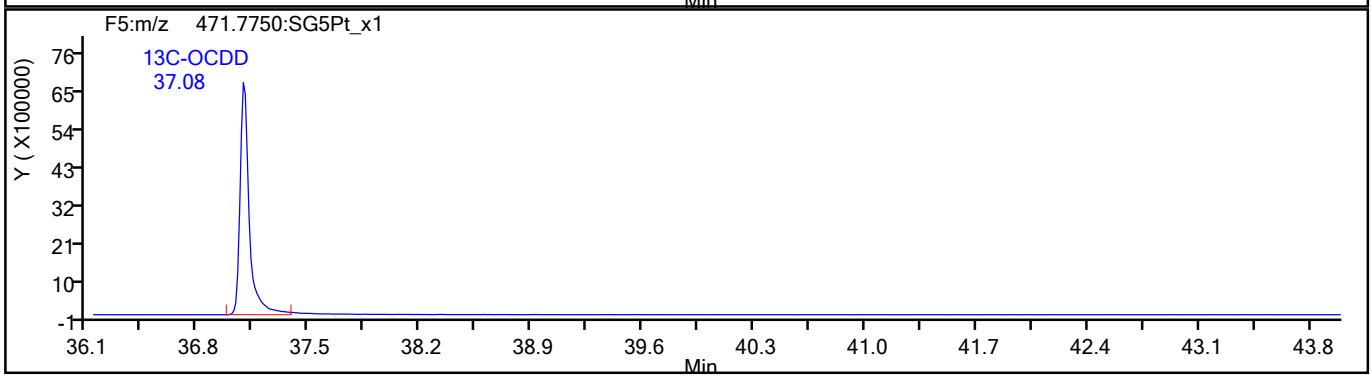

783027

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

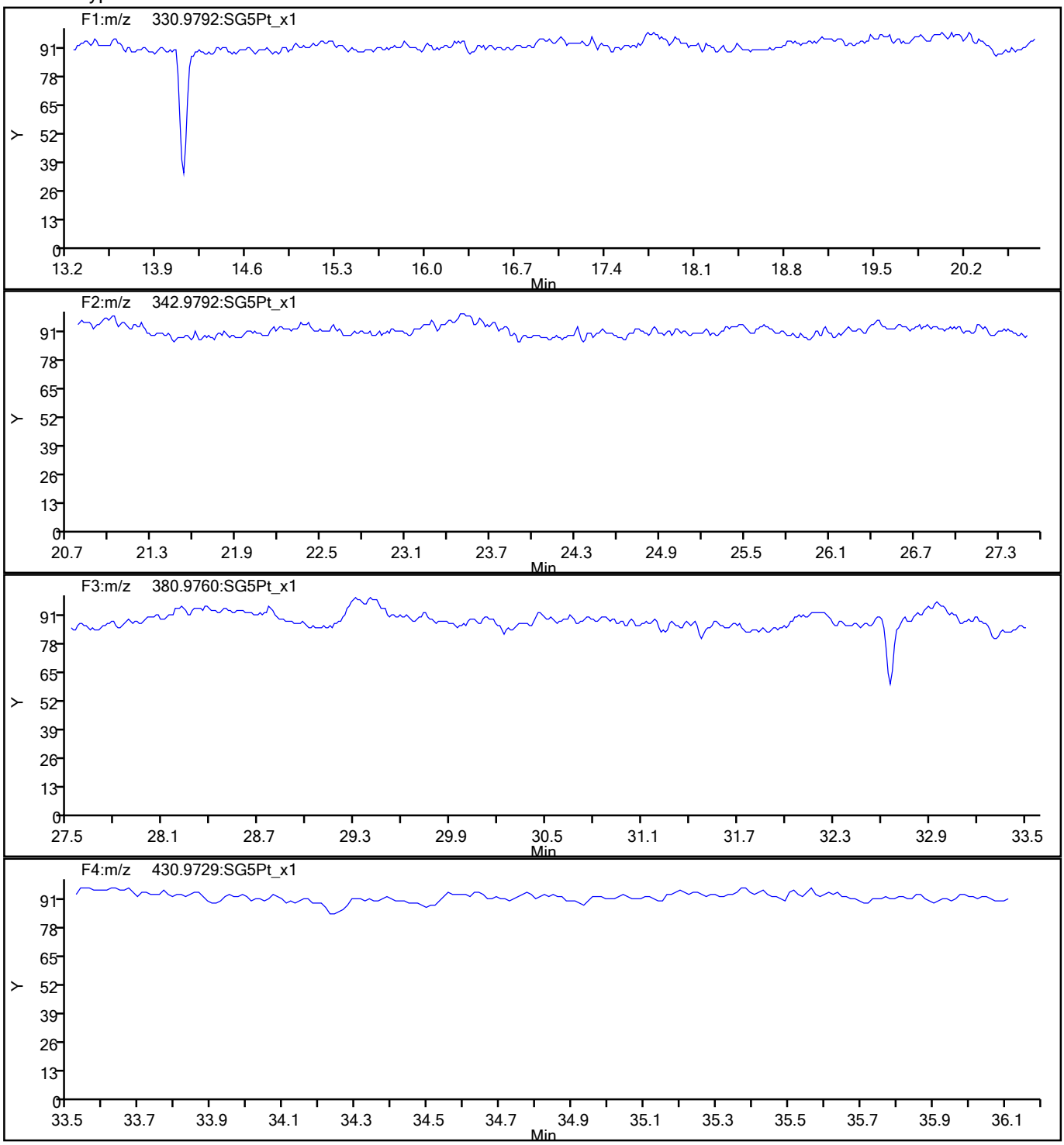

783028

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

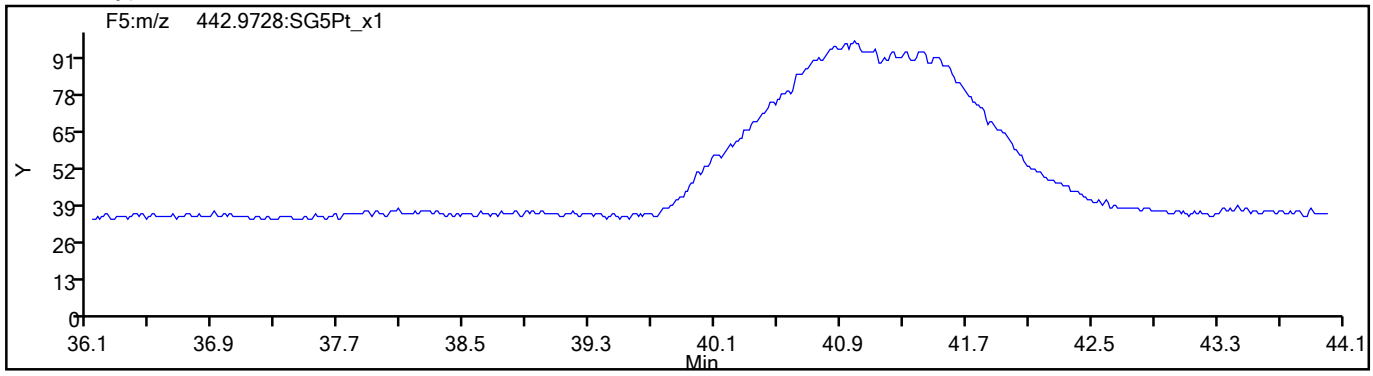

783029

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID: CCV 320-517729/2 Calibration Date: 08/18/2021 15:00

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 18AU2110D5_2.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.051		10.3	10.0	103	84-120
2,3,7,8-TCDD	AveID	1.254	1.248		9.95	10.0	100	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.088		51.3	50.0	103	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.052		51.6	50.0	103	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.049		50.0	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.086		50.1	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.161		51.5	50.0	103	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.177		50.4	50.0	101	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.079		50.7	50.0	101	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.058		52.9	50.0	106	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.213		53.6	50.0	107	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.185		50.8	50.0	102	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.494		51.8	50.0	104	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.109		50.7	50.0	101	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.368		51.9	50.0	104	86-116
OCDD	AveID	1.107	1.143		103	100	103	79-126
OCDF	AveID	1.438	1.474		103	100	103	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.547		95.2	100	95	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9226		103	100	103	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.187		98.1	100	98	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.216		98.1	100	98	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8005		105	100	105	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.047		96.6	100	97	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.088		96.5	100	96	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.014		95.3	100	95	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7203		98.2	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8225		93.4	100	93	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9221		95.3	100	95	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7270		94.0	100	94	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6349		98.1	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6573		93.8	100	94	77-129
13C-OCDD	Ave	0.4472	0.4528		203	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.162		10.5	10.0	105	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\18AU2110D5.SPL
Last Modified: Wednesday, August 18, 2021 16:19:48 Pacific Daylight Time
Printed: Wednesday, August 18, 2021 16:25:53 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix
1	18AU2110D5_1	WDM HRDXNCP_00044	WDM 081821	Tray01:1	Dioxin
2	18AU2110D5_2	CS-4 HRDXNL4_00099	CCV 081821	Tray01:2	Dioxin
3	18AU2110D5_3	Hexan QC 081721	Hexan QC 081721	Tray01:4	QC
4	18AU2110D5_4	580-104749-a-21-a RI	580-104749-a-21-a RI	Tray01:5	8290A_D5/Solid
5	18AU2110D5_5	320-76769-A-31-A RI	320-76769-A-31-A	Tray01:6	1613B/Solid
6	18AU2110D5_6	320-76769-A-34-A RI	320-76769-A-34-A RI	Tray01:7	1613B/Solid
7	18AU2110D5_7	320-76887-A-4-A RI	320-76887-A-4-A RI	Tray01:8	1613B/Solid
8	18AU2110D5_8	320-76887-a-2-a 10x	320-76887-a-2-a 10x	Tray01:9	1613B/Solid
9	18AU2110D5_9	320-76887-a-2-b ms 10x	320-76887-a-2-b ms 10x	Tray01:10	1613B/Solid
10	18AU2110D5_10	320-76887-a-2-c msd 10x	320-76887-a-2-c msd 10x	Tray01:11	1613B/Solid
11	18AU2110D5_11	SB Solvent Blank C-14	SB 081821	Tray01:3	
12	18AU2110D5_12	CS-4 HRDXNL4_00099	CCV 081821A	Tray01:2	Dioxin
13	18AU2110D5_13	WDM HRDXNCP_00044	WDM 081821A	Tray01:1	Dioxin
14	18AU2110D5_14	QC DH28_00196 1A 20%	QC DH28_00196 1A 20%	Tray01:15	1613B/8290/QC
15	18AU2110D5_15	QC DH28_00196 2A 65%	QC DH28_00196 2A 65%	Tray01:16	1613B/8290/QC
16	18AU2110D5_16	QC DH6535_00550 65%	QC DH6535_00550 65%	Tray01:17	1613B/8290/QC
17	18AU2110D5_17	QC DH6535_00551 65%	QC DH6535_00551 65%	Tray01:18	1613B/8290/QC
18	18AU2110D5_18	QC DH6535_00552 65%	QC DH6535_00552 65%	Tray01:19	1613B/8290/QC
19	18AU2110D5_19	570-65710-bc-1-a	570-65710-bc-1-a	Tray01:20	8290/Water
20	18AU2110D5_20	570-65471-ap-2-a	570-65471-ap-2-a	Tray01:21	8290/Water
21	18AU2110D5_21	240-153449-p-3-a	240-153449-p-3-a	Tray01:22	8290A/Water
22	18AU2110D5_22	SB Solvent Blank C-14	SB 081821A	Tray01:3	
23	18AU2110D5_23	CS-4 HRDXNL4_00099	CCV 081821B	Tray01:2	Dioxin
24	18AU2110D5_24	081721- DIOXIN IDA QC00481	081721- DIOXIN IDA QC00481	Tray01:23	Dioxin
25	18AU2110D5_25	WDM HRDXNCP_00044	WDM 081821B	Tray01:1	Dioxin
26	18AU2110D5_26	SB Solvent Blank C-14	SB 081821B	Tray01:3	
27	18AU2110D5_27	240-153367-C-5-A	240-153367-C-5-A	Tray01:29	8290A/Solid
28	18AU2110D5_28	240-153367-C-6-A	240-153367-C-6-A	Tray01:30	8290A/Solid
29	18AU2110D5_29	240-153367-C-7-A	240-153367-C-7-A	Tray01:31	8290A/Solid
30	18AU2110D5_30	240-153367-C-8-A	240-153367-C-8-A	Tray01:32	8290A/Solid
31	18AU2110D5_31	240-153367ZC-9-A	240-153367ZC-9-A	Tray01:33	8290A/Solid
32	18AU2110D5_32	240-153367-C-10-A	240-153367-C-10-A	Tray01:34	8290A/Solid
33	18AU2110D5_33	240-153367-C-11-A	240-153367-C-11-A	Tray01:35	8290A/Solid
34	18AU2110D5_34	SB Solvent Blank C-14	SB 081821A	Tray01:3	
35	18AU2110D5_35	CS-4 HRDXNL4_00099	CCV 081821	Tray01:2	Dioxin
36	18AU2110D5_36	WDM HRDXNCP_00044	WDM 081821C	Tray01:1	Dioxin

LOGFILE CHECKED
DB 8/19/21

783031

Box #	User	Sample Size	Units	MS File	Inlet File	Inject Volume	Process
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
---	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D260	SMA	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D266	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
---	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
QC90	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D262	SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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	SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
QC 90	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
---	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D259	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D259	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
---	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Wednesday, August 18, 2021 14:07:25 Pacific Daylight Time

M 292.9824 R 12252

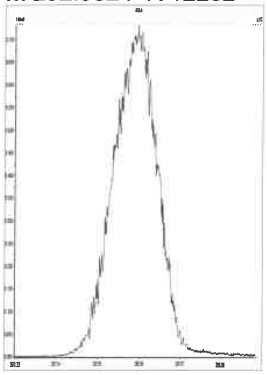

M 304.9824 R 12439

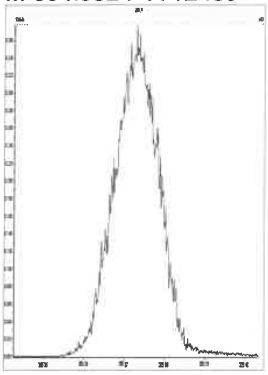

M 318.9792 R 12755

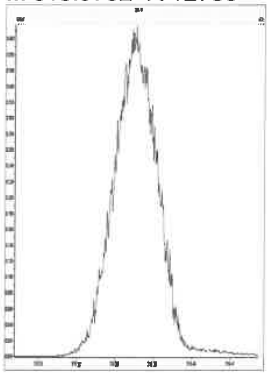

M 330.9792 R 12561

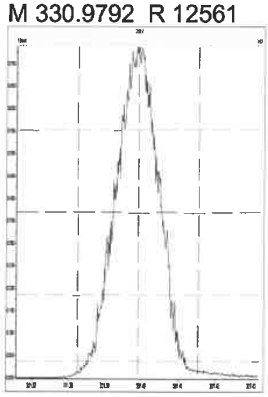

M 342.9792 R 12566

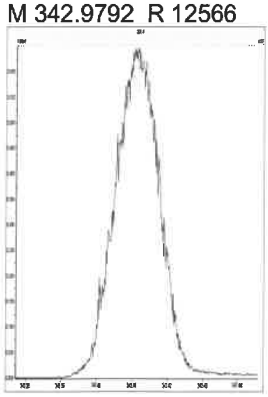

M 354.9792 R 12627

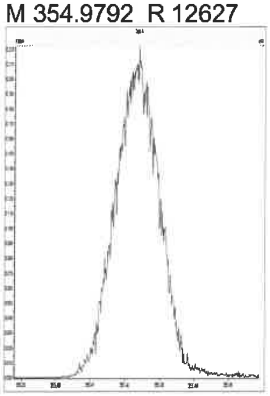

M 366.9792 R 12437

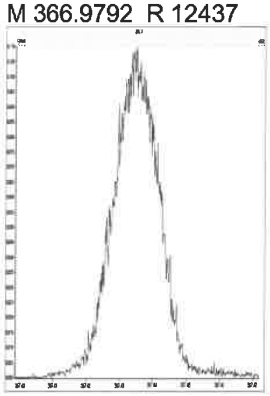

M 380.9760 R 12957

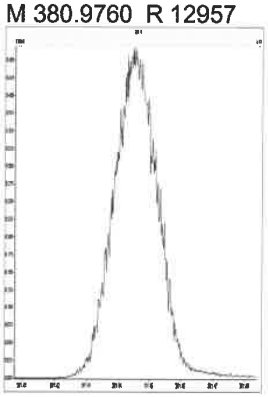

M 392.9760 R 12313

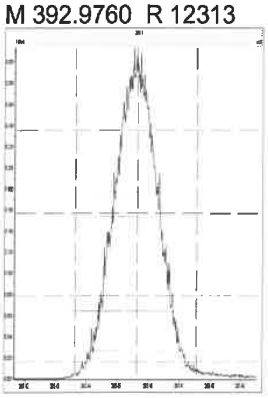

M 404.9760 R 11958

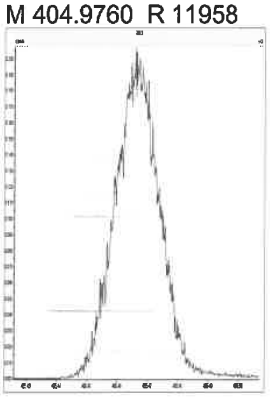

M 416.9760 R 12254

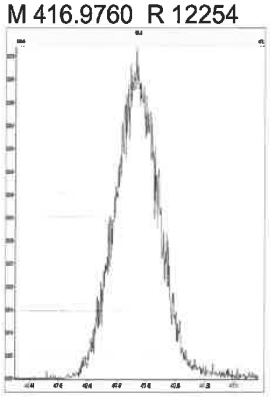

783034

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Wednesday, August 18, 2021 14:08:28 Pacific Daylight Time

M 318.9792 R 12815

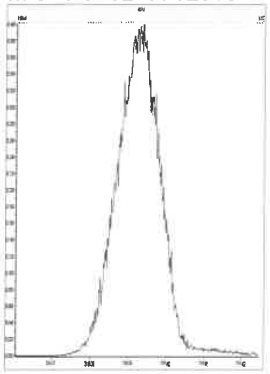

M 330.9792 R 13297

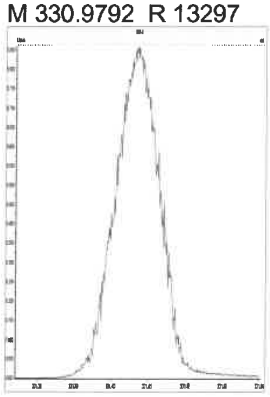

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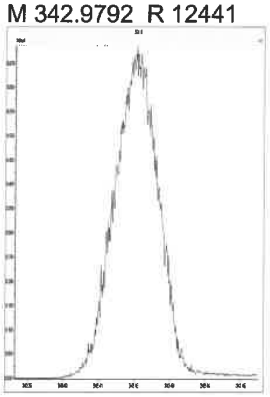

M 354.9792 R 12692

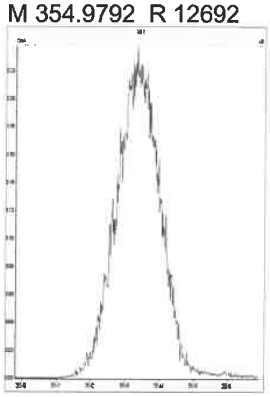

M 366.9792 R 12563

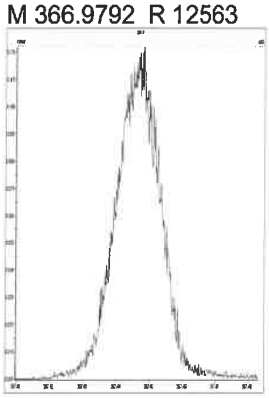

M 380.9760 R 12625

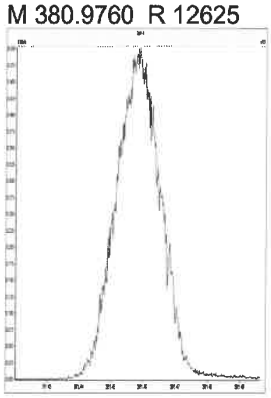

M 392.9760 R 12193

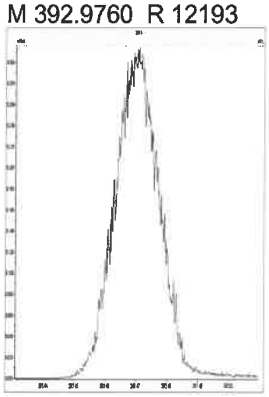

M 404.9760 R 12078

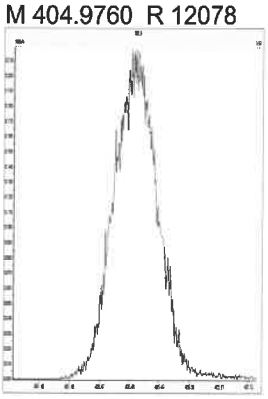

M 416.9760 R 12626

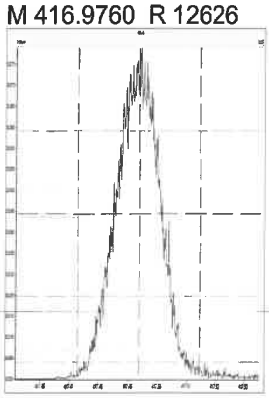

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Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

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M 366.9792 R 12251

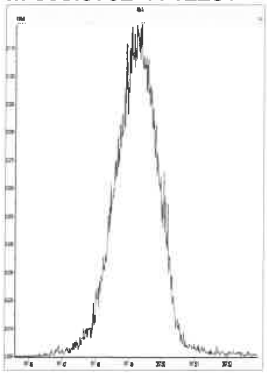

M 380.9760 R 12691

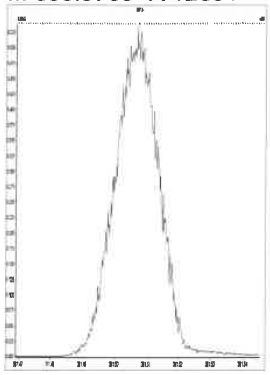

M 392.9760 R 13025

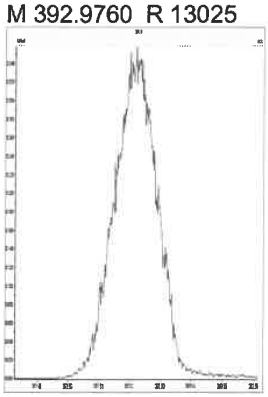

M 404.9760 R 12890

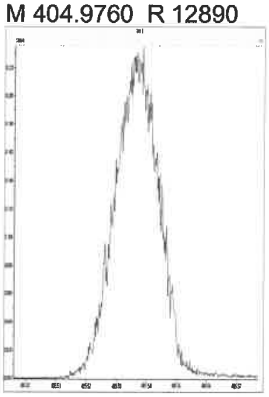

M 416.9760 R 13023

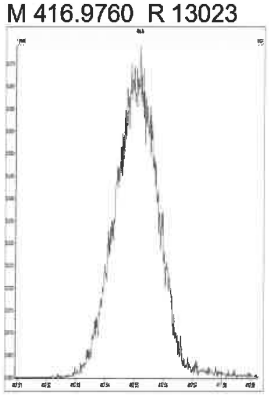

M 430.9728 R 12817

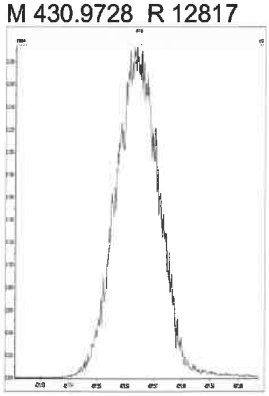

M 442.9728 R 12191

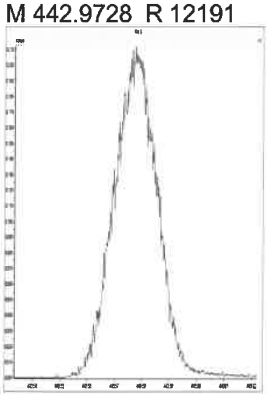

M 454.9728 R 12889

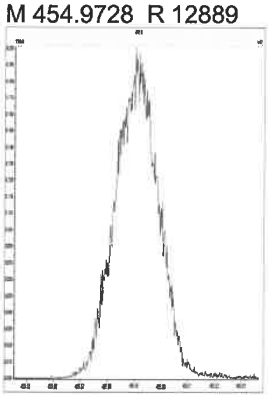

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Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

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M 380.9760 R 12693

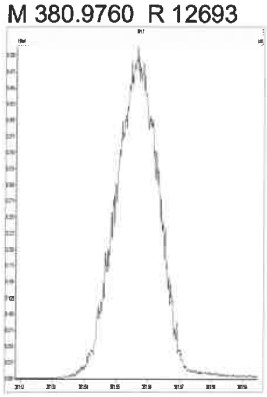

M 392.9760 R 12954

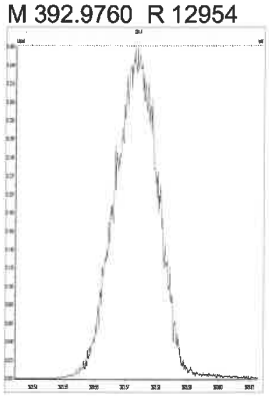

M 404.9760 R 12195

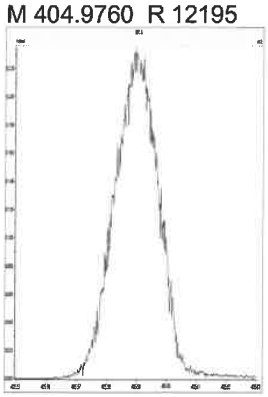

M 416.9760 R 12819

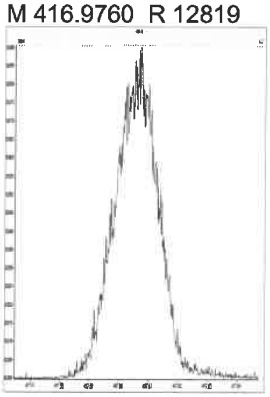

M 430.9728 R 12753

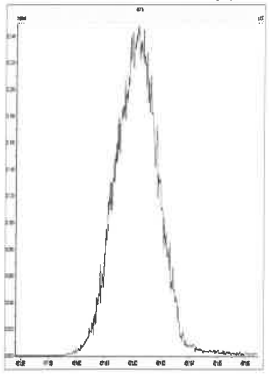

M 442.9728 R 13022

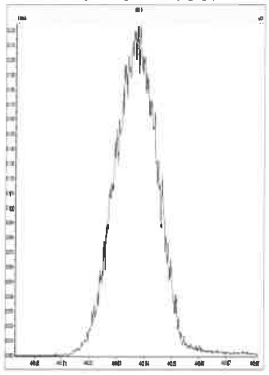

M 454.9728 R 12887

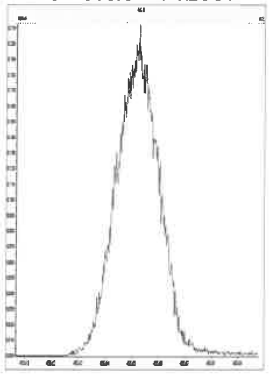

M 466.9728 R 12375

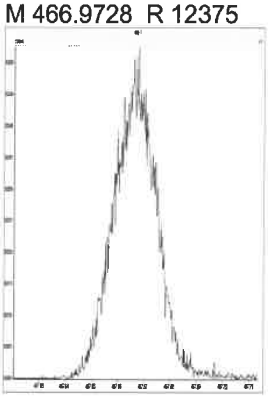

M 480.9696 R 12498

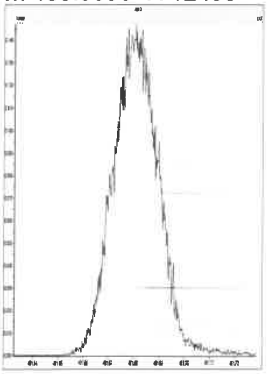

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Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

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M 380.9760 R 12440

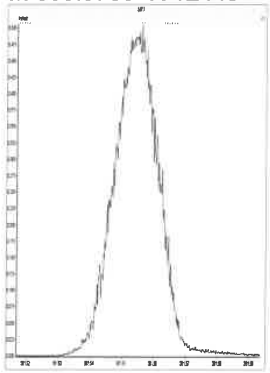

M 392.9760 R 12756

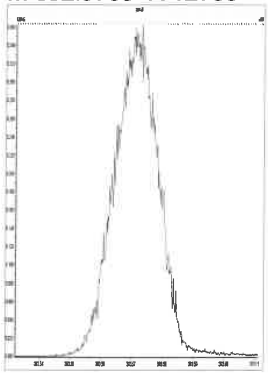

M 404.9760 R 12690

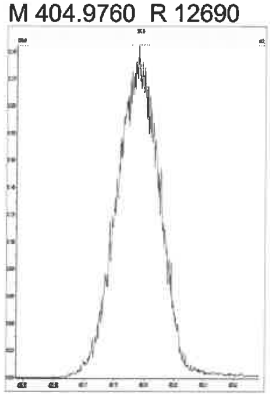

M 416.9760 R 12625

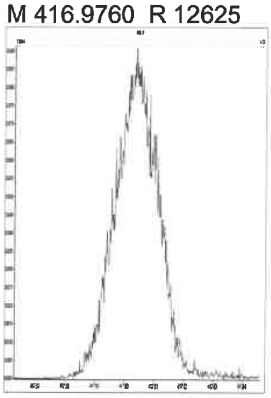

M 430.9728 R 12753

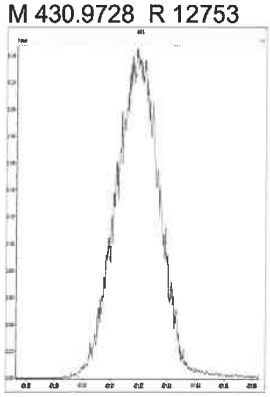

M 442.9728 R 13229

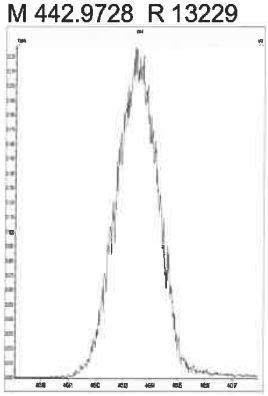

M 454.9728 R 12690

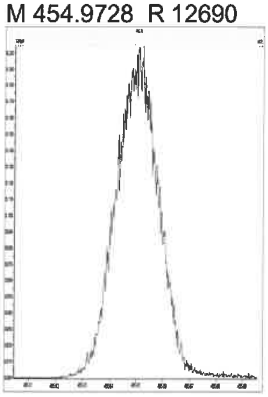

M 466.9728 R 13020

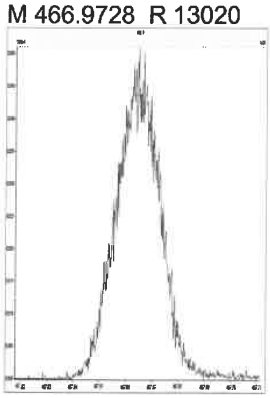

M 480.9696 R 12257

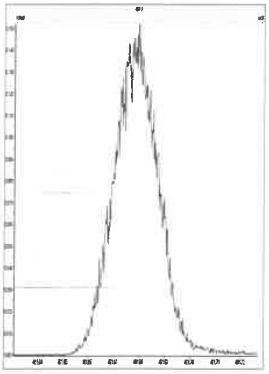

M 492.9696 R 12196

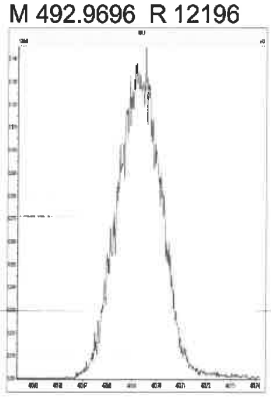

M 504.9696 R 12755

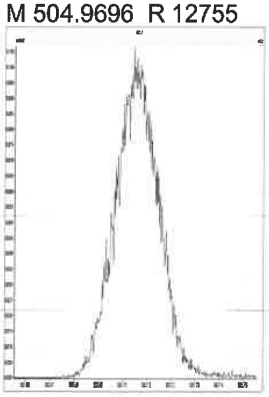

M 516.9697 R 12251

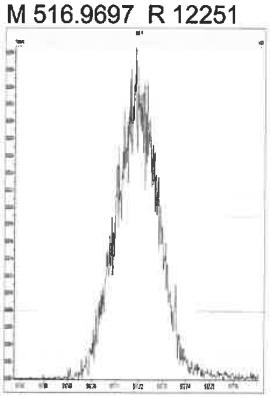

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M 292.9824_R 12026

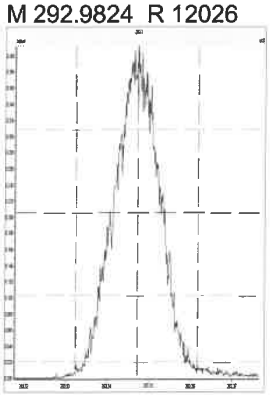

M 304.9824_R 11908

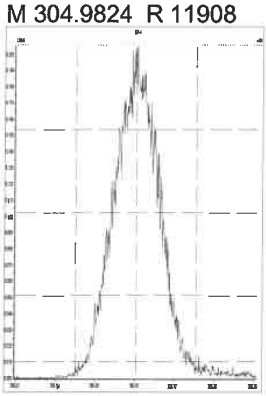

M 318.9792_R 12084

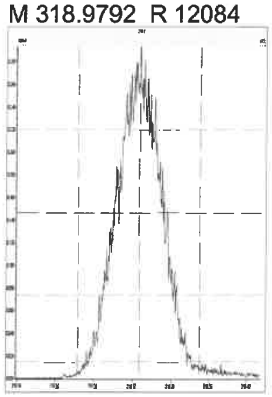

M 330.9792_R 11603

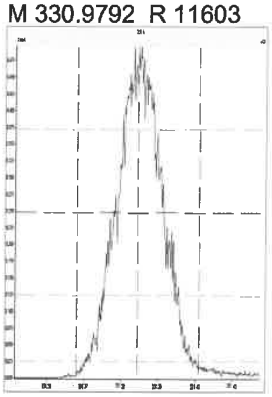

M 342.9792_R 11821

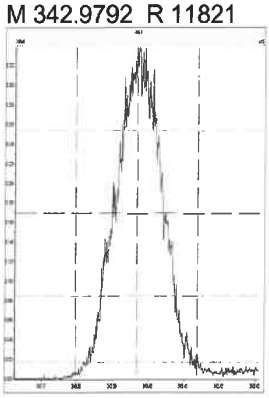

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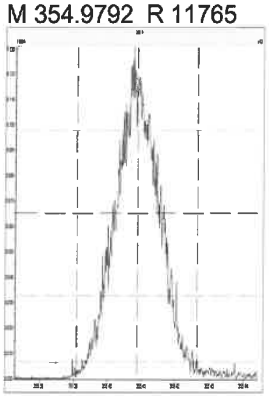

M 366.9792_R 12084

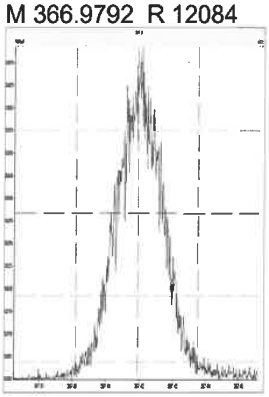

M 380.9760_R 11482

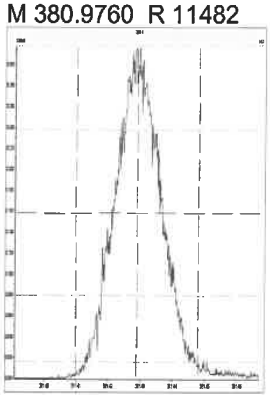

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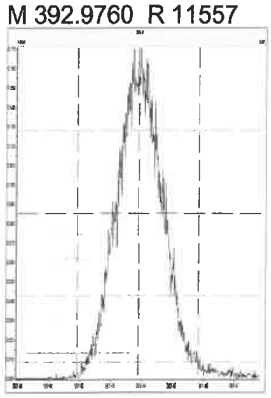

M 404.9760_R 11798

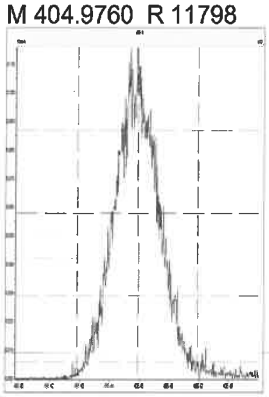

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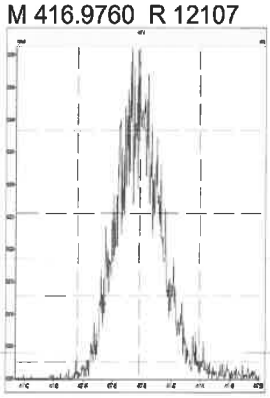

M 318.9792_R 11876

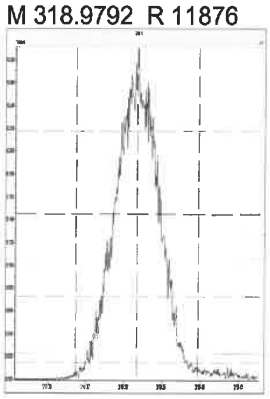

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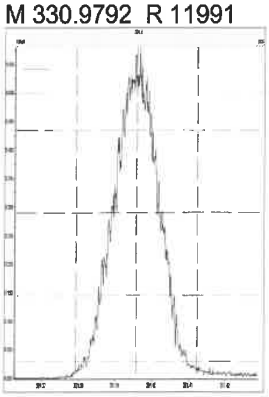

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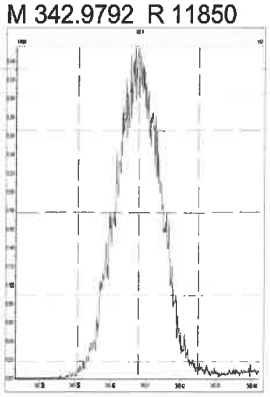

M 354.9792_R 12658

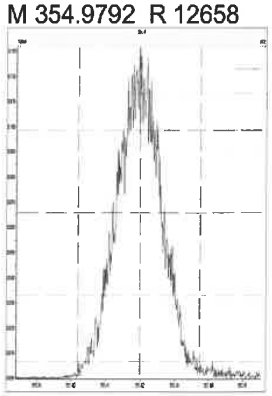

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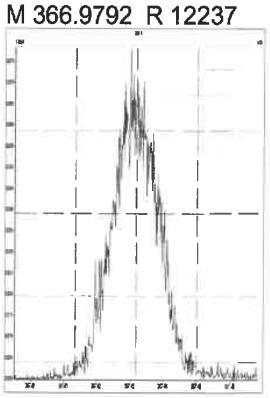

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M 380.9760 R 11684

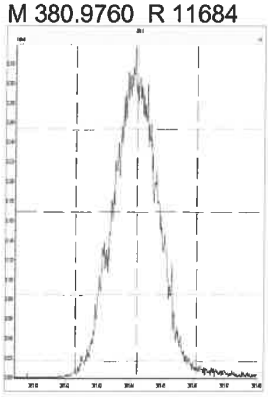

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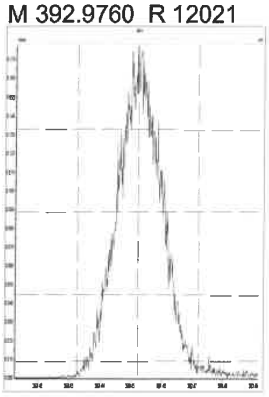

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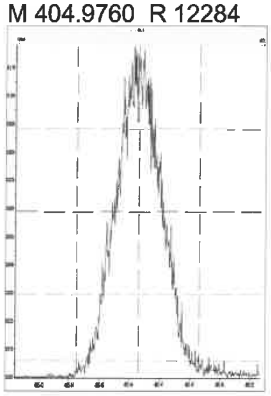

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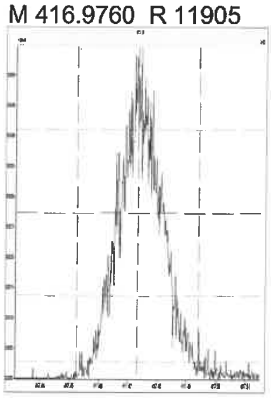

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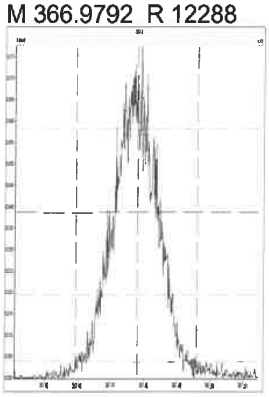

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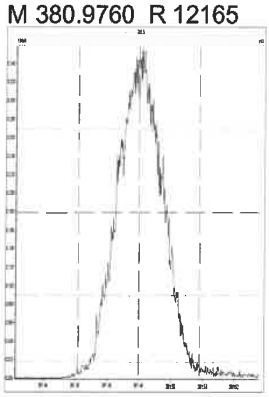

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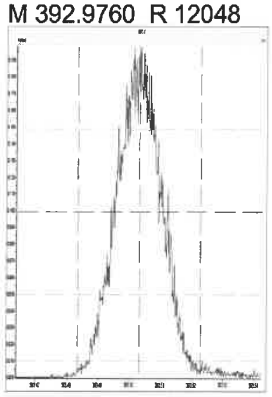

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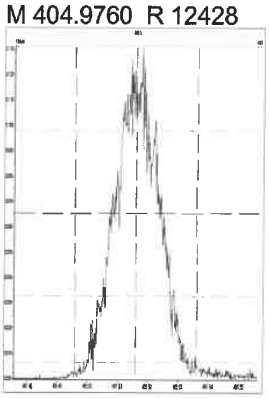

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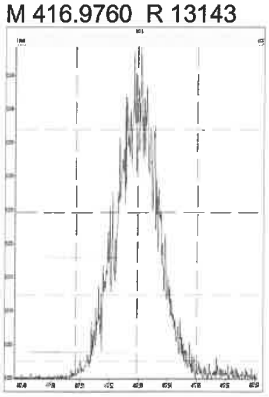

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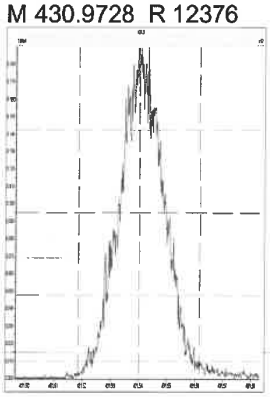

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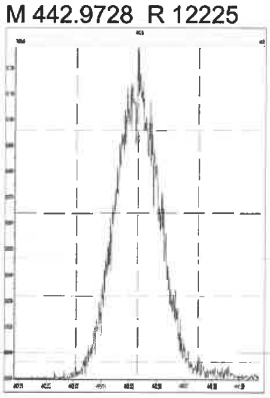

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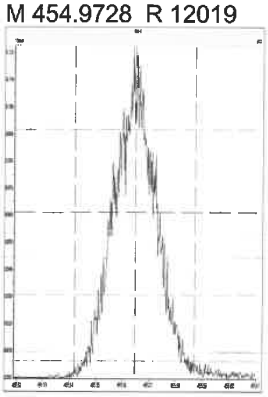

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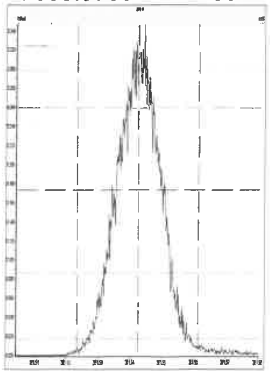

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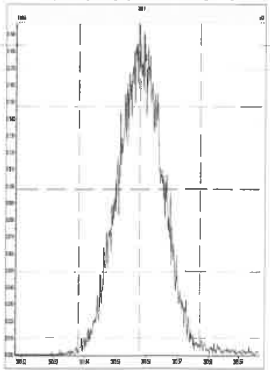

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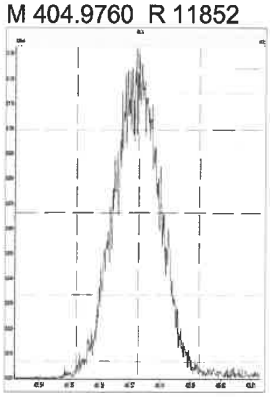

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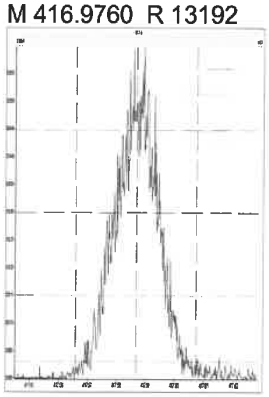

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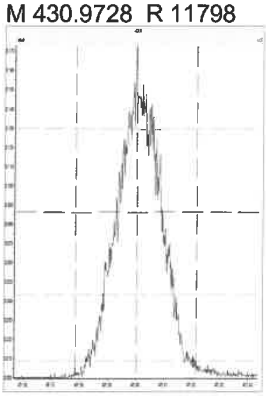

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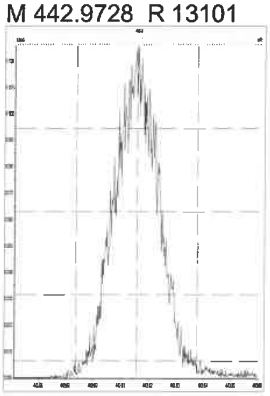

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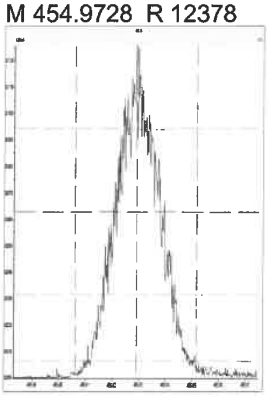

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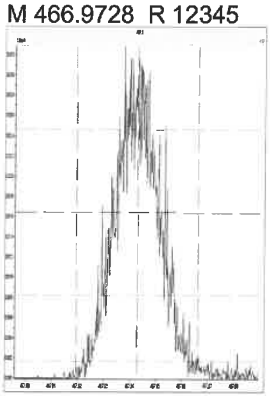

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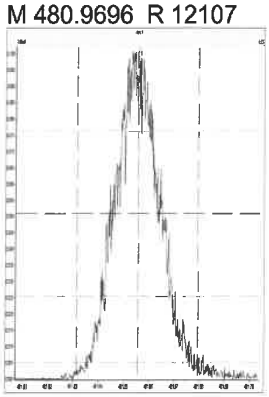

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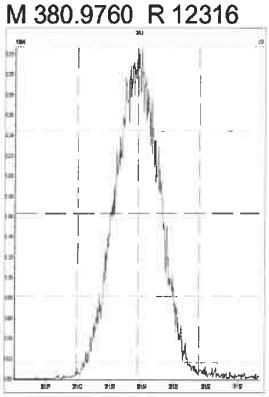

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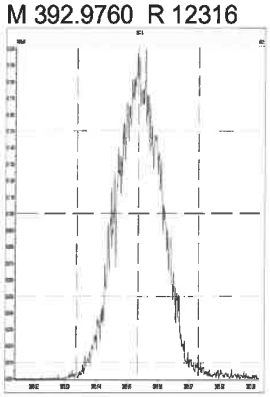

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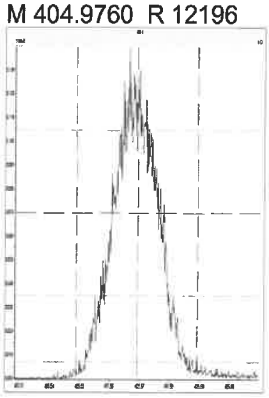

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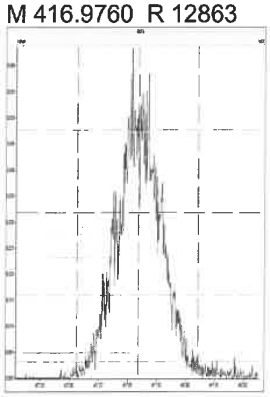

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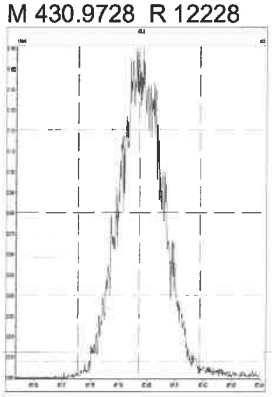

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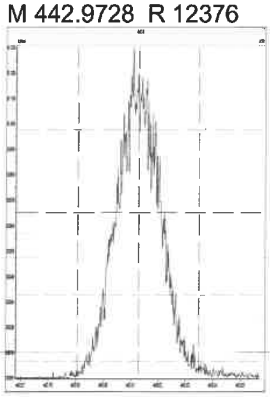

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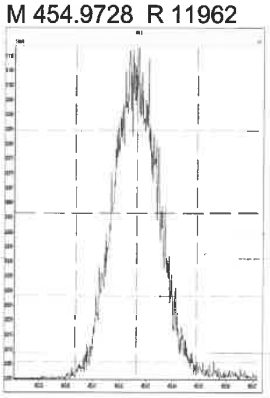

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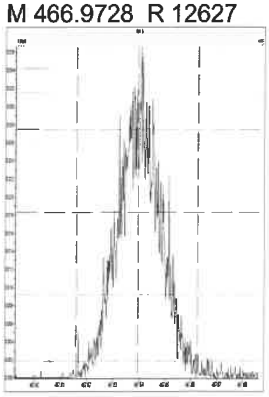

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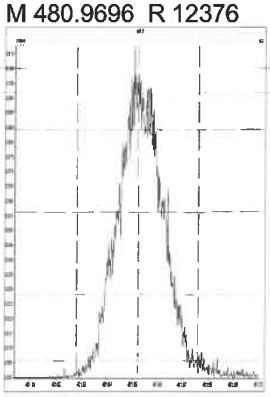

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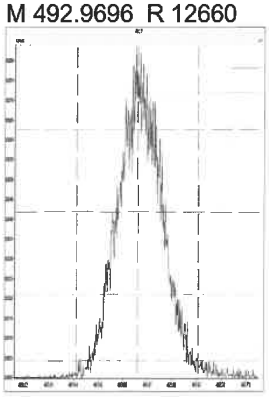

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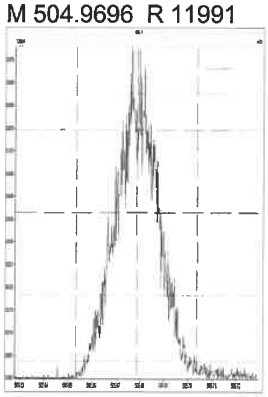

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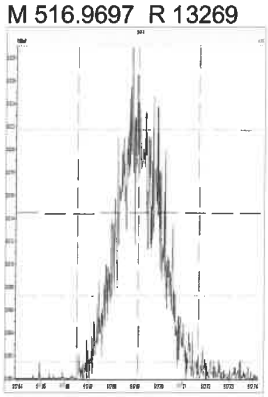

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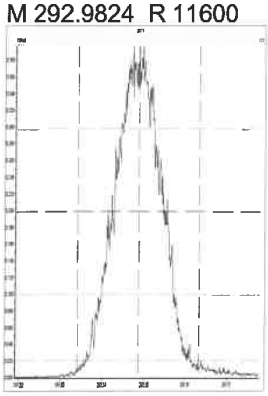

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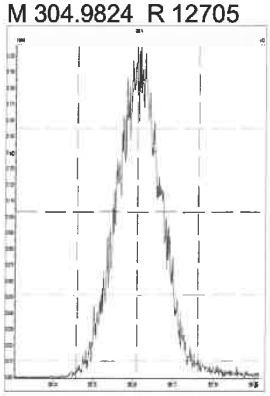

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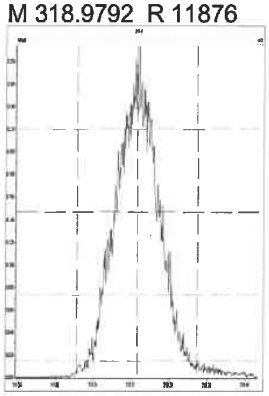

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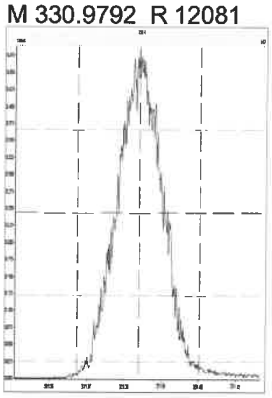

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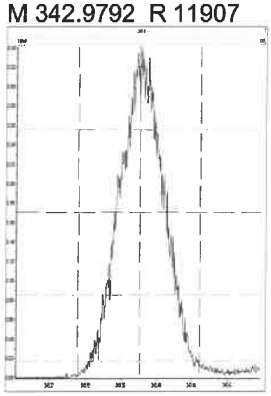

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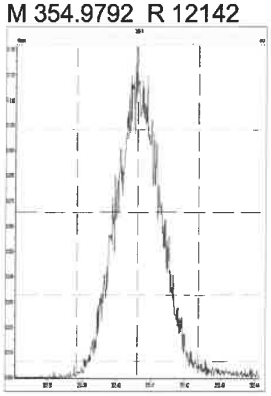

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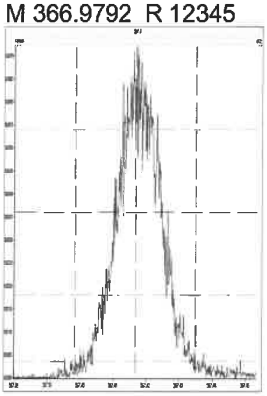

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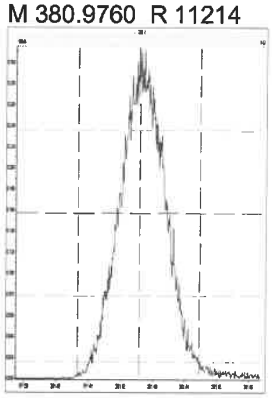

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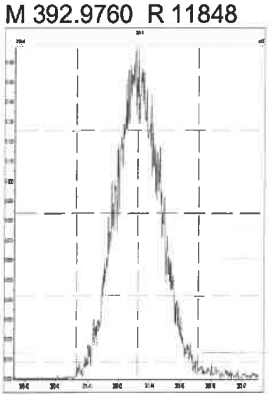

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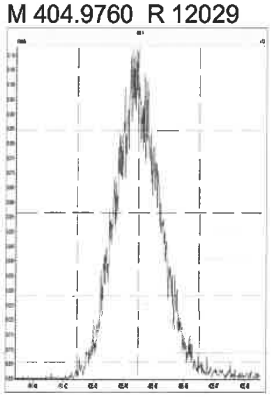

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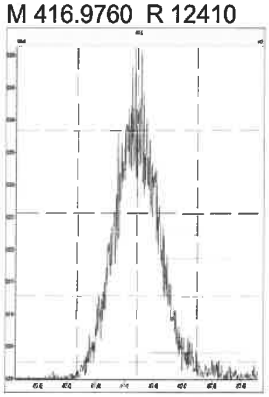

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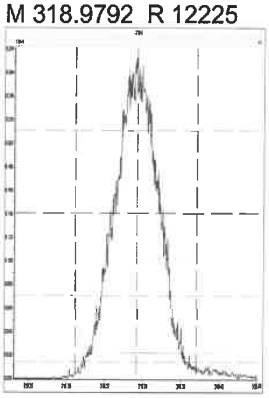

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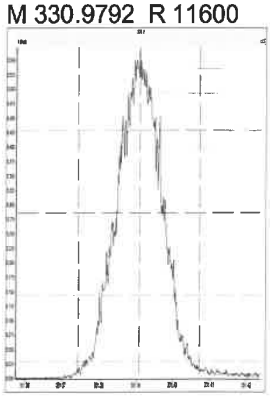

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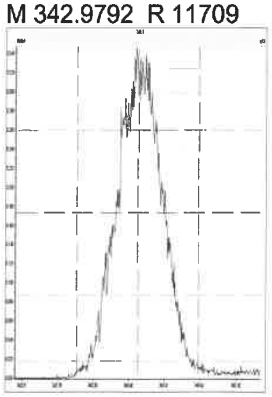

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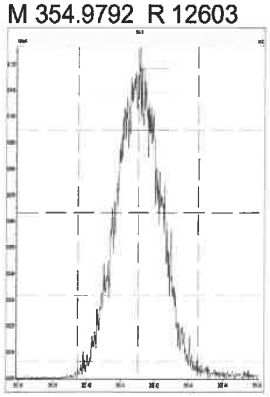

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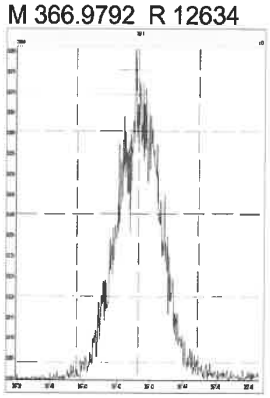

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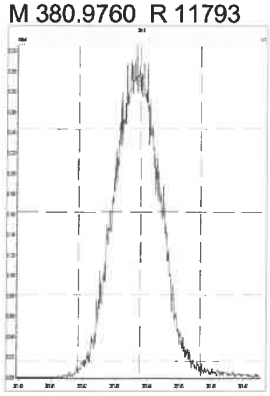

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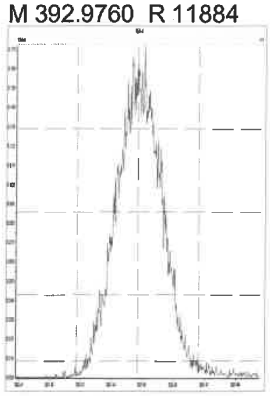

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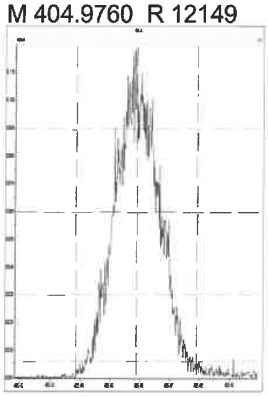

M 416.9760 R 12510

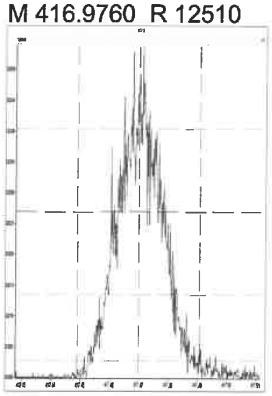

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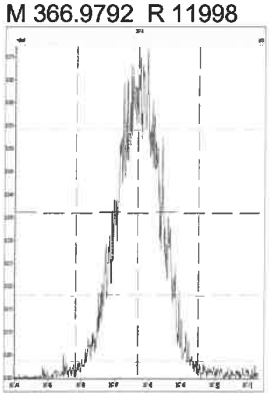

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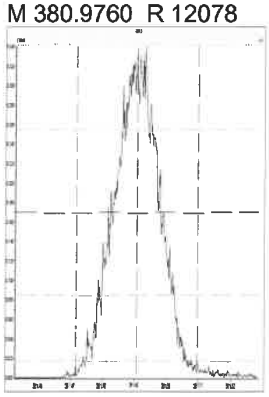

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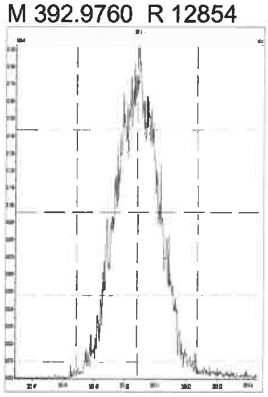

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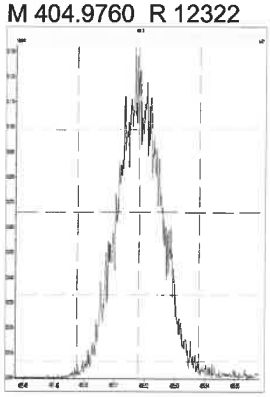

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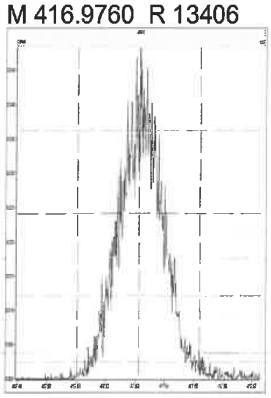

M 430.9728 R 11933

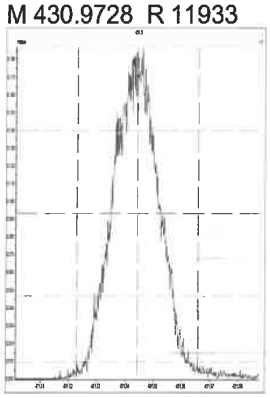

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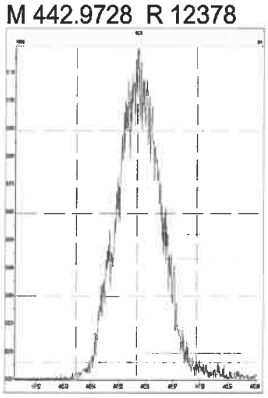

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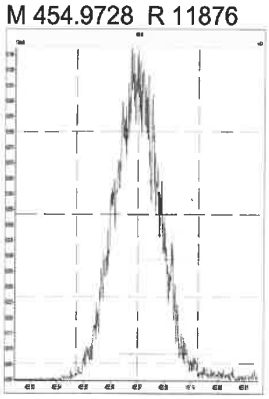

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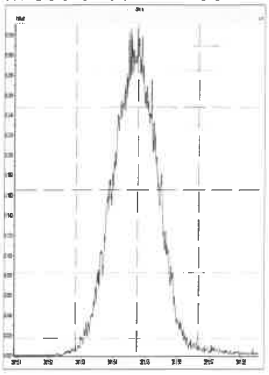

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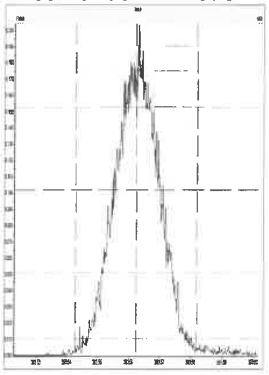

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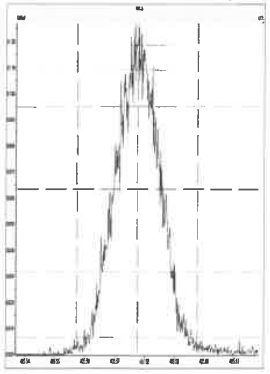

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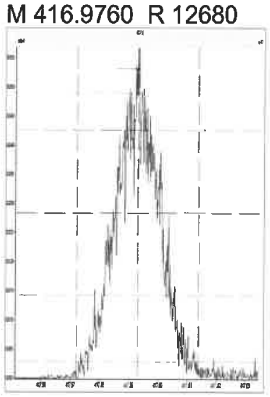

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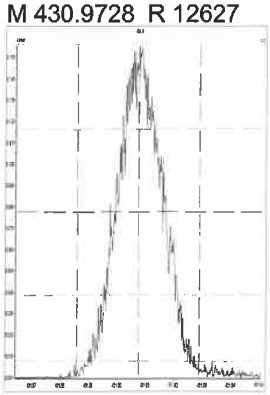

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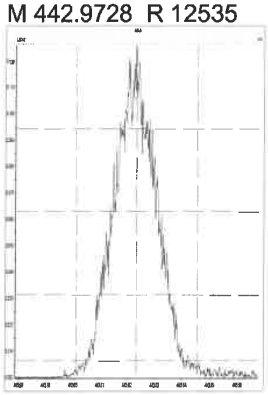

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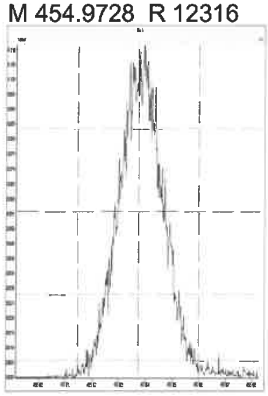

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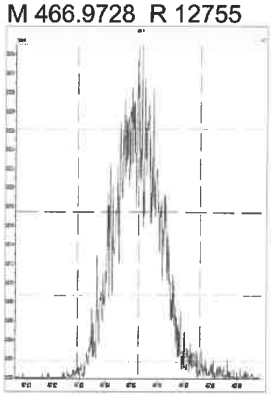

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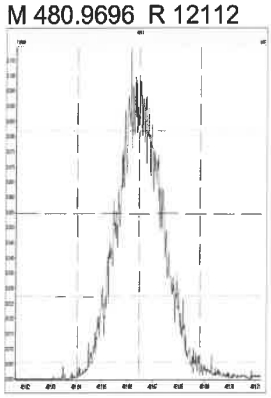

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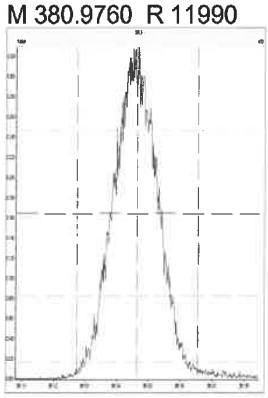

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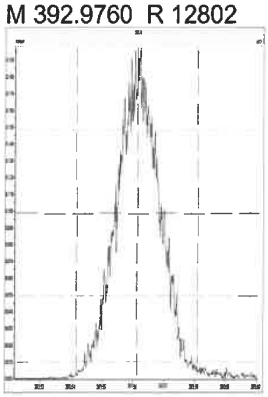

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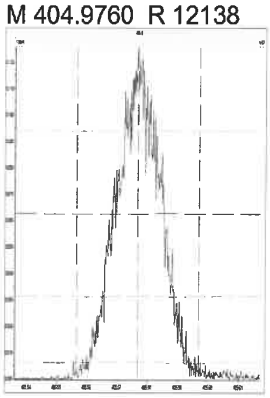

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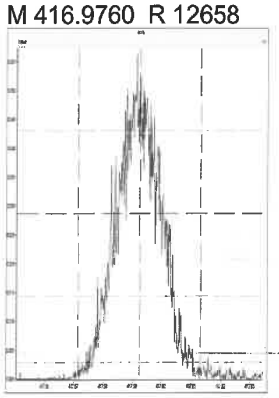

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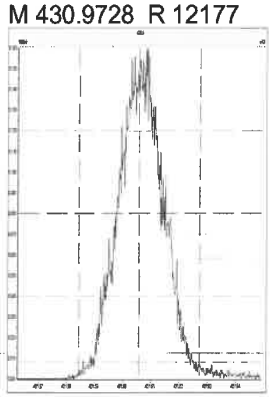

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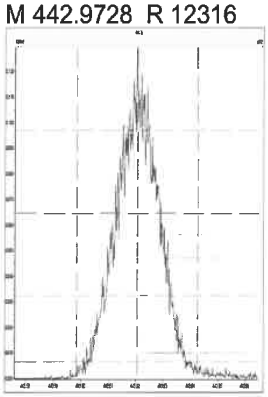

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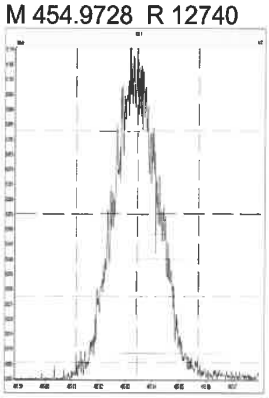

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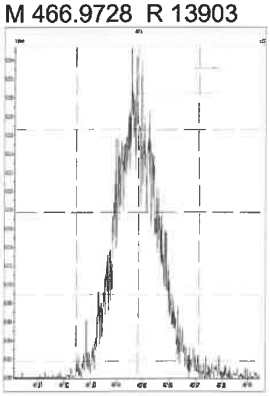

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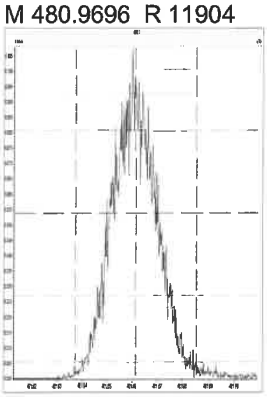

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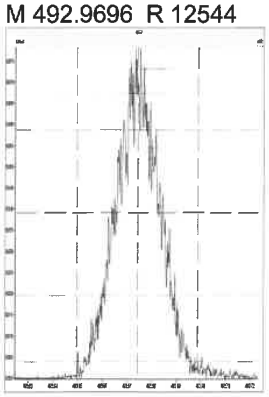

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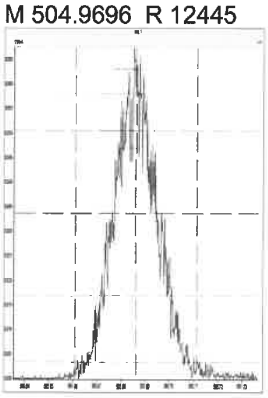

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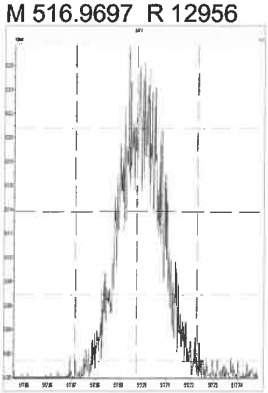

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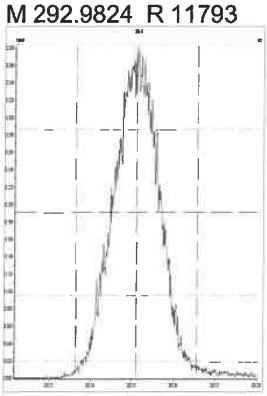

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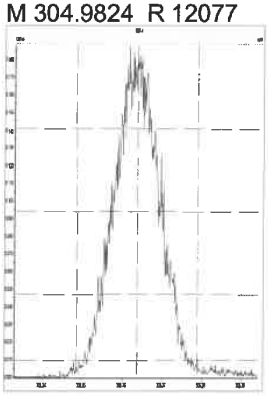

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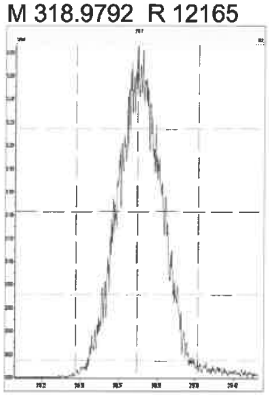

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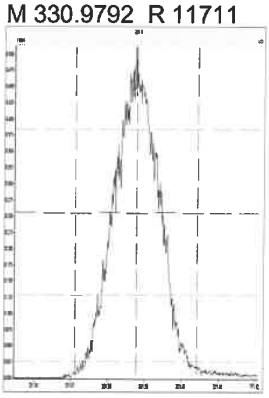

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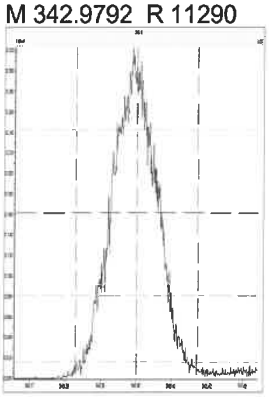

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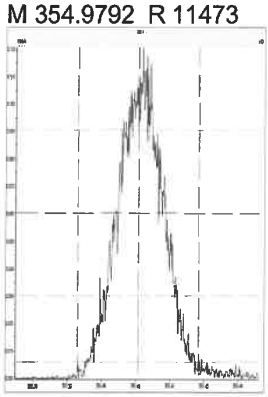

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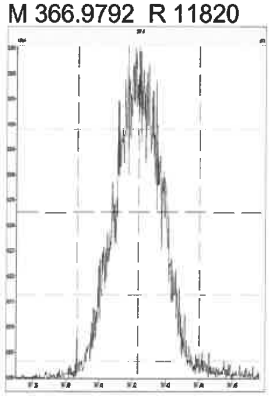

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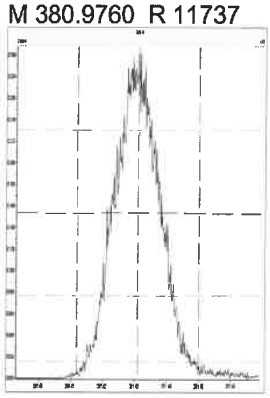

M 392.9760 R 11628

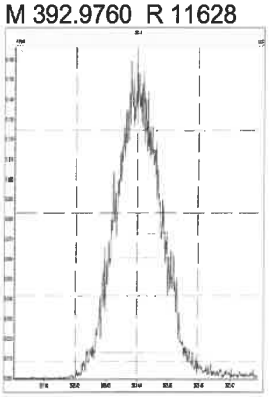

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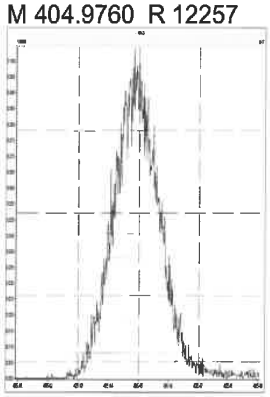

M 416.9760 R 12760

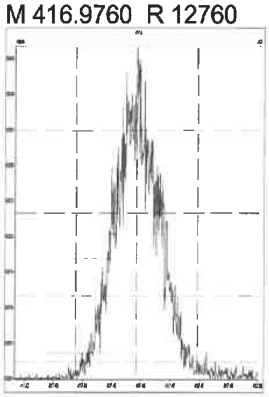

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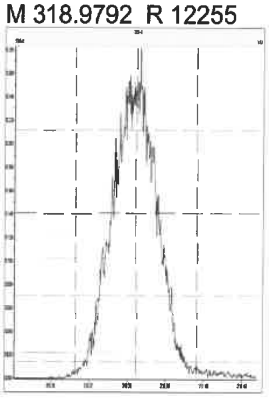

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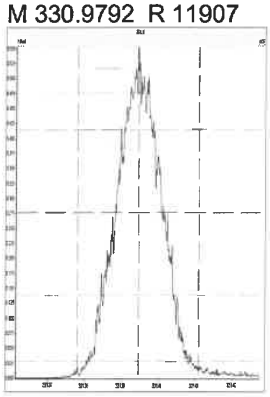

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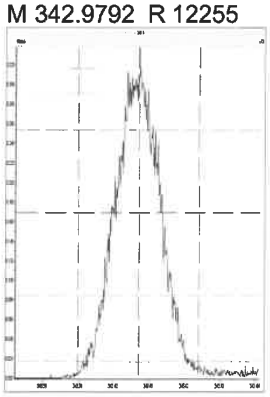

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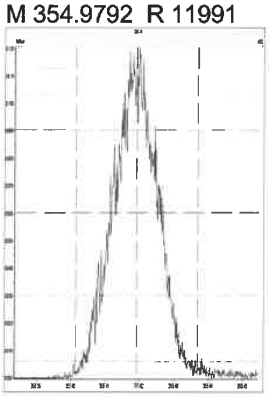

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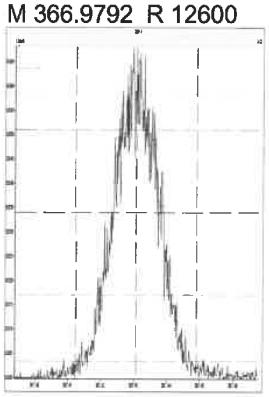

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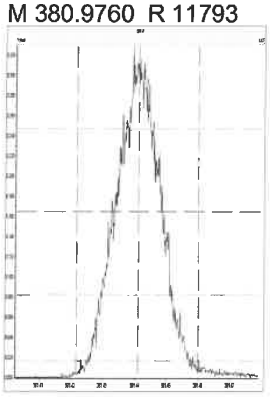

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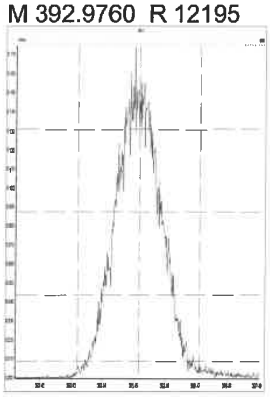

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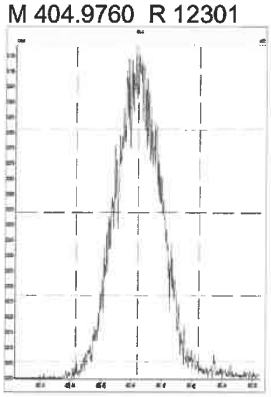

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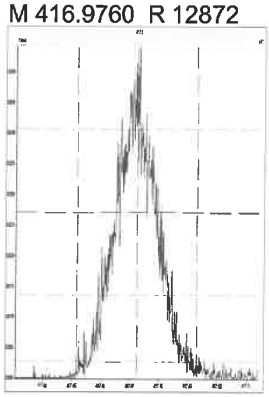

M 366.9792 R 11993

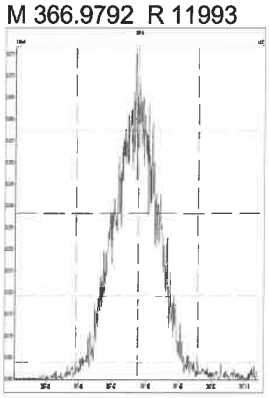

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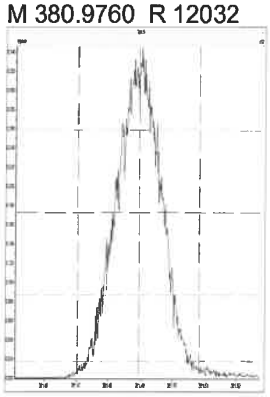

M 392.9760 R 11962

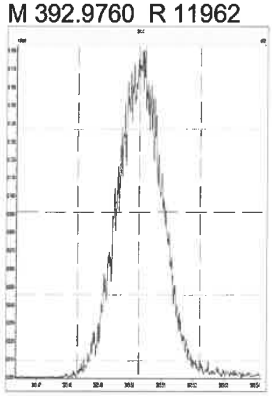

M 404.9760 R 12224

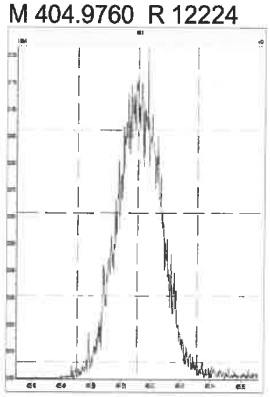

M 416.9760 R 13025

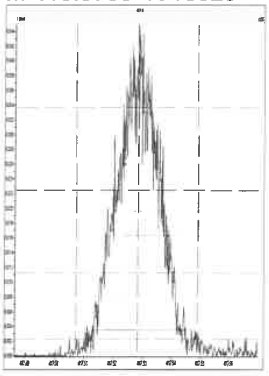

M 430.9728 R 12226

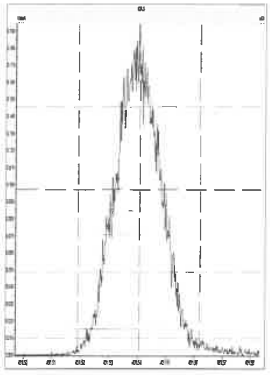

M 442.9728 R 12472

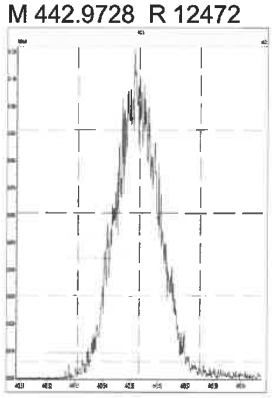

M 454.9728 R 12642

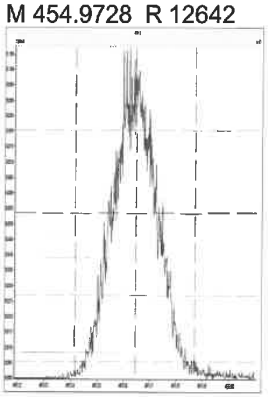

M 380.9760 R 12322

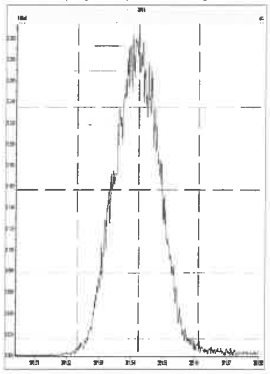

M 392.9760 R 12225

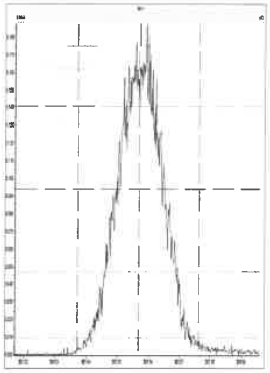

M 404.9760 R 12081

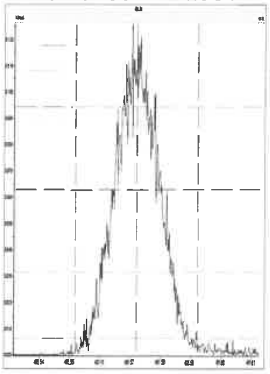

M 416.9760 R 12499

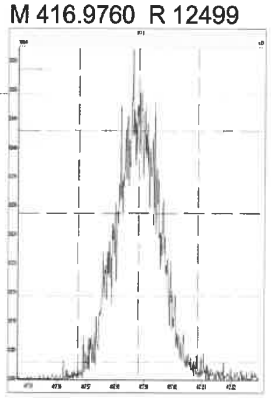

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Printed: Wednesday, August 18, 2021 23:49:29 Pacific Daylight Time

M 430.9728_R 11820

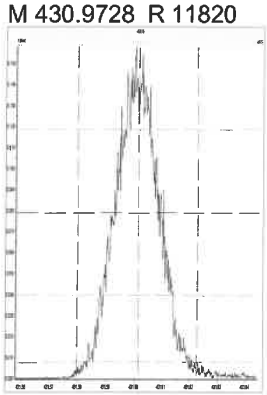

M 442.9728_R 12196

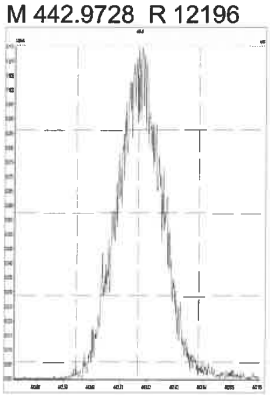

M 454.9728_R 12254

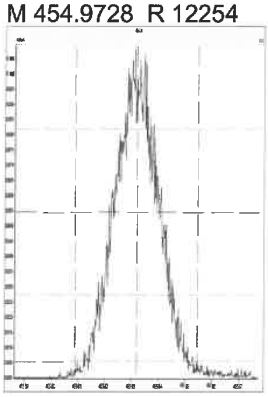

M 466.9728_R 12944

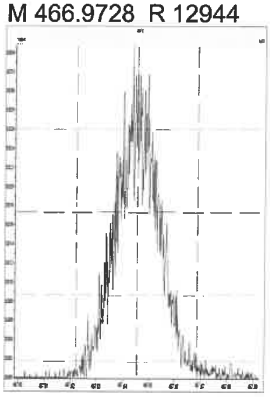

M 480.9696_R 11961

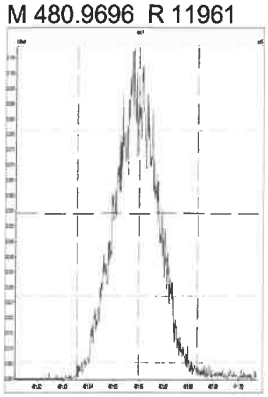

M 380.9760_R 11966

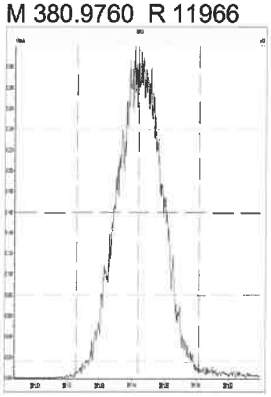

M 392.9760_R 12255

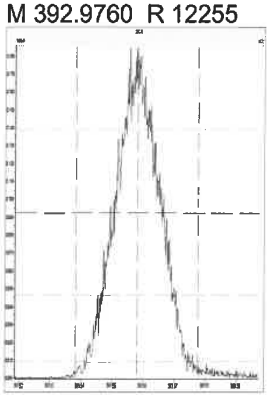

M 404.9760_R 12319

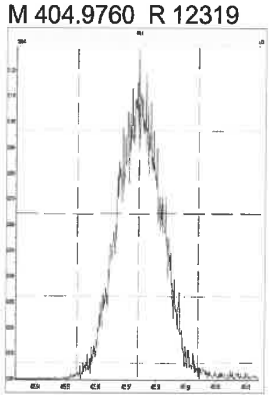

M 416.9760_R 12886

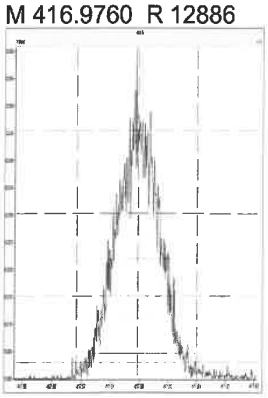

M 430.9728_R 12351

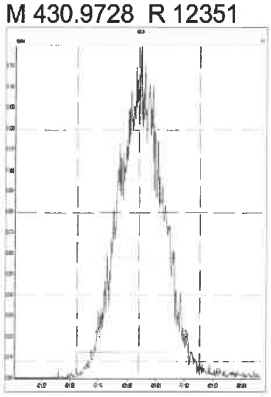

M 442.9728_R 12535

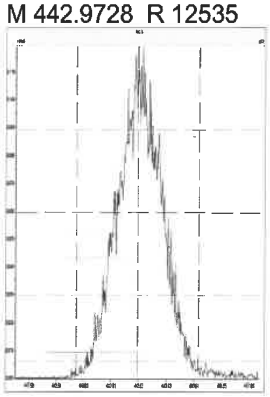

M 454.9728_R 12126

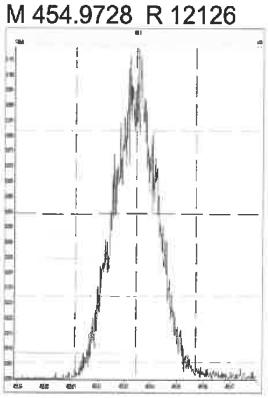

M 466.9728_R 12255

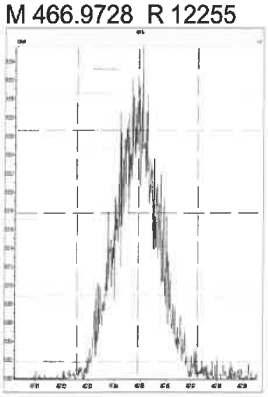

M 480.9696_R 12077

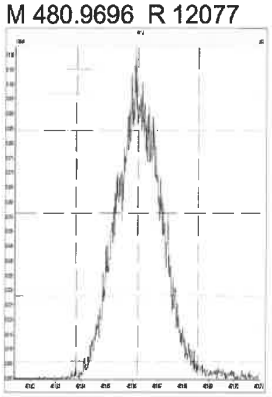

M 492.9696_R 12562

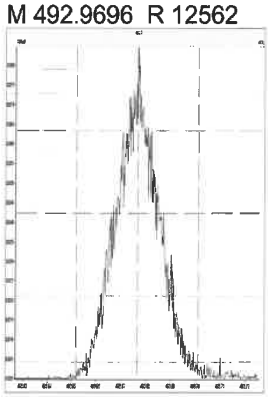

M 504.9696_R 12286

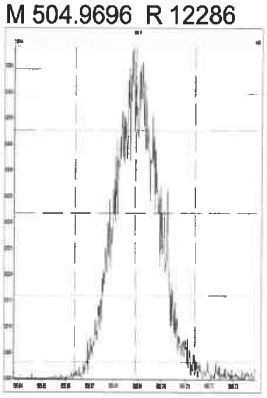

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M 516.9697 R 13640

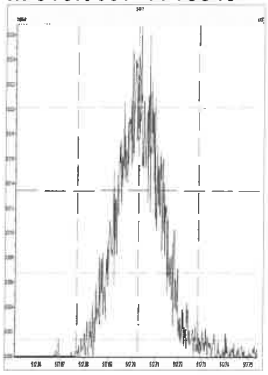

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 15:00:59 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081821 CS-4 HRDXNL4_00099
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:20:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.809	125274630	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.295	193804057	0.76	1.6249	95.2	95.2	0.2628	0.2628	95.21	
2,3,7,8-TCDF	17.310	20374957	0.74	1.0239	10.3	10.3	0.0202	0.0202	103	
A Non-2,3,7,8-sub-TCDF	17.159						0.0202	0.0202		n
S Total TCDF					10.3	10.3	0.0202	0.0202		
D 13C-2,3,7,8-TCDD	18.006	115575767	0.81	0.8993	102.6	102.6	0.2501	0.2501	103	
2,3,7,8-TCDD	18.021	14428107	0.79	1.2541	9.954	9.954	0.0216	0.0216	99.54	
$ 37Cl4-2,3,7,8-TCDD	18.021	14558317		1.1071	10.5	10.5	0.0226	0.0226	105	
A Non-2,3,7,8-sub-TCDD	17.620						0.0216	0.0216		
S Total TCDD					9.954	9.954	0.0216	0.0216		
D 13C-1,2,3,7,8-PeCDF	22.299	148698470	1.55	1.2101	98.1	98.1	0.2691	0.2691	98.09	
1,2,3,7,8-PeCDF	22.326	80901540	1.64	1.0611	51.3	51.3	0.1979	0.1979	103	
D 13C-2,3,4,7,8-PeCDF	23.635	152292643	1.52	1.2395	98.1	98.1	0.2627	0.2627	98.08	
2,3,4,7,8-PeCDF	23.649	80074314	1.58	1.0184	51.6	51.6	0.2180	0.2180	103	
A F1 PeCDFs	20.229						0.007854	0.007854		
A Non-2,3,7,8-sub-PeCDF	23.445						0.2076	0.2076		
S Total PeCDF					102.9	102.9	0.2079	0.2079		
D 13C-1,2,3,7,8-PeCDD	24.358	100276778	1.62	0.7612	105.2	105.2	0.1168	0.1168	105	
1,2,3,7,8-PeCDD	24.372	52599761	1.60	1.0484	50.0	50.0	0.0700	0.0700	100	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0700	0.0700		
S Total PeCDD					50.0	50.0	0.0700	0.0700		
D 13C-1,2,3,4,7,8-HxCDF	30.436	129822416	0.52	1.0837	96.6	96.6	0.4989	0.4989	96.59	
1,2,3,4,7,8-HxCDF	30.463	70522304	1.23	1.0851	50.1	50.1	0.3519	0.3519	100	
D 13C-1,2,3,6,7,8-HxCDF	30.623	134938060	0.53	1.1279	96.5	96.5	0.4793	0.4793	96.46	
1,2,3,6,7,8-HxCDF	30.649	78321574	1.21	1.1260	51.5	51.5	0.3215	0.3215	103	
D 13C-2,3,4,6,7,8-HxCDF	31.461	125717060	0.51	1.0637	95.3	95.3	0.5083	0.5083	95.29	
2,3,4,6,7,8-HxCDF	31.488	73972576	1.22	1.1675	50.4	50.4	0.2542	0.2542	101	
D 13C-1,2,3,7,8,9-HxCDF	32.273	114363903	0.51	0.9676	95.3	95.3	0.5588	0.5588	95.30	
1,2,3,7,8,9-HxCDF	32.286	67787700	1.23	1.1664	50.8	50.8	0.2705	0.2705	102	
A Non-2,3,7,8-sub-HxCDF	30.410						0.2953	0.2953		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					202.8	202.8	0.2995	0.2995		
* 13C-1,2,3,7,8,9-HxCDD	32.100	124026185	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.661	89334733	1.24	0.7334	98.2	98.2	0.3905	0.3905	98.21	
1,2,3,4,7,8-HxCDD	31.674	48210928	1.25	1.0640	50.7	50.7	0.1818	0.1818	101	
D 13C-1,2,3,6,7,8-HxCDD	31.767	102007309	1.20	0.8802	93.4	93.4	0.3254	0.3254	93.44	
1,2,3,6,7,8-HxCDD	31.781	53948690	1.26	1.0001	52.9	52.9	0.1851	0.1851	106	
1,2,3,7,8,9-HxCDD	32.113	58022287	1.26	1.1325	53.6	53.6	0.1671	0.1671	107	
A Non-2,3,7,8-sub-HxCDD	30.816						0.1776	0.1776		
S Total HxCDD					157.2	157.2	0.1780	0.1780		
D 13C-1,2,3,4,6,7,8-HpCDF	33.718	90162961	0.44	0.7730	94.0	94.0	1.028	1.028	94.04	
1,2,3,4,6,7,8-HpCDF	33.730	67354435	1.05	1.4413	51.8	51.8	0.5166	0.5166	104	
D 13C-1,2,3,4,7,8,9-HpCDF	34.811	81525679	0.44	0.7008	93.8	93.8	1.134	1.134	93.79	
1,2,3,4,7,8,9-HpCDF	34.811	55774124	1.06	1.3174	51.9	51.9	0.7362	0.7362	104	
A Non-2,3,7,8-sub-HpCDF	34.283						0.6108	0.6108		
S Total HpCDF					103.8	103.8	0.6264	0.6264		
D 13C-1,2,3,4,6,7,8-HpCDD	34.520	78738609	1.00	0.6472	98.1	98.1	0.5070	0.5070	98.09	
1,2,3,4,6,7,8-HpCDD	34.532	43664822	1.04	1.0943	50.7	50.7	0.2388	0.2388	101	
A Non-2,3,7,8-sub-HpCDD	33.504						0.2388	0.2388		
S Total HpCDD					50.7	50.7	0.2388	0.2388		
D 13C-OCDD	36.866	112330513	0.88	0.4472	202.5	202.5	0.1921	0.1921	101	
OCDF	36.962	82814446	0.89	1.4382	102.5	102.5	0.0885	0.0885	103	
OCDD	36.878	64177494	0.90	1.1070	103.2	103.2	0.1016	0.1016	103	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 15:00:59 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081821 CS-4 HRDXNL4_00099
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:20:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.809	17.809	0		55736498	13587558	13374	33435	1016		
333.9339	17.809	17.809	0		69538132	16878371	14038	35095	1202	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.295	17.295	0	0.971	83586866	19721140	19889	49722	992		
317.9389	17.295	17.295	0	0.971	110217191	26049370	32151	80377	810	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.310	17.310	0	1.001	8692442	2077936	1567	3917	1326		
305.8987	17.310	17.310	0	1.001	11682515	2758484	2227	5567	1239	0.74(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.948	17.159	-13	0.980	42020	10555	1567	3917	7		
305.8987	16.933	17.159	-14	0.979	55712	14433	2227	5567	6	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.006	18.006	0	1.011	51785893	11505545	13374	33435	860		
333.9339	18.006	18.006	0	1.011	63789874	14200675	14038	35095	1012	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.021	18.021	0	1.001	6369095	1448386	1525	3812	950		
321.8936	18.021	18.021	0	1.001	8059012	1827583	1260	3150	1450	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.021	18.021	0	1.012	14558317	3268578	3049	7622	1072		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.620						1525	3812			
321.8936	17.620						1260	3150			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.299	22.299	0	1.252	90271970	15041763	24310	60775	619		
353.8970	22.299	22.299	0	1.252	58426500	9561596	15368	38420	622	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.326	22.326	0	1.001	50207714	8182842	12381	30952	661		
341.8567	22.312	22.326	-1	1.001	30693826	5086401	8286	20715	614	1.64(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.635	23.635	0	1.327	91910933	14097277	24310	60775	580		
353.8970	23.635	23.635	0	1.327	60381710	9178004	15368	38420	597	1.52(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.649	23.649	0	1.001	49069040	7334316	12381	30952	592		
341.8567	23.649	23.649	0	1.001	31005274	4671897	8286	20715	564	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.229						299	747			
341.8567	20.229						483	1207			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.445						12381	30952			
341.8567	23.445						8286	20715			
13C-1,2,3,7,8-PeCDD											
367.8949	24.358	24.358	0	1.368	61945783	8910689	6562	16405	1358		
369.8919	24.358	24.358	0	1.368	38330995	5550706	4275	10687	1298	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.372	24.372	0	1.001	32358326	4704662	2703	6757	1741		
357.8516	24.372	24.372	0	1.001	20241435	2938127	1542	3855	1905	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						2703	6757			
357.8516	23.696						1542	3855			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.436	30.436	0	0.948	44506160	7943612	22718	56795	350		
385.8610	30.436	30.436	0	0.948	85316256	15360951	43547	108867	353	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.463	30.463	0	1.001	38844012	7190710	19541	48852	368		
375.8178	30.463	30.463	0	1.001	31678292	5902956	16060	40150	368	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.623	30.623	0	0.954	46488347	8438650	22718	56795	371		
385.8610	30.623	30.623	0	0.954	88449713	16149971	43547	108867	371	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.649	30.649	0	1.001	42953118	7782499	19541	48852	398		
375.8178	30.649	30.649	0	1.001	35368456	6456942	16060	40150	402	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.461	31.461	0	0.980	42655418	10160970	22718	56795	447		
385.8610	31.461	31.461	0	0.980	83061642	19823875	43547	108867	455	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.488	31.488	0	1.001	40621532	9421030	19541	48852	482		
375.8178	31.475	31.488	-1	1.000	33351044	7911439	16060	40150	493	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.273	32.273	0	1.005	38827641	9607307	22718	56795	423		
385.8610	32.273	32.273	0	1.005	75536262	18600026	43547	108867	427	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.286	32.286	0	1.000	37444442	9256034	19541	48852	474		
375.8178	32.286	32.286	0	1.000	30343258	7642697	16060	40150	476	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.410						19541	48852			
375.8178	30.410						16060	40150			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.100	32.100	0		68288771	16888912	18190	45475	928		
403.8529	32.100	32.100	0		55737414	13752307	16910	42275	813	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.661	31.661	0	0.986	49496871	13062548	18190	45475	718		
403.8529	31.661	31.661	0	0.986	39837862	10484312	16910	42275	620	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.674	31.674	0	1.000	26830218	7268440	9858	24645	737		
391.8127	31.674	31.674	0	1.000	21380710	5721266	8360	20900	684	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.767	31.767	0	0.990	55587908	13310800	18190	45475	732		
403.8529	31.754	31.767	-1	0.989	46419401	11286560	16910	42275	667	1.20(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.781	31.781	0	1.000	30110702	7380107	9858	24645	749		
391.8127	31.781	31.781	0	1.000	23837988	5817525	8360	20900	696	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.113	32.113	0	1.014	32338097	8008979	9858	24645	812		
391.8127	32.100	32.113	-1	1.014	25684190	6429936	8360	20900	769	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.816						9858	24645			
391.8127	30.816						8360	20900			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.718	33.718	0	1.050	27516469	8483012	30008	75020	283		
419.8220	33.718	33.718	0	1.050	62646492	19337147	67426	168565	287	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.730	33.730	0	1.000	34518971	10819501	40732	101830	266		
409.7789	33.730	33.730	0	1.000	32835464	10367364	42129	105322	246	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.811	34.811	0	1.084	24922068	6496289	30008	75020	216		
419.8220	34.799	34.811	-1	1.084	56603611	14862341	67426	168565	220	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.811	34.811	0	1.000	28680940	7773364	40732	101830	191		
409.7789	34.811	34.811	0	1.000	27093184	7389057	42129	105322	175	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.283						40732	101830			
409.7789	34.283						42129	105322			

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.520	34.520	0	1.075	39416837	11323012	21641	54102	523		
437.8140	34.520	34.520	0	1.075	39321772	11021895	18578	46445	593	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.532	34.532	0	1.000	22231118	6282473	11282	28205	557		
425.7737	34.532	34.532	0	1.000	21433704	5941517	12071	30177	492	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						11282	28205			
425.7737	33.504						12071	30177			
13C-OCDD											
469.7779	36.866	36.866	0	1.148	52534568	12396640	4359	10897	2844		
471.7750	36.866	36.866	0	1.148	59795945	14331014	6168	15420	2323	0.88(0.76-1.02)	
OCDF											
441.7428	36.962	36.962	0	1.003	39008933	9420516	3208	8020	2937		
443.7399	36.962	36.962	0	1.003	43805513	10637880	3598	8995	2957	0.89(0.76-1.02)	
OCDD											
457.7377	36.878	36.878	0	1.000	30441767	7255018	3155	7887	2300		
459.7348	36.878	36.878	0	1.000	33735727	8026620	2858	7145	2808	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

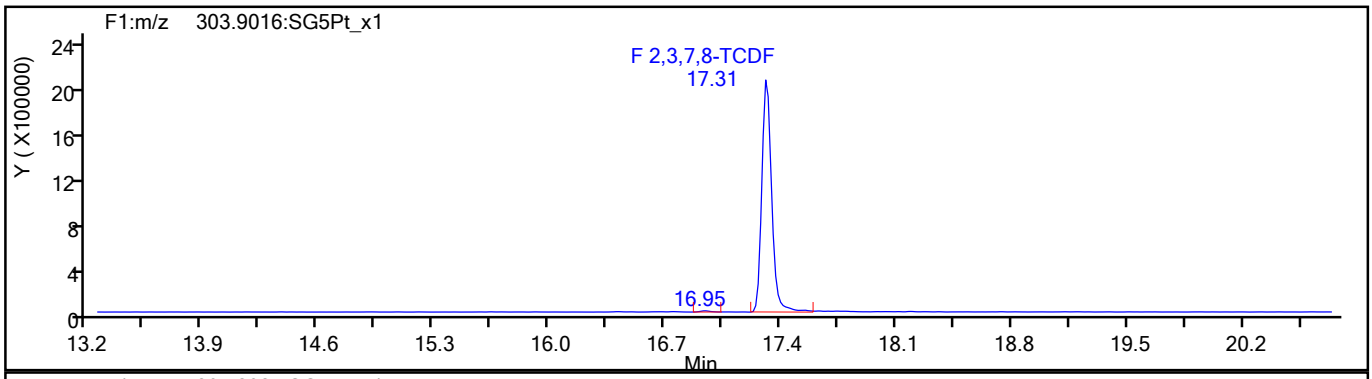

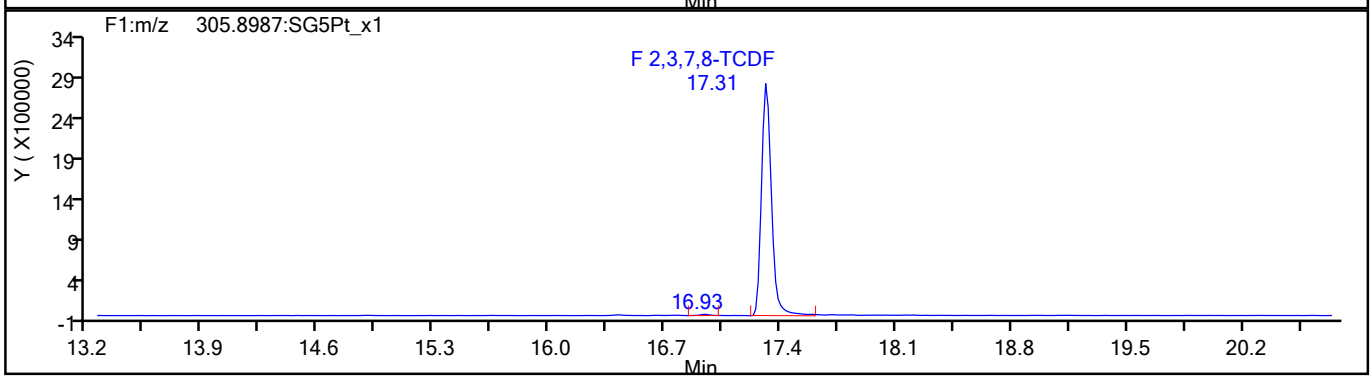

TCDF Standards

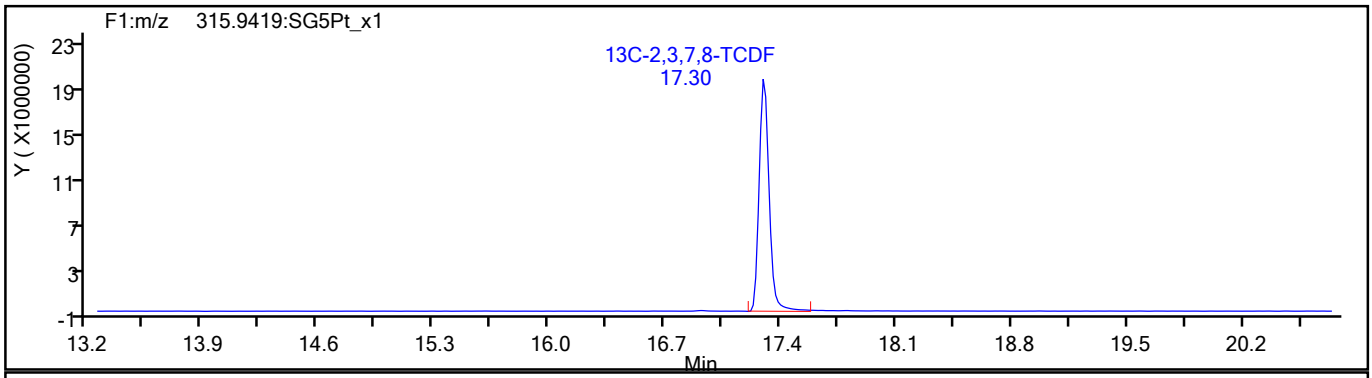

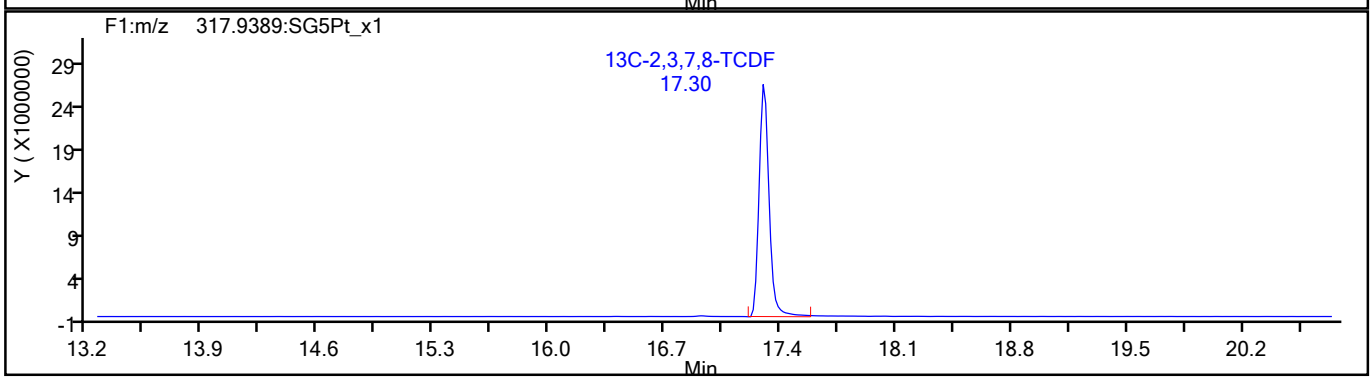

783057

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

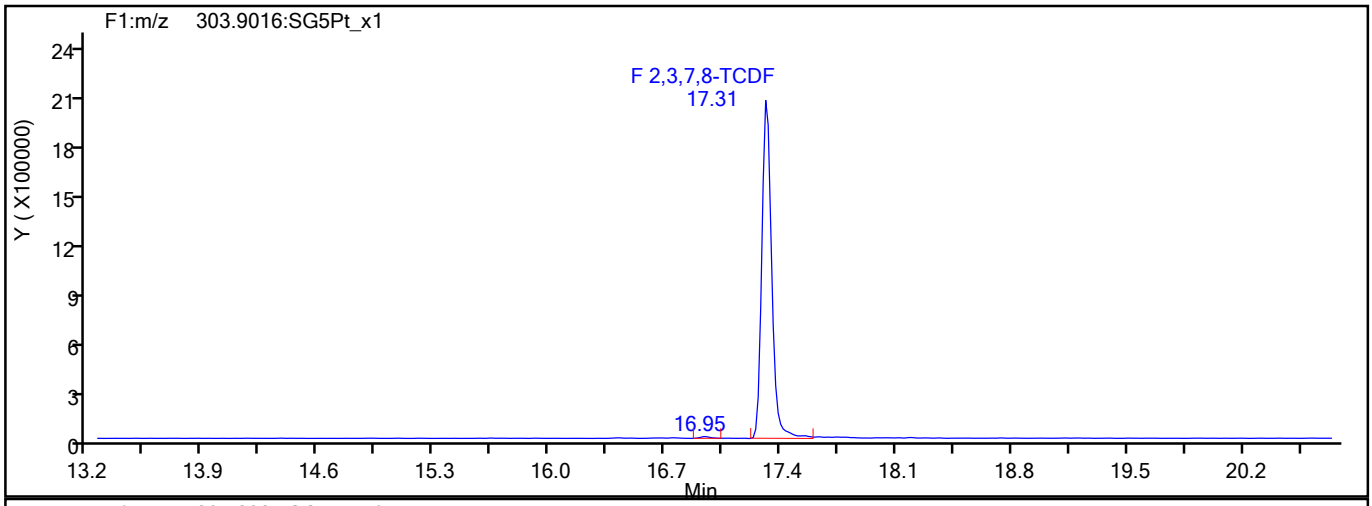

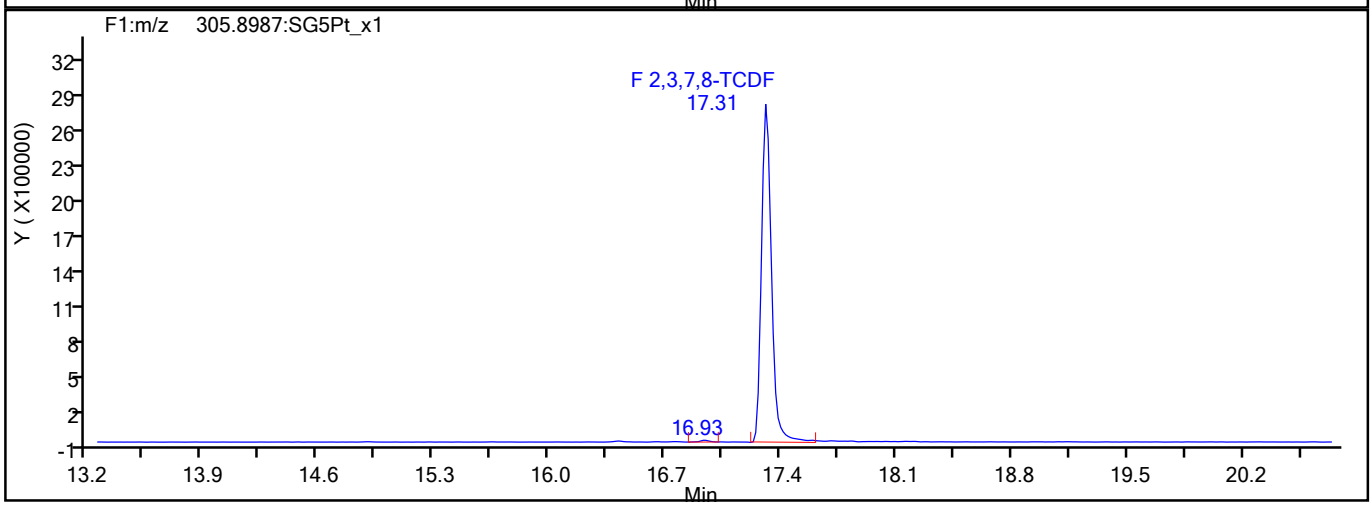

TCDF Interference Mass

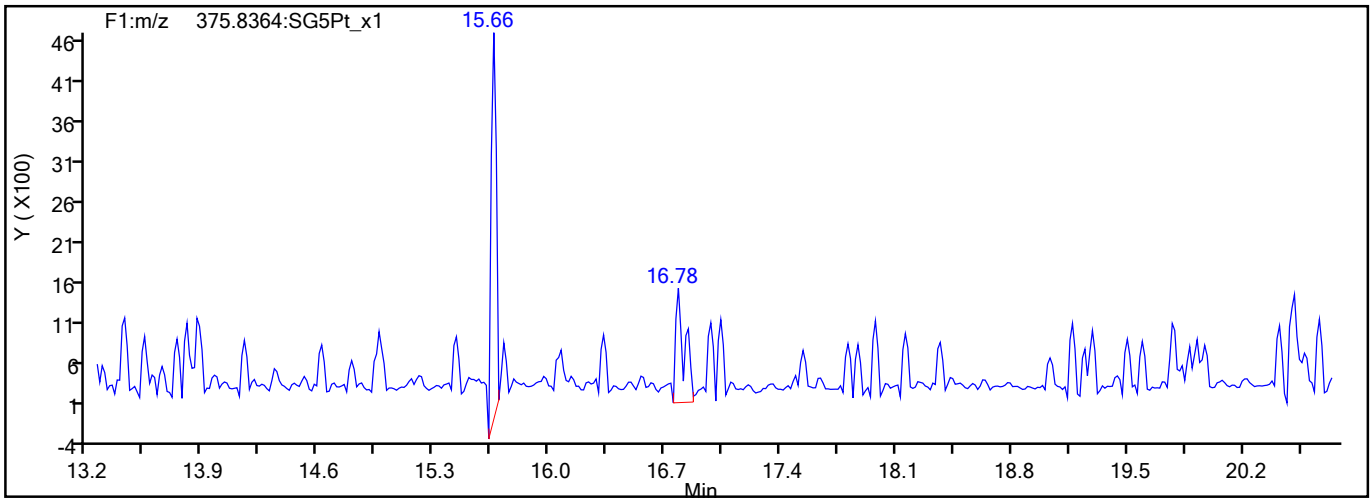

783058

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

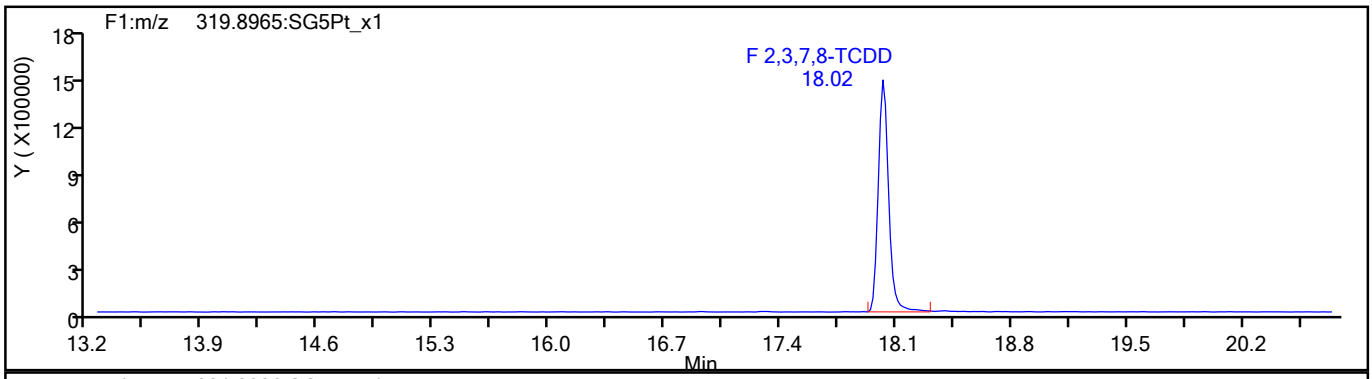

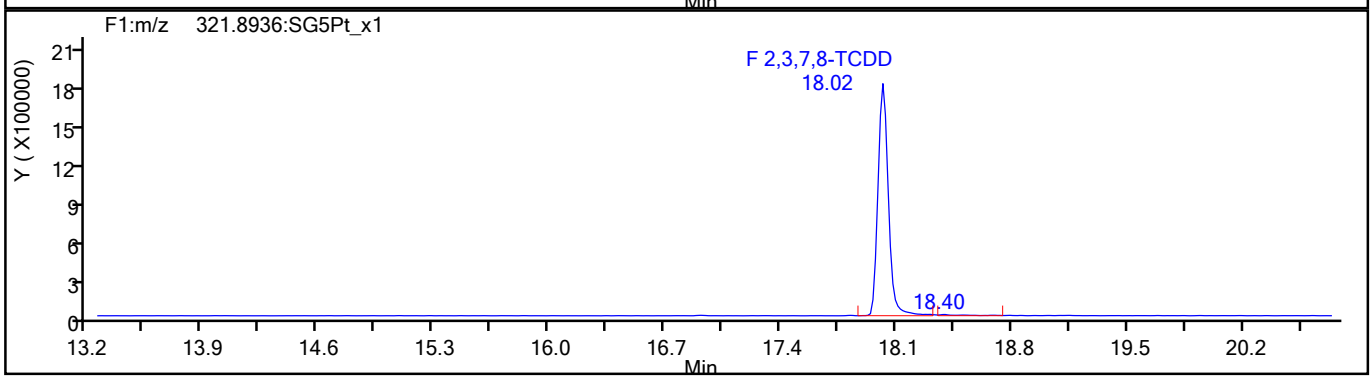

TCDD Standards

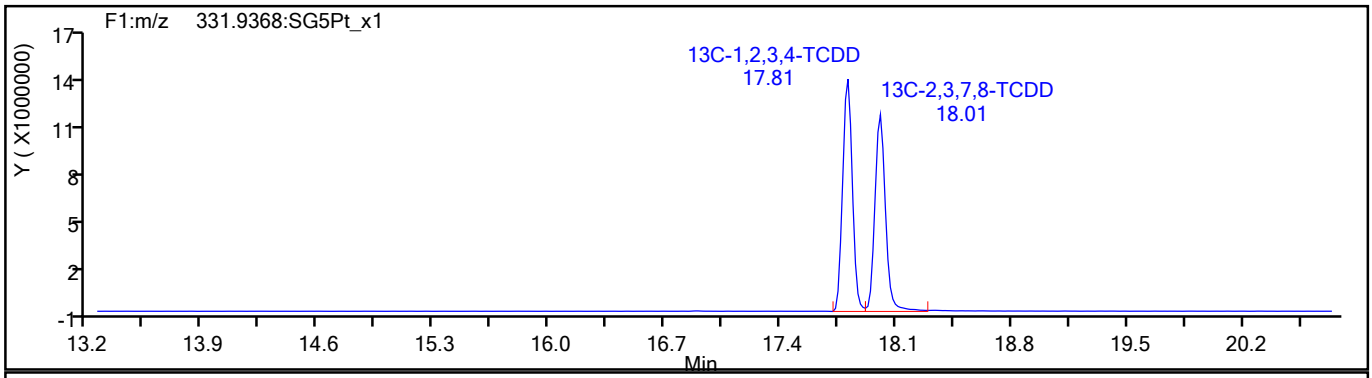

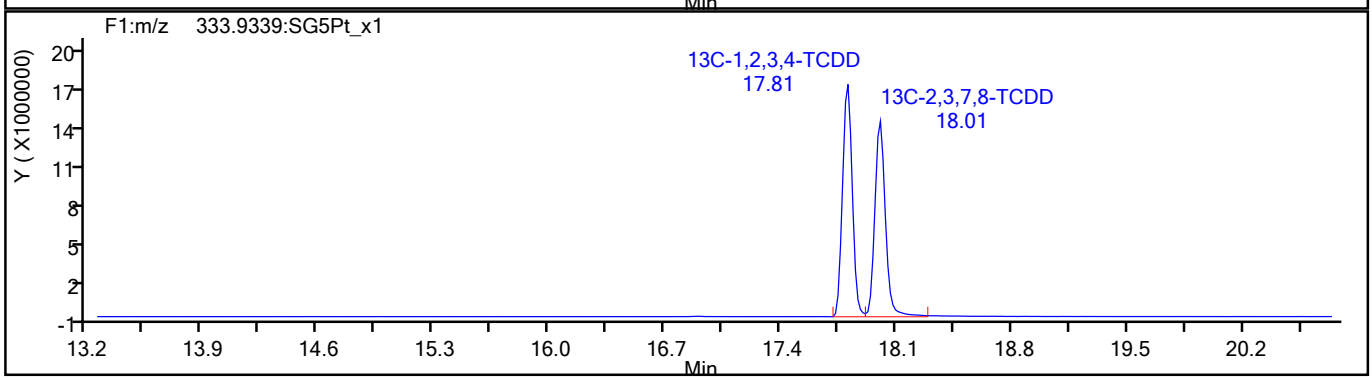

783059

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

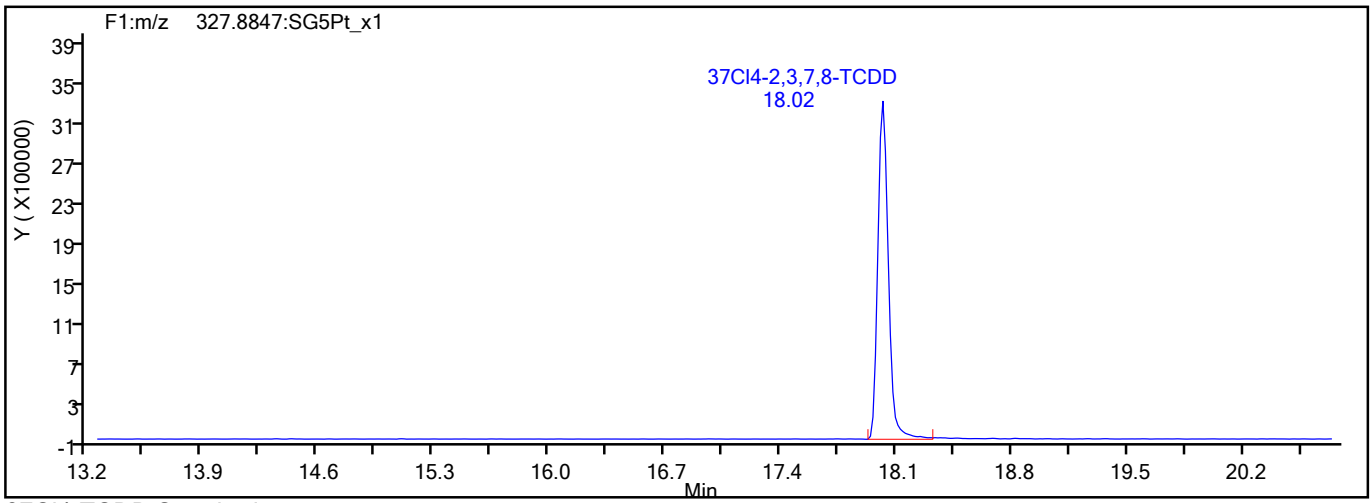

37Cl4-TCDD Standards

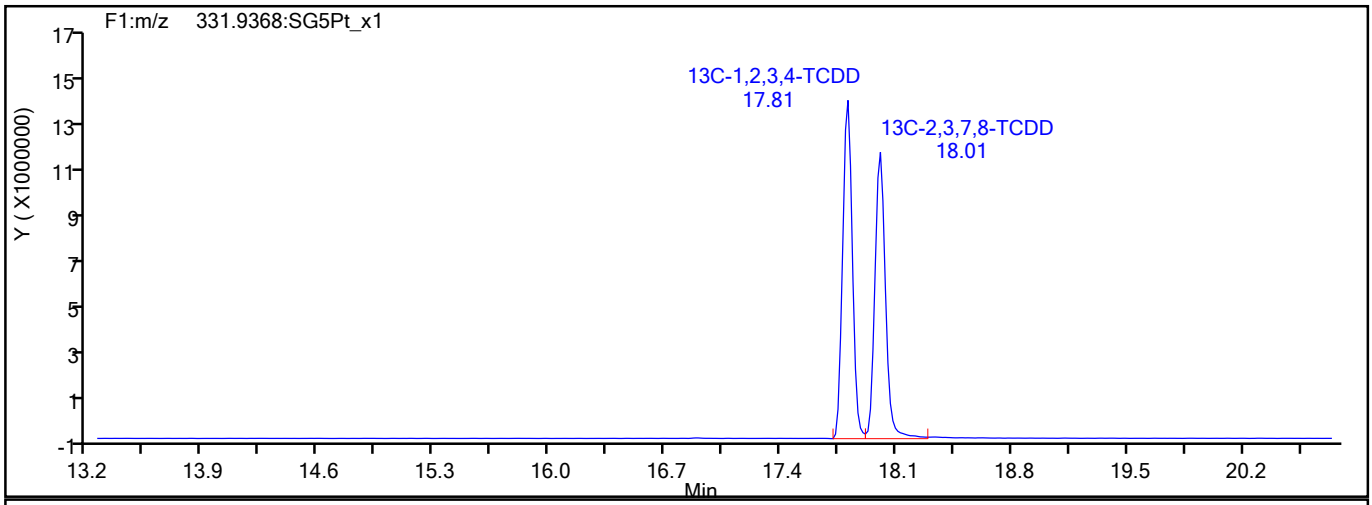

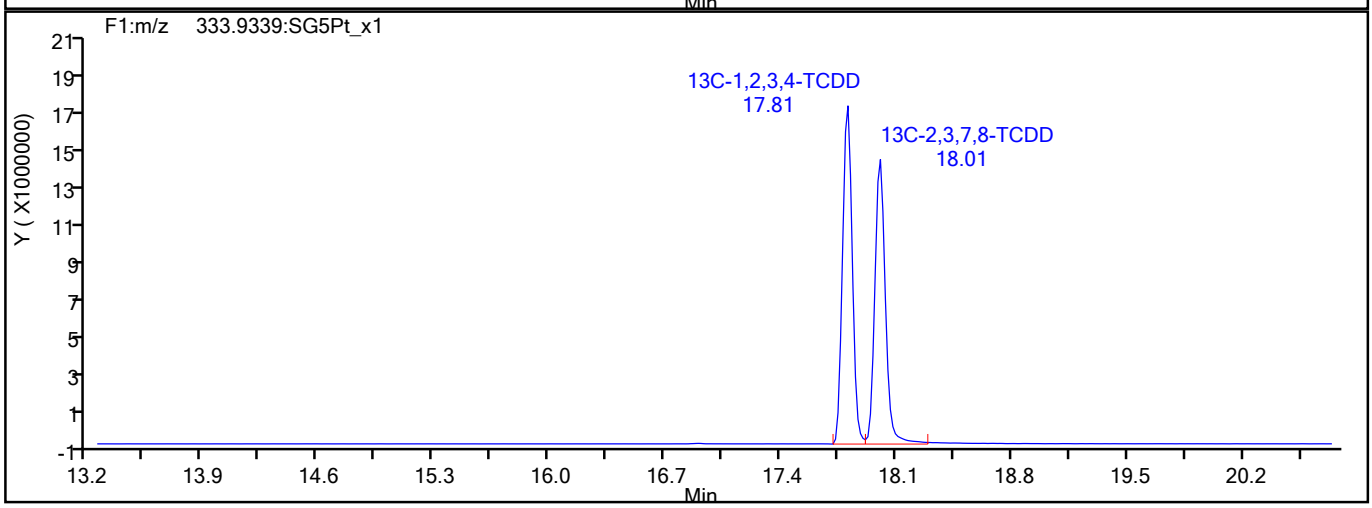

783060

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

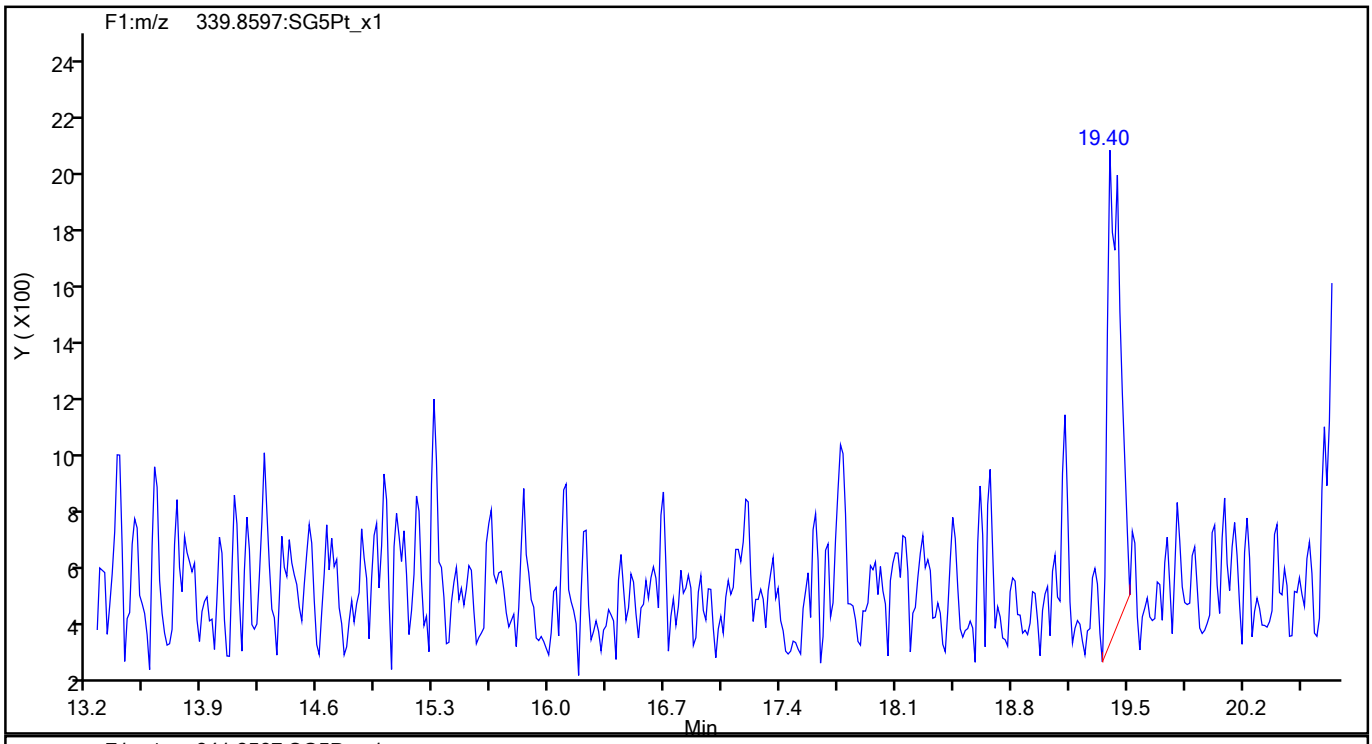

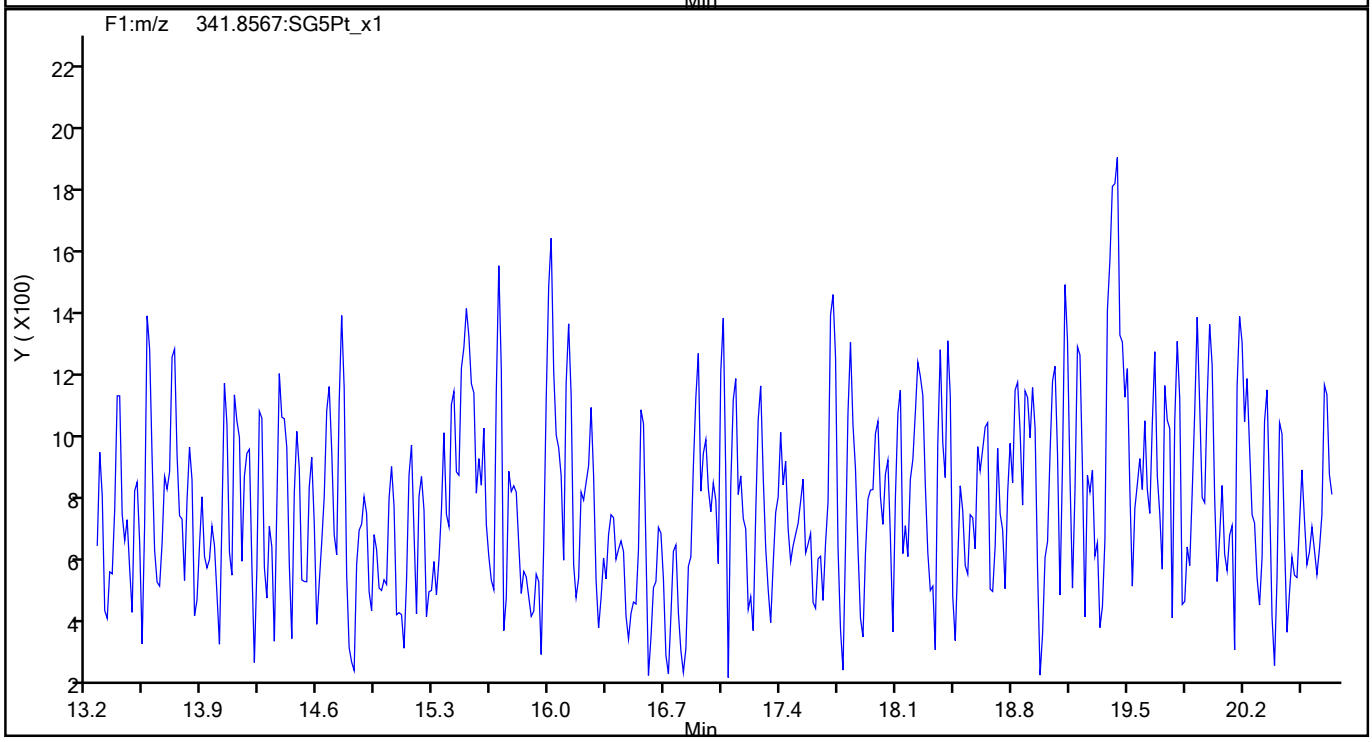

783061

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

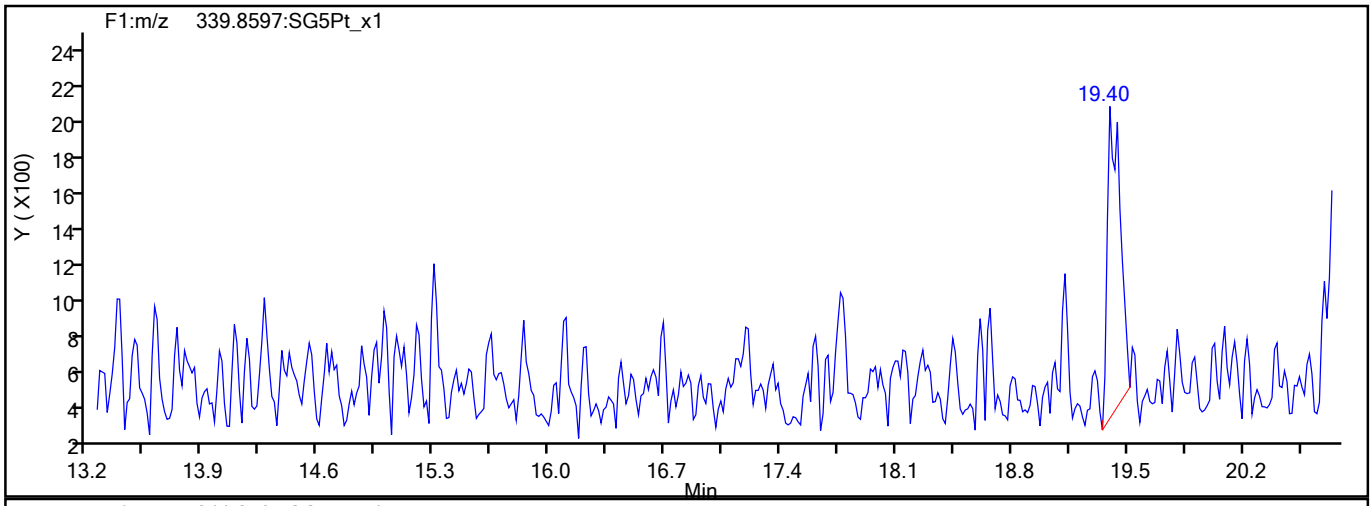

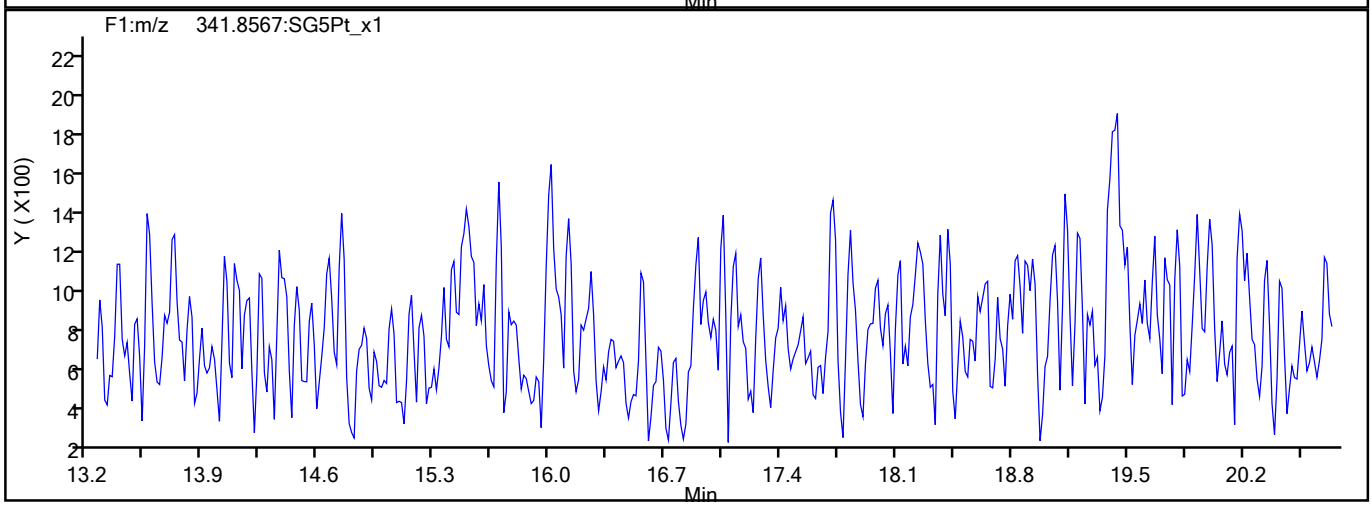

F1 PeCDFs Interference Mass

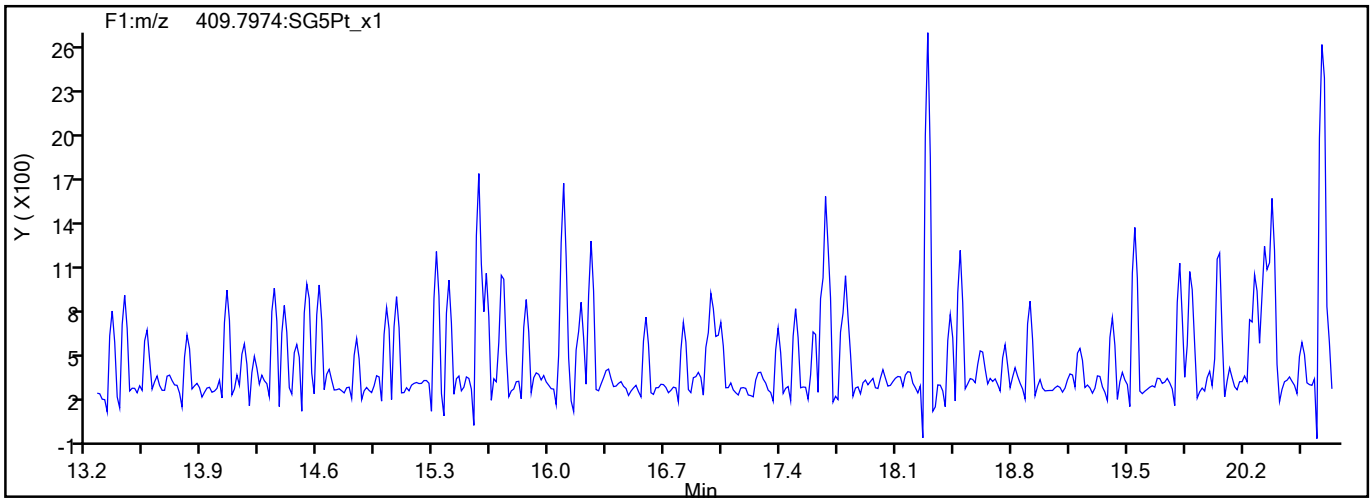

783062

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

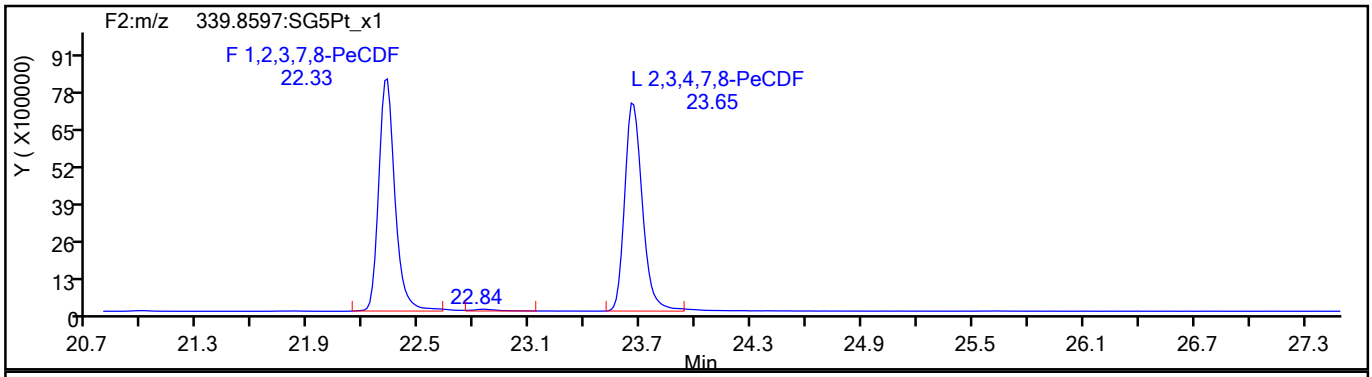

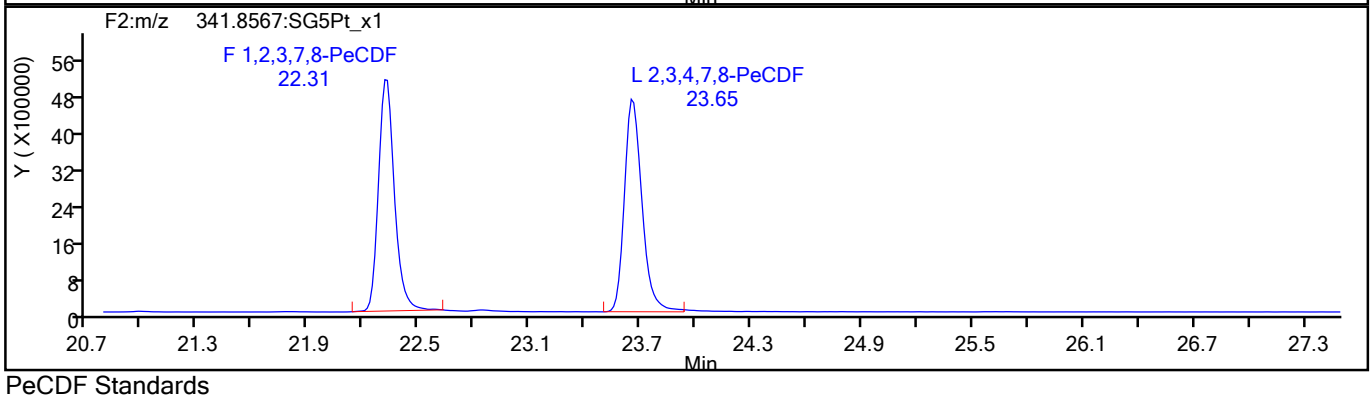

PeCDF Standards

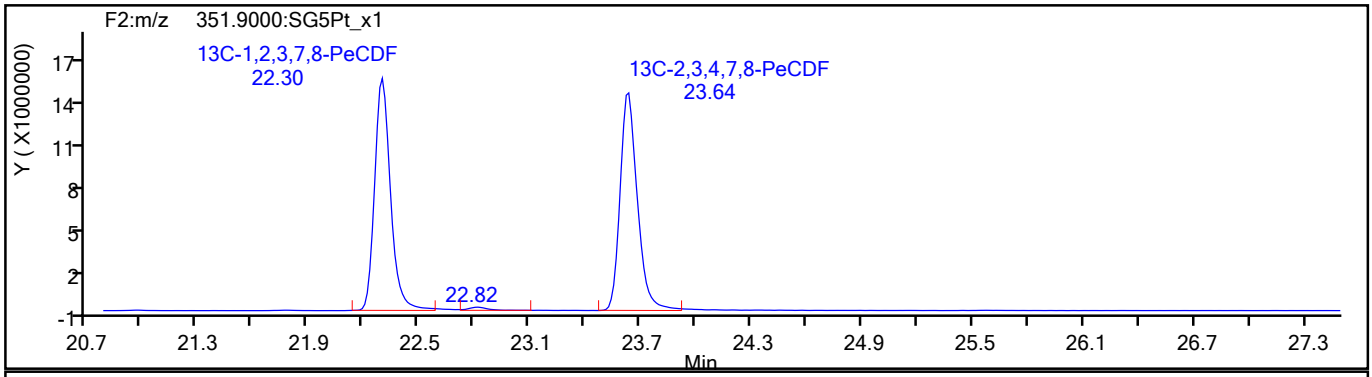

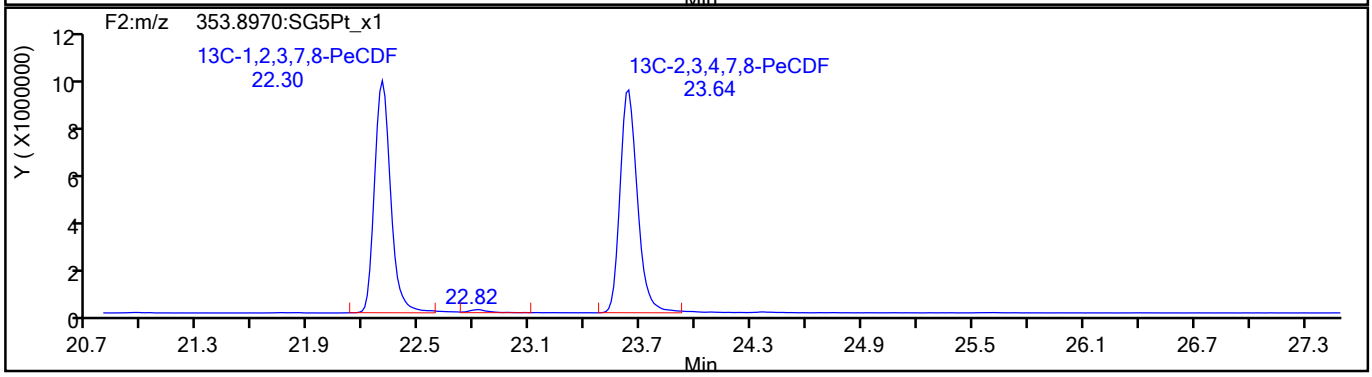

783063

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

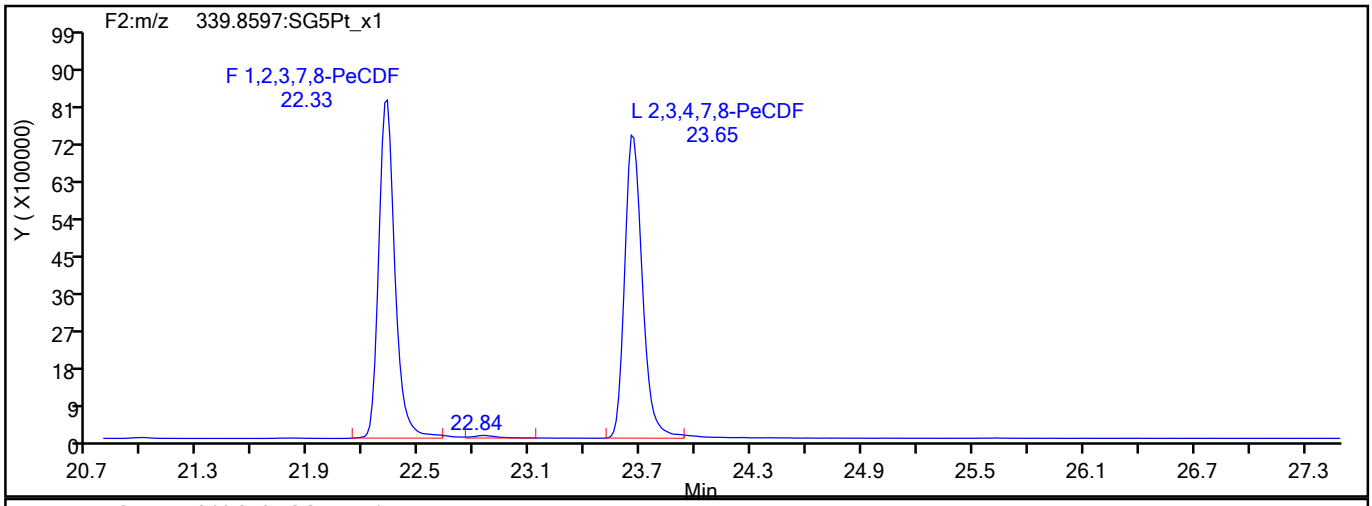

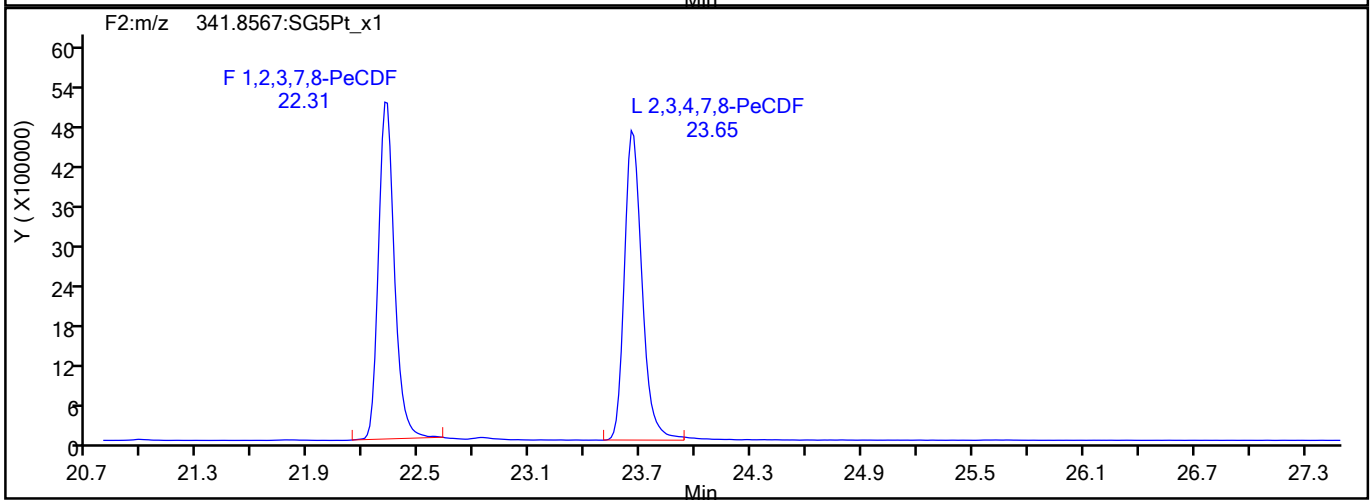

PeCDF Interference Mass

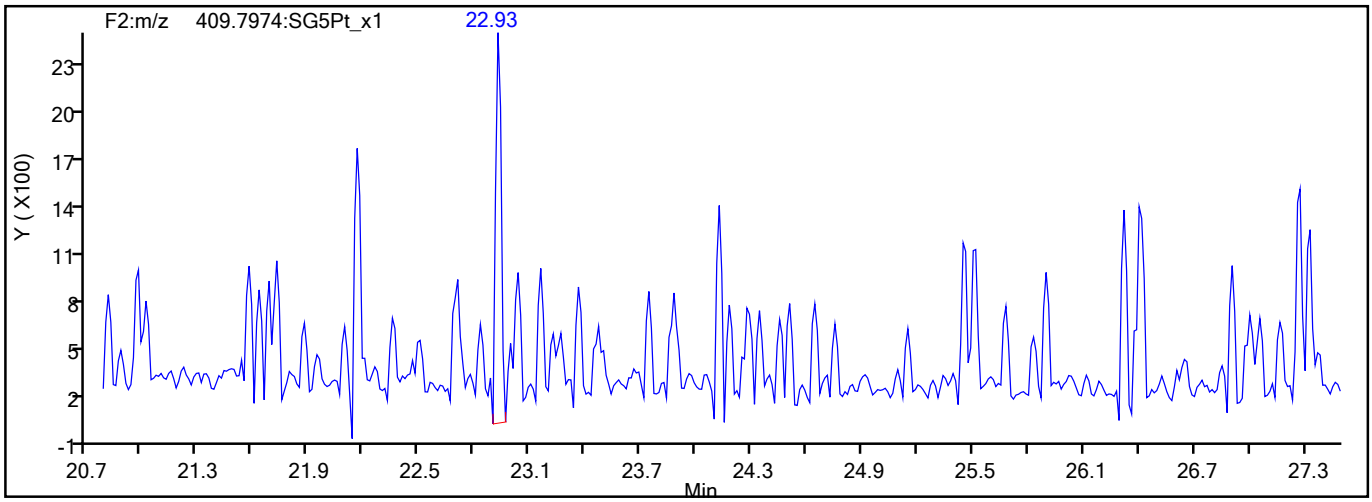

783064

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

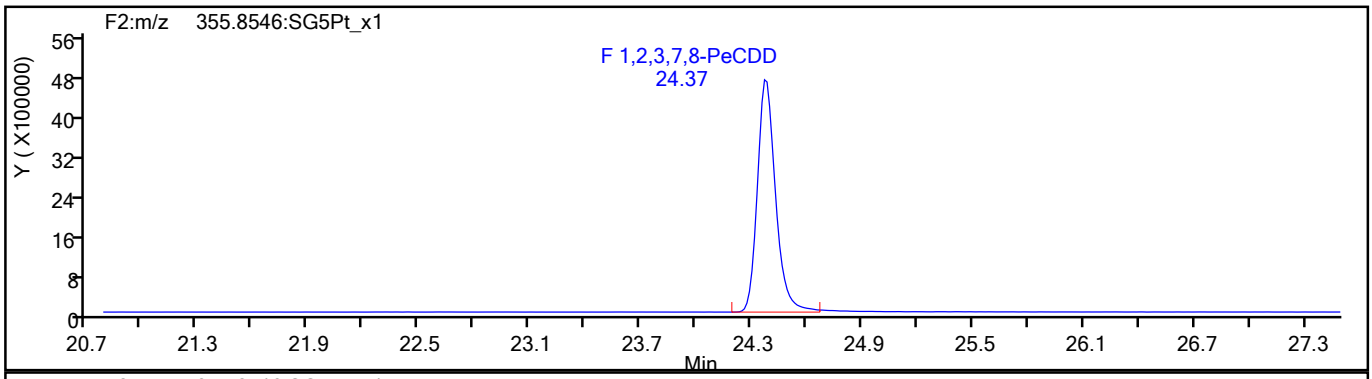

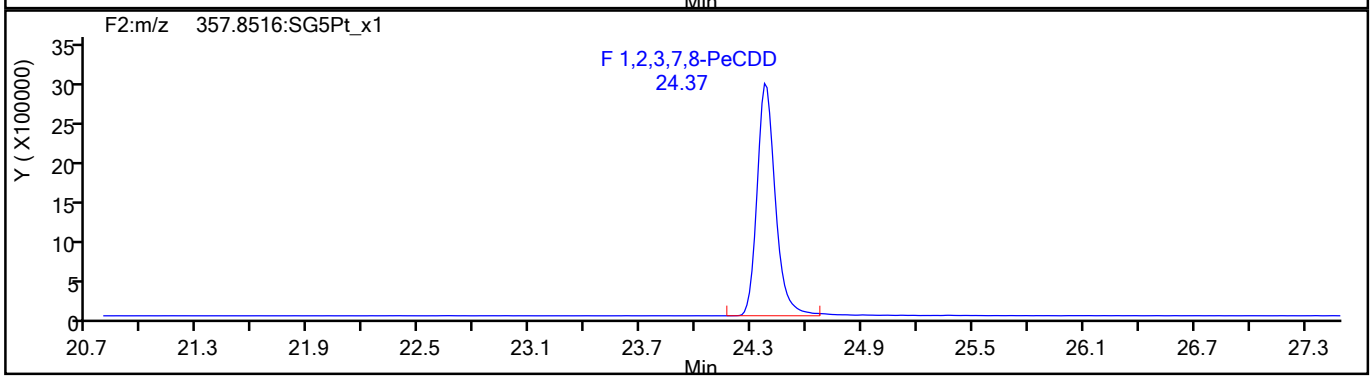

PeCDD Standards

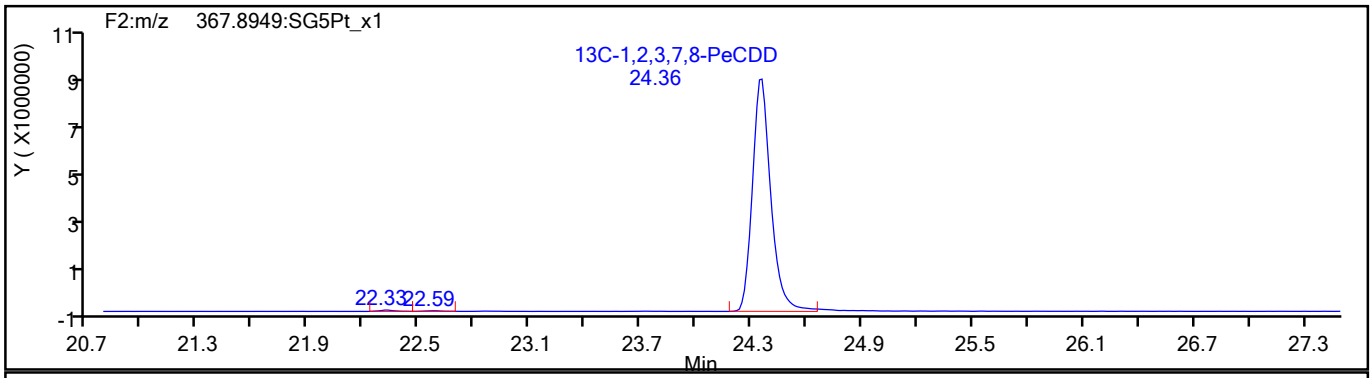

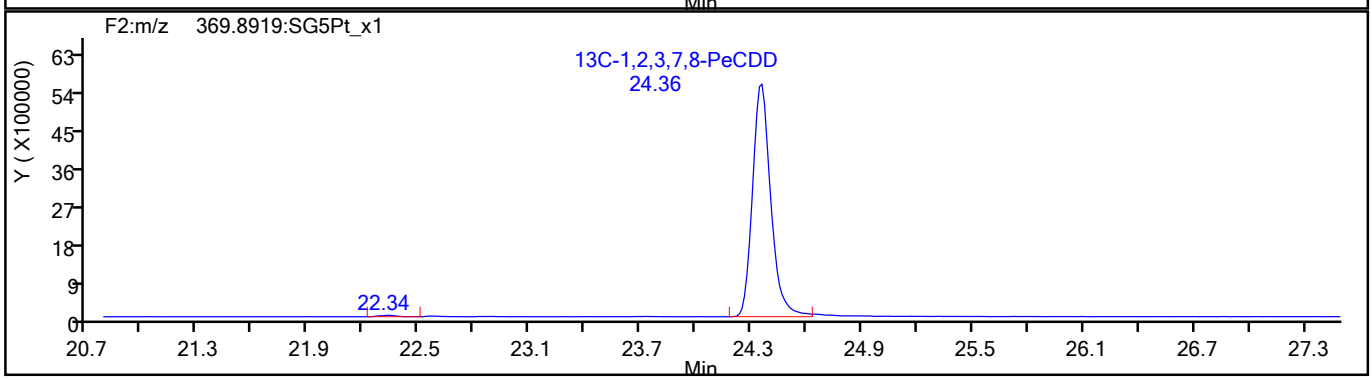

783065

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

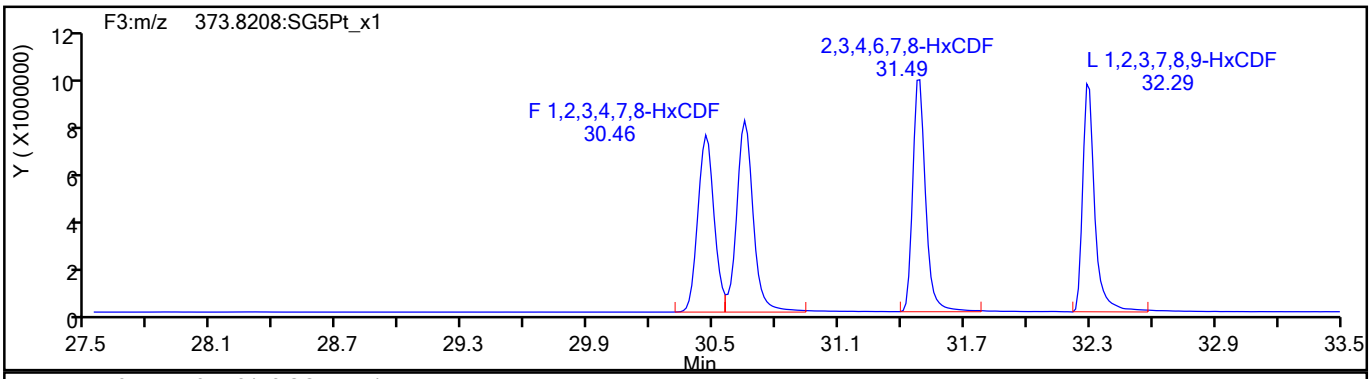

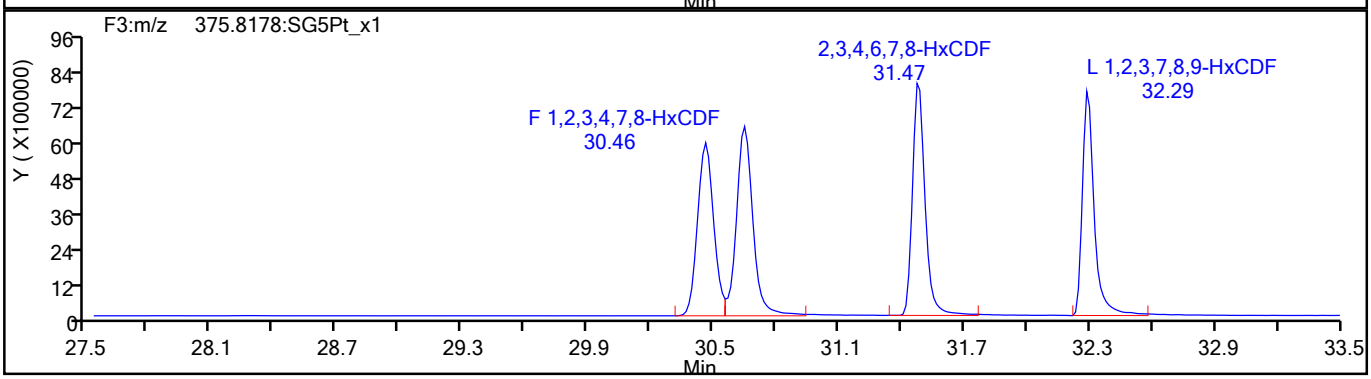

HxCDF Standards

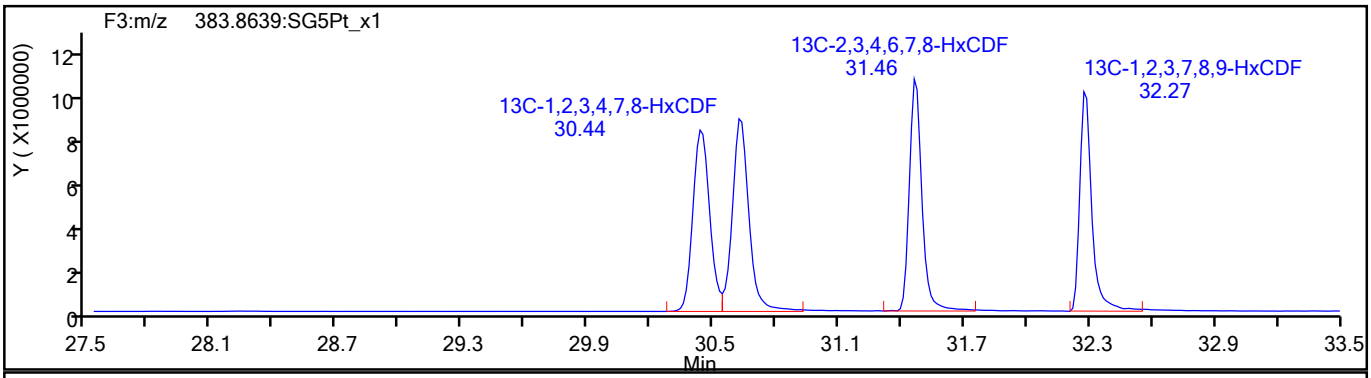

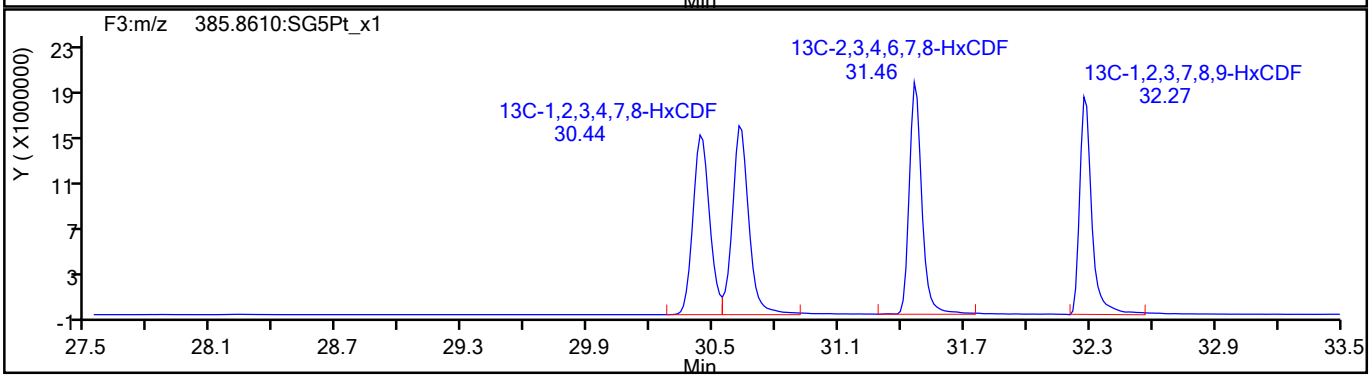

783066

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

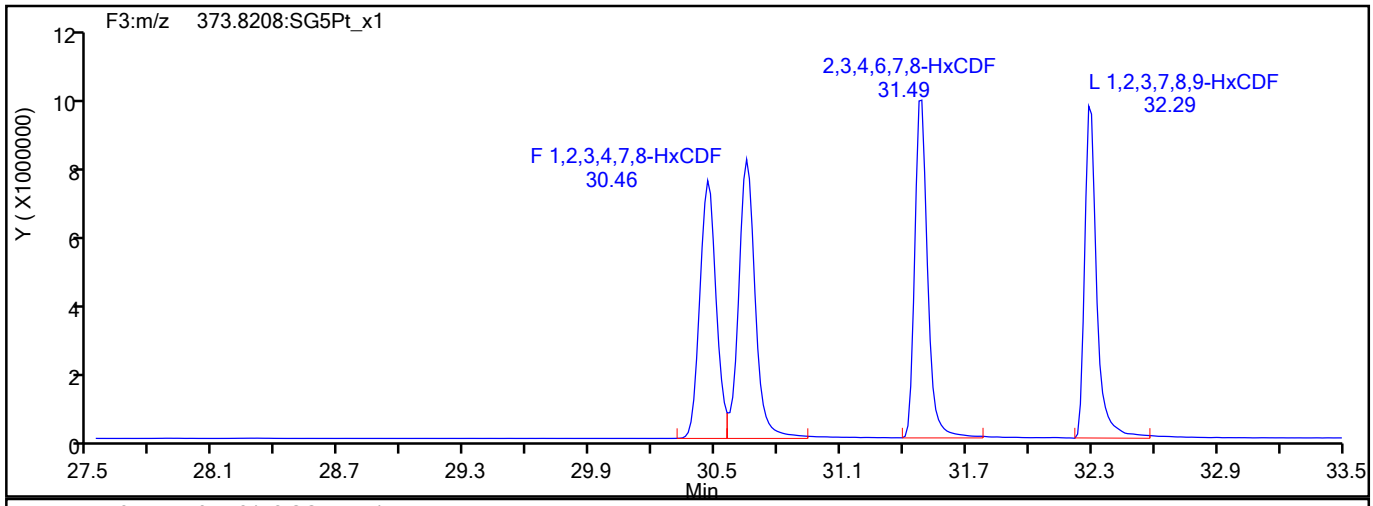

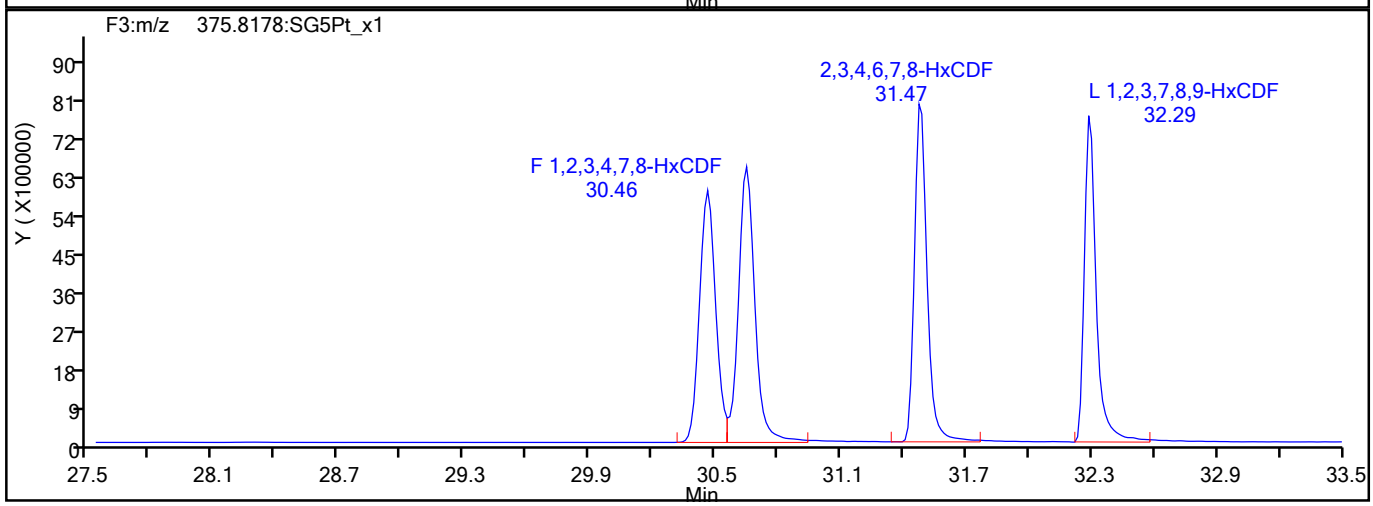

HxCDF Interference Mass

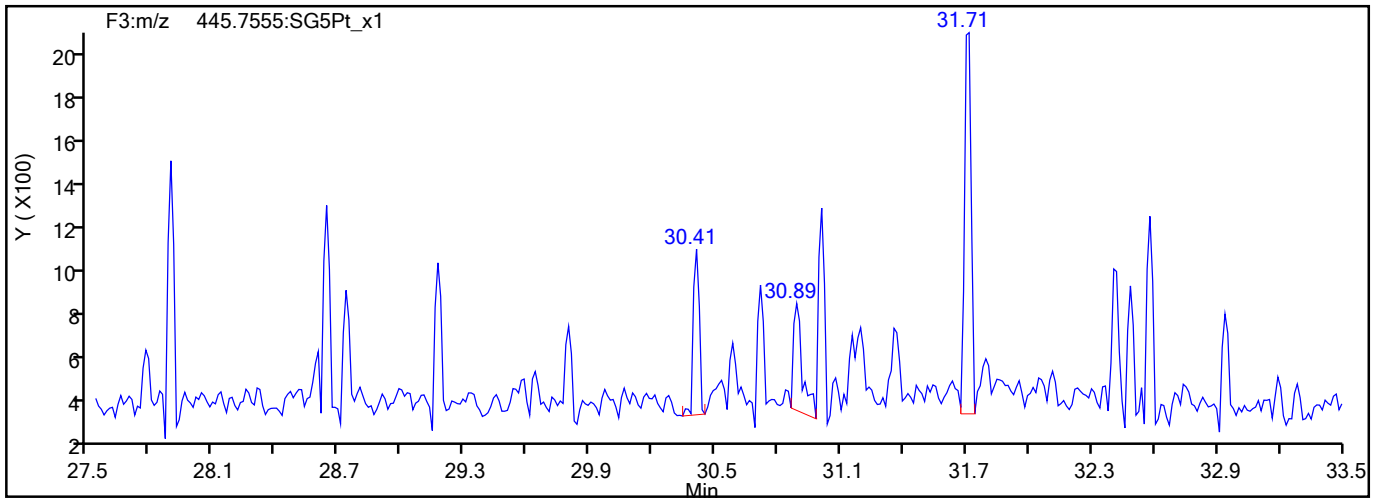

783067

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

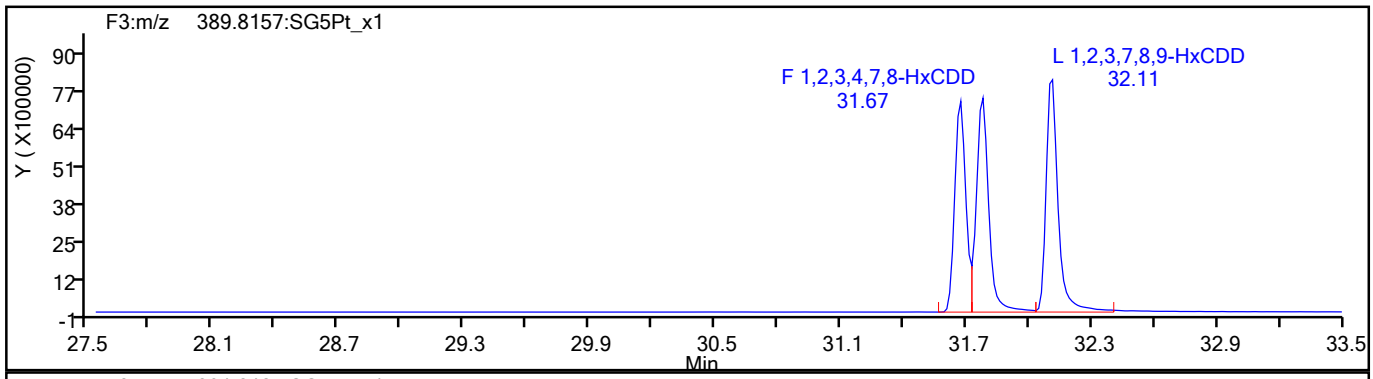

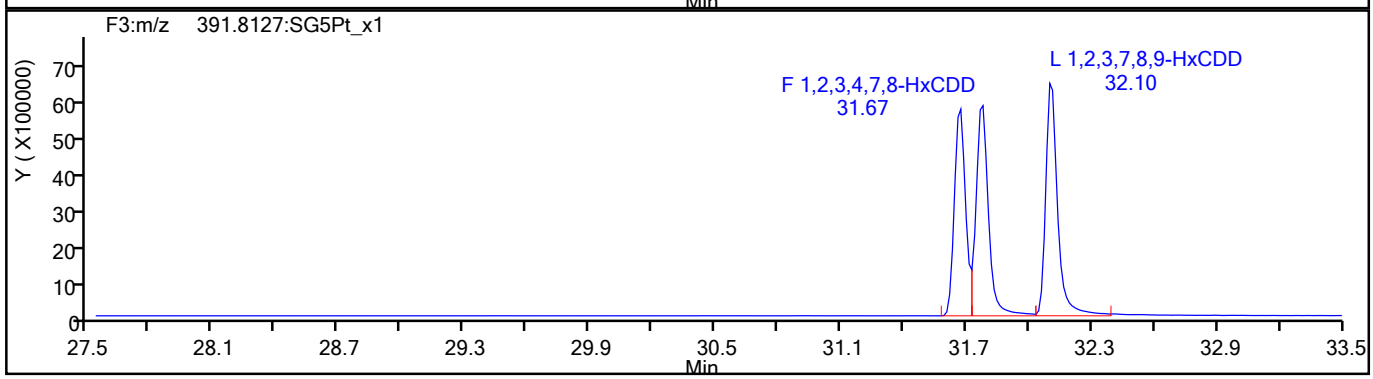

HxCDD Standards

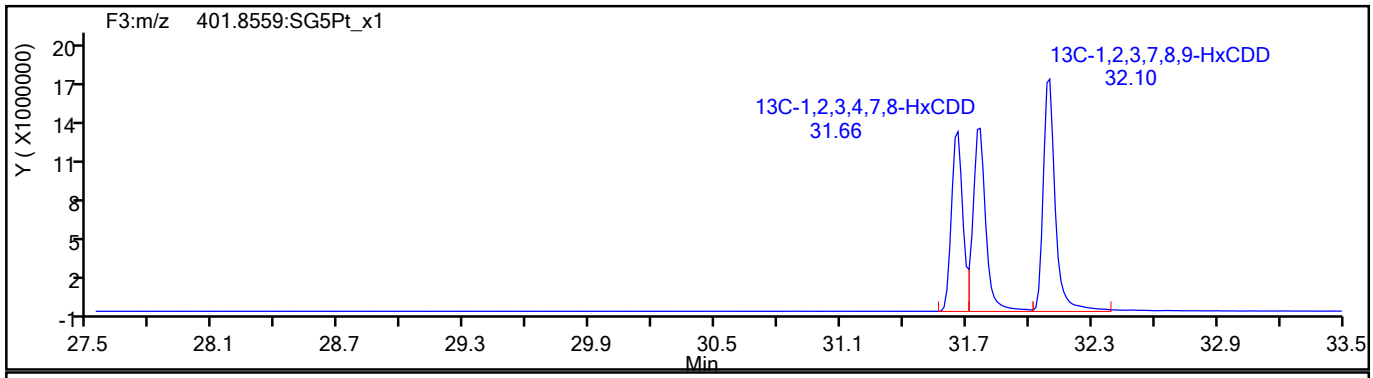

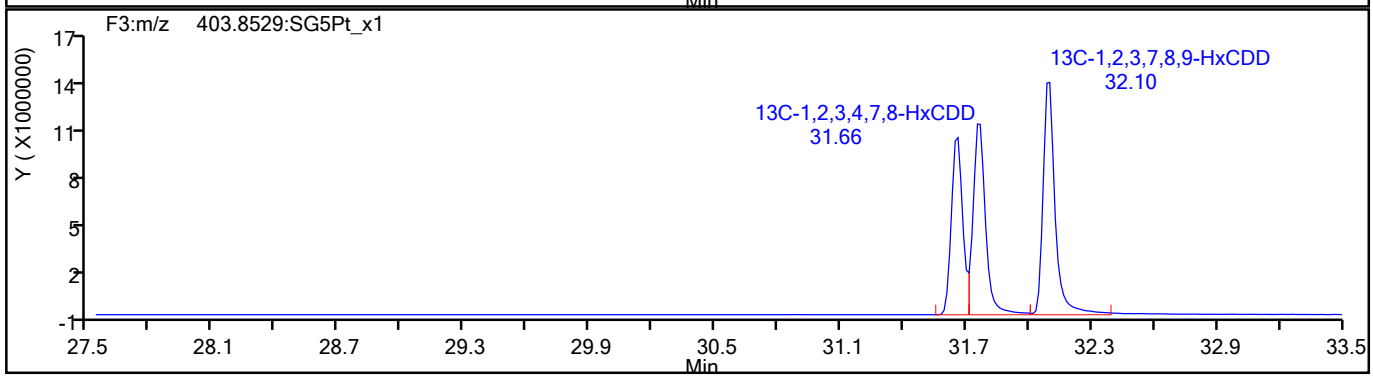

783068

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

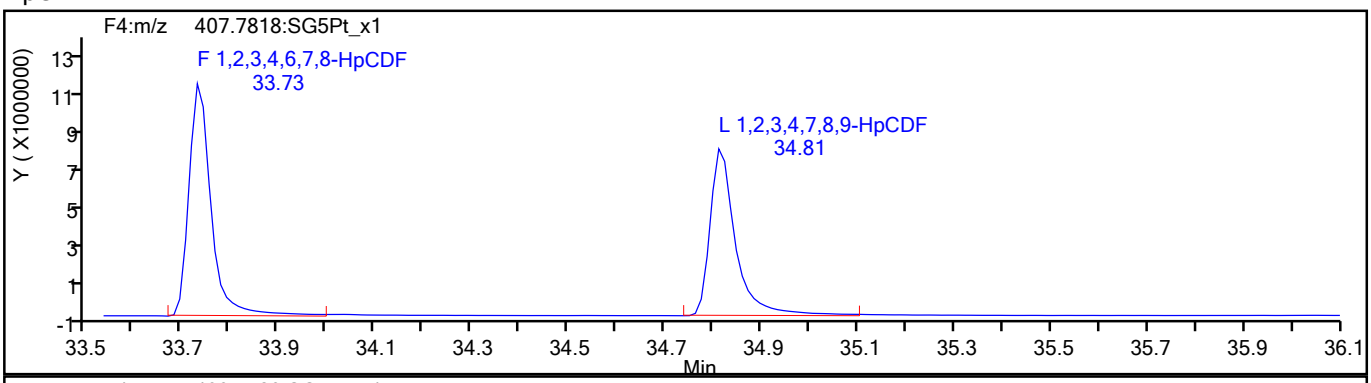

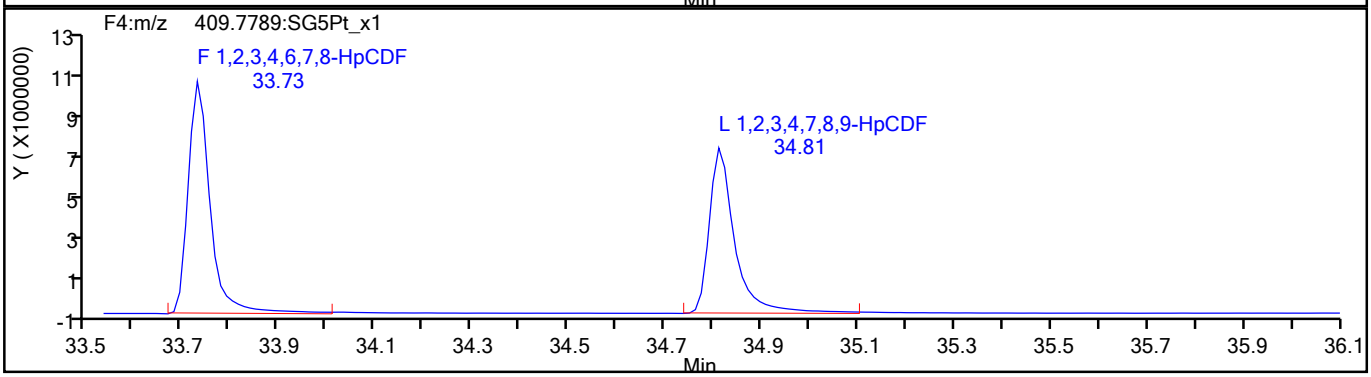

HpCDF Standards

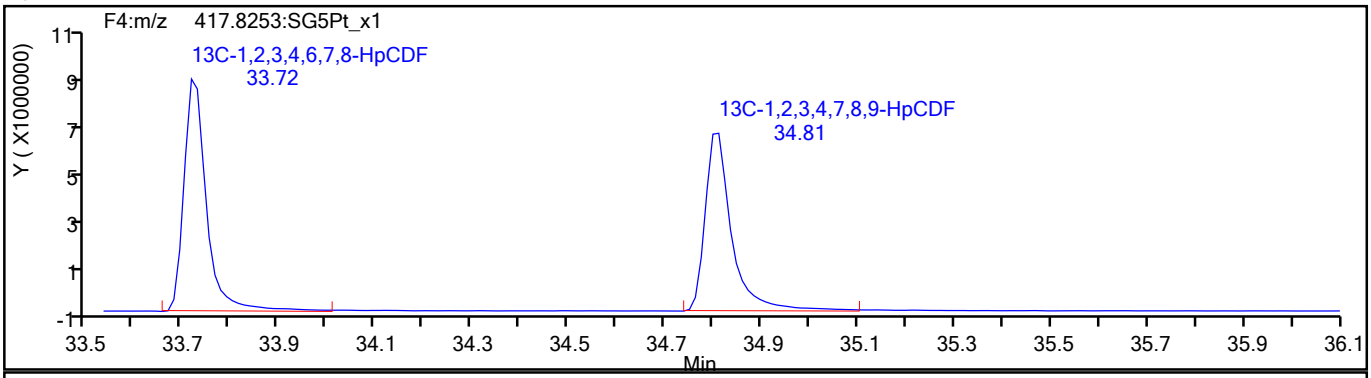

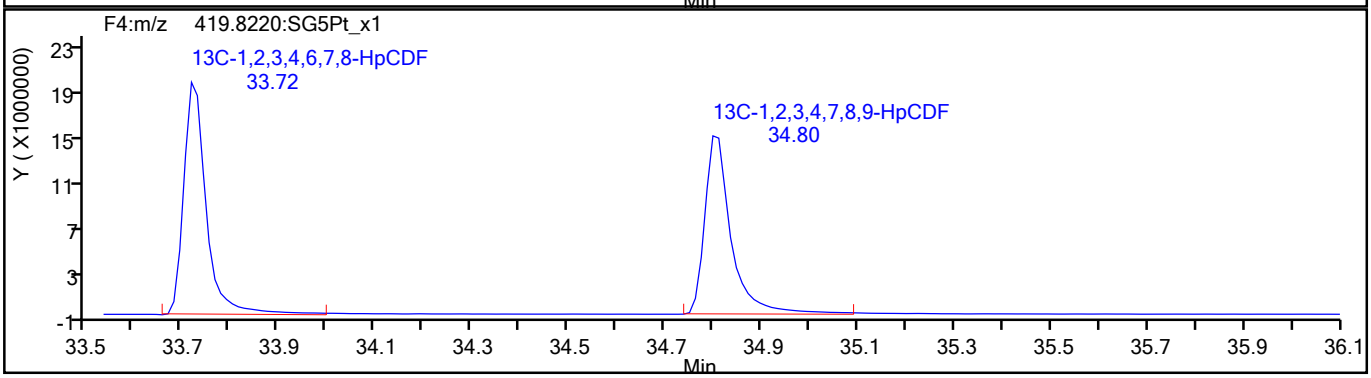

783069

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

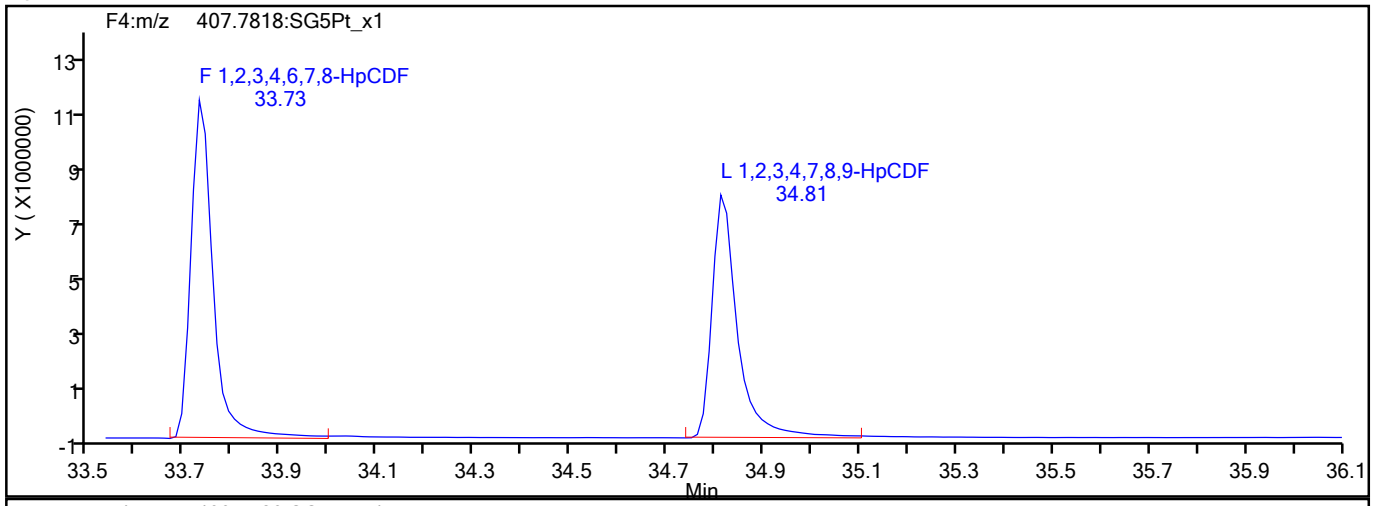

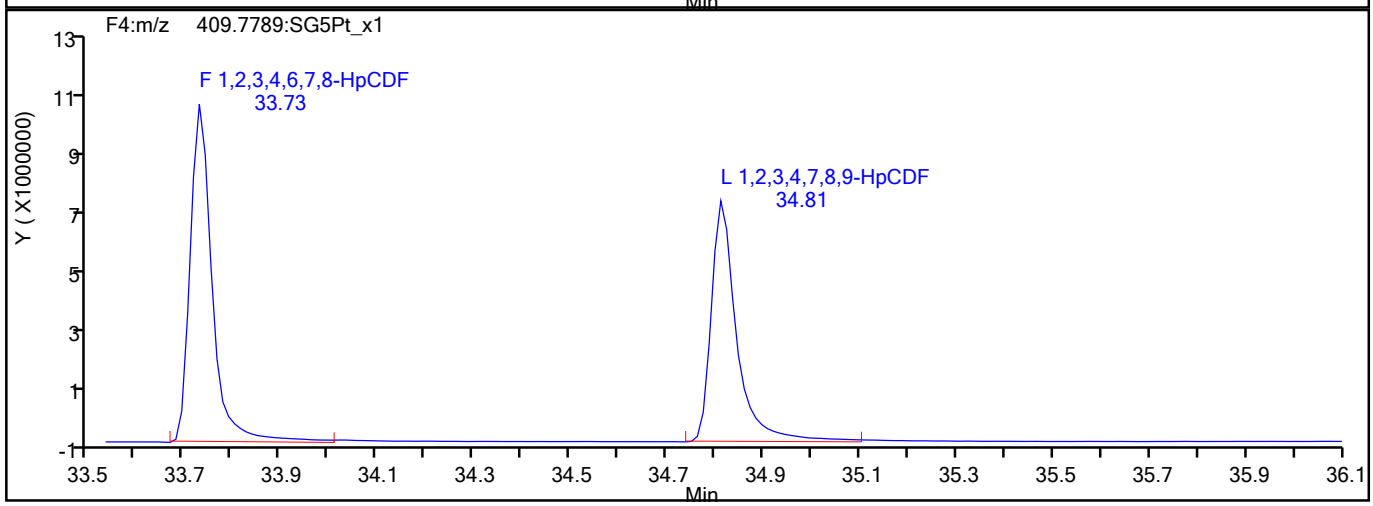

HpCDF Interference Mass

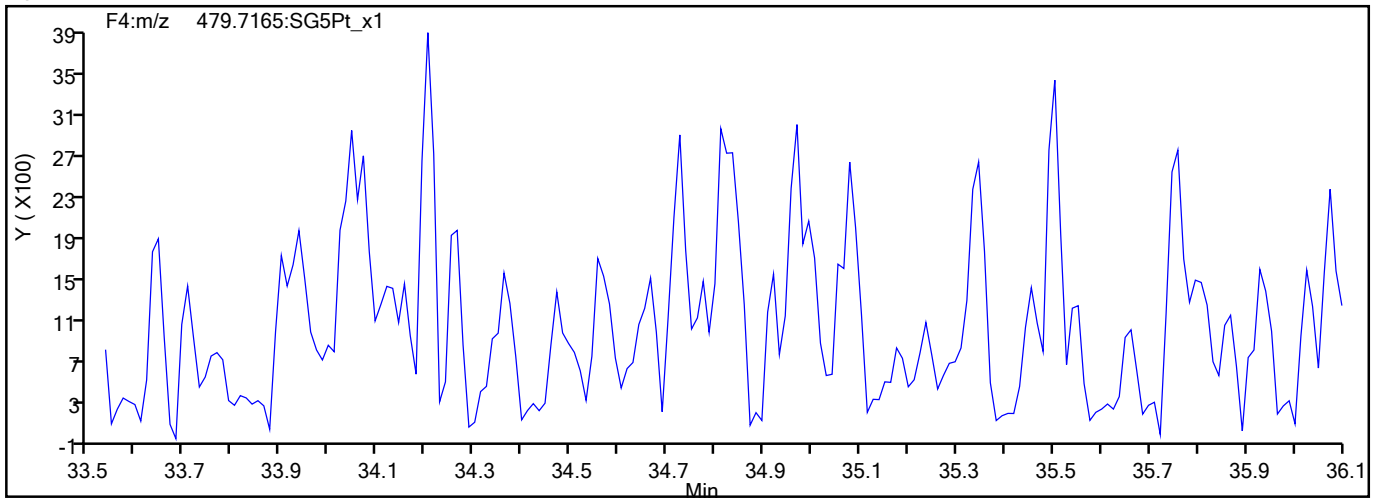

783070

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

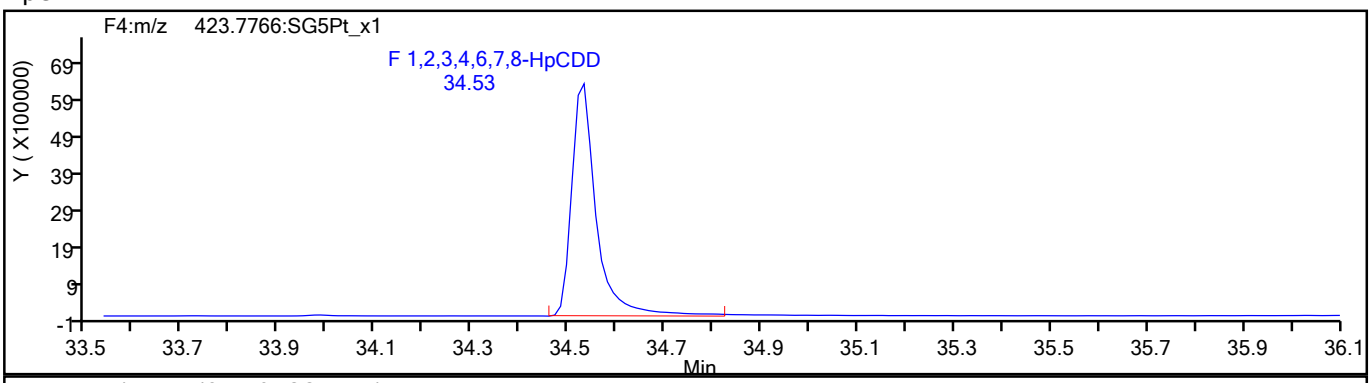

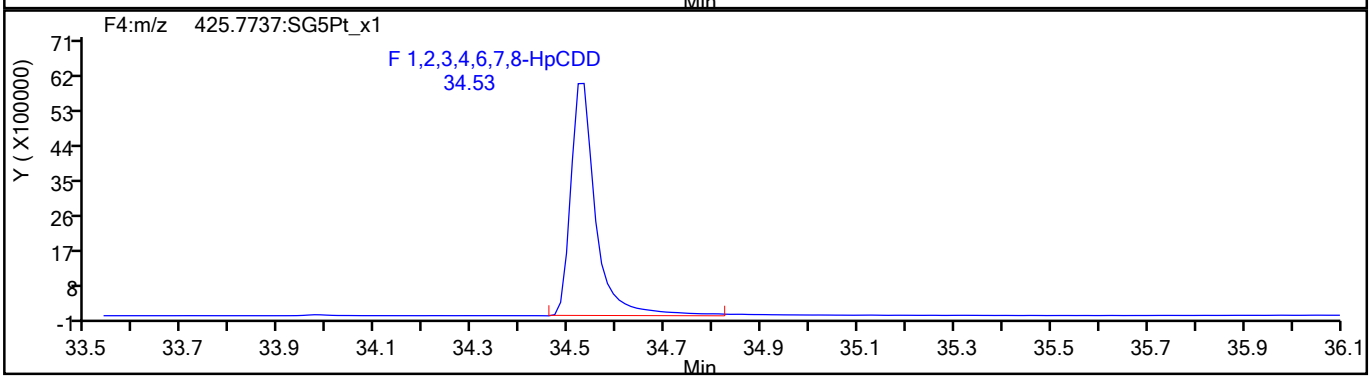

HpCDD Standards

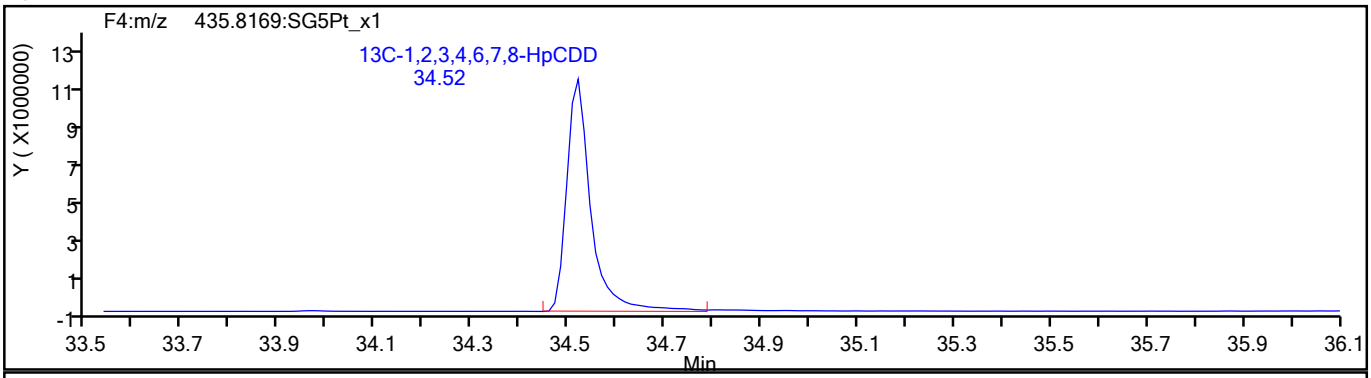

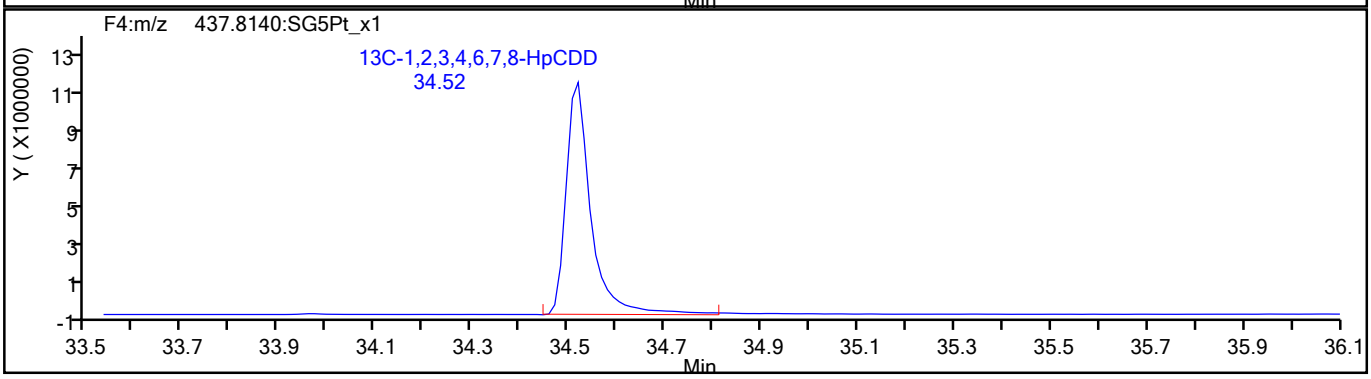

783071

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

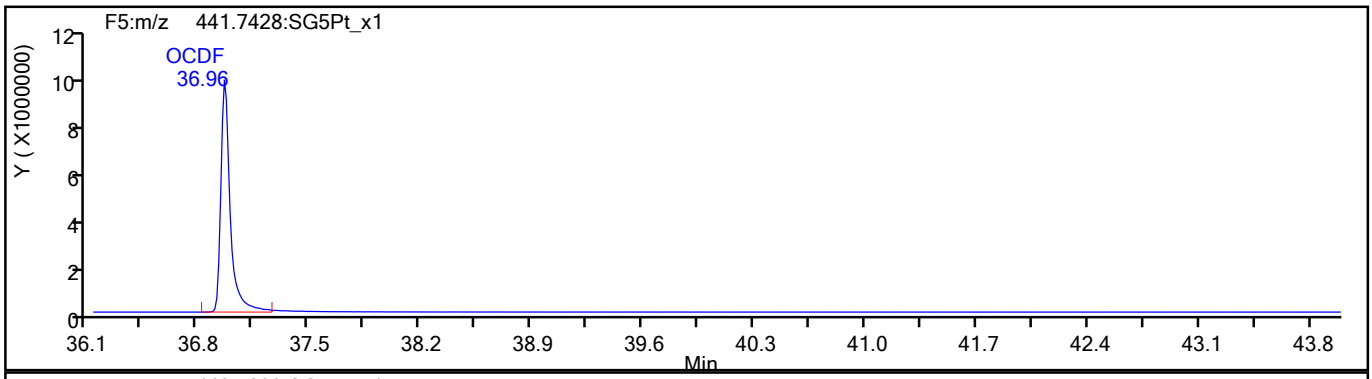

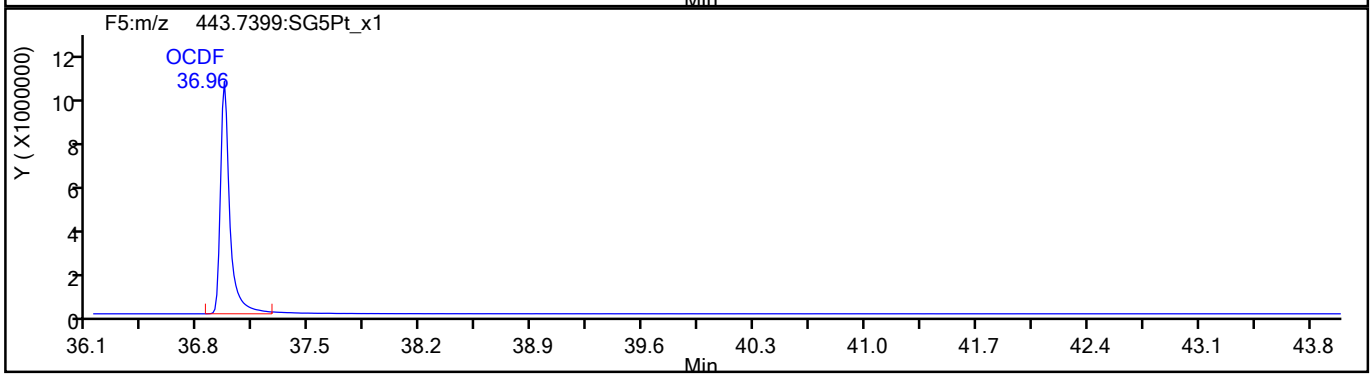

OCDF Standards

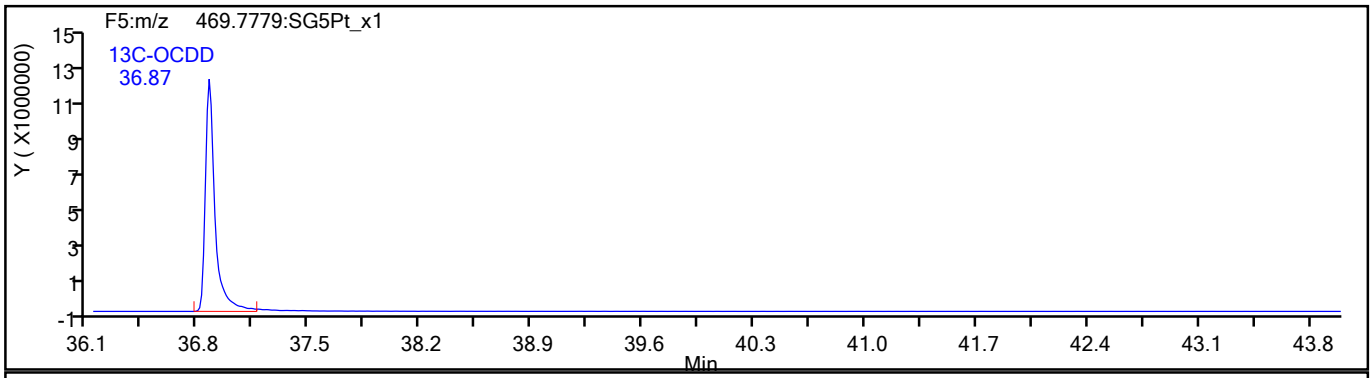

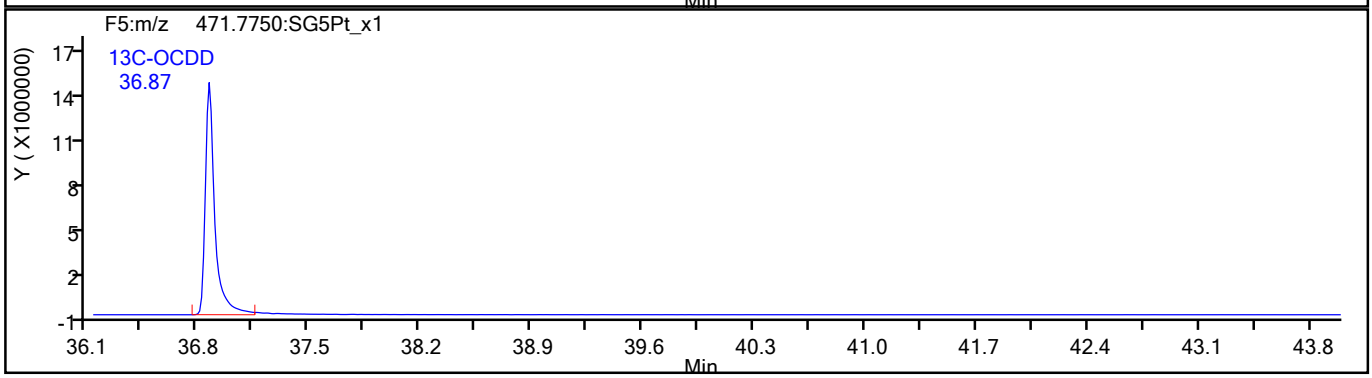

783072

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

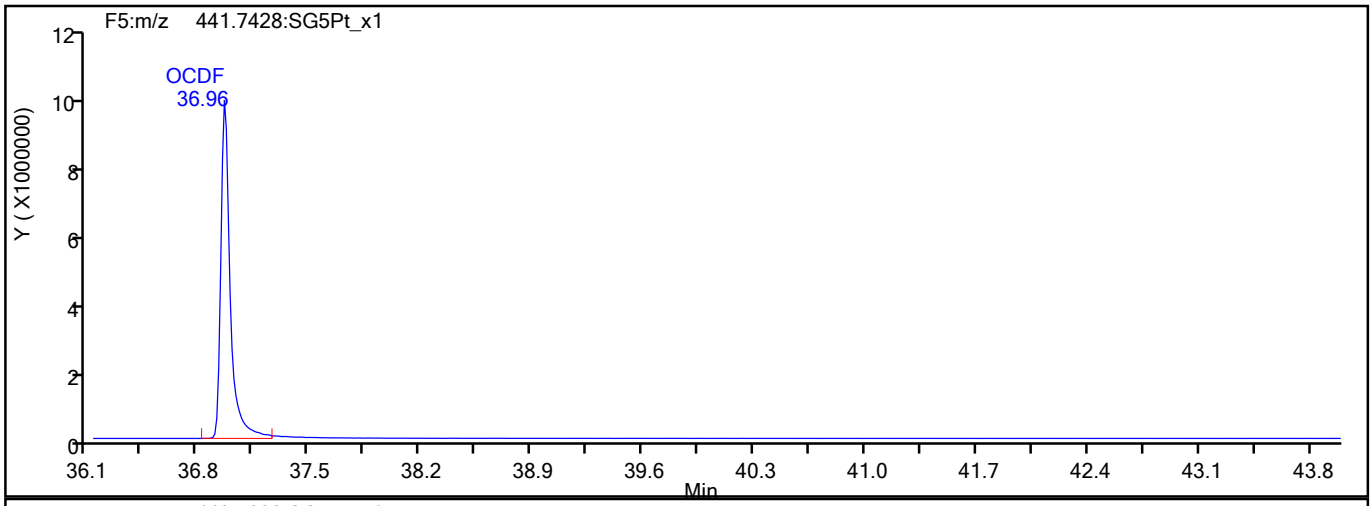

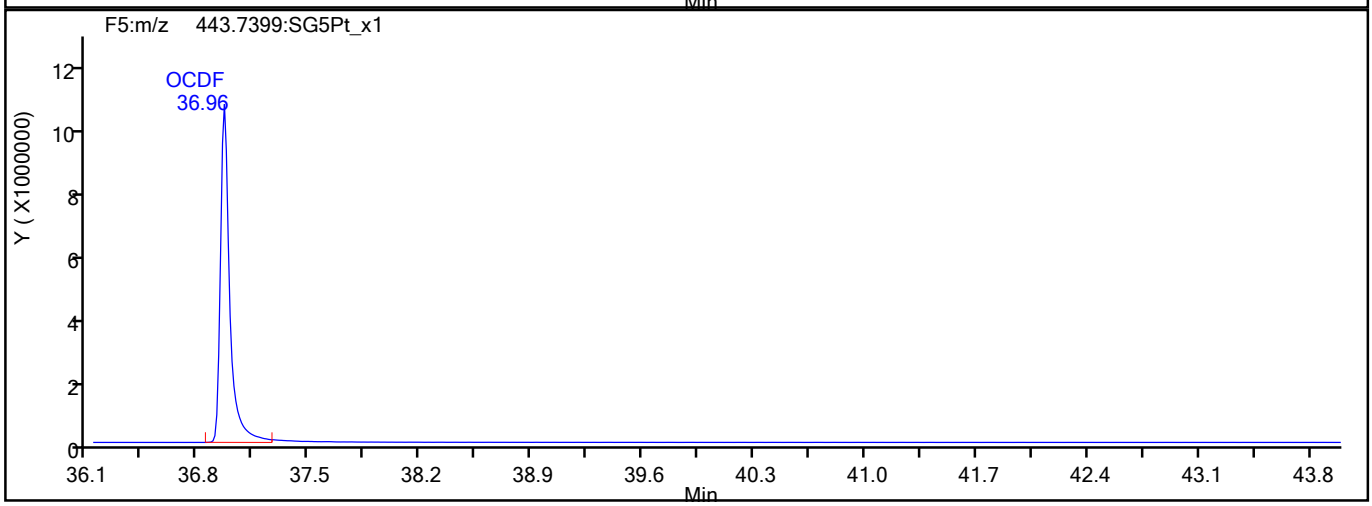

OCDF Interference Mass

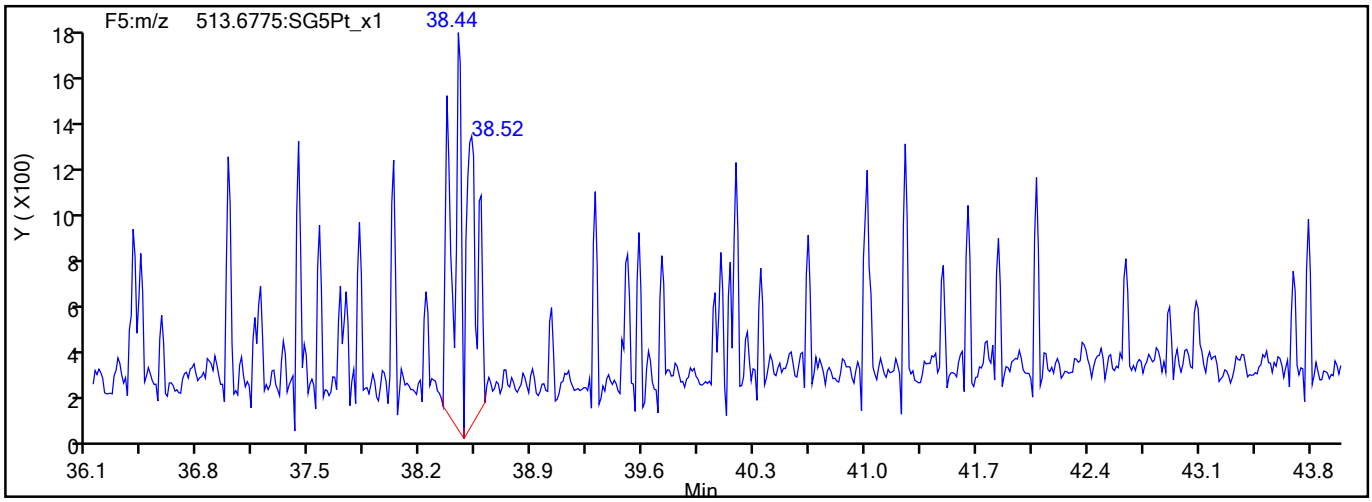

783073

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

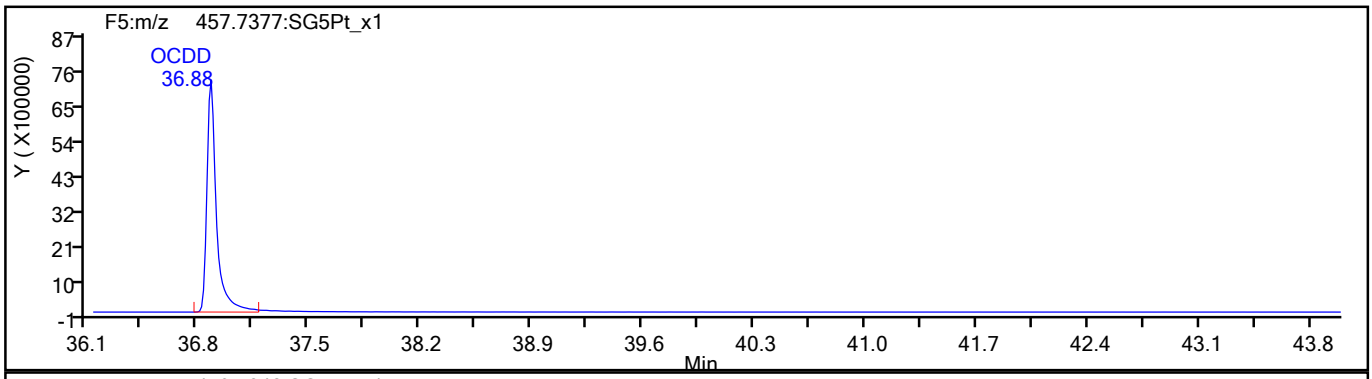

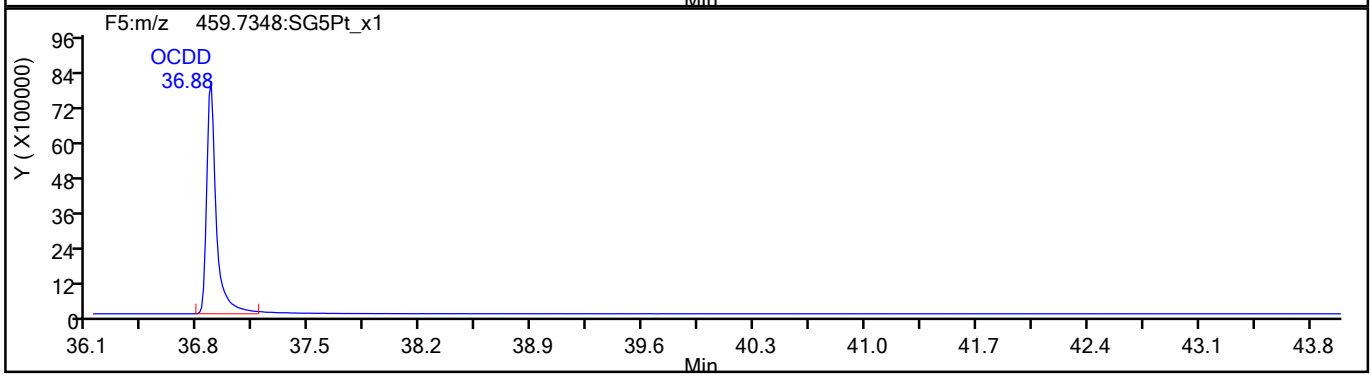

OCDD Standards

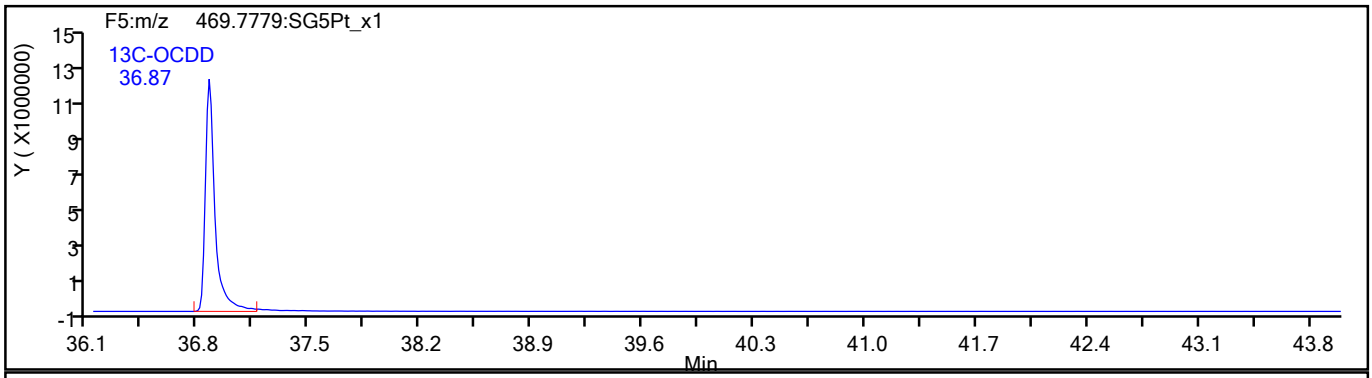

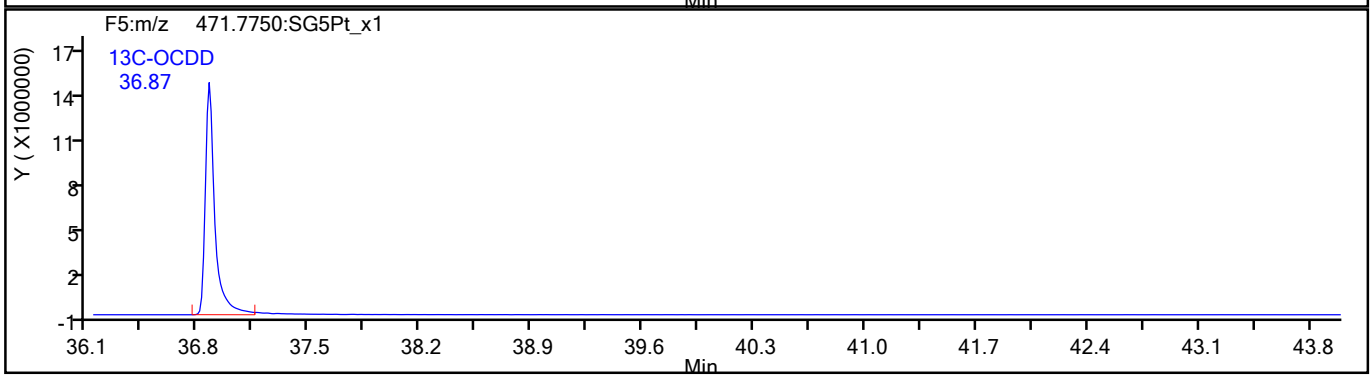

783074

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

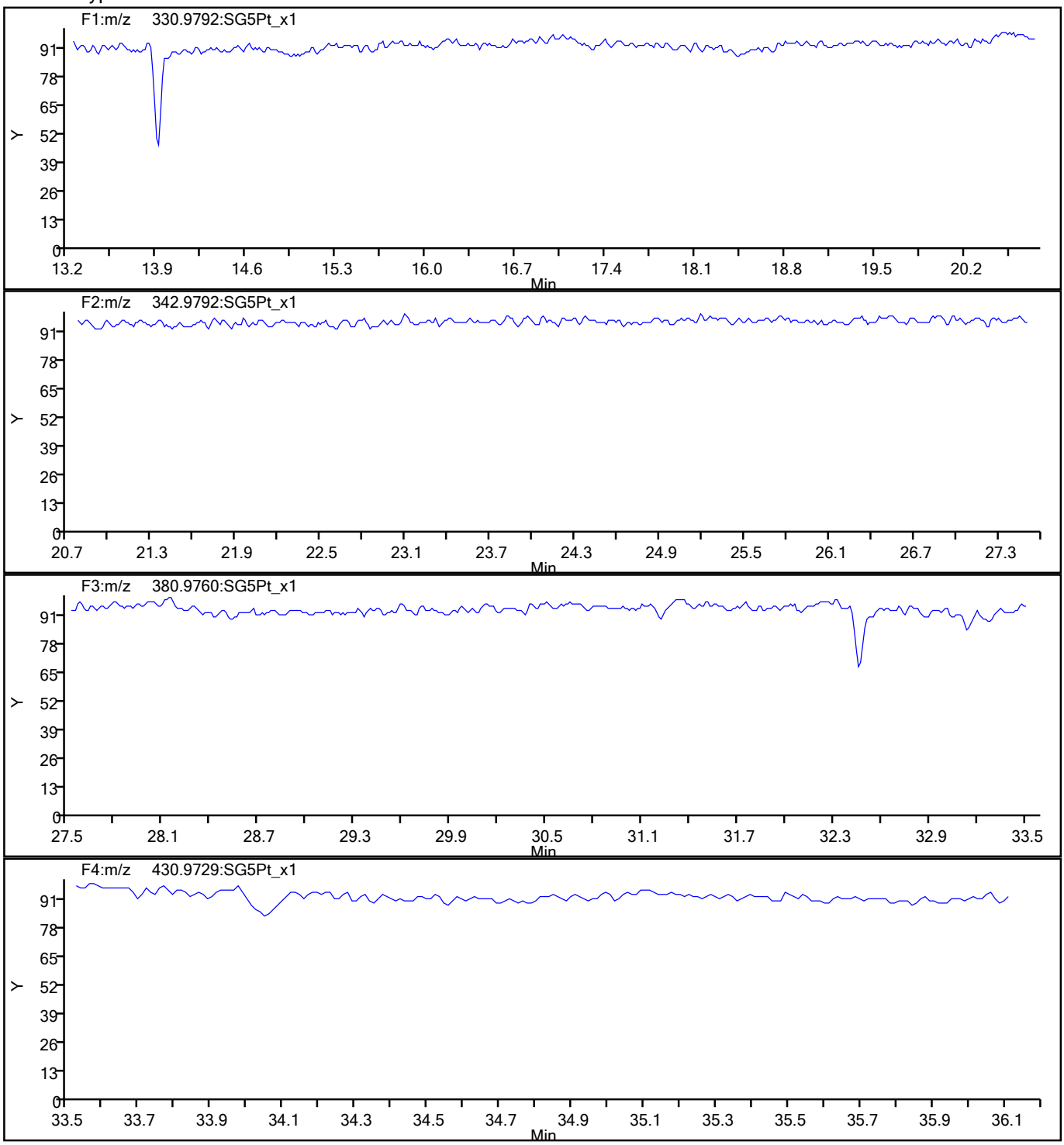

783075

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

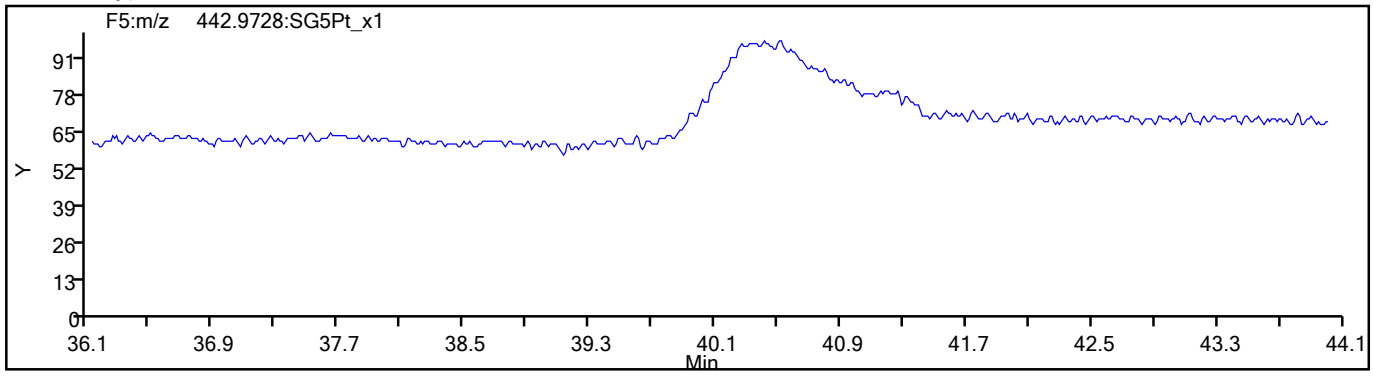

783076

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID: CCV 320-520325/2 Calibration Date: 08/26/2021 19:36

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 25AU2110D5_44.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.030		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.221		9.74	10.0	97	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.068		50.3	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.032		50.6	50.0	101	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.051		50.1	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.077		49.6	50.0	99	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.155		51.3	50.0	103	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.164		49.8	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.085		51.0	50.0	102	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.036		51.8	50.0	104	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.178		52.0	50.0	104	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.173		50.3	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.437		49.9	50.0	100	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.076		49.2	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.340		50.9	50.0	102	86-116
OCDD	AveID	1.107	1.121		101	100	101	79-126
OCDF	AveID	1.438	1.426		99.1	100	99	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.528		94.1	100	94	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9184		102	100	102	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.201		99.3	100	99	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.215		98.0	100	98	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7820		103	100	103	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.130		104	100	104	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.088		96.5	100	96	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.050		98.8	100	99	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7722		105	100	105	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8393		95.4	100	95	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9812		101	100	101	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7276		94.1	100	94	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6560		101	100	101	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6476		92.4	100	92	77-129
13C-OCDD	Ave	0.4472	0.4603		206	200	103	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.135		10.2	10.0	102	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\25AU2110D5.SPL
Last Modified: Friday, August 27, 2021 09:50:14 Pacific Daylight Time
Printed: Friday, August 27, 2021 09:50:50 Pacific Daylight Time

Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #
1	25AU2110D5_1	WDM HRDXNCP_00044	WDM 082521B	Tray01:1	Dioxin	
2	25AU2110D5_2	CS-4 HRDXNL4_00099	CCV 082521	Tray01:2	Dioxin	
3	25AU2110D5_3	MB 320-515492/1-A	MB 320-515492/1-A	Tray01:4	1613B/Solid	D270
4	25AU2110D5_4	LCS 320-515492/2-A	LCS 320-515492/2-A	Tray01:5	1613B/Solid	---
5	25AU2110D5_5	320-77214-A-1-A	320-77214-A-1-A	Tray01:6	1613B/Solid	---
6	25AU2110D5_6	320-77214-A-2-A	320-77214-A-2-A	Tray01:7	1613B/Solid	
7	25AU2110D5_7	320-77214-A-2-B MS	320-77214-A-2-B MS	Tray01:8	1613B/Solid	
8	25AU2110D5_8	320-77214-A-2-C MSD	320-77214-A-2-C MSD	Tray01:9	1613B/Solid	---
9	25AU2110D5_9	320-77214-A-3-A	320-77214-A-3-A	Tray01:10	1613B/Solid	---
10	25AU2110D5_10	320-77214-A-4-A	320-77214-A-4-A	Tray01:11	1613B/Solid	
11	25AU2110D5_11	320-77214-A-5-A	320-77214-A-5-A	Tray01:15	1613B/Solid	
12	25AU2110D5_12	320-77214-A-6-A	320-77214-A-6-A	Tray01:16	1613B/Solid	
13	25AU2110D5_13	320-77214-A-7-A	320-77214-A-7-A	Tray01:17	1613B/Solid	---
14	25AU2110D5_14	SB Solvent Blank C-14	SB 082521	Tray01:3		
15	25AU2110D5_15	CS-4 HRDXNL4_00099	CCV 082521A	Tray01:2	Dioxin	
16	25AU2110D5_16	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---
17	25AU2110D5_17	SB Solvent Blank C-14	SB 082521A	Tray01:3		
18	25AU2110D5_18	320-77214-A-8-A	320-77214-A-8-A	Tray01:29	1613B/Solid	D270
19	25AU2110D5_19	320-77214-A-9-A	320-77214-A-9-A	Tray01:30	1613B/Solid	
20	25AU2110D5_20	320-77214-A-13-A	320-77214-A-13-A	Tray01:31	1613B/Solid	
21	25AU2110D5_21	320-77292-A-1-A	320-77292-A-1-A	Tray01:32	1613B/Solid	
22	25AU2110D5_22	320-77292-A-2-A	320-77292-A-2-A	Tray01:33	1613B/Solid	
23	25AU2110D5_23	320-77292-A-2-B MS	320-77292-A-2-B MS	Tray01:34	1613B/Solid	
24	25AU2110D5_24	320-77292-A-2-C MSD	320-77292-A-2-C MSD	Tray01:35	1613B/Solid	
25	25AU2110D5_25	320-77292-A-3-A	320-77292-A-3-A	Tray01:36	1613B/Solid	
26	25AU2110D5_26	320-77292-A-4-A	320-77292-A-4-A	Tray01:37	1613B/Solid	
27	25AU2110D5_27	320-77292-A-5-A	320-77292-A-5-A	Tray01:38	1613B/Solid	
28	25AU2110D5_28	SB Solvent Blank C-14	SB 082521B	Tray01:3		
29	25AU2110D5_29	CS-4 HRDXNL4_00099	CCV 082521B	Tray01:2	Dioxin	
30	25AU2110D5_30	WDM HRDXNCP_00044	WDM 082521B	Tray01:1	Dioxin	---
31	25AU2110D5_31	SB Solvent Blank C-14	SB 082521C	Tray01:3		
32	25AU2110D5_32	320-77292-A-6-A	320-77292-A-6-A	Tray01:43	1613B/Solid	D270
33	25AU2110D5_33	320-77292-A-7-A	320-77292-A-7-A	Tray01:44	1613B/Solid	
34	25AU2110D5_34	320-77292-A-8-A	320-77292-A-8-A	Tray01:45	1613B/Solid	
35	25AU2110D5_35	320-77292-A-9-A	320-77292-A-9-A	Tray01:46	1613B/Solid	
36	25AU2110D5_36	320-77292-A-13-A	320-77292-A-13-A	Tray01:47	1613B/Solid	
37	25AU2110D5_37	400-206693-C-22-A	400-206693-C-22-A	Tray01:48	1613B/Solid	
38	25AU2110D5_38	400-206693-C-36-A	400-206693-C-36-A	Tray01:49	1613B/Solid	
39	25AU2110D5_39	400-206693-C-37-A	400-206693-C-37-A	Tray01:50	1613B/Solid	
40	25AU2110D5_40	400-206693-C-38-A	400-206693-C-38-A	Tray01:51	1613B/Solid	
41	25AU2110D5_41	400-206693-C-39-A	400-206693-C-39-A	Tray01:52	1613B/Solid	
42	25AU2110D5_42	SB Solvent Blank C-14	SB 082521D	Tray01:3		
43	25AU2110D5_43	WDM HRDXNCP_00044	WDM 082521C	Tray01:2	Dioxin	---
44	25AU2110D5_44	CS-4 HRDXNL4_00099	CCV 082521C	Tray01:1	Dioxin	
45	25AU2110D5_45	SB Solvent Blank C-14	SB 082521E	Tray01:3		
46	25AU2110D5_46	320-76887-a-1-a X10	320-76887-a-1-a X10	Tray01:57	1613B/Solid	D266
47	25AU2110D5_47	320-77214-a-1-a X10	320-77214-a-1-a X10	Tray01:58	1613B/Solid	D270
48	25AU2110D5_48	280-150979-b-1-f msd X10	280-150979-b-1-f msd X10	Tray01:59	8290A_D5/Solid	D265
49	25AU2110D5_49	280-150979-b-1-e ms X10	280-150979-b-1-e ms X10	Tray01:60	8290A_D5/Solid	
50	25AU2110D5_50	280-150979-b-1-d X10	280-150979-b-1-d X10	Tray01:61	8290A_D5/Solid	
51	25AU2110D5_51	400-206690-c-16-a X20	400-206690-c-16-a X20	Tray01:62	1613B/Solid	D262
52	25AU2110D5_52	580-104878-a-4-a	580-104878-a-4-a	Tray01:63	8290A_D5/Solid	D262
53	25AU2110D5_53	580-104878-a-8-a	580-104878-a-8-a	Tray01:64	8290A_D5/Solid	---
54	25AU2110D5_54	SB Solvent Blank C-14	SB 082521F	Tray01:3		
55	25AU2110D5_55	CS-4 HRDXNL4_00099	CCV 082521D	Tray01:1	Dioxin	
56	25AU2110D5_56	WDM HRDXNCP_00044	WDM 082521D	Tray01:2	Dioxin	---
57	25AU2110D5_57	CS-4 HRDXNL4_00099	CCV 082521E	Tray01:1	Dioxin	
58	25AU2110D5_58	mb 320-512856/1-a	mb 320-512856/1-a	Tray01:71	8290A_D5/Solid	D262

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	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #
59	25AU2110D5_59	lcs 320-512856/2-a	lcs 320-512856/2-a	Tray01:72	8290A_D5/Solid	
60	25AU2110D5_60	580-104878-c-1-a	580-104878-c-1-a	Tray01:73	8290A_D5/Solid	
61	25AU2110D5_61	580-104878-c-1-b ms	580-104878-c-1-b ms	Tray01:74	8290A_D5/Solid	
62	25AU2110D5_62	580-104878-c-1-c msd	580-104878-c-1-c msd	Tray01:75	8290A_D5/Solid	
63	25AU2110D5_63	580-104878-c-16-a	580-104878-c-16-a	Tray01:76	8290A_D5/Solid	
64	25AU2110D5_64	580-104878-c-17-a	580-104878-c-17-a	Tray01:77	8290A_D5/Solid	
65	25AU2110D5_65	580-104878-c-18-a	580-104878-c-18-a	Tray01:78	8290A_D5/Solid	
66	25AU2110D5_66	580-104878-c-19-a	580-104878-c-19-a	Tray01:79	8290A_D5/Solid	
67	25AU2110D5_67	580-104878-c-20-a	580-104878-c-20-a	Tray01:80	8290A_D5/Solid	
68	25AU2110D5_68	SB Solvent Blank C-14	SB 082521G	Tray01:3		
69	25AU2110D5_69	CS-4 HRDXNL4_00099	CCV 082521F	Tray01:1	Dioxin	

Log fil checked
08/27/21 SMA

User	Sample Size	Units	MS File	Inlet File	Inject Volume	Process
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover

Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
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---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM

User	Sample Size	Units	MS File	Inlet File	Inject Volume	Process
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---

Printed: Thursday, August 26, 2021 18:40:52 Pacific Daylight Time

M 292.9824 R 11038

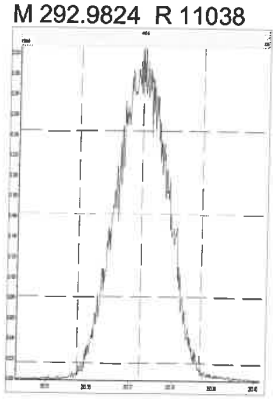

M 304.9824 R 11062

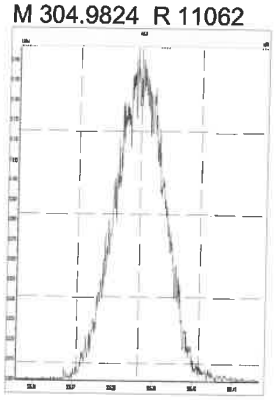

M 318.9792 R 11186

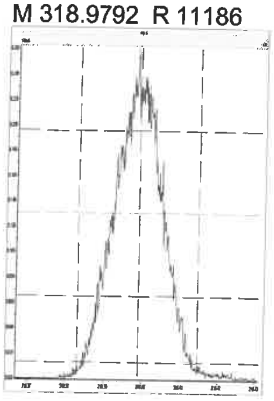

M 330.9792 R 10869

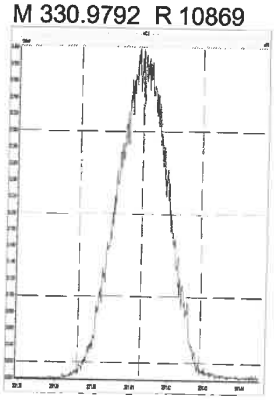

M 342.9792 R 11364

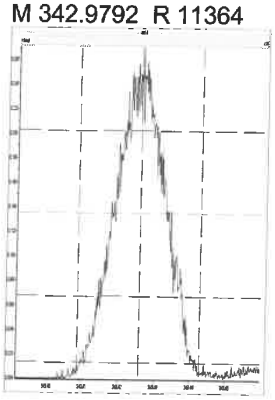

M 354.9792 R 11601

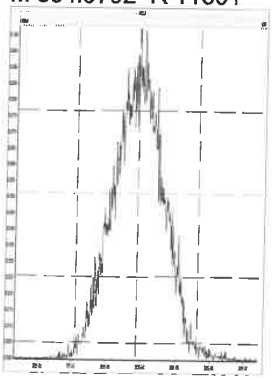

M 366.9792 R 11522

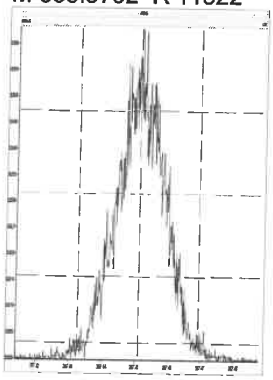

M 380.9760 R 10846

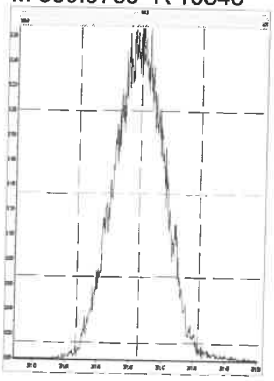

M 392.9760 R 11315

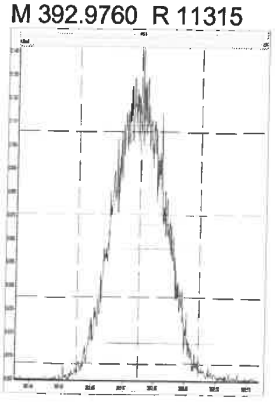

M 404.9760 R 10988

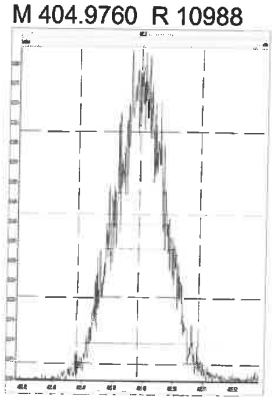

M 416.9760 R 11554

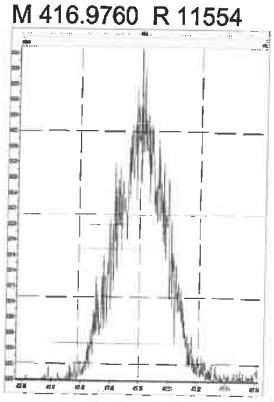

M 318.9792 R 11235

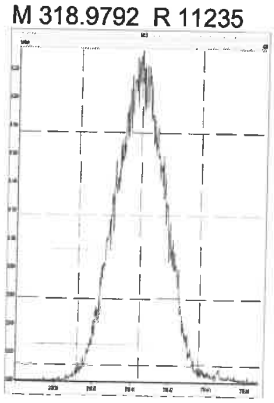

M 330.9792 R 11160

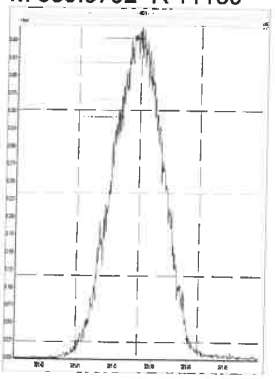

M 342.9792 R 11186

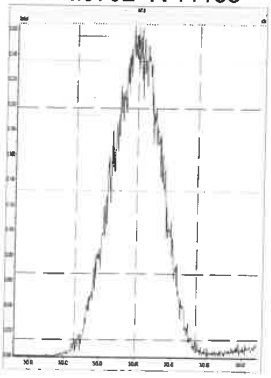

M 354.9792 R 11605

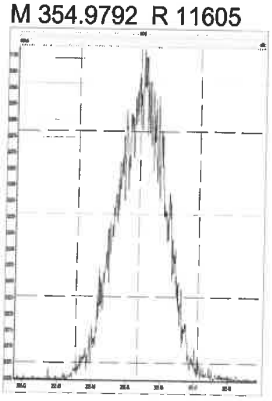

M 366.9792 R 11547

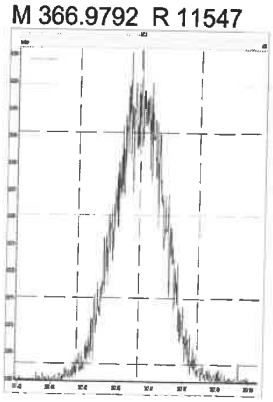

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M 380.9760 R 11444

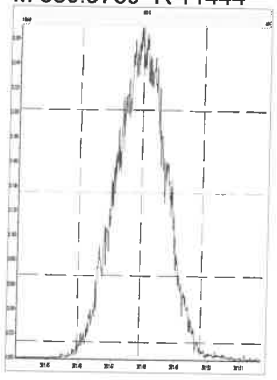

M 392.9760 R 11446

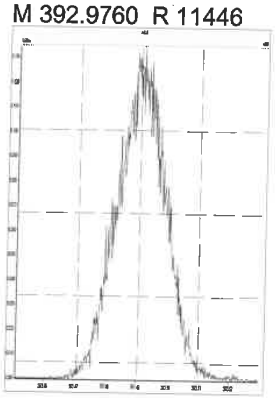

M 404.9760 R 11848

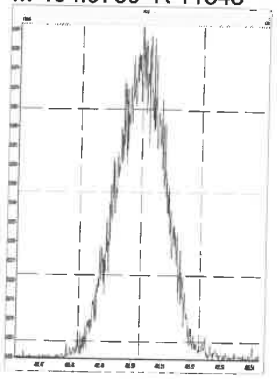

M 416.9760 R 12230

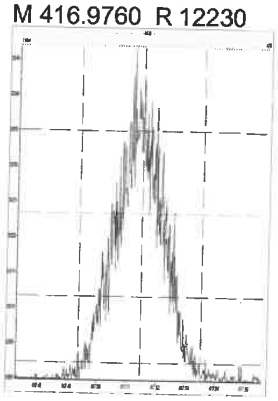

M 366.9792 R 12051

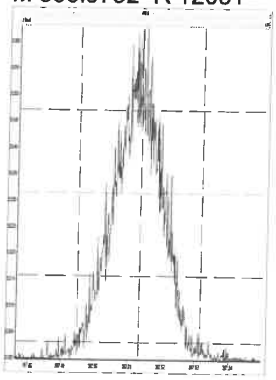

M 380.9760 R 11137

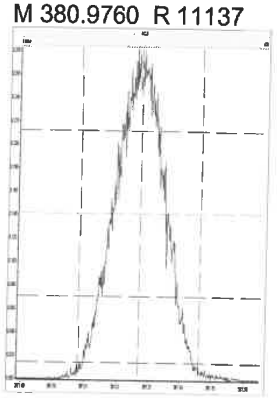

M 392.9760 R 10949

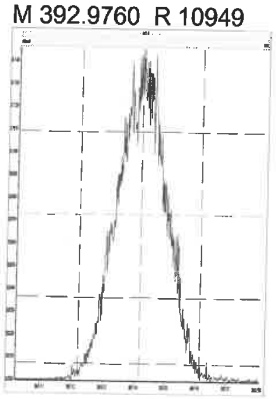

M 404.9760 R 11112

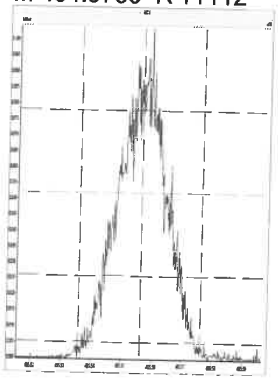

M 416.9760 R 11768

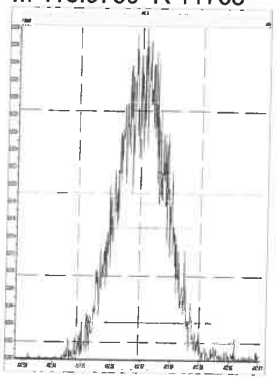

M 430.9728 R 11037

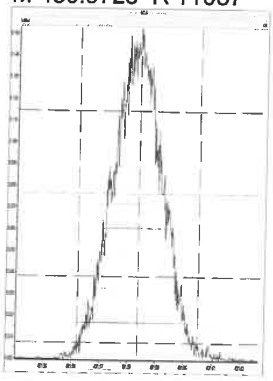

M 442.9728 R 11582

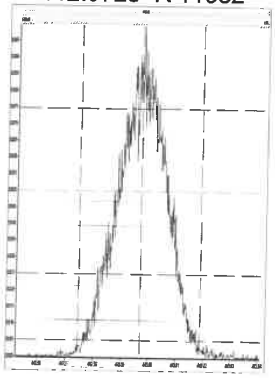

M 454.9728 R 11573

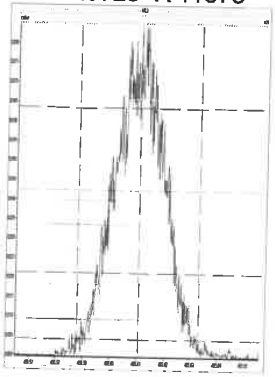

M 380.9760 R 11399

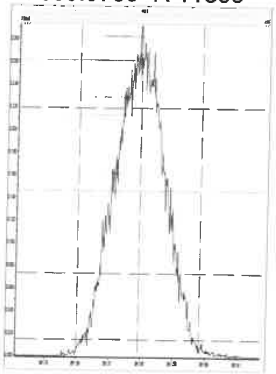

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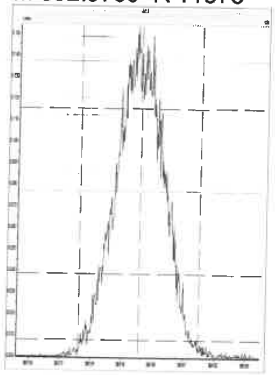

M 404.9760 R 11192

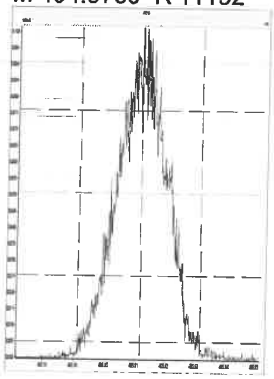

M 416.9760 R 11263

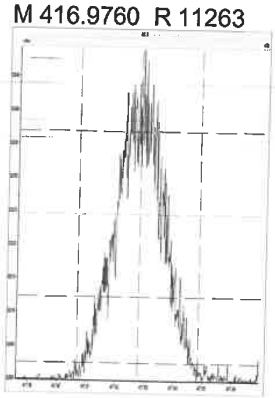

M 430.9728 R 11337

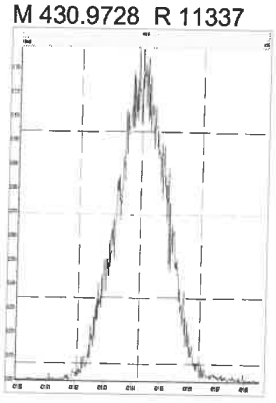

M 442.9728 R 11337

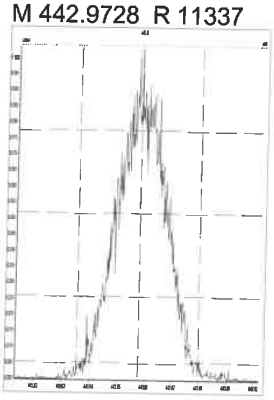

M 454.9728 R 11063

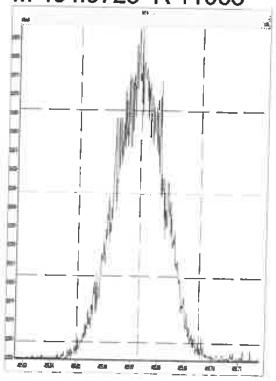

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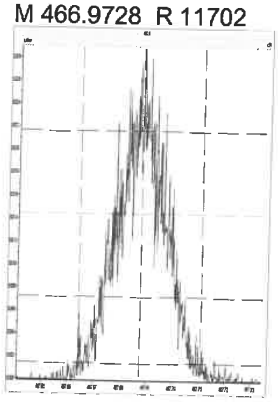

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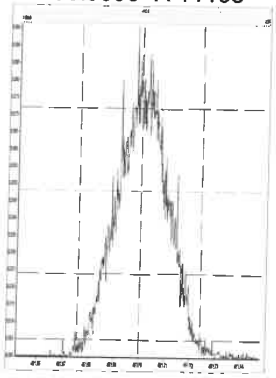

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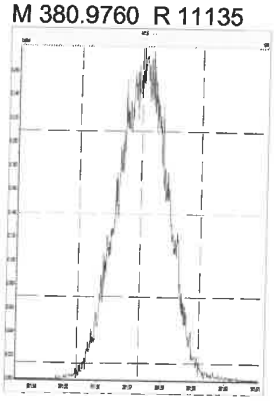

M 392.9760 R 11210

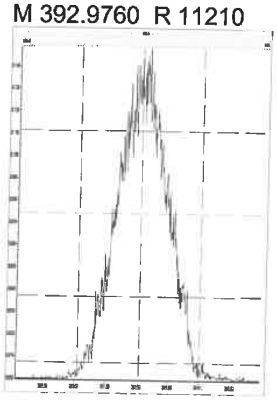

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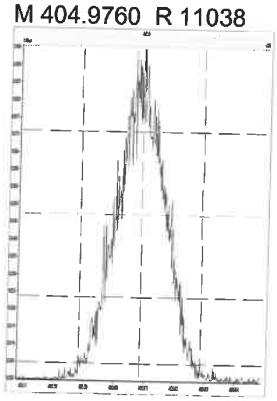

M 416.9760 R 12237

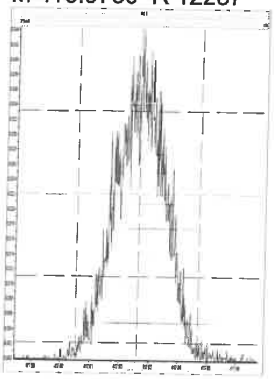

M 430.9728 R 11367

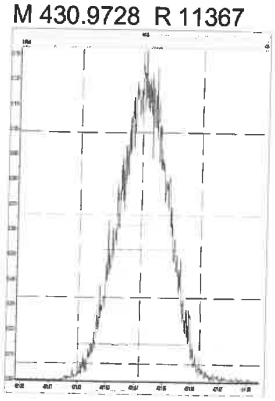

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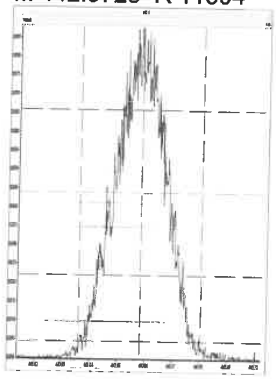

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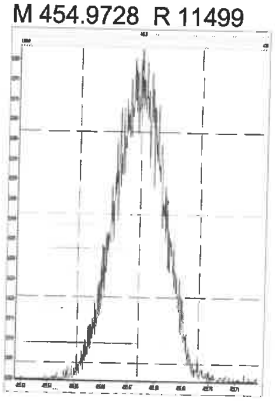

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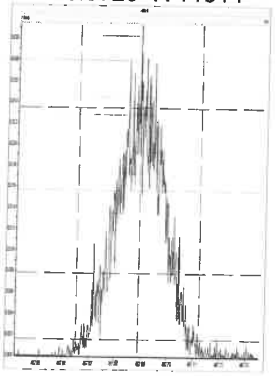

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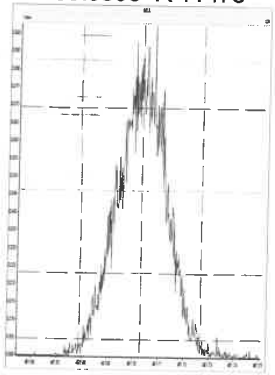

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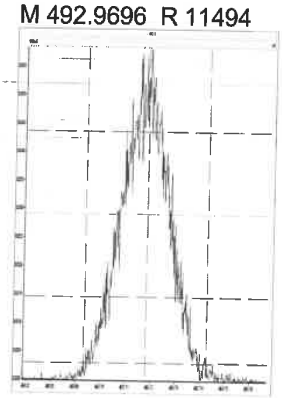

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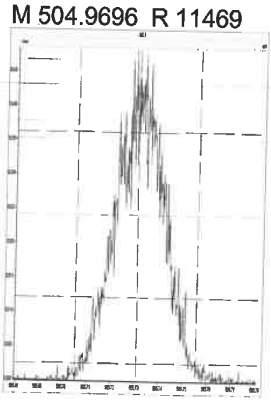

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M 516.9697 R 12372

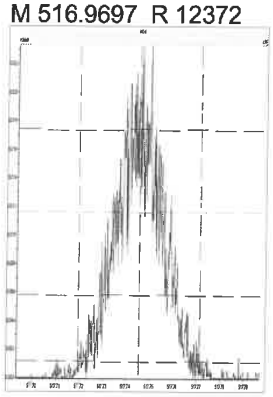

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M 292.9824 R 10872

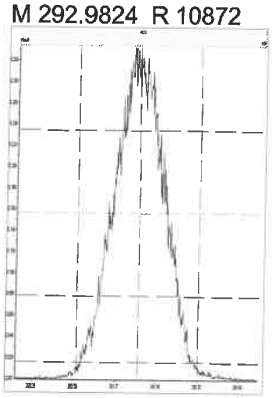

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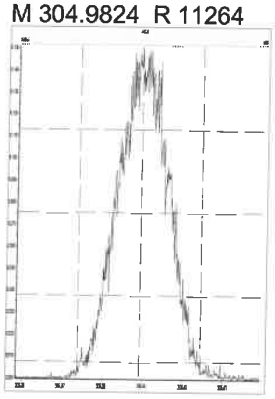

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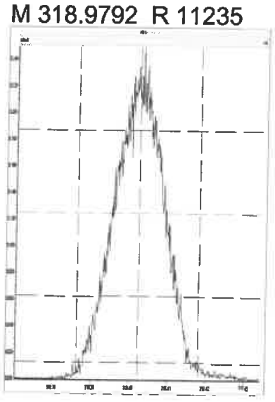

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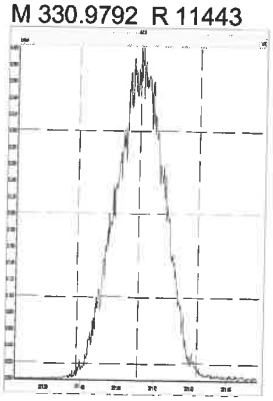

M 342.9792 R 10964

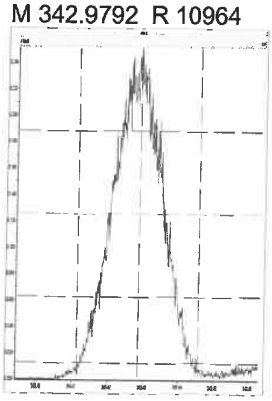

M 354.9792 R 11520

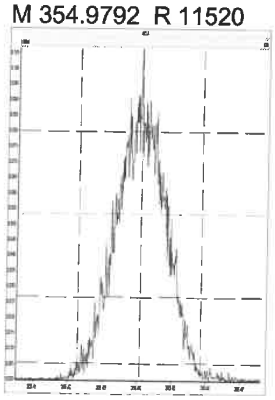

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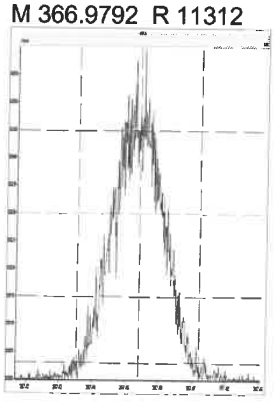

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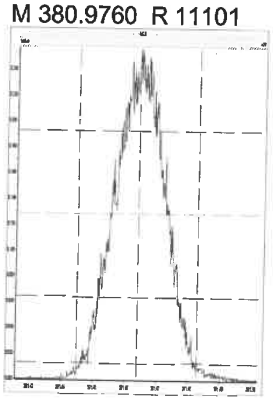

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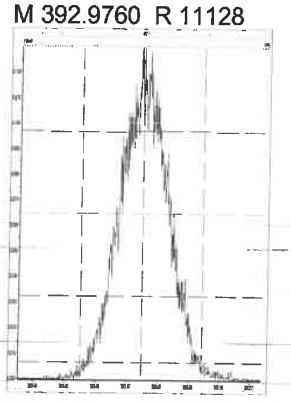

M 404.9760 R 11233

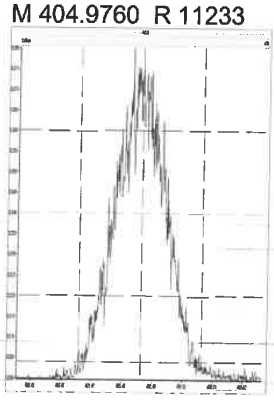

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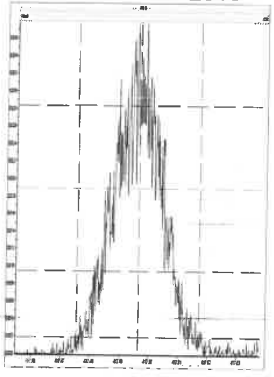

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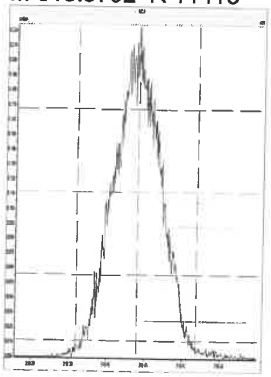

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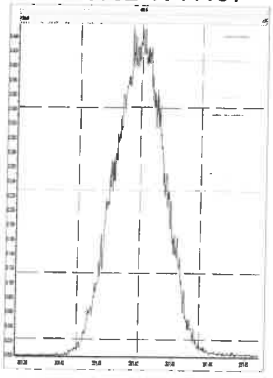

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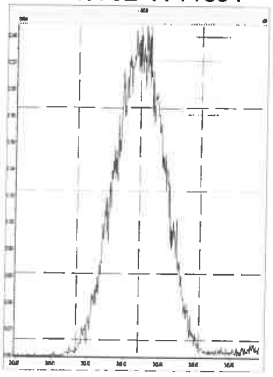

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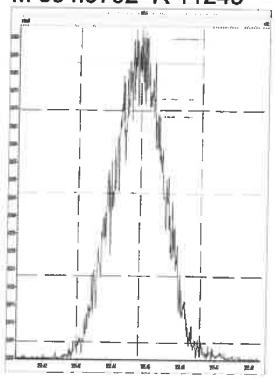

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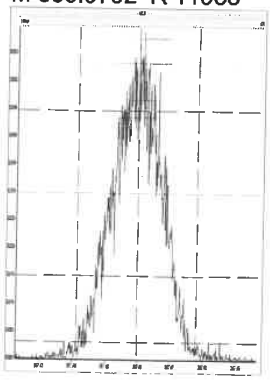

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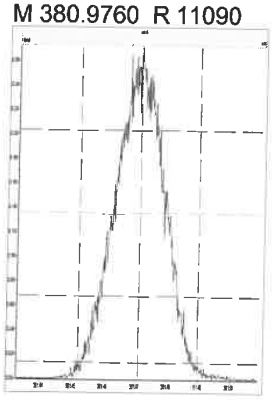

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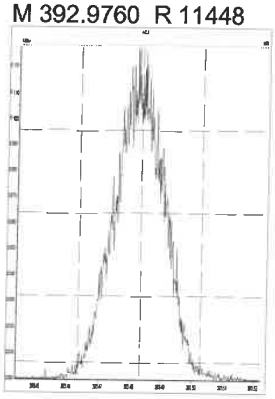

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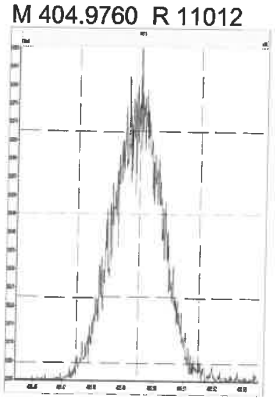

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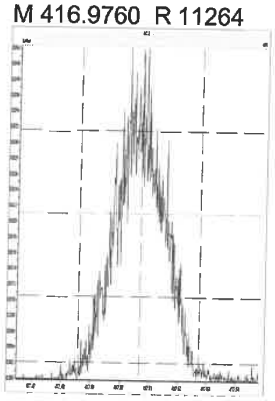

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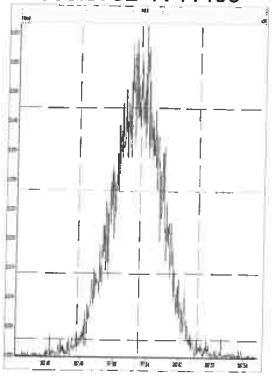

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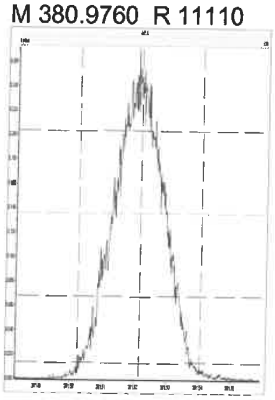

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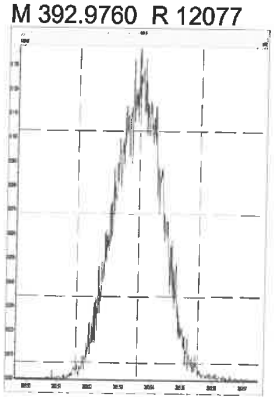

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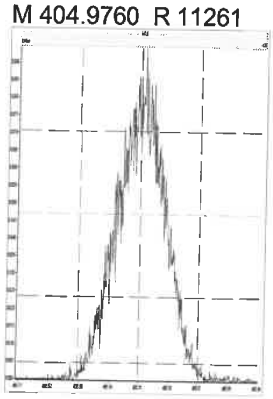

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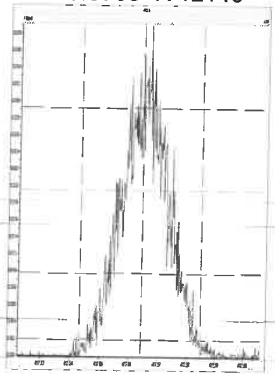

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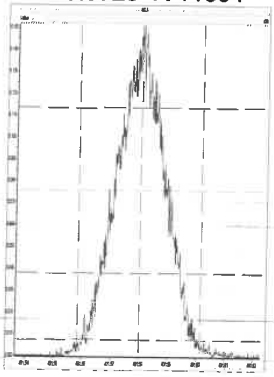

M 442.9728 R 12021

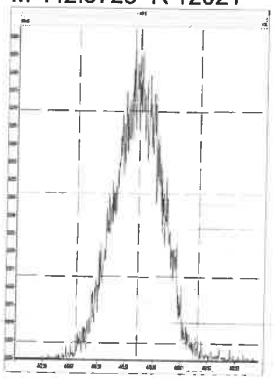

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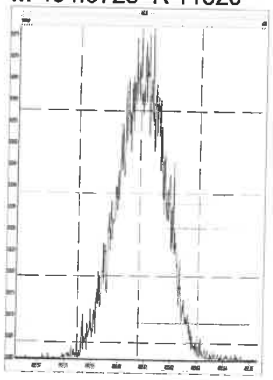

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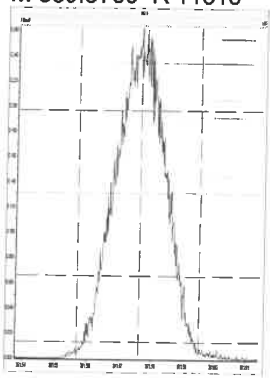

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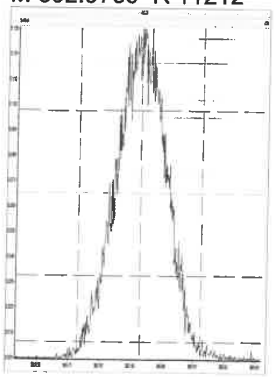

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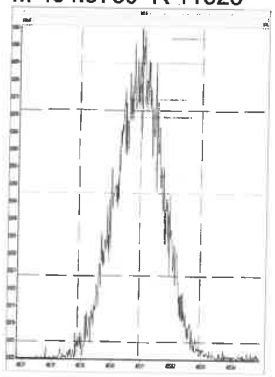

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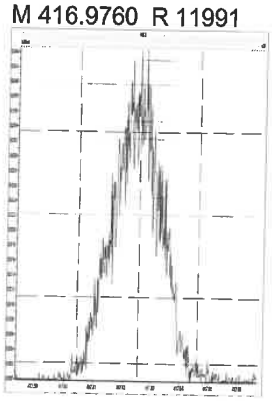

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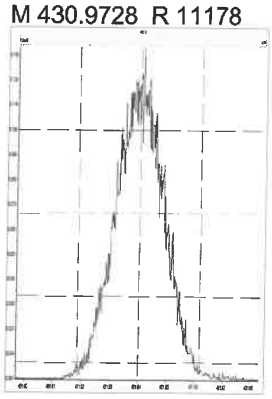

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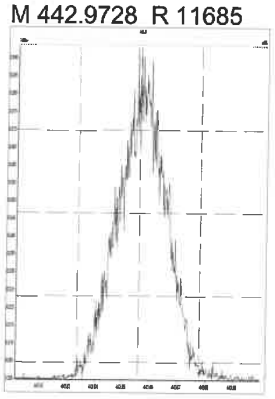

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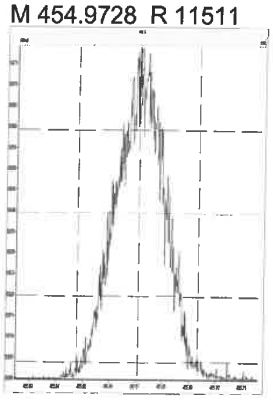

M 466.9728 R 12434

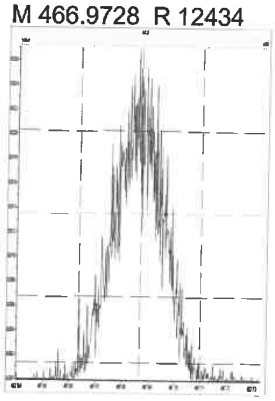

M 480.9696 R 11739

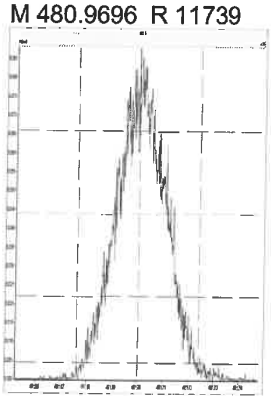

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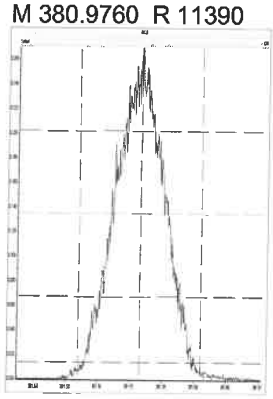

M 392.9760 R 11338

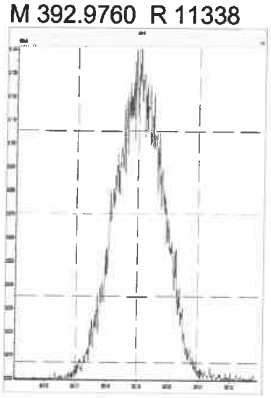

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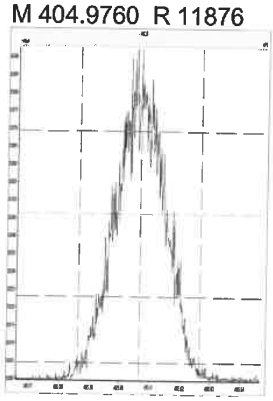

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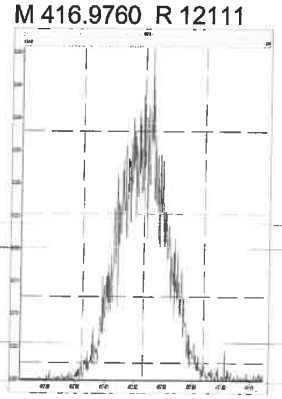

M 430.9728 R 11363

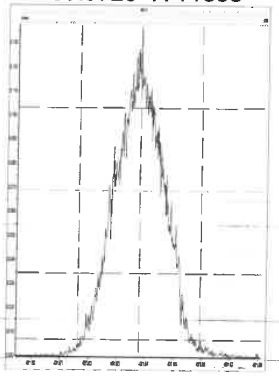

M 442.9728 R 11338

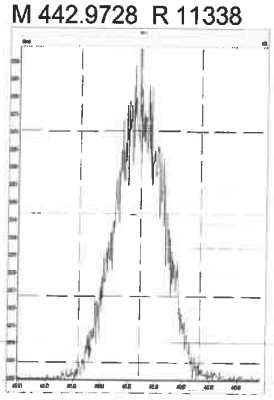

M 454.9728 R 11793

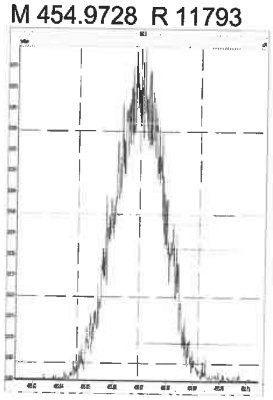

M 466.9728 R 11876

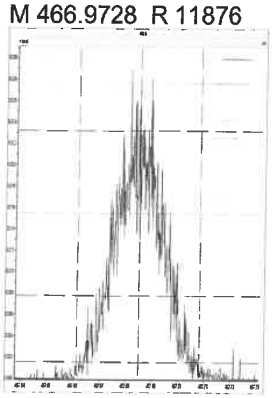

M 480.9696 R 11633

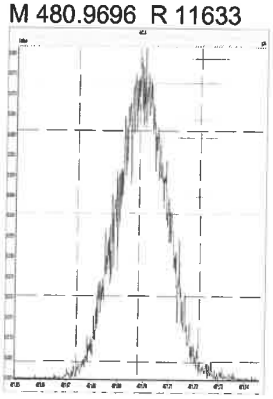

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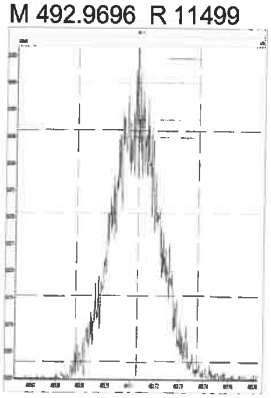

M 504.9696 R 11682

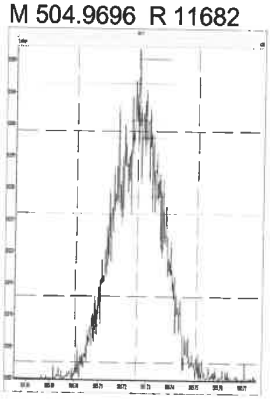

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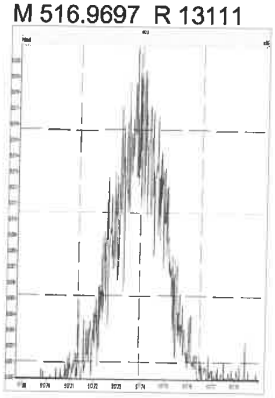

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M 292.9824 R 11441

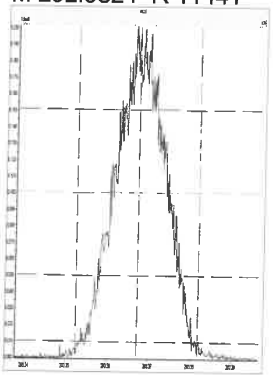

M 304.9824 R 11342

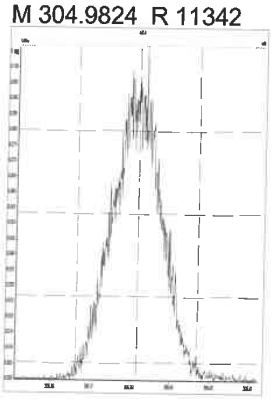

M 318.9792 R 11338

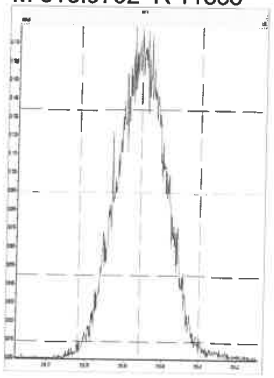

M 330.9792 R 11000

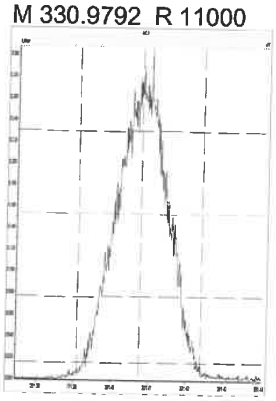

M 342.9792 R 11628

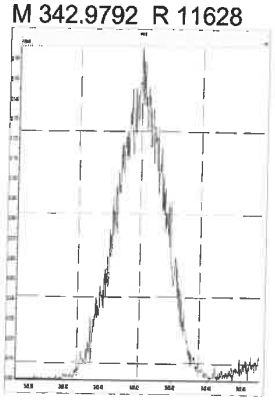

M 354.9792 R 11266

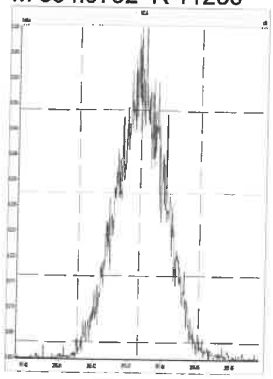

M 366.9792 R 11600

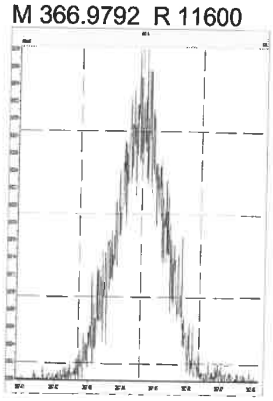

M 380.9760 R 10775

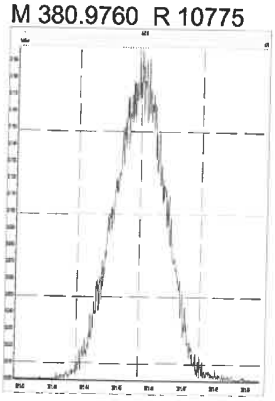

M 392.9760 R 11237

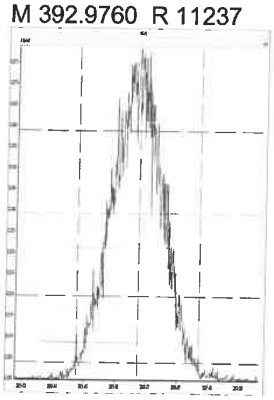

M 404.9760 R 11887

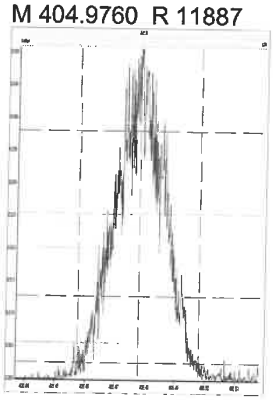

M 416.9760 R 12063

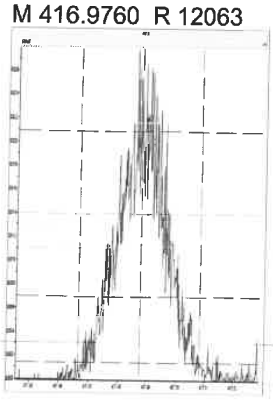

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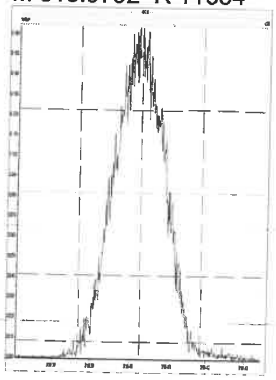

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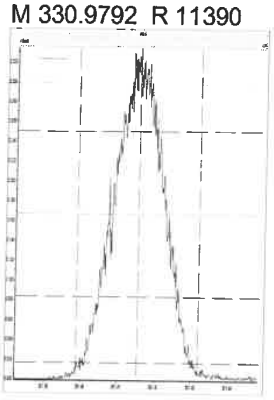

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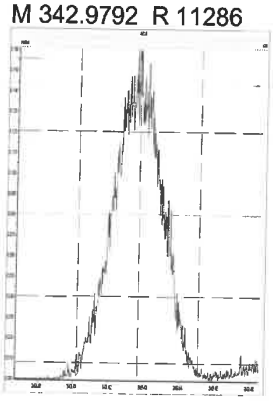

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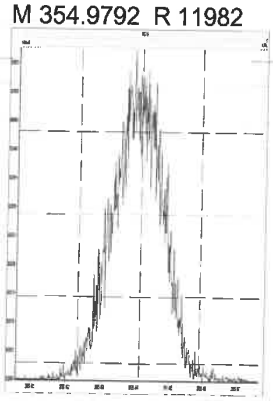

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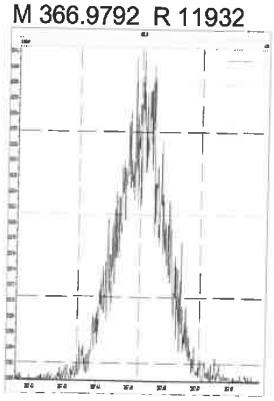

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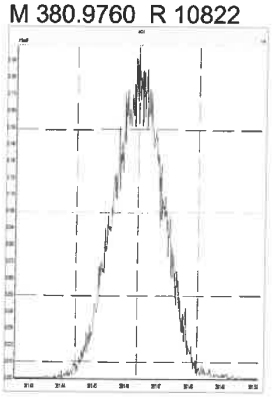

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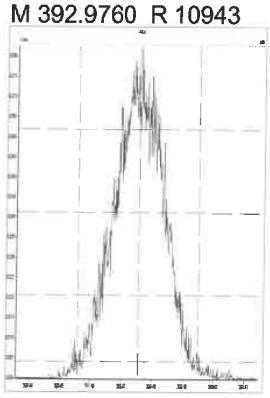

M 404.9760 R 11657

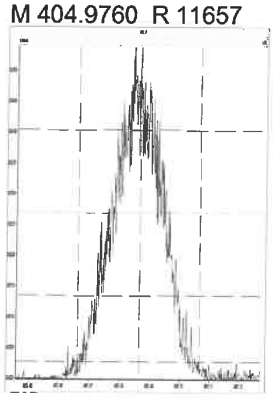

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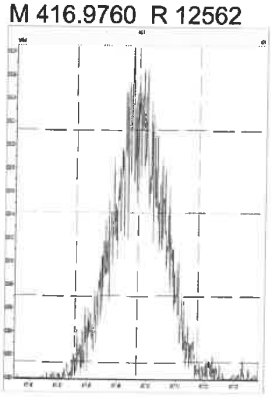

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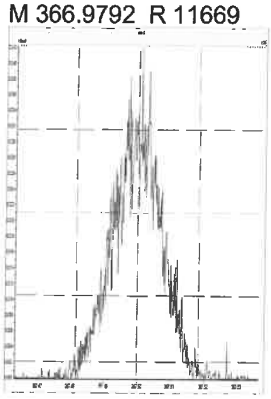

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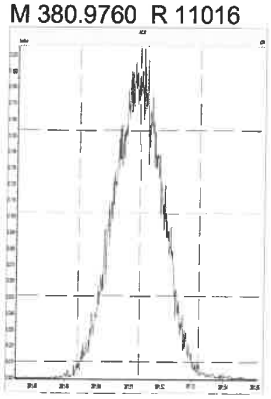

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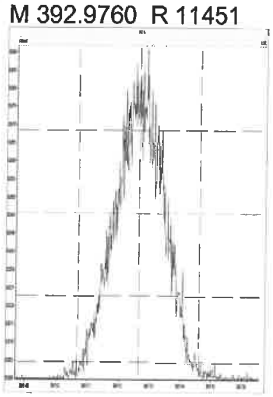

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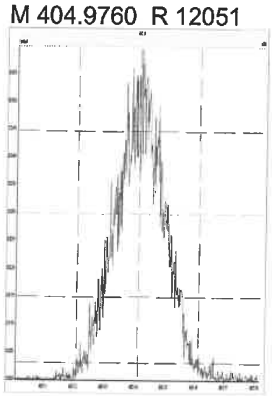

M 416.9760 R 12048

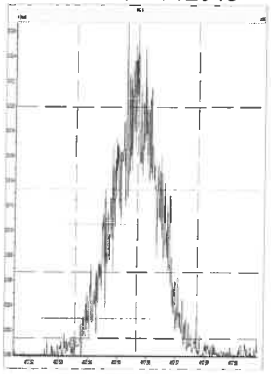

M 430.9728 R 11295

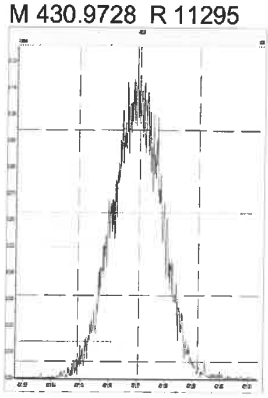

M 442.9728 R 11857

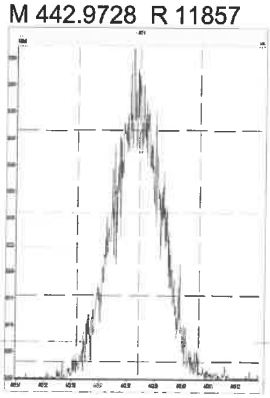

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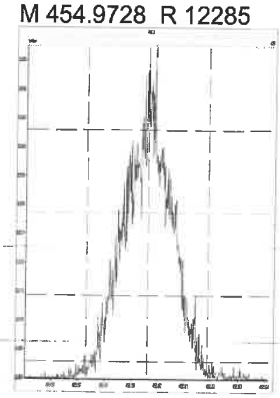

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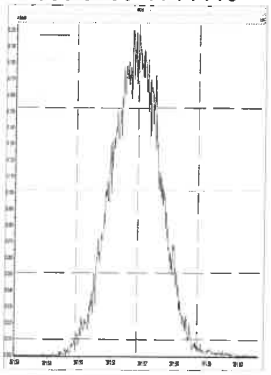

M 392.9760 R 11577

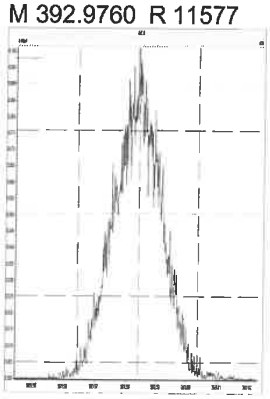

M 404.9760 R 12059

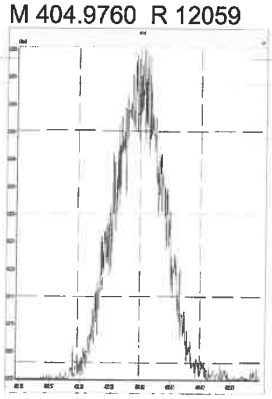

M 416.9760 R 11737

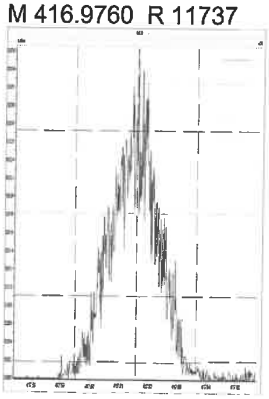

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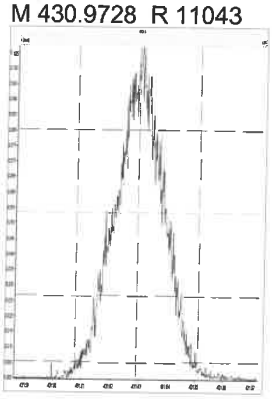

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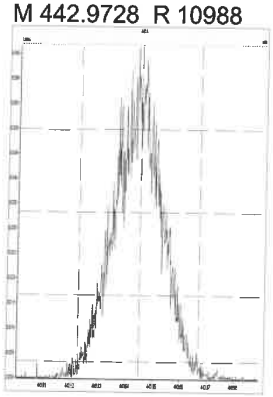

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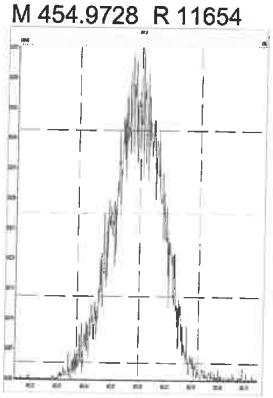

M 466.9728 R 12705

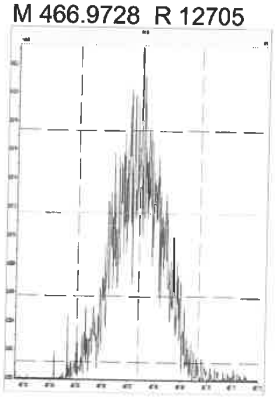

M 480.9696 R 10454

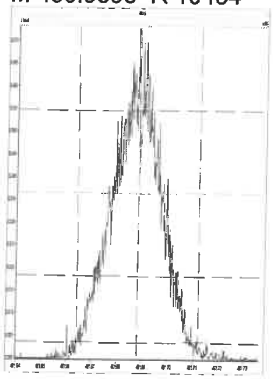

M 380.9760 R 11493

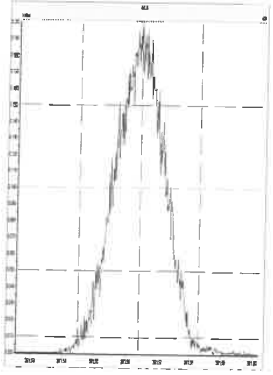

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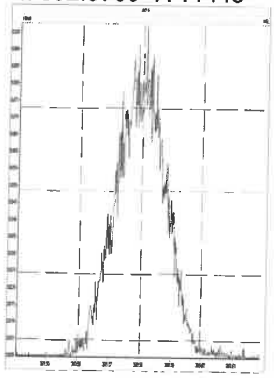

M 404.9760 R 11390

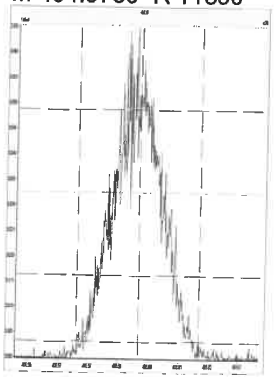

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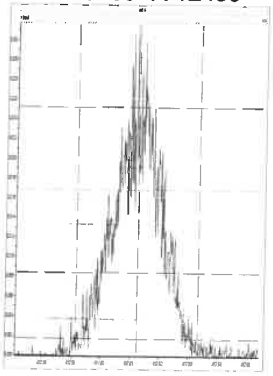

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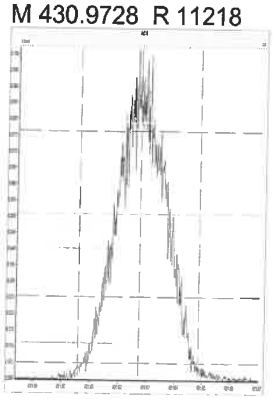

M 442.9728 R 11739

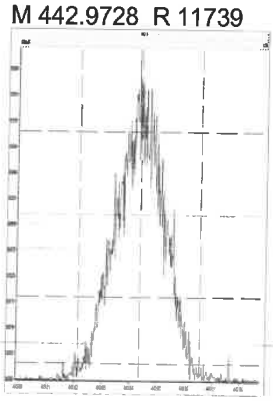

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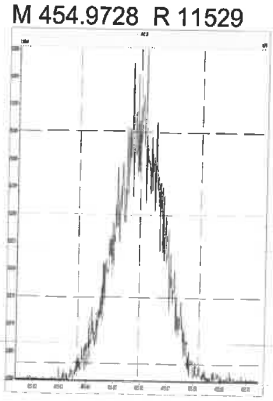

M 466.9728 R 11793

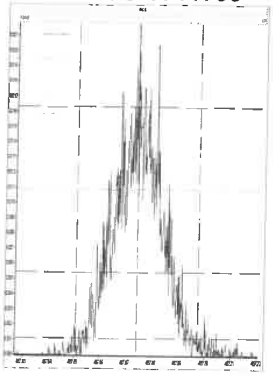

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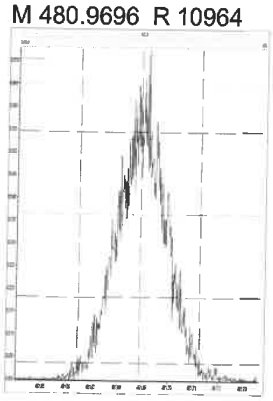

M 492.9696 R 12048

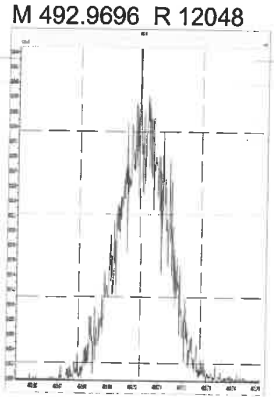

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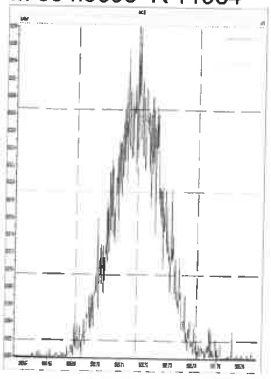

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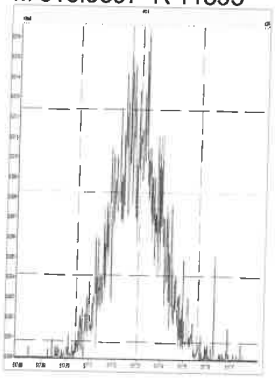

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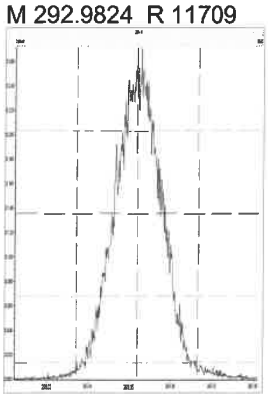

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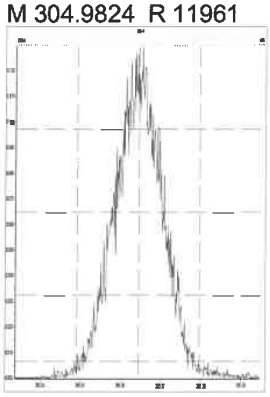

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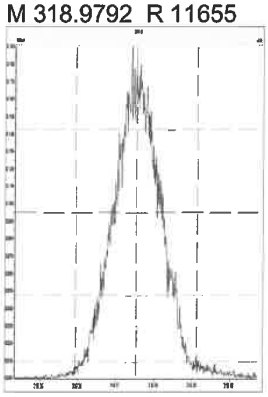

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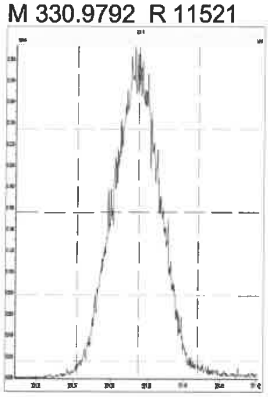

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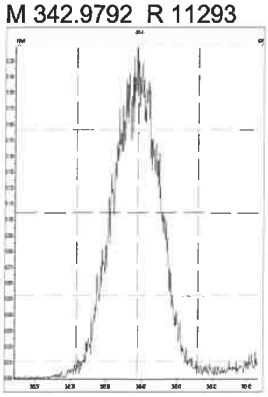

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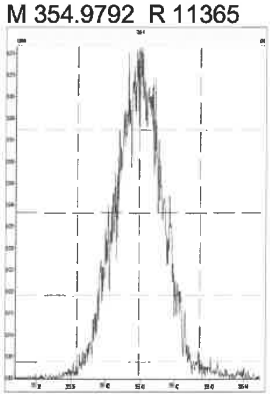

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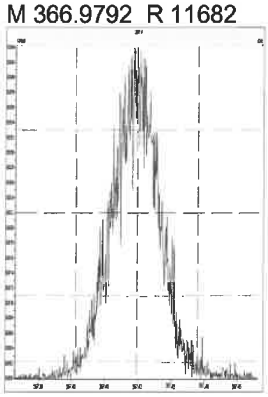

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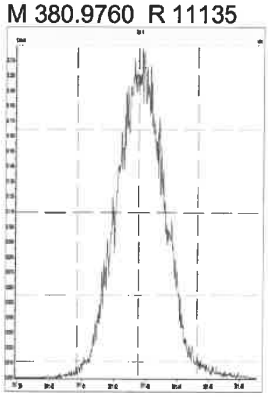

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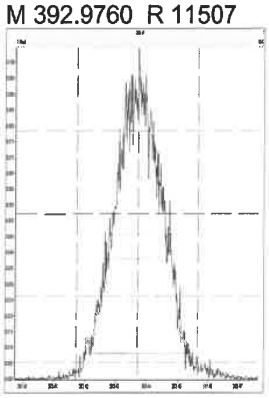

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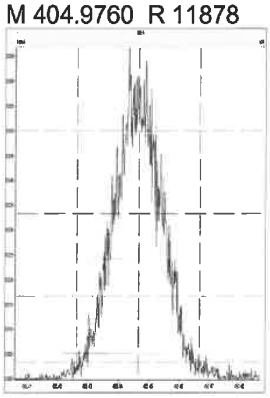

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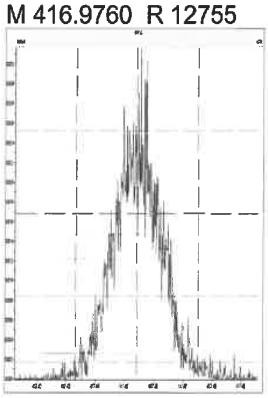

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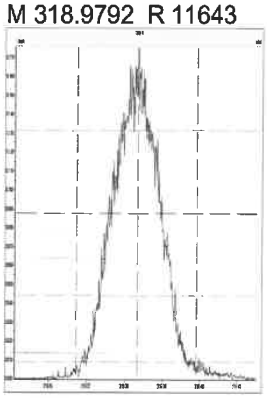

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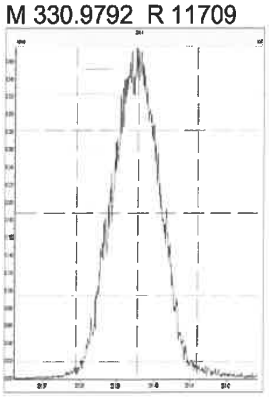

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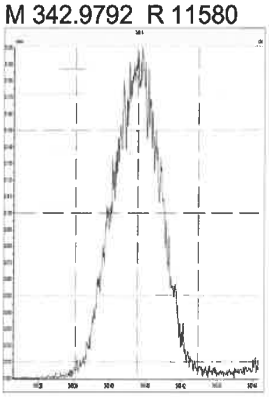

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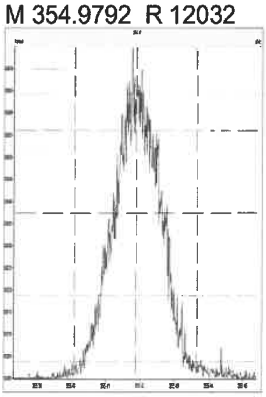

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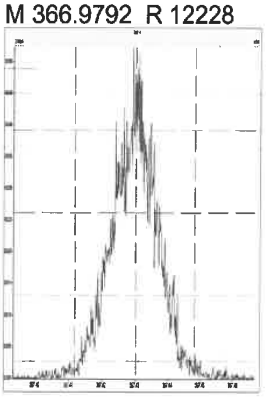

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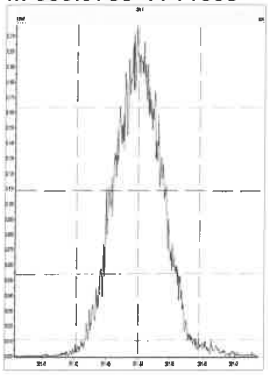

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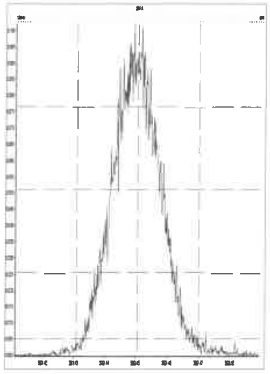

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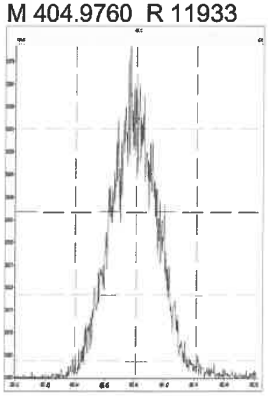

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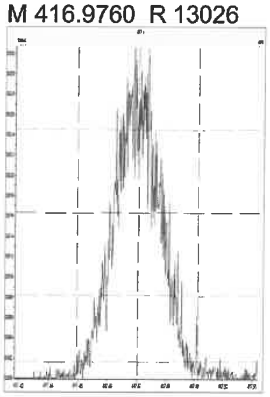

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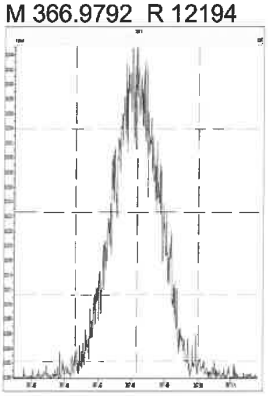

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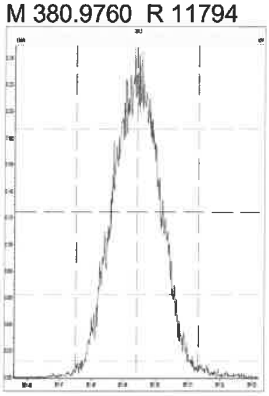

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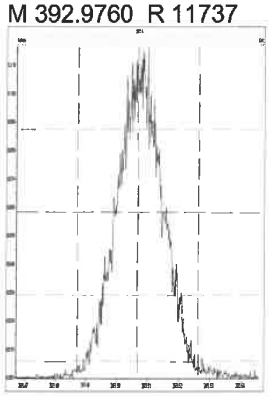

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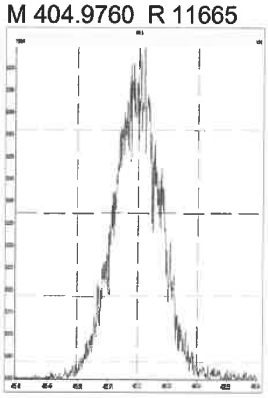

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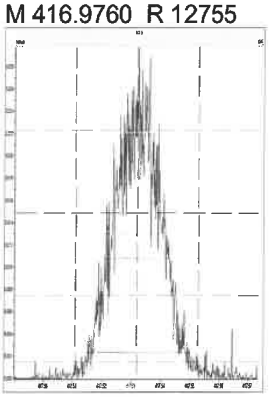

M 430.9728 R 11694

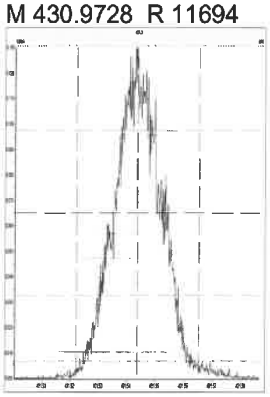

M 442.9728 R 12112

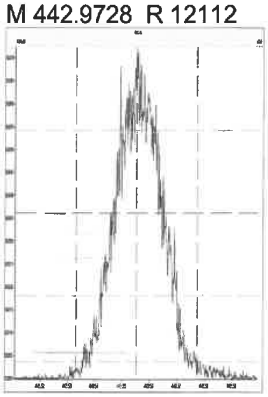

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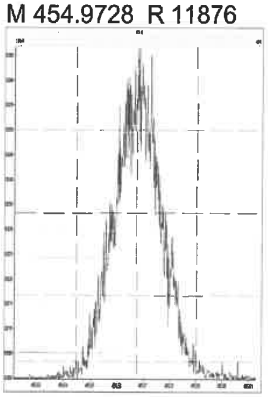

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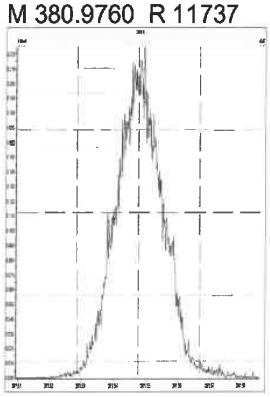

M 392.9760 R 11966

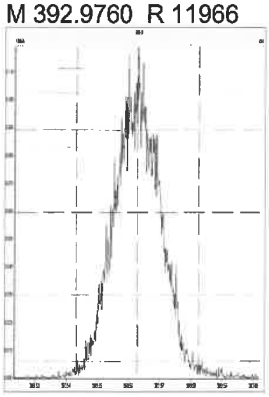

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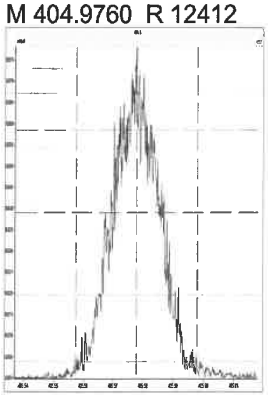

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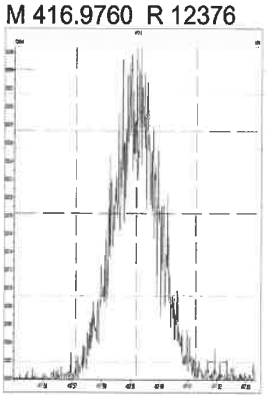

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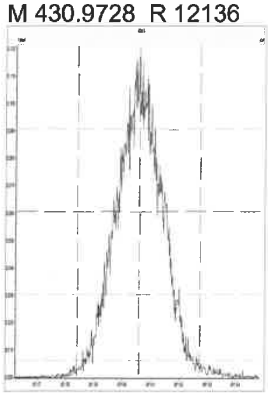

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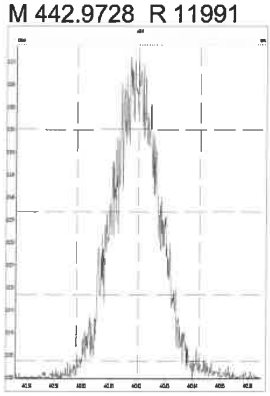

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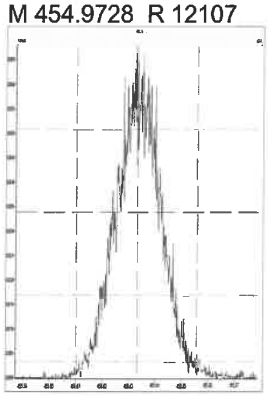

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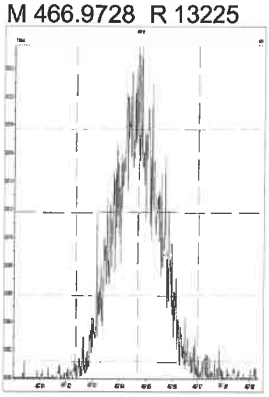

M 480.9696 R 11656

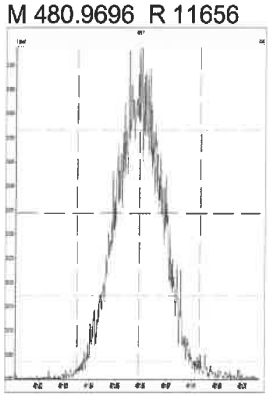

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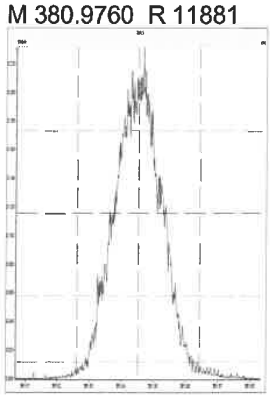

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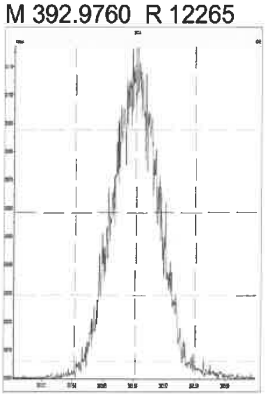

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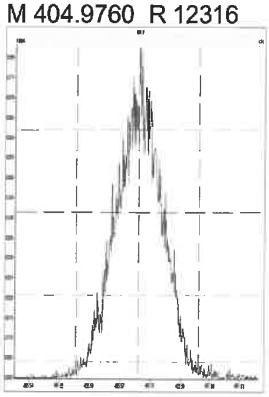

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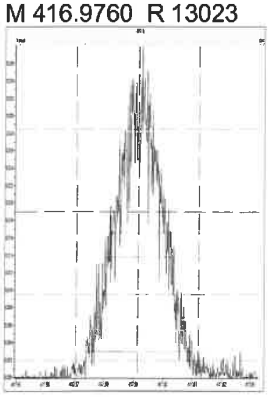

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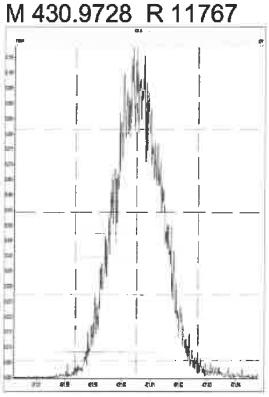

M 442.9728 R 12136

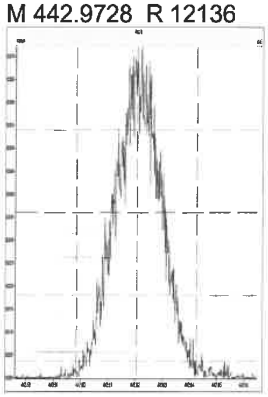

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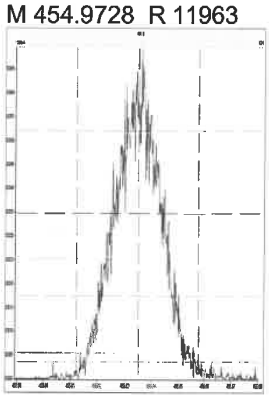

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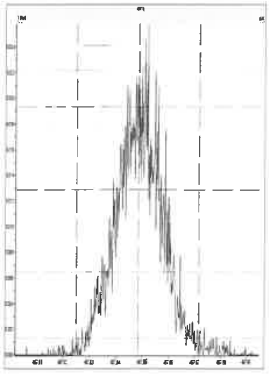

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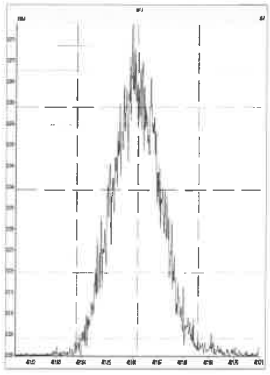

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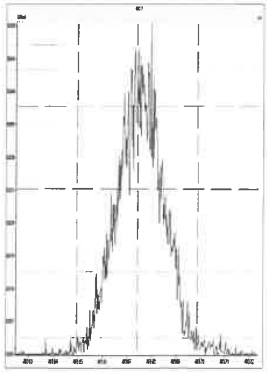

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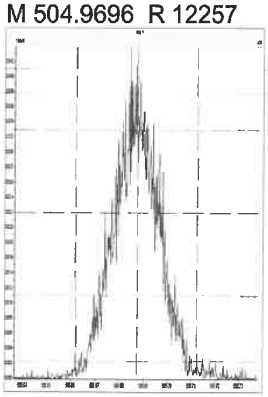

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M 516.9697 R 13029

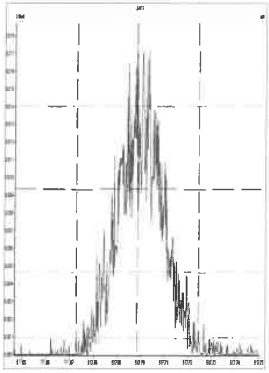

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M 292.9824 R 12278

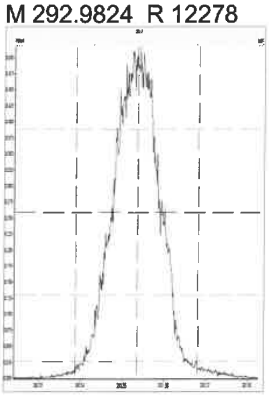

M 304.9824 R 11764

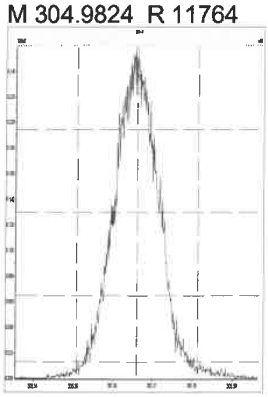

M 318.9792 R 12255

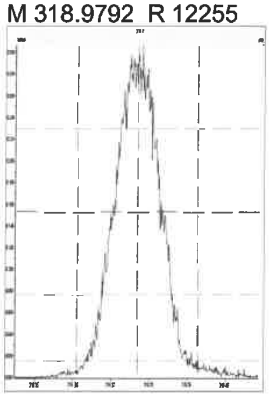

M 330.9792 R 11962

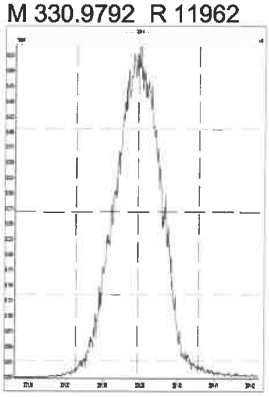

M 342.9792 R 12026

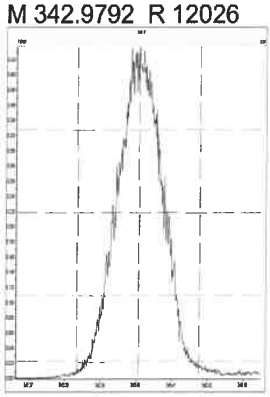

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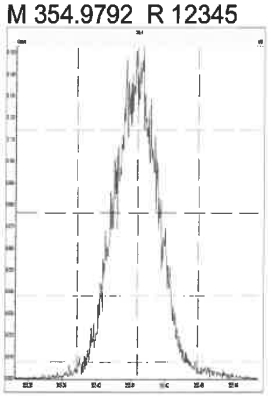

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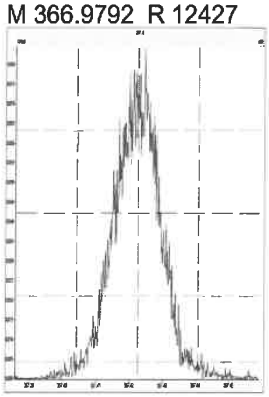

M 380.9760 R 11798

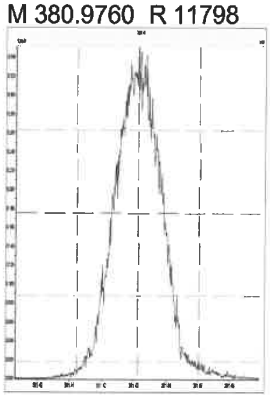

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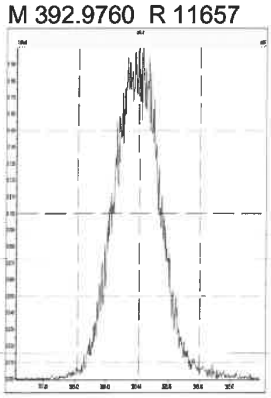

M 404.9760 R 11904

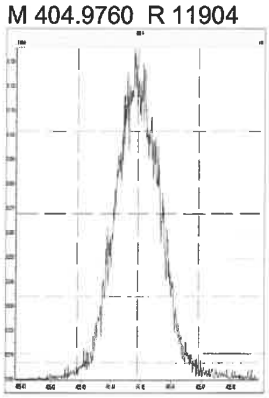

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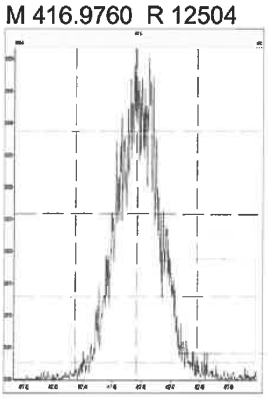

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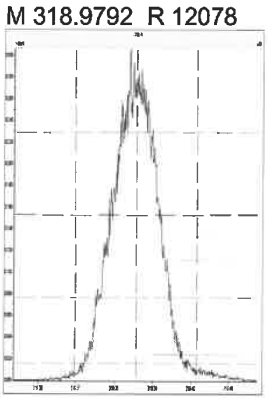

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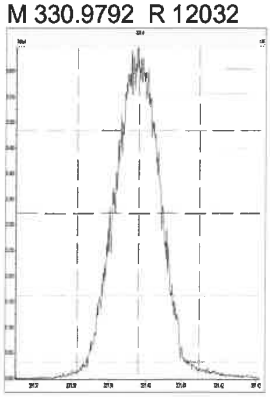

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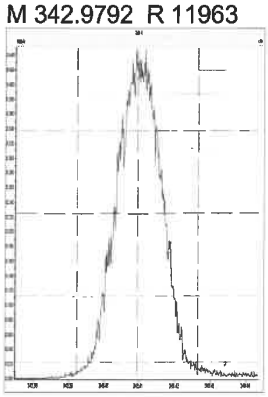

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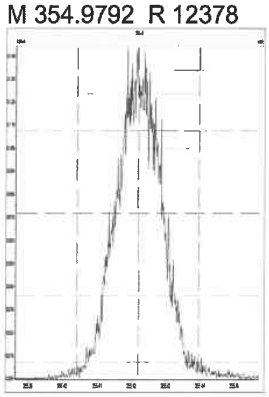

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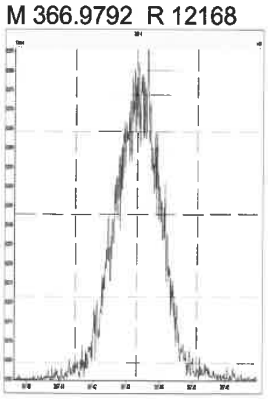

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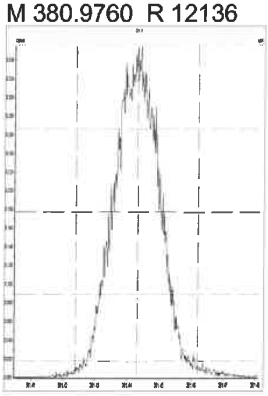

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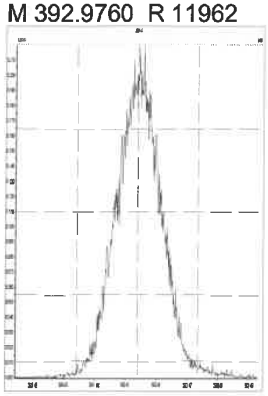

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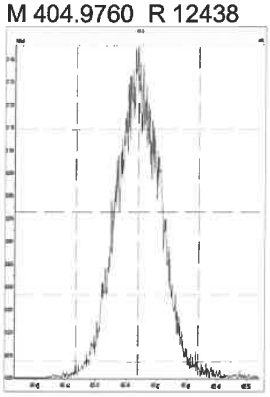

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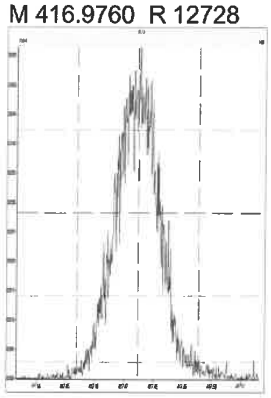

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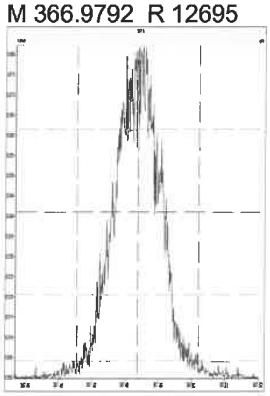

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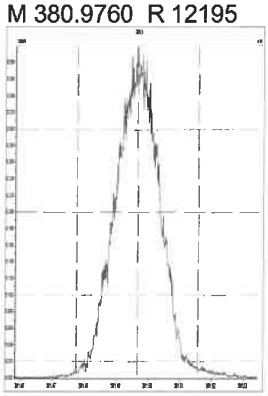

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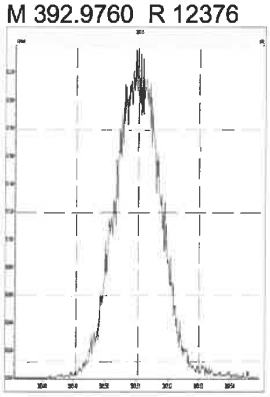

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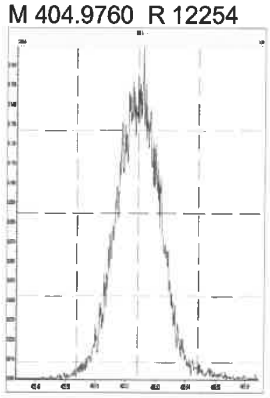

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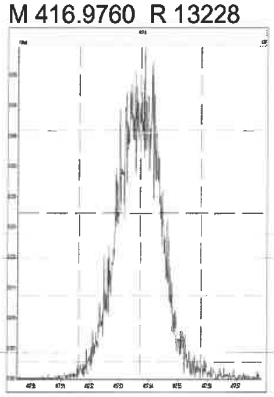

M 430.9728 R 12442

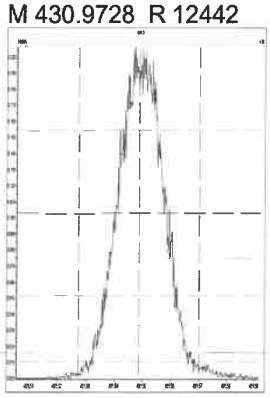

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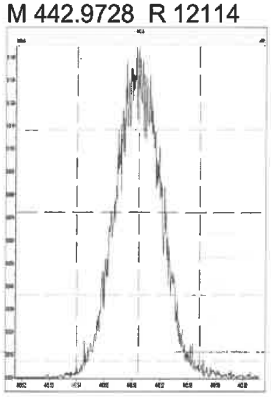

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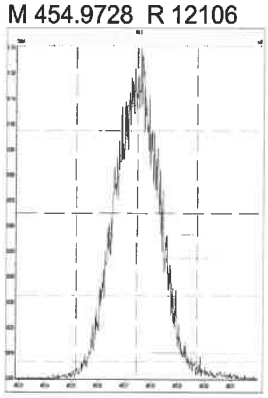

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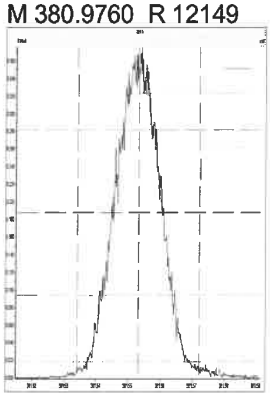

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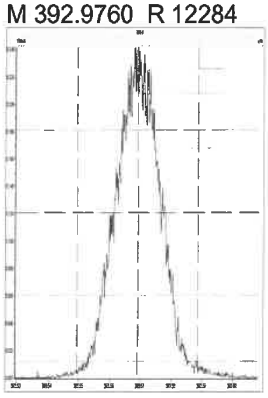

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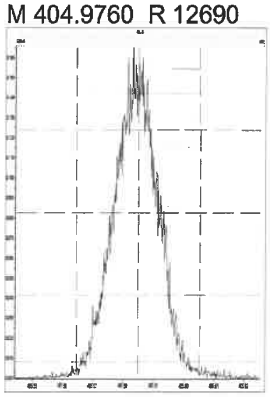

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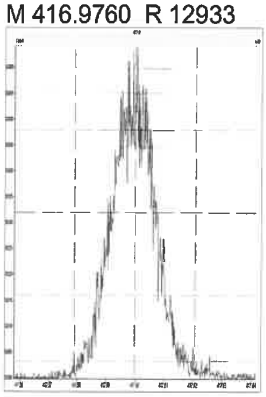

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M 430.9728 R 12535

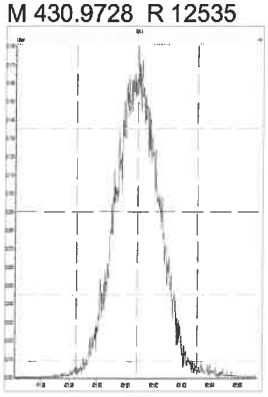

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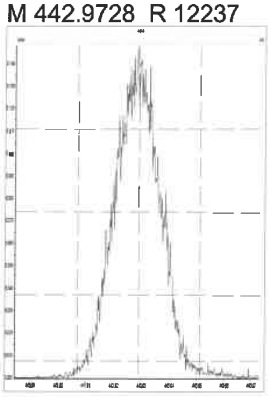

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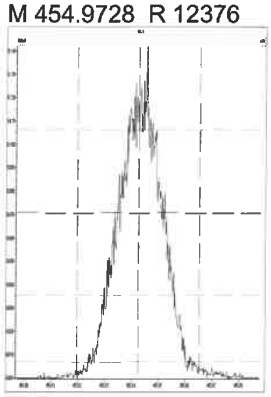

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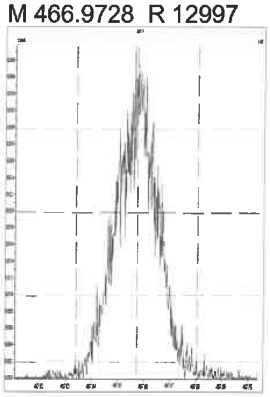

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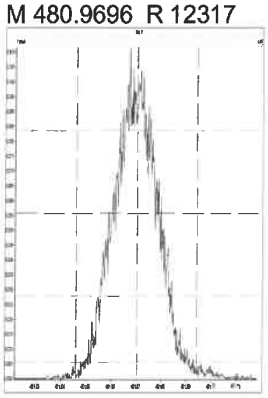

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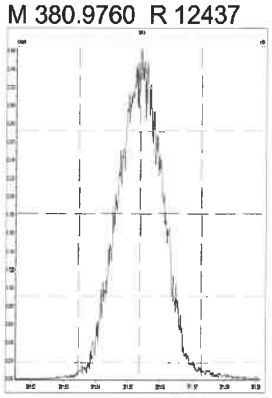

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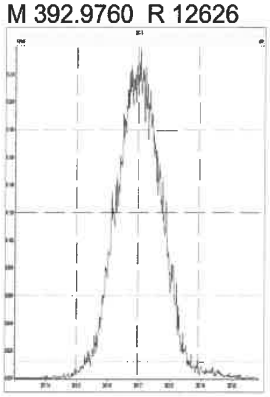

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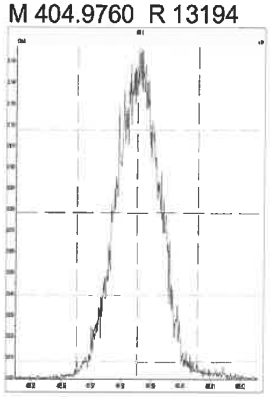

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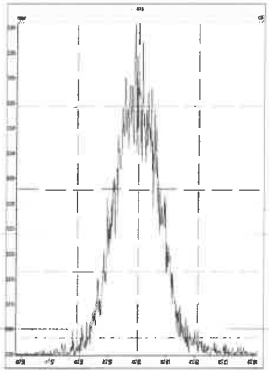

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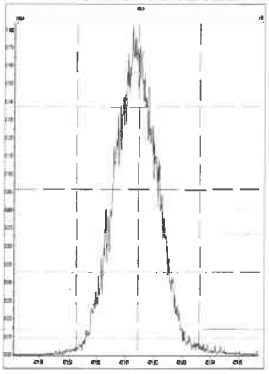

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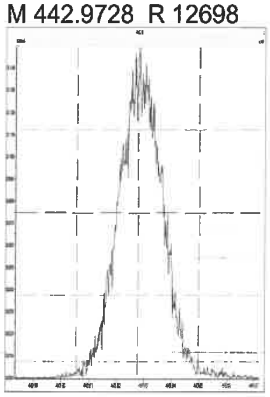

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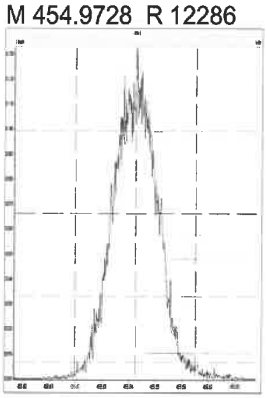

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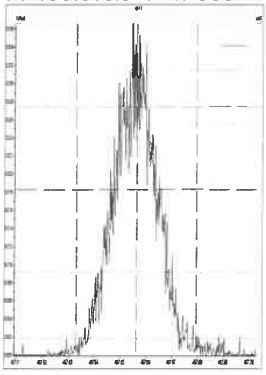

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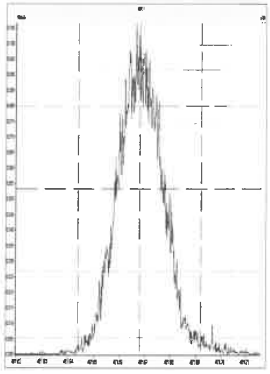

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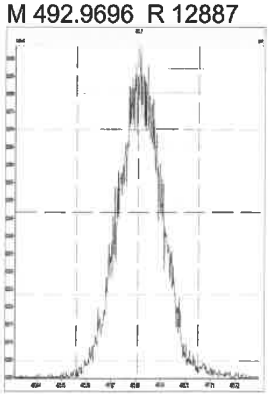

M 504.9696 R 12626

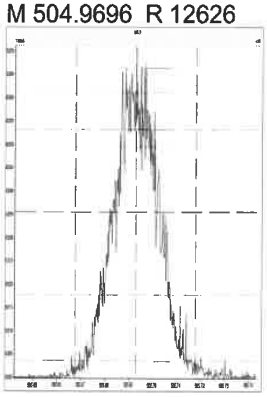

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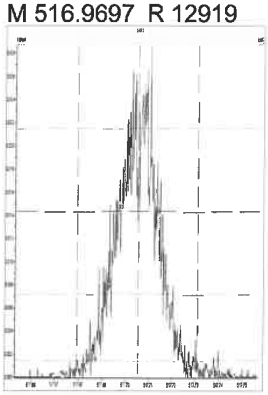

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

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Client ID:
Sample Type: CCV
Inject. Date: 26-Aug-2021 19:36:02 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521C CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 11:27:51 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1632

First Level Reviewer: arghestanis Date: 27-Aug-2021 10:00:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.583	105953794	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.084	161922532	0.76	1.6249	94.1	94.1	0.1510	0.1510	94.05	
2,3,7,8-TCDF	17.099	16672197	0.75	1.0239	10.1	10.1	0.0171	0.0171	101	
A Non-2,3,7,8-sub-TCDF	17.069						0.0171	0.0171		Rn
S Total TCDF					10.1	10.1	0.0171	0.0171		
D 13C-2,3,7,8-TCDD	17.779	97310808	0.79	0.8993	102.1	102.1	0.1041	0.1041	102	
2,3,7,8-TCDD	17.794	11885018	0.79	1.2541	9.739	9.739	0.0126	0.0126	97.39	
$ 37Cl4-2,3,7,8-TCDD	17.794	12021800		1.1071	10.2	10.2	0.0135	0.0135	102	
A Non-2,3,7,8-sub-TCDD	17.522						0.0126	0.0126		
S Total TCDD					9.739	9.739	0.0126	0.0126		
D 13C-1,2,3,7,8-PeCDF	22.006	127280083	1.55	1.2101	99.3	99.3	0.1371	0.1371	99.27	
1,2,3,7,8-PeCDF	22.034	67991083	1.60	1.0611	50.3	50.3	0.0991	0.0991	101	
D 13C-2,3,4,7,8-PeCDF	23.329	128701498	1.56	1.2395	98.0	98.0	0.1339	0.1339	98.00	
2,3,4,7,8-PeCDF	23.356	66385917	1.58	1.0184	50.6	50.6	0.1120	0.1120	101	
A F1 PeCDFs	19.851						0.008150	0.008150		
A Non-2,3,7,8-sub-PeCDF	23.067						0.1053	0.1053		n
S Total PeCDF					101.0	101.0	0.1056	0.1056		
D 13C-1,2,3,7,8-PeCDD	24.038	82857251	1.60	0.7612	102.7	102.7	0.0801	0.0801	103	
1,2,3,7,8-PeCDD	24.066	43551060	1.59	1.0484	50.1	50.1	0.0429	0.0429	100	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0429	0.0429		
S Total PeCDD					50.1	50.1	0.0429	0.0429		
D 13C-1,2,3,4,7,8-HxCDF	30.159	108459410	0.53	1.0837	104.3	104.3	0.2926	0.2926	104	
1,2,3,4,7,8-HxCDF	30.186	58389489	1.23	1.0851	49.6	49.6	0.2105	0.2105	99.22	
D 13C-1,2,3,6,7,8-HxCDF	30.385	104424805	0.52	1.1279	96.5	96.5	0.2811	0.2811	96.49	
1,2,3,6,7,8-HxCDF	30.399	60323234	1.22	1.1260	51.3	51.3	0.1957	0.1957	103	
D 13C-2,3,4,6,7,8-HxCDF	31.277	100795071	0.52	1.0637	98.8	98.8	0.2981	0.2981	98.75	
2,3,4,6,7,8-HxCDF	31.304	58639911	1.21	1.1675	49.8	49.8	0.1449	0.1449	99.66	
D 13C-1,2,3,7,8,9-HxCDF	32.129	94149369	0.51	0.9676	101.4	101.4	0.3277	0.3277	101	
1,2,3,7,8,9-HxCDF	32.143	55240241	1.23	1.1664	50.3	50.3	0.1304	0.1304	101	
A Non-2,3,7,8-sub-HxCDF	30.324						0.1645	0.1645		

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					201.0	201.0	0.1704	0.1704		
* 13C-1,2,3,7,8,9-HxCDD	31.943	95953411	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.490	74092808	1.24	0.7334	105.3	105.3	0.2038	0.2038	105	
1,2,3,4,7,8-HxCDD	31.503	40195999	1.26	1.0640	51.0	51.0	0.1215	0.1215	102	
D 13C-1,2,3,6,7,8-HxCDD	31.597	80537394	1.22	0.8802	95.4	95.4	0.1698	0.1698	95.36	
1,2,3,6,7,8-HxCDD	31.610	41713249	1.26	1.0001	51.8	51.8	0.1178	0.1178	104	
1,2,3,7,8,9-HxCDD	31.956	45521047	1.25	1.1325	52.0	52.0	0.1089	0.1089	104	
A Non-2,3,7,8-sub-HxCDD	30.525						0.1157	0.1157		
S Total HxCDD					154.8	154.8	0.1161	0.1161		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	69814195	0.45	0.7730	94.1	94.1	0.7349	0.7349	94.12	
1,2,3,4,6,7,8-HpCDF	33.603	50165096	1.03	1.4413	49.9	49.9	0.3743	0.3743	99.71	
D 13C-1,2,3,4,7,8,9-HpCDF	34.660	62136683	0.44	0.7008	92.4	92.4	0.8106	0.8106	92.40	
1,2,3,4,7,8,9-HpCDF	34.672	41632663	1.03	1.3174	50.9	50.9	0.5213	0.5213	102	
A Non-2,3,7,8-sub-HpCDF	34.138						0.4381	0.4381		
S Total HpCDF					100.7	100.7	0.4478	0.4478		
D 13C-1,2,3,4,6,7,8-HpCDD	34.381	62948723	1.03	0.6472	101.4	101.4	0.9008	0.9008	101	
1,2,3,4,6,7,8-HpCDD	34.393	33871992	1.04	1.0943	49.2	49.2	0.1710	0.1710	98.34	
A Non-2,3,7,8-sub-HpCDD	34.223						0.1710	0.1710		
S Total HpCDD					49.2	49.2	0.1710	0.1710		
D 13C-OCDD	36.689	88340640	0.89	0.4472	205.9	205.9	0.2250	0.2250	103	
OCDF	36.797	62973623	0.90	1.4382	99.1	99.1	0.0650	0.0650	99.13	
OCDD	36.701	49532317	0.90	1.1070	101.3	101.3	0.1006	0.1006	101	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Aug-2021 19:36:02 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521C CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 11:27:51 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1632

First Level Reviewer: arghestanis Date: 27-Aug-2021 10:00:57

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.583	17.583	0		47093976	12003528	4918	12295	2441		
333.9339	17.583	17.583	0		58859818	15096649	5231	13077	2886	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.084	17.084	0	0.972	70179249	18039614	11118	27795	1623		
317.9389	17.084	17.084	0	0.972	91743283	23532305	15482	38705	1520	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.099	17.099	0	1.001	7160205	1894055	1159	2897	1634		
305.8987	17.099	17.099	0	1.001	9511992	2448546	1745	4362	1403	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.721	17.069	-21	0.979	35419	9642	1159	2897	8		
305.8987	16.721	17.069	-21	0.979	38032	10177	1745	4362	6	0.93(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.779	17.779	0	1.011	42945657	10484951	4918	12295	2132		
333.9339	17.779	17.779	0	1.011	54365151	13383071	5231	13077	2558	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.794	17.794	0	1.001	5237975	1308375	871	2177	1502		
321.8936	17.794	17.794	0	1.001	6647043	1657658	642	1605	2582	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.794	17.794	0	1.012	12021800	3017947	1623	4057	1859		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.522						871	2177			
321.8936	17.522						642	1605			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.006	22.006	0	1.252	77430586	14329439	10706	26765	1338		
353.8970	22.006	22.006	0	1.252	49849497	9280173	7283	18207	1274	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.034	22.034	0	1.001	41822853	7776886	5688	14220	1367		
341.8567	22.034	22.034	0	1.001	26168230	4820346	4241	10602	1137	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.329	23.329	0	1.327	78357845	13287729	10706	26765	1241		
353.8970	23.329	23.329	0	1.327	50343653	8465261	7283	18207	1162	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.356	23.356	0	1.001	40607005	6918146	5688	14220	1216		
341.8567	23.356	23.356	0	1.001	25778912	4378480	4241	10602	1032	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						243	607			
341.8567	19.851						526	1315			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.552	23.067	-31	1.025	345975	49579	5688	14220	9		
341.8567	22.552	23.067	-31	1.025	227798	32160	4241	10602	8	1.52(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.038	24.038	0	1.367	51047692	8161671	4023	10057	2029		
369.8919	24.038	24.038	0	1.367	31809559	5155830	2585	6462	1995	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.066	24.066	0	1.001	26715499	4289207	1492	3730	2875		
357.8516	24.066	24.066	0	1.001	16835561	2721962	902	2255	3018	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1492	3730			
357.8516	23.696						902	2255			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.159	30.159	0	0.944	37353645	6337962	13845	34612	458		
385.8610	30.159	30.159	0	0.944	71105765	12002234	20460	51150	587	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.186	30.186	0	1.001	32211627	5498407	9820	24550	560		
375.8178	30.186	30.186	0	1.001	26177862	4529585	6937	17342	653	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.385	30.385	0	0.951	35857922	6574033	13845	34612	475		
385.8610	30.385	30.385	0	0.951	68566883	12438568	20460	51150	608	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.399	30.399	0	1.000	33104568	6281481	9820	24550	640		
375.8178	30.399	30.399	0	1.000	27218666	5144446	6937	17342	742	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.277	31.277	0	0.979	34581877	8479548	13845	34612	612		
385.8610	31.277	31.277	0	0.979	66213194	16286750	20460	51150	796	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.304	31.304	0	1.001	32135014	8251764	9820	24550	840		
375.8178	31.304	31.304	0	1.001	26504897	6767828	6937	17342	976	1.21(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.129	0	1.006	31972159	9419457	13845	34612	680		
385.8610	32.129	32.129	0	1.006	62177210	18124535	20460	51150	886	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.143	32.143	0	1.000	30463147	9131484	9820	24550	930		
375.8178	32.143	32.143	0	1.000	24777094	7320637	6937	17342	1055	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.324						9820	24550			
375.8178	30.324						6937	17342			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.943	0		52862585	14988399	9228	23070	1624		
403.8529	31.943	31.943	0		43090826	12058130	6942	17355	1737	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.490	31.490	0	0.986	41059142	11200497	9228	23070	1214		
403.8529	31.490	31.490	0	0.986	33033666	8967833	6942	17355	1292	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.503	31.503	0	1.000	22398962	6274398	5777	14442	1086		
391.8127	31.503	31.503	0	1.000	17797037	4949230	4653	11632	1064	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.597	31.597	0	0.989	44259384	12134446	9228	23070	1315		
403.8529	31.597	31.597	0	0.989	36278010	9999964	6942	17355	1441	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.610	31.610	0	1.000	23246945	6270250	5777	14442	1085		
391.8127	31.610	31.610	0	1.000	18466304	5033242	4653	11632	1082	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.956	31.956	0	1.015	25334303	7278069	5777	14442	1260		
391.8127	31.956	31.956	0	1.015	20186744	5662354	4653	11632	1217	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.525						5777	14442			
391.8127	30.525						4653	11632			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	21672655	8005321	19380	48450	413		
419.8220	33.603	33.603	0	1.052	48141540	18032402	42080	105200	429	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603	33.603	0	1.000	25472450	9363530	26879	67197	348		
409.7789	33.603	33.603	0	1.000	24692646	9367640	29306	73265	320	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.660	34.660	0	1.085	19040672	6281229	19380	48450	324		
419.8220	34.660	34.660	0	1.085	43096011	14173529	42080	105200	337	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.672	34.672	0	1.000	21137032	7133505	26879	67197	265		
409.7789	34.672	34.672	0	1.000	20495631	7013527	29306	73265	239	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						26879	67197			
409.7789	34.138						29306	73265			

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.381	34.381	0	1.076	31906205	11180097	28286	70715	395		
437.8140	34.381	34.381	0	1.076	31042518	10890643	34791	86977	313	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	17268555	6199948	7813	19532	794		
425.7737	34.393	34.393	0	1.000	16603437	5944803	8706	21765	683	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						7813	19532			
425.7737	34.223						8706	21765			
13C-OCDD											
469.7779	36.689	36.689	0	1.149	41489582	12138434	5158	12895	2353		
471.7750	36.689	36.689	0	1.149	46851058	13864494	5728	14320	2420	0.89(0.76-1.02)	
OCDF											
441.7428	36.797	36.797	0	1.003	29842521	8999498	2299	5747	3915		
443.7399	36.785	36.797	-1	1.003	33131102	9980657	2563	6407	3894	0.90(0.76-1.02)	
OCDD											
457.7377	36.701	36.701	0	1.000	23479005	7110725	2345	5862	3032		
459.7348	36.701	36.701	0	1.000	26053312	7949439	3447	8617	2306	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

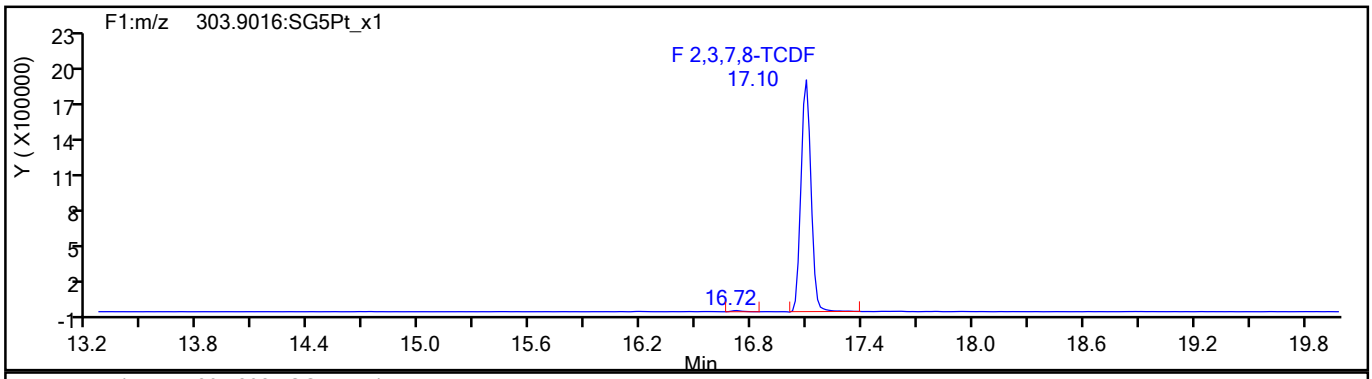

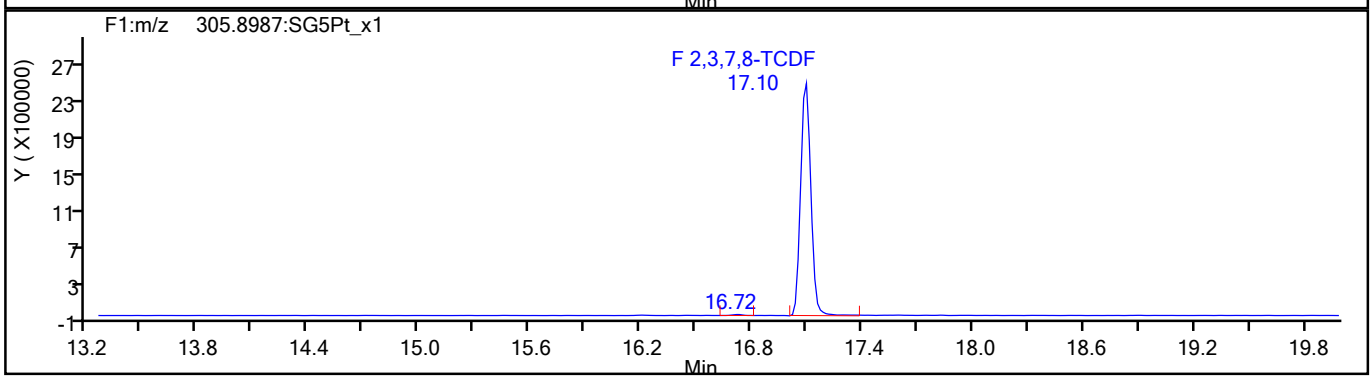

TCDF Standards

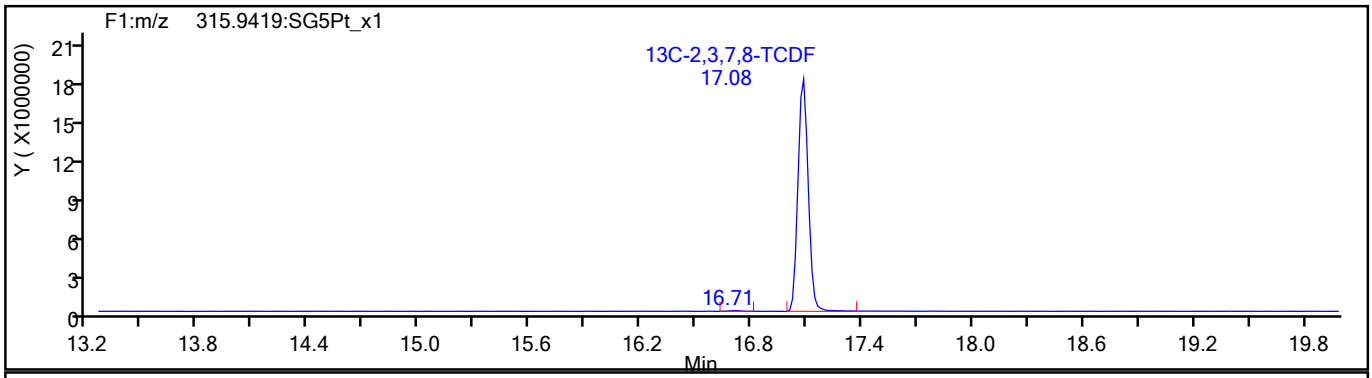

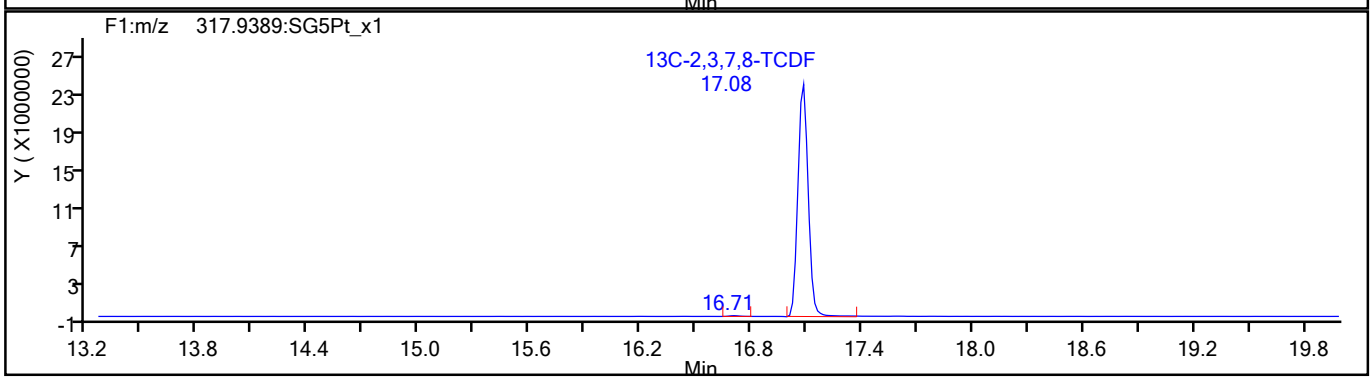

783110

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

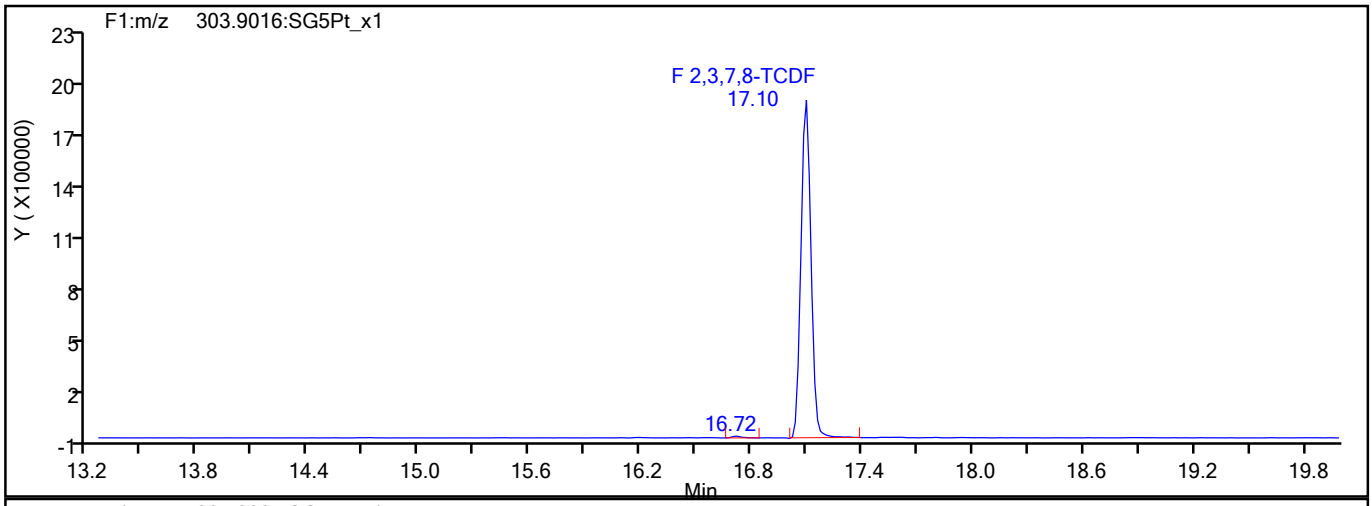

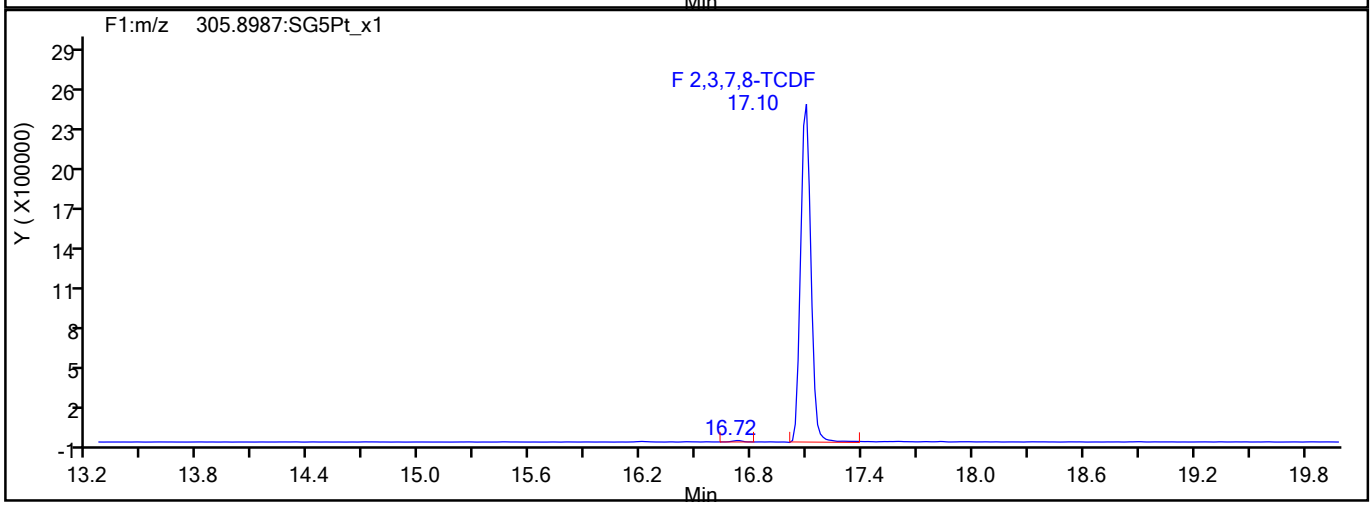

TCDF Interference Mass

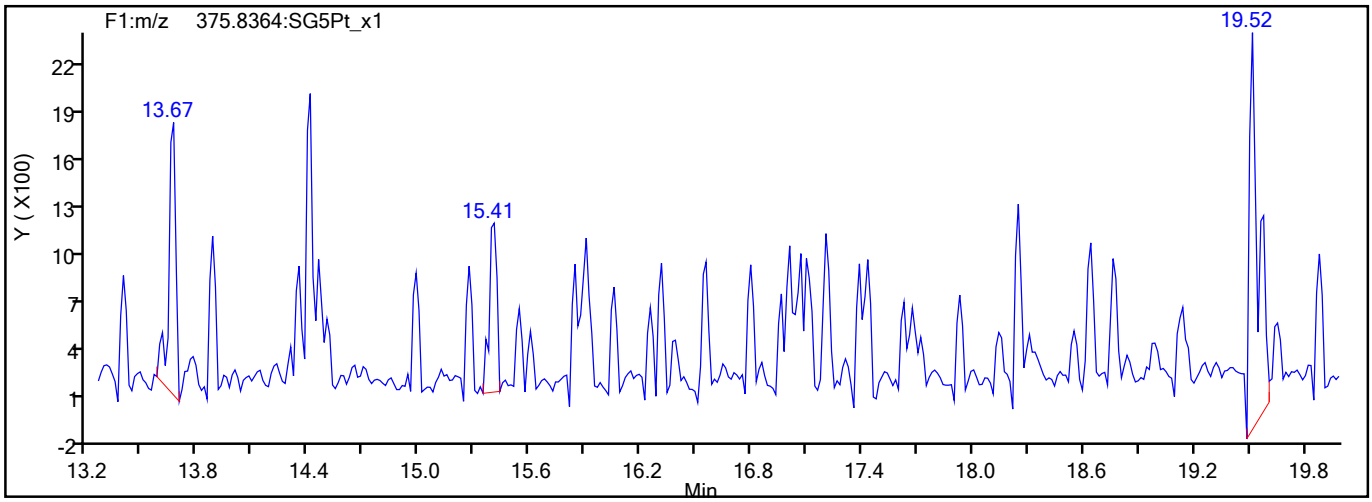

783111

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

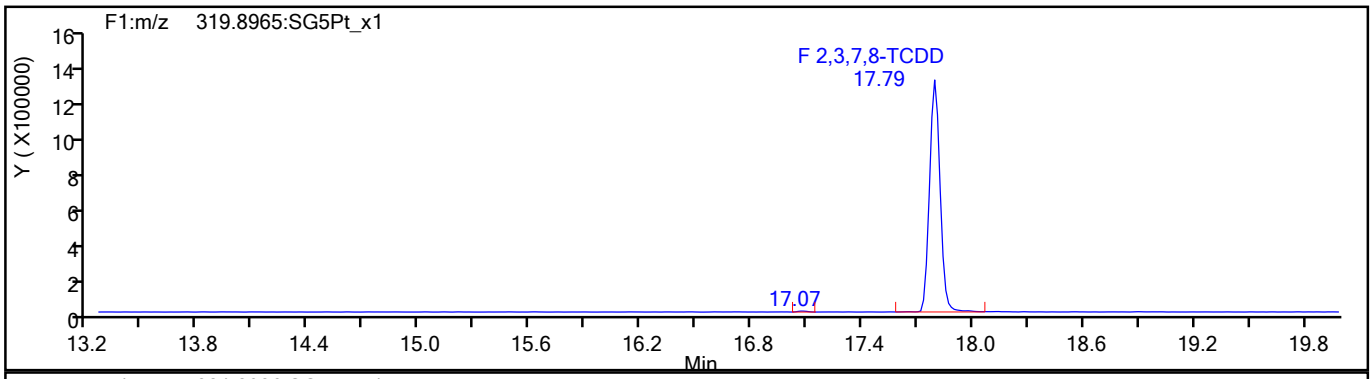

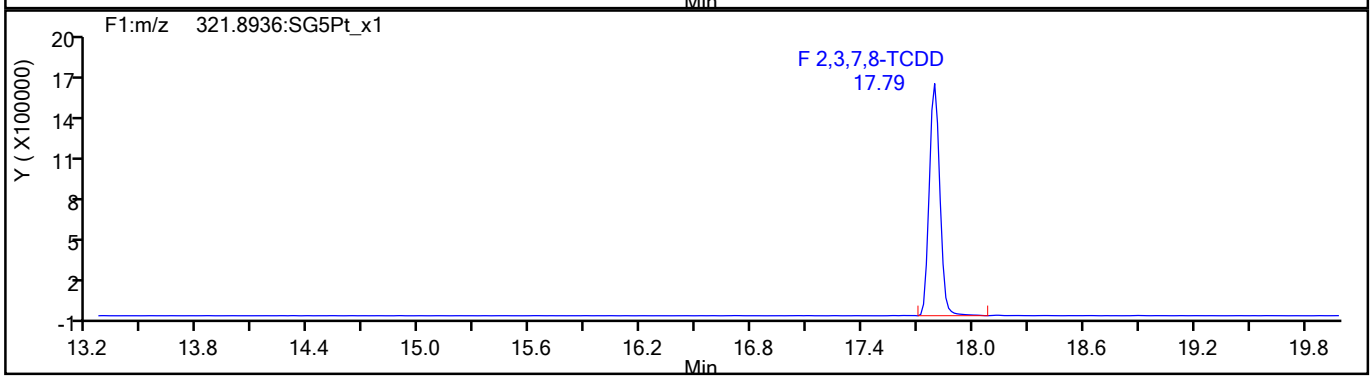

TCDD Standards

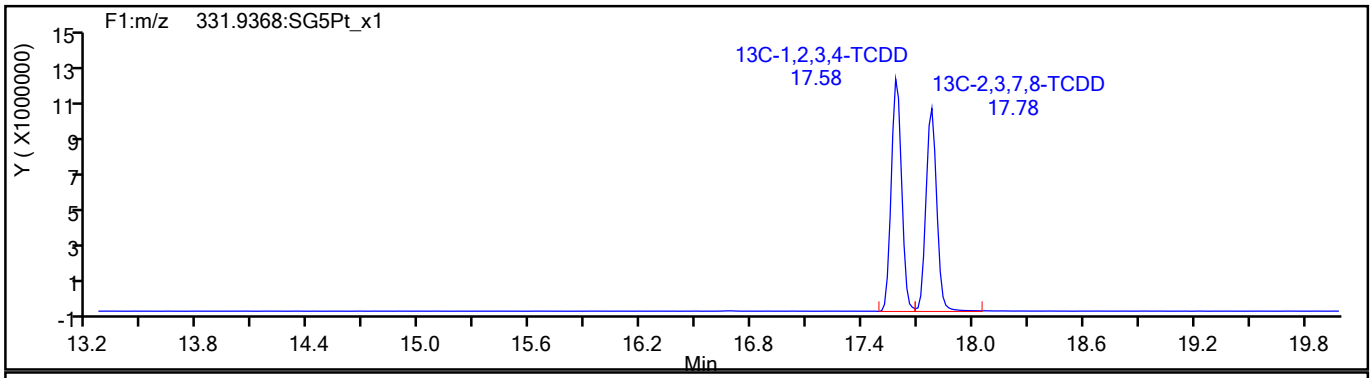

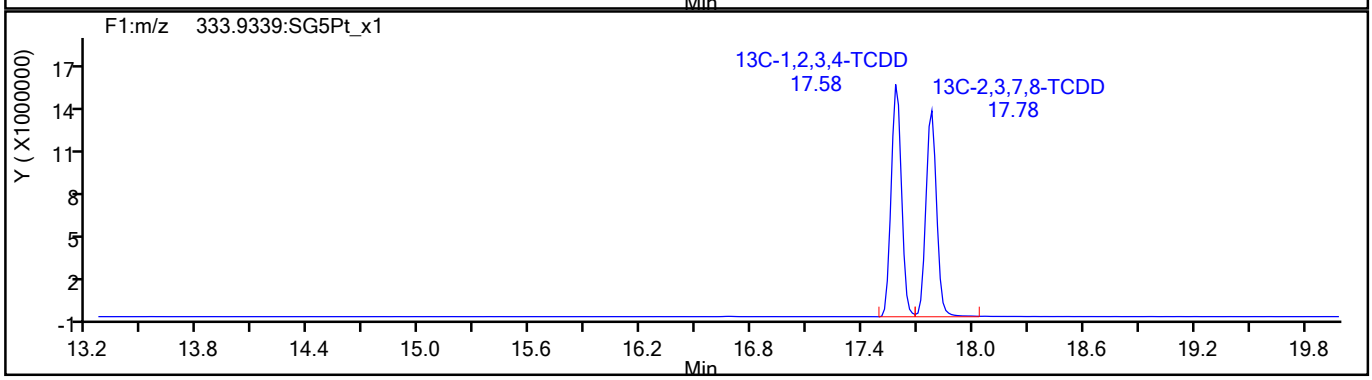

783112

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

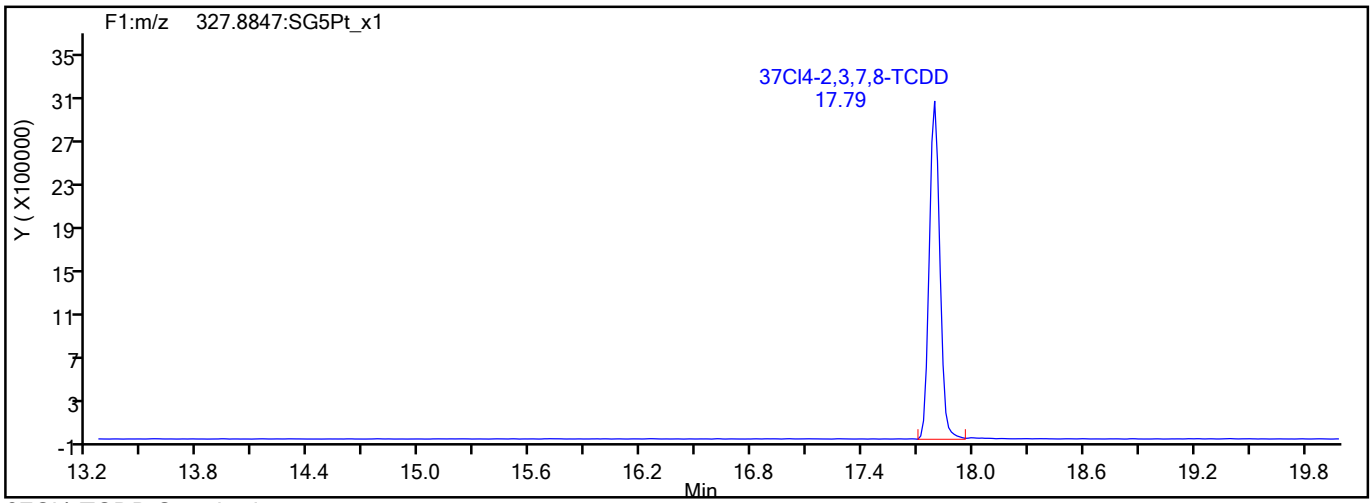

37Cl4-TCDD Standards

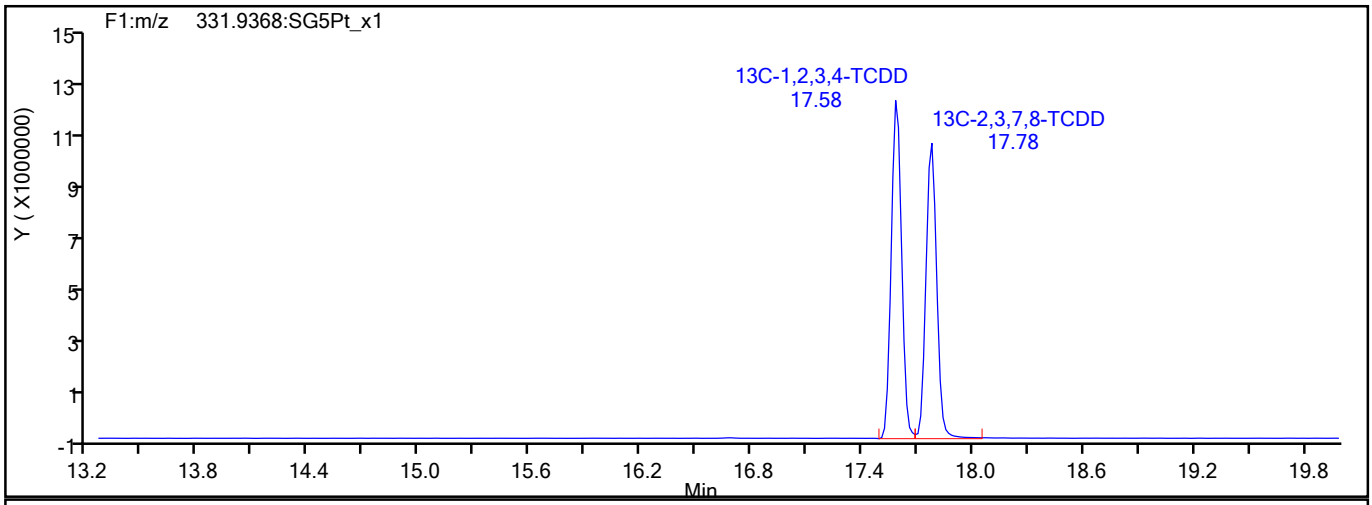

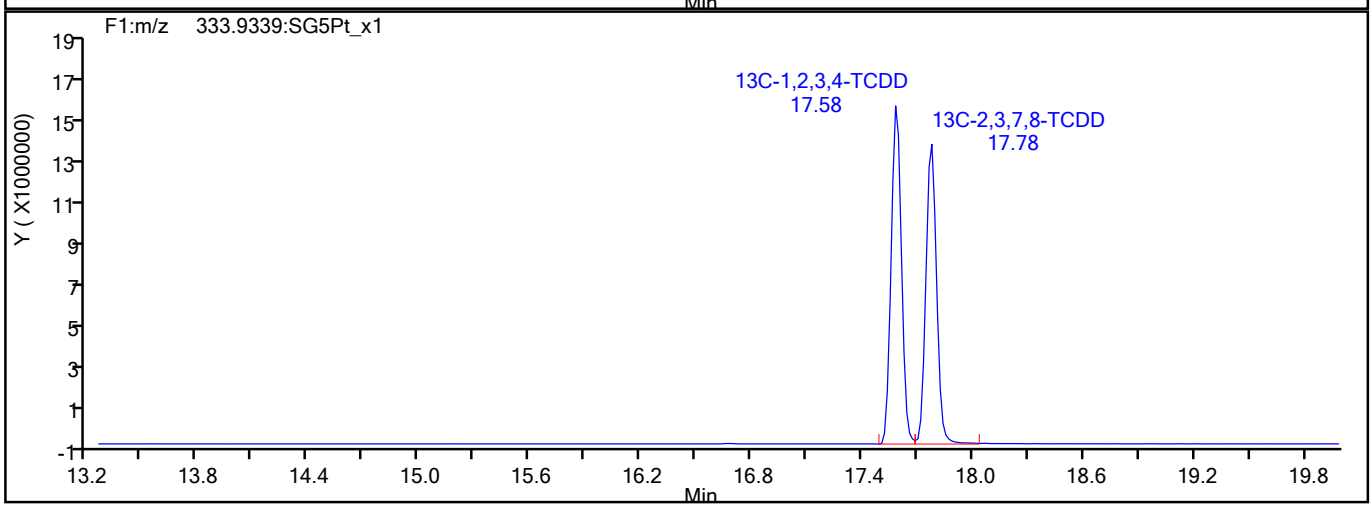

783113

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

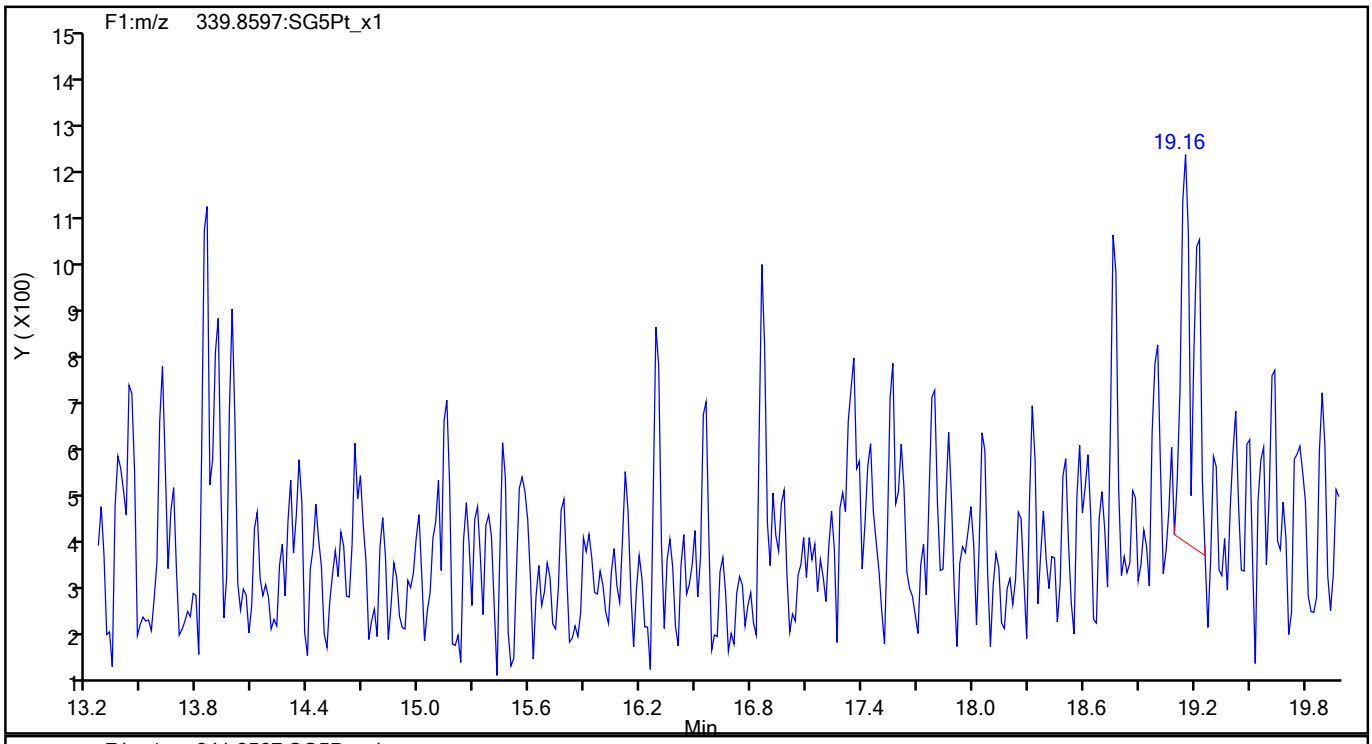

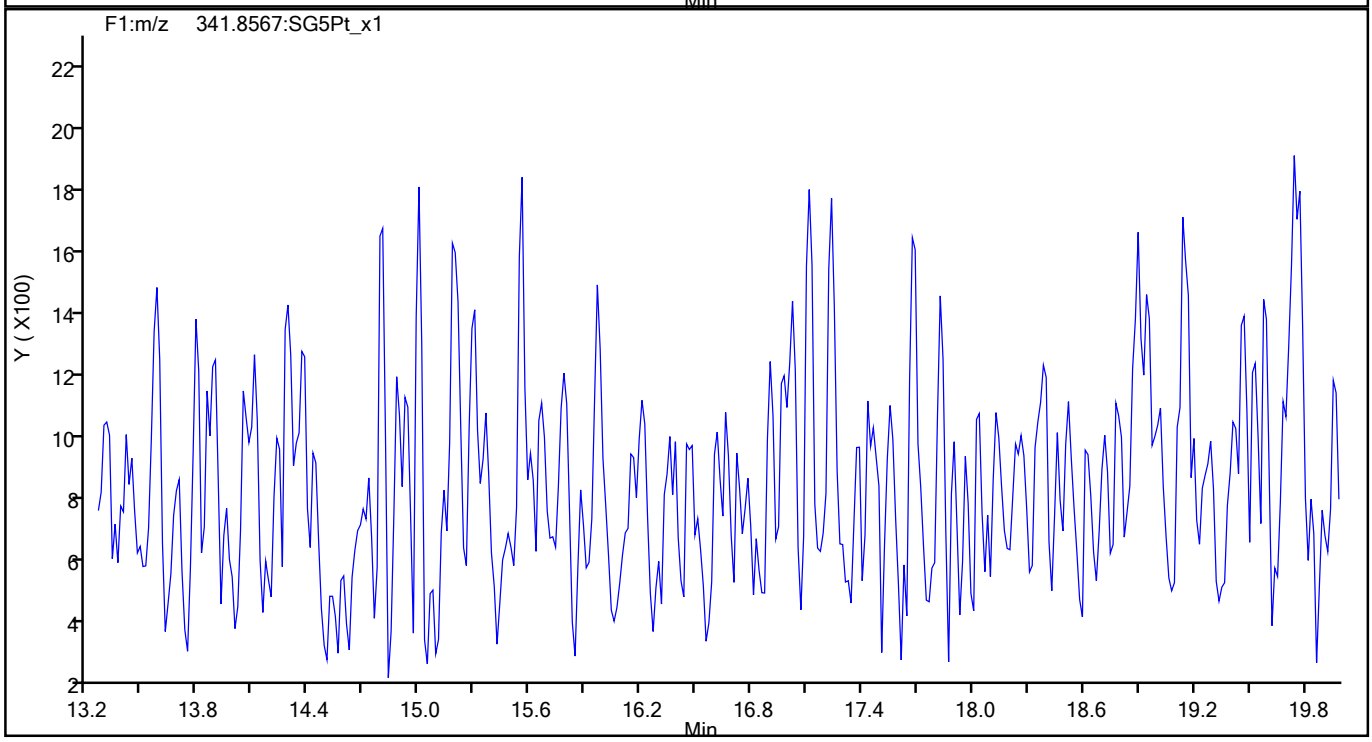

783114

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

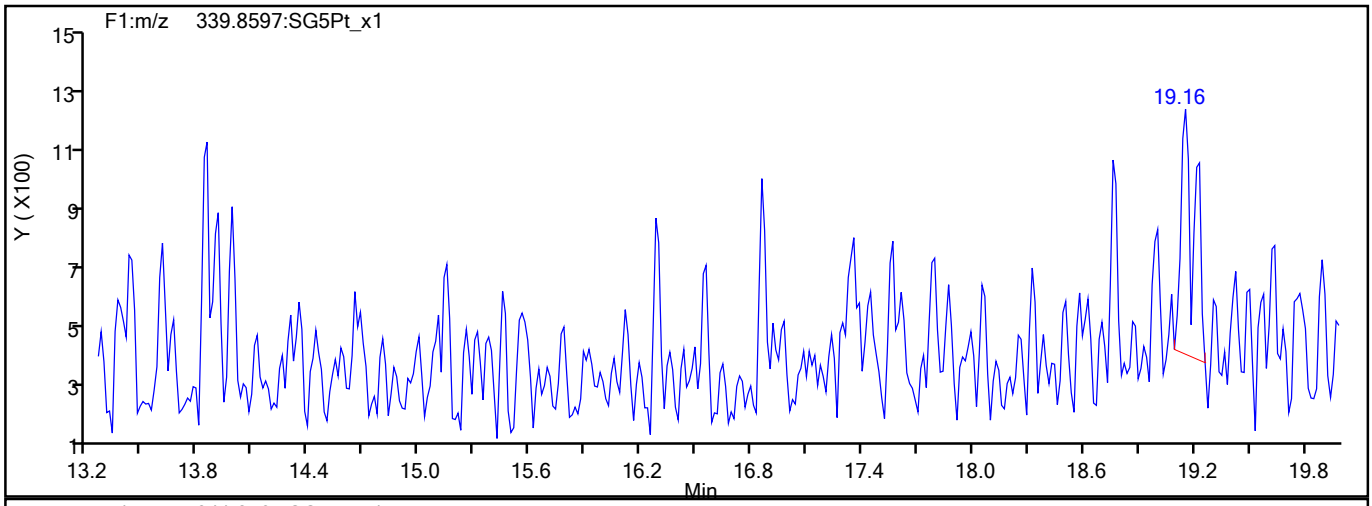

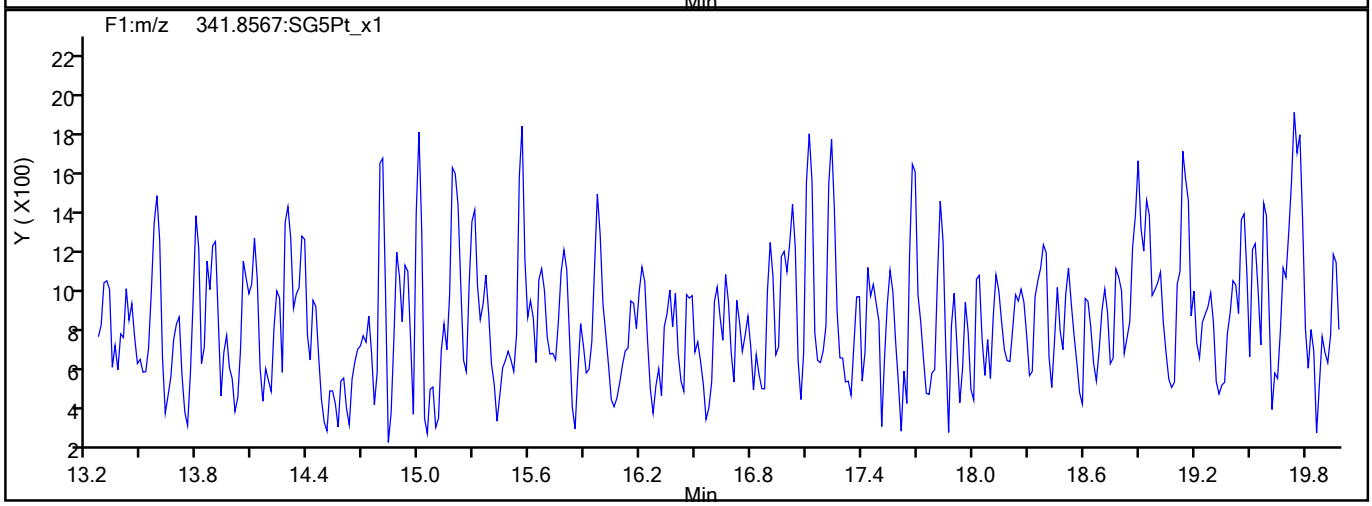

F1 PeCDFs Interference Mass

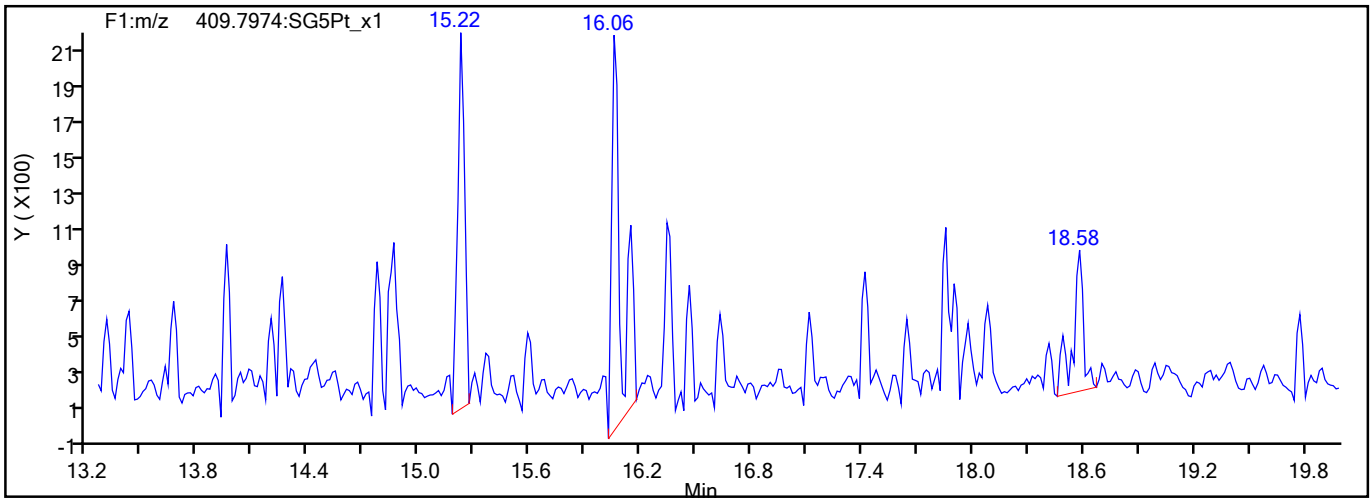

783115

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

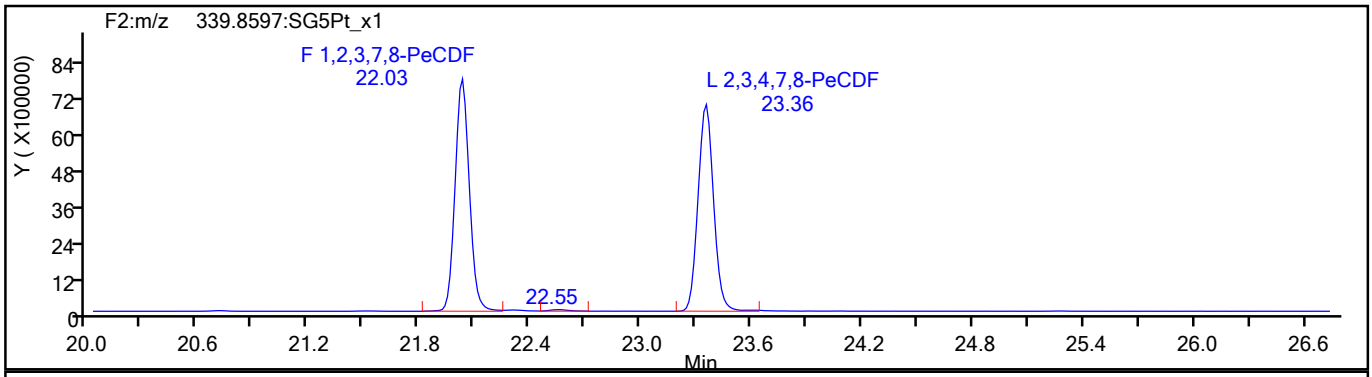

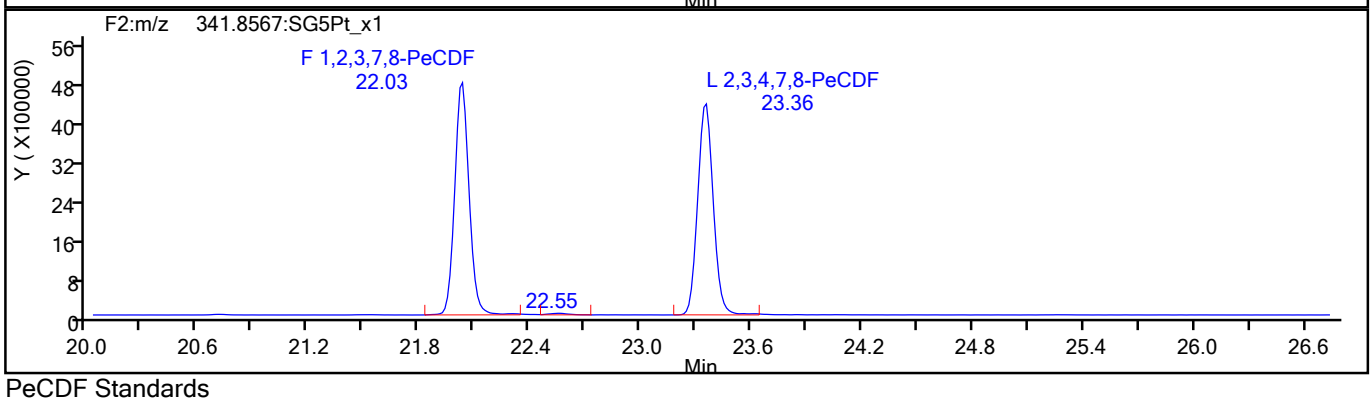

PeCDF Standards

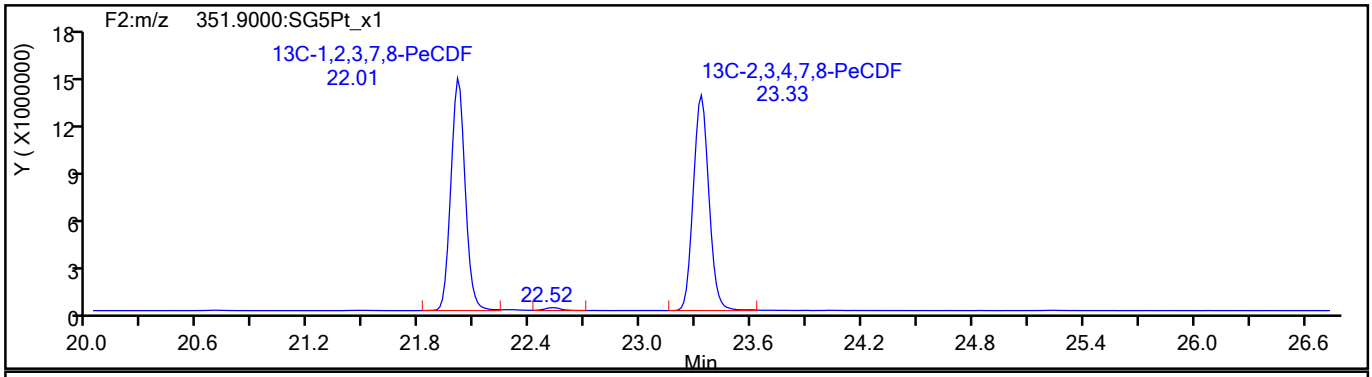

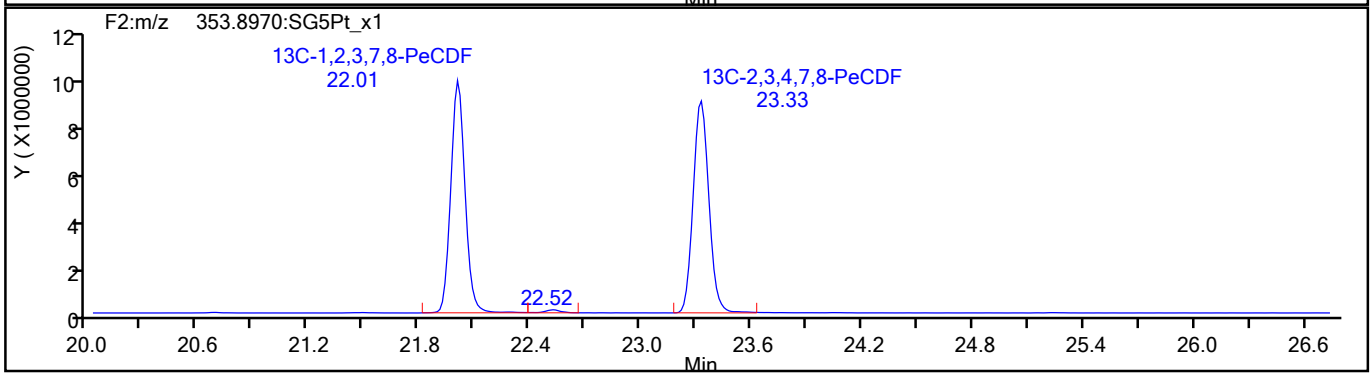

783116

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

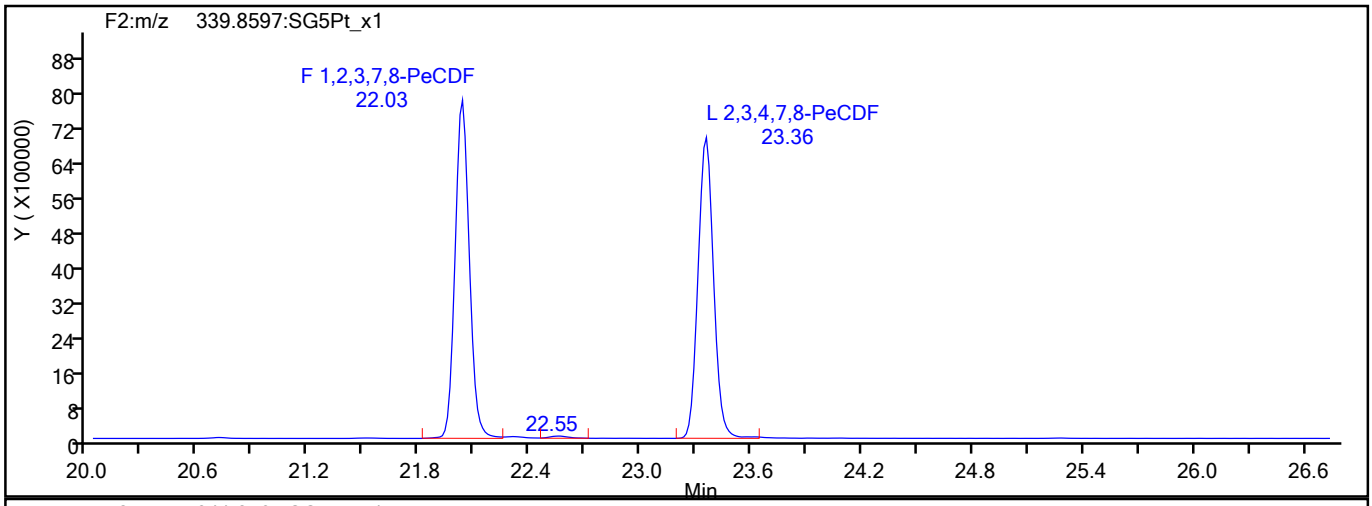

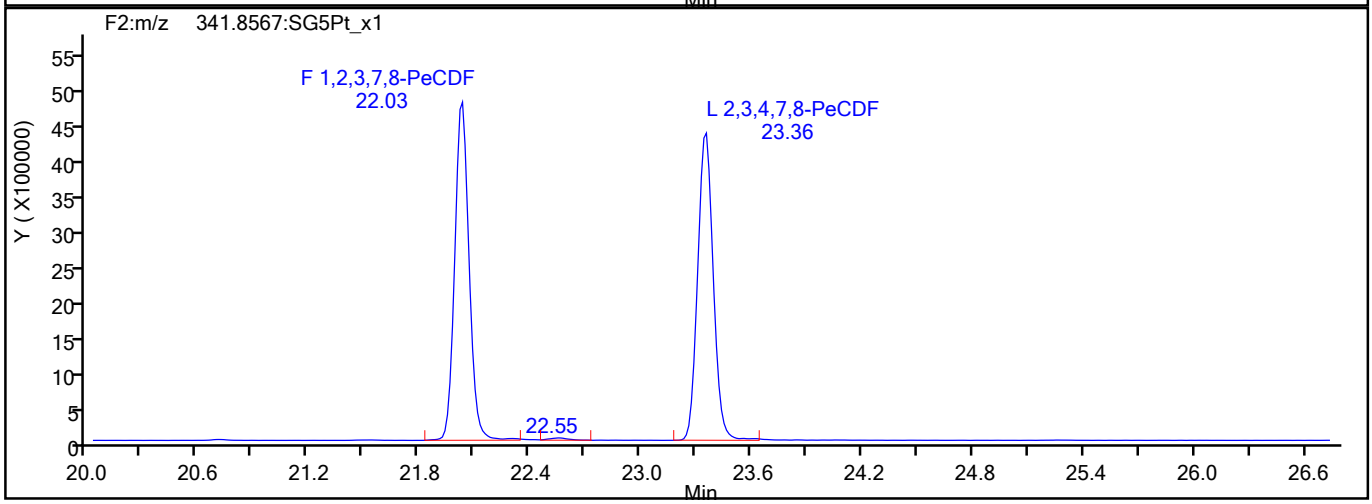

PeCDF Interference Mass

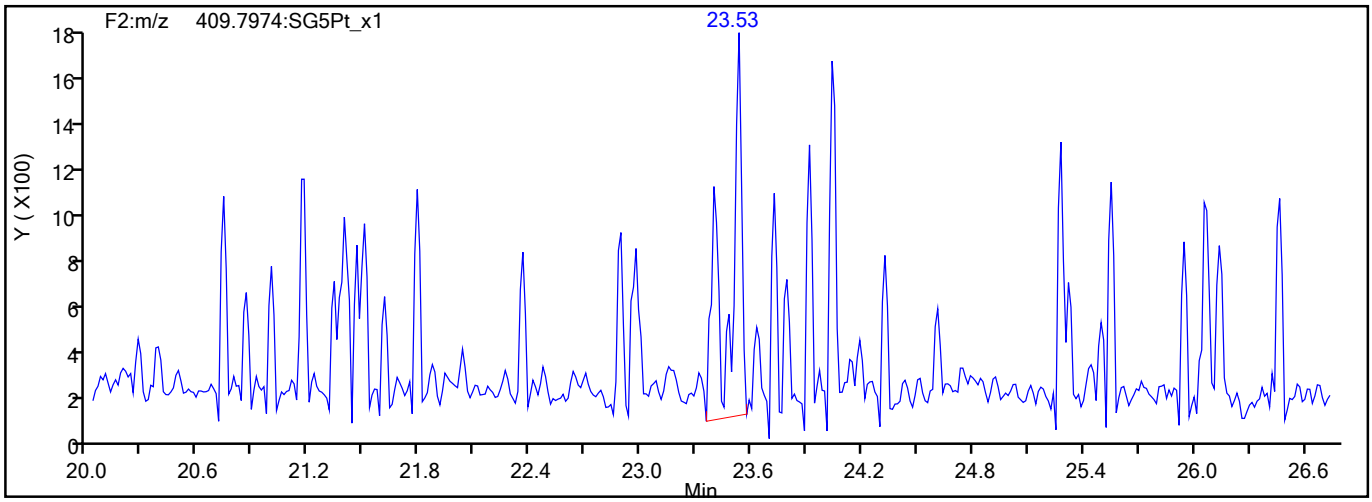

783117

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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PeCDD

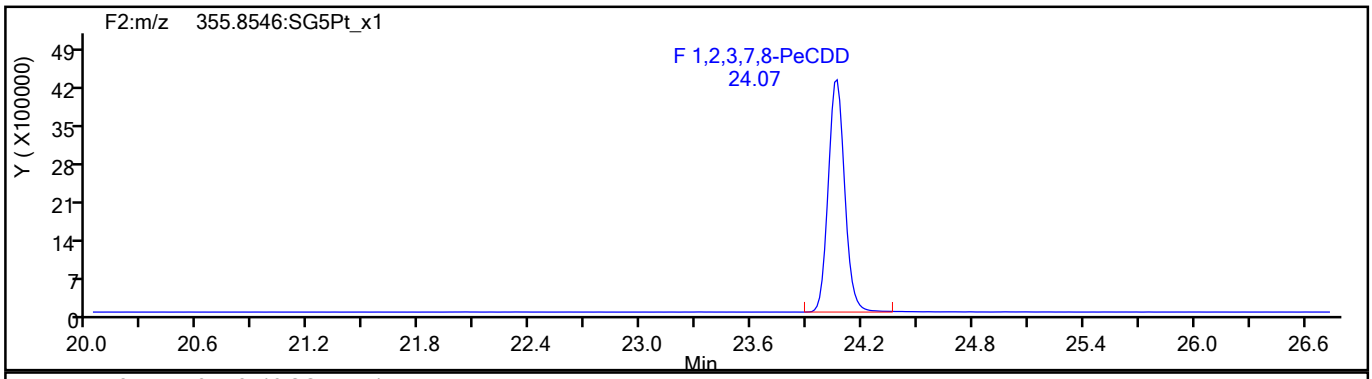

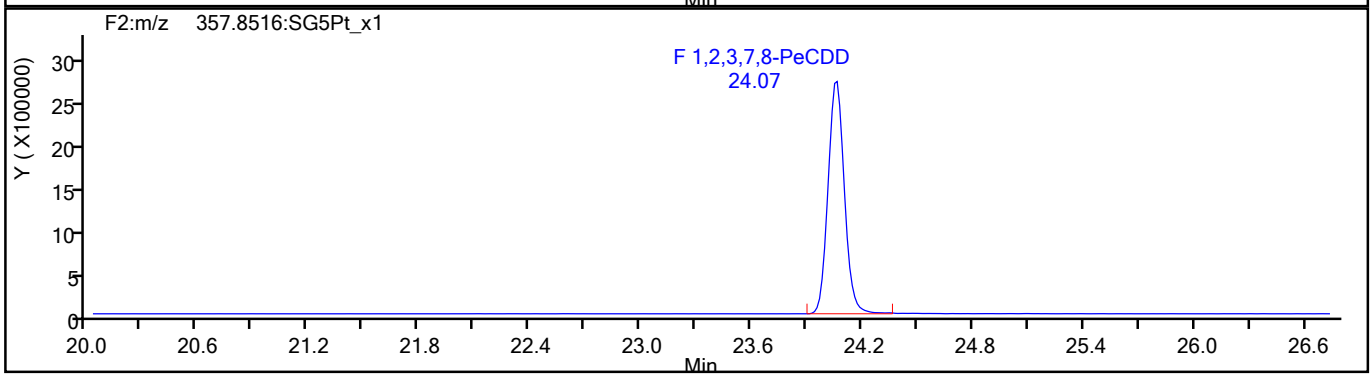

PeCDD Standards

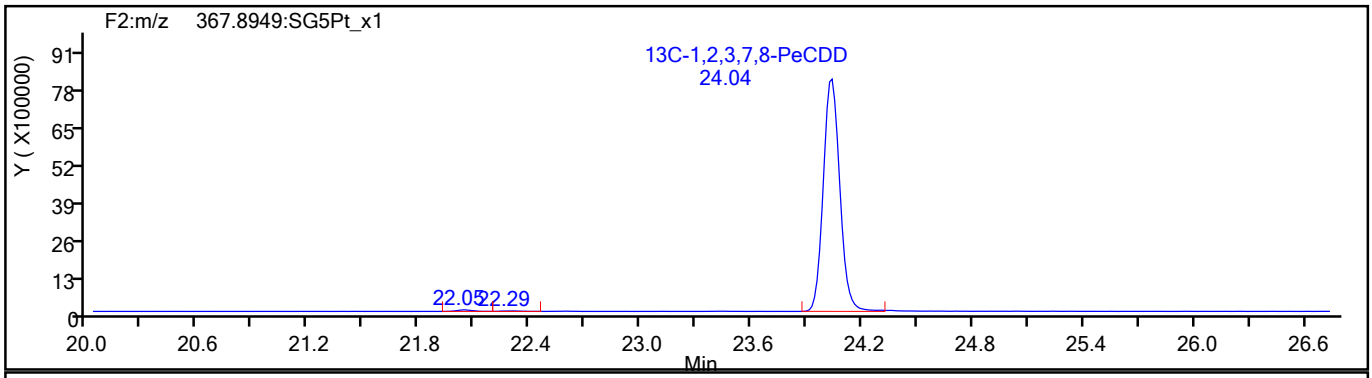

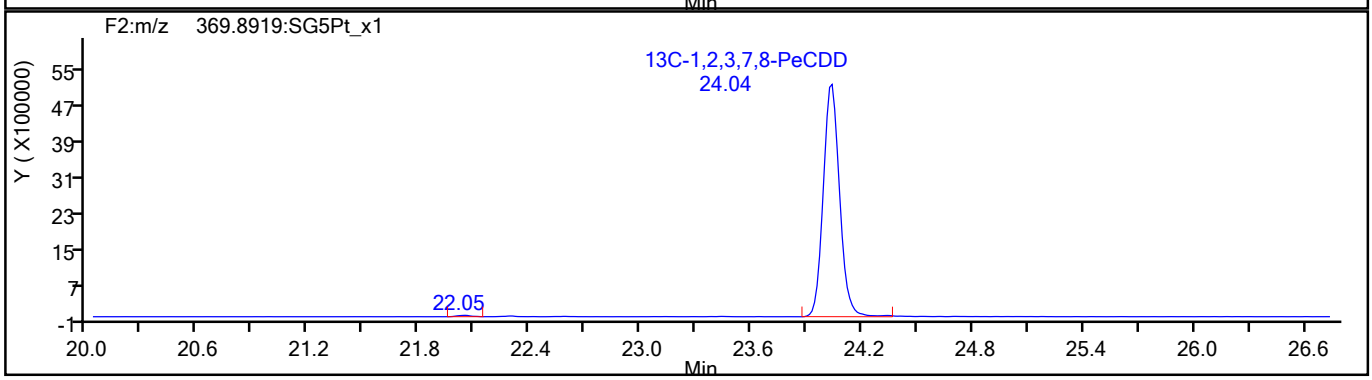

783118

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

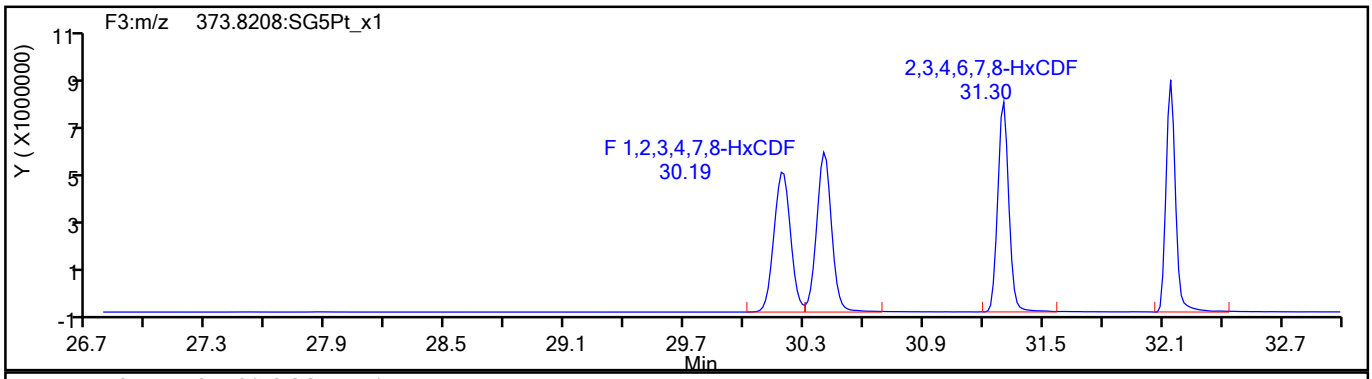

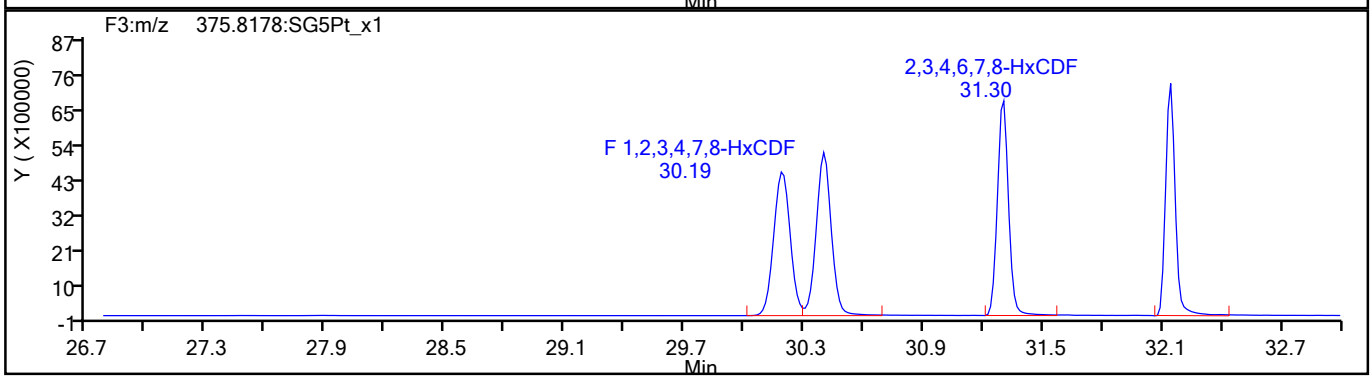

HxCDF Standards

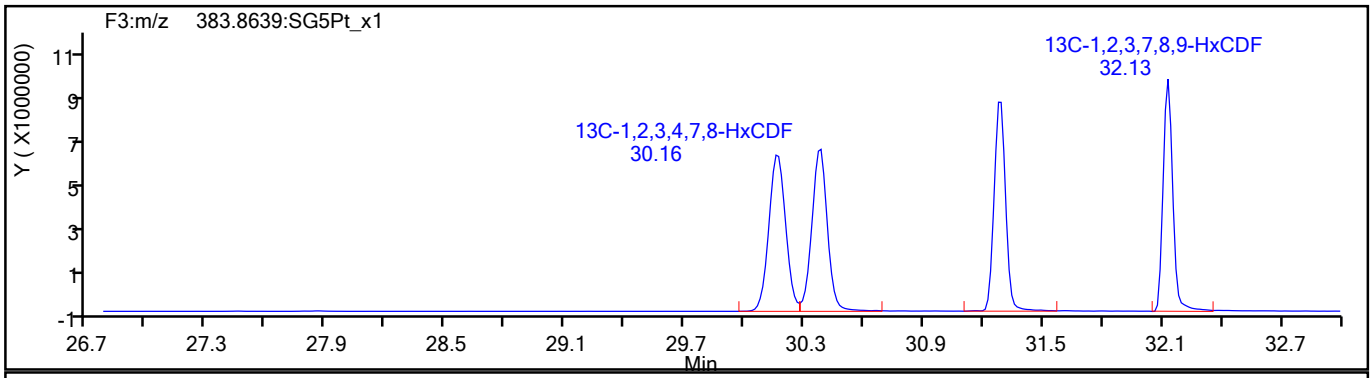

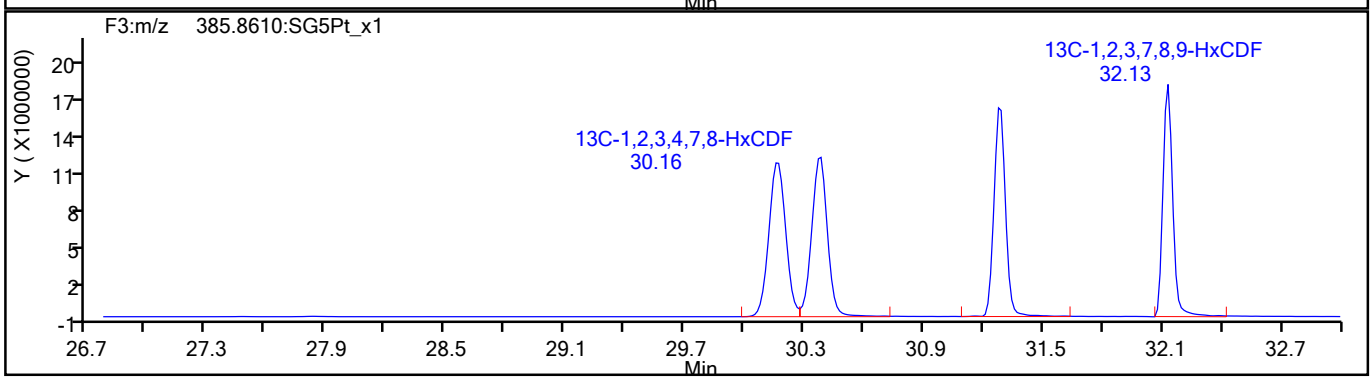

783119

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

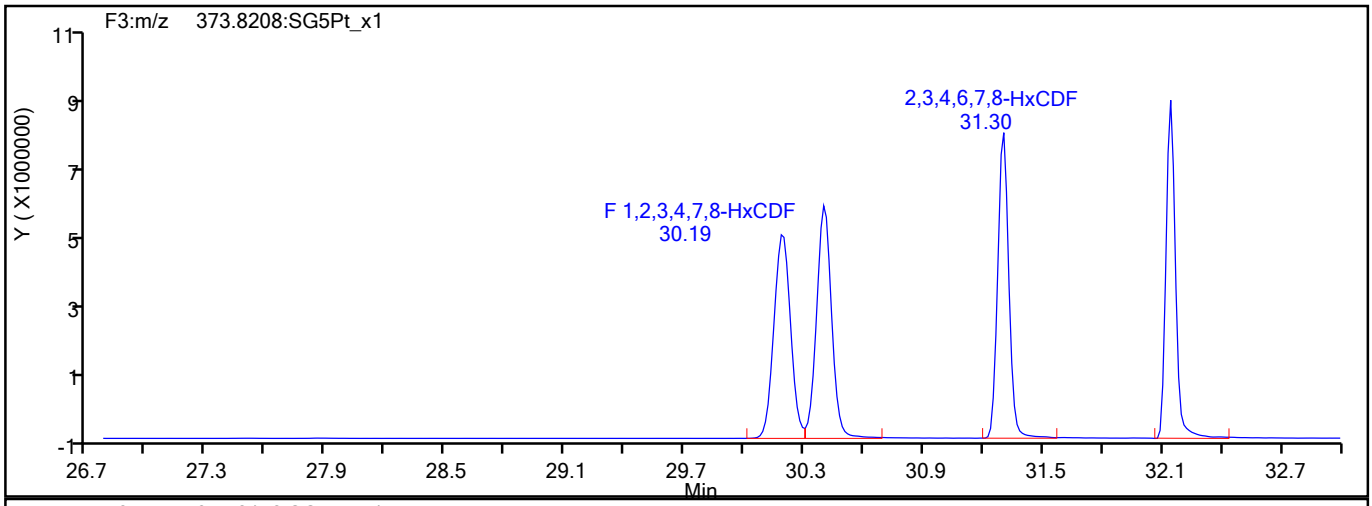

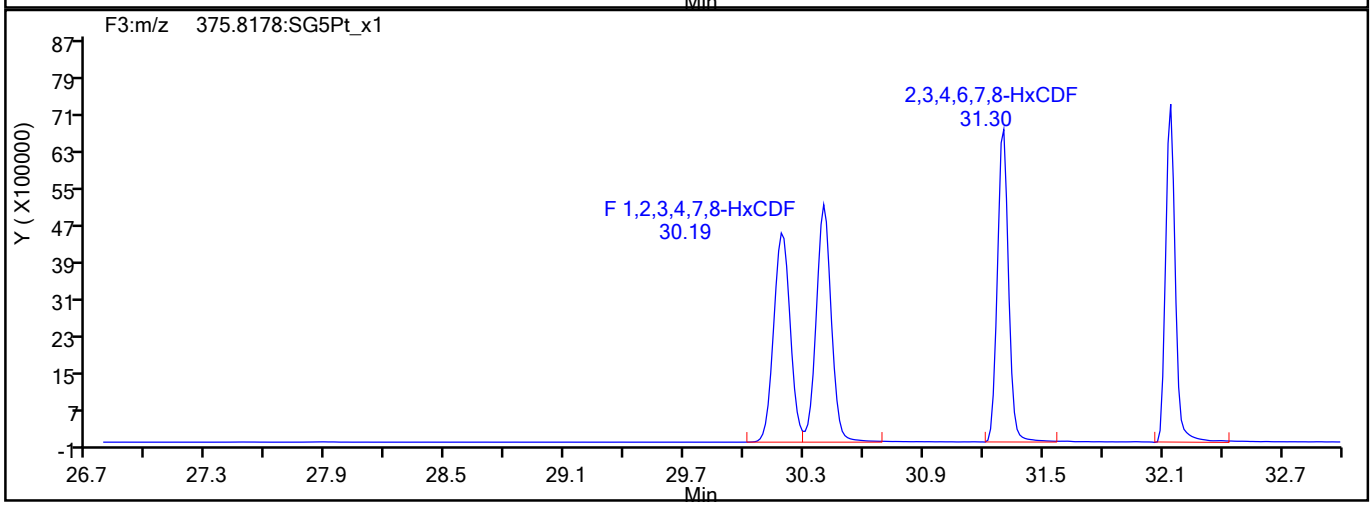

HxCDF Interference Mass

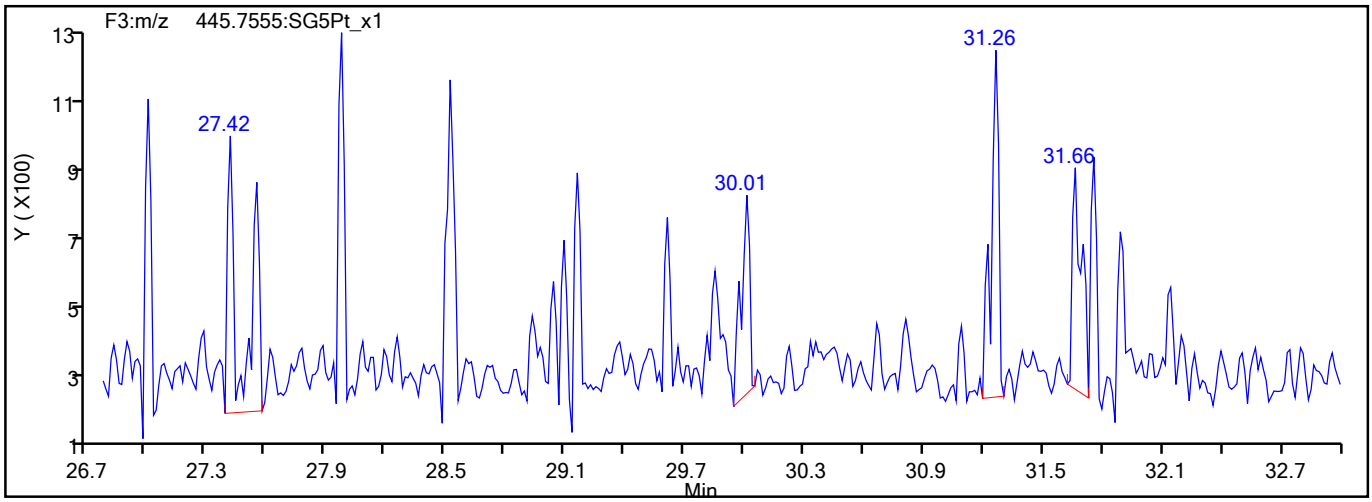

783120

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

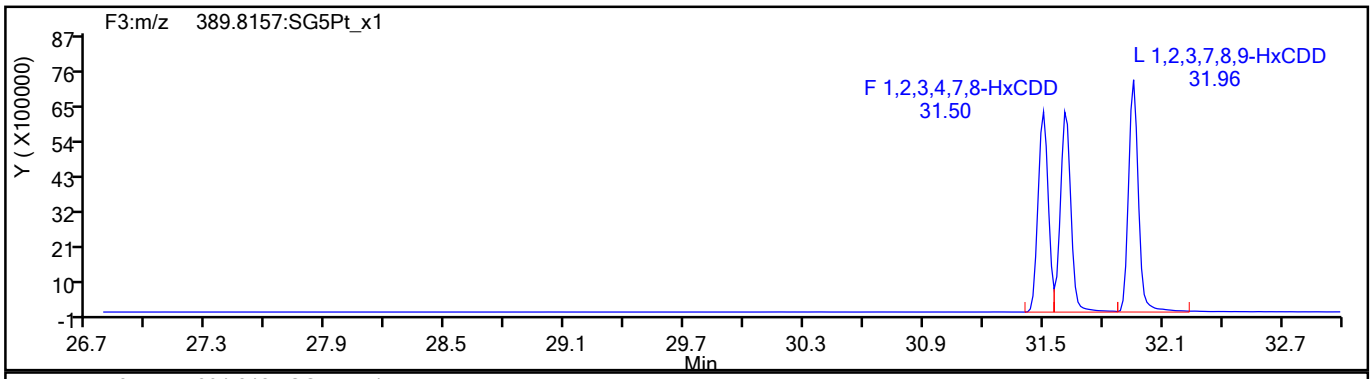

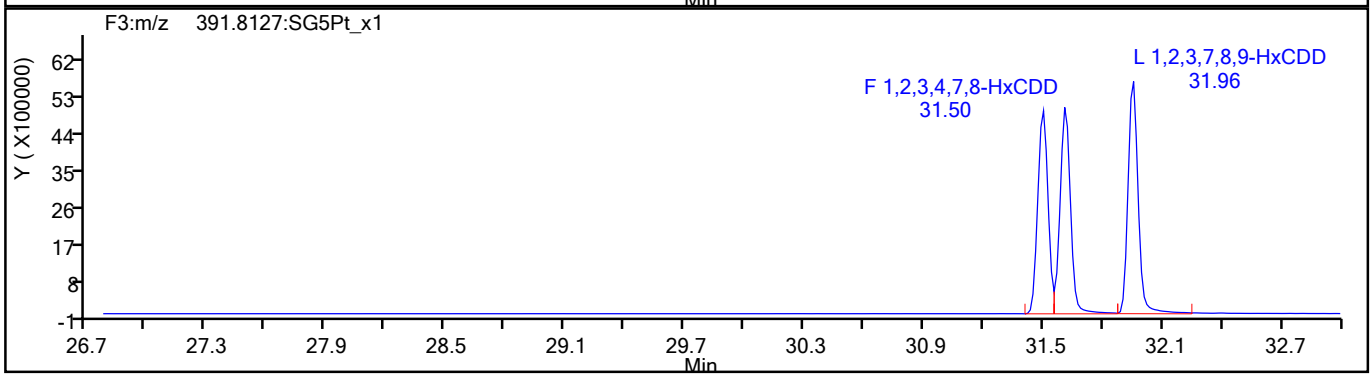

HxCDD Standards

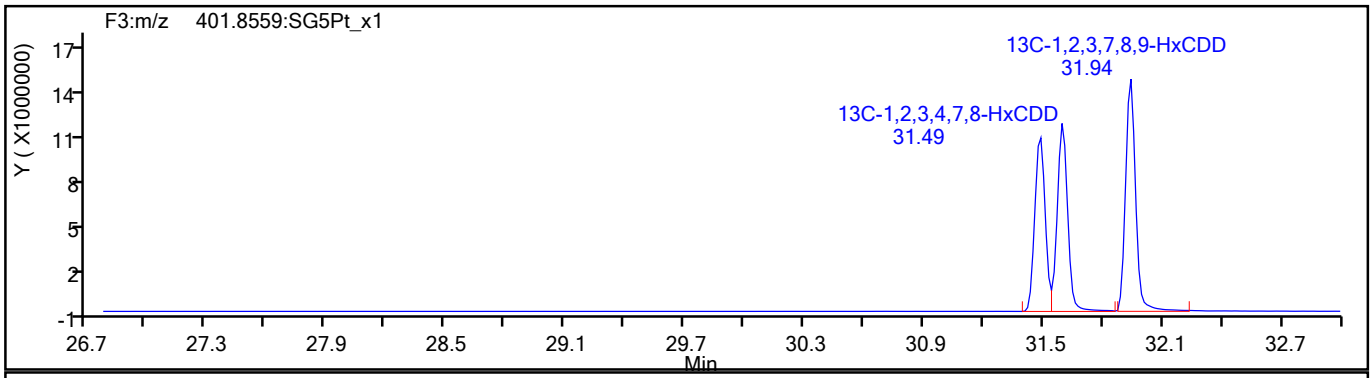

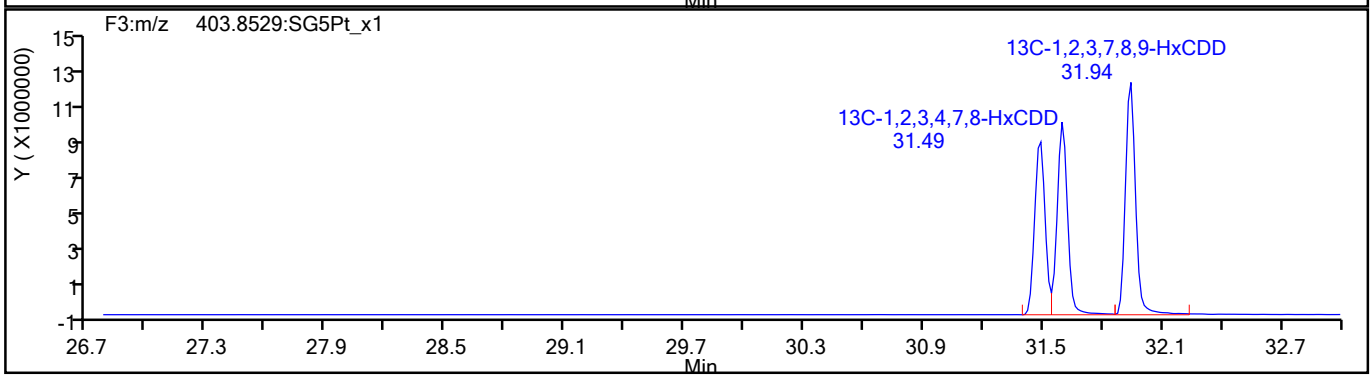

783121

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

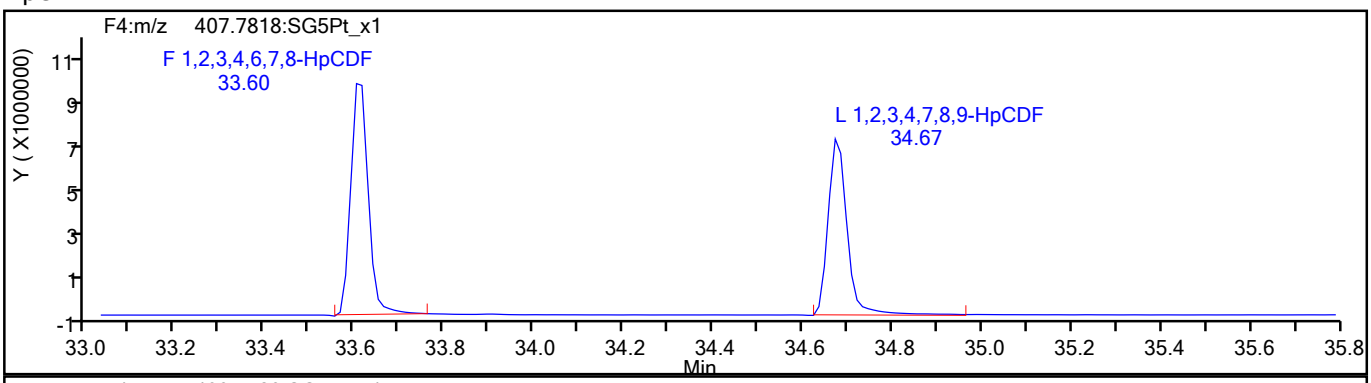

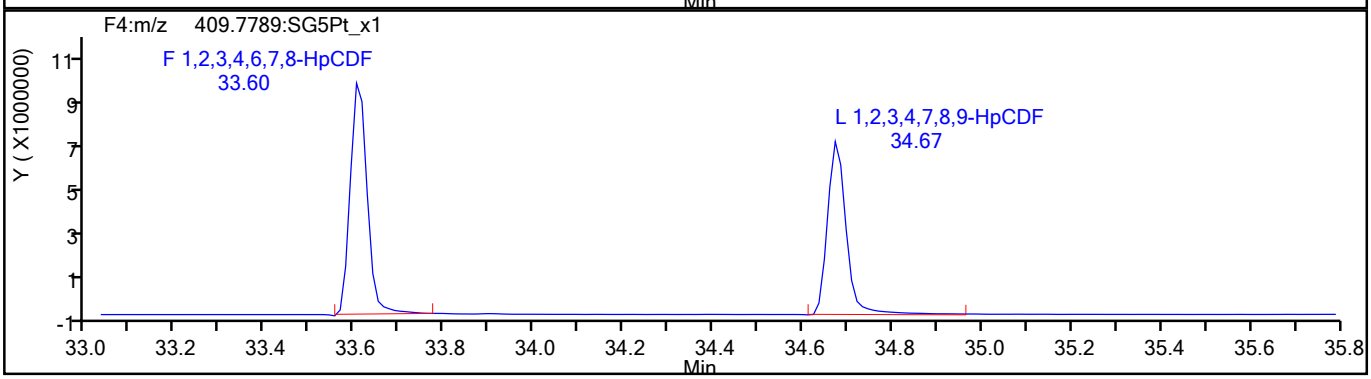

HpCDF Standards

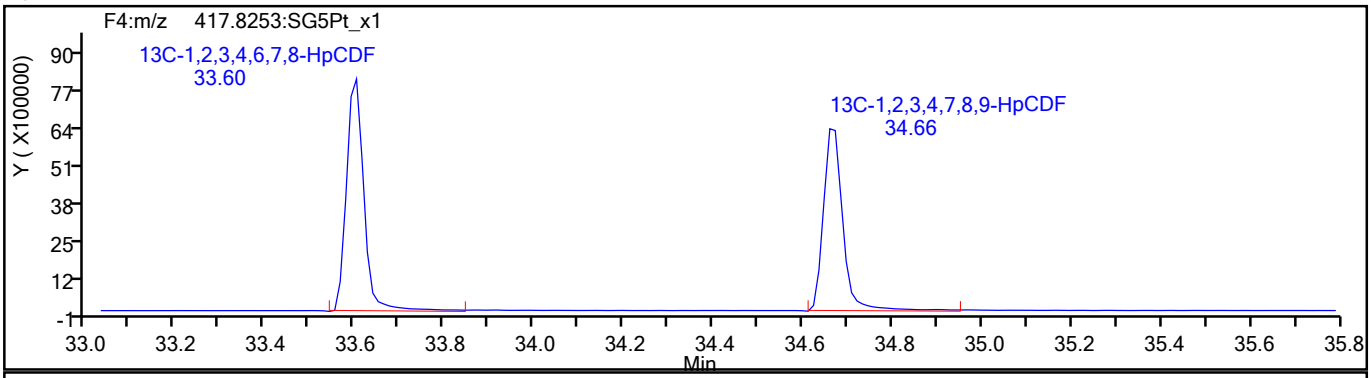

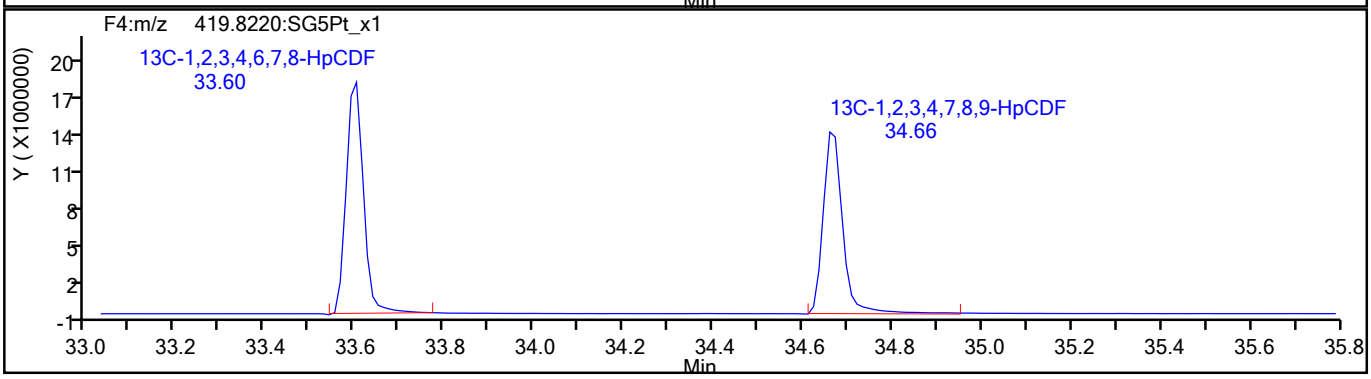

783122

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

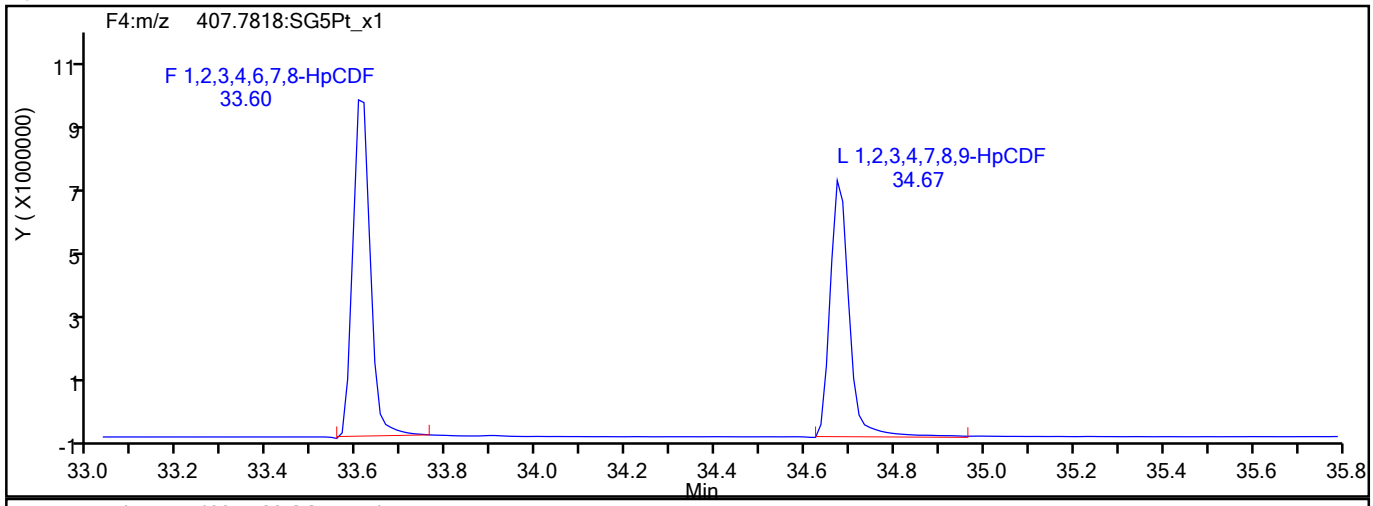

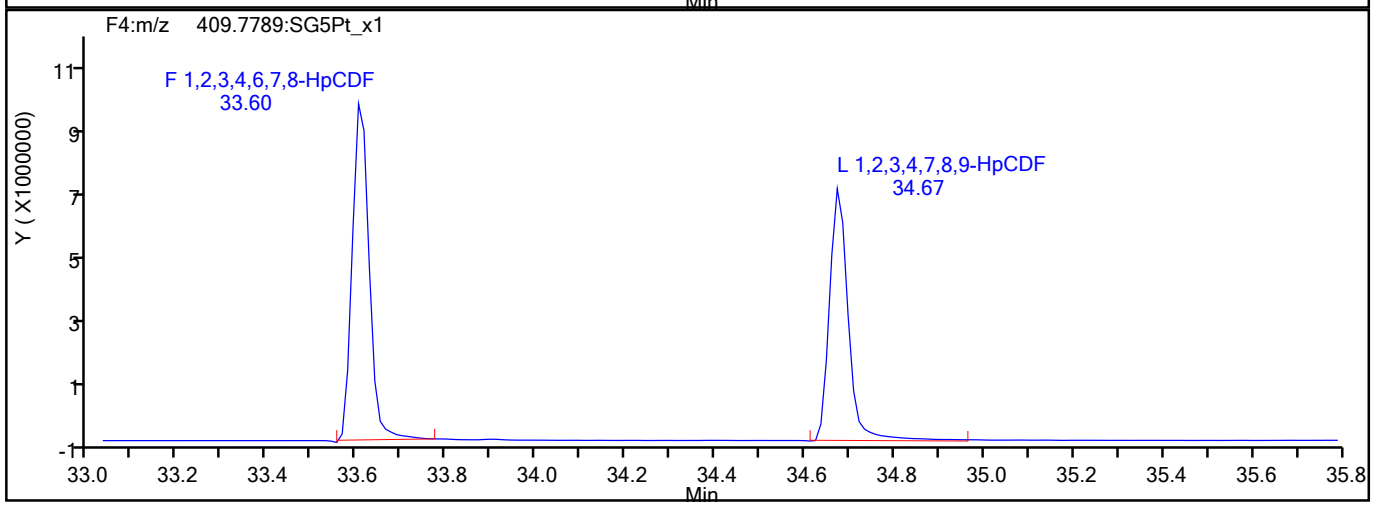

HpCDF Interference Mass

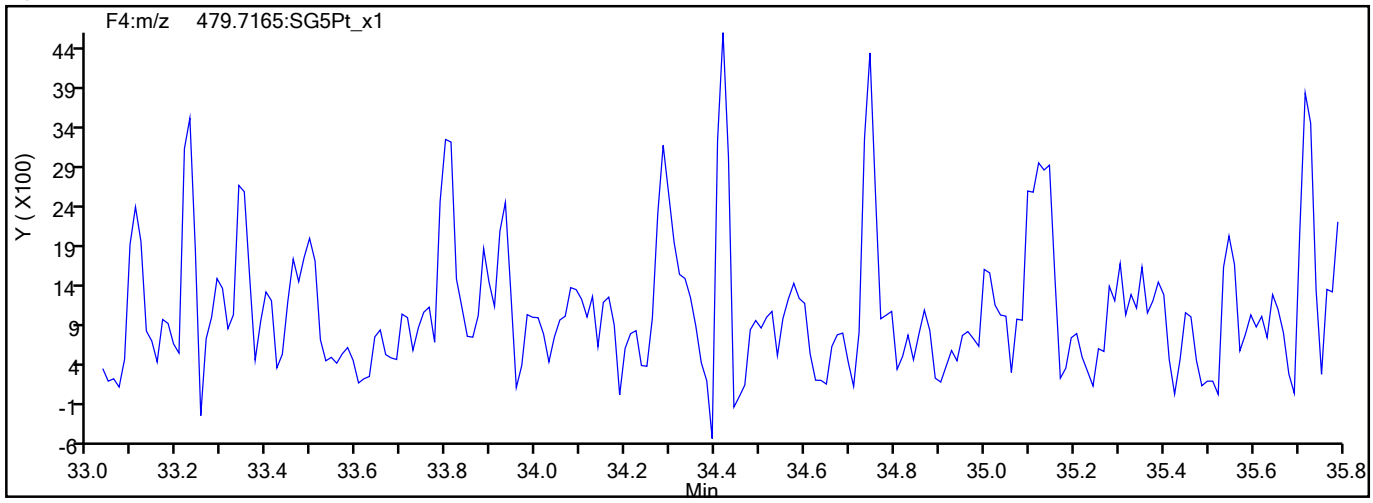

783123

Report Date: 27-Aug-2021 11:27:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

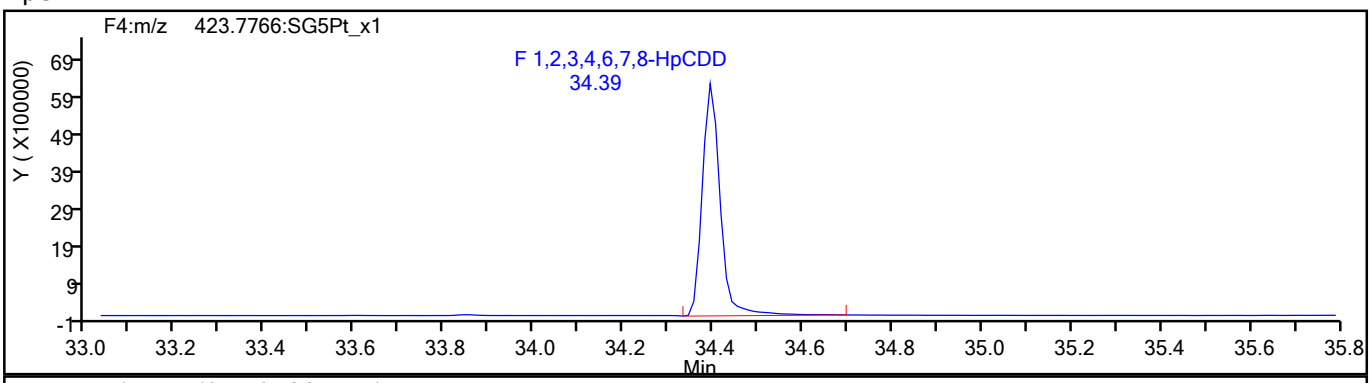

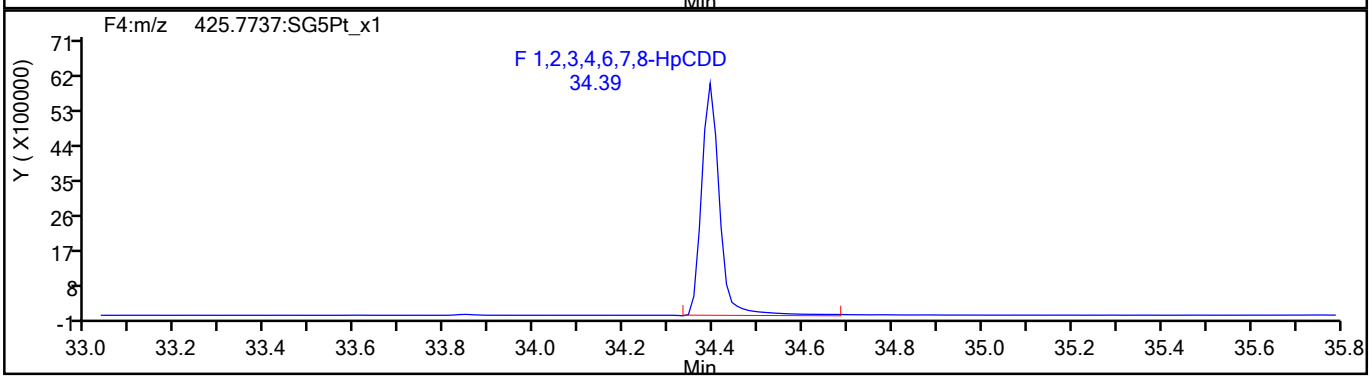

HpCDD Standards

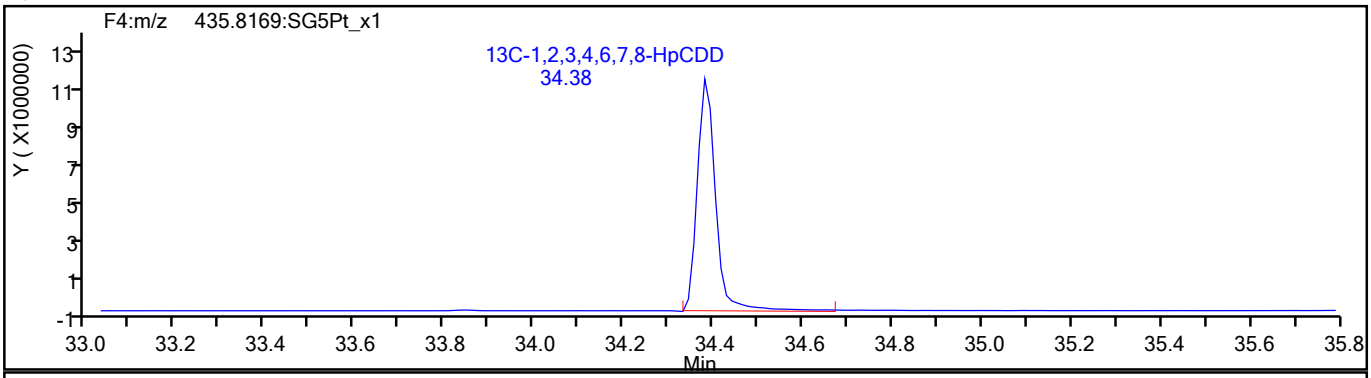

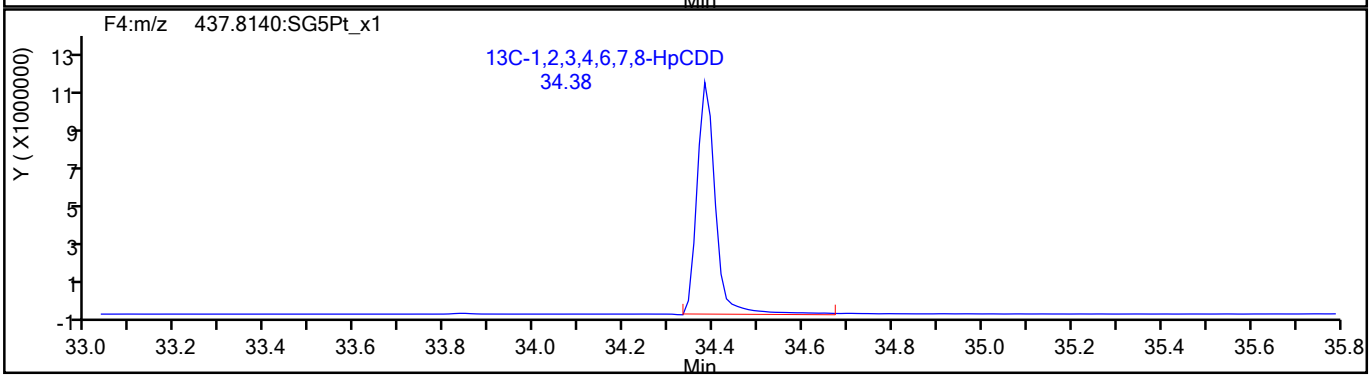

783124

Report Date: 27-Aug-2021 11:27:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

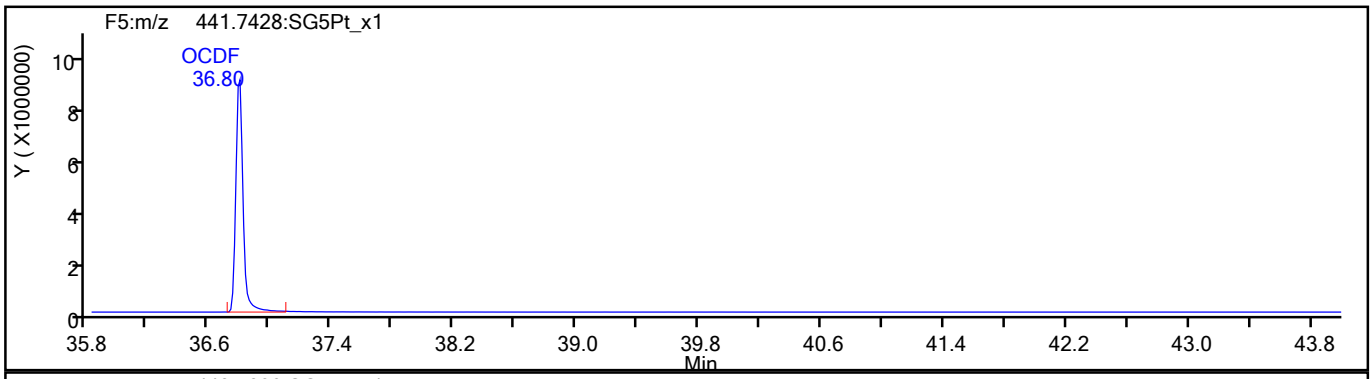

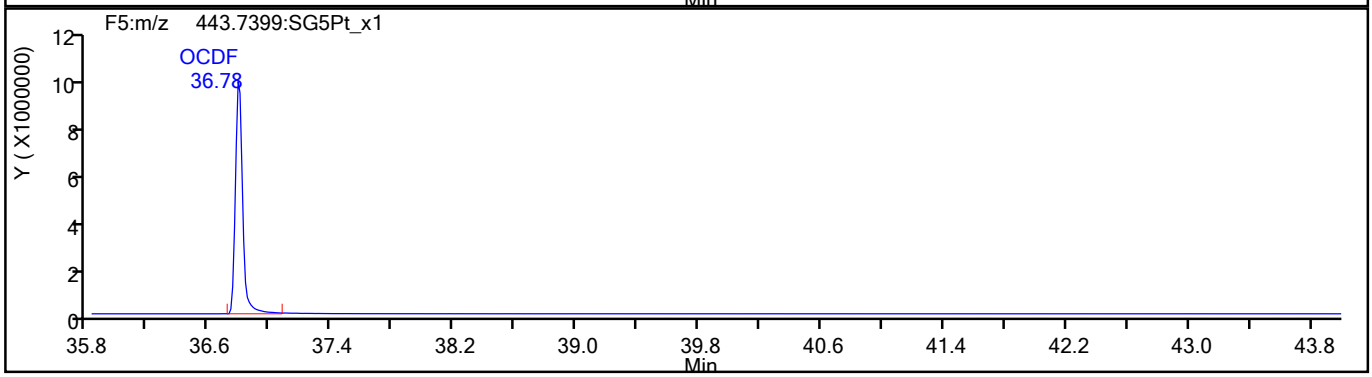

OCDF Standards

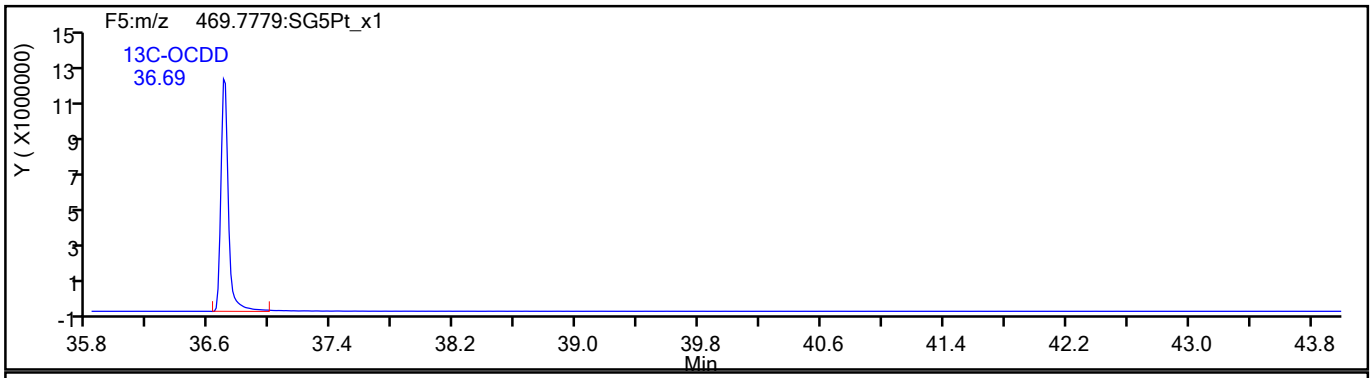

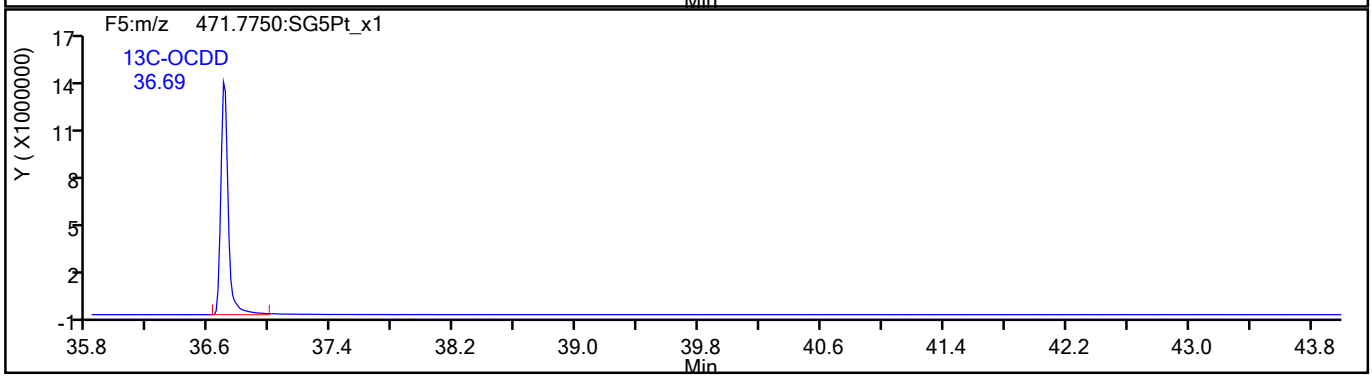

783125

Report Date: 27-Aug-2021 11:27:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

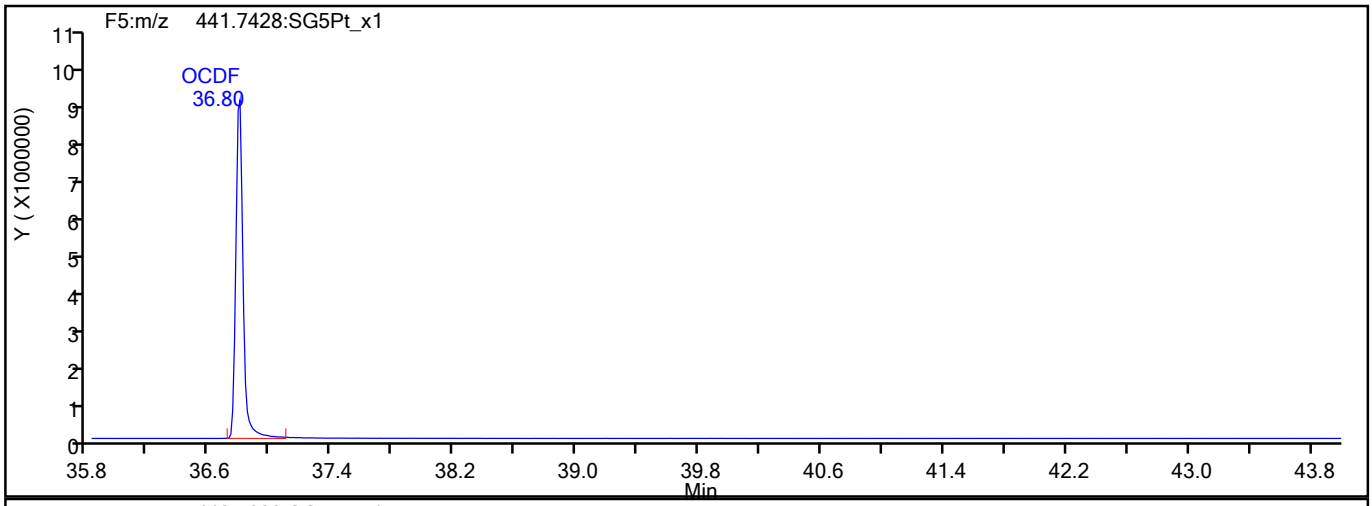

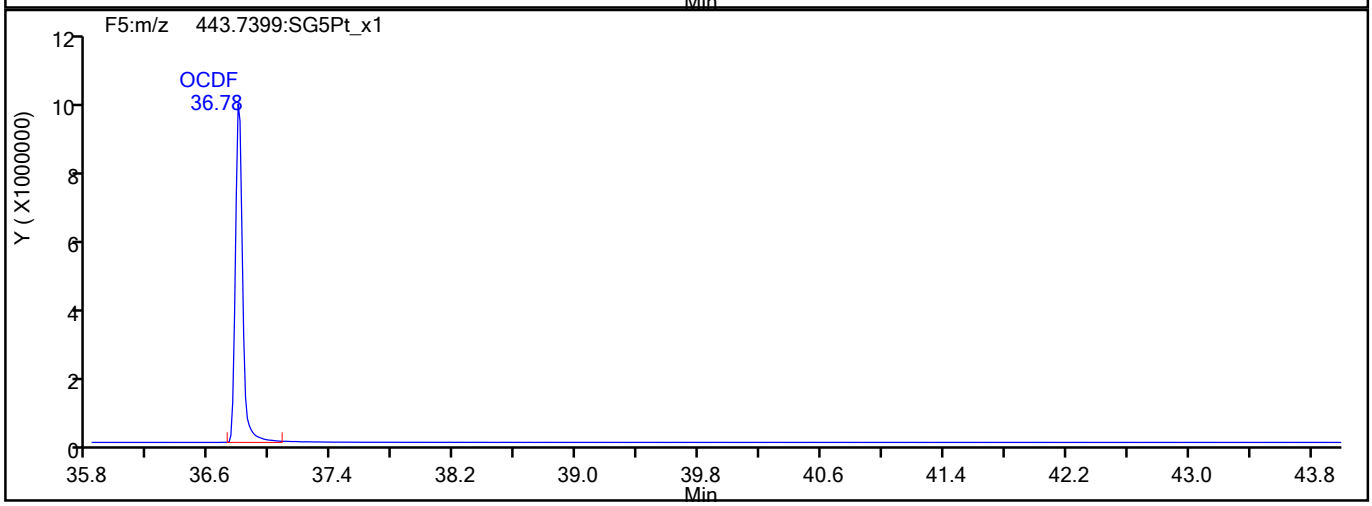

OCDF Interference Mass

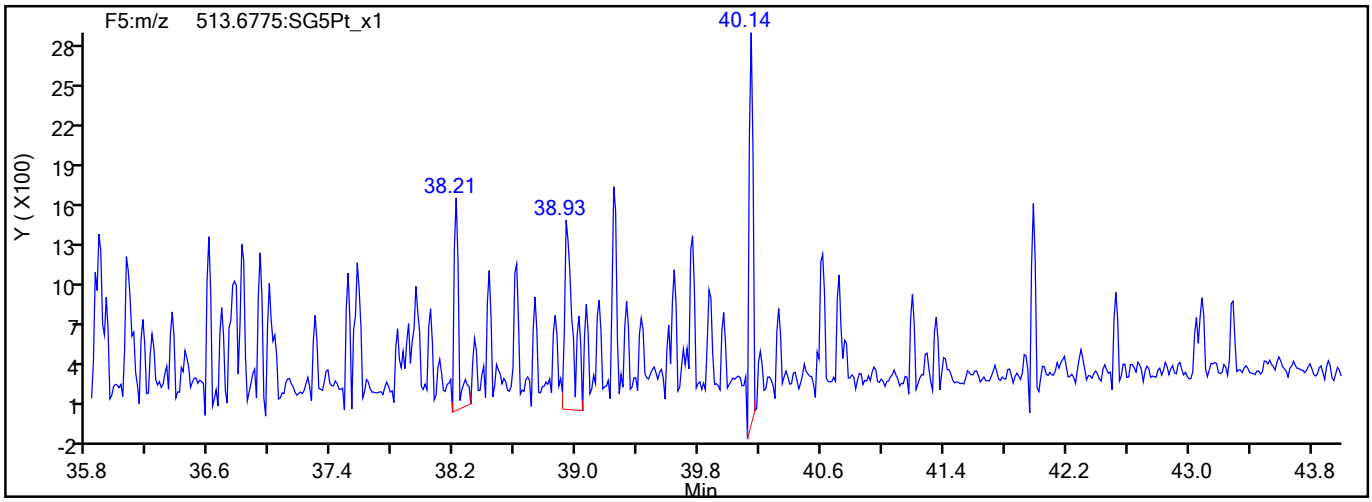

783126

Report Date: 27-Aug-2021 11:27:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

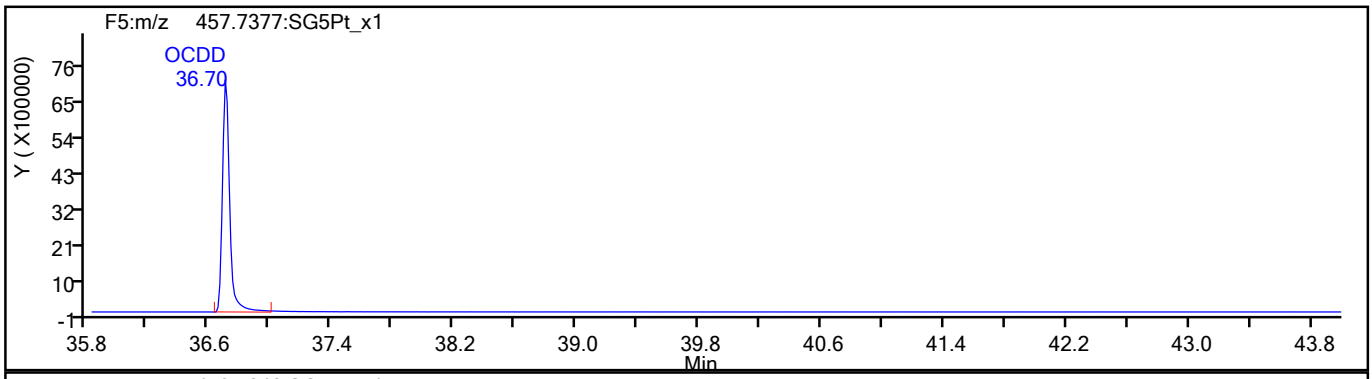

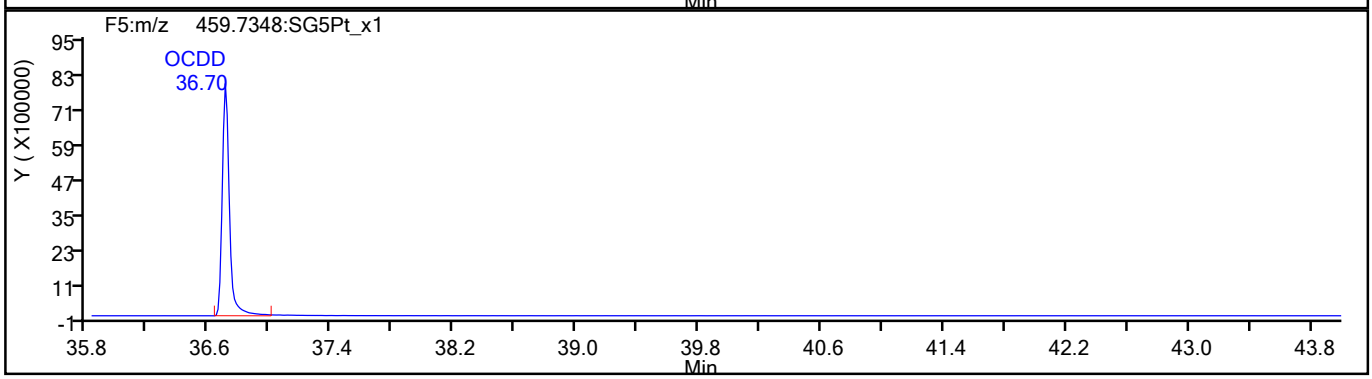

OCDD Standards

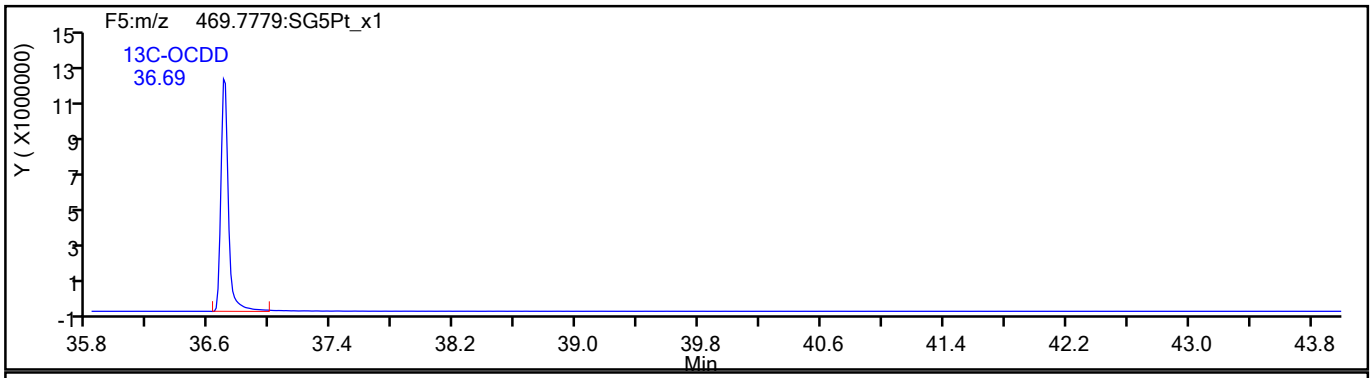

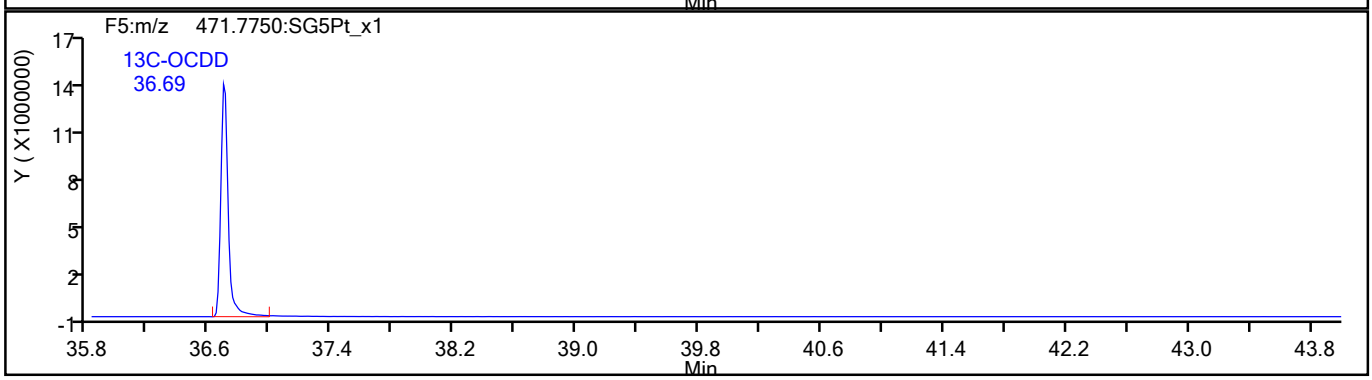

783127

Report Date: 27-Aug-2021 11:27:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

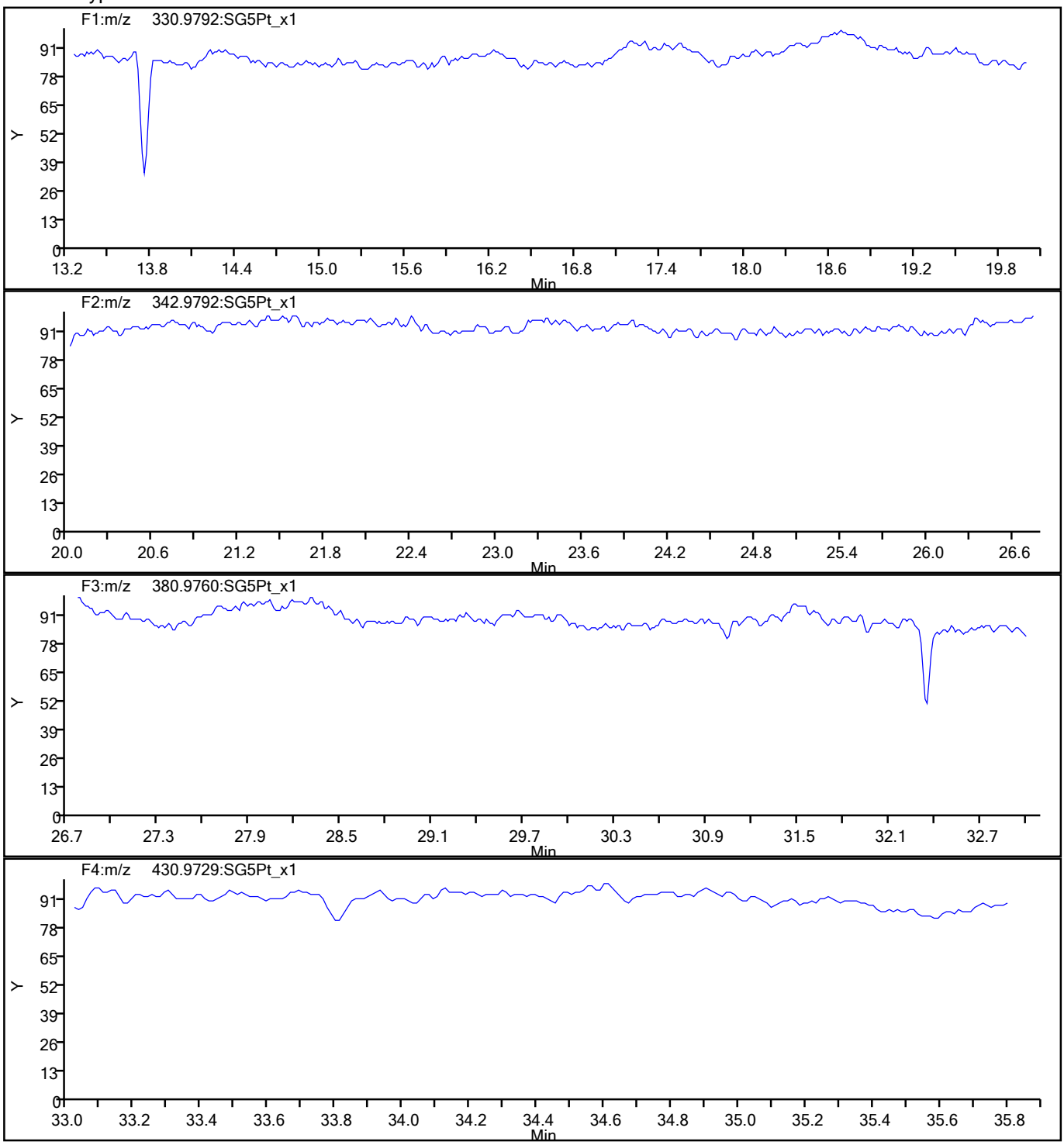

783128

Report Date: 27-Aug-2021 11:27:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

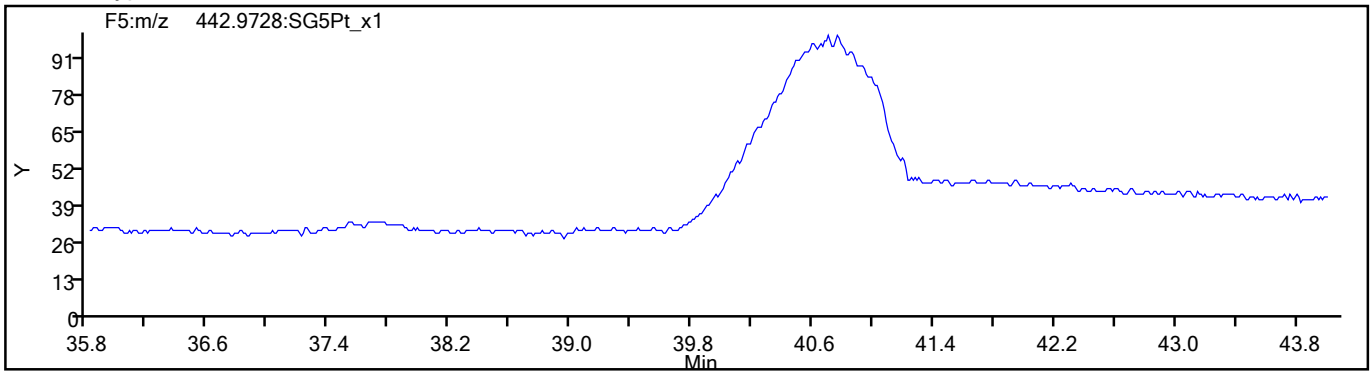

783129

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

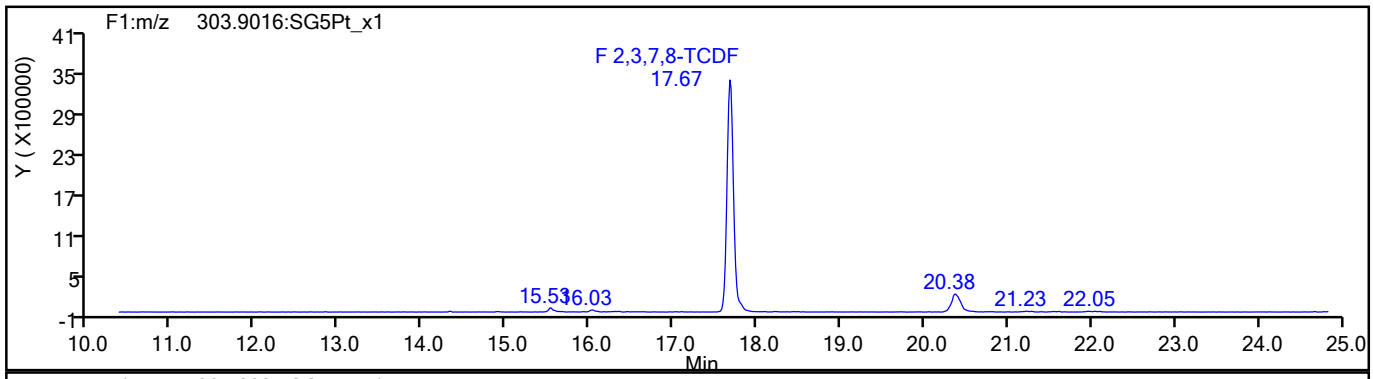

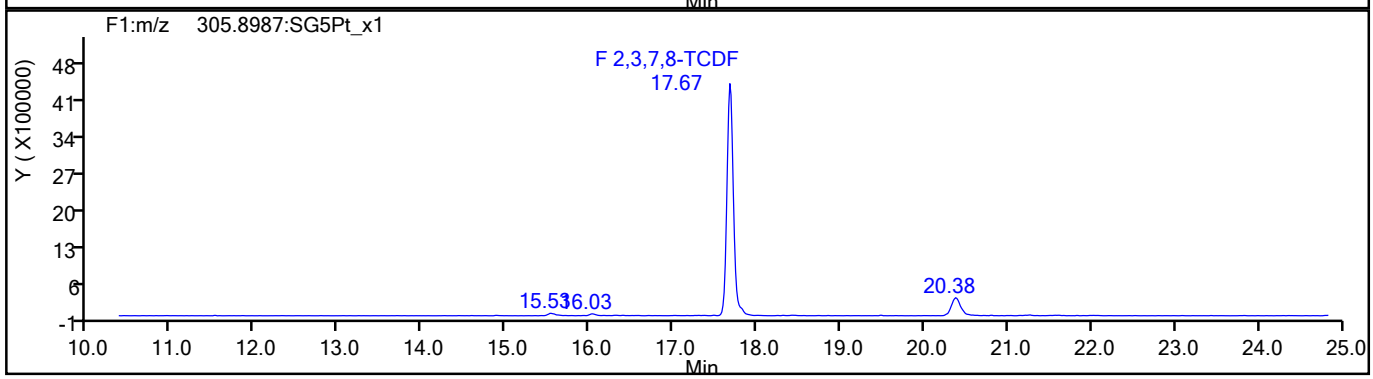

TCDF Standards

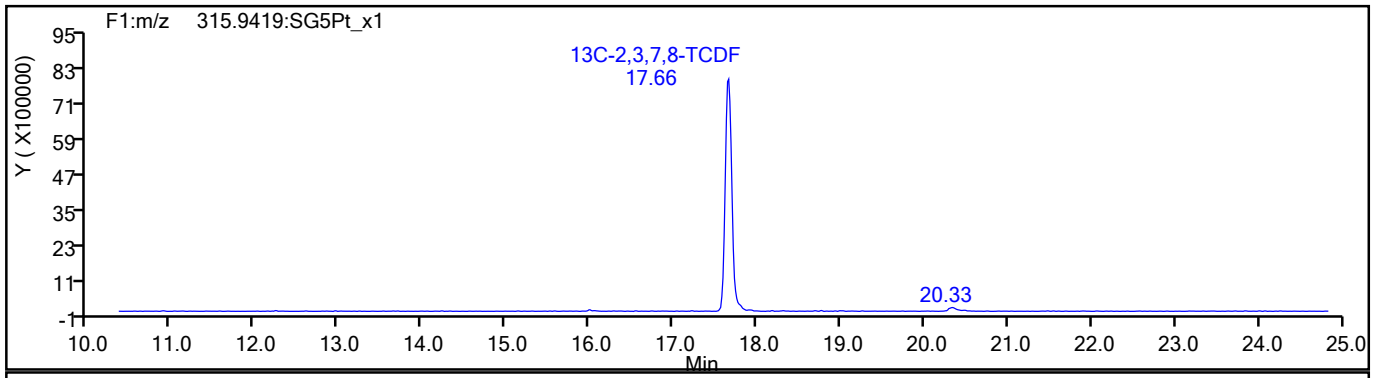

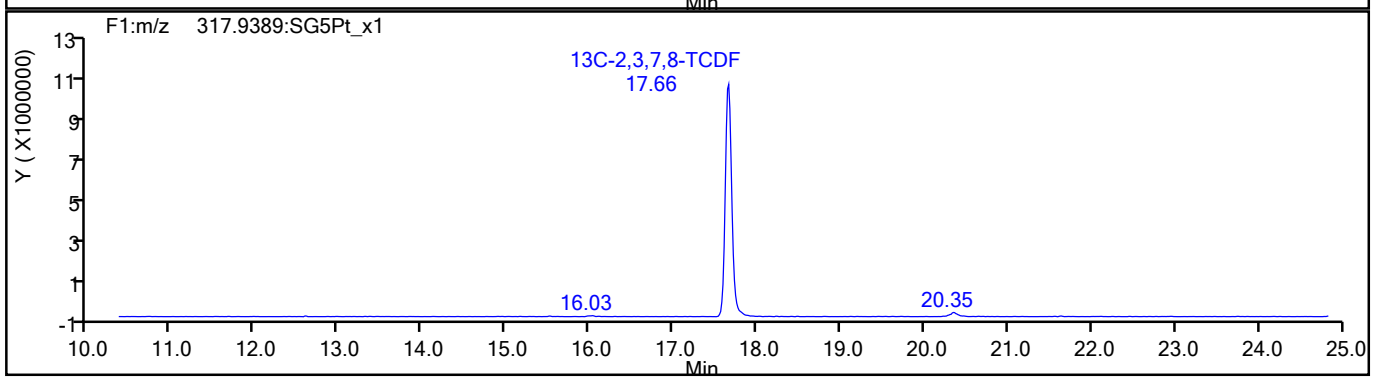

783133

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

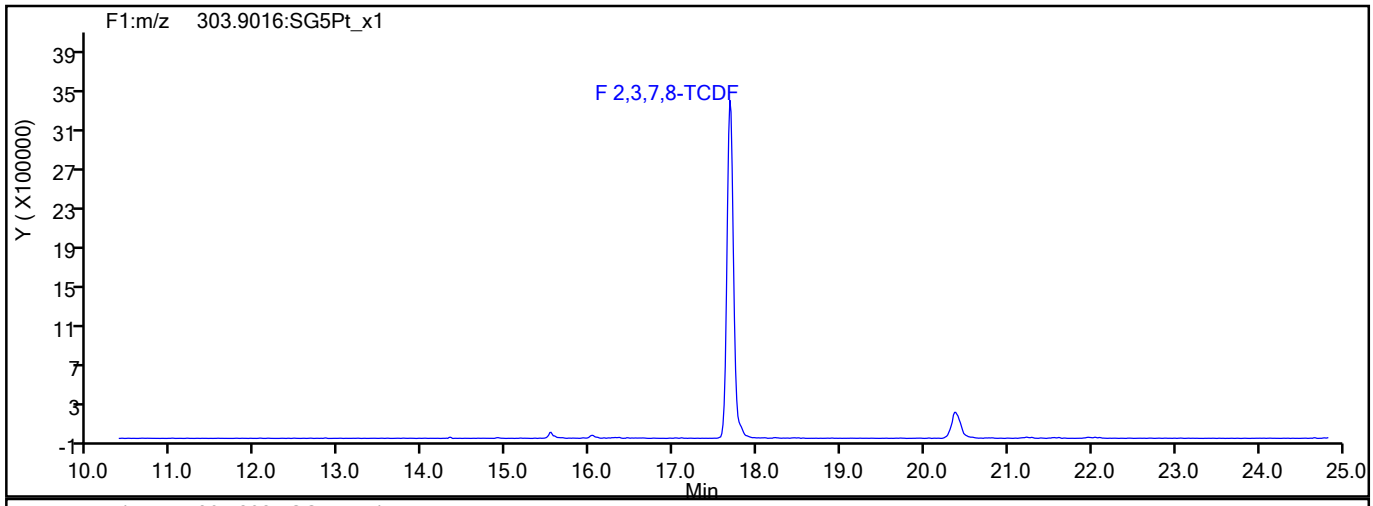

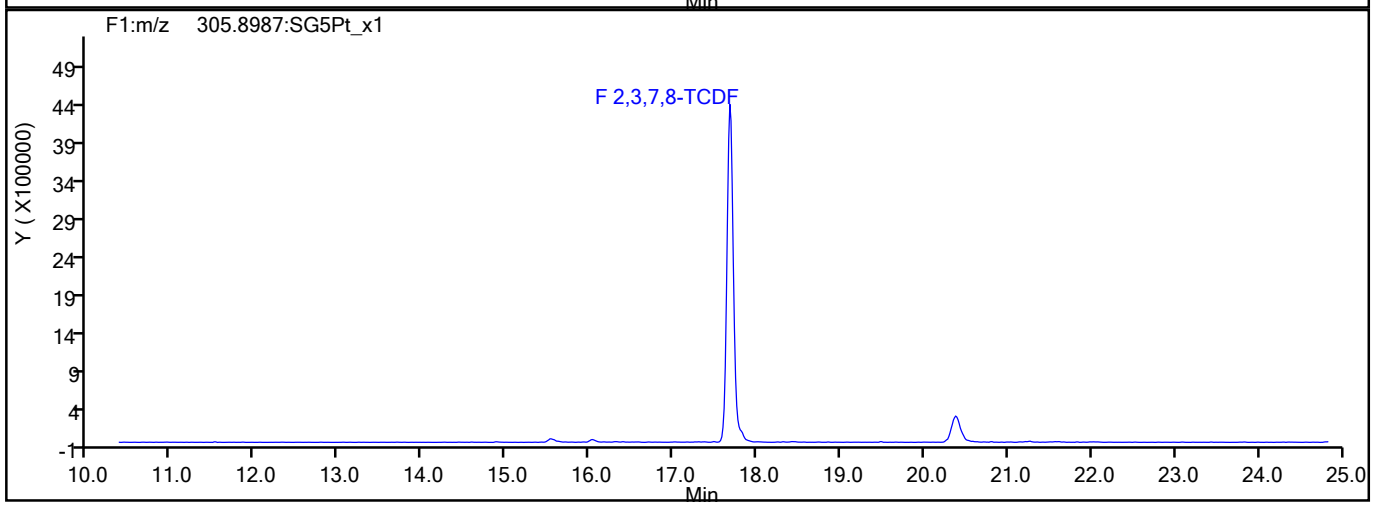

TCDF Interference Mass

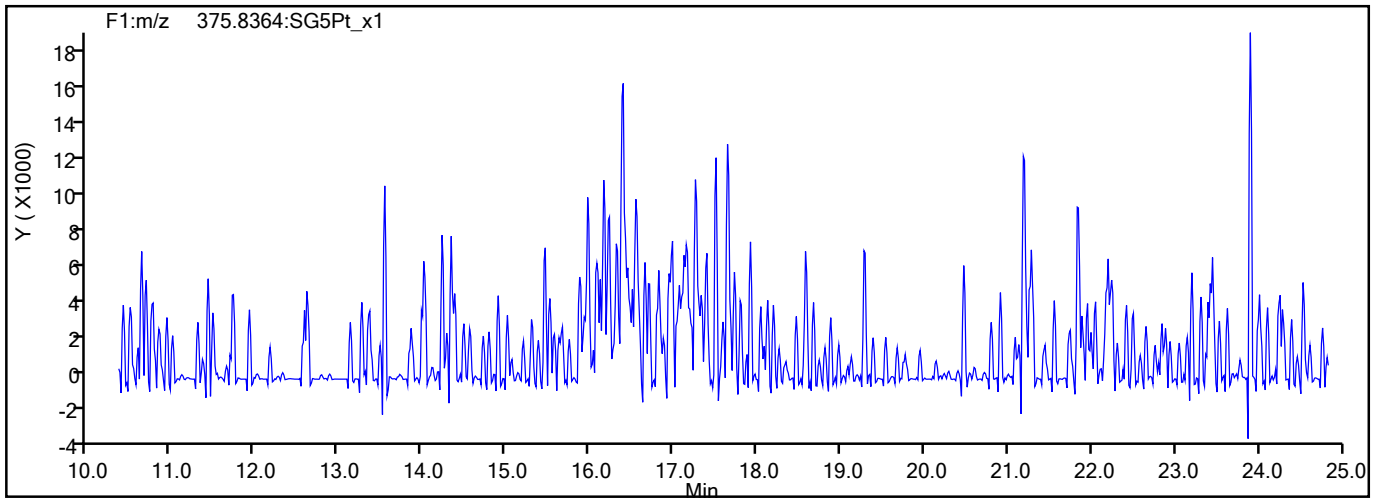

783134

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

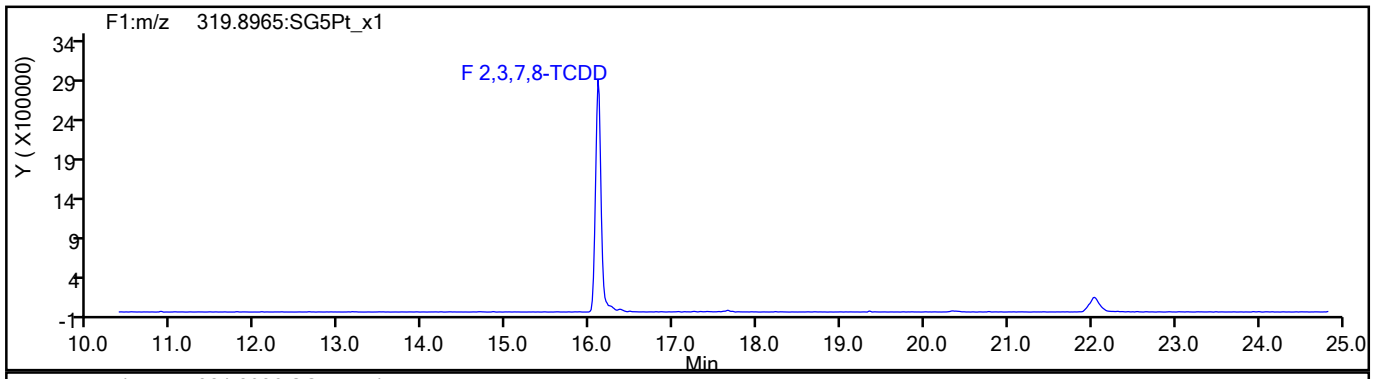

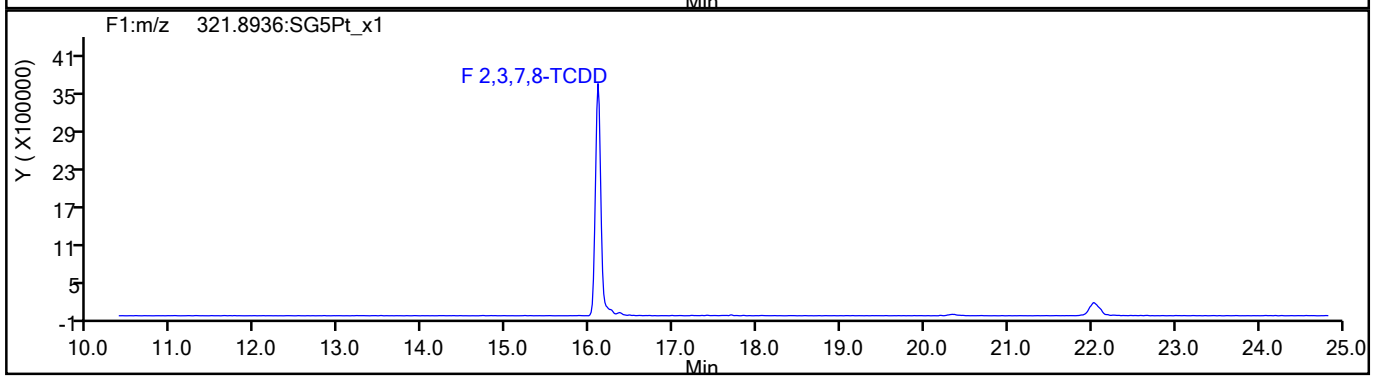

TCDD Standards

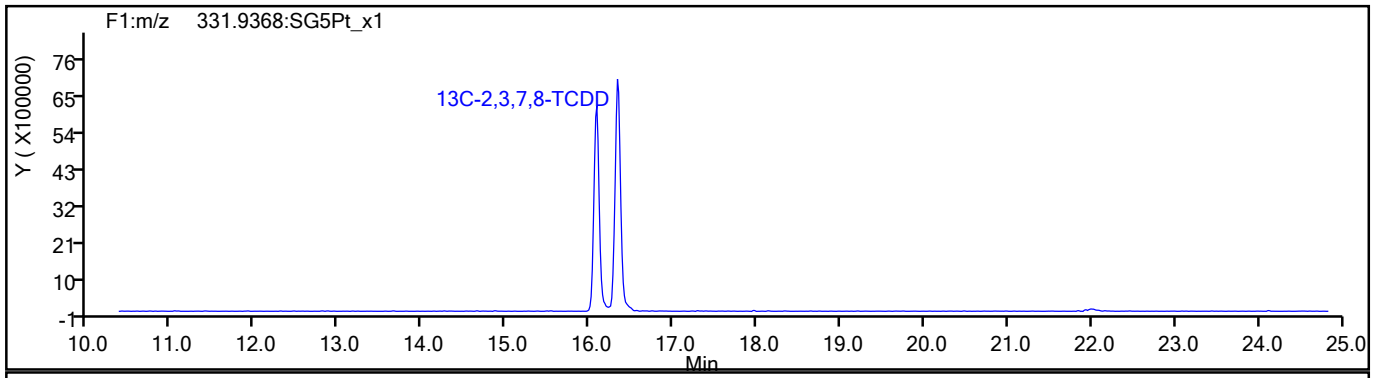

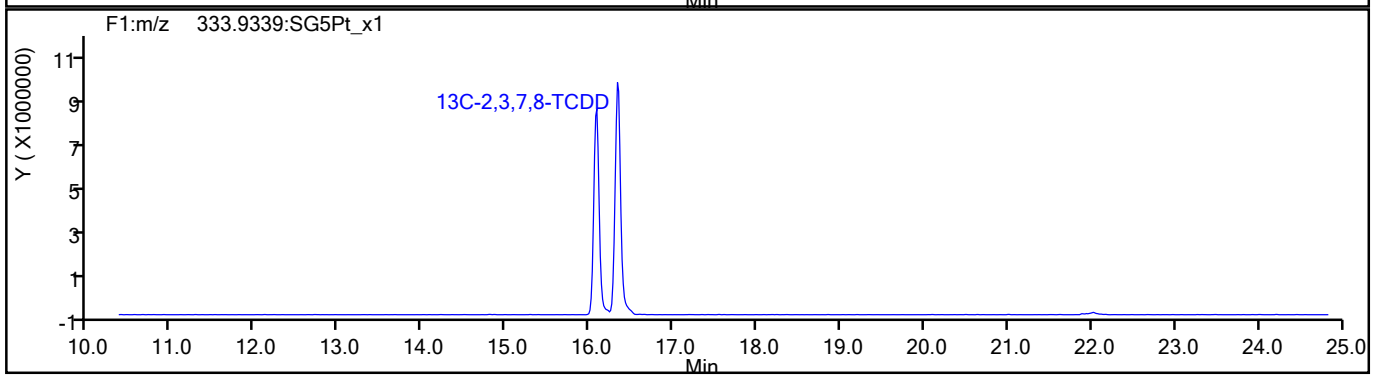

783135

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

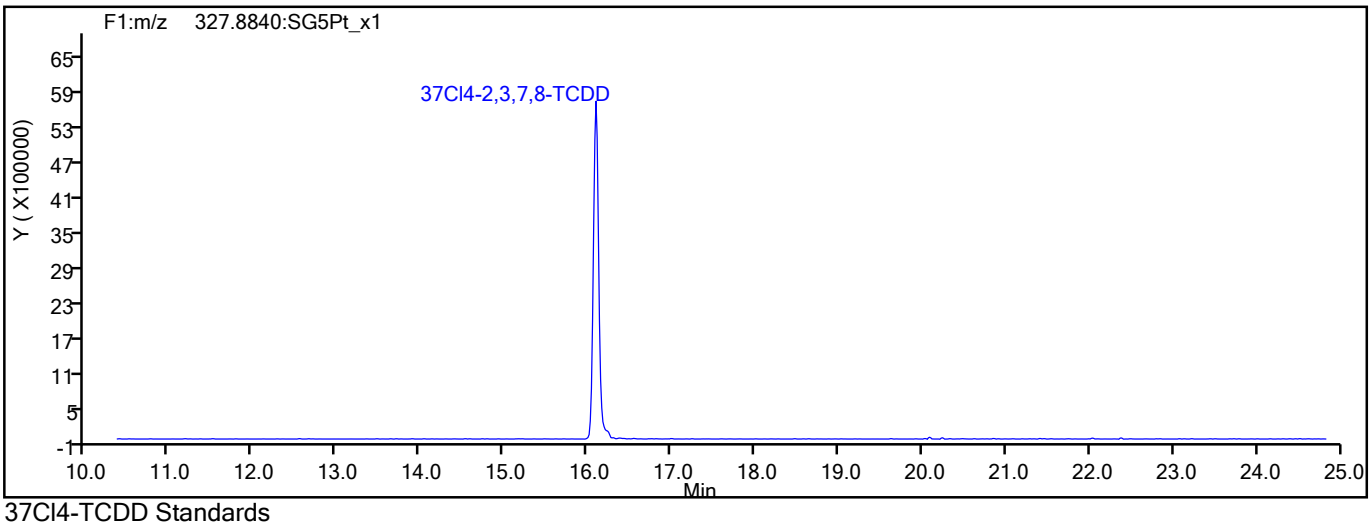

37Cl4-TCDD Standards

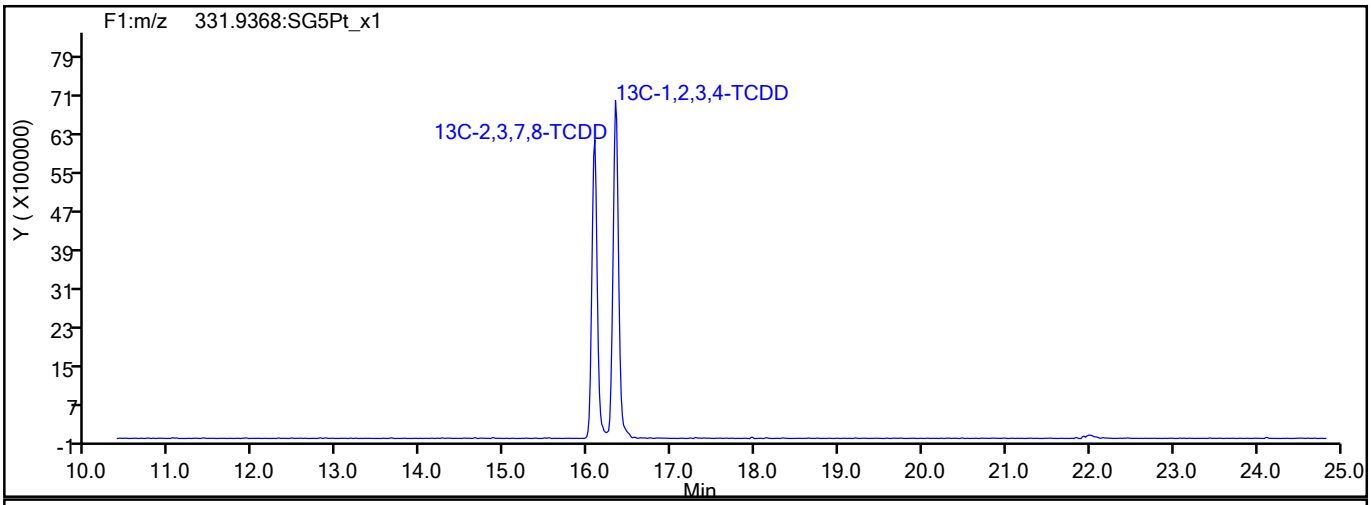

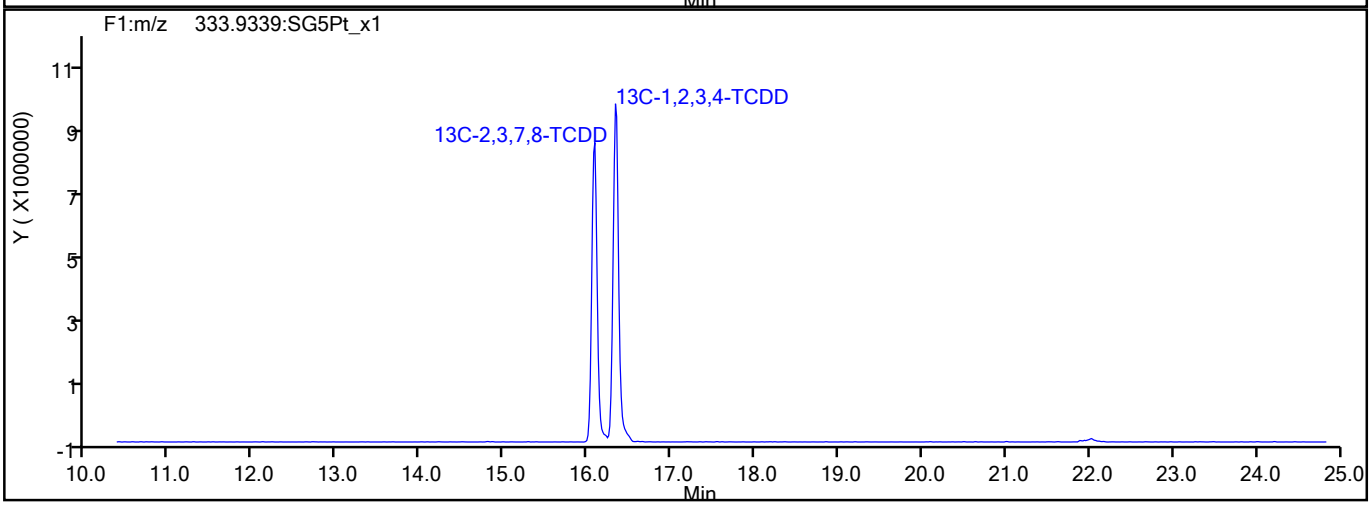

783136

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

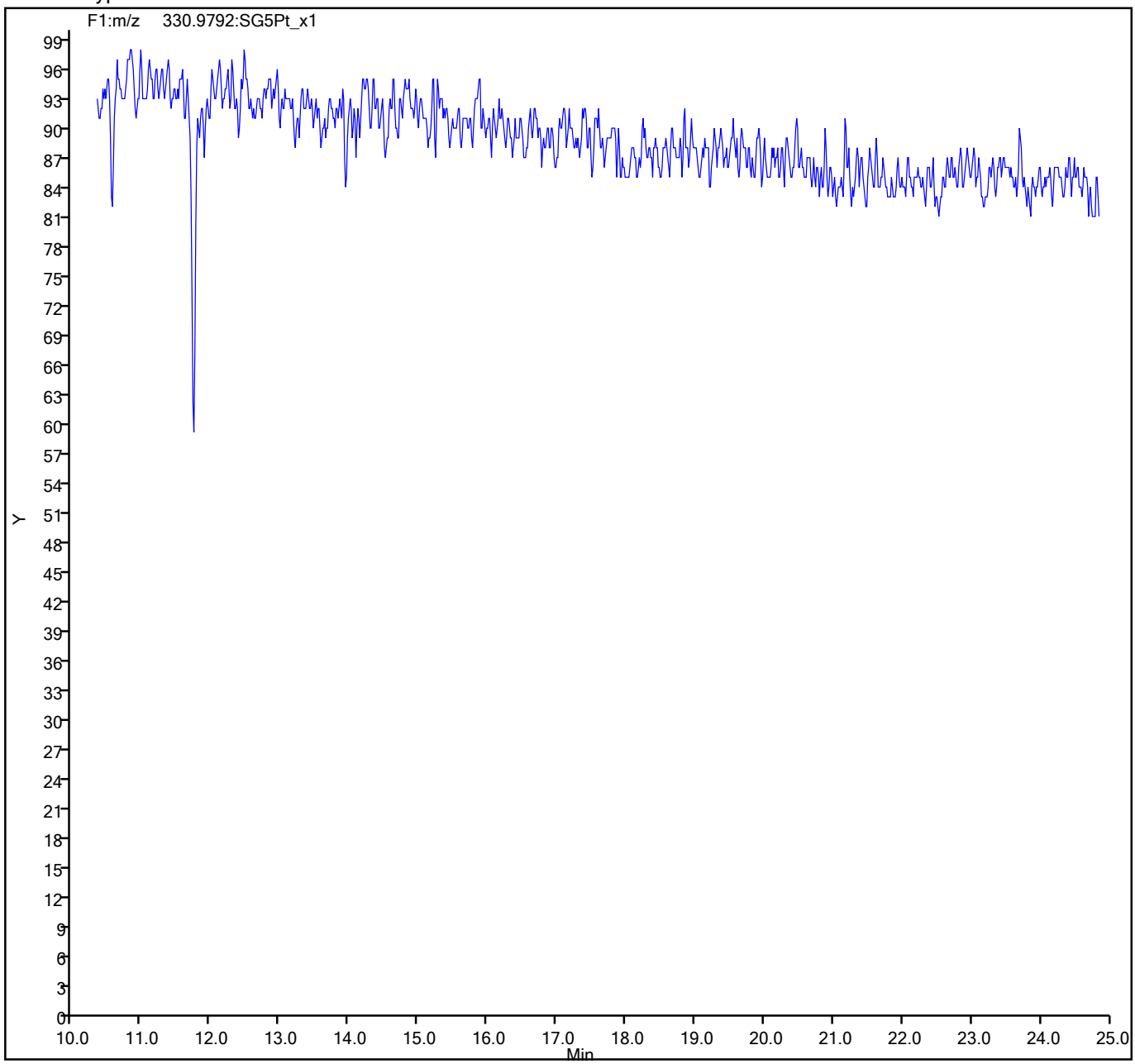

783137

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID: CCV 320-519744/2 Calibration Date: 08/25/2021 13:37

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 25AU21A11D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.014		9.59	10.0	96	78-129
2,3,7,8-TCDF	AveID	0.998	0.9106		9.13	10.0	91	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9659		110	100	110	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.534		115	100	115	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9227		10.7	10.0	107	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
25AU21A11D2	1	CPS 082521A	CPS HRDXNCP_00044				1.00000	
25AU21A11D2	2	CCV 082521A	CCV CS-4 HRDXNL4_00100				1.00000	
25AU21A11D2	3	SB 082521A	Solvent Blank C-14				1.00000	
25AU21A11D2	4	320-513586	320-76887-A-8-A	20	1613B/Solid	D266	10.00000	g
25AU21A11D2	5	320-513586	320-76887-A-13-A	20	1613B/Solid		10.00000	g
25AU21A11D2	6	320-513586	320-76887-A-4-A	20	1613B/Solid		10.00000	g
25AU21A11D2	7	320-513586	320-76887-A-7-A	20	1613B/Solid		10.00000	g
25AU21A11D2	8	320-513586	320-76887-A-6-A	20	1613B/Solid		10.00000	g
25AU21A11D2	9	320-513586	320-76887-A-3-A	20	1613B/Solid		10.00000	g
25AU21A11D2	10	320-513586	320-76888-A-13-A	20	1613B/Solid		10.00000	g
25AU21A11D2	11	320-513586	320-76887-A-5-A	20	1613B/Solid		10.00000	g
25AU21A11D2	12	320-512871	320-76788-A-1-A X5	20	1613B/Solid	D265	10.00000	g
25AU21A11D2	13	320-512871	320-76788-A-13-A X5	20	1613B/Solid		10.00000	g
25AU21A11D2	14	320-512871	320-76788-A-14-A X5	20	1613B/Solid		10.00000	g
25AU21A11D2	15	320-513586	320-76887-A-2-A X10	20	1613B/Solid	D266	10.00000	g
25AU21A11D2	16	320-513586	320-76887-A-2-B MS X10	20	1613B/Solid		10.00000	g
25AU21A11D2	17	320-513586	320-76887-A-2-C MSD X10	20	1613B/Solid		10.00000	g
25AU21A11D2	18	320-513586	320-76887-A-1-A X10	20	1613B/Solid		10.00000	g
25AU21A11D2	19						1.00000	
25AU21A11D2	20						1.00000	
25AU21A11D2	21						1.00000	
25AU21A11D2	22						1.00000	
25AU21A11D2	23						1.00000	
25AU21A11D2	24		DB 08-25-21		Logfile ✓ id 8/26/21 WSS		1.00000	
25AU21A11D2	25						1.00000	

783139

Peak Locate Examination:25-AUG-2021:12:57 File:25AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

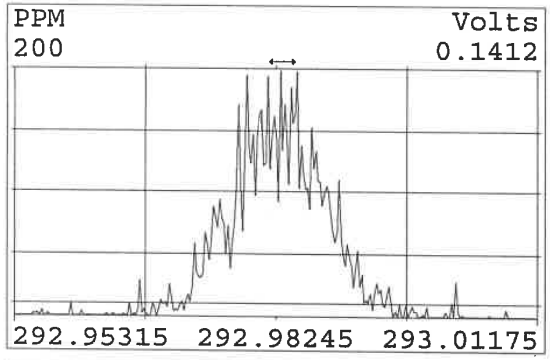

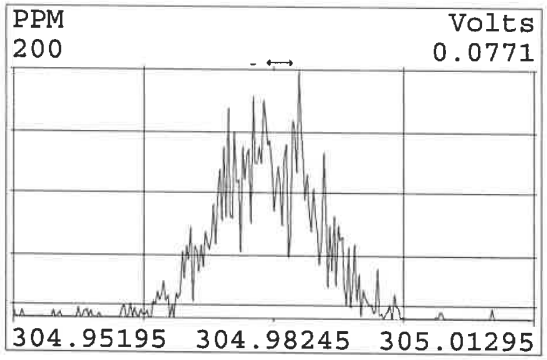

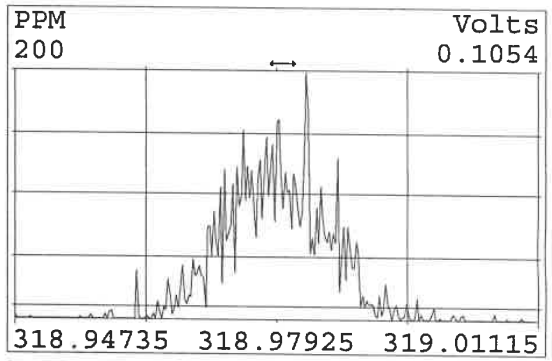

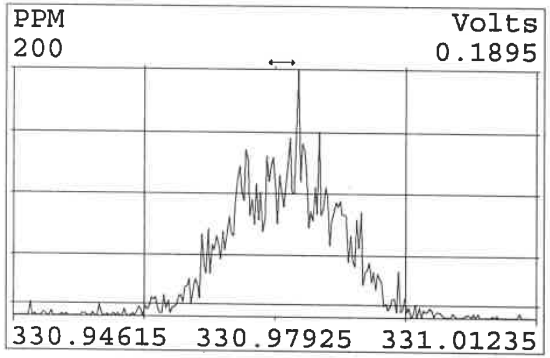

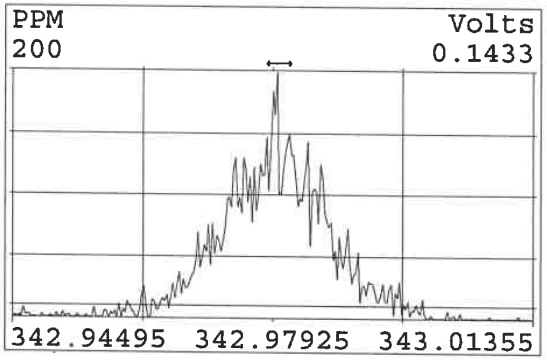

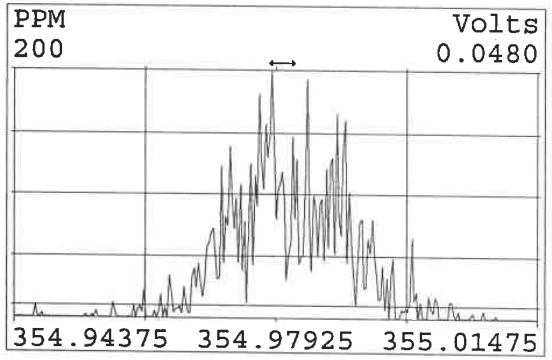

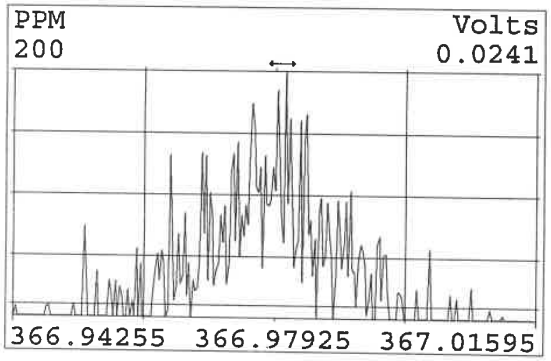

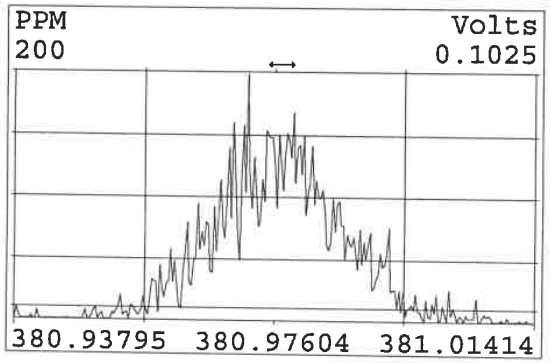

783140

Peak Locate Examination:26-AUG-2021:00:53 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

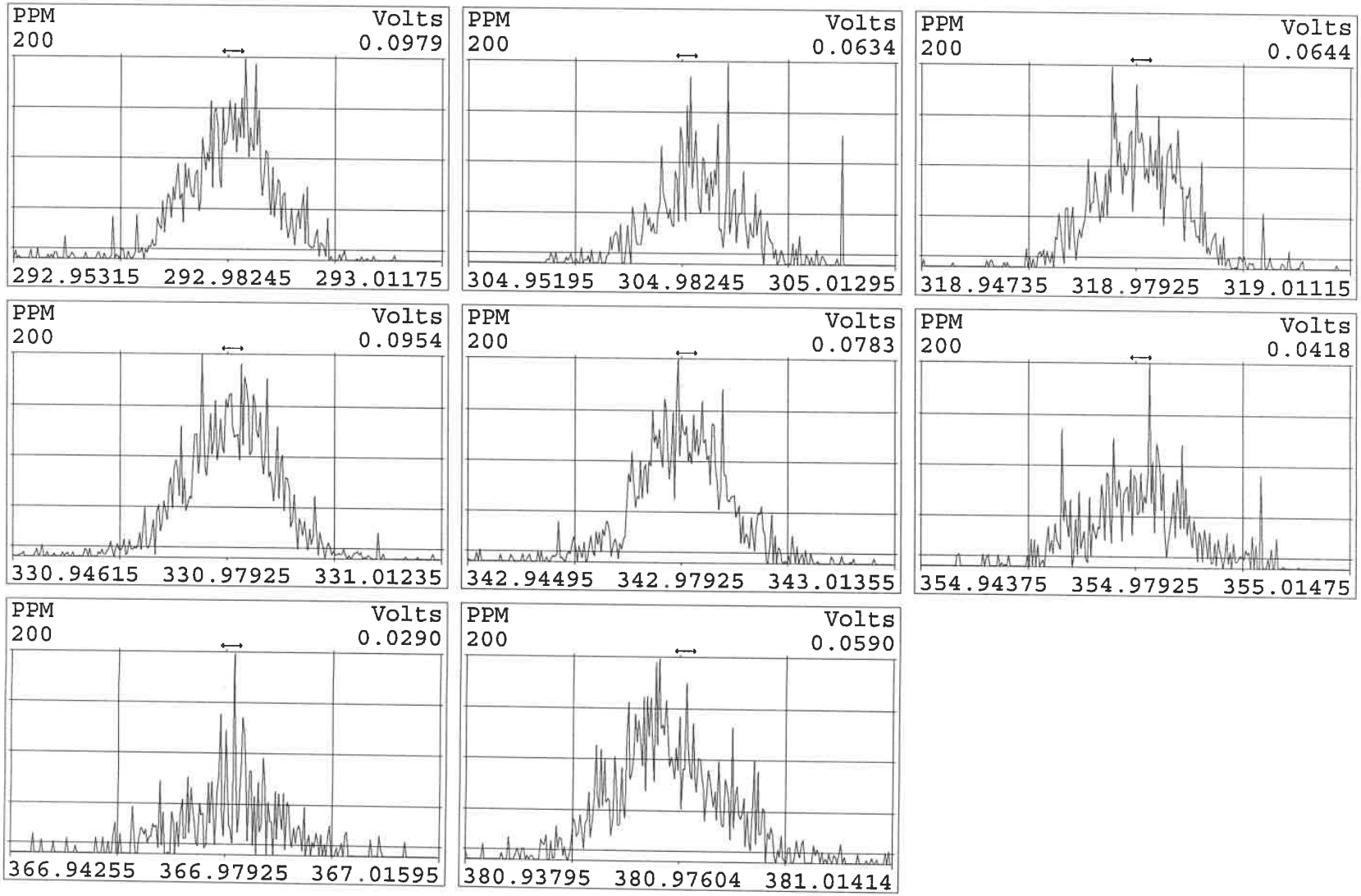

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 13:37:25 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:58:03

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	44613223	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	68447211	0.78	1.3327	115.1	115.1	0.4009	0.4009	115	
2,3,7,8-TCDF	17.628	6233038	0.76	0.9978	9.126	9.126	0.0456	0.0456	91.26	
D 13C-2,3,7,8-TCDD	16.065	43090707	0.78	0.8749	110.4	110.4	0.4999	0.4999	110	
2,3,7,8-TCDD	16.078	4369493	0.82	1.0570	9.593	9.593	0.0503	0.0503	95.93	
$ 37Cl4-2,3,7,8-TCDD	16.078	4116418		0.8648	10.7	10.7	0.0403	0.0403	107	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 13:37:25 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:58:03

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.298	16.298	0		19220204	4118470	10824	27060	380		
333.9339	16.298	16.298	0		25393019	5598505	6177	15442	906	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.081	30012344	5677395	10361	25902	548		
317.9389	17.615	17.615	0	1.081	38434867	7538958	10404	26010	725	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.628	0	1.001	2692252	497103	1141	2852	436		
305.8987	17.628	17.628	0	1.001	3540786	659047	1262	3155	522	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	0.986	18814987	4187657	10824	27060	387		
333.9339	16.065	16.065	0	0.986	24275720	5412651	6177	15442	876	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.078	16.078	0	1.001	1970068	437591	1166	2915	375		
321.8936	16.078	16.078	0	1.001	2399425	530002	877	2192	604	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.078	0	0.987	4116418	976537	1354	3385	721		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

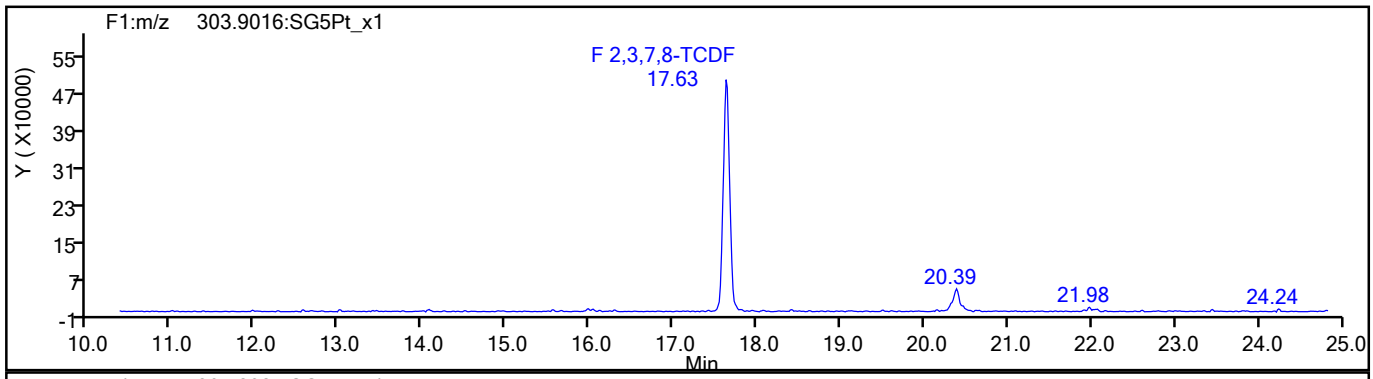

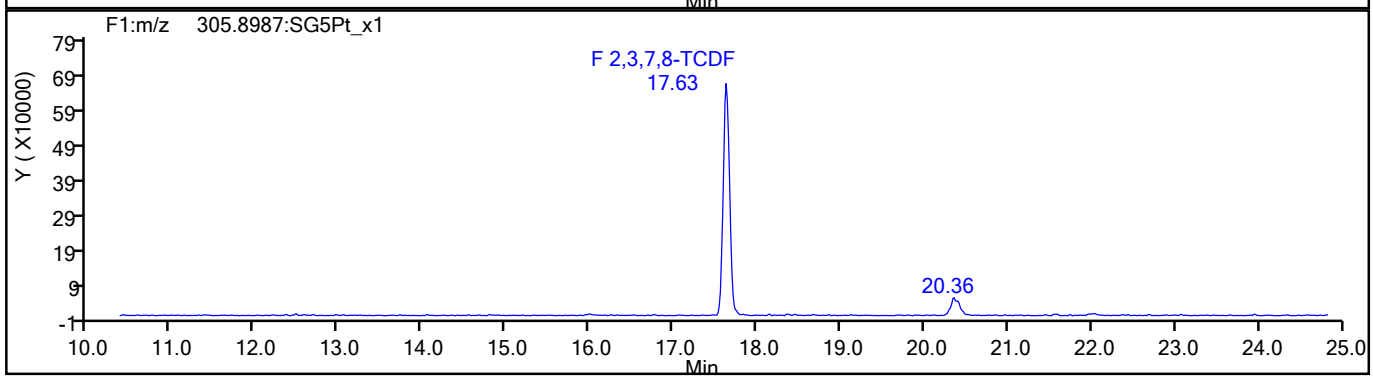

TCDF Standards

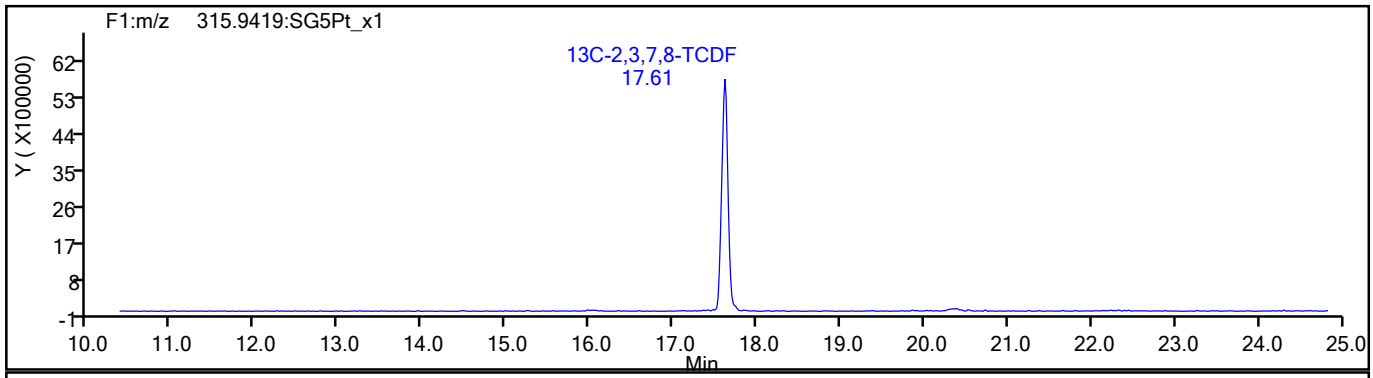

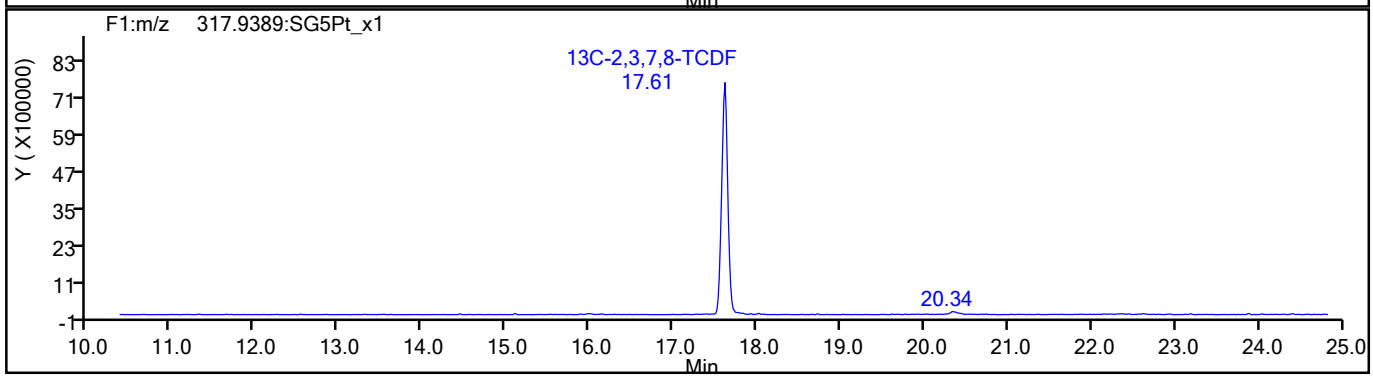

783144

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

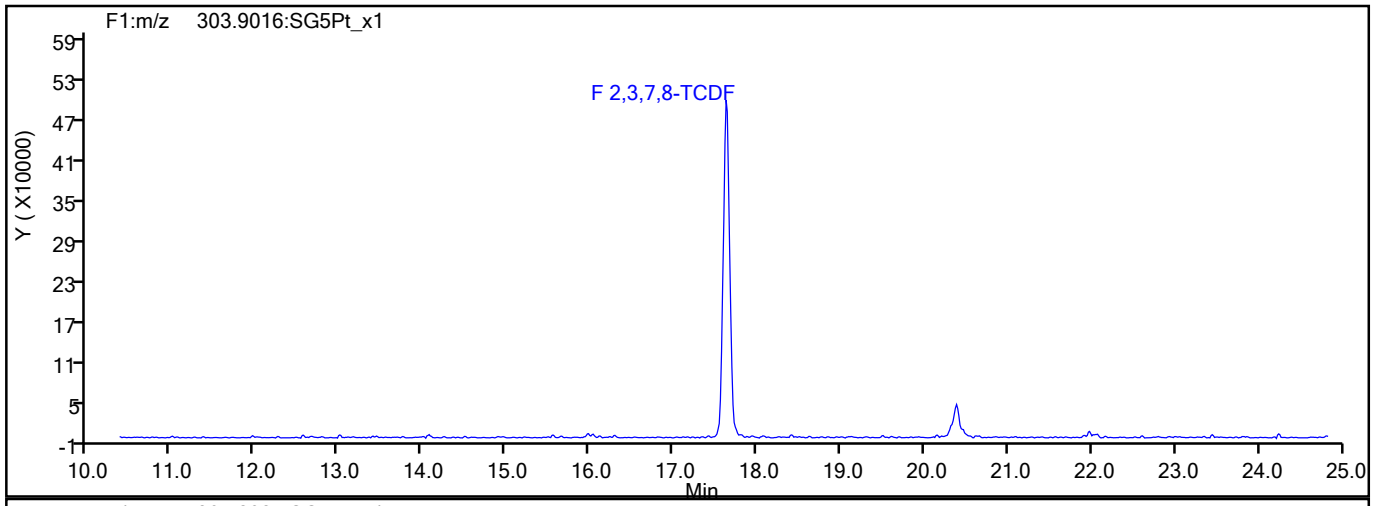

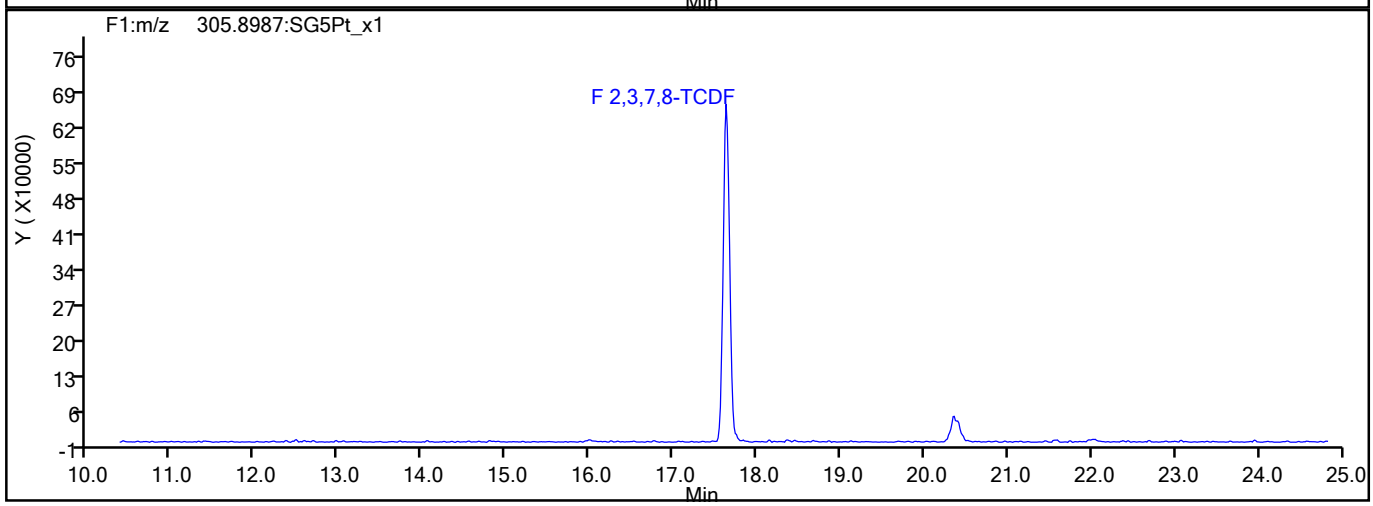

TCDF Interference Mass

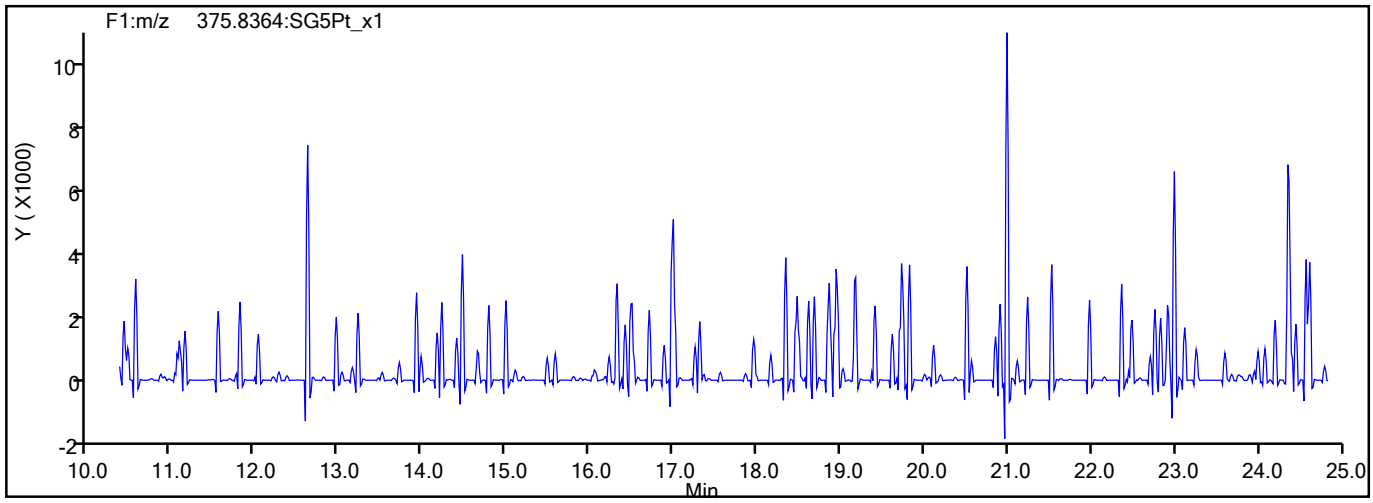

783145

Report Date: 26-Aug-2021 09:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

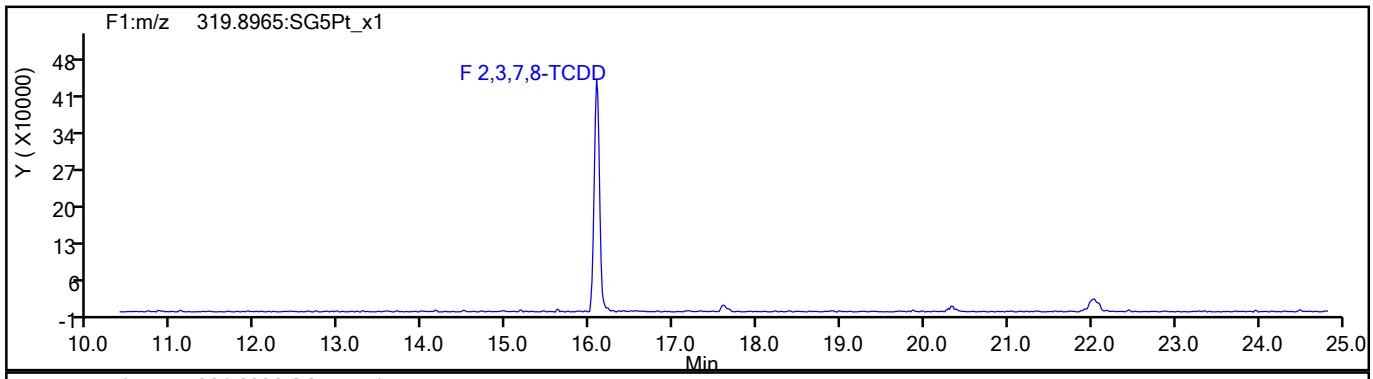

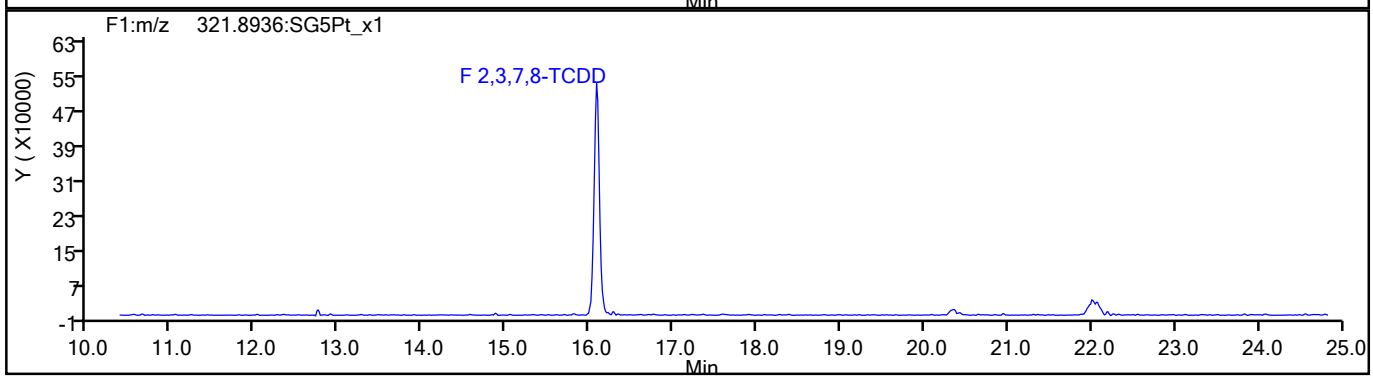

TCDD Standards

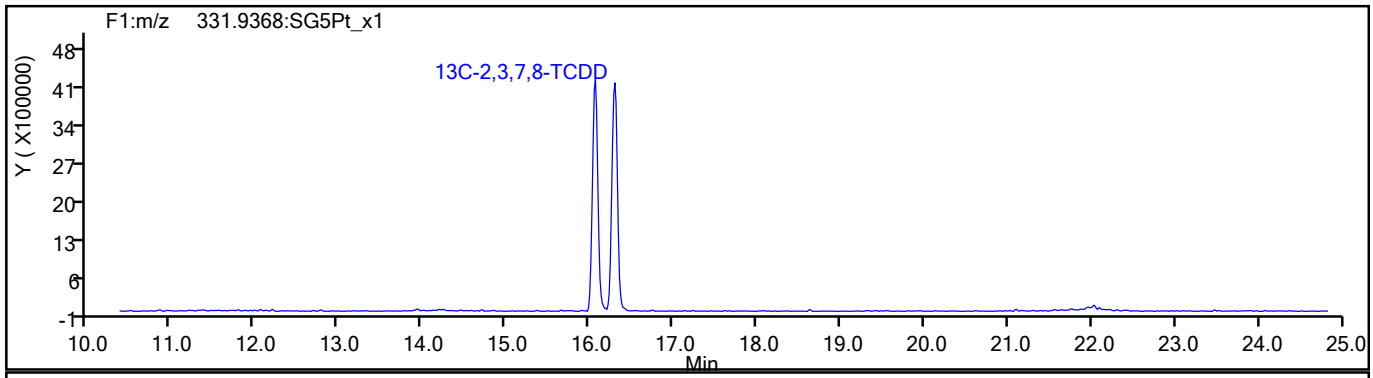

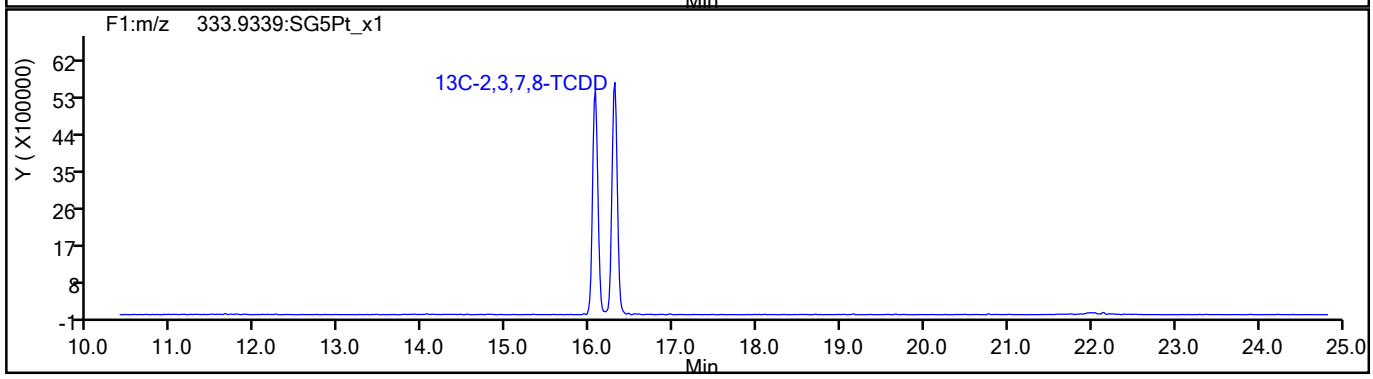

783146

Report Date: 26-Aug-2021 09:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

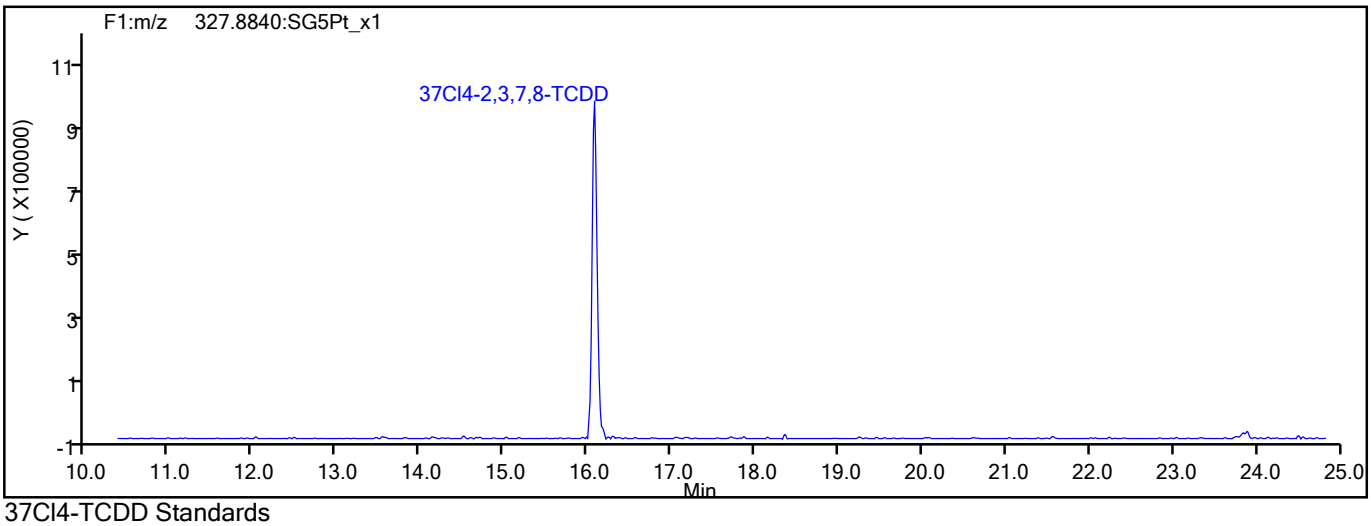

37Cl4-TCDD Standards

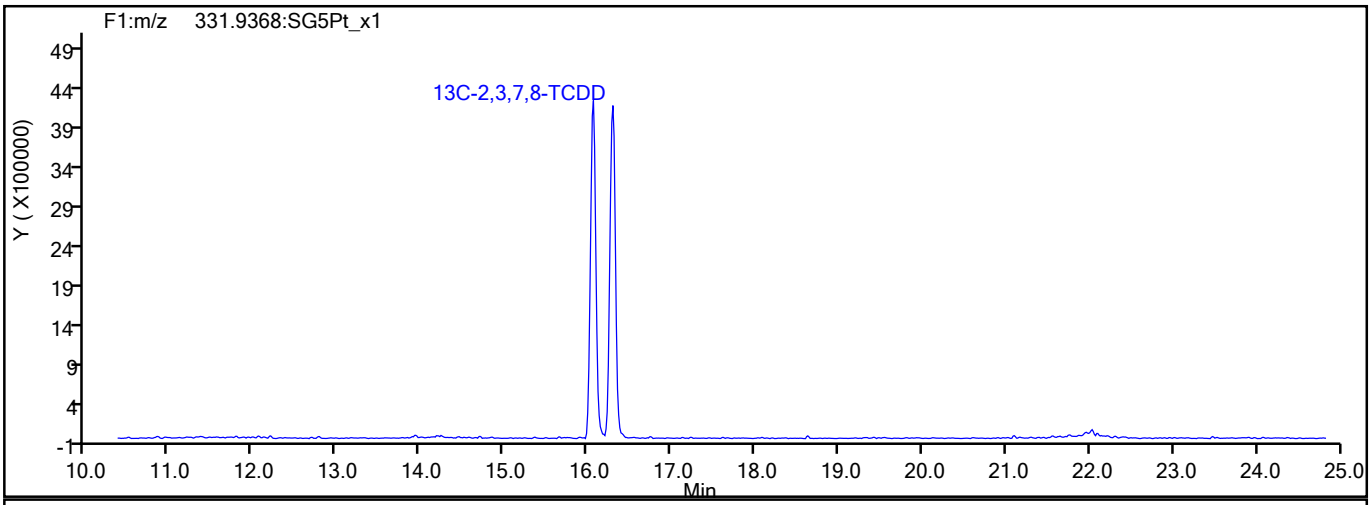

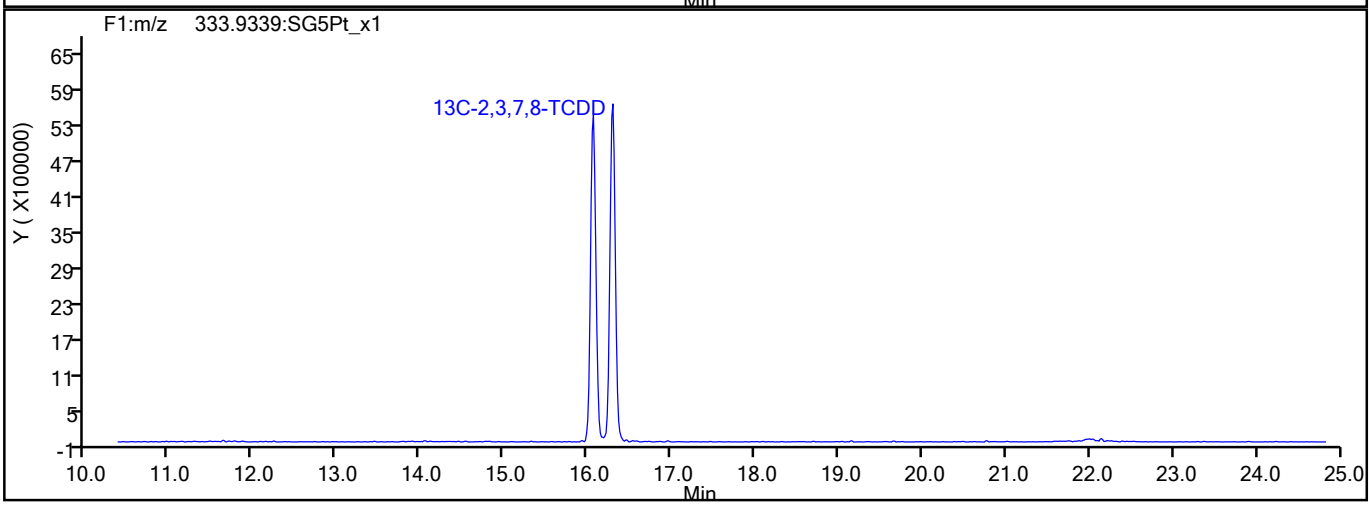

783147

Report Date: 26-Aug-2021 09:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

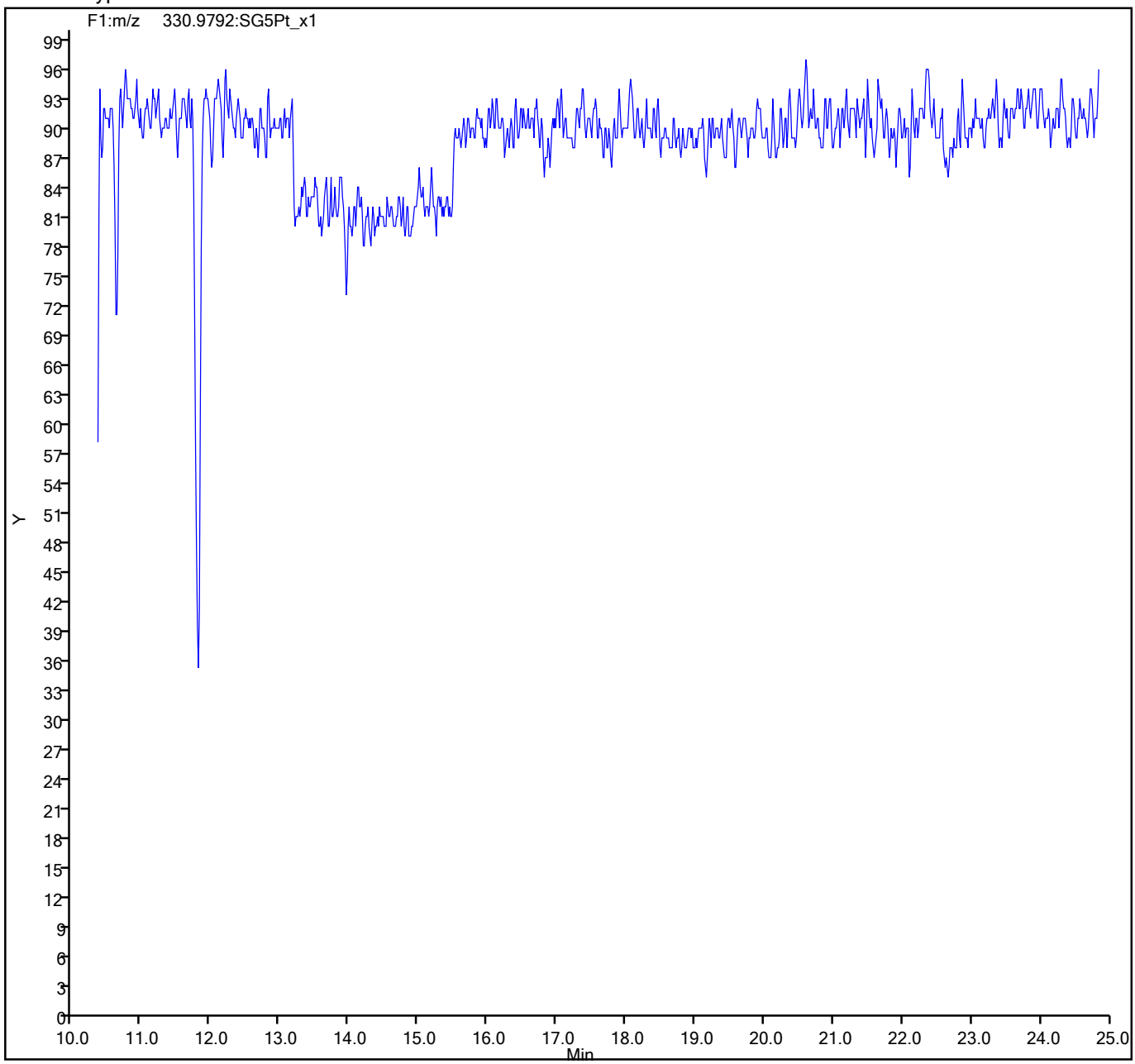

783148

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID: ICV 320-496688/9 Calibration Date: 06/08/2021 19:25

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 08jn21adfs1_11.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.086		40.2	40.0	101	70-130
2,3,7,8-TCDD	AveID	1.075	1.121		41.7	40.0	104	70-130
1,2,3,7,8-PeCDF	AveID	1.054	1.024		194	200	97	70-130
2,3,4,7,8-PeCDF	AveID	1.008	1.118		222	200	111	70-130
1,2,3,7,8-PeCDD	AveID	1.046	1.030		197	200	98	70-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.173		204	200	102	70-130
1,2,3,6,7,8-HxCDF	AveID	1.218	1.270		209	200	104	70-130
2,3,4,6,7,8-HxCDF	AveID	1.214	1.289		212	200	106	70-130
1,2,3,4,7,8-HxCDD	AveID	1.061	1.071		202	200	101	70-130
1,2,3,6,7,8-HxCDD	AveID	0.9933	1.055		212	200	106	70-130
1,2,3,7,8,9-HxCDD	AveID	1.109	1.001		180	200	90	70-130
1,2,3,7,8,9-HxCDF	AveID	1.240	1.220		197	200	98	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.505		209	200	104	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.076		205	200	102	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.299		198	200	99	70-130
OCDD	AveID	1.062	1.116		420	400	105	70-130
OCDF	AveID	1.317	1.367		415	400	104	70-130
13C-2,3,7,8-TCDF	Ave	1.346	1.311		97.4	100	97	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9331		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.095		96.0	100	96	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.137		101	100	101	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7038		98.2	100	98	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.080		112	100	112	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.244		116	100	116	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.134		109	100	109	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8428		111	100	111	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9479		110	100	110	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9309		95.7	100	96	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7732		105	100	105	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7344		109	100	109	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7385		108	100	108	77-129
13C-OCDD	Ave	0.5446	0.5501		202	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.000		39.7	40.0	99	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.559	1125768	0.79	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.623	1476391	0.81	1.3459	97.4	97.4	0.3116	0.3116	97.44	
2,3,7,8-TCDF	19.648	641186	0.78	1.0802	40.2	40.2	0.0827	0.0827	101	
A Non-2,3,7,8-sub-TCDF	19.213	10768	0.77	1.0802	0.7248	0.6752	0.0827	0.3523		RQ
S Total TCDF					40.9	40.9	0.0827	0.0827		RQ
D 13C-2,3,7,8-TCDD	20.928	1050504	0.81	0.9317	100.2	100.2	0.3032	0.3032	100	
$ 37Cl4-2,3,7,8-TCDD	20.946	450121		1.0083	39.7	39.7	0.0185	0.0185	99.14	
2,3,7,8-TCDD	20.946	471118	0.76	1.0753	41.7	41.7	0.1073	0.1073	104	
A Non-2,3,7,8-sub-TCDD	20.025	9415	0.75	1.0753	0.8334	0.8334	0.1073	0.8334		
S Total TCDD					42.5	42.5	0.1073	0.1073		
D 13C-1,2,3,7,8-PeCDF	26.596	1232285	1.59	1.1405	96.0	96.0	0.3457	0.3457	95.98	
1,2,3,7,8-PeCDF	26.612	2524406	1.56	1.0543	194.3	194.3	0.8579	0.8579	97.16	
D 13C-2,3,4,7,8-PeCDF	28.053	1280265	1.57	1.1253	101.1	101.1	0.3504	0.3504	101	
2,3,4,7,8-PeCDF	28.079	2861521	1.56	1.0079	221.8	221.8	0.9445	0.9445	111	
A F1 PeCDFs	24.098						0.0158	0.0158		
A Non-2,3,7,8-sub-PeCDF	27.473	63446	1.59	1.0311	4.898	4.898	0.8996	4.898		
S Total PeCDF					421.0	421.0	0.9012	0.9012		
D 13C-1,2,3,7,8-PeCDD	28.846	792316	1.60	0.7165	98.2	98.2	0.1154	0.1154	98.23	
1,2,3,7,8-PeCDD	28.871	1631677	1.56	1.0465	196.8	196.8	0.1550	0.1550	98.39	
A Non-2,3,7,8-sub-PeCDD	27.656						0.1550	0.1550		n
S Total PeCDD					196.8	196.8	0.1550	0.1550		
D 13C-1,2,3,4,7,8-HxCDF	34.420	999392	0.53	0.9648	111.9	111.9	0.3215	0.3215	112	
1,2,3,4,7,8-HxCDF	34.437	2343900	1.24	1.1474	204.4	204.4	0.8372	0.8372	102	
D 13C-1,2,3,6,7,8-HxCDF	34.597	1151145	0.54	1.0708	116.1	116.1	0.2896	0.2896	116	
1,2,3,6,7,8-HxCDF	34.614	2923094	1.25	1.2178	208.5	208.5	0.6918	0.6918	104	
D 13C-2,3,4,6,7,8-HxCDF	35.473	1049318	0.52	1.0413	108.9	108.9	0.2978	0.2978	109	
2,3,4,6,7,8-HxCDF	35.490	2704850	1.25	1.2145	212.3	212.3	0.6697	0.6697	106	
D 13C-1,2,3,7,8,9-HxCDF	36.409	861729	0.52	0.9731	95.7	95.7	0.3187	0.3187	95.67	
1,2,3,7,8,9-HxCDF	36.425	2103282	1.26	1.2401	196.8	196.8	0.7295	0.7295	98.41	
A Non-2,3,7,8-sub-HxCDF	34.470						0.7275	0.7275		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					822.0	822.0	0.7320	0.7320		
* 13C-1,2,3,7,8,9-HxCDD	36.215	925657	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.709	780111	1.25	0.7587	111.1	111.1	0.1965	0.1965	111	
1,2,3,4,7,8-HxCDD	35.726	1671580	1.25	1.0608	202.0	202.0	0.2912	0.2912	101	
D 13C-1,2,3,6,7,8-HxCDD	35.827	877428	1.29	0.8593	110.3	110.3	0.1735	0.1735	110	
1,2,3,6,7,8-HxCDD	35.844	1852033	1.25	0.9933	212.5	212.5	0.2936	0.2936	106	
1,2,3,7,8,9-HxCDD	36.232	1658680	1.25	1.1094	180.4	180.4	0.2704	0.2704	90.20	
A Non-2,3,7,8-sub-HxCDD	34.896						0.2845	0.2845		
S Total HxCDD					594.9	594.9	0.2851	0.2851		
D 13C-1,2,3,4,6,7,8-HpCDF	38.325	715749	0.46	0.7359	105.1	105.1	0.4232	0.4232	105	
1,2,3,4,6,7,8-HpCDF	38.334	2154882	1.05	1.4421	208.8	208.8	0.7056	0.7056	104	
D 13C-1,2,3,4,7,8,9-HpCDF	39.615	683594	0.46	0.6854	107.8	107.8	0.4545	0.4545	108	
1,2,3,4,7,8,9-HpCDF	39.623	1775948	1.06	1.3092	198.4	198.4	0.7773	0.7773	99.22	
A Non-2,3,7,8-sub-HpCDF	38.954						0.7397	0.7397		
S Total HpCDF					407.2	407.2	0.7415	0.7415		
D 13C-1,2,3,4,6,7,8-HpCDD	39.311	679765	1.07	0.6745	108.9	108.9	0.3101	0.3101	109	
1,2,3,4,6,7,8-HpCDD	39.320	1462615	1.05	1.0503	204.9	204.9	0.4465	0.4465	102	
A Non-2,3,7,8-sub-HpCDD	38.962						0.4465	0.4465		n
S Total HpCDD					204.9	204.9	0.4465	0.4465		
D 13C-OCDD	41.801	1018443	0.90	0.5446	202.0	202.0	0.2655	0.2655	101	
OCDF	41.885	2784055	0.91	1.3168	415.2	415.2	0.4728	0.4728	104	
OCDD	41.809	2272994	0.89	1.0620	420.3	420.3	0.4613	0.4613	105	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.559	20.544	1		497786	76231	115	287	663		
333.9338	20.550	20.544	0		627982	95455	79	197	1208	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.623	19.630	0	0.954	658944	105750	176	440	601		
317.9389	19.623	19.630	0	0.954	817447	135001	112	280	1205	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.648	19.673	-1	1.001	281905	45248	31	77	1460		
305.8987	19.648	19.673	-1	1.001	359281	56056	55	137	1019	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.489	19.213	-43	0.942	2444	489	31	77	16		
305.8987	18.489	19.213	-43	0.942	3965	647	55	137	12	0.62(0.65-0.89)	
	Empc Correction				3174	635	55	137	12		
303.9016	18.961	19.213	-15	0.966	2103	355	31	77	11		
305.8987	18.961	19.213	-15	0.966	3047	540	55	137	10	0.69(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.928	20.918	1	1.018	469892	68601	115	287	597		
333.9338	20.920	20.918	0	1.018	580612	84734	79	197	1073	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.946	20.939	0	1.019	450121	64795	13	32	4984		
2,3,7,8-TCDD											
319.8965	20.946	20.952	0	1.001	203710	30841	43	107	717		
321.8936	20.946	20.952	0	1.001	267408	39251	28	70	1402	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	20.748	20.025	43	0.991	4027	748	43	107	17		
321.8936	20.748	20.025	43	0.991	5388	912	28	70	33	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.596	26.552	3	1.294	756622	134257	176	440	763		
353.8970	26.596	26.552	3	1.294	475663	85437	95	237	899	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.612	26.578	2	1.001	1538811	266495	482	1205	553		
341.8567	26.612	26.578	2	1.001	985595	170105	313	782	543	1.56(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.053	28.002	3	1.365	781677	129402	176	440	735		
353.8970	28.062	28.002	4	1.365	498588	79335	95	237	835	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.079	28.028	3	1.001	1744490	280566	482	1205	582		
341.8567	28.079	28.028	3	1.001	1117031	182233	313	782	582	1.56(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.098						3	7			
341.8567	24.098						11	27			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.186	27.473	-17	1.022	38961	6595	482	1205	14		
341.8567	27.177	27.473	-18	1.022	24485	4217	313	782	13	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.846	28.795	3	1.403	487930	72898	31	77	2352		
369.8919	28.846	28.795	3	1.403	304386	45466	26	65	1749	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.871	28.820	3	1.001	995242	153111	50	125	3062		
357.8516	28.871	28.820	3	1.001	636435	96130	27	67	3560	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.214	27.656	33	0.978	1514	293	50	125	6		
357.8516	28.197	27.656	32	0.978	953	151	27	67	6	1.59(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.420	34.370	3	0.950	347982	68430	100	250	684		
385.8610	34.411	34.370	2	0.950	651410	129057	179	447	721	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.437	34.404	2	1.000	1299118	260435	435	1087	599		
375.8178	34.437	34.404	2	1.000	1044782	207176	324	810	639	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.597	34.555	2	0.955	402116	75630	100	250	756		
385.8610	34.597	34.555	2	0.955	749029	149555	179	447	836	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.614	34.572	2	1.000	1625084	318250	435	1087	732		
375.8178	34.614	34.572	2	1.000	1298010	254878	324	810	787	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.473	35.432	2	0.980	359196	80141	100	250	801		
385.8610	35.473	35.432	2	0.980	690122	153108	179	447	855	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.490	35.449	2	1.000	1504442	338765	435	1087	779		
375.8178	35.490	35.449	2	1.000	1200408	271192	324	810	837	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.409	36.376	2	1.005	295983	71192	100	250	712		
385.8610	36.409	36.376	2	1.005	565746	138504	179	447	774	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.425	36.393	2	1.000	1172455	286668	435	1087	659		
375.8178	36.425	36.393	2	1.000	930827	227290	324	810	702	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						435	1087			
375.8178	34.470						324	810			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.215	36.182	2		517474	125327	80	200	1567		
403.8529	36.215	36.182	2		408183	99401	54	135	1841	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.709	35.668	2	0.986	434094	107490	80	200	1344		
403.8529	35.709	35.668	2	0.986	346017	85806	54	135	1589	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.726	35.685	2	1.000	928783	231750	132	330	1756		
391.8127	35.726	35.685	2	1.000	742797	185332	107	267	1732	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.827	35.794	2	0.989	493784	113946	80	200	1424		
403.8529	35.827	35.794	2	0.989	383644	90754	54	135	1681	1.29(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	35.844	35.811	2	1.000	1030480	241468	132	330	1829		
391.8127	35.844	35.811	2	1.000	821553	192627	107	267	1800	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.232	36.198	2	1.015	920944	222717	132	330	1687		
391.8127	36.223	36.198	1	1.014	737736	175856	107	267	1644	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.896						132	330			
391.8127	34.896						107	267			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.325	38.292	2	1.058	225843	65327	102	255	640		
419.8220	38.325	38.292	2	1.058	489906	143703	178	445	807	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.334	38.309	1	1.000	1104308	315033	437	1092	721		
409.7788	38.334	38.309	1	1.000	1050574	298985	414	1035	722	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.615	39.591	1	1.094	215253	65848	102	255	646		
419.8220	39.615	39.591	1	1.094	468341	143162	178	445	804	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.623	39.598	1	1.000	914515	283964	437	1092	650		
409.7788	39.623	39.598	1	1.000	861433	268143	414	1035	648	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						437	1092			
409.7788	38.954						414	1035			

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.311	39.279	2	1.086	351100	106957	105	262	1019		
437.8140	39.311	39.279	2	1.086	328665	103097	83	207	1242	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.320	39.295	1	1.000	749316	235728	209	522	1128		
425.7737	39.320	39.295	1	1.000	713299	221333	185	462	1196	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.662	38.962	-18	0.983	5341	1580	209	522	8		
425.7737	38.662	38.962	-18	0.983	5423	1624	185	462	9	0.98(0.88-1.20)	
13C-OCDD											
469.7780	41.801	41.778	1	1.154	483015	136908	66	165	2074		
471.7750	41.801	41.778	1	1.154	535428	149653	64	160	2338	0.90(0.76-1.02)	
OCDF											
441.7428	41.885	41.862	1	1.002	1324086	386680	165	412	2344		
443.7399	41.885	41.862	1	1.002	1459969	425131	192	480	2214	0.91(0.76-1.02)	
OCDD											
457.7377	41.809	41.786	1	1.000	1072812	307543	147	367	2092		
459.7348	41.809	41.786	1	1.000	1200182	343135	134	335	2561	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1476391	240751

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1476391	240751

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.489	2444	489	3965	647	0.4019	0.62	RQ
18.489	2444	489	3174	635	0.3523		Empc Correction
18.961	2103	355	3047	540	0.3229	0.69	n
Signal Totals:							
	4547	844	6221	1175			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11559	2031				0.65	RQ
	10768	2019					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7248 = (11559 * 100.000) / (1476391 * 1.080)
Empc Amount: 0.6752 = (10768 * 100.000) / (1476391 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDD, RT: 20.025

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	1050504	153335

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	1050504	153335

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
20.748	4027	748	5388	912	0.8334	0.75	
Signal Totals:							
	4027	748	5388	912			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9415	1660				0.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8334 = (9415 * 100.000) / (1050504 * 1.075)

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1232285	219694
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1280265	208737

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1256275	214215

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.186	38961	6595	24485	4217	4.90	1.59	
Signal Totals:							
	38961	6595	24485	4217			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63446	10812				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.898 = (63446 * 100.000) / (1256275 * 1.031)

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

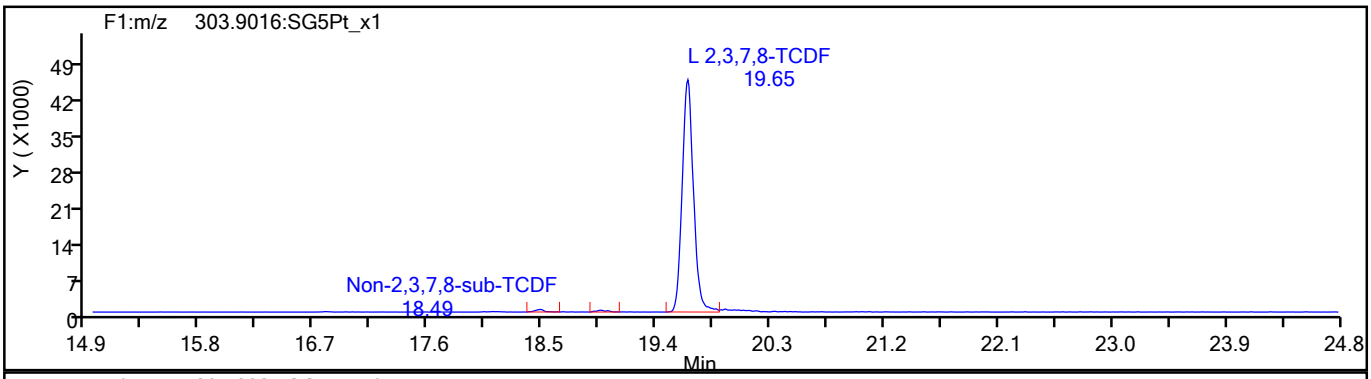

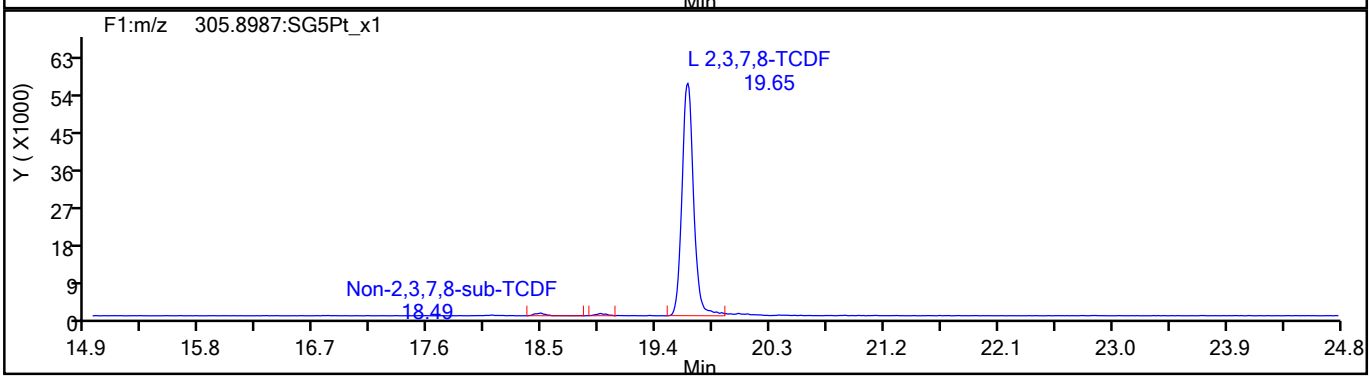

TCDF Standards

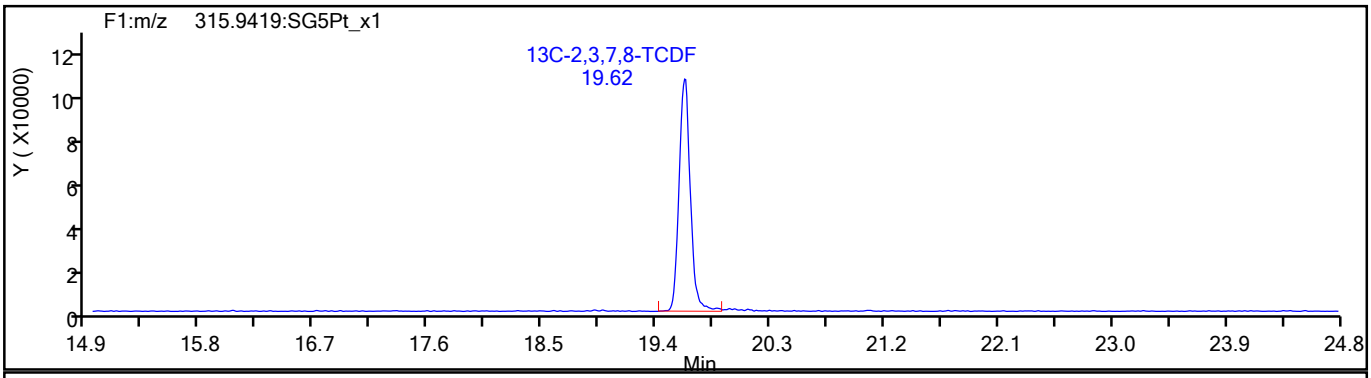

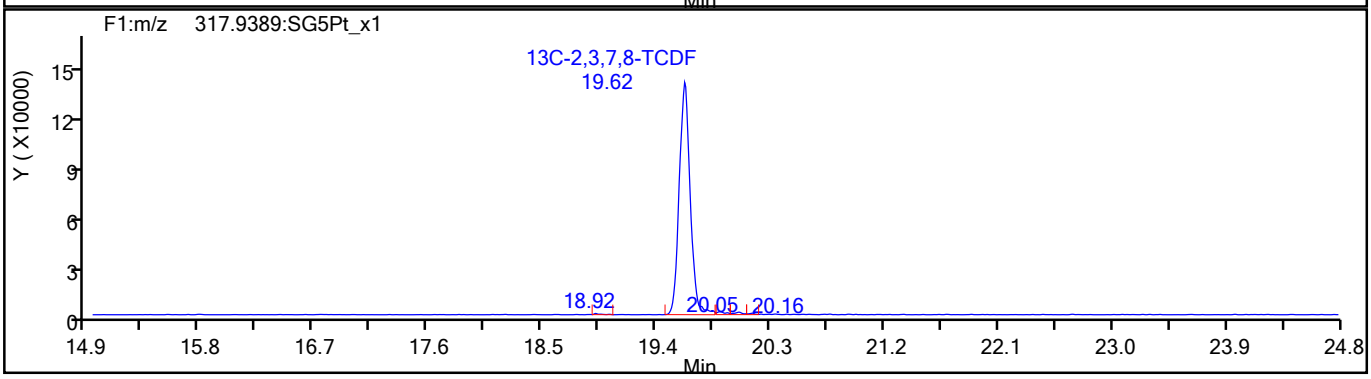

783159

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

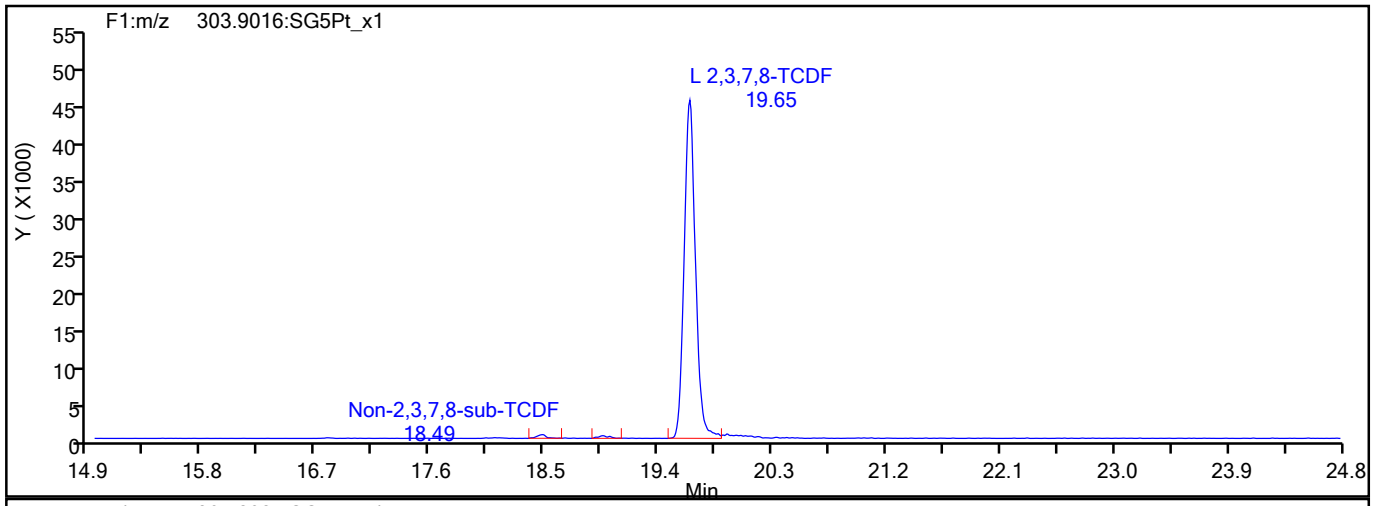

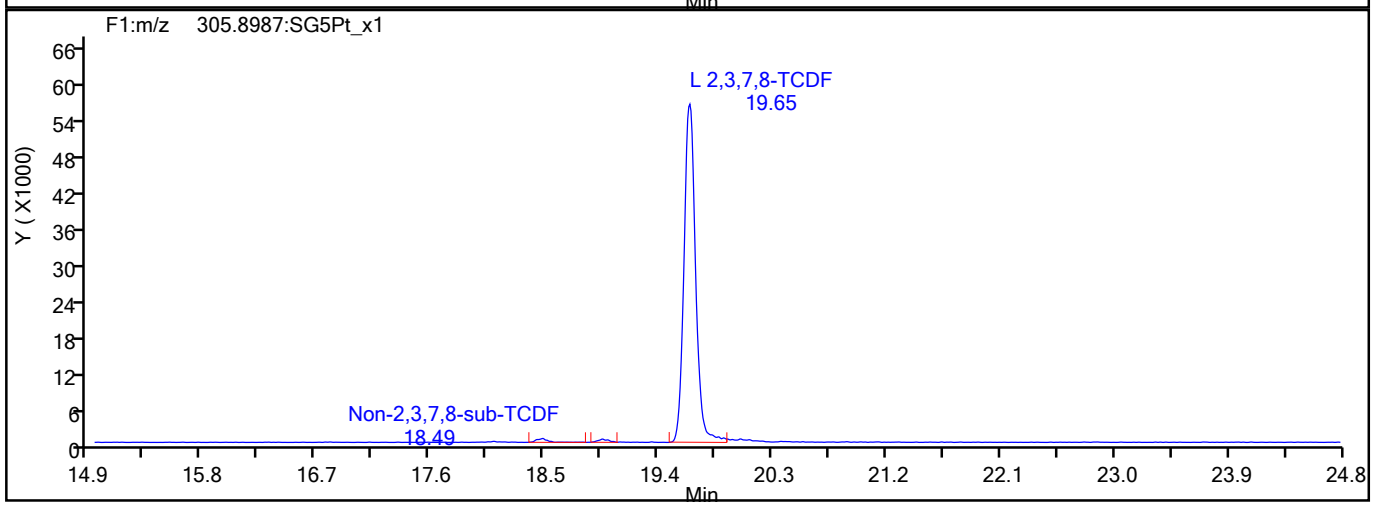

TCDF Interference Mass

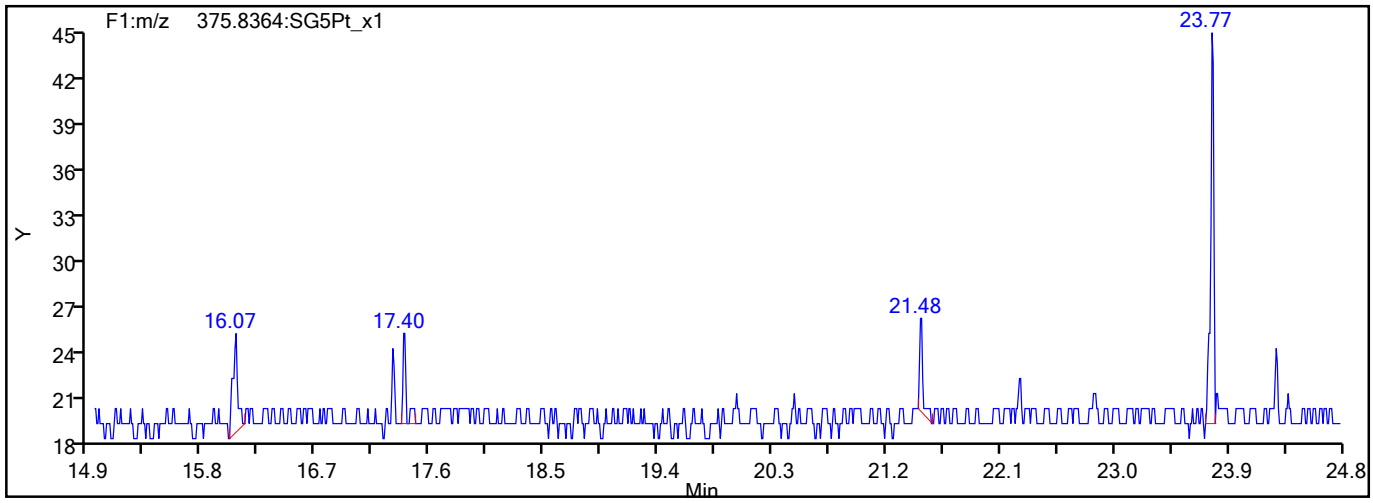

783160

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

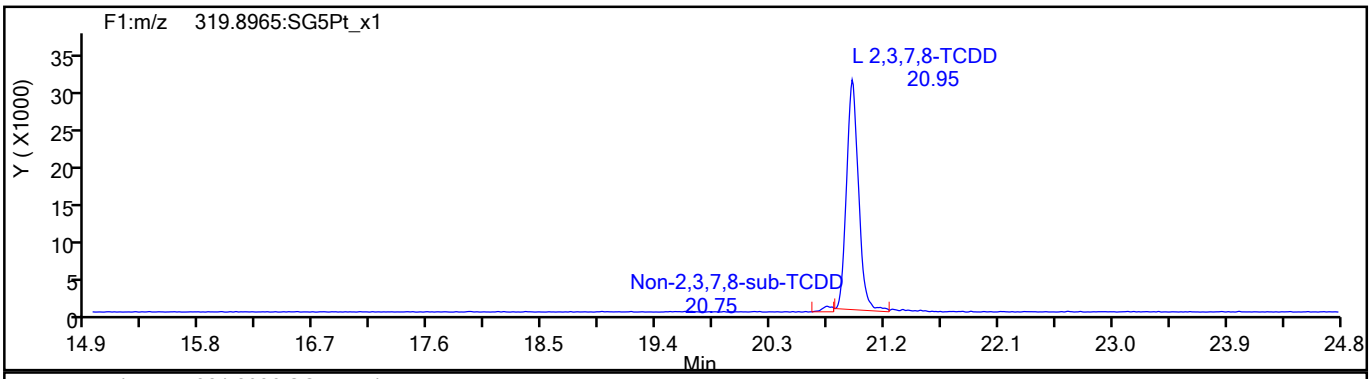

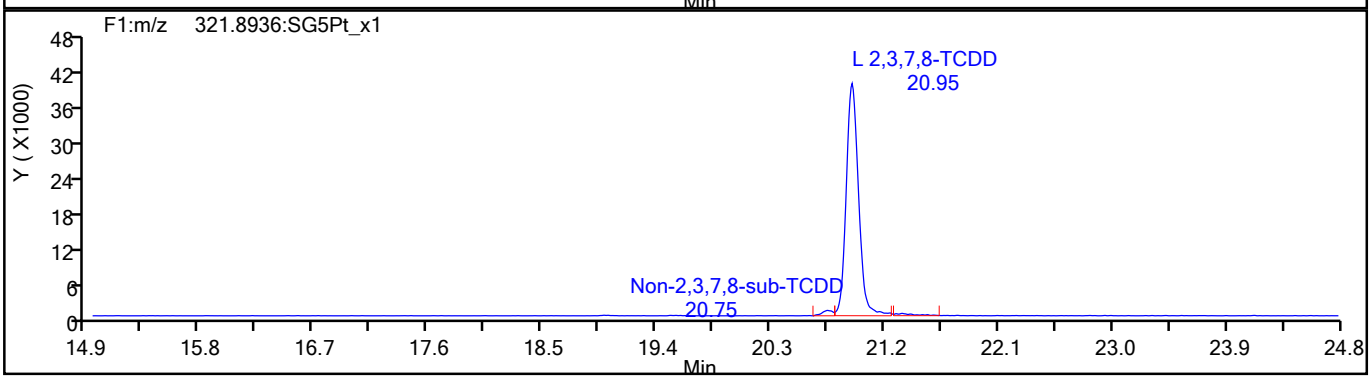

TCDD Standards

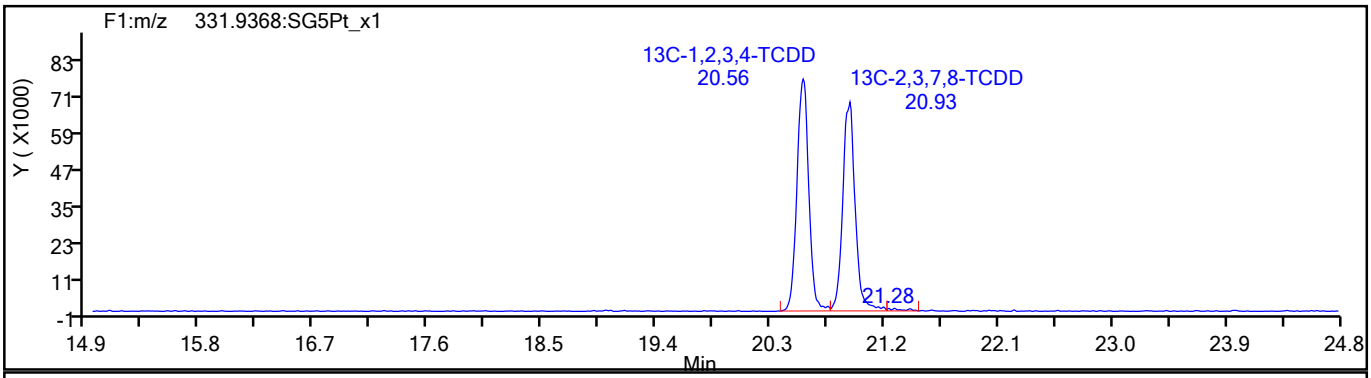

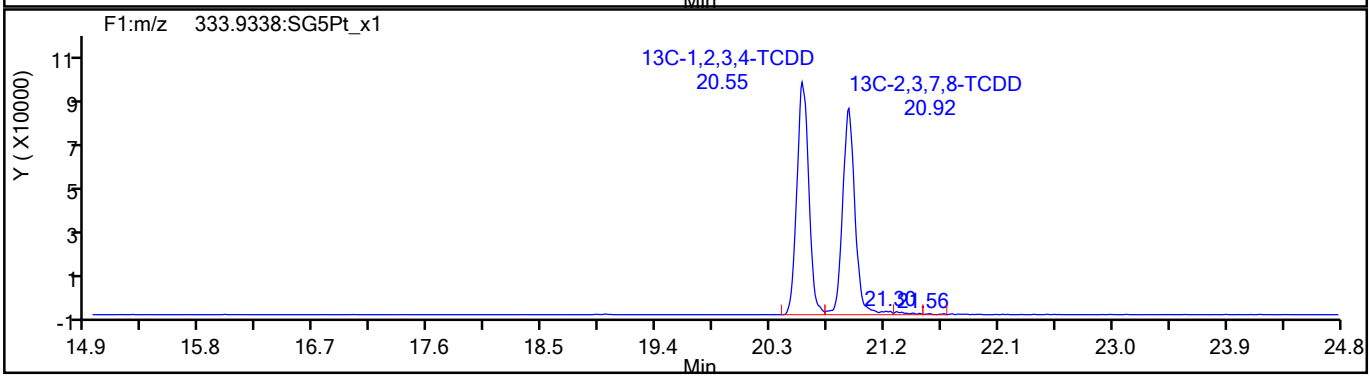

783161

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

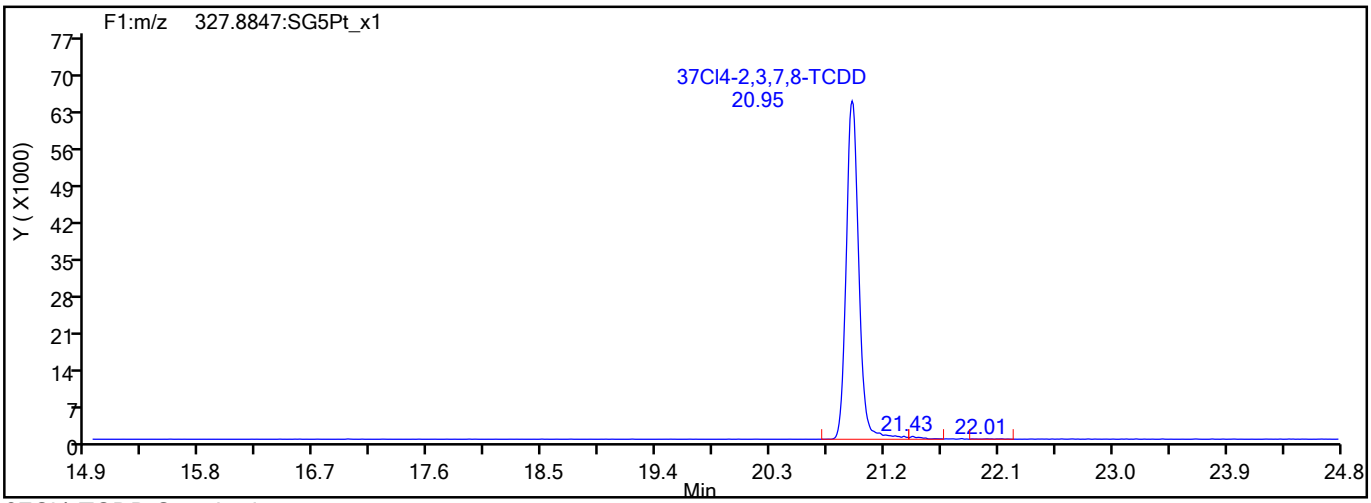

37Cl4-TCDD Standards

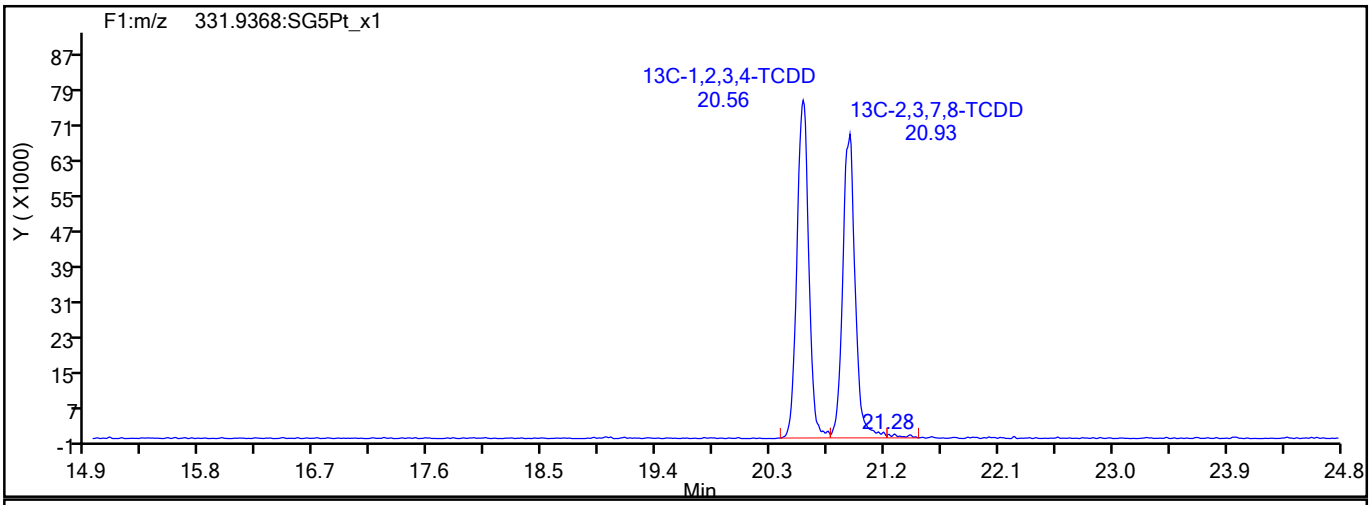

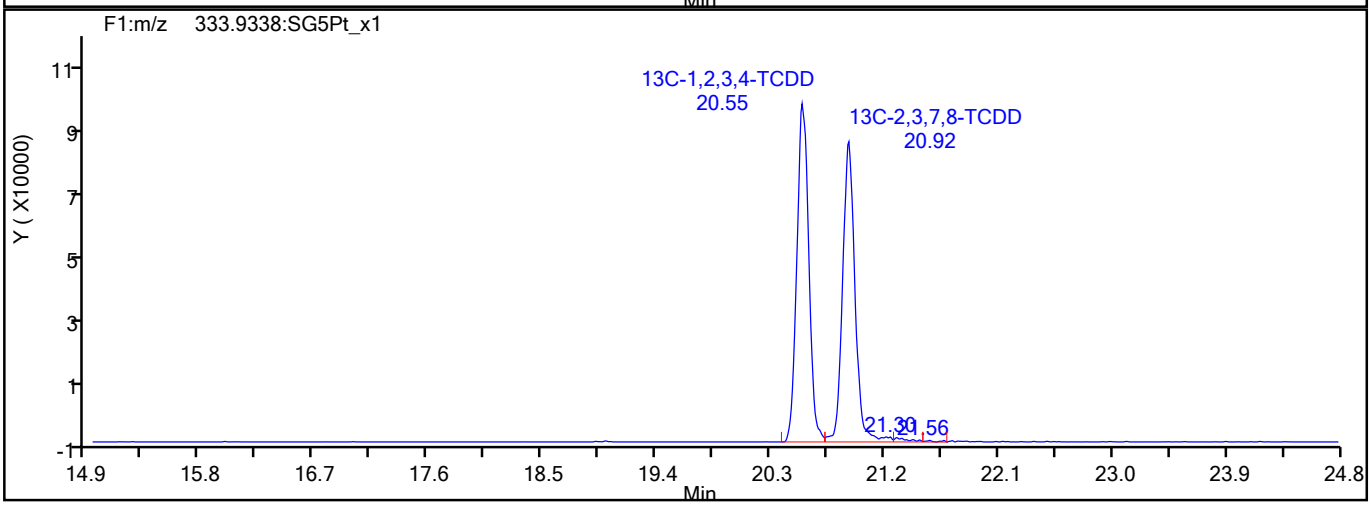

783162

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

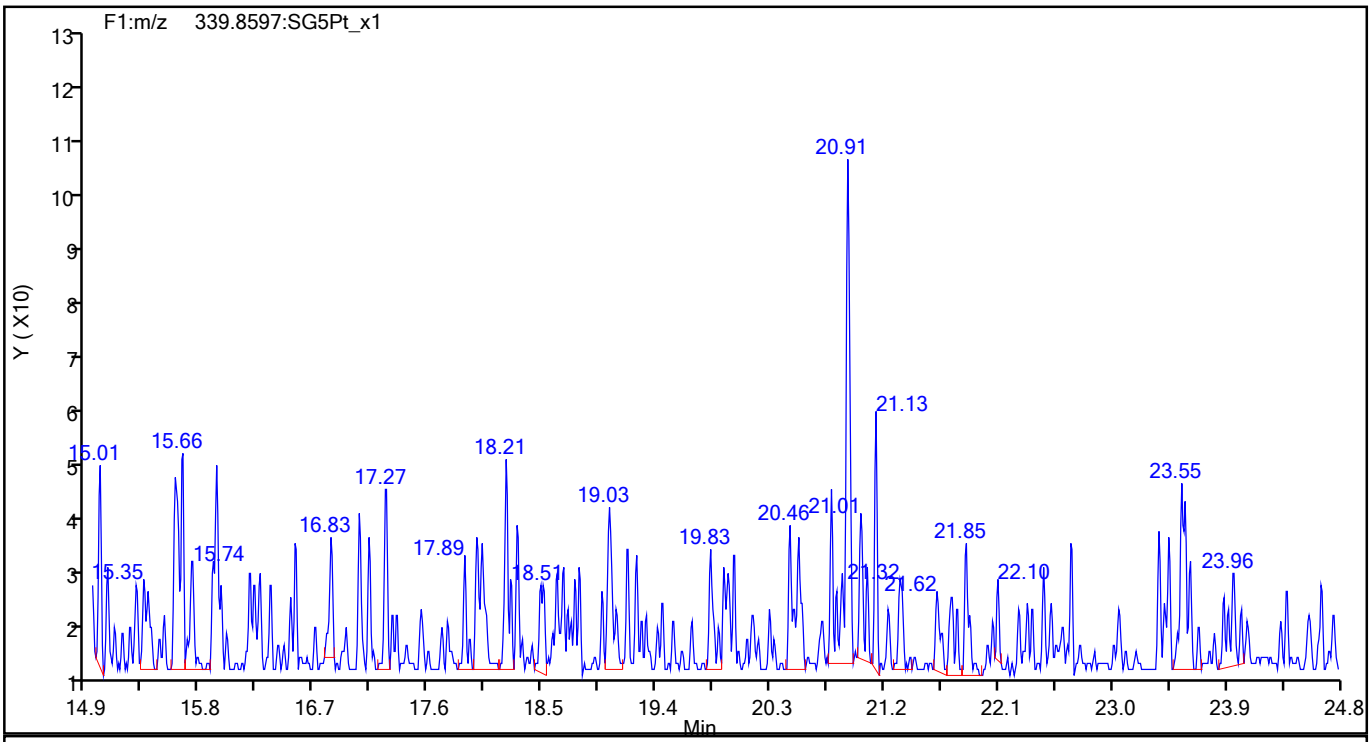

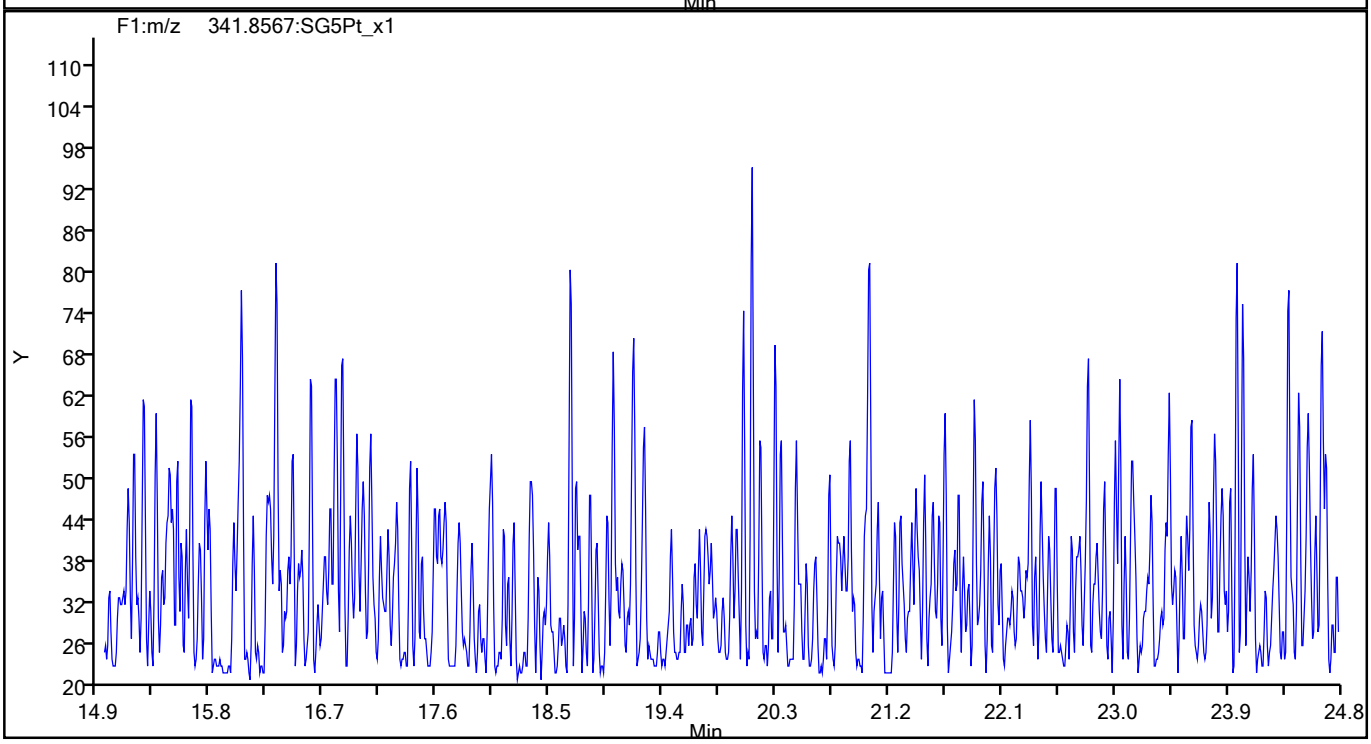

783163

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

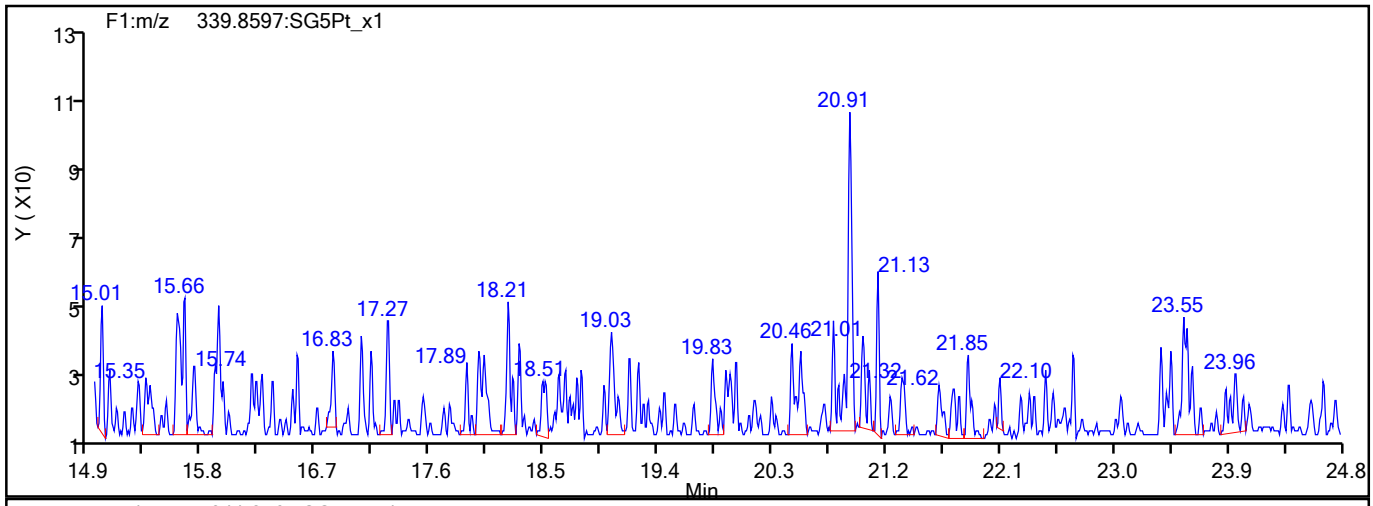

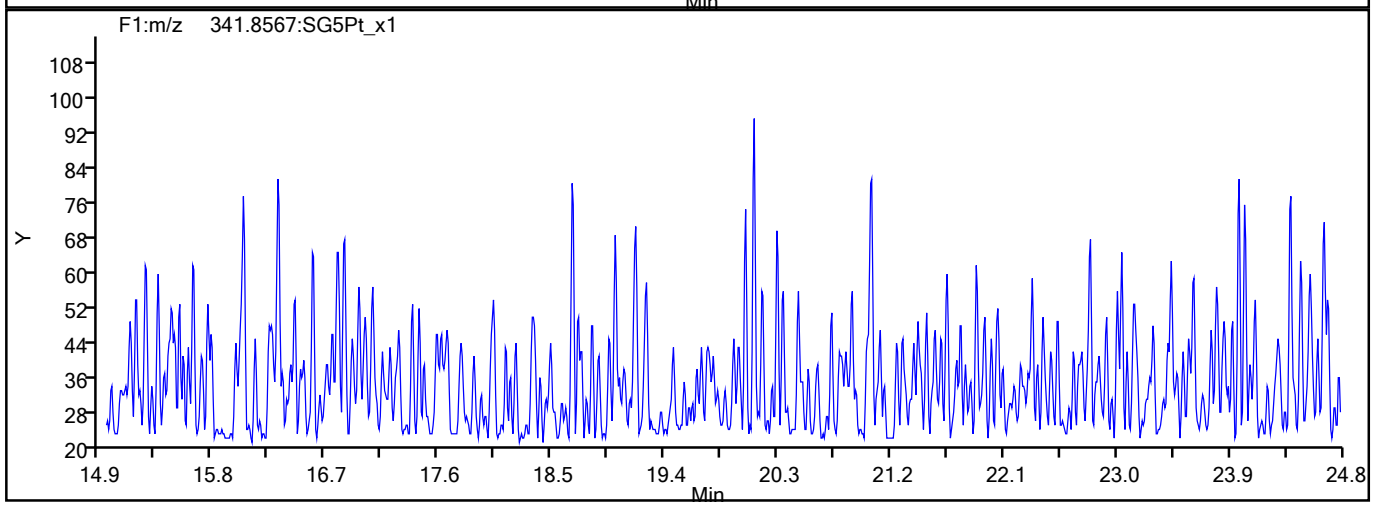

F1 PeCDFs Interference Mass

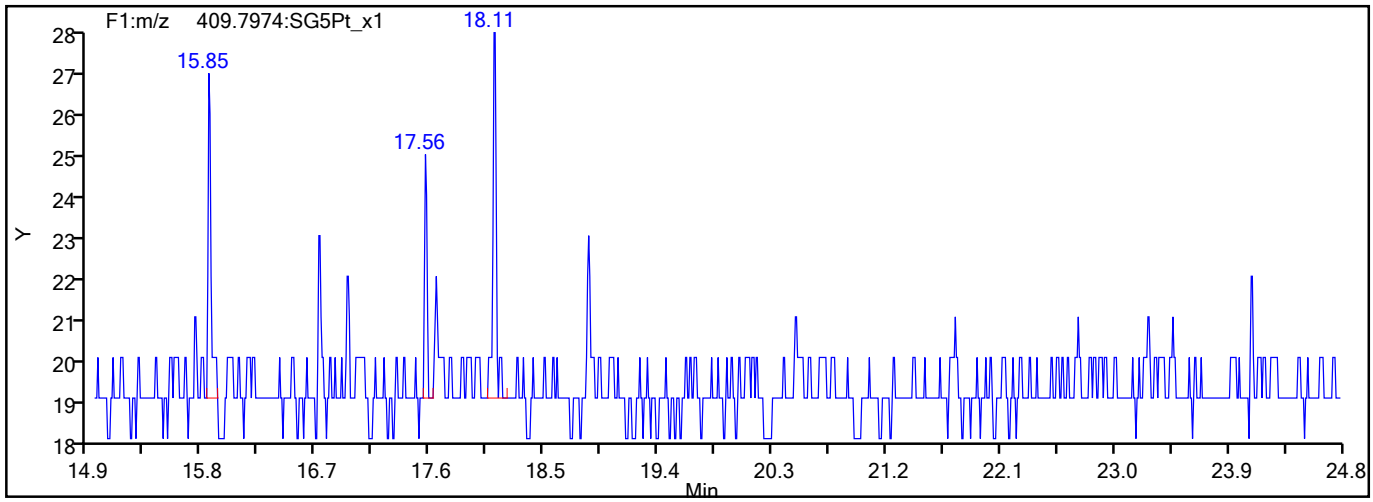

783164

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

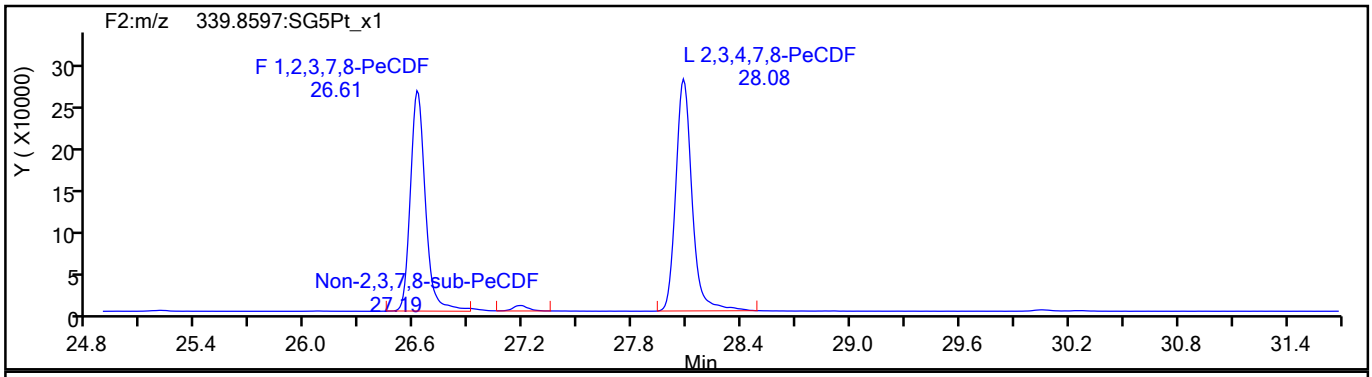

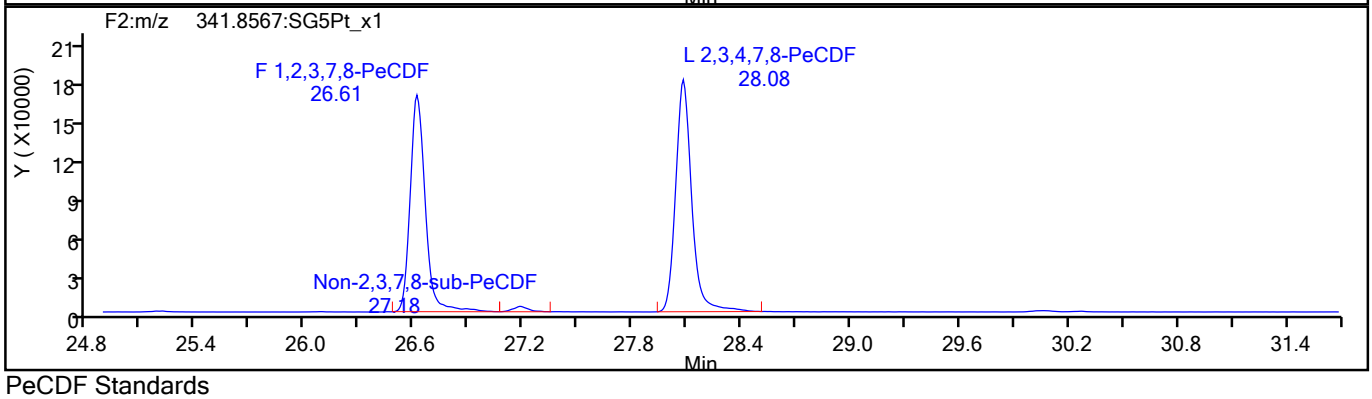

PeCDF Standards

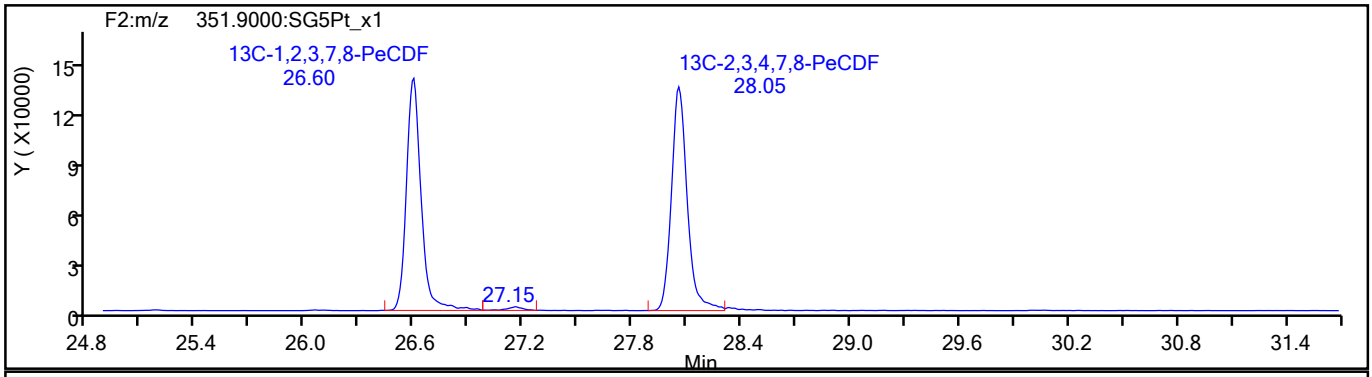

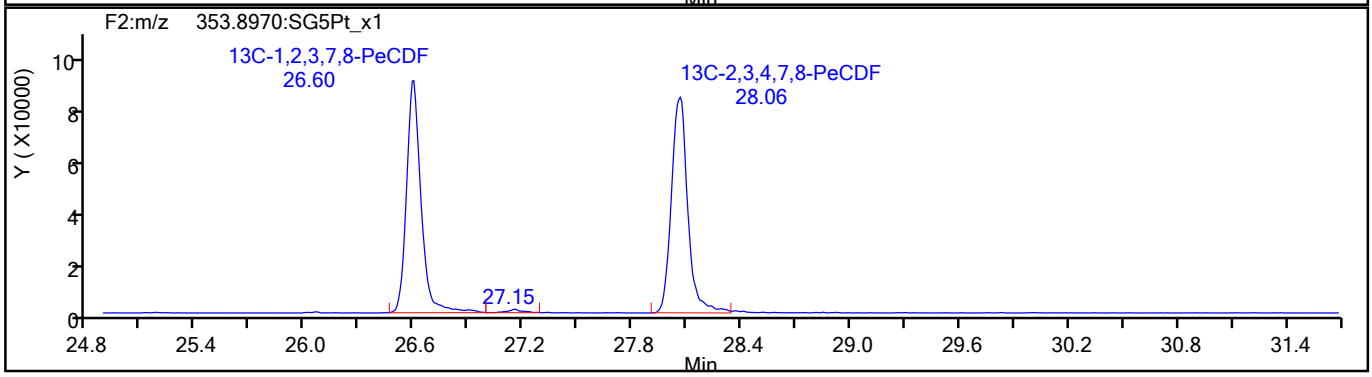

783165

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

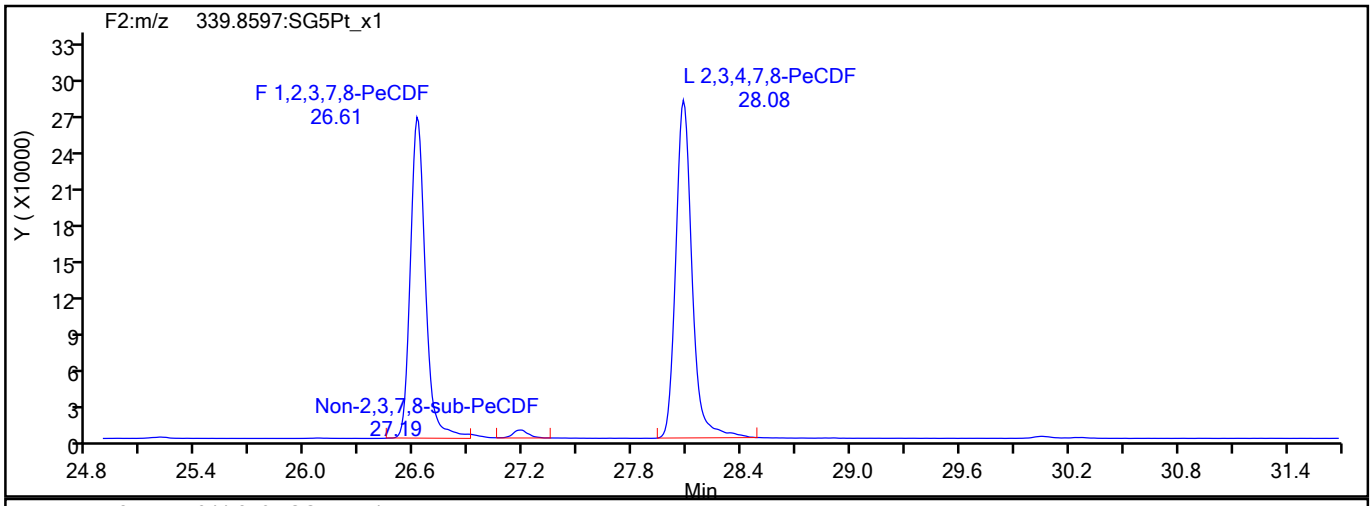

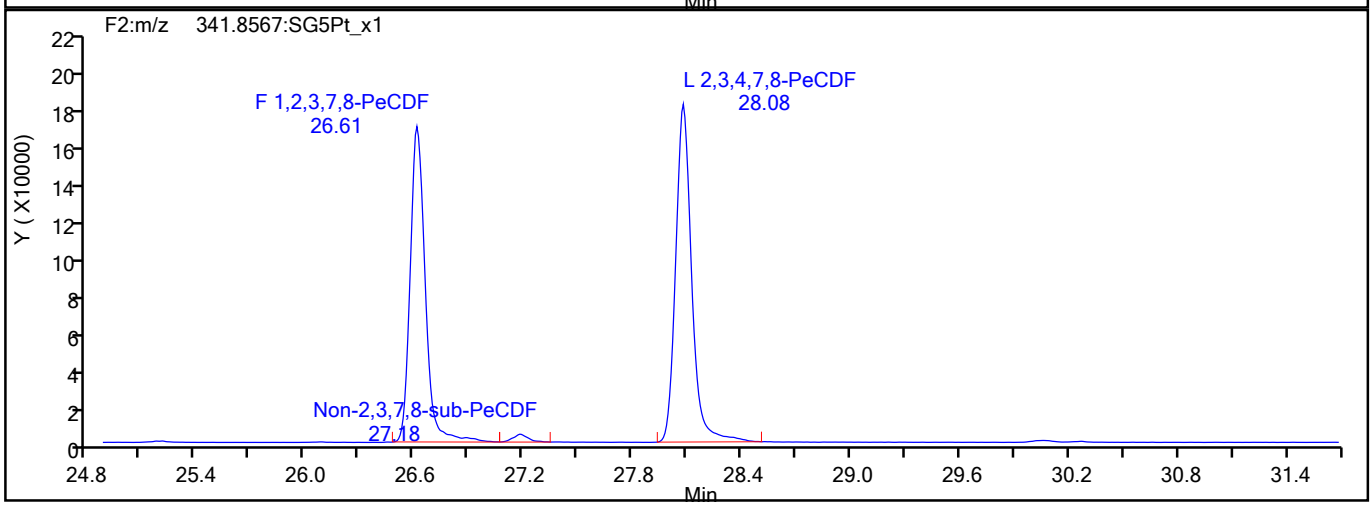

PeCDF Interference Mass

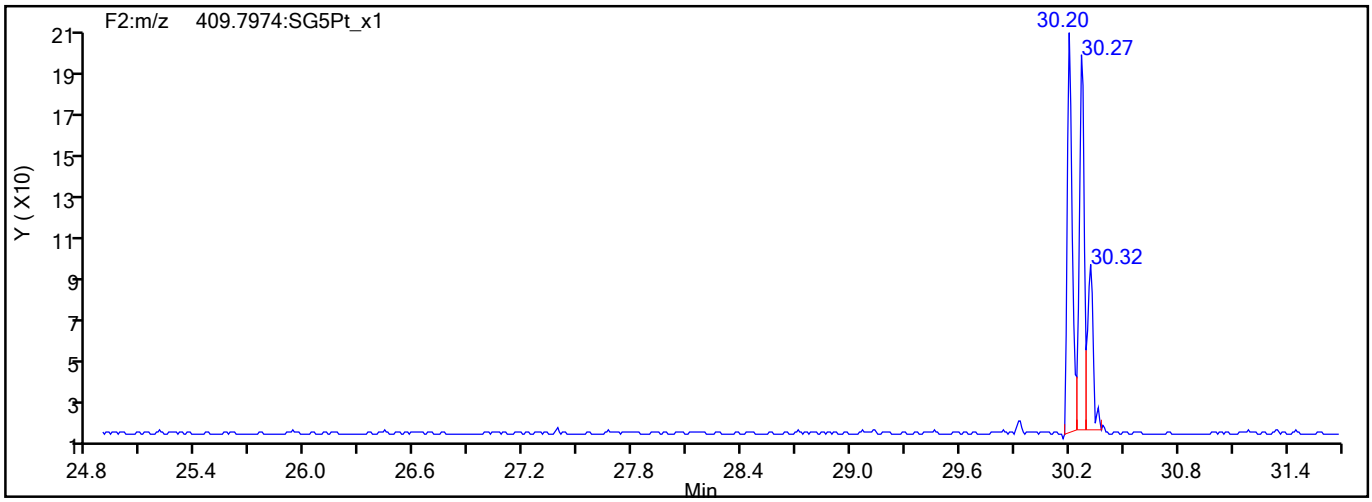

783166

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDD

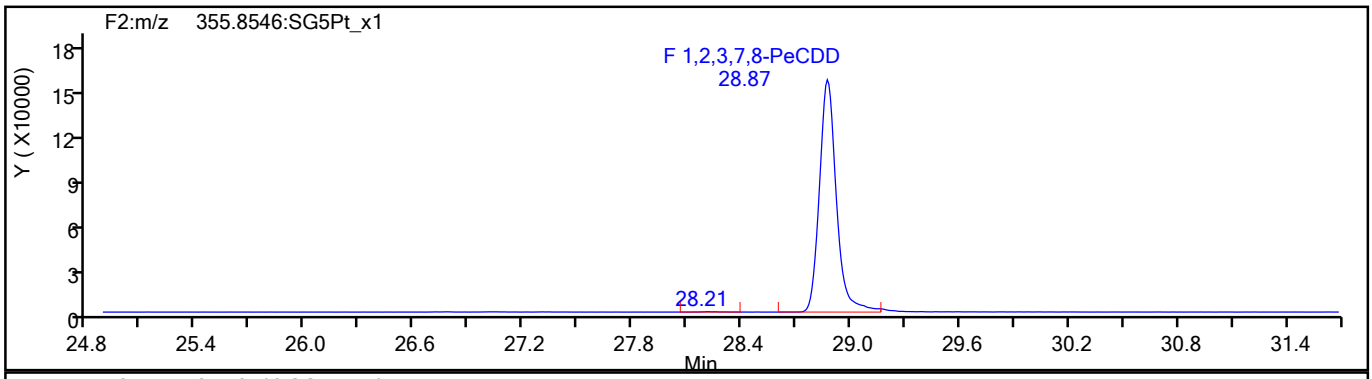

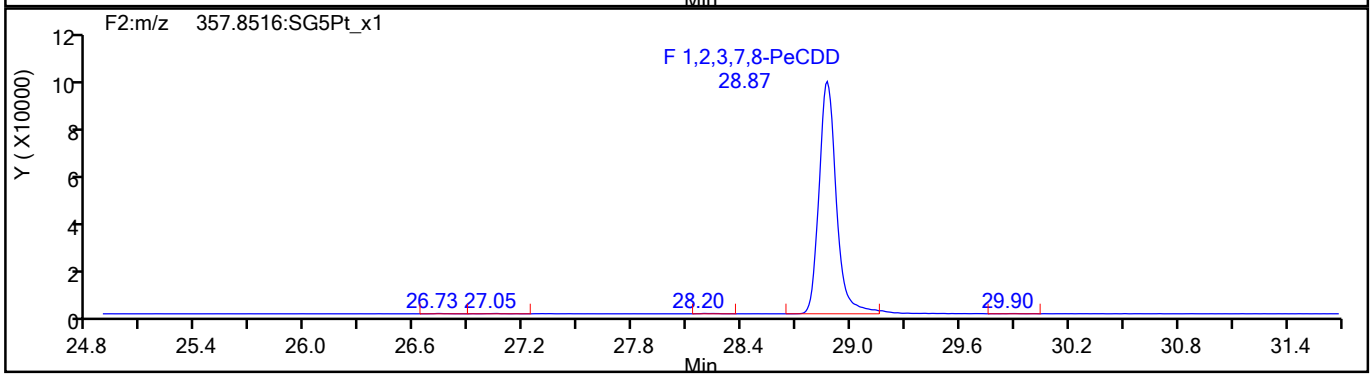

PeCDD Standards

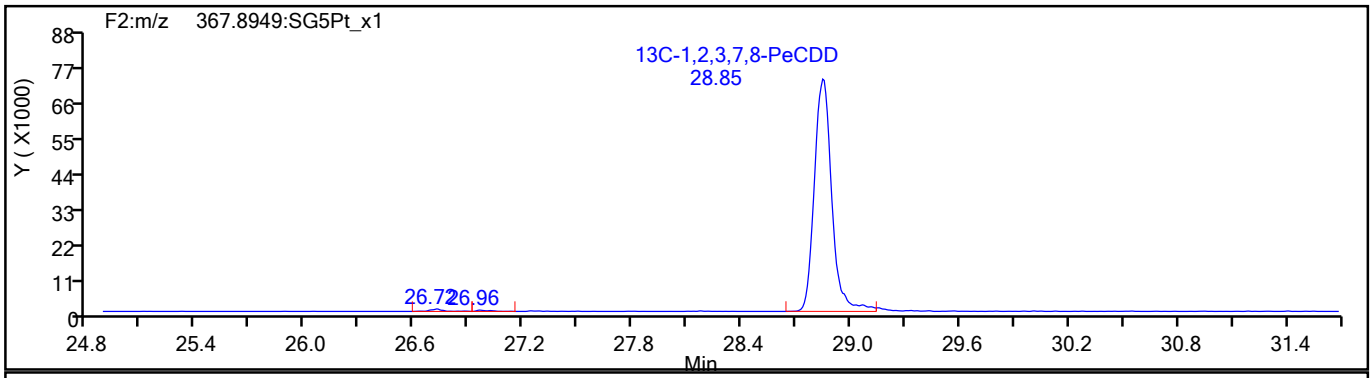

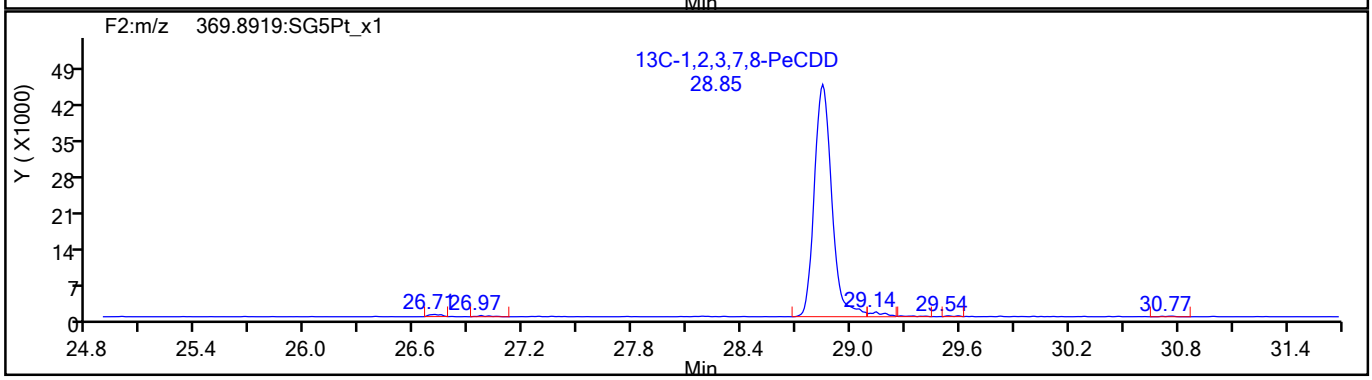

783167

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

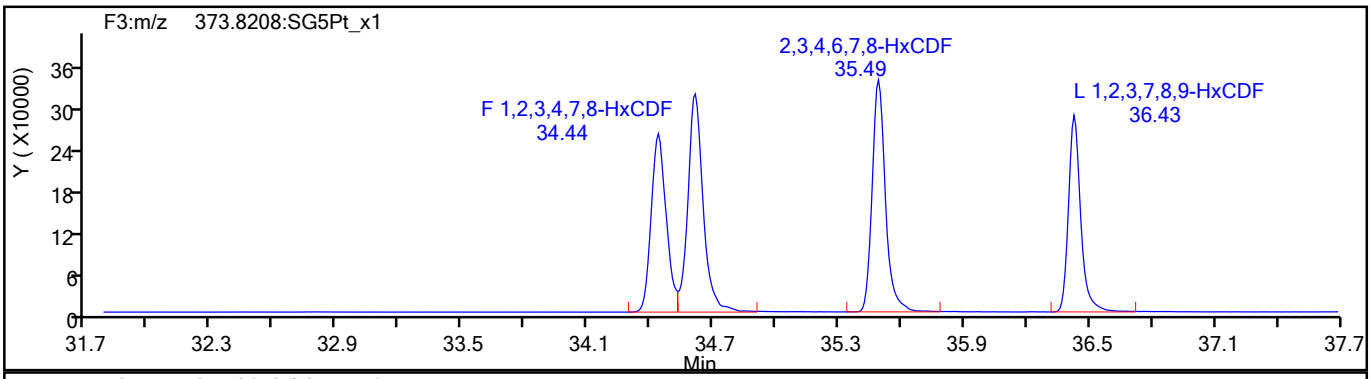

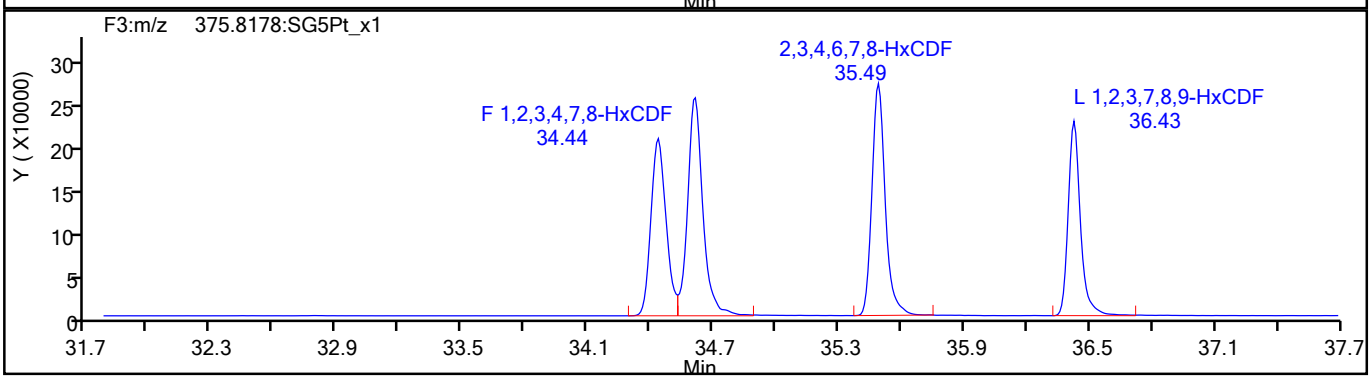

HxCDF Standards

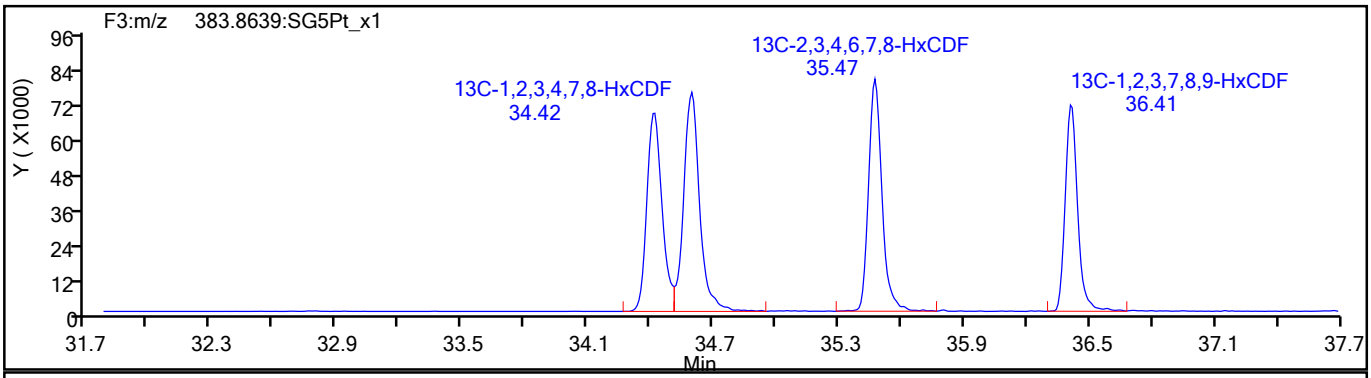

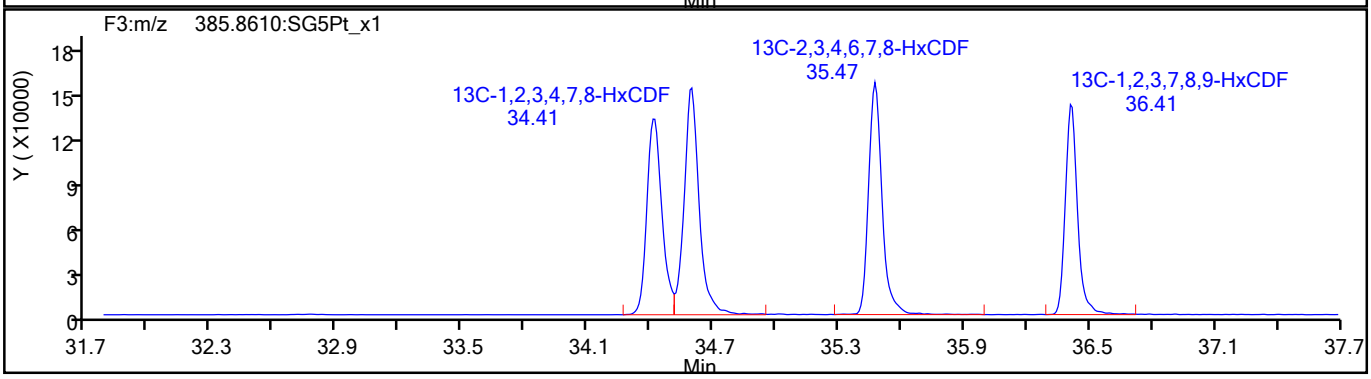

783168

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

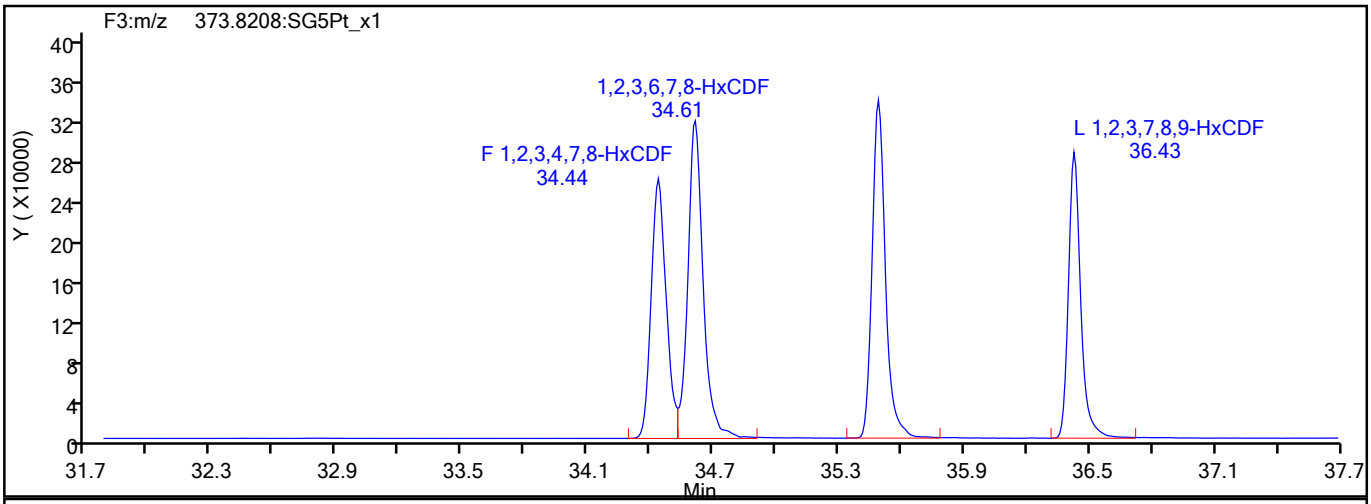

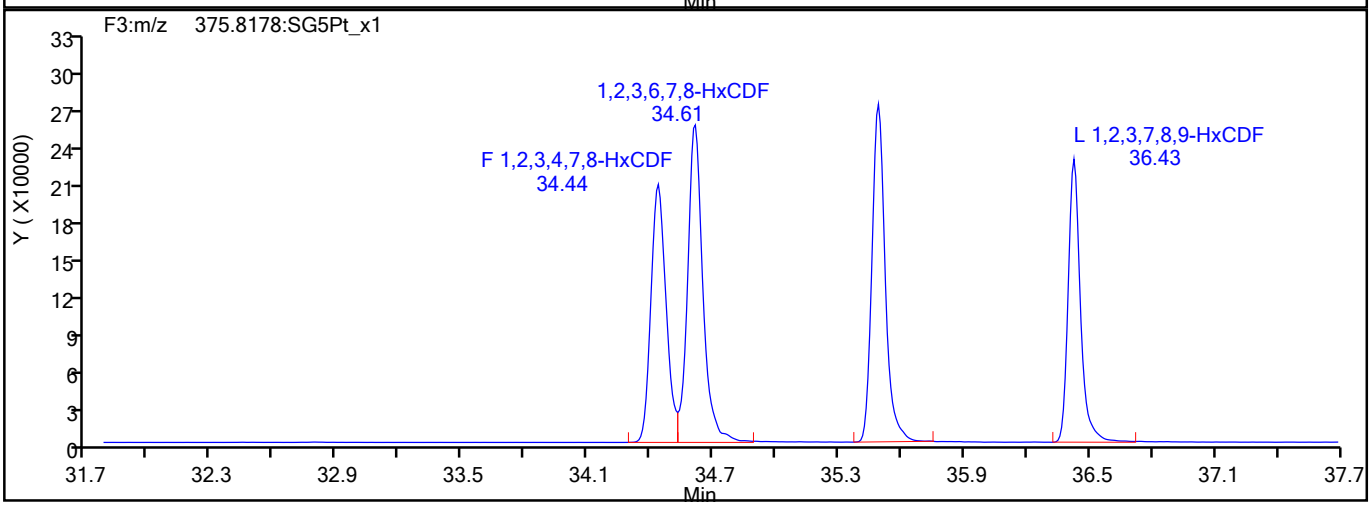

HxCDF Interference Mass

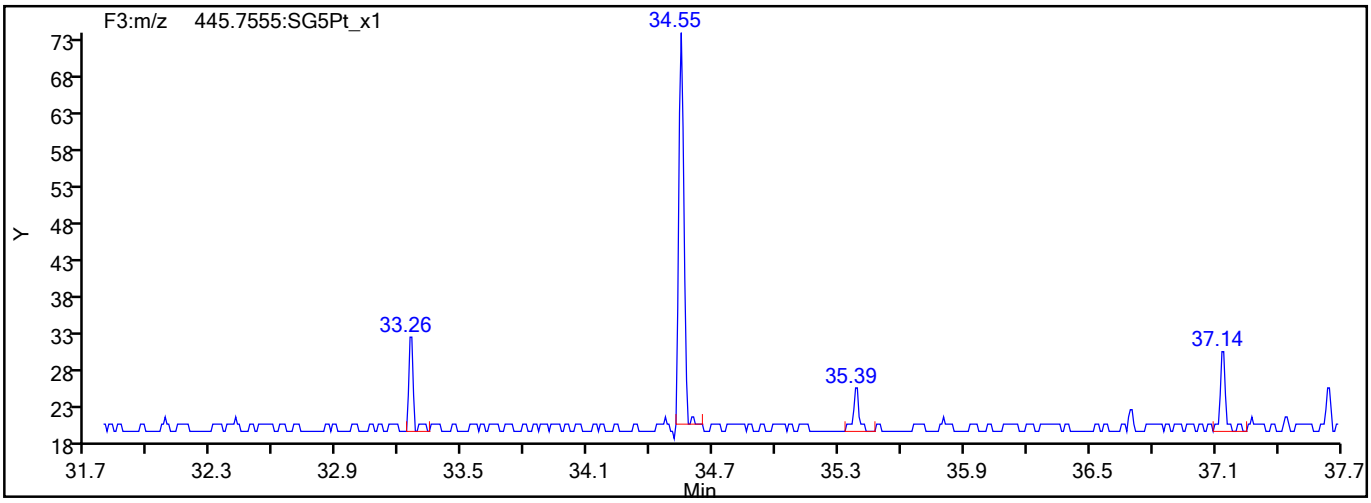

783169

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

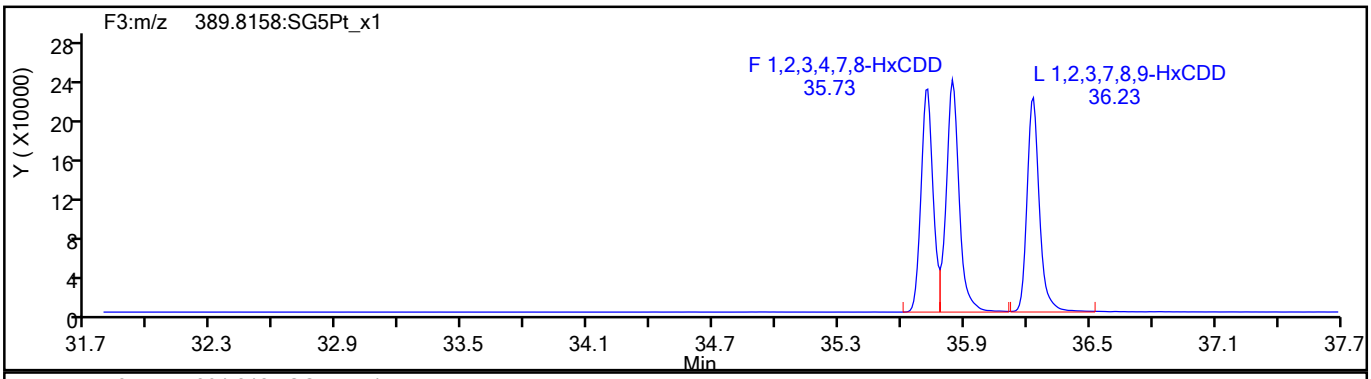

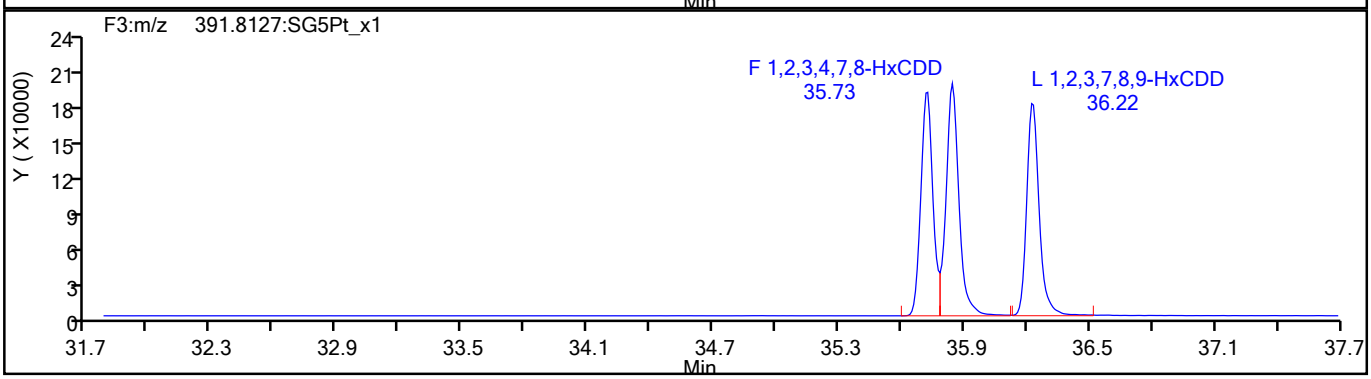

HxCDD Standards

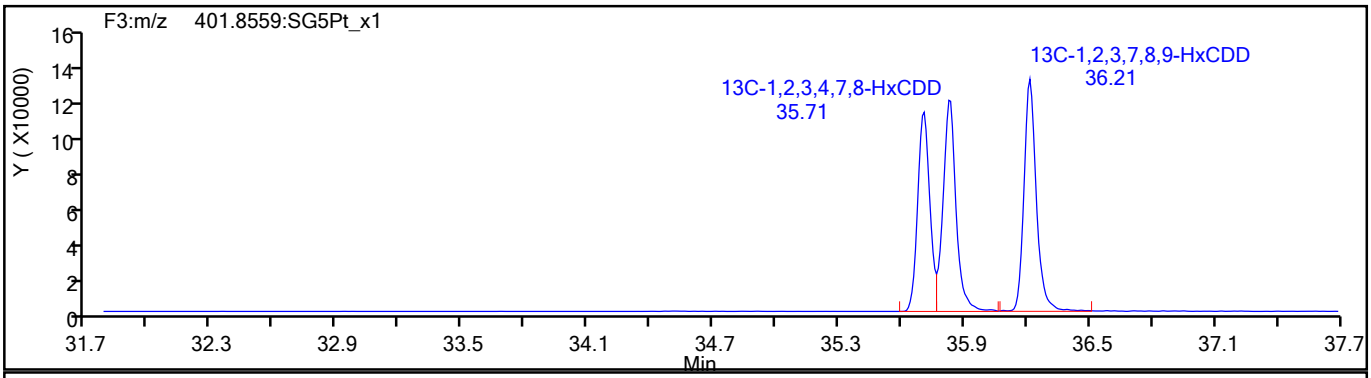

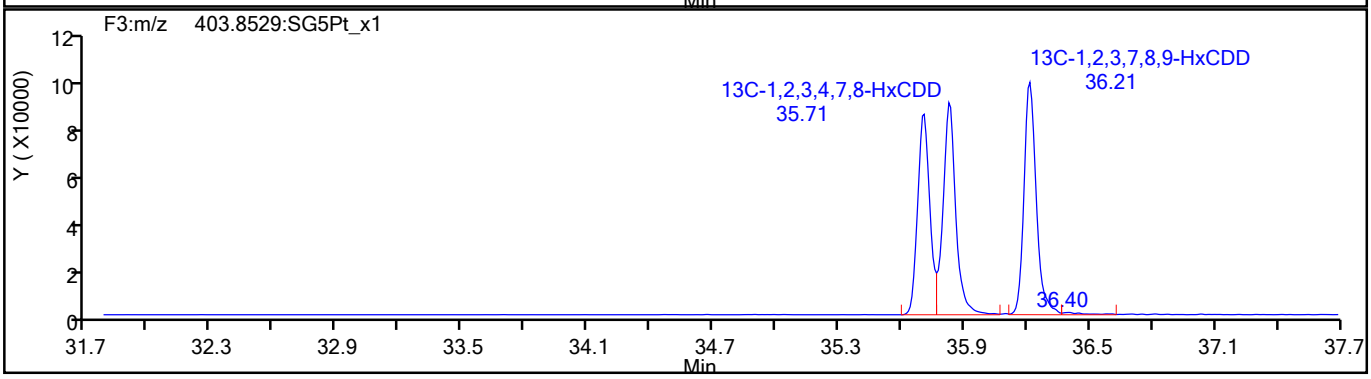

783170

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

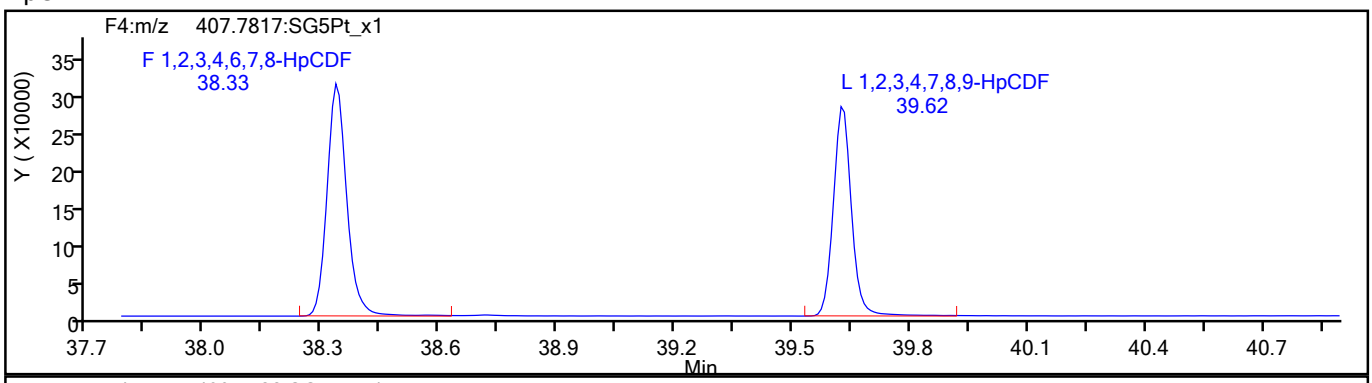

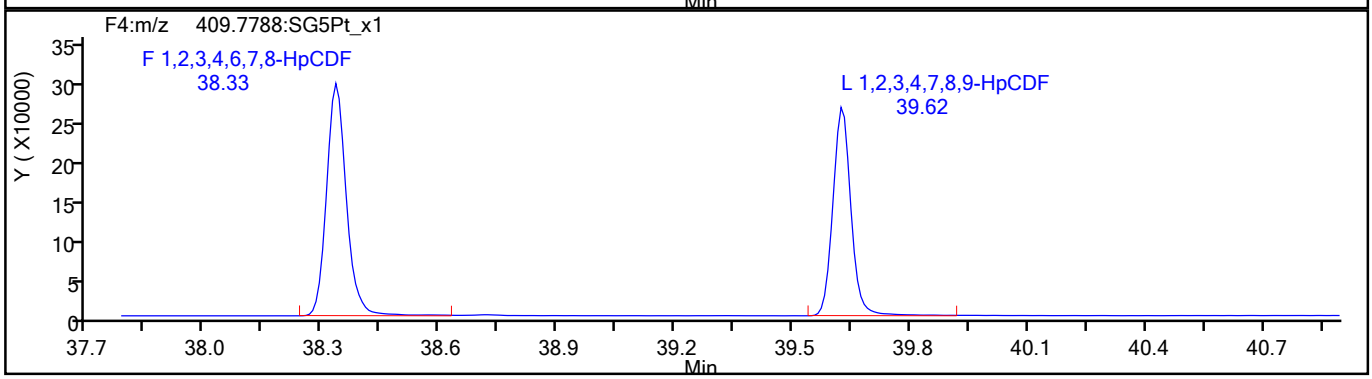

HpCDF Standards

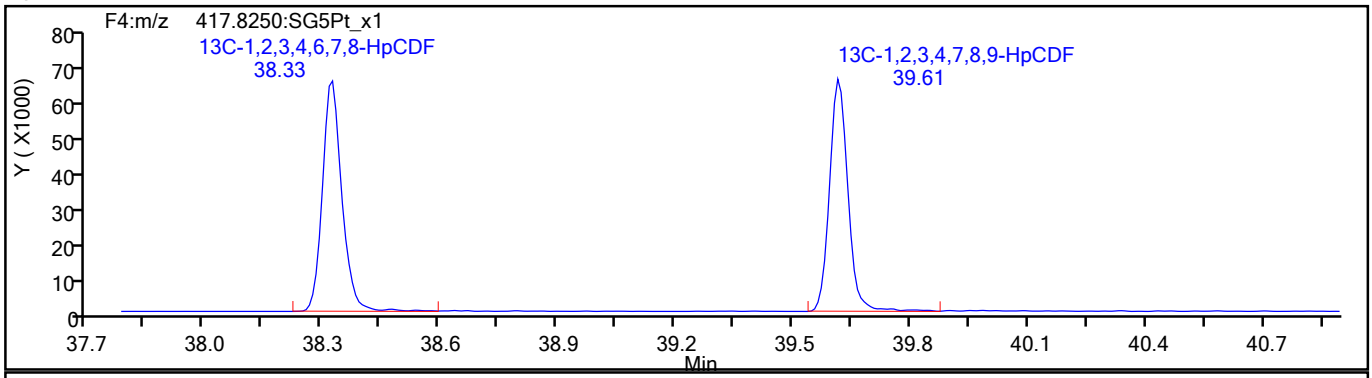

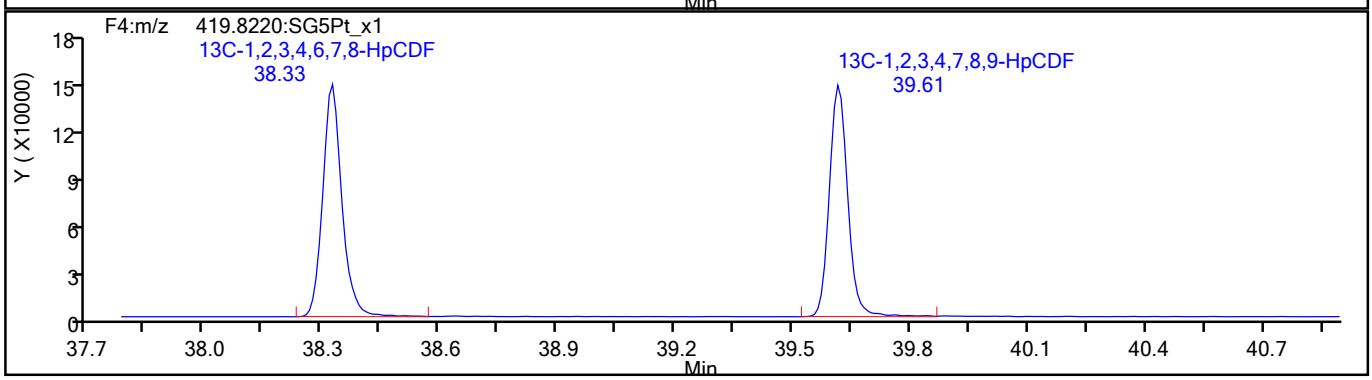

783171

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

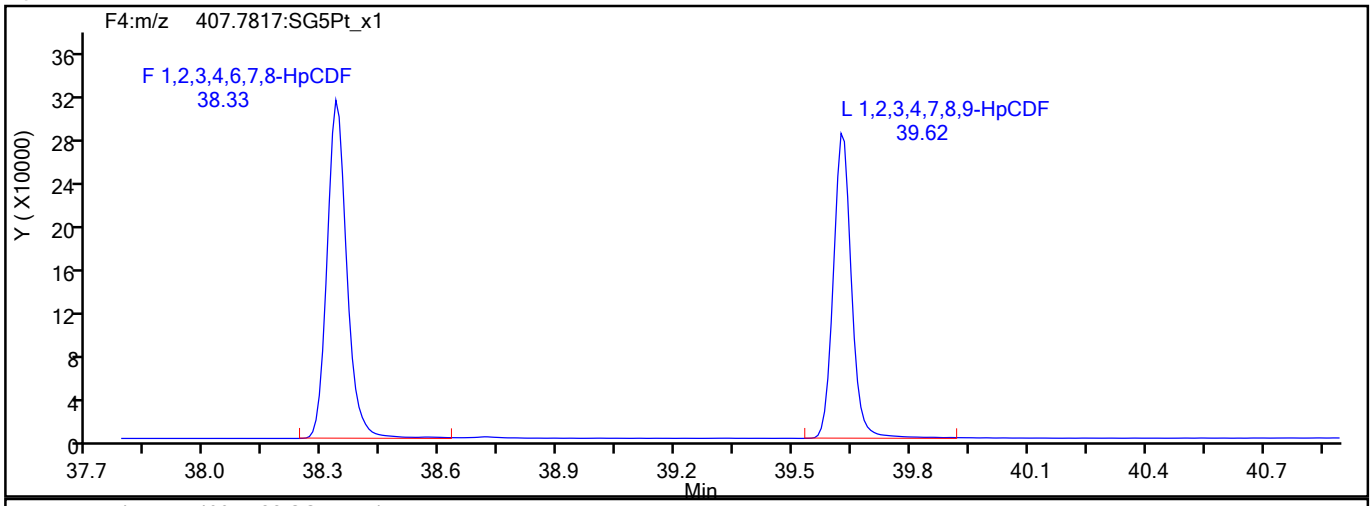

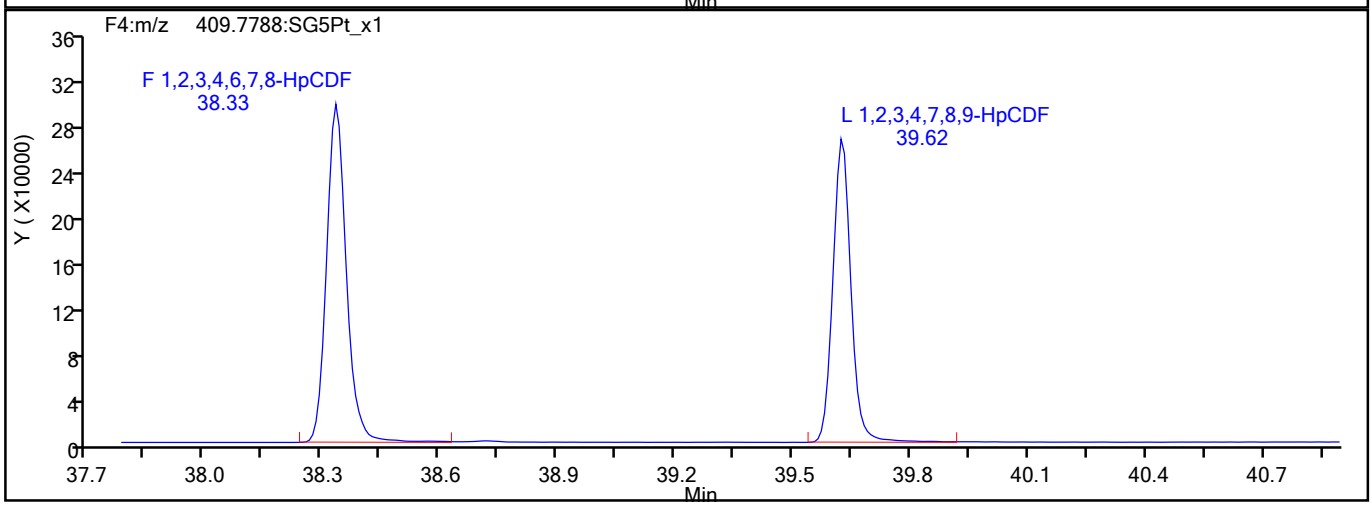

HpCDF Interference Mass

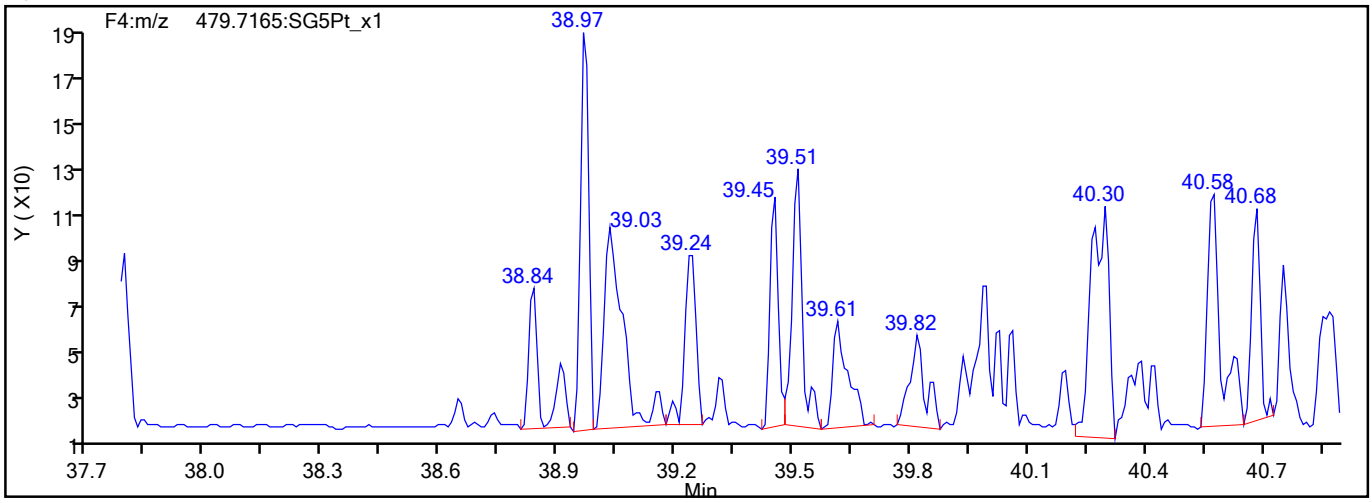

783172

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDD

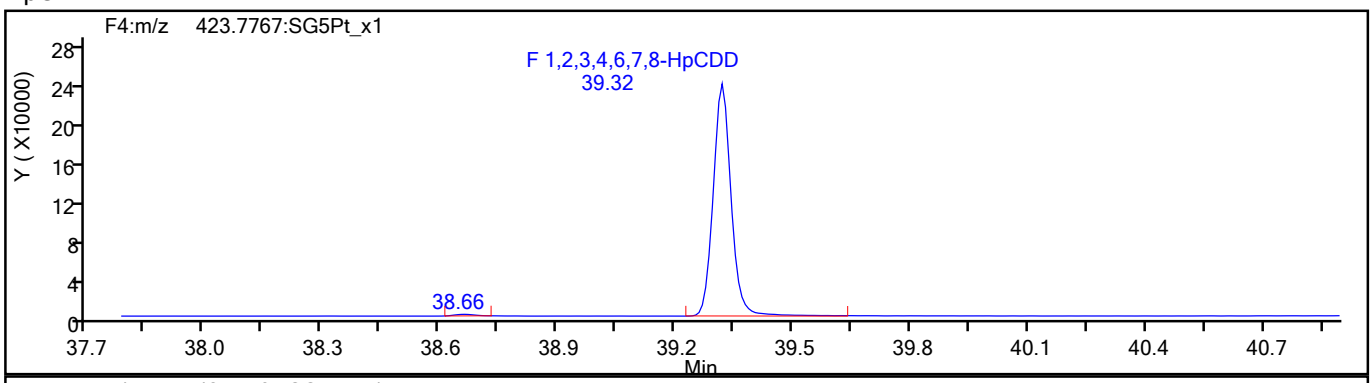

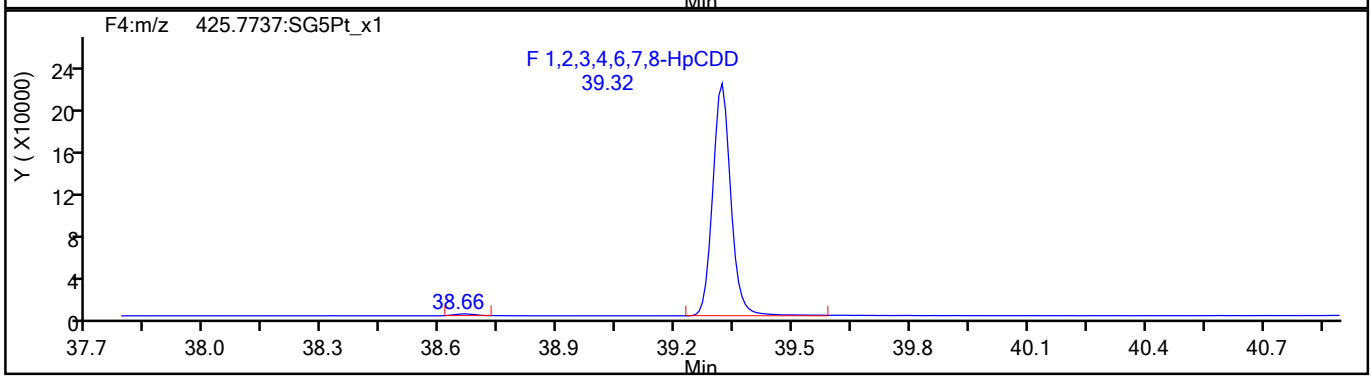

HpCDD Standards

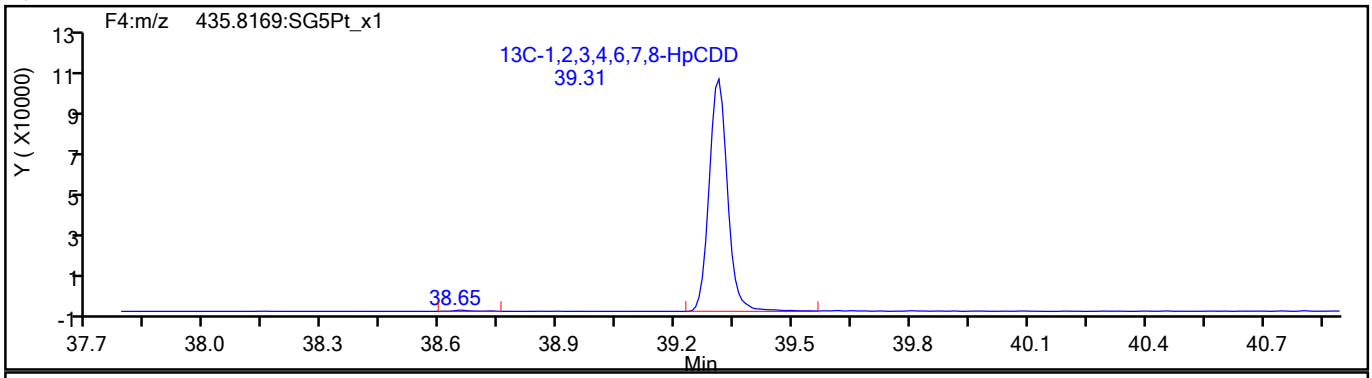

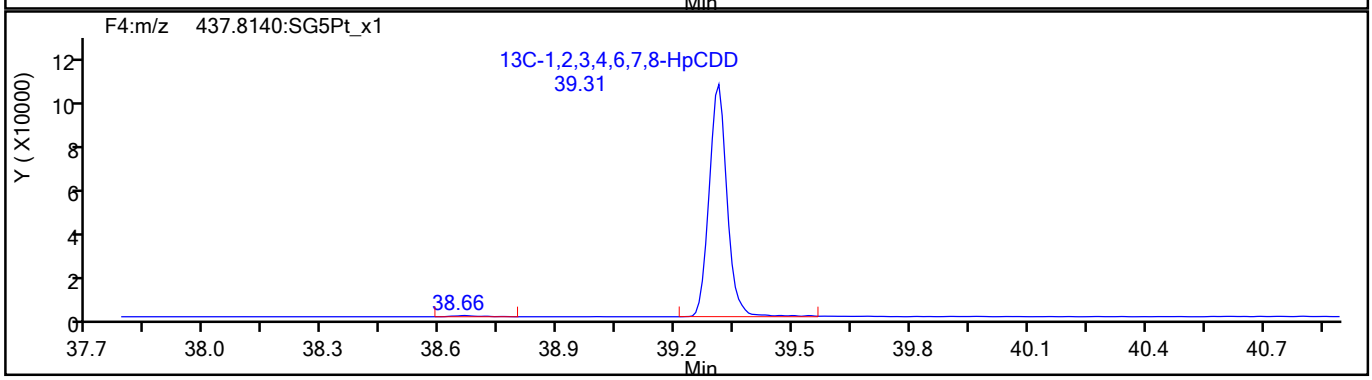

783173

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

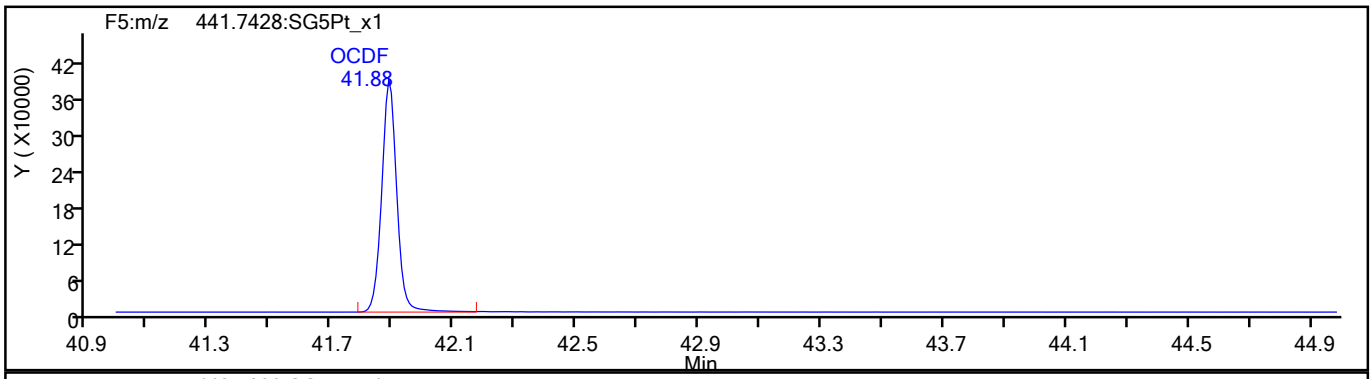

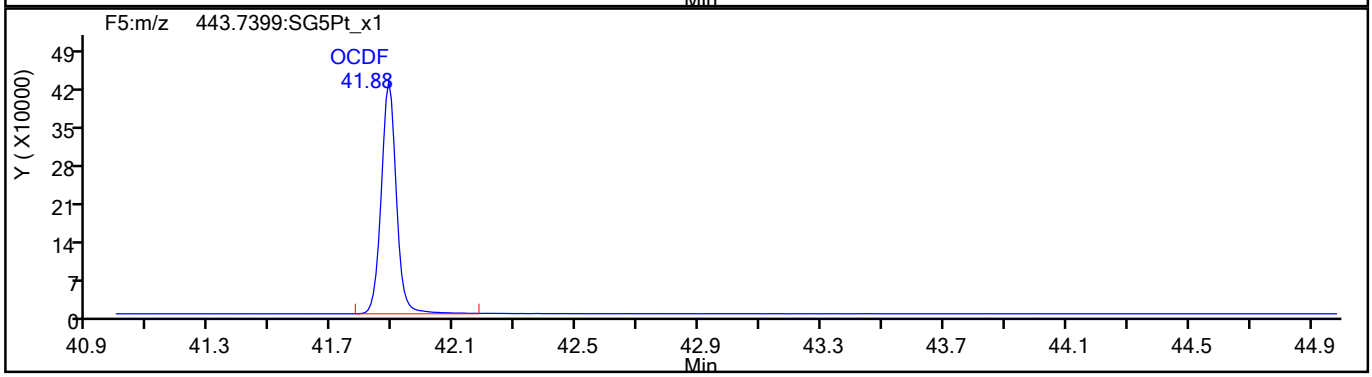

OCDF Standards

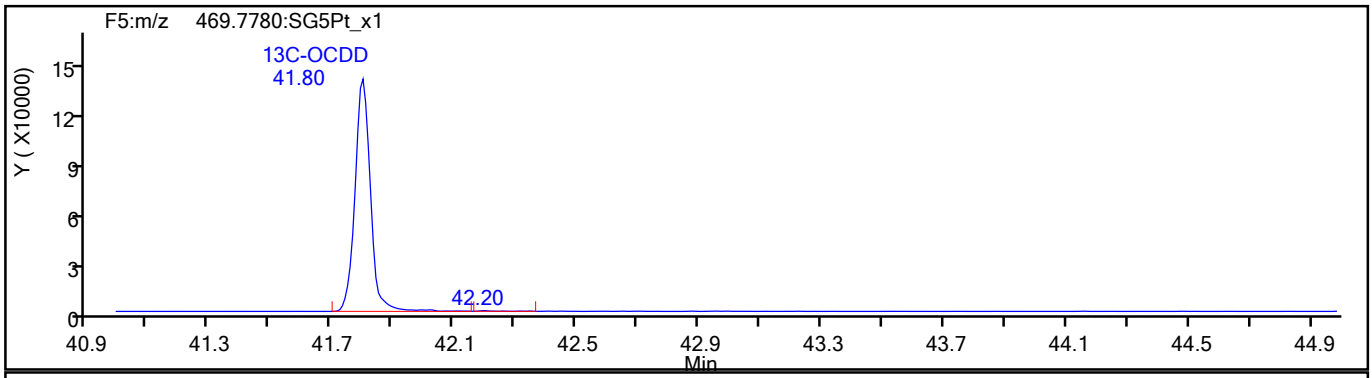

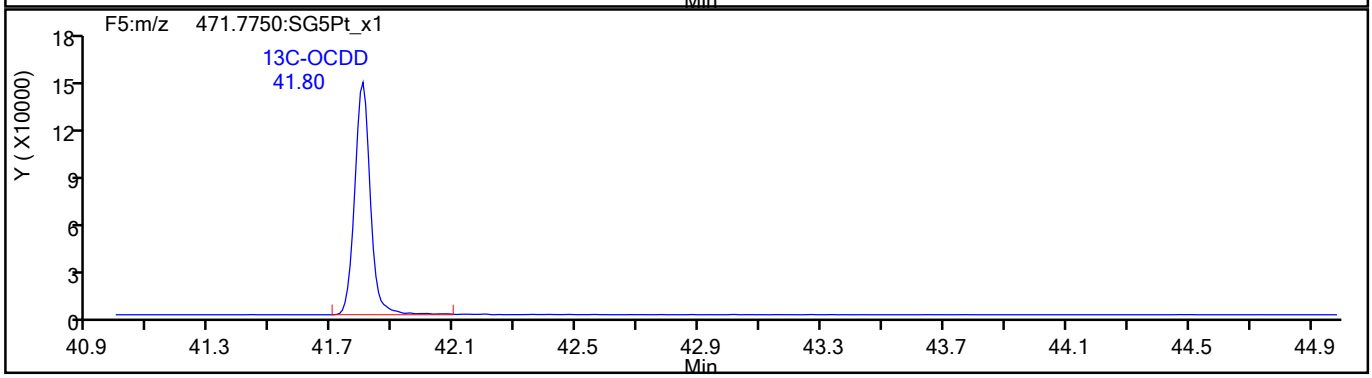

783174

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

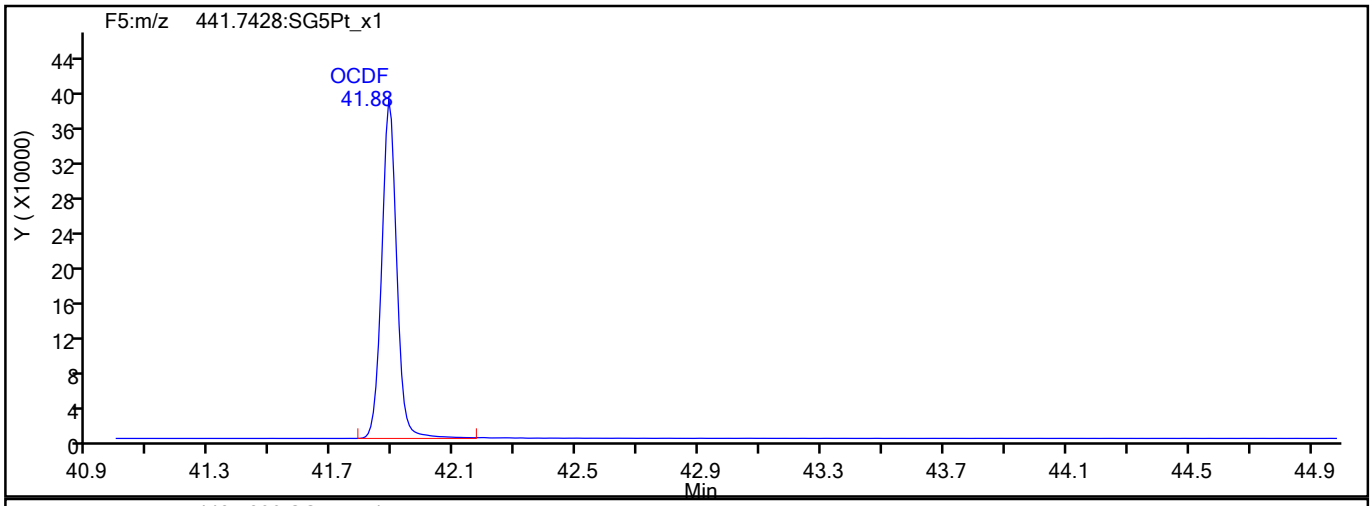

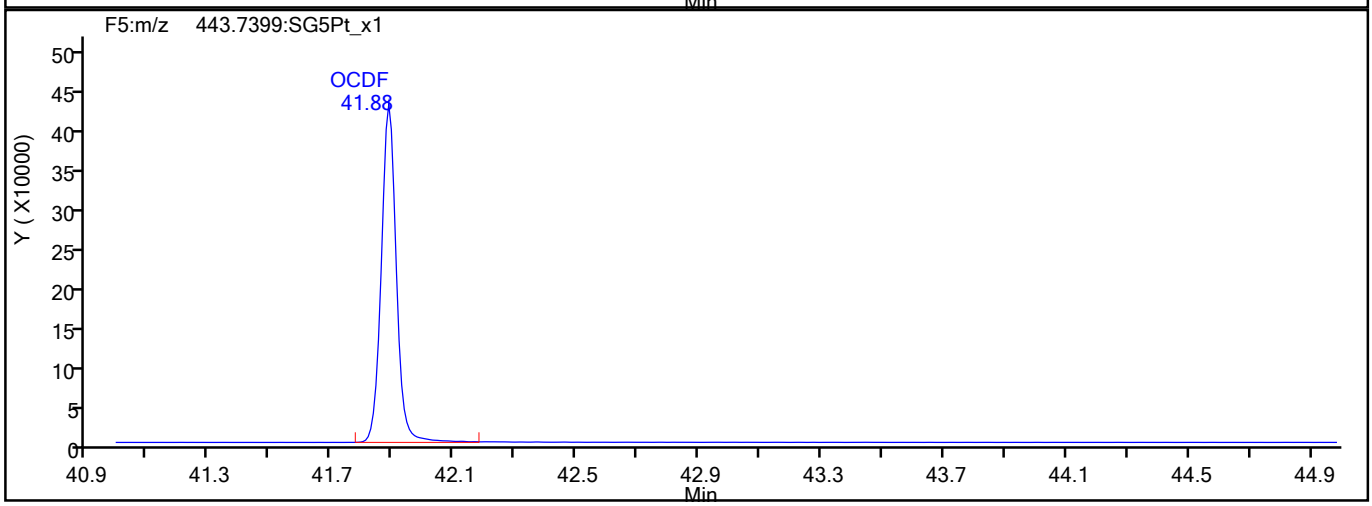

OCDF Interference Mass

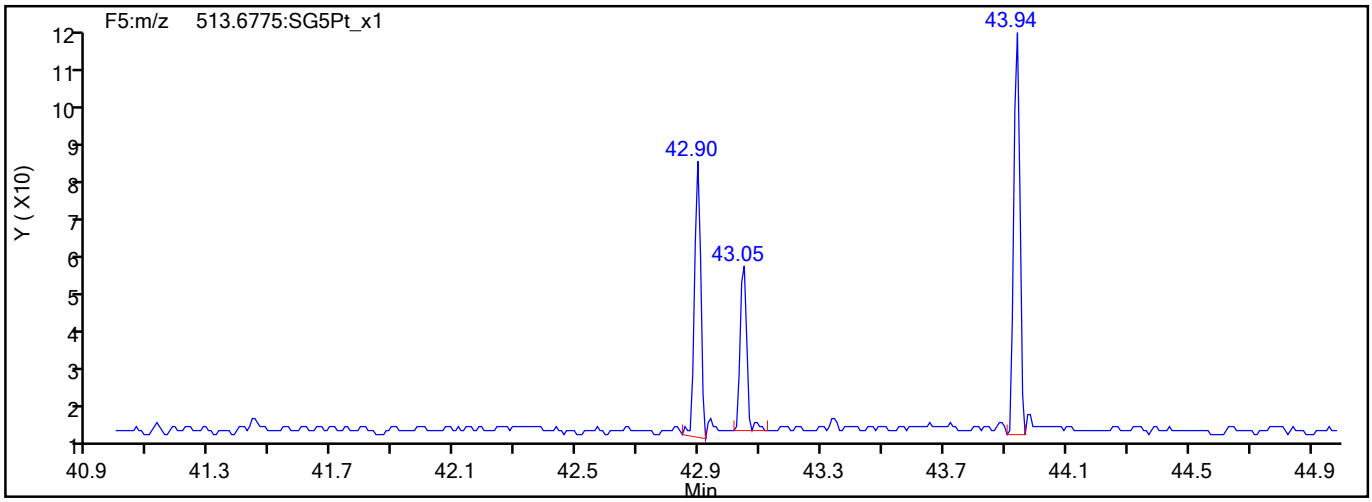

783175

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

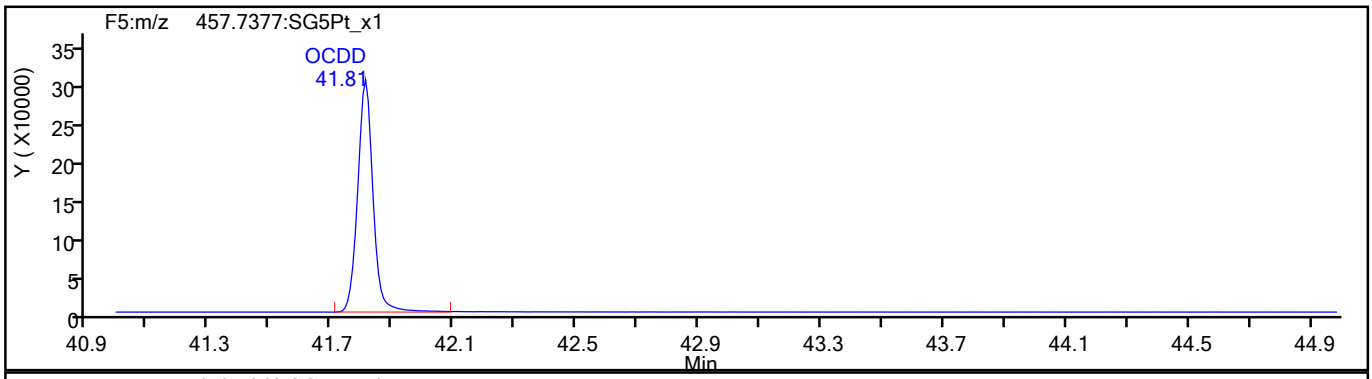

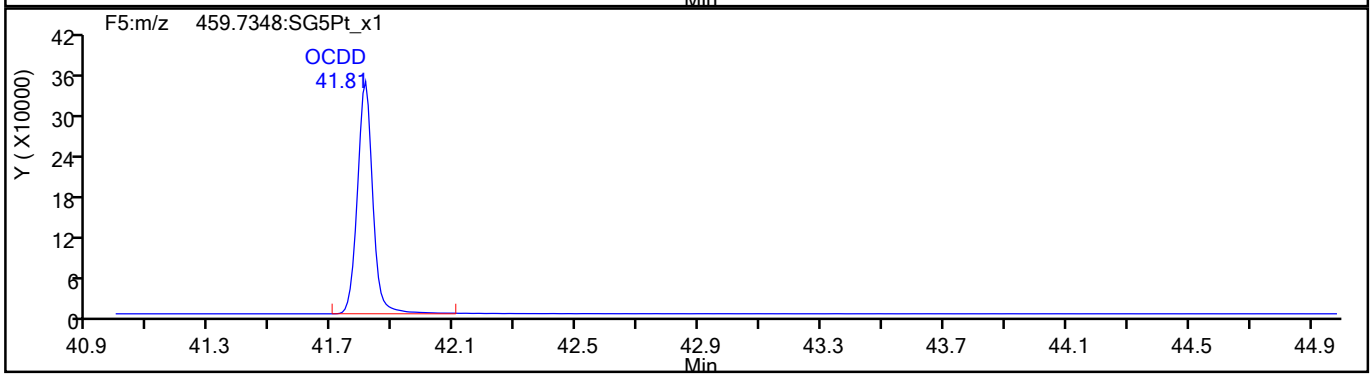

OCDD Standards

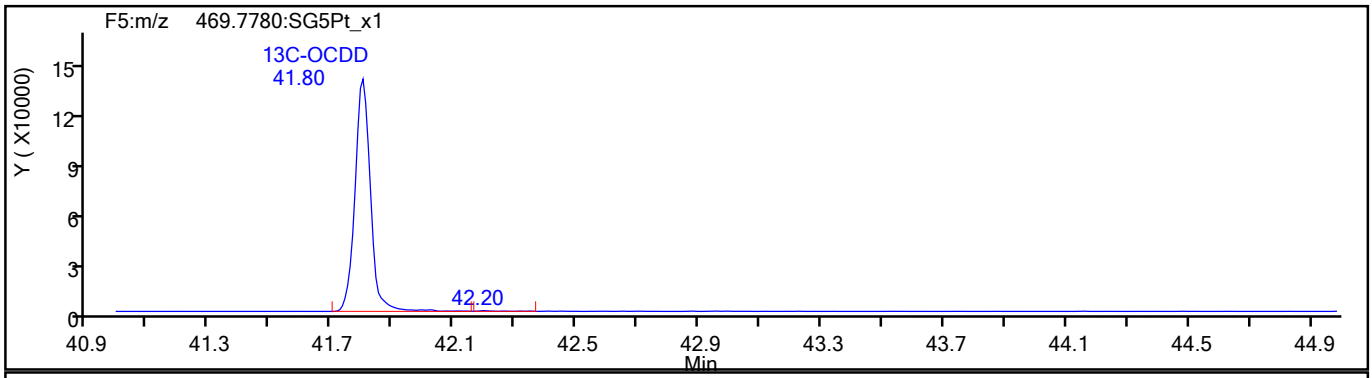

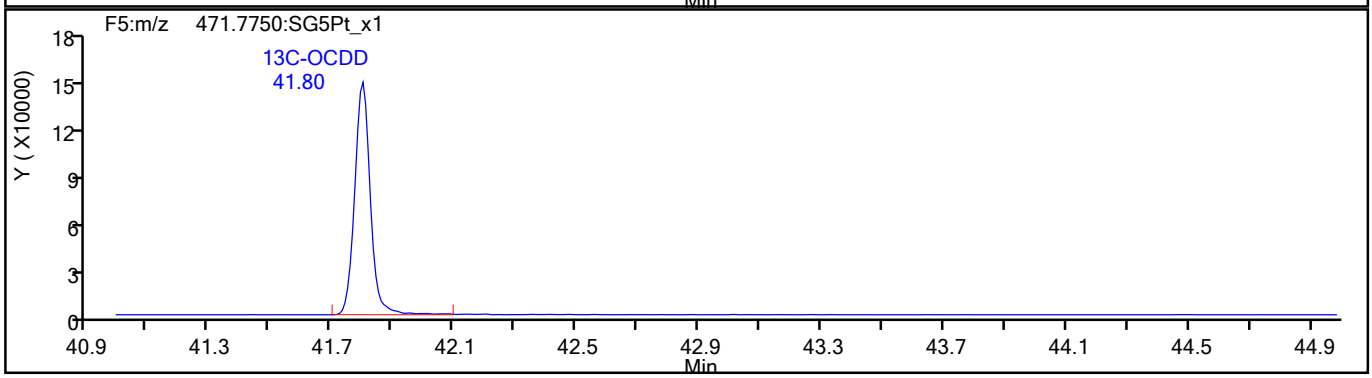

783176

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

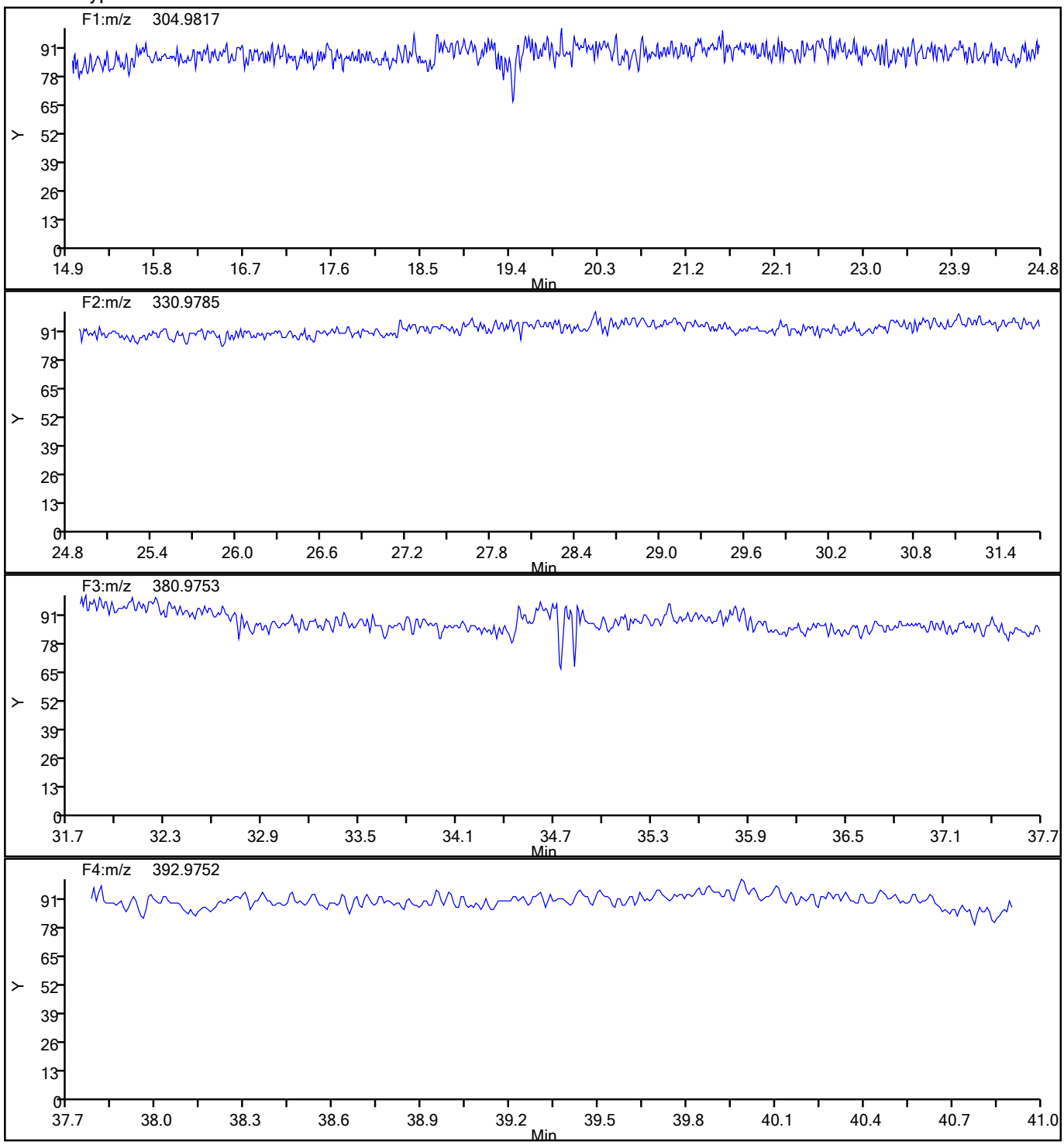

783177

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

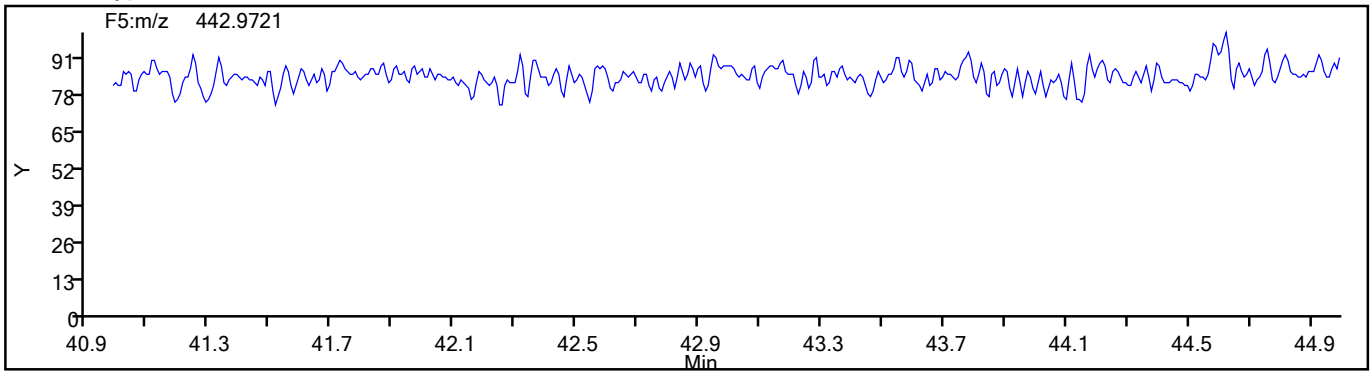

783178

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID: CCV 320-517196/2 Calibration Date: 08/17/2021 15:14

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_3.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.077		9.97	10.0	100	84-120
2,3,7,8-TCDD	AveID	1.075	0.9913		9.22	10.0	92	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.070		50.8	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9639		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.056		50.5	50.0	101	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.128		49.1	50.0	98	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.287		52.8	50.0	106	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.292		53.2	50.0	106	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	1.011		47.7	50.0	95	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9724		48.9	50.0	98	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.091		49.2	50.0	98	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.320		53.2	50.0	106	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.363		47.2	50.0	94	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.056		50.3	50.0	101	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.271		48.6	50.0	97	86-116
OCDD	AveID	1.062	1.047		98.6	100	99	79-126
OCDF	AveID	1.317	1.405		107	100	107	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.353		101	100	101	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9742		105	100	105	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.209		106	100	106	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.245		111	100	111	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7328		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.102		114	100	114	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.114		104	100	104	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.089		105	100	105	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7976		105	100	105	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9094		106	100	106	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.082		111	100	111	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.9310		127	100	127	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.8156		121	100	121	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.8837		129	100	129	77-129
13C-OCDD	Ave	0.5446	0.7572		278	200	139	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.015		10.1	10.0	101	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	17AU21DFS1_1	Resolution Check	RC 081721	46			KSS	1.000	
2	17AU21DFS1_2	WDM HRDXNCP_00044	WDM 081721	1	Dioxin		KSS	1.000	
3	17AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081621	2	Dioxin		KSS	1.000	
4	17AU21DFS1_4	SB Solvent Blank C14	SB 081621	3	Dioxin		KSS	1.000	
5	17AU21DFS1_5	mb 320-513586/1-a	mb 320-513586/1-a	4	1613B/Solid	D266	KSS	1.000	g
6	17AU21DFS1_6	lcs 320-513586/2-a	lcs 320-513586/2-a	5	1613B/Solid		KSS	1.000	g
7	17AU21DFS1_7	320-76724-a-16-a 10X	320-76724-a-16-a	6	1613B/Solid	D261	KSS	1.000	g
8	17AU21DFS1_8	320-76764-a-14-a 10X	320-76764-a-14-a	7	1613B/Solid	D263	KSS	1.000	g
9	17AU21DFS1_9	320-76764-a-16-a 10X	320-76764-a-16-a	8	1613B/Solid		KSS	1.000	g
10	17AU21DFS1_10	320-76764-a-38-a 10X	320-76764-a-38-a	9	1613B/Solid		KSS	1.000	g
11	17AU21DFS1_11	320-76765-a-4-a 5X	320-76765-a-4-a	10	1613B/Solid	D264	KSS	1.000	g
12	17AU21DFS1_12	320-76769-A-30-A	320-76769-A-30-A	11	1613B/Solid	D266	KSS	1.000	g
13	17AU21DFS1_13	320-76769-A-31-A	320-76769-A-31-A	12	1613B/Solid		KSS	1.000	g
14	17AU21DFS1_14	320-76769-A-32-A	320-76769-A-32-A	13	1613B/Solid		KSS	1.000	g
15	17AU21DFS1_15	SB Solvent Blank C14	SB 081721A	3	Dioxin		KSS	1.000	
16	17AU21DFS1_16	Resolution Check	RC 081721A	46			KSS	1.000	
17	17AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081621A	2	Dioxin		KSS	1.000	
18	17AU21DFS1_18	WDM HRDXNCP_00044	WDM 081721A	1	Dioxin		KSS	1.000	
19	17AU21DFS1_19	SB Solvent Blank C14	SB 081721B	3	Dioxin		KSS	1.000	
20	17AU21DFS1_20	320-76769-A-33-A	320-76769-A-33-A	14	1613B/Solid	D266	KSS	1.000	g
21	17AU21DFS1_21	320-76769-A-34-A	320-76769-A-34-A	15	1613B/Solid		KSS	1.000	g
22	17AU21DFS1_22	320-76887-A-2-A	320-76887-A-2-A	16	1613B/Solid		KSS	1.000	g
23	17AU21DFS1_23	320-76887-A-2-B MS	320-76887-A-2-B MS	17	1613B/Solid		KSS	1.000	g
24	17AU21DFS1_24	320-76887-A-2-C MSD	320-76887-A-2-C MSD	18	1613B/Solid		KSS	1.000	g
25	17AU21DFS1_25	320-76887-A-3-A	320-76887-A-3-A	19	1613B/Solid		KSS	1.000	g
26	17AU21DFS1_26	320-76887-A-4-A	320-76887-A-4-A	20	1613B/Solid		KSS	1.000	g
27	17AU21DFS1_27	320-76887-A-5-A	320-76887-A-5-A	21	1613B/Solid		KSS	1.000	g
28	17AU21DFS1_28	320-76887-A-6-A	320-76887-A-6-A	22	1613B/Solid		KSS	1.000	g
29	17AU21DFS1_29	320-76887-A-7-A	320-76887-A-7-A	23	1613B/Solid		KSS	1.000	g
30	17AU21DFS1_30	SB Solvent Blank C14	SB 081721C	3	Dioxin		KSS	1.000	
31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A	12	1613B/Solid	D266	KSS	1.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	1.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	1.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	1.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A	27	1613B/Solid		KSS	1.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	1.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	1.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	1.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A	31	1613B/Solid		KSS	1.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32	1613B/Solid		KSS	1.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	

Log file checked
08/18/21 SMA

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	17 Aug 2021 14:07
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11192 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10617 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10669 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10902 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10643 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10651 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 9999 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10320 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10065 [5%height]

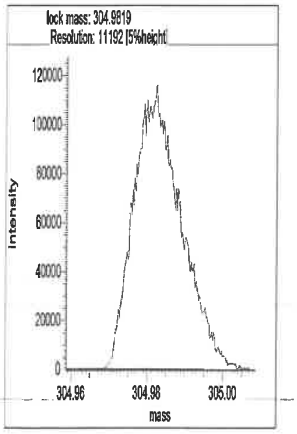

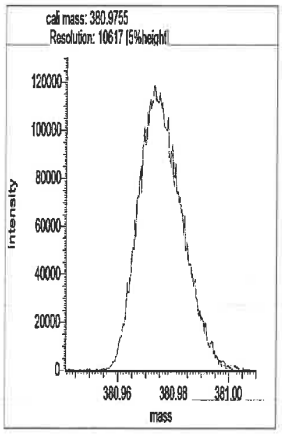

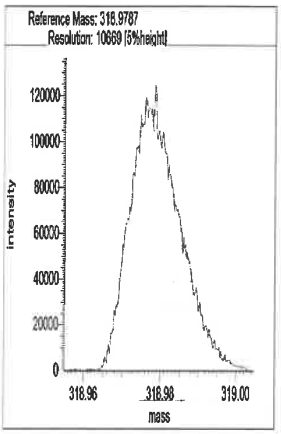

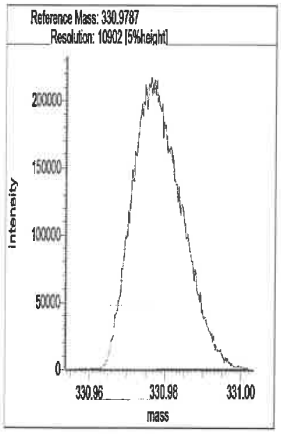

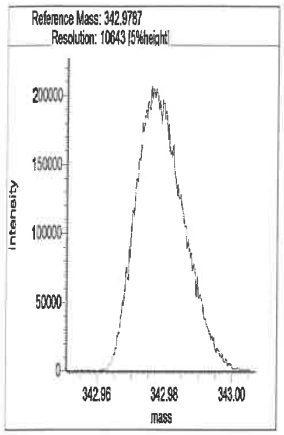

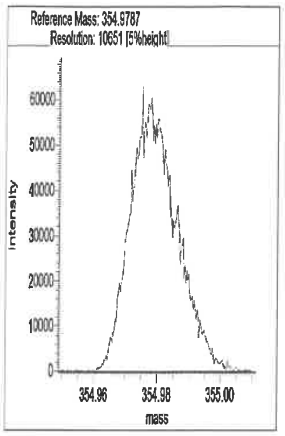

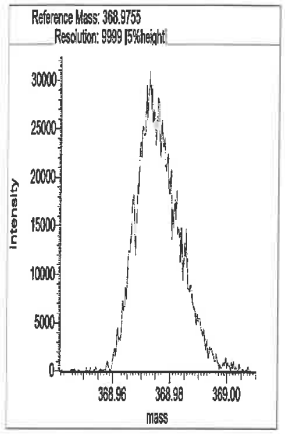

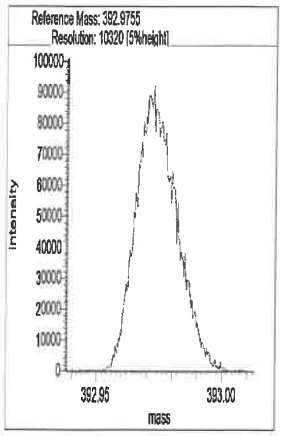

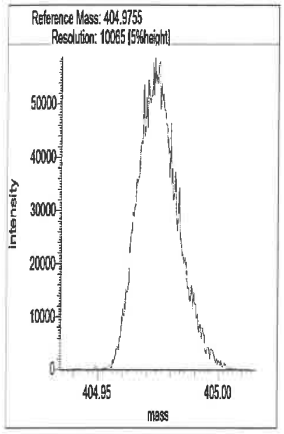

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11006 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10213 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10478 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11117 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10460 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10915 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10374 [5%height]

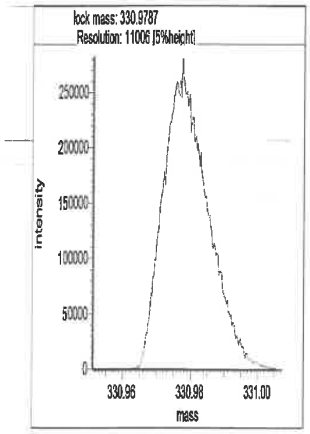

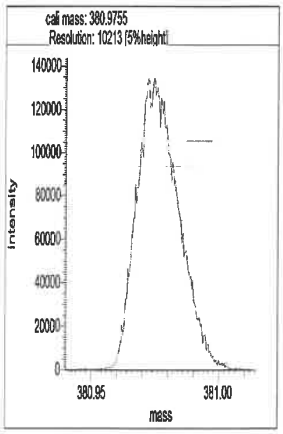

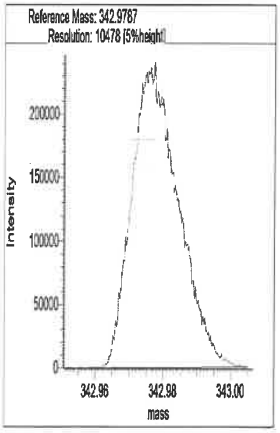

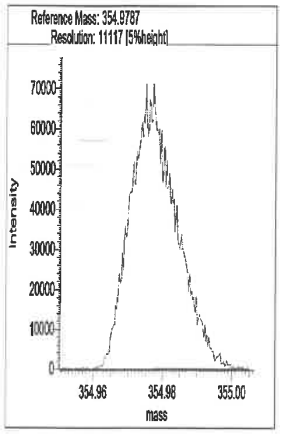

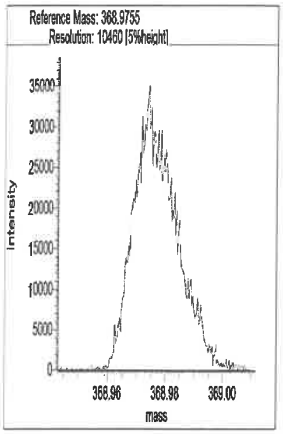

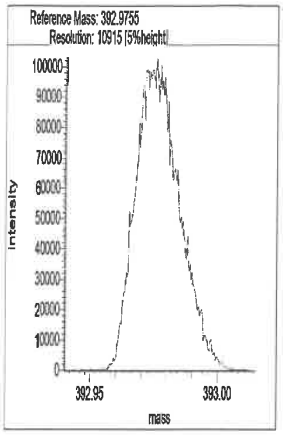

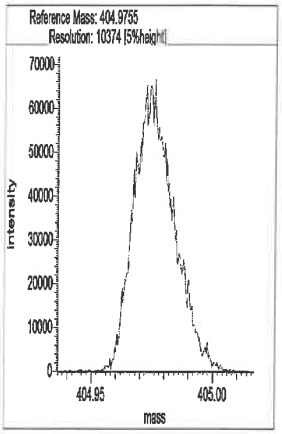

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10663 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10424 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10673 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10509 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11250 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10511 [5%height]

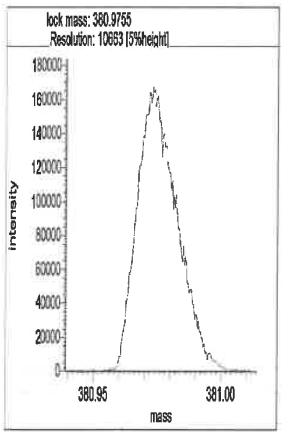

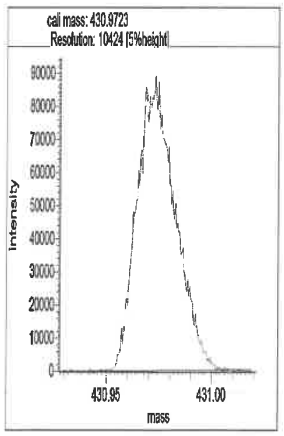

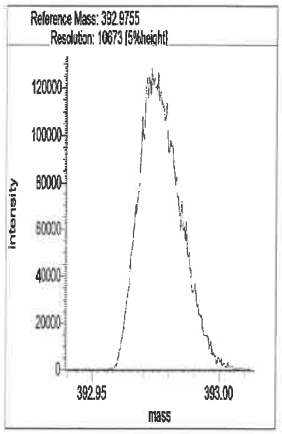

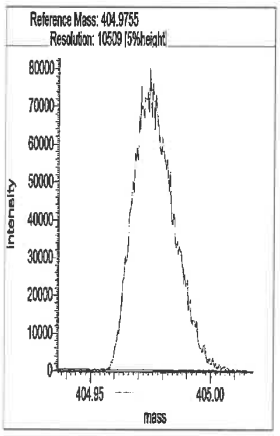

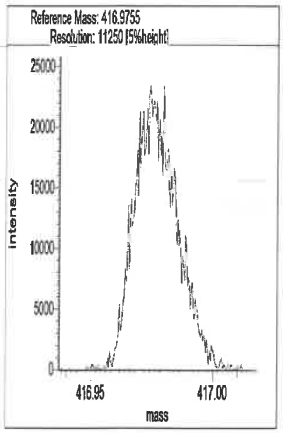

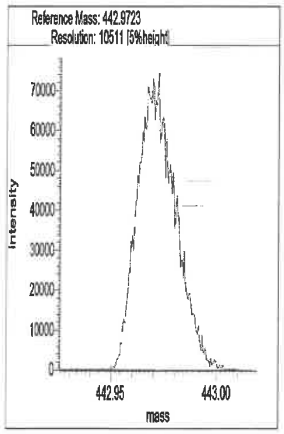

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10570 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11001 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10492 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10831 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10371 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10525 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 9876 [5%height]

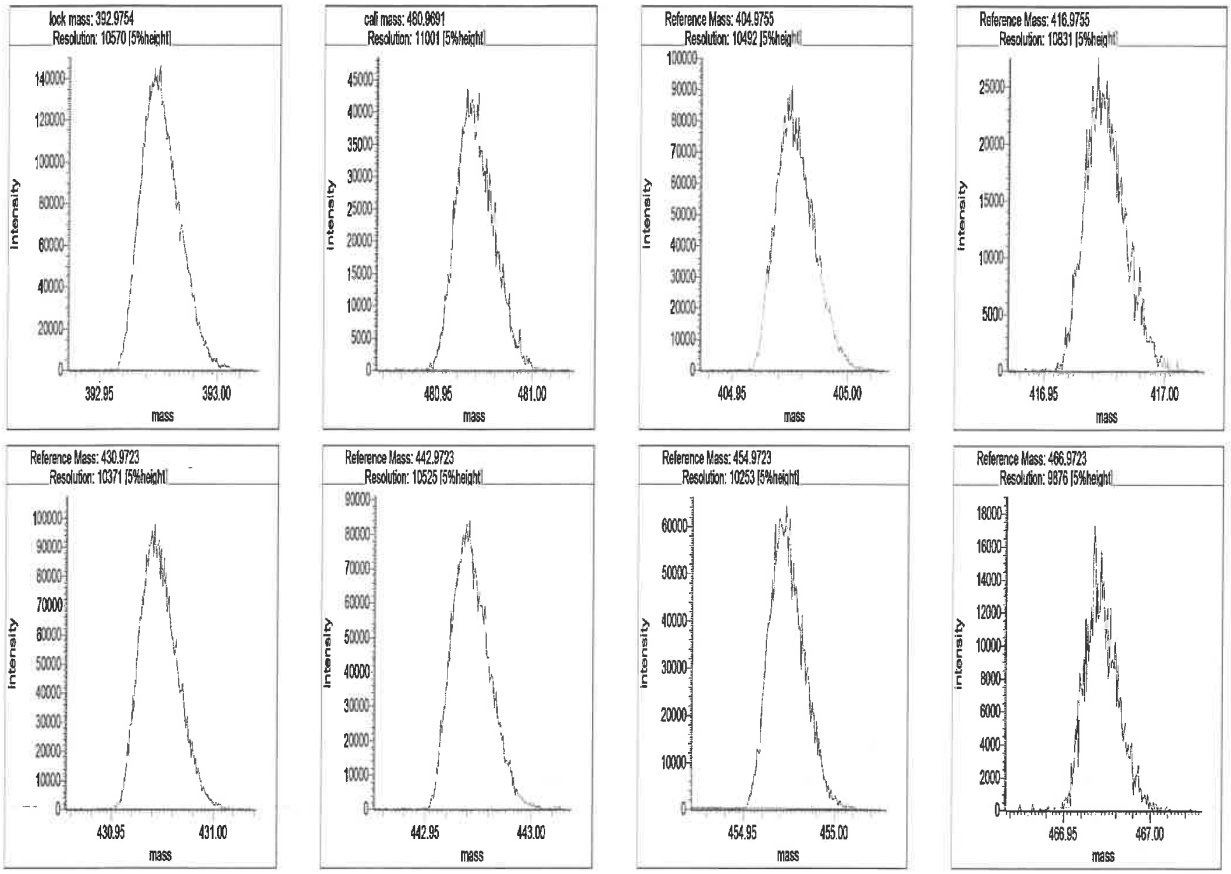

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10598 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10769 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11729 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10589 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10479 [5%height]

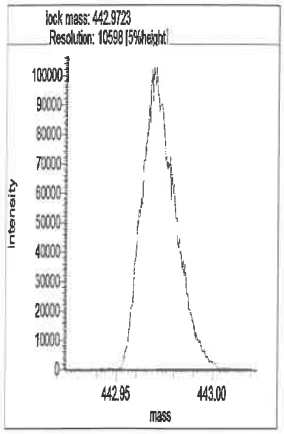
lock mass: 442.9723
Resolution: 10598 [5%height]
Intensity
mass

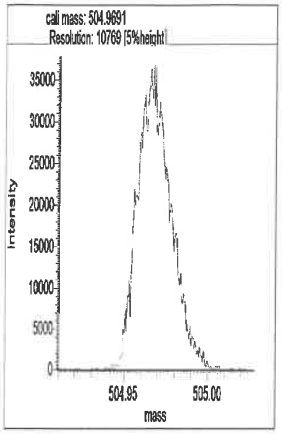
cali mass: 504.9691
Resolution: 10769 [5%height]
Intensity
mass

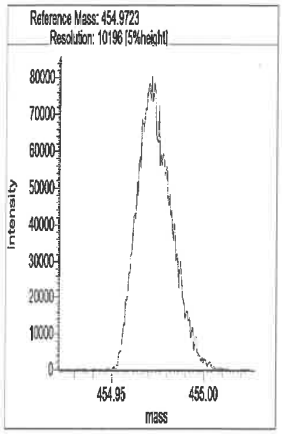
Reference Mass: 454.9723
Resolution: 10196 [5%height]
Intensity
mass

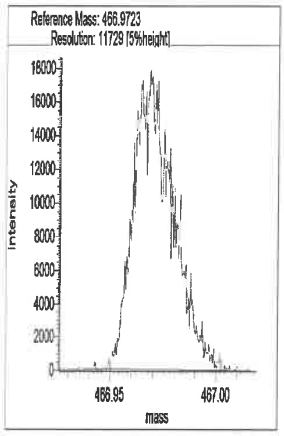
Reference Mass: 466.9723
Resolution: 11729 [5%height]
Intensity
mass

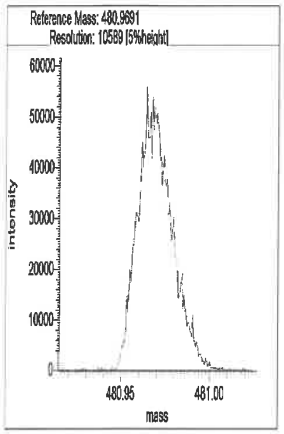
Reference Mass: 480.9691
Resolution: 10589 [5%height]
Intensity
mass

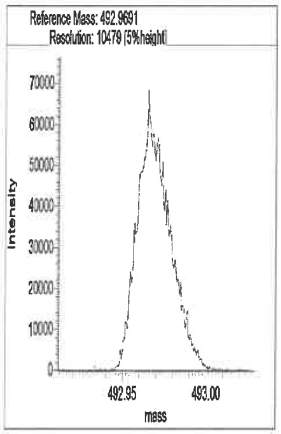
Reference Mass: 492.9691
Resolution: 10479 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 01:48
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10717 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10164 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10292 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10631 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10633 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10192 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10253 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9908 [5%height] 8/18/21 KS
Ref. mass 404.9755 [m/z] Resolution: 10394 [5%height]

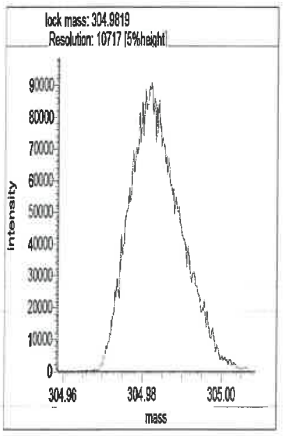

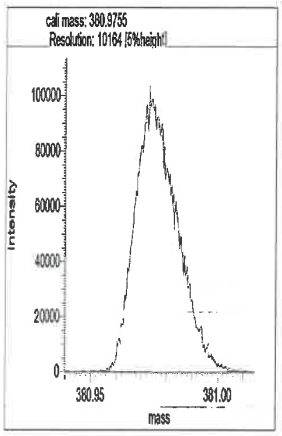

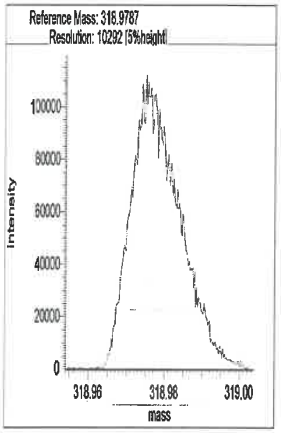

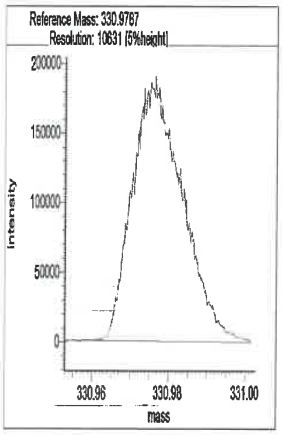

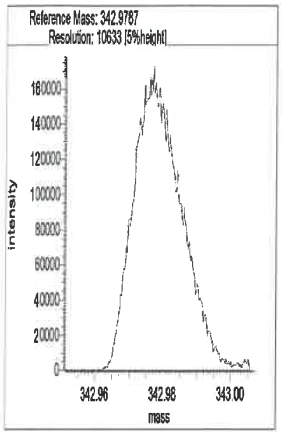

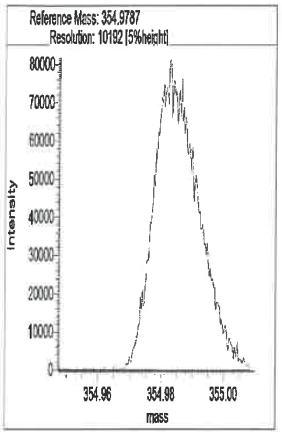

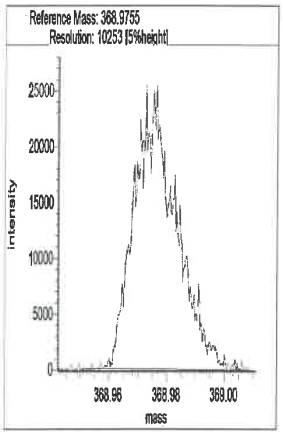

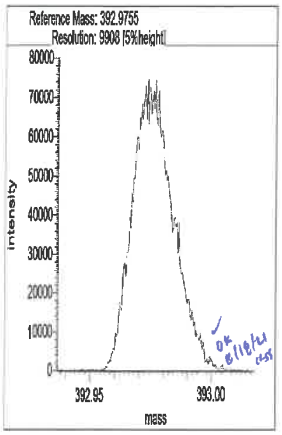

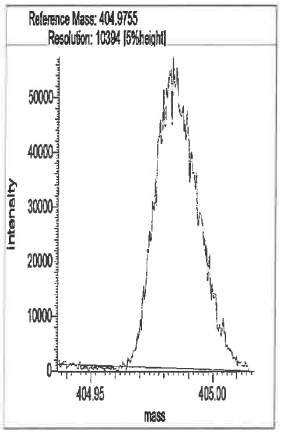

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10724 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10571 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10185 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10507 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 9890 [5%height] ✓

Ref. mass 392.9755 [m/z] Resolution: 10160 [5%height] 8/10/24 KJS

Ref. mass 404.9755 [m/z] Resolution: 9838 [5%height] ✓

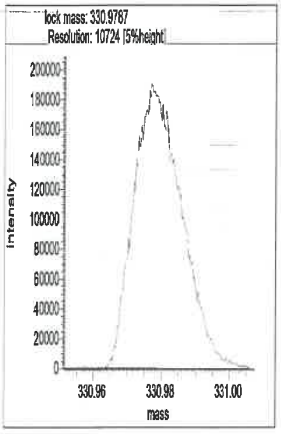

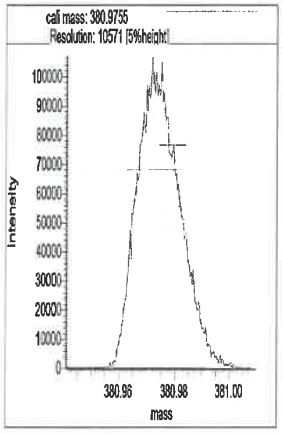

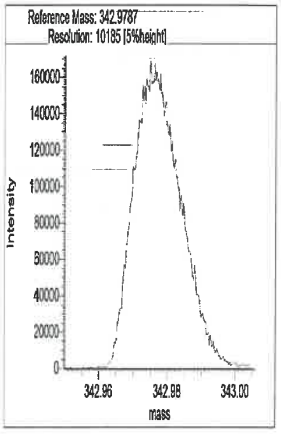

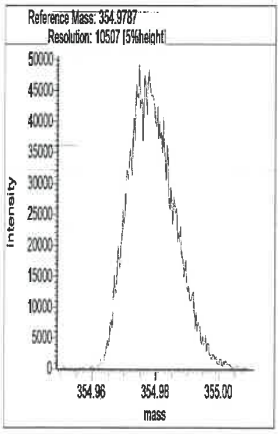

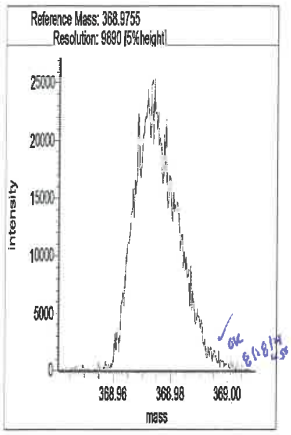

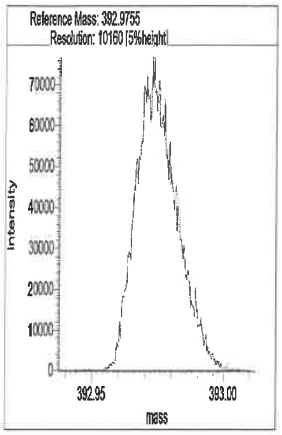

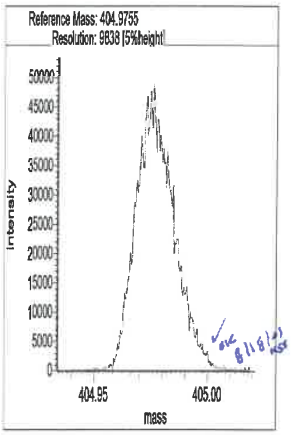

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10569 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10686 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10326 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11023 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11063 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11204 [5%height]

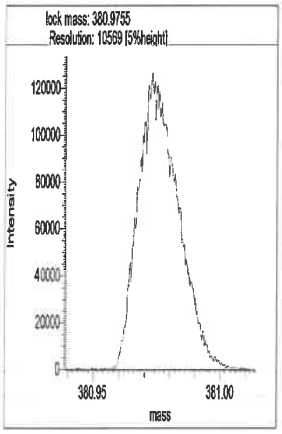

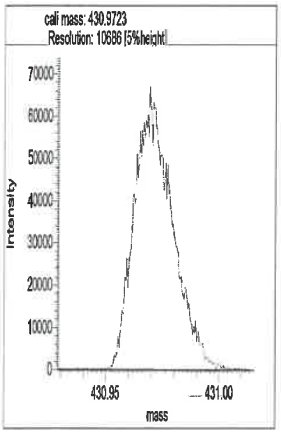

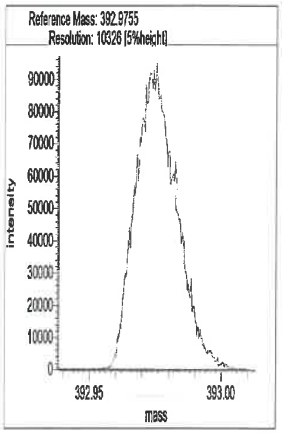

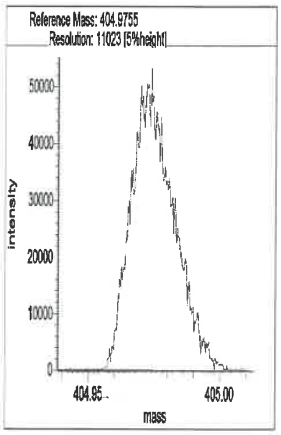

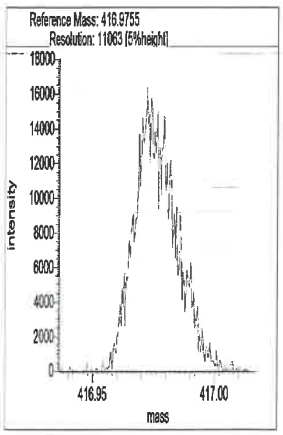

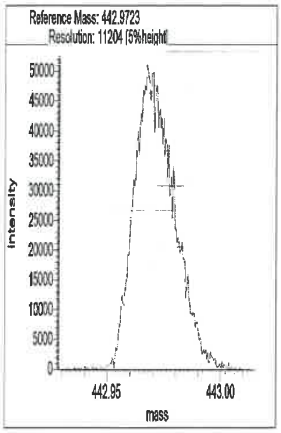

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10576 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10771 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10184 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11006 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10416 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11131 [5%height]

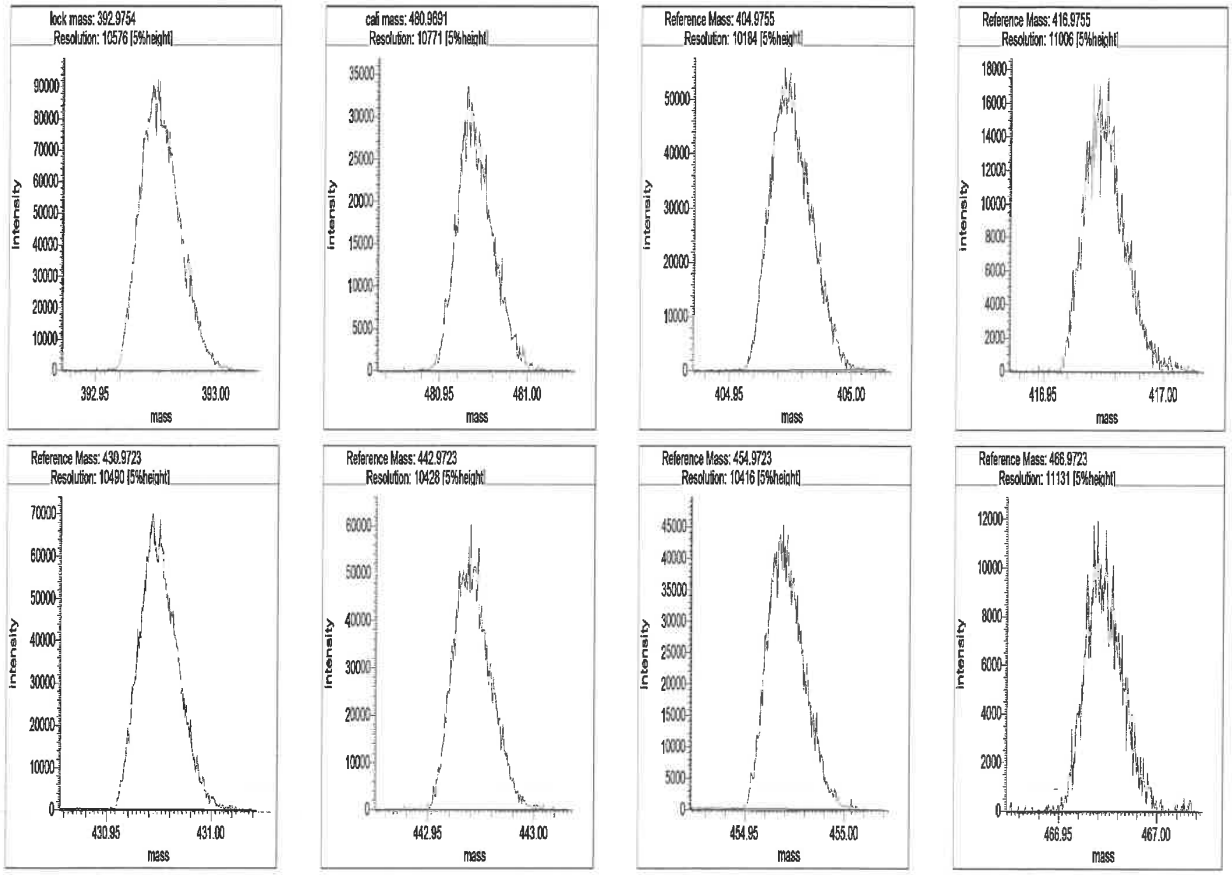

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10847 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11373 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10903 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10602 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10379 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10595 [5%height]

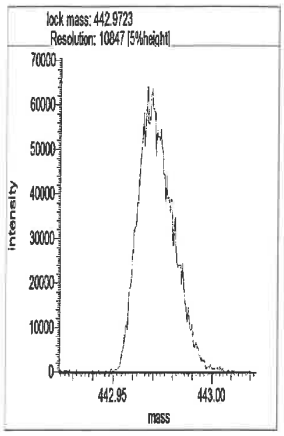
lock mass: 442.9723
Resolution: 10847 [5%height]
Intensity
mass

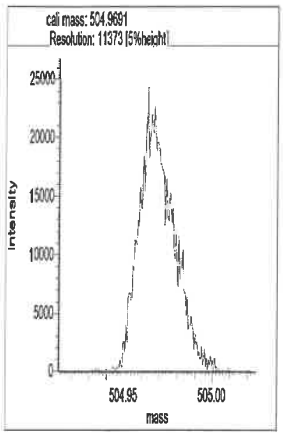
cali mass: 504.9691
Resolution: 11373 [5%height]
Intensity
mass

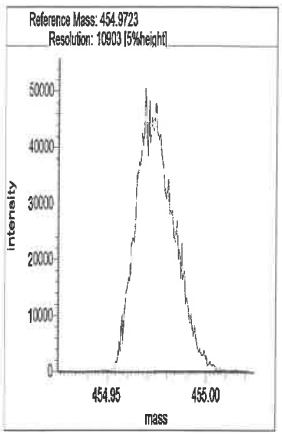
Reference Mass: 454.9723
Resolution: 10903 [5%height]
Intensity
mass

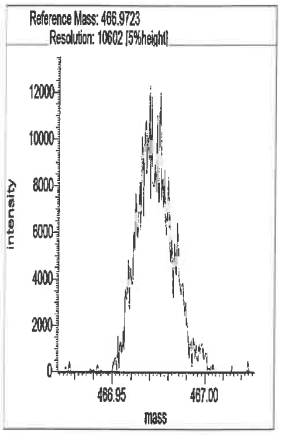
Reference Mass: 466.9723
Resolution: 10602 [5%height]
Intensity
mass

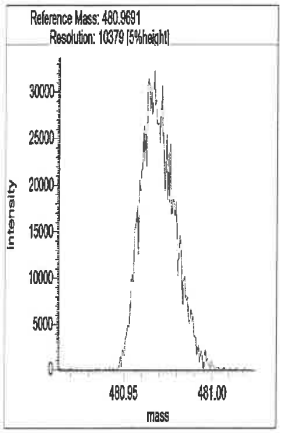
Reference Mass: 480.9691
Resolution: 10379 [5%height]
Intensity
mass

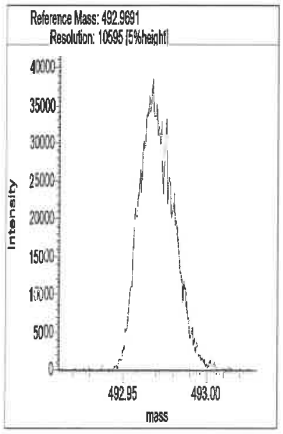
Reference Mass: 492.9691
Resolution: 10595 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

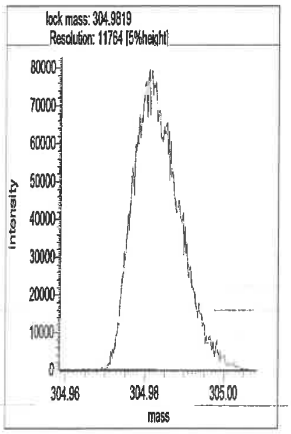

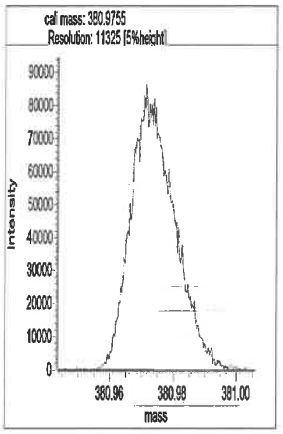

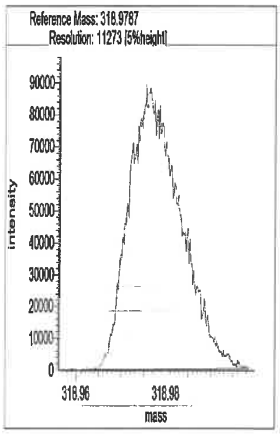

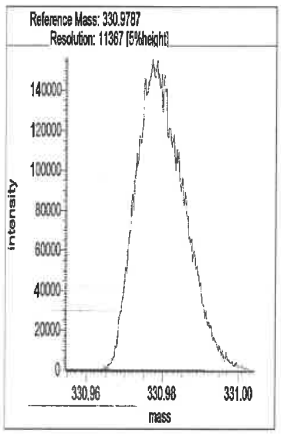

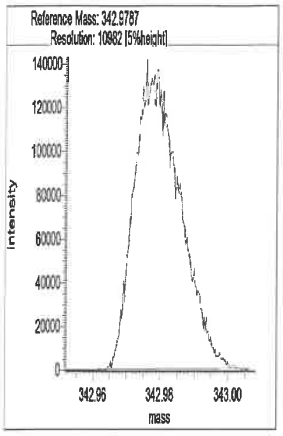

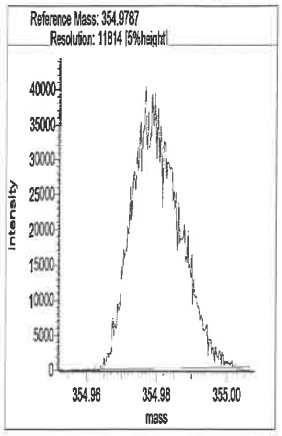

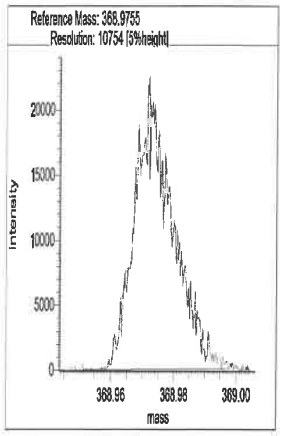

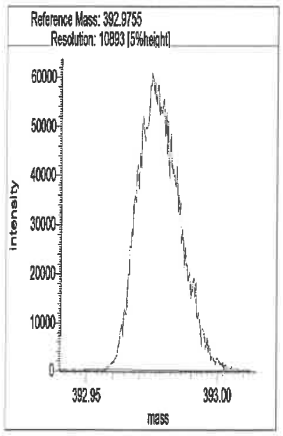

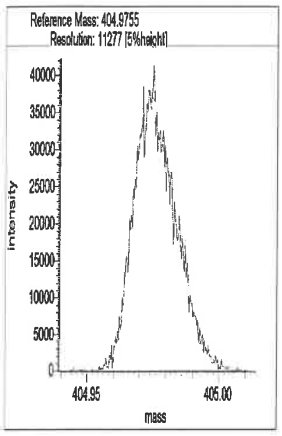

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

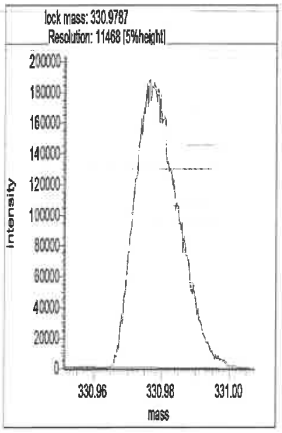

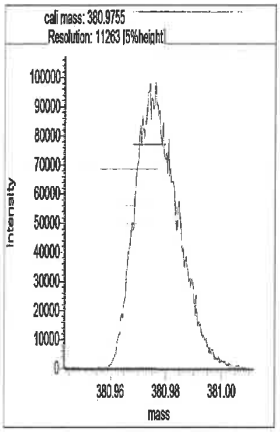

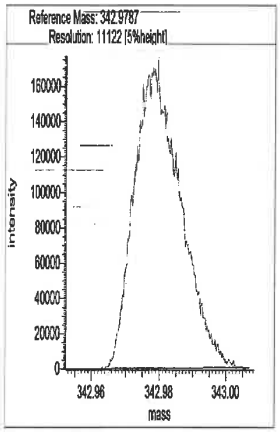

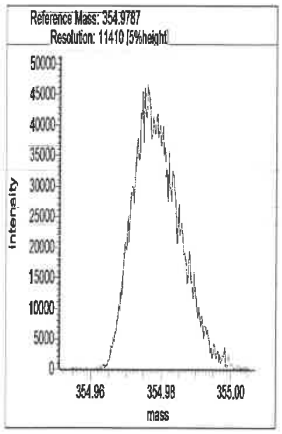

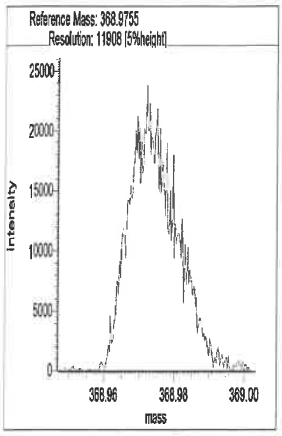

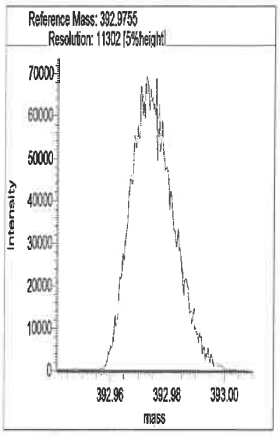

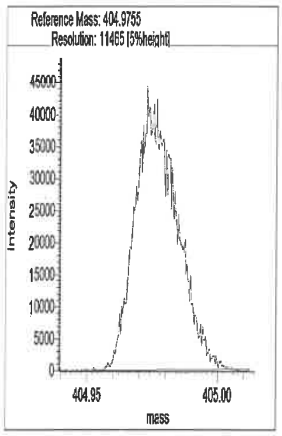

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

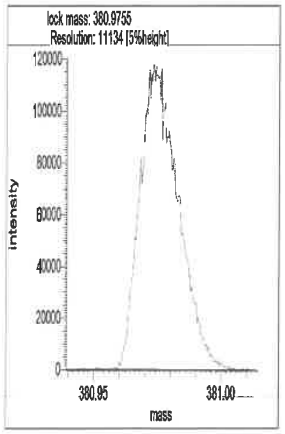

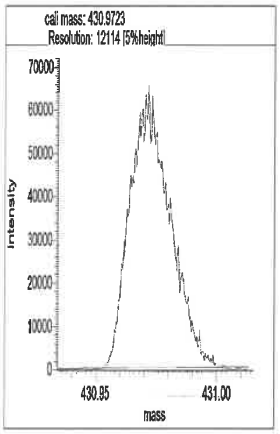

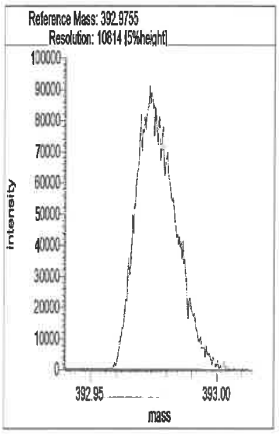

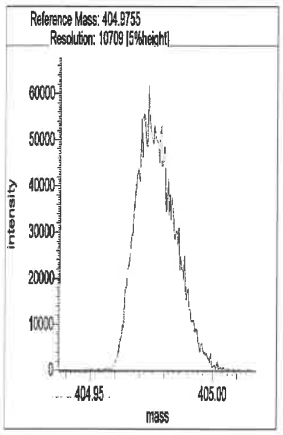

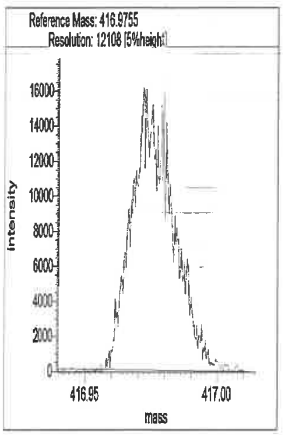

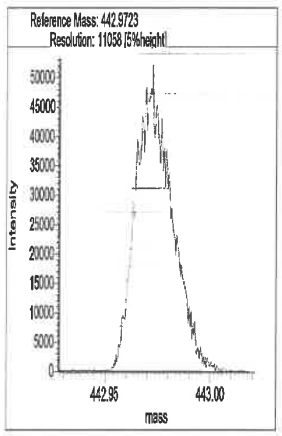

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

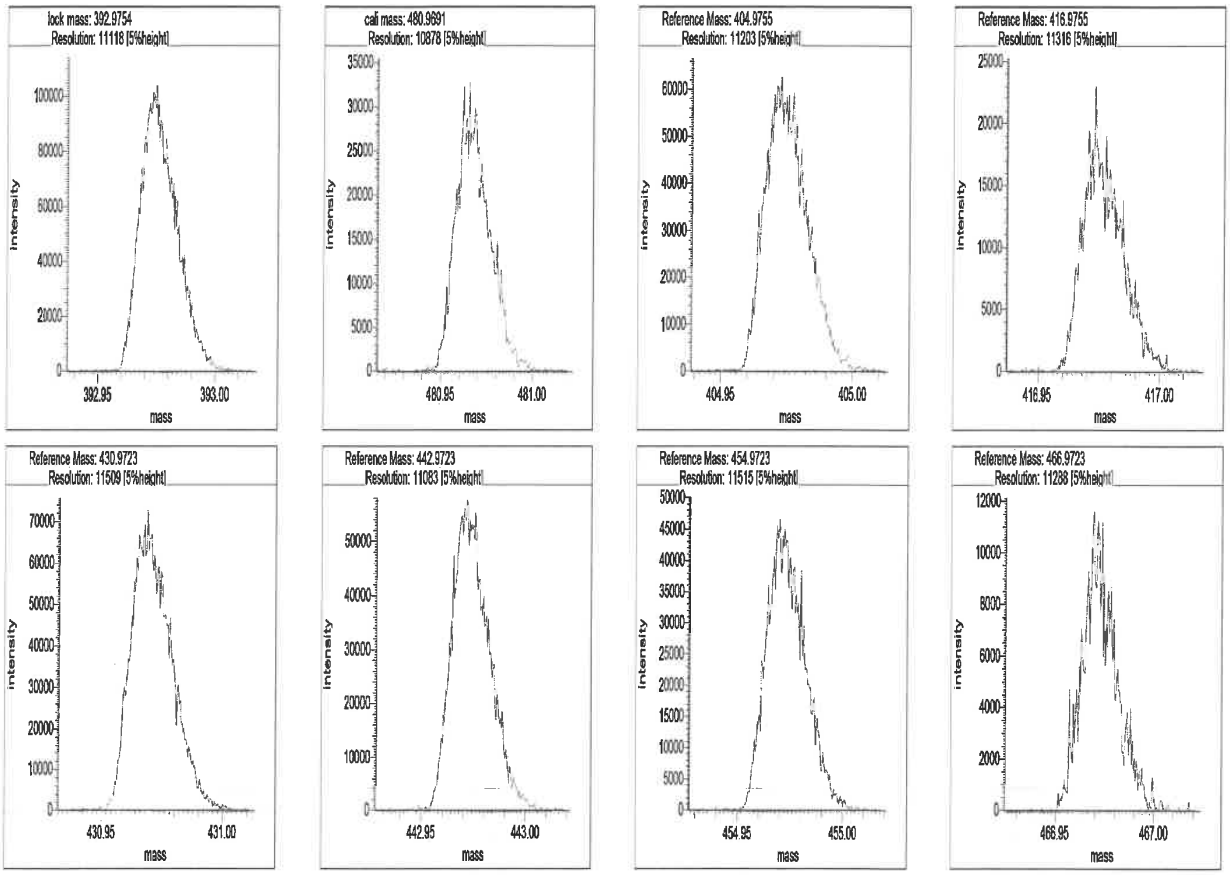

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

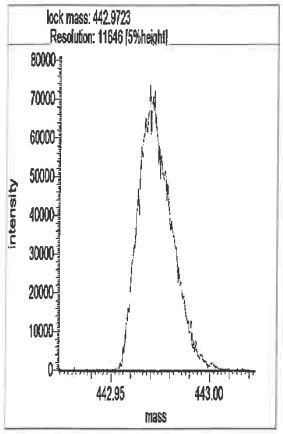
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

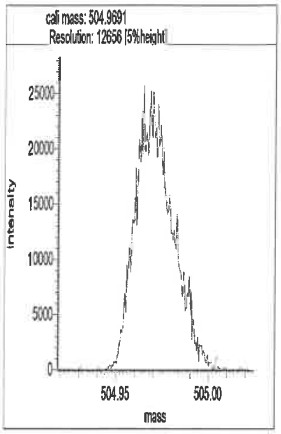
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

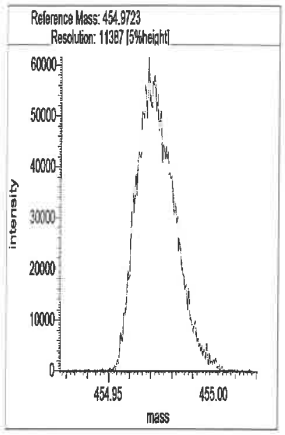
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

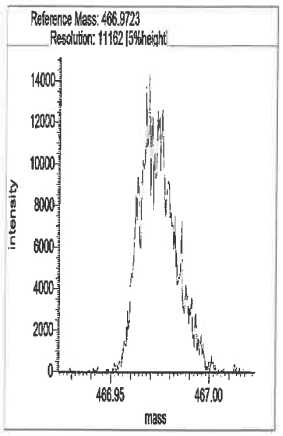
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

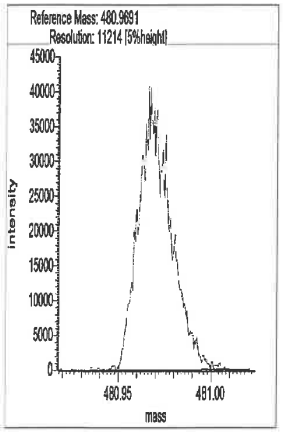
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

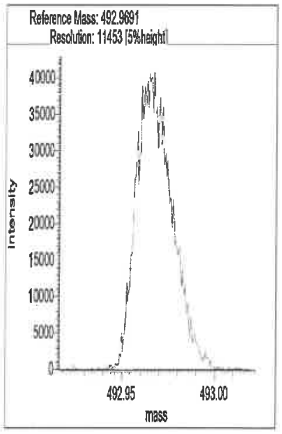
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Aug-2021 15:14:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:12 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 17:09:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.505	872844	0.84	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.517	1180751	0.79	1.3459	100.5	100.5	0.2362	0.2362	101	
2,3,7,8-TCDF	20.535	127151	0.81	1.0802	9.969	9.969	0.0201	0.0201	99.69	M
A Non-2,3,7,8-sub-TCDF	19.983	4146	0.77	1.0802	0.3965	0.3251	0.0201	0.1142	0.00	RQ
S Total TCDF					10.4	10.3	0.0201	0.0201		RQ
D 13C-2,3,7,8-TCDD	21.891	850336	0.79	0.9317	104.6	104.6	0.1468	0.1468	105	
$ 37Cl4-2,3,7,8-TCDD	21.926	88617		1.0083	10.1	10.1	0.006047	0.006047	101	
2,3,7,8-TCDD	21.900	84293	0.79	1.0753	9.218	9.218	0.0312	0.0312	92.18	
A Non-2,3,7,8-sub-TCDD	20.816	223	0.77	1.0753	0.0629	0.0244	0.0312	0.0312	0.00	RQ
S Total TCDD					9.281	9.243	0.0312	0.0312		RQ
D 13C-1,2,3,7,8-PeCDF	27.375	1055618	1.59	1.1405	106.0	106.0	0.3337	0.3337	106	
1,2,3,7,8-PeCDF	27.401	564968	1.61	1.0543	50.8	50.8	0.1524	0.1524	102	
D 13C-2,3,4,7,8-PeCDF	28.900	1086262	1.60	1.1253	110.6	110.6	0.3382	0.3382	111	
2,3,4,7,8-PeCDF	28.934	523506	1.59	1.0079	47.8	47.8	0.1622	0.1622	95.63	
A F1 PeCDFs	24.695	113	1.55	1.0311	0.0243	0.0102	0.003144	0.008151	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.196						0.1572	0.1572		n
S Total PeCDF					98.6	98.6	0.1573	0.1573		RQ
D 13C-1,2,3,7,8-PeCDD	29.734	639607	1.60	0.7165	102.3	102.3	0.1969	0.1969	102	
1,2,3,7,8-PeCDD	29.750	337811	1.56	1.0465	50.5	50.5	0.0678	0.0678	101	
A Non-2,3,7,8-sub-PeCDD	28.556						0.0678	0.0678		
S Total PeCDD					50.5	50.5	0.0678	0.0678		
D 13C-1,2,3,4,7,8-HxCDF	35.008	1081014	0.54	0.9648	114.2	114.2	0.3692	0.3692	114	
1,2,3,4,7,8-HxCDF	35.034	609522	1.29	1.1474	49.1	49.1	0.2200	0.2200	98.28	
D 13C-1,2,3,6,7,8-HxCDF	35.177	1092903	0.52	1.0708	104.0	104.0	0.3326	0.3326	104	
1,2,3,6,7,8-HxCDF	35.185	703282	1.26	1.2178	52.8	52.8	0.2080	0.2080	106	
D 13C-2,3,4,6,7,8-HxCDF	35.977	1067773	0.54	1.0413	104.5	104.5	0.3421	0.3421	105	
2,3,4,6,7,8-HxCDF	35.994	689655	1.27	1.2145	53.2	53.2	0.1898	0.1898	106	
D 13C-1,2,3,7,8,9-HxCDF	36.861	1061355	0.53	0.9731	111.2	111.2	0.3660	0.3660	111	
1,2,3,7,8,9-HxCDF	36.878	700315	1.29	1.2401	53.2	53.2	0.1808	0.1808	106	
A Non-2,3,7,8-sub-HxCDF	35.117						0.1987	0.1987		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					208.4	208.4	0.1996	0.1996		
* 13C-1,2,3,7,8,9-HxCDD	36.667	980938	1.26	1.8E+04	100.0	100.0				M
D 13C-1,2,3,4,7,8-HxCDD	36.196	782379	1.29	0.7587	105.1	105.1	0.2282	0.2282	105	
1,2,3,4,7,8-HxCDD	36.204	395636	1.27	1.0608	47.7	47.7	0.1125	0.1125	95.34	
D 13C-1,2,3,6,7,8-HxCDD	36.305	892057	1.27	0.8593	105.8	105.8	0.2015	0.2015	106	
1,2,3,6,7,8-HxCDD	36.322	433723	1.26	0.9933	48.9	48.9	0.1139	0.1139	97.89	
1,2,3,7,8,9-HxCDD	36.684	456594	1.27	1.1094	49.2	49.2	0.1047	0.1047	98.32	
A Non-2,3,7,8-sub-HxCDD	35.475						0.1102	0.1102		
S Total HxCDD					145.8	145.8	0.1104	0.1104		
D 13C-1,2,3,4,6,7,8-HpCDF	38.668	913255	0.46	0.7359	126.5	126.5	0.4372	0.4372	127	
1,2,3,4,6,7,8-HpCDF	38.685	622245	1.03	1.4421	47.2	47.2	0.2066	0.2066	94.50	
D 13C-1,2,3,4,7,8,9-HpCDF	39.923	866894	0.46	0.6854	128.9	128.9	0.4695	0.4695	129	M
1,2,3,4,7,8,9-HpCDF	39.932	551031	1.06	1.3092	48.6	48.6	0.2261	0.2261	97.11	
A Non-2,3,7,8-sub-HpCDF	39.301						0.2159	0.2159		n
S Total HpCDF					95.8	95.8	0.2164	0.2164		
D 13C-1,2,3,4,6,7,8-HpCDD	39.612	800046	1.03	0.6745	120.9	120.9	0.3371	0.3371	121	
1,2,3,4,6,7,8-HpCDD	39.620	422590	1.04	1.0503	50.3	50.3	0.1108	0.1108	101	
A Non-2,3,7,8-sub-HpCDD	39.297	9241	1.16	1.0503	1.100	1.100	0.1108	1.100	0.00	
S Total HpCDD					51.4	51.4	0.1108	0.1108		
D 13C-OCDD	42.118	1485464	0.88	0.5446	278.0	278.0	0.3266	0.3266	139	
OCDF	42.211	1043496	0.93	1.3168	106.7	106.7	0.1409	0.1409	107	
OCDD	42.126	777414	0.91	1.0620	98.6	98.6	0.1110	0.1110	98.56	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Aug-2021 15:14:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:12 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 17:09:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.505	21.505	0		399246	51899	51	127	1018		a
333.9338	21.470	21.505	-2		473598	62915	12	30	5243	0.84(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.517	20.517	0	0.954	520031	67444	106	265	636		
317.9389	20.509	20.517	-1	0.954	660720	93847	40	100	2346	0.79(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.535	20.580	-3	1.001	56730	7695	5	12	1539		M
305.8987	20.543	20.580	-2	1.001	70421	9641	9	22	1071	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.938	19.983	-63	0.923	170	62	5	12	12		
305.8987	18.955	19.983	-62	0.924	483	58	9	22	6	0.35(0.65-0.89)	
	Empc Correction				220	80	9	22	9		
303.9016	19.805	19.983	-11	0.965	792	127	5	12	25		
	Empc Correction				587	121	5	12	24		
305.8987	19.840	19.983	-9	0.967	763	158	9	22	18	1.04(0.65-0.89)	
303.9016	20.809	19.983	49	1.014	966	211	5	12	42		
	Empc Correction				633	132	5	12	26		
305.8987	20.809	19.983	49	1.014	823	172	9	22	19	1.17(0.65-0.89)	
303.9016	20.869	19.983	53	1.017	259	106	5	12	21		
305.8987	20.904	19.983	55	1.019	397	182	9	22	20	0.65(0.65-0.89)	
303.9016	22.123	19.983	128	1.078	128	60	5	12	12		
305.8987	22.115	19.983	128	1.078	276	92	9	22	10	0.46(0.65-0.89)	
	Empc Correction				166	77	9	22	9		
13C-2,3,7,8-TCDD											
331.9368	21.891	21.891	0	1.018	376057	46512	51	127	912		
333.9338	21.866	21.891	-2	1.017	474279	57849	12	30	4821	0.79(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											
327.8847	21.926	21.926	0	1.020	88617	11185	3	7	3728		
2,3,7,8-TCDD											
319.8965	21.900	21.928	-2	1.000	37238	5208	11	27	473		
321.8936	21.917	21.928	-1	1.001	47055	5923	3	7	1974	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.347	20.816	92	1.021	449	96	11	27	9		
	Empc Correction				97	52	11	27	5		
321.8936	22.364	20.816	93	1.022	126	68	3	7	23	3.56(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.375	27.375	0	1.273	648386	95776	93	232	1030		
353.8970	27.375	27.375	0	1.273	407232	59794	82	205	729	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.401	27.401	0	1.001	348720	51626	58	145	890		
341.8567	27.401	27.401	0	1.001	216248	31764	42	105	756	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.900	28.900	0	1.344	668645	94221	93	232	1013		
353.8970	28.908	28.900	1	1.344	417617	58719	82	205	716	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.934	28.934	0	1.001	321600	44628	58	145	769		
341.8567	28.934	28.934	0	1.001	201906	27959	42	105	666	1.59(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.107	24.695	-35	0.881	55	39	1	2	39		
341.8567	24.098	24.695	-36	0.880	103	52	1	2	52	0.53(1.32-1.78)	
	Empc Correction				35	25	1	2	25		
339.8597	24.167	24.695	-32	0.883	14	7	1	2	7		
341.8567	24.158	24.695	-32	0.882	96	38	1	2	38	0.15(1.32-1.78)	
	Empc Correction				9	4	1	2	4		
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.990	28.196	-12	1.022	3347	463	58	145	8		
341.8567	28.007	28.196	-11	1.023	1993	308	42	105	7	1.68(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.734	29.734	0	1.383	393342	53131	43	107	1236		
369.8919	29.717	29.734	-1	1.382	246265	31489	22	55	1431	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.750	29.750	0	1.001	206041	26780	17	42	1575		
357.8516	29.742	29.750	-1	1.000	131770	17431	7	17	2490	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						17	42			
357.8516	28.556						7	17			
13C-1,2,3,4,7,8-HxCDF											
383.8639	35.008	35.008	0	0.955	377816	74219	109	272	681		
385.8610	35.017	35.008	1	0.955	703198	136560	193	482	708	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.034	35.034	0	1.001	343279	67338	118	295	571		
375.8178	35.034	35.034	0	1.001	266243	52523	95	237	553	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.177	35.177	0	0.959	376027	74811	109	272	686		
385.8610	35.177	35.177	0	0.959	716876	135202	193	482	701	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.185	35.185	0	1.000	392015	74402	118	295	631		
375.8178	35.185	35.185	0	1.000	311267	58994	95	237	621	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.977	35.977	0	0.981	372963	83270	109	272	764		
385.8610	35.985	35.977	1	0.981	694810	147559	193	482	765	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.994	35.994	0	1.000	386238	84058	118	295	712		
375.8178	35.994	35.994	0	1.000	303417	65154	95	237	686	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.861	36.861	0	1.005	369514	83111	109	272	762		
385.8610	36.870	36.861	1	1.006	691841	154196	193	482	799	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.878	36.878	0	1.000	393832	87889	118	295	745		
375.8178	36.878	36.878	0	1.000	306483	68413	95	237	720	1.29(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.117						118	295			
375.8178	35.117						95	237			
13C-1,2,3,7,8,9-HxCDD											M
401.8559	36.667	36.667	0		547692	117622	80	200	1470		M
403.8529	36.667	36.667	0		433246	94341	67	167	1408	1.26(1.05-1.43)	M
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.196	36.196	0	0.987	440249	100900	80	200	1261		
403.8529	36.187	36.196	-1	0.987	342130	79230	67	167	1183	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.204	36.204	0	1.000	221550	51035	52	130	981		
391.8127	36.204	36.204	0	1.000	174086	38510	34	85	1133	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.305	36.305	0	0.990	498419	104261	80	200	1303		
403.8529	36.305	36.305	0	0.990	393638	85751	67	167	1280	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.322	36.322	0	1.000	242161	51161	52	130	984		
391.8127	36.322	36.322	0	1.000	191562	39885	34	85	1173	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.684	36.684	0	1.013	255516	54919	52	130	1056		
391.8127	36.684	36.684	0	1.013	201078	43958	34	85	1293	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.475						52	130			
391.8127	35.475						34	85			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.668	38.668	0	1.055	285619	74123	93	232	797		
419.8220	38.668	38.668	0	1.055	627636	159832	180	450	888	0.46(0.37-0.51)	

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											
407.7817	38.685	38.685	0	1.000	315818	79975	147	367	544		
409.7788	38.685	38.685	0	1.000	306427	78448	132	330	594	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											M
417.8250	39.923	39.923	0	1.089	274228	74693	93	232	803		M
419.8220	39.923	39.923	0	1.089	592666	160744	180	450	893	0.46(0.37-0.51)	M
1,2,3,4,7,8,9-HpCDF											
407.7817	39.932	39.932	0	1.000	282904	78576	147	367	535		
409.7788	39.932	39.932	0	1.000	268127	73201	132	330	555	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.912	39.301	-23	1.006	4859	976	147	367	7		
409.7788	38.912	39.301	-23	1.006	4264	991	132	330	8	1.14(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.612	39.612	0	1.080	406701	112657	68	170	1657		
437.8140	39.612	39.612	0	1.080	393345	110709	125	312	886	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.620	39.620	0	1.000	215461	58465	40	100	1462		
425.7737	39.620	39.620	0	1.000	207129	56768	64	160	887	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.988	39.297	-19	0.984	4970	1304	40	100	33		
425.7737	38.996	39.297	-18	0.984	4271	1241	64	160	19	1.16(0.88-1.20)	
13C-OCDD											
469.7780	42.118	42.118	0	1.149	697151	158566	72	180	2202		
471.7750	42.109	42.118	-1	1.148	788313	180878	79	197	2290	0.88(0.76-1.02)	
OCDF											
441.7428	42.211	42.211	0	1.002	502591	114869	45	112	2553		
443.7399	42.211	42.211	0	1.002	540905	125676	81	202	1552	0.93(0.76-1.02)	
OCDD											
457.7377	42.126	42.126	0	1.000	369625	84840	36	90	2357		
459.7348	42.126	42.126	0	1.000	407789	93747	44	110	2131	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 17-Aug-2021 15:14:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.983

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1180751	161291

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1180751	161291

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.938	170	62	483	58	0.0512	0.35	RnQ
18.938	170	62	220	80	0.0306		Empc Correction
19.805	792	127	763	158	0.1219	1.04	RQ
19.805	587	121	763	158	0.1058		Empc Correction
20.809	966	211	823	172	0.1403	1.17	RQ
20.809	633	132	823	172	0.1142		Empc Correction
20.869	259	106	397	182	0.0514	0.65	
22.123	128	60	276	92	0.0317	0.46	RQ
22.123	128	60	166	77	0.0231		Empc Correction
Signal Totals:							
	1777	481	2369	669			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5057	1228				0.84	RQ
	4146	1150					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3965 = (5057 * 100.000) / (1180751 * 1.080)
Empc Amount: 0.3251 = (4146 * 100.000) / (1180751 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 17-Aug-2021 15:14:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDD, RT: 20.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	850336	104361

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	850336	104361

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.347	449	96	126	68	0.0629	3.56	RnQ
22.347	97	52	126	68	0.0244		Empc Correction
Signal Totals:							
	97	52	126	68			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	575	164				3.56	RQ
	223	120					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0629 = (575 * 100.000) / (850336 * 1.075)
Empc Amount: 0.0244 = (223 * 100.000) / (850336 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 17-Aug-2021 15:14:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.695

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1055618	155570
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1086262	152940

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1070940	154255

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.107	55	39	103	52	0.0143	0.53	RQ
24.107	55	39	35	25	0.008151		Empc Correction
24.167	14	7	96	38	0.0100	0.15	RnQ
24.167	14	7	9	4	0.002083		Empc Correction
Signal Totals:							
	69	46	44	29			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	268	136				0.35	RQ
	113	75					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0243 = (268 * 100.000) / (1070940 * 1.031)
Empc Amount: 0.0102 = (113 * 100.000) / (1070940 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	17-Aug-2021 15:14:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-HpCDD, RT: 39.297

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	800046	223366

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	800046	223366

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.988	4970	1304	4271	1241	1.10	1.16	
Signal Totals:							
	4970	1304	4271	1241			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9241	2545				1.16	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.100 = (9241 * 100.000) / (800046 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Not Detected
Expected RT: 21.50

Processing Integration Results

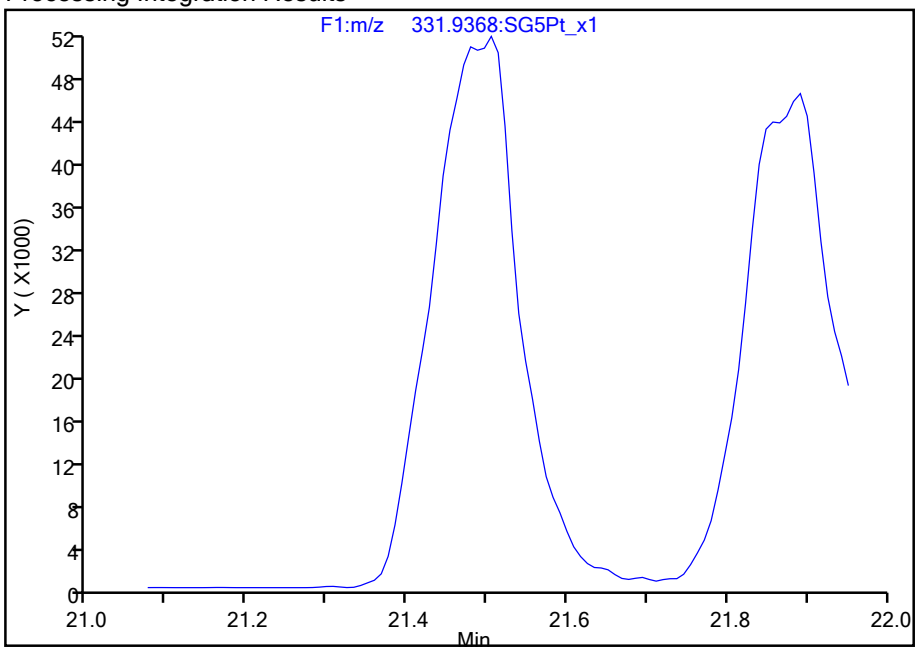

Manual Integration Results

RT: 21.50
Area: 399246
Amount: 100.0000
Amount Units: pg/ul

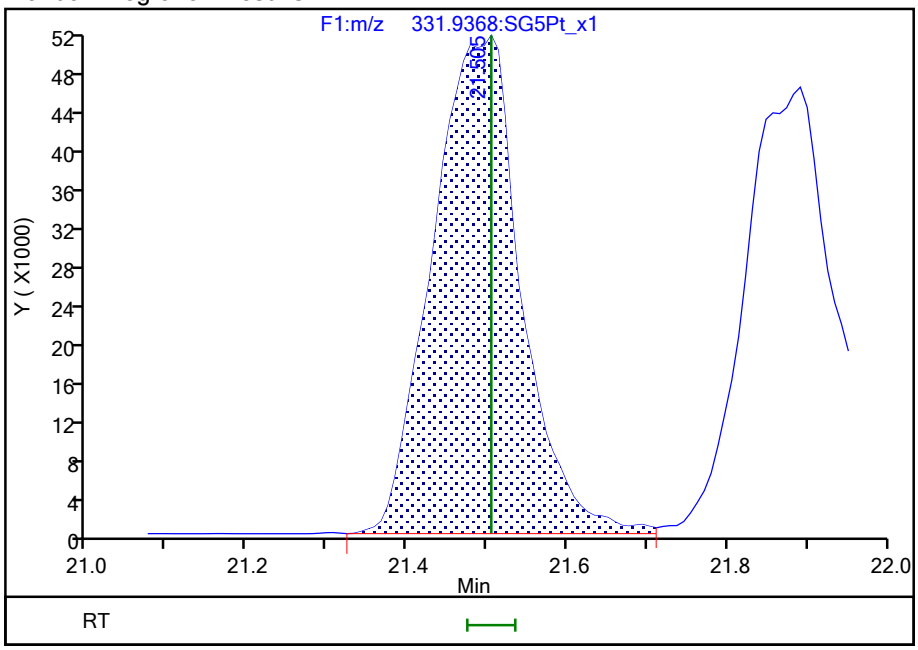

Reviewer: stephensk, 17-Aug-2021 16:07:19
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.53
Area: 54682
Amount: 9.808624
Amount Units: pg/ul

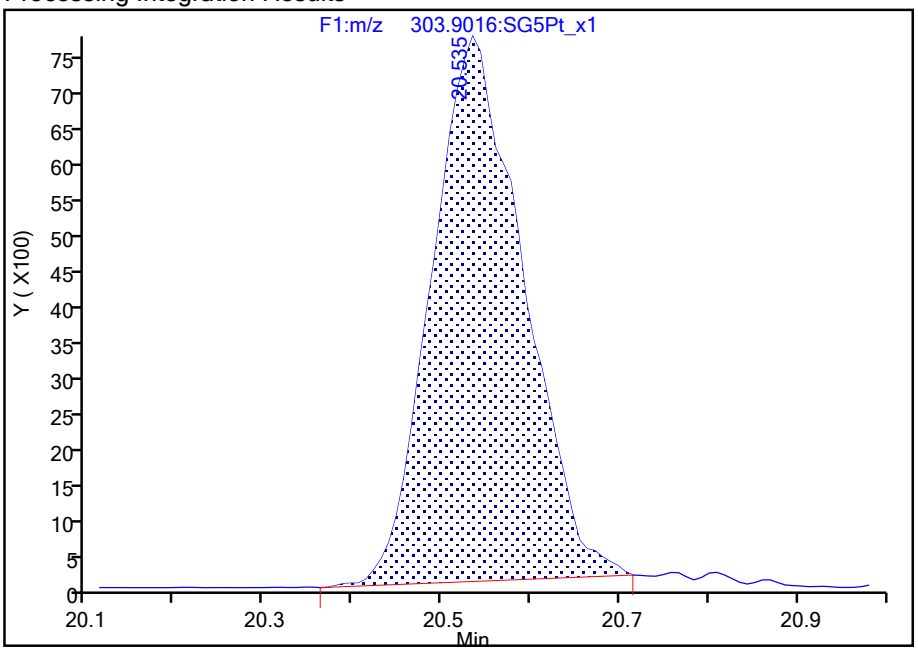

Manual Integration Results

RT: 20.53
Area: 56730
Amount: 9.969196
Amount Units: pg/ul

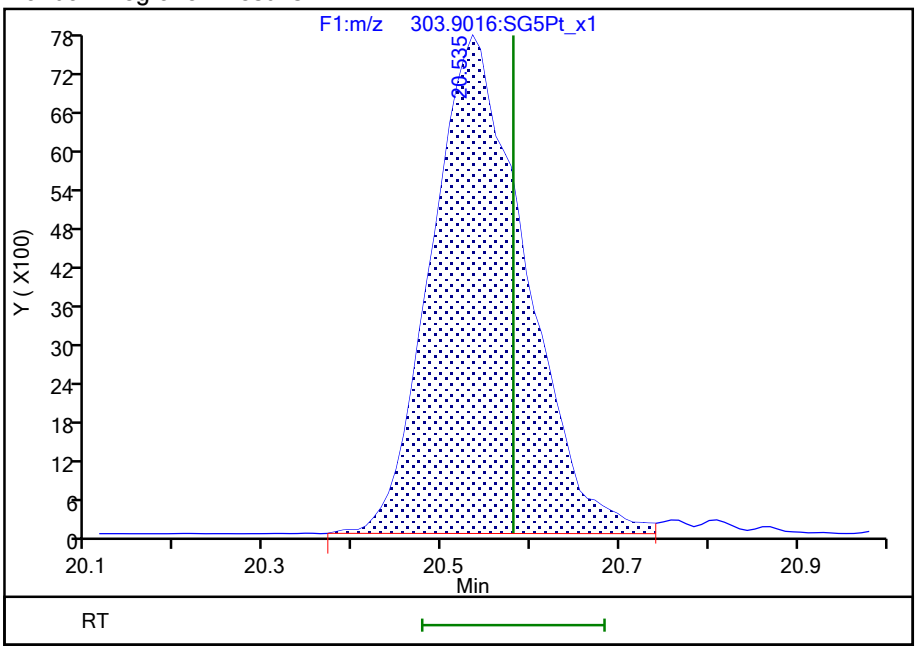

Reviewer: stephensk, 17-Aug-2021 16:07:38

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 1

Processing Integration Results

RT: 36.67
Area: 546030
Amount: 100.0000
Amount Units: pg/ul

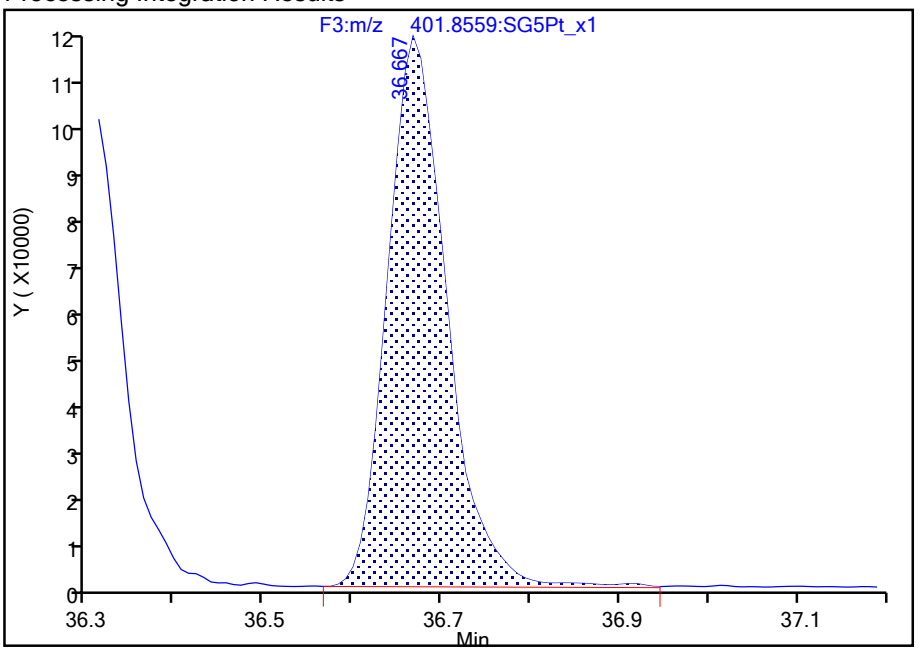

Manual Integration Results

RT: 36.67
Area: 547692
Amount: 100.0000
Amount Units: pg/ul

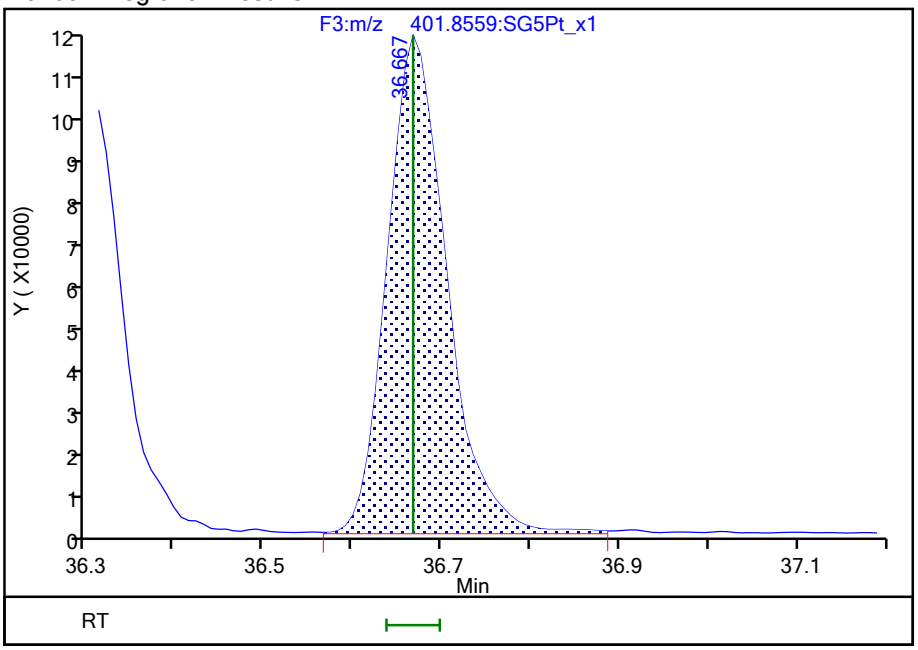

Reviewer: stephensk, 17-Aug-2021 16:09:43

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 2

Processing Integration Results

RT: 36.67
Area: 430515
Amount: 100.0000
Amount Units: pg/ul

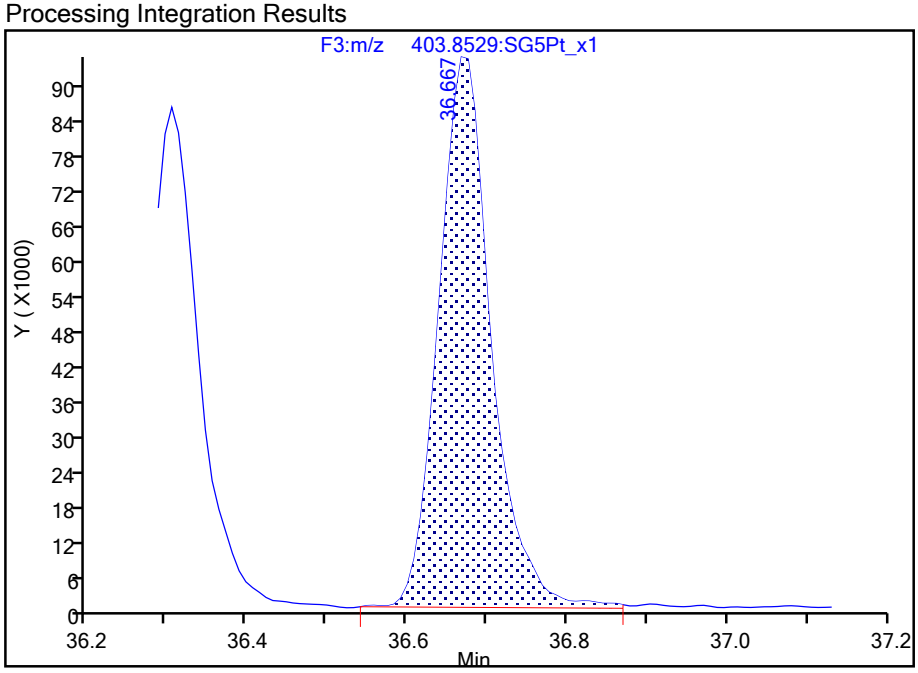

Manual Integration Results

RT: 36.67
Area: 433246
Amount: 100.0000
Amount Units: pg/ul

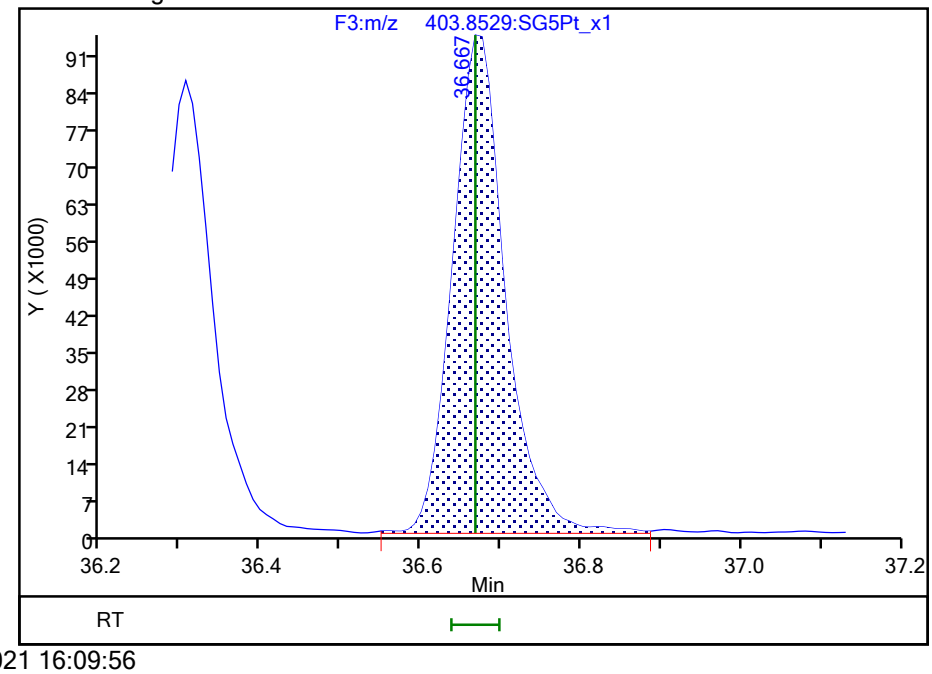

Reviewer: stephensk, 17-Aug-2021 16:09:56

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

RT: 39.92
Area: 275099
Amount: 130.6760
Amount Units: pg/ul

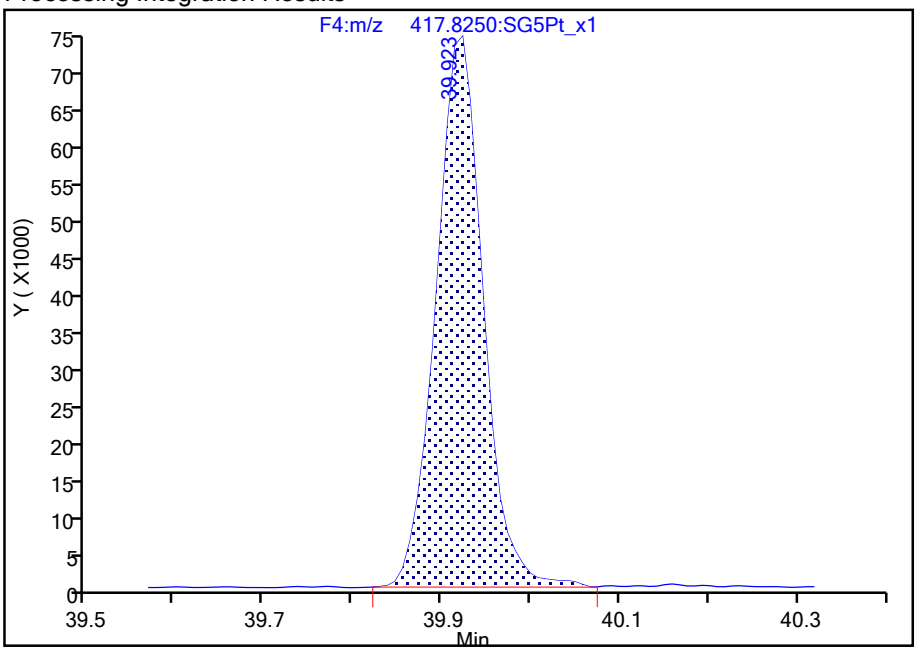

Manual Integration Results

RT: 39.92
Area: 274228
Amount: 128.9419
Amount Units: pg/ul

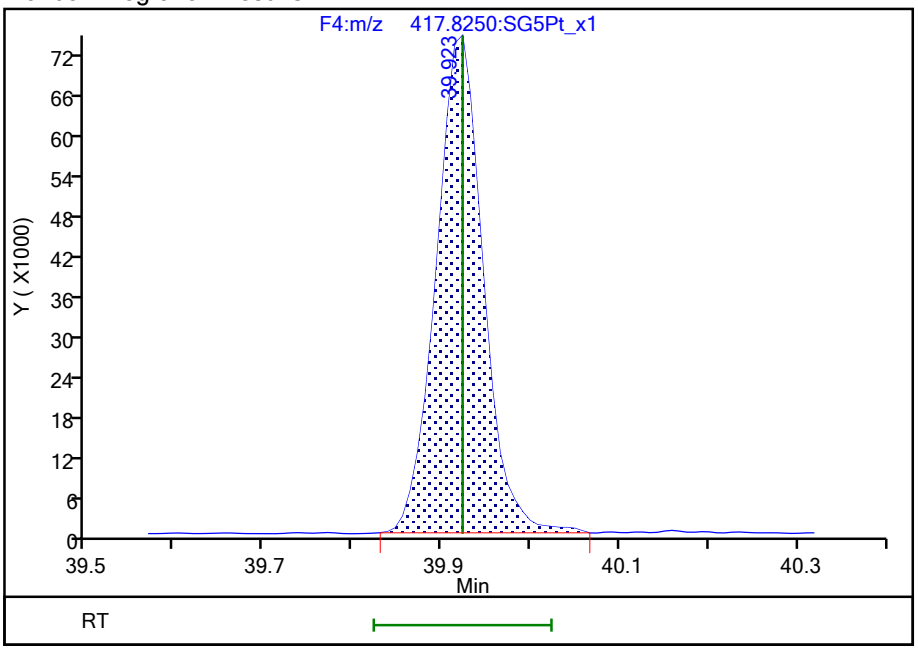

Reviewer: stephensk, 17-Aug-2021 16:09:13

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 2

Processing Integration Results

RT: 39.92
Area: 599519
Amount: 130.6760
Amount Units: pg/ul

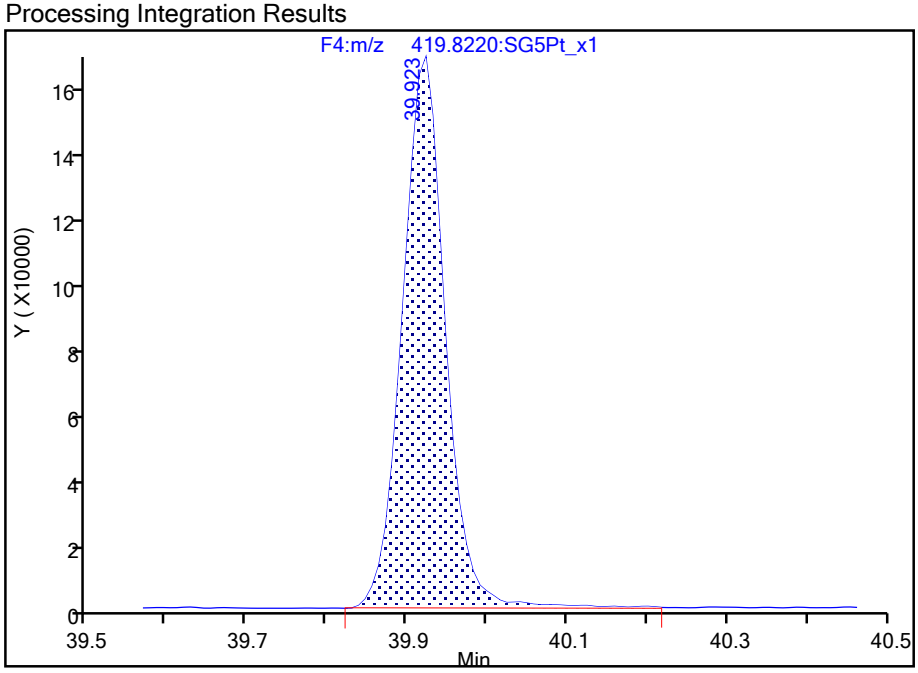

Manual Integration Results

RT: 39.92
Area: 592666
Amount: 128.9419
Amount Units: pg/ul

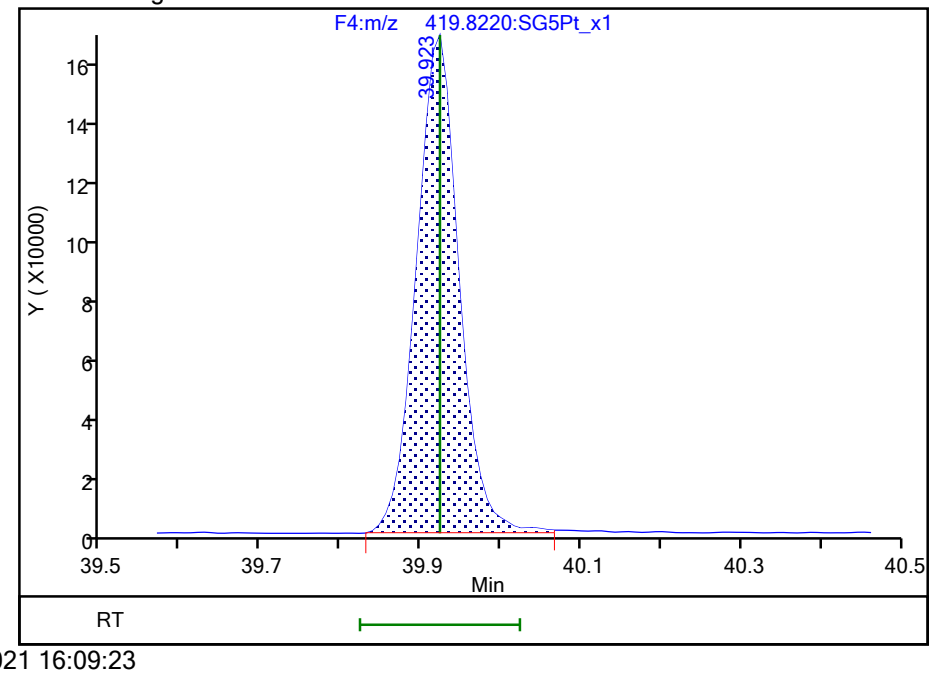

Reviewer: stephensk, 17-Aug-2021 16:09:23

Audit Action: Manually Integrated Audit Reason: Baseline

783212

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

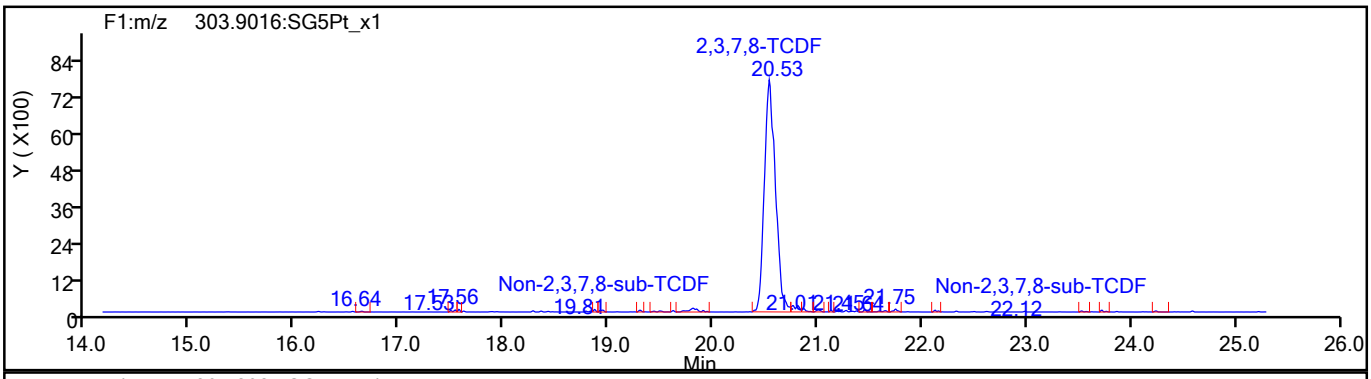

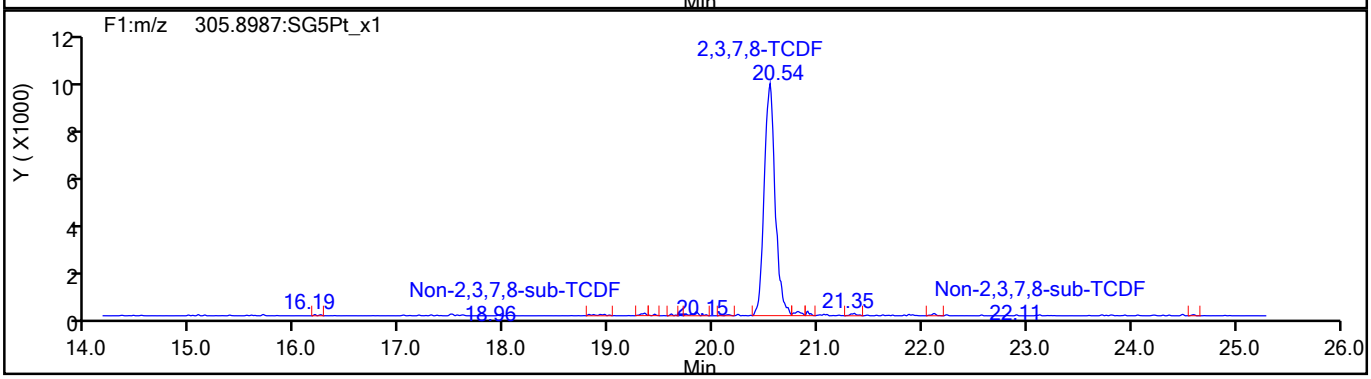

TCDF Standards

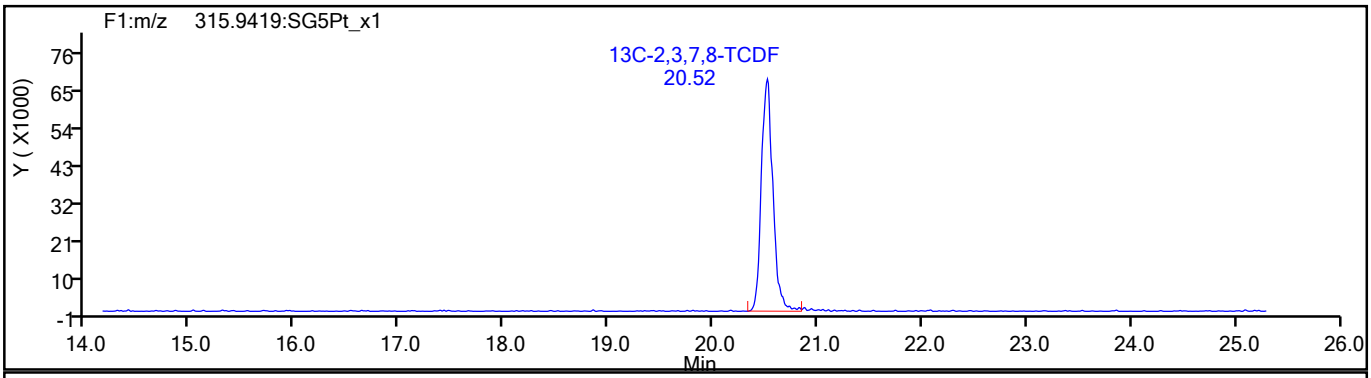

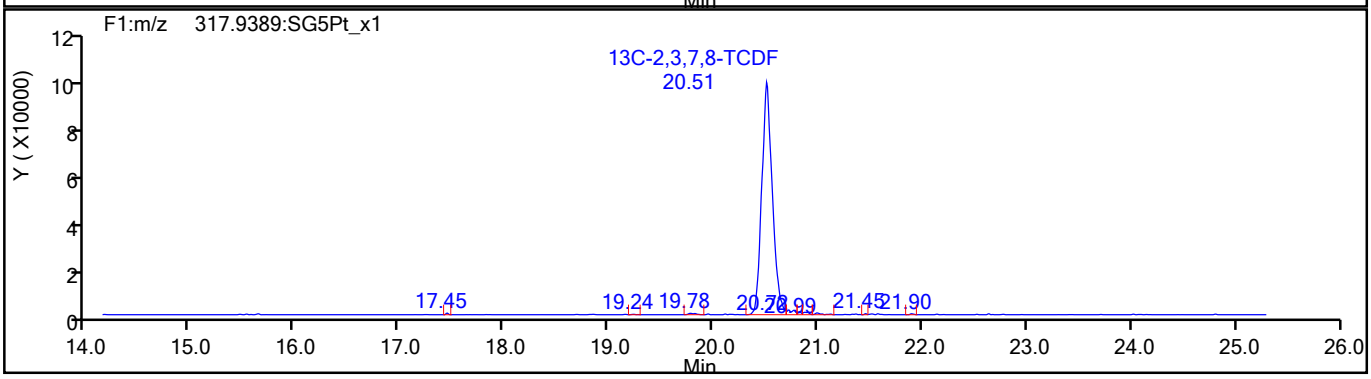

783213

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

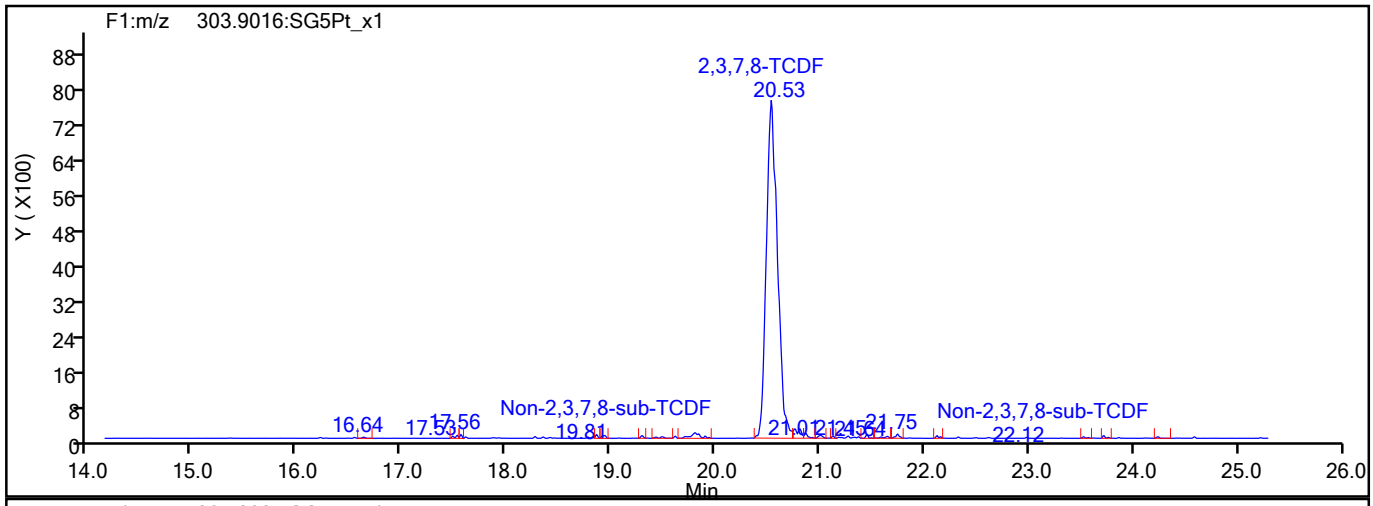

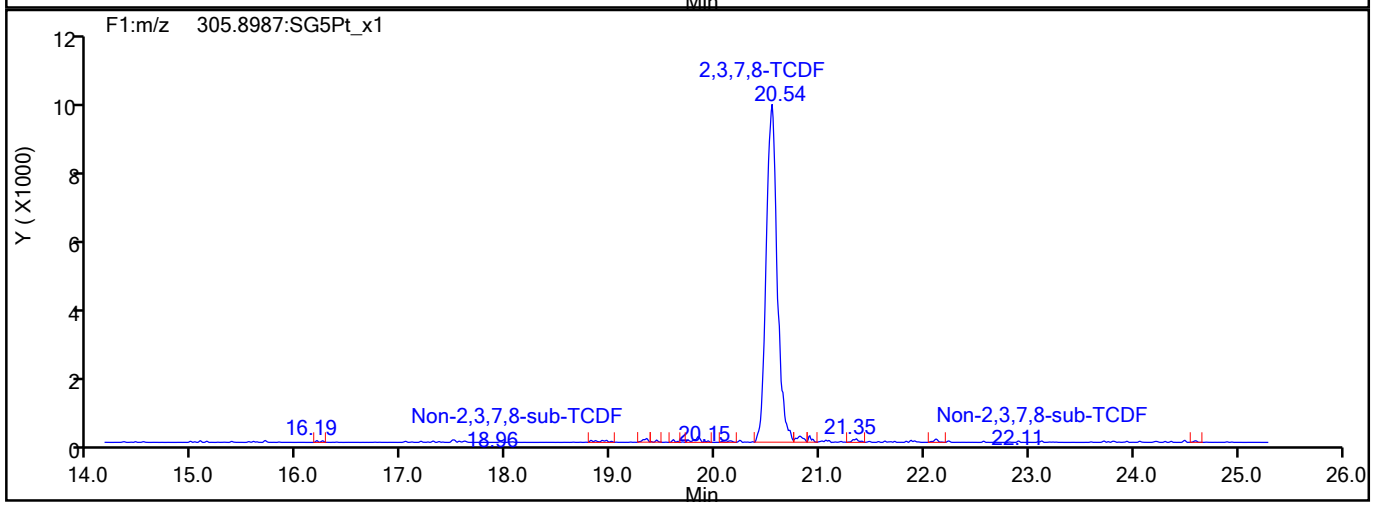

TCDF Interference Mass

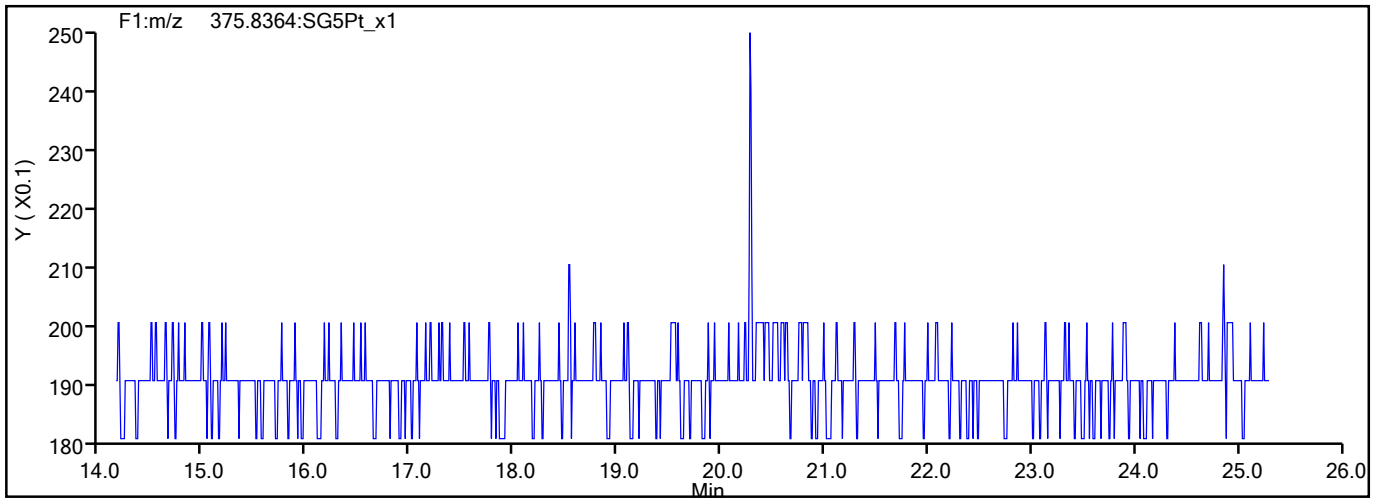

783214

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

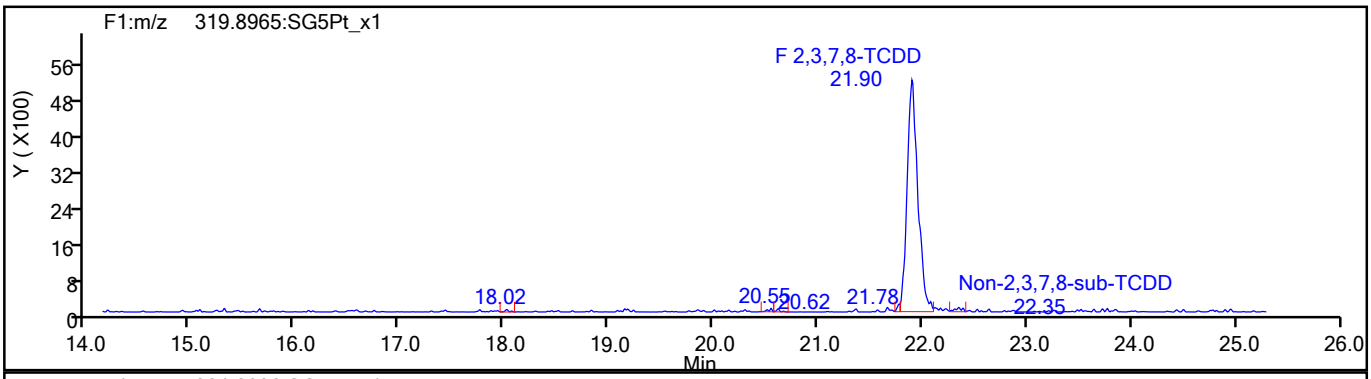

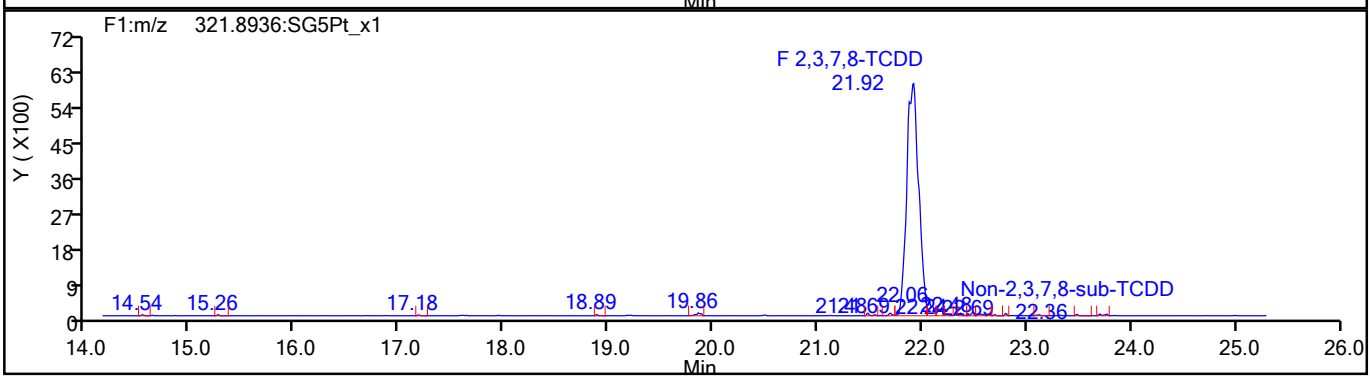

TCDD Standards

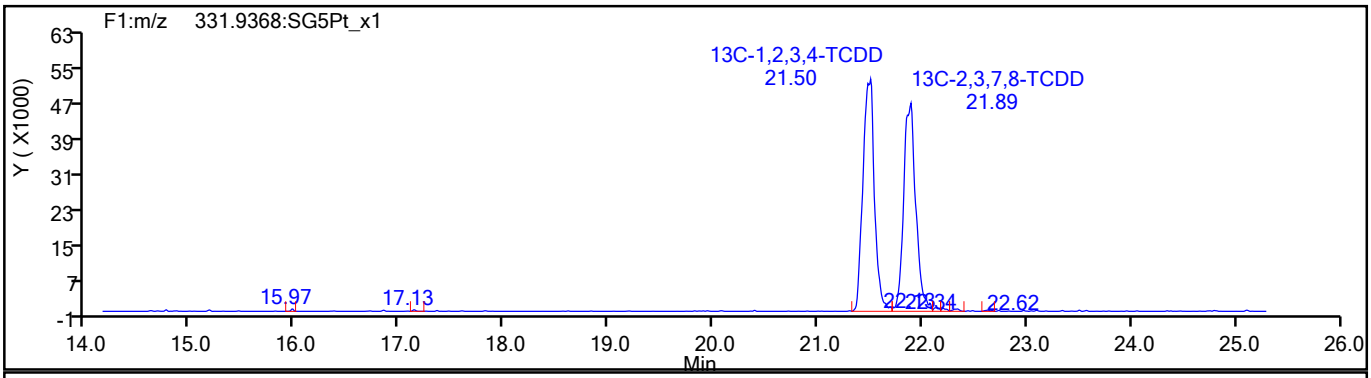

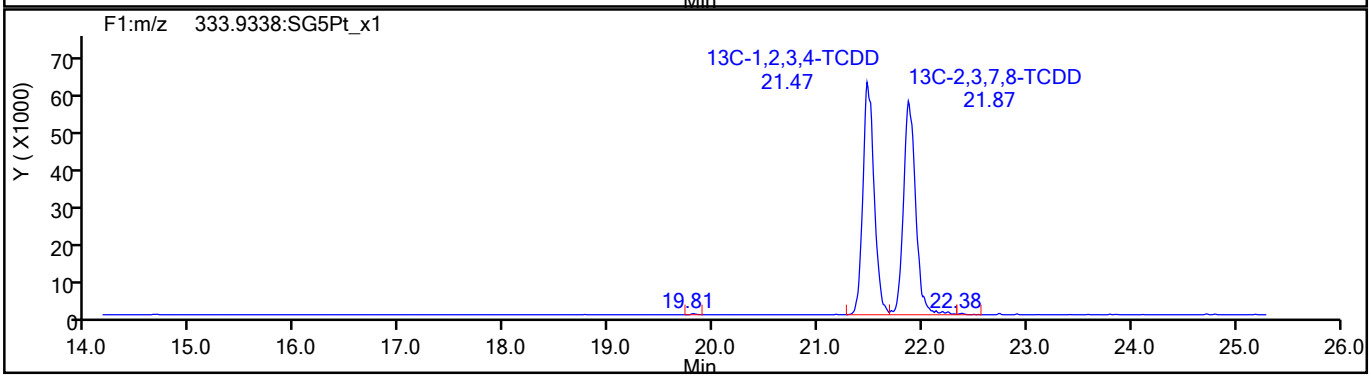

783215

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

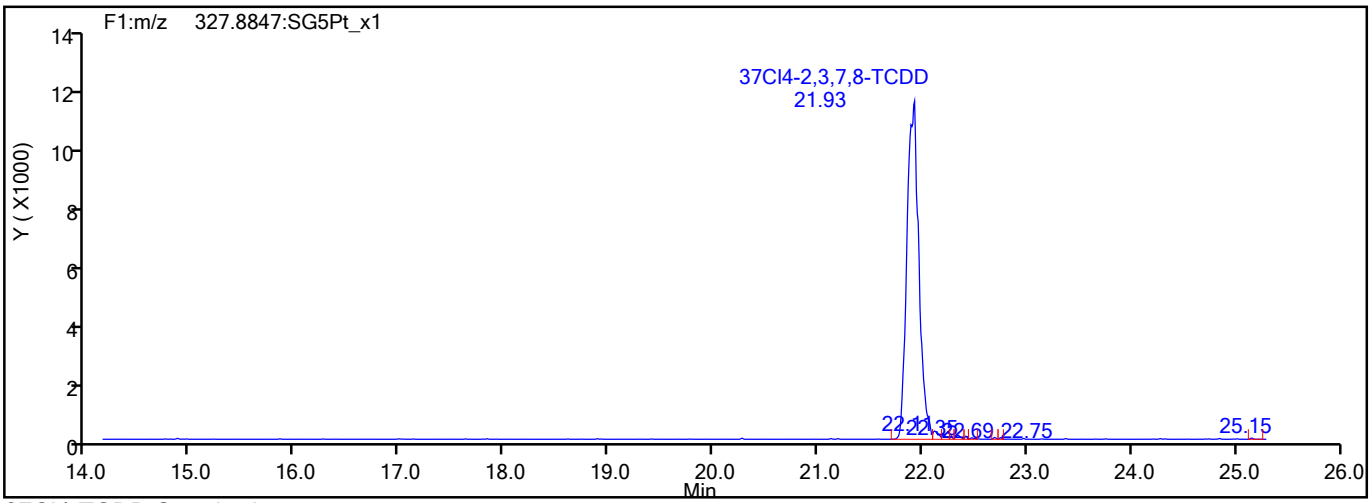

37Cl4-TCDD Standards

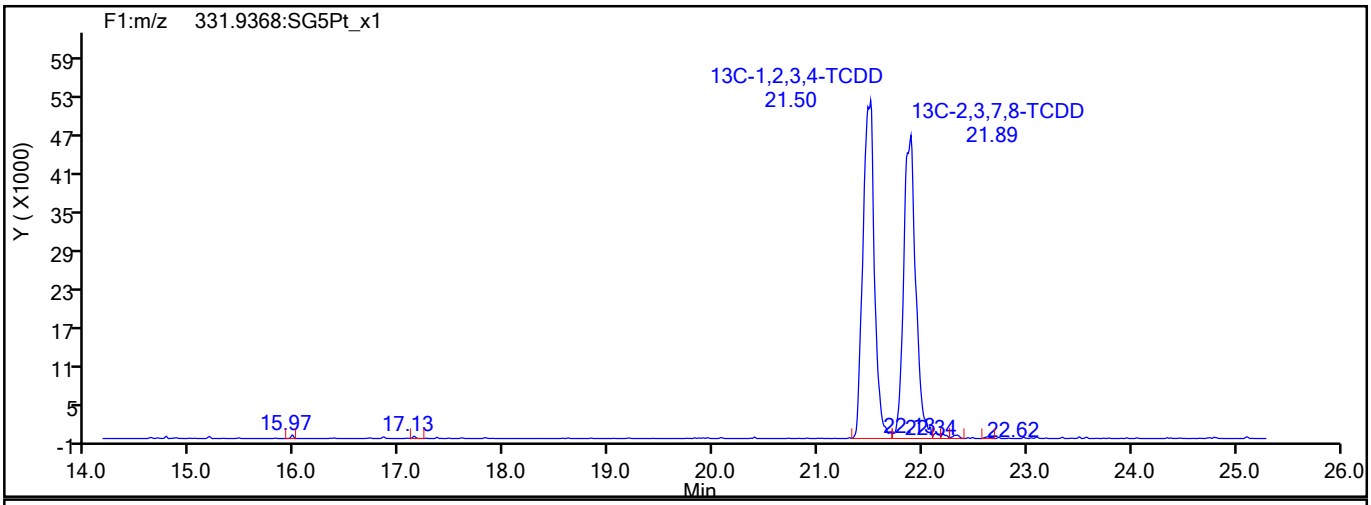

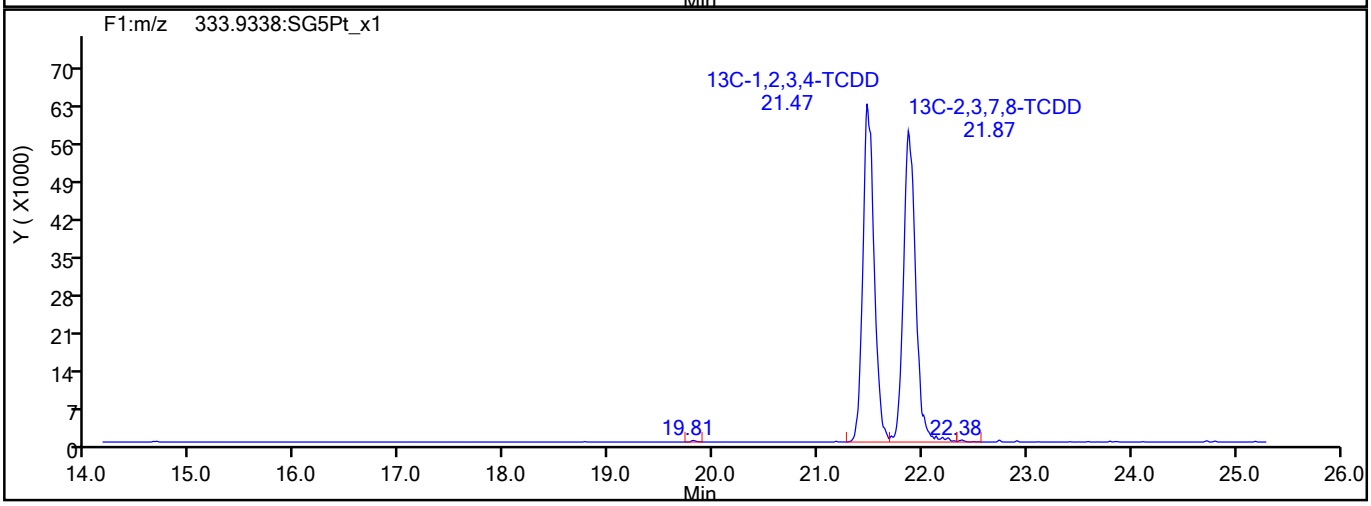

783216

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

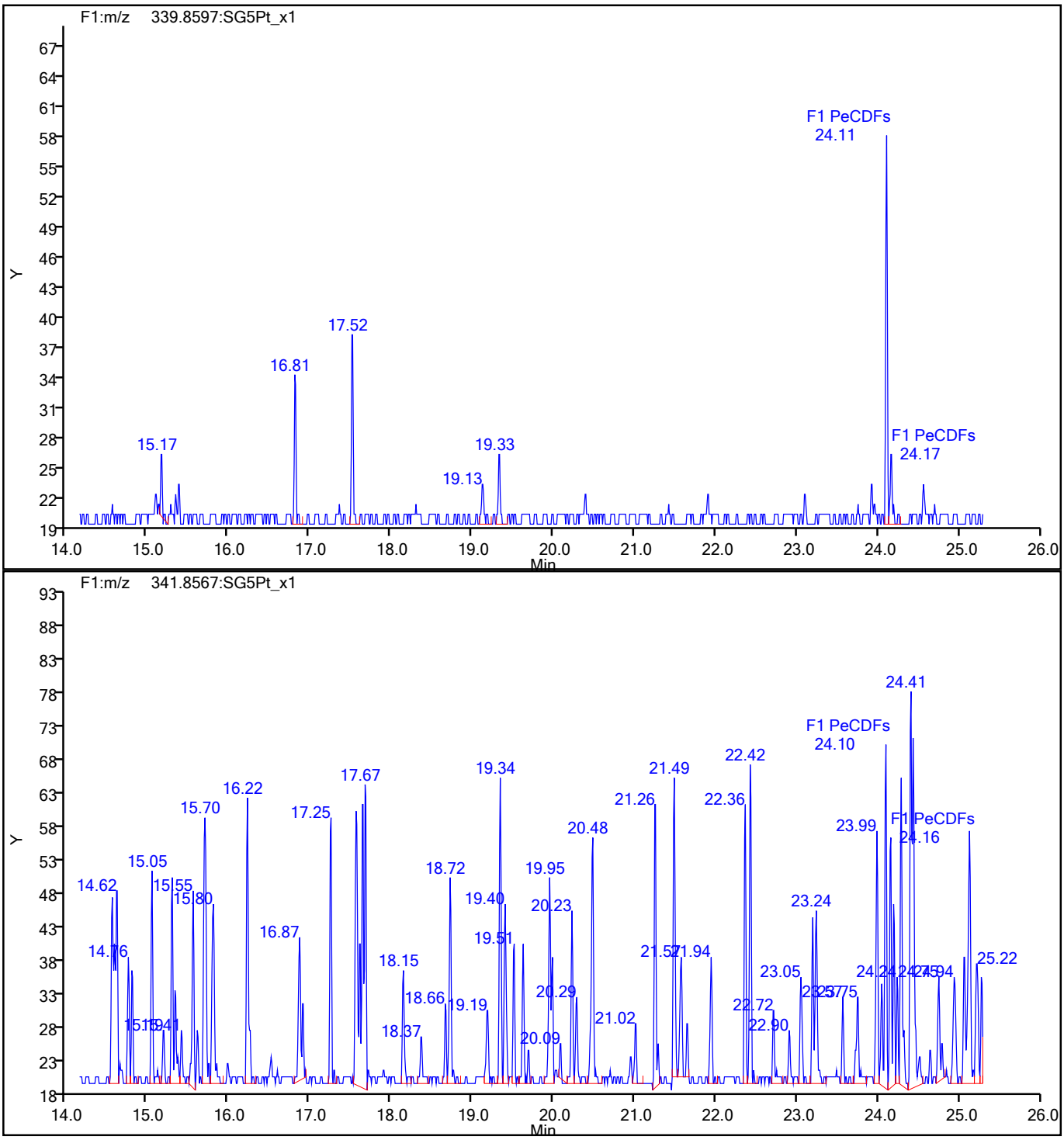

783217

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

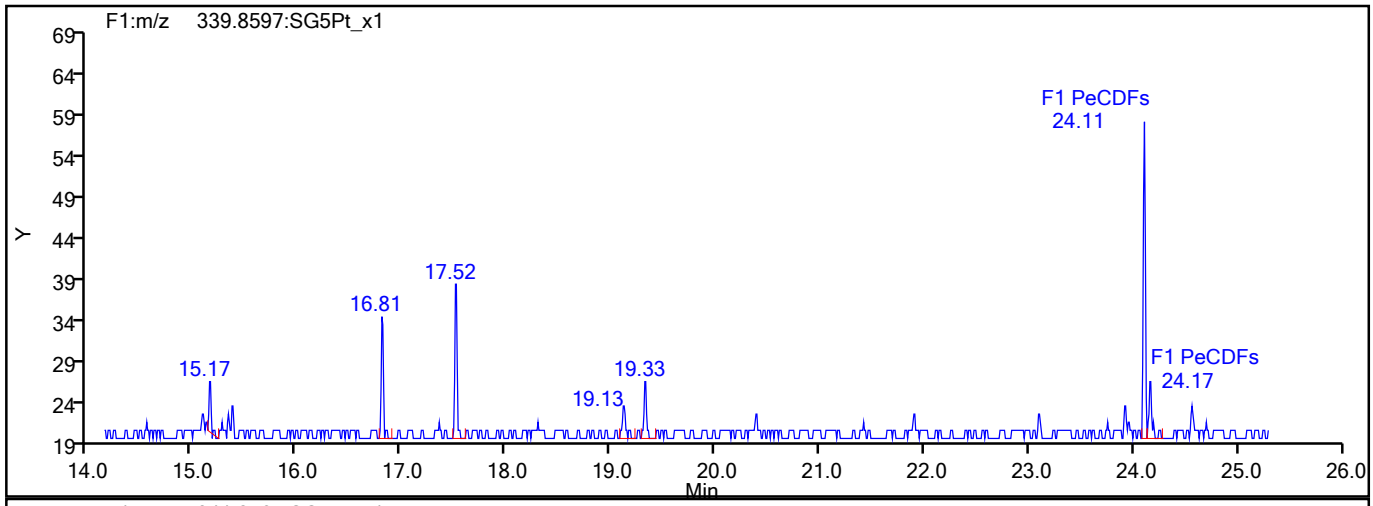

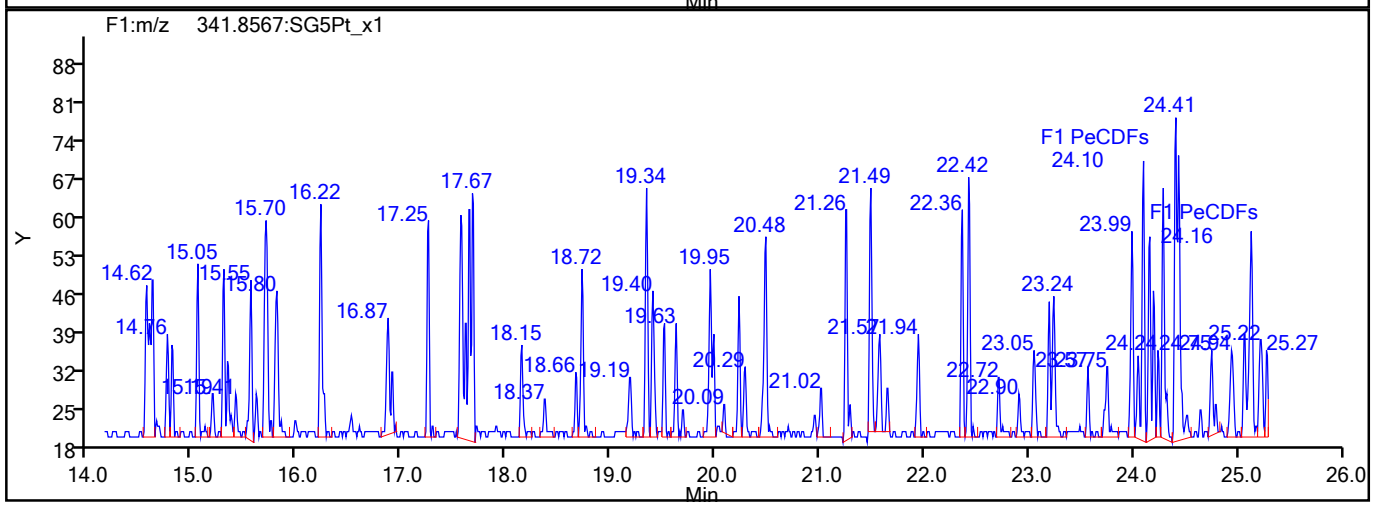

F1 PeCDFs Interference Mass

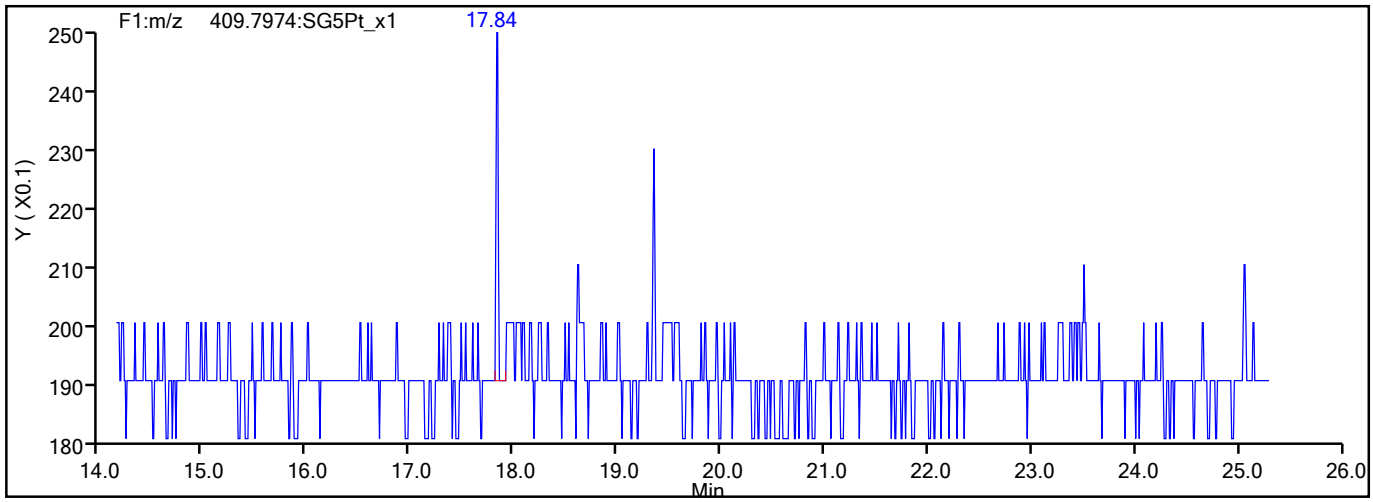

783218

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

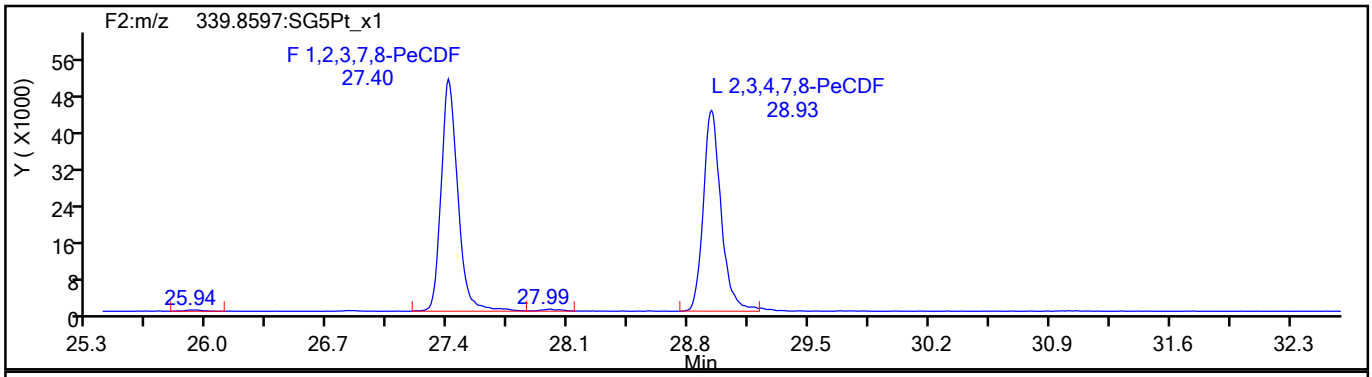

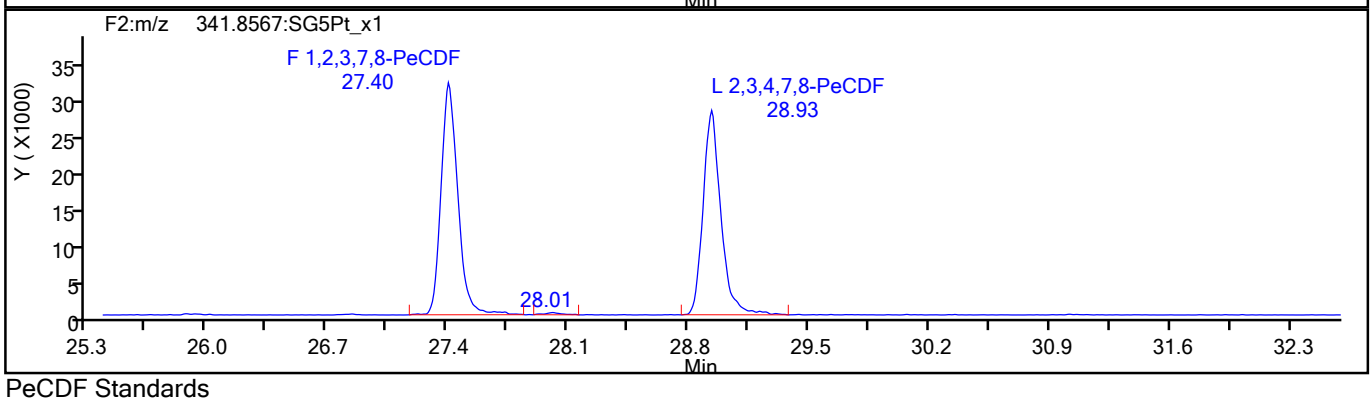

PeCDF Standards

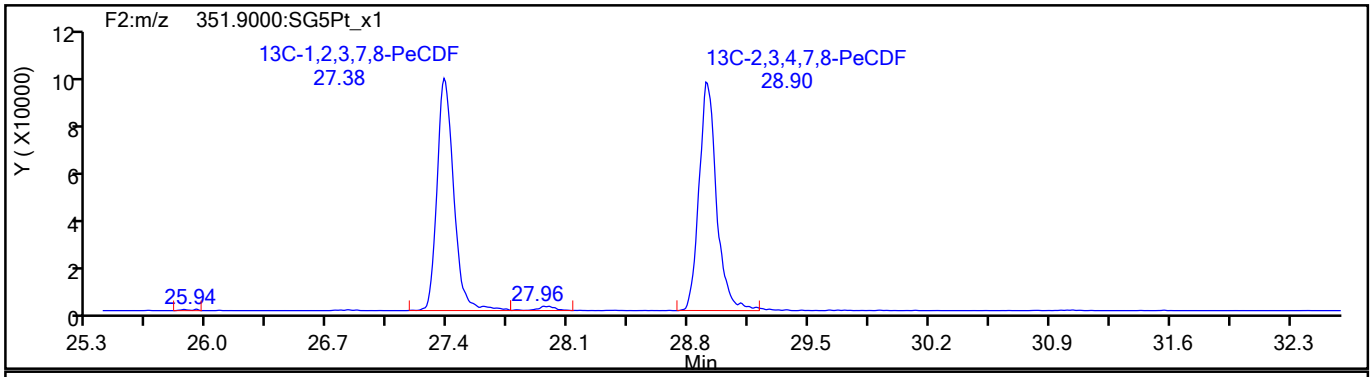

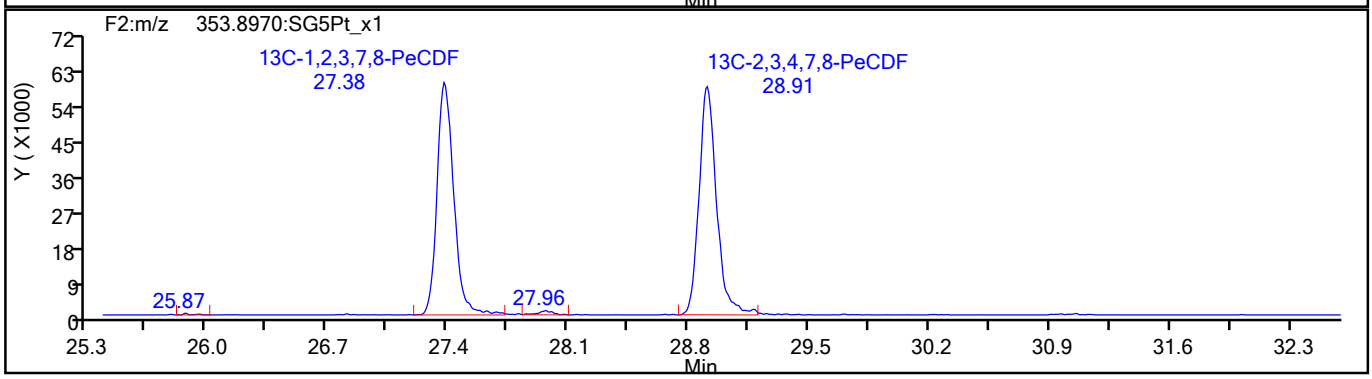

783219

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

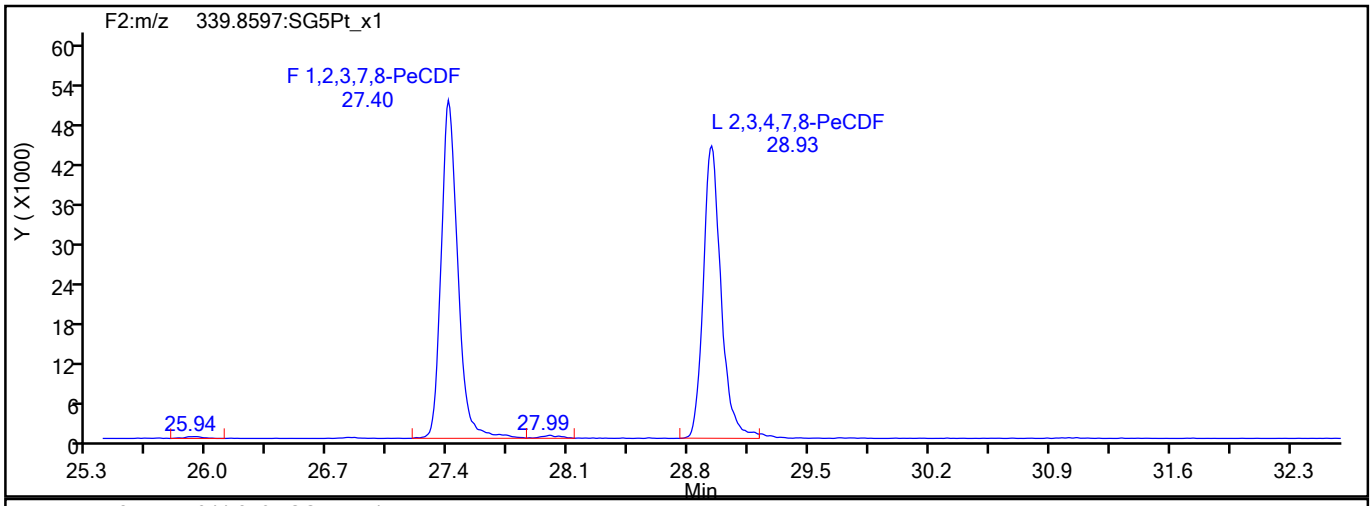

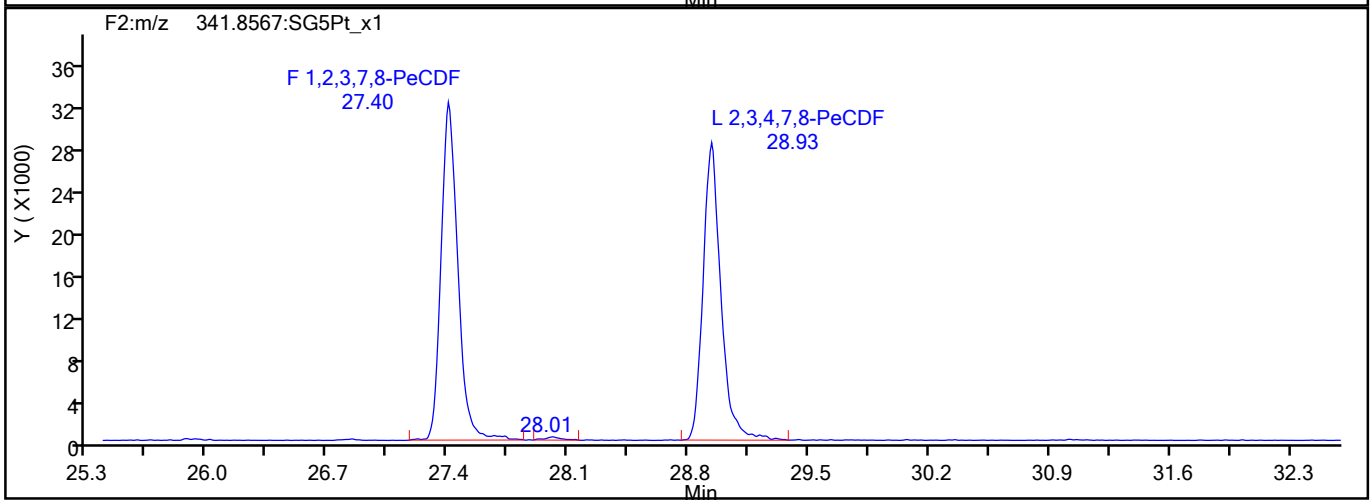

PeCDF Interference Mass

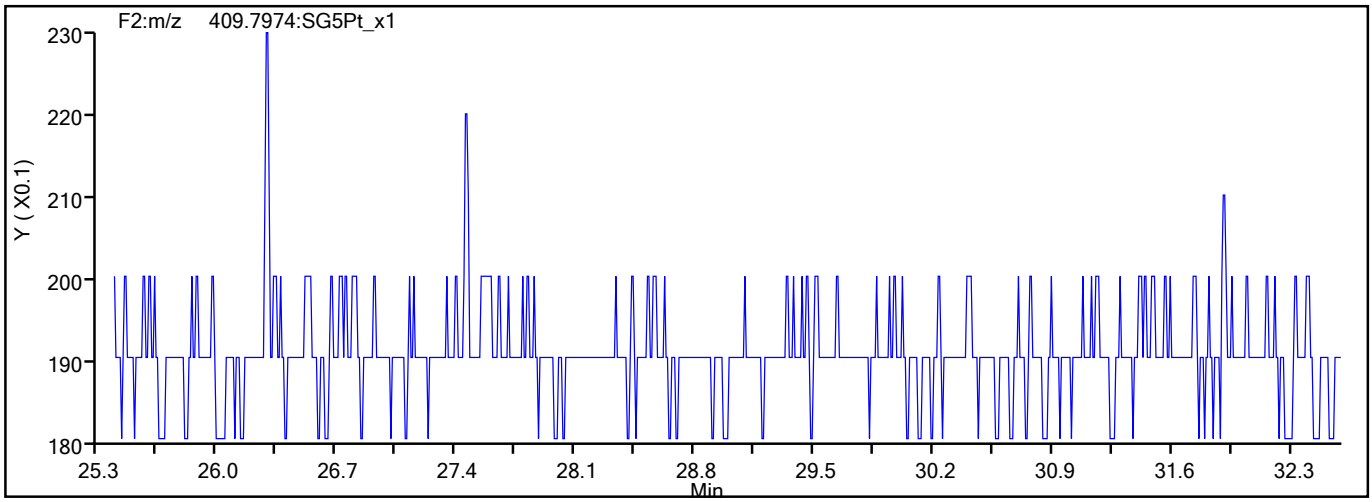

783220

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

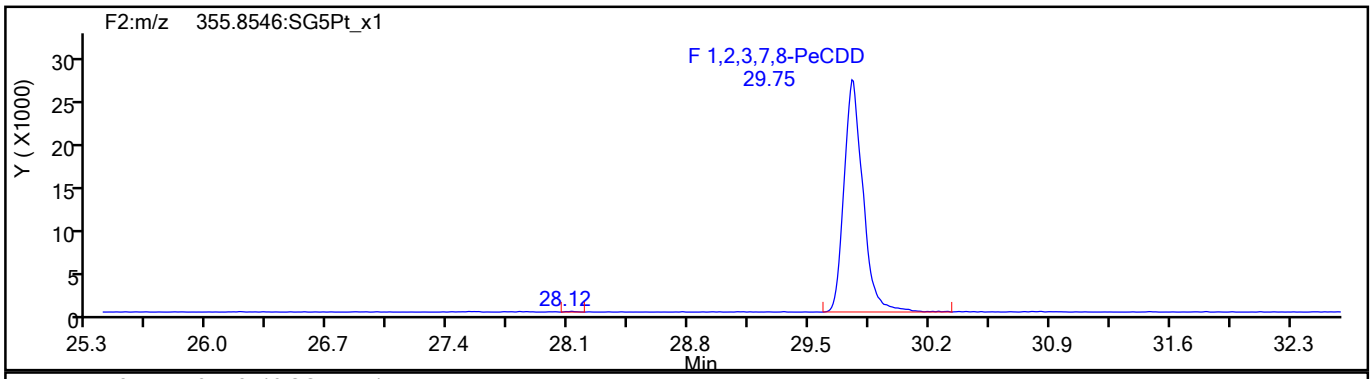

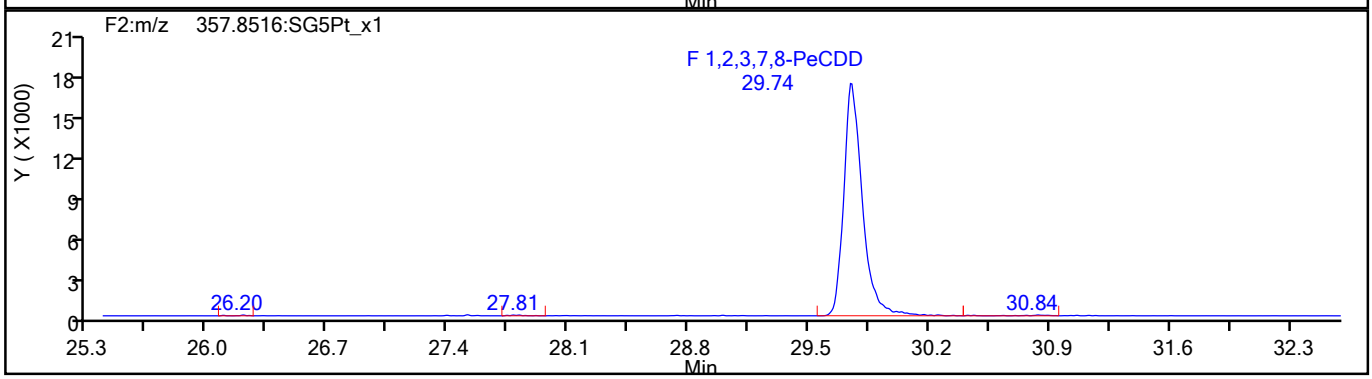

PeCDD Standards

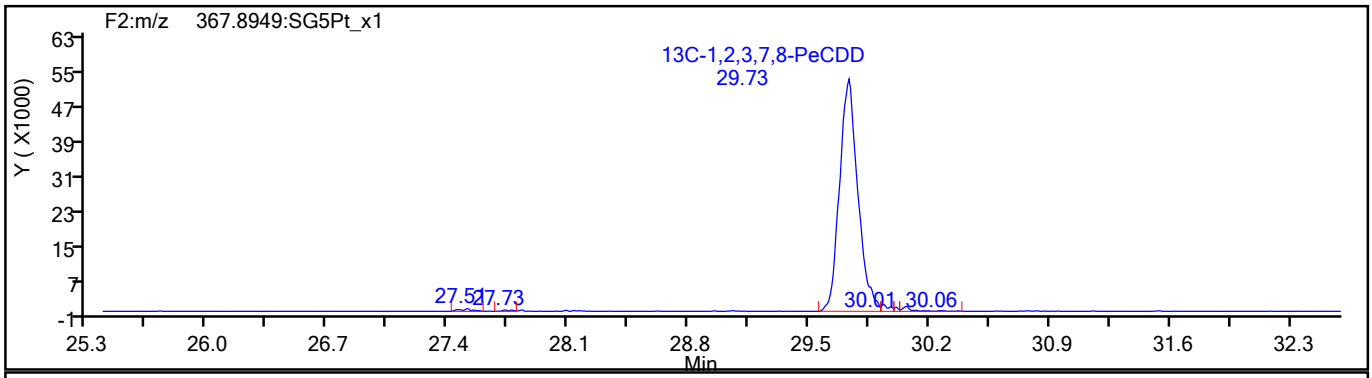

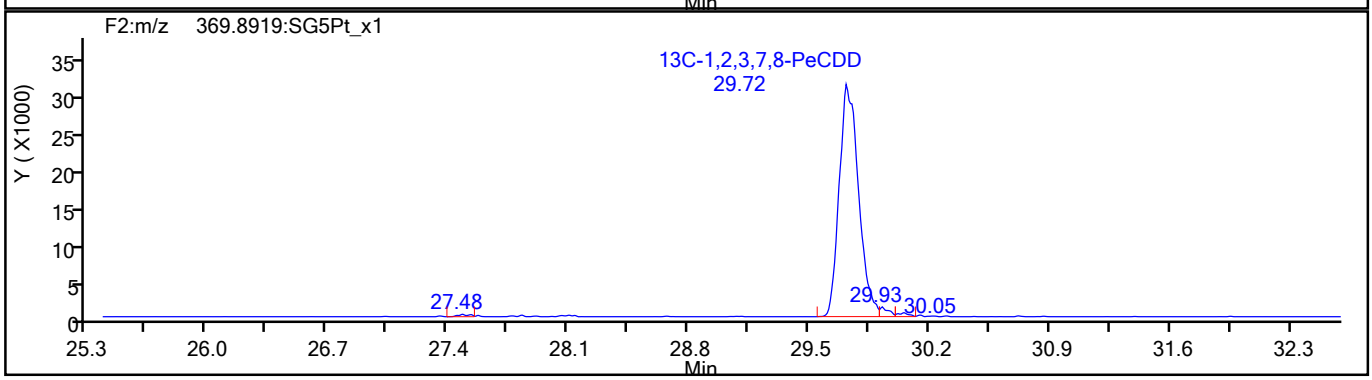

783221

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

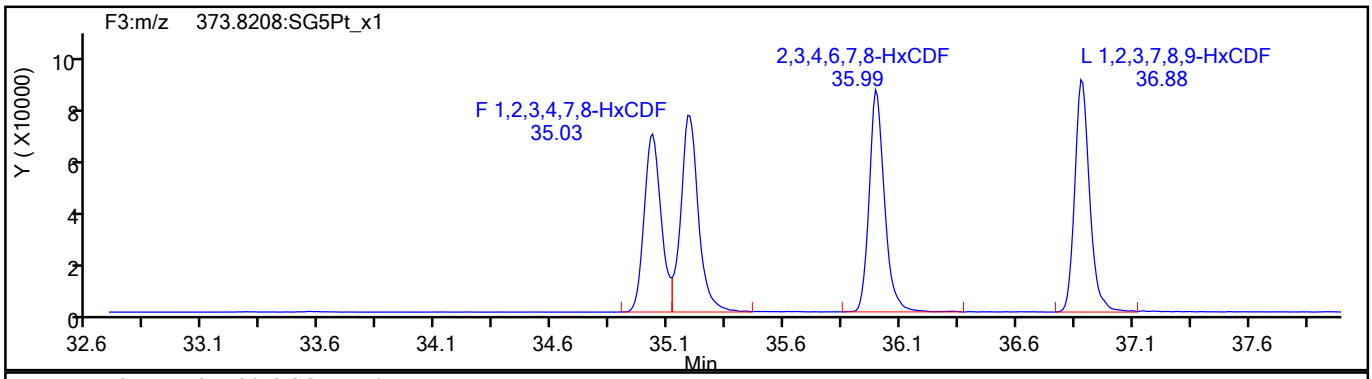

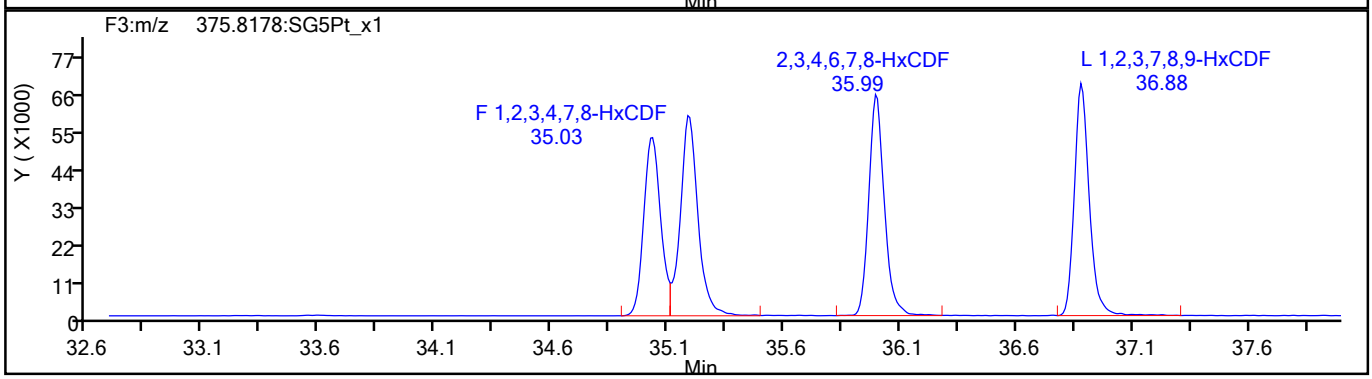

HxCDF Standards

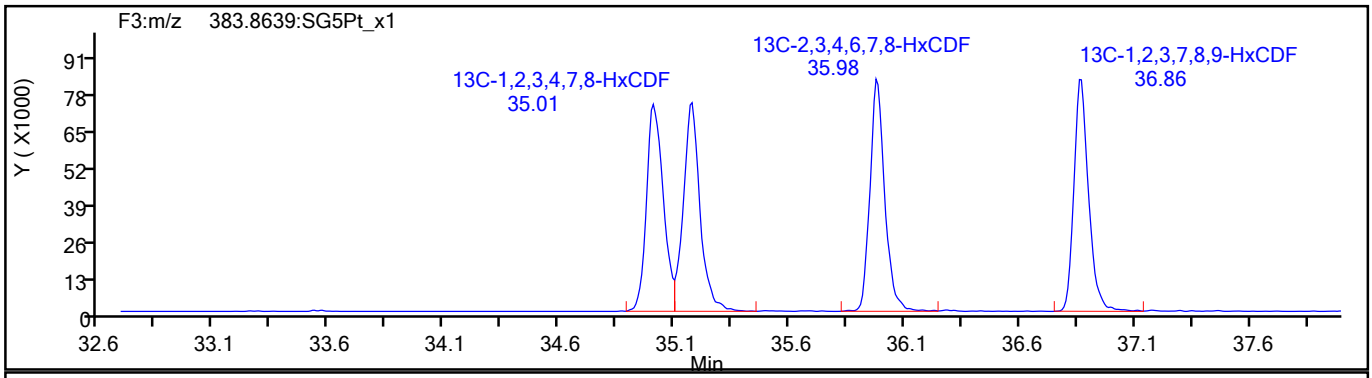

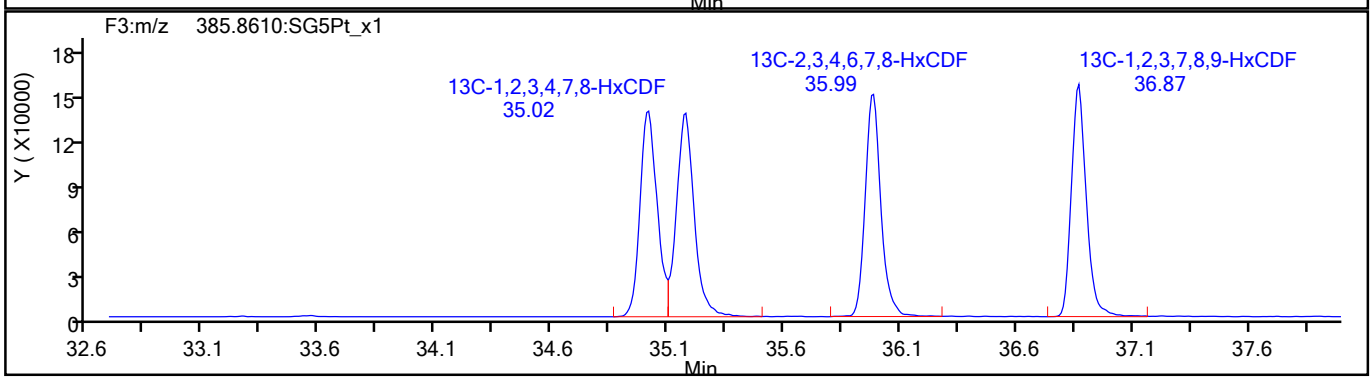

783222

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

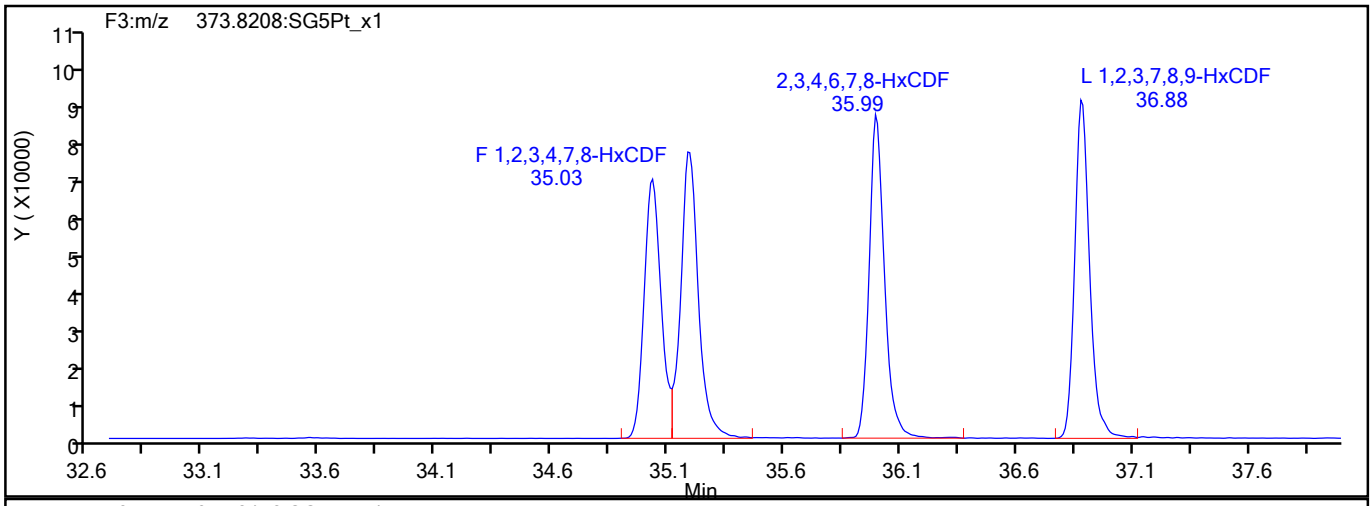

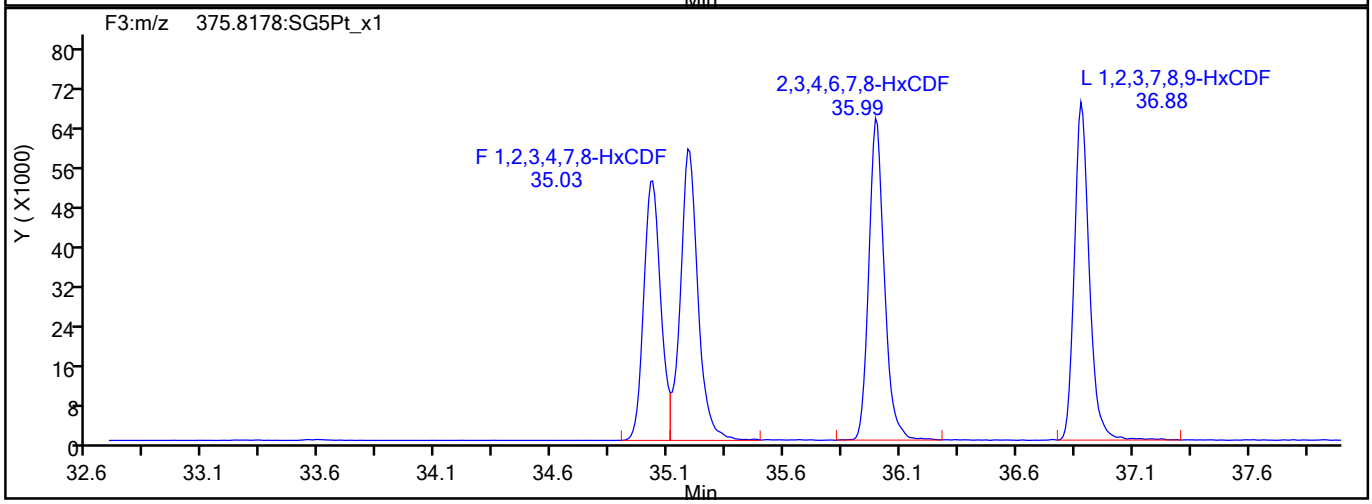

HxCDF Interference Mass

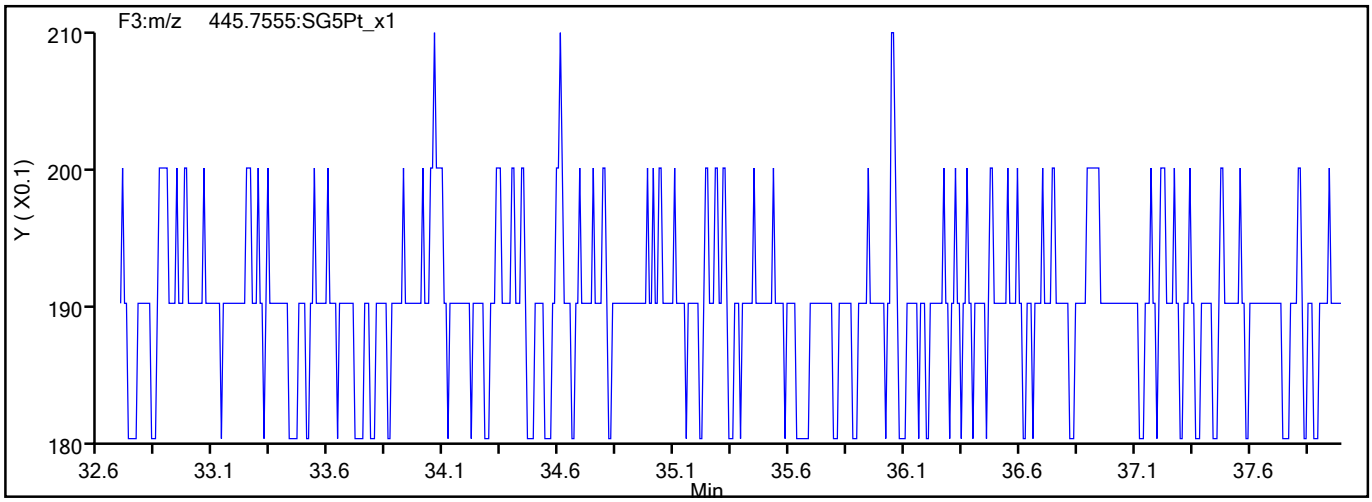

783223

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

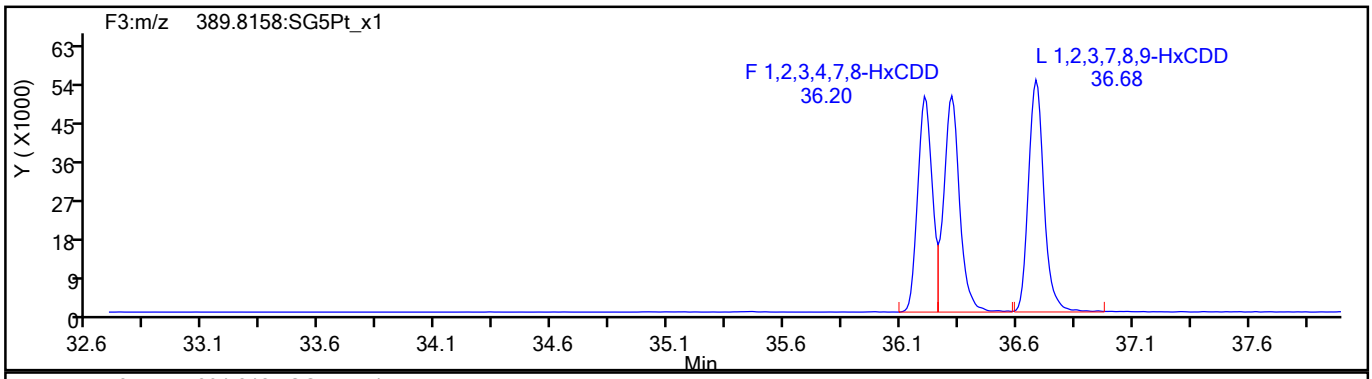

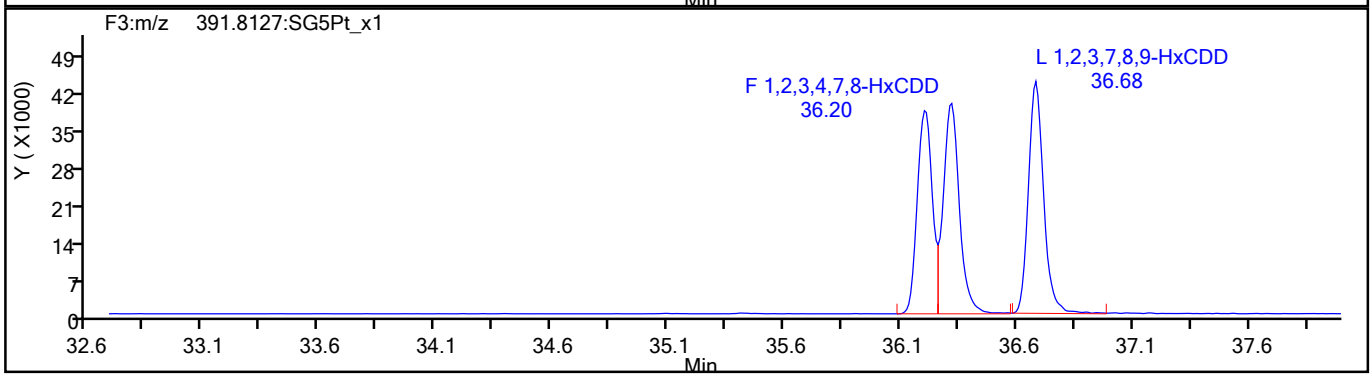

HxCDD Standards

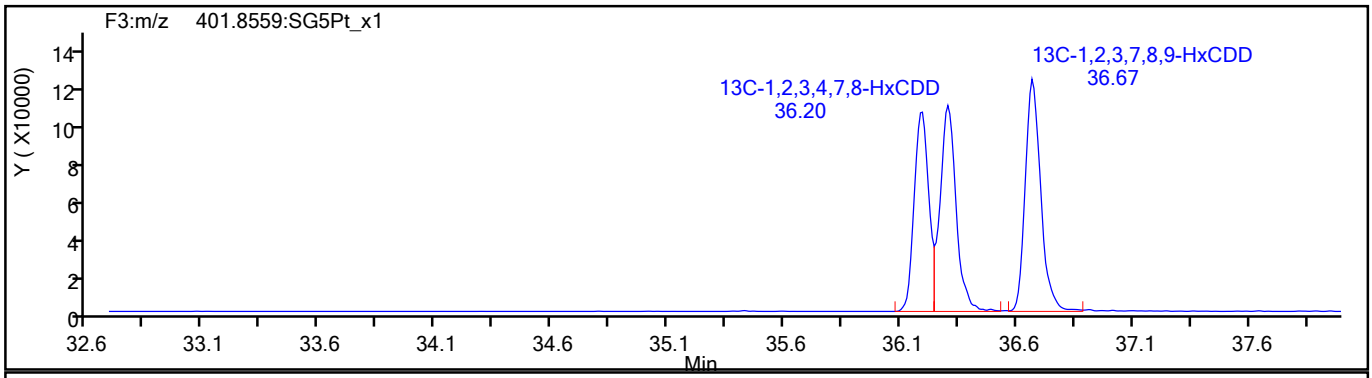

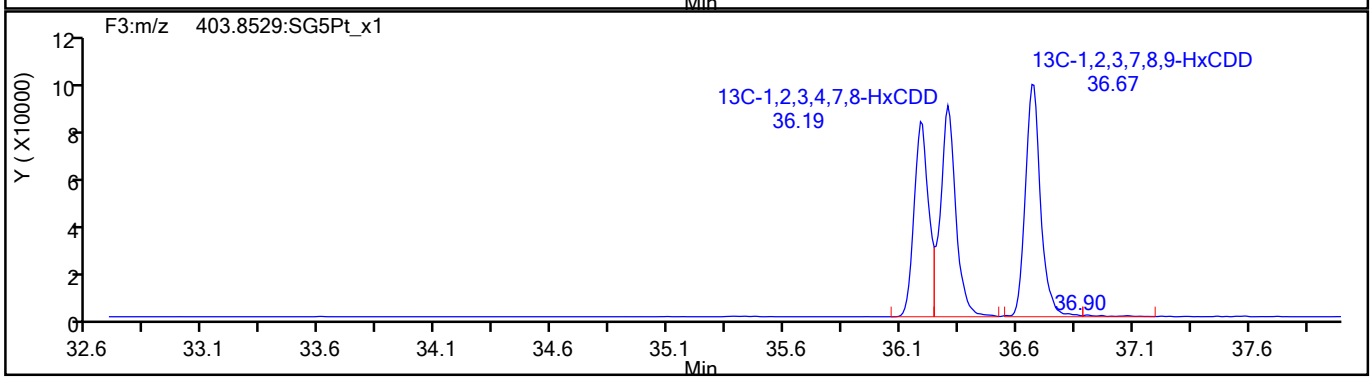

783224

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

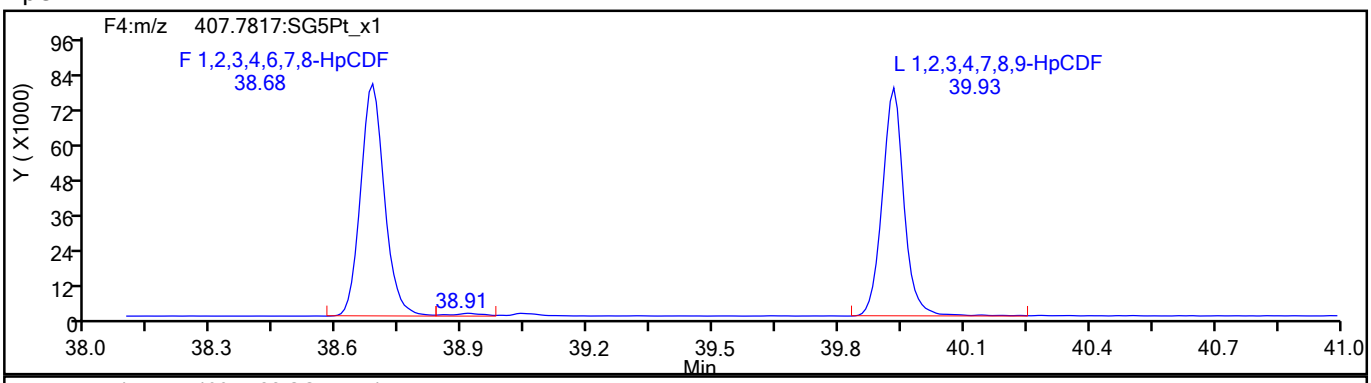

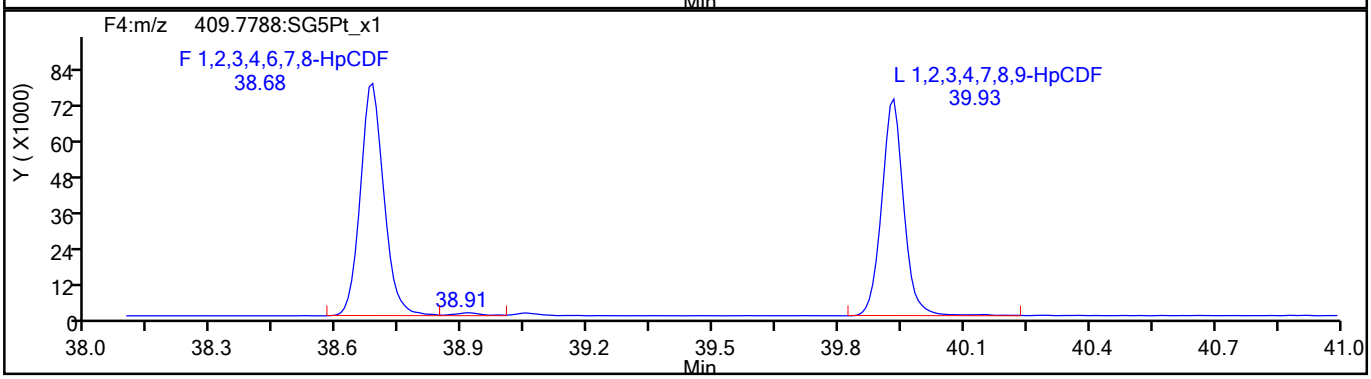

HpCDF Standards

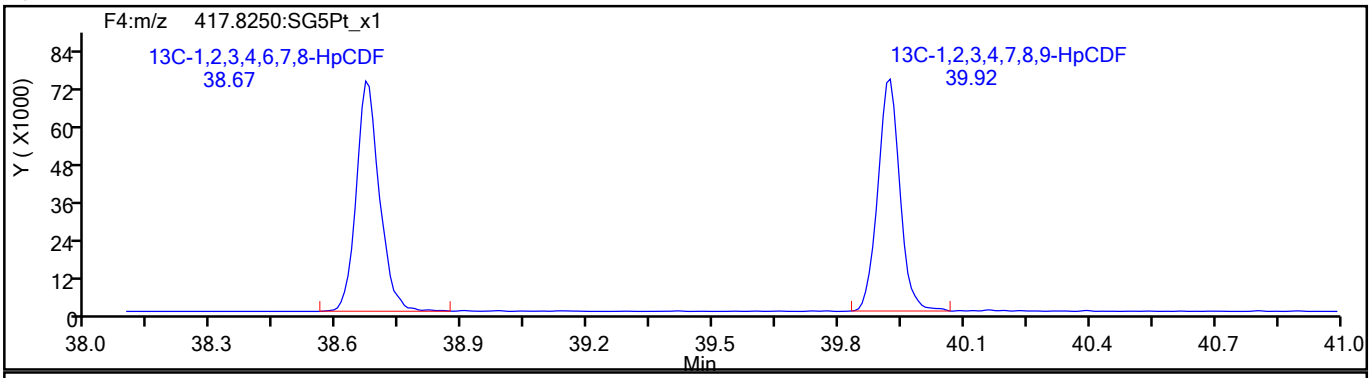

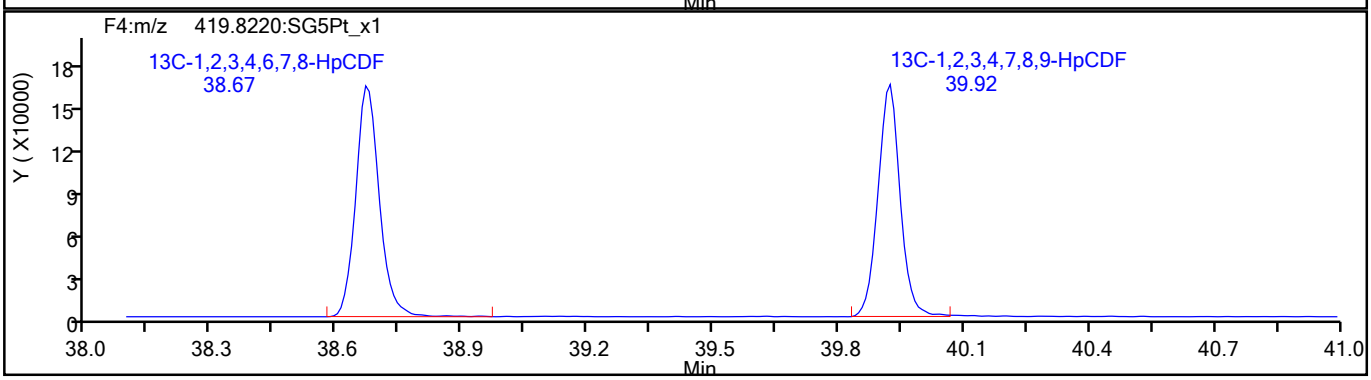

783225

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

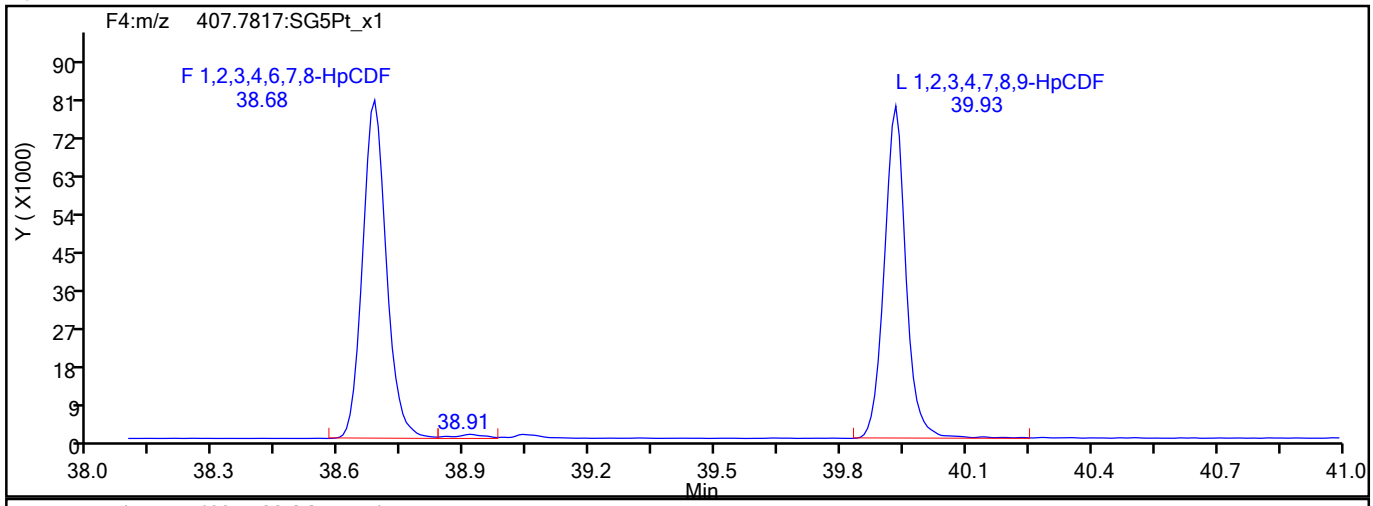

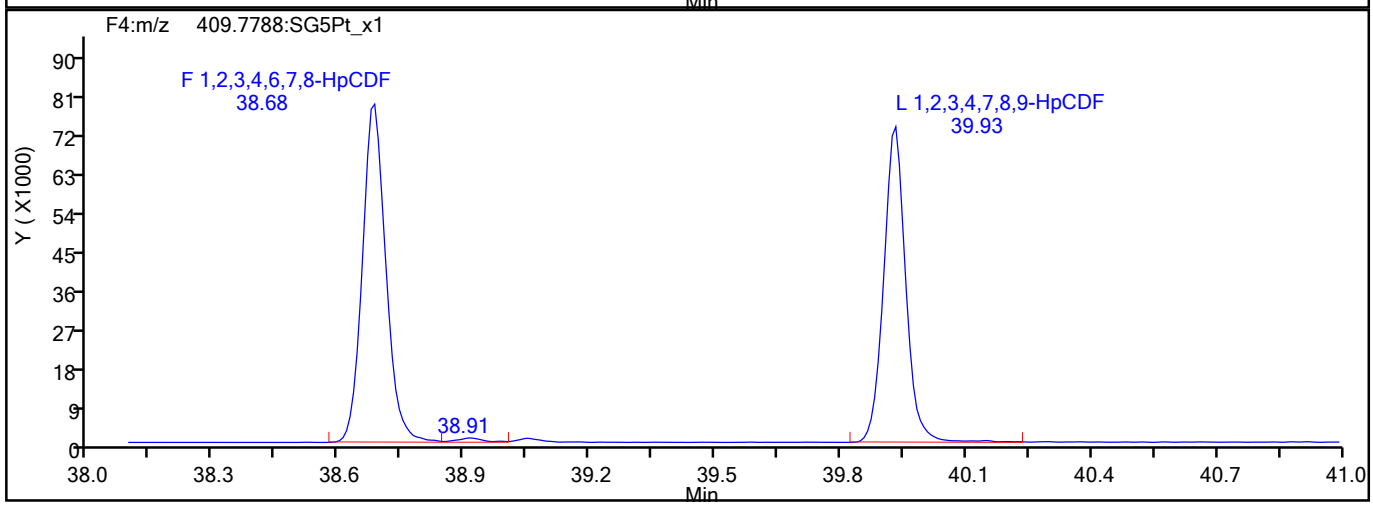

HpCDF Interference Mass

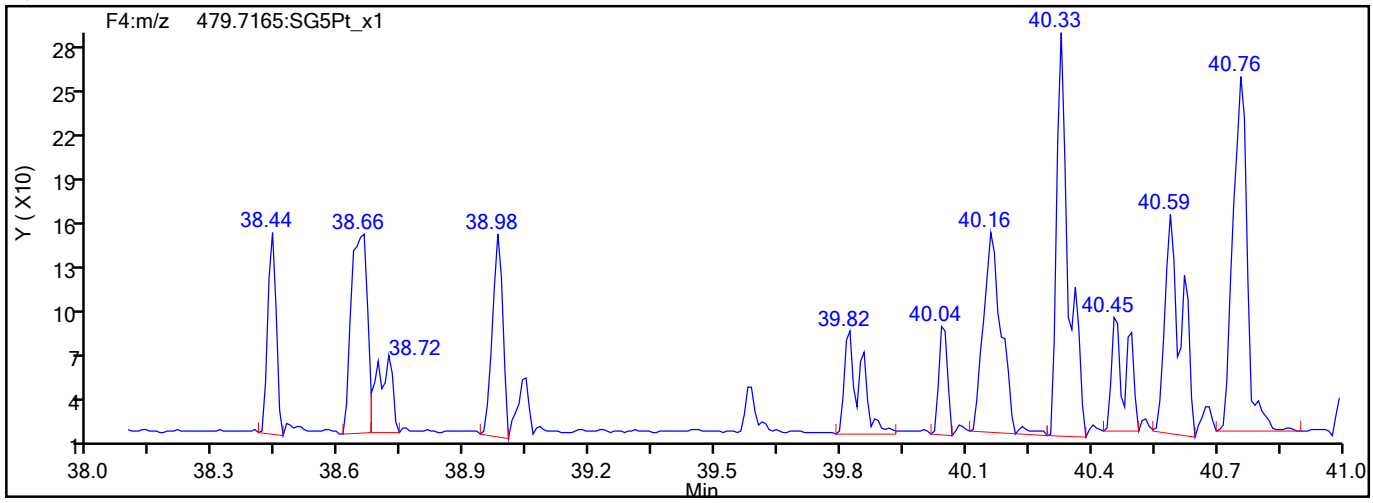

783226

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

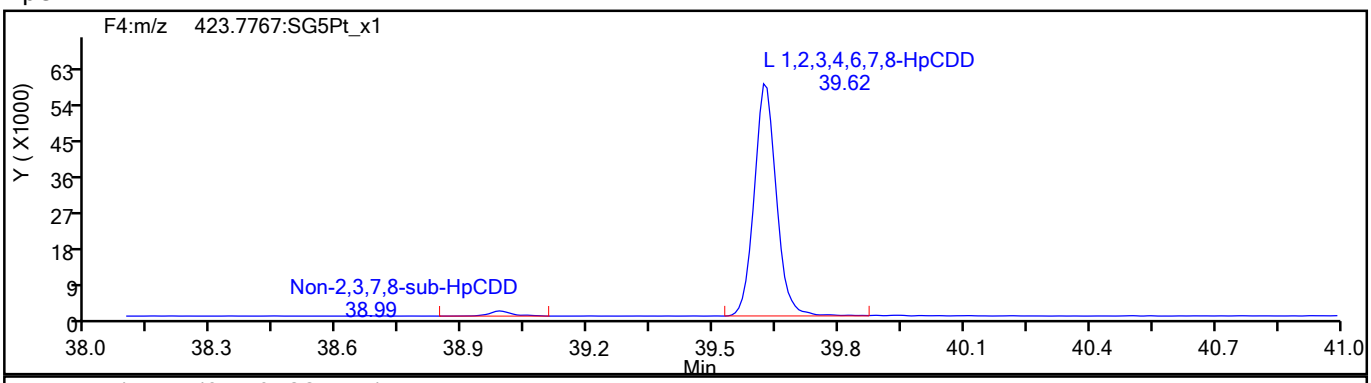

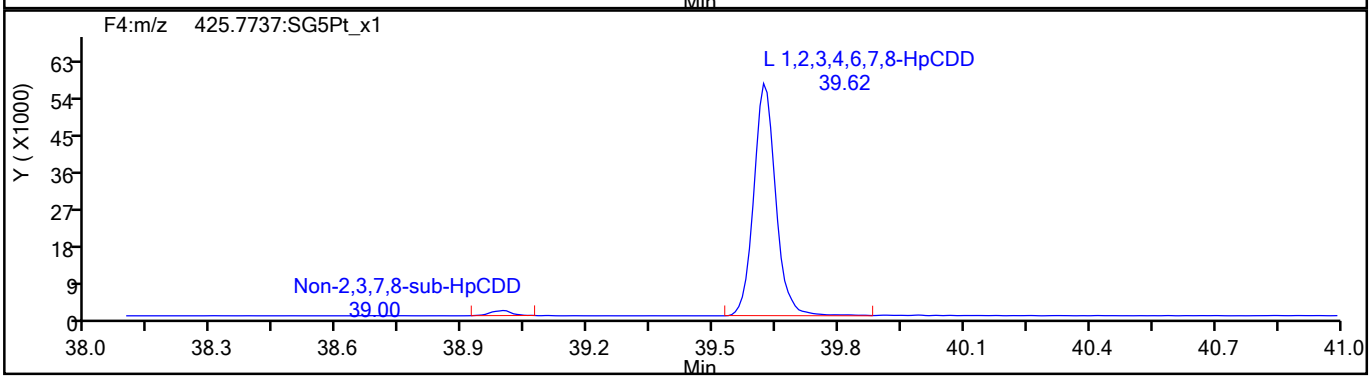

HpCDD Standards

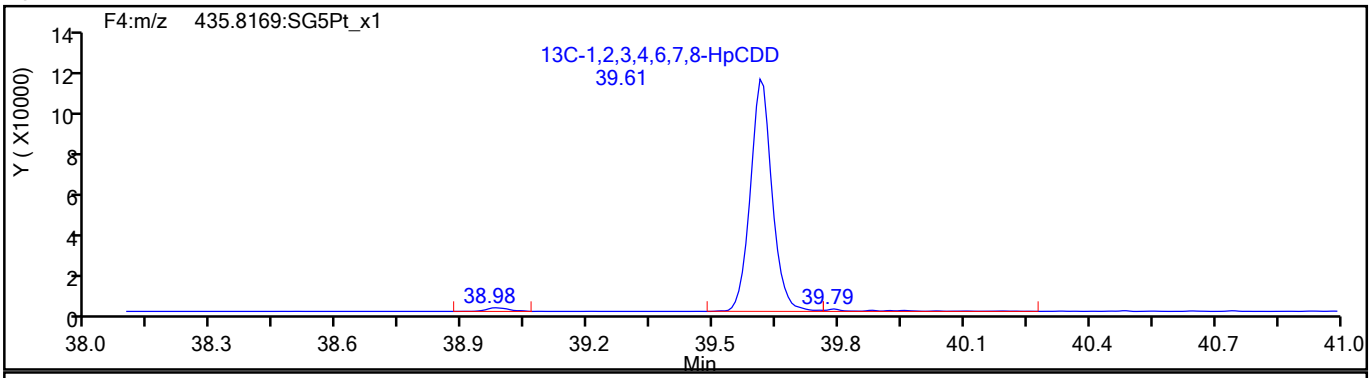

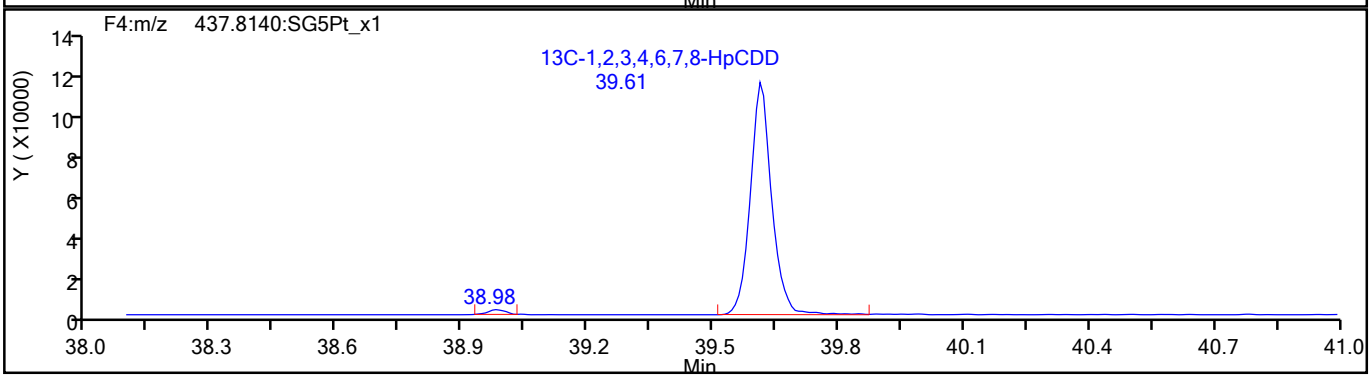

783227

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

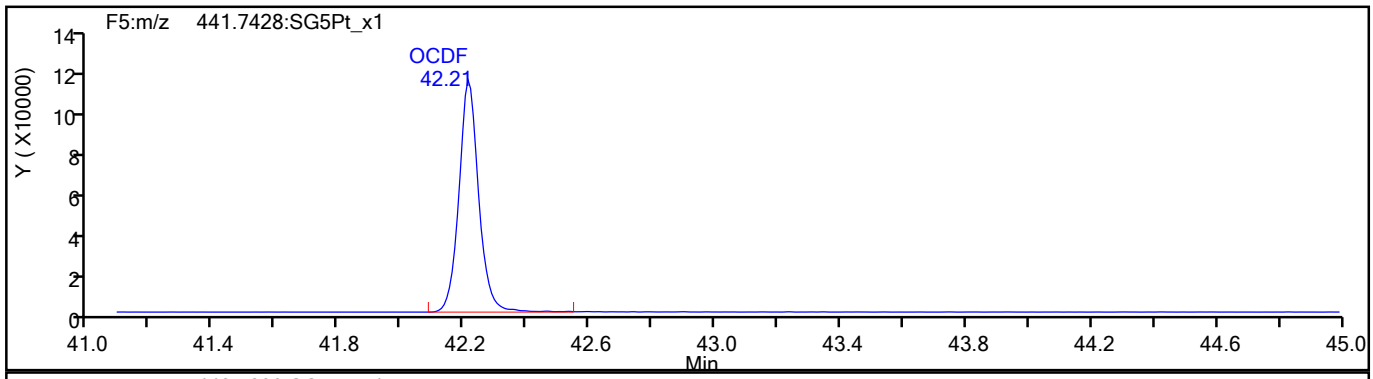

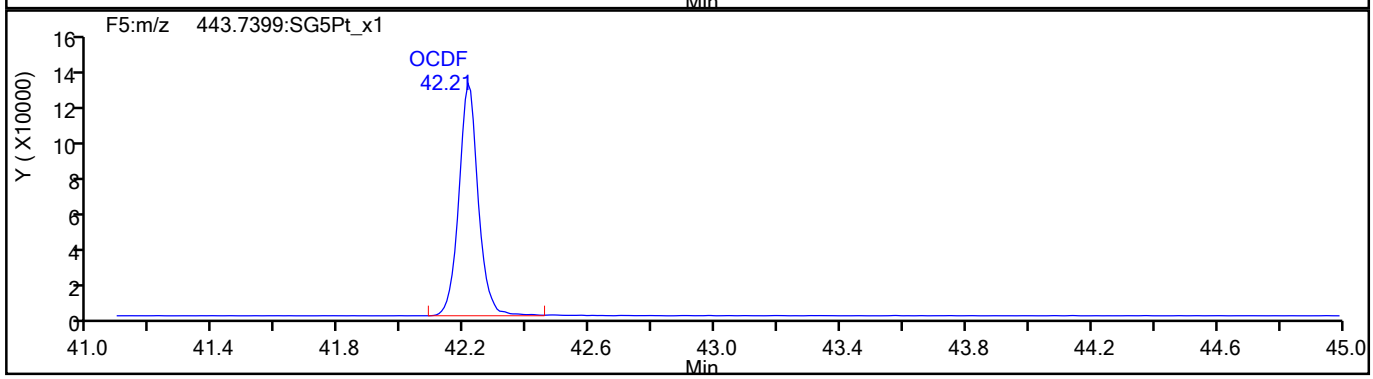

OCDF Standards

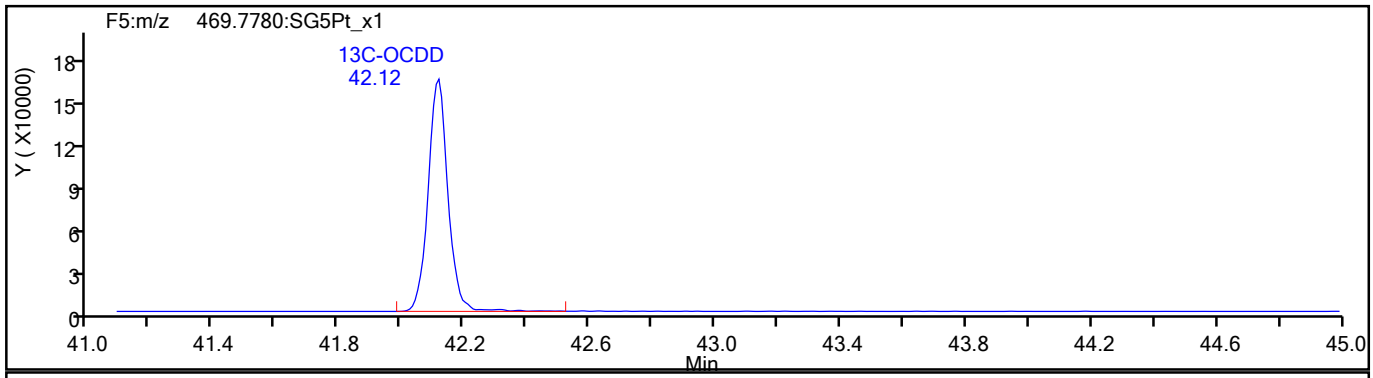

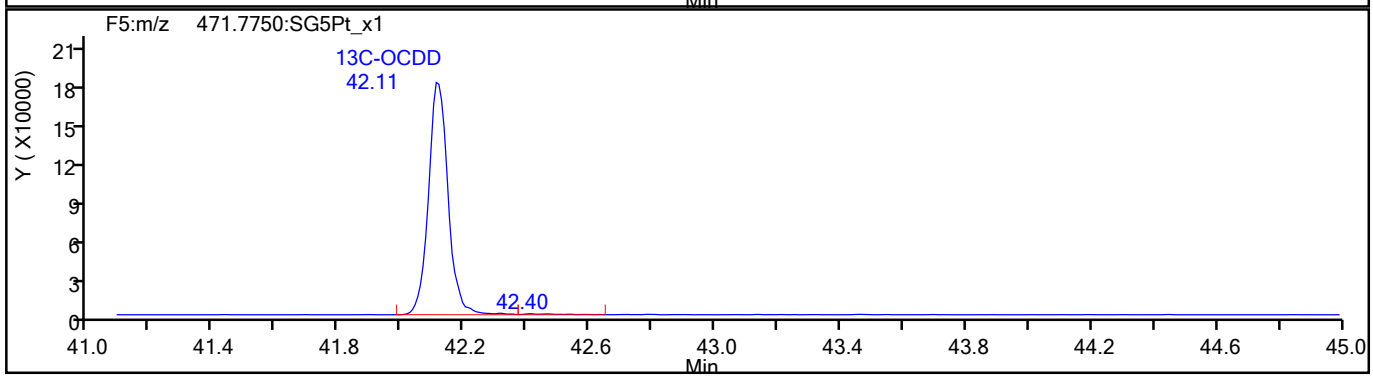

783228

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

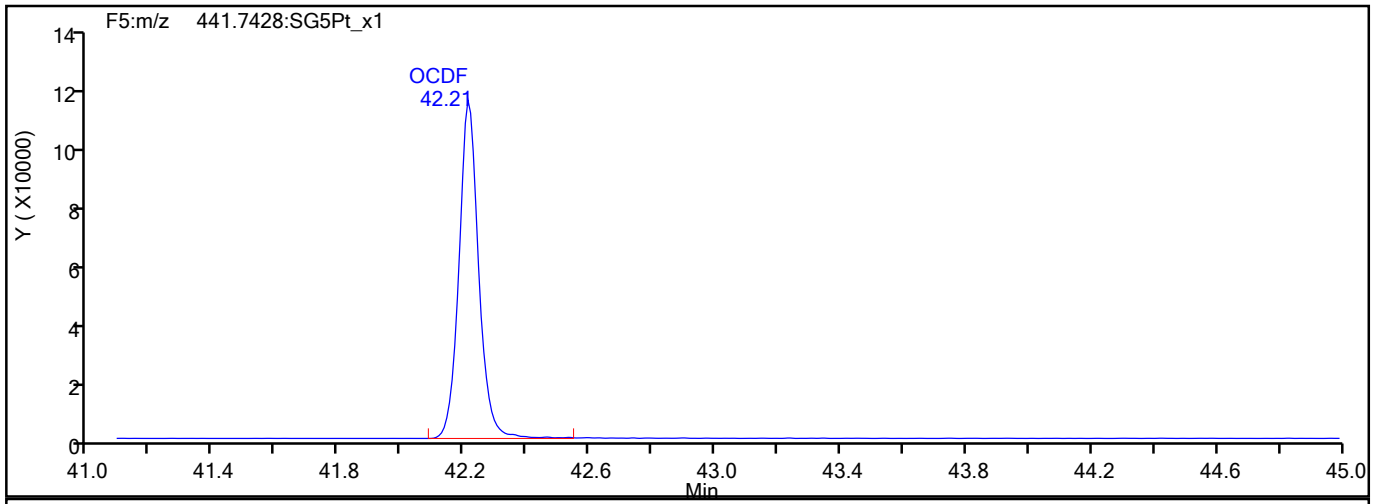

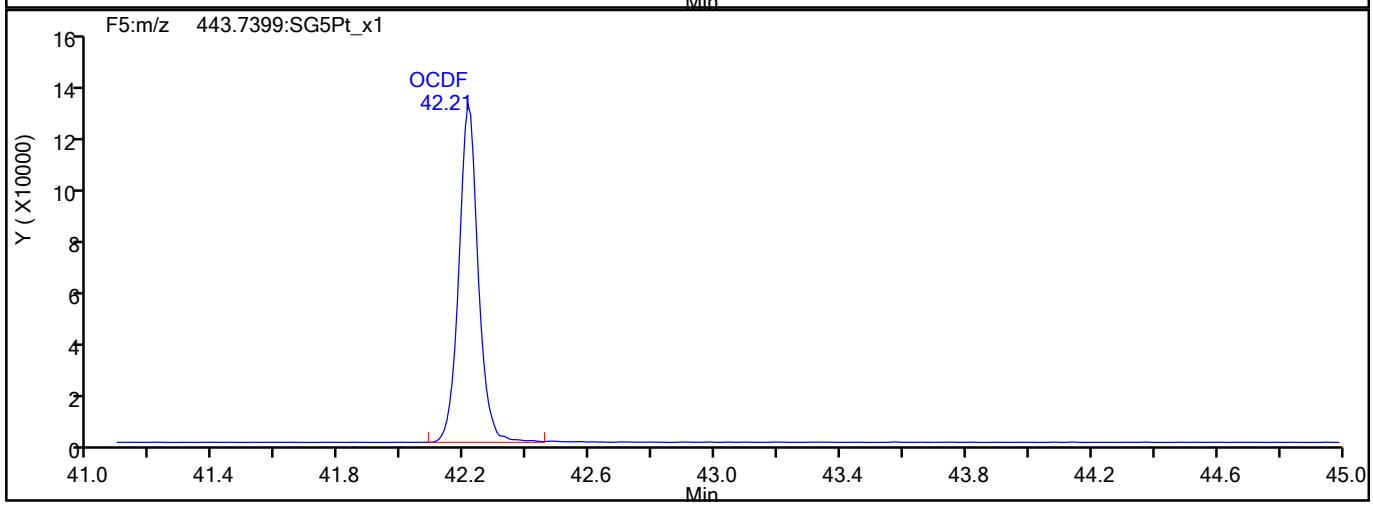

OCDF Interference Mass

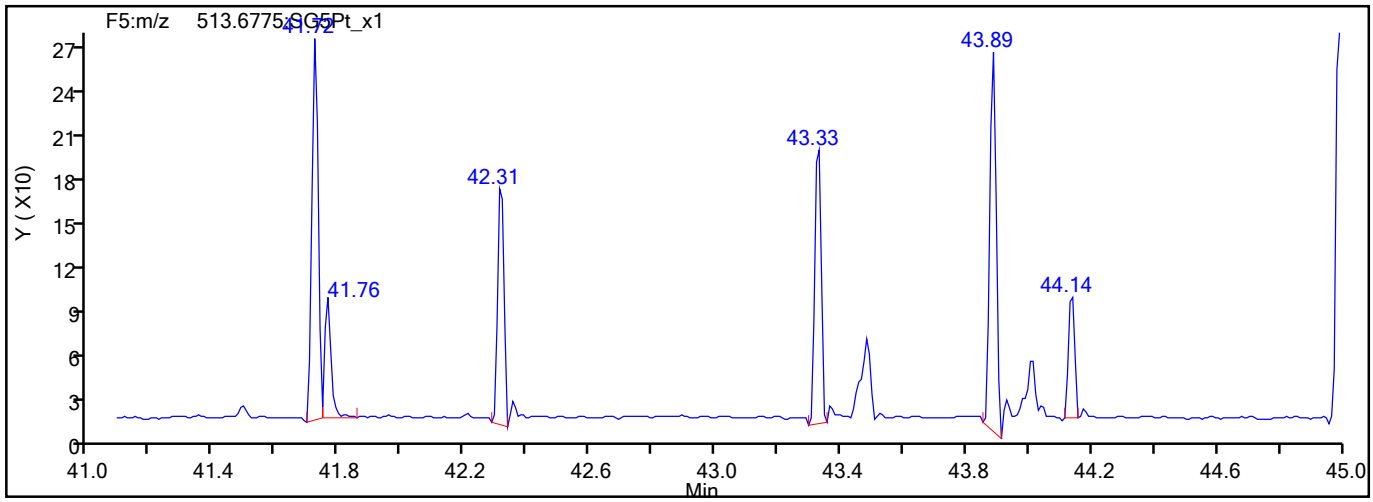

783229

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

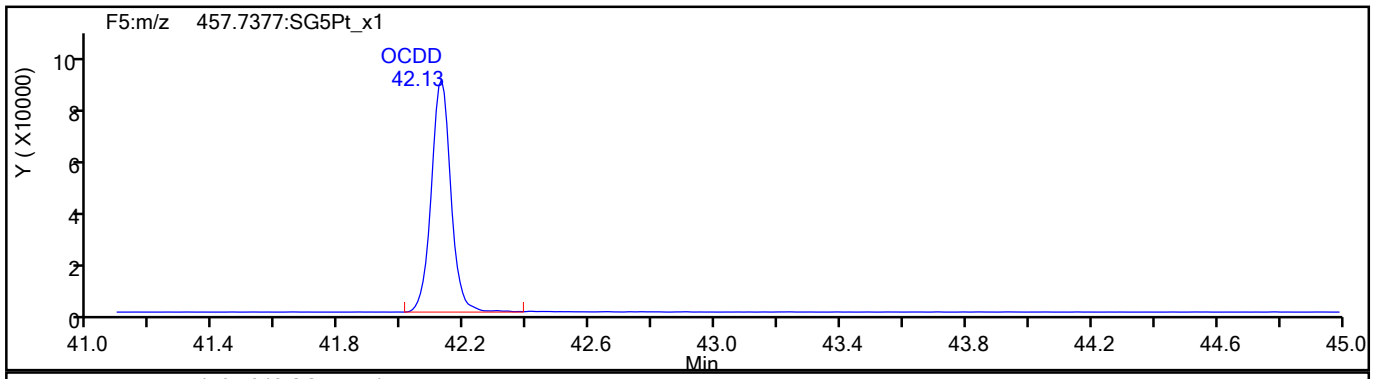

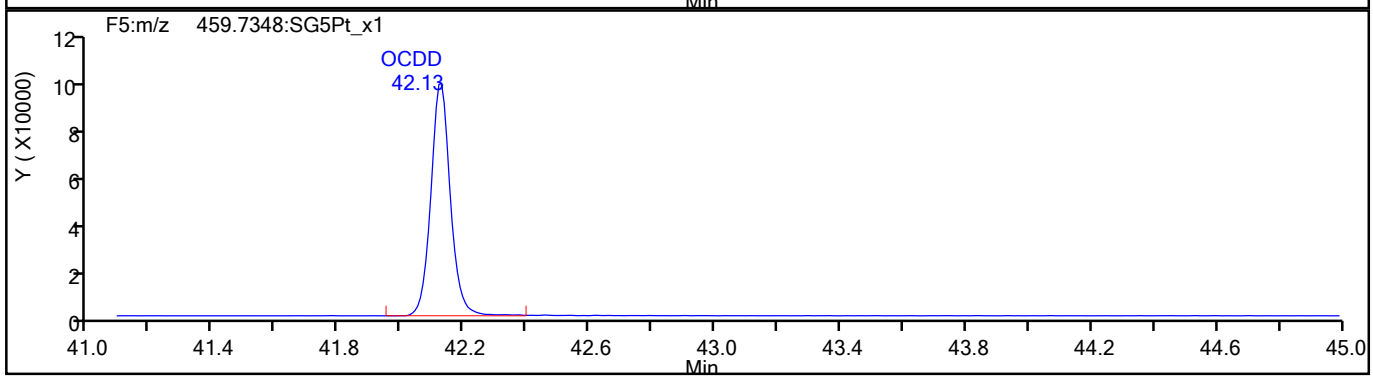

OCDD Standards

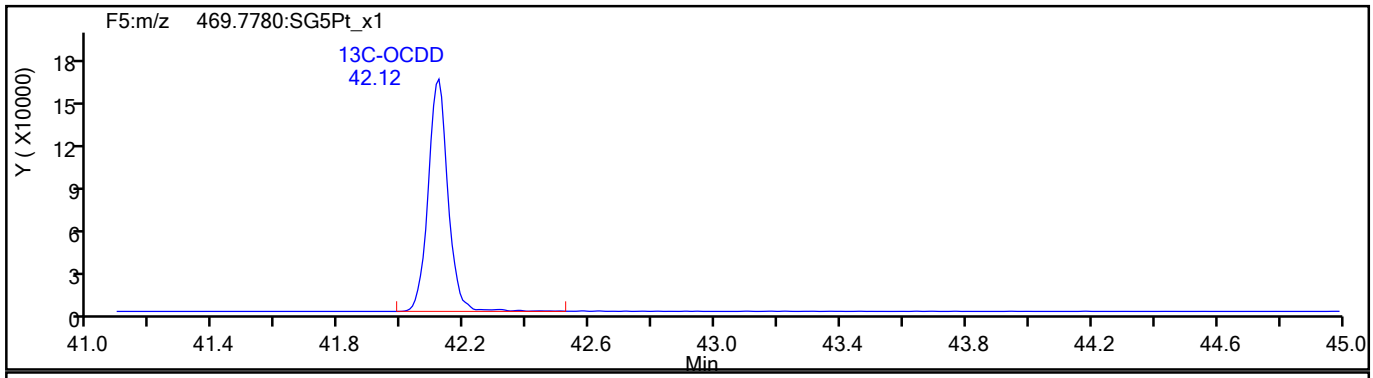

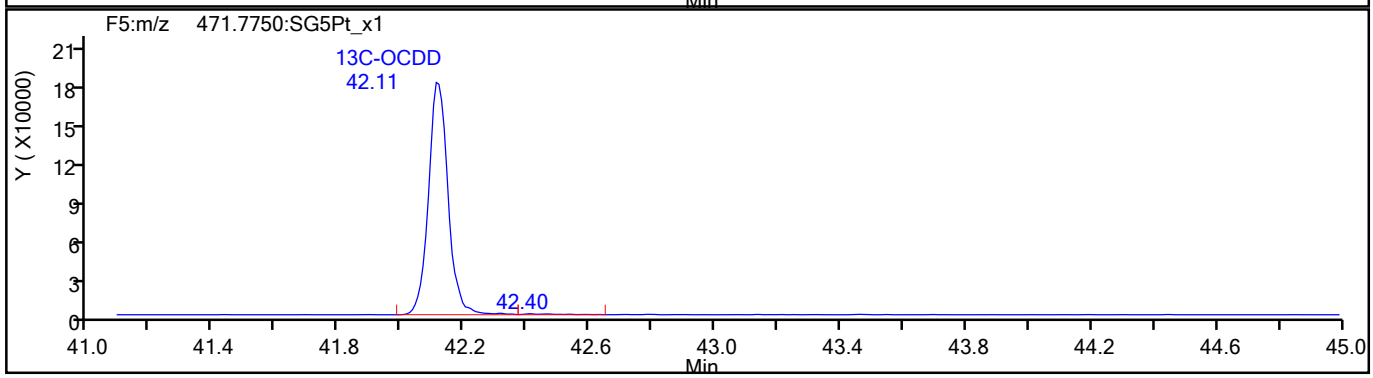

783230

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

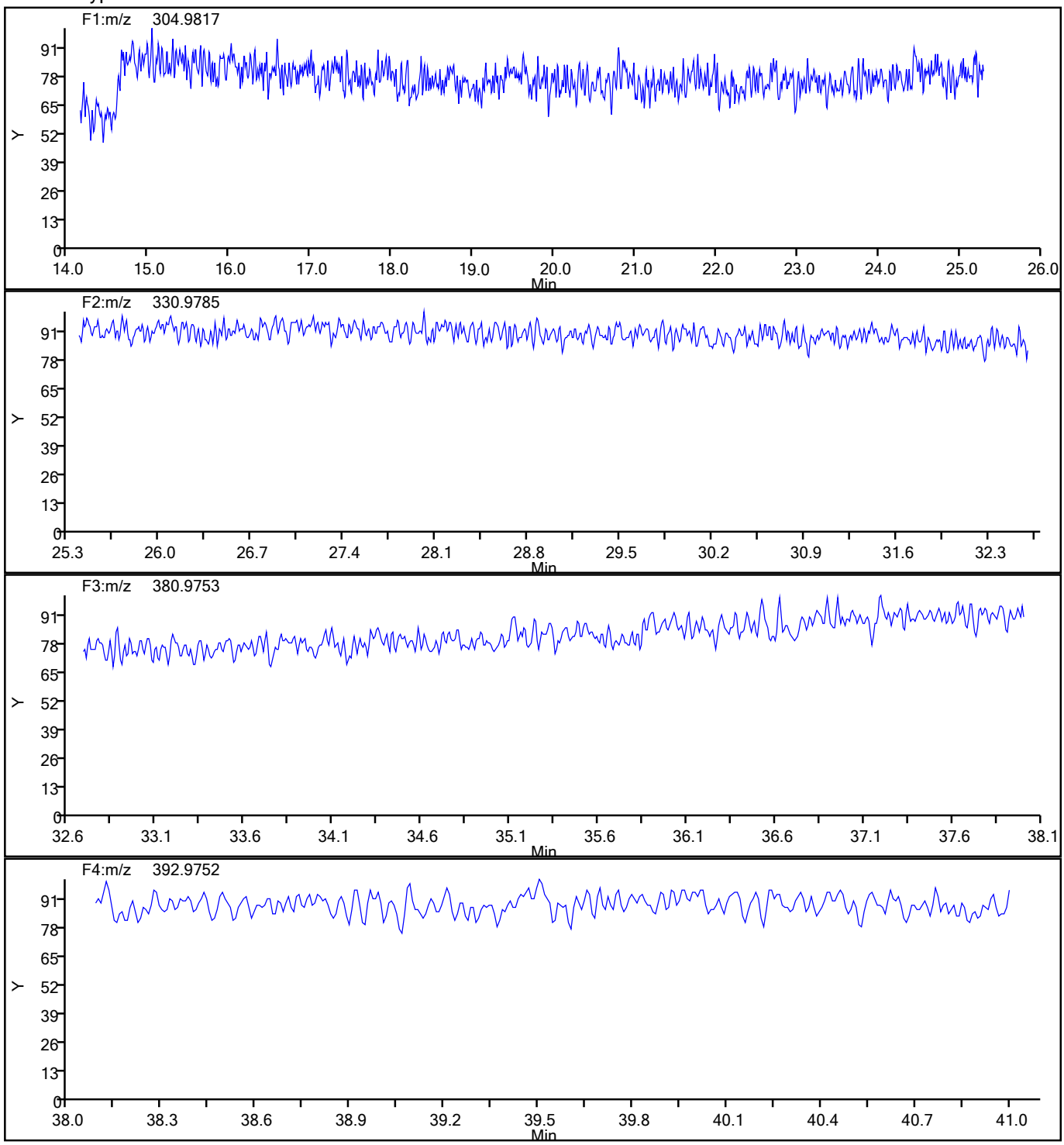

783231

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

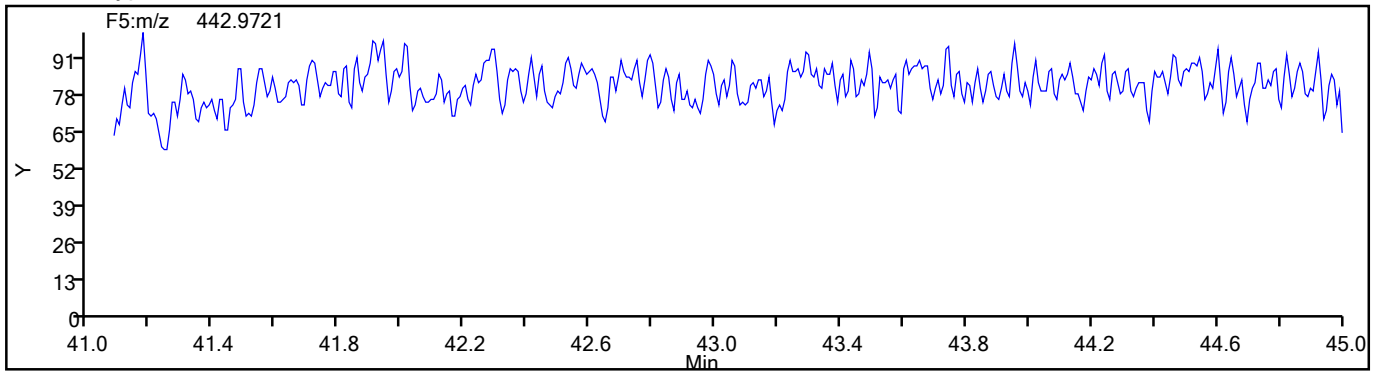

783232

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID: CCV 320-517281/15 Calibration Date: 08/18/2021 02:07

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_17.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	0.9735		9.01	10.0	90	84-120
2,3,7,8-TCDD	AveID	1.075	1.030		9.58	10.0	96	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.045		49.5	50.0	99	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9151		45.4	50.0	91	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.051		50.2	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.085		47.3	50.0	95	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.196		49.1	50.0	98	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.256		51.7	50.0	103	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9818		46.3	50.0	93	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9251		46.6	50.0	93	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.136		51.2	50.0	102	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.256		50.6	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.324		45.9	50.0	92	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.047		49.9	50.0	100	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.222		46.7	50.0	93	86-116
OCDD	AveID	1.062	1.015		95.6	100	96	79-126
OCDF	AveID	1.317	1.357		103	100	103	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.378		102	100	102	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9827		105	100	105	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.287		113	100	113	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.398		124	100	124	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7751		108	100	108	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.003		104	100	104	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	0.9639		90.0	100	90	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	0.9586		92.1	100	92	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7714		102	100	102	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.8499		98.9	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9105		93.6	100	94	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.8125		110	100	110	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7666		114	100	114	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.8215		120	100	120	77-129
13C-OCDD	Ave	0.5446	0.7174		263	200	132	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.046		10.4	10.0	104	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	17AU21DFS1_1	Resolution Check	RC 081721	46			KSS	1.000	
2	17AU21DFS1_2	WDM HRDXNCP_00044	WDM 081721	1	Dioxin		KSS	1.000	
3	17AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081621	2	Dioxin		KSS	1.000	
4	17AU21DFS1_4	SB Solvent Blank C14	SB 081621	3	Dioxin		KSS	1.000	
5	17AU21DFS1_5	mb 320-513586/1-a	mb 320-513586/1-a	4	1613B/Solid	D266	KSS	1.000	g
6	17AU21DFS1_6	lcs 320-513586/2-a	lcs 320-513586/2-a	5	1613B/Solid		KSS	1.000	g
7	17AU21DFS1_7	320-76724-a-16-a 10X	320-76724-a-16-a	6	1613B/Solid	D261	KSS	1.000	g
8	17AU21DFS1_8	320-76764-a-14-a 10X	320-76764-a-14-a	7	1613B/Solid	D263	KSS	1.000	g
9	17AU21DFS1_9	320-76764-a-16-a 10X	320-76764-a-16-a	8	1613B/Solid		KSS	1.000	g
10	17AU21DFS1_10	320-76764-a-38-a 10X	320-76764-a-38-a	9	1613B/Solid		KSS	1.000	g
11	17AU21DFS1_11	320-76765-a-4-a 5X	320-76765-a-4-a	10	1613B/Solid	D264	KSS	1.000	g
12	17AU21DFS1_12	320-76769-A-30-A	320-76769-A-30-A	11	1613B/Solid	D266	KSS	1.000	g
13	17AU21DFS1_13	320-76769-A-31-A	320-76769-A-31-A	12	1613B/Solid		KSS	1.000	g
14	17AU21DFS1_14	320-76769-A-32-A	320-76769-A-32-A	13	1613B/Solid		KSS	1.000	g
15	17AU21DFS1_15	SB Solvent Blank C14	SB 081721A	3	Dioxin		KSS	1.000	
16	17AU21DFS1_16	Resolution Check	RC 081721A	46			KSS	1.000	
17	17AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081621A	2	Dioxin		KSS	1.000	
18	17AU21DFS1_18	WDM HRDXNCP_00044	WDM 081721A	1	Dioxin		KSS	1.000	
19	17AU21DFS1_19	SB Solvent Blank C14	SB 081721B	3	Dioxin		KSS	1.000	
20	17AU21DFS1_20	320-76769-A-33-A	320-76769-A-33-A	14	1613B/Solid	D266	KSS	1.000	g
21	17AU21DFS1_21	320-76769-A-34-A	320-76769-A-34-A	15	1613B/Solid		KSS	1.000	g
22	17AU21DFS1_22	320-76887-A-2-A	320-76887-A-2-A	16	1613B/Solid		KSS	1.000	g
23	17AU21DFS1_23	320-76887-A-2-B MS	320-76887-A-2-B MS	17	1613B/Solid		KSS	1.000	g
24	17AU21DFS1_24	320-76887-A-2-C MSD	320-76887-A-2-C MSD	18	1613B/Solid		KSS	1.000	g
25	17AU21DFS1_25	320-76887-A-3-A	320-76887-A-3-A	19	1613B/Solid		KSS	1.000	g
26	17AU21DFS1_26	320-76887-A-4-A	320-76887-A-4-A	20	1613B/Solid		KSS	1.000	g
27	17AU21DFS1_27	320-76887-A-5-A	320-76887-A-5-A	21	1613B/Solid		KSS	1.000	g
28	17AU21DFS1_28	320-76887-A-6-A	320-76887-A-6-A	22	1613B/Solid		KSS	1.000	g
29	17AU21DFS1_29	320-76887-A-7-A	320-76887-A-7-A	23	1613B/Solid		KSS	1.000	g
30	17AU21DFS1_30	SB Solvent Blank C14	SB 081721C	3	Dioxin		KSS	1.000	
31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A	12	1613B/Solid	D266	KSS	1.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	1.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	1.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	1.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A	27	1613B/Solid		KSS	1.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	1.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	1.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	1.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A	31	1613B/Solid		KSS	1.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32	1613B/Solid		KSS	1.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	

Log file checked
08/18/21 SMA

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	17 Aug 2021 14:07
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11192 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10617 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10669 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10902 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10643 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10651 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 9999 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10320 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10065 [5%height]

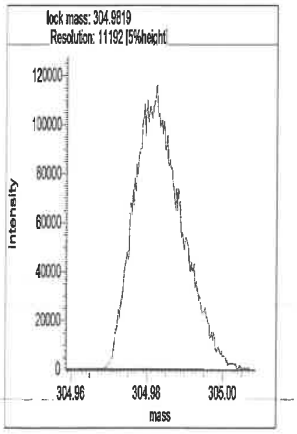

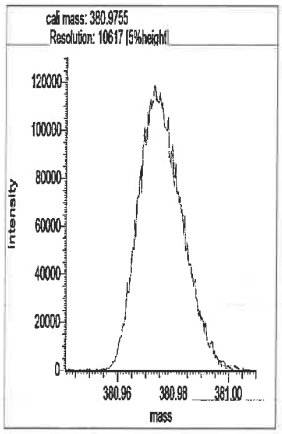

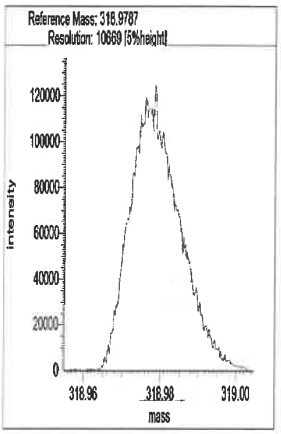

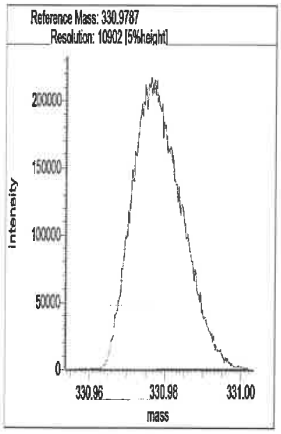

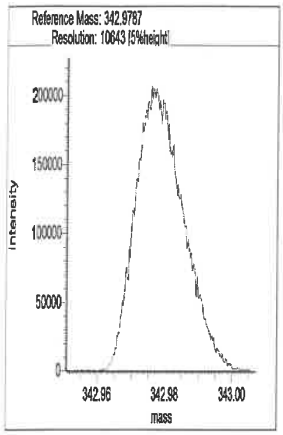

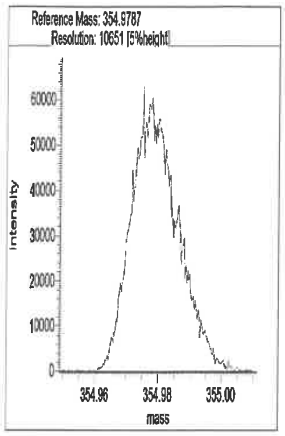

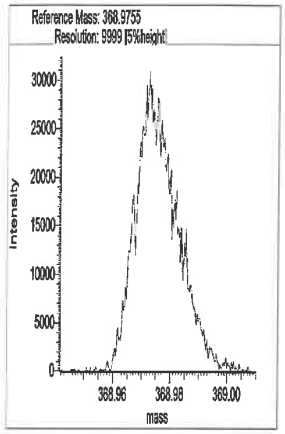

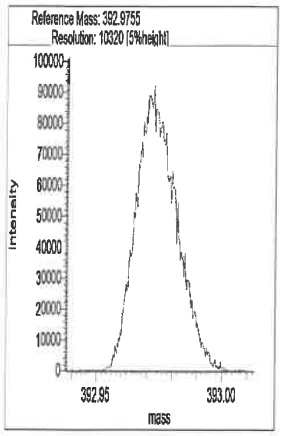

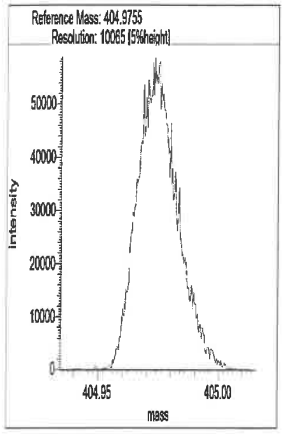

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11006 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10213 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10478 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11117 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10460 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10915 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10374 [5%height]

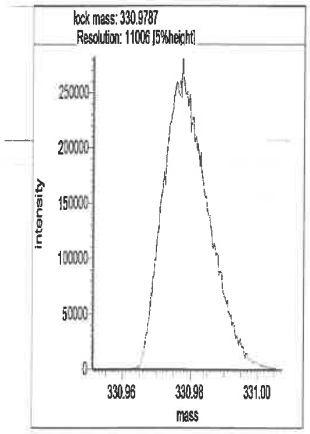

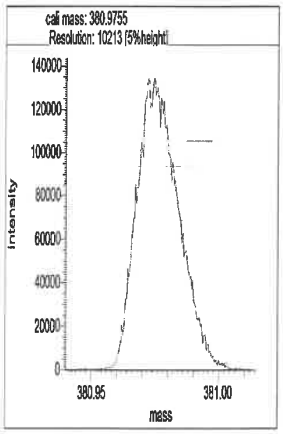

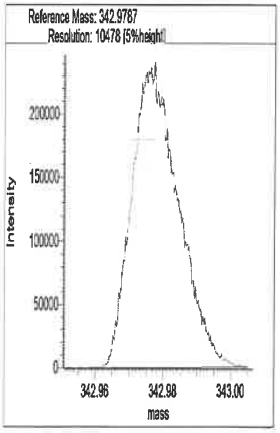

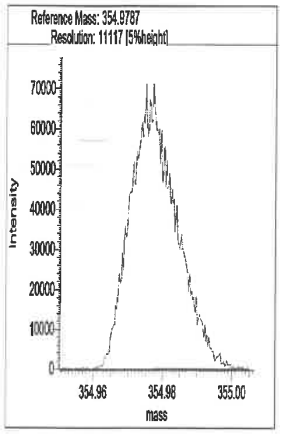

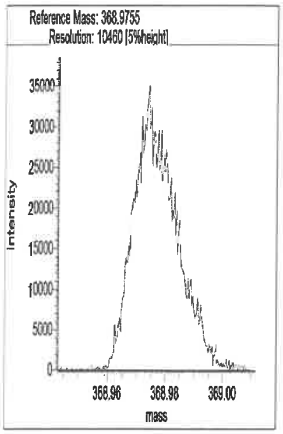

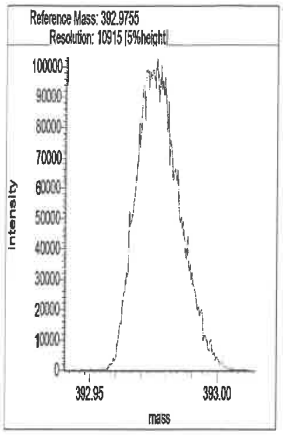

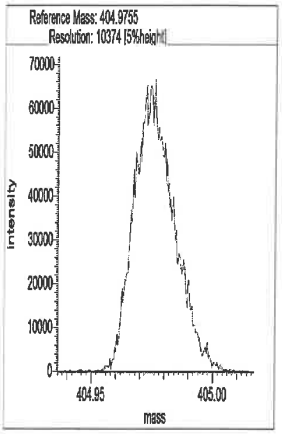

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10663 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10424 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10673 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10509 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11250 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10511 [5%height]

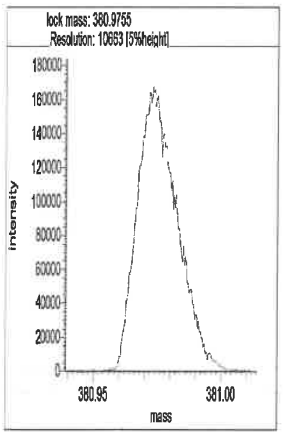

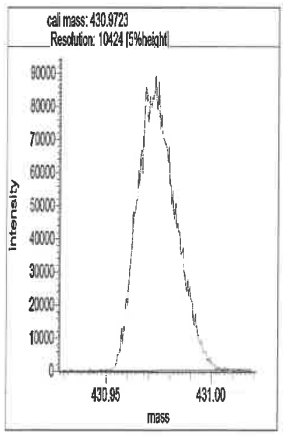

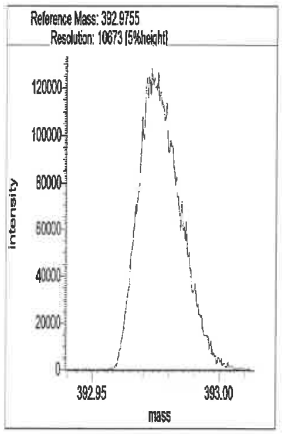

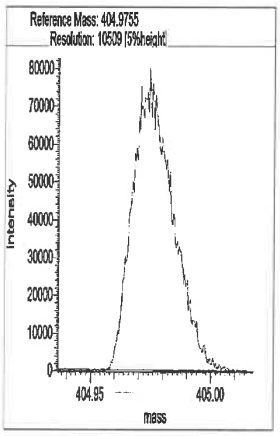

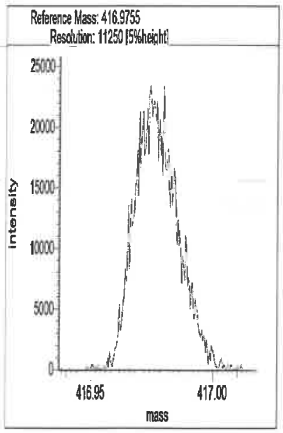

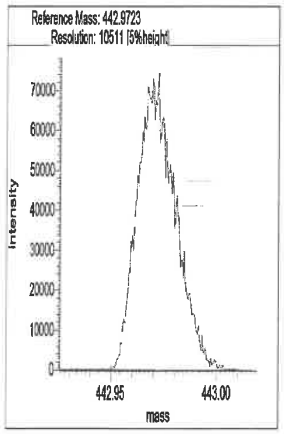

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10570 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11001 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10492 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10831 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10371 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10525 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 9876 [5%height]

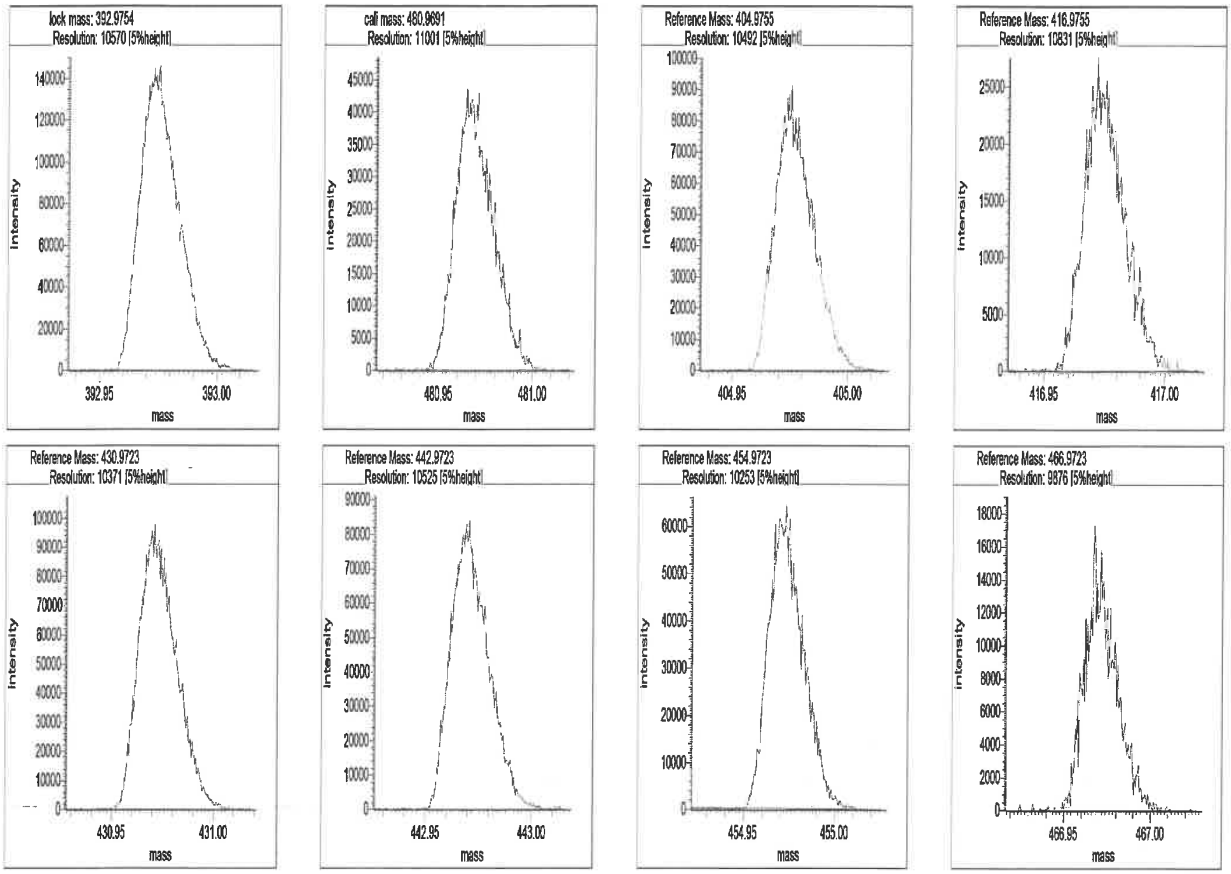

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10598 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10769 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11729 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10589 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10479 [5%height]

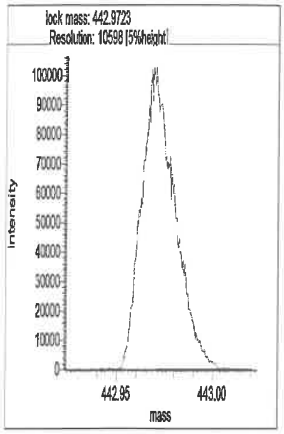
lock mass: 442.9723
Resolution: 10598 [5%height]
Intensity
mass

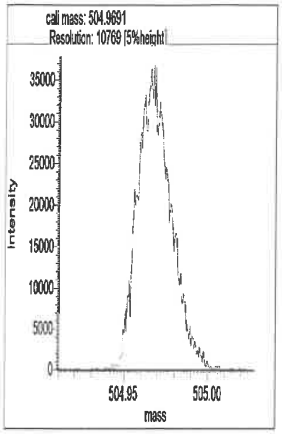
cali mass: 504.9691
Resolution: 10769 [5%height]
Intensity
mass

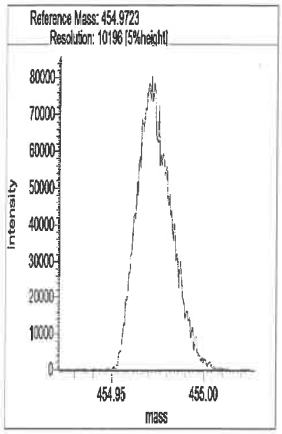
Reference Mass: 454.9723
Resolution: 10196 [5%height]
Intensity
mass

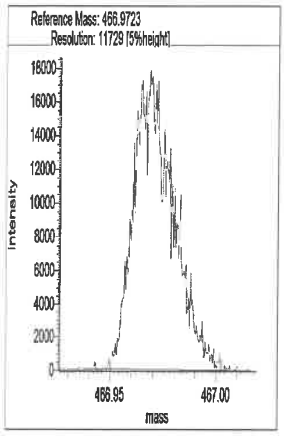
Reference Mass: 466.9723
Resolution: 11729 [5%height]
Intensity
mass

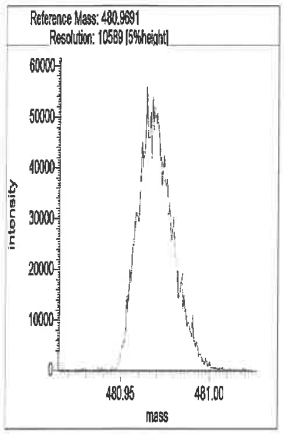
Reference Mass: 480.9691
Resolution: 10589 [5%height]
Intensity
mass

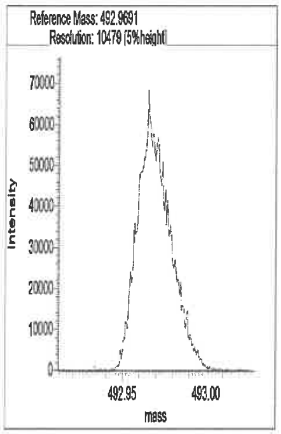
Reference Mass: 492.9691
Resolution: 10479 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 01:48
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10717 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10164 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10292 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10631 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10633 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10192 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10253 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9908 [5%height] 8/18/21 KS
Ref. mass 404.9755 [m/z] Resolution: 10394 [5%height]

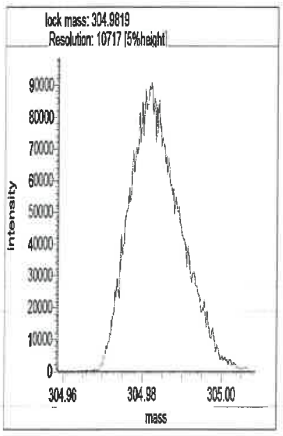

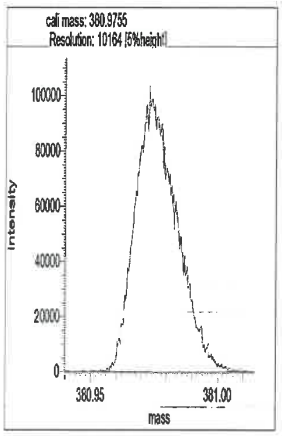

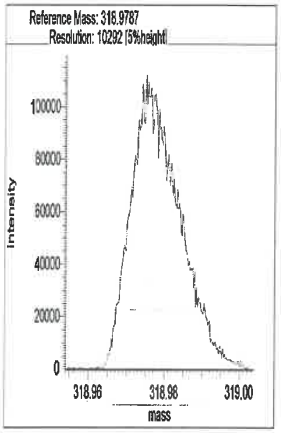

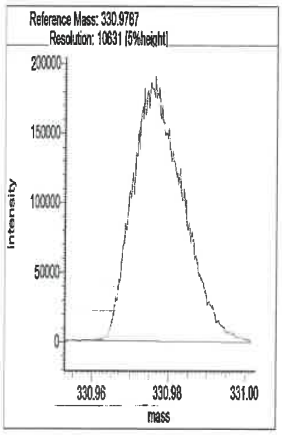

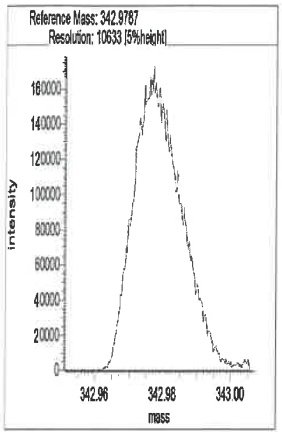

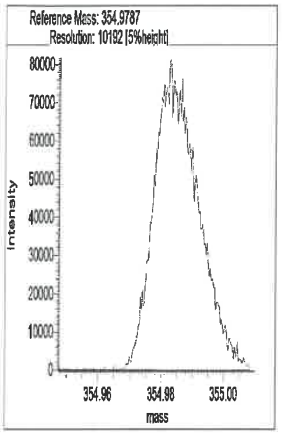

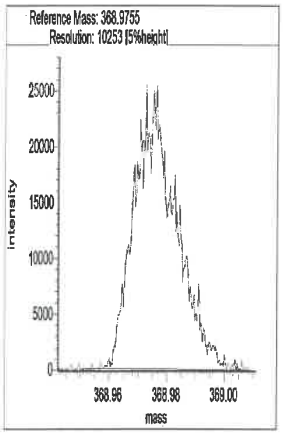

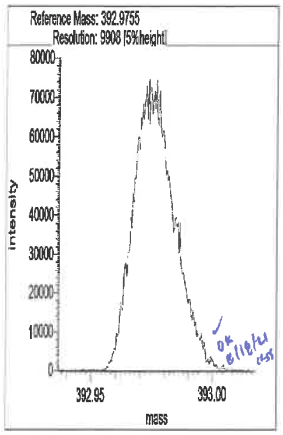

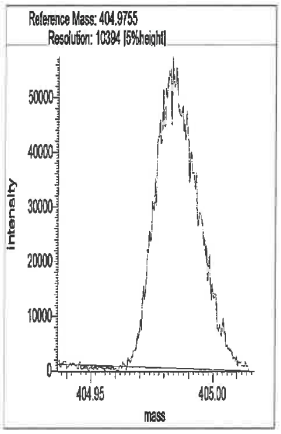

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10724 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10571 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10185 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10507 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 9890 [5%height] ✓

Ref. mass 392.9755 [m/z] Resolution: 10160 [5%height] 8/10/24 KJS

Ref. mass 404.9755 [m/z] Resolution: 9838 [5%height] ✓

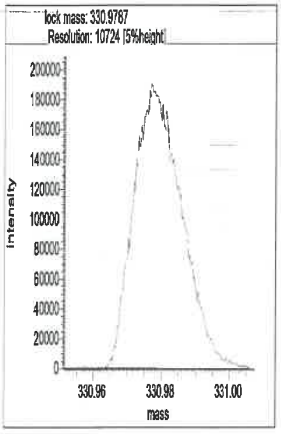

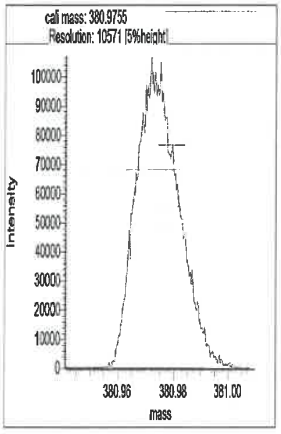

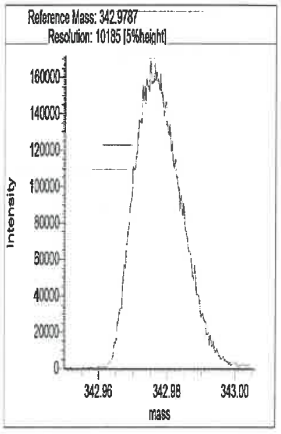

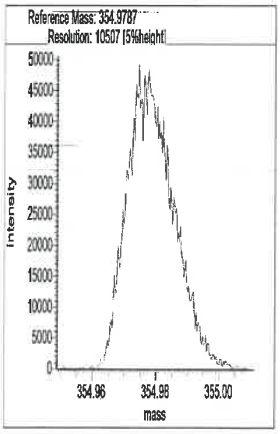

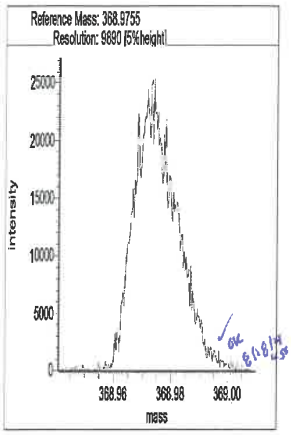

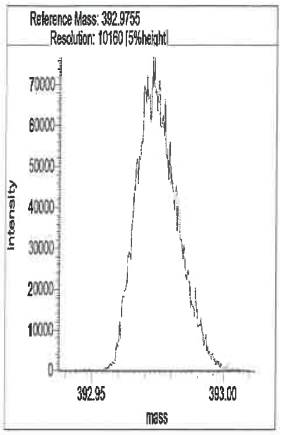

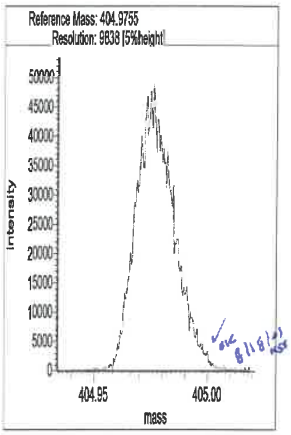

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10569 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10686 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10326 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11023 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11063 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11204 [5%height]

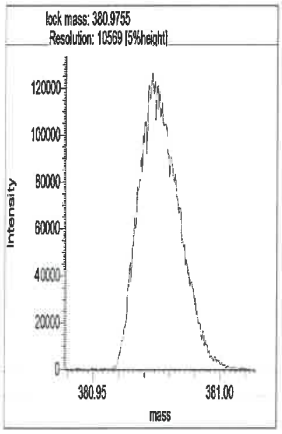

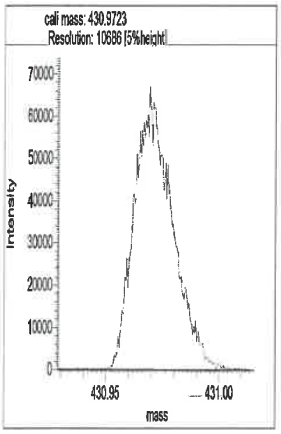

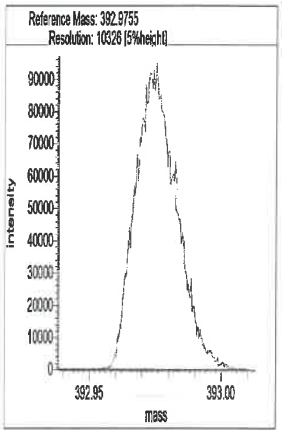

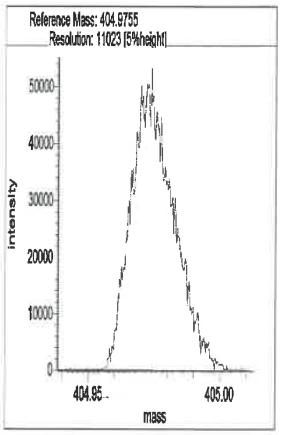

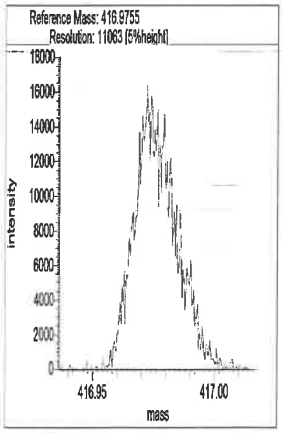

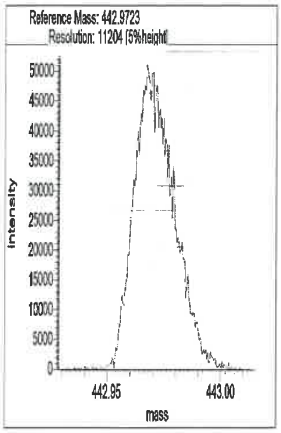

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10576 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10771 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10184 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11006 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10416 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11131 [5%height]

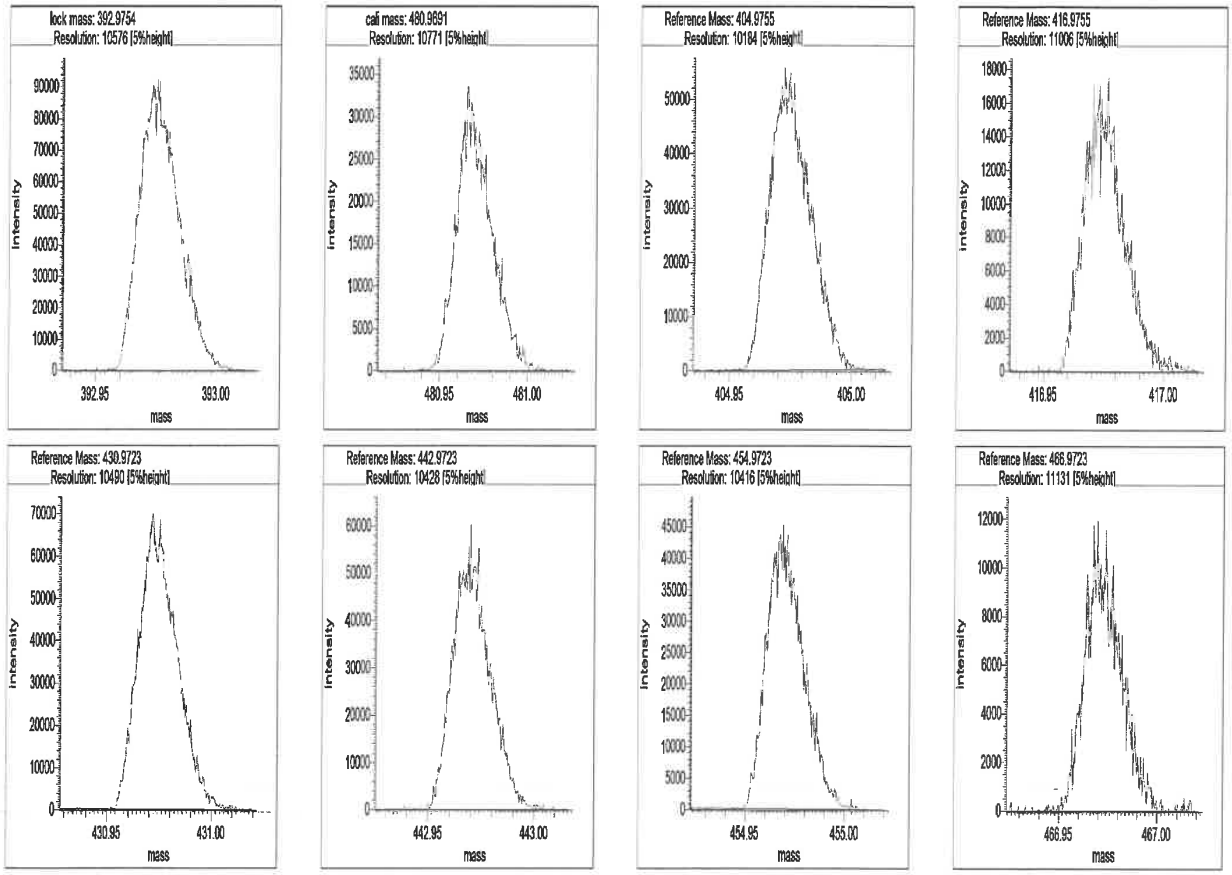

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10847 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11373 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10903 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10602 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10379 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10595 [5%height]

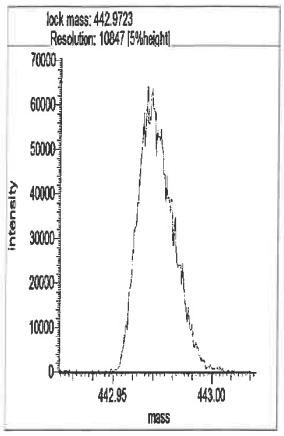
lock mass: 442.9723
Resolution: 10847 [5%height]
Intensity
mass

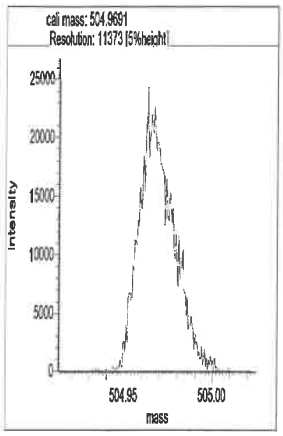
cali mass: 504.9691
Resolution: 11373 [5%height]
Intensity
mass

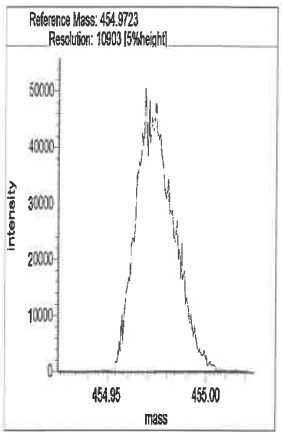
Reference Mass: 454.9723
Resolution: 10903 [5%height]
Intensity
mass

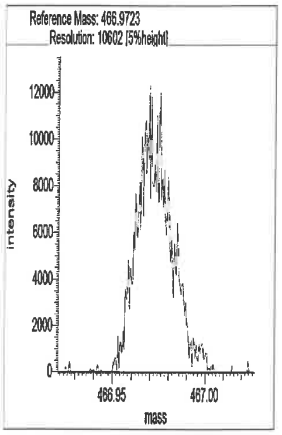
Reference Mass: 466.9723
Resolution: 10602 [5%height]
Intensity
mass

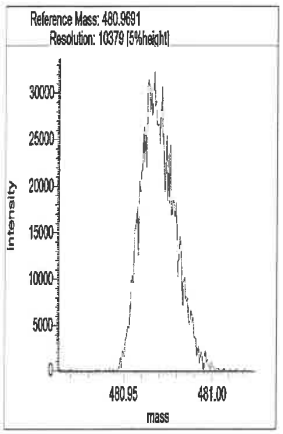
Reference Mass: 480.9691
Resolution: 10379 [5%height]
Intensity
mass

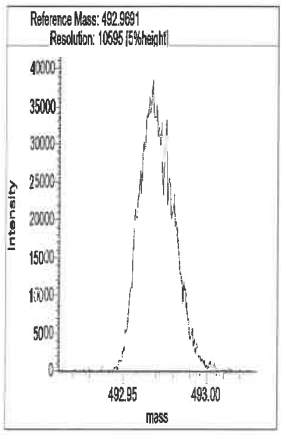
Reference Mass: 492.9691
Resolution: 10595 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

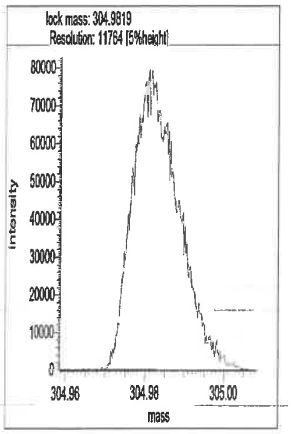

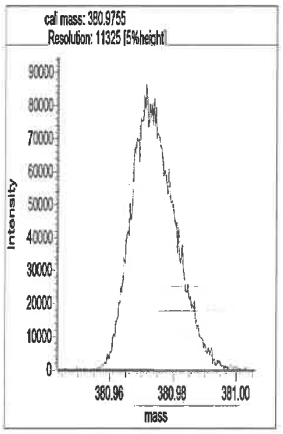

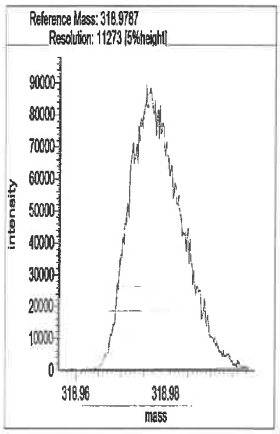

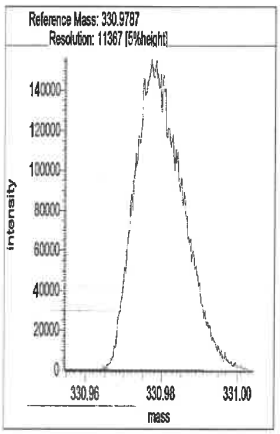

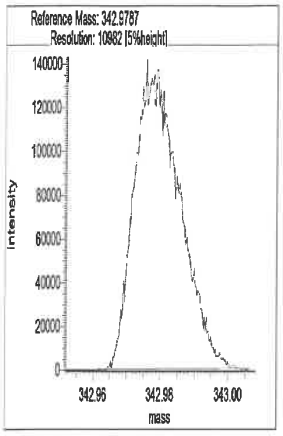

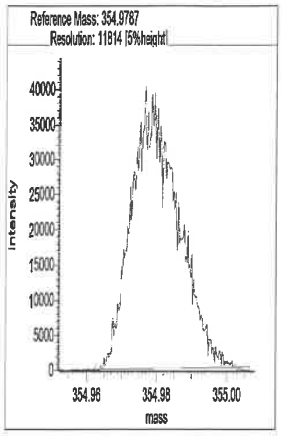

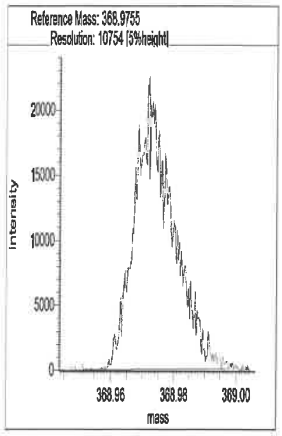

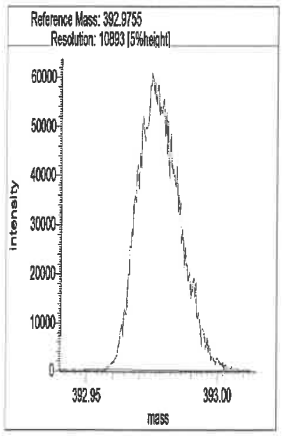

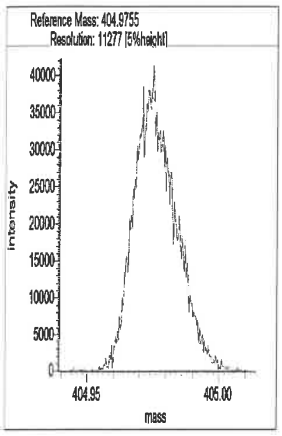

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

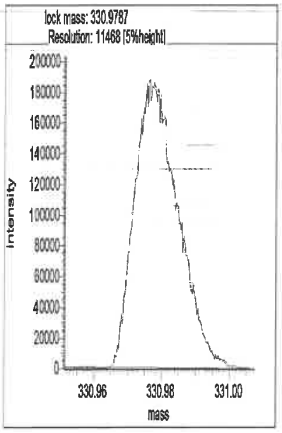

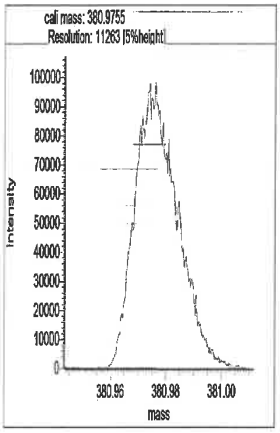

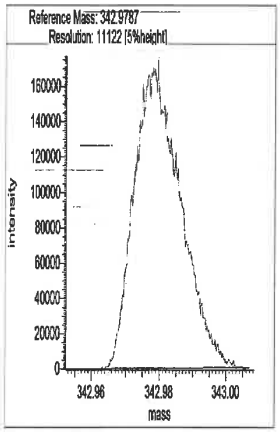

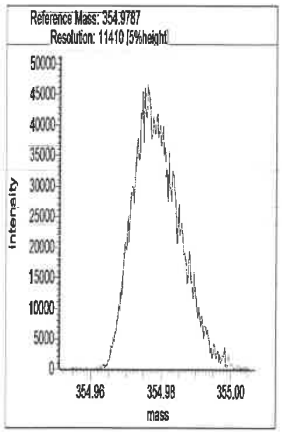

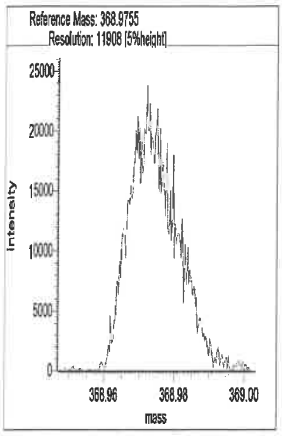

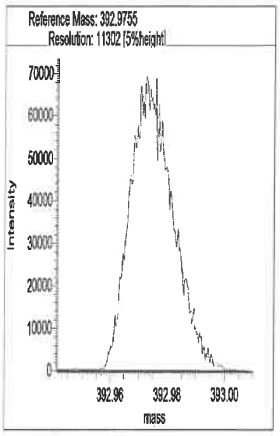

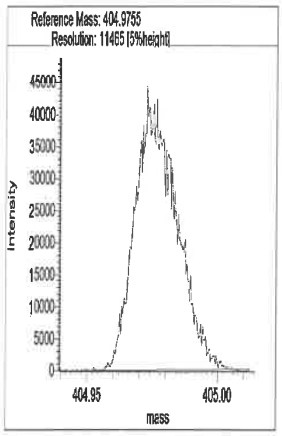

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

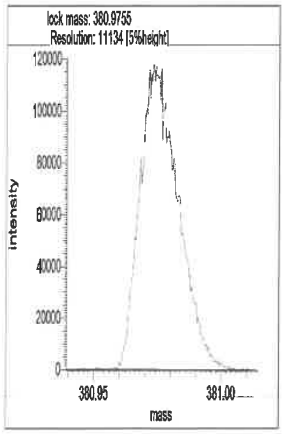

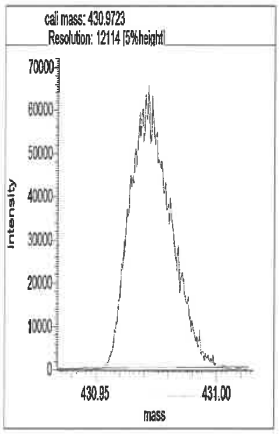

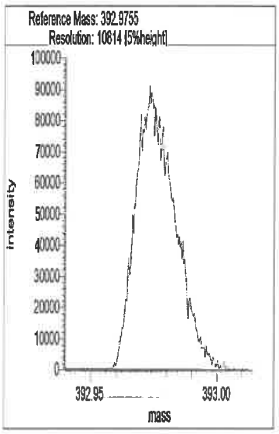

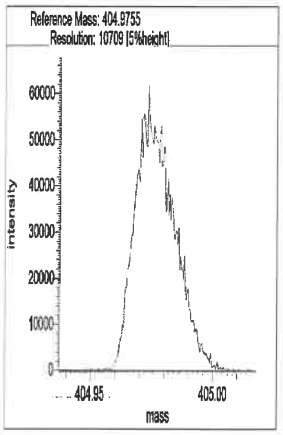

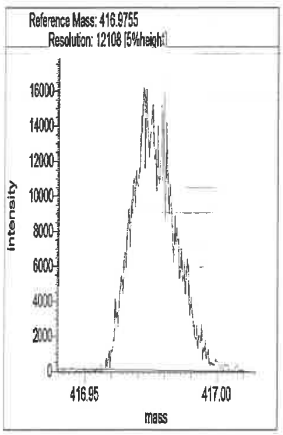

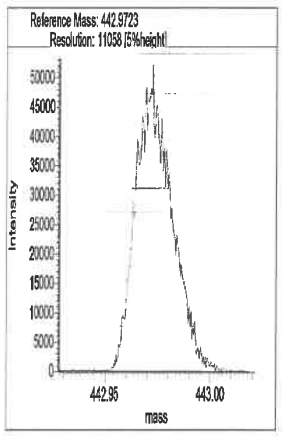

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

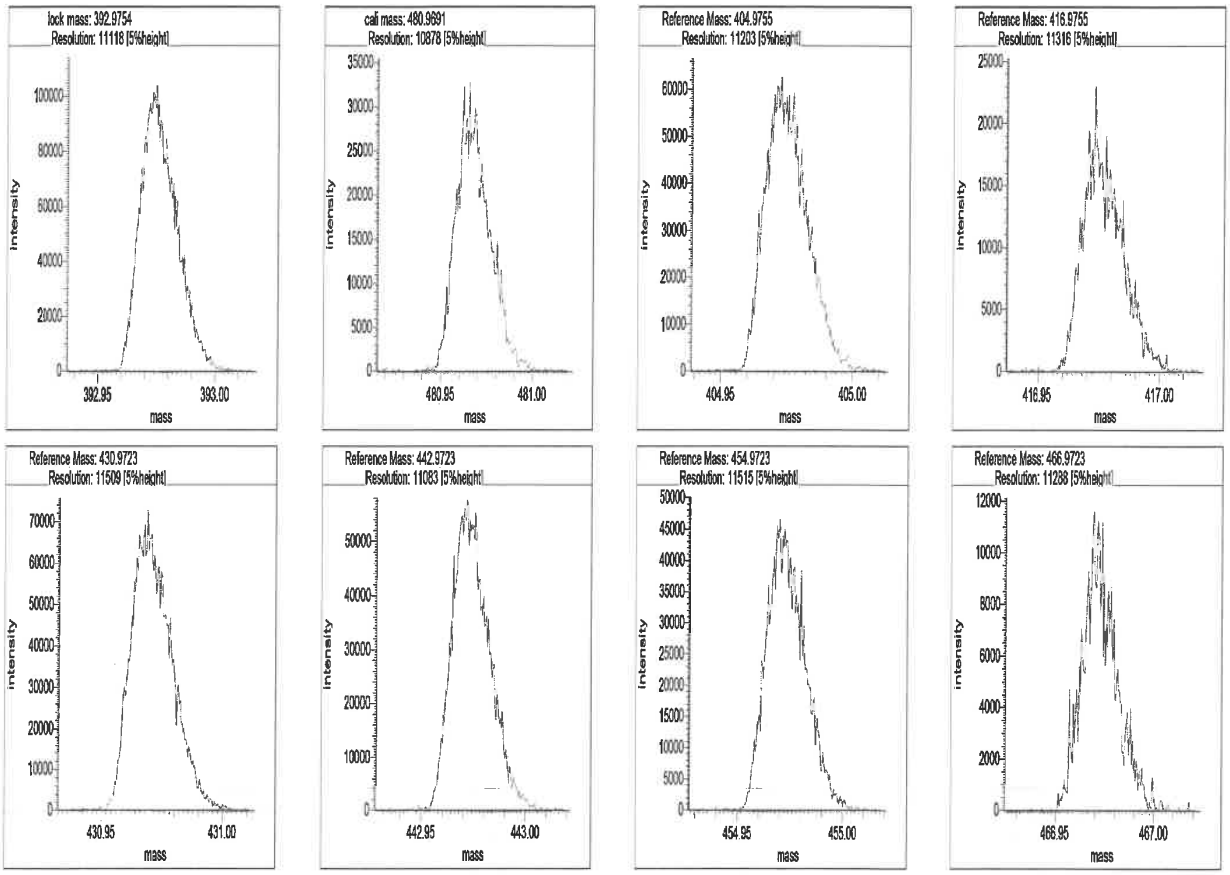

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

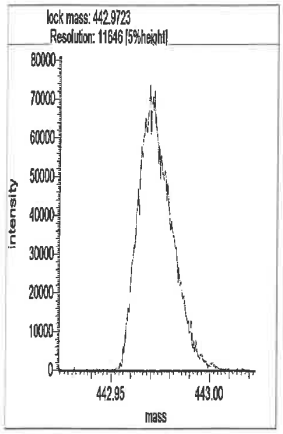
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

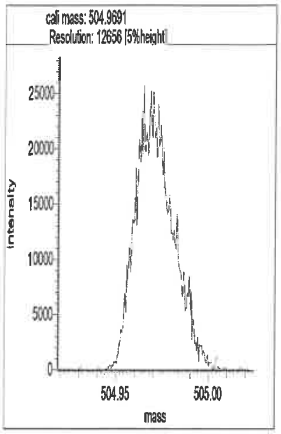
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

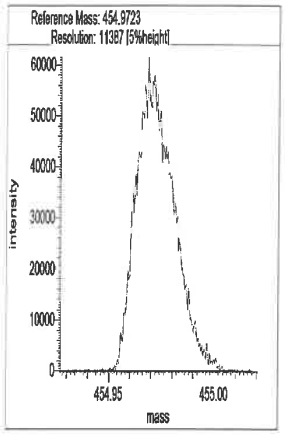
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

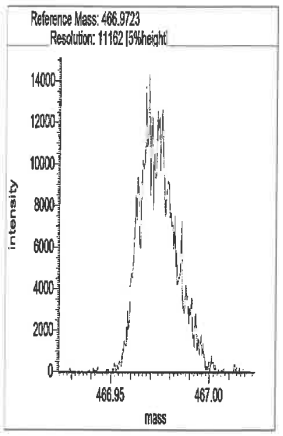
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

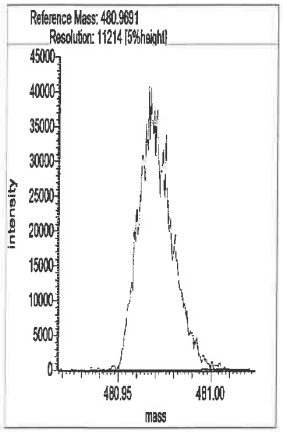
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

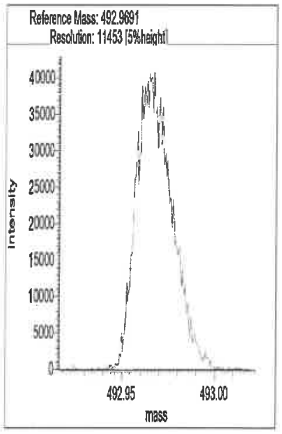
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 02:07:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:51 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 18-Aug-2021 08:26:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.483	653980	0.85	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.529	901083	0.77	1.3459	102.4	102.4	0.1422	0.1422	102	
2,3,7,8-TCDF	20.537	87721	0.70	1.0802	9.012	9.012	0.0156	0.0156	90.12	M
A Non-2,3,7,8-sub-TCDF	19.983	771	0.77	1.0802	0.1729	0.0792	0.0156	0.0373	0.00	RQ
S Total TCDF					9.185	9.092	0.0156	0.0156		RQ
D 13C-2,3,7,8-TCDD	21.879	642649	0.76	0.9317	105.5	105.5	0.1836	0.1836	105	
2,3,7,8-TCDD	21.905	66183	0.83	1.0753	9.577	9.577	0.0193	0.0193	95.77	M
$ 37Cl4-2,3,7,8-TCDD	21.905	68403		1.0083	10.4	10.4	0.0112	0.0112	104	
A Non-2,3,7,8-sub-TCDD	20.816	941	0.77	1.0753	0.2087	0.1362	0.0193	0.0686	0.00	RQ
S Total TCDD					9.786	9.713	0.0193	0.0193		RQ
D 13C-1,2,3,7,8-PeCDF	27.343	841428	1.56	1.1405	112.8	112.8	0.3325	0.3325	113	
1,2,3,7,8-PeCDF	27.368	439454	1.55	1.0543	49.5	49.5	0.1360	0.1360	99.08	
D 13C-2,3,4,7,8-PeCDF	28.867	914292	1.59	1.1253	124.2	124.2	0.3370	0.3370	124	
2,3,4,7,8-PeCDF	28.884	418352	1.57	1.0079	45.4	45.4	0.1398	0.1398	90.80	
A F1 PeCDFs	24.695						0.003787	0.003787		
A Non-2,3,7,8-sub-PeCDF	28.196	4957	1.57	1.0311	0.5477	0.5477	0.1379	0.5477	0.00	
S Total PeCDF					95.5	95.5	0.1379	0.1379		
D 13C-1,2,3,7,8-PeCDD	29.667	506875	1.64	0.7165	108.2	108.2	0.1414	0.1414	108	
1,2,3,7,8-PeCDD	29.692	266290	1.63	1.0465	50.2	50.2	0.0634	0.0634	100	
A Non-2,3,7,8-sub-PeCDD	28.556						0.0634	0.0634		Rn
S Total PeCDD					50.2	50.2	0.0634	0.0634		
D 13C-1,2,3,4,7,8-HxCDF	34.974	824340	0.54	0.9648	104.0	104.0	0.3060	0.3060	104	
1,2,3,4,7,8-HxCDF	35.000	447176	1.19	1.1474	47.3	47.3	0.1959	0.1959	94.56	
D 13C-1,2,3,6,7,8-HxCDF	35.134	791860	0.57	1.0708	90.0	90.0	0.2758	0.2758	90.02	
1,2,3,6,7,8-HxCDF	35.151	473460	1.23	1.2178	49.1	49.1	0.1875	0.1875	98.20	
D 13C-2,3,4,6,7,8-HxCDF	35.951	787519	0.54	1.0413	92.1	92.1	0.2836	0.2836	92.06	
2,3,4,6,7,8-HxCDF	35.968	494510	1.22	1.2145	51.7	51.7	0.1675	0.1675	103	
D 13C-1,2,3,7,8,9-HxCDF	36.843	748006	0.54	0.9731	93.6	93.6	0.3034	0.3034	93.57	
1,2,3,7,8,9-HxCDF	36.852	469818	1.24	1.2401	50.6	50.6	0.1639	0.1639	101	
A Non-2,3,7,8-sub-HxCDF	35.117						0.1779	0.1779		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					198.7	198.7	0.1787	0.1787		
* 13C-1,2,3,7,8,9-HxCDD	36.641	821504	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.161	633725	1.29	0.7587	101.7	101.7	0.1814	0.1814	102	
1,2,3,4,7,8-HxCDD	36.178	311106	1.23	1.0608	46.3	46.3	0.0910	0.0910	92.56	
D 13C-1,2,3,6,7,8-HxCDD	36.279	698214	1.25	0.8593	98.9	98.9	0.1602	0.1602	98.91	
1,2,3,6,7,8-HxCDD	36.296	322951	1.26	0.9933	46.6	46.6	0.0969	0.0969	93.13	
1,2,3,7,8,9-HxCDD	36.658	378296	1.24	1.1094	51.2	51.2	0.0869	0.0869	102	
A Non-2,3,7,8-sub-HxCDD	35.475						0.0914	0.0914		
S Total HxCDD					144.0	144.0	0.0916	0.0916		
D 13C-1,2,3,4,6,7,8-HpCDF	38.647	667505	0.45	0.7359	110.4	110.4	0.2934	0.2934	110	
1,2,3,4,6,7,8-HpCDF	38.664	441945	1.04	1.4421	45.9	45.9	0.1984	0.1984	91.82	
D 13C-1,2,3,4,7,8,9-HpCDF	39.901	674832	0.44	0.6854	119.9	119.9	0.3150	0.3150	120	
1,2,3,4,7,8,9-HpCDF	39.910	412232	1.03	1.3092	46.7	46.7	0.1941	0.1941	93.32	
A Non-2,3,7,8-sub-HpCDF	39.301						0.1957	0.1957		
S Total HpCDF					92.6	92.6	0.1963	0.1963		
D 13C-1,2,3,4,6,7,8-HpCDD	39.590	629793	1.08	0.6745	113.7	113.7	0.3161	0.3161	114	
1,2,3,4,6,7,8-HpCDD	39.598	329811	1.03	1.0503	49.9	49.9	0.1097	0.1097	99.72	
A Non-2,3,7,8-sub-HpCDD	39.297	4895	0.97	1.0503	0.7400	0.7400	0.1097	0.7400	0.00	
S Total HpCDD					50.6	50.6	0.1097	0.1097		
D 13C-OCDD	42.094	1178641	0.91	0.5446	263.4	263.4	0.2379	0.2379	132	
OCDF	42.187	799988	0.91	1.3168	103.1	103.1	0.1030	0.1030	103	
OCDD	42.103	598251	0.90	1.0620	95.6	95.6	0.0965	0.0965	95.59	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 02:07:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:51 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 18-Aug-2021 08:26:59

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.483	21.483	0		300468	40327	36	90	1120		
333.9338	21.501	21.483	1		353512	48528	25	62	1941	0.85(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.529	20.529	0	0.956	391284	55269	50	125	1105		
317.9389	20.520	20.529	-1	0.955	509799	75016	18	45	4168	0.77(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.537	20.537	0	1.000	36140	5174	4	10	1294		M
305.8987	20.555	20.537	1	1.001	51581	6857	5	12	1371	0.70(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.894	19.983	-65	0.920	51	40	4	10	10		
305.8987	18.902	19.983	-65	0.921	424	102	5	12	20	0.12(0.65-0.89)	
	Empc Correction				66	51	5	12	10		
303.9016	19.857	19.983	-8	0.967	158	72	4	10	18		
305.8987	19.849	19.983	-8	0.967	455	176	5	12	35	0.35(0.65-0.89)	
	Empc Correction				205	93	5	12	19		
303.9016	20.830	19.983	51	1.015	127	40	4	10	10		
305.8987	20.795	19.983	49	1.013	468	100	5	12	20	0.27(0.65-0.89)	
	Empc Correction				164	51	5	12	10		
13C-2,3,7,8-TCDD											
331.9368	21.879	21.879	0	1.018	278020	35005	36	90	972		
333.9338	21.879	21.879	0	1.018	364629	47074	25	62	1883	0.76(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.905	21.905	0	1.001	29930	4044	5	12	809		
321.8936	21.913	21.905	1	1.002	36253	4936	2	5	2468	0.83(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	21.905	21.905	0	1.020	68403	9430	4	10	2358		

783252

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	19.875	20.816	-56	0.908	98	53	5	12	11		
	Empc Correction				67	29	5	12	6		
321.8936	19.840	20.816	-58	0.907	88	38	2	5	19	1.11(0.65-0.89)	
319.8965	22.085	20.816	76	1.009	571	189	5	12	38		
	Empc Correction				206	54	5	12	11		
321.8936	22.137	20.816	79	1.012	268	71	2	5	36	2.13(0.65-0.89)	
319.8965	22.257	20.816	86	1.017	136	60	5	12	12		
321.8936	22.232	20.816	85	1.016	281	77	2	5	39	0.48(0.65-0.89)	
	Empc Correction				176	77	2	5	39		
13C-1,2,3,7,8-PeCDF											
351.9000	27.343	27.343	0	1.273	513108	78085	77	192	1014		
353.8970	27.335	27.343	-1	1.272	328320	48873	58	145	843	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.368	27.368	0	1.001	266782	39644	45	112	881		
341.8567	27.368	27.368	0	1.001	172672	25441	28	70	909	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.867	28.867	0	1.344	561769	78161	77	192	1015		
353.8970	28.867	28.867	0	1.344	352523	50966	58	145	879	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.884	28.884	0	1.001	255675	37187	45	112	826		
341.8567	28.892	28.884	1	1.001	162677	23614	28	70	843	1.57(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.695						1	2			
341.8567	24.695						1	2			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.966	28.196	-14	1.023	3027	388	45	112	9		
341.8567	27.975	28.196	-13	1.023	1930	313	28	70	11	1.57(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.667	29.667	0	1.381	314537	41843	16	40	2615		
369.8919	29.667	29.667	0	1.381	192338	26022	20	50	1301	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.692	29.692	0	1.001	165129	21108	12	30	1759		
357.8516	29.709	29.692	1	1.001	101161	12956	6	15	2159	1.63(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	27.756	28.556	-48	0.936	422	75	12	30	6		
357.8516	27.806	28.556	-45	0.937	173	40	6	15	7	2.44(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.974	34.974	0	0.955	288260	55851	76	190	735		
385.8610	34.974	34.974	0	0.955	536080	100742	143	357	704	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.000	35.000	0	1.001	242677	48305	76	190	636		
375.8178	35.000	35.000	0	1.001	204499	40075	65	162	617	1.19(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.134	35.134	0	0.959	288034	57691	76	190	759		
385.8610	35.143	35.134	1	0.959	503826	96474	143	357	675	0.57(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDF											
373.8208	35.151	35.151	0	1.000	260709	49152	76	190	647		
375.8178	35.151	35.151	0	1.000	212751	40959	65	162	630	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.951	35.951	0	0.981	274734	60860	76	190	801		
385.8610	35.951	35.951	0	0.981	512785	112169	143	357	784	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.968	35.968	0	1.000	271444	57965	76	190	763		
375.8178	35.968	35.968	0	1.000	223066	47945	65	162	738	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.843	36.843	0	1.006	262042	60518	76	190	796		
385.8610	36.843	36.843	0	1.006	485964	112714	143	357	788	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.852	36.852	0	1.000	260509	58683	76	190	772		
375.8178	36.852	36.852	0	1.000	209309	48521	65	162	746	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.117						76	190			
375.8178	35.117						65	162			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.641	36.641	0		458995	104898	62	155	1692		
403.8529	36.641	36.641	0		362509	80350	40	100	2009	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.161	36.161	0	0.987	357358	80985	62	155	1306		
403.8529	36.161	36.161	0	0.987	276367	66076	40	100	1652	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.178	36.178	0	1.000	171656	38288	35	87	1094		
391.8127	36.170	36.178	-1	1.000	139450	31245	22	55	1420	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.279	36.279	0	0.990	388276	81080	62	155	1308		
403.8529	36.279	36.279	0	0.990	309938	66370	40	100	1659	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.296	36.296	0	1.000	180049	38399	35	87	1097		
391.8127	36.296	36.296	0	1.000	142902	30189	22	55	1372	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.658	36.658	0	1.014	209455	47412	35	87	1355		
391.8127	36.658	36.658	0	1.014	168841	38105	22	55	1732	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.475						35	87			
391.8127	35.475						22	55			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.647	38.647	0	1.055	207852	52510	59	147	890		
419.8220	38.647	38.647	0	1.055	459653	116986	101	252	1158	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.664	38.664	0	1.000	225416	58663	100	250	587		
409.7788	38.664	38.664	0	1.000	216529	55624	94	235	592	1.04(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.901	39.901	0	1.089	207403	60112	59	147	1019		
419.8220	39.901	39.901	0	1.089	467429	130725	101	252	1294	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.910	39.910	0	1.000	209504	59297	100	250	593		
409.7788	39.910	39.910	0	1.000	202728	56331	94	235	599	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.301						100	250			
409.7788	39.301						94	235			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.590	39.590	0	1.080	327053	94033	85	212	1106		
437.8140	39.590	39.590	0	1.080	302740	85600	73	182	1173	1.08(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.598	39.598	0	1.000	167496	46994	44	110	1068		
425.7737	39.598	39.598	0	1.000	162315	44219	39	97	1134	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.958	39.297	-20	0.984	2414	637	44	110	14		
425.7737	38.958	39.297	-20	0.984	2481	763	39	97	20	0.97(0.88-1.20)	
13C-OCDD											
469.7780	42.094	42.094	0	1.149	561827	135839	61	152	2227		
471.7750	42.094	42.094	0	1.149	616814	147272	35	87	4208	0.91(0.76-1.02)	
OCDF											
441.7428	42.187	42.187	0	1.002	380624	88366	35	87	2525		
443.7399	42.187	42.187	0	1.002	419364	101887	42	105	2426	0.91(0.76-1.02)	
OCDD											
457.7377	42.103	42.103	0	1.000	282781	69356	30	75	2312		
459.7348	42.103	42.103	0	1.000	315470	77115	28	70	2754	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 02:07:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517281 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.983

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	901083	130285

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	901083	130285

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.894	51	40	424	102	0.0488	0.12	RQ
18.894	51	40	66	51	0.0120		Empc Correction
19.857	158	72	455	176	0.0630	0.35	RQ
19.857	158	72	205	93	0.0373		Empc Correction
20.830	127	40	468	100	0.0611	0.27	RQ
20.830	127	40	164	51	0.0299		Empc Correction
Signal Totals:							
	336	152	435	195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1683	530				0.25	RQ
	771	347					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1729 = (1683 * 100.000) / (901083 * 1.080)
Empc Amount: 0.0792 = (771 * 100.000) / (901083 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	18-Aug-2021 02:07:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	15
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-TCDD, RT: 20.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	642649	82079

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	642649	82079

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.875	98	53	88	38	0.0269	1.11	RQ
19.875	67	29	88	38	0.0224		Empc Correction
22.085	571	189	268	71	0.1214	2.13	RQ
22.085	206	54	268	71	0.0686		Empc Correction
22.257	136	60	281	77	0.0603	0.48	RQ
22.257	136	60	176	77	0.0451		Empc Correction
Signal Totals:							
	409	143	532	186			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1442	488				1.26	RQ
	941	329					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.2087 = (1442 * 100.000) / (642649 * 1.075)

Empc Amount: 0.1362 = (941 * 100.000) / (642649 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	18-Aug-2021 02:07:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	15
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-PeCDF, RT: 28.196

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	841428	126958
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	914292	129127

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	877860	128042

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.966	3027	388	1930	313	0.5477	1.57	n
Signal Totals:							
	3027	388	1930	313			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4957	701				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5477 = (4957 * 100.000) / (877860 * 1.031)

QC Flag Legend

Processing Flags

n - Failed Sig-To-Noise Test

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 02:07:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517281 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.297

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	629793	179633

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	629793	179633

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.958	2414	637	2481	763	0.7400	0.97	
Signal Totals:							
	2414	637	2481	763			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4895	1400				0.97	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7400 = (4895 * 100.000) / (629793 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d				
Injection Date:	18-Aug-2021 02:07:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.54
Area: 35560
Amount: 8.877750
Amount Units: pg/ul

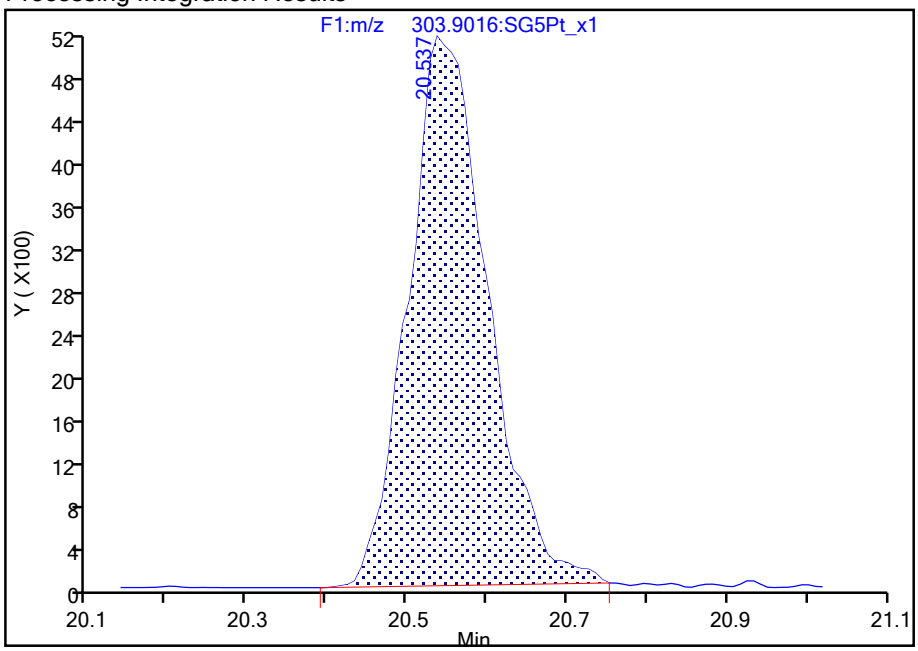

Manual Integration Results

RT: 20.54
Area: 36140
Amount: 9.012338
Amount Units: pg/ul

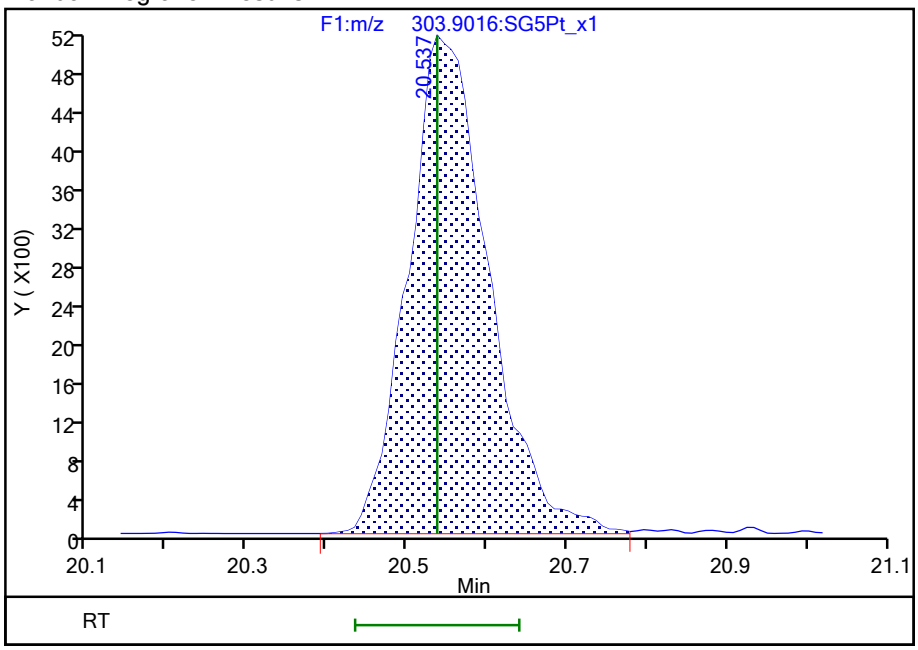

Reviewer: stephensk, 18-Aug-2021 08:26:28

Audit Action: Manually Integrated Audit Reason: Baseline

783260

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d				
Injection Date:	18-Aug-2021 02:07:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 20.55
Area: 50851
Amount: 8.877750
Amount Units: pg/ul

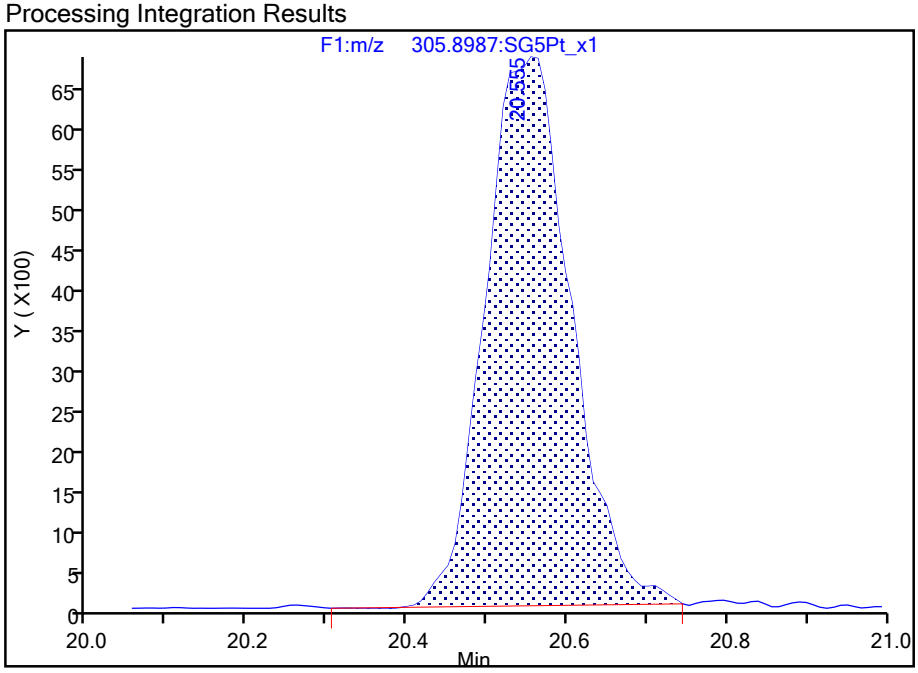

Manual Integration Results

RT: 20.55
Area: 51581
Amount: 9.012338
Amount Units: pg/ul

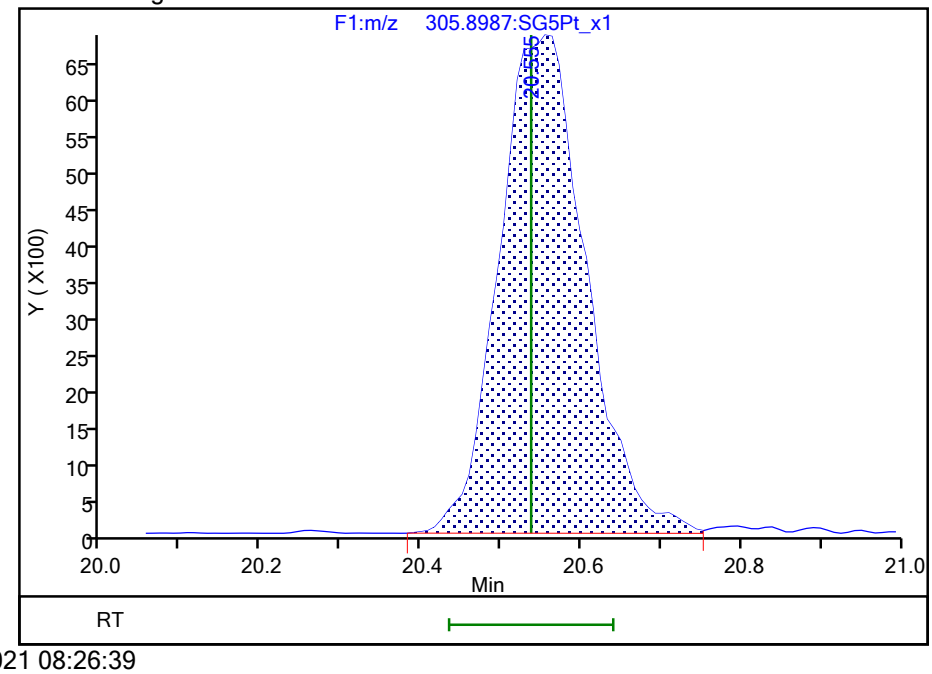

Reviewer: stephensk, 18-Aug-2021 08:26:39

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d				
Injection Date:	18-Aug-2021 02:07:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 21.91
Area: 35232
Amount: 9.429144
Amount Units: pg/ul

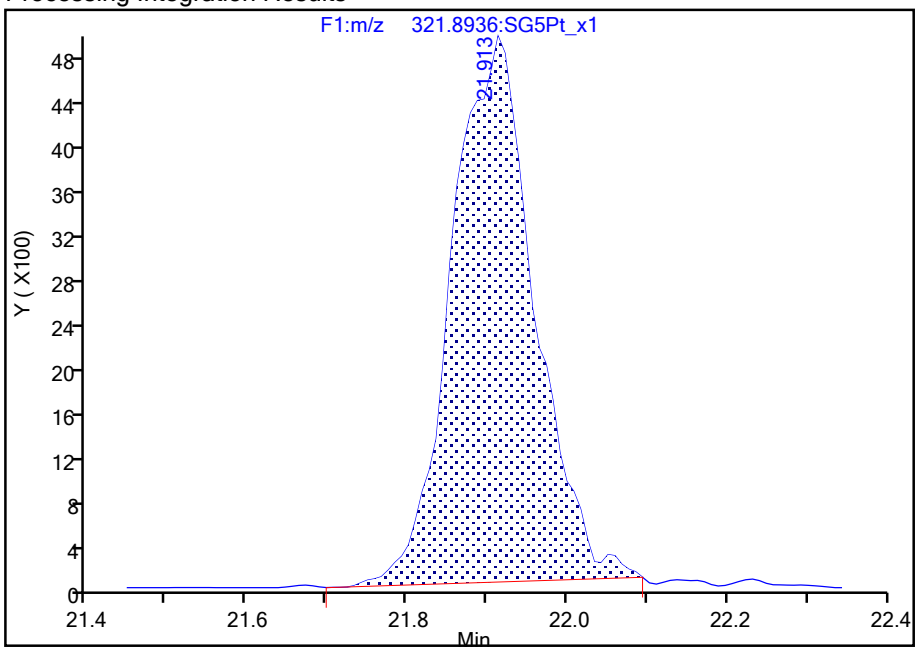

Manual Integration Results

RT: 21.91
Area: 36253
Amount: 9.576886
Amount Units: pg/ul

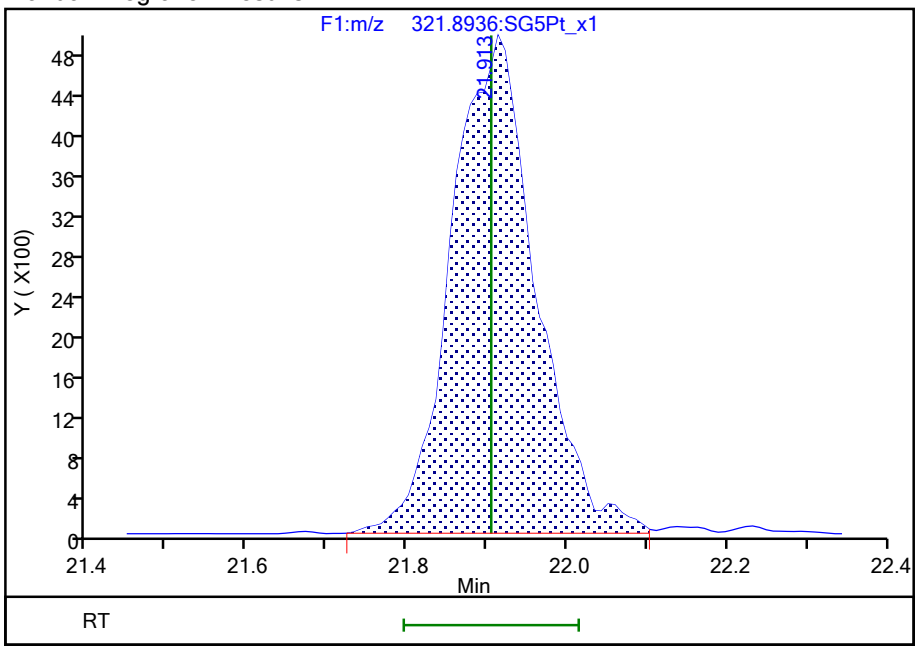

Reviewer: stephensk, 18-Aug-2021 08:26:53

Audit Action: Manually Integrated Audit Reason: Baseline

783262

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

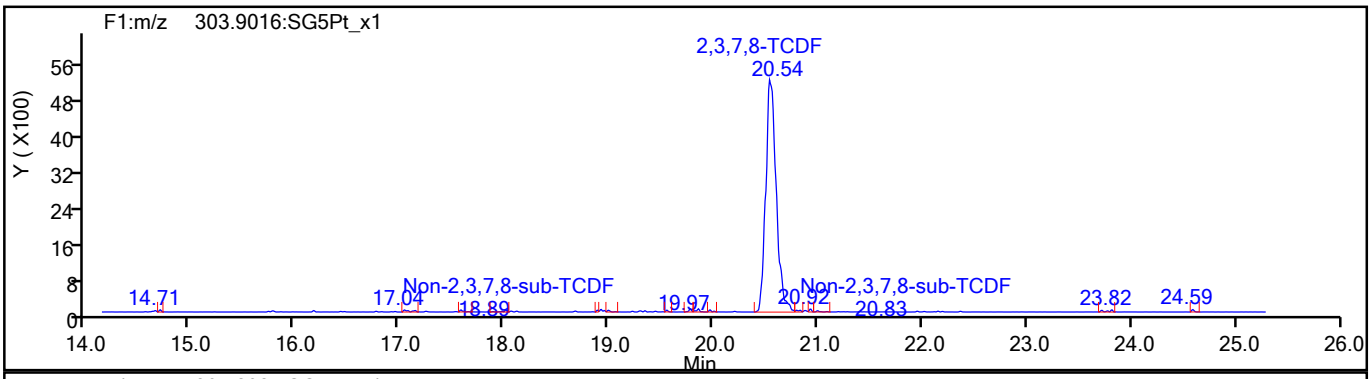

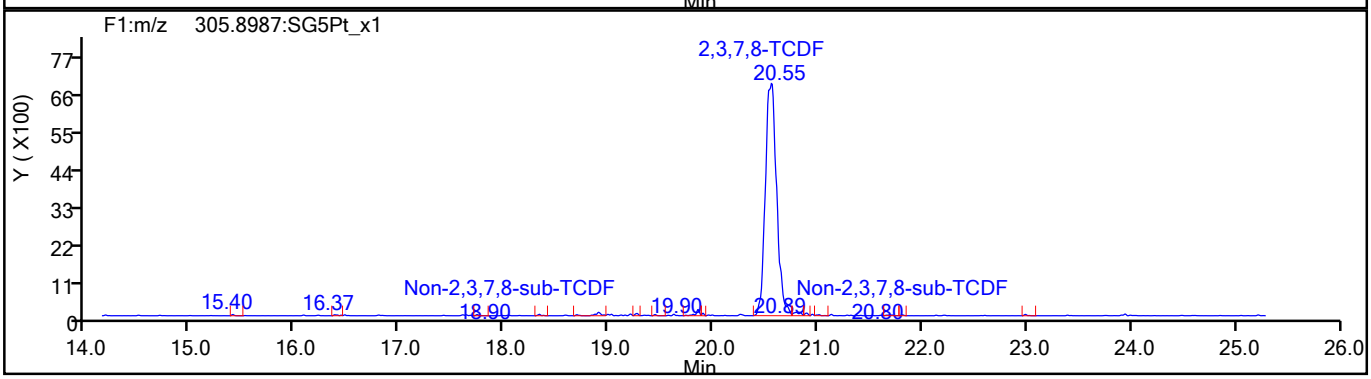

TCDF Standards

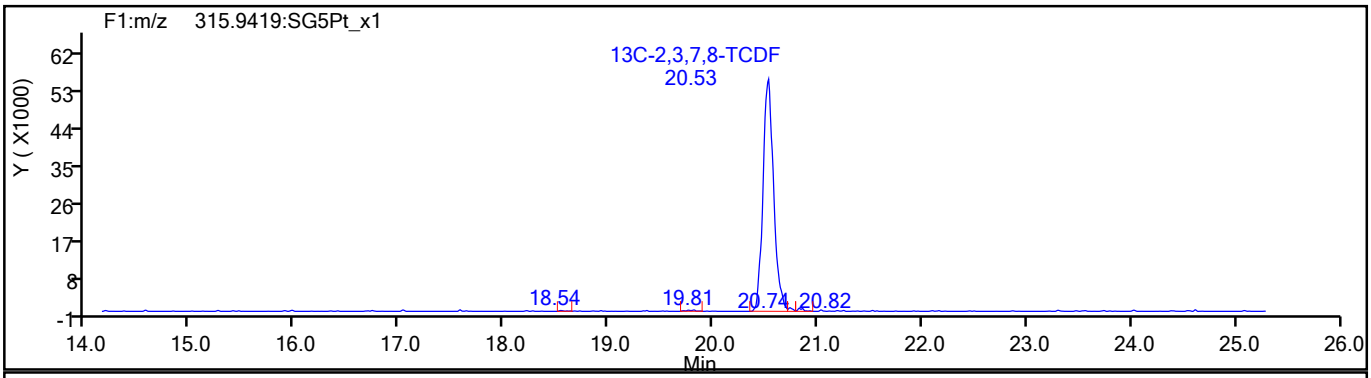

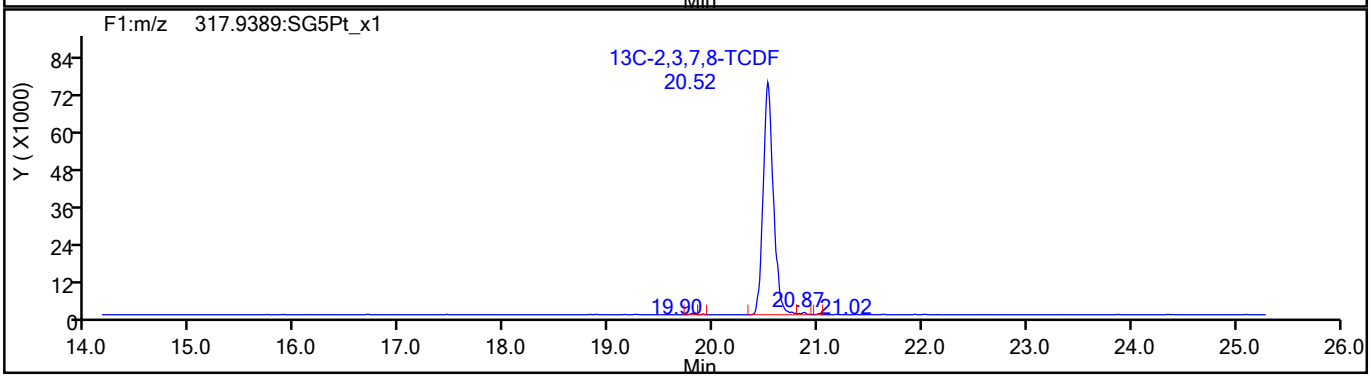

783263

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

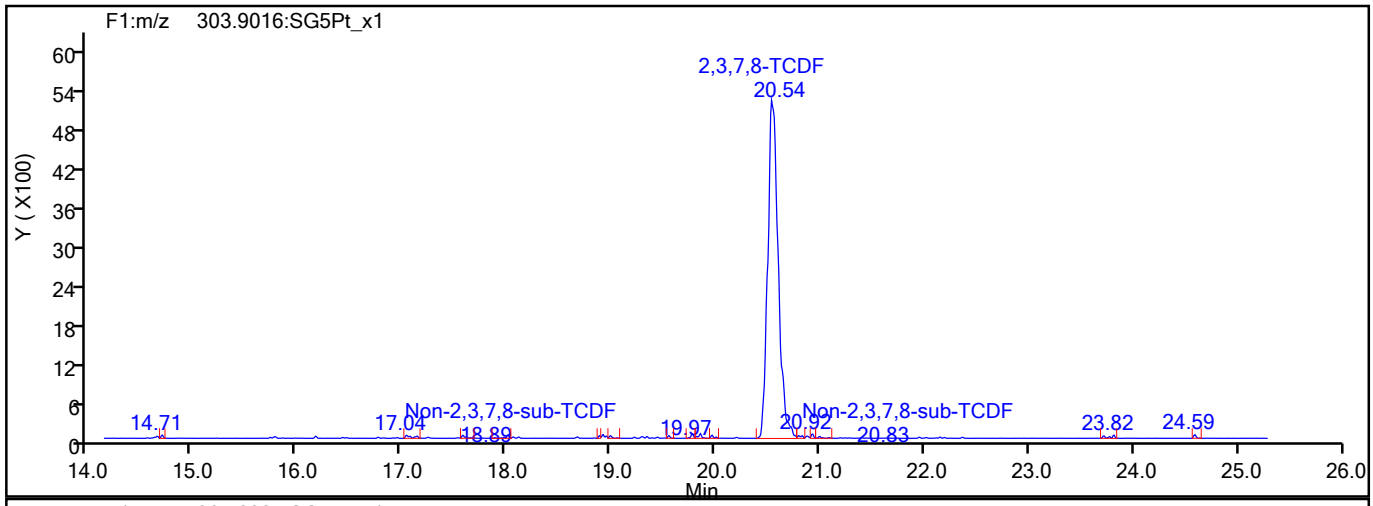

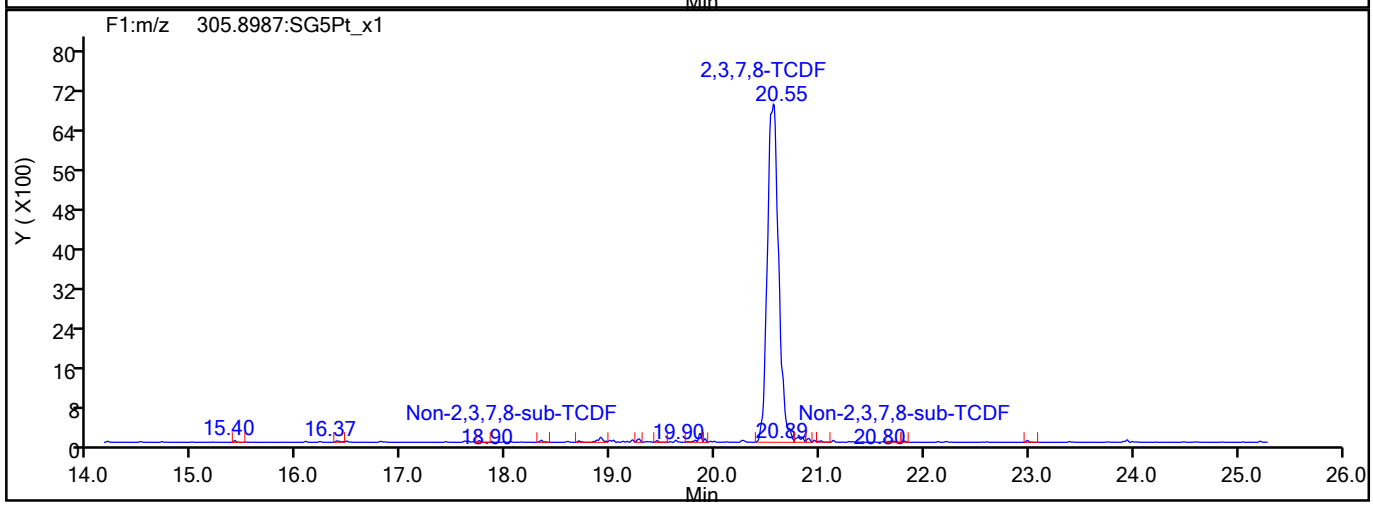

TCDF Interference Mass

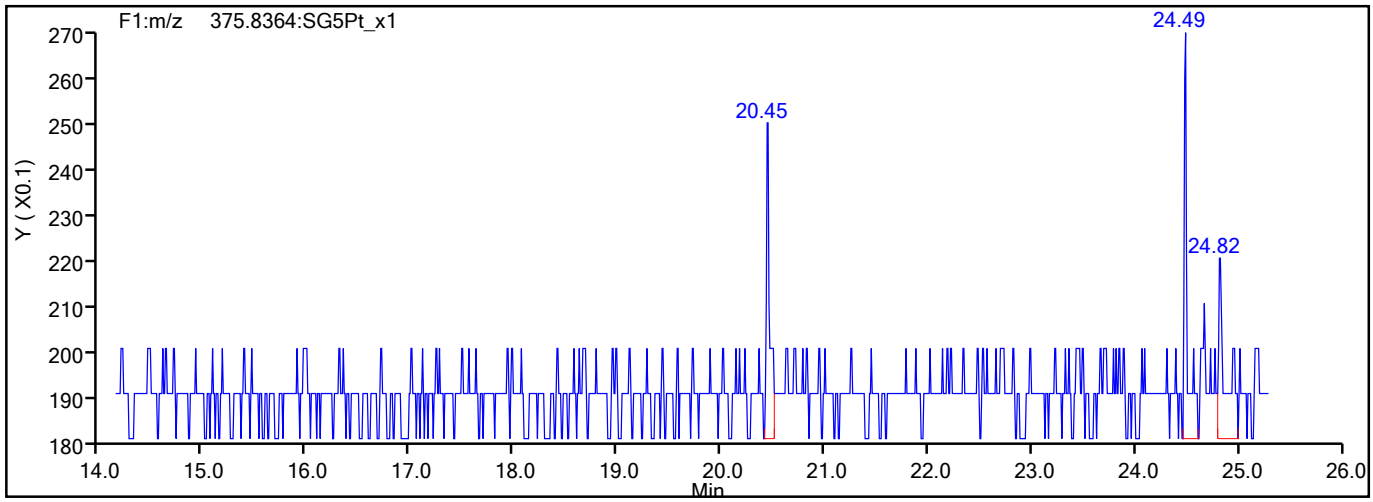

783264

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

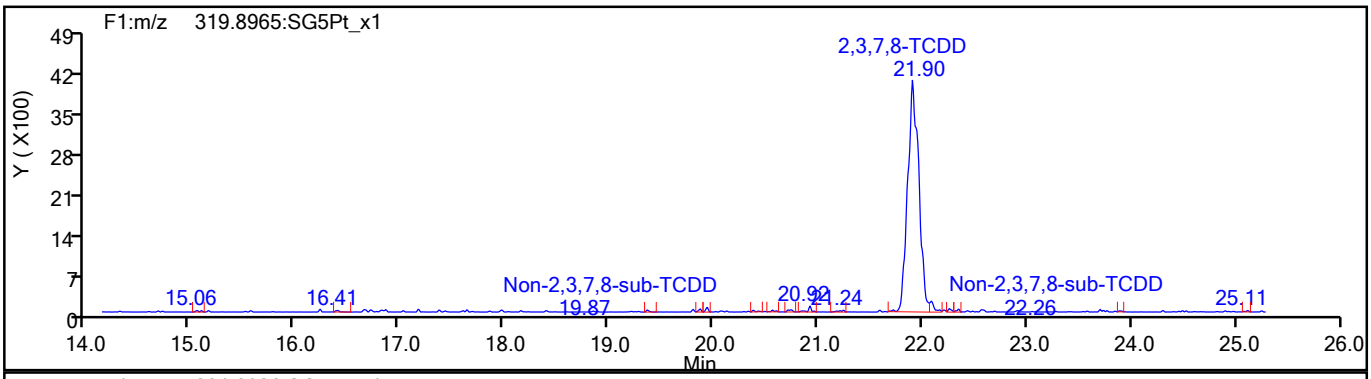

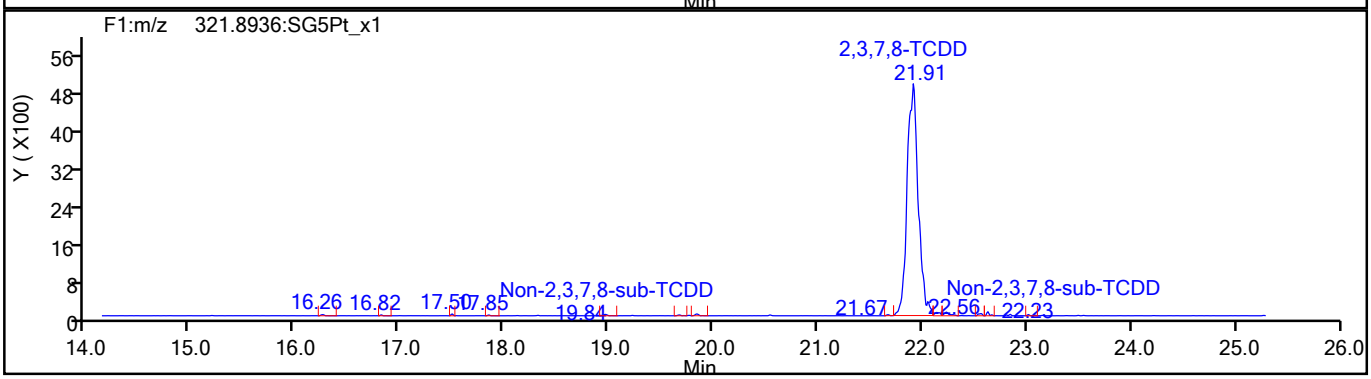

TCDD Standards

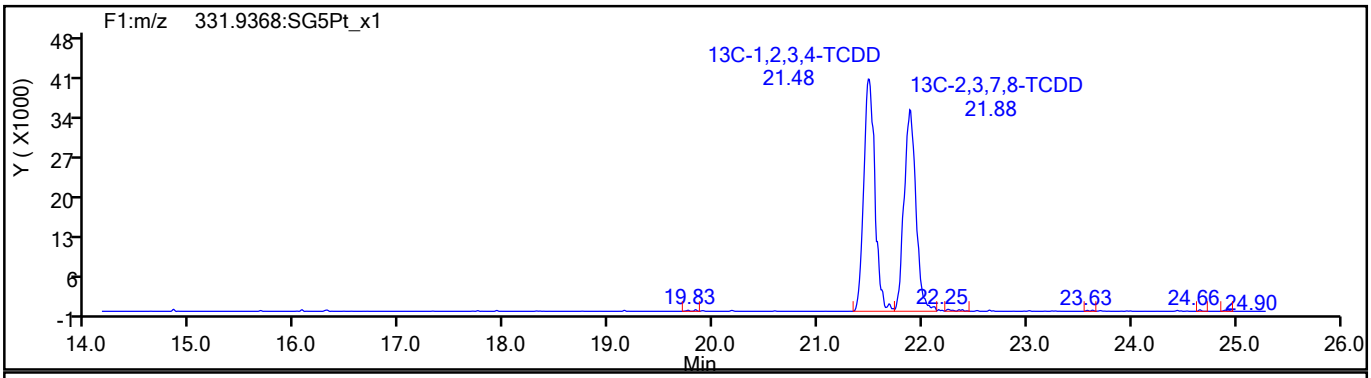

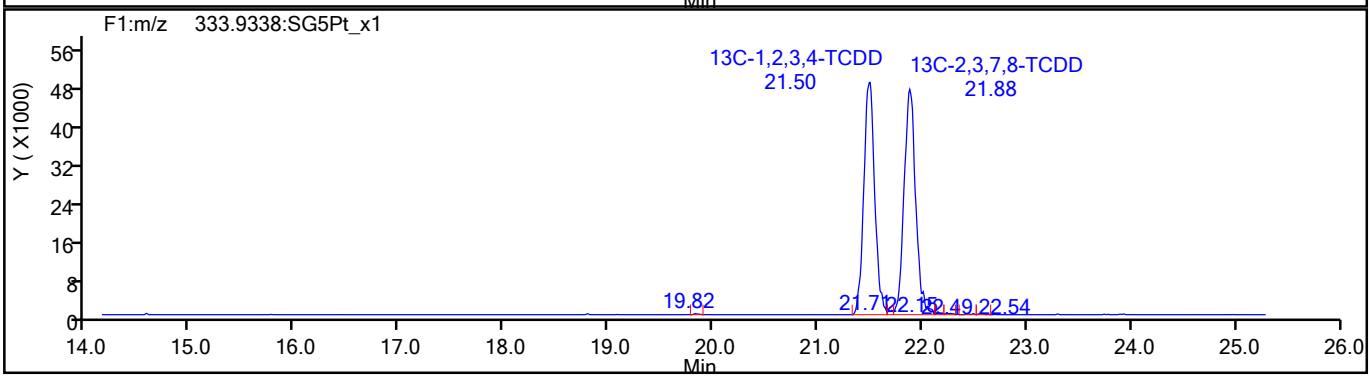

783265

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

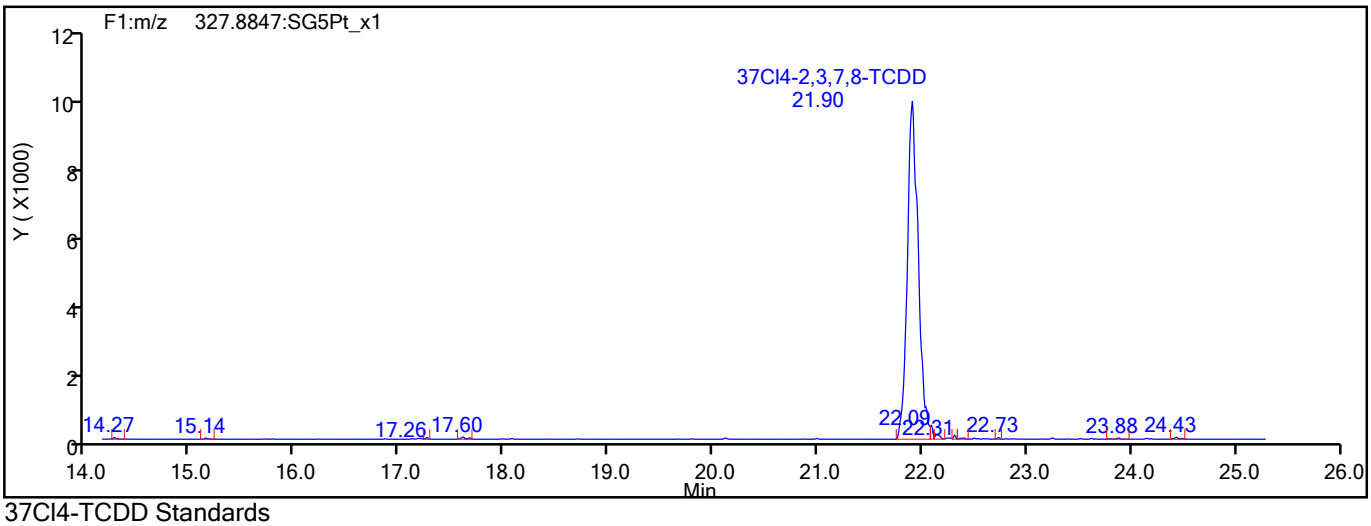

37Cl4-TCDD Standards

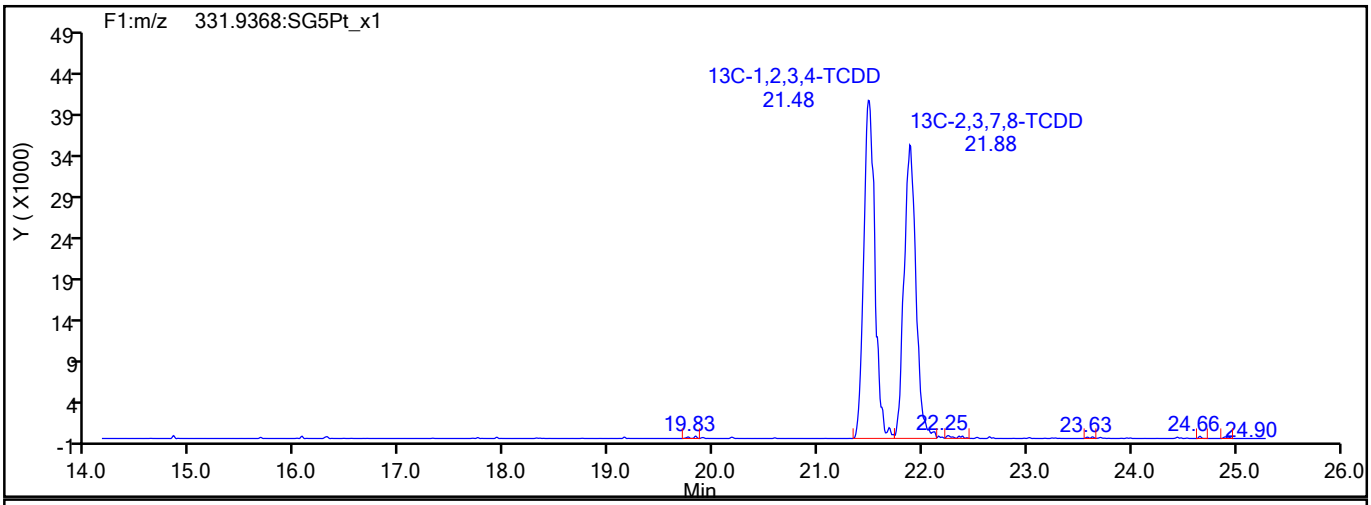

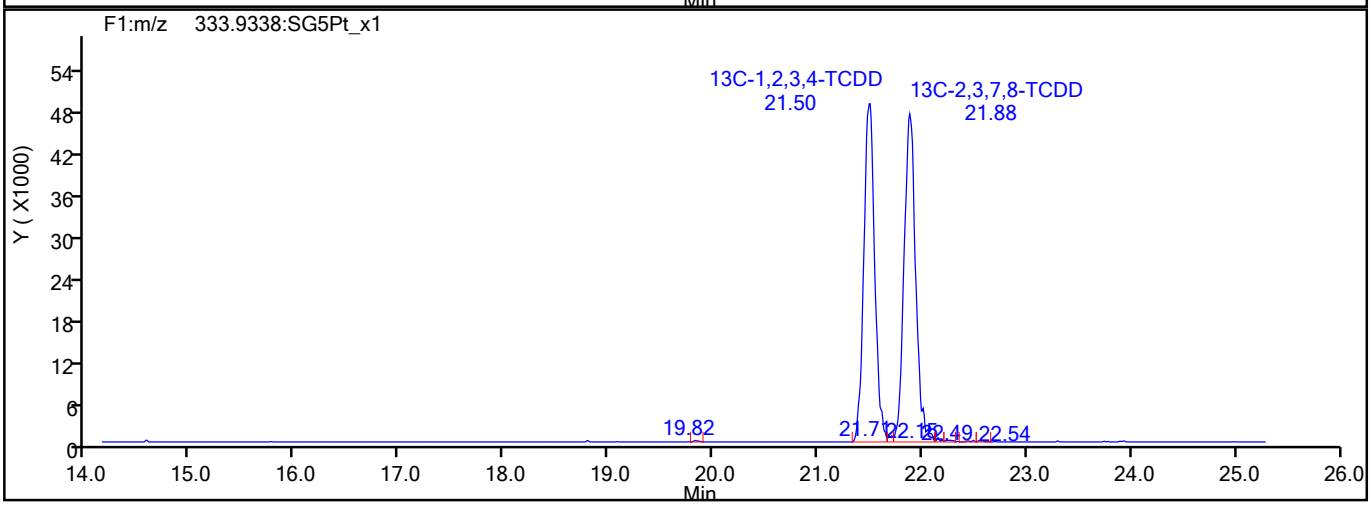

783266

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

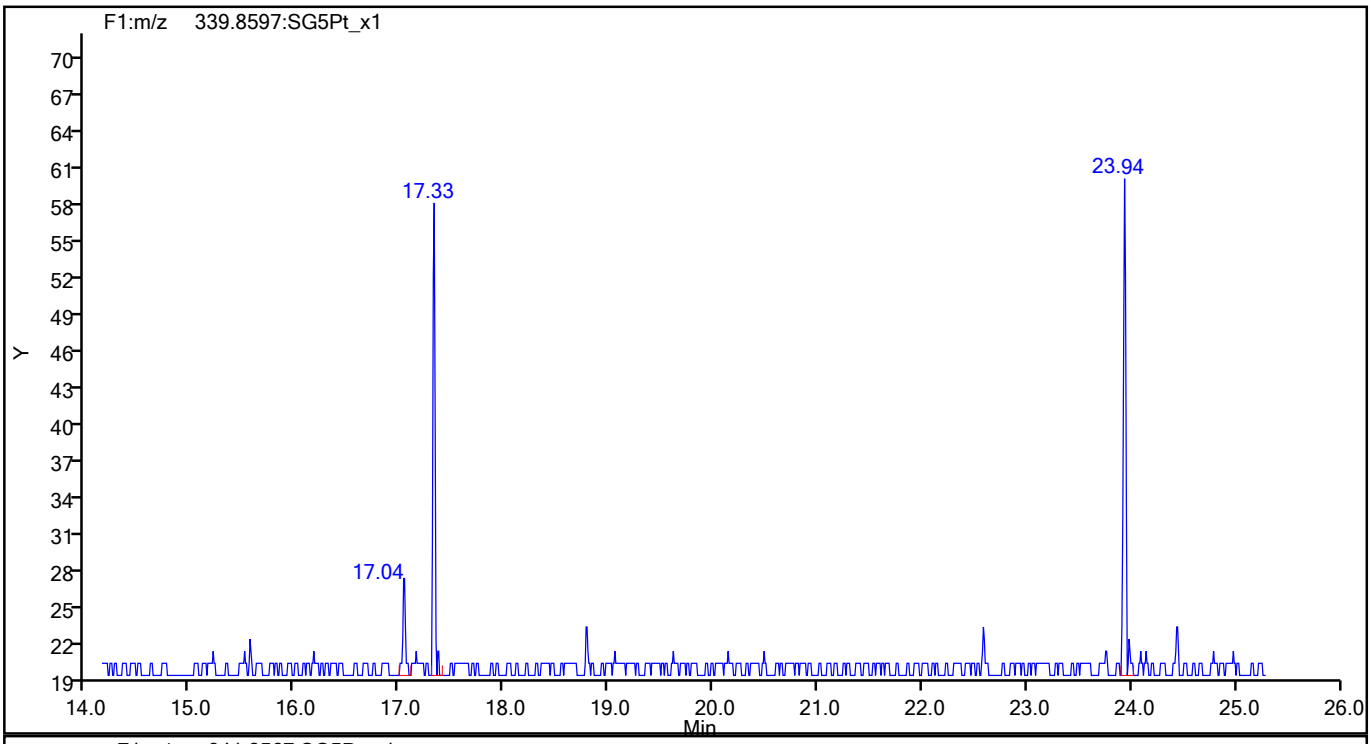

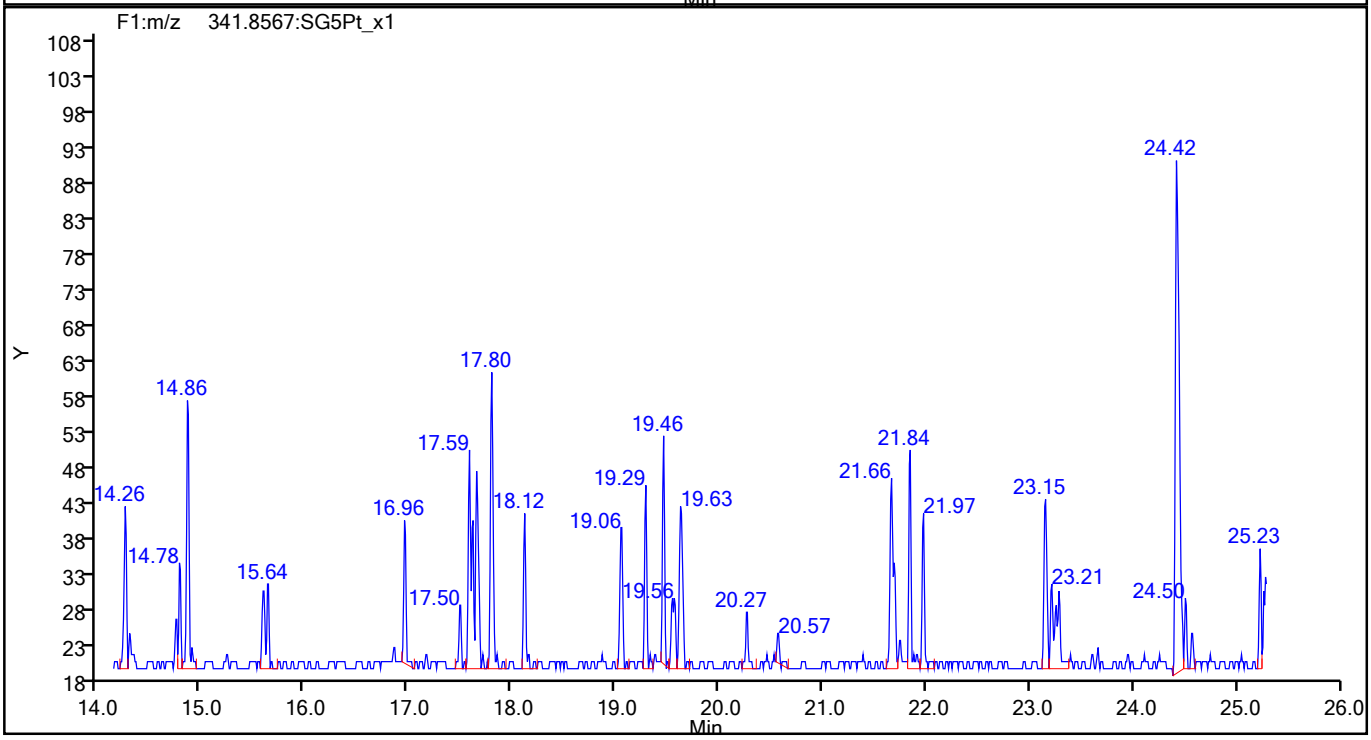

783267

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

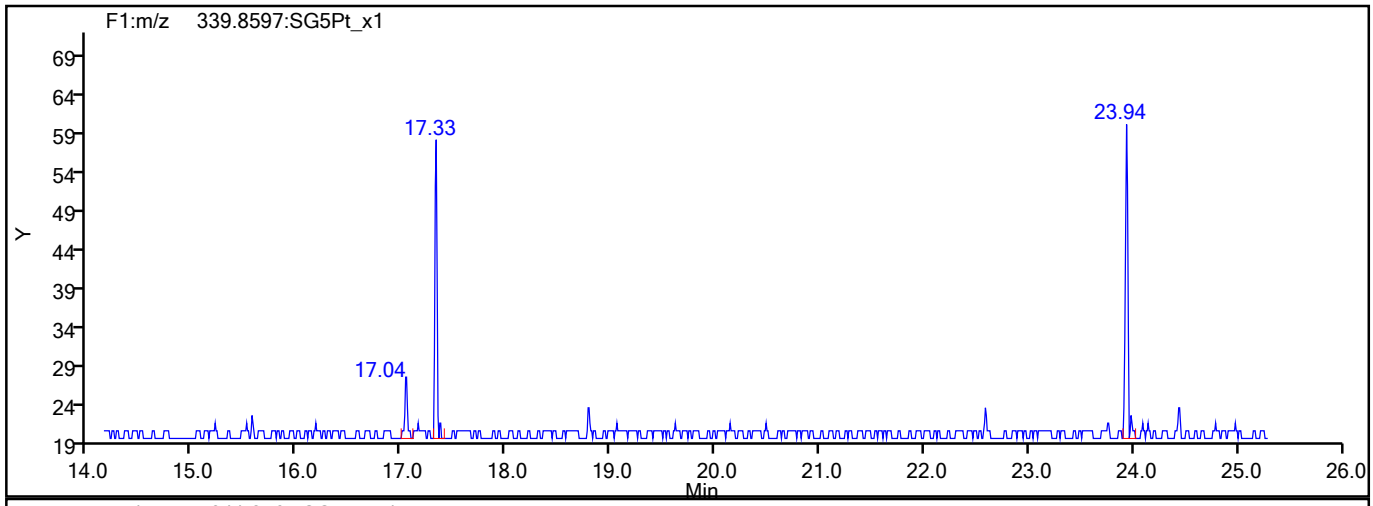

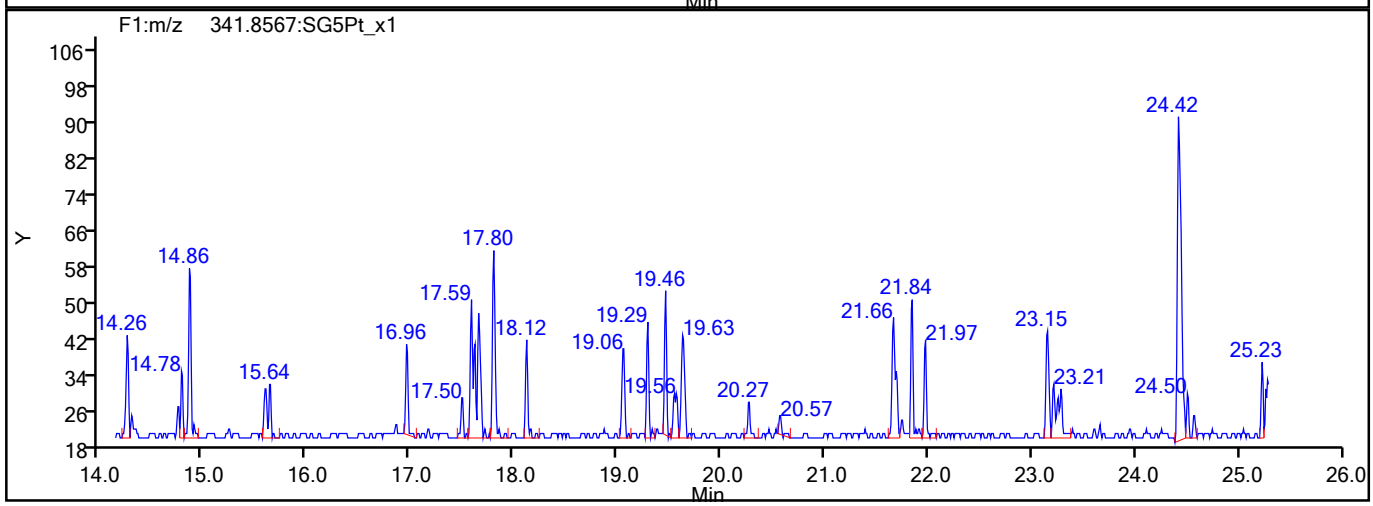

F1 PeCDFs Interference Mass

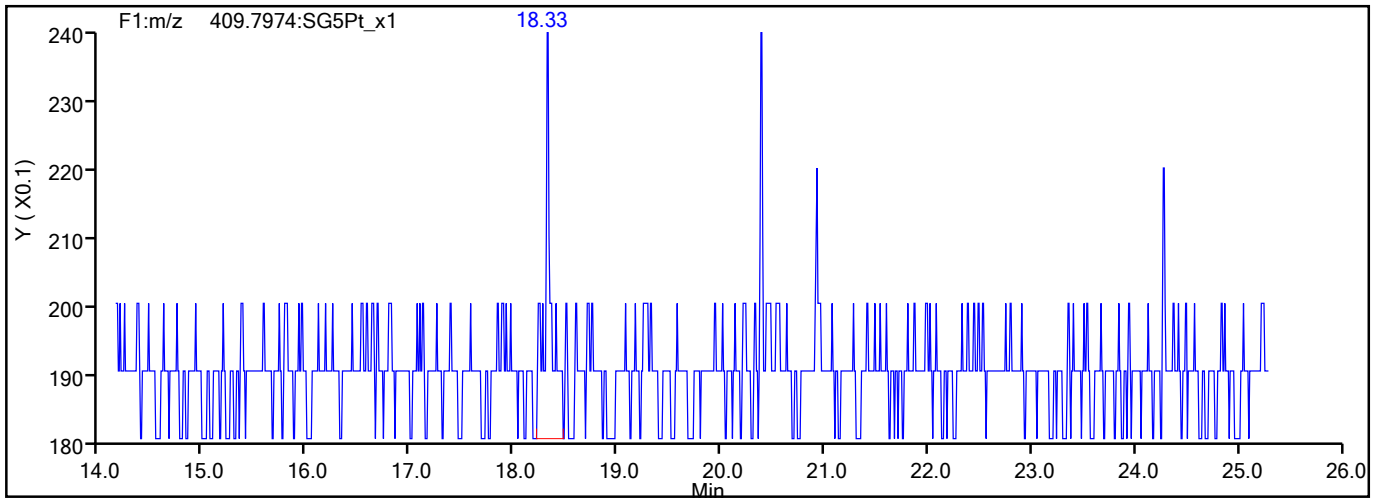

783268

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

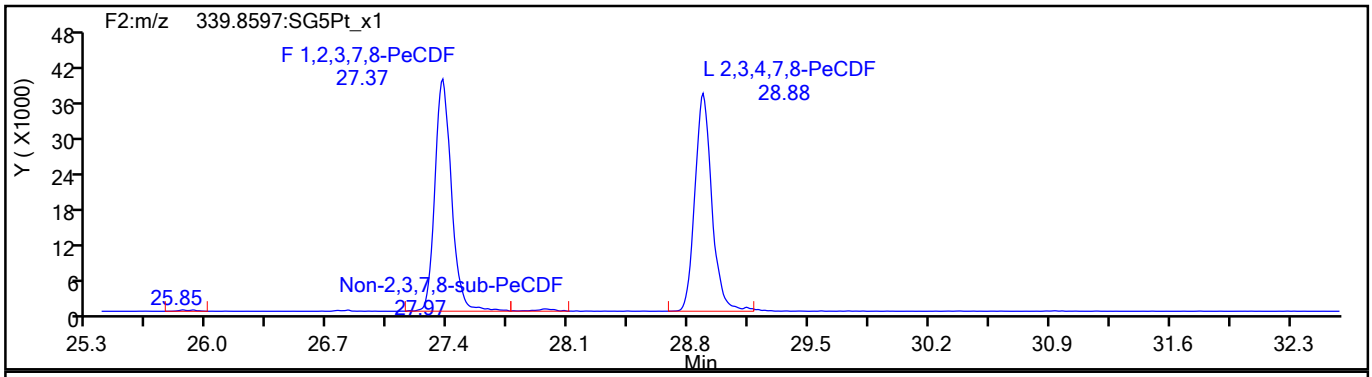

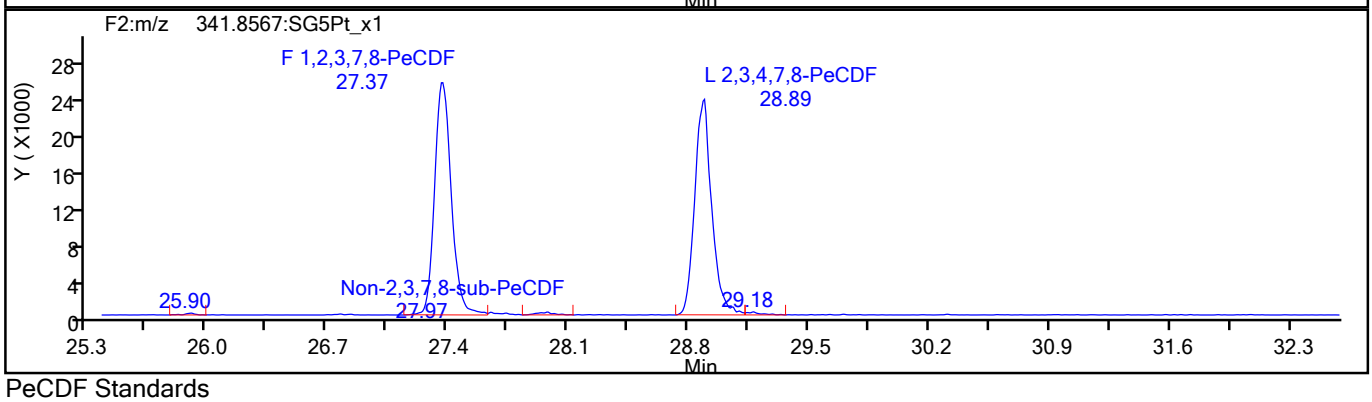

PeCDF Standards

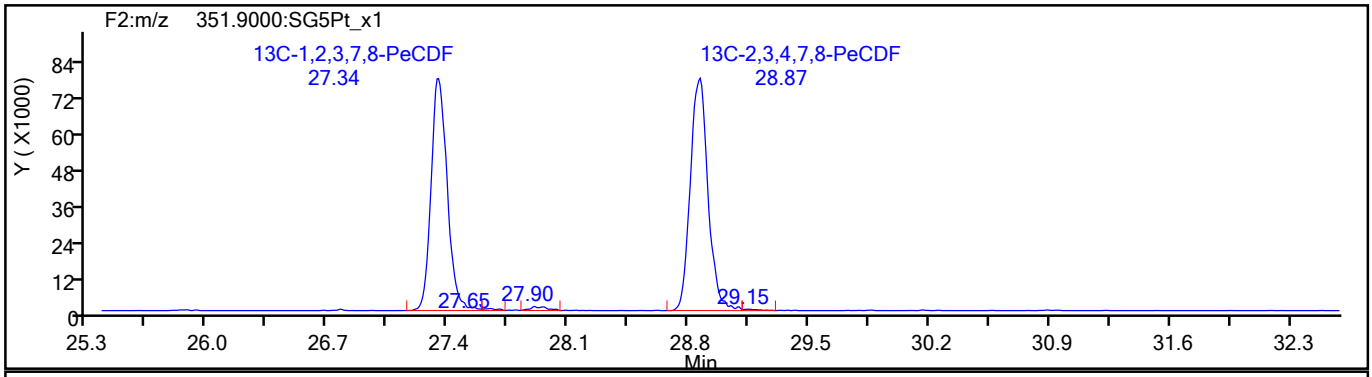

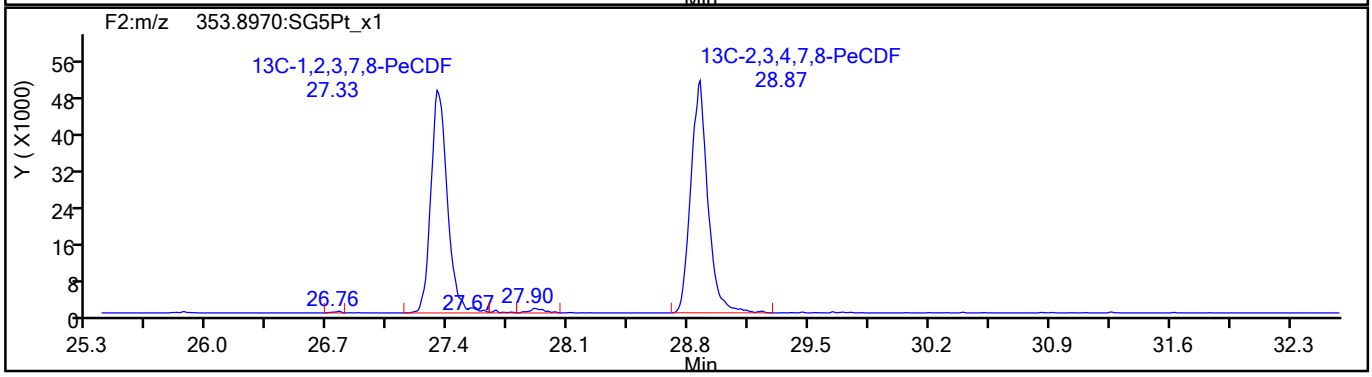

783269

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

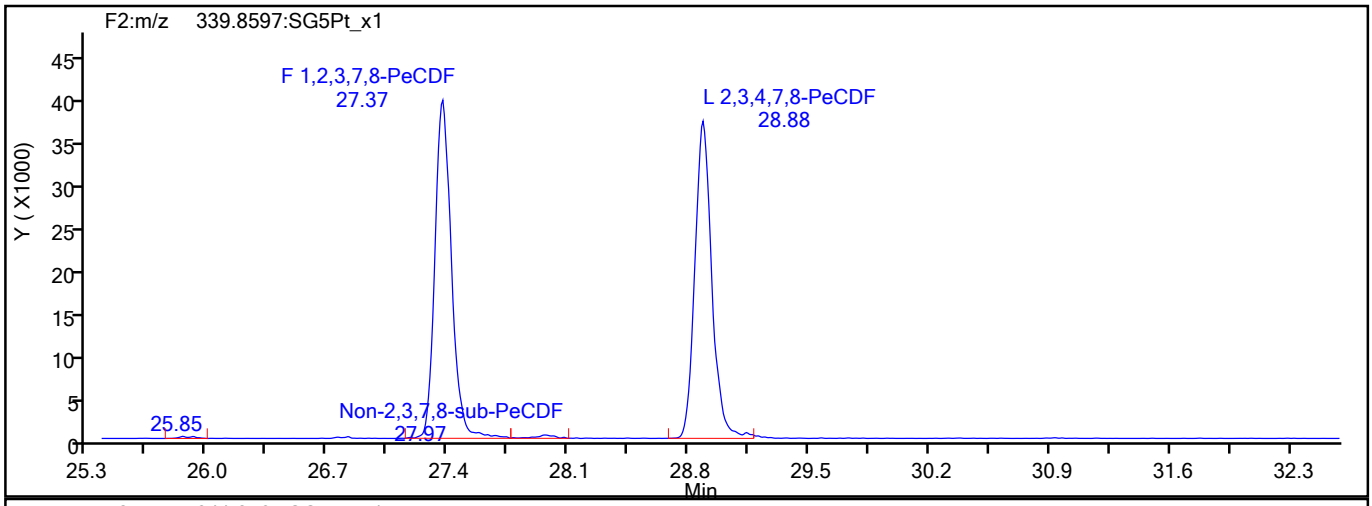

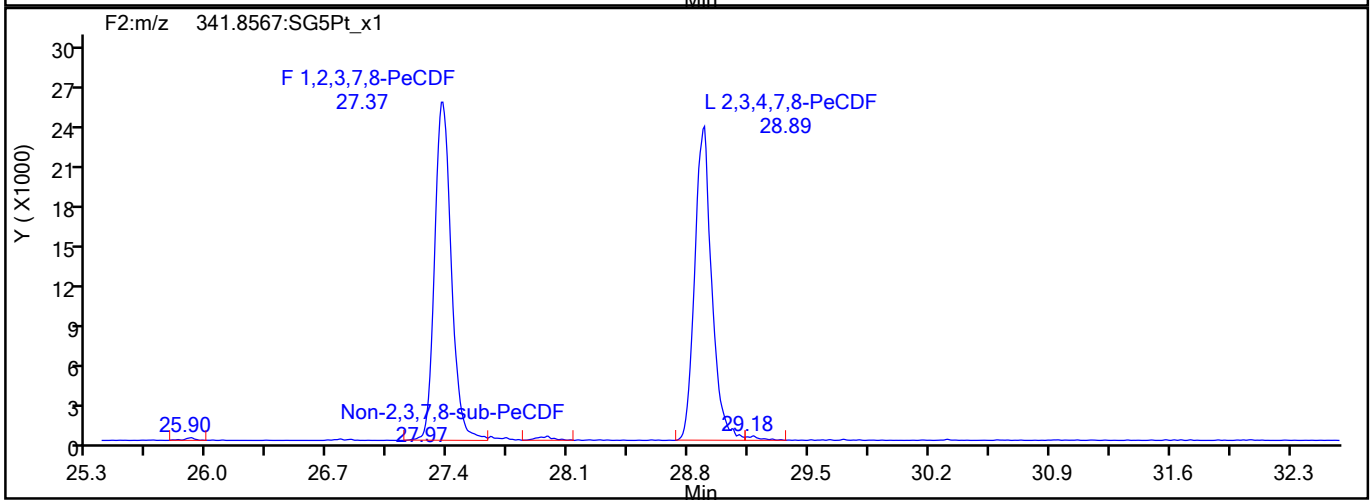

PeCDF Interference Mass

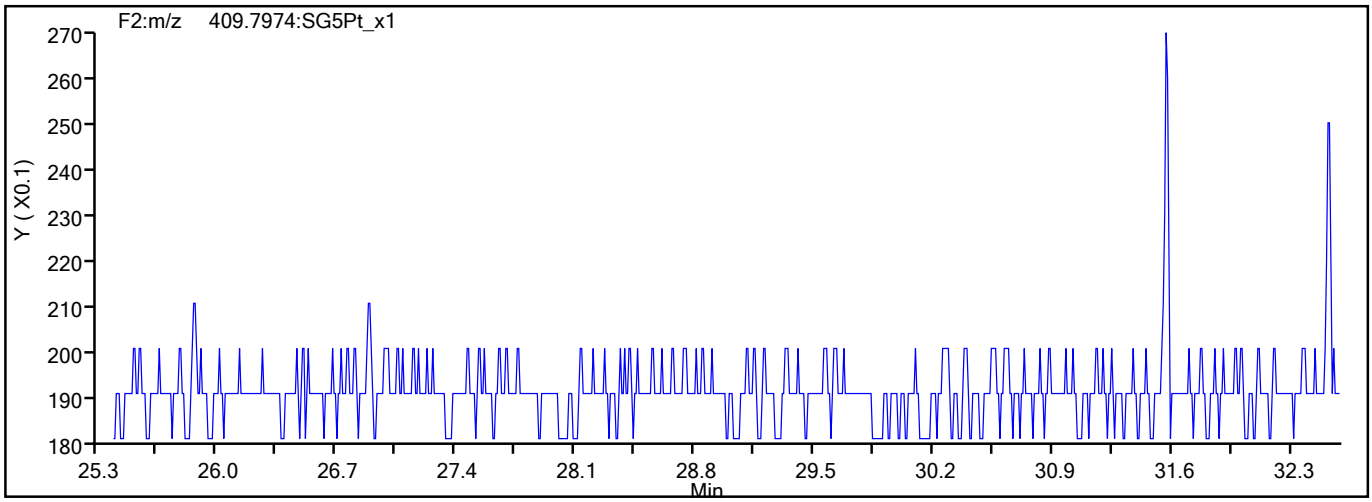

783270

Report Date: 18-Aug-2021 14:54:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

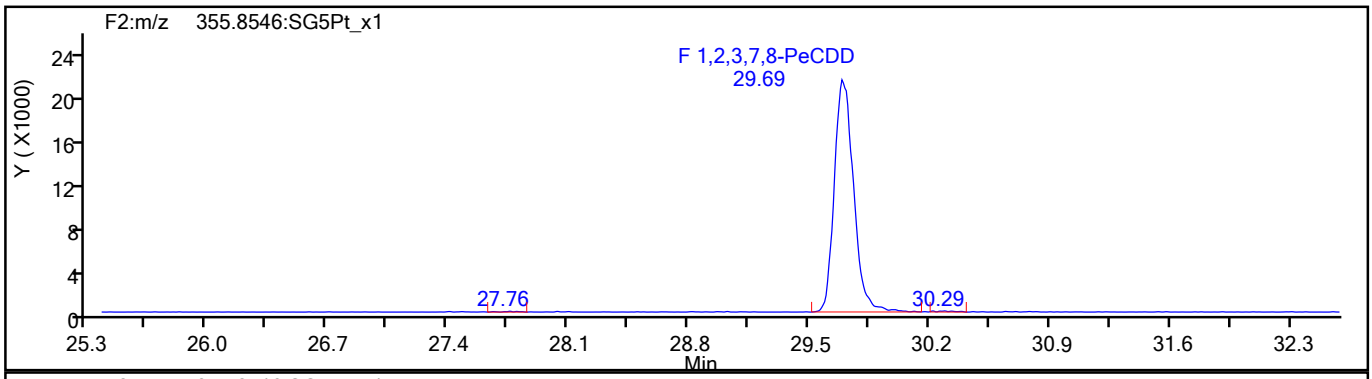

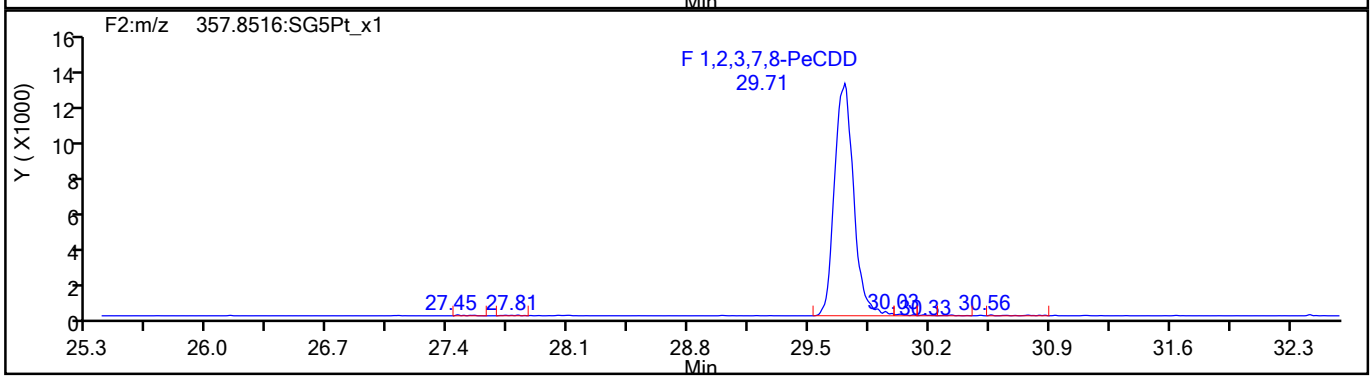

PeCDD Standards

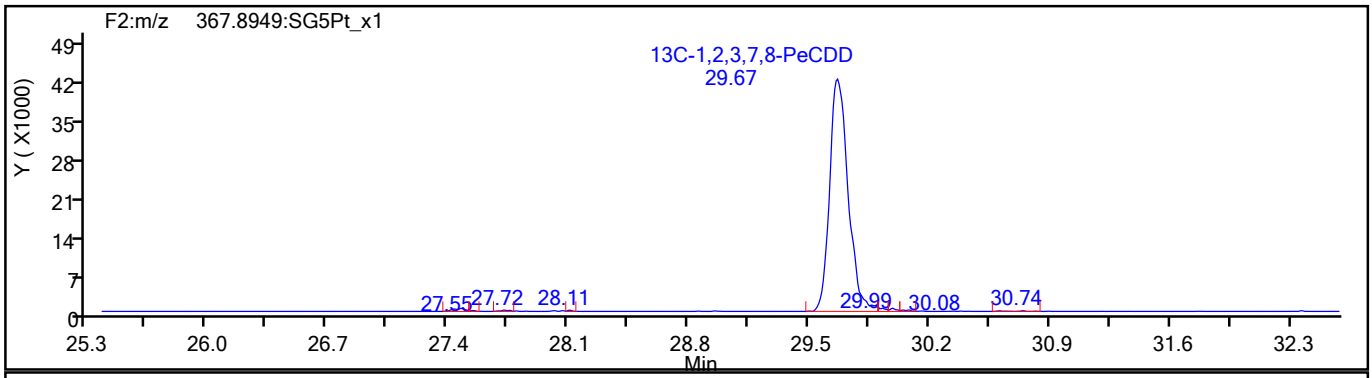

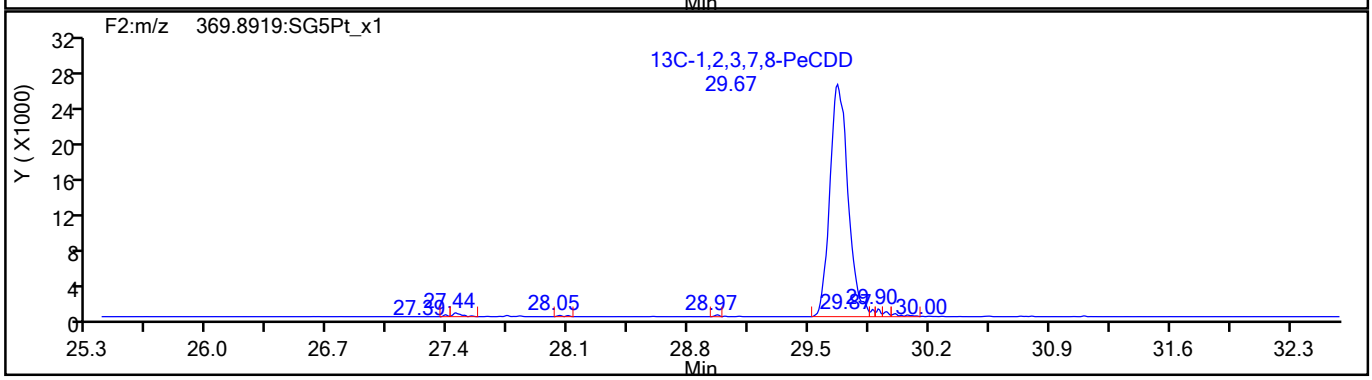

783271

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

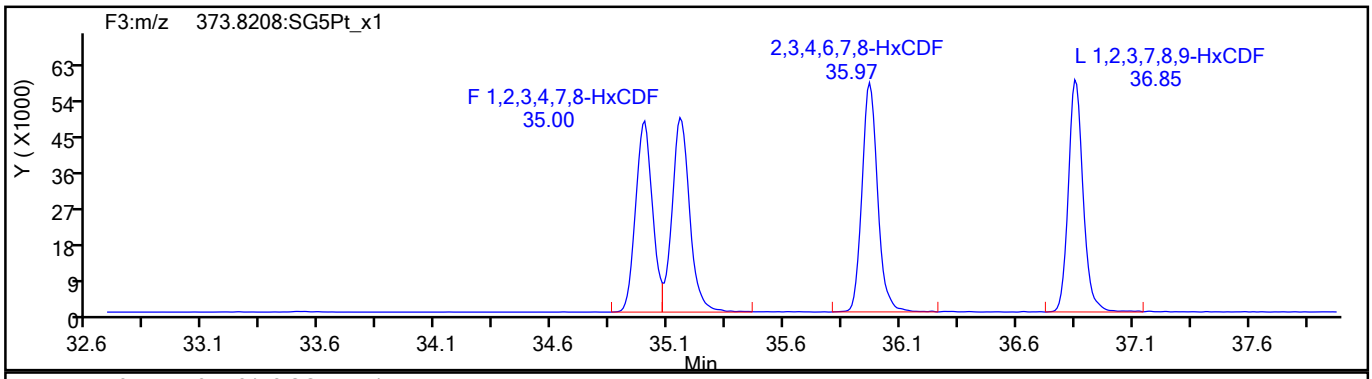

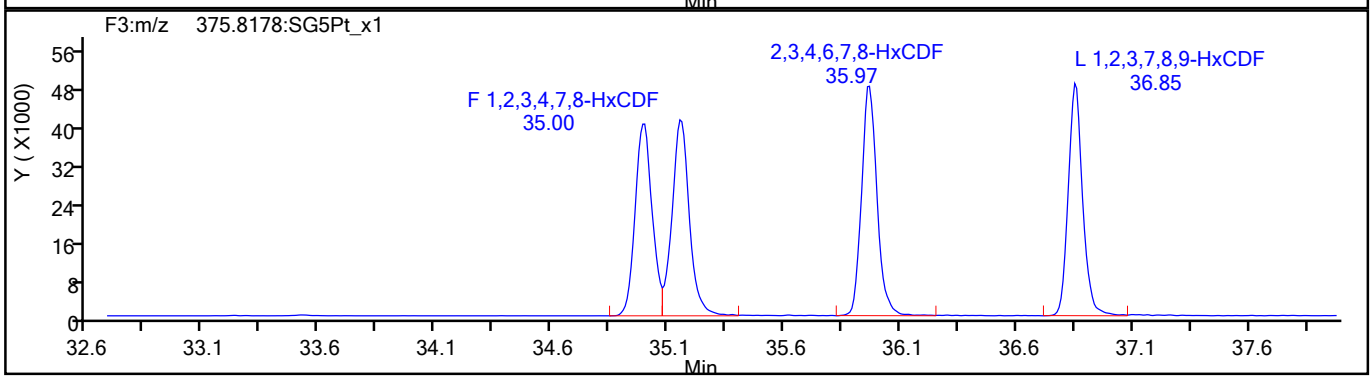

HxCDF Standards

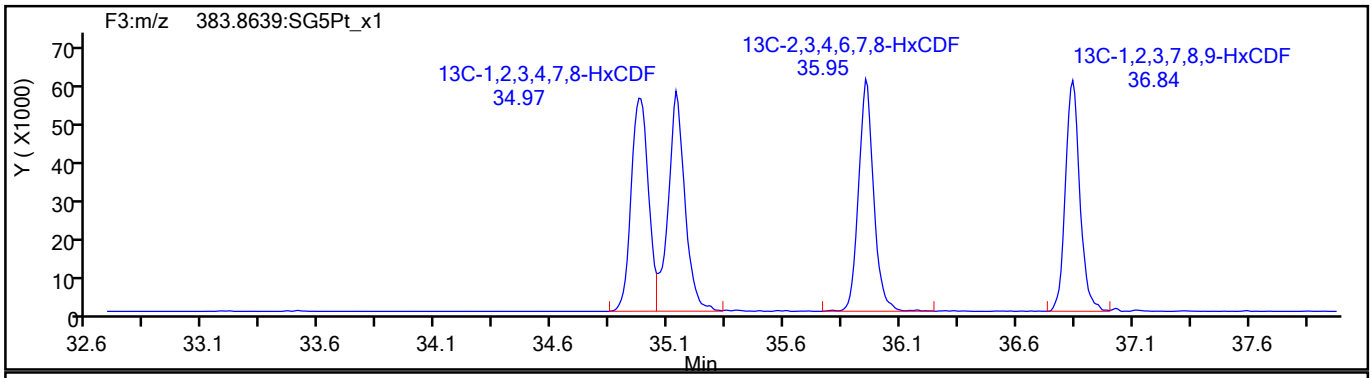

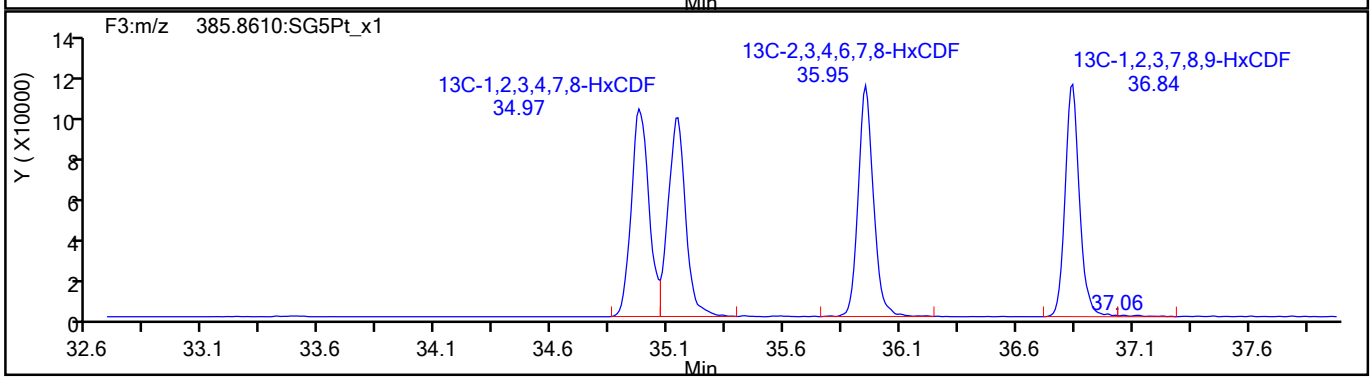

783272

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

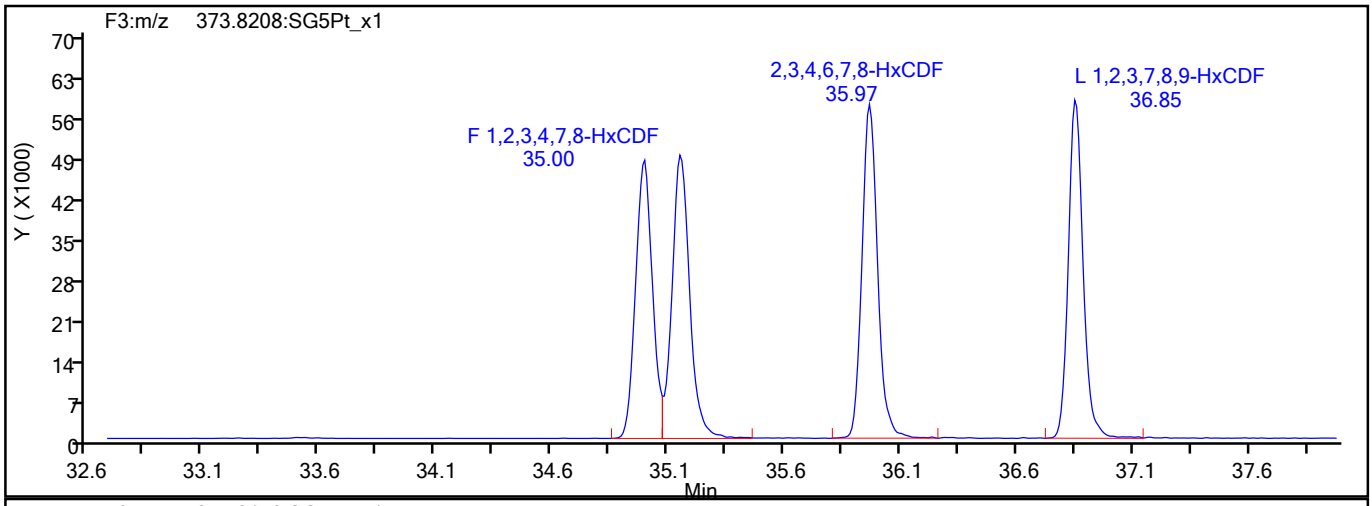

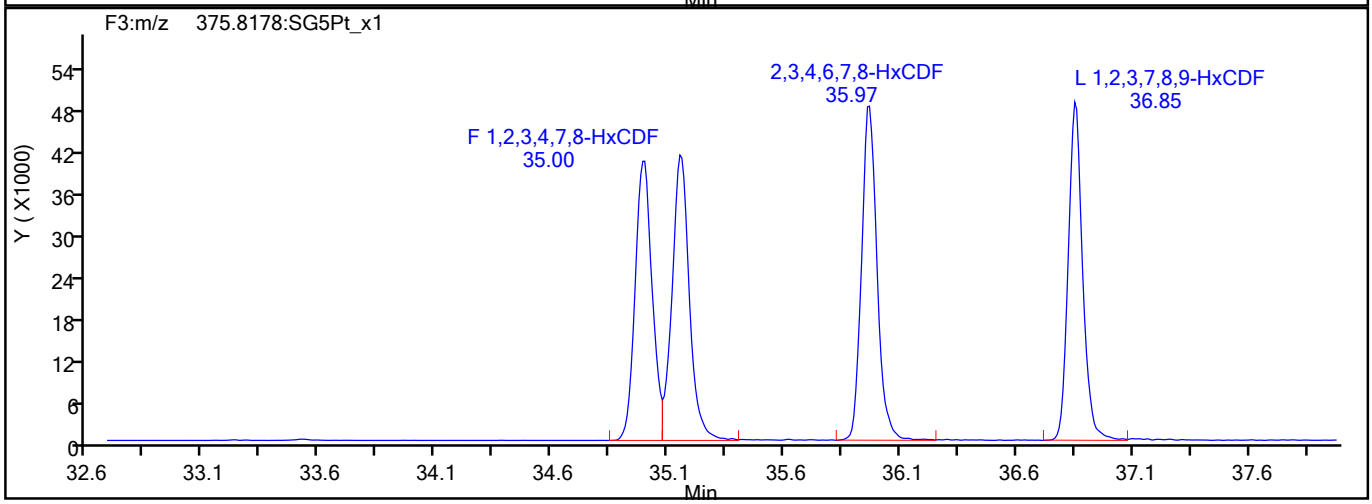

HxCDF Interference Mass

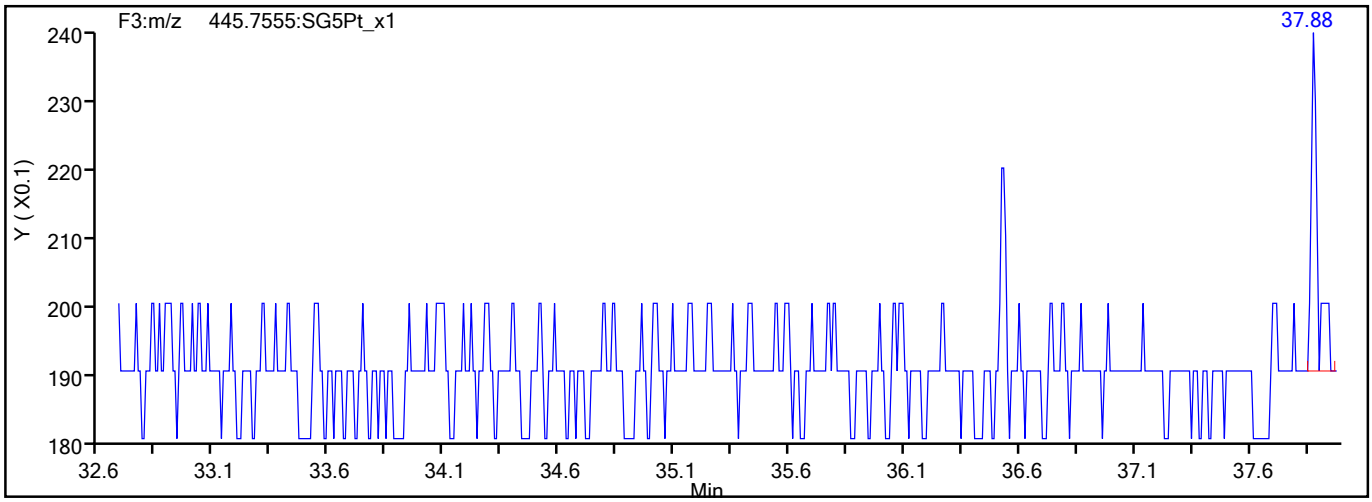

783273

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

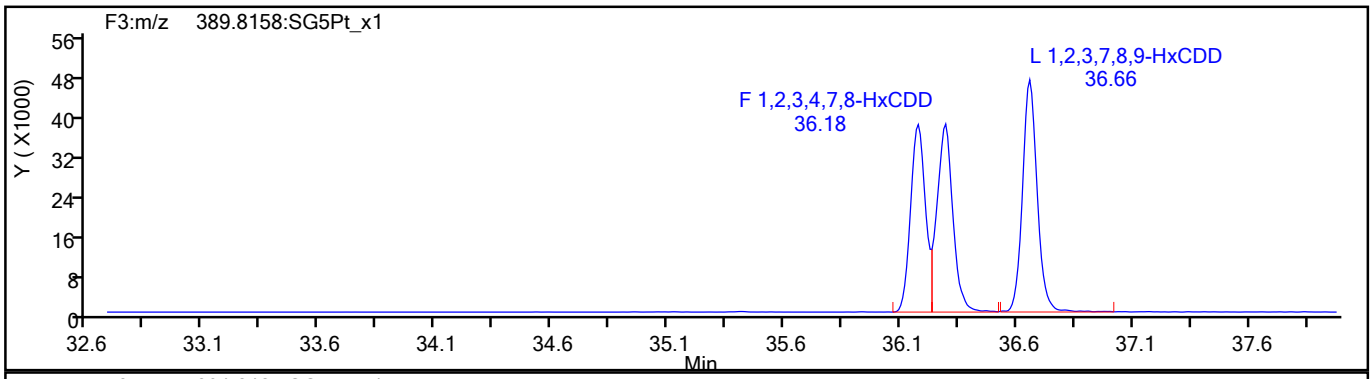

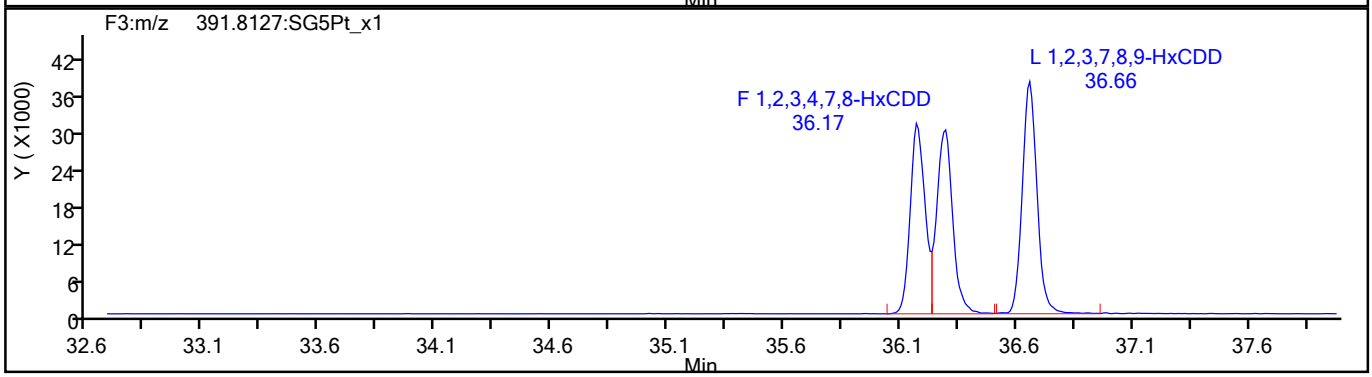

HxCDD Standards

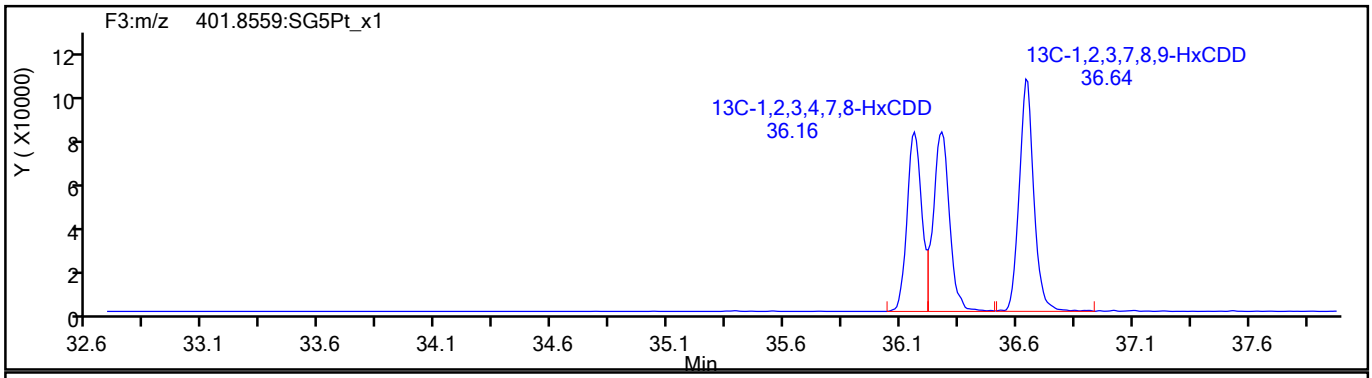

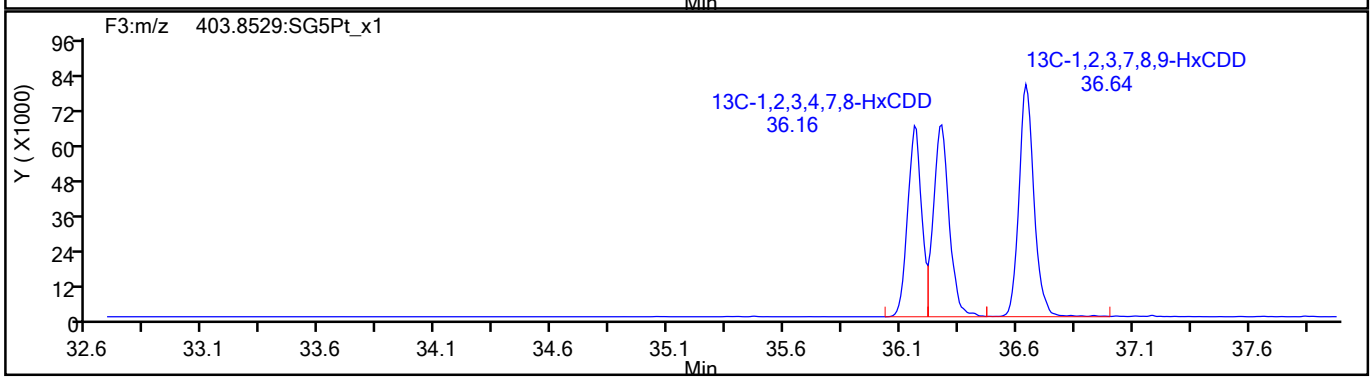

783274

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

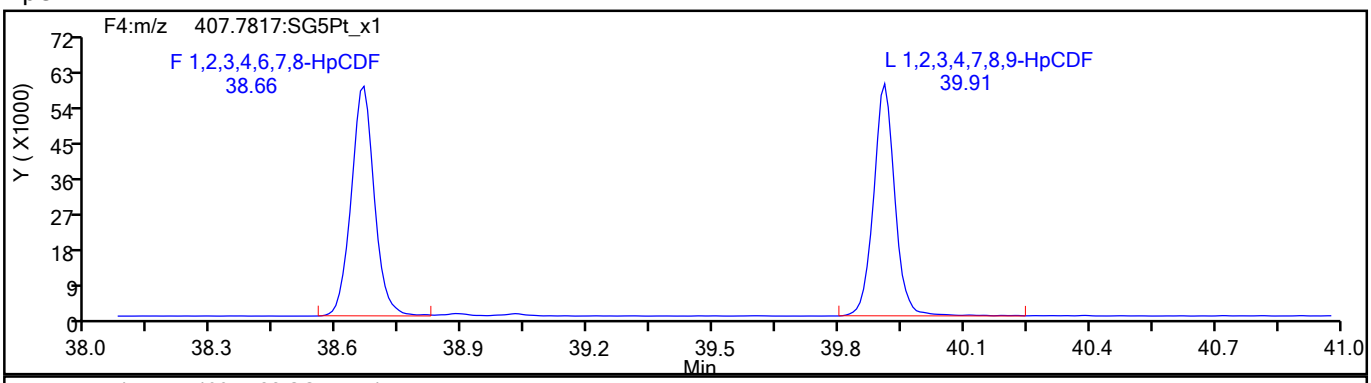

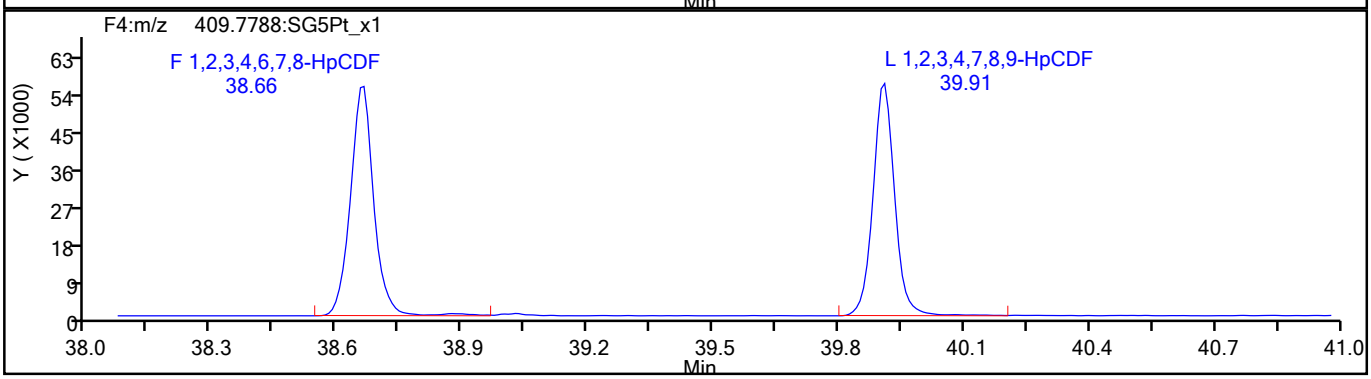

HpCDF Standards

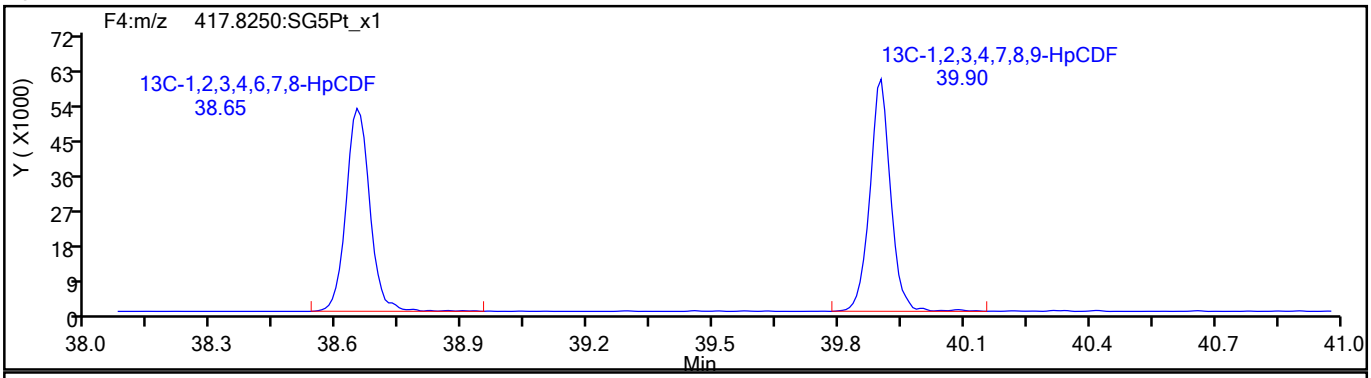

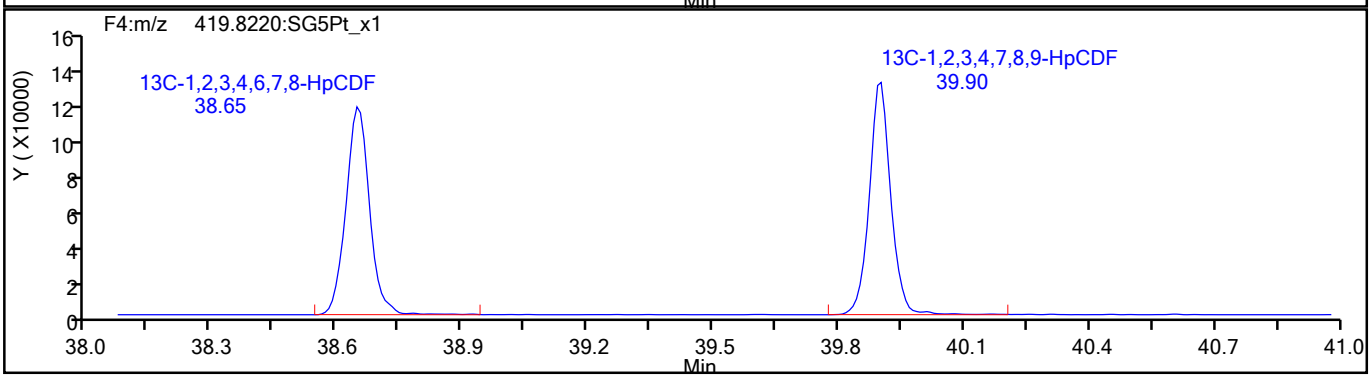

783275

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

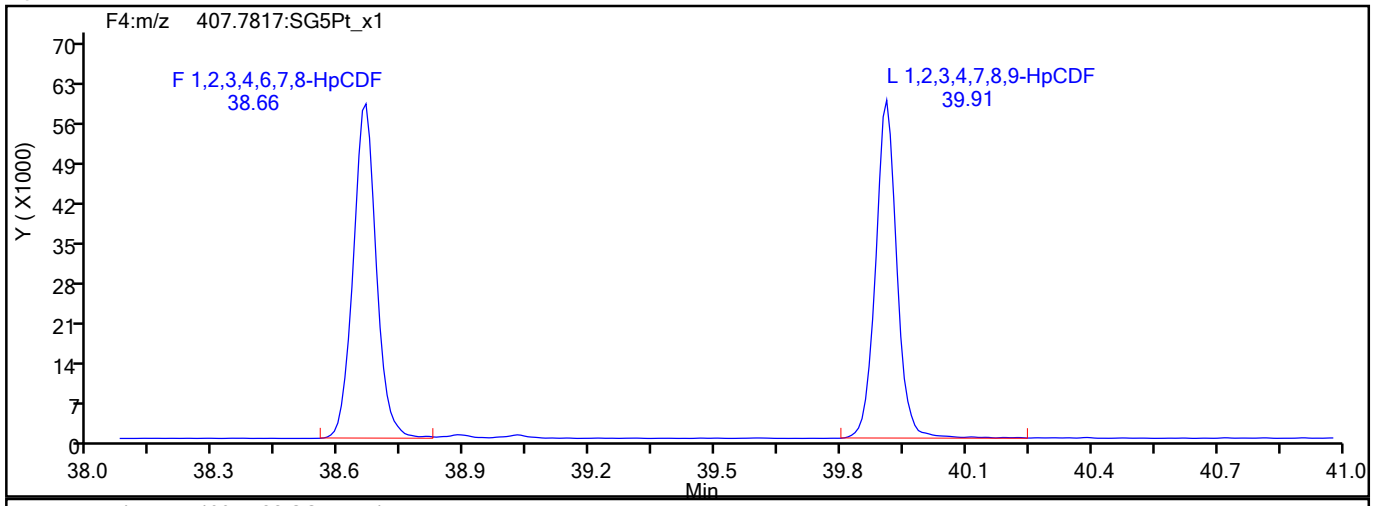

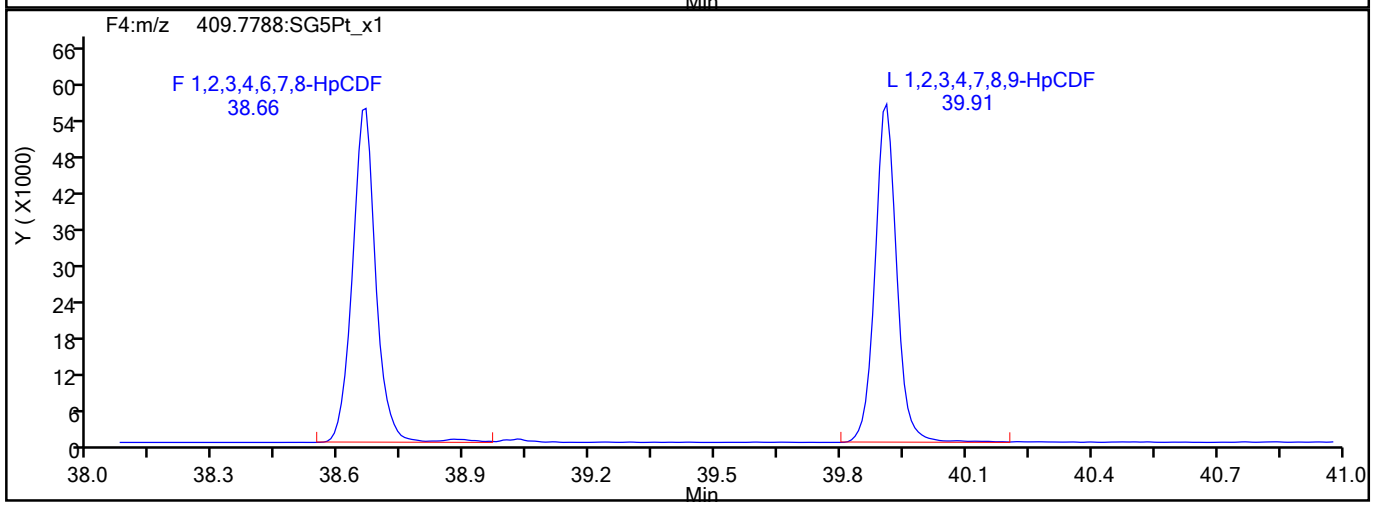

HpCDF Interference Mass

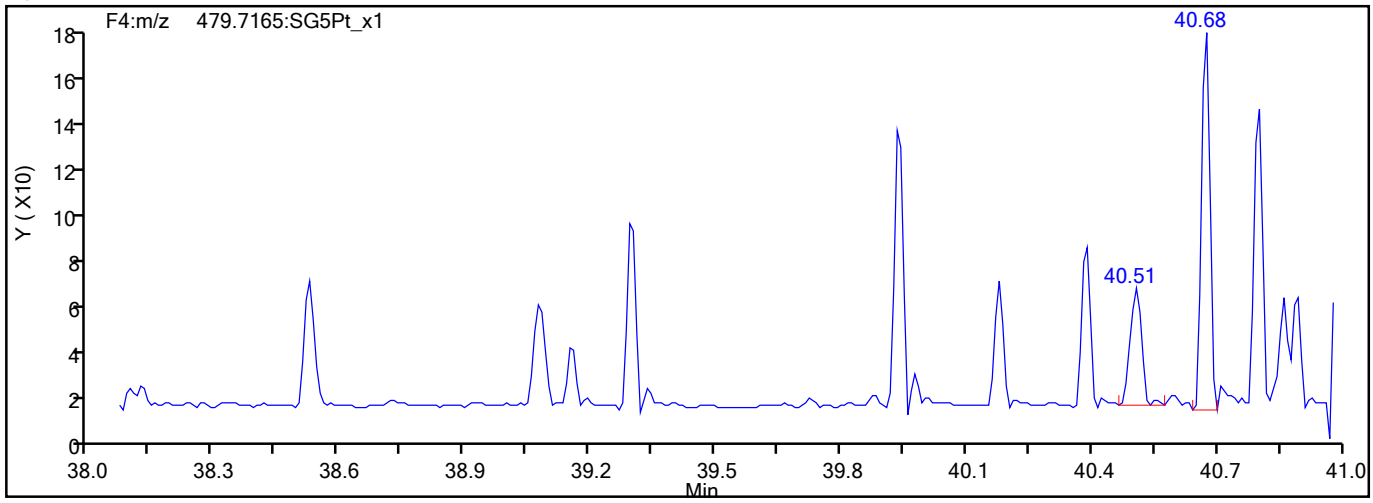

783276

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDD

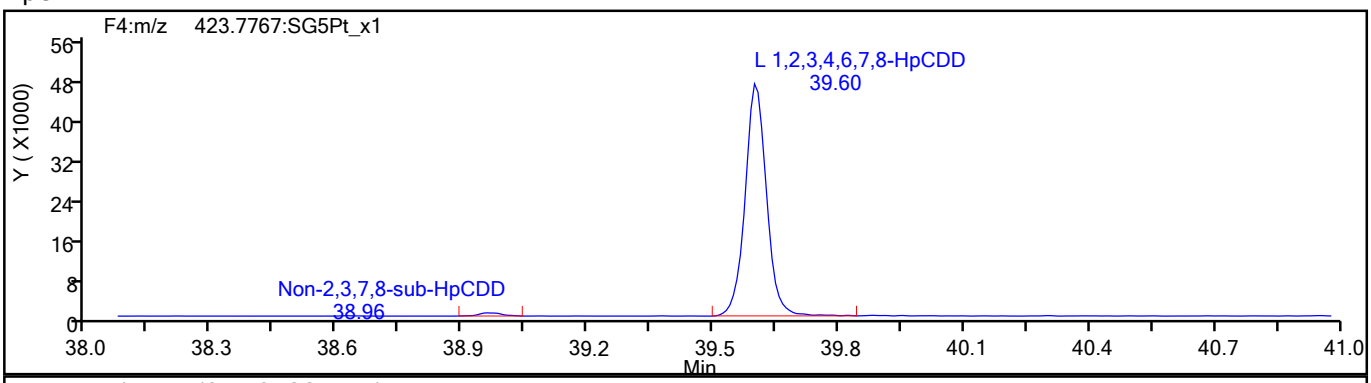

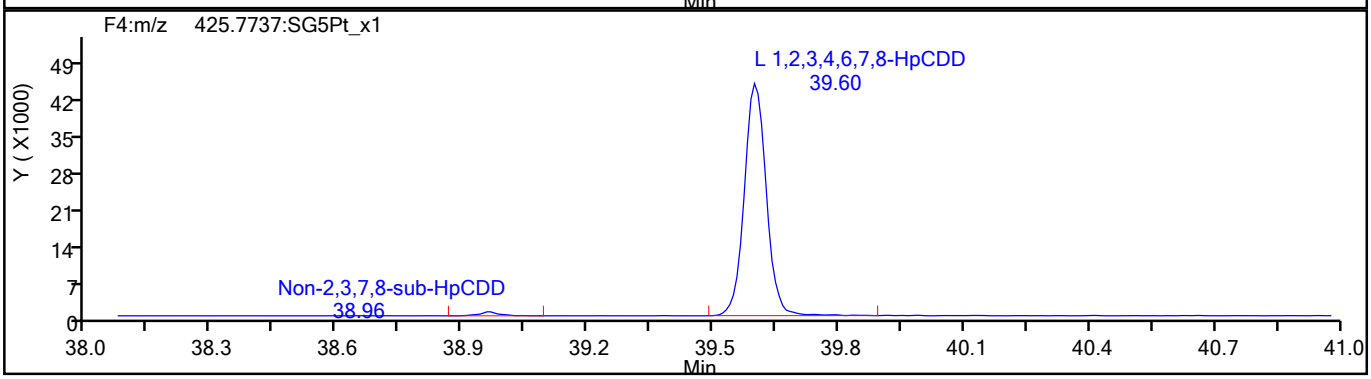

HpCDD Standards

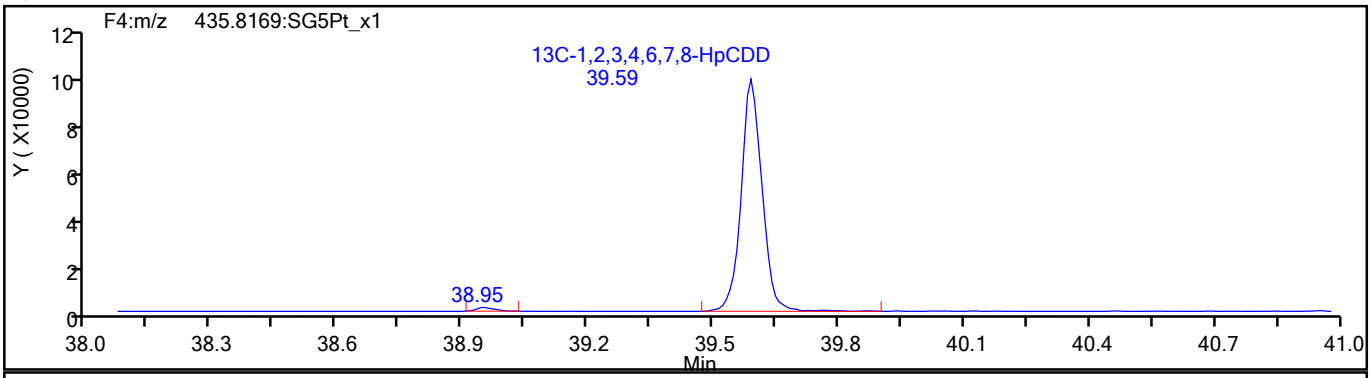

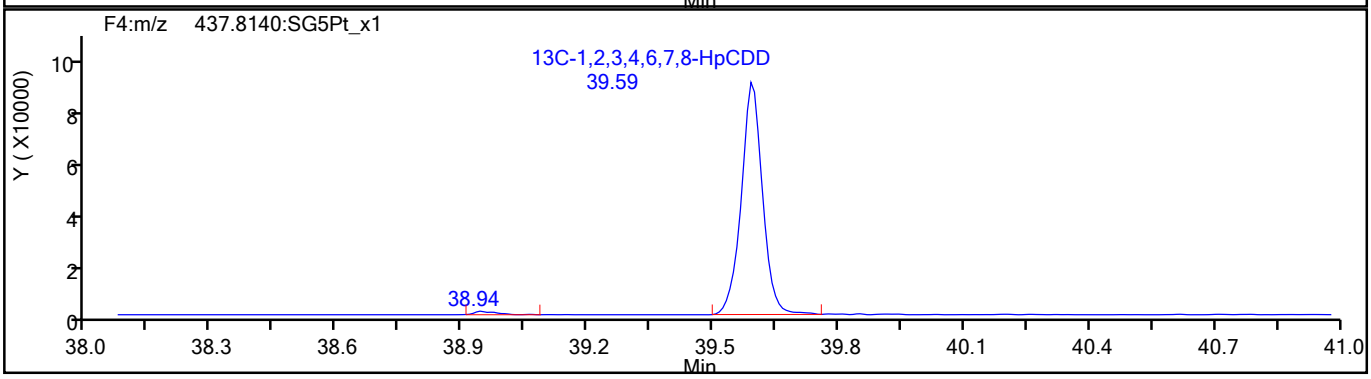

783277

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

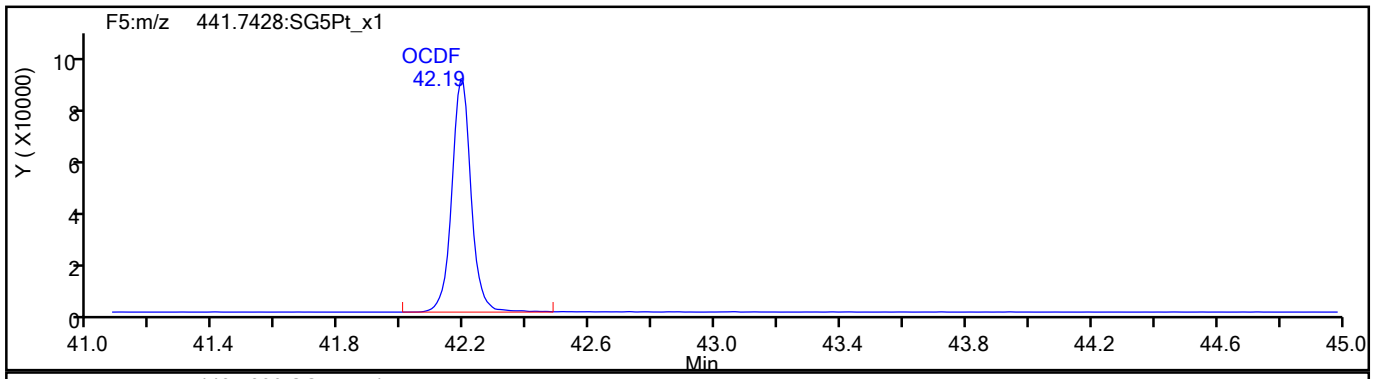

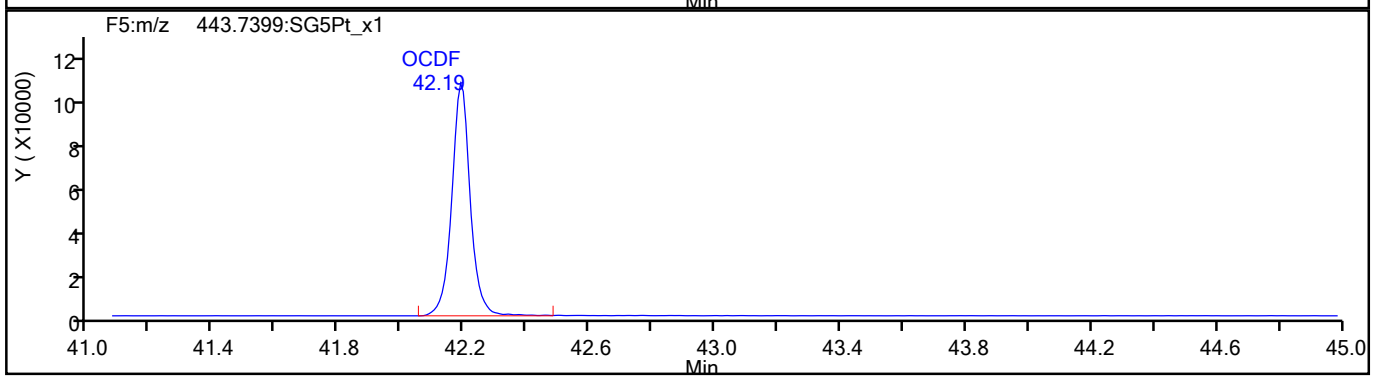

OCDF Standards

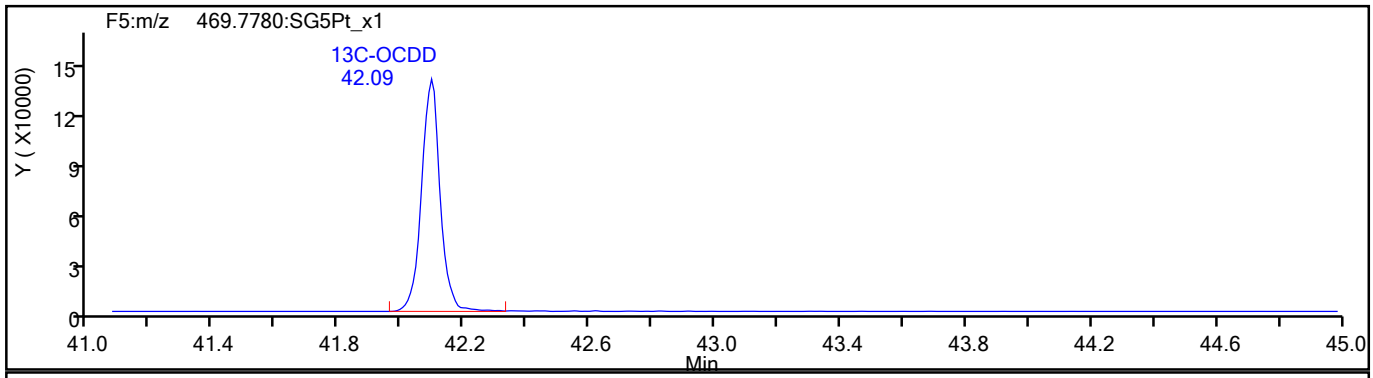

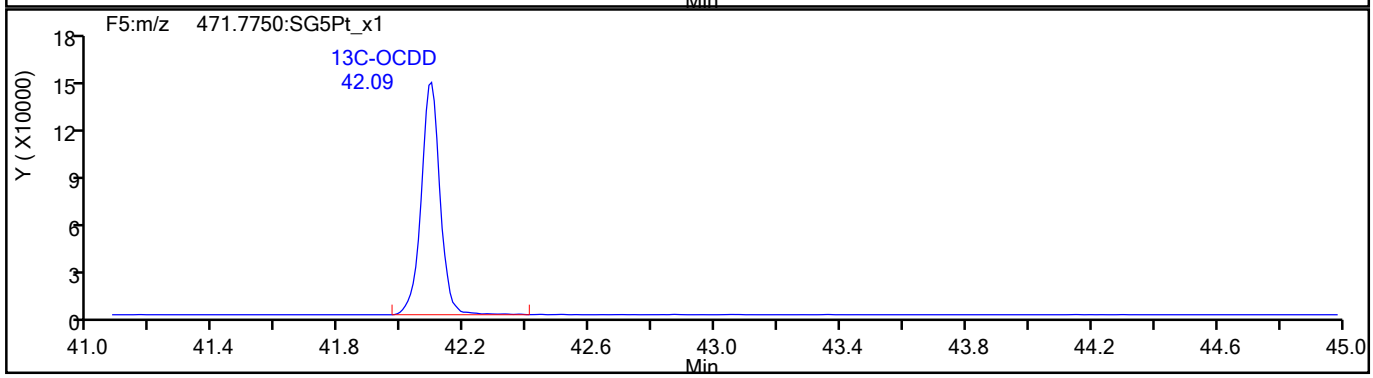

783278

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

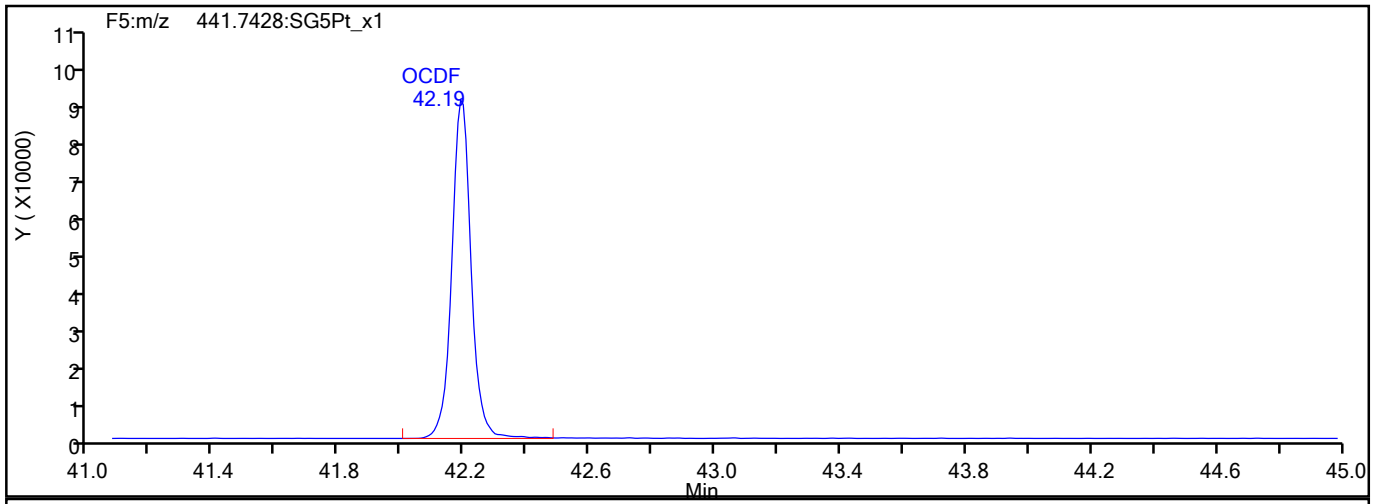

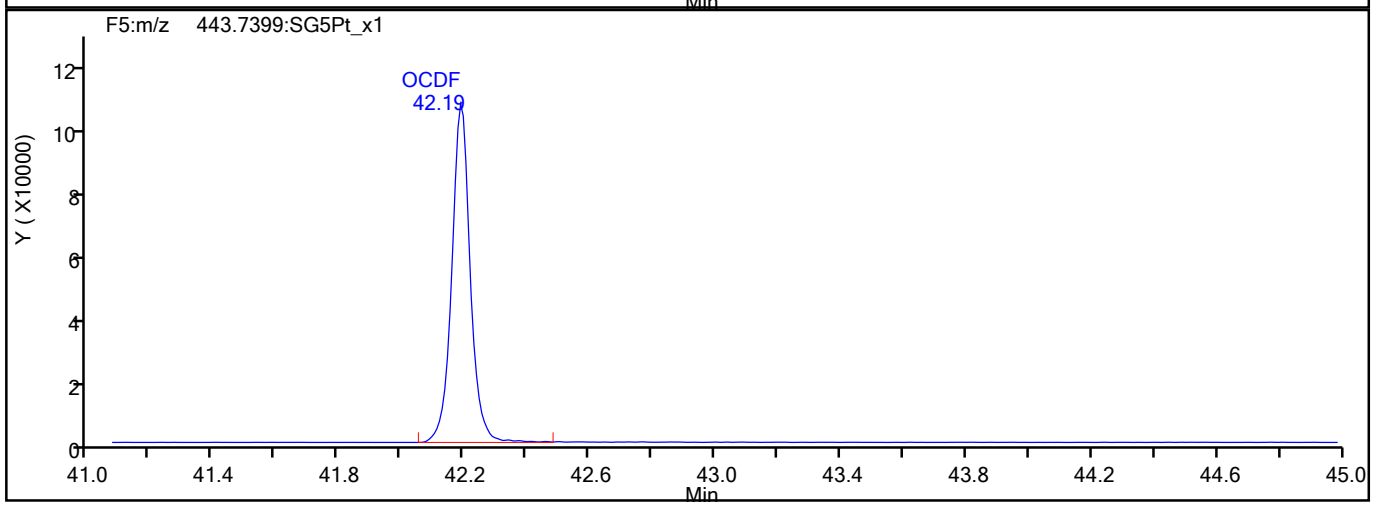

OCDF Interference Mass

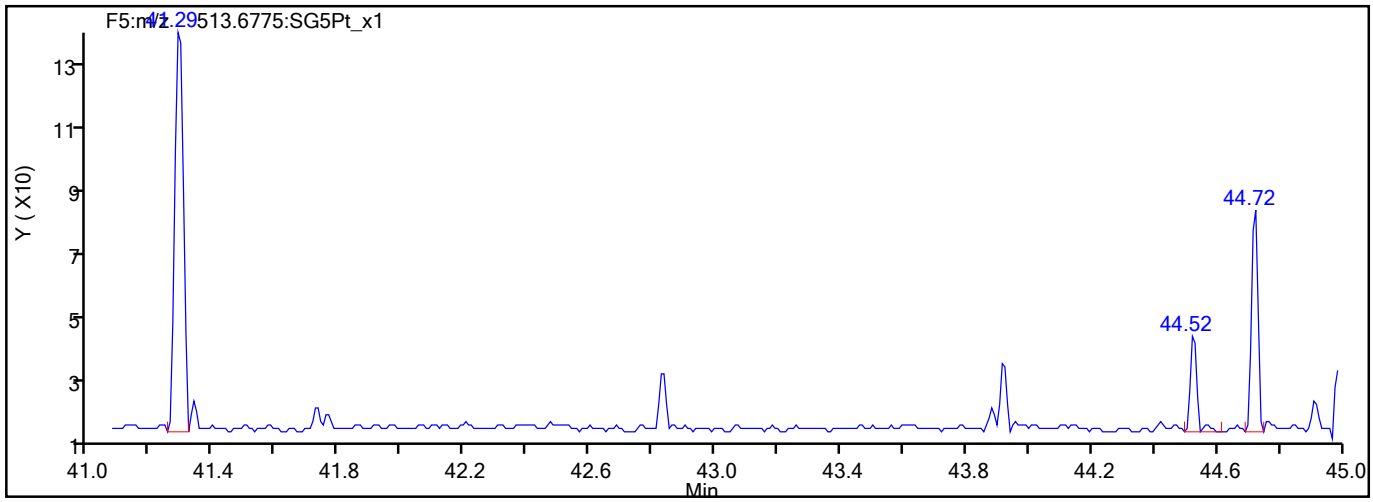

783279

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

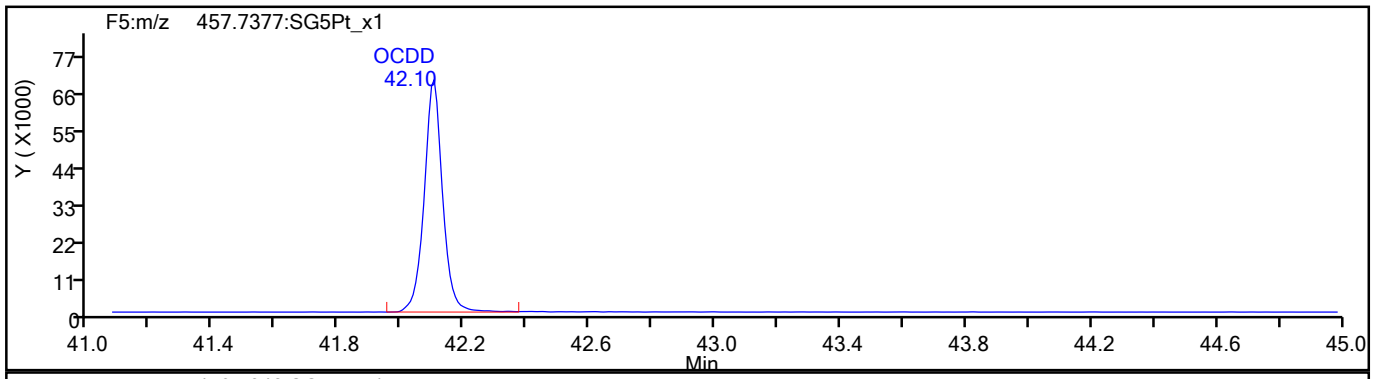

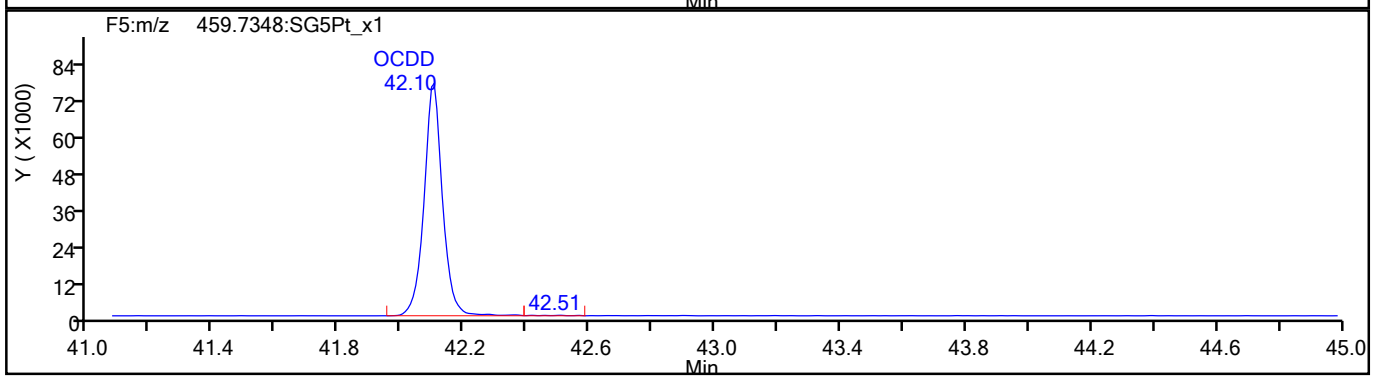

OCDD Standards

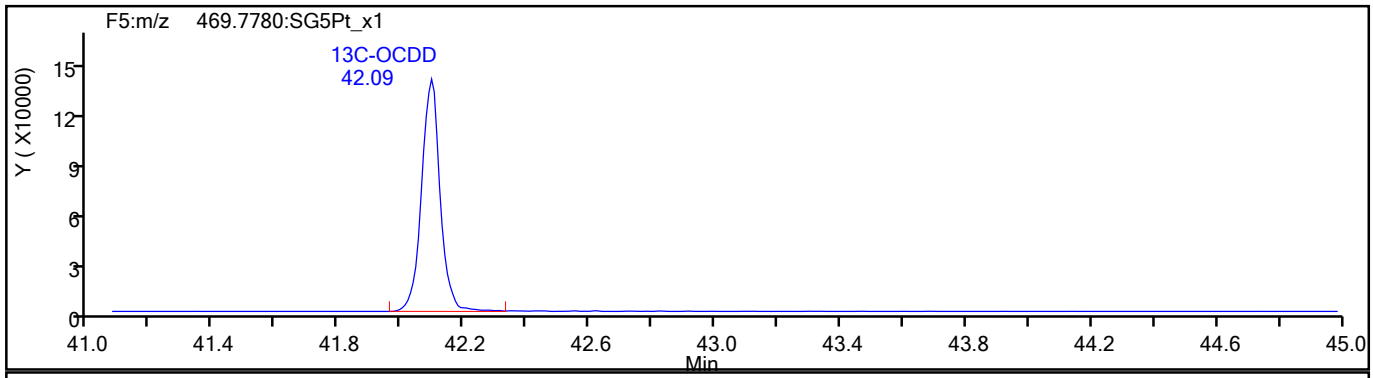

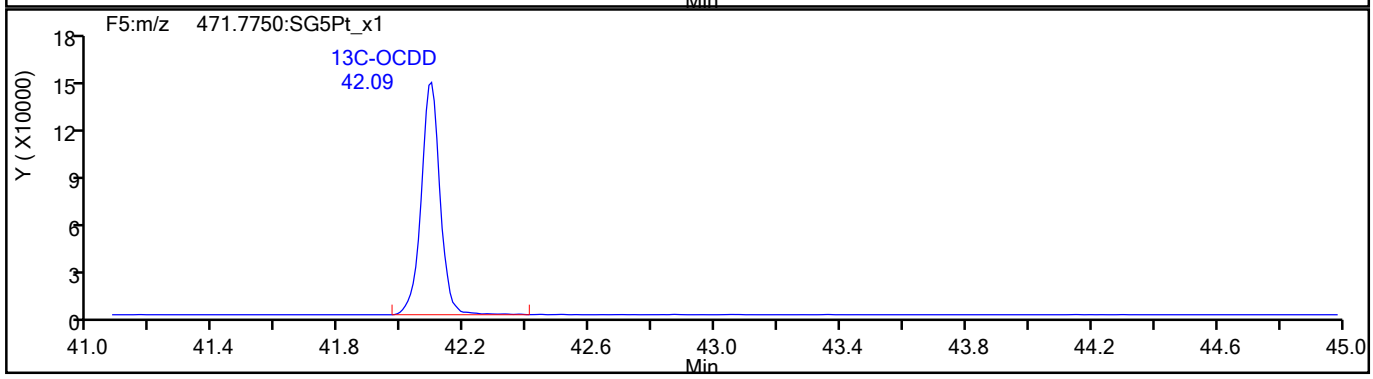

783280

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

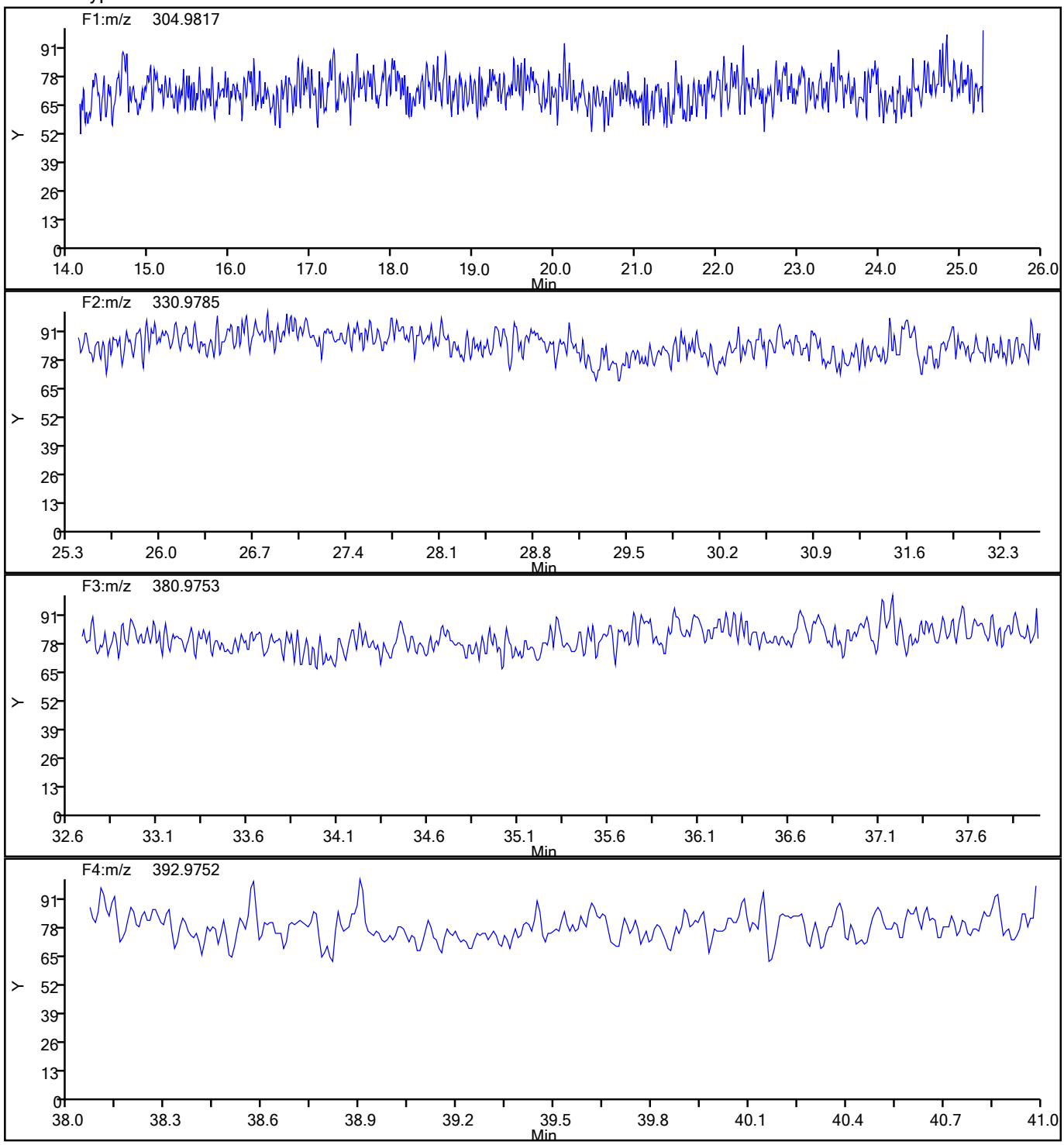

783281

Report Date: 18-Aug-2021 14:54:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_17.d		
Injection Date:	18-Aug-2021 02:07:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

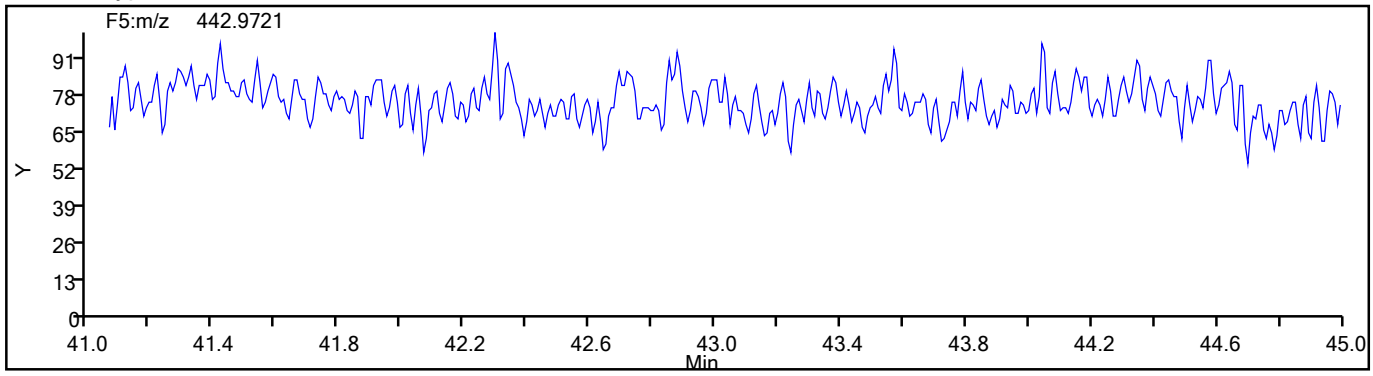

783282

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Lab Sample ID: CCV 320-517461/29 Calibration Date: 08/18/2021 13:48

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_32.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.039		9.61	10.0	96	84-120
2,3,7,8-TCDD	AveID	1.075	1.014		9.43	10.0	94	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.060		50.3	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9459		46.9	50.0	94	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.062		50.8	50.0	102	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.121		48.9	50.0	98	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.226		50.3	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.252		51.5	50.0	103	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9839		46.4	50.0	93	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9275		46.7	50.0	93	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.136		51.2	50.0	102	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.262		50.9	50.0	102	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.407		48.8	50.0	98	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.031		49.1	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.253		47.9	50.0	96	86-116
OCDD	AveID	1.062	1.015		95.6	100	96	79-126
OCDF	AveID	1.317	1.285		97.6	100	98	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.493		111	100	111	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	1.020		109	100	109	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.199		105	100	105	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.262		112	100	112	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7188		100	100	100	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.068		111	100	111	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.069		99.8	100	100	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.005		96.5	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7788		103	100	103	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.8427		98.1	100	98	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.020		105	100	105	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.8333		113	100	113	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7590		113	100	113	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.8873		129	100	129	77-129
13C-OCDD	Ave	0.5446	0.7162		263	200	132	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.104		11.0	10.0	110	79-127

31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A b.i. NU	12	1613B/Solid	D266	KSS	10.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	10.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	10.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	10.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A bad inj.	27	1613B/Solid		KSS	10.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	10.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	10.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	10.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A needs 20x	31 } matrix	1613B/Solid		KSS	10.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32 }	1613B/Solid		KSS	10.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	
47	17AU21DFS1_47	CCV CS-4 HRDXNL4_00100	CCV 081721C	2	Dioxin		KSS	1.000	
48	17AU21DFS1_48	WDM HRDXNCP_00044	WDM 081721C	1	Dioxin		KSS	1.000	
49	17AU21DFS1_49	SB Solvent Blank C14	SB 081721F	3	Dioxin		KSS	1.000	
50	17AU21DFS1_50	mb 320-513879/1-a	mb 320-513879/1-a	33	1613B/Solid	D267	KSS	10.000	g
51	17AU21DFS1_51	lcs 320-513879/2-a	lcs 320-513879/2-a	34	1613B/Solid		KSS	10.000	g
52	17AU21DFS1_52	320-76901-a-2-a	320-76901-a-2-a	35	1613B/Solid		KSS	10.000	g
53	17AU21DFS1_53	320-76901-a-2-b ms	320-76901-a-2-b ms	36	1613B/Solid		KSS	10.000	g
54	17AU21DFS1_54	320-76901-a-2-c msd	320-76901-a-2-c msd	37	1613B/Solid		KSS	10.000	g
55	17AU21DFS1_55	320-76769-a-4-b	320-76769-a-4-b	38	1613B/Solid		KSS	10.000	g
56	17AU21DFS1_56	320-76888-a-6-a	320-76888-a-6-a	39	1613B/Solid		KSS	10.000	g
57	17AU21DFS1_57	320-76888-a-7-a	320-76888-a-7-a	40	1613B/Solid		KSS	10.000	g
58	17AU21DFS1_58	320-76888-a-8-a	320-76888-a-8-a	41	1613B/Solid		KSS	10.000	g
59	17AU21DFS1_59	320-76888-a-9-a	320-76888-a-9-a	42	1613B/Solid		KSS	10.000	g
60	17AU21DFS1_60	SB Solvent Blank C14	SB 081721G	3	Dioxin		KSS	1.000	
61	17AU21DFS1_61	Resolution Check	RC 081721D	46			KSS	1.000	

LOGFILE CHECKED)
DB 8/18/21

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

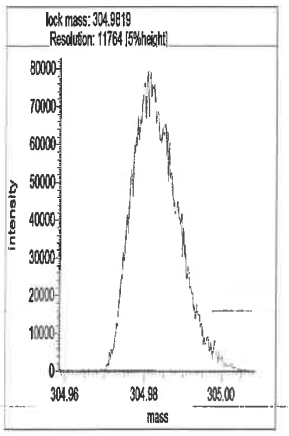

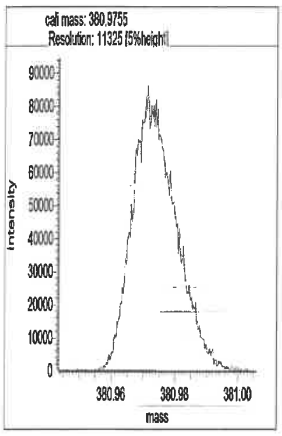

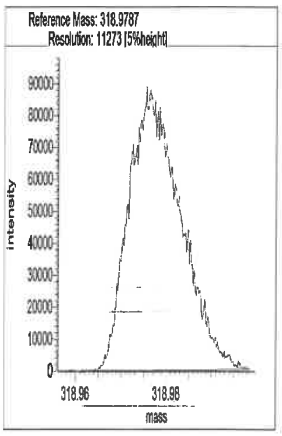

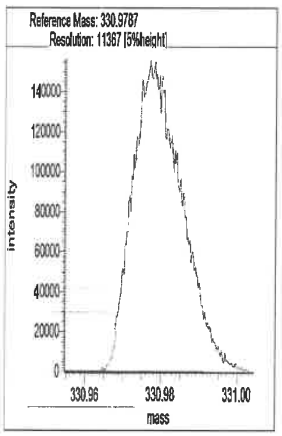

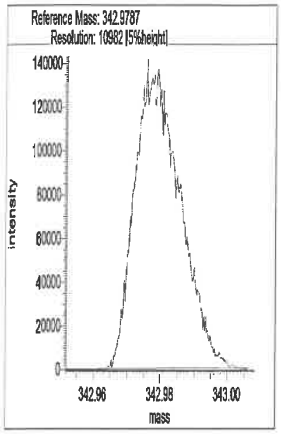

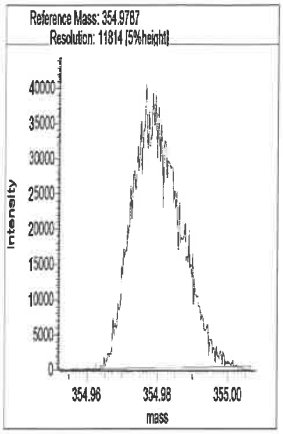

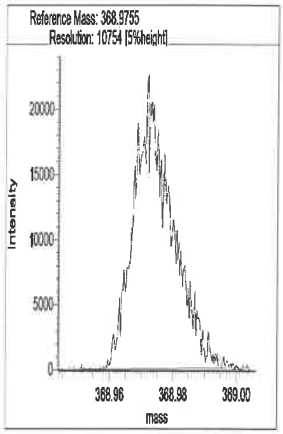

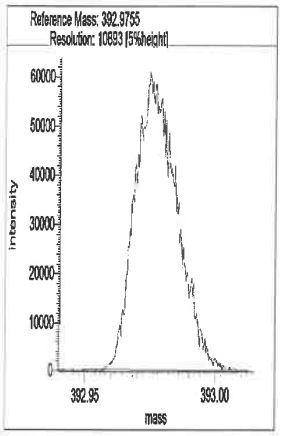

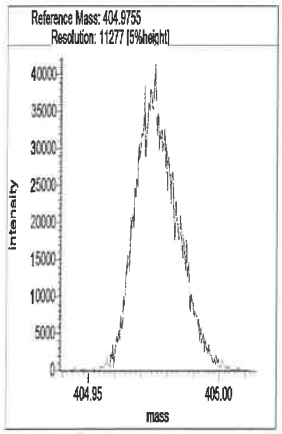

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

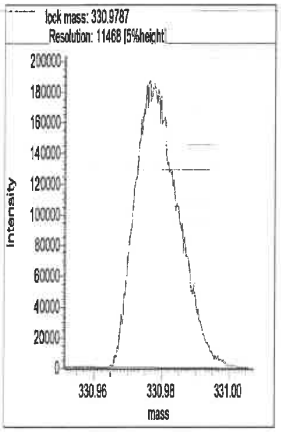

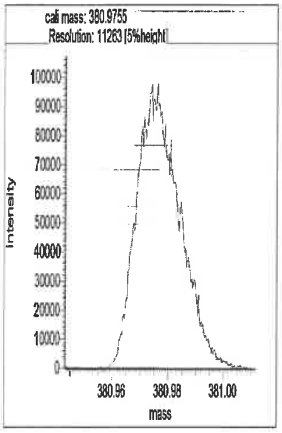

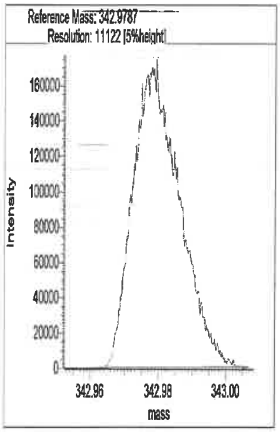

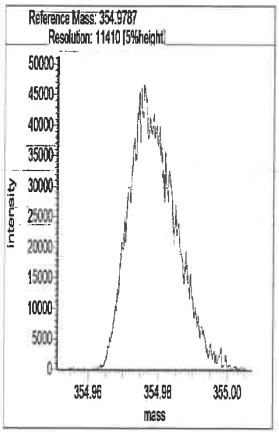

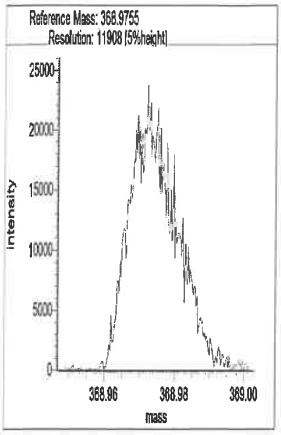

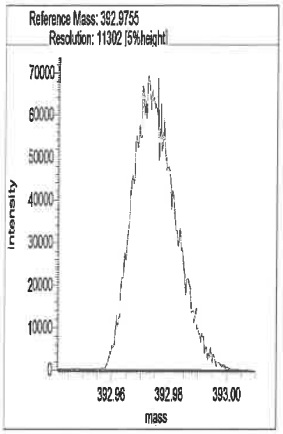

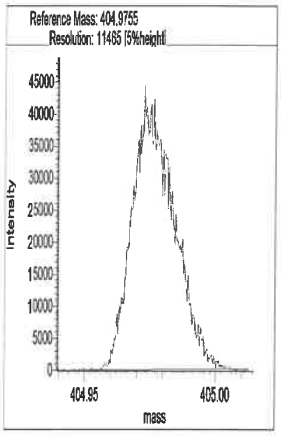

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

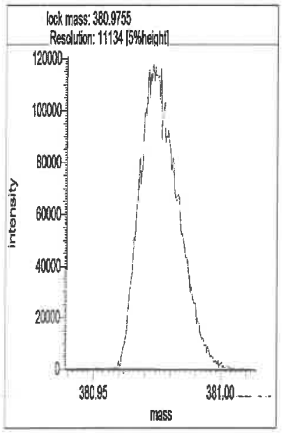

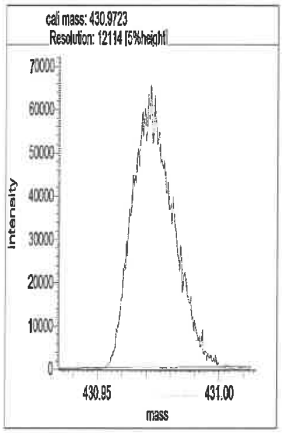

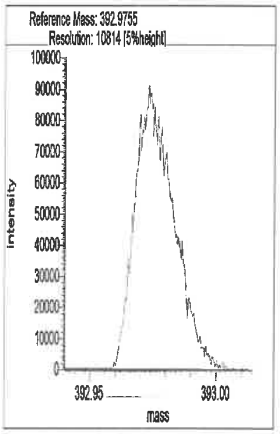

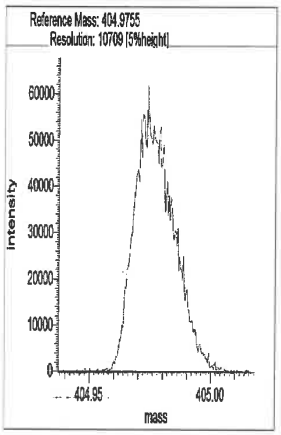

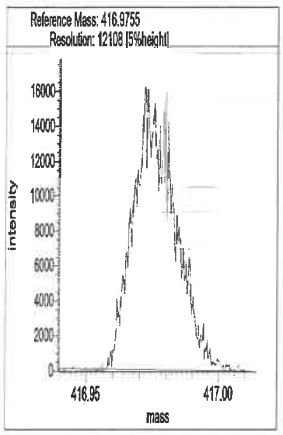

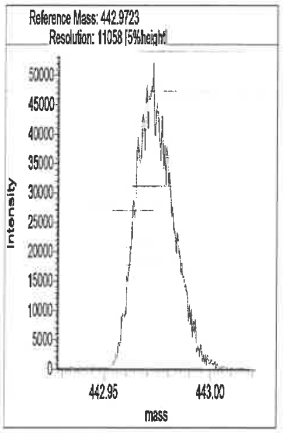

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

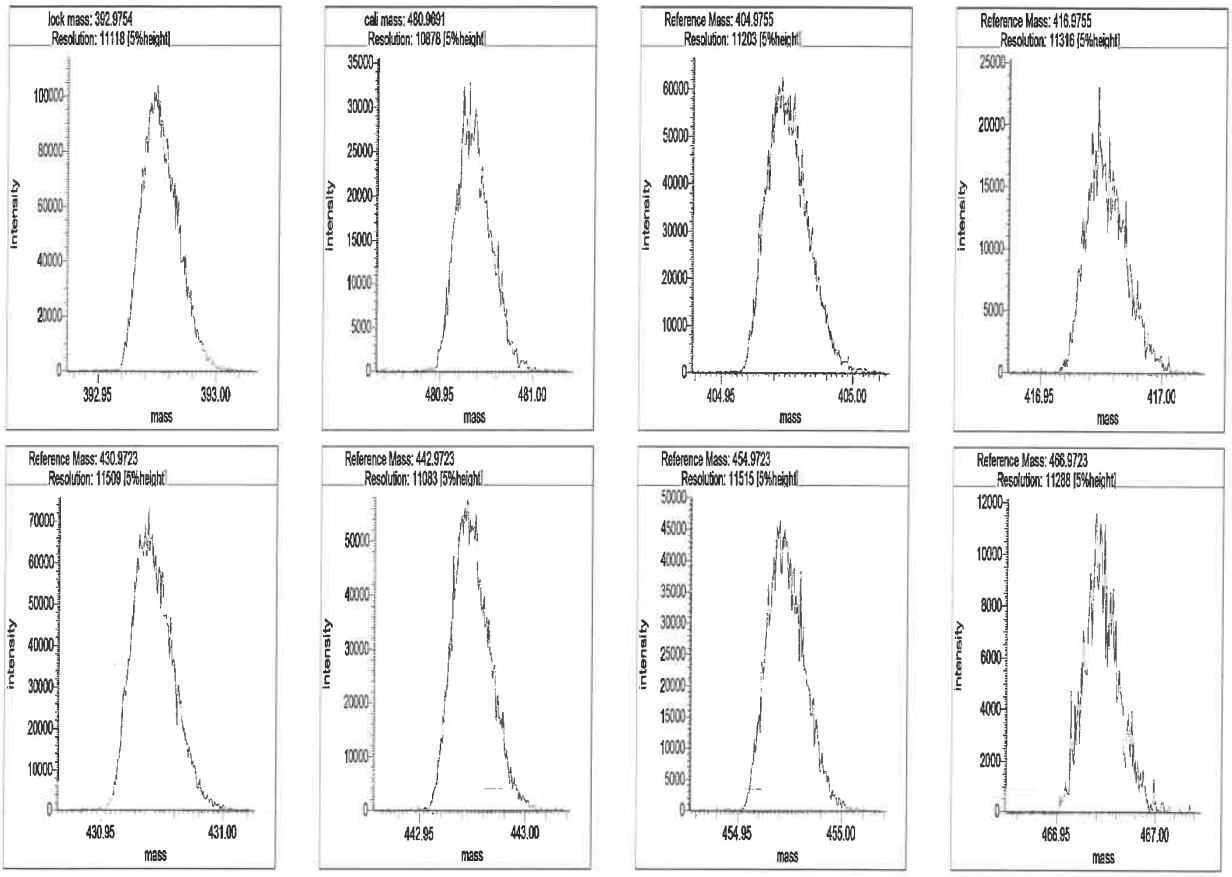

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

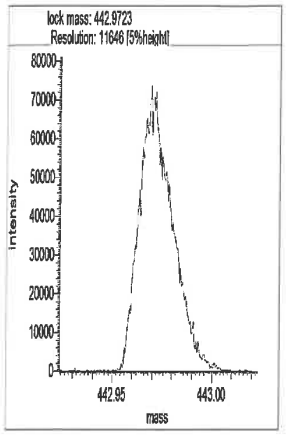
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

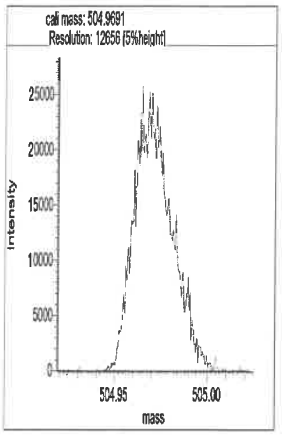
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

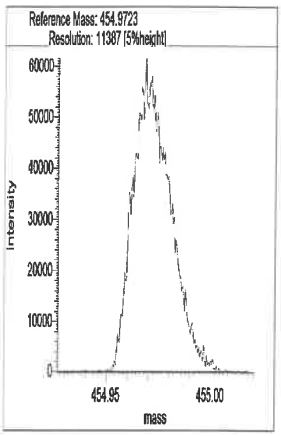
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

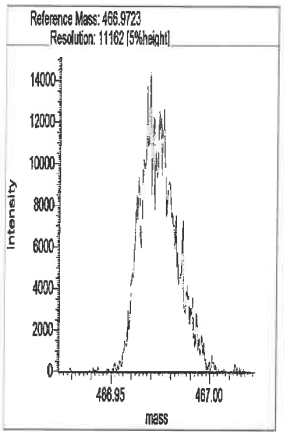
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

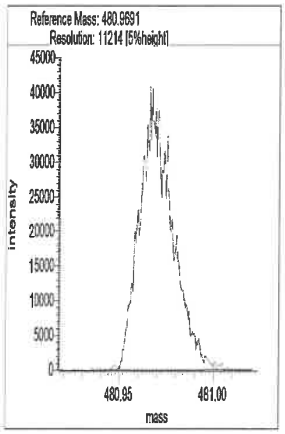
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

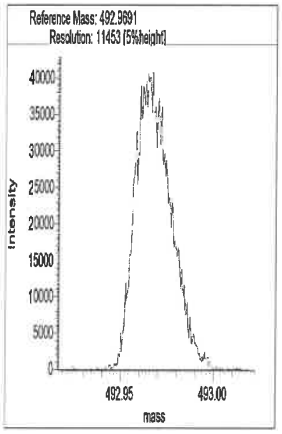
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 01:12
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10755 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10064 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11004 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10862 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10493 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11020 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10113 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10231 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9724 [5%height] ok 8/19/21

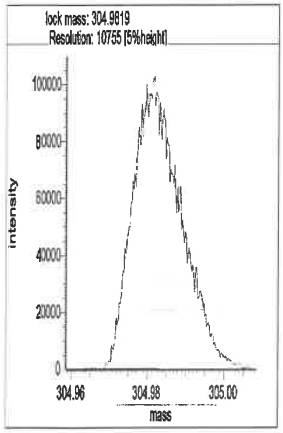

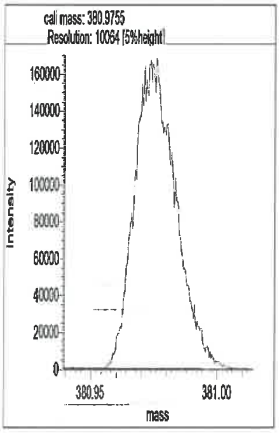

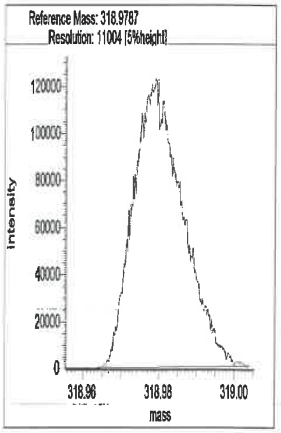

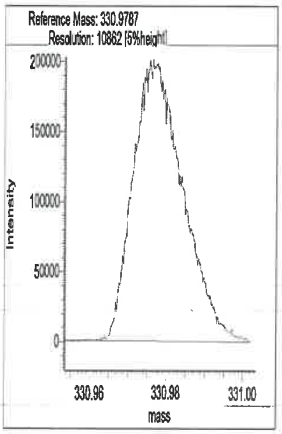

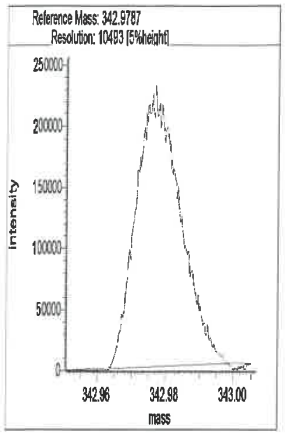

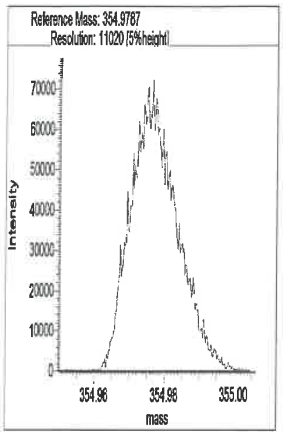

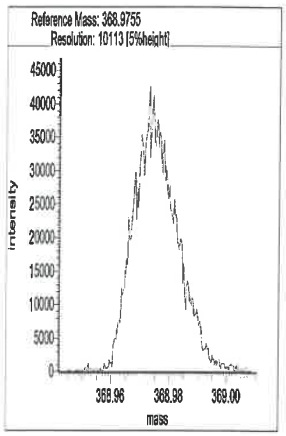

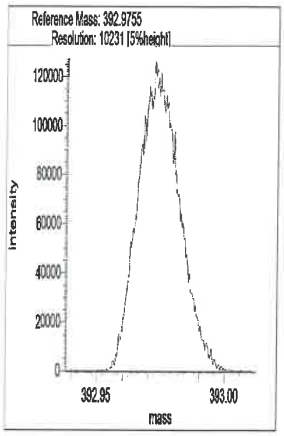

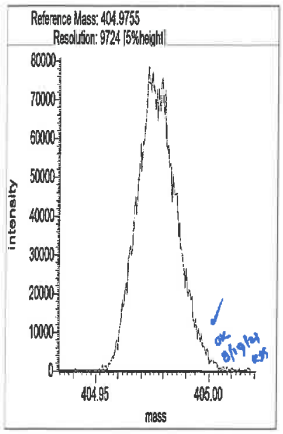

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10868 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10796 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10893 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11154 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10747 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10242 [5%height]

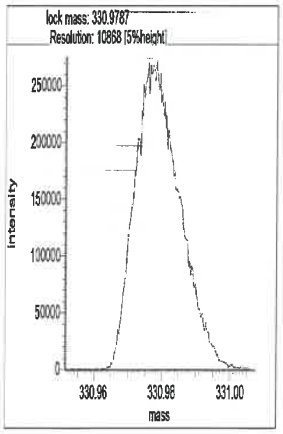

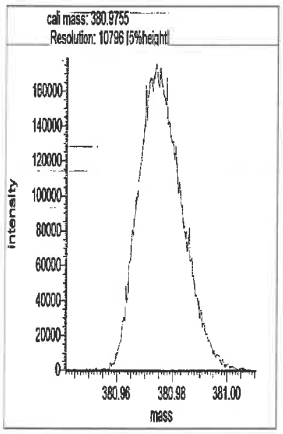

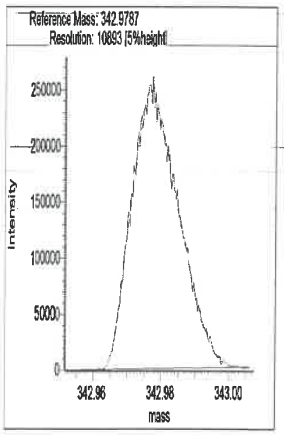

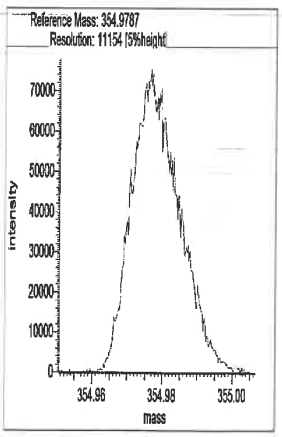

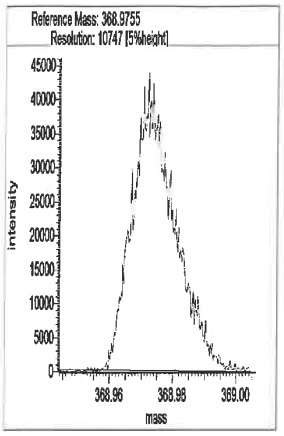

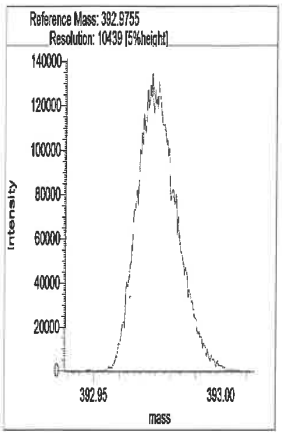

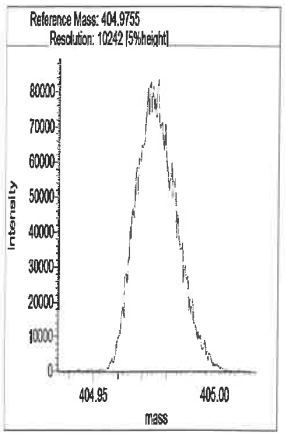

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11012 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10577 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11026 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10658 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11077 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10816 [5%height]

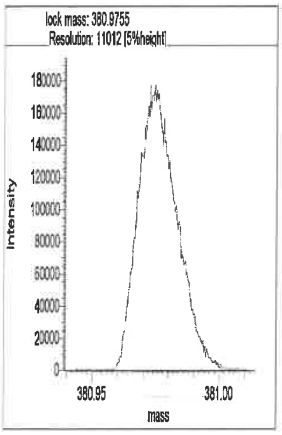

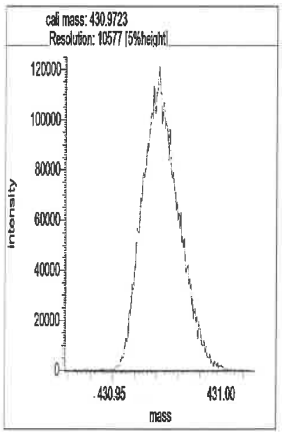

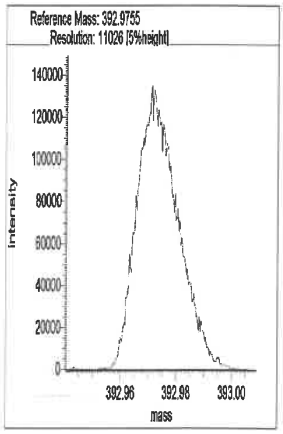

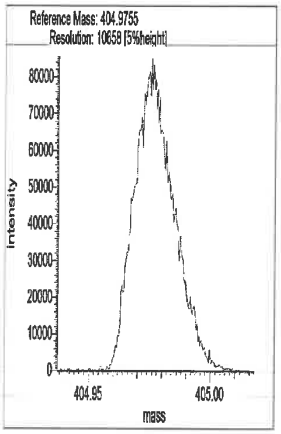

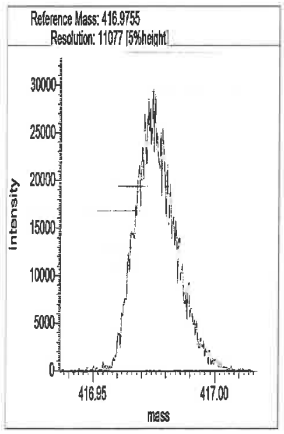

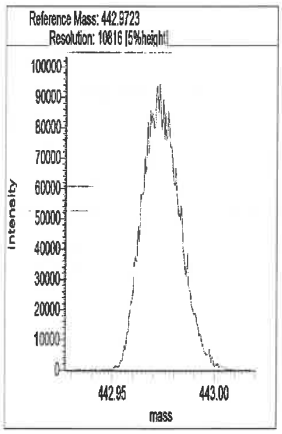

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11599 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10409 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11028 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11067 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10523 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10883 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10838 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11180 [5%height]

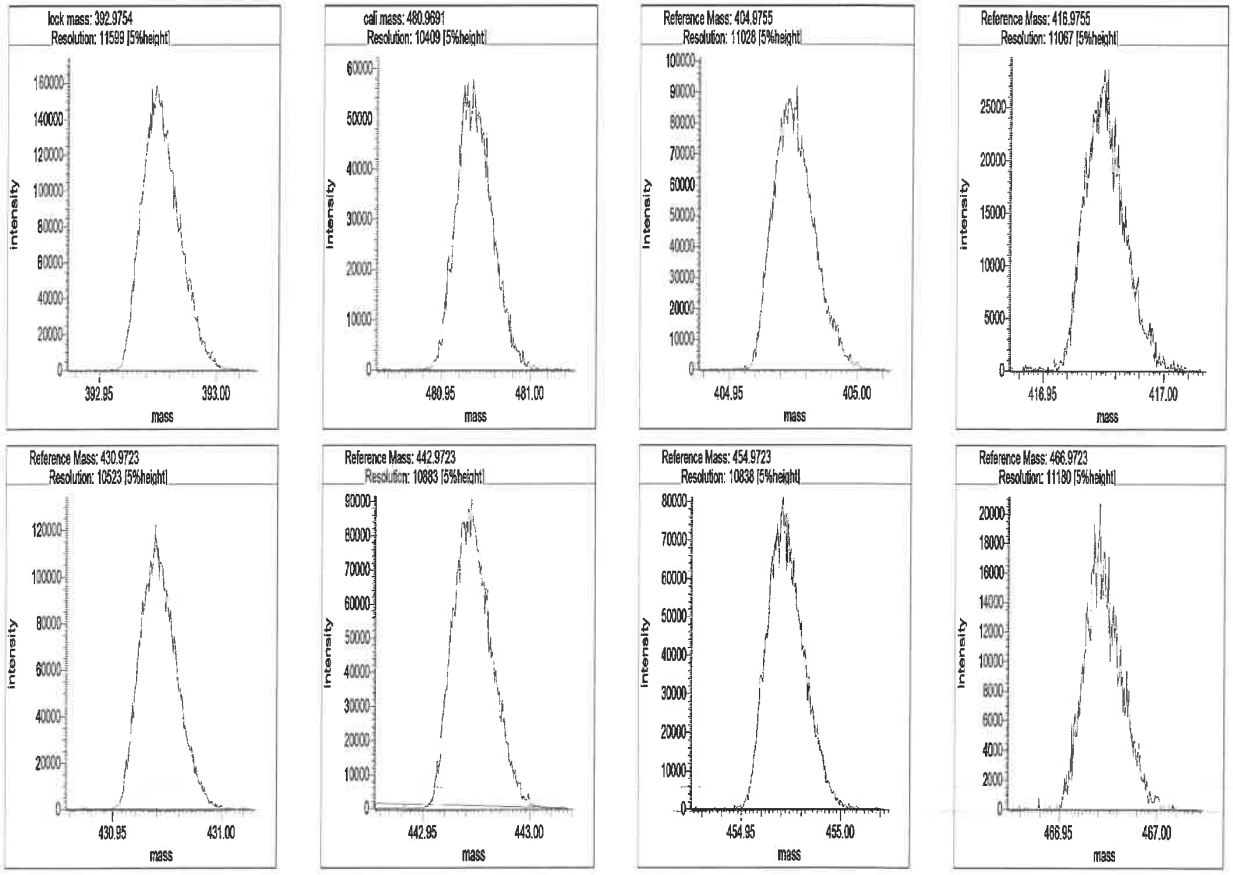

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11216 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10772 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11002 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11259 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10778 [5%height]

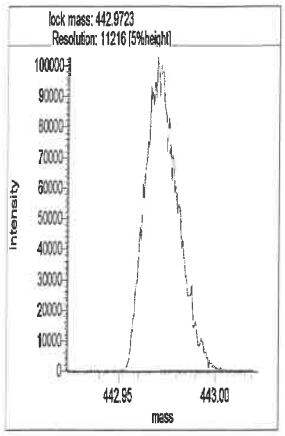
lock mass: 442.9723
Resolution: 11216 [5%height]
Intensity
mass

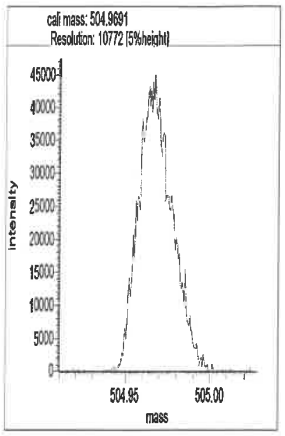
cali mass: 504.9691
Resolution: 10772 [5%height]
Intensity
mass

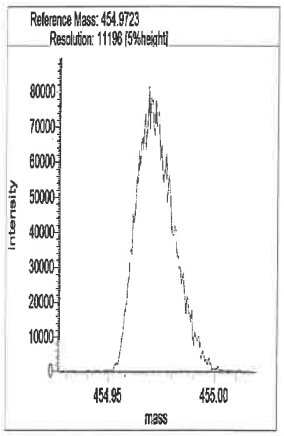
Reference Mass: 454.9723
Resolution: 11196 [5%height]
Intensity
mass

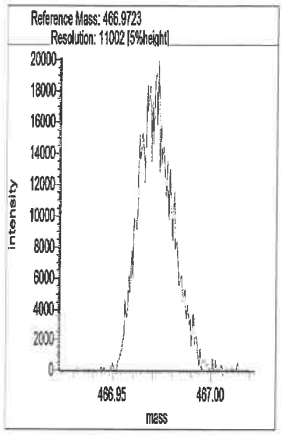
Reference Mass: 466.9723
Resolution: 11002 [5%height]
Intensity
mass

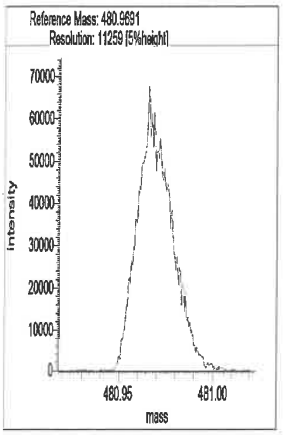
Reference Mass: 480.9691
Resolution: 11259 [5%height]
Intensity
mass

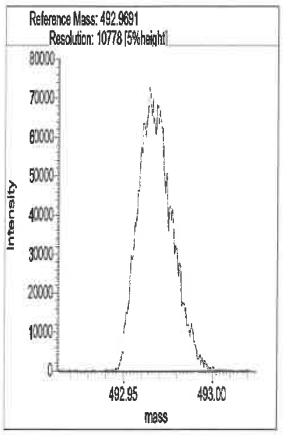
Reference Mass: 492.9691
Resolution: 10778 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 12:47
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11862 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10668 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11408 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11603 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11057 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11275 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11232 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10101 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9688 [5%height] ✓ 8/19/21 KCF

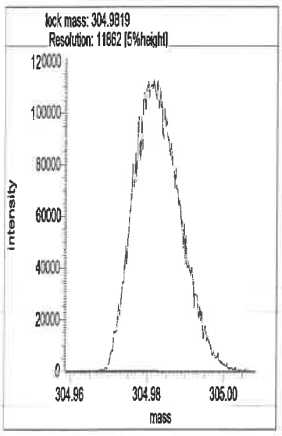

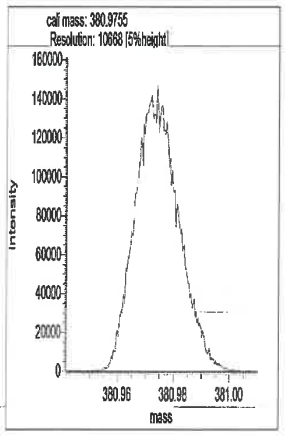

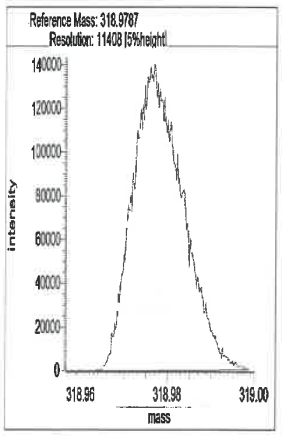

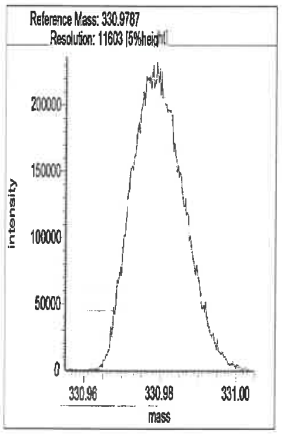

783295

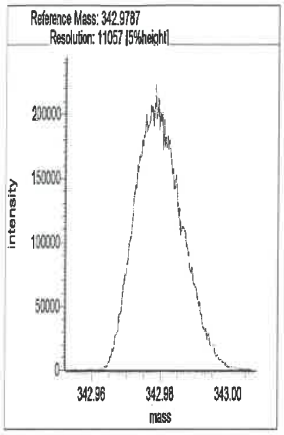

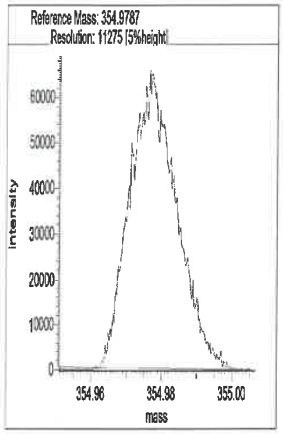

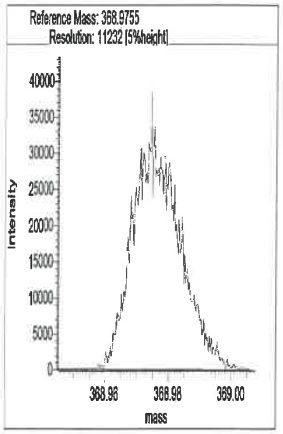

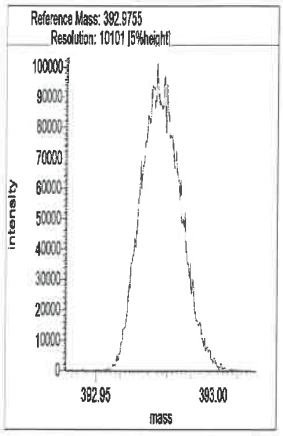

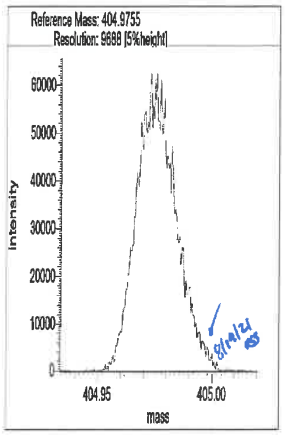

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11409 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11096 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11275 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10877 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10816 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11177 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10770 [5%height]

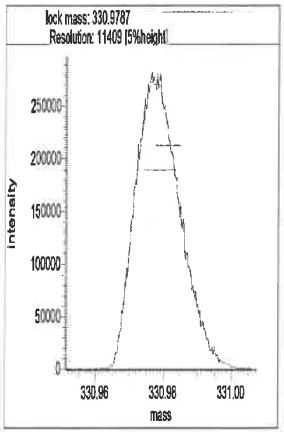

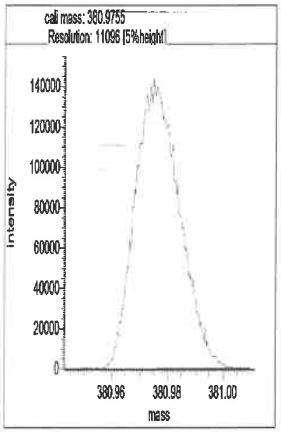

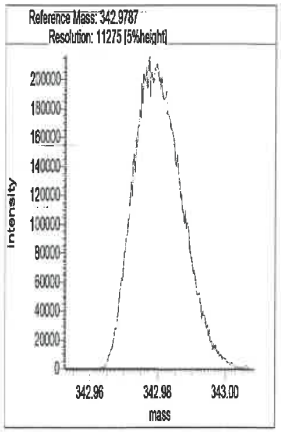

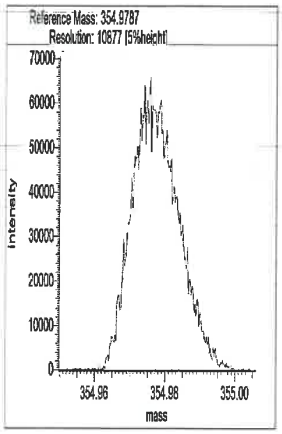

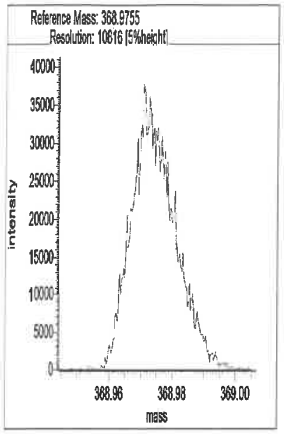

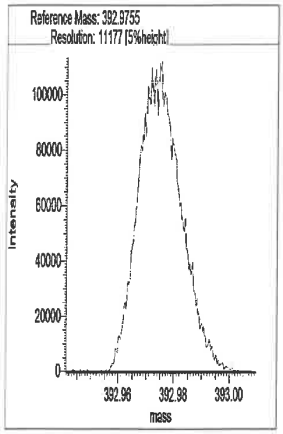

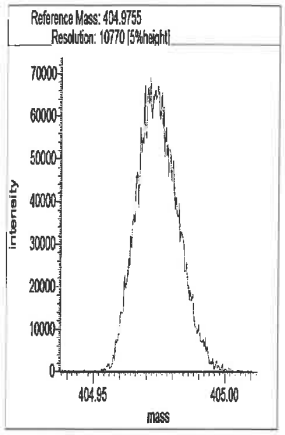

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11068 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11154 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11414 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11295 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10788 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10614 [5%height]

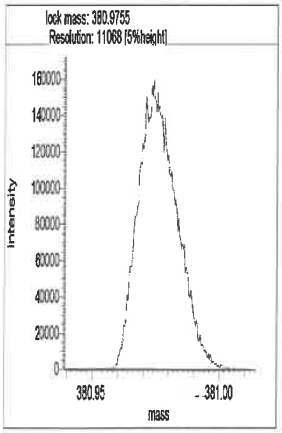

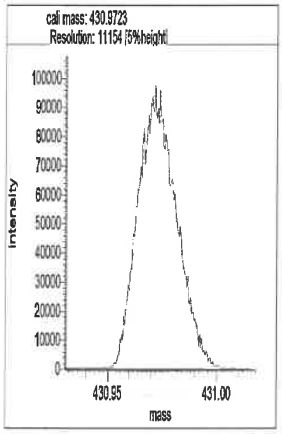

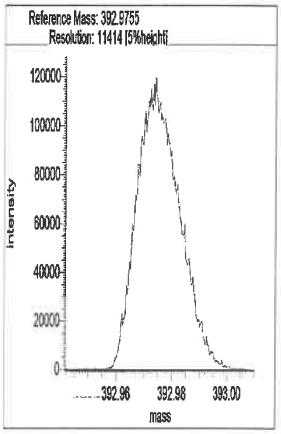

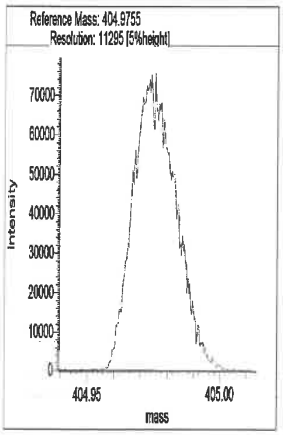

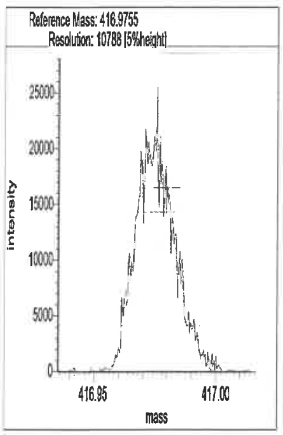

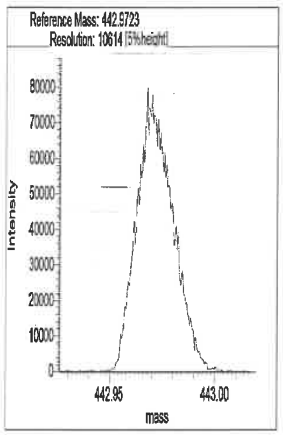

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11418 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11823 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11599 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11335 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10811 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11056 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10732 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10827 [5%height]

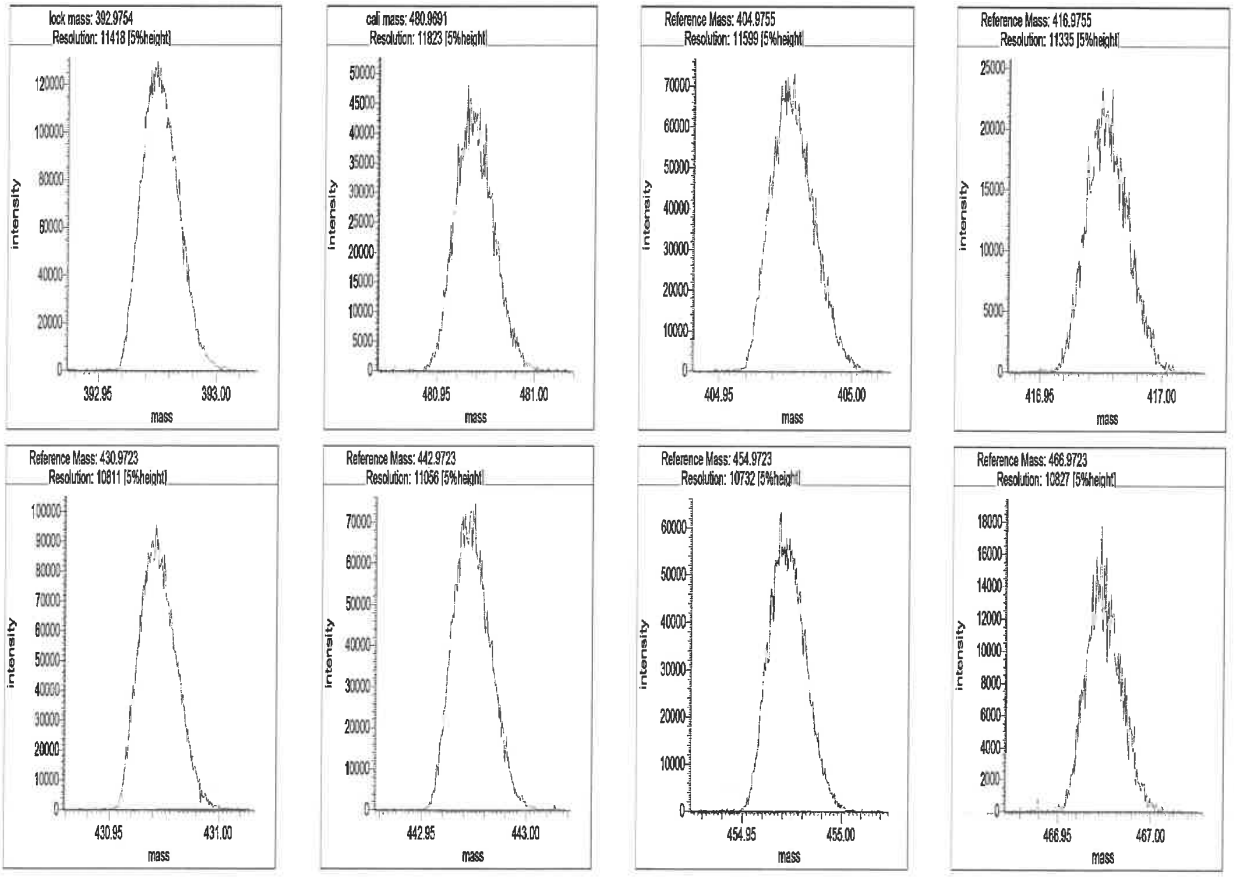

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11579 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11377 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11119 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12204 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10698 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10928 [5%height]

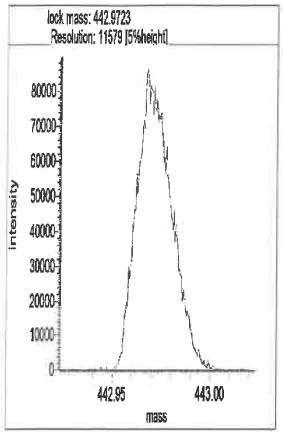
lock mass: 442.9723
Resolution: 11579 [5%height]
Intensity
mass

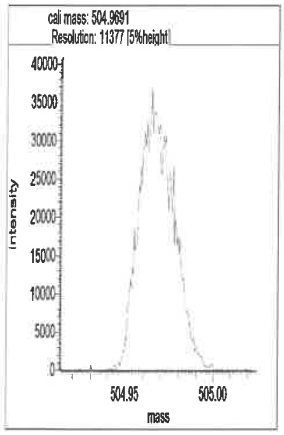
cali mass: 504.9691
Resolution: 11377 [5%height]
Intensity
mass

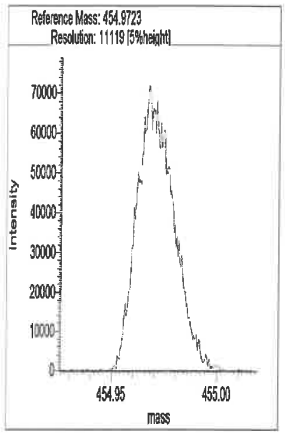
Reference Mass: 454.9723
Resolution: 11119 [5%height]
Intensity
mass

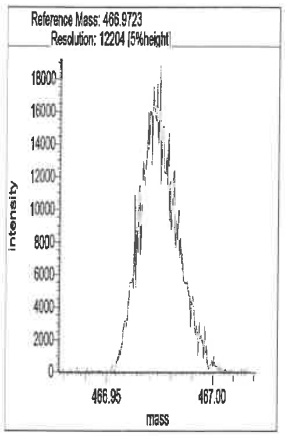
Reference Mass: 466.9723
Resolution: 12204 [5%height]
Intensity
mass

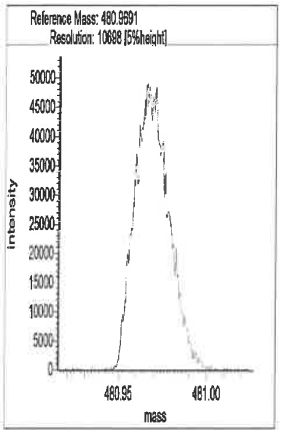
Reference Mass: 480.9691
Resolution: 10628 [5%height]
Intensity
mass

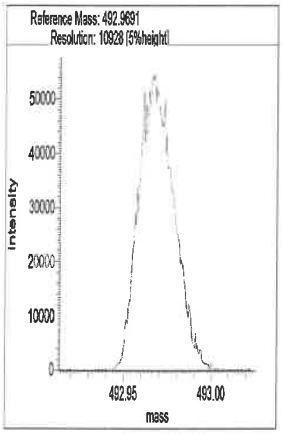
Reference Mass: 492.9691
Resolution: 10928 [5%height]
Intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 13:48:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:36 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 15:08:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.444	583584	0.84	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.480	871422	0.81	1.3459	110.9	110.9	0.2490	0.2490	111	
2,3,7,8-TCDF	20.523	90505	0.83	1.0802	9.615	9.615	0.0222	0.0222	96.15	M
A Non-2,3,7,8-sub-TCDF	19.878	1359	0.77	1.0802	0.2814	0.1444	0.0222	0.0337	0.00	RQM
S Total TCDF					9.896	9.759	0.0222	0.0222		RQ
D 13C-2,3,7,8-TCDD	21.831	595187	0.83	0.9317	109.5	109.5	0.2082	0.2082	109	
$ 37Cl4-2,3,7,8-TCDD	21.857	64449		1.0083	11.0	11.0	0.0117	0.0117	110	
2,3,7,8-TCDD	21.882	60333	0.89	1.0753	9.427	9.427	0.0245	0.0245	94.27	M
A Non-2,3,7,8-sub-TCDD	20.707	208	0.77	1.0753	0.0619	0.0325	0.0245	0.0245	0.00	RQM
S Total TCDD					9.488	9.459	0.0245	0.0245		RQ
D 13C-1,2,3,7,8-PeCDF	27.304	699918	1.55	1.1405	105.2	105.2	0.2134	0.2134	105	
1,2,3,7,8-PeCDF	27.330	370990	1.59	1.0543	50.3	50.3	0.1259	0.1259	101	
D 13C-2,3,4,7,8-PeCDF	28.820	736640	1.63	1.1253	112.2	112.2	0.2163	0.2163	112	
2,3,4,7,8-PeCDF	28.845	348407	1.57	1.0079	46.9	46.9	0.1301	0.1301	93.86	
A F1 PeCDFs	24.648	81	1.55	1.0311	0.0600	0.0109	0.004669	0.008777	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.125	4158	1.55	1.0311	0.6367	0.5614	0.1279	0.5614	0.00	RQ
S Total PeCDF					97.9	97.8	0.1280	0.1280		RQ
D 13C-1,2,3,7,8-PeCDD	29.645	419476	1.56	0.7165	100.3	100.3	0.1428	0.1428	100	
1,2,3,7,8-PeCDD	29.670	222798	1.53	1.0465	50.8	50.8	0.0611	0.0611	102	
A Non-2,3,7,8-sub-PeCDD	28.489						0.0611	0.0611		
S Total PeCDD					50.8	50.8	0.0611	0.0611		
D 13C-1,2,3,4,7,8-HxCDF	34.955	674175	0.54	0.9648	110.7	110.7	0.3609	0.3609	111	
1,2,3,4,7,8-HxCDF	34.972	377904	1.23	1.1474	48.9	48.9	0.1894	0.1894	97.71	
D 13C-1,2,3,6,7,8-HxCDF	35.123	674580	0.52	1.0708	99.8	99.8	0.3252	0.3252	99.80	
1,2,3,6,7,8-HxCDF	35.132	413479	1.26	1.2178	50.3	50.3	0.1934	0.1934	101	
D 13C-2,3,4,6,7,8-HxCDF	35.932	634377	0.53	1.0413	96.5	96.5	0.3344	0.3344	96.51	
2,3,4,6,7,8-HxCDF	35.949	397022	1.26	1.2145	51.5	51.5	0.1754	0.1754	103	
D 13C-1,2,3,7,8,9-HxCDF	36.816	643754	0.55	0.9731	104.8	104.8	0.3579	0.3579	105	
1,2,3,7,8,9-HxCDF	36.833	406240	1.28	1.2401	50.9	50.9	0.1567	0.1567	102	
A Non-2,3,7,8-sub-HxCDF	35.028						0.1777	0.1777		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					201.6	201.6	0.1788	0.1788		
* 13C-1,2,3,7,8,9-HxCDD	36.623	631247	1.29	1.8E+04	100.0	100.0				M
D 13C-1,2,3,4,7,8-HxCDD	36.134	491591	1.35	0.7587	102.6	102.6	0.2264	0.2264	103	
1,2,3,4,7,8-HxCDD	36.159	241838	1.29	1.0608	46.4	46.4	0.0904	0.0904	92.75	
D 13C-1,2,3,6,7,8-HxCDD	36.260	531922	1.23	0.8593	98.1	98.1	0.1999	0.1999	98.07	
1,2,3,6,7,8-HxCDD	36.269	246666	1.18	0.9933	46.7	46.7	0.0900	0.0900	93.37	
1,2,3,7,8,9-HxCDD	36.631	290723	1.25	1.1094	51.2	51.2	0.0834	0.0834	102	
A Non-2,3,7,8-sub-HxCDD	35.394						0.0878	0.0878		
S Total HxCDD					144.3	144.3	0.0880	0.0880		
D 13C-1,2,3,4,6,7,8-HpCDF	38.630	526049	0.45	0.7359	113.2	113.2	0.4054	0.4054	113	
1,2,3,4,6,7,8-HpCDF	38.638	370093	1.06	1.4421	48.8	48.8	0.1783	0.1783	97.57	
D 13C-1,2,3,4,7,8,9-HpCDF	39.876	560124	0.44	0.6854	129.5	129.5	0.4354	0.4354	129	M
1,2,3,4,7,8,9-HpCDF	39.885	351003	1.05	1.3092	47.9	47.9	0.1621	0.1621	95.73	
A Non-2,3,7,8-sub-HpCDF	39.258						0.1690	0.1690		
S Total HpCDF					96.7	96.7	0.1702	0.1702		
D 13C-1,2,3,4,6,7,8-HpCDD	39.573	479110	1.01	0.6745	112.5	112.5	0.3461	0.3461	113	
1,2,3,4,6,7,8-HpCDD	39.582	246982	1.07	1.0503	49.1	49.1	0.1221	0.1221	98.16	
A Non-2,3,7,8-sub-HpCDD	39.258	2973	1.04	1.0503	0.7180	0.5908	0.1221	0.5908	0.00	RQ
S Total HpCDD					49.8	49.7	0.1221	0.1221		RQ
D 13C-OCDD	42.069	904193	0.89	0.5446	263.0	263.0	0.3342	0.3342	132	
OCDF	42.170	580843	0.91	1.3168	97.6	97.6	0.0938	0.0938	97.57	
OCDD	42.078	458801	0.90	1.0620	95.6	95.6	0.0951	0.0951	95.56	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 13:48:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:36 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 15:08:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.444	21.444	0		265855	39874	42	105	949		a
333.9338	21.453	21.444	1		317729	45174	24	60	1882	0.84(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.480	20.480	0	0.955	389124	57100	79	197	723		
317.9389	20.489	20.480	1	0.955	482298	68240	35	87	1950	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.523	20.523	0	1.002	40929	5463	4	10	1366		M
305.8987	20.506	20.523	-1	1.001	49576	7254	8	20	907	0.83(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	17.486	19.878	-143	0.854	72	49	4	10	12		
305.8987	17.503	19.878	-142	0.855	325	77	8	20	10	0.22(0.65-0.89)	
	Empc Correction				93	63	8	20	8		
303.9016	19.749	19.878	-8	0.964	138	54	4	10	14		
305.8987	19.775	19.878	-6	0.966	511	125	8	20	16	0.27(0.65-0.89)	
	Empc Correction				179	70	8	20	9		
303.9016	20.911	19.878	62	1.021	628	84	4	10	21		
	Empc Correction				136	73	4	10	18		
305.8987	20.893	19.878	61	1.020	177	96	8	20	12	3.55(0.65-0.89)	
303.9016	21.005	19.878	67	1.026	138	57	4	10	14		
305.8987	20.988	19.878	66	1.025	265	51	8	20	6	0.52(0.65-0.89)	
	Empc Correction				179	74	8	20	9		
303.9016	21.281	19.878	84	1.039	255	95	4	10	24		
	Empc Correction				107	72	4	10	18		
305.8987	21.315	19.878	86	1.041	140	94	8	20	12	1.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											
331.9368	21.831	21.831	0	1.018	269248	34531	42	105	822		
333.9338	21.822	21.831	-1	1.018	325939	41230	24	60	1718	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.857	21.857	0	1.019	64449	8479	4	10	2120		
2,3,7,8-TCDD											M
319.8965	21.882	21.882	0	1.002	28457	3845	7	17	549		M
321.8936	21.882	21.882	0	1.002	31876	3953	1	2	3953	0.89(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQM
319.8965	21.668	20.707	58	0.993	120	81	7	17	12		
	Empc Correction				33	23	7	17	3		
321.8936	21.693	20.707	59	0.994	43	31	1	2	31	2.79(0.65-0.89)	
319.8965	22.399	20.707	101	1.026	158	67	7	17	10		
	Empc Correction				57	22	7	17	3		
321.8936	22.330	20.707	97	1.023	75	29	1	2	29	2.11(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.304	27.304	0	1.273	425195	63633	45	112	1414		
353.8970	27.313	27.304	1	1.274	274723	39611	38	95	1042	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.330	27.330	0	1.001	227987	33133	32	80	1035		
341.8567	27.338	27.330	1	1.001	143003	20797	23	57	904	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.820	28.820	0	1.344	456611	65087	45	112	1446		
353.8970	28.812	28.820	-1	1.344	280029	39384	38	95	1036	1.63(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.845	28.845	0	1.001	212877	28369	32	80	887		
341.8567	28.837	28.845	-1	1.001	135530	17603	23	57	765	1.57(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.256	24.648	-23	0.888	10	6	1	2	6		
341.8567	24.230	24.648	-25	0.887	25	14	1	2	14	0.40(1.32-1.78)	
	Empc Correction				6	3	1	2	3		
339.8597	24.420	24.648	-14	0.894	40	22	1	2	22		
341.8567	24.394	24.648	-15	0.893	369	90	1	2	90	0.11(1.32-1.78)	
	Empc Correction				25	14	1	2	14		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.919	28.125	-12	1.023	2528	386	32	80	12		
341.8567	27.953	28.125	-10	1.024	2187	262	23	57	11	1.16(1.32-1.78)	
	Empc Correction				1630	249	23	57	11		
13C-1,2,3,7,8-PeCDD											
367.8949	29.645	29.645	0	1.382	255348	35062	26	65	1349		
369.8919	29.636	29.645	-1	1.382	164128	22831	9	22	2537	1.56(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.670	29.670	0	1.001	134733	17174	10	25	1717		
357.8516	29.662	29.670	-1	1.001	88065	11340	5	12	2268	1.53(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						10	25			
357.8516	28.489						5	12			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.955	34.955	0	0.954	237033	46467	65	162	715		
385.8610	34.955	34.955	0	0.954	437142	82345	111	277	742	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.972	34.972	0	1.000	208303	39400	62	155	635		
375.8178	34.972	34.972	0	1.000	169601	31161	50	125	623	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.123	35.123	0	0.959	230353	41039	65	162	631		
385.8610	35.106	35.123	-1	0.959	444227	77817	111	277	701	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.132	35.132	0	1.000	230885	42672	62	155	688		
375.8178	35.132	35.132	0	1.000	182594	33631	50	125	673	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.932	35.932	0	0.981	219287	44412	65	162	683		
385.8610	35.923	35.932	-1	0.981	415090	86999	111	277	784	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.949	35.949	0	1.000	221069	46435	62	155	749		
375.8178	35.940	35.949	-1	1.000	175953	36135	50	125	723	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.816	36.816	0	1.005	227331	51062	65	162	786		
385.8610	36.816	36.816	0	1.005	416423	93051	111	277	838	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.833	36.833	0	1.000	228342	52008	62	155	839		
375.8178	36.833	36.833	0	1.000	177898	40049	50	125	801	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						62	155			
375.8178	35.028						50	125			
13C-1,2,3,7,8,9-HxCDD											M
401.8559	36.623	36.623	0		355684	70512	58	145	1216		M
403.8529	36.623	36.623	0		275563	55836	29	72	1925	1.29(1.05-1.43)	M
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.134	36.134	0	0.987	282661	63231	58	145	1090		
403.8529	36.134	36.134	0	0.987	208930	46276	29	72	1596	1.35(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.159	36.159	0	1.001	136378	30119	23	57	1310		
391.8127	36.151	36.159	-1	1.000	105460	23953	19	47	1261	1.29(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.260	36.260	0	0.990	293421	65852	58	145	1135		
403.8529	36.252	36.260	-1	0.990	238501	51544	29	72	1777	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.269	36.269	0	1.000	133735	29949	23	57	1302		
391.8127	36.269	36.269	0	1.000	112931	23931	19	47	1260	1.18(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDD											
389.8158	36.631	36.631	0	1.014	161603	35208	23	57	1531		
391.8127	36.640	36.631	1	1.014	129120	27227	19	47	1433	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.394						23	57			
391.8127	35.394						19	47			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.630	38.630	0	1.055	163701	41181	54	135	763		
419.8220	38.630	38.630	0	1.055	362348	91864	97	242	947	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.638	38.638	0	1.000	190629	47504	72	180	660		
409.7788	38.638	38.638	0	1.000	179464	44416	65	162	683	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											M
417.8250	39.876	39.876	0	1.089	170131	49846	54	135	923		M
419.8220	39.876	39.876	0	1.089	389993	111269	97	242	1147	0.44(0.37-0.51)	M
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885	39.885	0	1.000	180078	50639	72	180	703		
409.7788	39.885	39.885	0	1.000	170925	47586	65	162	732	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						72	180			
409.7788	39.258						65	162			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.573	39.573	0	1.081	240258	68218	63	157	1083		
437.8140	39.573	39.573	0	1.081	238852	65955	55	137	1199	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.582	39.582	0	1.000	127862	35481	35	87	1014		
425.7737	39.582	39.582	0	1.000	119120	33435	34	85	983	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.950	39.258	-18	0.984	1516	518	35	87	15		
425.7737	38.941	39.258	-19	0.984	2097	634	34	85	19	0.72(0.88-1.20)	
	Empc Correction				1457	498	34	85	15		
13C-OCDD											
469.7780	42.069	42.069	0	1.149	426510	101505	54	135	1880		
471.7750	42.069	42.069	0	1.149	477683	120225	38	95	3164	0.89(0.76-1.02)	
OCDF											
441.7428	42.170	42.170	0	1.002	277003	63466	24	60	2644		
443.7399	42.170	42.170	0	1.002	303840	69097	31	77	2229	0.91(0.76-1.02)	
OCDD											
457.7377	42.078	42.078	0	1.000	217935	51979	16	40	3249		
459.7348	42.078	42.078	0	1.000	240866	57297	29	72	1976	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 13:48:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 29
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	871422	125340

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	871422	125340

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.486	72	49	325	77	0.0422	0.22	RnQ
17.486	72	49	93	63	0.0175		Empc Correction
19.749	138	54	511	125	0.0689	0.27	RQ
19.749	138	54	179	70	0.0337		Empc Correction
20.911	628	84	177	96	0.0855	3.55	RQ
20.911	136	73	177	96	0.0333		Empc Correction
21.005	138	57	265	51	0.0428	0.52	RnQ
21.005	138	57	179	74	0.0337		Empc Correction
21.281	255	95	140	94	0.0420	1.82	RQ
21.281	107	72	140	94	0.0262		Empc Correction
Signal Totals:							
	591	305	768	397			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2649	782				0.87	RQ
	1359	702					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2814 = (2649 * 100.000) / (871422 * 1.080)
Empc Amount: 0.1444 = (1359 * 100.000) / (871422 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	18-Aug-2021 13:48:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	29
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	595187	75761

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	595187	75761

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.668	120	81	43	31	0.0255	2.79	RQ
21.668	33	23	43	31	0.0119		Empc Correction
22.399	158	67	75	29	0.0364	2.11	RnQ
22.399	57	22	75	29	0.0206		Empc Correction
Signal Totals:							
	90	45	118	60			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	396	208				2.36	RQ
	208	105					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0619 = (396 * 100.000) / (595187 * 1.075)

Empc Amount: 0.0325 = (208 * 100.000) / (595187 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 13:48:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 29
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	699918	103244
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	736640	104471

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	718279	103857

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.256	10	6	25	14	0.004726	0.40	RnQ
24.256	10	6	6	3	0.002160		Empc Correction
24.420	40	22	369	90	0.0552	0.11	RQ
24.420	40	22	25	14	0.008777		Empc Correction
Signal Totals:							
	50	28	31	17			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	444	132				0.13	RQ
	81	45					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0600 = (444 * 100.000) / (718279 * 1.031)
Empc Amount: 0.0109 = (81 * 100.000) / (718279 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	18-Aug-2021 13:48:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	29
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	699918	103244
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	736640	104471

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	718279	103857

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.919	2528	386	2187	262	0.6367	1.16	RQ
27.919	2528	386	1630	249	0.5614		Empc Correction
Signal Totals:							
	2528	386	1630	249			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4715	648				1.16	RQ
	4158	635					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.6367 = (4715 * 100.000) / (718279 * 1.031)

Empc Amount: 0.5614 = (4158 * 100.000) / (718279 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 13:48:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 29
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	479110	134173

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	479110	134173

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.950	1516	518	2097	634	0.7180	0.72	RQ
38.950	1516	518	1457	498	0.5908		Empc Correction
Signal Totals:							
	1516	518	1457	498			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3613	1152				0.72	RQ
	2973	1016					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7180 = (3613 * 100.000) / (479110 * 1.050)
Empc Amount: 0.5908 = (2973 * 100.000) / (479110 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.44

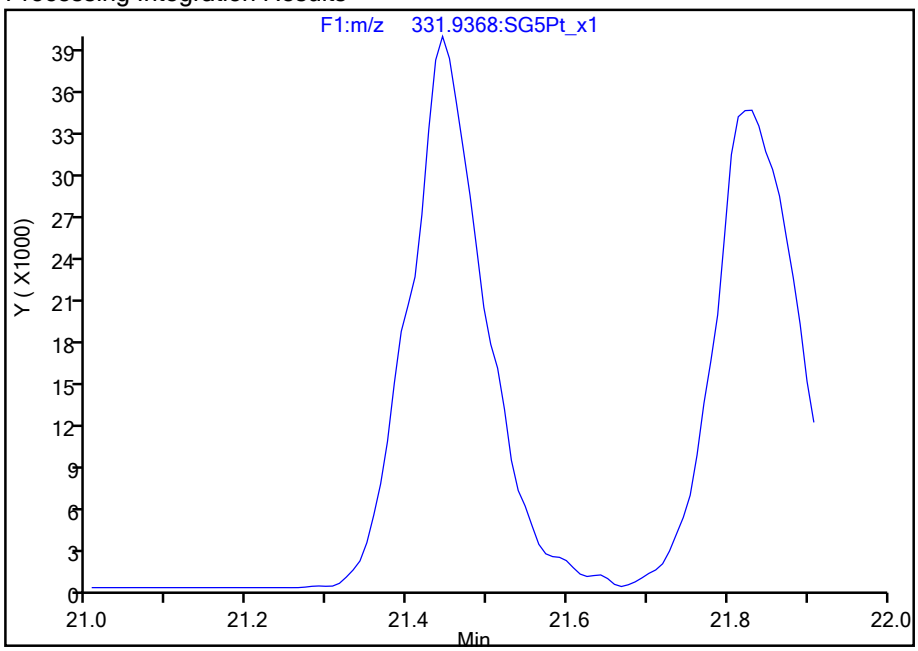

Manual Integration Results

RT: 21.44
Area: 265855
Amount: 100.0000
Amount Units: pg/ul

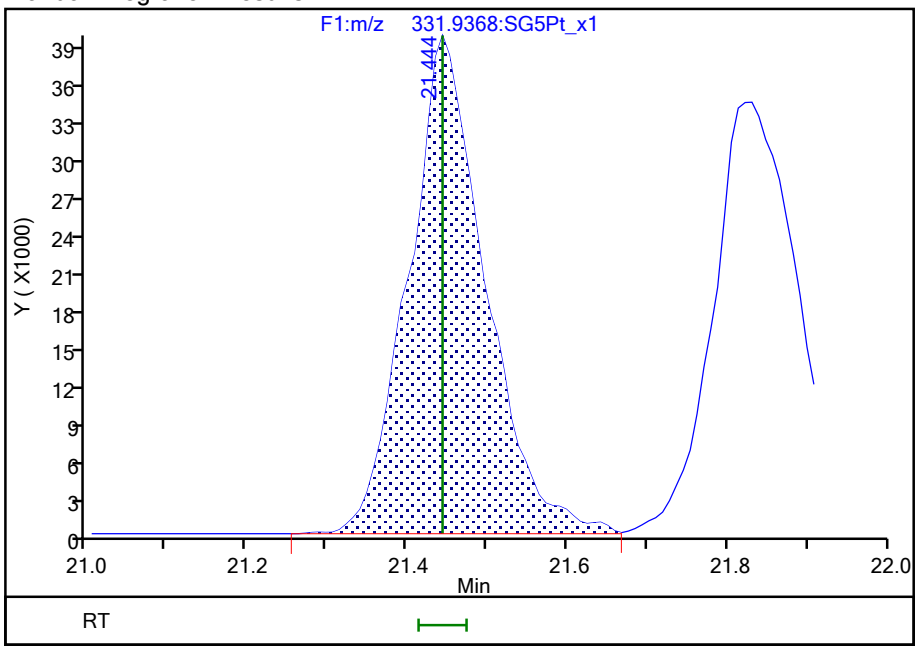

Reviewer: stephensk, 18-Aug-2021 14:37:53

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.52
Area: 39804
Amount: 9.495340
Amount Units: pg/ul

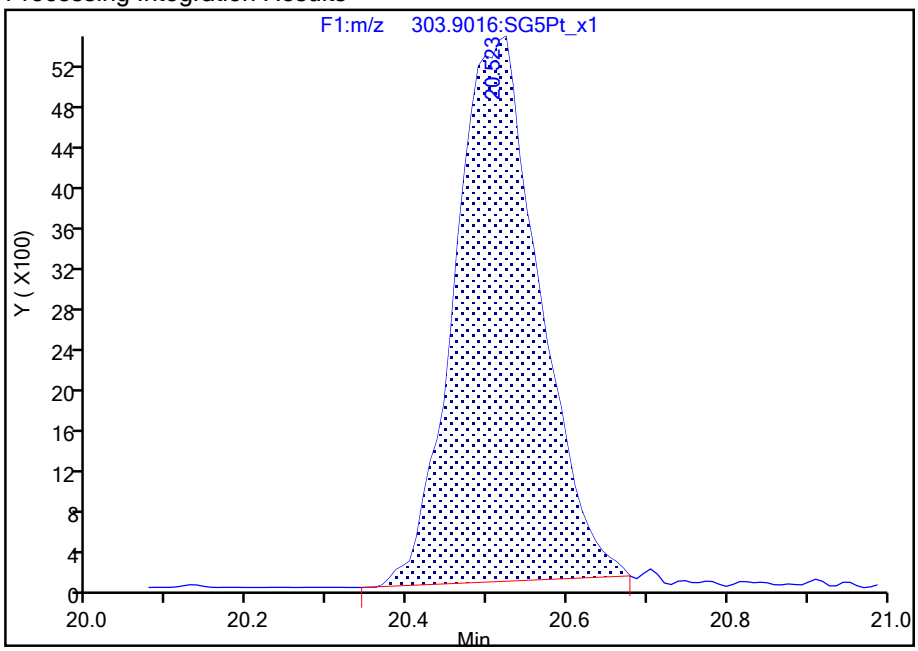

Manual Integration Results

RT: 20.52
Area: 40929
Amount: 9.614855
Amount Units: pg/ul

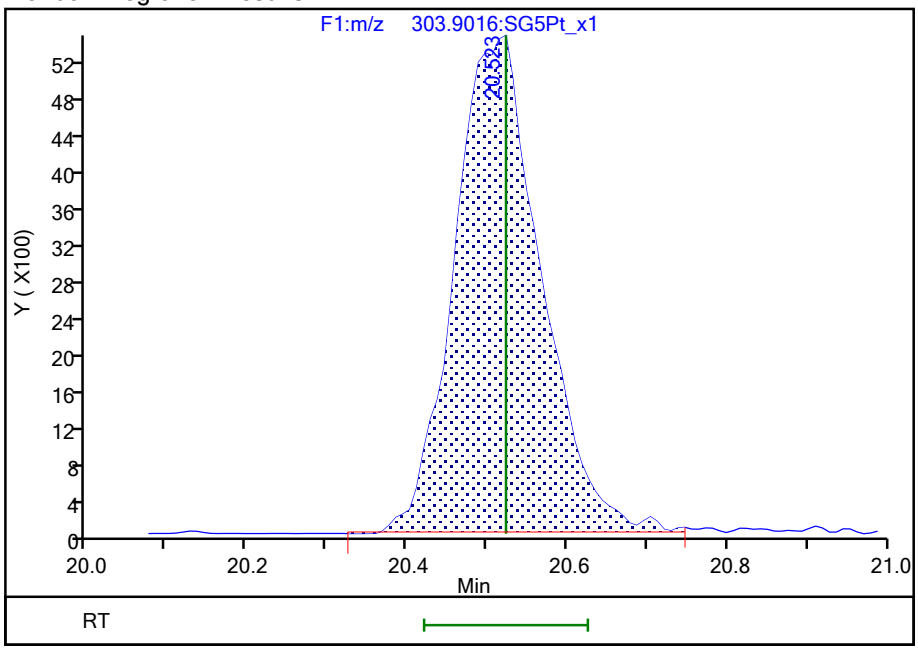

Reviewer: stephensk, 18-Aug-2021 14:38:12

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.88
Area: 26782
Amount: 9.164853
Amount Units: pg/ul

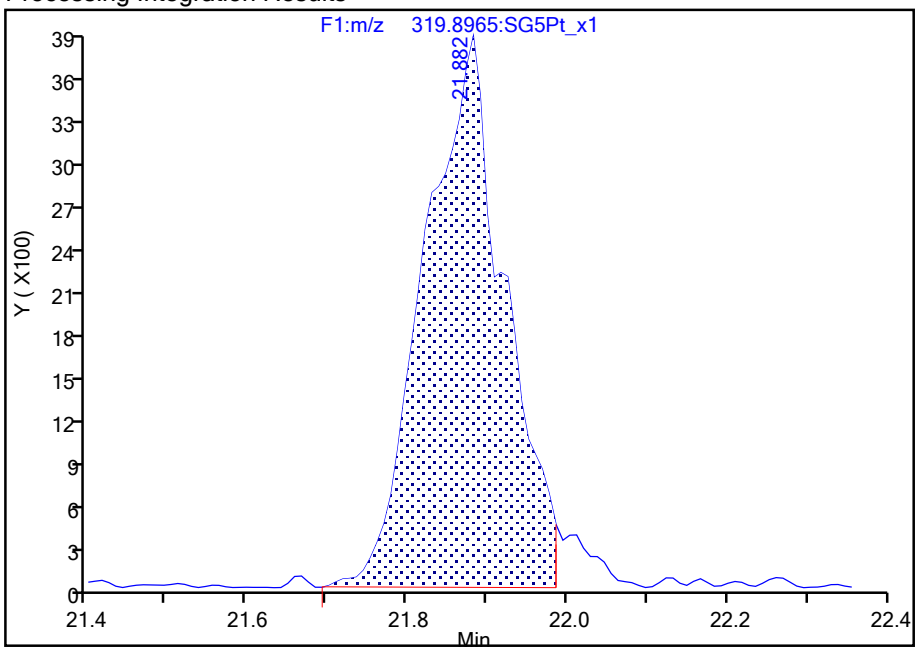

Manual Integration Results

RT: 21.88
Area: 28457
Amount: 9.426559
Amount Units: pg/ul

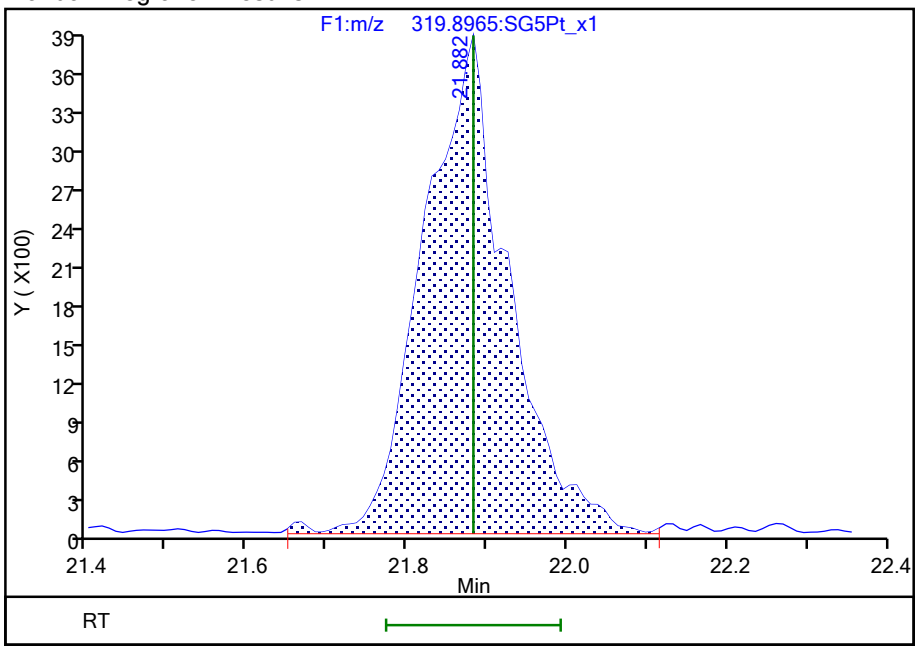

Reviewer: stephensk, 18-Aug-2021 14:38:34

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 1

Processing Integration Results

RT: 36.62
Area: 350740
Amount: 100.0000
Amount Units: pg/ul

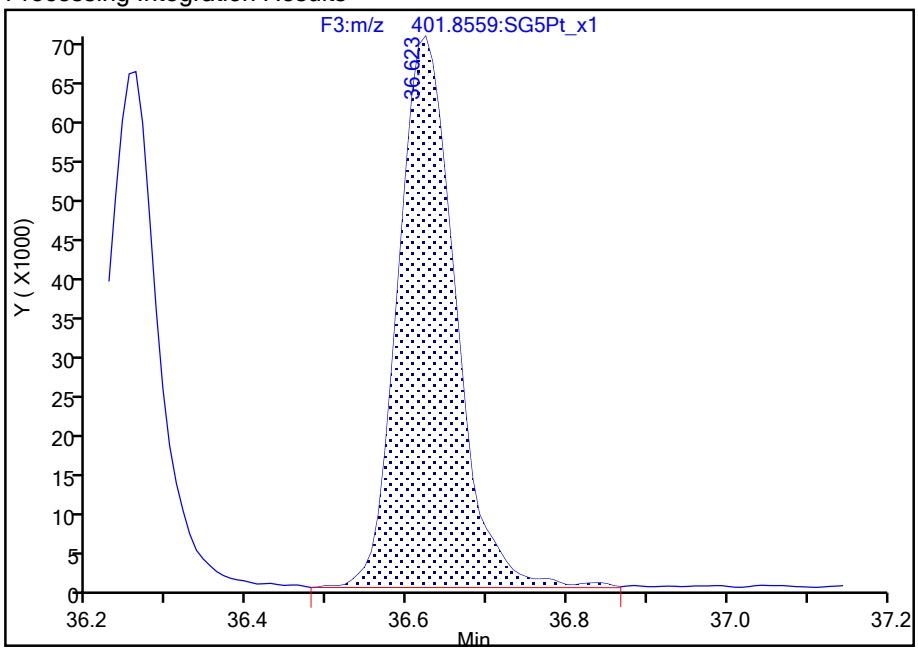

Manual Integration Results

RT: 36.62
Area: 355684
Amount: 100.0000
Amount Units: pg/ul

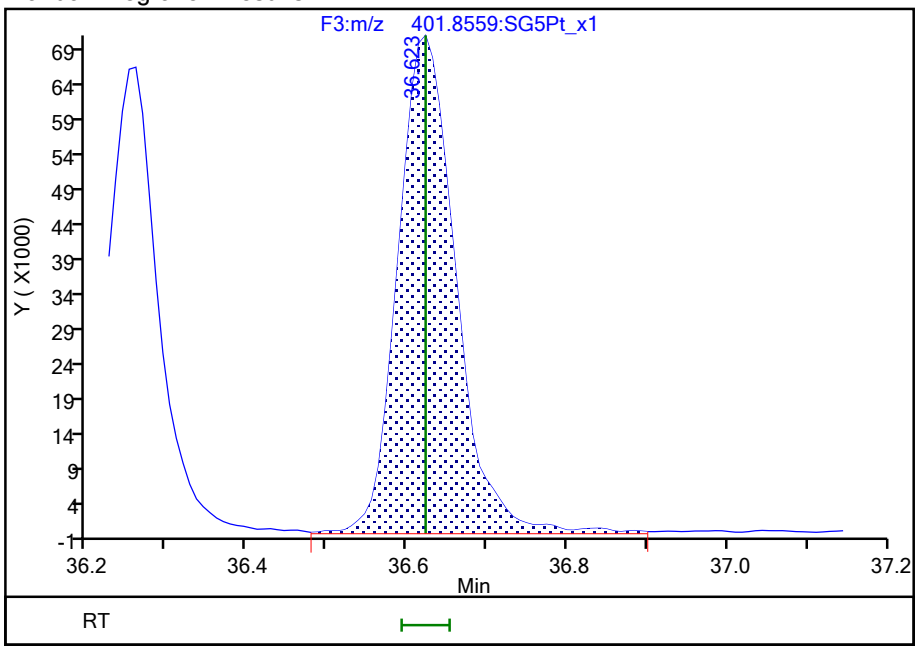

Reviewer: stephensk, 18-Aug-2021 15:08:03

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 2

Processing Integration Results

RT: 36.62
Area: 267152
Amount: 100.0000
Amount Units: pg/ul

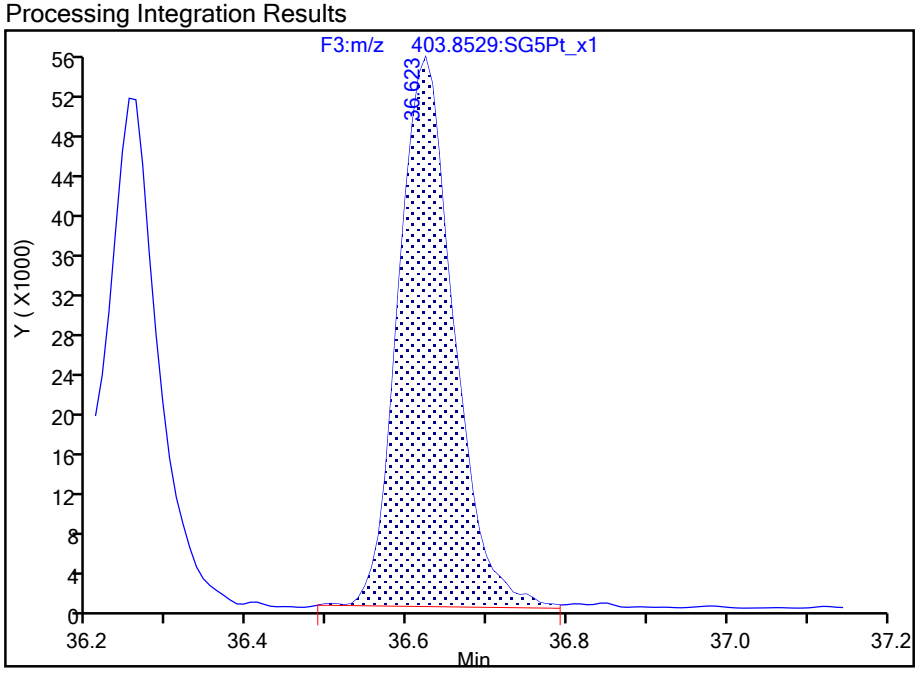

Manual Integration Results

RT: 36.62
Area: 275563
Amount: 100.0000
Amount Units: pg/ul

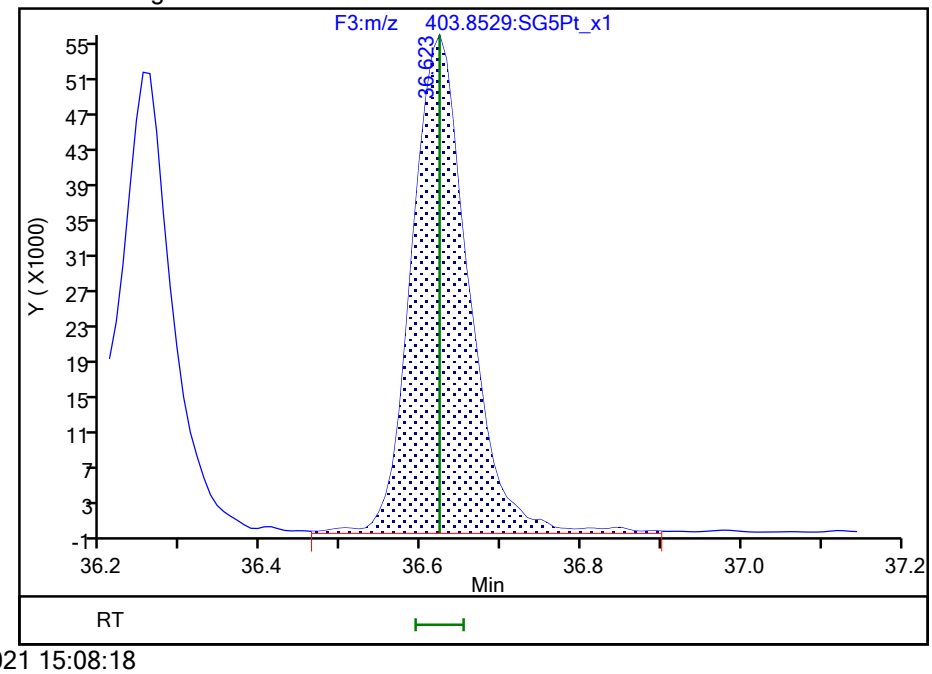

Reviewer: stephensk, 18-Aug-2021 15:08:18

Audit Action: Manually Integrated Audit Reason: Baseline

783317

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

RT: 39.88
Area: 171335
Amount: 133.8873
Amount Units: pg/ul

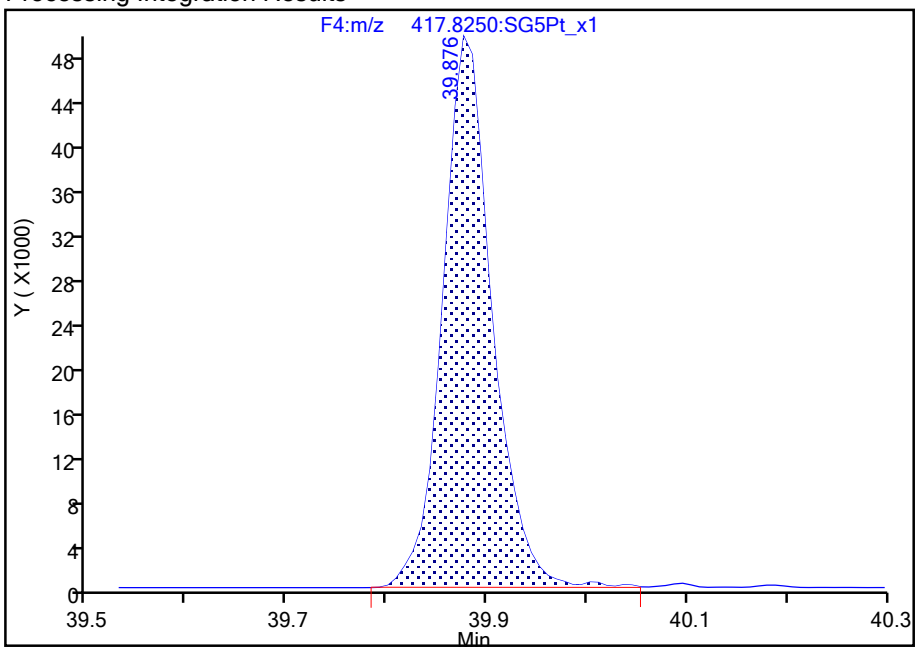

Manual Integration Results

RT: 39.88
Area: 170131
Amount: 129.4656
Amount Units: pg/ul

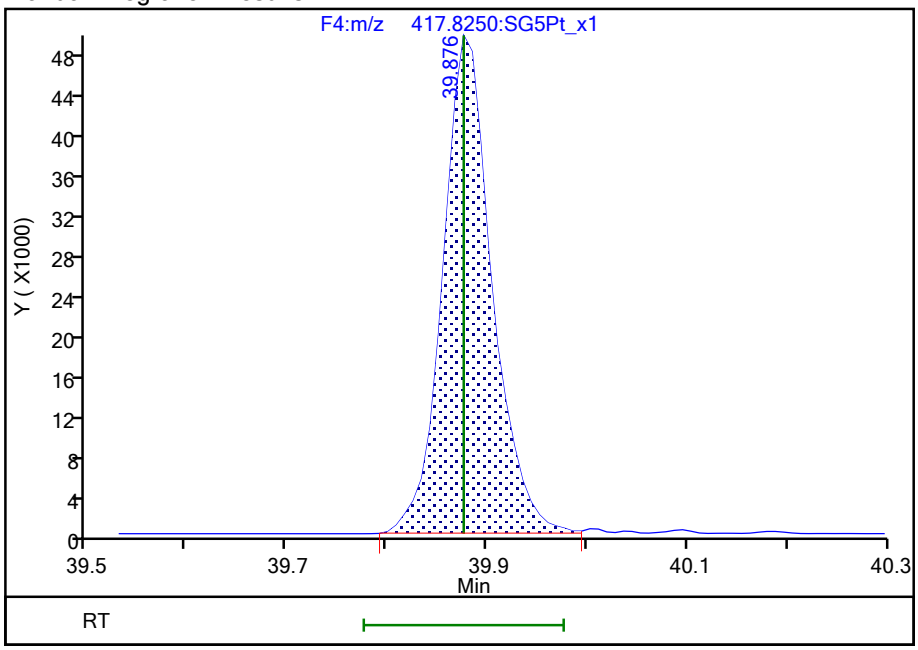

Reviewer: stephensk, 18-Aug-2021 14:43:11

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 2

Processing Integration Results

RT: 39.88
Area: 395664
Amount: 133.8873
Amount Units: pg/ul

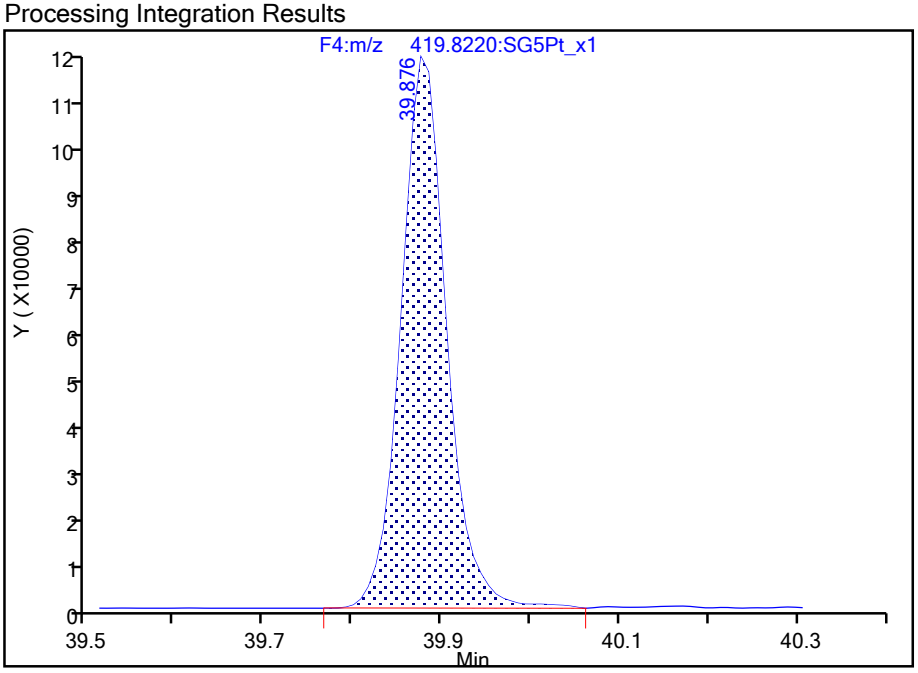

Manual Integration Results

RT: 39.88
Area: 389993
Amount: 129.4656
Amount Units: pg/ul

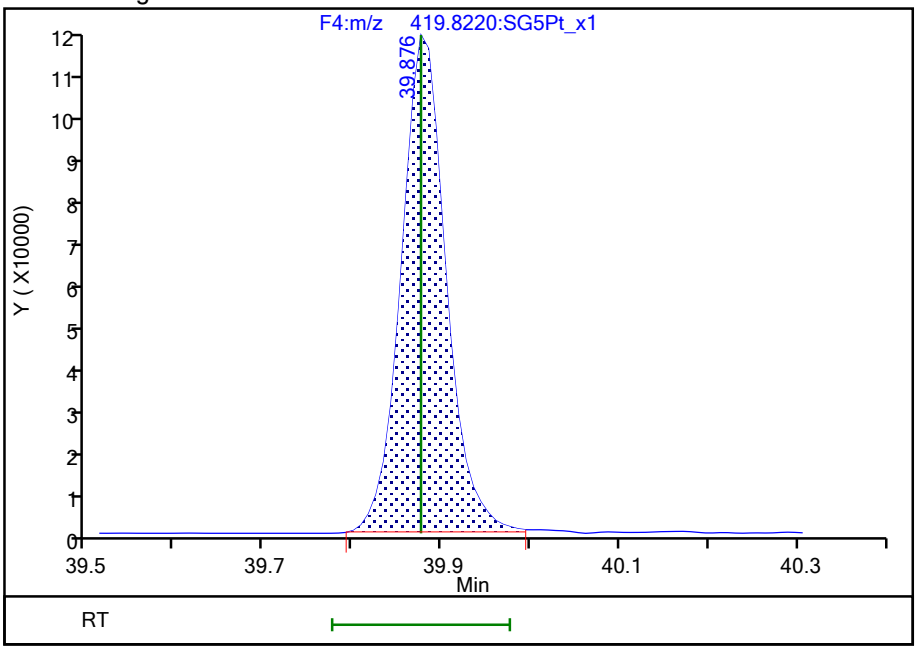

Reviewer: stephensk, 18-Aug-2021 14:43:21

Audit Action: Manually Integrated Audit Reason: Baseline

783319

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

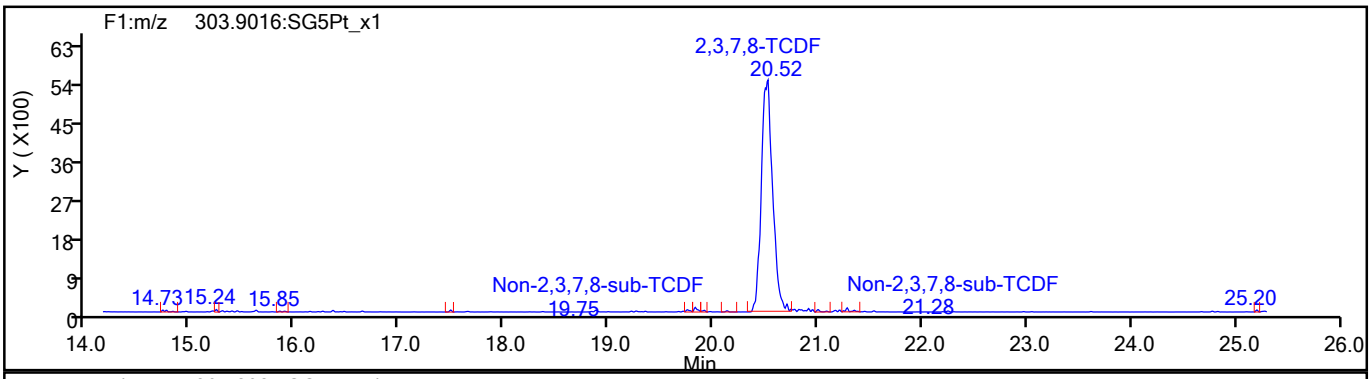

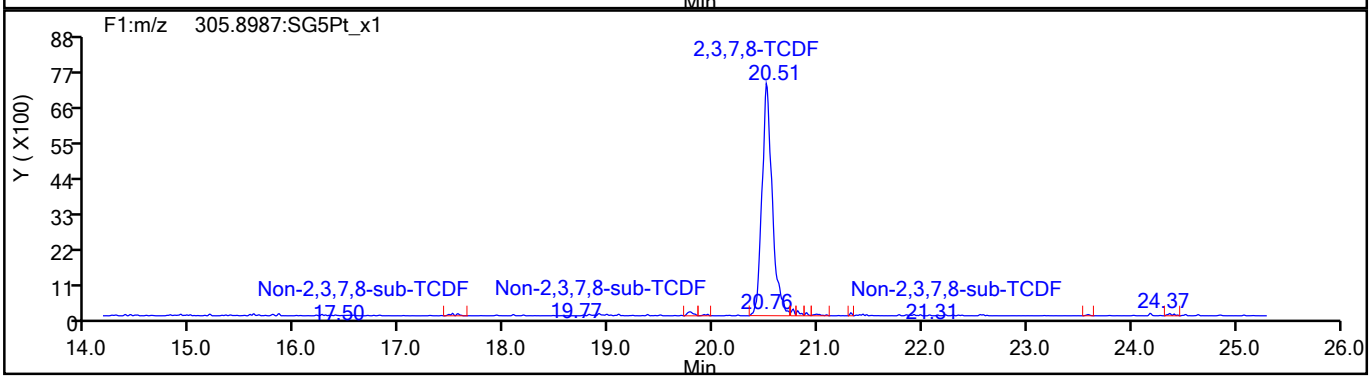

TCDF Standards

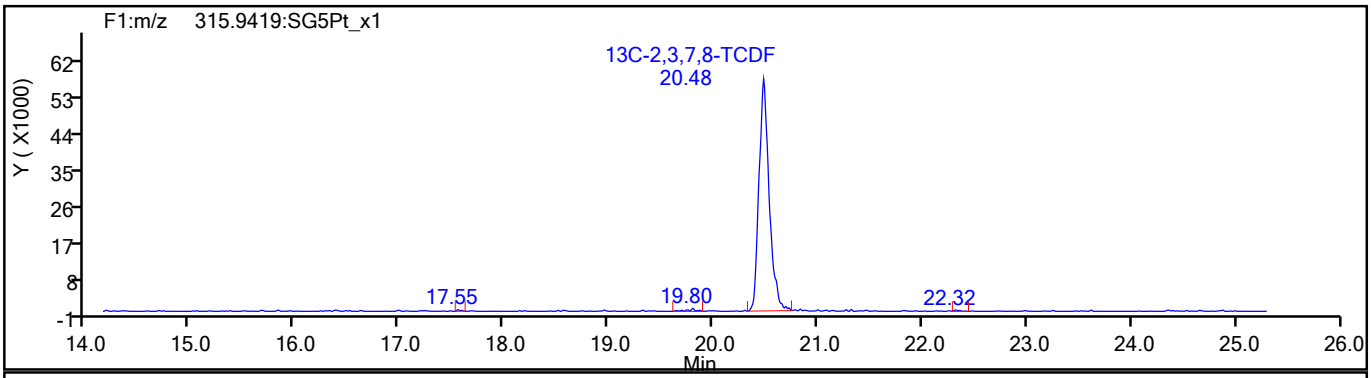

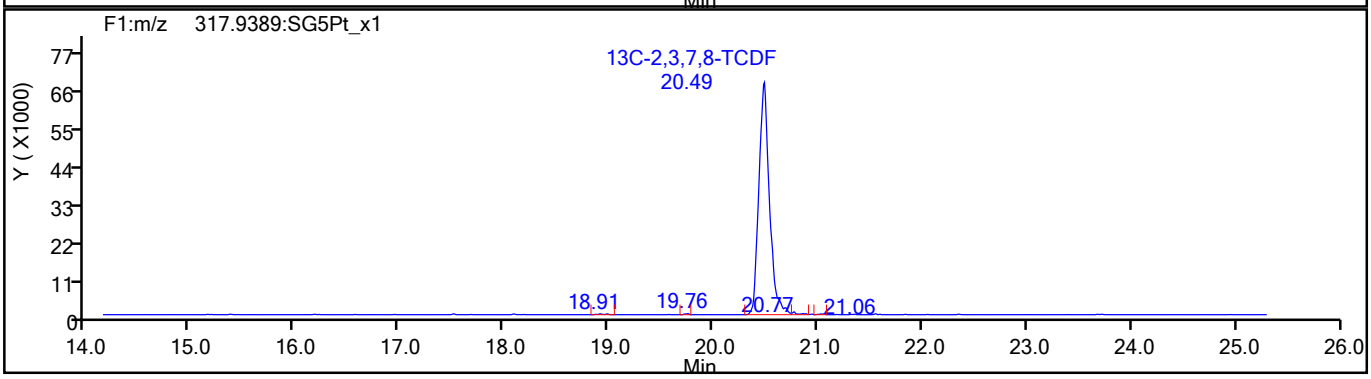

783320

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

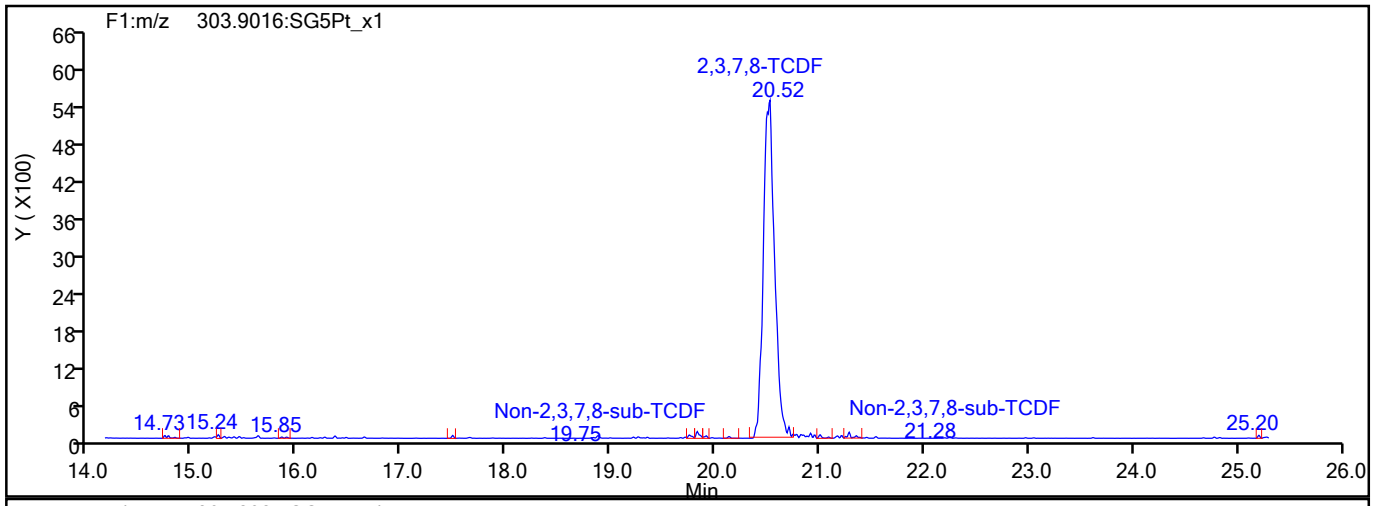

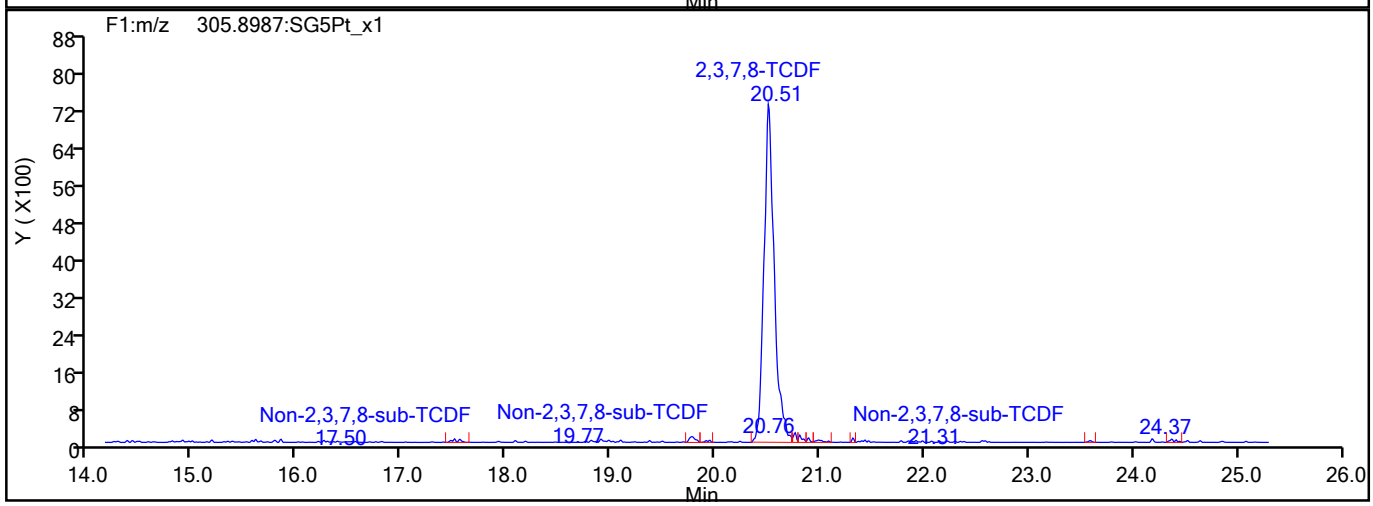

TCDF Interference Mass

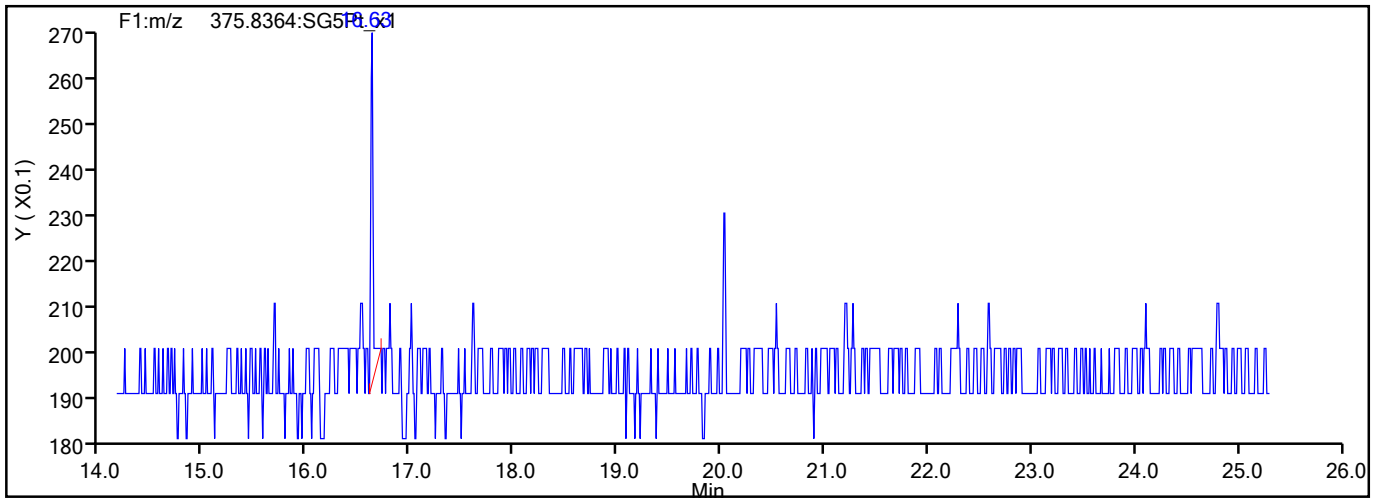

783321

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

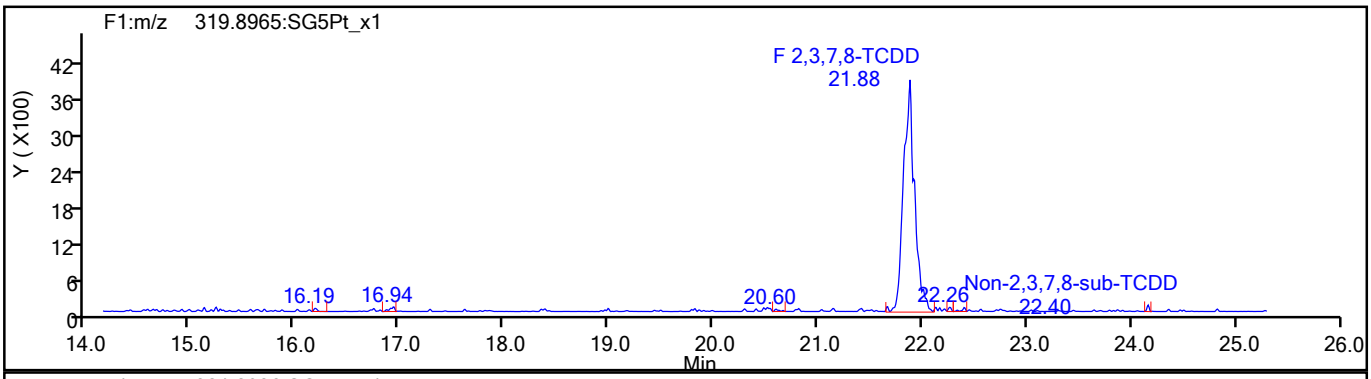

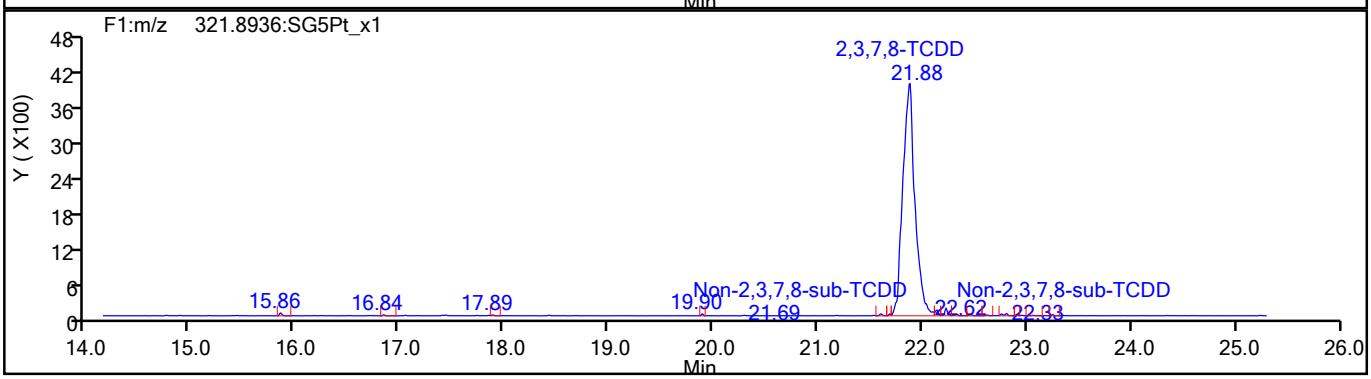

TCDD Standards

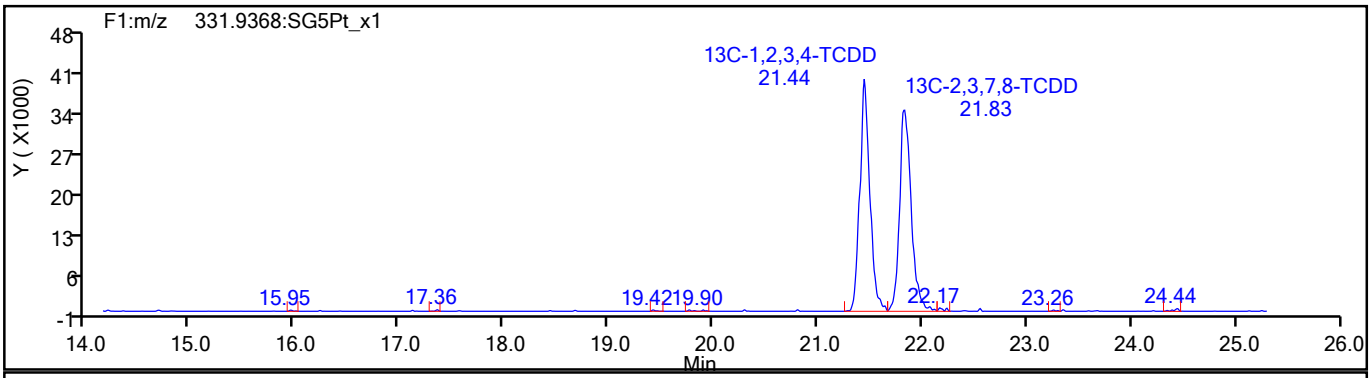

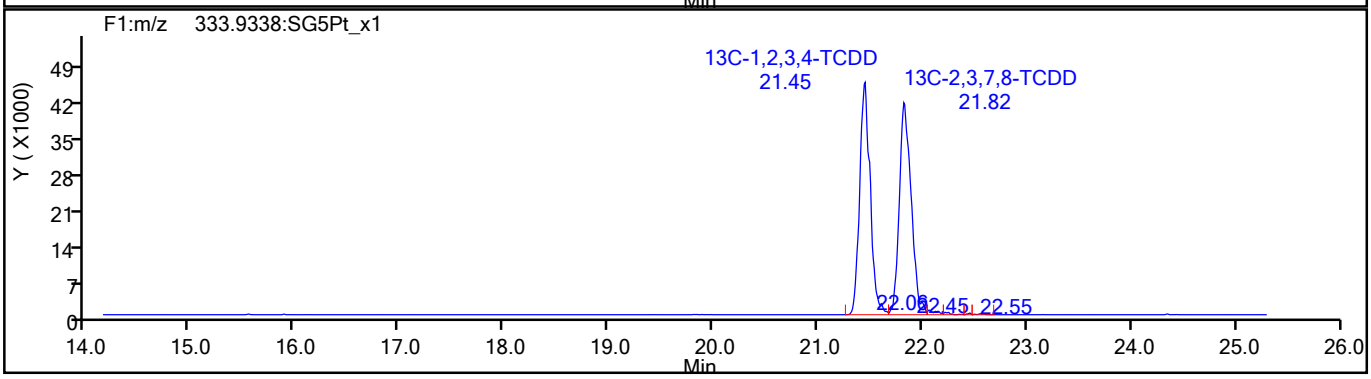

783322

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

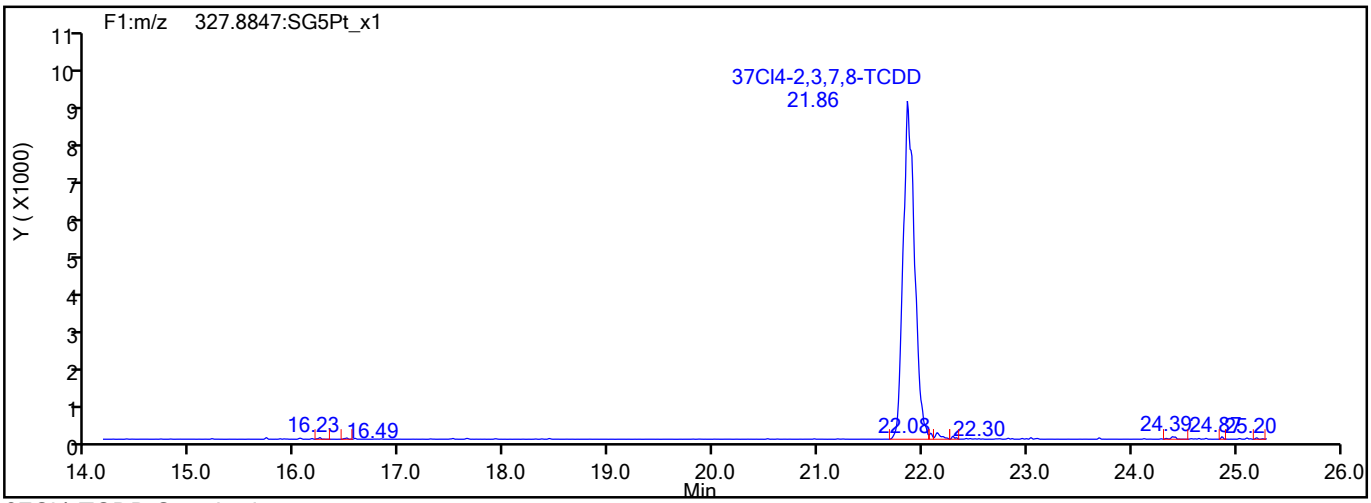

37Cl4-TCDD Standards

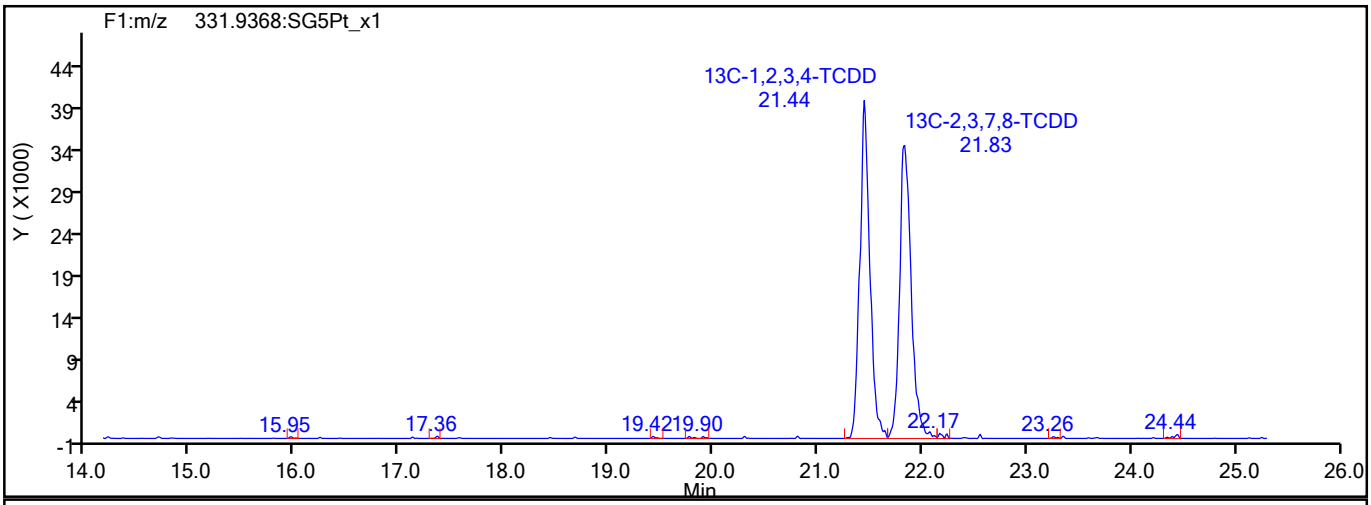

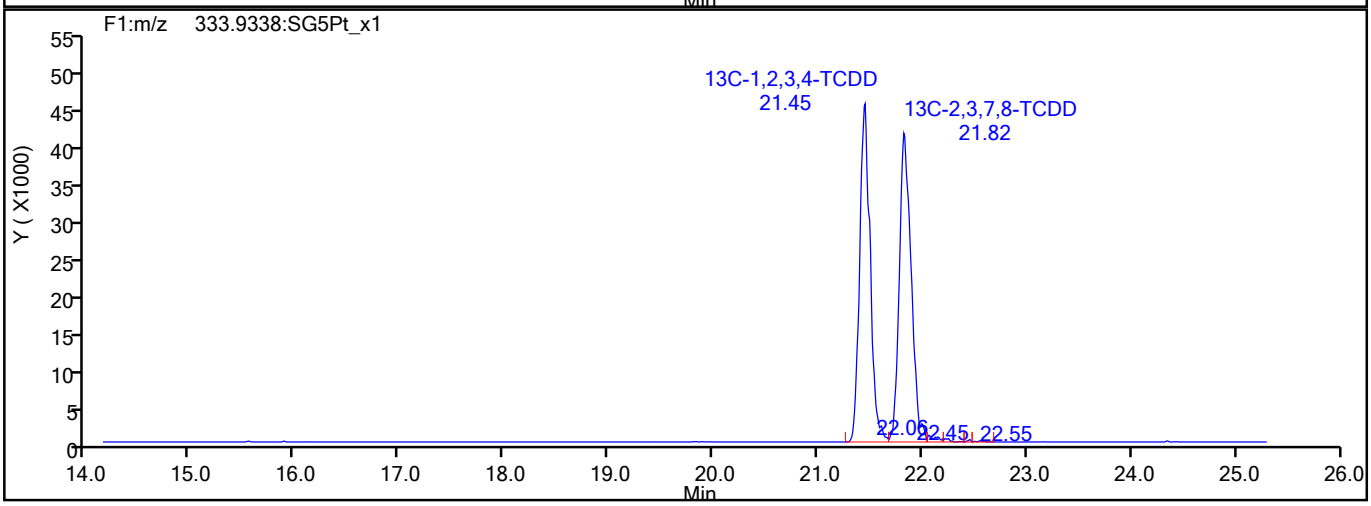

783323

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

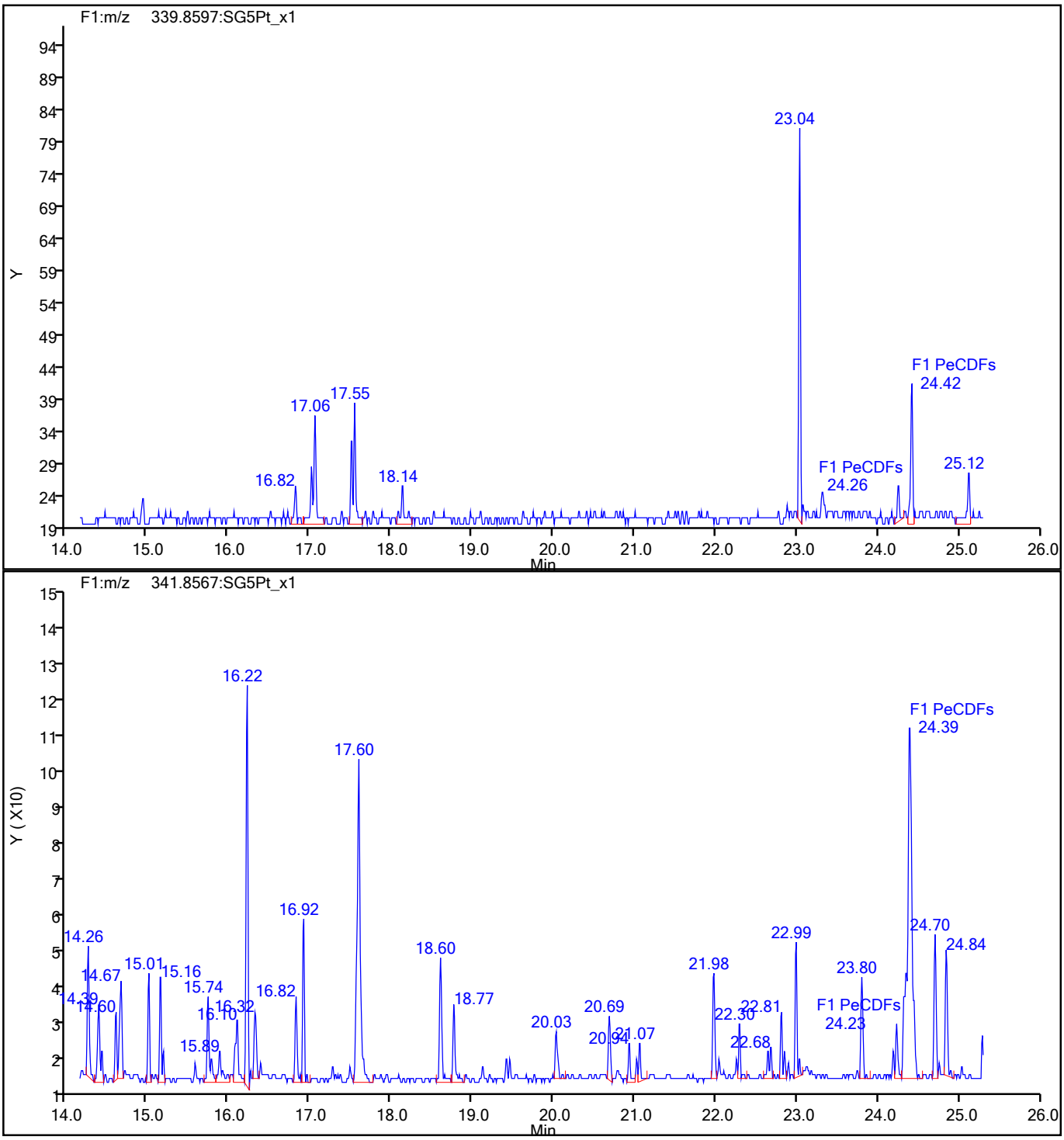

783324

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

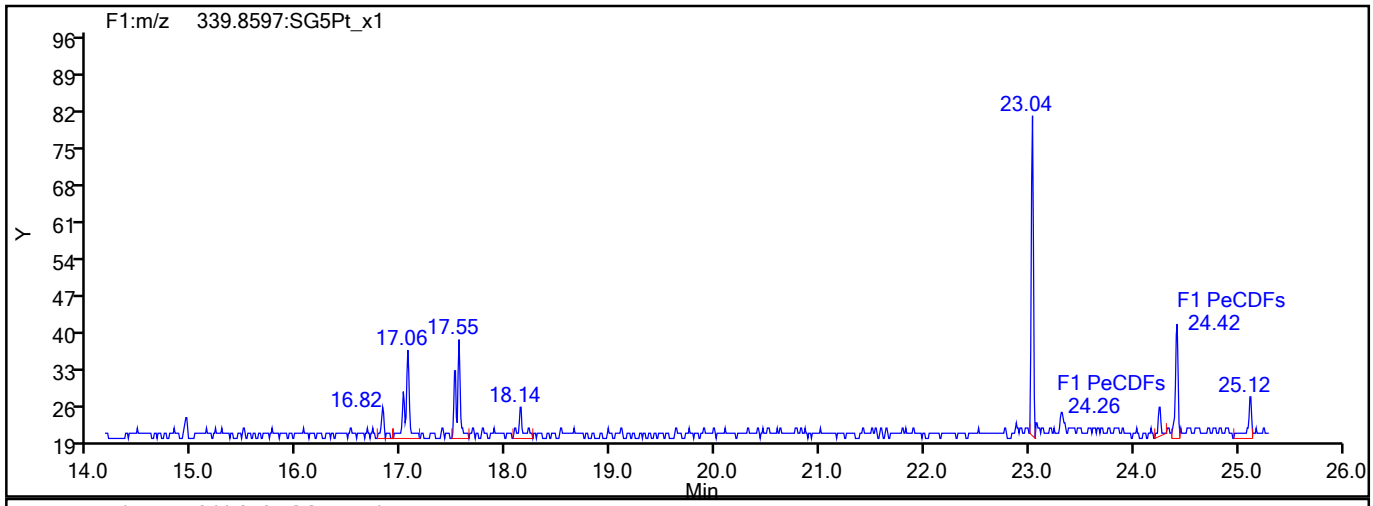

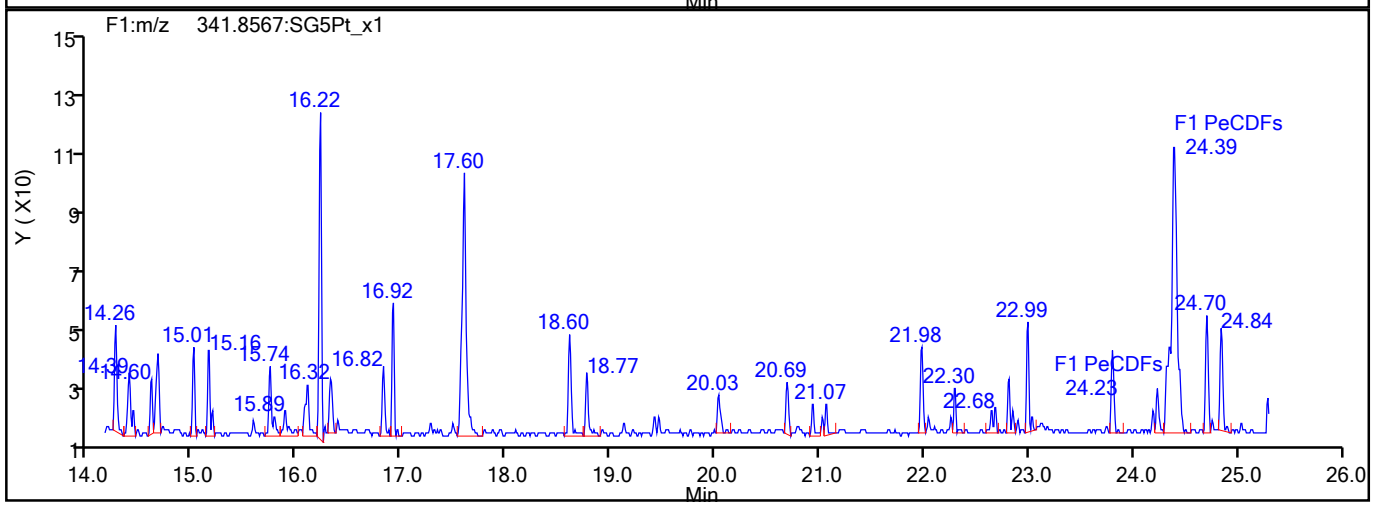

F1 PeCDFs Interference Mass

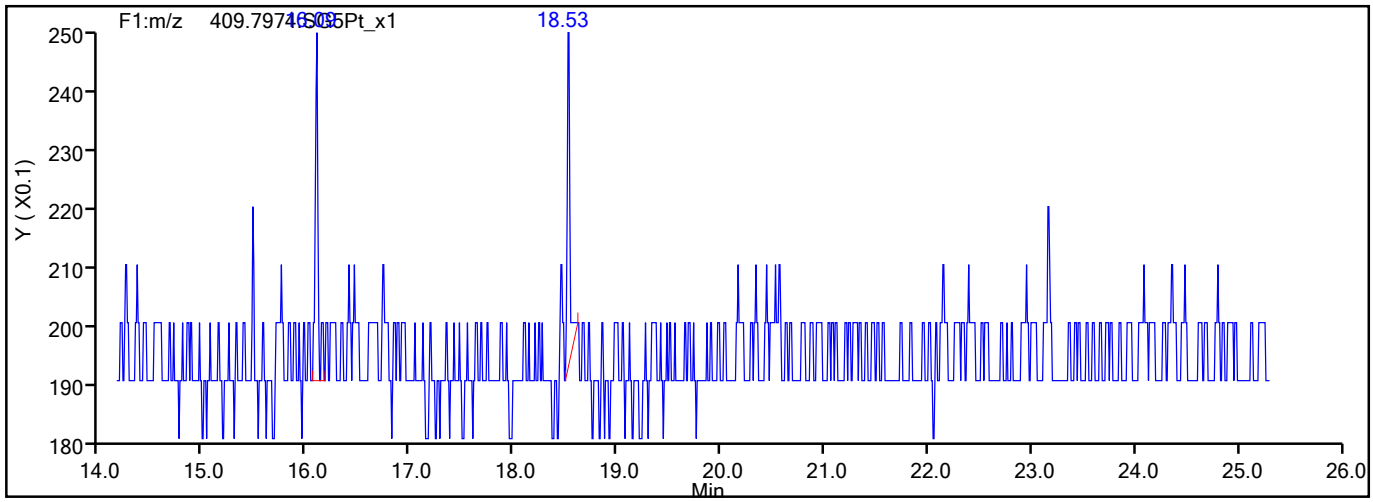

783325

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

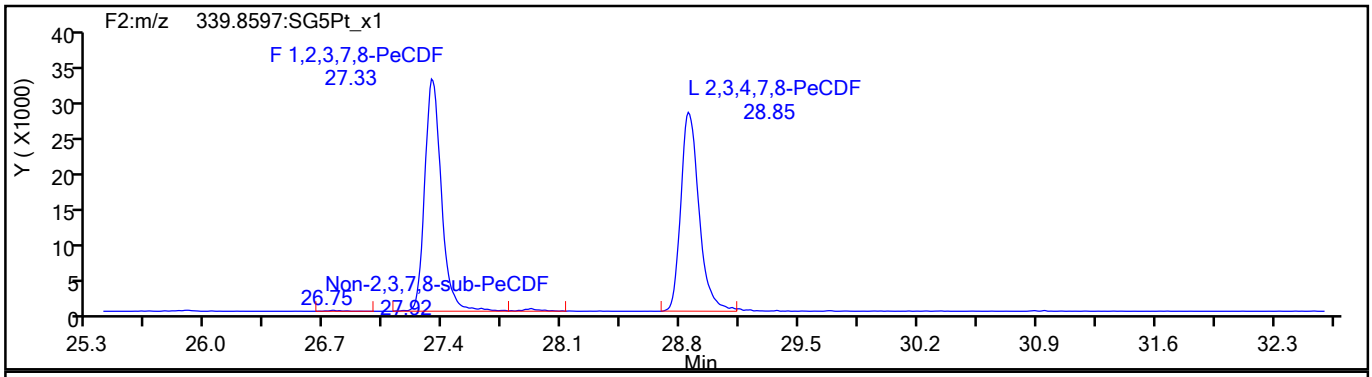

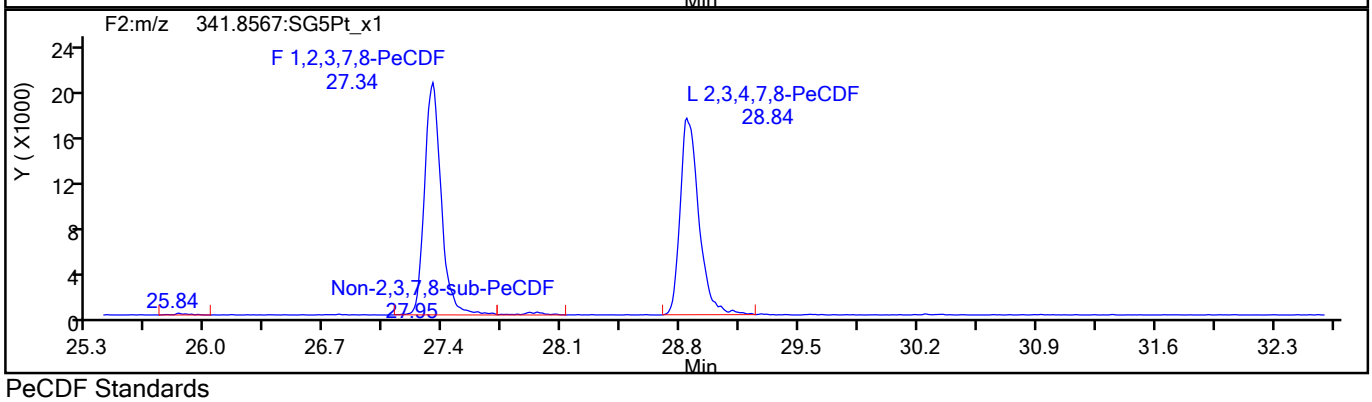

PeCDF Standards

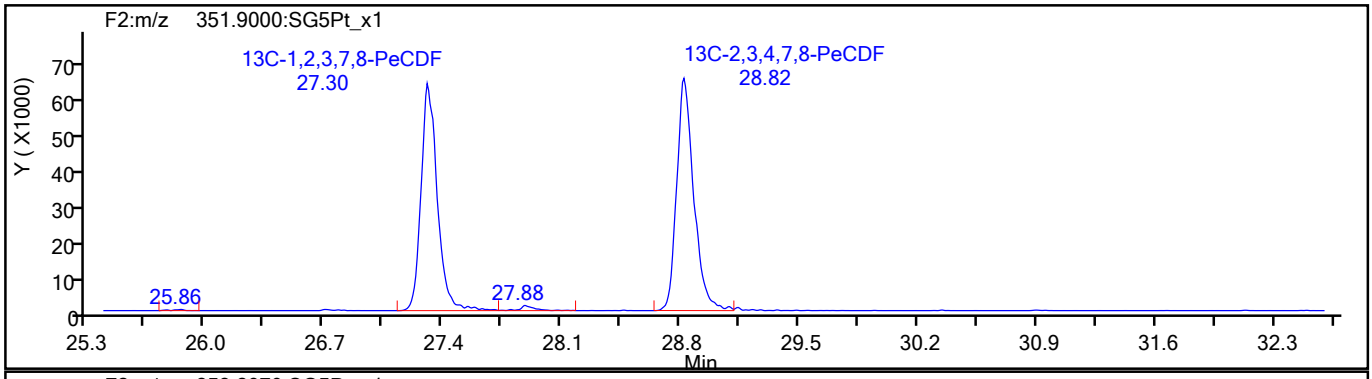

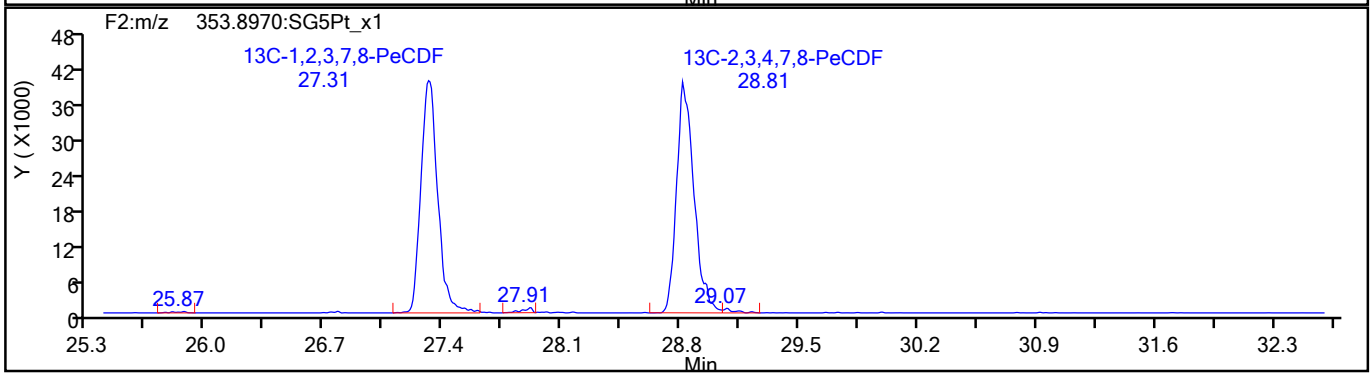

783326

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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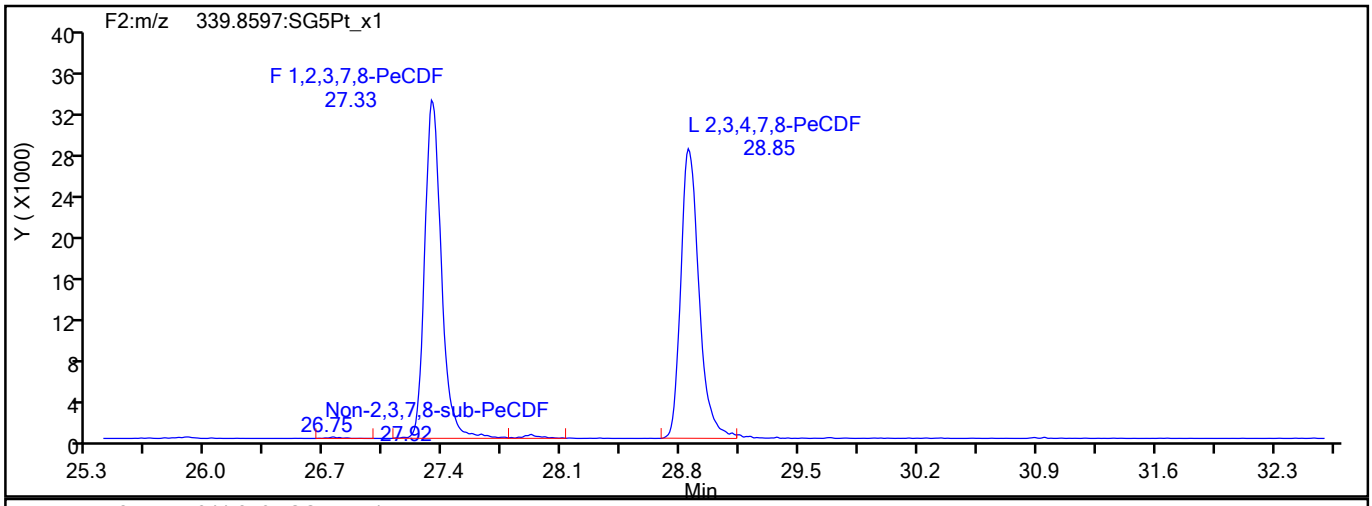

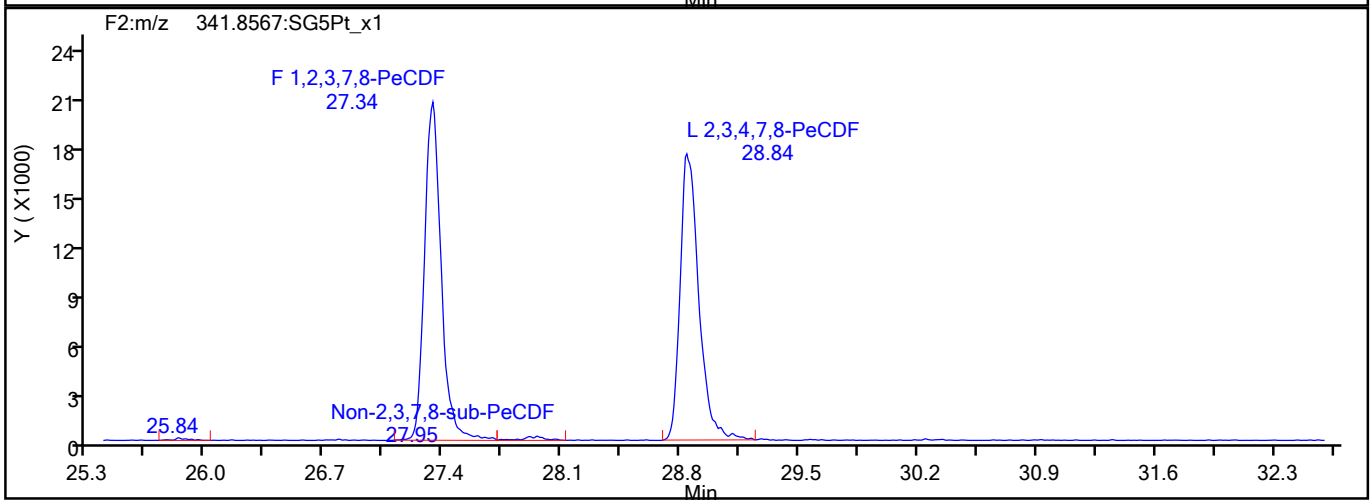

PeCDF Interference Mass

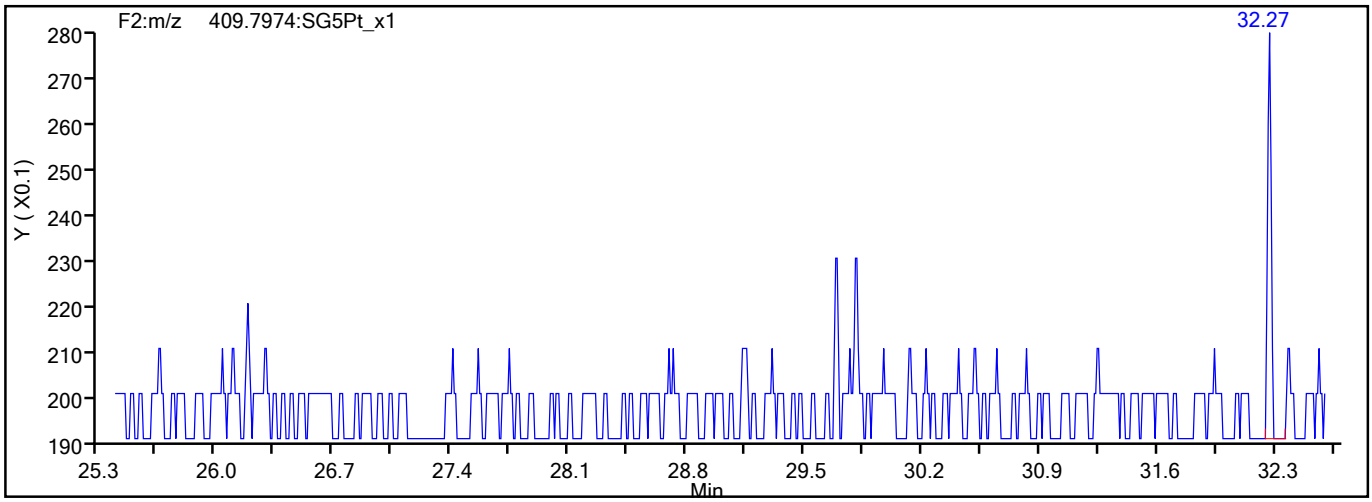

783327

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDD

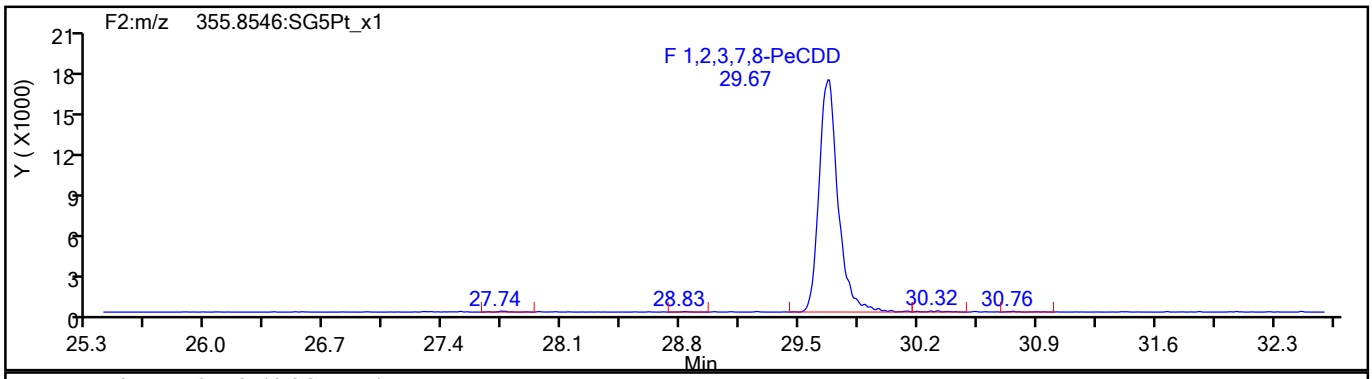

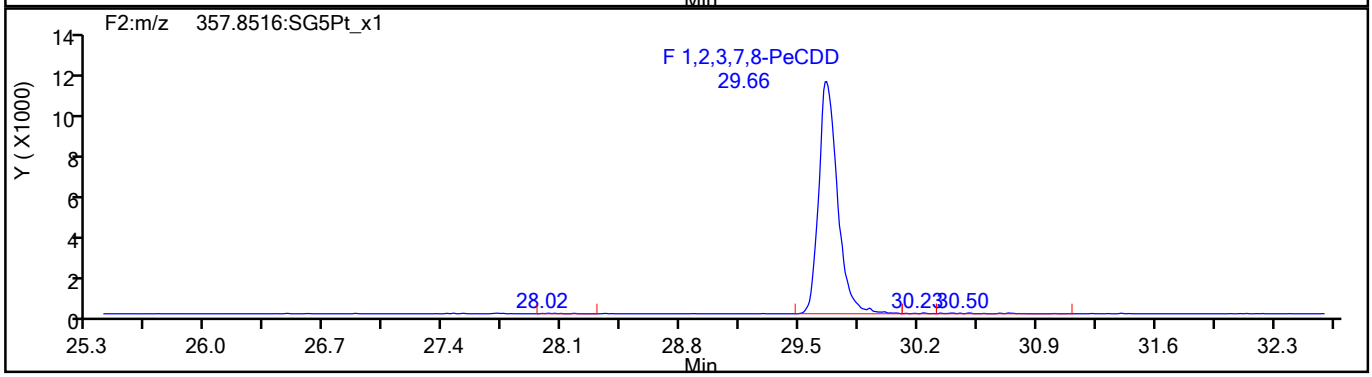

PeCDD Standards

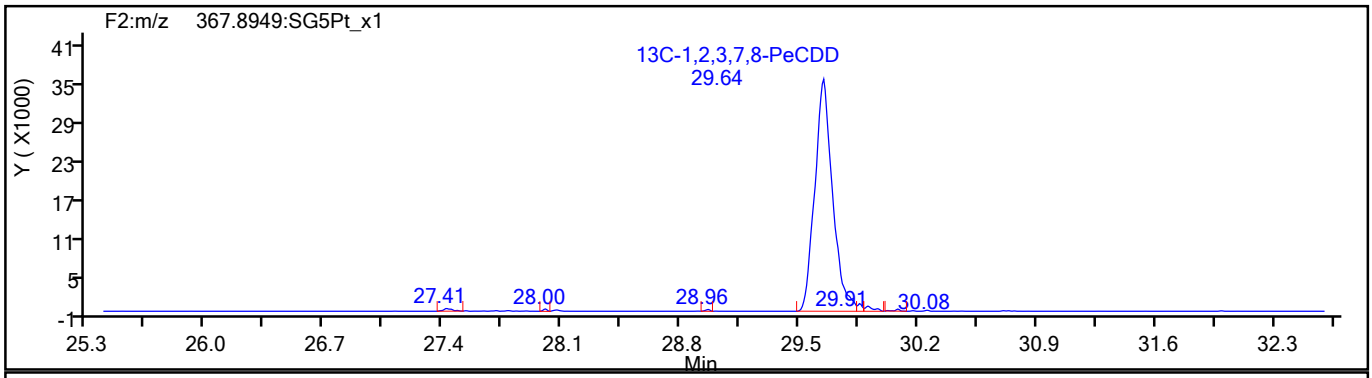

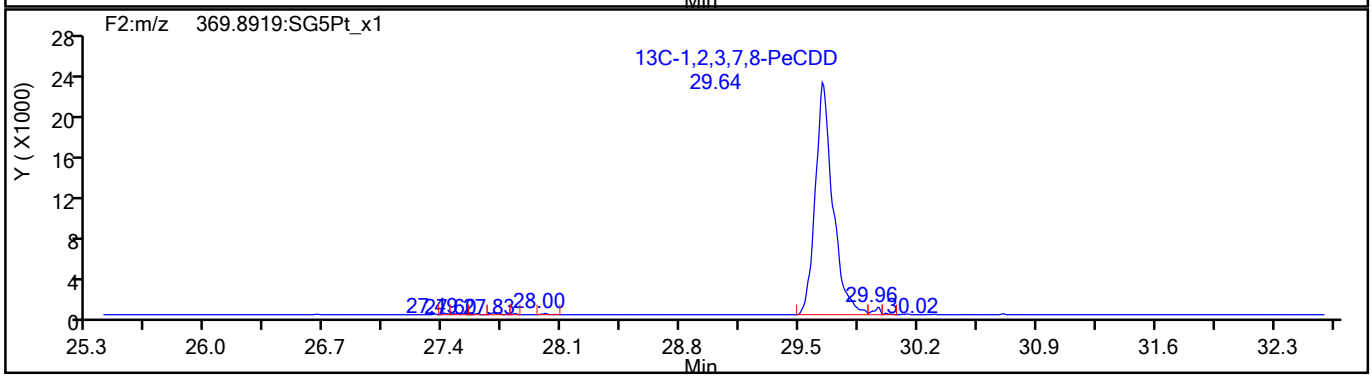

783328

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

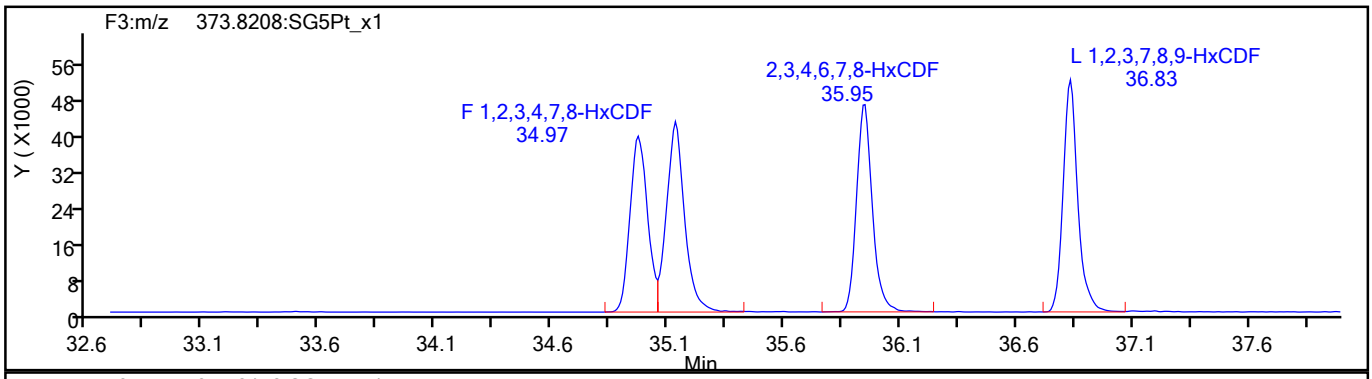

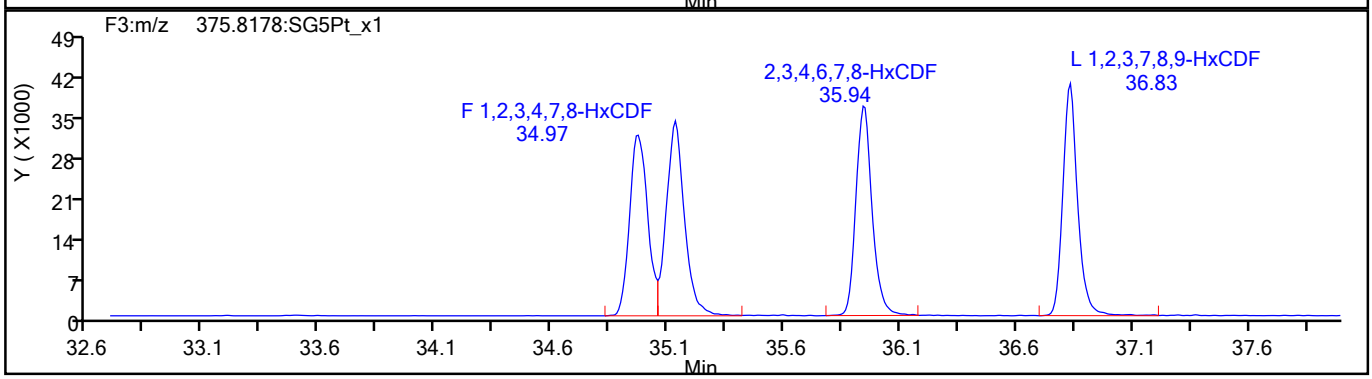

HxCDF Standards

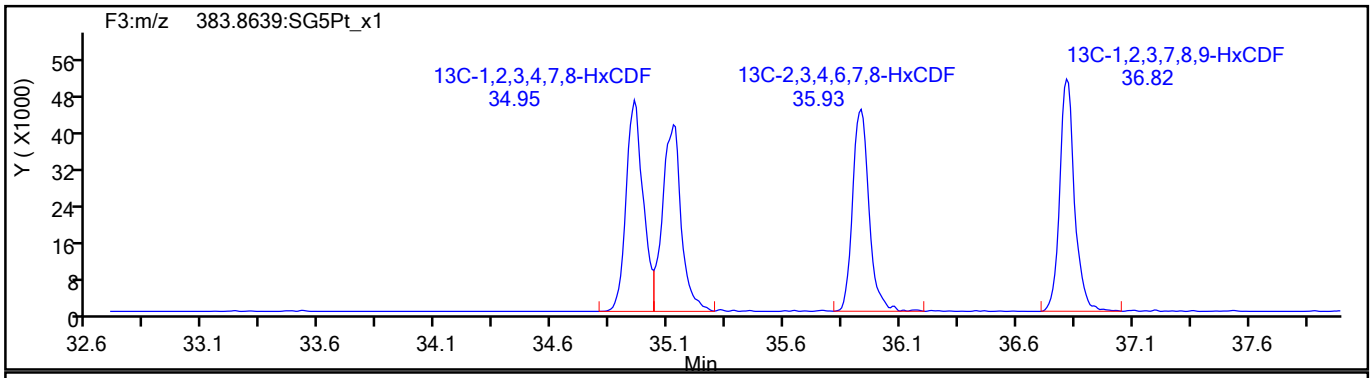

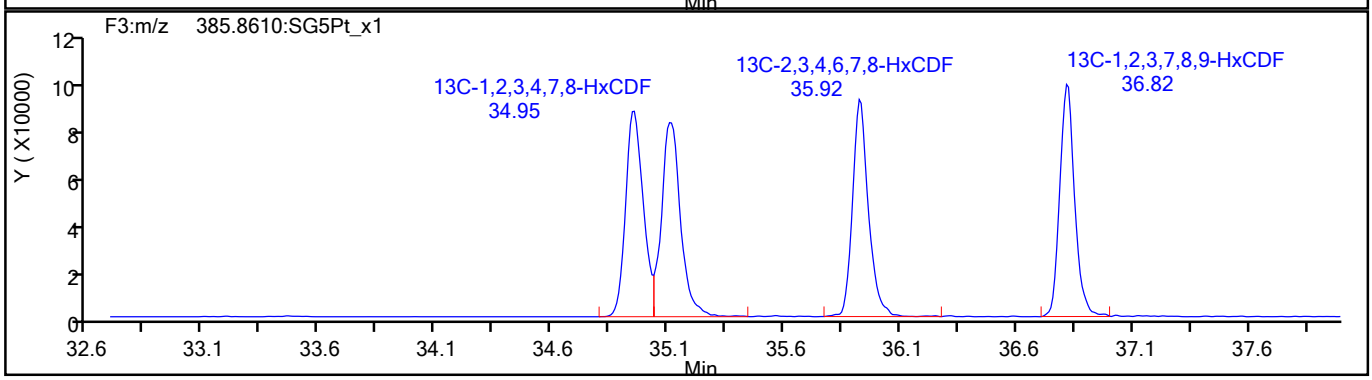

783329

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

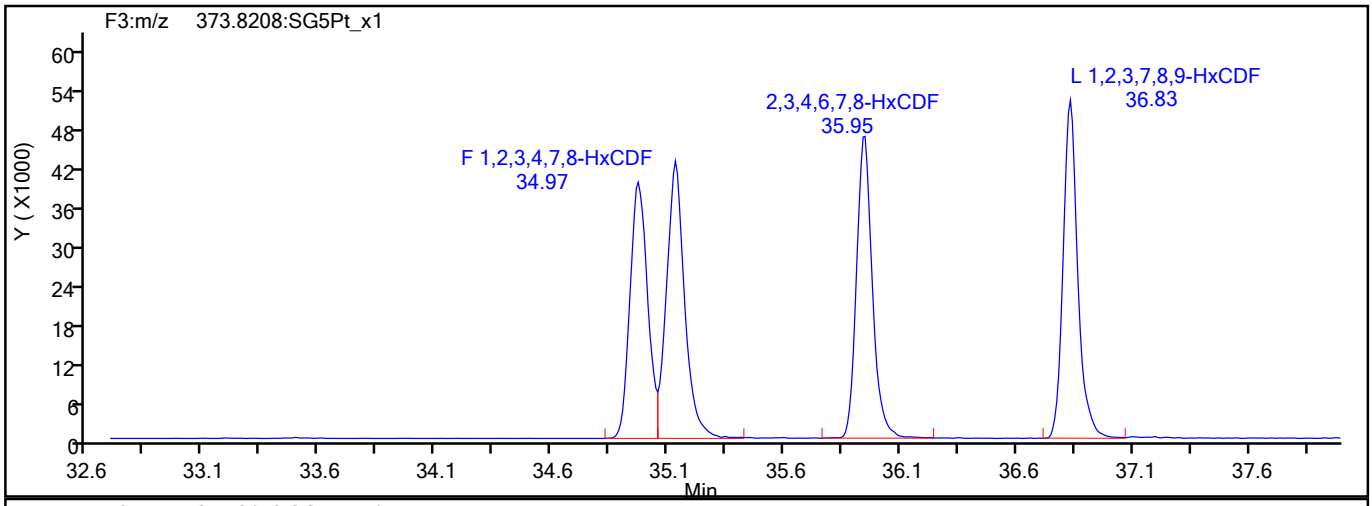

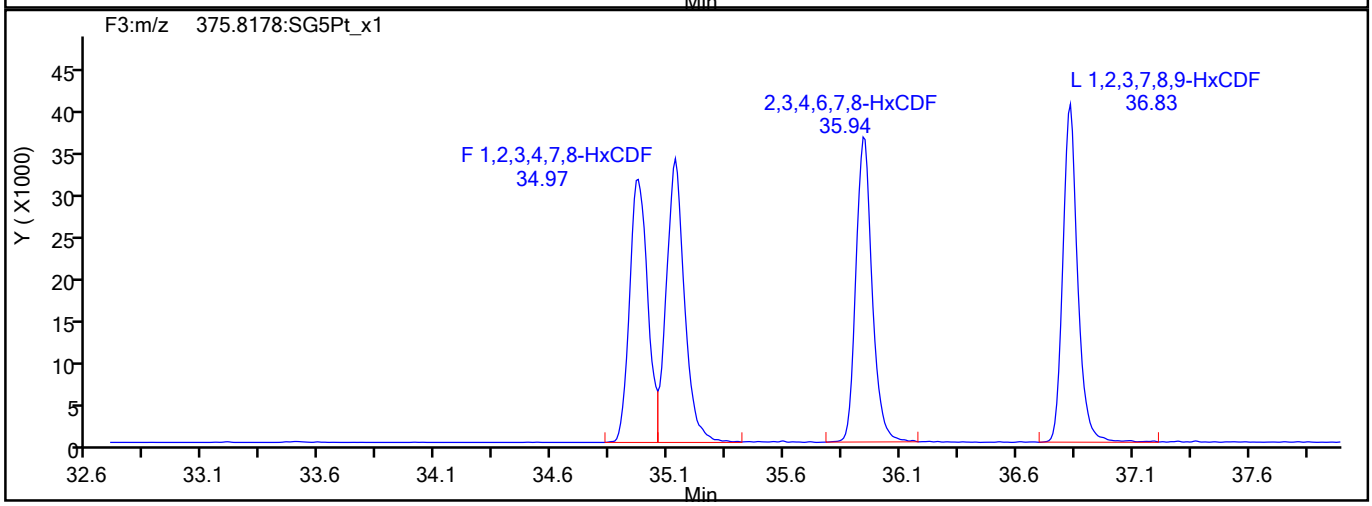

HxCDF Interference Mass

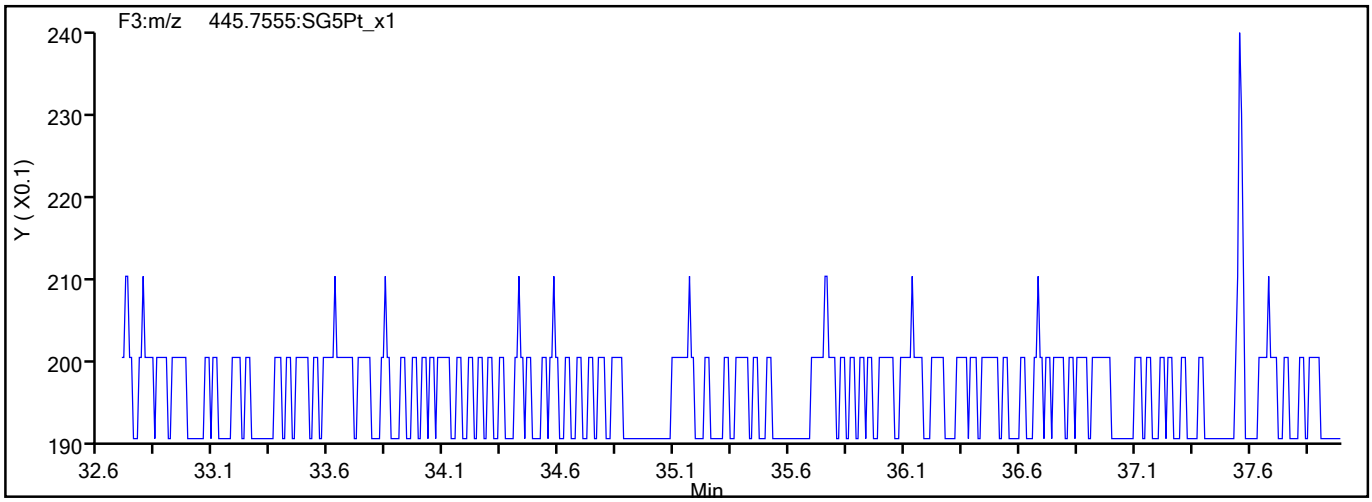

783330

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

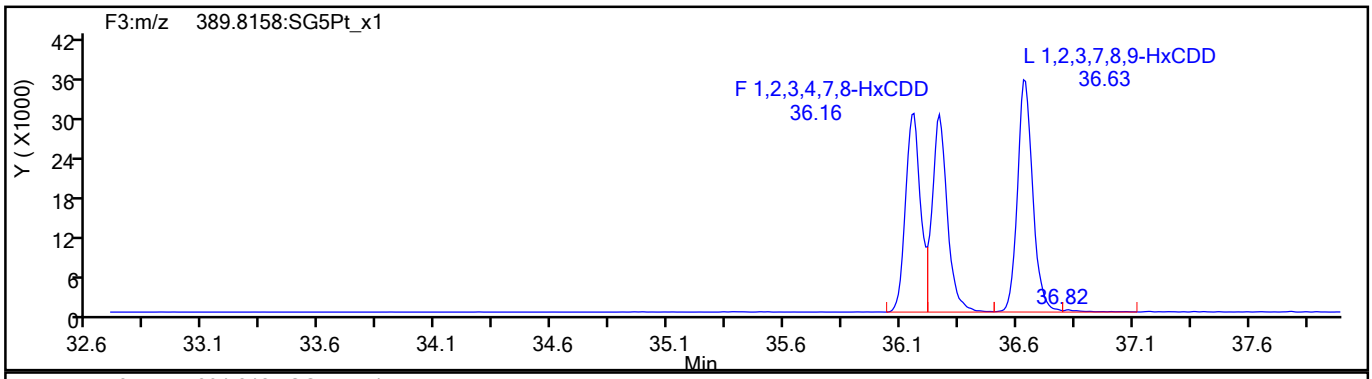

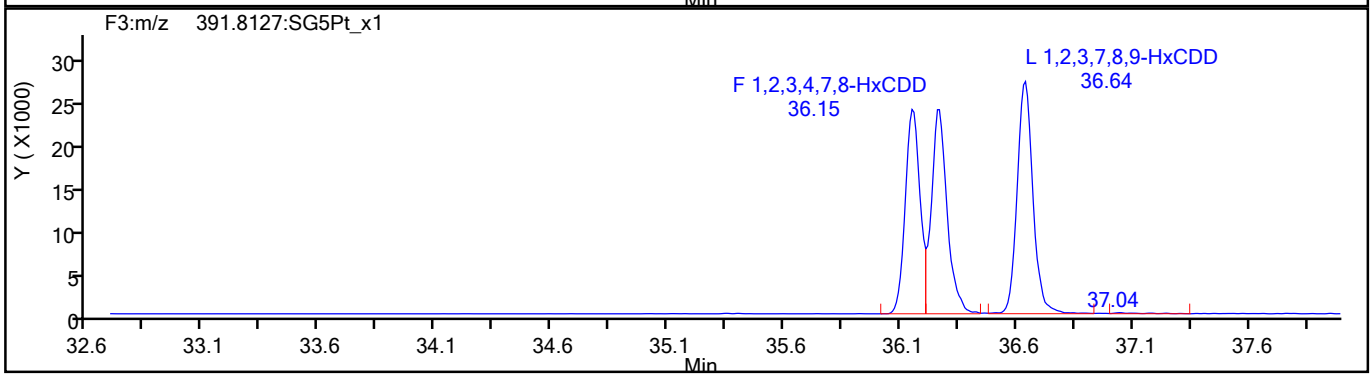

HxCDD Standards

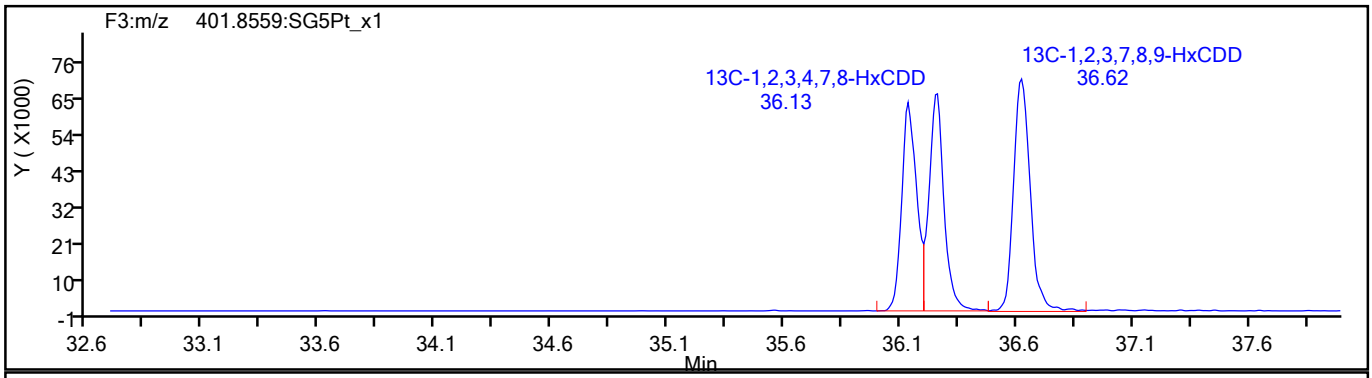

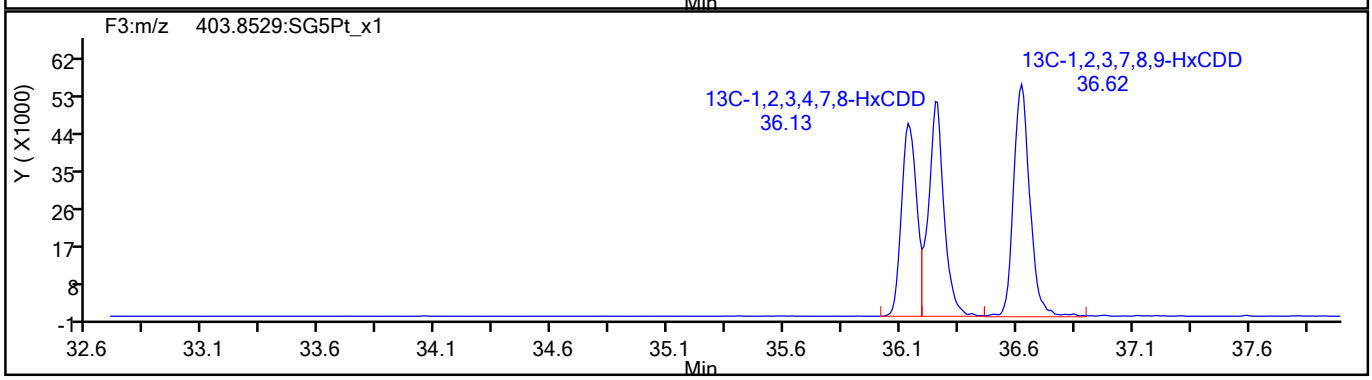

783331

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Eurofins TestAmerica, Sacramento

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HpCDF

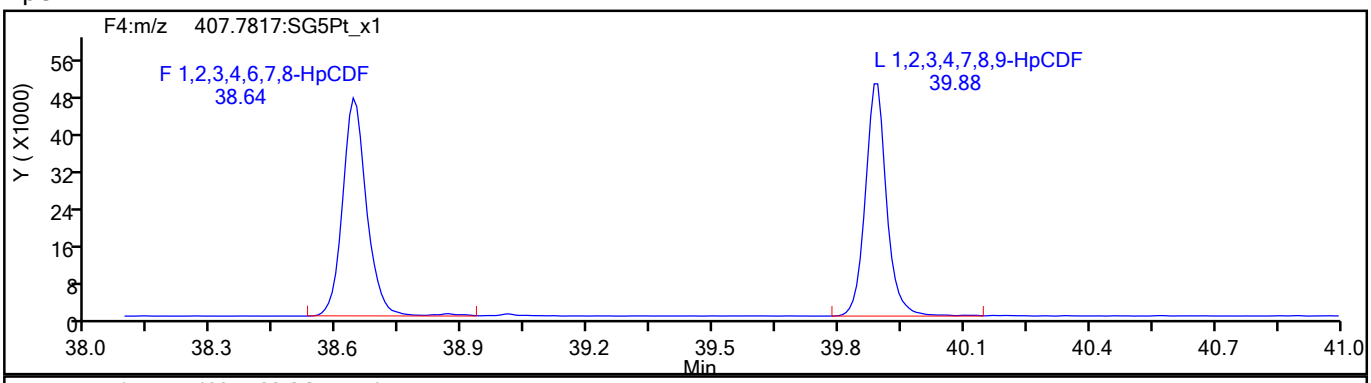

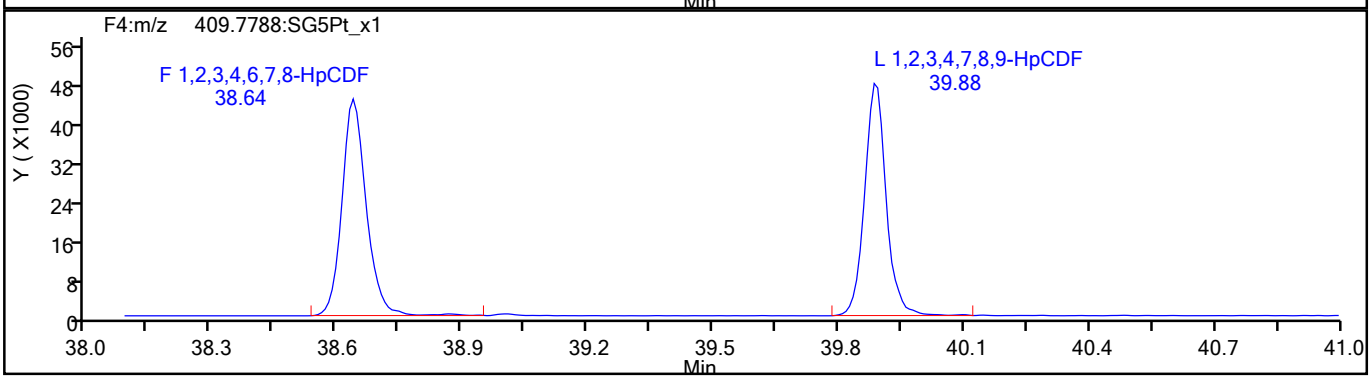

HpCDF Standards

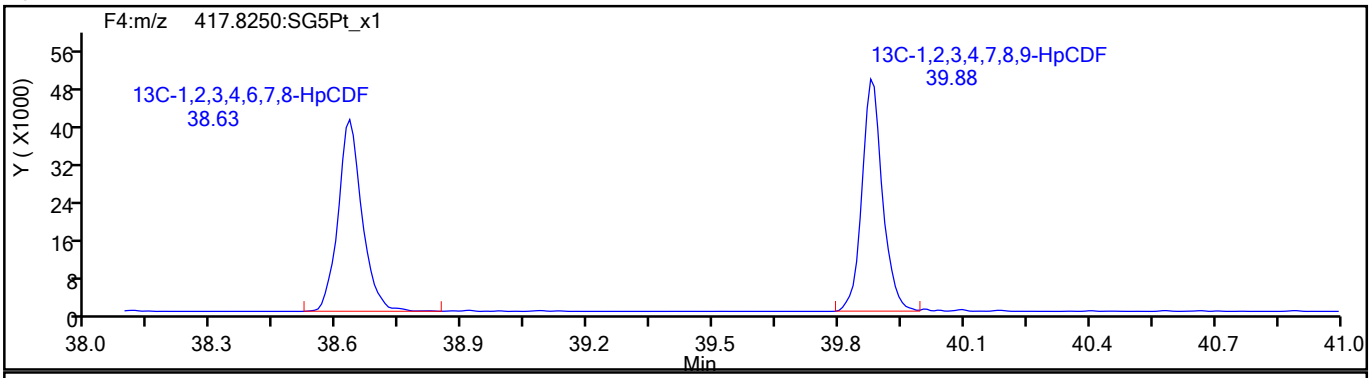

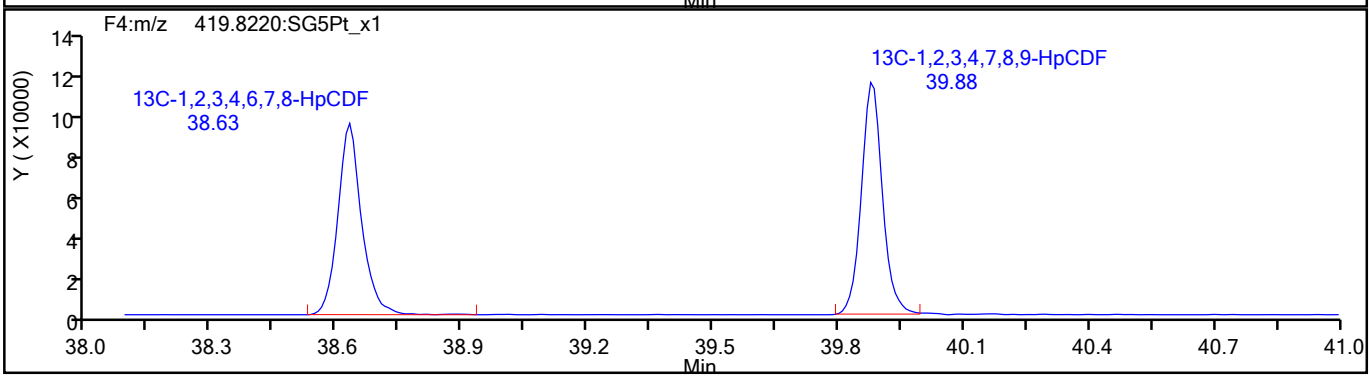

783332

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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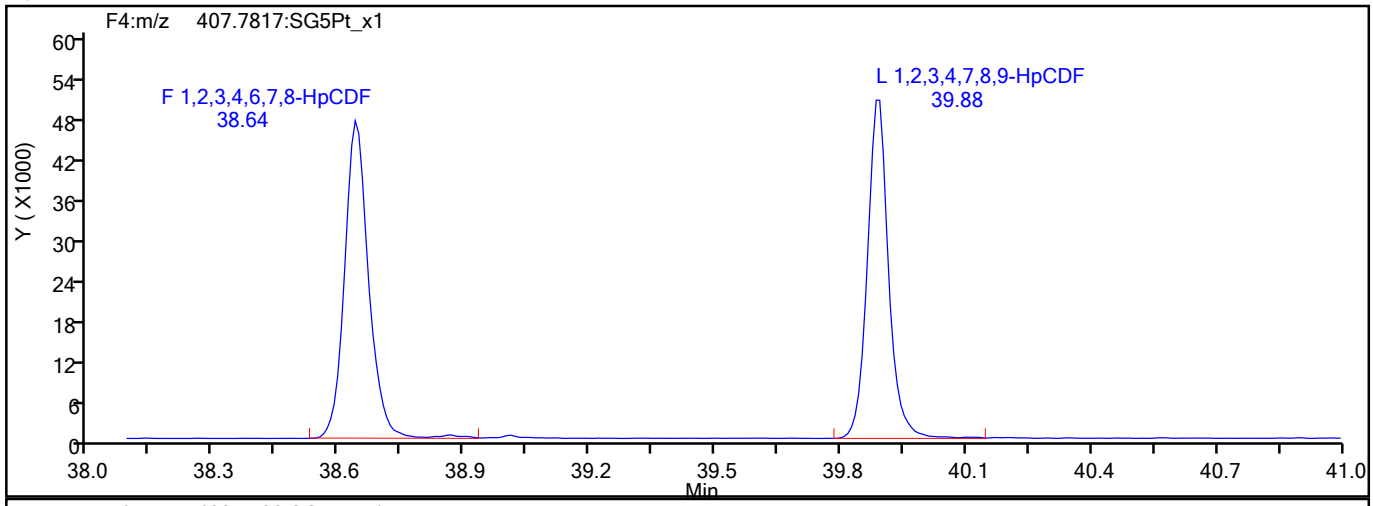

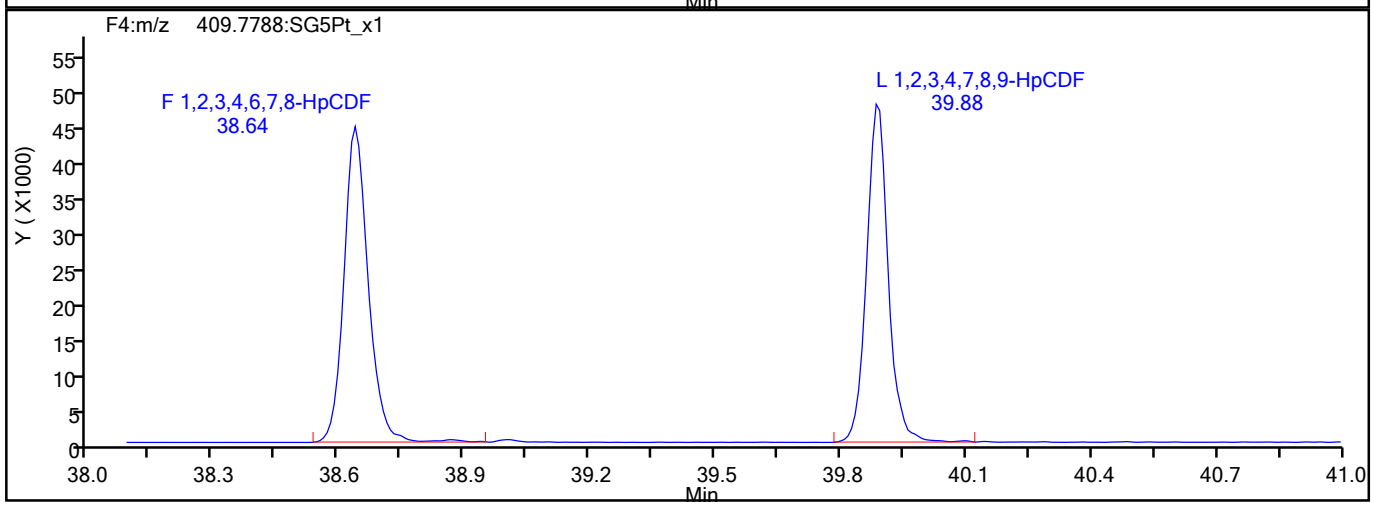

HpCDF Interference Mass

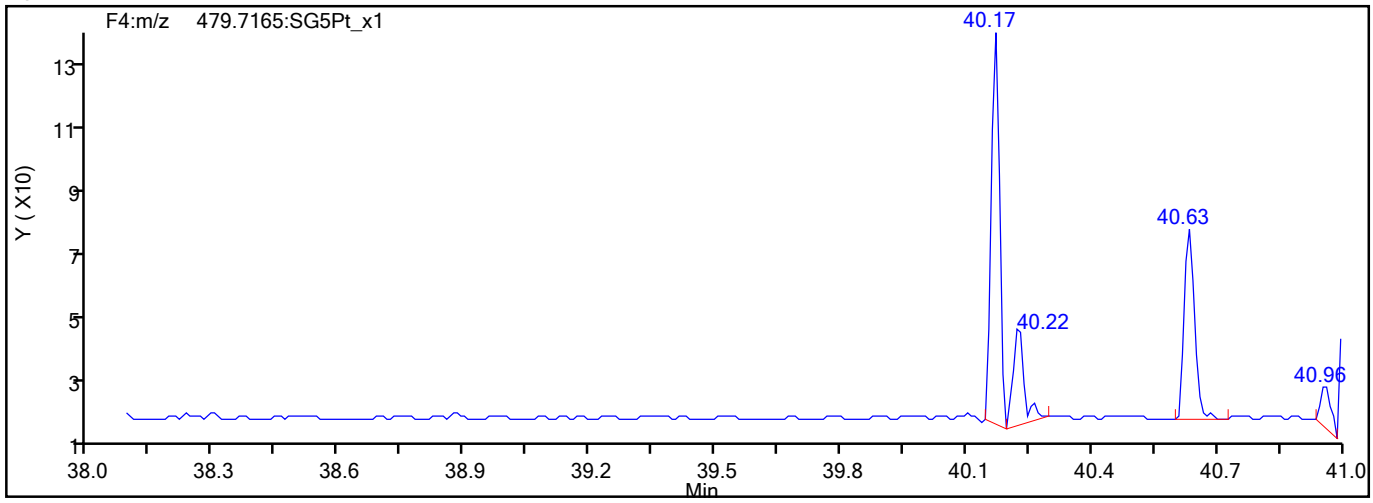

783333

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

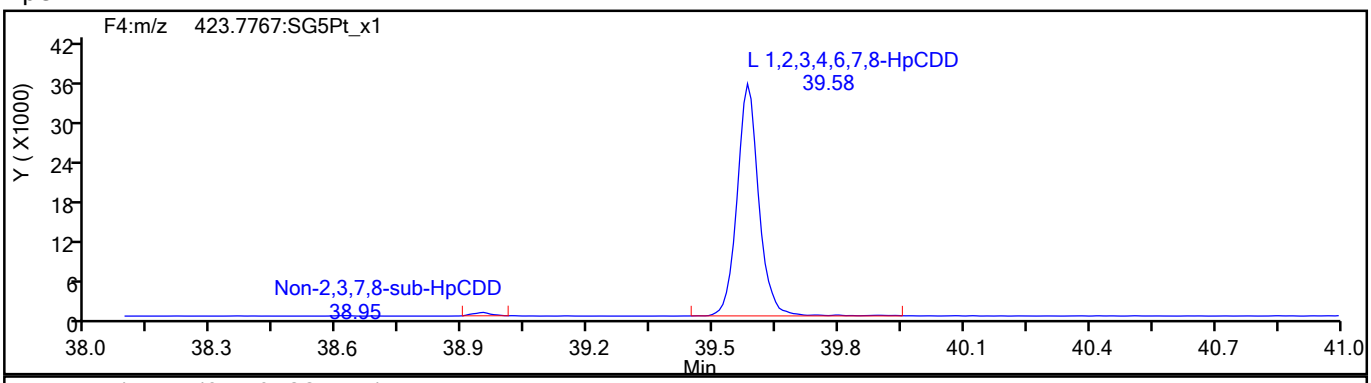

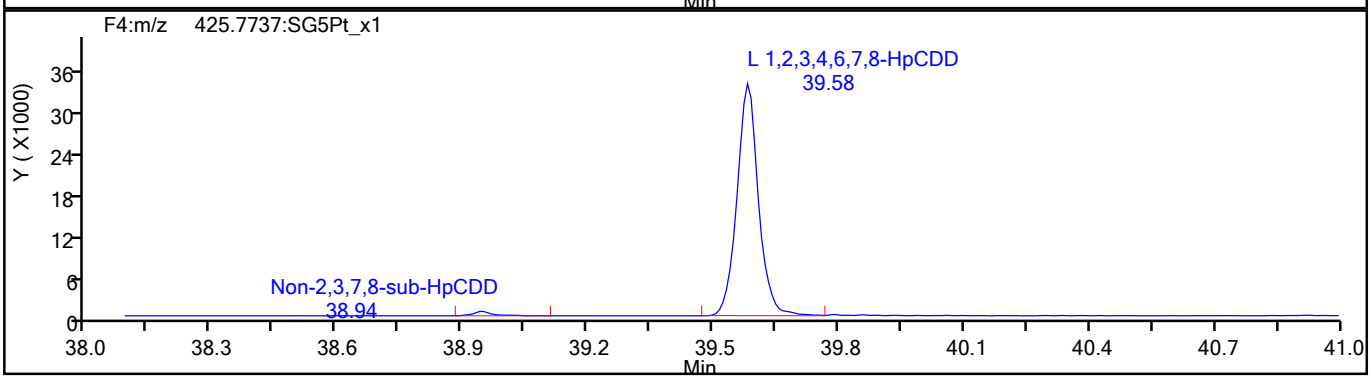

HpCDD Standards

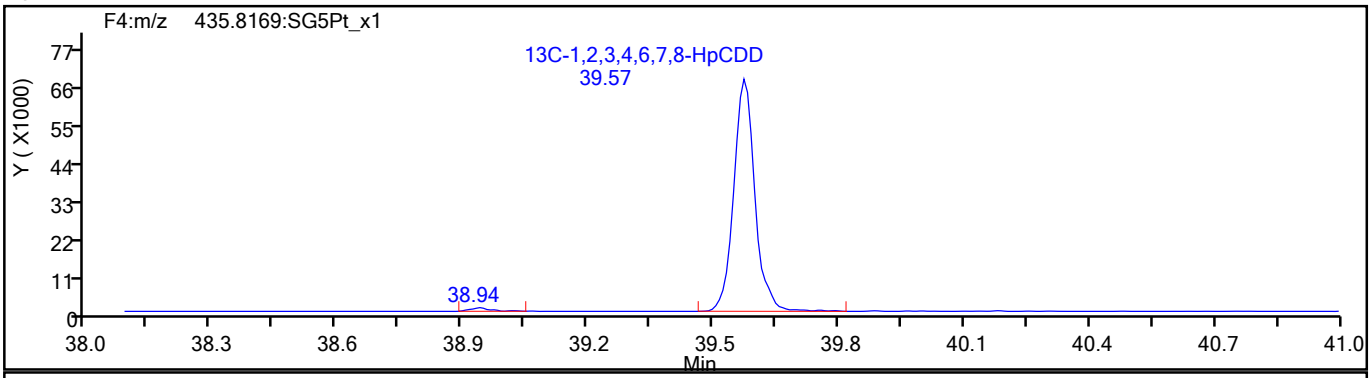

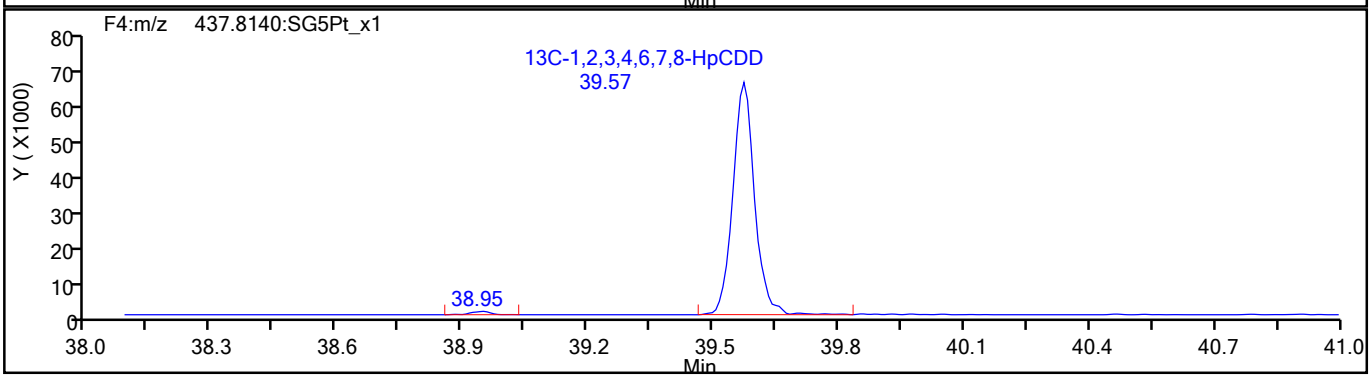

783334

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDF

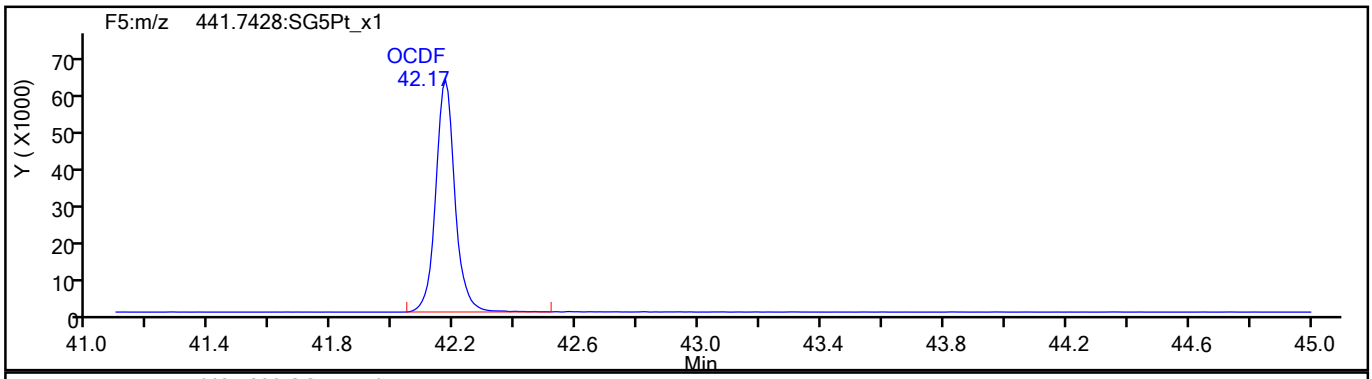

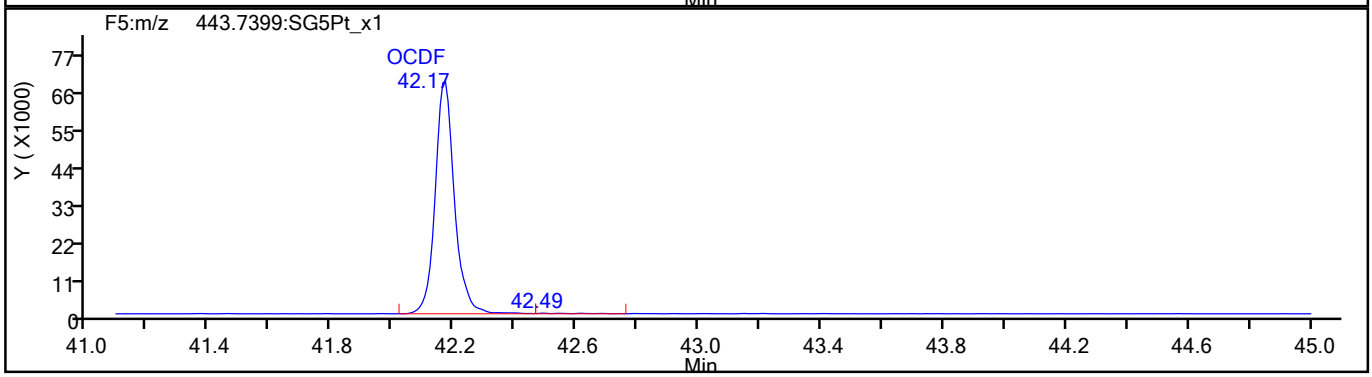

OCDF Standards

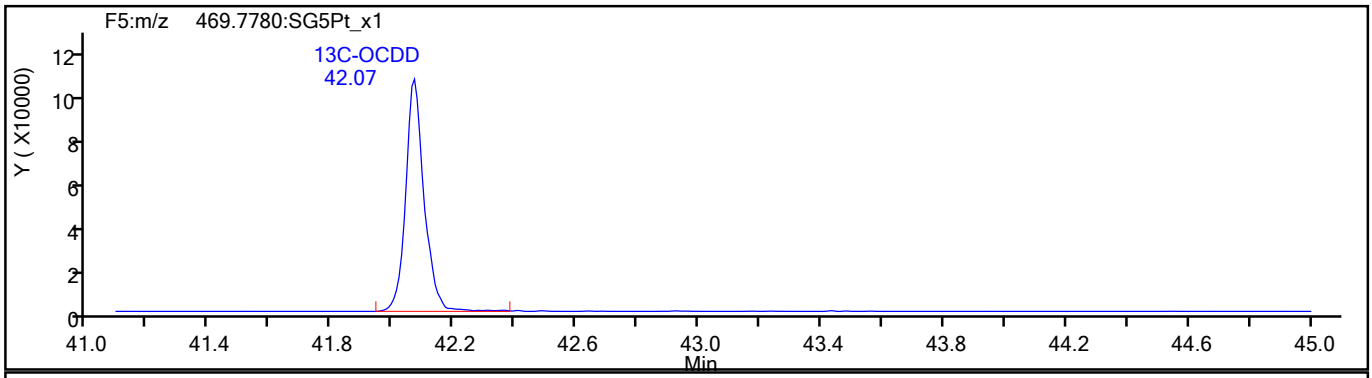

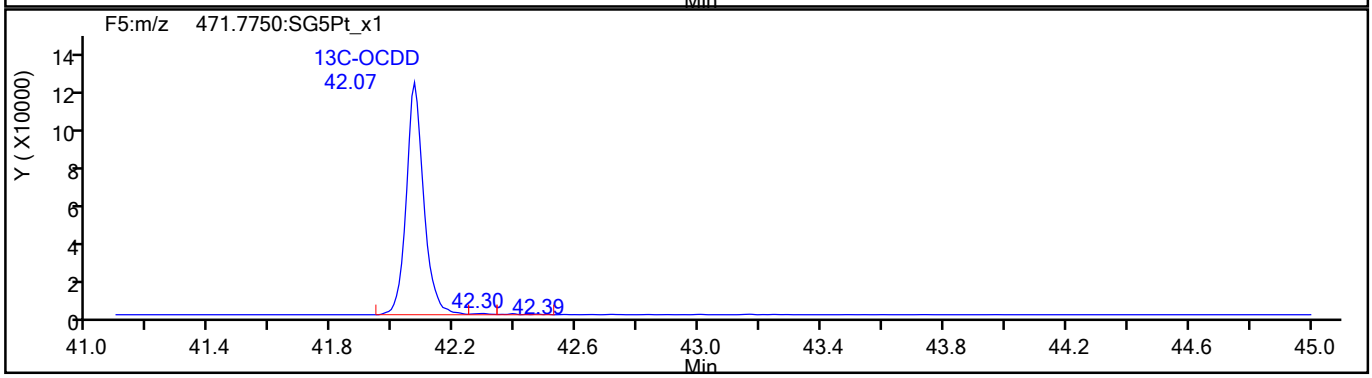

783335

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

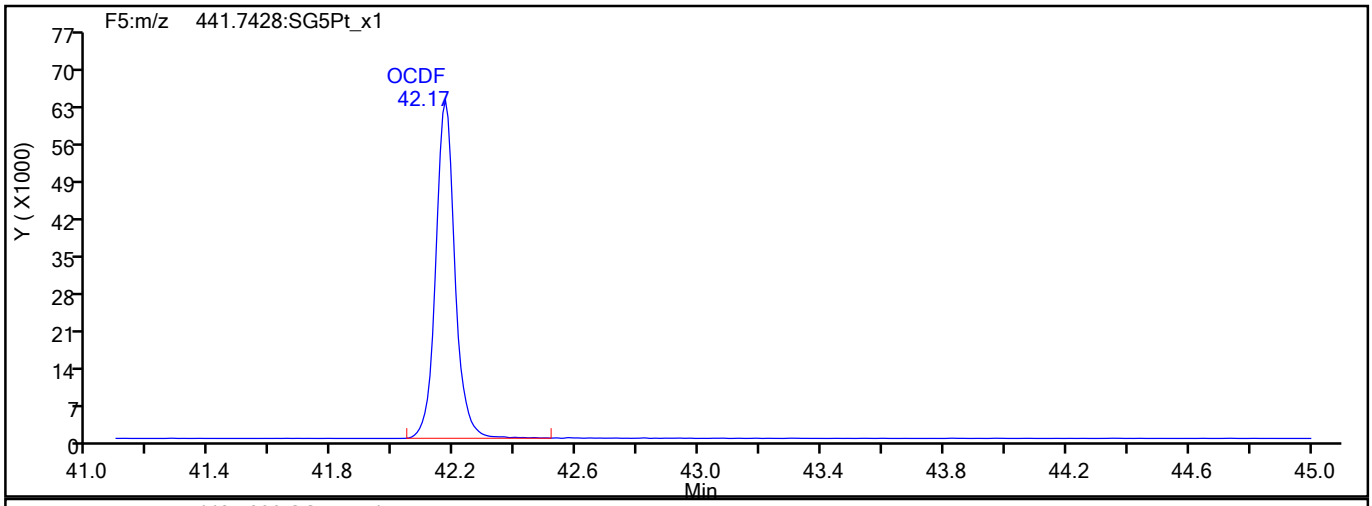

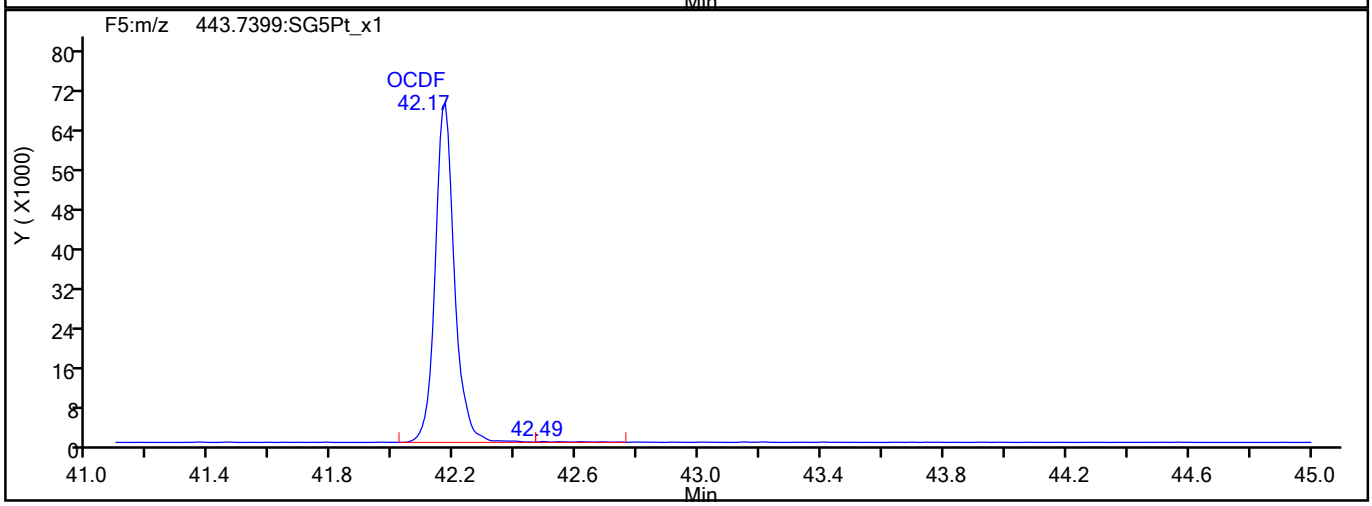

OCDF Interference Mass

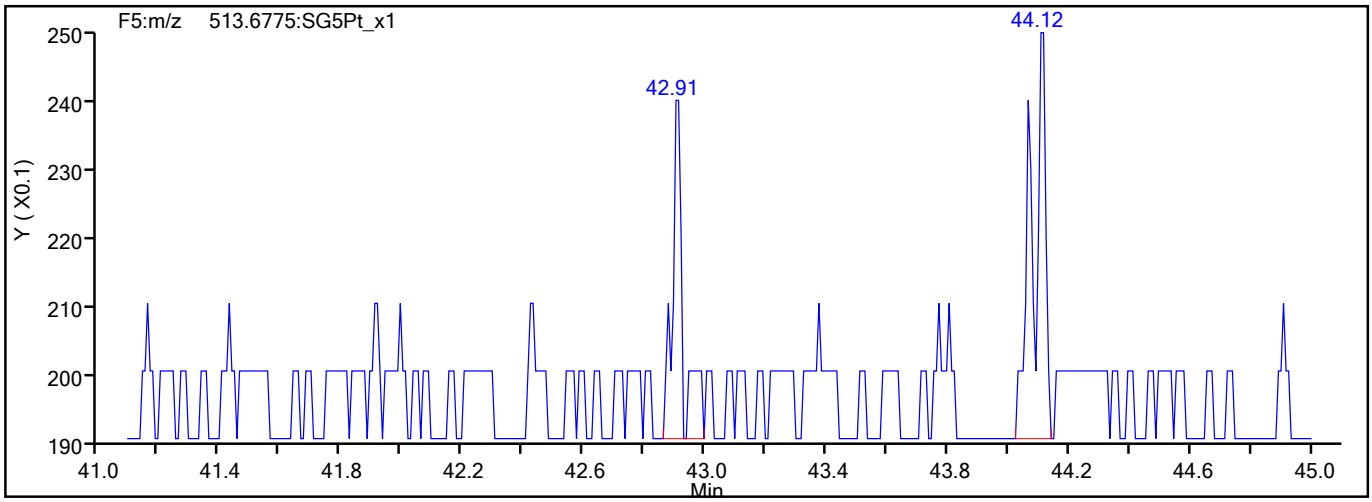

783336

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

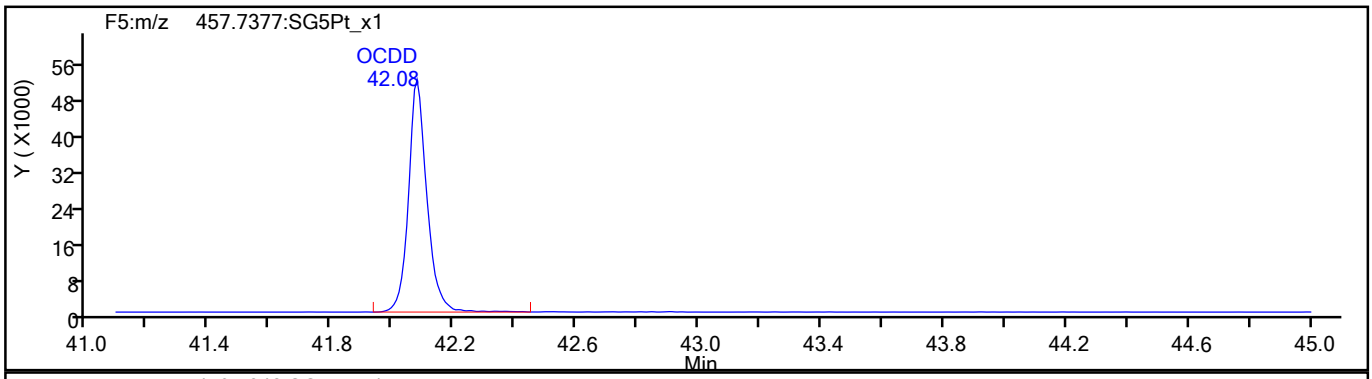

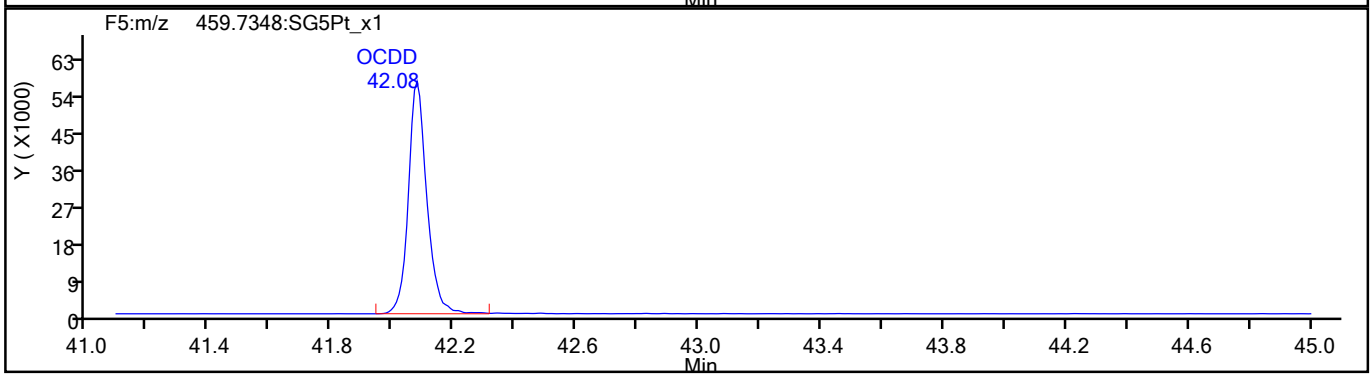

OCDD Standards

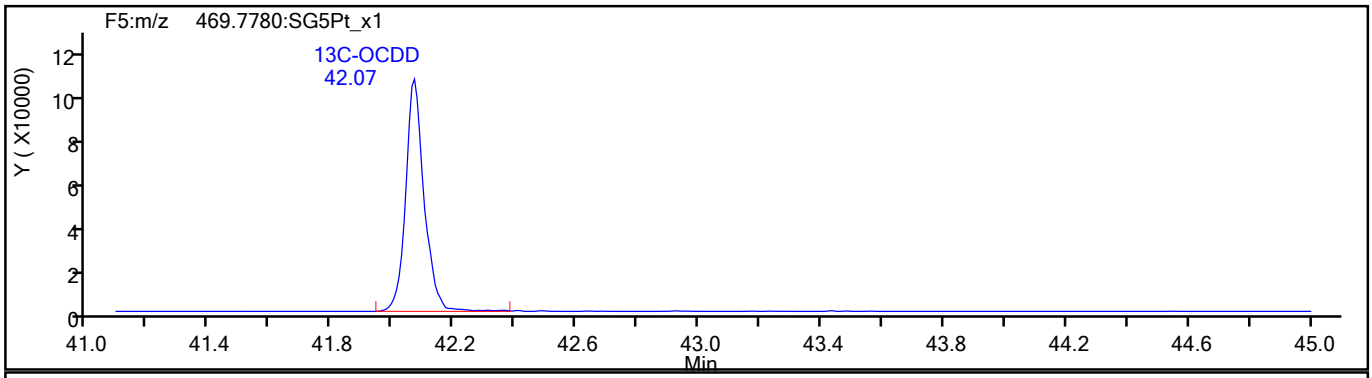

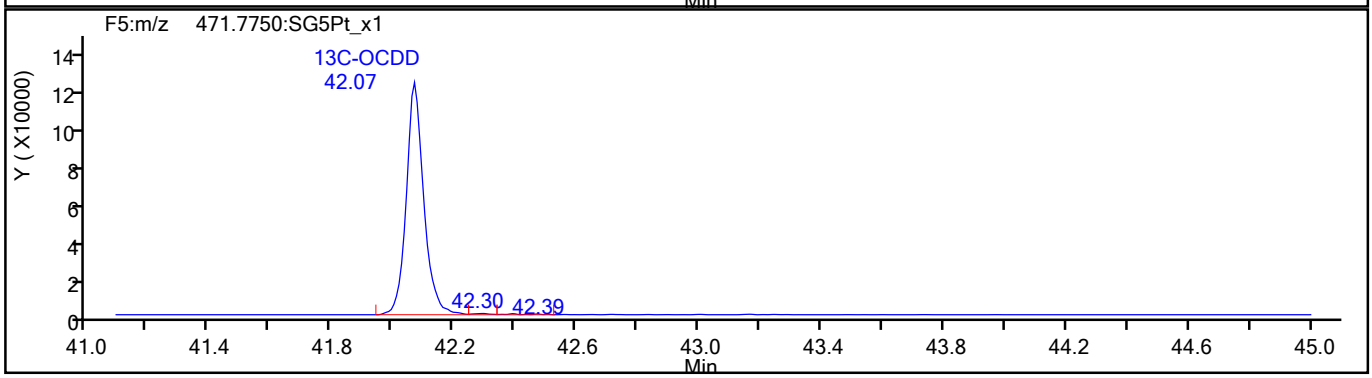

783337

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

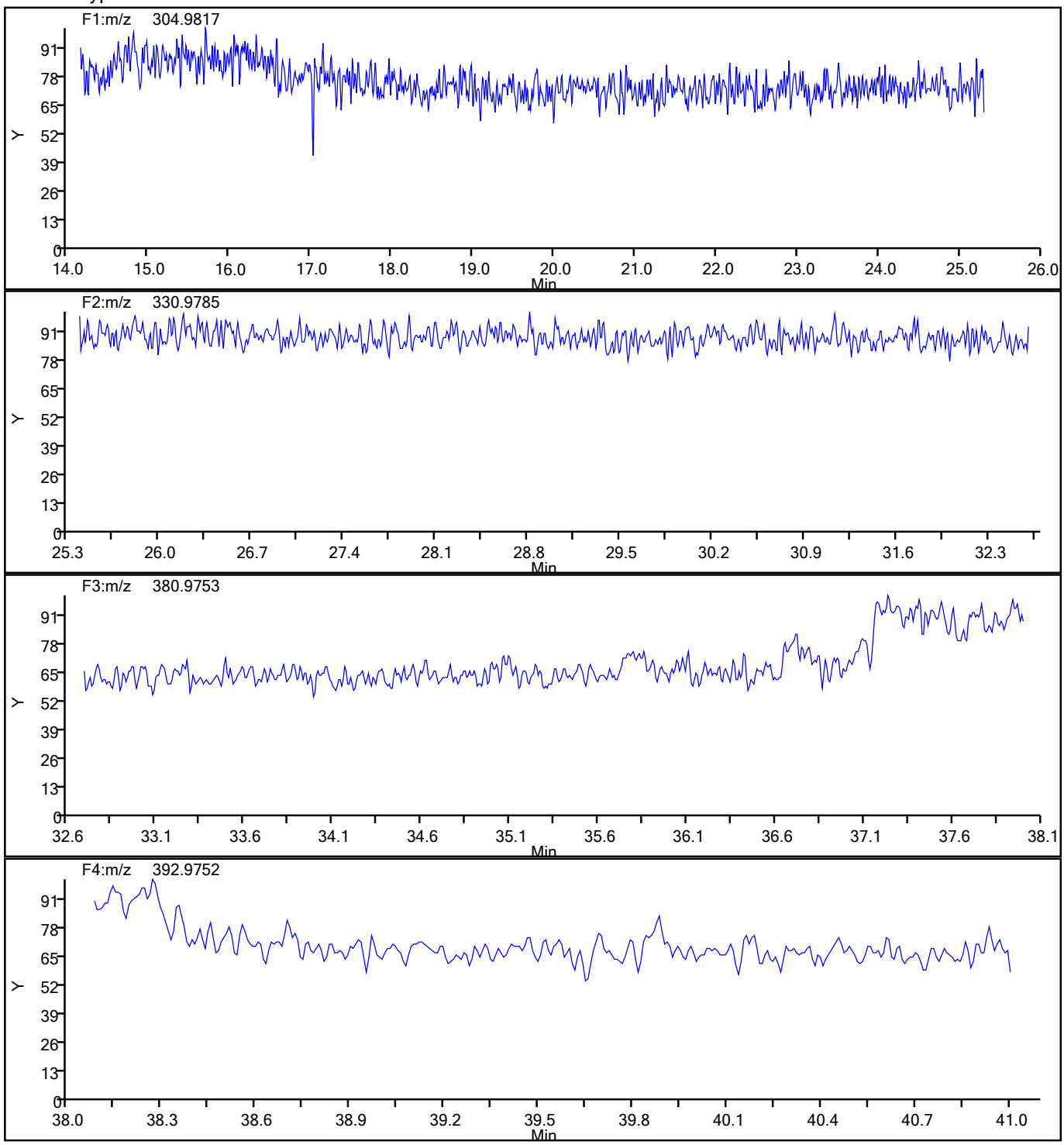

783338

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

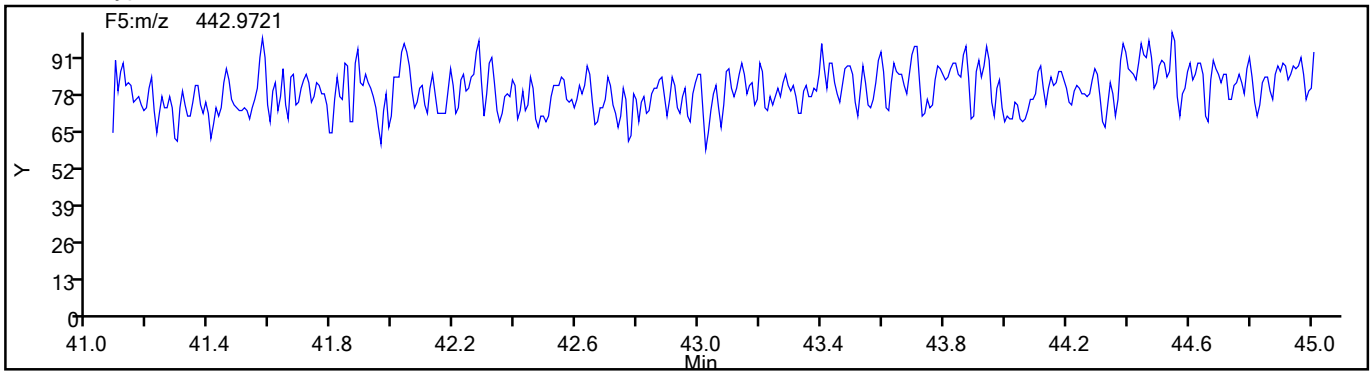

783339

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.598	43192451	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.628	95812265	0.77	1.0239	86.7	86.7	0.4368	0.4368		
A Non-2,3,7,8-sub-TCDF	17.311	141340622	0.77	1.0239	127.8	127.8	0.4368	50.4		
S Total TCDF					214.5	214.5	0.4368	0.4368		
D 13C-2,3,7,8-TCDD	18.323	22643725	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.338	31002300	0.78	1.2541	43.7	43.7	0.2199	0.2199		
A Non-2,3,7,8-sub-TCDD	17.772	120319254	0.78	1.2541	169.5	169.5	0.2199	46.0		
S Total TCDD					213.1	213.1	0.2199	0.2199		
A F1 PeCDFs	20.244	36548211	1.59	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.473	28699153	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.744	44367204	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.542	988216341	1.23	0.0000						
A Non-2,3,7,8-sub-HxCDF	30.542	1016402527	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	31.215	43254937	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.911	28490431	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	35.005	21744380	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.458						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.714	17168827	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.133	55744963	0.78							a
1,3,6,8-TCDD	16.071	32157911	0.78							a
2,3,4,7-TCDF	17.628	95812265	0.77							a
1,2,3,7-TCDD	18.218	26254918	0.77							a
1,2,3,9-TCDF	18.505	41465019	0.77							a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,9-TCDD	18.505	32677146	0.79							a
1,2,8,9-TCDD	19.472	12707183								a
1,2,8,9-TCDF	19.488	41982512	0.76							a
1,3,4,6,8-PeCDF	19.760	36548211	1.59							a
1,2,4,7,9-PeCDD	21.576	23369968	1.58							a
1,2,3,8,9-PeCDD	25.912	20997236	1.59							a
1,2,3,8,9-PeCDF	26.144	28026312	1.61							a
1,2,3,4,6,8-HxCDF	28.479	29886017	1.22							a
1,2,4,6,7,9-HxCDD	30.023	21768457	1.27							a
1,2,3,4,6,7-HxCDD	32.299	21486480	1.24							a
1,2,3,4,8,9-HxCDF	32.605	28186186	1.23							a
1,2,3,4,6,7,9-HpCDD	34.154						0.0	0.0		U

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	1.000	18796968	4666881	8168	20420	571		
317.9389	17.598	17.598	0	1.000	24395483	6066397	3473	8682	1747	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.002	41629702	9682578	19585	48962	494		
305.8987	17.628	17.631	0	1.002	54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.133	17.311	-130	0.860	24509538	7569037	19585	48962	386		
305.8987	15.133	17.311	-130	0.860	31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
303.9016	18.505	17.311	72	1.052	18061189	4195885	19585	48962	214		
305.8987	18.505	17.311	72	1.052	23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
303.9016	19.488	17.311	130	1.107	18098944	4035450	19585	48962	206		
305.8987	19.488	17.311	130	1.107	23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
303.9016	19.775	17.311	148	1.124	944774	152570	19585	48962	8		
305.8987	19.775	17.311	148	1.124	1203354	204203	28414	71035	7	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.000	10063481	2396990	3086	7715	777		
333.9339	18.323	18.323	0	1.000	12580244	3018588	1527	3817	1977	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.357	-1	1.001	13597515	3193209	6116	15290	522		
321.8936	18.338	18.357	-1	1.001	17404785	4135946	8817	22042	469	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	16.071	17.772	-102	0.877	14103074	4061475	6116	15290	664		
321.8936	16.071	17.772	-102	0.877	18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
319.8965	18.218	17.772	27	0.994	11446127	2829889	6116	15290	463		
321.8936	18.218	17.772	27	0.994	14808791	3726958	8817	22042	423	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	18.505	17.772	44	1.010	14439496	3301963	6116	15290	540		
321.8936	18.505	17.772	44	1.010	18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
319.8965	19.472	17.772	102	1.063	12707183	2751784	6116	15290	450		
321.8936	19.472	17.772	102	1.063	16522096	3661962	8817	22042	415	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.760	20.244	-29	1.000	22414023	4920048	649	1622	7581		
341.8567	19.760	20.244	-29	1.000	14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.344	23.473	-127	1.000	84191	14080	2633	6582	5		
341.8567	21.344	23.473	-127	1.000	53909	7615	1950	4875	4	1.56(1.32-1.78)	
339.8597	22.176	23.473	-78	1.000	88076	13805	2633	6582	5		
341.8567	22.190	23.473	-77	1.000	48170	9635	1950	4875	5	1.83(1.32-1.78)	
339.8597	22.749	23.473	-43	1.000	168309	20506	2633	6582	8		
341.8567	22.762	23.473	-43	1.000	82177	12827	1950	4875	7	2.05(1.32-1.78)	
339.8597	23.321	23.473	-9	1.000	142716	22963	2633	6582	9		
341.8567	23.321	23.473	-9	1.000	79356	11480	1950	4875	6	1.80(1.32-1.78)	
339.8597	26.144	23.473	160	1.000	17301746	2425915	2633	6582	921		
341.8567	26.144	23.473	160	1.000	10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.576	23.744	-130	1.000	14314296	2552271	2414	6035	1057		
357.8516	21.576	23.744	-130	1.000	9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
355.8546	25.912	23.744	130	1.000	12881489	1801570	2414	6035	746		
357.8516	25.912	23.744	130	1.000	8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	32.605	30.542	124	1.000	15534015	4607321	4603	11507	1001		
375.8178	32.605	30.542	124	1.000	12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.023	31.215	-71	1.000	12175655	1922535	6506	16265	296		
391.8127	30.023	31.215	-71	1.000	9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
389.8157	32.299	31.215	65	1.000	11903453	3254284	6506	16265	500		
391.8127	32.299	31.215	65	1.000	9583027	2649988	5715	14287	464	1.24(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.911	33.926	-1	1.000	14581587	4505694	20273	50682	222		
409.7789	33.911	33.926	-1	1.000	13908844	4348275	17441	43602	249	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.005	35.020	-1	1.000	11106344	3153936	20273	50682	156		
409.7789	35.005	35.020	-1	1.000	10638036	3040493	17441	43602	174	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						20273	50682			
409.7789	34.458						17441	43602			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.726	-1	1.000	8809155	2526480	13831	34577	183		
425.7737	34.714	34.726	-1	1.000	8359672	2427581	13744	34360	177	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						13831	34577			
425.7737	33.504						13744	34360			
1,3,6,8-TCDF											a
303.9016	15.133	15.133	0		24509538	7569037	19585	48962	386		a
305.8987	15.133	15.133	0		31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
1,3,6,8-TCDD											a
319.8965	16.071	16.071	0		14103074	4061475	6116	15290	664		a
321.8936	16.071	16.071	0		18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
2,3,4,7-TCDF											a
303.9016	17.628	17.628	0		41629702	9682578	19585	48962	494		a
305.8987	17.628	17.628	0		54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
1,2,3,7-TCDD											a
319.8965	18.218	18.218	0		11446127	2829889	6116	15290	463		a
321.8936	18.218	18.218	0		14808791	3726958	8817	22042	423	0.77(0.65-0.89)	
1,2,3,9-TCDF											a
303.9016	18.505	18.505	0		18061189	4195885	19585	48962	214		a
305.8987	18.505	18.505	0		23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
1,2,3,9-TCDD											a
319.8965	18.505	18.505	0		14439496	3301963	6116	15290	540		a
321.8936	18.505	18.505	0		18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
1,2,8,9-TCDD											a
319.8965	19.472	19.472	0		12707183	2751784	6116	15290	450		a
1,2,8,9-TCDF											a
303.9016	19.488	19.488	0		18098944	4035450	19585	48962	206		a
305.8987	19.488	19.488	0		23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
1,3,4,6,8-PeCDF											a
339.8597	19.760	19.760	0		22414023	4920048	649	1622	7581		a
341.8567	19.760	19.760	0		14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	21.576	21.576	0		14314296	2552271	2414	6035	1057		a
357.8516	21.576	21.576	0		9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											a
355.8546	25.912	25.912	0		12881489	1801570	2414	6035	746		a
357.8516	25.912	25.912	0		8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	26.144	26.144	0		17301746	2425915	2633	6582	921		a
341.8567	26.144	26.144	0		10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											a
373.8208	28.479	28.479	0		16406487	2121744	4603	11507	461		a
375.8178	28.479	28.479	0		13479530	1752621	3729	9322	470	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											a
389.8157	30.023	30.023	0		12175655	1922535	6506	16265	296		a
391.8127	30.023	30.023	0		9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											a
389.8157	32.299	32.299	0		11903453	3254284	6506	16265	500		a
391.8127	32.299	32.299	0		9583027	2649988	5715	14287	464	1.24(1.05-1.43)	

Report Date: 27-Jul-2021 15:09:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,8,9-HxCDF											a
373.8208	32.605	32.605	0		15534015	4607321	4603	11507	1001		a
375.8178	32.605	32.605	0		12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.154						13831	34577			
425.7737	34.154						13744	34360			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	43192451	10733278

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	43192451	10733278

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.133	24509538	7569037	31235425	9722736	50.4	0.78	
18.505	18061189	4195885	23403830	5509968	37.5	0.77	
19.488	18098944	4035450	23883568	5304928	38.0	0.76	
19.775	944774	152570	1203354	204203	1.94	0.79	
Signal Totals:	61614445	15952942	79726177	20741835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141340622	36694777				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 127.837 = (141340622 * 40.000) / (43192451 * 1.024)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	22643725	5415578

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	22643725	5415578

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.071	14103074	4061475	18054837	5166402	45.3	0.78	
18.218	11446127	2829889	14808791	3726958	37.0	0.77	
18.505	14439496	3301963	18237650	4248308	46.0	0.79	
19.472	12707183	2751784	16522096	3661962	41.2	0.77	
Signal Totals:	52695880	12945111	67623374	16803630			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	120319254	29748741				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 169.476 = (120319254 * 40.000) / (22643725 * 1.254)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

F1 PeCDFs, RT: 20.244

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.760	22414023	4920048	14134188	3116108		1.59	
Signal Totals:	22414023	4920048	14134188	3116108			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	36548211	8036156				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (36548211 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.344	84191	14080	53909	7615		1.56	
22.176	88076	13805	48170	9635		1.83	R
22.749	168309	20506	82177	12827		2.05	R
23.321	142716	22963	79356	11480		1.80	R
26.144	17301746	2425915	10724566	1530575		1.61	
Signal Totals:							
	17785038	2497269	10988178	1572132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28773216	4069401				1.62	RQ
	28699153	4064735					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (28773216 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (28699153 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.744

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.576	14314296	2552271	9055672	1599456		1.58	
25.912	12881489	1801570	8115747	1169053		1.59	
Signal Totals:							
	27195785	4353841	17171419	2768509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	44367204	7122350				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (44367204 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.542

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
32.605	15534015	4607321	12652171	3734547		1.23	
Signal Totals:							
	15534015	4607321	12652171	3734547			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	988216341	287497877				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (988216341 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 31.215

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.023	12175655	1922535	9592802	1497827		1.27	
32.299	11903453	3254284	9583027	2649988		1.24	
Signal Totals:							
	24079108	5176819	19175829	4147815			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43254937	9324634				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43254937 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

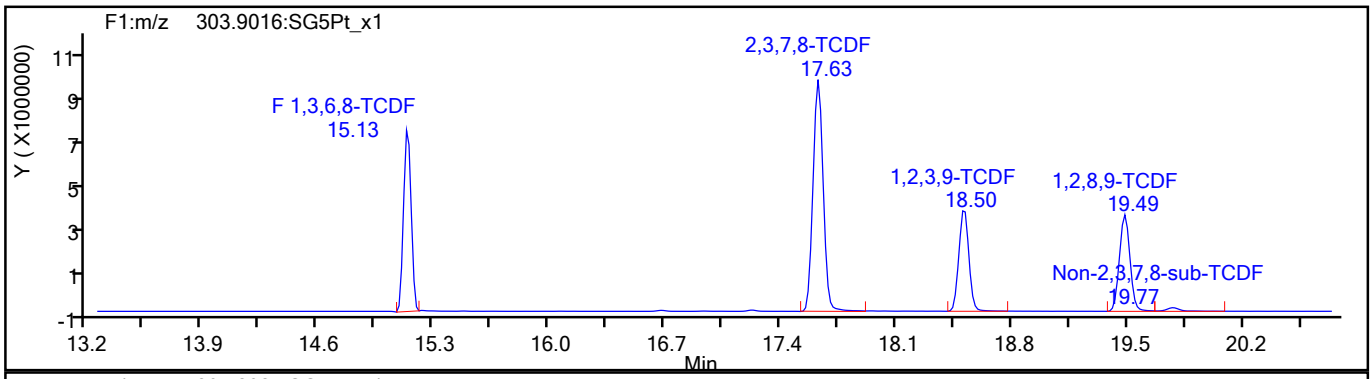

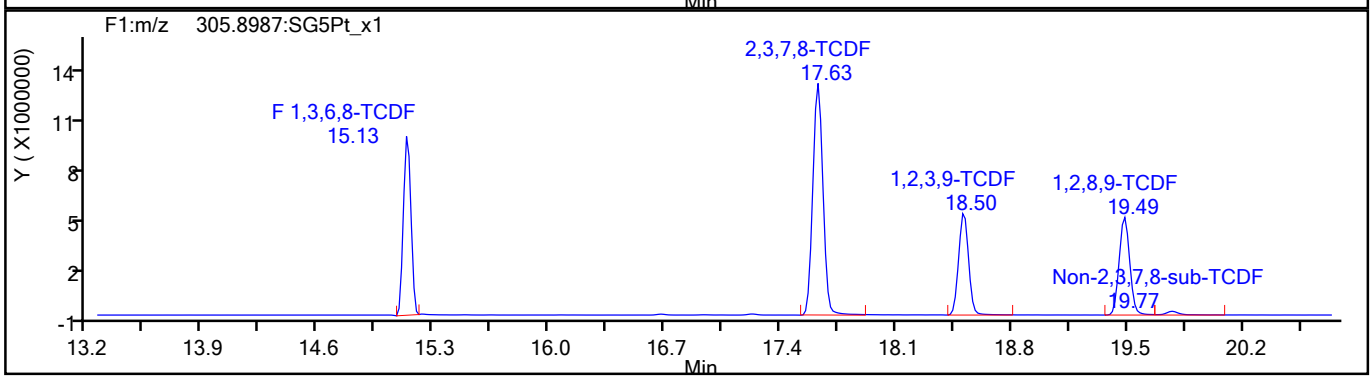

TCDF Standards

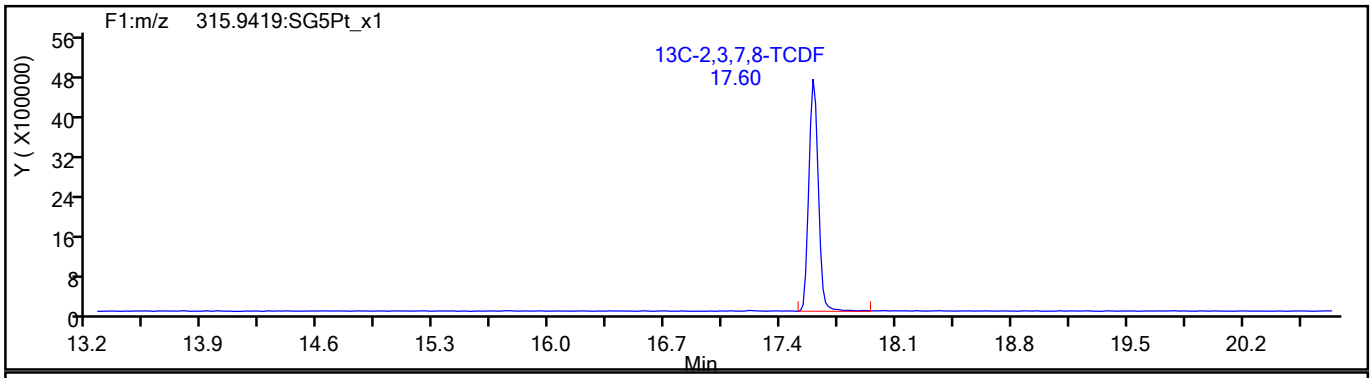

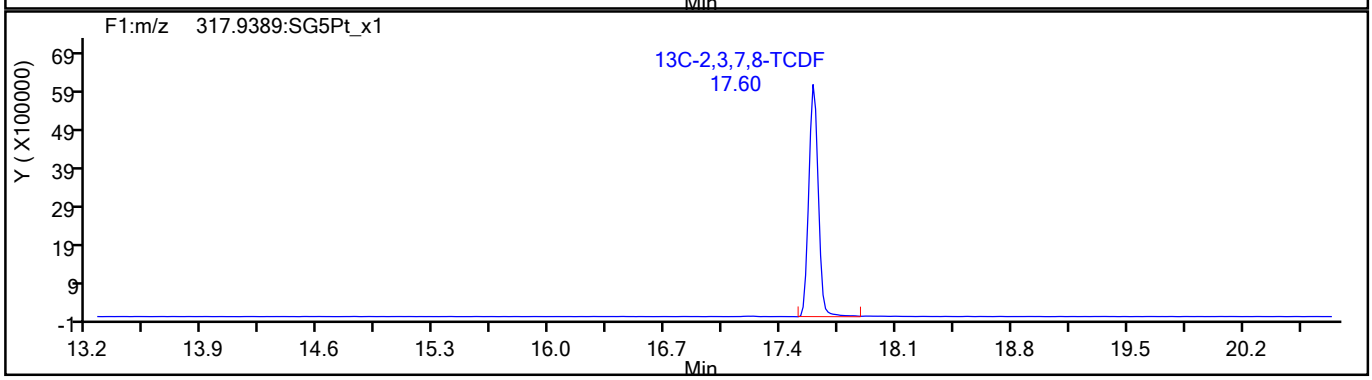

783354

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

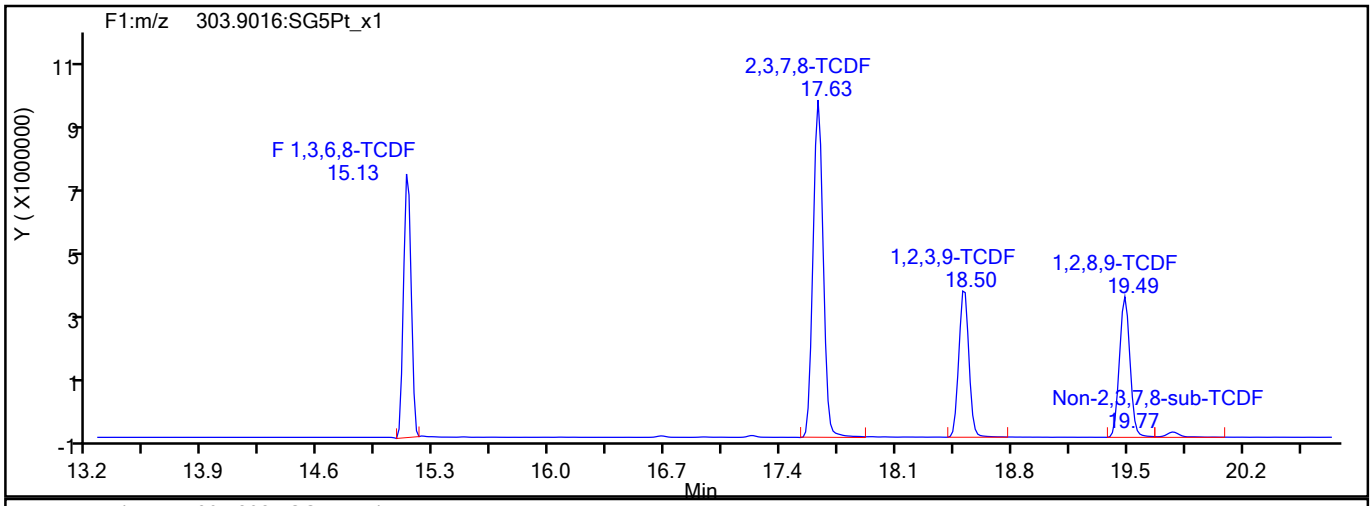

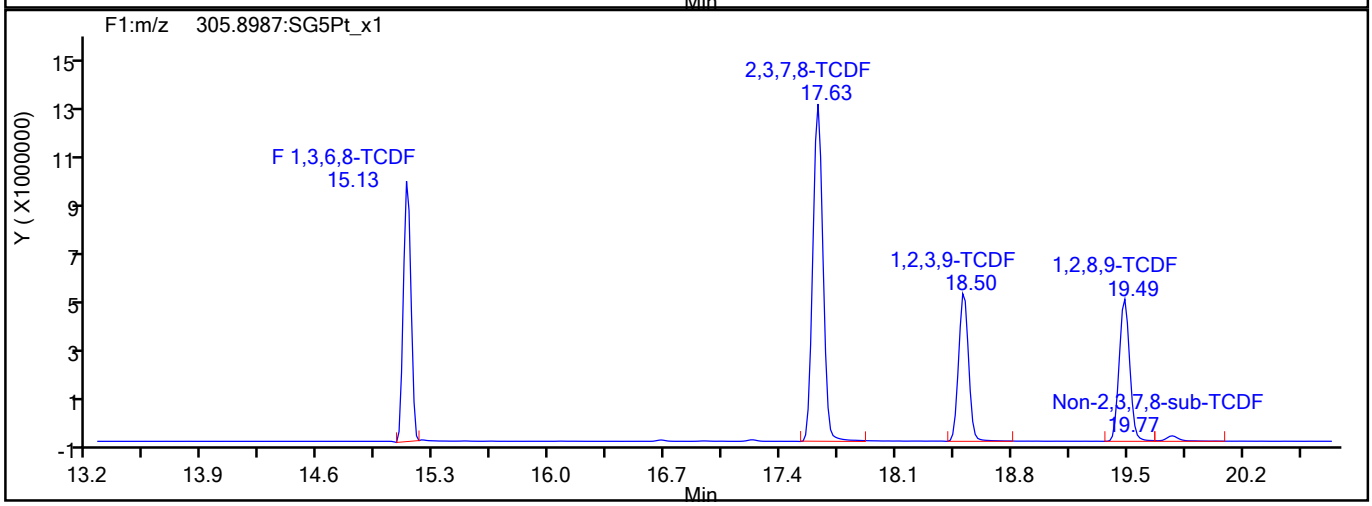

TCDF Interference Mass

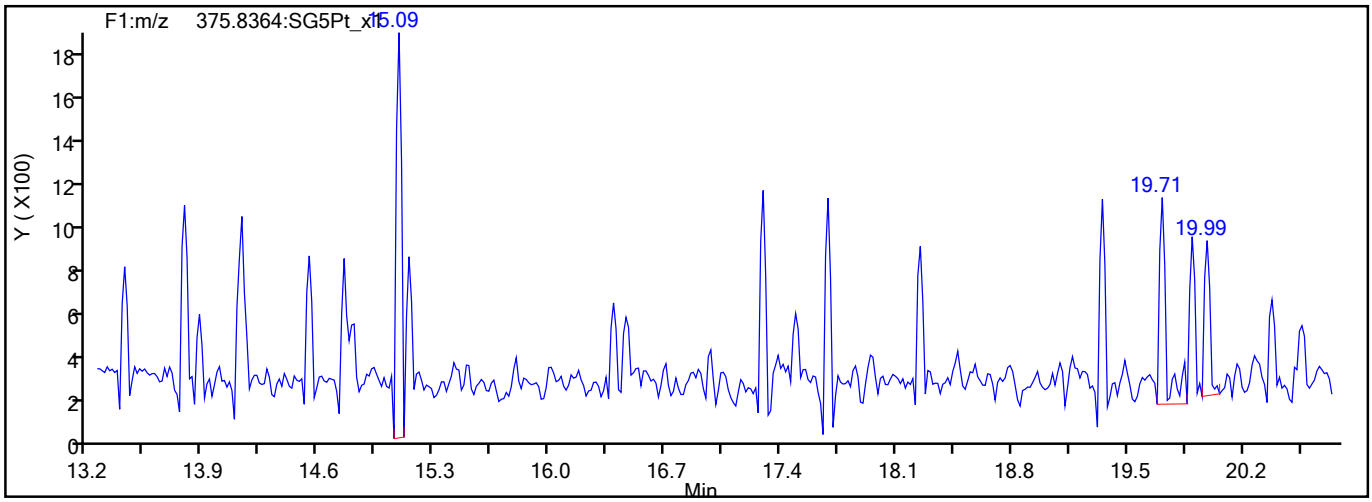

783355

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

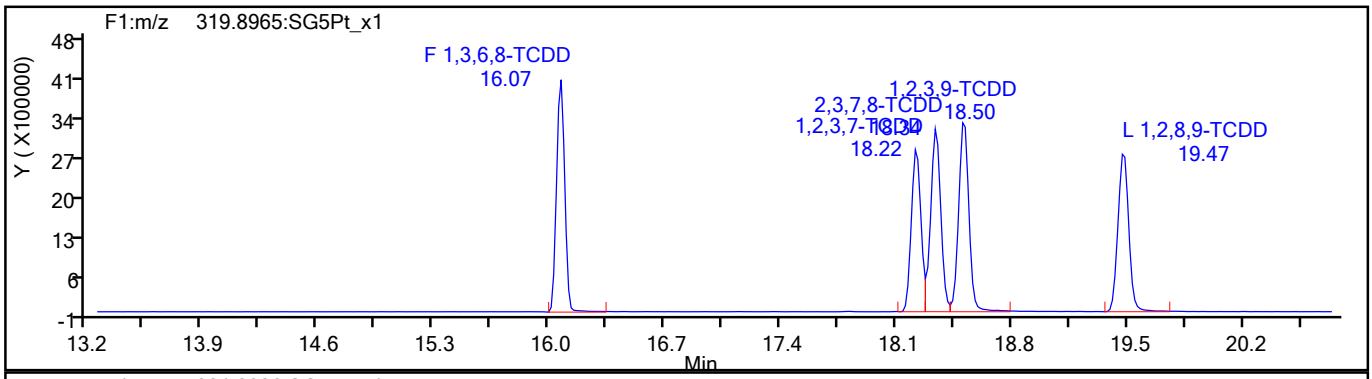

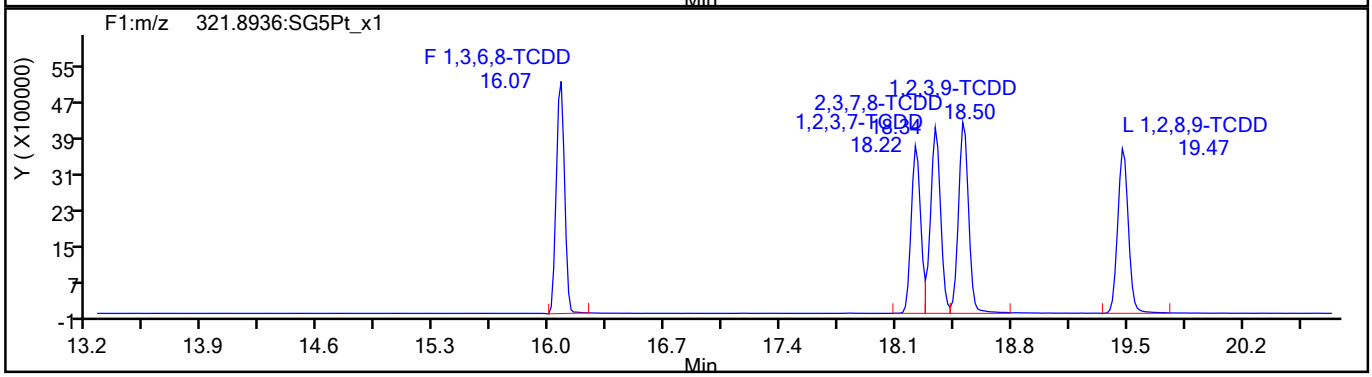

TCDD Standards

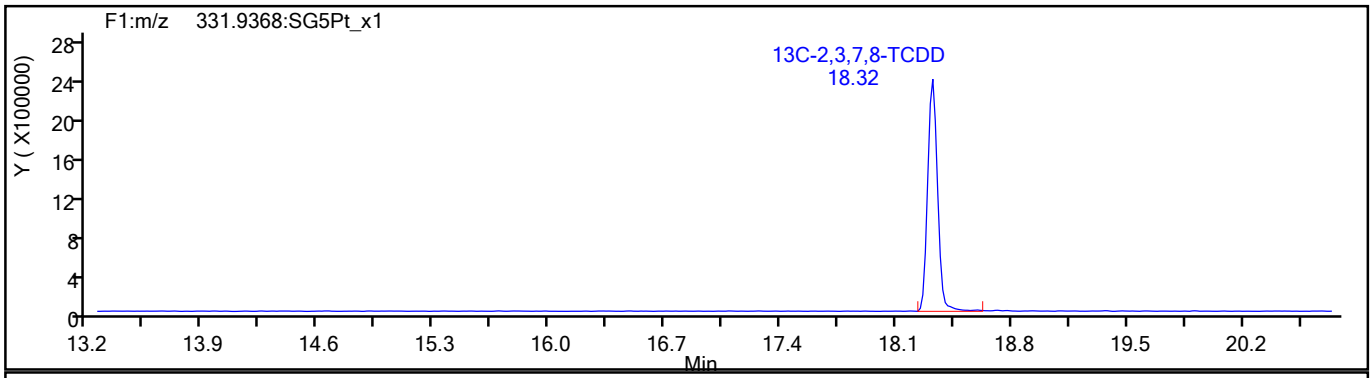

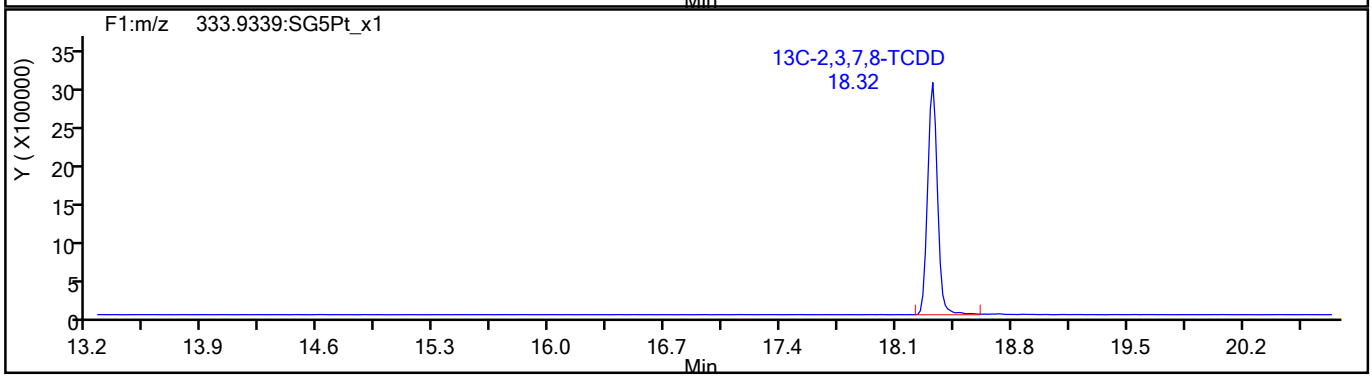

783356

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

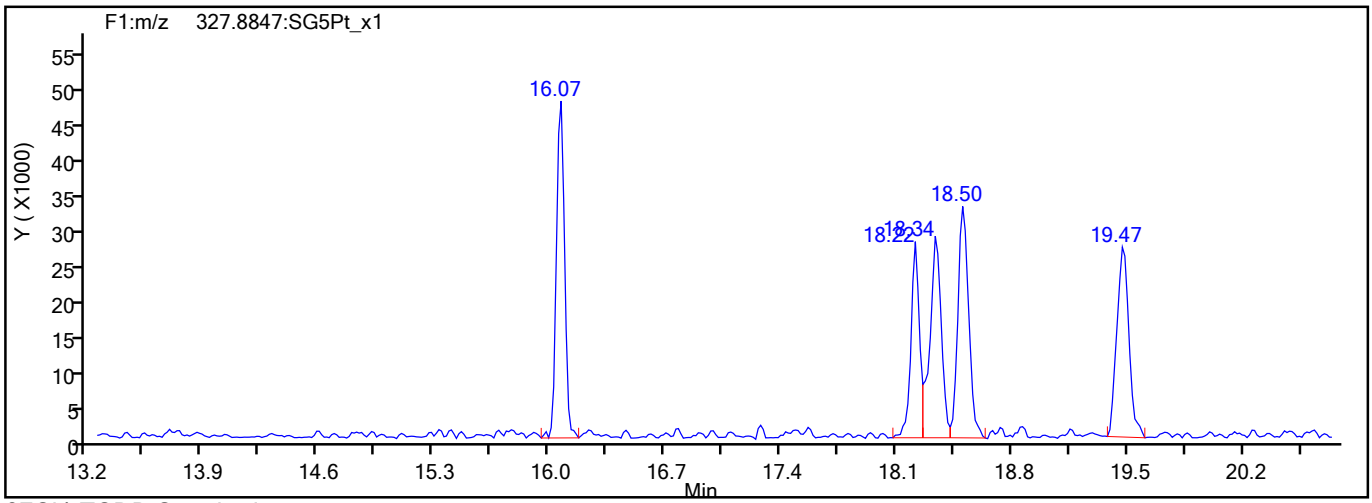

37Cl4-TCDD Standards

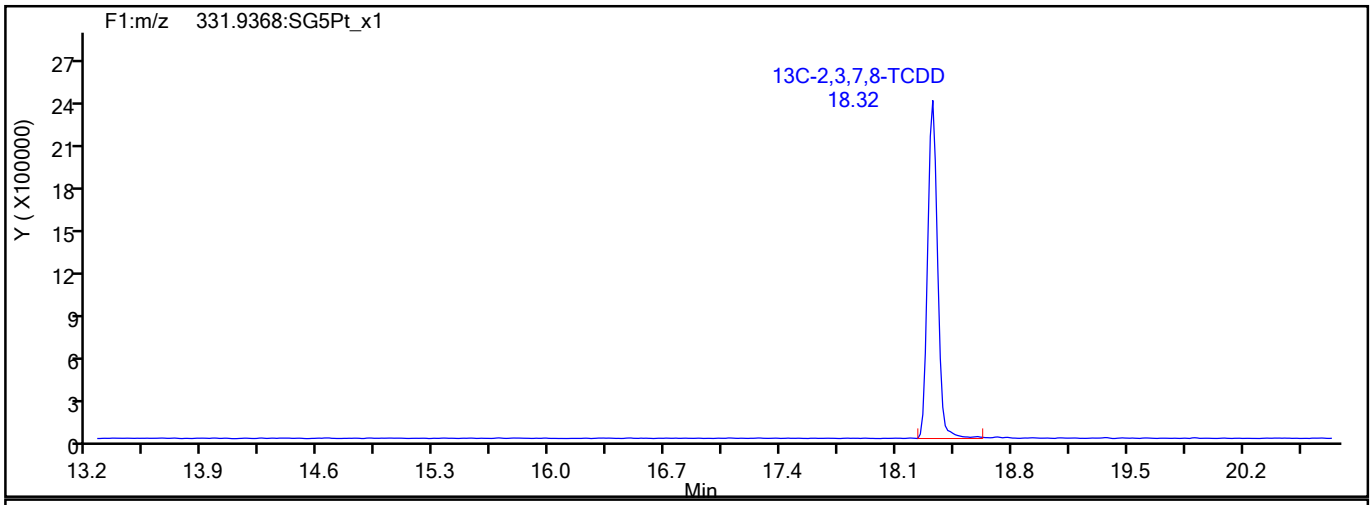

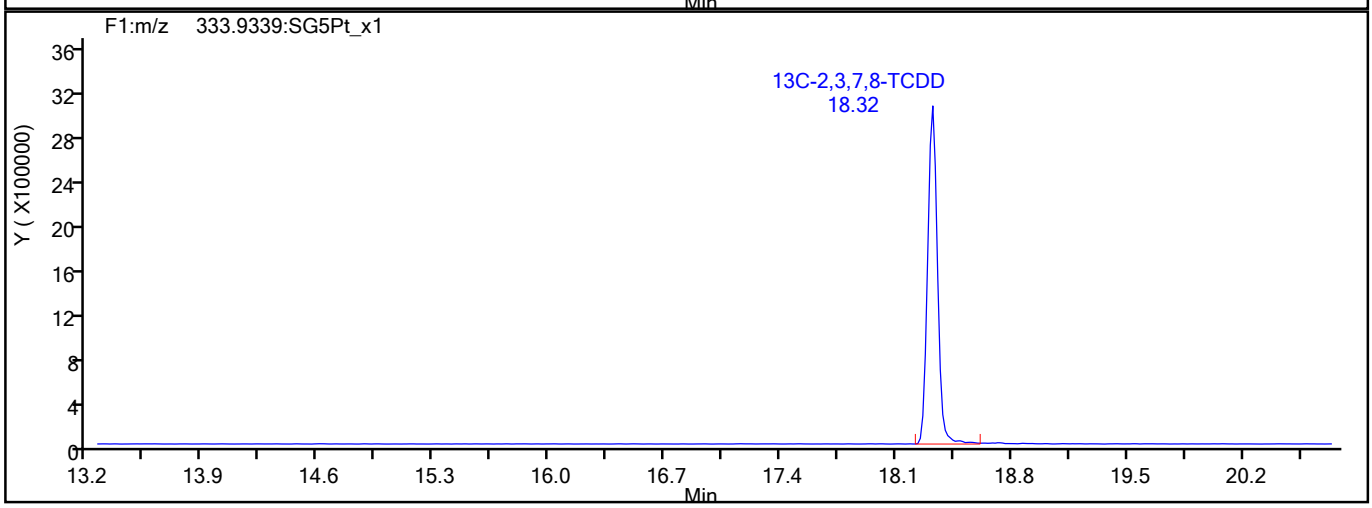

783357

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

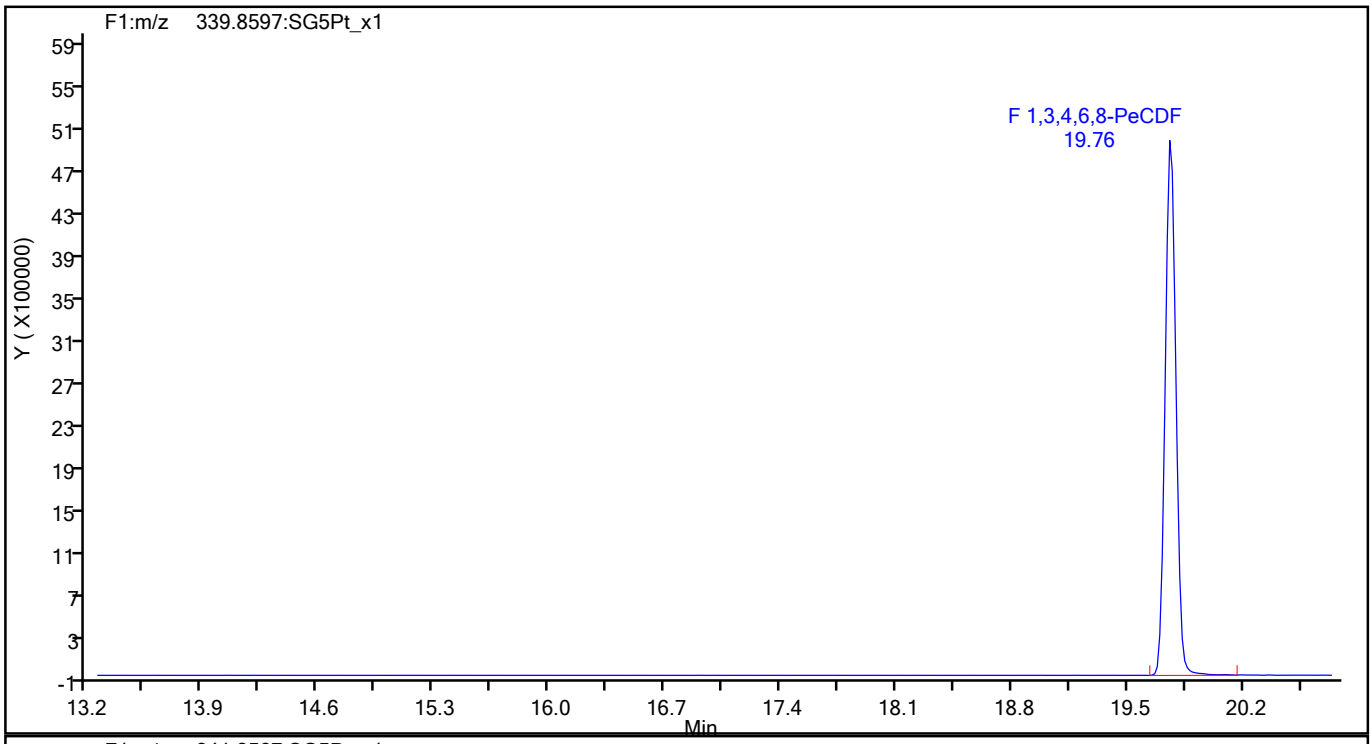

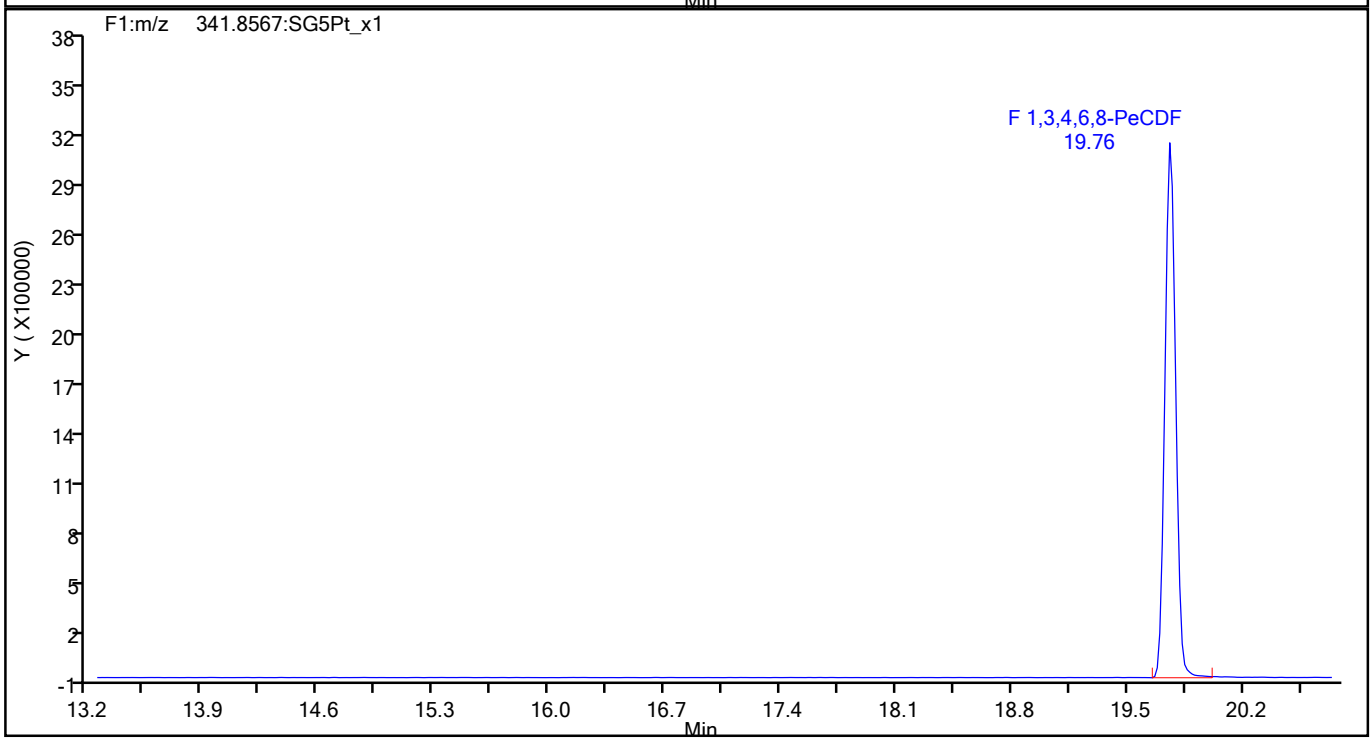

783358

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

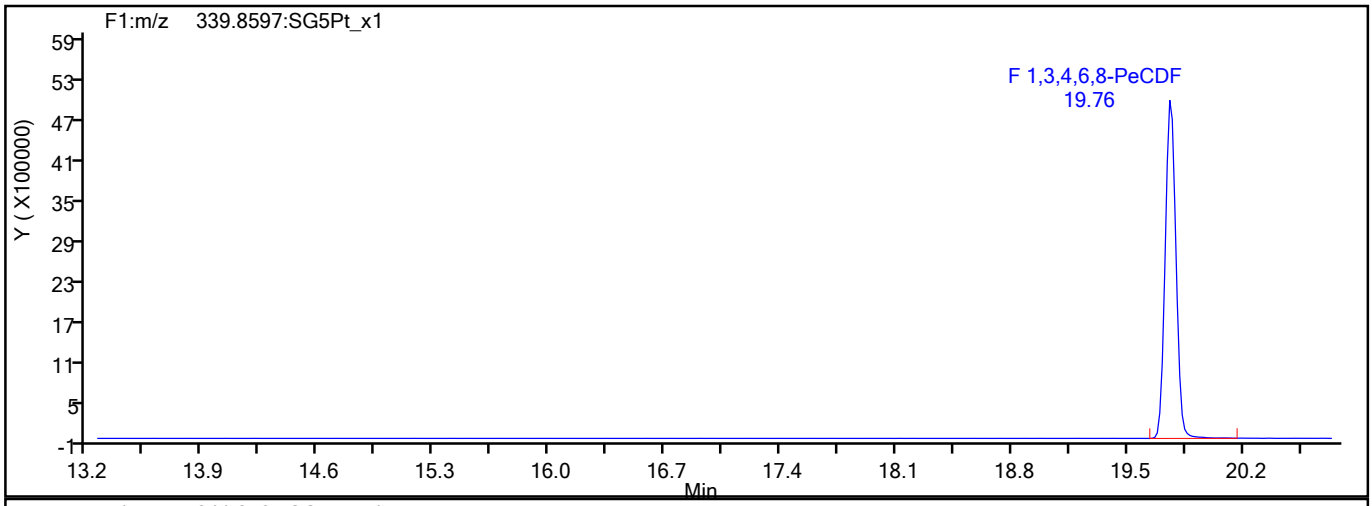

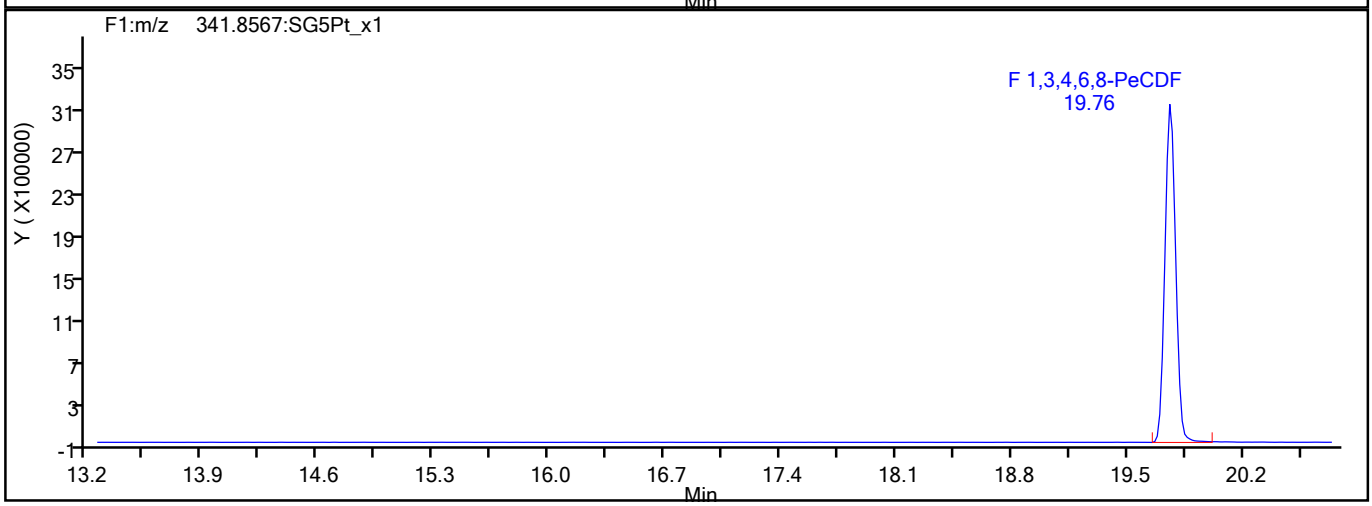

F1 PeCDFs Interference Mass

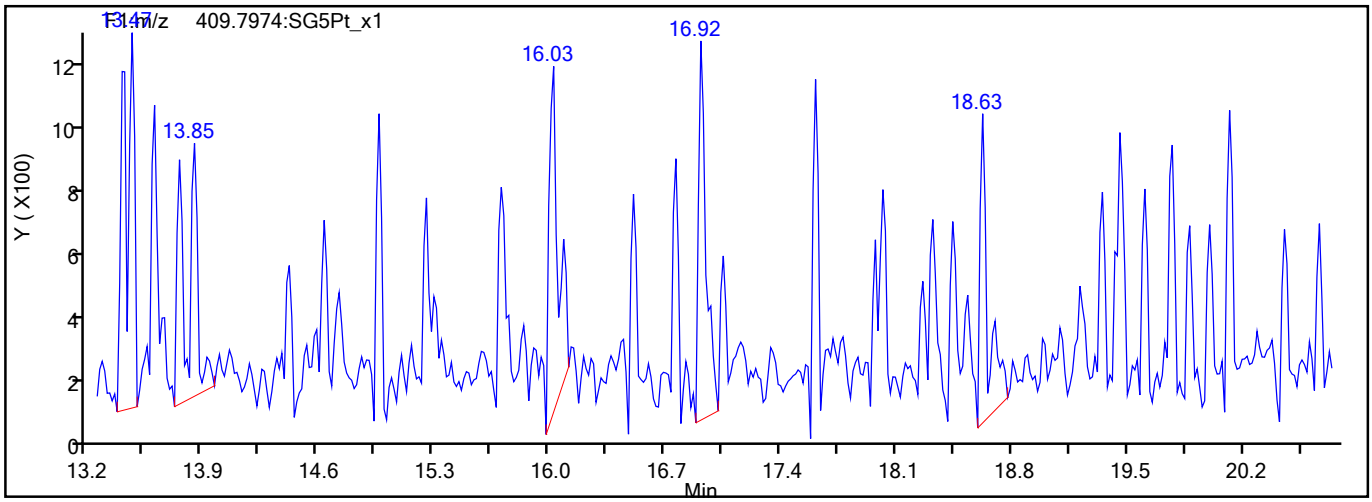

783359

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

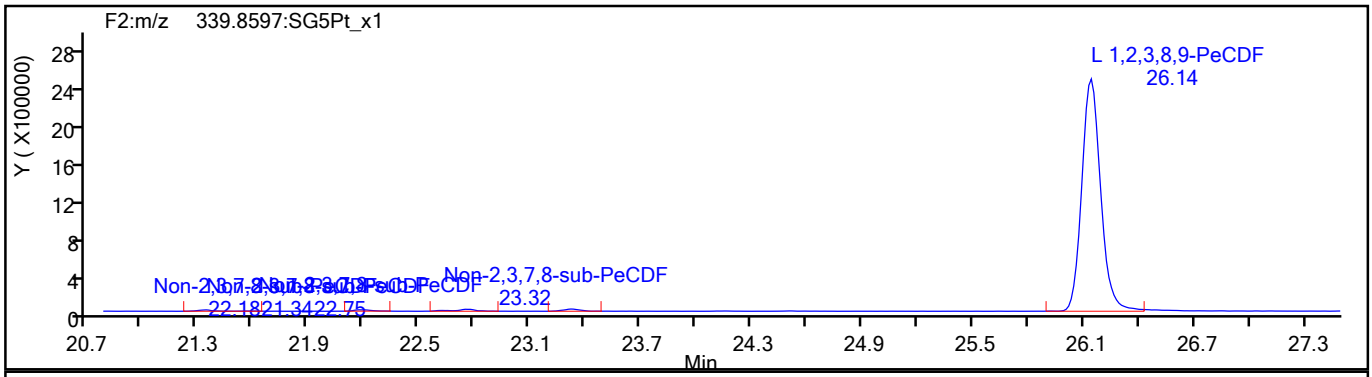

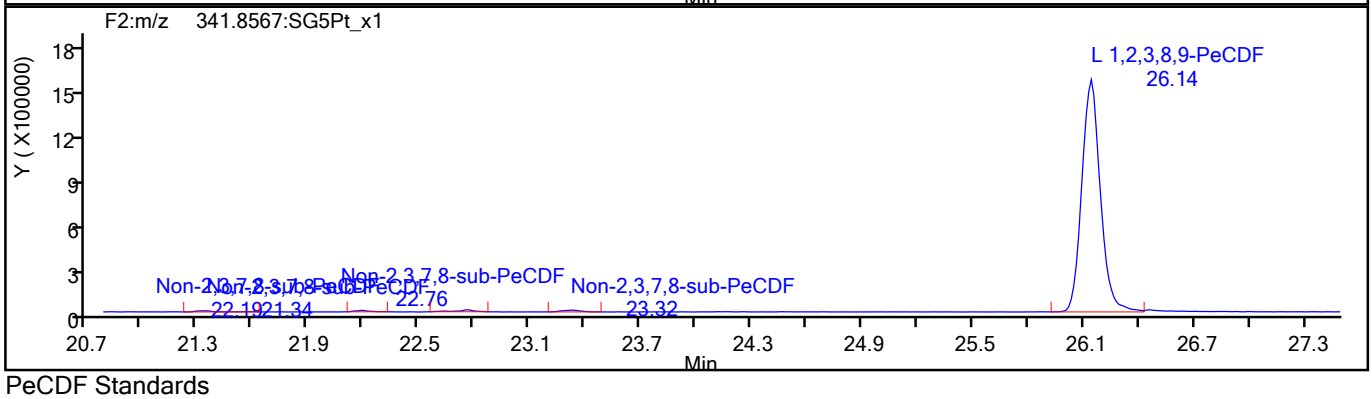

PeCDF Standards

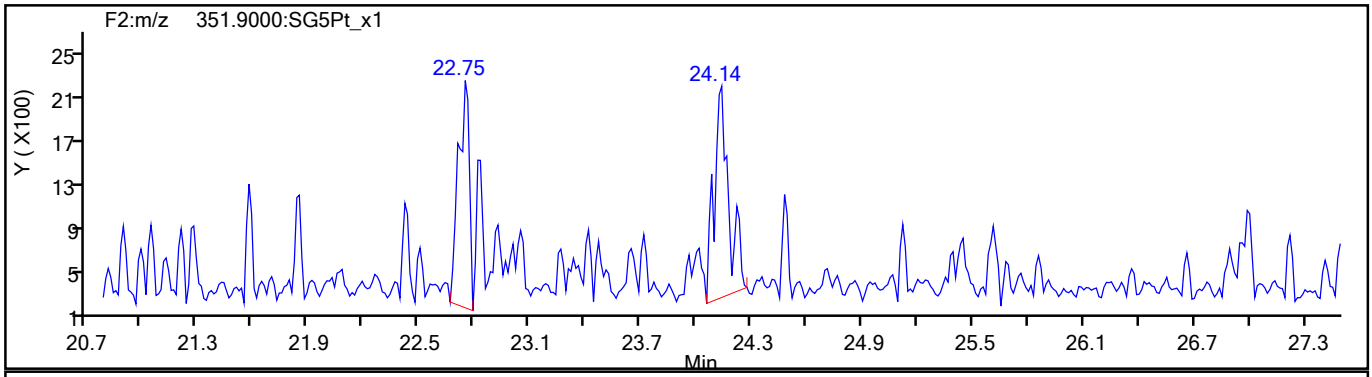

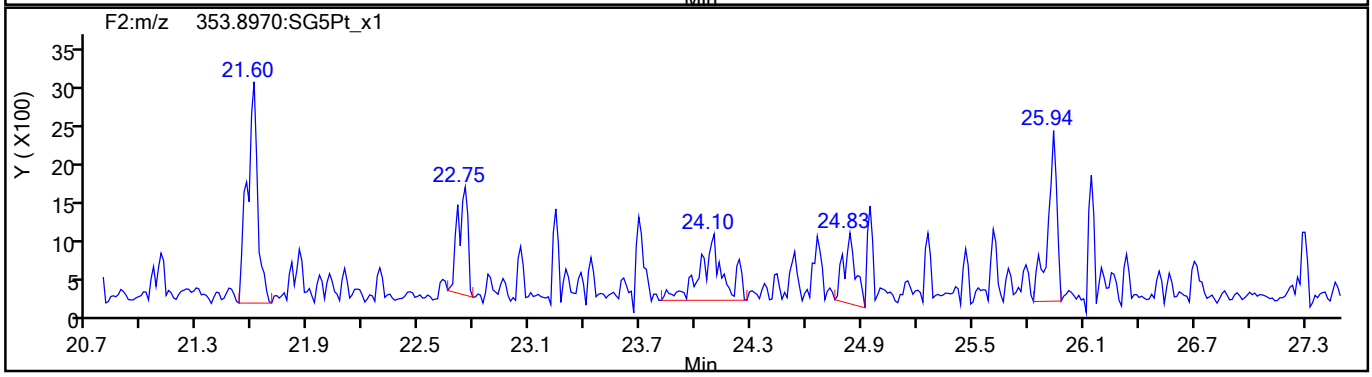

783360

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

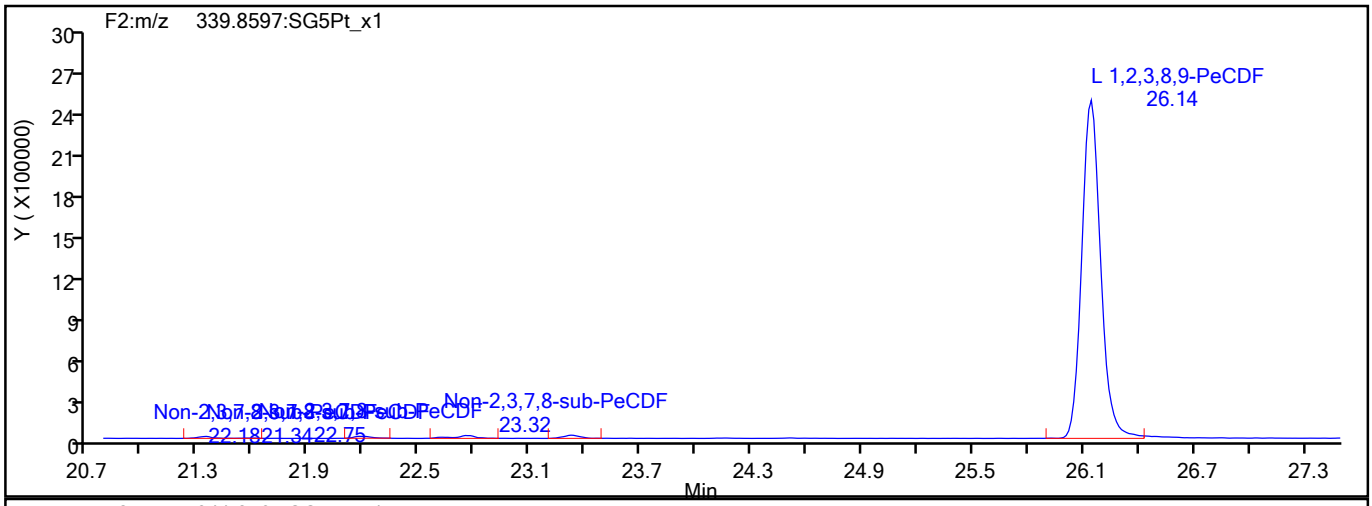

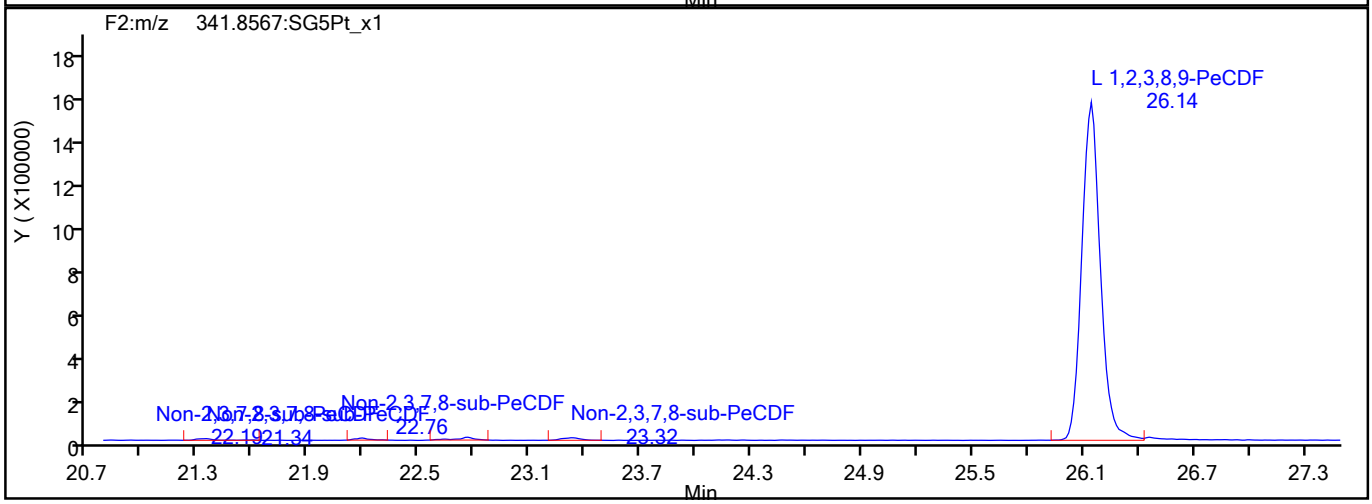

PeCDF Interference Mass

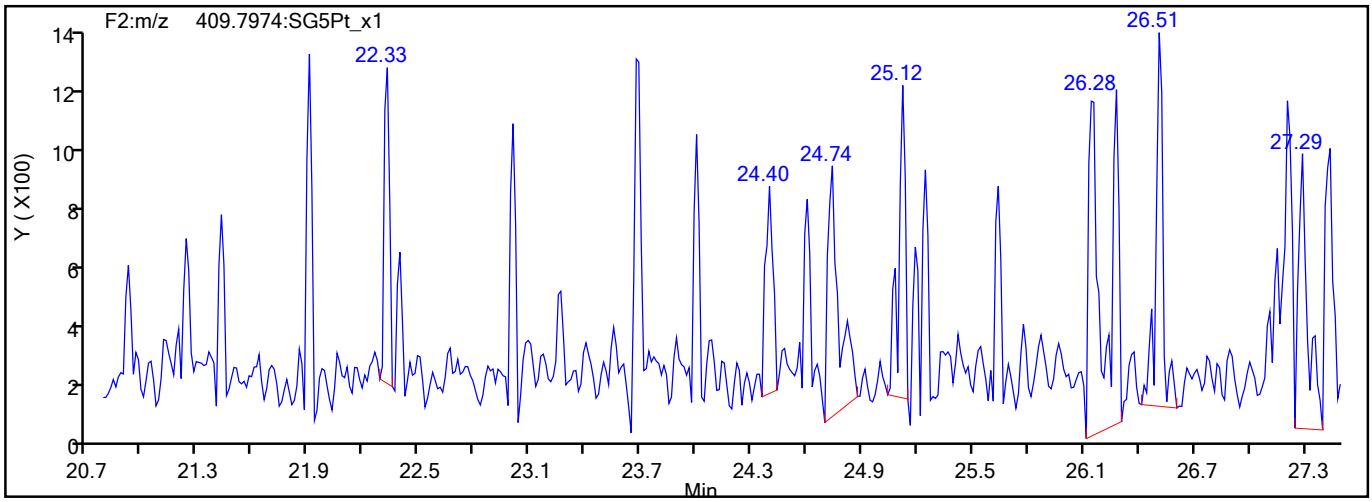

783361

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

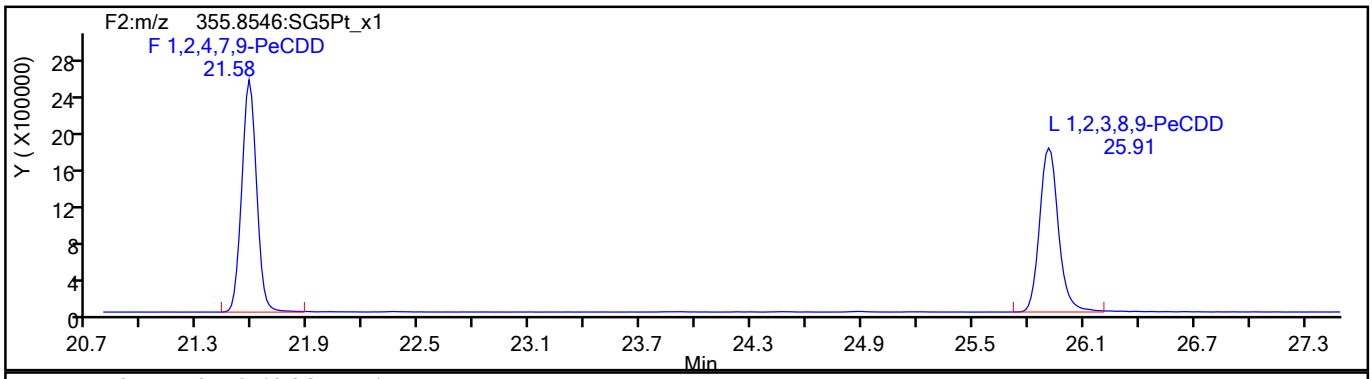

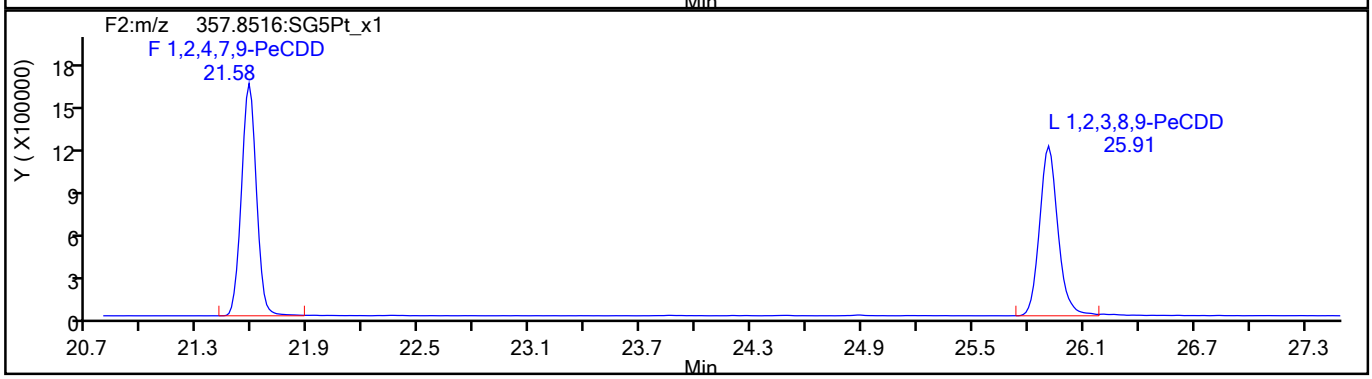

PeCDD Standards

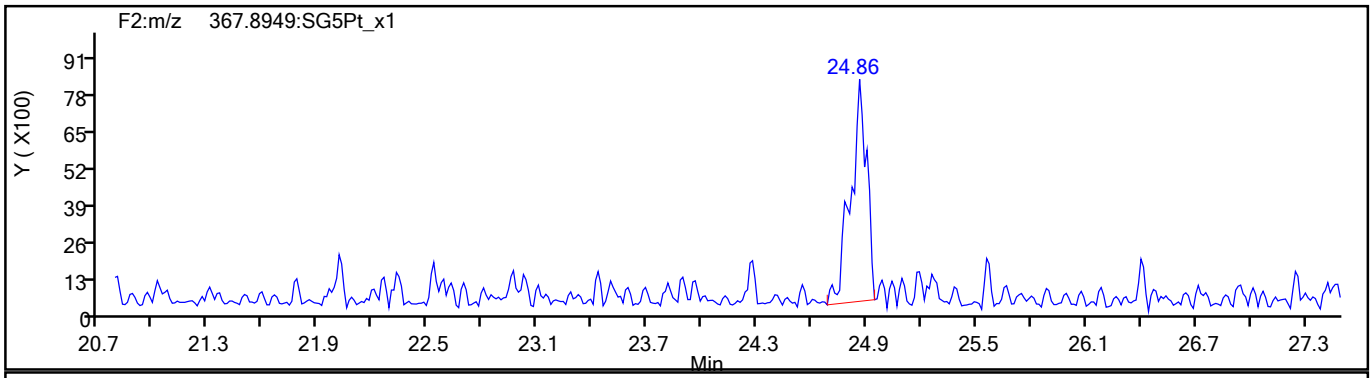

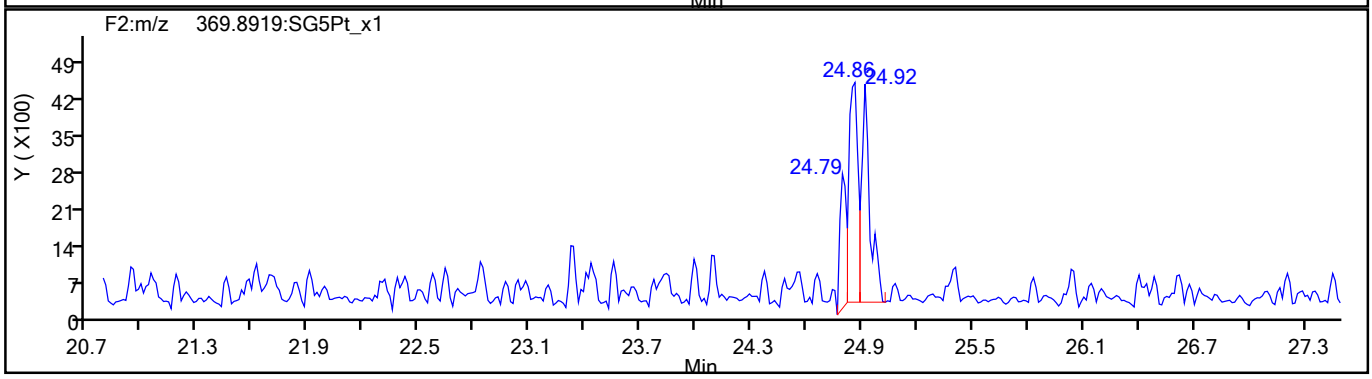

783362

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

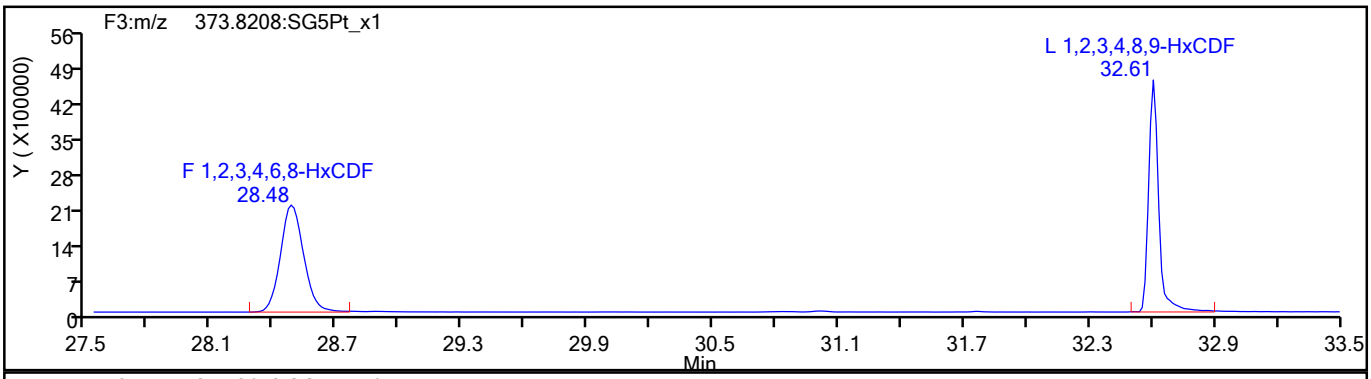

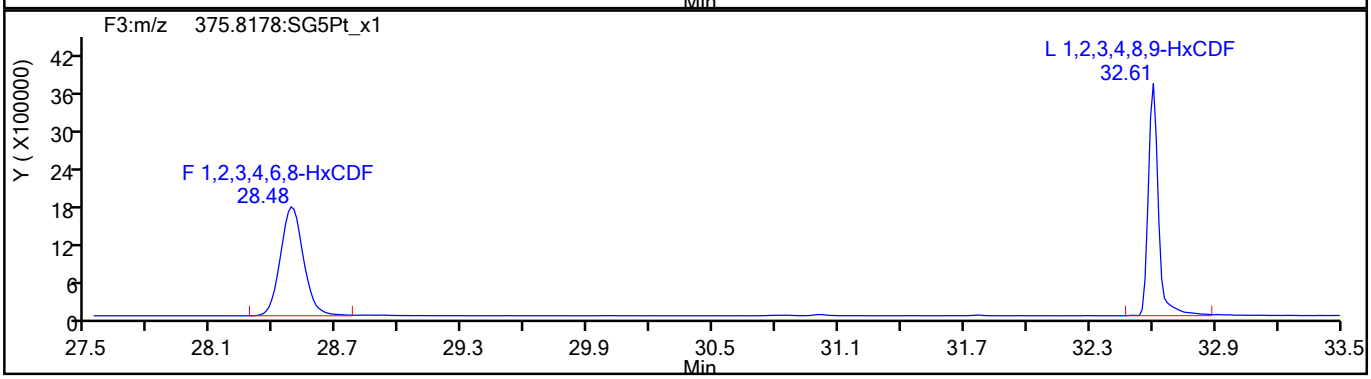

HxCDF Standards

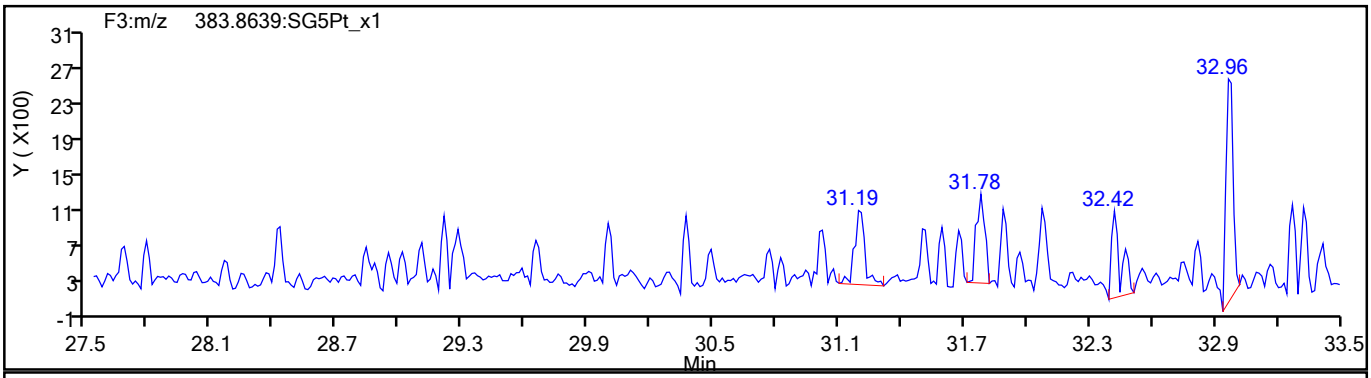

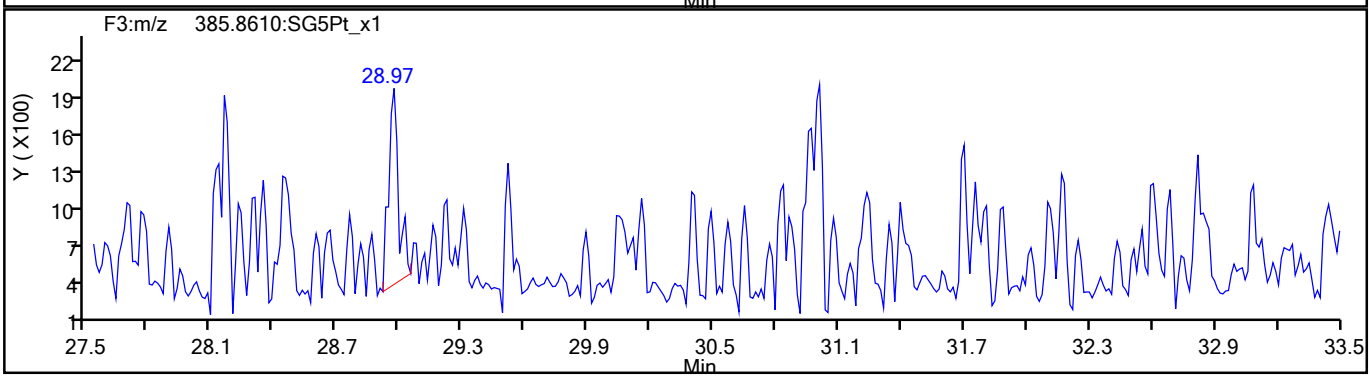

783363

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

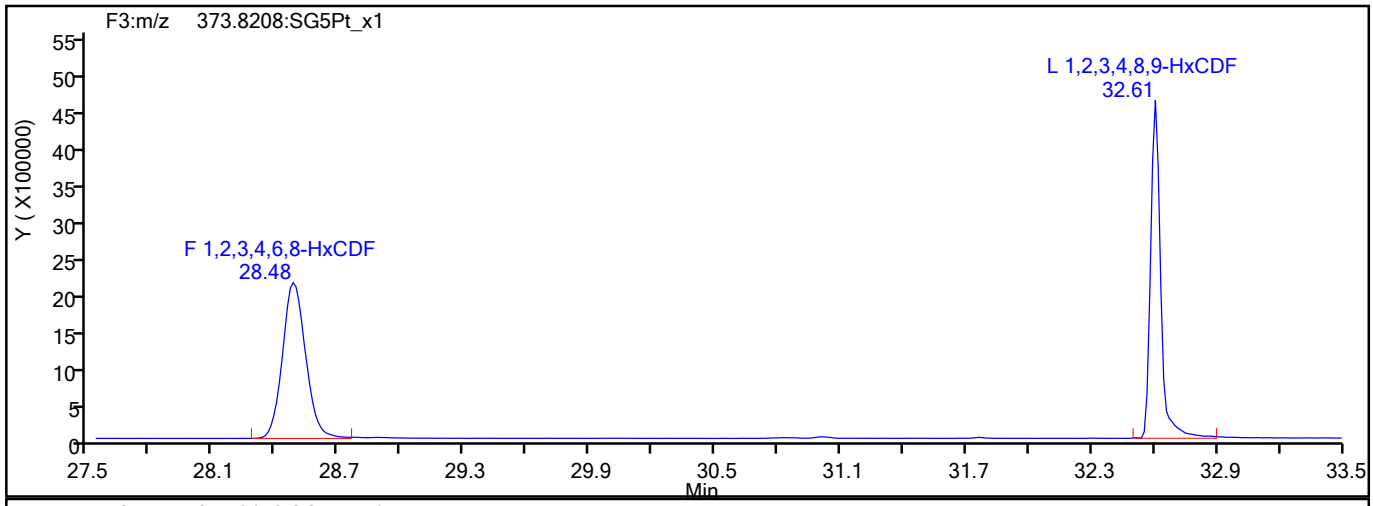

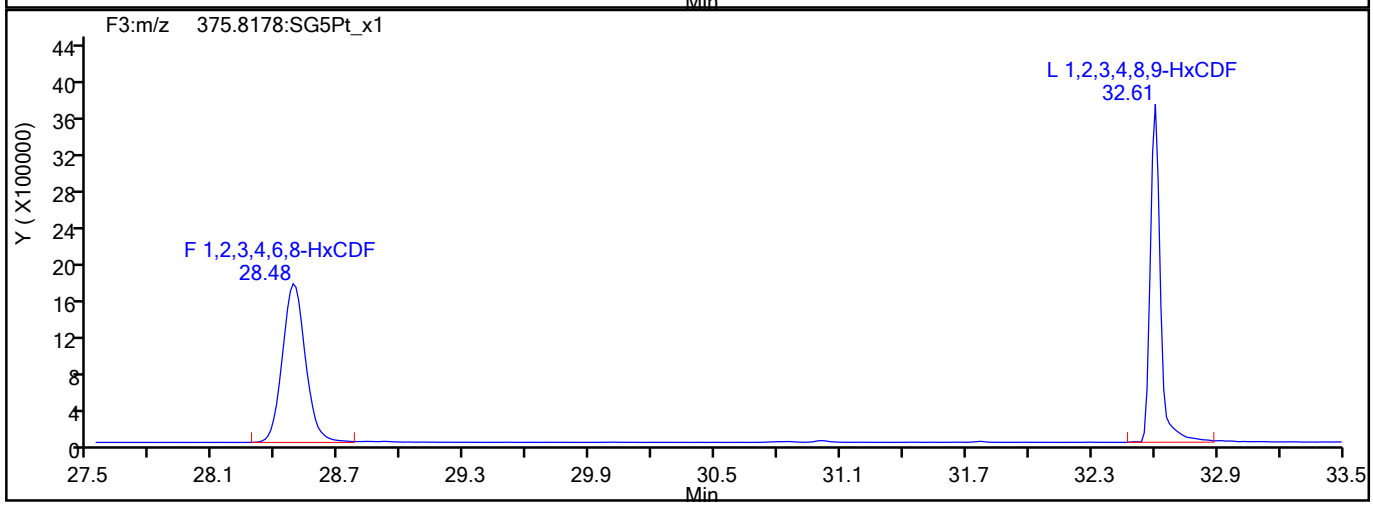

HxCDF Interference Mass

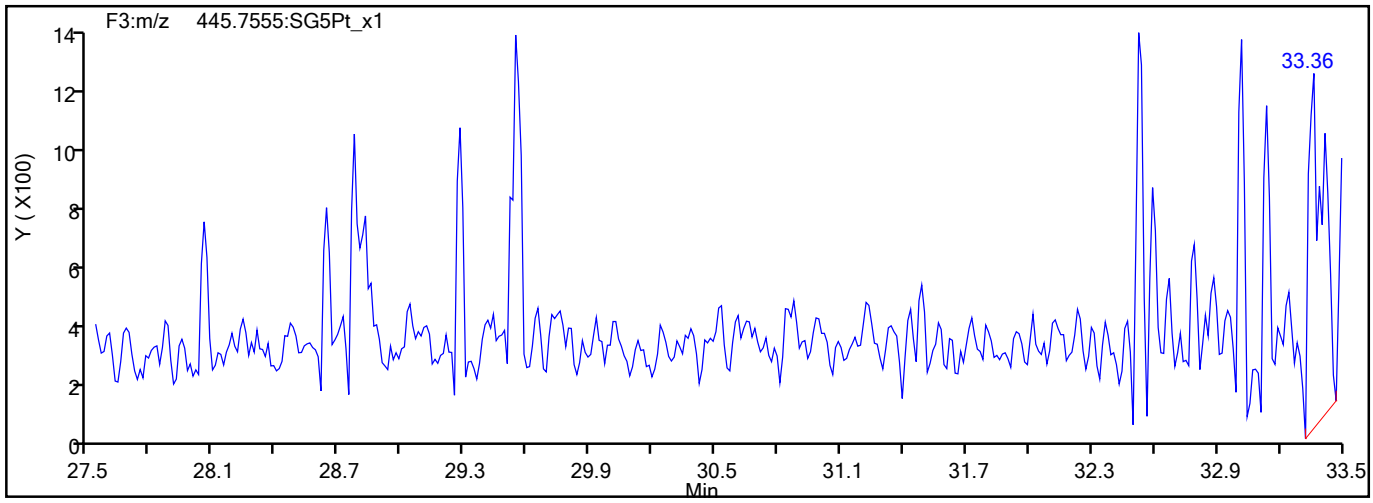

783364

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Eurofins TestAmerica, Sacramento

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HpCDF

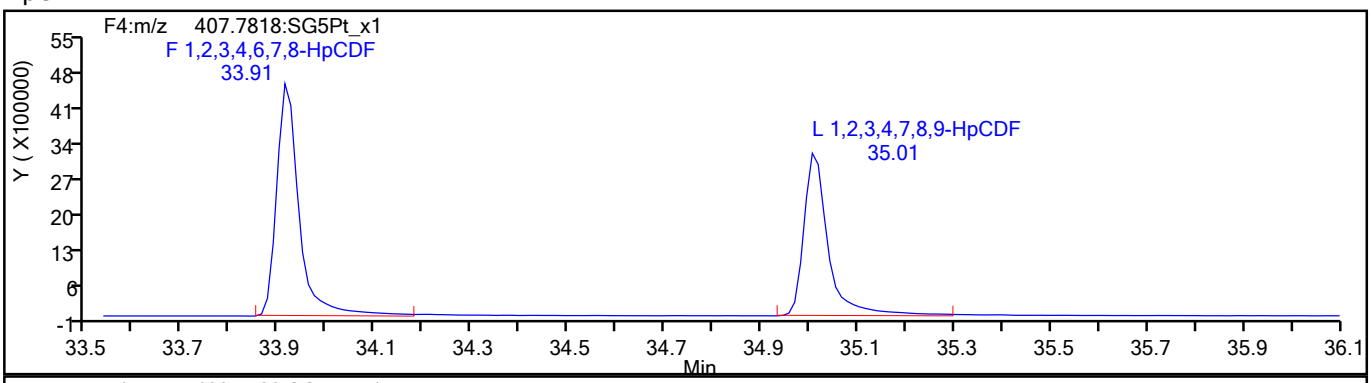

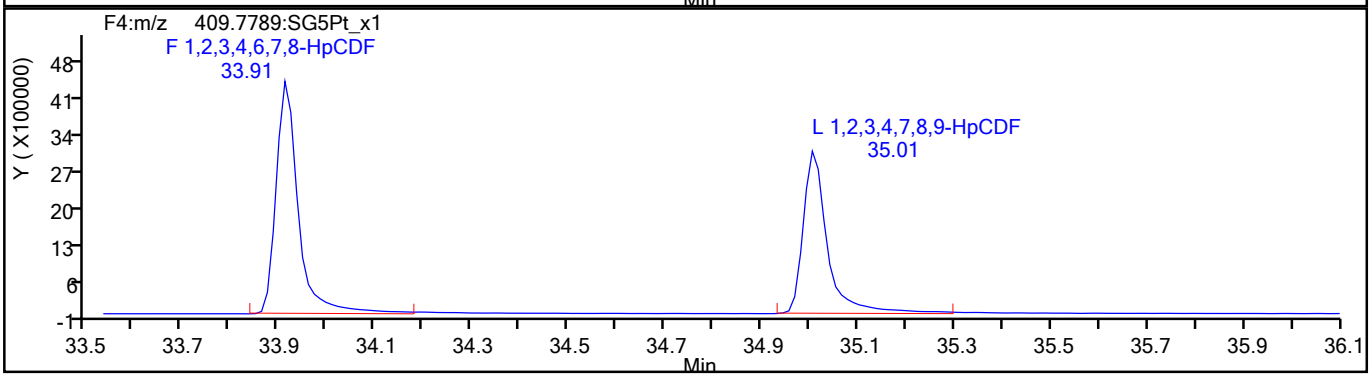

HpCDF Standards

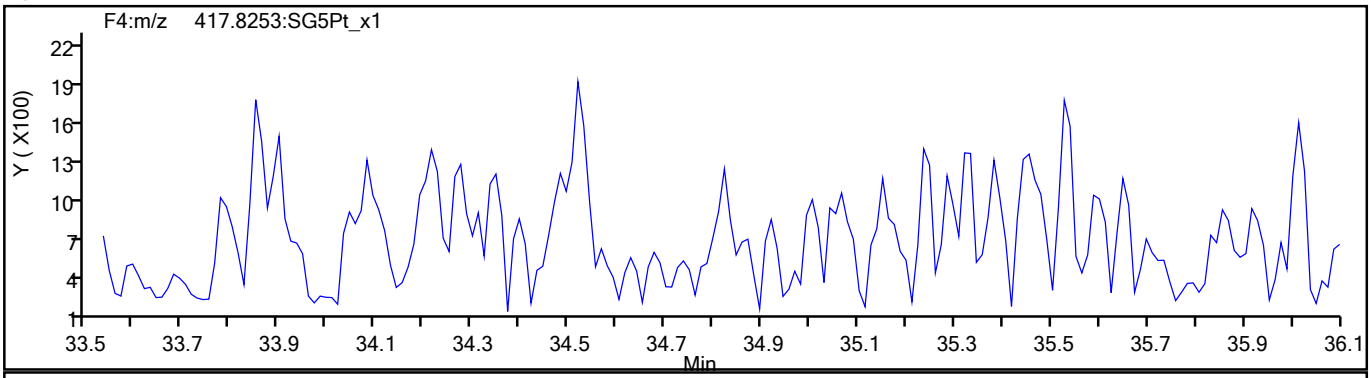

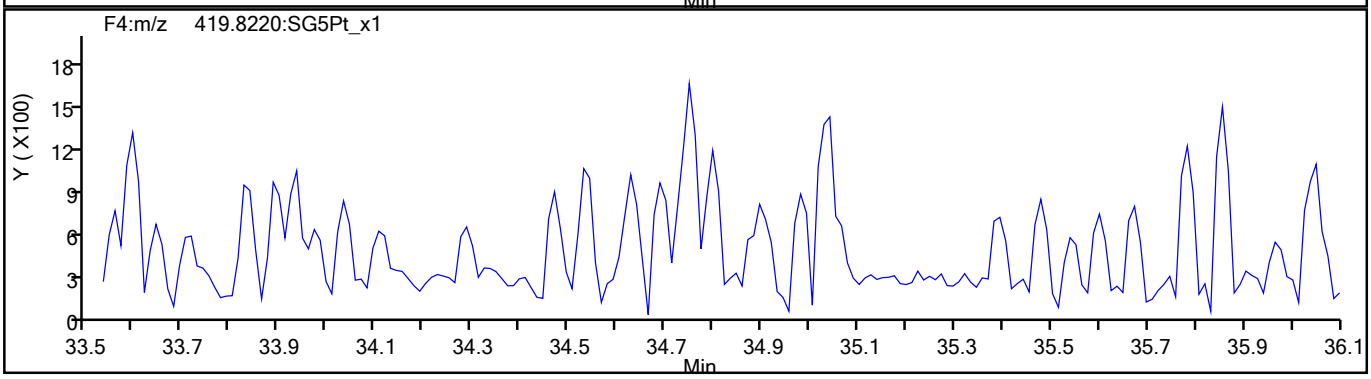

783365

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

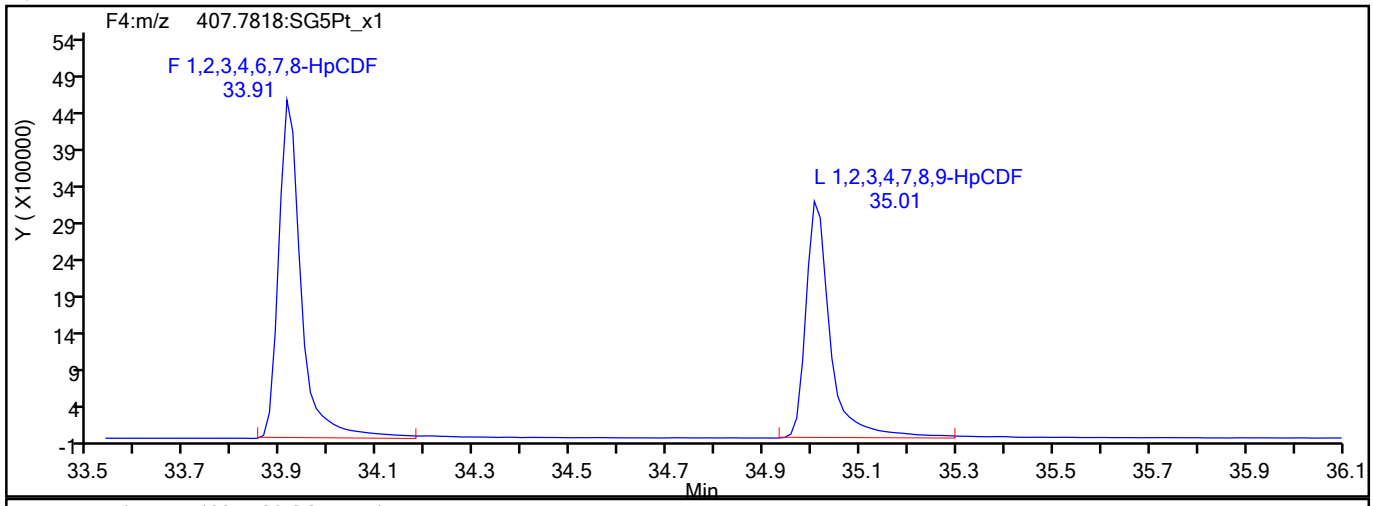

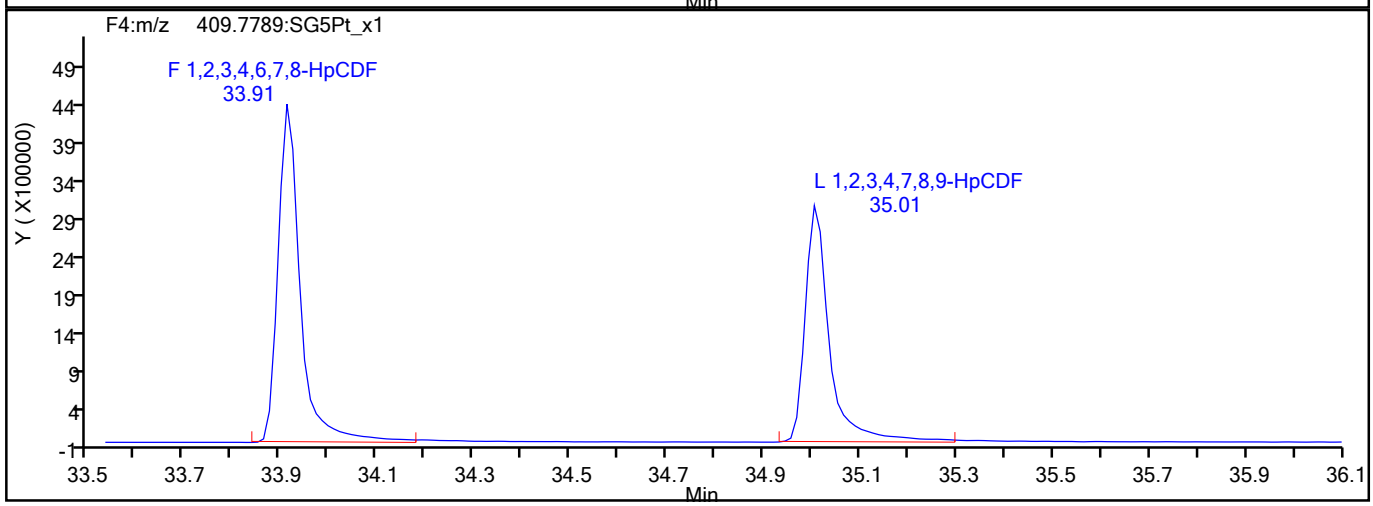

HpCDF Interference Mass

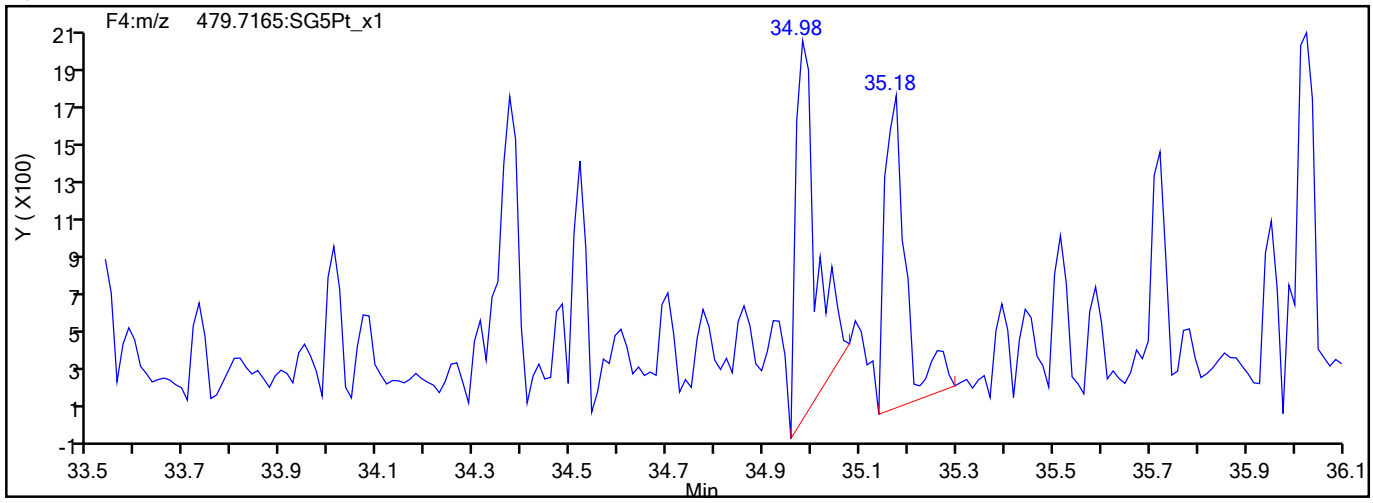

783366

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

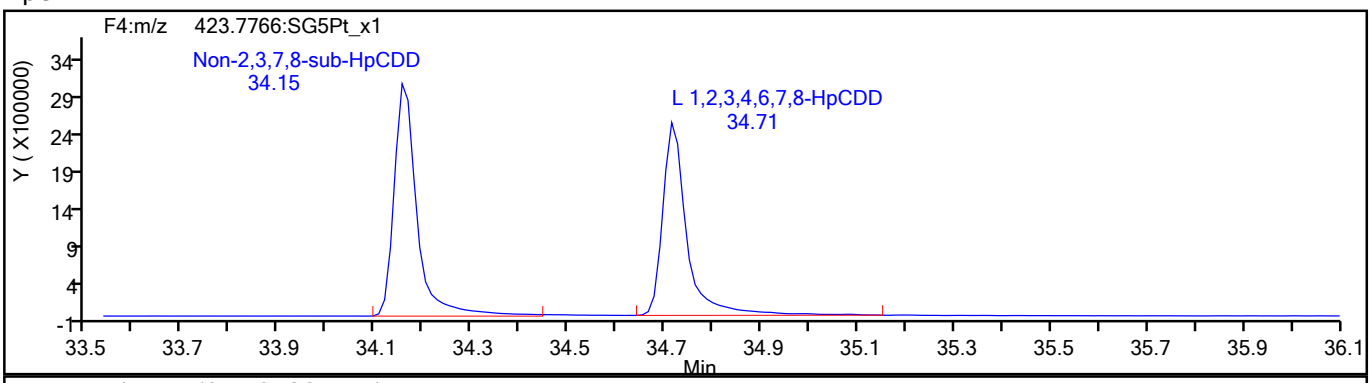

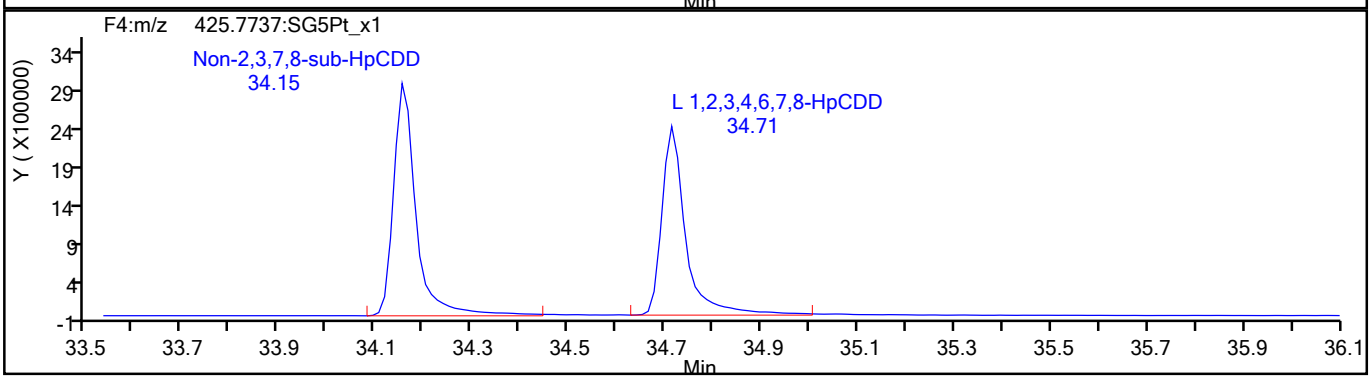

HpCDD Standards

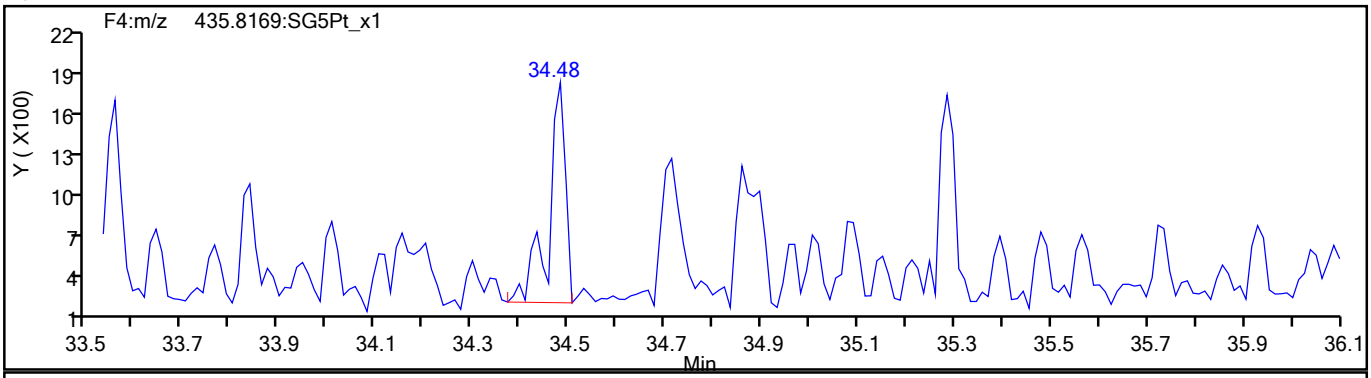

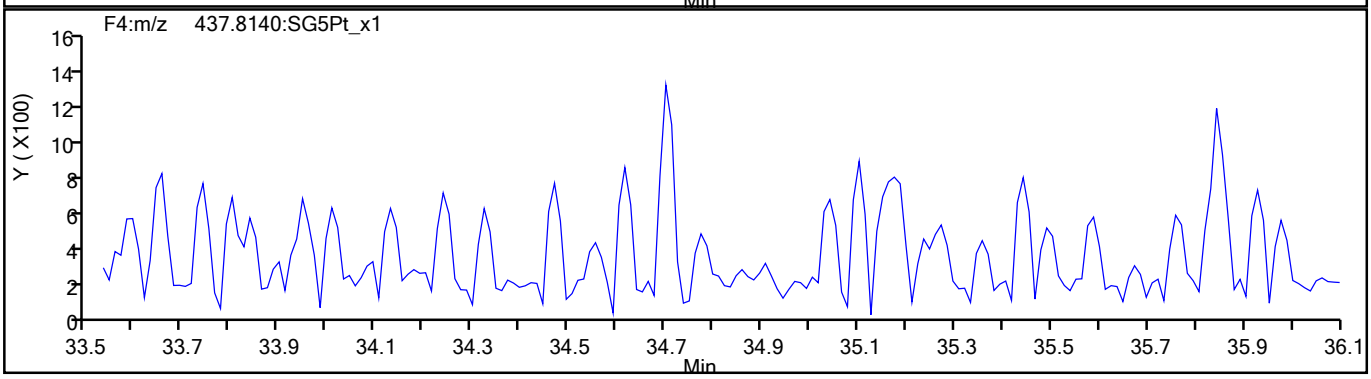

783367

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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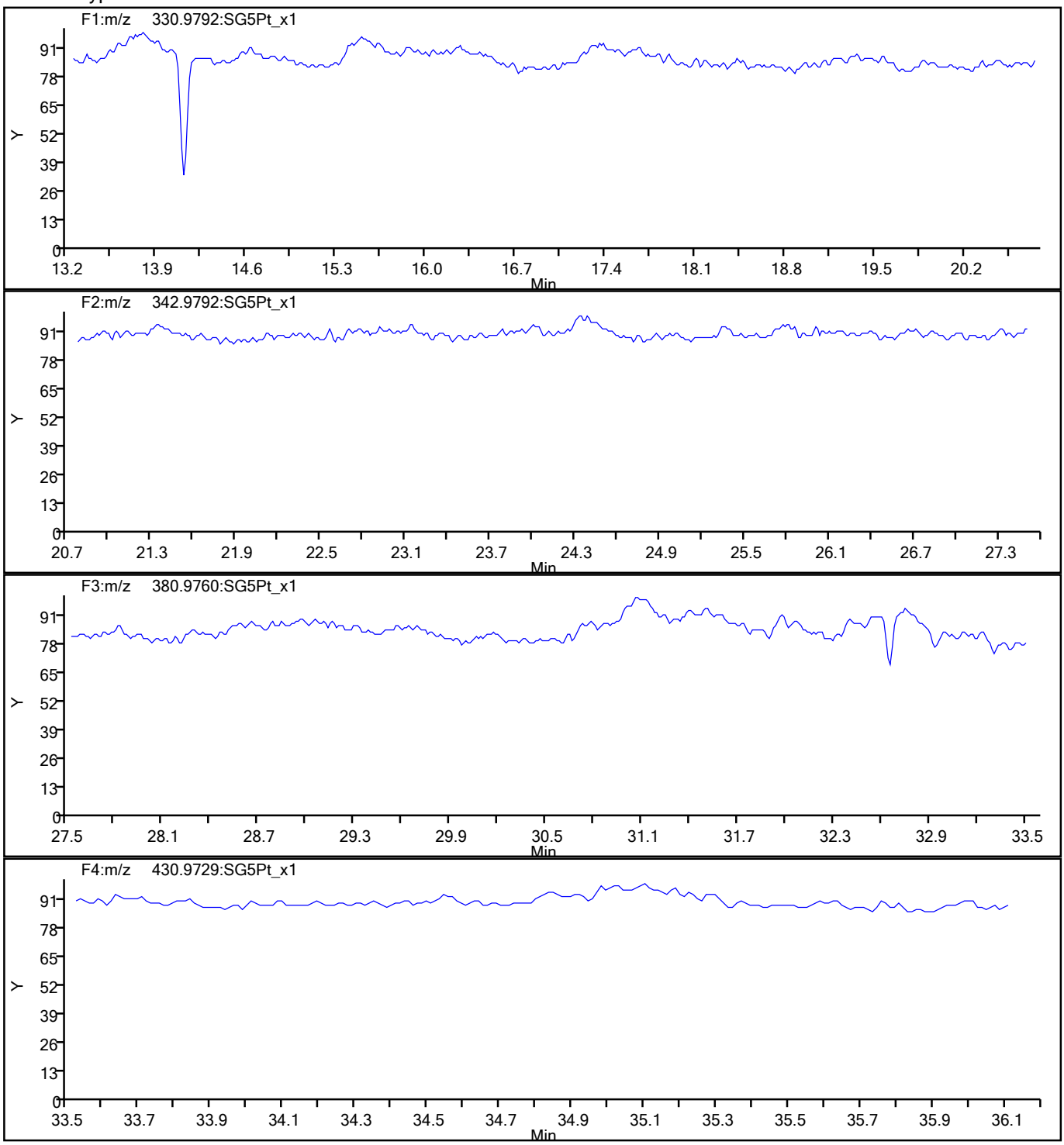

783368

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

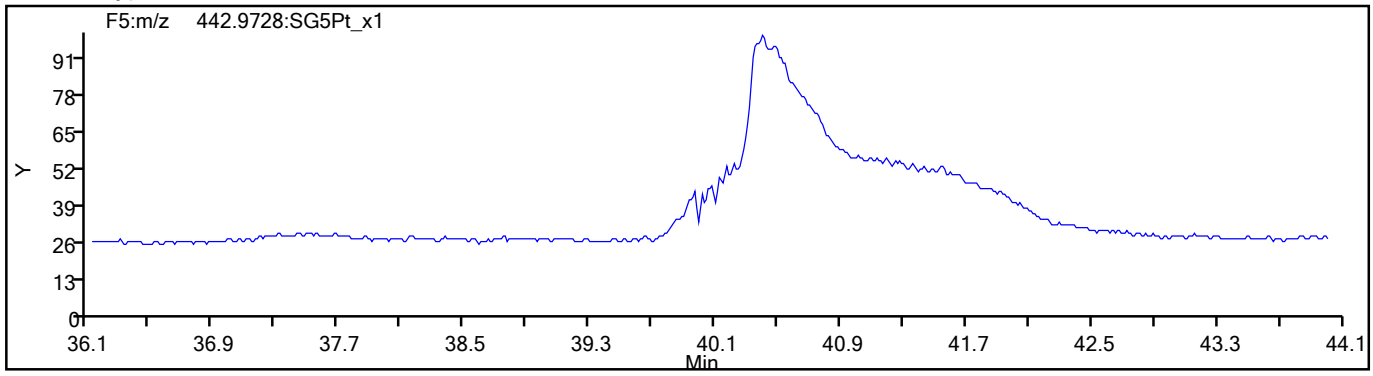

783369

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:15:56 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081821 WDM HRDXNCP_00044
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:08 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:20:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.295	69420187	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.326	151843787	0.77	1.0239	85.4	85.4	0.4310	0.4310		
A Non-2,3,7,8-sub-TCDF	17.159	133612459	0.77	1.0239	75.2	75.2	0.4310	38.3		
S Total TCDF					160.6	160.6	0.4310	0.4310		
D 13C-2,3,7,8-TCDD	18.006	37918605	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.021	53423673	0.78	1.2541	44.9	44.9	0.2530	0.2530		
A Non-2,3,7,8-sub-TCDD	17.620	92642138	0.77	1.2541	77.9	77.9	0.2530	42.0		
S Total TCDD					122.9	122.9	0.2530	0.2530		
A F1 PeCDFs	20.229	63182212	1.57	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.445	50866521	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.696	79837324	1.59	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.410	52807043	1.22	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.816	39471925	1.25	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.742	46907850	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	34.823	37538389	1.06	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.283						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.544	29701953	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.892	84061745	0.77							
1,3,6,8-TCDD	15.799	52404413	0.79							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.188	55973679	0.78							
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427	2869844	0.78							
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	32.074	38128527	1.28							
1,2,3,4,8,9-HxCDF	32.393	46915349	1.22							
1,2,3,4,6,7,9-HpCDD	33.985	33701057	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:15:56 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081821 WDM HRDXNCP_00044
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:08 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:20:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.295	17.295	0	1.000	30119156	7040410	10258	25645	686		
317.9389	17.295	17.295	0	1.000	39301031	9052899	8361	20902	1083	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.326	17.326	0	1.002	65844552	14068992	28643	71607	491		
305.8987	17.326	17.326	0	1.002	85999235	18144170	42380	105950	428	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	18.188	17.159	62	1.052	28576959	6224057	28643	71607	217		
305.8987	18.173	17.159	61	1.051	36892458	8010443	42380	105950	189	0.77(0.65-0.89)	
303.9016	19.125	17.159	118	1.106	29540653	6011607	28643	71607	210		
305.8987	19.125	17.159	118	1.106	38602389	7894370	42380	105950	186	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.006	18.006	0	1.000	16843563	3663772	4259	10647	860		
333.9339	18.006	18.006	0	1.000	21075042	4575106	3564	8910	1284	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.021	18.021	0	1.001	23429132	5046080	11037	27592	457		
321.8936	18.021	18.021	0	1.001	29994541	6481319	15105	37762	429	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.900	17.620	17	0.994	18501501	4422101	11037	27592	401		
321.8936	17.900	17.620	17	0.994	24188347	5763757	15105	37762	382	0.76(0.65-0.89)	
319.8965	19.125	17.620	90	1.062	21846080	4468756	11037	27592	405		
321.8936	19.125	17.620	90	1.062	28106210	5724522	15105	37762	379	0.78(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.412	20.229	-49	1.000	38615522	8205117	1956	4890	4195		
341.8567	19.412	20.229	-49	1.000	24566690	5135283	1400	3500	3668	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	22.340	23.445	-66	1.000	228968	28585	4870	12175	6		
341.8567	22.353	23.445	-65	1.000	192408	20551	3418	8545	6	1.19(1.32-1.78)	
339.8597	22.913	23.445	-32	1.000	154598	20633	4870	12175	4		
341.8567	22.913	23.445	-32	1.000	84101	12272	3418	8545	4	1.84(1.32-1.78)	
339.8597	25.612	23.445	130	1.000	30966531	3822830	4870	12175	785		
341.8567	25.612	23.445	130	1.000	19308844	2404223	3418	8545	703	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.181	23.696	-151	1.000	25265729	4092592	5766	14415	710		
357.8516	21.181	23.696	-151	1.000	15918876	2558015	3809	9522	672	1.59(1.32-1.78)	
355.8546	25.394	23.696	102	1.000	23797384	3085081	5766	14415	535		
357.8516	25.394	23.696	102	1.000	14855335	1944381	3809	9522	510	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.894	30.410	-151	1.000	28980246	3431886	9045	22612	379		
375.8178	27.894	30.410	-151	1.000	23826797	2865744	7126	17815	402	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.465	30.816	-81	1.000	21961037	2463781	13897	34742	177		
391.8127	29.465	30.816	-81	1.000	17510888	1966381	7540	18850	261	1.25(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.742	33.742	0	1.000	23982917	7200292	41768	104420	172		
409.7789	33.742	33.742	0	1.000	22924933	7020417	31948	79870	220	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.823	34.823	0	1.000	19292477	4755591	41768	104420	114		
409.7789	34.823	34.823	0	1.000	18245912	4549449	31948	79870	142	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.283						41768	104420			
409.7789	34.283						31948	79870			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.544	34.544	0	1.000	15149420	4052775	21767	54417	186		
425.7737	34.544	34.544	0	1.000	14552533	3832849	21109	52772	182	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						21767	54417			
425.7737	33.504						21109	52772			
1,3,6,8-TCDF											
303.9016	14.892	14.892	0		36536834	10411762	28643	71607	364		
305.8987	14.876	14.892	-1		47524911	13356055	42380	105950	315	0.77(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.799	15.799	0		23209186	6396511	11037	27592	580		
321.8936	15.799	15.799	0		29195227	8036642	15105	37762	532	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.537						28643	71607			
305.8987	17.537						42380	105950			
1,2,3,7-TCDD											
319.8965	18.188	18.188	0		24514458	5166590	11037	27592	468		
321.8936	18.188	18.188	0		31459221	6563099	15105	37762	434	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,9-TCDF											
303.9016	18.414						28643	71607			
305.8987	18.414						42380	105950			
1,2,3,9-TCDD											
319.8965	18.414						11037	27592			
321.8936	18.414						15105	37762			
1,2,8,9-TCDD											
319.8965	19.382						11037	27592			
1,2,8,9-TCDF											
303.9016	19.427	19.427	0		1254031	169921	28643	71607	6		
305.8987	19.427	19.427	0		1615813	214042	42380	105950	5	0.78(0.65-0.89)	
1,3,4,6,8-PeCDF											
339.8597	19.669						1956	4890			
341.8567	19.669						1400	3500			
1,2,4,7,9-PeCDD											
355.8546	21.480						5766	14415			
357.8516	21.480						3809	9522			
1,2,3,8,9-PeCDD											
355.8546	25.790						5766	14415			
357.8516	25.790						3809	9522			
1,2,3,8,9-PeCDF											
339.8597	26.021						4870	12175			
341.8567	26.021						3418	8545			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						9045	22612			
375.8178	28.333						7126	17815			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						13897	34742			
391.8127	29.890						7540	18850			
1,2,3,4,6,7-HxCDD											
389.8157	32.074	32.074	0		21375834	5308020	13897	34742	382		
391.8127	32.074	32.074	0		16752693	4221204	7540	18850	560	1.28(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.393	32.393	0		25737556	6730514	9045	22612	744		
375.8178	32.393	32.393	0		21177793	5495534	7126	17815	771	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.985	33.985	0		17203699	5138812	21767	54417	236		
425.7737	33.985	33.985	0		16497358	4928736	21109	52772	233	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.159

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	69420187	16093309

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	69420187	16093309

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.188	28576959	6224057	36892458	8010443	36.8	0.77	
19.125	29540653	6011607	38602389	7894370	38.3	0.77	
Signal Totals:							
	58117612	12235664	75494847	15904813			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	133612459	28140477				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 75.190 = (133612459 * 40.000) / (69420187 * 1.024)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.620

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	37918605	8238878

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	37918605	8238878

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.900	18501501	4422101	24188347	5763757	35.9	0.76	
19.125	21846080	4468756	28106210	5724522	42.0	0.78	
Signal Totals:							
	40347581	8890857	52294557	11488279			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	92642138	20379136				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 77.925 = (92642138 * 40.000) / (37918605 * 1.254)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

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Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

F1 PeCDFs, RT: 20.229

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.412	38615522	8205117	24566690	5135283		1.57	
Signal Totals:							
	38615522	8205117	24566690	5135283			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63182212	13340400				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (63182212 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.445

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.340	228968	28585	192408	20551		1.19	R
22.913	154598	20633	84101	12272		1.84	R
25.612	30966531	3822830	19308844	2404223		1.60	
Signal Totals:							
	31350097	3872048	19585353	2437046			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	50935450	6309094				1.60	RQ
	50866521	6305372					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (50935450 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (50866521 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.181	25265729	4092592	15918876	2558015		1.59	
25.394	23797384	3085081	14855335	1944381		1.60	
Signal Totals:							
	49063113	7177673	30774211	4502396			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	79837324	11680069				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (79837324 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.410

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.894	28980246	3431886	23826797	2865744		1.22	
Signal Totals:							
	28980246	3431886	23826797	2865744			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	52807043	6297630				1.22	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (52807043 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 30.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.465	21961037	2463781	17510888	1966381		1.25	
Signal Totals:							
	21961037	2463781	17510888	1966381			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	39471925	4430162				1.25	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (39471925 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

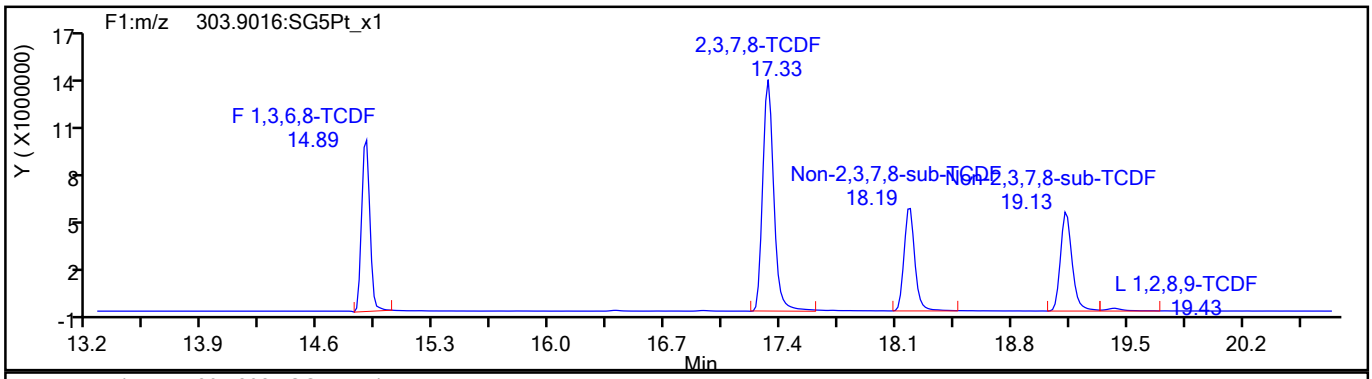

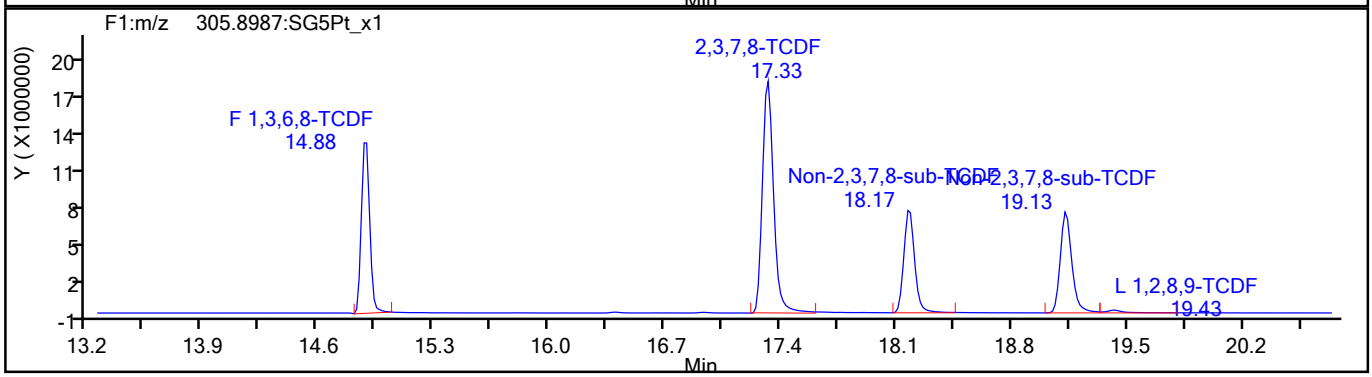

TCDF Standards

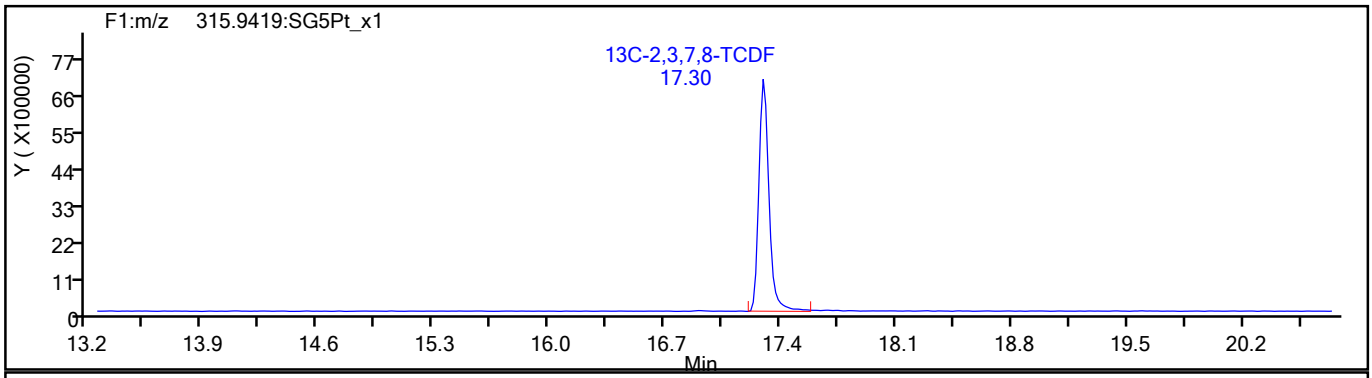

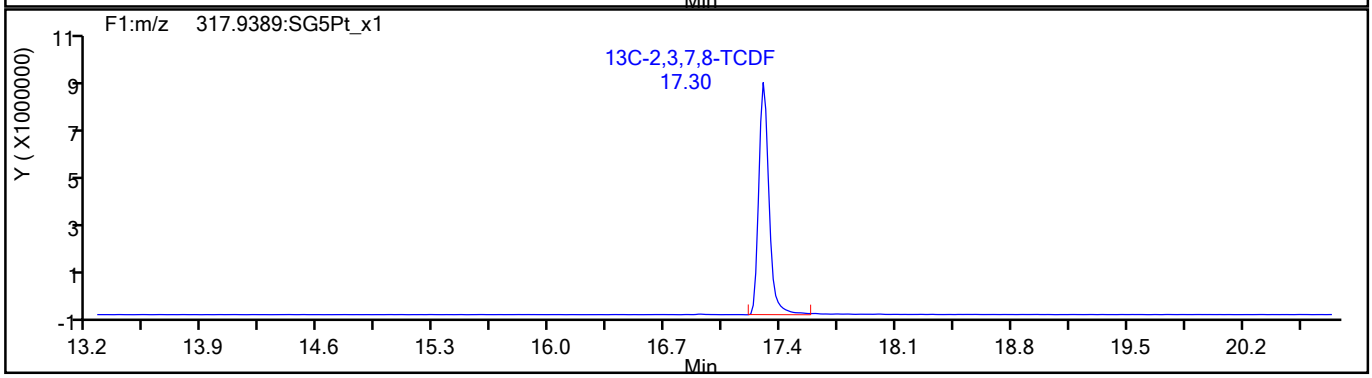

783382

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

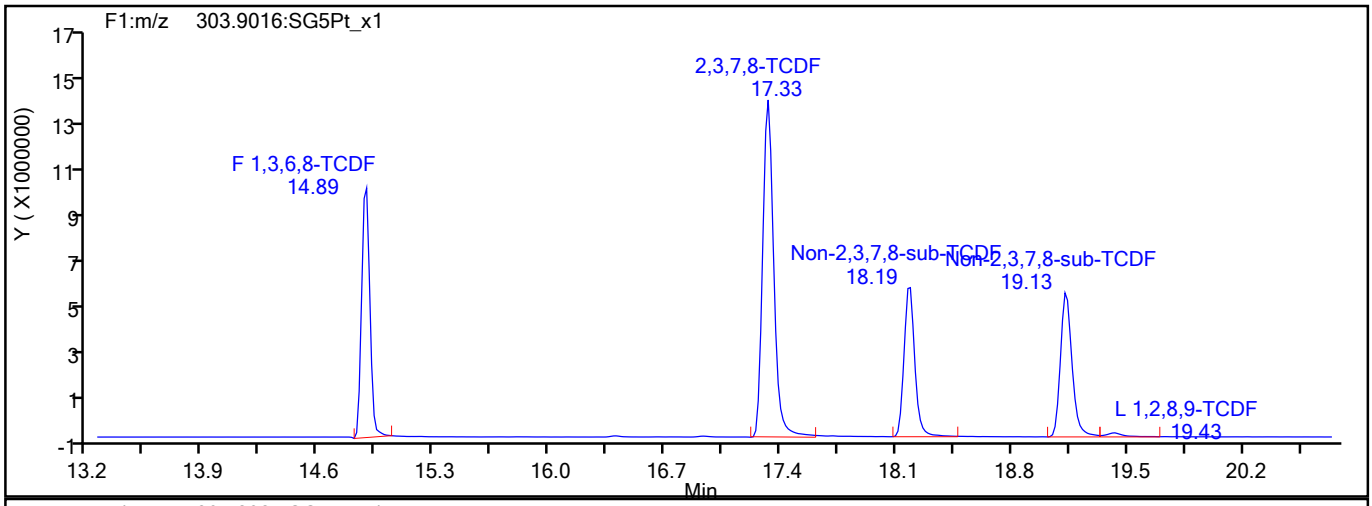

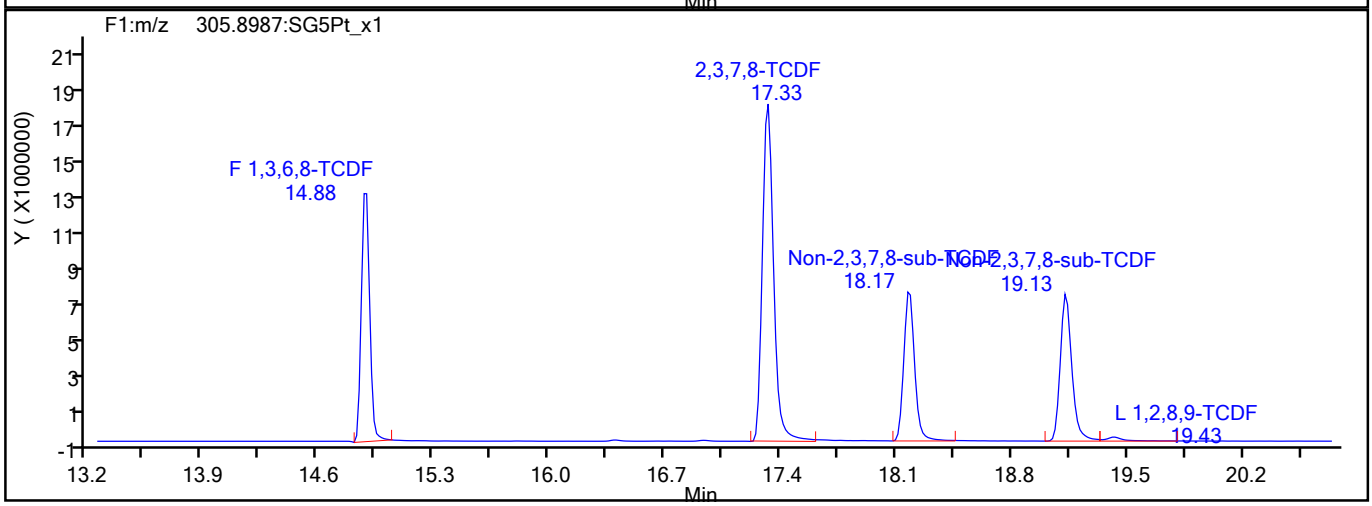

TCDF Interference Mass

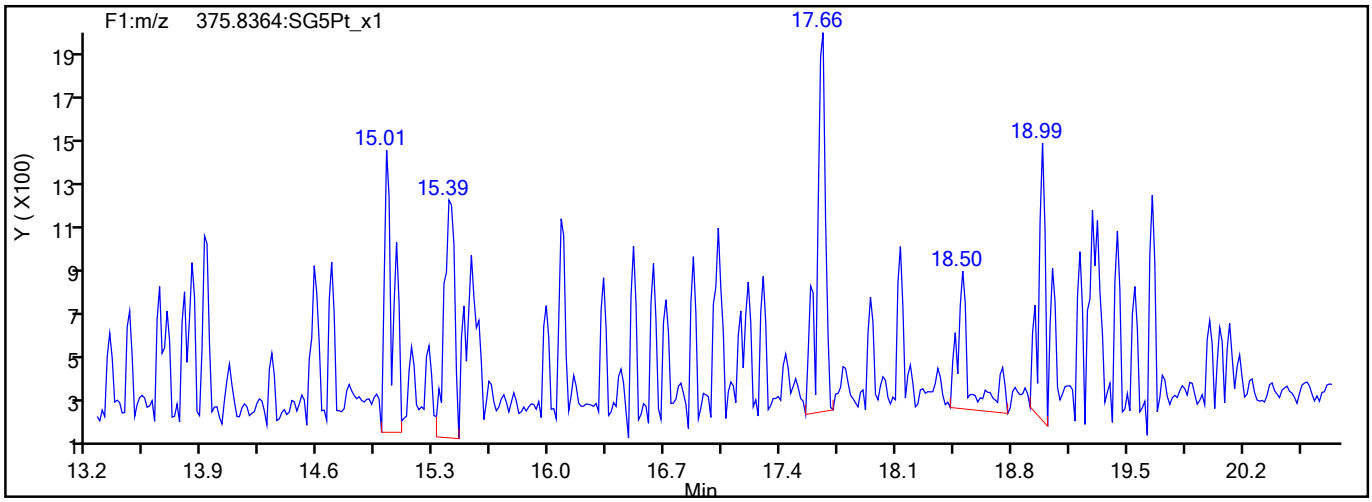

783383

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

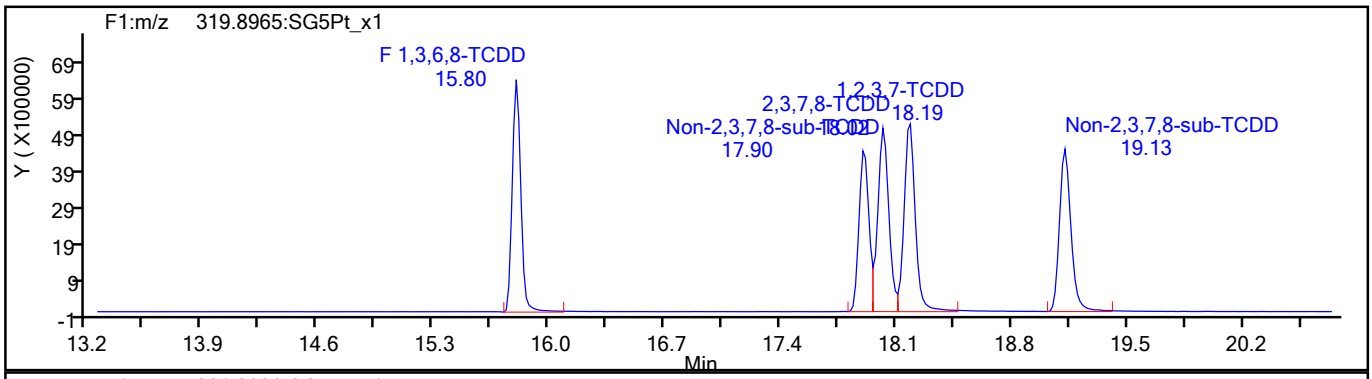

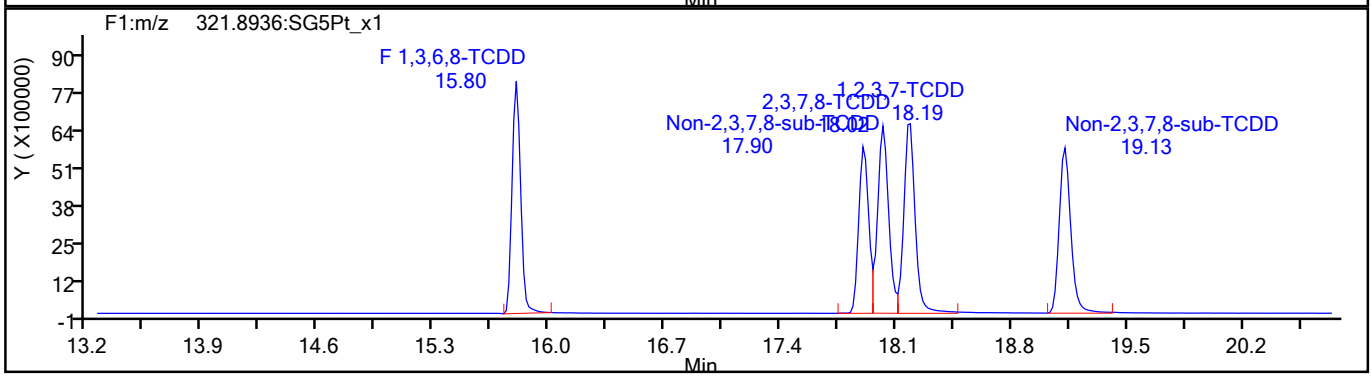

TCDD Standards

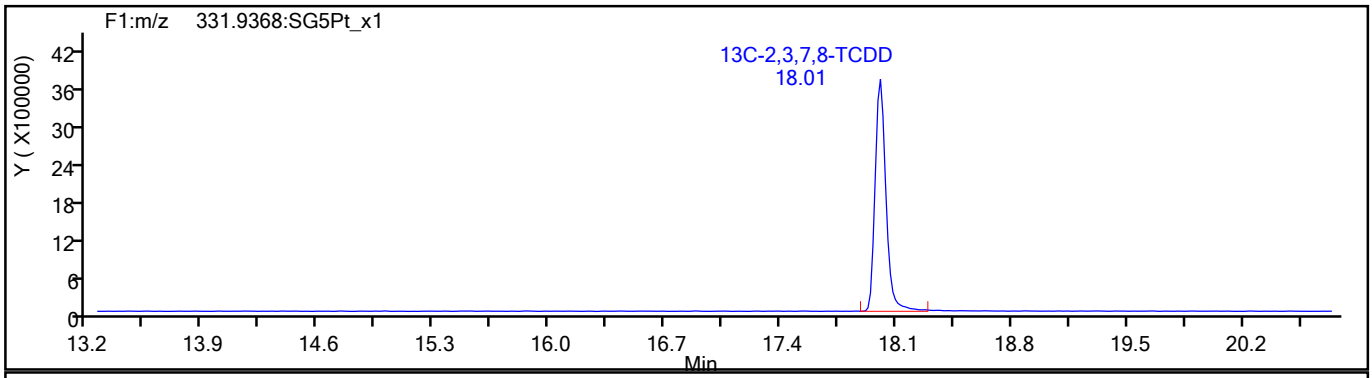

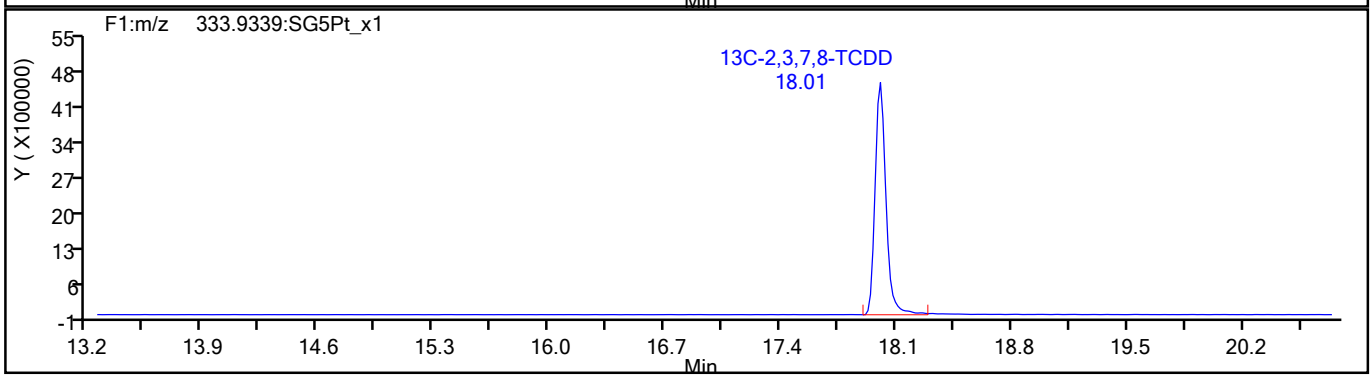

783384

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

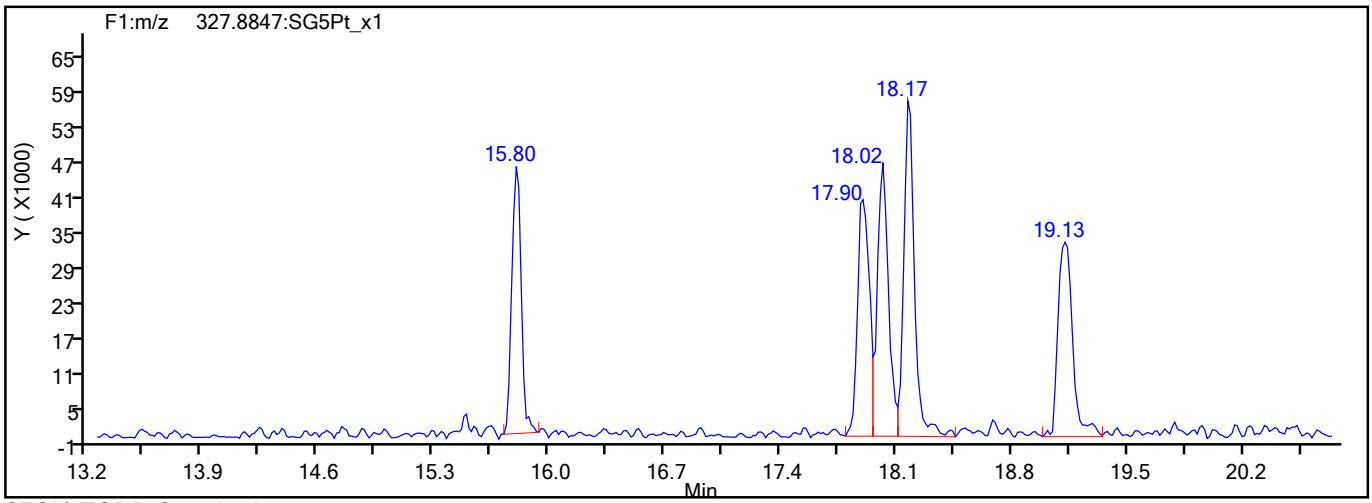

37Cl4-TCDD Standards

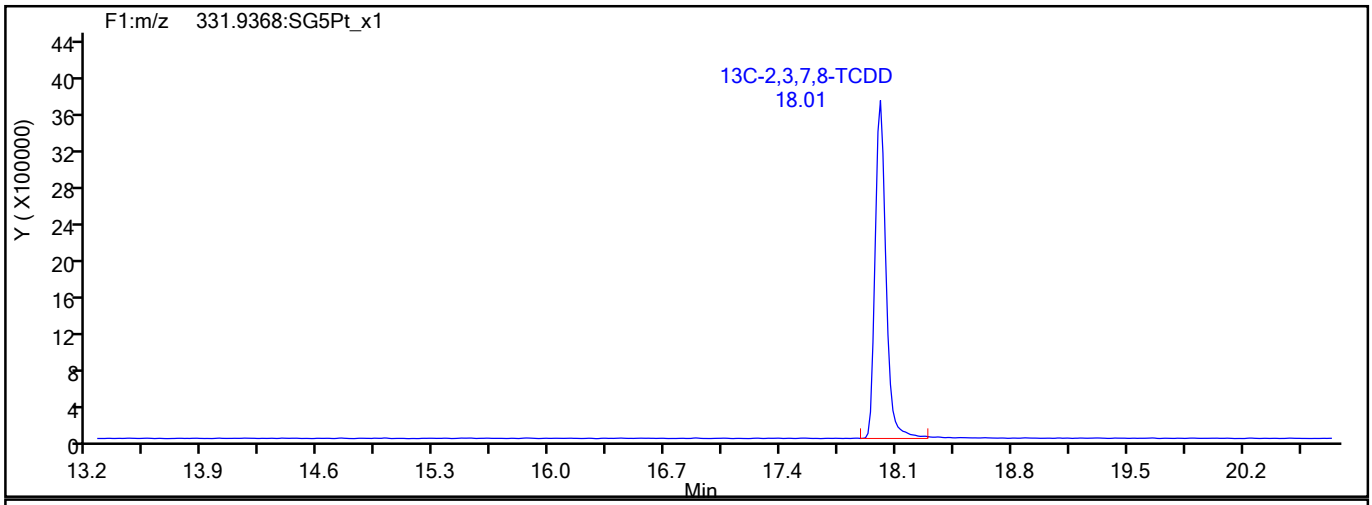

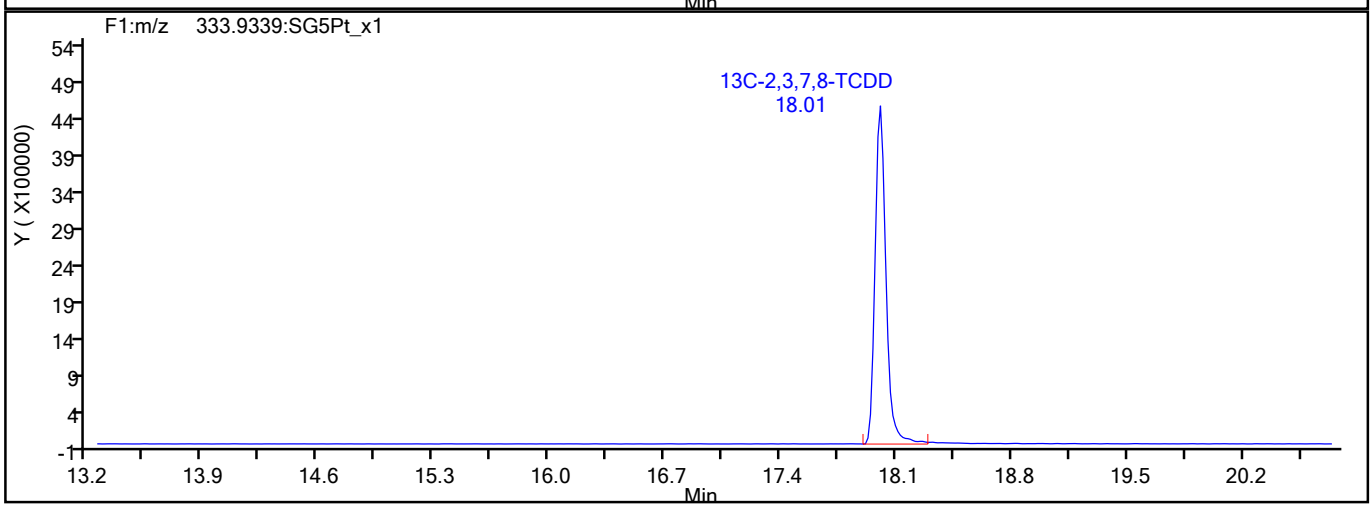

783385

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

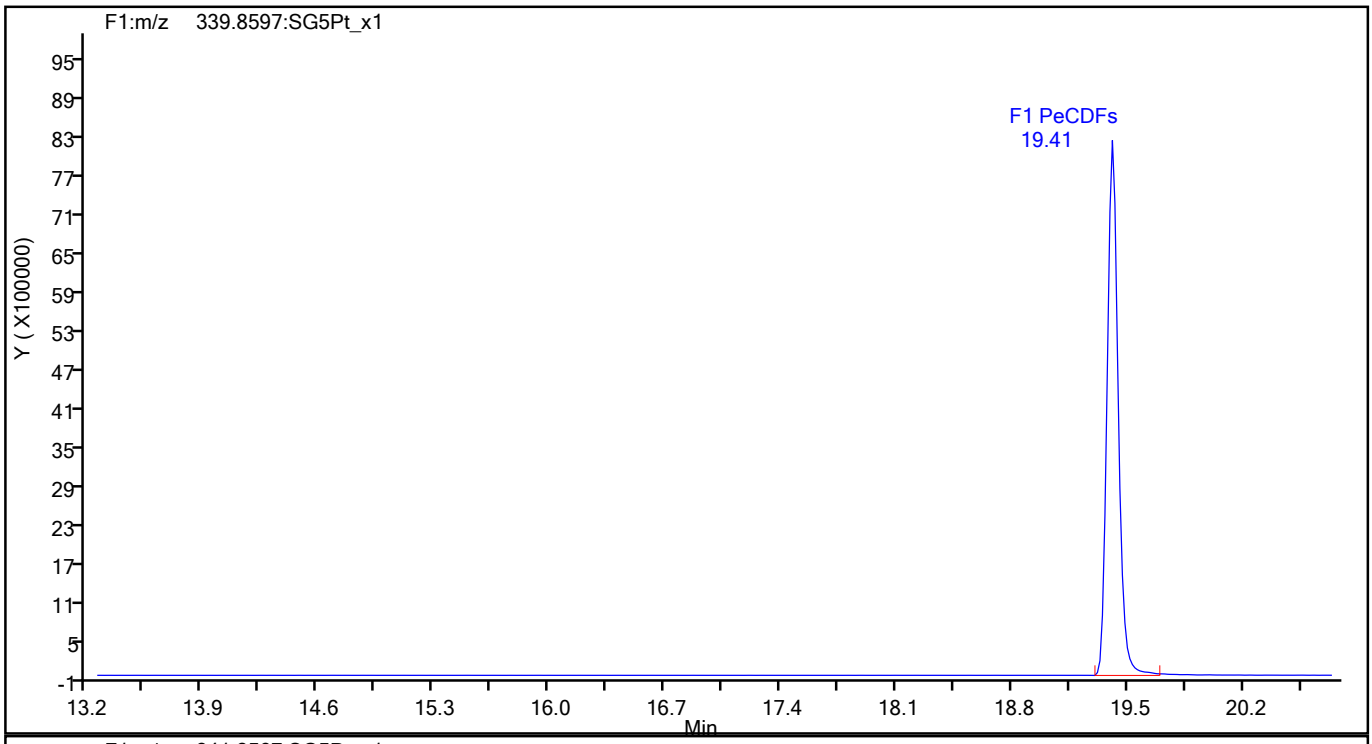

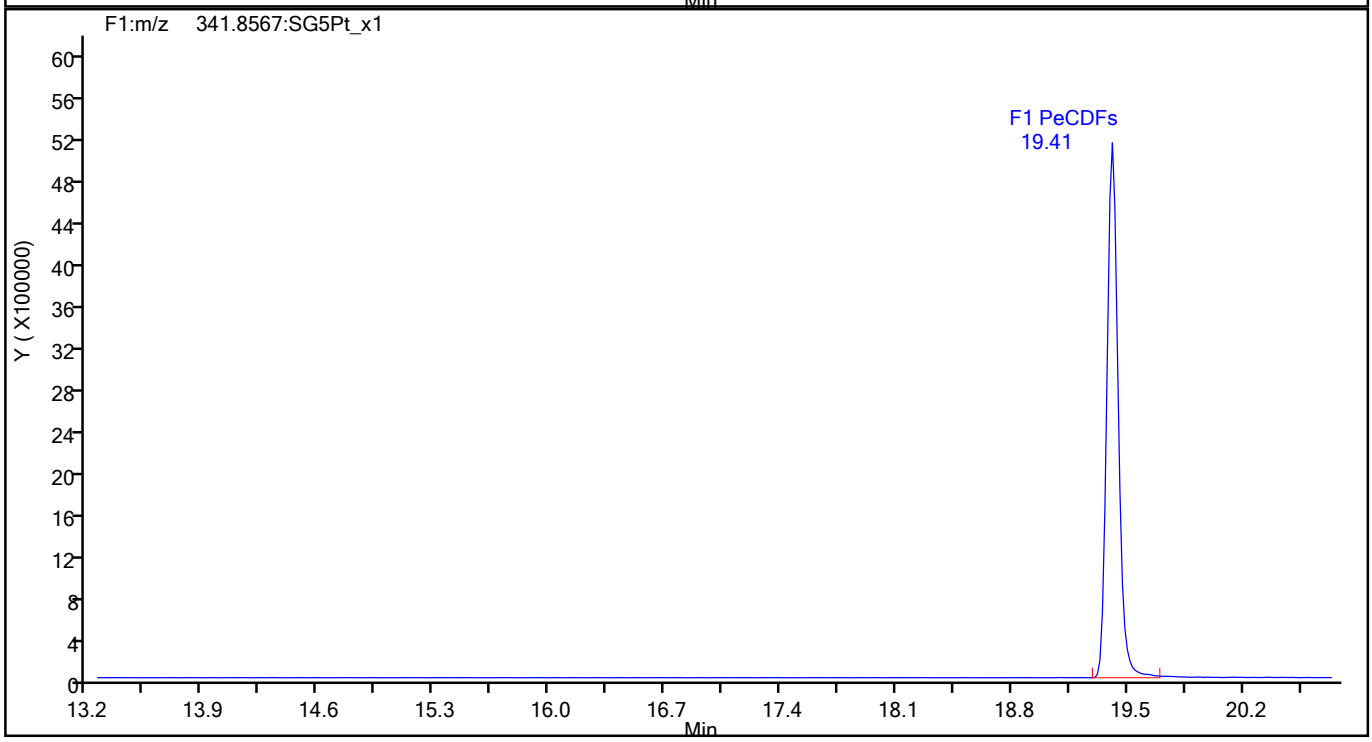

783386

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

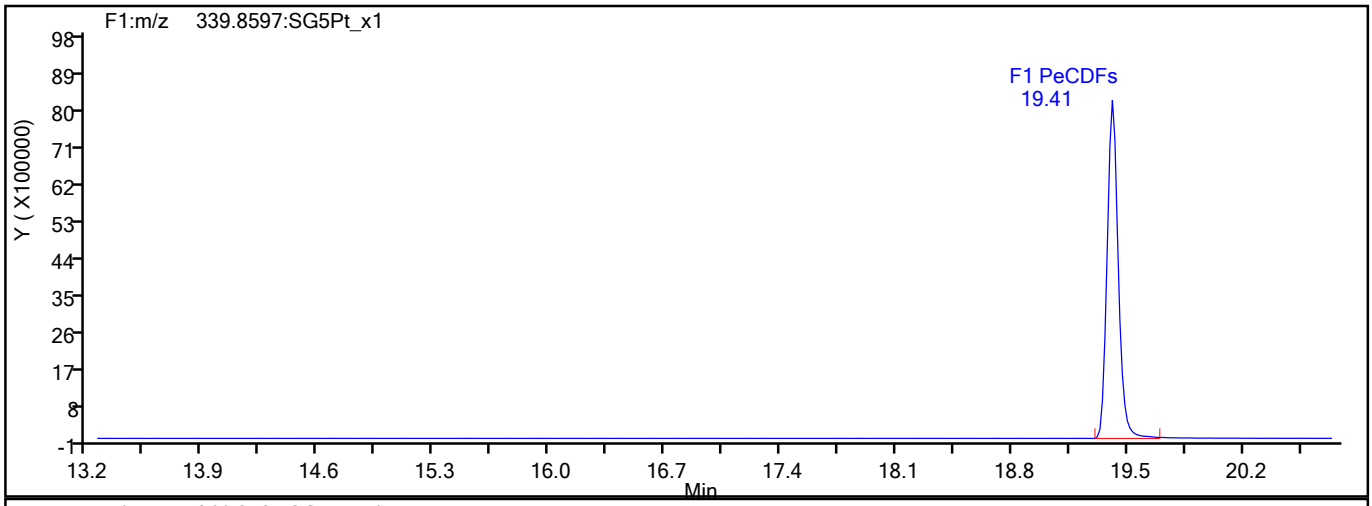

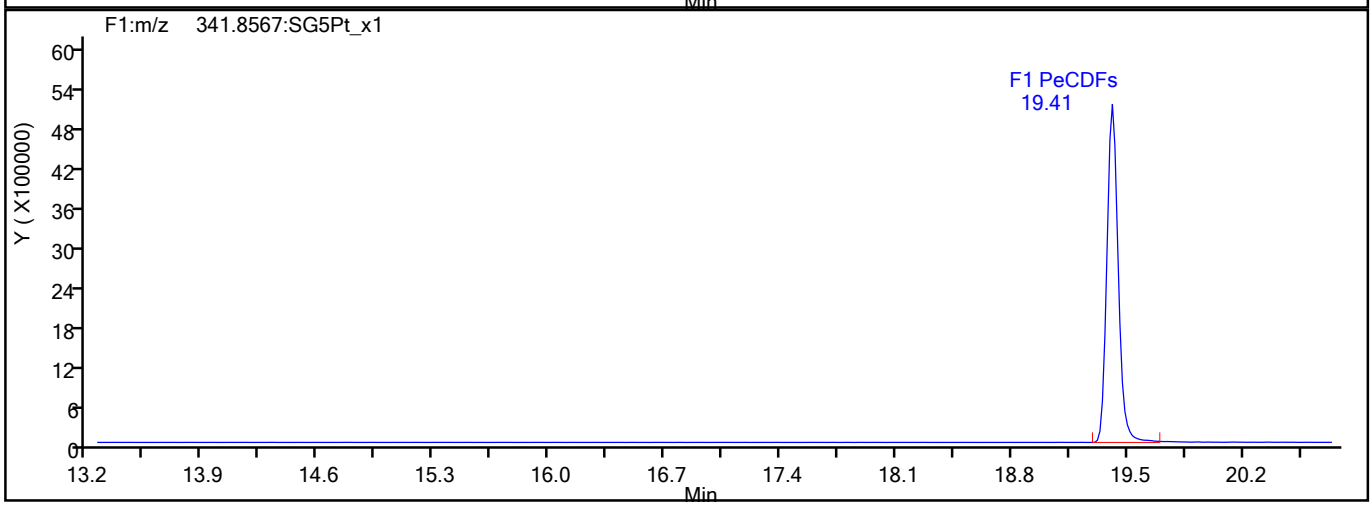

F1 PeCDFs Interference Mass

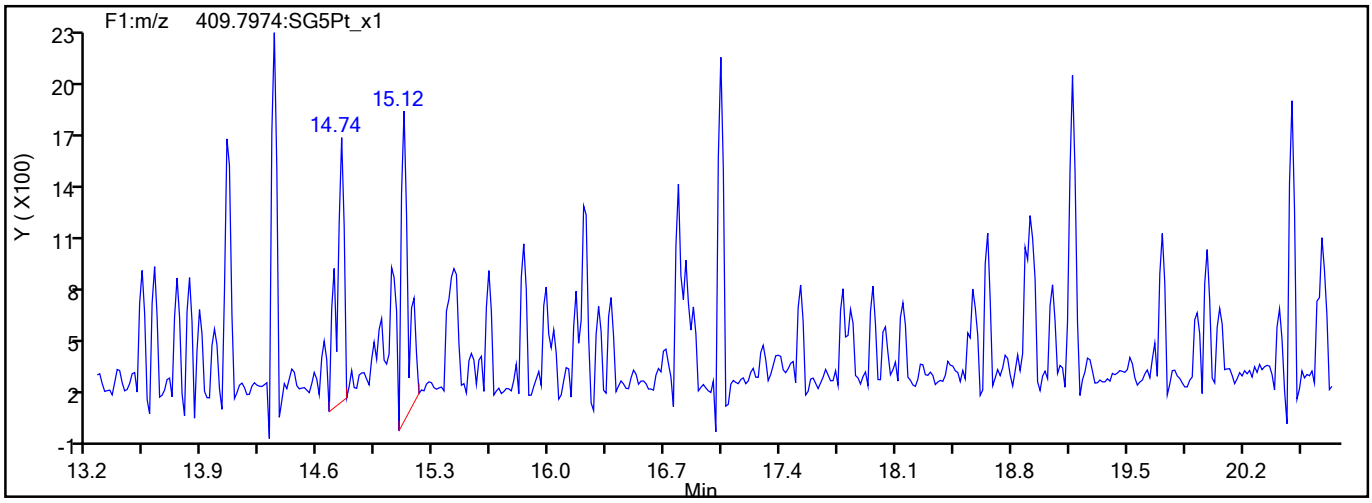

783387

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

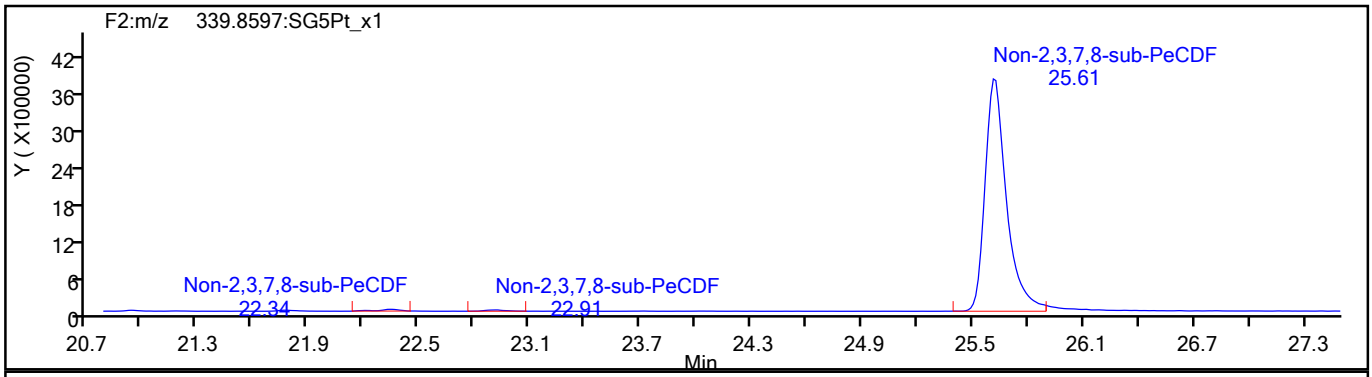

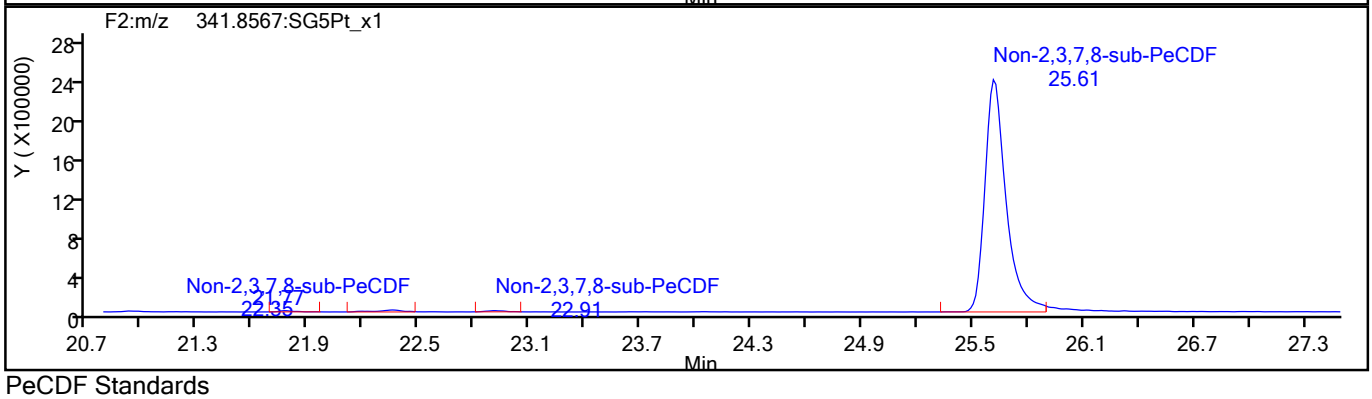

PeCDF Standards

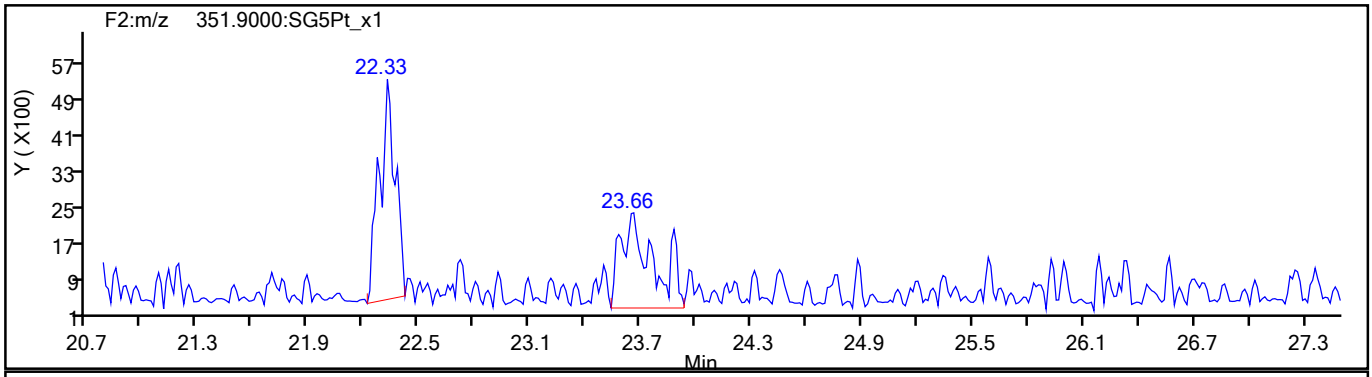

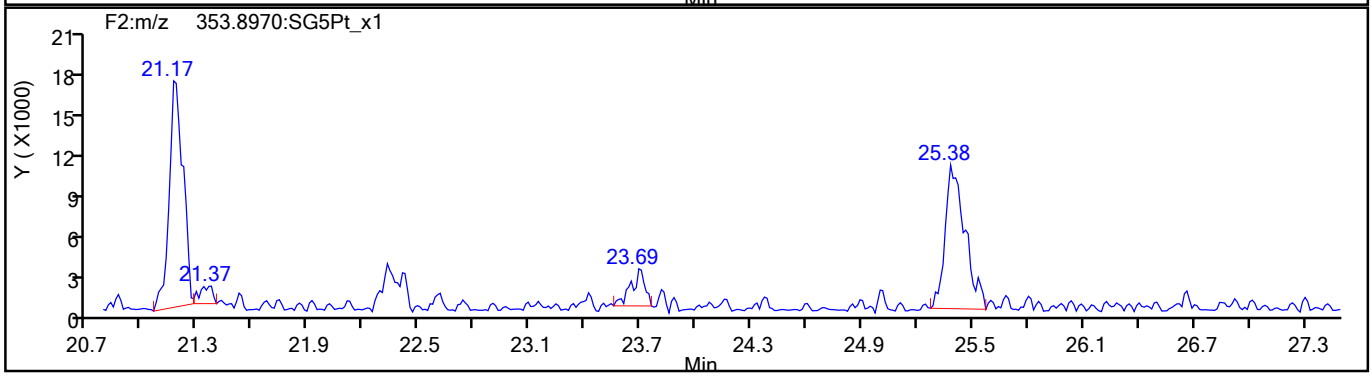

783388

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

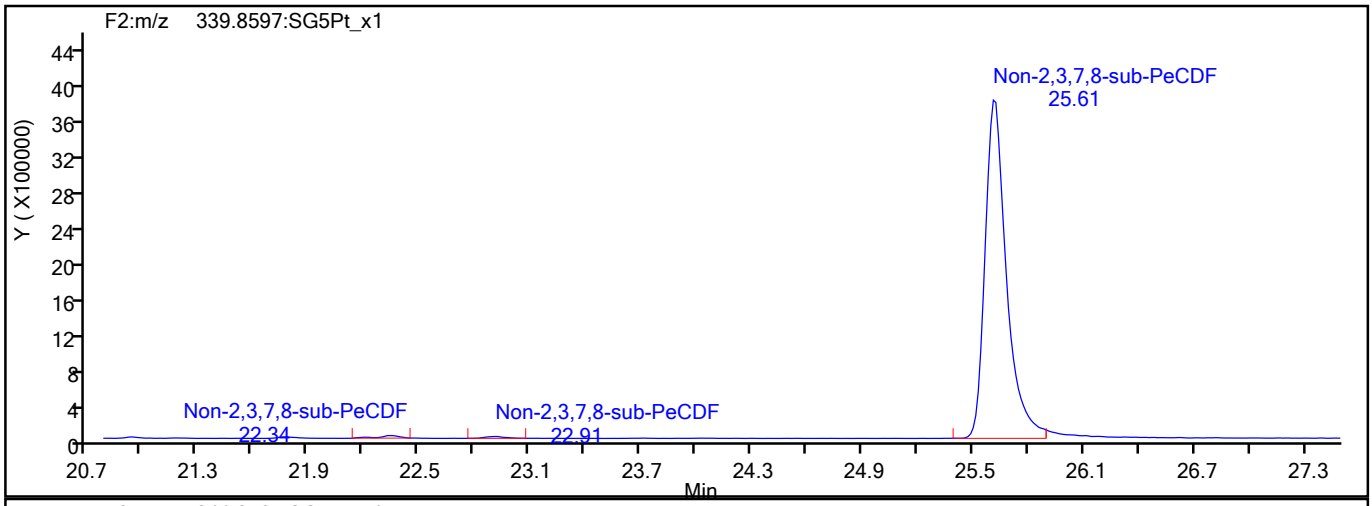

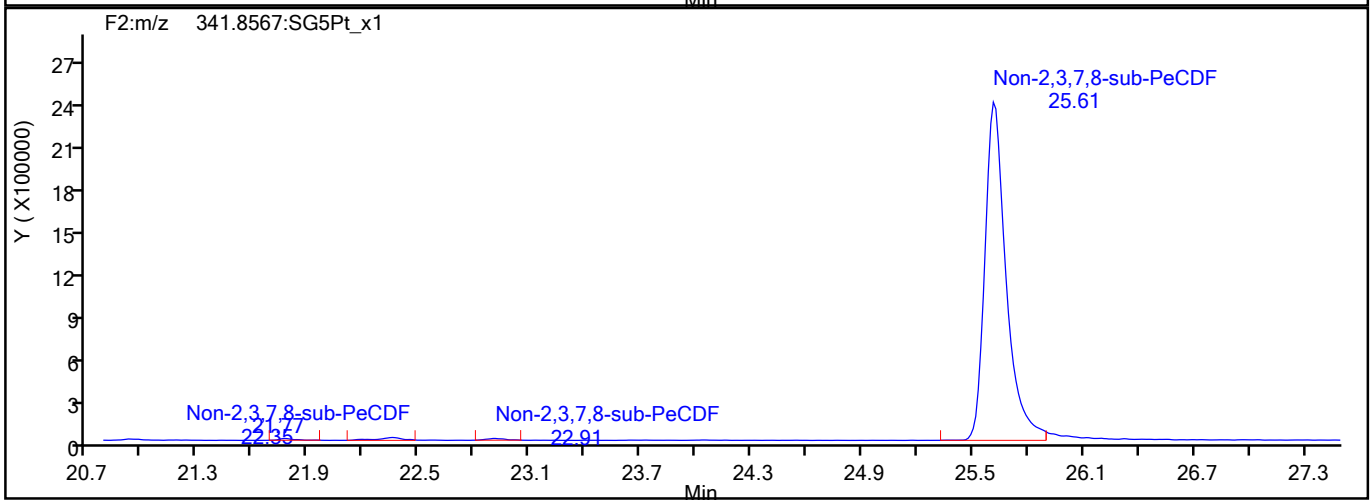

PeCDF Interference Mass

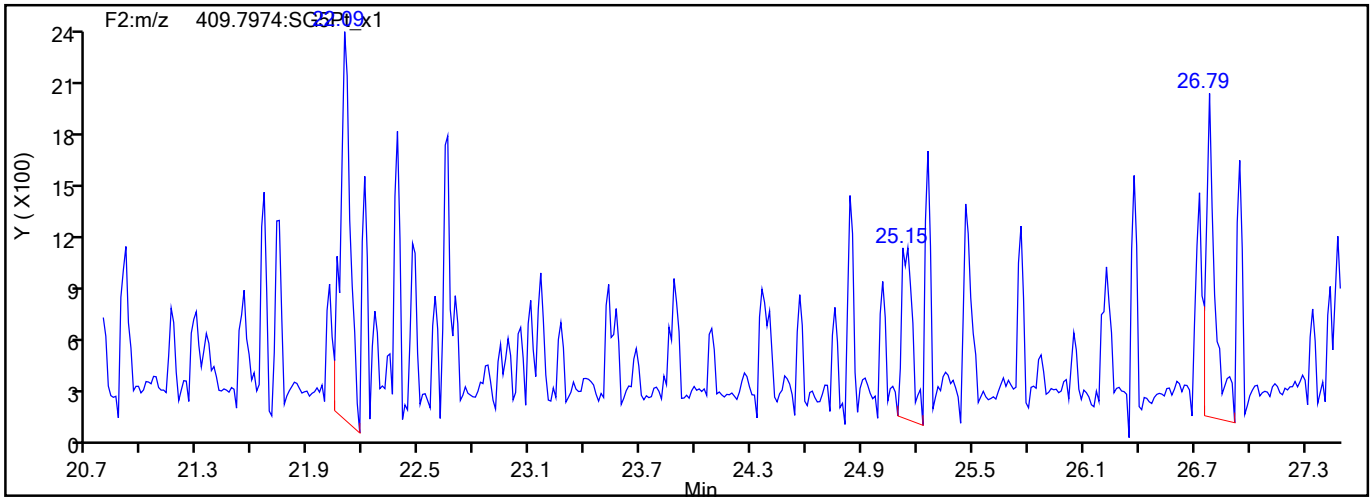

783389

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

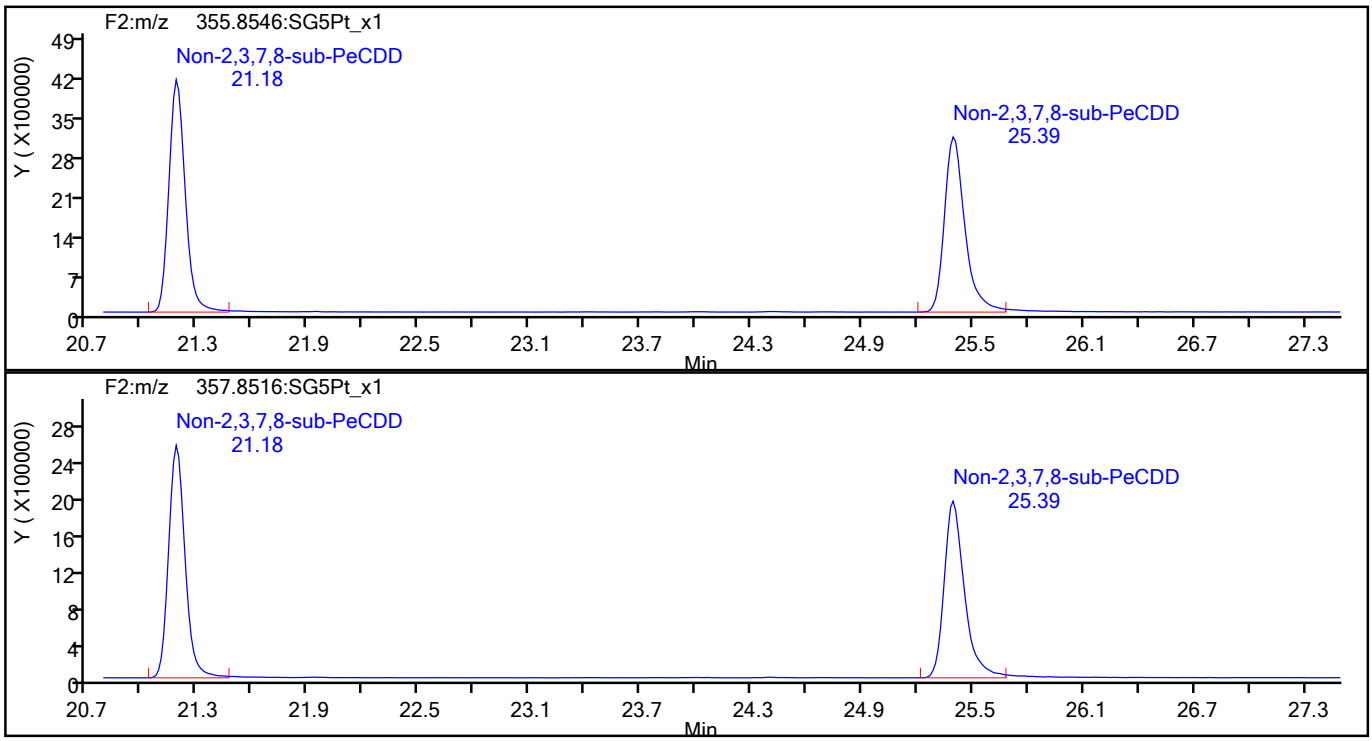

PeCDD Standards

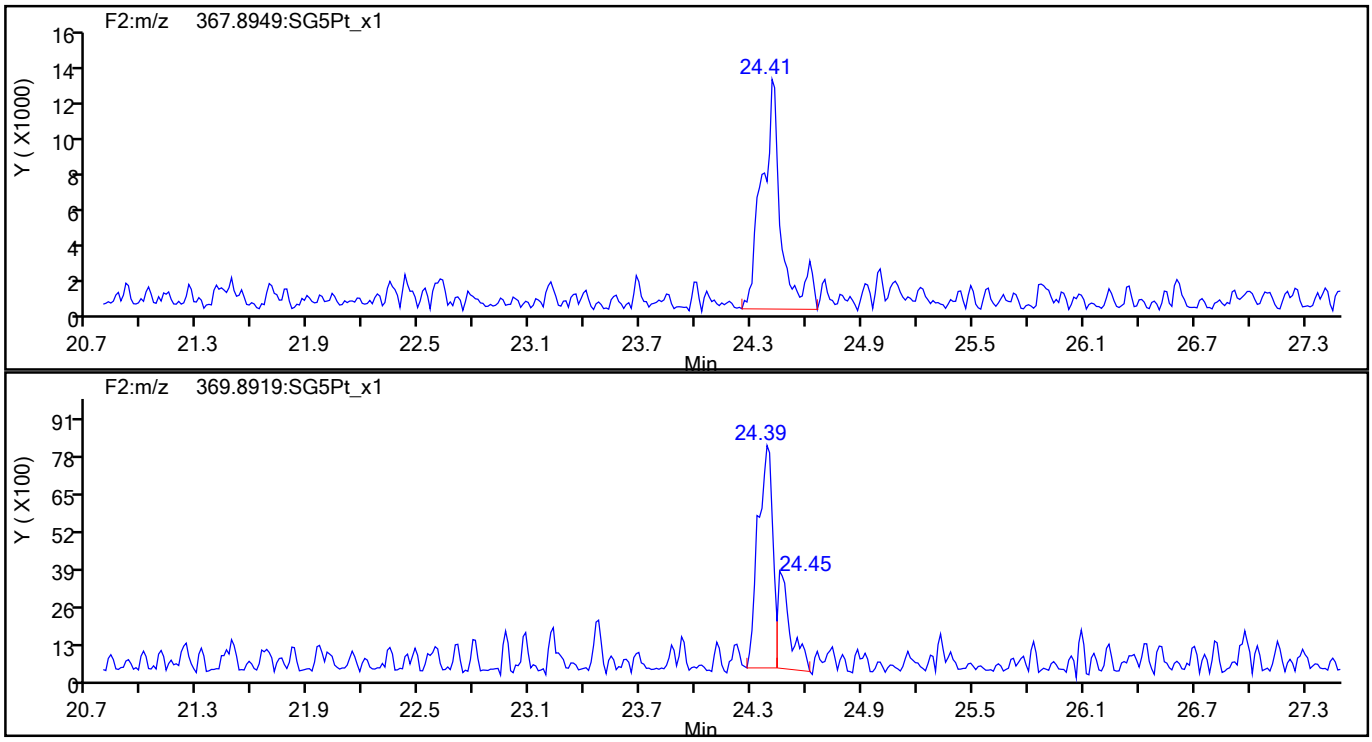

783390

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

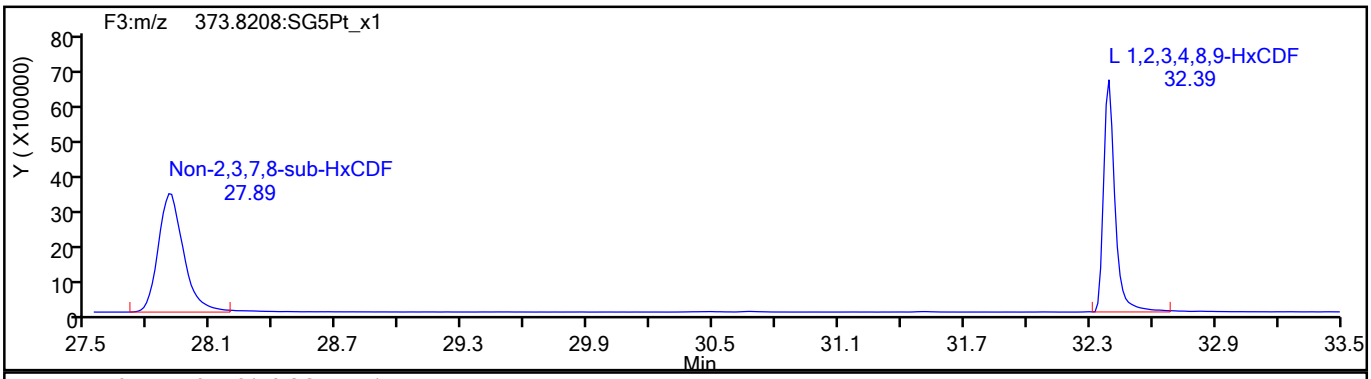

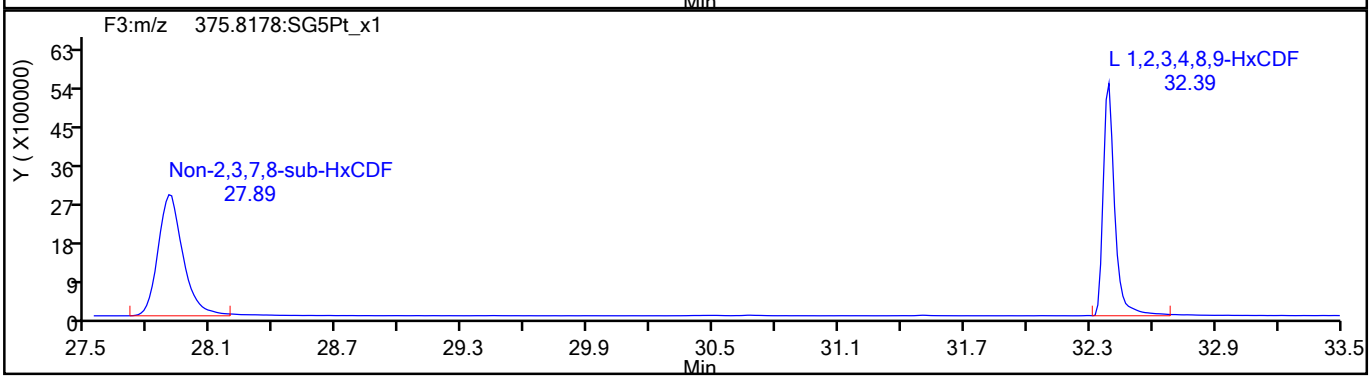

HxCDF Standards

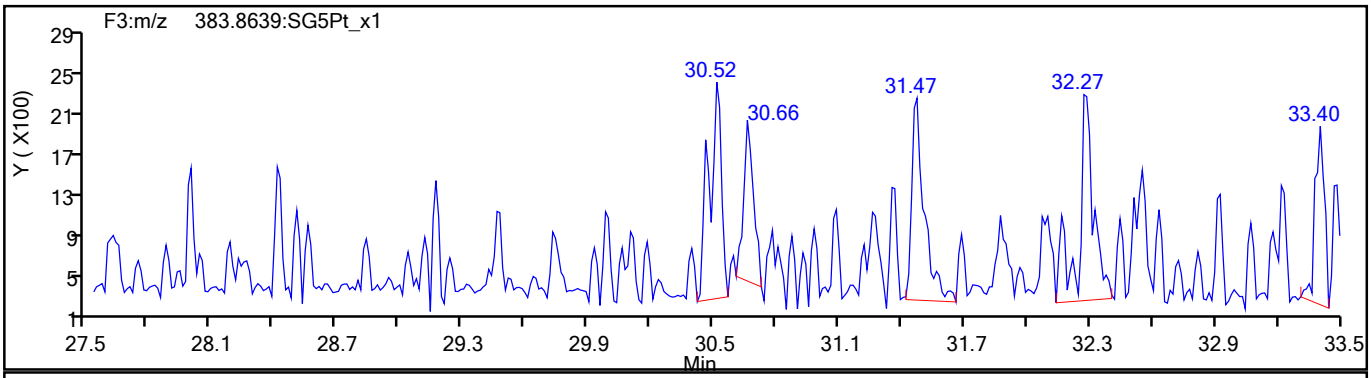

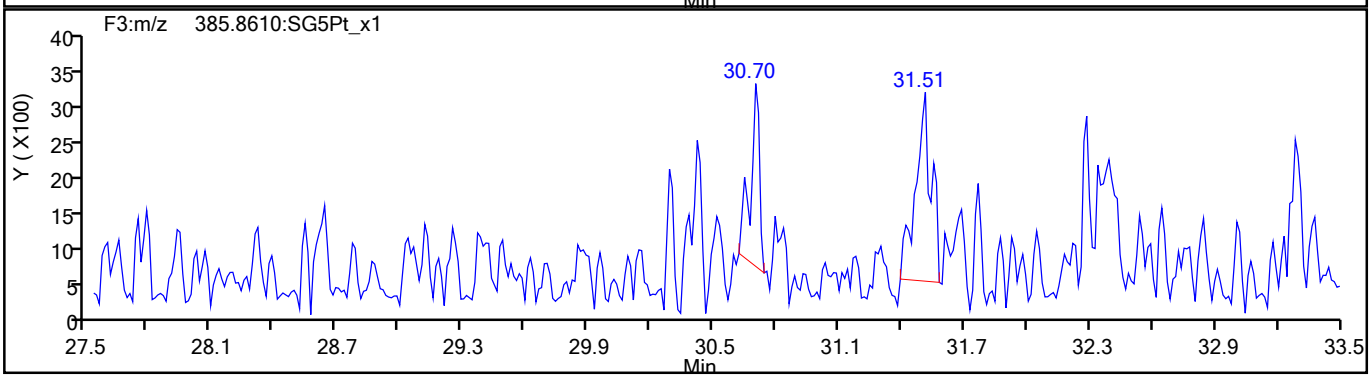

783391

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

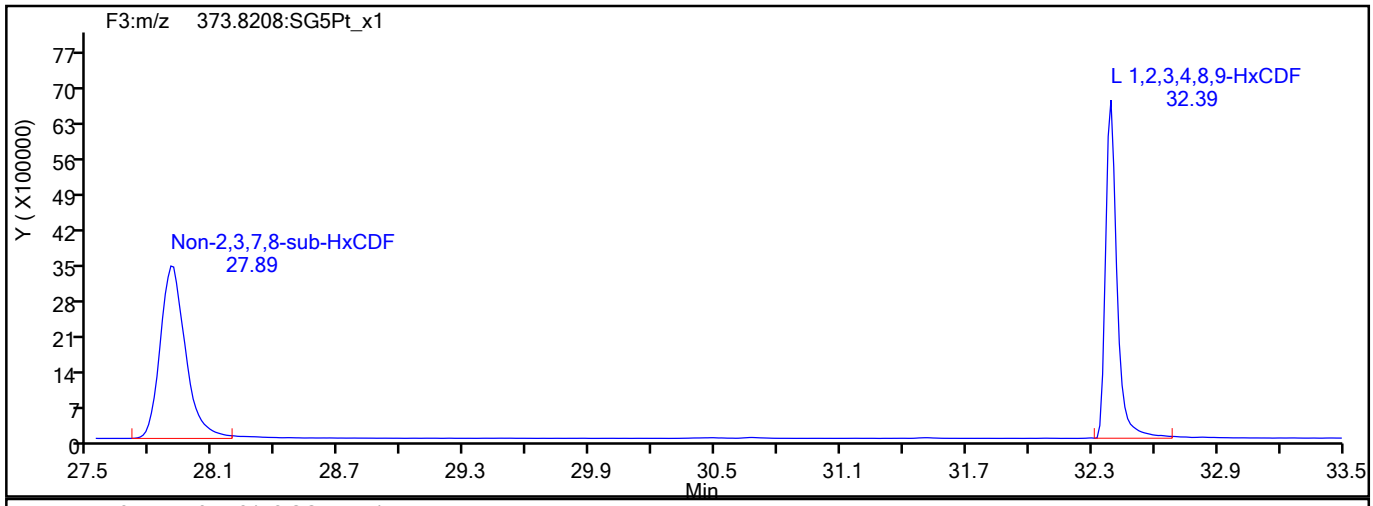

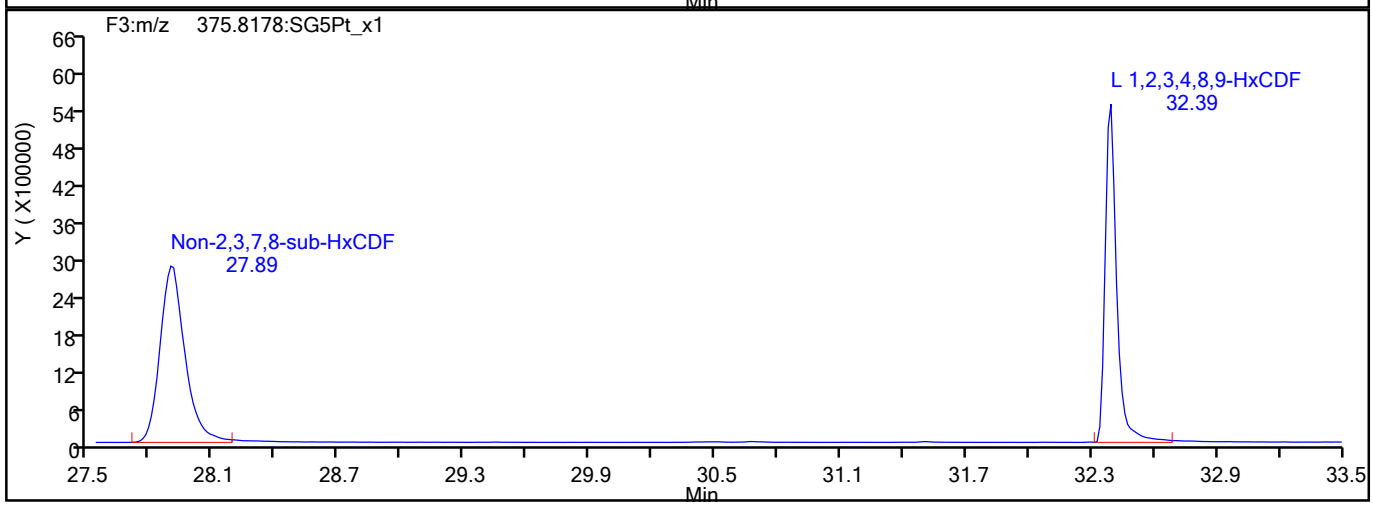

HxCDF Interference Mass

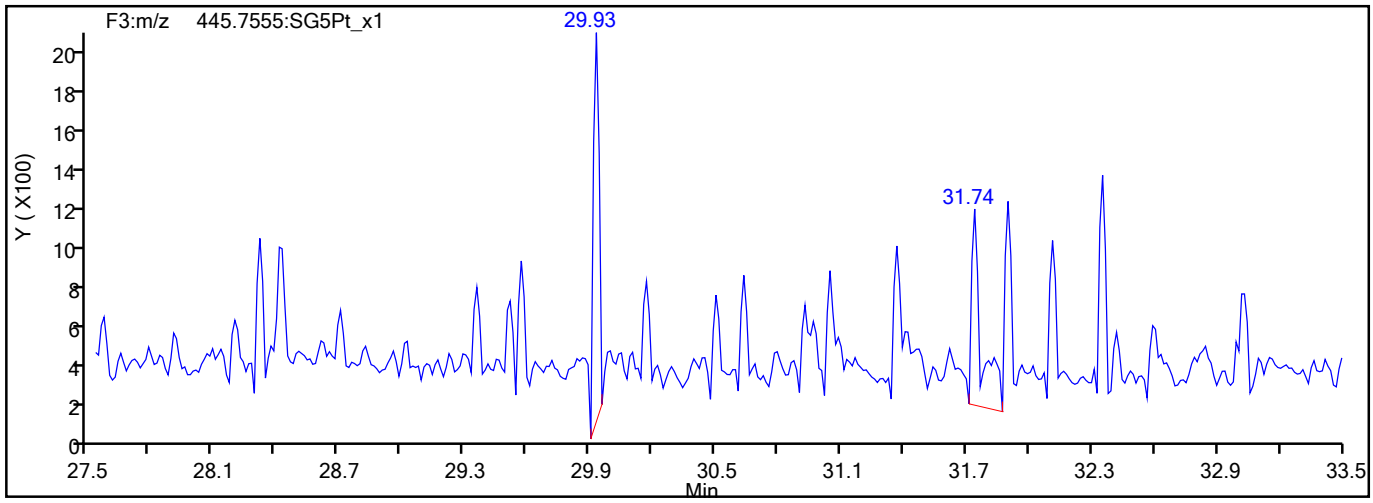

783392

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

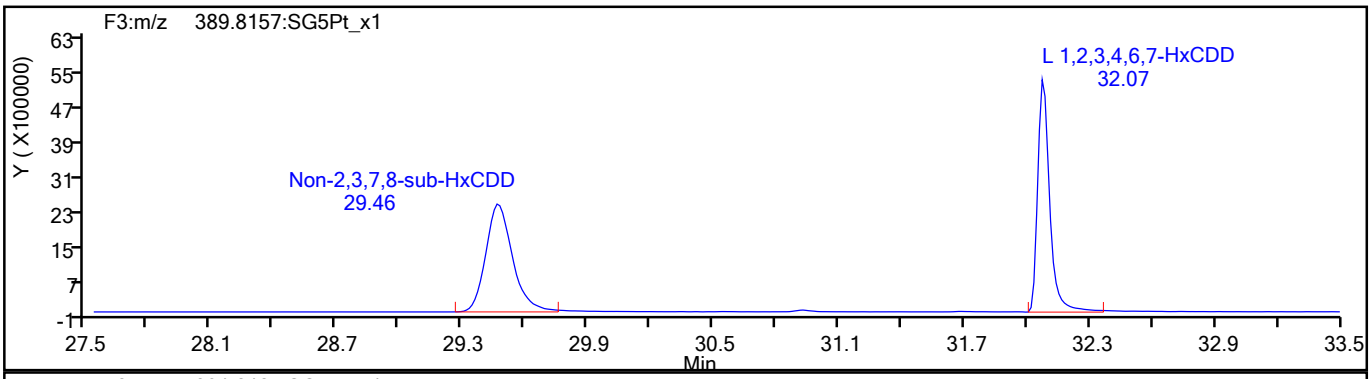

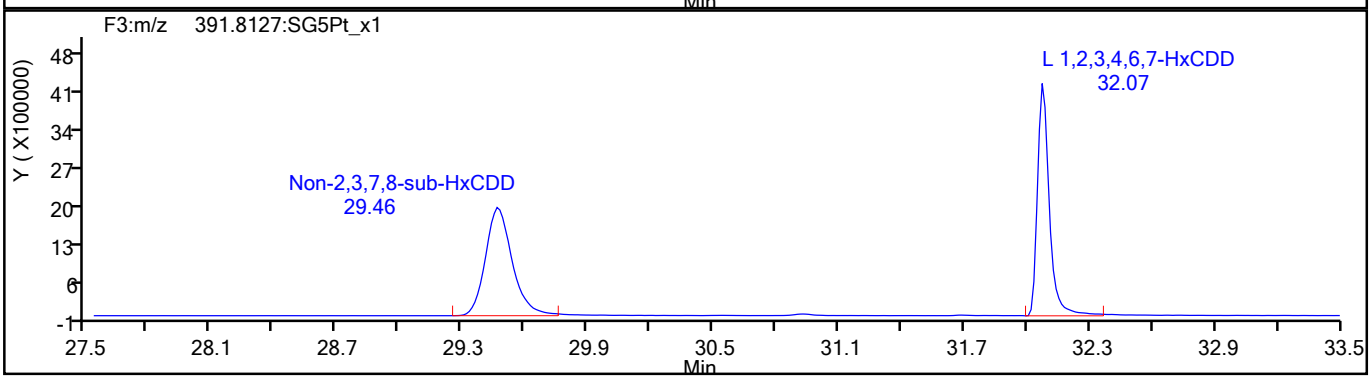

HxCDD Standards

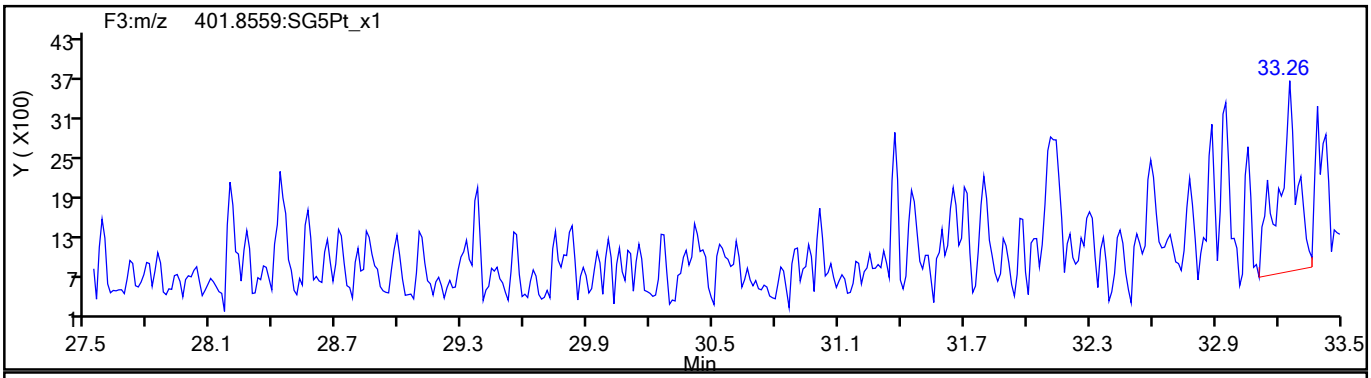

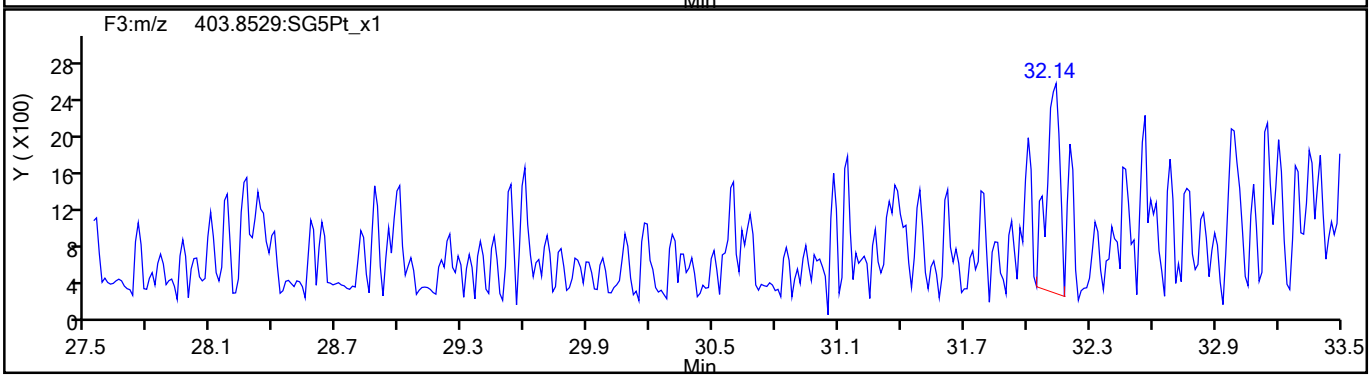

783393

Report Date: 19-Aug-2021 13:08:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

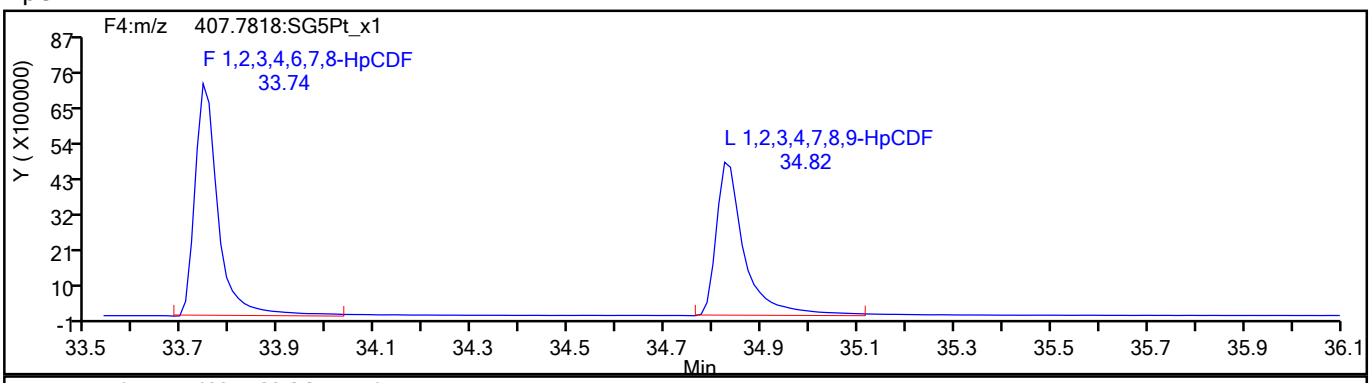

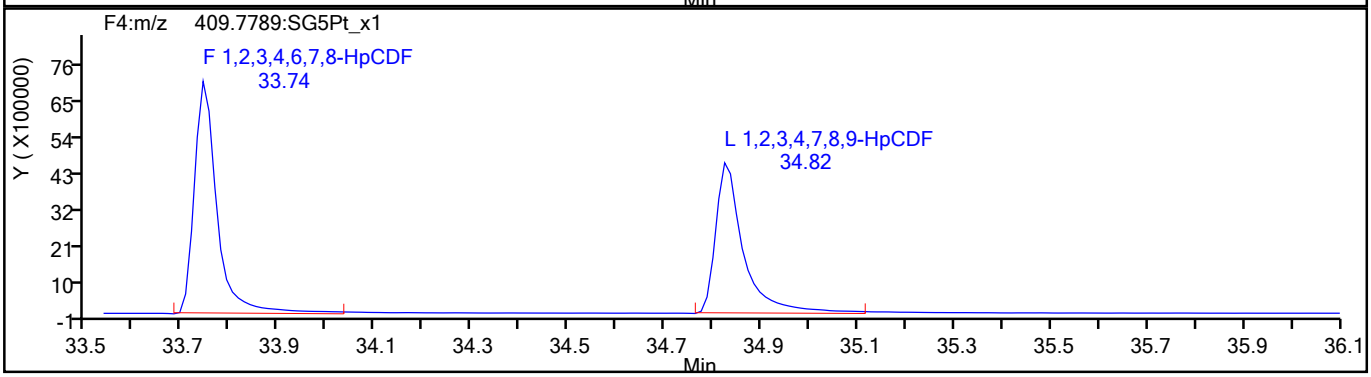

HpCDF Standards

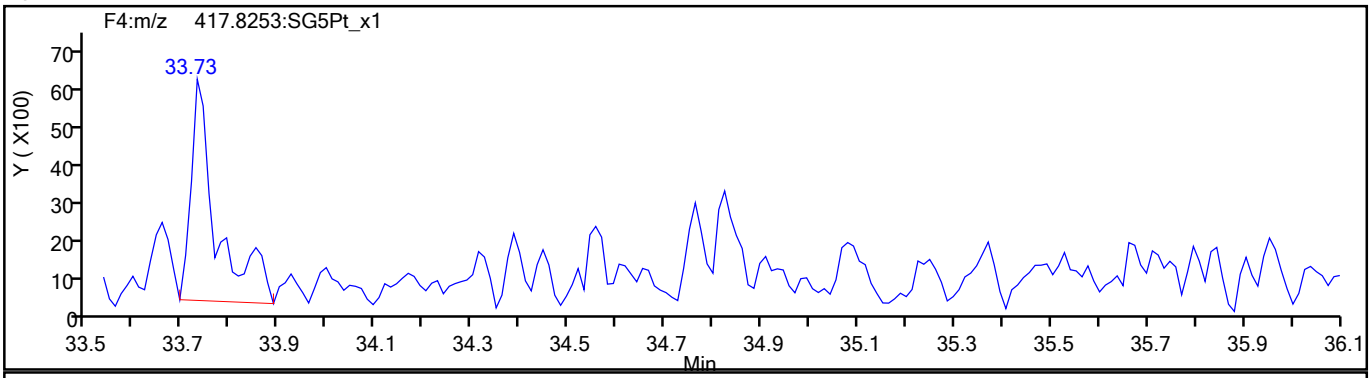

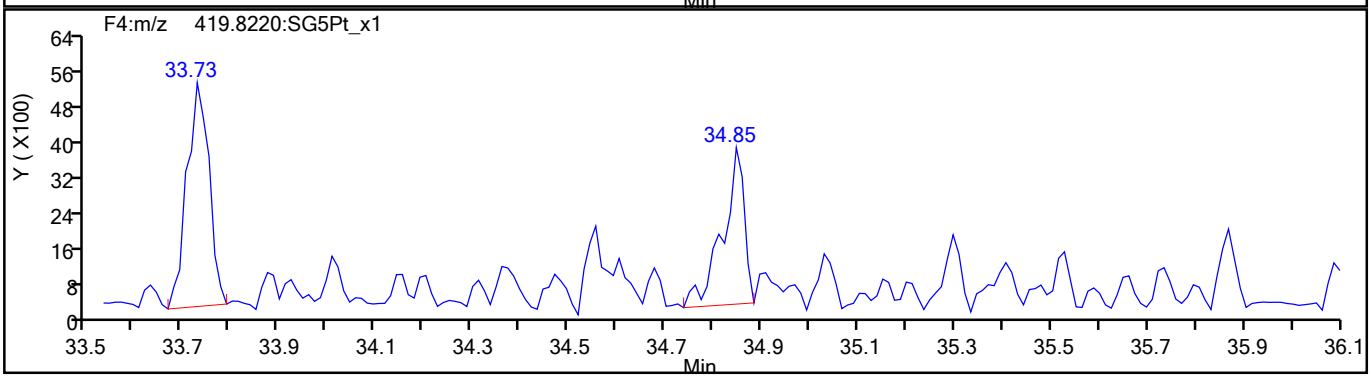

783394

Report Date: 19-Aug-2021 13:08:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

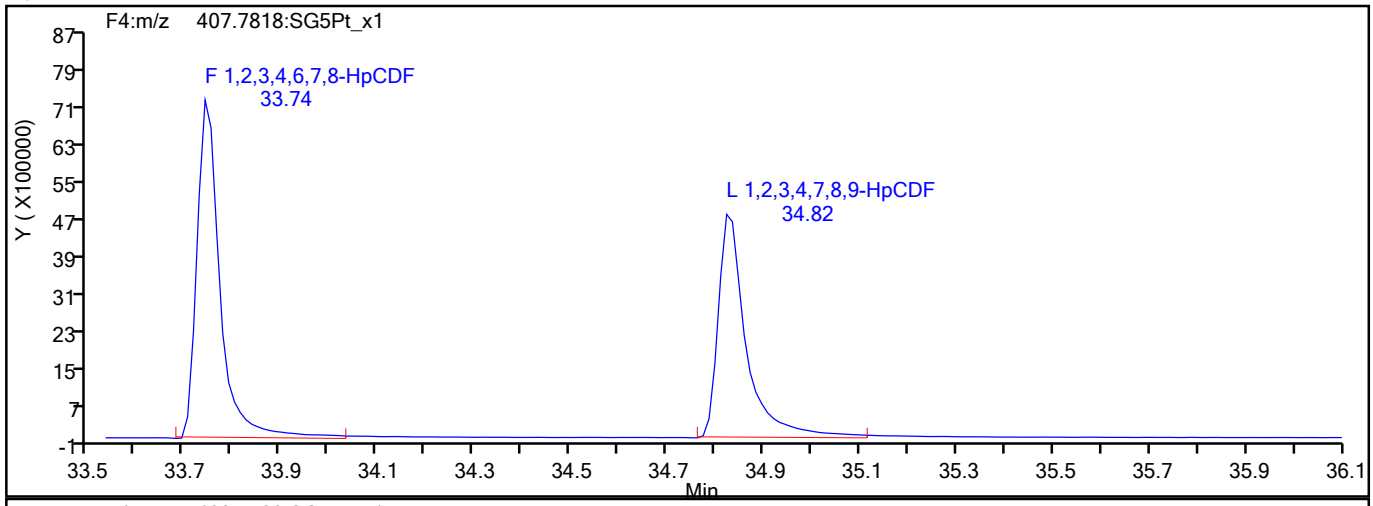

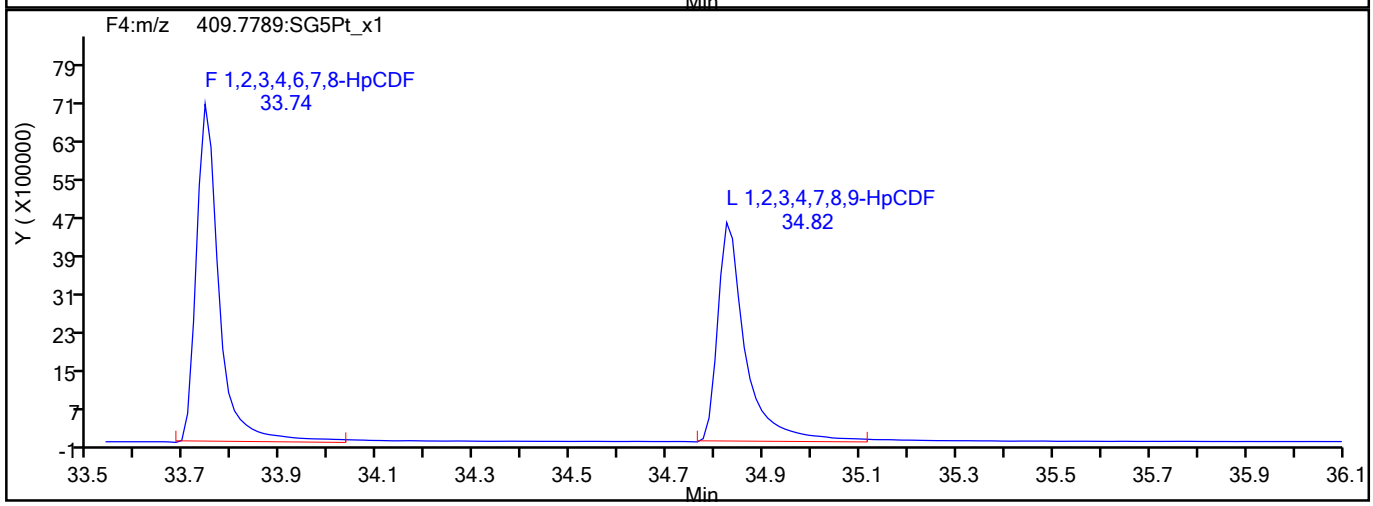

HpCDF Interference Mass

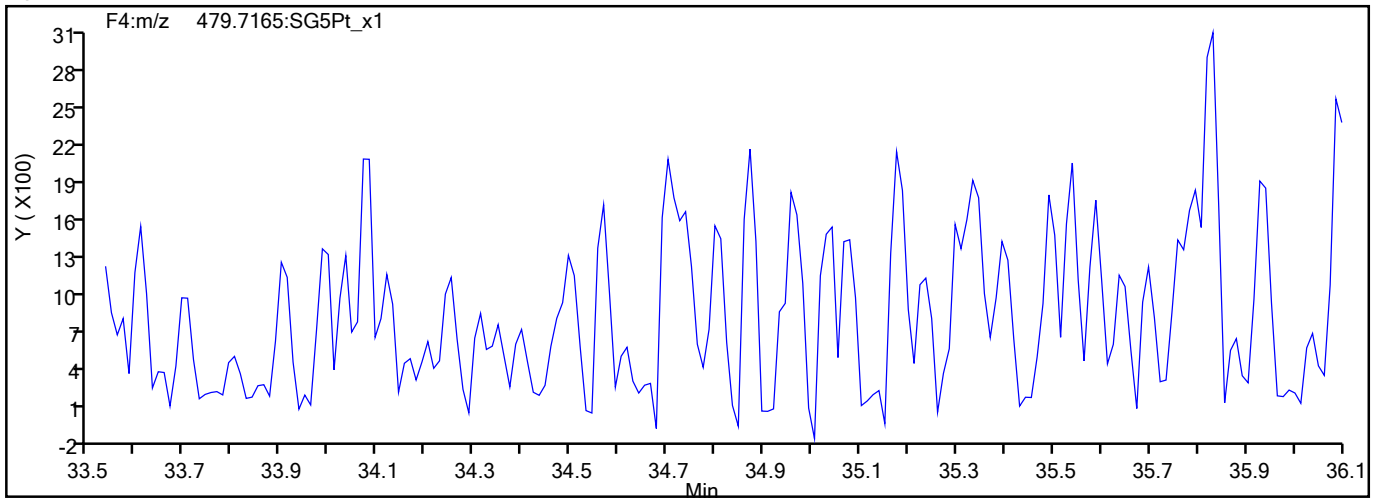

783395

Report Date: 19-Aug-2021 13:08:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

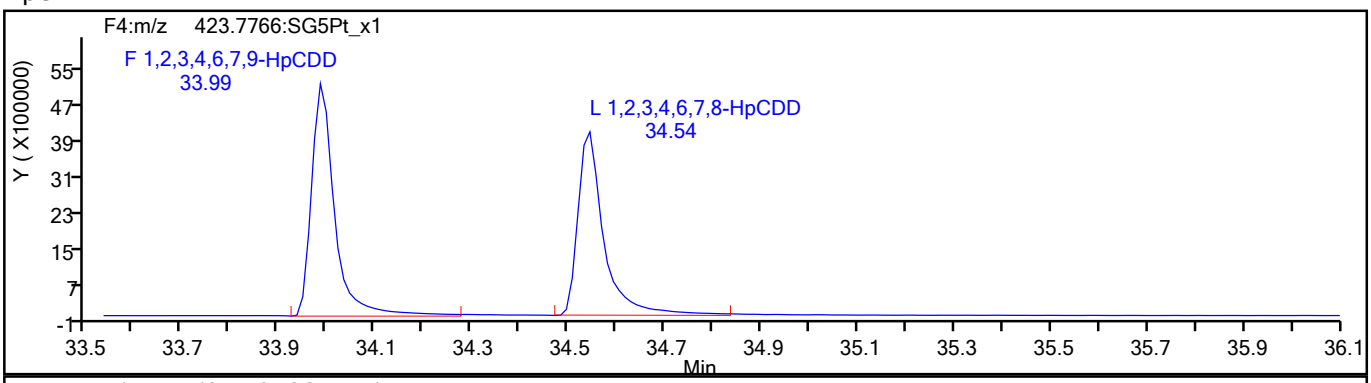

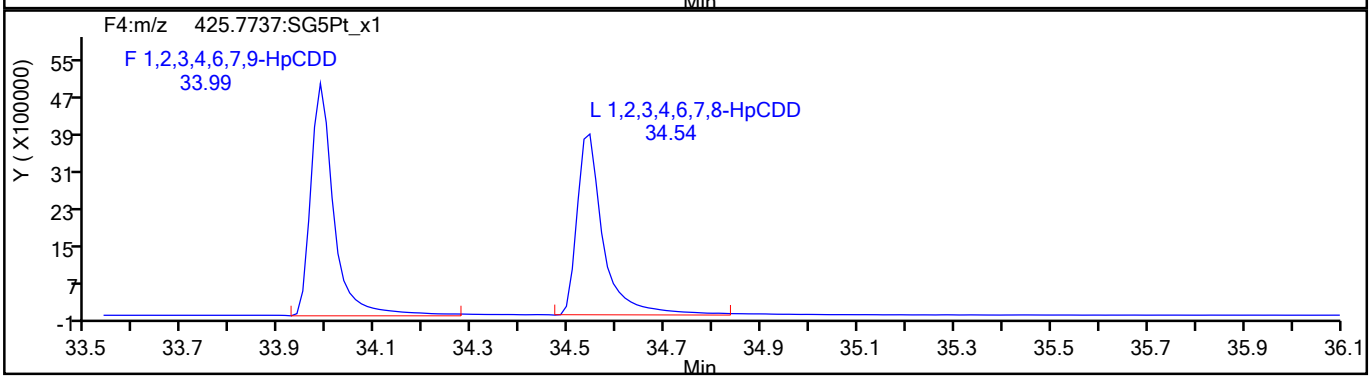

HpCDD Standards

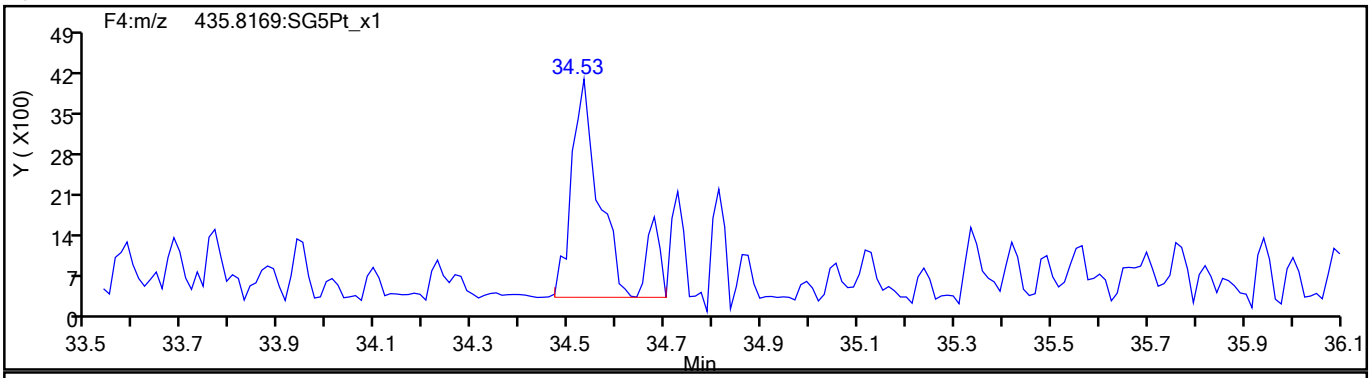

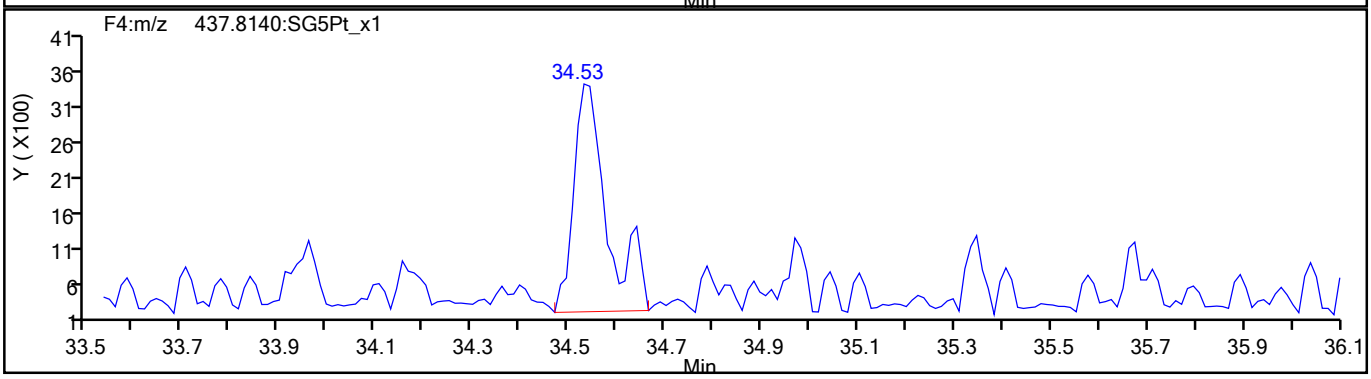

783396

Report Date: 19-Aug-2021 13:08:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

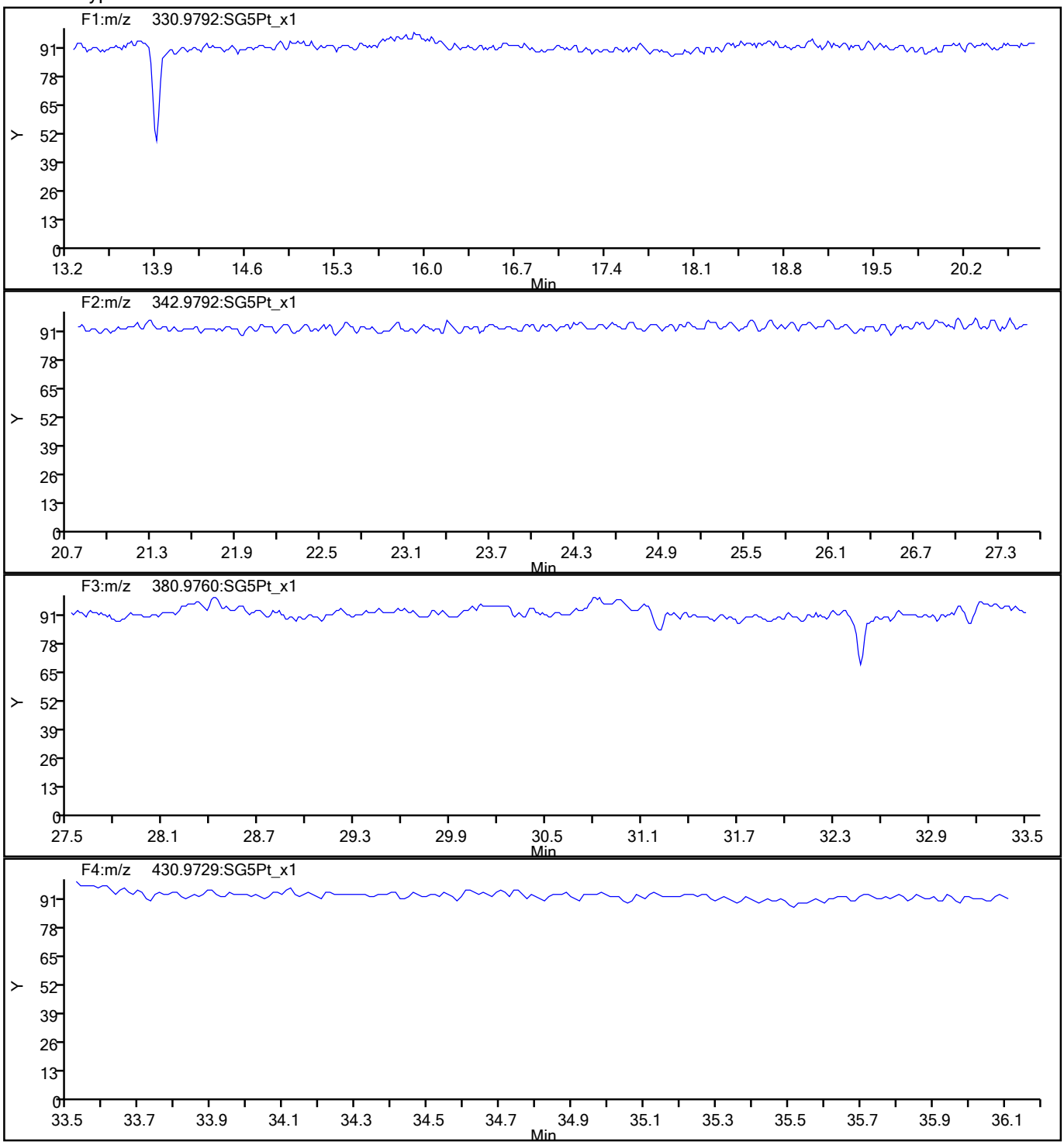

783397

Report Date: 19-Aug-2021 13:08:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

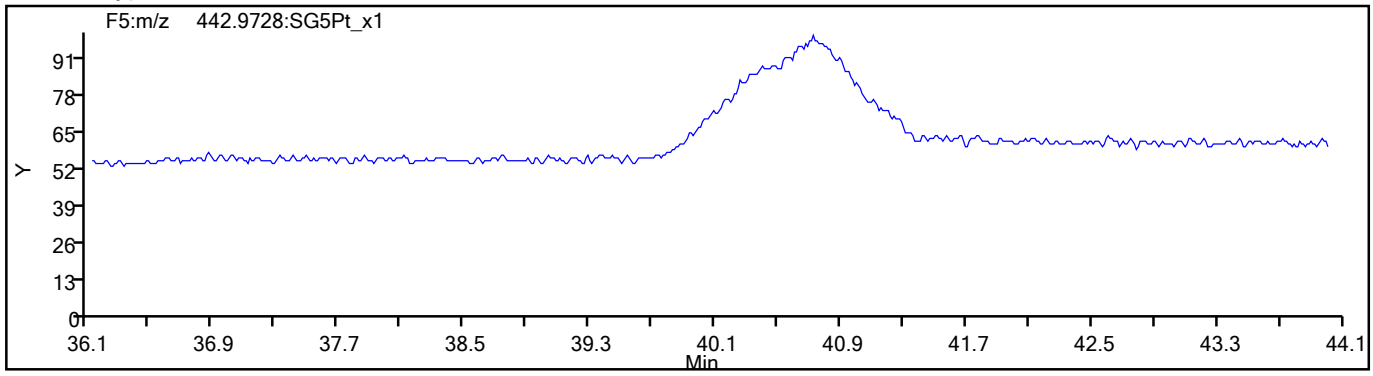

783398

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Aug-2021 18:40:59 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521C WDM HRDXNL4_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 11:27:42 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1632

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.069	72350297	0.76	1.6249					0.00	
2,3,7,8-TCDF	17.099	153737900	0.76	1.0239	83.0	83.0	0.2096	0.2096		
A Non-2,3,7,8-sub-TCDF	17.069	130886649	0.76	1.0239	70.7	70.7	0.2096	35.9		
S Total TCDF					153.7	153.7	0.2096	0.2096		
D 13C-2,3,7,8-TCDD	17.764	38963619	0.79	0.8993					0.00	
2,3,7,8-TCDD	17.779	51665692	0.78	1.2541	42.3	42.3	0.0988	0.0988		
A Non-2,3,7,8-sub-TCDD	17.522	145989555	0.78	1.2541	119.5	119.5	0.0988	42.3		
S Total TCDD					161.8	161.8	0.0988	0.0988		
A F1 PeCDFs	19.851	60632309	1.58	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.067	51940602	1.59	0.0000						
S Total PeCDF										
A Non-2,3,7,8-sub-PeCDD	23.696	78881710	1.59	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.324	51372864	1.22	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.525	38405919	1.25	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.603	43484013	1.08	1.4413						
1,2,3,4,7,8,9-HpCDF	34.673	35292410	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.138						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.393	28223837	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.223						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.710	84188153	0.77							
1,3,6,8-TCDD	15.602	51351192	0.77							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.172						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,8,9-TCDD	19.382						0.0	0.0		

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.903	37794617	1.26							
1,2,3,4,8,9-HxCDF	32.222	46217980	1.21							
1,2,3,4,6,7,9-HpCDD	33.846	31189692	1.03							

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Aug-2021 18:40:59 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521C WDM HRDXNL4_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 11:27:42 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1632

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.069	17.069	0	1.000	31270524	8094861	8607	21517	940		
317.9389	17.069	17.069	0	1.000	41079773	10739436	3334	8335	3221	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.099	17.099	0	1.002	66326153	16052246	15672	39180	1024		
305.8987	17.099	17.099	0	1.002	87411747	21190251	24742	61855	856	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.945	17.069	53	1.051	27747324	6874359	15672	39180	439		
305.8987	17.945	17.069	53	1.051	36702955	9062354	24742	61855	366	0.76(0.65-0.89)	
303.9016	18.883	17.069	109	1.106	28938418	6609804	15672	39180	422		
305.8987	18.883	17.069	109	1.106	37497952	8552753	24742	61855	346	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.764	17.764	0	1.000	17150030	4342030	2891	7227	1502		
333.9339	17.764	17.764	0	1.000	21813589	5394736	2498	6245	2160	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.779	17.779	0	1.001	22672517	5541080	5561	13902	996		
321.8936	17.779	17.779	0	1.001	28993175	7203269	6500	16250	1108	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.673	17.522	9	0.995	20280357	5136758	5561	13902	924		
321.8936	17.673	17.522	9	0.995	26390295	6648354	6500	16250	1023	0.77(0.65-0.89)	
319.8965	17.945	17.522	25	1.010	22816290	5536599	5561	13902	996		
321.8936	17.945	17.522	25	1.010	28863746	7047627	6500	16250	1084	0.79(0.65-0.89)	
319.8965	18.868	17.522	81	1.062	20754534	4690631	5561	13902	843		
321.8936	18.868	17.522	81	1.062	26884333	6118398	6500	16250	941	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.155	19.851	-42	1.000	37092589	8430108	1207	3017	6984		
341.8567	19.155	19.851	-42	1.000	23539720	5349820	838	2095	6384	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											
339.8597	20.643	23.067	-145	1.000	97178	16873	3347	8367	5		
341.8567	20.629	23.067	-146	1.000	58976	10597	2452	6130	4	1.65(1.32-1.78)	
339.8597	21.461	23.067	-96	1.000	145864	25618	3347	8367	8		
341.8567	21.475	23.067	-95	1.000	83098	13706	2452	6130	6	1.76(1.32-1.78)	
339.8597	22.020	23.067	-63	1.000	268467	34914	3347	8367	10		
341.8567	22.020	23.067	-63	1.000	156056	21027	2452	6130	9	1.72(1.32-1.78)	
339.8597	22.565	23.067	-30	1.000	170142	28848	3347	8367	9		
341.8567	22.565	23.067	-30	1.000	115526	18480	2452	6130	8	1.47(1.32-1.78)	
339.8597	25.252	23.067	131	1.000	31240980	4689625	3347	8367	1401		
341.8567	25.238	23.067	130	1.000	19604315	2950104	2452	6130	1203	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	20.888	23.696	-168	1.000	24915043	4496753	2574	6435	1747		
357.8516	20.888	23.696	-168	1.000	15835289	2918053	1537	3842	1899	1.57(1.32-1.78)	
355.8546	25.034	23.696	80	1.000	23453474	3578237	2574	6435	1390		
357.8516	25.034	23.696	80	1.000	14677904	2265397	1537	3842	1474	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.484	30.324	-170	1.000	28182416	3871905	4048	10120	956		
375.8178	27.471	30.324	-171	1.000	23190448	3200646	3176	7940	1008	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.028	30.525	-90	1.000	21120815	2681333	5049	12622	531		
391.8127	29.015	30.525	-90	1.000	16889321	2115960	4760	11900	445	1.25(1.05-1.43)	
389.8157	30.678	30.525	9	1.000	226378	44409	5049	12622	9		
391.8127	30.678	30.525	9	1.000	169405	37770	4760	11900	8	1.34(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603	33.603	0	1.000	22542433	8469199	15784	39460	537		
409.7789	33.603	33.603	0	1.000	20941580	8091292	17493	43732	463	1.08(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673	34.673	0	1.000	18010609	6206747	15784	39460	393		
409.7789	34.673	34.673	0	1.000	17281801	5902249	17493	43732	337	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						15784	39460			
409.7789	34.138						17493	43732			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	14382763	4949987	11155	27887	444		
425.7737	34.381	34.393	-1	1.000	13841074	4624503	13136	32840	352	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						11155	27887			
425.7737	34.223						13136	32840			
1,3,6,8-TCDF											
303.9016	14.710	14.710	0		36533093	11442181	15672	39180	730		
305.8987	14.710	14.710	0		47655060	14776806	24742	61855	597	0.77(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.602	15.602	0		22367084	6692183	5561	13902	1203		
321.8936	15.602	15.602	0		28984108	8655008	6500	16250	1332	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7-TCDF											
303.9016	17.537						15672	39180			
305.8987	17.537						24742	61855			
1,2,3,7-TCDD											
319.8965	18.172						5561	13902			
321.8936	18.172						6500	16250			
1,2,3,9-TCDD											
319.8965	18.414						5561	13902			
321.8936	18.414						6500	16250			
1,2,3,9-TCDF											
303.9016	18.414						15672	39180			
305.8987	18.414						24742	61855			
1,2,8,9-TCDD											
319.8965	19.382						5561	13902			
1,2,8,9-TCDF											
303.9016	19.427						15672	39180			
305.8987	19.427						24742	61855			
1,3,4,6,8-PeCDF											
339.8597	19.669						1207	3017			
341.8567	19.669						838	2095			
1,2,4,7,9-PeCDD											
355.8546	21.480						2574	6435			
357.8516	21.480						1537	3842			
1,2,3,8,9-PeCDD											
355.8546	25.790						2574	6435			
357.8516	25.790						1537	3842			
1,2,3,8,9-PeCDF											
339.8597	26.021						3347	8367			
341.8567	26.021						2452	6130			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						4048	10120			
375.8178	28.333						3176	7940			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						5049	12622			
391.8127	29.890						4760	11900			
1,2,3,4,6,7-HxCDD											
389.8157	31.903	31.903	0		21091642	6205497	5049	12622	1229		
391.8127	31.903	31.903	0		16702975	4921594	4760	11900	1034	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.222	32.222	0		25285260	7836177	4048	10120	1936		
375.8178	32.222	32.222	0		20932720	6563604	3176	7940	2067	1.21(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.846	33.846	0		15859070	5952247	11155	27887	534		
425.7737	33.846	33.846	0		15330622	5641430	13136	32840	429	1.03(0.88-1.20)	

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 27-Aug-2021 11:27:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	72350297	18834297

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	72350297	18834297

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.945	27747324	6874359	36702955	9062354	34.8	0.76	
18.883	28938418	6609804	37497952	8552753	35.9	0.77	
Signal Totals:							
	56685742	13484163	74200907	17615107			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	130886649	31099270				0.76	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 70.673 = (130886649 * 40.000) / (72350297 * 1.024)

Report Date: 27-Aug-2021 11:27:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.522

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	38963619	9736766

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	38963619	9736766

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.673	20280357	5136758	26390295	6648354	38.2	0.77	
17.945	22816290	5536599	28863746	7047627	42.3	0.79	
18.868	20754534	4690631	26884333	6118398	39.0	0.77	
Signal Totals:							
	63851181	15363988	82138374	19814379			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	145989555	35178367				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 119.504 = (145989555 * 40.000) / (38963619 * 1.254)

Report Date: 27-Aug-2021 11:27:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.155	37092589	8430108	23539720	5349820		1.58	
Signal Totals:							
	37092589	8430108	23539720	5349820			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	60632309	13779928				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (60632309 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 11:27:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.643	97178	16873	58976	10597		1.65	
21.461	145864	25618	83098	13706		1.76	
22.020	268467	34914	156056	21027		1.72	
22.565	170142	28848	115526	18480		1.47	
25.252	31240980	4689625	19604315	2950104		1.59	
Signal Totals:							
	31922631	4795878	20017971	3013914			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	51940602	7809792				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (51940602 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.888	24915043	4496753	15835289	2918053		1.57	
25.034	23453474	3578237	14677904	2265397		1.60	
Signal Totals:							
	48368517	8074990	30513193	5183450			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	78881710	13258440				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (78881710 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.324

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.484	28182416	3871905	23190448	3200646		1.22	
Signal Totals:							
	28182416	3871905	23190448	3200646			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	51372864	7072551				1.22	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (51372864 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.028	21120815	2681333	16889321	2115960		1.25	
30.678	226378	44409	169405	37770		1.34	
Signal Totals:							
	21347193	2725742	17058726	2153730			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	38405919	4879472				1.25	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (38405919 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

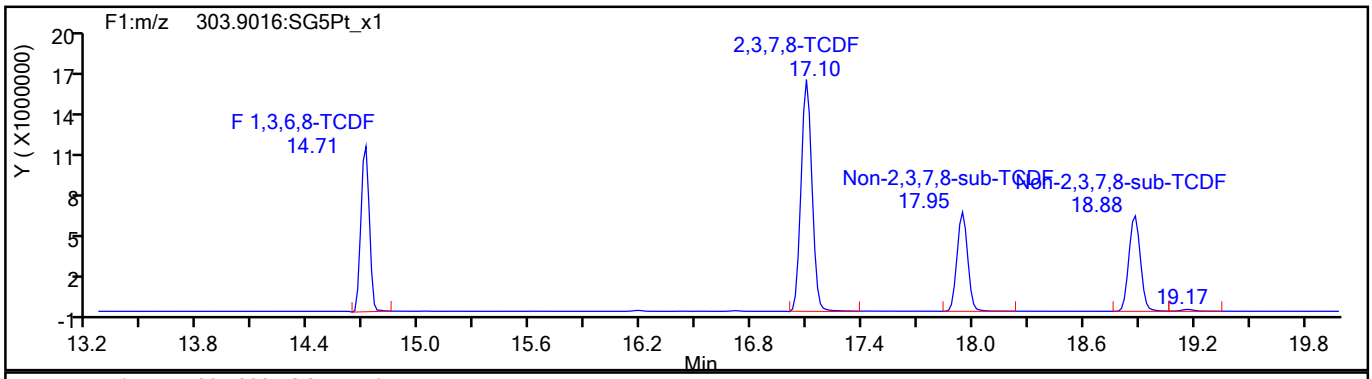

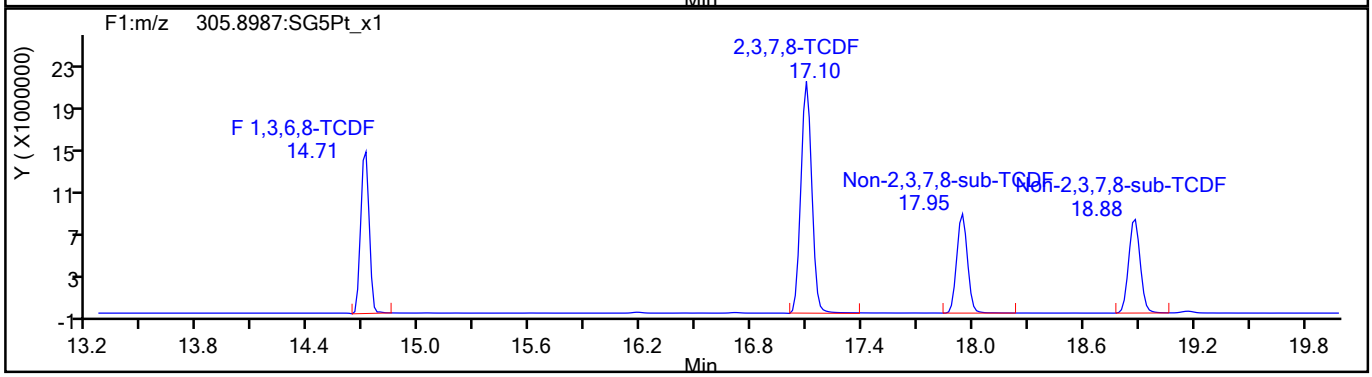

TCDF Standards

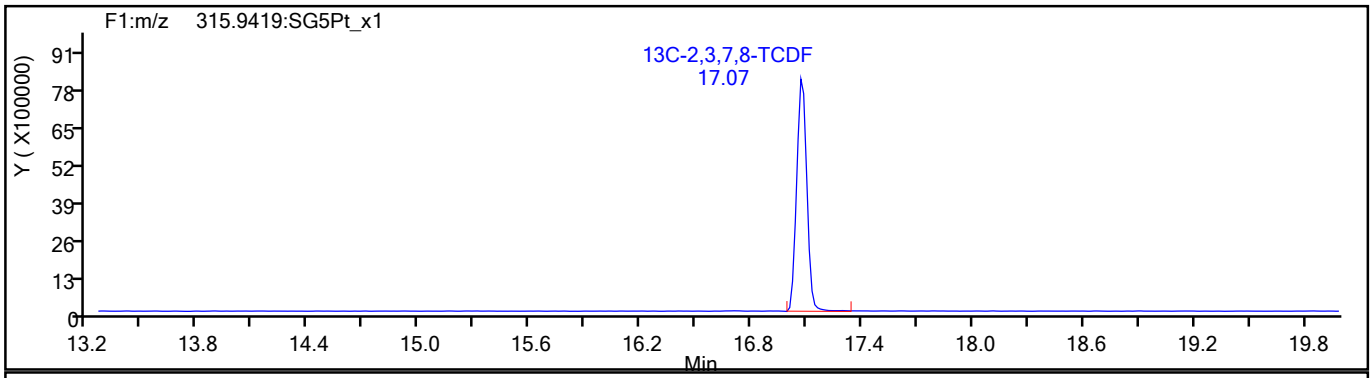

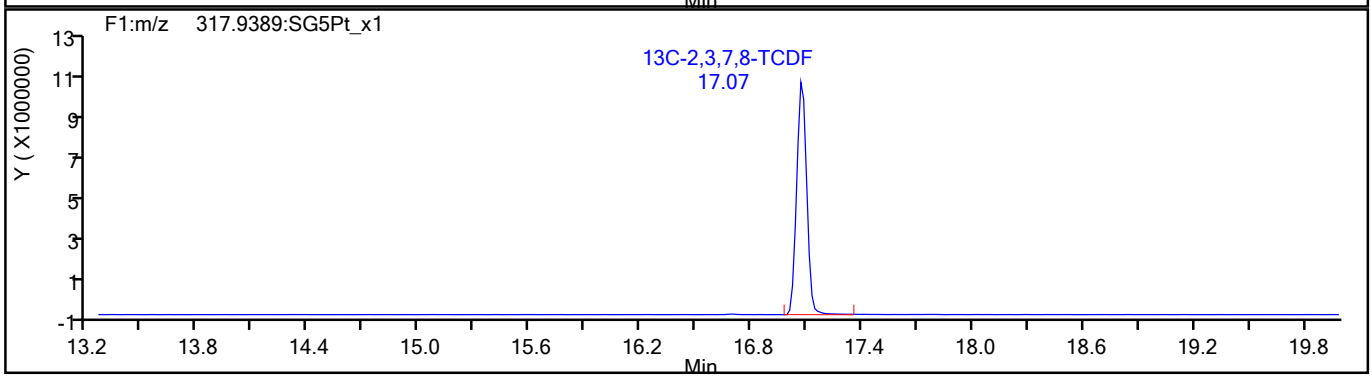

783411

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

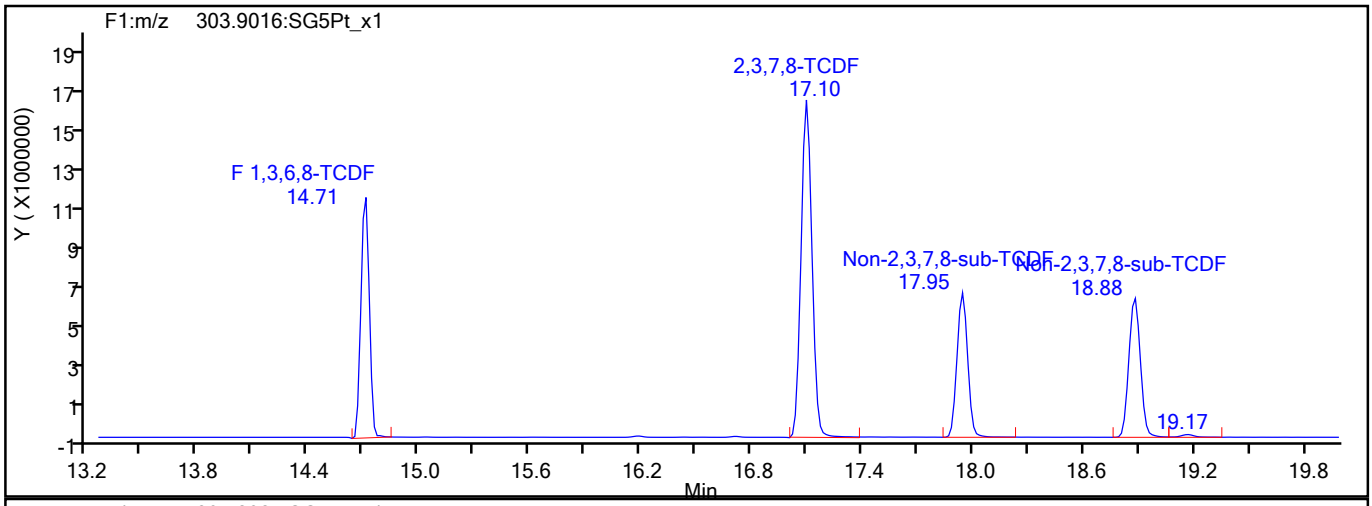

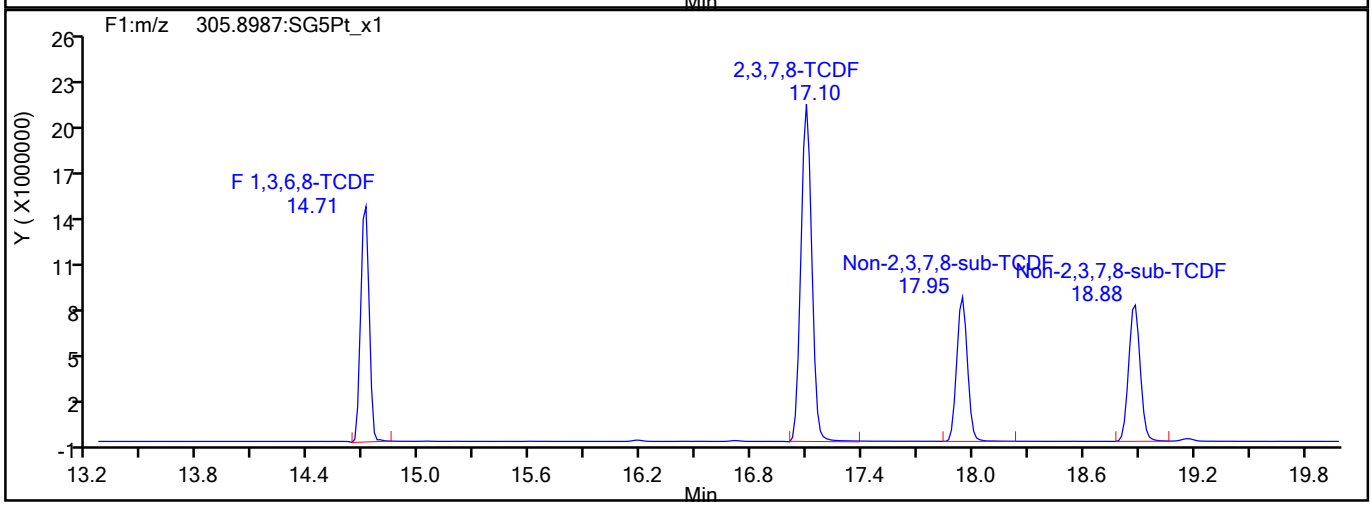

TCDF Interference Mass

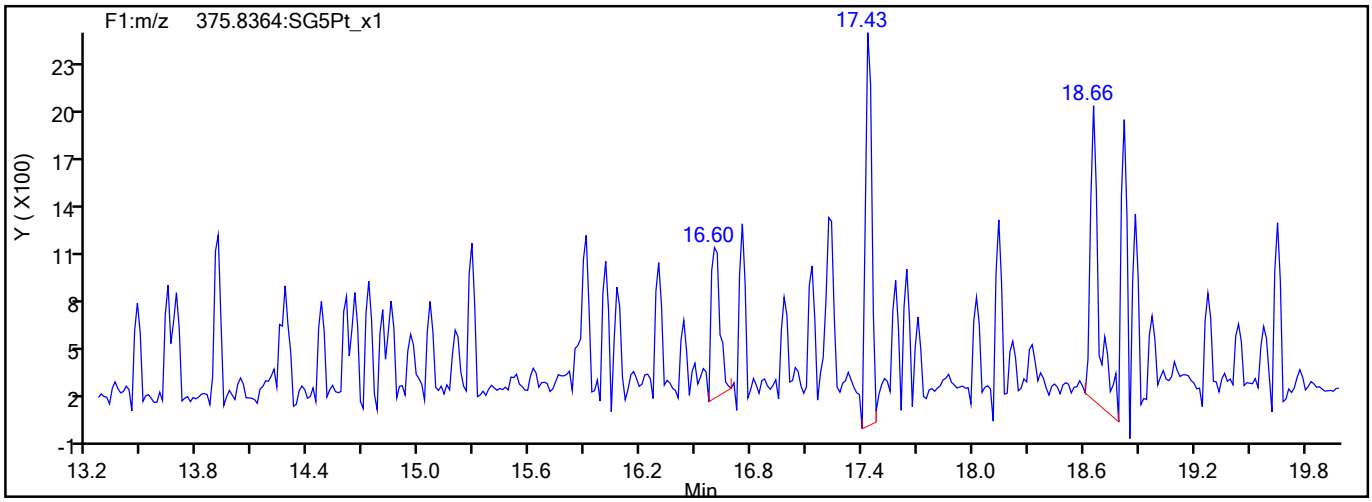

783412

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

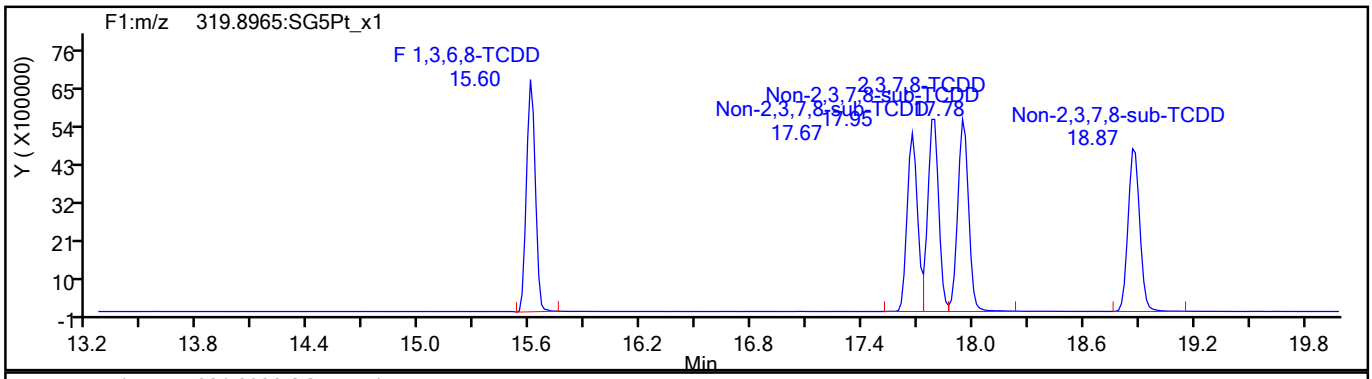

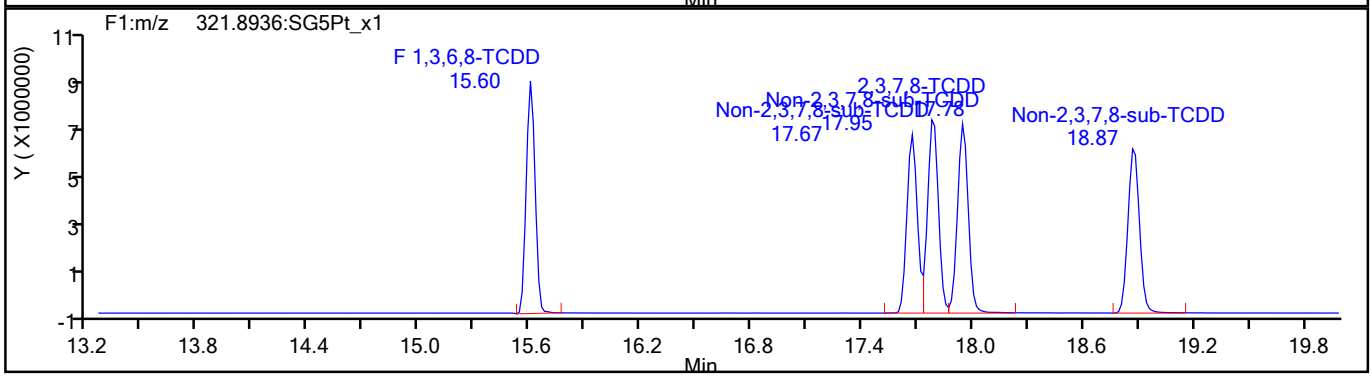

TCDD Standards

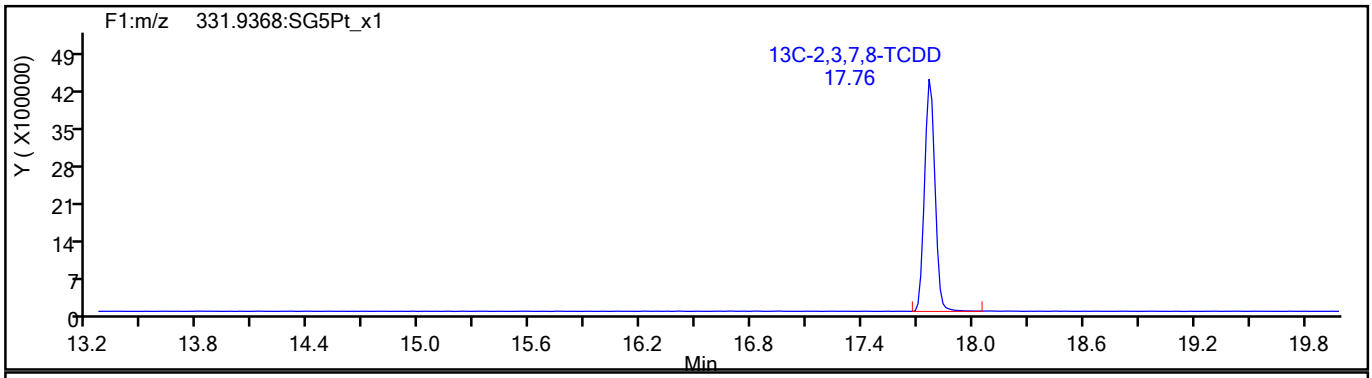

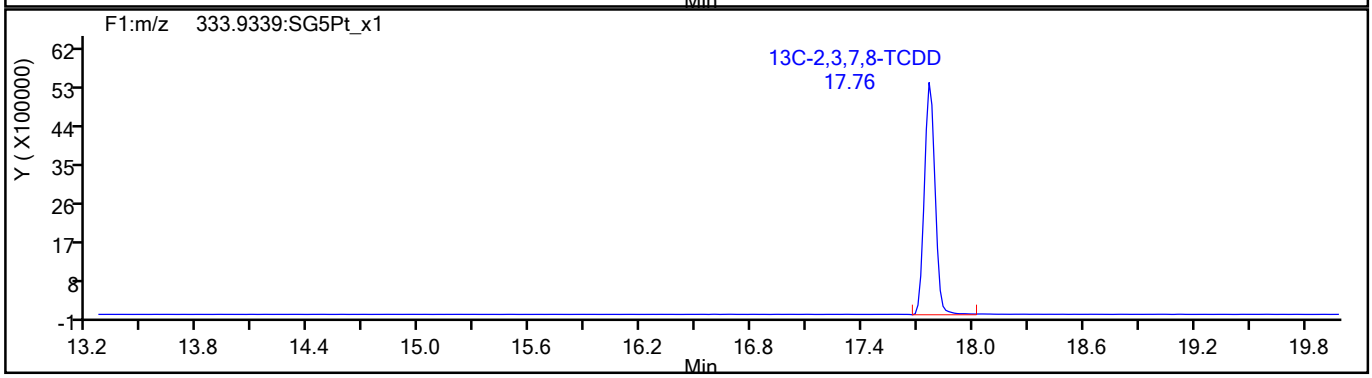

783413

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

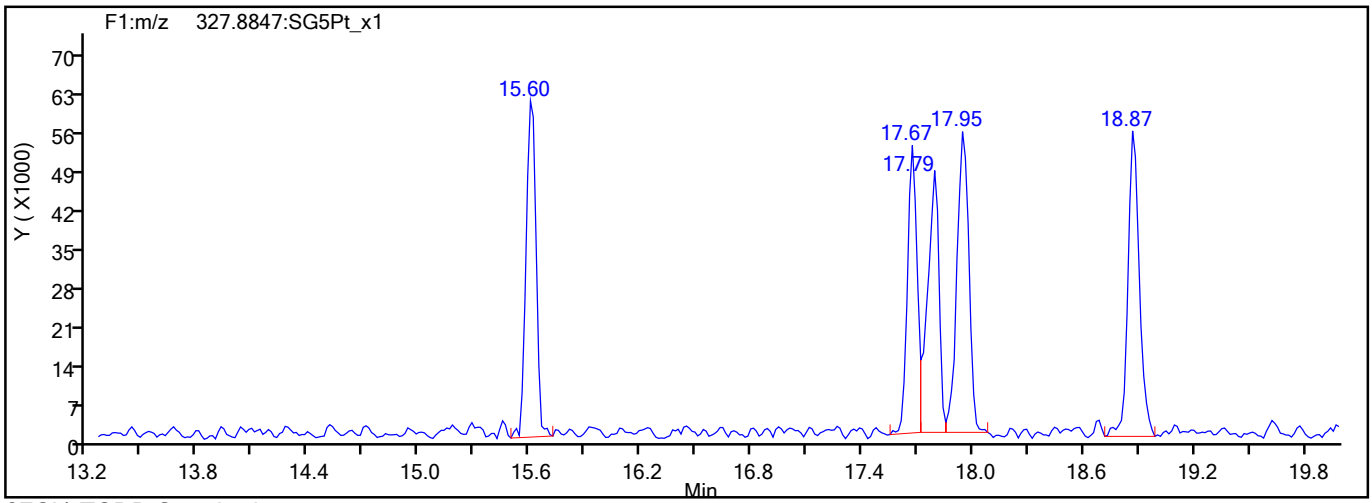

37Cl4-TCDD Standards

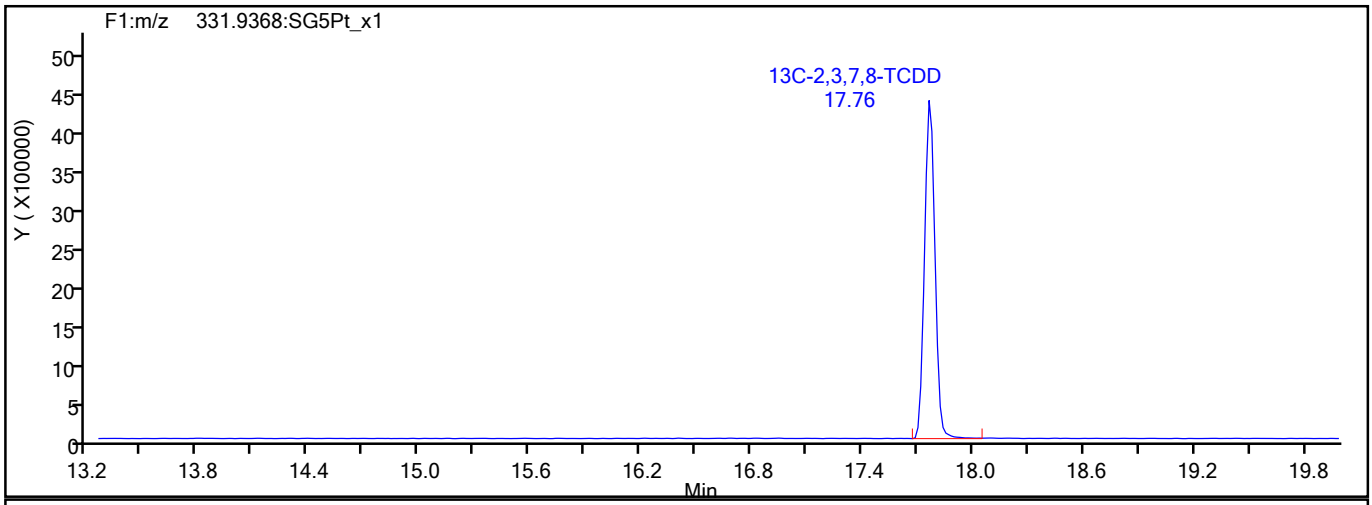

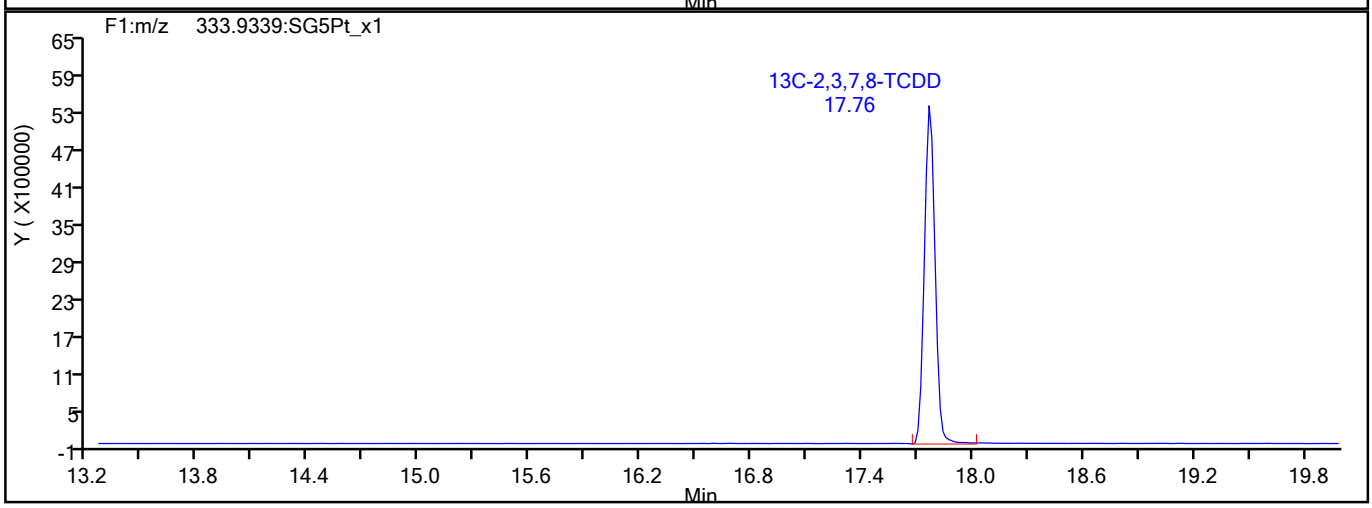

783414

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

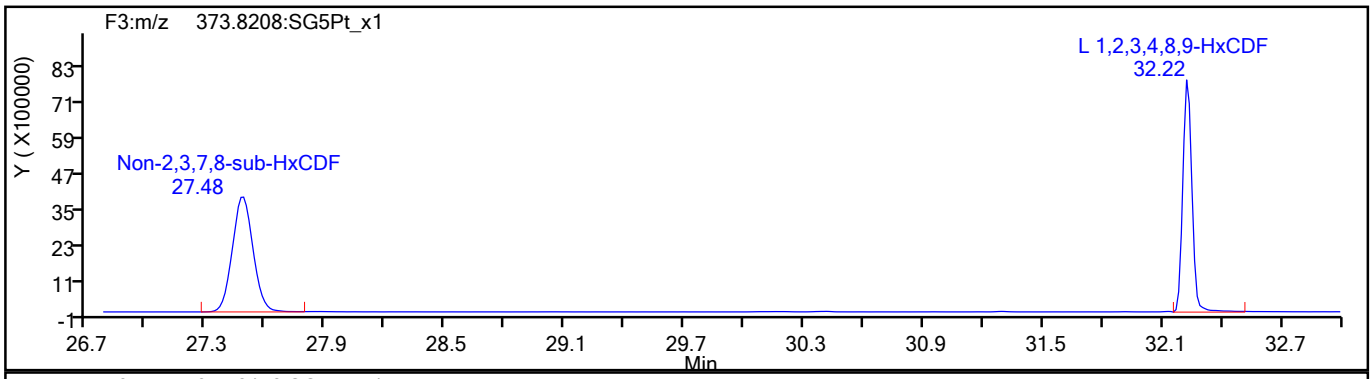

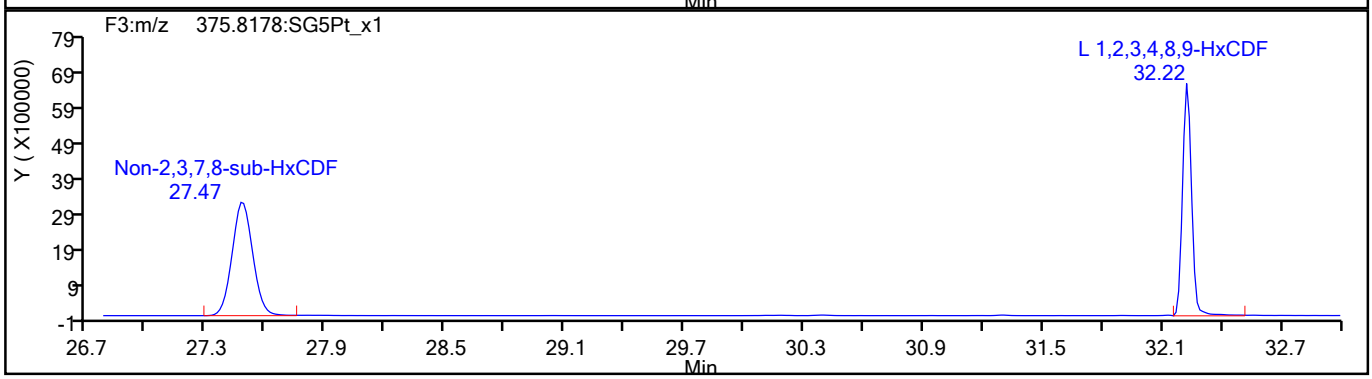

HxCDF Standards

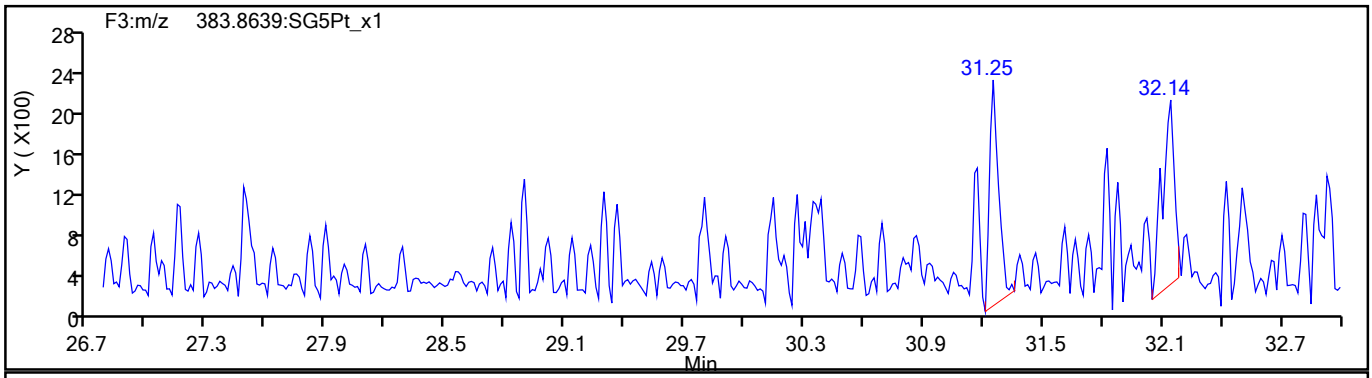

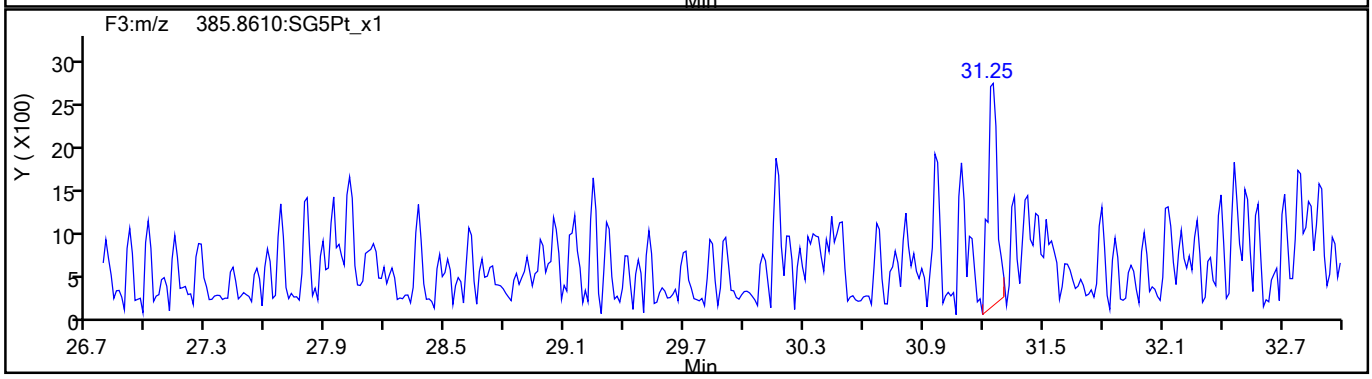

783415

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

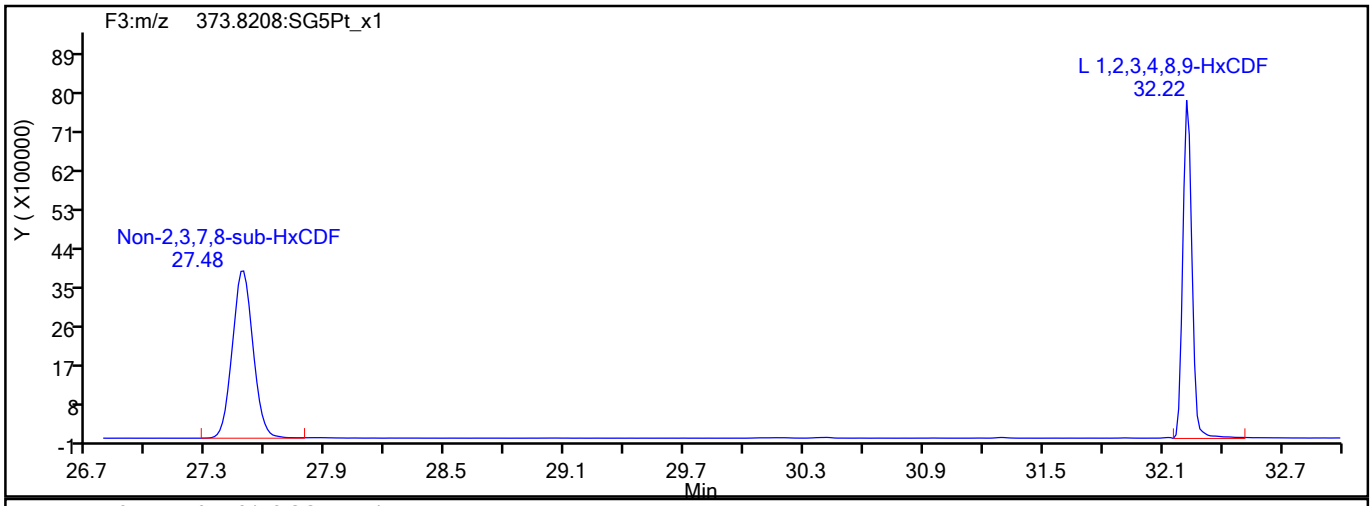

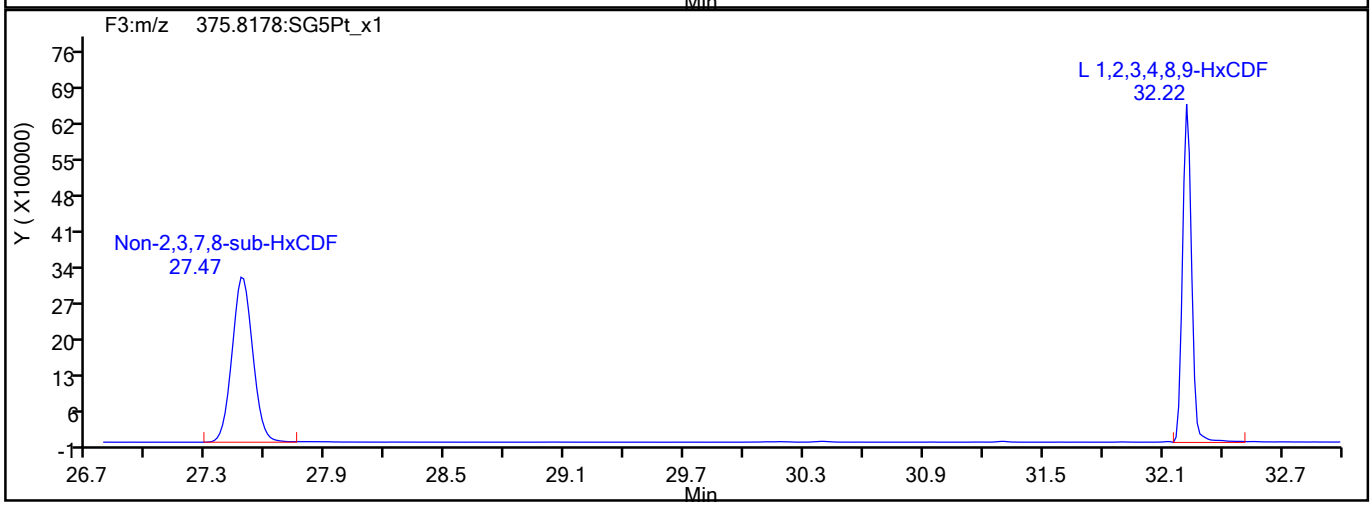

HxCDF Interference Mass

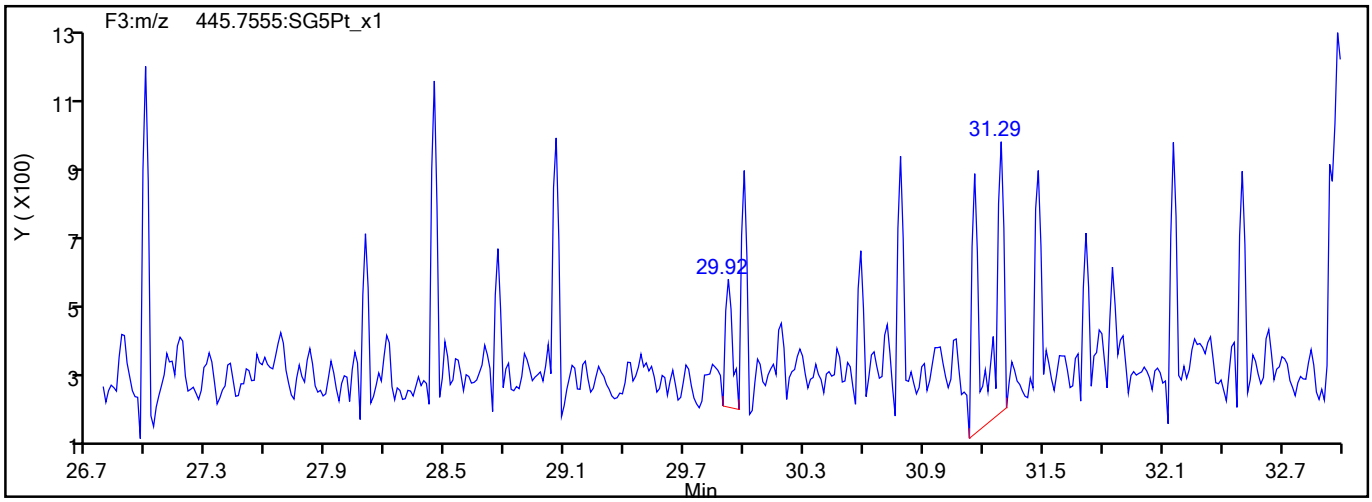

783416

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

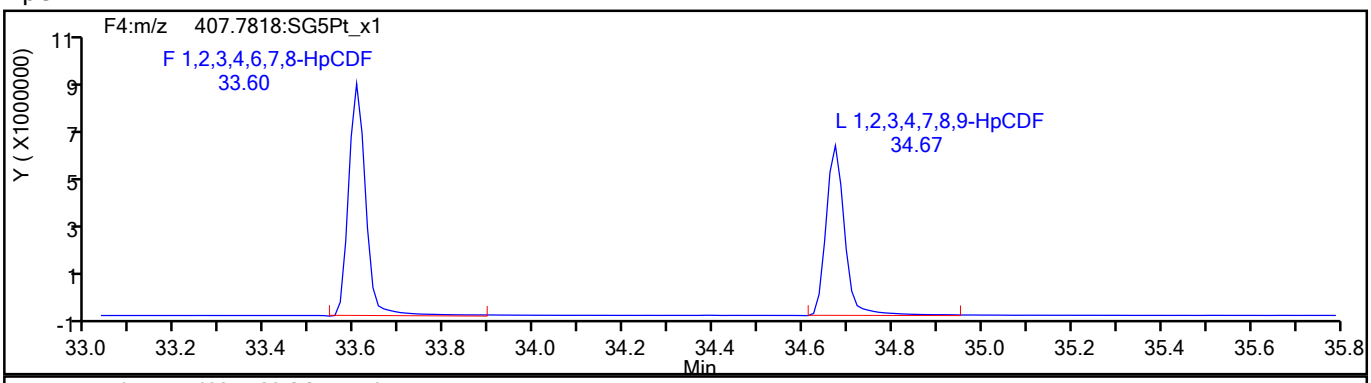

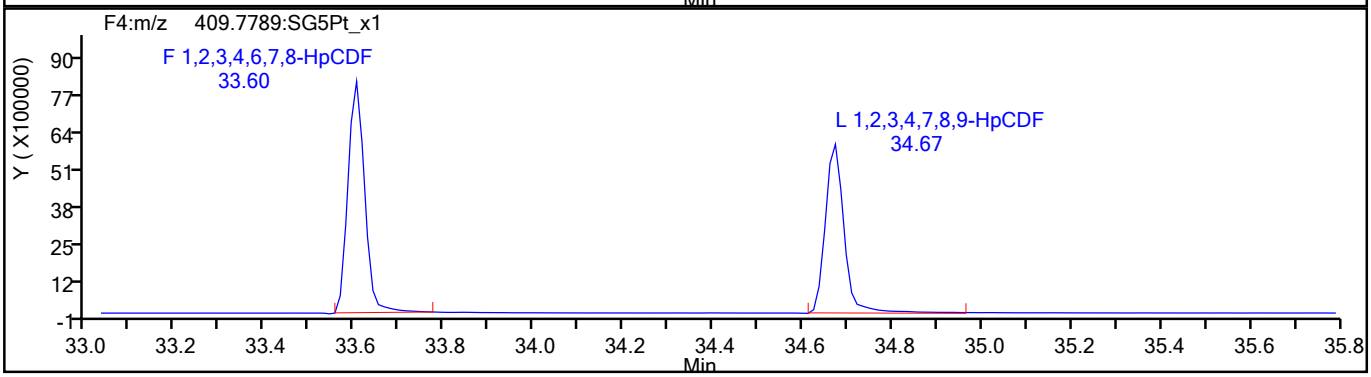

HpCDF Standards

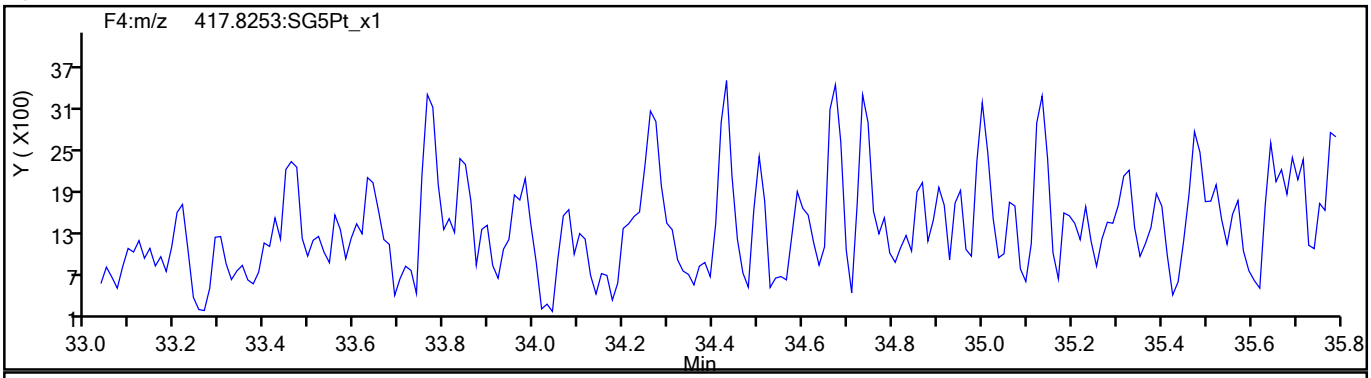

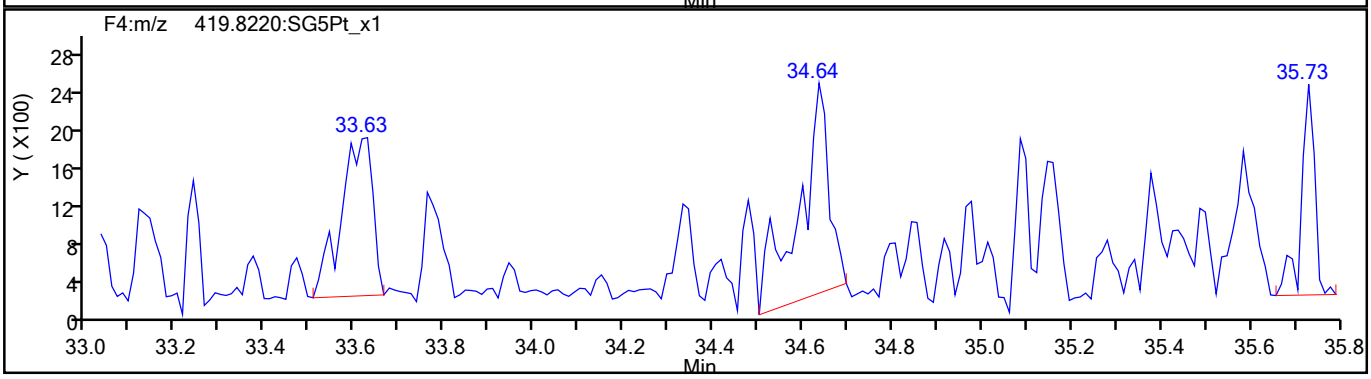

783417

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

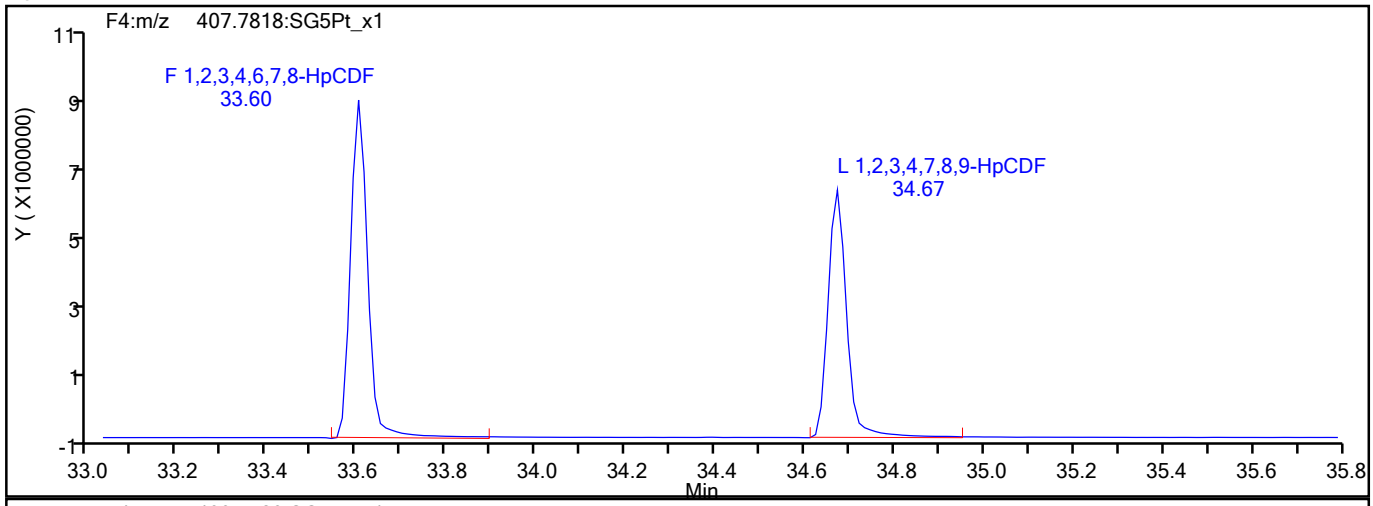

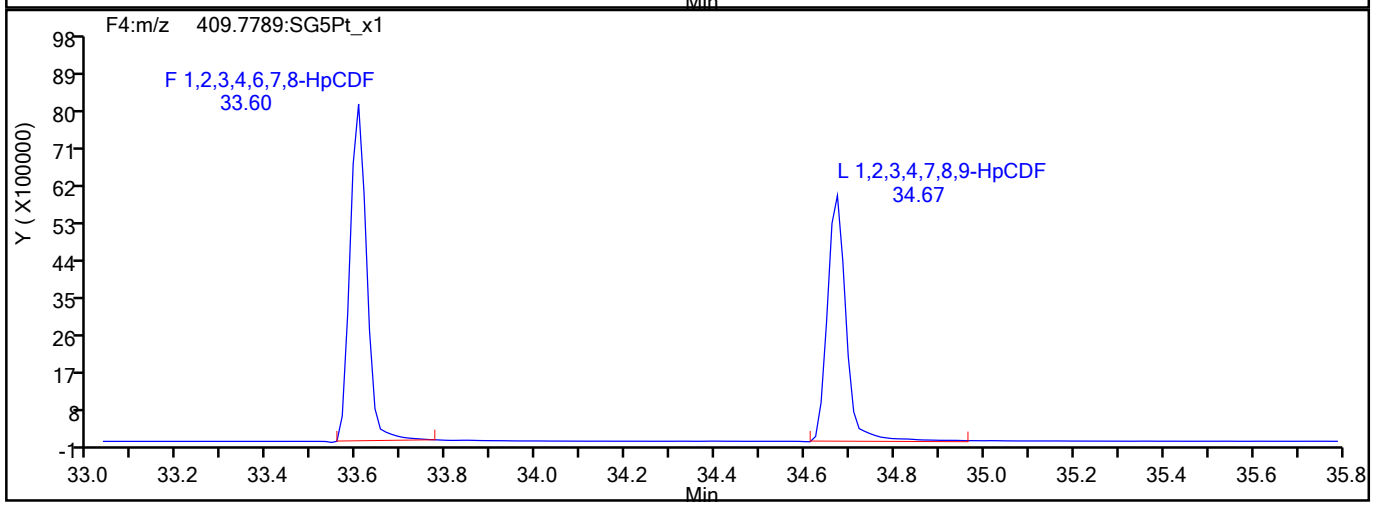

HpCDF Interference Mass

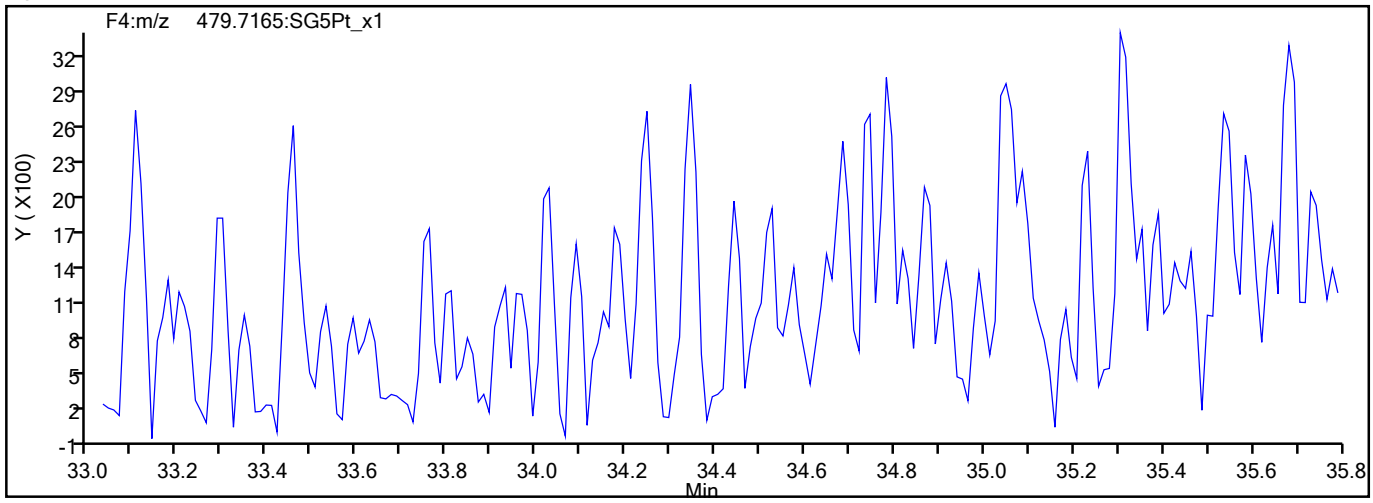

783418

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

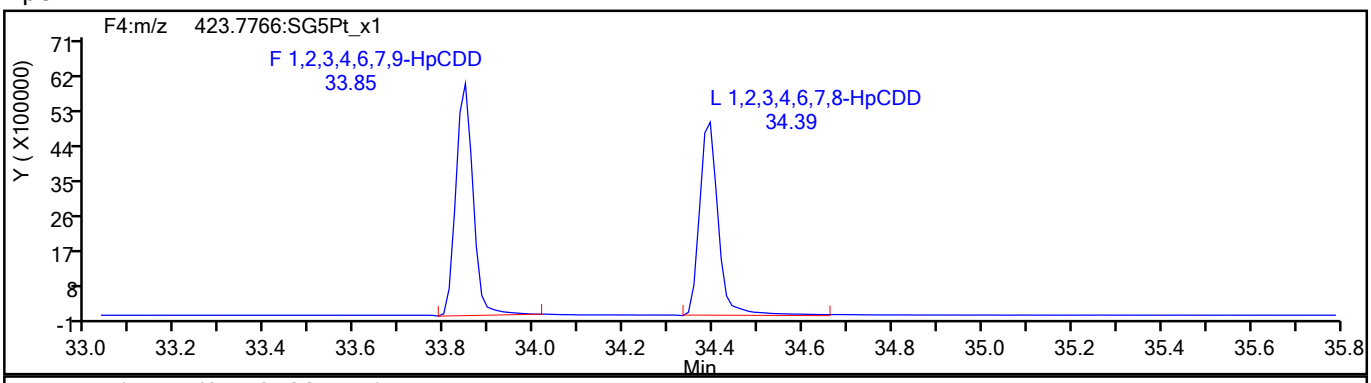

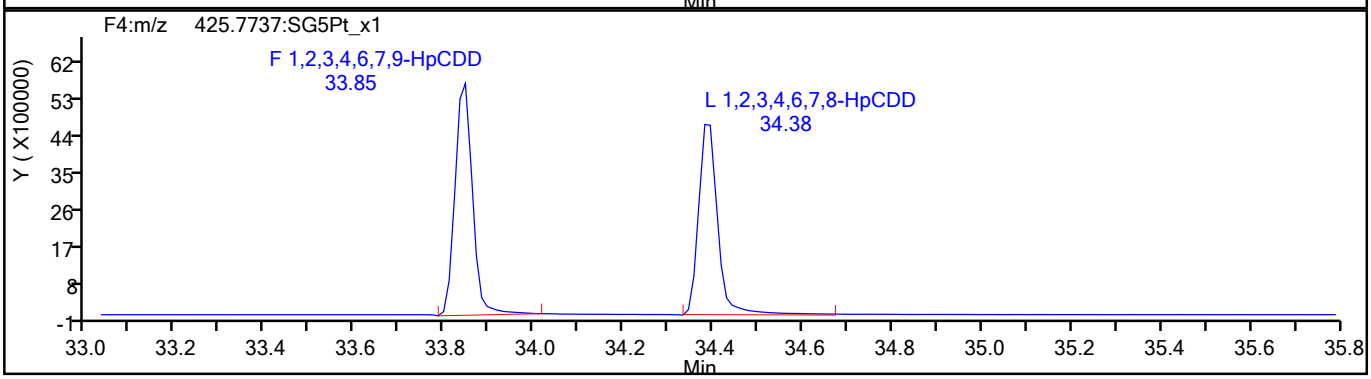

HpCDD Standards

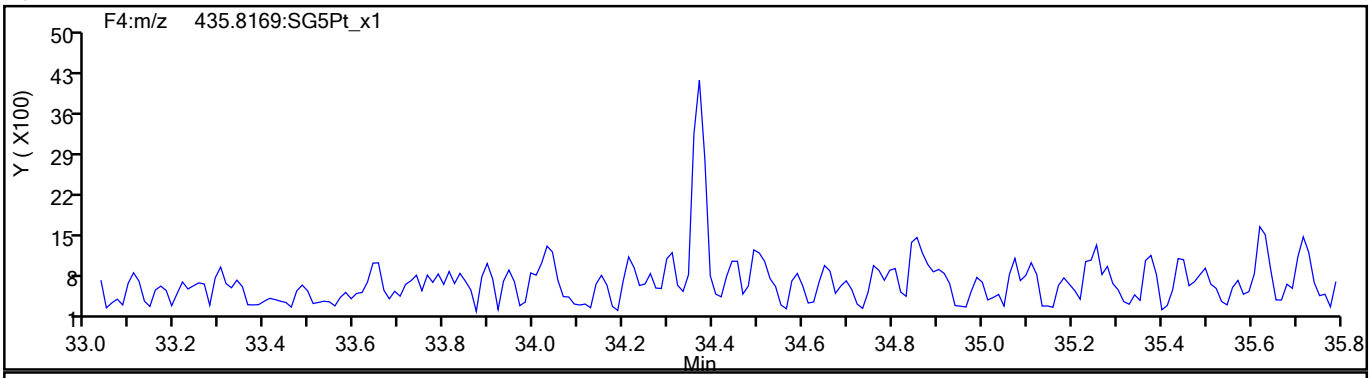

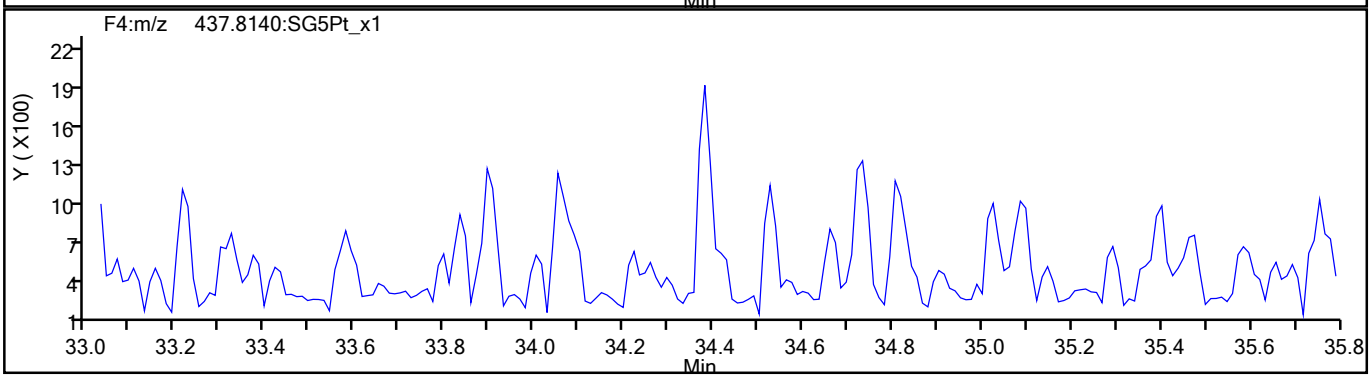

783419

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

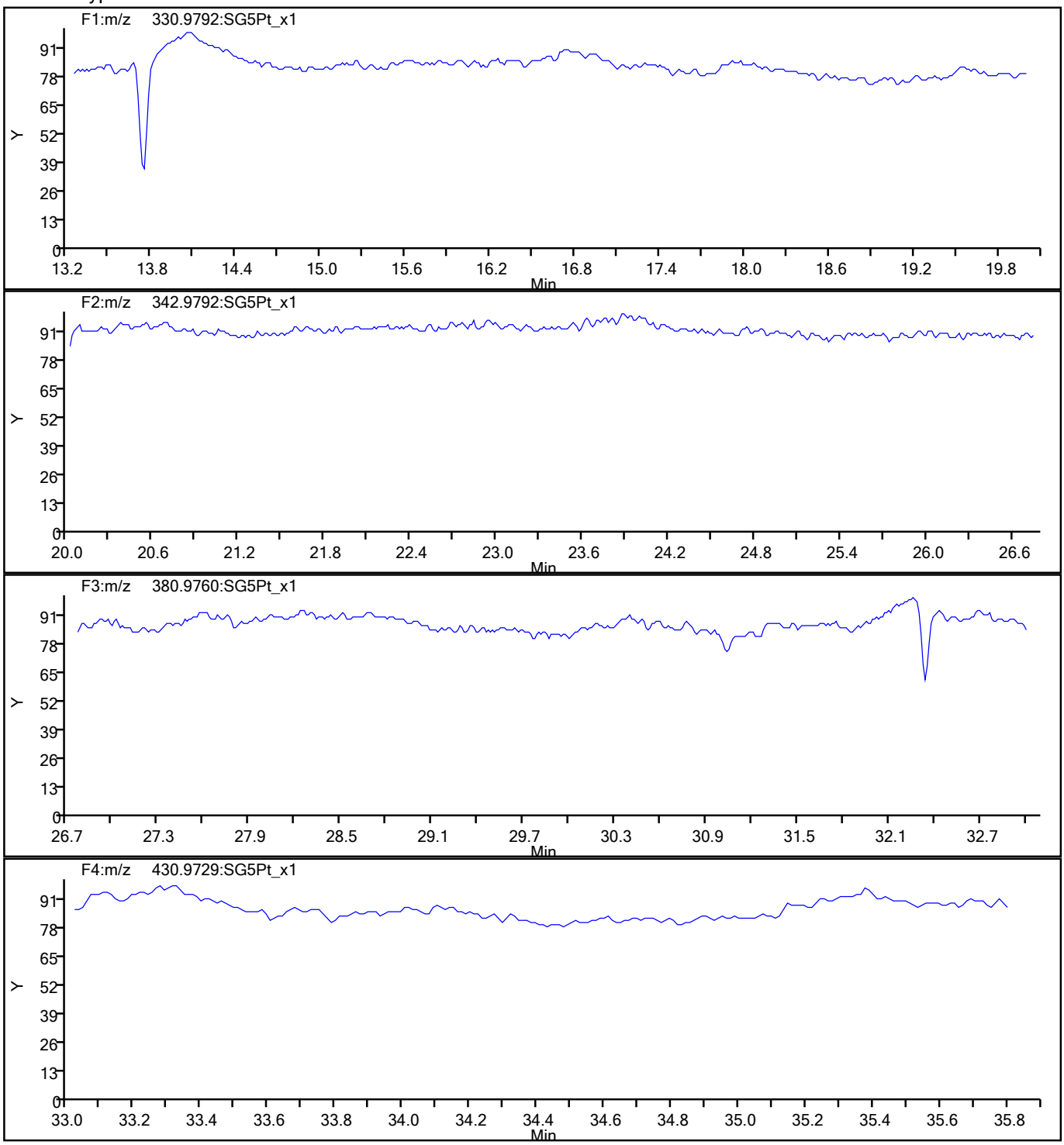

783420

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

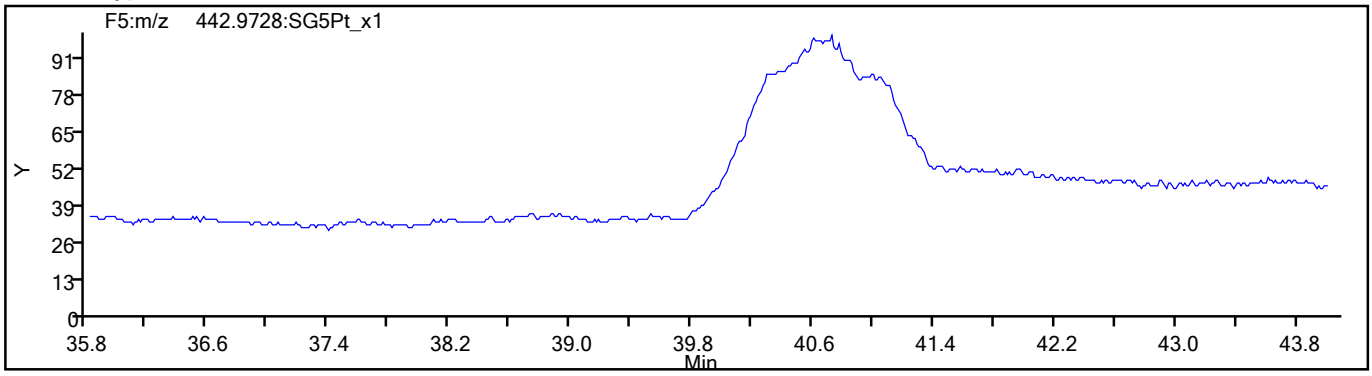

783421

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

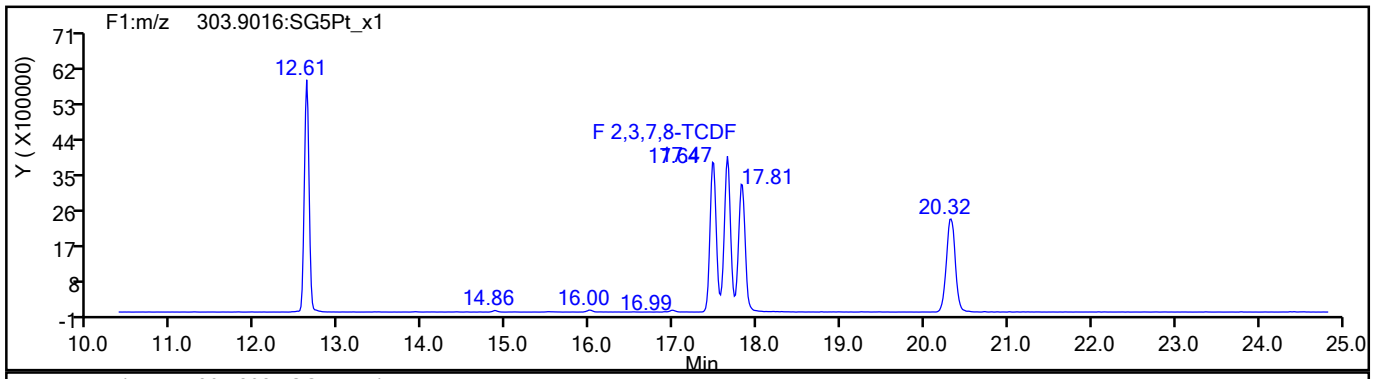

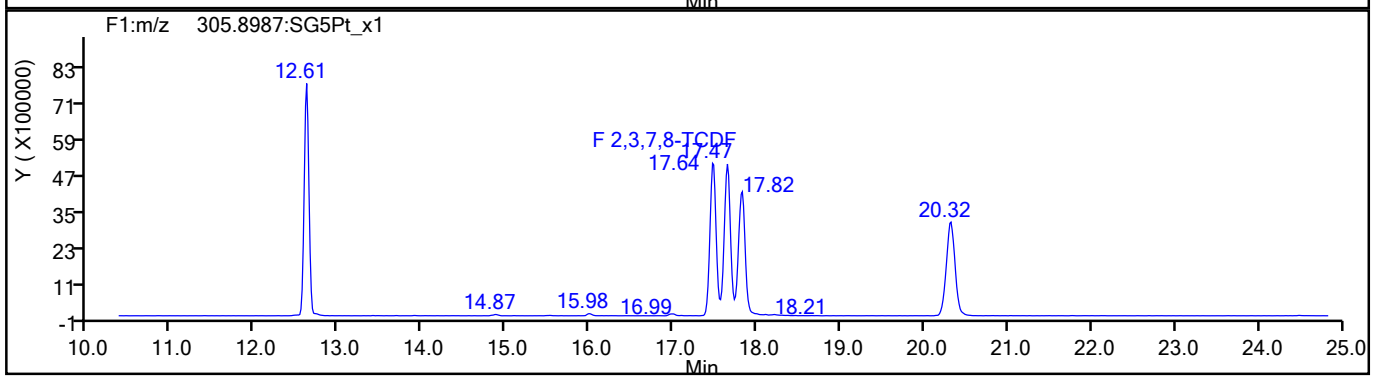

TCDF Standards

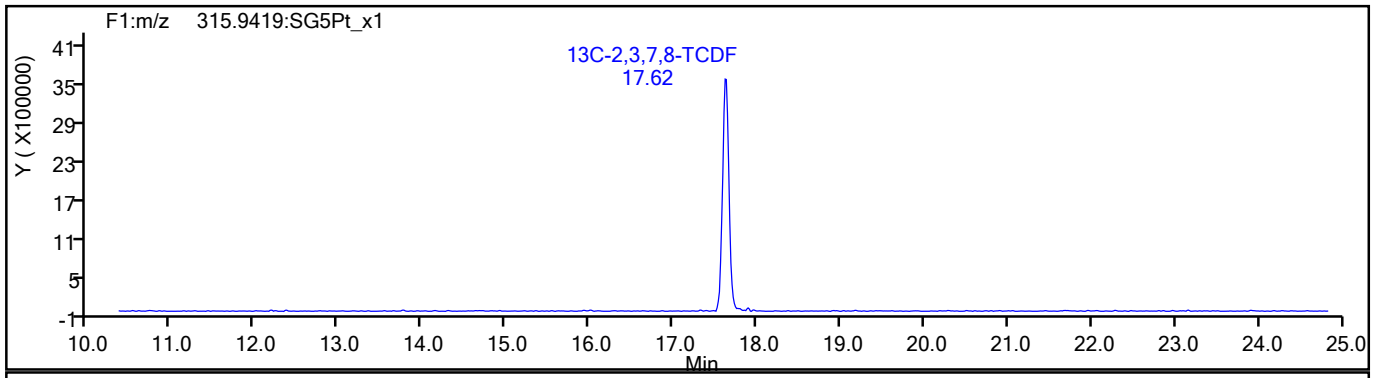

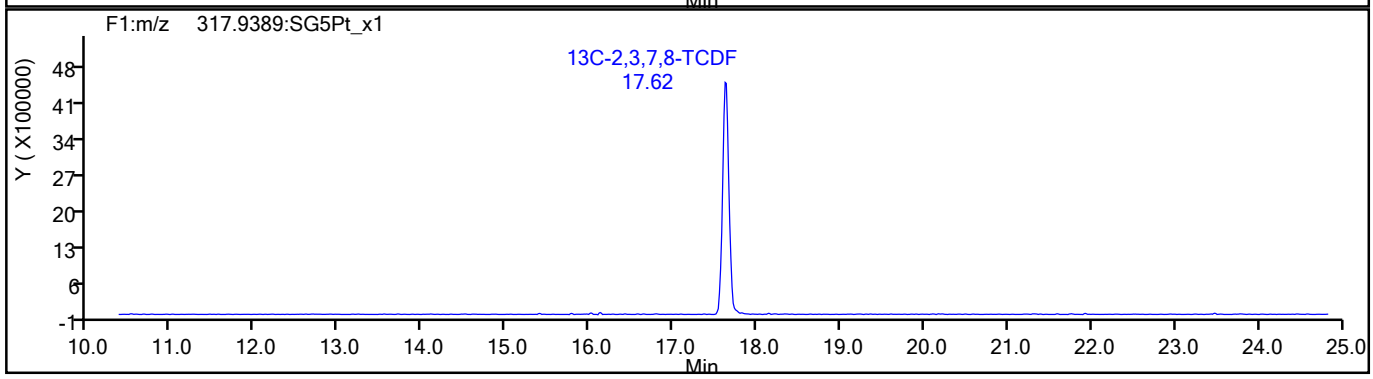

783424

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

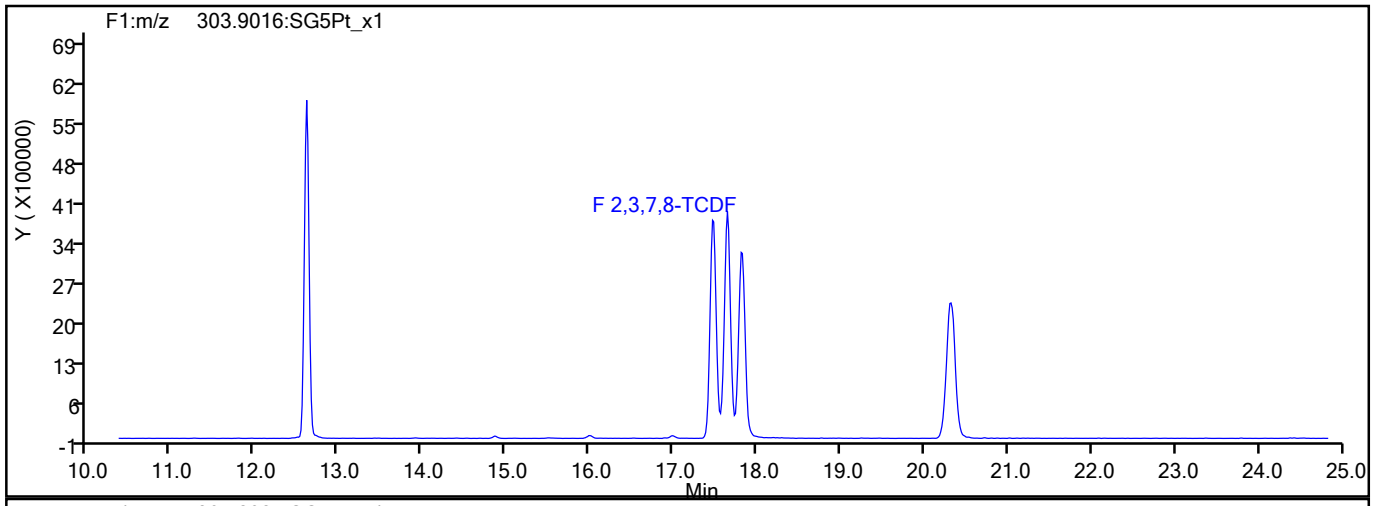

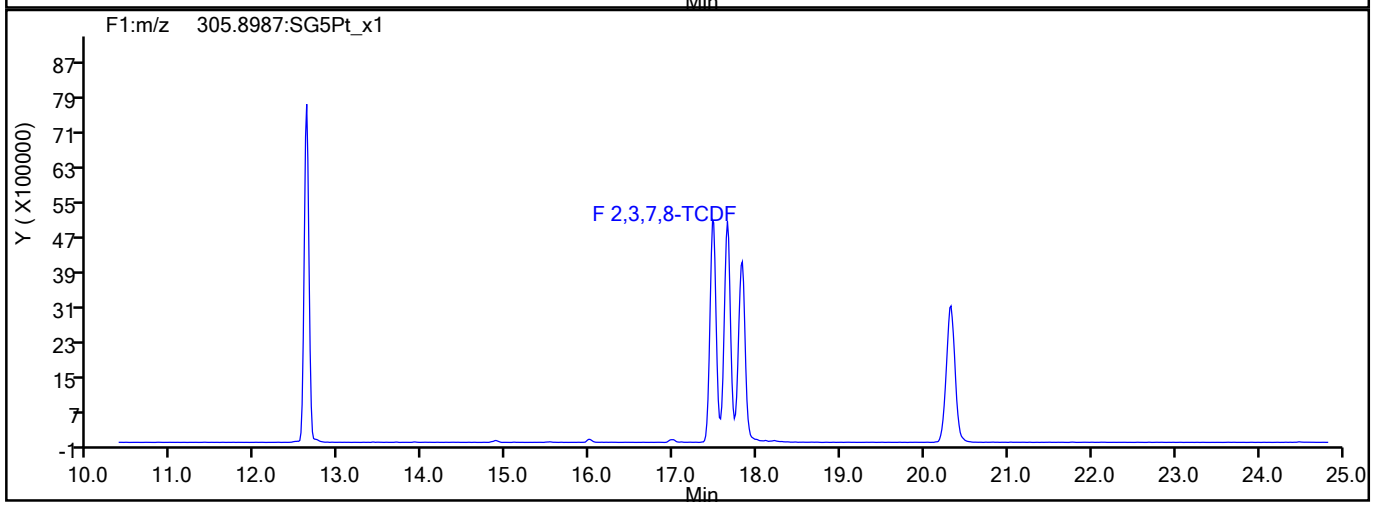

TCDF Interference Mass

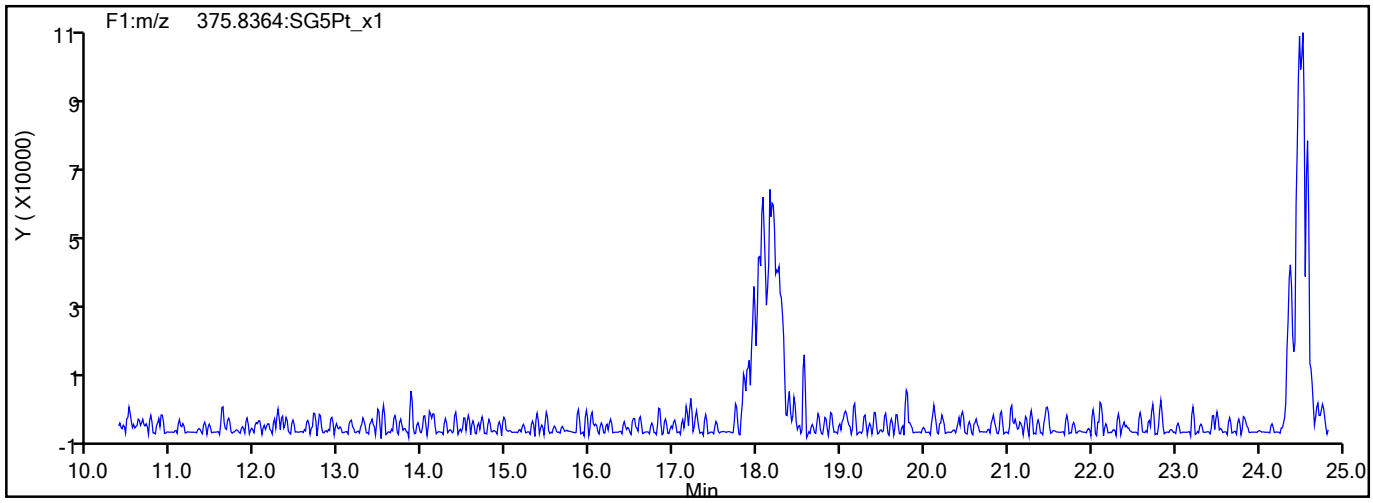

783425

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

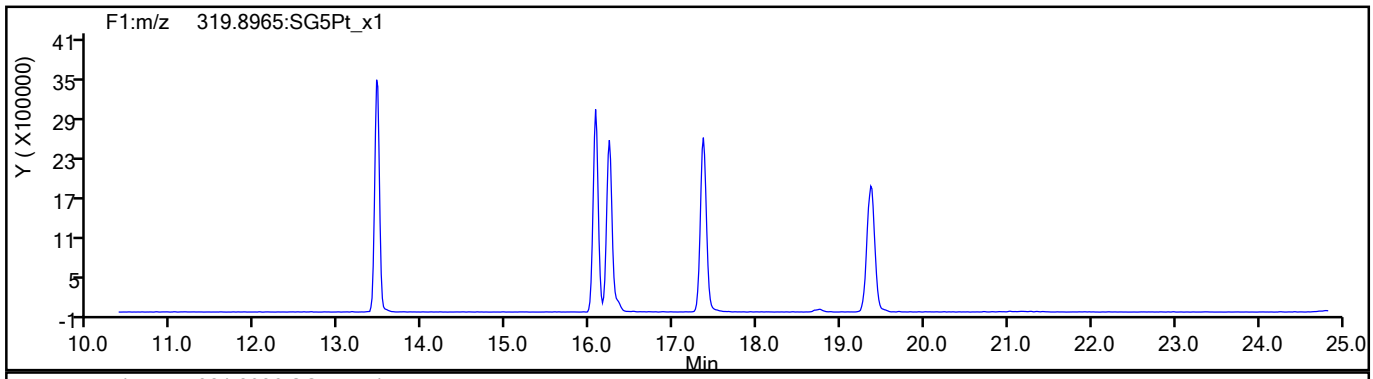

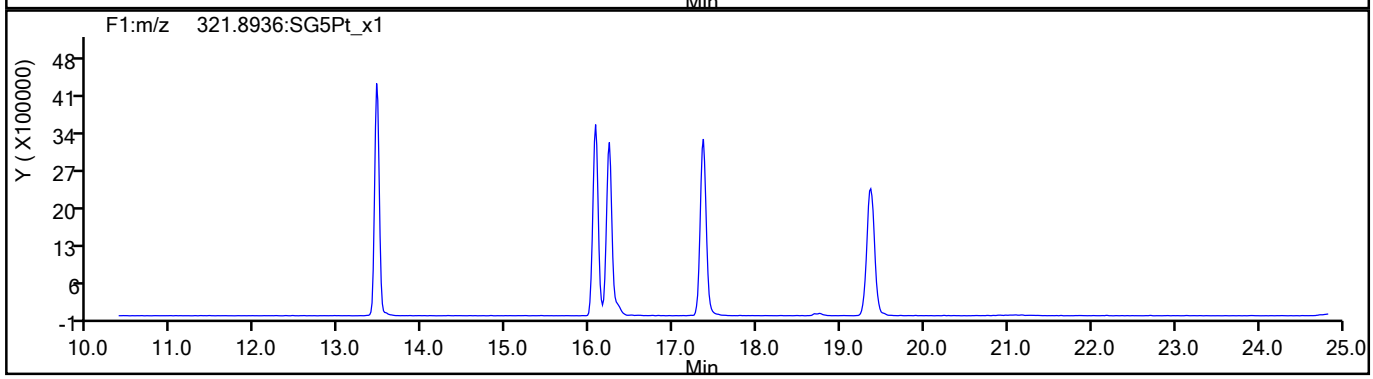

TCDD Standards

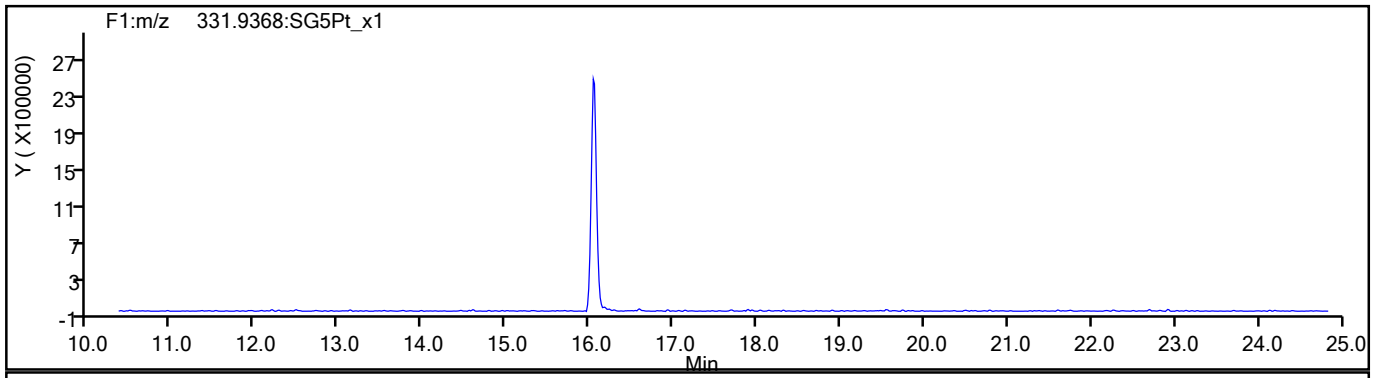

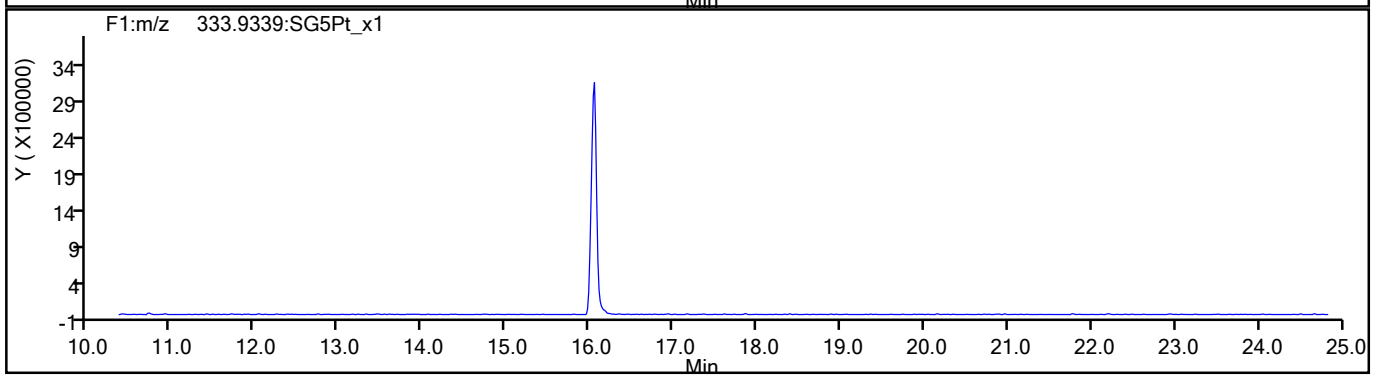

783426

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

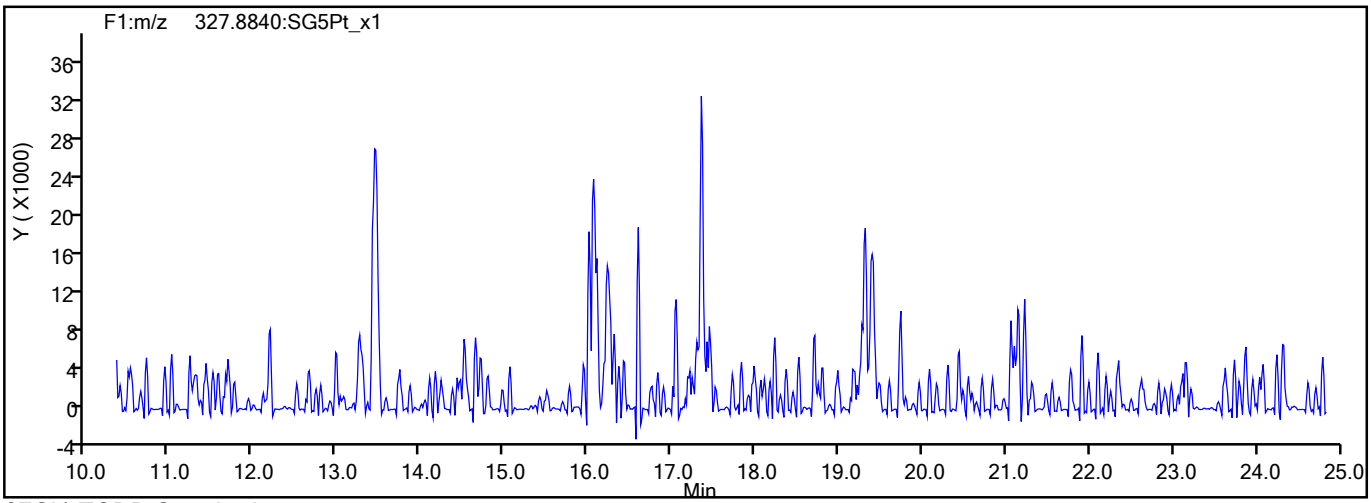

37Cl4-TCDD Standards

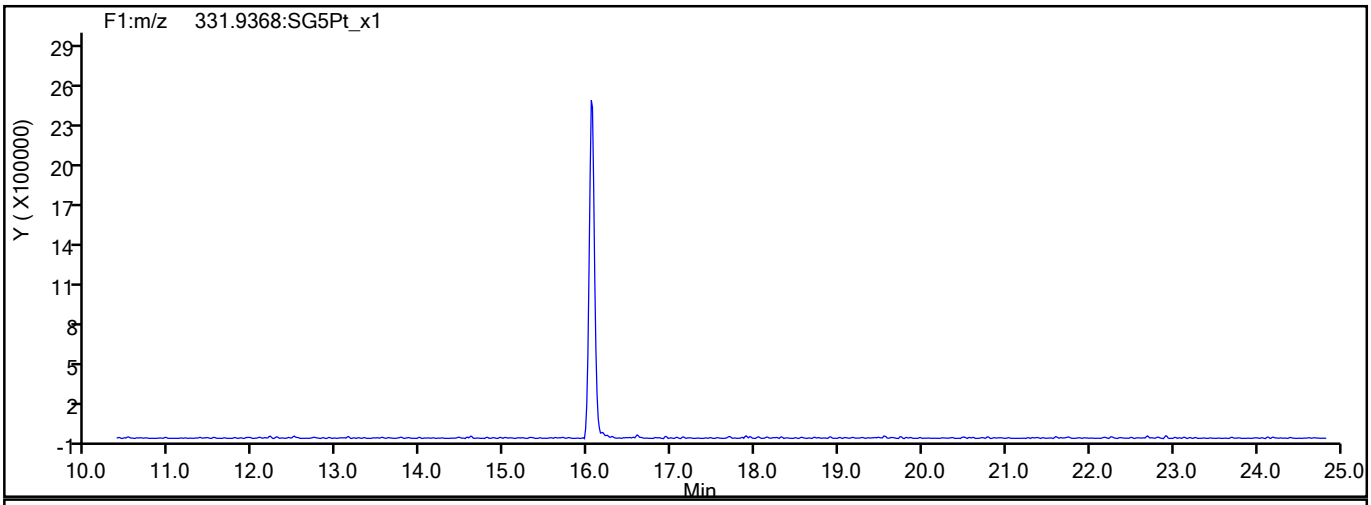

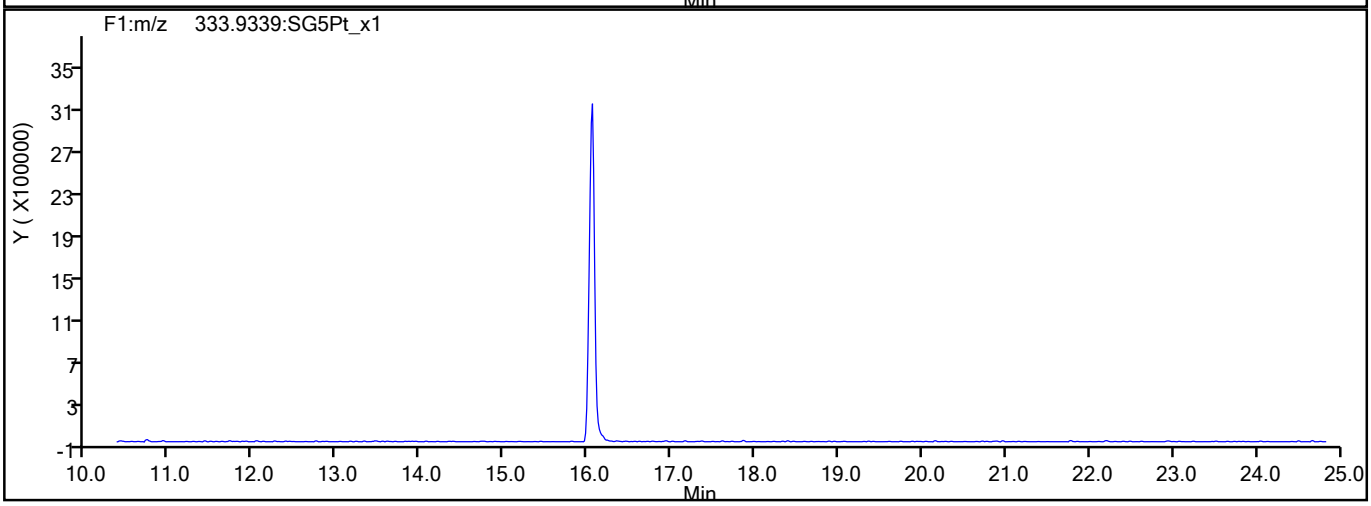

783427

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

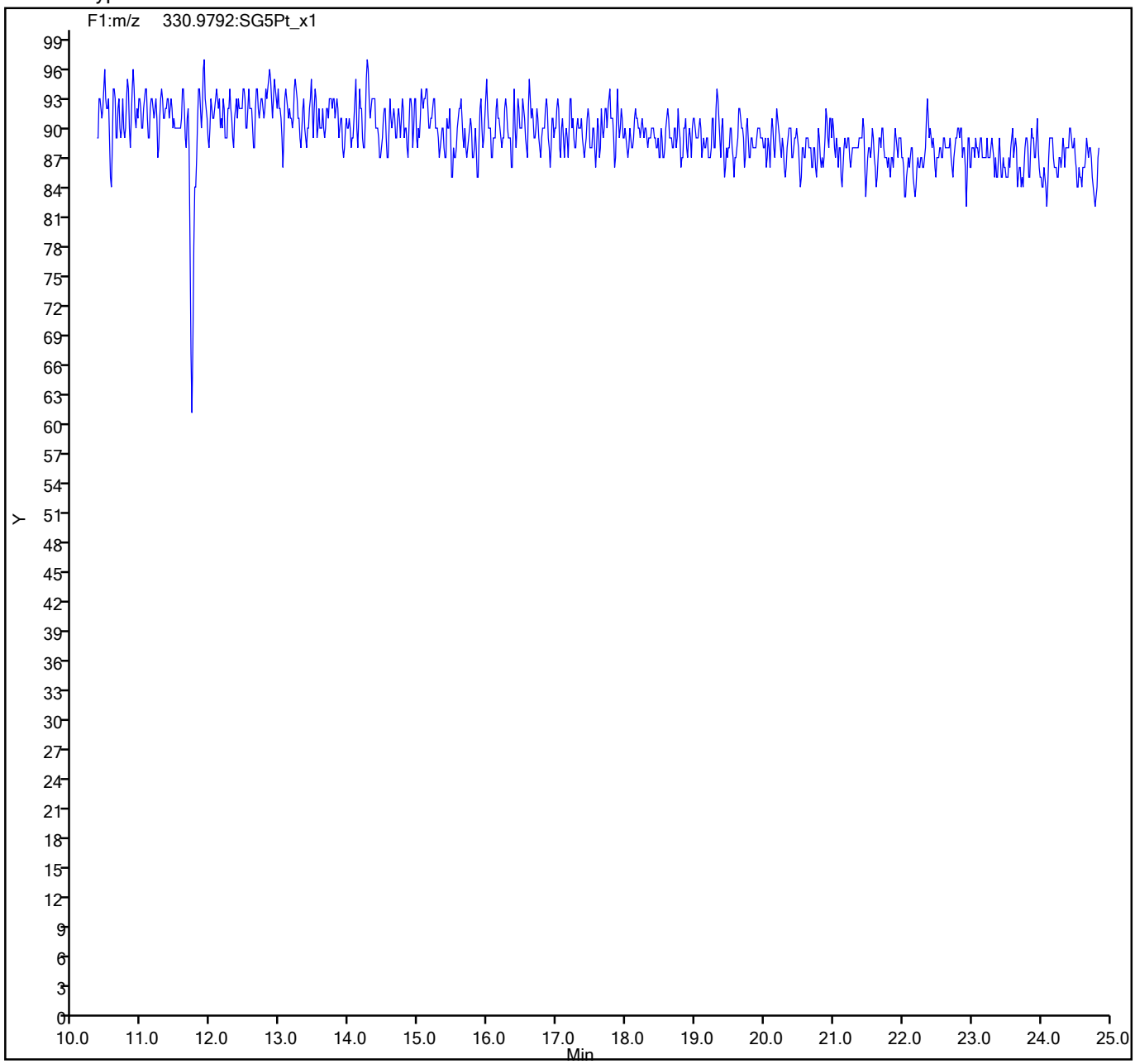

783428

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 12:59:07 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:33 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:56:58

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.631	29054878	0.79	1.3327					0.00	
2,3,7,8-TCDF	17.659	30793724	0.77	0.9978	42.5	42.5	0.0965	0.0965		
D 13C-2,3,7,8-TCDD	16.081	17349695	0.82	0.8749					0.00	
2,3,7,8-TCDD	16.095	19254291	0.78	1.0570	42.0	42.0	0.1075	0.1075		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 12:59:07 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:33 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:56:58

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.631	17.631	0	1.000	12787012	2551981	13654	34135	187		
317.9389	17.631	17.631	0	1.000	16267866	3076922	11183	27957	275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.659	17.659	0	1.002	13417414	2552580	2769	6922	922		
305.8987	17.645	17.659	-1	1.001	17376310	3303374	2652	6630	1246	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.081	16.081	0	1.000	7825356	1694452	30090	75225	56		
333.9339	16.068	16.081	-1	1.000	9524339	2014028	12442	31105	162	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.095	16.095	0	1.001	8416026	1883087	1907	4767	987		
321.8936	16.095	16.095	0	1.001	10838265	2417244	2305	5762	1049	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

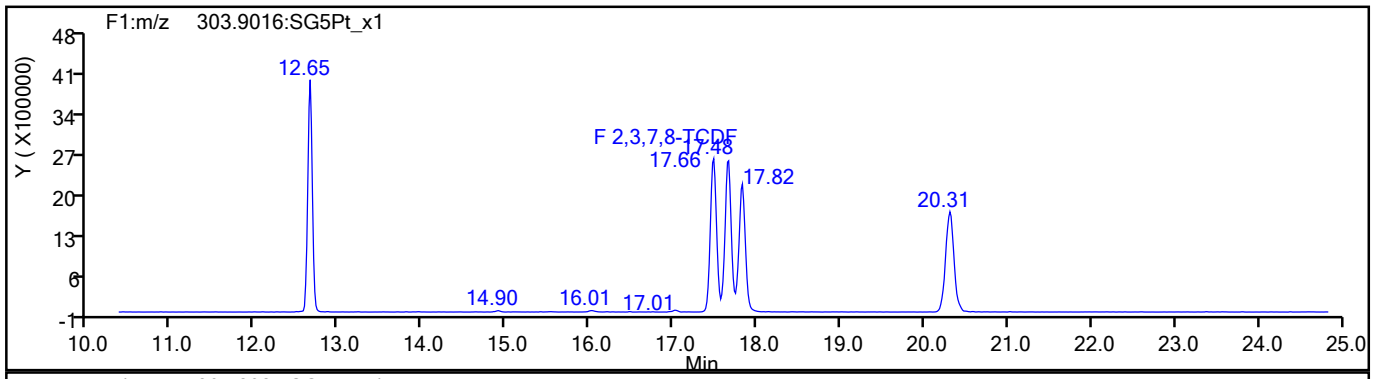

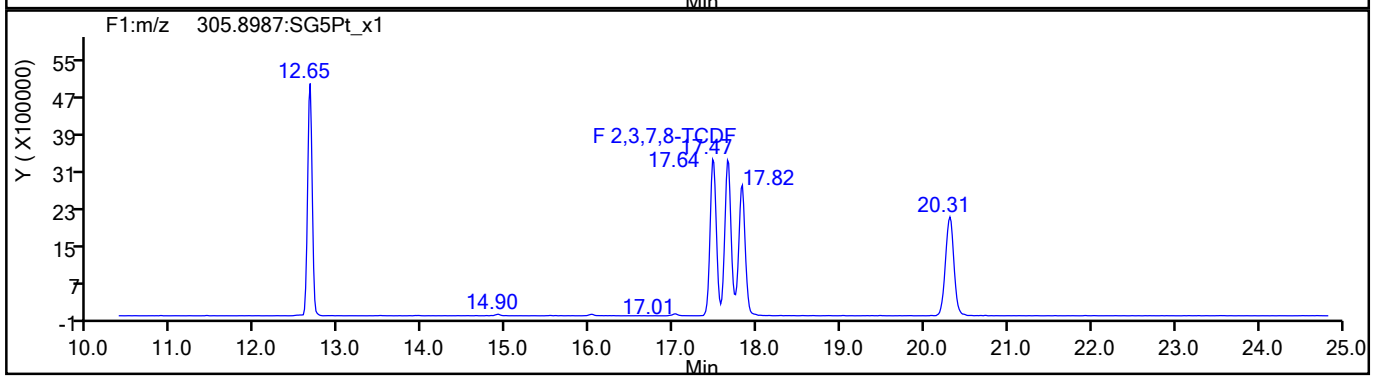

TCDF Standards

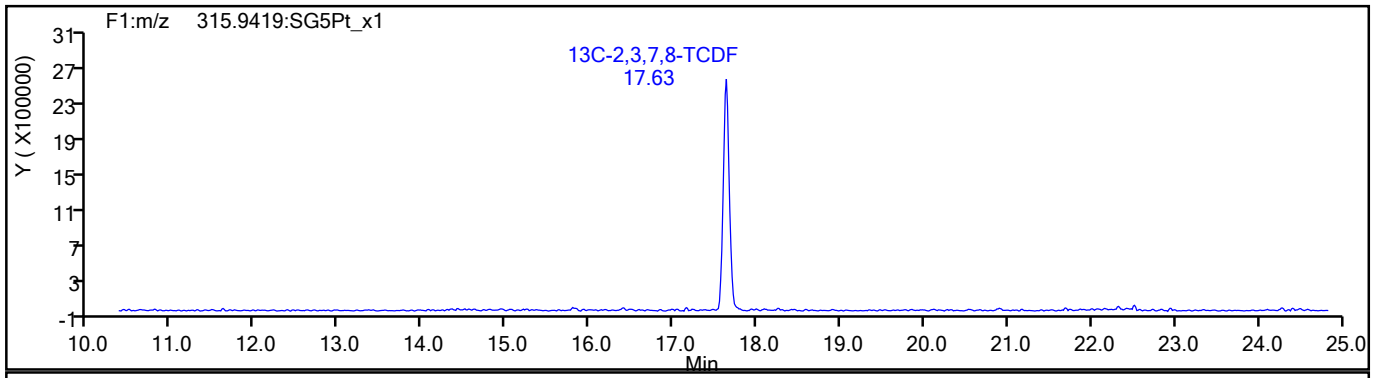

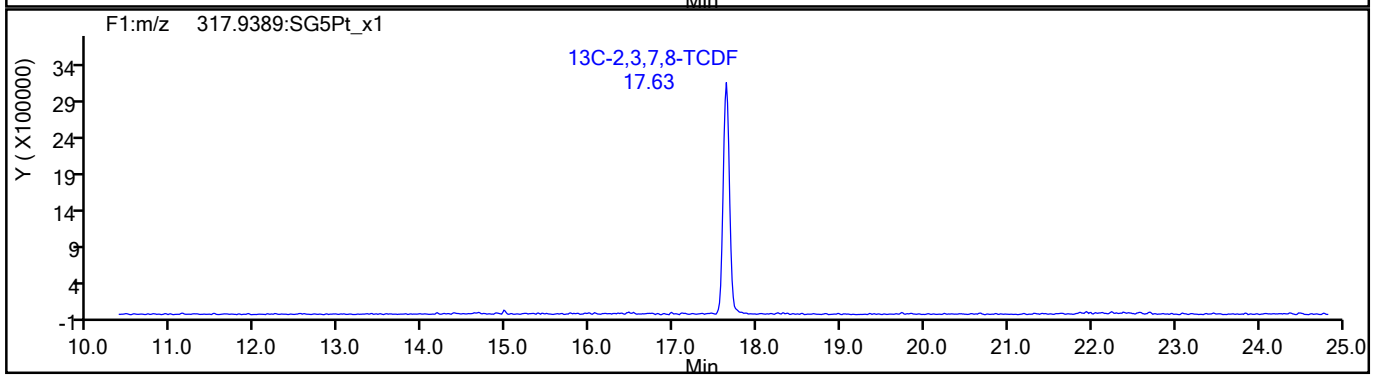

783431

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

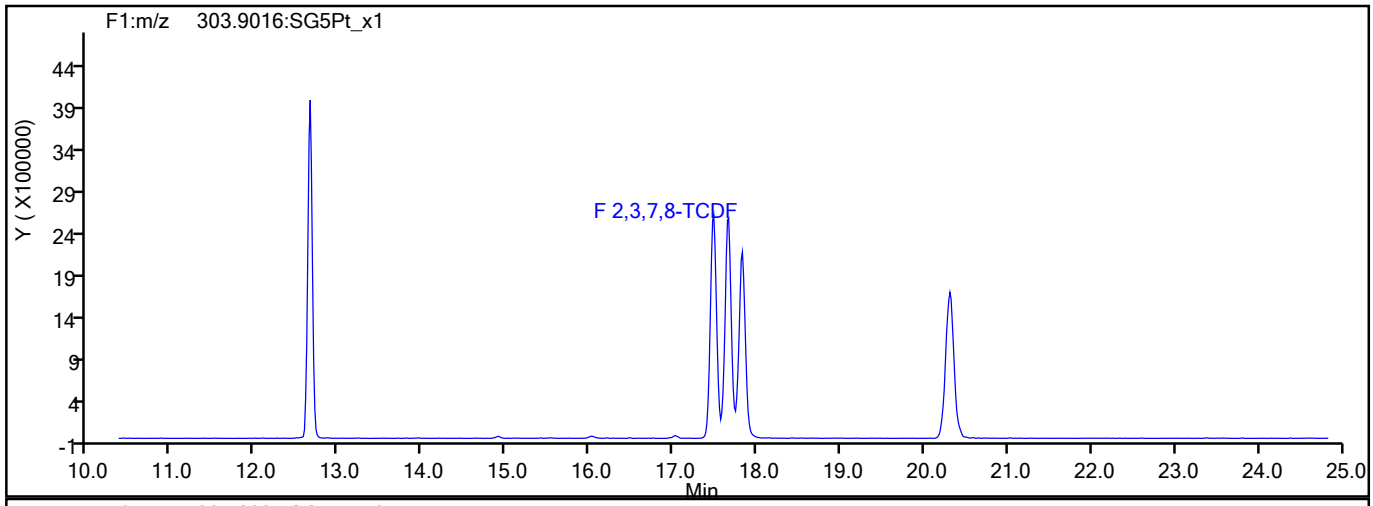

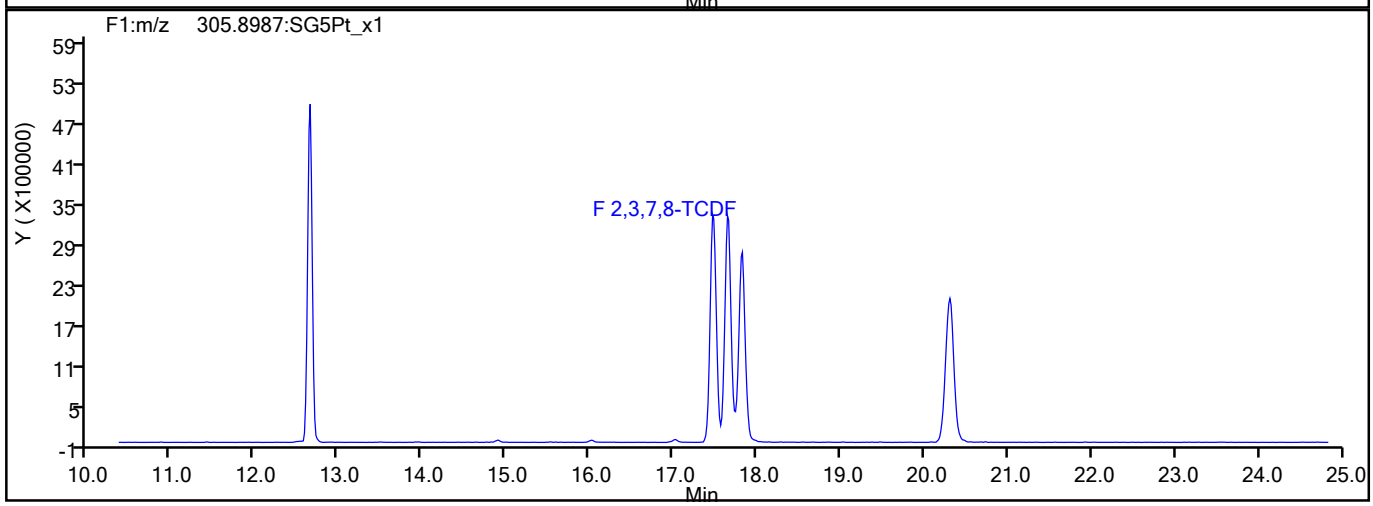

TCDF Interference Mass

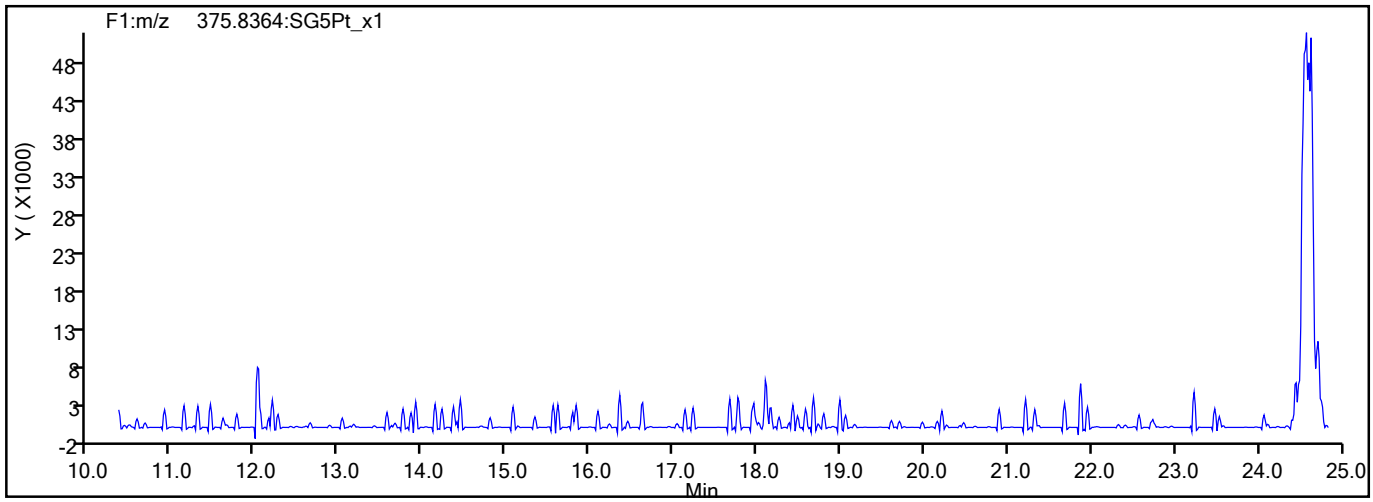

783432

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

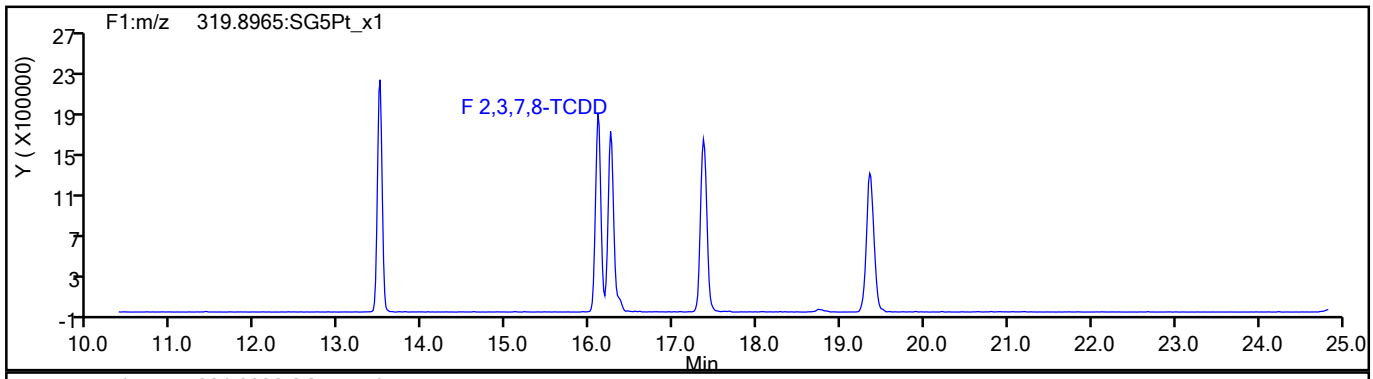

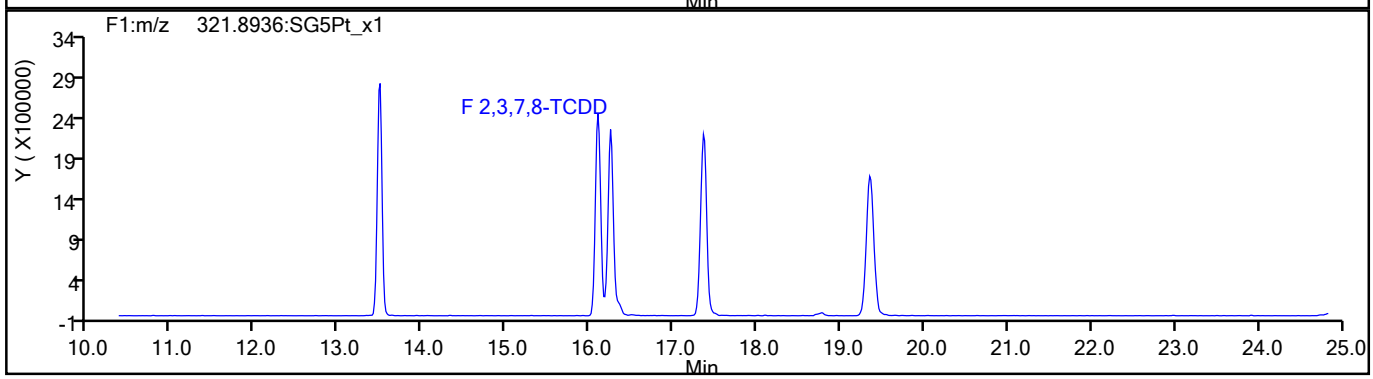

TCDD Standards

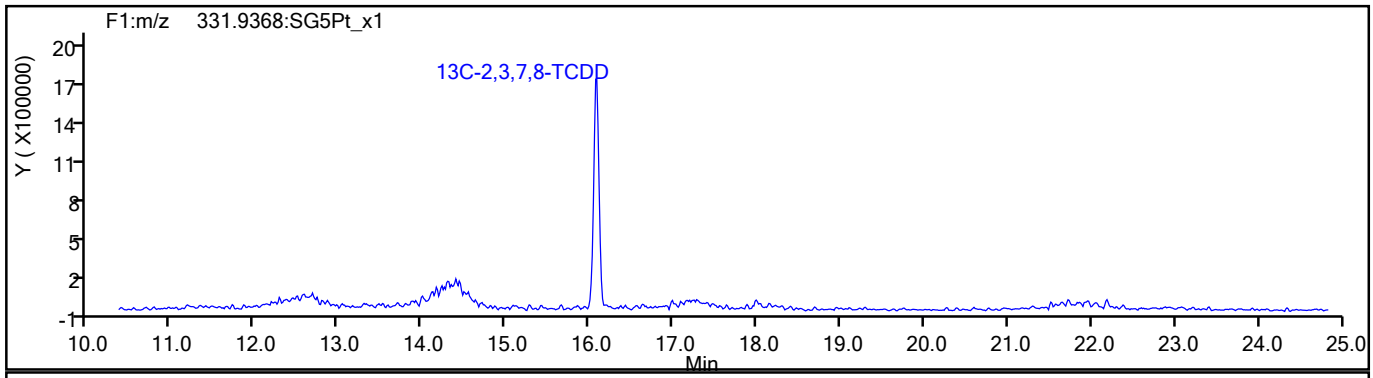

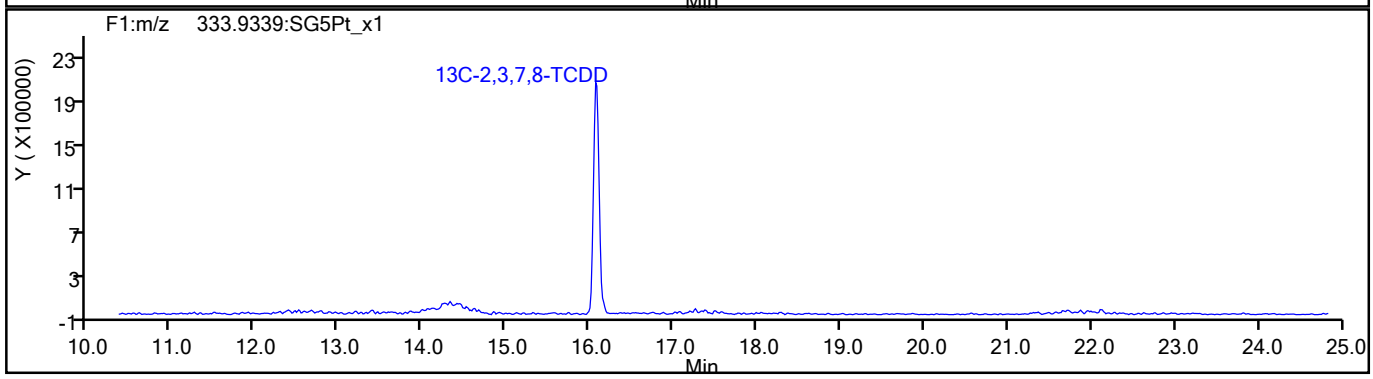

783433

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

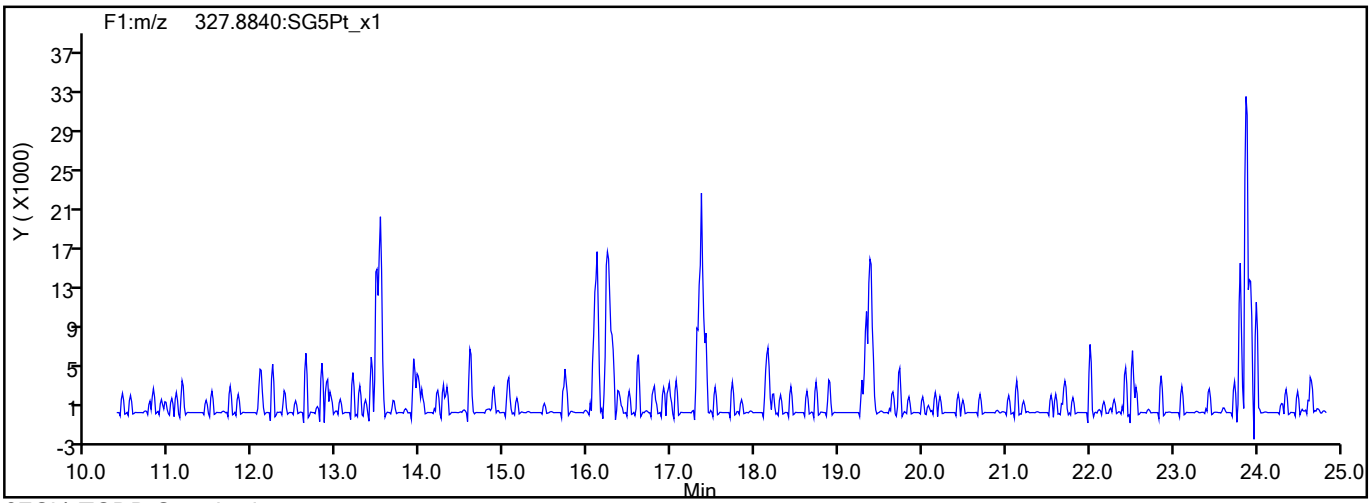

37Cl4-TCDD Standards

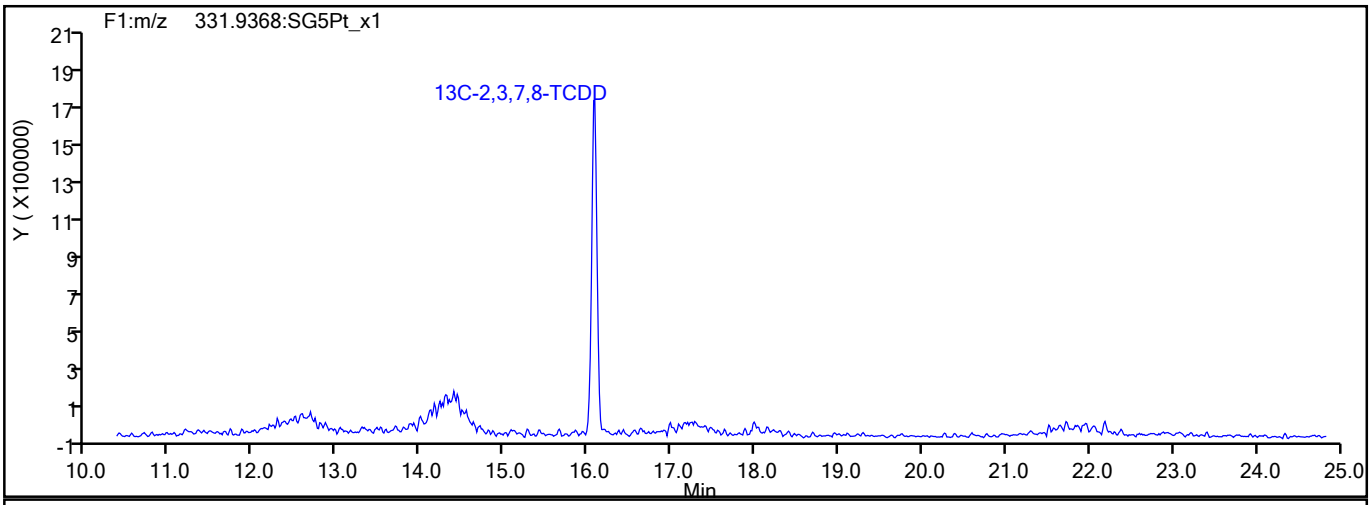

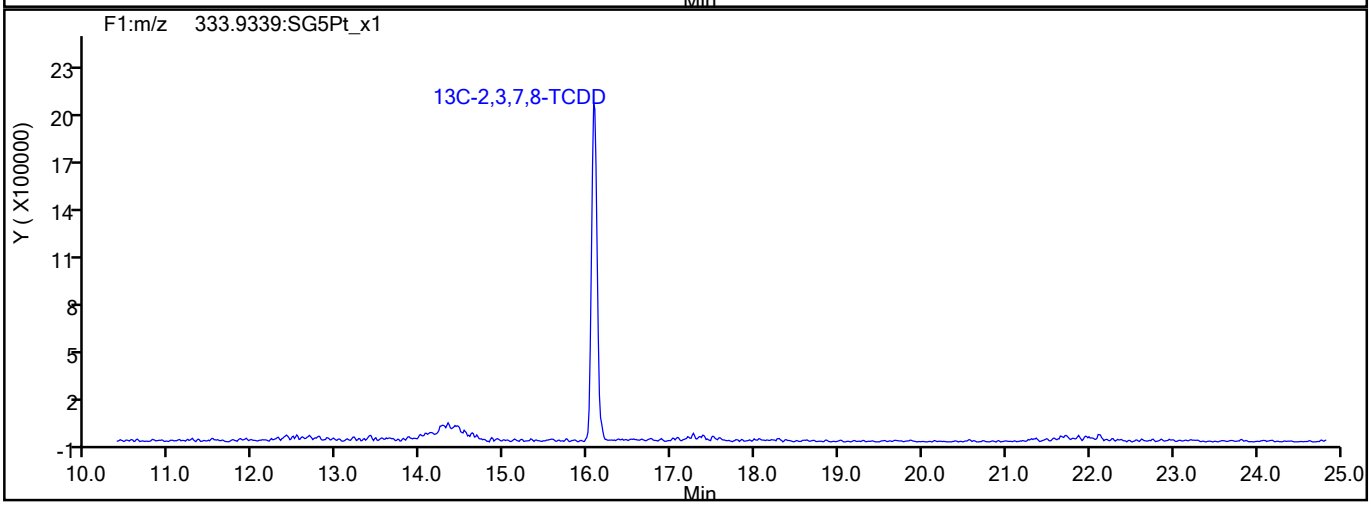

783434

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

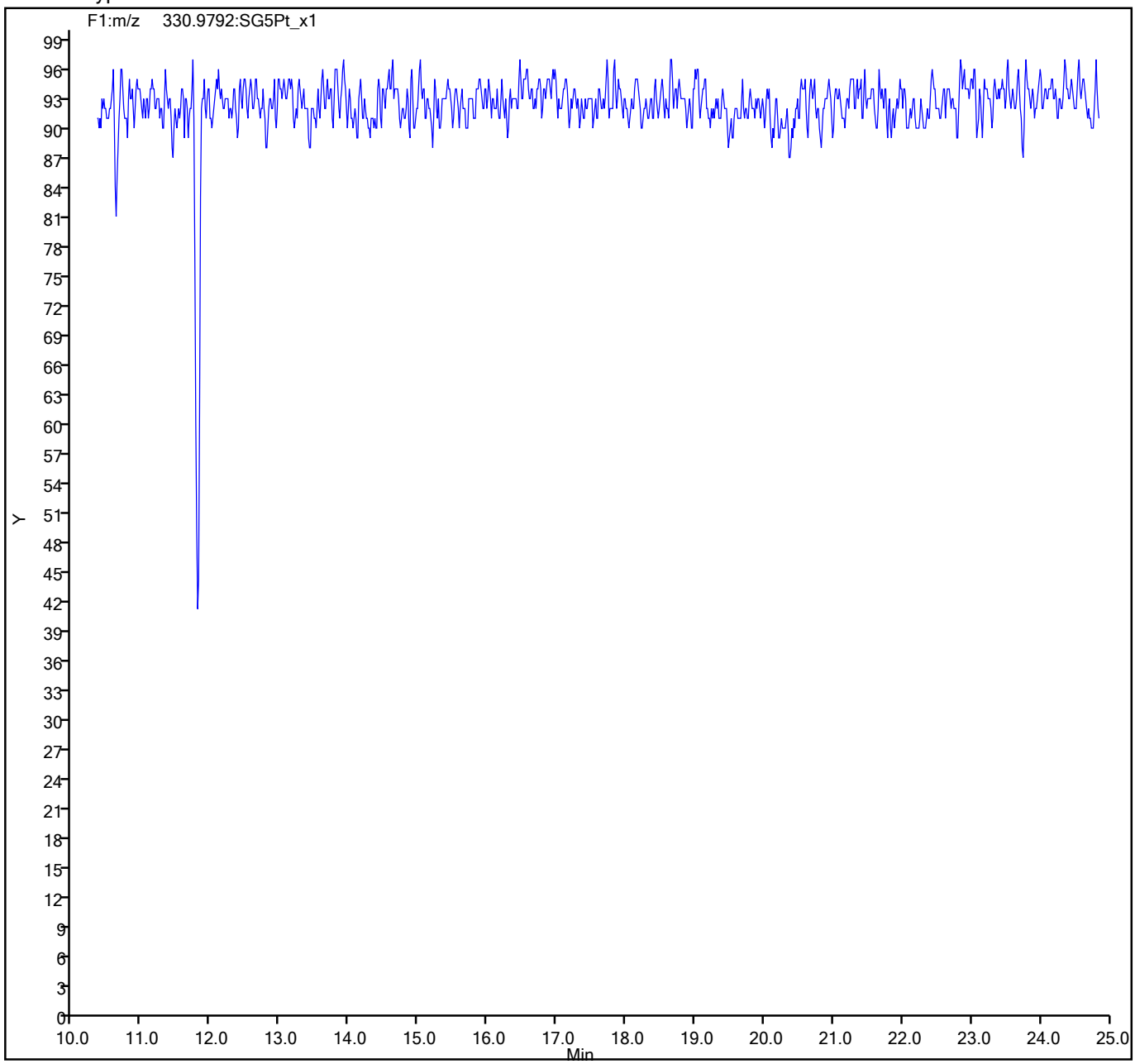

783435

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	19.630	956054	0.80	1.3459					0.00	
2,3,7,8-TCDF	19.673	1998250	0.78	1.0802	77.4	77.4	0.2129	0.2129		
A Non-2,3,7,8-sub-TCDF	19.213	12503	0.80	1.0802	0.4843	0.4843	0.2129	0.4843		
S Total TCDF					77.9	77.9	0.2129	0.2129		
D 13C-2,3,7,8-TCDD	20.918	596833	0.84	0.9317					0.00	
2,3,7,8-TCDD	20.952	682873	0.80	1.0753	42.6	42.6	0.1742	0.1742		
A Non-2,3,7,8-sub-TCDD	20.025						0.1742	0.1742		
S Total TCDD					42.6	42.6	0.1742	0.1742		
A F1 PeCDFs	24.098						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	27.473	14452	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	27.656						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	34.470						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	34.896	7360	1.11	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.309	643675	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.598	537364	1.05	1.3092						
A Non-2,3,7,8-sub-HpCDF	38.954						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.295	435480	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	38.962						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.592	1199920	0.78							
1,3,6,8-TCDD	17.122	706482	0.80							
2,3,4,7-TCDF	19.673	1998250	0.78							
1,2,3,7-TCDD	20.746	567957	0.79							
1,2,3,9-TCDF	21.124	860286	0.78							
1,2,3,9-TCDD	21.227	705730	0.80							
1,2,8,9-TCDF	22.833	906629	0.79							

783436

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	22.927	290535								
1,3,4,6,8-PeCDF	23.417	833719	1.57							
1,2,4,7,9-PeCDD	25.443	580592	1.56							
1,2,3,8,9-PeCDD	29.870	532099	1.58							
1,2,3,8,9-PeCDF	30.030	680377	1.58							
1,2,3,4,6,8-HxCDF	32.430	811785	1.23							
1,2,4,6,7,9-HxCDD	33.644	577087	1.25							
1,2,3,4,6,7-HxCDD	36.148	580699	1.24							
1,2,3,4,8,9-HxCDF	36.510	710754	1.25							
1,2,3,4,6,7,9-HpCDD	38.629	486479	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	19.630	19.630	0	1.000	423520	68874	224	560	307		
317.9389	19.639	19.630	1	1.000	532534	85912	93	232	924	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.673	19.646	2	1.002	874984	129163	148	370	873		
305.8987	19.673	19.646	2	1.002	1123266	166698	208	520	801	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	23.417	19.213	252	1.193	5547	1019	148	370	7		
305.8987	23.417	19.213	252	1.193	6956	1132	208	520	5	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.918	20.918	0	1.000	272607	40247	106	265	380		
333.9338	20.927	20.918	1	1.000	324226	50518	46	115	1098	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	20.952	20.939	1	1.002	302613	44836	90	225	498		
321.8936	20.952	20.939	1	1.002	380260	55991	80	200	700	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.025						90	225			
321.8936	20.025						80	200			
A F1 PeCDFs											
339.8597	24.098						6	15			
341.8567	24.098						22	55			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.114	27.473	-141	1.000	1272	231	55	137	4		
341.8567	25.123	27.473	-141	1.000	842	169	40	100	4	1.51(1.32-1.78)	
339.8597	26.033	27.473	-86	1.000	1834	347	55	137	6		
341.8567	26.067	27.473	-84	1.000	1408	247	40	100	6	1.30(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	26.623	27.473	-51	1.000	3412	452	55	137	8		
341.8567	26.606	27.473	-52	1.000	2424	350	40	100	9	1.41(1.32-1.78)	
339.8597	27.205	27.473	-16	1.000	2495	380	55	137	7		
341.8567	27.188	27.473	-17	1.000	1367	235	40	100	6	1.83(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	27.656						71	177			
357.8516	27.656						35	87			
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						89	222			
375.8178	34.470						66	165			
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.875	34.896	-1	1.000	3879	711	57	142	12		
391.8127	34.866	34.896	-2	1.000	3481	707	48	120	15	1.11(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	330574	91984	132	330	697		
409.7788	38.309	38.317	0	1.000	313101	85674	117	292	732	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	275340	83564	132	330	633		
409.7788	39.598	39.608	-1	1.000	262024	79894	117	292	683	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						132	330			
409.7788	38.954						117	292			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.295	39.301	0	1.000	225083	68745	95	237	724		
425.7737	39.295	39.301	0	1.000	210397	63713	87	217	732	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.962						95	237			
425.7737	38.962						87	217			
1,3,6,8-TCDF											
303.9016	15.592	15.592	0		526894	111834	148	370	756		
305.8987	15.583	15.592	-1		673026	142703	208	520	686	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.122	17.122	0		313043	59426	90	225	660		
321.8936	17.122	17.122	0		393439	76022	80	200	950	0.80(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	19.673	19.673	0		874984	129163	148	370	873		
305.8987	19.673	19.673	0		1123266	166698	208	520	801	0.78(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	20.746	20.746	0		250988	38559	90	225	428		
321.8936	20.746	20.746	0		316969	48950	80	200	612	0.79(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.124	21.124	0		377767	55151	148	370	373		
305.8987	21.124	21.124	0		482519	70000	208	520	337	0.78(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	21.227	21.227	0		313060	44546	90	225	495		
321.8936	21.219	21.227	-1		392670	57474	80	200	718	0.80(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	22.833	22.833	0		399193	52133	148	370	352		
305.8987	22.833	22.833	0		507436	68524	208	520	329	0.79(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	22.927	22.927	0		290535	38894	90	225	432		
1,3,4,6,8-PeCDF											
339.8597	23.417	23.417	0		509034	87286	6	15	14548		
341.8567	23.417	23.417	0		324685	55380	22	55	2517	1.57(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	25.443	25.443	0		354036	58724	71	177	827		
357.8516	25.443	25.443	0		226556	37367	35	87	1068	1.56(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	29.870	29.870	0		325767	47119	71	177	664		
357.8516	29.870	29.870	0		206332	29856	35	87	853	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.030	30.030	0		416382	57063	55	137	1038		
341.8567	30.030	30.030	0		263995	36391	40	100	910	1.58(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	32.430	32.430	0		447956	61361	89	222	689		
375.8178	32.421	32.430	-1		363829	50870	66	165	771	1.23(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	33.644	33.644	0		320872	55052	57	142	966		
391.8127	33.644	33.644	0		256215	45045	48	120	938	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.148	36.148	0		321739	75271	57	142	1321		
391.8127	36.148	36.148	0		258960	61340	48	120	1278	1.24(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.510	36.510	0		394836	96545	89	222	1085		
375.8178	36.510	36.510	0		315918	78144	66	165	1184	1.25(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.629	38.629	0		248662	72309	95	237	761		
425.7737	38.629	38.629	0		237817	69783	87	217	802	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	956054	154786

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	956054	154786

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
23.417	5547	1019	6956	1132	0.4843	0.80	
Signal Totals:							
	5547	1019	6956	1132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12503	2151				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4843 = (12503 * 40.000) / (956054 * 1.080)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.114	1272	231	842	169		1.51	
26.033	1834	347	1408	247		1.30	R
26.623	3412	452	2424	350		1.41	
27.205	2495	380	1367	235		1.83	R
Signal Totals:							
	9013	1410	6041	1001			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15054	2411				1.49	RQ
	14452	2371					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (15054 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (14452 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	08-Jun-2021 12:40:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	496688	Lims Sample ID:	1

Non-2,3,7,8-sub-HxCDD, RT: 34.896

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.875	3879	711	3481	707		1.11	
Signal Totals:							
	3879	711	3481	707			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7360	1418				1.11	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (7360 * 0.0) / (0 * 0.000)

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

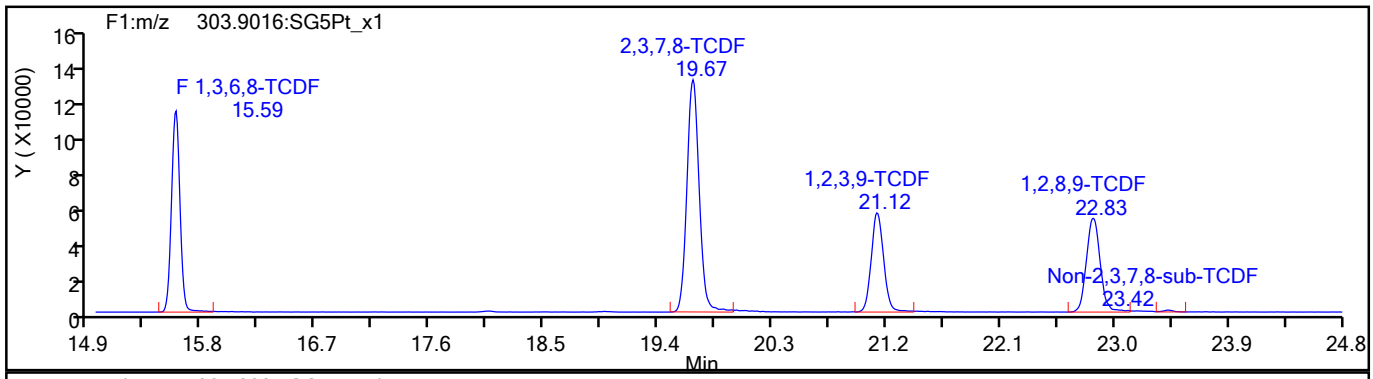

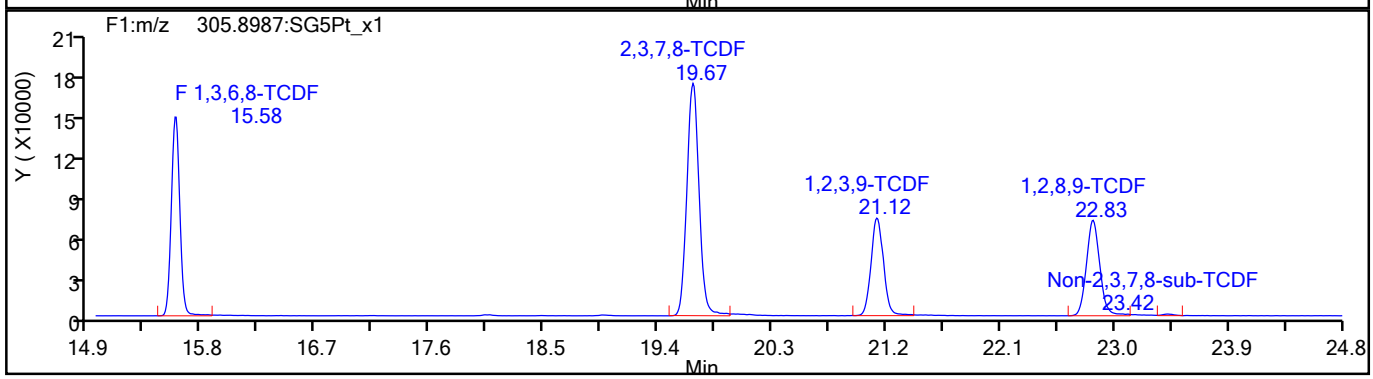

TCDF Standards

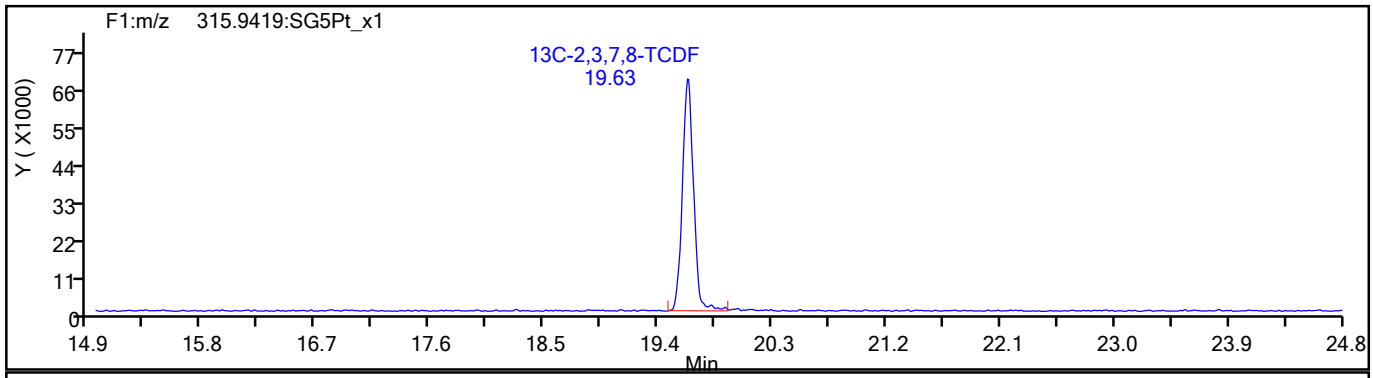

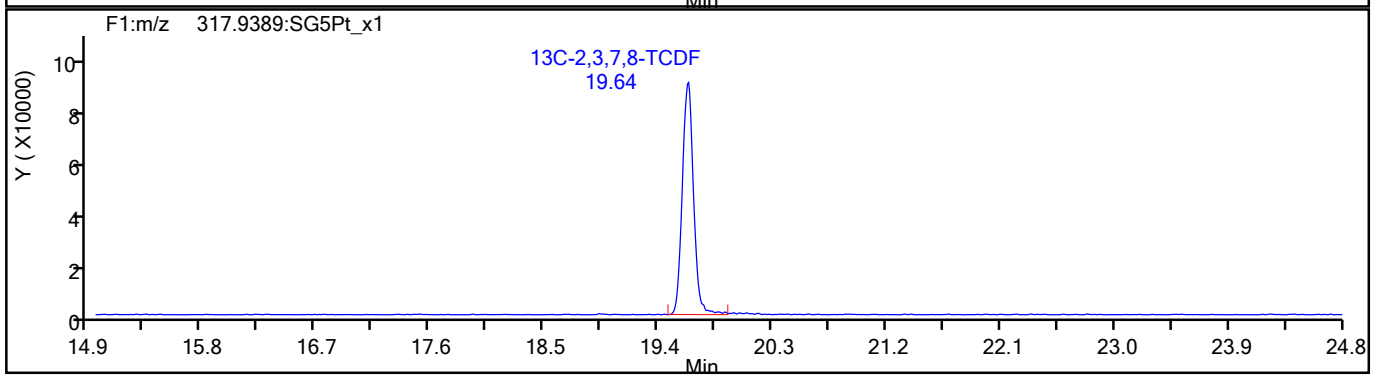

783444

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

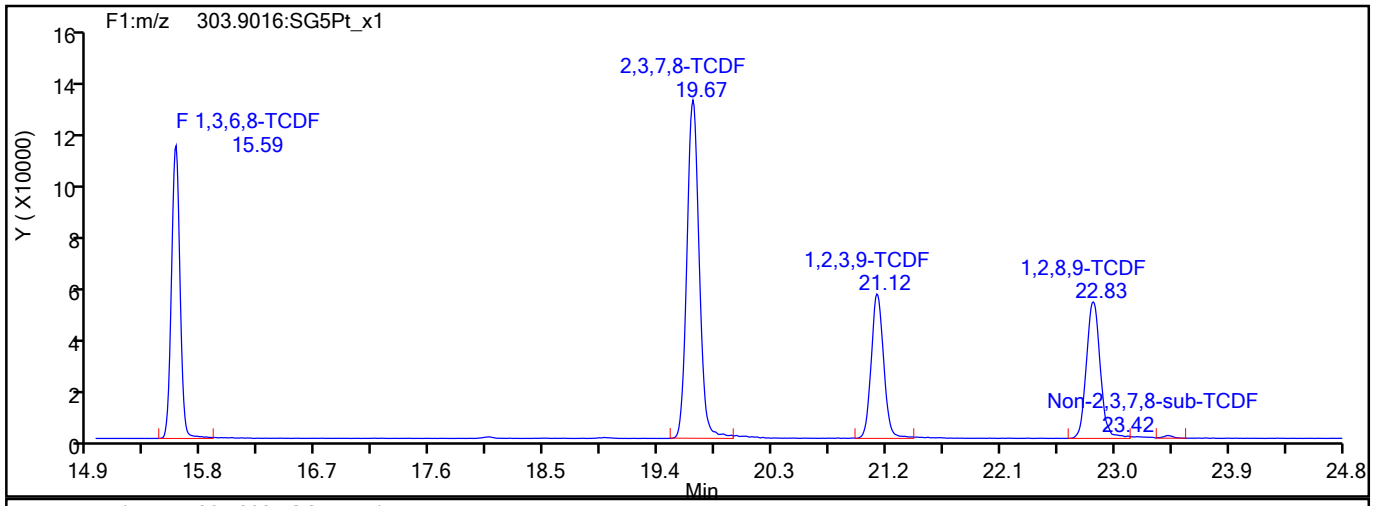

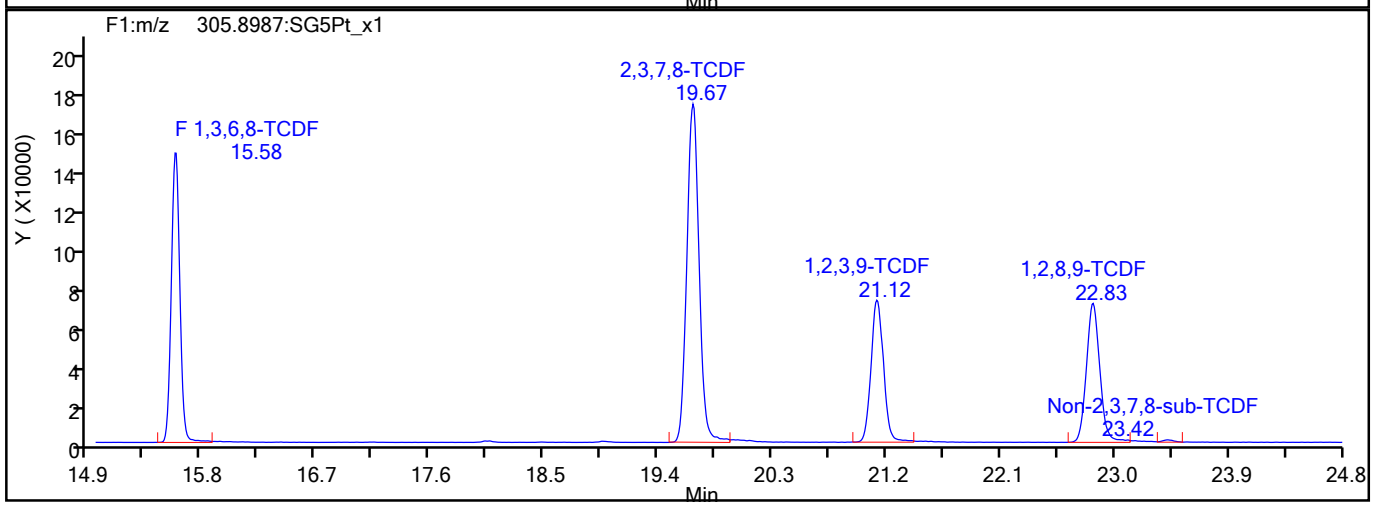

TCDF Interference Mass

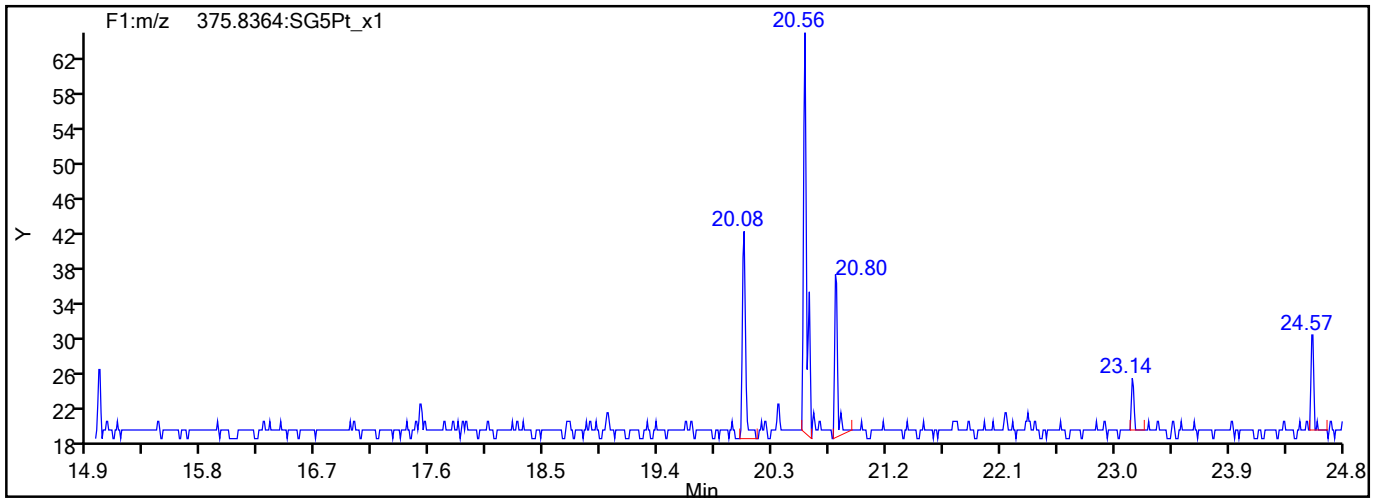

783445

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

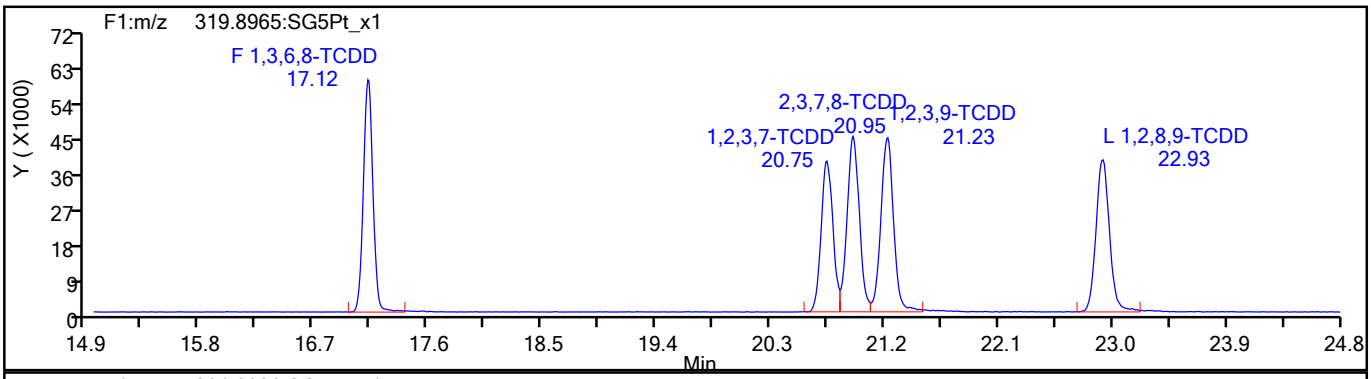

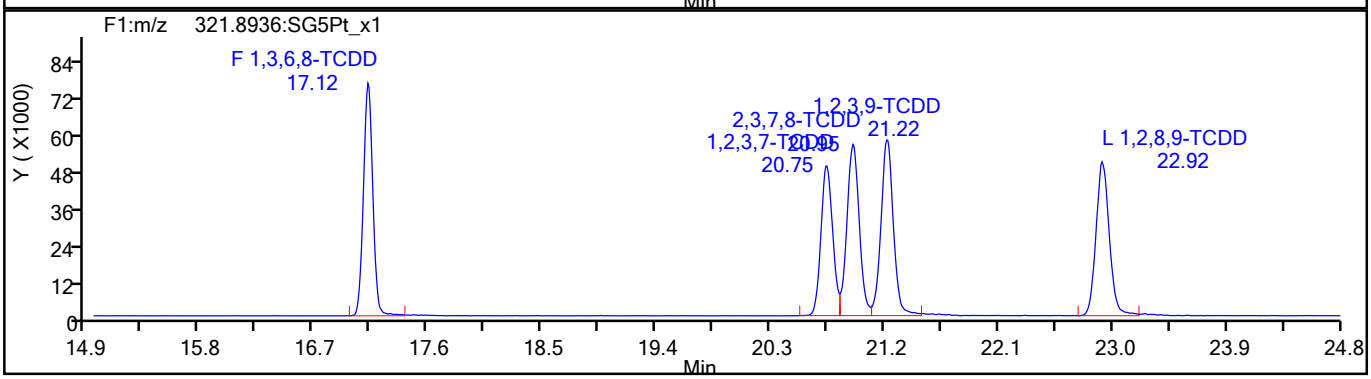

TCDD Standards

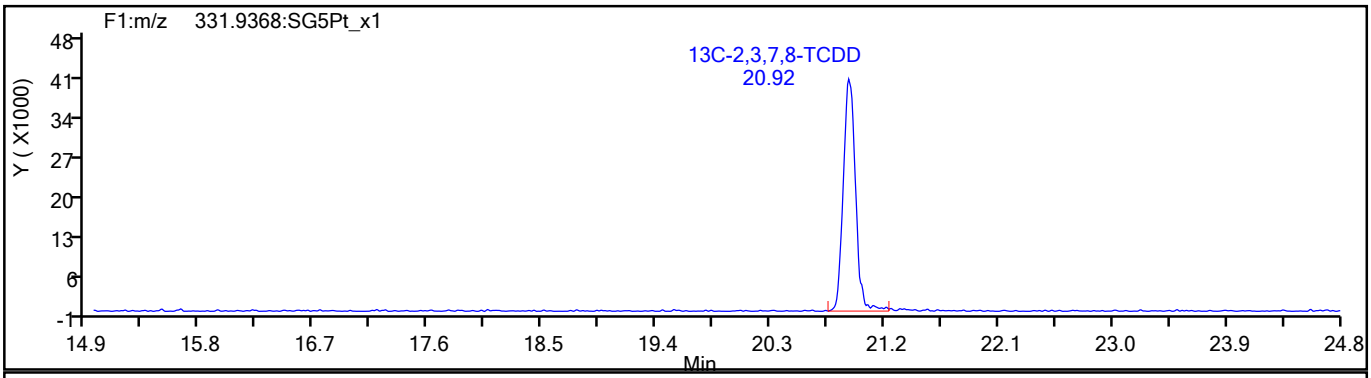

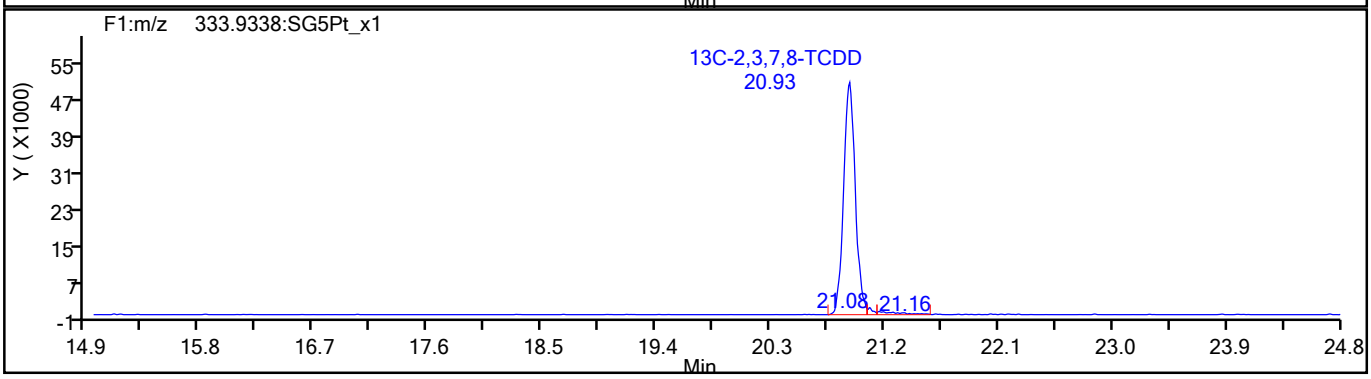

783446

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

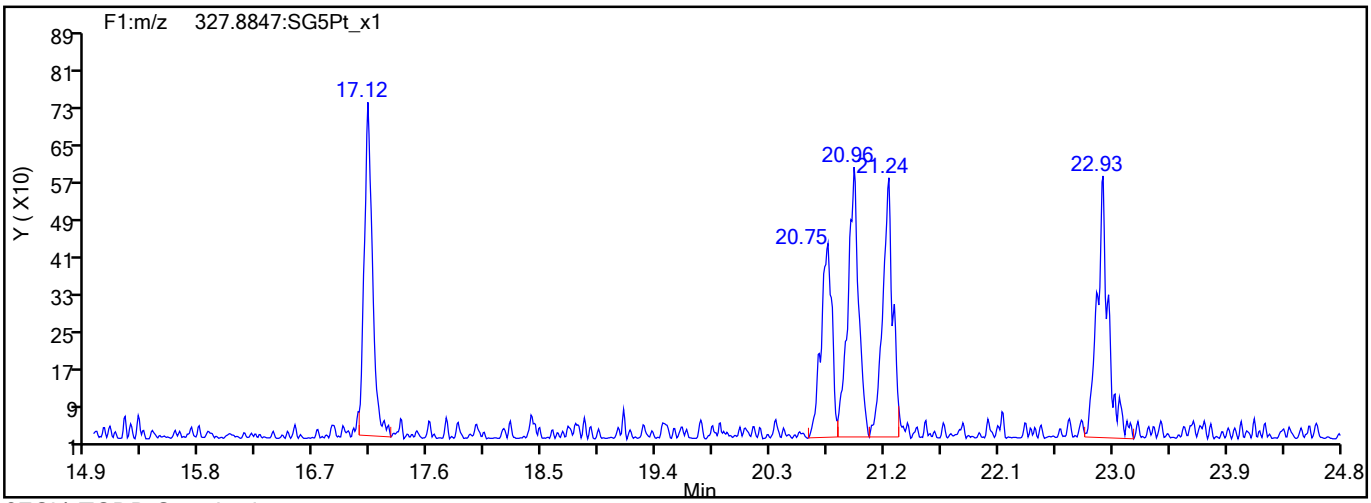

37Cl4-TCDD Standards

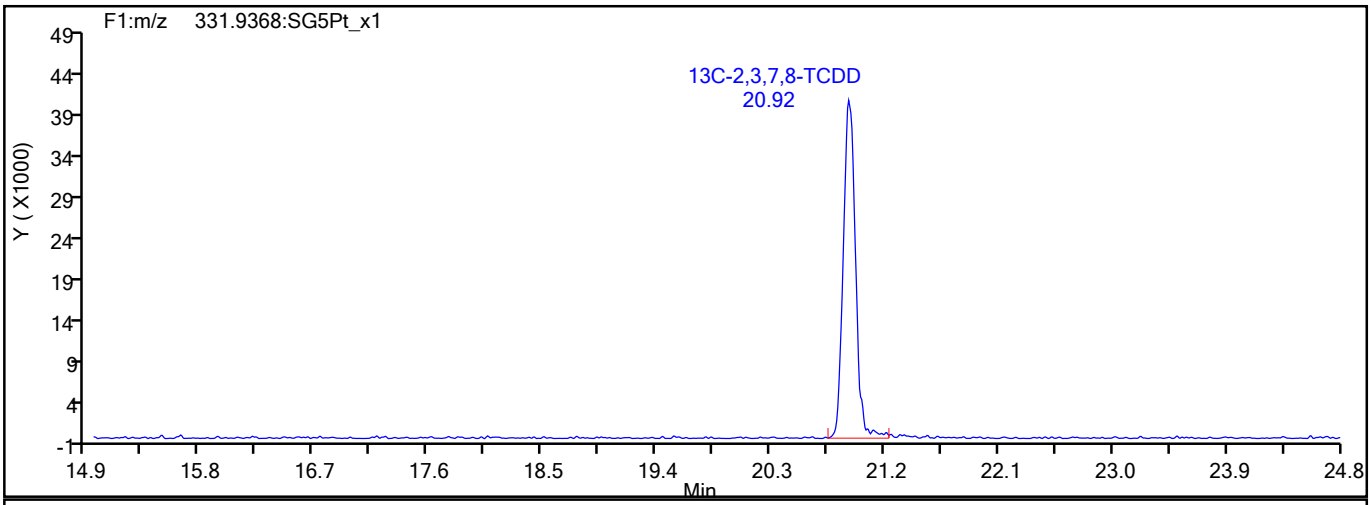

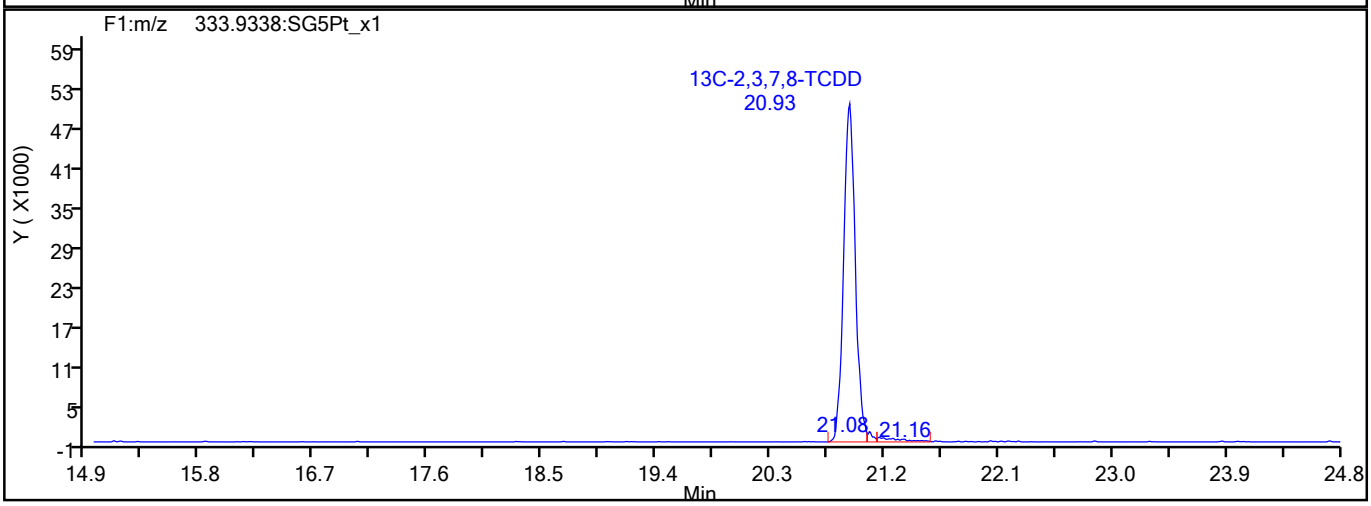

783447

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

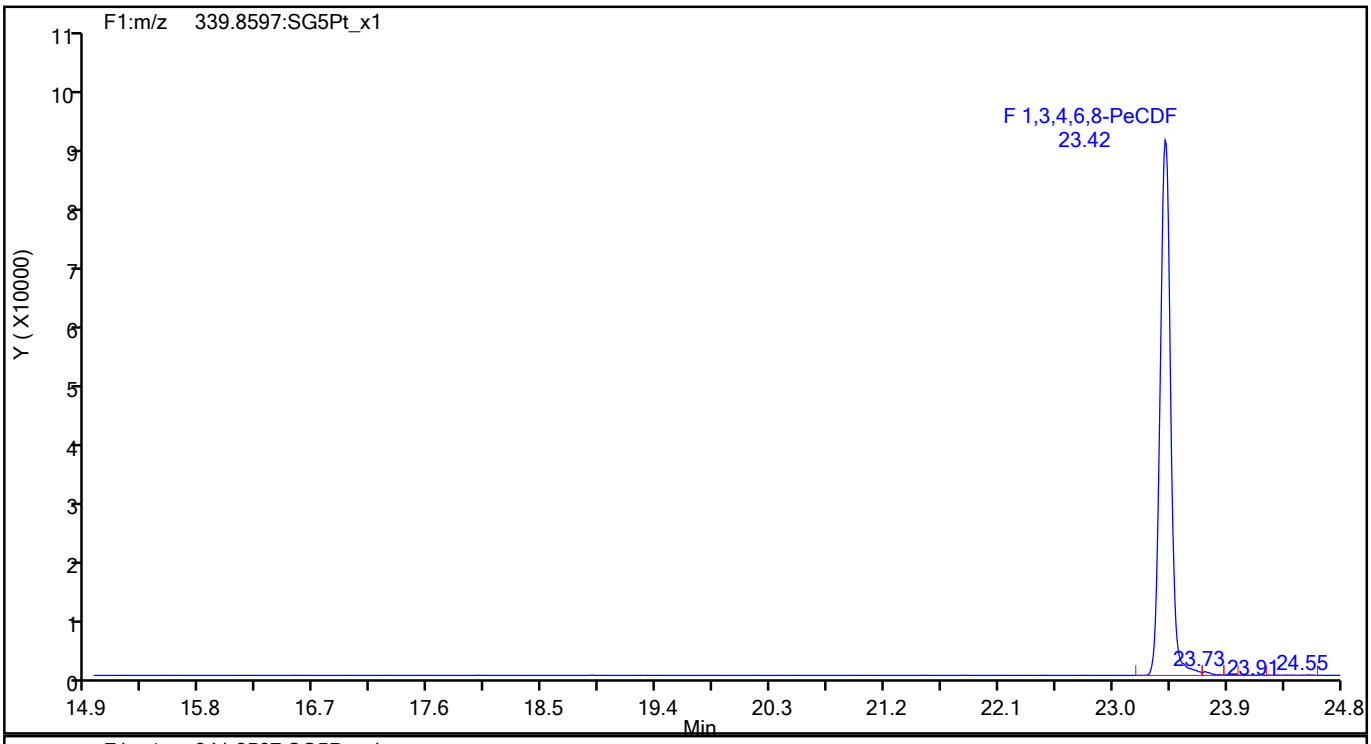

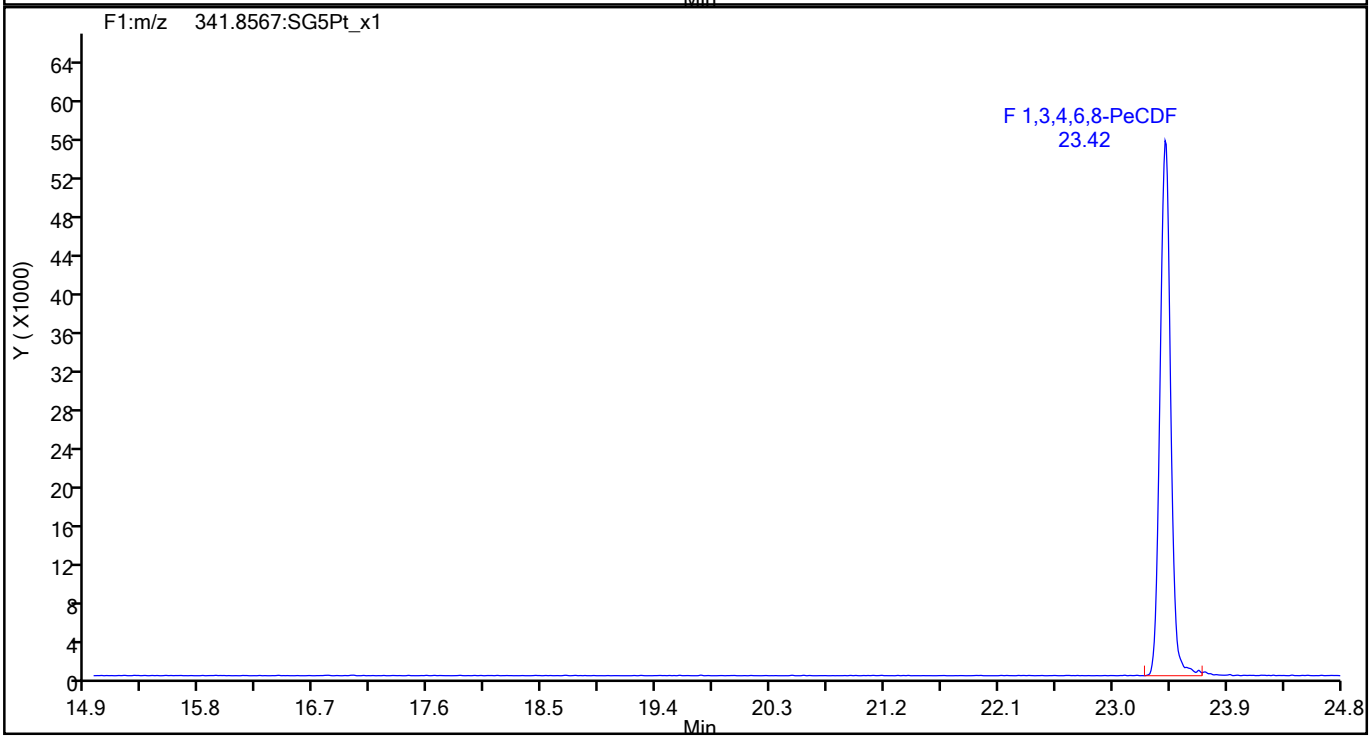

783448

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

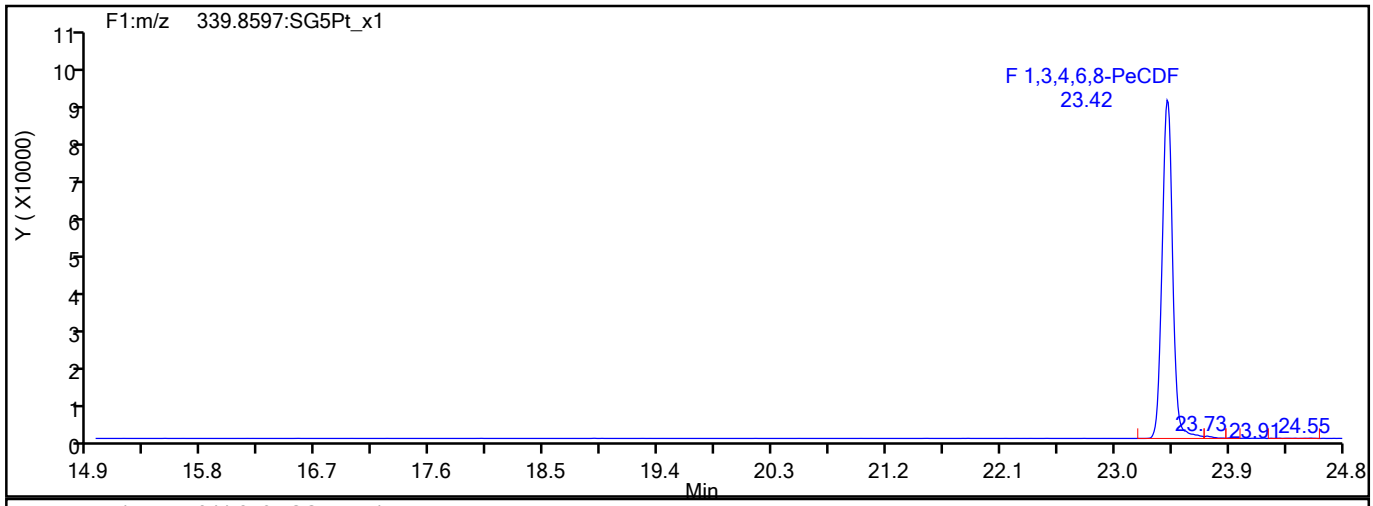

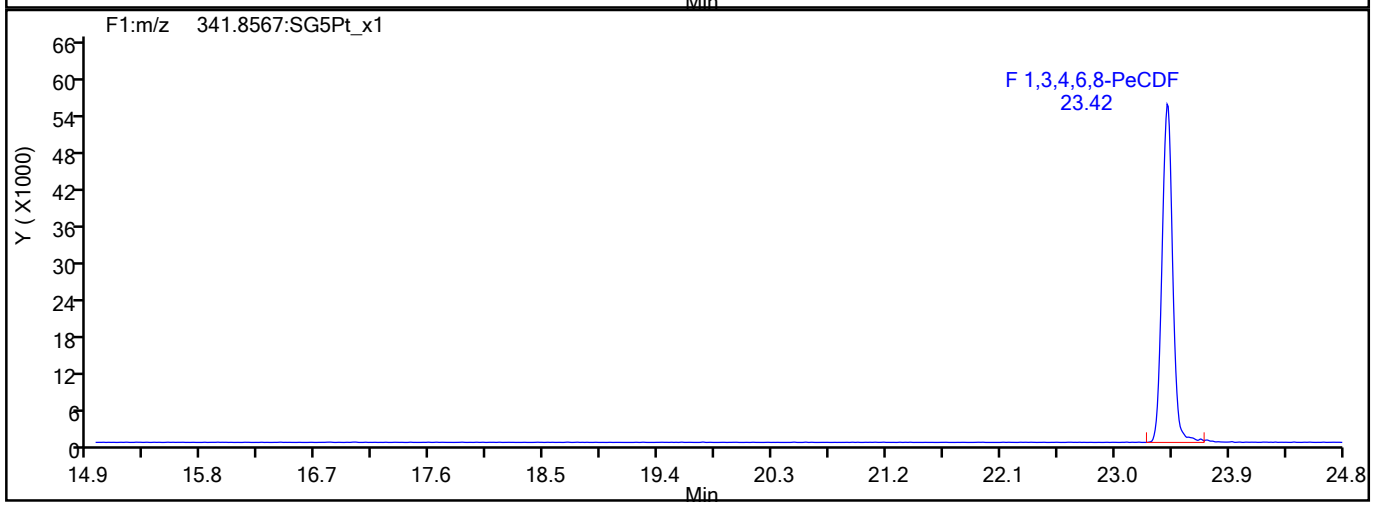

F1 PeCDFs Interference Mass

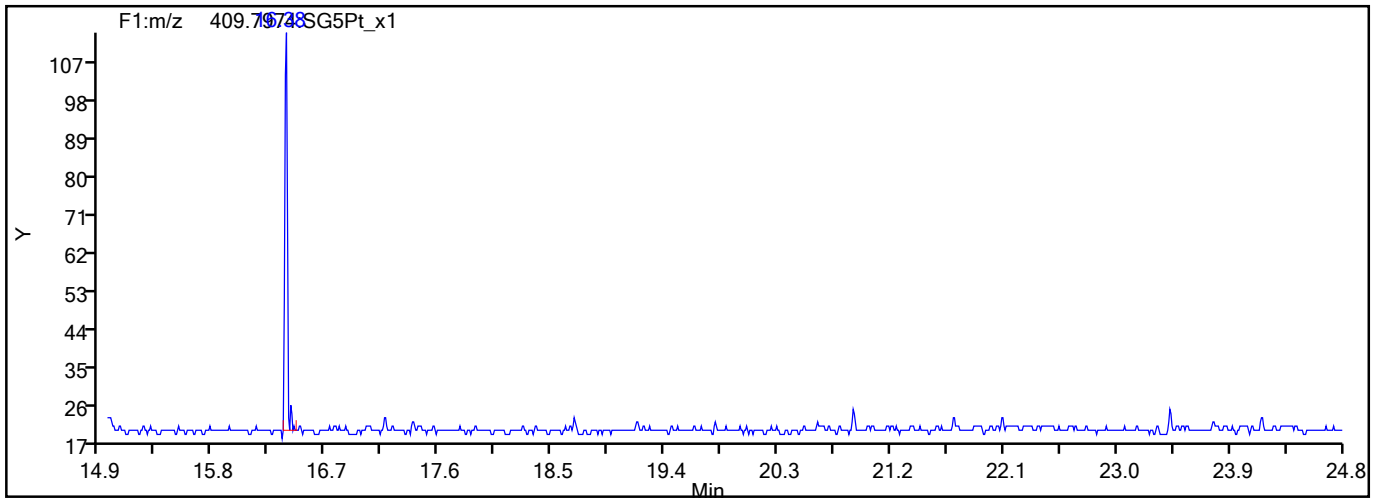

783449

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

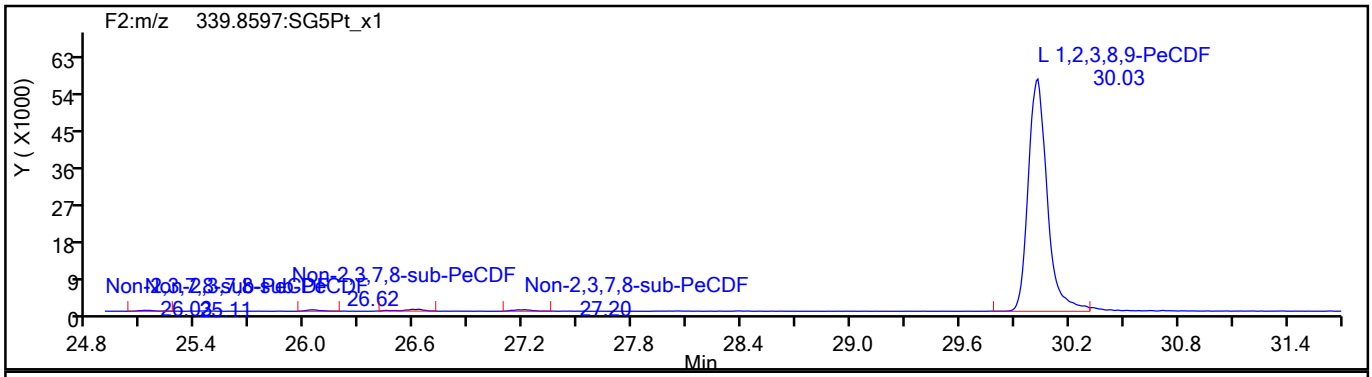

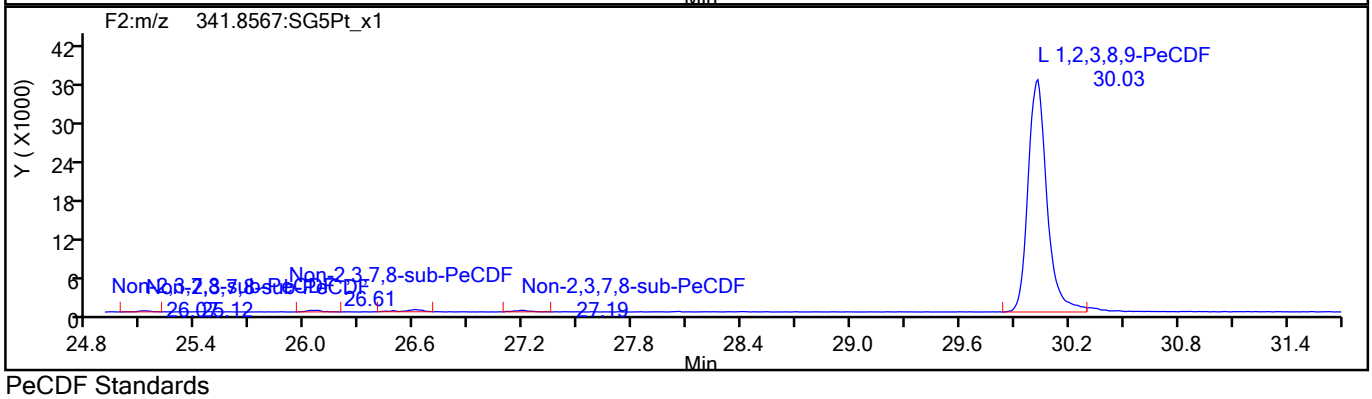

PeCDF Standards

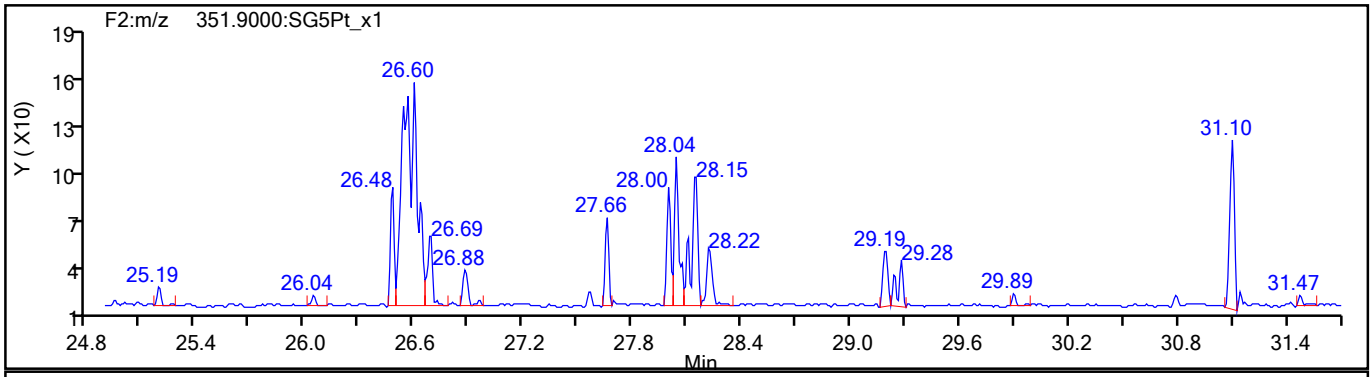

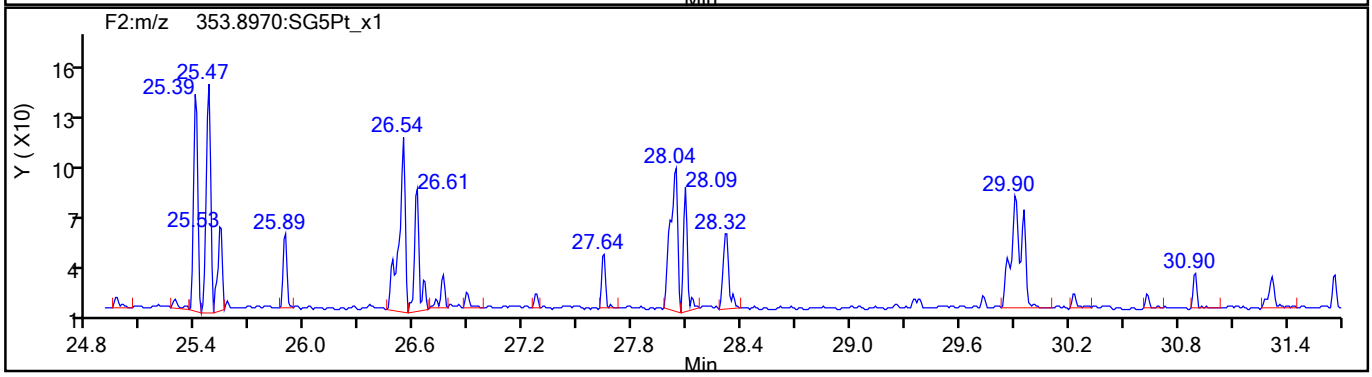

783450

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

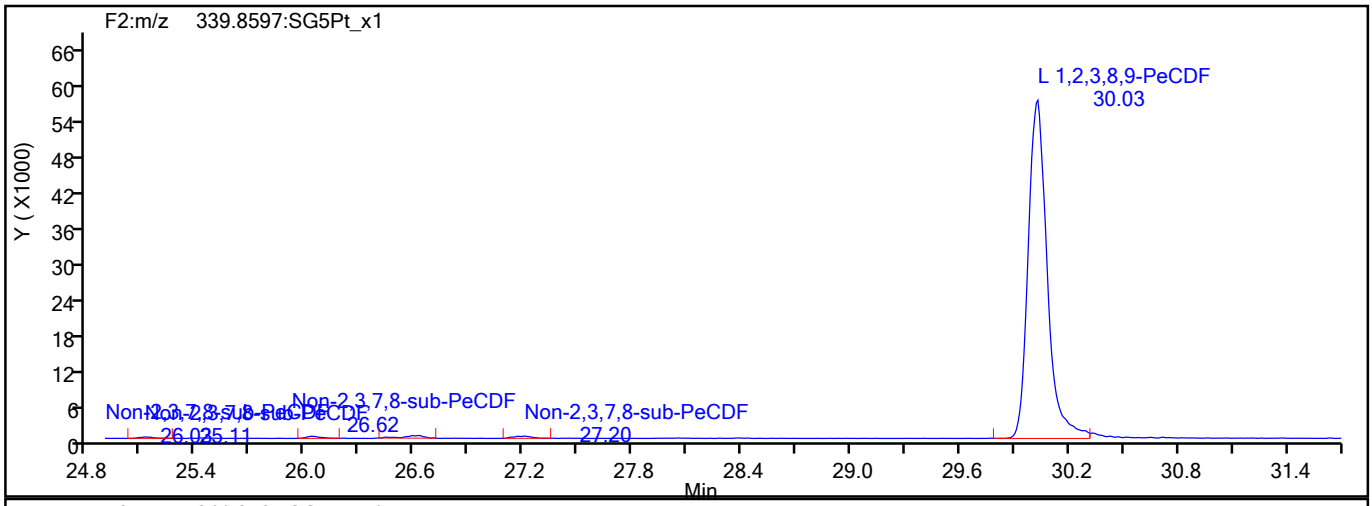

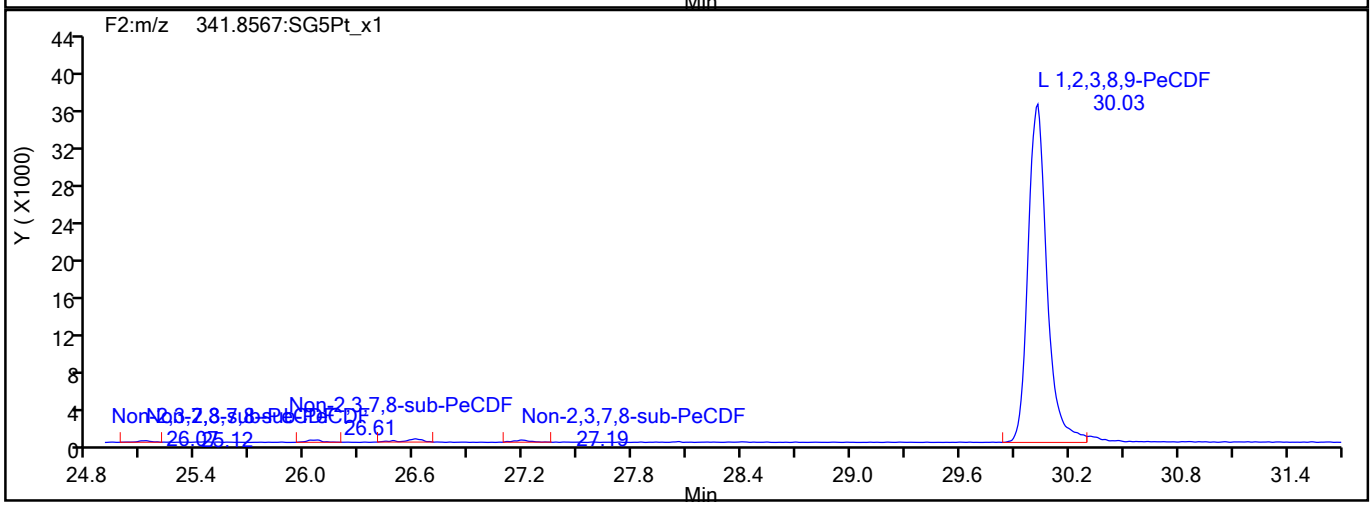

PeCDF Interference Mass

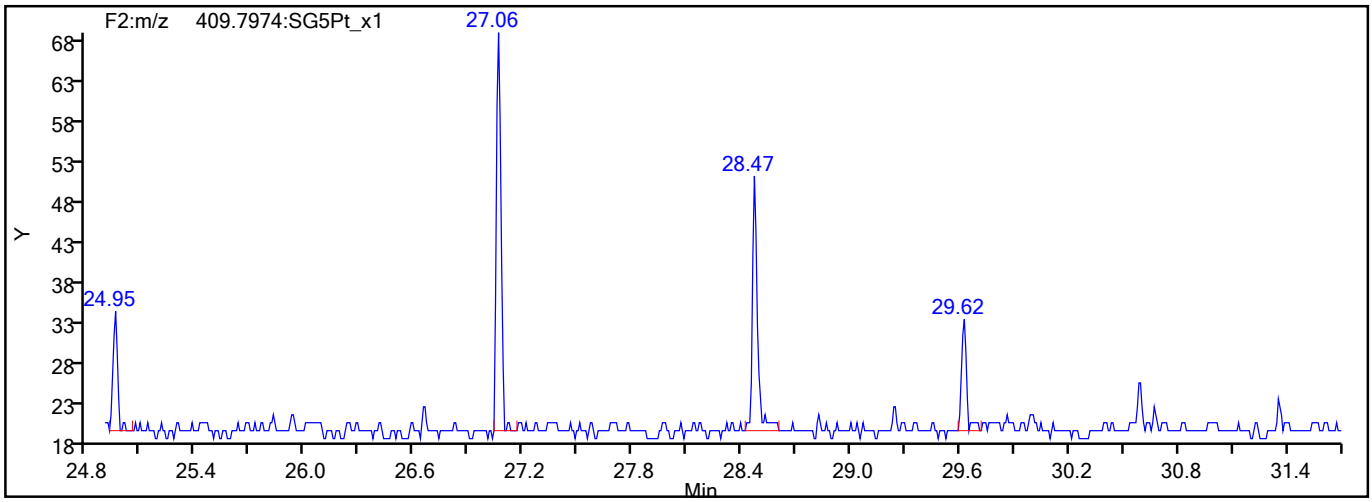

783451

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

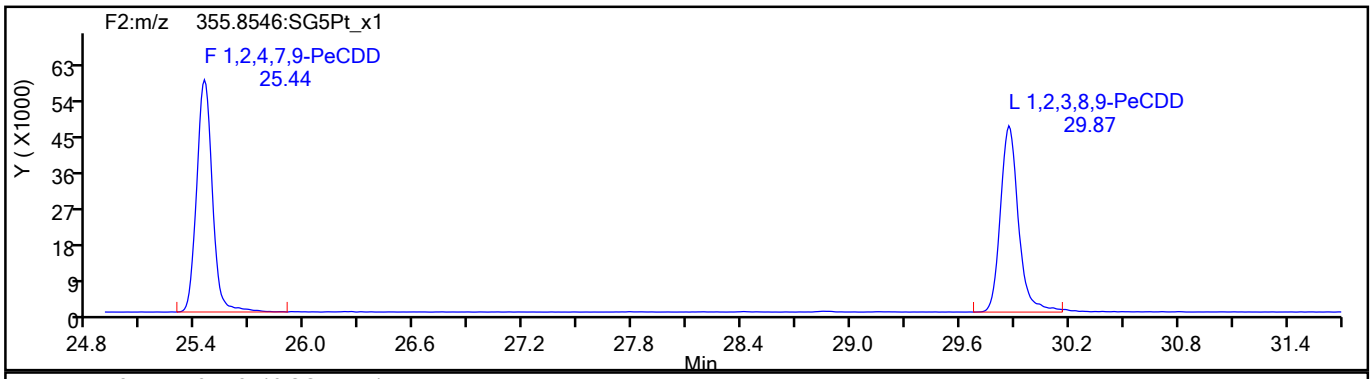

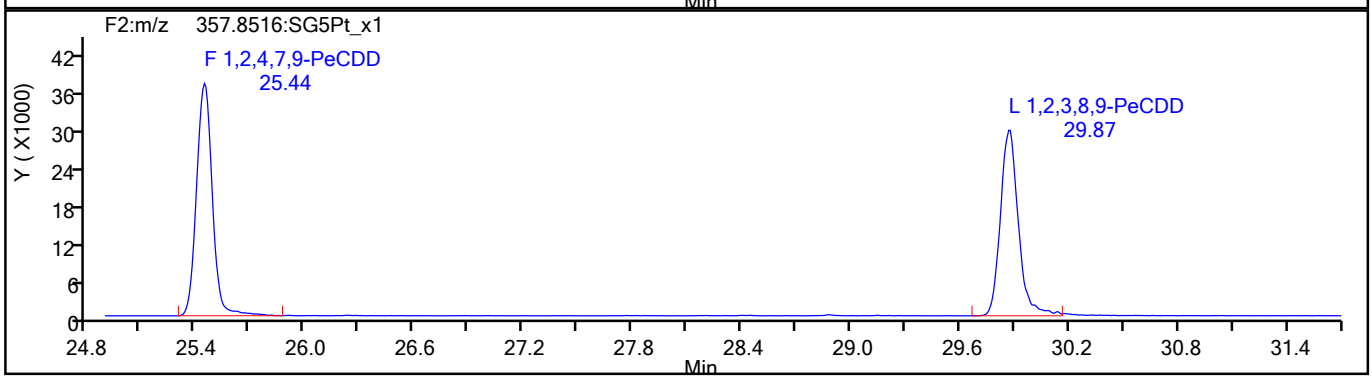

PeCDD Standards

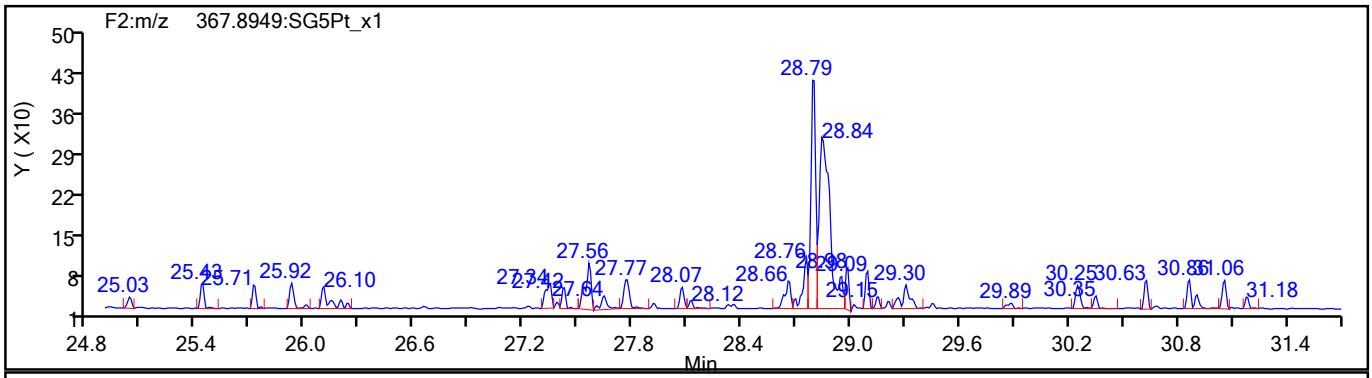

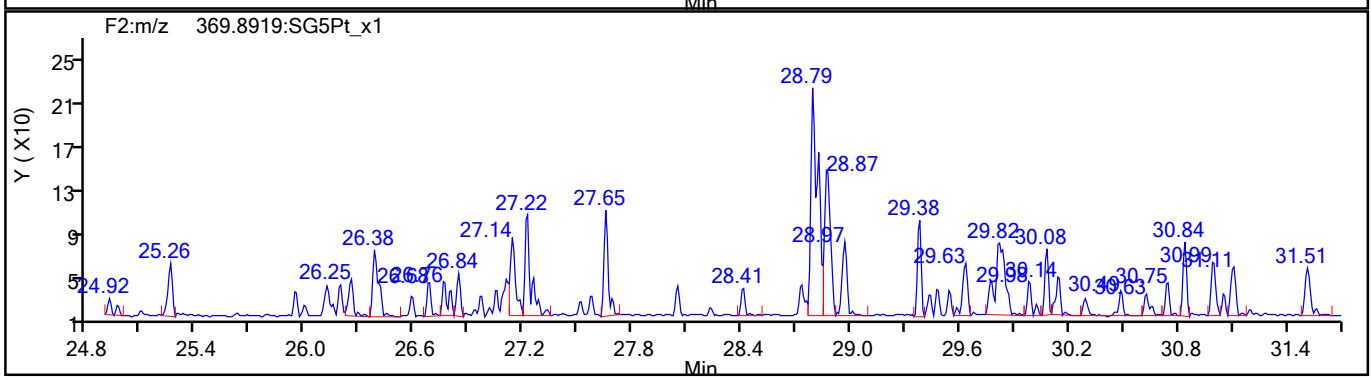

783452

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

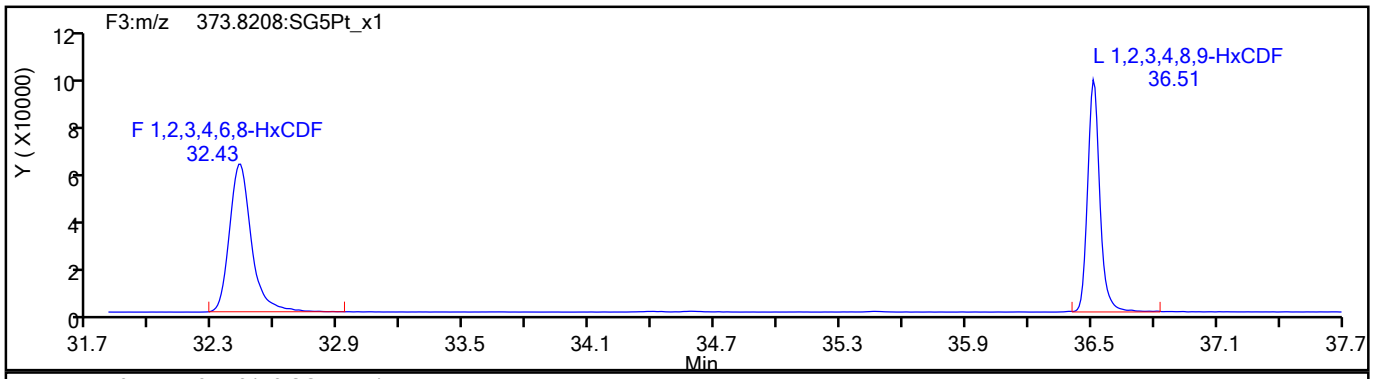

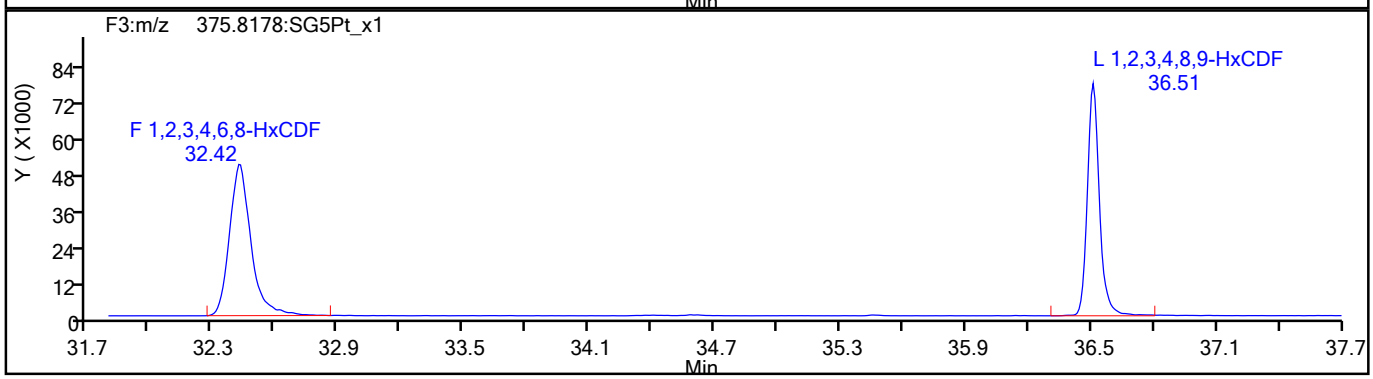

HxCDF Standards

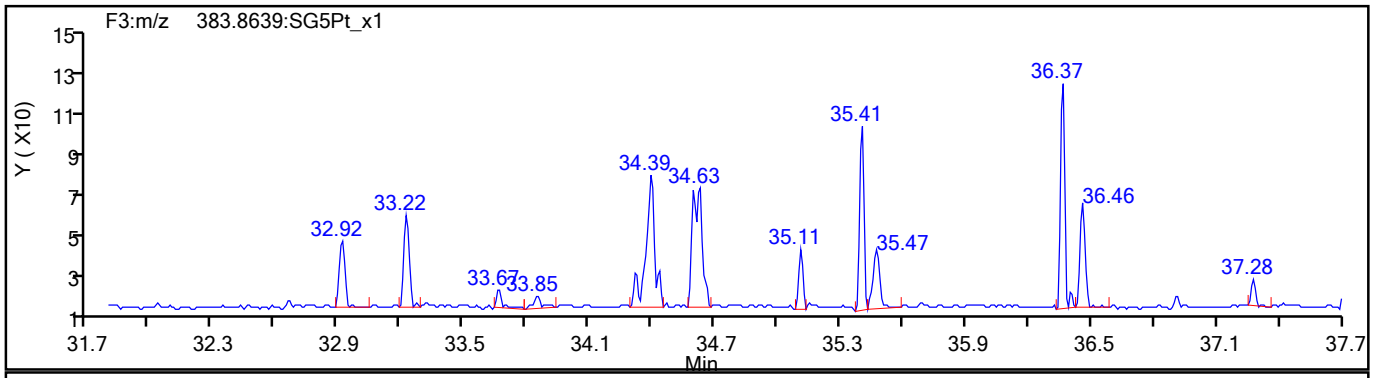

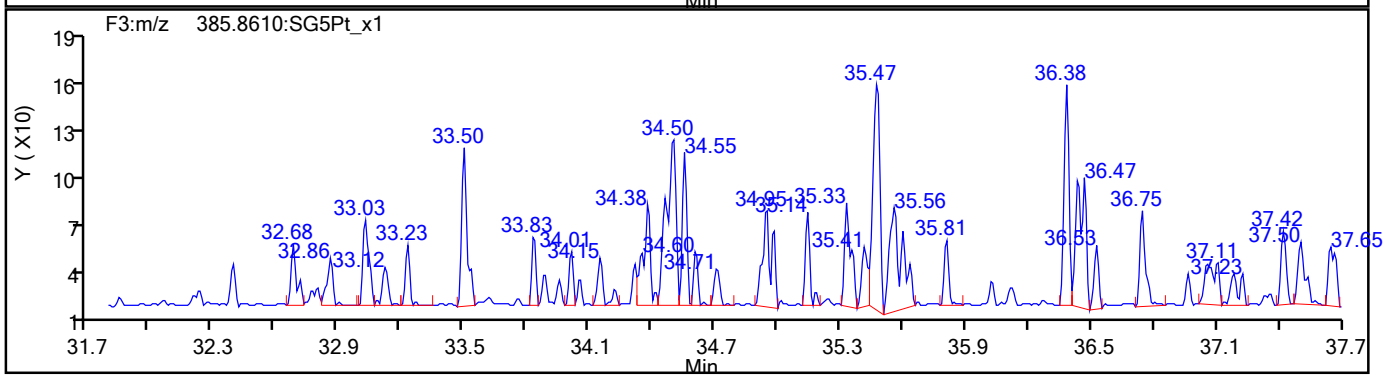

783453

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

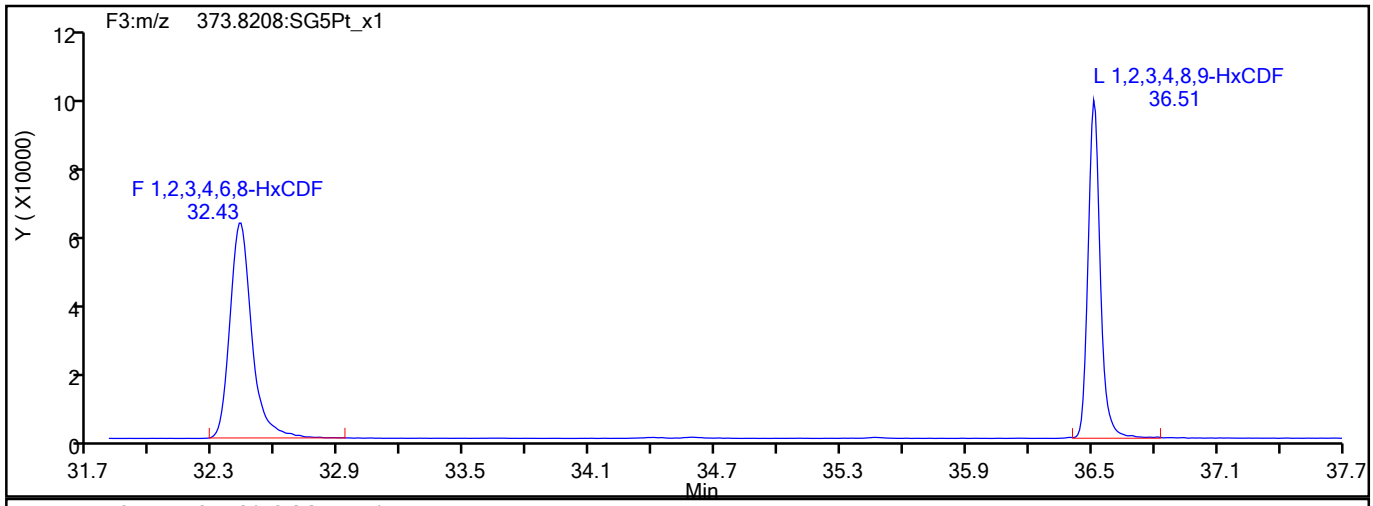

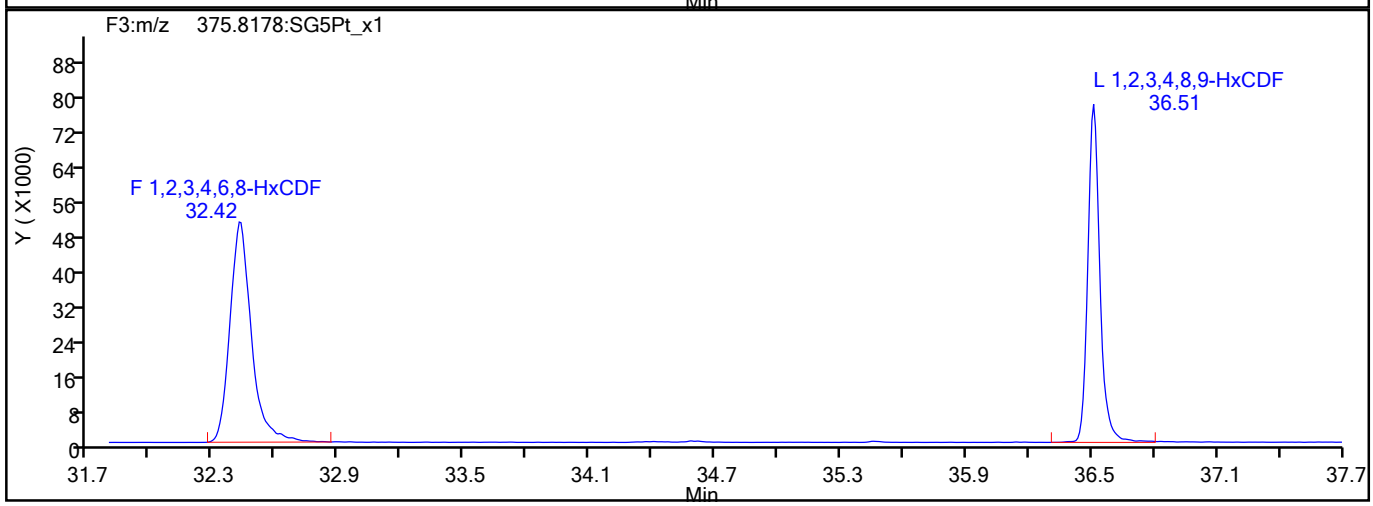

HxCDF Interference Mass

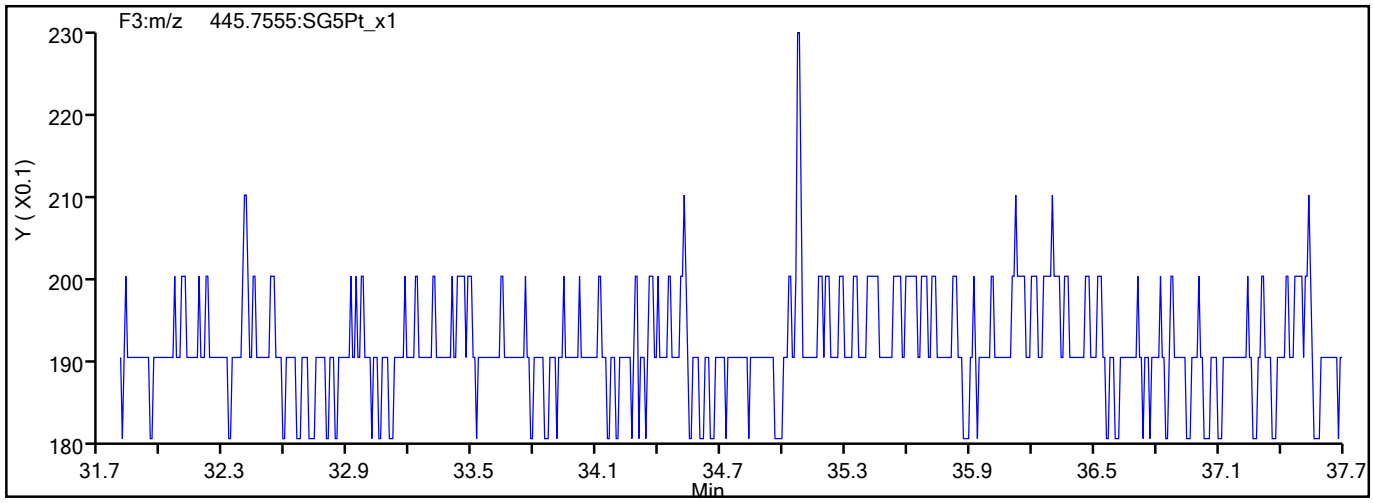

783454

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

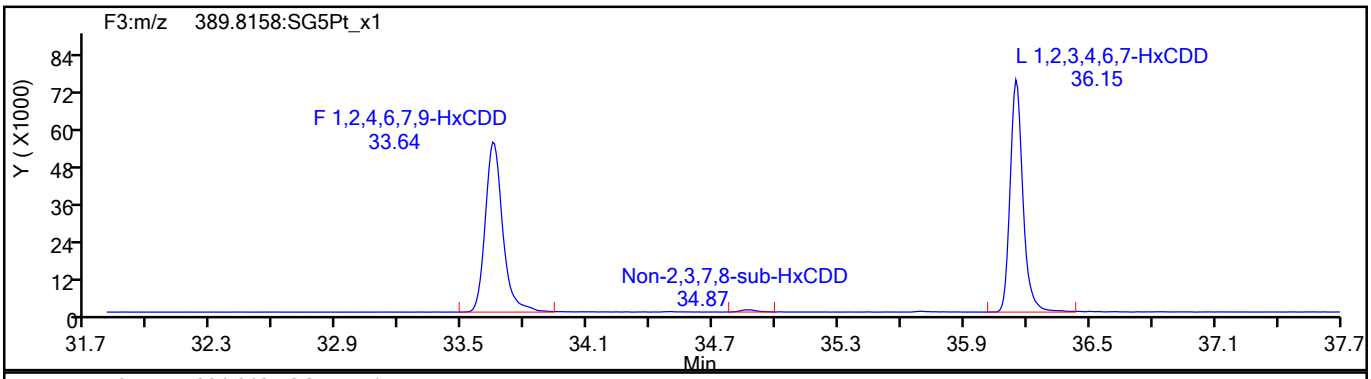

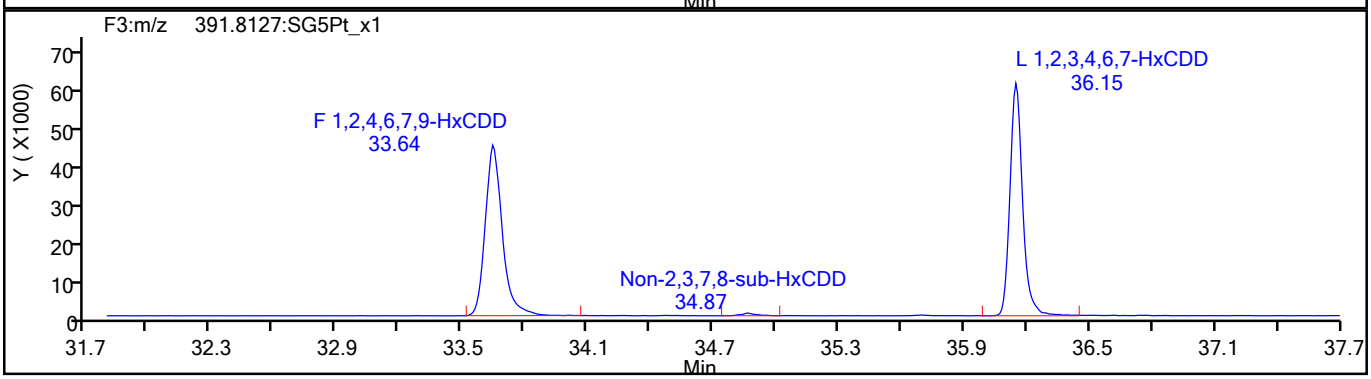

HxCDD Standards

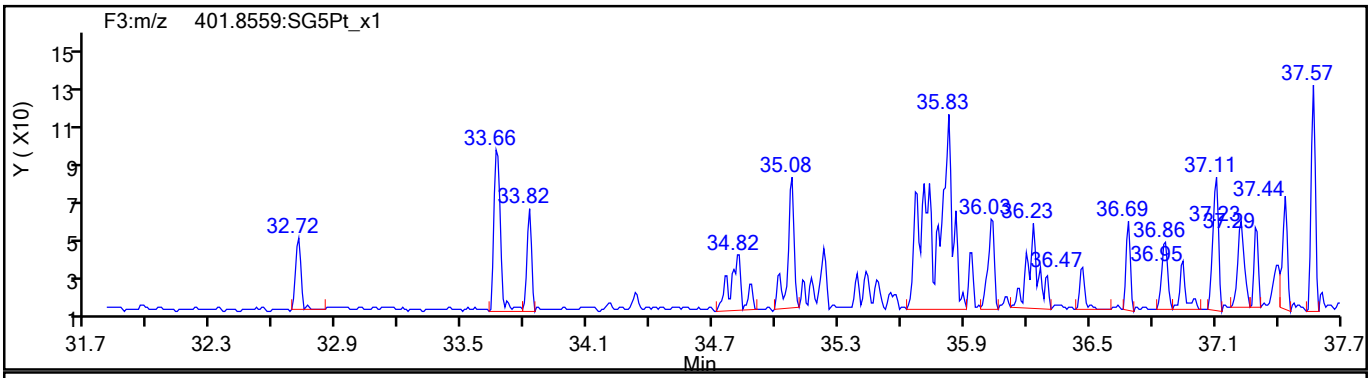

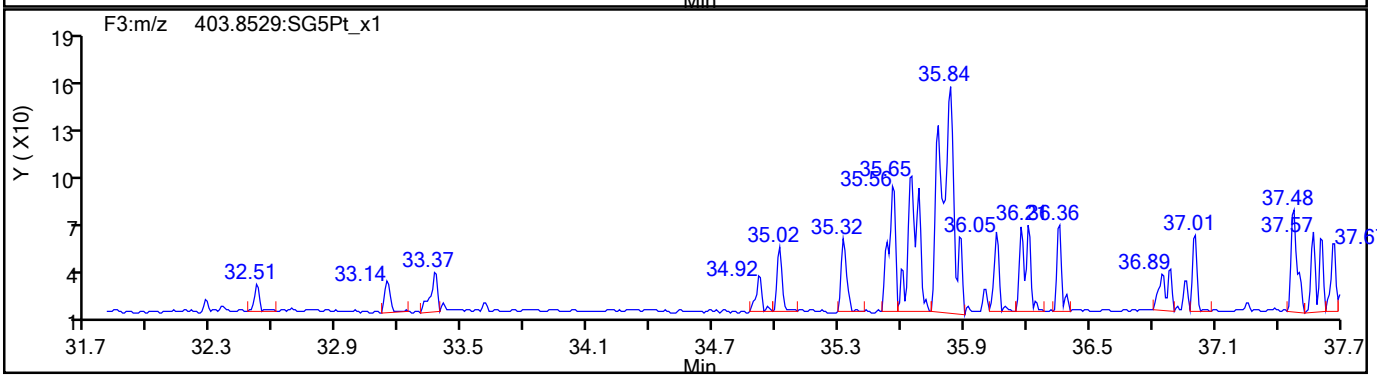

783455

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
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HpCDF

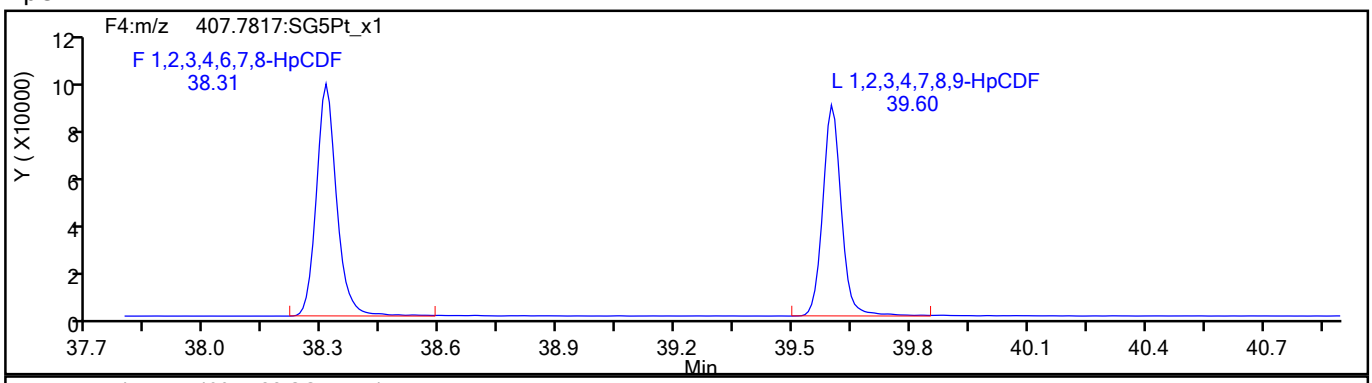

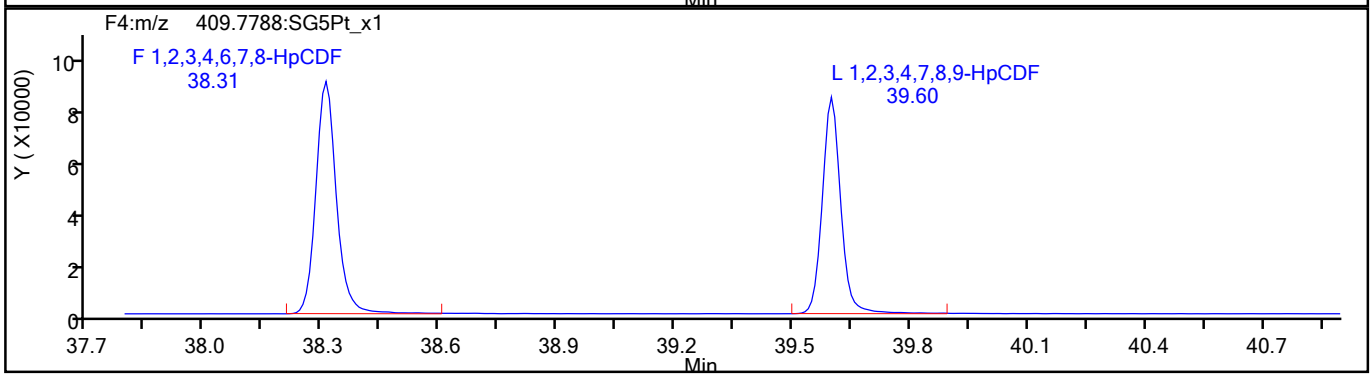

HpCDF Standards

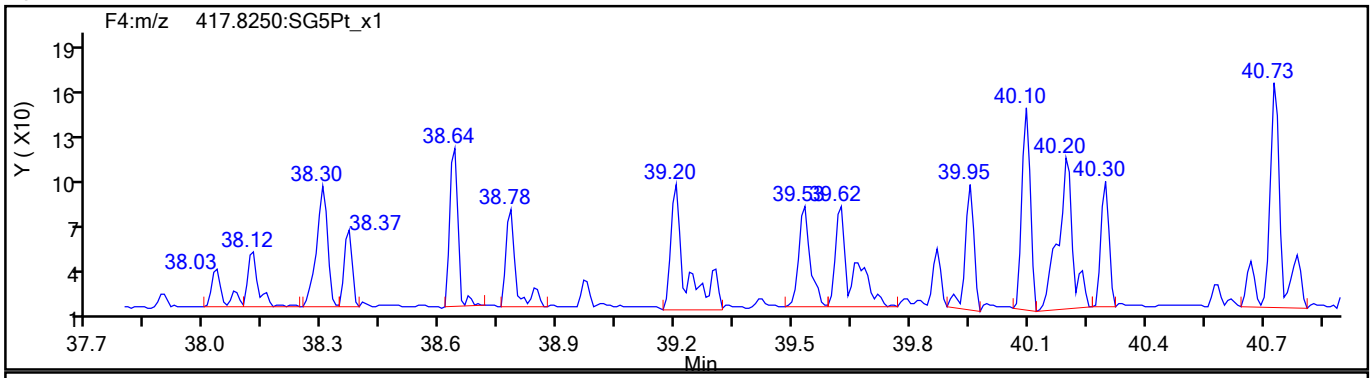

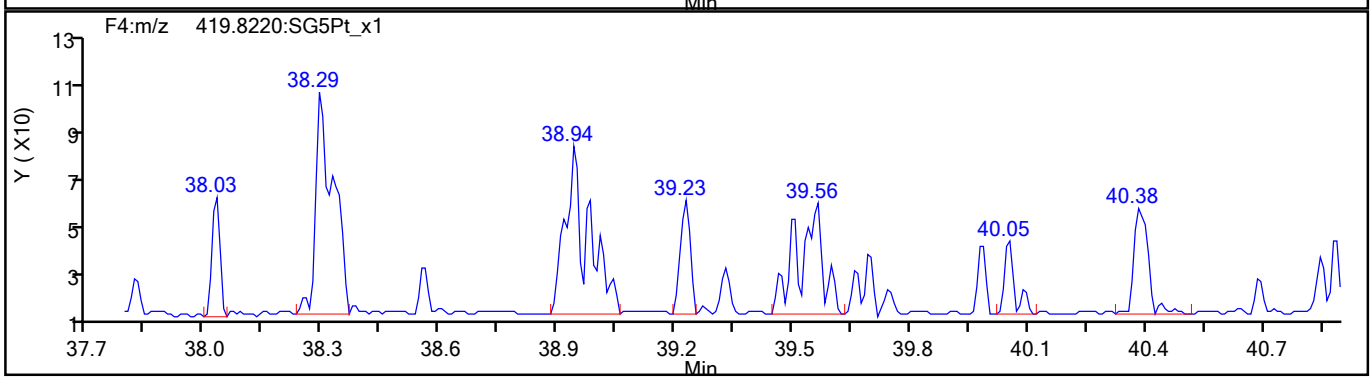

783456

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

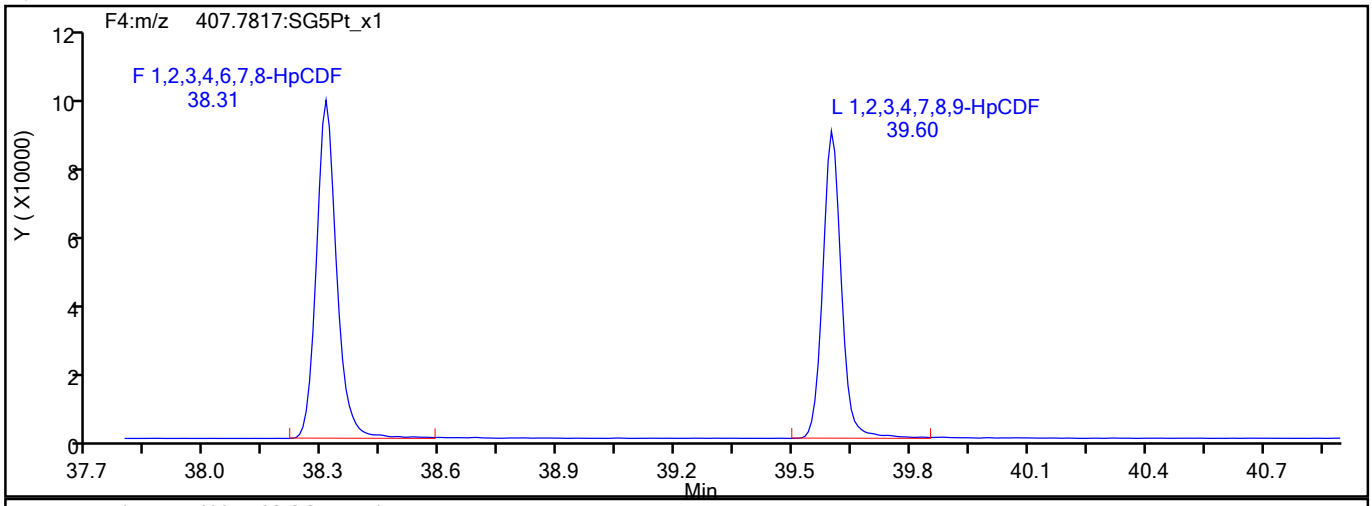

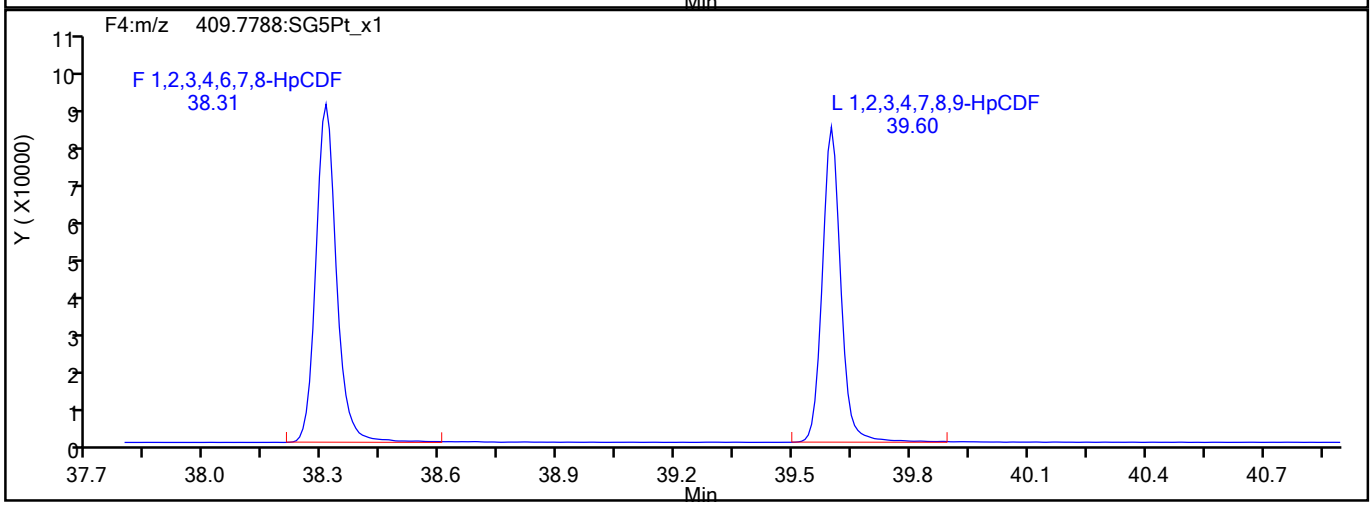

HpCDF Interference Mass

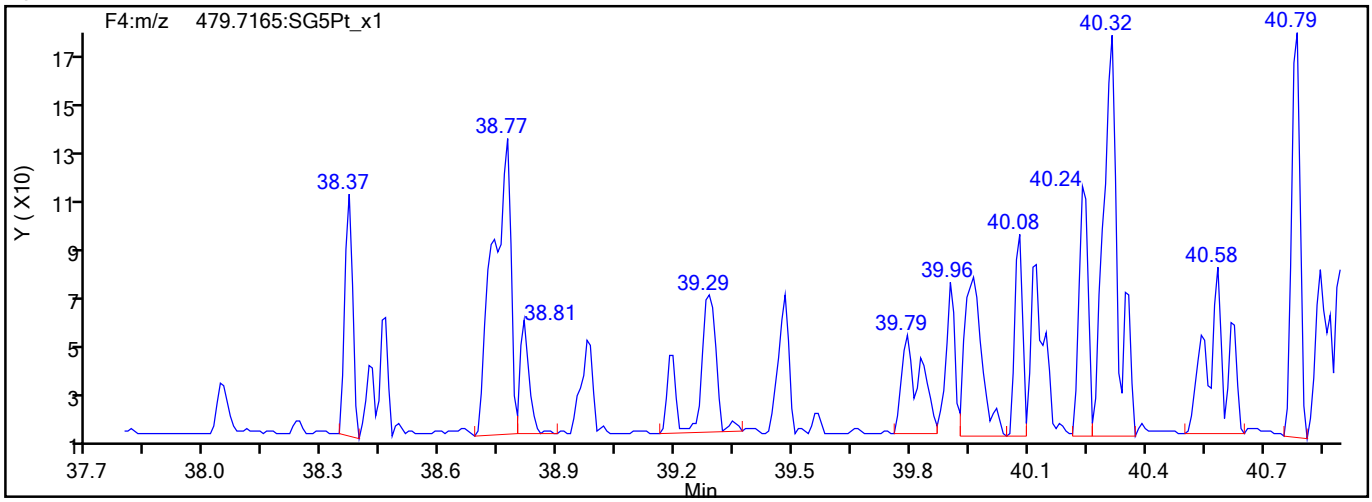

783457

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

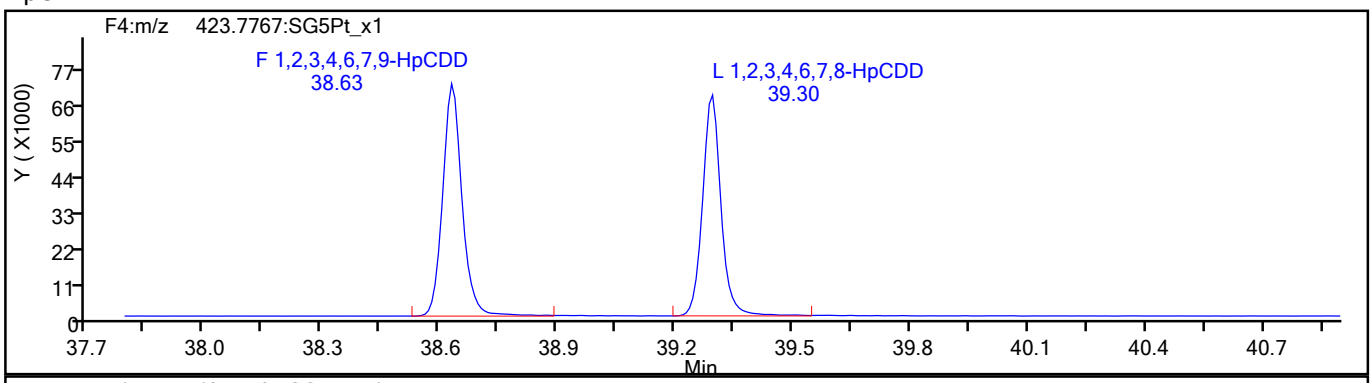

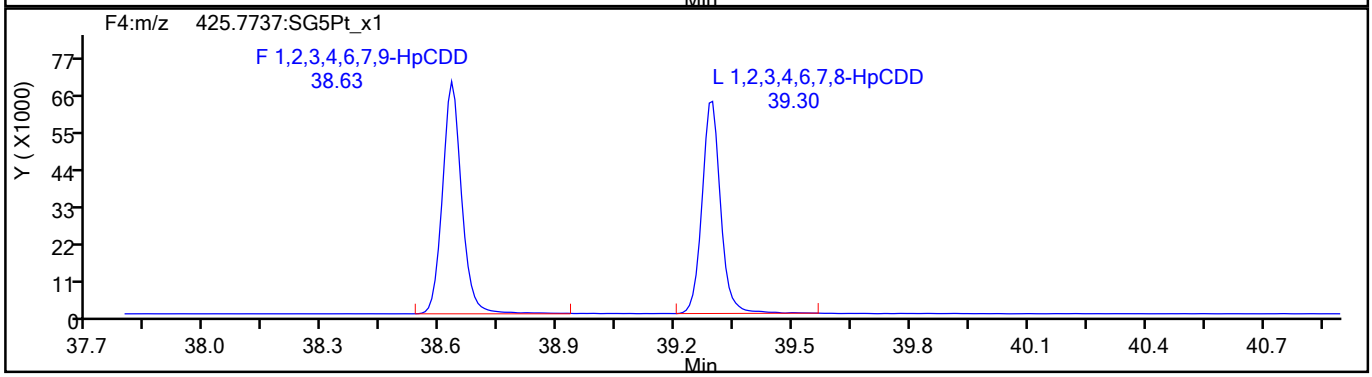

HpCDD Standards

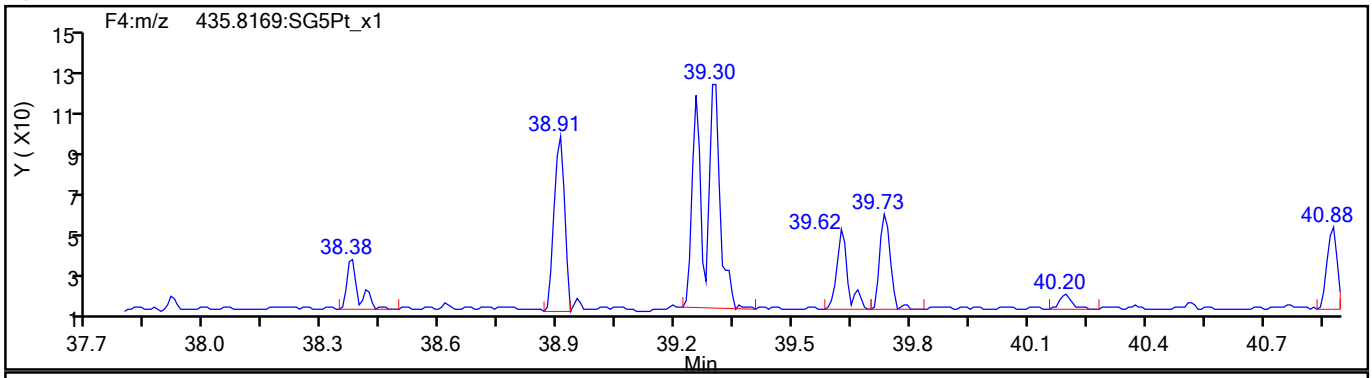

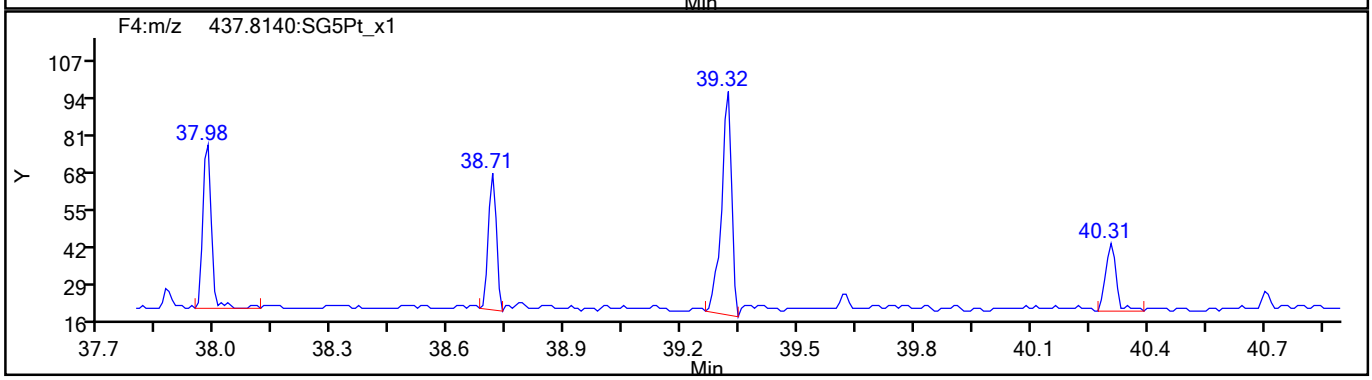

783458

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

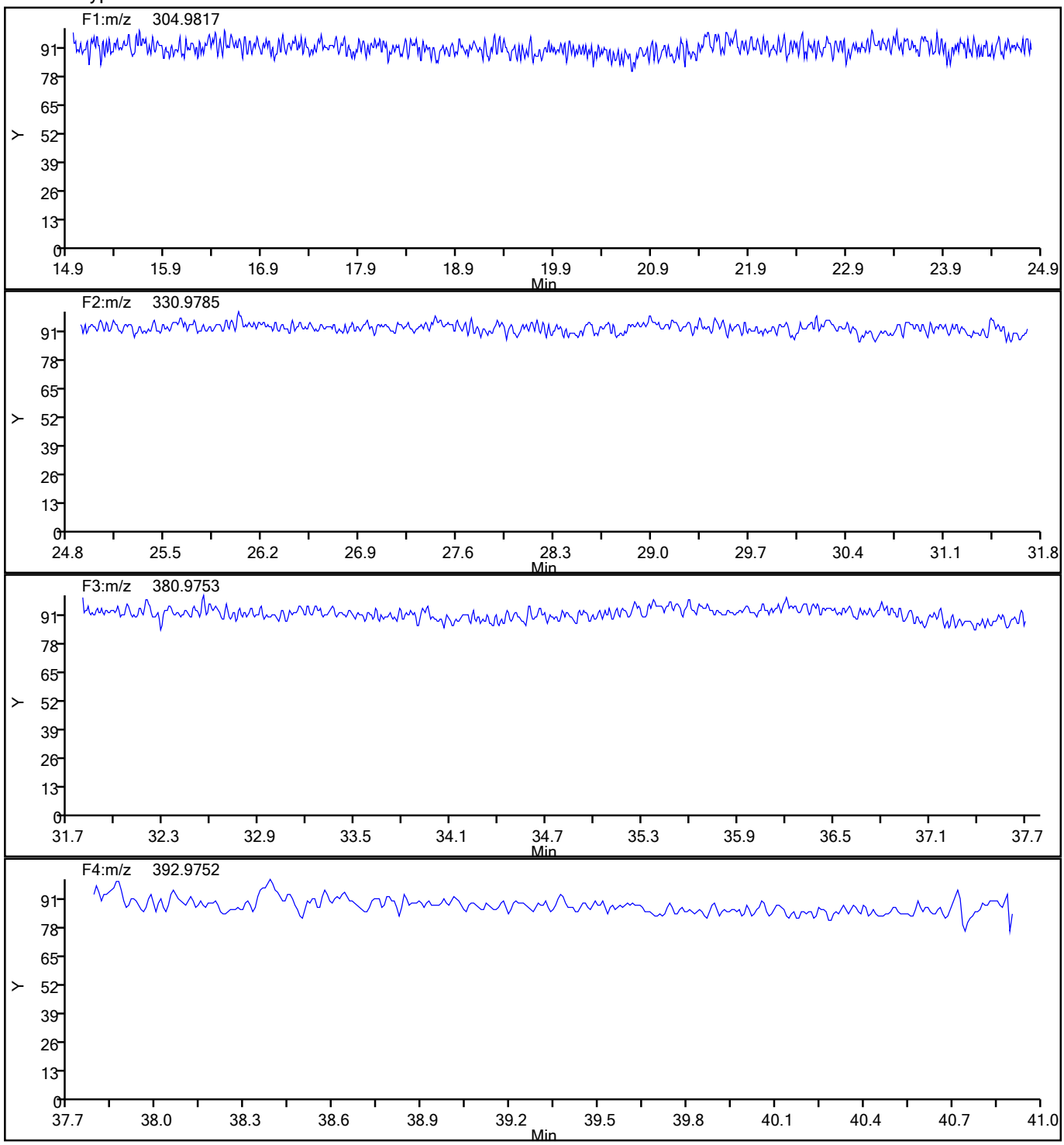

783459

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

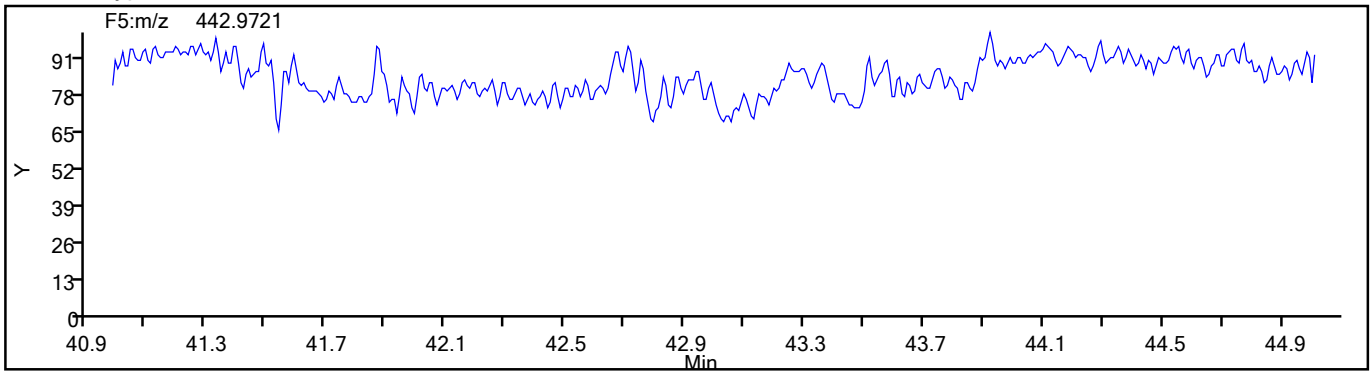

783460

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 17-Aug-2021 14:27:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 16:07:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.529	393112	0.77	1.3459					0.00	
2,3,7,8-TCDF	20.580	883074	0.78	1.0802	83.2	83.2	0.1765	0.1765		
A Non-2,3,7,8-sub-TCDF	19.983	14516	0.77	1.0802	1.441	1.367	0.1765	0.7533		RQ
S Total TCDF					84.6	84.6	0.1765	0.1765		RQ
D 13C-2,3,7,8-TCDD	21.902	237674	0.79	0.9317					0.00	
2,3,7,8-TCDD	21.928	282066	0.80	1.0753	44.1	44.1	0.1251	0.1251		
A Non-2,3,7,8-sub-TCDD	20.816						0.1251	0.1251		
S Total TCDD					44.1	44.1	0.1251	0.1251		
A F1 PeCDFs	24.695	314	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.196	12272	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.556						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.117	9319	1.28	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.475	5418	1.08	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.678	524513	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.925	436983	1.02	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.301						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.613	344276	1.05	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.297						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.251	552143	0.76							
1,3,6,8-TCDD	17.867	286795	0.81							
2,3,4,7-TCDF	20.580	883074	0.78							
1,2,3,7-TCDD	21.713	246746	0.80							
1,2,3,9-TCDF	22.091	375235	0.81							
1,2,3,9-TCDD	22.203	294638	0.78							
1,2,8,9-TCDF	23.714	427941	0.80							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.766	127271								
1,3,4,6,8-PeCDF	24.126	385071	1.61							
1,2,3,8,9-PeCDD	26.181	276939	1.58							
1,2,4,7,9-PeCDD	30.804	272114	1.59							
1,2,3,8,9-PeCDF	30.989	368041	1.62							
1,2,3,4,6,8-HxCDF	33.260	451714	1.27							
1,2,4,6,7,9-HxCDD	34.329	334369	1.26							
1,2,3,4,6,7-HxCDD	36.620	364948	1.23							
1,2,3,4,8,9-HxCDF	36.973	519420	1.27							
1,2,3,4,6,7,9-HpCDD	38.981	383342	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 17-Aug-2021 14:27:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 16:07:09

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.529	20.529	0	1.000	170513	24451	60	150	408		
317.9389	20.537	20.529	1	1.000	222599	31155	14	35	2225	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.580	20.580	0	1.003	386703	50727	45	112	1127		
305.8987	20.572	20.580	-1	1.002	496371	65154	61	152	1068	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.889	19.983	-65	0.920	1545	292	45	112	6		
305.8987	18.889	19.983	-65	0.920	1924	396	61	152	6	0.80(0.65-0.89)	
303.9016	19.808	19.983	-10	0.965	3532	597	45	112	13		
305.8987	19.825	19.983	-9	0.966	4465	768	61	152	13	0.79(0.65-0.89)	
303.9016	24.160	19.983	250	1.177	1327	241	45	112	5		
305.8987	24.126	19.983	248	1.175	2504	449	61	152	7	0.53(0.65-0.89)	
	Empc Correction				1723	312	61	152	5		
13C-2,3,7,8-TCDD											
331.9368	21.902	21.902	0	1.000	105089	13957	10	25	1396		
333.9338	21.876	21.902	-2	1.000	132585	19347	14	35	1382	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.928	21.928	0	1.001	125335	16412	25	62	656		
321.8936	21.928	21.928	0	1.001	156731	20206	20	50	1010	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.816						25	62			
321.8936	20.816						20	50			
A F1 PeCDFs											RQ
339.8597	24.925	24.695	14	1.000	191	35	2	5	18		
341.8567	24.950	24.695	15	1.000	174	103	8	20	13	1.10(1.32-1.78)	

783463

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.844	28.196	-141	1.000	766	192	27	67	7		
341.8567	25.827	28.196	-142	1.000	749	122	20	50	6	1.02(1.32-1.78)	
339.8597	26.812	28.196	-83	1.000	1473	236	27	67	9		
341.8567	26.804	28.196	-83	1.000	1238	175	20	50	9	1.19(1.32-1.78)	
339.8597	27.242	28.196	-57	1.000	774	228	27	67	8		
341.8567	27.242	28.196	-57	1.000	414	129	20	50	6	1.87(1.32-1.78)	
339.8597	27.410	28.196	-47	1.000	2007	272	27	67	10		
341.8567	27.419	28.196	-47	1.000	1023	119	20	50	6	1.96(1.32-1.78)	
339.8597	28.009	28.196	-11	1.000	3045	480	27	67	18		
341.8567	28.000	28.196	-12	1.000	1881	272	20	50	14	1.62(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						31	77			
357.8516	28.556						12	30			
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028	35.117	-5	1.000	1563	301	78	195	4		
375.8178	35.028	35.117	-5	1.000	1453	309	63	157	5	1.08(1.05-1.43)	
373.8208	35.180	35.117	4	1.000	3670	776	78	195	10		
375.8178	35.171	35.117	3	1.000	2633	573	63	157	9	1.39(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.424	35.475	-3	1.000	2814	512	49	122	10		
391.8127	35.415	35.475	-4	1.000	2604	510	37	92	14	1.08(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.678	38.678	0	1.000	269858	70534	95	237	742		
409.7788	38.678	38.678	0	1.000	254655	66103	84	210	787	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.925	39.925	0	1.000	221169	60461	95	237	636		
409.7788	39.916	39.925	-1	1.000	215814	60231	84	210	717	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.301						95	237			
409.7788	39.301						84	210			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.613	39.613	0	1.000	176113	47810	61	152	784		
425.7737	39.613	39.613	0	1.000	168163	46077	62	155	743	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.297						61	152			
425.7737	39.297						62	155			
1,3,6,8-TCDF											
303.9016	16.251	16.251	0		238917	44390	45	112	986		
305.8987	16.251	16.251	0		313226	56510	61	152	926	0.76(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.867	17.867	0		128143	22094	25	62	884		
321.8936	17.876	17.867	1		158652	27668	20	50	1383	0.81(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.580	20.580	0		386703	50727	45	112	1127		
305.8987	20.572	20.580	-1		496371	65154	61	152	1068	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7-TCDD											
319.8965	21.713	21.713	0		109917	14539	25	62	582		
321.8936	21.713	21.713	0		136829	17891	20	50	895	0.80(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.091	22.091	0		167447	21351	45	112	474		
305.8987	22.100	22.091	1		207788	27306	61	152	448	0.81(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.203	22.203	0		128657	16375	25	62	655		
321.8936	22.194	22.203	-1		165981	21311	20	50	1066	0.78(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.714	23.714	0		189792	31730	45	112	705		
305.8987	23.714	23.714	0		238149	40152	61	152	658	0.80(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.766	23.766	0		127271	24228	25	62	969		
1,3,4,6,8-PeCDF											
339.8597	24.126	24.126	0		237485	45645	2	5	22823		
341.8567	24.117	24.126	-1		147586	28368	8	20	3546	1.61(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.181	26.181	0		169516	25557	31	77	824		
357.8516	26.181	26.181	0		107423	16002	12	30	1334	1.58(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.804	30.804	0		166968	21361	31	77	689		
357.8516	30.796	30.804	-1		105146	13117	12	30	1093	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.989	30.989	0		227678	26376	27	67	977		
341.8567	30.973	30.989	-1		140363	16634	20	50	832	1.62(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.260	33.260	0		252670	38083	78	195	488		
375.8178	33.260	33.260	0		199044	29014	63	157	461	1.27(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.329	34.329	0		186543	32347	49	122	660		
391.8127	34.321	34.329	-1		147826	25220	37	92	682	1.26(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.620	36.620	0		200927	47066	49	122	961		
391.8127	36.620	36.620	0		164021	38120	37	92	1030	1.23(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.973	36.973	0		290634	66772	78	195	856		
375.8178	36.973	36.973	0		228786	52982	63	157	841	1.27(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.981	38.981	0		196303	52734	61	152	864		
425.7737	38.981	38.981	0		187039	50357	62	155	812	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 17-Aug-2021 14:27:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.983

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	393112	55606

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	393112	55606

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.889	1545	292	1924	396	0.3268	0.80	
19.808	3532	597	4465	768	0.7533	0.79	
24.160	1327	241	2504	449	0.3609	0.53	RQ
24.160	1327	241	1723	312	0.2873		Empc Correction
Signal Totals:							
	6404	1130	8112	1476			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15297	2743				0.72	RQ
	14516	2606					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.441 = (15297 * 40.000) / (393112 * 1.080)
Empc Amount: 1.367 = (14516 * 40.000) / (393112 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

F1 PeCDFs, RT: 24.695

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.925	191	35	174	103		1.10	R
Signal Totals:							
	191	35	174	103			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	365	138				1.10	RQ
	314	57					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount:	0.0 = (365 * 0.0) / (0 * 0.000)
Empc Amount:	0.0 = (314 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

Non-2,3,7,8-sub-PeCDF, RT: 28.196

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.844	766	192	749	122		1.02	R
26.812	1473	236	1238	175		1.19	R
27.242	774	228	414	129		1.87	R
27.410	2007	272	1023	119		1.96	R
28.009	3045	480	1881	272		1.62	
Signal Totals:							
	8065	1408	5305	817			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13370	2225				1.52	RQ
	12272	2086					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (13370 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (12272 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

Non-2,3,7,8-sub-HxCDF, RT: 35.117

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
35.028	1563	301	1453	309		1.08	
35.180	3670	776	2633	573		1.39	
Signal Totals:							
	5233	1077	4086	882			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9319	1959				1.28	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (9319 * 0.0) / (0 * 0.000)

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

Non-2,3,7,8-sub-HxCDD, RT: 35.475

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.424	2814	512	2604	510		1.08	
Signal Totals:							
	2814	512	2604	510			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5418	1022				1.08	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (5418 * 0.0) / (0 * 0.000)

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

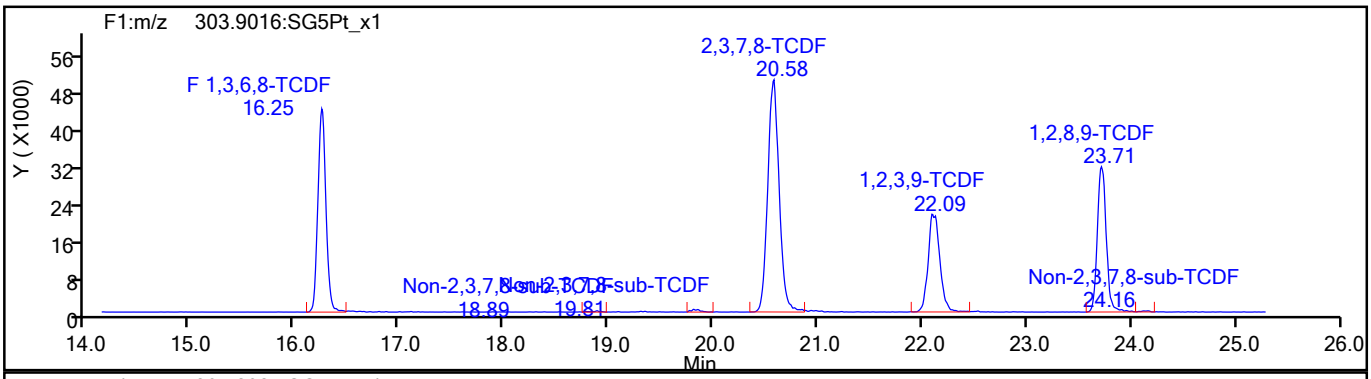

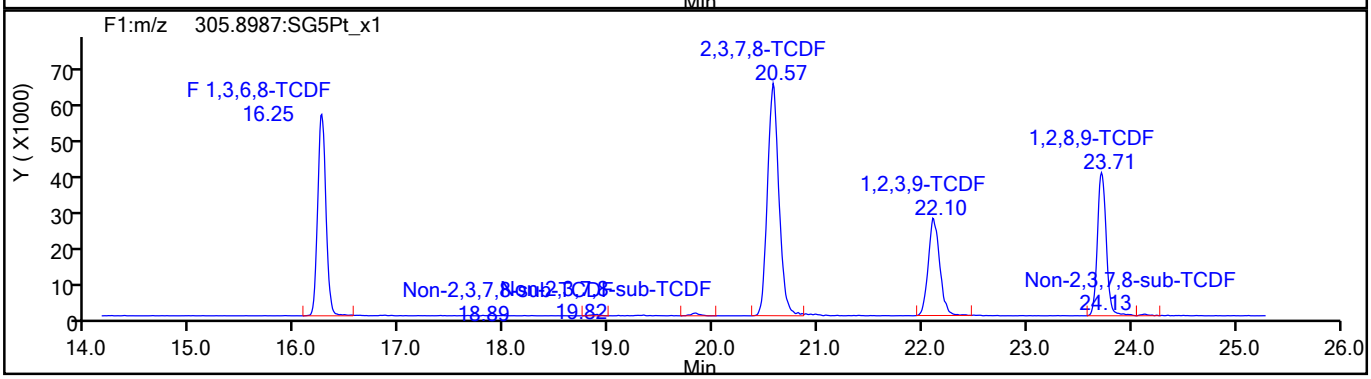

TCDF Standards

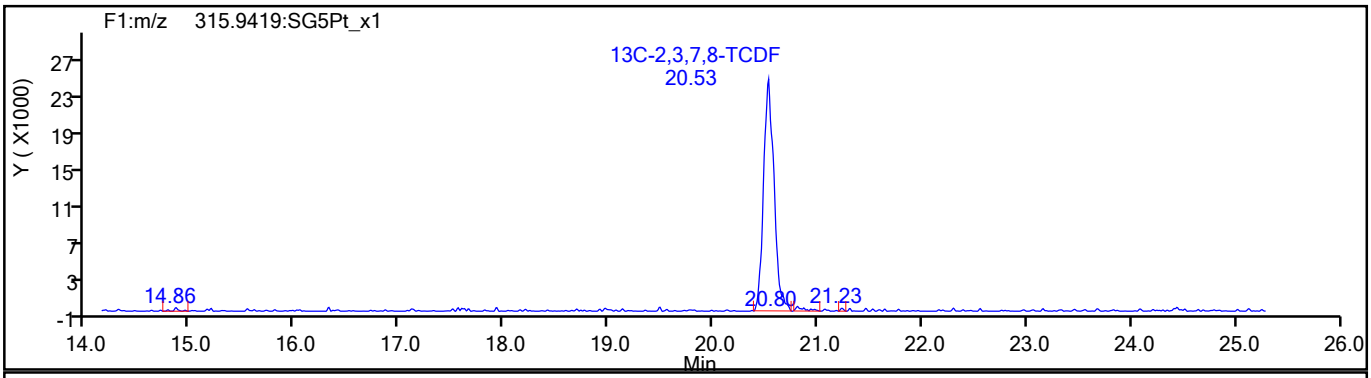

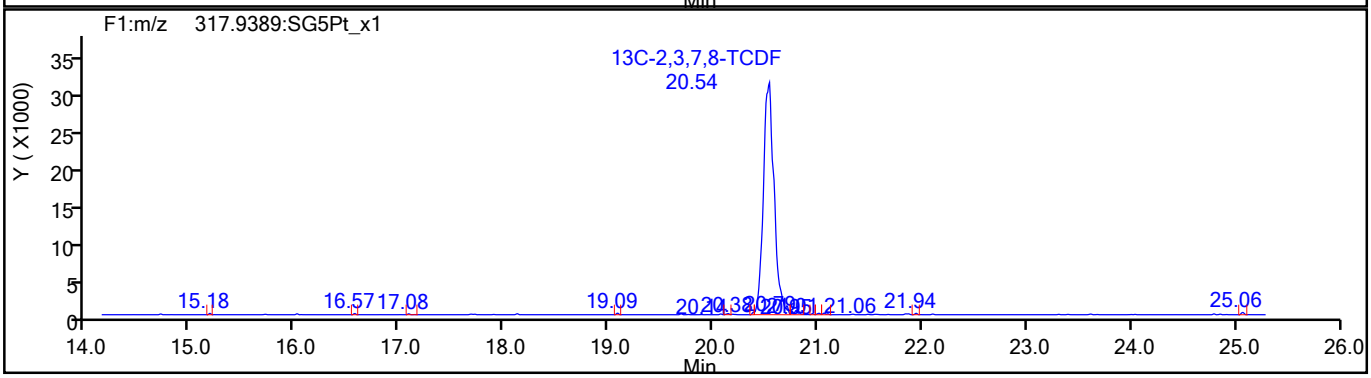

783472

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

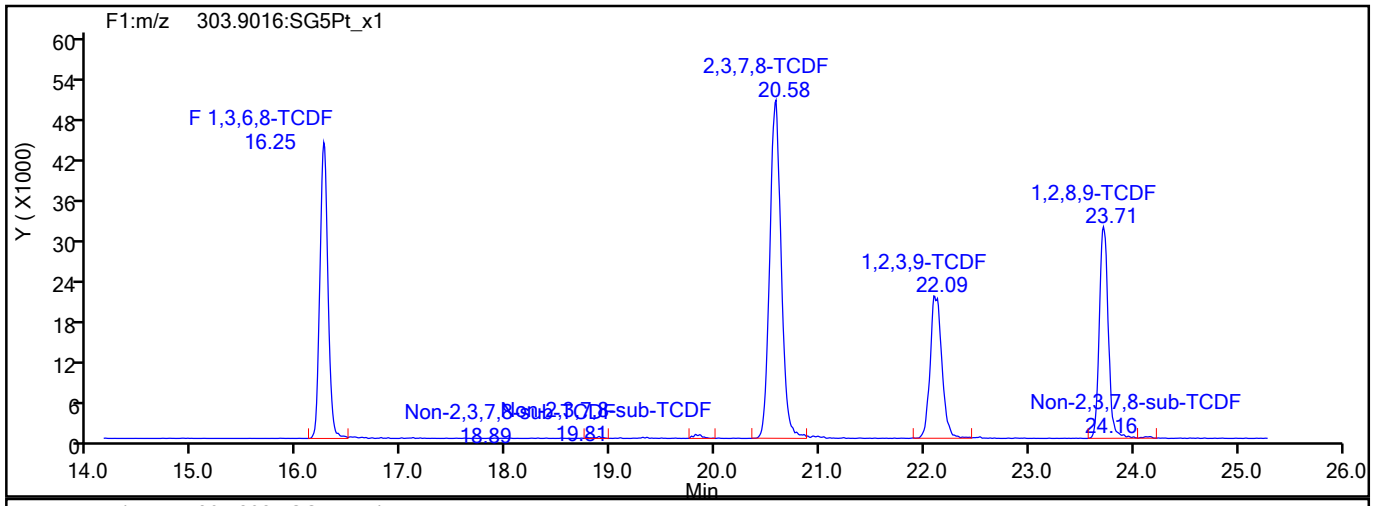

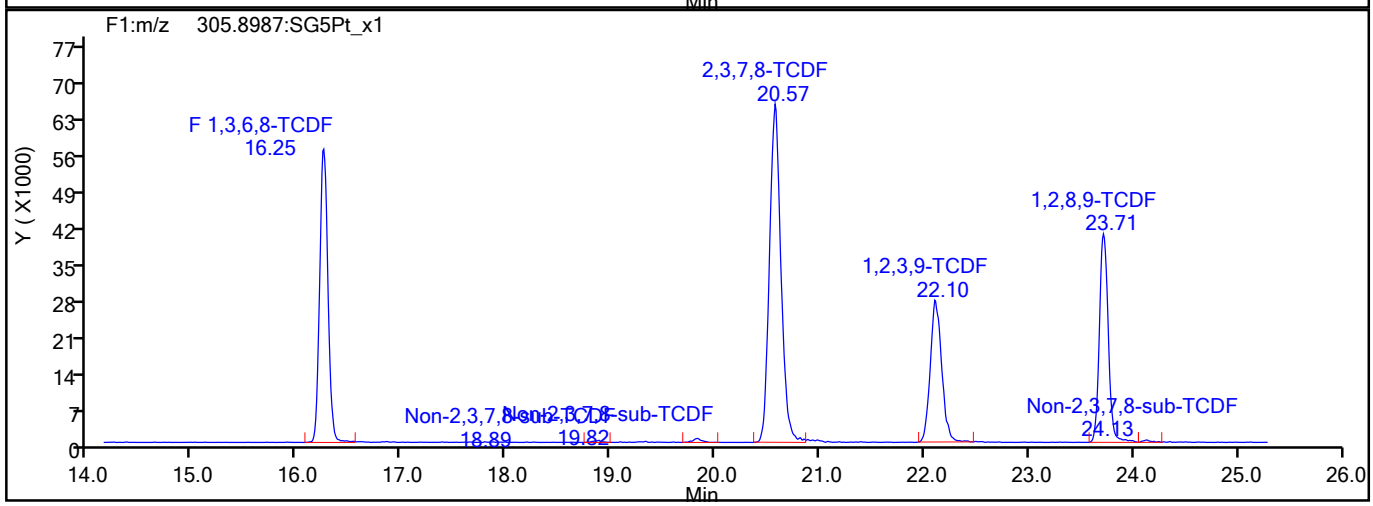

TCDF Interference Mass

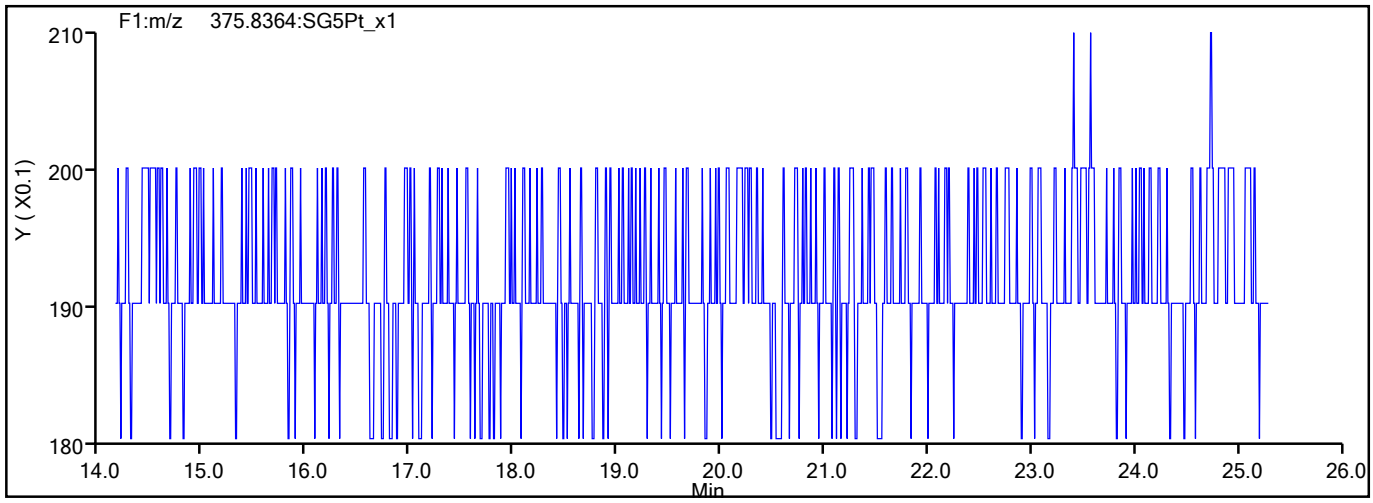

783473

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

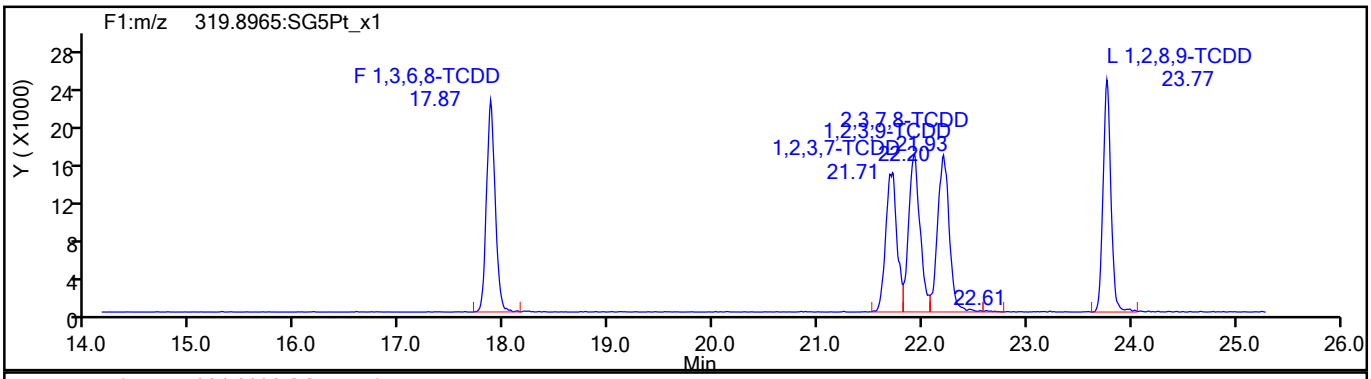

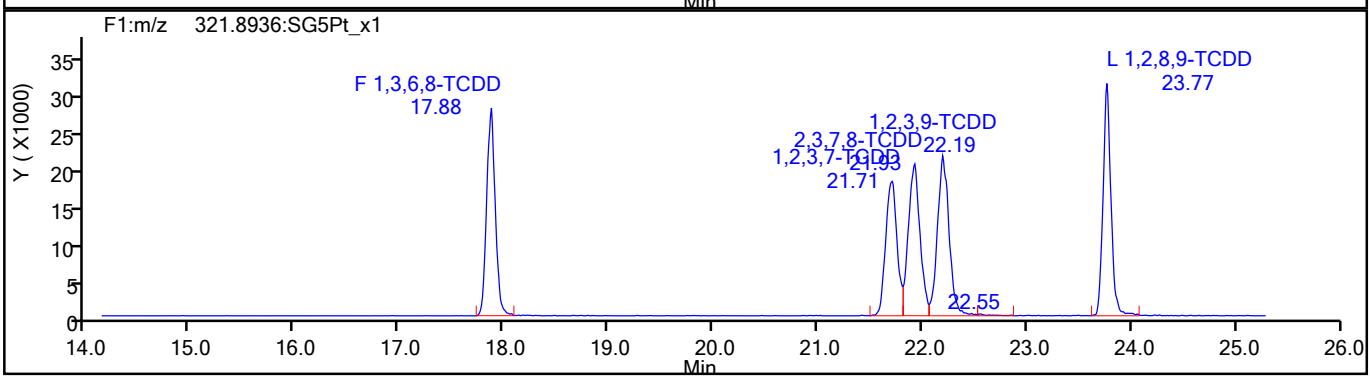

TCDD Standards

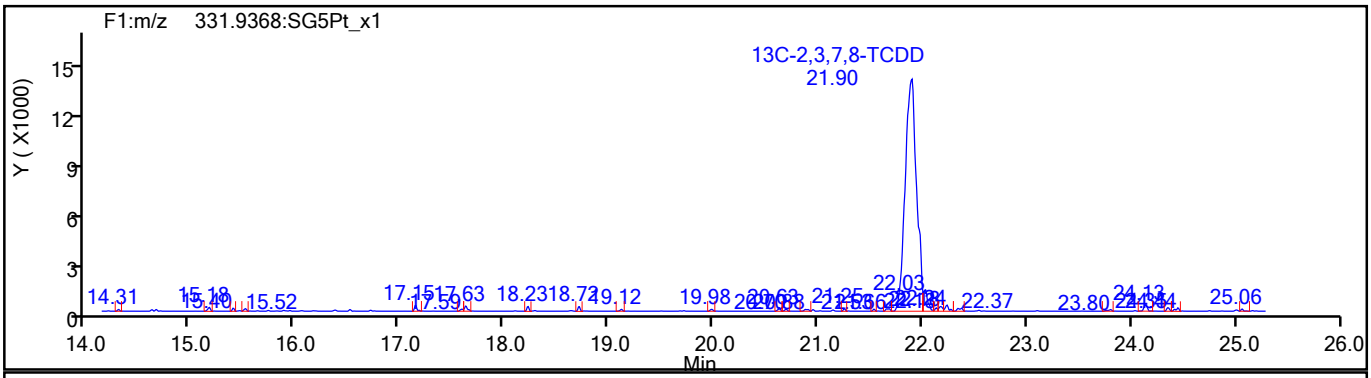

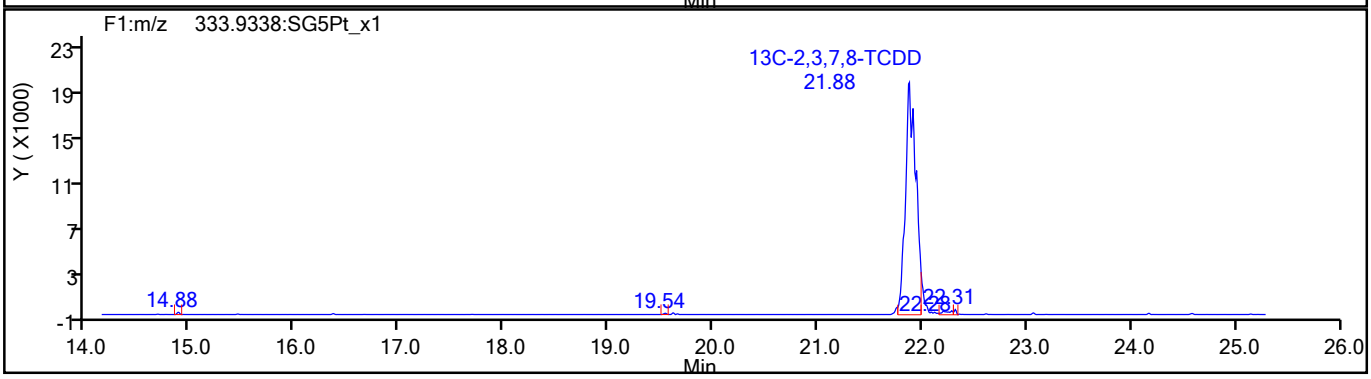

783474

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

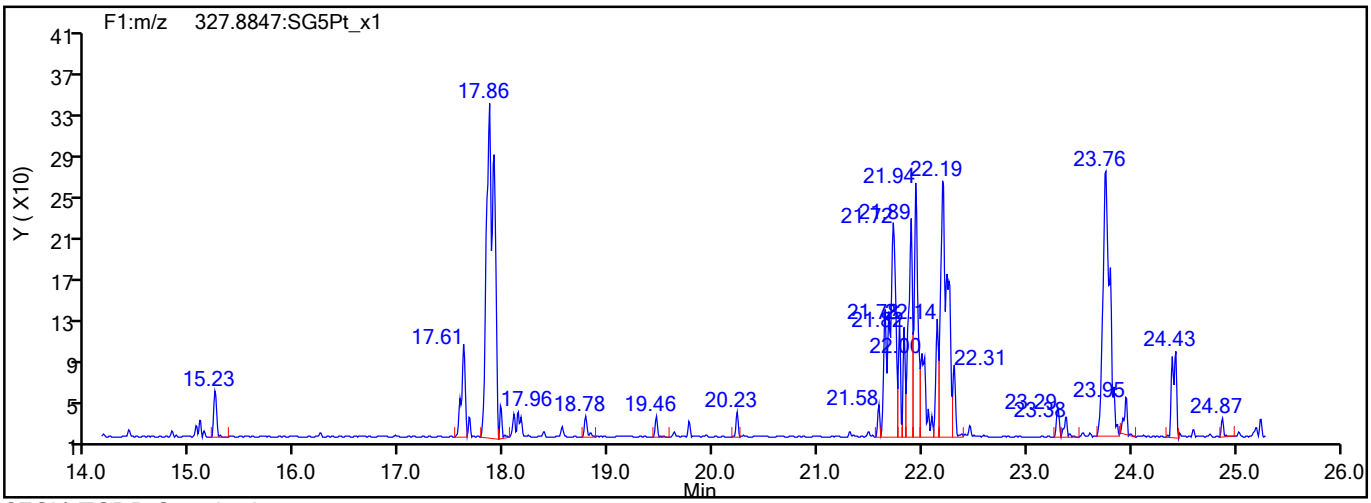

37Cl4-TCDD Standards

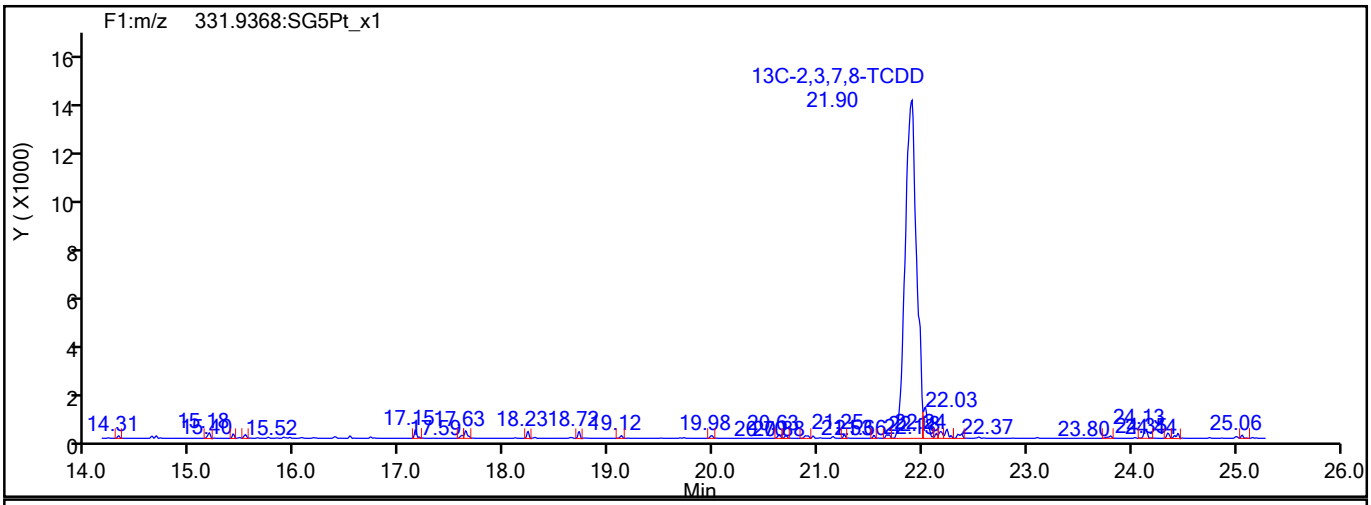

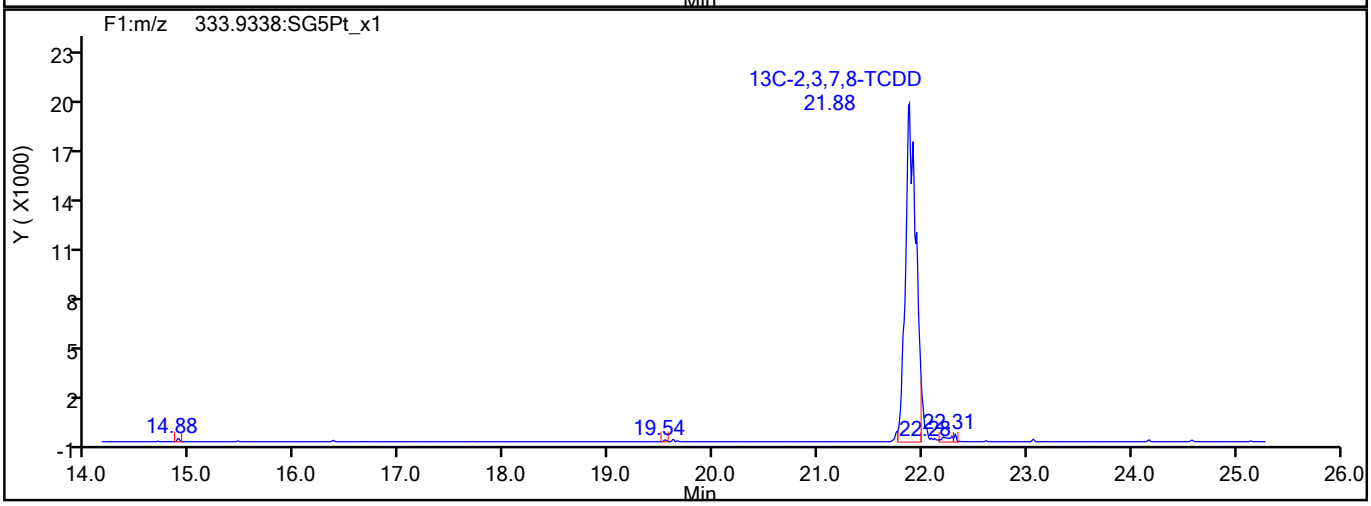

783475

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

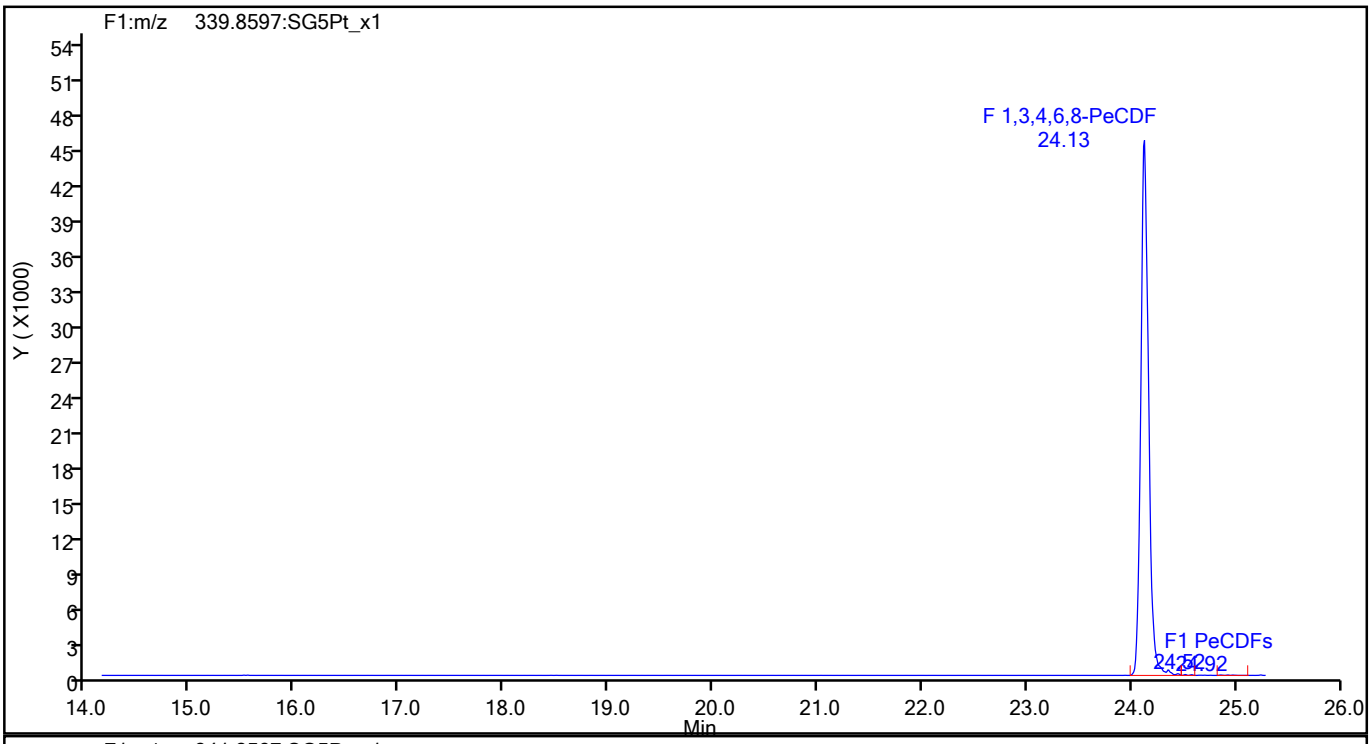

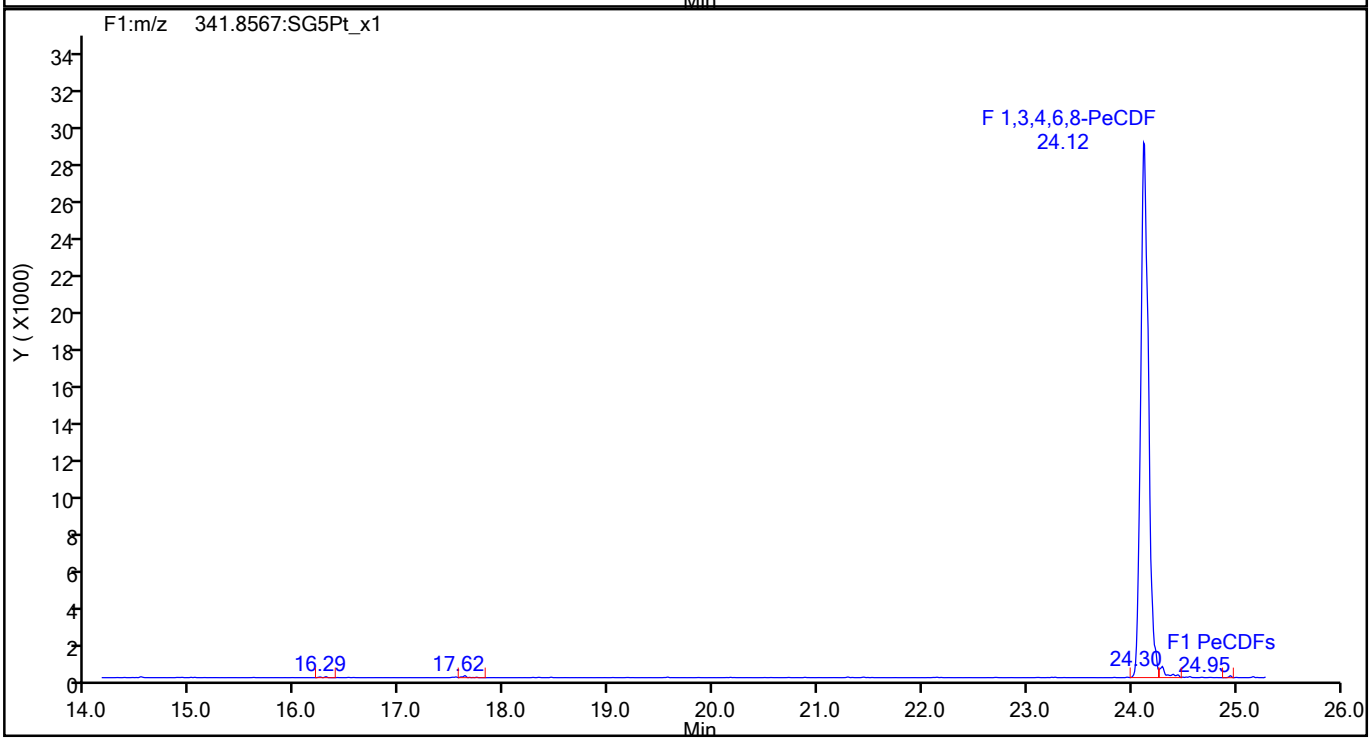

783476

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

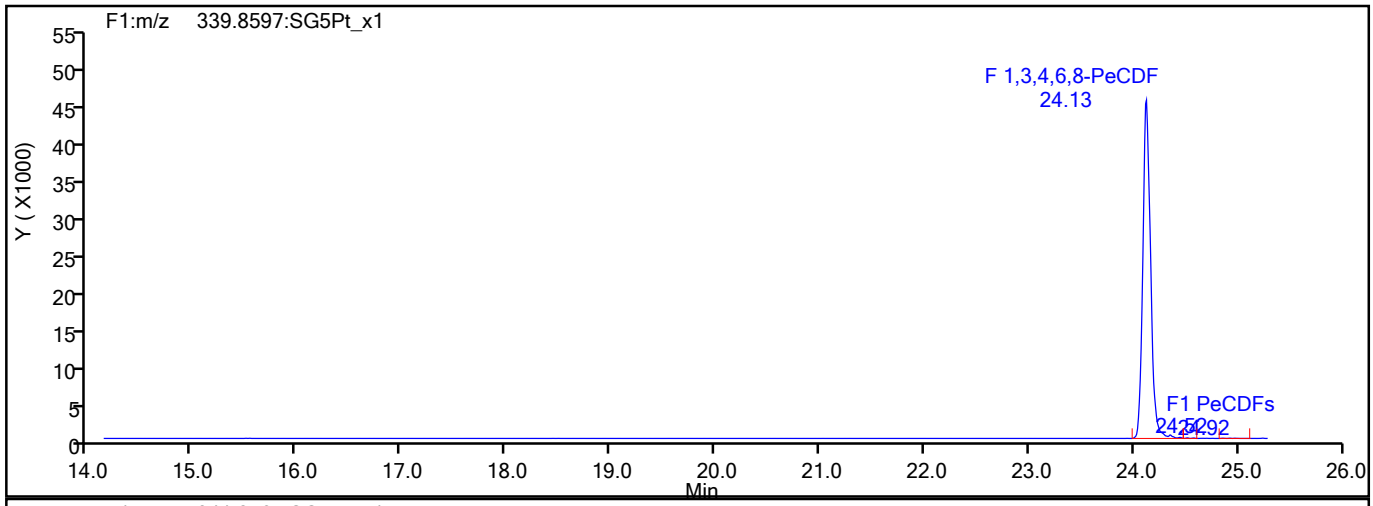

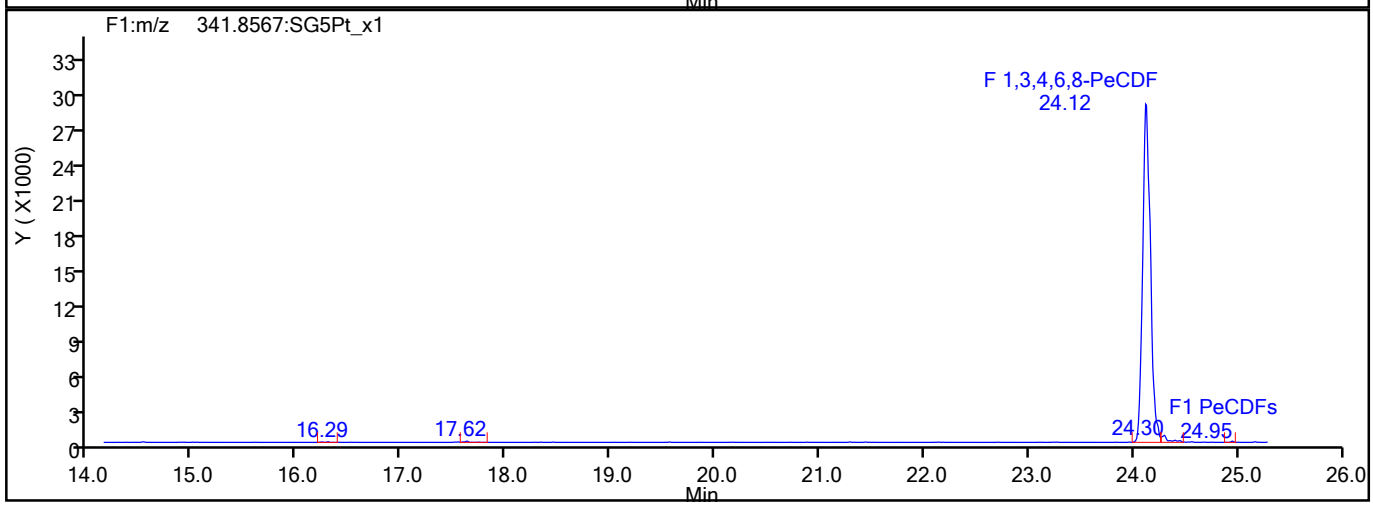

F1 PeCDFs Interference Mass

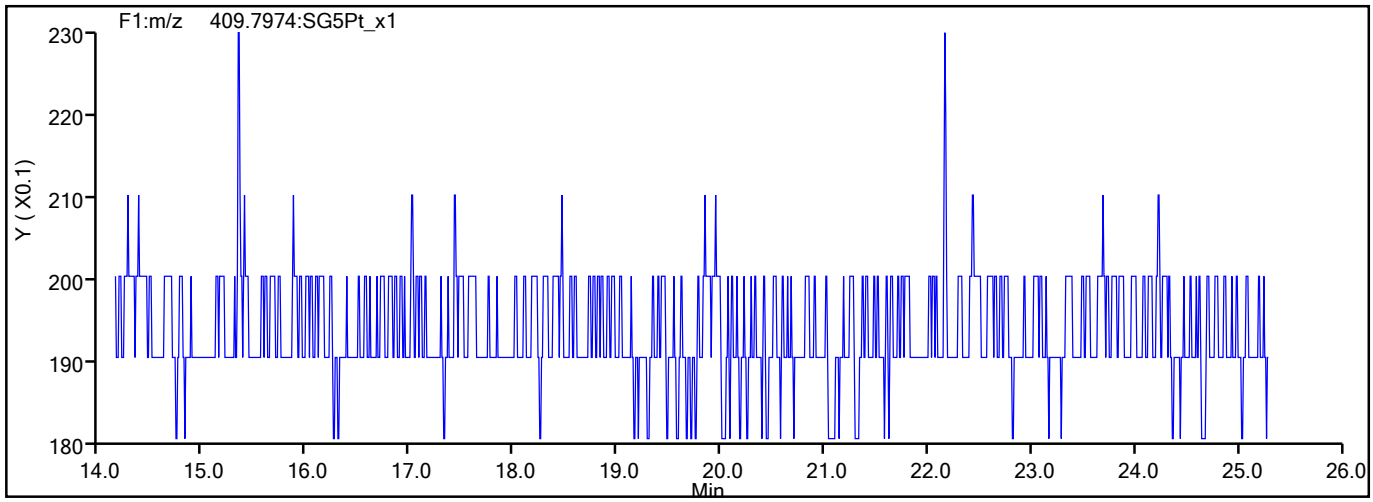

783477

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

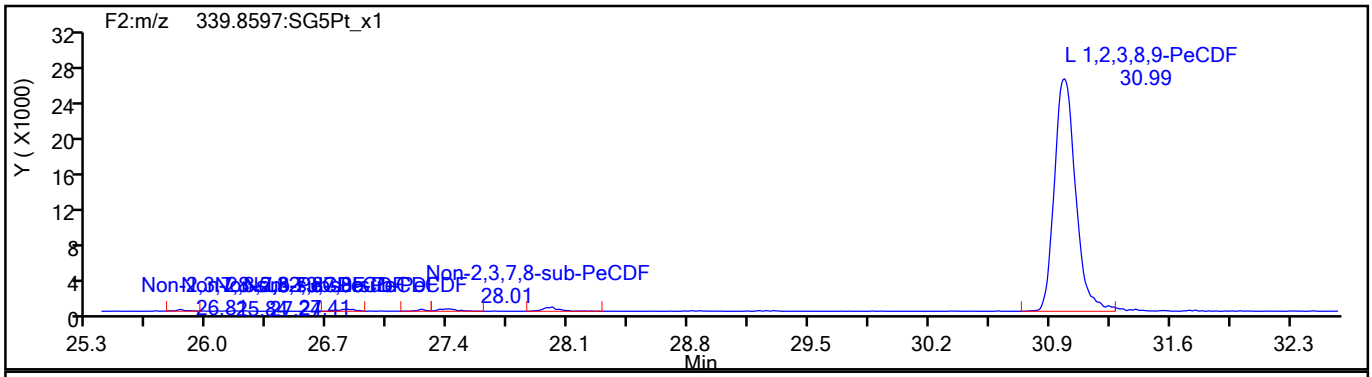

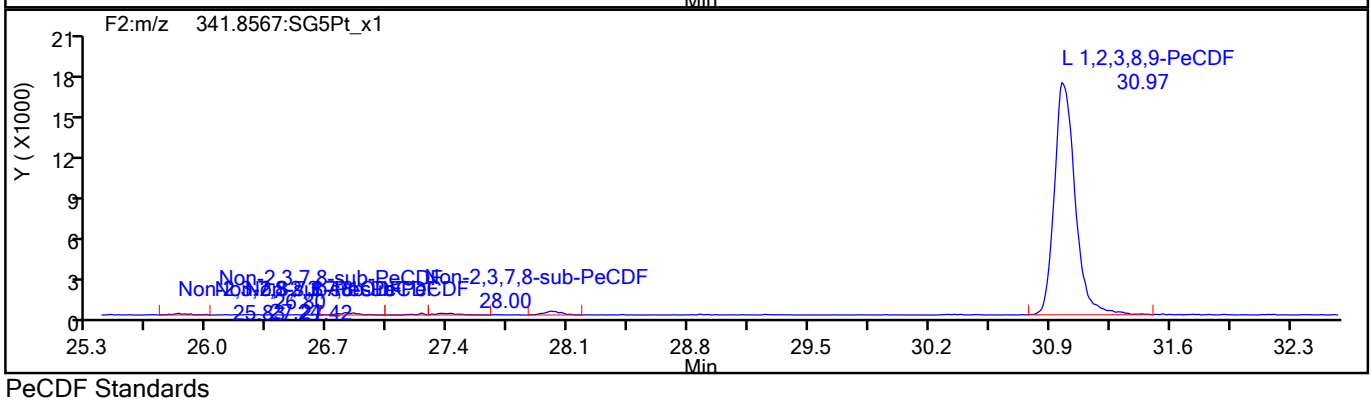

PeCDF Standards

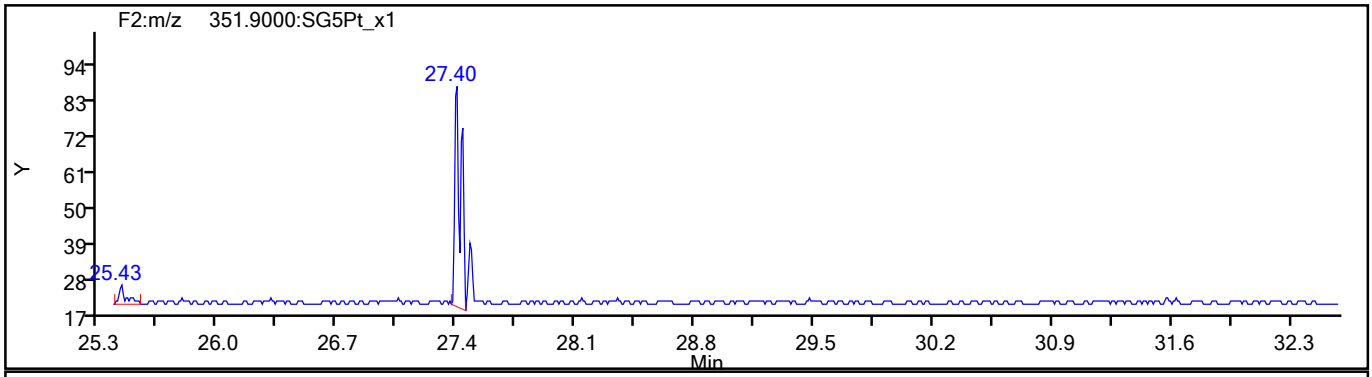

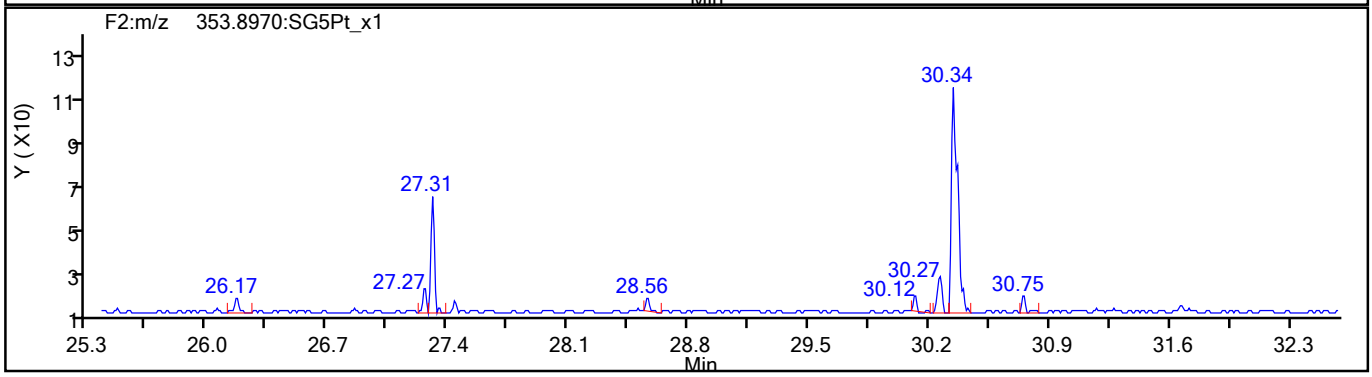

783478

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

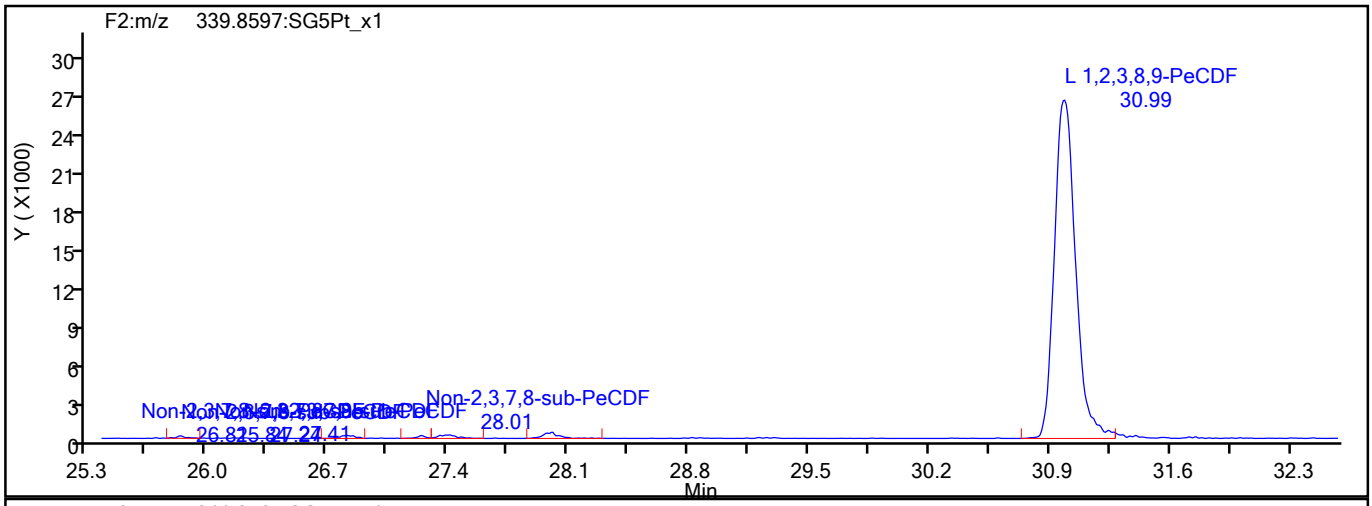

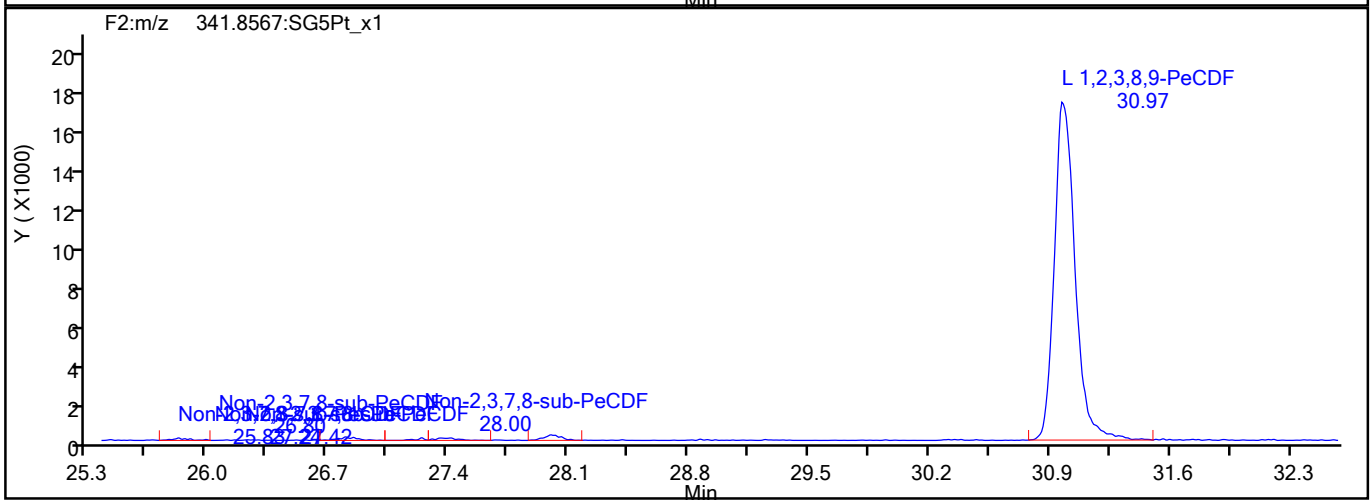

PeCDF Interference Mass

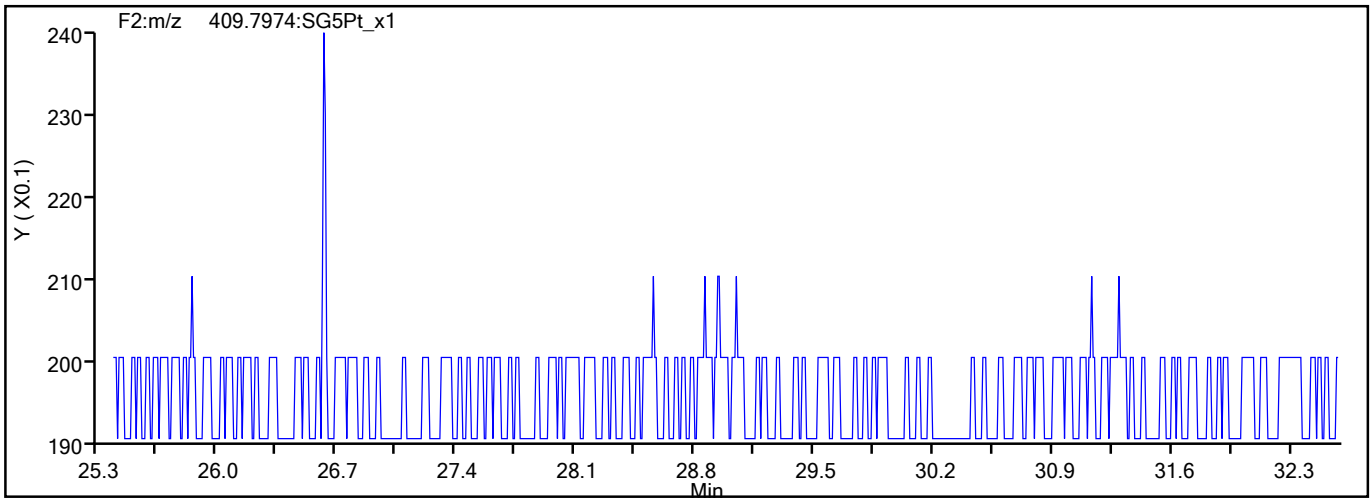

783479

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

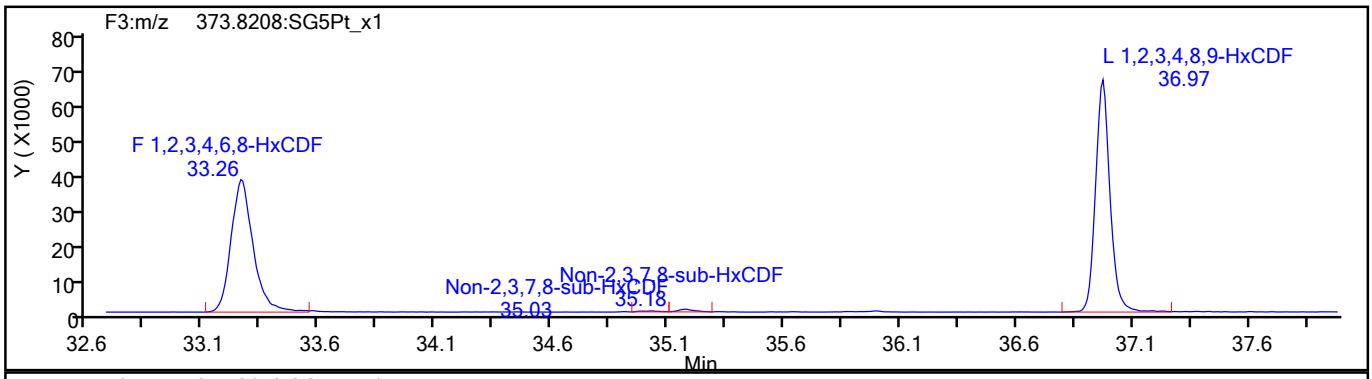

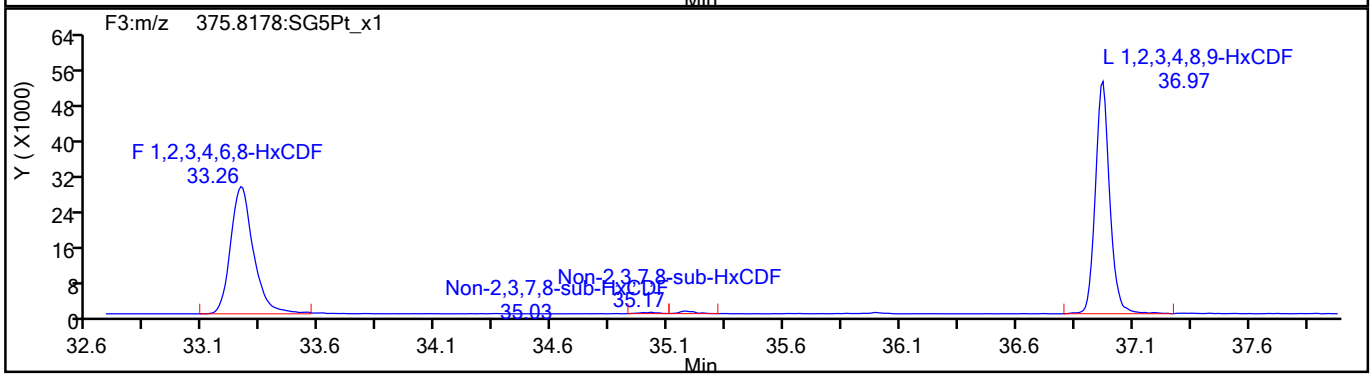

HxCDF Standards

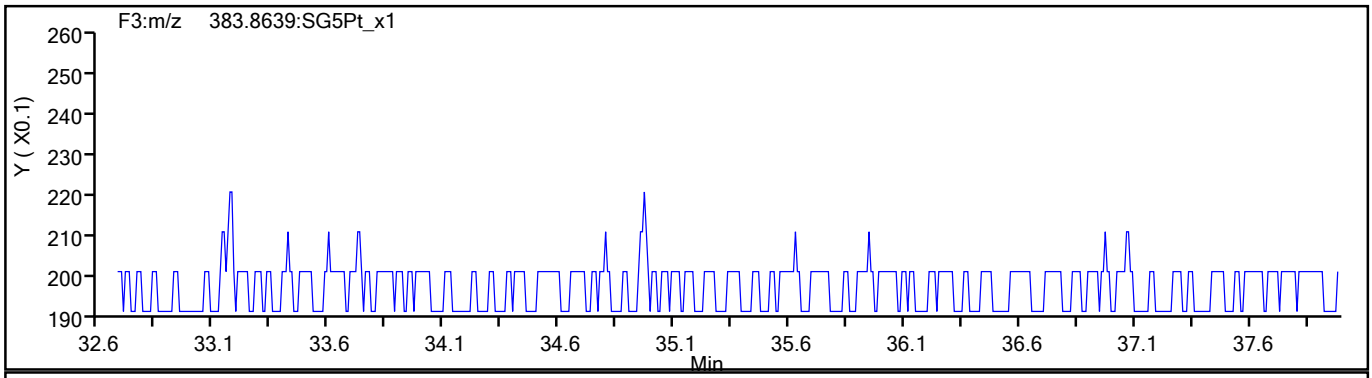

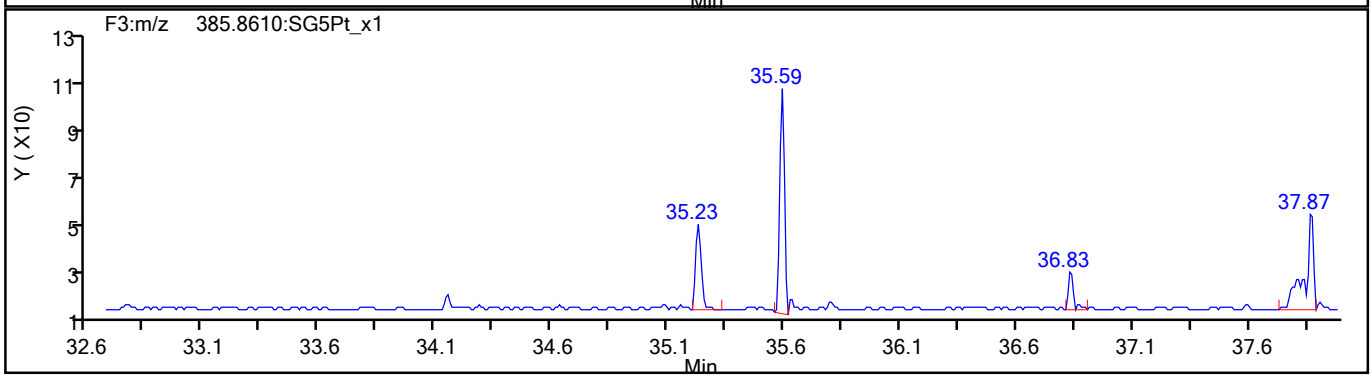

783480

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

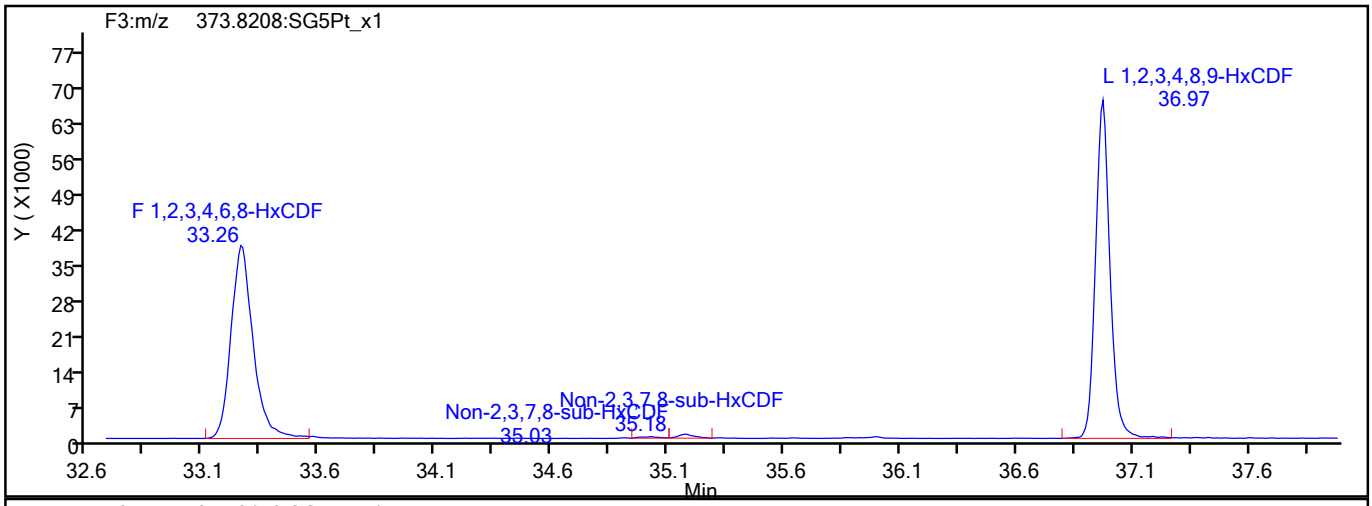

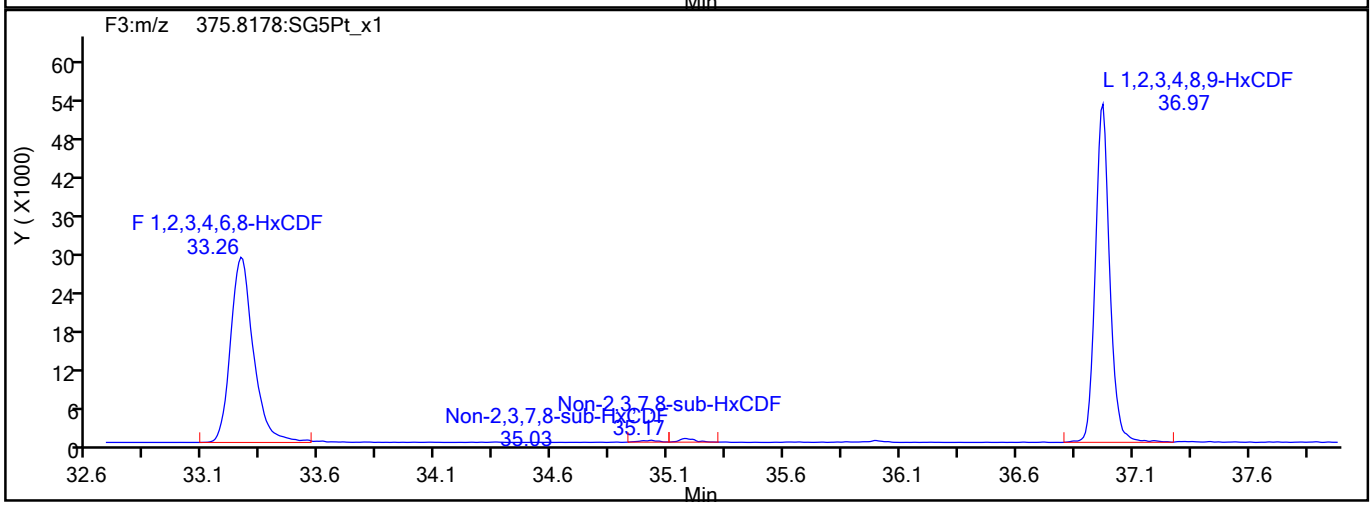

HxCDF Interference Mass

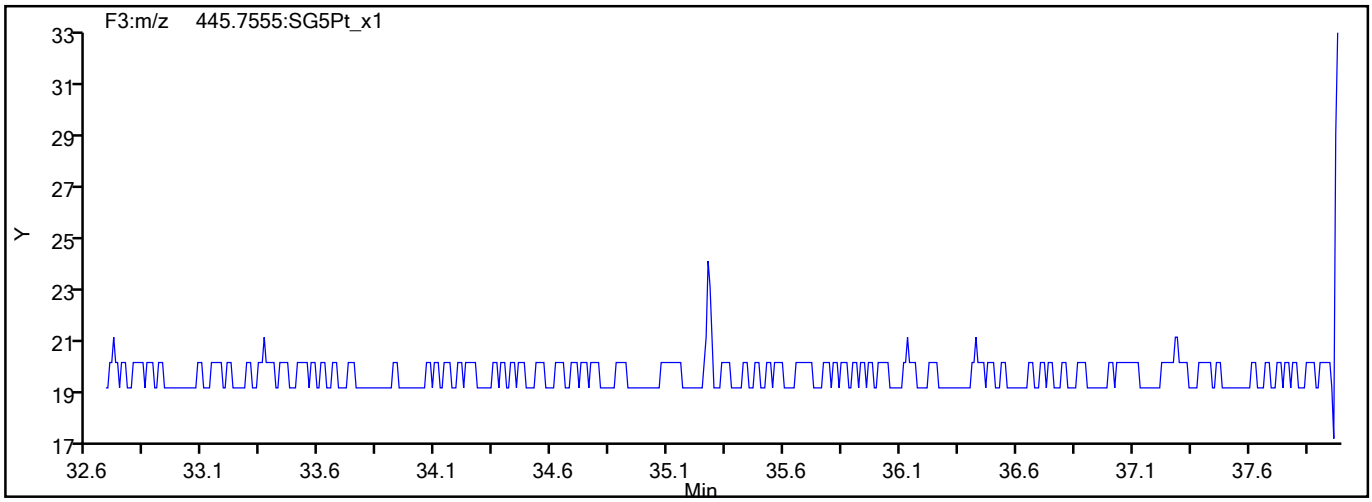

783481

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

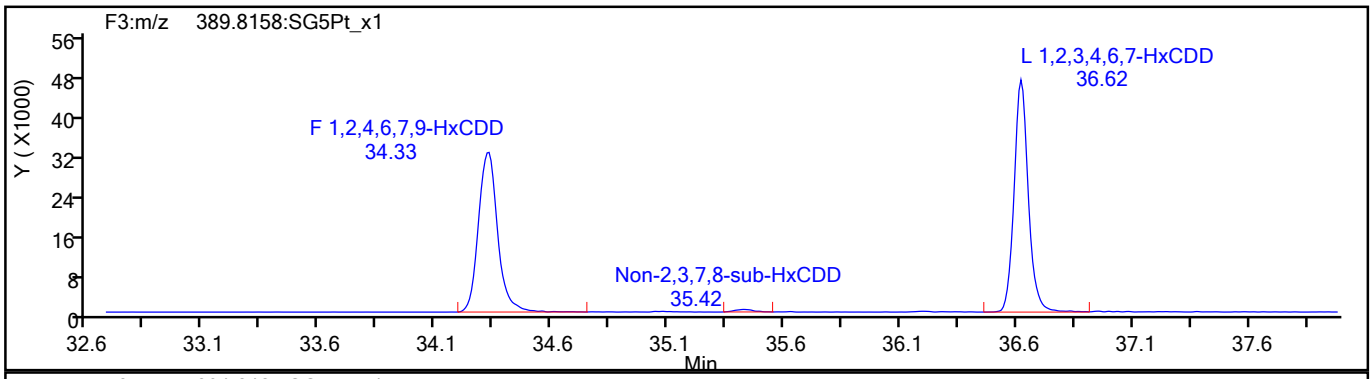

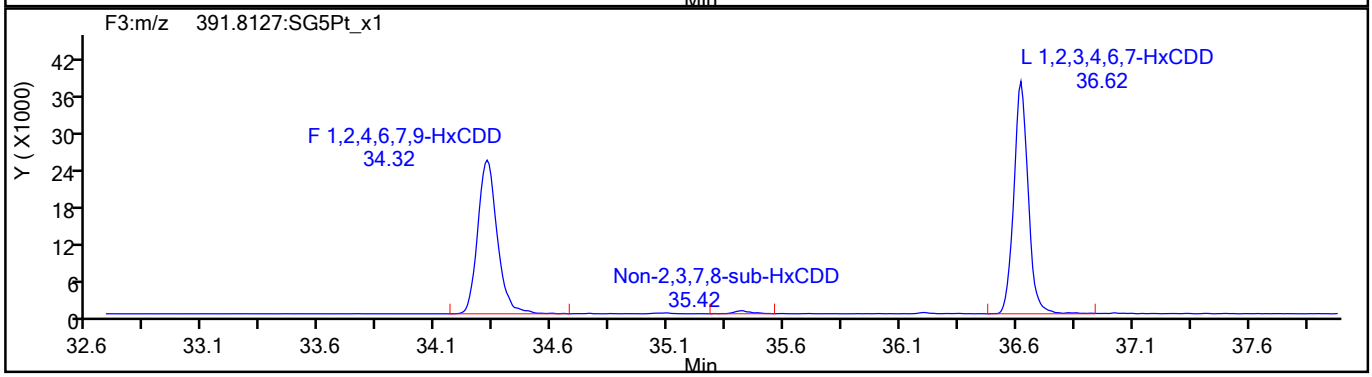

HxCDD Standards

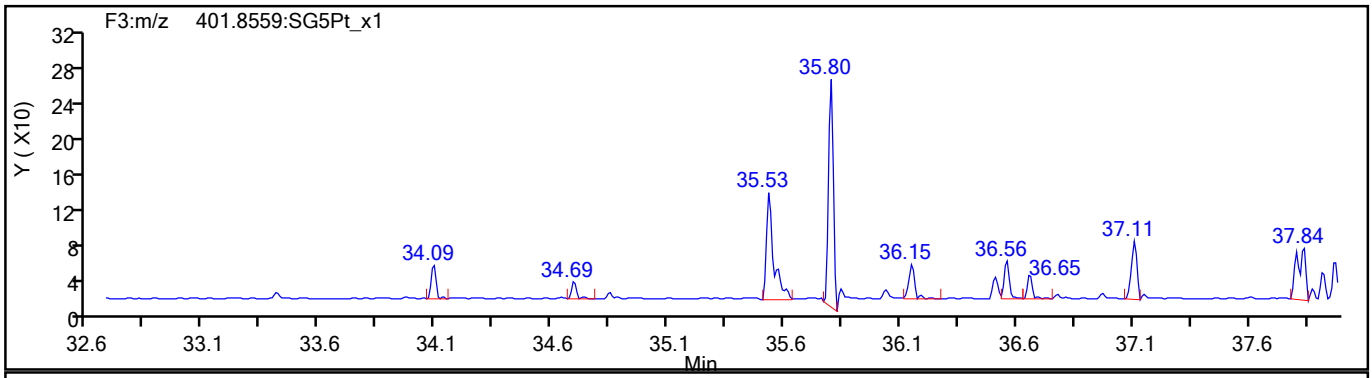

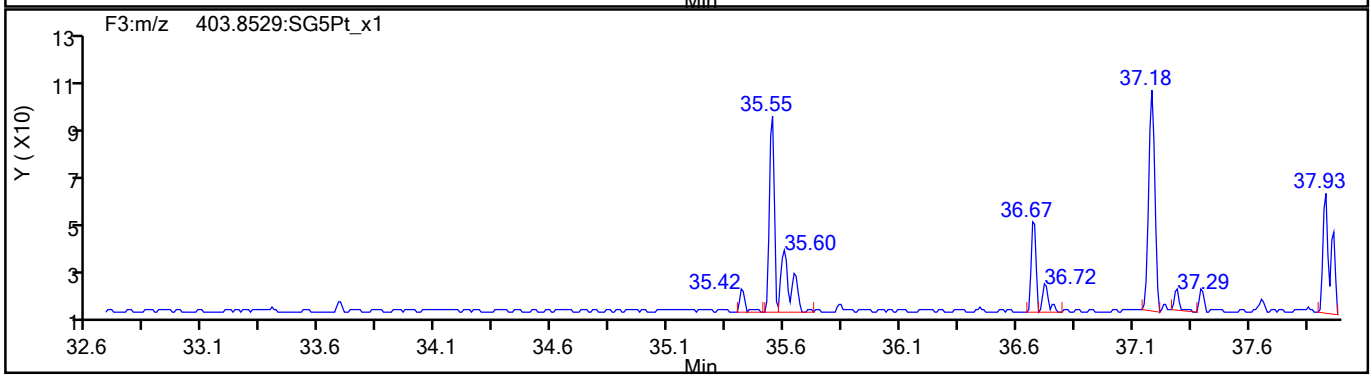

783482

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

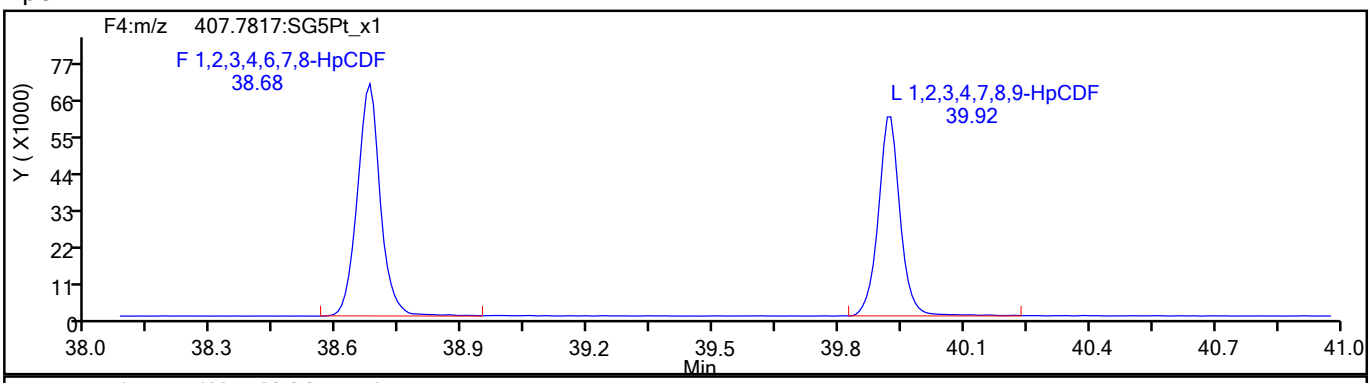

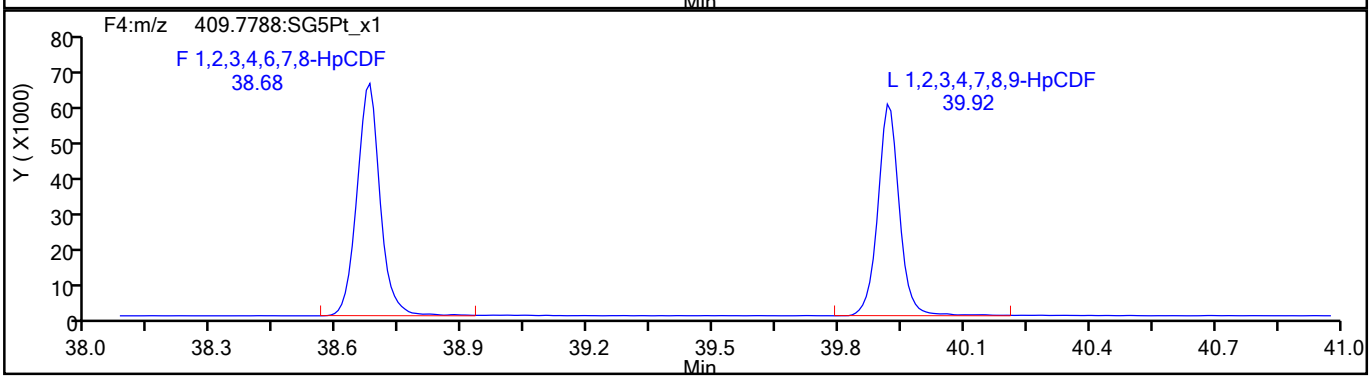

HpCDF Standards

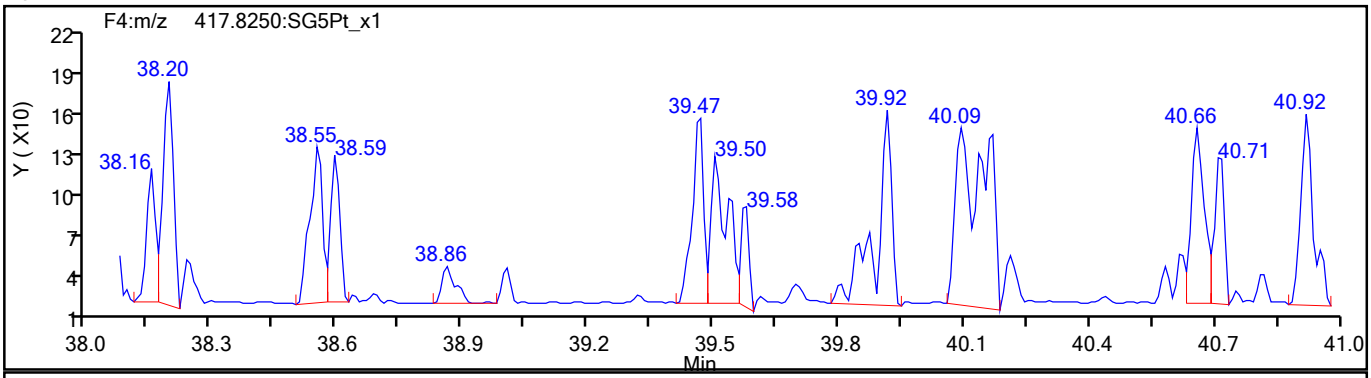

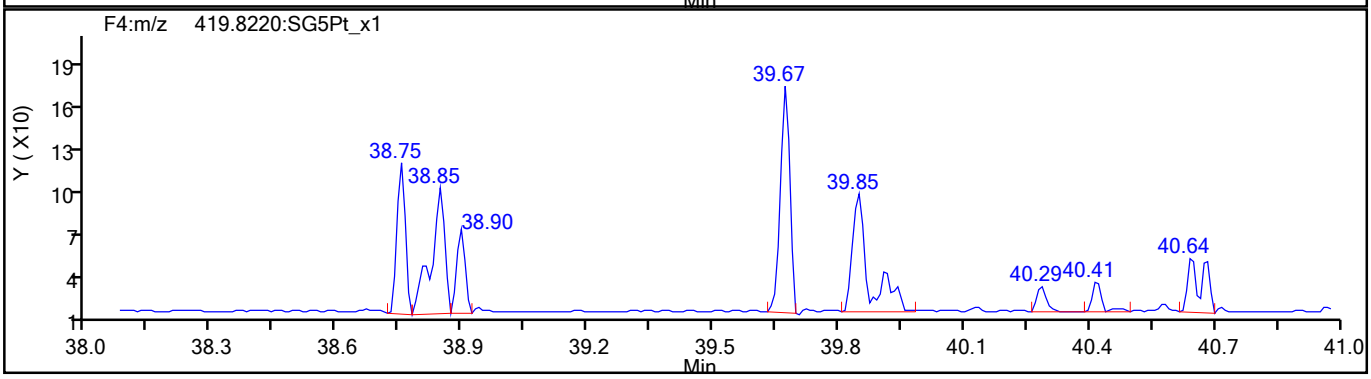

783483

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

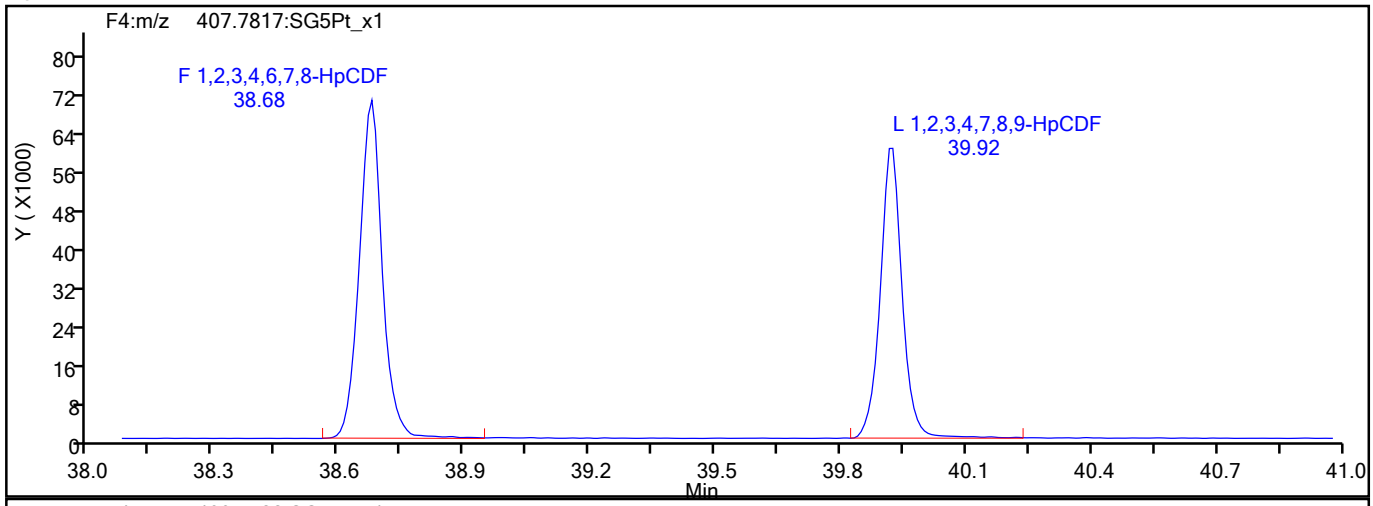

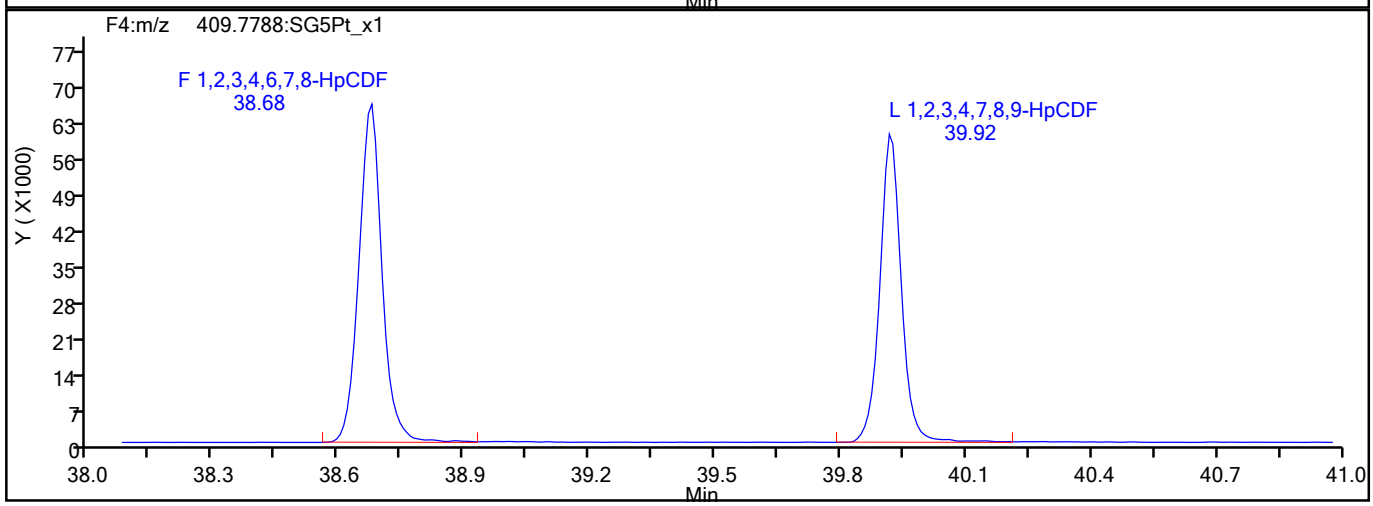

HpCDF Interference Mass

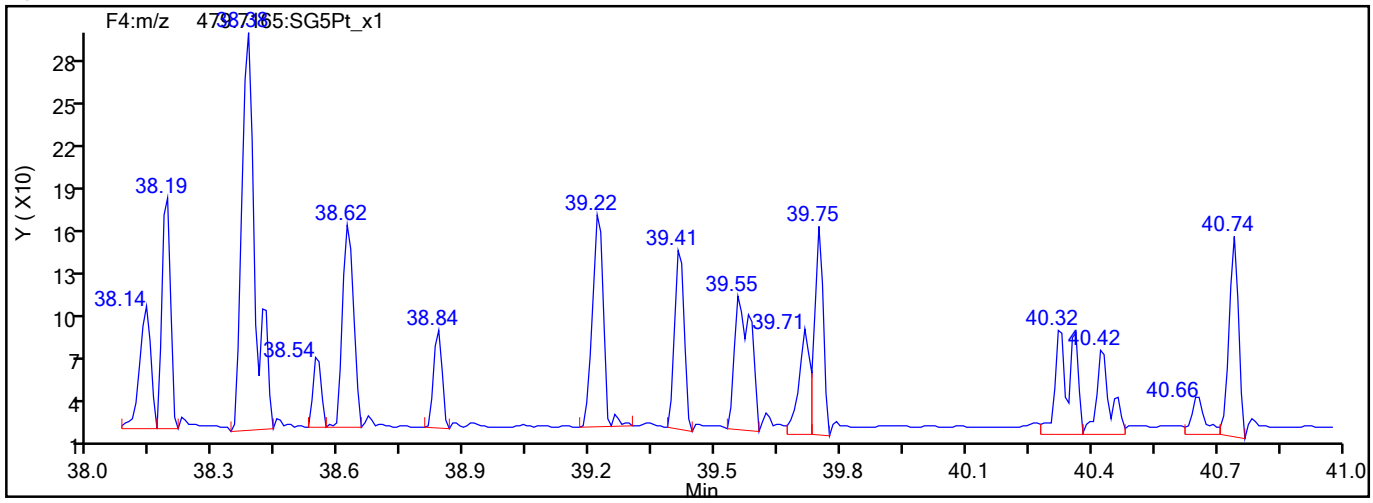

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Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

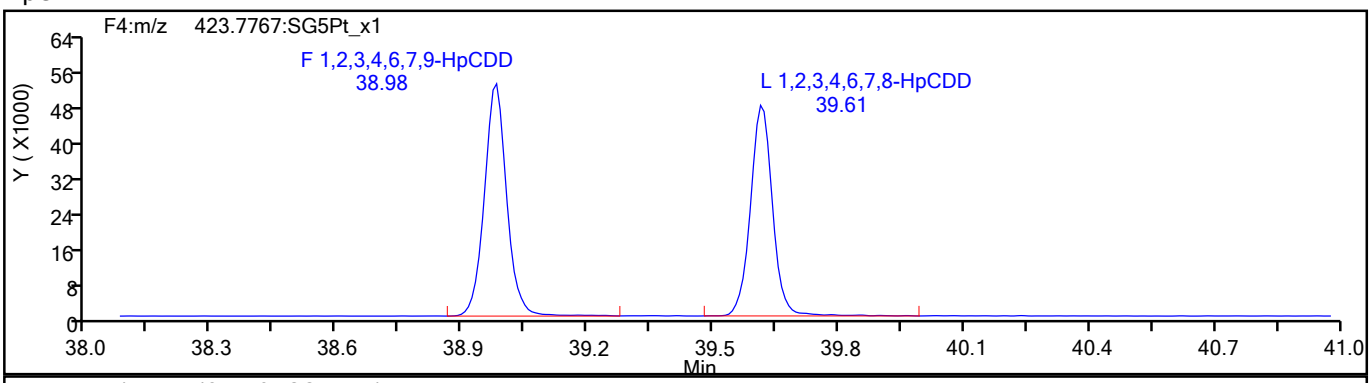

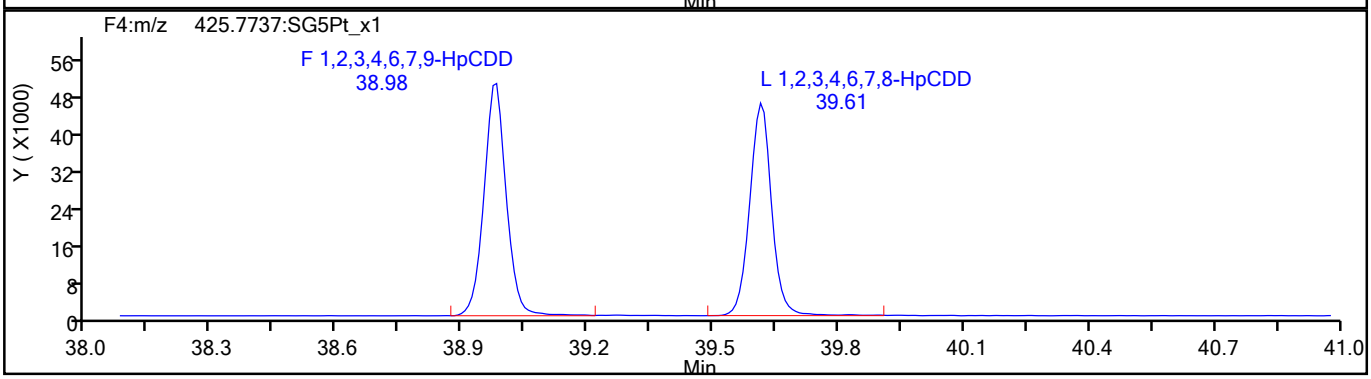

HpCDD Standards

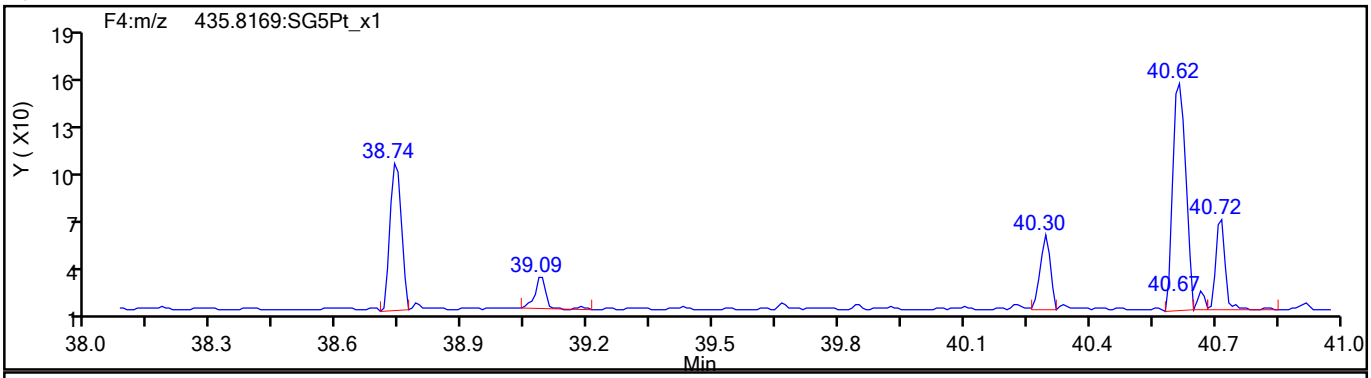

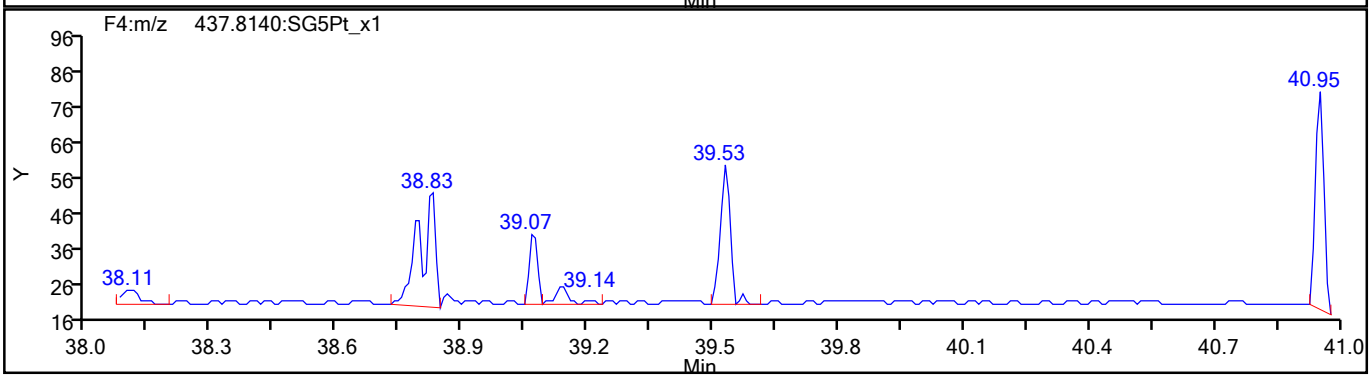

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Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

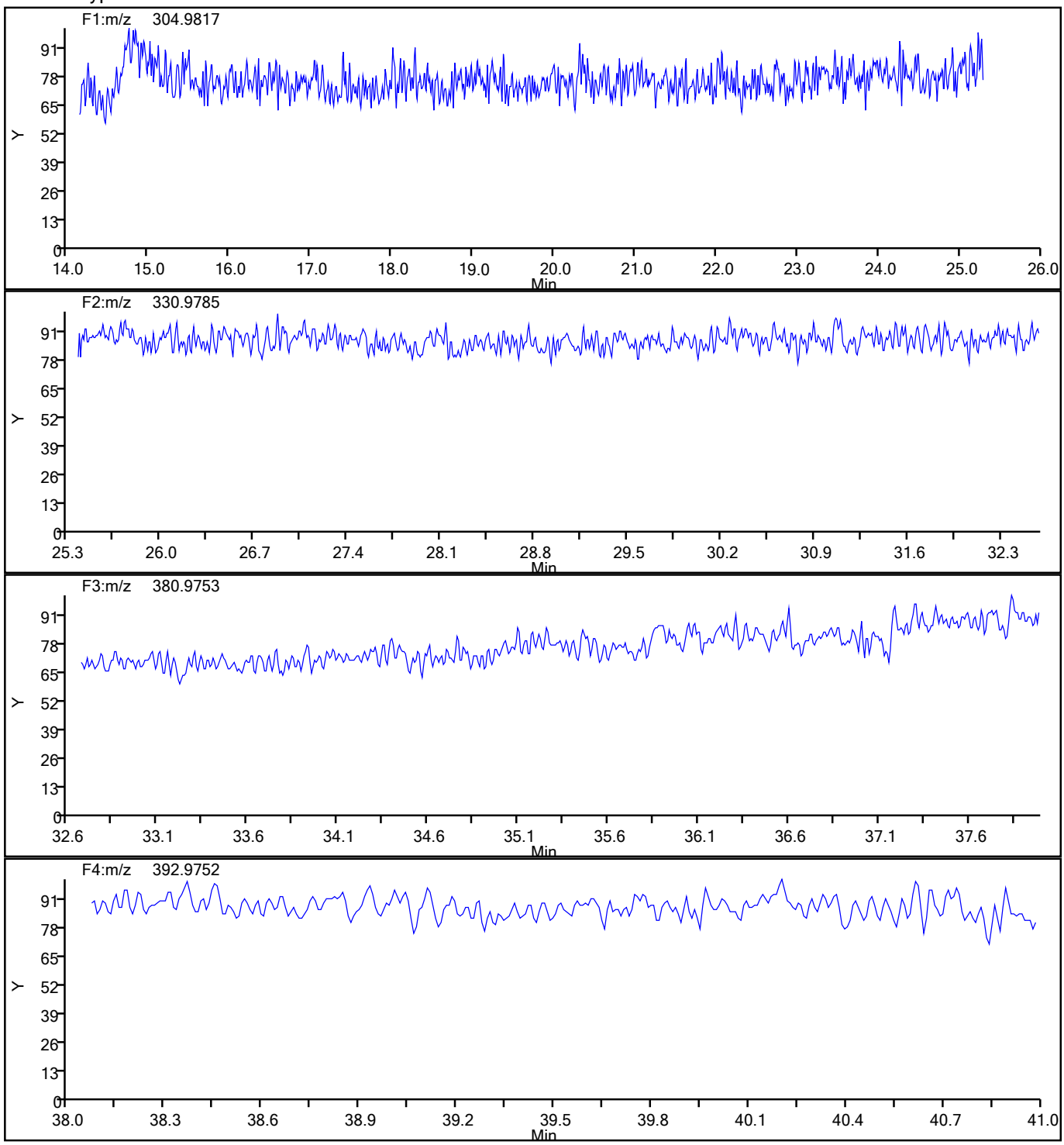

783486

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

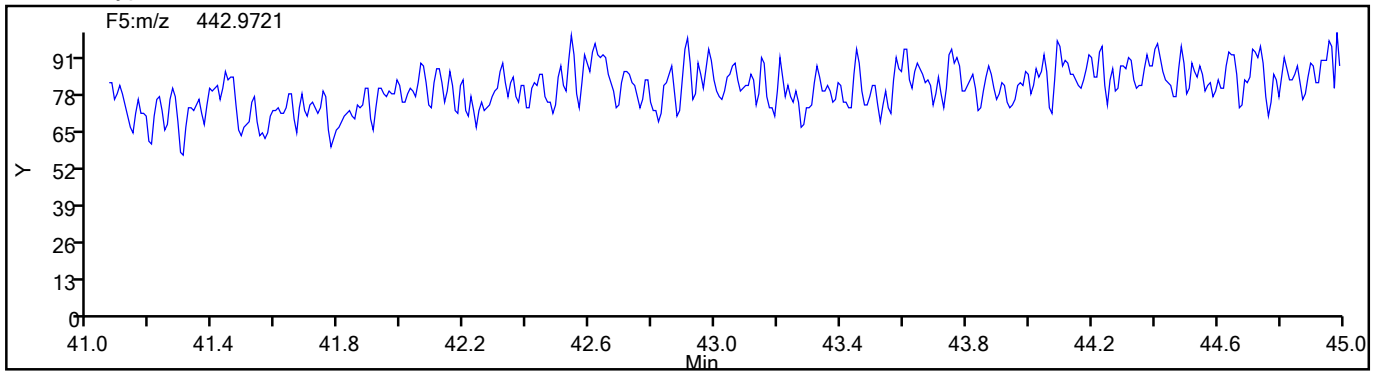

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Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 02:55:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
2,3,7,8-TCDF	20.482	462457	0.73	1.0802	5438.2	5438.2	5.349	5.349		E
D 13C-2,3,7,8-TCDF	20.594	3149	0.93	1.3459					0.00	R
A Non-2,3,7,8-sub-TCDF	19.916	8786	0.77	1.0802	106.9	103.3	5.349	56.3		RQ
S Total TCDF					5545.1	5541.5	5.349	5.349		RQ
D 13C-2,3,7,8-TCDD	21.790	149359	0.71	0.9317					0.00	
2,3,7,8-TCDD	21.825	163506	0.79	1.0753	40.7	40.7	0.1407	0.1407		
A Non-2,3,7,8-sub-TCDD	20.750	1228	0.77	1.0753	0.3611	0.3058	0.1407	0.3058		RQ
S Total TCDD					41.1	41.0	0.1407	0.1407		RQ
A F1 PeCDFs	24.676						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	28.167	5463	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.556						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.074	4187	1.24	0.0000						RQ
S Total HxCDF										RQ
A Non-2,3,7,8-sub-HxCDD	35.432	3077	1.30	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.654	220428	1.04	1.4421						
1,2,3,4,7,8,9-HpCDF	39.900	199844	1.02	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.277						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.597	164185	1.04	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.277						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.183	265721	0.71							
1,3,6,8-TCDD	17.790	166185	0.82							
2,3,4,7-TCDF	20.482	462457	0.73							
1,2,3,7-TCDD	21.618	143186	0.76							
1,2,3,9-TCDF	22.006	191607	0.71							
1,2,3,9-TCDD	22.109	166850	0.79							
1,2,8,9-TCDF	23.649	195972	0.71							
1,2,8,9-TCDD	23.710	66144								

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,3,4,6,8-PeCDF	24.071	212213	1.60							
1,2,3,8,9-PeCDD	26.115	147669	1.57							
1,2,4,7,9-PeCDD	30.719	143633	1.60							
1,2,3,8,9-PeCDF	30.913	189150	1.56							
1,2,3,4,6,8-HxCDF	33.205	217265	1.24							
1,2,4,6,7,9-HxCDD	34.274	164975	1.28							
1,2,3,4,6,7-HxCDD	36.589	164395	1.26							
1,2,3,4,8,9-HxCDF	36.943	212653	1.19							
1,2,3,4,6,7,9-HpCDD	38.957	158509	1.07							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 02:55:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDF											E
303.9016	20.482	20.537	-3	0.995	195033	25531	21	52	1216		
305.8987	20.482	20.537	-3	0.995	267424	35779	36	90	994	0.73(0.65-0.89)	
13C-2,3,7,8-TCDF											R
315.9419	20.594	20.594	0	1.000	1515	523	14	35	37		
317.9389	20.637	20.594	3	1.000	1634	460	27	67	17	0.93(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.796	19.916	-67	0.913	595	146	21	52	7		
305.8987	18.762	19.916	-69	0.911	1078	203	36	90	6	0.55(0.65-0.89)	
	Empc Correction				772	189	36	90	5		
303.9016	19.751	19.916	-10	0.959	1160	216	21	52	10		
305.8987	19.759	19.916	-9	0.959	1472	267	36	90	7	0.79(0.65-0.89)	
303.9016	24.054	19.916	248	1.168	2062	334	21	52	16		
305.8987	24.046	19.916	247	1.168	2725	398	36	90	11	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.790	21.790	0	1.000	61924	8377	4	10	2094		
333.9338	21.799	21.790	1	1.000	87435	11448	1	2	11448	0.71(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.825	21.905	-5	1.002	71995	9349	16	40	584		
321.8936	21.816	21.905	-5	1.001	91511	11645	14	35	832	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.479	20.750	104	1.032	756	146	16	40	9		
	Empc Correction				534	91	16	40	6		
321.8936	22.531	20.750	107	1.034	694	119	14	35	9	1.09(0.65-0.89)	
A F1 PeCDFs											
339.8597	24.676						11	27			
341.8567	24.676						4	10			

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.804	28.167	-142	1.000	425	67	13	32	5		
341.8567	25.762	28.167	-144	1.000	549	125	16	40	8	0.77(1.32-1.78)	
339.8597	26.746	28.167	-85	1.000	828	117	13	32	9		
341.8567	26.780	28.167	-83	1.000	363	73	16	40	5	2.28(1.32-1.78)	
339.8597	27.344	28.167	-49	1.000	1006	172	13	32	13		
341.8567	27.335	28.167	-50	1.000	832	105	16	40	7	1.21(1.32-1.78)	
339.8597	27.916	28.167	-15	1.000	1397	213	13	32	16		
341.8567	27.916	28.167	-15	1.000	787	138	16	40	9	1.78(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						14	35			
357.8516	28.556						10	25			
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	34.948	35.074	-8	1.000	835	149	35	87	4		
375.8178	34.973	35.074	-6	1.000	588	101	26	65	4	1.42(1.05-1.43)	
373.8208	35.124	35.074	3	1.000	2003	379	35	87	11		
375.8178	35.141	35.074	4	1.000	1234	298	26	65	11	1.62(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.385	35.432	-3	1.000	1738	276	23	57	12		
391.8127	35.369	35.432	-4	1.000	1339	253	18	45	14	1.30(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.654	38.654	0	1.000	112153	29783	44	110	677		
409.7788	38.654	38.654	0	1.000	108275	28966	35	87	828	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.900	39.900	0	1.000	100772	28275	44	110	643		
409.7788	39.900	39.900	0	1.000	99072	28616	35	87	818	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.277						44	110			
409.7788	39.277						35	87			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.597	39.597	0	1.000	83839	23245	30	75	775		
425.7737	39.588	39.597	-1	1.000	80346	22297	23	57	969	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.277						30	75			
425.7737	39.277						23	57			
1,3,6,8-TCDF											
303.9016	16.183	16.183	0		110656	20732	21	52	987		
305.8987	16.174	16.183	-1		155065	29700	36	90	825	0.71(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.790	17.790	0		74627	12096	16	40	756		
321.8936	17.782	17.790	-1		91558	15098	14	35	1078	0.82(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.482	20.482	0		195033	25531	21	52	1216		
305.8987	20.482	20.482	0		267424	35779	36	90	994	0.73(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7-TCDD											
319.8965	21.618	21.618	0		62041	8581	16	40	536		
321.8936	21.618	21.618	0		81145	11265	14	35	805	0.76(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.006	22.006	0		79525	10003	21	52	476		
305.8987	22.014	22.006	1		112082	15132	36	90	420	0.71(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.109	22.109	0		73542	9615	16	40	601		
321.8936	22.100	22.109	-1		93308	12054	14	35	861	0.79(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.649	23.649	0		81335	13400	21	52	638		
305.8987	23.658	23.649	1		114637	19189	36	90	533	0.71(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.710	23.710	0		66144	11936	16	40	746		
1,3,4,6,8-PeCDF											
339.8597	24.071	24.071	0		130490	23932	11	27	2176		
341.8567	24.063	24.071	-1		81723	14772	4	10	3693	1.60(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.115	26.115	0		90126	14014	14	35	1001		
357.8516	26.115	26.115	0		57543	8886	10	25	889	1.57(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.719	30.719	0		88424	11438	14	35	817		
357.8516	30.727	30.719	1		55209	7437	10	25	744	1.60(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.913	30.913	0		115346	13800	13	32	1062		
341.8567	30.921	30.913	1		73804	8928	16	40	558	1.56(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.205	33.205	0		120224	17363	35	87	496		
375.8178	33.197	33.205	-1		97041	14228	26	65	547	1.24(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.274	34.274	0		92566	15957	23	57	694		
391.8127	34.266	34.274	-1		72409	12820	18	45	712	1.28(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.589	36.589	0		91728	21178	23	57	921		
391.8127	36.589	36.589	0		72667	16993	18	45	944	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.943	36.943	0		115360	26865	35	87	768		
375.8178	36.943	36.943	0		97293	22438	26	65	863	1.19(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.957	38.957	0		82068	22904	30	75	763		
425.7737	38.957	38.957	0		76441	21326	23	57	927	1.07(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	18-Aug-2021 02:55:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	16

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	3149	983

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	3149	983

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.796	595	146	1078	203	19.7	0.55	RQ
18.796	595	146	772	189	16.1		Empc Correction
19.751	1160	216	1472	267	31.0	0.79	
24.054	2062	334	2725	398	56.3	0.76	
Signal Totals:							
	3817	696	4969	854			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9092	1564				0.72	RQ
	8786	1550					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 106.917 = (9092 * 40.000) / (3149 * 1.080)
Empc Amount: 103.318 = (8786 * 40.000) / (3149 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 02:55:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517281 Lims Sample ID: 16

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	40.000	149359	19825

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		40.000	149359	19825

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.479	756	146	694	119	0.3611	1.09	RQ
22.479	534	91	694	119	0.3058		Empc Correction
Signal Totals:							
	534	91	694	119			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1450	265				1.09	RQ
	1228	210					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3611 = (1450 * 40.000) / (149359 * 1.075)
Empc Amount: 0.3058 = (1228 * 40.000) / (149359 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	18-Aug-2021 02:55:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	16

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.804	425	67	549	125		0.77	R
26.746	828	117	363	73		2.28	R
27.344	1006	172	832	105		1.21	R
27.916	1397	213	787	138		1.78	
Signal Totals:							
	3656	569	2531	441			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6187	1010				1.44	RQ
	5463	929					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (6187 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (5463 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 02:55:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517281 Lims Sample ID: 16

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
34.948	835	149	588	101		1.42	
35.124	2003	379	1234	298		1.62	R
Signal Totals:							
	2838	528	1822	399			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4660	927				1.56	RQ
	4187	917					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4660 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (4187 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	18-Aug-2021 02:55:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517281	Lims Sample ID:	16

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.385	1738	276	1339	253		1.30	
Signal Totals:							
	1738	276	1339	253			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3077	529				1.30	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (3077 * 0.0) / (0 * 0.000)

Report Date: 18-Aug-2021 14:54:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

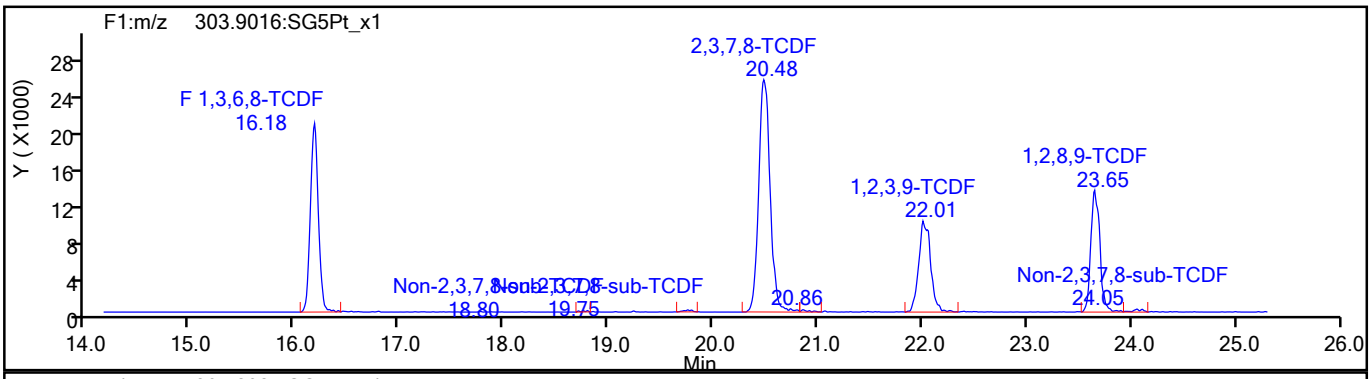

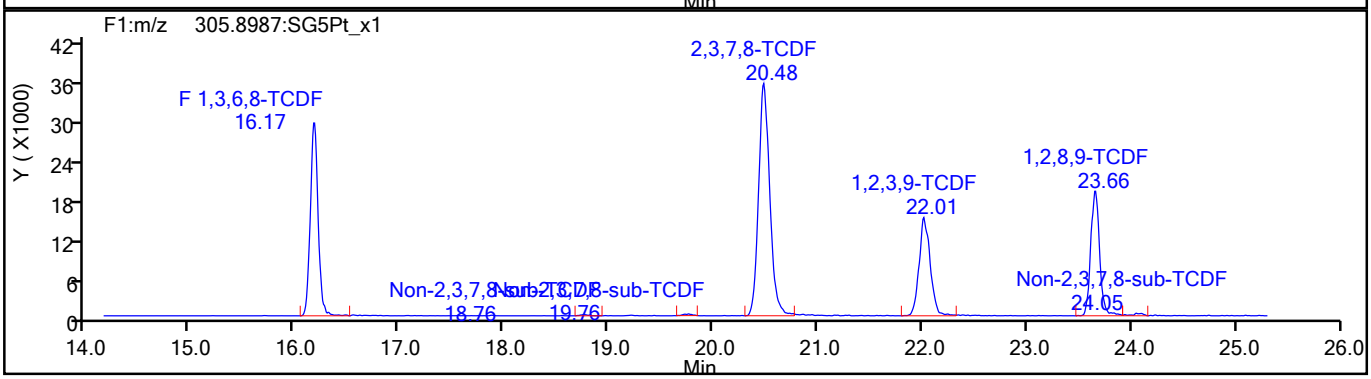

TCDF Standards

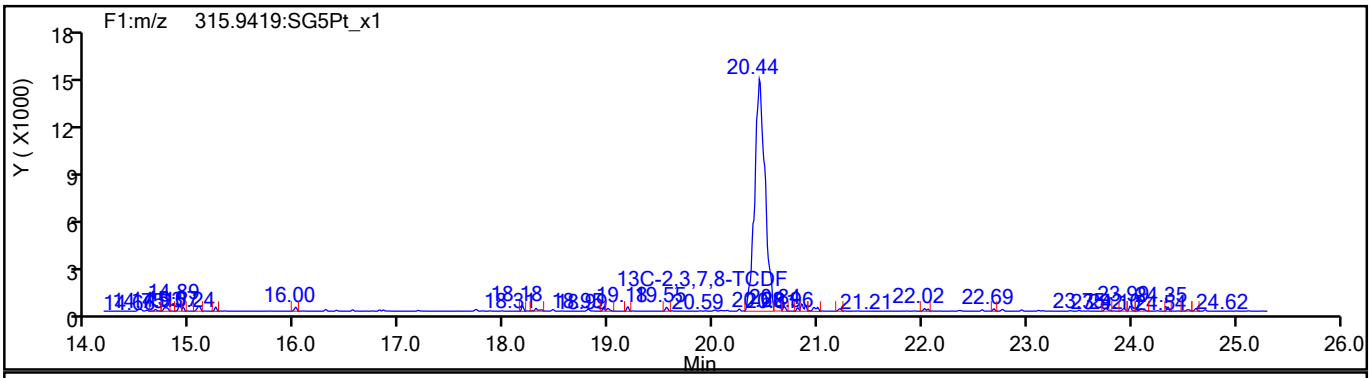

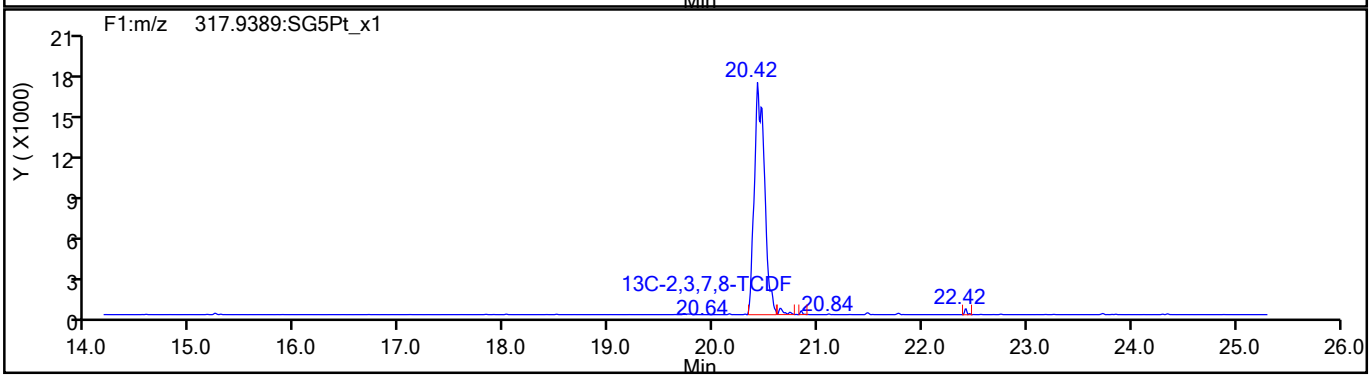

783499

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

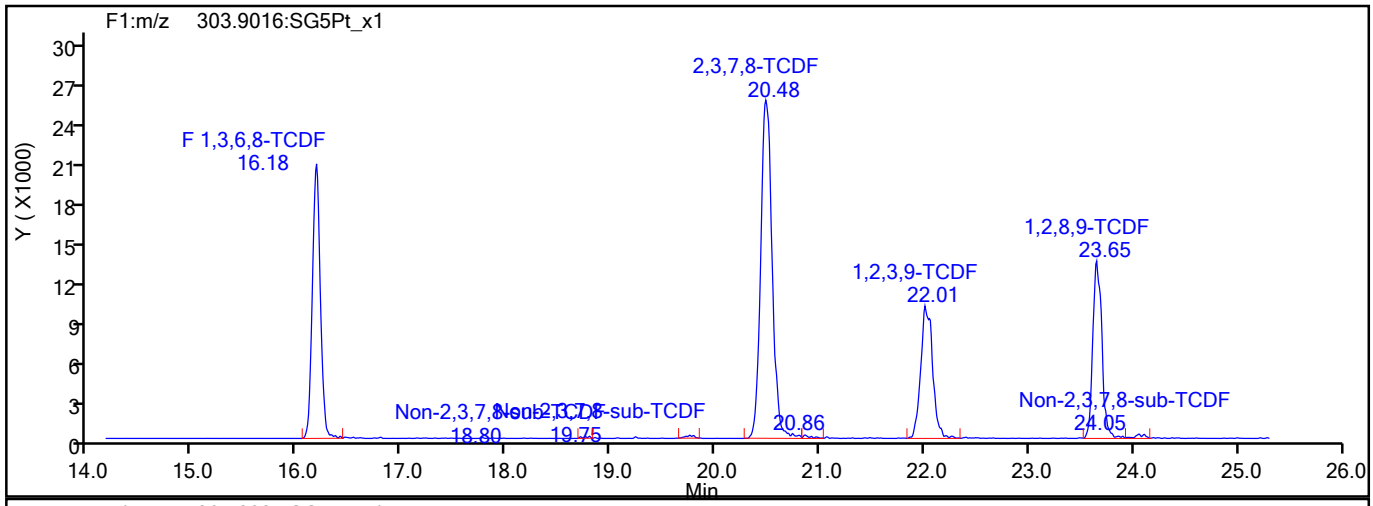

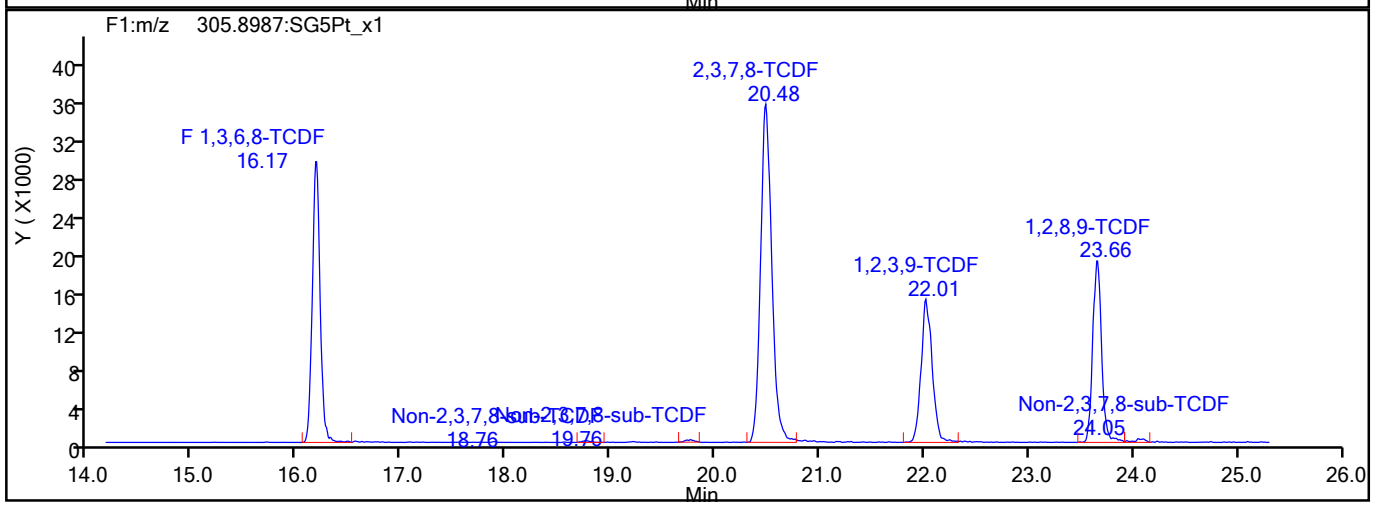

TCDF Interference Mass

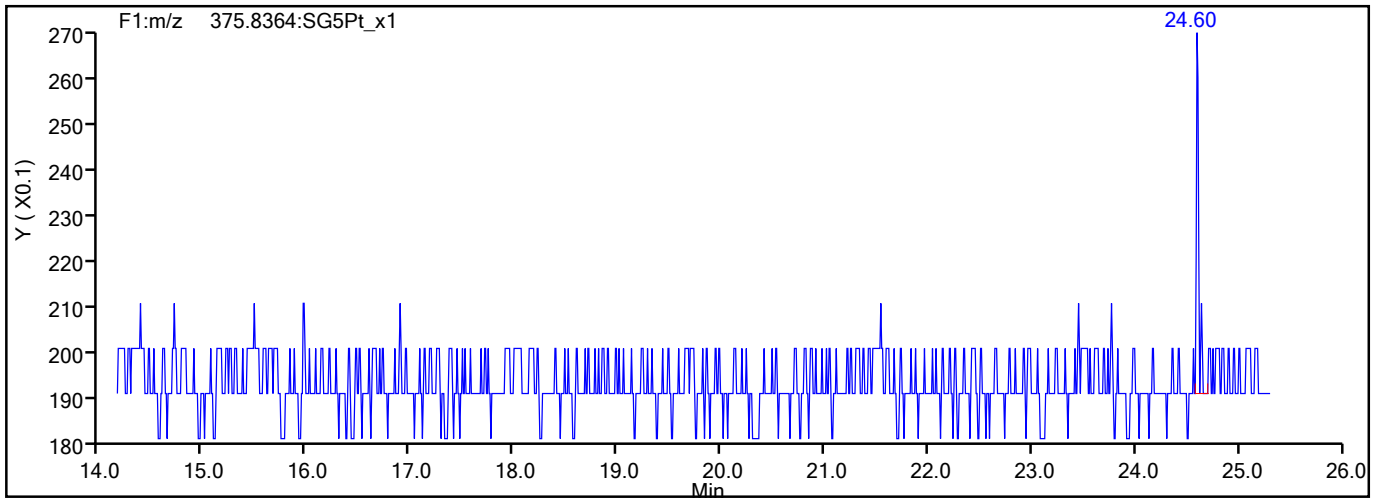

783500

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

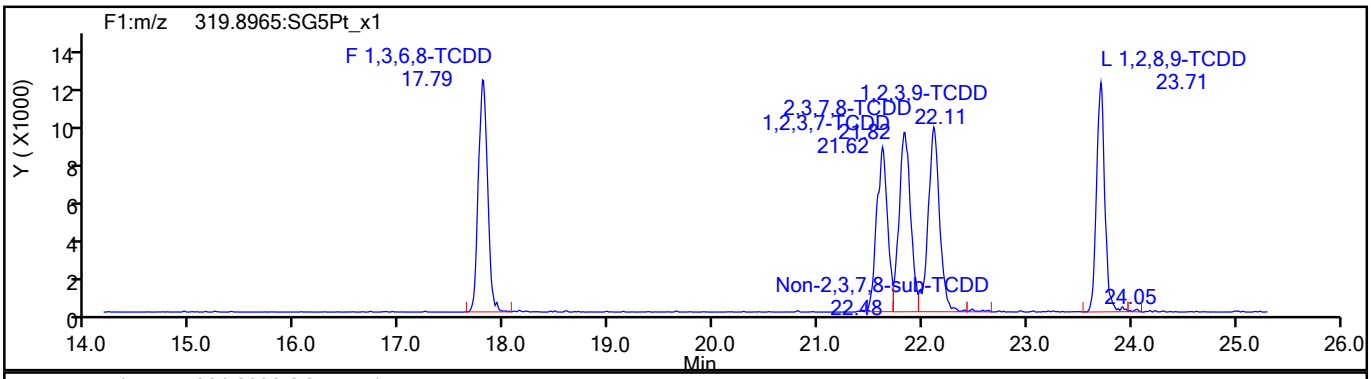

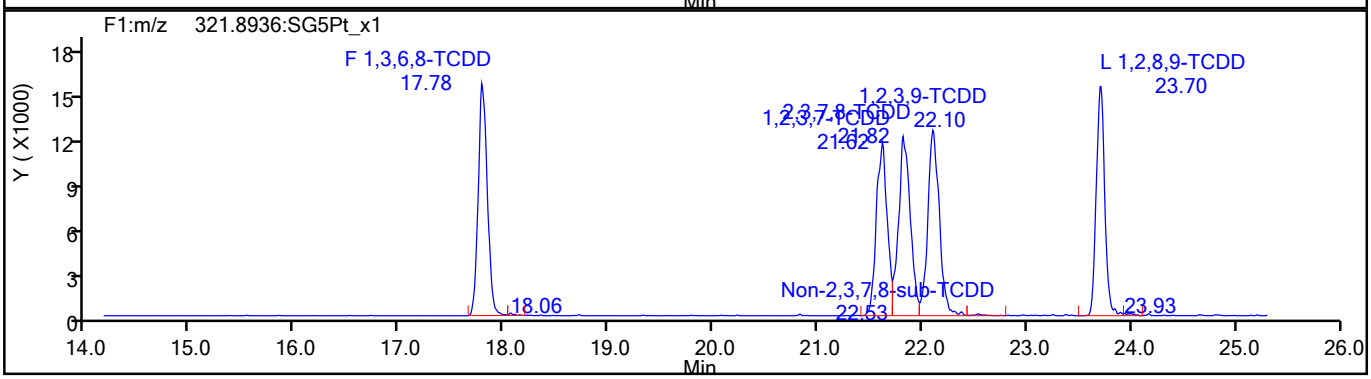

TCDD Standards

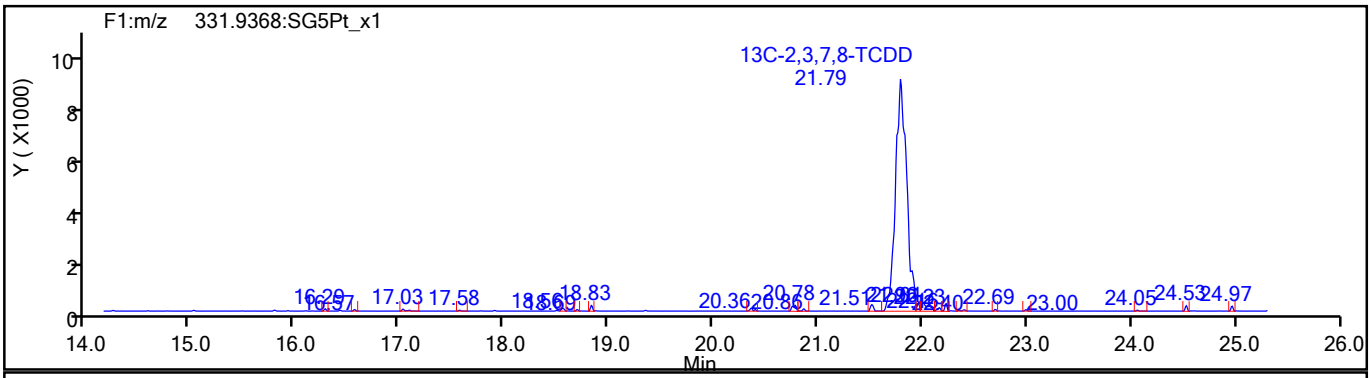

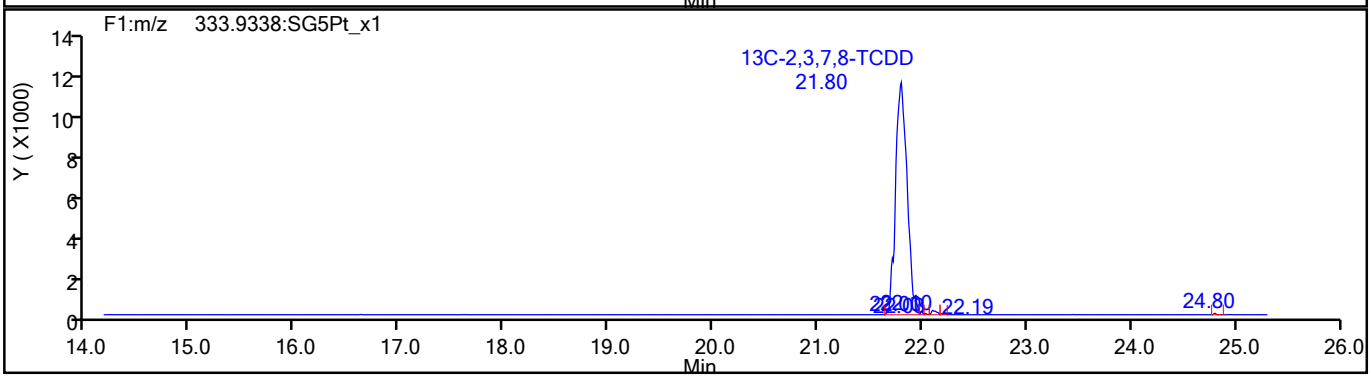

783501

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

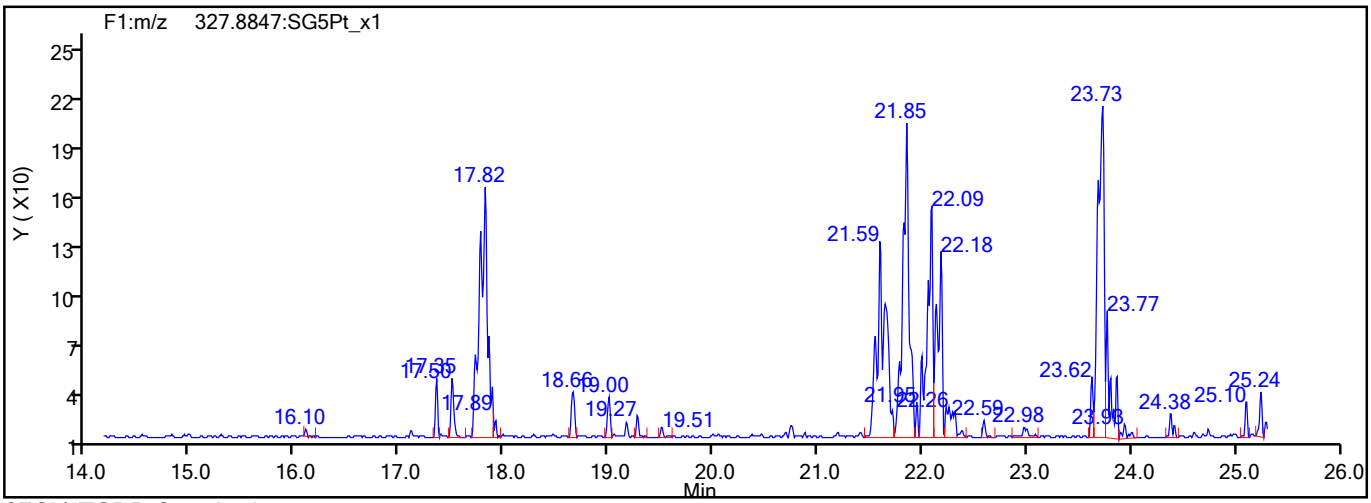

37Cl4-TCDD Standards

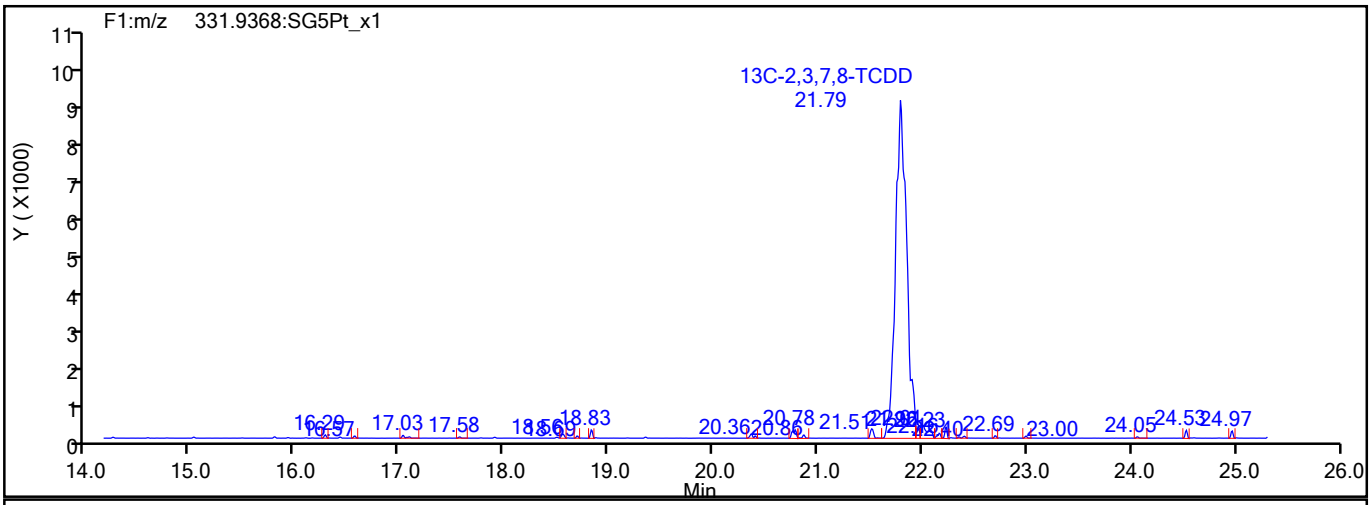

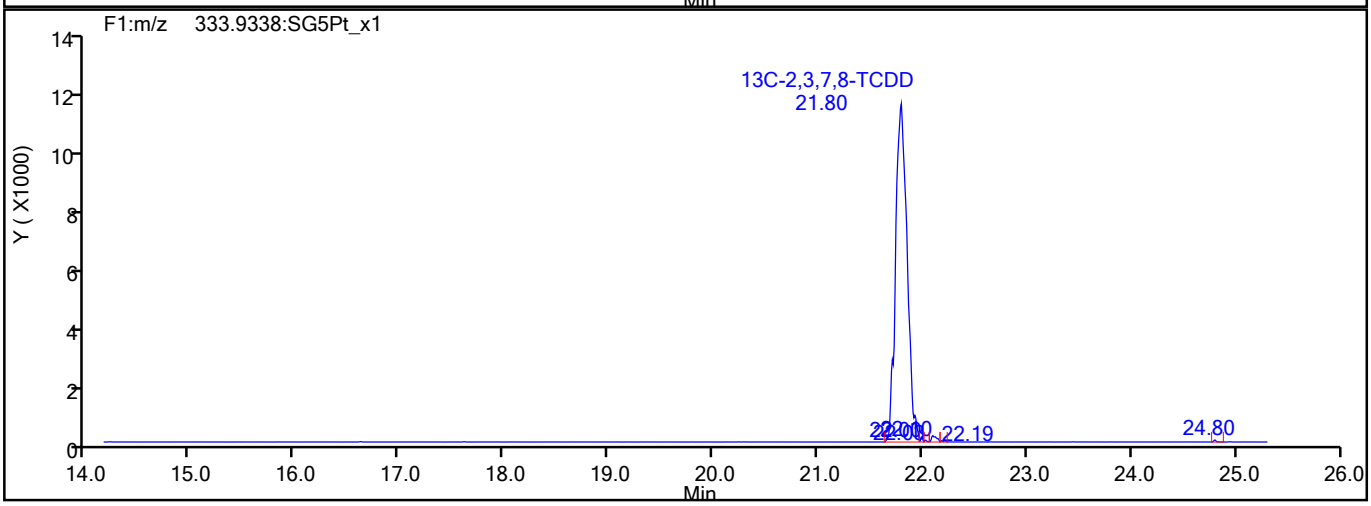

783502

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

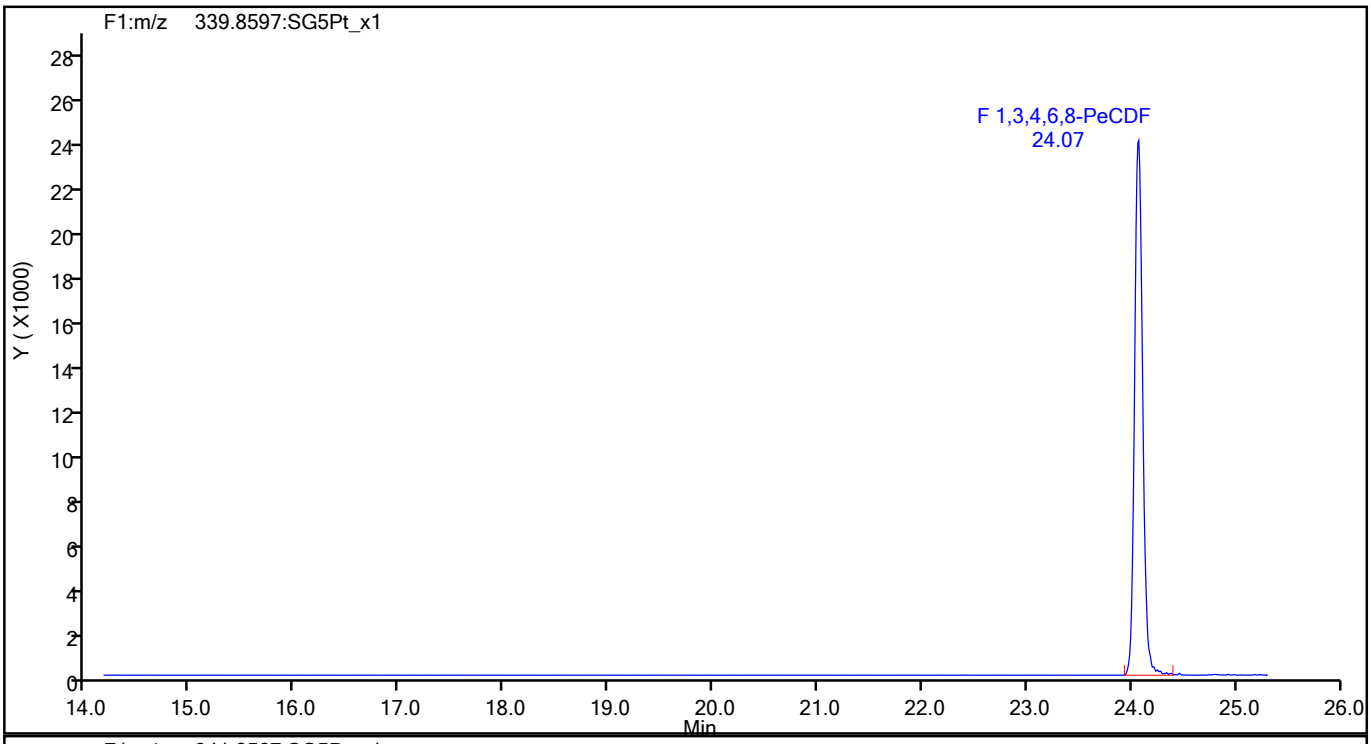

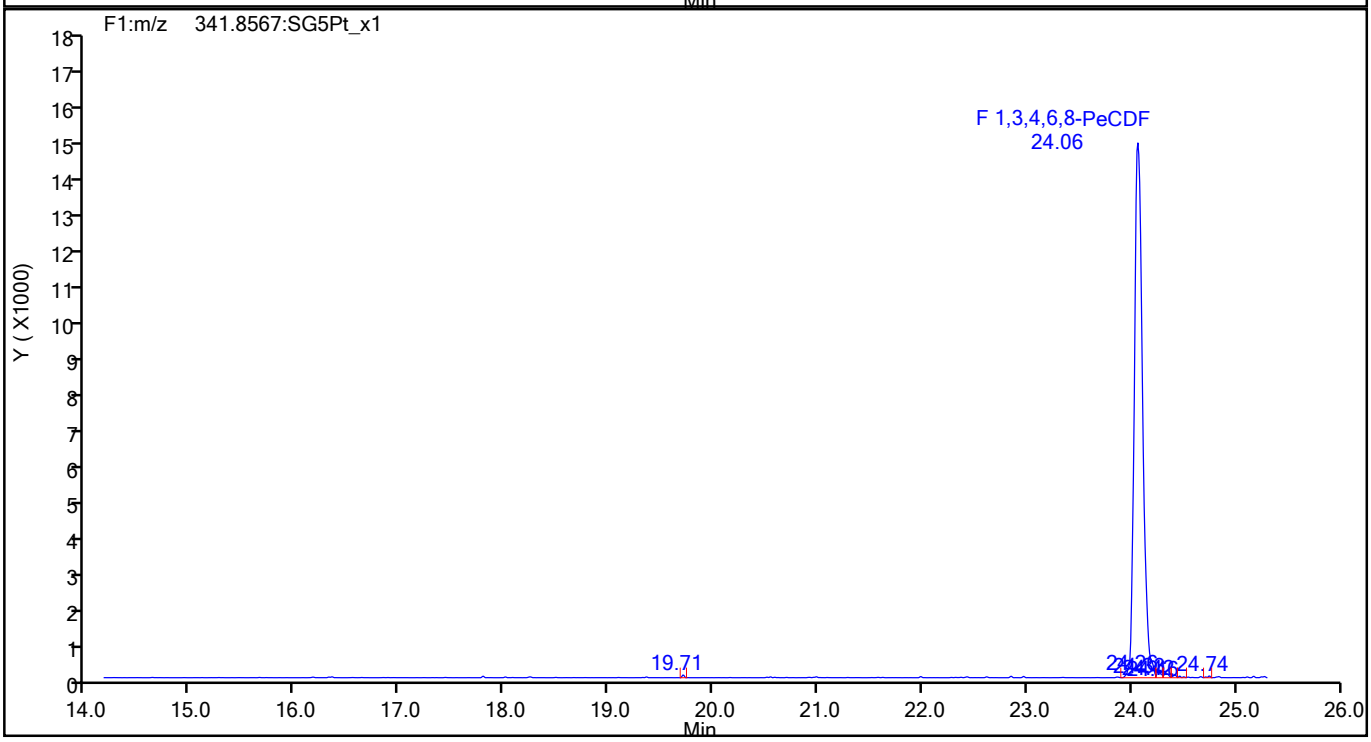

783503

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

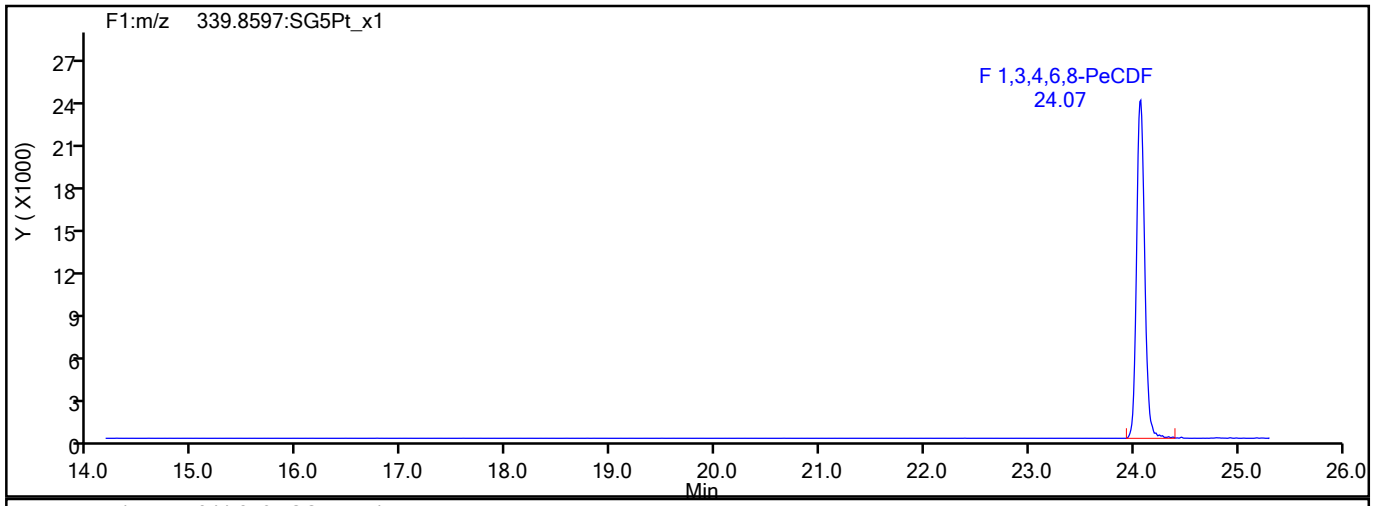

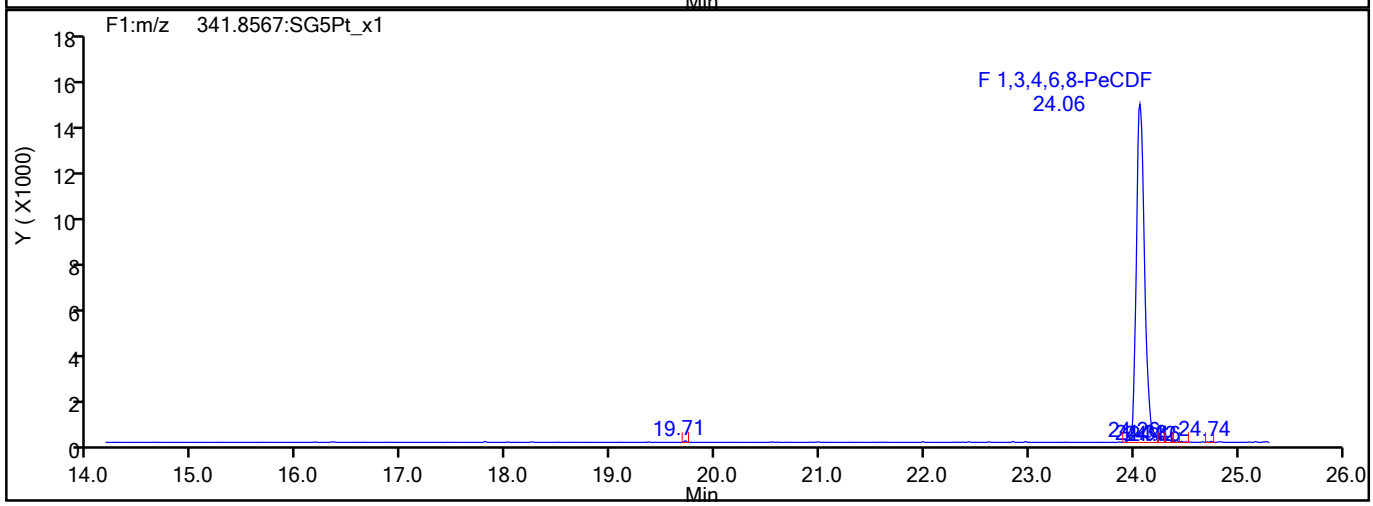

F1 PeCDFs Interference Mass

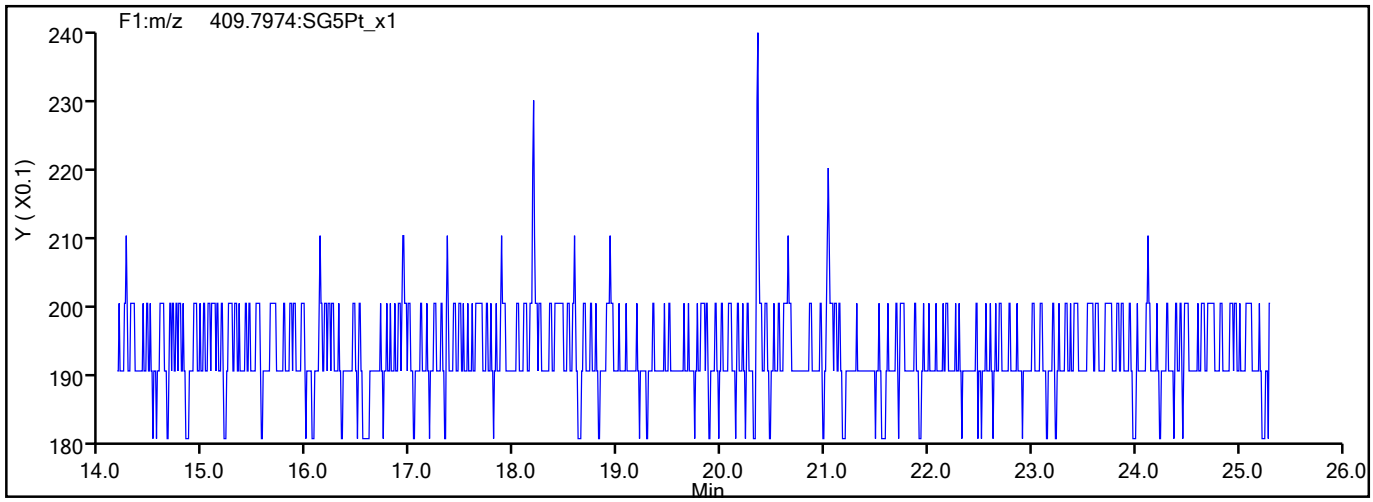

783504

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

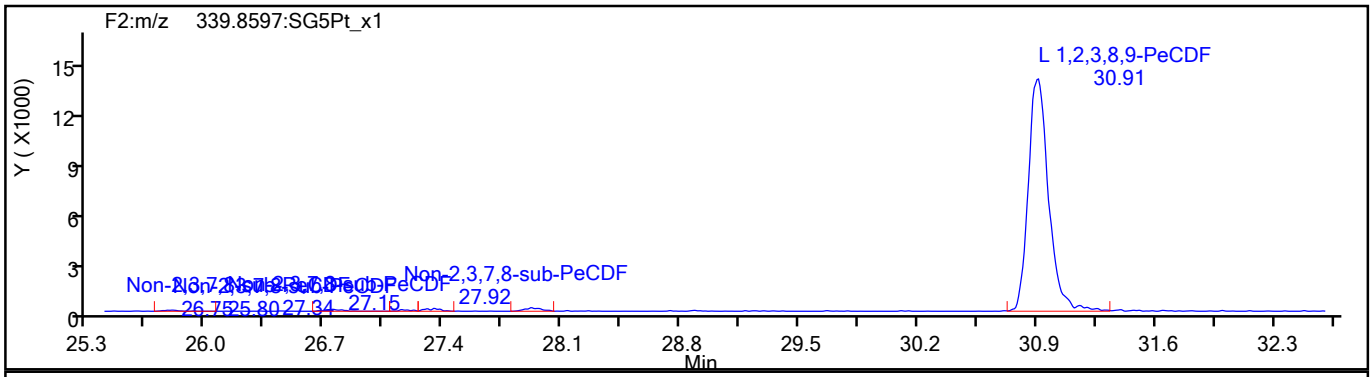

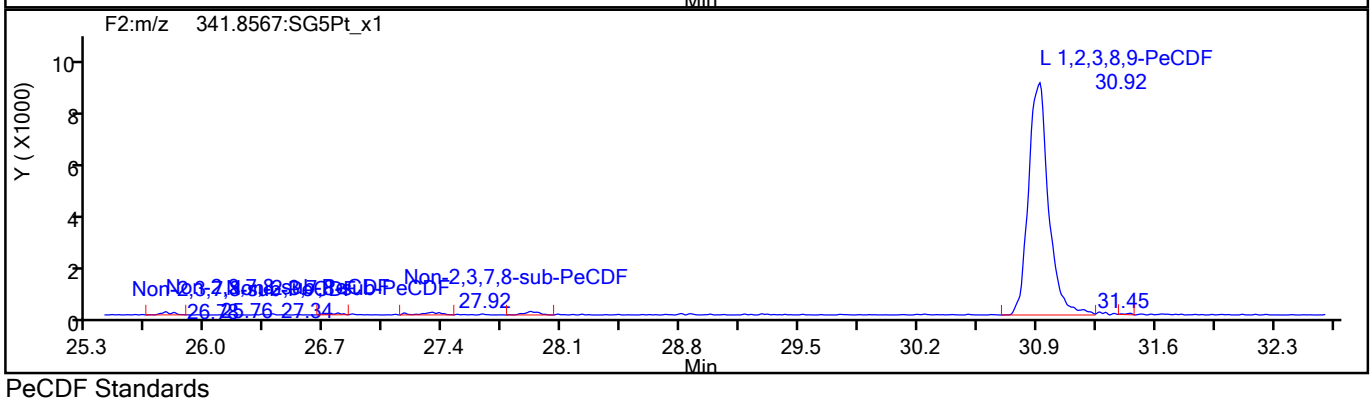

PeCDF Standards

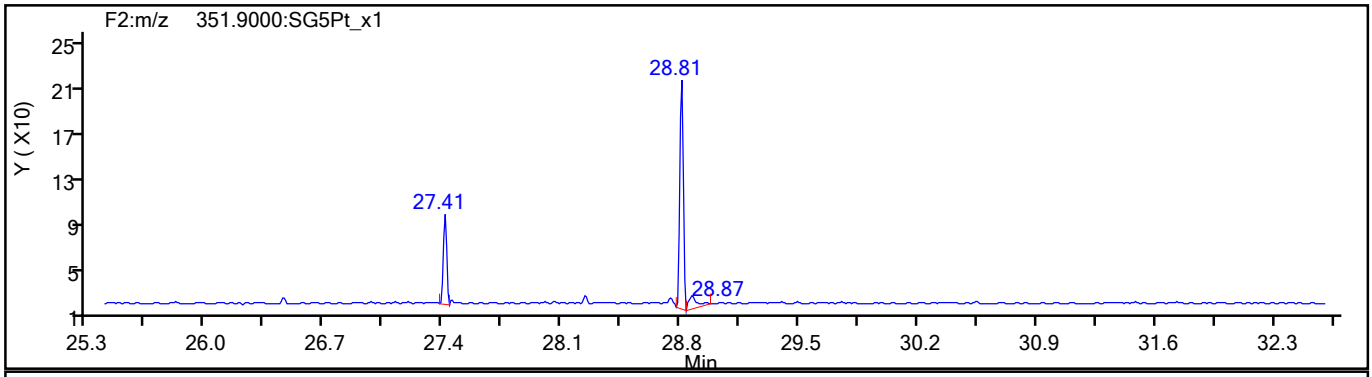

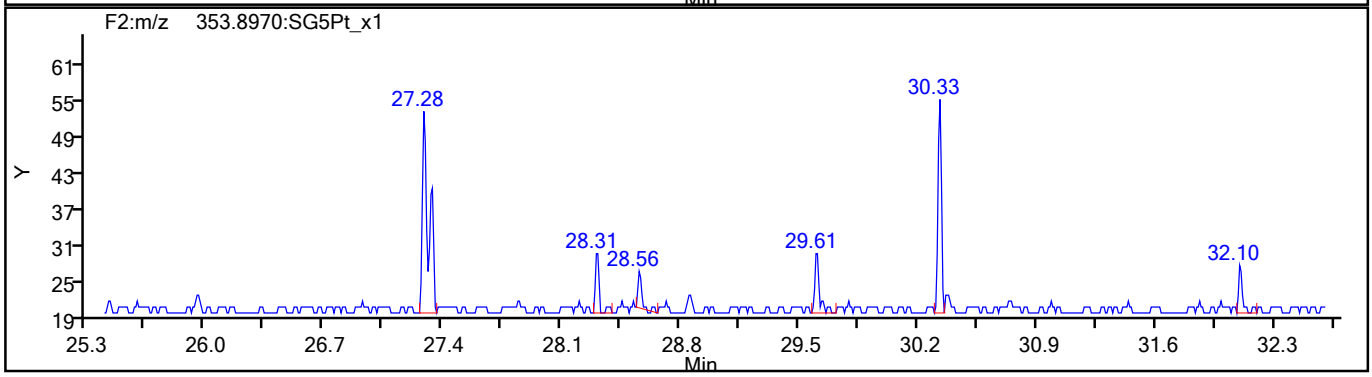

783505

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

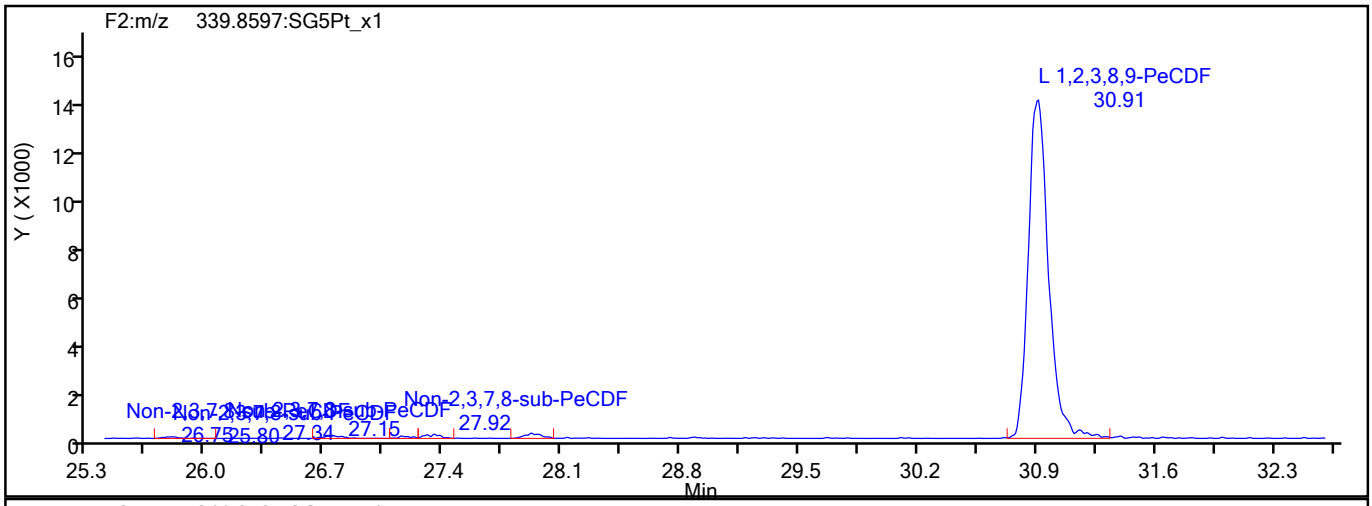

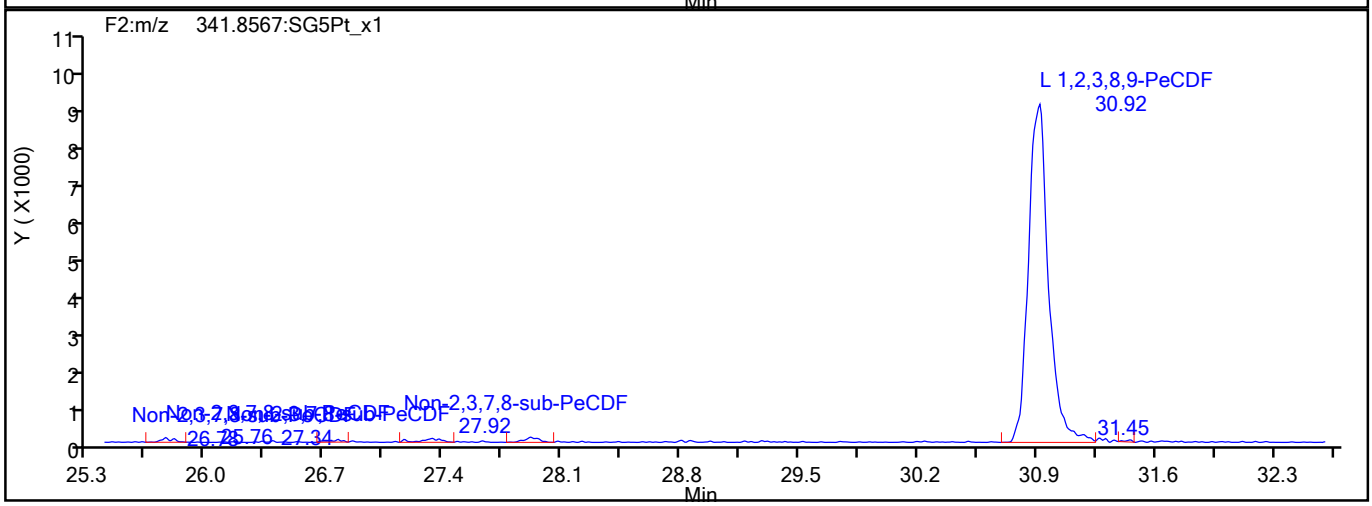

PeCDF Interference Mass

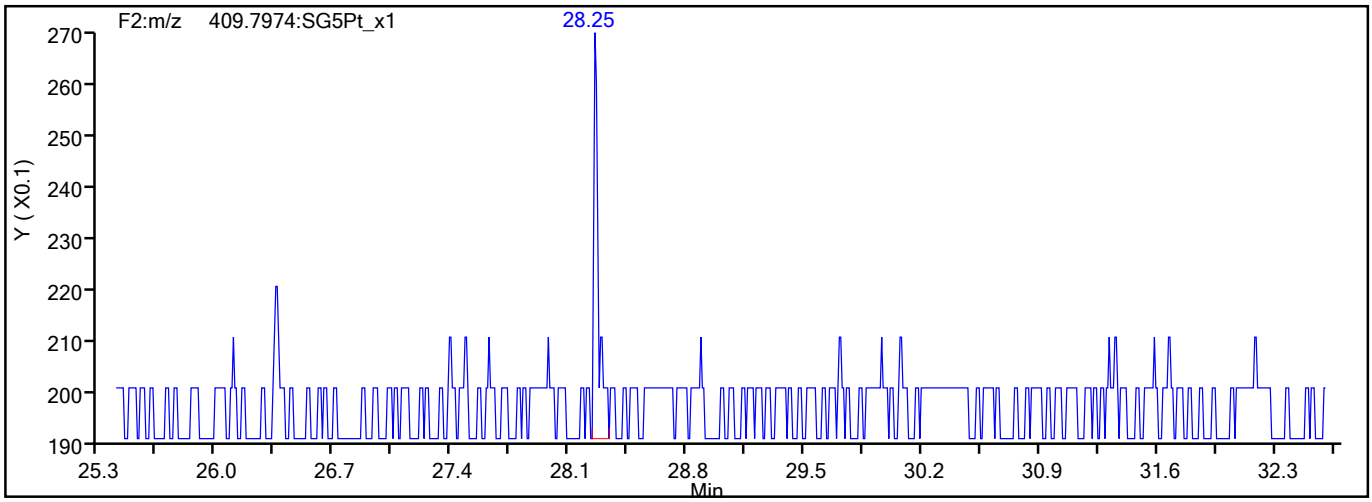

783506

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

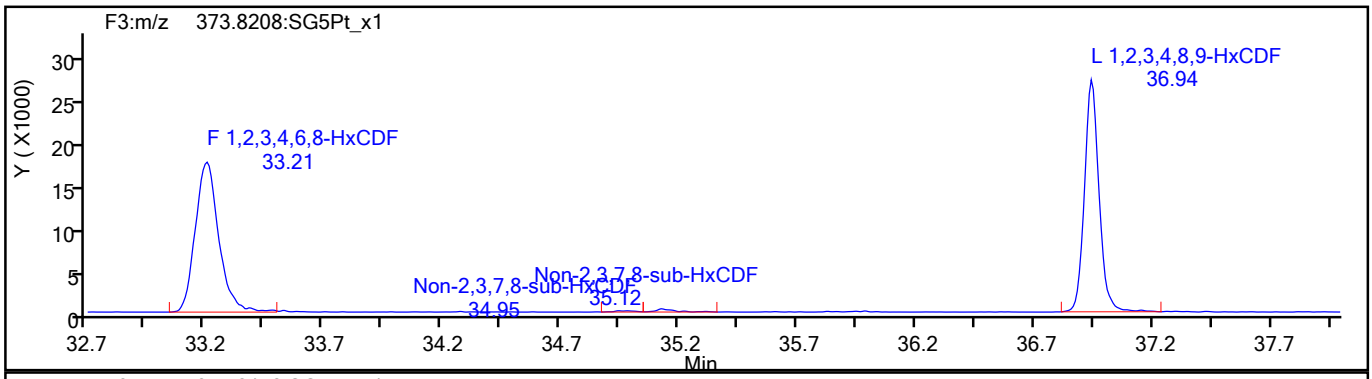

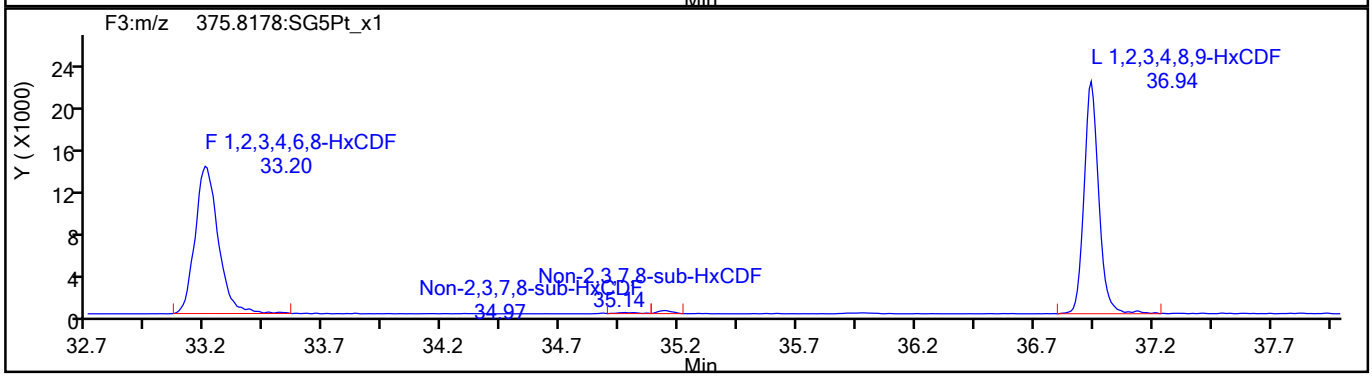

HxCDF Standards

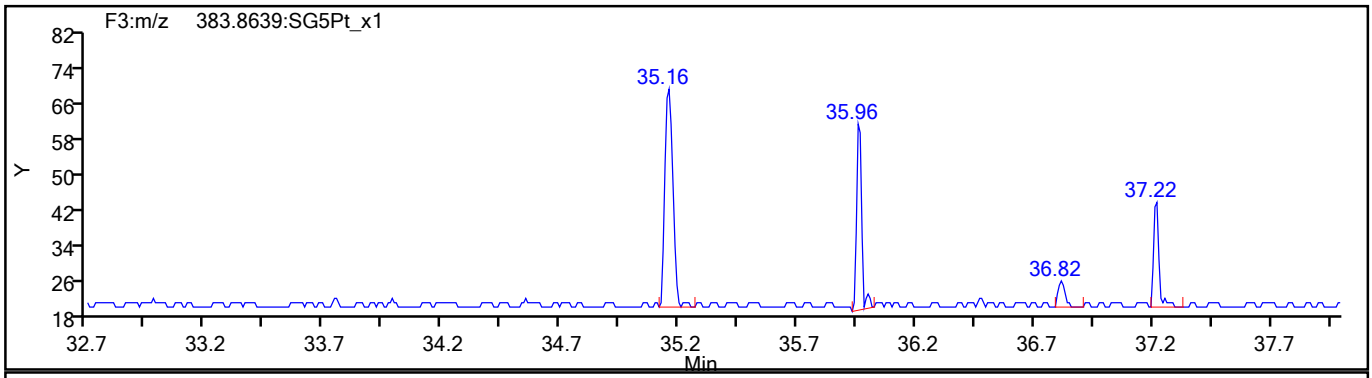

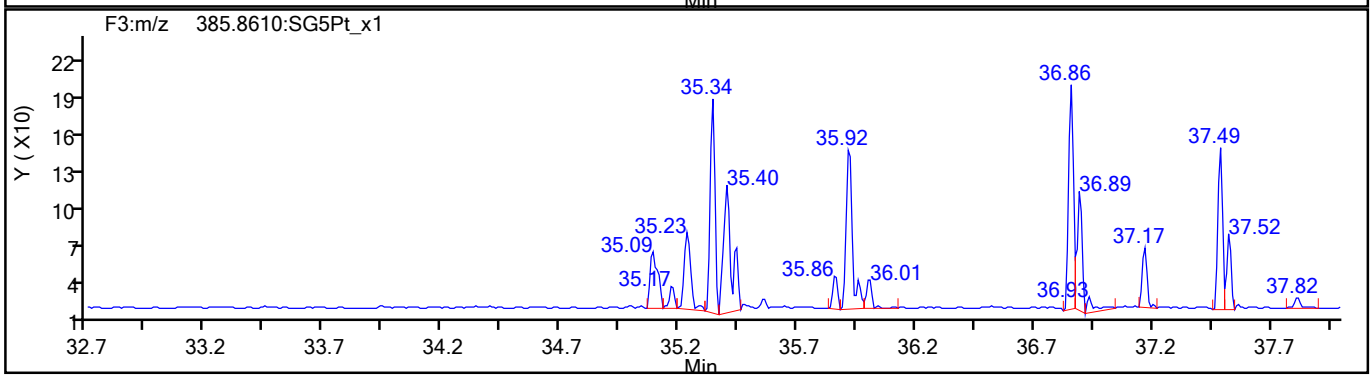

783507

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

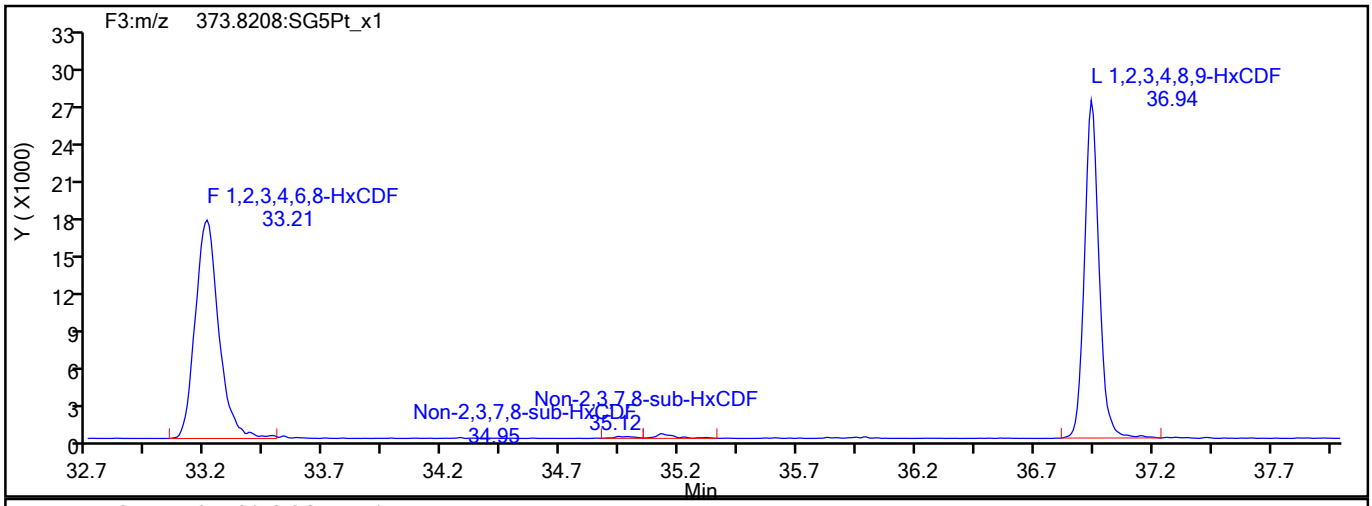

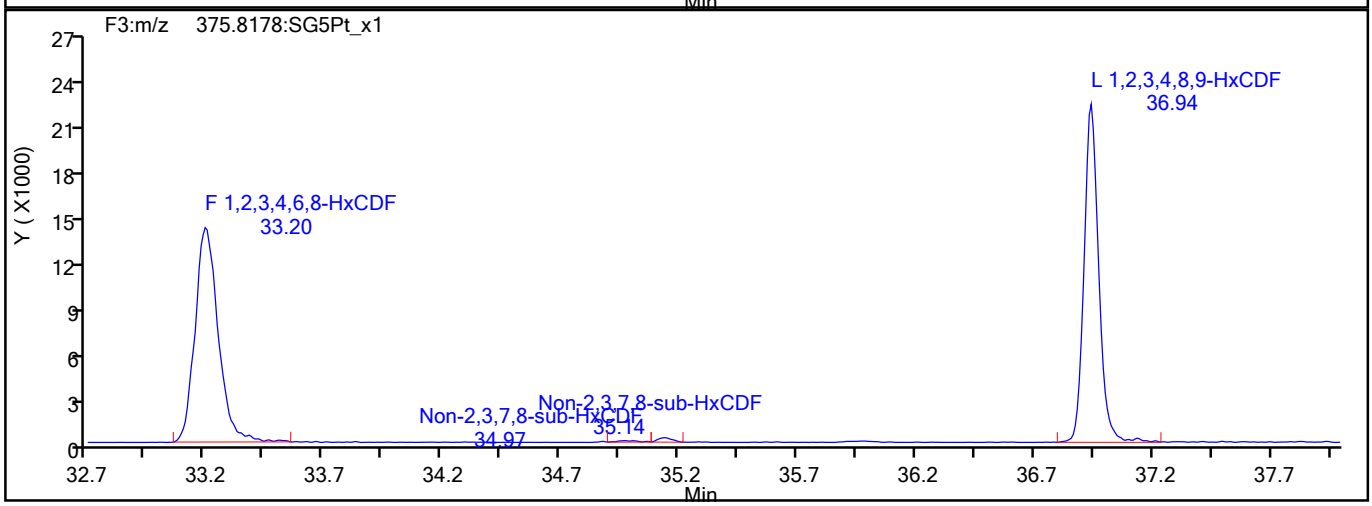

HxCDF Interference Mass

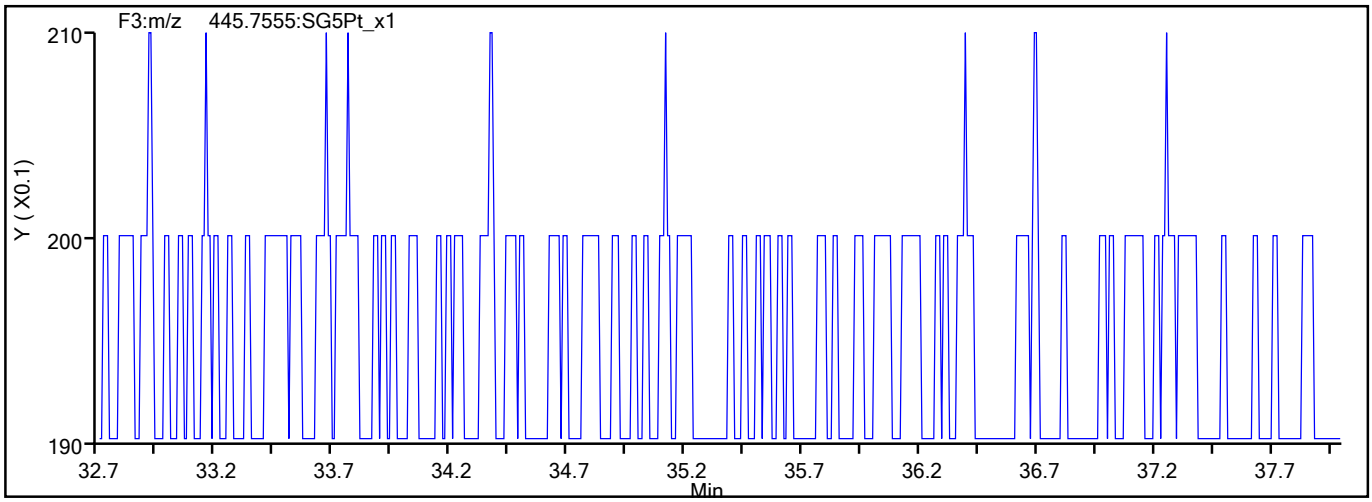

783508

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

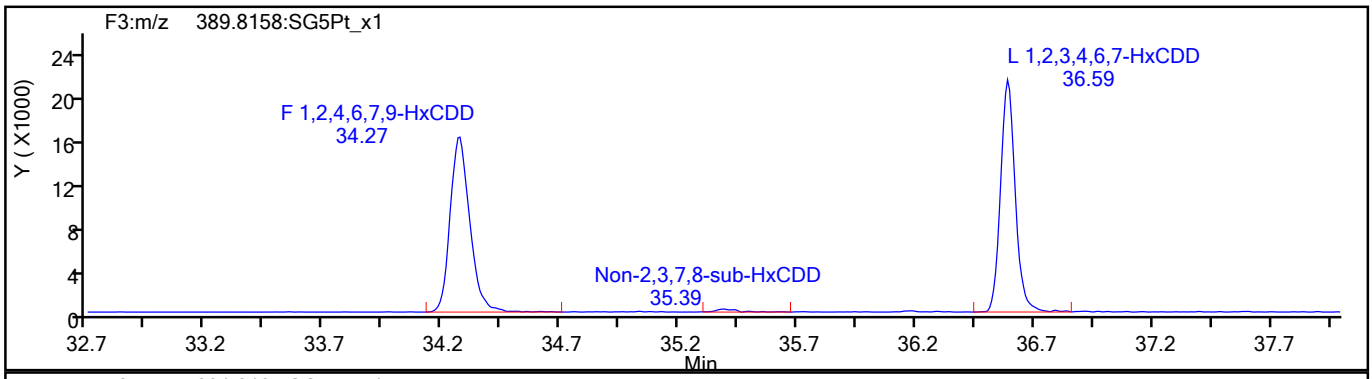

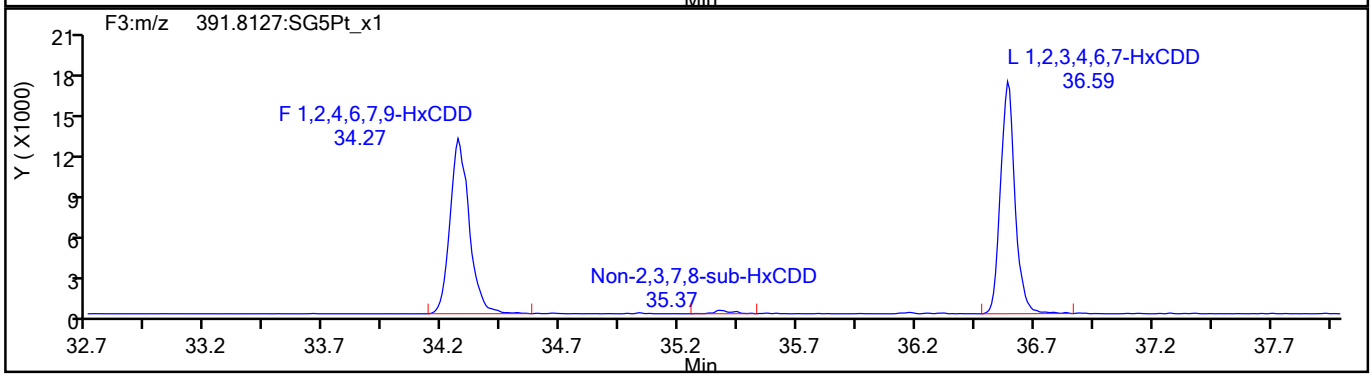

HxCDD Standards

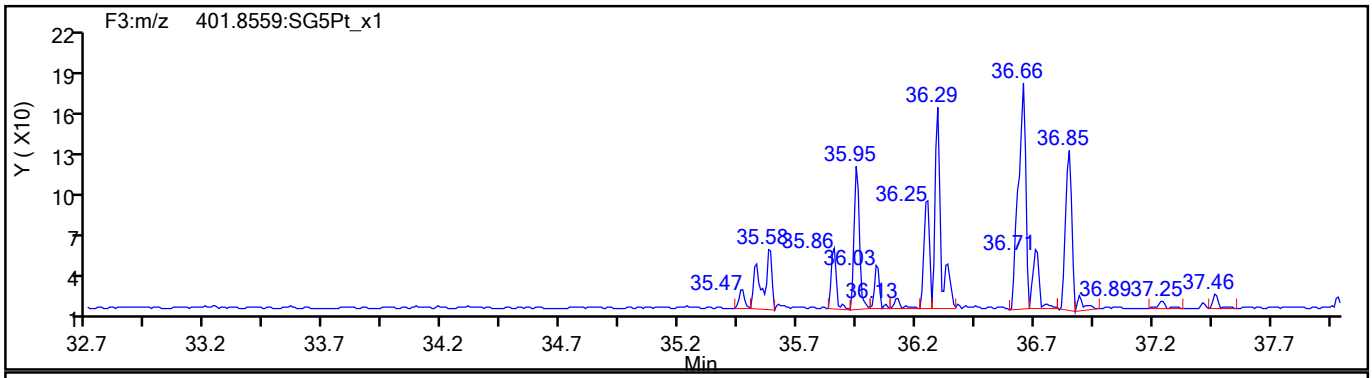

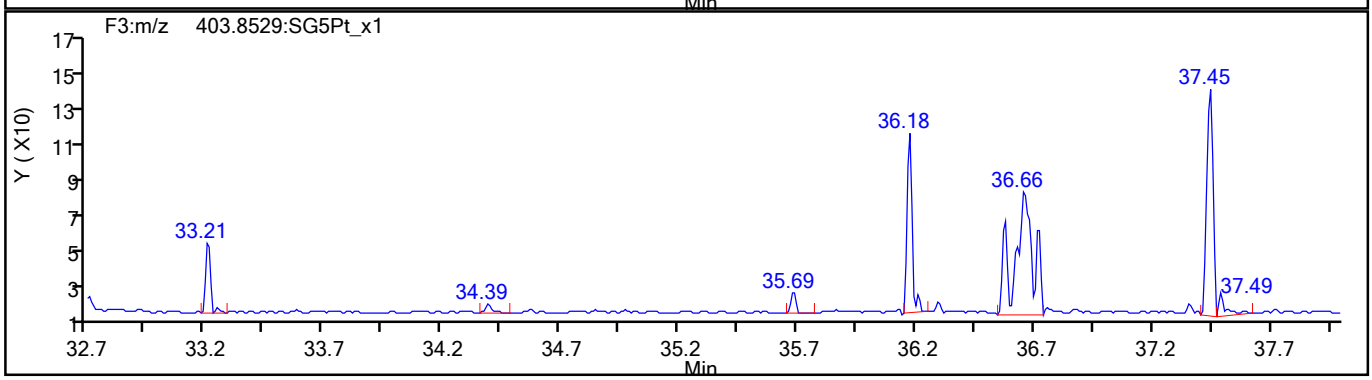

783509

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

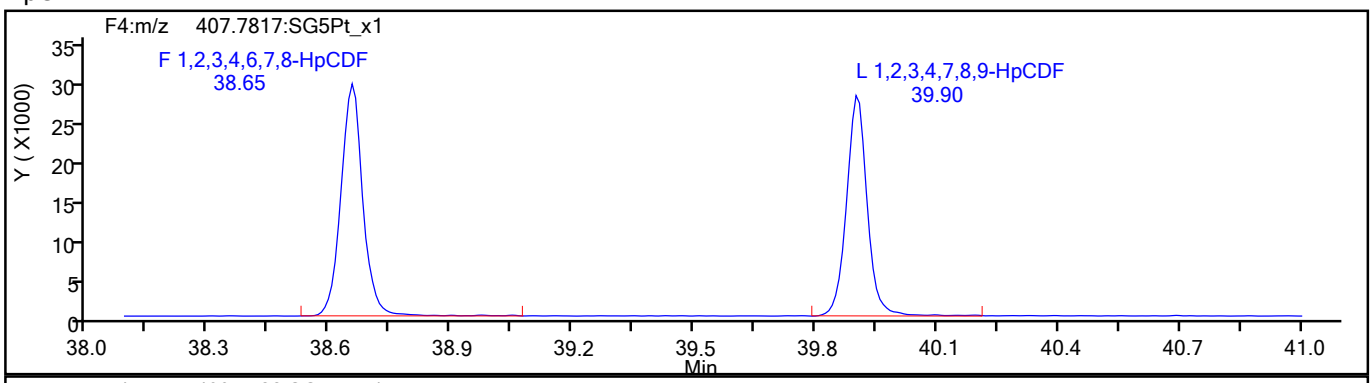

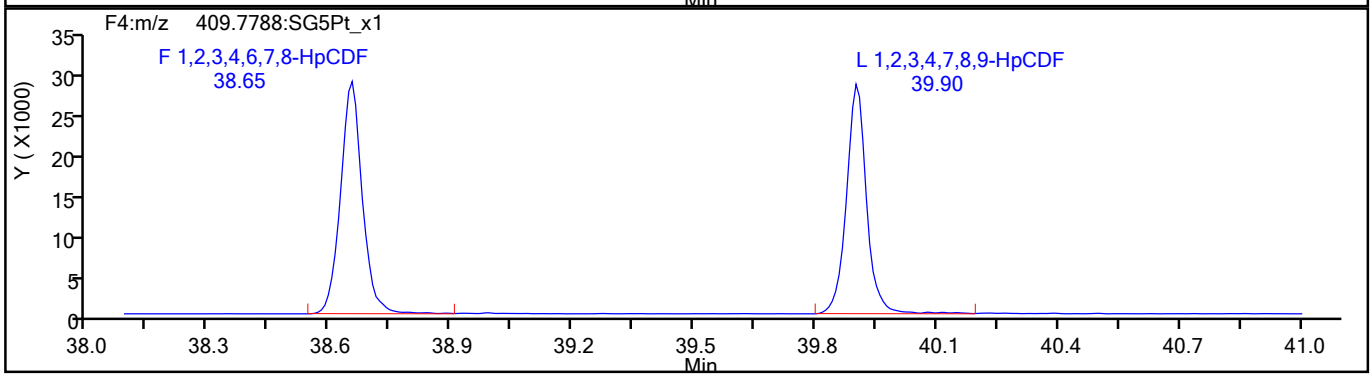

HpCDF Standards

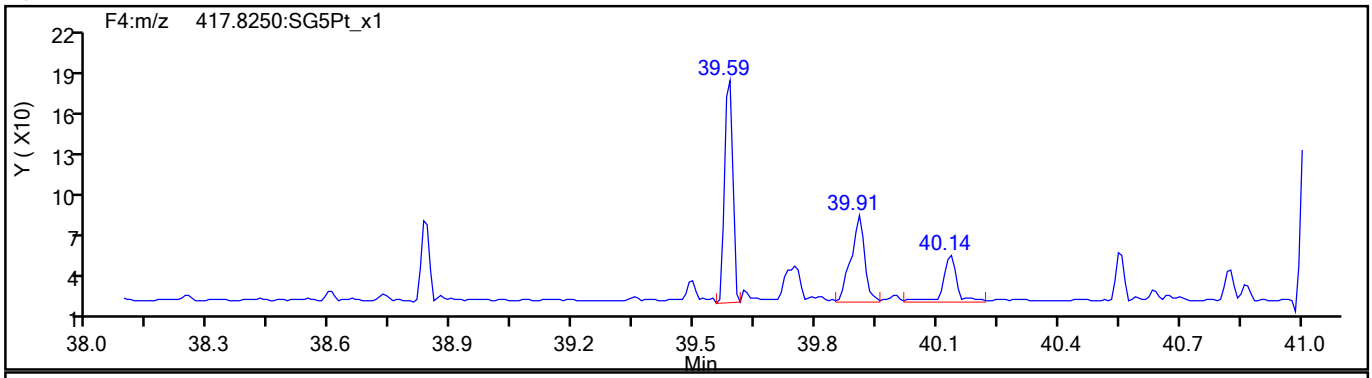

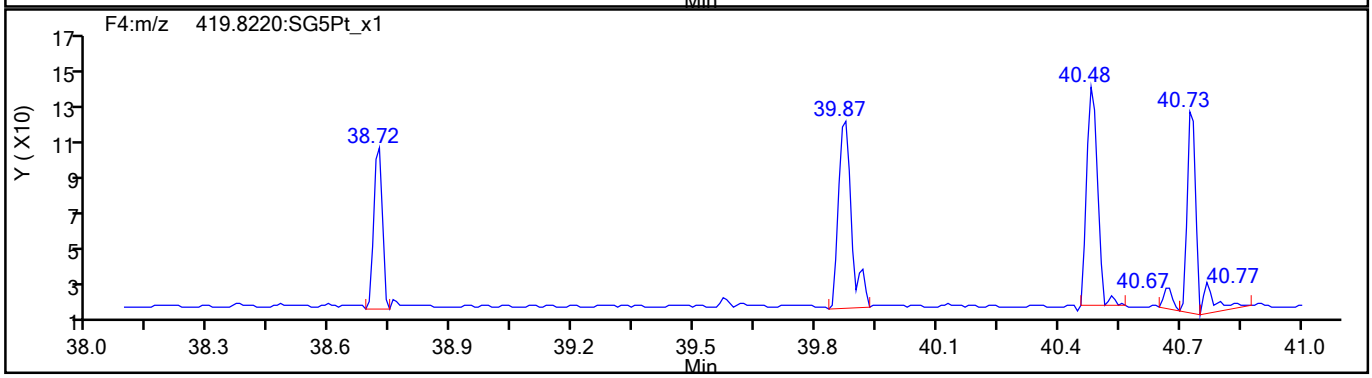

783510

Report Date: 18-Aug-2021 14:54:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

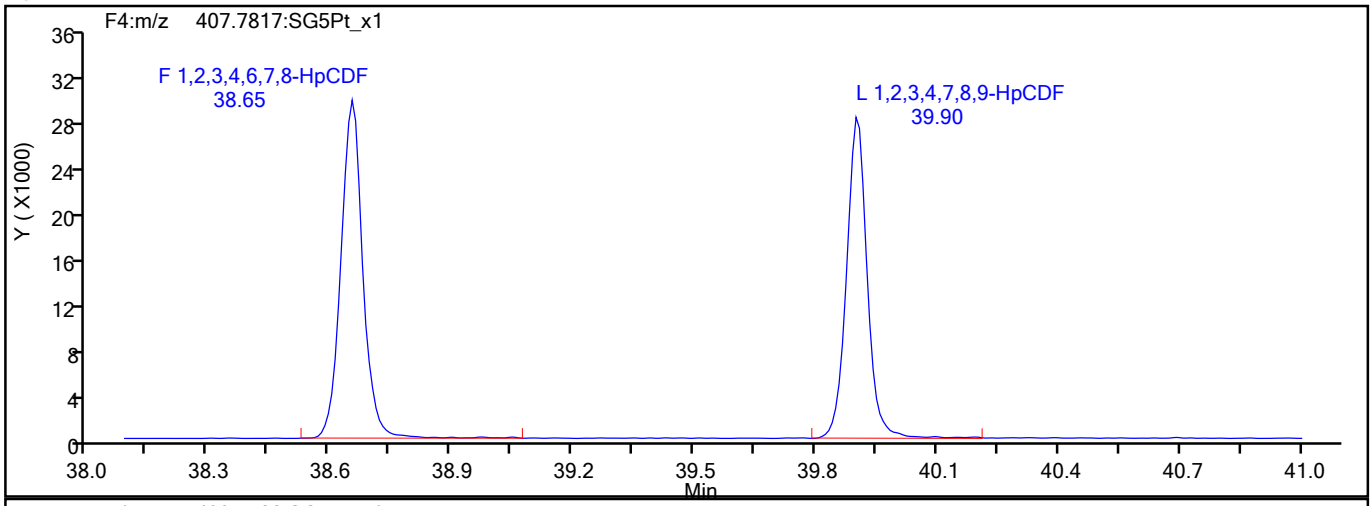

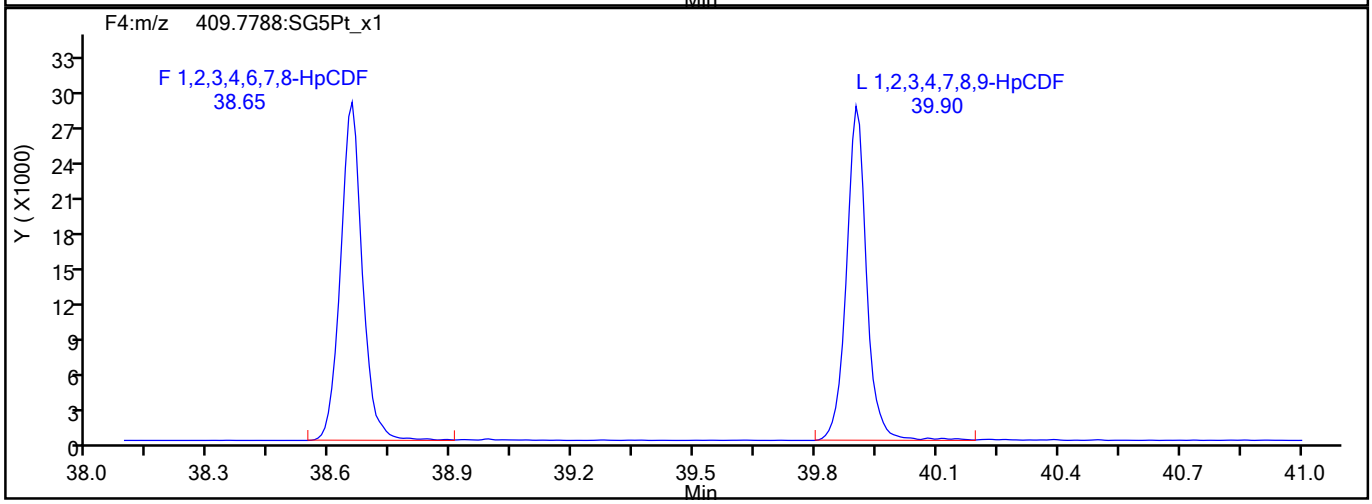

HpCDF Interference Mass

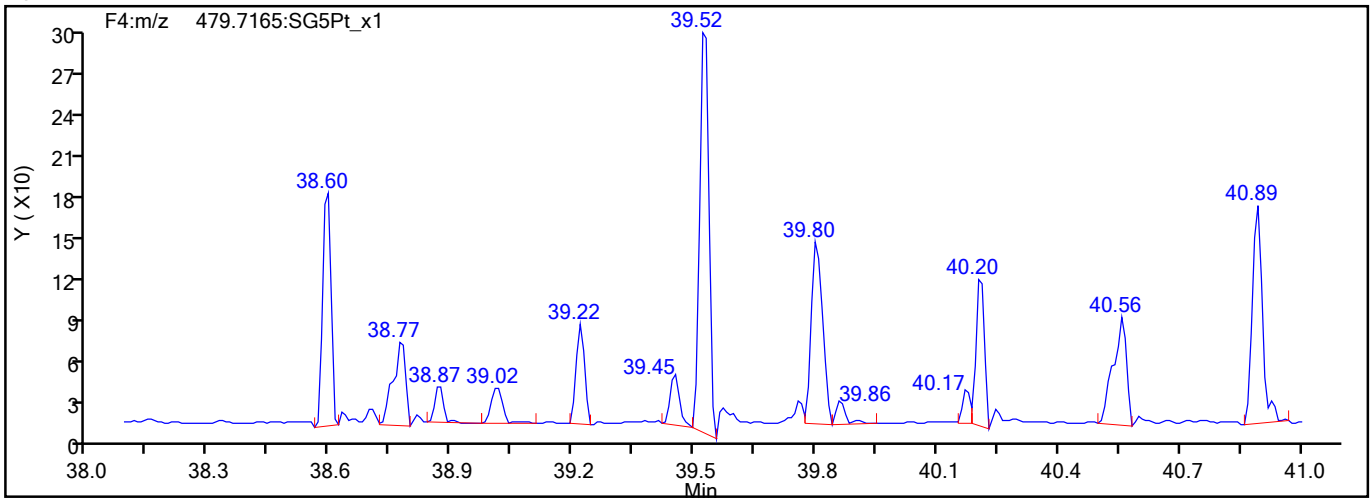

783511

Report Date: 18-Aug-2021 14:54:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

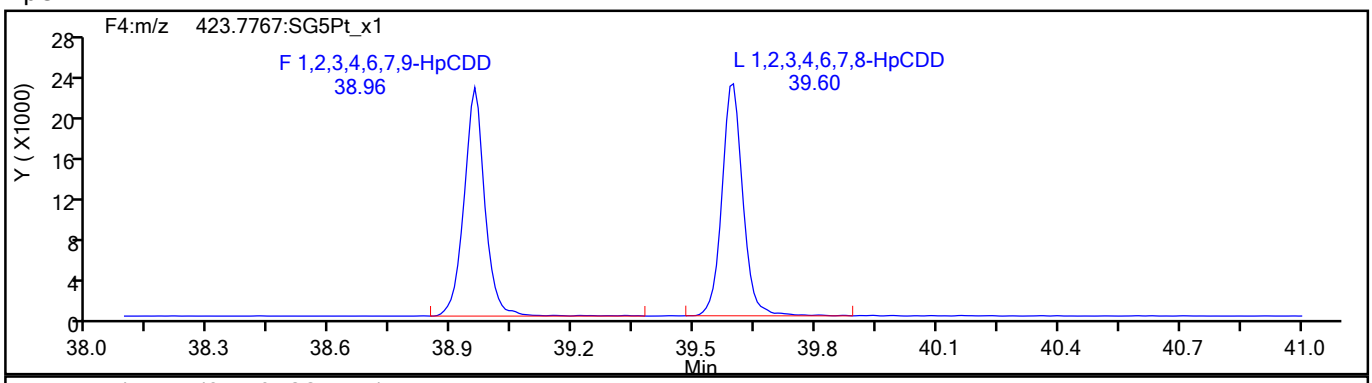

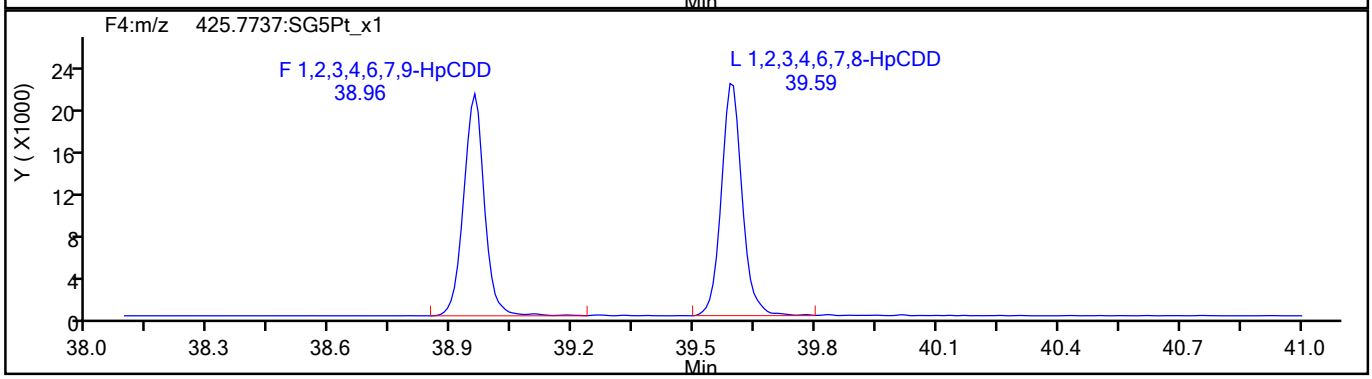

HpCDD Standards

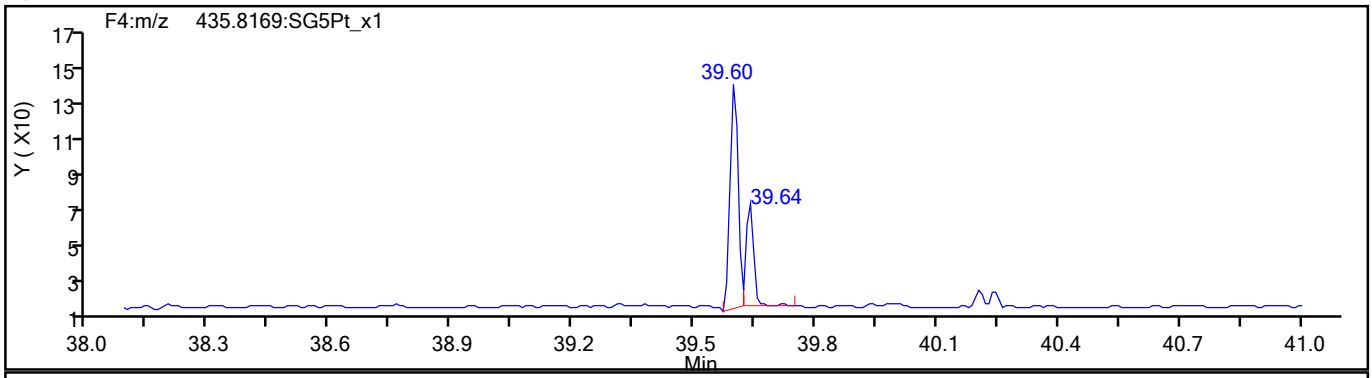

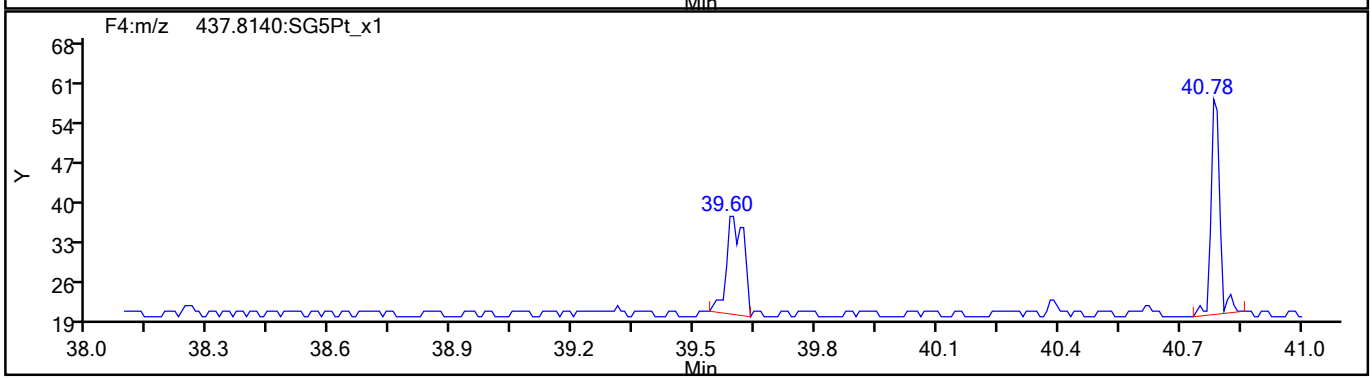

783512

Report Date: 18-Aug-2021 14:54:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

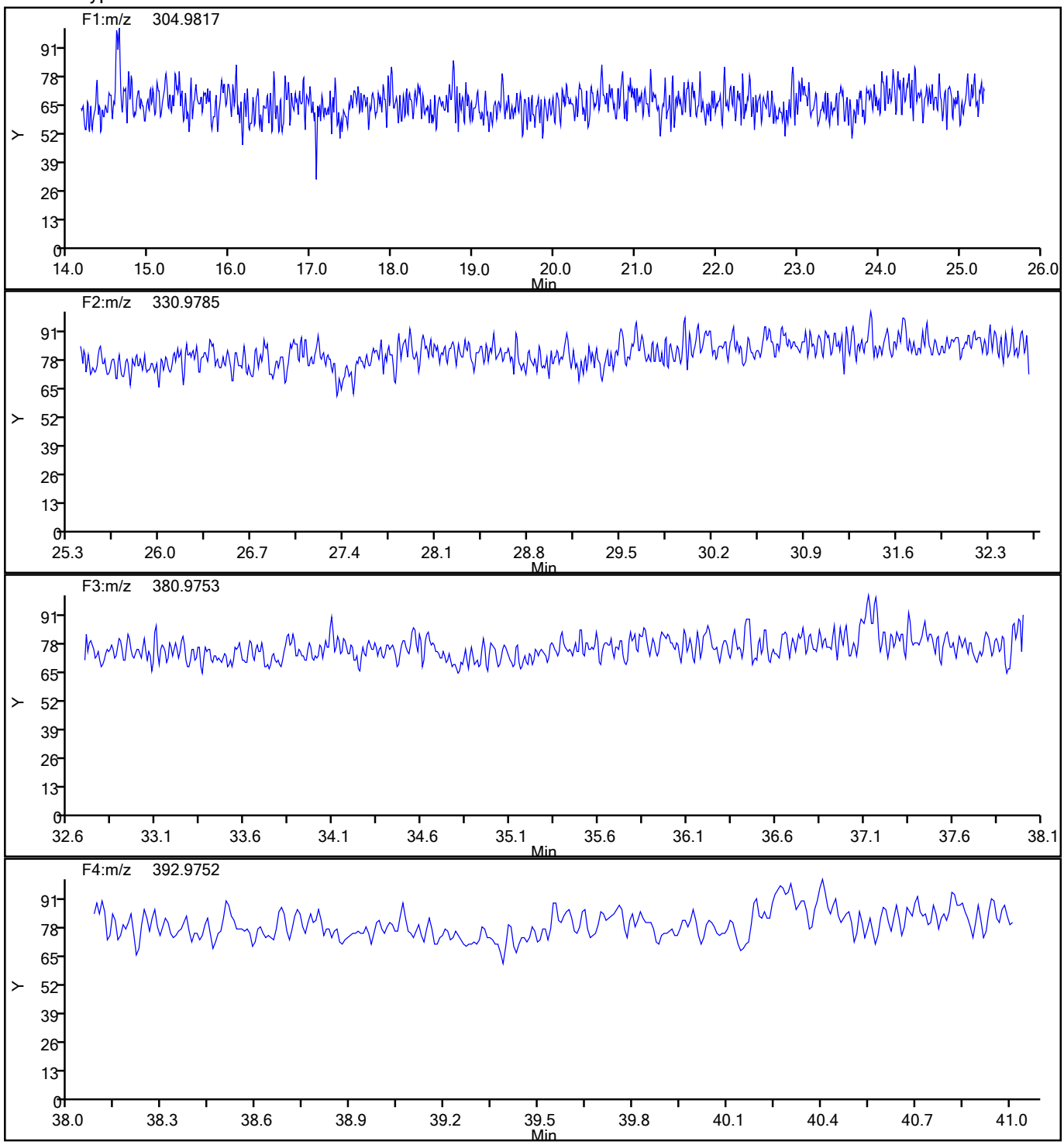

783513

Report Date: 18-Aug-2021 14:54:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_18.d		
Injection Date:	18-Aug-2021 02:55:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517281	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

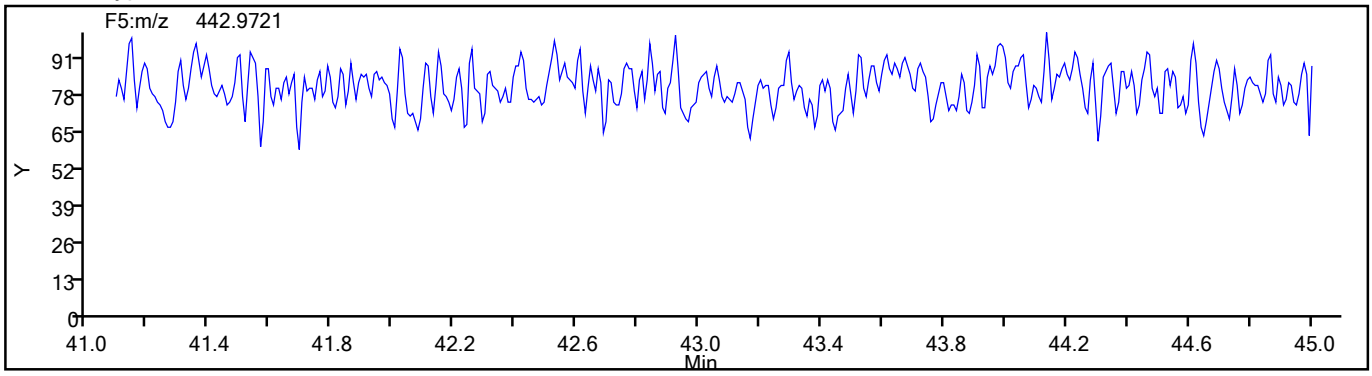

783514

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:50:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:40 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 17:49:01

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.515	79976	0.91	1.3459					0.00	R
2,3,7,8-TCDF	20.532	165011	0.80	1.0802	76.4	76.4	0.3112	0.3112		
A Non-2,3,7,8-sub-TCDF	19.946	3139	0.77	1.0802	2.721	1.453	0.3112	0.7927		RQ
S Total TCDF					79.1	77.9	0.3112	0.3112		RQ
D 13C-2,3,7,8-TCDD	21.874	21127	3.29	0.9317					0.00	R
2,3,7,8-TCDD	21.891	55608	0.81	1.0753	97.9	97.9	0.6109	0.6109		
A Non-2,3,7,8-sub-TCDD	20.781						0.6109	0.6109		
S Total TCDD					97.9	97.9	0.6109	0.6109		
A F1 PeCDFs	24.697	1039	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.194						0.0	0.0		
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.489						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.107						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.460	880	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.669	68328	1.07	1.4421						
1,2,3,4,7,8,9-HpCDF	39.907	44006	1.13	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.288						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.604	40915	1.01	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.288						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.186	98623	0.78							
1,3,6,8-TCDD	17.804	59806	0.85							
2,3,4,7-TCDF	20.532	165011	0.80							
1,2,3,7-TCDD	21.659	47985	0.81							
1,2,3,9-TCDF	22.072	74538	0.76							
1,2,3,9-TCDD	22.167	58731	0.76							
1,2,8,9-TCDF	23.706	76728	0.73							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.757	24107								
1,3,4,6,8-PeCDF	24.119	69782	1.60							
1,2,3,8,9-PeCDD	26.166	50624	1.46							
1,2,4,7,9-PeCDD	30.806	43678	1.58							
1,2,3,8,9-PeCDF	30.974	58543	1.62							
1,2,3,4,6,8-HxCDF	33.250	76257	1.26							
1,2,4,6,7,9-HxCDD	34.311	50756	1.33							
1,2,3,4,6,7-HxCDD	36.610	49652	1.28							
1,2,3,4,8,9-HxCDF	36.963	67795	1.20							
1,2,3,4,6,7,9-HpCDD	38.972	47358	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:50:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:40 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 17:49:01

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											R
315.9419	20.515	20.515	0	1.000	38178	5878	63	157	93		
317.9389	20.498	20.515	-1	1.000	41798	6617	4	10	1654	0.91(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.532	20.523	1	1.001	73204	9732	18	45	541		
305.8987	20.523	20.523	0	1.000	91807	11784	24	60	491	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	20.842	19.946	54	1.016	745	243	18	45	14		
305.8987	20.859	19.946	55	1.017	3144	272	24	60	11	0.24(0.65-0.89)	
	Empc Correction				967	315	24	60	13		
303.9016	24.075	19.946	247	1.174	621	118	18	45	7		
305.8987	24.119	19.946	250	1.176	1367	222	24	60	9	0.45(0.65-0.89)	
	Empc Correction				806	153	24	60	6		
13C-2,3,7,8-TCDD											R
331.9368	21.874	21.874	0	1.000	16200	2990	21	52	142		
333.9338	21.908	21.874	2	1.000	4927	2186	1	2	2186	3.29(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.891	21.882	1	1.001	24886	3342	27	67	124		
321.8936	21.874	21.882	-1	1.000	30722	4352	7	17	622	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.781						27	67			
321.8936	20.781						7	17			
A F1 PeCDFs											RQ
339.8597	15.816	24.697	-532	1.000	99	51	2	5	26		
341.8567	15.893	24.697	-527	1.000	68	44	4	10	11	1.46(1.32-1.78)	
339.8597	24.325	24.697	-22	1.000	587	136	2	5	68		
341.8567	24.316	24.697	-23	1.000	294	137	4	10	34	2.00(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	24.737	24.697	2	1.000	75	52	2	5	26		
341.8567	24.755	24.697	3	1.000	78	54	4	10	14	0.96(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.194						9	22			
341.8567	28.194						12	30			
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						13	32			
357.8516	28.489						10	25			
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.107						50	125			
375.8178	35.107						15	37			
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.430	35.460	-2	1.000	583	185	14	35	13		
391.8127	35.414	35.460	-3	1.000	393	84	12	30	7	1.48(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.669	38.638	2	1.000	35335	9256	22	55	421		
409.7788	38.669	38.638	2	1.000	32993	8367	11	27	761	1.07(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.907	39.885	1	1.000	23333	6317	22	55	287		
409.7788	39.916	39.885	2	1.000	20673	5103	11	27	464	1.13(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.288						22	55			
409.7788	39.288						11	27			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.604	39.582	1	1.000	20550	5578	12	30	465		
425.7737	39.596	39.582	1	1.000	20365	5300	10	25	530	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.288						12	30			
425.7737	39.288						10	25			
1,3,6,8-TCDF											
303.9016	16.186	16.186	0		43329	7699	18	45	428		
305.8987	16.186	16.186	0		55294	9985	24	60	416	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.804	17.804	0		27400	4703	27	67	174		
321.8936	17.813	17.804	1		32406	5212	7	17	745	0.85(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.532	20.532	0		73204	9732	18	45	541		
305.8987	20.523	20.532	-1		91807	11784	24	60	491	0.80(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.659	21.659	0		21515	2915	27	67	108		
321.8936	21.650	21.659	-1		26470	3363	7	17	480	0.81(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.072	22.072	0		32270	4169	18	45	232		
305.8987	22.063	22.072	-1		42268	5203	24	60	217	0.76(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.167	22.167	0		25374	3037	27	67	112		
321.8936	22.149	22.167	-1		33357	3722	7	17	532	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	23.706	23.706	0		32443	5107	18	45	284		
305.8987	23.697	23.706	-1		44285	7203	24	60	300	0.73(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.757	23.757	0		24107	4090	27	67	151		
1,3,4,6,8-PeCDF											
339.8597	24.119	24.119	0		42897	7179	2	5	3590		
341.8567	24.101	24.119	-1		26885	5048	4	10	1262	1.60(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.166	26.166	0		30013	4216	13	32	324		
357.8516	26.158	26.166	-1		20611	3257	10	25	326	1.46(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.806	30.806	0		26774	3220	13	32	248		
357.8516	30.815	30.806	1		16904	2007	10	25	201	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.974	30.974	0		36159	4045	9	22	449		
341.8567	31.000	30.974	2		22384	2622	12	30	219	1.62(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.250	33.250	0		42505	5788	50	125	116		
375.8178	33.267	33.250	1		33752	5024	15	37	335	1.26(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.311	34.311	0		29002	4807	14	35	343		
391.8127	34.319	34.311	1		21754	3912	12	30	326	1.33(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.610	36.610	0		27870	6094	14	35	435		
391.8127	36.610	36.610	0		21782	4999	12	30	417	1.28(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.963	36.963	0		37010	8343	50	125	167		
375.8178	36.963	36.963	0		30785	7337	15	37	489	1.20(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.972	38.972	0		24197	6959	12	30	580		
425.7737	38.972	38.972	0		23161	6428	10	25	643	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:50:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 30

Non-2,3,7,8-sub-TCDF, RT: 19.946

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	79976	12495

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	79976	12495

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
20.842	745	243	3144	272	1.80	0.24	RQ
20.842	745	243	967	315	0.7927		Empc Correction
24.075	621	118	1367	222	0.9205	0.45	RQ
24.075	621	118	806	153	0.6607		Empc Correction
Signal Totals:							
	1366	361	1773	468			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5877	855				0.30	RQ
	3139	829					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.721 = (5877 * 40.000) / (79976 * 1.080)
Empc Amount: 1.453 = (3139 * 40.000) / (79976 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:50:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 30

F1 PeCDFs, RT: 24.697

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
15.816	99	51	68	44		1.46	
24.325	587	136	294	137		2.00	R
24.737	75	52	78	54		0.96	R
Signal Totals:							
	761	239	440	235			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1201	474				1.73	RQ
	1039	529					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1201 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (1039 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	18-Aug-2021 14:50:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	30

Non-2,3,7,8-sub-HxCDD, RT: 35.460

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.430	583	185	393	84		1.48	R
Signal Totals:							
	583	185	393	84			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	976	269				1.48	RQ
	880	188					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (976 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (880 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

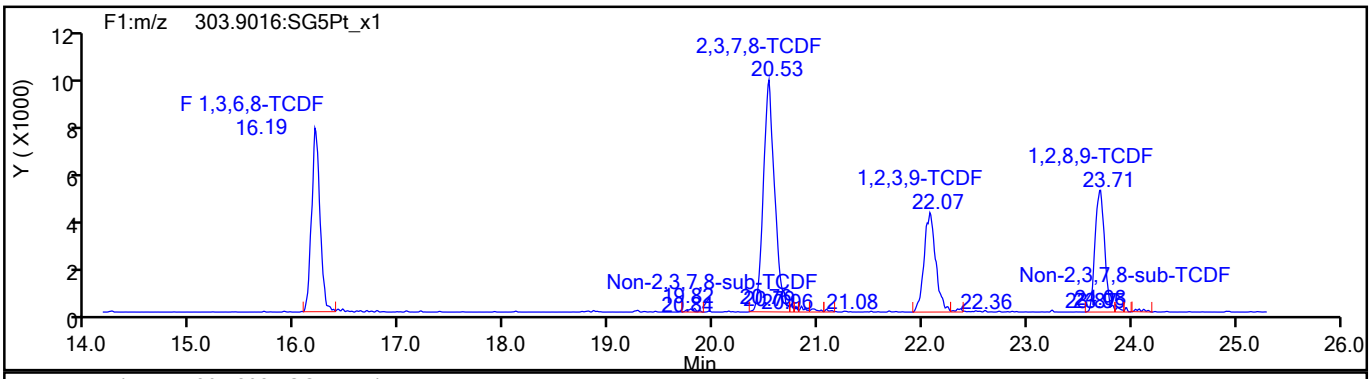

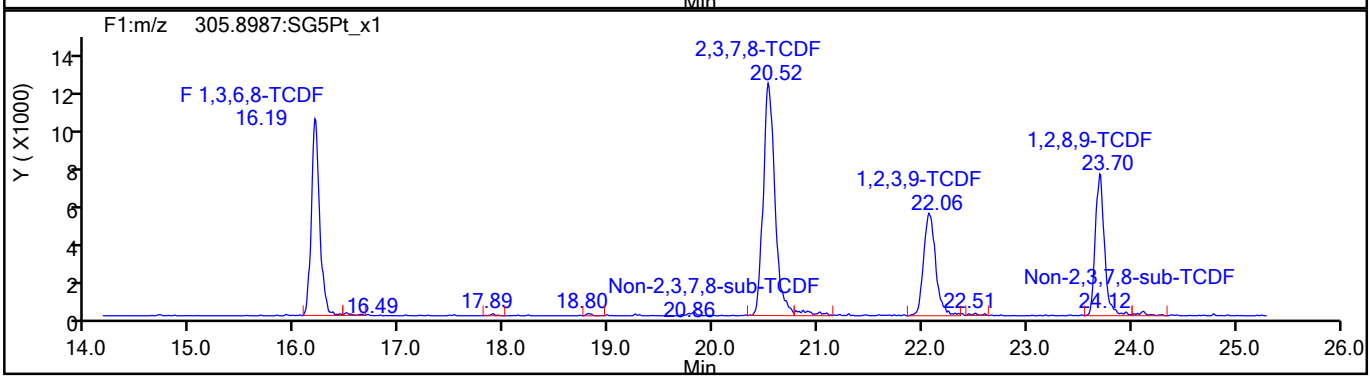

TCDF Standards

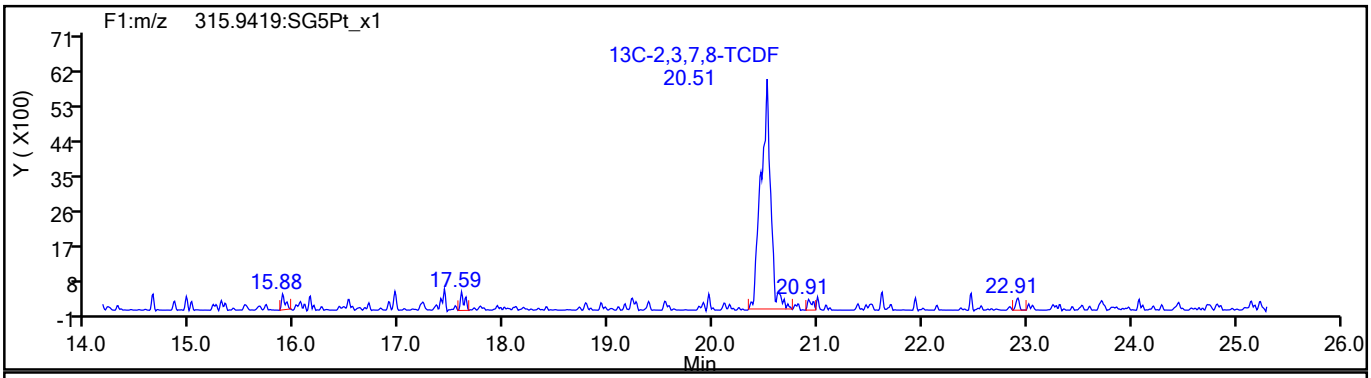

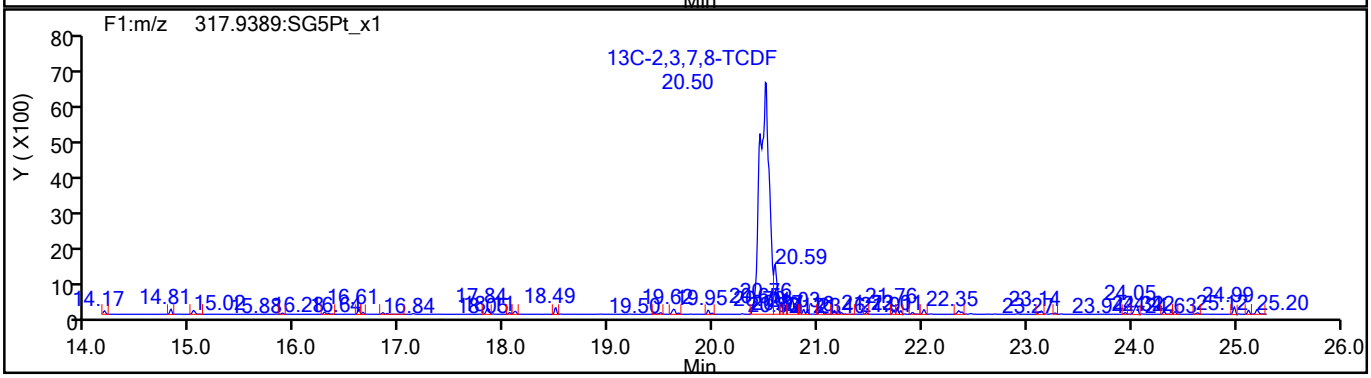

783523

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

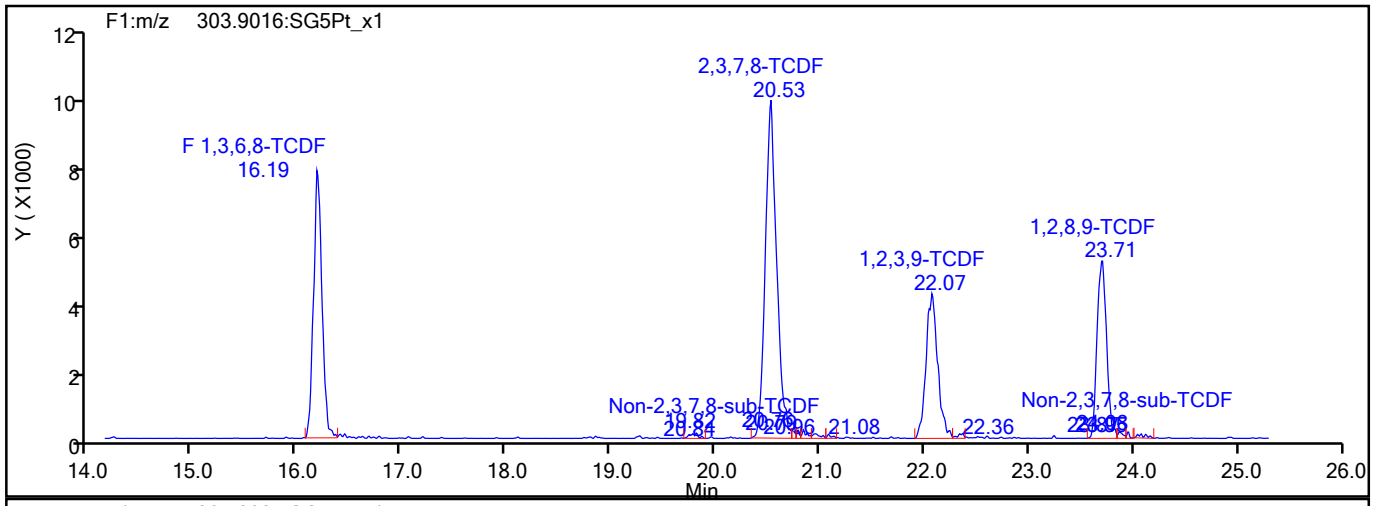

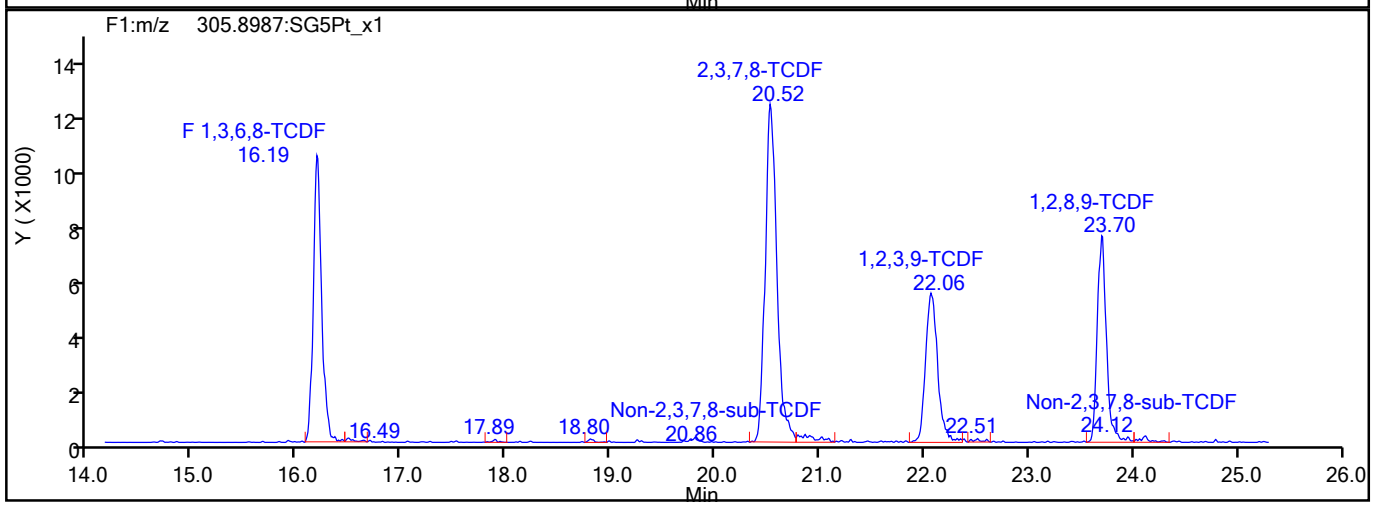

TCDF Interference Mass

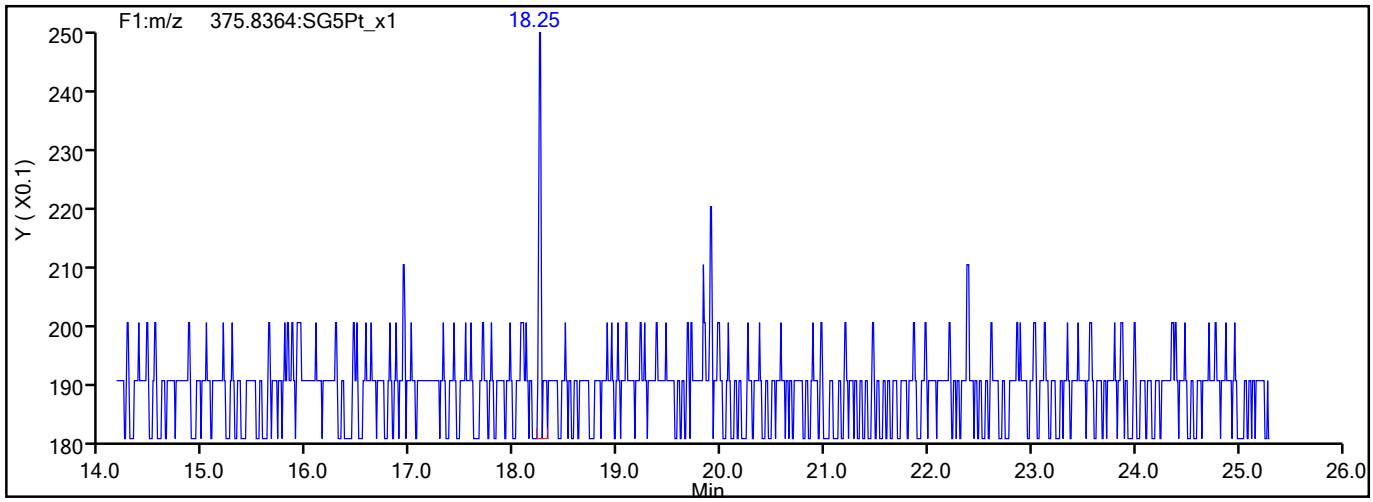

783524

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

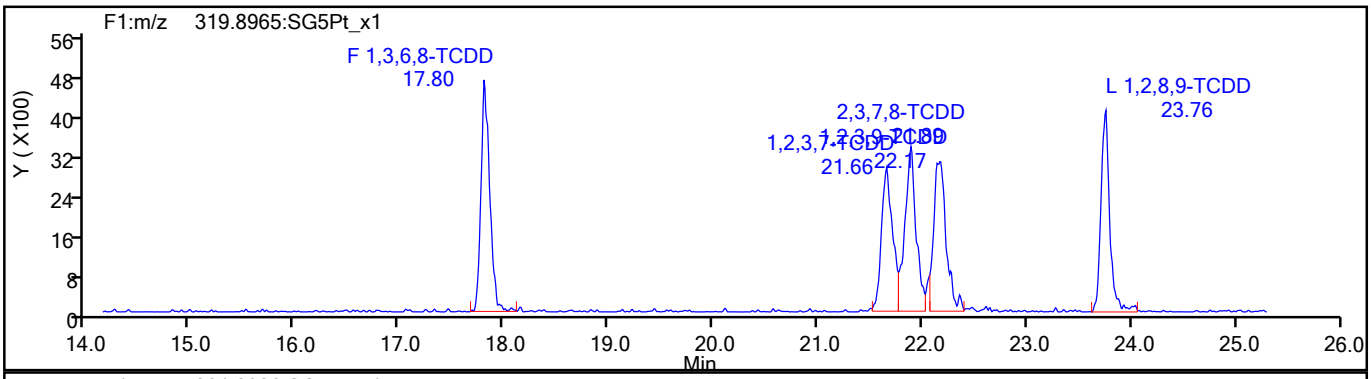

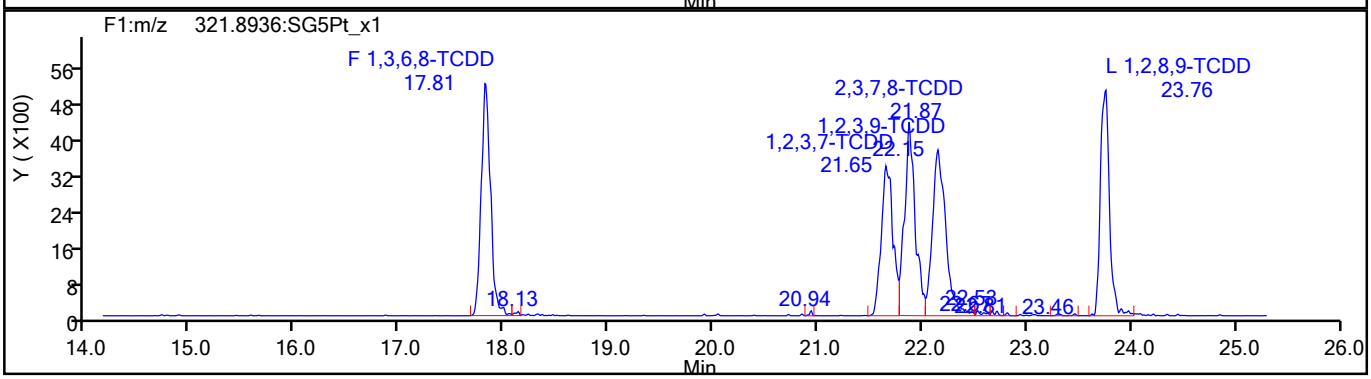

TCDD Standards

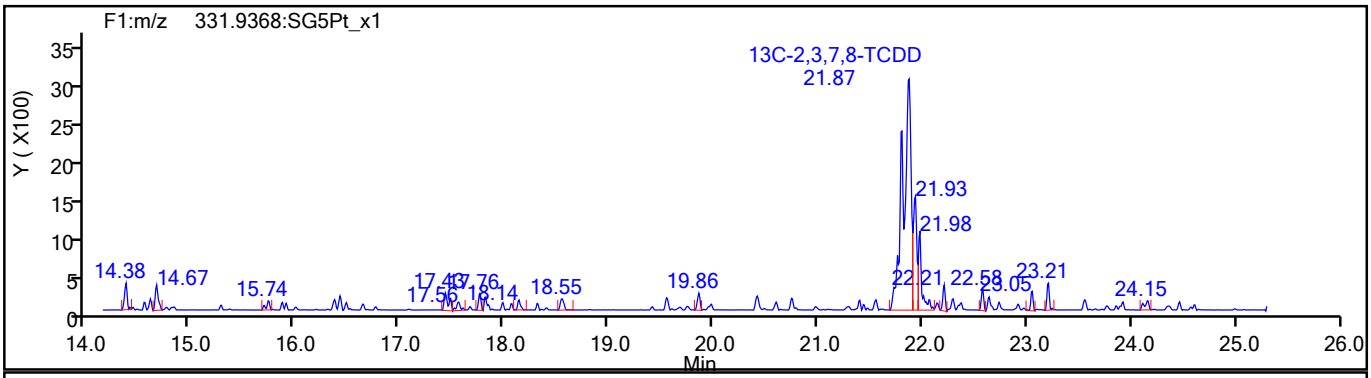

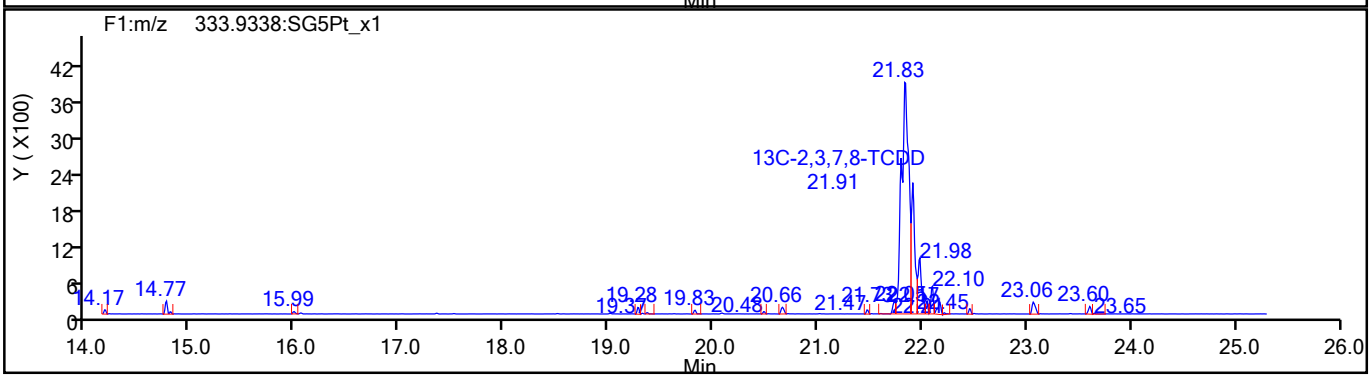

783525

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

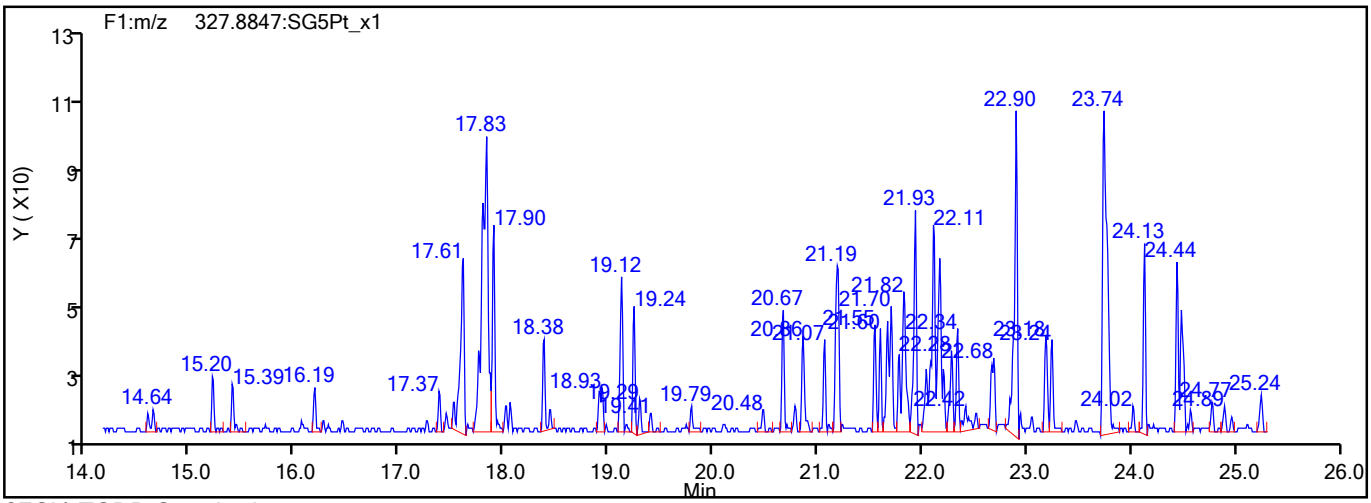

37Cl4-TCDD Standards

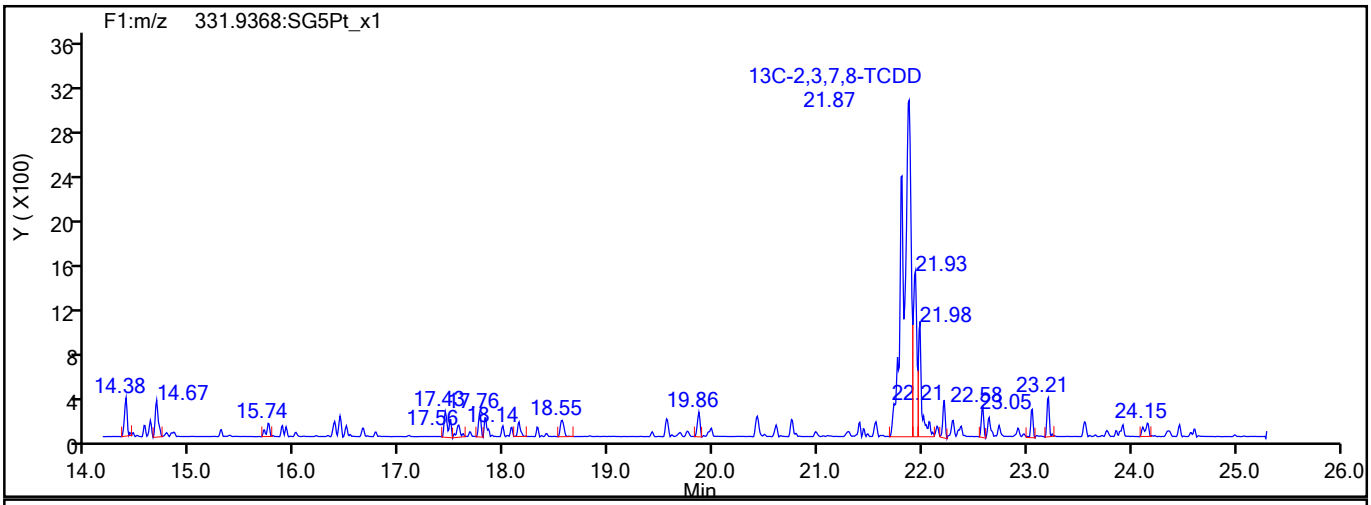

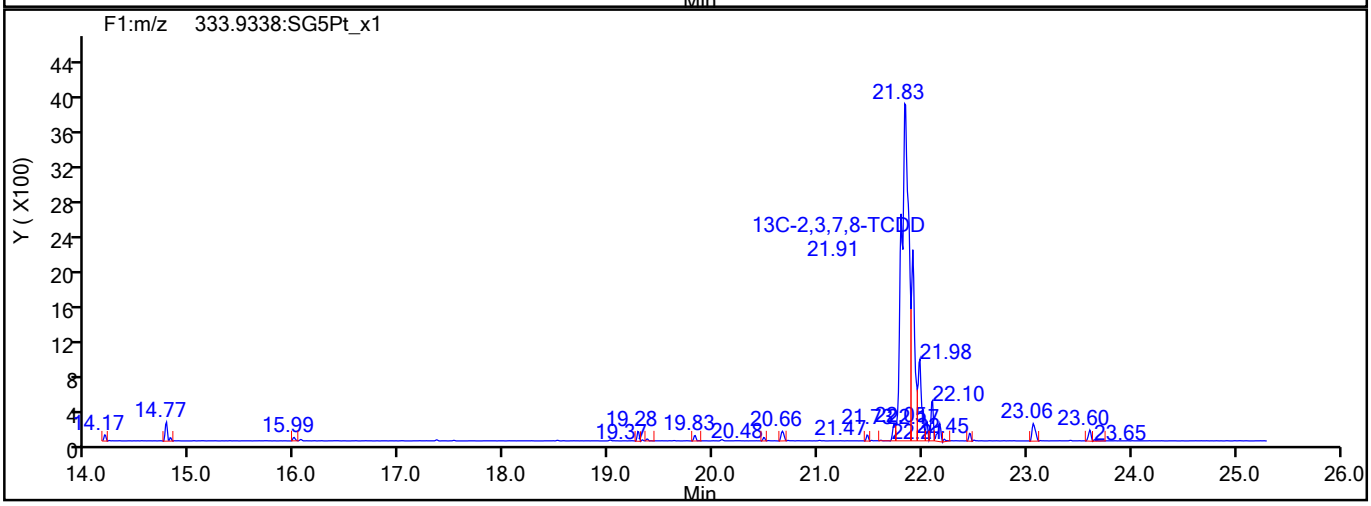

783526

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

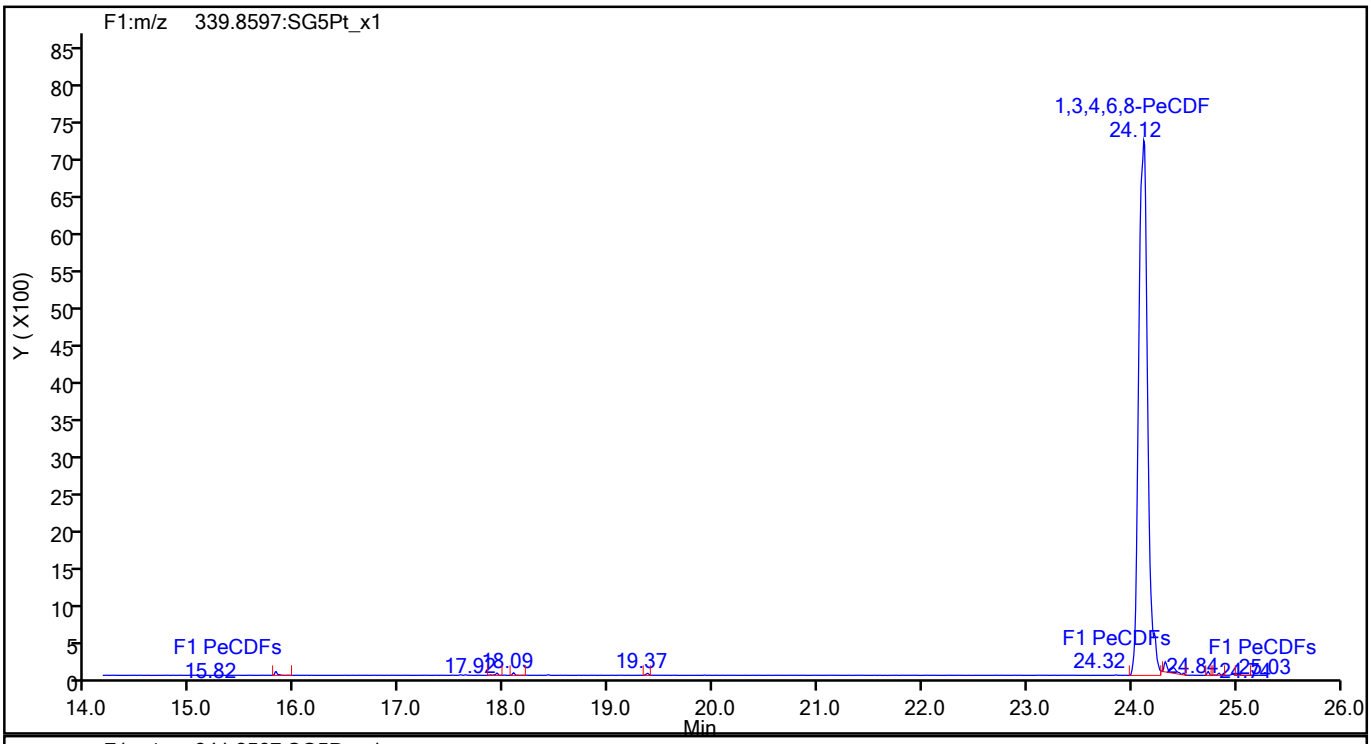

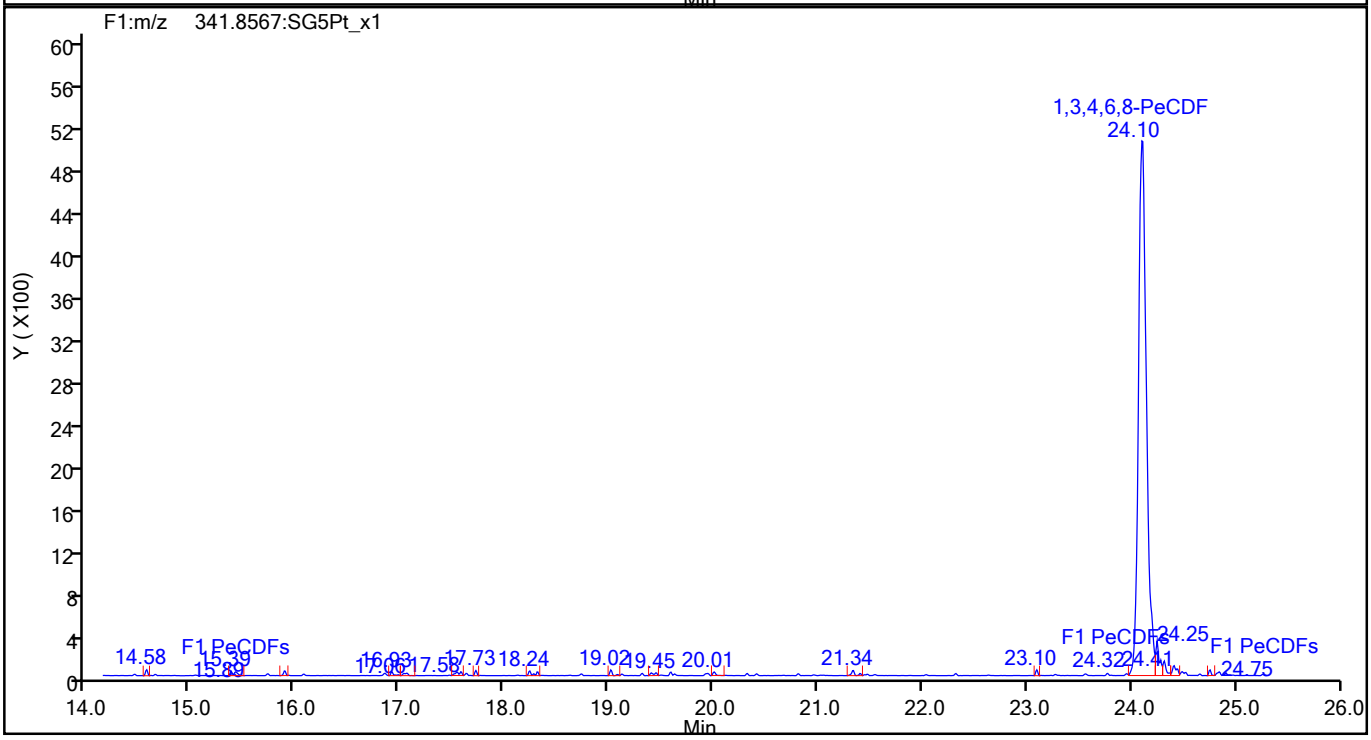

783527

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

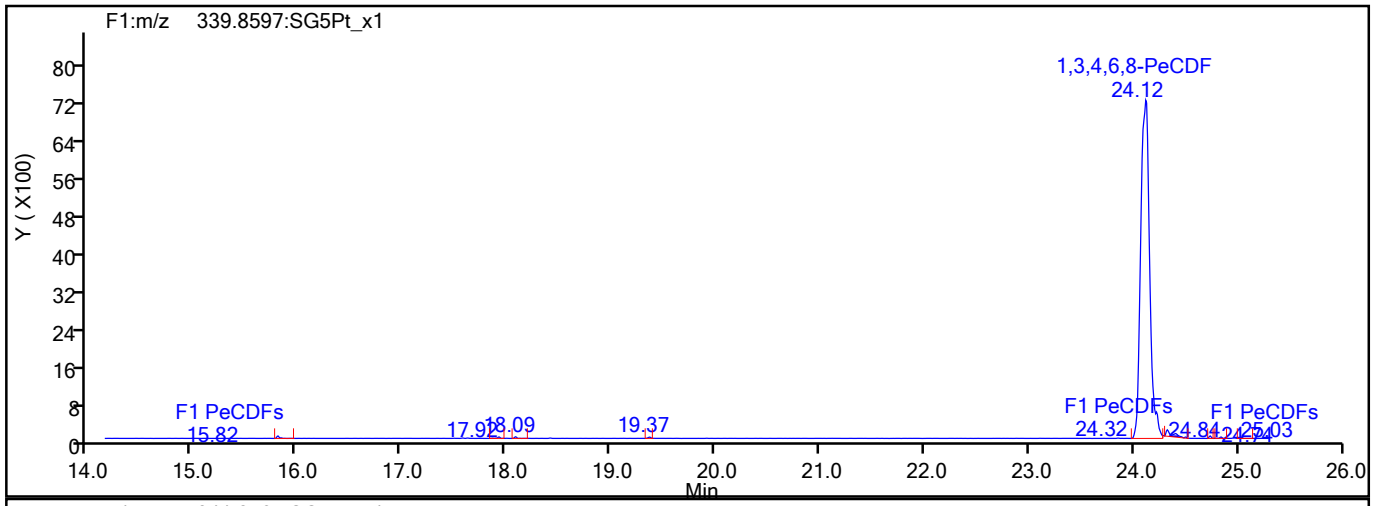

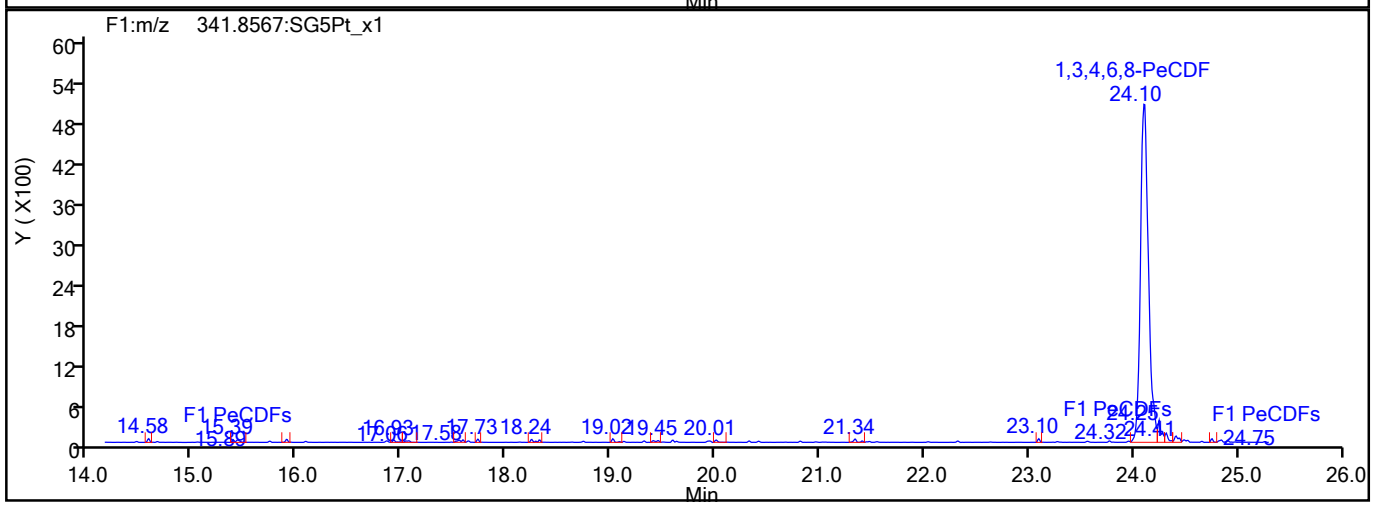

F1 PeCDFs Interference Mass

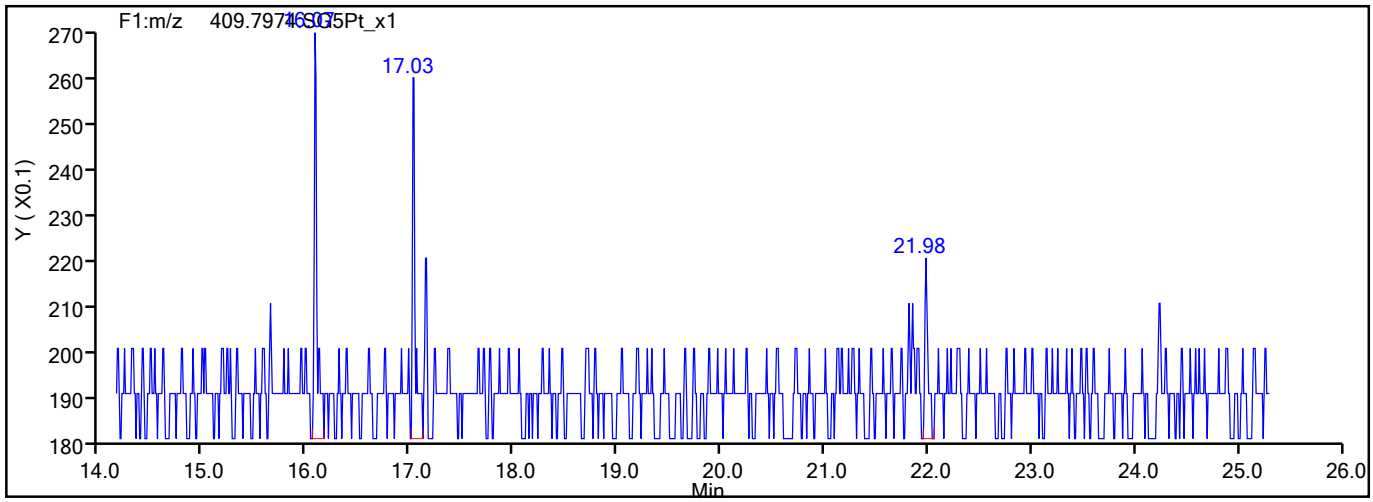

783528

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

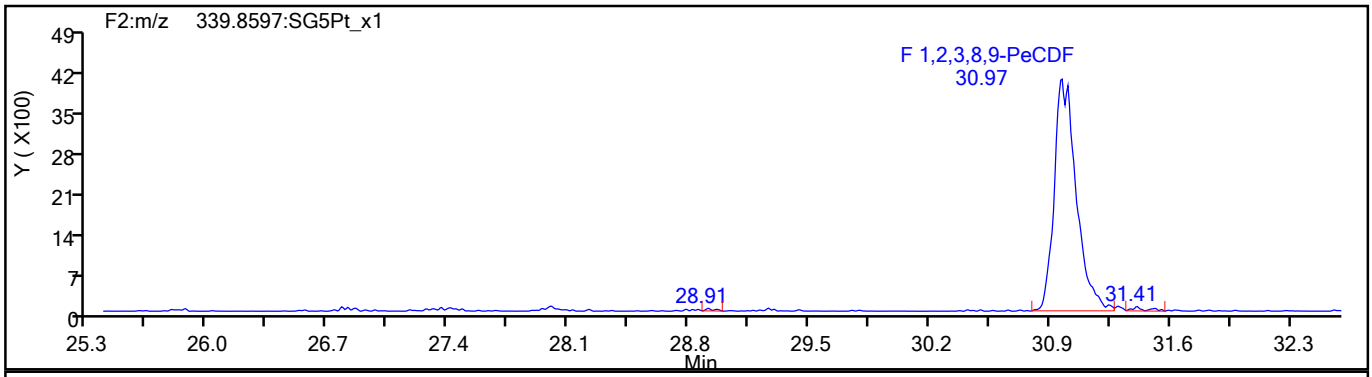

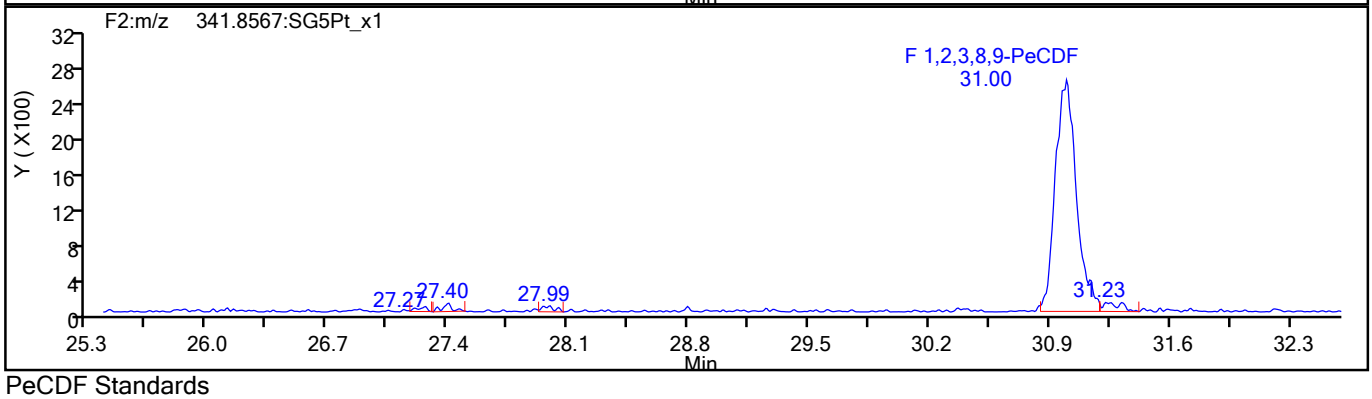

PeCDF Standards

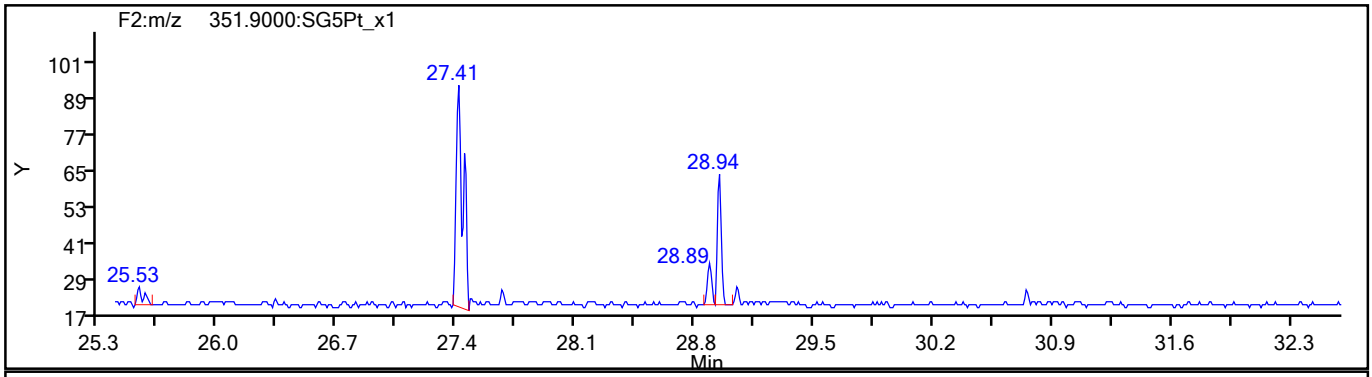

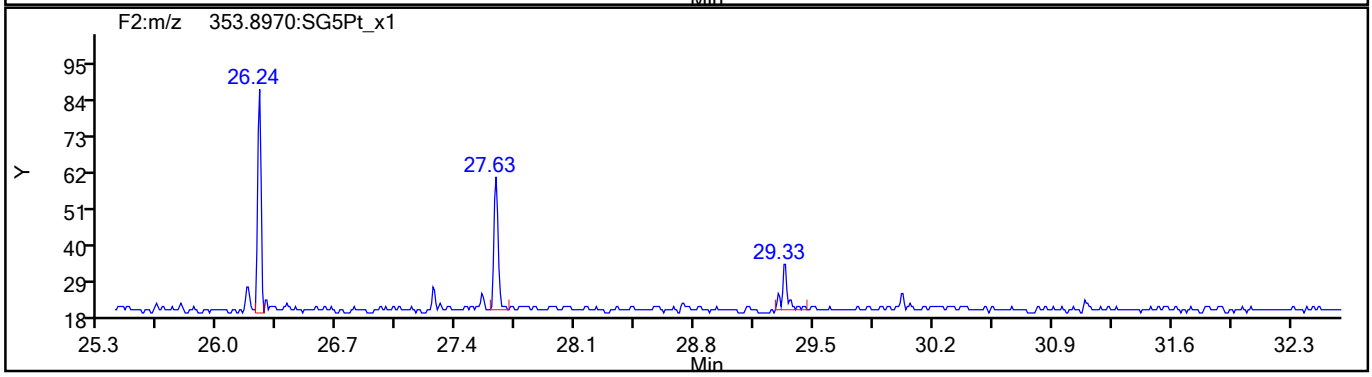

783529

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

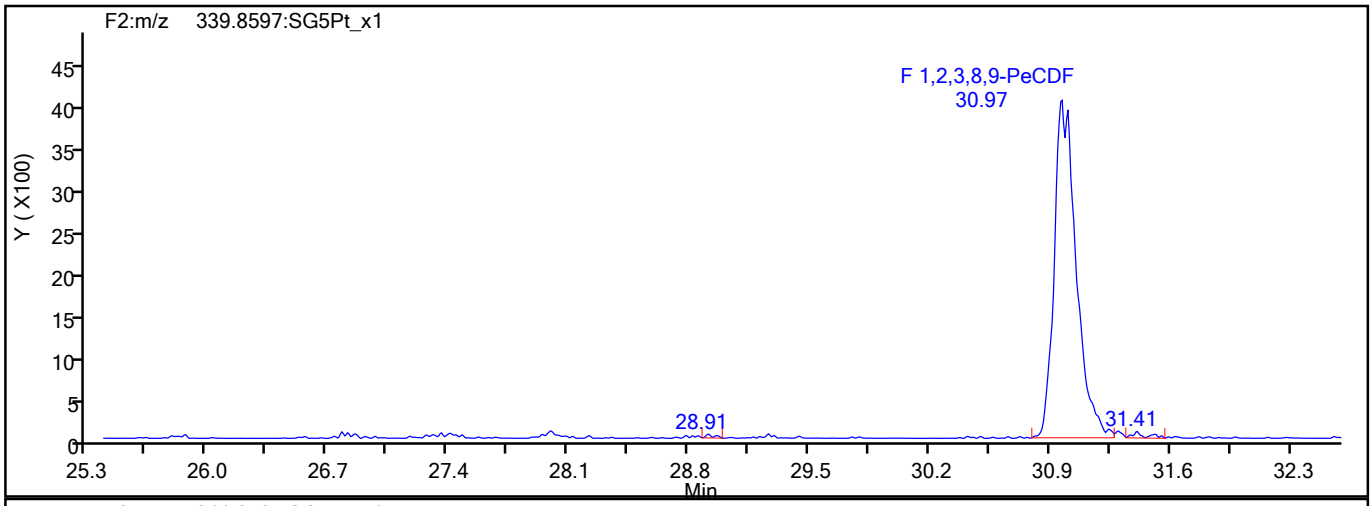

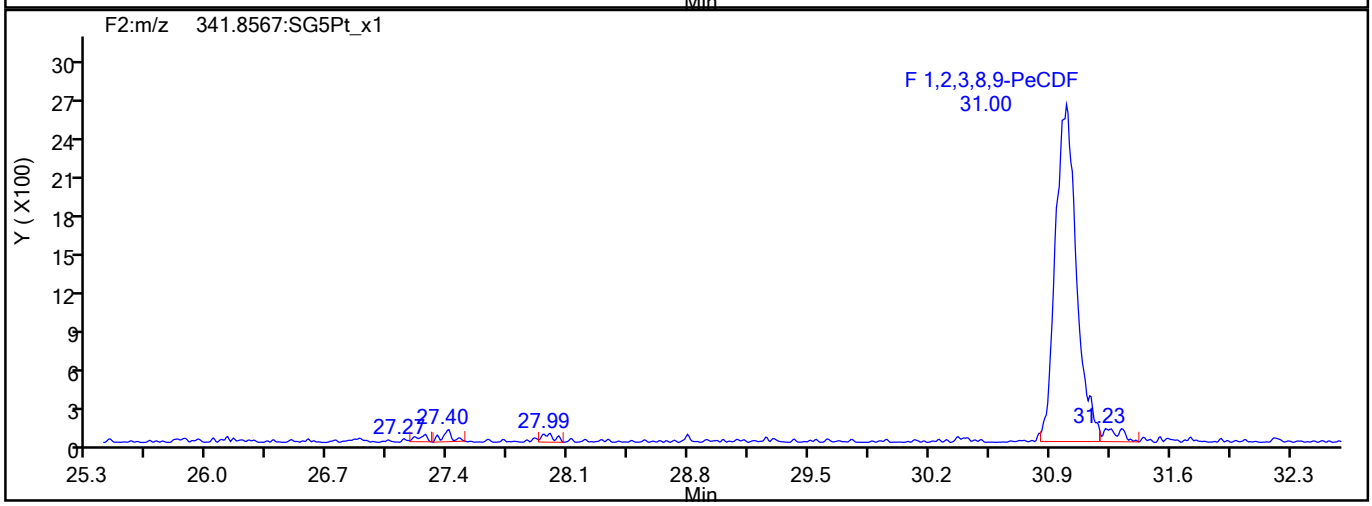

PeCDF Interference Mass

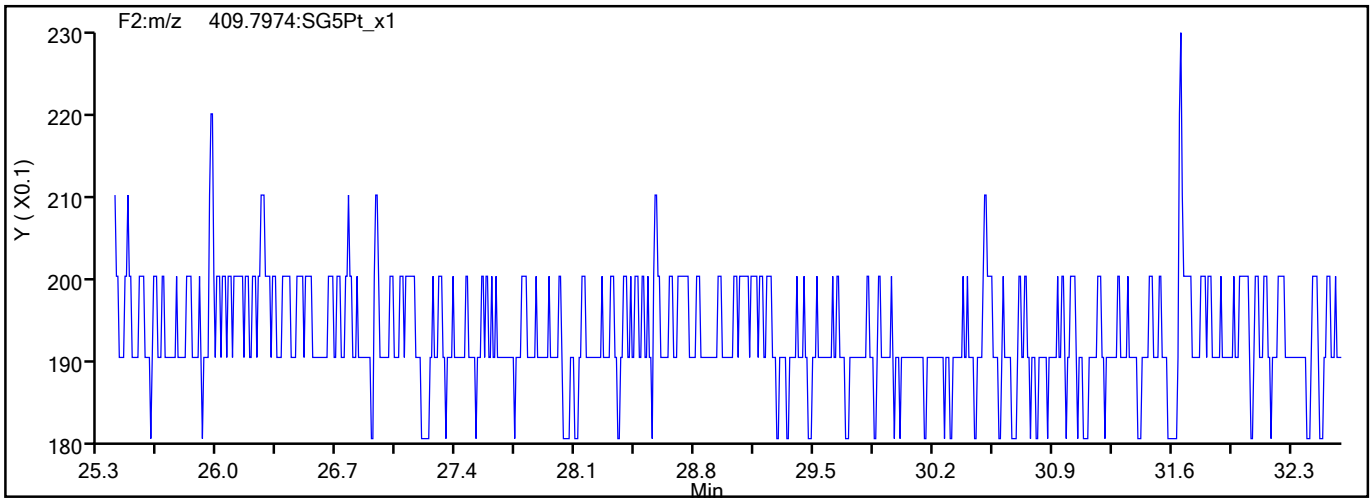

783530

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

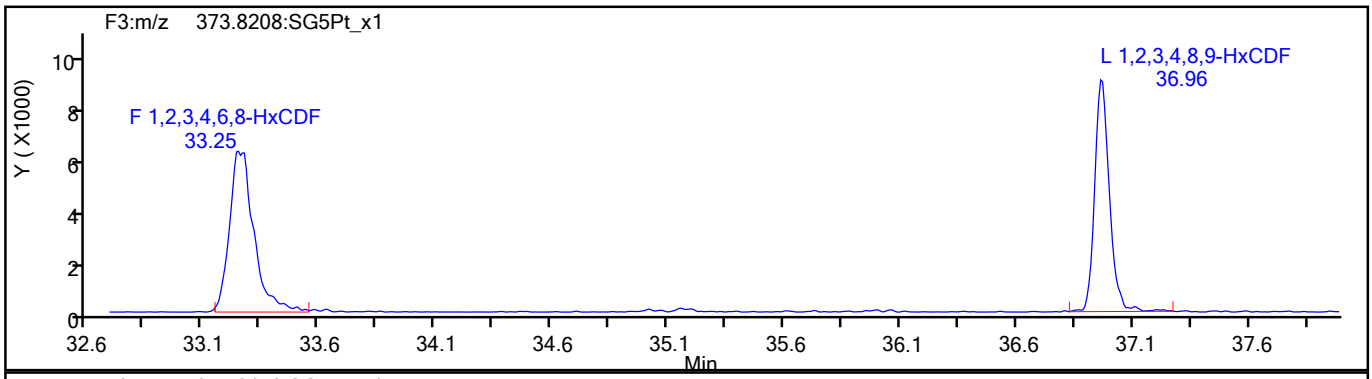

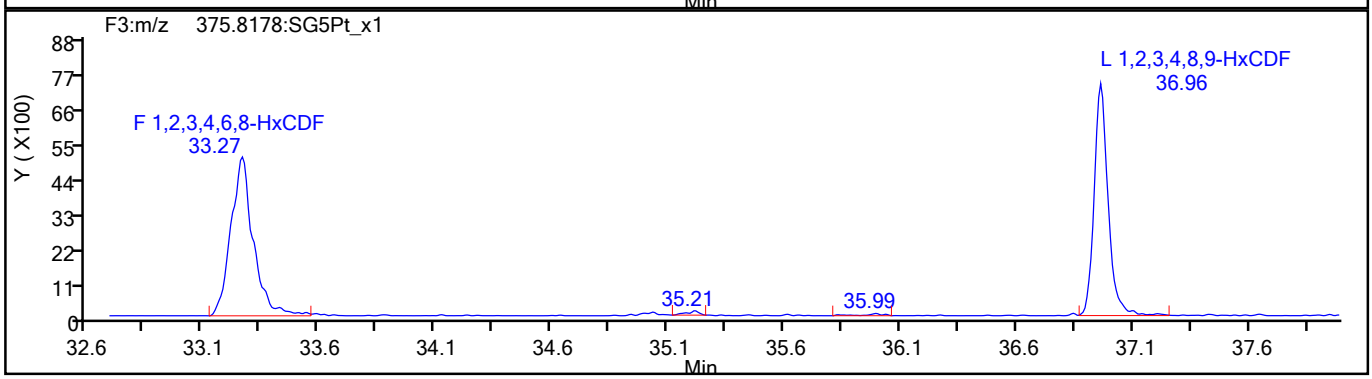

HxCDF Standards

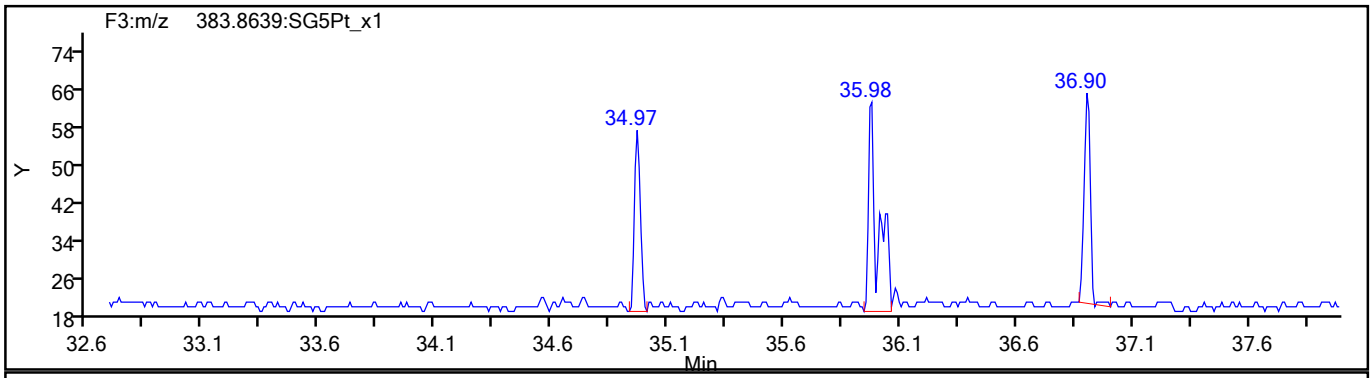

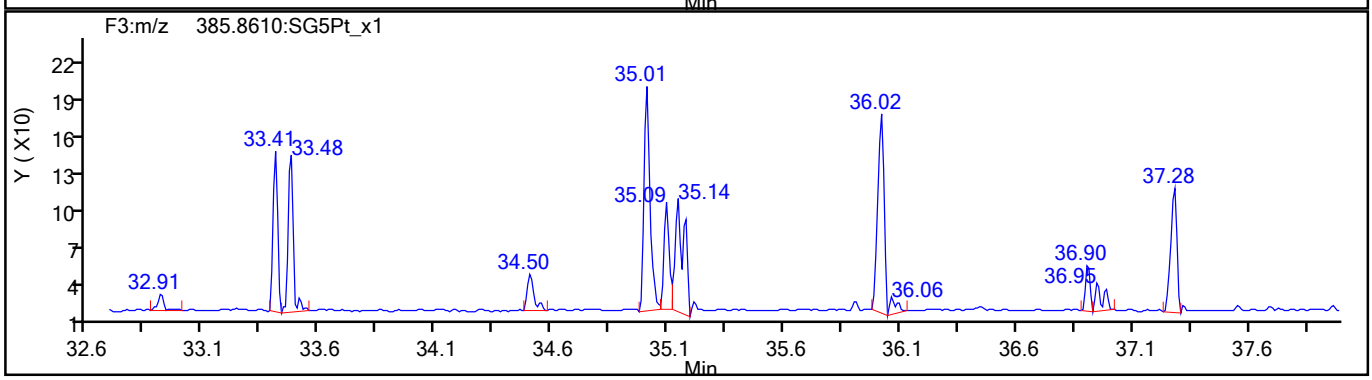

783531

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

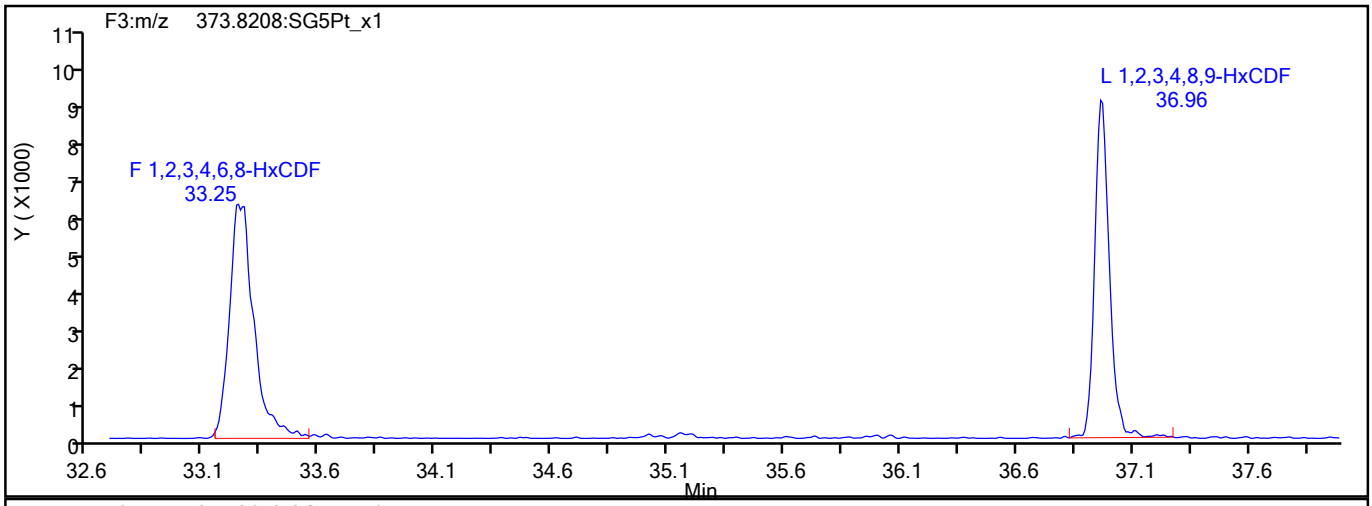

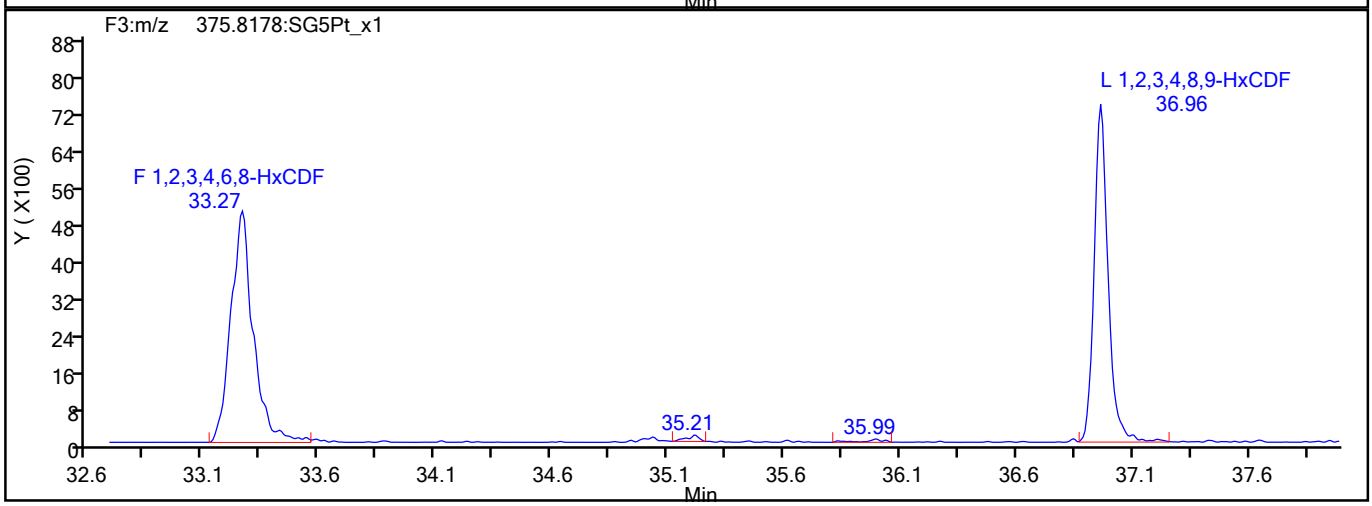

HxCDF Interference Mass

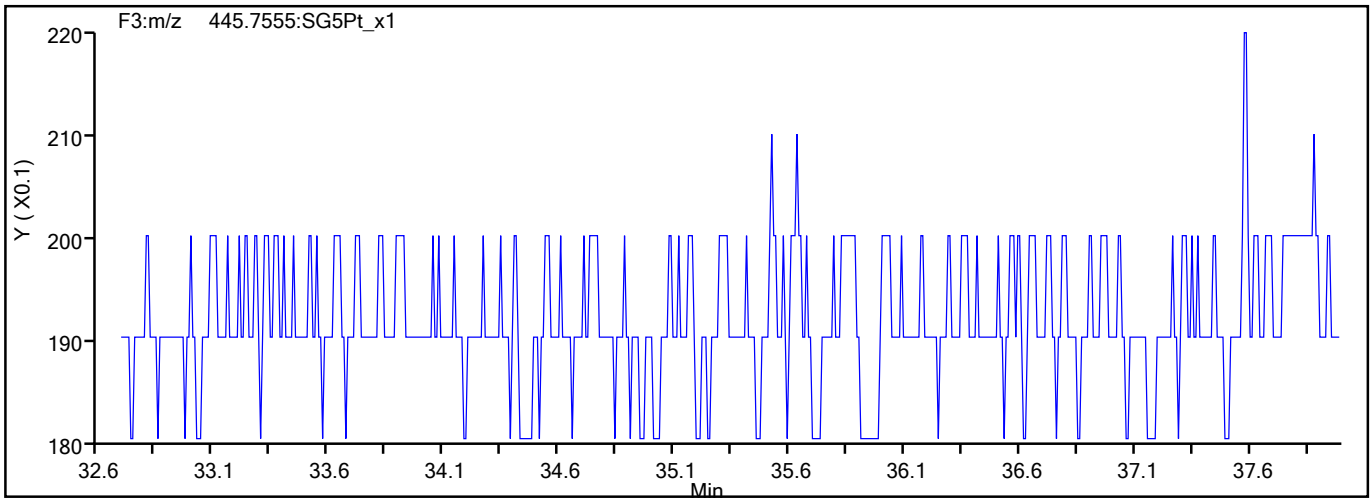

783532

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

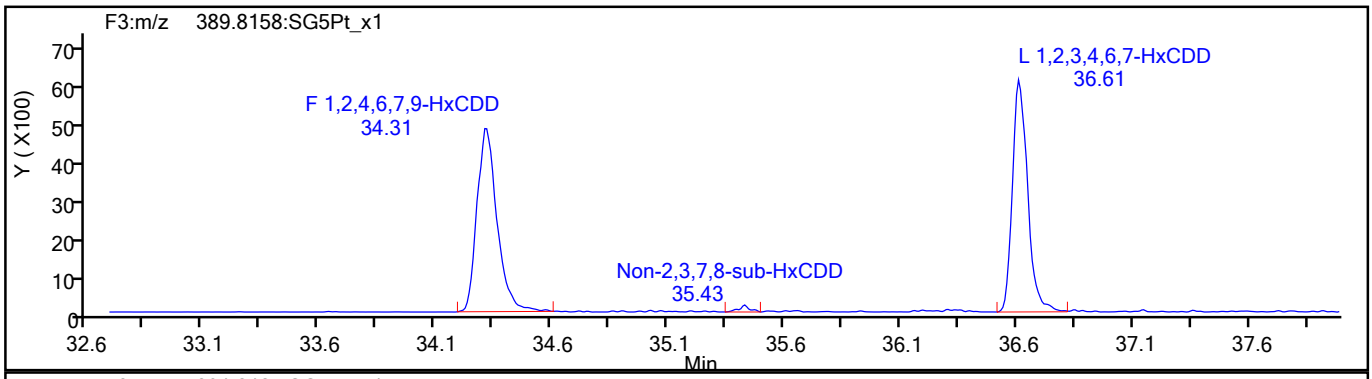

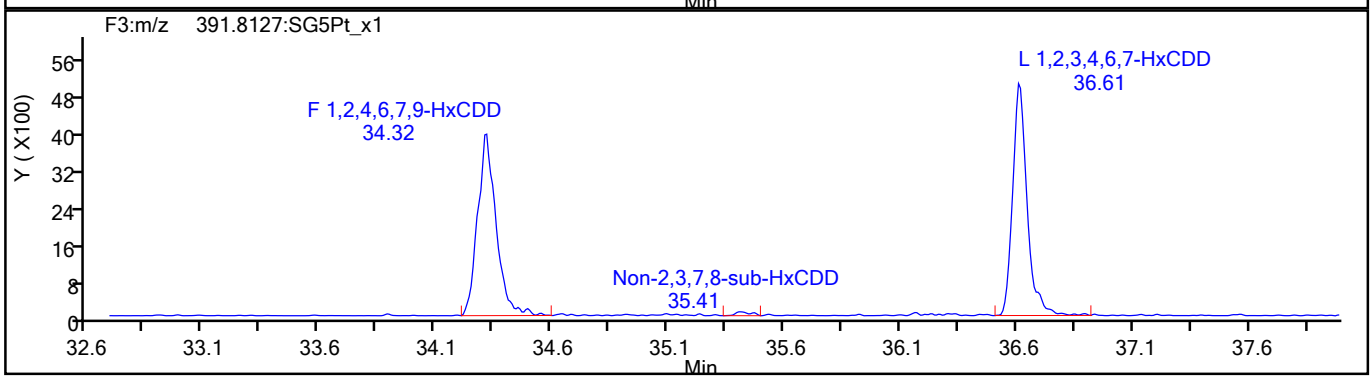

HxCDD Standards

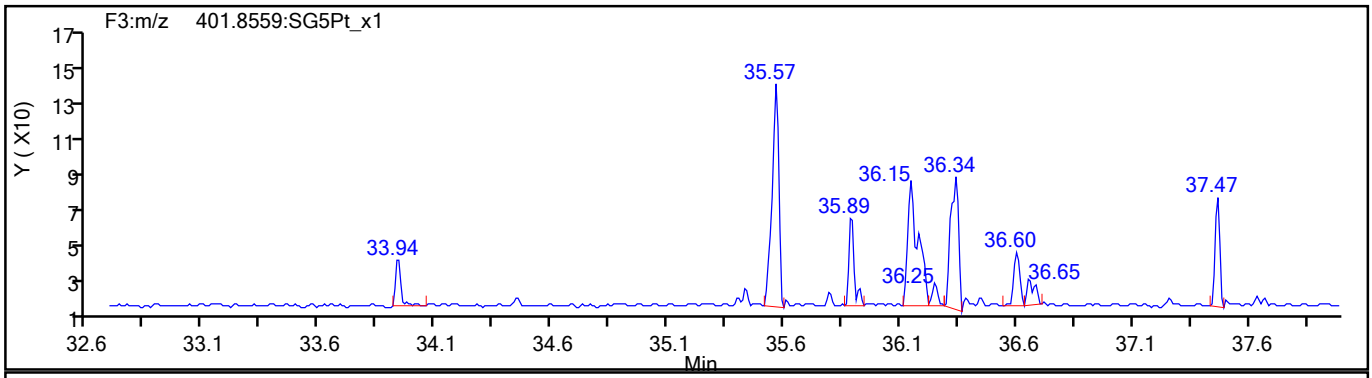

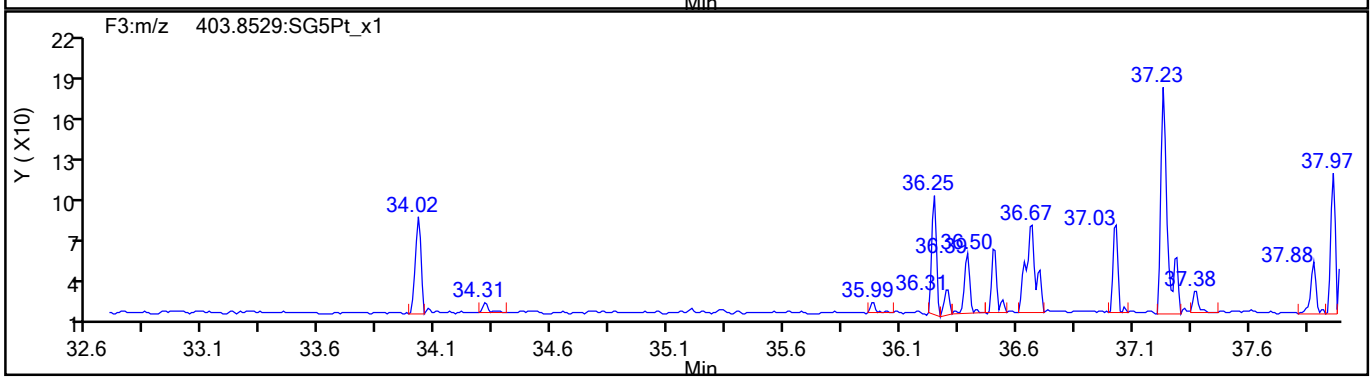

783533

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

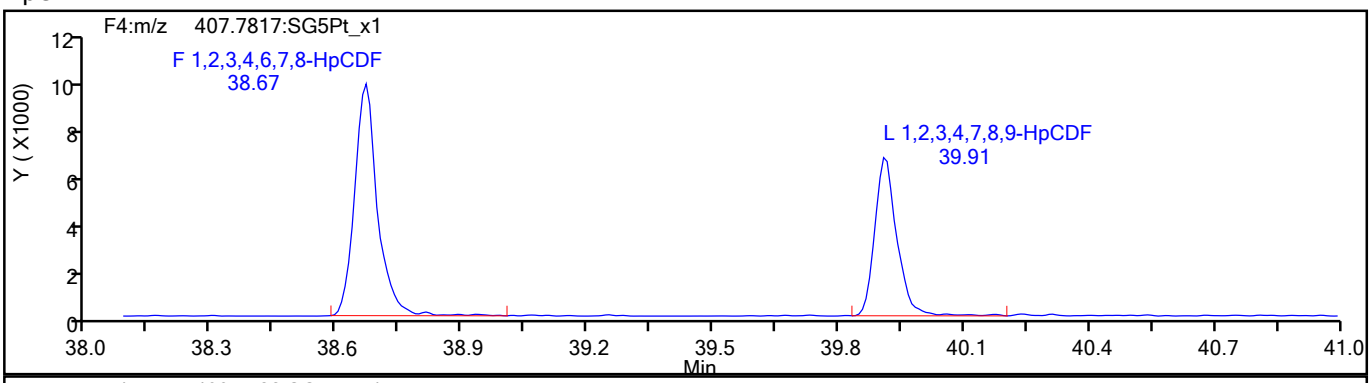

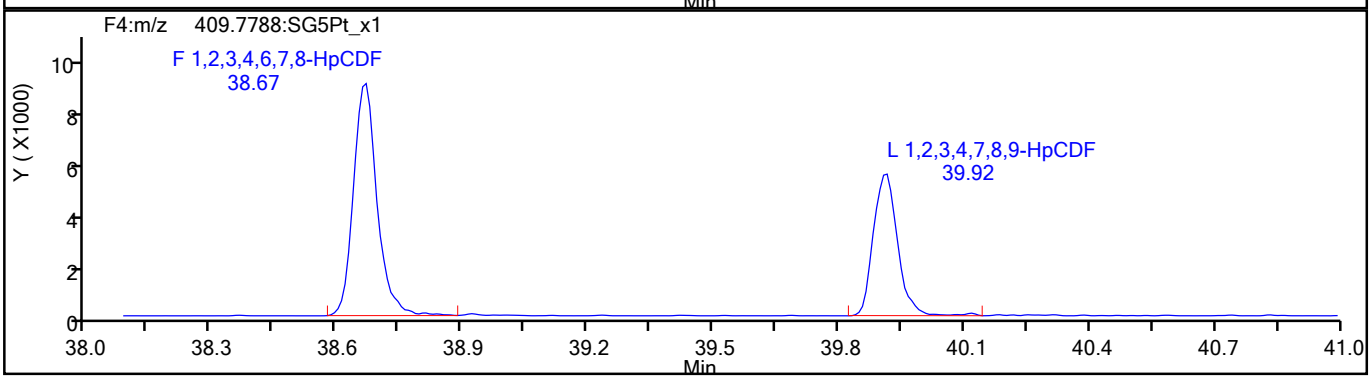

HpCDF Standards

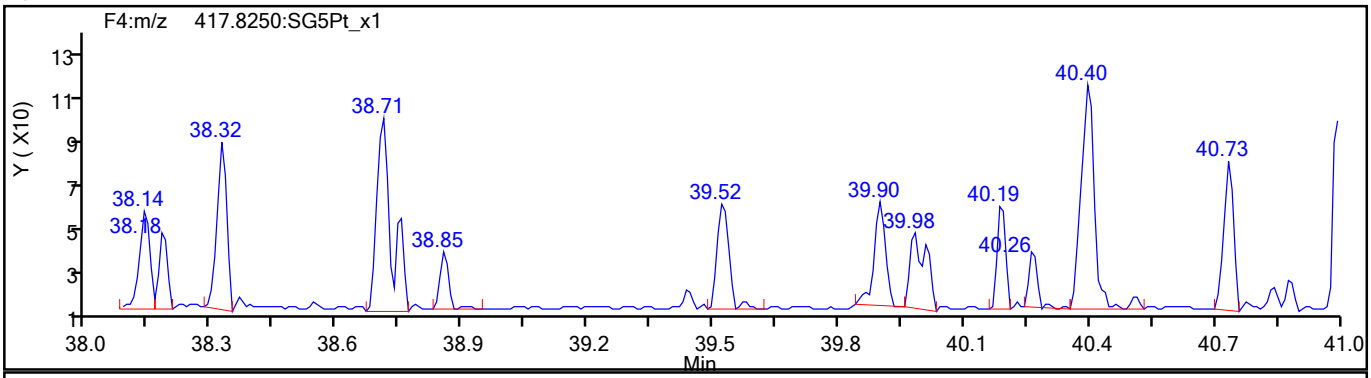

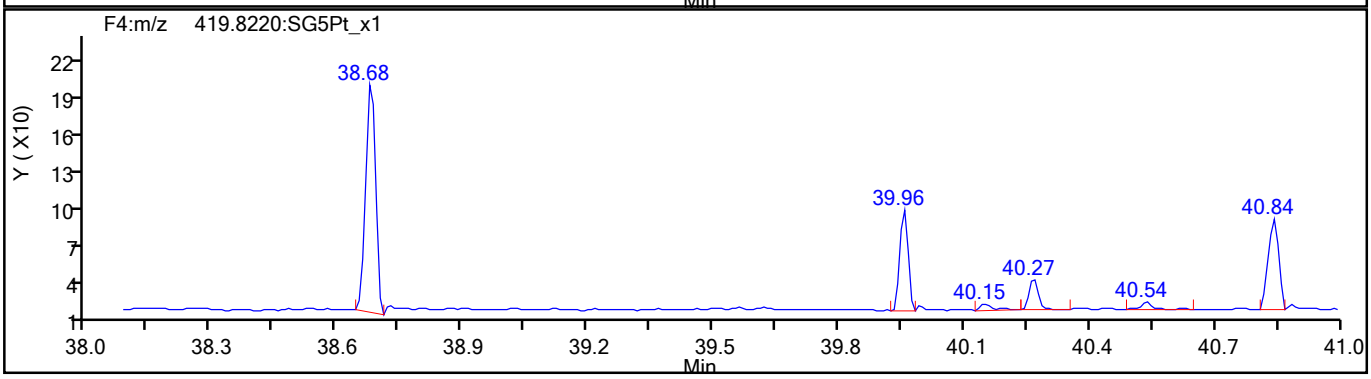

783534

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

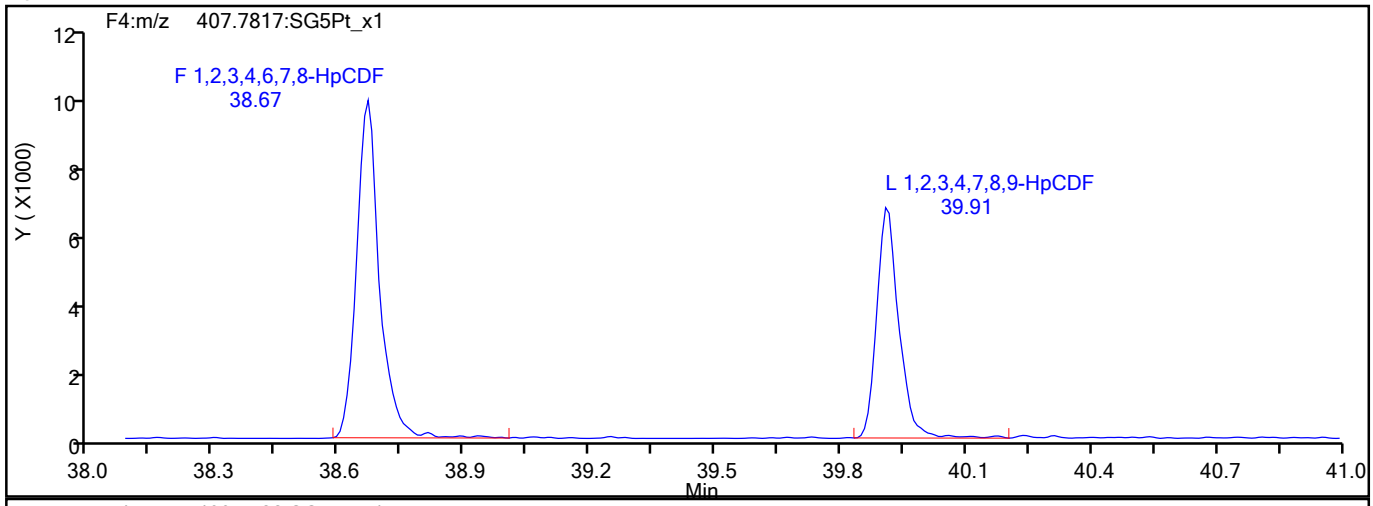

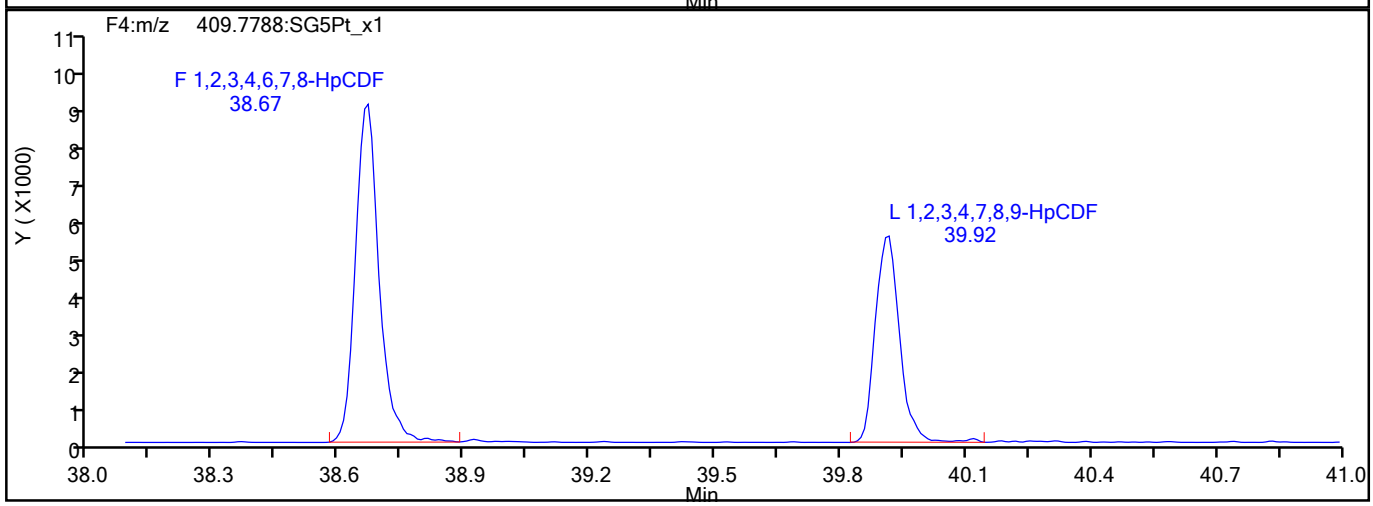

HpCDF Interference Mass

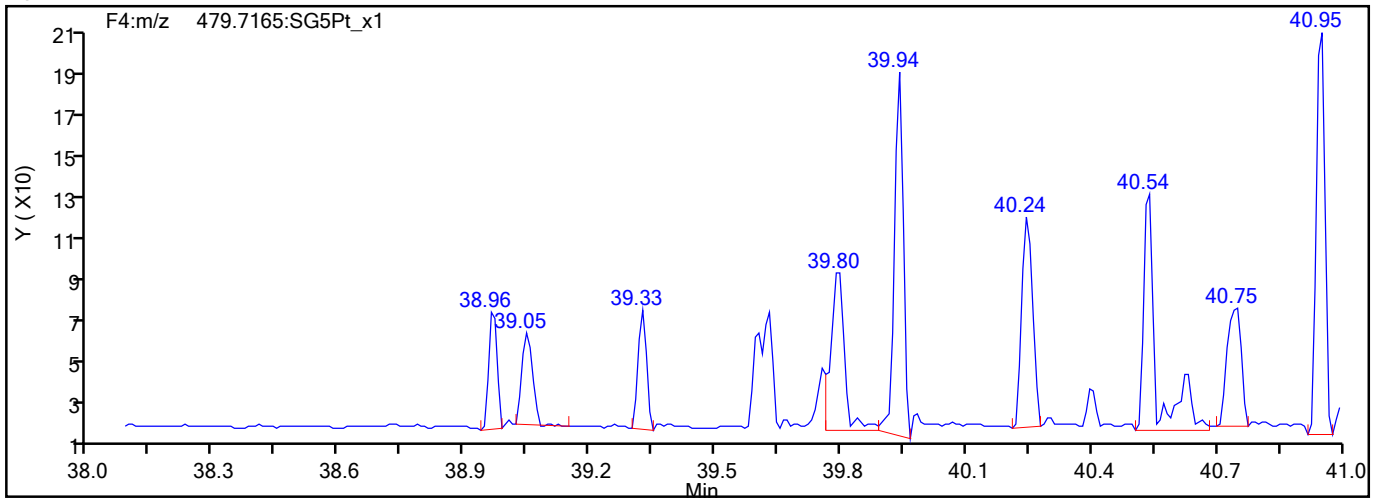

783535

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

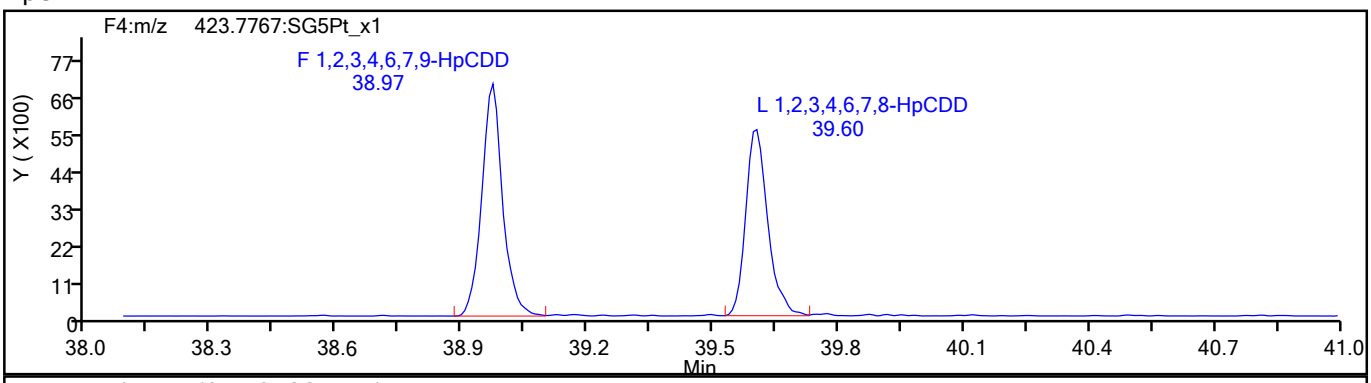

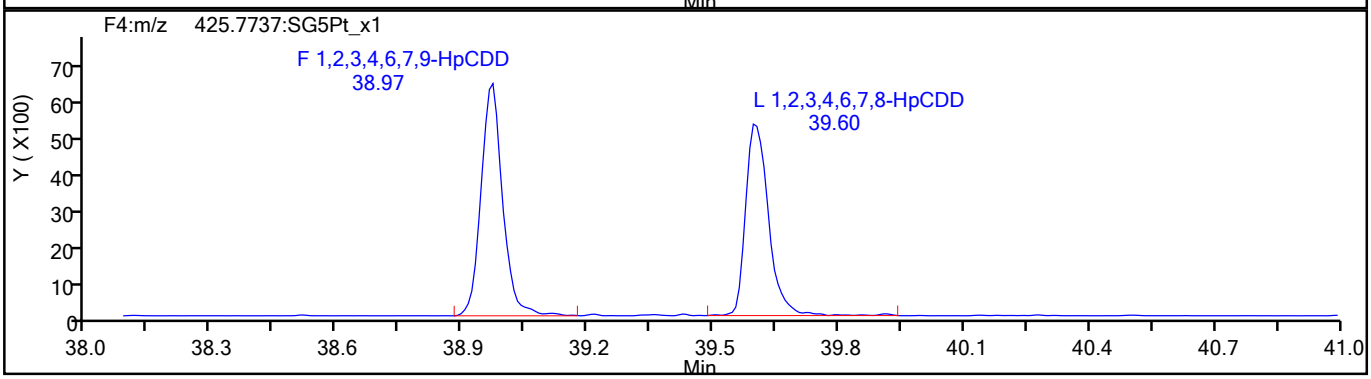

HpCDD Standards

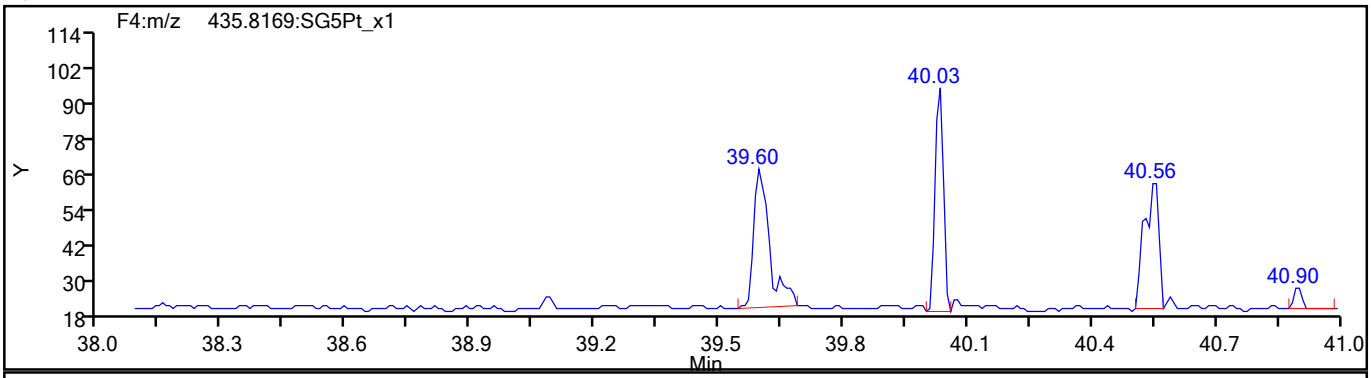

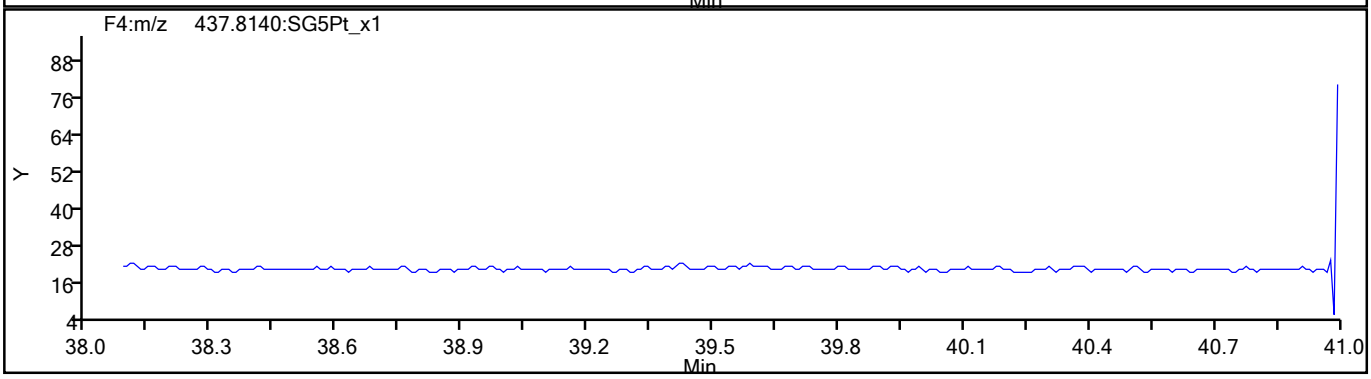

783536

Report Date: 19-Aug-2021 15:48:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

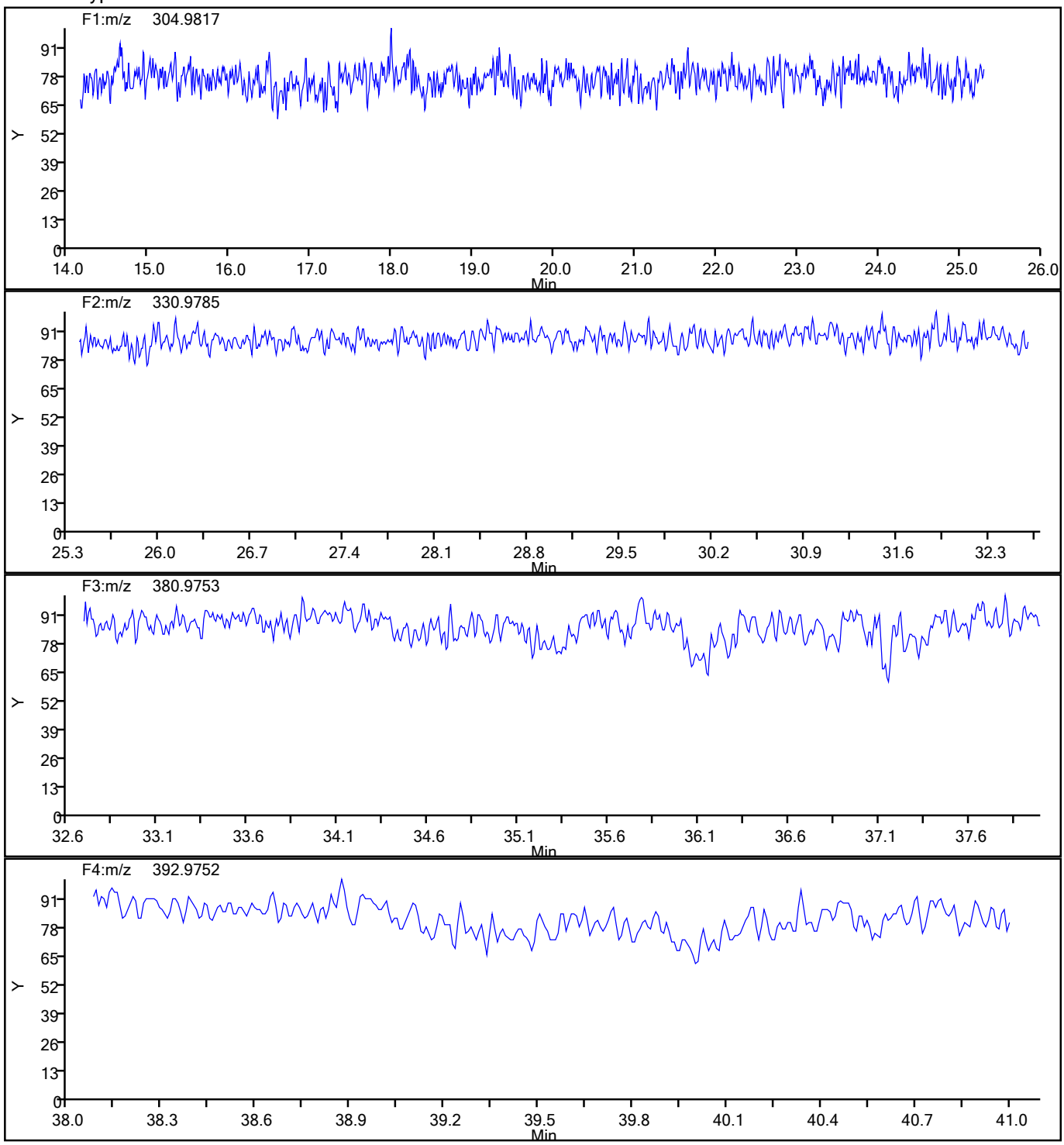

783537

Report Date: 19-Aug-2021 15:48:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

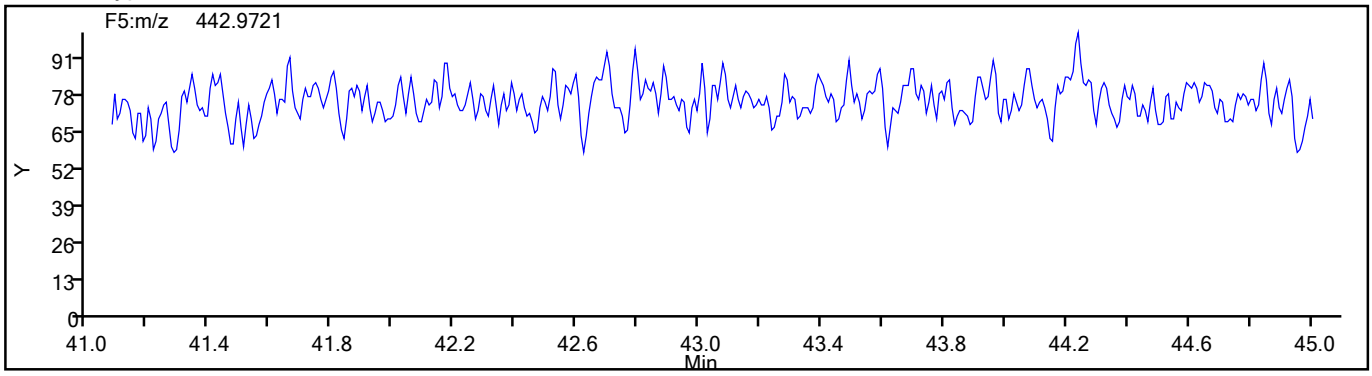

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FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513586/1-A

Matrix: Sediment Lab File ID: 17au21dfs1_5.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10(g) Date Analyzed: 08/17/2021 17:01

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517196 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.031
51207-31-9	2,3,7,8-TCDF	ND		1.0	0.011
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.041
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.026
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.028
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.0	0.034
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.034
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.031
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.015
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.016
72918-21-9	1,2,3,7,8,9-HxCDF	ND		5.0	0.015
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.015
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.198	J	5.0	0.021
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		5.0	0.039
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.037
3268-87-9	OCDD	0.435	J	10	0.035
39001-02-0	OCDF	ND		10	0.061
41903-57-5	Total TCDD	ND		1.0	0.031
30402-14-3	Total TCDF	ND		1.0	0.13
36088-22-9	Total PeCDD	ND		5.0	0.16
30402-15-4	Total PeCDF	ND		5.0	0.028
34465-46-8	Total HxCDD	ND		5.0	0.16
55684-94-1	Total HxCDF	ND		5.0	0.036
37871-00-4	Total HpCDD	0.357	J	5.0	0.021
38998-75-3	Total HpCDF	ND		5.0	0.039

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513586/1-A

Matrix: Sediment Lab File ID: 17au21dfs1_5.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10(g) Date Analyzed: 08/17/2021 17:01

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517196 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	57		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	61		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	65		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	65		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	60		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	74		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	64		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	61		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	61		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	72		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	65		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	78		26-138
114423-97-1	13C-OCDD	76		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	68		35-197

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d
Lims ID: MB 320-513586/1-A
Client ID:
Sample Type: MB
Inject. Date: 17-Aug-2021 17:01:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513586/1-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:08:49 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 18:32:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.495	799097	0.80	2.1E+04	100.0	100.0				
2,3,7,8-TCDF	20.533						0.005480	0.005480		MU
D 13C-2,3,7,8-TCDF	20.533	613921	0.82	1.3459	57.1	57.1	0.1280	0.1280	57.08	
A Non-2,3,7,8-sub-TCDF	19.916						0.005480	0.0627		RQMU
S Total TCDF							0.0627	0.0627		
D 13C-2,3,7,8-TCDD	21.864	441482	0.78	0.9317	59.3	59.3	0.1206	0.1206	59.30	
2,3,7,8-TCDD	21.899						0.0157	0.0157		U
$ 37Cl4-2,3,7,8-TCDD	21.907	219939		1.0083	27.3	27.3	0.0155	0.0155	68.24	
A Non-2,3,7,8-sub-TCDD	20.750						0.0157	0.0157		RQU
S Total TCDD							0.0157	0.0157		
D 13C-1,2,3,7,8-PeCDF	27.350	557472	1.51	1.1405	61.2	61.2	0.2141	0.2141	61.17	
1,2,3,7,8-PeCDF	27.401						0.0130	0.0130		
D 13C-2,3,4,7,8-PeCDF	28.859	583289	1.60	1.1253	64.9	64.9	0.2170	0.2170	64.86	
2,3,4,7,8-PeCDF	28.934						0.0142	0.0142		
A F1 PeCDFs	24.676						0.005660	0.005660		
A Non-2,3,7,8-sub-PeCDF	28.167						0.0136	0.0136		
S Total PeCDF							0.0142	0.0142		
D 13C-1,2,3,7,8-PeCDD	29.675	334387	1.53	0.7165	58.4	58.4	0.0836	0.0836	58.41	
1,2,3,7,8-PeCDD	29.734						0.0203	0.0203		RQU
A Non-2,3,7,8-sub-PeCDD	28.556						0.0203	0.0777		RQU
S Total PeCDD							0.0777	0.0777		
D 13C-1,2,3,4,7,8-HxCDF	34.986	562635	0.53	0.9648	74.0	74.0	0.2255	0.2255	74.01	
1,2,3,4,7,8-HxCDF	35.028						0.007677	0.007677		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.146	535930	0.52	1.0708	63.5	63.5	0.2032	0.2032	63.52	
1,2,3,6,7,8-HxCDF	35.028						0.008144	0.008144		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.963	499899	0.53	1.0413	60.9	60.9	0.2089	0.2089	60.92	
2,3,4,6,7,8-HxCDF	36.148						0.007599	0.007599		RQU
D 13C-1,2,3,7,8,9-HxCDF	36.856	469783	0.53	0.9731	61.3	61.3	0.2236	0.2236	61.27	
1,2,3,7,8,9-HxCDF	37.025						0.007441	0.007441		RQU
A Non-2,3,7,8-sub-HxCDF	35.074						0.007701	0.0180		RQU
S Total HxCDF							0.0180	0.0180		
* 13C-1,2,3,7,8,9-HxCDD	36.654	787976	1.29	1.8E+04	100.0	100.0				

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-1,2,3,4,7,8-HxCDD	36.174	391222	1.29	0.7587	65.4	65.4	0.1682	0.1682	65.44	
1,2,3,4,7,8-HxCDD	36.182						0.0168	0.0168		U
D 13C-1,2,3,6,7,8-HxCDD	36.283	409175	1.25	0.8593	60.4	60.4	0.1485	0.1485	60.43	
1,2,3,6,7,8-HxCDD	36.182						0.0170	0.0170		U
1,2,3,7,8,9-HxCDD	36.684						0.0156	0.0156		
A Non-2,3,7,8-sub-HxCDD	35.432						0.0164	0.0822		RQU
S Total HxCDD							0.0822	0.0822		
D 13C-1,2,3,4,6,7,8-HpCDF	38.669	378902	0.49	0.7359	65.3	65.3	0.3017	0.3017	65.34	
1,2,3,4,6,7,8-HpCDF	38.686						0.0193	0.0193		RQU
1,2,3,4,7,8,9-HpCDF	40.043						0.0187	0.0187		RQU
D 13C-1,2,3,4,7,8,9-HpCDF	39.916	420192	0.49	0.6854	77.8	77.8	0.3240	0.3240	77.80	
A Non-2,3,7,8-sub-HpCDF	39.277						0.0189	0.0189		
S Total HpCDF							0.0193	0.0193		
D 13C-1,2,3,4,6,7,8-HpCDD	39.604	381174	1.05	0.6745	71.7	71.7	0.2350	0.2350	71.72	
1,2,3,4,6,7,8-HpCDD	39.613	397	1.04	1.0503	0.1097	0.0992	0.0107	0.0107		RQM
A Non-2,3,7,8-sub-HpCDD	39.277	318	1.04	1.0503	0.1034	0.0794	0.0107	0.0794		RQ
S Total HpCDD					0.2131	0.1786	0.0107	0.0107		RQ
D 13C-OCDD	42.111	656031	0.92	0.5446	152.9	152.9	0.1569	0.1569	76.43	
OCDF	42.170						0.0304	0.0304		RQU
OCDD	42.119	757	0.89	1.0620	0.2701	0.2173	0.0177	0.0177		RQM

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d
Lims ID: MB 320-513586/1-A
Client ID:
Sample Type: MB
Inject. Date: 17-Aug-2021 17:01:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513586/1-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:08:49 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 18:32:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.495	21.483	1		354691	47564	32	80	1486		
333.9338	21.486	21.483	0		444406	60975	17	42	3587	0.80(0.65-0.89)	
2,3,7,8-TCDF											MU
303.9016	20.482						1	2			
305.8987	20.482						1	2			
13C-2,3,7,8-TCDF											
315.9419	20.533	20.594	-4	0.955	276238	38140	51	127	748		
317.9389	20.533	20.594	-4	0.955	337683	46326	24	60	1930	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											MU
303.9016	17.312	19.916	-156	0.843	28	13	1	2	13		
305.8987	17.355	19.916	-153	0.845	68	44	1	2	44	0.41(0.65-0.89)	
	Empc Correction				36	16	1	2	16		
13C-2,3,7,8-TCDD											
331.9368	21.864	21.790	4	1.017	193397	25177	32	80	787		
333.9338	21.881	21.790	5	1.018	248085	34117	17	42	2007	0.78(0.65-0.89)	
2,3,7,8-TCDD											U
319.8965	21.825						3	7			
321.8936	21.825						1	2			
37Cl4-2,3,7,8-TCDD											
327.8847	21.907	21.905	0	1.019	219939	28238	7	17	4034		
A Non-2,3,7,8-sub-TCDD											U
319.8965	20.750	20.750	0	0.949	48	23	3	7			
	Empc Correction				30	19	3	7	0		
321.8936	20.750	20.750	0	0.949	40	25	1	2		1.20(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	27.350	27.343	0	1.272	335540	53824	58	145	928		
353.8970	27.350	27.343	0	1.272	221932	33777	48	120	704	1.51(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.368						1	2			
341.8567	27.368						4	10			
13C-2,3,4,7,8-PeCDF											
351.9000	28.859	28.867	0	1.343	359159	51112	58	145	881		
353.8970	28.875	28.867	1	1.343	224130	32642	48	120	680	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.884						1	2			
341.8567	28.884						4	10			
A F1 PeCDFs											
339.8597	24.676						1	2			
341.8567	24.676						1	2			
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.167						1	2			
341.8567	28.167						4	10			
13C-1,2,3,7,8-PeCDD											
367.8949	29.675	29.667	0	1.381	202336	27337	16	40	1709		
369.8919	29.684	29.667	1	1.381	132051	19768	10	25	1977	1.53(1.32-1.78)	
1,2,3,7,8-PeCDD											RQU
355.8546	29.692						3	7			
357.8516	29.692						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.556	28.556	0	0.962	304	118	3	7			
	Empc Correction				210	84	3	7	0		
357.8516	28.556	28.556	0	0.962	156	68	1	2		1.95(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.986	34.974	1	0.954	195123	37085	54	135	687		
385.8610	34.986	34.974	1	0.954	367512	76444	101	252	757	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	35.000						2	5			
375.8178	35.000						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.146	35.134	1	0.959	184147	34968	54	135	648		
385.8610	35.154	35.134	1	0.959	351783	65864	101	252	652	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.151						2	5			
375.8178	35.151						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.963	35.951	1	0.981	172829	38826	54	135	719		
385.8610	35.963	35.951	1	0.981	327070	69530	101	252	688	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQU
373.8208	35.968						2	5			
375.8178	35.968						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.856	36.843	1	1.006	163509	37541	54	135	695		
385.8610	36.848	36.843	0	1.005	306274	70829	101	252	701	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQU
373.8208	36.852						2	5			
375.8178	36.852						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.529	35.074	-93	0.958	61	31	2	5	16		
375.8178	33.571	35.074	-90	0.960	51	23	2	5	12	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.654	36.641	1		443438	99421	59	147	1685		
403.8529	36.654	36.641	1		344538	78478	32	80	2452	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.174	36.161	1	0.987	220623	48424	59	147	821		
403.8529	36.182	36.161	1	0.987	170599	35600	32	80	1113	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											U
389.8158	36.178						3	7			
391.8127	36.178						3	7			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.283	36.279	0	0.990	227133	50882	59	147	862		
403.8529	36.283	36.279	0	0.990	182042	38077	32	80	1190	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											U
389.8158	36.296						3	7			
391.8127	36.296						3	7			
1,2,3,7,8,9-HxCDD											
389.8158	36.658						3	7			
391.8127	36.658						3	7			
A Non-2,3,7,8-sub-HxCDD											U
389.8158	35.053	35.432	-23	0.966	183	48	3	7	16		
391.8127	35.062	35.432	-22	0.966	164	56	3	7	19	1.12(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.669	38.647	1	1.055	124116	30519	63	157	484		
419.8220	38.661	38.647	1	1.055	254786	66630	95	237	701	0.49(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQU
407.7817	38.654						9	22			
409.7788	38.654						2	5			
1,2,3,4,7,8,9-HpCDF											RQU
407.7817	39.900						9	22			
409.7788	39.900						2	5			
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.916	39.901	1	1.089	138143	37432	63	157	594		
419.8220	39.916	39.901	1	1.089	282049	73073	95	237	769	0.49(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.277						9	22			
409.7788	39.277						2	5			

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.604	39.590	1	1.080	195625	54023	53	132	1019		
437.8140	39.604	39.590	1	1.080	185549	52645	60	150	877	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											RQM
423.7767	39.613	39.597	1	1.000	244	64	4	10	16		M
	Empc Correction				202	77	4	10	19		
425.7737	39.621	39.597	1	1.000	195	75	1	2	75	1.25(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.989	39.277	-17	0.984	258	73	4	10	18		
	Empc Correction				162	42	4	10	11		
425.7737	38.964	39.277	-19	0.984	156	41	1	2	41	1.65(0.88-1.20)	
13C-OCDD											
469.7780	42.111	42.094	1	1.149	314902	77358	24	60	3223		
471.7750	42.111	42.094	1	1.149	341129	82612	37	92	2233	0.92(0.76-1.02)	
OCDF											RQU
441.7428	42.187						2	5			
443.7399	42.187						11	27			
OCDD											RQM
457.7377	42.119	42.103	1	1.000	540	229	3	7	76		M
	Empc Correction				356	164	3	7	55		
459.7348	42.119	42.103	1	1.000	401	185	3	7	62	1.35(0.76-1.02)	M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	613921	84466

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	613921	84466

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.312	28	13	68	44	0.0145	0.41	RQ
17.312	28	13	36	16	0.009651		Empc Correction
18.815	37	23	79	16	0.0175	0.47	RQ
18.815	37	23	48	29	0.0128		Empc Correction
19.253	9	7	53	21	0.009349	0.17	RQ
19.253	9	7	11	9	0.003016		Empc Correction
19.820	181	83	291	94	0.0712	0.62	RQ
19.820	181	83	235	107	0.0627		Empc Correction
19.863	92	55	104	72	0.0296	0.88	
20.645	94	53	64	39	0.0238	1.47	RQ
20.645	49	30	64	39	0.0170		Empc Correction
20.928	31	18	31	19	0.009349	1.00	RQ
20.928	23	14	31	19	0.008143		Empc Correction
23.547	26	13	31	15	0.008595	0.84	

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	441482	59294

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	441482	59294

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.122	48	23	40	25	0.0185	1.20	RQ
22.122	30	19	40	25	0.0147		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDD, RT: 28.556

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	334387	47105

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	334387	47105

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
28.791	42	25	12	7	0.0154	3.50	RQ
28.791	18	10	12	7	0.008573		Empc Correction
28.993	27	14	37	22	0.0183	0.73	RQ
28.993	27	14	17	9	0.0126		Empc Correction
30.307	235	79	107	39	0.0977	2.20	RQ
30.307	165	60	107	39	0.0777		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	562635	113529
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	535930	100832
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	499899	108356
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	469783	108370

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	517061	107771

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.529	61	31	51	23	0.0180	1.20	
36.308	89	40	34	21	0.0197	2.62	RQ
36.308	42	26	34	21	0.0122		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	391222	84024
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	409175	88959
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	400198	86491

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.053	183	48	164	56	0.0822	1.12	
35.963	128	44	157	22	0.0675	0.82	RQ
35.963	128	44	103	35	0.0547		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDF, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	378902	97149
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	420192	110505

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	399547	103827

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
Signal Totals:							
	0	0	0	0			

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	381174	106668

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	381174	106668

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.989	258	73	156	41	0.1034	1.65	RQ
38.989	162	42	156	41	0.0794		Empc Correction
Signal Totals:							
	162	42	156	41			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	414	114				1.65	RQ
	318	83					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.1034 = (414 * 100.000) / (381174 * 1.050)

Empc Amount: 0.0794 = (318 * 100.000) / (381174 * 1.050)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 3

Processing Integration Results

RT: 39.61
Area: 310
Amount: 0.077433
Amount Units: pg/ul

Manual Integration Results

RT: 39.61
Area: 439
Amount: 0.109655
Amount Units: pg/ul
Reviewer: dadunj, 19-Aug-2021 12:07:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 39.61
Area: 153
Amount: 0.077433
Amount Units: pg/ul

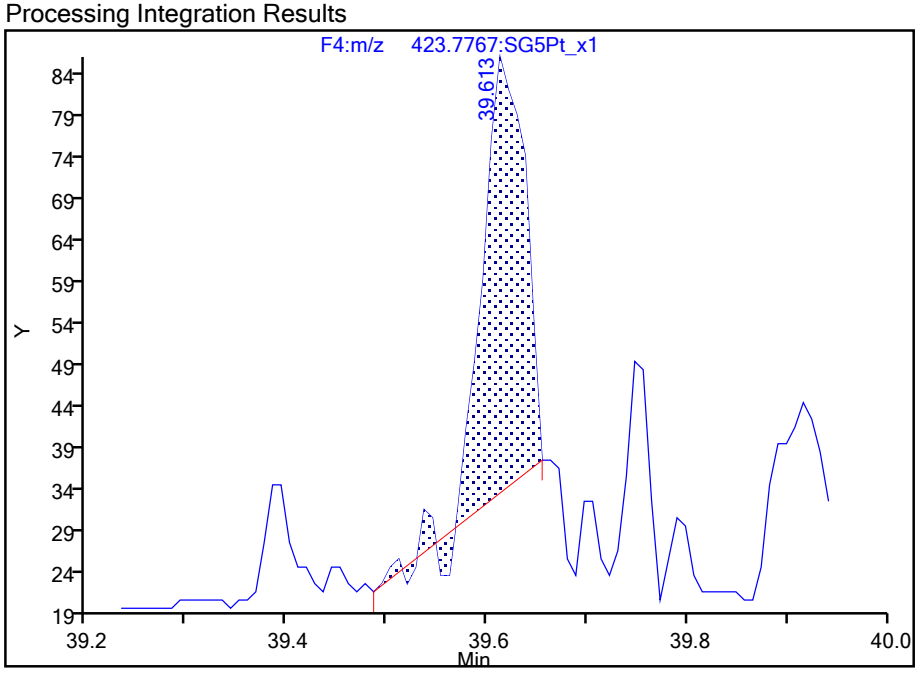

Manual Integration Results

RT: 39.61
Area: 244
Amount: 0.109655
Amount Units: pg/ul

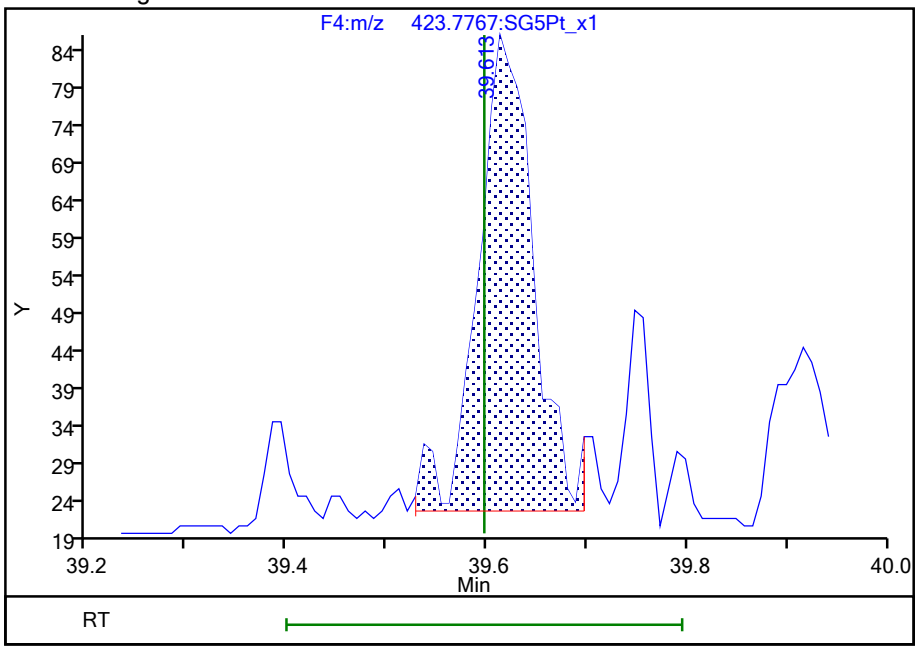

Reviewer: dadunj, 19-Aug-2021 12:07:16

Audit Action: Manually Integrated Audit Reason: Baseline

783555

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 39.62
Area: 157
Amount: 0.077433
Amount Units: pg/ul

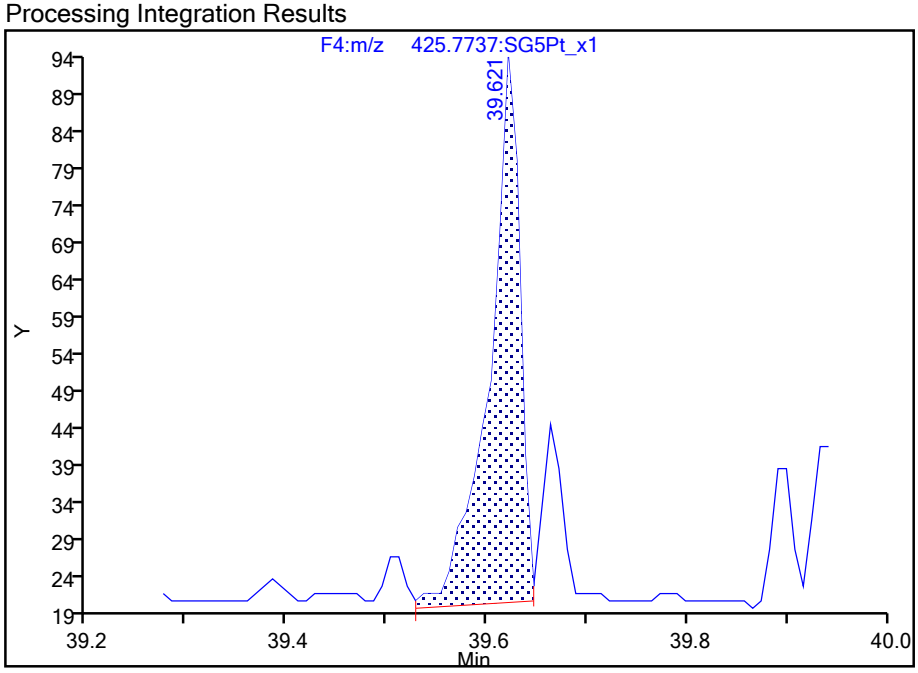

Manual Integration Results

RT: 39.62
Area: 195
Amount: 0.109655
Amount Units: pg/ul

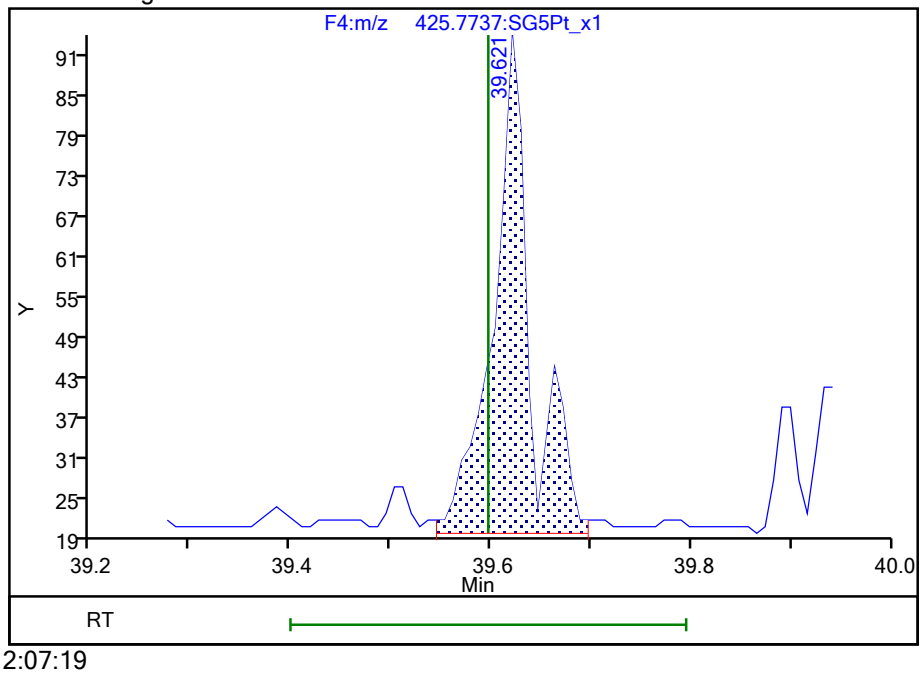

Reviewer: dadunj, 19-Aug-2021 12:07:19

Audit Action: Manually Integrated Audit Reason: Baseline

783556

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 2

Processing Integration Results

RT: 42.12
Area: 542
Amount: 0.343334
Amount Units: pg/ul

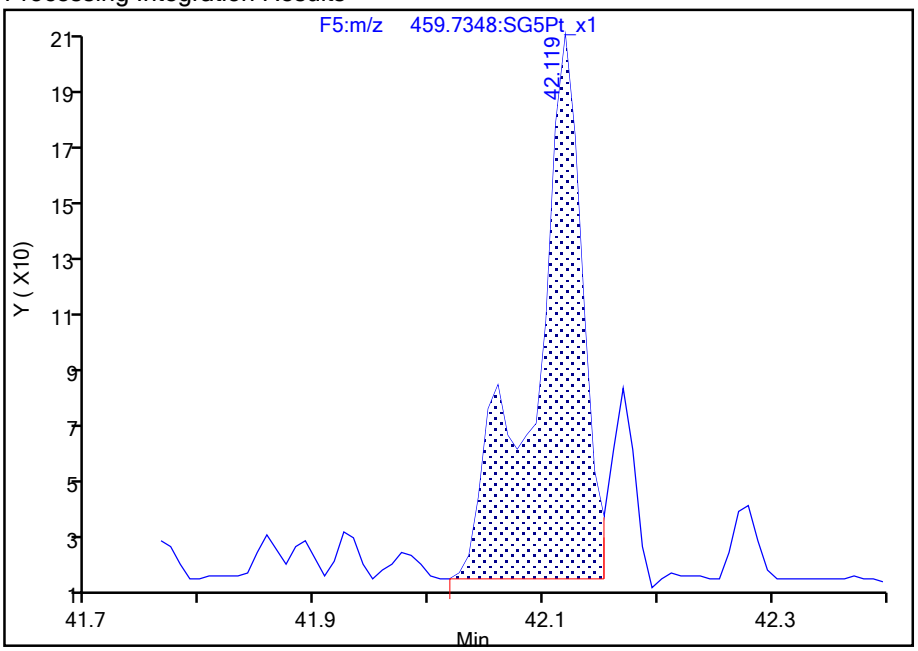

Manual Integration Results

RT: 42.12
Area: 401
Amount: 0.270132
Amount Units: pg/ul

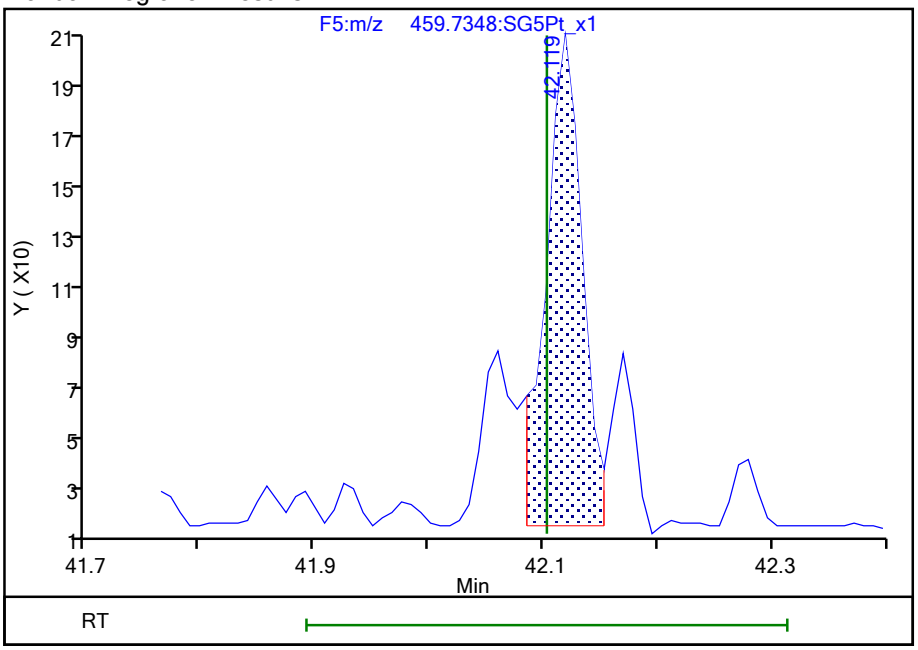

Reviewer: dadunj, 19-Aug-2021 12:07:46

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 42.12
Area: 654
Amount: 0.343334
Amount Units: pg/ul

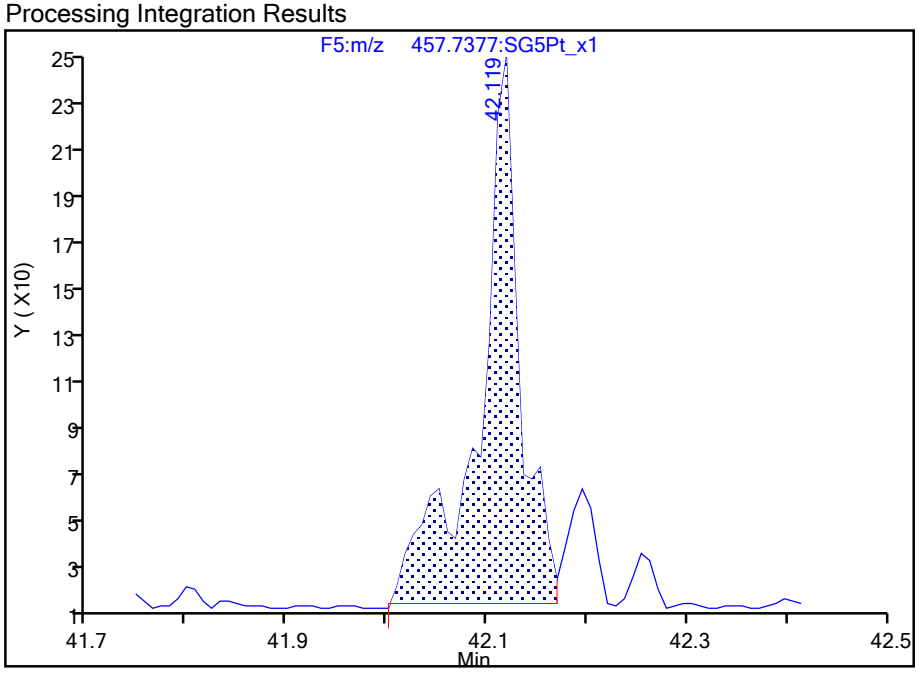

Manual Integration Results

RT: 42.12
Area: 540
Amount: 0.270132
Amount Units: pg/ul

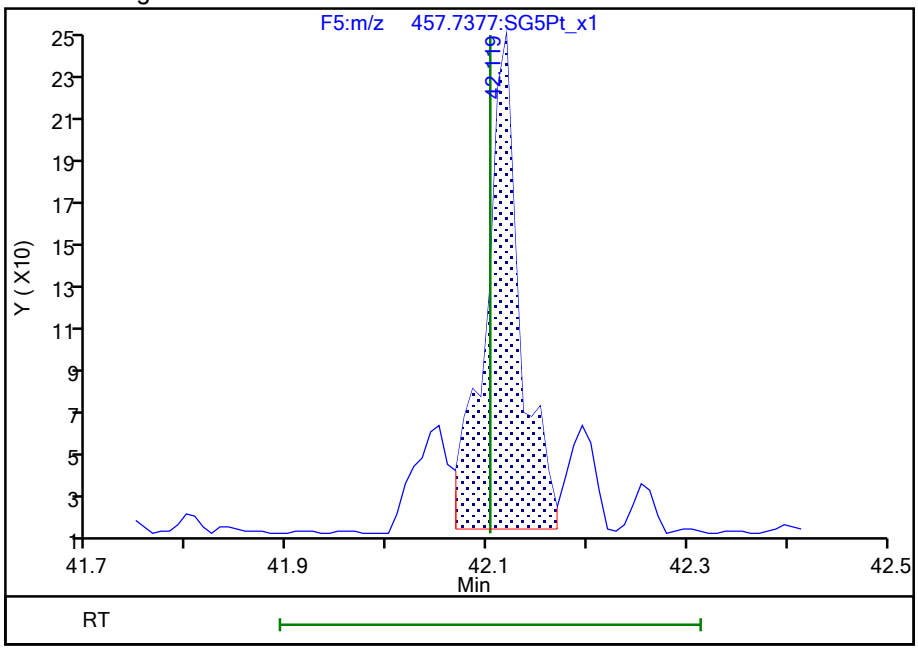

Reviewer: dadunj, 19-Aug-2021 12:07:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

783558

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

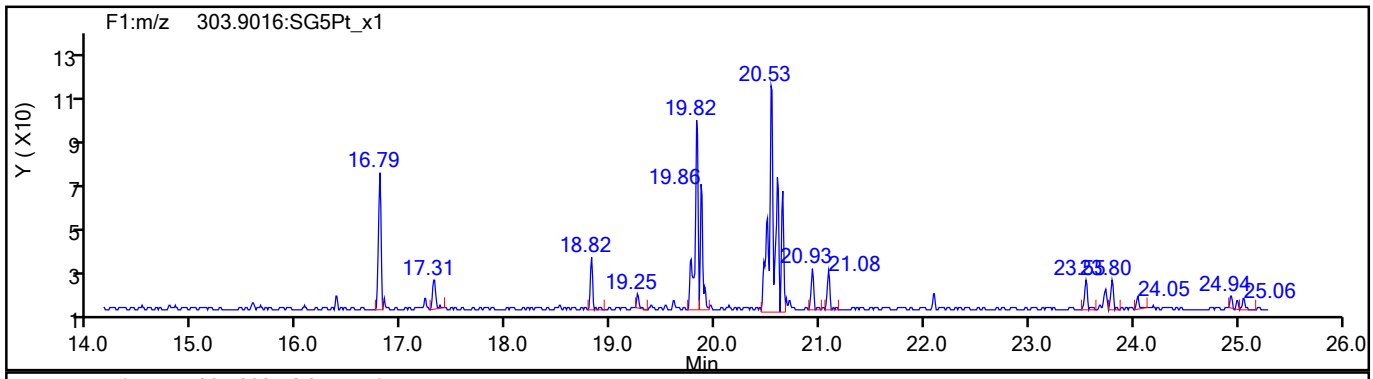

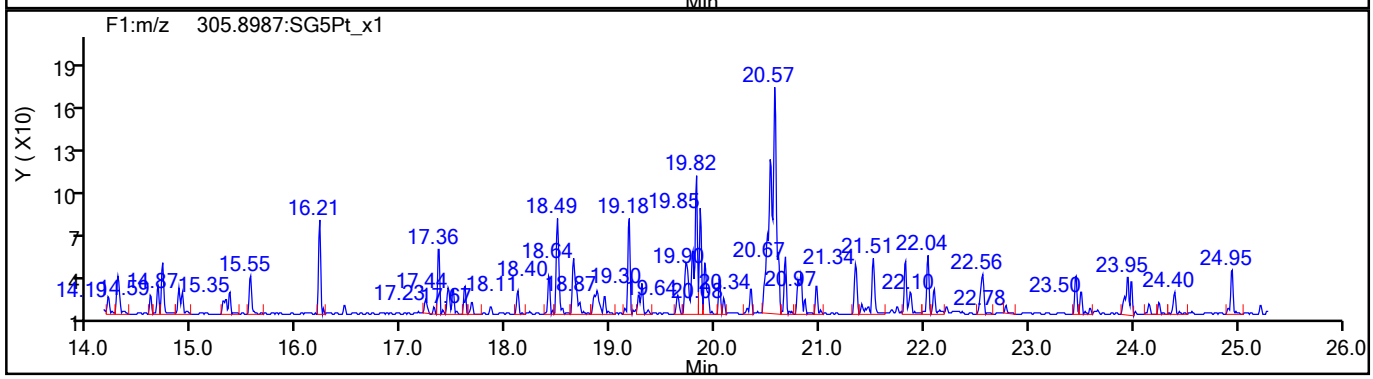

TCDF Standards

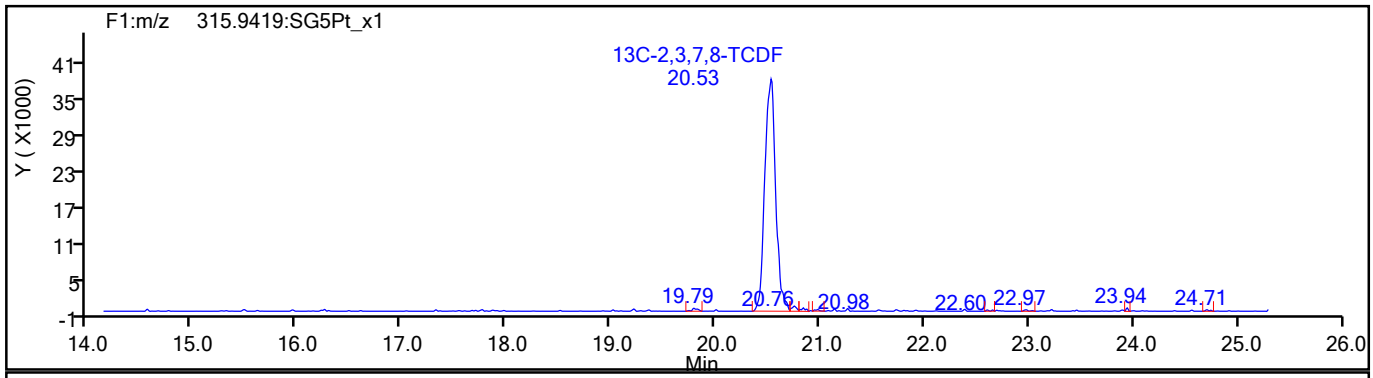

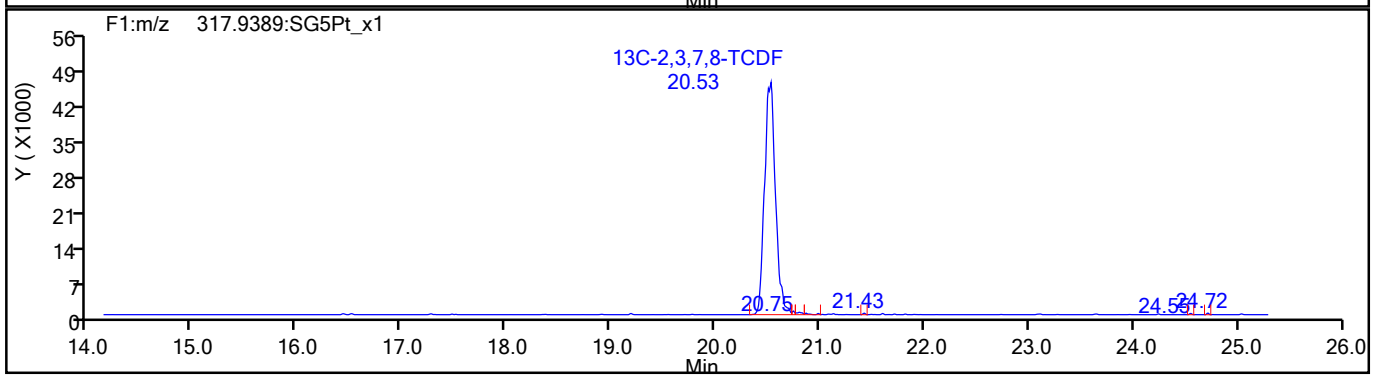

783559

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

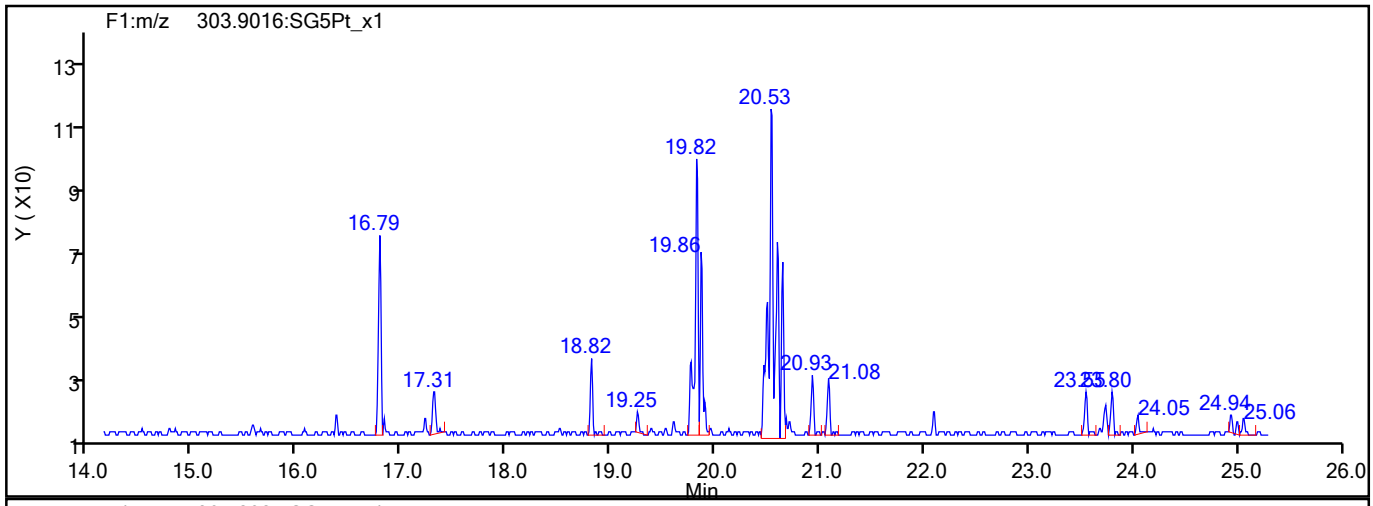

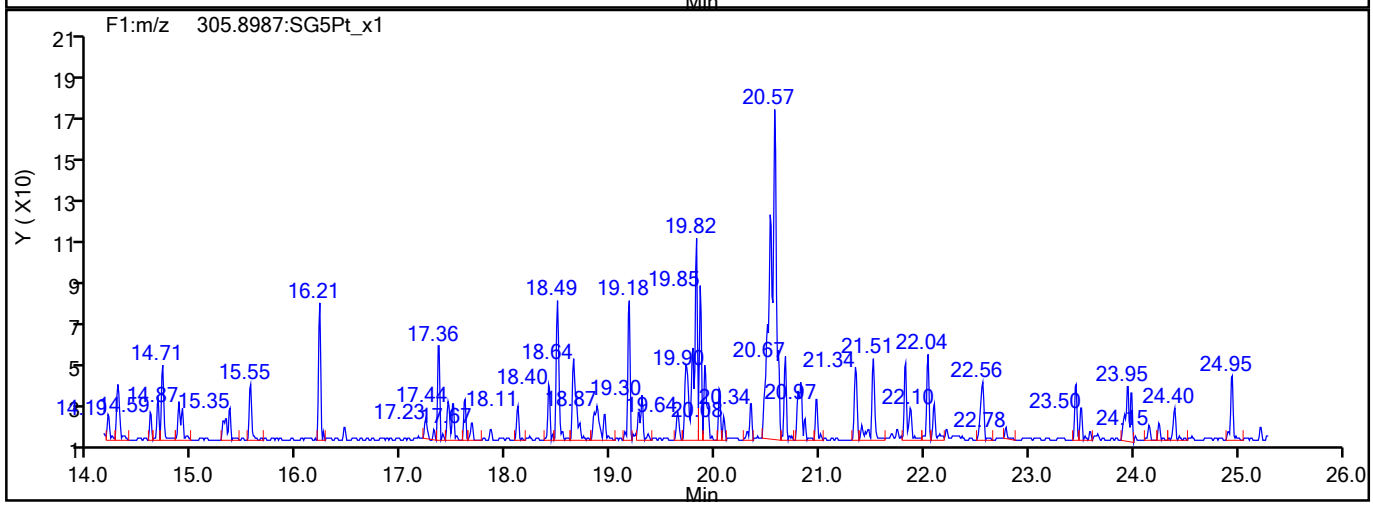

TCDF Interference Mass

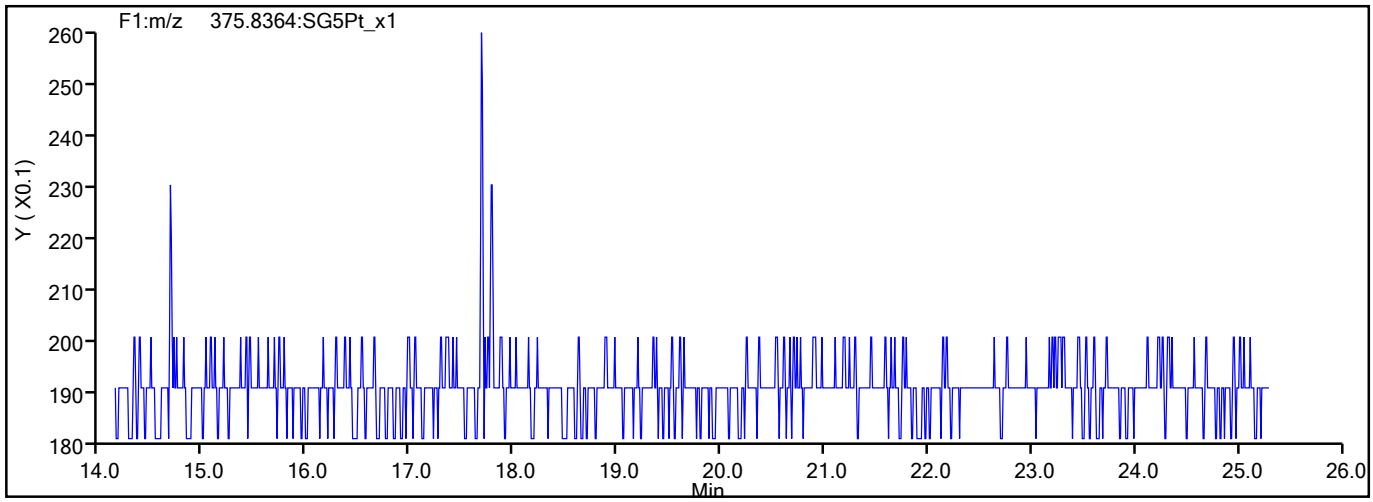

783560

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

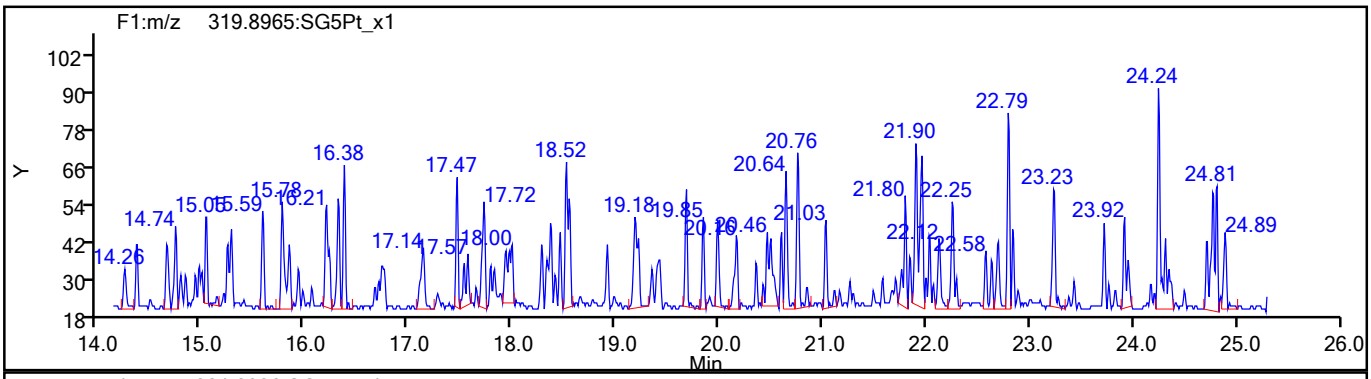

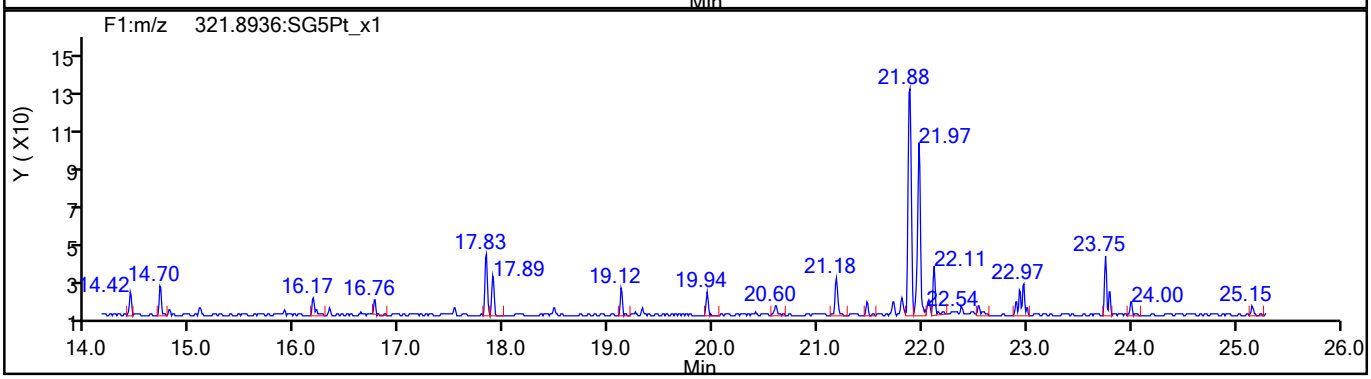

TCDD Standards

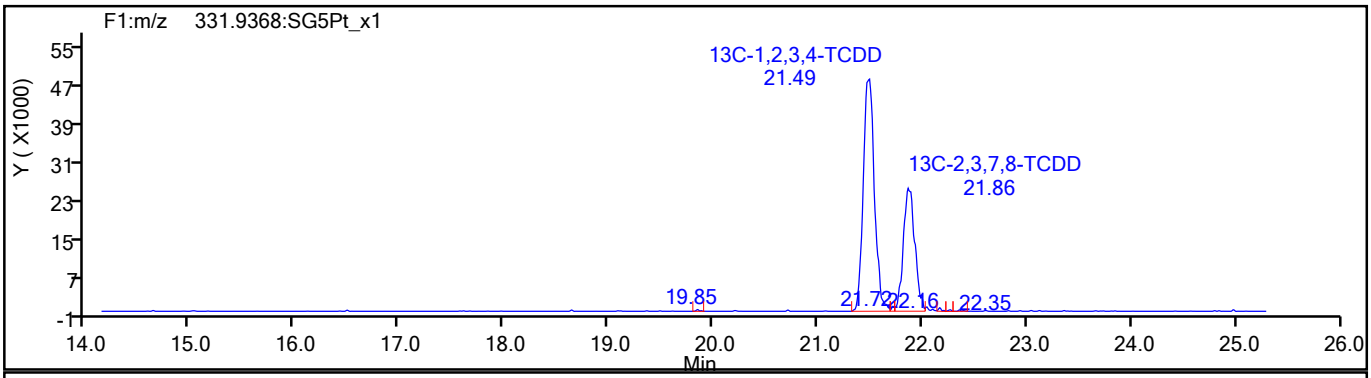

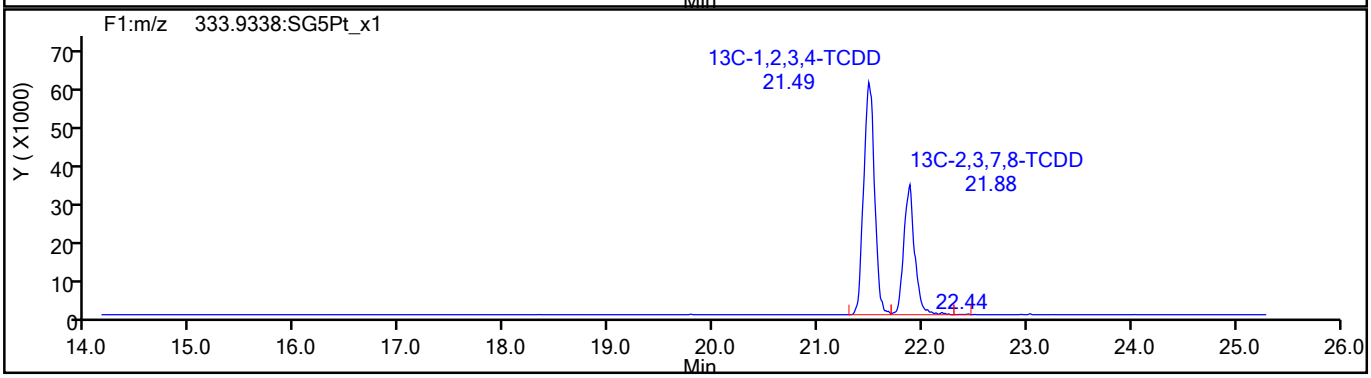

783561

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

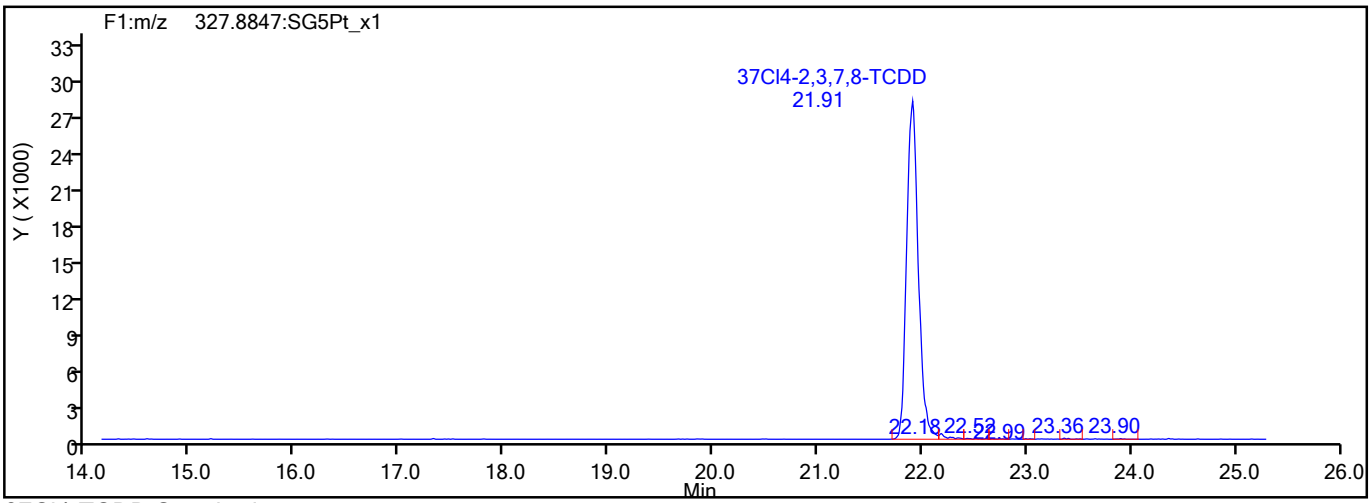

37Cl4-TCDD Standards

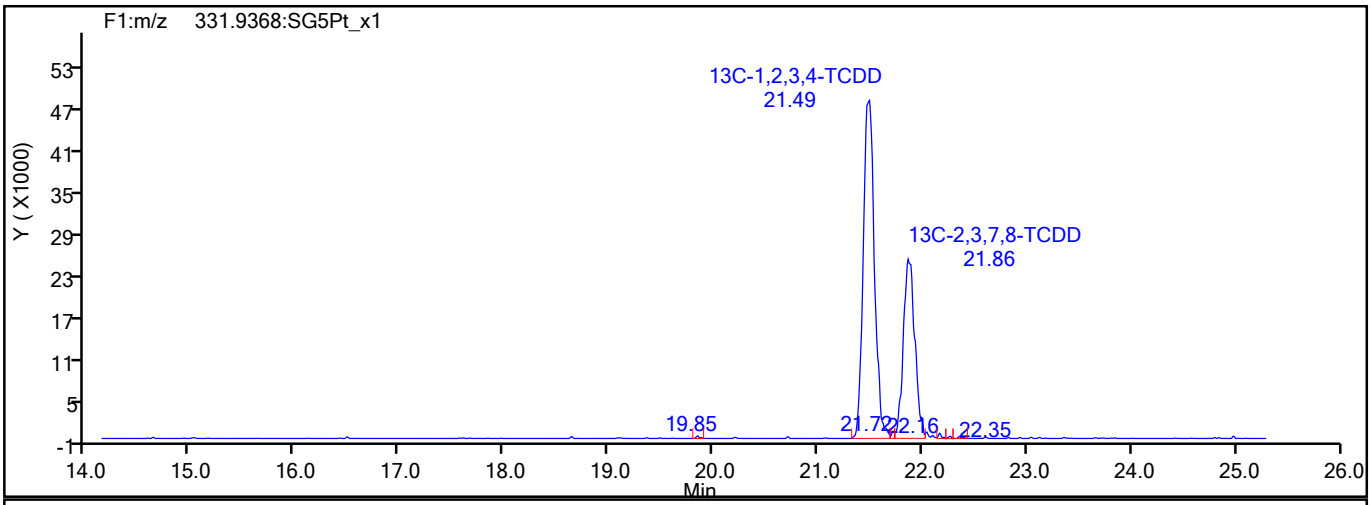

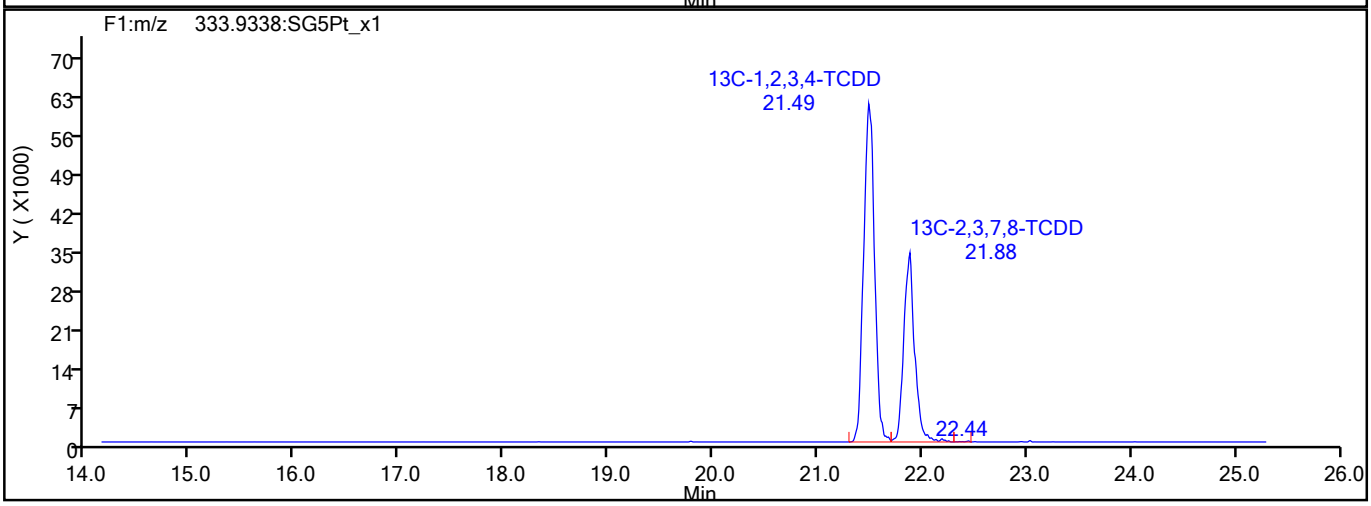

783562

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

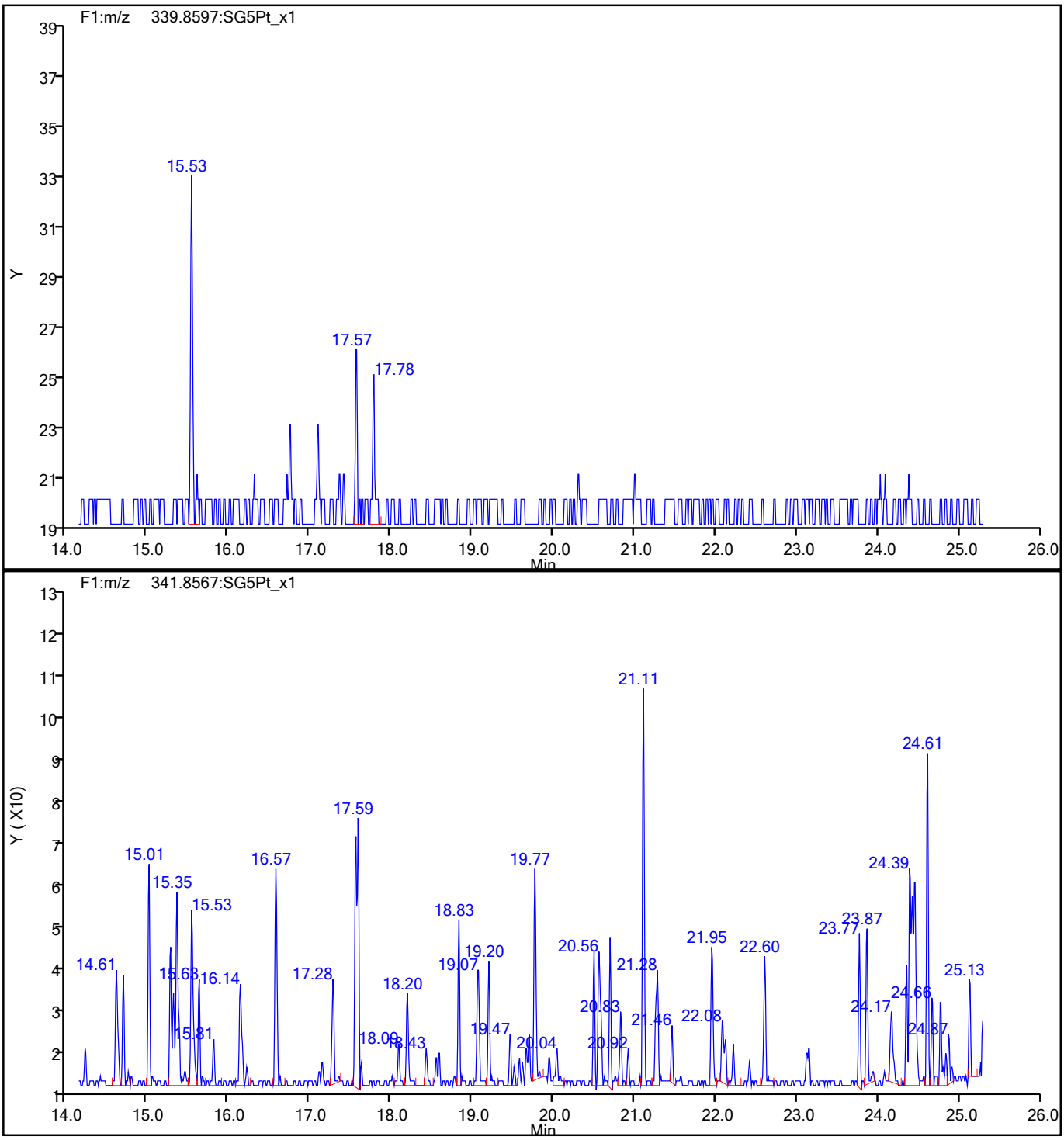

783563

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

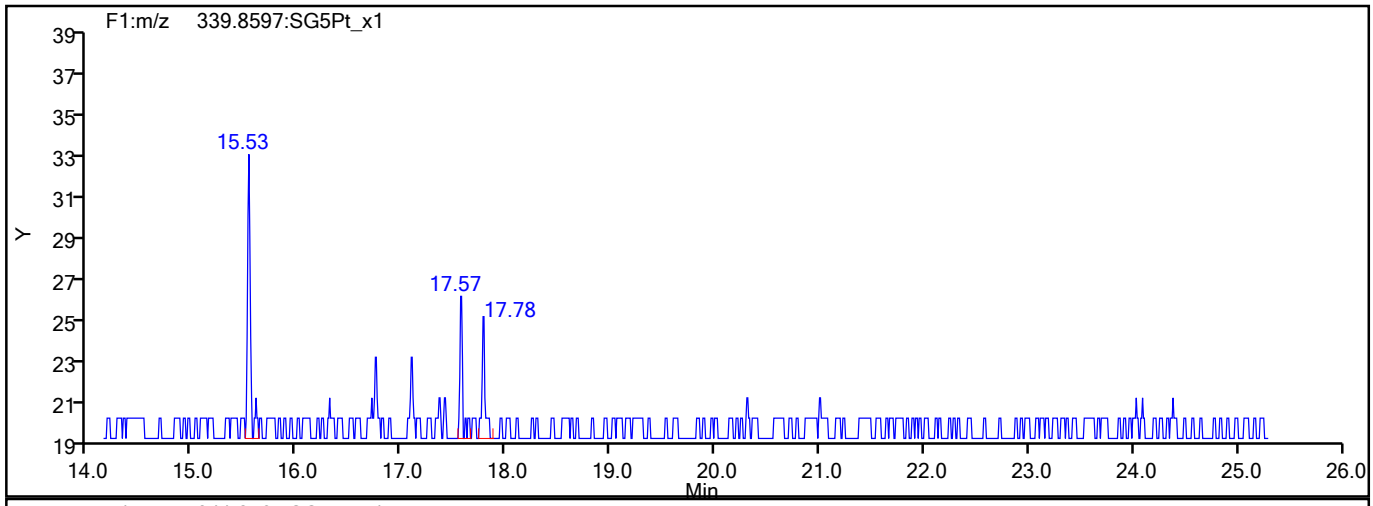

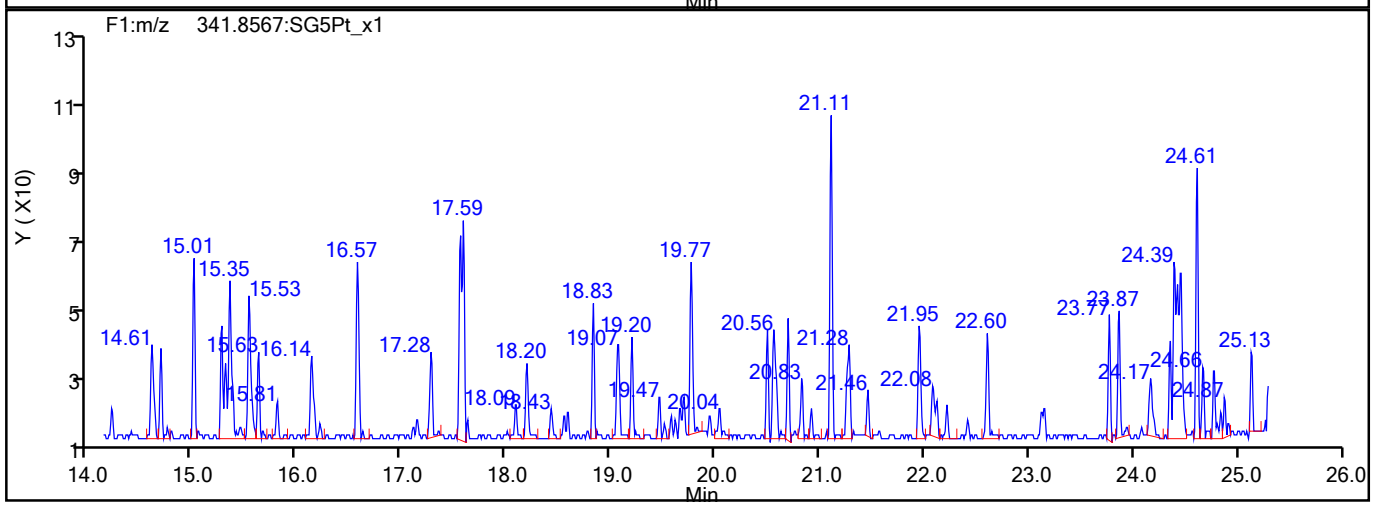

F1 PeCDFs Interference Mass

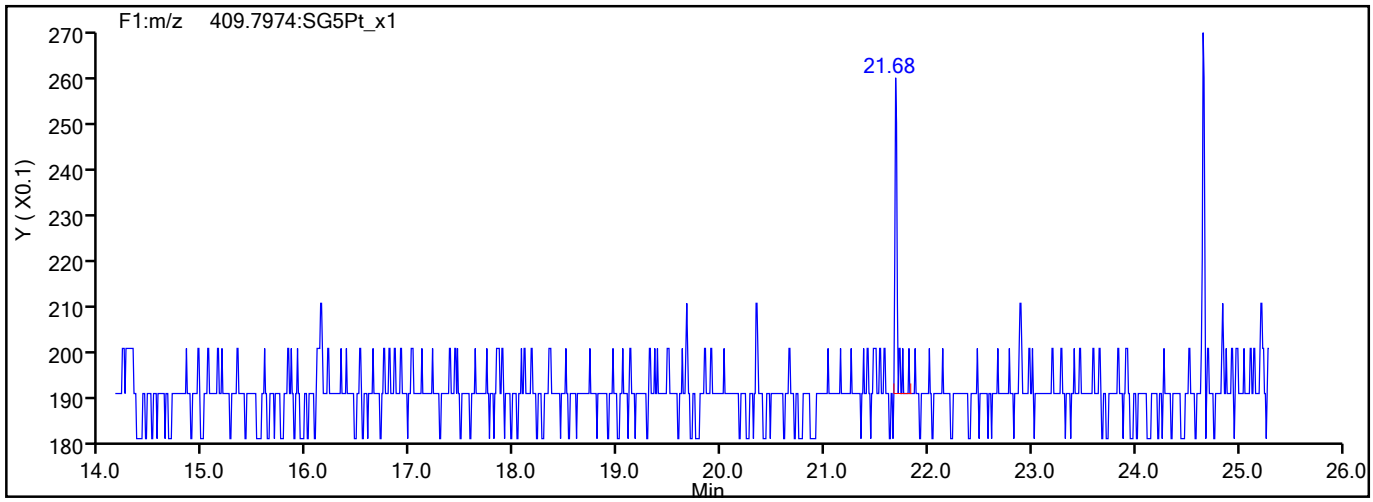

783564

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

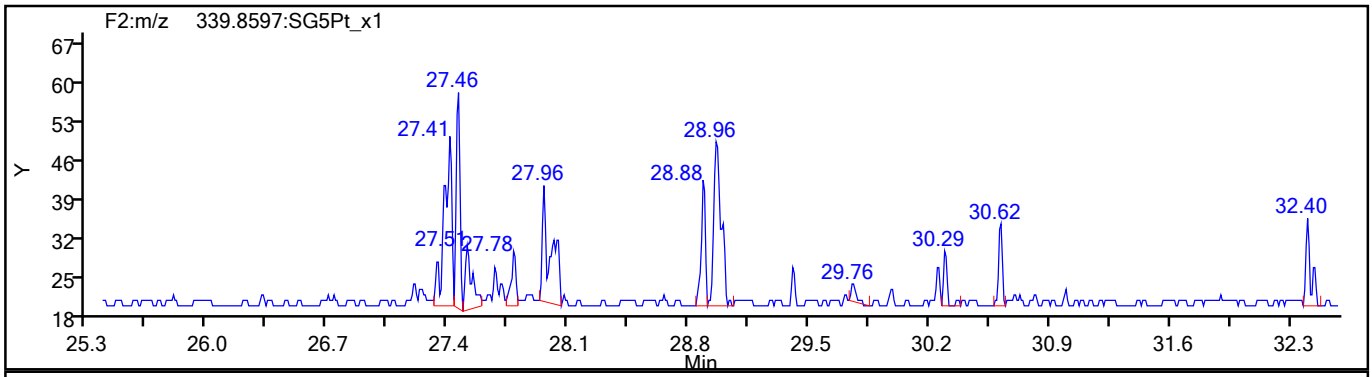

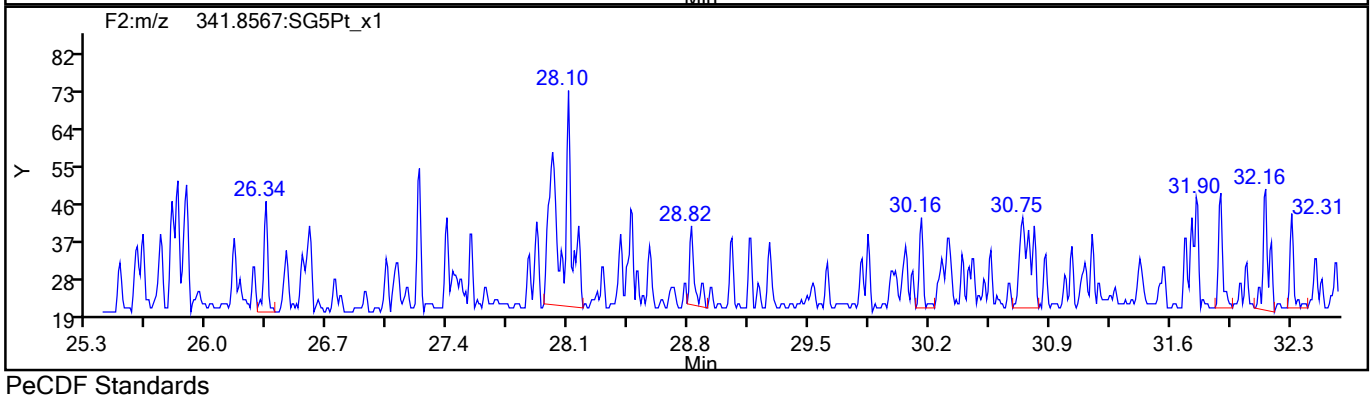

PeCDF Standards

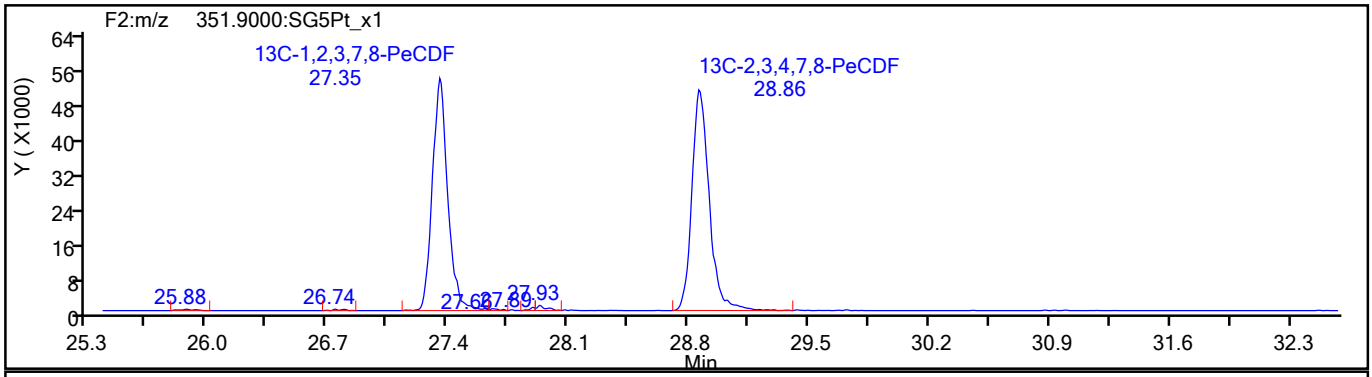

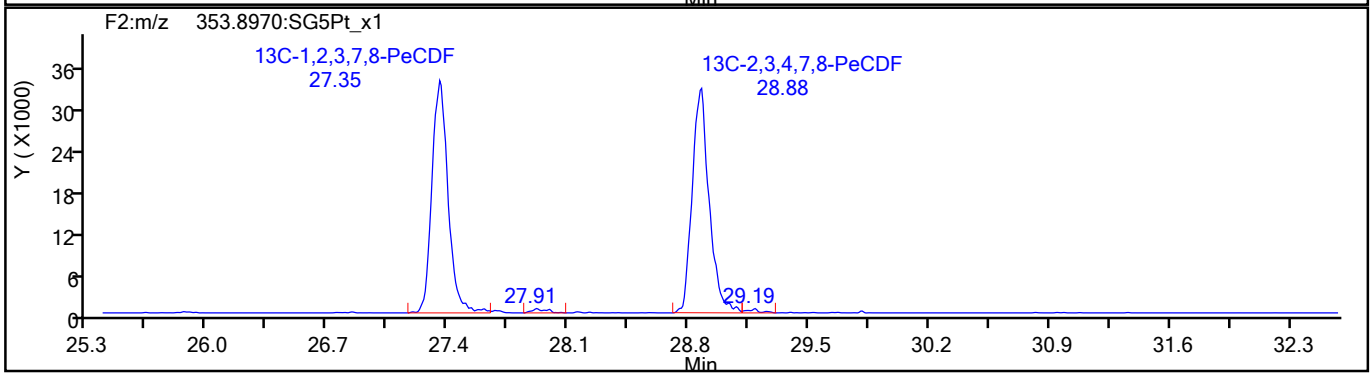

783565

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

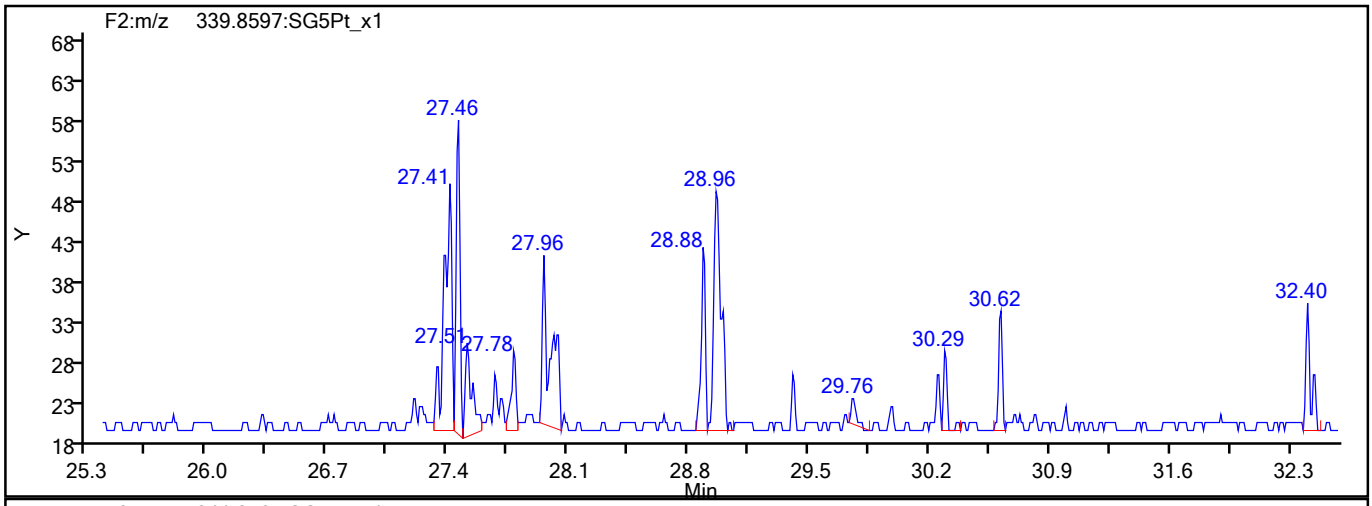

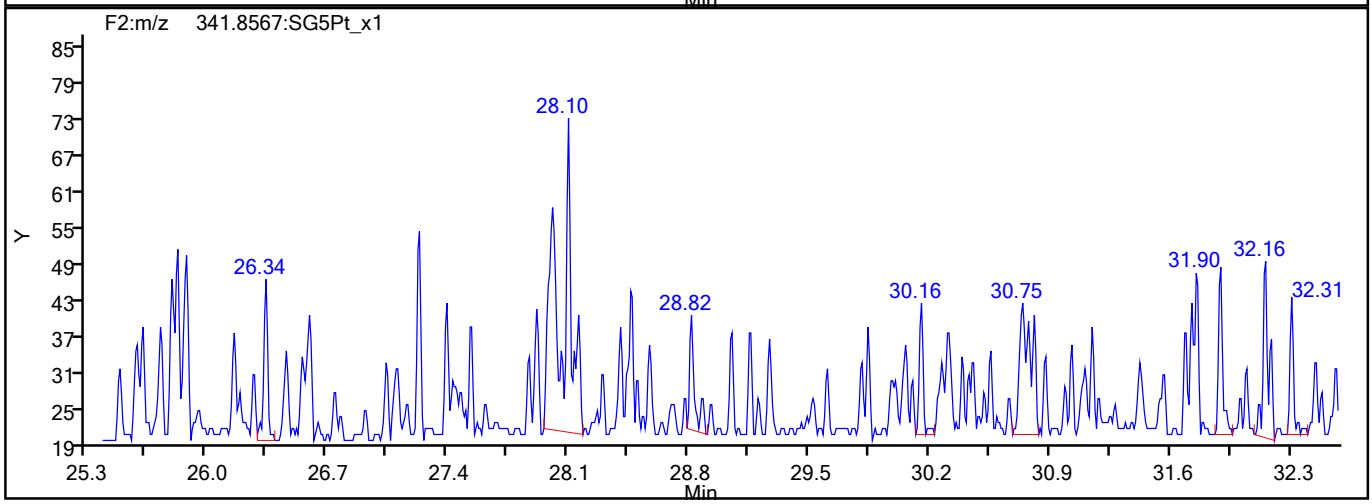

PeCDF Interference Mass

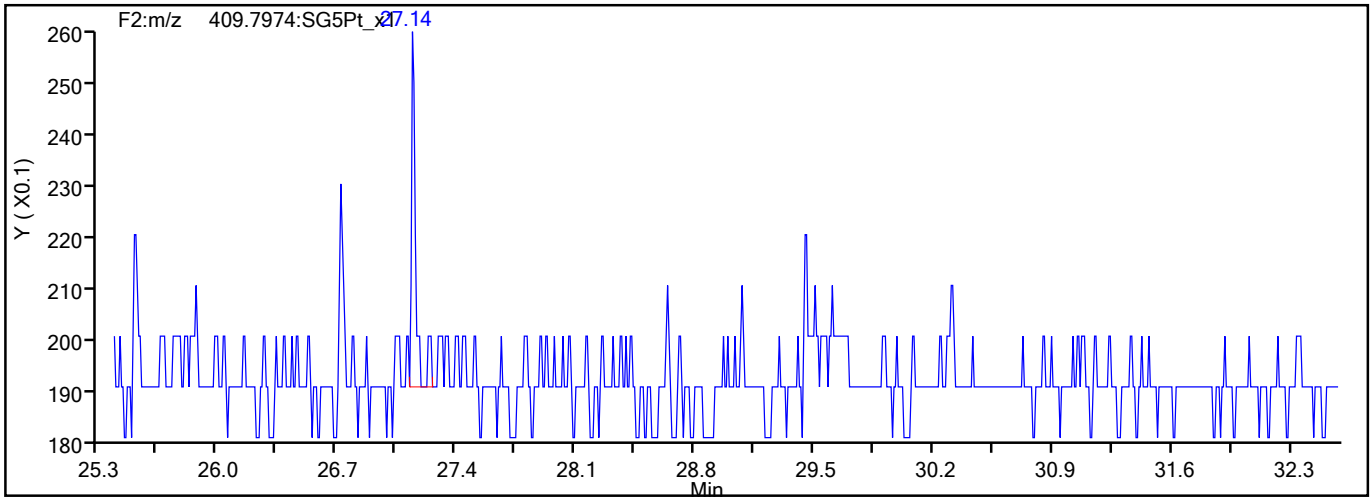

783566

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

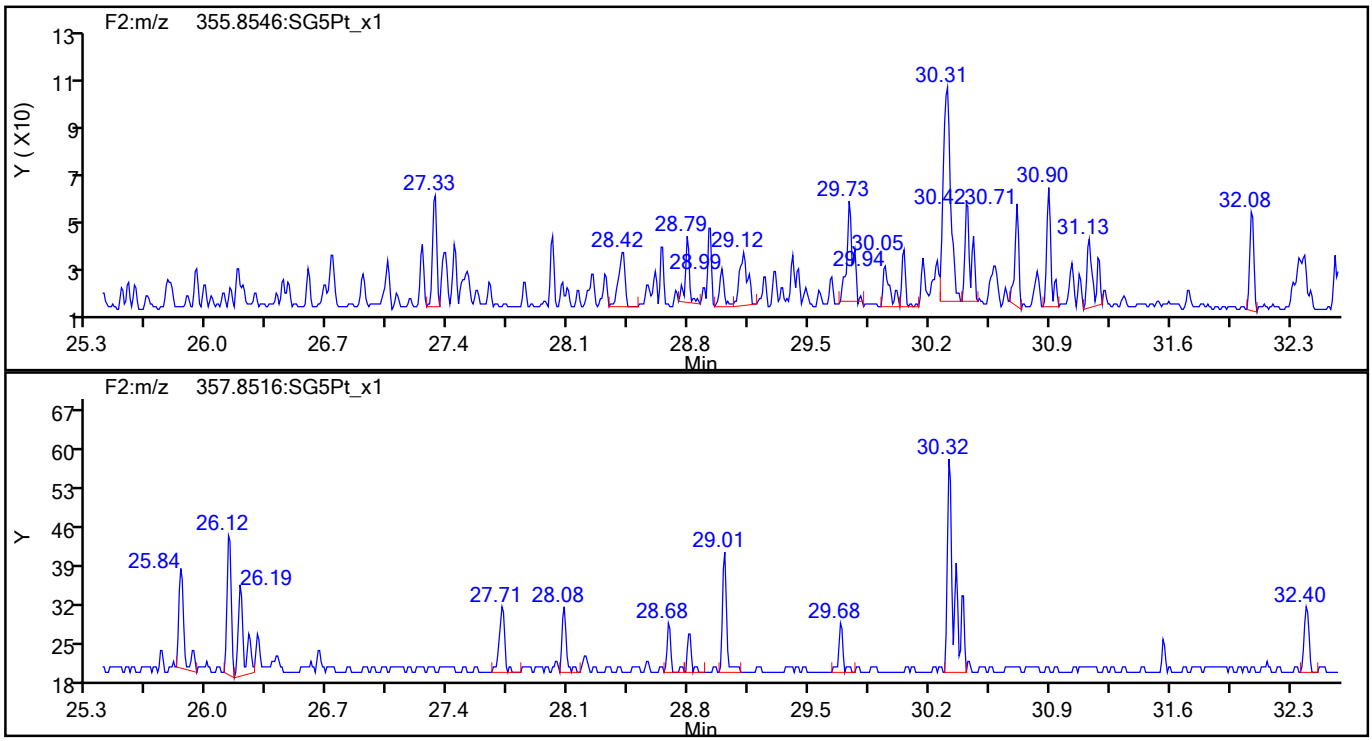

PeCDD Standards

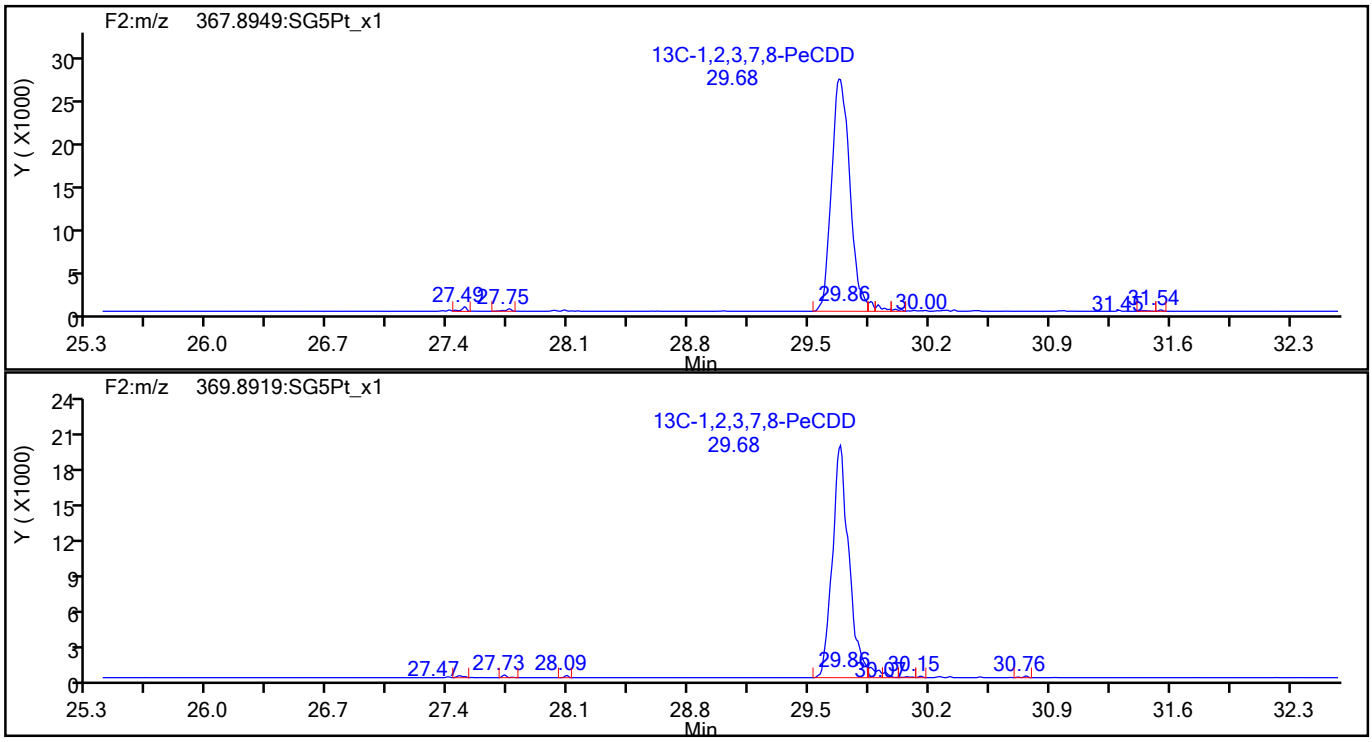

783567

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

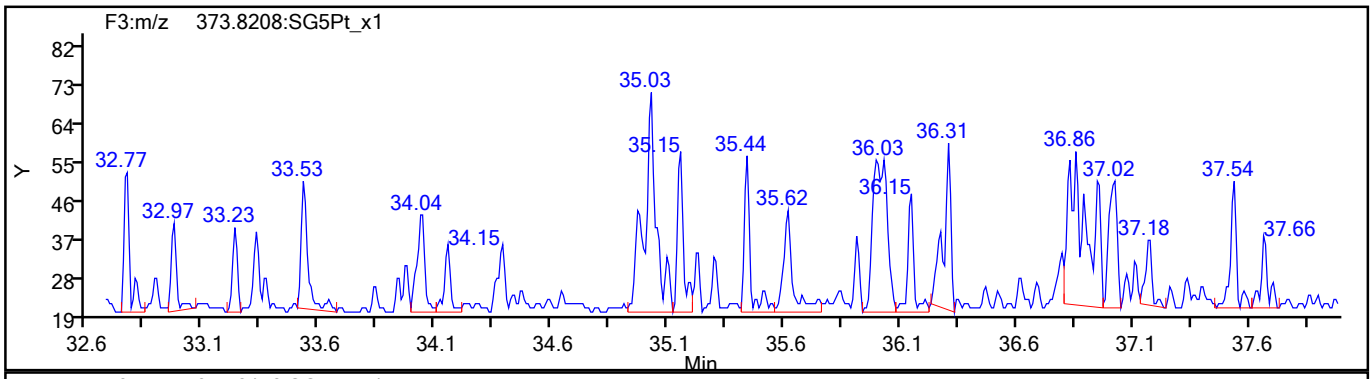

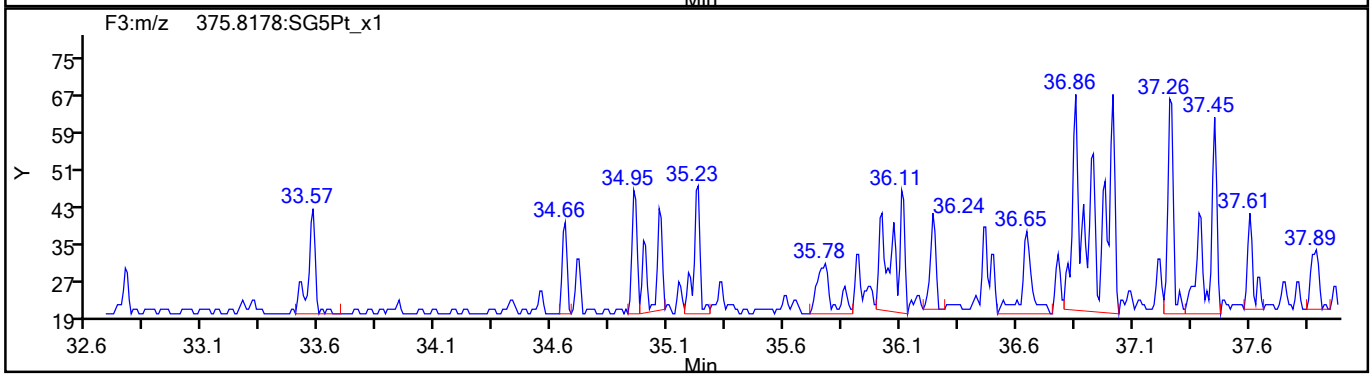

HxCDF Standards

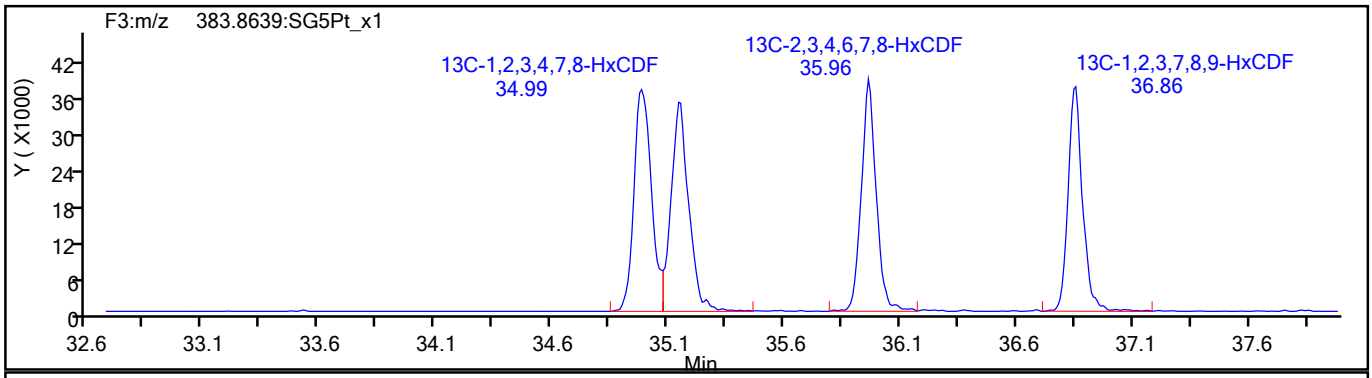

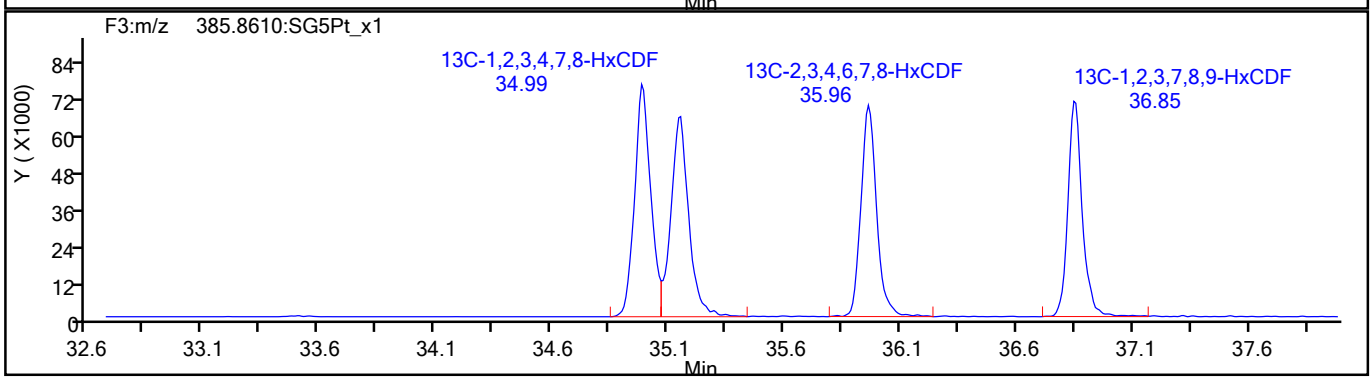

783568

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

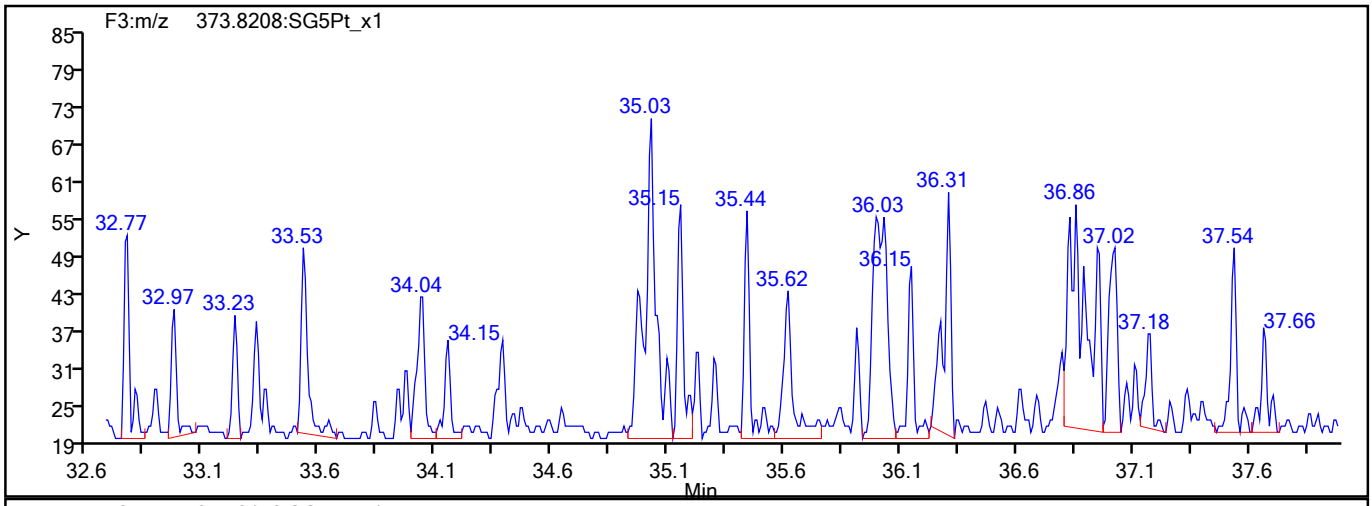

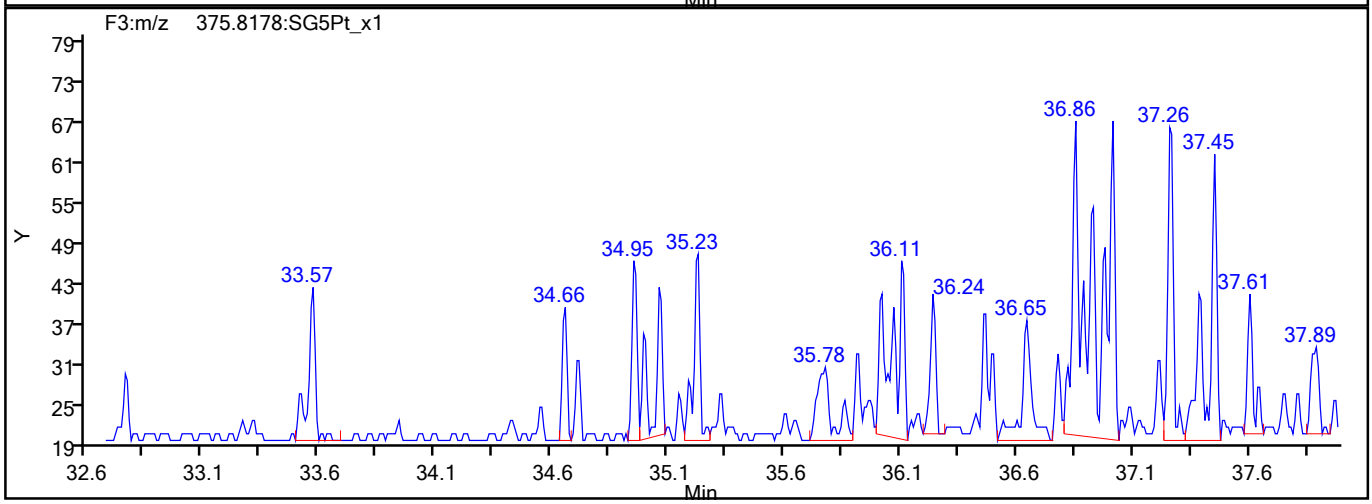

HxCDF Interference Mass

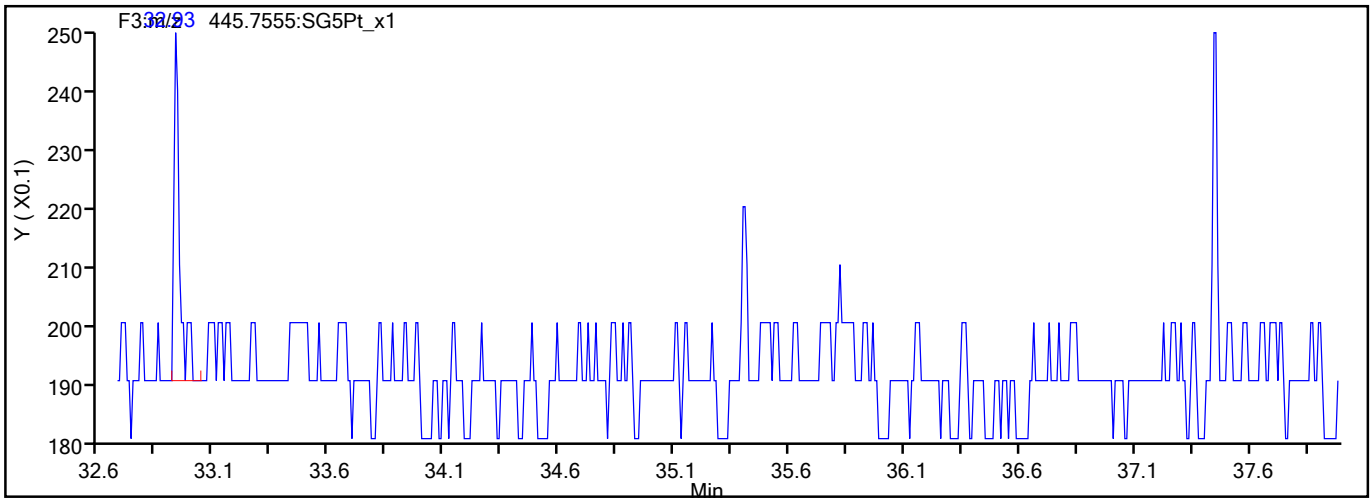

783569

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

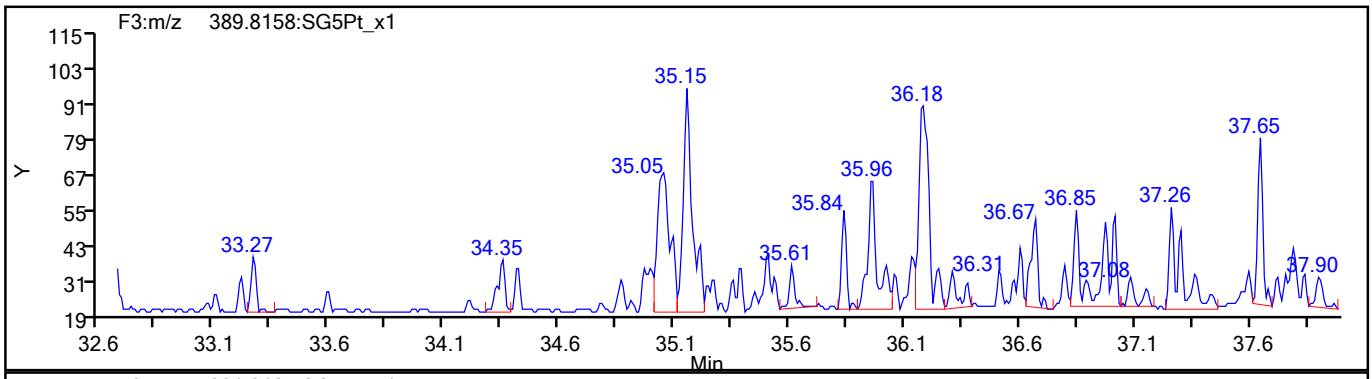

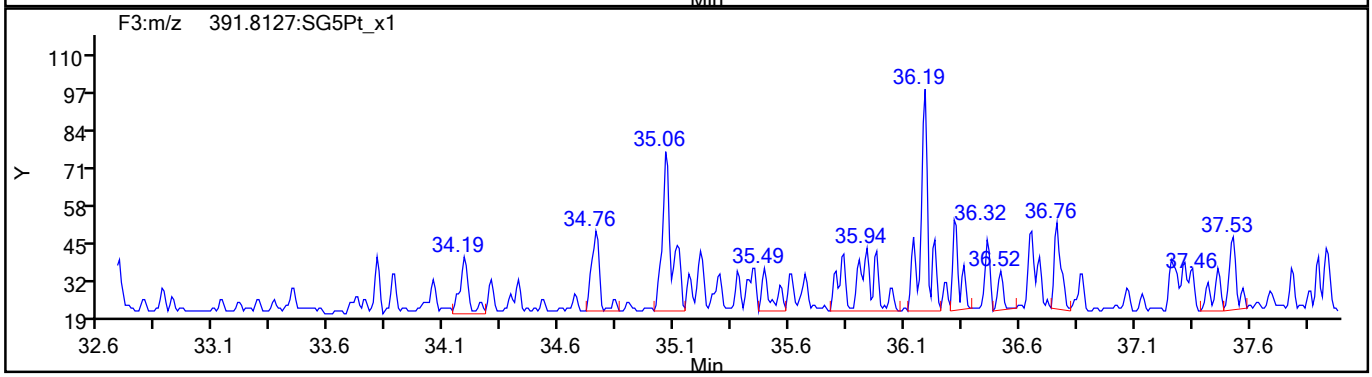

HxCDD Standards

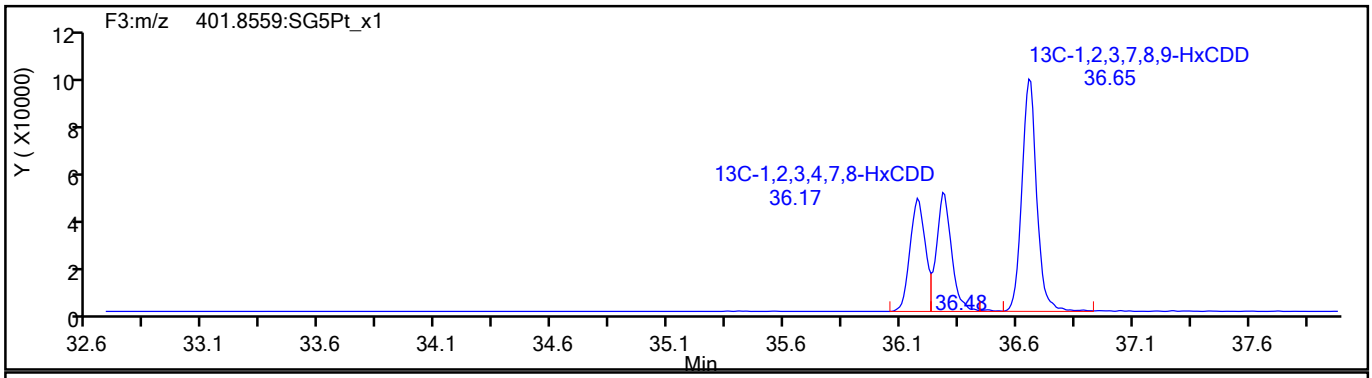

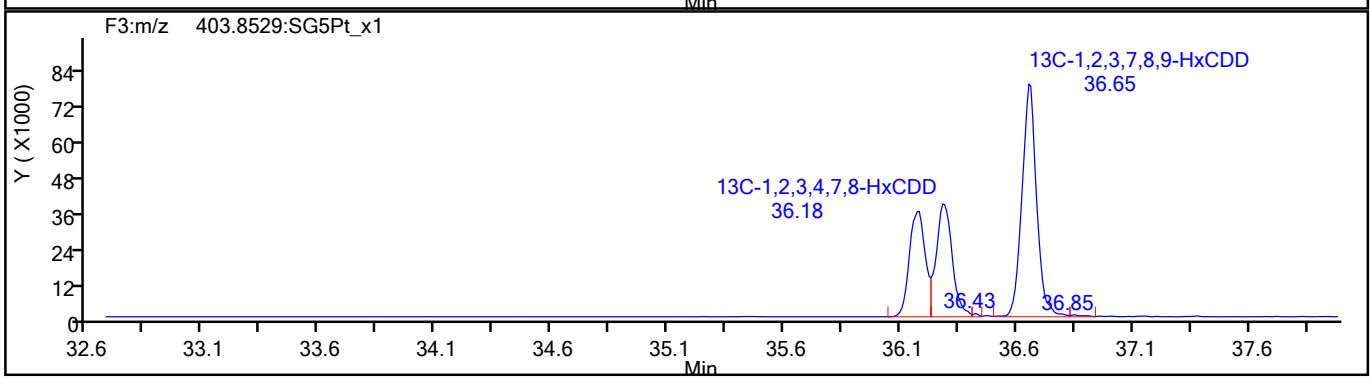

783570

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

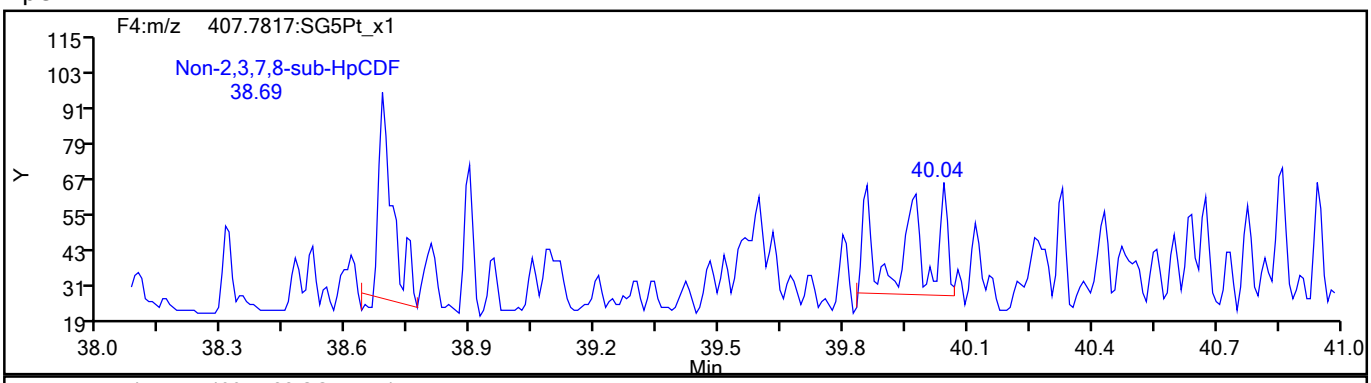

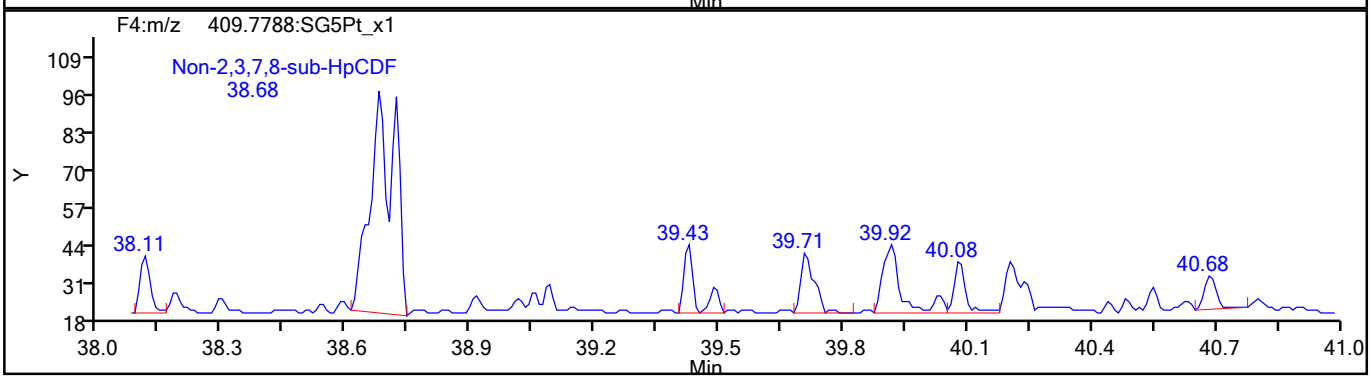

HpCDF Standards

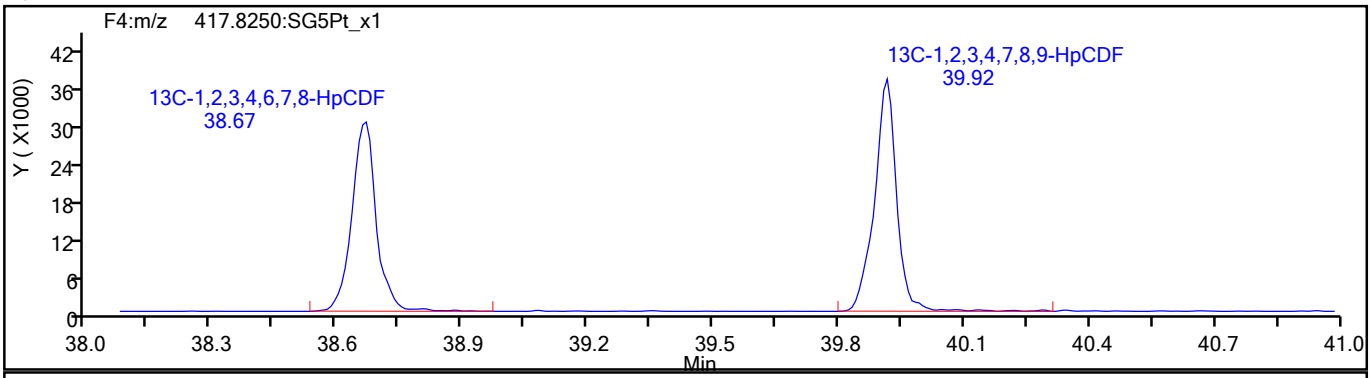

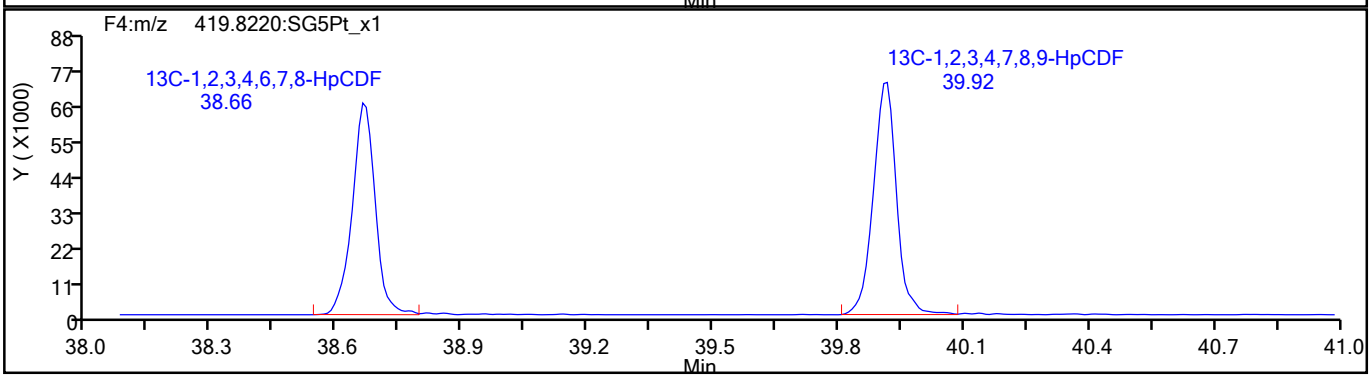

783571

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

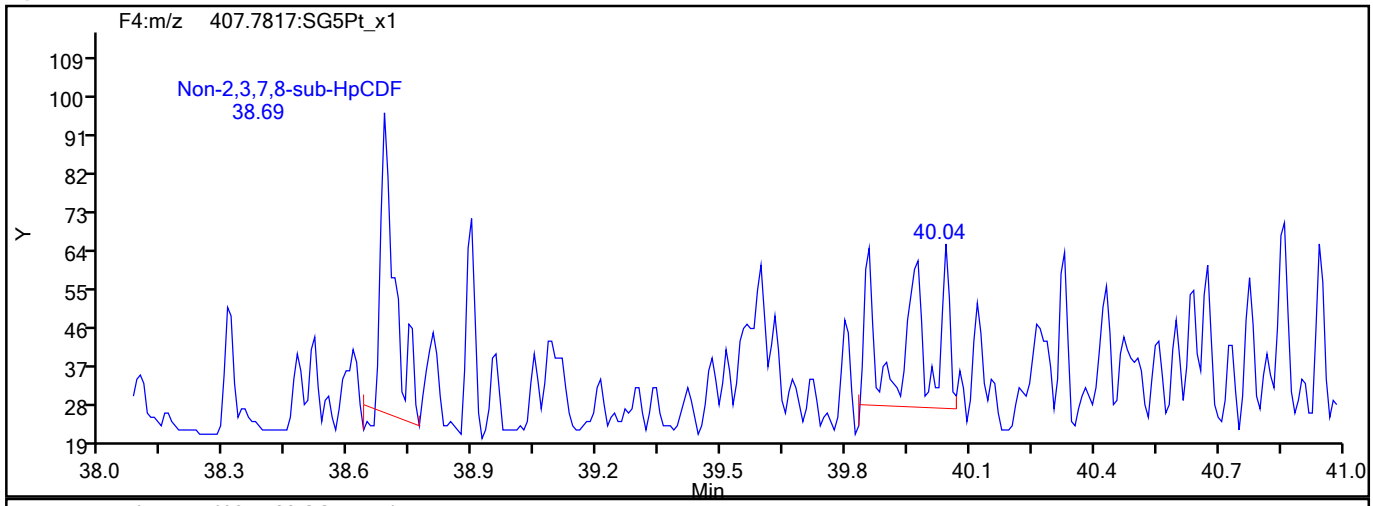

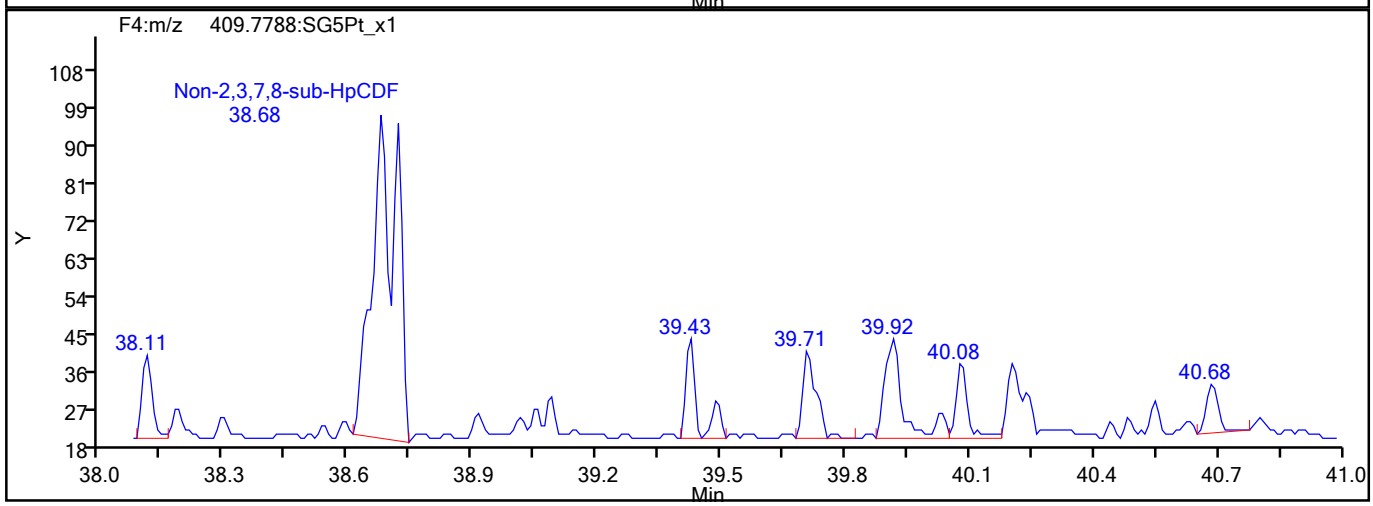

HpCDF Interference Mass

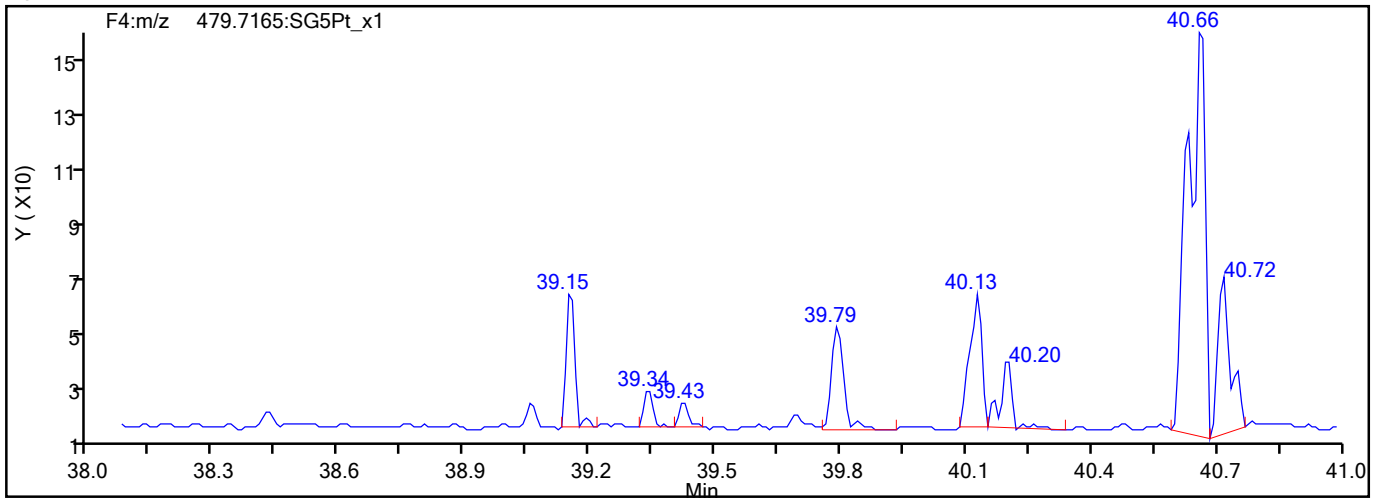

783572

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

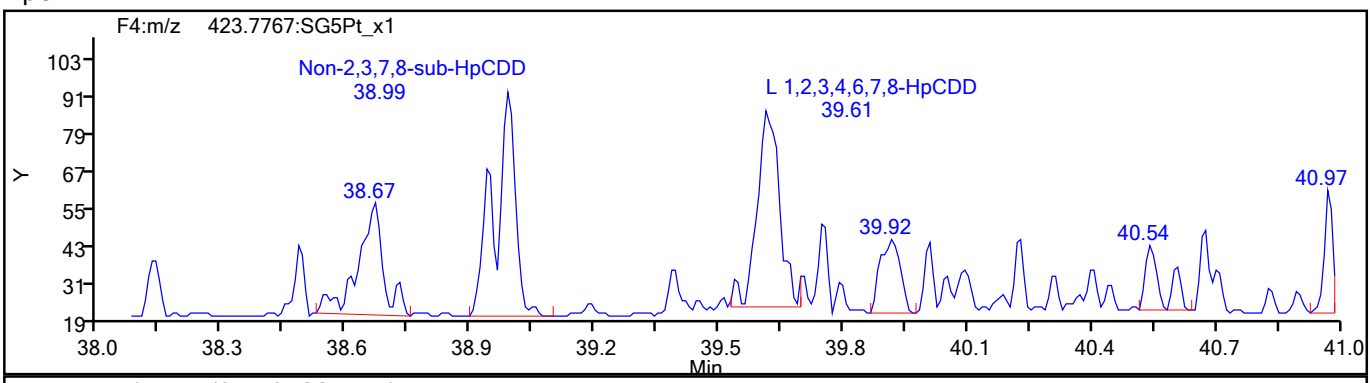

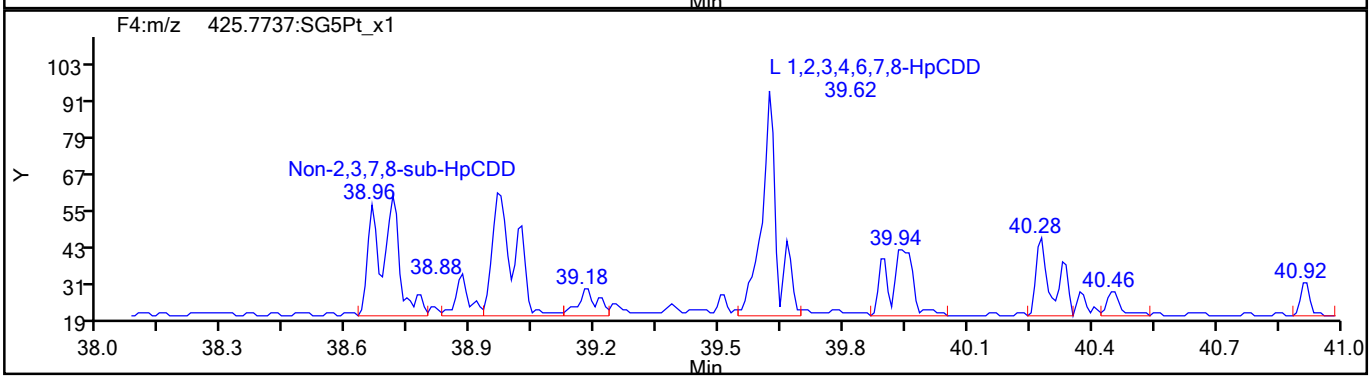

HpCDD Standards

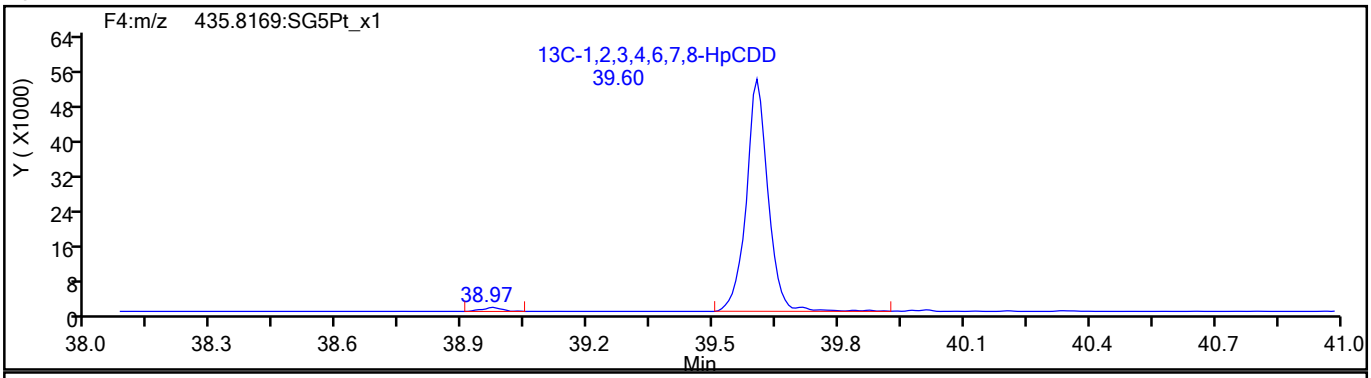

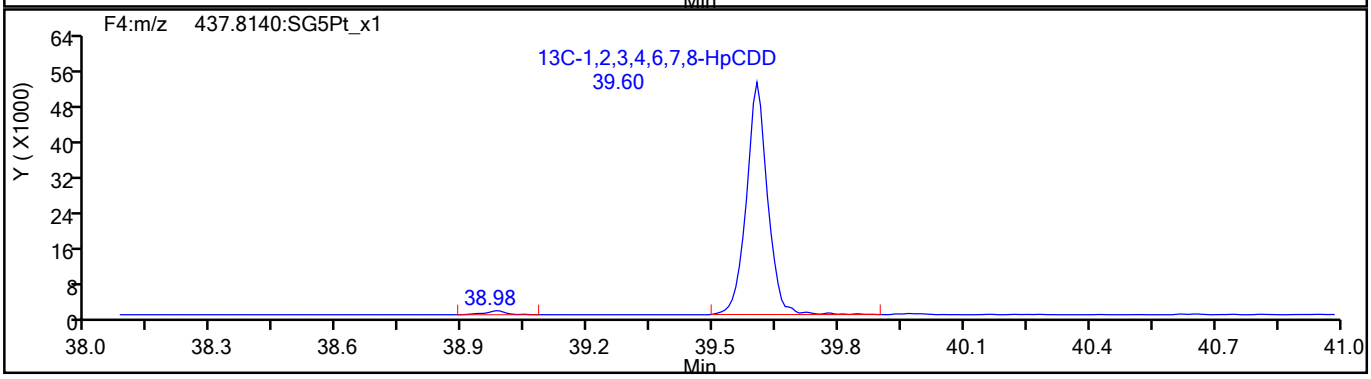

783573

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

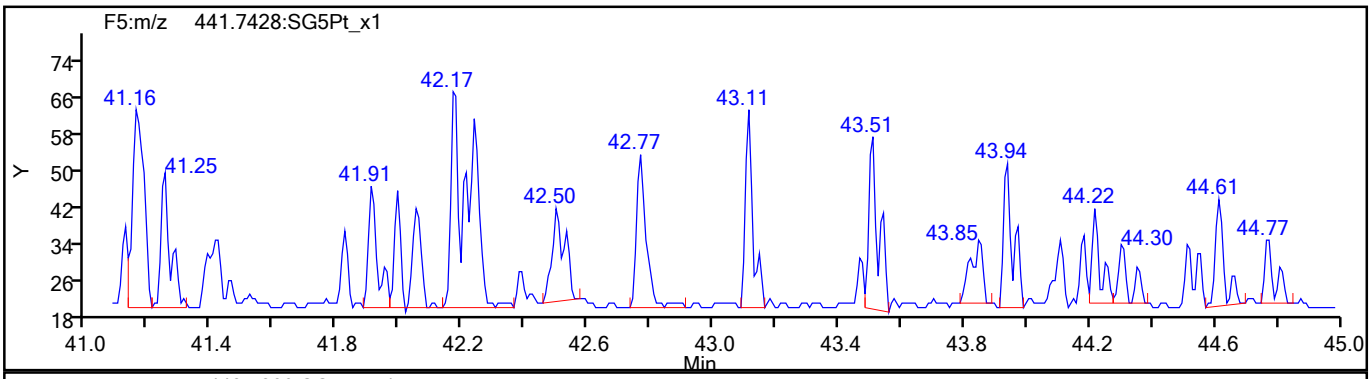

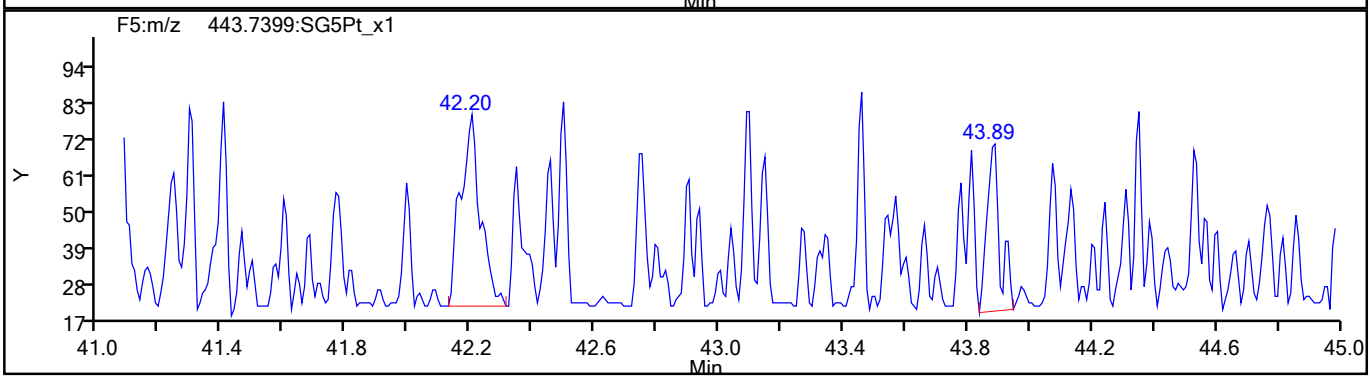

OCDF Standards

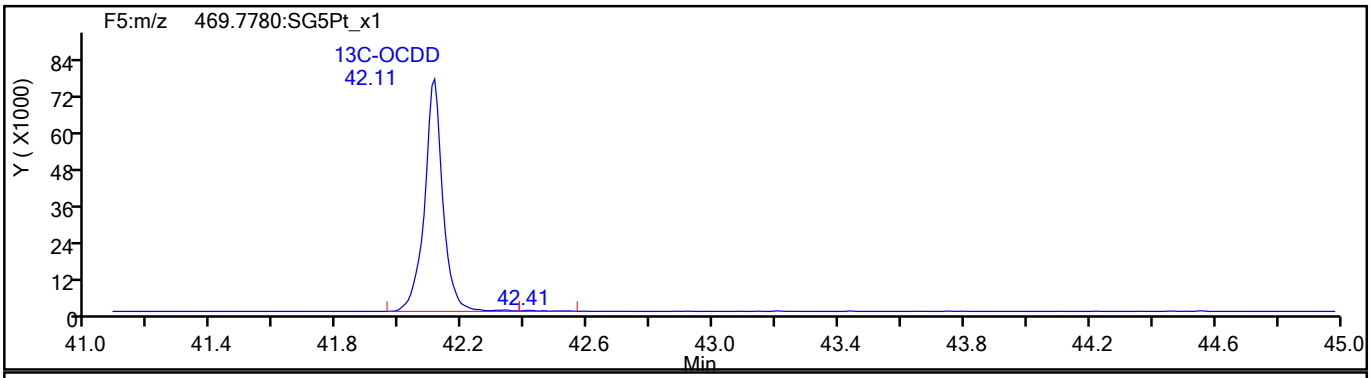

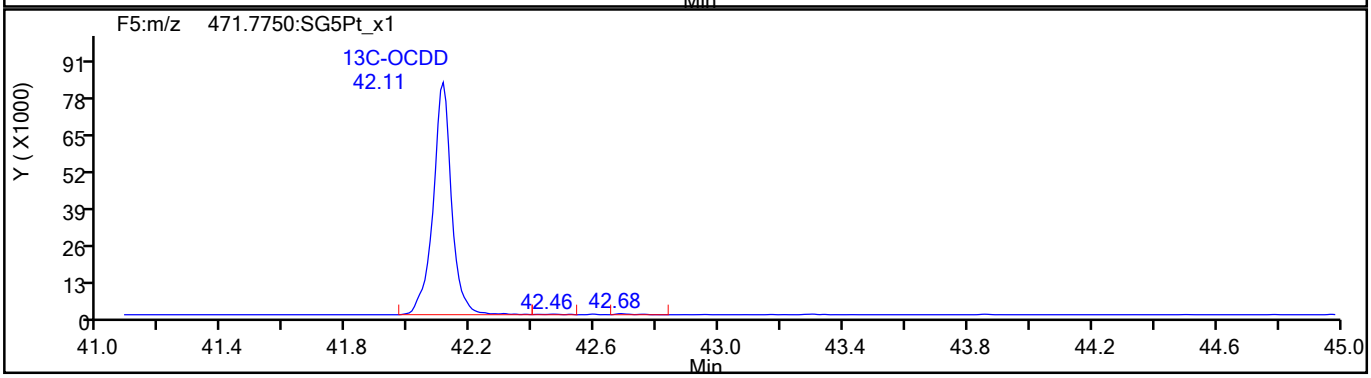

783574

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

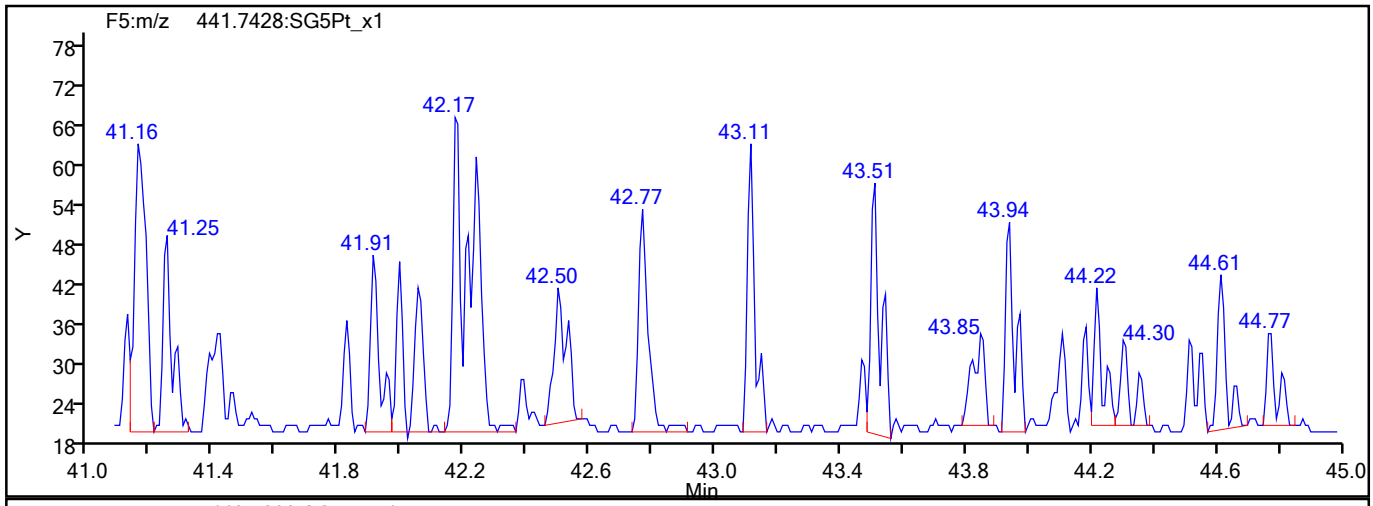

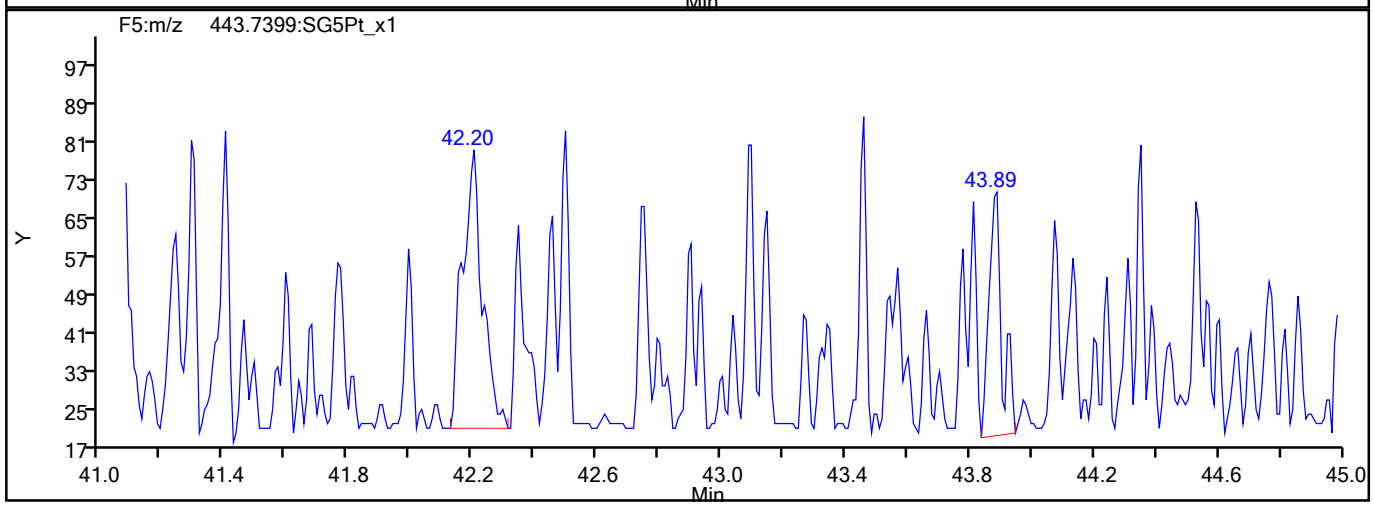

OCDF Interference Mass

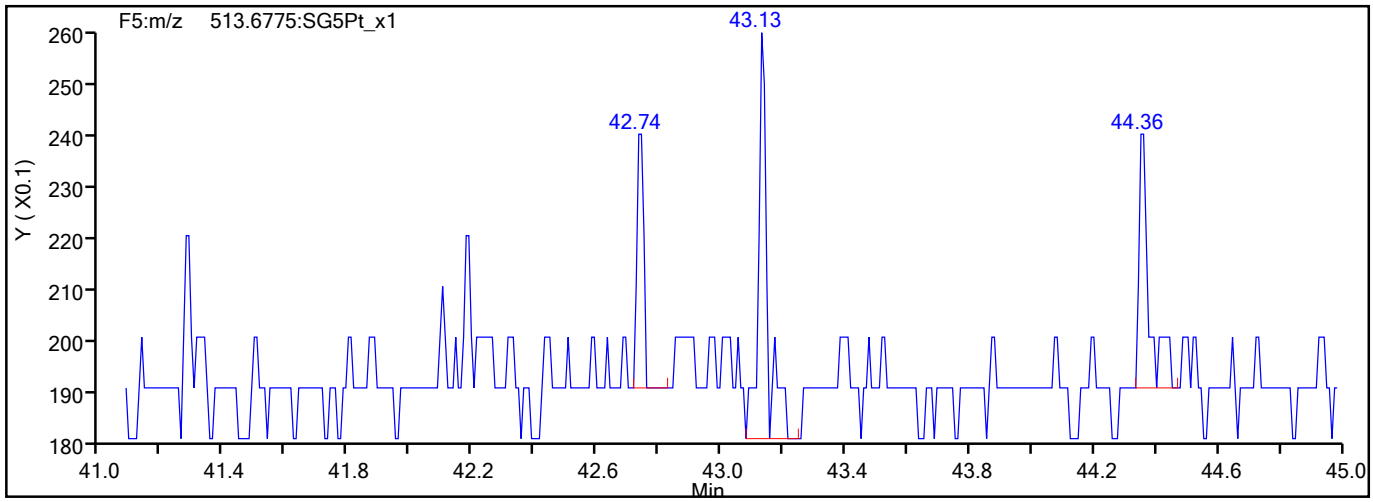

783575

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

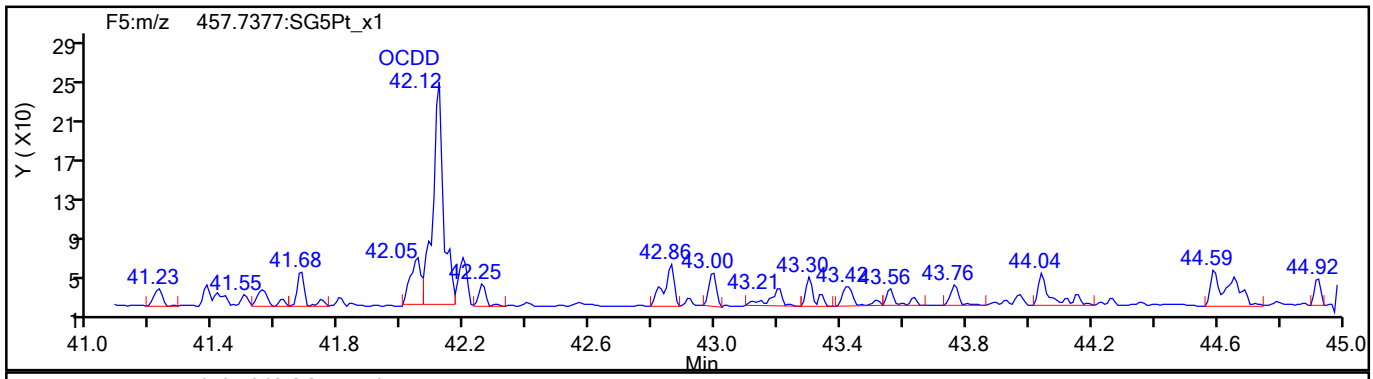

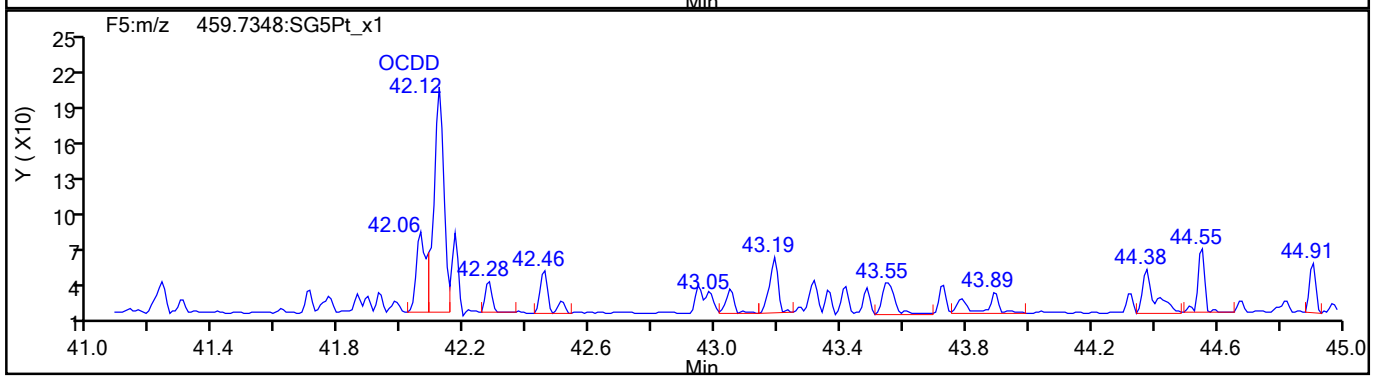

OCDD Standards

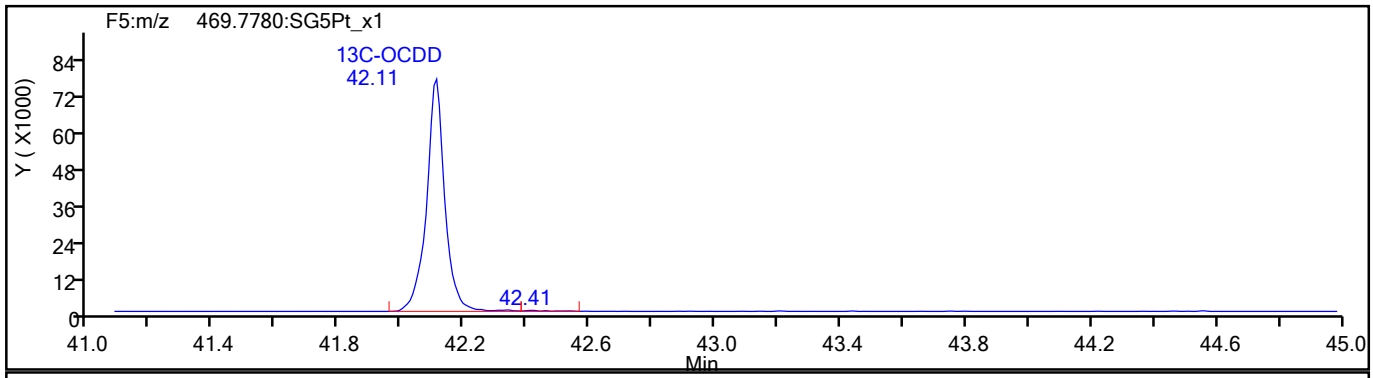

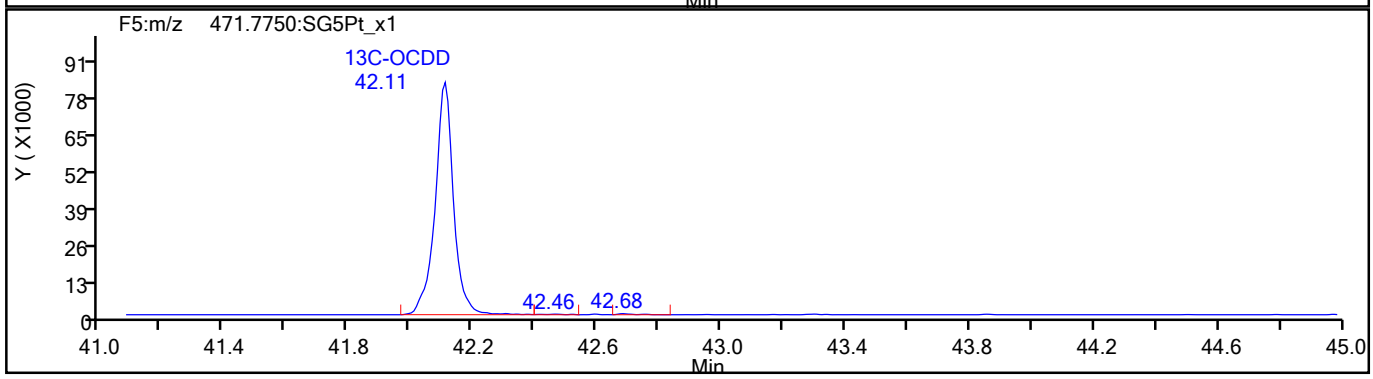

783576

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

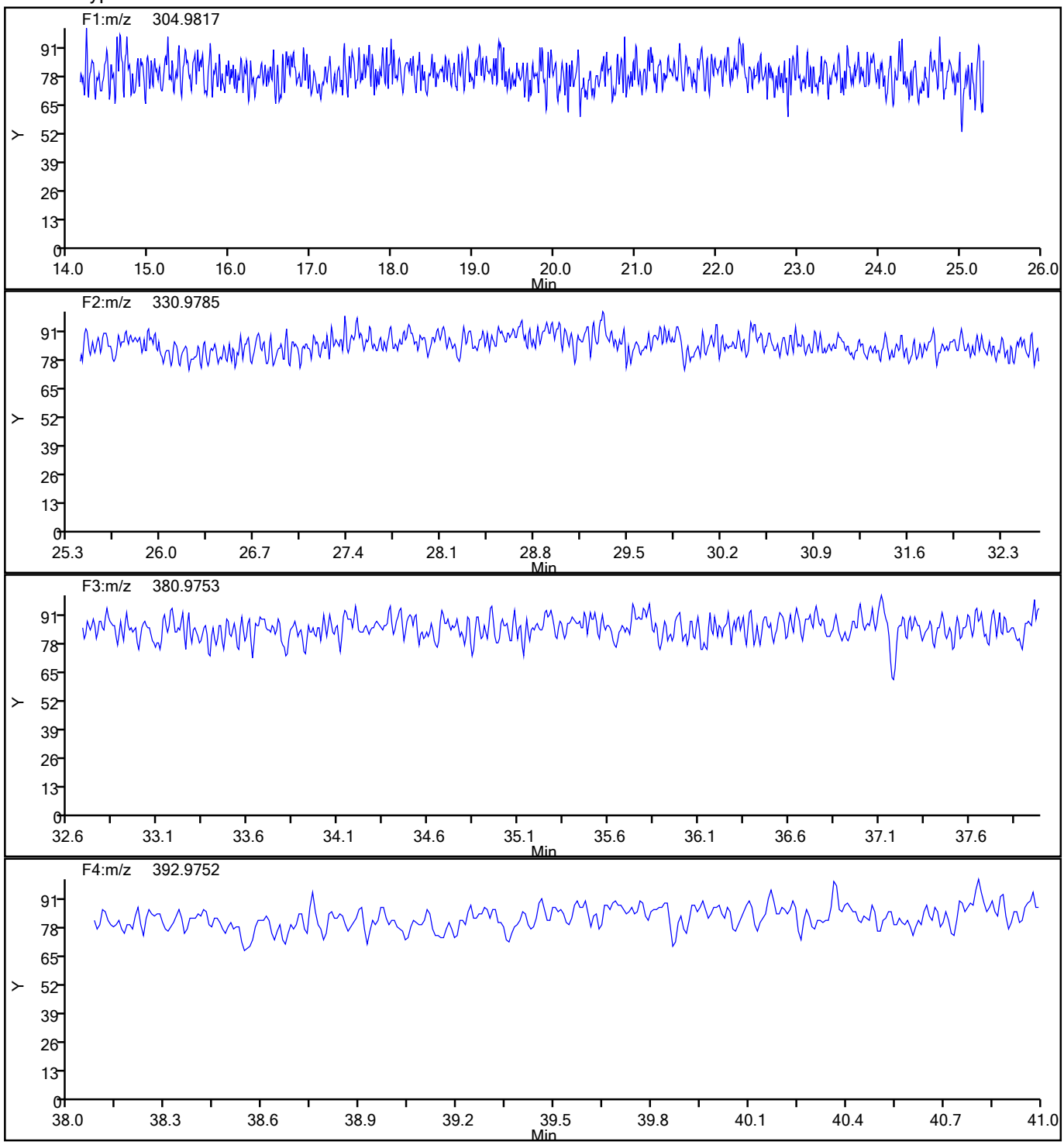

783577

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

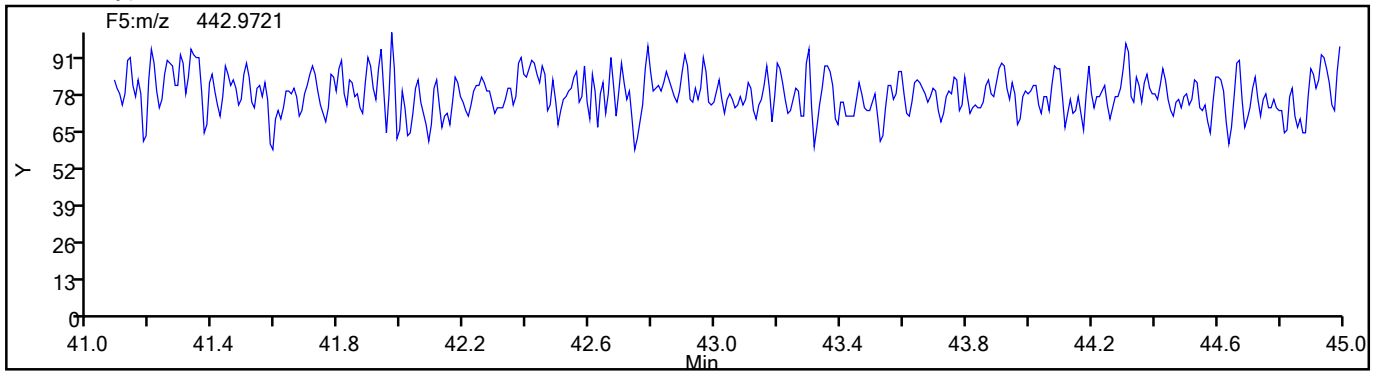

783578

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-513586/2-A
Matrix: Sediment
Lab File ID: 17au21dfs1_6.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10(g)
Date Analyzed: 08/17/2021 17:49
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517196
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	21.3		1.0	0.15
51207-31-9	2,3,7,8-TCDF	21.8		1.0	0.046
40321-76-4	1,2,3,7,8-PeCDD	112		5.0	0.19
57117-41-6	1,2,3,7,8-PeCDF	114		5.0	0.31
57117-31-4	2,3,4,7,8-PeCDF	105		5.0	0.32
39227-28-6	1,2,3,4,7,8-HxCDD	101		5.0	0.22
57653-85-7	1,2,3,6,7,8-HxCDD	111		5.0	0.26
19408-74-3	1,2,3,7,8,9-HxCDD	110		5.0	0.22
70648-26-9	1,2,3,4,7,8-HxCDF	107		5.0	0.41
57117-44-9	1,2,3,6,7,8-HxCDF	112		5.0	0.40
72918-21-9	1,2,3,7,8,9-HxCDF	116		5.0	0.41
60851-34-5	2,3,4,6,7,8-HxCDF	117		5.0	0.41
35822-46-9	1,2,3,4,6,7,8-HpCDD	108		5.0	0.29
67562-39-4	1,2,3,4,6,7,8-HpCDF	112		5.0	0.51
55673-89-7	1,2,3,4,7,8,9-HpCDF	105		5.0	0.48
3268-87-9	OCDD	228		10	0.25
39001-02-0	OCDF	248		10	0.31
41903-57-5	Total TCDD	21.3		1.0	0.15
30402-14-3	Total TCDF	21.8		1.0	0.046
36088-22-9	Total PeCDD	112		5.0	0.19
30402-15-4	Total PeCDF	221		5.0	0.31
34465-46-8	Total HxCDD	322		5.0	0.24
55684-94-1	Total HxCDF	452		5.0	0.41
37871-00-4	Total HpCDD	110		5.0	0.29
38998-75-3	Total HpCDF	217		5.0	0.49

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513586/2-A

Matrix: Sediment Lab File ID: 17au21dfs1_6.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10(g) Date Analyzed: 08/17/2021 17:49

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517196 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		20-175
89059-46-1	13C-2,3,7,8-TCDF	54		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	59		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	56		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	63		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	60		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	67		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	58		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	67		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	63		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	72		20-186
114423-97-1	13C-OCDD	71		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	69		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d
Lims ID: LCS 320-513586/2-A
Client ID:
Sample Type: LCS
Inject. Date: 17-Aug-2021 17:49:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513586/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:09:35 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 19:22:53

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.491	781428	0.79	2.1E+04	100.0	100.0				
2,3,7,8-TCDF	20.555	66994	0.76	1.0802	10.9	10.9	0.0232	0.0232	109	
D 13C-2,3,7,8-TCDF	20.520	568874	0.80	1.3459	54.1	54.1	0.1036	0.1036	54.09	
A Non-2,3,7,8-sub-TCDF	19.916						0.0232	0.1455		RQU
S Total TCDF					10.9	10.9	0.0232	0.0232		
D 13C-2,3,7,8-TCDD	21.860	395704	0.85	0.9317	54.4	54.4	0.2364	0.2364	54.35	
2,3,7,8-TCDD	21.894	45397	0.79	1.0753	10.7	10.7	0.0774	0.0774	107	
$ 37Cl4-2,3,7,8-TCDD	21.903	217136		1.0083	27.6	27.6	0.0138	0.0138	68.90	
A Non-2,3,7,8-sub-TCDD	20.750						0.0774	0.0774		
S Total TCDD					10.7	10.7	0.0774	0.0774		
D 13C-1,2,3,7,8-PeCDF	27.335	501609	1.68	1.1405	56.3	56.3	0.2160	0.2160	56.28	
1,2,3,7,8-PeCDF	27.368	301701	1.58	1.0543	57.1	57.1	0.1540	0.1540	114	
D 13C-2,3,4,7,8-PeCDF	28.868	556312	1.55	1.1253	63.3	63.3	0.2189	0.2189	63.26	
2,3,4,7,8-PeCDF	28.893	295657	1.58	1.0079	52.7	52.7	0.1609	0.1609	105	
A F1 PeCDFs	24.676						0.006051	0.006051		
A Non-2,3,7,8-sub-PeCDF	28.167	3852	1.43	1.0311	0.7063	0.7063	0.1573	0.7063	0.00	
S Total PeCDF					110.5	110.5	0.1574	0.1574		
D 13C-1,2,3,7,8-PeCDD	29.685	328312	1.73	0.7165	58.6	58.6	0.0778	0.0778	58.64	
1,2,3,7,8-PeCDD	29.710	192359	1.58	1.0465	56.0	56.0	0.0962	0.0962	112	
A Non-2,3,7,8-sub-PeCDD	28.556						0.0962	0.0962		
S Total PeCDD					56.0	56.0	0.0962	0.0962		
D 13C-1,2,3,4,7,8-HxCDF	34.995	518980	0.54	0.9648	66.5	66.5	0.2256	0.2256	66.55	
1,2,3,4,7,8-HxCDF	35.012	317201	1.24	1.1474	53.3	53.3	0.2039	0.2039	107	
D 13C-1,2,3,6,7,8-HxCDF	35.147	504596	0.52	1.0708	58.3	58.3	0.2032	0.2032	58.30	
1,2,3,6,7,8-HxCDF	35.163	344779	1.28	1.2178	56.1	56.1	0.2020	0.2020	112	
D 13C-2,3,4,6,7,8-HxCDF	35.964	451934	0.54	1.0413	53.7	53.7	0.2090	0.2090	53.70	
2,3,4,6,7,8-HxCDF	35.981	321341	1.25	1.2145	58.5	58.5	0.2027	0.2027	117	
D 13C-1,2,3,7,8,9-HxCDF	36.849	420297	0.54	0.9731	53.4	53.4	0.2236	0.2236	53.44	
1,2,3,7,8,9-HxCDF	36.865	303602	1.26	1.2401	58.2	58.2	0.2065	0.2065	116	
A Non-2,3,7,8-sub-HxCDF	35.074						0.2036	0.2036		
S Total HxCDF					226.2	226.2	0.2038	0.2038		

783581

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.663	808260	1.30	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.174	370303	1.28	0.7587	60.4	60.4	0.1486	0.1486	60.39	
1,2,3,4,7,8-HxCDD	36.191	199314	1.29	1.0608	50.7	50.7	0.1112	0.1112	101	
D 13C-1,2,3,6,7,8-HxCDD	36.301	375488	1.28	0.8593	54.1	54.1	0.1312	0.1312	54.07	
1,2,3,6,7,8-HxCDD	36.309	206353	1.27	0.9933	55.3	55.3	0.1309	0.1309	111	
1,2,3,7,8,9-HxCDD	36.672	226911	1.24	1.1094	54.8	54.8	0.1115	0.1115	110	
A Non-2,3,7,8-sub-HxCDD	35.432						0.1173	0.1173		
S Total HxCDD					160.9	160.9	0.1178	0.1178		
D 13C-1,2,3,4,6,7,8-HpCDF	38.662	374575	0.44	0.7359	63.0	63.0	0.2745	0.2745	62.97	
1,2,3,4,6,7,8-HpCDF	38.679	302379	1.04	1.4421	56.0	56.0	0.2544	0.2544	112	
1,2,3,4,7,8,9-HpCDF	39.926	272343	1.03	1.3092	52.5	52.5	0.2383	0.2383	105	
D 13C-1,2,3,4,7,8,9-HpCDF	39.918	396261	0.47	0.6854	71.5	71.5	0.2947	0.2947	71.53	
A Non-2,3,7,8-sub-HpCDF	39.277						0.2451	0.2451		
S Total HpCDF					108.5	108.5	0.2463	0.2463		
D 13C-1,2,3,4,6,7,8-HpCDD	39.606	363095	1.10	0.6745	66.6	66.6	0.1365	0.1365	66.60	
1,2,3,4,6,7,8-HpCDD	39.614	206552	1.03	1.0503	54.2	54.2	0.1430	0.1430	108	
A Non-2,3,7,8-sub-HpCDD	39.277	2982	1.01	1.0503	0.7819	0.7819	0.1430	0.7819	0.00	
S Total HpCDD					54.9	54.9	0.1430	0.1430		
D 13C-OCDD	42.111	621791	0.91	0.5446	141.3	141.3	0.2018	0.2018	70.63	
OCDF	42.203	507114	0.92	1.3168	123.9	123.9	0.1527	0.1527	124	
OCDD	42.119	376368	0.89	1.0620	114.0	114.0	0.1262	0.1262	114	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d
Lims ID: LCS 320-513586/2-A
Client ID:
Sample Type: LCS
Inject. Date: 17-Aug-2021 17:49:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513586/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:09:35 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 19:22:53

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.491	21.483	0		345437	48384	25	62	1935		
333.9338	21.499	21.483	1		435991	59201	70	175	846	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.555	20.482	4	1.002	28976	4280	3	7	1427		
305.8987	20.546	20.482	4	1.001	38018	5339	5	12	1068	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.520	20.594	-4	0.955	253688	35207	40	100	880		
317.9389	20.503	20.594	-5	0.954	315186	44524	20	50	2226	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											U
303.9016	18.958	19.916	-57	0.924	113	44	3	7	15		
305.8987	18.915	19.916	-60	0.922	130	46	5	12	9	0.87(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.860	21.790	4	1.017	181844	25019	25	62	1001		
333.9338	21.860	21.790	4	1.017	213860	31474	70	175	450	0.85(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.894	21.825	4	1.002	20103	2896	5	12	579		
321.8936	21.885	21.825	4	1.001	25294	3228	14	35	231	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.903	21.905	0	1.019	217136	27685	6	15	4614		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.750						5	12			
321.8936	20.750						14	35			
13C-1,2,3,7,8-PeCDF											
351.9000	27.335	27.343	-1	1.272	314240	51089	53	132	964		
353.8970	27.335	27.343	-1	1.272	187369	29006	53	132	547	1.68(1.32-1.78)	

783583

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.368	27.368	0	1.001	184883	27670	28	70	988		
341.8567	27.377	27.368	1	1.002	116818	17194	24	60	716	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.868	28.867	0	1.343	337792	50728	53	132	957		
353.8970	28.851	28.867	-1	1.343	218520	29455	53	132	556	1.55(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.893	28.884	1	1.001	181094	26198	28	70	936		
341.8567	28.893	28.884	1	1.001	114563	15264	24	60	636	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.676						1	2			
341.8567	24.676						1	2			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.950	28.167	-13	1.023	2268	309	28	70	11		
341.8567	27.950	28.167	-13	1.023	1584	237	24	60	10	1.43(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.685	29.667	1	1.381	207955	29249	18	45	1625		
369.8919	29.668	29.667	0	1.381	120357	17448	6	15	2908	1.73(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.710	29.692	1	1.001	117826	15707	10	25	1571		
357.8516	29.710	29.692	1	1.001	74533	10483	9	22	1165	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						10	25			
357.8516	28.556						9	22			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.995	34.974	1	0.954	182167	37932	50	125	759		
385.8610	34.995	34.974	1	0.954	336813	65518	106	265	618	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.012	35.000	1	1.000	175404	35496	51	127	696		
375.8178	35.012	35.000	1	1.000	141797	28810	46	115	626	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.147	35.134	1	0.959	173057	33255	50	125	665		
385.8610	35.147	35.134	1	0.959	331539	65113	106	265	614	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.163	35.151	1	1.000	193669	35743	51	127	701		
375.8178	35.163	35.151	1	1.000	151110	27401	46	115	596	1.28(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.964	35.951	1	0.981	158326	33846	50	125	677		
385.8610	35.972	35.951	1	0.981	293608	64464	106	265	608	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.981	35.968	1	1.000	178371	37689	51	127	739		
375.8178	35.981	35.968	1	1.000	142970	29993	46	115	652	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.849	36.843	0	1.005	147959	32965	50	125	659		
385.8610	36.857	36.843	1	1.005	272338	61538	106	265	581	0.54(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	36.865	36.852	1	1.000	169544	38440	51	127	754		
375.8178	36.865	36.852	1	1.000	134058	29629	46	115	644	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.074						51	127			
375.8178	35.074						46	115			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.663	36.641	1		456380	101107	56	140	1805		
403.8529	36.663	36.641	1		351880	78100	25	62	3124	1.30(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.174	36.161	1	0.987	208027	48736	56	140	870		
403.8529	36.174	36.161	1	0.987	162276	37765	25	62	1511	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.191	36.178	1	1.000	112420	24753	24	60	1031		
391.8127	36.183	36.178	0	1.000	86894	19685	17	42	1158	1.29(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.301	36.279	1	0.990	211074	44321	56	140	791		
403.8529	36.292	36.279	1	0.990	164414	34129	25	62	1365	1.28(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.309	36.296	1	1.000	115636	24833	24	60	1035		
391.8127	36.309	36.296	1	1.000	90717	19079	17	42	1122	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.672	36.658	1	1.014	125718	28435	24	60	1185		
391.8127	36.672	36.658	1	1.014	101193	23432	17	42	1378	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.432						24	60			
391.8127	35.432						17	42			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.662	38.647	1	1.055	114724	29183	61	152	478		
419.8220	38.662	38.647	1	1.055	259851	63486	84	210	756	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.679	38.654	1	1.000	154442	40275	70	175	575		
409.7788	38.679	38.654	1	1.000	147937	37501	66	165	568	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.926	39.900	2	1.000	138266	38599	70	175	551		
409.7788	39.926	39.900	2	1.000	134077	37292	66	165	565	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.918	39.901	1	1.089	127445	35018	61	152	574		
419.8220	39.918	39.901	1	1.089	268816	73983	84	210	881	0.47(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.277						70	175			
409.7788	39.277						66	165			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.606	39.590	1	1.080	190429	52166	37	92	1410		
437.8140	39.606	39.590	1	1.080	172666	51054	29	72	1760	1.10(0.88-1.20)	

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.614	39.597	1	1.000	104986	29398	34	85	865		
425.7737	39.614	39.597	1	1.000	101566	28626	28	70	1022	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.982	39.277	-18	0.984	1500	459	34	85	14		
425.7737	38.982	39.277	-18	0.984	1482	509	28	70	18	1.01(0.88-1.20)	
13C-OCDD											
469.7780	42.111	42.094	1	1.149	296333	71223	40	100	1781		
471.7750	42.111	42.094	1	1.149	325458	77952	39	97	1999	0.91(0.76-1.02)	
OCDF											
441.7428	42.203	42.187	1	1.002	242906	58135	26	65	2236		
443.7399	42.203	42.187	1	1.002	264208	61787	34	85	1817	0.92(0.76-1.02)	
OCDD											
457.7377	42.119	42.103	1	1.000	177310	43889	19	47	2310		
459.7348	42.119	42.103	1	1.000	199058	47902	21	52	2281	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Lims ID:	LCS 320-513586/2-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:49:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	5

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	568874	79731

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	568874	79731

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.958	113	44	130	46	0.0395	0.87	
19.842	389	66	786	257	0.1912	0.49	RQ
19.842	389	66	505	85	0.1455		Empc Correction
20.847	174	115	289	72	0.0753	0.60	RQ
20.847	174	115	225	149	0.0649		Empc Correction
20.941	55	26	93	39	0.0241	0.59	RQ
20.941	55	26	71	33	0.0205		Empc Correction
21.336	192	40	250	57	0.0719	0.77	

Compound is Marked ND

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Lims ID:	LCS 320-513586/2-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:49:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	5

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	501609	80095
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	556312	80183

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	528960	80139

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.950	2268	309	1584	237	0.7063	1.43	
Signal Totals:							
	2268	309	1584	237			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3852	546				1.43	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.7063 = (3852 * 100.000) / (528960 * 1.031)

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Lims ID:	LCS 320-513586/2-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:49:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	5

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	363095	103220

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	363095	103220

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.982	1500	459	1482	509	0.7819	1.01	
Signal Totals:							
	1500	459	1482	509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2982	968				1.01	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.7819 = (2982 * 100.000) / (363095 * 1.050)

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

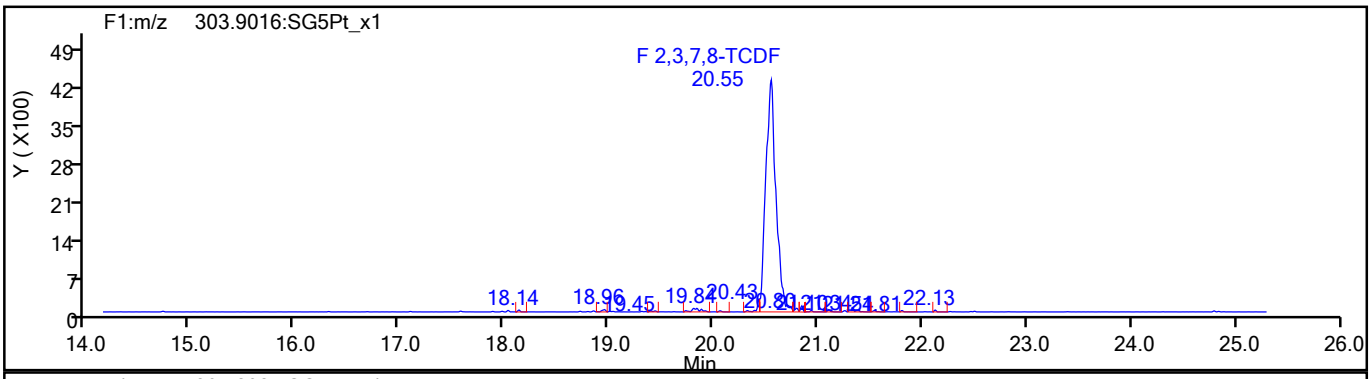

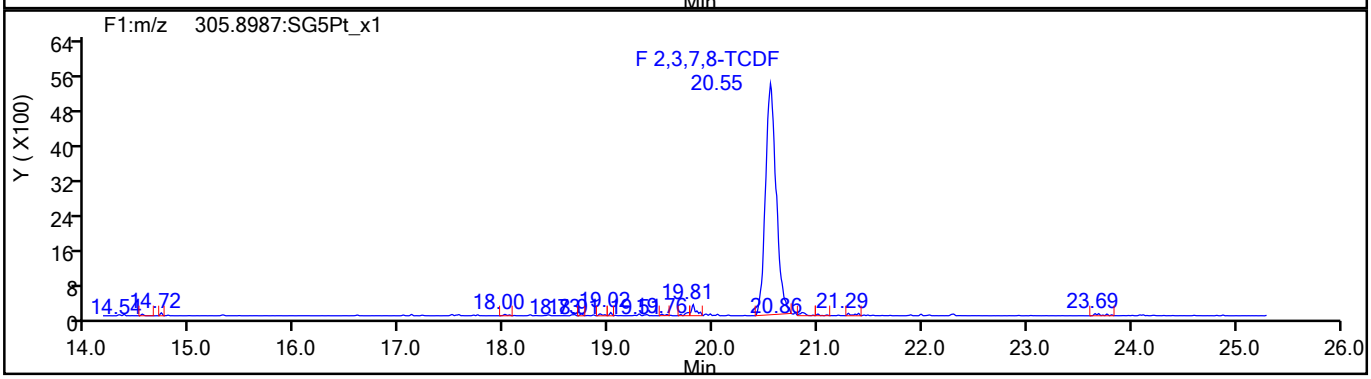

TCDF Standards

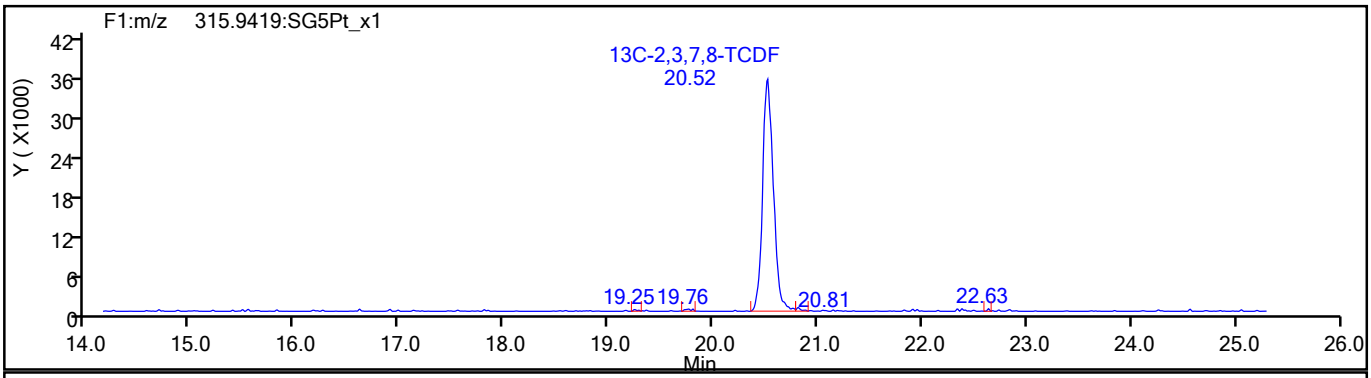

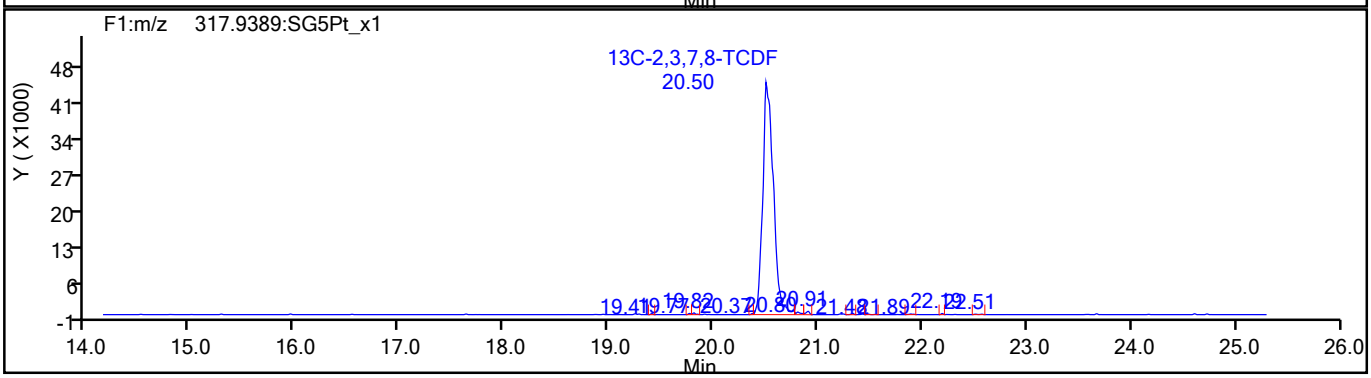

783590

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

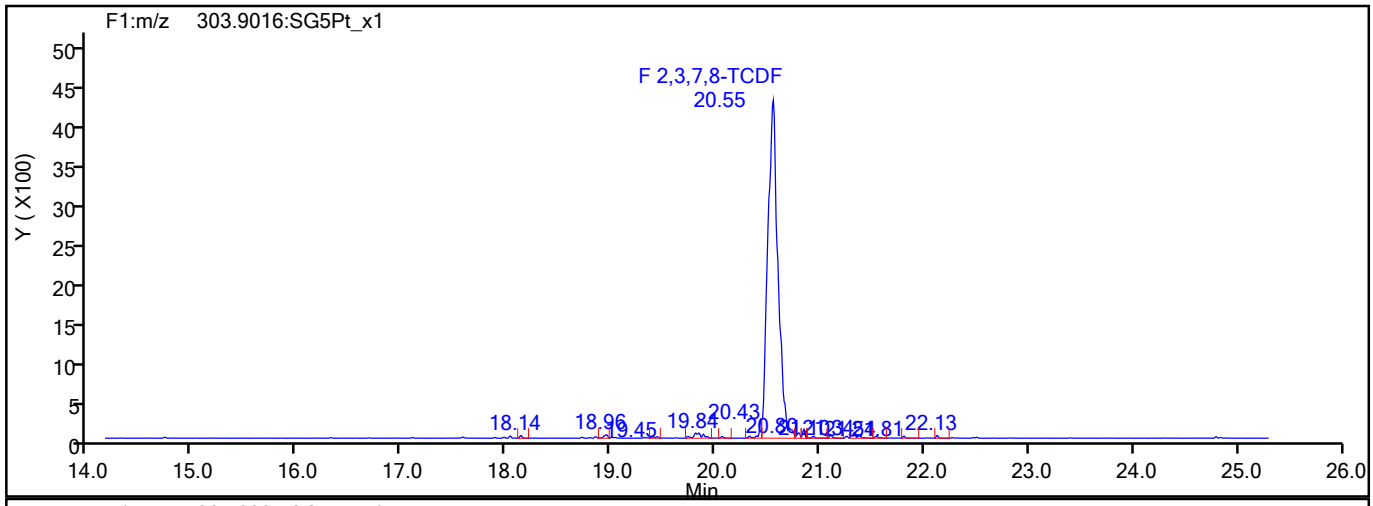

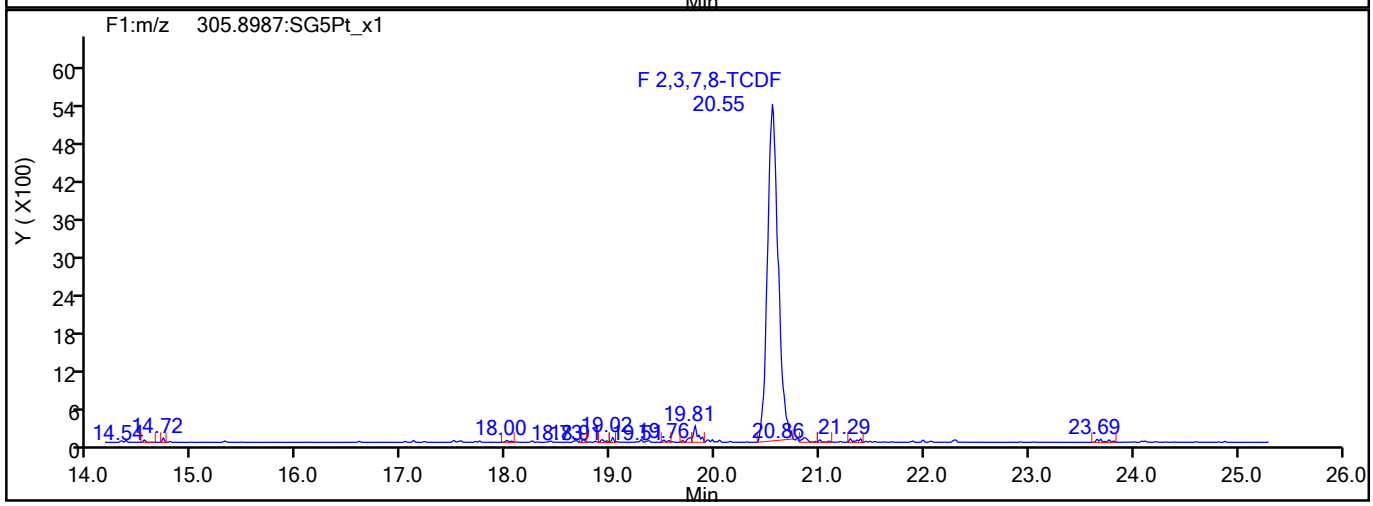

TCDF Interference Mass

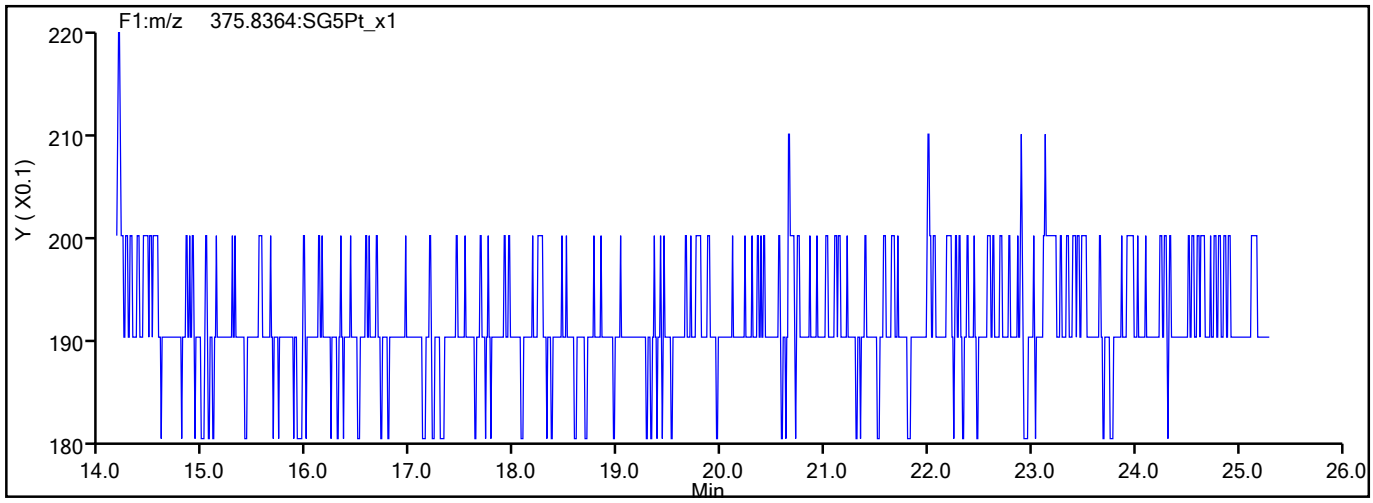

783591

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

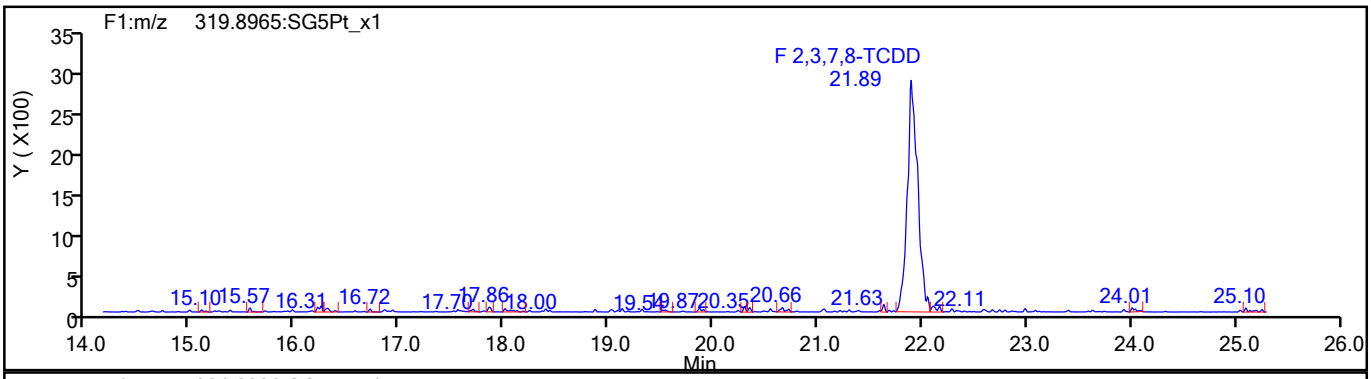

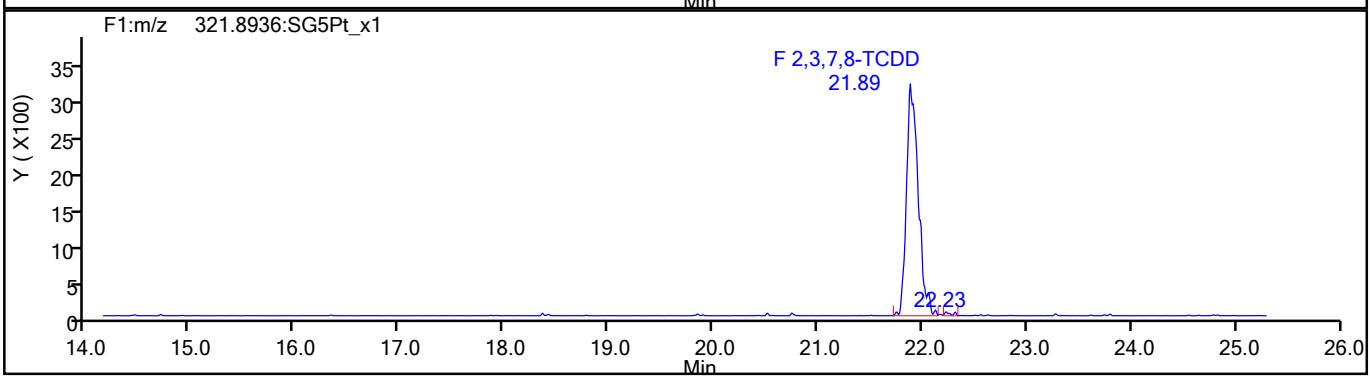

TCDD Standards

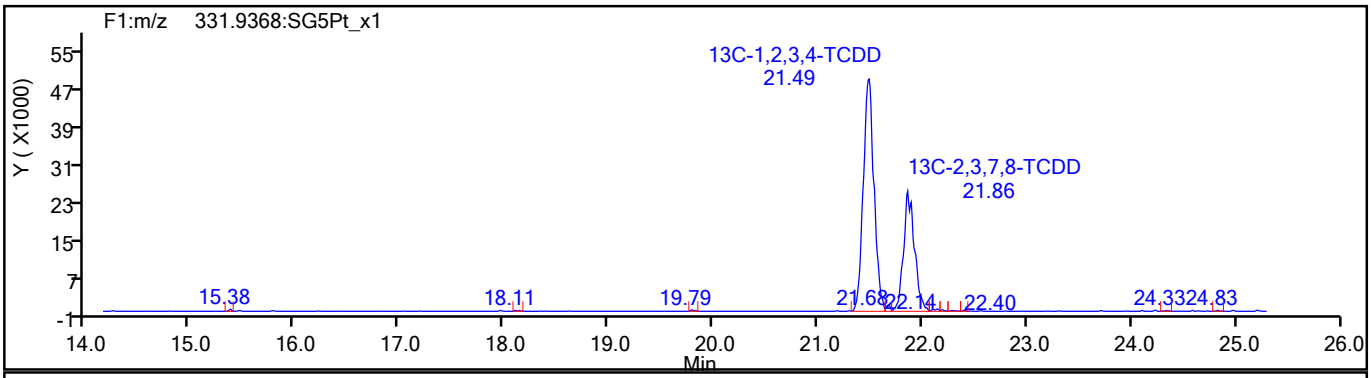

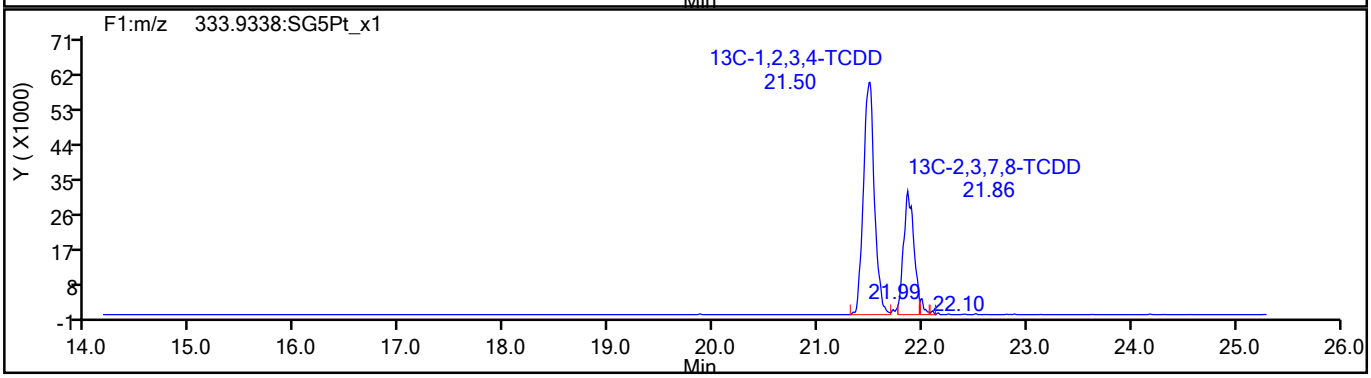

783592

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

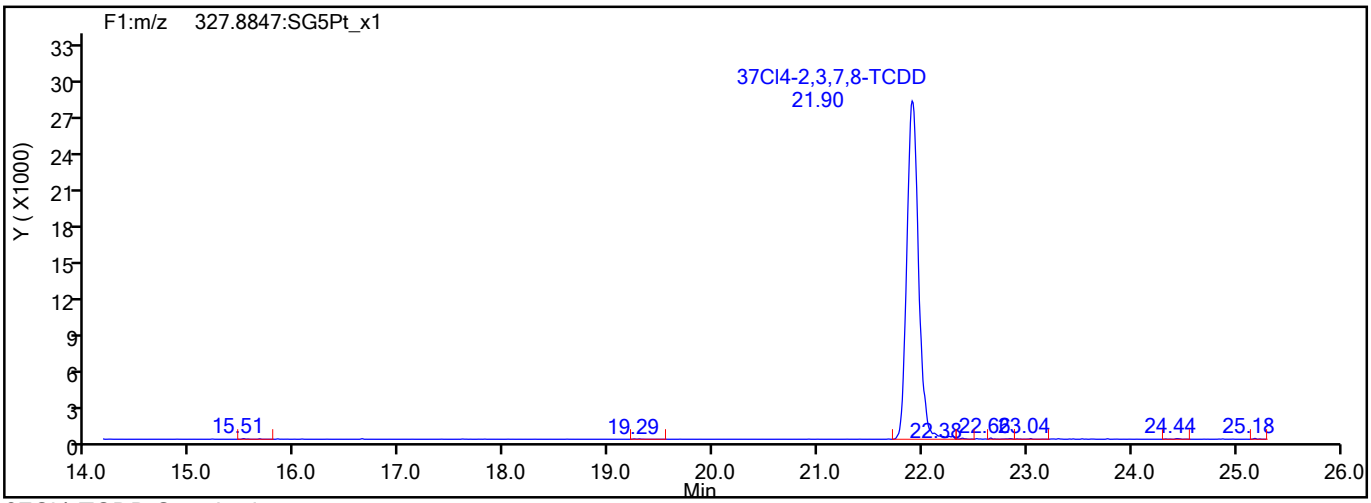

37Cl4-TCDD Standards

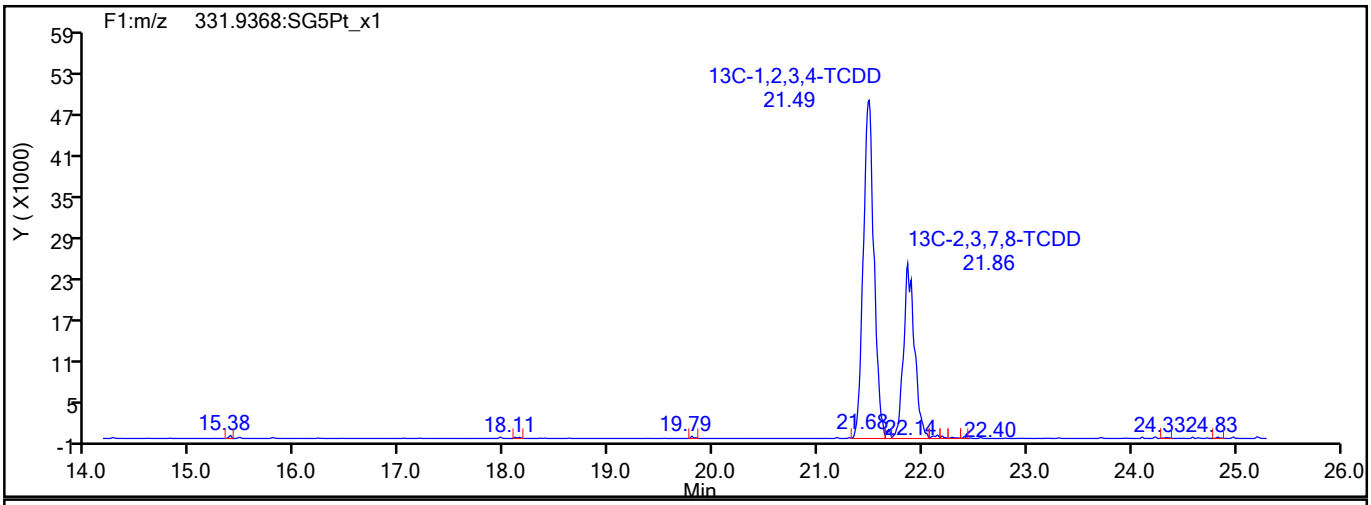

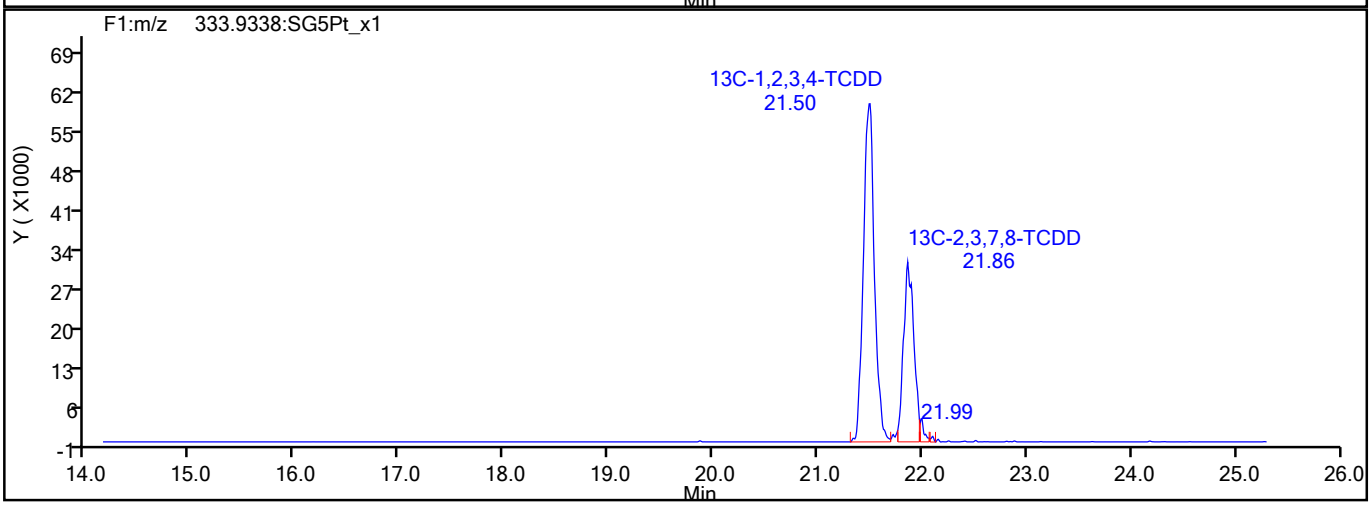

783593

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

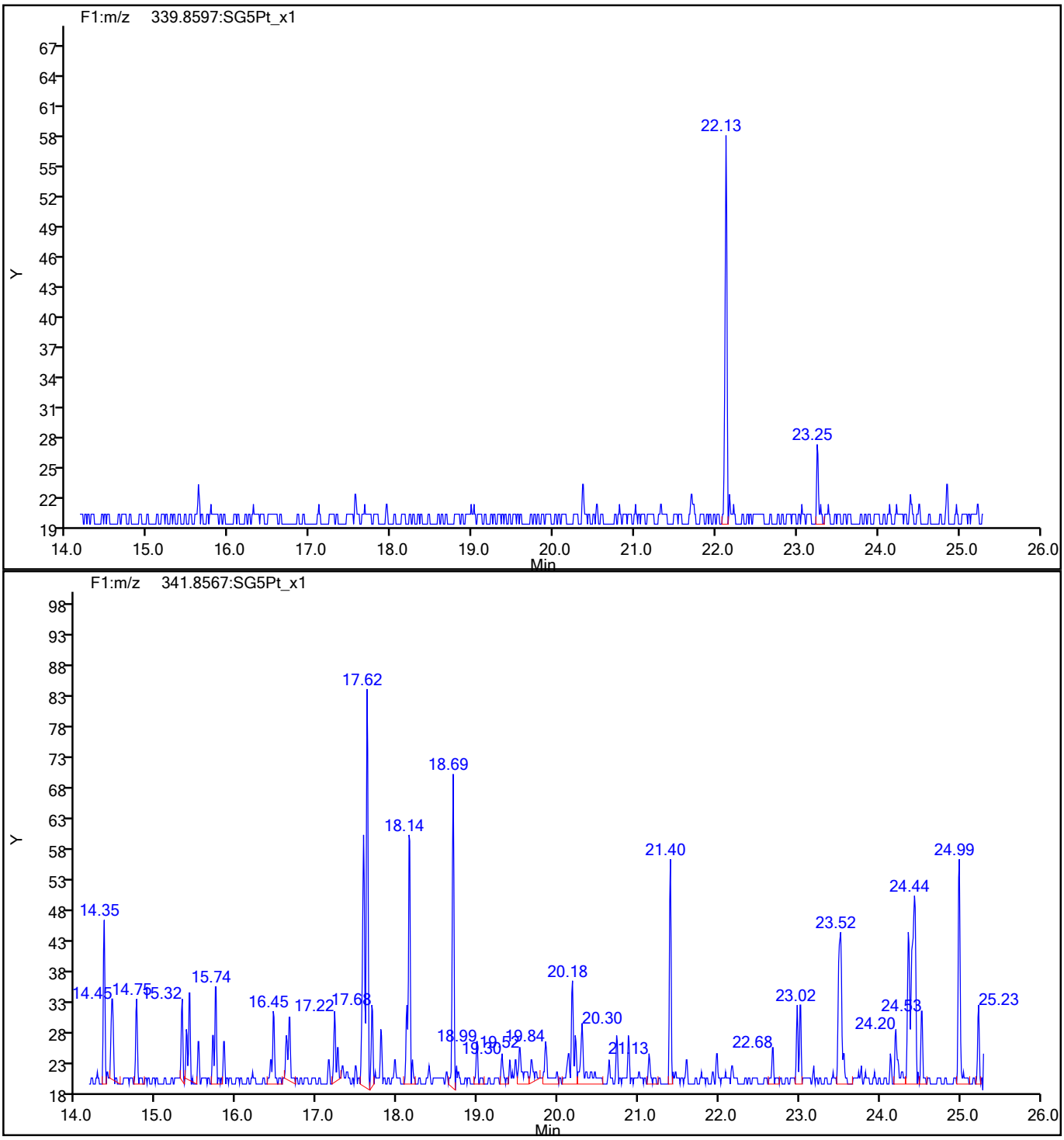

783594

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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F1 PeCDFs

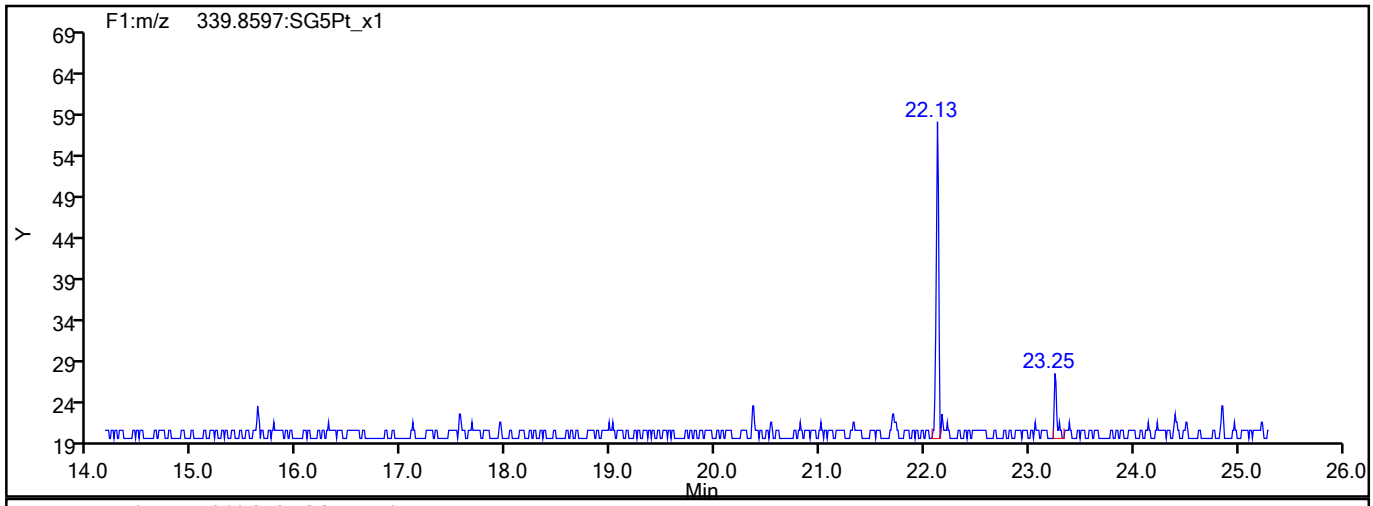

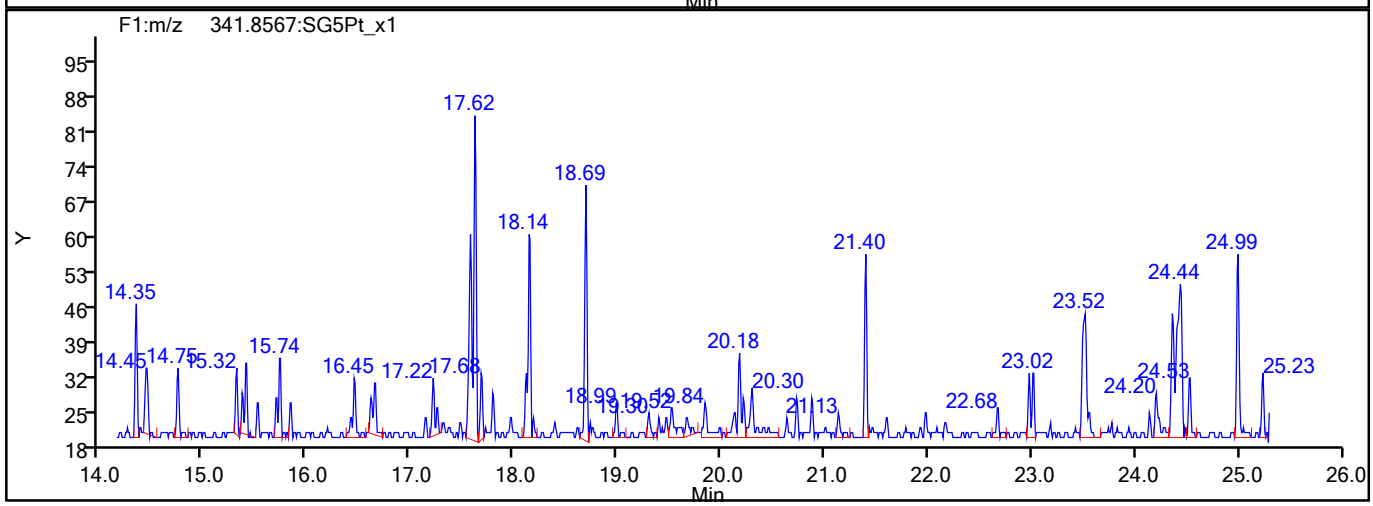

F1 PeCDFs Interference Mass

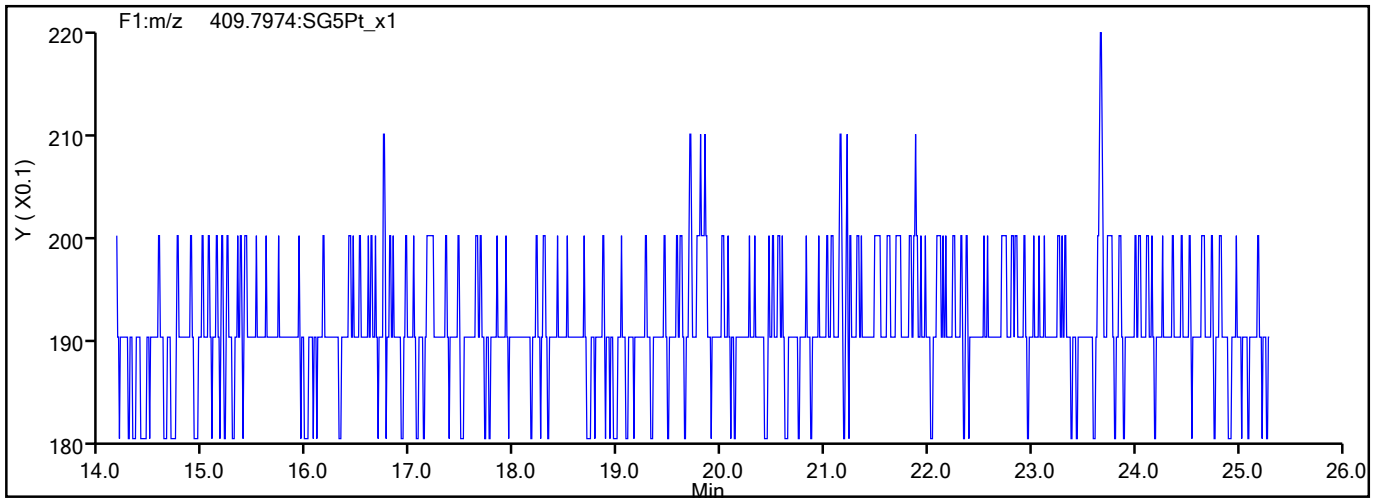

783595

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

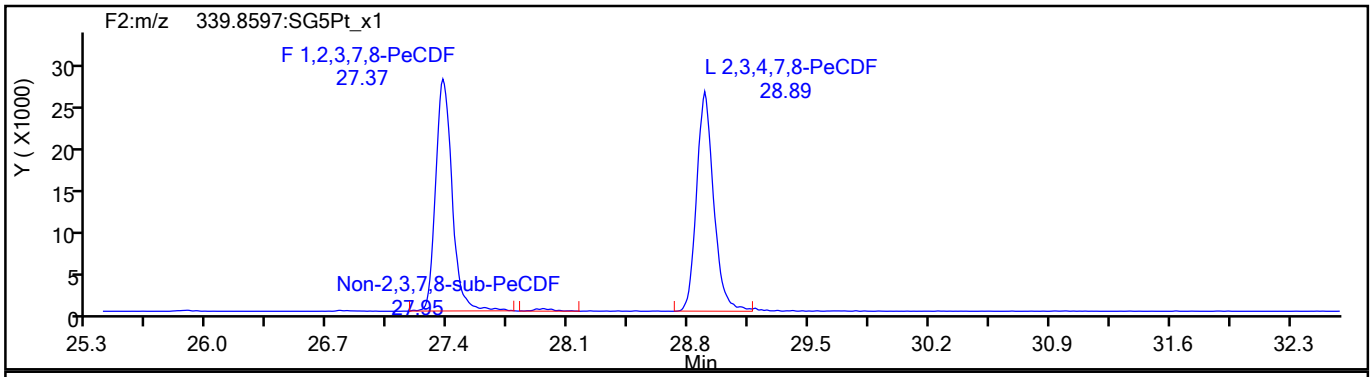

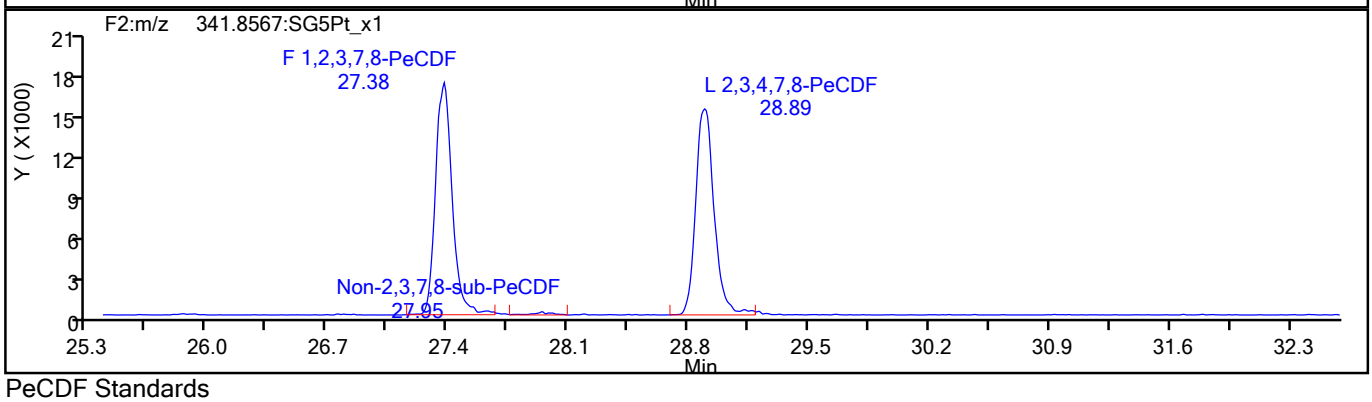

PeCDF Standards

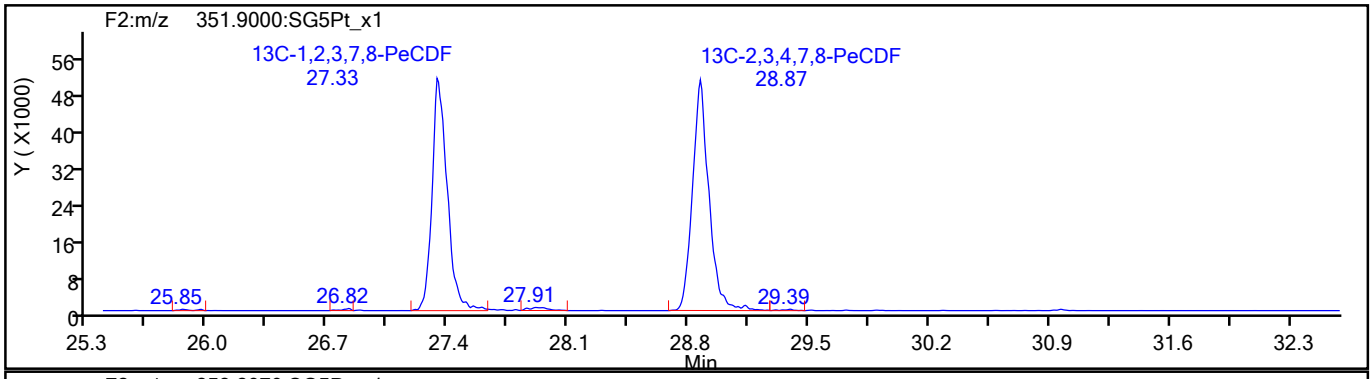

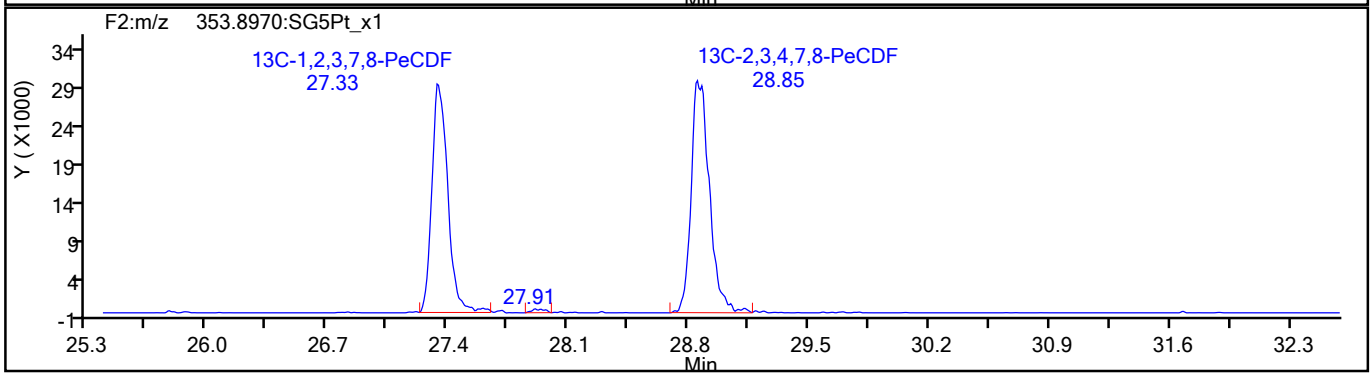

783596

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

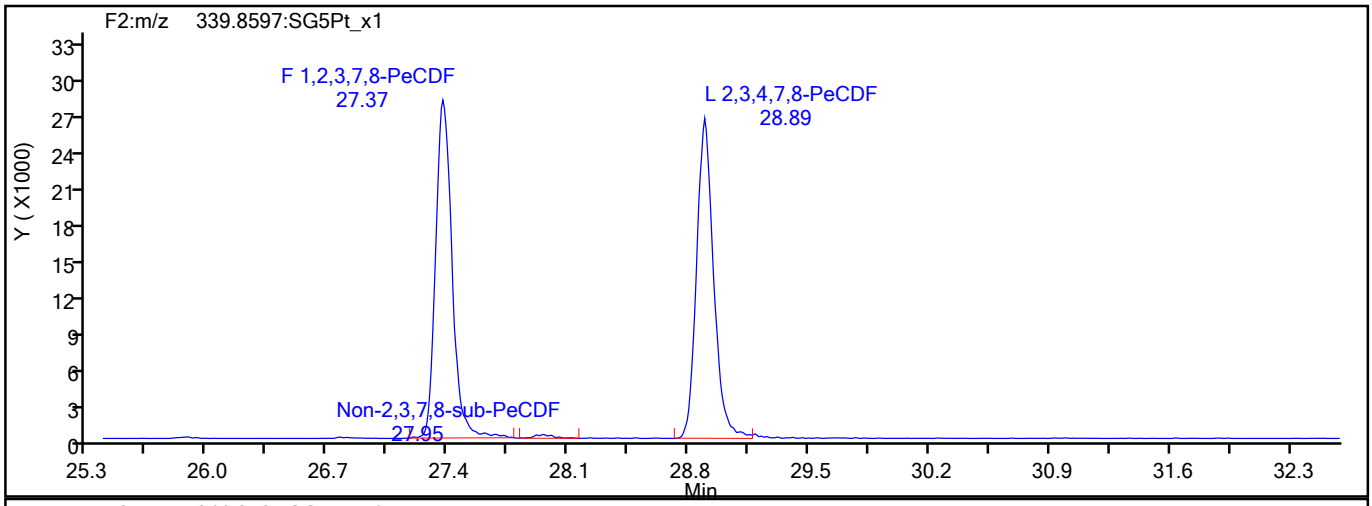

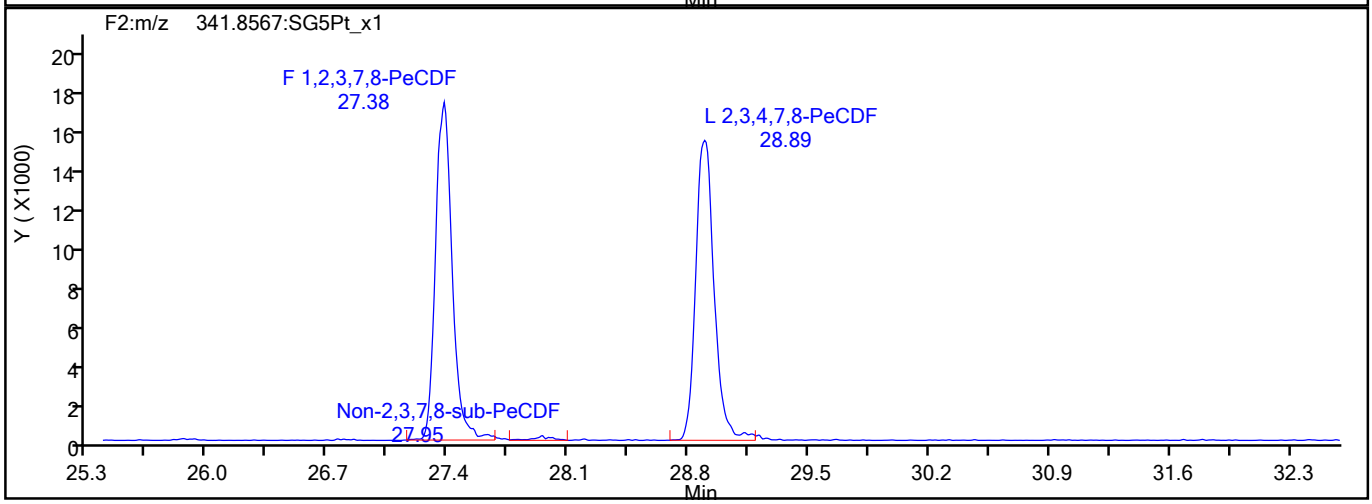

PeCDF Interference Mass

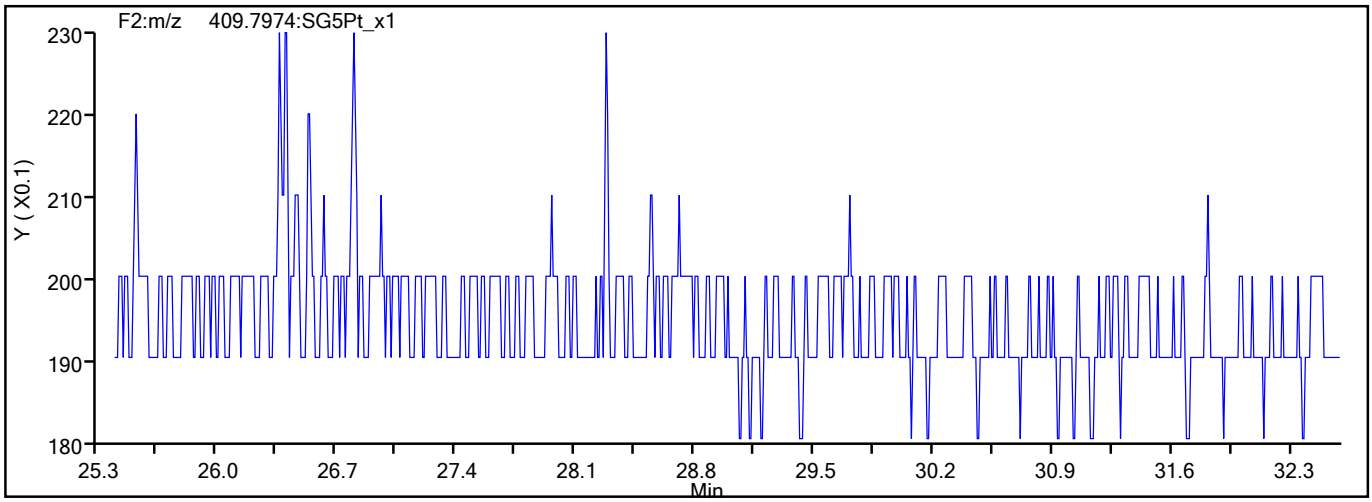

783597

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

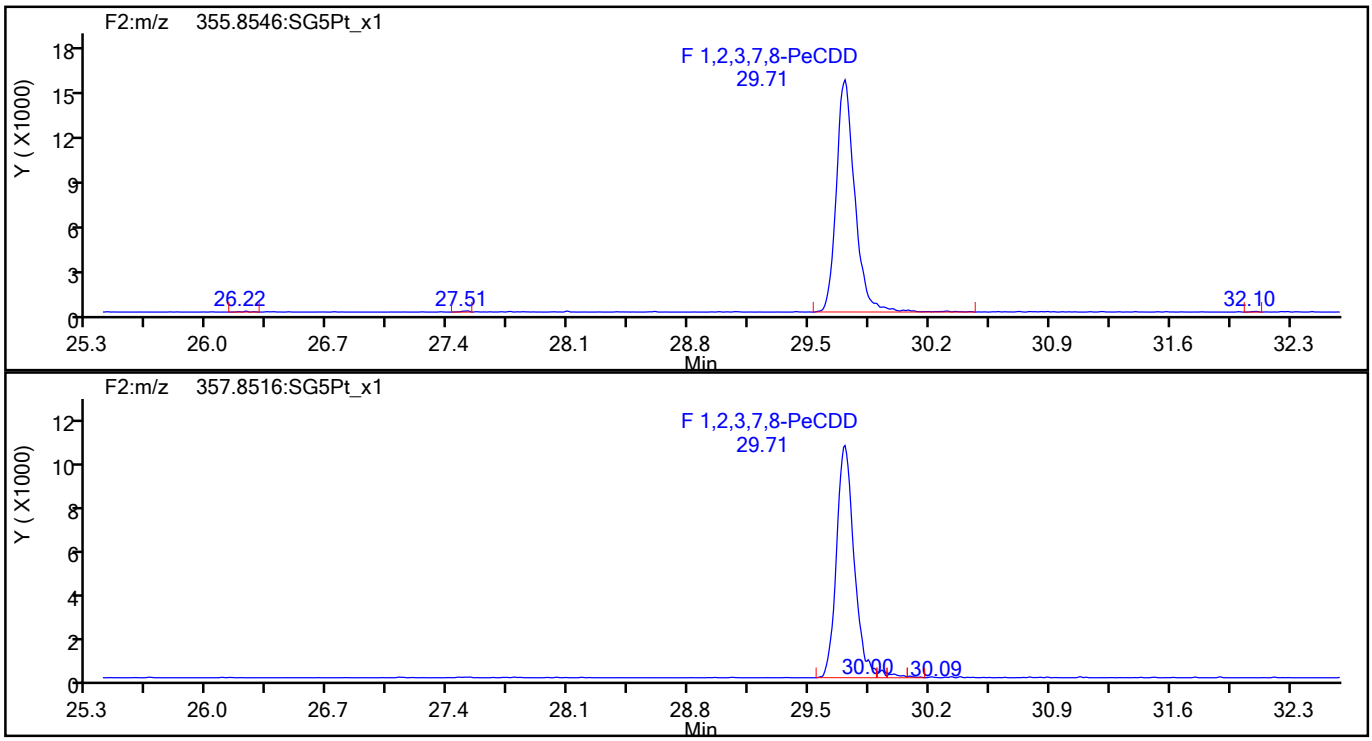

PeCDD Standards

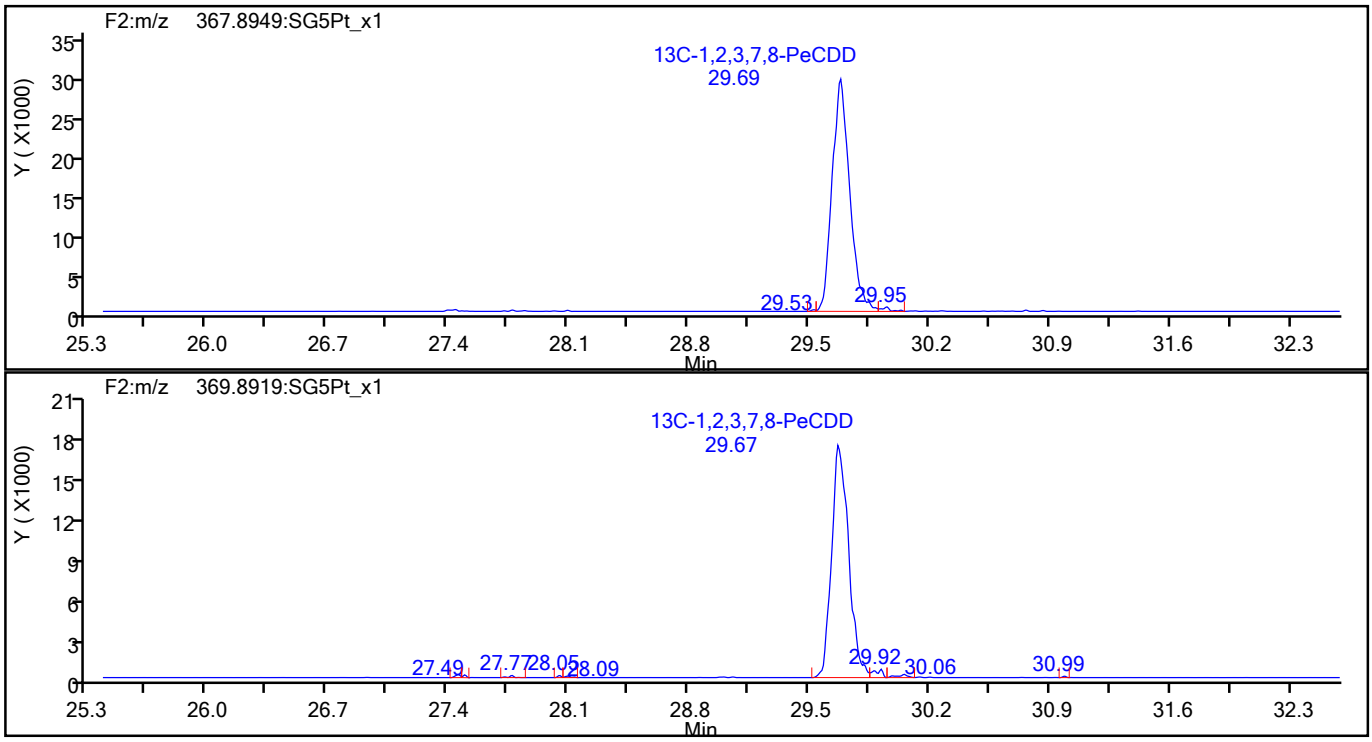

783598

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

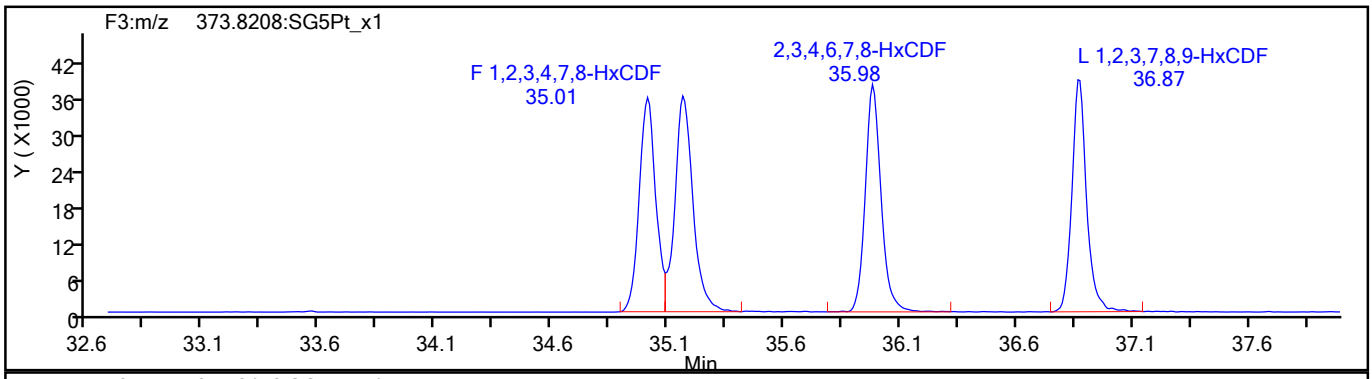

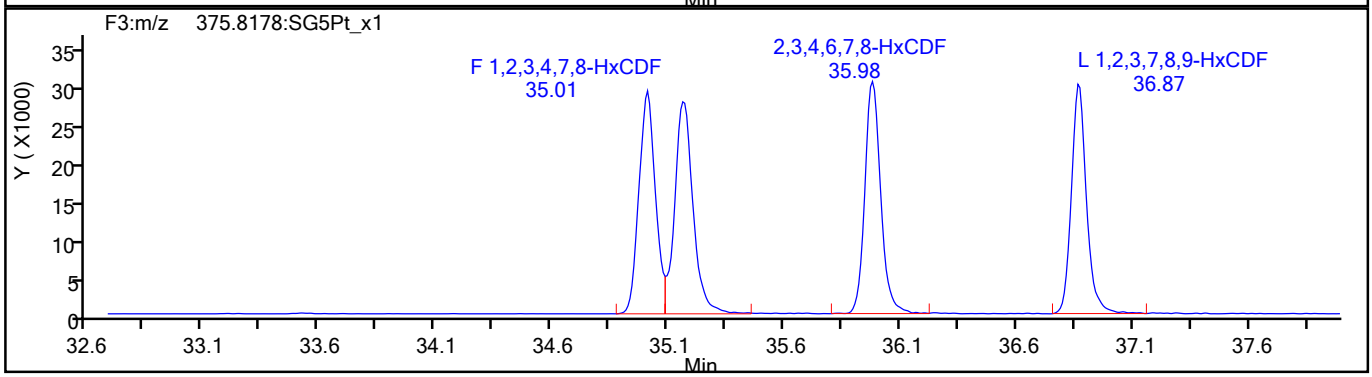

HxCDF Standards

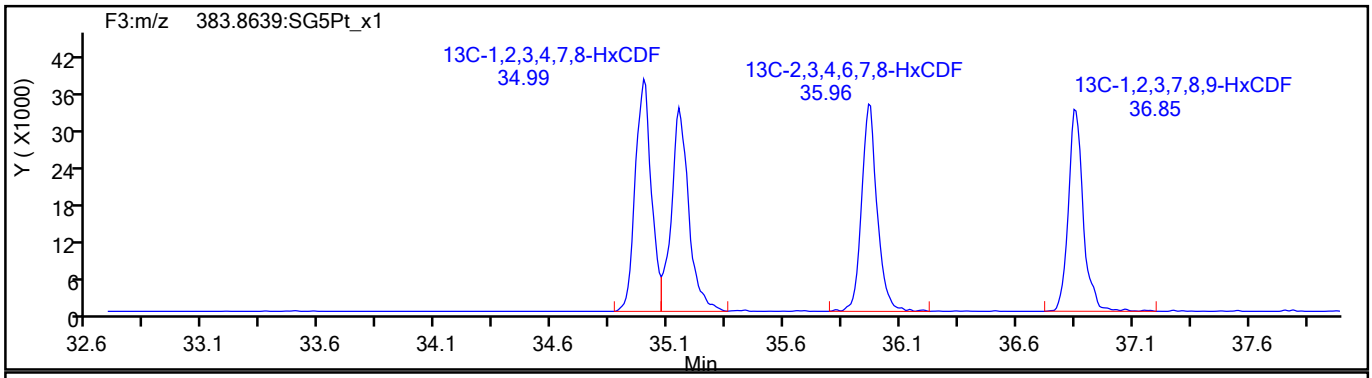

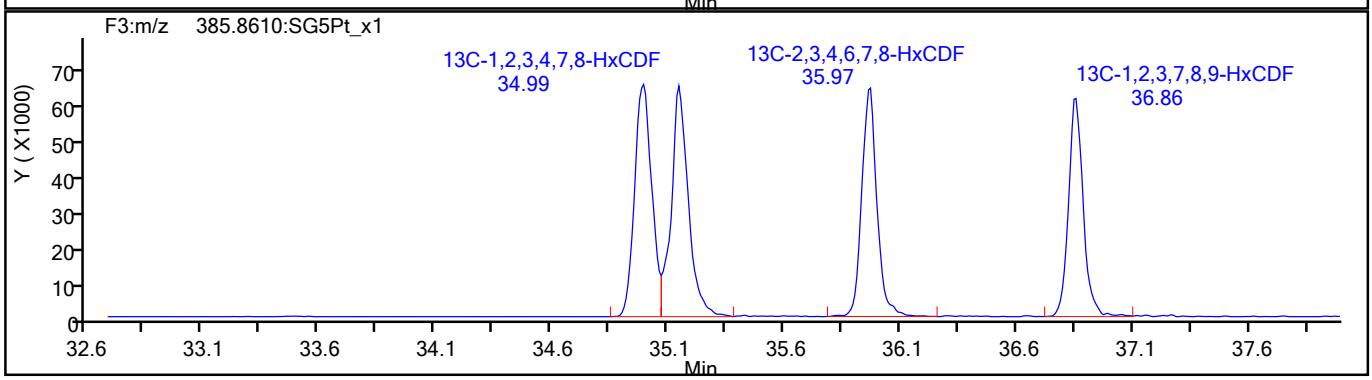

783599

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

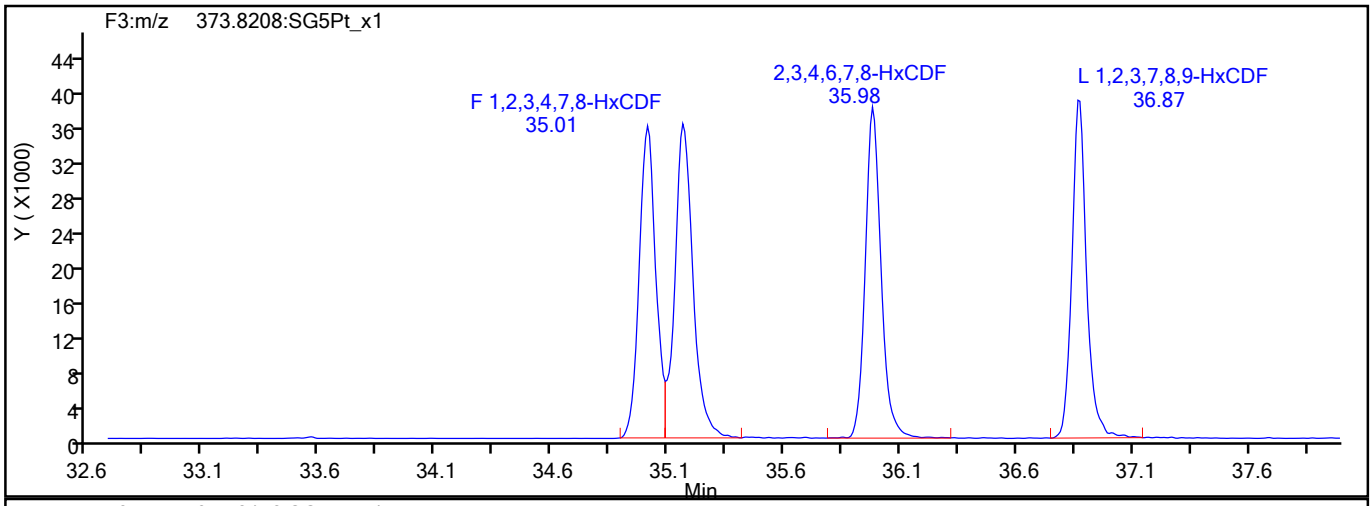

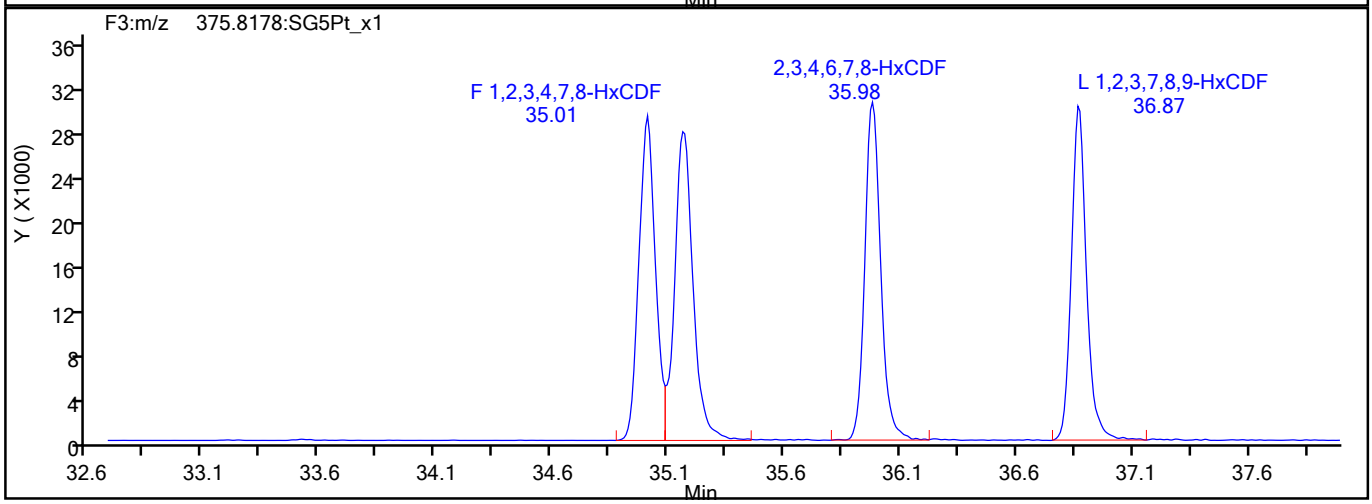

HxCDF Interference Mass

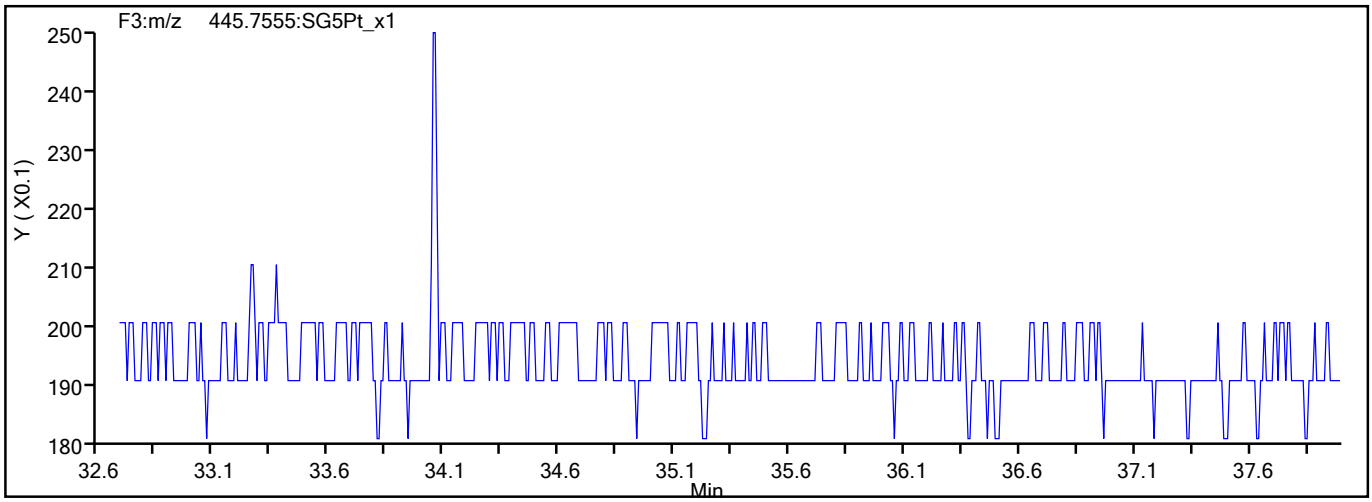

783600

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

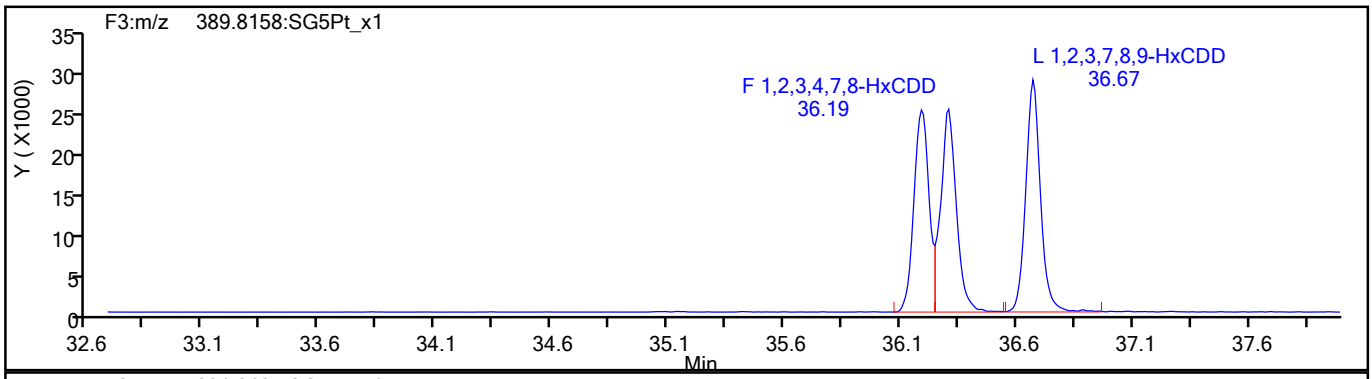

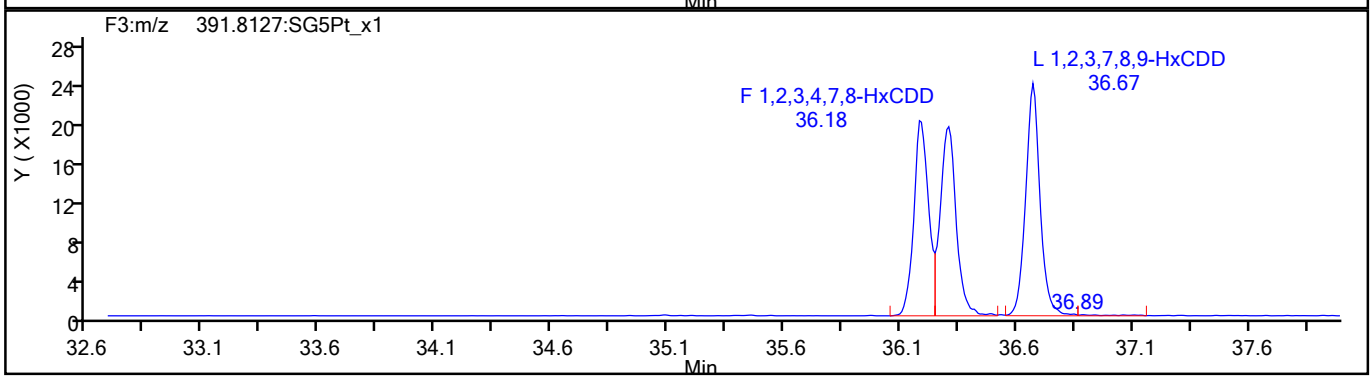

HxCDD Standards

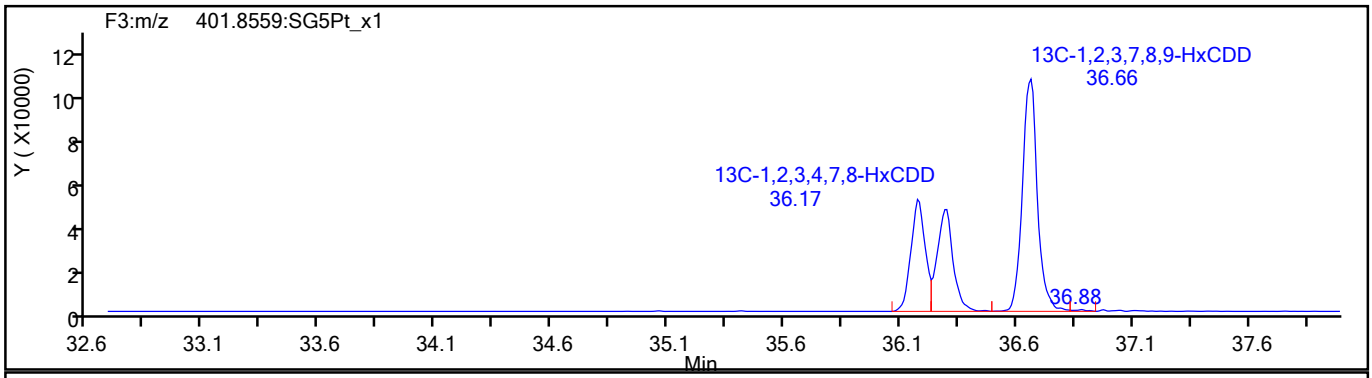

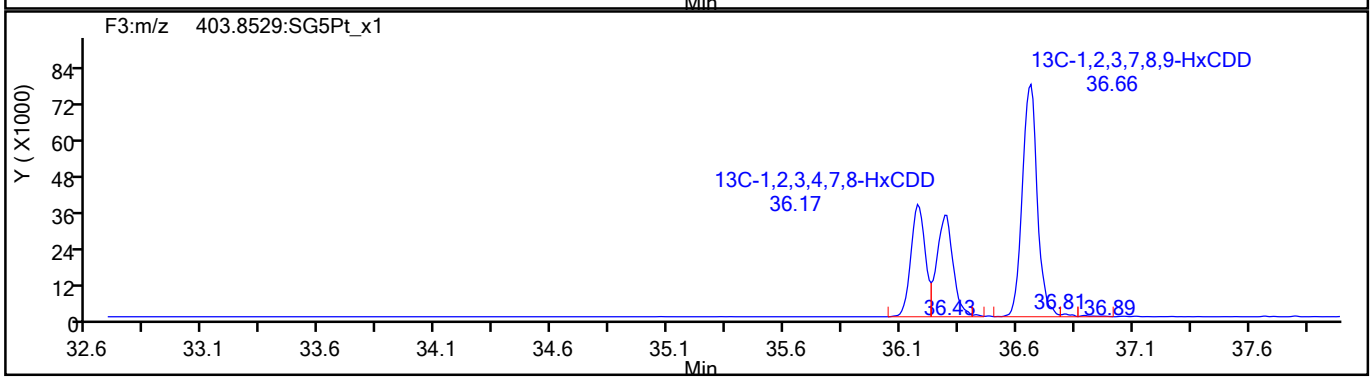

783601

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

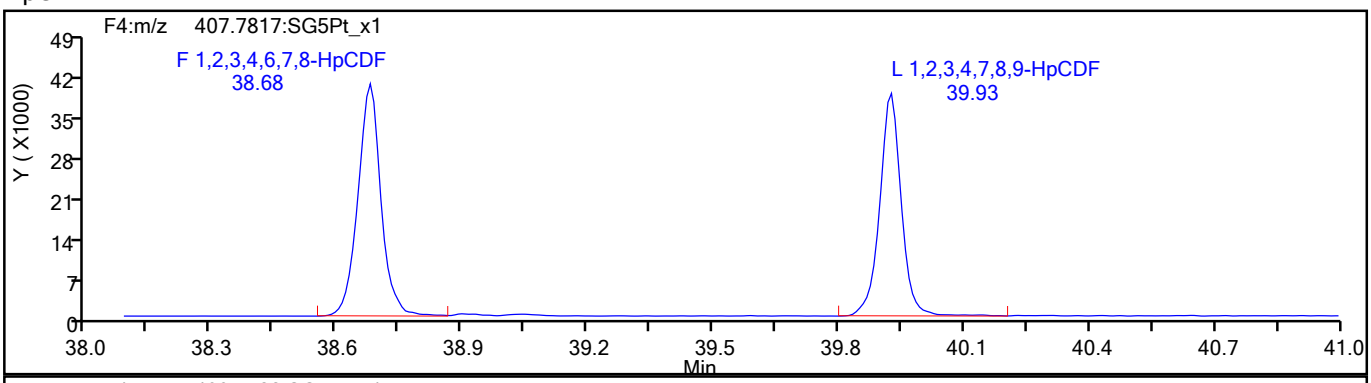

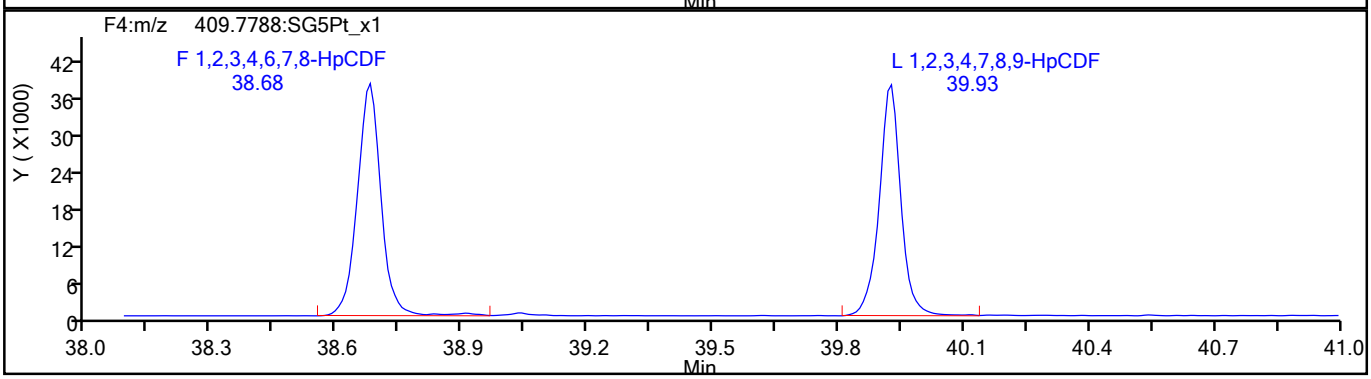

HpCDF Standards

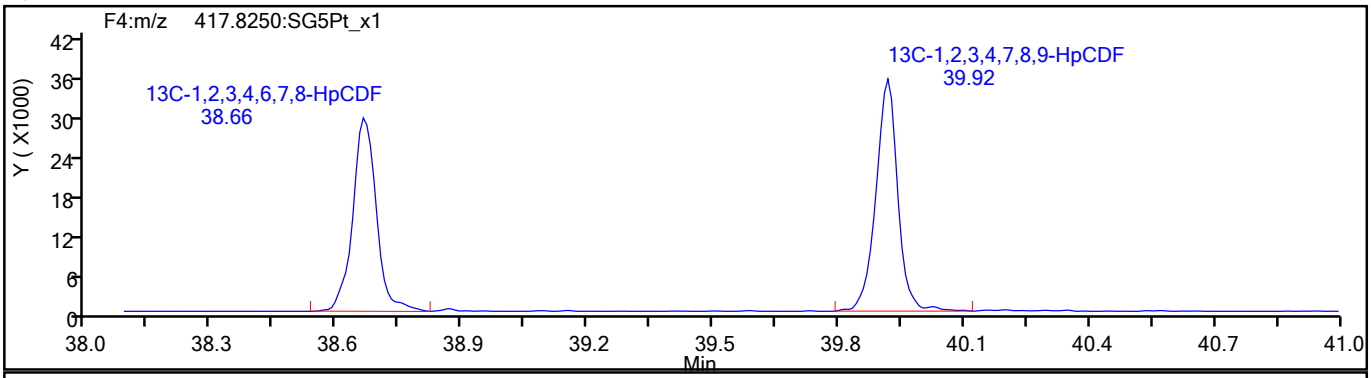

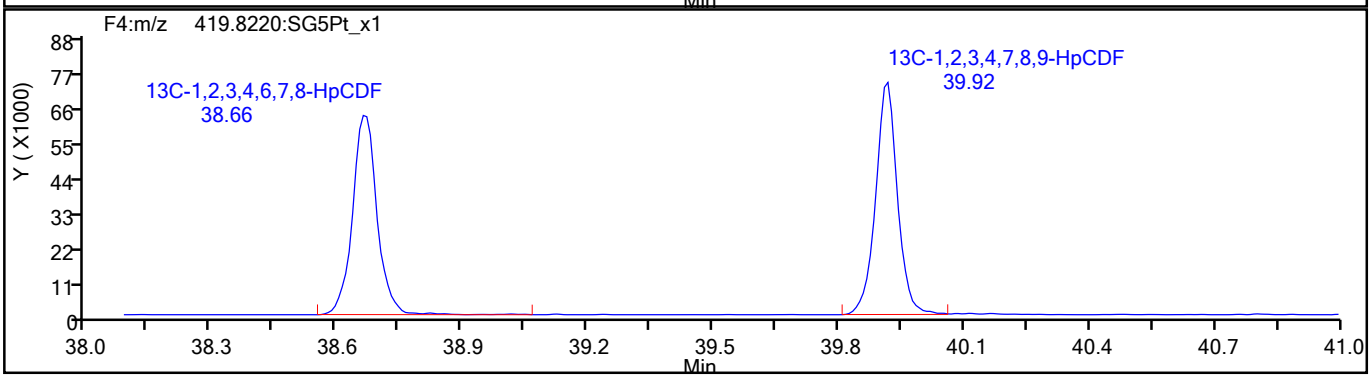

783602

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

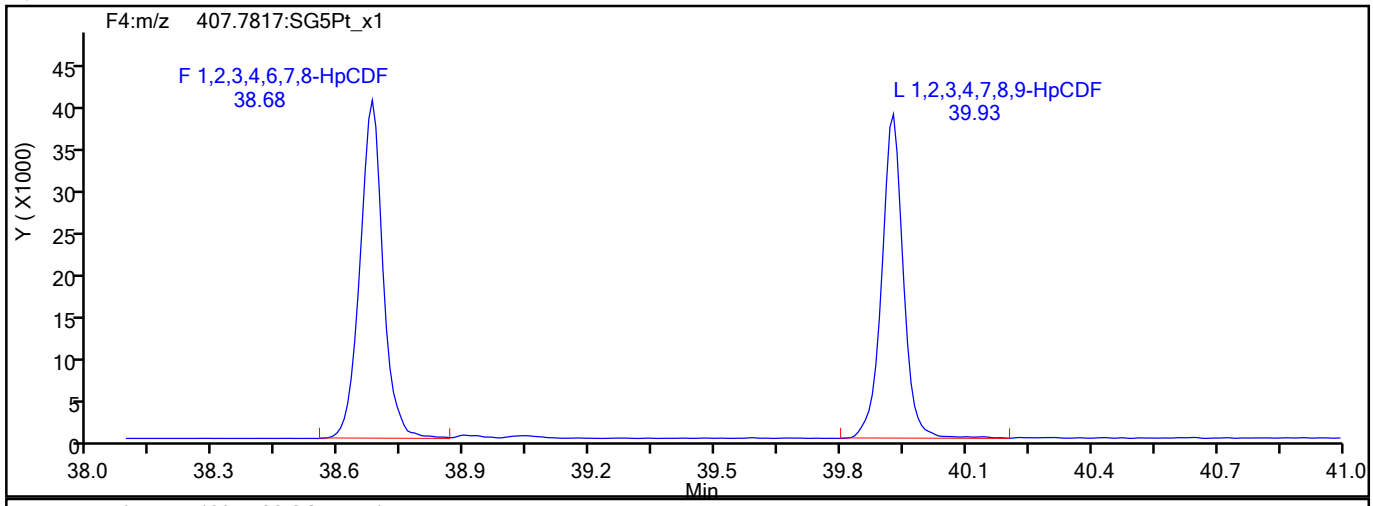

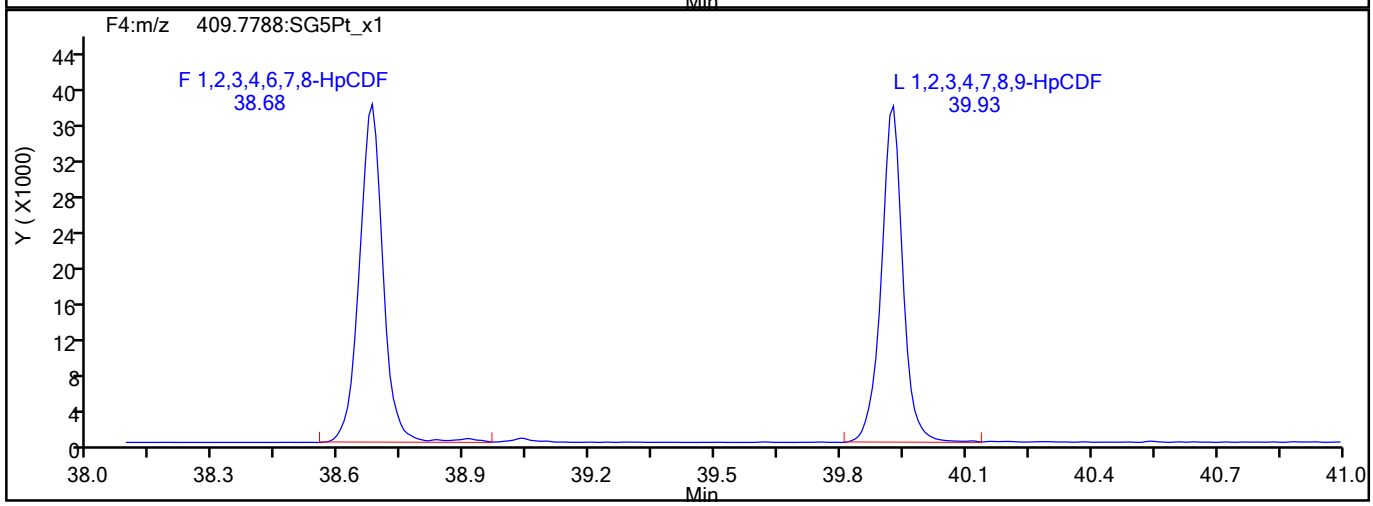

HpCDF Interference Mass

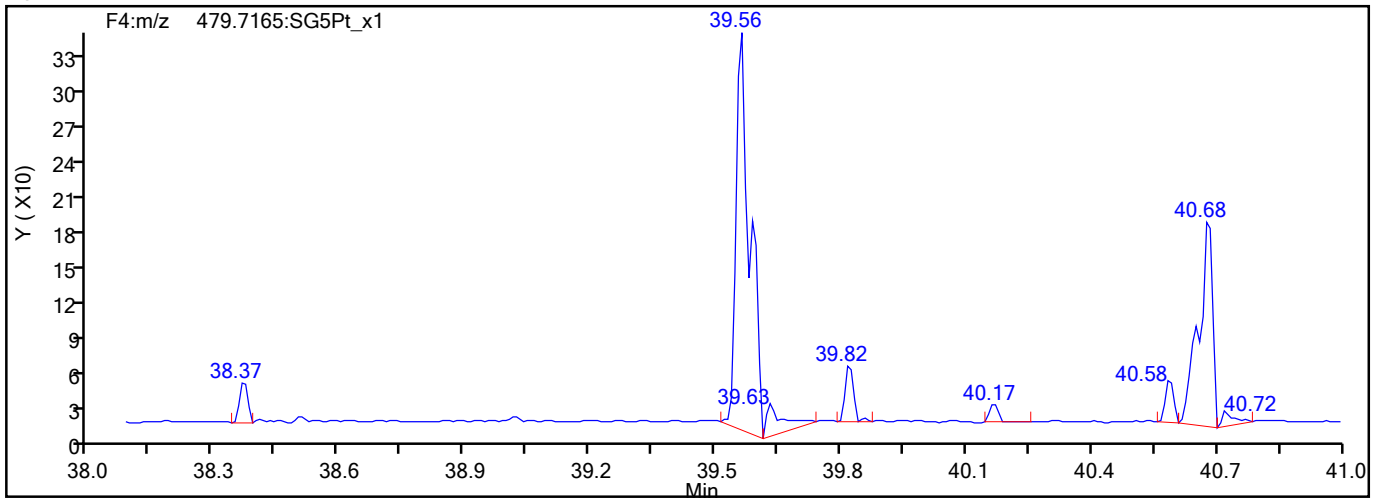

783603

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

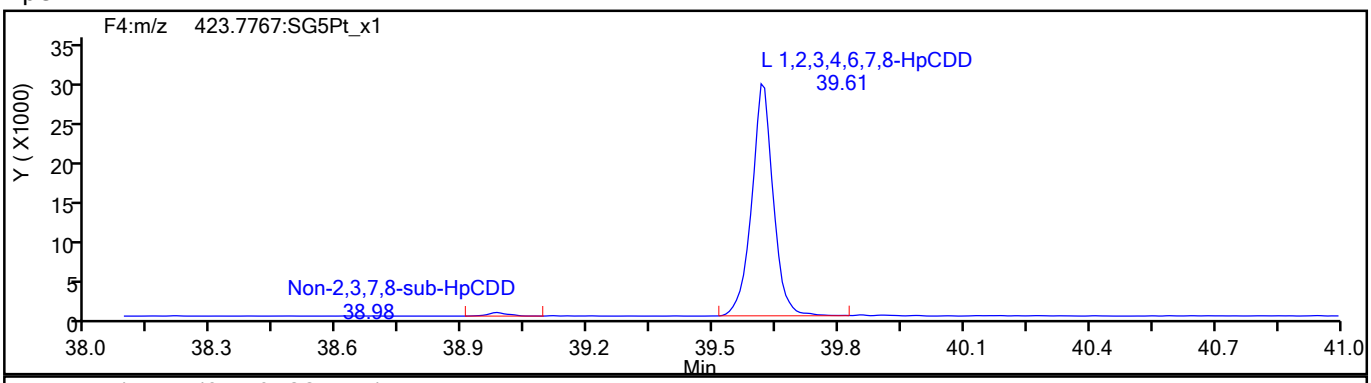

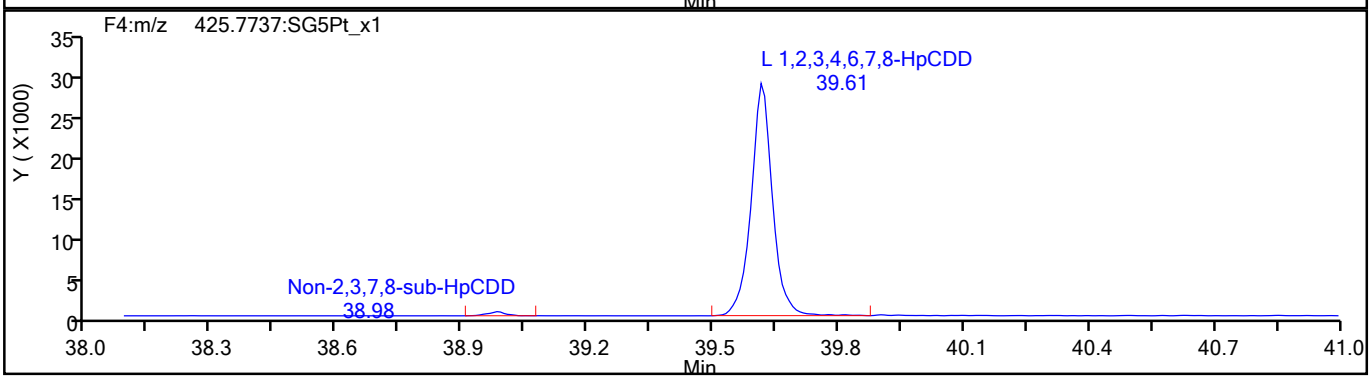

HpCDD Standards

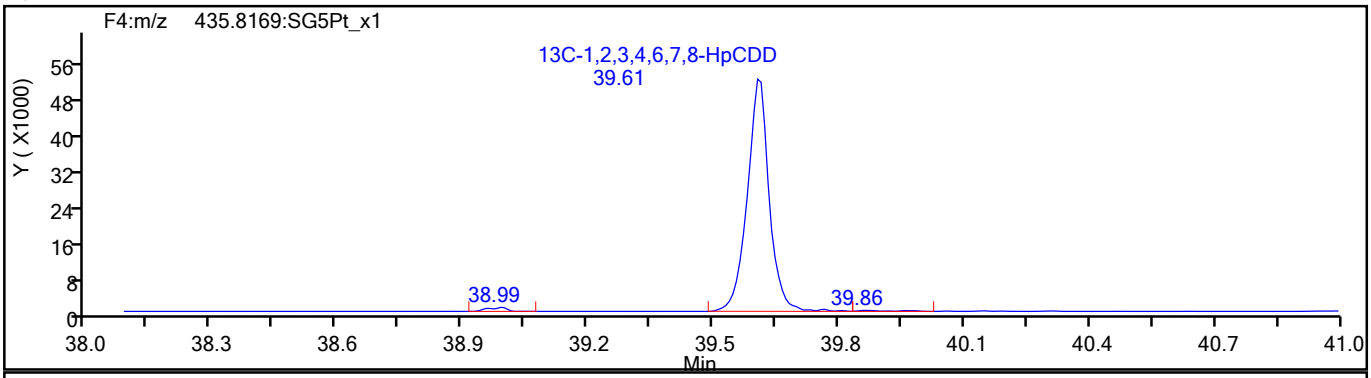

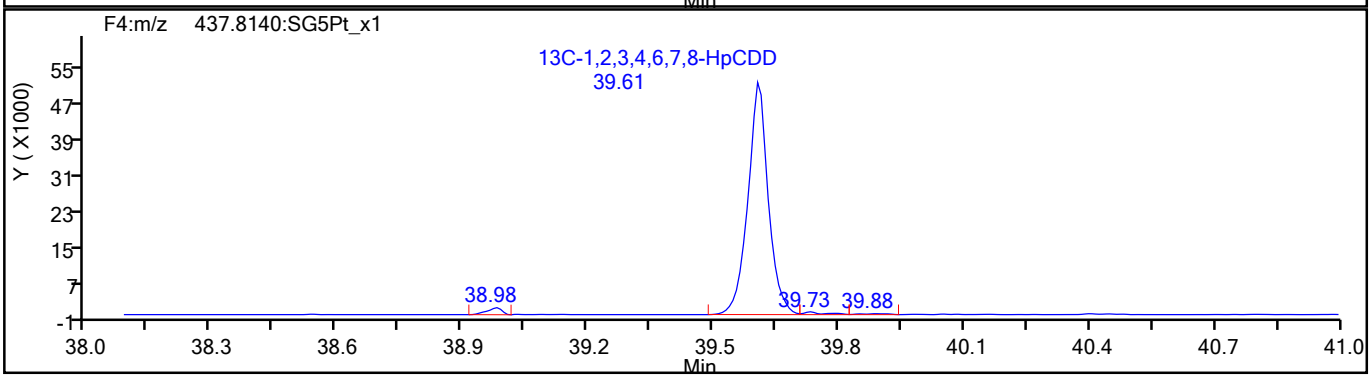

783604

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

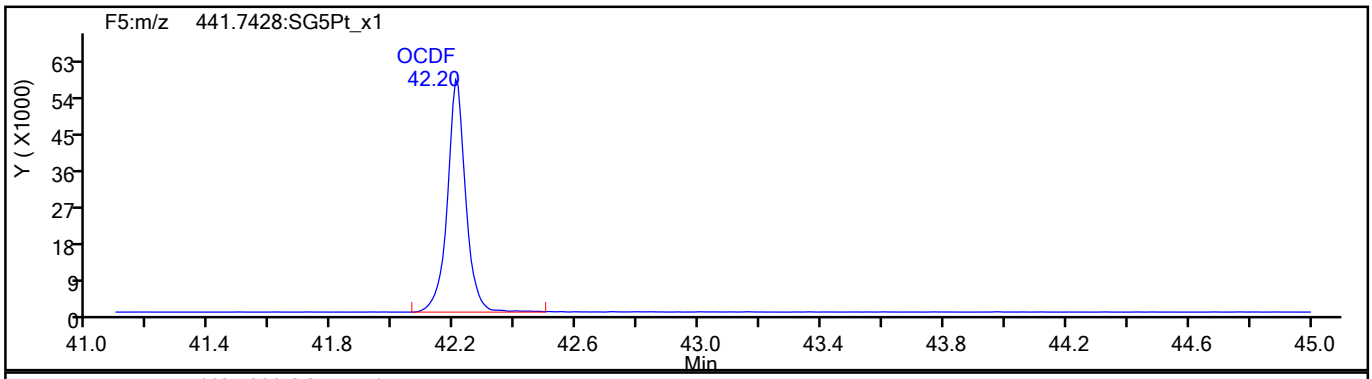

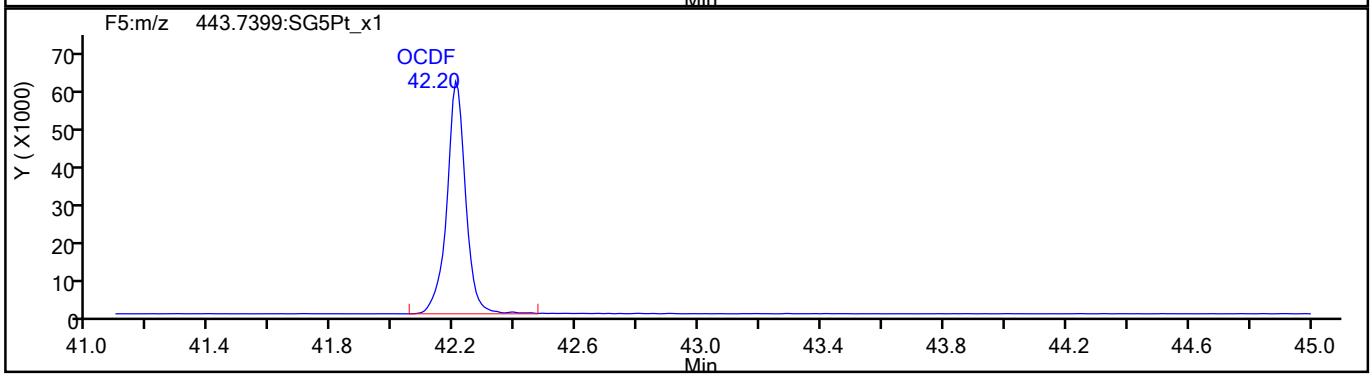

OCDF Standards

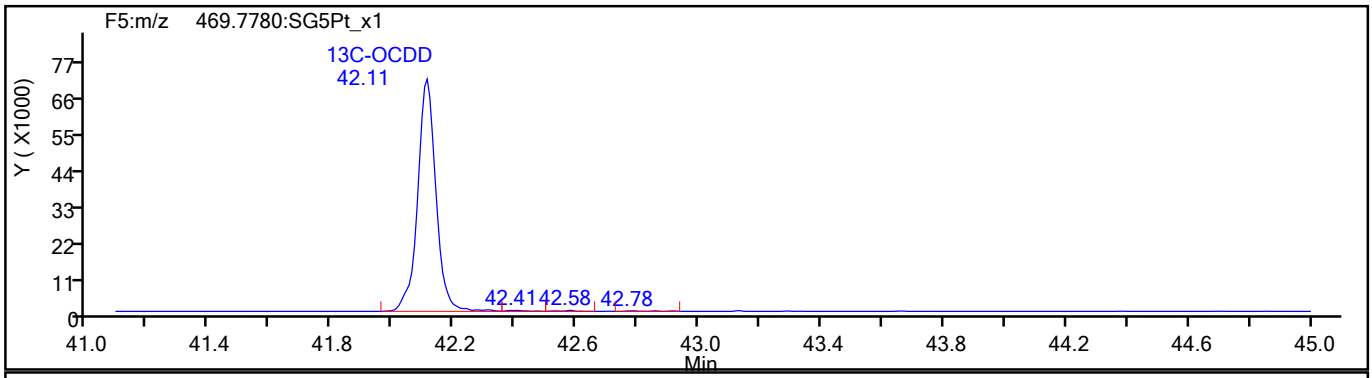

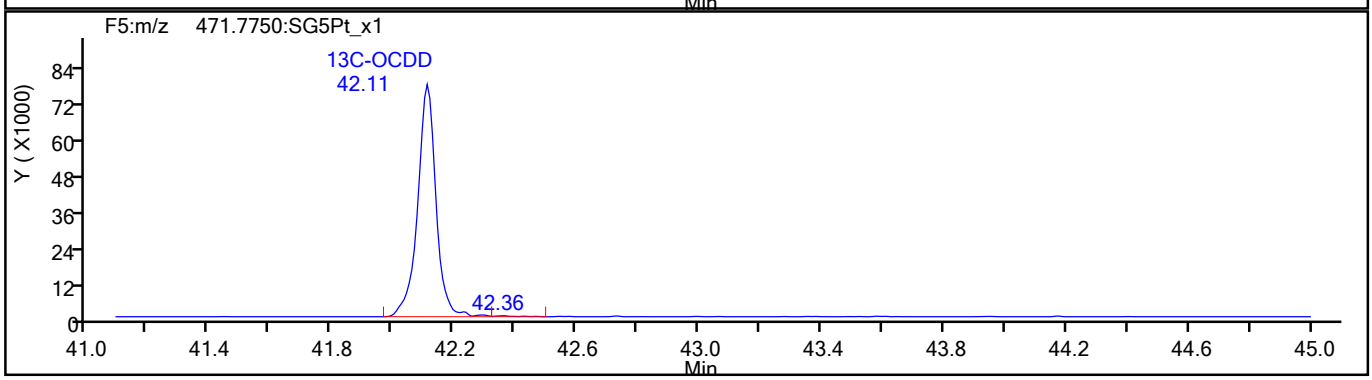

783605

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

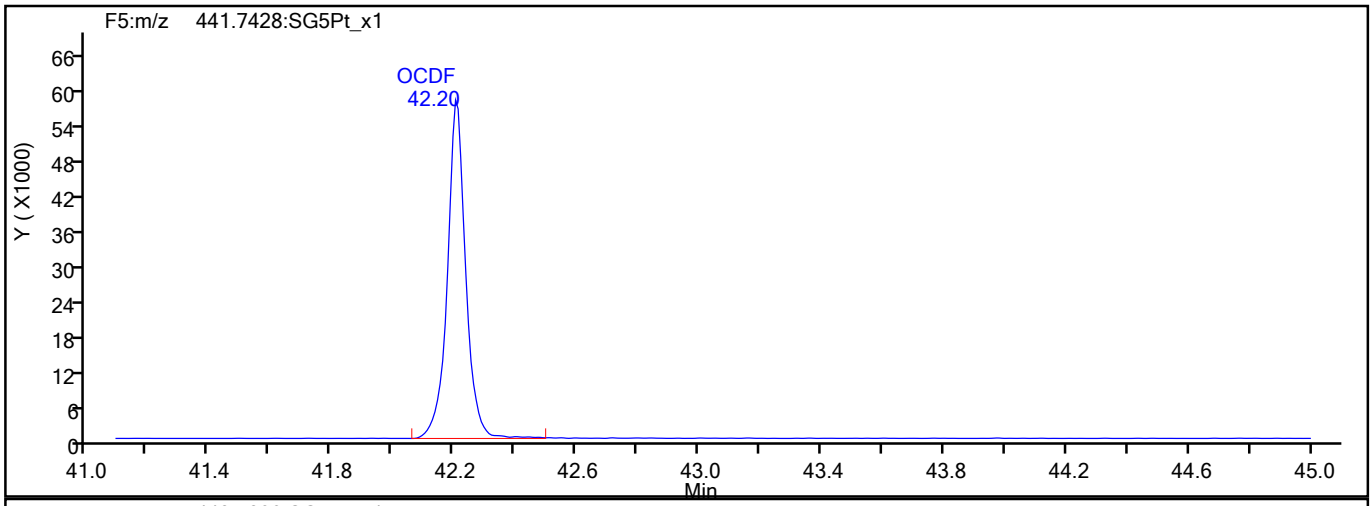

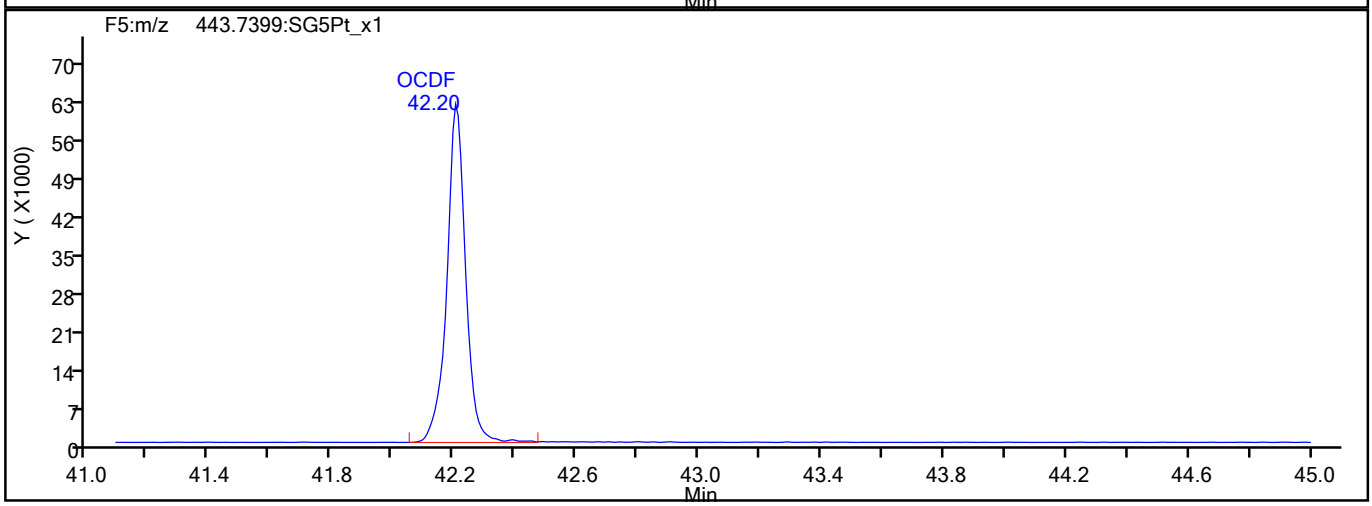

OCDF Interference Mass

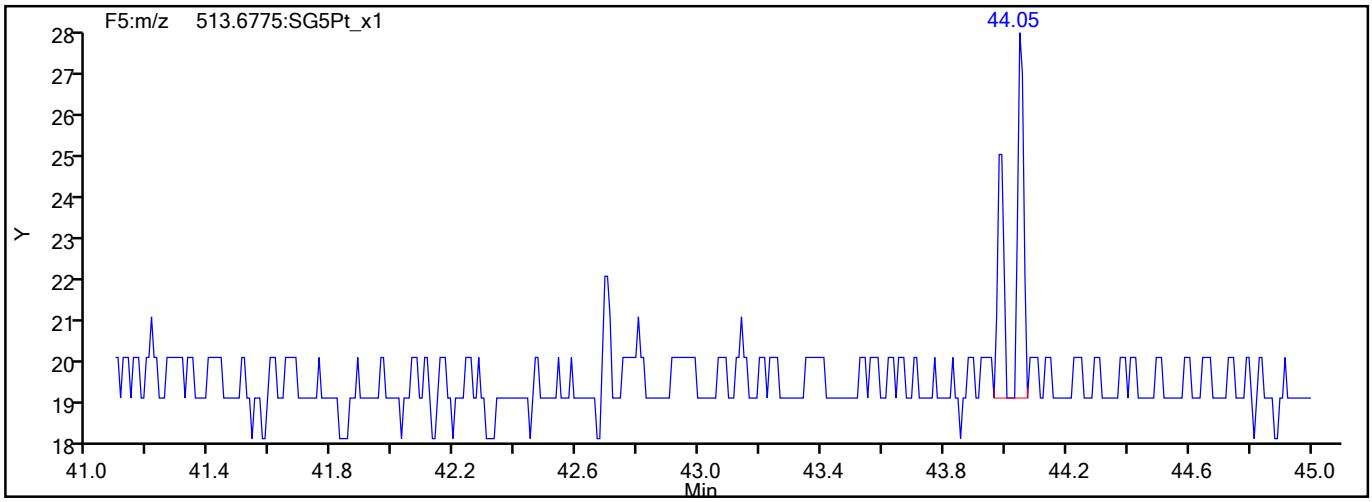

783606

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

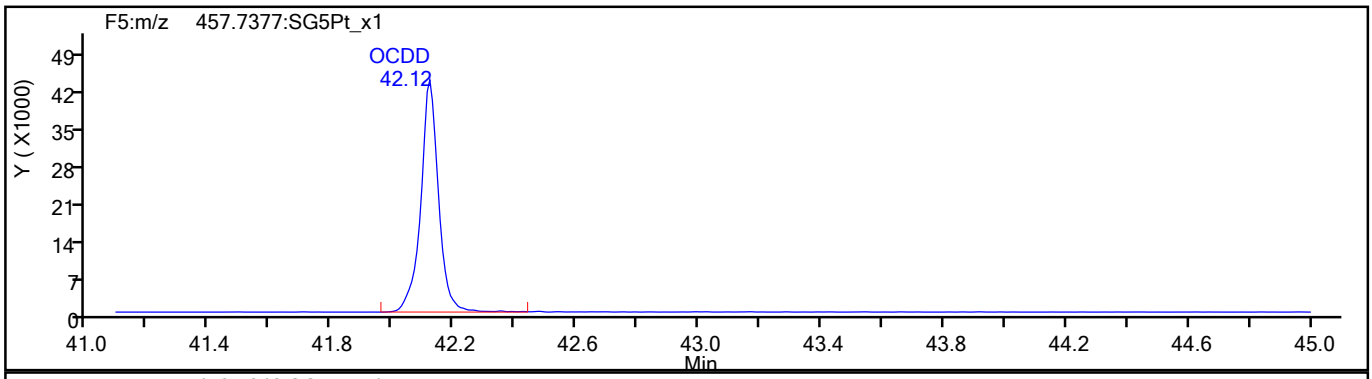

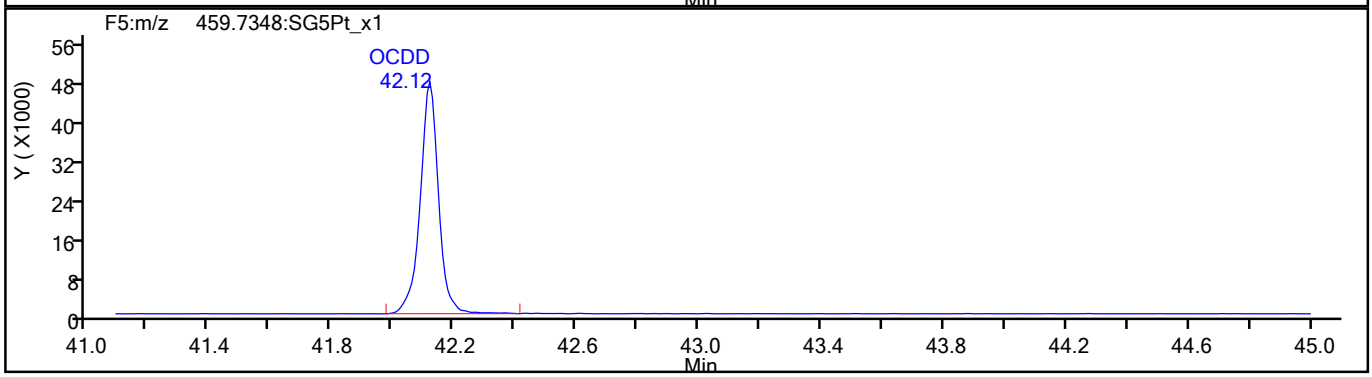

OCDD Standards

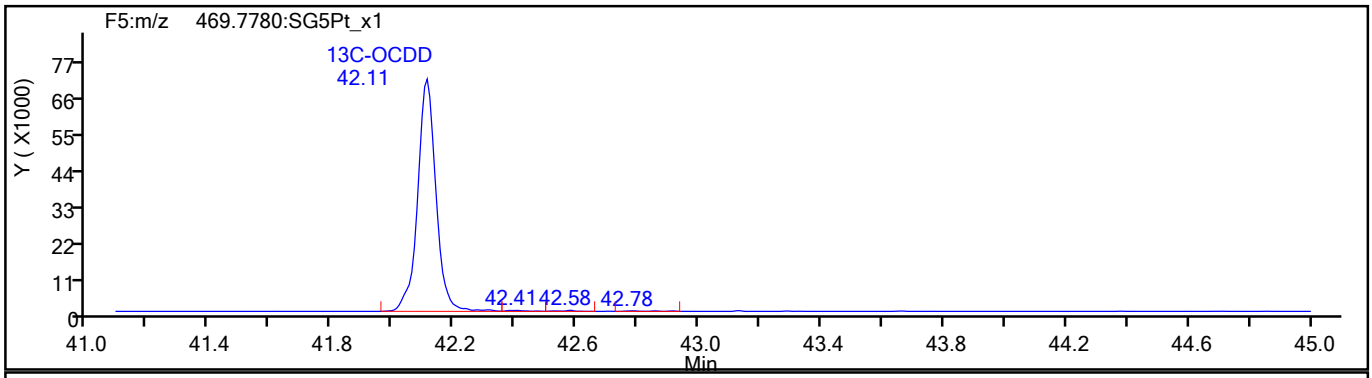

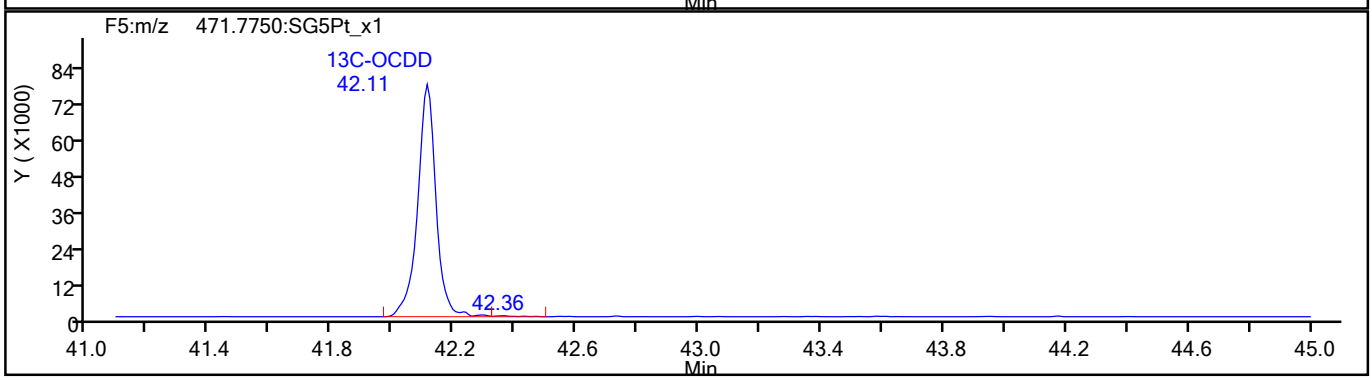

783607

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

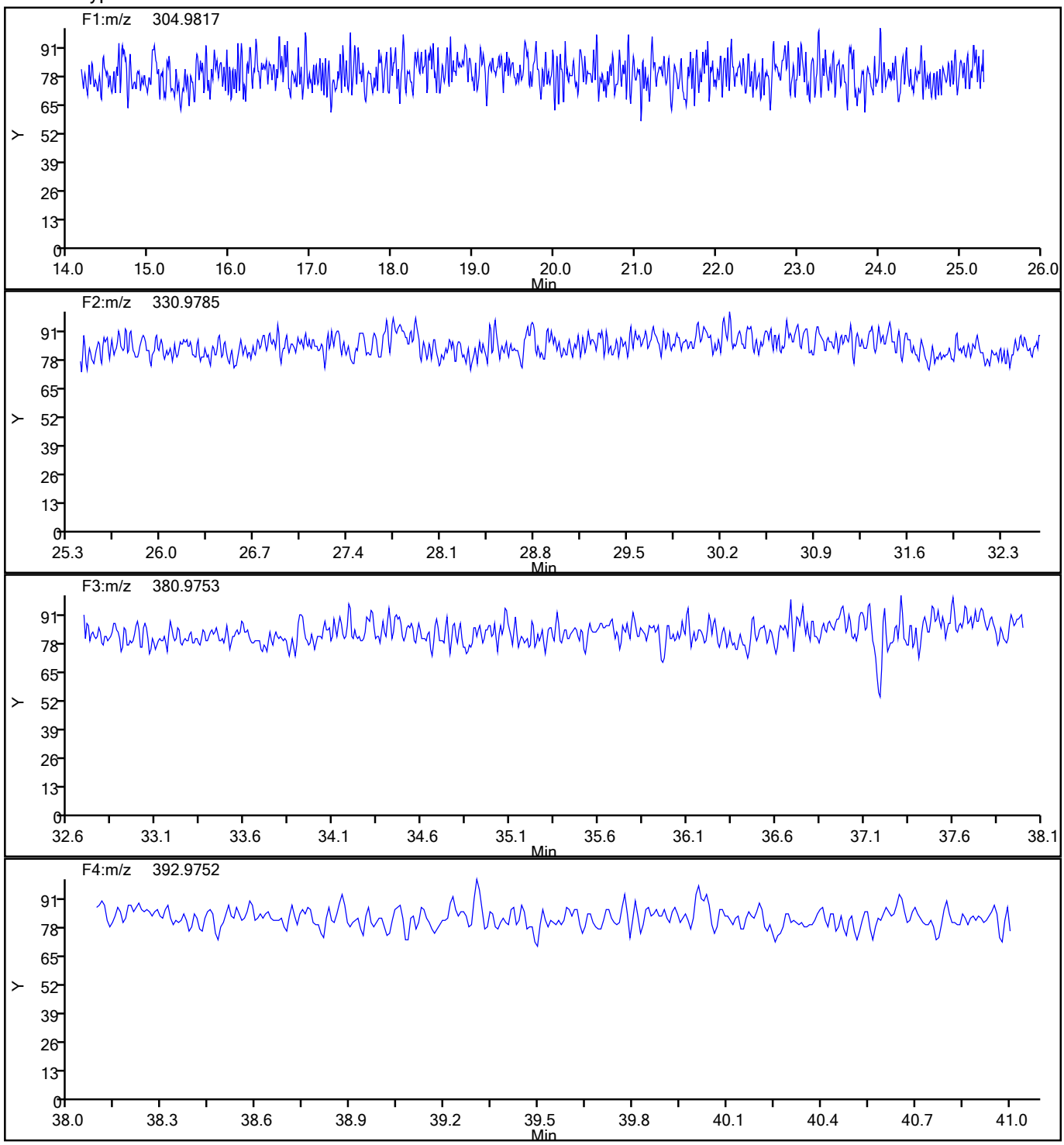

783608

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

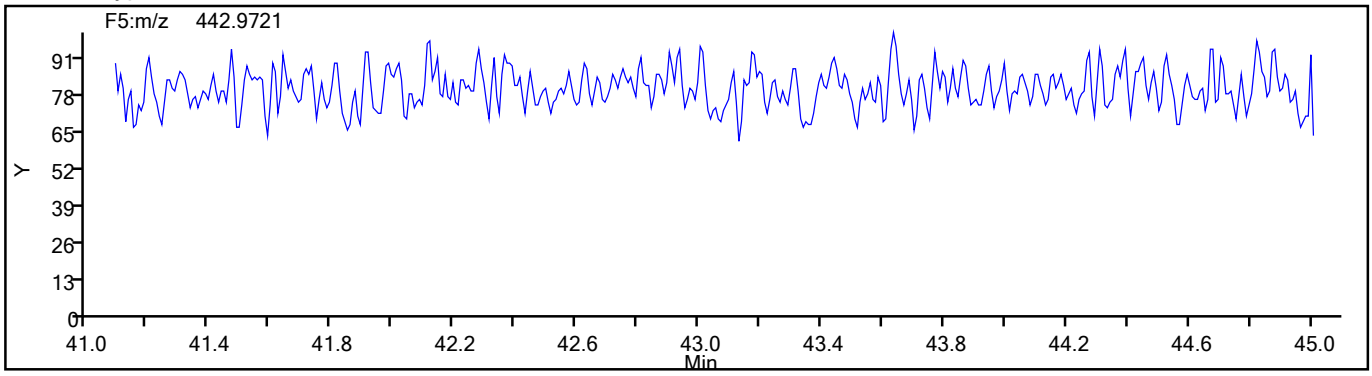

783609

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) MS
Lab Sample ID: 320-76887-2 MS
Matrix: Sediment
Lab File ID: 18AU2110D5_9.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.12(g)
Date Analyzed: 08/18/2021 20:19
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	16100		47	47
40321-76-4	1,2,3,7,8-PeCDD	329		80	4.4
57117-41-6	1,2,3,7,8-PeCDF	1590		80	11
57117-31-4	2,3,4,7,8-PeCDF	1230		80	11
39227-28-6	1,2,3,4,7,8-HxCDD	161		80	1.7
57653-85-7	1,2,3,6,7,8-HxCDD	183		80	1.8
19408-74-3	1,2,3,7,8,9-HxCDD	164		80	1.6
70648-26-9	1,2,3,4,7,8-HxCDF	1950		80	13
57117-44-9	1,2,3,6,7,8-HxCDF	647		80	14
72918-21-9	1,2,3,7,8,9-HxCDF	173		80	10
60851-34-5	2,3,4,6,7,8-HxCDF	215		80	10
35822-46-9	1,2,3,4,6,7,8-HpCDD	219		80	1.4
67562-39-4	1,2,3,4,6,7,8-HpCDF	701		80	4.6
55673-89-7	1,2,3,4,7,8,9-HpCDF	325		80	5.7
3268-87-9	OCDD	1020		160	2.2
39001-02-0	OCDF	555		160	1.3
41903-57-5	Total TCDD	17800		47	47
30402-14-3	Total TCDF	121000		190	190
36088-22-9	Total PeCDD	345		80	4.4
30402-15-4	Total PeCDF	4270		80	11
34465-46-8	Total HxCDD	520		80	1.7
55684-94-1	Total HxCDF	3180		80	12
37871-00-4	Total HpCDD	267		80	1.4
38998-75-3	Total HpCDF	1140		80	5.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) MS
Lab Sample ID: 320-76887-2 MS
Matrix: Sediment
Lab File ID: 18AU2110D5_9.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.12(g)
Date Analyzed: 08/18/2021 20:19
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	58		25-164
89059-46-1	13C-2,3,7,8-TCDF	57		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	63		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	59		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	65		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	64		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	59		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	65		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	57		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	57		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	59		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	60		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	57		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	64		26-138
114423-97-1	13C-OCDD	62		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	115		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MS
Inject. Date: 18-Aug-2021 20:19:26 ALS Bottle#: 10 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-a-2-b ms 10x 320-76887-a-2-b ms 10x
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 13:02:47

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	8086086	0.84	6.2E+05	10.0	10.0				a
D 13C-2,3,7,8-TCDF	17.341	7455573	0.80	1.6249	5.674	5.674	0.2700	0.2700	56.74	
2,3,7,8-TCDF	17.356	1652270869	0.78	1.0239	2164.4	2164.4	5.928	5.928	2.2E+005	E
A Non-2,3,7,8-sub-TCDF	17.159	1251519851	0.78	1.0239	1639.4	1639.4	5.928	1001.0	0.00	M
S Total TCDF					3803.8	3803.8	5.928	5.928		
D 13C-2,3,7,8-TCDD	18.051	4203164	0.77	0.8993	5.780	5.780	0.1533	0.1533	57.80	
2,3,7,8-TCDD	18.066	266156926	0.78	1.2541	504.9	504.9	1.482	1.482	50492	E
$ 37Cl4-2,3,7,8-TCDD	18.066	4116612		1.1071	4.598	4.598	0.0709	0.0709	115	
A Non-2,3,7,8-sub-TCDD	17.620	28198510	0.74	1.2541	53.5	53.5	1.482	48.6	0.00	a
S Total TCDD					558.4	558.4	1.482	1.482		
D 13C-1,2,3,7,8-PeCDF	22.340	5765491	1.62	1.2101	5.892	5.892	0.0644	0.0644	58.92	
1,2,3,7,8-PeCDF	22.367	30548403	1.64	1.0611	49.9	49.9	0.3573	0.3573	999	
D 13C-2,3,4,7,8-PeCDF	23.676	6465439	1.61	1.2395	6.451	6.451	0.0629	0.0629	64.51	
2,3,4,7,8-PeCDF	23.703	25502226	1.62	1.0184	38.7	38.7	0.3442	0.3442	775	
A F1 PeCDFs	20.229						0.0171	0.0171		
A Non-2,3,7,8-sub-PeCDF	23.445	28803415	1.55	1.0398	45.4	45.3	0.3503	18.3	0.00	RQ
S Total PeCDF					134.0	134.0	0.3507	0.3507		RQ
D 13C-1,2,3,7,8-PeCDD	24.385	3895421	1.55	0.7612	6.328	6.328	0.0465	0.0465	63.28	
1,2,3,7,8-PeCDD	24.412	4220994	1.63	1.0484	10.3	10.3	0.1388	0.1388	207	
A Non-2,3,7,8-sub-PeCDD	23.696	205333	1.55	1.0484	0.6630	0.5028	0.1388	0.2519	0.00	RQM
S Total PeCDD					11.0	10.8	0.1388	0.1388		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.463	5759861	0.52	1.0837	6.485	6.485	0.0423	0.0423	64.85	
1,2,3,4,7,8-HxCDF	30.490	38177175	1.21	1.0851	61.1	61.1	0.4200	0.4200	1222	
D 13C-1,2,3,6,7,8-HxCDF	30.663	5311742	0.51	1.1279	5.746	5.746	0.0407	0.0407	57.46	
1,2,3,6,7,8-HxCDF	30.676	12139819	1.23	1.1260	20.3	20.3	0.4300	0.4300	406	
D 13C-2,3,4,6,7,8-HxCDF	31.488	5171425	0.52	1.0637	5.931	5.931	0.0431	0.0431	59.31	
2,3,4,6,7,8-HxCDF	31.501	4074235	1.23	1.1675	6.748	6.748	0.3261	0.3261	135	
D 13C-1,2,3,7,8,9-HxCDF	32.300	4521502	0.51	0.9676	5.701	5.701	0.0474	0.0474	57.01	
1,2,3,7,8,9-HxCDF	32.313	2858090	1.27	1.1664	5.420	5.420	0.3247	0.3247	108	
A Non-2,3,7,8-sub-HxCDF	30.410	3616710	1.32	1.1363	6.132	6.132	0.3695	3.460	0.00	Ma

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					99.7	99.7	0.3752	0.3752		
* 13C-1,2,3,7,8,9-HxCDD	32.113	8196461	1.24	6.2E+05	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	31.674	3819248	1.21	0.7334	6.353	6.353	0.0616	0.0616	63.53	
1,2,3,4,7,8-HxCDD	31.688	2054546	1.23	1.0640	5.056	5.056	0.0533	0.0533	101	
D 13C-1,2,3,6,7,8-HxCDD	31.781	4244355	1.25	0.8802	5.883	5.883	0.0514	0.0514	58.83	
1,2,3,6,7,8-HxCDD	31.808	2430950	1.30	1.0001	5.727	5.727	0.0577	0.0577	115	
1,2,3,7,8,9-HxCDD	32.127	2352891	1.23	1.1325	5.153	5.153	0.0505	0.0505	103	
A Non-2,3,7,8-sub-HxCDD	30.816	159194	1.23	1.0655	0.3706	0.3706	0.0537	0.3706	0.00	
S Total HxCDD					16.3	16.3	0.0539	0.0539		
D 13C-1,2,3,4,6,7,8-HpCDF	33.742	3615535	0.46	0.7730	5.706	5.706	0.0758	0.0758	57.06	
1,2,3,4,6,7,8-HpCDF	33.754	11457483	1.04	1.4413	22.0	22.0	0.1435	0.1435	440	
D 13C-1,2,3,4,7,8,9-HpCDF	34.823	3668251	0.44	0.7008	6.386	6.386	0.0836	0.0836	63.86	
1,2,3,4,7,8,9-HpCDF	34.835	4924188	1.04	1.3174	10.2	10.2	0.1781	0.1781	204	
A Non-2,3,7,8-sub-HpCDF	34.283	1760784	1.04	1.3793	3.962	3.505	0.1594	3.505	0.00	RQa
S Total HpCDF					36.1	35.7	0.1608	0.1608		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.532	3197979	1.04	0.6472	6.028	6.028	0.0637	0.0637	60.28	
1,2,3,4,6,7,8-HpCDD	34.544	2404563	1.07	1.0943	6.871	6.871	0.0432	0.0432	137	
A Non-2,3,7,8-sub-HpCDD	33.504	529650	1.05	1.0943	1.513	1.513	0.0432	1.513	0.00	a
S Total HpCDD					8.385	8.385	0.0432	0.0432		
D 13C-OCDD	36.878	4533719	0.83	0.4472	12.4	12.4	0.0475	0.0475	61.85	
OCDF	36.986	5672994	0.89	1.4382	17.4	17.4	0.0402	0.0402	174	
OCDD	36.890	8054549	0.88	1.1070	32.1	32.1	0.0677	0.0677	321	
1,3,6,8-TCDF	14.892						0.0	0.0		
1,3,6,8-TCDD	15.799						0.0	0.0		
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.188						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,3,9-TCDD	18.414	25603931	0.75							
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.307	2092214	1.28							
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	32.074						0.0	0.0		U
1,2,3,4,8,9-HxCDF	28.307	2092214	1.28							a
1,2,3,4,6,7,9-HpCDF	34.046	1990122	0.82							R
1,2,3,4,6,7,9-HpCDD	33.985	529650	1.05							
1,2,3,8-TCDD	0.0						0.0	0.0		
1,3,7,9-TCDD	0.0						0.0	0.0		
1,2,3,4,7-PeCDD	0.0						0.0	0.0		
1,4,7,8-TCDD	0.0						0.0	0.0		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MS
Inject. Date: 18-Aug-2021 20:19:26 ALS Bottle#: 10 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-a-2-b ms 10x 320-76887-a-2-b ms 10x
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 13:02:47

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.855	17.809	3		3695424	873495	4751	11877	184		a
333.9339	17.855	17.809	3		4390662	997767	5566	13915	179	0.84(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.295	3	0.971	3308093	861548	10043	25107	86		
317.9389	17.341	17.295	3	0.971	4147480	1083514	22796	56990	48	0.80(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.356	17.310	3	1.001	724720534	175629776	206549	516372	850		
305.8987	17.356	17.310	3	1.001	927550335	222493313	265678	664195	837	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											M
303.9016	15.693	17.159	-88	0.905	3379063	997324	206549	516372	5		M
305.8987	15.677	17.159	-89	0.904	4050073	1256766	265678	664195	5	0.83(0.65-0.89)	M
303.9016	15.934	17.159	-73	0.919	13188414	3560855	206549	516372	17		
305.8987	15.934	17.159	-73	0.919	16915826	4637540	265678	664195	17	0.78(0.65-0.89)	
303.9016	16.222	17.159	-56	0.935	22713838	4705091	206549	516372	23		
305.8987	16.222	17.159	-56	0.935	29530405	6073778	265678	664195	23	0.77(0.65-0.89)	
303.9016	16.449	17.159	-43	0.949	21293084	5599482	206549	516372	27		
305.8987	16.449	17.159	-43	0.949	27612335	7283063	265678	664195	27	0.77(0.65-0.89)	
303.9016	16.691	17.159	-28	0.963	31345894	7899542	206549	516372	38		
305.8987	16.691	17.159	-28	0.963	40698540	10226127	265678	664195	38	0.77(0.65-0.89)	
303.9016	16.963	17.159	-12	0.978	334648927	86677903	206549	516372	420		
305.8987	16.963	17.159	-12	0.978	429490879	111827203	265678	664195	421	0.78(0.65-0.89)	
303.9016	17.190	17.159	2	0.991	11353673	2740702	206549	516372	13		
305.8987	17.190	17.159	2	0.991	14393468	3478403	265678	664195	13	0.79(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.779	17.159	37	1.025	52766281	12731429	206549	516372	62		
305.8987	17.779	17.159	37	1.025	67348262	16143007	265678	664195	61	0.78(0.65-0.89)	
303.9016	18.036	17.159	52	1.040	8819886	1889134	206549	516372	9		
305.8987	18.036	17.159	52	1.040	11362573	2450053	265678	664195	9	0.78(0.65-0.89)	
303.9016	19.170	17.159	120	1.106	48371049	11214713	206549	516372	54		
305.8987	19.170	17.159	120	1.106	62237381	14313283	265678	664195	54	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.006	3	1.011	1825645	475173	4751	11877	100		
333.9339	18.051	18.006	3	1.011	2377519	590522	5566	13915	106	0.77(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	18.066	18.021	3	1.001	116898050	30037732	39885	99712	753		
321.8936	18.066	18.021	3	1.001	149258876	38452382	39344	98360	977	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.021	3	1.012	4116612	1027047	5878	14695	175		
A Non-2,3,7,8-sub-TCDD											a
319.8965	17.961	17.620	20	0.995	1021019	305207	39885	99712	8		
321.8936	17.961	17.620	20	0.995	1573560	417982	39344	98360	11	0.65(0.65-0.89)	
319.8965	18.414	17.620	48	1.020	11012747	2621353	39885	99712	66		a
321.8936	18.414	17.620	48	1.020	14591184	3301510	39344	98360	84	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.340	22.299	2	1.251	3562089	633649	3305	8262	192		
353.8970	22.340	22.299	2	1.251	2203402	399157	2531	6327	158	1.62(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.367	22.326	2	1.001	18976432	3331999	9287	23217	359		
341.8567	22.367	22.326	2	1.001	11571971	2035613	6377	15942	319	1.64(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.676	23.635	2	1.326	3989614	690646	3305	8262	209		
353.8970	23.676	23.635	2	1.326	2475825	426641	2531	6327	169	1.61(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.703	23.649	3	1.001	15779165	2685385	9287	23217	289		
341.8567	23.703	23.649	3	1.001	9723061	1625723	6377	15942	255	1.62(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.229						299	747			
341.8567	20.229						464	1160			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.031	23.445	-145	0.941	7200431	1439508	9287	23217	155		
341.8567	21.031	23.445	-145	0.941	4462685	867989	6377	15942	136	1.61(1.32-1.78)	
339.8597	21.862	23.445	-95	0.979	729462	88154	9287	23217	9		
341.8567	21.862	23.445	-95	0.979	494779	62585	6377	15942	10	1.47(1.32-1.78)	
339.8597	22.230	23.445	-73	0.995	1429697	312119	9287	23217	34		
341.8567	22.230	23.445	-73	0.995	857712	184388	6377	15942	29	1.67(1.32-1.78)	
339.8597	22.640	23.445	-48	1.013	262100	45656	9287	23217	5		
	Empc Correction				219791	41459	9287	23217	4		
341.8567	22.640	23.445	-48	1.013	141801	26748	6377	15942	4	1.85(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	22.885	23.445	-34	1.024	4734903	864842	9287	23217	93		
341.8567	22.885	23.445	-34	1.024	3030452	549383	6377	15942	86	1.56(1.32-1.78)	
339.8597	24.031	23.445	35	1.076	2727137	403839	9287	23217	43		
341.8567	24.031	23.445	35	1.076	1681353	253911	6377	15942	40	1.62(1.32-1.78)	
339.8597	25.640	23.445	131	1.148	662845	101135	9287	23217	11		
341.8567	25.640	23.445	131	1.148	430367	61290	6377	15942	10	1.54(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.385	24.358	2	1.366	2366204	378113	1463	3657	258		
369.8919	24.399	24.358	2	1.367	1529217	230135	1187	2967	194	1.55(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.412	24.372	2	1.001	2618111	406087	2117	5292	192		
357.8516	24.426	24.372	3	1.002	1602883	251849	1424	3560	177	1.63(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	22.640	23.696	-63	0.928	60231	10648	2117	5292	5		M
357.8516	22.640	23.696	-63	0.928	42220	8247	1424	3560	6	1.43(1.32-1.78)	M
355.8546	24.917	23.696	73	1.022	127966	14303	2117	5292	7		
	Empc Correction				62536	7052	2117	5292	3		
357.8516	24.917	23.696	73	1.022	40346	4550	1424	3560	3	3.17(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.463	30.436	2	0.949	1982709	363425	1771	4427	205		
385.8610	30.463	30.436	2	0.949	3777152	698739	2275	5687	307	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.490	30.463	2	1.001	20927681	4018639	10751	26877	374		
375.8178	30.490	30.463	2	1.001	17249494	3360592	8611	21527	390	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.663	30.623	2	0.955	1791630	341134	1771	4427	193		
385.8610	30.663	30.623	2	0.955	3520112	658581	2275	5687	289	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.676	30.649	2	1.000	6705947	1290136	10751	26877	120		
375.8178	30.676	30.649	2	1.000	5433872	1059041	8611	21527	123	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.488	31.461	2	0.981	1771672	433521	1771	4427	245		
385.8610	31.488	31.461	2	0.981	3399753	837731	2275	5687	368	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.501	31.488	1	1.000	2247988	564392	10751	26877	52		
375.8178	31.501	31.488	1	1.000	1826247	453124	8611	21527	53	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.300	32.273	2	1.006	1530645	435381	1771	4427	246		
385.8610	32.300	32.273	2	1.006	2990857	842811	2275	5687	370	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.313	32.286	2	1.000	1596499	498002	10751	26877	46		
375.8178	32.313	32.286	2	1.000	1261591	390643	8611	21527	45	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	29.651	30.410	-45	0.973	590072	71476	10751	26877	7		M
375.8178	29.638	30.410	-46	0.973	440156	61531	8611	21527	7	1.34(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	31.395	30.410	59	1.031	313445	78313	10751	26877	7		a
375.8178	31.395	30.410	59	1.031	231957	58493	8611	21527	7	1.35(1.05-1.43)	
373.8208	32.393	30.410	119	1.063	1157036	325917	10751	26877	30		a
375.8178	32.393	30.410	119	1.063	884044	262593	8611	21527	30	1.31(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.113	32.100	1		4541308	1247916	2235	5587	558		
403.8529	32.113	32.100	1		3655153	956691	1751	4377	546	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.674	31.661	1	0.986	2088047	586938	2235	5587	263		
403.8529	31.674	31.661	1	0.986	1731201	493952	1751	4377	282	1.21(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.688	31.674	1	1.000	1131582	312024	1187	2967	263		
391.8127	31.688	31.674	1	1.000	922964	251454	1265	3162	199	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.781	31.767	1	0.990	2361250	592975	2235	5587	265		
403.8529	31.781	31.767	1	0.990	1883105	468451	1751	4377	268	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.808	31.781	2	1.001	1375886	337346	1187	2967	284		
391.8127	31.794	31.781	1	1.000	1055064	257242	1265	3162	203	1.30(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.127	32.113	1	1.014	1298799	347590	1187	2967	293		
391.8127	32.127	32.113	1	1.014	1054092	281172	1265	3162	222	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.929	30.816	7	0.973	87820	19232	1187	2967	16		
391.8127	30.929	30.816	7	0.973	71374	14034	1265	3162	11	1.23(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.742	33.718	1	1.051	1134377	359234	2085	5212	172		
419.8220	33.742	33.718	1	1.051	2481158	829576	3079	7697	269	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.754	33.730	1	1.000	5840862	1951512	5149	12872	379		
409.7789	33.754	33.730	1	1.000	5616621	1825959	4687	11717	390	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.823	34.811	1	1.084	1115510	315093	2085	5212	151		
419.8220	34.823	34.811	1	1.084	2552741	733179	3079	7697	238	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.835	34.811	1	1.000	2515359	721550	5149	12872	140		
409.7789	34.823	34.811	1	1.000	2408829	691922	4687	11717	148	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											RQa
407.7818	34.046	34.283	-14	1.009	897655	295797	5149	12872	57		a
409.7789	34.046	34.283	-14	1.009	1092467	298240	4687	11717	64	0.82(0.88-1.20)	
	Empc Correction				863129	284420	4687	11717	61		
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.532	34.520	1	1.075	1626758	506924	2228	5570	228		
437.8140	34.532	34.520	1	1.075	1571221	487038	1410	3525	345	1.04(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.544	34.532	1	1.000	1242797	378701	997	2492	380		
425.7737	34.544	34.532	1	1.000	1161766	349672	881	2202	397	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.985	33.504	29	0.984	270741	88583	997	2492	89		a
425.7737	33.985	33.504	29	0.984	258909	88774	881	2202	101	1.05(0.88-1.20)	
13C-OCDD											
469.7779	36.878	36.866	1	1.148	2051911	501691	1102	2755	455		
471.7750	36.878	36.866	1	1.148	2481808	639865	773	1932	828	0.83(0.76-1.02)	
OCDF											
441.7428	36.986	36.962	1	1.003	2672150	673862	573	1432	1176		
443.7399	36.974	36.962	1	1.003	3000844	776334	747	1867	1039	0.89(0.76-1.02)	
OCDD											
457.7377	36.890	36.878	1	1.000	3774236	957453	903	2257	1060		
459.7348	36.890	36.878	1	1.000	4280313	1097446	807	2017	1360	0.88(0.76-1.02)	
1,3,6,8-TCDF											
303.9016	14.892						206549	516372			
305.8987	14.892						265678	664195			
1,3,6,8-TCDD											
319.8965	15.799						39885	99712			
321.8936	15.799						39344	98360			
2,3,4,7-TCDF											
303.9016	17.537						206549	516372			
305.8987	17.537						265678	664195			
1,2,3,7-TCDD											
319.8965	18.188						39885	99712			
321.8936	18.188						39344	98360			
1,2,3,9-TCDF											
303.9016	18.414						206549	516372			
305.8987	18.414						265678	664195			
1,2,3,9-TCDD											
319.8965	18.414	18.414	0		11012747	2621353	39885	99712	66		
321.8936	18.414	18.414	0		14591184	3301510	39344	98360	84	0.75(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.382						39885	99712			
1,2,8,9-TCDF											
303.9016	19.427						206549	516372			
305.8987	19.427						265678	664195			
1,3,4,6,8-PeCDF											
339.8597	19.669						299	747			
341.8567	19.669						464	1160			
1,2,4,7,9-PeCDD											
355.8546	21.480						2117	5292			
357.8516	21.480						1424	3560			
1,2,3,8,9-PeCDD											
355.8546	25.790						2117	5292			
357.8516	25.790						1424	3560			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,8,9-PeCDF											
339.8597	26.021						9287	23217			
341.8567	26.021						6377	15942			
1,2,3,4,6,8-HxCDF											
373.8208	28.307	28.333	-2		1174068	168081	10751	26877	16		
375.8178	28.307	28.333	-2		918146	132279	8611	21527	15	1.28(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.890						1187	2967			
391.8127	29.890						1265	3162			
1,2,3,4,6,7-HxCDD											U
389.8157	32.074						1187	2967			
391.8127	32.074						1265	3162			
1,2,3,4,8,9-HxCDF											a
373.8208	28.307	32.393	-245		1174068	168081	10751	26877	16		a
375.8178	28.307	32.393	-245		918146	132279	8611	21527	15	1.28(1.05-1.43)	
1,2,3,4,6,7,9-HpCDF											R
407.7818	34.046	33.916	8		897655	295797	5149	12872	57		
409.7789	34.046	33.916	8		1092467	298240	4687	11717	64	0.82(0.88-1.20)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.985	33.985	0		270741	88583	997	2492	89		
425.7737	33.985	33.985	0		258909	88774	881	2202	101	1.05(0.88-1.20)	
1,2,3,8-TCDD											
319.8965	0.0						39885	99712			
321.8936	0.0						39344	98360			
1,3,7,9-TCDD											
319.8965	0.0						39885	99712			
321.8936	0.0						39344	98360			
1,2,3,4,7-PeCDD											
355.8546	0.0						2117	5292			
357.8516	0.0						1424	3560			
1,4,7,8-TCDD											
319.8965	0.0						39885	99712			
321.8936	0.0						39344	98360			

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-TCDF, RT: 17.159

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	7455573	1945062

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		10.000	7455573	1945062

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.693	3379063	997324	4050073	1256766	9.73	0.83	M
15.934	13188414	3560855	16915826	4637540	39.4	0.78	
16.222	22713838	4705091	29530405	6073778	68.4	0.77	
16.449	21293084	5599482	27612335	7283063	64.1	0.77	
16.691	31345894	7899542	40698540	10226127	94.4	0.77	
16.963	334648927	86677903	429490879	111827203	1001.0	0.78	
17.190	11353673	2740702	14393468	3478403	33.7	0.79	
17.779	52766281	12731429	67348262	16143007	157.3	0.78	
18.036	8819886	1889134	11362573	2450053	26.4	0.78	
19.170	48371049	11214713	62237381	14313283	144.9	0.78	
Signal Totals:	547880109	138016175	703639742	177689223			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1251519851	315705398				0.78	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1639.4 = (1251519851 * 10.000) / (7455573 * 1.024)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-TCDD, RT: 17.620

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	4203164	1065695

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		10.000	4203164	1065695

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.961	1021019	305207	1573560	417982	4.92	0.65	
18.414	11012747	2621353	14591184	3301510	48.6	0.75	a
Signal Totals:							
	12033766	2926560	16164744	3719492			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28198510	6646052				0.74	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 53.495 = (28198510 * 10.000) / (4203164 * 1.254)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-PeCDF, RT: 23.445

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	5765491	1032806
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	6465439	1117287

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		10.000	6115465	1075046

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.031	7200431	1439508	4462685	867989	18.3	1.61	
21.862	729462	88154	494779	62585	1.93	1.47	
22.230	1429697	312119	857712	184388	3.60	1.67	
22.640	262100	45656	141801	26748	0.6352	1.85	RQ
22.640	219791	41459	141801	26748	0.5687		Empc Correction
22.885	4734903	864842	3030452	549383	12.2	1.56	
24.031	2727137	403839	1681353	253911	6.93	1.62	
25.640	662845	101135	430367	61290	1.72	1.54	
Signal Totals:							
	17704266	3251056	11099149	2006294			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28845724	5261547				1.60	RQ
	28803415	5257350					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 45.364 = (28845724 * 10.000) / (6115465 * 1.040)
Empc Amount: 45.298 = (28803415 * 10.000) / (6115465 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	3895421	608248

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		10.000	3895421	608248

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.640	60231	10648	42220	8247	0.2509	1.43	M
24.917	127966	14303	40346	4550	0.4121	3.17	RQ
24.917	62536	7052	40346	4550	0.2519		Empc Correction
Signal Totals:							
	122767	17700	82566	12797			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	270763	37748				2.28	RQM
	205333	30497					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6630 = (270763 * 10.000) / (3895421 * 1.048)
Empc Amount: 0.5028 = (205333 * 10.000) / (3895421 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-HxCDF, RT: 30.410

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	5759861	1062164
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	5311742	999715
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	5171425	1271252
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	4521502	1278192

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		10.000	5191132	1152830

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.651	590072	71476	440156	61531	1.75	1.34	Ma
31.395	313445	78313	231957	58493	0.9247	1.35	a
32.393	1157036	325917	884044	262593	3.46	1.31	a
Signal Totals:							
	2060553	475706	1556157	382617			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3616710	858323				1.32	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.132 = (3616710 * 10.000) / (5191132 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-HxCDD, RT: 30.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	3819248	1080890
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	4244355	1061426
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		10.000	4031801	1071158

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.929	87820	19232	71374	14034	0.3706	1.23	
Signal Totals:							
	87820	19232	71374	14034			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	159194	33266				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3706 = (159194 * 10.000) / (4031801 * 1.066)

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Lims ID:	320-76887-A-2-B MS		
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Inject. Date:	18-Aug-2021 20:19:26	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	9

Non-2,3,7,8-sub-HpCDF, RT: 34.283

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	3615535	1188810
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	3668251	1048272

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		10.000	3641893	1118541

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.046	897655	295797	1092467	298240	3.96	0.82	RQa
34.046	897655	295797	863129	284420	3.51		Empc Correction
Signal Totals:							
	897655	295797	863129	284420			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1990122	594037				0.82	RQa
	1760784	580217					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.962 = (1990122 * 10.000) / (3641893 * 1.379)
Empc Amount: 3.505 = (1760784 * 10.000) / (3641893 * 1.379)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	3197979	993962

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		10.000	3197979	993962

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.985	270741	88583	258909	88774	1.51	1.05	a
Signal Totals:							
	270741	88583	258909	88774			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	529650	177357				1.05	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.513 = (529650 * 10.000) / (3197979 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d				
Injection Date:	18-Aug-2021 20:19:26	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	10	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.86- 19.46)

Signal: 1

Not Detected

RT: 14.86- 19.46

Processing Integration Results

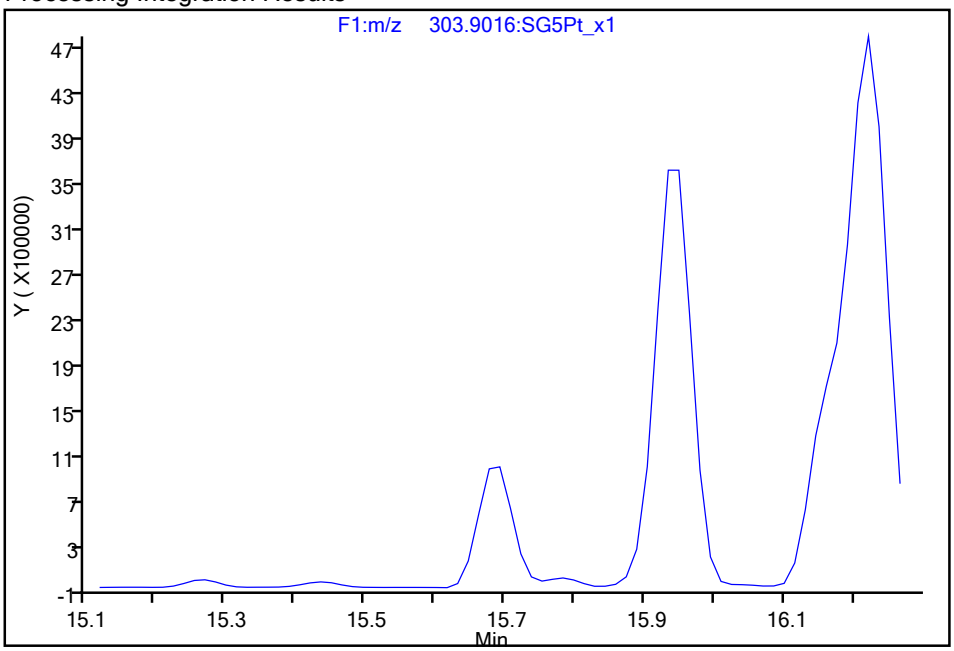

RT = 15.693 Area = 3379063 M

Manual Integration Results

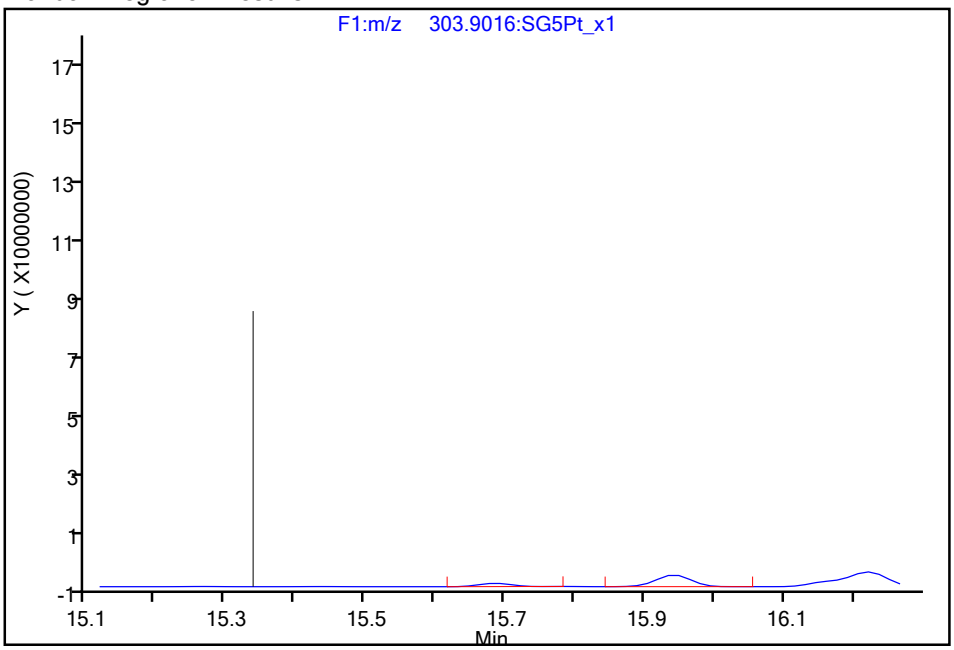

Reviewer: bennettd, 19-Aug-2021 12:58:22

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d				
Injection Date:	18-Aug-2021 20:19:26	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	10	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.86- 19.46)

Signal: 2

Not Detected
RT: 14.86- 19.46

Processing Integration Results

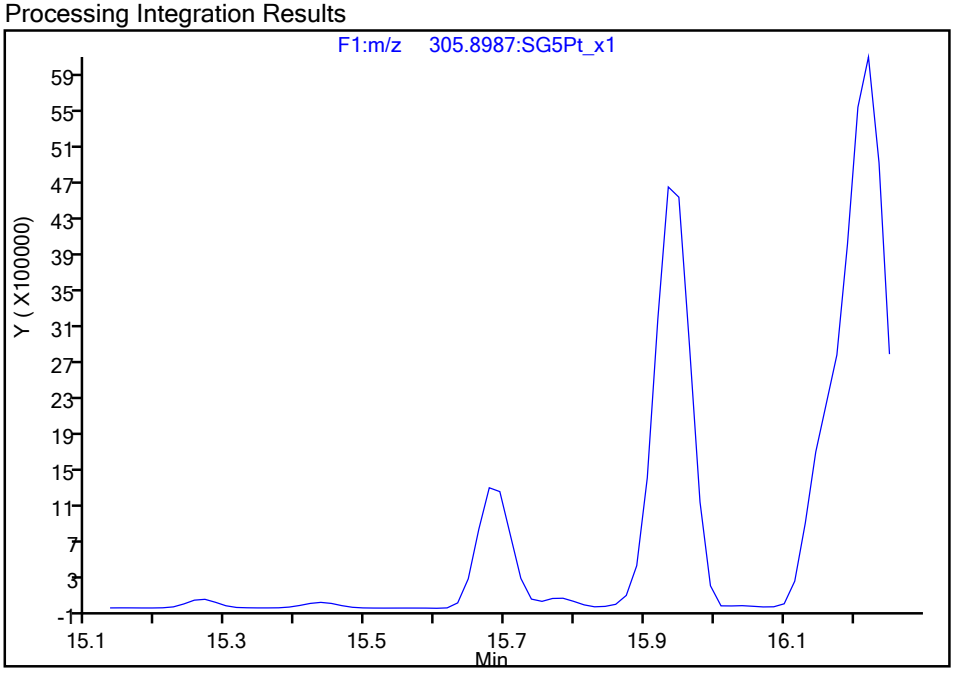

RT = 15.677 Area = 4050073 M

Manual Integration Results

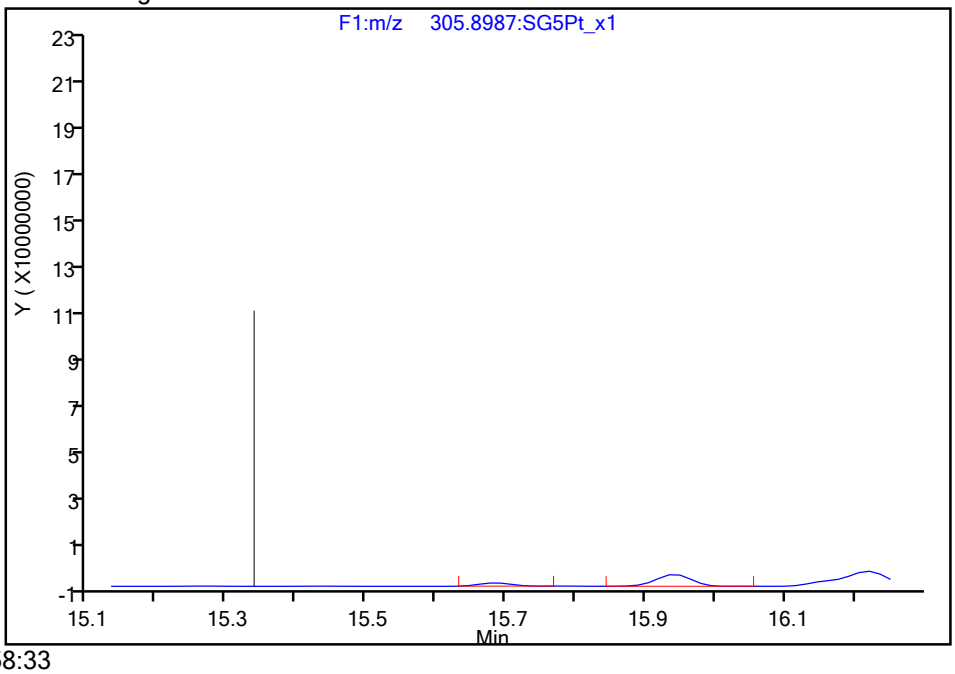

Reviewer: bennettd, 19-Aug-2021 12:58:33
Audit Action: Manually Integrated Audit Reason: Missed Peak

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d				
Injection Date:	18-Aug-2021 20:19:26	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	10	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

Not Detected

RT: 21.50- 25.89

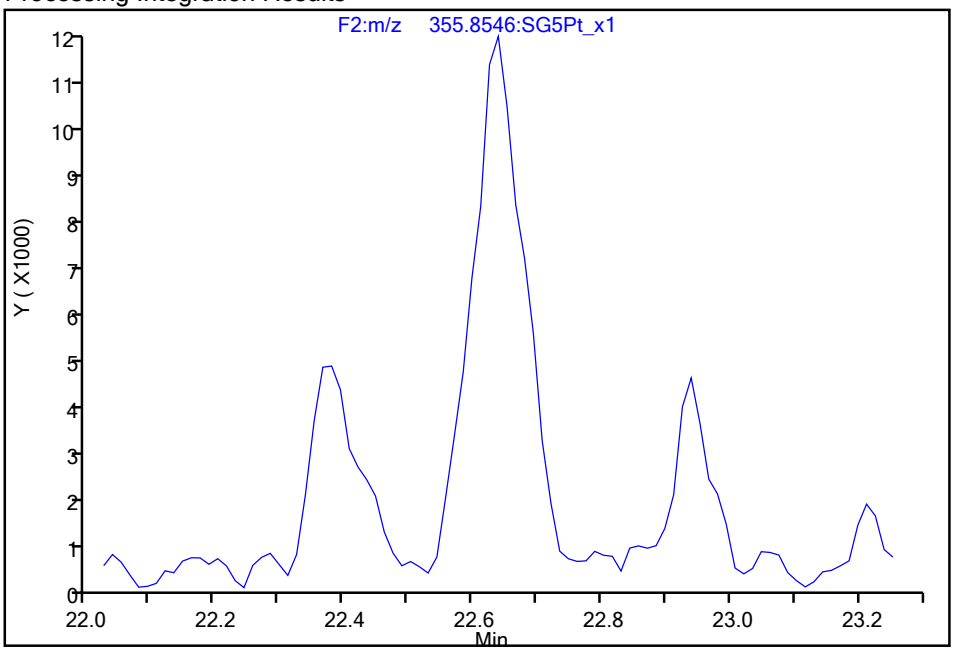

Manual Integration Results

RT = 22.640 Area = 60231 M

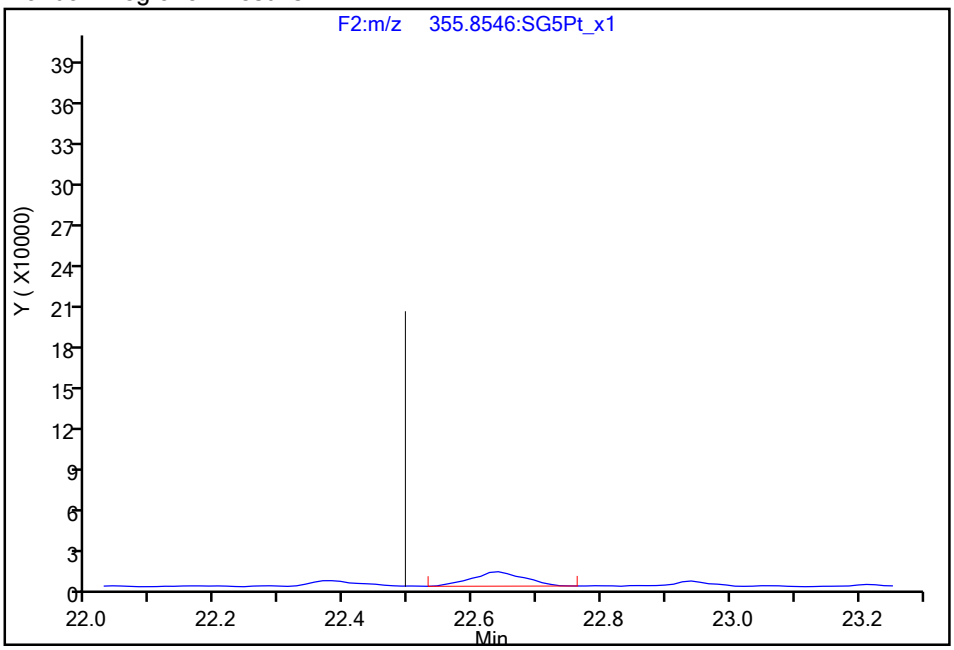

Reviewer: bennettd, 19-Aug-2021 12:59:19

Audit Action: Manually Integrated Audit Reason: Missed Peak

783632

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d				
Injection Date:	18-Aug-2021 20:19:26	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	10	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.50- 25.89)

Signal: 2

Processing Integration Results

RT = 22.640 Area = 42171

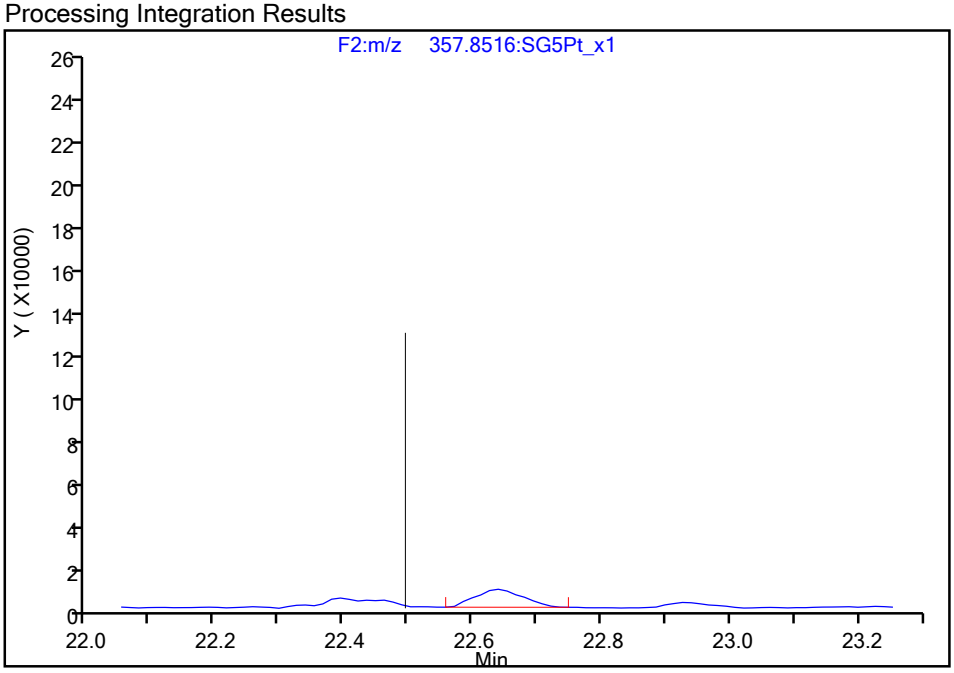

Manual Integration Results

RT = 22.640 Area = 42220 M

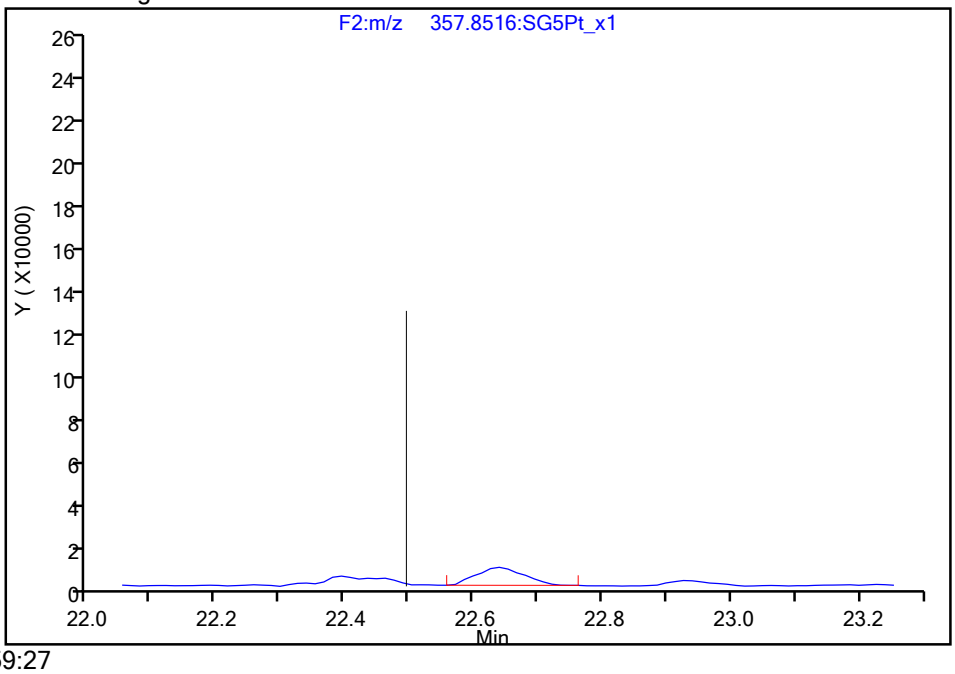

Reviewer: bennettd, 19-Aug-2021 12:59:27

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d				
Injection Date:	18-Aug-2021 20:19:26	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	10	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (28.40- 32.42)

Signal: 1

Processing Integration Results

RT = 29.651 Area = 466624

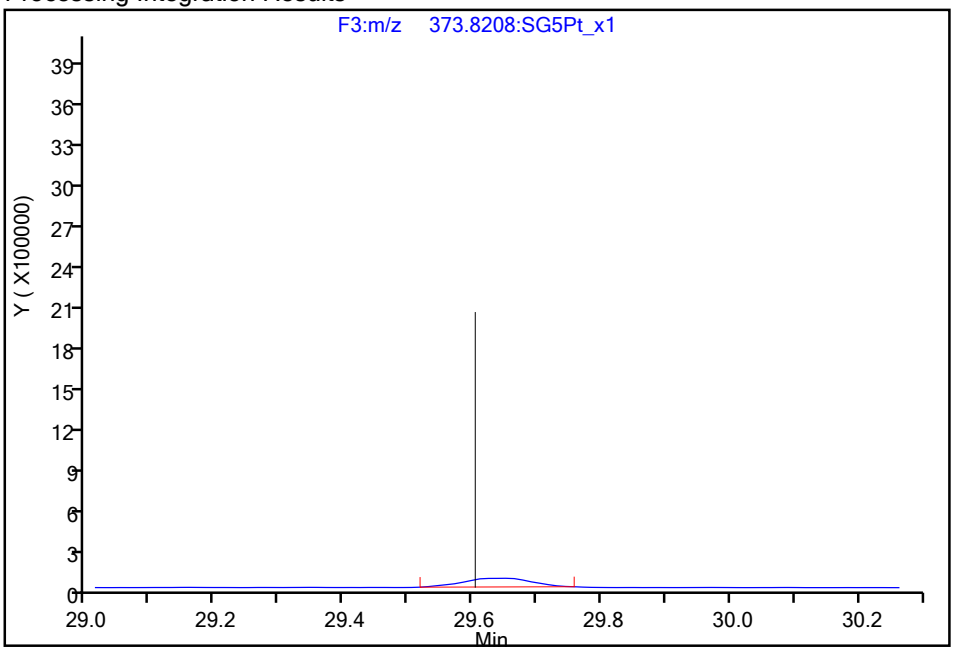

Manual Integration Results

RT = 29.651 Area = 590072 M

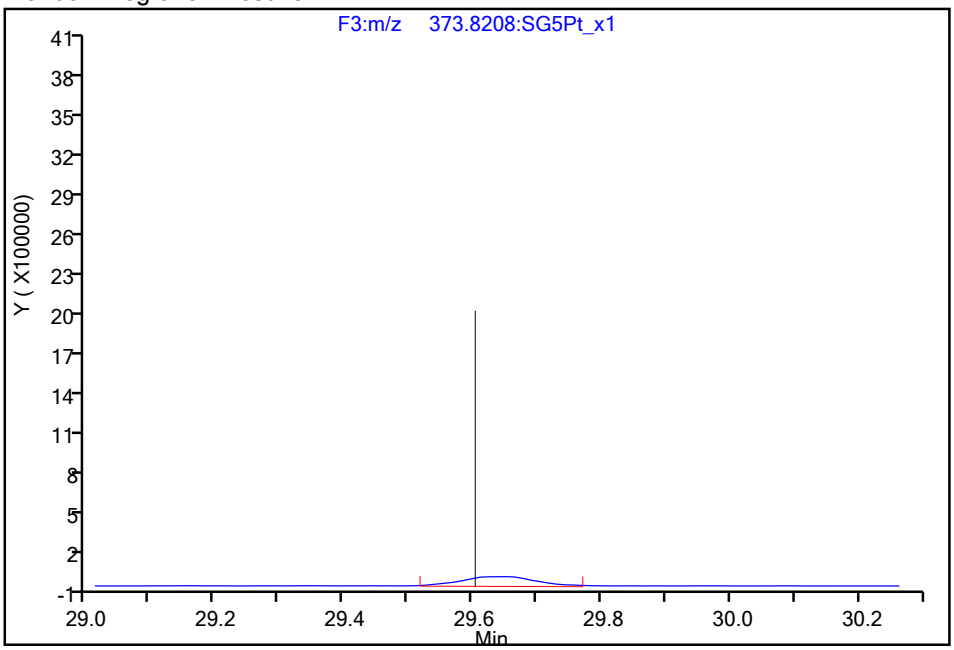

Reviewer: bennettd, 19-Aug-2021 13:01:17

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Missed Peak

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

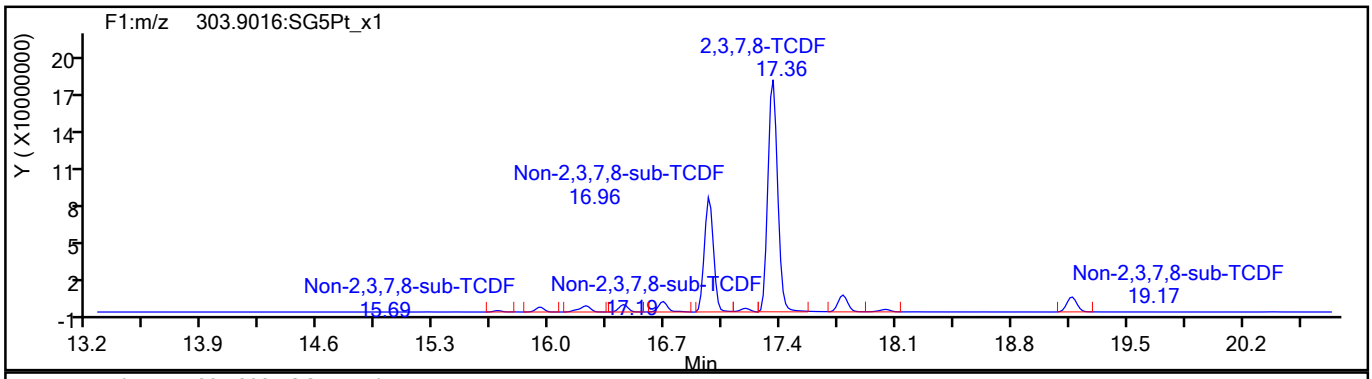

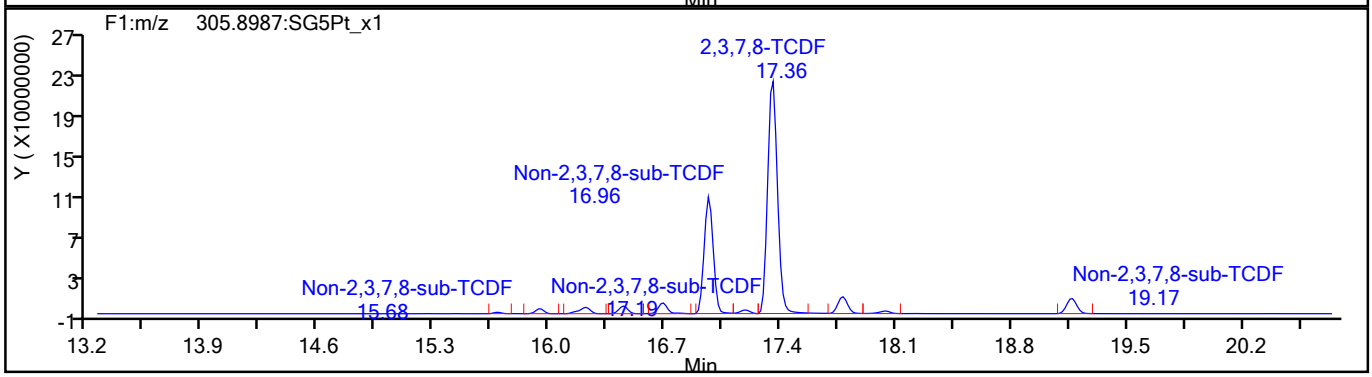

TCDF Standards

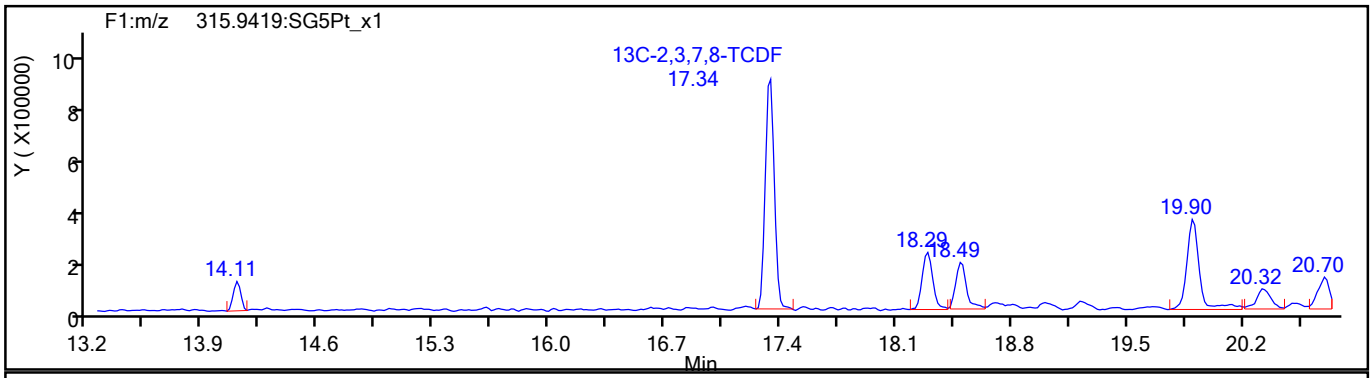

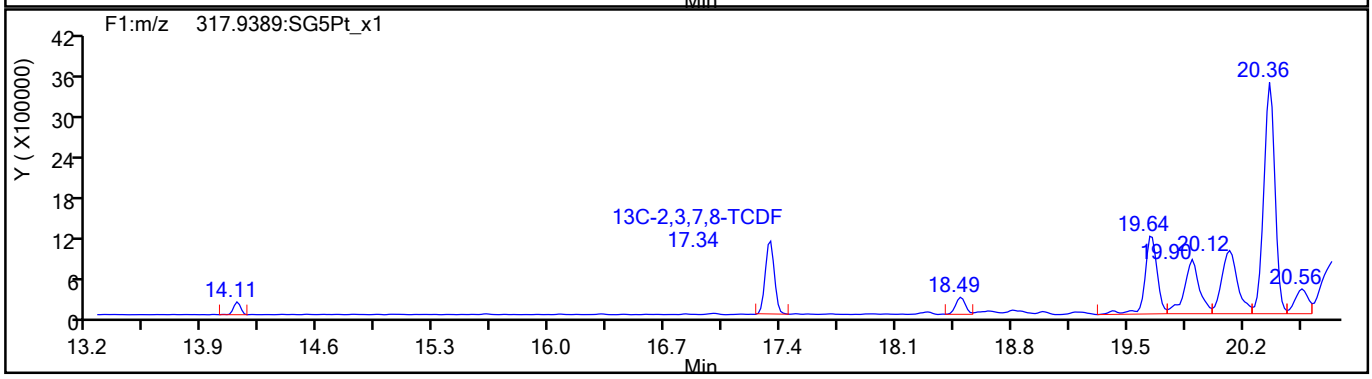

783635

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

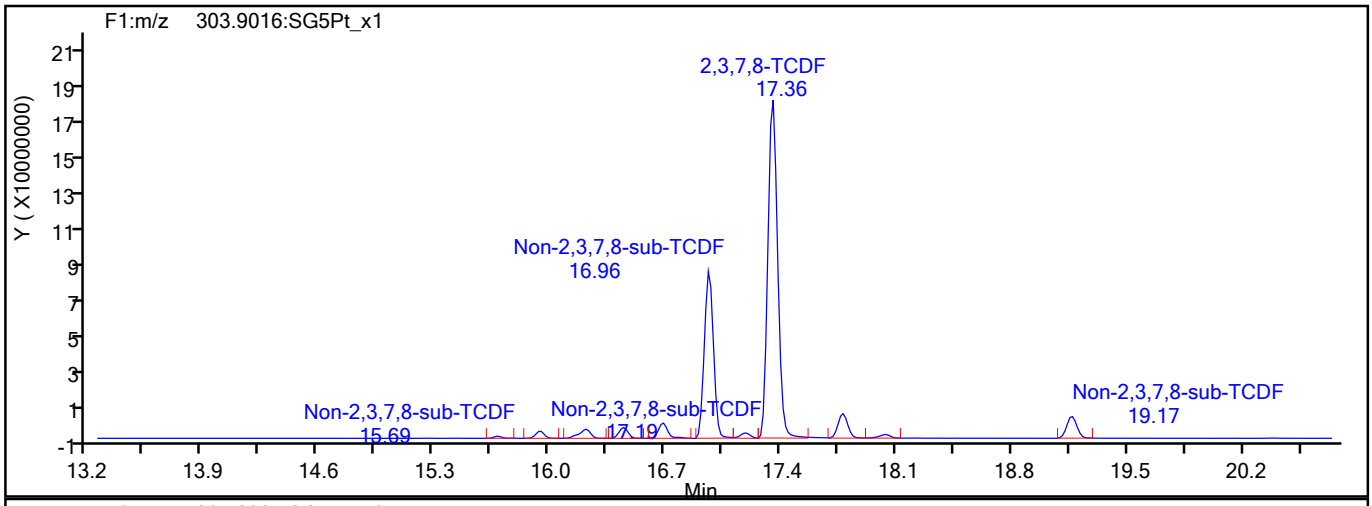

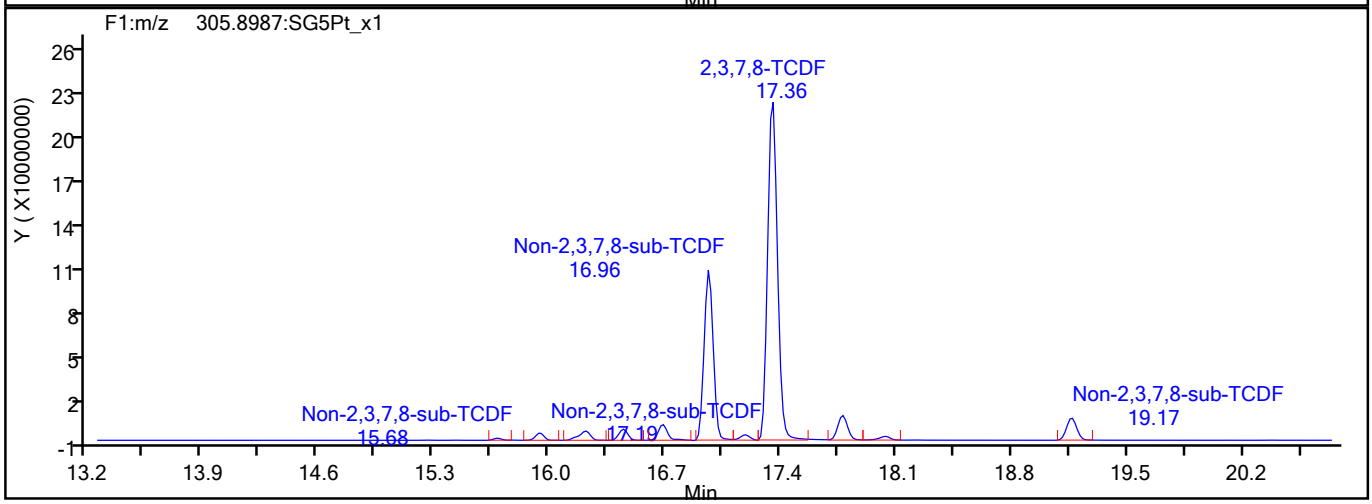

TCDF Interference Mass

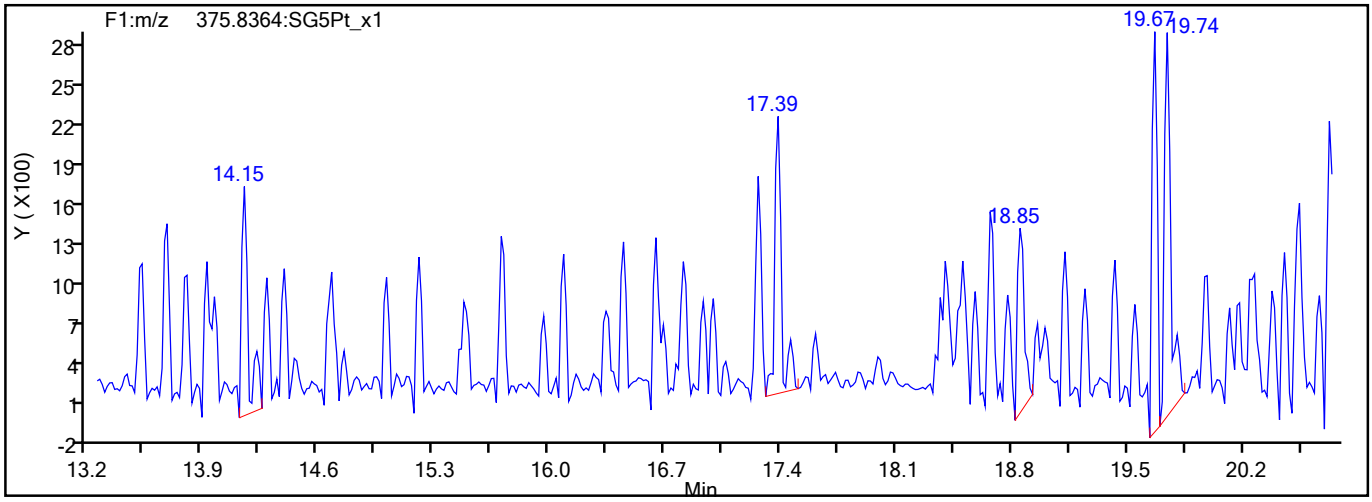

783636

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

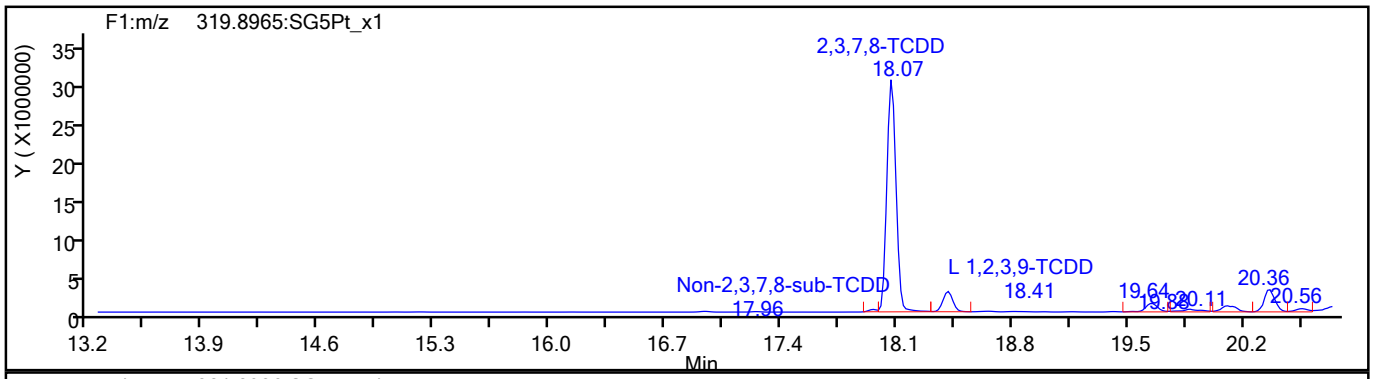

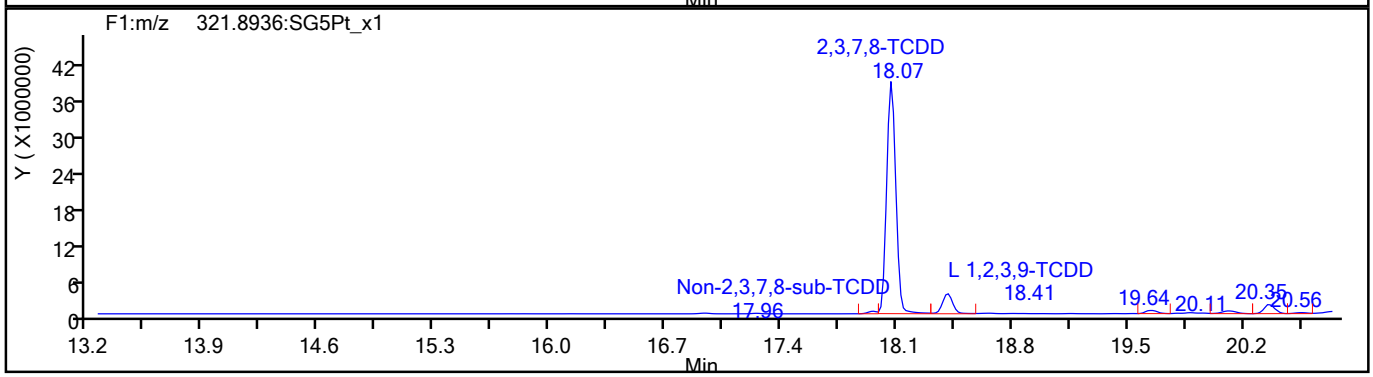

TCDD Standards

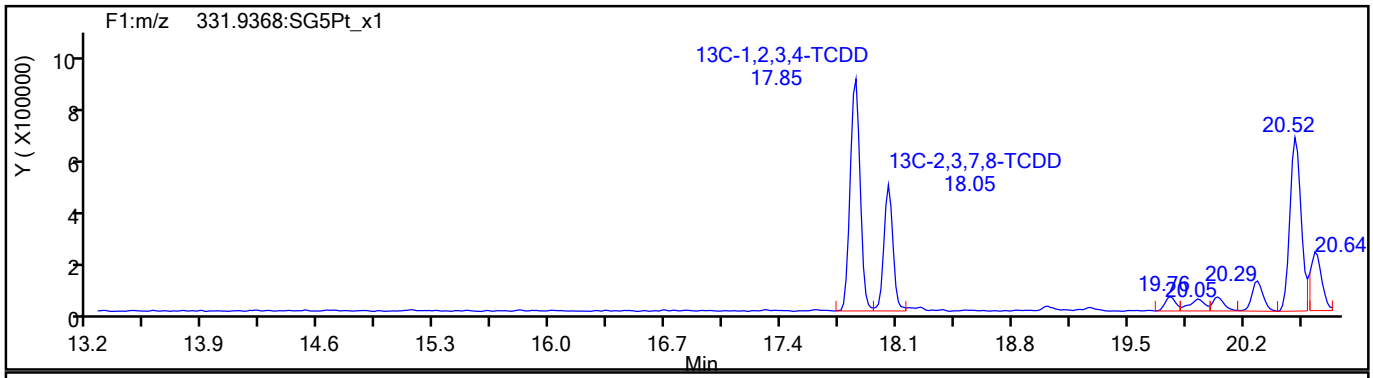

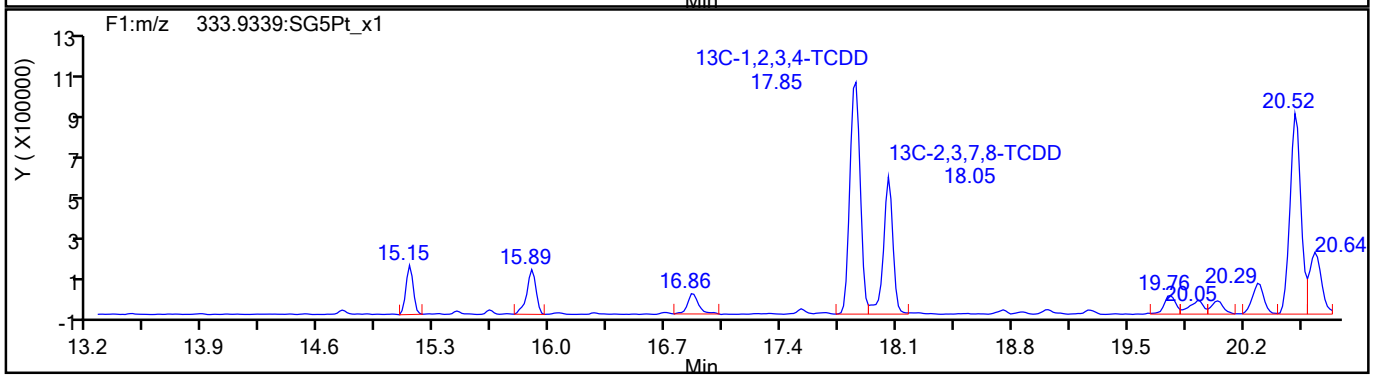

783637

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

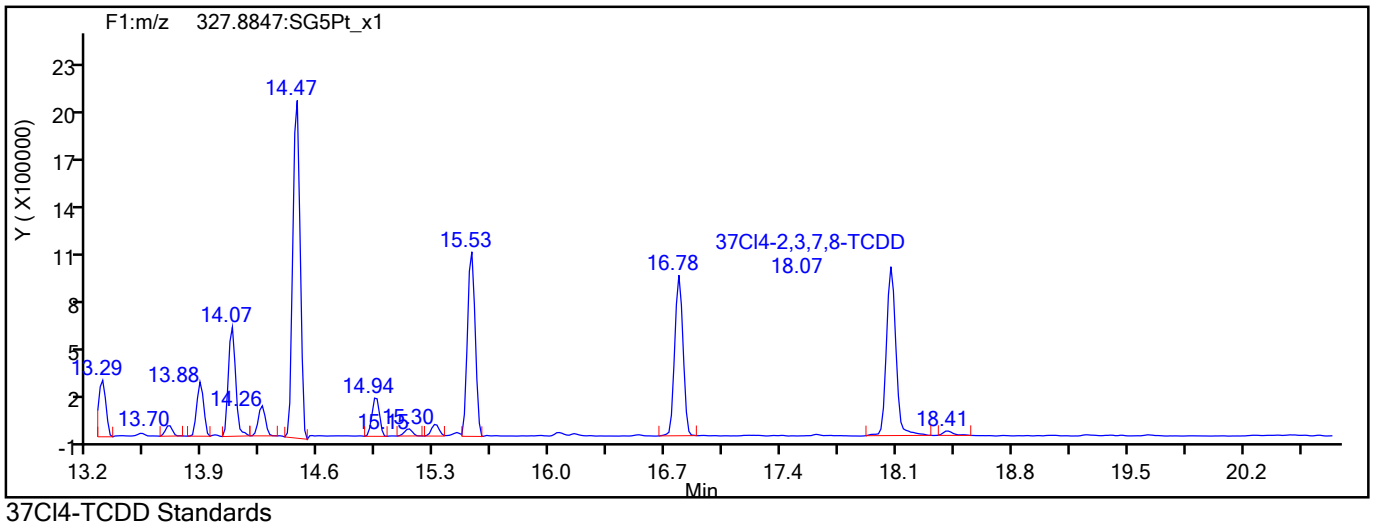

37Cl4-TCDD Standards

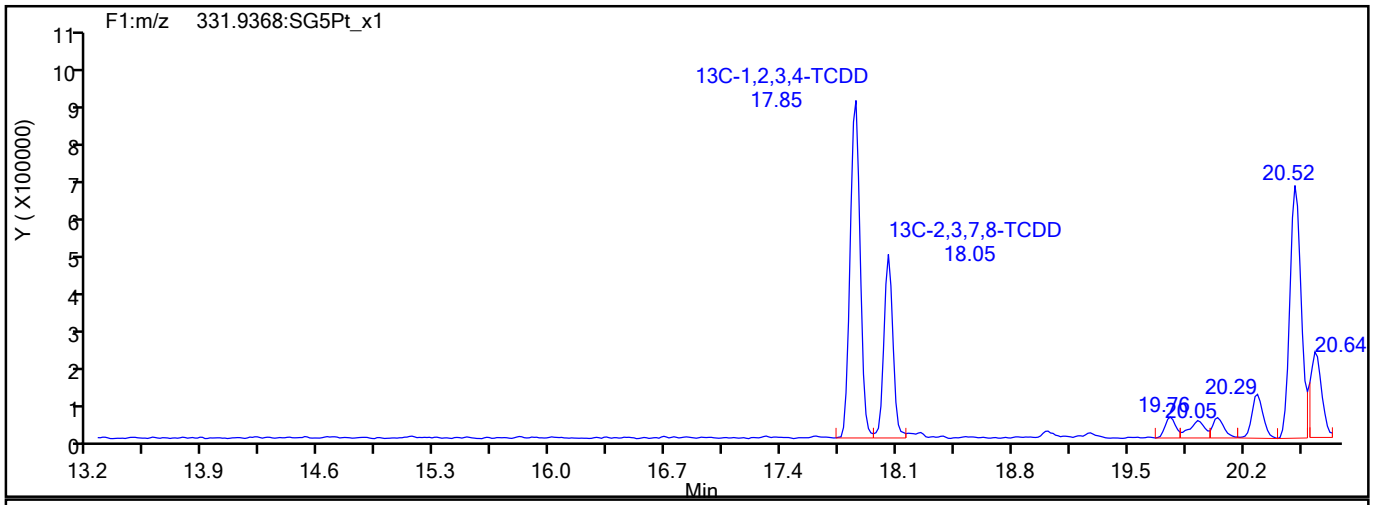

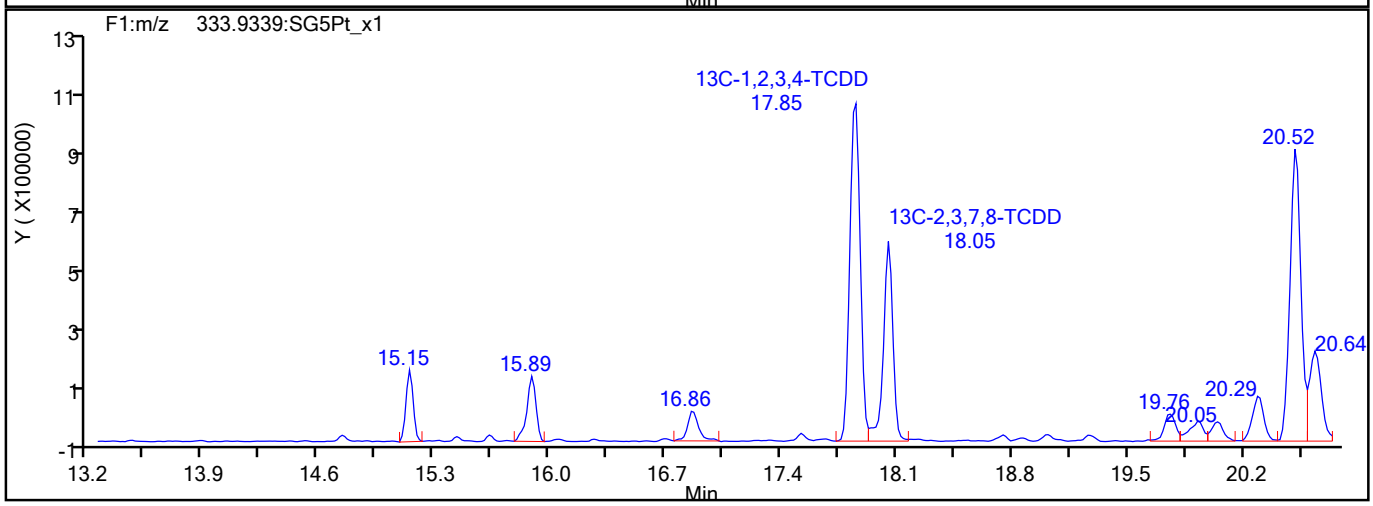

783638

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

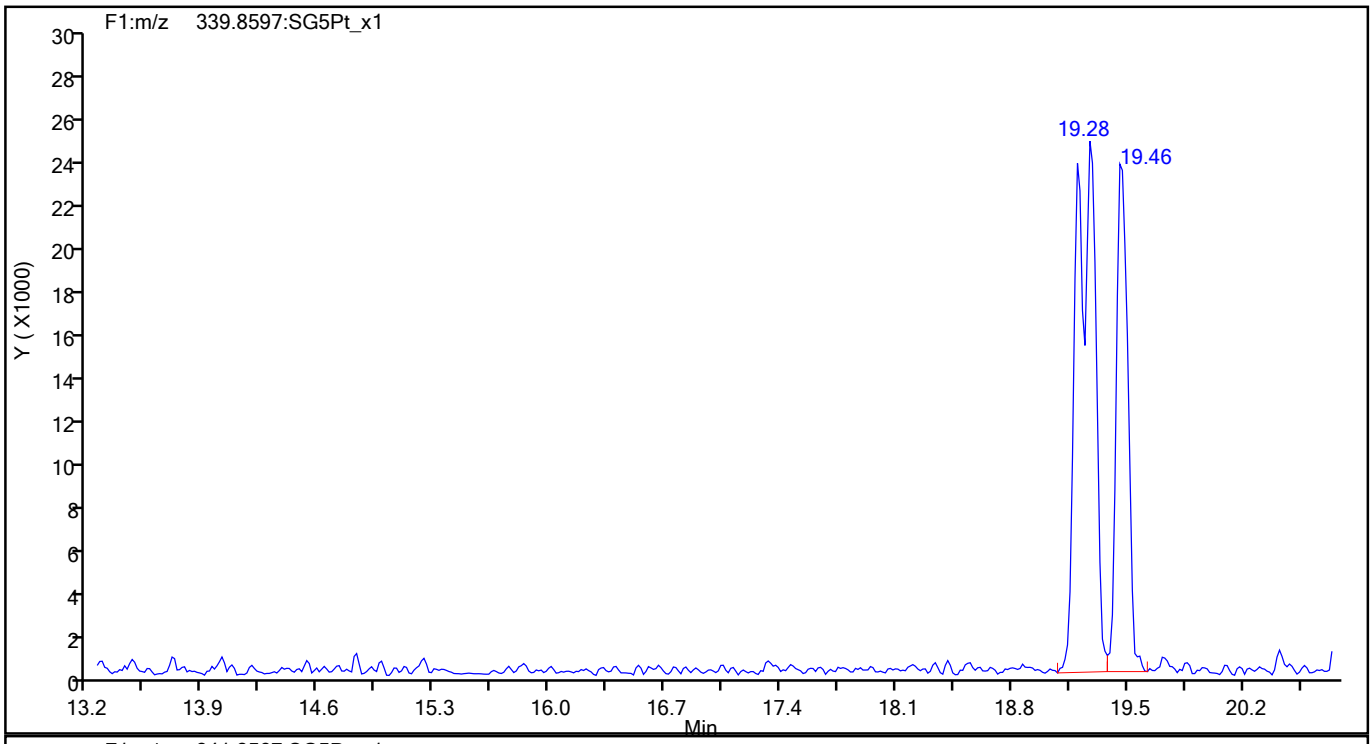

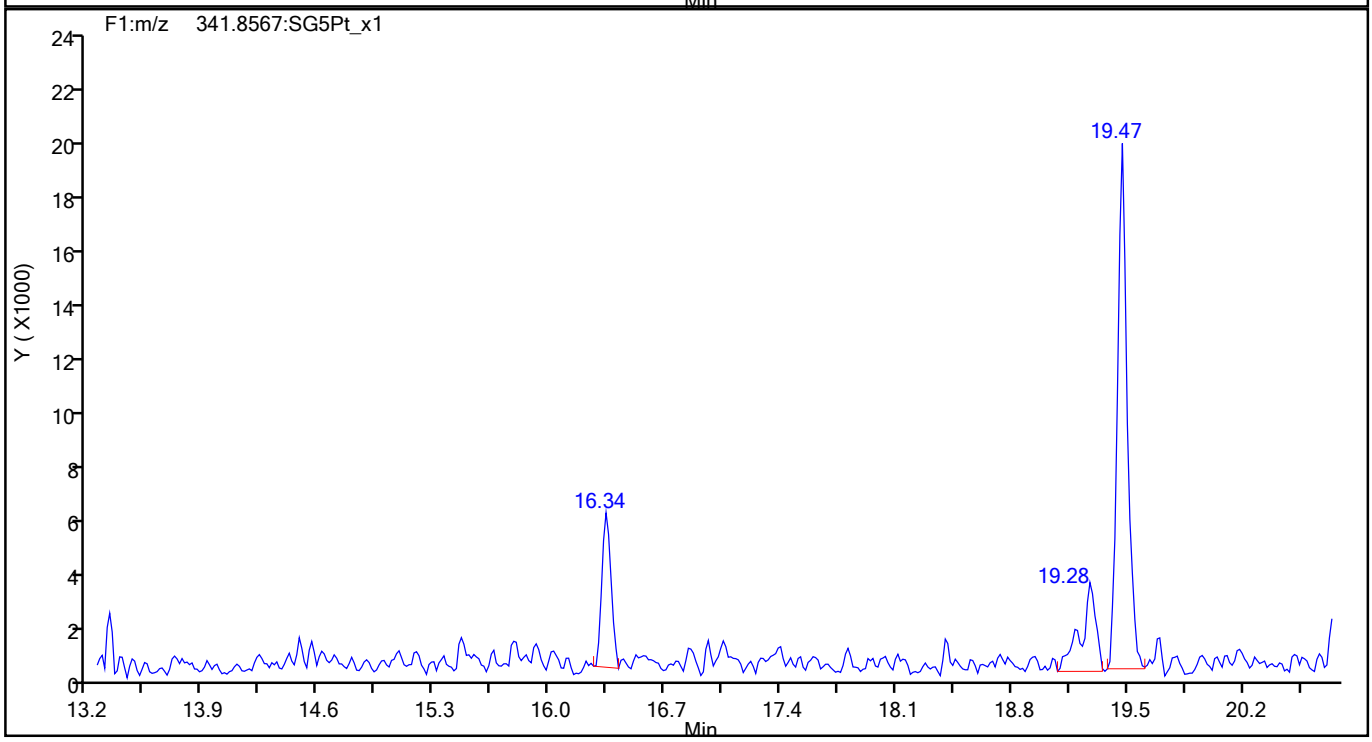

783639

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

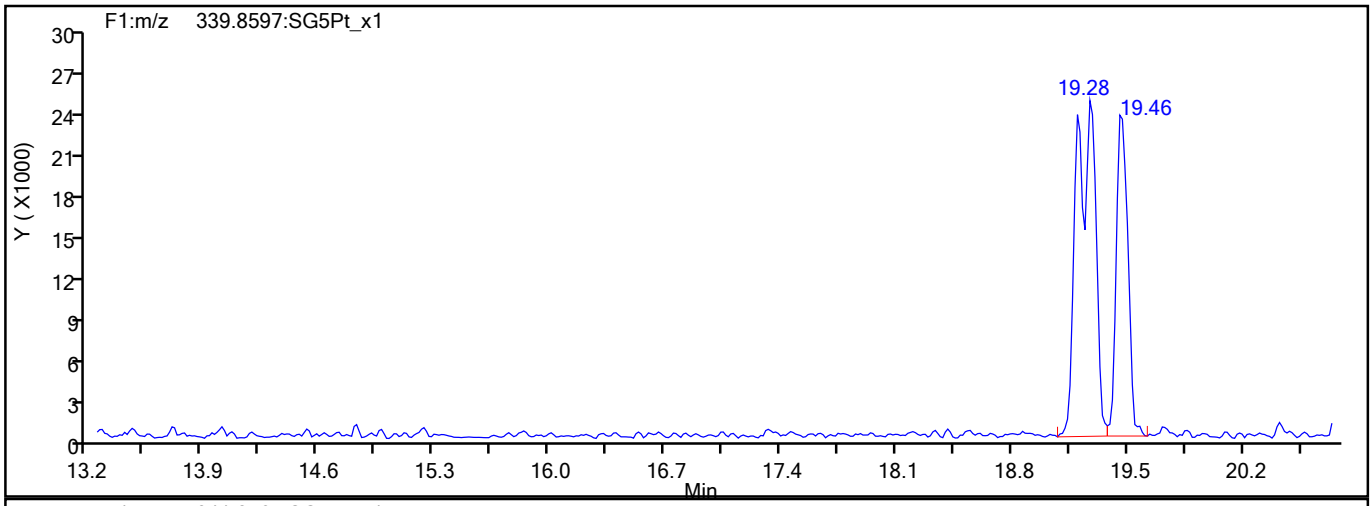

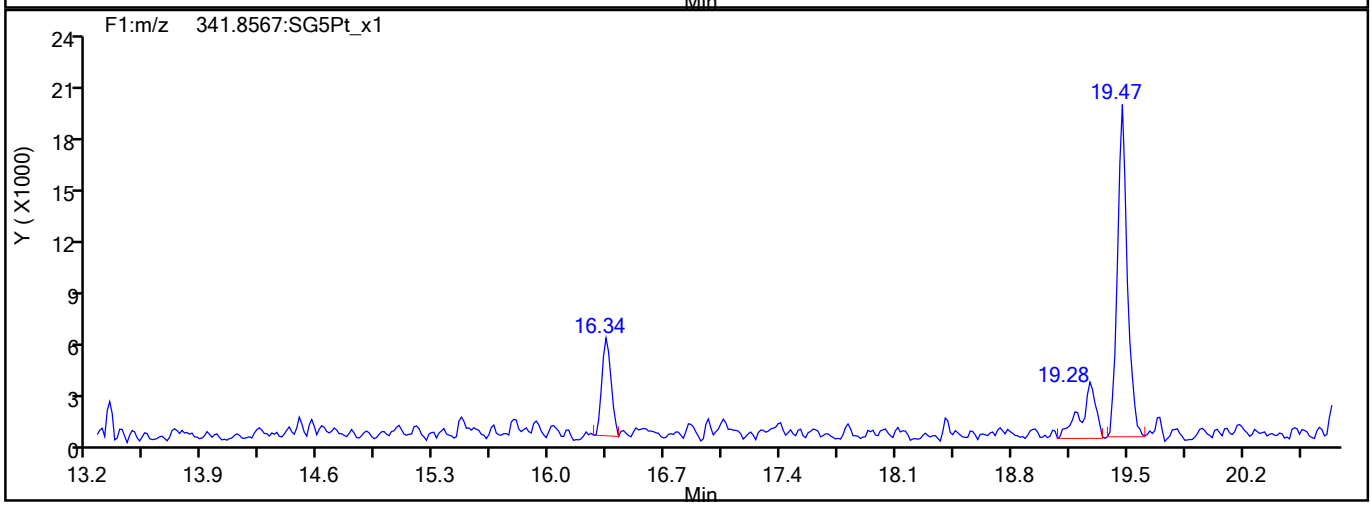

F1 PeCDFs Interference Mass

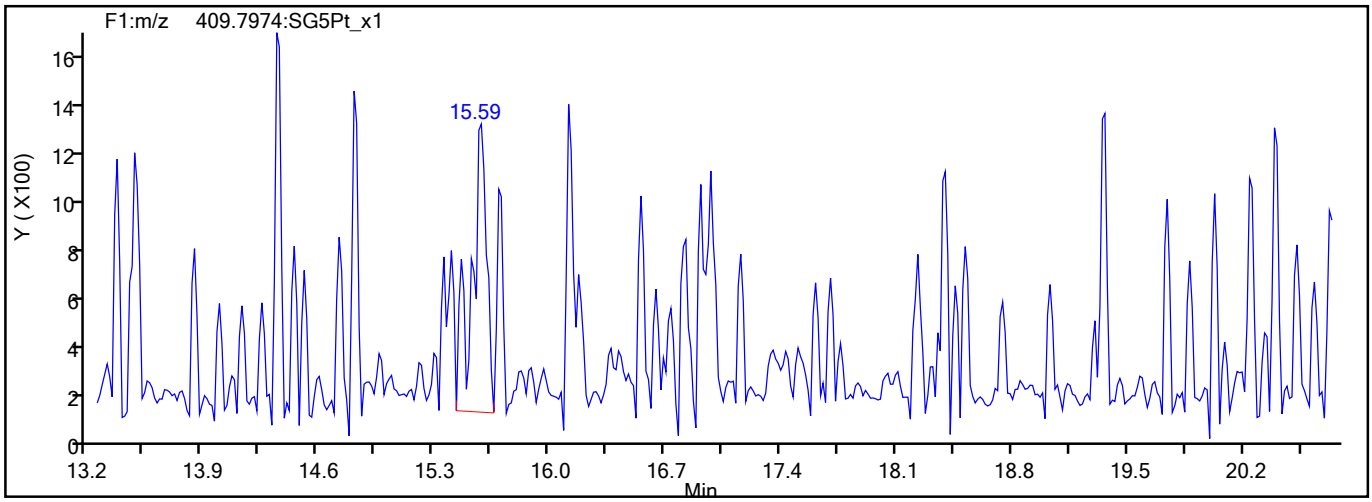

783640

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

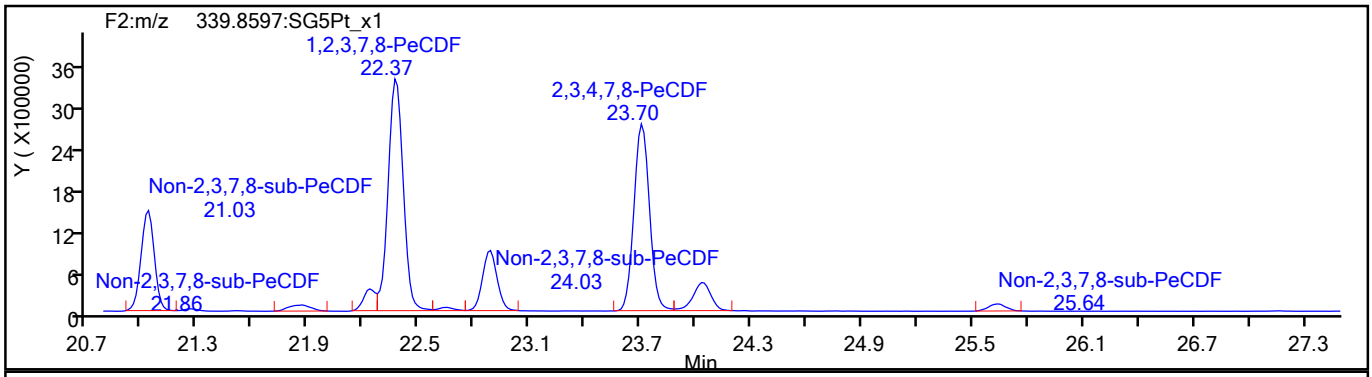

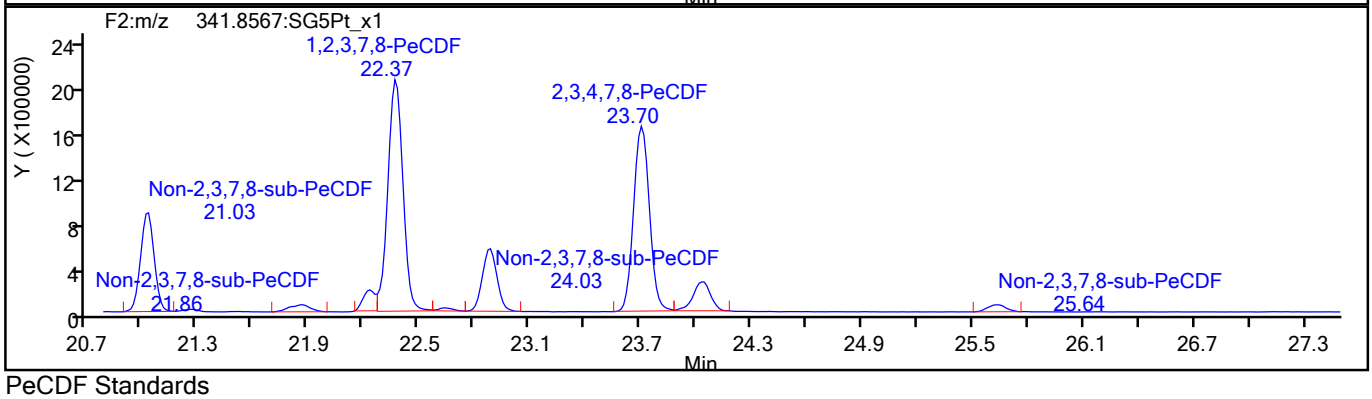

PeCDF Standards

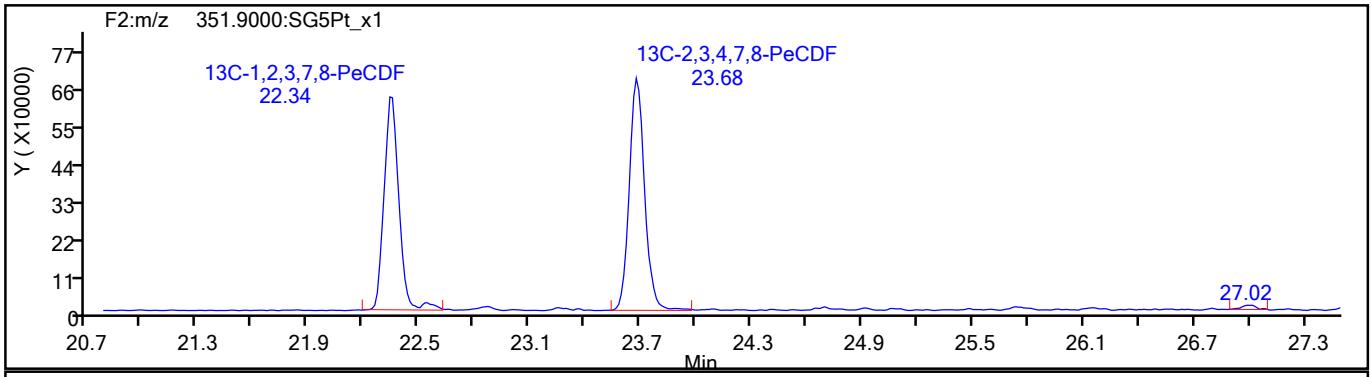

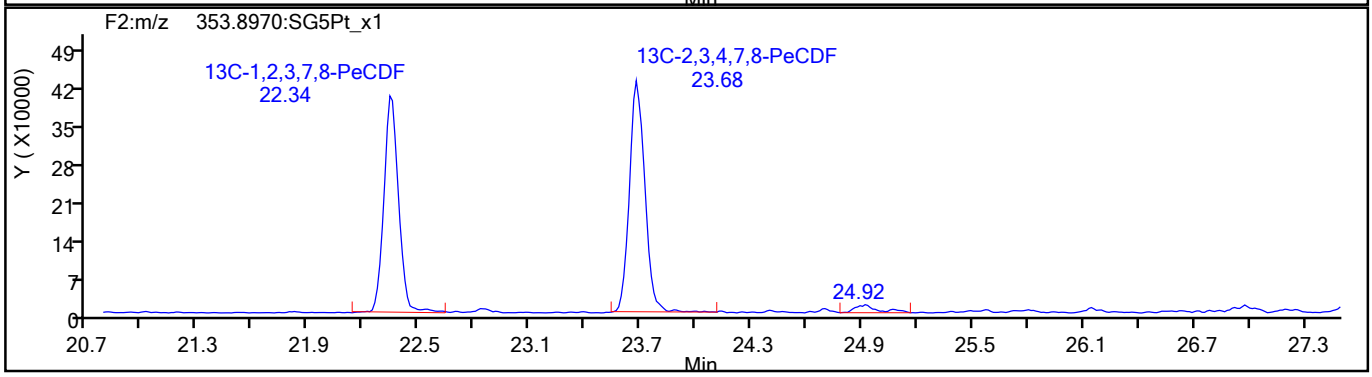

783641

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

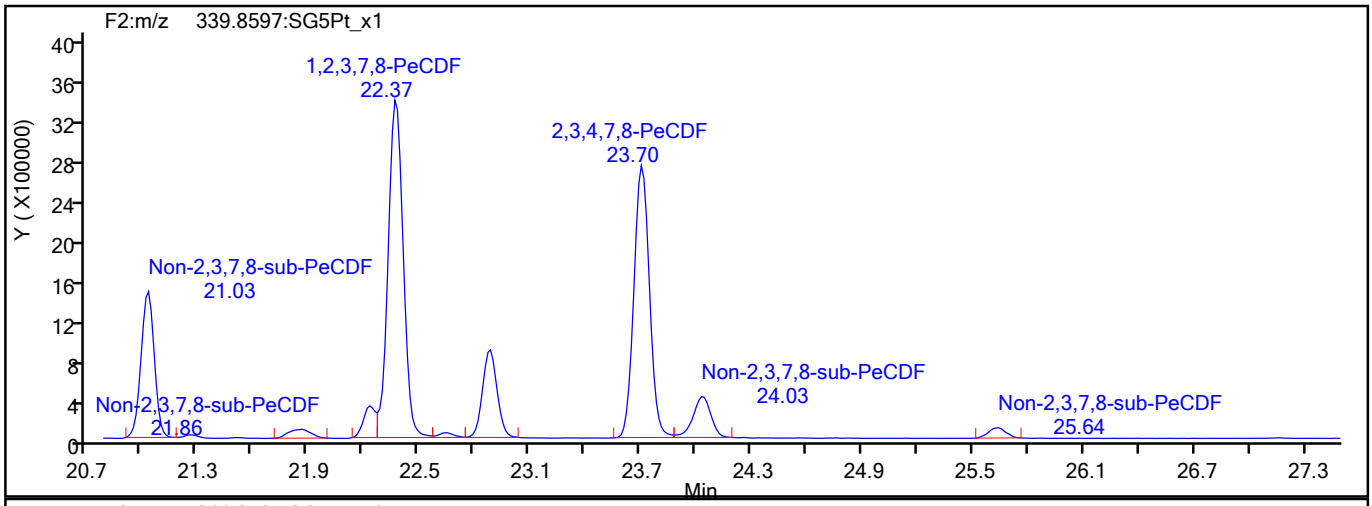

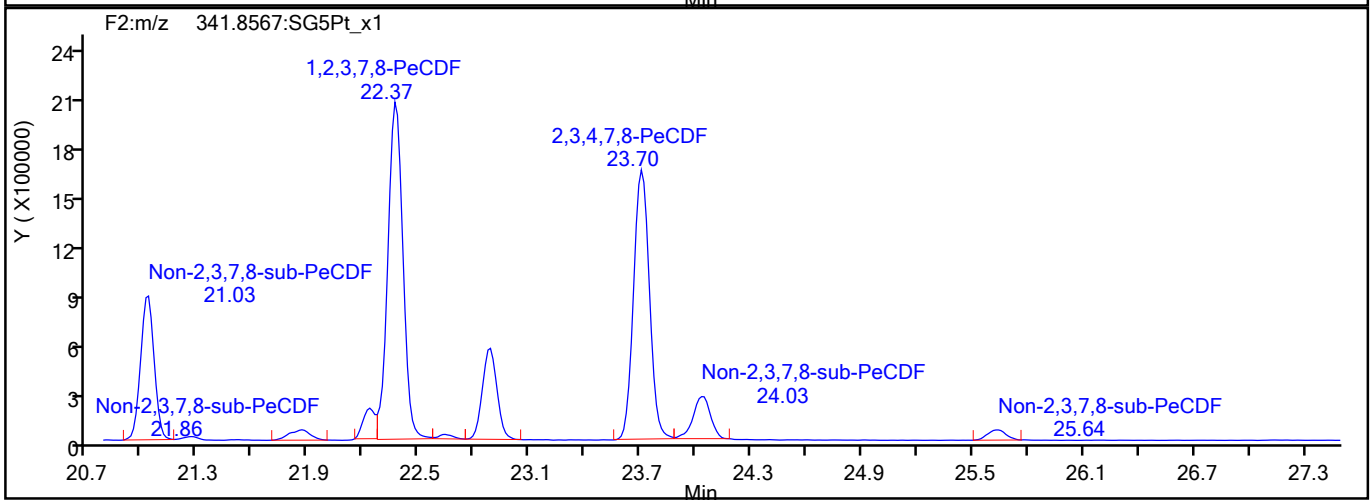

PeCDF Interference Mass

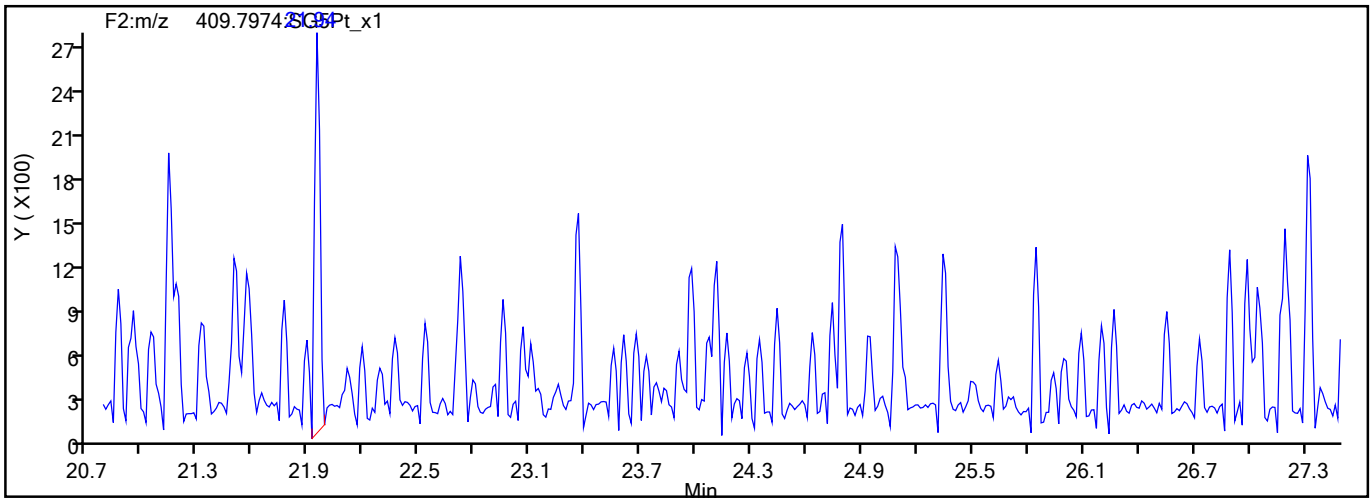

783642

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

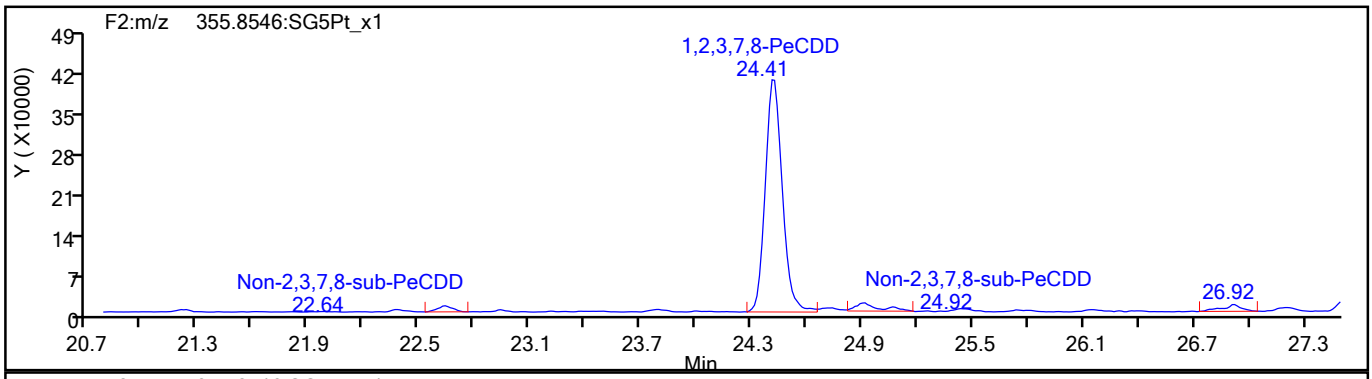

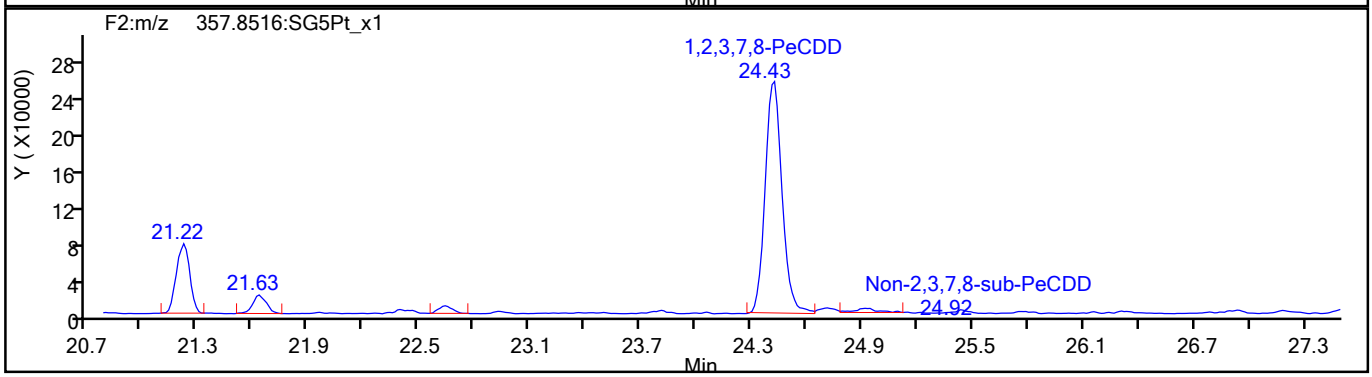

PeCDD Standards

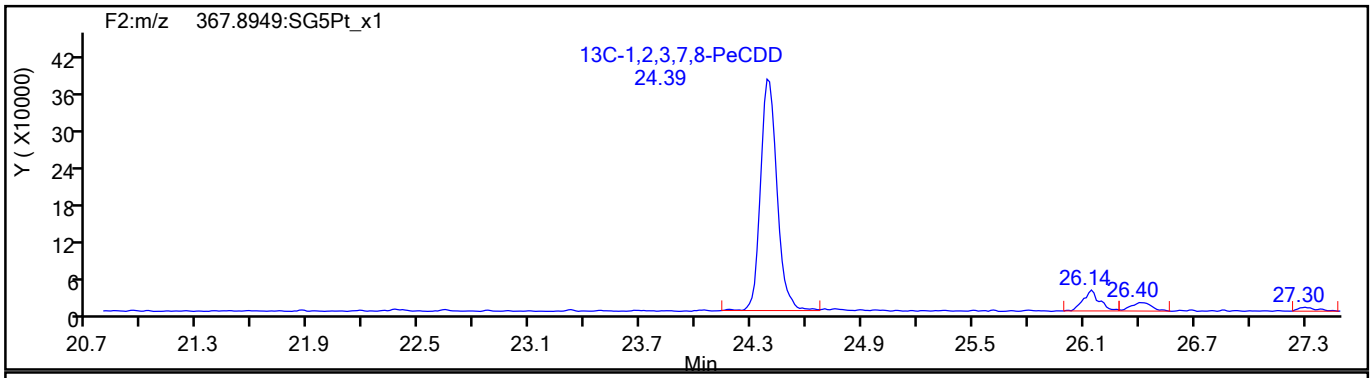

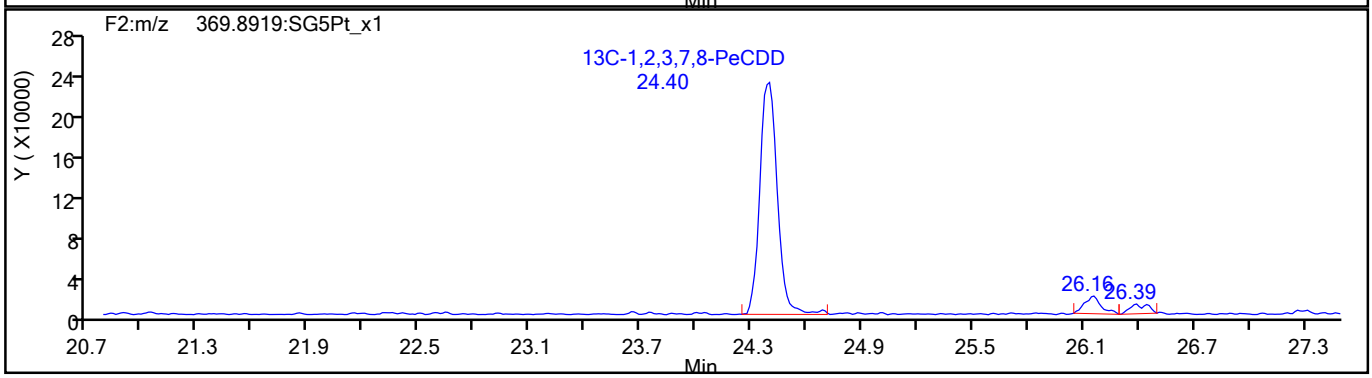

783643

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

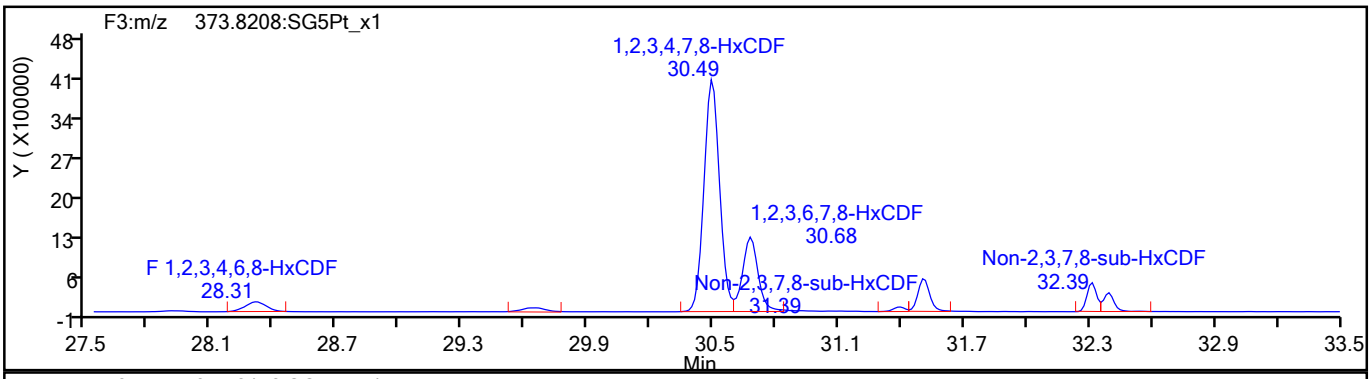

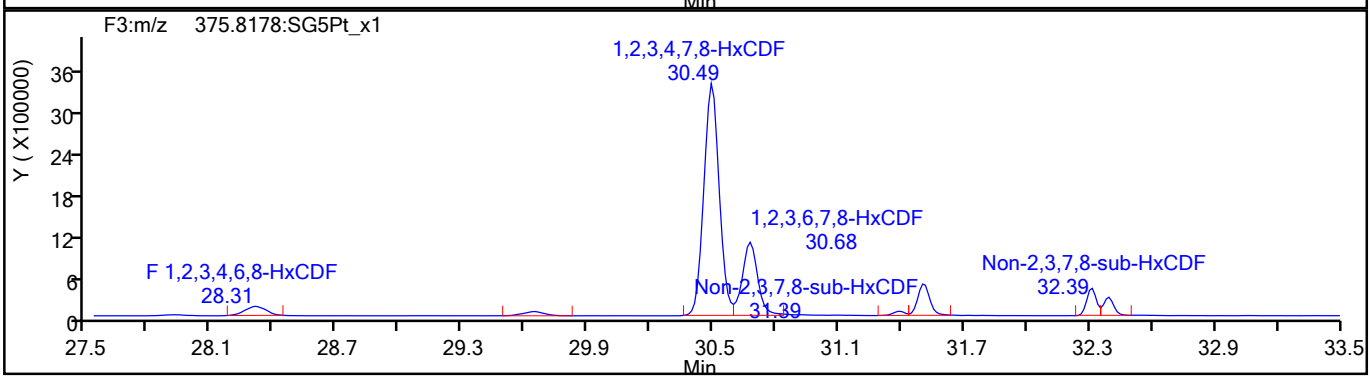

HxCDF Standards

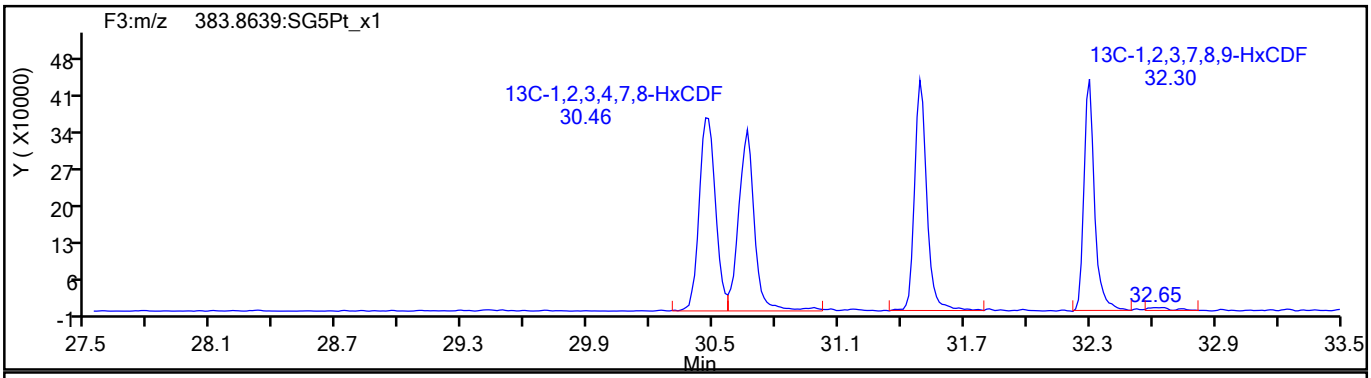

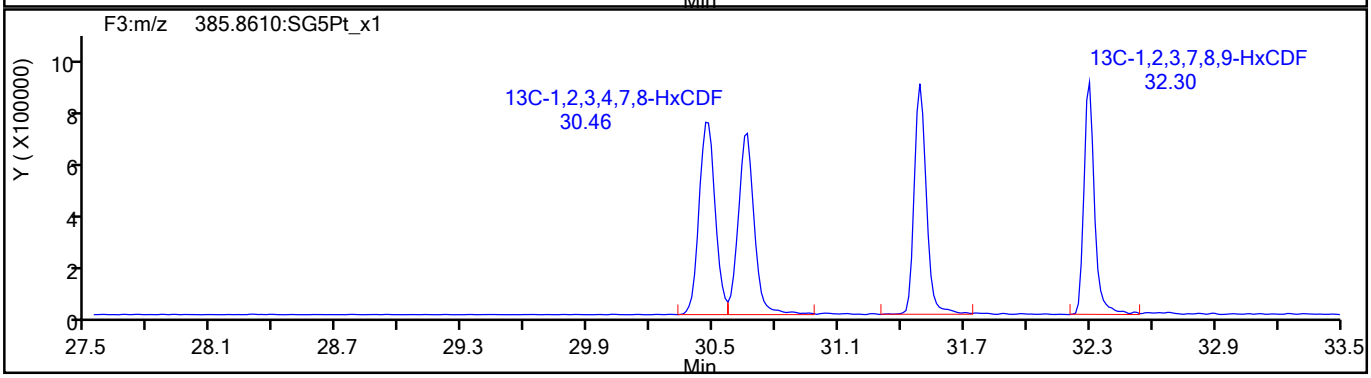

783644

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

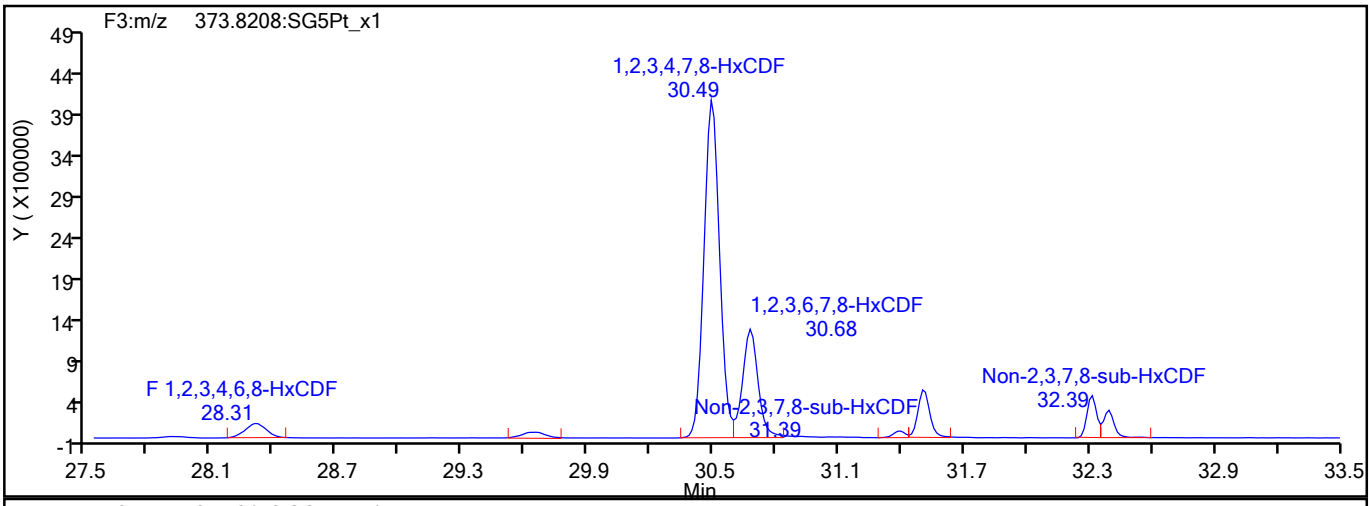

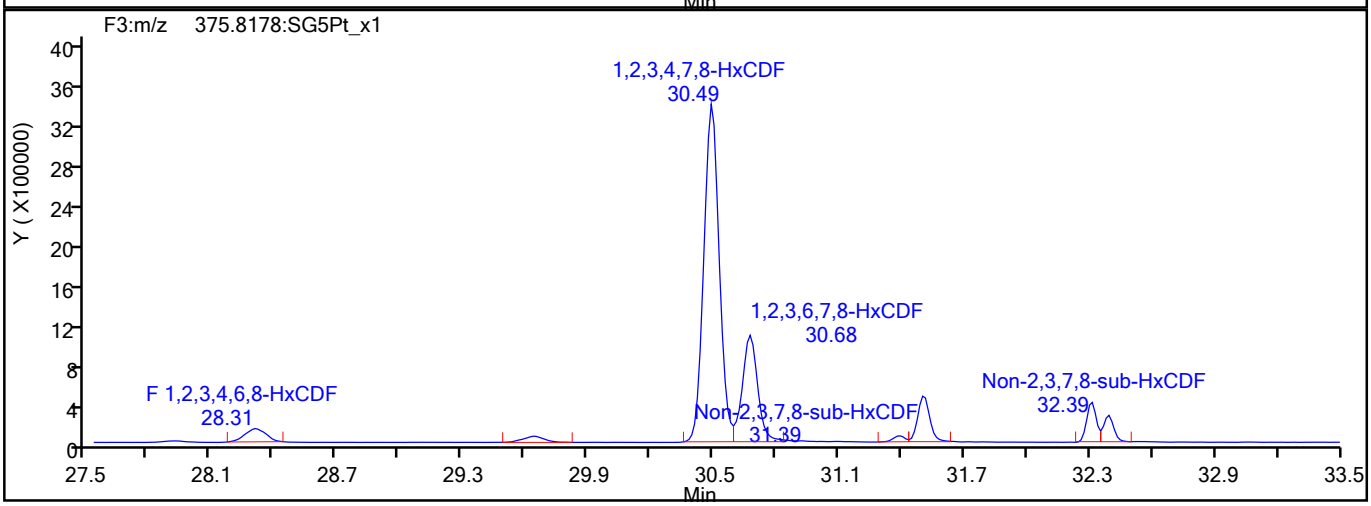

HxCDF Interference Mass

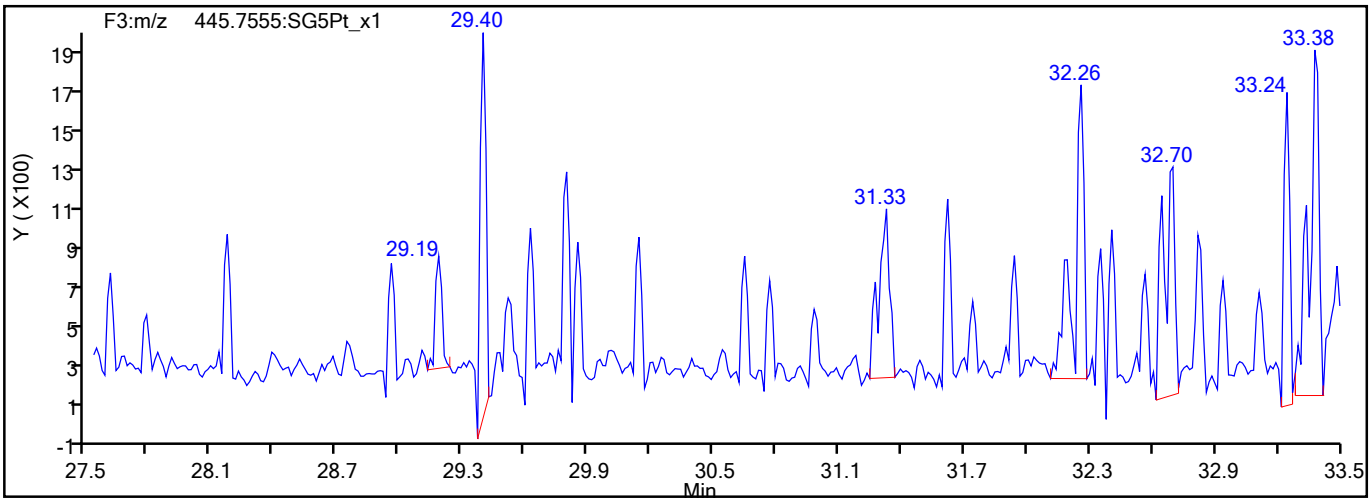

783645

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

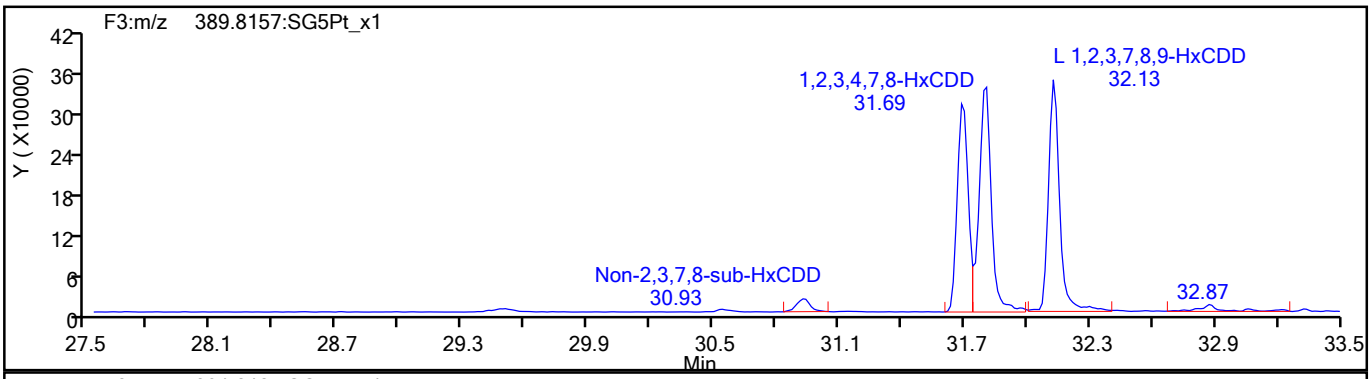

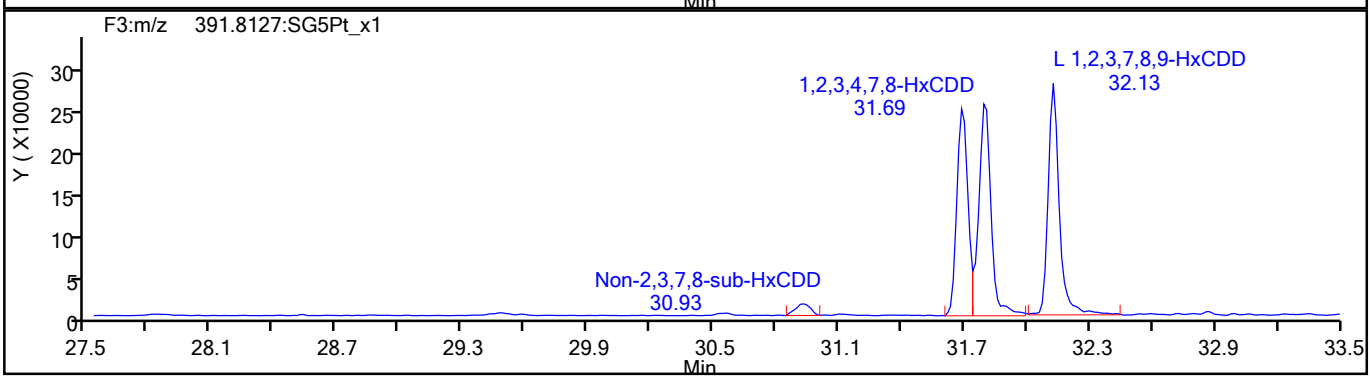

HxCDD Standards

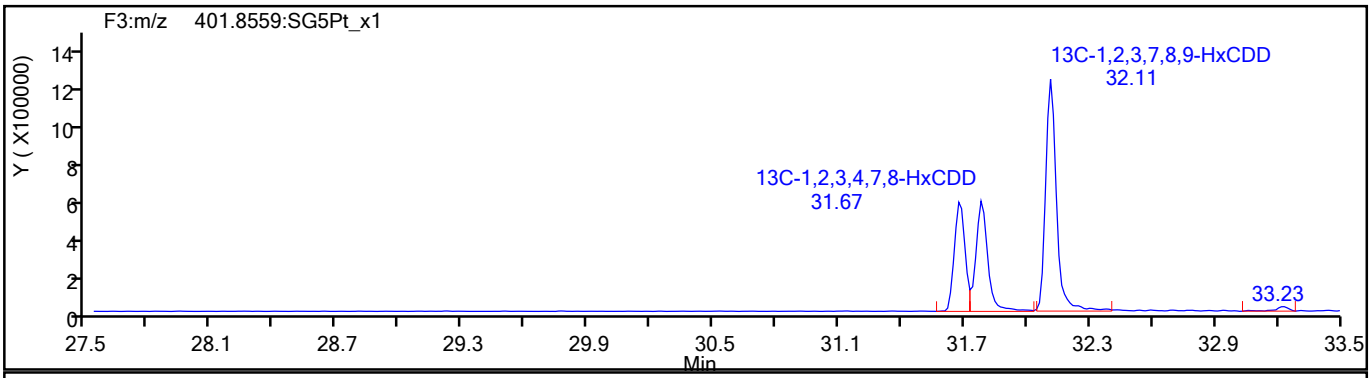

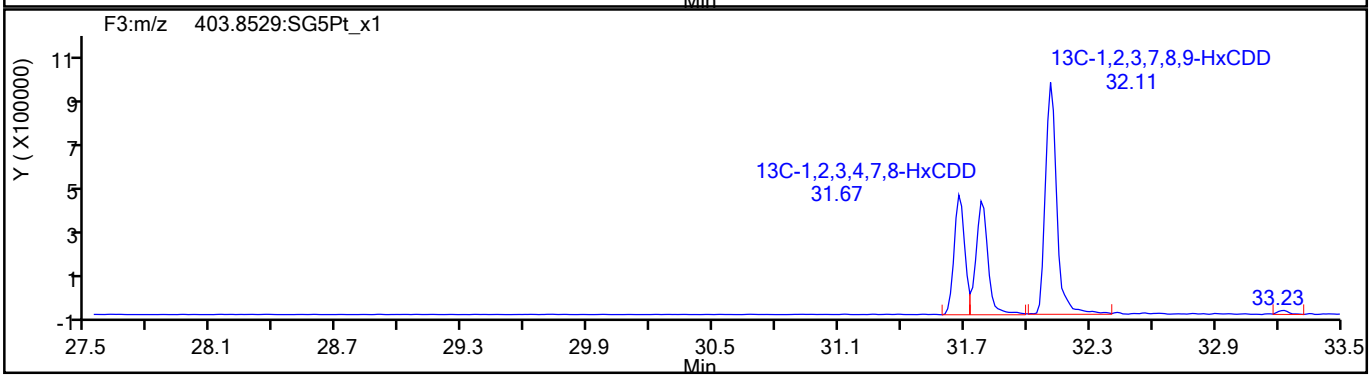

783646

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
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HpCDF

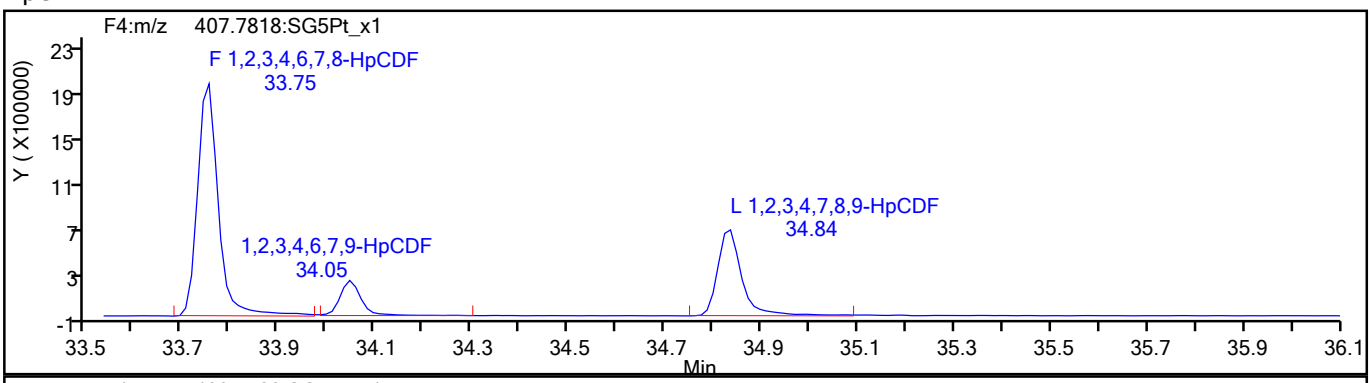

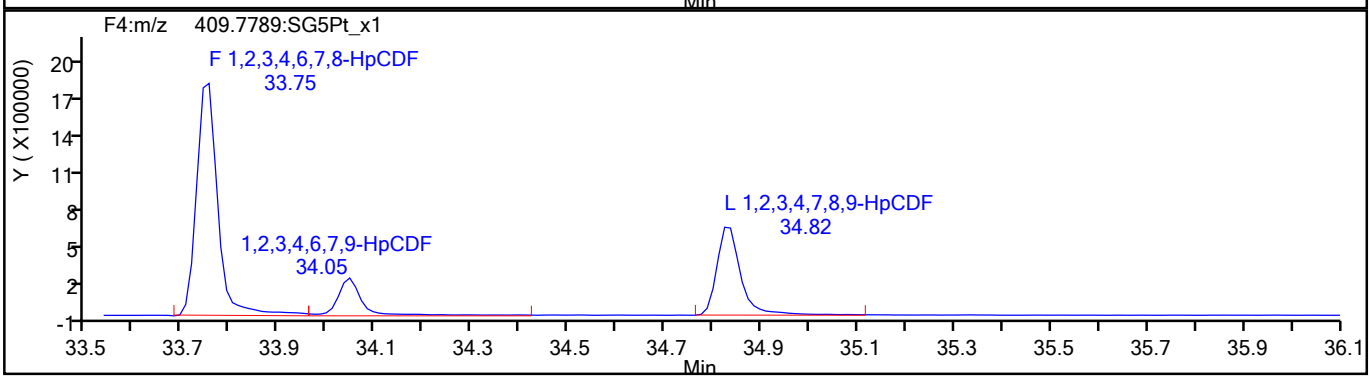

HpCDF Standards

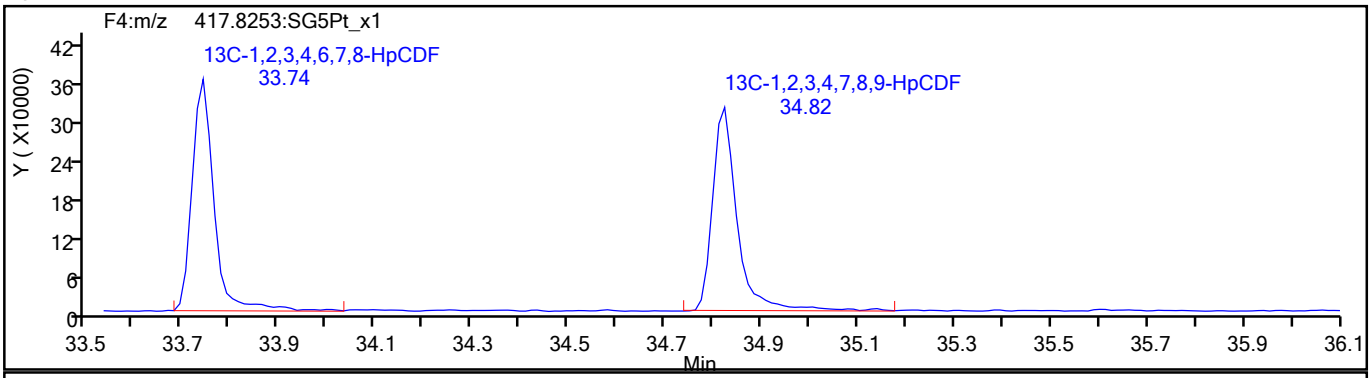

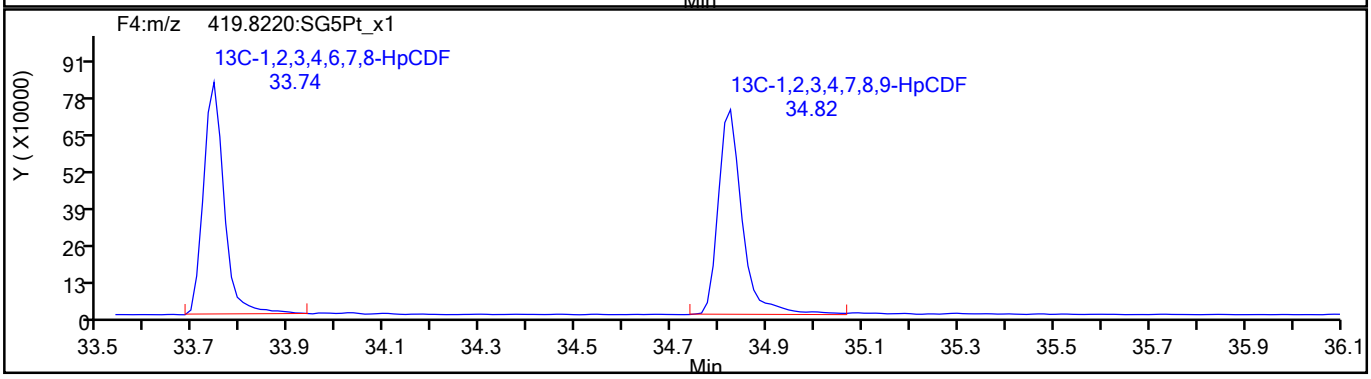

783647

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

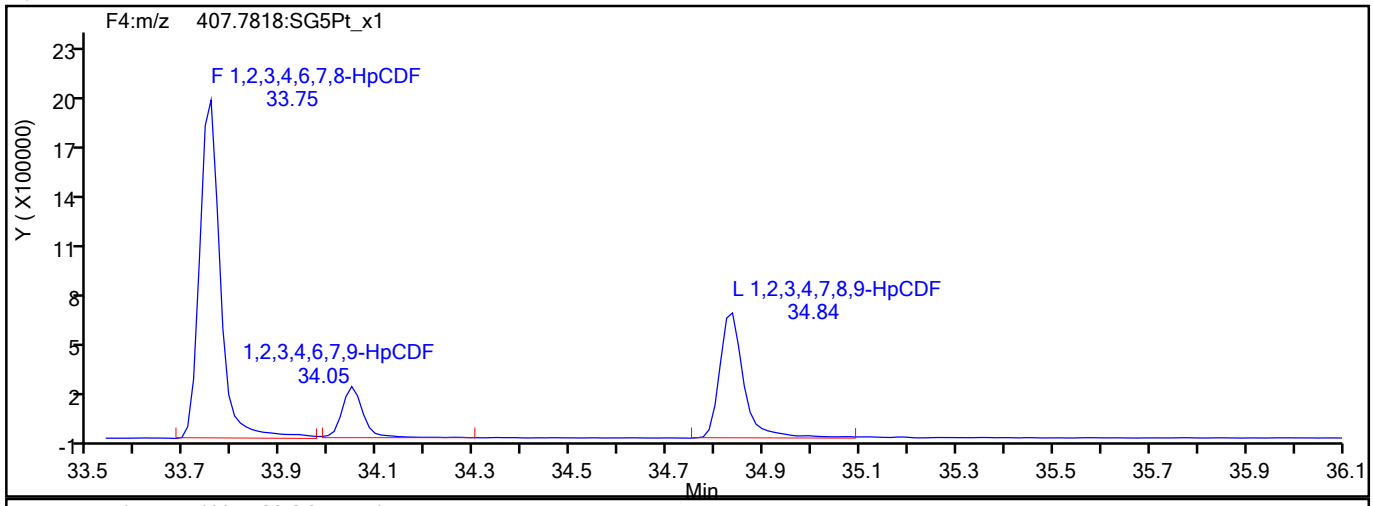

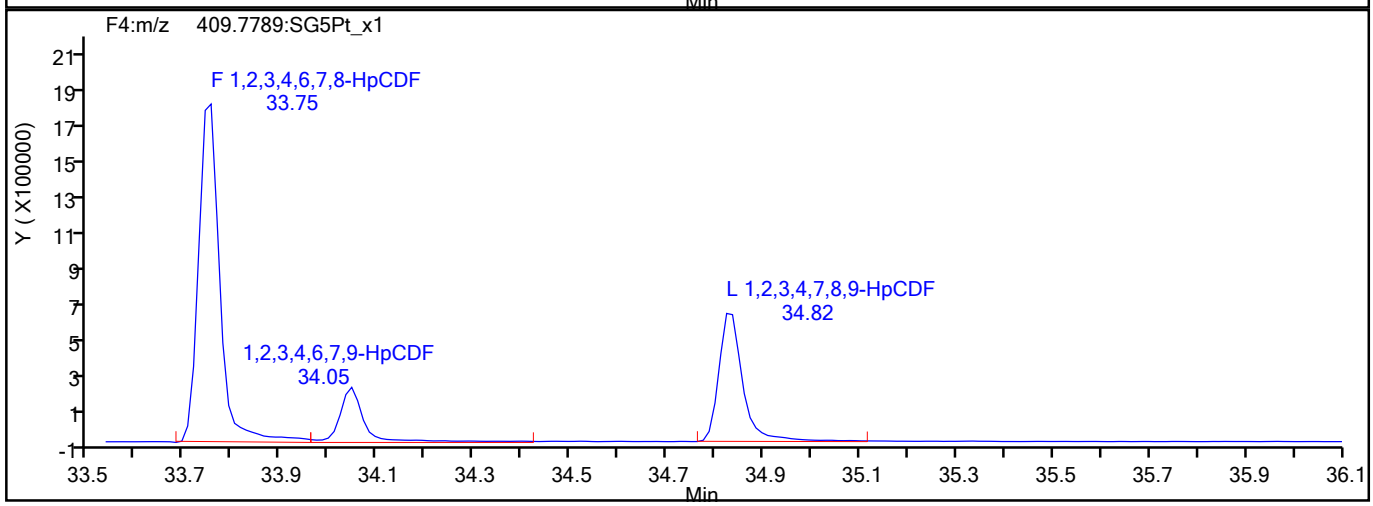

HpCDF Interference Mass

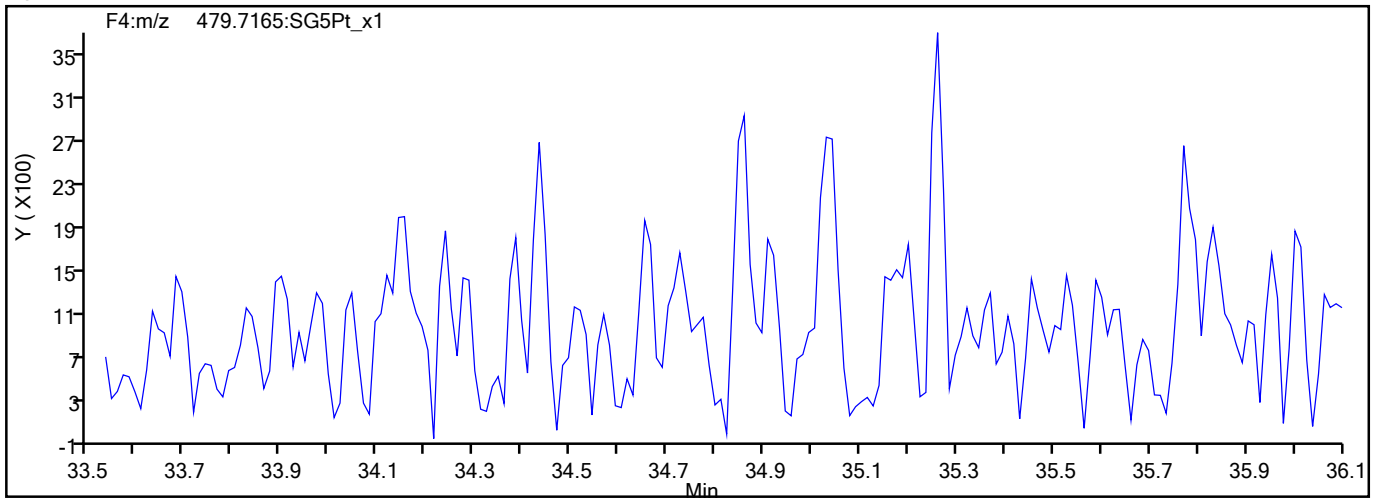

783648

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

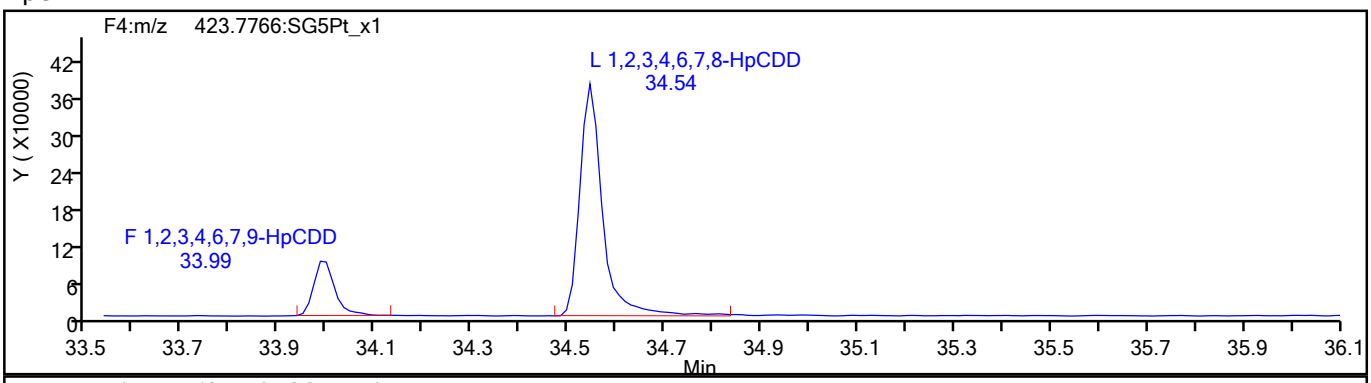

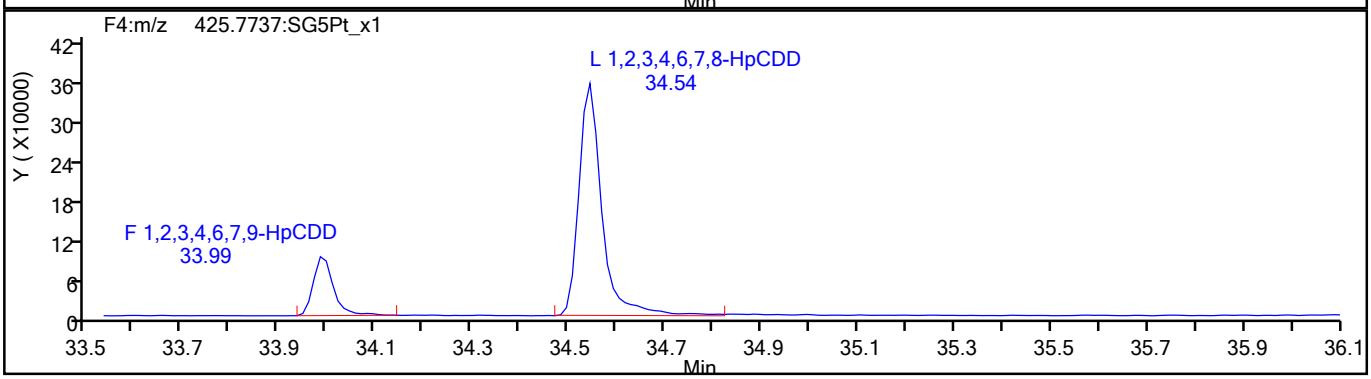

HpCDD Standards

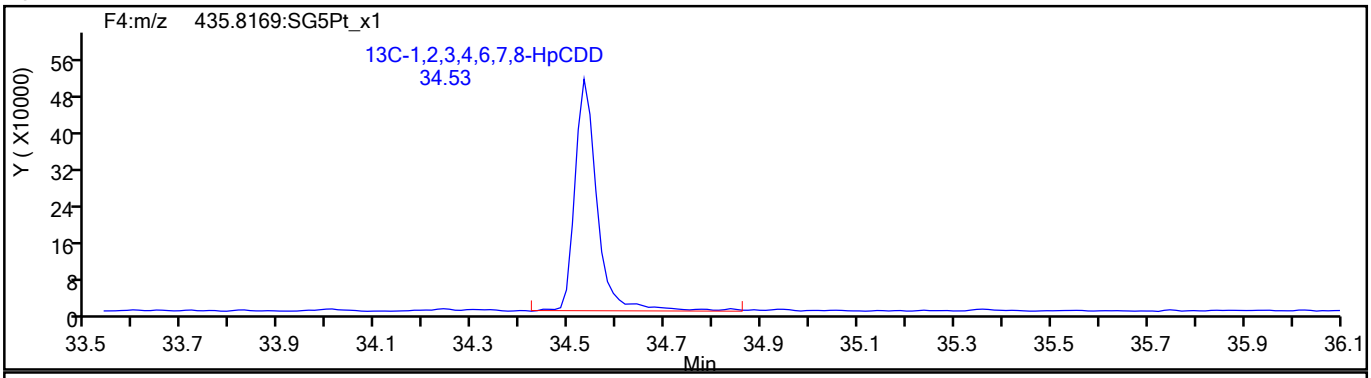

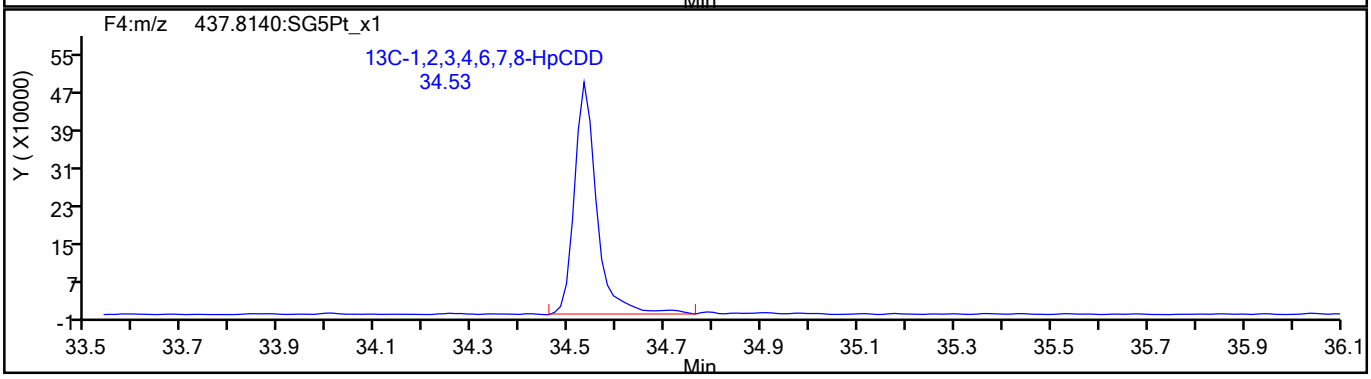

783649

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

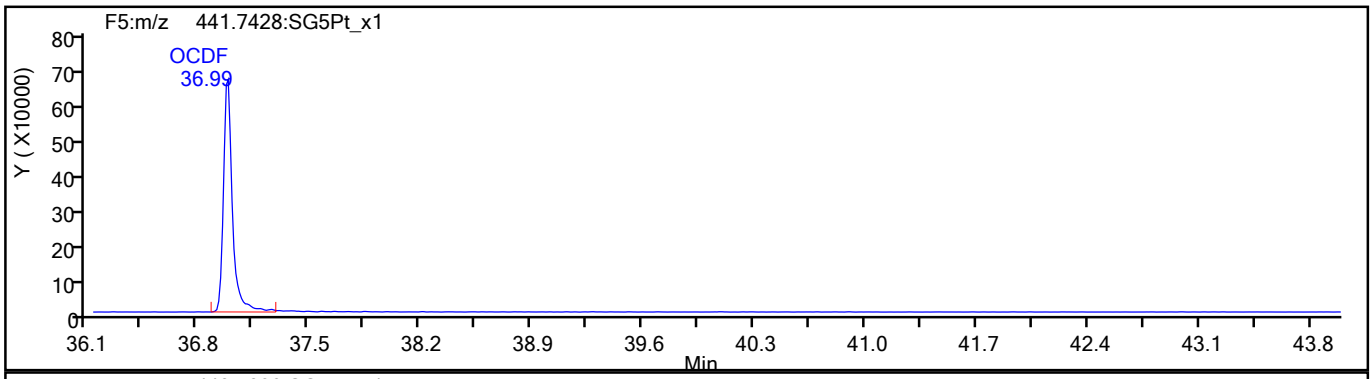

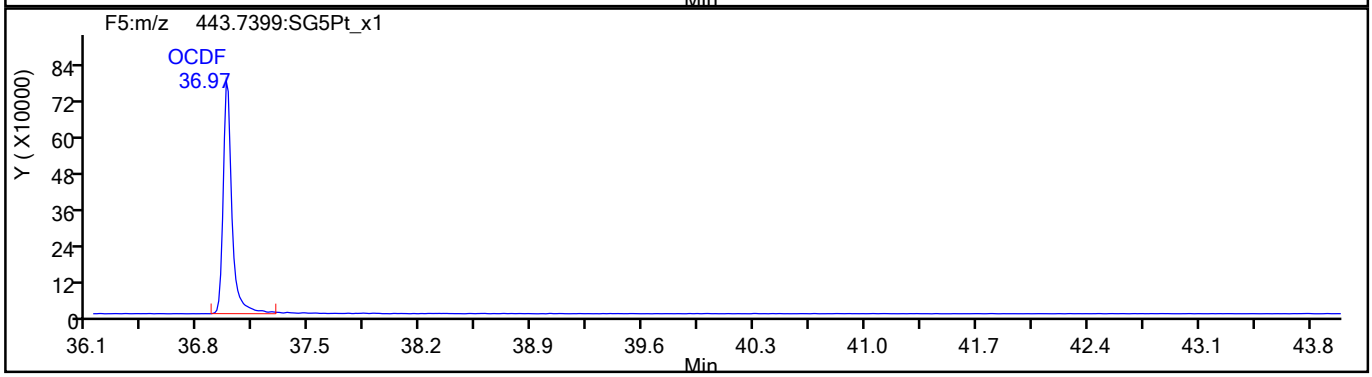

OCDF Standards

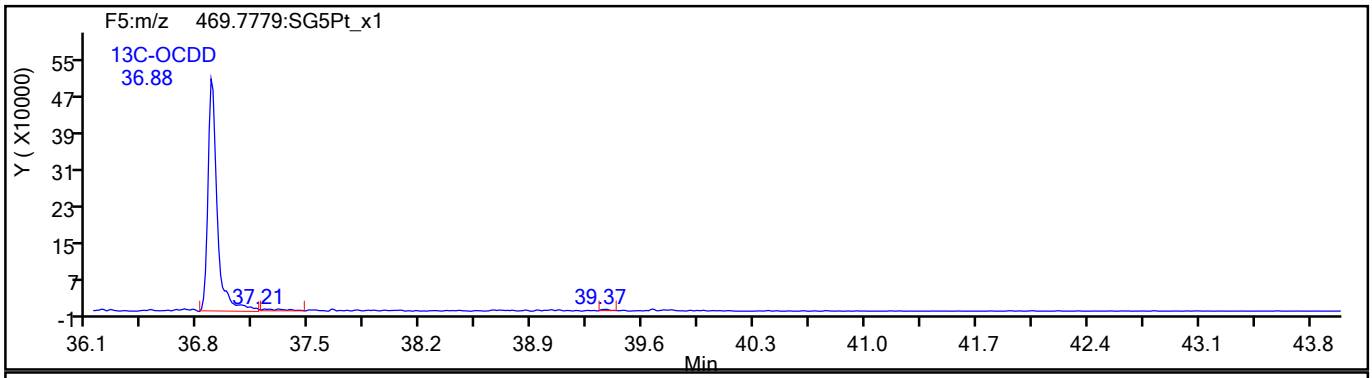

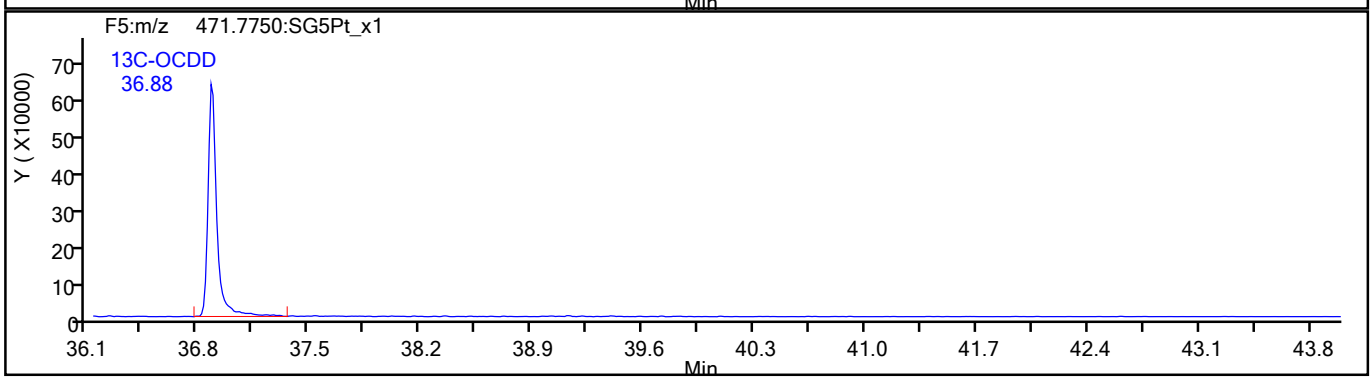

783650

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

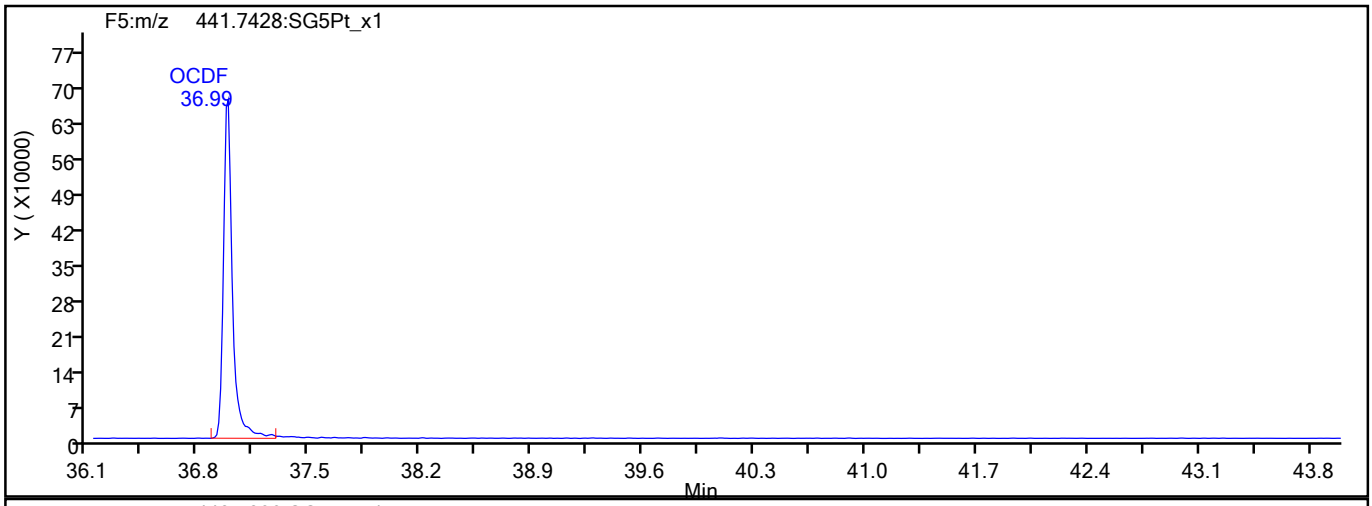

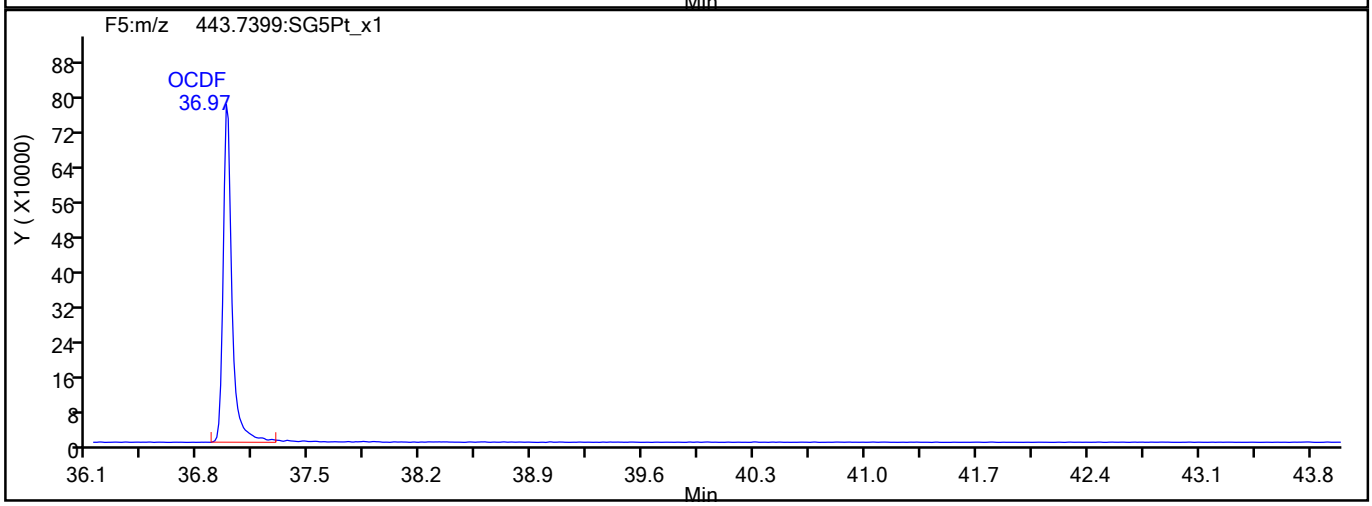

OCDF Interference Mass

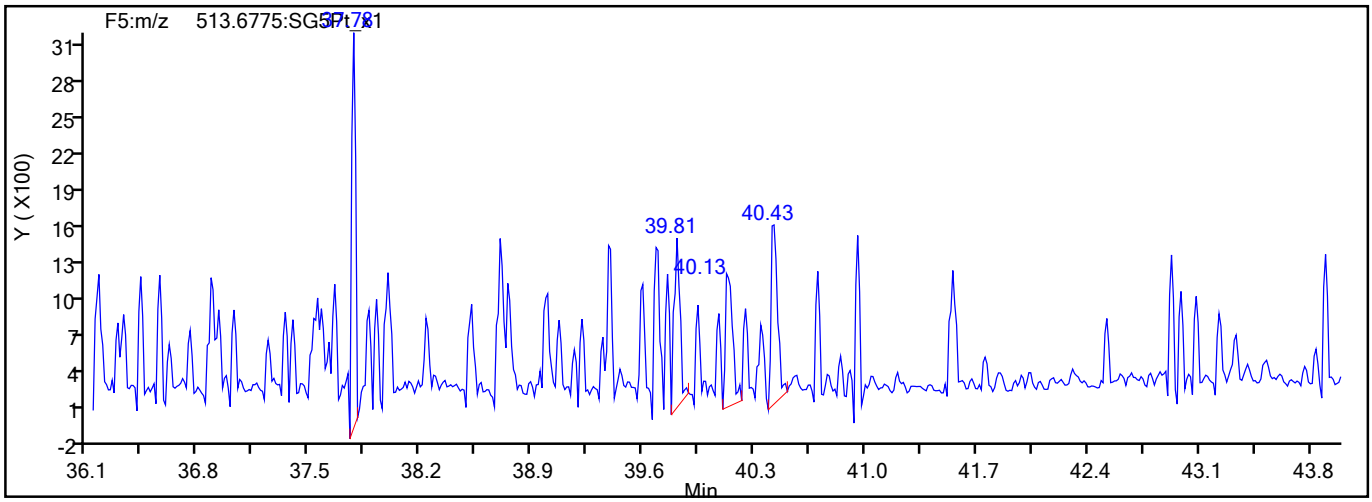

783651

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

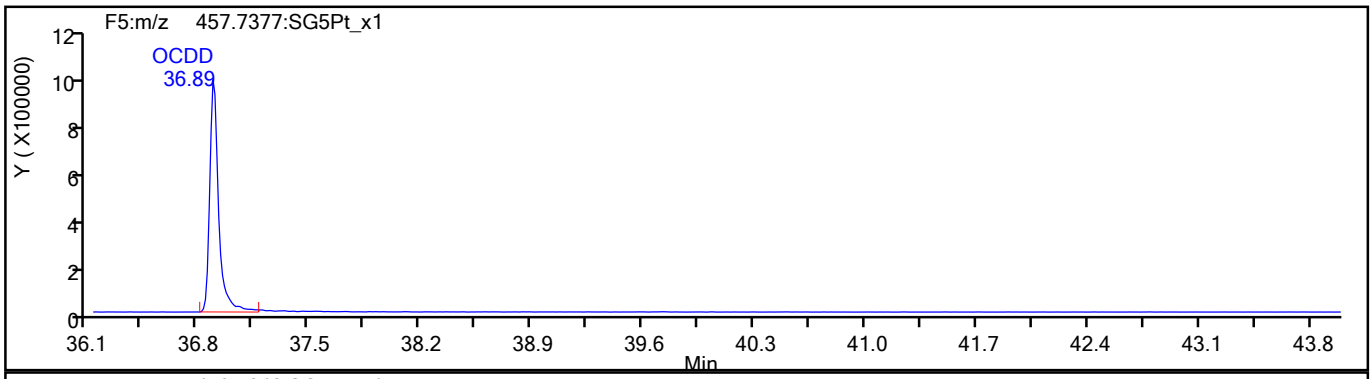

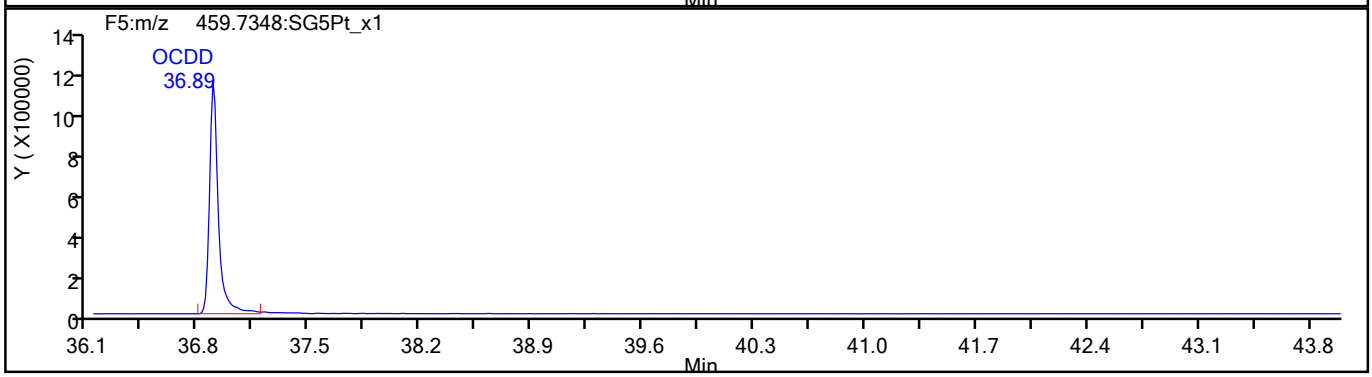

OCDD Standards

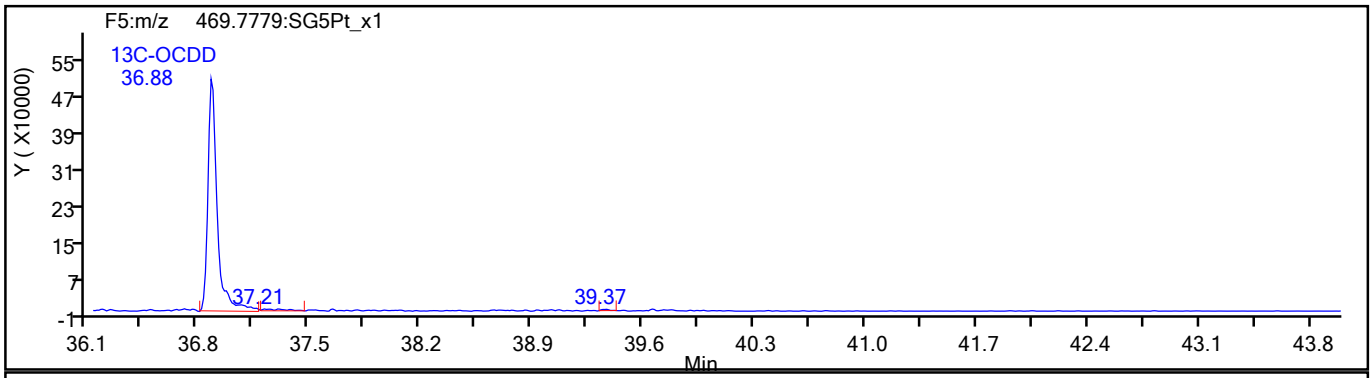

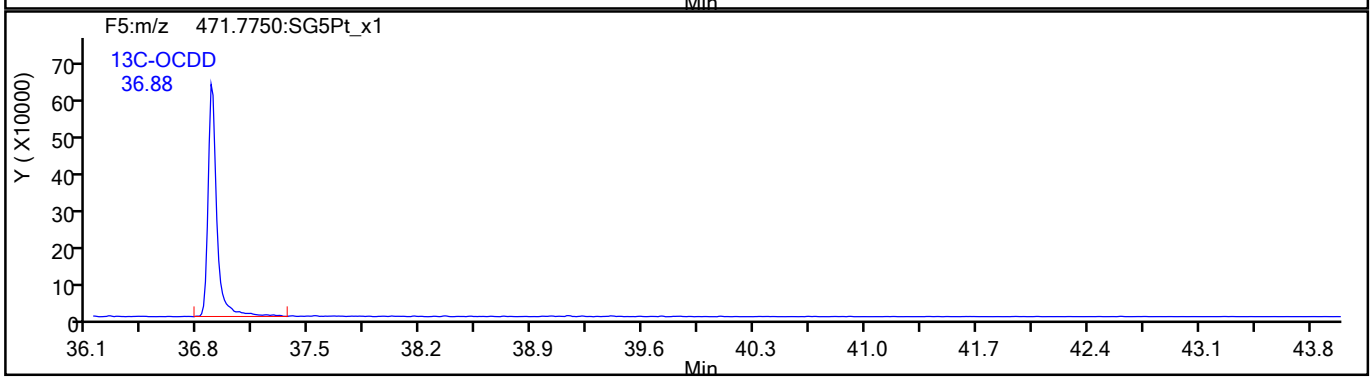

783652

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

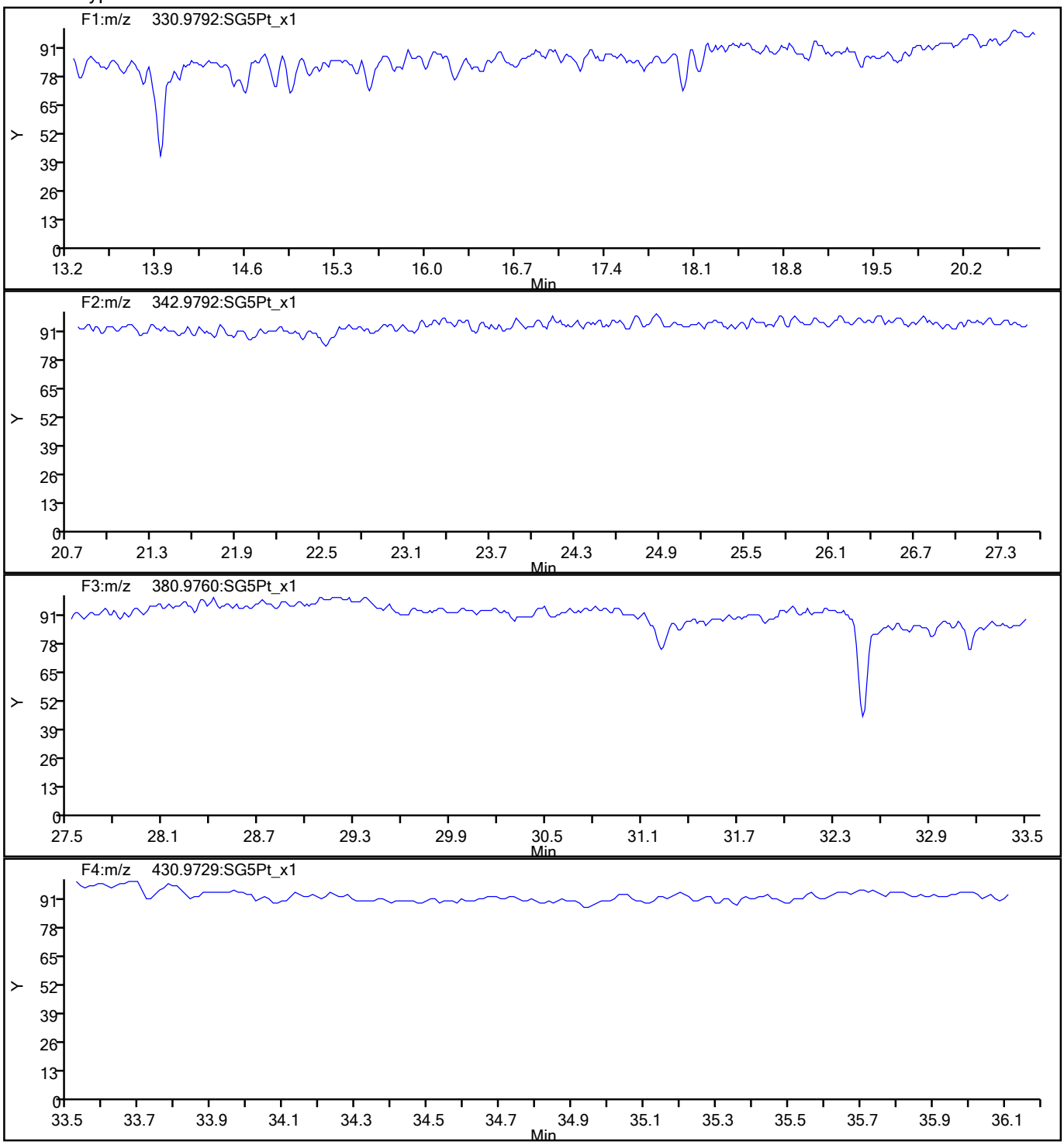

783653

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

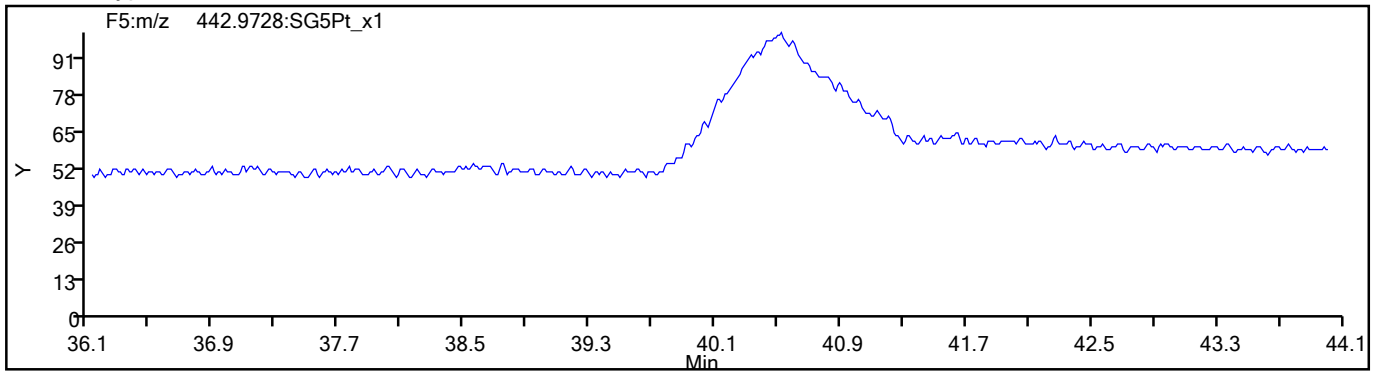

783654

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) MS RA
Lab Sample ID: 320-76887-2 MS RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_016.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.12(g)
Date Analyzed: 08/25/2021 22:33
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	71100		66	66

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	44		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	65		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MS
Inject. Date: 25-Aug-2021 22:33:36 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-A-2-B MS X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:24:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.312	4042823	0.85	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.615	2363705	0.72	1.3327	4.387	4.387	1.547	1.547	43.87	M
2,3,7,8-TCDF	17.656	525927075	0.79	0.9978	2229.9	2229.9	2.079	2.079	2.2E+005	E
D 13C-2,3,7,8-TCDD	16.092	1828154	0.84	0.8749	5.168	5.168	9.607	9.607	51.68	nM
2,3,7,8-TCDD	16.092	84946145	0.79	1.0570	439.6	439.6	2.237	2.237	43960	Ea
$ 37Cl4-2,3,7,8-TCDD	16.078	913023		0.8648	2.611	2.611	0.3023	0.3023	65.28	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 26-Aug-2021 09:30:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MS
Inject. Date: 25-Aug-2021 22:33:36 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-A-2-B MS X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:24:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.312	16.298	1		1854317	381077	137828	344570	3		M
333.9339	16.312	16.298	1		2188506	384866	119703	299257	3	0.85(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.615	17.615	0	1.080	992200	200704	28937	72342	7		M
317.9389	17.642	17.615	2	1.082	1371505	289503	34243	85607	8	0.72(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.656	17.628	2	1.002	231682445	43323024	16082	40205	2694		
305.8987	17.656	17.628	2	1.002	294244630	54591779	24586	61465	2220	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.092	16.065	2	0.987	832065	163518	137828	344570	1		M
333.9339	16.078	16.065	1	0.986	996089	224396	119703	299257	2	0.84(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.092	16.078	1	1.000	37563053	8232449	23151	57877	356		a
321.8936	16.092	16.078	1	1.000	47383092	10260153	13537	33842	758	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.078	16.078	0	0.986	913023	169884	8010	20025	21		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d				
Injection Date:	25-Aug-2021 22:33:36	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.61
Area: 688157
Amount: 6.248947
Amount Units: pg/ul

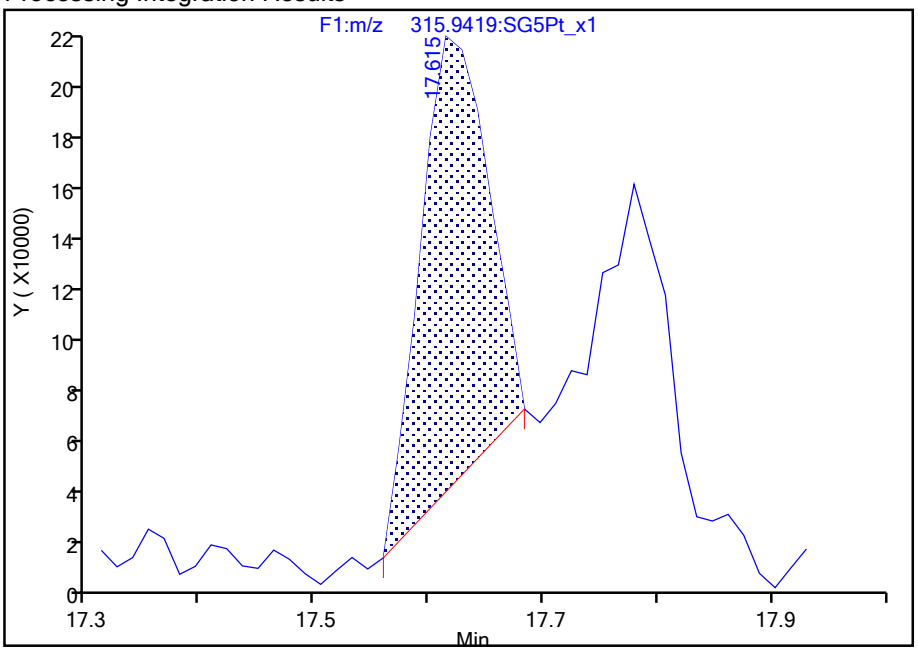

Manual Integration Results

RT: 17.61
Area: 992200
Amount: 4.387132
Amount Units: pg/ul

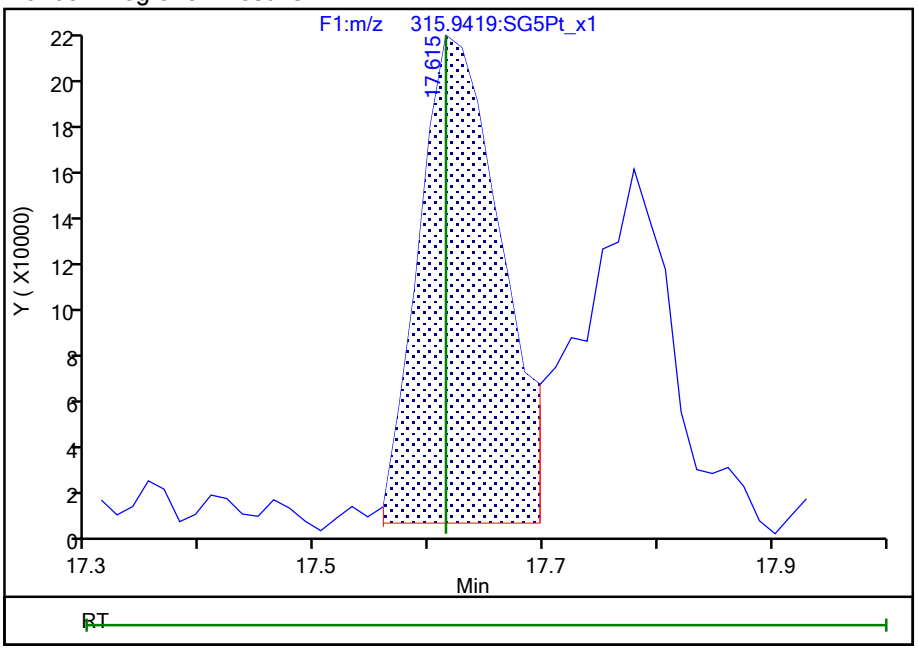

Reviewer: stephensk, 26-Aug-2021 09:23:35

Audit Action: Manually Integrated Audit Reason: Poor chromatography

783658

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d				
Injection Date:	25-Aug-2021 22:33:36	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.64
Area: 2678659
Amount: 6.248947
Amount Units: pg/ul

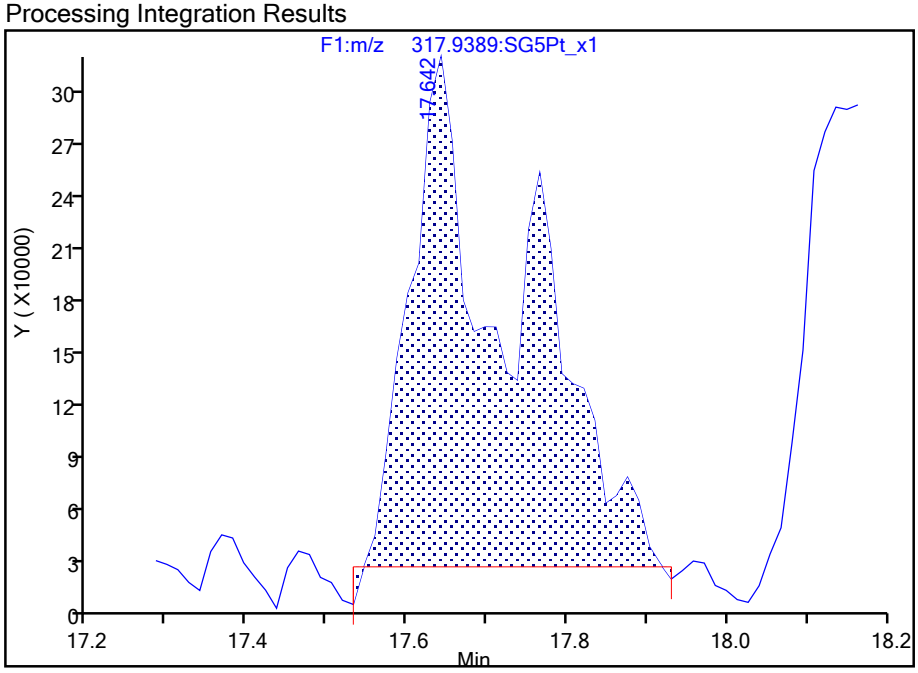

Manual Integration Results

RT: 17.64
Area: 1371505
Amount: 4.387132
Amount Units: pg/ul

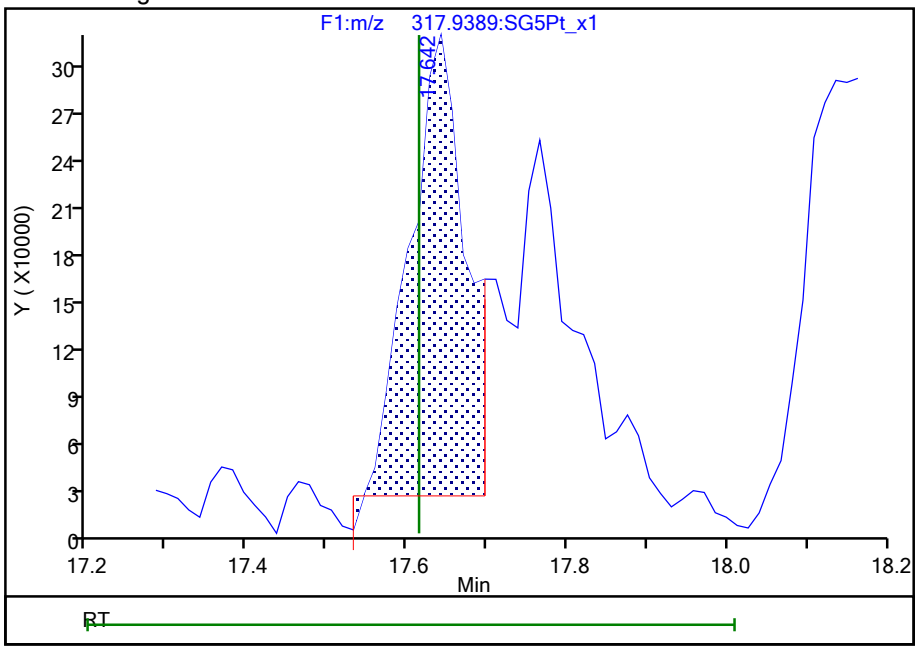

Reviewer: stephensk, 26-Aug-2021 09:23:39

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

783659

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d				
Injection Date:	25-Aug-2021 22:33:36	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Not Detected
Expected RT: 16.08

Processing Integration Results

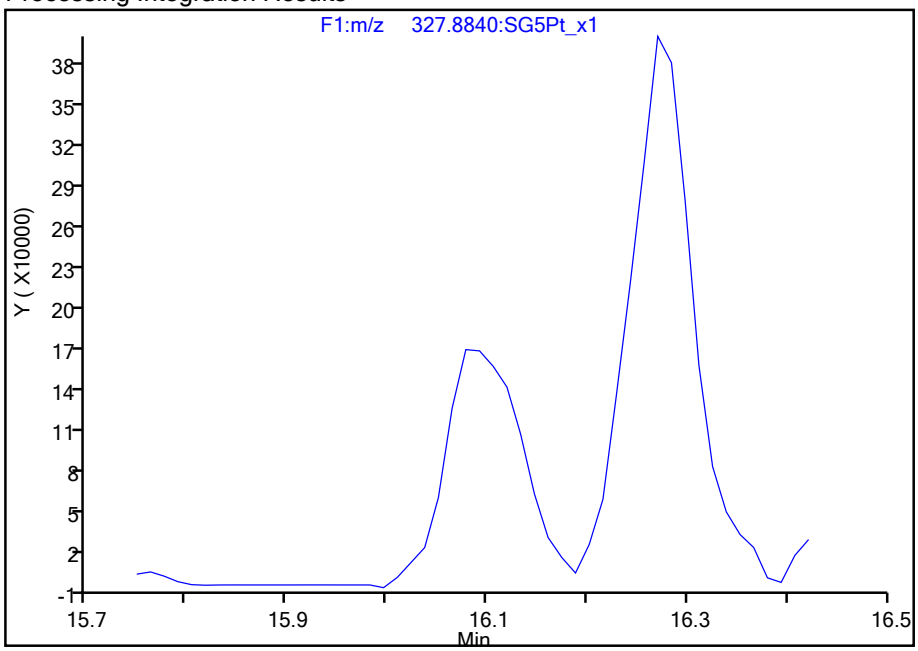

Manual Integration Results

RT: 16.08
Area: 913023
Amount: 2.611399
Amount Units: pg/ul

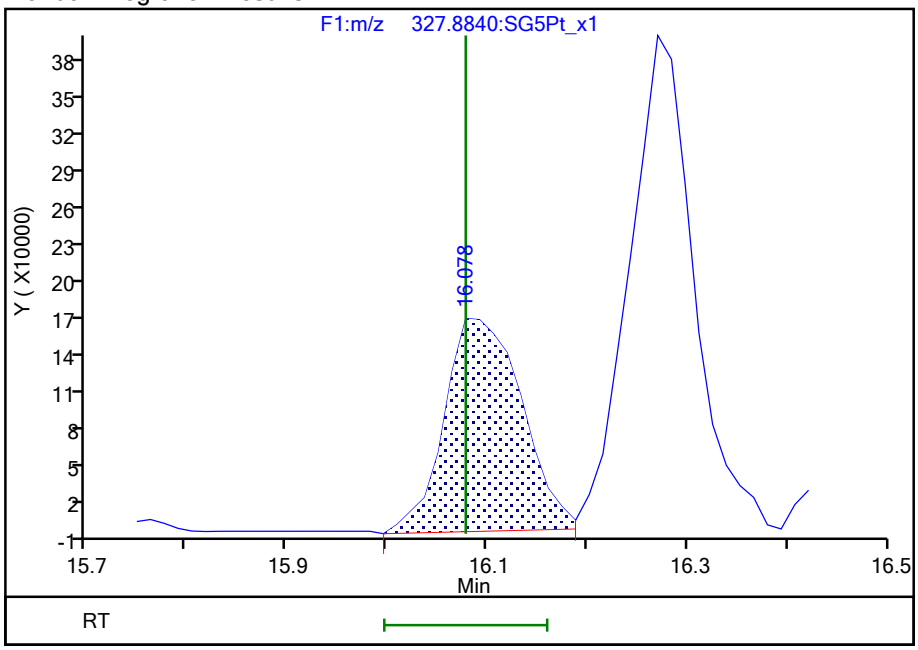

Reviewer: stephensk, 26-Aug-2021 09:24:50
Audit Action: Assigned Compound ID Audit Reason: Retention Time Shift

783660

Report Date: 26-Aug-2021 09:30:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d		
Injection Date:	25-Aug-2021 22:33:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

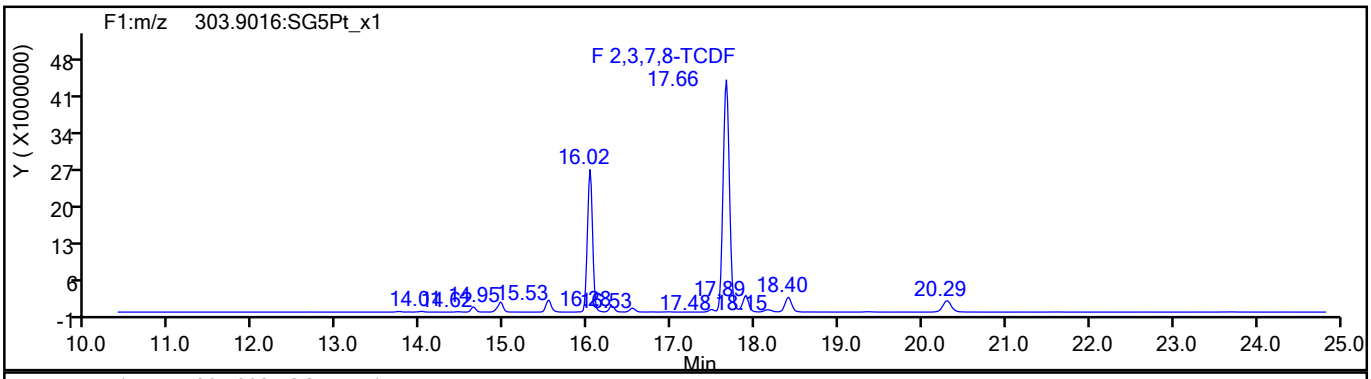

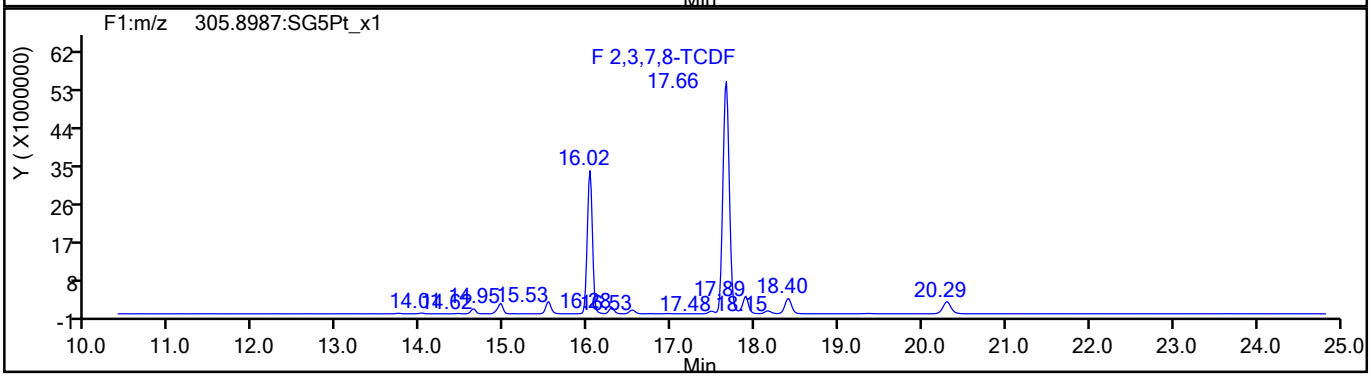

TCDF Standards

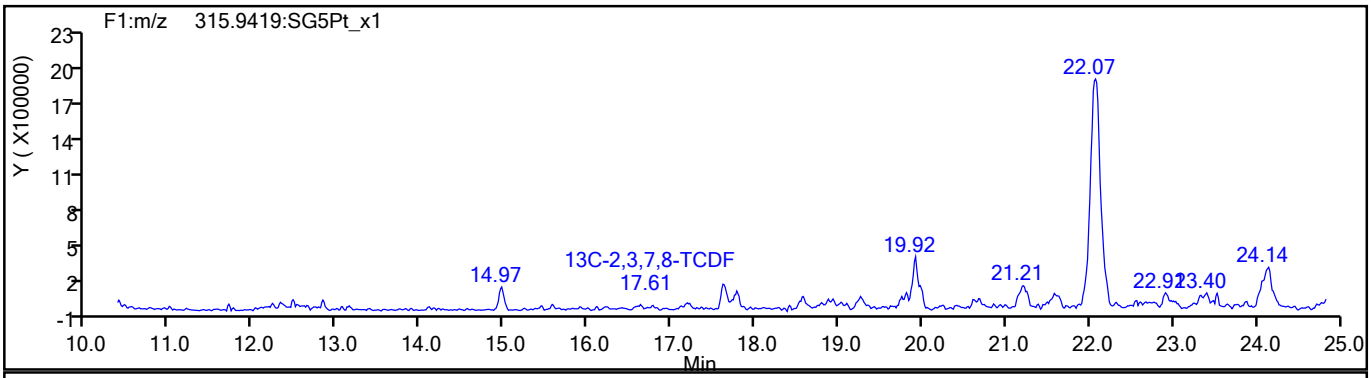

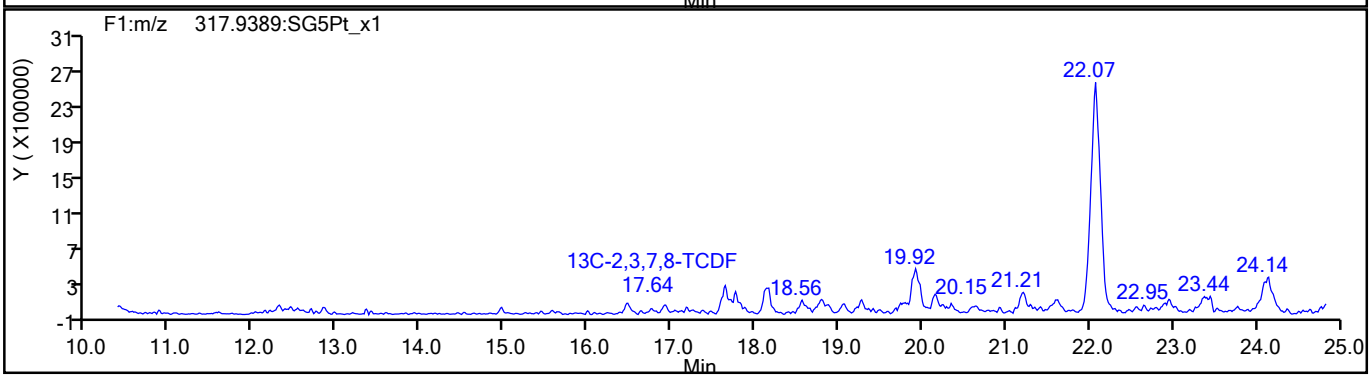

783661

Report Date: 26-Aug-2021 09:30:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d		
Injection Date:	25-Aug-2021 22:33:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

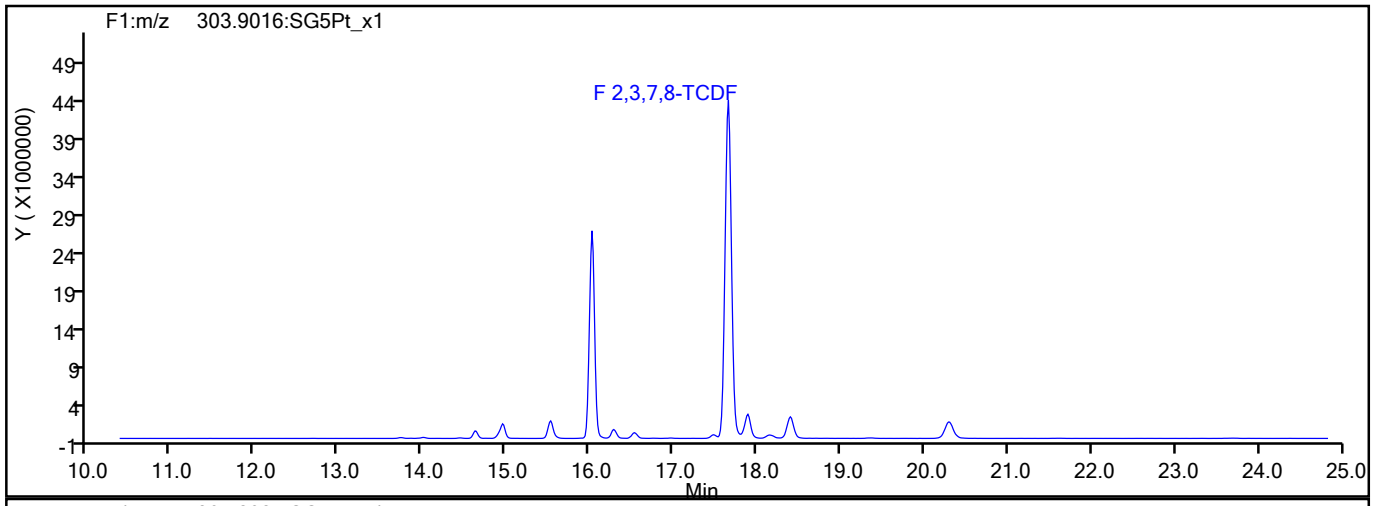

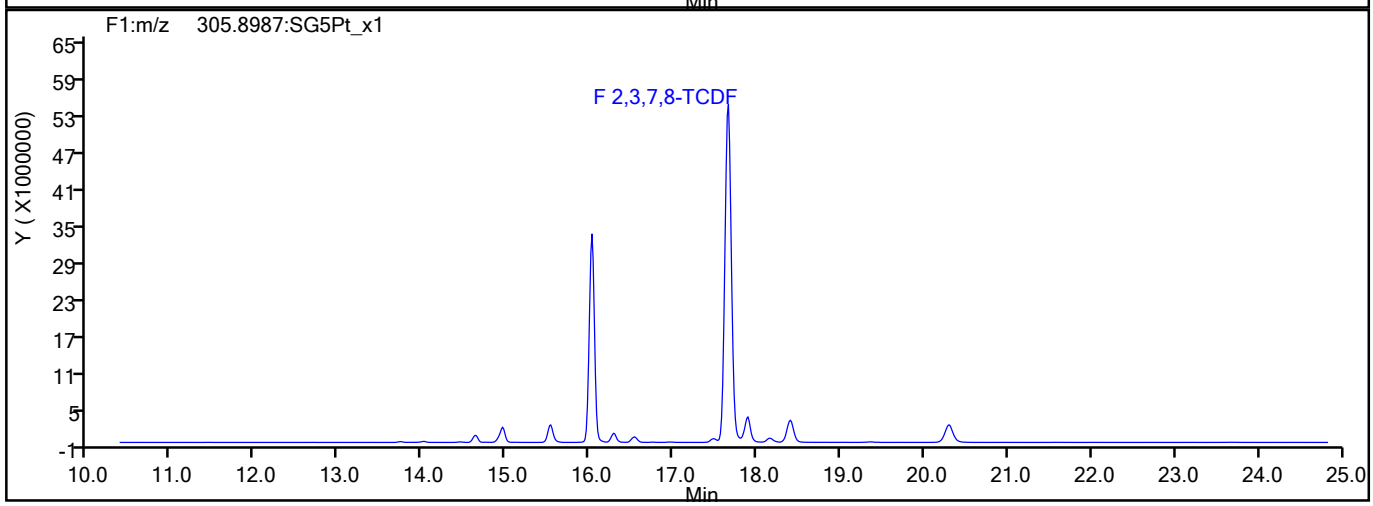

TCDF Interference Mass

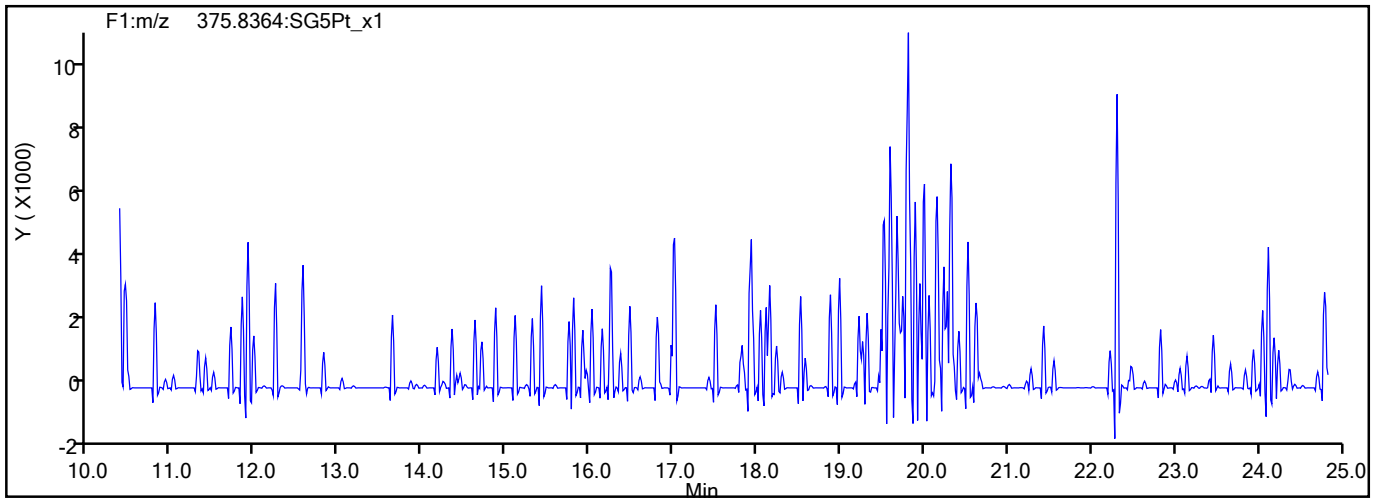

783662

Report Date: 26-Aug-2021 09:30:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d		
Injection Date:	25-Aug-2021 22:33:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

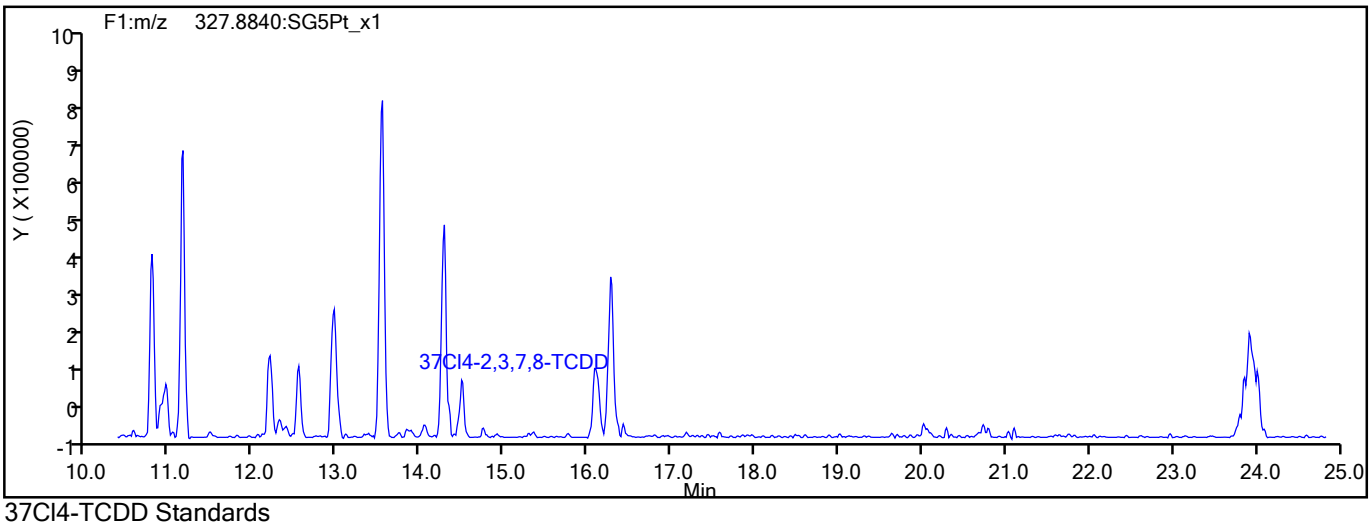

37Cl4-TCDD Standards

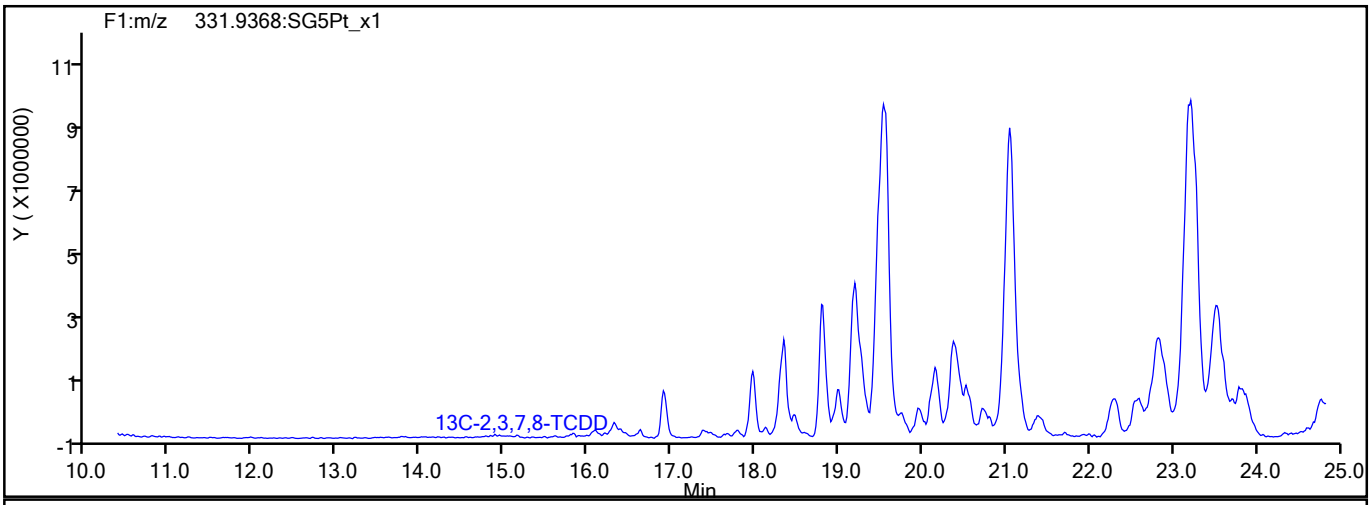

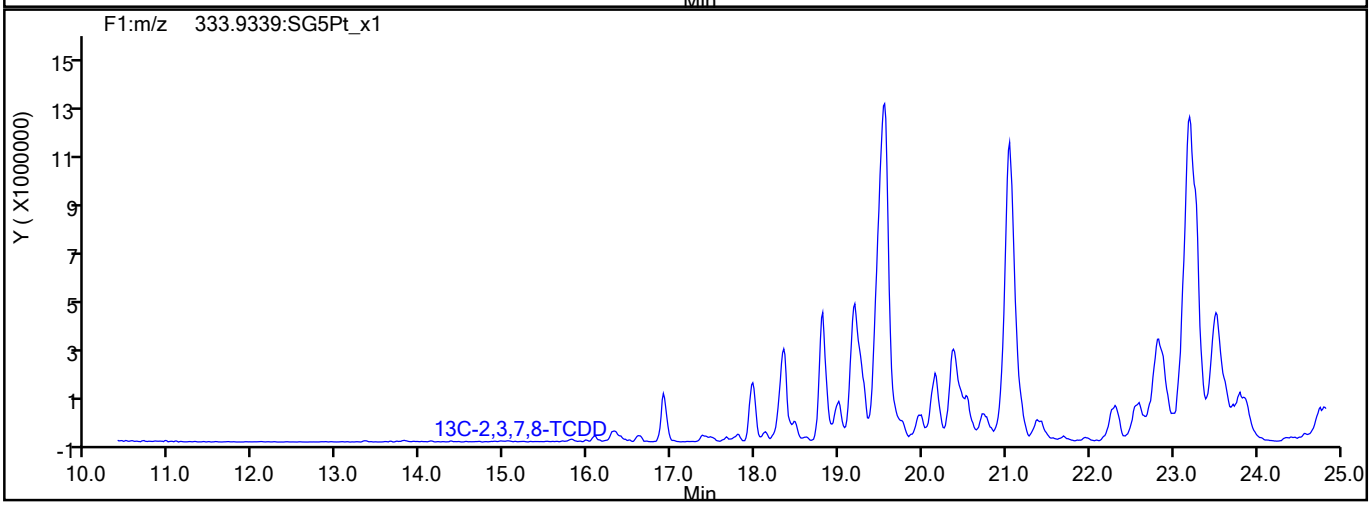

783663

Report Date: 26-Aug-2021 09:30:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d		
Injection Date:	25-Aug-2021 22:33:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

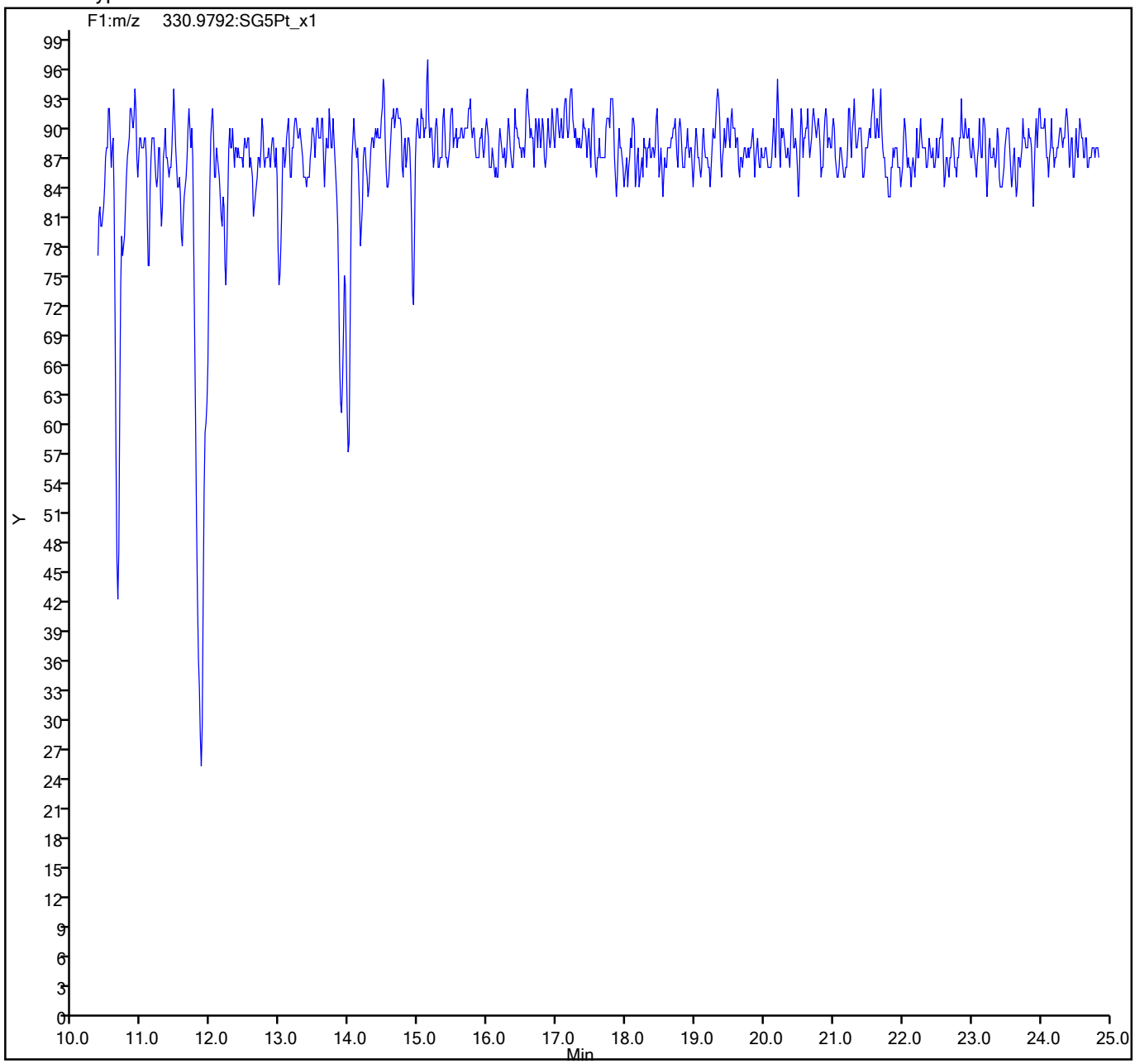

783664

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) MSD
Lab Sample ID: 320-76887-2 MSD
Matrix: Sediment
Lab File ID: 18AU2110D5_10.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.44(g)
Date Analyzed: 08/18/2021 21:04
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	19400		55	55
40321-76-4	1,2,3,7,8-PeCDD	366		77	3.9
57117-41-6	1,2,3,7,8-PeCDF	2150		77	13
57117-31-4	2,3,4,7,8-PeCDF	1450		77	13
39227-28-6	1,2,3,4,7,8-HxCDD	162		77	2.1
57653-85-7	1,2,3,6,7,8-HxCDD	183		77	2.2
19408-74-3	1,2,3,7,8,9-HxCDD	172		77	2.0
70648-26-9	1,2,3,4,7,8-HxCDF	2640		77	15
57117-44-9	1,2,3,6,7,8-HxCDF	831		77	16
72918-21-9	1,2,3,7,8,9-HxCDF	186		77	11
60851-34-5	2,3,4,6,7,8-HxCDF	236		77	11
35822-46-9	1,2,3,4,6,7,8-HpCDD	240		77	1.8
67562-39-4	1,2,3,4,6,7,8-HpCDF	893		77	6.4
55673-89-7	1,2,3,4,7,8,9-HpCDF	386		77	7.5
3268-87-9	OCDD	1240		150	2.0
39001-02-0	OCDF	649		150	1.3
41903-57-5	Total TCDD	21400		55	55
30402-14-3	Total TCDF	130000		160	160
36088-22-9	Total PeCDD	366		77	3.9
30402-15-4	Total PeCDF	4970		77	13
34465-46-8	Total HxCDD	529		77	2.1
55684-94-1	Total HxCDF	4150		77	13
37871-00-4	Total HpCDD	303		77	1.8
38998-75-3	Total HpCDF	1430		77	7.0

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) MSD
Lab Sample ID: 320-76887-2 MSD
Matrix: Sediment
Lab File ID: 18AU2110D5_10.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.44(g)
Date Analyzed: 08/18/2021 21:04
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	55		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	57		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	56		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	52		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	57		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	52		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	54		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	55		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	56		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	52		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	61		26-138
114423-97-1	13C-OCDD	57		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	112		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MSD
Inject. Date: 18-Aug-2021 21:04:23 ALS Bottle#: 11 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-a-2-c msd 10x 320-76887-a-2-c msd 10x
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 13:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.840	8075123	0.81	6.2E+05	10.0	10.0				a
D 13C-2,3,7,8-TCDF	17.326	7213618	0.74	1.6249	5.498	5.498	0.1615	0.1615	54.98	
2,3,7,8-TCDF	17.341	1846024615	0.78	1.0239	2499.3	2499.3	5.077	5.077	2.5E+005	E
A Non-2,3,7,8-sub-TCDF	17.159	1273199414	0.78	1.0239	1723.8	1723.8	5.077	1135.2	0.00	M
S Total TCDF					4223.1	4223.1	5.077	5.077		
D 13C-2,3,7,8-TCDD	18.036	3953385	0.82	0.8993	5.444	5.444	0.1285	0.1285	54.44	
2,3,7,8-TCDD	18.051	311104405	0.80	1.2541	627.5	627.5	1.793	1.793	62748	E
$ 37Cl4-2,3,7,8-TCDD	18.051	3988655		1.1071	4.461	4.461	0.0636	0.0636	112	
A Non-2,3,7,8-sub-TCDD	17.620	32512753	0.72	1.2541	65.6	65.6	1.793	59.6	0.00	a
S Total TCDD					693.1	693.1	1.793	1.793		
D 13C-1,2,3,7,8-PeCDF	22.340	5412321	1.49	1.2101	5.539	5.539	0.0484	0.0484	55.39	M
1,2,3,7,8-PeCDF	22.353	40063395	1.60	1.0611	69.8	69.8	0.4102	0.4102	1395	
D 13C-2,3,4,7,8-PeCDF	23.662	5678065	1.61	1.2395	5.673	5.673	0.0473	0.0473	56.73	
2,3,4,7,8-PeCDF	23.690	27113815	1.59	1.0184	46.9	46.9	0.4312	0.4312	938	
A F1 PeCDFs	20.229						0.0211	0.0211		
A Non-2,3,7,8-sub-PeCDF	23.445	25593749	1.58	1.0398	44.4	44.4	0.4205	16.7	0.00	
S Total PeCDF					161.0	161.0	0.4207	0.4207		
D 13C-1,2,3,7,8-PeCDD	24.385	3593553	1.66	0.7612	5.846	5.846	0.0378	0.0378	58.46	
1,2,3,7,8-PeCDD	24.399	4462359	1.63	1.0484	11.8	11.8	0.1274	0.1274	237	
A Non-2,3,7,8-sub-PeCDD	23.696						0.1274	0.1274		
S Total PeCDD					11.8	11.8	0.1274	0.1274		
D 13C-1,2,3,4,7,8-HxCDF	30.463	4931238	0.53	1.0837	5.692	5.692	0.0398	0.0398	56.92	
1,2,3,4,7,8-HxCDF	30.476	45813114	1.22	1.0851	85.6	85.6	0.4975	0.4975	1712	
D 13C-1,2,3,6,7,8-HxCDF	30.636	4722515	0.52	1.1279	5.237	5.237	0.0382	0.0382	52.37	
1,2,3,6,7,8-HxCDF	30.663	14307386	1.21	1.1260	26.9	26.9	0.5051	0.5051	538	
D 13C-2,3,4,6,7,8-HxCDF	31.474	4670285	0.53	1.0637	5.491	5.491	0.0405	0.0405	54.91	
2,3,4,6,7,8-HxCDF	31.488	4160785	1.22	1.1675	7.631	7.631	0.3696	0.3696	153	
D 13C-1,2,3,7,8,9-HxCDF	32.286	4192133	0.51	0.9676	5.419	5.419	0.0446	0.0446	54.19	
1,2,3,7,8,9-HxCDF	32.300	2946481	1.20	1.1664	6.026	6.026	0.3613	0.3613	121	
A Non-2,3,7,8-sub-HxCDF	30.410	4294831	1.22	1.1363	8.165	8.165	0.4241	5.259	0.00	a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					134.3	134.3	0.4334	0.4334		
* 13C-1,2,3,7,8,9-HxCDD	32.100	7995205	1.21	6.2E+05	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	31.661	3292128	1.21	0.7334	5.614	5.614	0.0536	0.0536	56.14	
1,2,3,4,7,8-HxCDD	31.687	1835840	1.28	1.0640	5.241	5.241	0.0691	0.0691	105	
D 13C-1,2,3,6,7,8-HxCDD	31.767	3633343	1.32	0.8802	5.163	5.163	0.0446	0.0446	51.63	
1,2,3,6,7,8-HxCDD	31.794	2155962	1.23	1.0001	5.933	5.933	0.0711	0.0711	119	
1,2,3,7,8,9-HxCDD	32.113	2189330	1.29	1.1325	5.583	5.583	0.0638	0.0638	112	
A Non-2,3,7,8-sub-HxCDD	30.816	139362	1.42	1.0655	0.3777	0.3777	0.0678	0.3777	0.00	
S Total HxCDD					17.1	17.1	0.0680	0.0680		
D 13C-1,2,3,4,6,7,8-HpCDF	33.730	3223604	0.41	0.7730	5.216	5.216	0.0836	0.0836	52.16	
1,2,3,4,6,7,8-HpCDF	33.742	13435010	1.05	1.4413	28.9	28.9	0.2079	0.2079	578	
D 13C-1,2,3,4,7,8,9-HpCDF	34.811	3397473	0.42	0.7008	6.064	6.064	0.0922	0.0922	60.64	
1,2,3,4,7,8,9-HpCDF	34.823	5590134	1.04	1.3174	12.5	12.5	0.2433	0.2433	250	
A Non-2,3,7,8-sub-HpCDF	34.283	2207806	1.16	1.3793	4.835	4.835	0.2246	4.835	0.00	a
S Total HpCDF					46.2	46.2	0.2256	0.2256		
D 13C-1,2,3,4,6,7,8-HpCDD	34.520	2875226	1.00	0.6472	5.556	5.556	0.0510	0.0510	55.56	
1,2,3,4,6,7,8-HpCDD	34.532	2440068	1.04	1.0943	7.755	7.755	0.0584	0.0584	155	
A Non-2,3,7,8-sub-HpCDD	33.504	645427	1.03	1.0943	2.051	2.051	0.0584	2.051	0.00	a
S Total HpCDD					9.807	9.807	0.0584	0.0584		
D 13C-OCDD	36.878	4109990	0.86	0.4472	11.5	11.5	0.0521	0.0521	57.48	
OCDF	36.974	6210269	0.89	1.4382	21.0	21.0	0.0424	0.0424	210	
OCDD	36.878	9112264	0.89	1.1070	40.1	40.1	0.0658	0.0658	401	
1,3,6,8-TCDF	14.892						0.0	0.0		
1,3,6,8-TCDD	15.799						0.0	0.0		
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.188						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,3,9-TCDD	18.399	29542769	0.71							
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.293	1926931	1.21							
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	32.074						0.0	0.0		U
1,2,3,4,8,9-HxCDF	32.380	2766092	1.24							
1,2,3,4,6,7,9-HpCDF	34.033	2207806	1.16							
1,2,3,4,6,7,9-HpCDD	33.985	645427	1.03							
1,2,3,8-TCDD	0.0						0.0	0.0		
1,3,7,9-TCDD	0.0						0.0	0.0		
1,2,3,4,7-PeCDD	0.0						0.0	0.0		
1,4,7,8-TCDD	0.0						0.0	0.0		

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MSD
Inject. Date: 18-Aug-2021 21:04:23 ALS Bottle#: 11 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-a-2-c msd 10x 320-76887-a-2-c msd 10x
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 13:07:57

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.840	17.809	2		3621153	855005	4411	11027	194		a
333.9339	17.840	17.809	2		4453970	1089043	4574	11435	238	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.326	17.295	2	0.971	3071894	786359	10462	26155	75		
317.9389	17.326	17.295	2	0.971	4141724	1065447	9943	24857	107	0.74(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.341	17.310	2	1.001	808467769	200274881	169335	423337	1183		
305.8987	17.341	17.310	2	1.001	1037556846	254700800	215739	539347	1181	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											M
303.9016	15.678	17.159	-89	0.905	2037753	605807	169335	423337	4		M
305.8987	15.678	17.159	-89	0.905	2562218	753049	215739	539347	3	0.80(0.65-0.89)	M
303.9016	15.935	17.159	-73	0.920	5168296	1446630	169335	423337	9		
305.8987	15.935	17.159	-73	0.920	6620704	1866043	215739	539347	9	0.78(0.65-0.89)	
303.9016	16.207	17.159	-57	0.935	10004860	2182918	169335	423337	13		
305.8987	16.207	17.159	-57	0.935	12817790	2790002	215739	539347	13	0.78(0.65-0.89)	
303.9016	16.434	17.159	-43	0.949	15743337	4046221	169335	423337	24		
305.8987	16.434	17.159	-43	0.949	20340187	5248797	215739	539347	24	0.77(0.65-0.89)	
303.9016	16.676	17.159	-29	0.962	29176768	8091045	169335	423337	48		
305.8987	16.676	17.159	-29	0.962	37671902	10432735	215739	539347	48	0.77(0.65-0.89)	
303.9016	16.948	17.159	-13	0.978	367514633	93606725	169335	423337	553		
305.8987	16.948	17.159	-13	0.978	470923541	121445118	215739	539347	563	0.78(0.65-0.89)	
303.9016	17.174	17.159	1	0.991	7183643	1708485	169335	423337	10		
305.8987	17.174	17.159	1	0.991	9486922	2184376	215739	539347	10	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.764	17.159	36	1.025	58130366	13982438	169335	423337	83		
305.8987	17.764	17.159	36	1.025	75020223	18124581	215739	539347	84	0.77(0.65-0.89)	
303.9016	18.021	17.159	52	1.040	7173305	1437494	169335	423337	8		
305.8987	18.021	17.159	52	1.040	9634887	1872019	215739	539347	9	0.74(0.65-0.89)	
303.9016	19.155	17.159	120	1.106	55082434	12650550	169335	423337	75		
305.8987	19.155	17.159	120	1.106	70905645	16271808	215739	539347	75	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.036	18.006	2	1.011	1785085	461336	4411	11027	105		
333.9339	18.036	18.006	2	1.011	2168300	554247	4574	11435	121	0.82(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	18.051	18.021	2	1.001	137829086	35654257	42070	105175	847		
321.8936	18.051	18.021	2	1.001	173275319	45296482	49273	123182	919	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.051	18.021	2	1.012	3988655	997725	5476	13690	182		
A Non-2,3,7,8-sub-TCDD											a
319.8965	17.945	17.620	19	0.995	1312836	370413	42070	105175	9		
321.8936	17.945	17.620	19	0.995	1657148	456970	49273	123182	9	0.79(0.65-0.89)	
319.8965	18.399	17.620	47	1.020	12273808	2881943	42070	105175	69		a
321.8936	18.399	17.620	47	1.020	17268961	3794852	49273	123182	77	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											M
351.9000	22.340	22.299	2	1.252	3240967	587745	2554	6385	230		M
353.8970	22.326	22.299	2	1.251	2171354	392402	2004	5010	196	1.49(1.32-1.78)	M
1,2,3,7,8-PeCDF											
339.8597	22.353	22.326	2	1.001	24639457	4410783	9659	24147	457		
341.8567	22.353	22.326	2	1.001	15423938	2805828	7408	18520	379	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.662	23.635	2	1.326	3502286	597963	2554	6385	234		
353.8970	23.662	23.635	2	1.326	2175779	373554	2004	5010	186	1.61(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.690	23.649	2	1.001	16630443	2874829	9659	24147	298		
341.8567	23.690	23.649	2	1.001	10483372	1816462	7408	18520	245	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.229						291	727			
341.8567	20.229						564	1410			
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.003	23.445	-146	0.940	5889186	1178433	9659	24147	122		
341.8567	21.003	23.445	-146	0.940	3749948	738064	7408	18520	100	1.57(1.32-1.78)	
339.8597	21.822	23.445	-97	0.977	579261	68790	9659	24147	7		
341.8567	21.849	23.445	-96	0.978	351888	41497	7408	18520	6	1.65(1.32-1.78)	
339.8597	22.217	23.445	-74	0.995	845498	201992	9659	24147	21		
341.8567	22.217	23.445	-74	0.995	569032	134674	7408	18520	18	1.49(1.32-1.78)	
339.8597	22.872	23.445	-34	1.024	4370401	779966	9659	24147	81		
341.8567	22.872	23.445	-34	1.024	2700610	481988	7408	18520	65	1.62(1.32-1.78)	
339.8597	24.017	23.445	34	1.075	3168257	495323	9659	24147	51		
341.8567	24.017	23.445	34	1.075	2017146	313977	7408	18520	42	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	25.626	23.445	131	1.147	837582	121584	9659	24147	13		
341.8567	25.612	23.445	130	1.147	514940	79822	7408	18520	11	1.63(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.385	24.358	2	1.367	2244276	351322	1358	3395	259		
369.8919	24.372	24.358	1	1.366	1349277	205819	881	2202	234	1.66(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.399	24.372	2	1.001	2767512	424871	1815	4537	234		
357.8516	24.399	24.372	2	1.001	1694847	255783	1162	2905	220	1.63(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1815	4537			
357.8516	23.696						1162	2905			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.463	30.436	2	0.949	1709972	311064	1583	3957	197		
385.8610	30.463	30.436	2	0.949	3221266	607124	2080	5200	292	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.476	30.463	1	1.000	25219897	4764389	10954	27385	435		
375.8178	30.476	30.463	1	1.000	20593217	3964508	8873	22182	447	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.636	30.623	1	0.954	1622535	302057	1583	3957	191		
385.8610	30.649	30.623	2	0.955	3099980	569409	2080	5200	274	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.663	30.649	1	1.001	7847030	1513100	10954	27385	138		
375.8178	30.663	30.649	1	1.001	6460356	1242711	8873	22182	140	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.474	31.461	1	0.981	1622698	401628	1583	3957	254		
385.8610	31.474	31.461	1	0.981	3047587	747180	2080	5200	359	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.488	31.488	0	1.000	2290753	569454	10954	27385	52		
375.8178	31.488	31.488	0	1.000	1870032	464821	8873	22182	52	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.286	32.273	1	1.006	1416931	396053	1583	3957	250		
385.8610	32.286	32.273	1	1.006	2775202	780245	2080	5200	375	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.300	32.286	1	1.000	1608402	512387	10954	27385	47		
375.8178	32.300	32.286	1	1.000	1338079	424024	8873	22182	48	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											a
373.8208	29.624	30.410	-47	0.972	471226	70921	10954	27385	6		
375.8178	29.624	30.410	-47	0.972	401376	60245	8873	22182	7	1.17(1.05-1.43)	
373.8208	31.381	30.410	58	1.030	354387	96843	10954	27385	9		
375.8178	31.381	30.410	58	1.030	301750	81147	8873	22182	9	1.17(1.05-1.43)	
373.8208	32.380	30.410	118	1.063	1530681	424023	10954	27385	39		a
375.8178	32.380	30.410	118	1.063	1235411	351768	8873	22182	40	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.100	32.100	0		4381079	1167599	1925	4812	607		
403.8529	32.100	32.100	0		3614126	955558	1411	3527	677	1.21(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.661	31.661	0	0.986	1804035	495588	1925	4812	257		
403.8529	31.661	31.661	0	0.986	1488093	378515	1411	3527	268	1.21(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.687	31.674	1	1.001	1029583	279115	1475	3687	189		
391.8127	31.674	31.674	0	1.000	806257	219436	1095	2737	200	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.767	31.767	0	0.990	2064666	496186	1925	4812	258		
403.8529	31.767	31.767	0	0.990	1568677	407943	1411	3527	289	1.32(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.794	31.781	1	1.001	1190675	301034	1475	3687	204		
391.8127	31.794	31.781	1	1.001	965287	231976	1095	2737	212	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.113	32.113	0	1.014	1233622	322430	1475	3687	219		
391.8127	32.113	32.113	0	1.014	955708	250166	1095	2737	228	1.29(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.915	30.816	6	0.973	81760	16422	1475	3687	11		
391.8127	30.915	30.816	6	0.973	57602	11750	1095	2737	11	1.42(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.730	33.718	1	1.051	929456	297162	2373	5932	125		
419.8220	33.730	33.718	1	1.051	2294148	750588	3117	7792	241	0.41(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.742	33.730	1	1.000	6884730	2274602	6932	17330	328		
409.7789	33.742	33.730	1	1.000	6550280	2175208	5627	14067	387	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.811	34.811	0	1.084	1010295	294580	2373	5932	124		
419.8220	34.811	34.811	0	1.084	2387178	684924	3117	7792	220	0.42(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.823	34.811	1	1.000	2845333	841424	6932	17330	121		
409.7789	34.823	34.811	1	1.000	2744801	789585	5627	14067	140	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											a
407.7818	34.033	34.283	-15	1.009	1185972	381541	6932	17330	55		a
409.7789	34.033	34.283	-15	1.009	1021834	348391	5627	14067	62	1.16(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.520	34.520	0	1.075	1435909	390677	1596	3990	245		
437.8140	34.520	34.520	0	1.075	1439317	433836	1207	3017	359	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.532	34.532	0	1.000	1241118	370324	1068	2670	347		
425.7737	34.532	34.532	0	1.000	1198950	357626	1038	2595	345	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.985	33.504	29	0.985	327452	103839	1068	2670	97		a
425.7737	33.973	33.504	28	0.984	317975	97052	1038	2595	93	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.878	36.866	1	1.149	1895955	463733	886	2215	523		
471.7750	36.878	36.866	1	1.149	2214035	514970	1093	2732	471	0.86(0.76-1.02)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											
441.7428	36.974	36.962	1	1.003	2915991	728743	563	1407	1294		
443.7399	36.962	36.962	0	1.002	3294278	815744	632	1580	1291	0.89(0.76-1.02)	
OCDD											
457.7377	36.878	36.878	0	1.000	4290127	1046524	632	1580	1656		
459.7348	36.878	36.878	0	1.000	4822137	1200542	793	1982	1514	0.89(0.76-1.02)	
1,3,6,8-TCDF											
303.9016	14.892						169335	423337			
305.8987	14.892						215739	539347			
1,3,6,8-TCDD											
319.8965	15.799						42070	105175			
321.8936	15.799						49273	123182			
2,3,4,7-TCDF											
303.9016	17.537						169335	423337			
305.8987	17.537						215739	539347			
1,2,3,7-TCDD											
319.8965	18.188						42070	105175			
321.8936	18.188						49273	123182			
1,2,3,9-TCDF											
303.9016	18.414						169335	423337			
305.8987	18.414						215739	539347			
1,2,3,9-TCDD											
319.8965	18.399	18.414	-1		12273808	2881943	42070	105175	69		
321.8936	18.399	18.414	-1		17268961	3794852	49273	123182	77	0.71(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.382						42070	105175			
1,2,8,9-TCDF											
303.9016	19.427						169335	423337			
305.8987	19.427						215739	539347			
1,3,4,6,8-PeCDF											
339.8597	19.669						291	727			
341.8567	19.669						564	1410			
1,2,4,7,9-PeCDD											
355.8546	21.480						1815	4537			
357.8516	21.480						1162	2905			
1,2,3,8,9-PeCDD											
355.8546	25.790						1815	4537			
357.8516	25.790						1162	2905			
1,2,3,8,9-PeCDF											
339.8597	26.021						9659	24147			
341.8567	26.021						7408	18520			
1,2,3,4,6,8-HxCDF											
373.8208	28.293	28.333	-2		1055970	147115	10954	27385	13		
375.8178	28.280	28.333	-3		870961	123871	8873	22182	14	1.21(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.890						1475	3687			
391.8127	29.890						1095	2737			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7-HxCDD											U
389.8157	32.074						1475	3687			
391.8127	32.074						1095	2737			
1,2,3,4,8,9-HxCDF											
373.8208	32.380	32.393	-1		1530681	424023	10954	27385	39		
375.8178	32.380	32.393	-1		1235411	351768	8873	22182	40	1.24(1.05-1.43)	
1,2,3,4,6,7,9-HpCDF											
407.7818	34.033	33.916	7		1185972	381541	6932	17330	55		
409.7789	34.033	33.916	7		1021834	348391	5627	14067	62	1.16(0.88-1.20)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.985	33.985	0		327452	103839	1068	2670	97		
425.7737	33.973	33.985	-1		317975	97052	1038	2595	93	1.03(0.88-1.20)	
1,2,3,8-TCDD											
319.8965	0.0						42070	105175			
321.8936	0.0						49273	123182			
1,3,7,9-TCDD											
319.8965	0.0						42070	105175			
321.8936	0.0						49273	123182			
1,2,3,4,7-PeCDD											
355.8546	0.0						1815	4537			
357.8516	0.0						1162	2905			
1,4,7,8-TCDD											
319.8965	0.0						42070	105175			
321.8936	0.0						49273	123182			

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 21:04:23 Dil. Factor: 10.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 10

Non-2,3,7,8-sub-TCDF, RT: 17.159

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	7213618	1851806

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		10.000	7213618	1851806

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.678	2037753	605807	2562218	753049	6.23	0.80	M
15.935	5168296	1446630	6620704	1866043	16.0	0.78	
16.207	10004860	2182918	12817790	2790002	30.9	0.78	
16.434	15743337	4046221	20340187	5248797	48.9	0.77	
16.676	29176768	8091045	37671902	10432735	90.5	0.77	
16.948	367514633	93606725	470923541	121445118	1135.2	0.78	
17.174	7183643	1708485	9486922	2184376	22.6	0.76	
17.764	58130366	13982438	75020223	18124581	180.3	0.77	
18.021	7173305	1437494	9634887	1872019	22.8	0.74	
19.155	55082434	12650550	70905645	16271808	170.6	0.78	
Signal Totals:	557215395	139758313	715984019	180988528			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1273199414	320746841				0.78	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1723.8 = (1273199414 * 10.000) / (7213618 * 1.024)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Lims ID:	320-76887-A-2-C MSD		
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Inject. Date:	18-Aug-2021 21:04:23	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	10

Non-2,3,7,8-sub-TCDD, RT: 17.620

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	3953385	1015583

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		10.000	3953385	1015583

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.945	1312836	370413	1657148	456970	5.99	0.79	
18.399	12273808	2881943	17268961	3794852	59.6	0.71	a
Signal Totals:							
	13586644	3252356	18926109	4251822			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	32512753	7504178				0.72	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 65.576 = (32512753 * 10.000) / (3953385 * 1.254)

QC Flag Legend

Review Flags

a - User Assigned ID

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Lims ID:	320-76887-A-2-C MSD		
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Inject. Date:	18-Aug-2021 21:04:23	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	10

Non-2,3,7,8-sub-PeCDF, RT: 23.445

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	5412321	980147
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	5678065	971517

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		10.000	5545193	975832

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.003	5889186	1178433	3749948	738064	16.7	1.57	
21.822	579261	68790	351888	41497	1.61	1.65	
22.217	845498	201992	569032	134674	2.45	1.49	
22.872	4370401	779966	2700610	481988	12.3	1.62	
24.017	3168257	495323	2017146	313977	8.99	1.57	
25.626	837582	121584	514940	79822	2.35	1.63	
Signal Totals:							
	15690185	2846088	9903564	1790022			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	25593749	4636110				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 44.389 = (25593749 * 10.000) / (5545193 * 1.040)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 21:04:23 Dil. Factor: 10.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 10

Non-2,3,7,8-sub-HxCDF, RT: 30.410

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	4931238	918188
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	4722515	871466
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	4670285	1148808
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	4192133	1176298

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		10.000	4629042	1028690

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.624	471226	70921	401376	60245	1.66	1.17	
31.381	354387	96843	301750	81147	1.25	1.17	
32.380	1530681	424023	1235411	351768	5.26	1.24	a
Signal Totals:							
	2356294	591787	1938537	493160			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4294831	1084947				1.22	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 8.165 = (4294831 * 10.000) / (4629042 * 1.136)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Lims ID:	320-76887-A-2-C MSD		
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Inject. Date:	18-Aug-2021 21:04:23	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	10

Non-2,3,7,8-sub-HxCDD, RT: 30.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	3292128	874103
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	3633343	904129
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		10.000	3462735	889116

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.915	81760	16422	57602	11750	0.3777	1.42	
Signal Totals:							
	81760	16422	57602	11750			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	139362	28172				1.42	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.3777 = (139362 * 10.000) / (3462735 * 1.066)

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Lims ID:	320-76887-A-2-C MSD		
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Inject. Date:	18-Aug-2021 21:04:23	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	10

Non-2,3,7,8-sub-HpCDF, RT: 34.283

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	3223604	1047750
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	3397473	979504

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		10.000	3310538	1013627

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.033	1185972	381541	1021834	348391	4.83	1.16	a
Signal Totals:							
	1185972	381541	1021834	348391			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2207806	729932				1.16	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.835 = (2207806 * 10.000) / (3310538 * 1.379)

QC Flag Legend

Review Flags

a - User Assigned ID

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 21:04:23 Dil. Factor: 10.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 10

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	2875226	824513

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		10.000	2875226	824513

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.985	327452	103839	317975	97052	2.05	1.03	a
Signal Totals:							
	327452	103839	317975	97052			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	645427	200891				1.03	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.051 = (645427 * 10.000) / (2875226 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d				
Injection Date:	18-Aug-2021 21:04:23	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-C MSD				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.86- 19.46)

Signal: 1

Not Detected

RT: 14.86- 19.46

Processing Integration Results

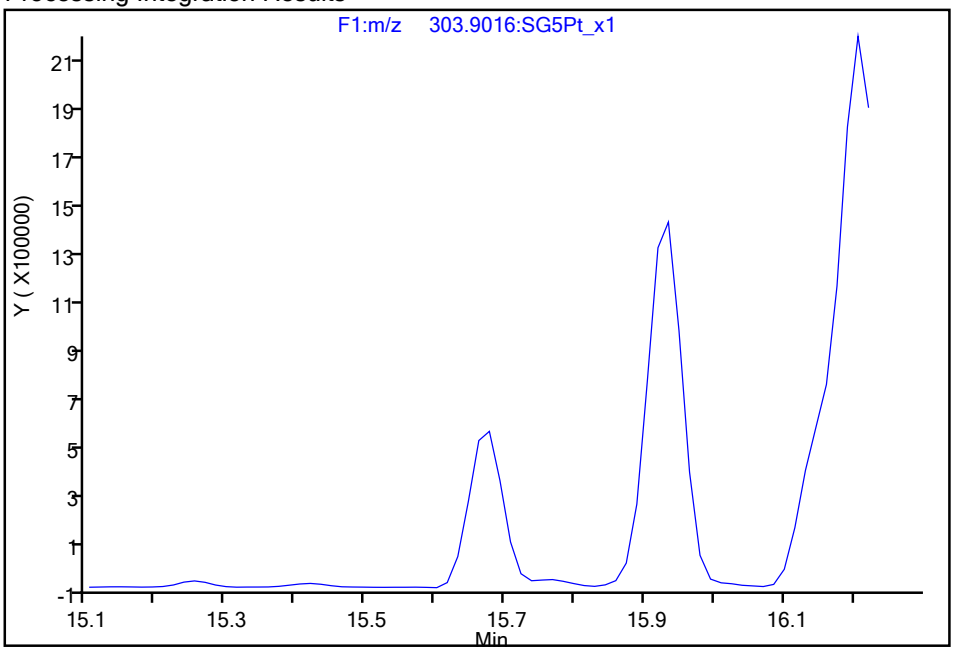

RT = 15.678 Area = 2037753 M

Manual Integration Results

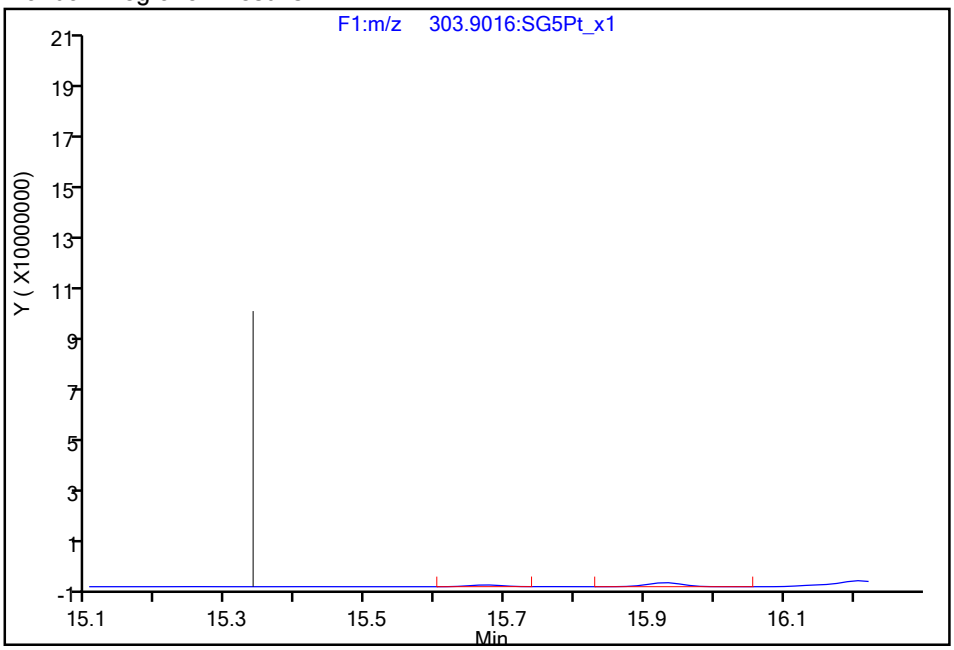

Reviewer: bennettd, 19-Aug-2021 13:03:21

Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d				
Injection Date:	18-Aug-2021 21:04:23	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-C MSD				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.86- 19.46)

Signal: 2

Not Detected
RT: 14.86- 19.46

Processing Integration Results

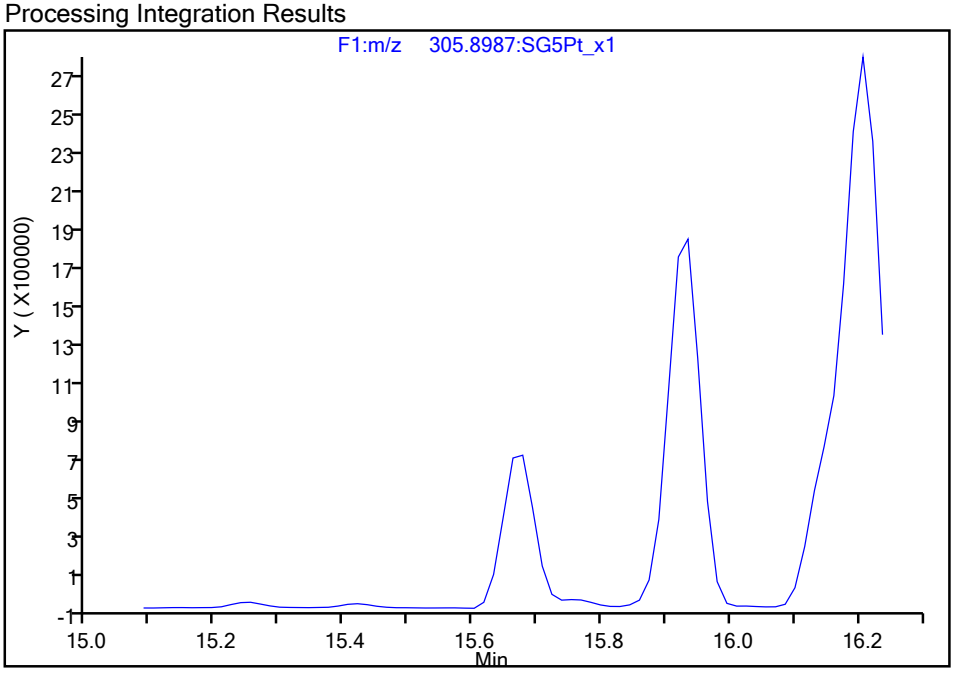

RT = 15.678 Area = 2562218 M

Manual Integration Results

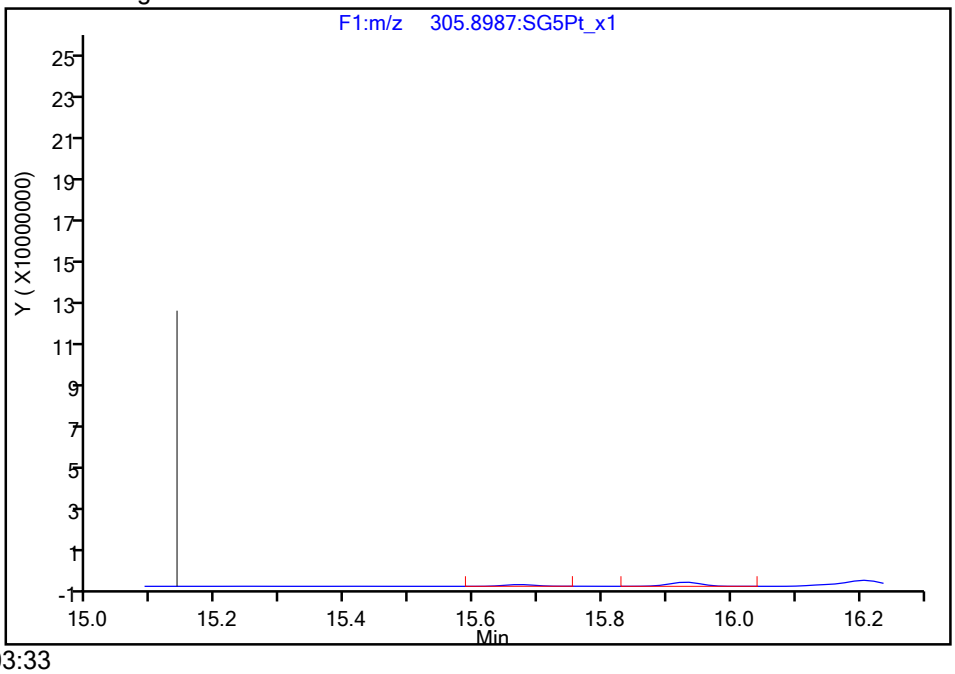

Reviewer: bennettd, 19-Aug-2021 13:03:33
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d				
Injection Date:	18-Aug-2021 21:04:23	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-C MSD				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-1,2,3,7,8-PeCDF, CAS: 109719-77-9

Signal: 2

Processing Integration Results

RT: 22.33
Area: 2186851
Amount: 5.669966
Amount Units: pg/ul

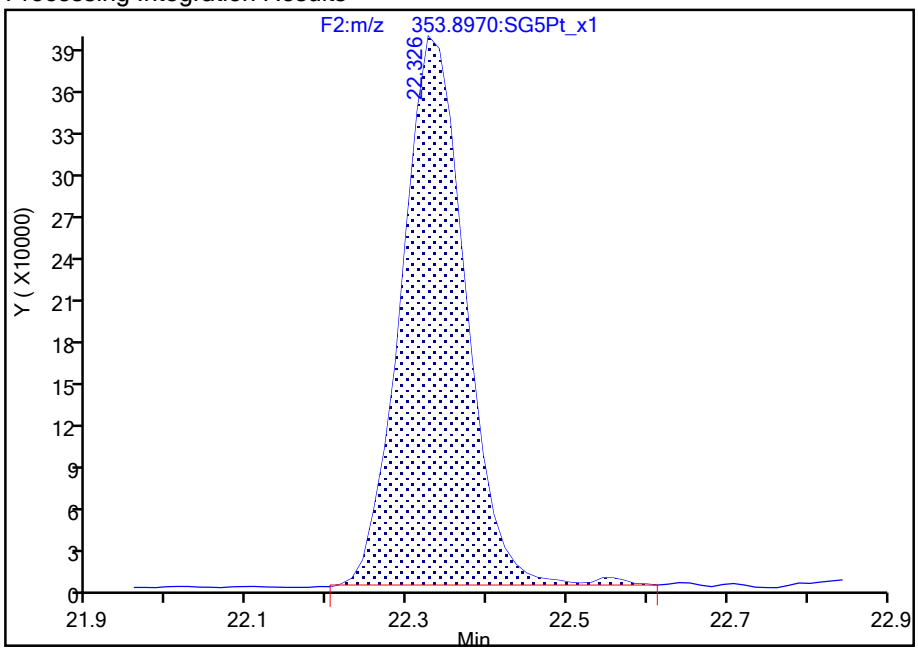

Manual Integration Results

RT: 22.33
Area: 2171354
Amount: 5.538912
Amount Units: pg/ul

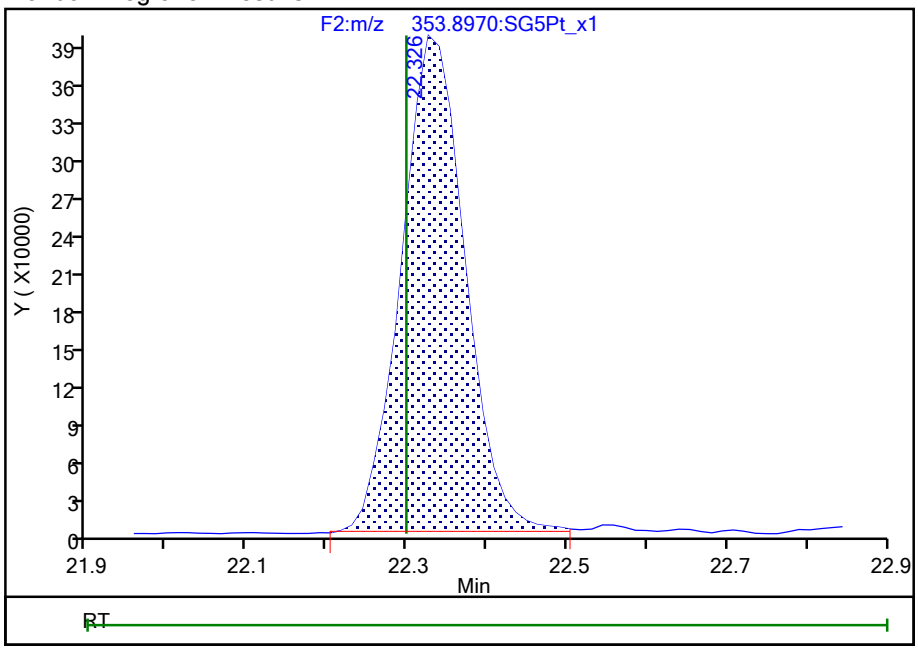

Reviewer: bennettd, 19-Aug-2021 13:06:03

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d				
Injection Date:	18-Aug-2021 21:04:23	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-C MSD				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-1,2,3,7,8-PeCDF, CAS: 109719-77-9

Signal: 1

Processing Integration Results

RT: 22.34
Area: 3353529
Amount: 5.669966
Amount Units: pg/ul

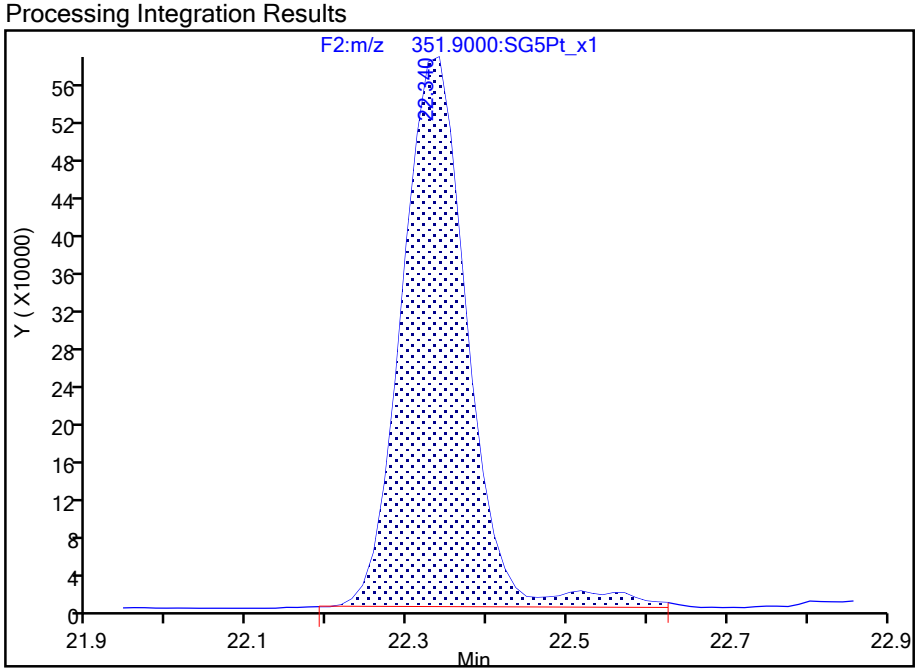

Manual Integration Results

RT: 22.34
Area: 3240967
Amount: 5.538912
Amount Units: pg/ul

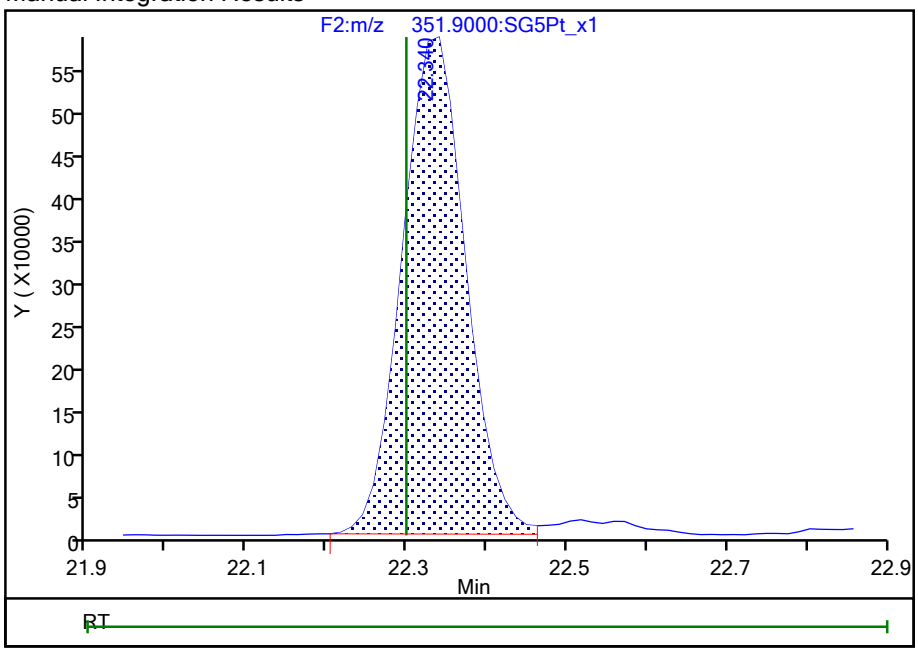

Reviewer: bennettd, 19-Aug-2021 13:06:20

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

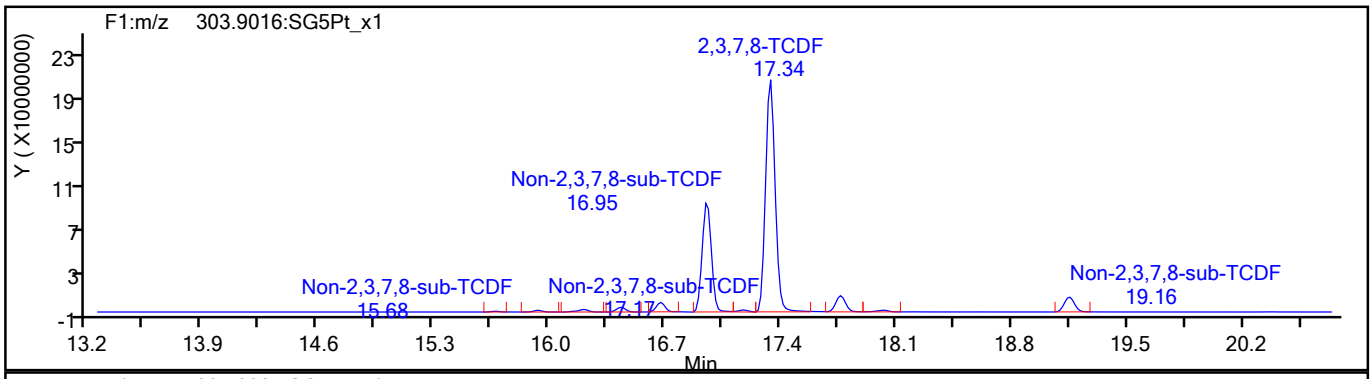

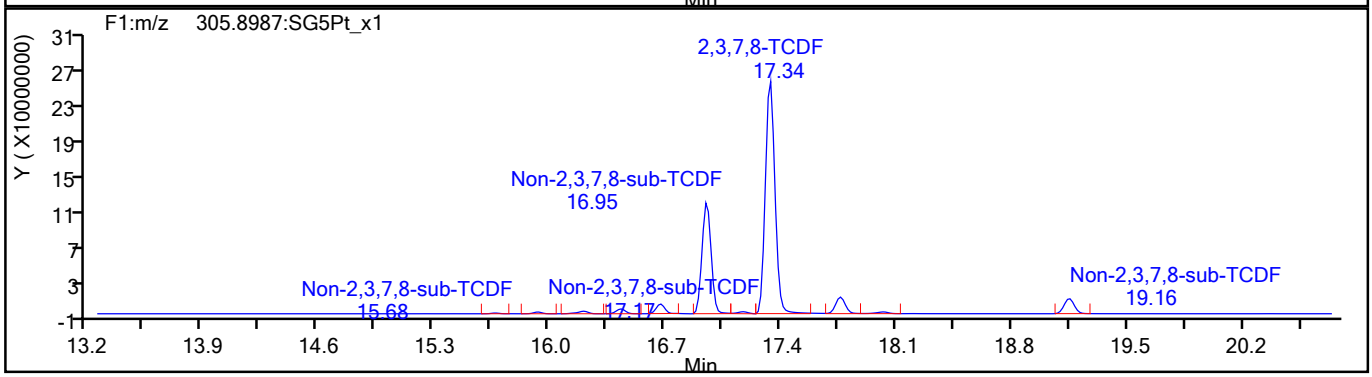

TCDF Standards

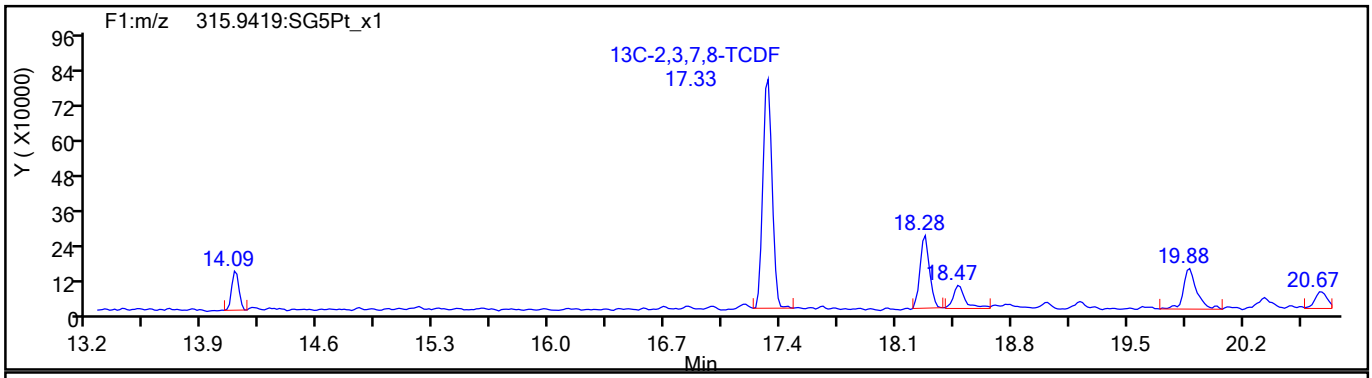

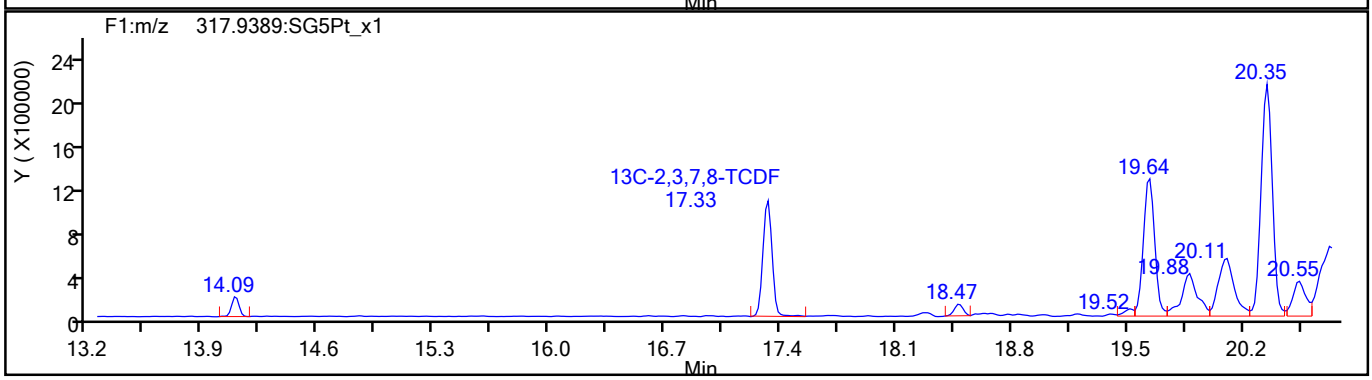

783687

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

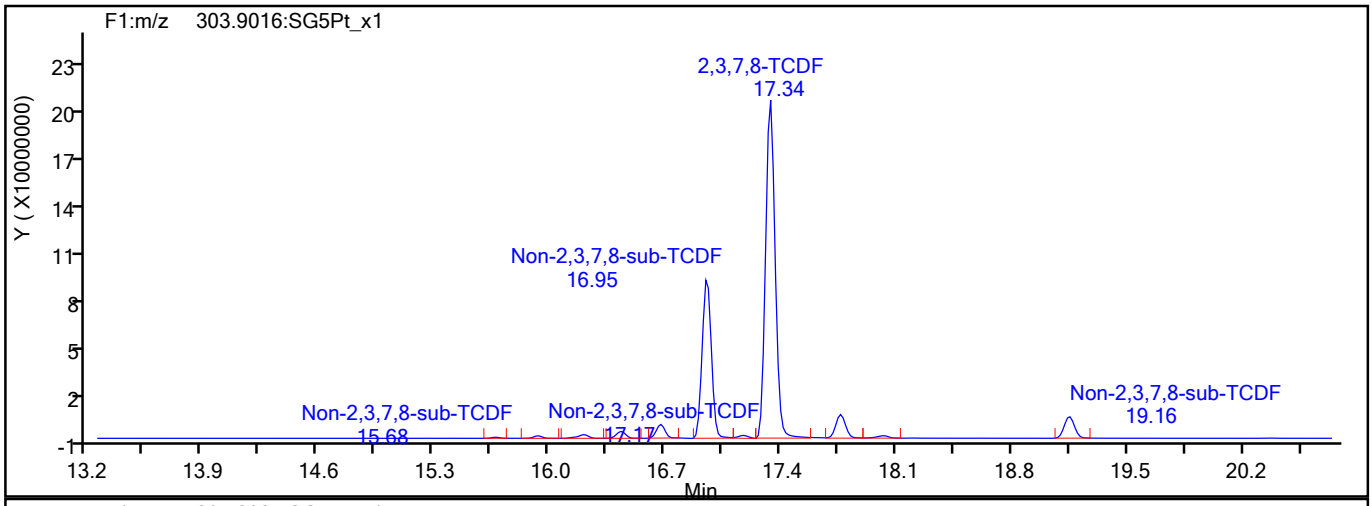

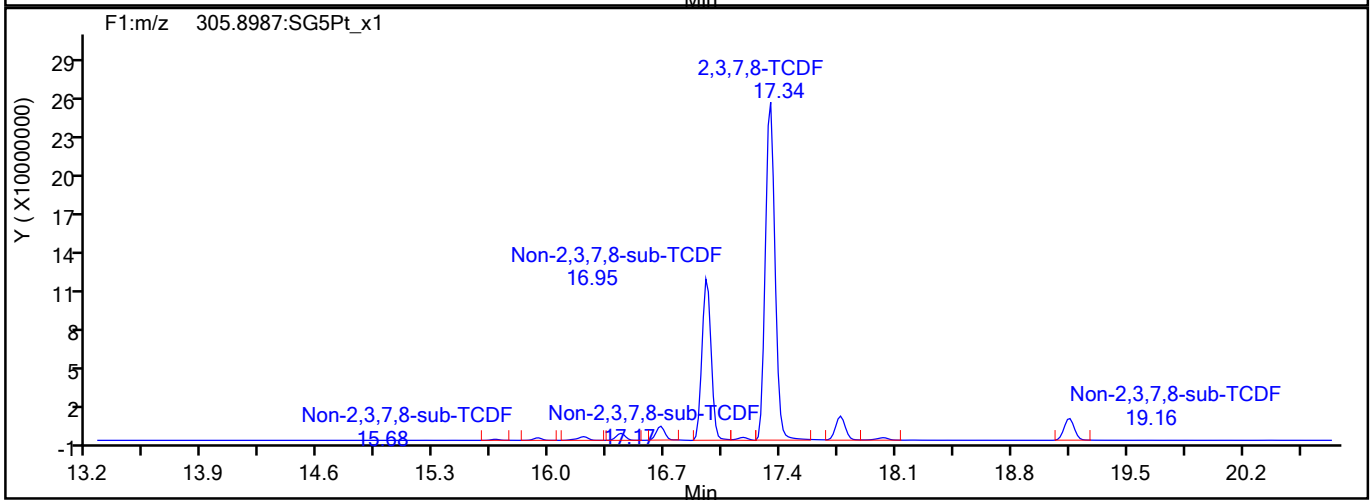

TCDF Interference Mass

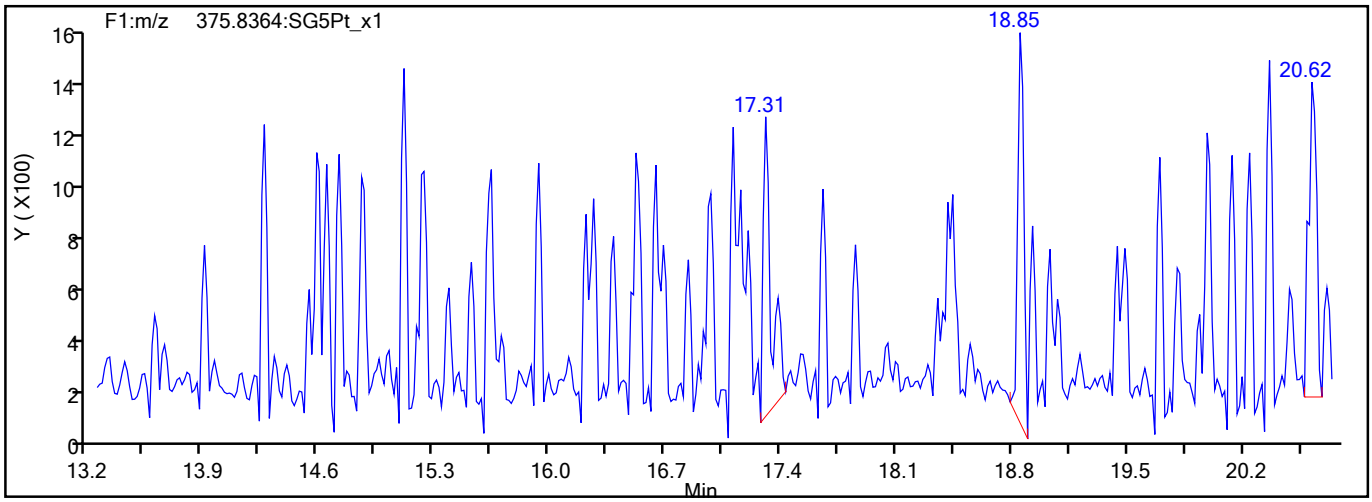

783688

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

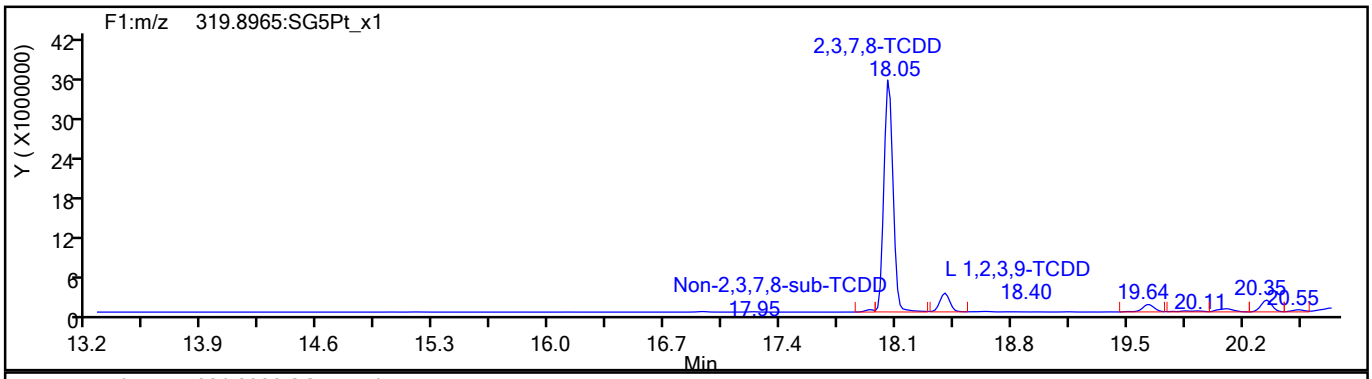

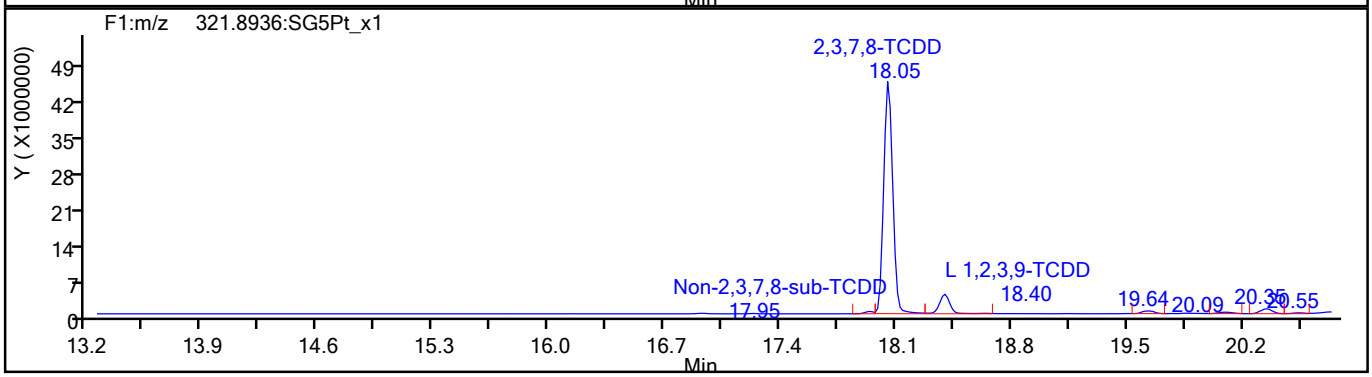

TCDD Standards

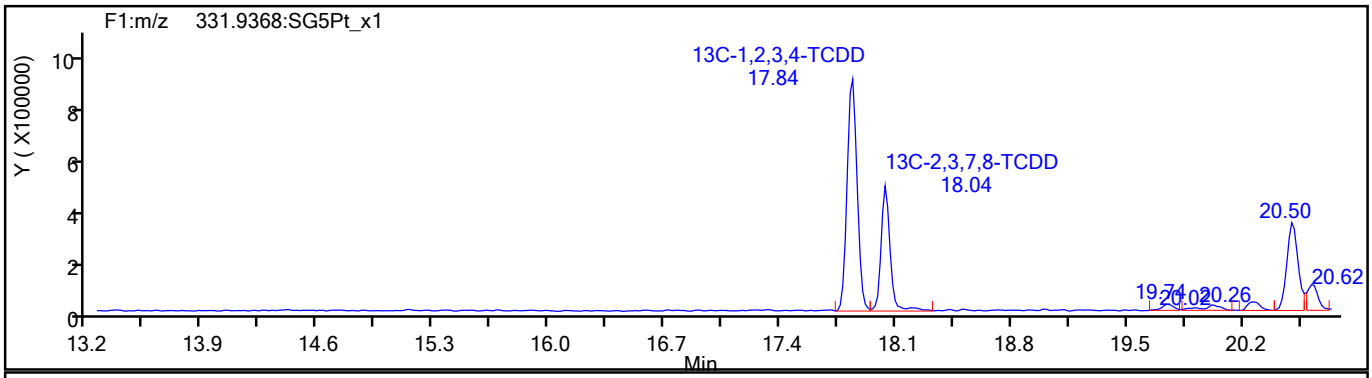

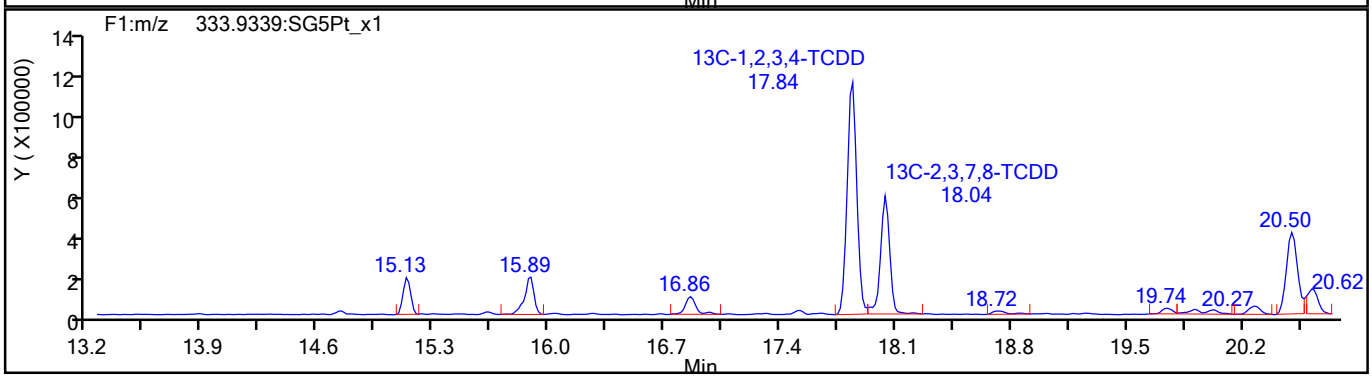

783689

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

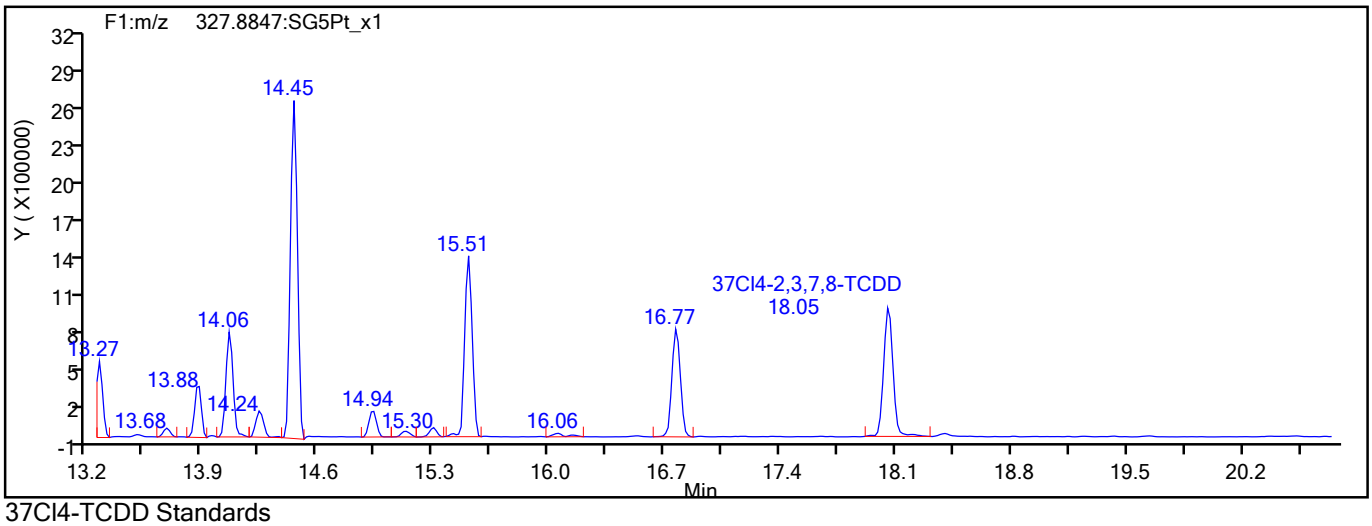

37Cl4-TCDD Standards

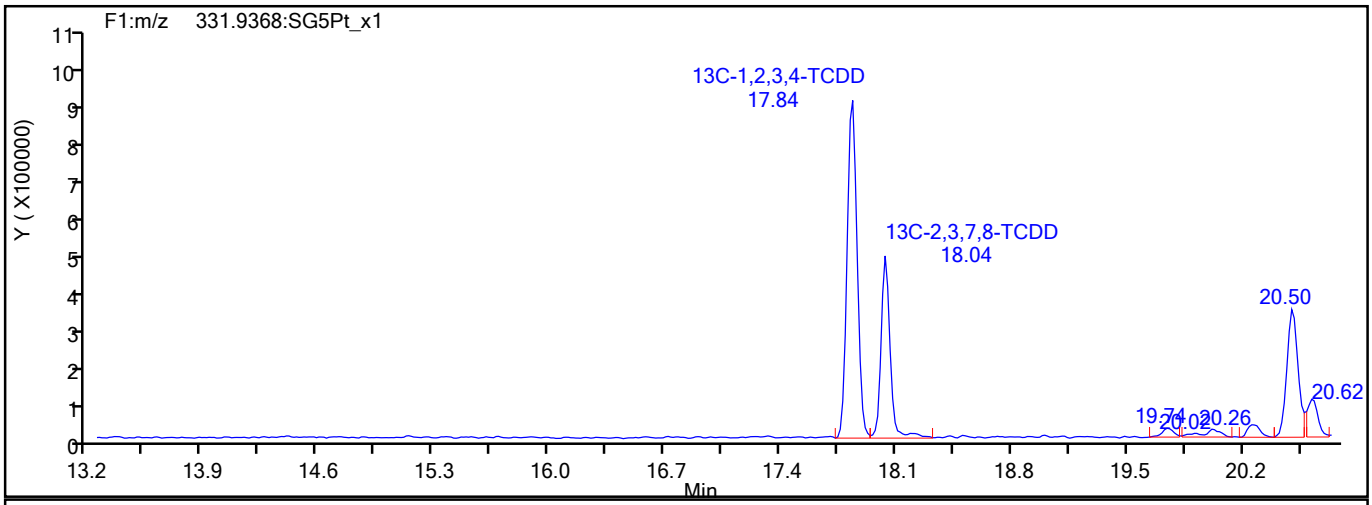

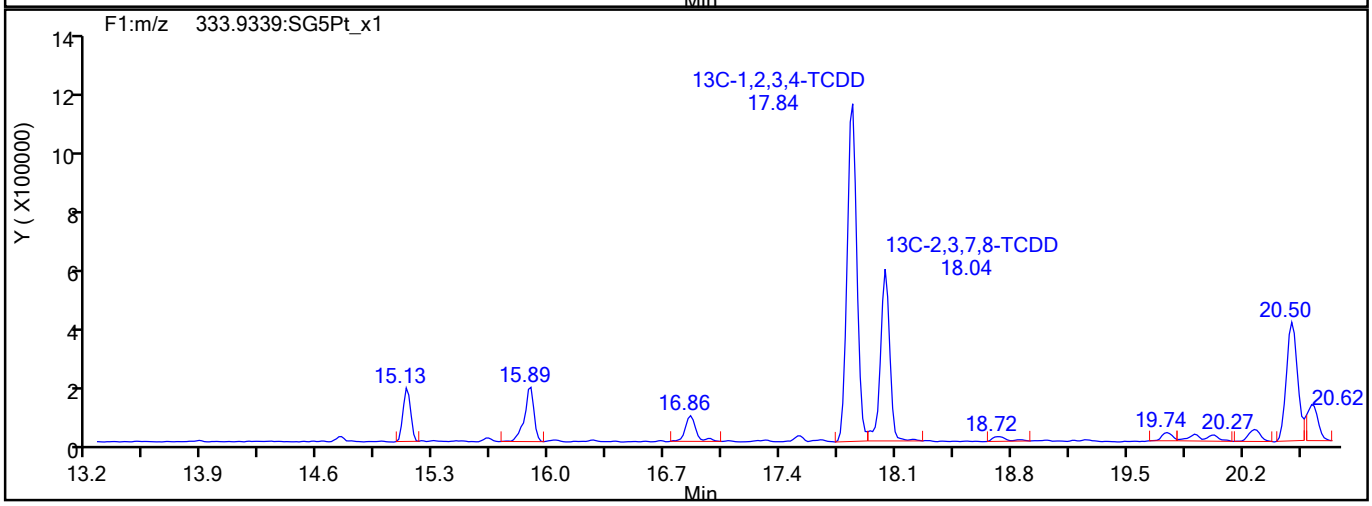

783690

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

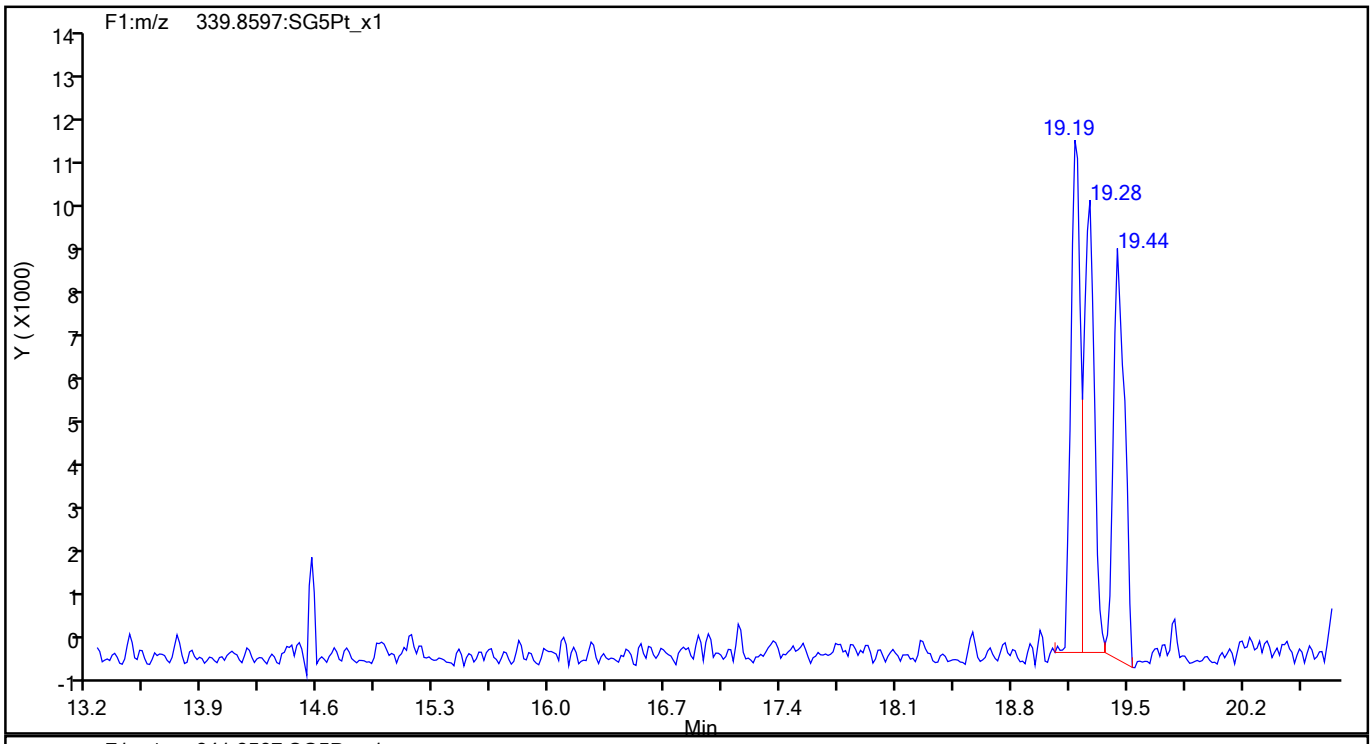

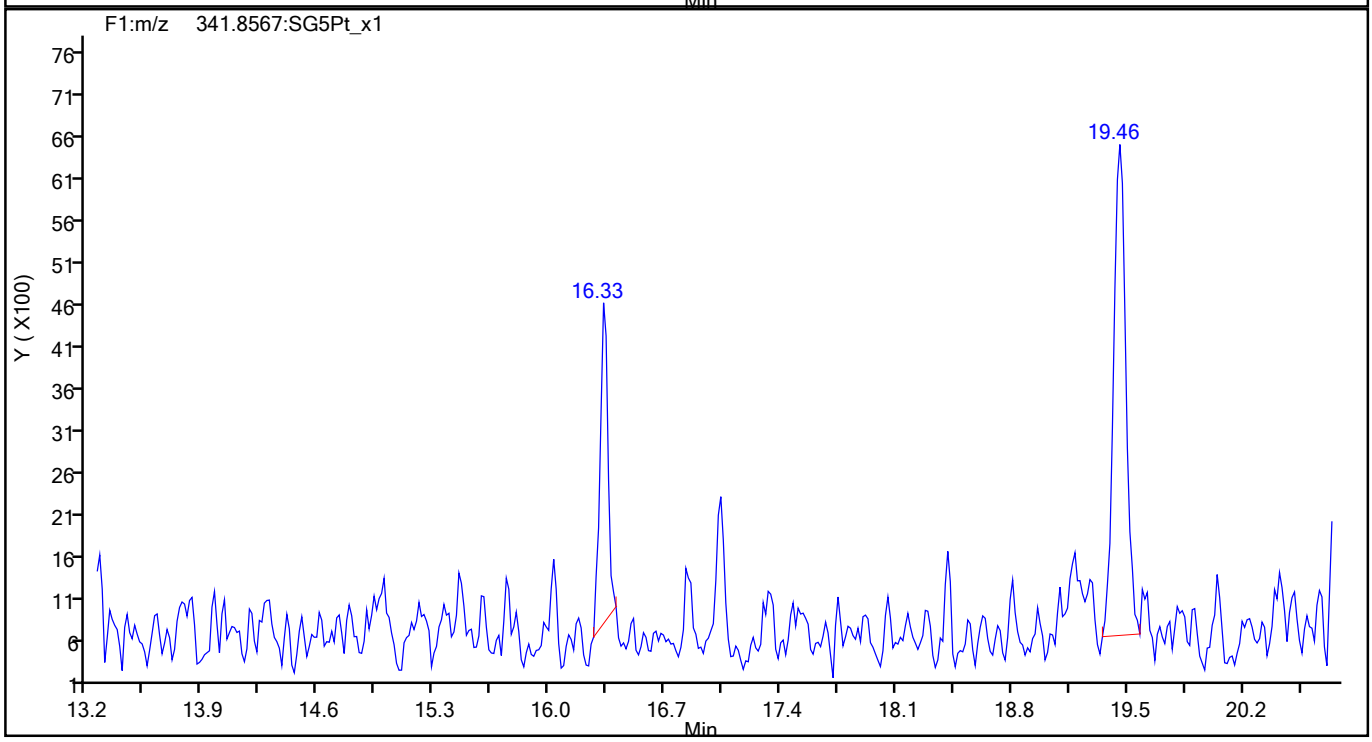

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Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
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F1 PeCDFs

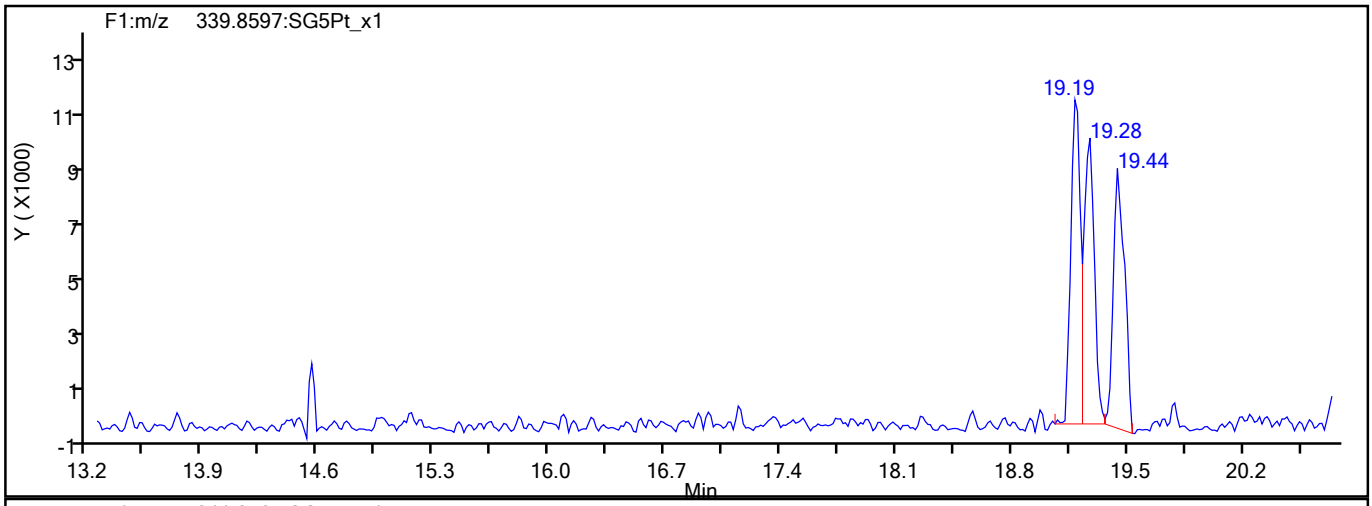

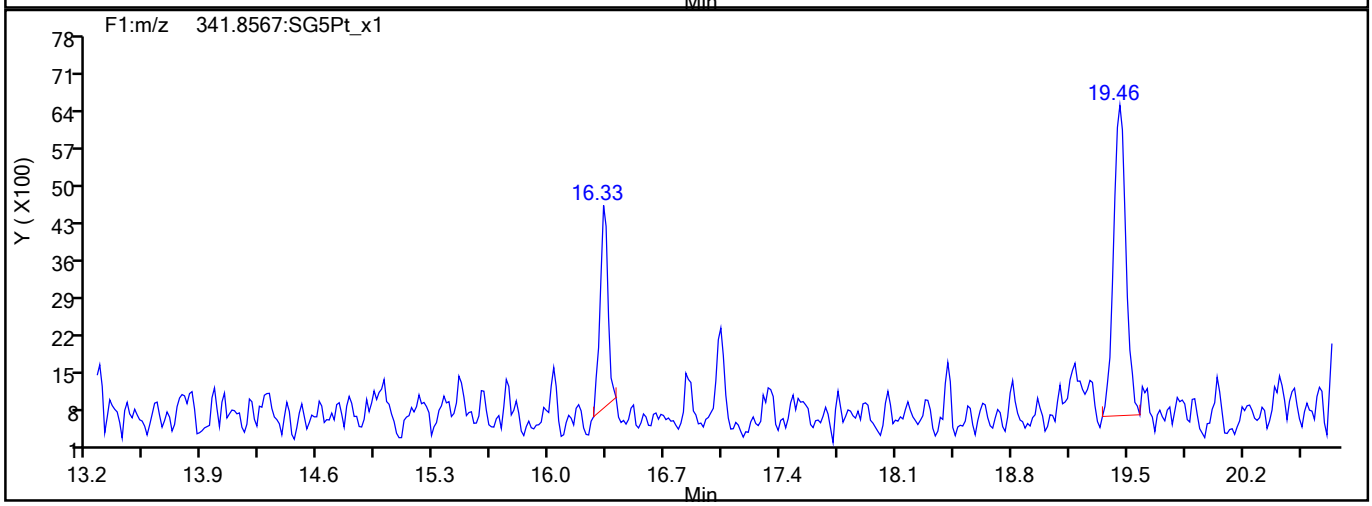

F1 PeCDFs Interference Mass

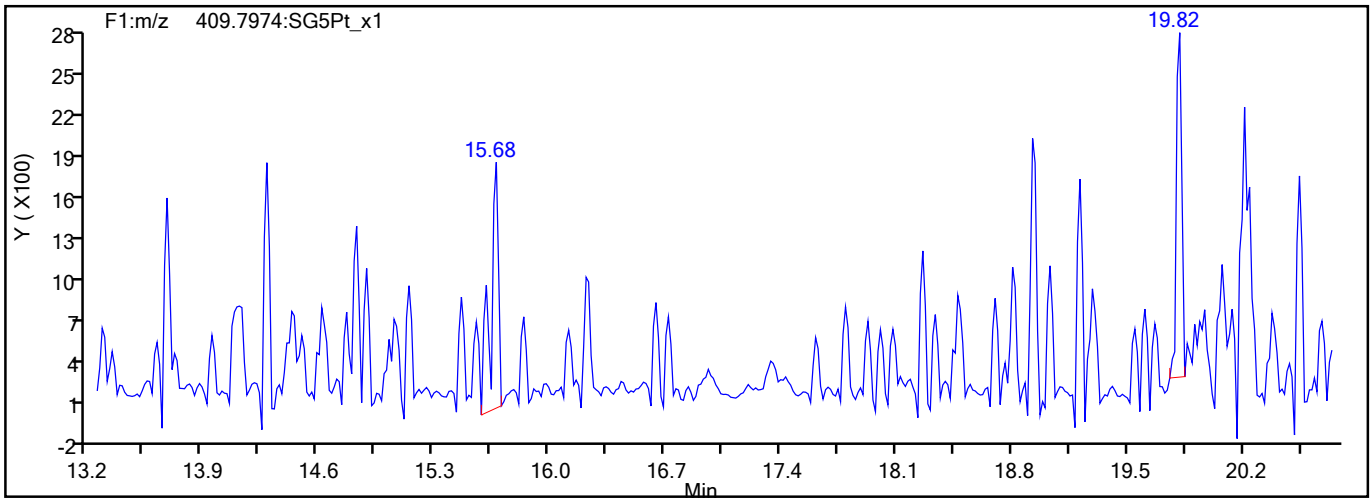

783692

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
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PeCDF

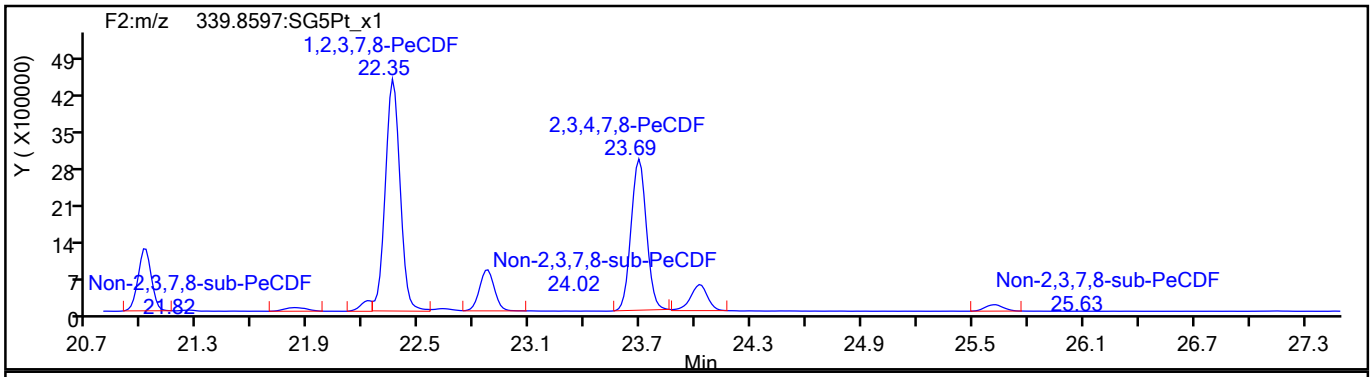

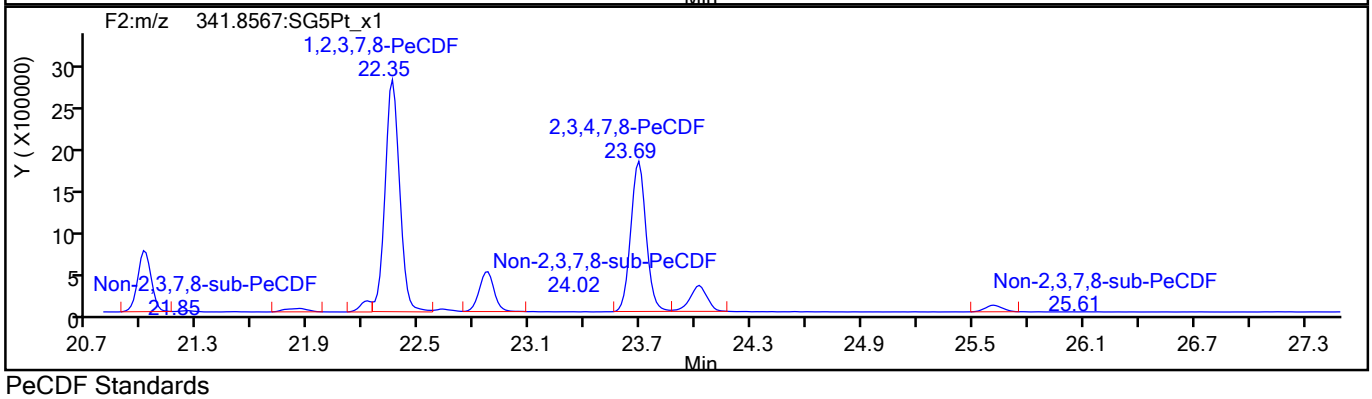

PeCDF Standards

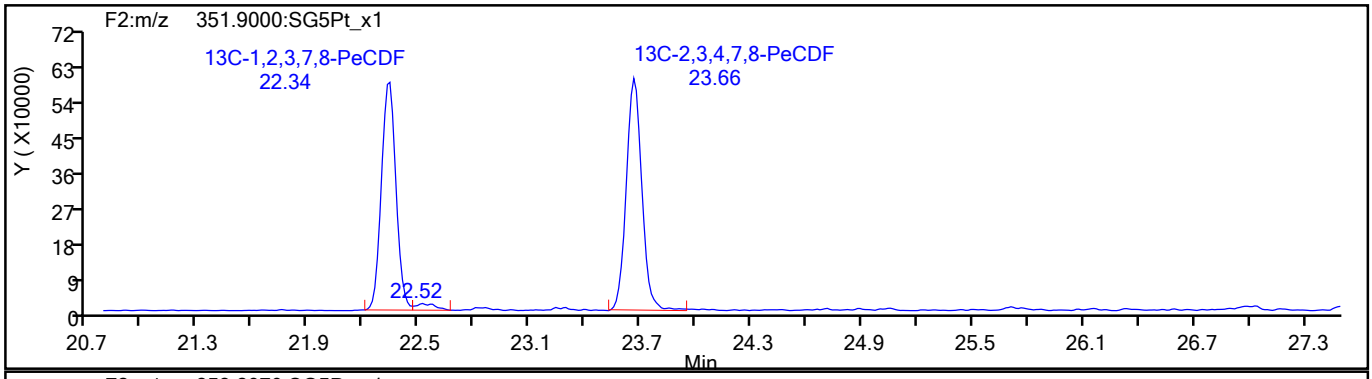

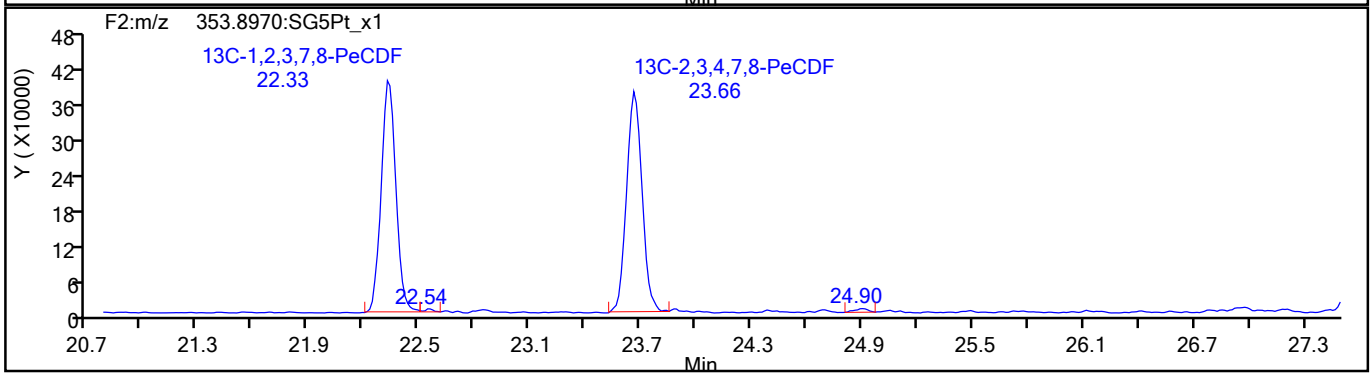

783693

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
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PeCDF

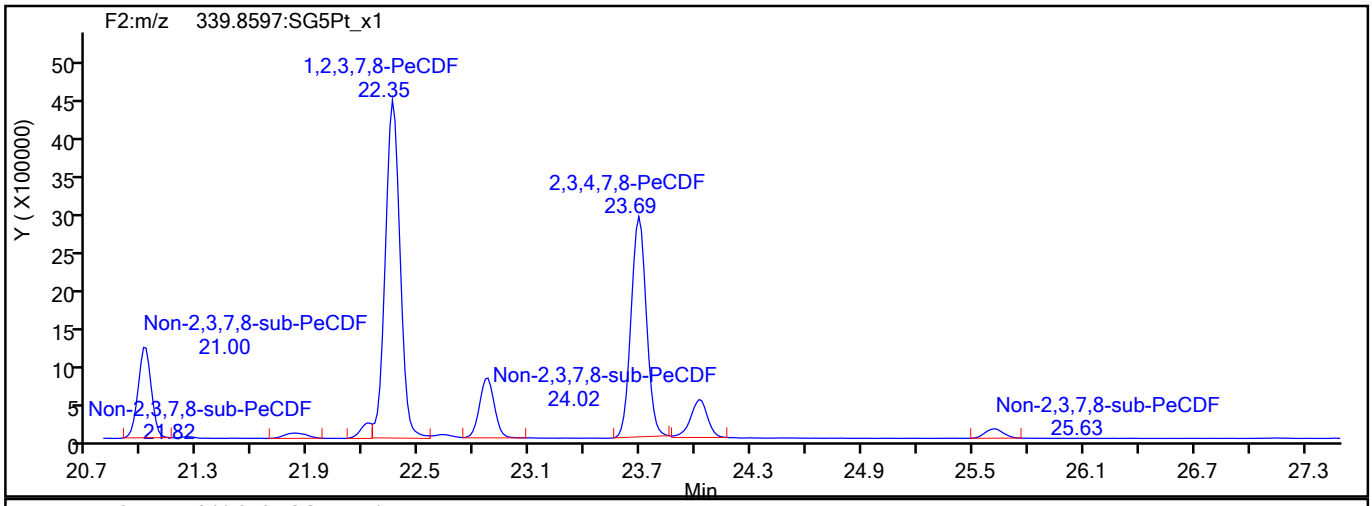

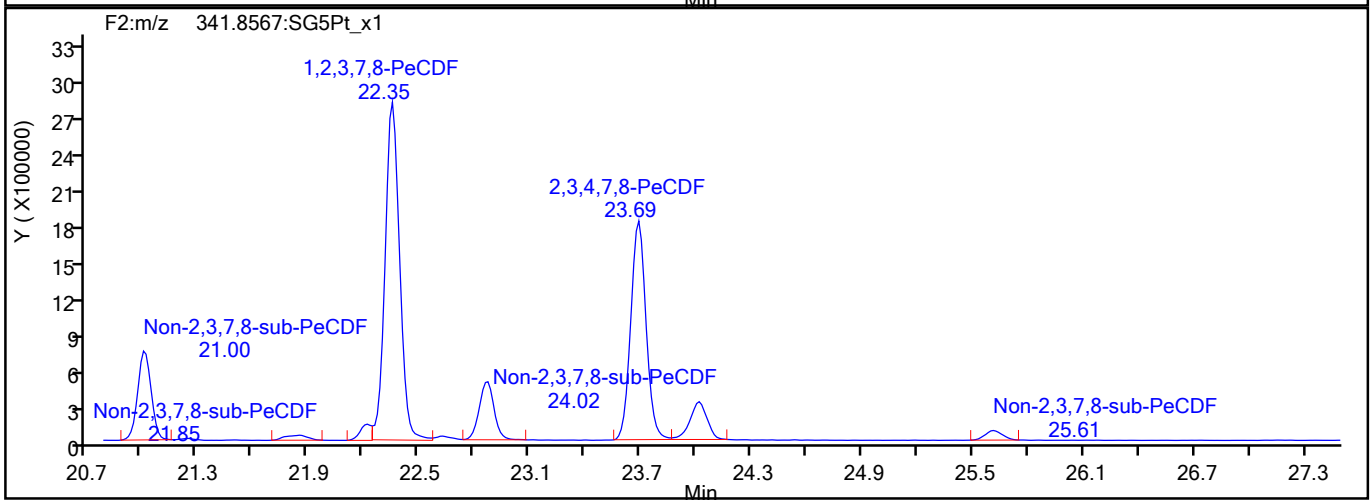

PeCDF Interference Mass

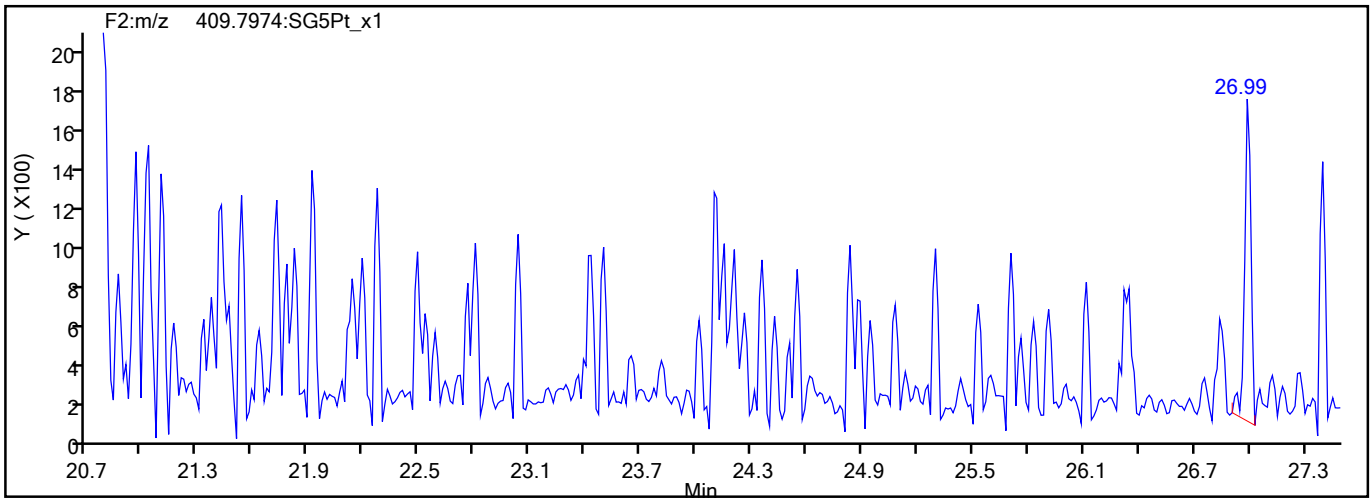

783694

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

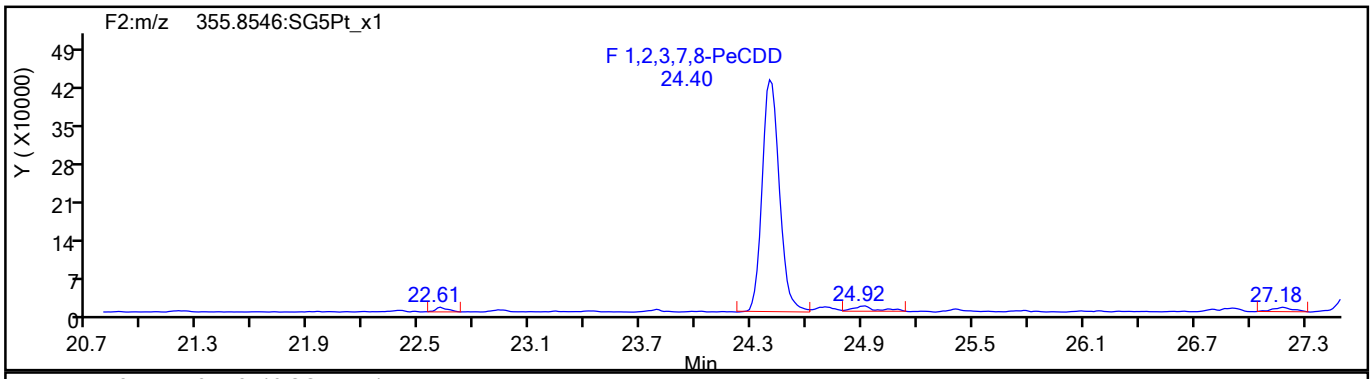

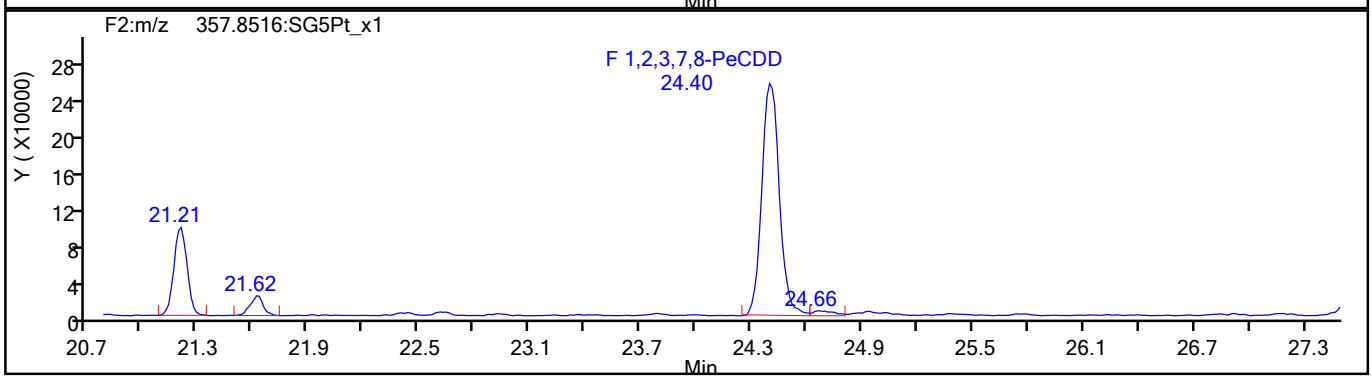

PeCDD Standards

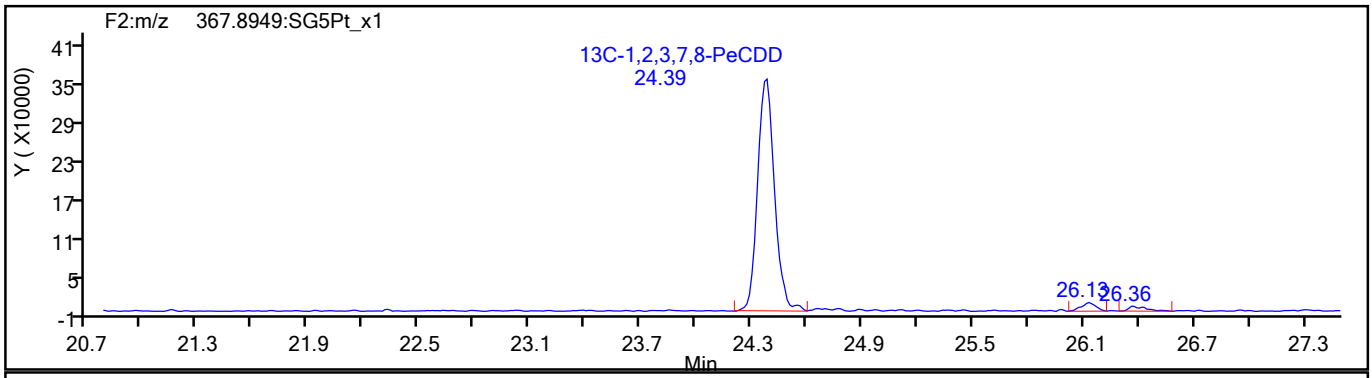

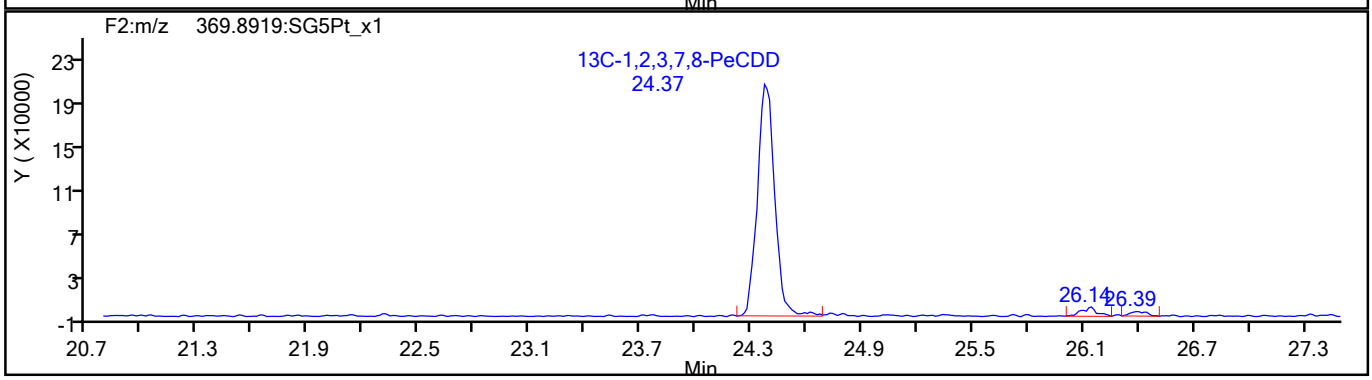

783695

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
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HxCDF

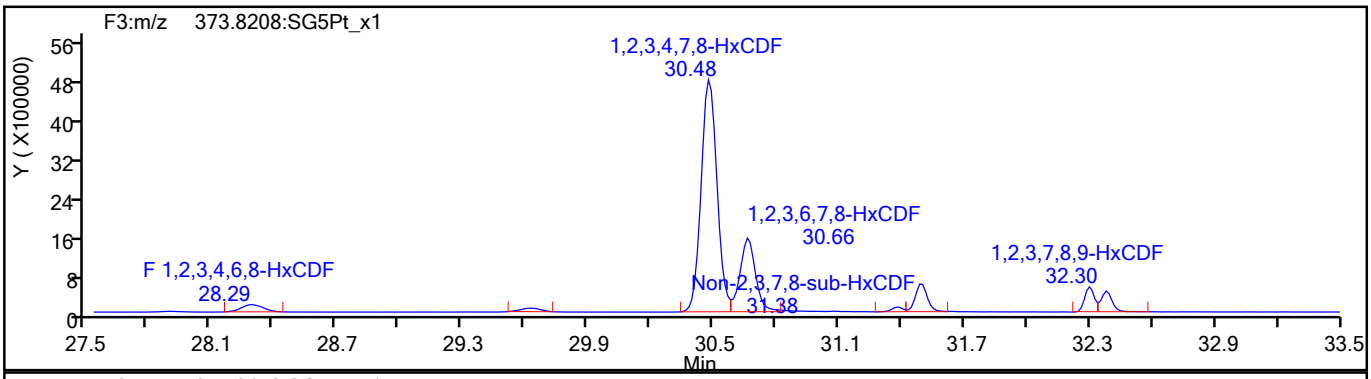

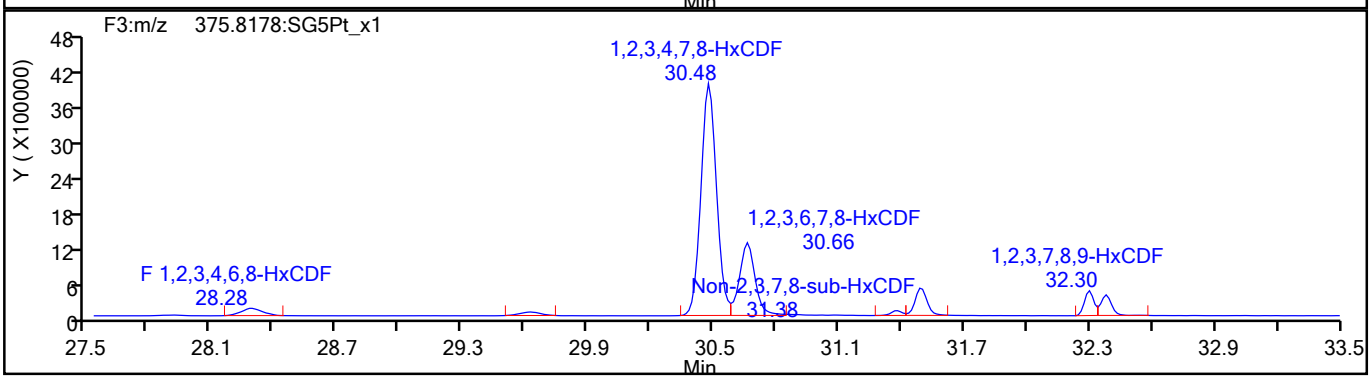

HxCDF Standards

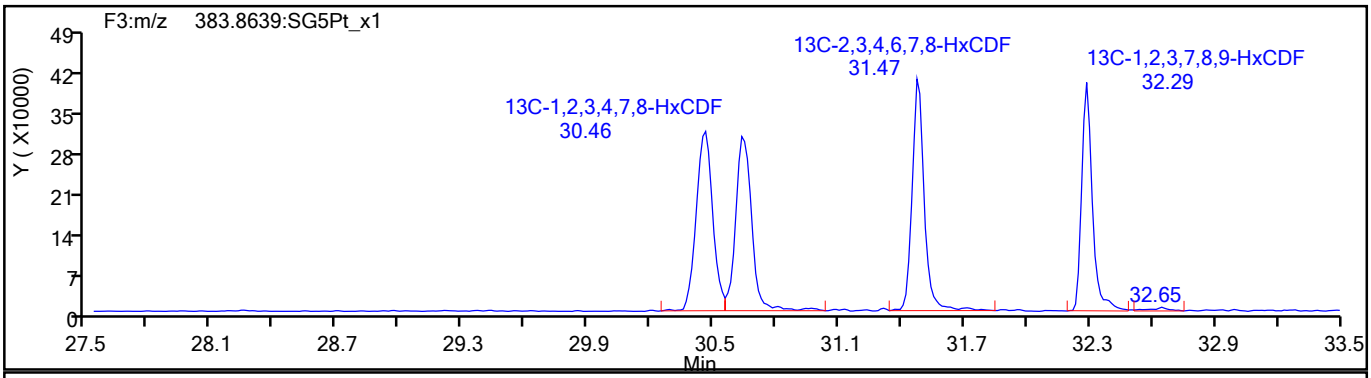

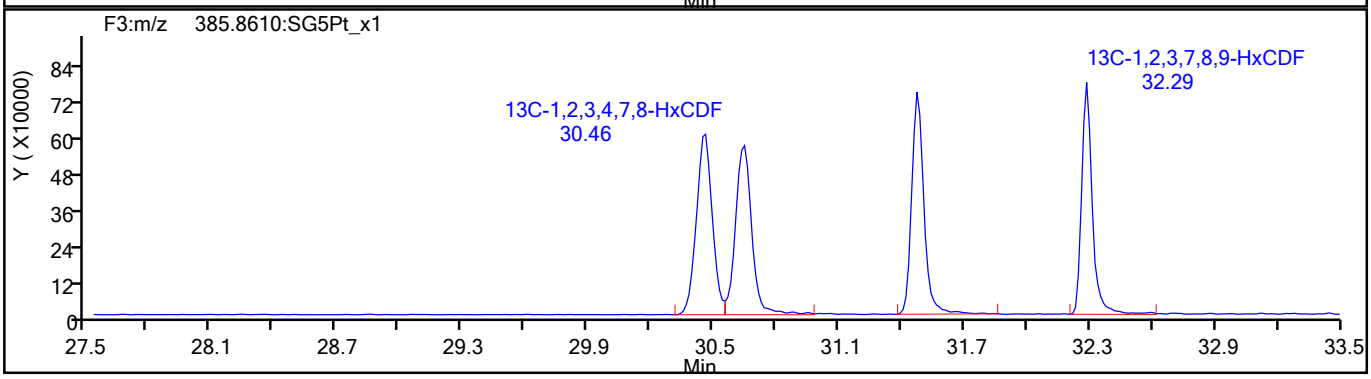

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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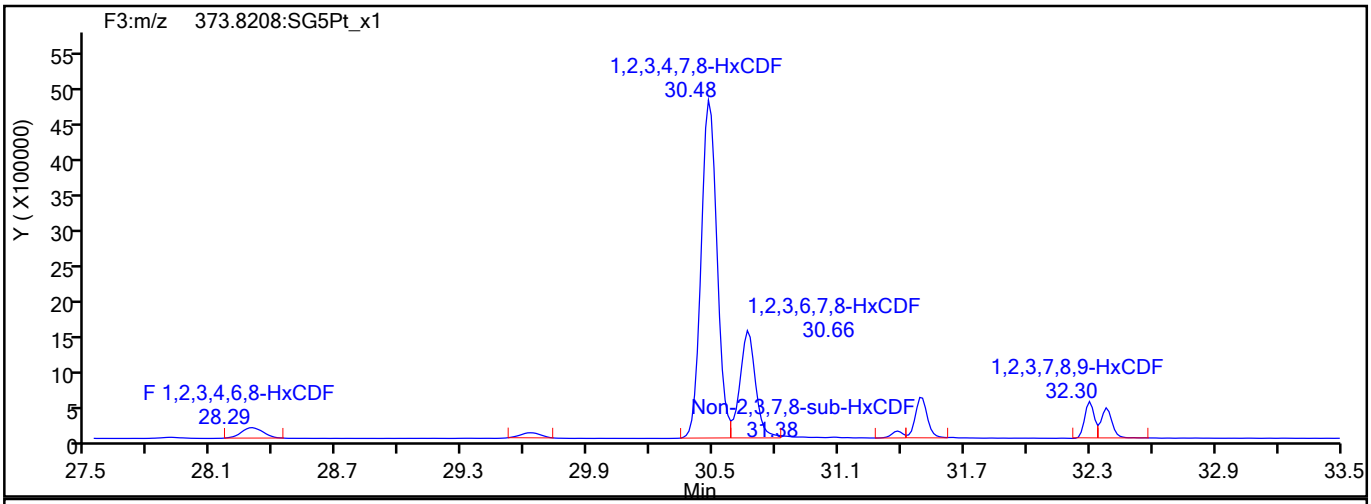

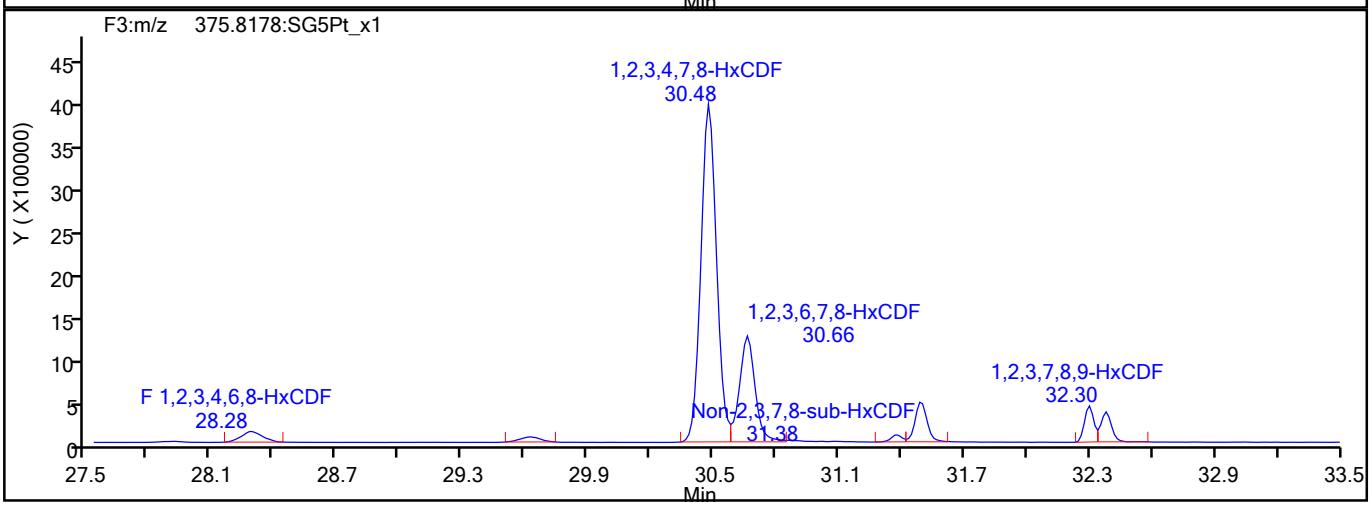

HxCDF Interference Mass

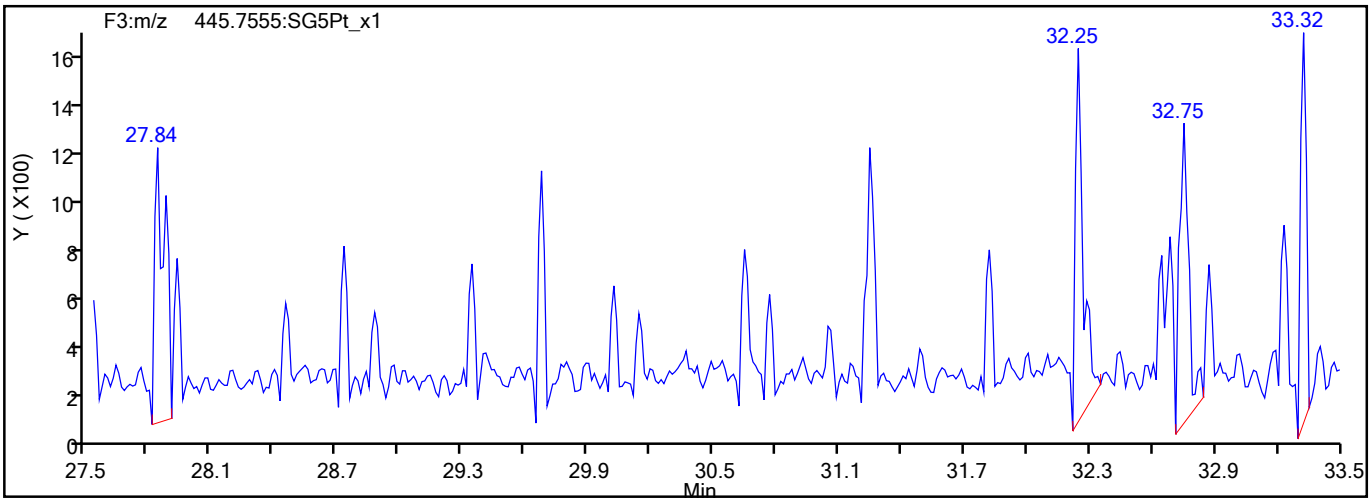

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Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

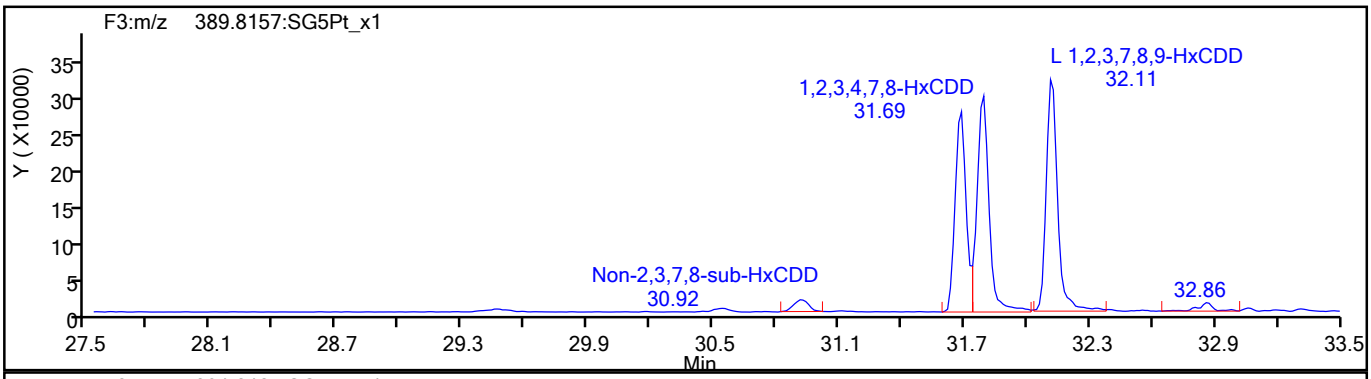

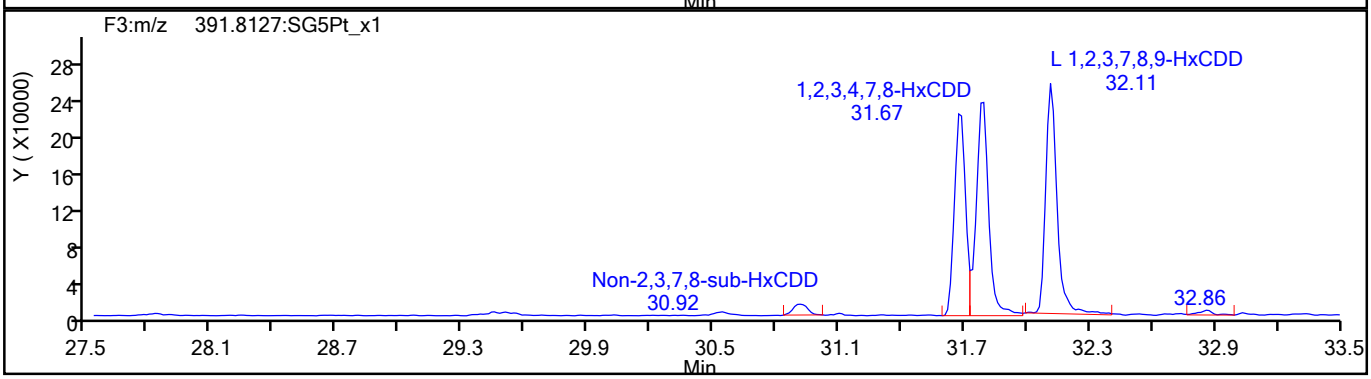

HxCDD Standards

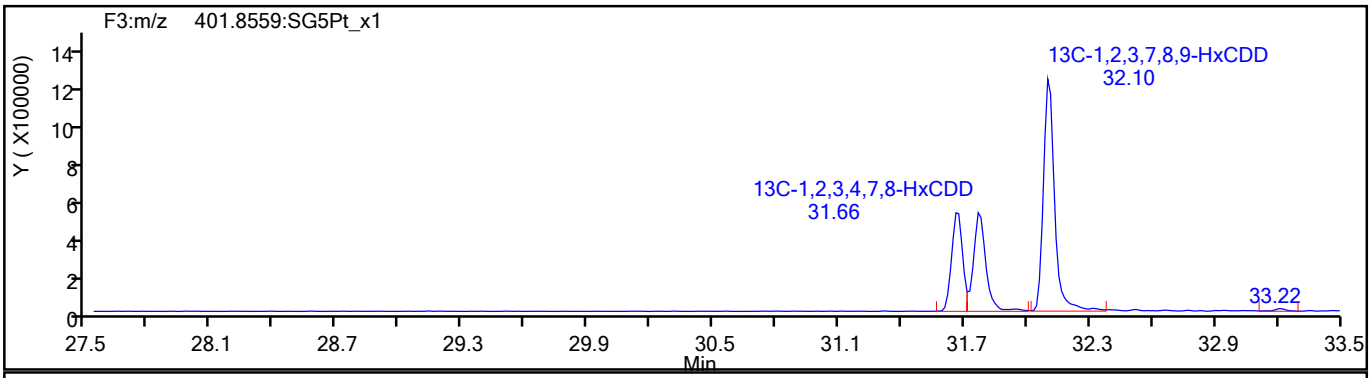

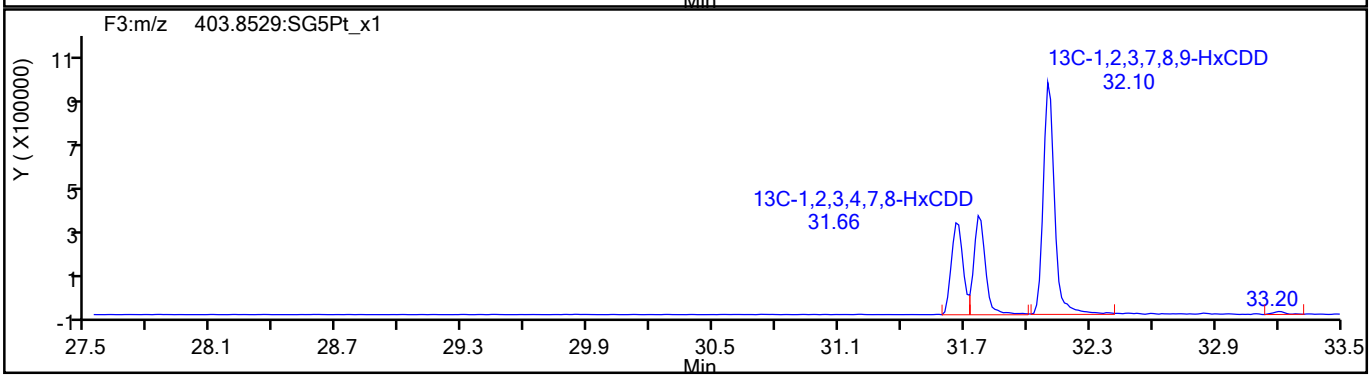

783698

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
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HpCDF

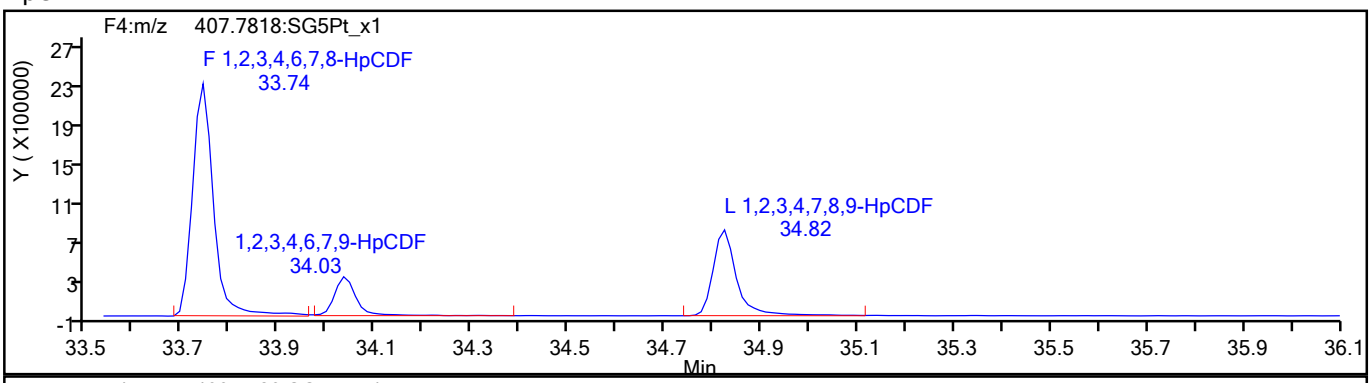

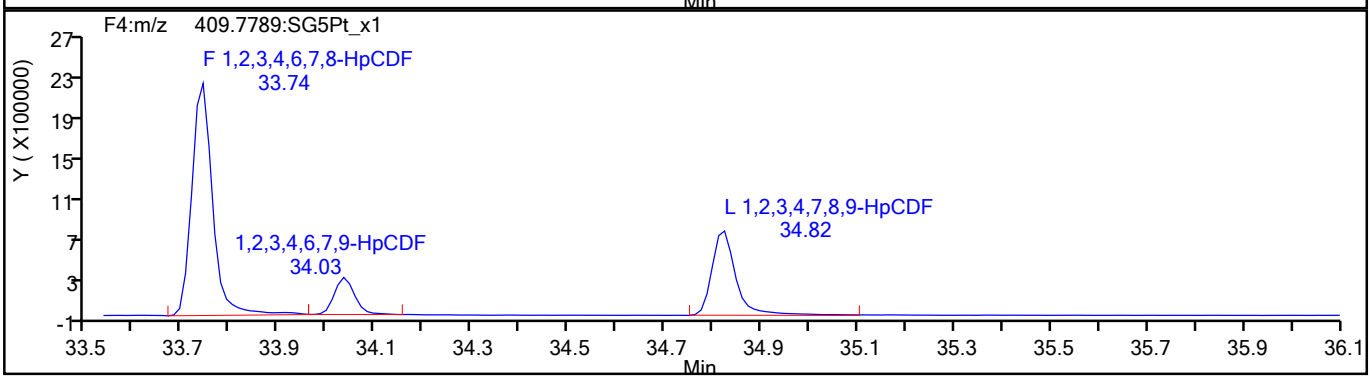

HpCDF Standards

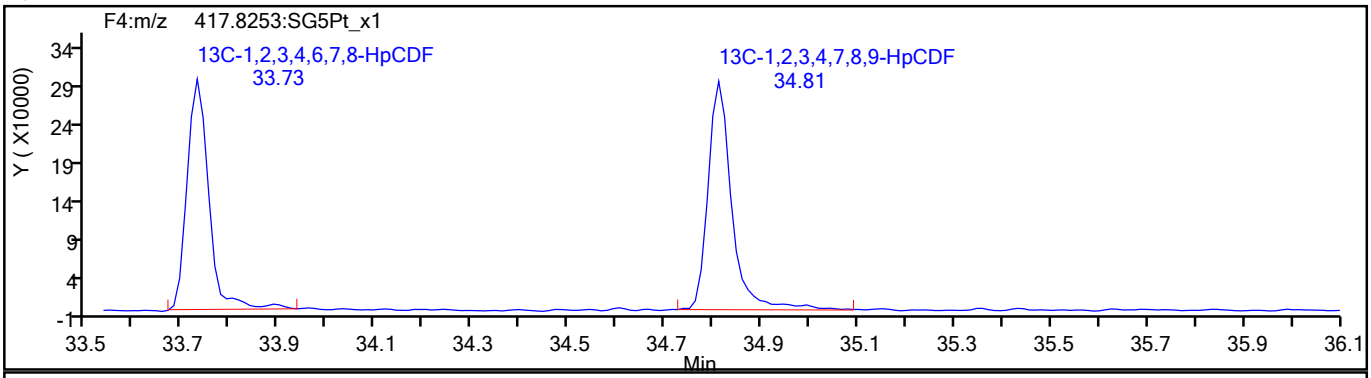

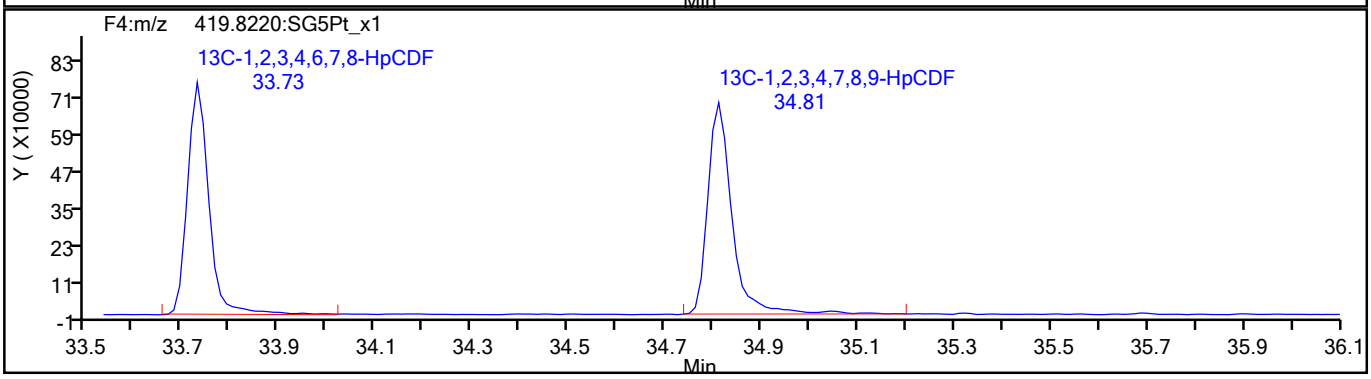

783699

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Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
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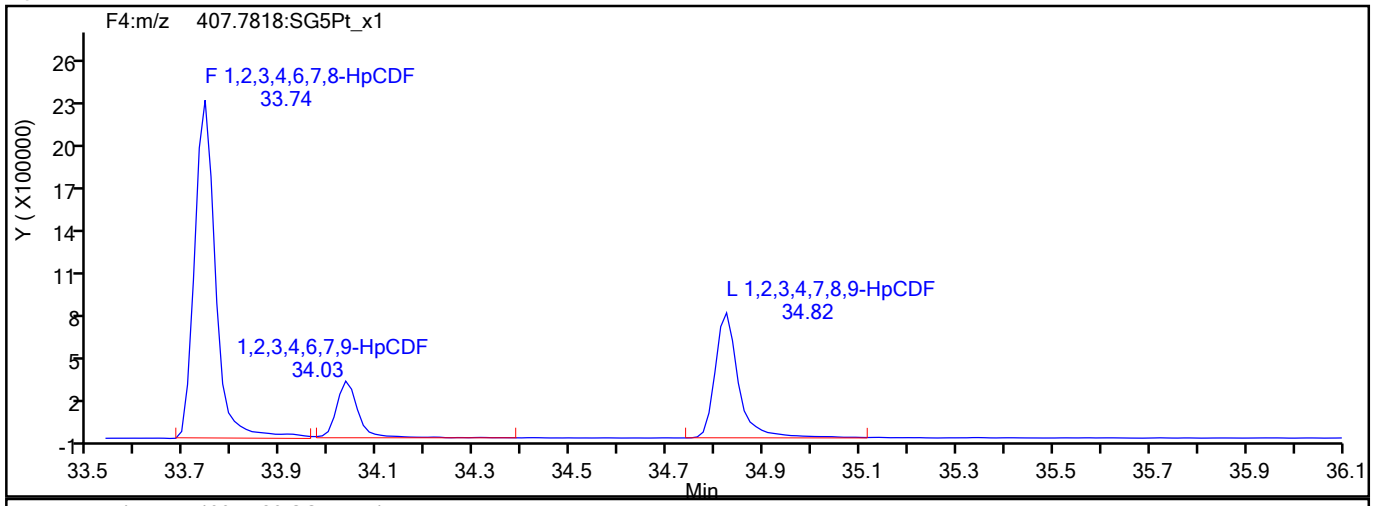

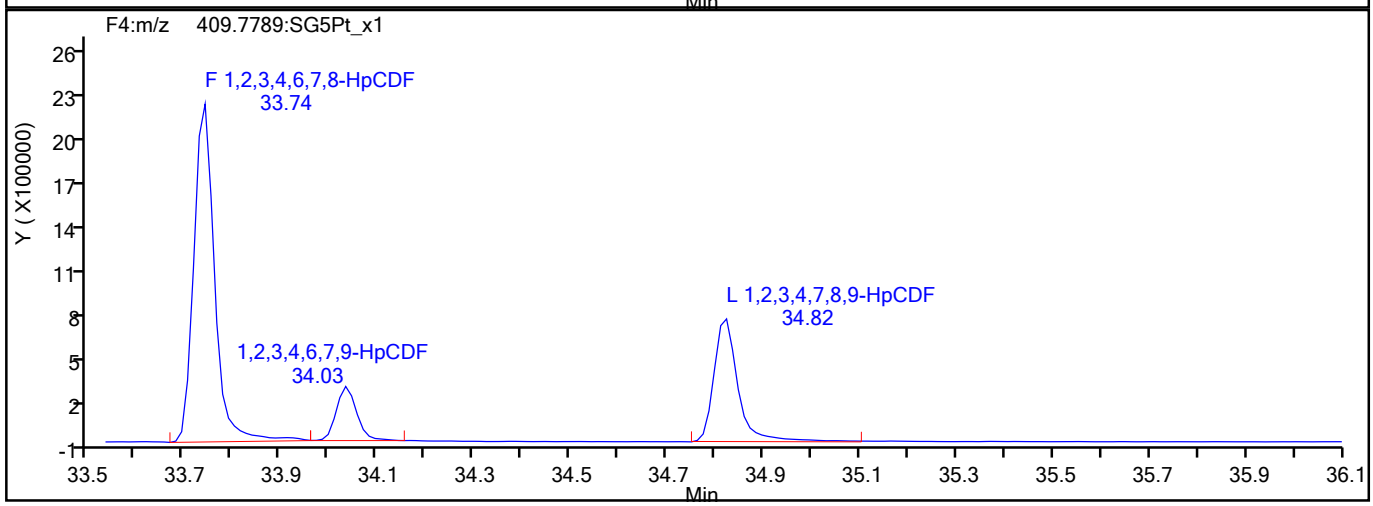

HpCDF Interference Mass

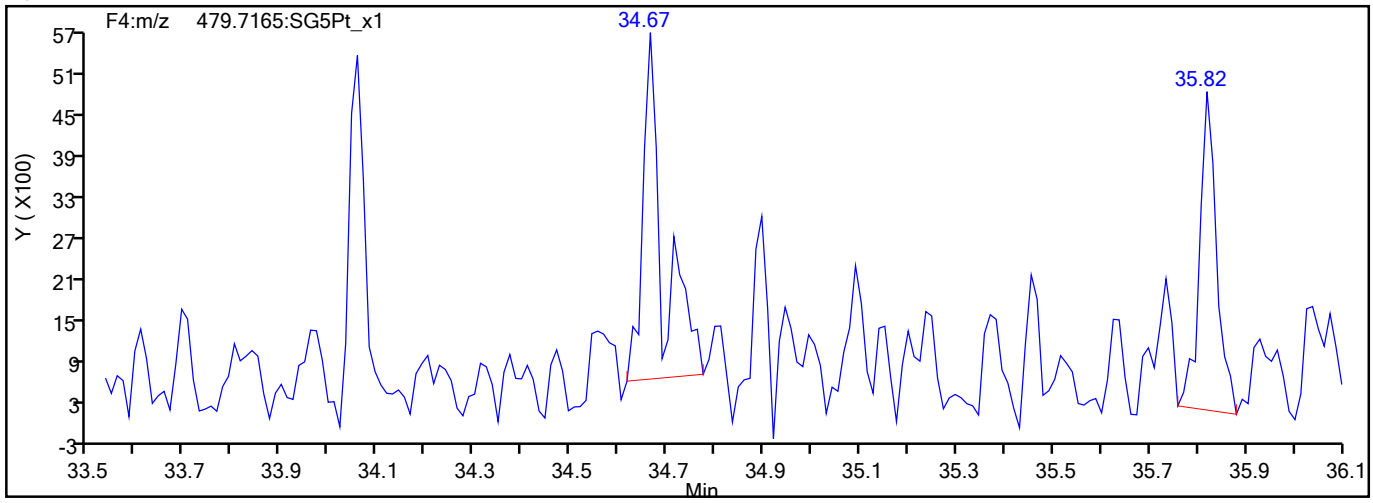

783700

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

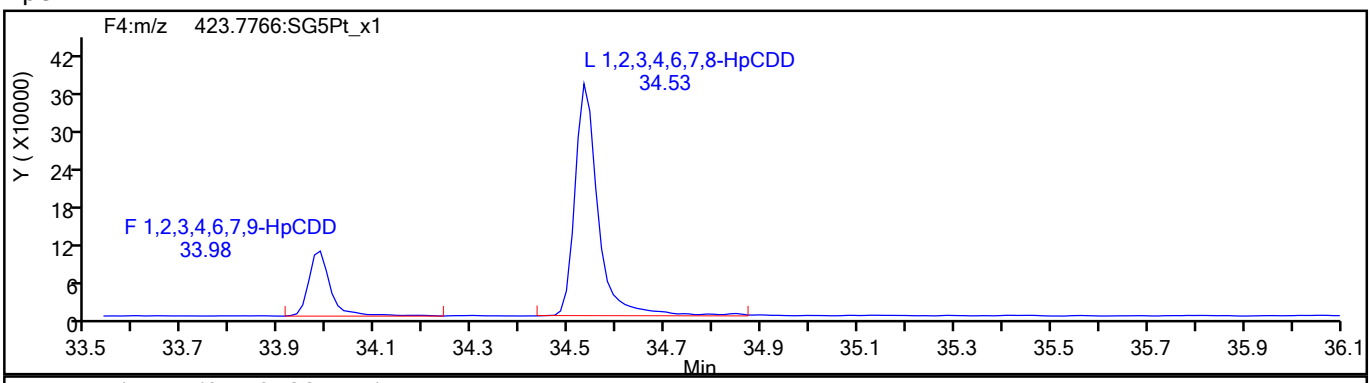

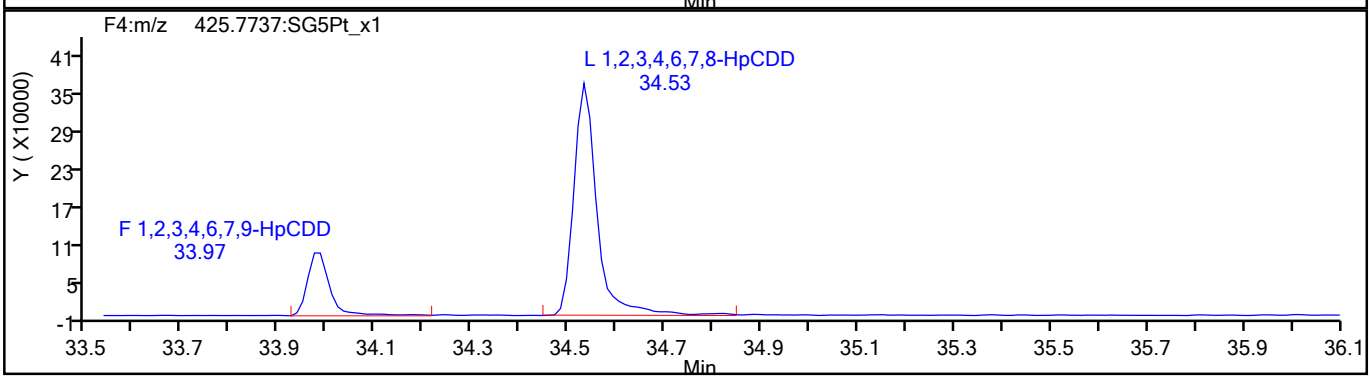

HpCDD Standards

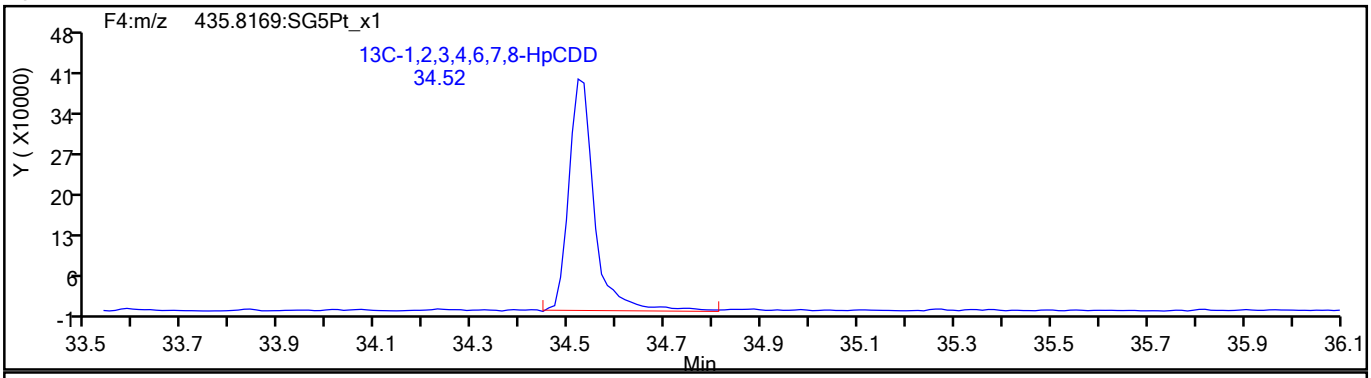

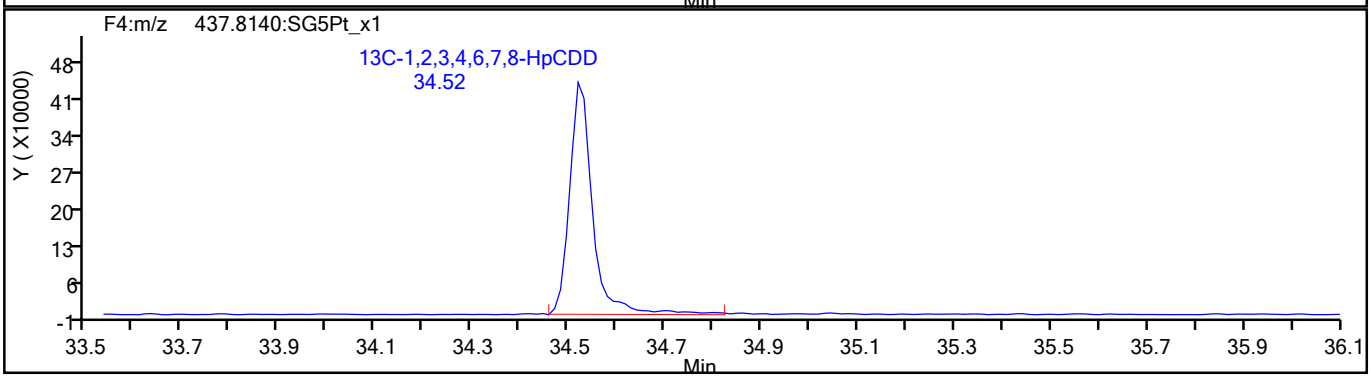

783701

Report Date: 19-Aug-2021 13:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

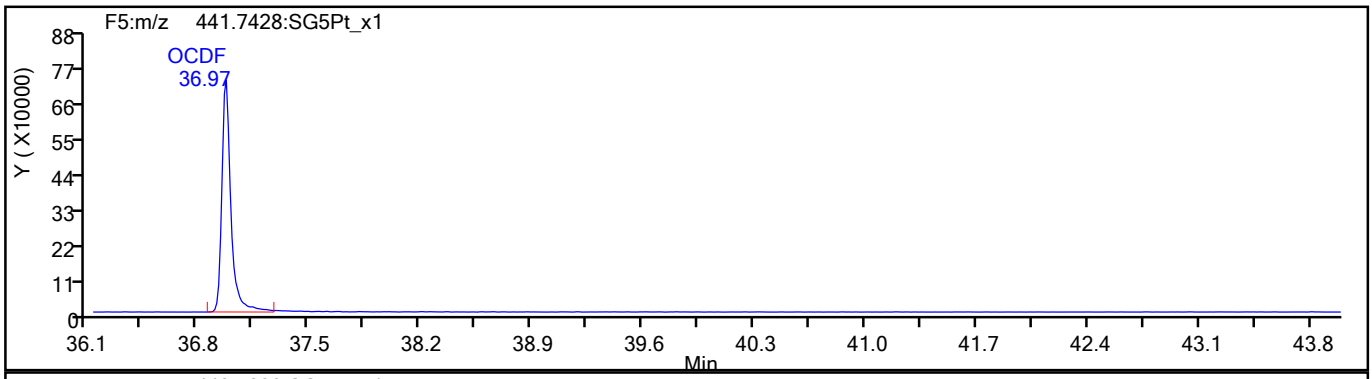

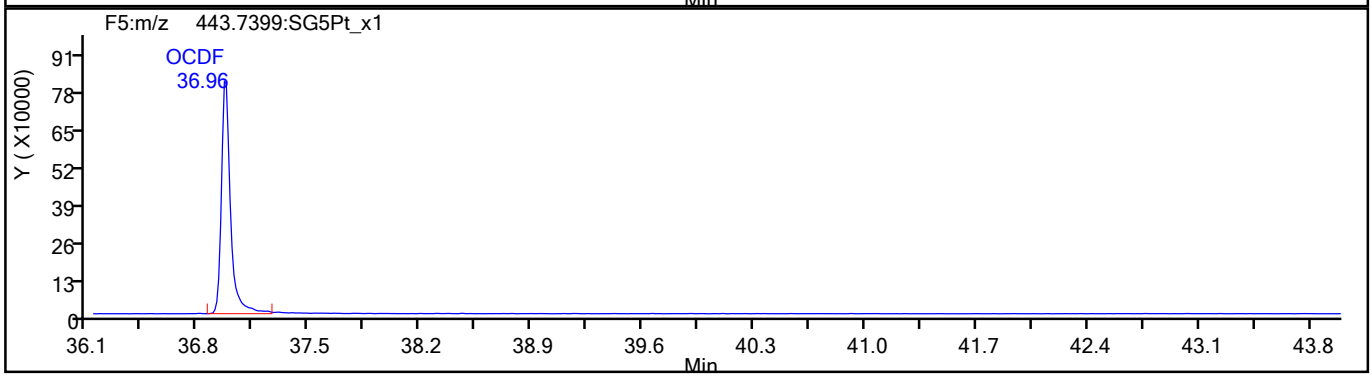

OCDF Standards

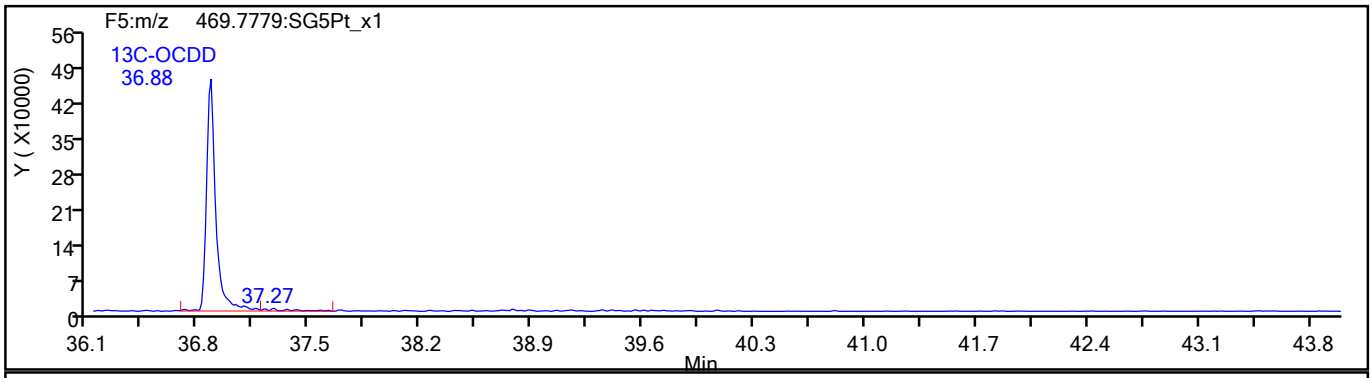

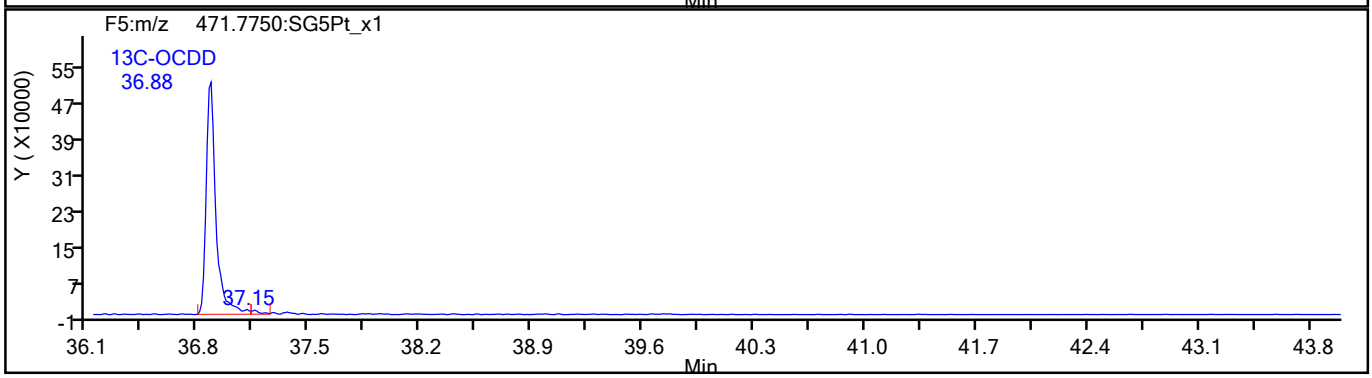

783702

Report Date: 19-Aug-2021 13:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

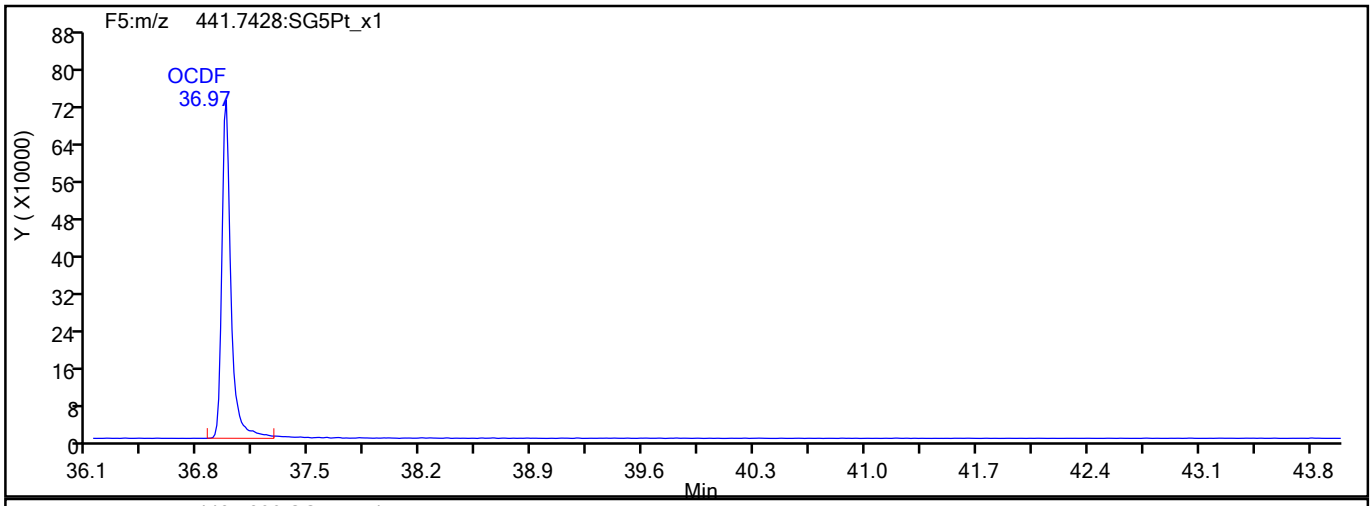

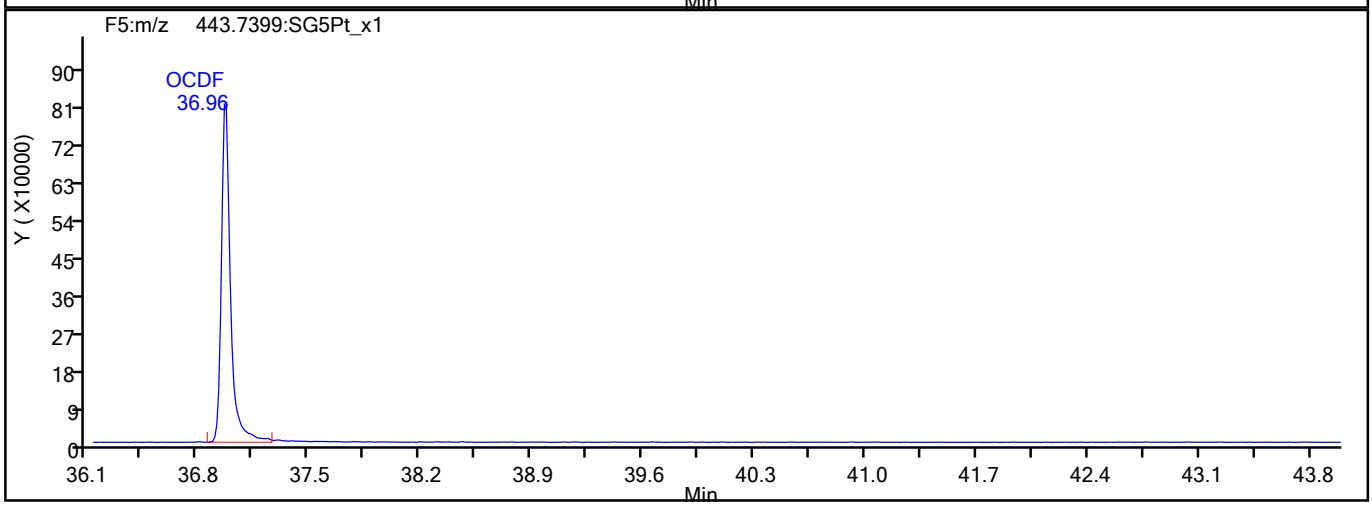

OCDF Interference Mass

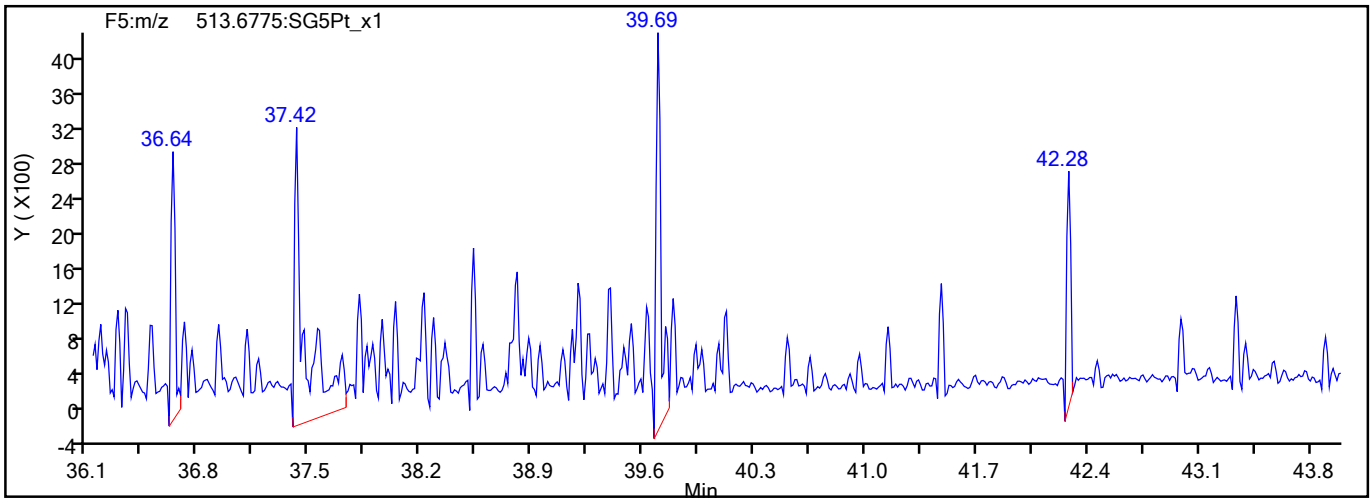

783703

Report Date: 19-Aug-2021 13:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

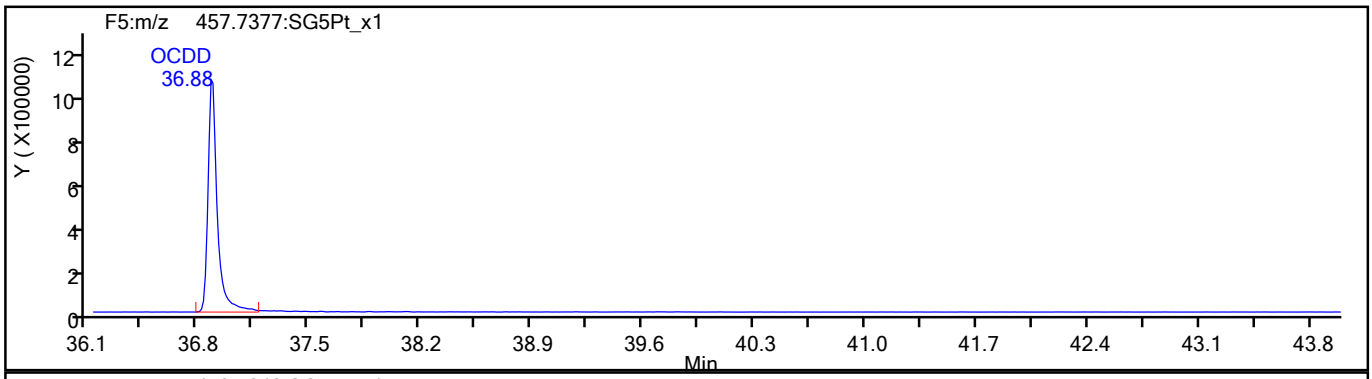

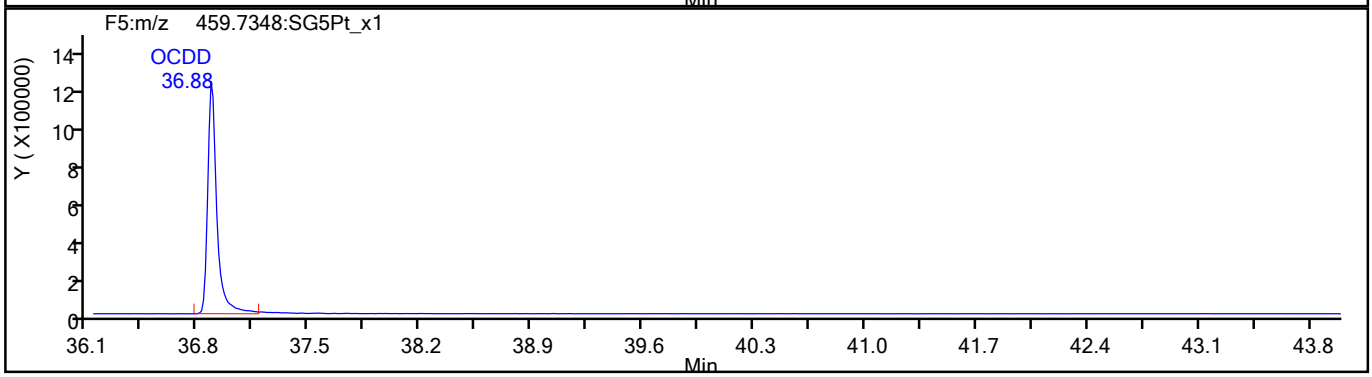

OCDD Standards

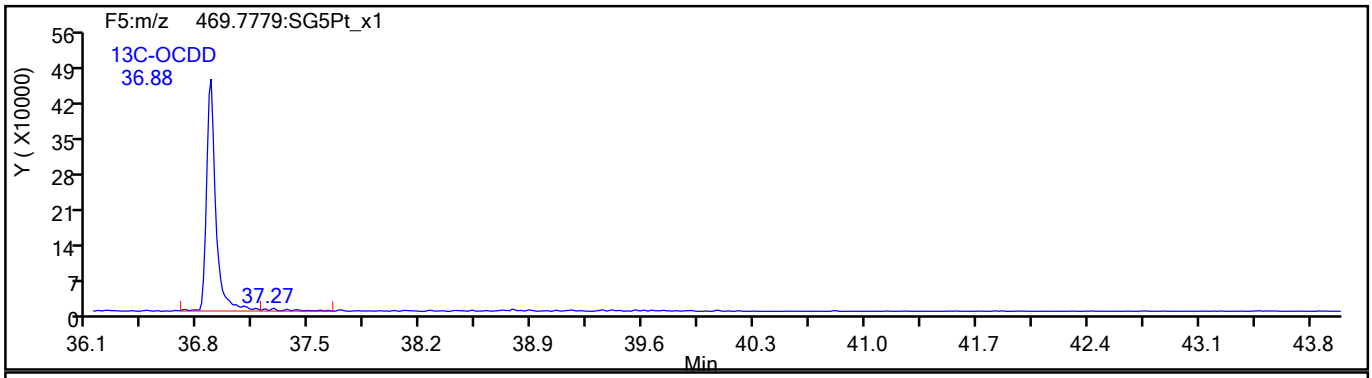

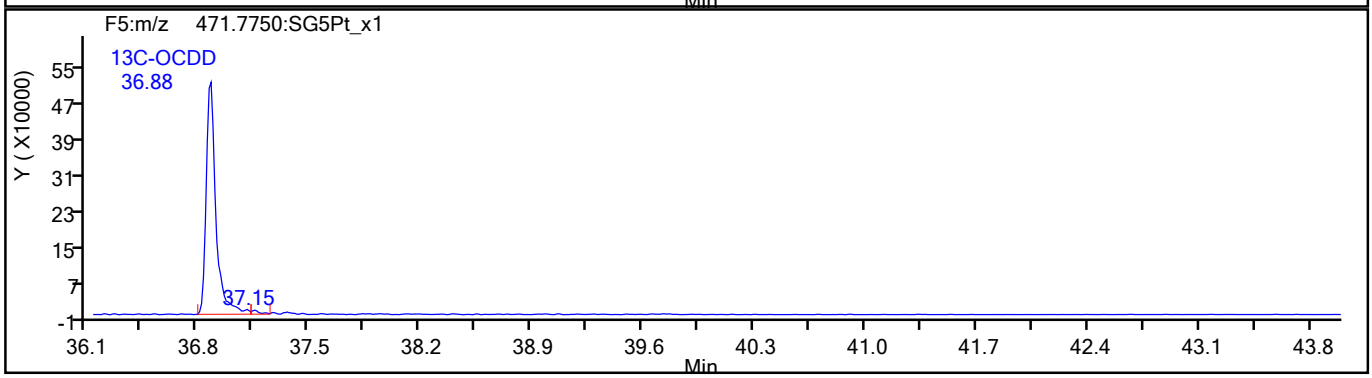

783704

Report Date: 19-Aug-2021 13:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

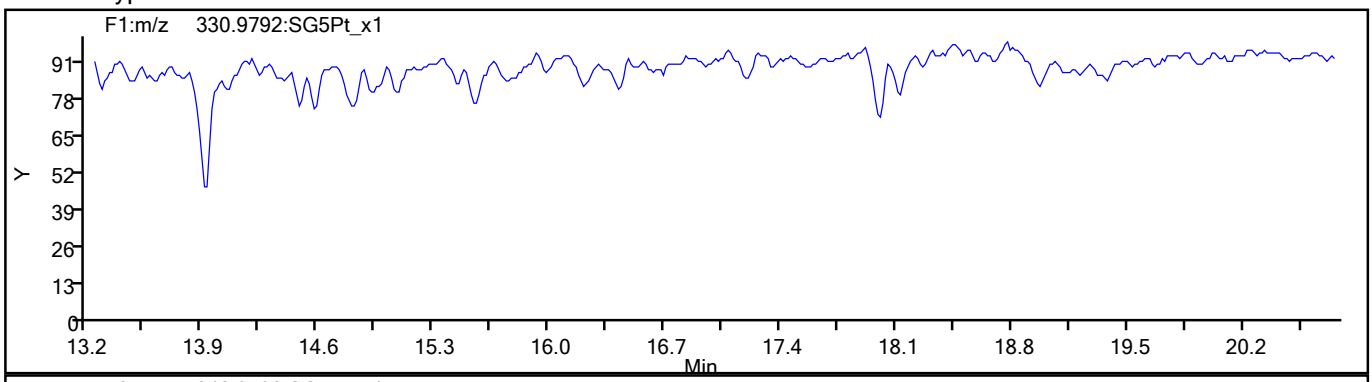

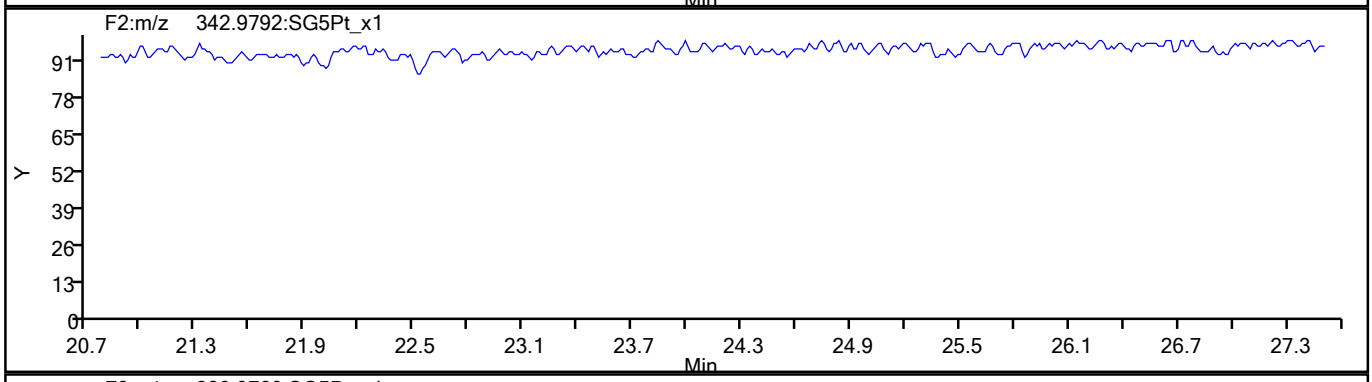

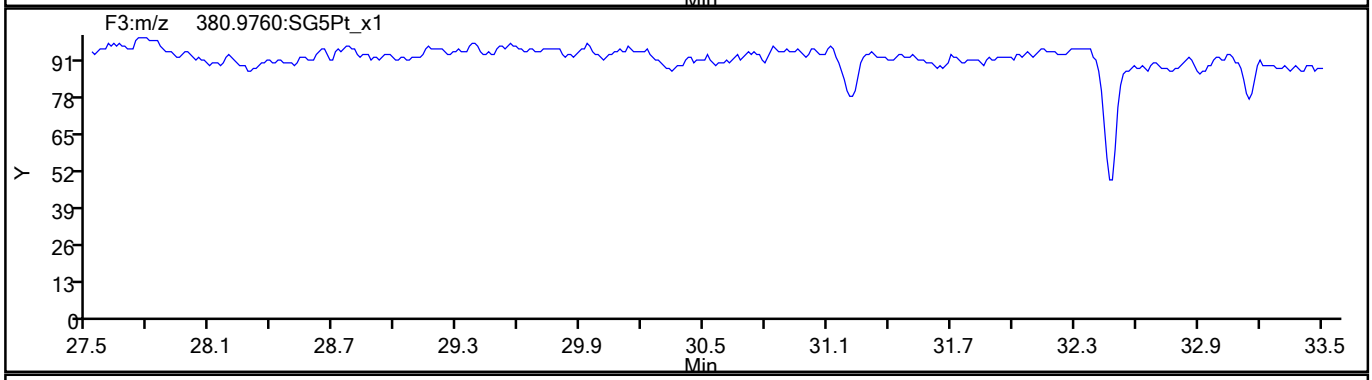

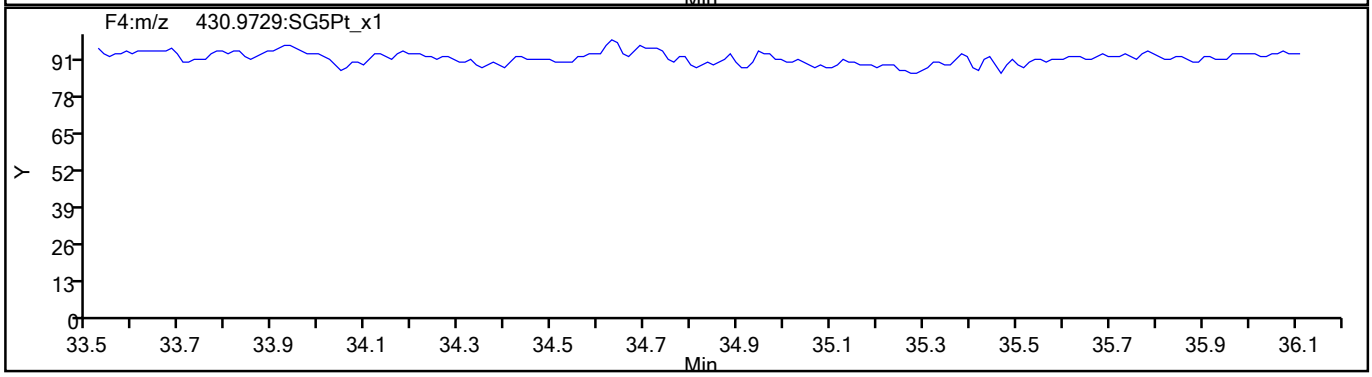

783705

Report Date: 19-Aug-2021 13:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

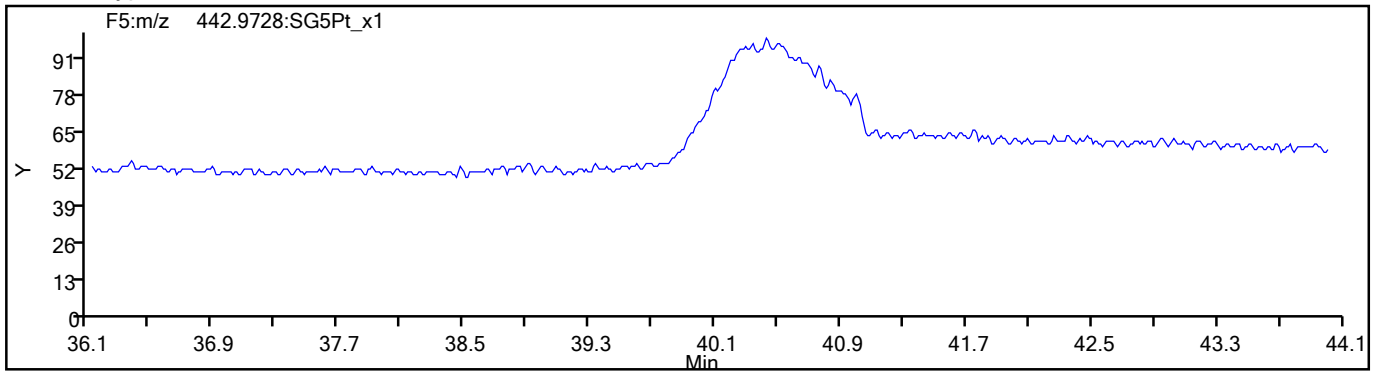

783706

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-1
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (2-4) MSD RA
Lab Sample ID: 320-76887-2 MSD RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_017.d
Analysis Method: 1613B
Date Collected: 07/27/2021 12:50
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.44(g)
Date Analyzed: 08/25/2021 23:11
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	74700		75	75

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	42		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	81		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MSD
Inject. Date: 25-Aug-2021 23:11:55 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-A-2-C MSD X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:27:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	4264796	0.89	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.615	2404028	0.66	1.3327	4.230	4.230	1.255	1.255	42.30	M
2,3,7,8-TCDF	17.642	580301413	0.78	0.9978	2419.2	2419.2	2.416	2.416	2.4E+005	E
D 13C-2,3,7,8-TCDD	16.065	1667654	0.73	0.8749	4.469	4.469	6.938	6.938	44.69	nM
2,3,7,8-TCDD	16.092	102346705	0.79	1.0570	580.6	580.6	2.249	2.249	58063	Ea
$ 37Cl4-2,3,7,8-TCDD	16.092	1196739		0.8648	3.245	3.245	0.2055	0.2055	81.12	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 26-Aug-2021 09:30:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MSD
Inject. Date: 25-Aug-2021 23:11:55 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-A-2-C MSD X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:27:31

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.298	16.298	0		2006296	351276	76309	190772	5		M
333.9339	16.298	16.298	0		2258500	419822	110930	277325	4	0.89(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.615	17.615	0	1.081	951734	148233	25282	63205	6		M
317.9389	17.629	17.615	1	1.082	1452294	310216	26305	65762	12	0.66(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.642	17.628	1	1.002	254982242	46572044	22555	56387	2065		
305.8987	17.642	17.628	1	1.002	325319171	59592956	21649	54122	2753	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.065	16.065	0	0.986	701898	141362	76309	190772	2		M
333.9339	16.065	16.065	0	0.986	965756	194166	110930	277325	2	0.73(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.092	16.078	1	1.002	45294422	10202754	19629	49072	520		a
321.8936	16.092	16.078	1	1.002	57052283	12788095	12274	30685	1042	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.078	1	0.987	1196739	291502	5483	13707	53		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d				
Injection Date:	25-Aug-2021 23:11:55	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-C MSD				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.61
Area: 1095337
Amount: 5.078624
Amount Units: pg/ul

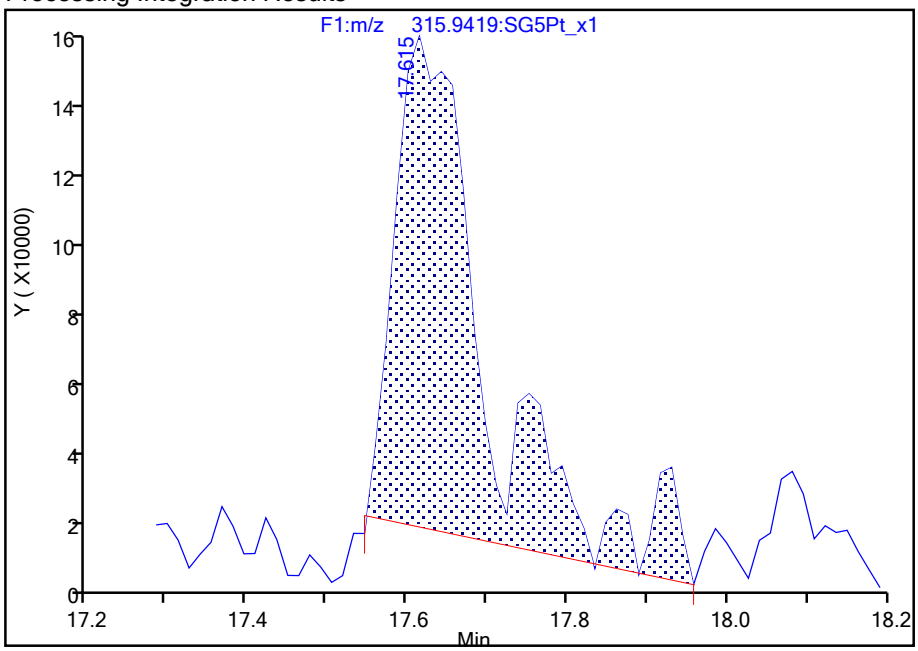

Manual Integration Results

RT: 17.61
Area: 951734
Amount: 4.229738
Amount Units: pg/ul

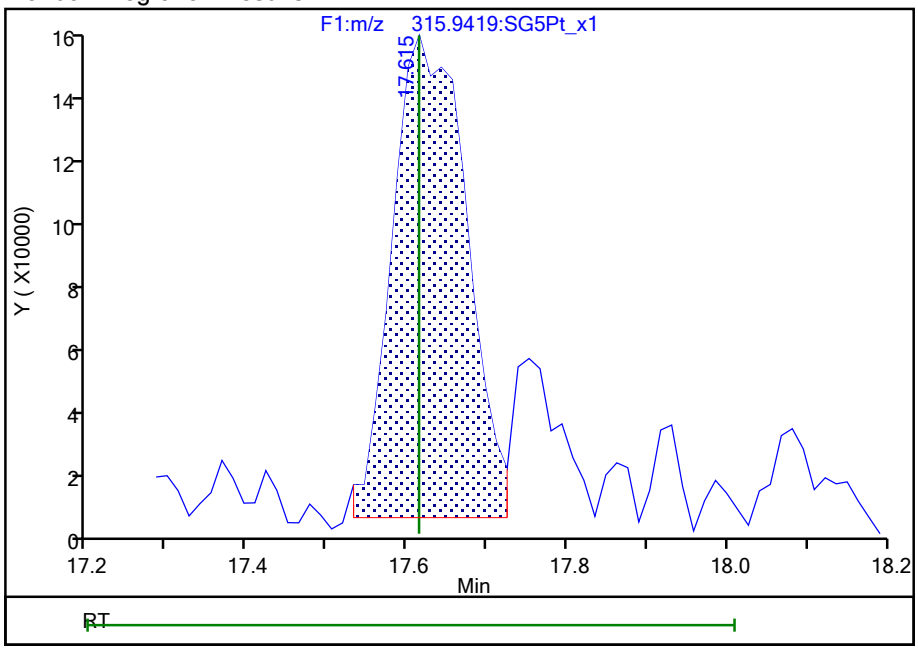

Reviewer: stephensk, 26-Aug-2021 09:26:11

Audit Action: Manually Integrated Audit Reason: Poor chromatography

783710

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d				
Injection Date:	25-Aug-2021 23:11:55	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-C MSD				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.63
Area: 1791167
Amount: 5.078624
Amount Units: pg/ul

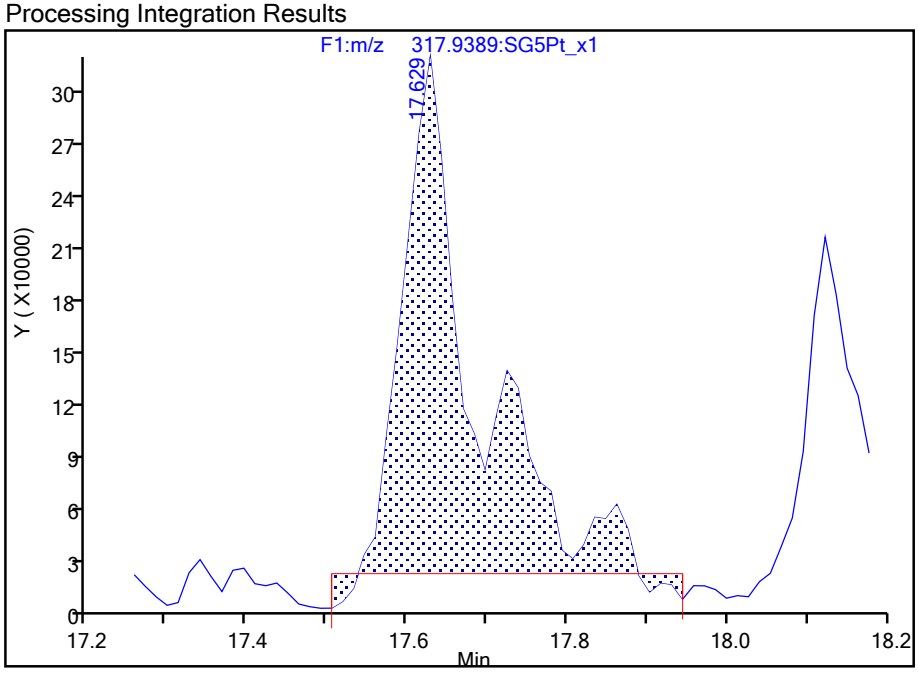

Manual Integration Results

RT: 17.63
Area: 1452294
Amount: 4.229738
Amount Units: pg/ul

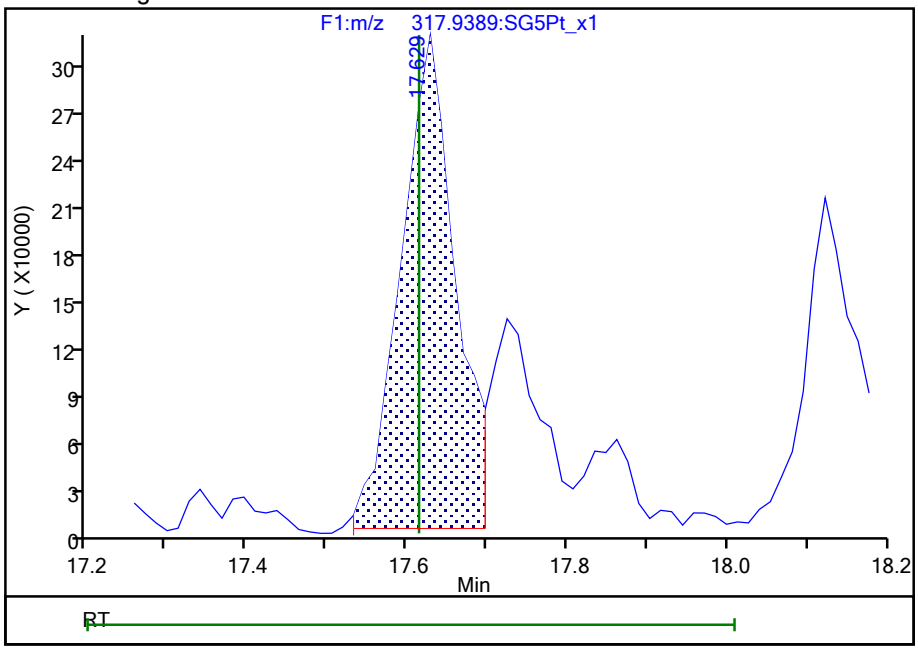

Reviewer: stephensk, 26-Aug-2021 09:26:20

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Report Date: 26-Aug-2021 09:30:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d		
Injection Date:	25-Aug-2021 23:11:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

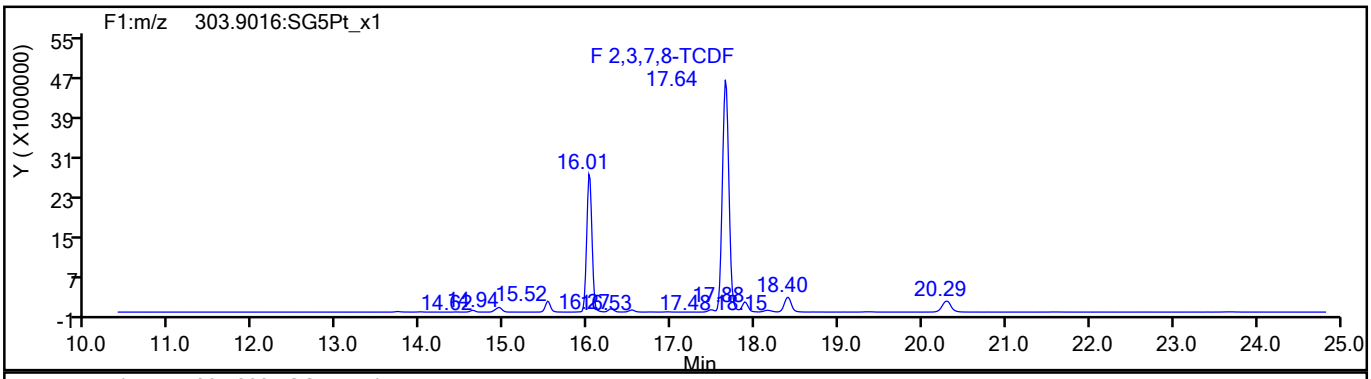

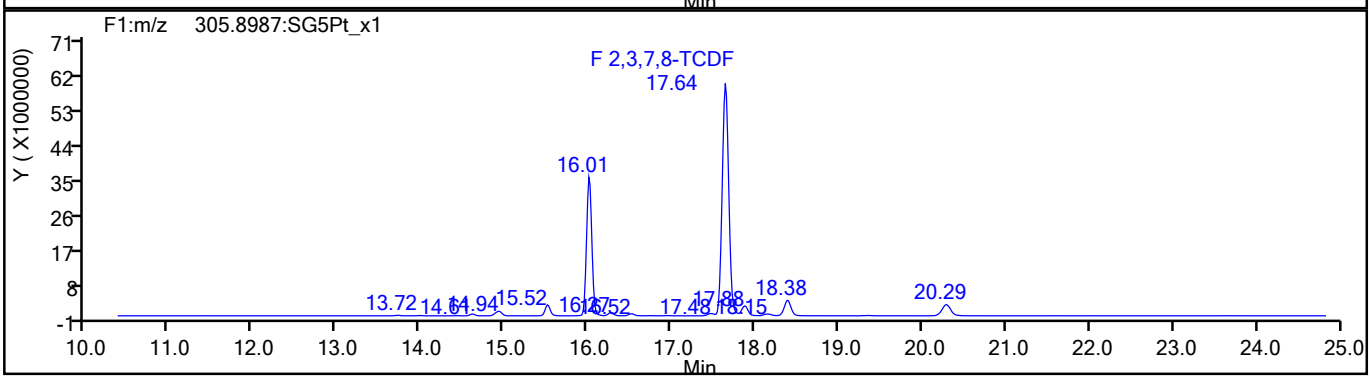

TCDF Standards

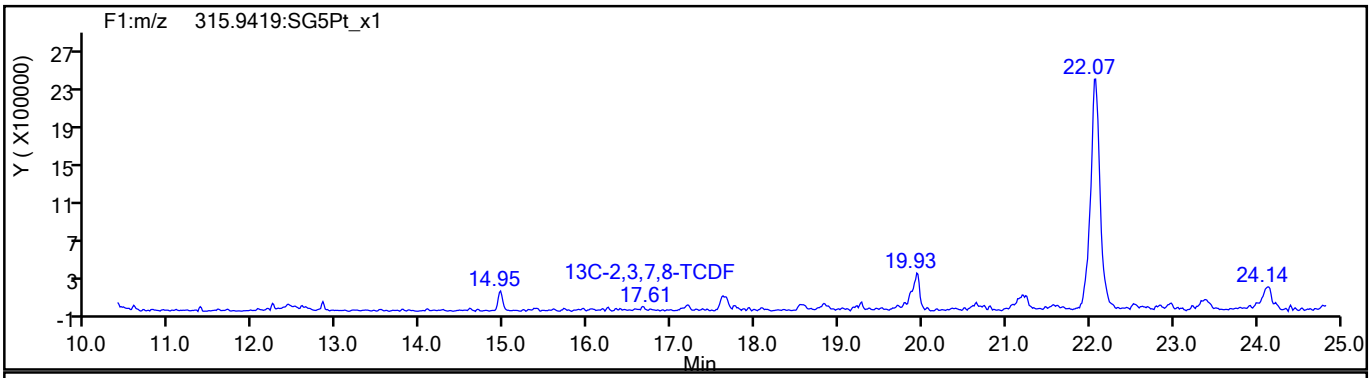

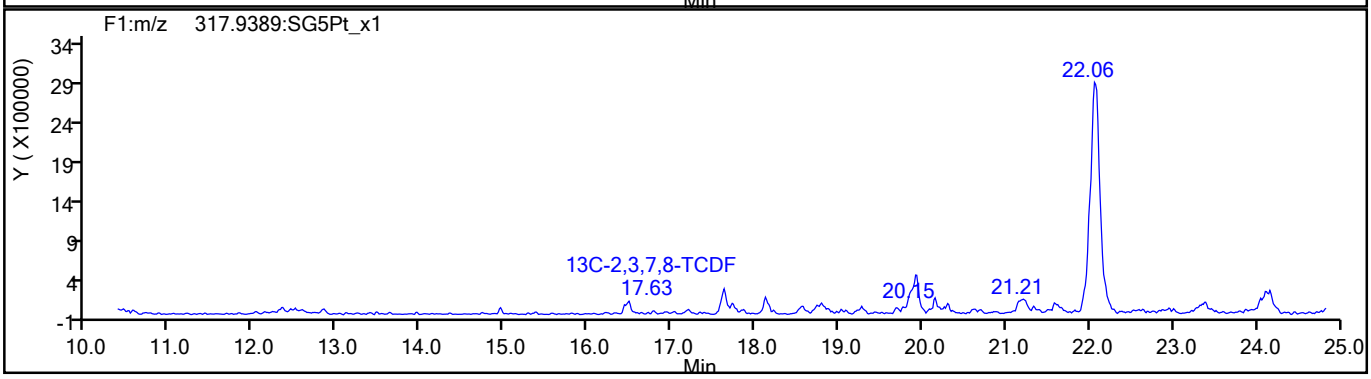

783712

Report Date: 26-Aug-2021 09:30:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d		
Injection Date:	25-Aug-2021 23:11:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

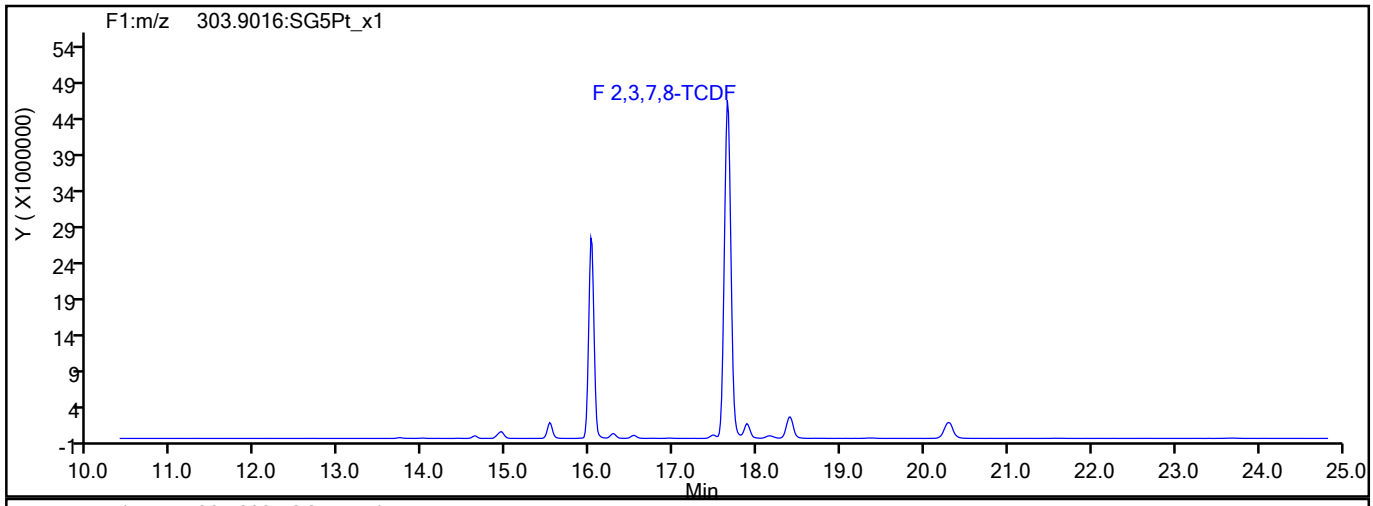

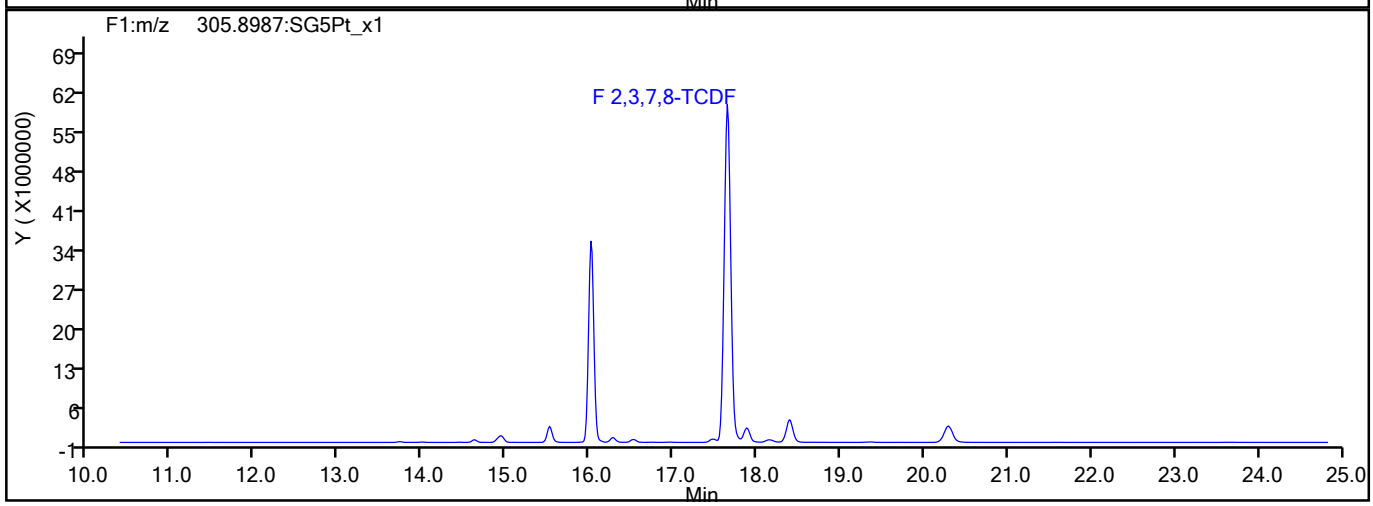

TCDF Interference Mass

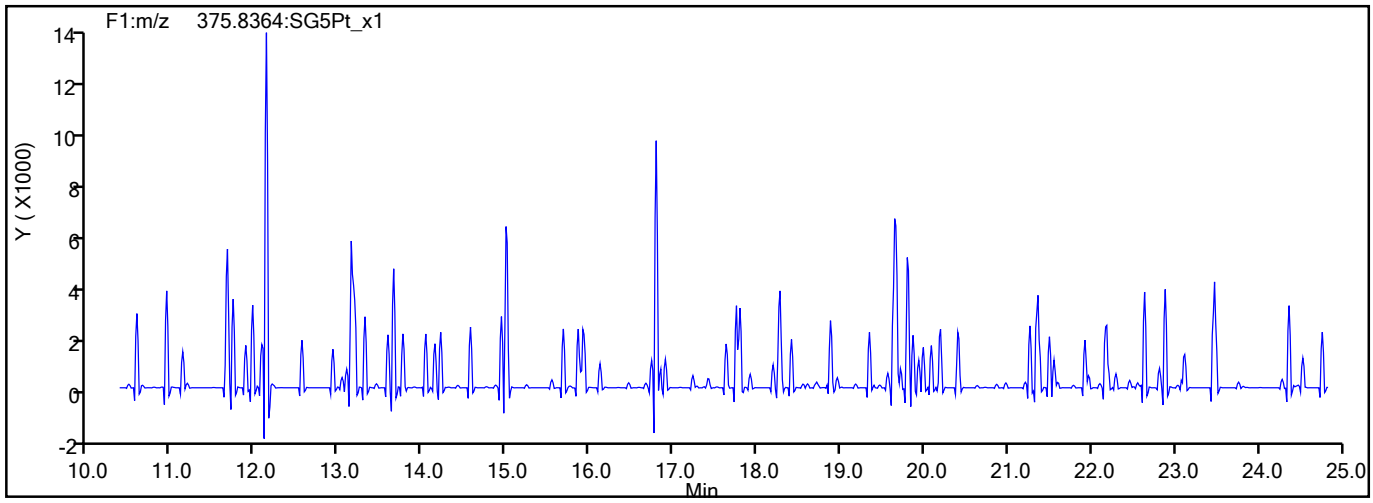

783713

Report Date: 26-Aug-2021 09:30:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d		
Injection Date:	25-Aug-2021 23:11:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

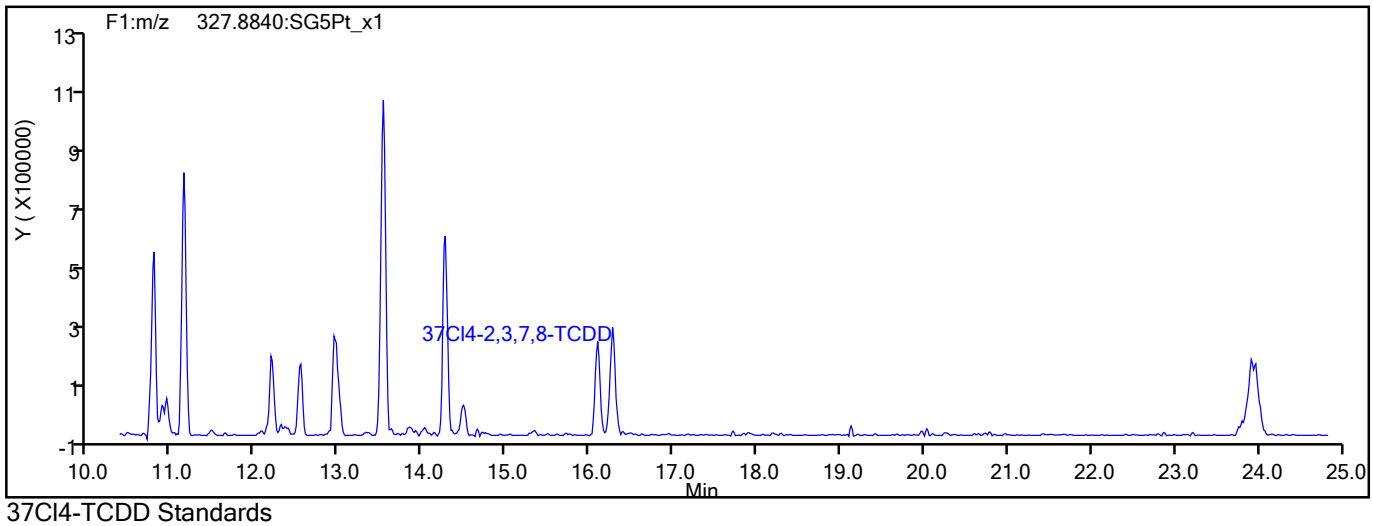

37Cl4-TCDD Standards

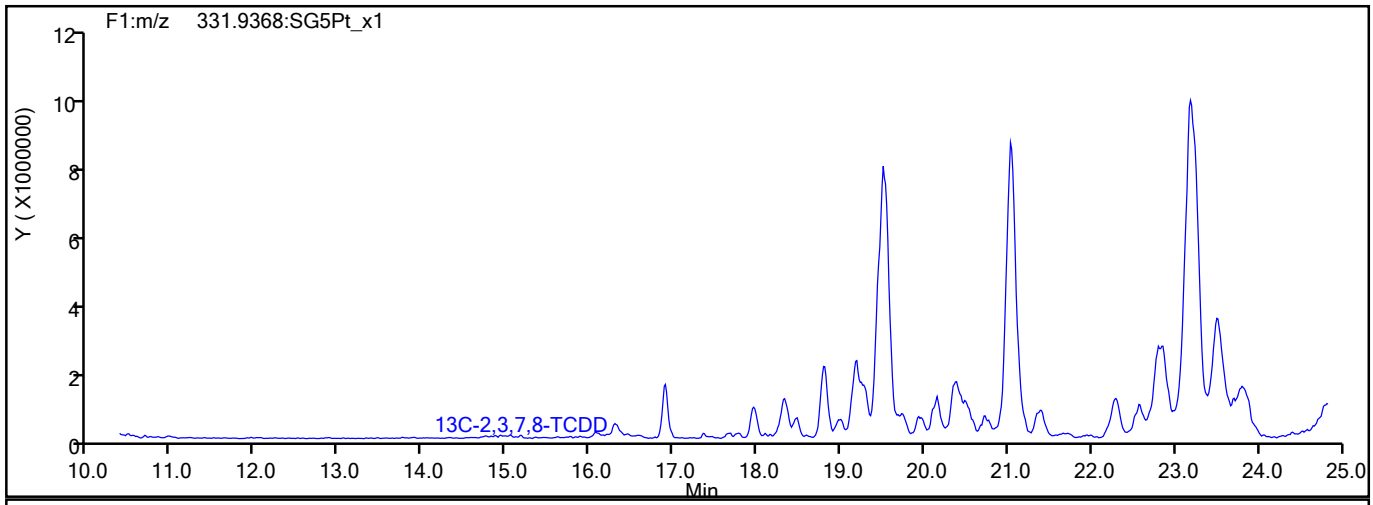

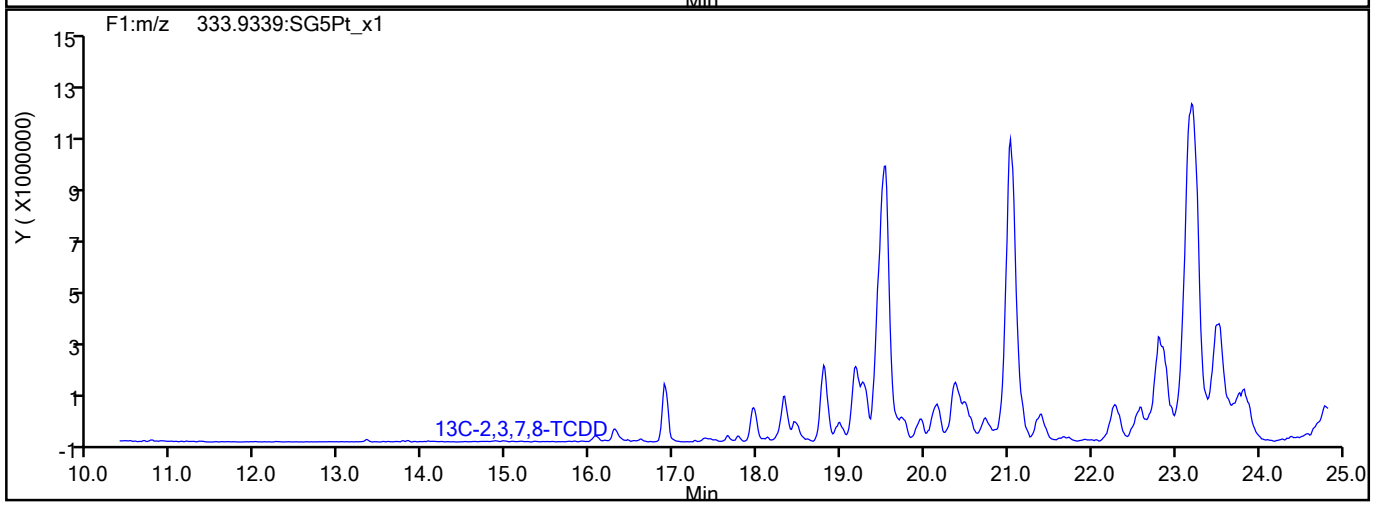

783714

Report Date: 26-Aug-2021 09:30:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d		
Injection Date:	25-Aug-2021 23:11:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

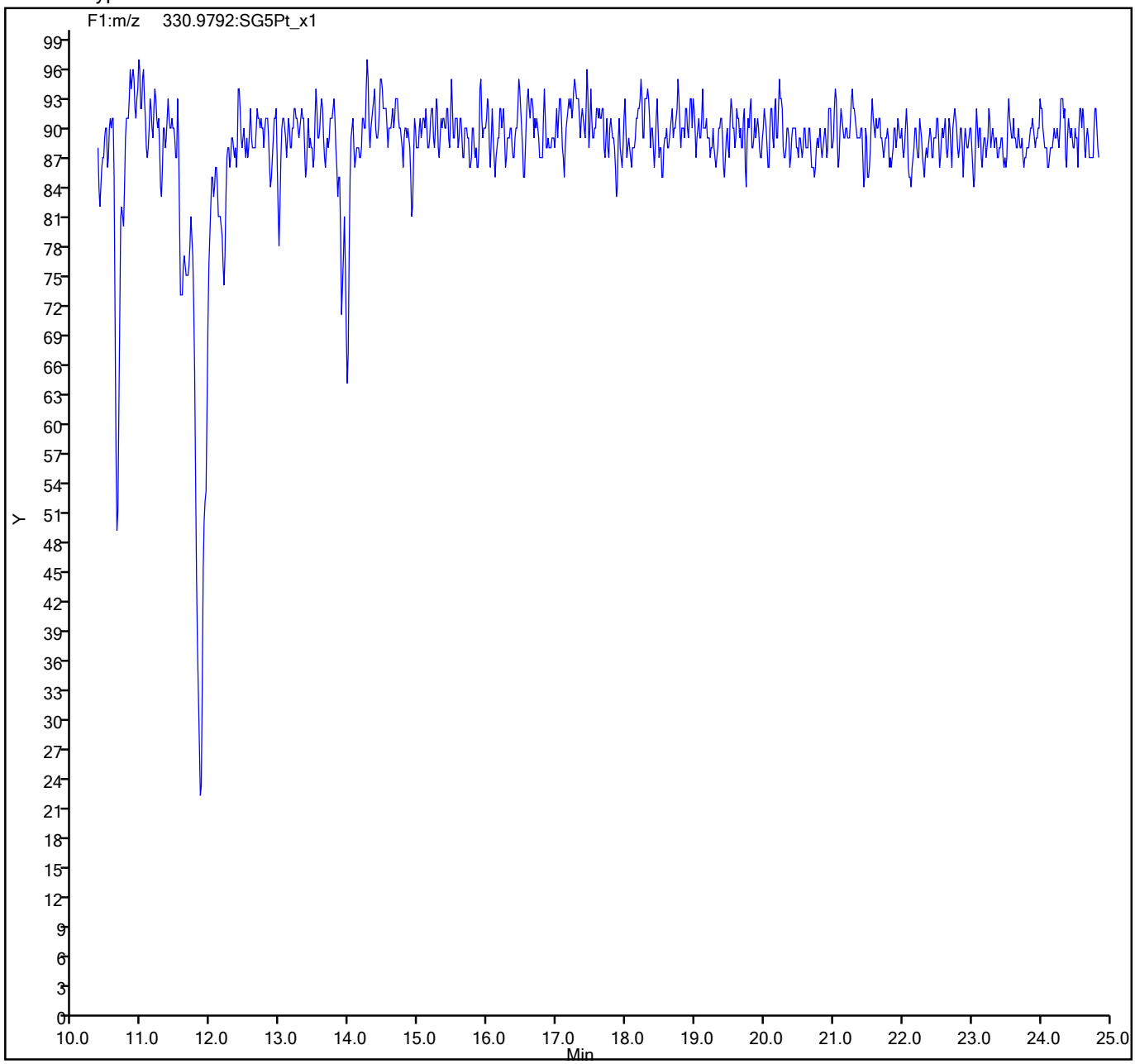

783715

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Instrument ID: DFS 1 Start Date: 06/08/2021 12:40

Analysis Batch Number: 496688 End Date: 06/08/2021 19:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-496688/1		06/08/2021 12:40	1	08jn21adfs1_2.d	DB-5 0.32(mm)
IC 320-496688/3		06/08/2021 14:18	1	08jn21adfs1_4.d	DB-5 0.32(mm)
IC 320-496688/4		06/08/2021 15:06	1	08jn21adfs1_5.d	DB-5 0.32(mm)
IC 320-496688/5		06/08/2021 15:54	1	08jn21adfs1_6.d	DB-5 0.32(mm)
IC 320-496688/6		06/08/2021 16:42	1	08jn21adfs1_7.d	DB-5 0.32(mm)
IC 320-496688/7		06/08/2021 17:30	1	08jn21adfs1_8.d	DB-5 0.32(mm)
ICV 320-496688/9		06/08/2021 19:25	1	08jn21adfs1_11.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Instrument ID: 10D5 Start Date: 07/26/2021 09:21

Analysis Batch Number: 510264 End Date: 07/26/2021 15:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-510264/1		07/26/2021 09:21	1	26JL2110D5_1.d	DB-5 0.32(mm)
IC 320-510264/3		07/26/2021 10:51	1	26JL2110D5_3.d	DB-5 0.32(mm)
IC 320-510264/4		07/26/2021 11:36	1	26JL2110D5_4.d	DB-5 0.32(mm)
IC 320-510264/5		07/26/2021 12:21	1	26JL2110D5_5.d	DB-5 0.32(mm)
IC 320-510264/6		07/26/2021 13:06	1	26JL2110D5_6.d	DB-5 0.32(mm)
IC 320-510264/7		07/26/2021 13:51	1	26JL2110D5_7.d	DB-5 0.32(mm)
ICV 320-510264/9		07/26/2021 15:31	1	26JL2110D5_9.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/17/2021 14:27

Analysis Batch Number: 517196 End Date: 08/18/2021 00:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-517196/1		08/17/2021 14:27	1	17au21dfs1_2.d	DB-5 0.32(mm)
CCV 320-517196/2		08/17/2021 15:14	1	17au21dfs1_3.d	DB-5 0.32(mm)
MB 320-513586/1-A		08/17/2021 17:01	1	17au21dfs1_5.d	DB-5 0.32(mm)
LCS 320-513586/2-A		08/17/2021 17:49	1	17au21dfs1_6.d	DB-5 0.32(mm)
ZZZZZ		08/17/2021 18:37	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 19:24	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 20:12	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 21:00	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 21:48	5		DB-5 0.32(mm)
ZZZZZ		08/17/2021 22:36	1		DB-5 0.32(mm)
ZZZZZ		08/17/2021 23:24	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 00:12	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/18/2021 02:07

Analysis Batch Number: 517281 End Date: 08/18/2021 11:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-517281/15		08/18/2021 02:07	1	17au21dfs1_17.d	DB-5 0.32(mm)
WDM 320-517281/16		08/18/2021 02:55	1	17au21dfs1_18.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 03:43	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 04:31	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 05:18	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 06:06	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 06:54	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 07:42	1		DB-5 0.32(mm)
320-76887-3	11215702-072721-BN-SJ SB096 (4-6)	08/18/2021 08:30	1	17au21dfs1_25.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 09:18	1		DB-5 0.32(mm)
320-76887-5	11215702-072721-BN-SJ SB096 (8-10)	08/18/2021 10:06	1	17au21dfs1_27.d	DB-5 0.32(mm)
320-76887-6	11215702-072721-BN-SJ SB096 (10-12)	08/18/2021 10:54	1	17au21dfs1_28.d	DB-5 0.32(mm)
320-76887-7	11215702-072721-BN-SJ SB096 (12-14)	08/18/2021 11:42	1	17au21dfs1_29.d	DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/18/2021 13:48

Analysis Batch Number: 517461 End Date: 08/18/2021 23:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-517461/29		08/18/2021 13:48	1	17au21dfs1_32.d	DB-5 0.32(mm)
WDM 320-517461/30		08/18/2021 14:50	1	17au21dfs1_33.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 15:37	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 16:25	1		DB-5 0.32(mm)
320-76887-8	11215702-072721-BN-SJ SB096 (14-16)	08/18/2021 17:13	1	17au21dfs1_36.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 18:01	1		DB-5 0.32(mm)
320-76887-13	11215702-072721-BN-DU P-9	08/18/2021 18:49	1	17au21dfs1_38.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 19:36	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 20:24	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 21:12	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 22:00	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 22:48	1		DB-5 0.32(mm)
320-76887-1	11215702-072721-BN-SJ SB096 (0-2)	08/18/2021 23:36	1	17au21dfs1_44.d	DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/18/2021 14:15

Analysis Batch Number: 517729 End Date: 08/18/2021 21:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-517729/1		08/18/2021 14:15	1	18AU2110D5_1.d	DB-5 0.32(mm)
CCV 320-517729/2		08/18/2021 15:00	1	18AU2110D5_2.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 15:49	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 17:19	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 18:04	1		DB-5 0.32(mm)
320-76887-4	11215702-072721-BN-SJ SB096 (6-8)	08/18/2021 18:49	1	18AU2110D5_7.d	DB-5 0.32(mm)
320-76887-2	11215702-072721-BN-SJ SB096 (2-4)	08/18/2021 19:34	10	18AU2110D5_8.d	DB-5 0.32(mm)
320-76887-2 MS	11215702-072721-BN-SJ SB096 (2-4) MS	08/18/2021 20:19	10	18AU2110D5_9.d	DB-5 0.32(mm)
320-76887-2 MSD	11215702-072721-BN-SJ SB096 (2-4) MSD	08/18/2021 21:04	10	18AU2110D5_10.d	DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/25/2021 12:59

Analysis Batch Number: 519744 End Date: 08/25/2021 23:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-519744/1		08/25/2021 12:59	1	25AU21A11D2_001.d	DB-225 0.32(mm)
CCV 320-519744/2		08/25/2021 13:37	1	25AU21A11D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/25/2021 14:15	1		DB-225 0.32(mm)
320-76887-8 RA	11215702-072721-BN-SJSB096 (14-16) RA	08/25/2021 14:54	1	25AU21A11D2_004.d	DB-225 0.32(mm)
320-76887-13 RA	11215702-072721-BN-DUP-9 RA	08/25/2021 15:32	1	25AU21A11D2_005.d	DB-225 0.32(mm)
320-76887-4 RA	11215702-072721-BN-SJSB096 (6-8) RA	08/25/2021 16:10	1	25AU21A11D2_006.d	DB-225 0.32(mm)
320-76887-7 RA	11215702-072721-BN-SJSB096 (12-14) RA	08/25/2021 16:48	1	25AU21A11D2_007.d	DB-225 0.32(mm)
320-76887-6 RA	11215702-072721-BN-SJSB096 (10-12) RA	08/25/2021 17:27	1	25AU21A11D2_008.d	DB-225 0.32(mm)
320-76887-3 RA	11215702-072721-BN-SJSB096 (4-6) RA	08/25/2021 18:05	1	25AU21A11D2_009.d	DB-225 0.32(mm)
ZZZZZ		08/25/2021 18:43	1		DB-225 0.32(mm)
320-76887-5 RA	11215702-072721-BN-SJSB096 (8-10) RA	08/25/2021 19:22	1	25AU21A11D2_011.d	DB-225 0.32(mm)
ZZZZZ		08/25/2021 20:00	5		DB-225 0.32(mm)
ZZZZZ		08/25/2021 20:38	5		DB-225 0.32(mm)
ZZZZZ		08/25/2021 21:17	5		DB-225 0.32(mm)
320-76887-2 RA	11215702-072721-BN-SJSB096 (2-4) RA	08/25/2021 21:55	10	25AU21A11D2_015.d	DB-225 0.32(mm)
320-76887-2 MS RA	11215702-072721-BN-SJSB096 (2-4) MS RA	08/25/2021 22:33	10	25AU21A11D2_016.d	DB-225 0.32(mm)
320-76887-2 MSD RA	11215702-072721-BN-SJSB096 (2-4) MSD RA	08/25/2021 23:11	10	25AU21A11D2_017.d	DB-225 0.32(mm)
320-76887-1 RADL	11215702-072721-BN-SJSB096 (0-2) RADL	08/25/2021 23:50	10	25AU21A11D2_018.d	DB-225 0.32(mm)

1613B

783723

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/26/2021 18:40

Analysis Batch Number: 520325 End Date: 08/27/2021 00:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-520325/1		08/26/2021 18:40	1	25AU2110D5_43.d	DB-5 0.32(mm)
CCV 320-520325/2		08/26/2021 19:36	1	25AU2110D5_44.d	DB-5 0.32(mm)
ZZZZZ		08/26/2021 20:21	1		DB-5 0.32(mm)
320-76887-1 DL	11215702-072721-BN-SJ SB096 (0-2) DL	08/26/2021 21:06	10	25AU2110D5_46.d	DB-5 0.32(mm)
ZZZZZ		08/26/2021 21:51	10		DB-5 0.32(mm)
ZZZZZ		08/27/2021 00:51	20		DB-5 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76887-1

SDG No.:

Batch Number: 513586 Batch Start Date: 08/06/21 05:28 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/13/21 17:05

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-513586/1		HRMS-Sox, 1613B		10 g	20.0 uL	G-1	73	1	1 mL
LCS 320-513586/2		HRMS-Sox, 1613B		10 g	20.0 uL	G-2	7	3	1 mL
320-76887-A-1	11215702-072721-BN-SJSB096 (0-2)	HRMS-Sox, 1613B	T	10.04 g	20.0 uL	H-6	3	3	1 mL
320-76887-A-2	11215702-072721-BN-SJSB096 (2-4)	HRMS-Sox, 1613B	T	10.21 g	20.0 uL	I-1	119	1	1 mL
320-76887-A-2 MS	11215702-072721-BN-SJSB096 (2-4)	HRMS-Sox, 1613B	T	10.12 g	20.0 uL	I-2	32	3	1 mL
320-76887-A-2 MSD	11215702-072721-BN-SJSB096 (2-4)	HRMS-Sox, 1613B	T	10.44 g	20.0 uL	I-3	33	1	1 mL
320-76887-A-3	11215702-072721-BN-SJSB096 (4-6)	HRMS-Sox, 1613B	T	10.55 g	20.0 uL	I-4	9	3	1 mL
320-76887-A-4	11215702-072721-BN-SJSB096 (6-8)	HRMS-Sox, 1613B	T	10.16 g	20.0 uL	I-5	96	1	1 mL
320-76887-A-5	11215702-072721-BN-SJSB096 (8-10)	HRMS-Sox, 1613B	T	10.72 g	20.0 uL	I-6	22	3	1 mL
320-76887-A-6	11215702-072721-BN-SJSB096 (10-12)	HRMS-Sox, 1613B	T	9.90 g	20.0 uL	J-1	105	1	1 mL
320-76887-A-7	11215702-072721-BN-SJSB096 (12-14)	HRMS-Sox, 1613B	T	10.67 g	20.0 uL	J-2	91	3	1 mL
320-76887-A-8	11215702-072721-BN-SJSB096 (14-16)	HRMS-Sox, 1613B	T	10.09 g	20.0 uL	J-3	106	1	1 mL
320-76887-A-13	11215702-072721-BN-DUP-9	HRMS-Sox, 1613B	T	9.59 g	20.0 uL	J-5	98	1	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-513586/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-513586/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76887-A-1	11215702-072721-BN-SJSB096 (0-2)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76887-A-2	11215702-072721-BN-SJSB096 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76887-A-2 MS	11215702-072721-BN-SJSB096 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76887-1

SDG No.:

Batch Number: 513586 Batch Start Date: 08/06/21 05:28 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/13/21 17:05

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
320-76887-A-2 MSD	11215702-072721-BN-SJSB096 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76887-A-3	11215702-072721-BN-SJSB096 (4-6)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76887-A-4	11215702-072721-BN-SJSB096 (6-8)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76887-A-5	11215702-072721-BN-SJSB096 (8-10)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76887-A-6	11215702-072721-BN-SJSB096 (10-12)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76887-A-7	11215702-072721-BN-SJSB096 (12-14)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76887-A-8	11215702-072721-BN-SJSB096 (14-16)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76887-A-13	11215702-072721-BN-DUP-9	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76887-1

SDG No.:

Batch Number: 513586 Batch Start Date: 08/06/21 05:28 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/13/21 17:05

Batch Notes	
20% DCM:Hexane ID	DH28_00193 mL
65% DCM:Hexane ID	DH6535_00546
Acid Silica Gel ID	SA5644_00732
Acid Alumina ID	Acid_Alumina_00019
Balance ID	QA-074
Batch Comment	Samples were brought up to 10.0 mL and 20.0 uL was aliquoted for screening.
C14 ID	2414812
Sulfuric Acid Lot Number	2623518
Hexane ID	Hexane_00285
IFB Clean Up	SKV 08/13/21
Na2SO4 ID	SodiumSulfate_00166
Option C Clean Up	GLB 08/13/21
Analyst ID - IDA Reagent Drop	FC 8/6/21 HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	IP 08/06/21
Analyst ID - IS Reagent Drop	SR 08/13/21 DB15270 HRDXNIS_00137 B-1/4 20.0 uL
Analyst ID - IS Reagent Drop Witness	SKV 08/13/21
Analyst ID - SU Reagent Drop	GLB 08/13/21 HD05018 HRDXNSU_00255 B-4/5 1.0 mL
Analyst ID - SU Reagent Drop Witness	FC 08/13/21
Analyst ID - TA Reagent Drop	FC 8/6/21 DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	IP 08/06/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/6/21 11:40
Soxhlet/Soxtherm Start	8/6/21 8:40
Storage Box ID	DXN -266
Toluene ID	Toluene_00110

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

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Sacramento
Dilution Report Form – HRMS Tests

Use this form for documenting dilutions. All dilutions are based on removing sample from the original extract, unless otherwise noted. The final volume for the dilutions listed is the sum of the solvent and the sample.

Attach the completed form to the original bench sheet, for archive with the lot data.

Table 1: How Dilutions Are Made

Dilution required	**Amount of Solvent (µL)** DXN Methods: 8290, 1613B, TO-9, EPA 23, EPA 0023A; Solvent (tetradecane C_{14}) PCB Methods: 1668A, 1668C; Solvent (dodecane C_{12})	Amount of sample (µl) to be added to solvent
2X	5.0	5.0
5X	8.0	2.0
10X	18.0	2.0
20X	38.0	2.0
25X	48.0	2.0
30X	58.0	2.0
40X	78.0	2.0
50X	98.0	2.0
100X	198.0	2.0

Sample Dilutions Made

Job Number	Sample ID	Dilution Made	Reagent (Solvent)/ IS ID*	Pipette/ Syringe ID	Analyst	Date
320-77214	A-1-A	10X	TETRADECANE_00015	10µl NA	DB	8/26/21
320-76887	A-1-A	10X	↓	10µl NA	DB	8/26/21
400-206690	C-16-A	20X	↓	10µl NA	DB	8/26/21
			DB 8/26/21			

Log solvents into TALS, use TALS Reagent ID here; if adding IS, also input TALS Reagent ID for IS.

GENERAL CHEMISTRY

783729

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-76887-1

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-072721-BN-SJSB096 (0-2)	320-76887-1
11215702-072721-BN-SJSB096 (2-4)	320-76887-2
11215702-072721-BN-SJSB096 (4-6)	320-76887-3
11215702-072721-BN-SJSB096 (6-8)	320-76887-4
11215702-072721-BN-SJSB096 (8-10)	320-76887-5
11215702-072721-BN-SJSB096 (10-12)	320-76887-6
11215702-072721-BN-SJSB096 (12-14)	320-76887-7
11215702-072721-BN-SJSB096 (14-16)	320-76887-8
11215702-072721-BN-DUP-9	320-76887-13

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76887-1

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76887-1

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/30/2021 12:30 End Date: 07/30/2021 12:30

Lab Sample Id	D/F	Type	Time	Analytes	
				% Sol	Moist
320-76887-1	1	T	12:30	X	X
320-76887-1 DU	1	T	12:30	X	X
320-76887-2	1	T	12:30	X	X
320-76887-3	1	T	12:30	X	X
320-76887-4	1	T	12:30	X	X
320-76887-5	1	T	12:30	X	X
320-76887-6	1	T	12:30	X	X
320-76887-7	1	T	12:30	X	X
320-76887-8	1	T	12:30	X	X
ZZZZZZ			12:30		
320-76887-13	1	T	12:30	X	X
ZZZZZZ			12:30		
ZZZZZZ			12:30		
ZZZZZZ			12:30		
ZZZZZZ			12:30		
ZZZZZZ			12:30		
ZZZZZZ			12:30		
ZZZZZZ			12:30		
ZZZZZZ			12:30		
ZZZZZZ			12:30		
ZZZZZZ			12:30		

Prep Types:
T = Total/NA

FORM XIII-IN

783733

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76887-1

SDG No.:

Batch Number: 511708 Batch Start Date: 07/30/21 12:30 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/02/21 09:08

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76887-A-1	11215702-072721-BN-SJSB096 (0-2)	D 2216	T	1	1.04 g	8.68 g	4.78 g	51.0471204188482 %	48.9528795811518 %
320-76887-A-1 DU	11215702-072721-BN-SJSB096 (0-2)	D 2216	T	2	1.05 g	8.54 g	4.74 g	50.7343124165554 %	49.2656875834446 %
320-76887-A-2	11215702-072721-BN-SJSB096 (2-4)	D 2216	T	3	1.05 g	8.00 g	5.36 g	37.9856115107914 %	62.0143884892086 %
320-76887-A-3	11215702-072721-BN-SJSB096 (4-6)	D 2216	T	4	1.08 g	9.41 g	6.90 g	30.1320528211285 %	69.8679471788715 %
320-76887-A-4	11215702-072721-BN-SJSB096 (6-8)	D 2216	T	5	1.06 g	10.06 g	7.20 g	31.777777777778 %	68.222222222222 %
320-76887-A-5	11215702-072721-BN-SJSB096 (8-10)	D 2216	T	6	1.05 g	7.64 g	5.45 g	33.2321699544765 %	66.7678300455235 %
320-76887-A-6	11215702-072721-BN-SJSB096 (10-12)	D 2216	T	7	1.05 g	8.18 g	5.75 g	34.0813464235624 %	65.9186535764376 %
320-76887-A-7	11215702-072721-BN-SJSB096 (12-14)	D 2216	T	8	1.03 g	9.25 g	7.06 g	26.6423357664234 %	73.3576642335766 %
320-76887-A-8	11215702-072721-BN-SJSB096 (14-16)	D 2216	T	9	1.02 g	9.32 g	7.02 g	27.710843373494 %	72.289156626506 %
320-76887-A-13	11215702-072721-BN-DUP-9	D 2216	T	11	1.06 g	9.91 g	6.82 g	34.9152542372881 %	65.0847457627119 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	08/02/2021 08:37
Date and Time Samples out of Desiccator	08/02/2021 09:08
Date samples were placed in the oven	07/30/2021
Oven Temp In	114 Degrees C
Time samples were place in the oven	12:30
Date samples were removed from oven	08/02/2021
Oven Temp Out	113 Degrees C
Time Samples were removed from oven	08:37
Oven ID	Soil Prep #2
Thermometer ID	151969607

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76887-1

SDG No.:

Batch Number: 511708 Batch Start Date: 07/30/21 12:30 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/02/21 09:08

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-76887-1

Batch: 511708
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76887-A-1

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	51.0471204188482	%
Percent Solids	None	1	48.9528795811518	%

Lab Sample ID: 320-76887-A-1 DU

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	50.7343124165554	%
Percent Solids	None	1	49.2656875834446	%

Lab Sample ID: 320-76887-A-2

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	37.9856115107914	%
Percent Solids	None	1	62.0143884892086	%

Lab Sample ID: 320-76887-A-3

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	30.1320528211285	%
Percent Solids	None	1	69.8679471788715	%

Lab Sample ID: 320-76887-A-4

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	31.7777777777778	%
Percent Solids	None	1	68.2222222222222	%

Lab Sample ID: 320-76887-A-5

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	33.2321699544765	%
Percent Solids	None	1	66.7678300455235	%

Lab Sample ID: 320-76887-A-6

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	34.0813464235624	%
Percent Solids	None	1	65.9186535764376	%

Lab Sample ID: 320-76887-A-7

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	26.6423357664234	%
Percent Solids	None	1	73.3576642335766	%

Lab Sample ID: 320-76887-A-8

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	27.710843373494	%
Percent Solids	None	1	72.289156626506	%

General Chemistry Raw Data Report

Job ID: 320-76887-1

Batch: 511708 (Continued)
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76887-A-13

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	34.9152542372881	%
Percent Solids	None	1	65.0847457627119	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P
1.00	1.00	200.00	200.00	8/1/2021	DM	WT-3	P
1.00	1.00	200.00	200.00	08/02/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

783740

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 1 of 2
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702 - 2021 - 001			

Analysis Requested

320-76887 Chain of Custody

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072721-BN-SJSB096 (0-2)	7-27-21	1245	G	S	N	N	X	X	X		
(2-4)		1250			N	Y	X	X	X		MS/MSD
(4-6)		1255			N	N	X	X	X		
(6-8)		1300			N	N	X	X	X		
(8-10)		1305			N	N	X	X	X		
(10-12)		1310			N	N	X	X	X		
(12-14)		1315			N	N	X	X	X		
(14-16)		1320			N	N	X	X	X		
(16-18)		1325			N	N	X	X	X		Priority
(18-20)		1330			N	N	X	X	X		HOLD
(20-22)		1335			N	N	X	X	X		HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: fed-ex		
Relinquished by: Breanna North	Date/Time: 7-27-21 1500	Company: GHD	Received by: [signature]	Date/Time: 7/28/21 945	Company: [illegible]
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☒ Yes ☐ No
Custody Seal No.: 1519355

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

783741

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

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Chain of Custody Record

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 2 of 2
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072721-BN-SJSB096(22-24)	7-27-21	1340	G	S	N	N	X	X	X		HOLD
11215702-072721-BN-DUP-9	7-27-21	—	G	S	N	N	X	X	X		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by: Breanna North	Date/Time: 7-27-21 1500	Company: GHD	Received by: [signature]	Date/Time: 7/29/21 945	Company: BAV
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ✓ Yes ☐ No
Custody Seal No.: 151 9355
Cooler Temperature(s) °C and Other Remarks: 1.0

• Sample #12 no time on container label 7/29/21

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-76887-1

Login Number: 76887
List Number: 1
Creator: Gonzales, Justinn

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1519355
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Job Number: 320-76887-2

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
8/26/2021 4:13 PM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
08/26/2021

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 7/29/2021 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0º C.

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: (CCV 320-517729/2). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 320-513586 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Job ID: 320-76887-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072721-BN-SJSB096 (16-18) — Lab Sample ID: 320-76887-9

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	8.7		1.4	0.16	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.53	J q	6.9	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.5	J	6.9	0.29	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.91	J q	6.9	0.036	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	27	B	6.9	0.26	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.40	J q	6.9	0.050	pg/g	1	☼	1613B	Total/NA
OCDD	600	B	14	0.67	pg/g	1	☼	1613B	Total/NA
OCDF	0.60	J	14	0.071	pg/g	1	☼	1613B	Total/NA
Total TCDD	8.7		1.4	0.16	pg/g	1	☼	1613B	Total/NA
Total TCDF	60	q	1.4	0.21	pg/g	1	☼	1613B	Total/NA
Total PeCDD	9.2		6.9	0.15	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.53	J q	6.9	0.11	pg/g	1	☼	1613B	Total/NA
Total HxCDD	42	q	6.9	0.31	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.91	J q	6.9	0.036	pg/g	1	☼	1613B	Total/NA
Total HpCDD	130	B	6.9	0.26	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.40	J q	6.9	0.054	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	32		1.4	0.30	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-2

Client Sample ID: 11215702-072721-BN-SJSB096 (16-18)

Lab Sample ID: 320-76887-9

Date Collected: 07/27/21 13:25
Matrix: Sediment
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26.8		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	73.2		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072721-BN-SJSB096 (16-18)

Lab Sample ID: 320-76887-9

Date Collected: 07/27/21 13:25
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 73.2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	8.7		1.4	0.16	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
1,2,3,7,8-PeCDD	ND		6.9	0.15	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
1,2,3,7,8-PeCDF	0.53	J q	6.9	0.11	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
2,3,4,7,8-PeCDF	ND		6.9	0.12	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
1,2,3,4,7,8-HxCDD	ND		6.9	0.29	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
1,2,3,6,7,8-HxCDD	ND		6.9	0.33	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
1,2,3,7,8,9-HxCDD	2.5	J	6.9	0.29	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
1,2,3,4,7,8-HxCDF	0.91	J q	6.9	0.036	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
1,2,3,6,7,8-HxCDF	ND		6.9	0.036	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
1,2,3,7,8,9-HxCDF	ND		6.9	0.036	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
2,3,4,6,7,8-HxCDF	ND		6.9	0.034	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
1,2,3,4,6,7,8-HpCDD	27	B	6.9	0.26	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
1,2,3,4,6,7,8-HpCDF	0.40	J q	6.9	0.050	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
1,2,3,4,7,8,9-HpCDF	ND		6.9	0.059	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
OCDD	600	B	14	0.67	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
OCDF	0.60	J	14	0.071	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
Total TCDD	8.7		1.4	0.16	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
Total TCDF	60	q	1.4	0.21	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
Total PeCDD	9.2		6.9	0.15	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
Total PeCDF	0.53	J q	6.9	0.11	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
Total HxCDD	42	q	6.9	0.31	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
Total HxCDF	0.91	J q	6.9	0.036	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
Total HpCDD	130	B	6.9	0.26	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1
Total HpCDF	0.40	J q	6.9	0.054	pg/g	☼	08/06/21 05:28	08/18/21 18:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*59*		*25 - 164*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-2,3,7,8-TCDF	*55*		*24 - 169*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-1,2,3,7,8-PeCDD	*54*		*25 - 181*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-1,2,3,7,8-PeCDF	*53*		*24 - 185*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-2,3,4,7,8-PeCDF	*58*		*21 - 178*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-1,2,3,4,7,8-HxCDD	*66*		*32 - 141*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-1,2,3,6,7,8-HxCDD	*57*		*28 - 130*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-1,2,3,4,7,8-HxCDF	*74*		*26 - 152*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-1,2,3,6,7,8-HxCDF	*65*		*26 - 123*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-1,2,3,7,8,9-HxCDF	*56*		*29 - 147*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-2,3,4,6,7,8-HxCDF	*61*		*28 - 136*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*60*		*23 - 140*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*63*		*28 - 143*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*57*		*26 - 138*	*08/06/21 05:28*	*08/18/21 18:01*	*1*
13C-OCDD	*63*		*17 - 157*	*08/06/21 05:28*	*08/18/21 18:01*	*1*

Client Sample ID: 11215702-072721-BN-SJSB096 (16-18) Lab Sample ID: 320-76887-9

Date Collected: 07/27/21 13:25 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 73.2**

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*71*		*35 - 197*	*08/06/21 05:28*	*08/18/21 18:01*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**32**		1.4	0.30	pg/g	☼	08/06/21 05:28	08/23/21 18:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*58*		*24 - 169*	*08/06/21 05:28*	*08/23/21 18:07*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*75*		*35 - 197*	*08/06/21 05:28*	*08/23/21 18:07*	*1*

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-2

Client Sample ID: 11215702-072721-BN-SJSB096 (16-18) — Lab Sample ID: 320-76887-9

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
2,3,7,8-TCDD	**8.7**		1.4	0.16	pg/g	1	**8.7**	1613B
1,2,3,7,8-PeCDD	ND		6.9	0.15	pg/g	1	0.075	1613B
1,2,3,7,8-PeCDF	**0.53**	**J q**	6.9	0.11	pg/g	0.03	**0.016**	1613B
2,3,4,7,8-PeCDF	ND		6.9	0.12	pg/g	0.3	0.018	1613B
1,2,3,4,7,8-HxCDD	ND		6.9	0.29	pg/g	0.1	0.015	1613B
1,2,3,6,7,8-HxCDD	ND		6.9	0.33	pg/g	0.1	0.017	1613B
1,2,3,7,8,9-HxCDD	**2.5**	**J**	6.9	0.29	pg/g	0.1	**0.25**	1613B
1,2,3,4,7,8-HxCDF	**0.91**	**J q**	6.9	0.036	pg/g	0.1	**0.091**	1613B
1,2,3,6,7,8-HxCDF	ND		6.9	0.036	pg/g	0.1	0.0018	1613B
1,2,3,7,8,9-HxCDF	ND		6.9	0.036	pg/g	0.1	0.0018	1613B
2,3,4,6,7,8-HxCDF	ND		6.9	0.034	pg/g	0.1	0.0017	1613B
1,2,3,4,6,7,8-HpCDD	**27**	**B**	6.9	0.26	pg/g	0.01	**0.27**	1613B
1,2,3,4,6,7,8-HpCDF	**0.40**	**J q**	6.9	0.050	pg/g	0.01	**0.0040**	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.9	0.059	pg/g	0.01	0.00030	1613B
OCDD	**600**	**B**	14	0.67	pg/g	0.0003	**0.18**	1613B
OCDF	**0.60**	**J**	14	0.071	pg/g	0.0003	**0.00018**	1613B
2,3,7,8-TCDF - RA	**32**		1.4	0.30	pg/g	0.1	**3.2**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
Total Dioxin/Furan TEQ					pg/g		13	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-76887-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-76887-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (35-197)							
320-76887-9	11215702-072721-BN-SJSB096	71							
320-76887-9 - RA	11215702-072721-BN-SJSB096 (16-18)	75							
320-76887-A-2-B MS	Matrix Spike	115							
320-76887-A-2-B MS - RA	Matrix Spike	65							
320-76887-A-2-C MSD	Matrix Spike Duplicate	112							
320-76887-A-2-C MSD - RA	Matrix Spike Duplicate	81							
MB 320-513586/1-A	Method Blank	68							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (31-191)							
LCS 320-513586/2-A	Lab Control Sample	69							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76887-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD	TCDF	PeCDD	PeCDF	PeCF	HxCDD	HxDD	HxCDF
Lab Sample ID	Client Sample ID	(25-164)	(24-169)	(25-181)	(24-185)	(21-178)	(32-141)	(28-130)	(26-152)
320-76887-9	11215702-072721-BN-SJSB096	59	55	54	53	58	66	57	74
320-76887-9 - RA	11215702-072721-BN-SJSB096 (16-18)		58						
320-76887-A-2-B MS	Matrix Spike	58	57	63	59	65	64	59	65
320-76887-A-2-B MS - RA	Matrix Spike		44						
320-76887-A-2-C MSD	Matrix Spike Duplicate	54	55	58	55	57	56	52	57
320-76887-A-2-C MSD - RA	Matrix Spike Duplicate		42						
MB 320-513586/1-A	Method Blank	59	57	58	61	65	65	60	74

		Percent Isotope Dilution Recovery (Acceptance Limits)						
		HxDF	HxCF	13CHxCF	HpCDD	HpCDF	HpCDF2	OCDD
Lab Sample ID	Client Sample ID	(26-123)	(29-147)	(28-136)	(23-140)	(28-143)	(26-138)	(17-157)
320-76887-9	11215702-072721-BN-SJSB096	65	56	61	60	63	57	63
320-76887-9 - RA	11215702-072721-BN-SJSB096 (16-18)							
320-76887-A-2-B MS	Matrix Spike	57	57	59	60	57	64	62
320-76887-A-2-B MS - RA	Matrix Spike							
320-76887-A-2-C MSD	Matrix Spike Duplicate	52	54	55	56	52	61	57
320-76887-A-2-C MSD - RA	Matrix Spike Duplicate							
MB 320-513586/1-A	Method Blank	64	61	61	72	65	78	76

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD	TCDF	PeCDD	PeCDF	PeCF	HxCDD	HxDD	HxCDF
Lab Sample ID	Client Sample ID	(20-175)	(22-152)	(21-227)	(21-192)	(13-328)	(21-193)	(25-163)	(19-202)
LCS 320-513586/2-A	Lab Control Sample	54	54	59	56	63	60	54	67

		Percent Isotope Dilution Recovery (Acceptance Limits)						
		HxDF	HxCF	13CHxCF	HpCDD	HpCDF	HpCDF2	OCDD
Lab Sample ID	Client Sample ID	(21-159)	(17-205)	(22-176)	(26-166)	(21-158)	(20-186)	(13-199)
LCS 320-513586/2-A	Lab Control Sample	58	53	54	67	63	72	71

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76887-2

Project/Site: SJRWP Supplemental Design Investigation

TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-513586/1-A
Matrix: Sediment
Analysis Batch: 517196

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513586

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.031	pg/g		08/06/21 05:28	08/17/21 17:01	1
2,3,7,8-TCDF	ND		1.0	0.011	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8-PeCDD	ND		5.0	0.041	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8-PeCDF	ND		5.0	0.026	pg/g		08/06/21 05:28	08/17/21 17:01	1
2,3,4,7,8-PeCDF	ND		5.0	0.028	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.034	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.034	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.031	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.015	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.016	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.015	pg/g		08/06/21 05:28	08/17/21 17:01	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.015	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,6,7,8-HpCDD	0.198	J q	5.0	0.021	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	0.039	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.037	pg/g		08/06/21 05:28	08/17/21 17:01	1
OCDD	0.435	J q	10	0.035	pg/g		08/06/21 05:28	08/17/21 17:01	1
OCDF	ND		10	0.061	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total TCDD	ND		1.0	0.031	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total TCDF	ND		1.0	0.13	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total PeCDD	ND		5.0	0.16	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total PeCDF	ND		5.0	0.028	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HxCDD	ND		5.0	0.16	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HxCDF	ND		5.0	0.036	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HpCDD	0.357	J q	5.0	0.021	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HpCDF	ND		5.0	0.039	pg/g		08/06/21 05:28	08/17/21 17:01	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*59*		*25 - 164*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-2,3,7,8-TCDF	*57*		*24 - 169*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,7,8-PeCDD	*58*		*25 - 181*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,7,8-PeCDF	*61*		*24 - 185*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-2,3,4,7,8-PeCDF	*65*		*21 - 178*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,7,8-HxCDD	*65*		*32 - 141*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,6,7,8-HxCDD	*60*		*28 - 130*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,7,8-HxCDF	*74*		*26 - 152*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,6,7,8-HxCDF	*64*		*26 - 123*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,7,8,9-HxCDF	*61*		*29 - 147*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-2,3,4,6,7,8-HxCDF	*61*		*28 - 136*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*72*		*23 - 140*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*65*		*28 - 143*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*78*		*26 - 138*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-OCDD	*76*		*17 - 157*	*08/06/21 05:28*	*08/17/21 17:01*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*68*		*35 - 197*	*08/06/21 05:28*	*08/17/21 17:01*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-513586/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517196 **Prep Batch: 513586**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	21.3		pg/g		107	67 - 158
2,3,7,8-TCDF	20.0	21.8		pg/g		109	75 - 158
1,2,3,7,8-PeCDD	100	112		pg/g		112	70 - 142
1,2,3,7,8-PeCDF	100	114		pg/g		114	80 - 134
2,3,4,7,8-PeCDF	100	105		pg/g		105	68 - 160
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	70 - 164
1,2,3,6,7,8-HxCDD	100	111		pg/g		111	76 - 134
1,2,3,7,8,9-HxCDD	100	110		pg/g		110	64 - 162
1,2,3,4,7,8-HxCDF	100	107		pg/g		107	72 - 134
1,2,3,6,7,8-HxCDF	100	112		pg/g		112	84 - 130
1,2,3,7,8,9-HxCDF	100	116		pg/g		116	78 - 130
2,3,4,6,7,8-HxCDF	100	117		pg/g		117	70 - 156
1,2,3,4,6,7,8-HpCDD	100	108		pg/g		108	70 - 140
1,2,3,4,6,7,8-HpCDF	100	112		pg/g		112	82 - 122
1,2,3,4,7,8,9-HpCDF	100	105		pg/g		105	78 - 138
OCDD	200	228		pg/g		114	78 - 144
OCDF	200	248		pg/g		124	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*54*		*20 - 175*
13C-2,3,7,8-TCDF	*54*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*59*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*56*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*63*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*60*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*54*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*67*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*58*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*53*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*54*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*67*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*63*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*72*		*20 - 186*
13C-OCDD	*71*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*69*		*31 - 191*

Lab Sample ID: 320-76887-A-2-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517729 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	15000	E G	31.9	16100	E G 4	pg/g	☼	4297	67 - 158
1,2,3,7,8-PeCDD	130	F1	159	329		pg/g	☼	123	70 - 142
1,2,3,7,8-PeCDF	1300		159	1590	4	pg/g	☼	212	80 - 134
2,3,4,7,8-PeCDF	930		159	1230	4	pg/g	☼	193	68 - 160
1,2,3,4,7,8-HxCDD	2.1	J	159	161		pg/g	☼	100	70 - 164

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76887-A-2-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517729 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	4.0	J q	159	183		pg/g	☼	112	76 - 134
1,2,3,7,8,9-HxCDD	2.6	J	159	164		pg/g	☼	101	64 - 162
1,2,3,4,7,8-HxCDF	2000		159	1950	4	pg/g	☼	-31	72 - 134
1,2,3,6,7,8-HxCDF	500	F1	159	647		pg/g	☼	94	84 - 130
1,2,3,7,8,9-HxCDF	23	J	159	173		pg/g	☼	94	78 - 130
2,3,4,6,7,8-HxCDF	47	J	159	215		pg/g	☼	105	70 - 156
1,2,3,4,6,7,8-HpCDD	43	J B	159	219		pg/g	☼	110	70 - 140
1,2,3,4,6,7,8-HpCDF	650		159	701	4	pg/g	☼	32	82 - 122
1,2,3,4,7,8,9-HpCDF	200		159	325		pg/g	☼	78	78 - 138
OCDD	610	B F1	319	1020		pg/g	☼	129	78 - 144
OCDF	290		319	555		pg/g	☼	83	63 - 170

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*58*		*25 - 164*
13C-2,3,7,8-TCDF	*57*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*63*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*59*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*65*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*64*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*59*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*65*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*57*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*57*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*59*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*60*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*57*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*64*		*26 - 138*
13C-OCDD	*62*		*17 - 157*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*115*		*35 - 197*

Lab Sample ID: 320-76887-A-2-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517729 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	15000	E G	30.9	19400	E G 4	pg/g	☼	15092	67 - 158	19	50
1,2,3,7,8-PeCDD	130	F1	154	366	F1	pg/g	☼	151	70 - 142	11	50
1,2,3,7,8-PeCDF	1300		154	2150	4	pg/g	☼	584	80 - 134	30	50
2,3,4,7,8-PeCDF	930		154	1450	4	pg/g	☼	337	68 - 160	16	50
1,2,3,4,7,8-HxCDD	2.1	J	154	162		pg/g	☼	103	70 - 164	0	50
1,2,3,6,7,8-HxCDD	4.0	J q	154	183		pg/g	☼	116	76 - 134	0	50
1,2,3,7,8,9-HxCDD	2.6	J	154	172		pg/g	☼	110	64 - 162	5	50
1,2,3,4,7,8-HxCDF	2000		154	2640	4	pg/g	☼	420	72 - 134	30	50
1,2,3,6,7,8-HxCDF	500	F1	154	831	F1	pg/g	☼	217	84 - 130	25	50
1,2,3,7,8,9-HxCDF	23	J	154	186		pg/g	☼	106	78 - 130	7	50
2,3,4,6,7,8-HxCDF	47	J	154	236		pg/g	☼	122	70 - 156	9	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76887-A-2-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517729 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	43	J B	154	240		pg/g	☼	127	70 - 140	9	50
1,2,3,4,6,7,8-HpCDF	650		154	893	4	pg/g	☼	158	82 - 122	24	50
1,2,3,4,7,8,9-HpCDF	200		154	386		pg/g	☼	120	78 - 138	17	50
OCDD	610	B F1	309	1240	F1	pg/g	☼	202	78 - 144	19	50
OCDF	290		309	649		pg/g	☼	116	63 - 170	16	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*54*		*25 - 164*
13C-2,3,7,8-TCDF	*55*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*58*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*55*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*57*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*56*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*52*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*57*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*52*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*54*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*55*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*56*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*52*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*61*		*26 - 138*
13C-OCDD	*57*		*17 - 157*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*112*		*35 - 197*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: 320-76887-A-2-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519744 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDF - RA	61000	E G	31.9	71100	E 4 G	pg/g	☼	30642	75 - 158		

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDF - RA	*44*		*24 - 169*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD - RA	*65*		*35 - 197*

Lab Sample ID: 320-76887-A-2-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519744 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	61000	E G	30.9	74700	E 4 G	pg/g	☼	43487	75 - 158	5	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA (Continued)

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDF - RA	42		24 - 169

Surrogate	MSD %Recovery	MSD Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	81		35 - 197

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-76887-2
Project/Site: SJRWP Supplemental Design Investigation

Specialty Organics

Prep Batch: 513586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-9 - RA	11215702-072721-BN-SJSB096 (16-18)	Total/NA	Sediment	HRMS-Sox	
320-76887-9	11215702-072721-BN-SJSB096 (16-18)	Total/NA	Sediment	HRMS-Sox	
MB 320-513586/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-513586/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-76887-A-2-B MS	Matrix Spike	Total/NA	Sediment	HRMS-Sox	
320-76887-A-2-B MS - RA	Matrix Spike	Total/NA	Sediment	HRMS-Sox	
320-76887-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	HRMS-Sox	
320-76887-A-2-C MSD - RA	Matrix Spike Duplicate	Total/NA	Sediment	HRMS-Sox	

Analysis Batch: 517196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-513586/1-A	Method Blank	Total/NA	Sediment	1613B	513586
LCS 320-513586/2-A	Lab Control Sample	Total/NA	Sediment	1613B	513586

Analysis Batch: 517461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-9	11215702-072721-BN-SJSB096 (16-18)	Total/NA	Sediment	1613B	513586

Analysis Batch: 517729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-A-2-B MS	Matrix Spike	Total/NA	Sediment	1613B	513586
320-76887-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	1613B	513586

Analysis Batch: 518979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-9 - RA	11215702-072721-BN-SJSB096 (16-18)	Total/NA	Sediment	1613B	513586

Analysis Batch: 519744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-A-2-B MS - RA	Matrix Spike	Total/NA	Sediment	1613B	513586
320-76887-A-2-C MSD - RA	Matrix Spike Duplicate	Total/NA	Sediment	1613B	513586

General Chemistry

Analysis Batch: 511708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76887-9	11215702-072721-BN-SJSB096 (16-18)	Total/NA	Sediment	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Job ID: 320-76887-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072721-BN-SJSB096 (16-18)
Lab Sample ID: 320-76887-9

Date Collected: 07/27/21 13:25
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072721-BN-SJSB096 (16-18)
Lab Sample ID: 320-76887-9

Date Collected: 07/27/21 13:25
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 73.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518979	08/23/21 18:07	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517461	08/18/21 18:01	KSS	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-76887-2
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDD
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDF
1613B	HRMS-Sox	Sediment	OCDD
1613B	HRMS-Sox	Sediment	OCDF
1613B	HRMS-Sox	Sediment	Total HpCDD
1613B	HRMS-Sox	Sediment	Total HpCDF
1613B	HRMS-Sox	Sediment	Total HxCDD
1613B	HRMS-Sox	Sediment	Total HxCDF
1613B	HRMS-Sox	Sediment	Total PeCDD
1613B	HRMS-Sox	Sediment	Total PeCDF
1613B	HRMS-Sox	Sediment	Total TCDD
1613B	HRMS-Sox	Sediment	Total TCDF
D 2216		Sediment	Percent Moisture
D 2216		Sediment	Percent Solids
TEQ		Sediment	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-2

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76887-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76887-9	11215702-072721-BN-SJSB096 (16-18)	Sediment	07/27/21 13:25	07/29/21 09:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: WDM 320-510264/1 Client Sample ID:

Date Analyzed: 07/26/21 09:21 Lab File ID: 26JL2110D5_1.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,6,8-TCDF	15.13	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,6,8-TCDD	16.07	Peak assignment corrected	arghestanis	07/26/21 12:21
2,3,4,7-TCDF	17.63	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,7-TCDD	18.22	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDD	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDF	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,8,9-TCDD	19.47	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,8,9-TCDF	19.49	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,4,6,8-PeCDF	19.76	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,4,7,9-PeCDD	21.58	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDD	25.91	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDF	26.14	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,8-HxCDF	28.48	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,4,6,7,9-HxCDD	30.02	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,7-HxCDD	32.30	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,3,4,8,9-HxCDF	32.61	Peak assignment corrected	arghestanis	07/26/21 12:23

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: IC 320-510264/3 Client Sample ID:

Date Analyzed: 07/26/21 10:51 Lab File ID: 26JL2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.35	Invalid Compound ID	stephensk	07/27/21 08:15

Lab Sample ID: IC 320-510264/4 Client Sample ID:

Date Analyzed: 07/26/21 11:36 Lab File ID: 26JL2110D5_4.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,4,7,8-PeCDF	24.13	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDF	30.84	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDD	31.93	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8,9-HpCDF	35.01	Peak assignment corrected	arghestanis	07/26/21 12:31

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 517729

Lab Sample ID: 320-76887-A-2-C MSD Client Sample ID:

Date Analyzed: 08/18/21 21:04 Lab File ID: 18AU2110D5_10.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,7,8-PeCDF	22.34	Peak Tail	bennettd	08/19/21 13:06

1613B

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

1613B

783769

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 518979

Lab Sample ID: 320-76887-9 RA Client Sample ID: 11215702-072721-BN-SJSB096 (16-18) RA

Date Analyzed: 08/23/21 18:07 Lab File ID: 23AU21A11D2_005.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.66	Peak Tail	bennettd	08/24/21 09:14

1613B

783770

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 519744

Lab Sample ID: 320-76887-A-2-B MS RA Client Sample ID:

Date Analyzed: 08/25/21 22:33 Lab File ID: 25AU21A11D2_016.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.08	Retention Time Shift	stephensk	08/26/21 09:24
13C-2,3,7,8-TCDF	17.62	Poor chromatography	stephensk	08/26/21 09:23

Lab Sample ID: 320-76887-A-2-C MSD RA Client Sample ID:

Date Analyzed: 08/25/21 23:11 Lab File ID: 25AU21A11D2_017.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.62	Poor chromatography	stephensk	08/26/21 09:26

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-2

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517196

Lab Sample ID: CCV 320-517196/2 Client Sample ID:

Date Analyzed: 08/17/21 15:14 Lab File ID: 17au21dfs1_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.54	Baseline	stephensk	08/17/21 16:07
13C-1,2,3,4-TCDD	21.51	Peak assignment corrected	stephensk	08/17/21 16:07
13C-1,2,3,7,8,9-HxCDD	36.67	Baseline	stephensk	08/17/21 16:09
13C-1,2,3,4,7,8,9-HpCDF	39.92	Baseline	stephensk	08/17/21 16:09

Lab Sample ID: MB 320-513586/1-A Client Sample ID:

Date Analyzed: 08/17/21 17:01 Lab File ID: 17au21dfs1_5.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,6,7,8-HpCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,4,7,8,9-HpCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/19/21 12:06
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
2,3,7,8-TCDD		Invalid Compound ID	stephensk	08/17/21 18:31
2,3,7,8-TCDF		Invalid Compound ID	dadunj	08/19/21 12:06
OCDF		Invalid Compound ID	dadunj	08/19/21 12:07
1,2,3,4,6,7,8-HpCDD	39.61	Invalid Compound ID	dadunj	08/19/21 12:07
OCDD	42.12	Baseline	dadunj	08/19/21 12:07

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76887-2

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517461

Lab Sample ID: CCV 320-517461/29 Client Sample ID:

Date Analyzed: 08/18/21 13:48 Lab File ID: 17au21dfs1_32.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.52	Baseline	stephensk	08/18/21 14:38
13C-1,2,3,4-TCDD	21.44	Peak assignment corrected	stephensk	08/18/21 14:37
2,3,7,8-TCDD	21.88	Incomplete Integration	stephensk	08/18/21 14:38
13C-1,2,3,7,8,9-HxCDD	36.62	Baseline	stephensk	08/18/21 15:08
13C-1,2,3,4,7,8,9-HpCDF	39.88	Baseline	stephensk	08/18/21 14:43

Lab Sample ID: 320-76887-9 Client Sample ID: 11215702-072721-BN-SJSB096 (16-18)

Date Analyzed: 08/18/21 18:01 Lab File ID: 17au21dfs1_37.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/20/21 09:10
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/20/21 09:11
2,3,7,8-TCDD	21.83	Split Peak	dadunj	08/20/21 09:09
1,2,3,7,8-PeCDF	27.28	Baseline	dadunj	08/20/21 09:10
1,2,3,4,7,8-HxCDF	34.98	Baseline	dadunj	08/20/21 09:10
1,2,3,4,6,7,8-HpCDF	38.66	Baseline	dadunj	08/20/21 09:11
OCDF	42.17	Split Peak	dadunj	08/20/21 09:11

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL

783778

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL

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REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

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REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL

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REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30		CIL, Lot ER09031903		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

783792

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

783794

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

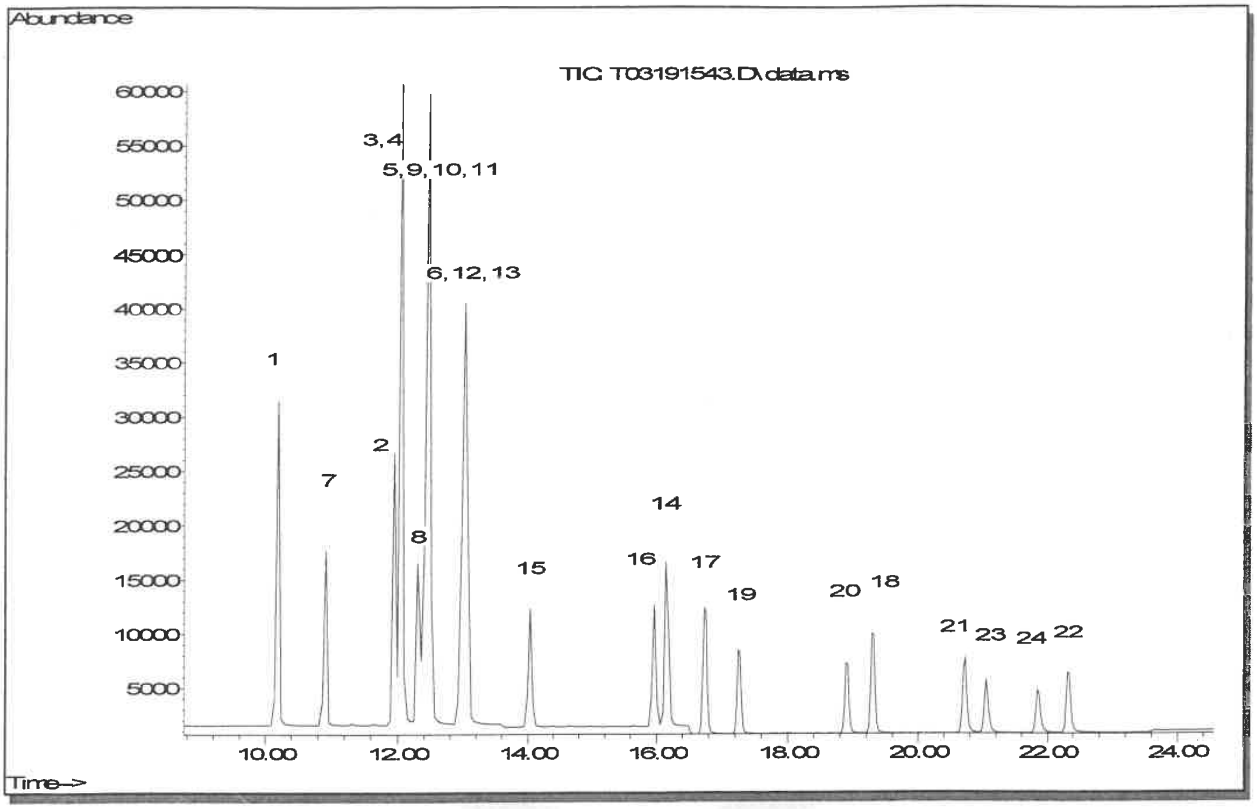

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

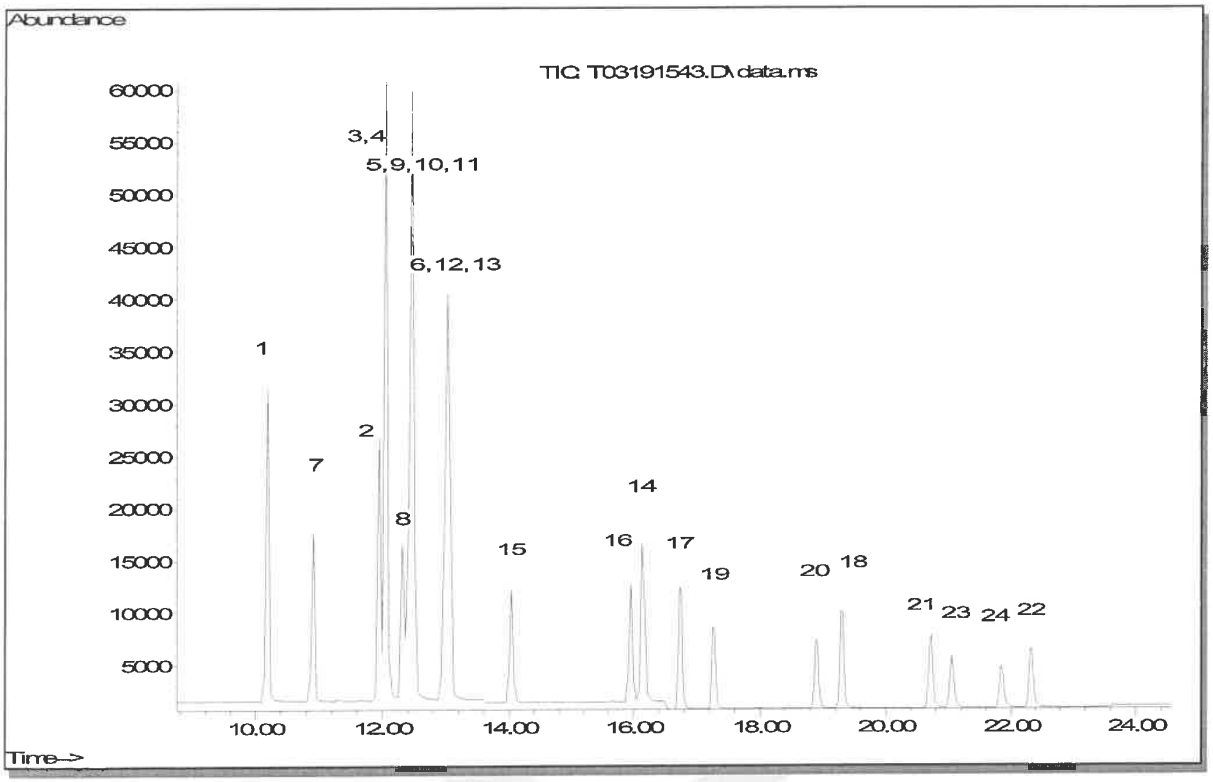

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r: 3/30/20

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

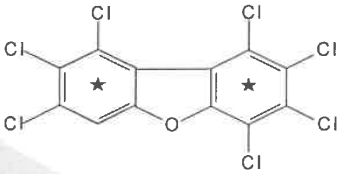

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

783808

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

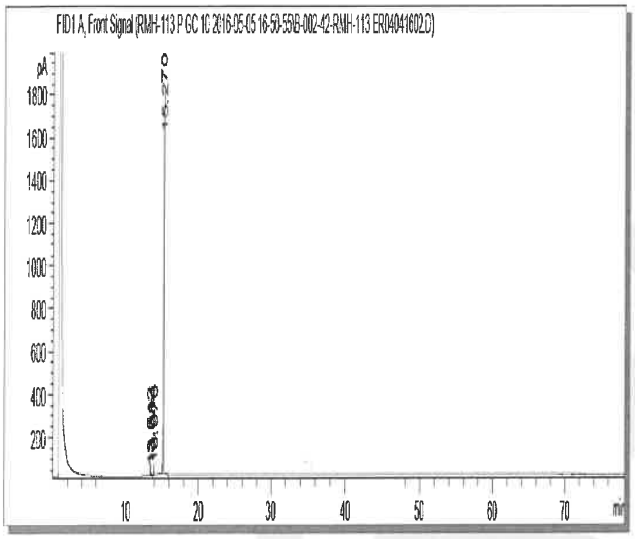

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

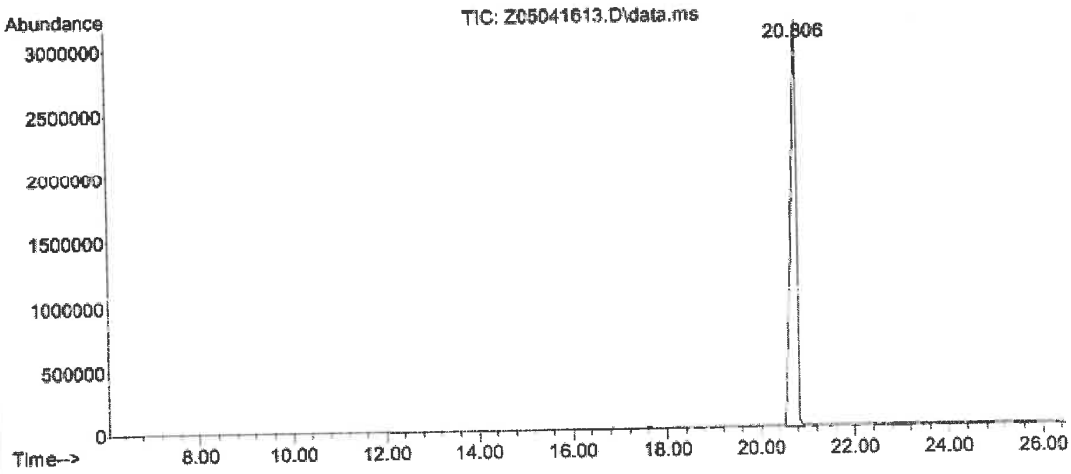

Mass Spectrum

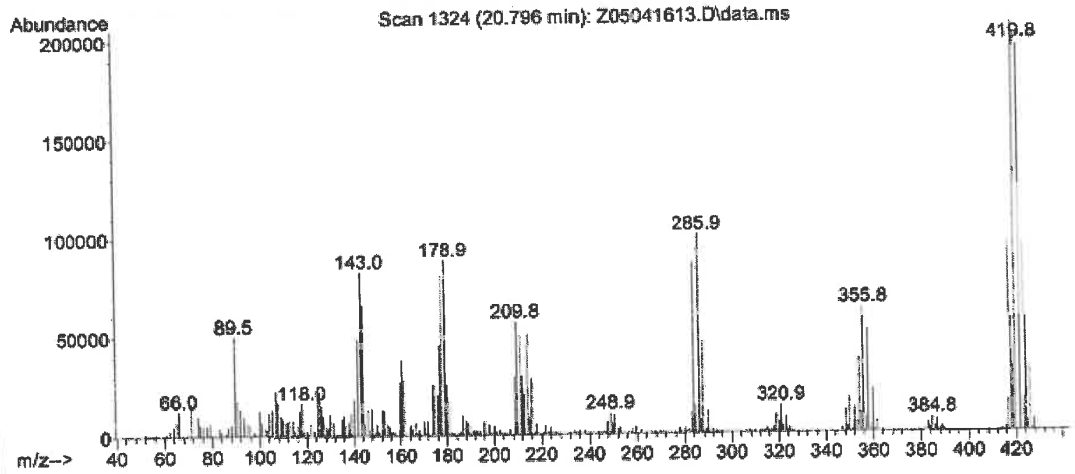

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 [illegible]

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

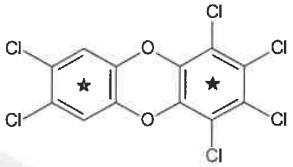

Catalog Number: ED-946
Solution Lot: ER04211601
Expiration Date: June 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

783815

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

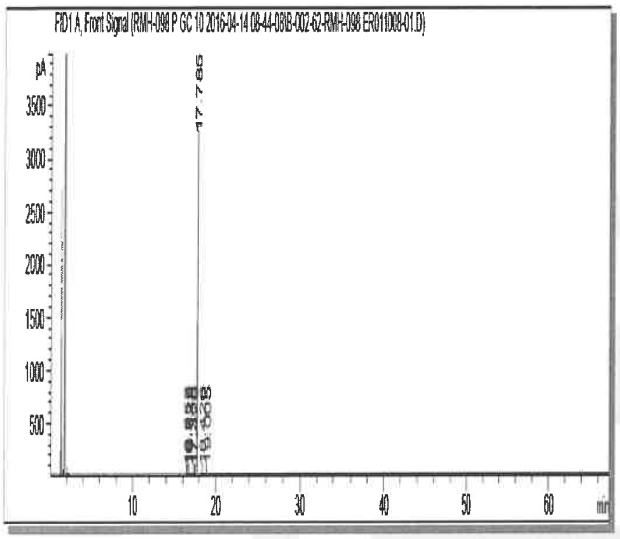

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument:	GC#10
Sample Name:	ER011008-01
Acquired:	April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

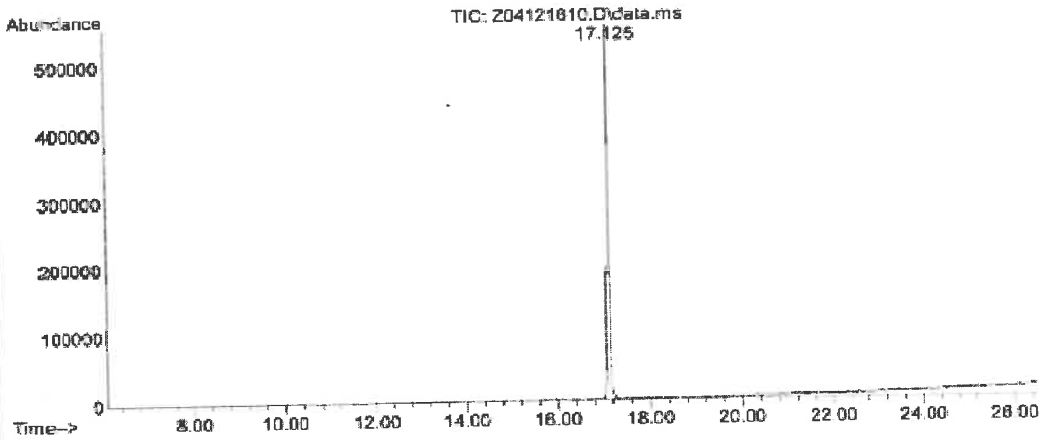

Mass Spectrum

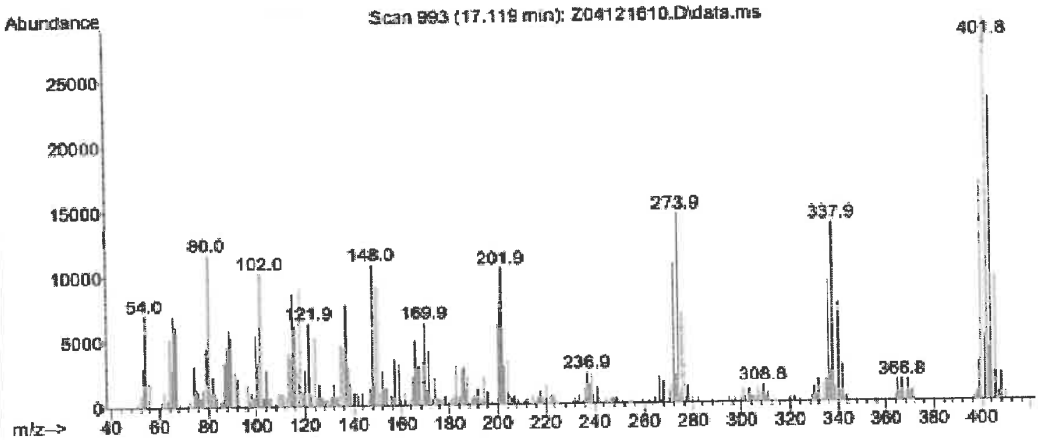

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

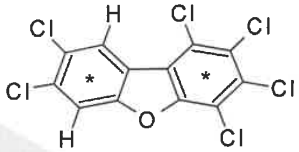

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

783820

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot:	ER11281601

Chemical Formula:	$^{13}C_{12}Cl_6H_2O$
CAS Number:	114423-98-2
Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

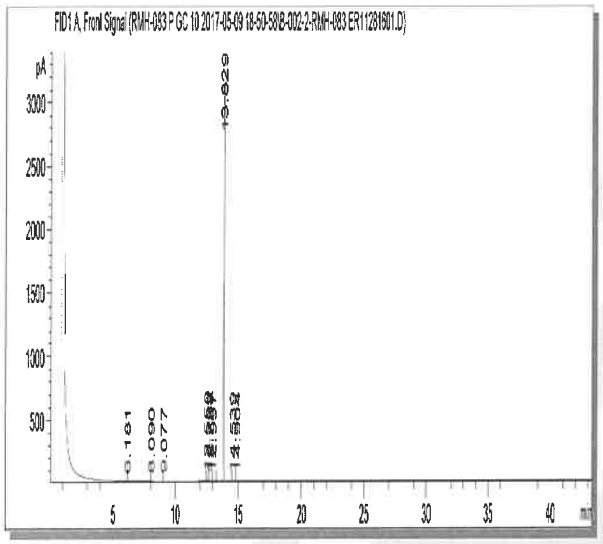

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

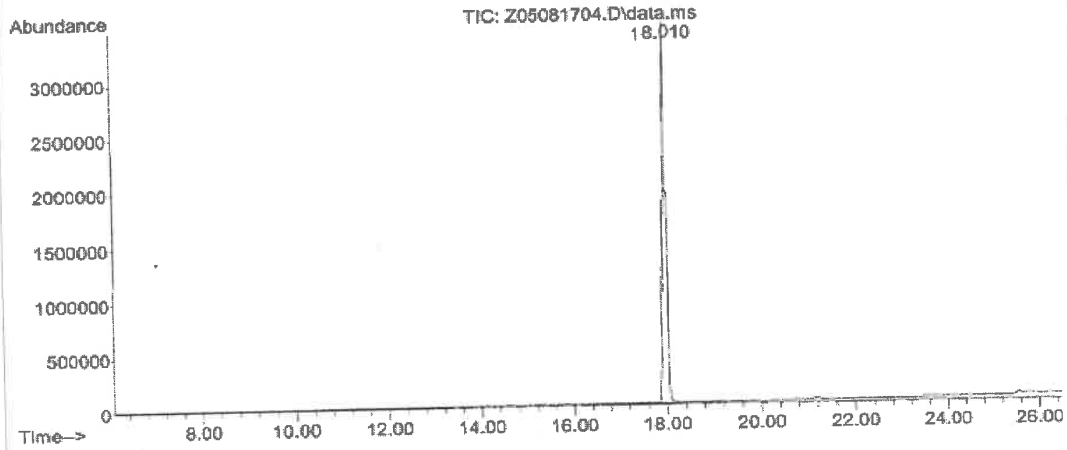

Mass Spectrum

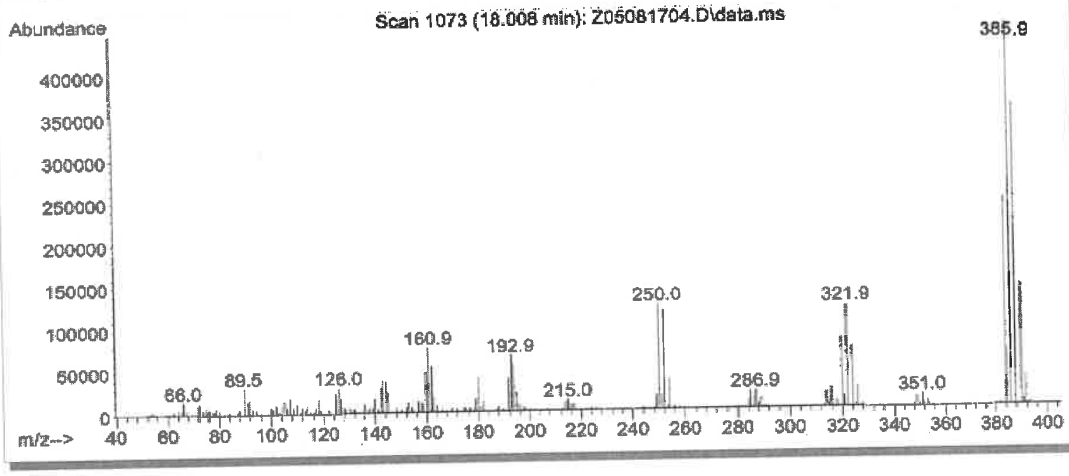

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

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Analytical Reference Standards
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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

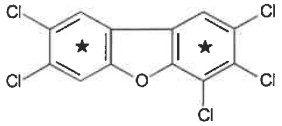

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

783825

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

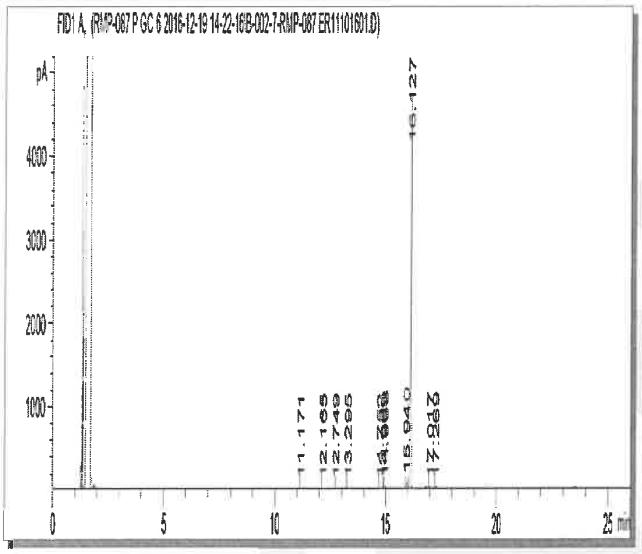

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

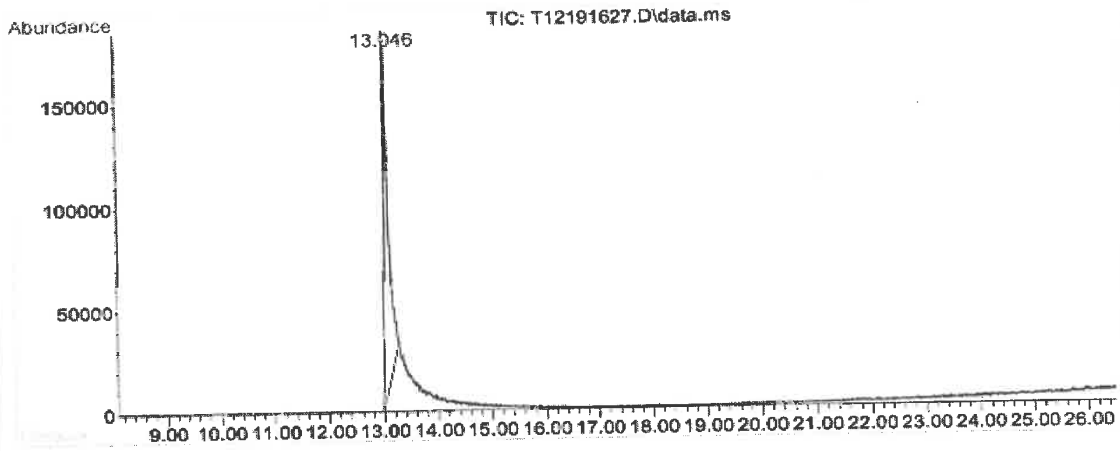

Mass Spectrum

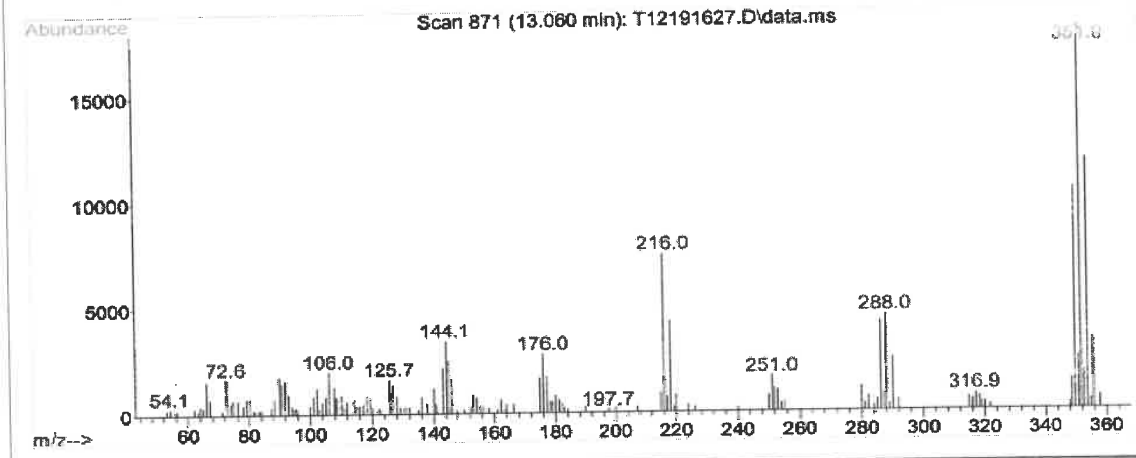

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

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Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

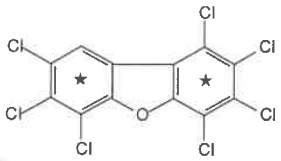

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

783830

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER020507-02

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-84-8
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

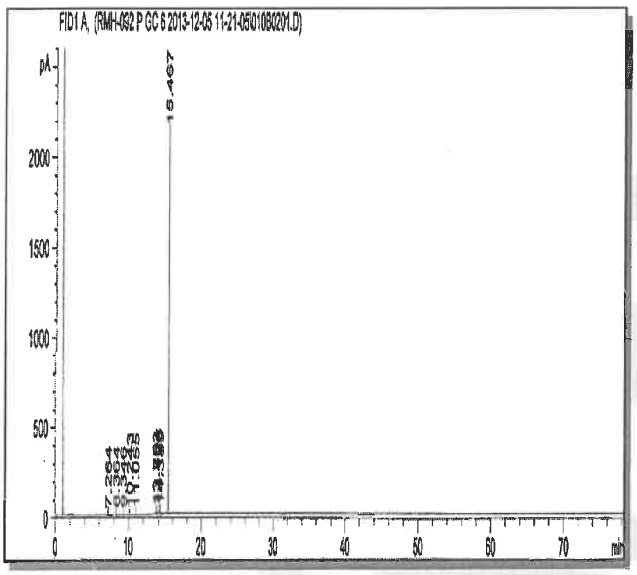

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Data File Name: RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument: GC#6
Sample Name: ER020507-02
Acquired: December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

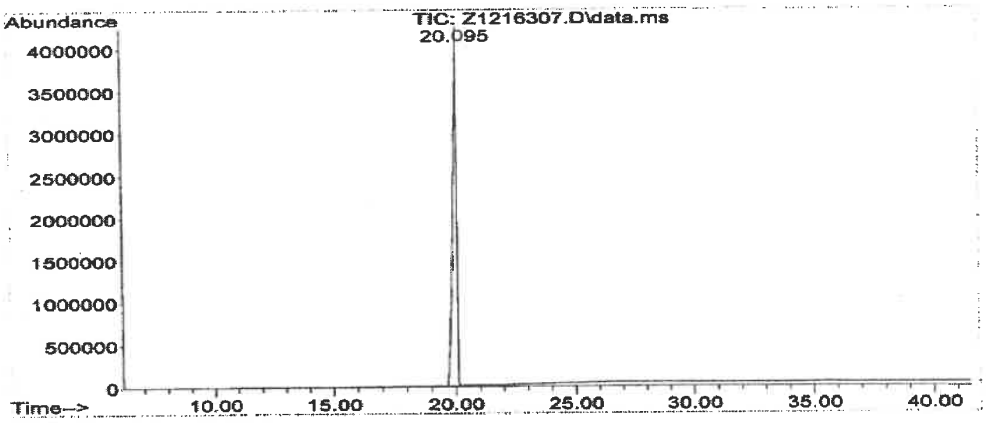

Mass Spectrum

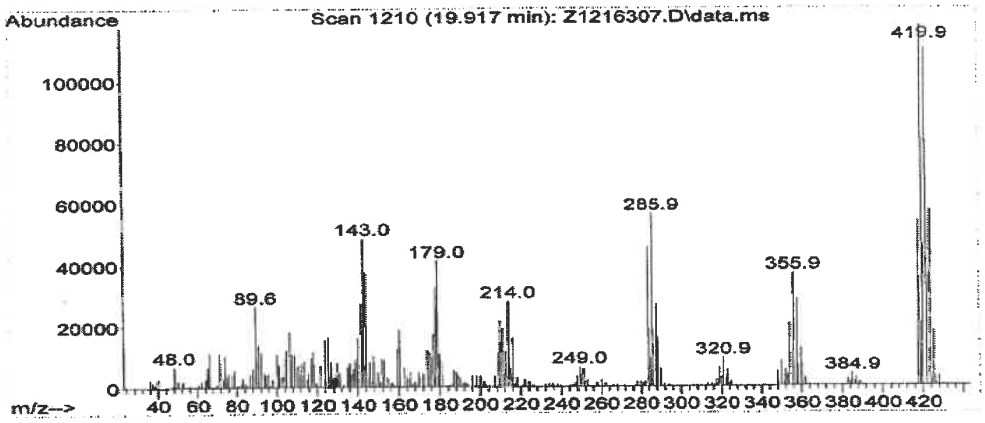

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

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ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

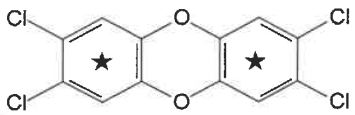

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

783837

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_4Cl_4O_2$
Compound Lot:	ER01201405	**CAS Number:**	76523-40-5
		Molecular Weight:	333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

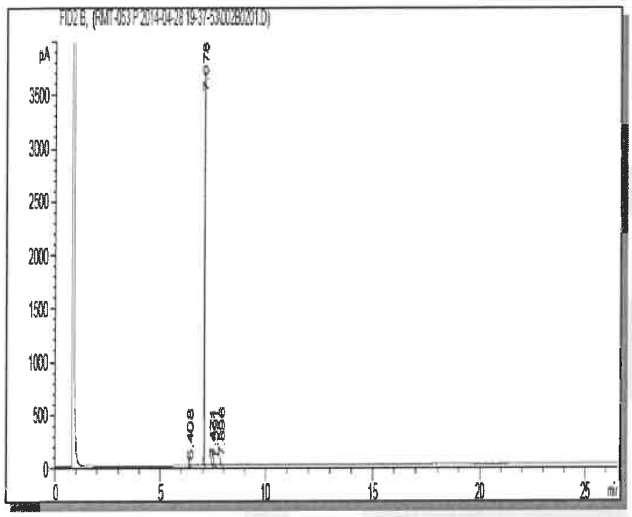

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

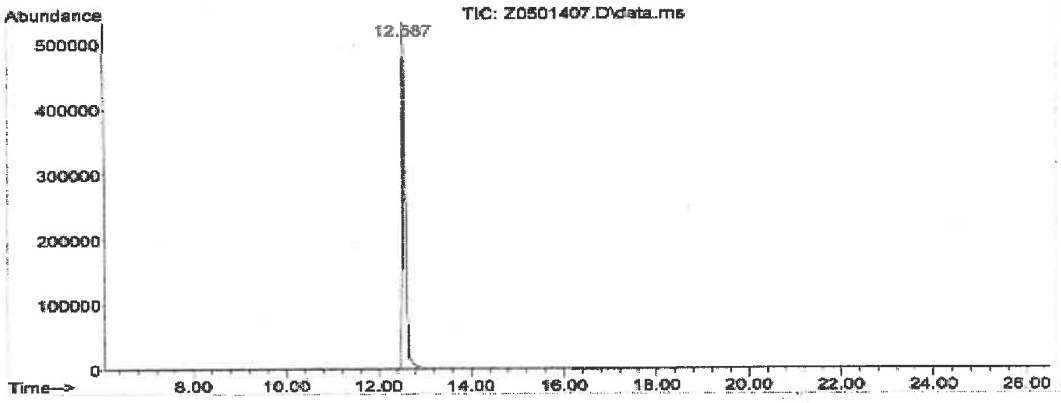

Mass Spectrum

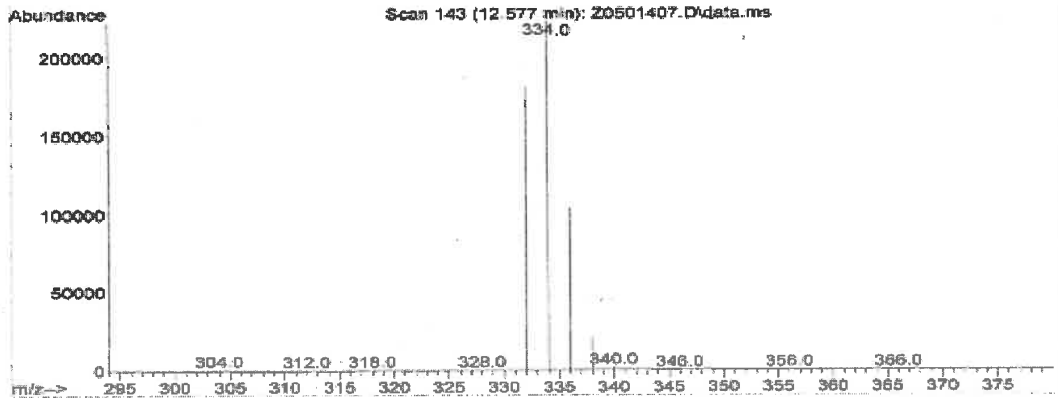

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

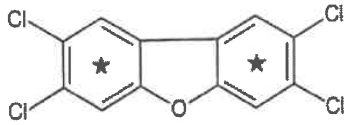

Catalog Number:	EF-904
Solution Lot:	ER09131601
Expiration Date:	September 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

783842

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

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783843

GC/FID

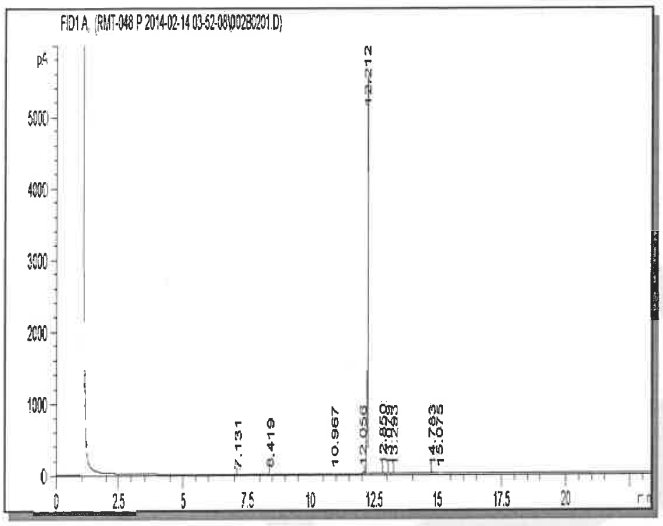

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

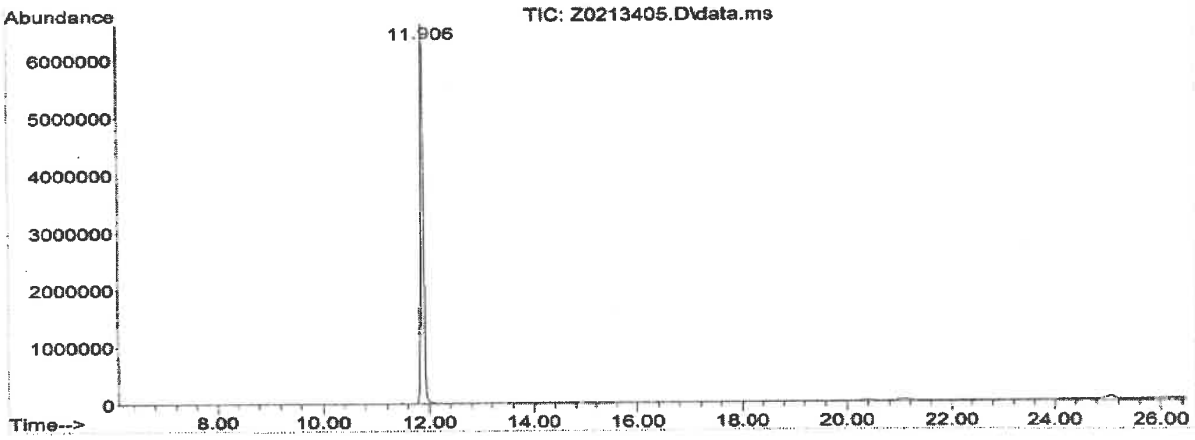

Mass Spectrum

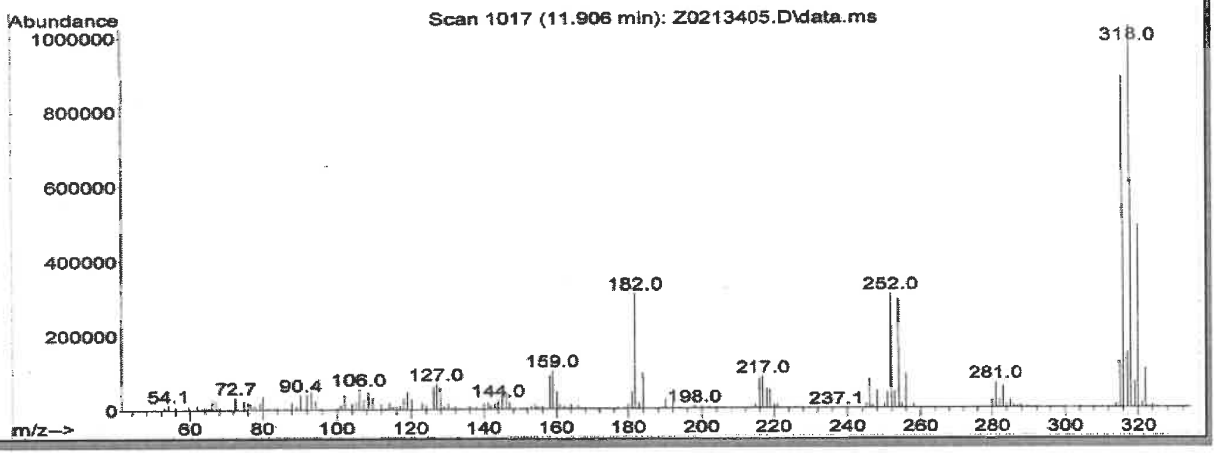

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

Reagent

HRDXNIDA_00443

Rec'd 10-19-20

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

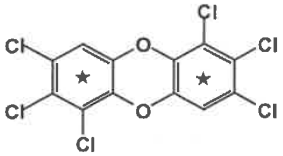

Catalog Number: ED-966
Solution Lot: ER03151801
Expiration Date: March 2028
Solvent: n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

783847

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

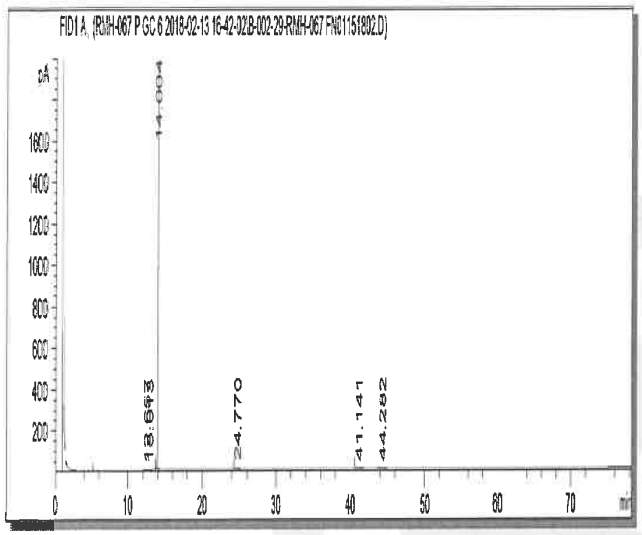

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

```
Compound Name          : 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number             : FN01151802
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Mon Mar 05 10:17:33 2018
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

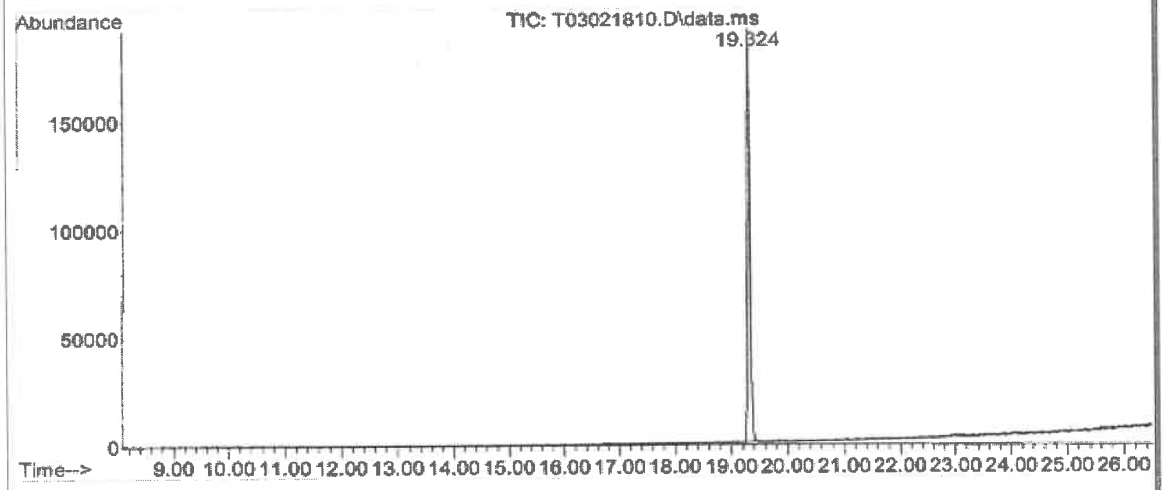

Mass Spectrum

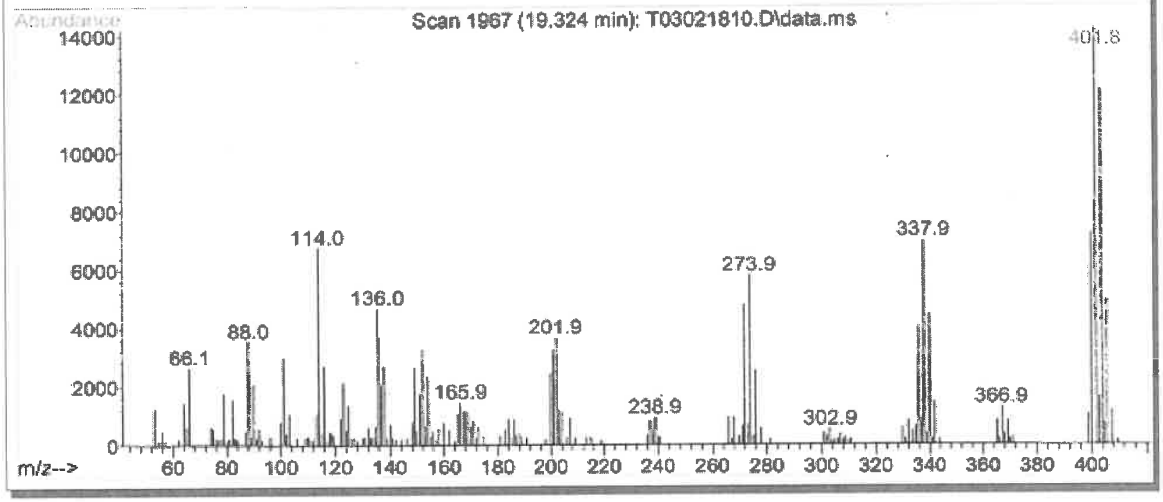

Reagent

HRDXNIDA_00457

r: 1/18/21 SW

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

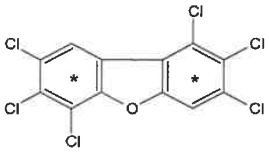

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

783852

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

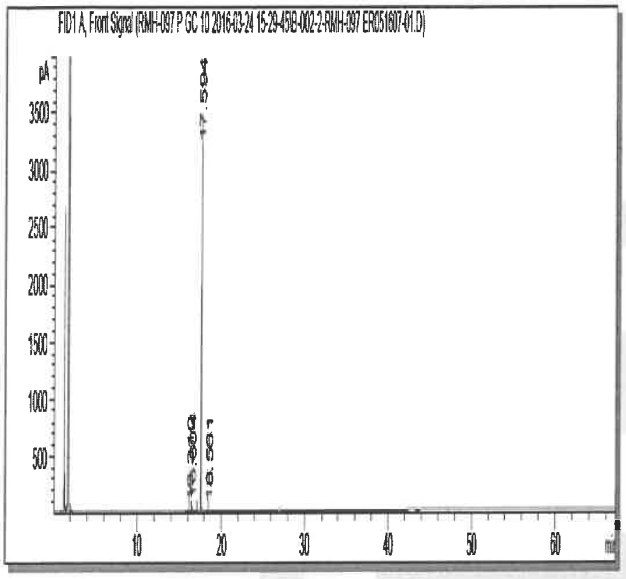

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

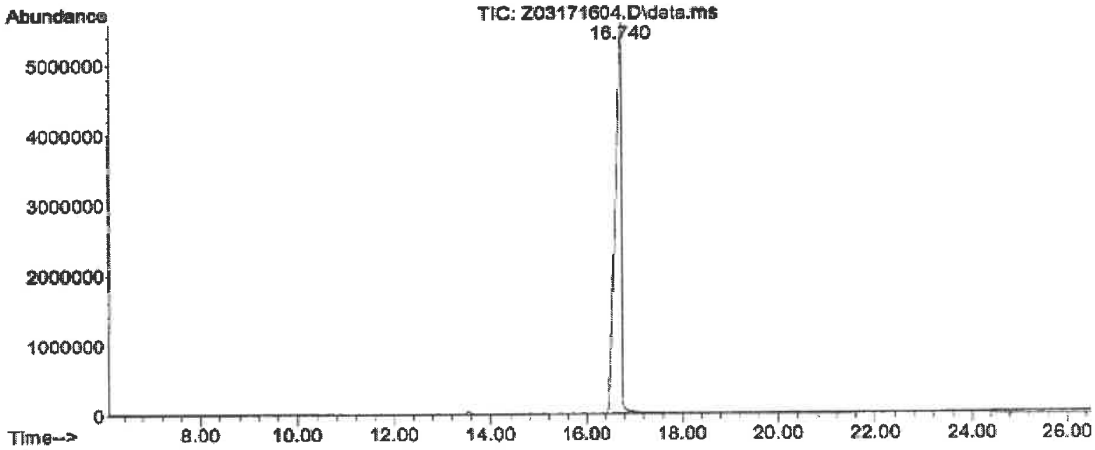

Mass Spectrum

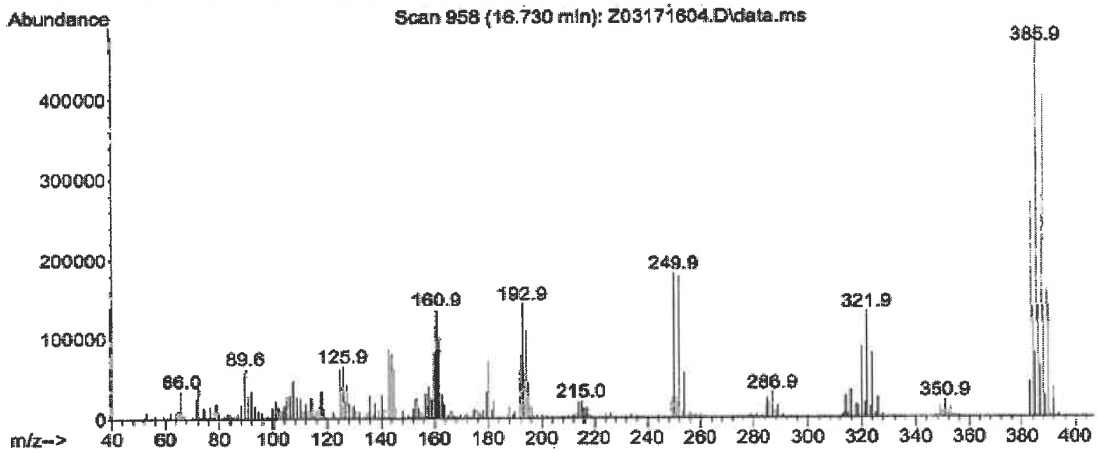

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
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CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

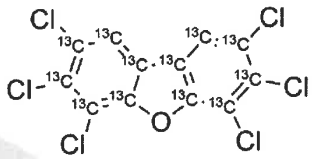

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

783859

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER09051801	**CAS Number:**	116843-05-1
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

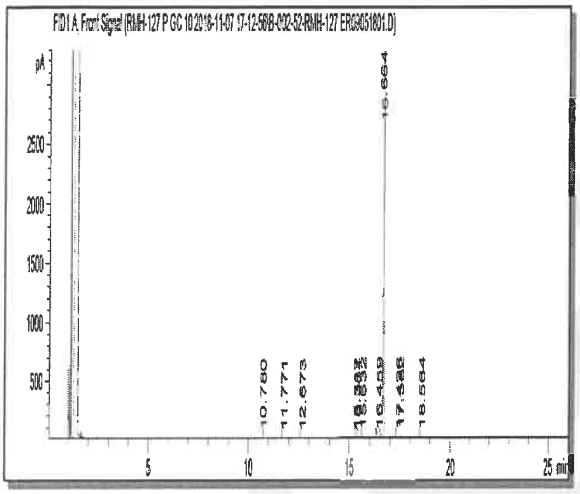

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

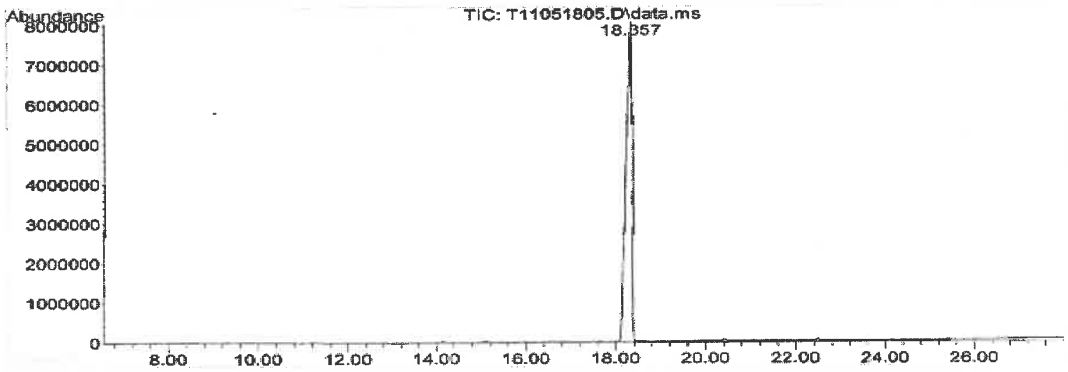

Mass Spectrum

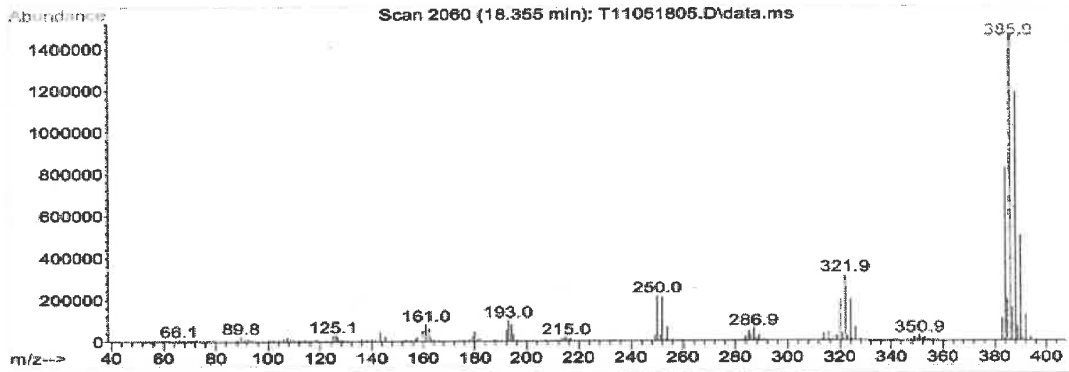

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

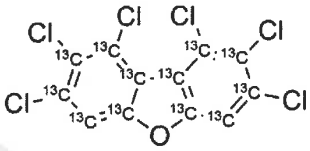

Catalog Number: EF-986
Solution Lot: ER01062016
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

783866

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

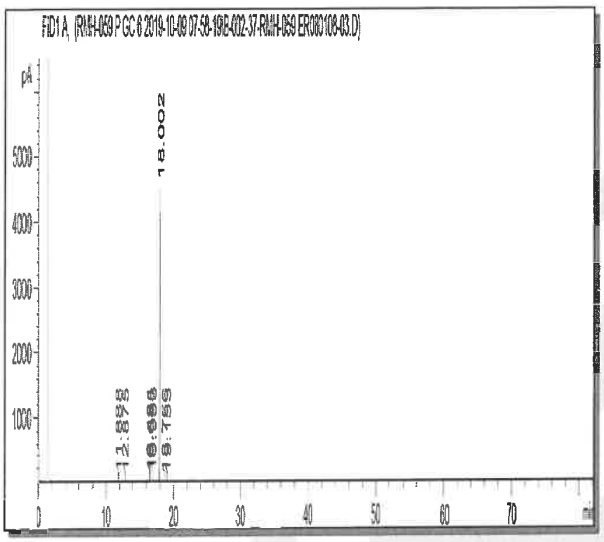

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

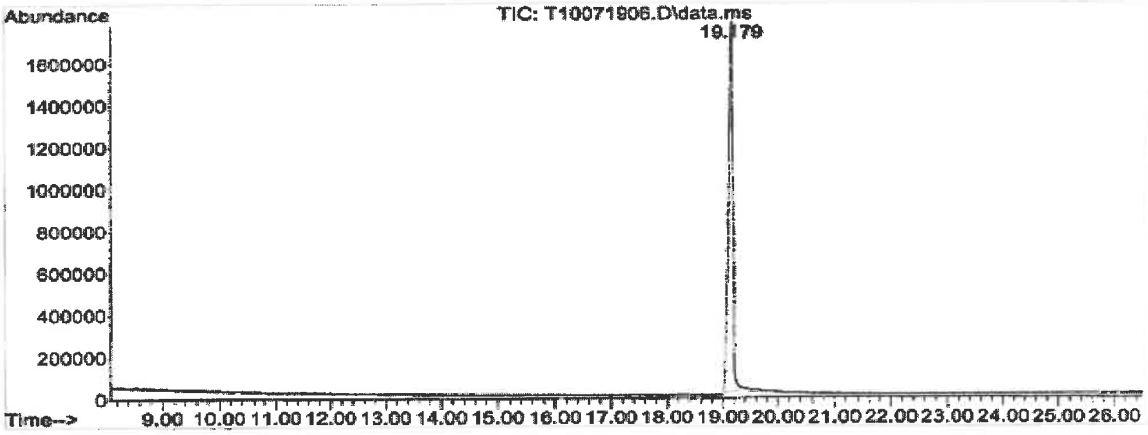

Mass Spectrum

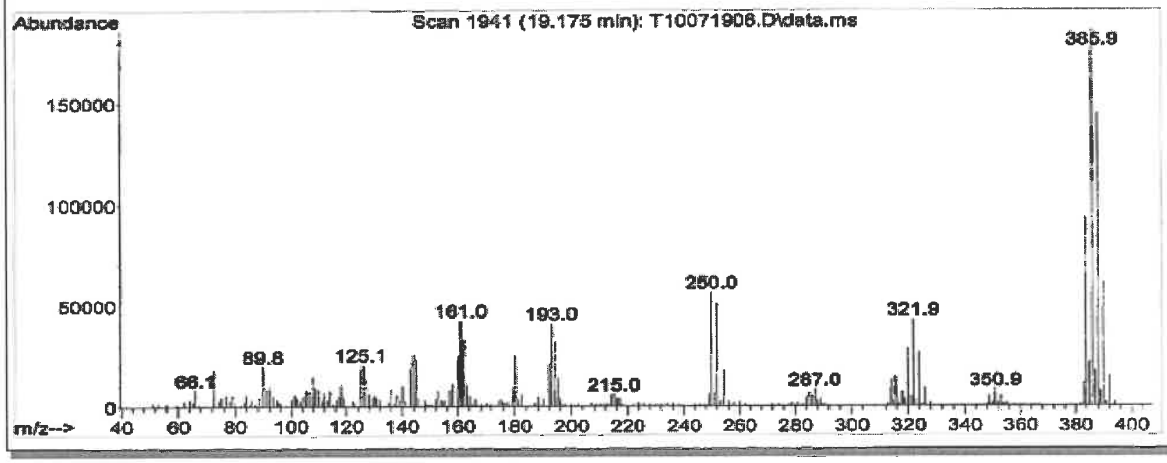

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant® Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

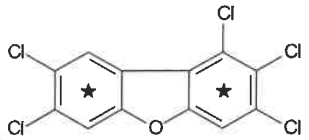

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

783873

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O$
Compound Lot:	ER090110-01	**CAS Number:**	109719-77-9
		Molecular Weight:	352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

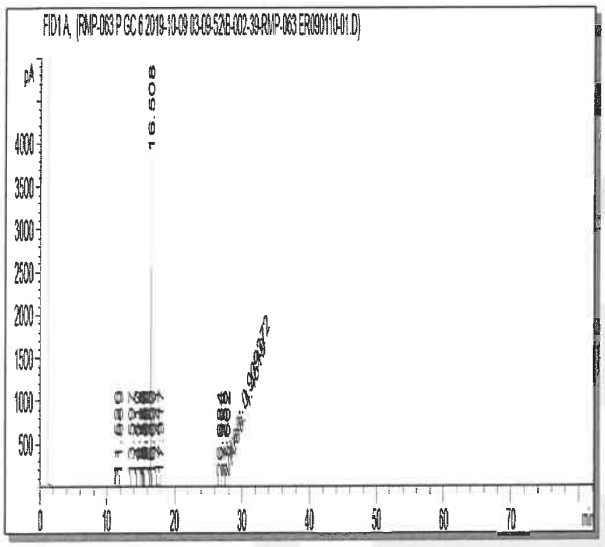

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Sample Name: ER090110-01
Acquired: October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

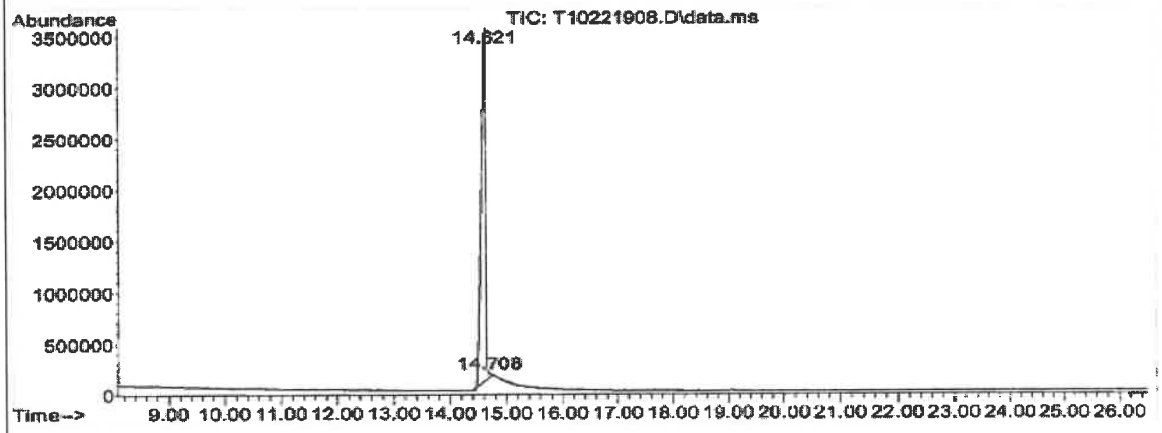

Mass Spectrum

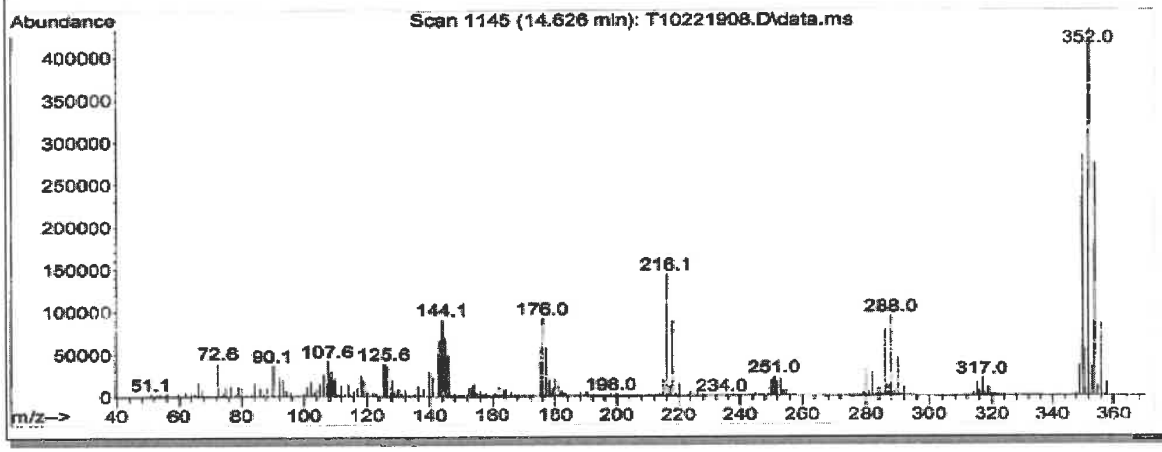

783876

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

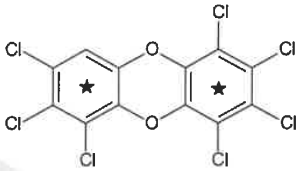

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

783880

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 0.999

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER100110-01

Chemical Formula: $^{13}C_{12}HCl_7O_2$
CAS Number: 109719-83-7
Molecular Weight: 437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

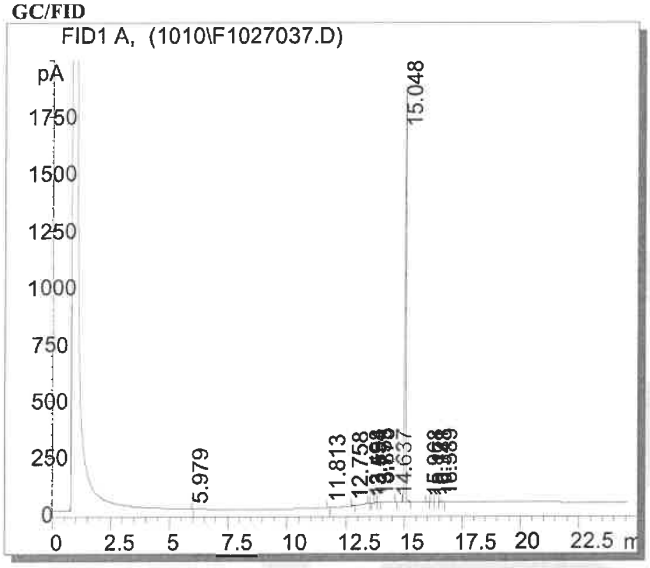

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

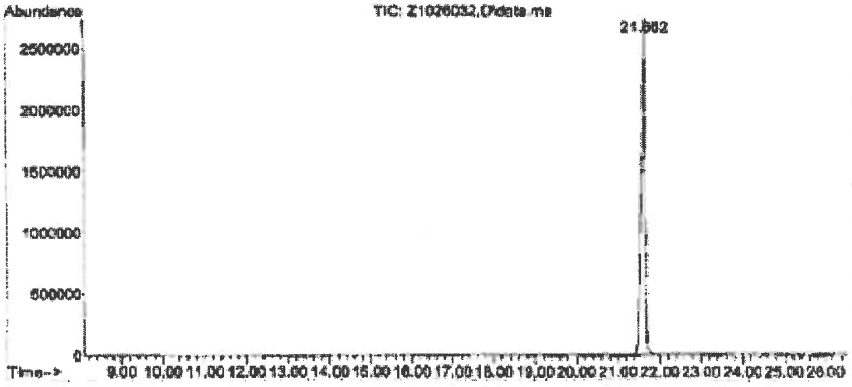

Mass Spectrum

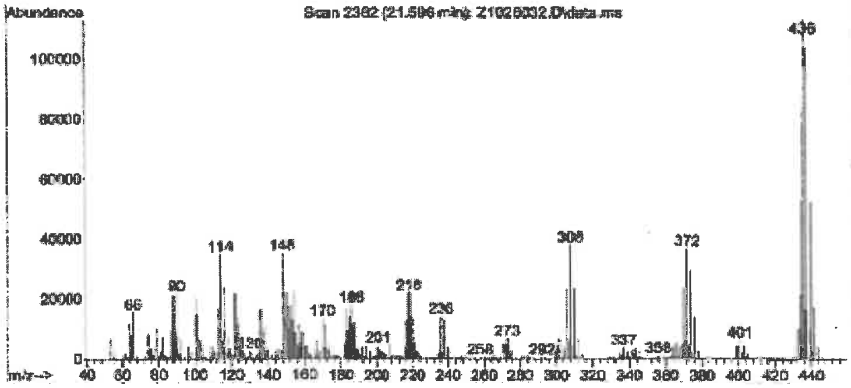

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

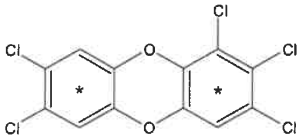

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

783885

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER06241403

Chemical Formula: $^{13}C_{12}H_3Cl_5O_2$
CAS Number: 109719-79-1
Molecular Weight: 368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

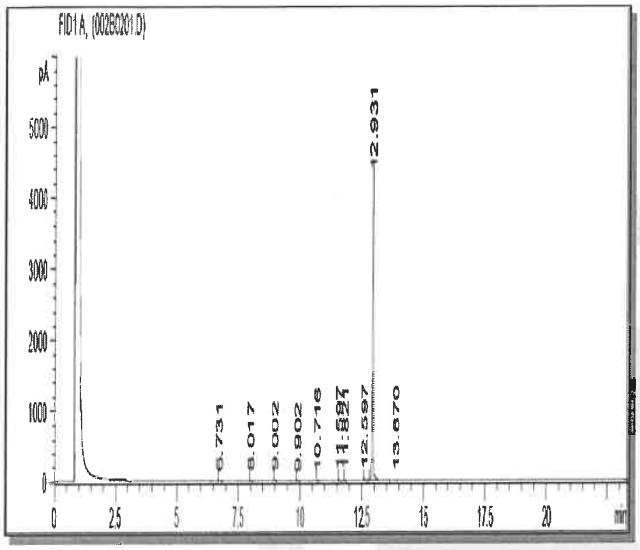

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

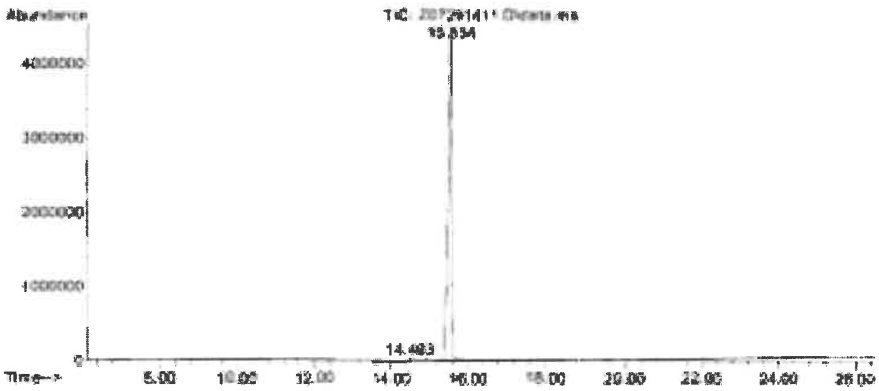

Mass Spectrum

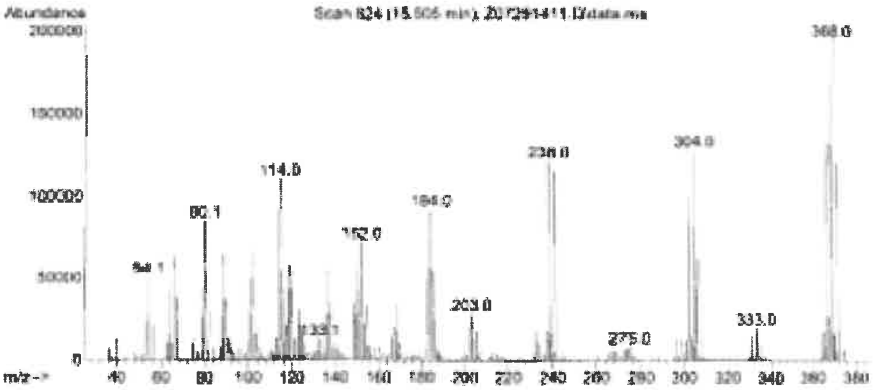

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

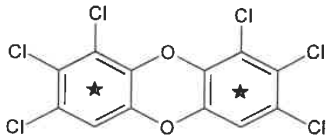

Catalog Number:	ED-996
Solution Lot:	ER08221601
Expiration Date:	September 2026
Solvent:	n-Nonane:Toluene (80:20)
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

783892

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

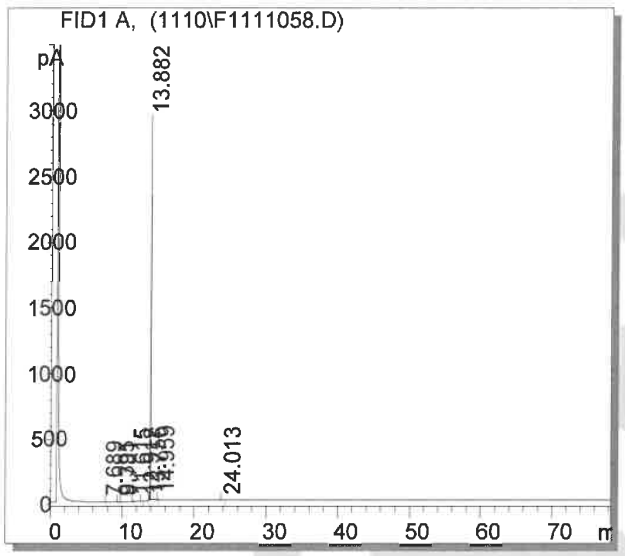

Column:	DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1110\F1111058.D
Instrument:	GC#6
Sample Name:	ER110510-01
Acquired:	November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

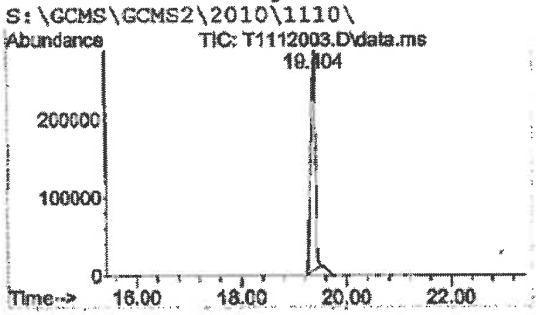

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

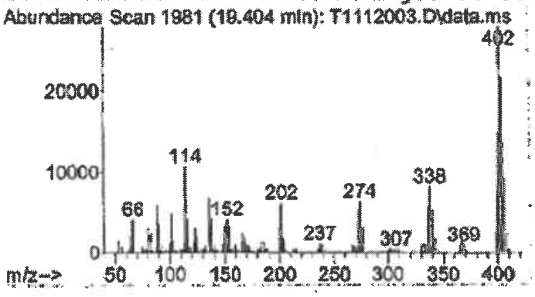

SIM Ion Chromatogram 1

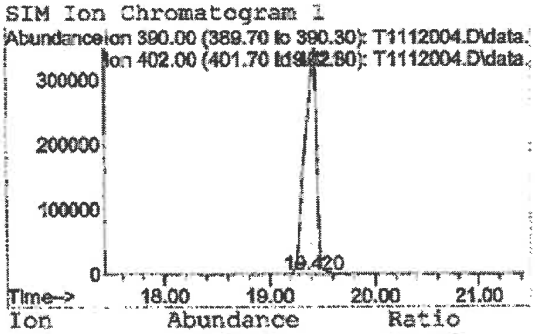

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

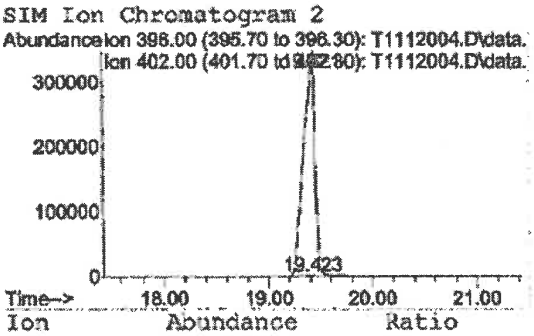

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

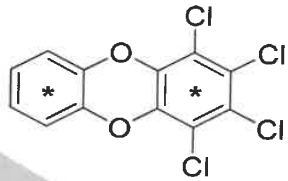

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 13194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

783899

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

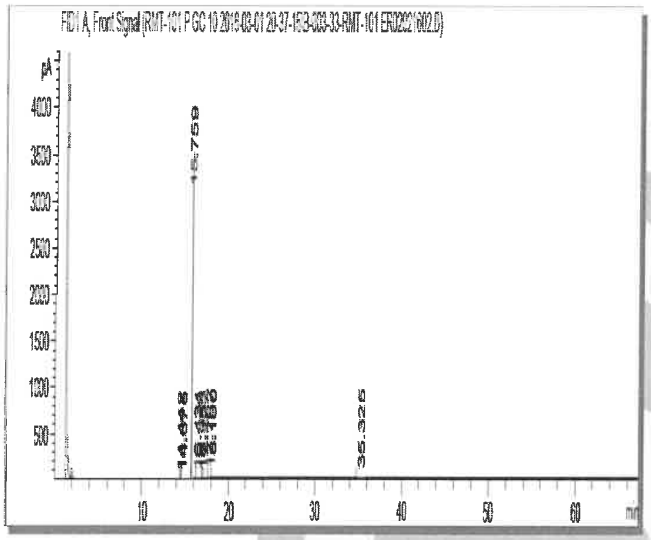

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

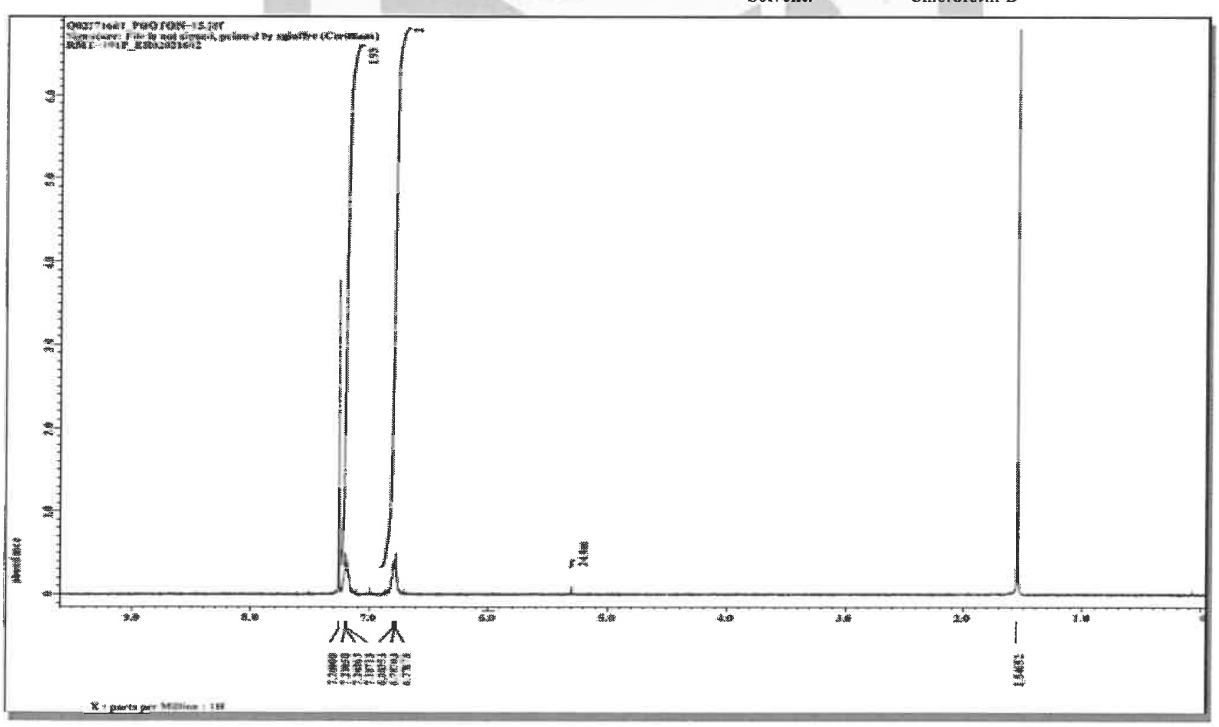

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER02021602
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Fri Feb 19 12:55:12 2016
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

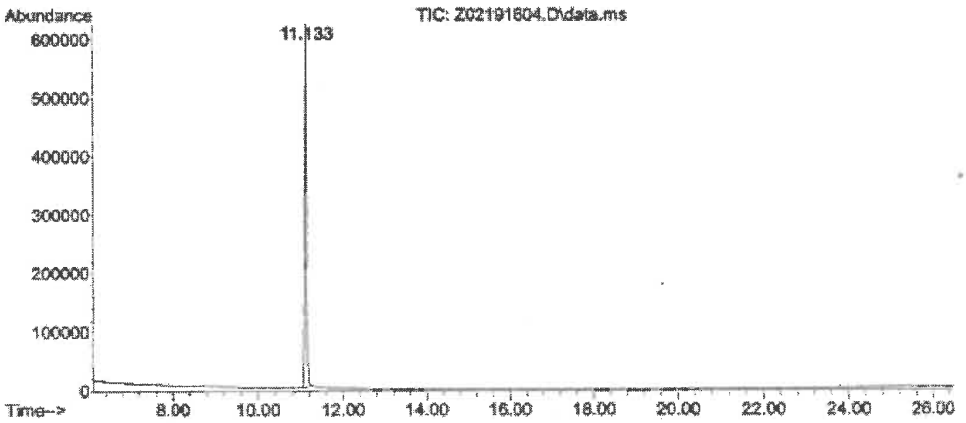

Mass Spectrum

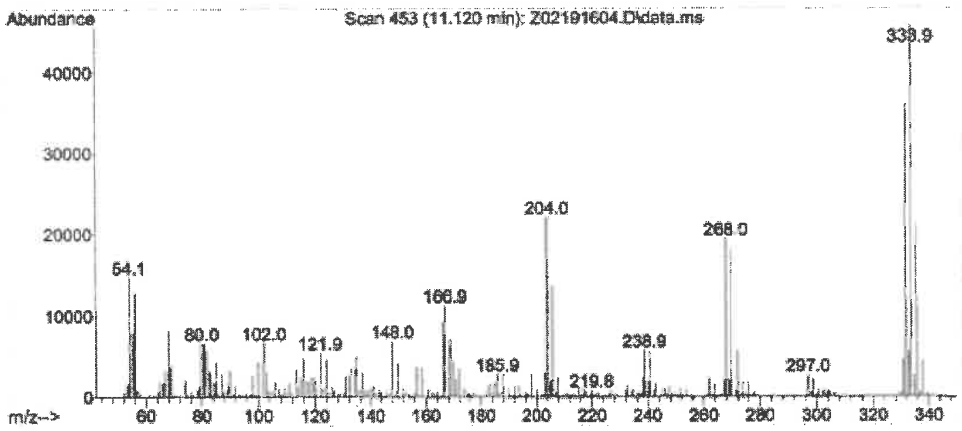

Reagent

HRDXNTA_00108

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WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

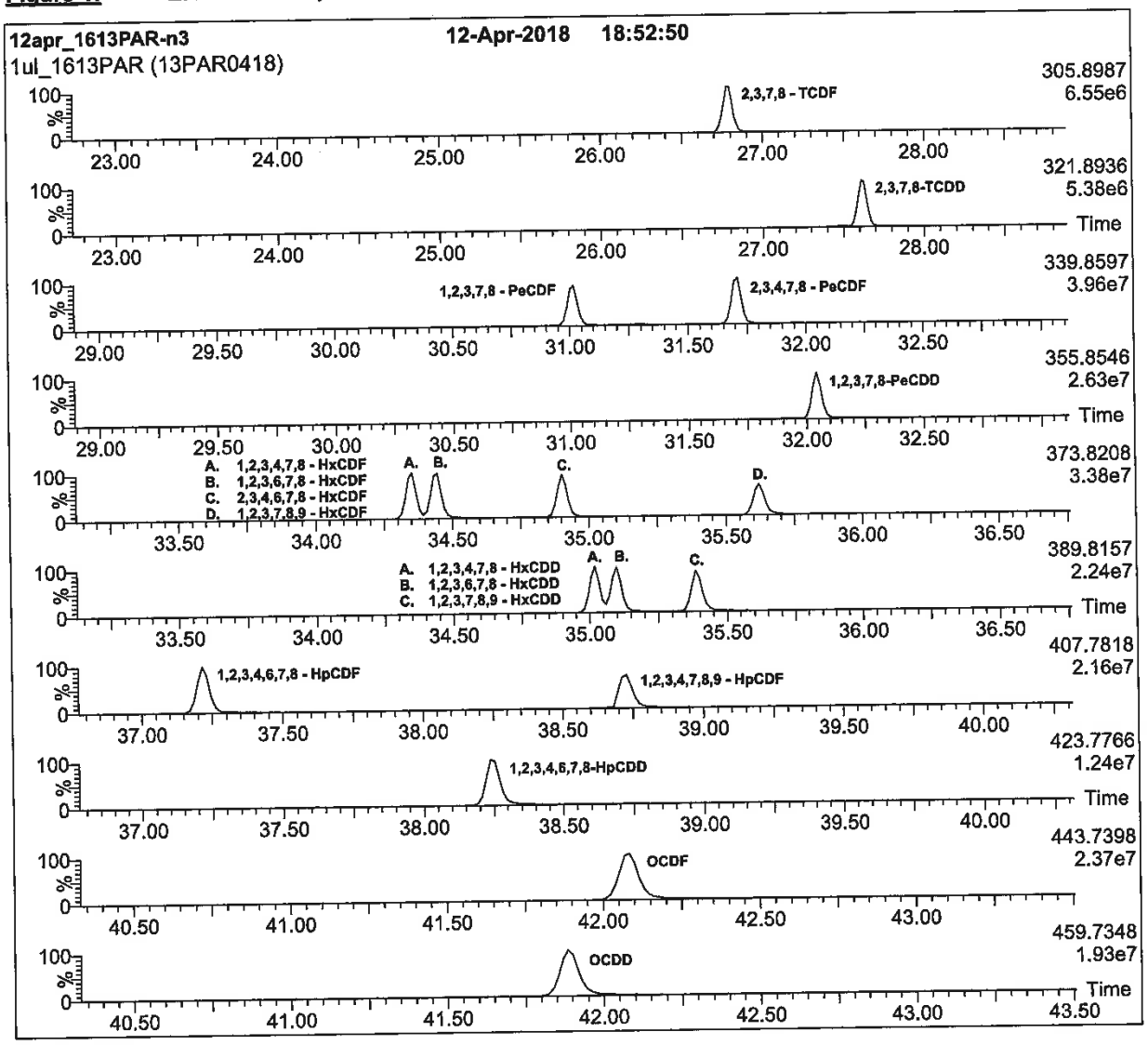

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

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Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number: EDF-7999-10X
Solution Lot: ER02241602
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

783909

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/ECD
Column:	DB-5ms, 30 m x 0.25 mm ID, 0 25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min hold 3 min
Injector Temp:	Cool on-column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397 1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386 6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0 8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0 7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

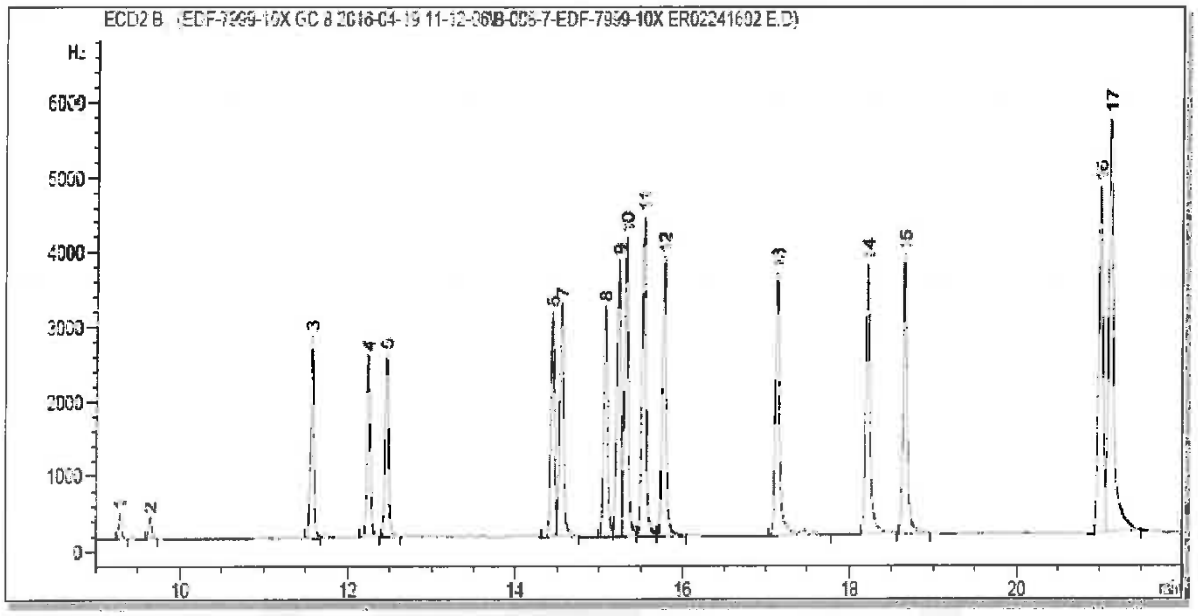

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Method 1613 PAR Stock Solution

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

783914

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

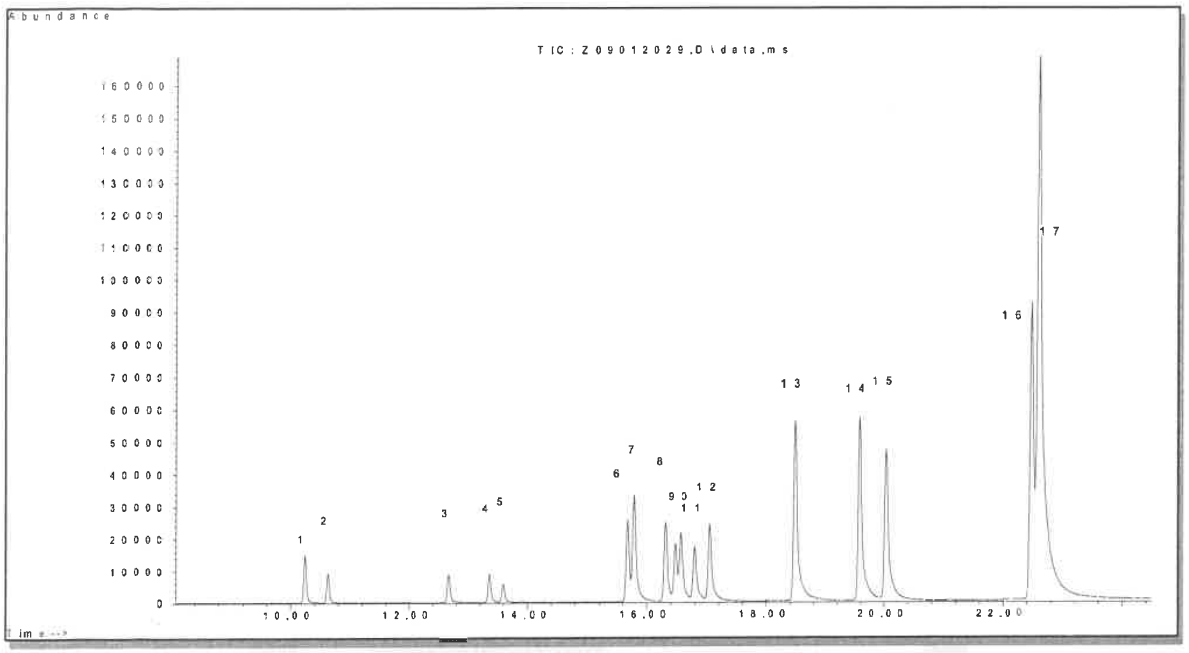

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-513586/2-A	54	54	69	56	63	59	67	58

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-513586/2-A	54	60	54	53	63	67	72	71

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-072721-BN -SJSB096 (16-18) RA	320-76887-9 RA	58	75
	320-76887-A-2-B MS RA	44	65
	320-76887-A-2-C MSD RA	42	81

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-072721-BN -SJSB096 (16-18)	320-76887-9	55	59	71	53	58	54	74	65
	MB 320-513586/1-A	57	59	68	61	65	58	74	64
	320-76887-A-2-B MS	57	58	115	59	65	63	65	57
	320-76887-A-2-C MSD	55	54	112	55	57	58	57	52

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072721-BN -SJSB096 (16-18)	320-76887-9	61	66	57	56	63	60	57	63
	MB 320-513586/1-A	61	65	60	61	65	72	78	76
	320-76887-A-2-B MS	59	64	59	57	57	60	64	62
	320-76887-A-2-C MSD	55	56	52	54	52	56	61	57

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

783923

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_6.d

Lab ID: LCS 320-513586/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	21.3	107	67-158	
2,3,7,8-TCDF	20.0	21.8	109	75-158	
1,2,3,7,8-PeCDD	100	112	112	70-142	
1,2,3,7,8-PeCDF	100	114	114	80-134	
2,3,4,7,8-PeCDF	100	105	105	68-160	
1,2,3,4,7,8-HxCDD	100	101	101	70-164	
1,2,3,6,7,8-HxCDD	100	111	111	76-134	
1,2,3,7,8,9-HxCDD	100	110	110	64-162	
1,2,3,4,7,8-HxCDF	100	107	107	72-134	
1,2,3,6,7,8-HxCDF	100	112	112	84-130	
1,2,3,7,8,9-HxCDF	100	116	116	78-130	
2,3,4,6,7,8-HxCDF	100	117	117	70-156	
1,2,3,4,6,7,8-HpCDD	100	108	108	70-140	
1,2,3,4,6,7,8-HpCDF	100	112	112	82-122	
1,2,3,4,7,8,9-HpCDF	100	105	105	78-138	
OCDD	200	228	114	78-144	
OCDF	200	248	124	63-170	
13C-2,3,7,8-TCDD	200	109	54	20-175	
13C-2,3,7,8-TCDF	200	108	54	22-152	
13C-1,2,3,7,8-PeCDD	200	117	59	21-227	
13C-1,2,3,7,8-PeCDF	200	113	56	21-192	
13C-2,3,4,7,8-PeCDF	200	127	63	13-328	
13C-1,2,3,4,7,8-HxCDD	200	121	60	21-193	
13C-1,2,3,6,7,8-HxCDD	200	108	54	25-163	
13C-1,2,3,4,7,8-HxCDF	200	133	67	19-202	
13C-1,2,3,6,7,8-HxCDF	200	117	58	21-159	
13C-1,2,3,7,8,9-HxCDF	200	107	53	17-205	
13C-2,3,4,6,7,8-HxCDF	200	107	54	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	133	67	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	126	63	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	143	72	20-186	
13C-OCDD	400	283	71	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 18AU2110D5_9.d

Lab ID: 320-76887-A-2-B MS Client ID:

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	31.9	15000	16100	4297	67-158	E G 4
1,2,3,7,8-PeCDD	159	130	329	123	70-142	
1,2,3,7,8-PeCDF	159	1300	1590	212	80-134	4
2,3,4,7,8-PeCDF	159	930	1230	193	68-160	4
1,2,3,4,7,8-HxCDD	159	2.1 J	161	100	70-164	
1,2,3,6,7,8-HxCDD	159	4.0 J	183	112	76-134	
1,2,3,7,8,9-HxCDD	159	2.6 J	164	101	64-162	
1,2,3,4,7,8-HxCDF	159	2000	1950	-31	72-134	4
1,2,3,6,7,8-HxCDF	159	500	647	94	84-130	
1,2,3,7,8,9-HxCDF	159	23 J	173	94	78-130	
2,3,4,6,7,8-HxCDF	159	47 J	215	105	70-156	
1,2,3,4,6,7,8-HpCDD	159	43 J	219	110	70-140	
1,2,3,4,6,7,8-HpCDF	159	650	701	32	82-122	4
1,2,3,4,7,8,9-HpCDF	159	200	325	78	78-138	
OCDD	319	610	1020	129	78-144	
OCDF	319	290	555	83	63-170	
13C-2,3,7,8-TCDD	319	210	184	58	25-164	
13C-2,3,7,8-TCDF	319	210	181	57	24-169	
13C-1,2,3,7,8-PeCDD	319	240	202	63	25-181	
13C-1,2,3,7,8-PeCDF	319	220	188	59	24-185	
13C-2,3,4,7,8-PeCDF	319	240	206	65	21-178	
13C-1,2,3,4,7,8-HxCDD	319	240	202	64	32-141	
13C-1,2,3,6,7,8-HxCDD	319	210	187	59	28-130	
13C-1,2,3,4,7,8-HxCDF	319	240	207	65	26-152	
13C-1,2,3,6,7,8-HxCDF	319	210	183	57	26-123	
13C-1,2,3,7,8,9-HxCDF	319	220	182	57	29-147	
13C-2,3,4,6,7,8-HxCDF	319	220	189	59	28-136	
13C-1,2,3,4,6,7,8-HpCDD	319	230	192	60	23-140	
13C-1,2,3,4,6,7,8-HpCDF	319	210	182	57	28-143	
13C-1,2,3,4,7,8,9-HpCDF	319	240	204	64	26-138	
13C-OCDD	637	470	394	62	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU21A11D2_016.d

Lab ID: 320-76887-A-2-B MS RA Client ID:

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	31.9	61000	71100	30642	75-158	E 4 G
13C-2,3,7,8-TCDF	319	110	140	44	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 18AU2110D5_10.d

Lab ID: 320-76887-A-2-C MSD Client ID:

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	30.9	19400	15092	19	50	67-158	E G 4
1,2,3,7,8-PeCDD	154	366	151	11	50	70-142	F1
1,2,3,7,8-PeCDF	154	2150	584	30	50	80-134	4
2,3,4,7,8-PeCDF	154	1450	337	16	50	68-160	4
1,2,3,4,7,8-HxCDD	154	162	103	0	50	70-164	
1,2,3,6,7,8-HxCDD	154	183	116	0	50	76-134	
1,2,3,7,8,9-HxCDD	154	172	110	5	50	64-162	
1,2,3,4,7,8-HxCDF	154	2640	420	30	50	72-134	4
1,2,3,6,7,8-HxCDF	154	831	217	25	50	84-130	F1
1,2,3,7,8,9-HxCDF	154	186	106	7	50	78-130	
2,3,4,6,7,8-HxCDF	154	236	122	9	50	70-156	
1,2,3,4,6,7,8-HpCDD	154	240	127	9	50	70-140	
1,2,3,4,6,7,8-HpCDF	154	893	158	24	50	82-122	4
1,2,3,4,7,8,9-HpCDF	154	386	120	17	50	78-138	
OCDD	309	1240	202	19	50	78-144	F1
OCDF	309	649	116	16	50	63-170	
13C-2,3,7,8-TCDD	309	168	54			25-164	
13C-2,3,7,8-TCDF	309	170	55			24-169	
13C-1,2,3,7,8-PeCDD	309	181	58			25-181	
13C-1,2,3,7,8-PeCDF	309	171	55			24-185	
13C-2,3,4,7,8-PeCDF	309	175	57			21-178	
13C-1,2,3,4,7,8-HxCDD	309	173	56			32-141	
13C-1,2,3,6,7,8-HxCDD	309	159	52			28-130	
13C-1,2,3,4,7,8-HxCDF	309	176	57			26-152	
13C-1,2,3,6,7,8-HxCDF	309	162	52			26-123	
13C-1,2,3,7,8,9-HxCDF	309	167	54			29-147	
13C-2,3,4,6,7,8-HxCDF	309	170	55			28-136	
13C-1,2,3,4,6,7,8-HpCDD	309	172	56			23-140	
13C-1,2,3,4,6,7,8-HpCDF	309	161	52			28-143	
13C-1,2,3,4,7,8,9-HpCDF	309	187	61			26-138	
13C-OCDD	618	355	57			17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU21A11D2_017.d

Lab ID: 320-76887-A-2-C MSD RA Client ID:

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDF	30.9	74700	43487	5	50	75-158	E 4 G
13C-2,3,7,8-TCDF	309	131	42			24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab File ID: 17au21dfs1_5.d Lab Sample ID: MB 320-513586/1-A

Matrix: Sediment Date Extracted: 08/06/2021 05:28

Instrument ID: DFS 1 Date Analyzed: 08/17/2021 17:01

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-513586/2-A	17au21dfs1_6.d	08/17/2021 17:49
11215702-072721-BN-SJSB096 (16-18)	320-76887-9	17au21dfs1_37.d	08/18/2021 18:01
	320-76887-A-2-B MS	18AU2110D5_9.d	08/18/2021 20:19
	320-76887-A-2-C MSD	18AU2110D5_10.d	08/18/2021 21:04
11215702-072721-BN-SJSB096 (16-18) RA	320-76887-9 RA	23AU21A11D2_005.d	08/23/2021 18:07
	320-76887-A-2-B MS RA	25AU21A11D2_016.d	08/25/2021 22:33
	320-76887-A-2-C MSD RA	25AU21A11D2_017.d	08/25/2021 23:11

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-2
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (16-18)
Lab Sample ID: 320-76887-9
Matrix: Sediment
Lab File ID: 17au21dfs1_37.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.84(g)
Date Analyzed: 08/18/2021 18:01
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 26.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	8.7		1.4	0.16
40321-76-4	1,2,3,7,8-PeCDD	ND		6.9	0.15
57117-41-6	1,2,3,7,8-PeCDF	0.53	J q	6.9	0.11
57117-31-4	2,3,4,7,8-PeCDF	ND		6.9	0.12
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.9	0.29
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.9	0.33
19408-74-3	1,2,3,7,8,9-HxCDD	2.5	J	6.9	0.29
70648-26-9	1,2,3,4,7,8-HxCDF	0.91	J q	6.9	0.036
57117-44-9	1,2,3,6,7,8-HxCDF	ND		6.9	0.036
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.9	0.036
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.9	0.034
35822-46-9	1,2,3,4,6,7,8-HpCDD	27	B	6.9	0.26
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.40	J q	6.9	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.9	0.059
3268-87-9	OCDD	600	B	14	0.67
39001-02-0	OCDF	0.60	J	14	0.071
41903-57-5	Total TCDD	8.7		1.4	0.16
30402-14-3	Total TCDF	60	q	1.4	0.21
36088-22-9	Total PeCDD	9.2		6.9	0.15
30402-15-4	Total PeCDF	0.53	J q	6.9	0.11
34465-46-8	Total HxCDD	42	q	6.9	0.31
55684-94-1	Total HxCDF	0.91	J q	6.9	0.036
37871-00-4	Total HpCDD	130	B	6.9	0.26
38998-75-3	Total HpCDF	0.40	J q	6.9	0.054

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-2
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (16-18)
Lab Sample ID: 320-76887-9
Matrix: Sediment
Lab File ID: 17au21dfs1_37.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.84(g)
Date Analyzed: 08/18/2021 18:01
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 26.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	54		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	53		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	58		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	66		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	57		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	74		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	65		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	56		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	61		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	60		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	63		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	57		26-138
114423-97-1	13C-OCDD	63		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	71		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d
Lims ID: 320-76887-A-9-A
Client ID: 11215702-072721-BN-SJSB096 (16-18)
Sample Type: Client
Inject. Date: 18-Aug-2021 18:01:00 ALS Bottle#: 0 Worklist Smp#: 34
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-9-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:13:21 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:03:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.413	1184139	0.77	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.441	879298	0.82	1.3459	55.2	55.2	0.1769	0.1769	55.17	
2,3,7,8-TCDF	20.484	128996	0.82	1.0802	13.6	13.6	0.0740	0.0740		
A Non-2,3,7,8-sub-TCDF	19.878	77166	0.77	1.0802	8.279	8.124	0.0740	5.683		RQ
S Total TCDF					21.9	21.7	0.0740	0.0740		RQ
D 13C-2,3,7,8-TCDD	21.792	645935	0.83	0.9317	58.5	58.5	0.1923	0.1923	58.55	
2,3,7,8-TCDD	21.826	21830	0.84	1.0753	3.143	3.143	0.0564	0.0564		M
$ 37Cl4-2,3,7,8-TCDD	21.826	340480		1.0083	28.5	28.5	0.0286	0.0286	71.29	
A Non-2,3,7,8-sub-TCDD	20.707						0.0564	0.6283		RQU
S Total TCDD					3.143	3.143	0.0564	0.0564		
D 13C-1,2,3,7,8-PeCDF	27.272	710050	1.57	1.1405	52.6	52.6	0.1599	0.1599	52.58	
1,2,3,7,8-PeCDF	27.280	1418	1.55	1.0543	0.2240	0.1894	0.0399	0.0399		RQM
D 13C-2,3,4,7,8-PeCDF	28.779	774639	1.60	1.1253	58.1	58.1	0.1621	0.1621	58.13	
2,3,4,7,8-PeCDF	28.845						0.0428	0.0428		
A F1 PeCDFs	24.648						0.006425	0.006425		
A Non-2,3,7,8-sub-PeCDF	28.125						0.0413	0.0793		RQU
S Total PeCDF					0.2240	0.1894	0.0413	0.0413		RQ
D 13C-1,2,3,7,8-PeCDD	29.604	454832	1.53	0.7165	53.6	53.6	0.0911	0.0911	53.61	
1,2,3,7,8-PeCDD	29.637						0.0551	0.0551		
A Non-2,3,7,8-sub-PeCDD	28.489	15839	1.66	1.0465	3.328	3.328	0.0551	1.765		M
S Total PeCDD					3.328	3.328	0.0551	0.0551		
D 13C-1,2,3,4,7,8-HxCDF	34.937	738862	0.53	0.9648	74.1	74.1	0.2416	0.2416	74.11	
1,2,3,4,7,8-HxCDF	34.979	2766	1.24	1.1474	0.3585	0.3263	0.0130	0.0130		RQM
D 13C-1,2,3,6,7,8-HxCDF	35.089	720697	0.55	1.0708	65.1	65.1	0.2177	0.2177	65.13	
1,2,3,6,7,8-HxCDF	35.139						0.0131	0.0131		RQMU
D 13C-2,3,4,6,7,8-HxCDF	35.914	656312	0.54	1.0413	61.0	61.0	0.2239	0.2239	60.99	
2,3,4,6,7,8-HxCDF	35.949						0.0124	0.0124		
D 13C-1,2,3,7,8,9-HxCDF	36.807	564800	0.53	0.9731	56.2	56.2	0.2396	0.2396	56.17	
1,2,3,7,8,9-HxCDF	36.874						0.0131	0.0131		U
A Non-2,3,7,8-sub-HxCDF	35.028						0.0129	0.0129		RQU
S Total HxCDF					0.3585	0.3263	0.0129	0.0129		RQ

783932

Report Date: 20-Aug-2021 09:13:21 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.614	1033339	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.133	519282	1.22	0.7587	66.2	66.2	0.1778	0.1778	66.24	
1,2,3,4,7,8-HxCDD	36.159						0.1061	0.1061		
D 13C-1,2,3,6,7,8-HxCDD	36.243	510175	1.28	0.8593	57.5	57.5	0.1570	0.1570	57.46	
1,2,3,6,7,8-HxCDD	36.269						0.1202	0.1202		
1,2,3,7,8,9-HxCDD	36.605	5179	1.23	1.1094	0.9069	0.9069	0.1044	0.1044		
A Non-2,3,7,8-sub-HxCDD	35.394	76426	1.24	1.0545	14.1	14.1	0.1098	11.7		RQ
S Total HxCDD					15.0	15.0	0.1102	0.1102		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.630	475715	0.44	0.7359	62.6	62.6	0.2076	0.2076	62.55	
1,2,3,4,6,7,8-HpCDF	38.655	981	1.04	1.4421	0.2035	0.1430	0.0179	0.0179		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	39.876	407019	0.45	0.6854	57.5	57.5	0.2229	0.2229	57.47	
1,2,3,4,7,8,9-HpCDF	39.885						0.0213	0.0213		
A Non-2,3,7,8-sub-HpCDF	39.258						0.0195	0.0399		RQU
S Total HpCDF					0.2035	0.1430	0.0196	0.0196		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	39.581	419197	1.01	0.6745	60.1	60.1	0.0861	0.0861	60.14	
1,2,3,4,6,7,8-HpCDD	39.590	43587	1.05	1.0503	9.900	9.900	0.0925	0.0925		
A Non-2,3,7,8-sub-HpCDD	39.258	163412	1.02	1.0503	37.1	37.1	0.0925	37.1		
S Total HpCDD					47.0	47.0	0.0925	0.0925		
D 13C-OCDD	42.071	709940	0.91	0.5446	126.1	126.1	0.1411	0.1411	63.07	
OCDF	42.172	1017	0.86	1.3168	0.2176	0.2176	0.0256	0.0256		M
OCDD	42.079	812894	0.90	1.0620	215.6	215.6	0.2413	0.2413		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d
Lims ID: 320-76887-A-9-A
Client ID: 11215702-072721-BN-SJSB096 (16-18)
Sample Type: Client
Inject. Date: 18-Aug-2021 18:01:00 ALS Bottle#: 0 Worklist Smp#: 34
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-9-A
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:13:21 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:03:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.413	21.427	-1		514346	70472	72	180	979		a
333.9338	21.422	21.427	0		669793	85786	40	100	2145	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.441	20.401	2	0.955	396865	48829	102	255	479		
317.9389	20.441	20.401	2	0.955	482433	69980	47	117	1489	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.484	20.436	3	1.002	57954	7665	15	37	511		
305.8987	20.484	20.436	3	1.002	71042	9268	23	57	403	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	17.947	19.878	-116	0.878	1115	258	15	37	17		
305.8987	17.939	19.878	-116	0.878	1754	363	23	57	16	0.64(0.65-0.89)	
	Empc Correction				1448	335	23	57	15		
303.9016	18.403	19.878	-88	0.900	1340	267	15	37	18		
305.8987	18.420	19.878	-87	0.901	2568	389	23	57	17	0.52(0.65-0.89)	
	Empc Correction				1740	346	23	57	15		
303.9016	18.850	19.878	-62	0.922	1961	271	15	37	18		
	Empc Correction				1630	261	15	37	17		
305.8987	18.842	19.878	-62	0.922	2118	340	23	57	15	0.93(0.65-0.89)	
303.9016	19.280	19.878	-36	0.943	2181	393	15	37	26		
305.8987	19.237	19.878	-38	0.941	2935	535	23	57	23	0.74(0.65-0.89)	
303.9016	19.761	19.878	-7	0.967	23568	3554	15	37	237		
305.8987	19.761	19.878	-7	0.967	30407	4501	23	57	196	0.78(0.65-0.89)	
303.9016	23.648	19.878	226	1.157	3818	740	15	37	49		
305.8987	23.640	19.878	225	1.156	4866	913	23	57	40	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											
331.9368	21.792	21.743	3	1.018	293615	36627	72	180	509		
333.9338	21.792	21.743	3	1.018	352320	45855	40	100	1146	0.83(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.826	21.777	3	1.002	9955	1464	15	37	98		M
321.8936	21.834	21.777	3	1.002	11875	1566	5	12	313	0.84(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.826	21.849	-1	1.019	340480	42742	18	45	2375		
A Non-2,3,7,8-sub-TCDD											U
319.8965	18.317	20.707	-143	0.841	395	238	15	37	16		
321.8936	18.326	20.707	-143	0.841	871	238	5	12	48	0.45(0.65-0.89)	
	Empc Correction				512	309	5	12	62		
13C-1,2,3,7,8-PeCDF											
351.9000	27.272	27.288	-1	1.274	434133	64951	73	182	890		
353.8970	27.272	27.288	-1	1.274	275917	42079	41	102	1026	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											RQM
339.8597	27.280	27.313	-2	1.000	862	157	3	7	52		M
341.8567	27.272	27.313	-2	1.000	815	181	15	37	12	1.06(1.32-1.78)	M
	Empc Correction				556	101	15	37	7		
13C-2,3,4,7,8-PeCDF											
351.9000	28.779	28.795	-1	1.344	476883	63304	73	182	867		
353.8970	28.771	28.795	-1	1.344	297756	41005	41	102	1000	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.820						3	7			
341.8567	28.820						15	37			
A F1 PeCDFs											
339.8597	24.648						1	2			
341.8567	24.648						2	5			
A Non-2,3,7,8-sub-PeCDF											U
339.8597	25.798	28.125	-139	0.946	165	92	3	7	31		
341.8567	25.823	28.125	-138	0.947	286	57	15	37	4	0.58(1.32-1.78)	
	Empc Correction				106	59	15	37	4		
13C-1,2,3,7,8-PeCDD											
367.8949	29.604	29.612	0	1.383	275156	36438	25	62	1458		
369.8919	29.596	29.612	-1	1.382	179676	24287	16	40	1518	1.53(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.637						9	22			
357.8516	29.637						5	12			
A Non-2,3,7,8-sub-PeCDD											M
355.8546	26.084	28.489	-144	0.881	2288	403	9	22	45		
357.8516	26.118	28.489	-142	0.882	1425	231	5	12	46	1.61(1.32-1.78)	
355.8546	26.893	28.489	-96	0.908	5265	858	9	22	95		
357.8516	26.885	28.489	-96	0.908	3138	495	5	12	99	1.68(1.32-1.78)	M
355.8546	28.527	28.489	2	0.964	2341	308	9	22	34		
357.8516	28.501	28.489	1	0.963	1382	194	5	12	39	1.69(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.937	34.942	0	0.954	257246	48070	59	147	815		
385.8610	34.929	34.942	-1	0.954	481616	85562	150	375	570	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQM
373.8208	34.979	34.959	1	1.001	1804	299	5	12	60		
	Empc Correction				1531	342	5	12	68		
375.8178	34.946	34.959	-1	1.000	1235	276	3	7	92	1.46(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.089	35.111	-1	0.958	255992	42751	59	147	725		
385.8610	35.089	35.111	-1	0.958	464705	82489	150	375	550	0.55(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQMU
373.8208	35.119						5	12			
375.8178	35.119						3	7			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.914	35.919	0	0.981	230741	47142	59	147	799		
385.8610	35.914	35.919	0	0.981	425571	85393	150	375	569	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.936						5	12			
375.8178	35.936						3	7			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.807	36.811	0	1.005	196674	41844	59	147	709		
385.8610	36.807	36.811	0	1.005	368126	81401	150	375	543	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											U
373.8208	36.828						5	12			
375.8178	36.828						3	7			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.506	35.028	-91	0.959	96	26	5	12	5		
	Empc Correction				23	17	5	12	3		
375.8178	33.540	35.028	-89	0.960	19	14	3	7	5	5.05(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.614	36.609	0		572706	123423	62	155	1991		
403.8529	36.614	36.609	0		460633	100475	59	147	1703	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.133	36.129	0	0.987	285060	62496	62	155	1008		
403.8529	36.125	36.129	0	0.987	234222	48612	59	147	824	1.22(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.146						30	75			
391.8127	36.146						20	50			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.243	36.247	0	0.990	286828	57982	62	155	935		
403.8529	36.243	36.247	0	0.990	223347	46735	59	147	792	1.28(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.264						30	75			
391.8127	36.264						20	50			
1,2,3,7,8,9-HxCDD											
389.8158	36.605	36.626	-1	1.013	2852	475	30	75	16		
391.8127	36.597	36.626	-2	1.013	2327	437	20	50	22	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	34.255	35.394	-68	0.945	35719	5940	30	75	198		
391.8127	34.247	35.394	-69	0.945	27892	4905	20	50	245	1.28(1.05-1.43)	
389.8158	35.021	35.394	-22	0.966	1282	317	30	75	11		
	Empc Correction				1066	271	30	75	9		
391.8127	35.030	35.394	-22	0.967	860	219	20	50	11	1.49(1.05-1.43)	
389.8158	35.359	35.394	-2	0.976	6215	1256	30	75	42		
391.8127	35.376	35.394	-1	0.976	4674	850	20	50	43	1.33(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.630	38.626	0	1.055	146369	36589	54	135	678		
419.8220	38.630	38.626	0	1.055	329346	79942	83	207	963	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7817	38.655	38.630	1	1.001	915	269	10	25	27		
	Empc Correction				500	167	10	25	17		
409.7788	38.638	38.630	0	1.000	481	161	2	5	81	1.90(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.876	39.880	0	1.089	126498	33688	54	135	624		
419.8220	39.876	39.880	0	1.089	280521	73712	83	207	888	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885						10	25			
409.7788	39.885						2	5			
A Non-2,3,7,8-sub-HpCDF											U
407.7817	38.983	39.258	-16	1.009	212	53	10	25	5		
	Empc Correction				123	44	10	25	4		
409.7788	39.009	39.258	-15	1.010	119	43	2	5	22	1.78(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.581	39.569	1	1.081	210711	54896	29	72	1893		
437.8140	39.581	39.569	1	1.081	208486	58375	23	57	2538	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.590	39.582	0	1.000	22320	6189	22	55	281		
425.7737	39.590	39.582	0	1.000	21267	6329	22	55	288	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.941	39.258	-19	0.984	82612	21410	22	55	973		
425.7737	38.941	39.258	-19	0.984	80800	21572	22	55	981	1.02(0.88-1.20)	
13C-OCDD											
469.7780	42.071	42.072	0	1.149	338417	75986	30	75	2533		
471.7750	42.071	42.072	0	1.149	371523	84011	39	97	2154	0.91(0.76-1.02)	
OCDF											M
441.7428	42.172	42.165	0	1.002	470	138	3	7	46		M
443.7399	42.180	42.165	1	1.003	547	149	8	20	19	0.86(0.76-1.02)	M
OCDD											
457.7377	42.079	42.081	0	1.000	385463	83869	41	102	2046		
459.7348	42.079	42.081	0	1.000	427431	93113	41	102	2271	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Lims ID:	320-76887-A-9-A		
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Inject. Date:	18-Aug-2021 18:01:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	34

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	879298	118809

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	879298	118809

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.947	1115	258	1754	363	0.3021	0.64	RQ
17.947	1115	258	1448	335	0.2698		Empc Correction
18.403	1340	267	2568	389	0.4115	0.52	RQ
18.403	1340	267	1740	346	0.3243		Empc Correction
18.850	1961	271	2118	340	0.4295	0.93	RQ
18.850	1630	261	2118	340	0.3946		Empc Correction
19.280	2181	393	2935	535	0.5386	0.74	
19.761	23568	3554	30407	4501	5.68	0.78	
23.648	3818	740	4866	913	0.9143	0.78	
Signal Totals:							
	33652	5473	43514	6970			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	78631	12524				0.76	RQ
	77166	12443					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 8.279 = (78631 * 100.000) / (879298 * 1.080)

Empc Amount: 8.124 = (77166 * 100.000) / (879298 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d
Lims ID: 320-76887-A-9-A
Client ID: 11215702-072721-BN-SJSB096 (16-18)
Inject. Date: 18-Aug-2021 18:01:00 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 34

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	645935	82482

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	645935	82482

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.317	395	238	871	238	0.1823	0.45	RQ
18.317	395	238	512	309	0.1306		Empc Correction
18.360	311	155	343	158	0.0942	0.91	RQ
18.360	264	121	343	158	0.0874		Empc Correction
18.721	582	107	479	166	0.1527	1.22	RQ
18.721	368	127	479	166	0.1219		Empc Correction
19.676	1907	376	2457	477	0.6283	0.78	
20.837	659	131	453	115	0.1601	1.45	RQ
20.837	348	88	453	115	0.1153		Empc Correction
21.327	770	137	1208	240	0.2848	0.64	RQ
21.327	770	137	1000	177	0.2548		Empc Correction
21.611	609	111	581	138	0.1713	1.05	RQ
21.611	447	106	581	138	0.1480		Empc Correction
22.539	1218	208	611	191	0.2633	1.99	RQ
22.539	470	147	611	191	0.1556		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Lims ID:	320-76887-A-9-A		
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Inject. Date:	18-Aug-2021 18:01:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	34

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	710050	107030
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	774639	104309

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	742344	105669

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.798	165	92	286	57	0.0589	0.58	RQ
25.798	165	92	106	59	0.0354		Empc Correction
25.874	320	70	286	57	0.0792	1.12	RQ
25.874	320	70	206	45	0.0687		Empc Correction
27.878	369	88	287	76	0.0857	1.29	RQ
27.878	369	88	238	56	0.0793		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Lims ID:	320-76887-A-9-A		
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Inject. Date:	18-Aug-2021 18:01:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	34

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	454832	60725

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	454832	60725

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.084	2288	403	1425	231	0.7801	1.61	
26.893	5265	858	3138	495	1.77	1.68	M
28.527	2341	308	1382	194	0.7822	1.69	
Signal Totals:							
	9894	1569	5945	920			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15839	2489				1.66	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.328 = (15839 * 100.000) / (454832 * 1.046)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Lims ID:	320-76887-A-9-A		
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Inject. Date:	18-Aug-2021 18:01:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	34

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	738862	133632
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	720697	125240
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	656312	132535
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	564800	123245

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	670167	128663

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.506	96	26	19	14	0.0142	5.05	RQ
33.506	23	17	19	14	0.005201		Empc Correction
35.923	211	49	4	0	0.0266	52.75	RnQ
35.923	4	0	4	0	0.000991		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Lims ID:	320-76887-A-9-A		
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Inject. Date:	18-Aug-2021 18:01:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	34

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	519282	111108
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	510175	104717
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	514728	107912

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.255	35719	5940	27892	4905	11.7	1.28	
35.021	1282	317	860	219	0.3946	1.49	RQ
35.021	1066	271	860	219	0.3548		Empc Correction
35.359	6215	1256	4674	850	2.01	1.33	
Signal Totals:							
	43000	7467	33426	5974			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	76642	13487				1.29	RQ
	76426	13441					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 14.120 = (76642 * 100.000) / (514728 * 1.055)

Empc Amount: 14.080 = (76426 * 100.000) / (514728 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Lims ID:	320-76887-A-9-A		
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Inject. Date:	18-Aug-2021 18:01:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	34

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	475715	116531
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	407019	107400

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	441367	111965

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.983	212	53	119	43	0.0545	1.78	RQ
38.983	123	44	119	43	0.0399		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Lims ID:	320-76887-A-9-A		
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Inject. Date:	18-Aug-2021 18:01:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	34

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	419197	113271

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	419197	113271

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.941	82612	21410	80800	21572	37.1	1.02	
Signal Totals:							
	82612	21410	80800	21572			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	163412	42982				1.02	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 37.115 = (163412 * 100.000) / (419197 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d				
Injection Date:	18-Aug-2021 18:01:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-9-A	Lab Sample ID:	320-76887-9		
Client ID:	11215702-072721-BN-SJSB096 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	34
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.83
Area: 10516
Amount: 3.223564
Amount Units: pg/ul

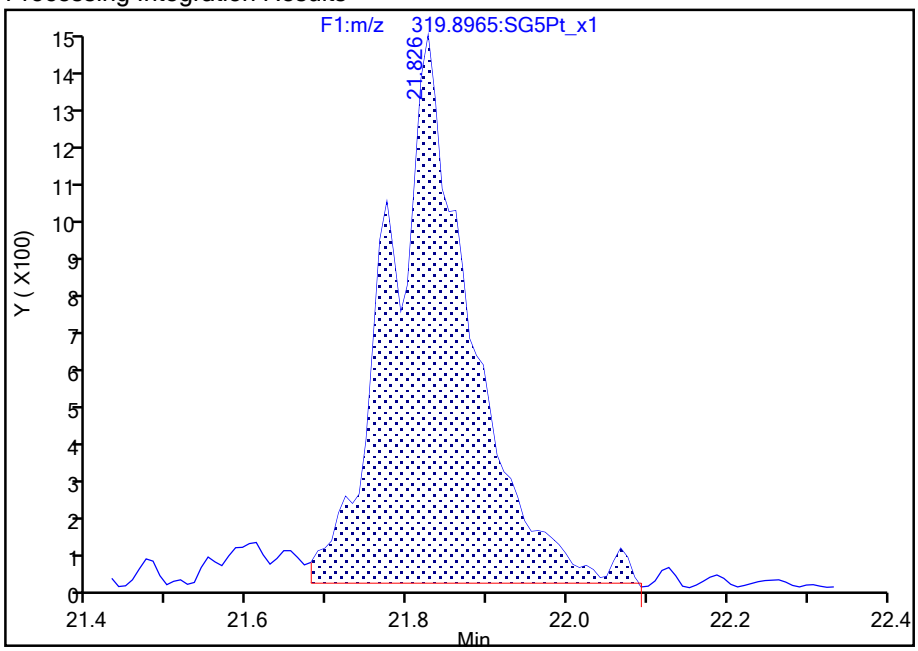

Manual Integration Results

RT: 21.83
Area: 9955
Amount: 3.142799
Amount Units: pg/ul

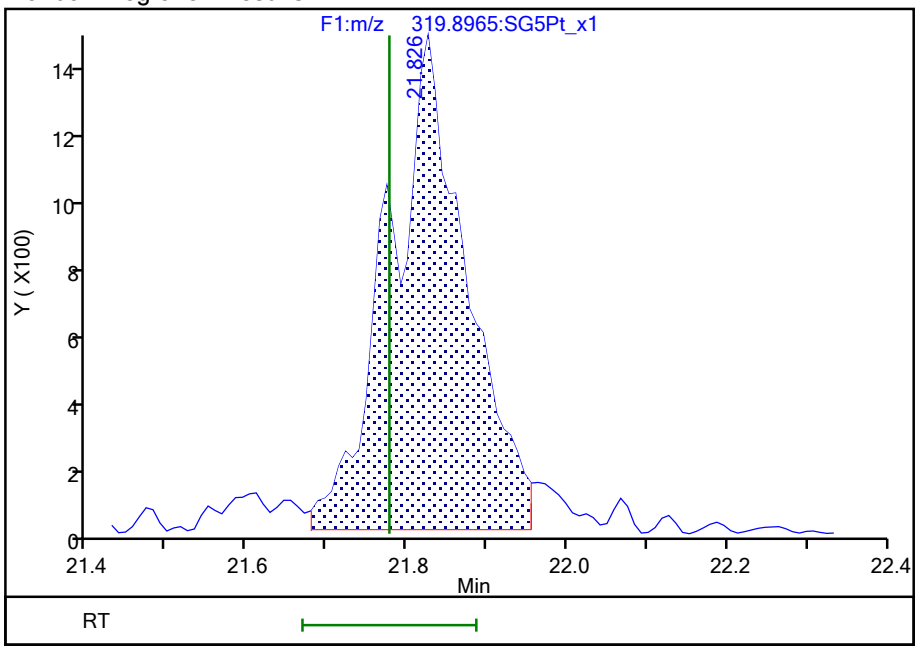

Reviewer: dadunj, 20-Aug-2021 09:09:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d				
Injection Date:	18-Aug-2021 18:01:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-9-A	Lab Sample ID:	320-76887-9		
Client ID:	11215702-072721-BN-SJSB096 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	34
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.27
Area: 131
Amount: 0.136392
Amount Units: pg/ul

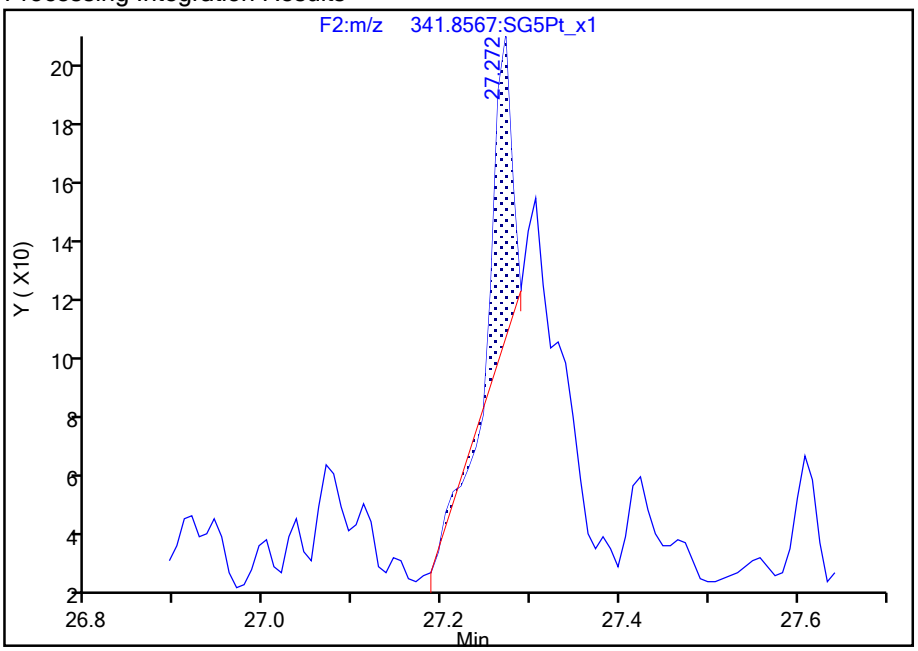

Manual Integration Results

RT: 27.27
Area: 815
Amount: 0.224024
Amount Units: pg/ul

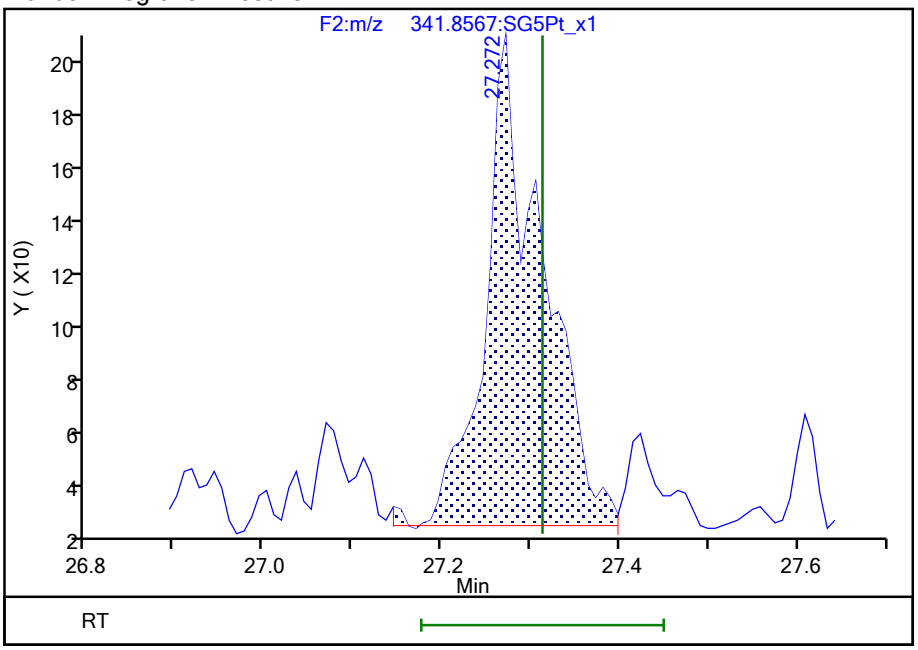

Reviewer: dadunj, 20-Aug-2021 09:10:04

Audit Action: Split an Integrated Peak Audit Reason: Baseline

783949

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d				
Injection Date:	18-Aug-2021 18:01:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-9-A	Lab Sample ID:	320-76887-9		
Client ID:	11215702-072721-BN-SJSB096 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	34
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.28
Area: 890
Amount: 0.136392
Amount Units: pg/ul

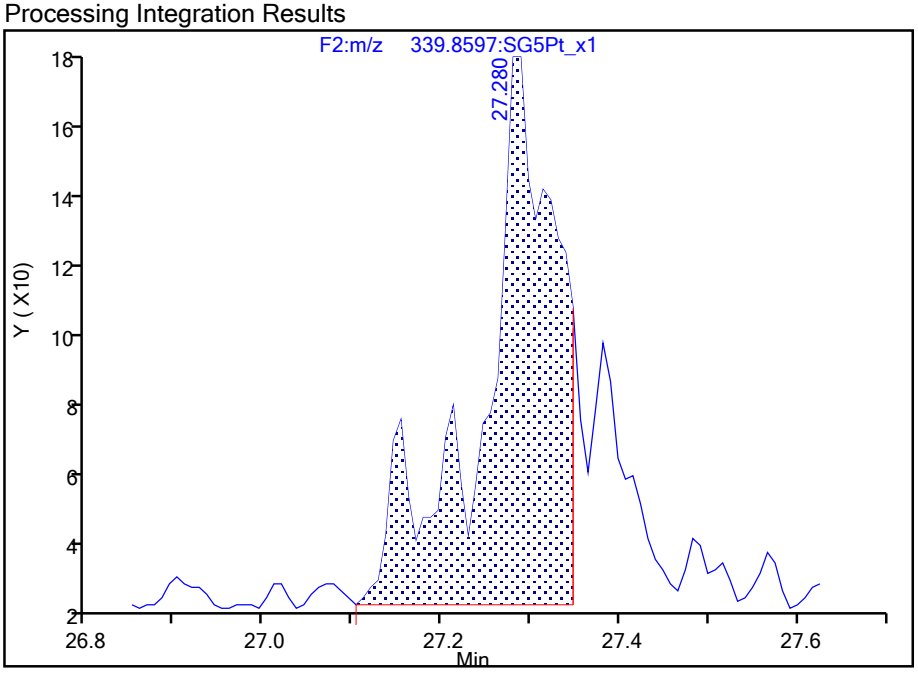

Manual Integration Results

RT: 27.28
Area: 862
Amount: 0.224024
Amount Units: pg/ul

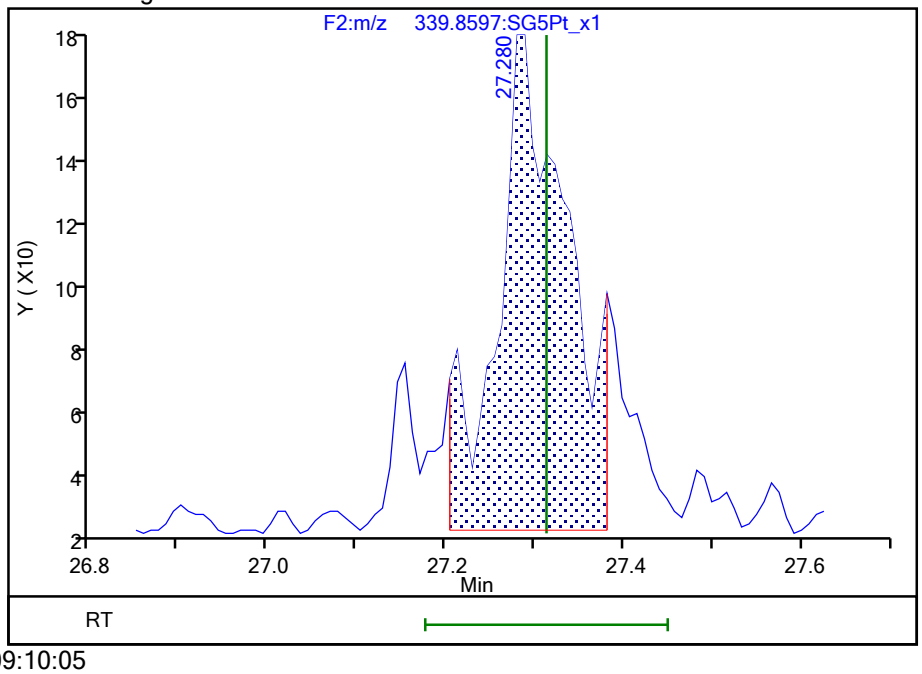

Reviewer: dadunj, 20-Aug-2021 09:10:05
Audit Action: Split an Integrated Peak Audit Reason: Baseline

783950

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d				
Injection Date:	18-Aug-2021 18:01:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-9-A	Lab Sample ID:	320-76887-9		
Client ID:	11215702-072721-BN-SJSB096 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	34
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (25.88- 31.10)

Signal: 2

Processing Integration Results

RT = 26.885 Area = 2486

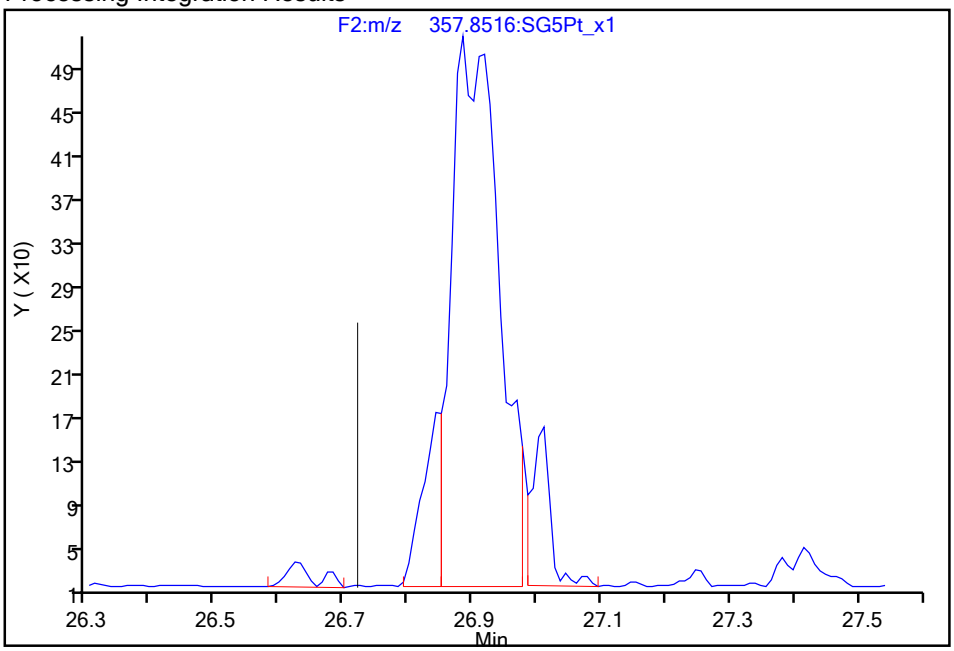

Manual Integration Results

RT = 26.885 Area = 3138 M

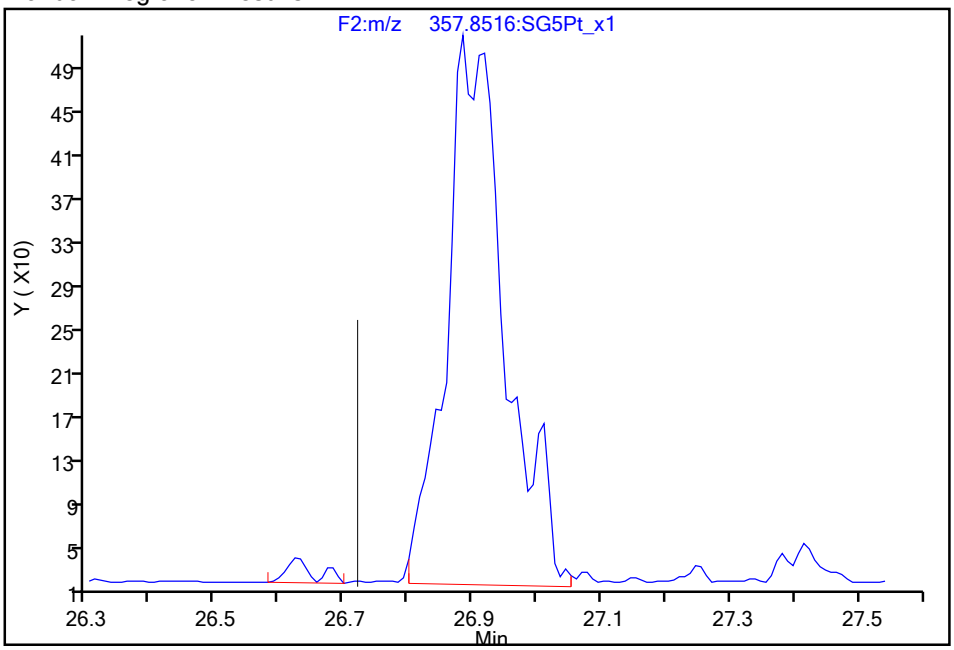

Reviewer: dadunj, 20-Aug-2021 09:10:23

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d				
Injection Date:	18-Aug-2021 18:01:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-9-A	Lab Sample ID:	320-76887-9		
Client ID:	11215702-072721-BN-SJSB096 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	34
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 2

Processing Integration Results

RT: 34.95
Area: 1251
Amount: 0.360363
Amount Units: pg/ul

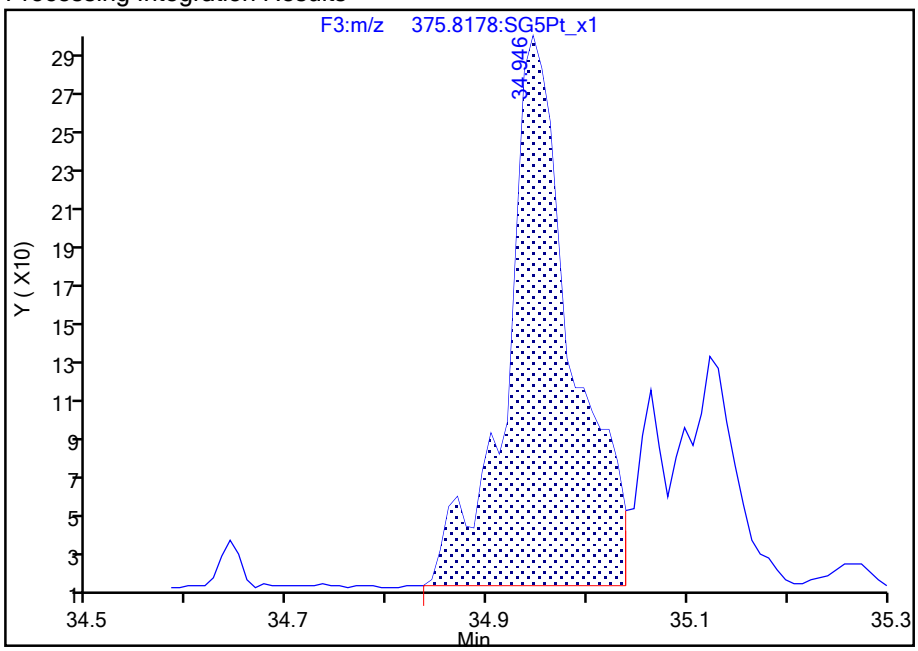

Manual Integration Results

RT: 34.95
Area: 1235
Amount: 0.358476
Amount Units: pg/ul

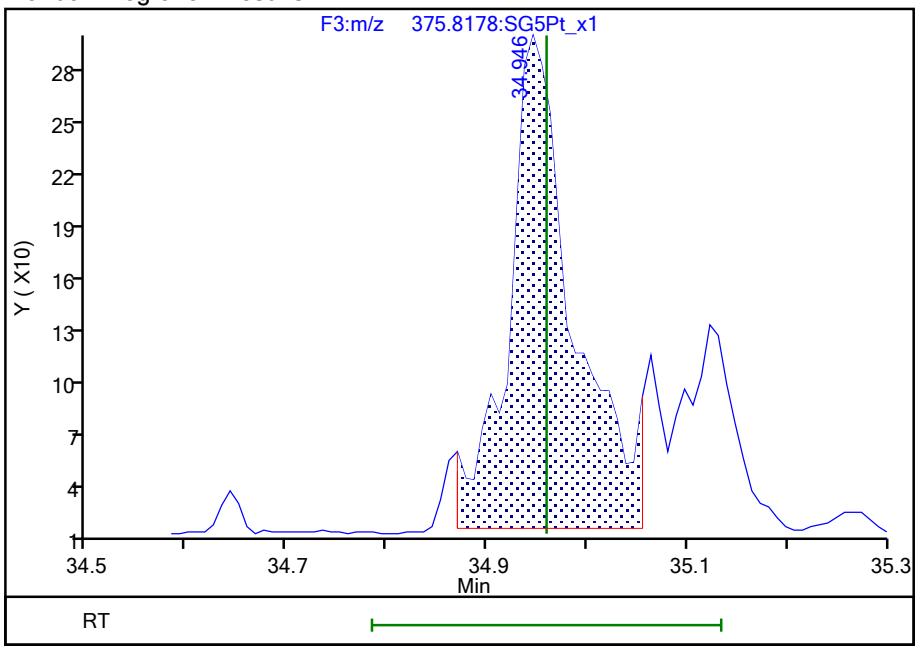

Reviewer: dadunj, 20-Aug-2021 09:10:39

Audit Action: Manually Integrated Audit Reason: Baseline

783952

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d				
Injection Date:	18-Aug-2021 18:01:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-9-A	Lab Sample ID:	320-76887-9		
Client ID:	11215702-072721-BN-SJSB096 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	34
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.64
Area: 307
Amount: 0.178130
Amount Units: pg/ul

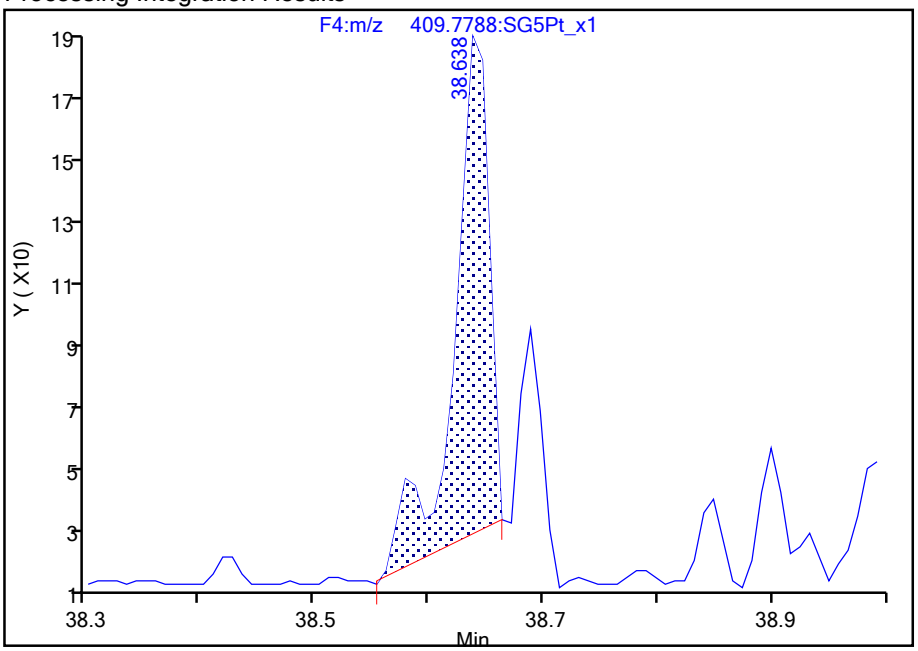

Manual Integration Results

RT: 38.64
Area: 481
Amount: 0.203494
Amount Units: pg/ul

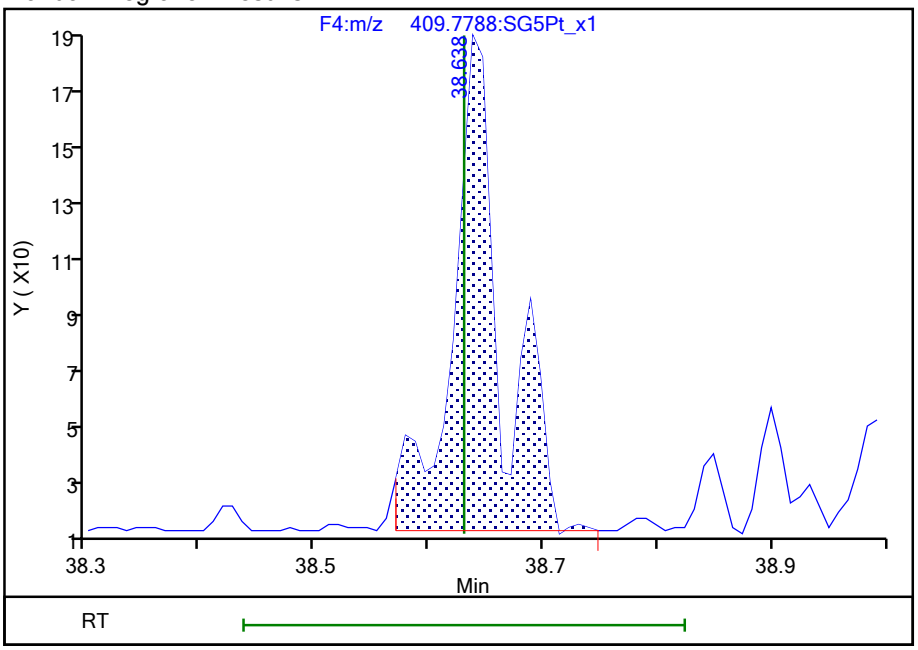

Reviewer: dadunj, 20-Aug-2021 09:11:31

Audit Action: Manually Integrated Audit Reason: Baseline

783953

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d				
Injection Date:	18-Aug-2021 18:01:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-9-A	Lab Sample ID:	320-76887-9		
Client ID:	11215702-072721-BN-SJSB096 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	34
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 42.17
Area: 808
Amount: 0.296305
Amount Units: pg/ul

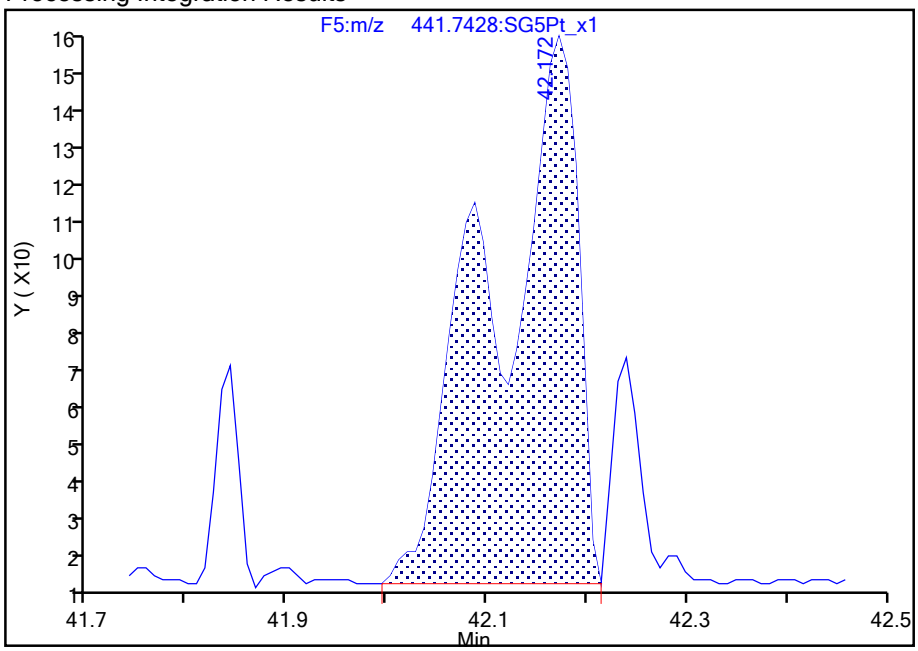

Manual Integration Results

RT: 42.17
Area: 470
Amount: 0.217576
Amount Units: pg/ul

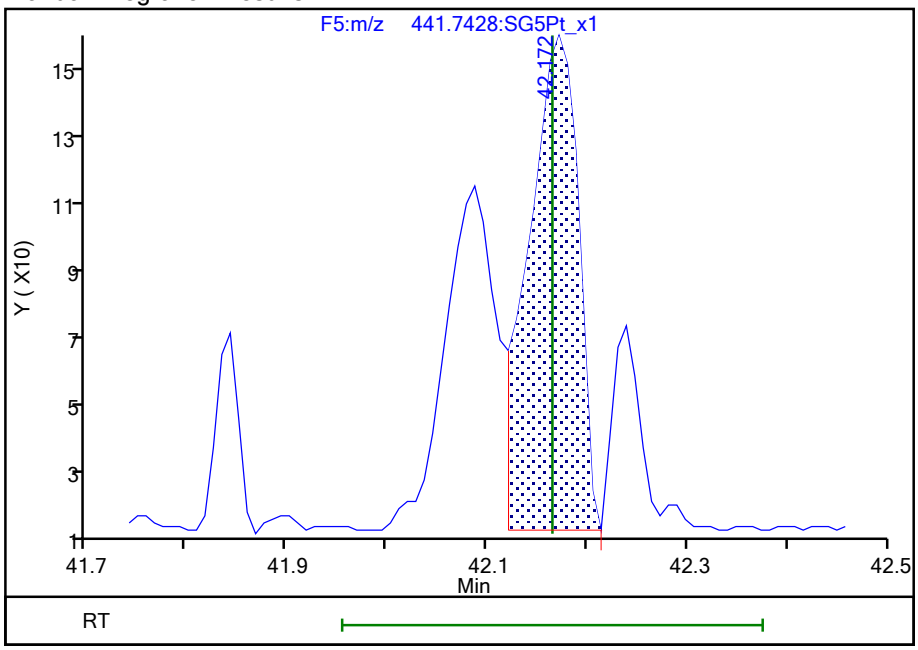

Reviewer: dadunj, 20-Aug-2021 09:11:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d				
Injection Date:	18-Aug-2021 18:01:00	Instrument ID:	DFS 1		
Lims ID:	320-76887-A-9-A	Lab Sample ID:	320-76887-9		
Client ID:	11215702-072721-BN-SJSB096 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	34
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 42.18
Area: 577
Amount: 0.296305
Amount Units: pg/ul

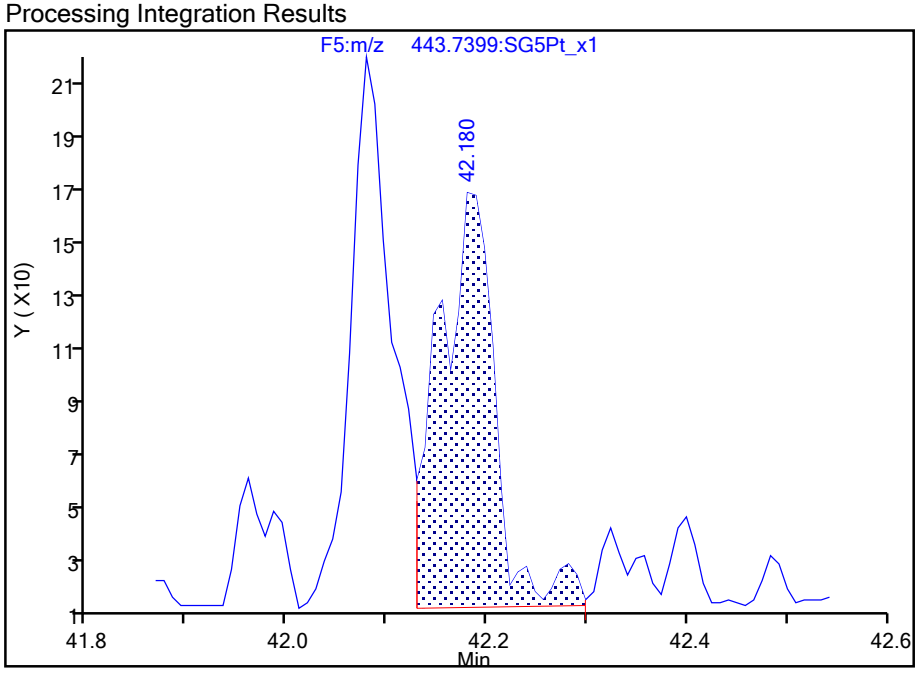

Manual Integration Results

RT: 42.18
Area: 547
Amount: 0.217576
Amount Units: pg/ul

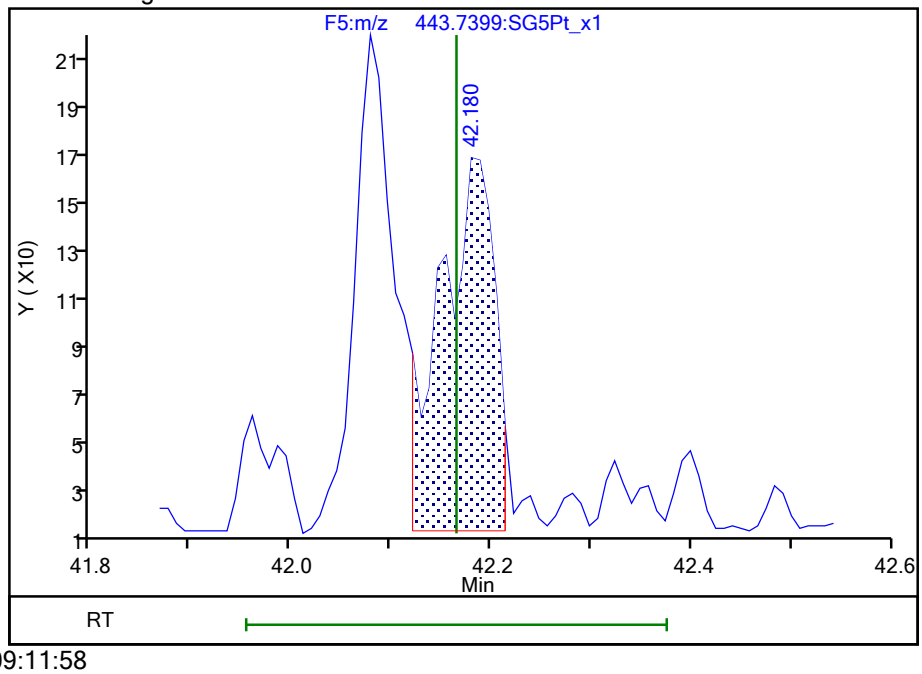

Reviewer: dadunj, 20-Aug-2021 09:11:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

783955

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Injection Date:	18-Aug-2021 18:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	517461	Sample Line#:	34
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

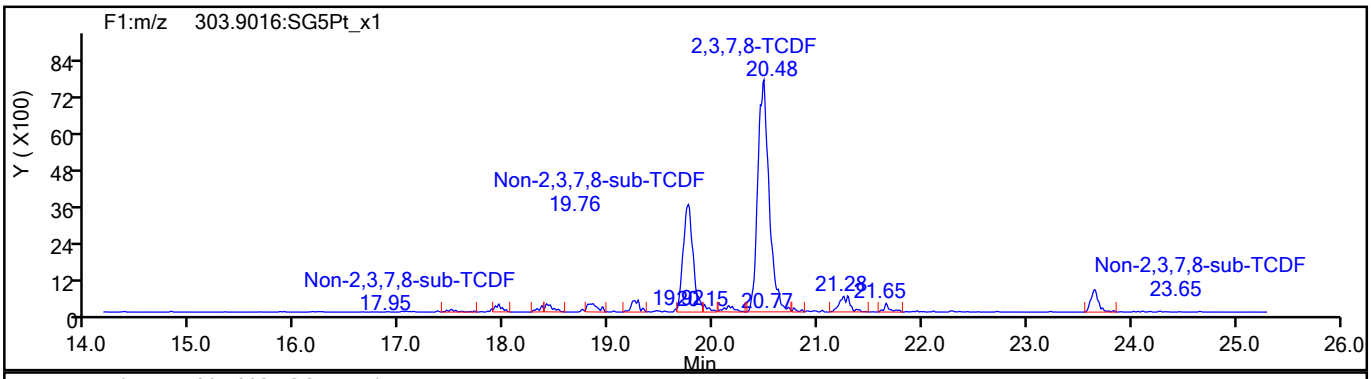

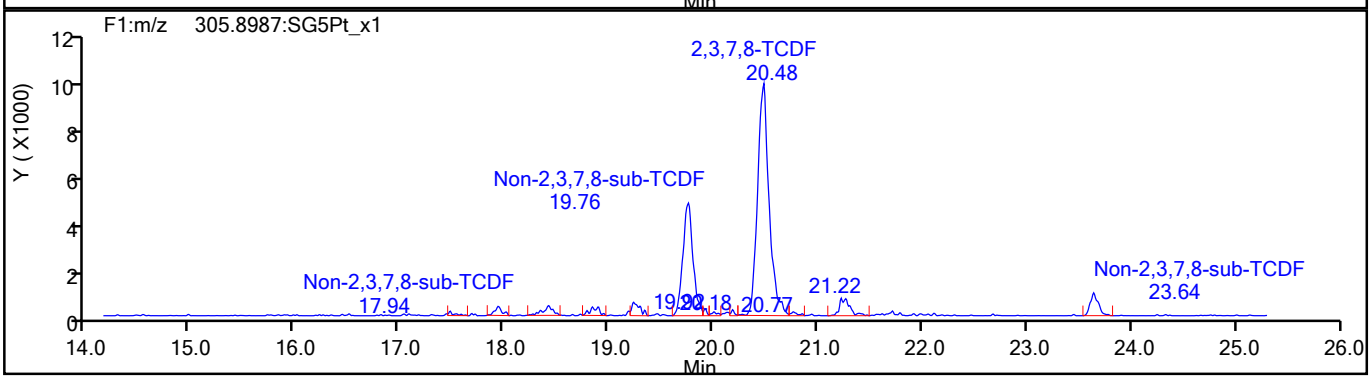

TCDF Standards

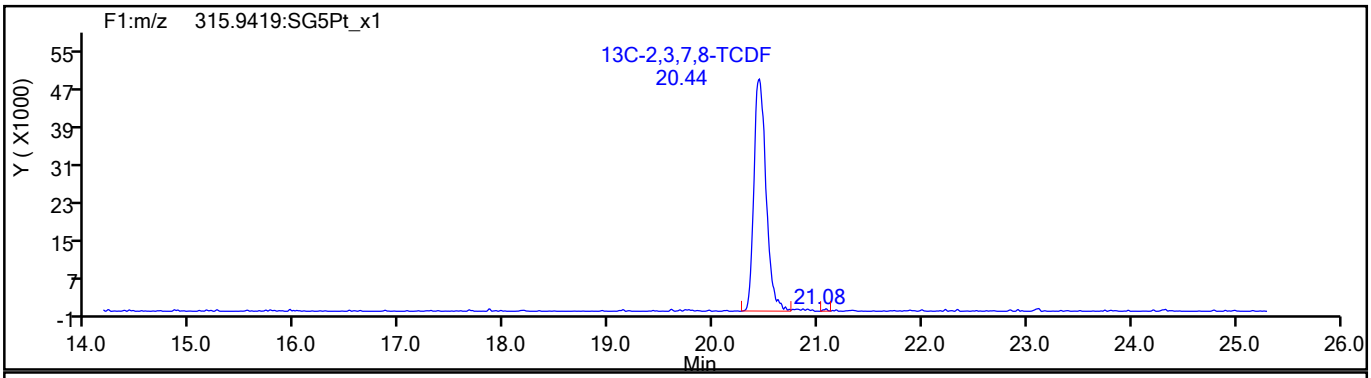

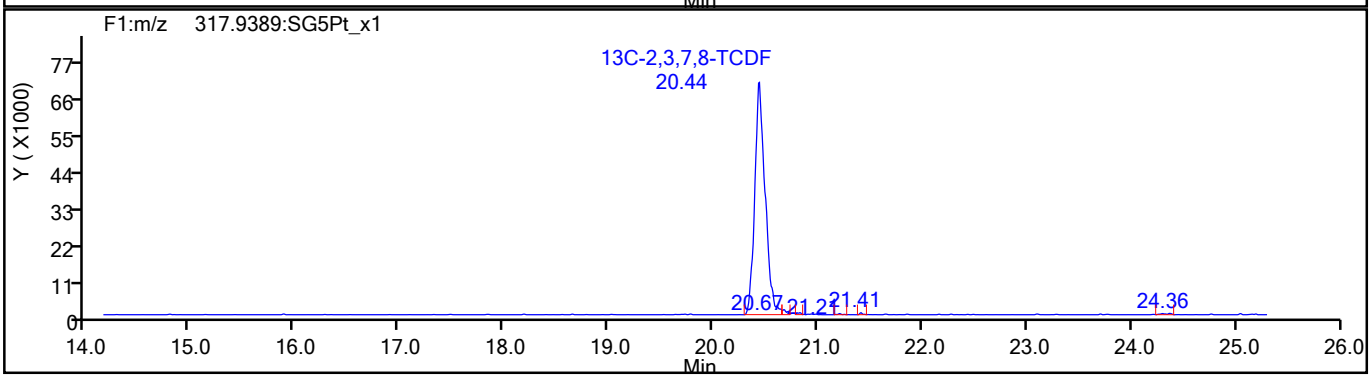

783956

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Injection Date:	18-Aug-2021 18:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	517461	Sample Line#:	34
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

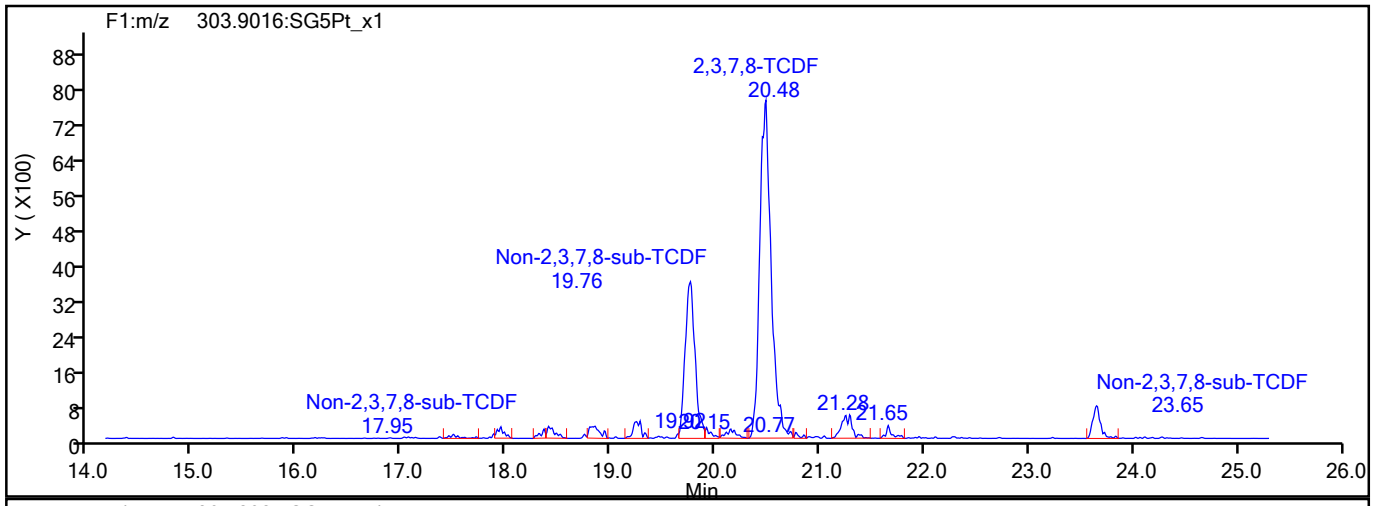

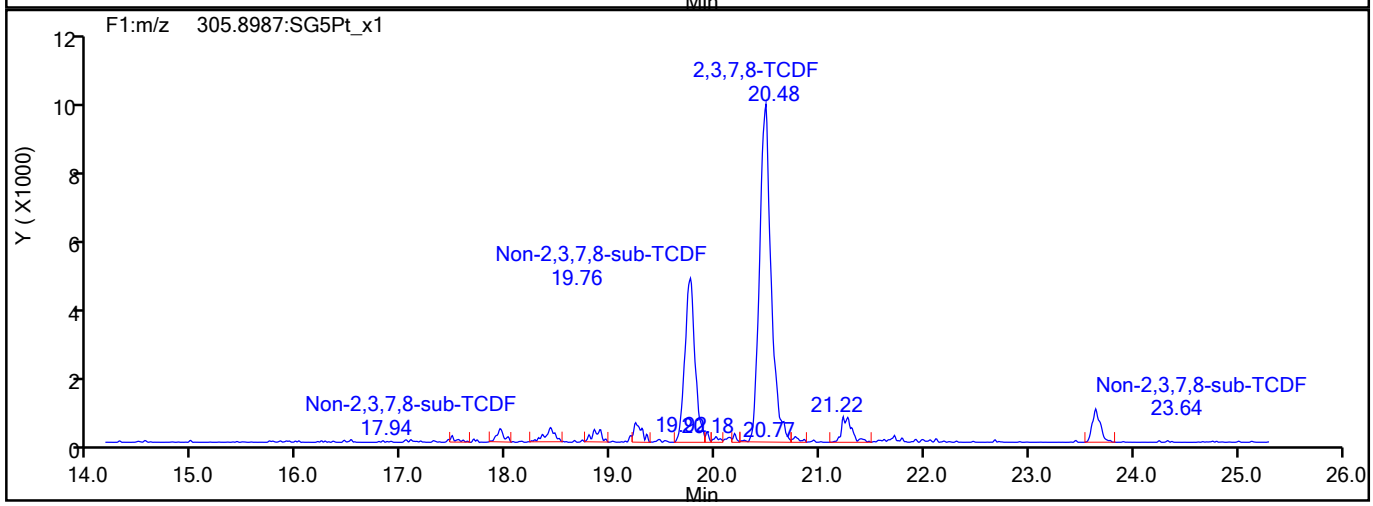

TCDF Interference Mass

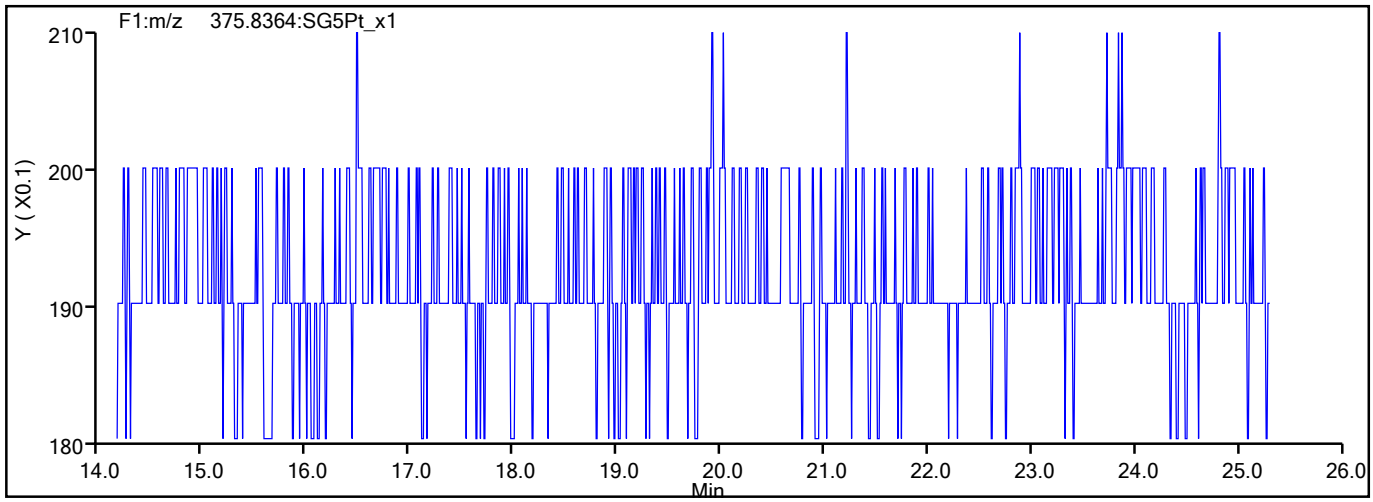

783957

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Injection Date:	18-Aug-2021 18:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	517461	Sample Line#:	34
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

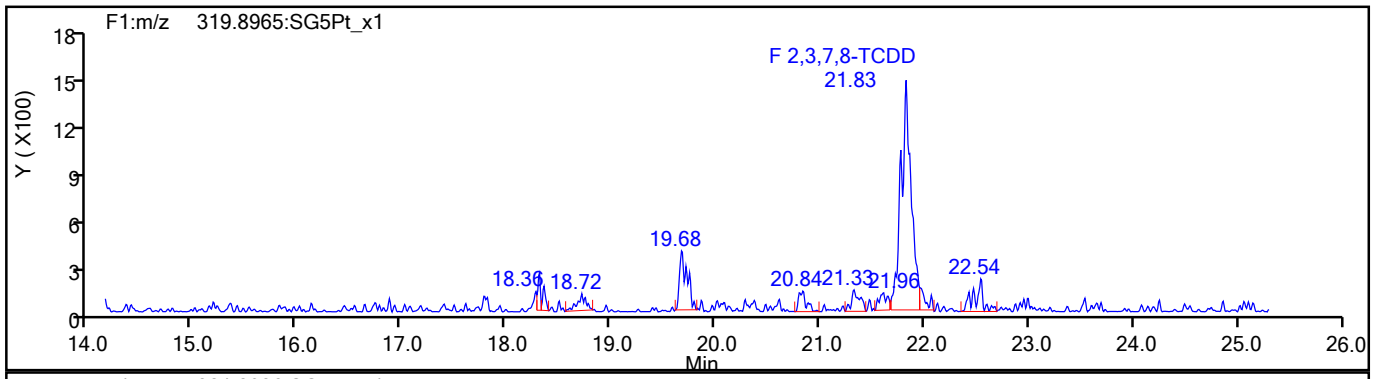

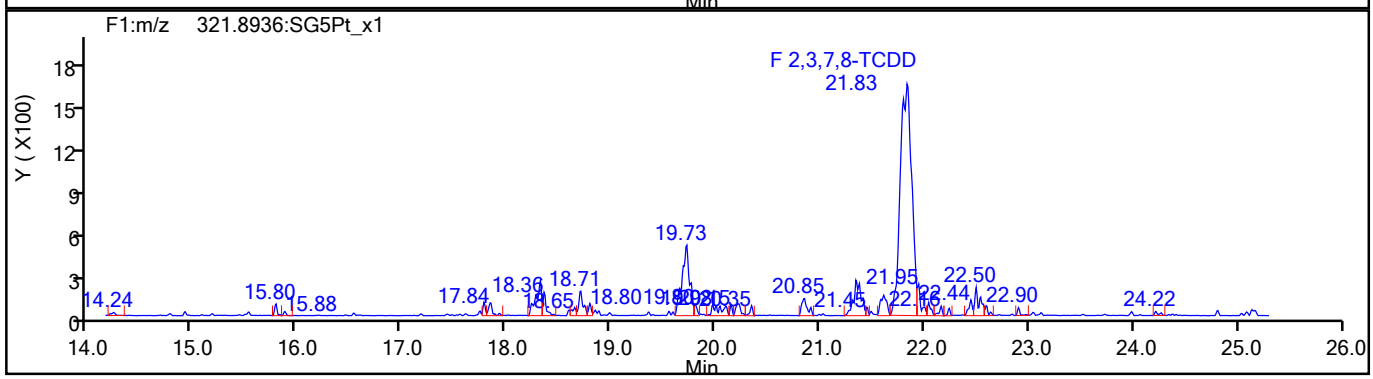

TCDD Standards

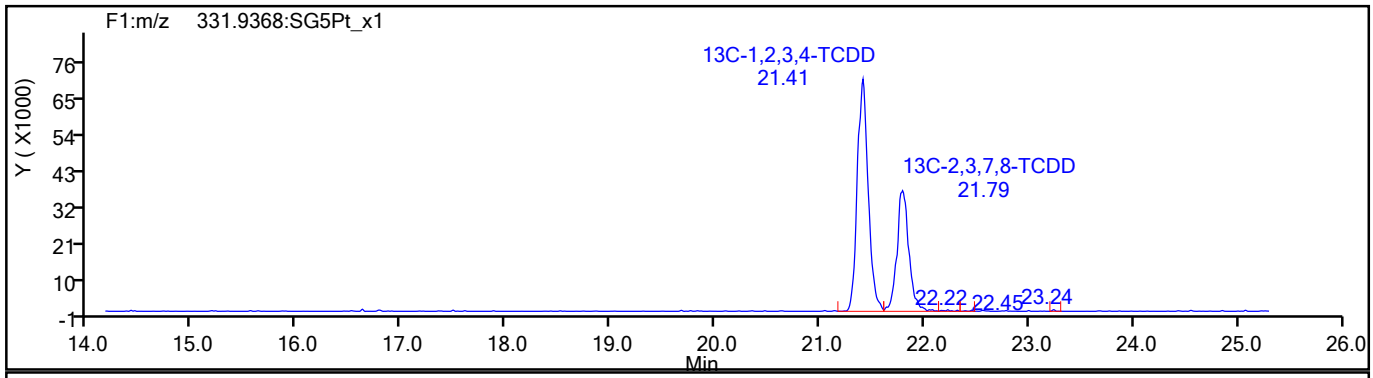

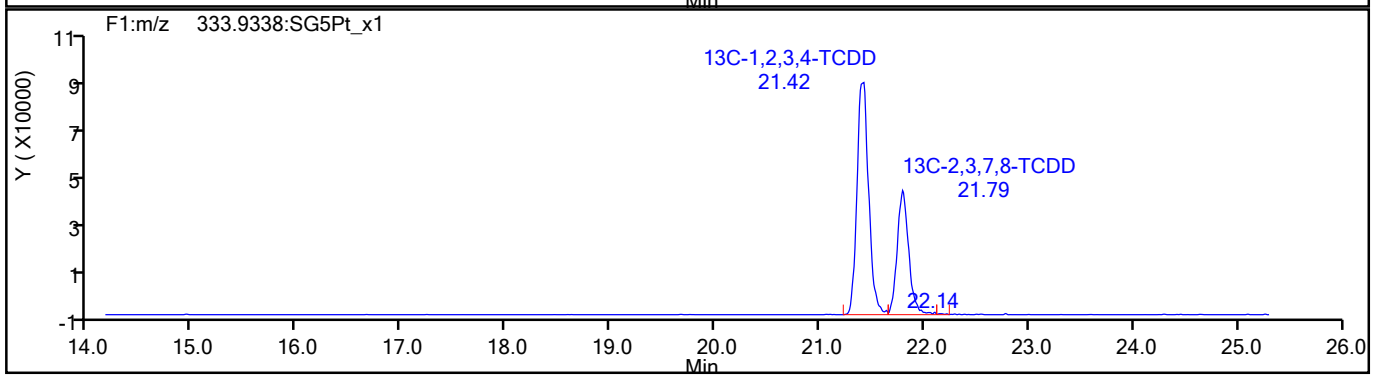

783958

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	517461	Sample Line#:	34
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

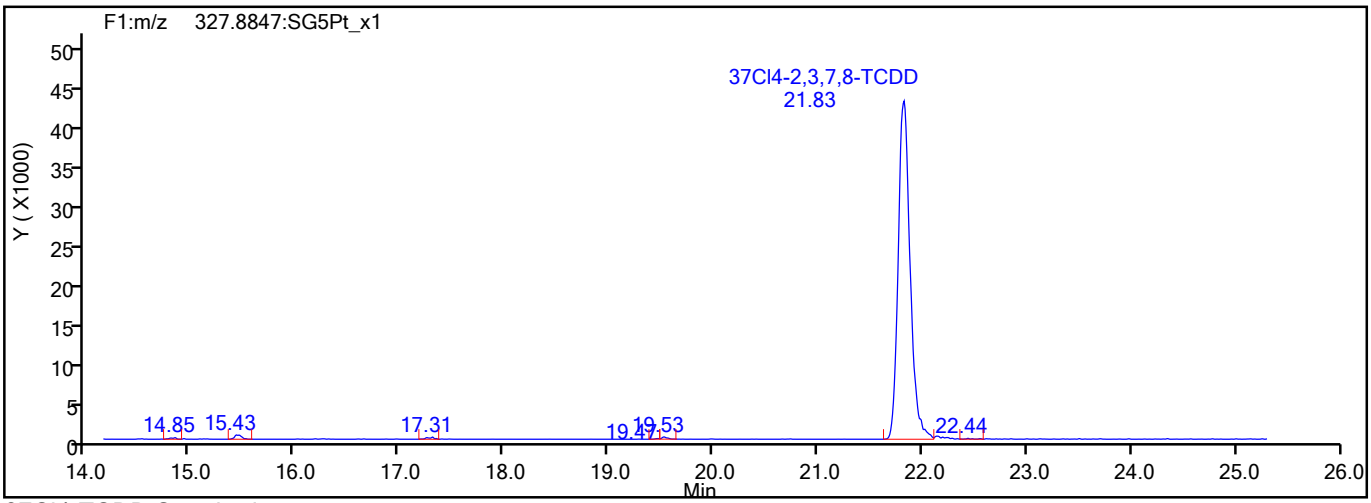

37Cl4-TCDD Standards

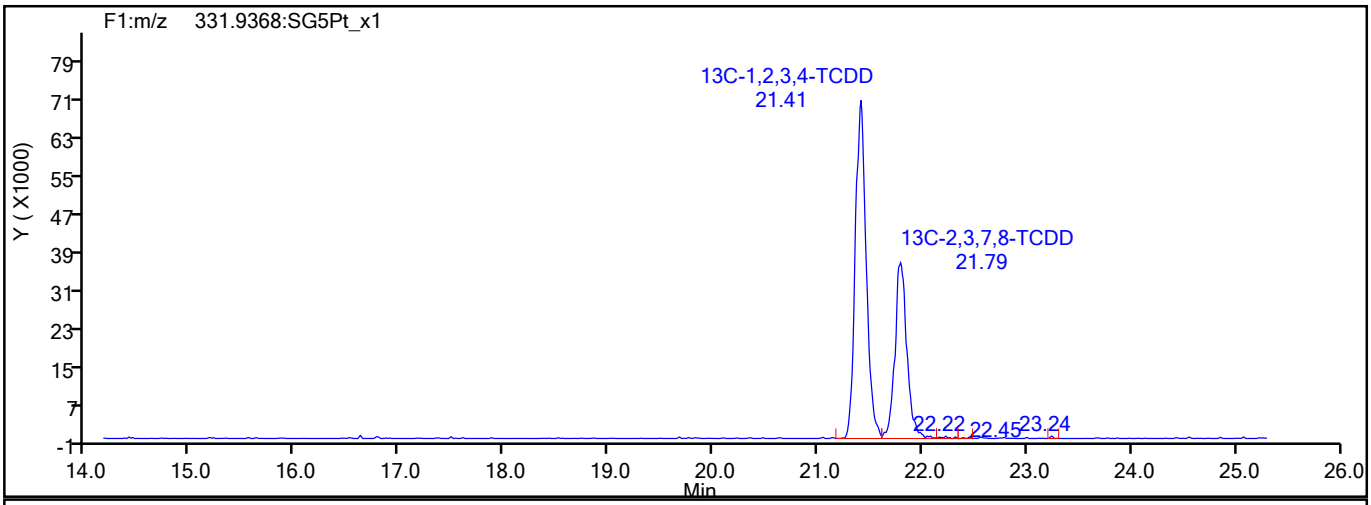

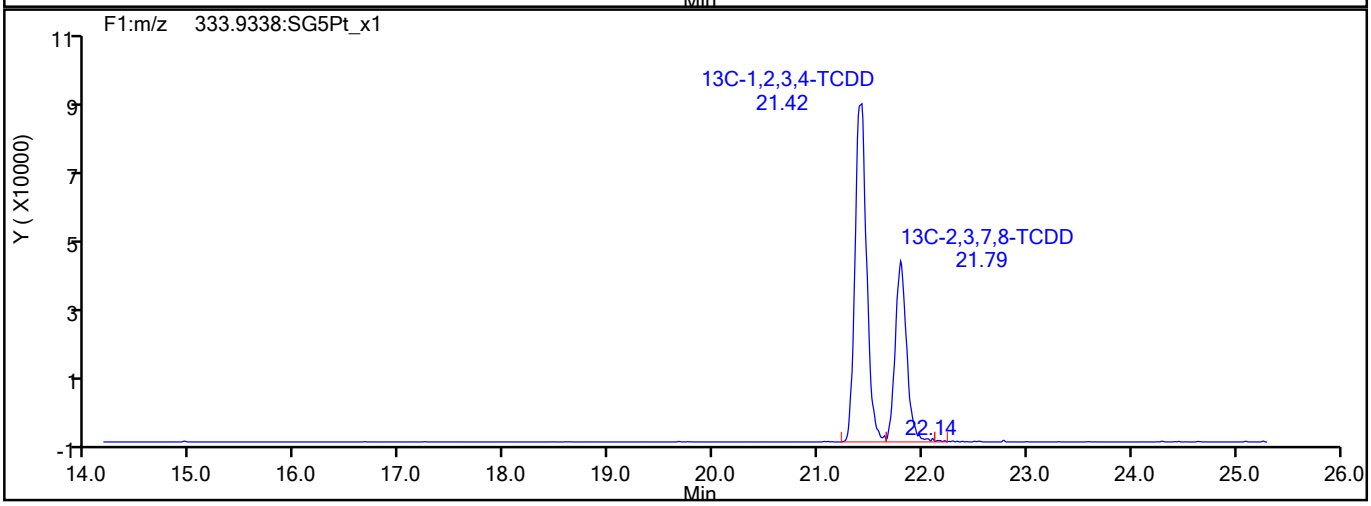

783959

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

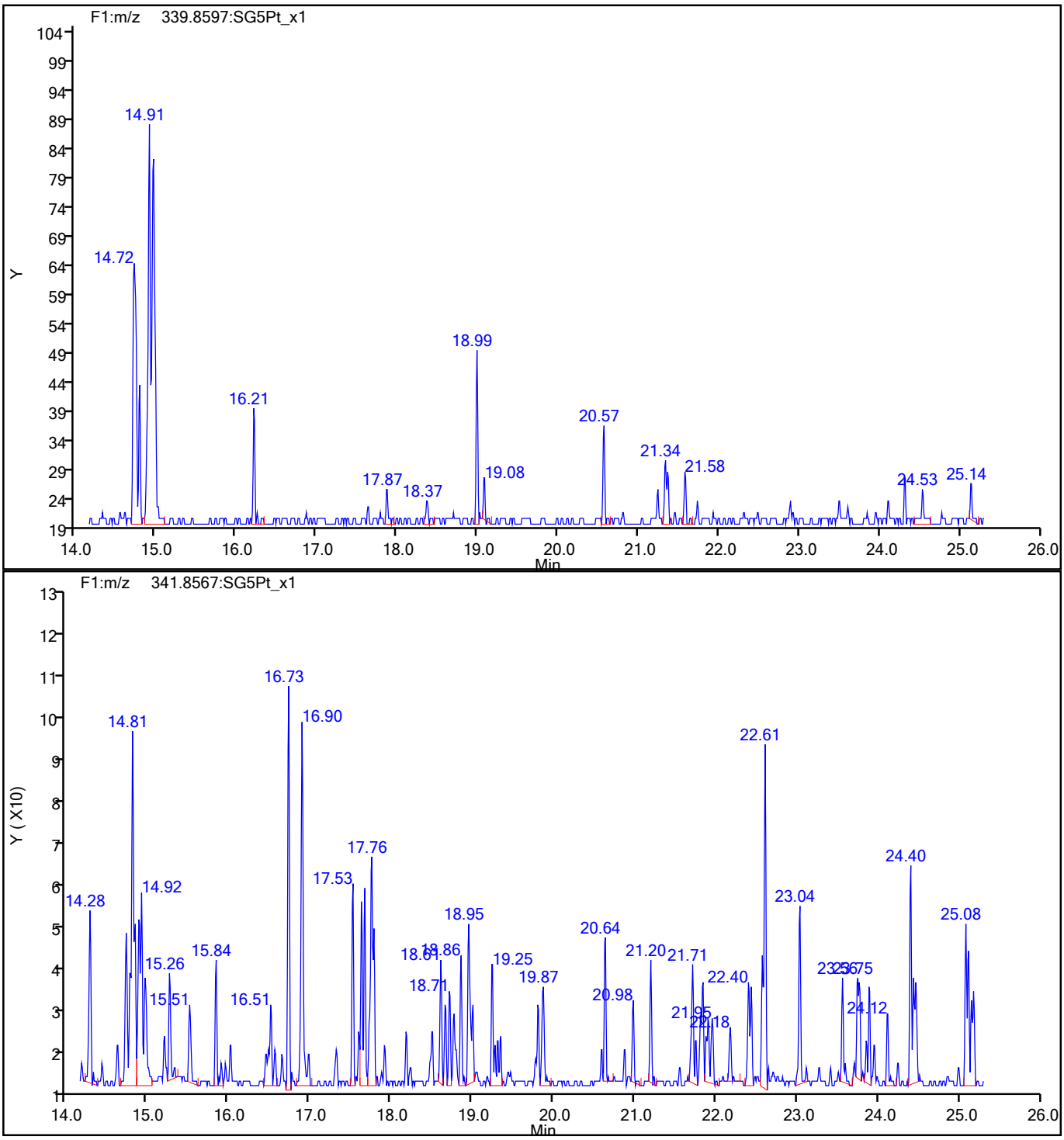

783960

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

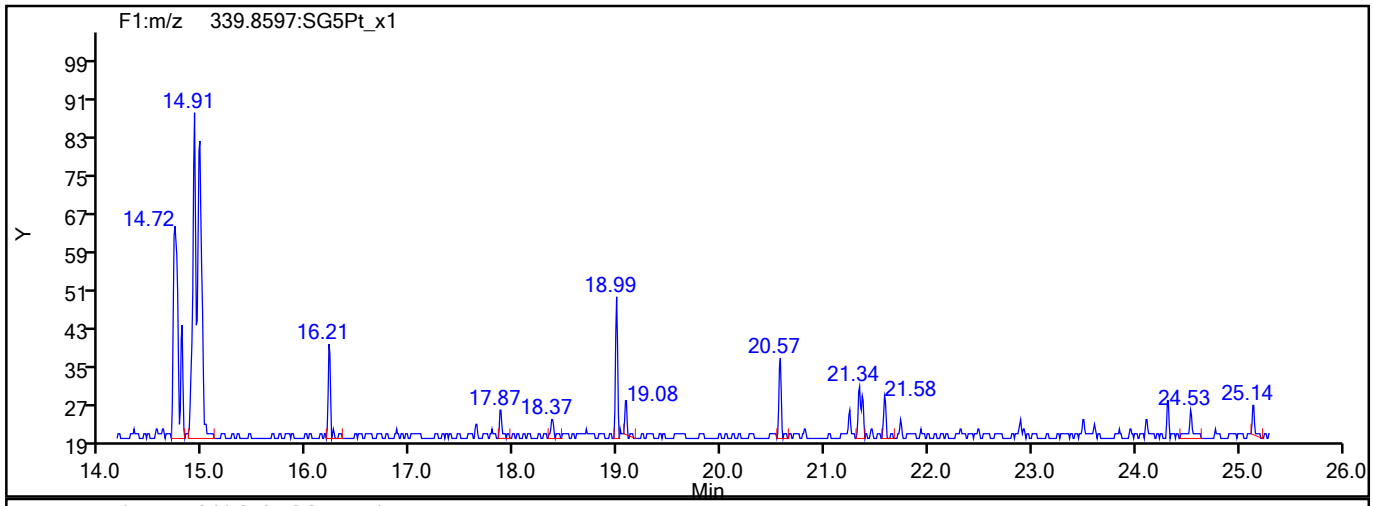

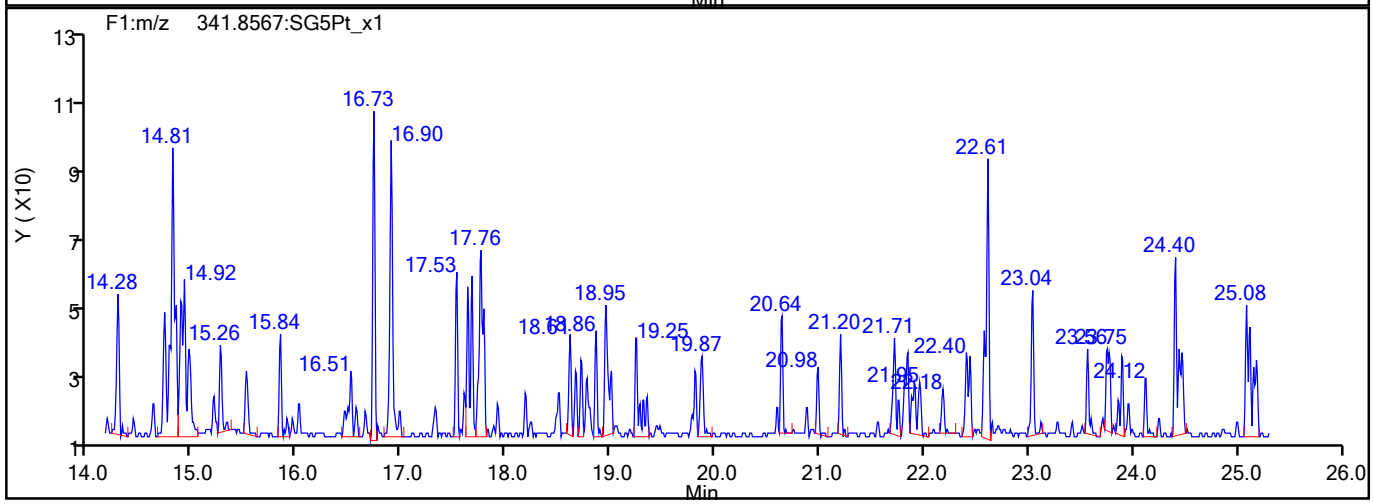

F1 PeCDFs Interference Mass

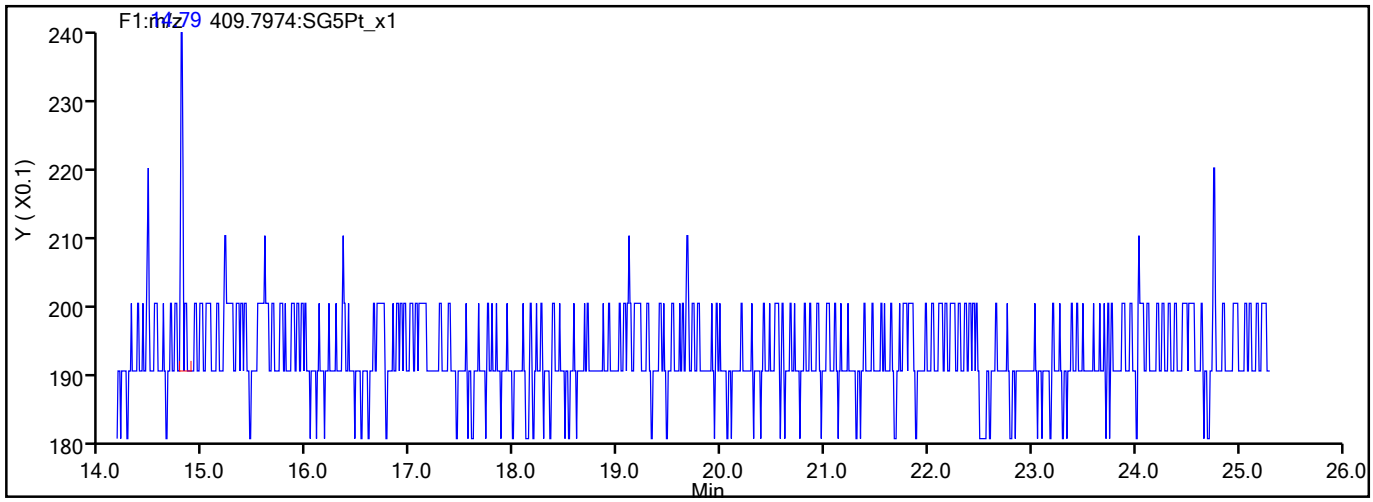

783961

Report Date: 20-Aug-2021 09:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

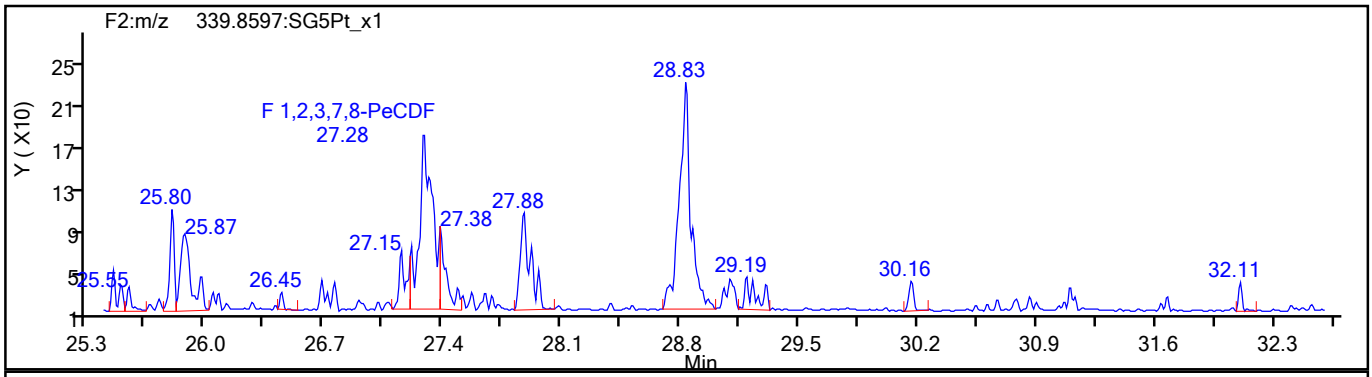

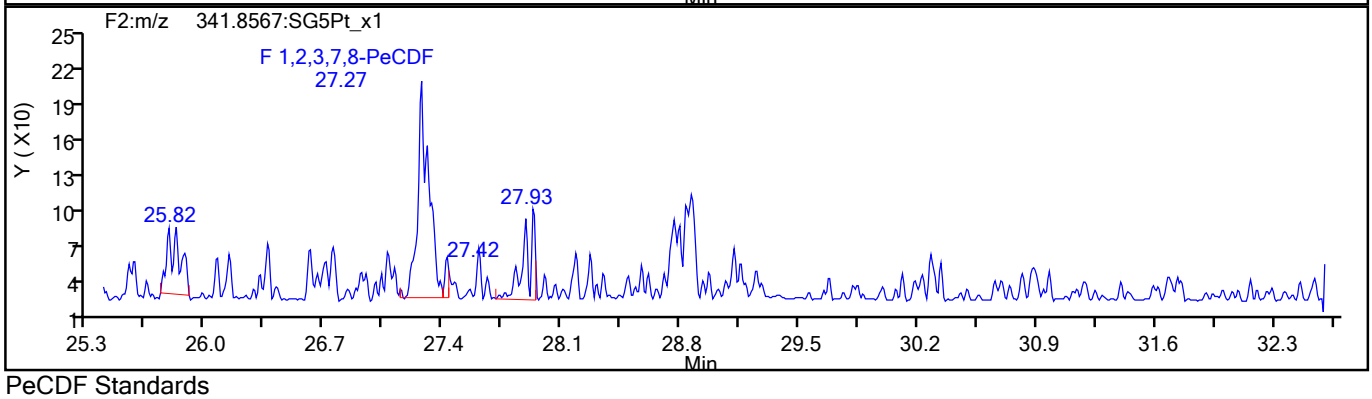

PeCDF Standards

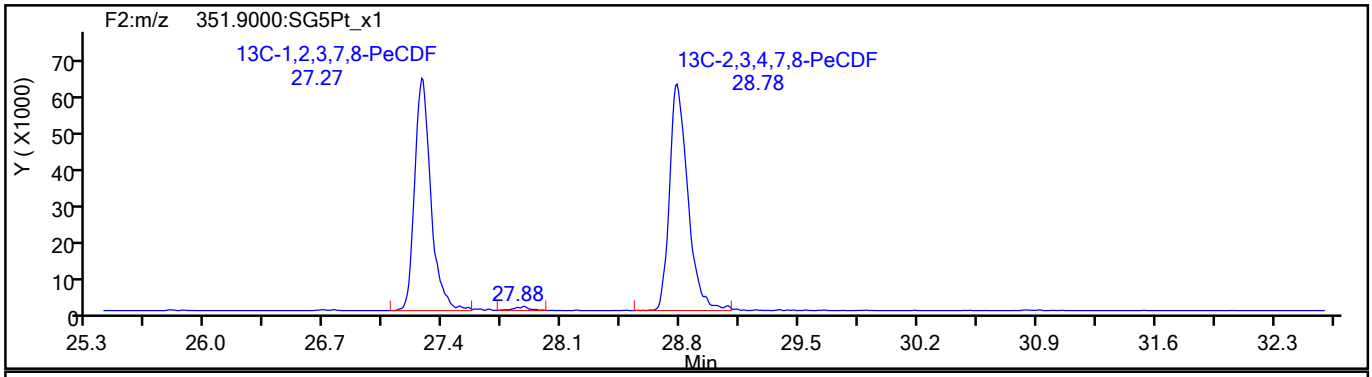

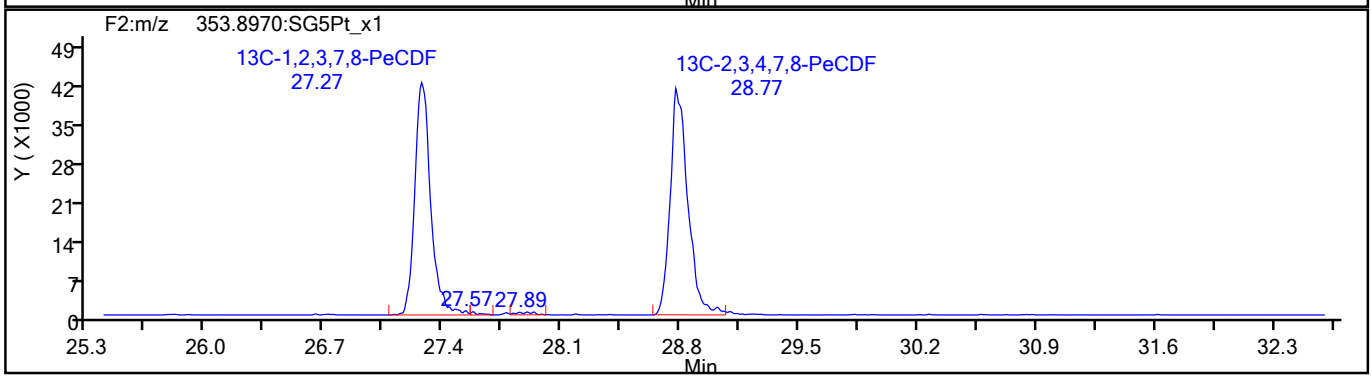

783962

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

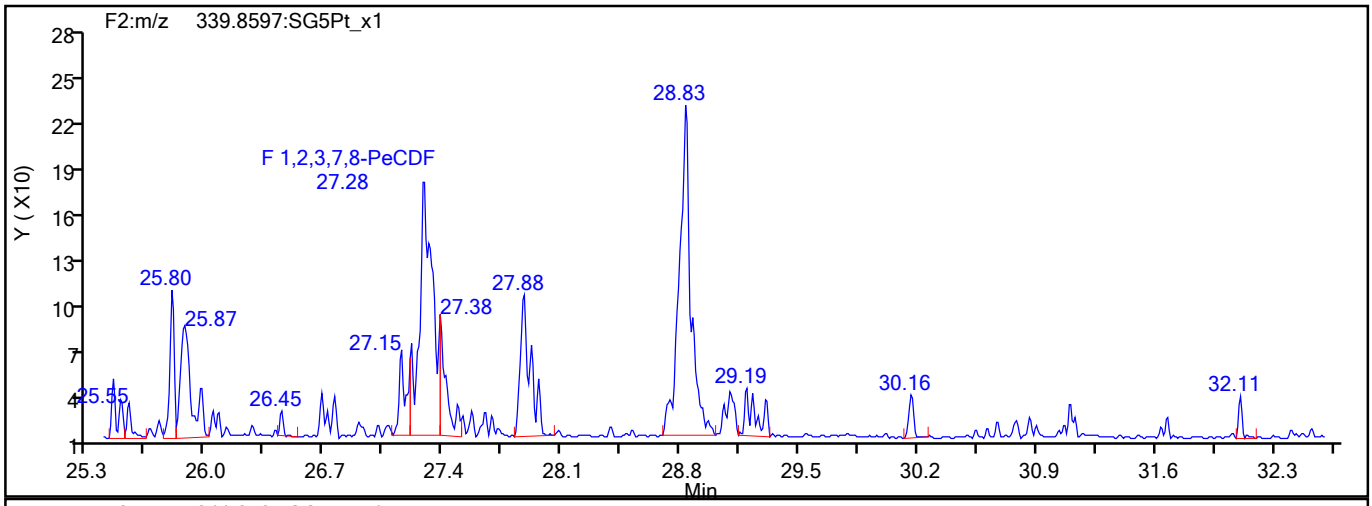

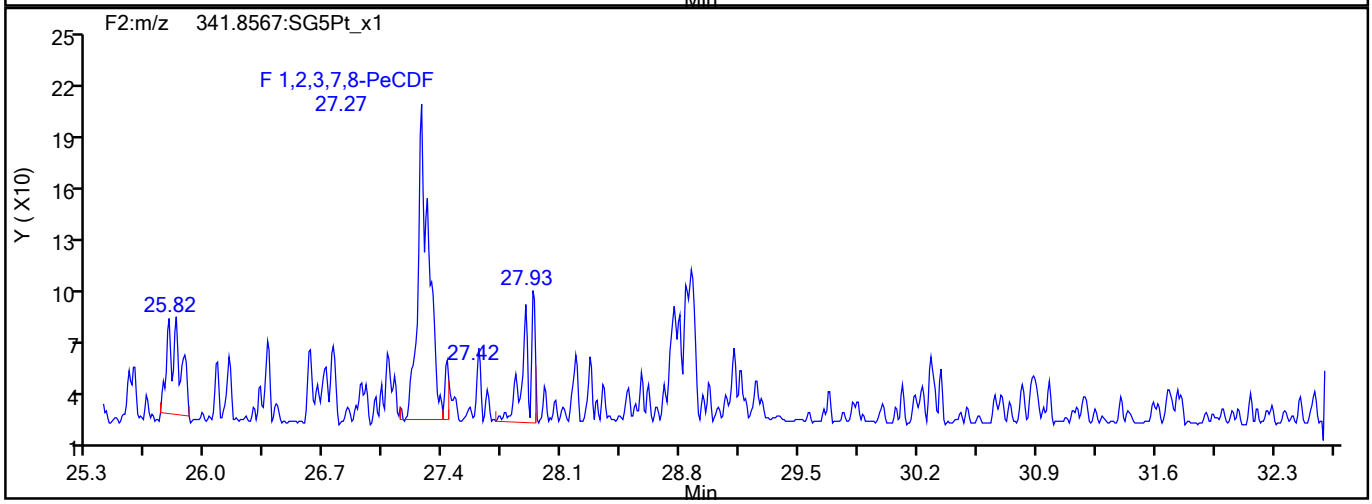

PeCDF Interference Mass

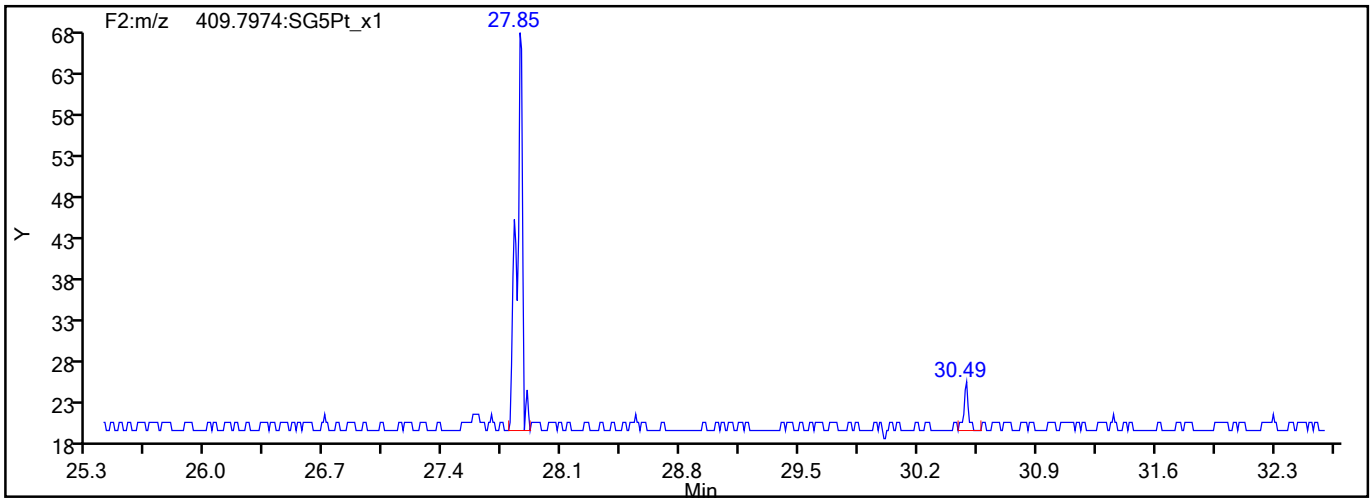

783963

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

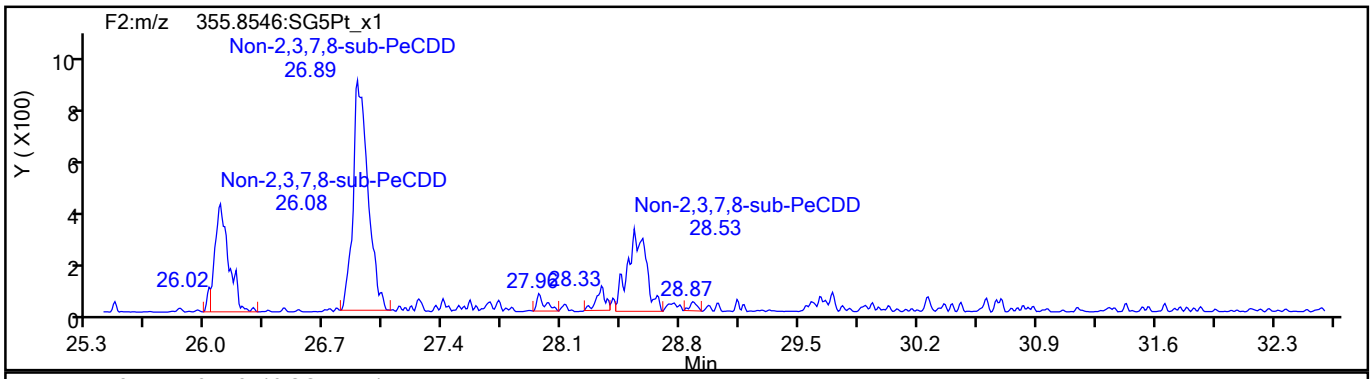

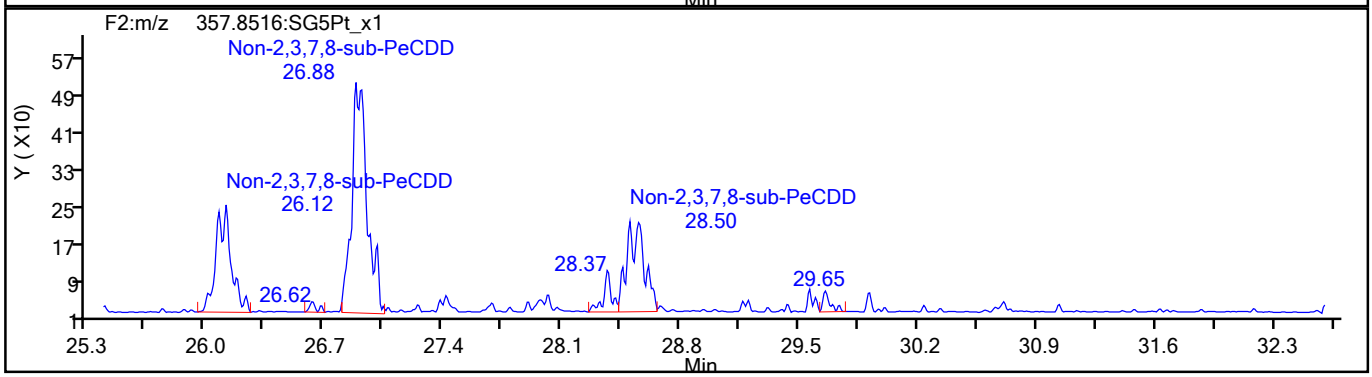

PeCDD Standards

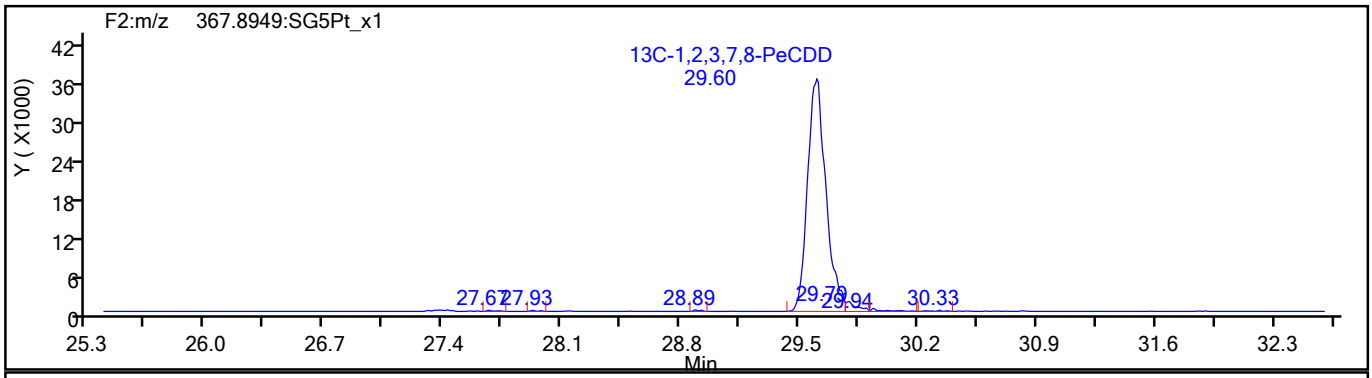

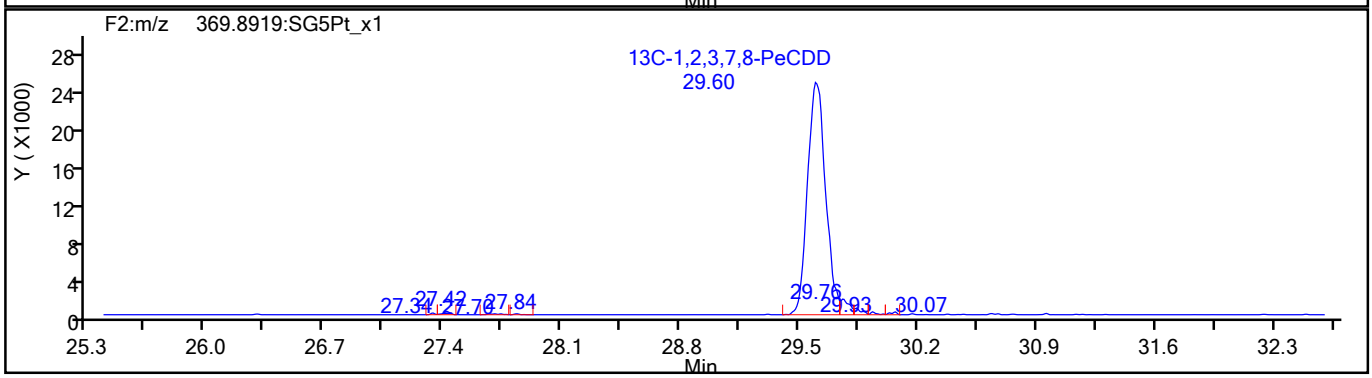

783964

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

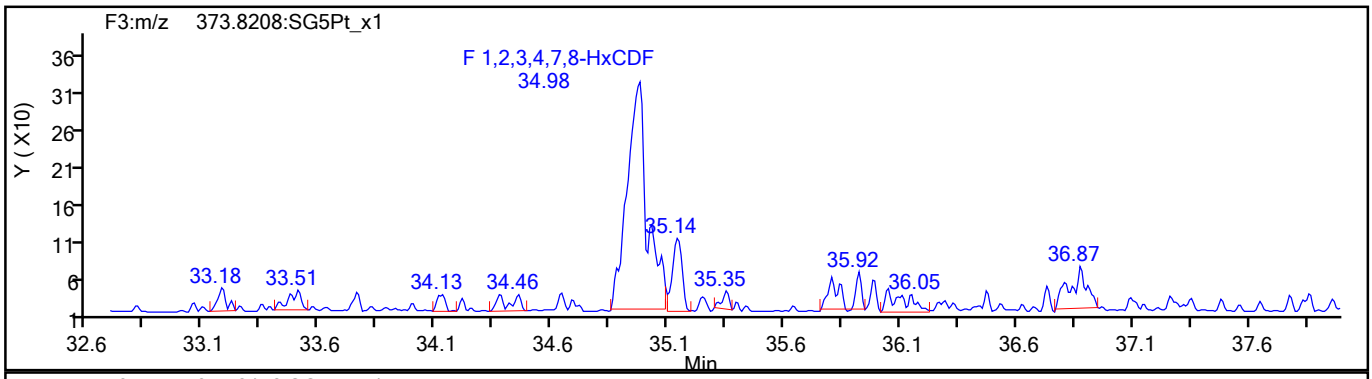

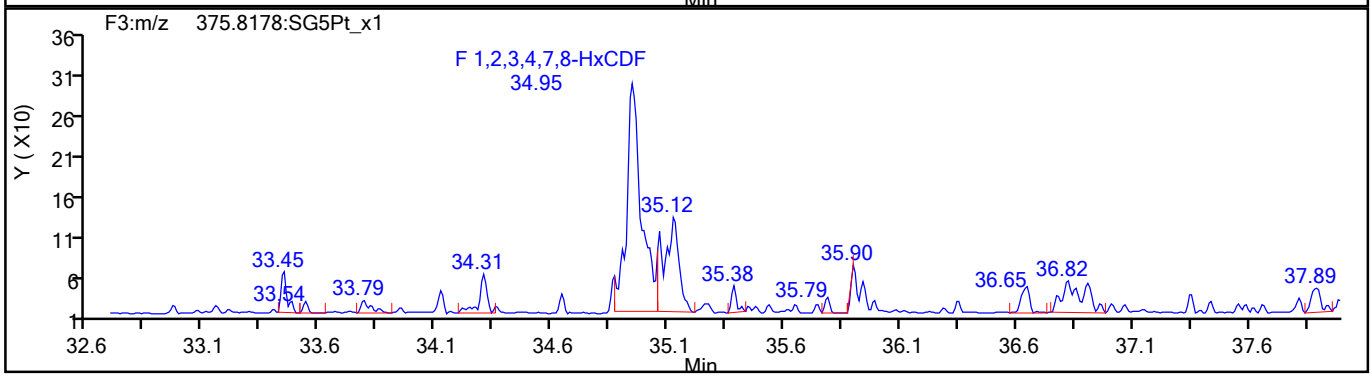

HxCDF Standards

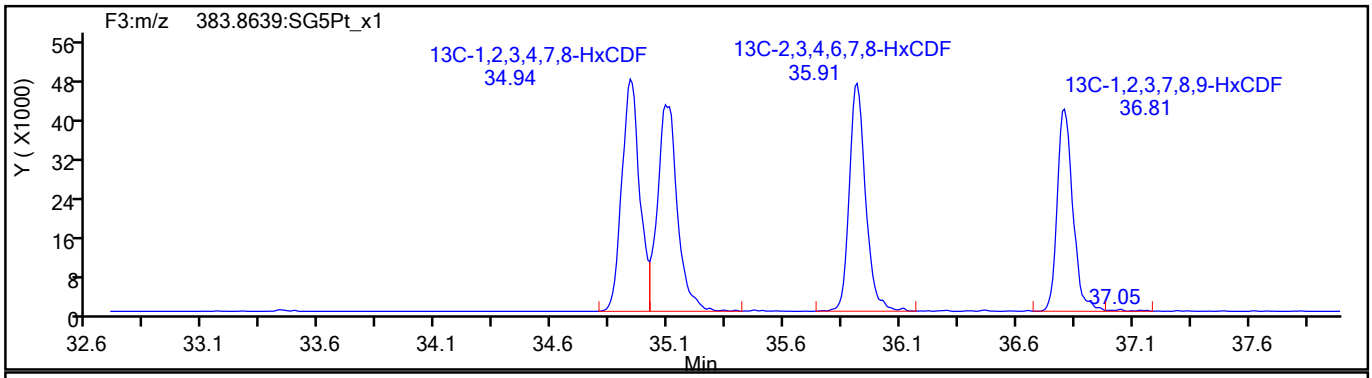

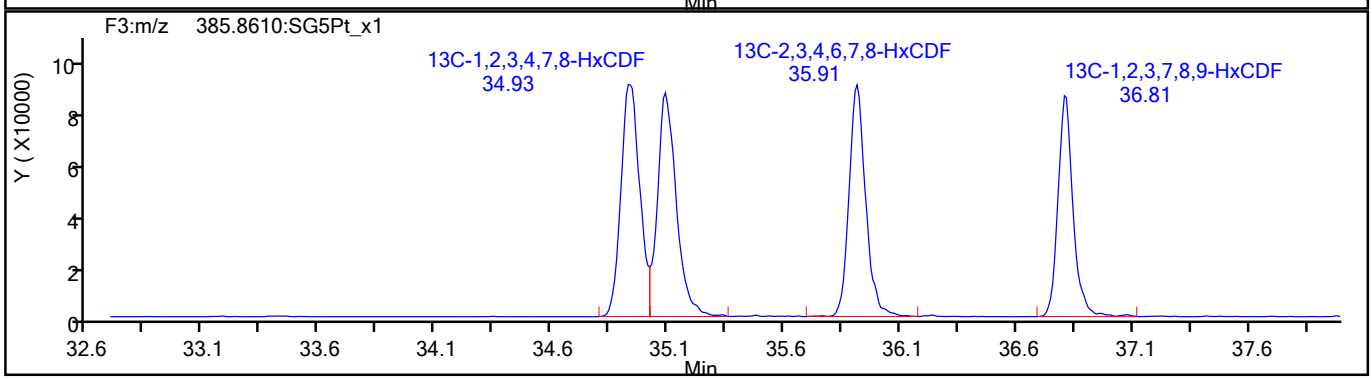

783965

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

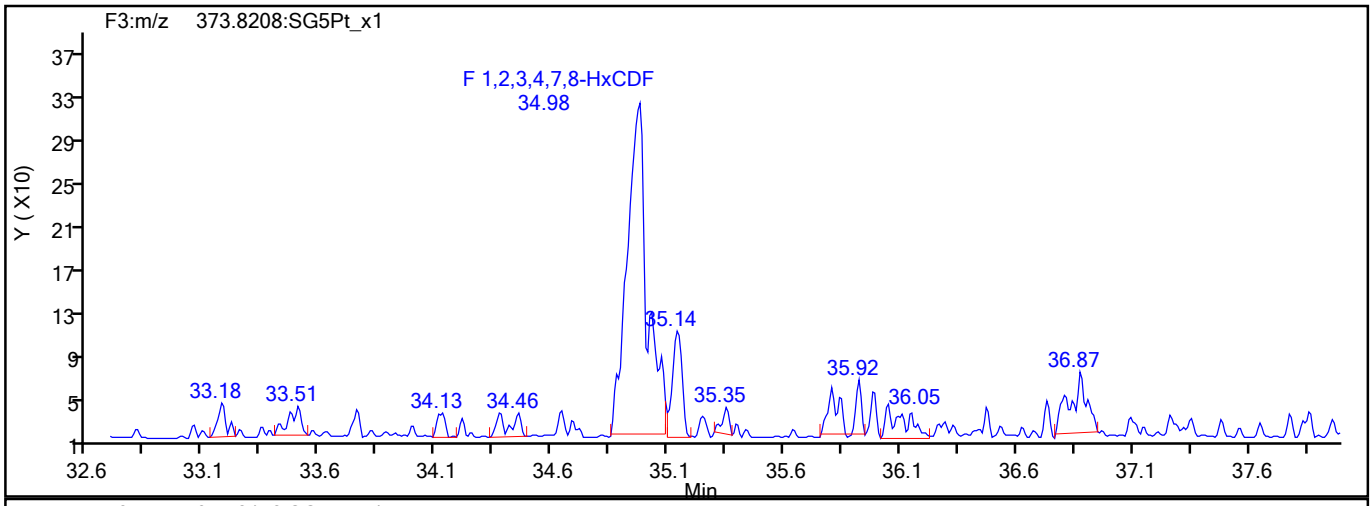

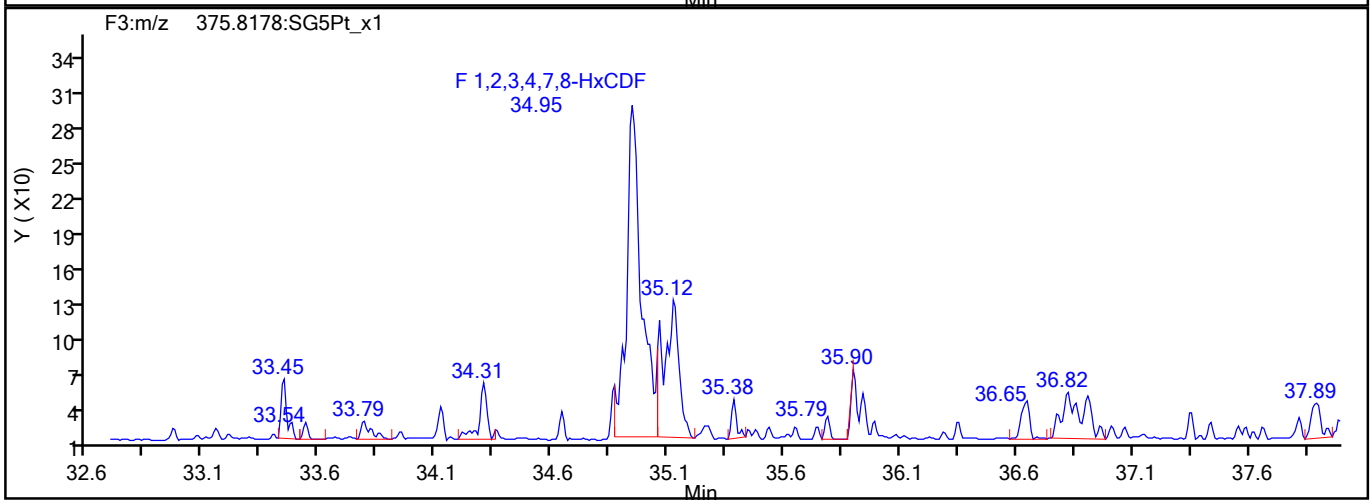

HxCDF Interference Mass

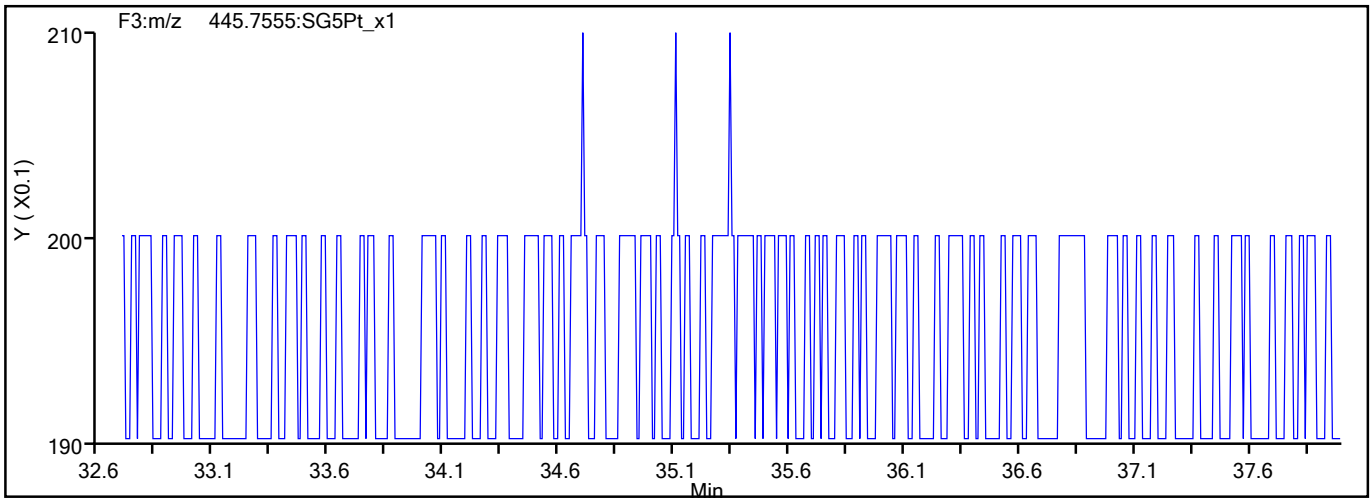

783966

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	517461	Sample Line#:	34
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

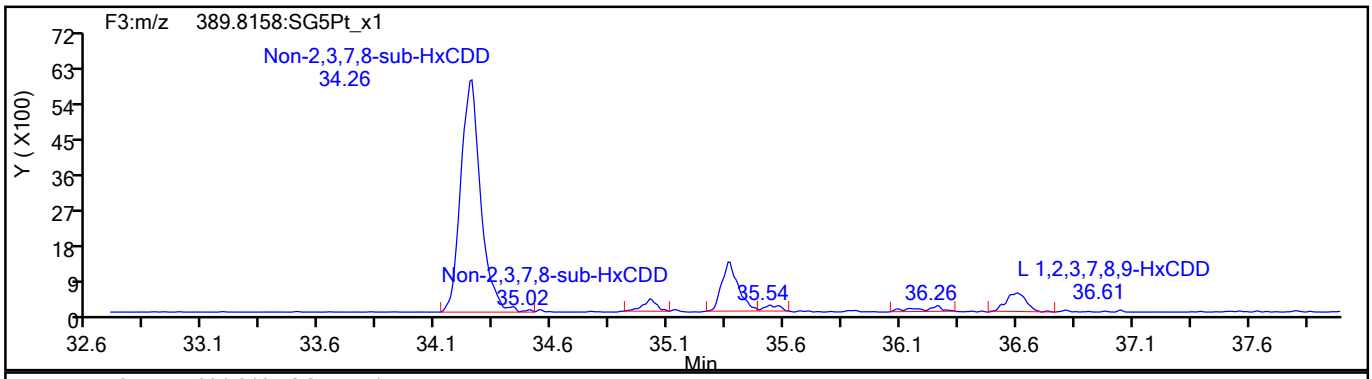

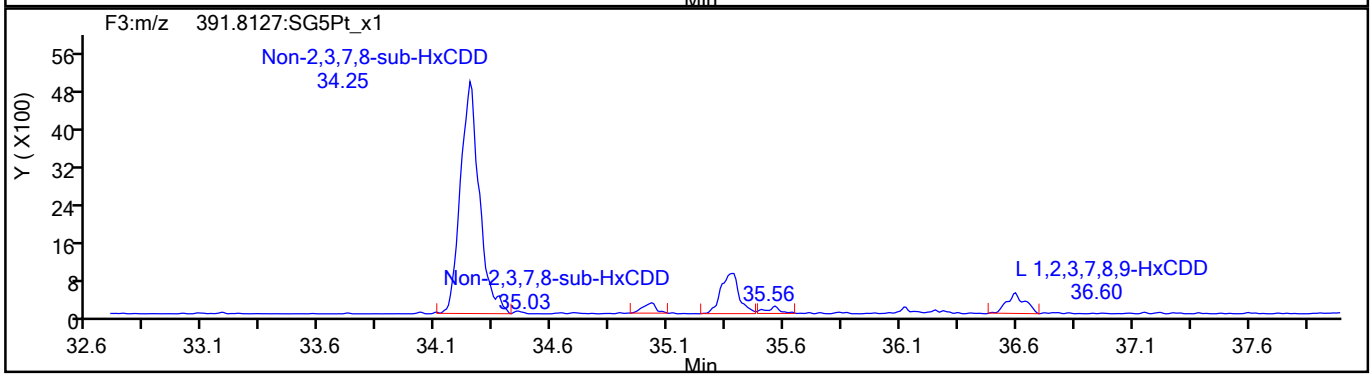

HxCDD Standards

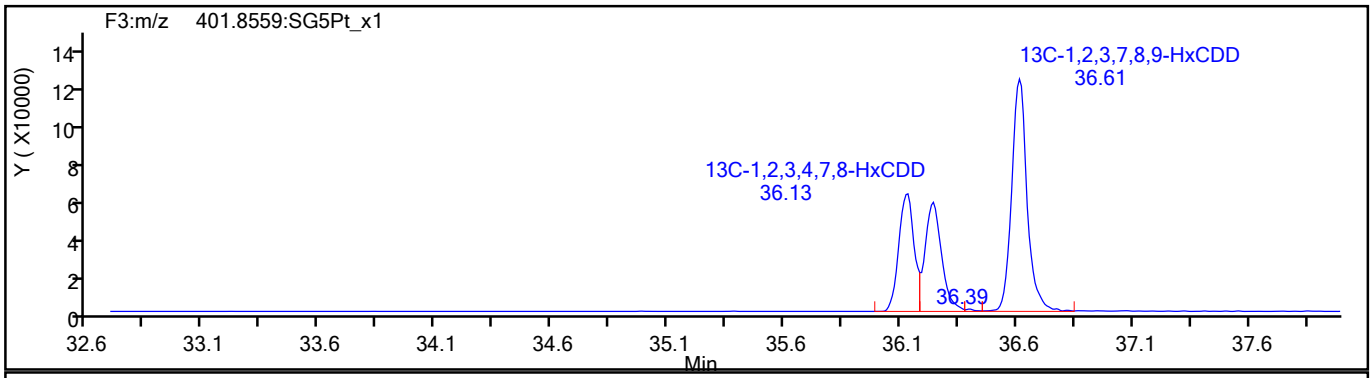

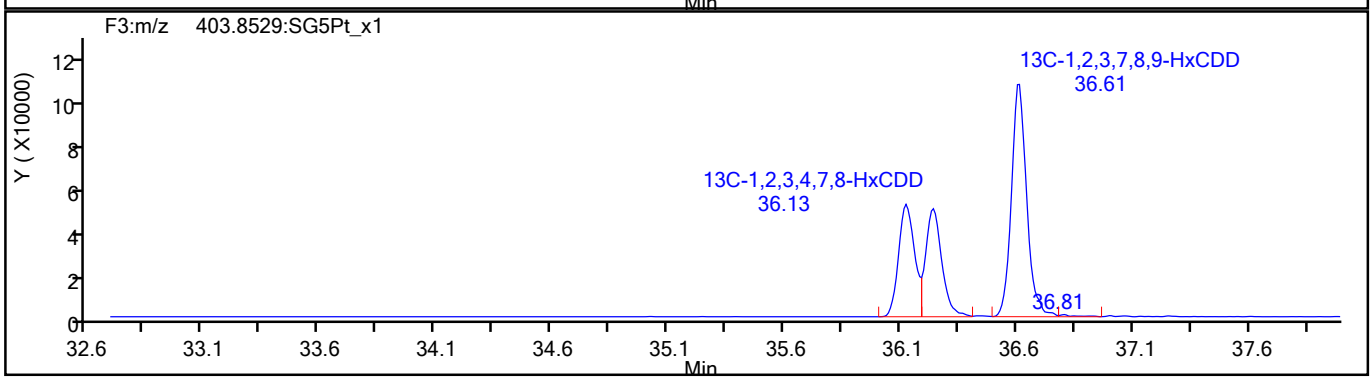

783967

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	517461	Sample Line#:	34
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HpCDF

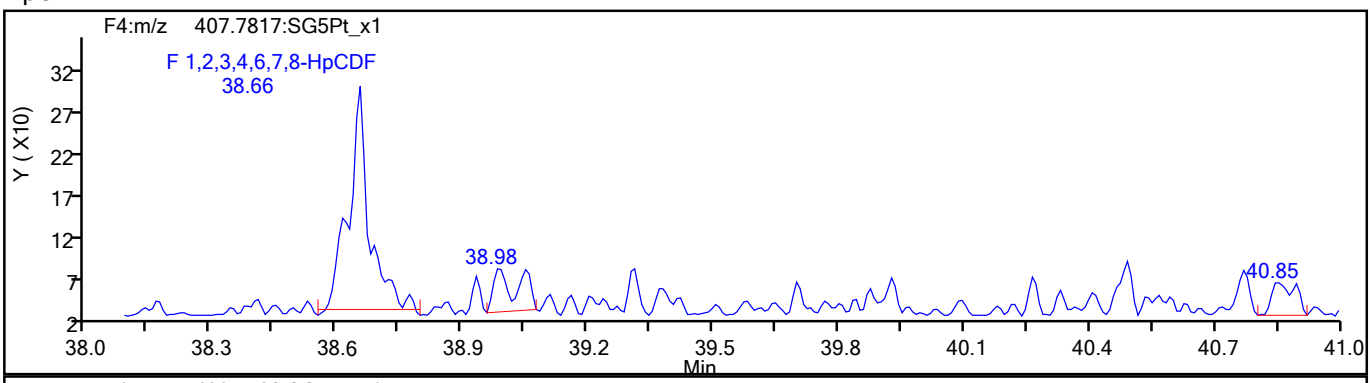

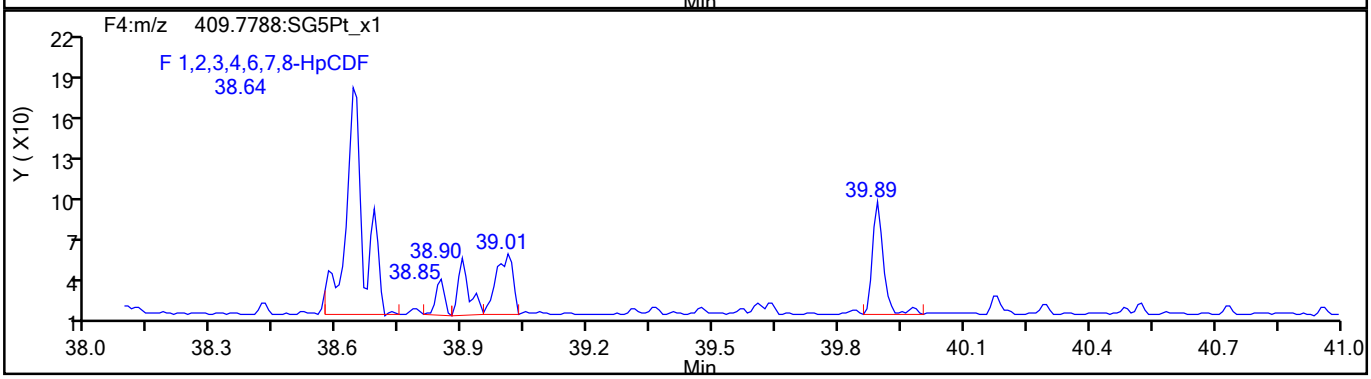

HpCDF Standards

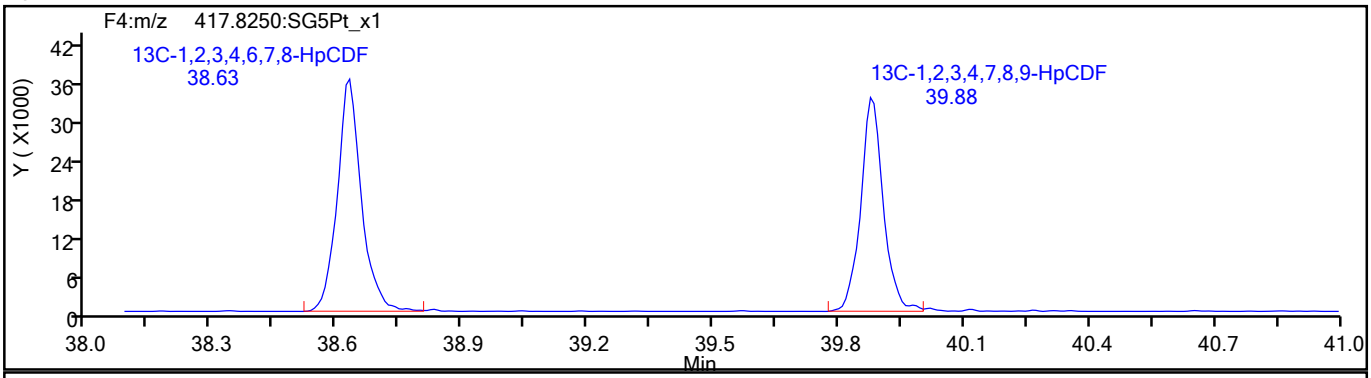

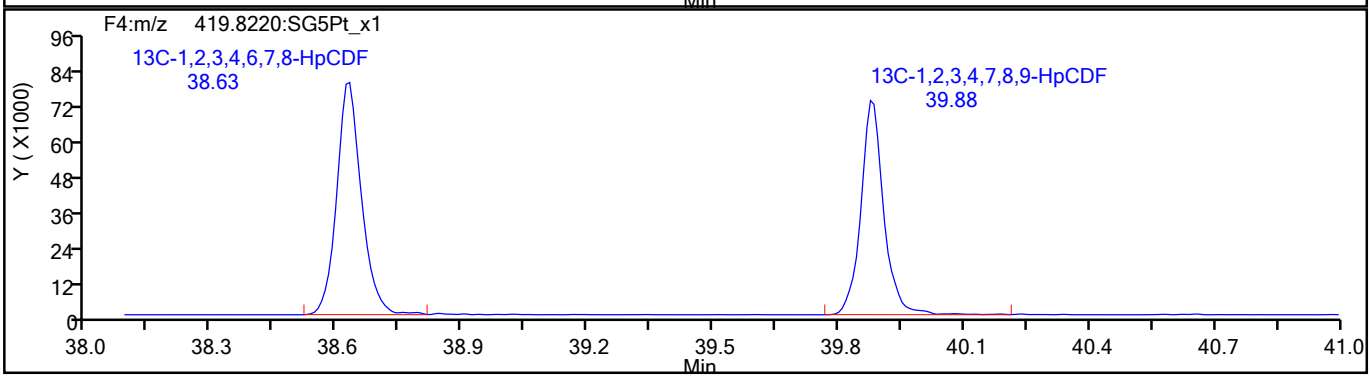

783968

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

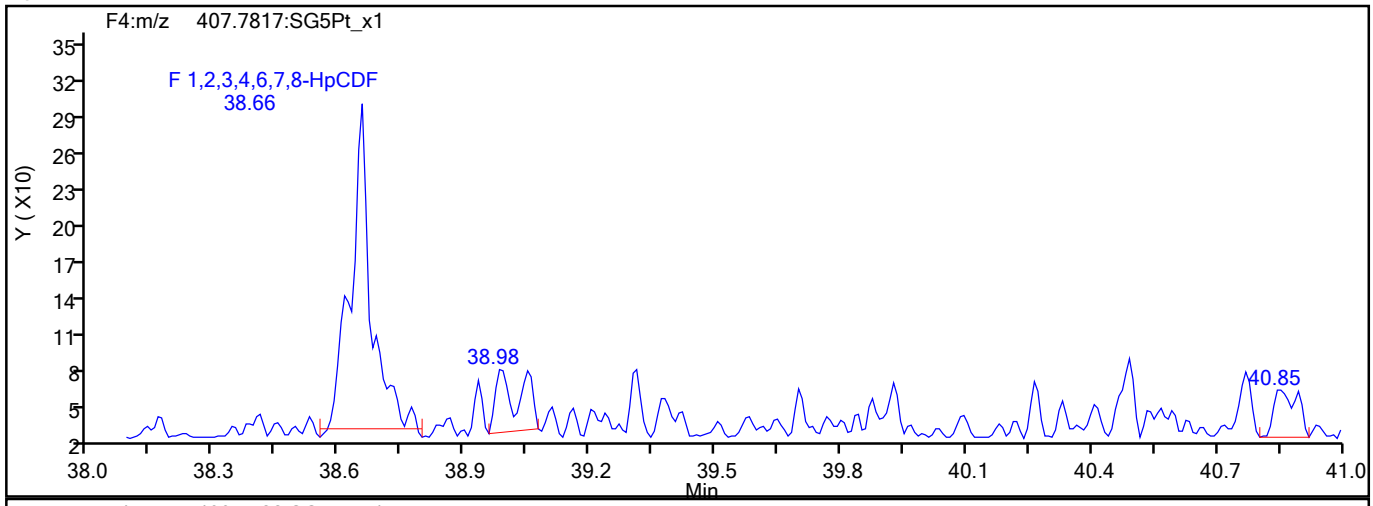

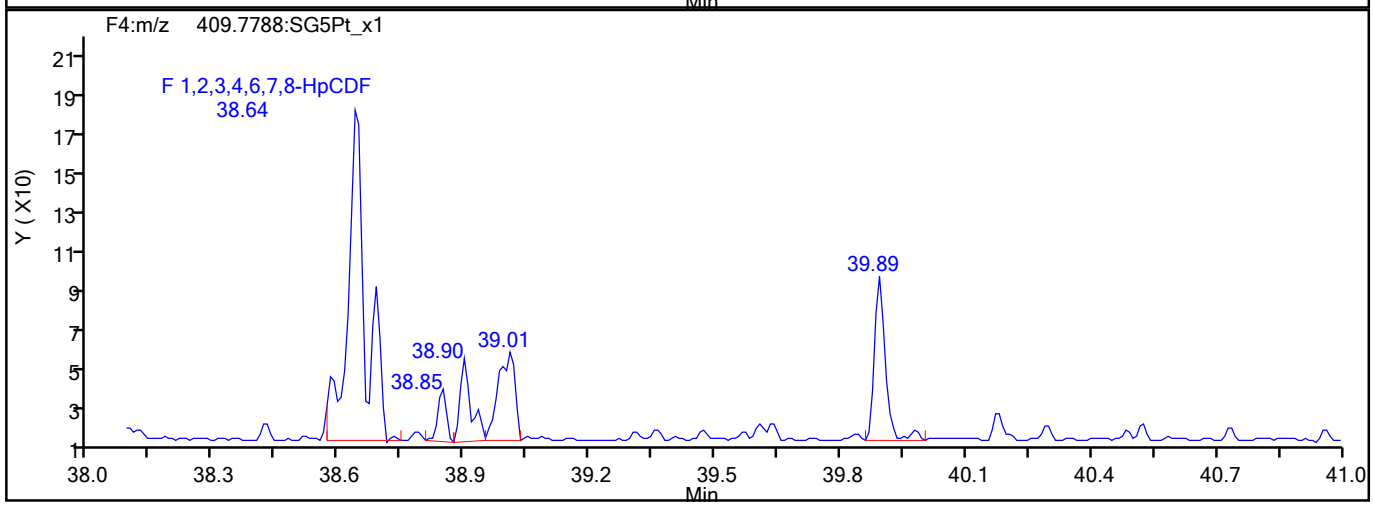

HpCDF Interference Mass

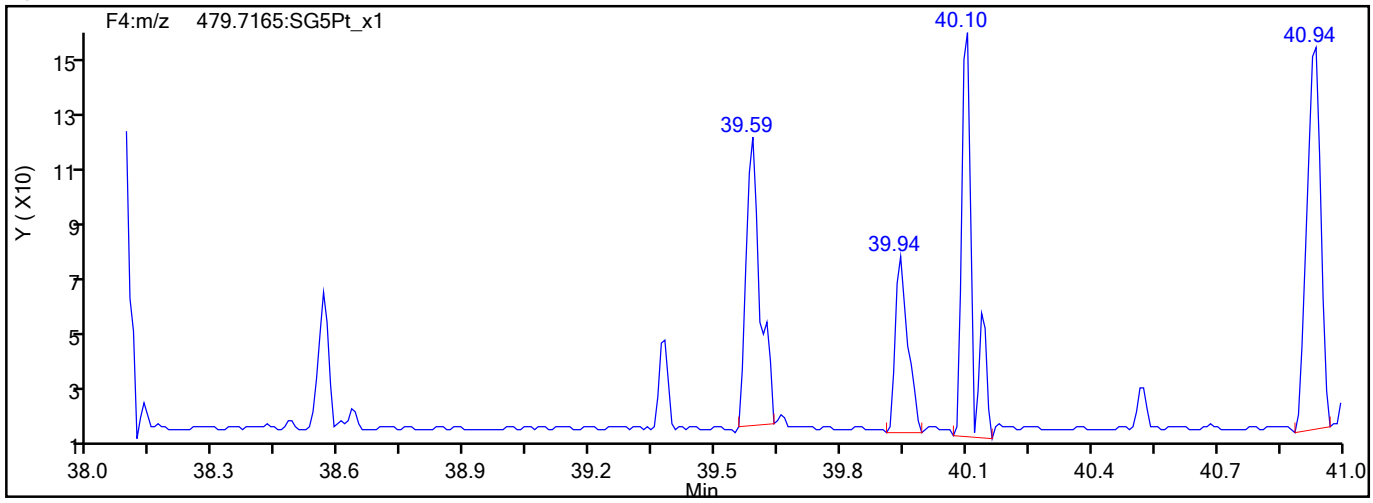

783969

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 18:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	517461	Sample Line#:	34
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

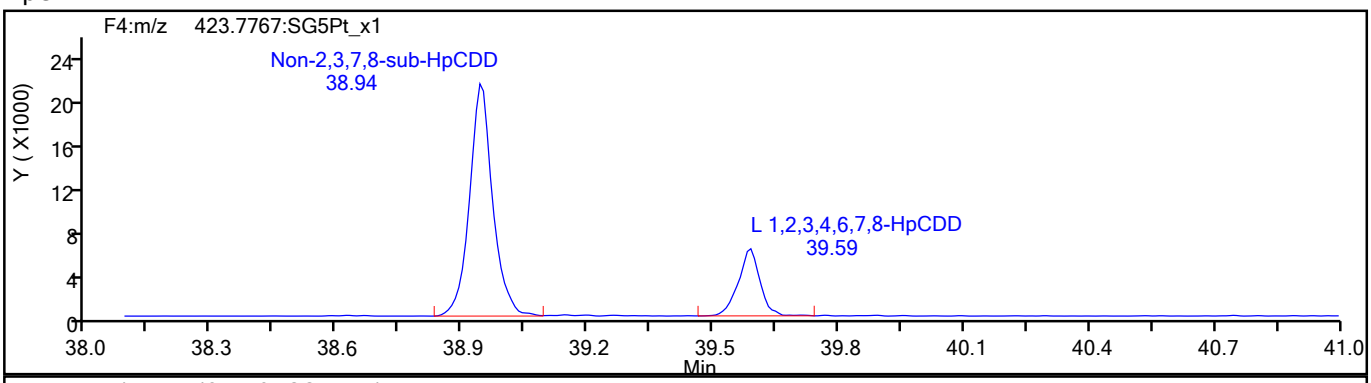

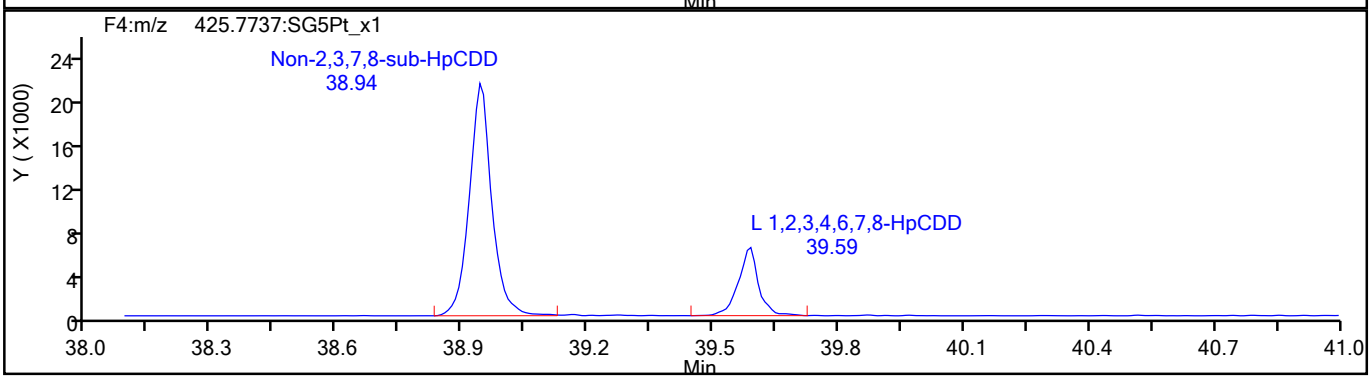

HpCDD Standards

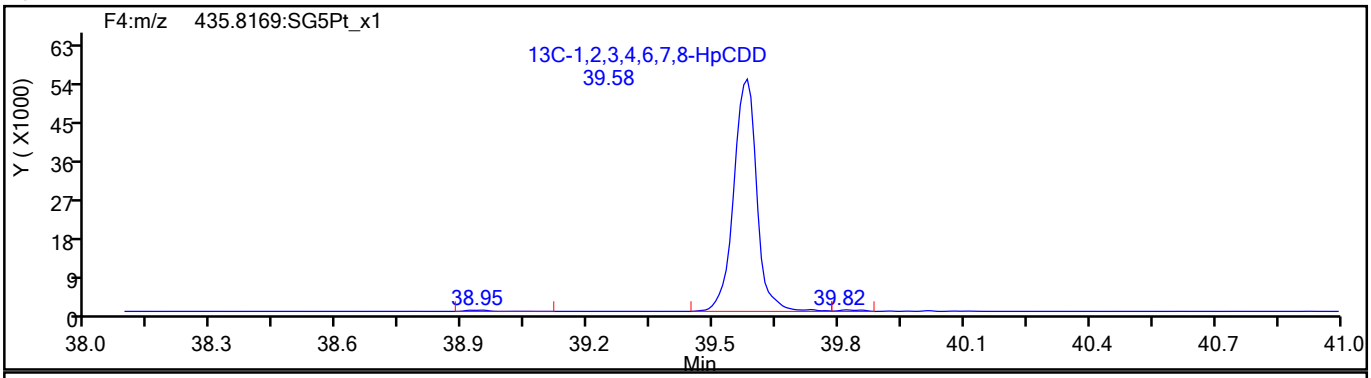

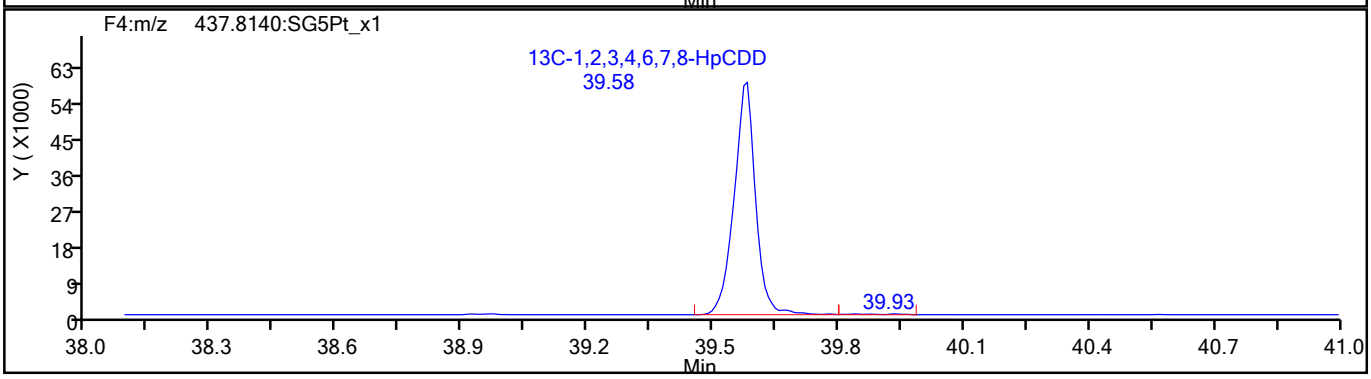

783970

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Injection Date:	18-Aug-2021 18:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	517461	Sample Line#:	34
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

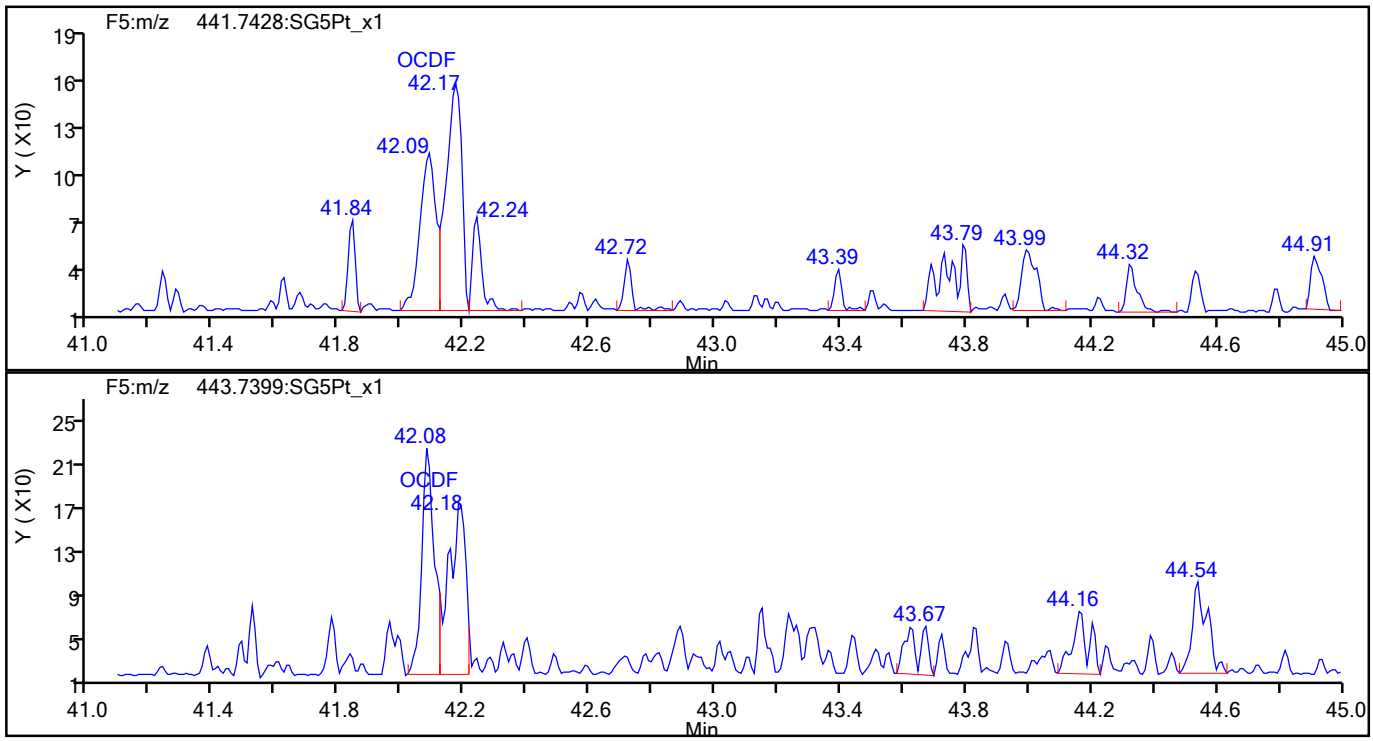

OCDF Standards

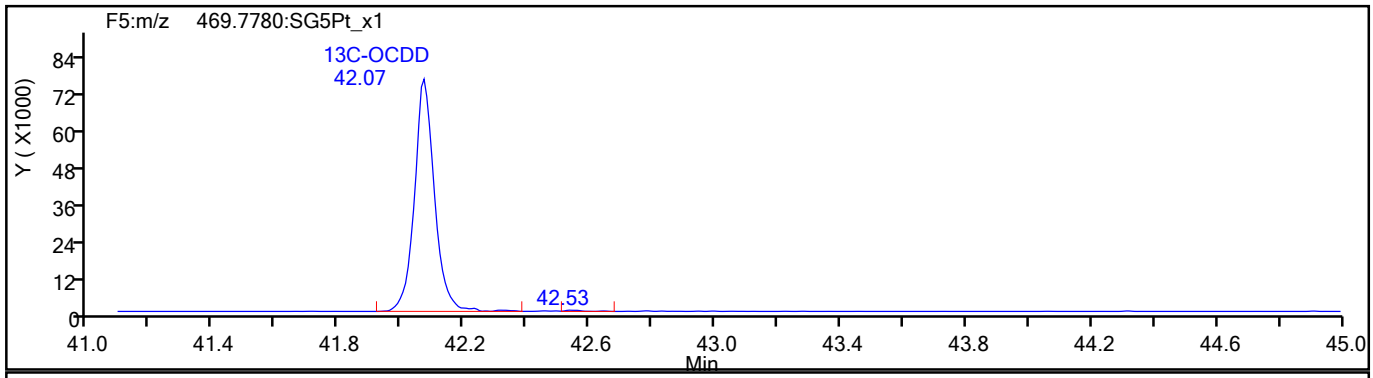

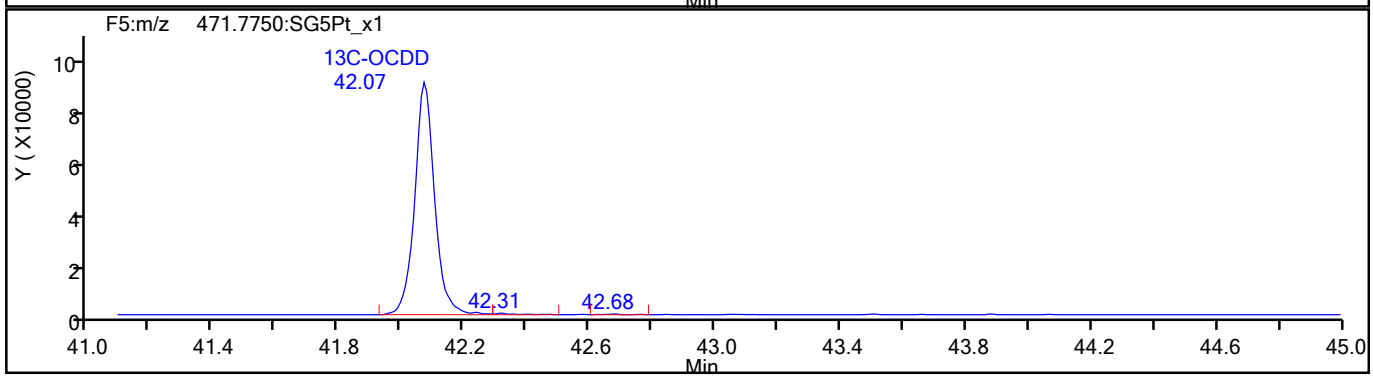

783971

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Injection Date:	18-Aug-2021 18:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	517461	Sample Line#:	34
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

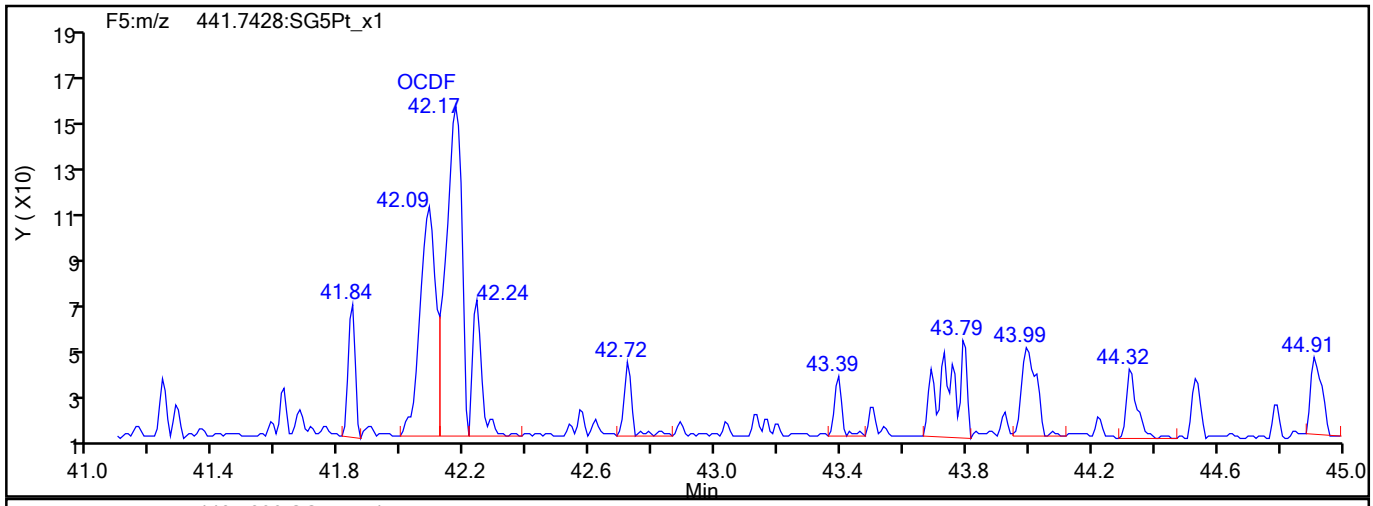

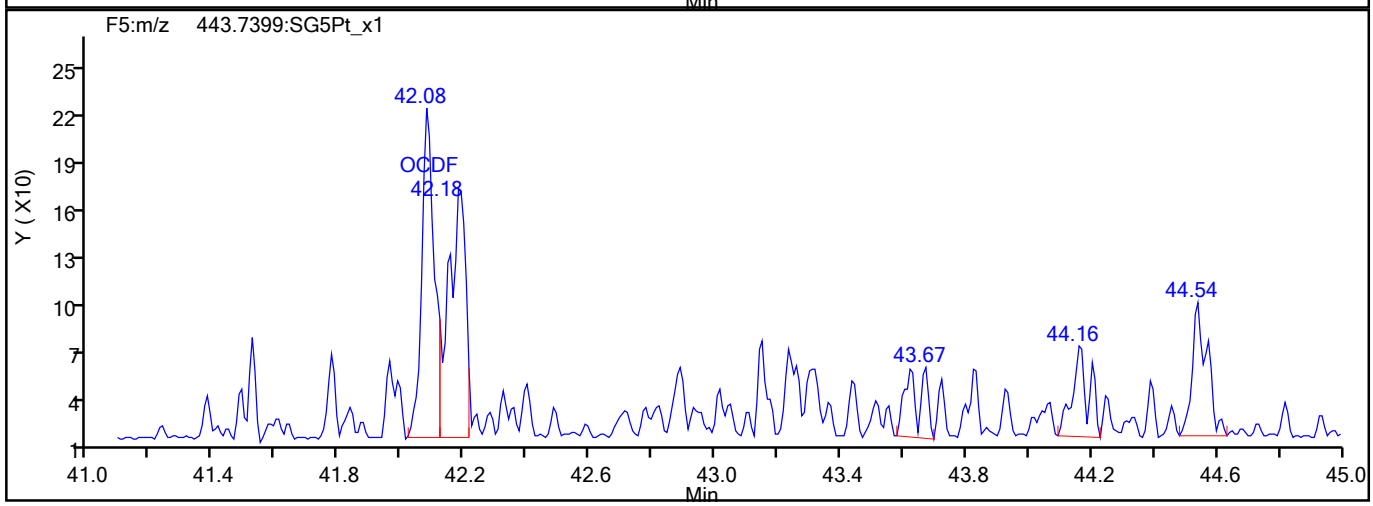

OCDF Interference Mass

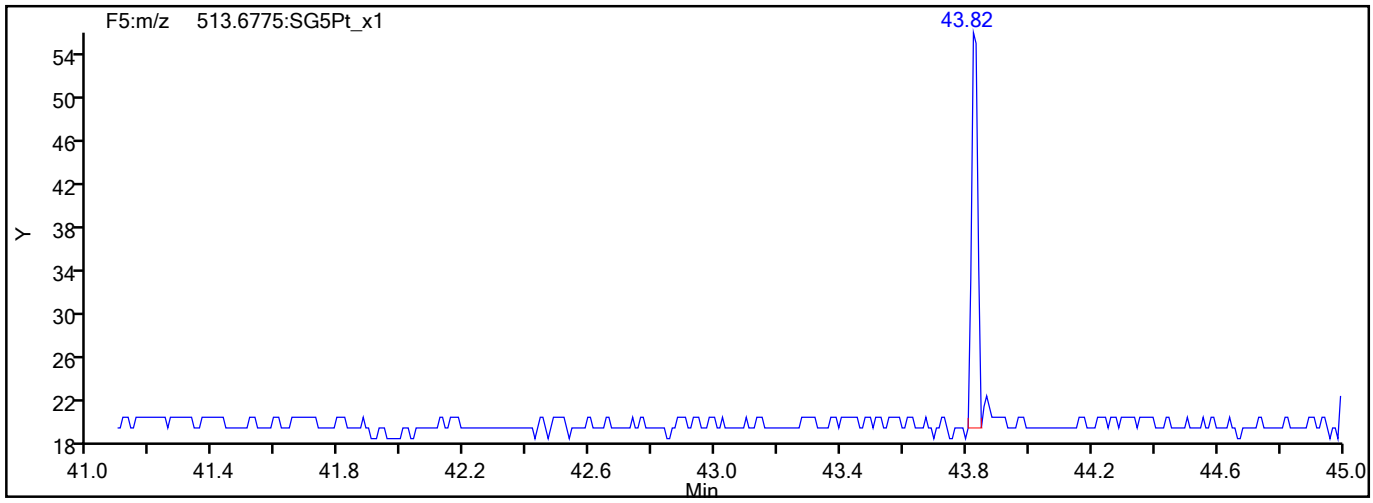

783972

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Injection Date:	18-Aug-2021 18:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	517461	Sample Line#:	34
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

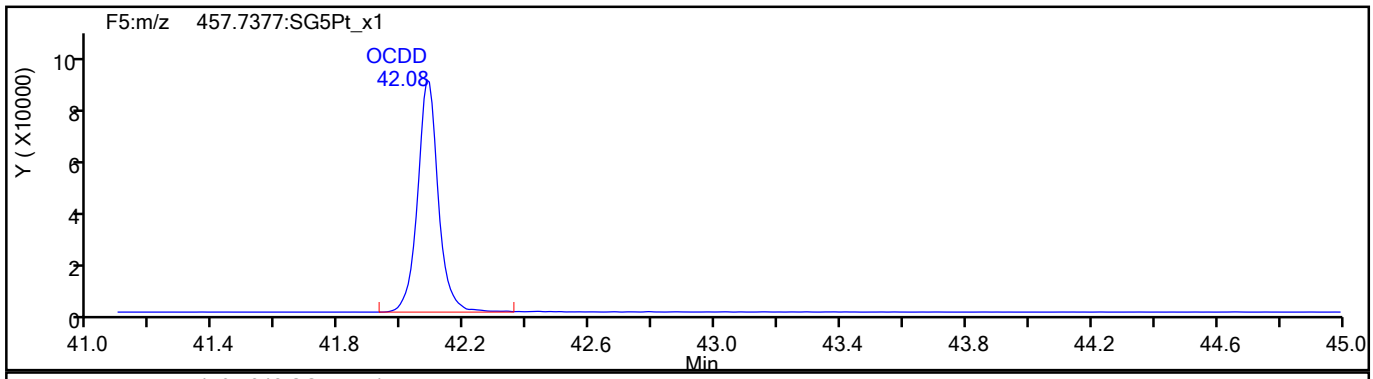

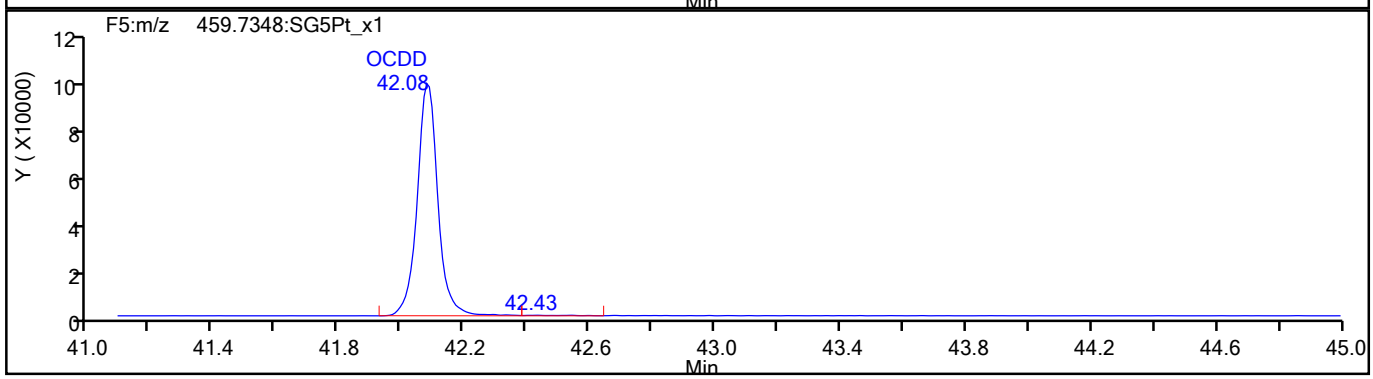

OCDD Standards

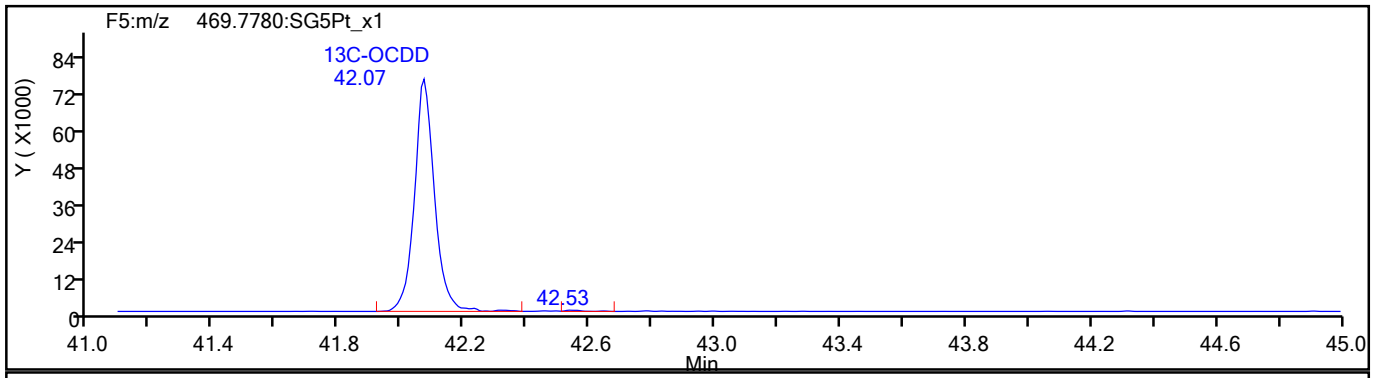

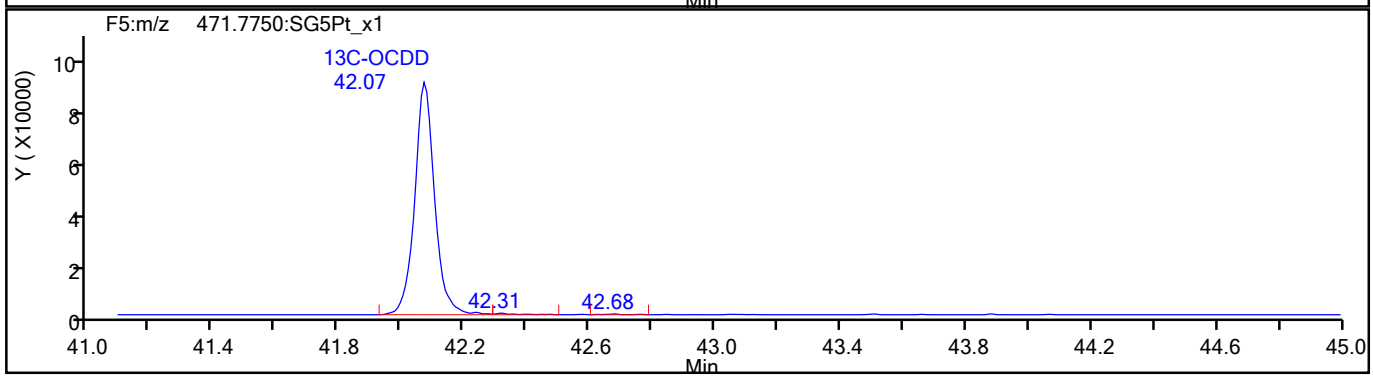

783973

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Injection Date:	18-Aug-2021 18:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	517461	Sample Line#:	34
Column Type:	DB-5	Column Dia:	0.32 mm

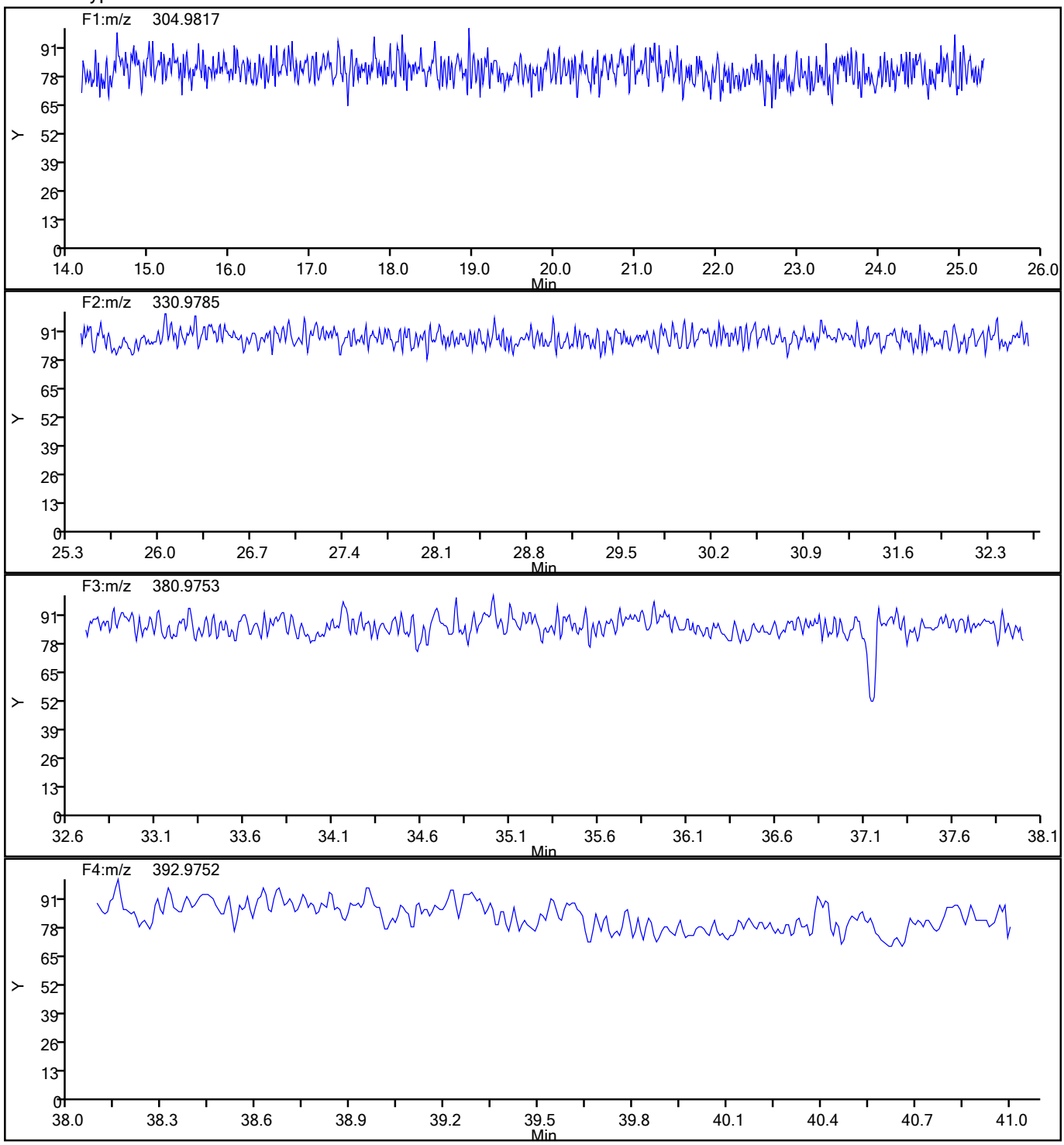

783974

Report Date: 20-Aug-2021 09:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_37.d		
Injection Date:	18-Aug-2021 18:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	517461	Sample Line#:	34
Column Type:	DB-5	Column Dia:	0.32 mm

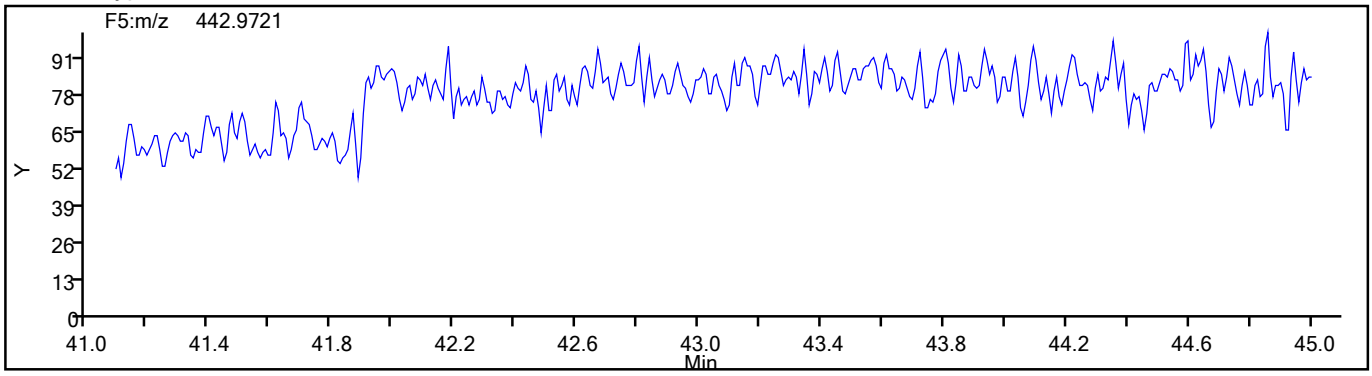

783975

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-2
SDG No.:
Client Sample ID: 11215702-072721-BN-SJSB096 (16-18) RA
Lab Sample ID: 320-76887-9 RA
Matrix: Sediment
Lab File ID: 23AU21A11D2_005.d
Analysis Method: 1613B
Date Collected: 07/27/2021 13:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.84(g)
Date Analyzed: 08/23/2021 18:07
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 26.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518979
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	32		1.4	0.30

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	58		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	75		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_005.d
Lims ID: 320-76887-A-9-A
Client ID: 11215702-072721-BN-SJSB096 (16-18)
Sample Type: Client
Inject. Date: 23-Aug-2021 18:07:46 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-9-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:14:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.315	53712093	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.632	41752521	0.79	1.3327	58.3	58.3	0.2514	0.2514	58.33	
2,3,7,8-TCDF	17.660	4774686	0.78	0.9978	11.5	11.5	0.1074	0.1074		M
D 13C-2,3,7,8-TCDD	16.082	26268456	0.77	0.8749	55.9	55.9	0.7588	0.7588	55.90	
2,3,7,8-TCDD	16.110	927317	0.80	1.0570	3.340	3.340	0.1147	0.1147		
$ 37Cl4-2,3,7,8-TCDD	16.096	13936578		0.8648	30.0	30.0	0.0717	0.0717	75.01	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

783977

Report Date: 24-Aug-2021 09:19:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_005.d
Lims ID: 320-76887-A-9-A
Client ID: 11215702-072721-BN-SJSB096 (16-18)
Sample Type: Client
Inject. Date: 23-Aug-2021 18:07:46 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76887-A-9-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:14:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.315	16.298	1		23467015	5203187	15723	39307	331		
333.9339	16.315	16.298	1		30245078	6726544	15958	39895	422	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.632	17.615	1	1.081	18397417	3524028	8526	21315	413		
317.9389	17.632	17.615	1	1.081	23355104	4480199	7462	18655	600	0.79(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.660	17.643	1	1.002	2095166	399688	1501	3752	266		M
305.8987	17.646	17.643	0	1.001	2679520	469985	1931	4827	243	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.065	1	0.986	11412219	2492205	15723	39307	159		
333.9339	16.082	16.065	1	0.986	14856237	3344995	15958	39895	210	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.110	16.079	2	1.002	413093	88141	1510	3775	58		
321.8936	16.096	16.079	1	1.001	514224	109700	1320	3300	83	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.096	16.093	0	0.987	13936578	3116727	2959	7397	1053		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

783978

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_005.d				
Injection Date:	23-Aug-2021 18:07:46	Instrument ID:	11D2		
Lims ID:	320-76887-A-9-A	Lab Sample ID:	320-76887-9		
Client ID:	11215702-072721-BN-SJSB096 (16-18)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.66
Area: 2121862
Amount: 11.524898
Amount Units: pg/ul

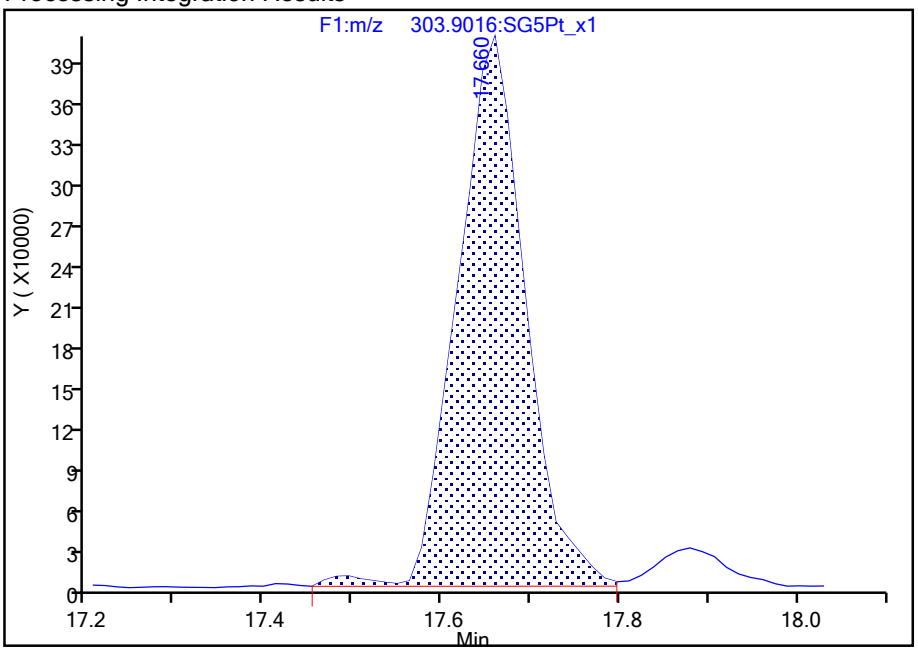

Manual Integration Results

RT: 17.66
Area: 2095166
Amount: 11.460819
Amount Units: pg/ul

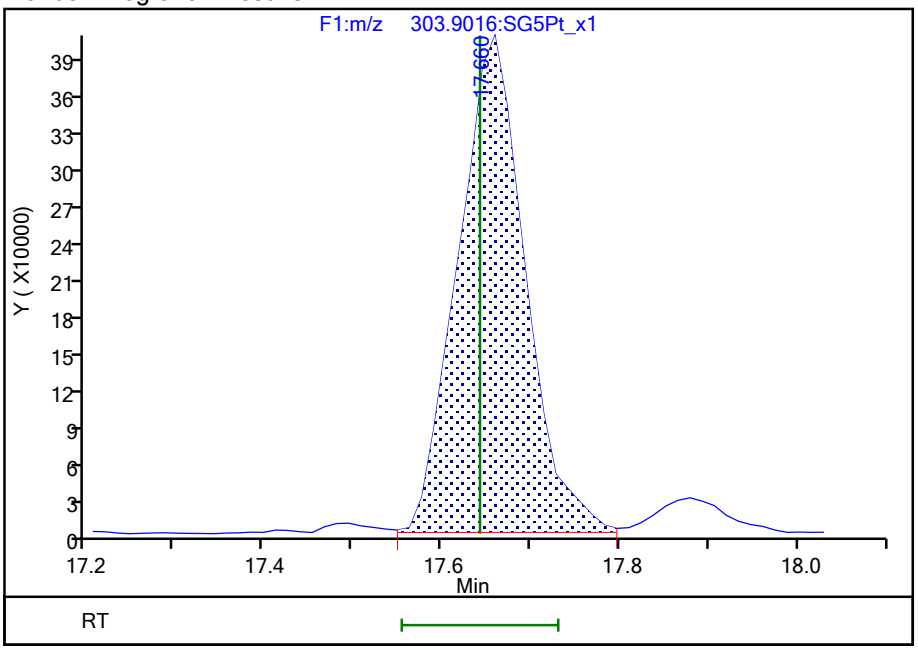

Reviewer: bennettd, 24-Aug-2021 09:14:29

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 24-Aug-2021 09:19:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_005.d		
Injection Date:	23-Aug-2021 18:07:46	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	518979	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

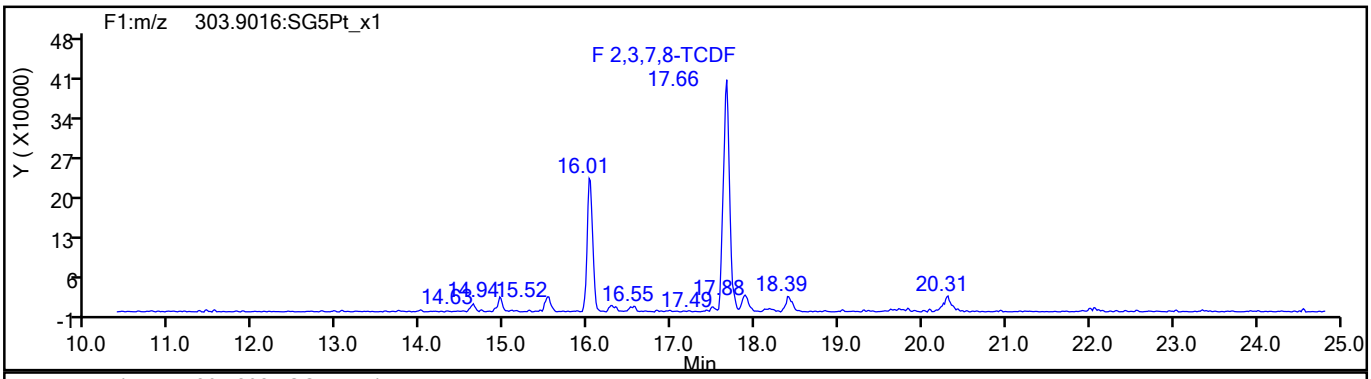

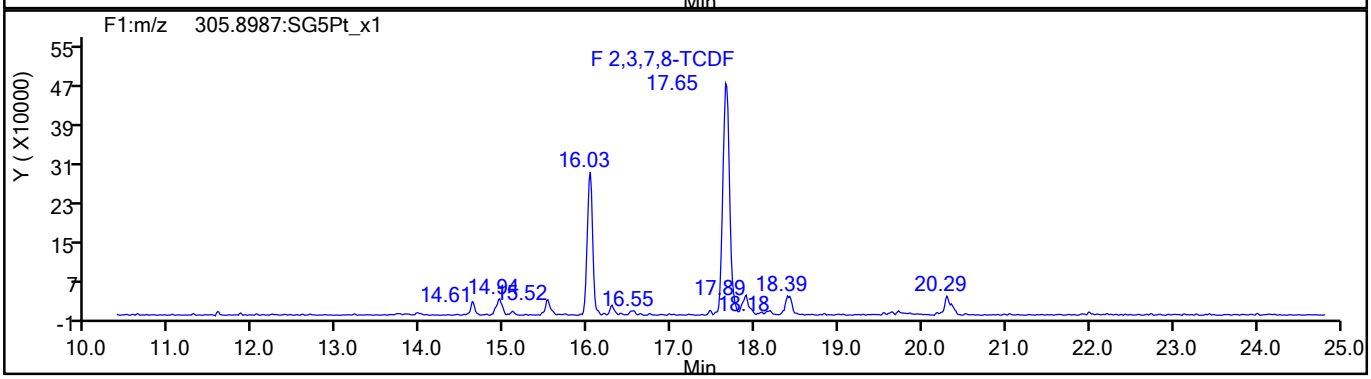

TCDF Standards

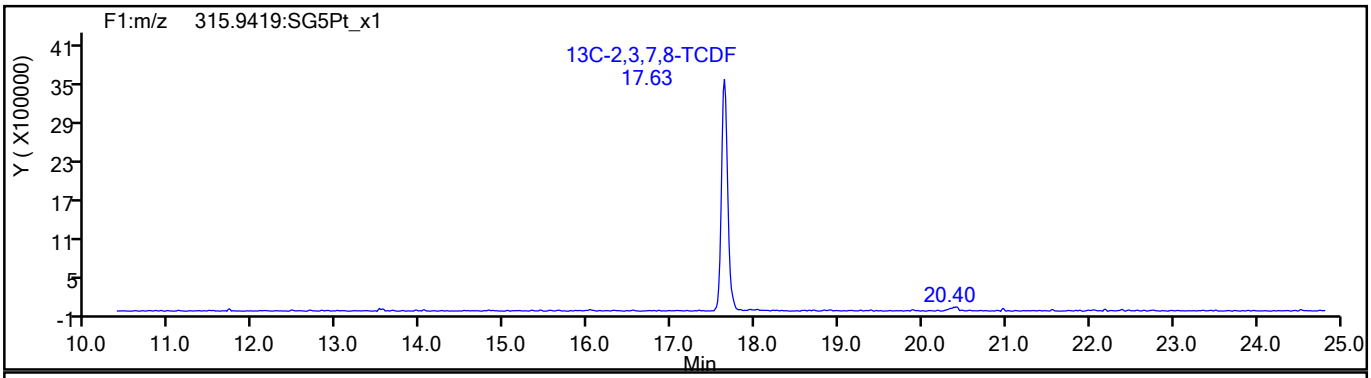

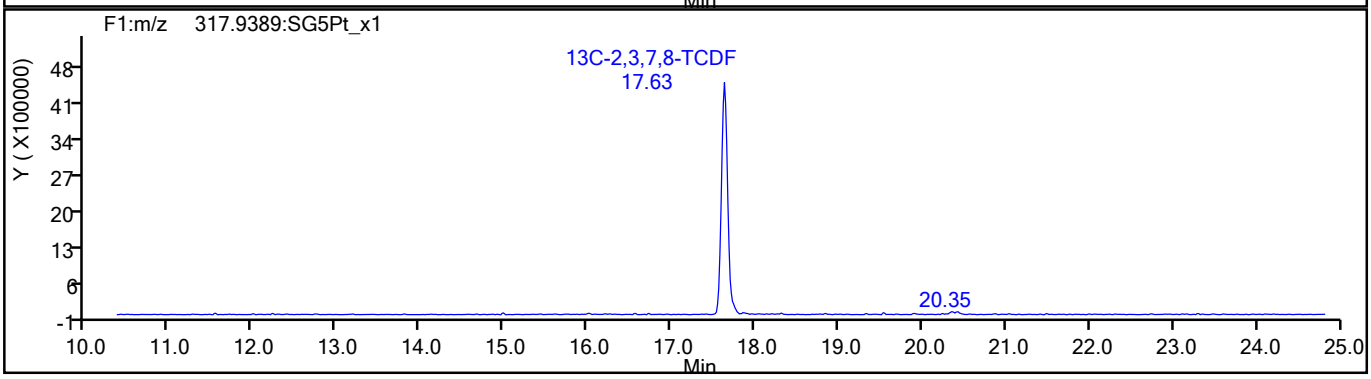

783980

Report Date: 24-Aug-2021 09:19:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_005.d		
Injection Date:	23-Aug-2021 18:07:46	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	518979	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

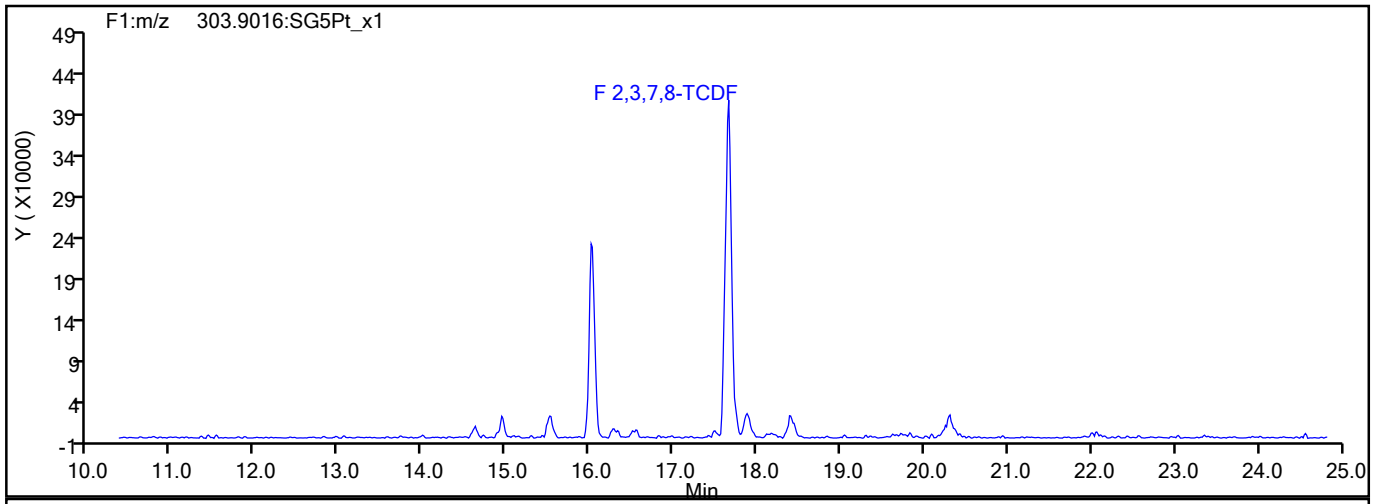

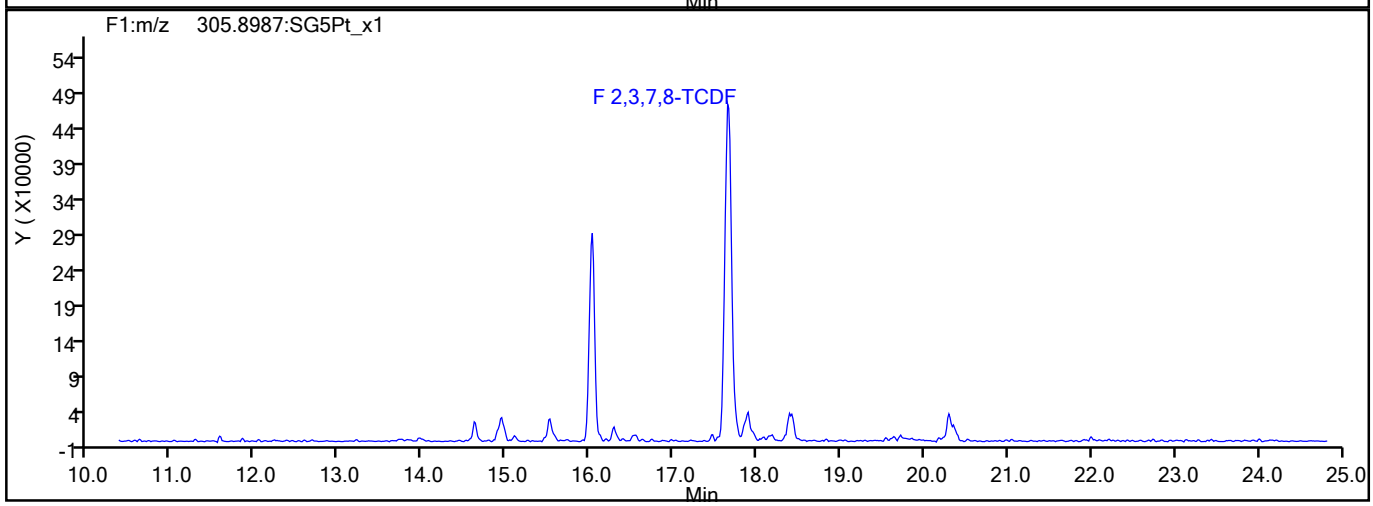

TCDF Interference Mass

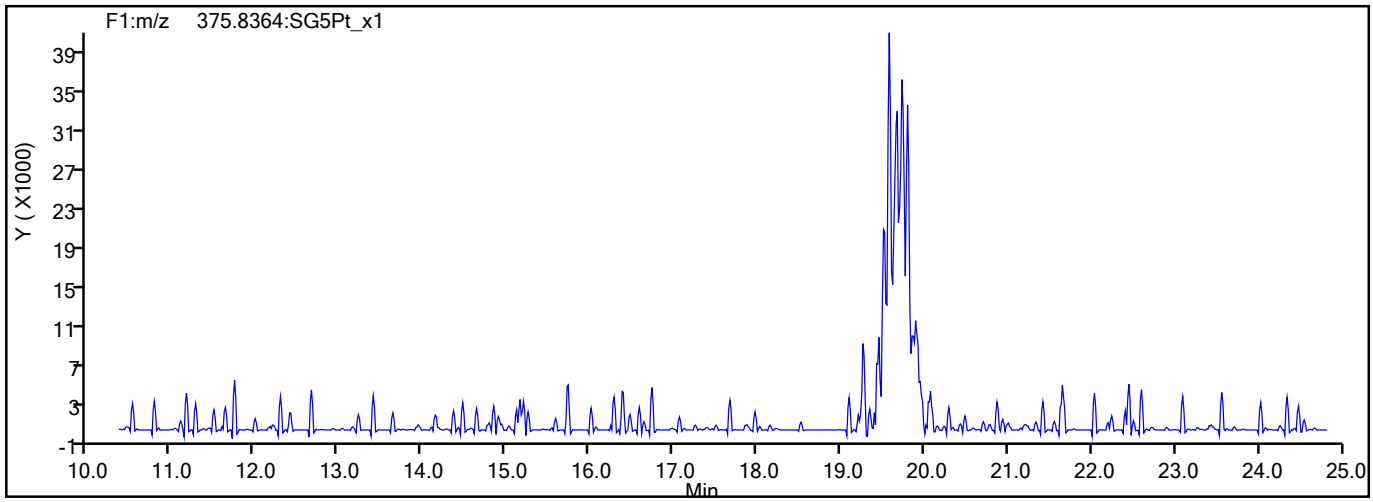

783981

Report Date: 24-Aug-2021 09:19:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_005.d		
Injection Date:	23-Aug-2021 18:07:46	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	518979	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

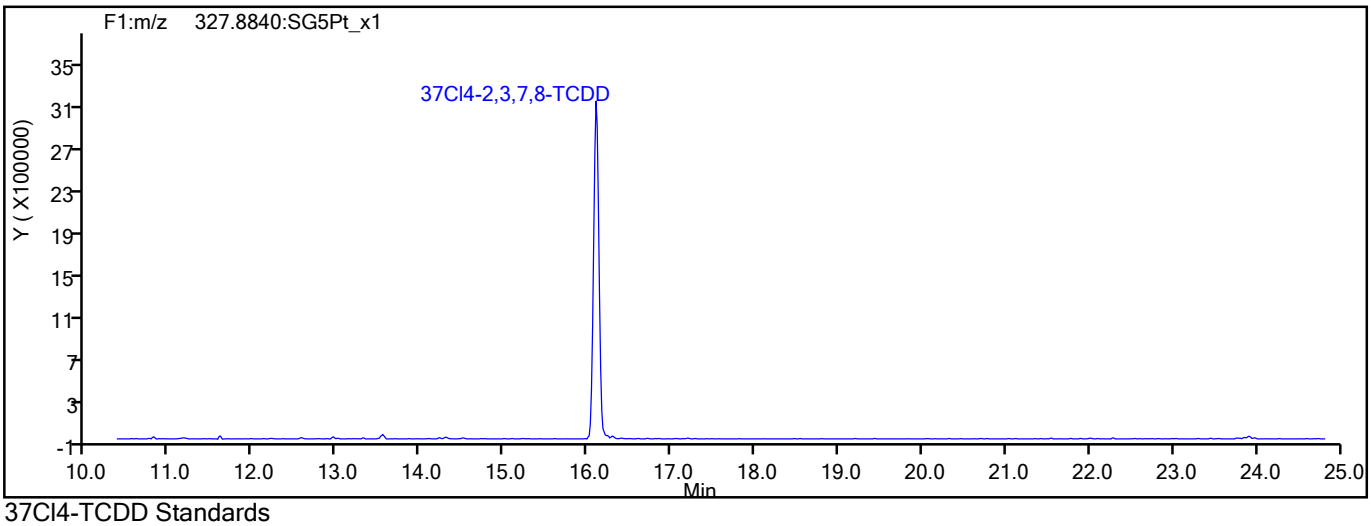

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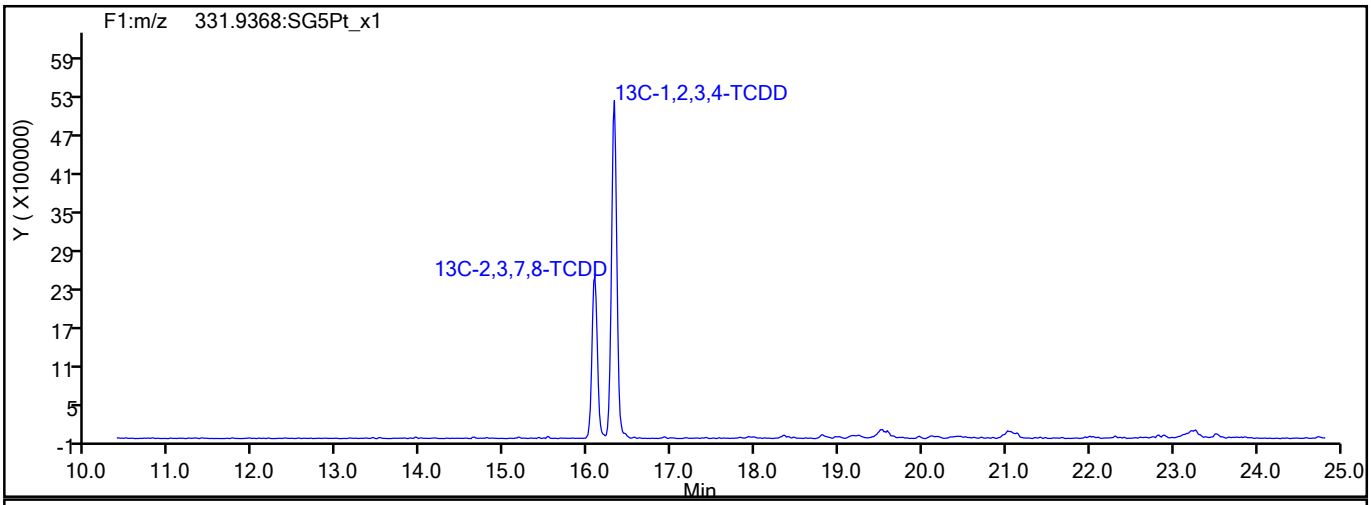

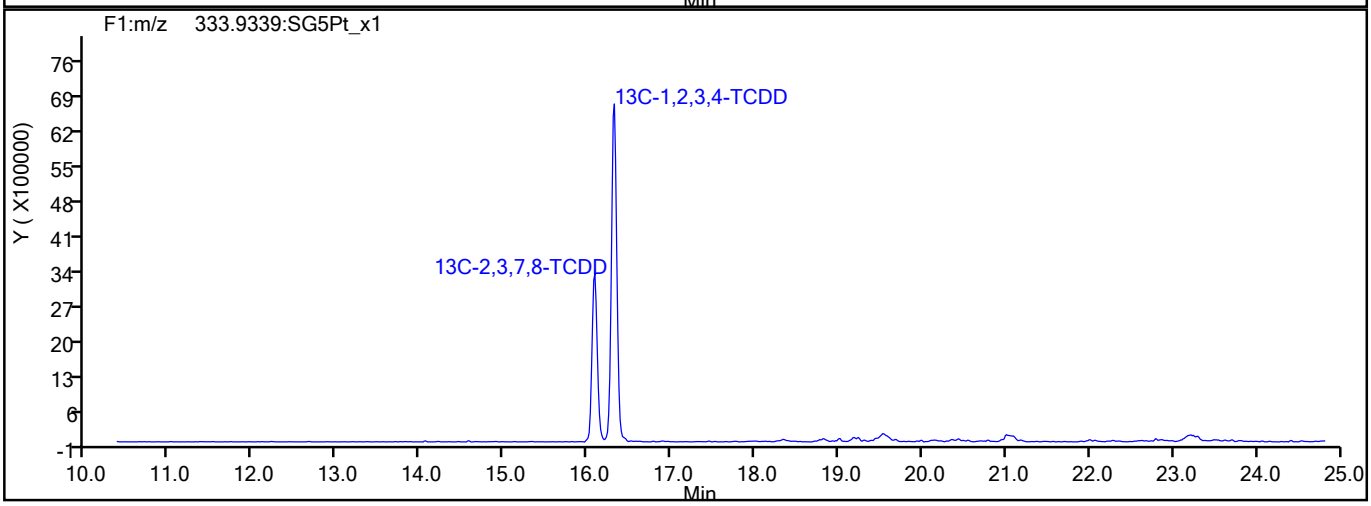

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Report Date: 24-Aug-2021 09:19:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_005.d		
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Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (16-18)		
Worklist#:	518979	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

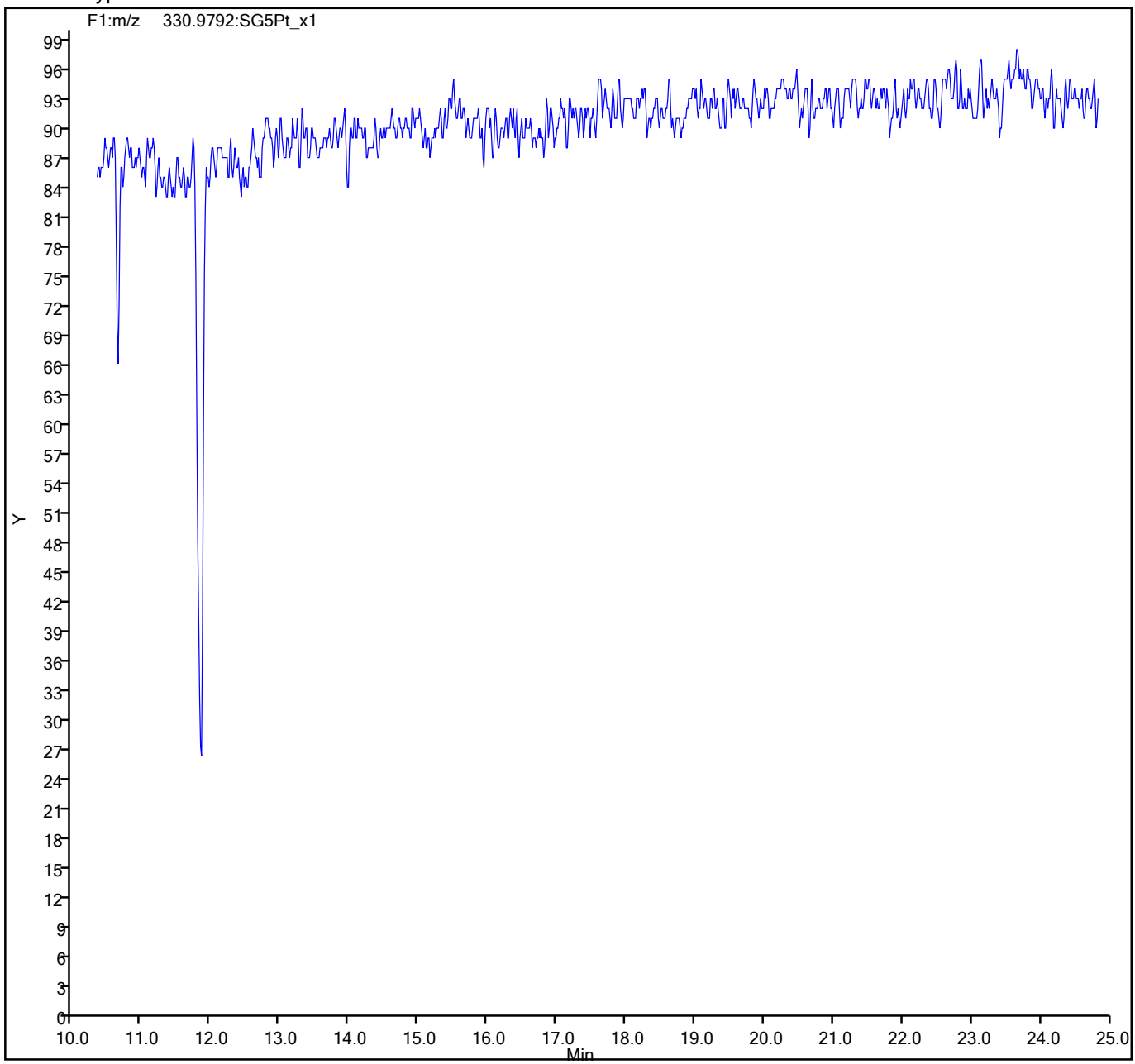

783983

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.0287	0.8698	1.0458	1.1094	1.0657	AveID		1.0239				8.9		20.0			
2,3,7,8-TCDD	1.2575	1.0971	1.2651	1.3434	1.3075	AveID		1.2541				7.5		20.0			
1,2,3,7,8-PeCDF	1.0739	0.9128	1.0891	1.1370	1.0928	AveID		1.0611				8.1		20.0			
2,3,4,7,8-PeCDF	1.0408	0.8610	1.0466	1.1082	1.0356	AveID		1.0184				9.1		20.0			
1,2,3,7,8-PeCDD	1.0578	0.9031	1.0680	1.1310	1.0823	AveID		1.0484				8.2		20.0			
1,2,3,4,7,8-HxCDF	1.1222	0.9192	1.1025	1.1936	1.0881	AveID		1.0851				9.3		20.0			
1,2,3,6,7,8-HxCDF	1.1488	0.9637	1.1546	1.1966	1.1664	AveID		1.1260				8.2		20.0			
2,3,4,6,7,8-HxCDF	1.2223	0.9863	1.1858	1.2415	1.2018	AveID		1.1675				8.9		20.0			
1,2,3,4,7,8-HxCDD	1.0979	0.8906	1.1304	1.1671	1.0341	AveID		1.0640				10.2		20.0			
1,2,3,6,7,8-HxCDD	1.0294	0.8529	1.0113	1.0930	1.0138	AveID		1.0001				8.9		20.0			
1,2,3,7,8,9-HxCDD	1.1551	0.9428	1.1999	1.2421	1.1227	AveID		1.1325				10.2		20.0			
1,2,3,7,8,9-HxCDF	1.1733	1.0136	1.1898	1.2479	1.2072	AveID		1.1664				7.7		20.0			
1,2,3,4,6,7,8-HpCDF	1.4474	1.2413	1.4986	1.5485	1.4706	AveID		1.4413				8.2		20.0			
1,2,3,4,6,7,8-HpCDD	1.1119	0.9539	1.1176	1.1675	1.1205	AveID		1.0943				7.5		20.0			
1,2,3,4,7,8,9-HpCDF	1.3136	1.1269	1.3622	1.4520	1.3321	AveID		1.3174				9.0		20.0			
OCDD	1.1009	0.9635	1.1652	1.1829	1.1226	AveID		1.1070				7.8		20.0			
OCDF	1.3863	1.1912	1.5145	1.5858	1.5129	AveID		1.4382				10.8		20.0			
13C-2,3,7,8-TCDF	1.6500	1.5631	1.6241	1.6170	1.6703	Ave		1.6249				2.5		35.0			
13C-2,3,7,8-TCDD	0.9128	0.8588	0.8965	0.8940	0.9345	Ave		0.8993				3.1		35.0			
13C-1,2,3,7,8-PeCDF	1.1977	1.1539	1.2193	1.2121	1.2674	Ave		1.2101				3.4		35.0			
13C-2,3,4,7,8-PeCDF	1.2269	1.1924	1.2487	1.2129	1.3165	Ave		1.2395				3.8		35.0			
13C-1,2,3,7,8-PeCDD	0.7558	0.7433	0.7524	0.7498	0.8049	Ave		0.7612				3.3		35.0			
13C-1,2,3,4,7,8-HxCDF	1.0875	1.1006	1.0706	1.0371	1.1225	Ave		1.0837				3.0		35.0			
13C-1,2,3,6,7,8-HxCDF	1.1466	1.1401	1.1115	1.1251	1.1163	Ave		1.1279				1.3		35.0			
13C-2,3,4,6,7,8-HxCDF	1.0781	1.0785	1.0541	1.0562	1.0518	Ave		1.0637				1.3		35.0			
13C-1,2,3,4,7,8-HxCDD	0.7413	0.7515	0.6926	0.7049	0.7769	Ave		0.7334				4.7		35.0			
13C-1,2,3,6,7,8-HxCDD	0.8884	0.8870	0.8694	0.8685	0.8876	Ave		0.8802				1.2		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9787	0.9851	0.9497	0.9522	0.9722	Ave		0.9676				1.6		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.8030	0.7818	0.7501	0.7625	0.7677	Ave		0.7730				2.6		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6554	0.6478	0.6343	0.6458	0.6528	Ave		0.6472				1.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6985	0.7093	0.6800	0.6816	0.7346	Ave		0.7008				3.2		35.0			
13C-OCDD	0.4462	0.4357	0.4273	0.4575	0.4691	Ave		0.4472				3.7		35.0			
37Cl4-2,3,7,8-TCDD	0.9705	0.9794	1.1718	1.1876	1.2264	Ave		1.1071				11.1					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	557485	1709191	10638776	44524782	204575642	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	376984	1184284	7104238	29808948	140421448	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	2112140	6620354	41588176	171023920	795873691	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	2096967	6452410	40928436	166805723	783403837	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	1312779	4219570	25165054	105236005	500555284	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	1949462	6041767	37525146	155057762	737075796	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	2104086	6561860	40802767	168618976	785709889	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	2104896	6352404	39741365	164241378	762810877	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	1300030	3996910	24891170	103044220	484857042	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	1460747	4517909	27953752	118900298	543061818	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	1503407	4612548	29794954	122394998	563888565	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	1834100	5963032	35924190	148834491	708280047	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	1856599	5795616	35740964	147892240	681312007	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	1164074	3690749	22538791	94435922	441437476	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	1465634	4773949	29450636	123968724	590555312	2.50	10.0	50.0	200	1000
OCDD		AveID	1569338	5013385	31656667	135570174	635652839	5.00	20.0	100	400	2000
OCDF		AveID	1976175	6198469	41147202	181747068	856685987	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	108384725	98246522	101724636	100332269	95980421	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	59957723	53975587	56155483	55471422	53698206	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	78674290	72525655	76368219	75205597	72829681	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	80591659	74944110	78214582	75259591	75649463	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	49643581	46721712	47124414	46524396	46251010	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	69484482	65726932	68075509	64951889	67741189	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	73262388	68089005	70677463	70459920	67363664	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	68885161	64406928	67028498	66145684	63471184	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	47363504	44877133	44039927	44144841	46886171	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	56759108	52974056	55284532	54392394	53564396	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	62528954	58828058	60389284	59636084	58669892	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	51308225	46691158	47697671	47752972	46328151	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	41876556	38689128	40333717	40442950	39395832	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	44628352	42362179	43238622	42687625	44333848	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	57018462	52034518	54338243	57303880	56623863	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	318727	1231219	7339670	29474361	140953034	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\26JL2110D5.SPL
Last Modified: Monday, July 26, 2021 16:58:03 Pacific Daylight Time
Printed: Tuesday, July 27, 2021 07:40:45 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	26JL2110D5_1	WDM HRDXNCP_00042	WDM 072621	Tray01:1	Dioxin		SMA
2	26JL2110D5_2	SB Solvent Blank C-14	SB 072621	Tray01:3			SMA
3	26JL2110D5_3	CS-2 HRDXNL2_00032	IC 072621	Tray01:4	Dioxin		SMA
4	26JL2110D5_4	CS-3 HRDXNL3_00029	IC 072621A	Tray01:5	Dioxin		SMA
5	26JL2110D5_5	CS-4 HRDXNL4_00099	IC 072621B	Tray01:2	Dioxin		SMA
6	26JL2110D5_6	CS-5 HRDXNL5_00032	IC 072621C	Tray01:6	Dioxin		SMA
7	26JL2110D5_7	CS-6 HRDXNL6_00028	IC 072621D	Tray01:7	Dioxin		SMA
8	26JL2110D5_8	SB Solvent Blank C-14	SB 072621A	Tray01:3			SMA
9	26JL2110D5_9	ICV HRDXNIC_00047	ICV 072621	Tray01:8	Dioxin		SMA
10	26JL2110D5_10	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS
11	26JL2110D5_11	WDM HRDXNCP_00042	WDM 031621C	Tray01:1	Dioxin		KSS
12	26JL2110D5_12	SB Solvent Blank C-14	SB 072621B	Tray01:3			KSS
13	26JL2110D5_13	mb 320-508015/1-a	mb 320-508015/1-a	Tray01:9	1613B/8290/Water	D255	KSS
14	26JL2110D5_14	lcs 320-508015/2-a	lcs 320-508015/2-a	Tray01:10	1613B/8290/Water		KSS
15	26JL2110D5_15	lcsd 320-508015/3-a	lcsd 320-508015/3-a	Tray01:11	1613B/8290/Water		KSS
16	26JL2110D5_16	320-76081-a-3-c	320-76081-a-3-c	Tray01:12	1613B/8290/Water		KSS
17	26JL2110D5_17	SB Solvent Blank C-14	SB 072621C	Tray01:3			KSS
18	26JL2110D5_18	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS

LOGFILE CHECKED
DB 7/27/21

783989

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:18:21 Pacific Daylight Time

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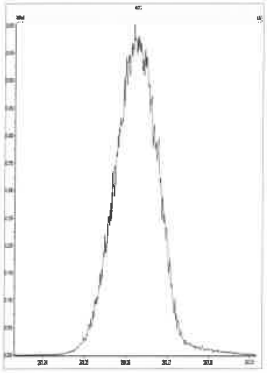

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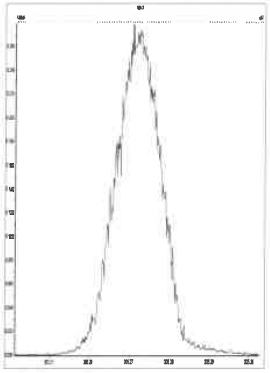

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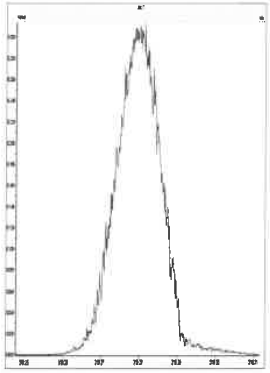

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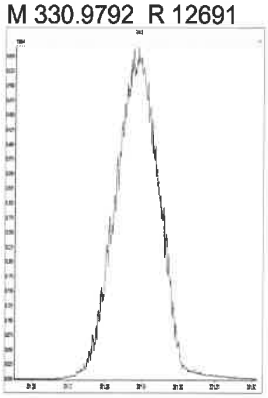

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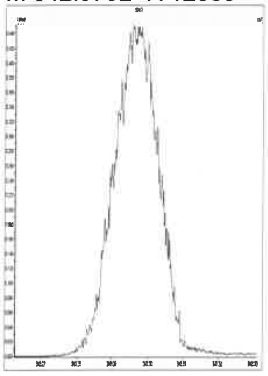

M 354.9792 R 12138

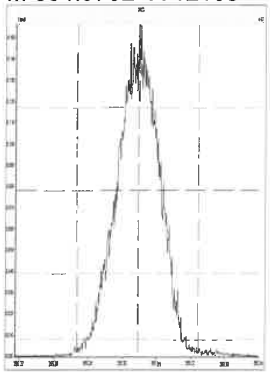

M 366.9792 R 13090

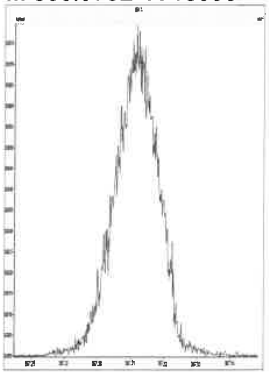

M 380.9760 R 12562

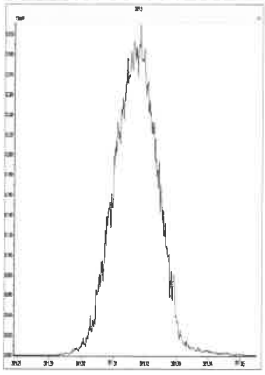

M 392.9760 R 12753

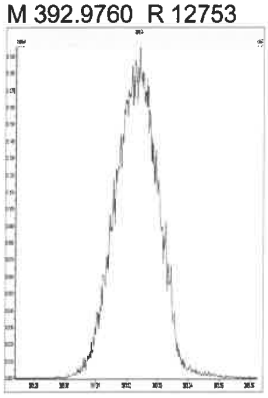

M 404.9760 R 12137

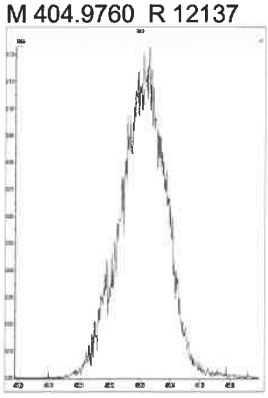

M 416.9760 R 12563

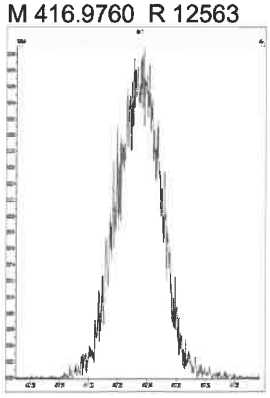

783990

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:04 Pacific Daylight Time

M 318.9792 R 13300

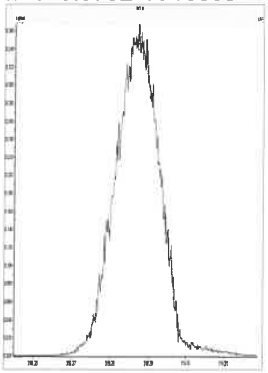

M 330.9792 R 12691

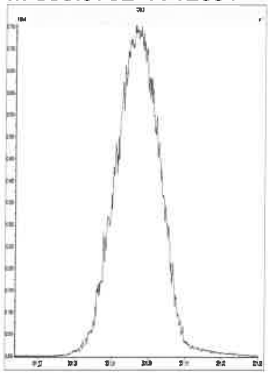

M 342.9792 R 12499

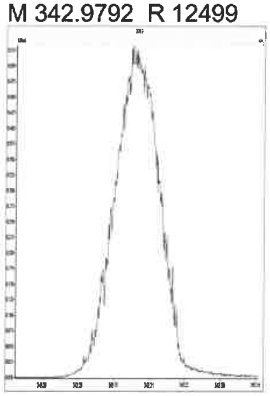

M 354.9792 R 12374

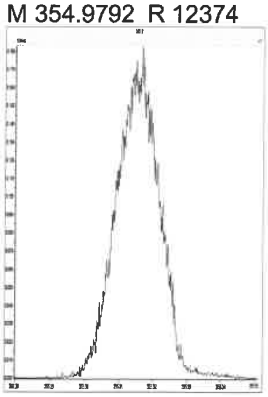

M 366.9792 R 12691

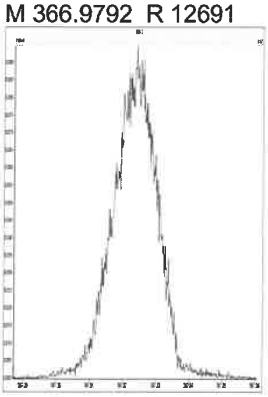

M 380.9760 R 12690

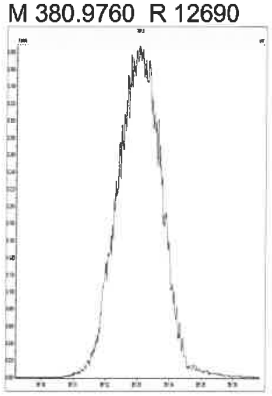

M 392.9760 R 12885

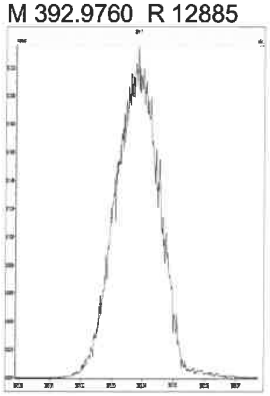

M 404.9760 R 12817

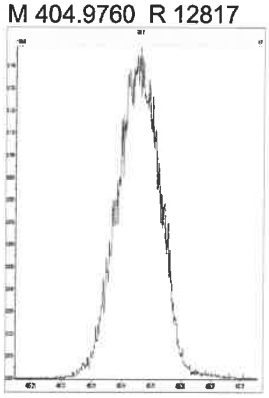

M 416.9760 R 12954

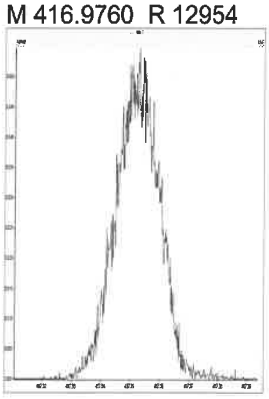

783991

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:43 Pacific Daylight Time

M 366.9792 R 12440

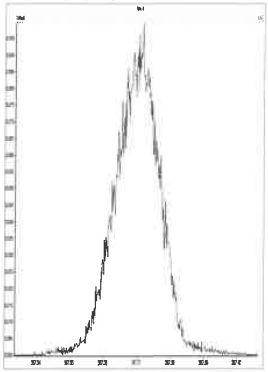

M 380.9760 R 12955

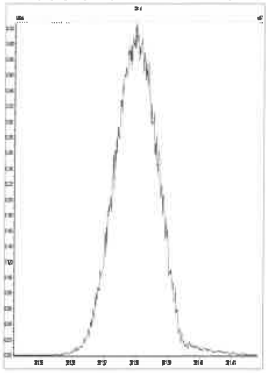

M 392.9760 R 12690

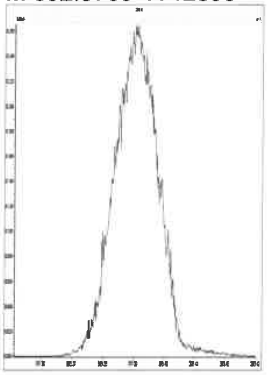

M 404.9760 R 12957

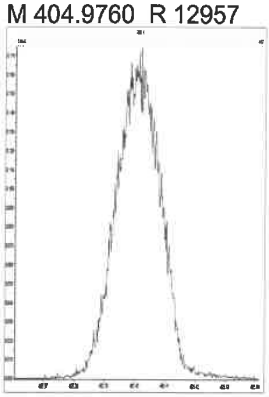

M 416.9760 R 13516

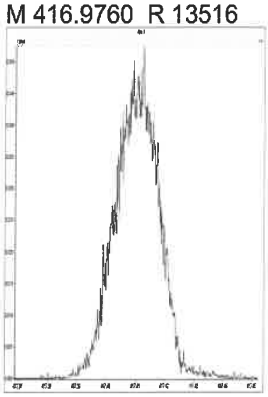

M 430.9728 R 12564

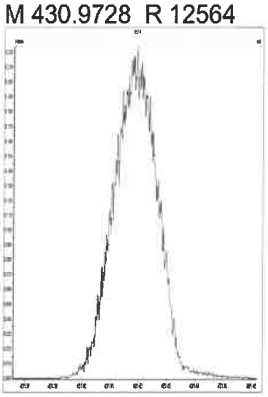

M 442.9728 R 12953

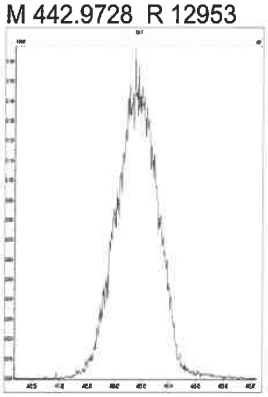

M 454.9728 R 13226

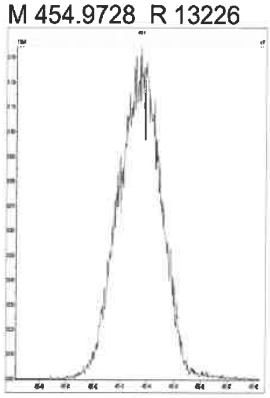

783992

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:20:01 Pacific Daylight Time

M 380.9760 R 12885

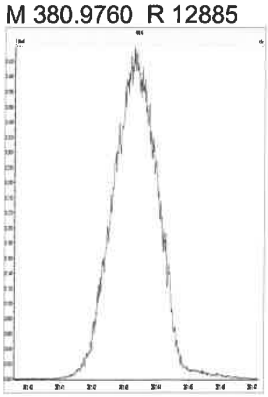

M 392.9760 R 12955

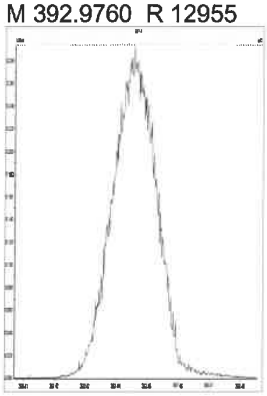

M 404.9760 R 12756

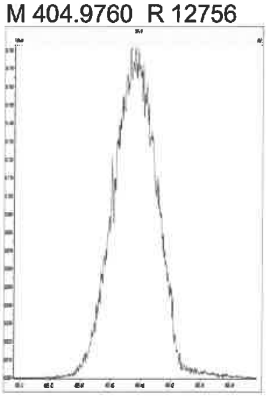

M 416.9760 R 13368

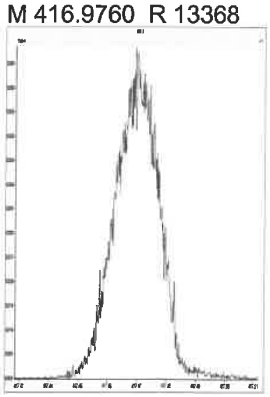

M 430.9728 R 12758

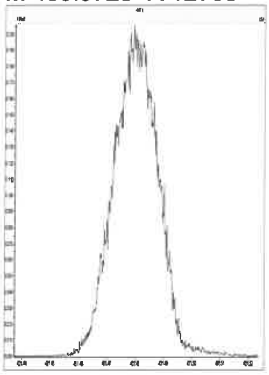

M 442.9728 R 13229

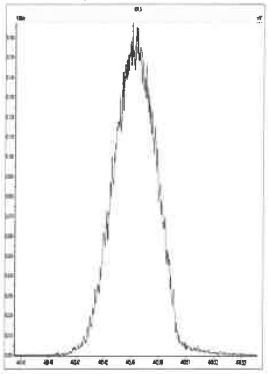

M 454.9728 R 13737

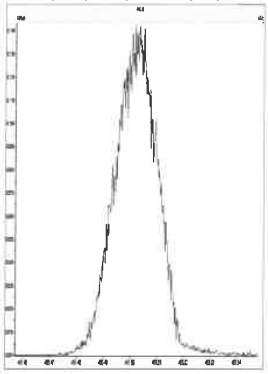

M 466.9728 R 12952

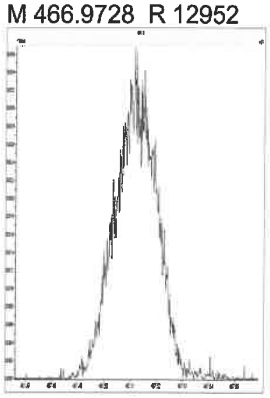

M 480.9696 R 12819

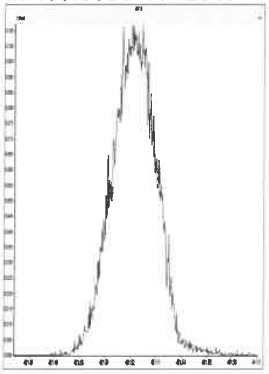

783993

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:21:28 Pacific Daylight Time

M 380.9760 R 12630

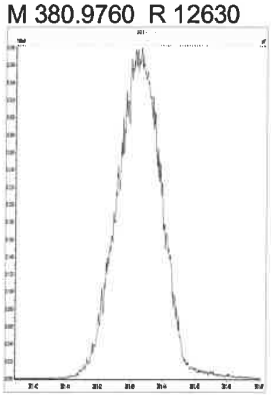

M 392.9760 R 12687

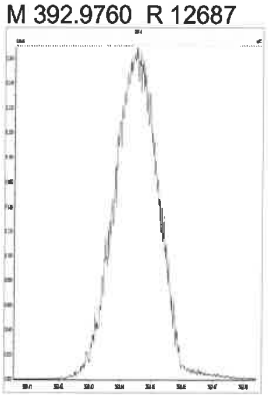

M 404.9760 R 13441

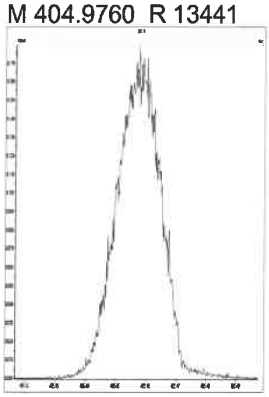

M 416.9760 R 12886

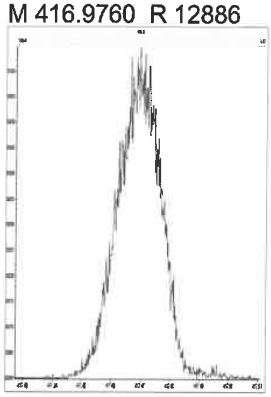

M 430.9728 R 12952

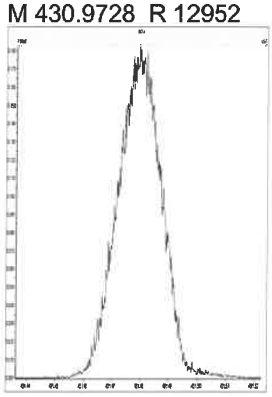

M 442.9728 R 12564

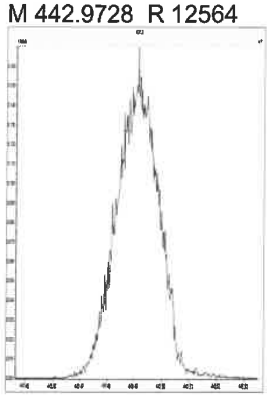

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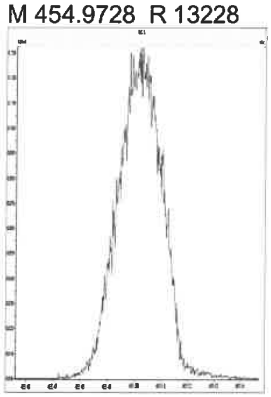

M 466.9728 R 12689

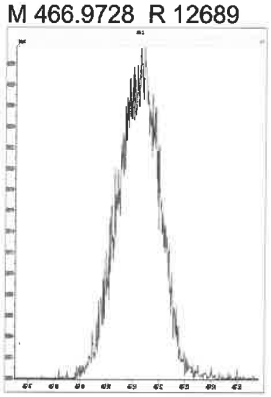

M 480.9696 R 13226

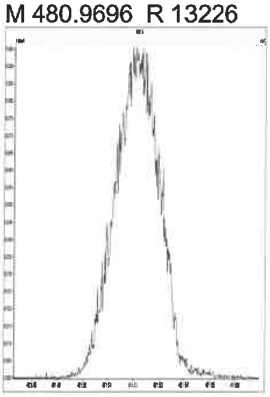

M 492.9696 R 13090

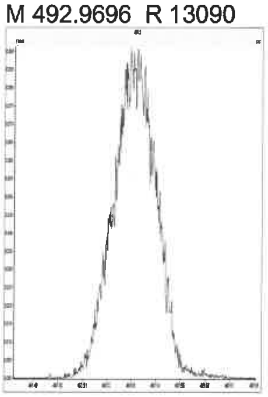

M 504.9696 R 13021

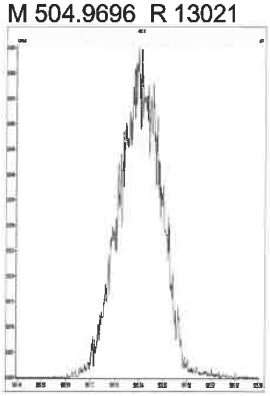

M 516.9697 R 13811

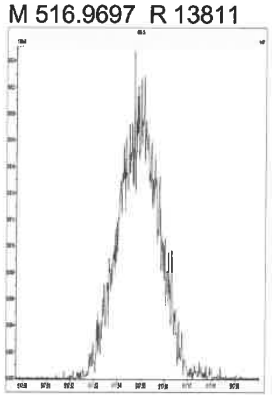

783994

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M 292.9824 R 12322

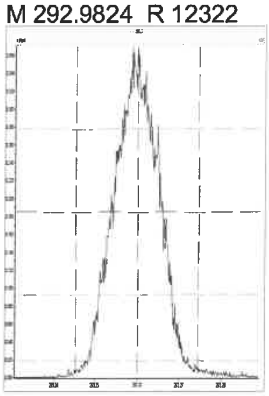

M 304.9824 R 12923

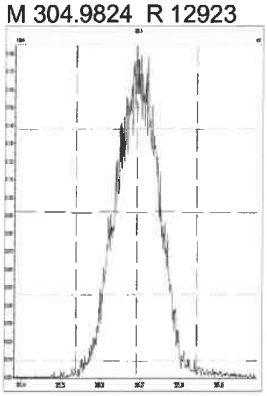

M 318.9792 R 12953

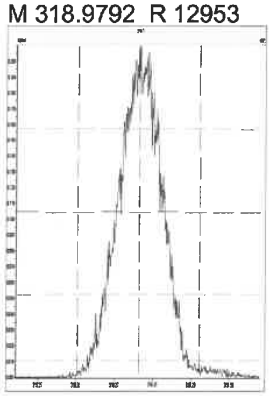

M 330.9792 R 12791

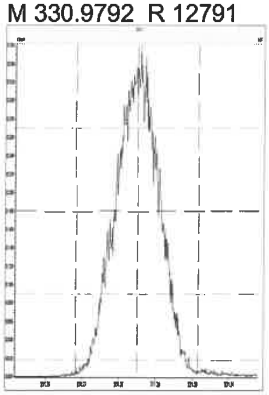

M 342.9792 R 12345

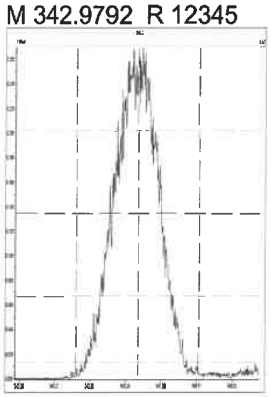

M 354.9792 R 13001

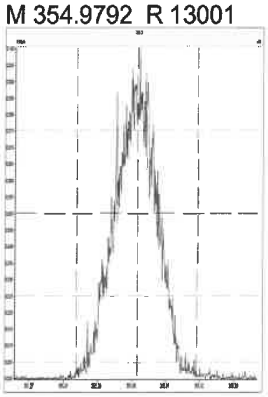

M 366.9792 R 13101

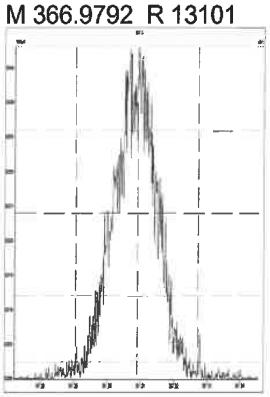

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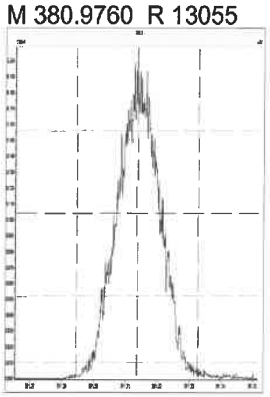

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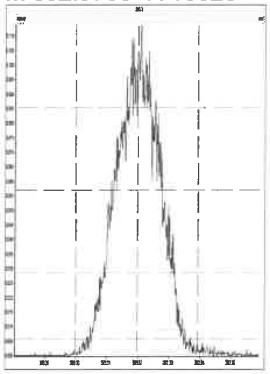

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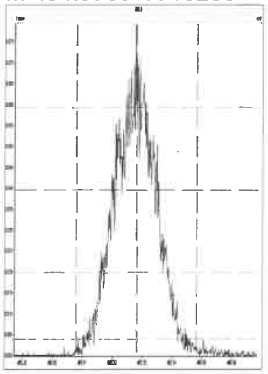

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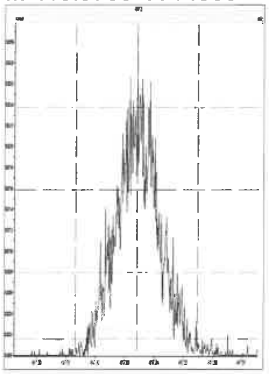

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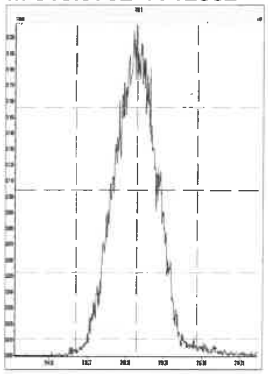

M 330.9792 R 12659

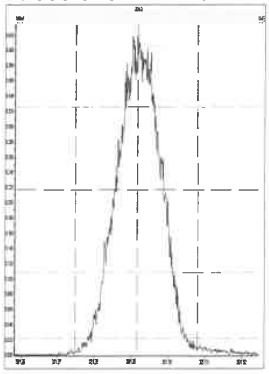

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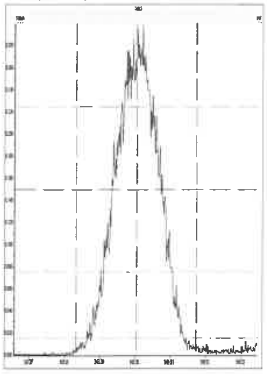

M 354.9792 R 13061

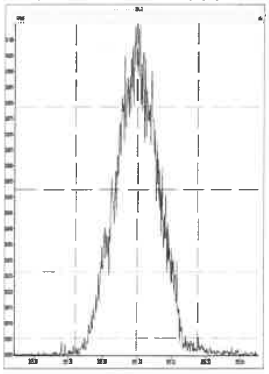

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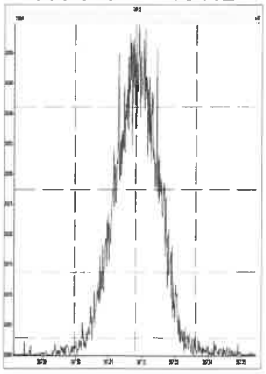

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M 380.9760 R 13021

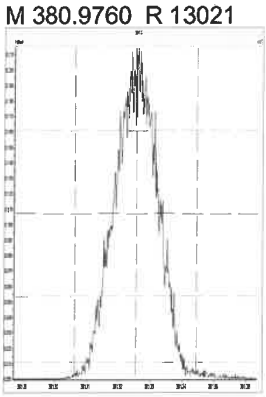

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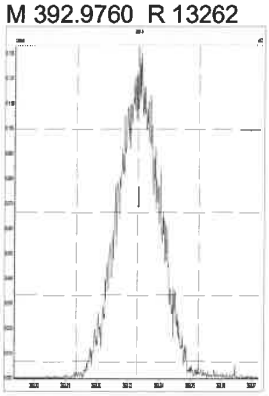

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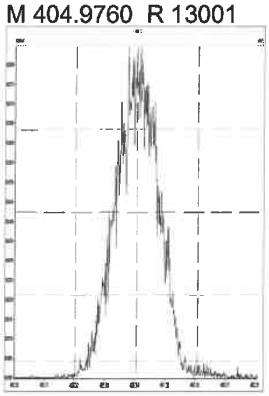

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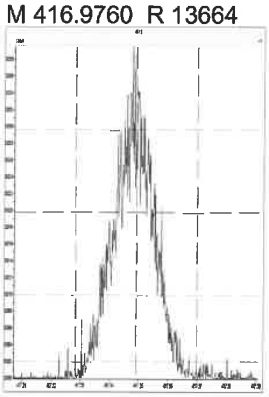

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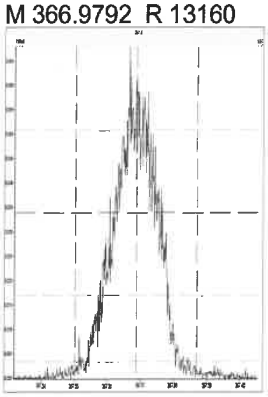

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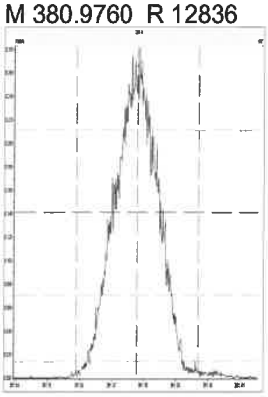

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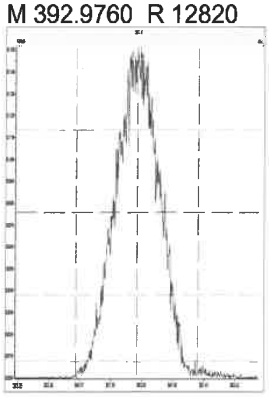

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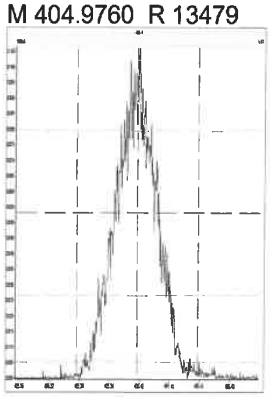

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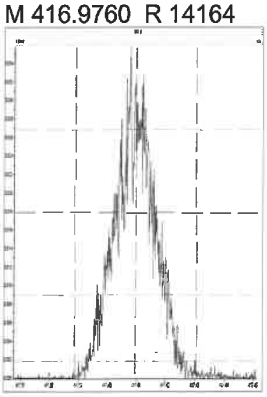

M 430.9728 R 13727

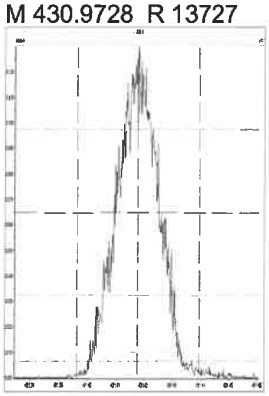

M 442.9728 R 13415

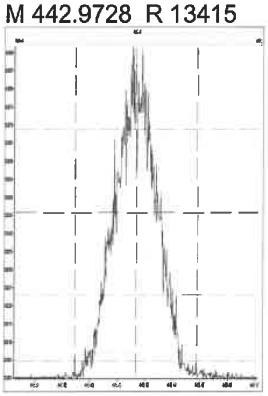

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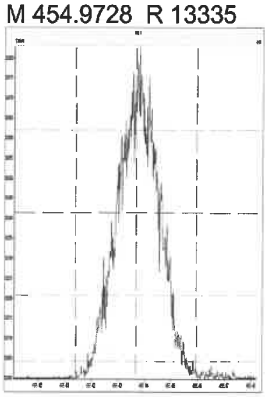

M 380.9760 R 13021

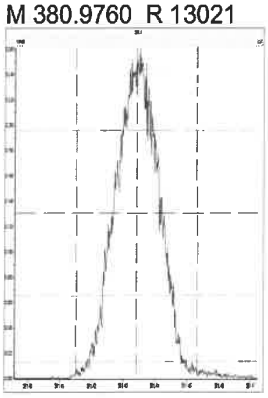

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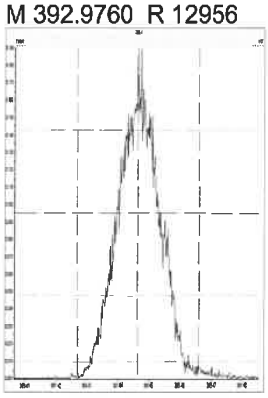

M 404.9760 R 13194

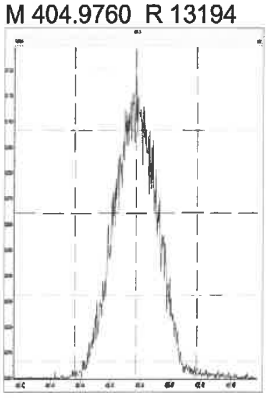

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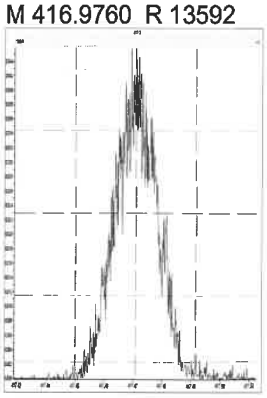

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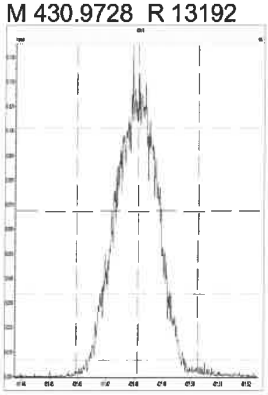

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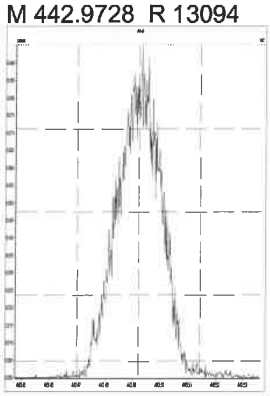

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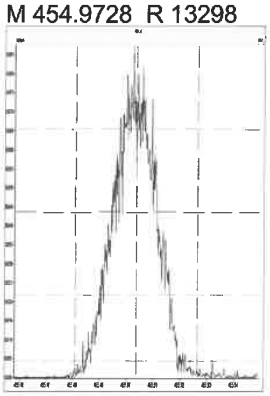

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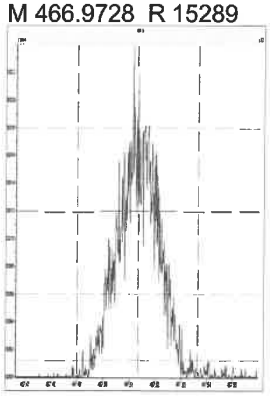

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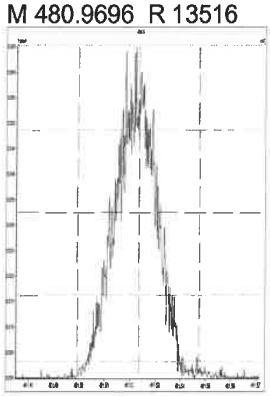

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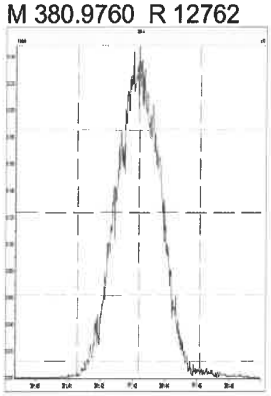

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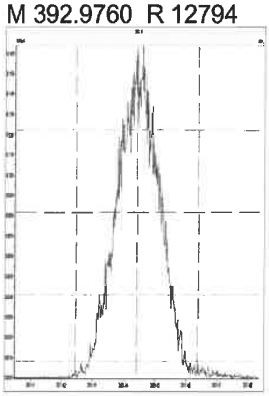

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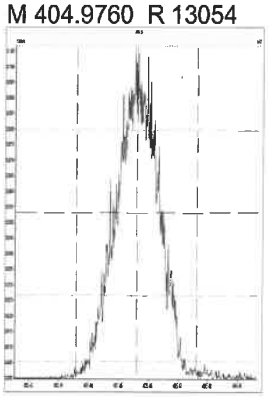

M 416.9760_R 13966

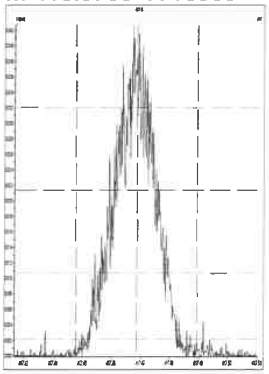

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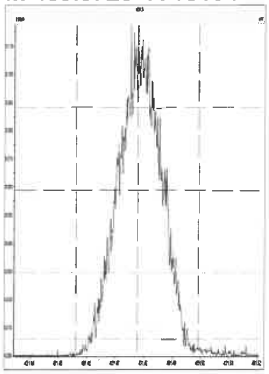

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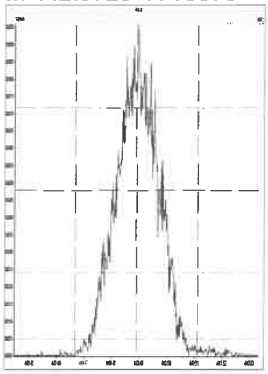

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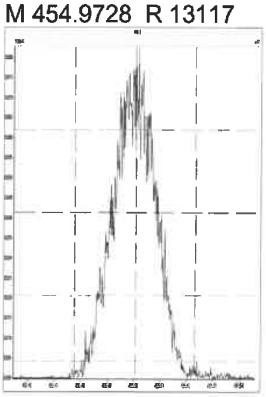

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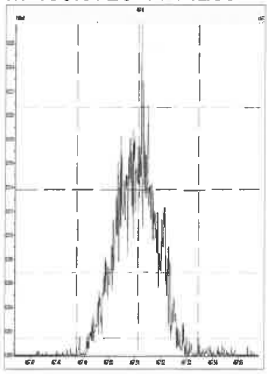

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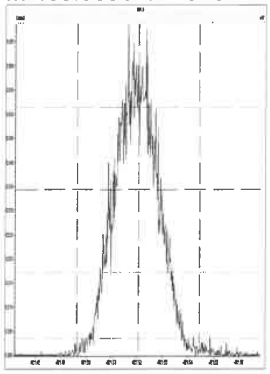

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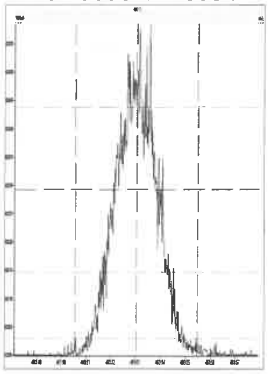

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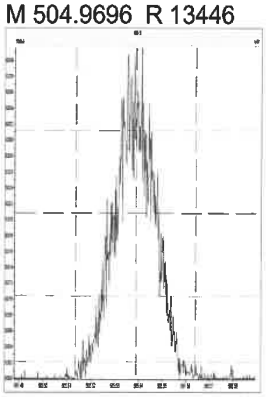

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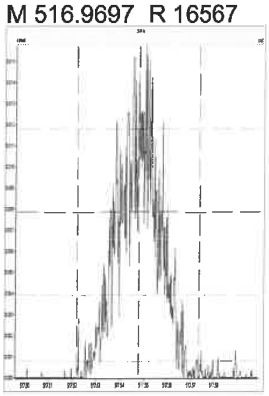

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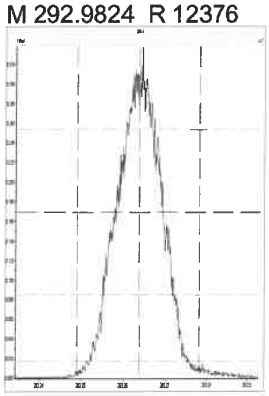

M 304.9824 R 12412

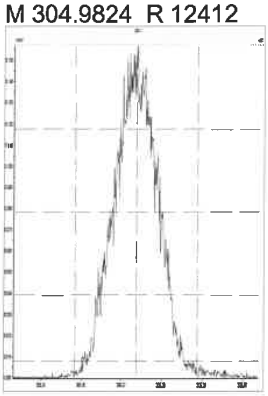

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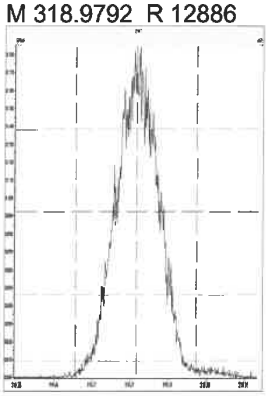

M 330.9792 R 12820

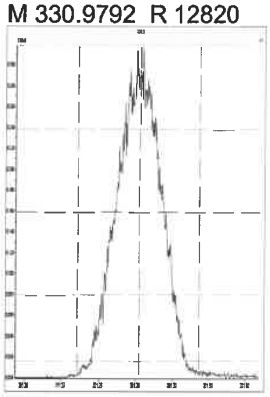

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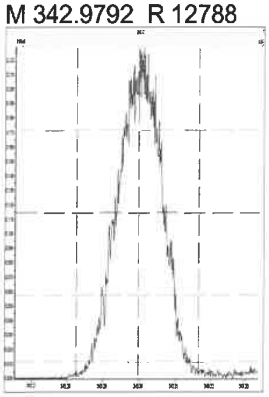

M 354.9792 R 12991

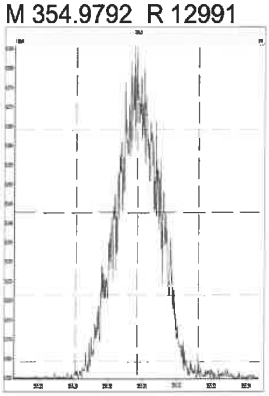

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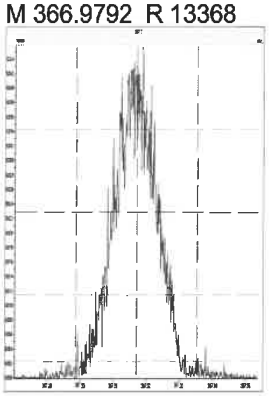

M 380.9760 R 12766

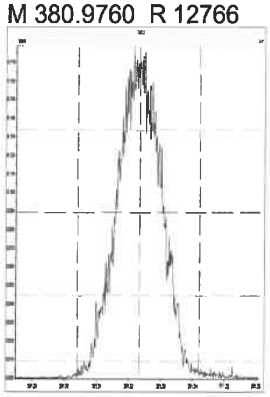

M 392.9760 R 13080

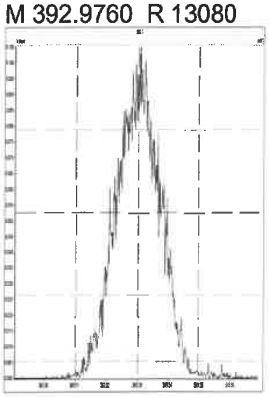

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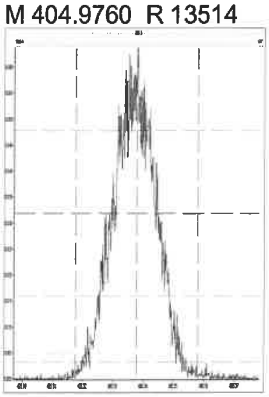

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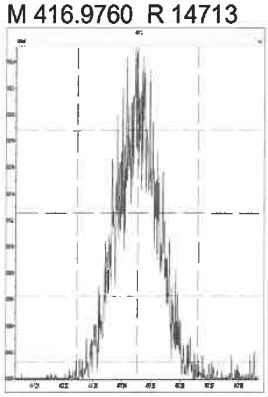

M 318.9792 R 12628

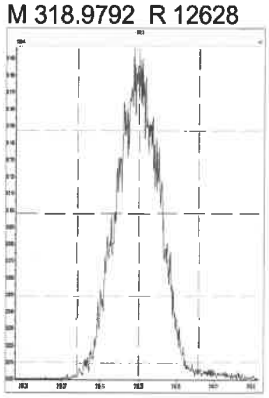

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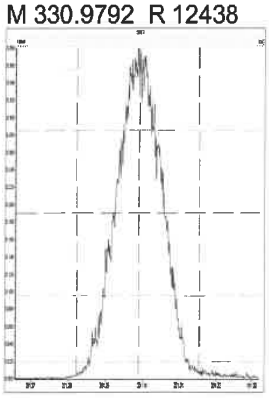

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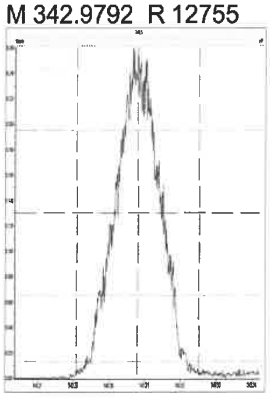

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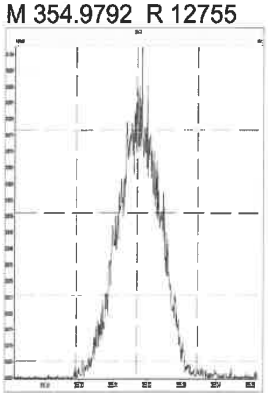

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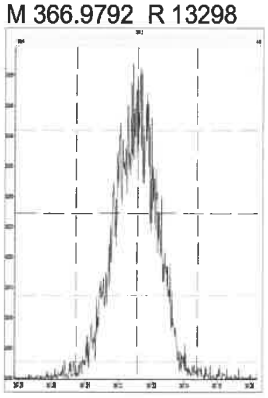

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M 380.9760 R 12791

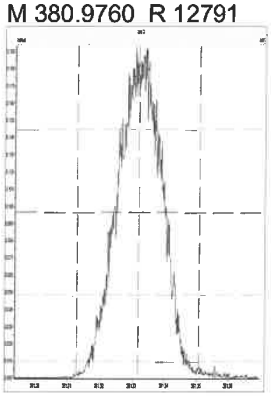

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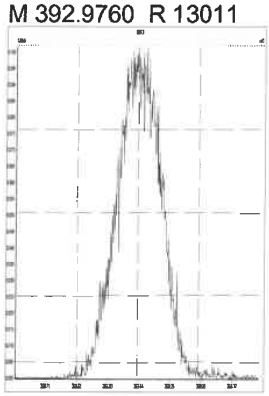

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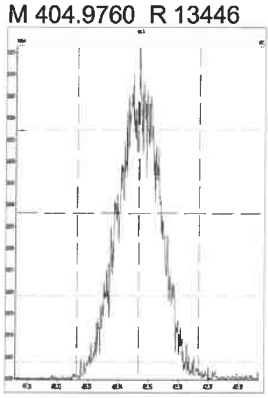

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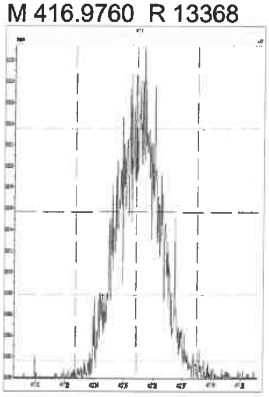

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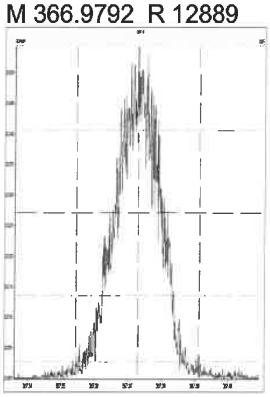

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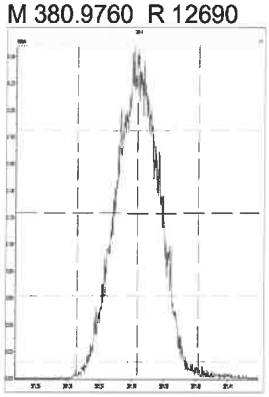

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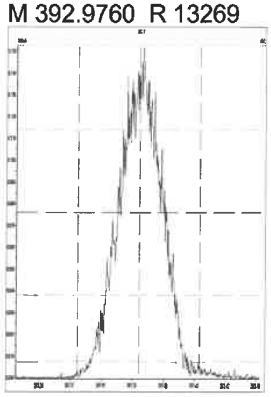

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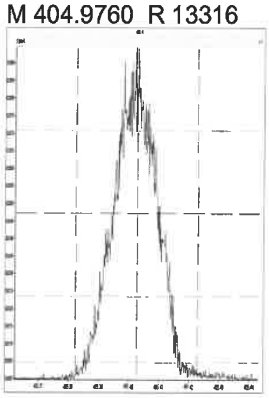

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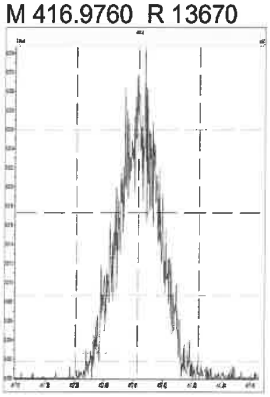

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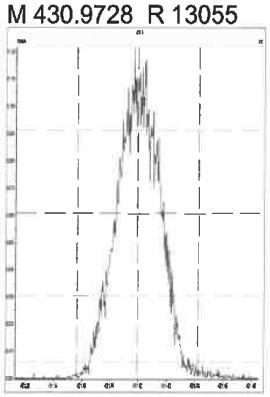

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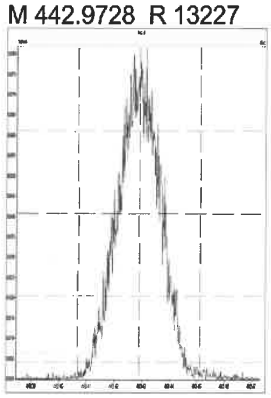

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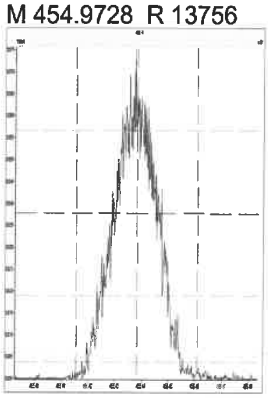

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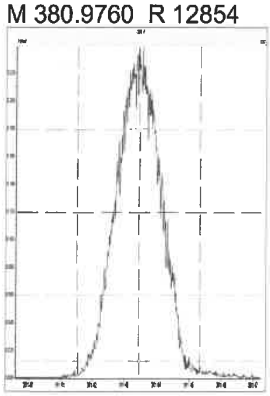

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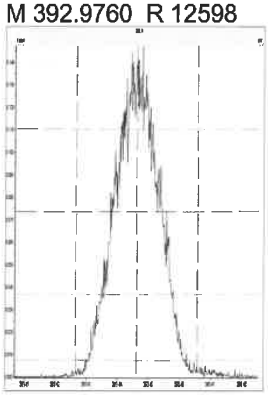

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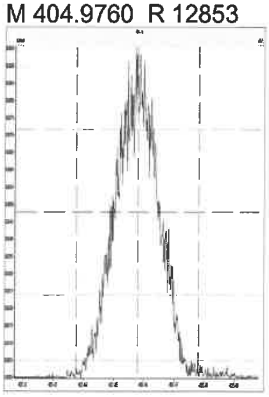

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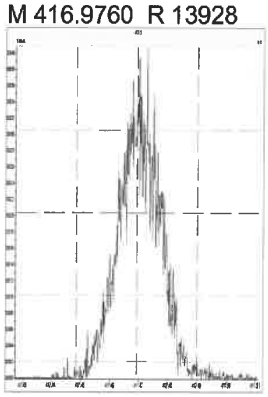

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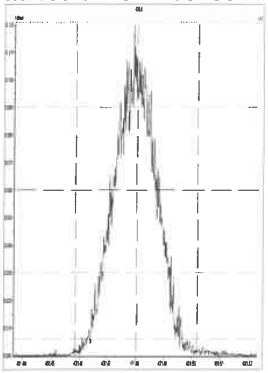

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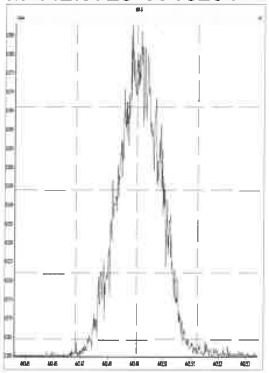

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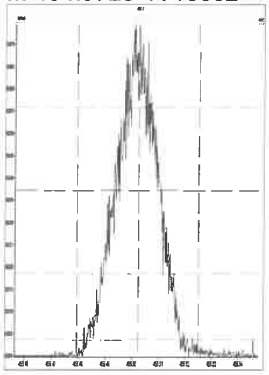

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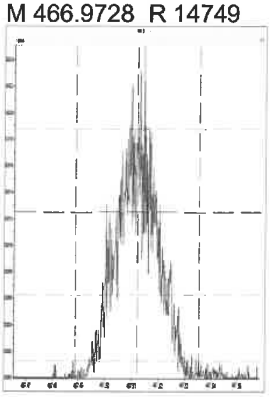

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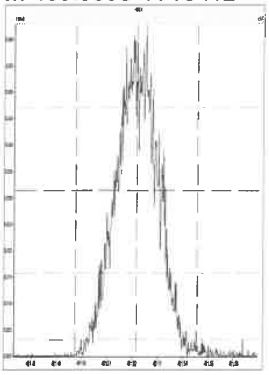

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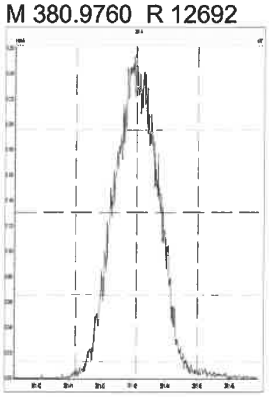

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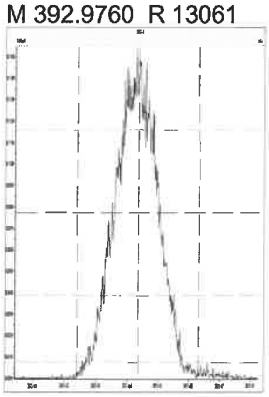

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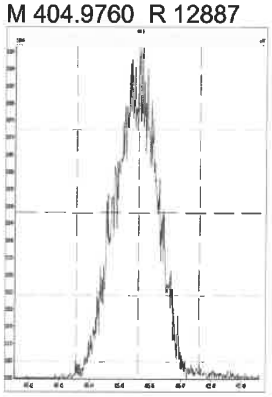

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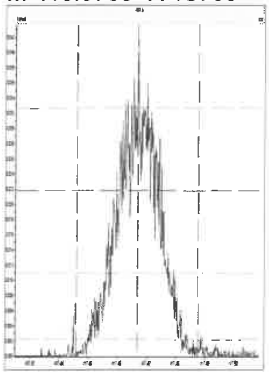

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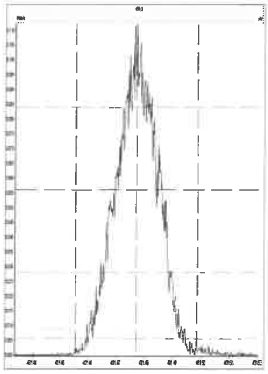

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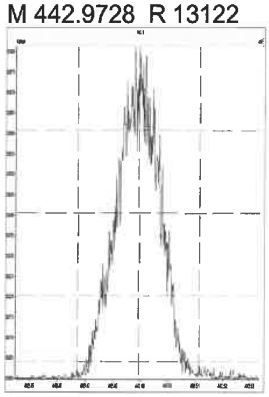

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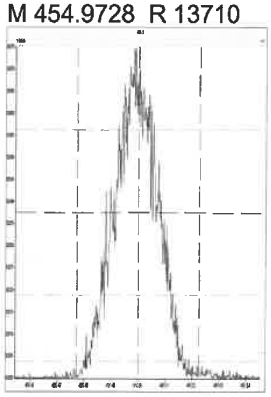

M 466.9728 R 14205

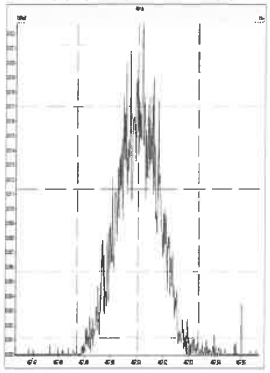

M 480.9696 R 13298

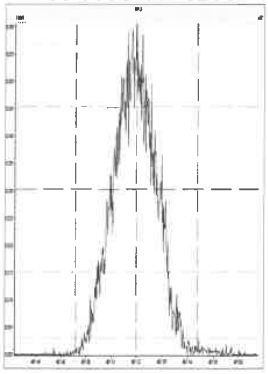

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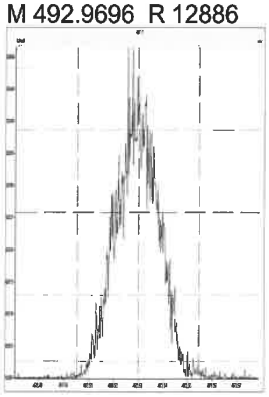

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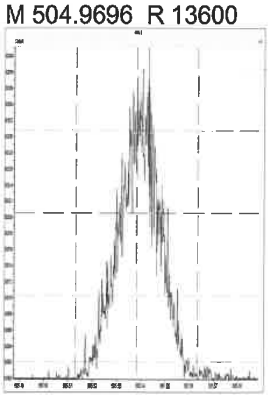

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M 516.9697 R 15872

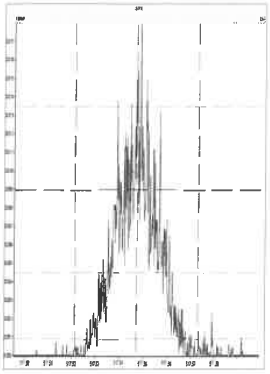

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

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Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	65685883	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	108384725	0.78	1.6249	101.5	101.5	0.1385	0.1385	102	
2,3,7,8-TCDF	17.628	557485	0.78	1.0239	0.5023	0.5023	0.009259	0.009259	100	
S Total TCDF					0.5023	0.5023	0.009259	0.009259		
D 13C-2,3,7,8-TCDD	18.338	59957723	0.80	0.8993	101.5	101.5	0.1222	0.1222	101	
$ 37Cl4-2,3,7,8-TCDD	18.338	318727		1.1071	0.4383	0.4383	0.006072	0.006072	87.65	
2,3,7,8-TCDD	18.354	376984	0.89	1.2541	0.5013	0.5013	0.0150	0.0150	100	M
S Total TCDD					0.5013	0.5013	0.0150	0.0150		
D 13C-1,2,3,7,8-PeCDF	22.749	78674290	1.60	1.2101	99.0	99.0	0.2282	0.2282	98.98	
1,2,3,7,8-PeCDF	22.776	2112140	1.63	1.0611	2.530	2.530	0.0220	0.0220	101	
D 13C-2,3,4,7,8-PeCDF	24.126	80591659	1.57	1.2395	99.0	99.0	0.2228	0.2228	98.99	
2,3,4,7,8-PeCDF	24.153	2096967	1.56	1.0184	2.555	2.555	0.0245	0.0245	102	
S Total PeCDF					5.085	5.085	0.0233	0.0233		
D 13C-1,2,3,7,8-PeCDD	24.862	49643581	1.62	0.7612	99.3	99.3	0.1197	0.1197	99.28	
1,2,3,7,8-PeCDD	24.889	1312779	1.42	1.0484	2.522	2.522	0.0218	0.0218	101	
S Total PeCDD					2.522	2.522	0.0218	0.0218		
D 13C-1,2,3,4,7,8-HxCDF	30.835	69484482	0.52	1.0837	100.4	100.4	0.5299	0.5299	100	
1,2,3,4,7,8-HxCDF	30.849	1949462	1.23	1.0851	2.586	2.586	0.0289	0.0289	103	
D 13C-1,2,3,6,7,8-HxCDF	30.995	73262388	0.52	1.1279	101.7	101.7	0.5091	0.5091	102	
1,2,3,6,7,8-HxCDF	31.022	2104086	1.18	1.1260	2.551	2.551	0.0273	0.0273	102	
D 13C-2,3,4,6,7,8-HxCDF	31.754	68885161	0.52	1.0637	101.4	101.4	0.5398	0.5398	101	
2,3,4,6,7,8-HxCDF	31.767	2104896	1.20	1.1675	2.617	2.617	0.0225	0.0225	105	
D 13C-1,2,3,7,8,9-HxCDF	32.512	62528954	0.51	0.9676	101.1	101.1	0.5935	0.5935	101	
1,2,3,7,8,9-HxCDF	32.526	1834100	1.21	1.1664	2.515	2.515	0.0244	0.0244	101	
S Total HxCDF					10.3	10.3	0.0258	0.0258		
* 13C-1,2,3,7,8,9-HxCDD	32.339	63892665	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	47363504	1.27	0.7334	101.1	101.1	0.5001	0.5001	101	
1,2,3,4,7,8-HxCDD	31.940	1300030	1.26	1.0640	2.580	2.580	0.0268	0.0268	103	
D 13C-1,2,3,6,7,8-HxCDD	32.033	56759108	1.25	0.8802	100.9	100.9	0.4167	0.4167	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	1460747	1.28	1.0001	2.573	2.573	0.0268	0.0268	103	
1,2,3,7,8,9-HxCDD	32.353	1503407	1.26	1.1325	2.550	2.550	0.0244	0.0244	102	
S Total HxCDD					7.703	7.703	0.0260	0.0260		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	51308225	0.44	0.7730	103.9	103.9	1.147	1.147	104	
1,2,3,4,6,7,8-HpCDF	33.924	1856599	1.05	1.4413	2.511	2.511	0.0321	0.0321	100	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44628352	0.44	0.7008	99.7	99.7	1.266	1.266	99.67	
1,2,3,4,7,8,9-HpCDF	35.017	1465634	1.06	1.3174	2.493	2.493	0.0442	0.0442	99.72	
S Total HpCDF					5.003	5.003	0.0381	0.0381		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	41876556	1.01	0.6472	101.3	101.3	0.6709	0.6709	101	
1,2,3,4,6,7,8-HpCDD	34.726	1164074	1.06	1.0943	2.540	2.540	0.0284	0.0284	102	
S Total HpCDD					2.540	2.540	0.0284	0.0284		
D 13C-OCDD	37.093	57018462	0.89	0.4472	199.6	199.6	0.2479	0.2479	99.79	
OCDF	37.201	1976175	0.91	1.4382	4.820	4.820	0.0196	0.0196	96.40	
OCDD	37.105	1569338	0.92	1.1070	4.973	4.973	0.0246	0.0246	99.45	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		29725607	7464659	4167	10417	1791		
333.9339	18.142	18.142	0		35960276	9003139	3074	7685	2929	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	47438761	11992473	9243	23107	1297		
317.9389	17.613	17.616	0	0.971	60945964	15328013	5578	13945	2748	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	244966	62557	418	1045	150		
305.8987	17.628	17.631	0	1.001	312519	74119	618	1545	120	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	26677109	6242710	4167	10417	1498		
333.9339	18.338	18.338	0	1.011	33280614	7789380	3074	7685	2534	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.011	318727	66577	443	1107	150		
2,3,7,8-TCDD											M
319.8965	18.354	18.357	0	1.001	177891	43427	698	1745	62		M
321.8936	18.354	18.357	0	1.001	199093	47894	356	890	135	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	48367116	8680931	10780	26950	805		
353.8970	22.749	22.754	0	1.254	30307174	5346402	7413	18532	721	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	1307686	232308	692	1730	336		
341.8567	22.762	22.779	-1	1.001	804454	137466	619	1547	222	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	49186157	7929286	10780	26950	736		
353.8970	24.126	24.129	0	1.330	31405502	5197836	7413	18532	701	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	1276283	202864	692	1730	293		
341.8567	24.153	24.156	0	1.001	820684	134634	619	1547	218	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	30684379	4744795	3870	9675	1226		
369.8919	24.862	24.865	0	1.370	18959202	2913489	2133	5332	1366	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	770345	123302	470	1175	262		
357.8516	24.889	24.892	0	1.001	542434	83964	231	577	363	1.42(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23885791	5080702	12413	31032	409		
385.8610	30.835	30.838	0	0.953	45598691	9653525	24179	60447	399	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.857	0	1.000	1073816	228005	1130	2825	202		
375.8178	30.849	30.857	0	1.000	875646	183719	720	1800	255	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	25163610	5186426	12413	31032	418		
385.8610	30.995	31.003	0	0.958	48098778	9847658	24179	60447	407	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.001	1138605	230252	1130	2825	204		
375.8178	31.008	31.022	-1	1.000	965481	194261	720	1800	270	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	23545536	6005512	12413	31032	484		
385.8610	31.754	31.756	0	0.982	45339625	11622590	24179	60447	481	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	1148495	290976	1130	2825	258		
375.8178	31.767	31.772	0	1.000	956401	245408	720	1800	341	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.512	32.523	-1	1.005	21115296	5525344	12413	31032	445		
385.8610	32.512	32.523	-1	1.005	41413658	10740911	24179	60447	444	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	1004237	260741	1130	2825	231		
375.8178	32.526	32.534	0	1.000	829863	215930	720	1800	300	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		35492157	8840472	14115	35287	626		
403.8529	32.339	32.342	0		28400508	7090007	9259	23147	766	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	26497467	7547113	14115	35287	535		
403.8529	31.927	31.929	0	0.987	20866037	5954906	9259	23147	643	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	725563	201392	885	2212	228		
391.8127	31.940	31.945	0	1.000	574467	160999	657	1642	245	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	31586686	7983088	14115	35287	566		
403.8529	32.033	32.033	0	0.991	25172422	6406461	9259	23147	692	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	819435	207367	885	2212	234		
391.8127	32.047	32.047	0	1.000	641312	163363	657	1642	249	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	837706	208716	885	2212	236		
391.8127	32.353	32.355	0	1.013	665701	168193	657	1642	256	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	15666898	4905580	16994	42485	289		
419.8220	33.912	33.914	0	1.049	35641327	11012481	39521	98802	279	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	949994	280926	1603	4007	175		
409.7789	33.924	33.926	0	1.000	906605	280503	1346	3365	208	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13532847	3927195	16994	42485	231		
419.8220	35.005	35.010	0	1.082	31095505	8744356	39521	98802	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	755406	231092	1603	4007	144		
409.7789	35.017	35.020	0	1.000	710228	201627	1346	3365	150	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	21029381	6108519	13979	34947	437		
437.8140	34.714	34.716	0	1.073	20847175	6052425	13690	34225	442	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	599401	178801	821	2052	218		
425.7737	34.726	34.726	0	1.000	564673	160703	693	1732	232	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26904388	6653832	3548	8870	1875		
471.7750	37.093	37.094	0	1.147	30114074	7334467	3515	8787	2087	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	941996	224700	300	750	749		
443.7399	37.189	37.199	-1	1.003	1034179	253612	487	1217	521	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	750544	177364	389	972	456		
459.7348	37.105	37.106	0	1.000	818794	206090	374	935	551	0.92(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.35
Area: 201476
Amount: 0.545465
Amount Units: pg/ul

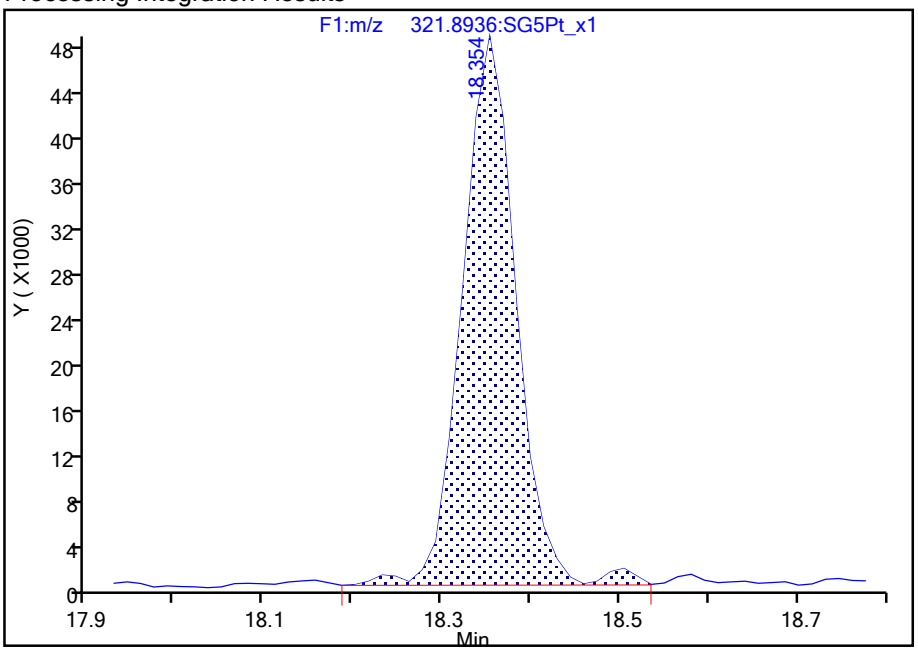

Manual Integration Results

RT: 18.35
Area: 199093
Amount: 0.501347
Amount Units: pg/ul

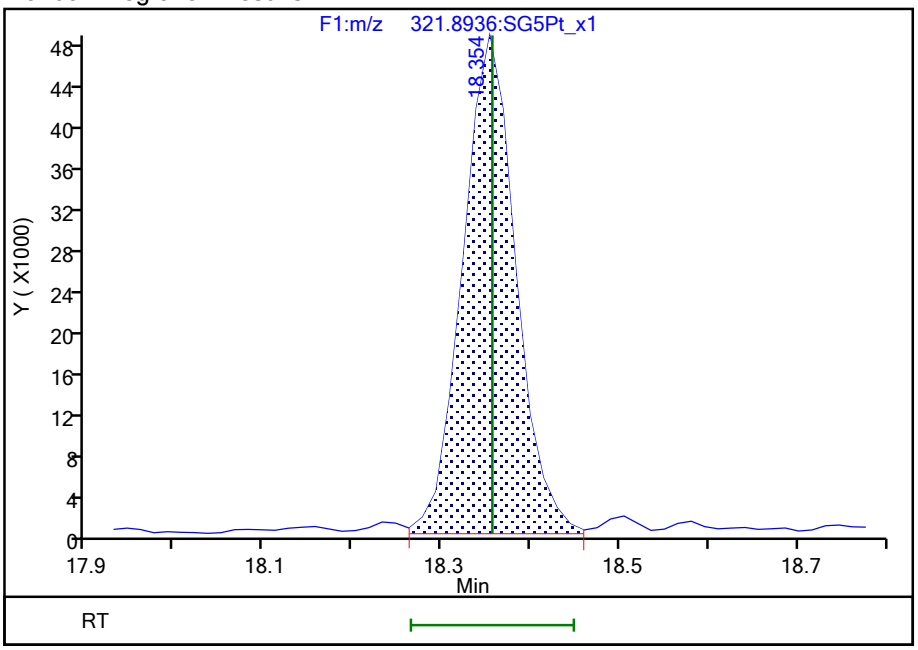

Reviewer: stephensk, 27-Jul-2021 08:15:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

Processing Integration Results

RT: 18.35
Area: 394678
Amount: 0.545465
Amount Units: pg/ul

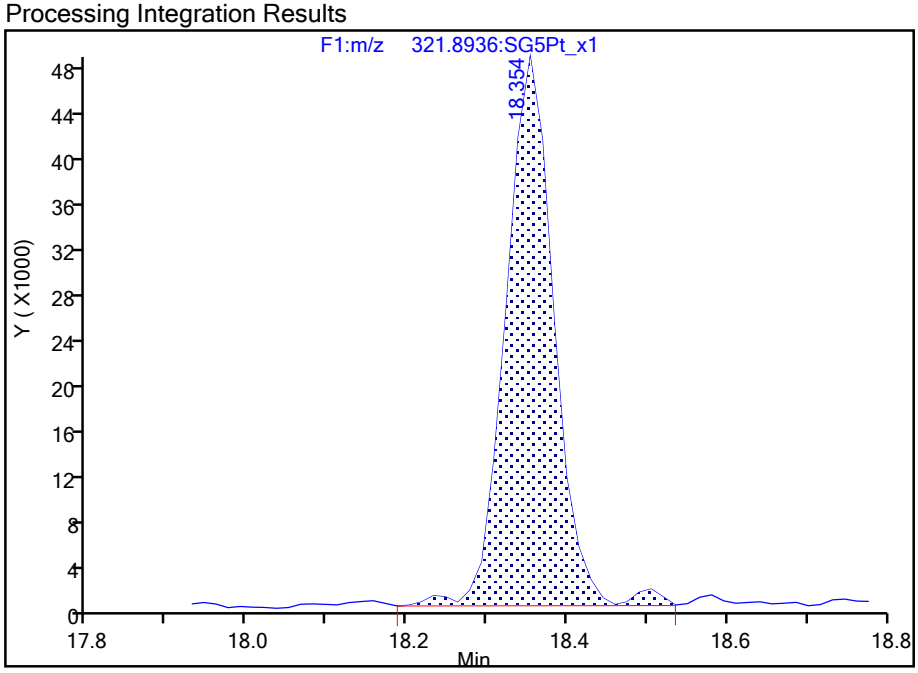

Manual Integration Results

RT: 18.35
Area: 376984
Amount: 0.501347
Amount Units: pg/ul
Reviewer: stephensk, 27-Jul-2021 08:15:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

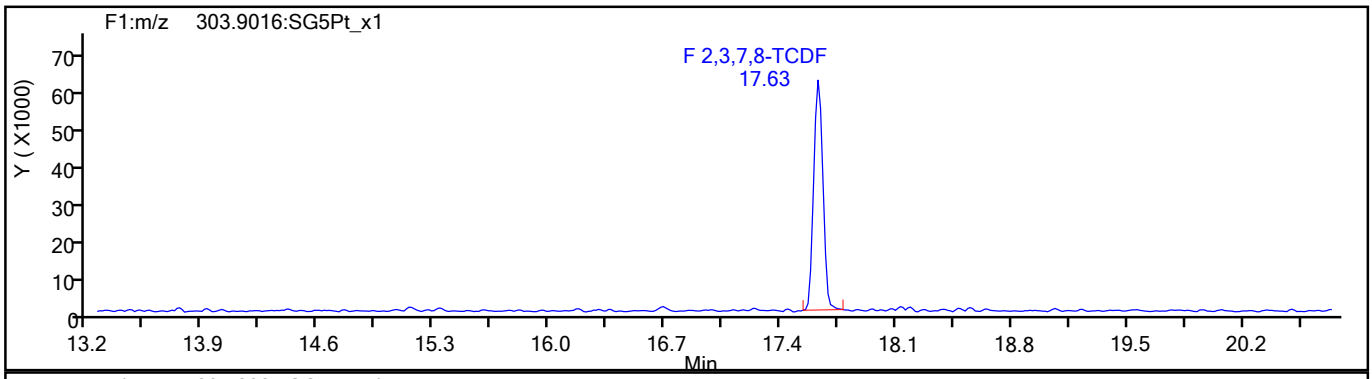

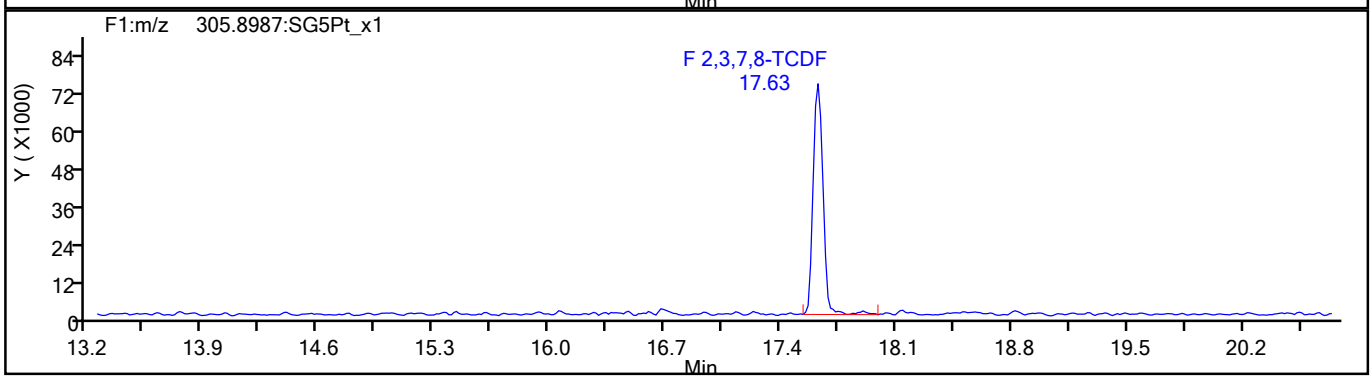

TCDF Standards

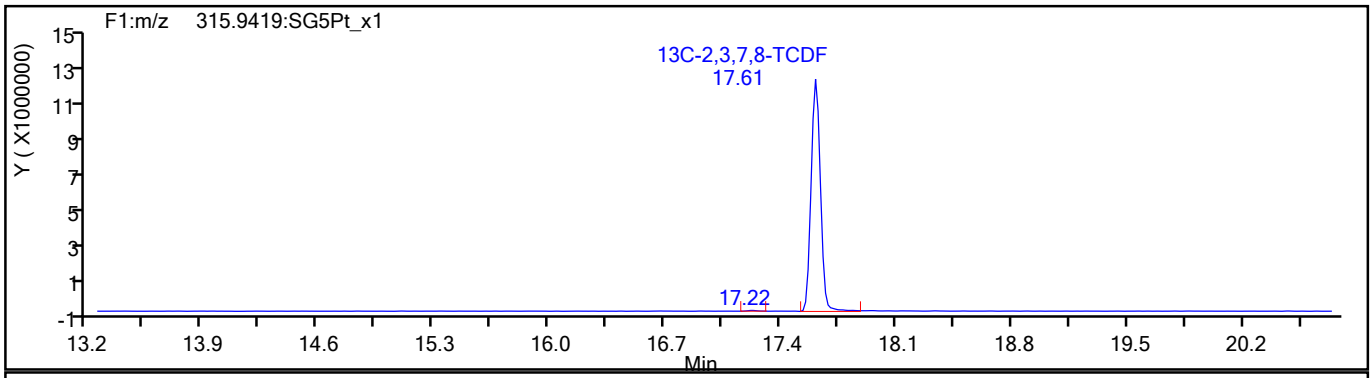

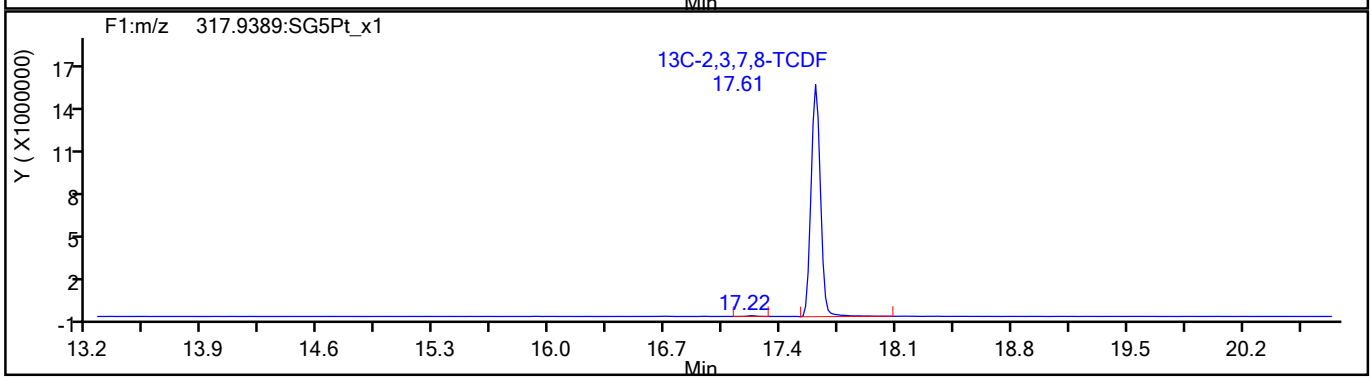

784010

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

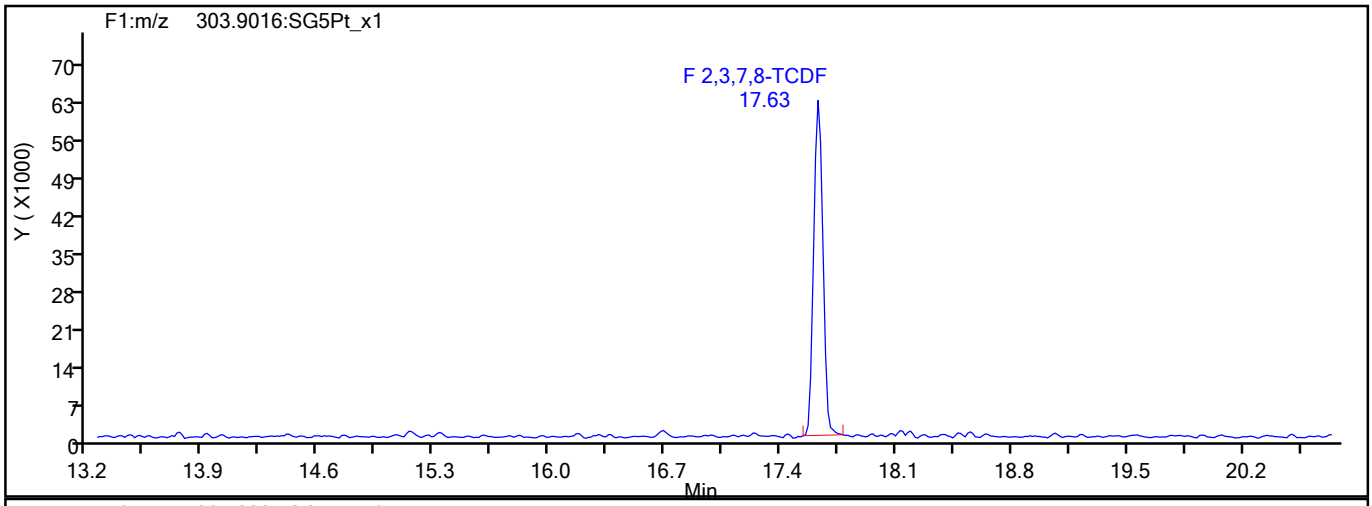

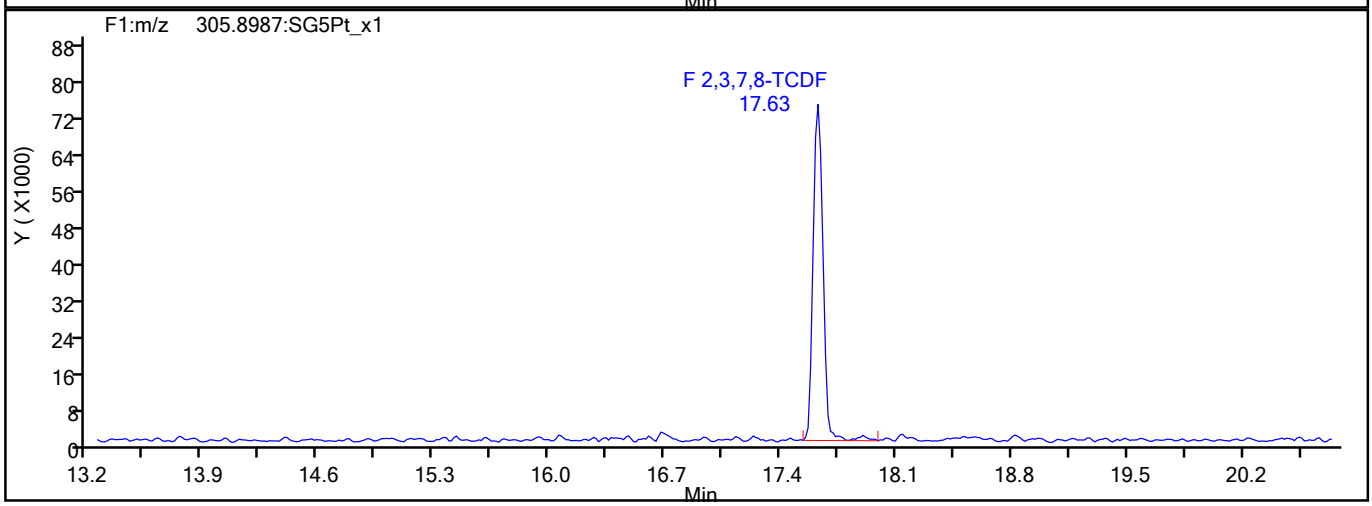

TCDF Interference Mass

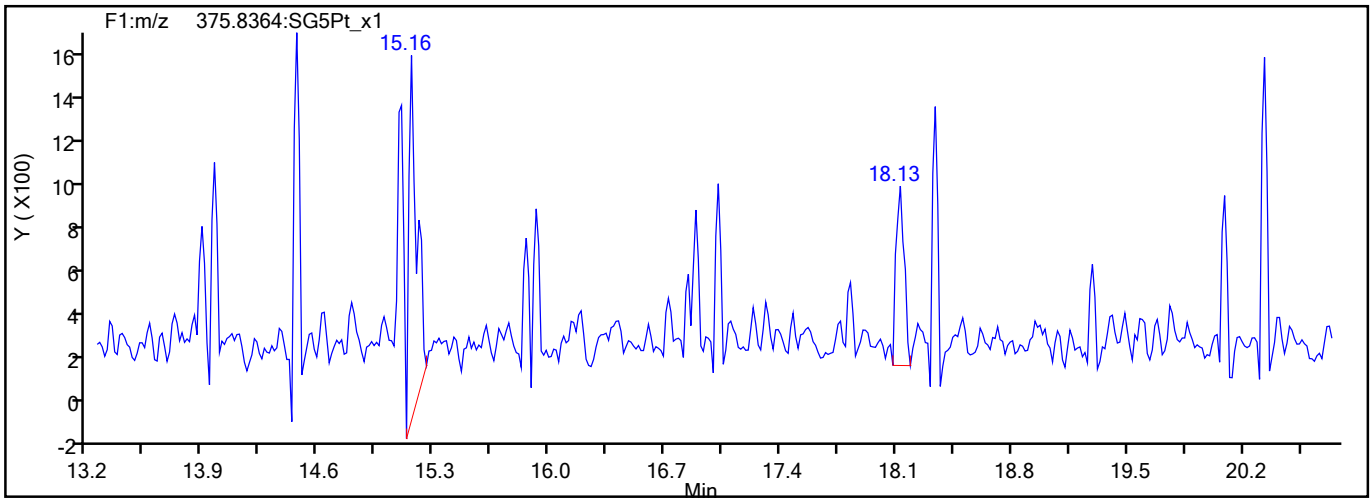

784011

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

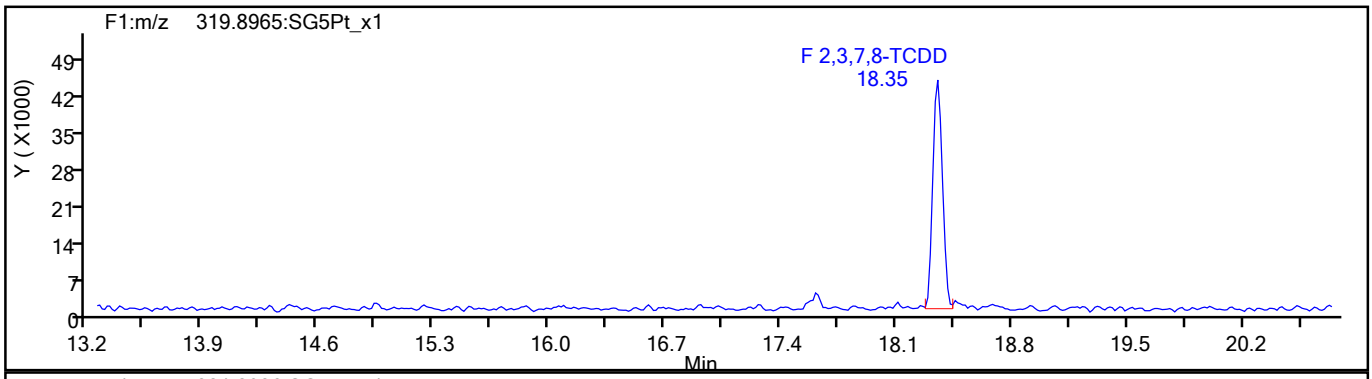

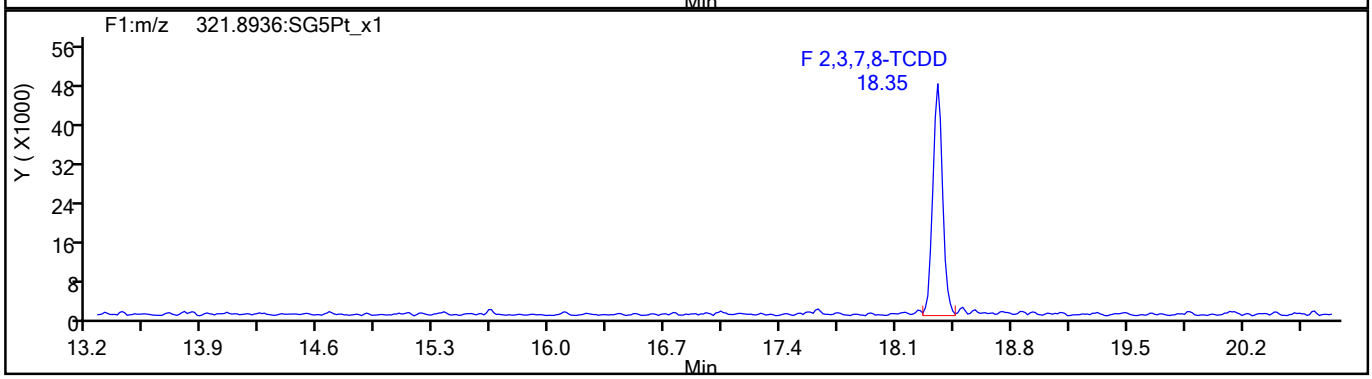

TCDD Standards

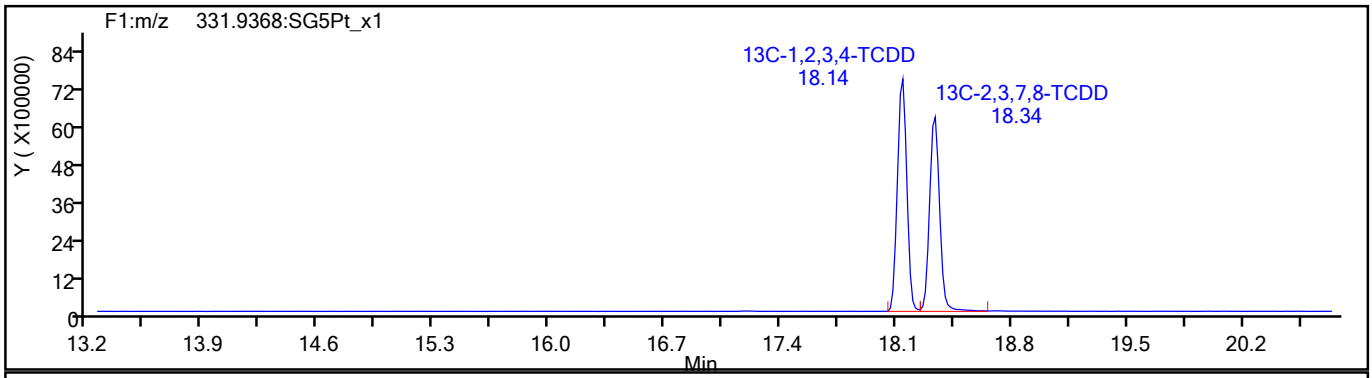

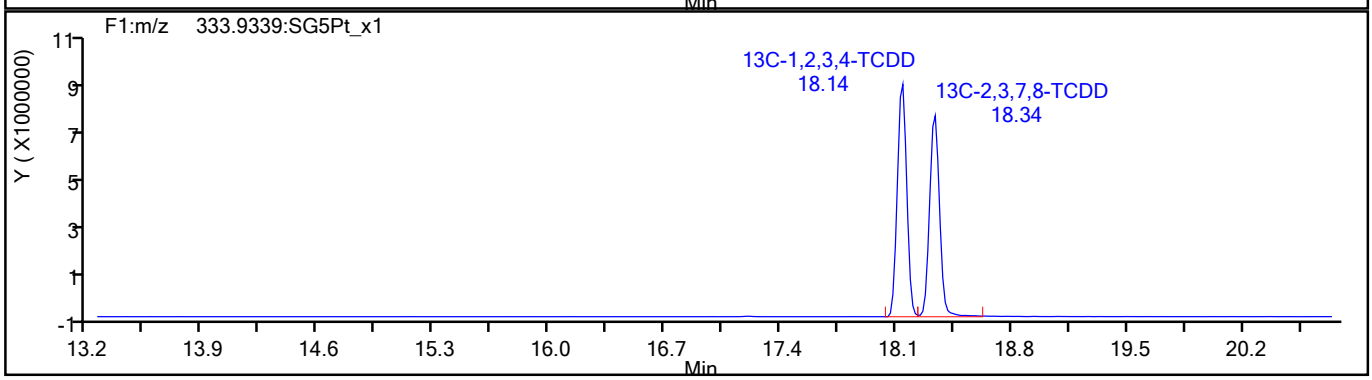

784012

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

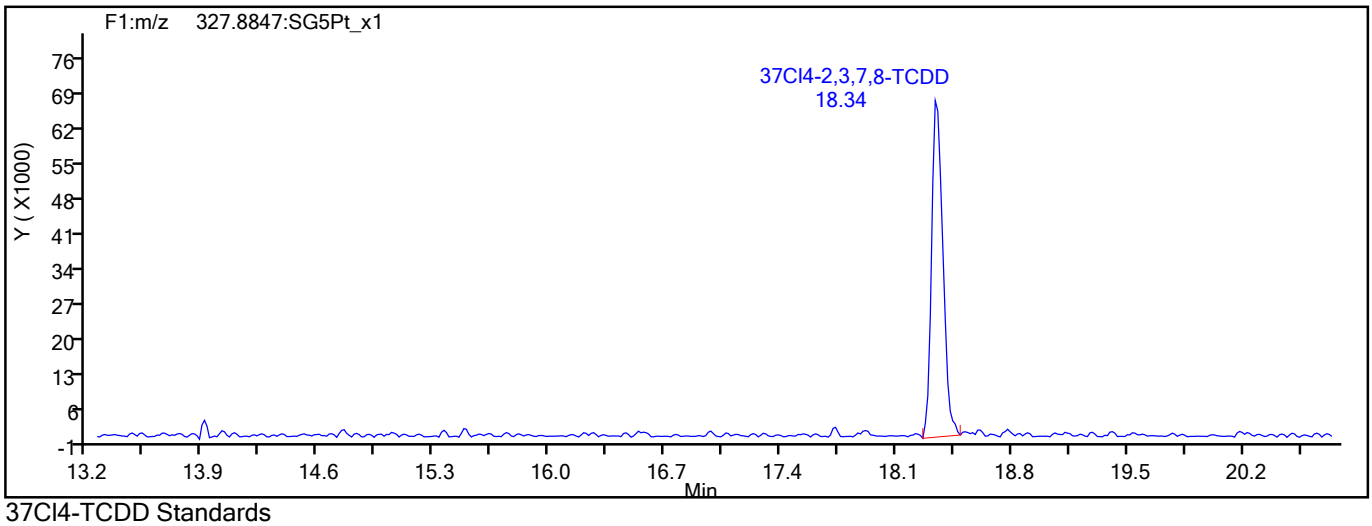

37Cl4-TCDD Standards

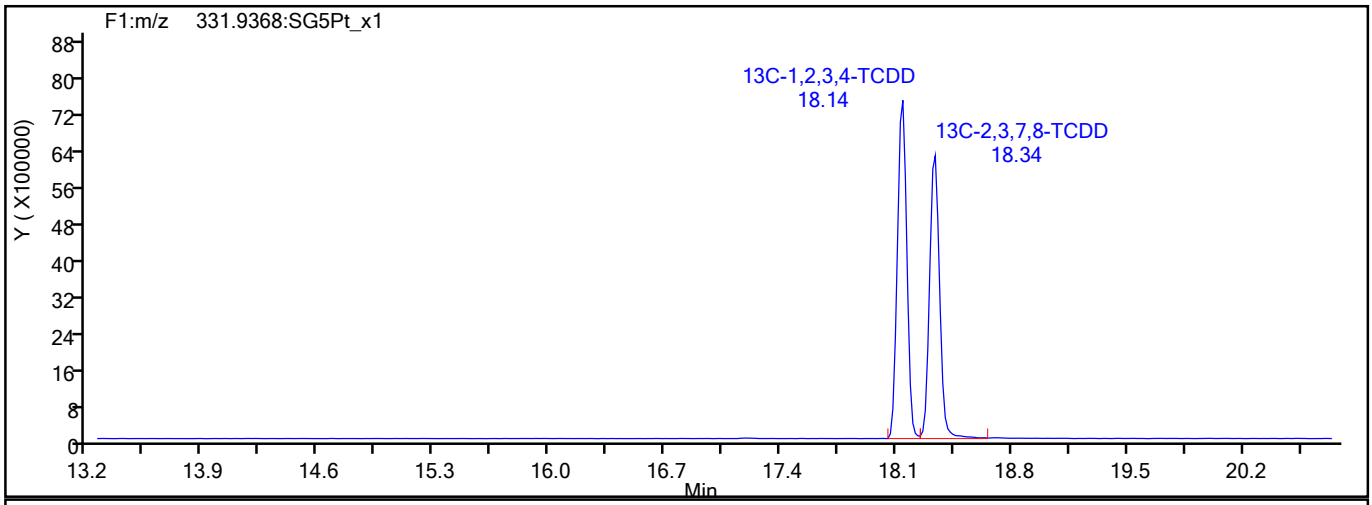

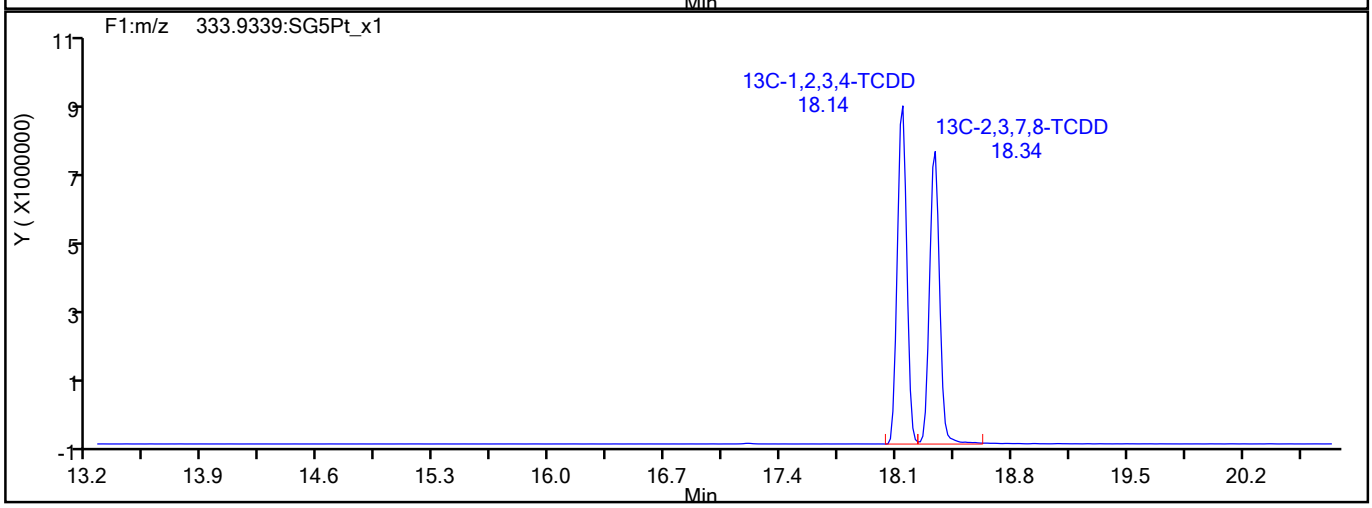

784013

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

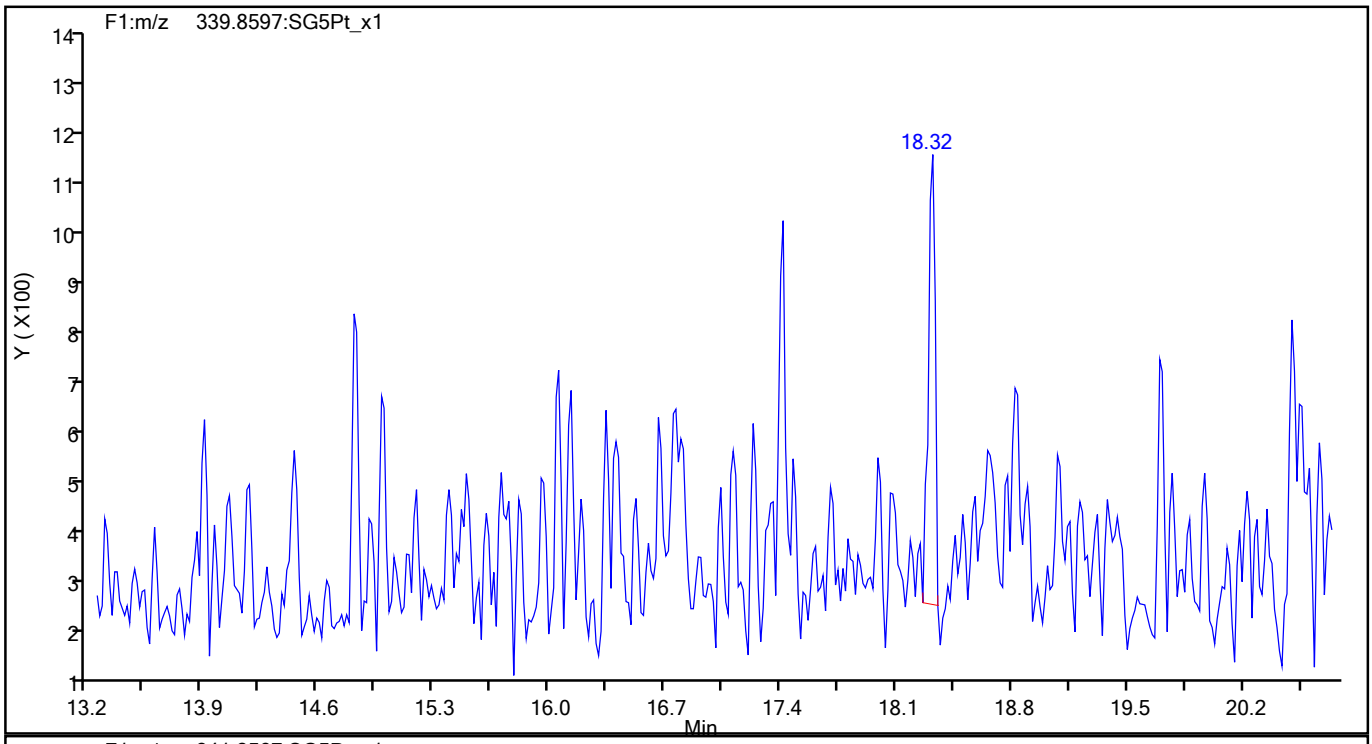

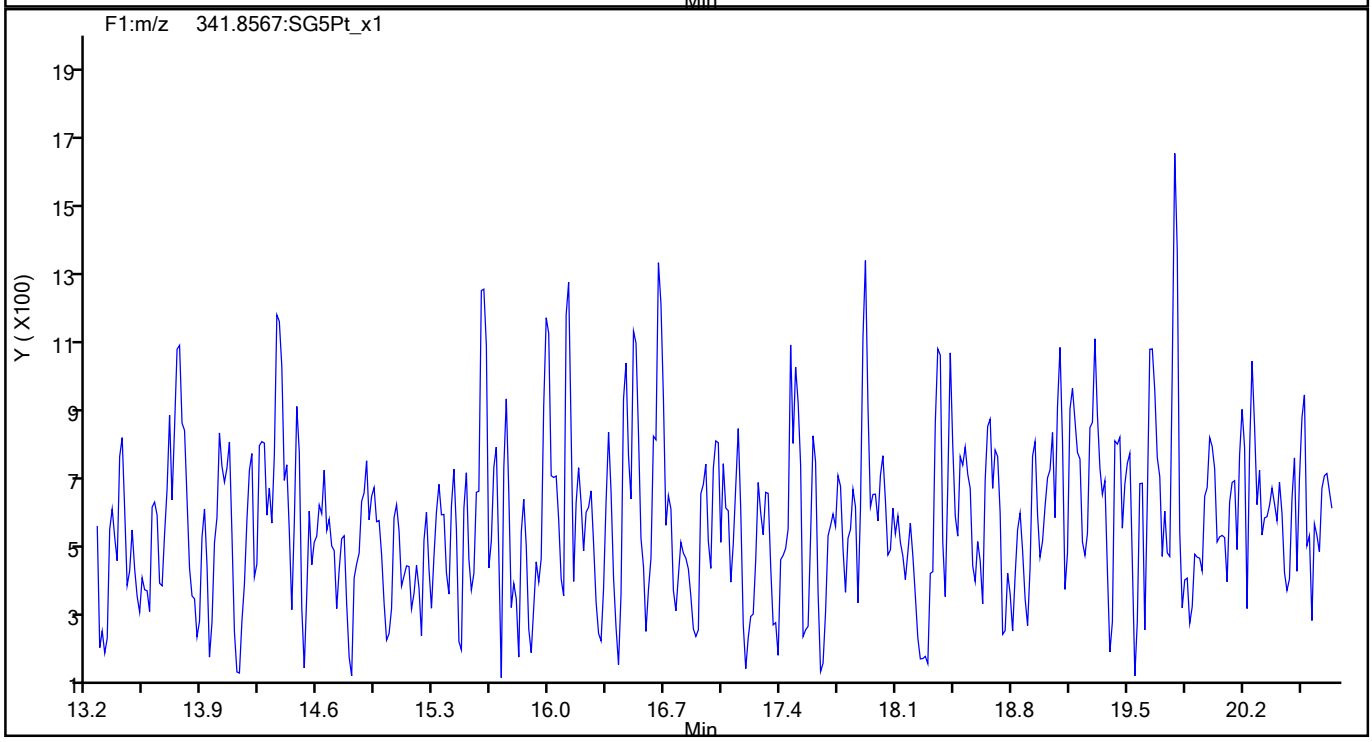

784014

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

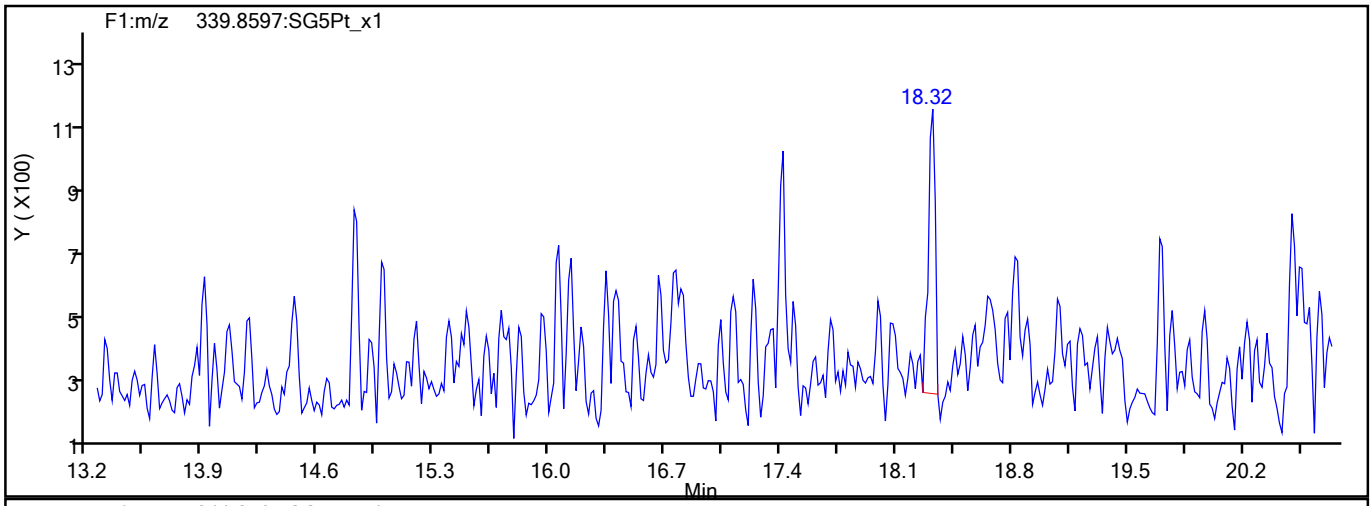

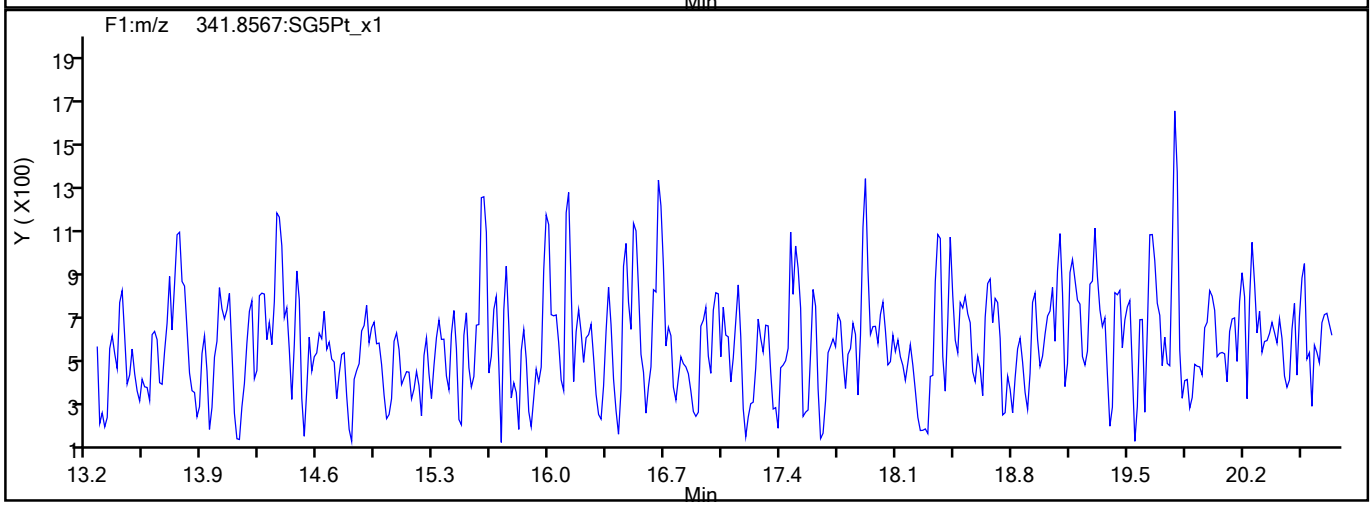

F1 PeCDFs Interference Mass

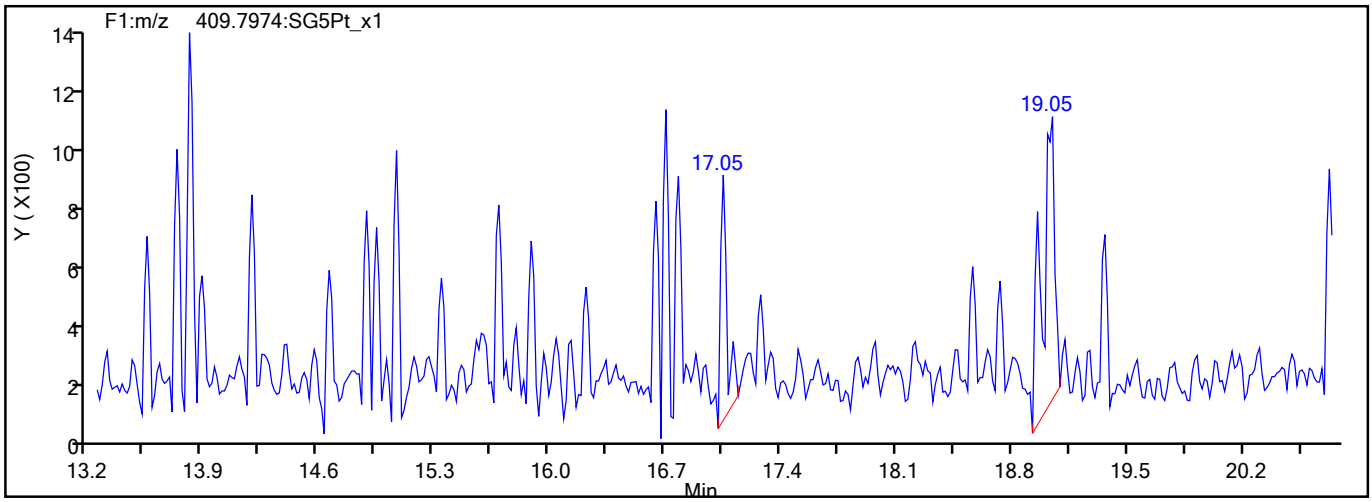

784015

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

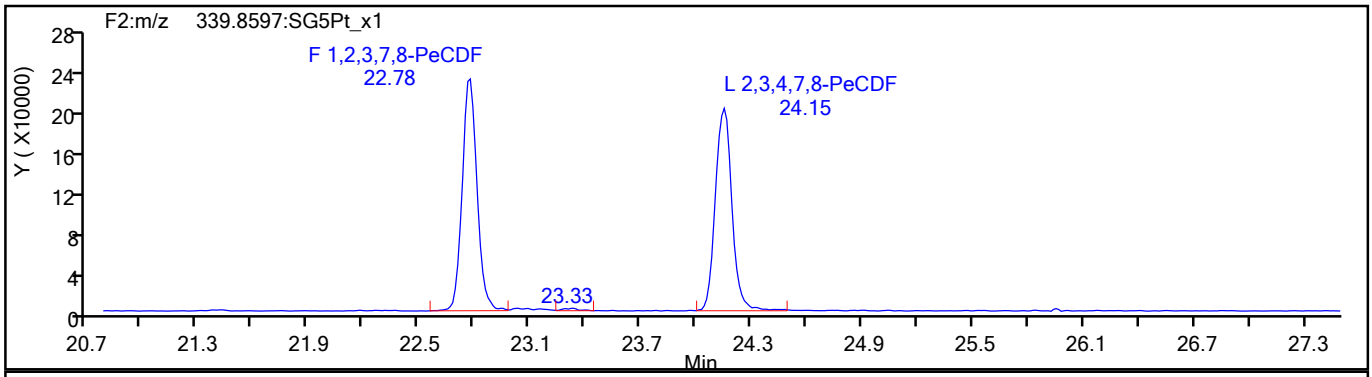

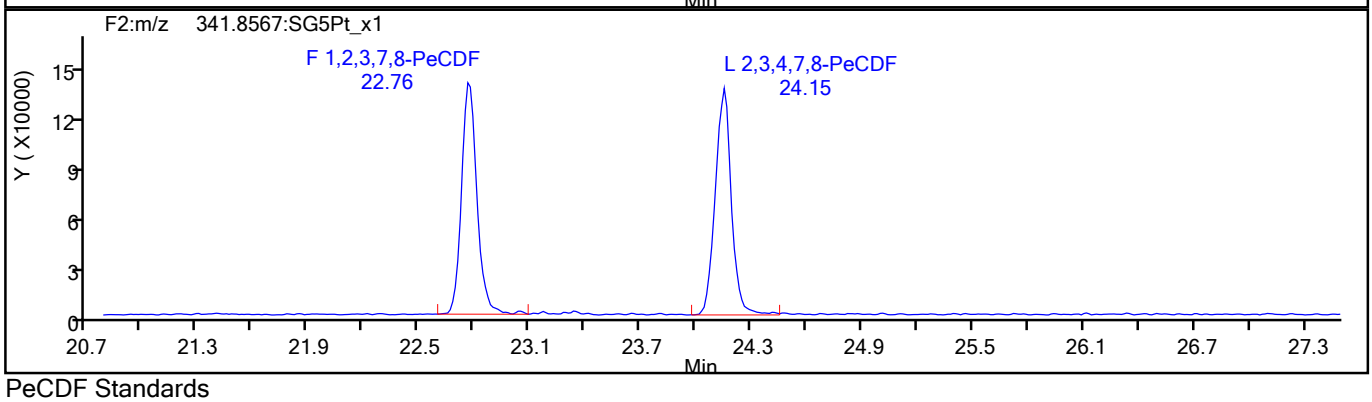

PeCDF Standards

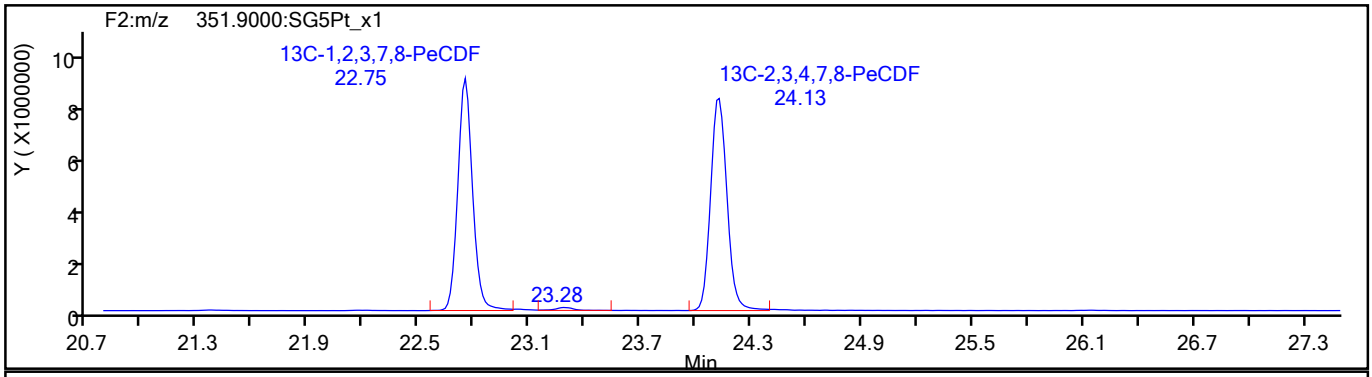

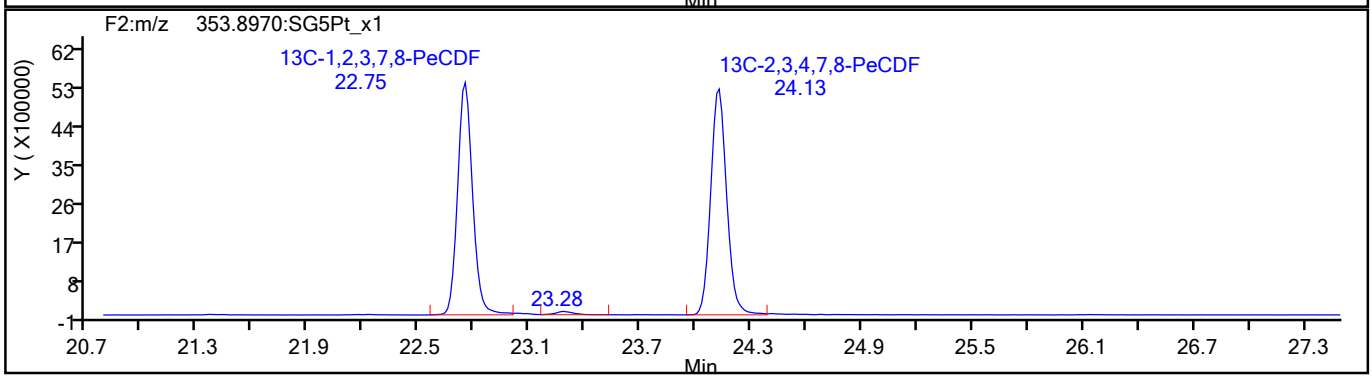

784016

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Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

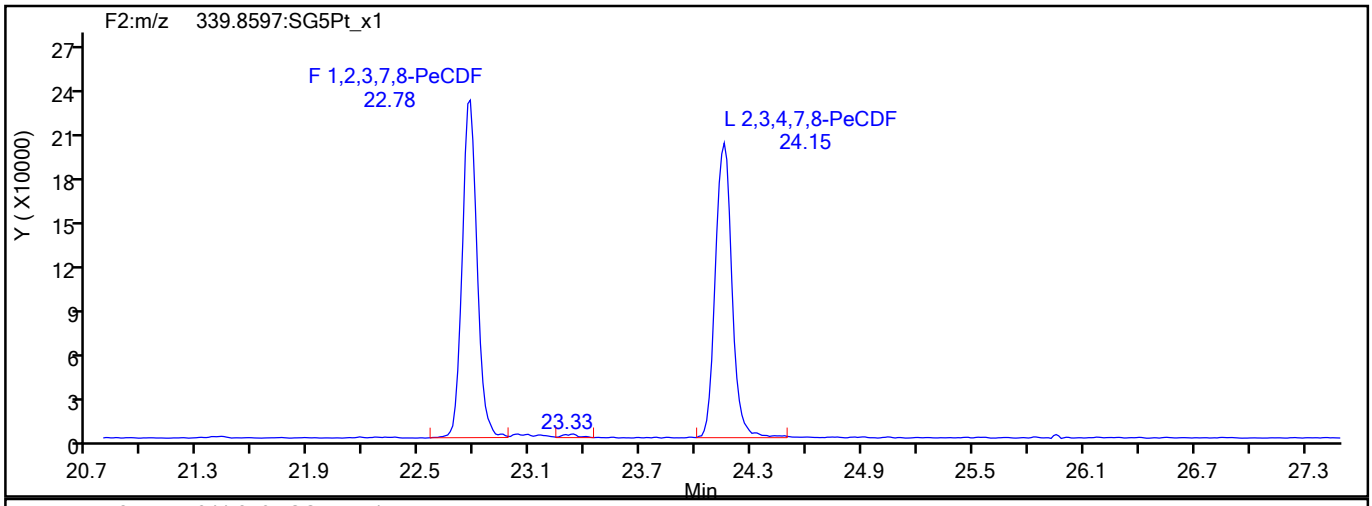

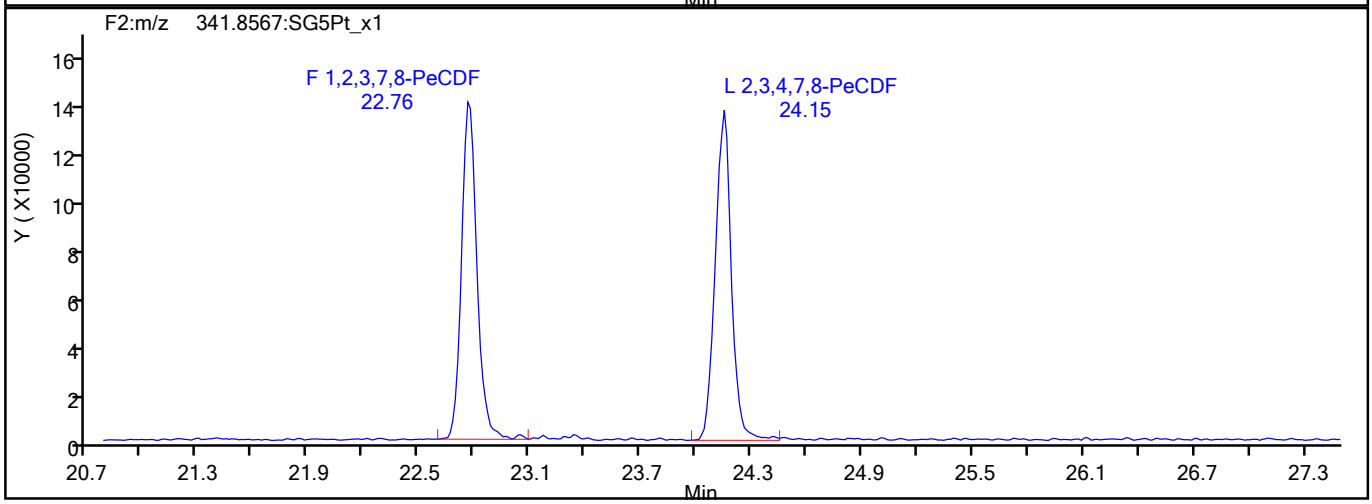

PeCDF Interference Mass

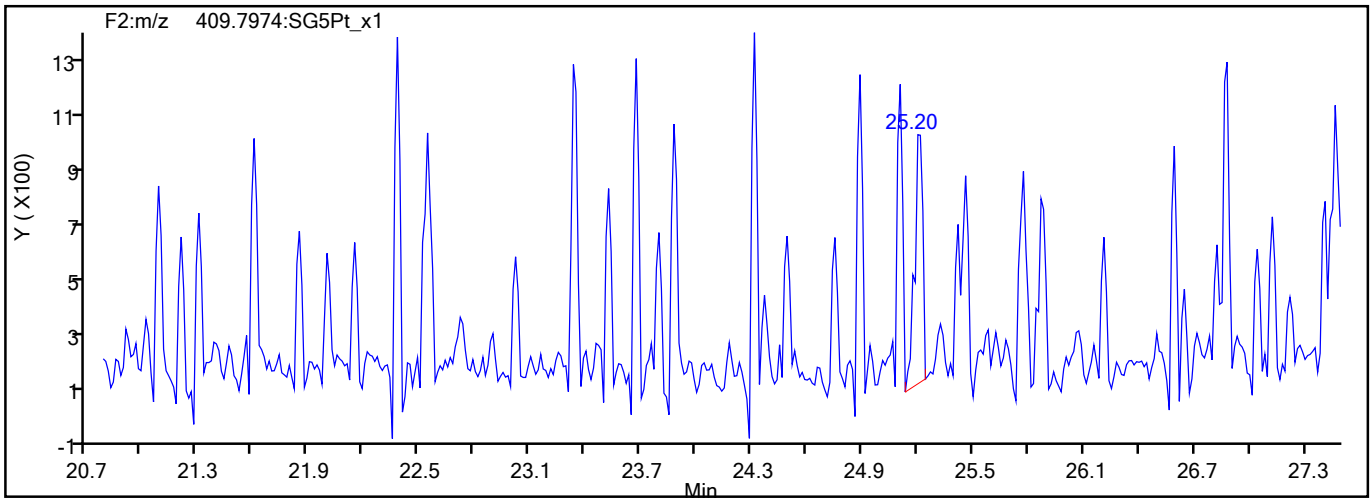

784017

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

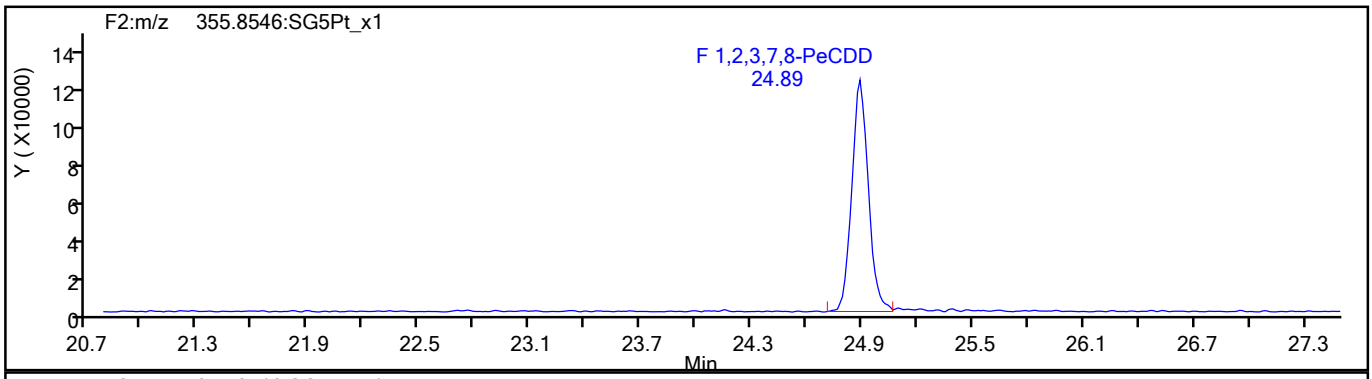

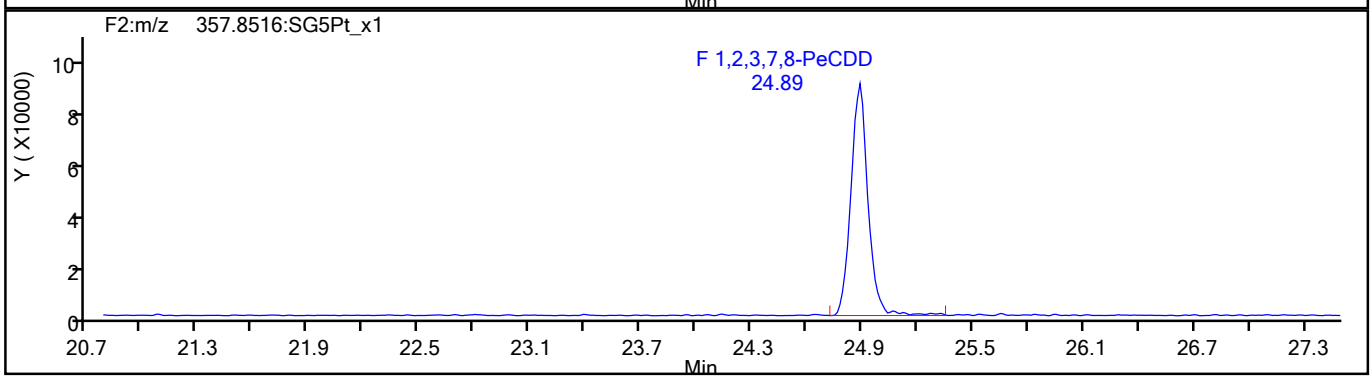

PeCDD Standards

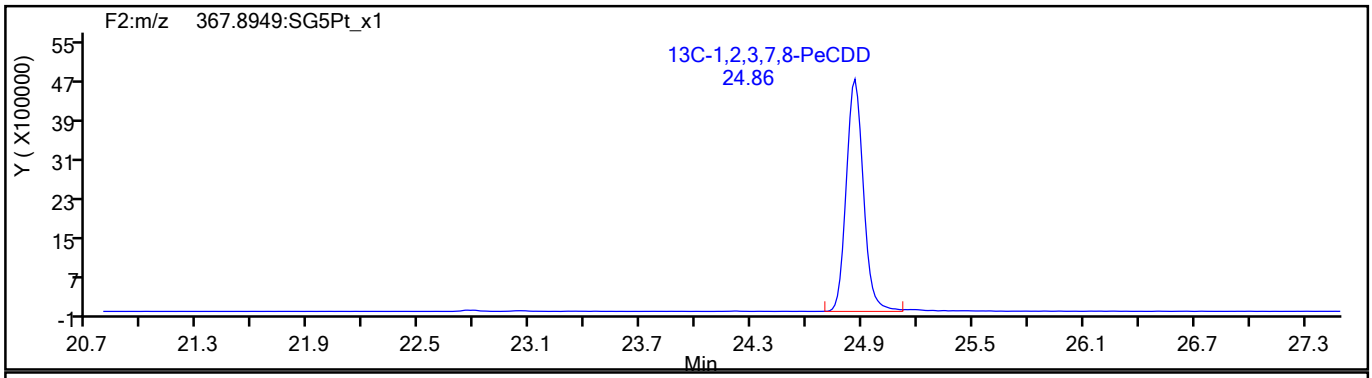

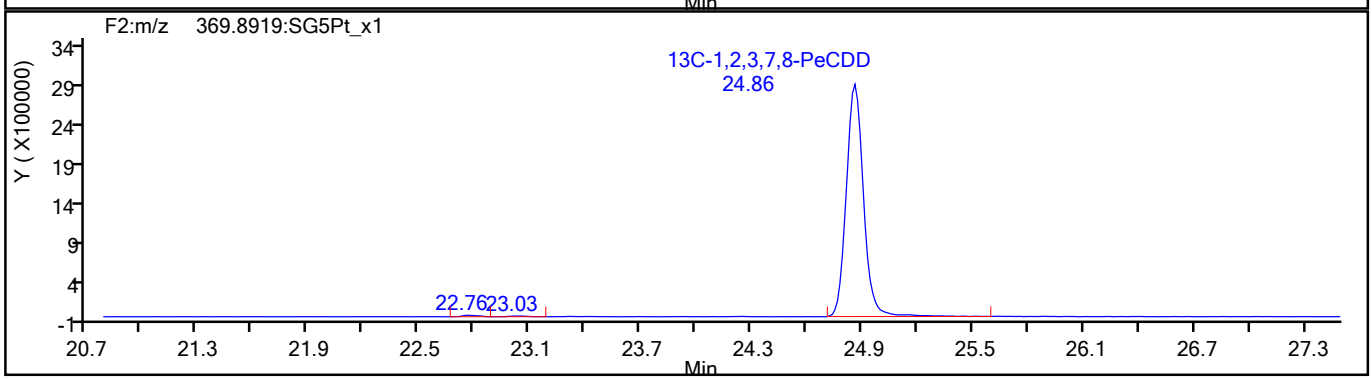

784018

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Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

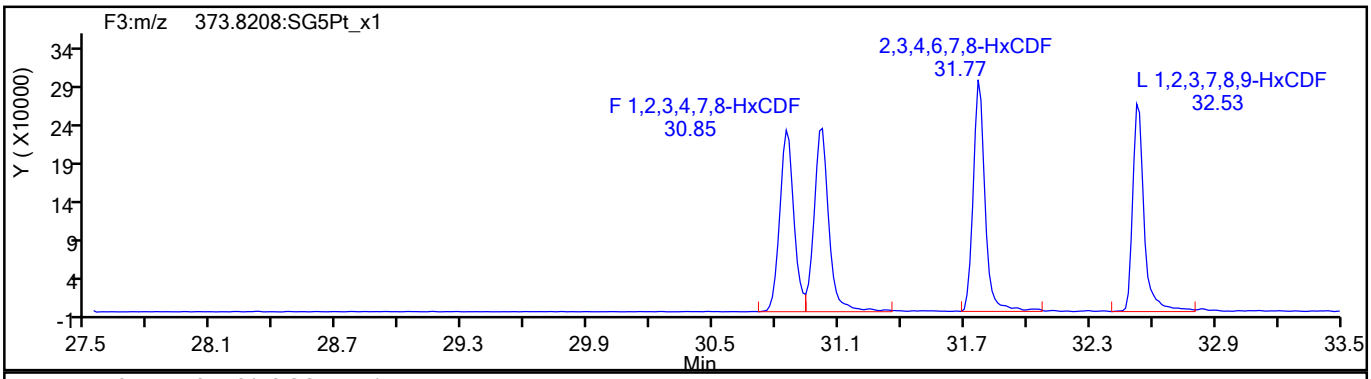

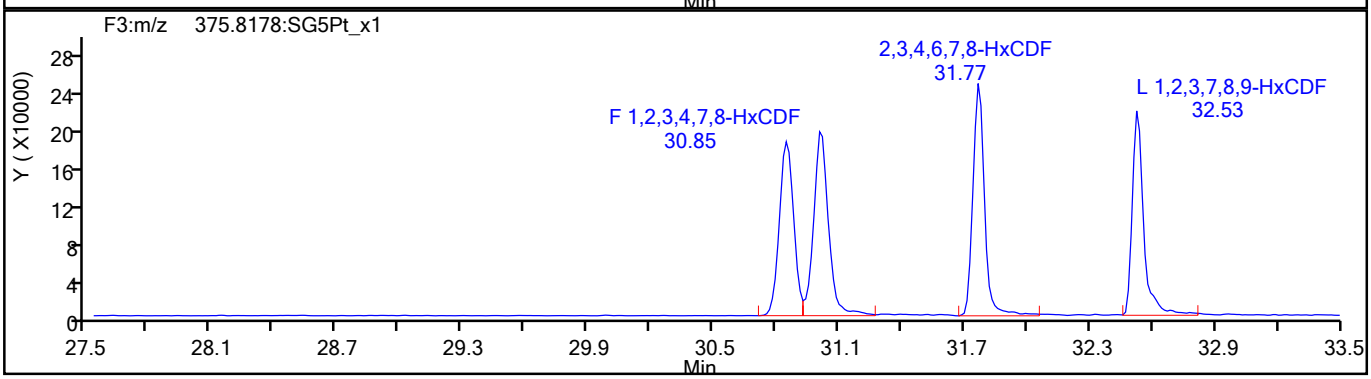

HxCDF Standards

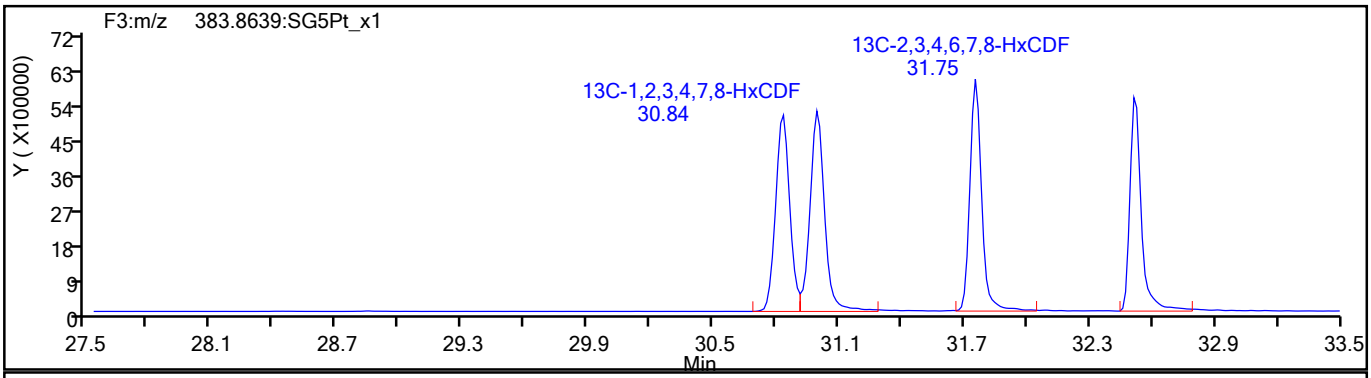

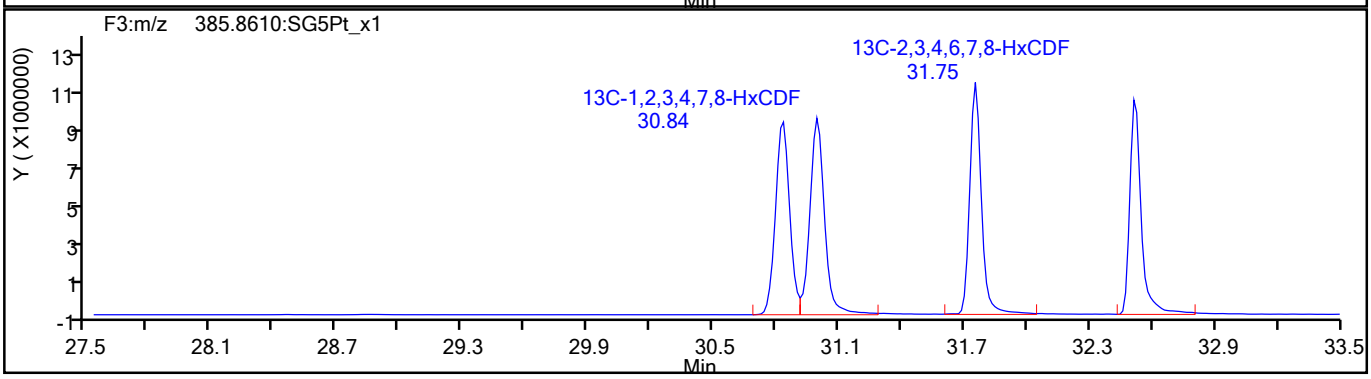

784019

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

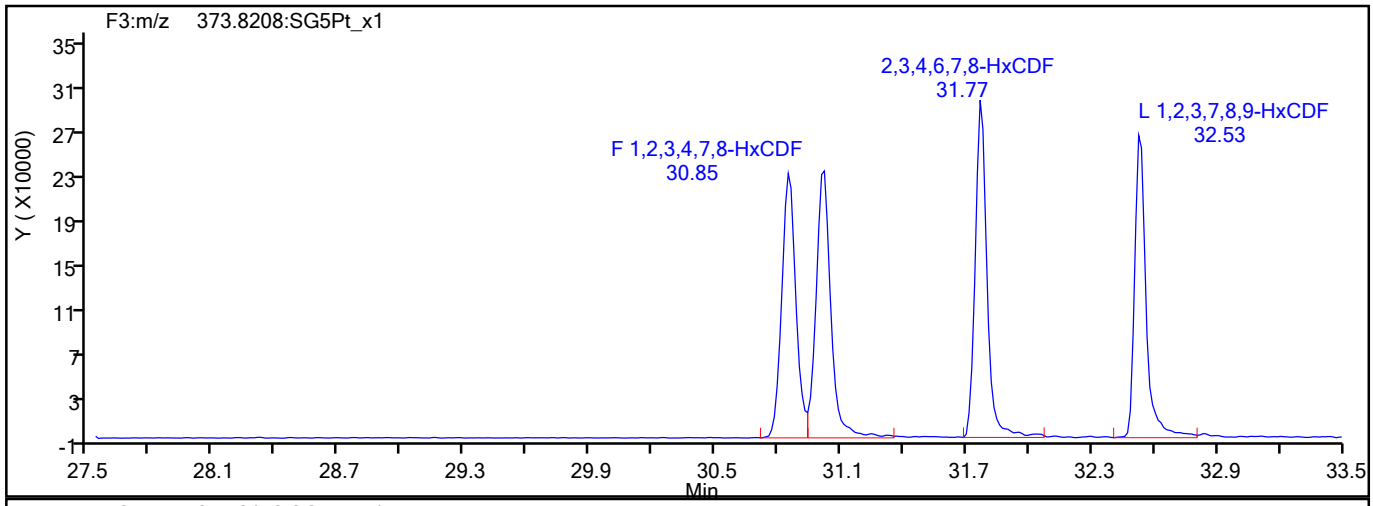

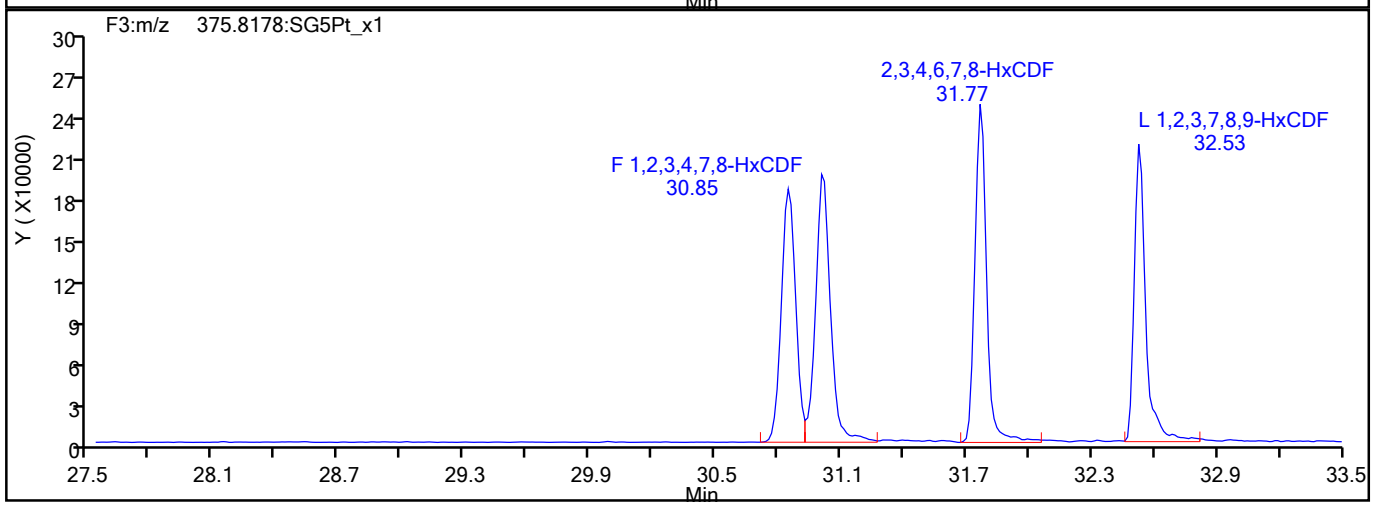

HxCDF Interference Mass

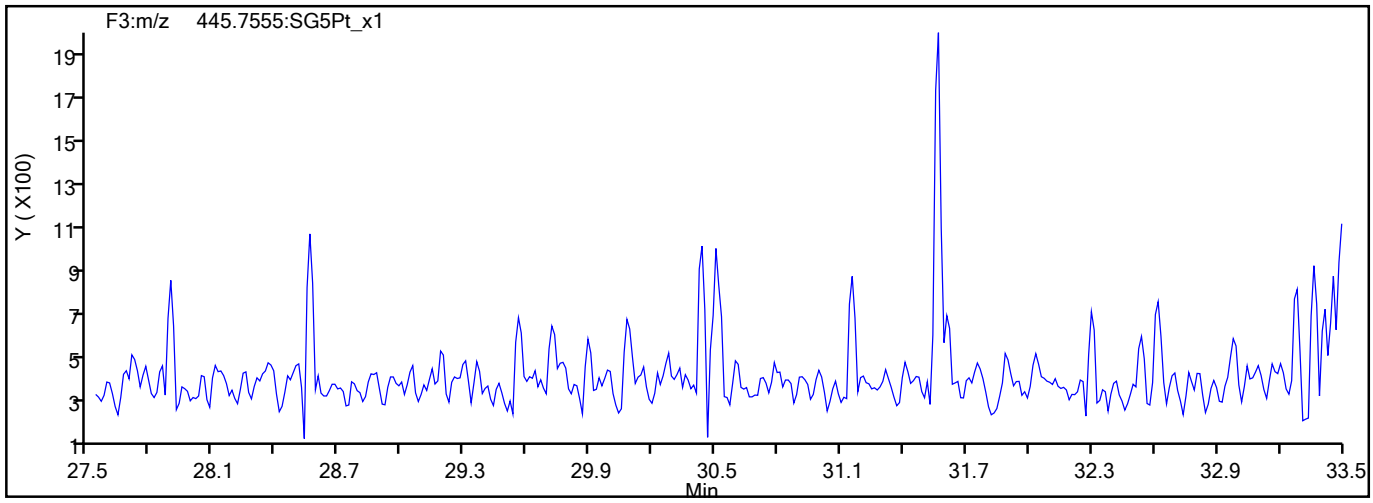

784020

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

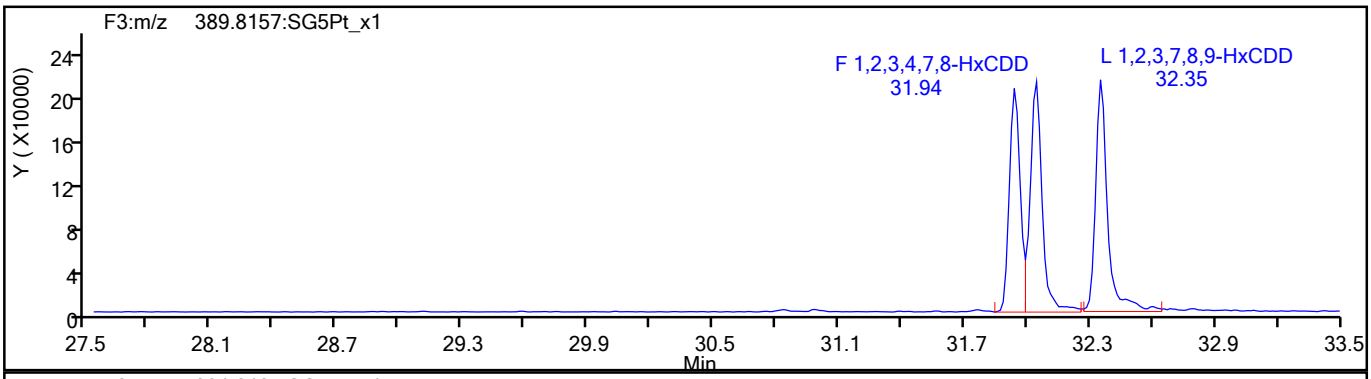

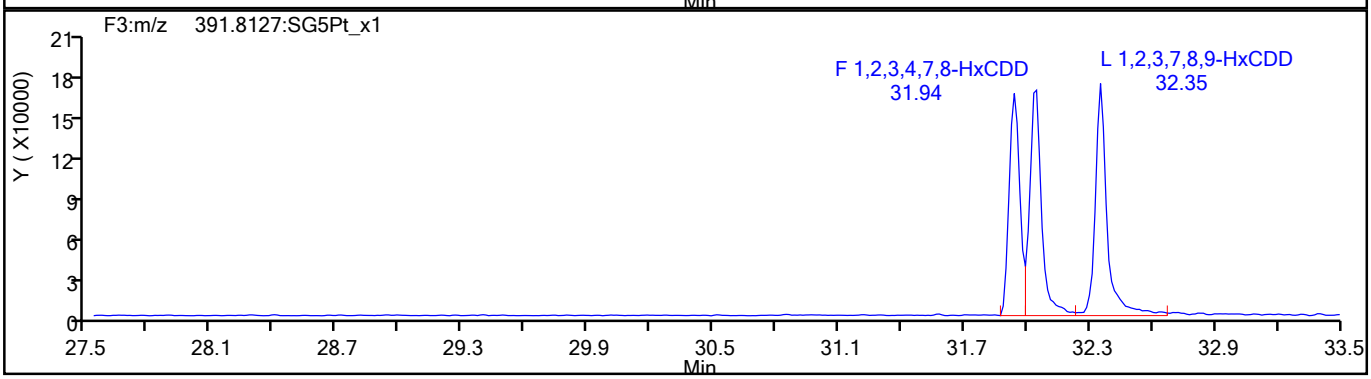

HxCDD Standards

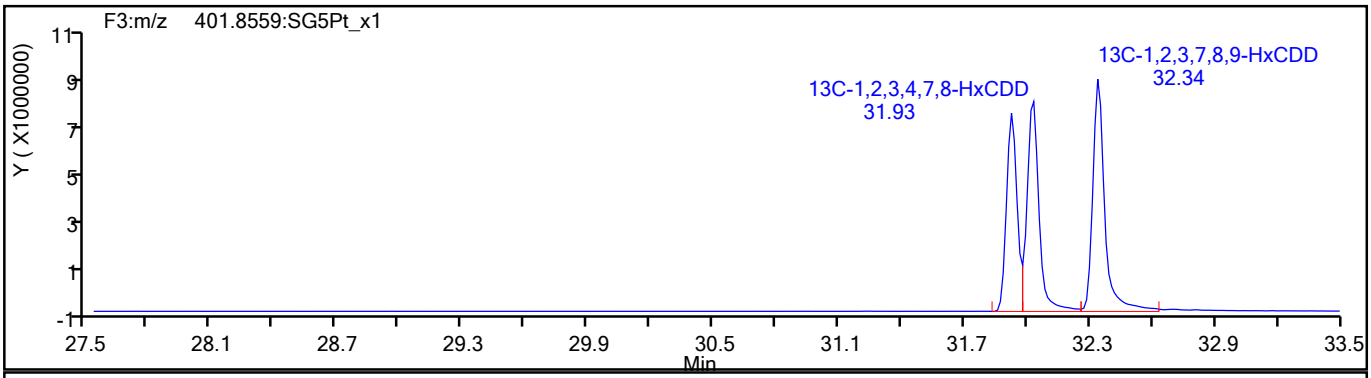

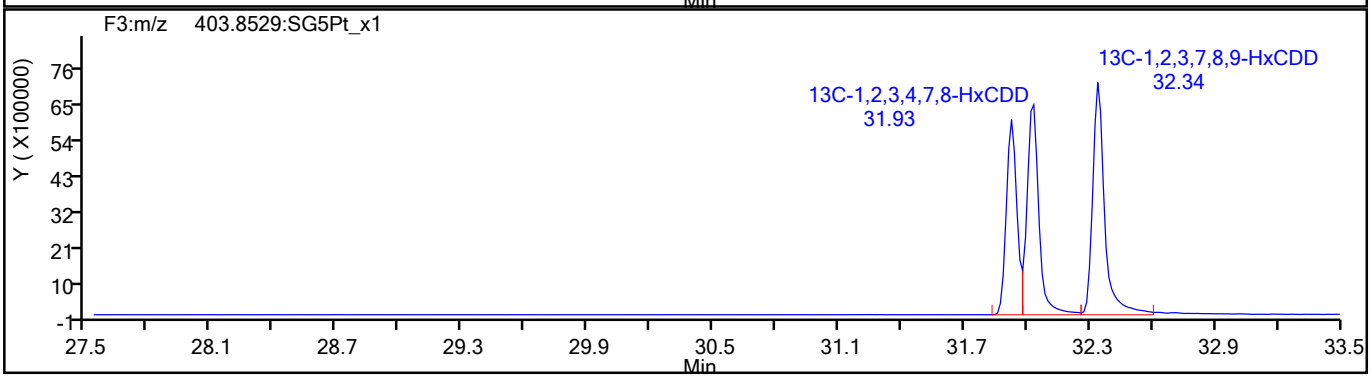

784021

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

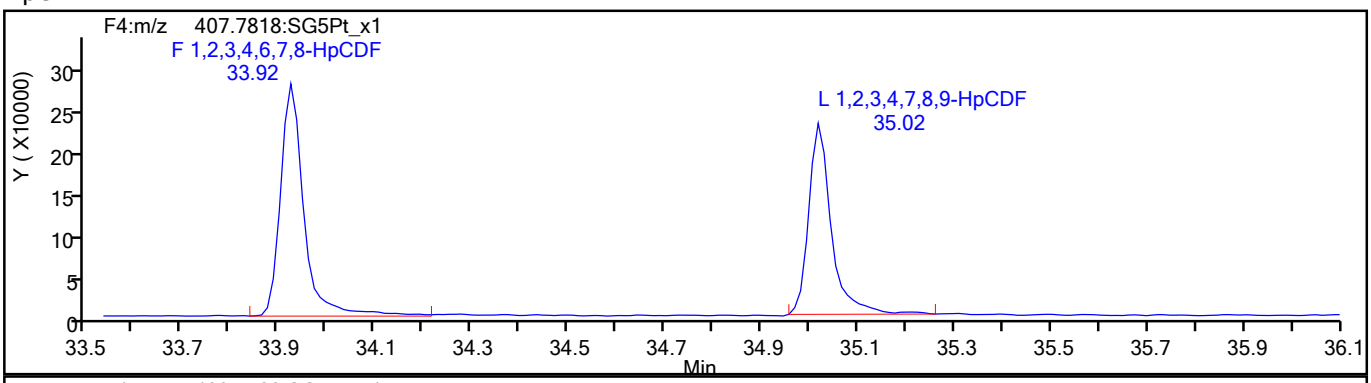

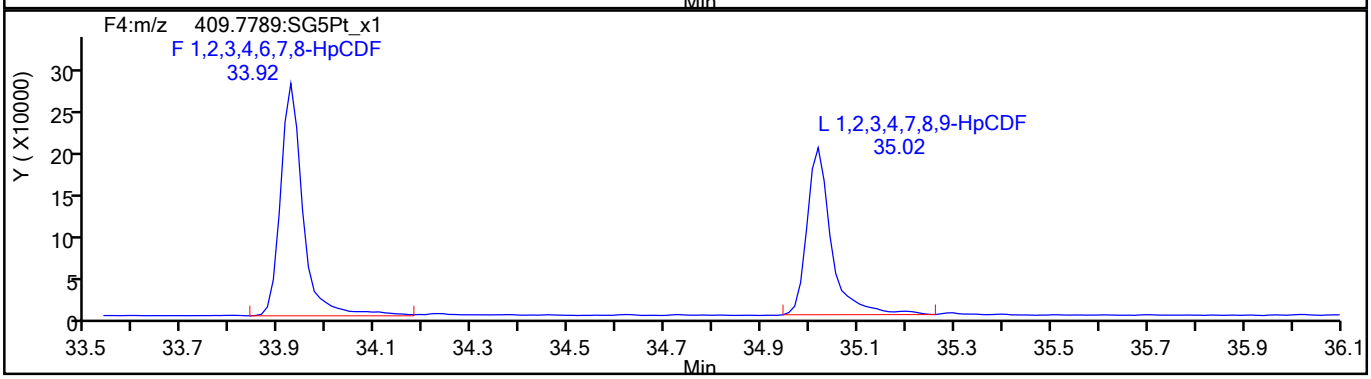

HpCDF Standards

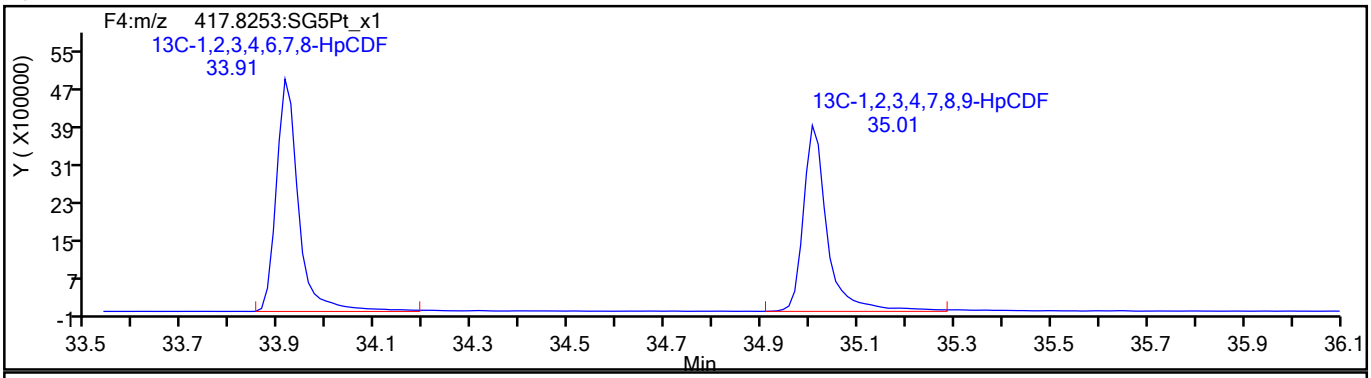

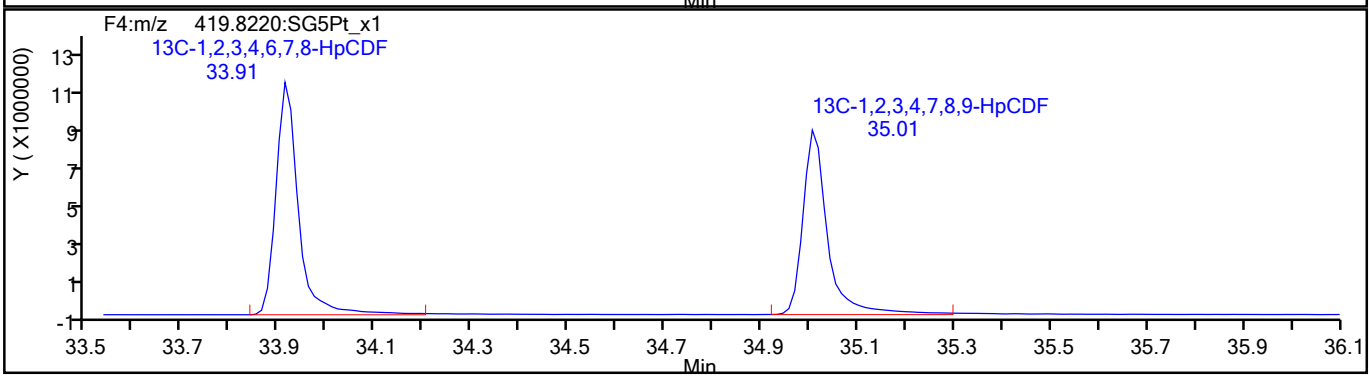

784022

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

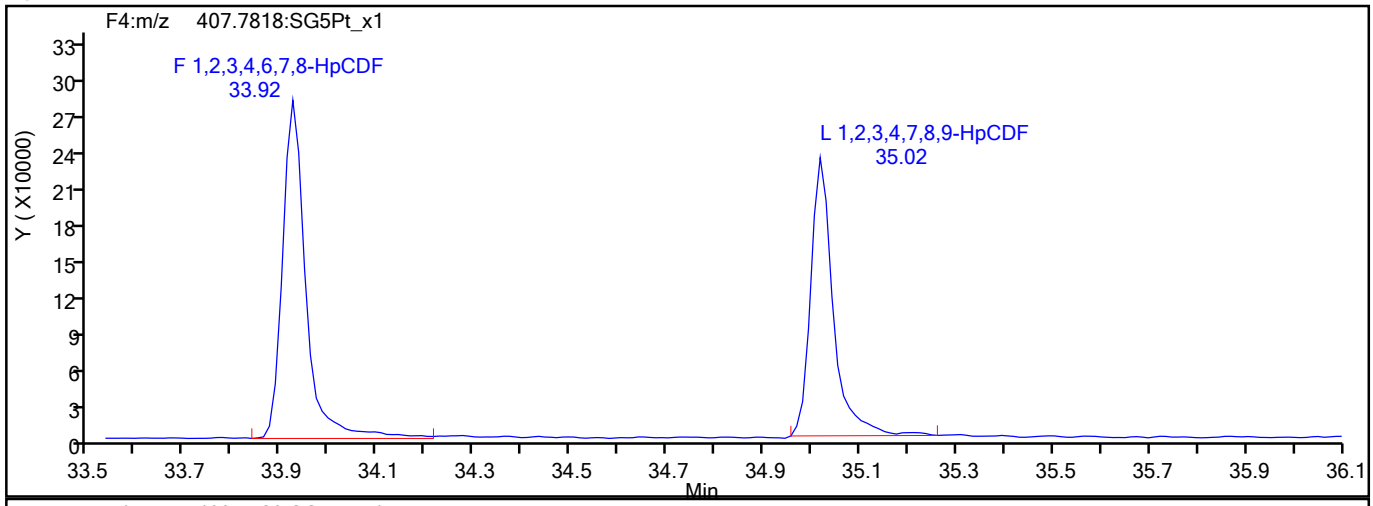

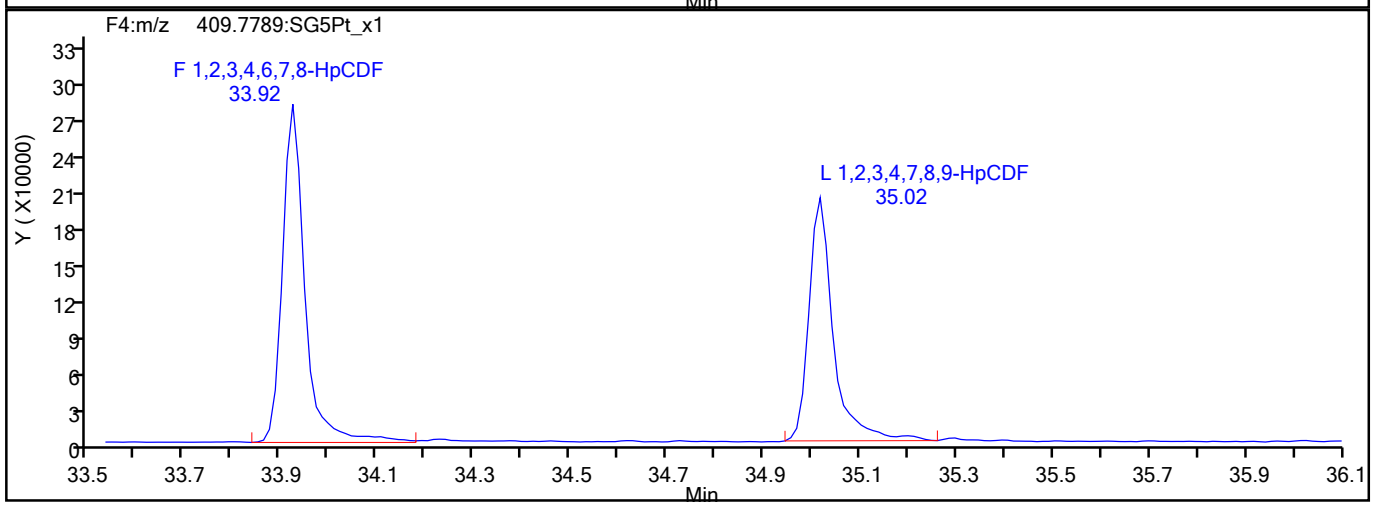

HpCDF Interference Mass

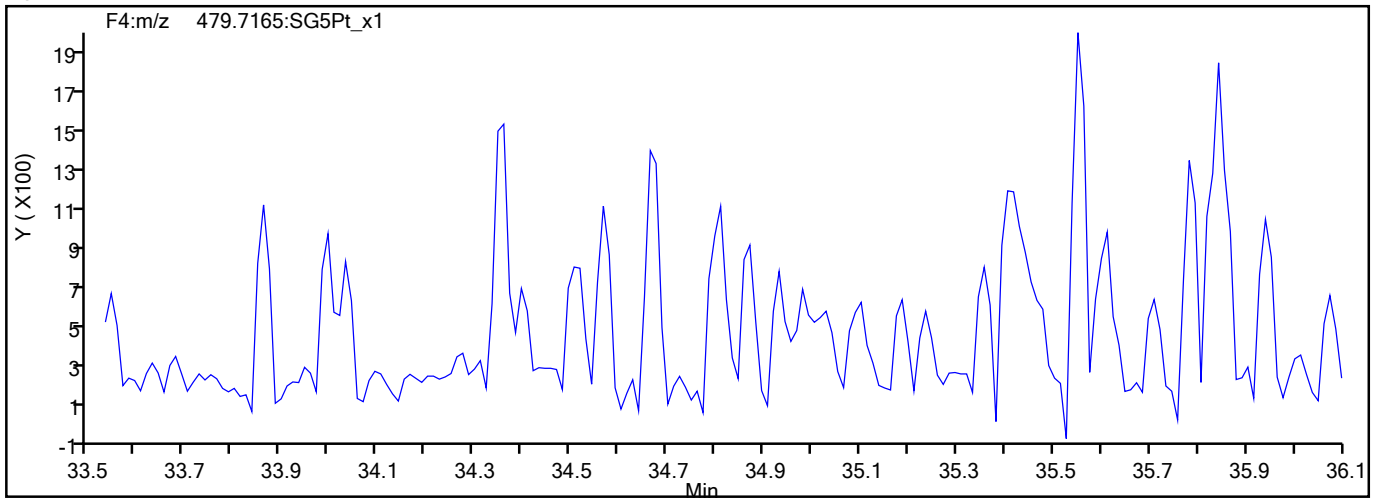

784023

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

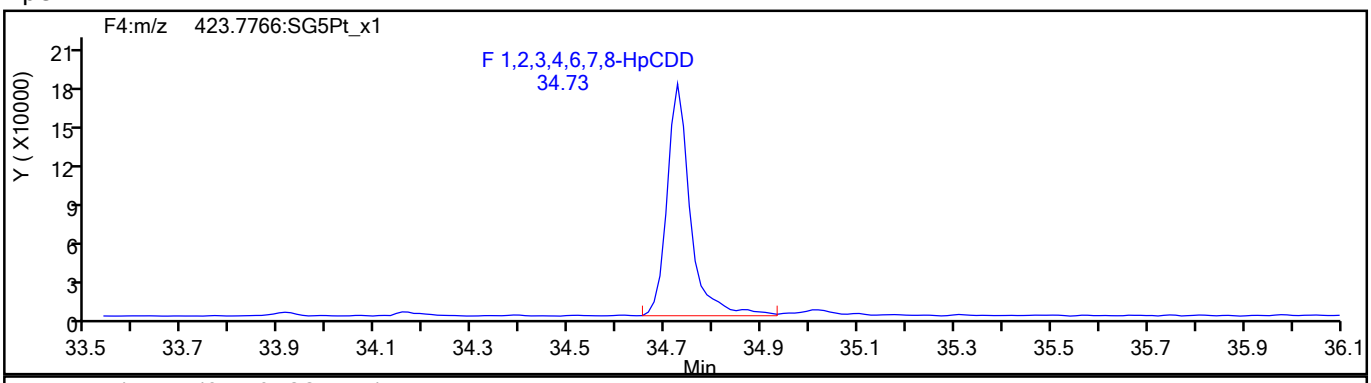

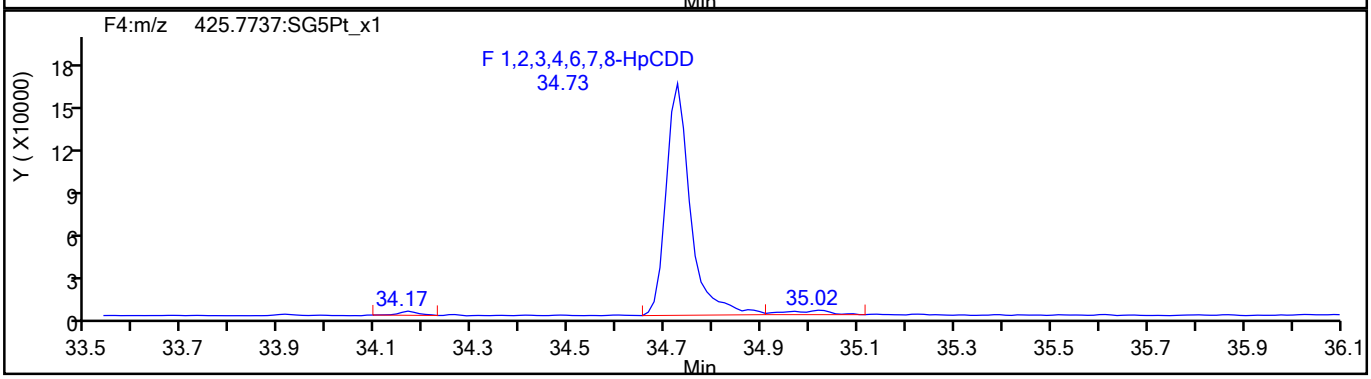

HpCDD Standards

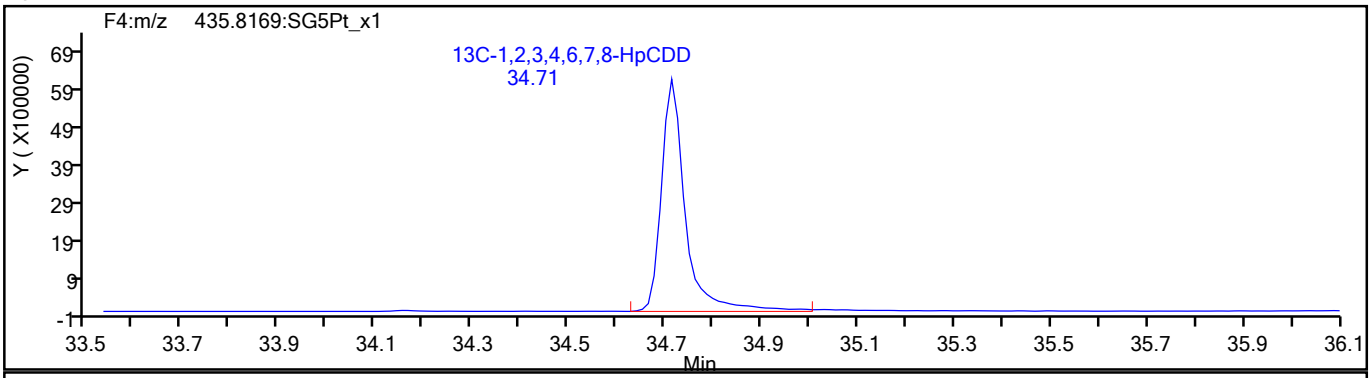

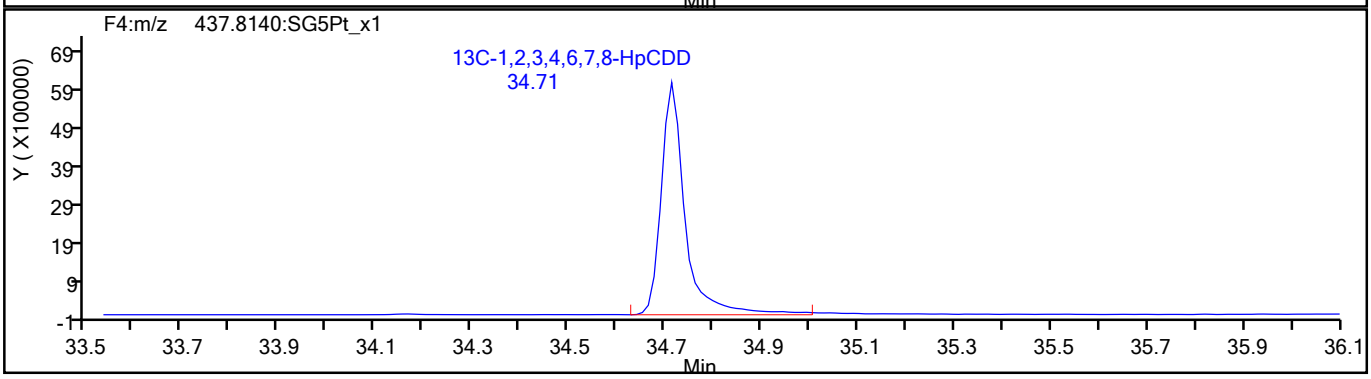

784024

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

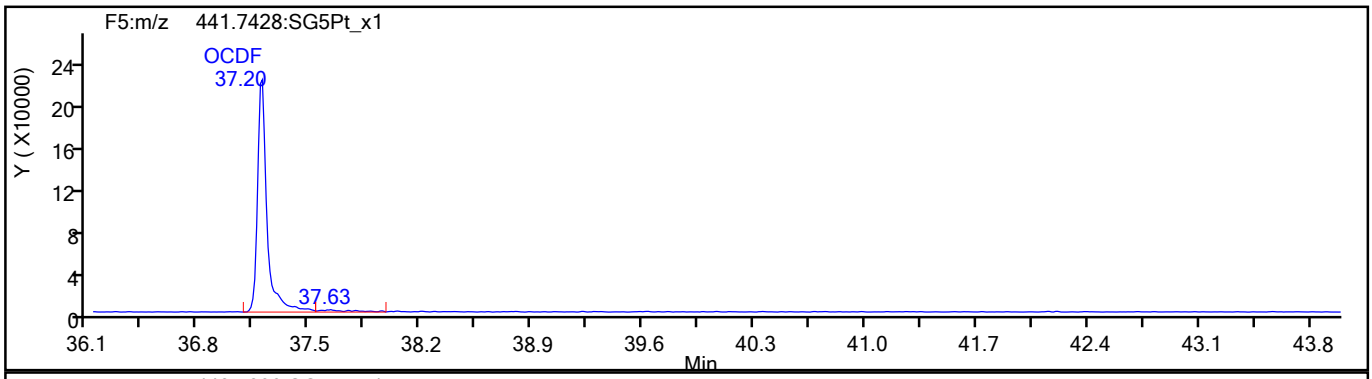

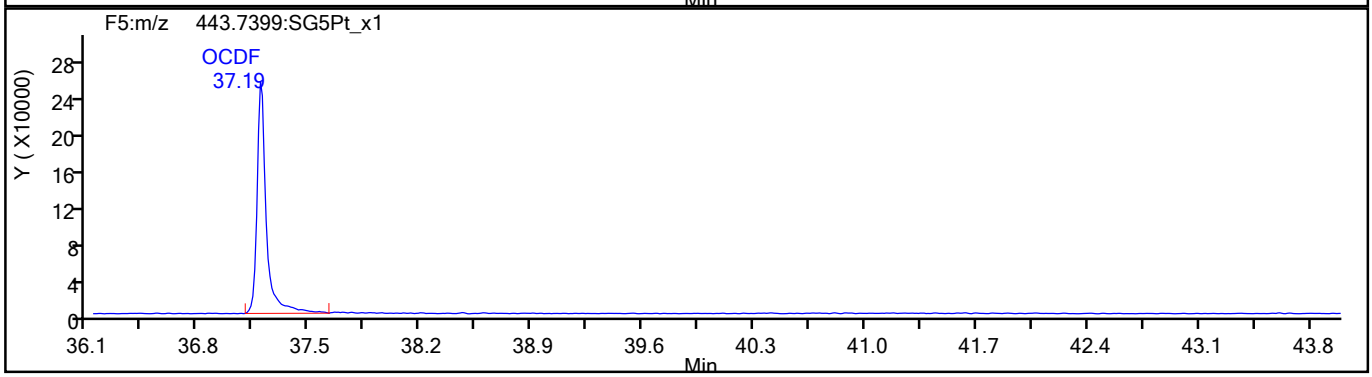

OCDF Standards

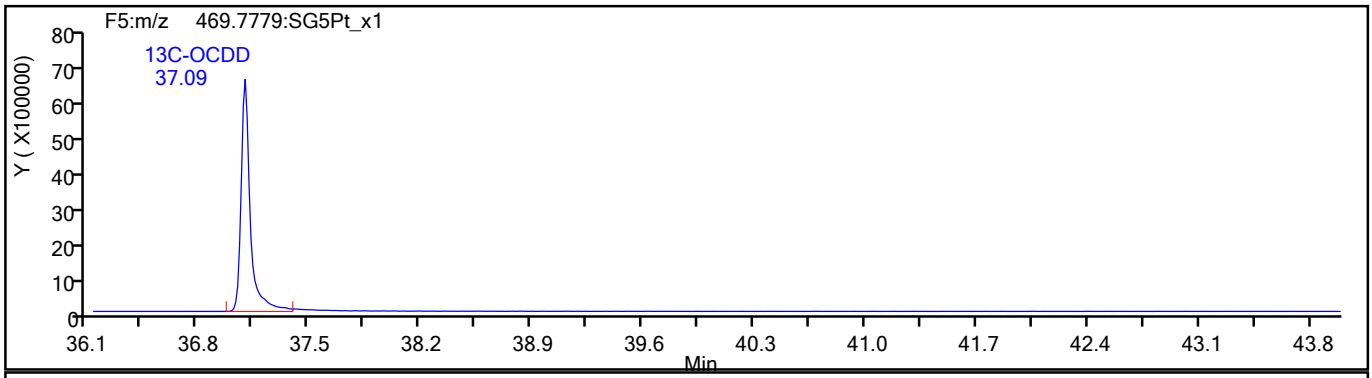

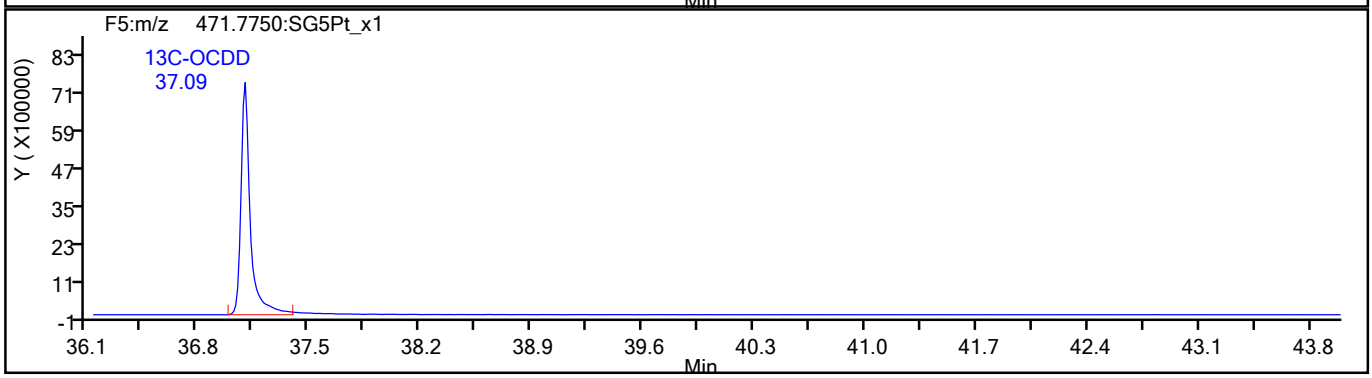

784025

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

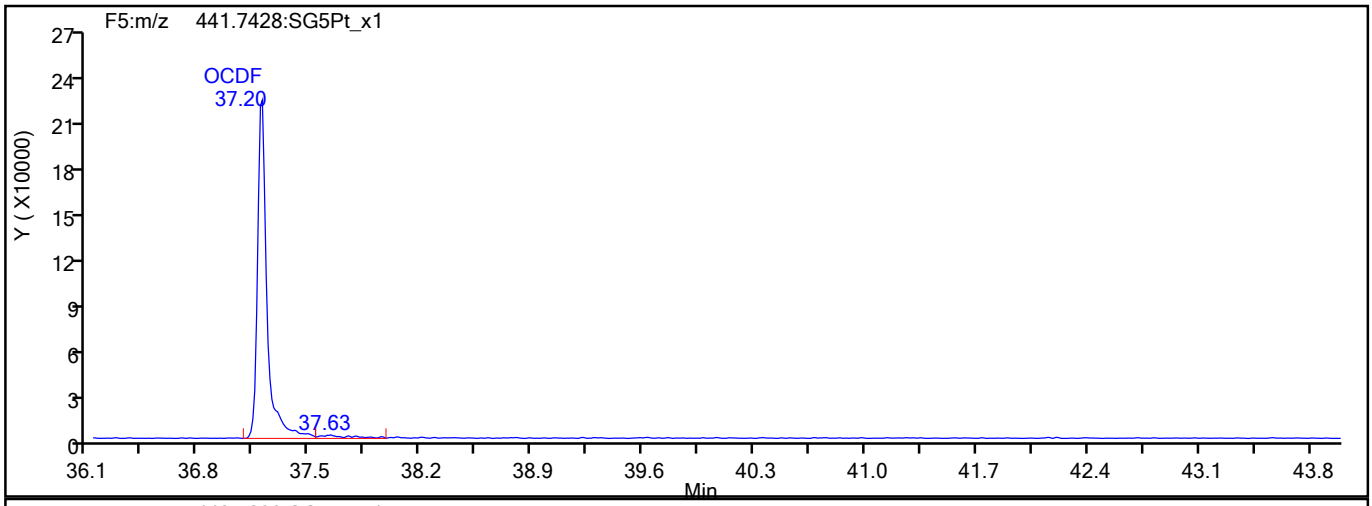

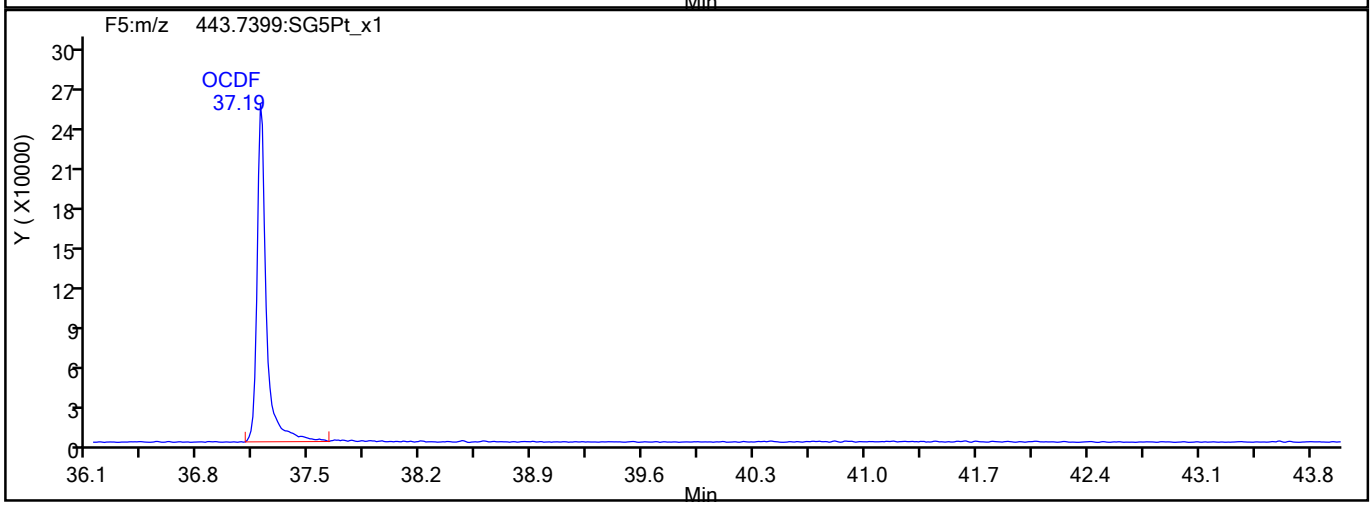

OCDF Interference Mass

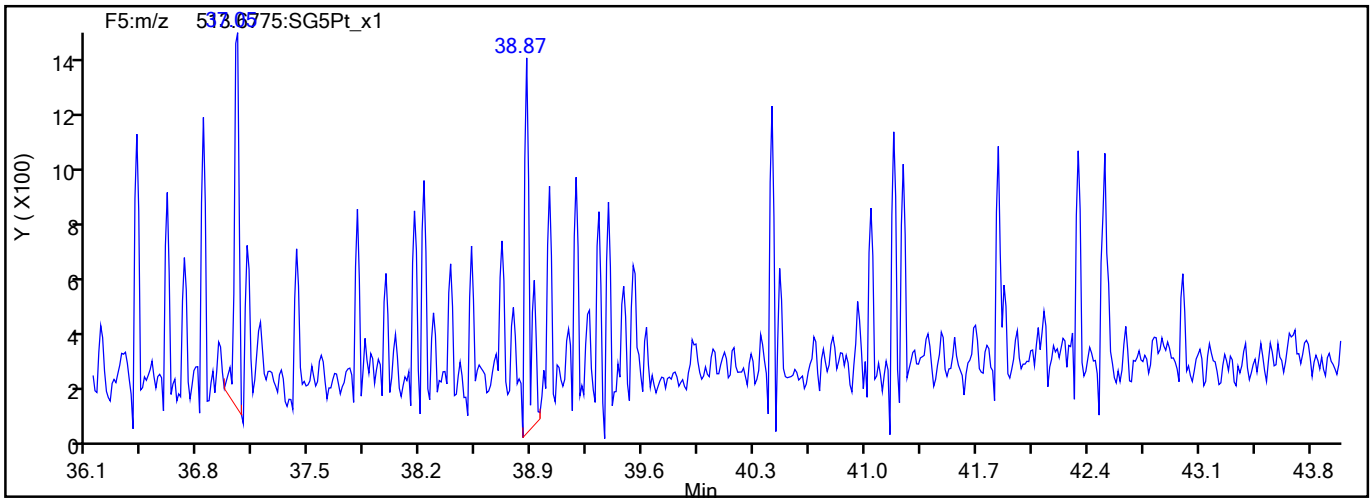

784026

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

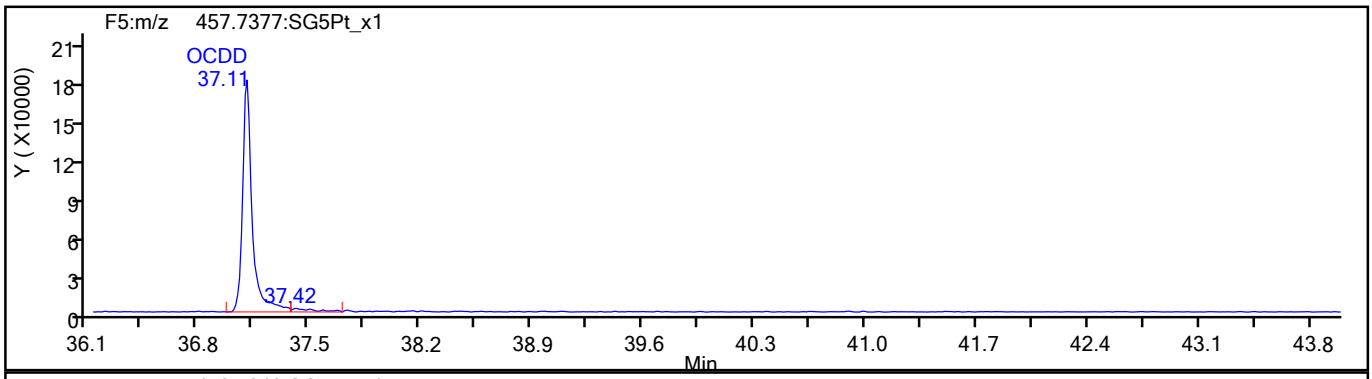

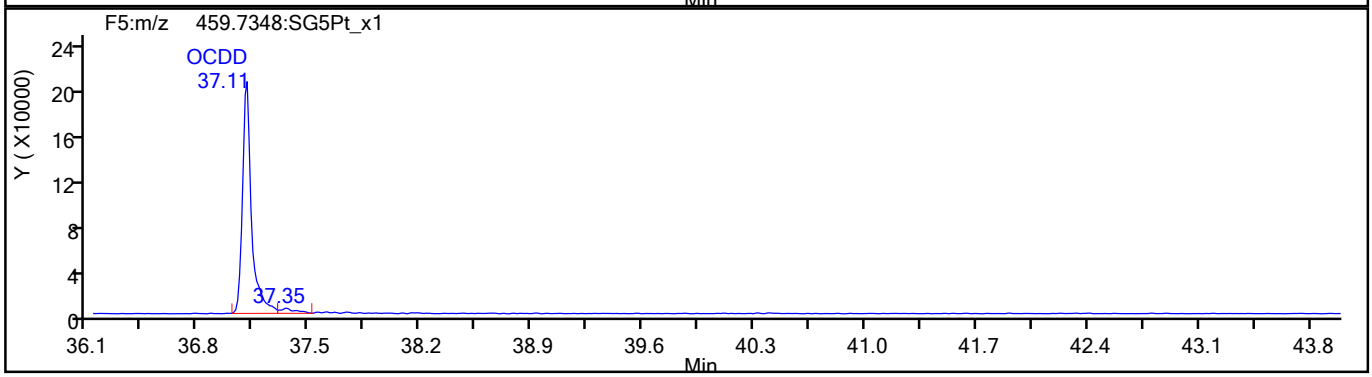

OCDD Standards

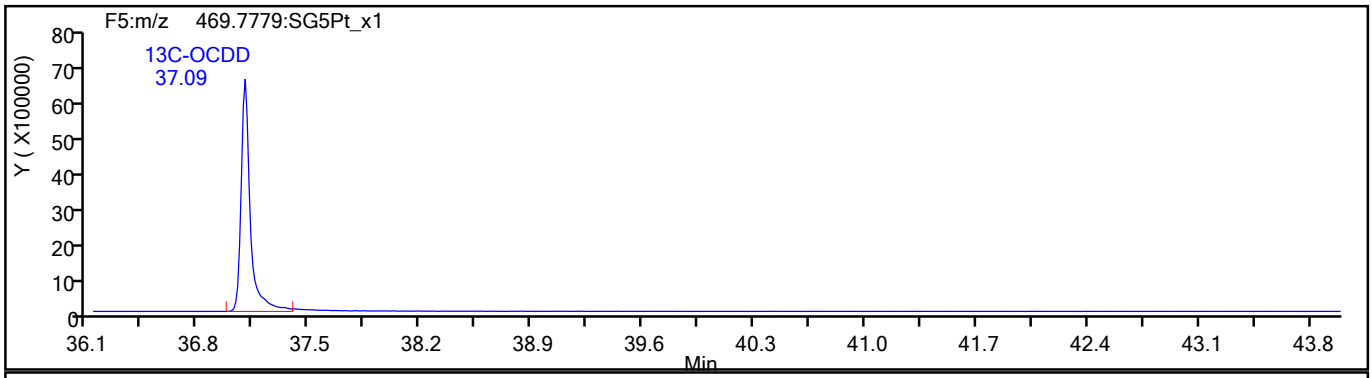

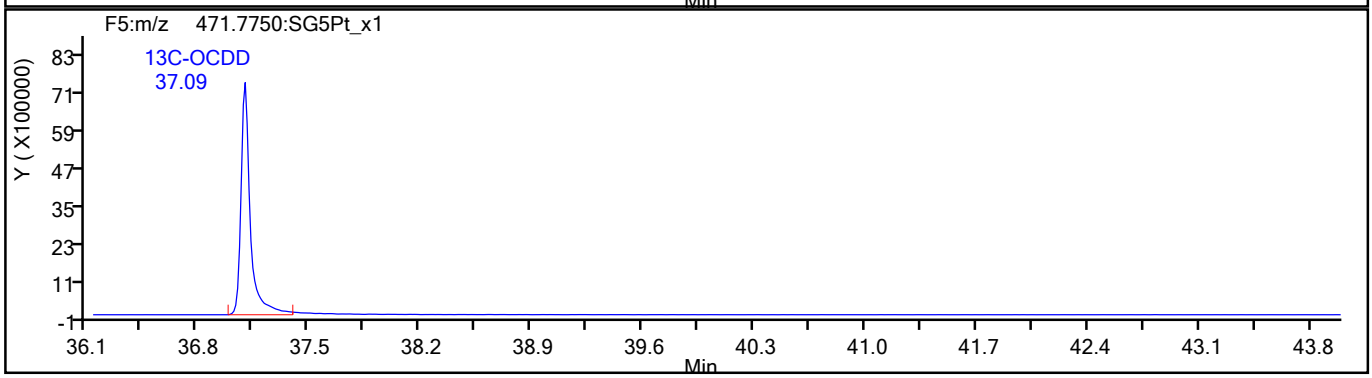

784027

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

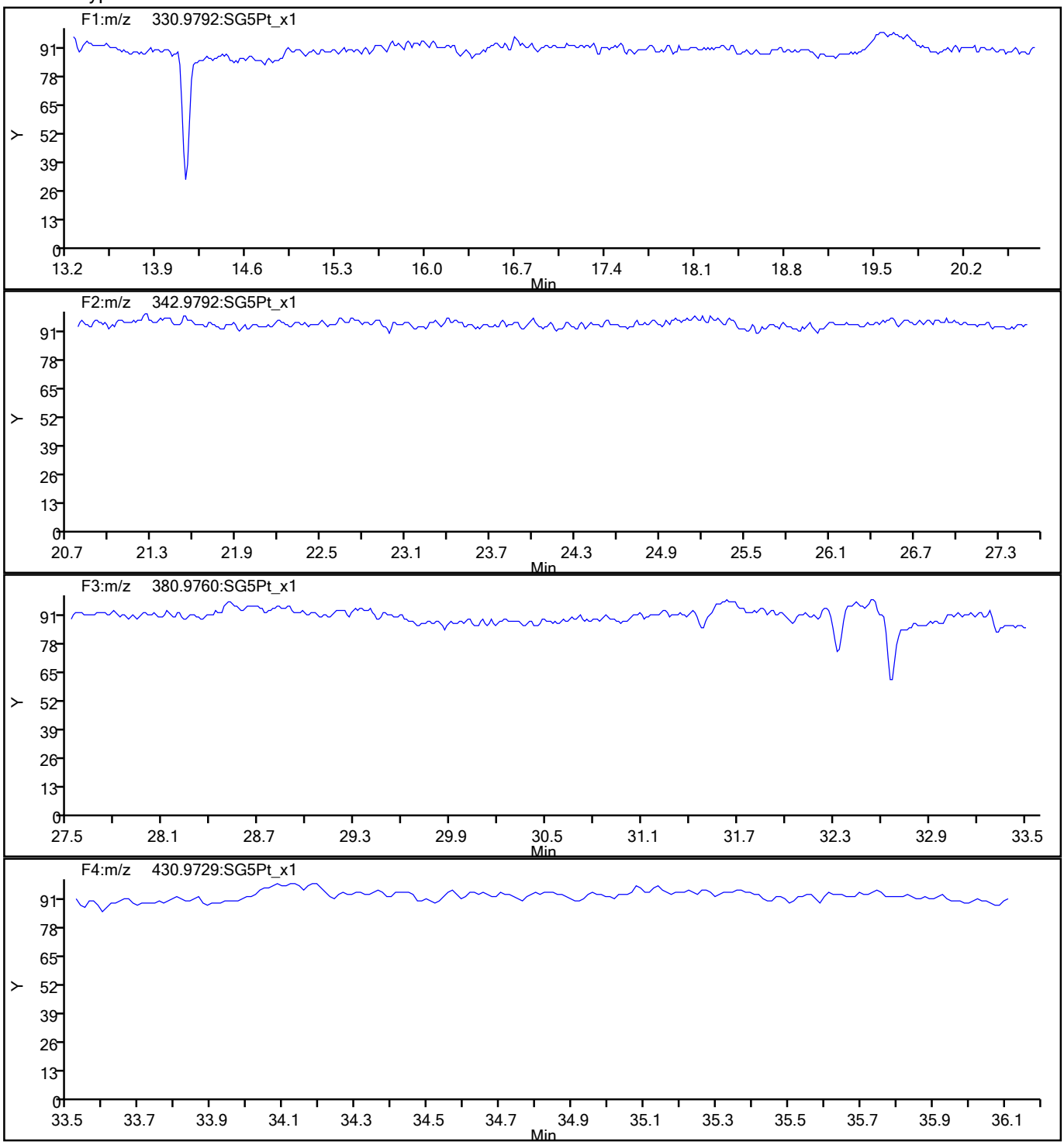

784028

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

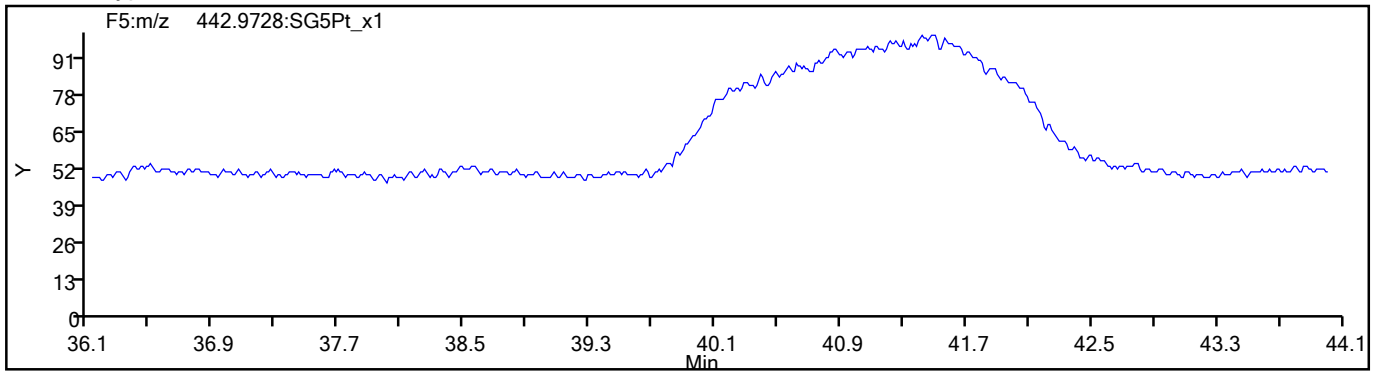

784029

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62853211	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	98246522	0.78	1.6249	96.2	96.2	0.1370	0.1370	96.20	
2,3,7,8-TCDF	17.628	1709191	0.74	1.0239	1.699	1.699	0.0115	0.0115	84.95	
S Total TCDF					1.699	1.699	0.0115	0.0115		
D 13C-2,3,7,8-TCDD	18.338	53975587	0.81	0.8993	95.5	95.5	0.1627	0.1627	95.49	
$ 37Cl4-2,3,7,8-TCDD	18.354	1231219		1.1071	1.769	1.769	0.009070	0.009070	88.47	
2,3,7,8-TCDD	18.354	1184284	0.77	1.2541	1.750	1.750	0.0187	0.0187	87.48	
S Total TCDD					1.750	1.750	0.0187	0.0187		
D 13C-1,2,3,7,8-PeCDF	22.749	72525655	1.59	1.2101	95.4	95.4	0.2163	0.2163	95.36	
1,2,3,7,8-PeCDF	22.776	6620354	1.62	1.0611	8.602	8.602	0.0369	0.0369	86.02	
D 13C-2,3,4,7,8-PeCDF	24.126	74944110	1.59	1.2395	96.2	96.2	0.2111	0.2111	96.20	a
2,3,4,7,8-PeCDF	24.153	6452410	1.61	1.0184	8.454	8.454	0.0398	0.0398	84.54	
S Total PeCDF					17.1	17.1	0.0383	0.0383		
D 13C-1,2,3,7,8-PeCDD	24.862	46721712	1.62	0.7612	97.7	97.7	0.1174	0.1174	97.65	
1,2,3,7,8-PeCDD	24.889	4219570	1.58	1.0484	8.614	8.614	0.0282	0.0282	86.14	
S Total PeCDD					8.614	8.614	0.0282	0.0282		
D 13C-1,2,3,4,7,8-HxCDF	30.835	65726932	0.51	1.0837	101.6	101.6	0.5284	0.5284	102	a
1,2,3,4,7,8-HxCDF	30.848	6041767	1.22	1.0851	8.471	8.471	0.0611	0.0611	84.71	
D 13C-1,2,3,6,7,8-HxCDF	30.995	68089005	0.53	1.1279	101.1	101.1	0.5077	0.5077	101	
1,2,3,6,7,8-HxCDF	31.021	6561860	1.24	1.1260	8.559	8.559	0.0596	0.0596	85.59	
D 13C-2,3,4,6,7,8-HxCDF	31.753	64406928	0.52	1.0637	101.4	101.4	0.5383	0.5383	101	
2,3,4,6,7,8-HxCDF	31.767	6352404	1.21	1.1675	8.448	8.448	0.0492	0.0492	84.48	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58828058	0.51	0.9676	101.8	101.8	0.5918	0.5918	102	
1,2,3,7,8,9-HxCDF	32.526	5963032	1.22	1.1664	8.691	8.691	0.0536	0.0536	86.91	
S Total HxCDF					34.2	34.2	0.0559	0.0559		
* 13C-1,2,3,7,8,9-HxCDD	32.339	59719891	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44877133	1.26	0.7334	102.5	102.5	0.4904	0.4904	102	a
1,2,3,4,7,8-HxCDD	31.940	3996910	1.25	1.0640	8.370	8.370	0.0541	0.0541	83.70	
D 13C-1,2,3,6,7,8-HxCDD	32.033	52974056	1.27	0.8802	100.8	100.8	0.4087	0.4087	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.046	4517909	1.28	1.0001	8.528	8.528	0.0541	0.0541	85.28	
1,2,3,7,8,9-HxCDD	32.353	4612548	1.27	1.1325	8.324	8.324	0.0492	0.0492	83.24	
S Total HxCDD					25.2	25.2	0.0525	0.0525		
D 13C-1,2,3,4,6,7,8-HpCDF	33.911	46691158	0.44	0.7730	101.1	101.1	1.219	1.219	101	
1,2,3,4,6,7,8-HpCDF	33.924	5795616	1.06	1.4413	8.612	8.612	0.0908	0.0908	86.12	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	42362179	0.44	0.7008	101.2	101.2	1.344	1.344	101	a
1,2,3,4,7,8,9-HpCDF	35.017	4773949	1.04	1.3174	8.554	8.554	0.1198	0.1198	85.54	
S Total HpCDF					17.2	17.2	0.1053	0.1053		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	38689128	1.01	0.6472	100.1	100.1	0.6644	0.6644	100	
1,2,3,4,6,7,8-HpCDD	34.725	3690749	1.06	1.0943	8.717	8.717	0.0588	0.0588	87.17	
S Total HpCDD					8.717	8.717	0.0588	0.0588		
D 13C-OCDD	37.093	52034518	0.88	0.4472	194.9	194.9	0.3057	0.3057	97.43	
OCDF	37.189	6198469	0.89	1.4382	16.6	16.6	0.0331	0.0331	82.83	
OCDD	37.105	5013385	0.90	1.1070	17.4	17.4	0.0477	0.0477	87.03	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28386456	7046087	6003	15007	1174		
333.9339	18.142	18.142	0		34466755	8558284	3128	7820	2736	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42972486	10763336	8679	21697	1240		
317.9389	17.613	17.616	0	0.971	55274036	13878642	5218	13045	2660	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	725190	178427	386	965	462		
305.8987	17.628	17.631	0	1.001	984001	248871	771	1927	323	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24153490	5697854	6003	15007	949		
333.9339	18.338	18.338	0	1.011	29822097	7031837	3128	7820	2248	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	1231219	295748	627	1567	472		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	516509	120344	727	1817	166		
321.8936	18.354	18.357	0	1.001	667775	162973	470	1175	347	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44514928	7853181	9659	24147	813		
353.8970	22.749	22.754	0	1.254	28010727	4960984	6675	16687	743	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	4089215	716349	1056	2640	678		
341.8567	22.776	22.779	0	1.001	2531139	446464	949	2372	470	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											a
351.9000	24.126	24.129	0	1.330	46033296	7621284	9659	24147	789		a
353.8970	24.126	24.129	0	1.330	28910814	4739818	6675	16687	710	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	3984657	653372	1056	2640	619		
341.8567	24.153	24.156	0	1.001	2467753	411895	949	2372	434	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28869986	4442492	3510	8775	1266		
369.8919	24.862	24.865	0	1.370	17851726	2719251	2068	5170	1315	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	2584600	398905	491	1227	812		
357.8516	24.889	24.892	0	1.001	1634970	246537	355	887	694	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											a
383.8639	30.835	30.838	0	0.953	22324815	4908430	11721	29302	419		a
385.8610	30.835	30.838	0	0.953	43402117	9487505	22146	55365	428	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.848	30.857	0	1.000	3322045	734549	2125	5312	346		
375.8178	30.848	30.857	0	1.000	2719722	584076	1696	4240	344	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	23443638	4852452	11721	29302	414		
385.8610	30.995	31.003	0	0.958	44645367	9390378	22146	55365	424	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.001	3628802	774738	2125	5312	365		
375.8178	31.021	31.022	0	1.001	2933058	621989	1696	4240	367	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.753	31.756	0	0.982	22116278	5724833	11721	29302	488		
385.8610	31.753	31.756	0	0.982	42290650	10891641	22146	55365	492	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	3476984	900887	2125	5312	424		
375.8178	31.767	31.772	0	1.000	2875420	748664	1696	4240	441	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	19952155	5224965	11721	29302	446		
385.8610	32.512	32.523	-1	1.005	38875903	10047992	22146	55365	454	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	3272570	870864	2125	5312	410		
375.8178	32.526	32.534	0	1.000	2690462	702575	1696	4240	414	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33208186	8207924	11753	29382	698		
403.8529	32.339	32.342	0		26511705	6578059	9521	23802	691	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	31.927	31.929	0	0.987	24991401	7247079	11753	29382	617		a
403.8529	31.927	31.929	0	0.987	19885732	5749736	9521	23802	604	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	2220855	634454	1798	4495	353		
391.8127	31.940	31.945	0	1.000	1776055	520388	1195	2987	435	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29637474	7731021	11753	29382	658		
403.8529	32.033	32.033	0	0.991	23336582	6105317	9521	23802	641	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.046	32.047	0	1.000	2539756	681391	1798	4495	379		
391.8127	32.046	32.047	0	1.000	1978153	525440	1195	2987	440	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	2578931	681238	1798	4495	379		
391.8127	32.353	32.355	0	1.013	2033617	530890	1195	2987	444	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.911	33.914	0	1.049	14324046	4548819	17096	42740	266		
419.8220	33.911	33.914	0	1.049	32367112	10373412	38619	96547	269	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	2984390	989226	3939	9847	251		
409.7789	33.924	33.926	0	1.000	2811226	912647	3871	9677	236	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											a
417.8253	35.005	35.010	0	1.082	12913204	3817815	17096	42740	223		a
419.8220	35.005	35.010	0	1.082	29448975	8551787	38619	96547	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	2430692	699814	3939	9847	178		
409.7789	35.017	35.020	0	1.000	2343257	686031	3871	9677	177	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19472945	5796031	12697	31742	456		
437.8140	34.714	34.716	0	1.073	19216183	5692167	12738	31845	447	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.725	34.726	0	1.000	1901971	557241	1605	4012	347		
425.7737	34.725	34.726	0	1.000	1788778	518346	1352	3380	383	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	24422535	6155132	2912	7280	2114		
471.7750	37.093	37.094	0	1.147	27611983	6845350	5172	12930	1324	0.88(0.76-1.02)	
OCDF											
441.7428	37.189	37.199	-1	1.003	2921445	715883	635	1587	1127		
443.7399	37.189	37.199	-1	1.003	3277024	845078	603	1507	1401	0.89(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	2373314	577341	633	1582	912		
459.7348	37.105	37.106	0	1.000	2640071	638330	739	1847	864	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.13

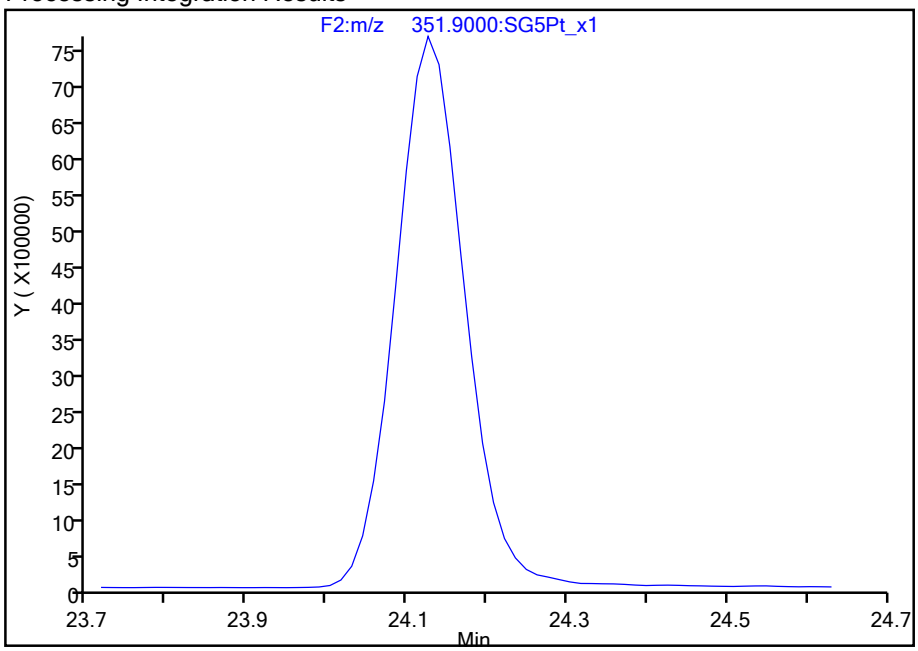

Manual Integration Results

RT: 24.13
Area: 46033296
Amount: 96.198549
Amount Units: pg/ul

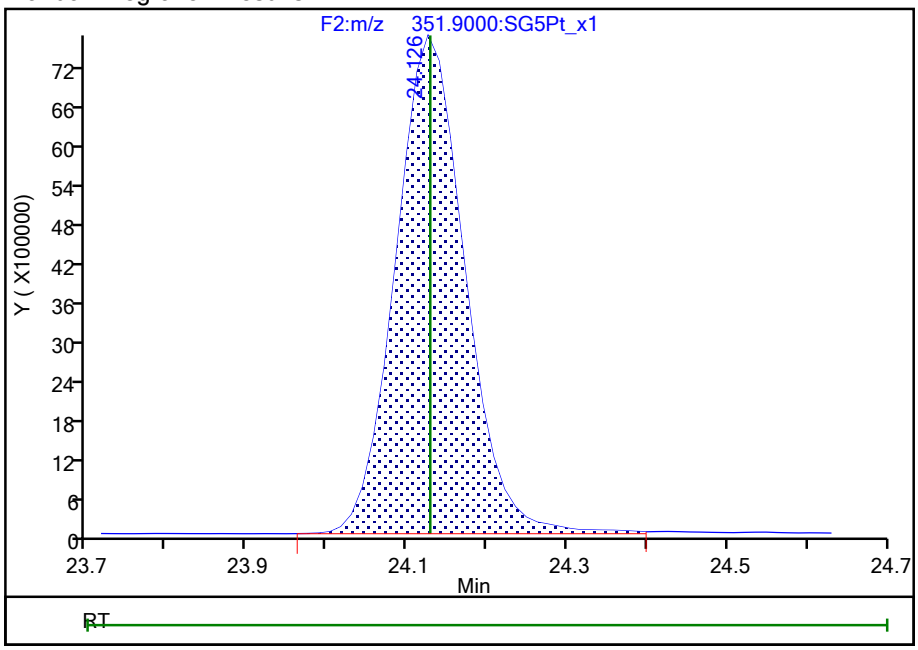

Reviewer: arghestanis, 26-Jul-2021 12:30:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDF, CAS: 114423-98-2

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.84

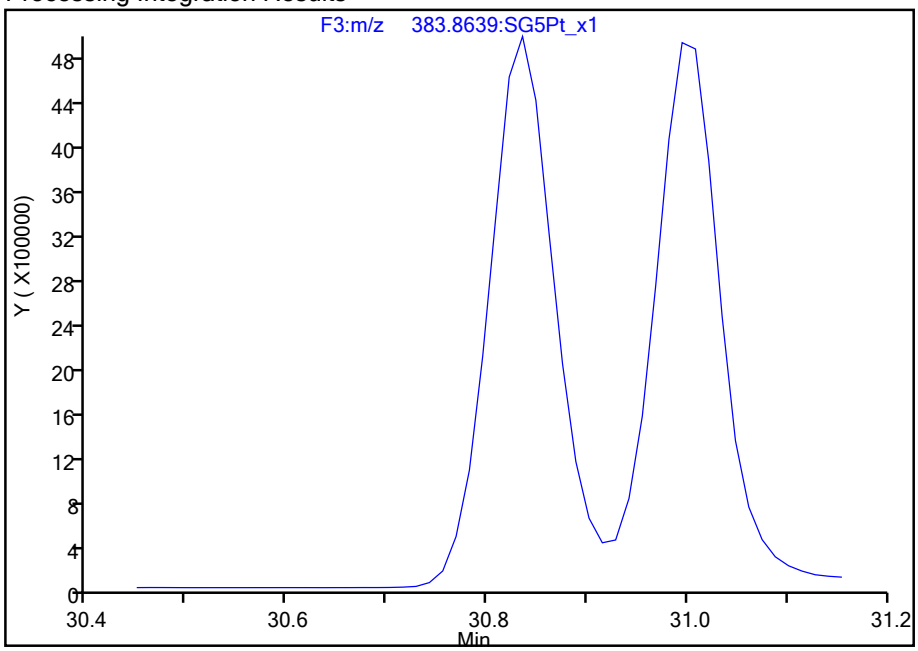

Manual Integration Results

RT: 30.84
Area: 22324815
Amount: 101.5622
Amount Units: pg/ul

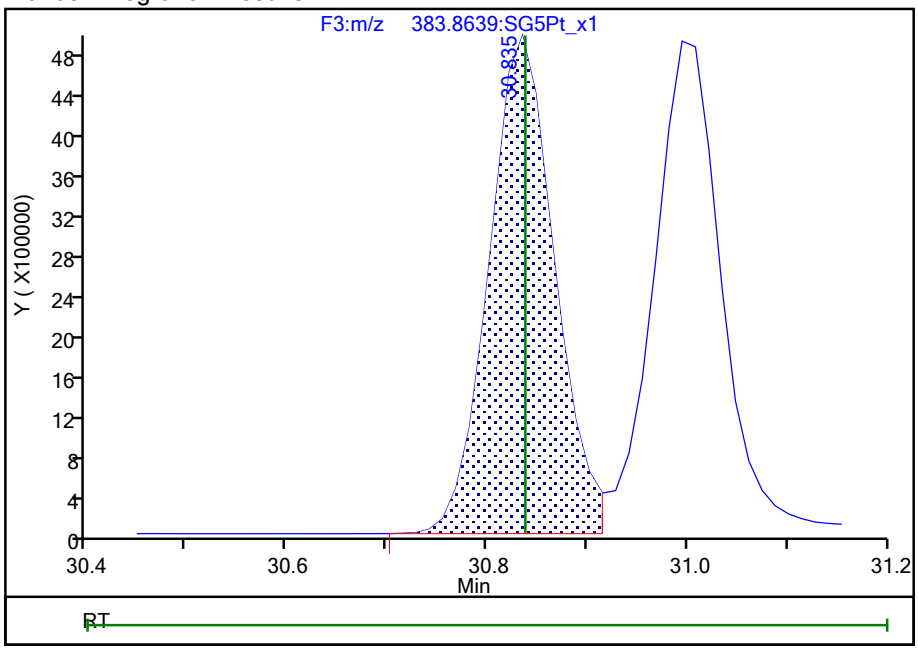

Reviewer: arghestanis, 26-Jul-2021 12:30:40
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

784036

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.93

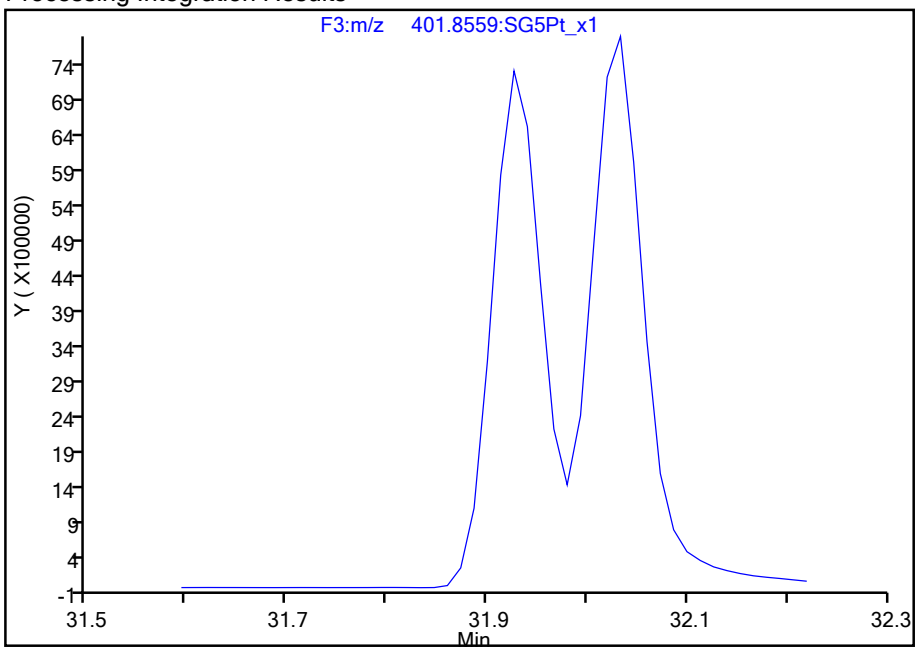

Manual Integration Results

RT: 31.93
Area: 24991401
Amount: 102.4585
Amount Units: pg/ul

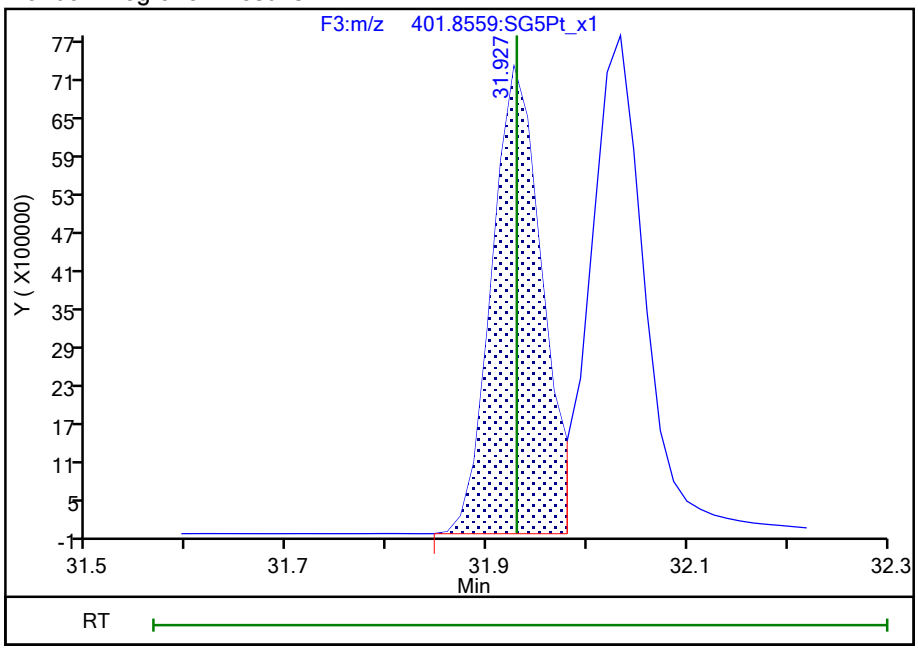

Reviewer: arghestanis, 26-Jul-2021 12:30:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

784037

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.01

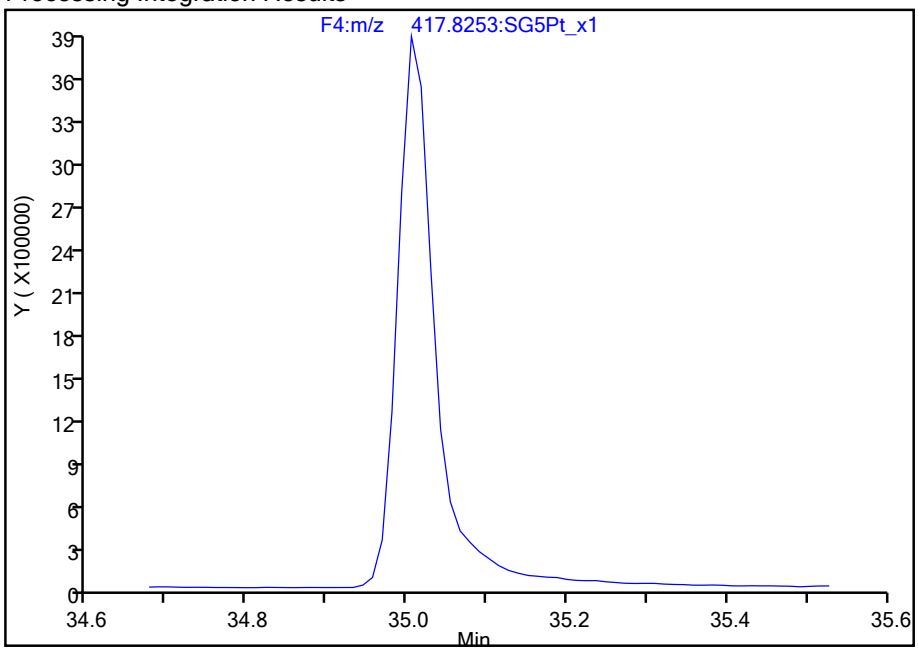

Manual Integration Results

RT: 35.01
Area: 12913204
Amount: 101.2180
Amount Units: pg/ul

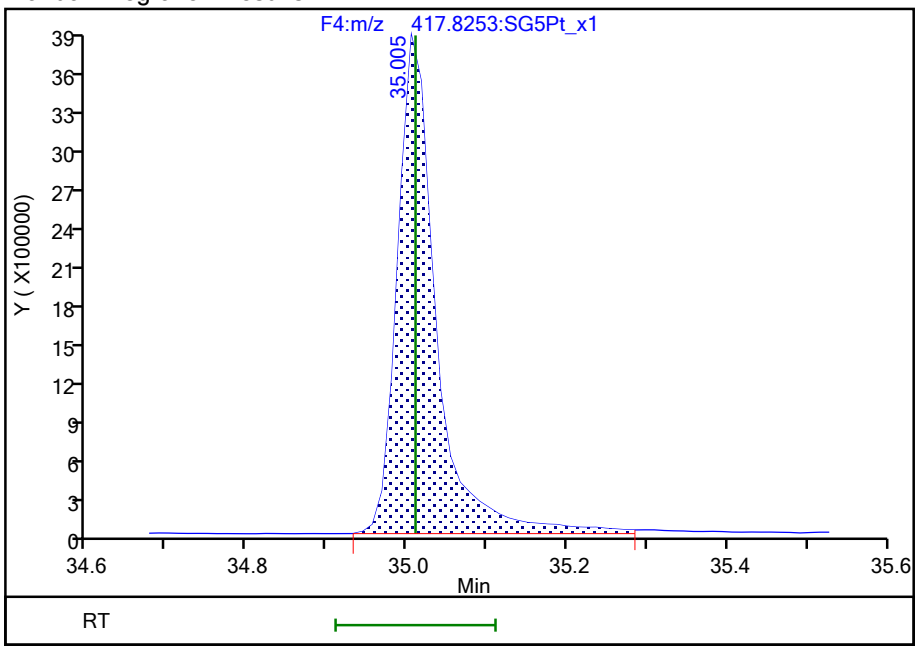

Reviewer: arghestanis, 26-Jul-2021 12:31:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

784038

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

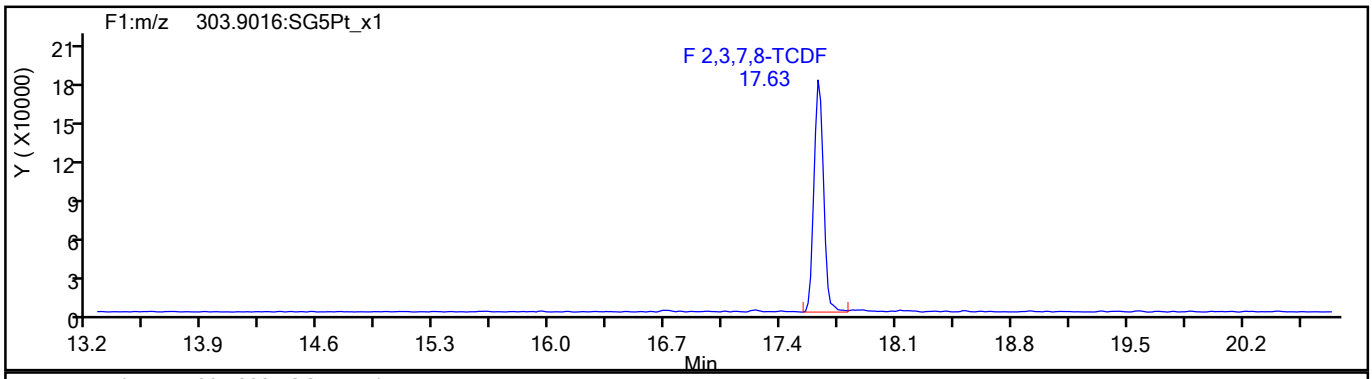

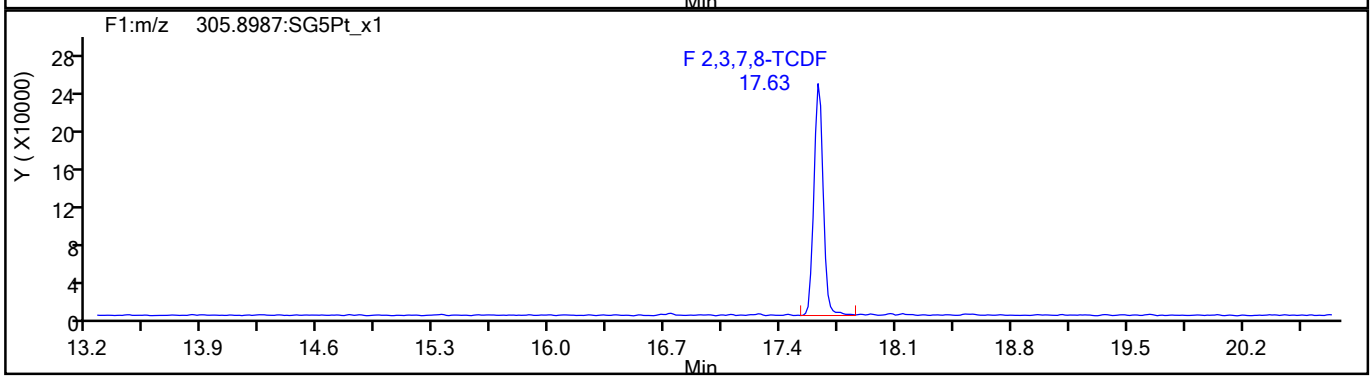

TCDF Standards

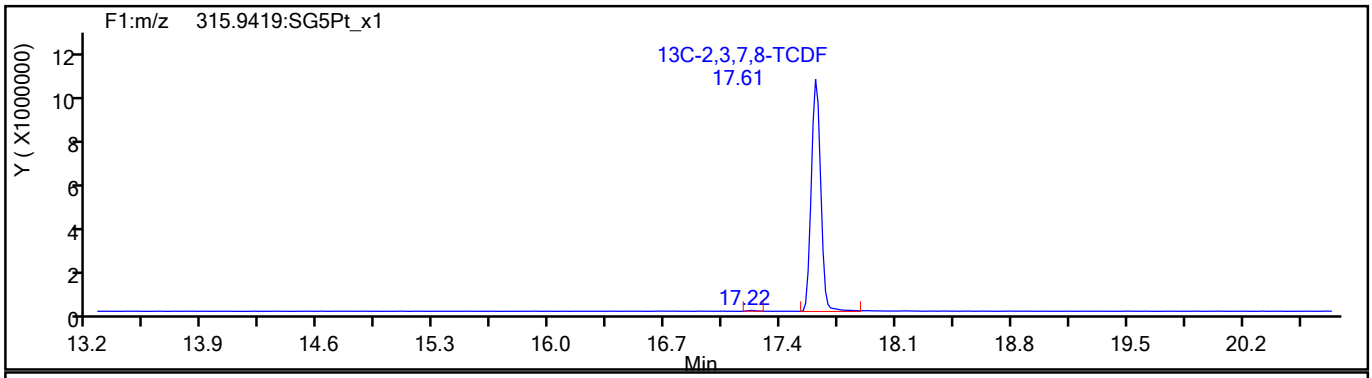

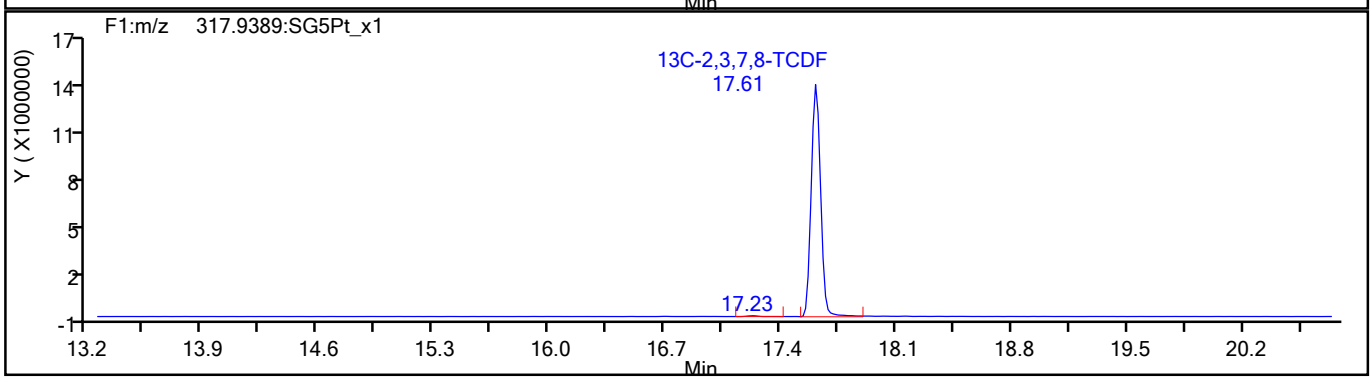

784039

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

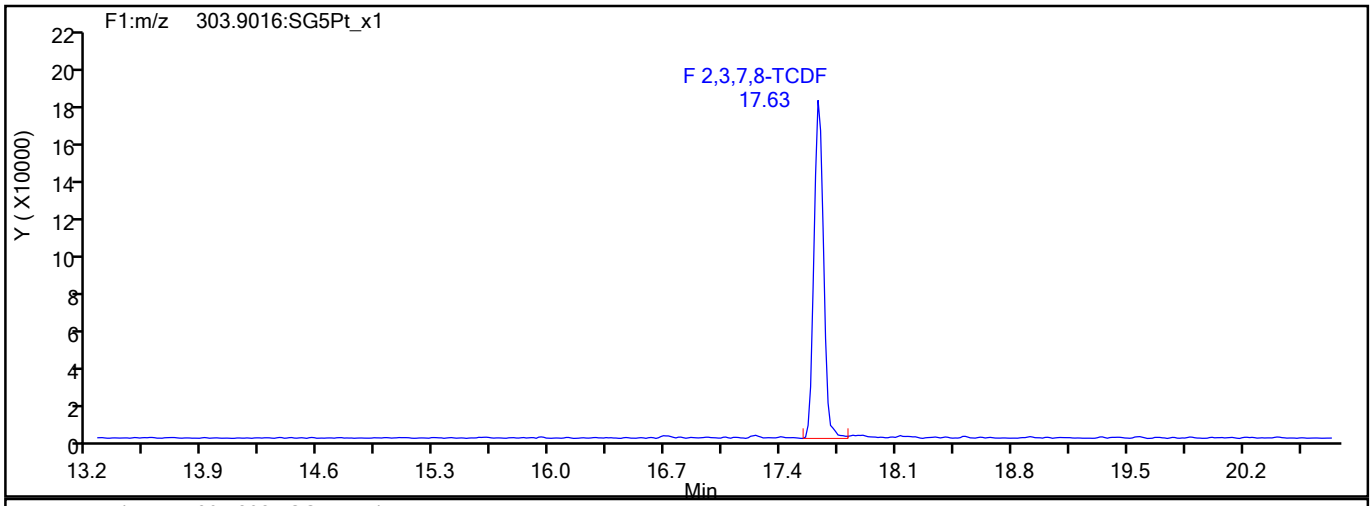

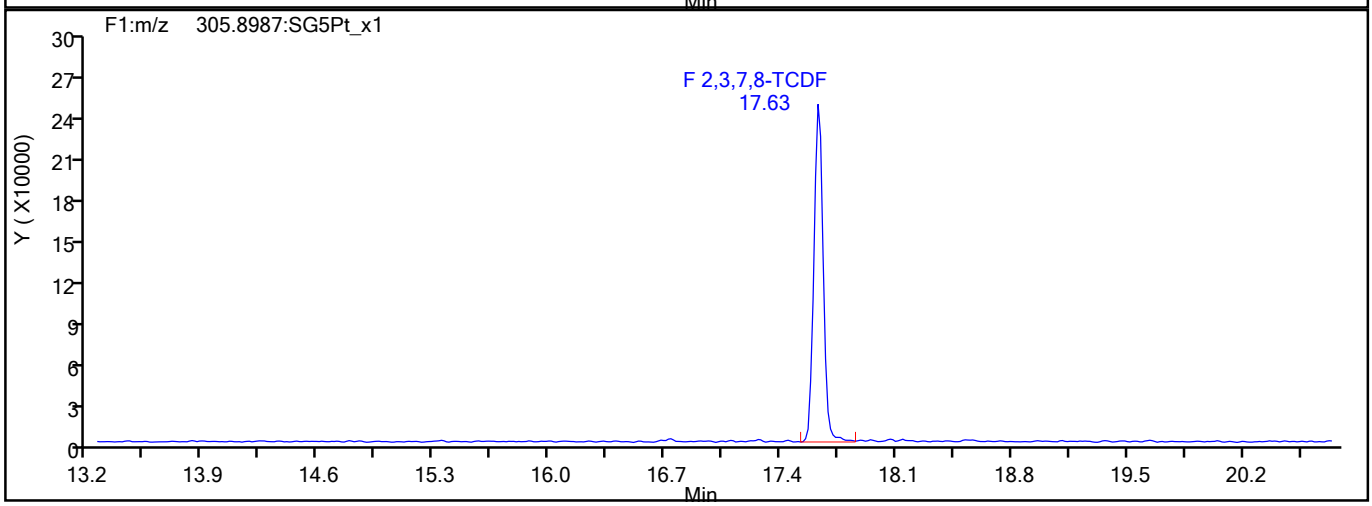

TCDF Interference Mass

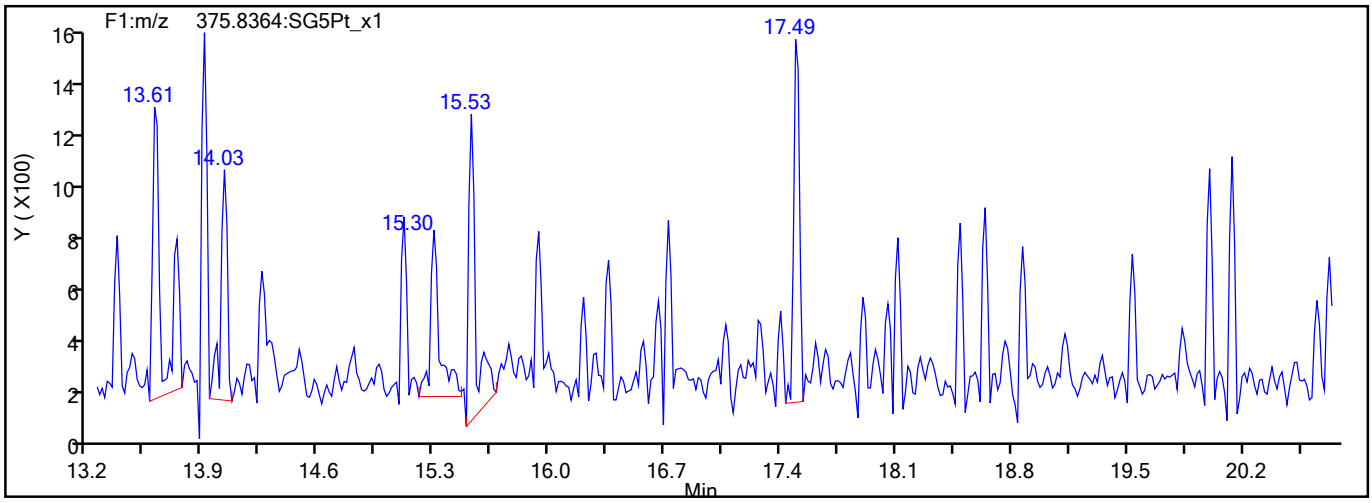

784040

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

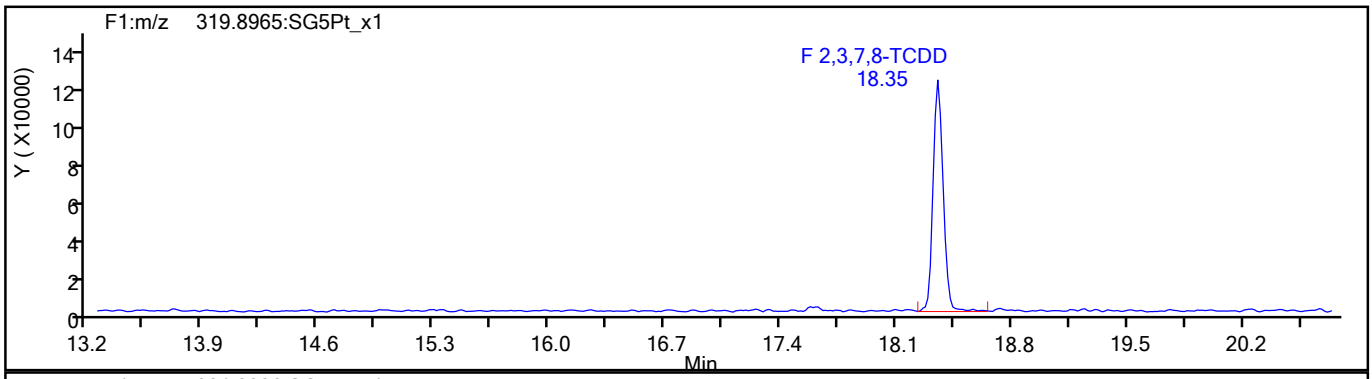

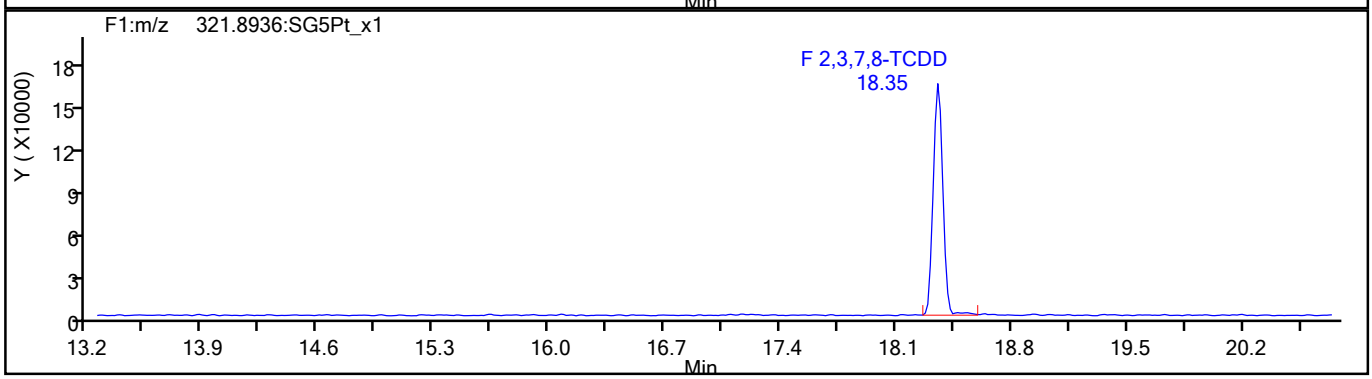

TCDD Standards

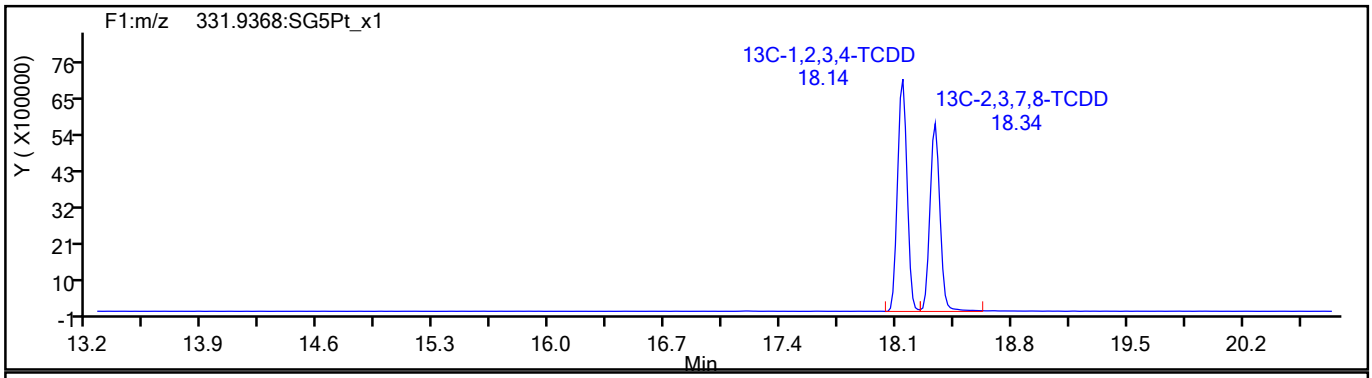

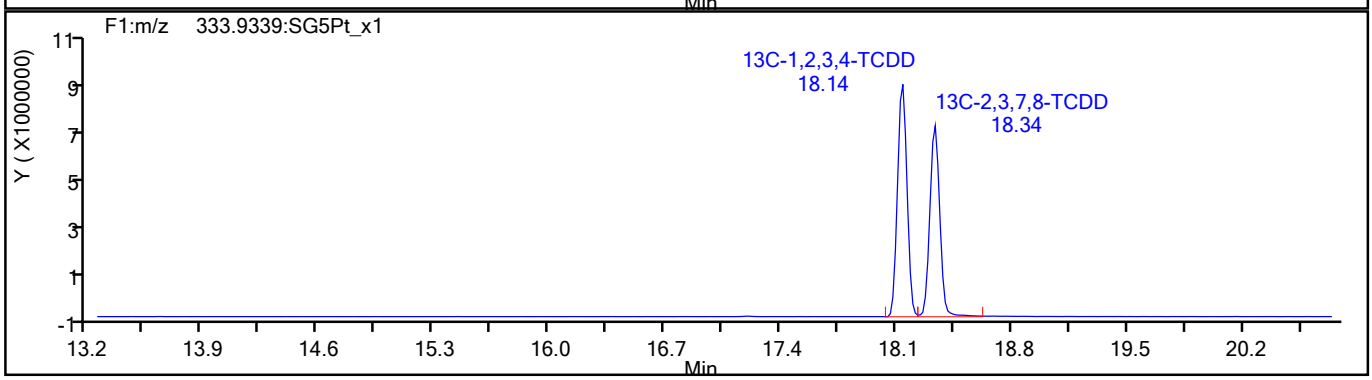

784041

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

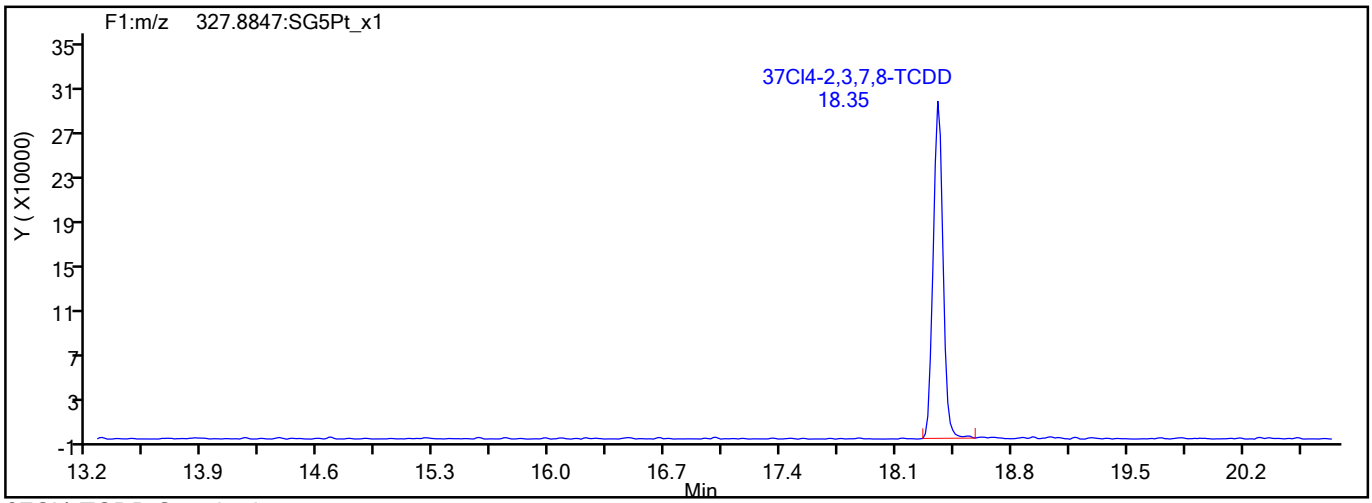

37Cl4-TCDD Standards

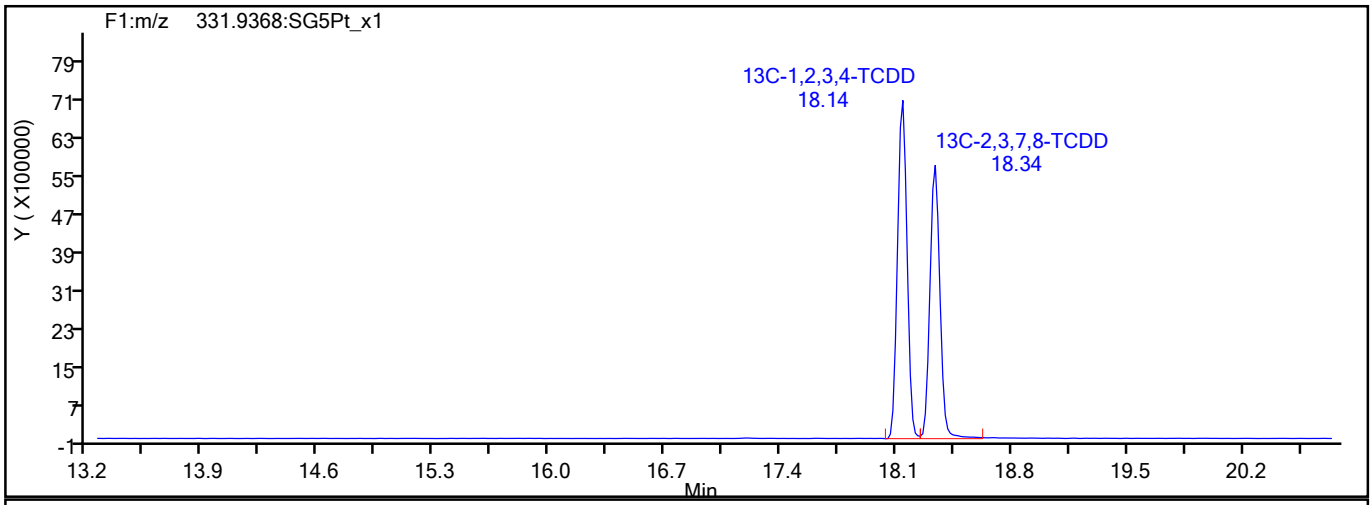

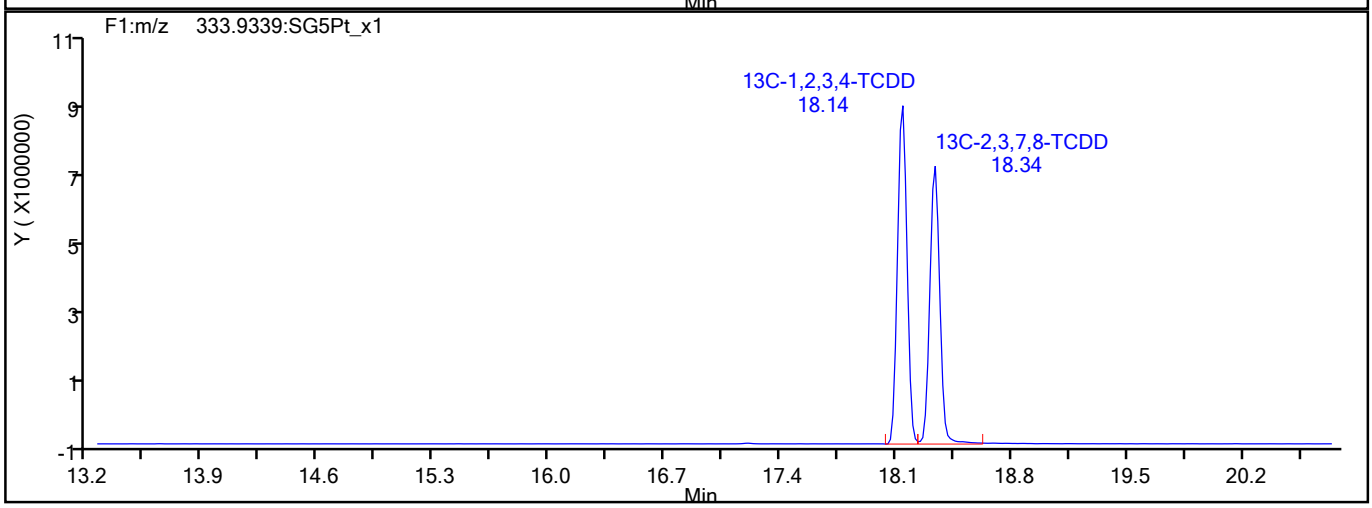

784042

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

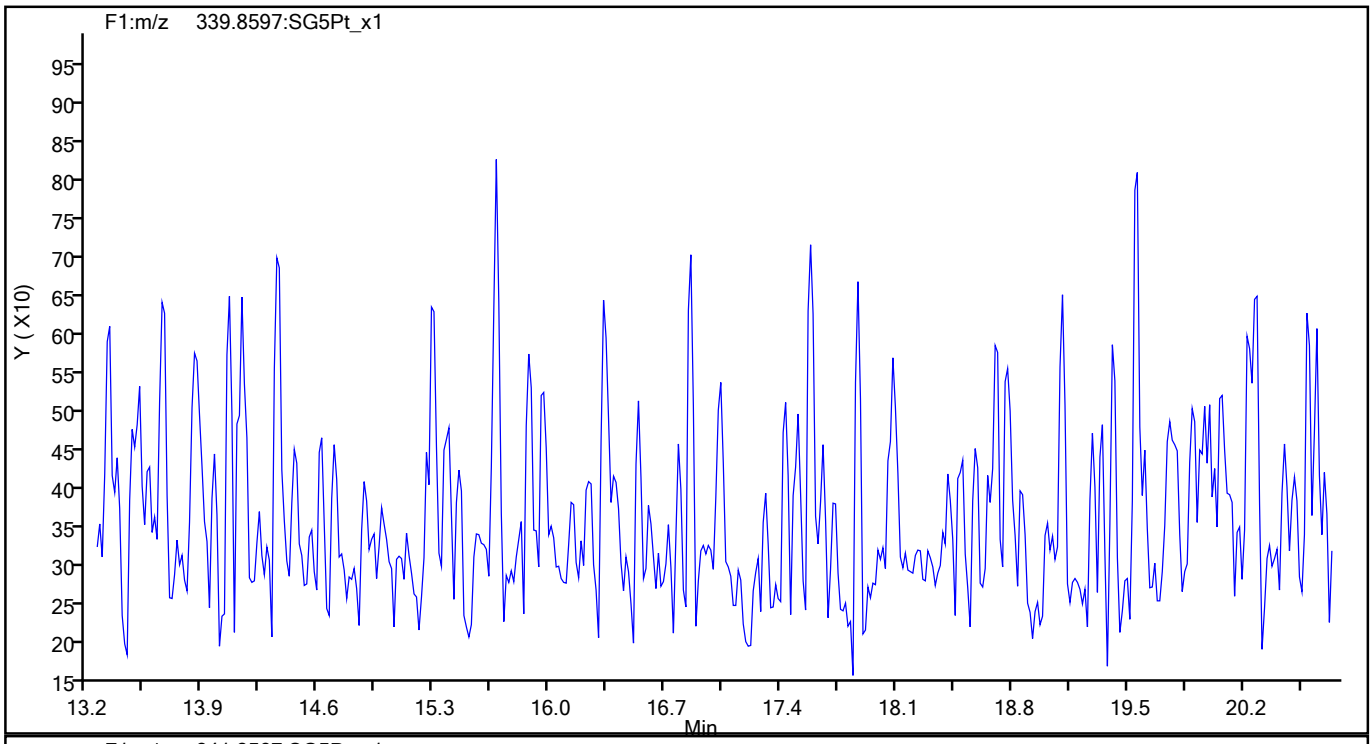

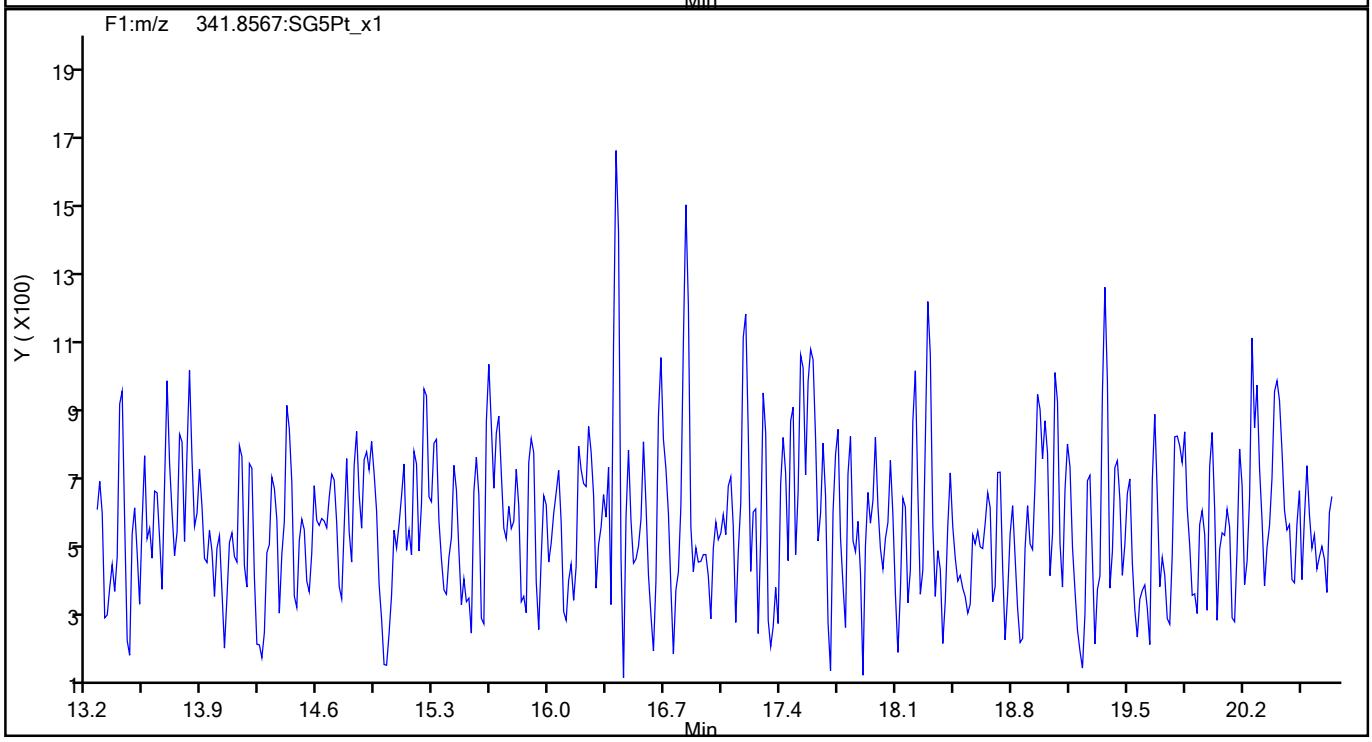

784043

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

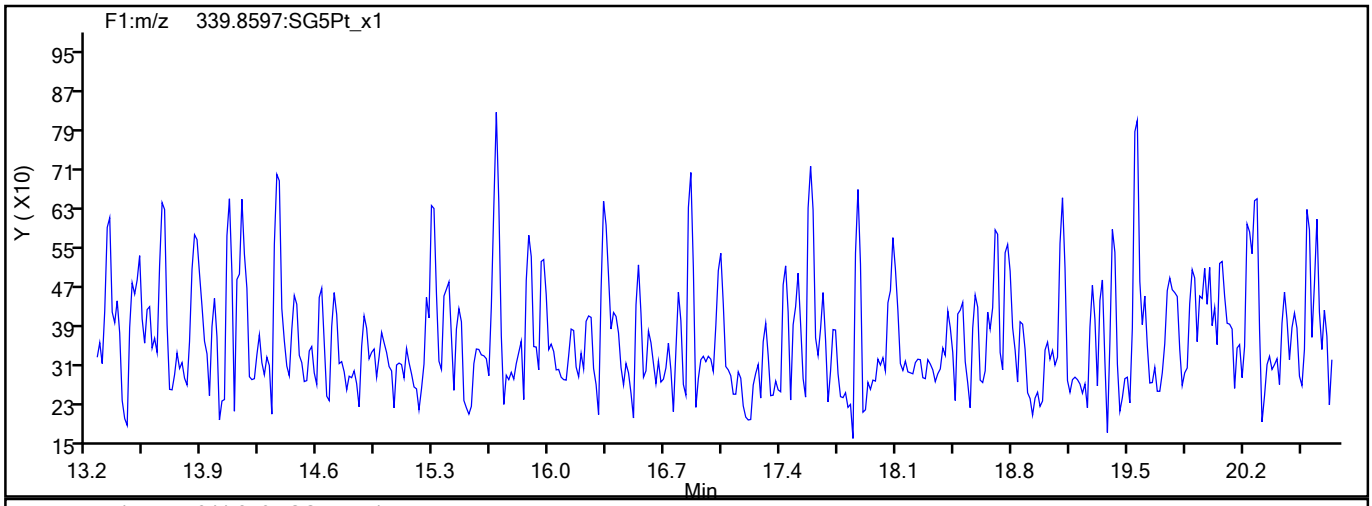

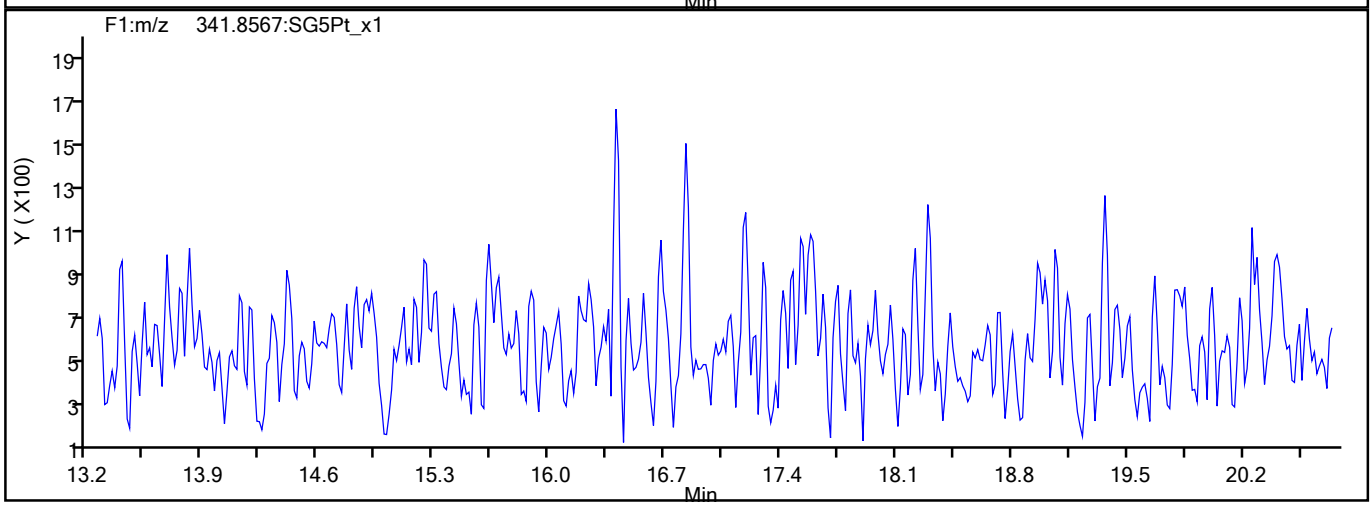

F1 PeCDFs Interference Mass

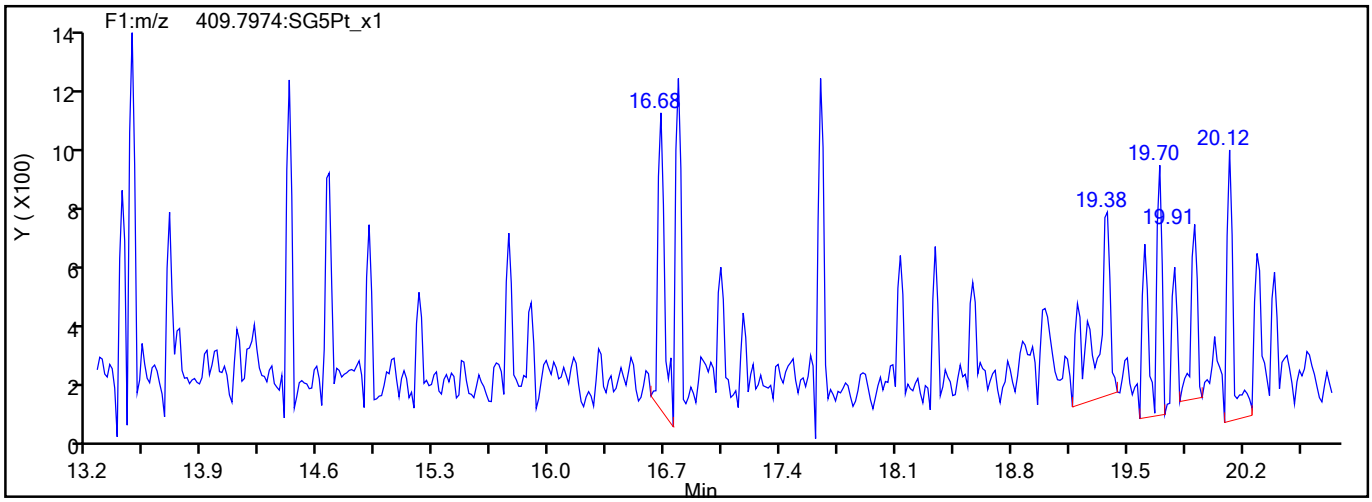

784044

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Eurofins TestAmerica, Sacramento

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PeCDF

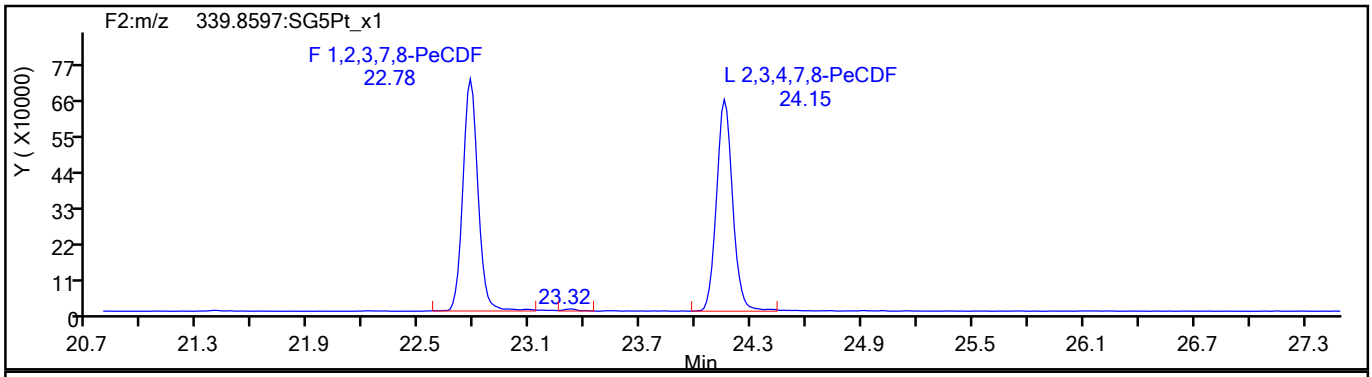

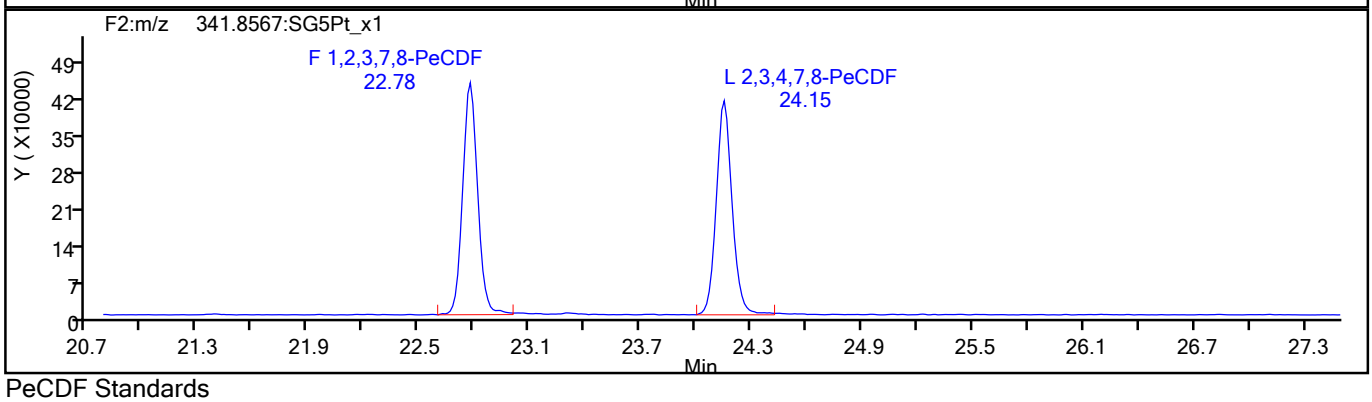

PeCDF Standards

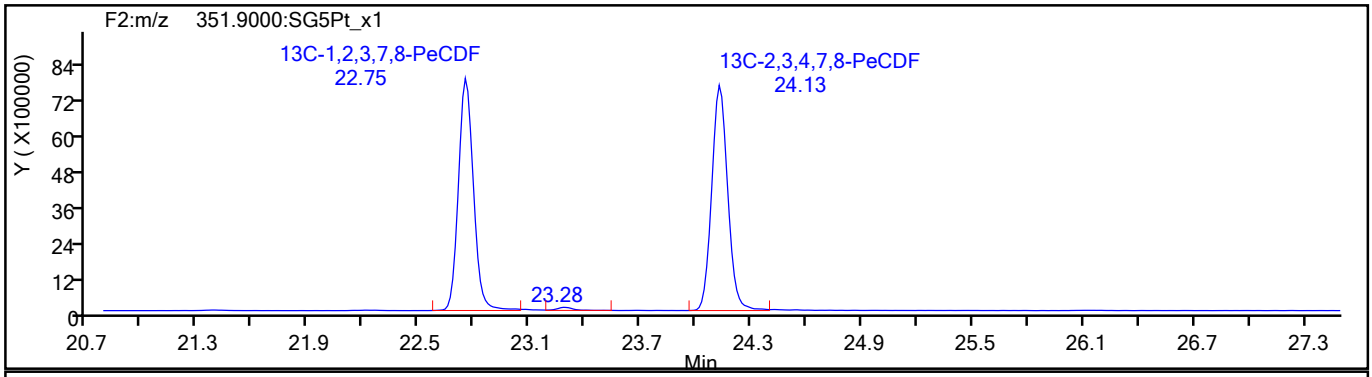

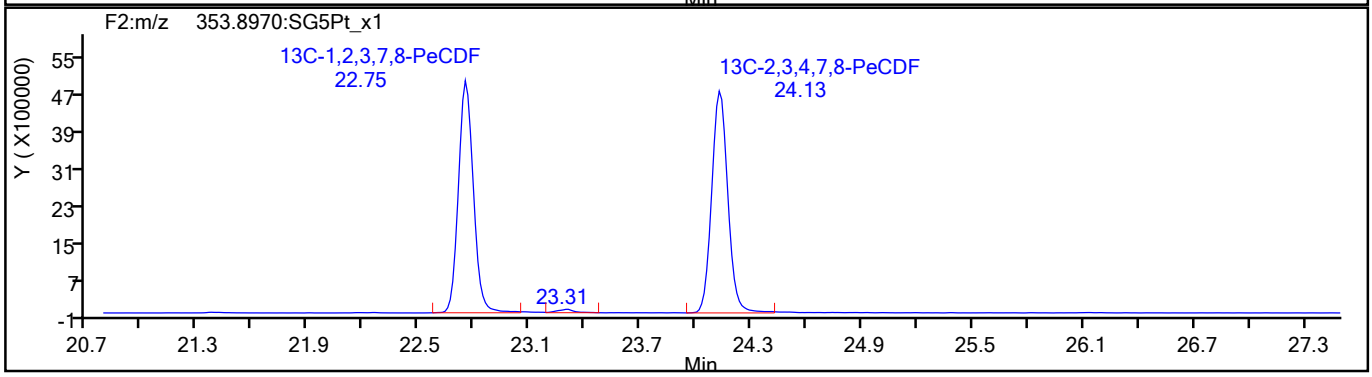

784045

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Eurofins TestAmerica, Sacramento

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PeCDF

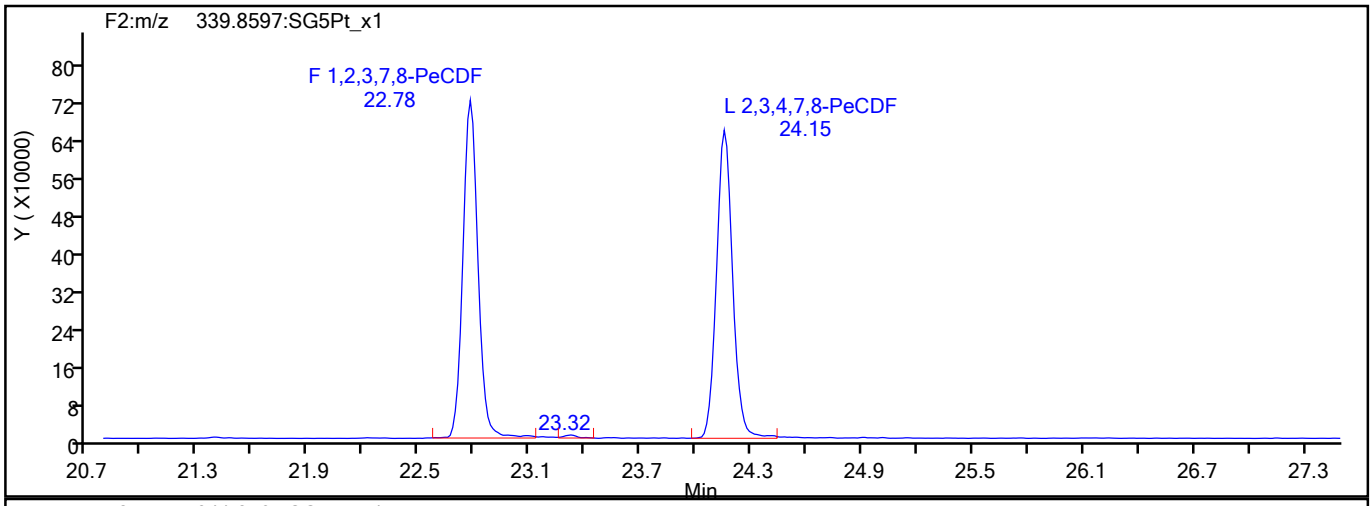

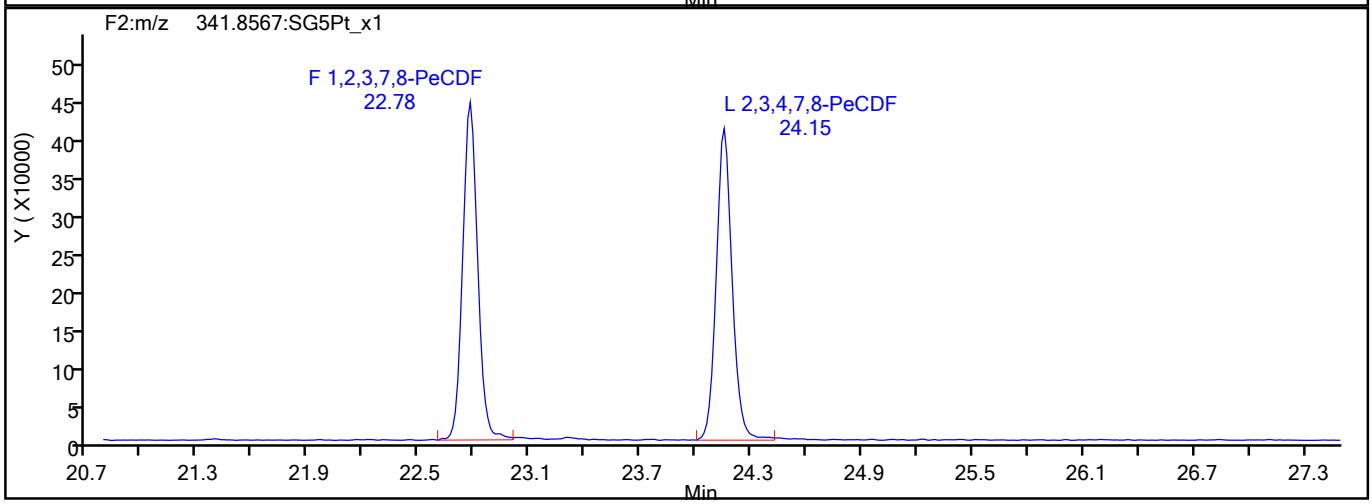

PeCDF Interference Mass

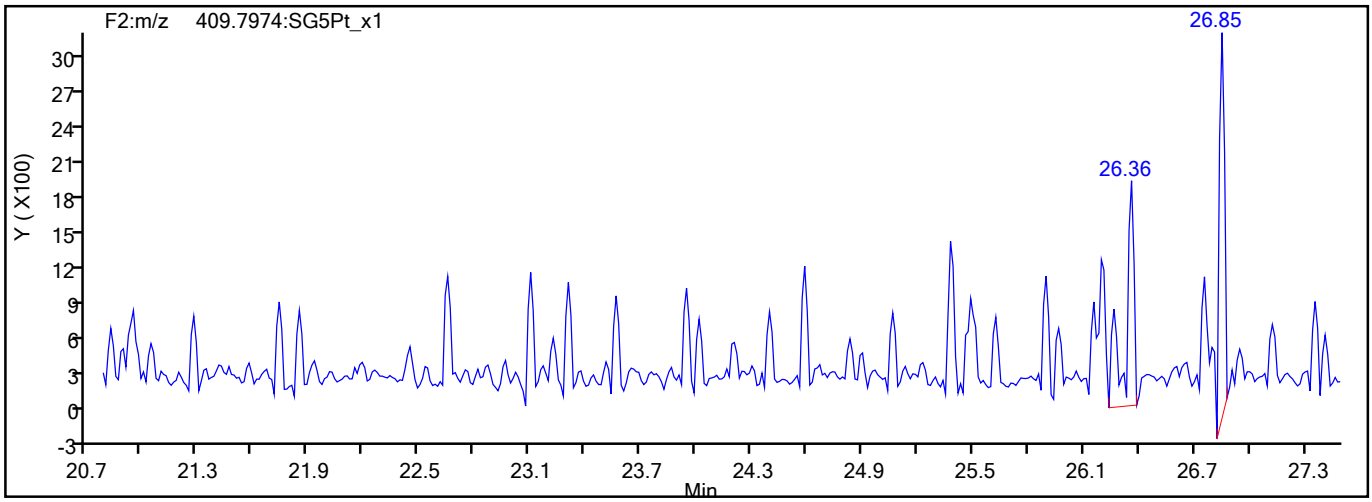

784046

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

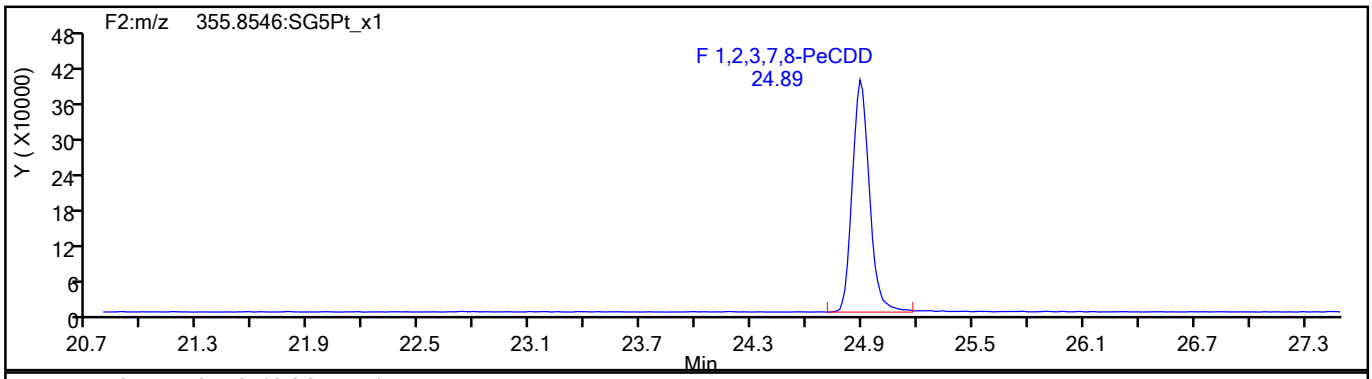

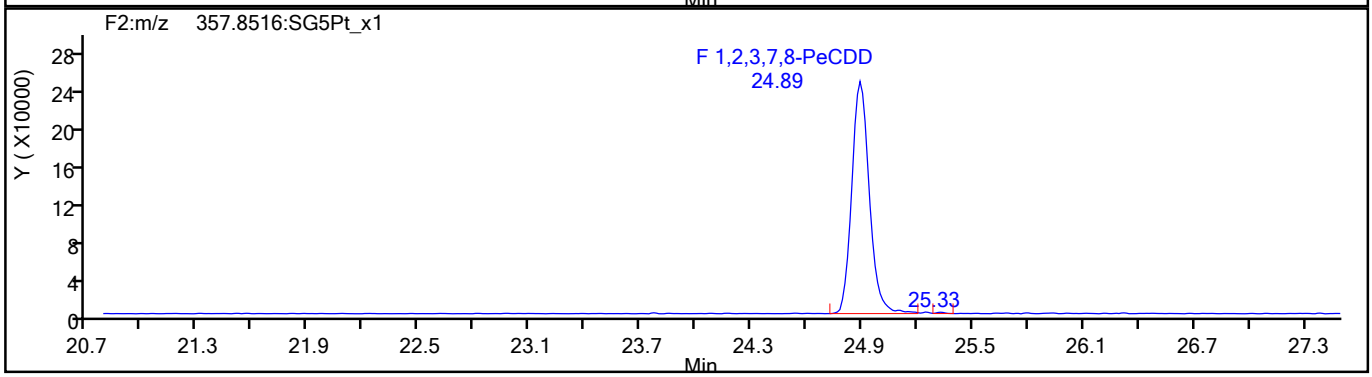

PeCDD Standards

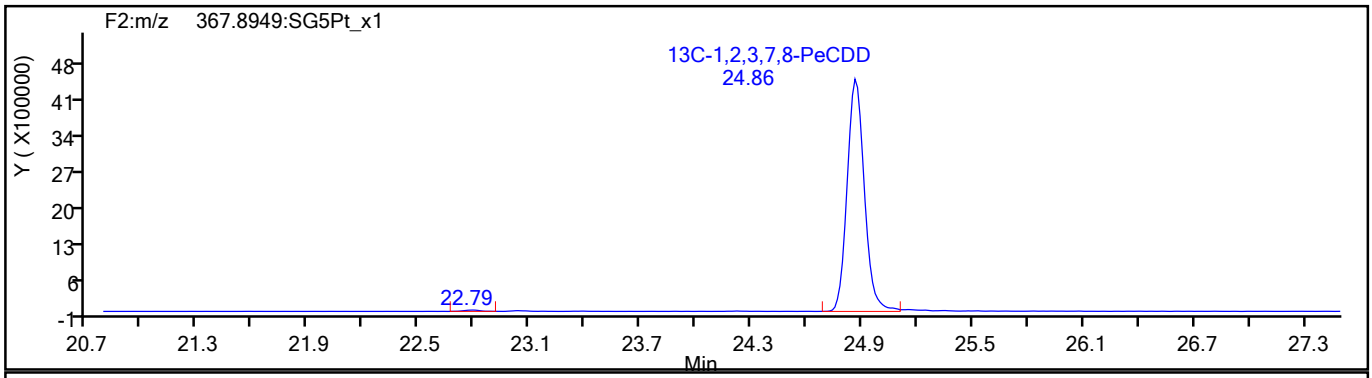

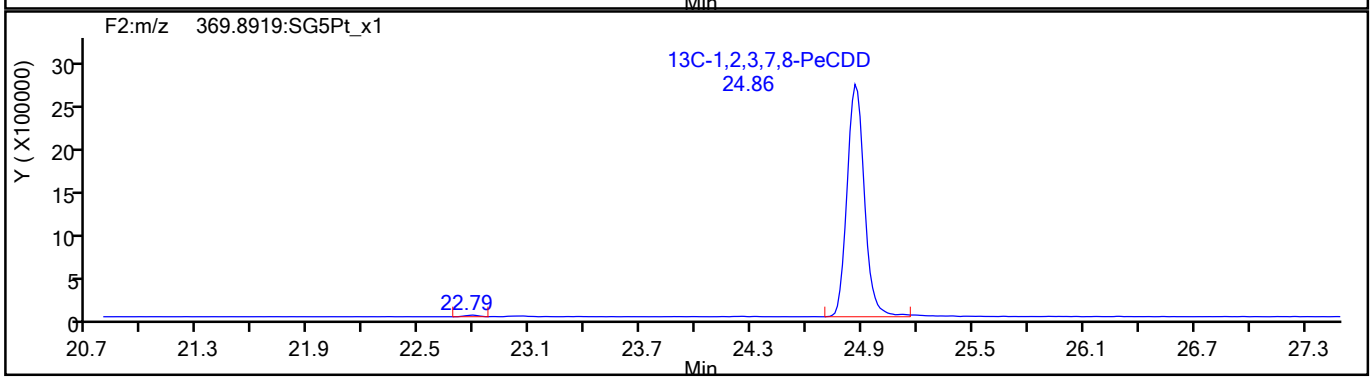

784047

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

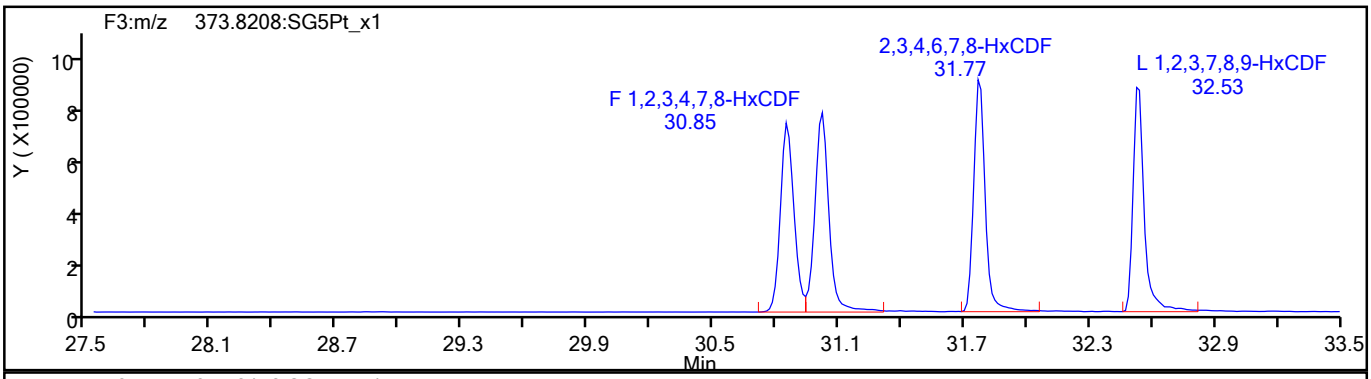

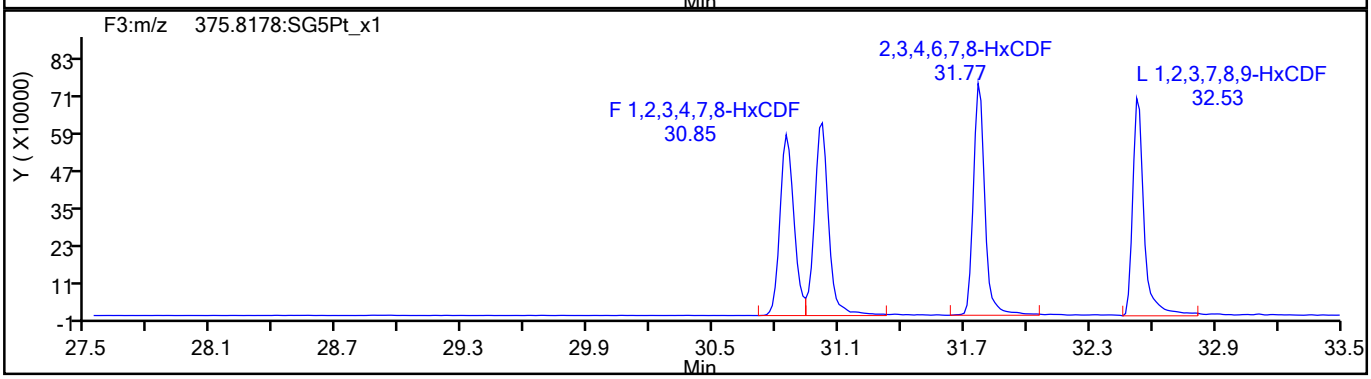

HxCDF Standards

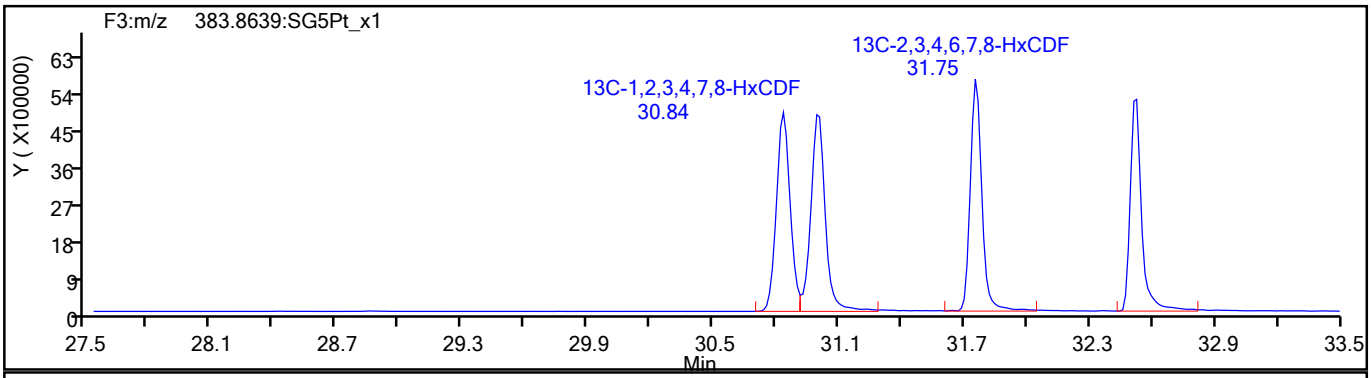

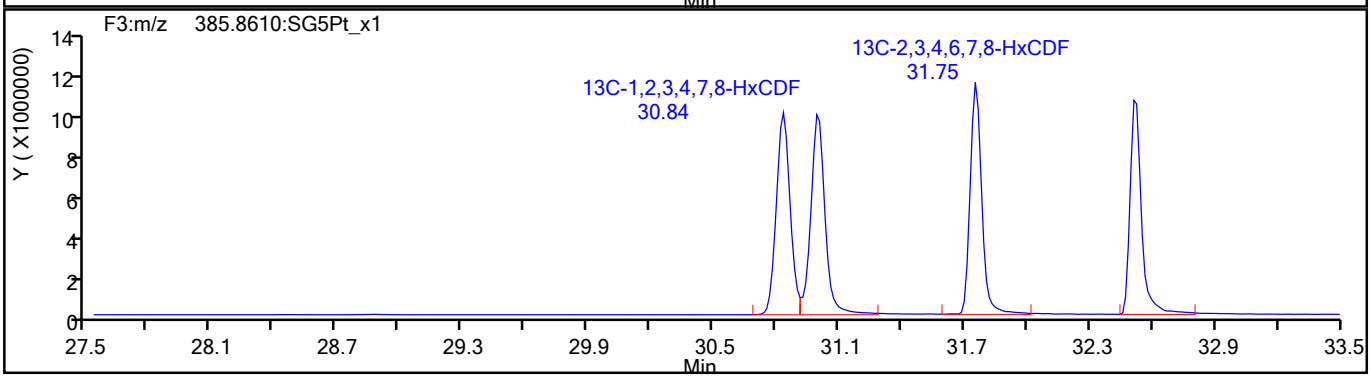

784048

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Eurofins TestAmerica, Sacramento

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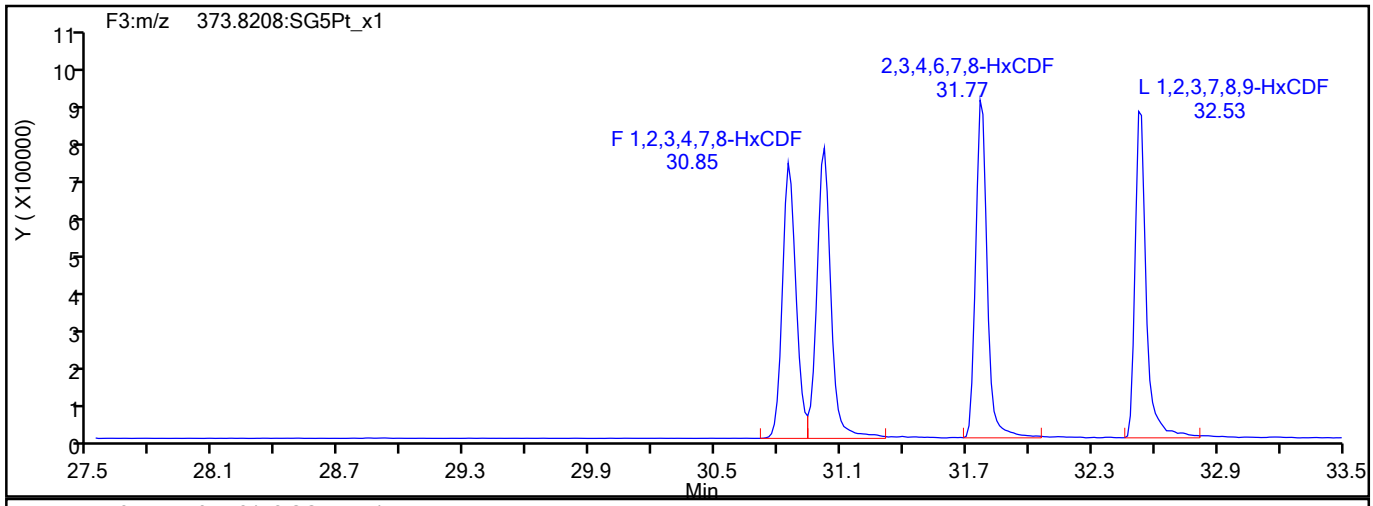

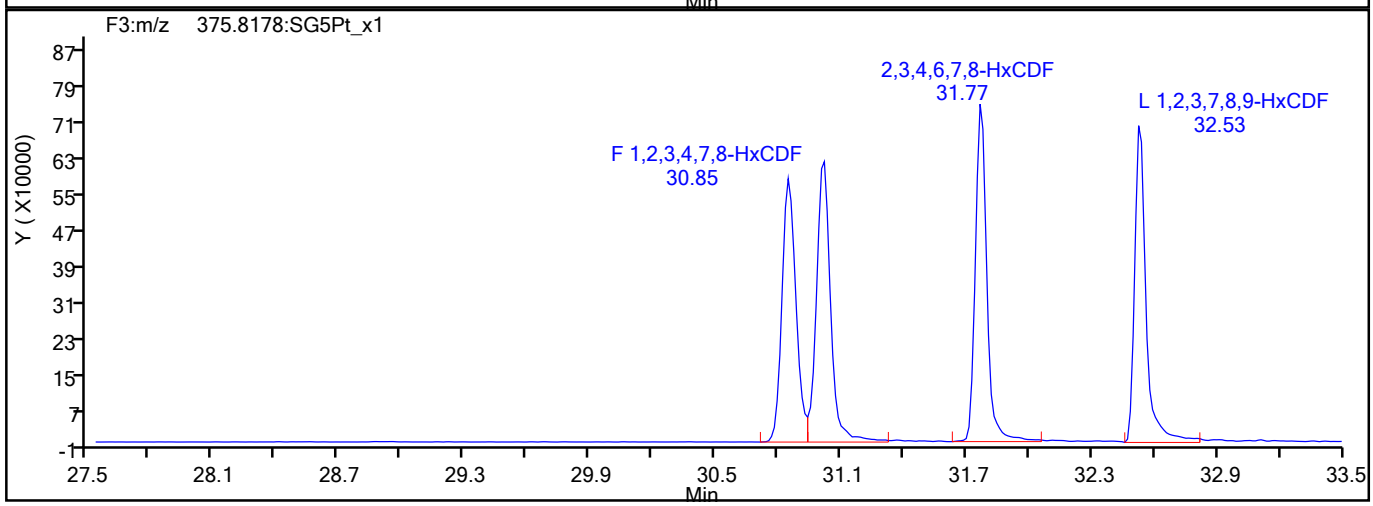

HxCDF Interference Mass

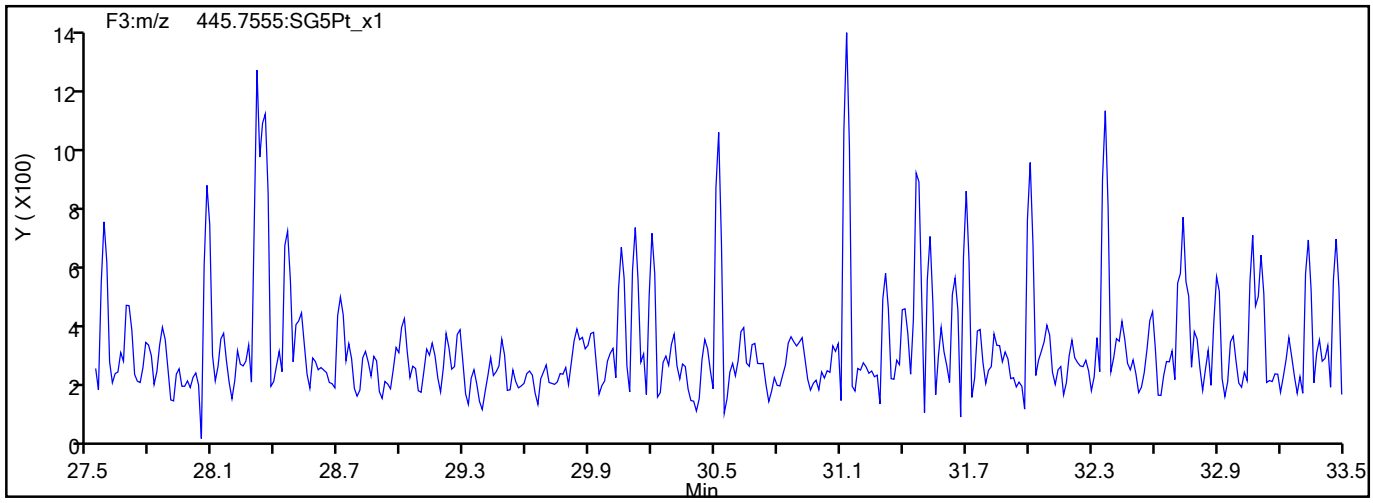

784049

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Eurofins TestAmerica, Sacramento

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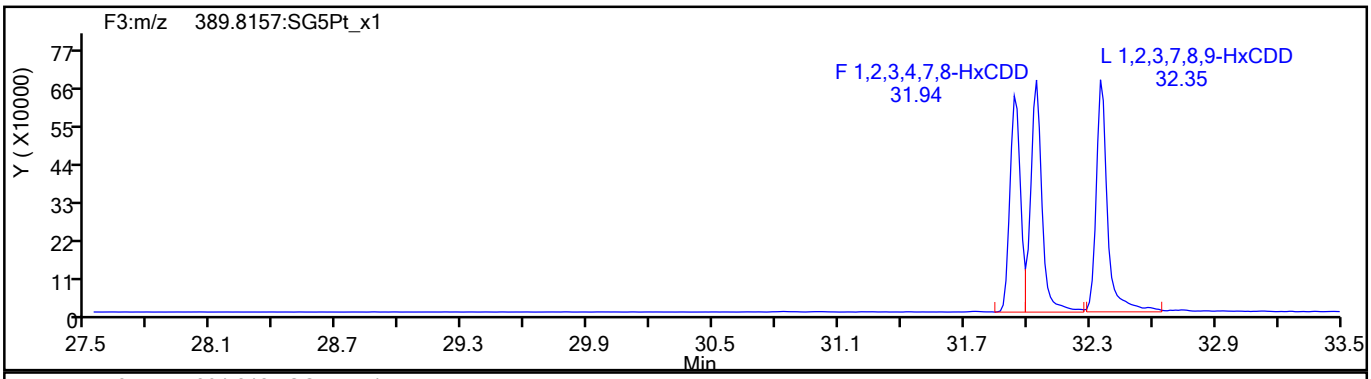

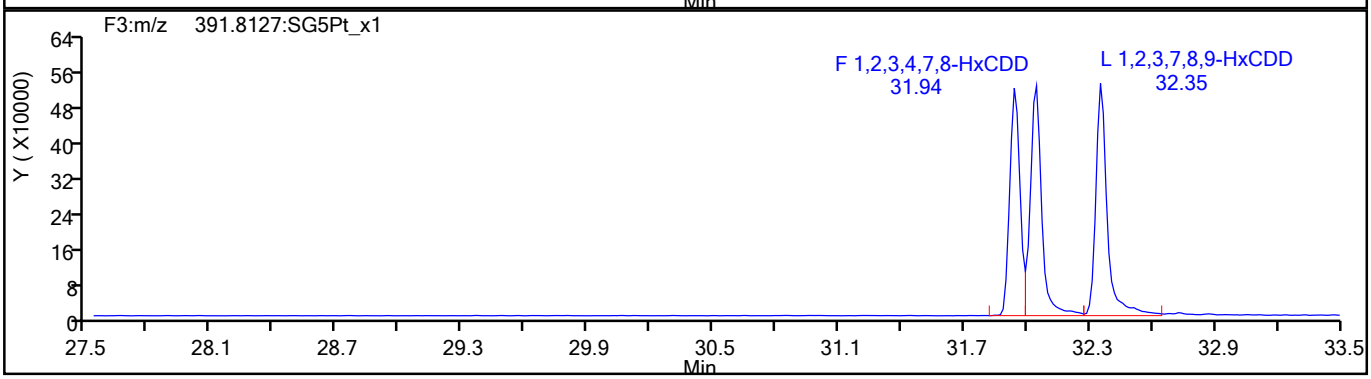

HxCDD Standards

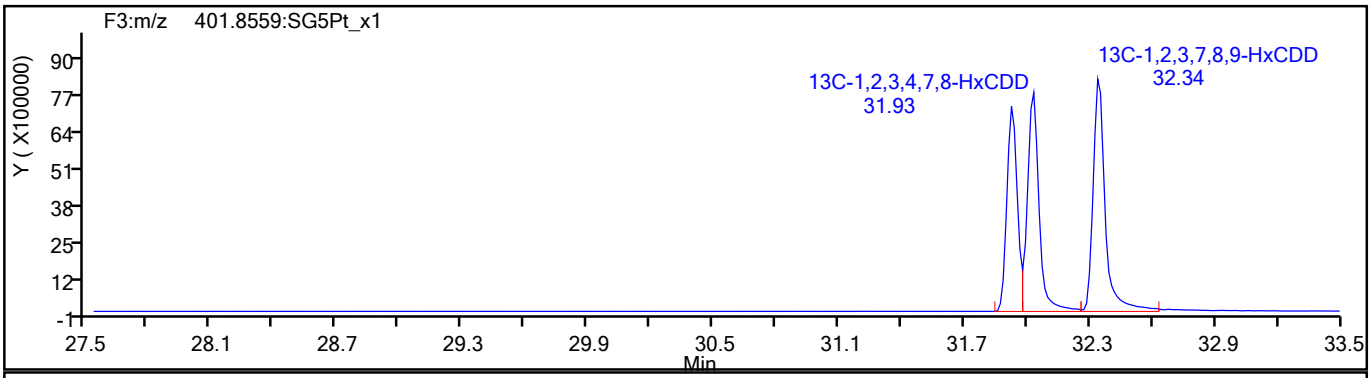

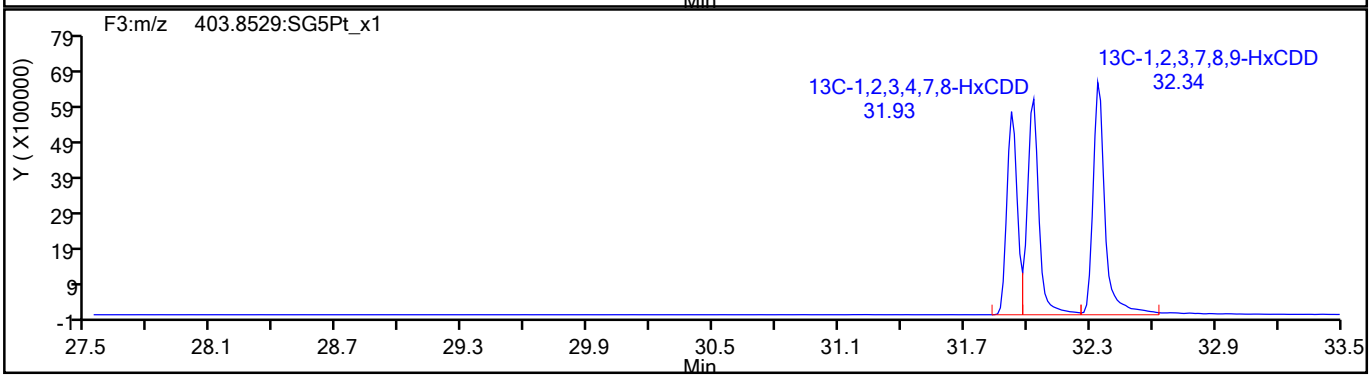

784050

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

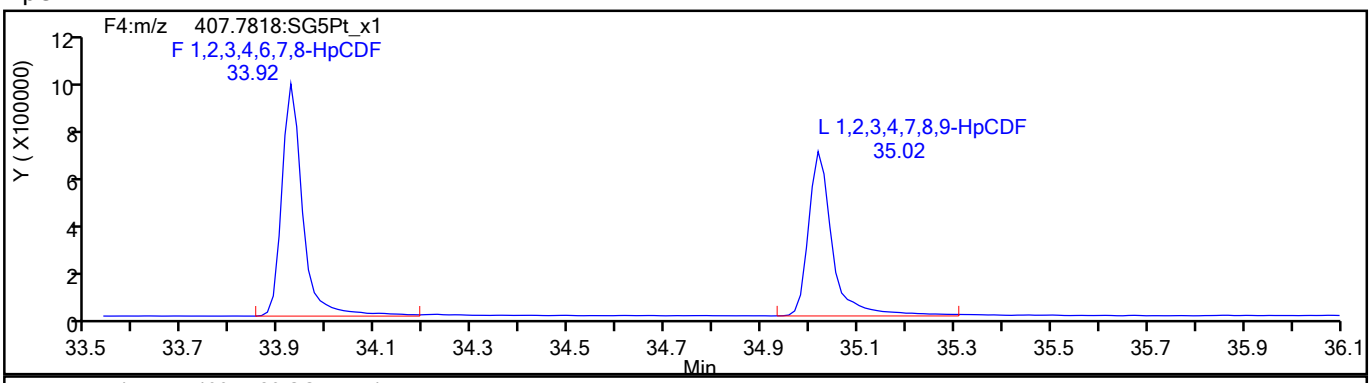

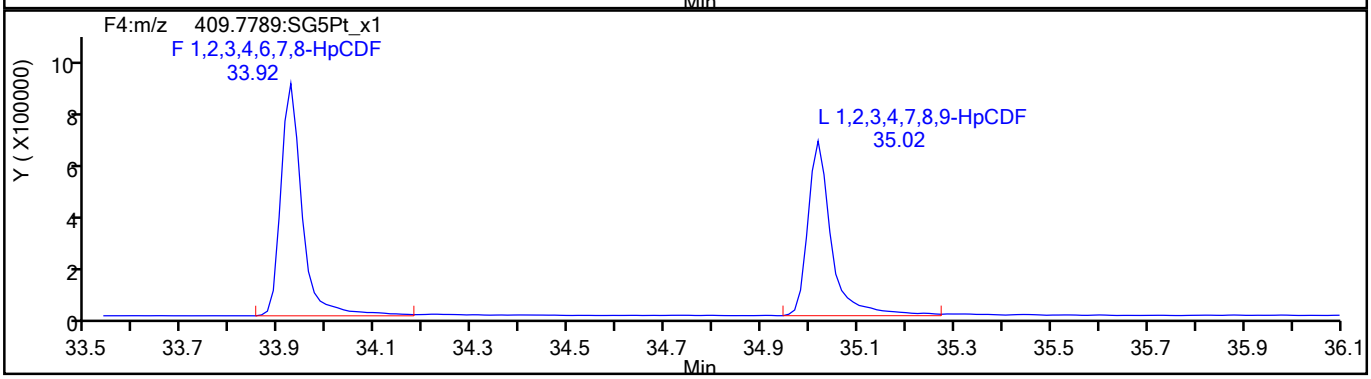

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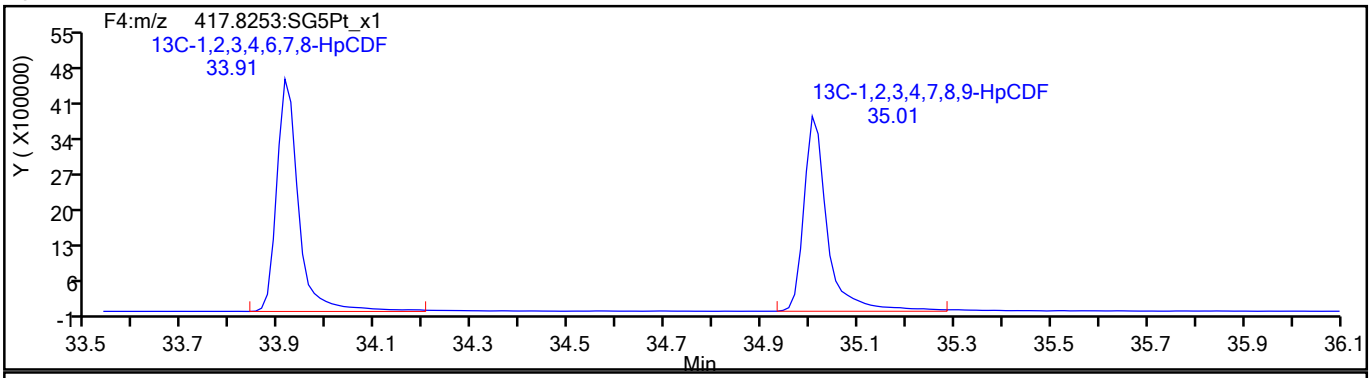

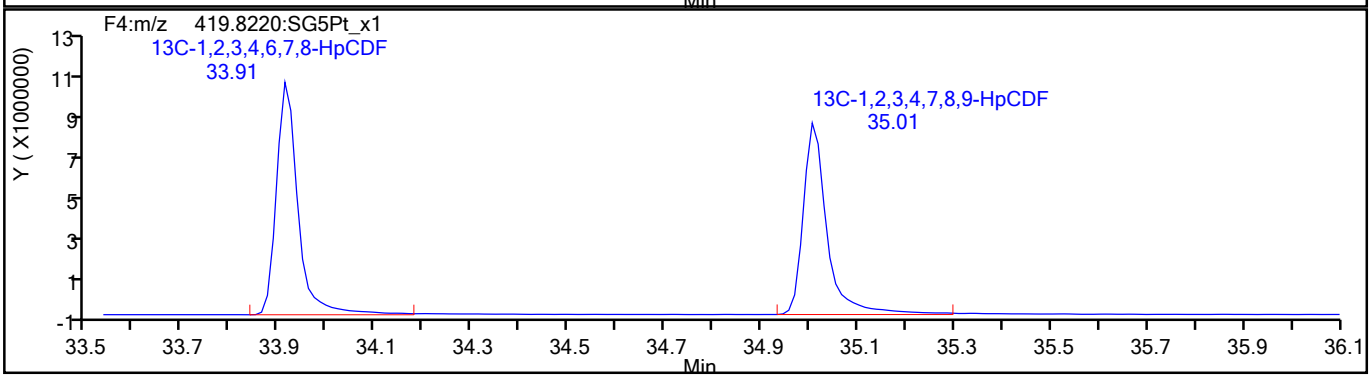

784051

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Eurofins TestAmerica, Sacramento

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HpCDF

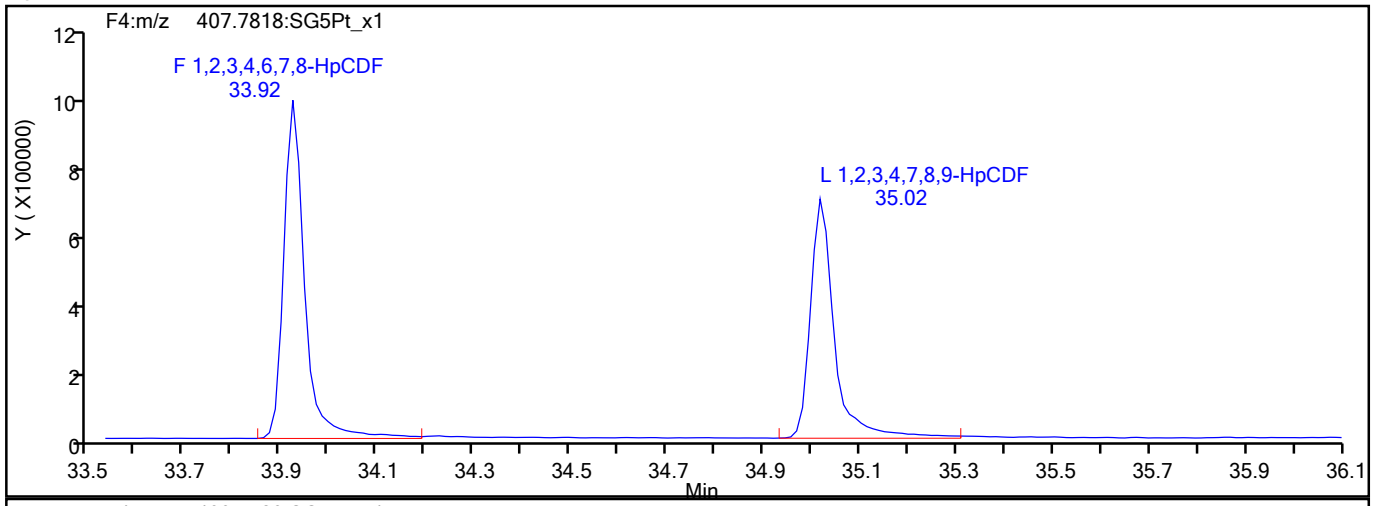

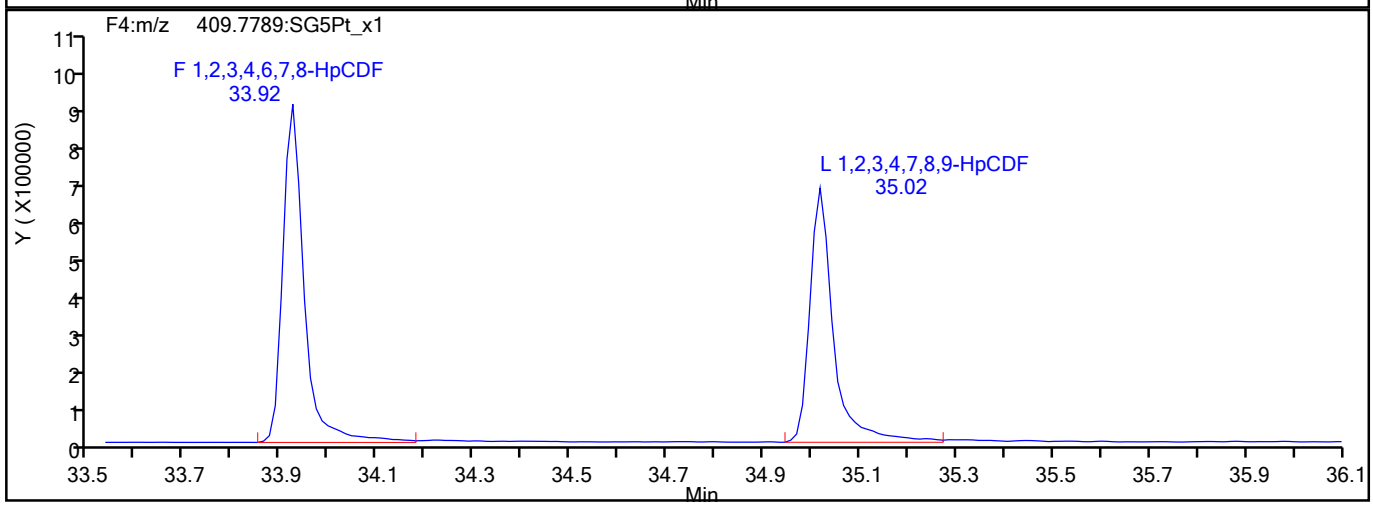

HpCDF Interference Mass

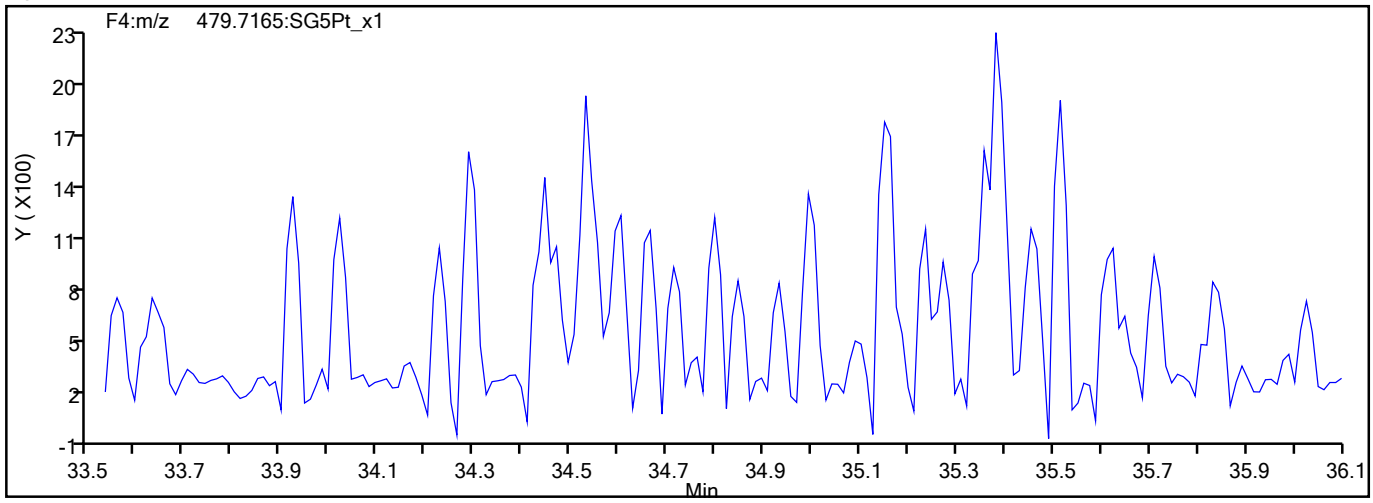

784052

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

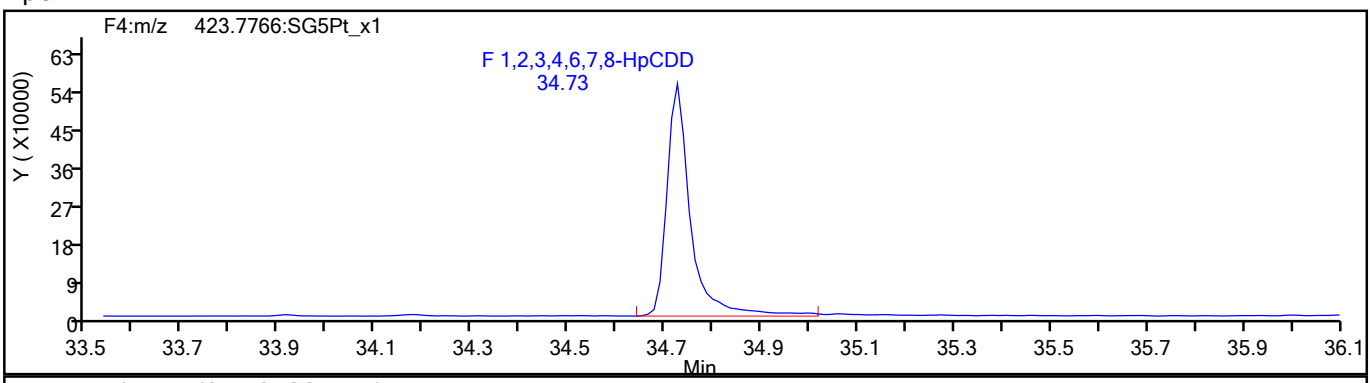

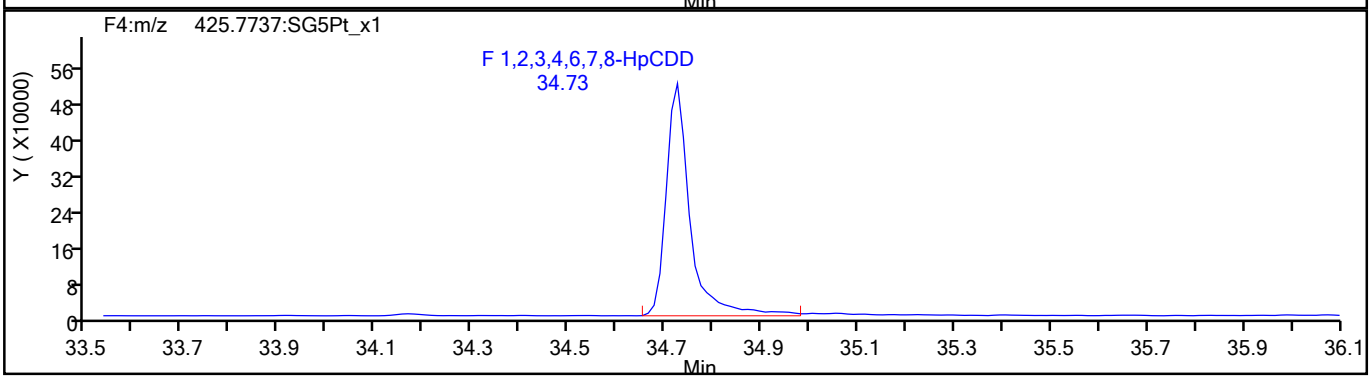

HpCDD Standards

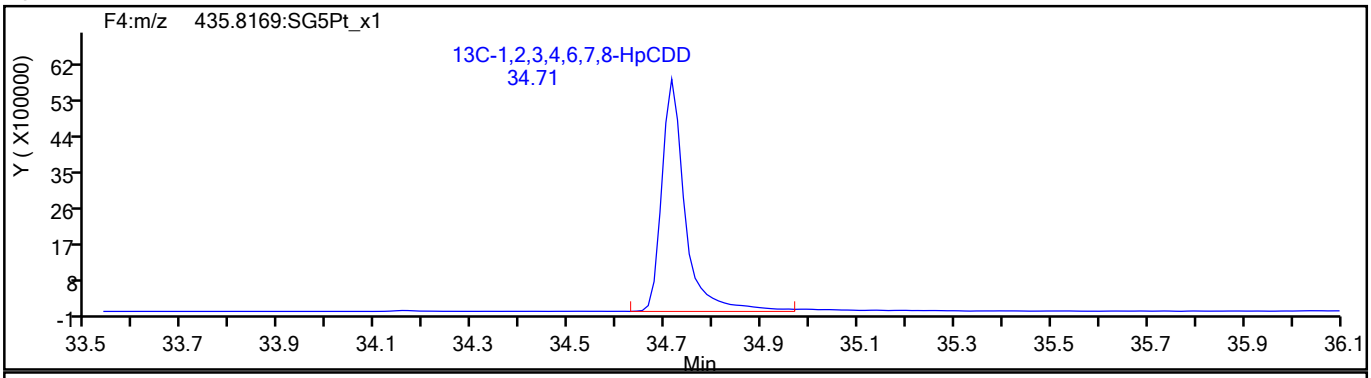

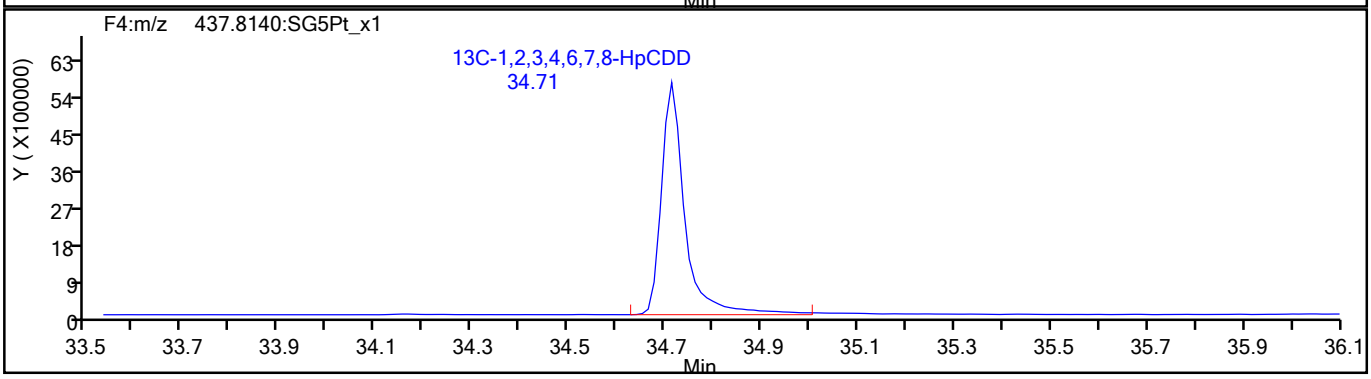

784053

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

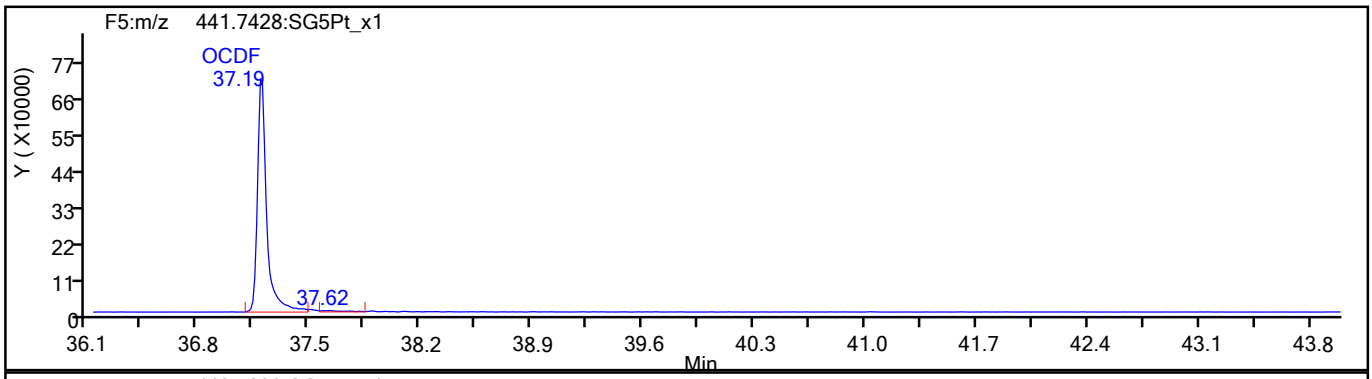

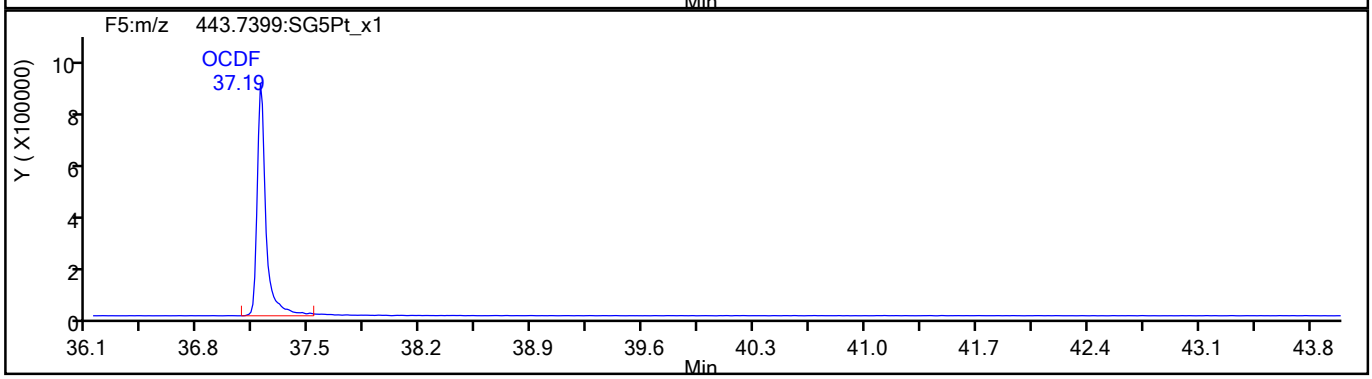

OCDF Standards

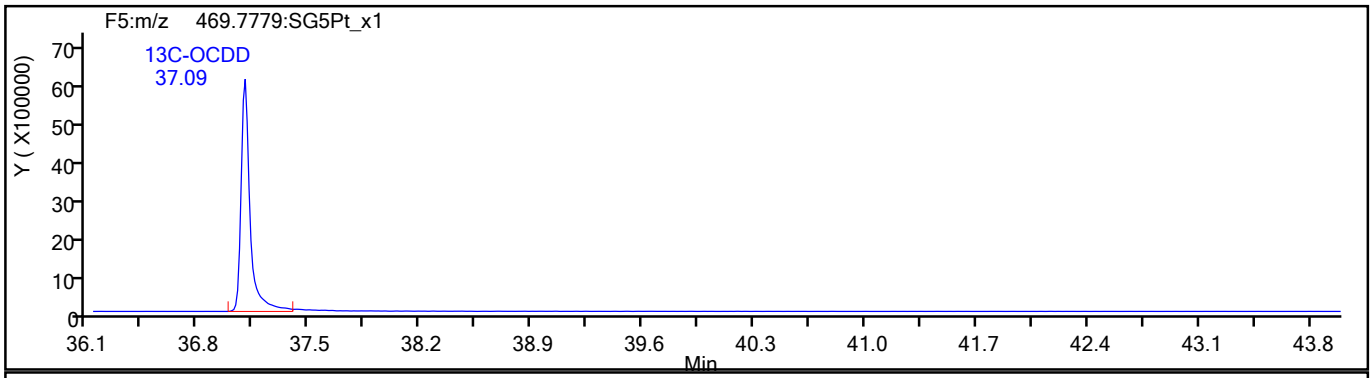

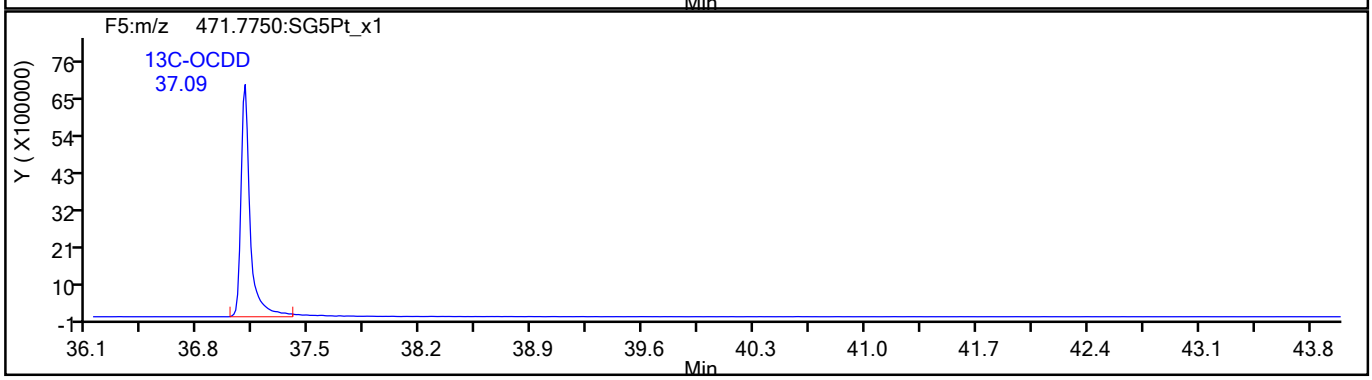

784054

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

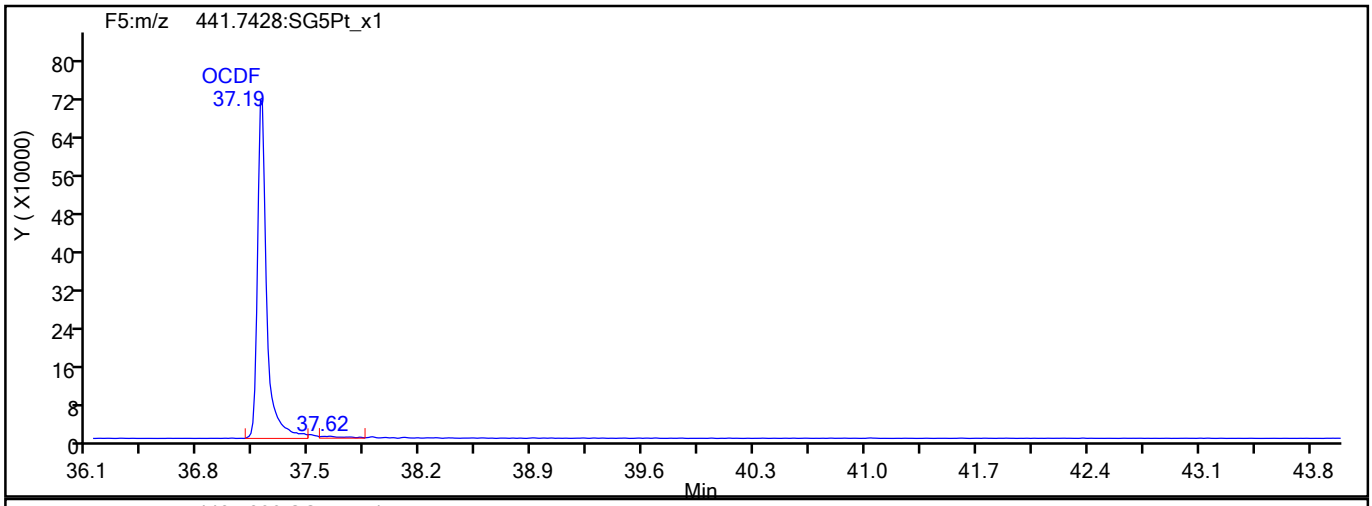

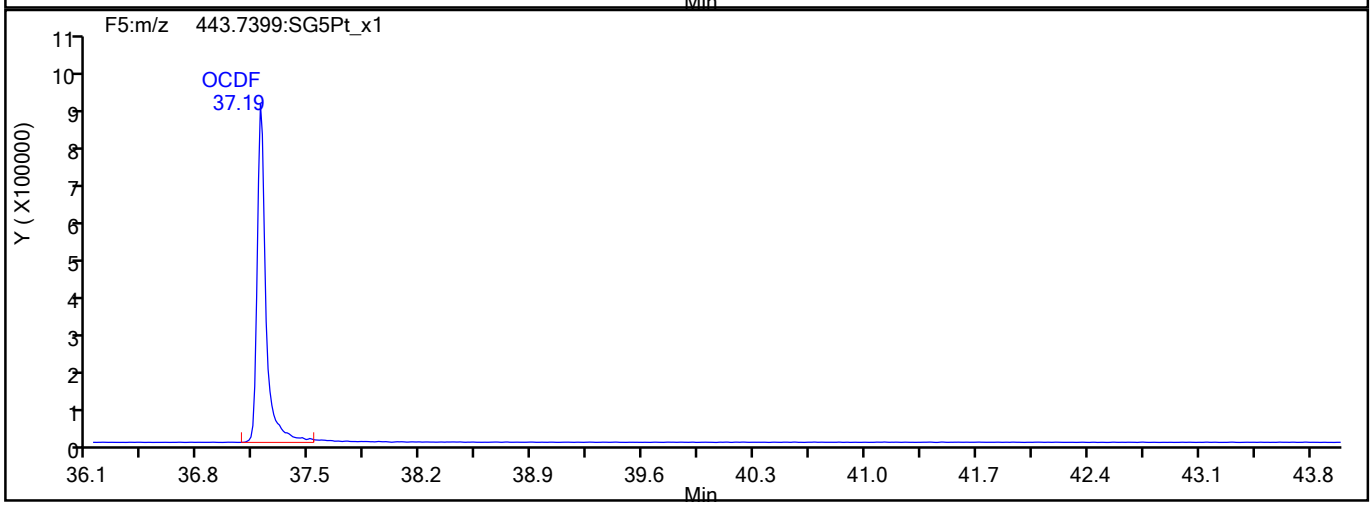

OCDF Interference Mass

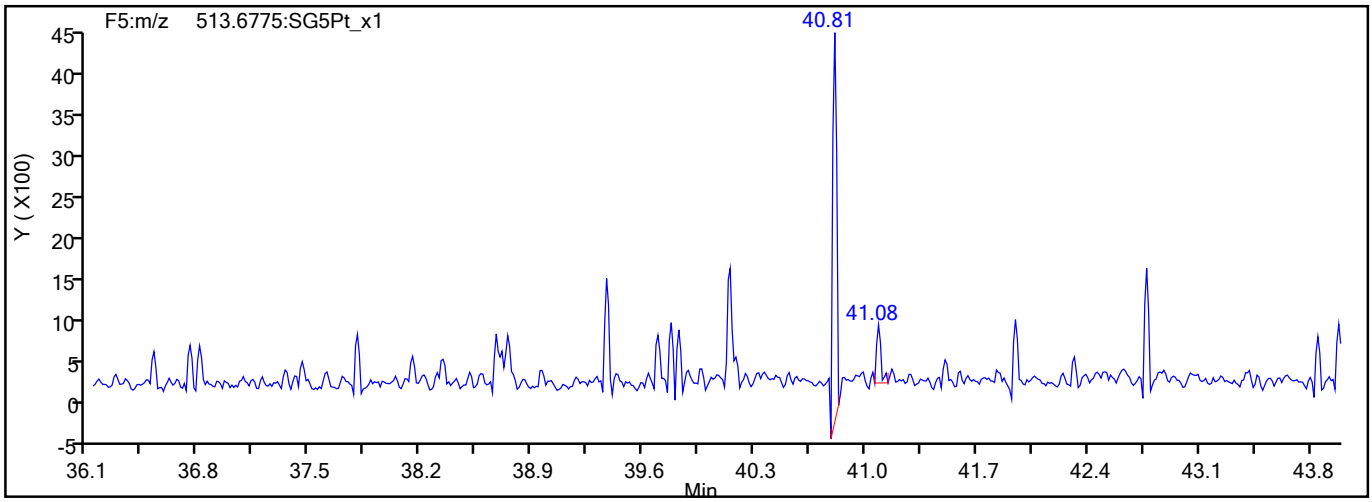

784055

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

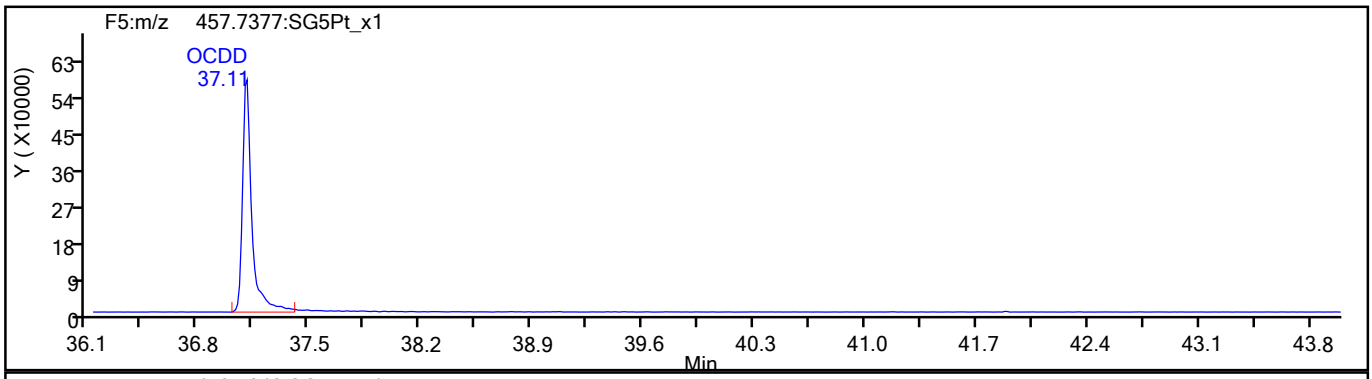

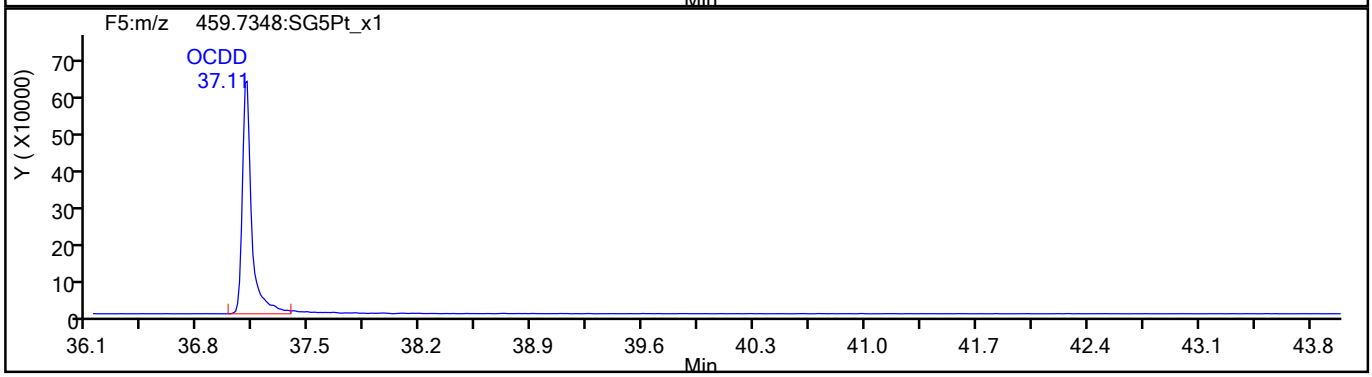

OCDD Standards

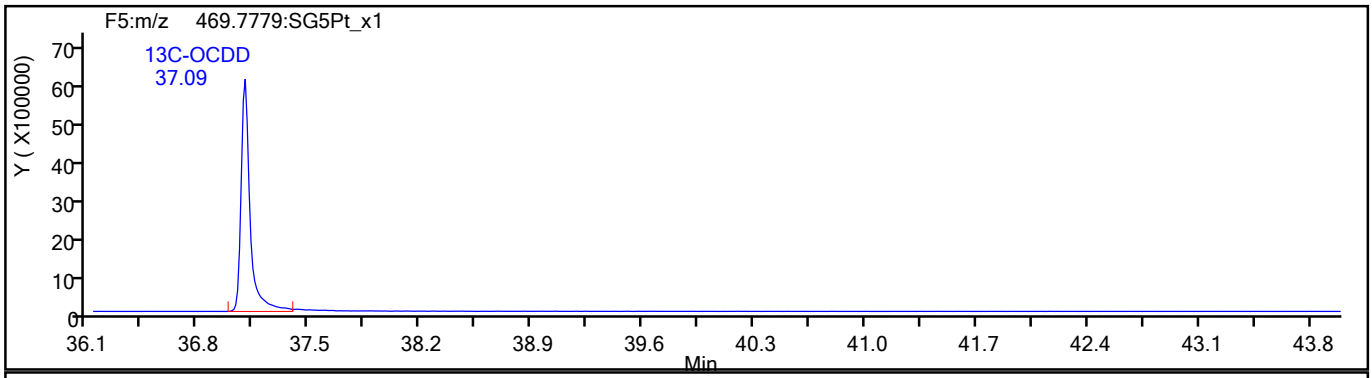

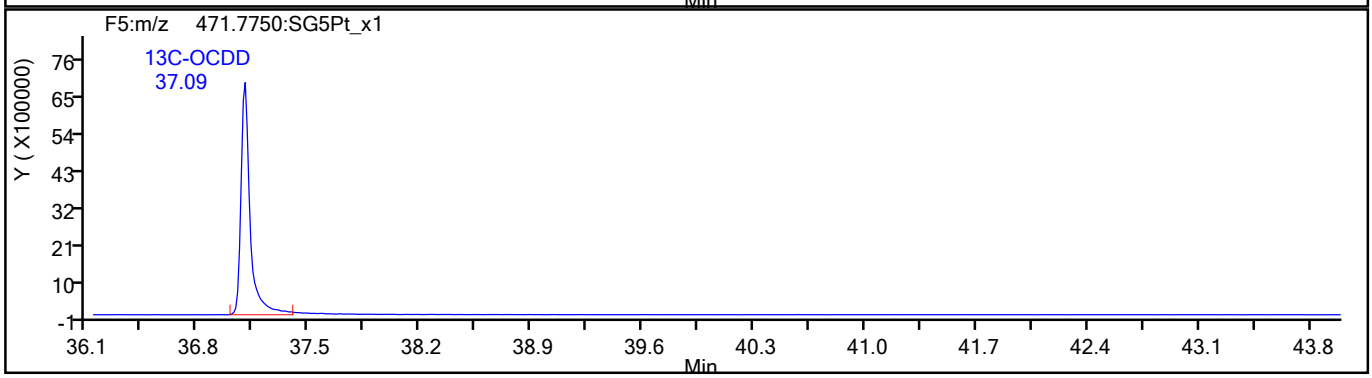

784056

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

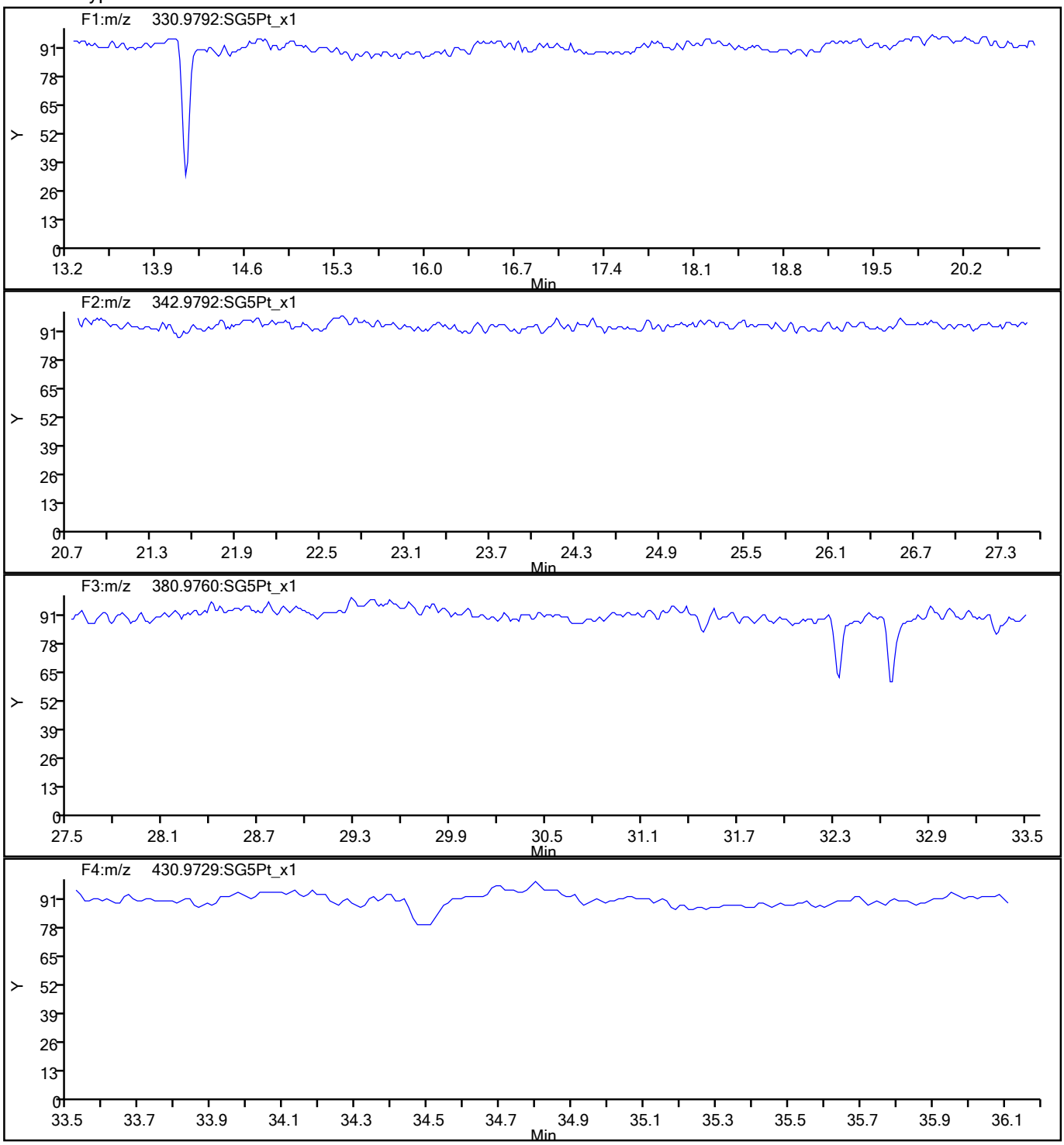

784057

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

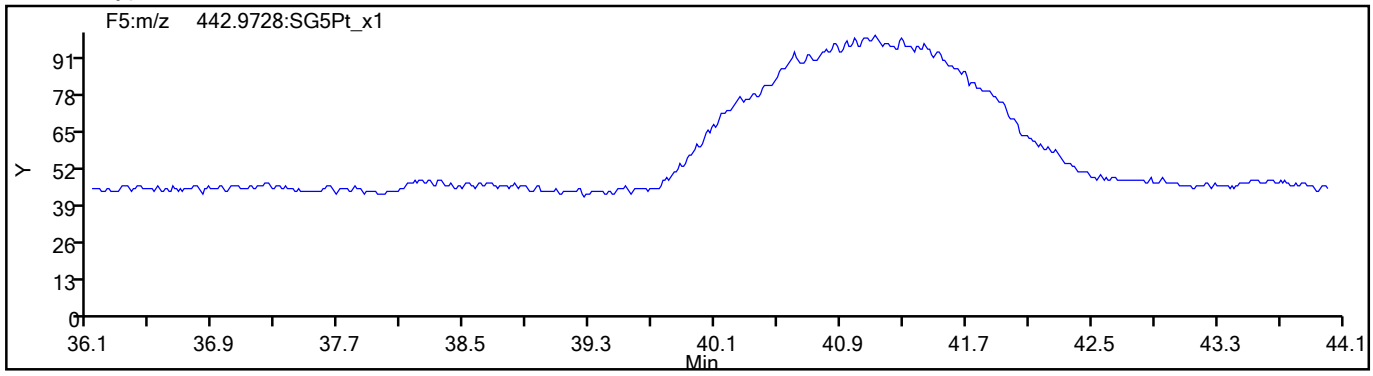

784058

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62635225	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	101724636	0.78	1.6249	99.9	99.9	0.2242	0.2242	99.95	
2,3,7,8-TCDF	17.643	10638776	0.78	1.0239	10.2	10.2	0.0283	0.0283	102	
S Total TCDF					10.2	10.2	0.0283	0.0283		
D 13C-2,3,7,8-TCDD	18.338	56155483	0.81	0.8993	99.7	99.7	0.1510	0.1510	99.69	
$ 37Cl4-2,3,7,8-TCDD	18.369	7339670		1.1071	10.6	10.6	0.0132	0.0132	106	
2,3,7,8-TCDD	18.369	7104238	0.76	1.2541	10.1	10.1	0.0224	0.0224	101	
S Total TCDD					10.1	10.1	0.0224	0.0224		
D 13C-1,2,3,7,8-PeCDF	22.762	76368219	1.58	1.2101	100.8	100.8	0.2109	0.2109	101	
1,2,3,7,8-PeCDF	22.789	41588176	1.62	1.0611	51.3	51.3	0.1508	0.1508	103	
D 13C-2,3,4,7,8-PeCDF	24.139	78214582	1.58	1.2395	100.7	100.7	0.2059	0.2059	101	
2,3,4,7,8-PeCDF	24.167	40928436	1.60	1.0184	51.4	51.4	0.1656	0.1656	103	
S Total PeCDF					102.7	102.7	0.1582	0.1582		
D 13C-1,2,3,7,8-PeCDD	24.876	47124414	1.60	0.7612	98.8	98.8	0.1214	0.1214	98.83	
1,2,3,7,8-PeCDD	24.903	25165054	1.62	1.0484	50.9	50.9	0.0669	0.0669	102	
S Total PeCDD					50.9	50.9	0.0669	0.0669		
D 13C-1,2,3,4,7,8-HxCDF	30.849	68075509	0.52	1.0837	98.8	98.8	0.4389	0.4389	98.79	
1,2,3,4,7,8-HxCDF	30.862	37525146	1.24	1.0851	50.8	50.8	0.2914	0.2914	102	
D 13C-1,2,3,6,7,8-HxCDF	31.009	70677463	0.52	1.1279	98.5	98.5	0.4217	0.4217	98.54	
1,2,3,6,7,8-HxCDF	31.022	40802767	1.21	1.1260	51.3	51.3	0.2729	0.2729	103	
D 13C-2,3,4,6,7,8-HxCDF	31.767	67028498	0.52	1.0637	99.1	99.1	0.4471	0.4471	99.10	
2,3,4,6,7,8-HxCDF	31.781	39741365	1.22	1.1675	50.8	50.8	0.2260	0.2260	102	
D 13C-1,2,3,7,8,9-HxCDF	32.526	60389284	0.52	0.9676	98.2	98.2	0.4916	0.4916	98.15	
1,2,3,7,8,9-HxCDF	32.540	35924190	1.21	1.1664	51.0	51.0	0.2363	0.2363	102	
S Total HxCDF					203.9	203.9	0.2566	0.2566		
* 13C-1,2,3,7,8,9-HxCDD	32.353	63588089	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.941	44039927	1.25	0.7334	94.4	94.4	0.3731	0.3731	94.43	
1,2,3,4,7,8-HxCDD	31.954	24891170	1.33	1.0640	53.1	53.1	0.1747	0.1747	106	
D 13C-1,2,3,6,7,8-HxCDD	32.034	55284532	1.26	0.8802	98.8	98.8	0.3109	0.3109	98.78	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	27953752	1.21	1.0001	50.6	50.6	0.1666	0.1666	101	
1,2,3,7,8,9-HxCDD	32.367	29794954	1.26	1.1325	53.0	53.0	0.1552	0.1552	106	
S Total HxCDD					156.7	156.7	0.1655	0.1655		
D 13C-1,2,3,4,6,7,8-HpCDF	33.924	47697671	0.44	0.7730	97.0	97.0	1.328	1.328	97.03	
1,2,3,4,6,7,8-HpCDF	33.937	35740964	1.05	1.4413	52.0	52.0	0.5190	0.5190	104	
D 13C-1,2,3,4,7,8,9-HpCDF	35.018	43238622	0.44	0.7008	97.0	97.0	1.465	1.465	97.03	
1,2,3,4,7,8,9-HpCDF	35.030	29450636	1.07	1.3174	51.7	51.7	0.6741	0.6741	103	
S Total HpCDF					103.7	103.7	0.5966	0.5966		
D 13C-1,2,3,4,6,7,8-HpCDD	34.726	40333717	1.03	0.6472	98.0	98.0	0.5563	0.5563	98.00	
1,2,3,4,6,7,8-HpCDD	34.726	22538791	1.03	1.0943	51.1	51.1	0.2539	0.2539	102	
S Total HpCDD					51.1	51.1	0.2539	0.2539		
D 13C-OCDD	37.094	54338243	0.87	0.4472	191.1	191.1	0.2612	0.2612	95.55	
OCDF	37.202	41147202	0.91	1.4382	105.3	105.3	0.1155	0.1155	105	
OCDD	37.106	31656667	0.89	1.1070	105.3	105.3	0.1572	0.1572	105	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28287778	7074314	3903	9757	1813		
333.9339	18.142	18.142	0		34347447	8672273	4653	11632	1864	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.616	1	0.972	44652675	10978931	8756	21890	1254		
317.9389	17.628	17.616	1	0.972	57071961	13787474	14192	35480	971	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.631	1	1.001	4665898	1145703	1759	4397	651		
305.8987	17.643	17.631	1	1.001	5972878	1458593	1111	2777	1313	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	25132336	5946858	3903	9757	1524		
333.9339	18.338	18.338	0	1.011	31023147	7337223	4653	11632	1577	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.369	18.354	1	1.012	7339670	1703834	921	2302	1850		
2,3,7,8-TCDD											
319.8965	18.369	18.357	1	1.002	3077636	720367	906	2265	795		
321.8936	18.369	18.357	1	1.002	4026602	947792	588	1470	1612	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46742521	8181774	9794	24485	835		
353.8970	22.762	22.754	0	1.255	29625698	5225925	6278	15695	832	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.789	22.779	1	1.001	25738852	4452039	5088	12720	875		
341.8567	22.789	22.779	1	1.001	15849324	2731041	3494	8735	782	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.139	24.129	1	1.331	47906018	7878060	9794	24485	804		
353.8970	24.139	24.129	1	1.331	30308564	4845446	6278	15695	772	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.167	24.156	1	1.001	25185293	4111601	5088	12720	808		
341.8567	24.167	24.156	1	1.001	15743143	2618923	3494	8735	750	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.876	24.865	1	1.371	29023498	4508866	3701	9252	1218		
369.8919	24.876	24.865	1	1.371	18100916	2812844	2121	5302	1326	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.903	24.892	1	1.001	15548746	2422000	1286	3215	1883		
357.8516	24.903	24.892	1	1.001	9616308	1489099	768	1920	1939	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.849	30.838	1	0.954	23323404	5008910	10853	27132	462		
385.8610	30.849	30.838	1	0.954	44752105	9511743	20971	52427	454	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.000	20753403	4584464	10058	25145	456		
375.8178	30.862	30.857	0	1.000	16771743	3729681	8311	20777	449	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.009	31.003	0	0.958	24213048	5206646	10853	27132	480		
385.8610	31.009	31.003	0	0.958	46464415	9739576	20971	52427	464	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	22352739	4771379	10058	25145	474		
375.8178	31.022	31.022	0	1.000	18450028	3943683	8311	20777	475	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.767	31.756	1	0.982	22835025	6015846	10853	27132	554		
385.8610	31.767	31.756	1	0.982	44193473	11391437	20971	52427	543	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.781	31.772	1	1.000	21800962	5788708	10058	25145	576		
375.8178	31.781	31.772	1	1.000	17940403	4765095	8311	20777	573	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.005	20681548	5801162	10853	27132	535		
385.8610	32.526	32.523	0	1.005	39707736	10862121	20971	52427	518	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.540	32.534	0	1.000	19691436	5514300	10058	25145	548		
375.8178	32.540	32.534	0	1.000	16232754	4594829	8311	20777	553	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.353	32.342	1		35642869	9349119	10403	26007	899		
403.8529	32.353	32.342	1		27945220	7378163	7908	19770	933	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.941	31.929	1	0.987	24473480	7240164	10403	26007	696		
403.8529	31.941	31.929	1	0.987	19566447	5775722	7908	19770	730	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.954	31.945	1	1.000	14220855	4121905	5566	13915	741		
391.8127	31.954	31.945	1	1.000	10670315	3199272	4114	10285	778	1.33(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.034	32.033	0	0.990	30876044	8117648	10403	26007	780		
403.8529	32.034	32.033	0	0.990	24408488	6404371	7908	19770	810	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	15327109	4211681	5566	13915	757		
391.8127	32.047	32.047	0	1.000	12626643	3343117	4114	10285	813	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.367	32.355	1	1.013	16583478	4368640	5566	13915	785		
391.8127	32.353	32.355	0	1.013	13211476	3519862	4114	10285	856	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.924	33.914	1	1.049	14460337	4683854	18083	45207	259		
419.8220	33.924	33.914	1	1.049	33237334	10568693	50629	126572	209	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.937	33.926	1	1.000	18301949	5790856	23497	58742	246		
409.7789	33.924	33.926	0	1.000	17439015	5585138	22139	55347	252	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.018	35.010	0	1.082	13111896	3936331	18083	45207	218		
419.8220	35.018	35.010	0	1.082	30126726	8910423	50629	126572	176	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.030	35.020	1	1.000	15206712	4448229	23497	58742	189		
409.7789	35.018	35.020	0	1.000	14243924	4117019	22139	55347	186	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.726	34.716	1	1.073	20474082	5927612	12552	31380	472		
437.8140	34.714	34.716	0	1.073	19859635	5735510	11540	28850	497	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	11412485	3410093	6511	16277	524		
425.7737	34.726	34.726	0	1.000	11126306	3358586	6451	16127	521	1.03(0.88-1.20)	
13C-OCDD											
469.7779	37.094	37.094	0	1.147	25234291	6398501	3020	7550	2119		
471.7750	37.094	37.094	0	1.147	29103952	7389026	4794	11985	1541	0.87(0.76-1.02)	
OCDF											
441.7428	37.202	37.199	0	1.003	19626693	5149784	2565	6412	2008		
443.7399	37.202	37.199	0	1.003	21520509	5563126	2015	5037	2761	0.91(0.76-1.02)	
OCDD											
457.7377	37.106	37.106	0	1.000	14916504	3846231	2276	5690	1690		
459.7348	37.106	37.106	0	1.000	16740163	4277323	2524	6310	1695	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

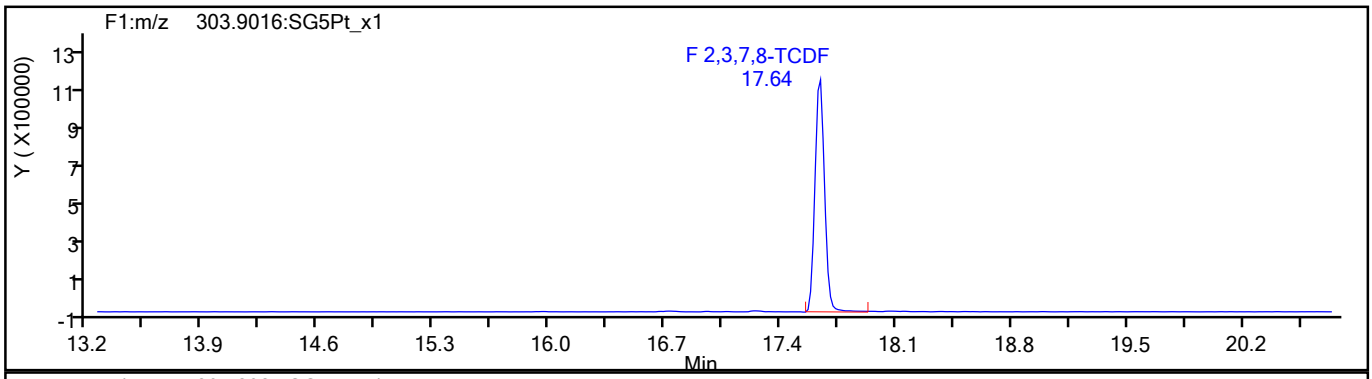

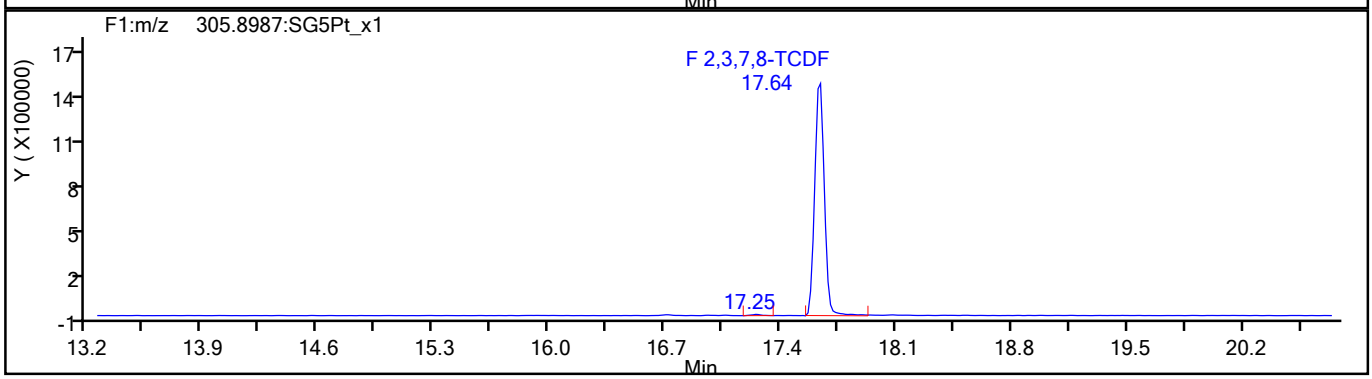

TCDF Standards

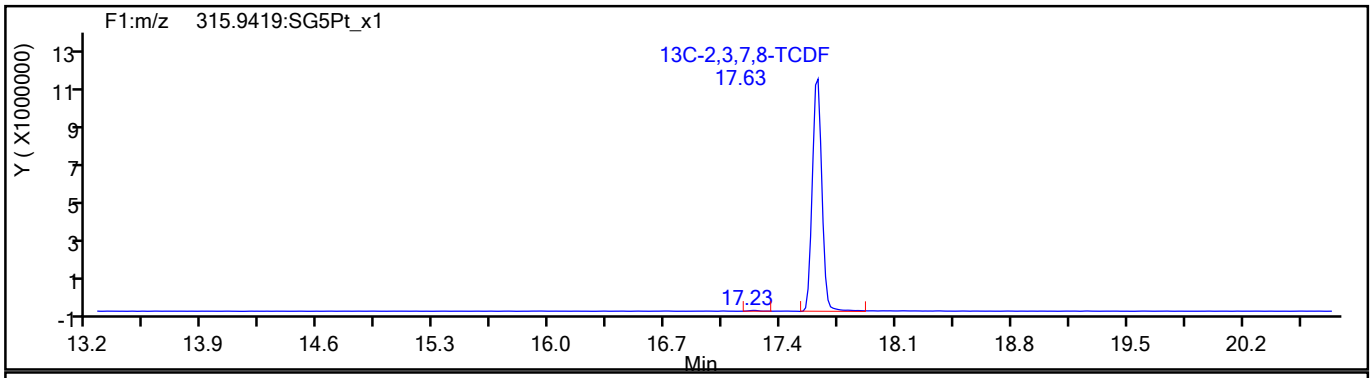

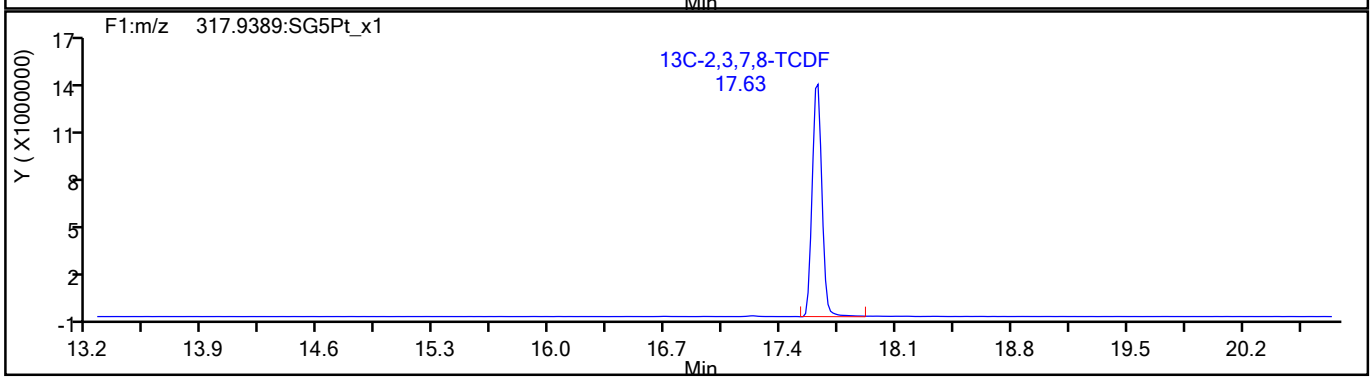

784064

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

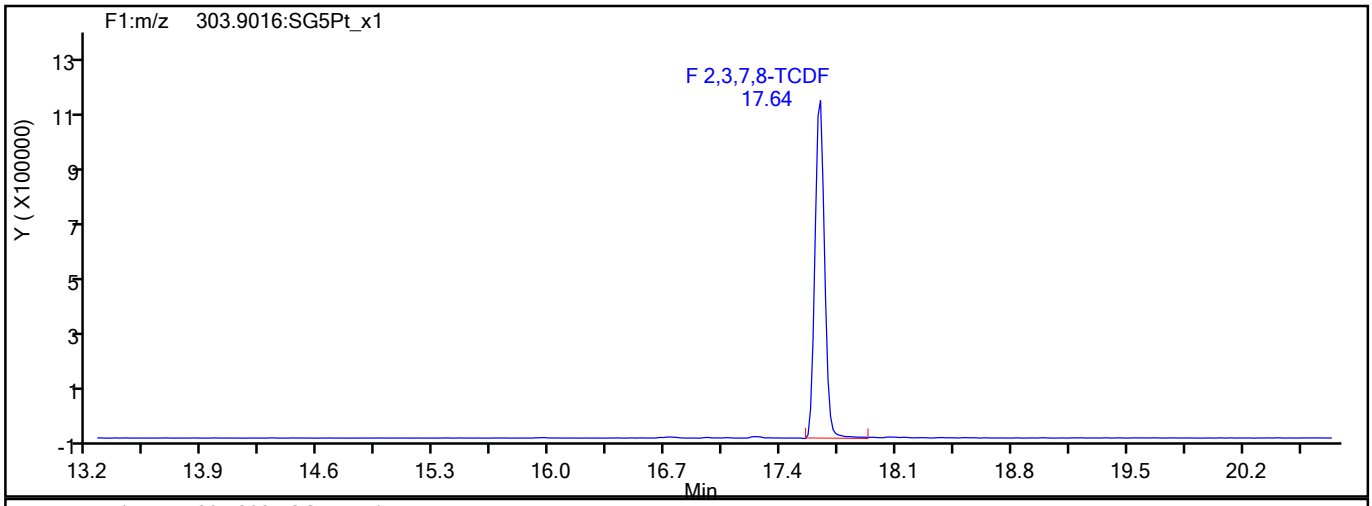

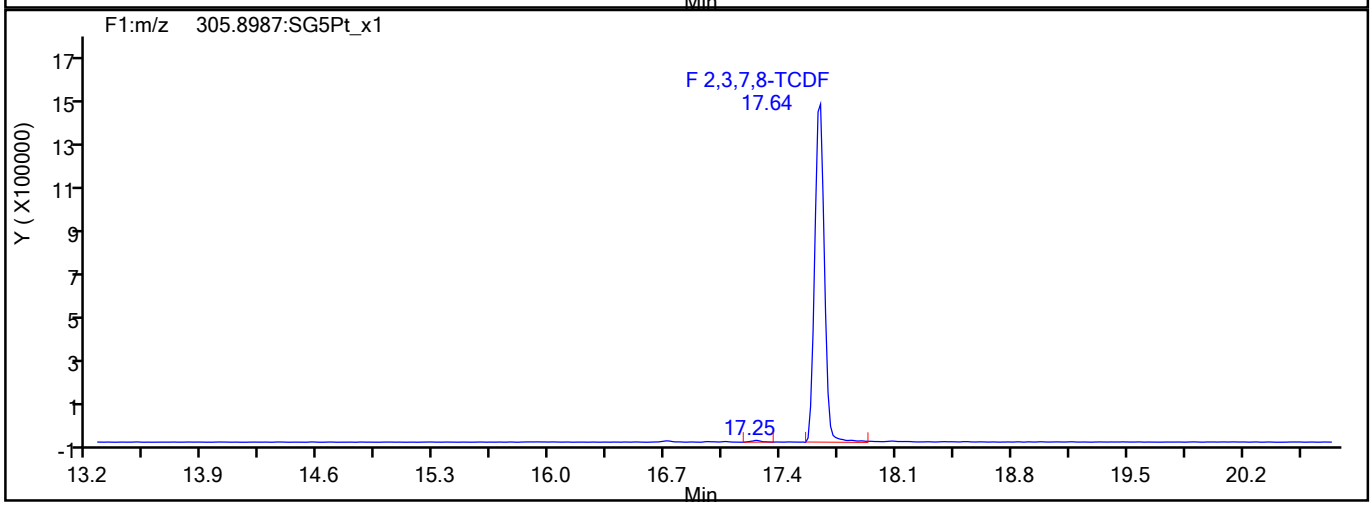

TCDF Interference Mass

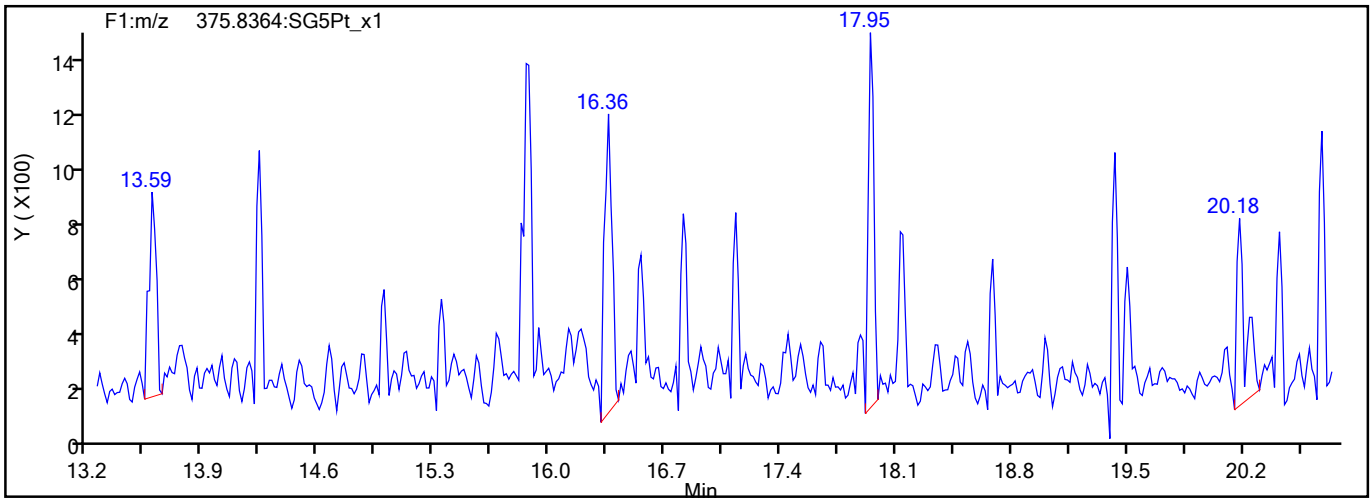

784065

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

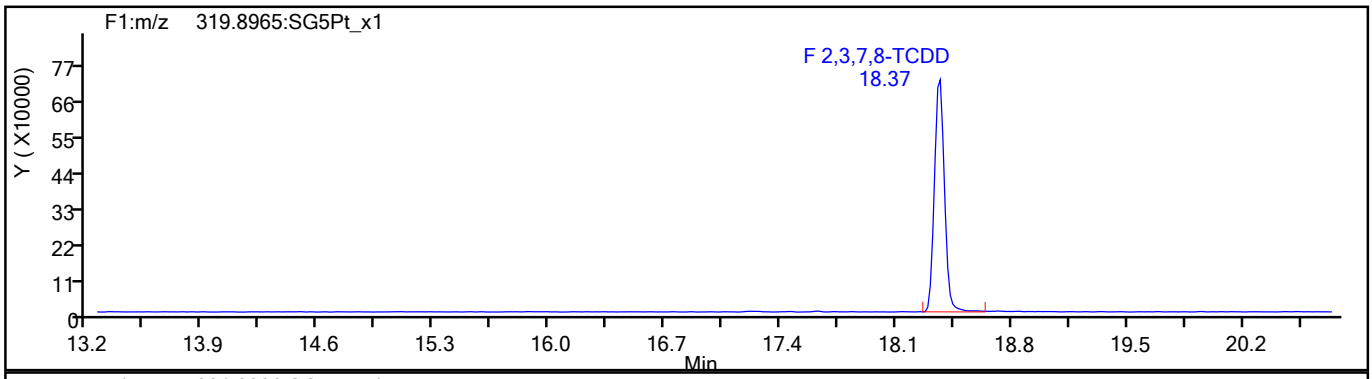

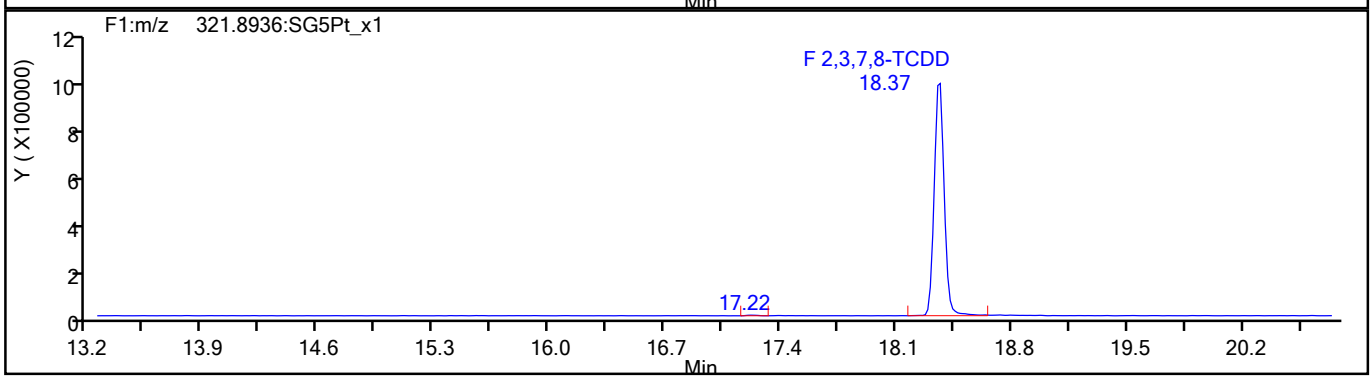

TCDD Standards

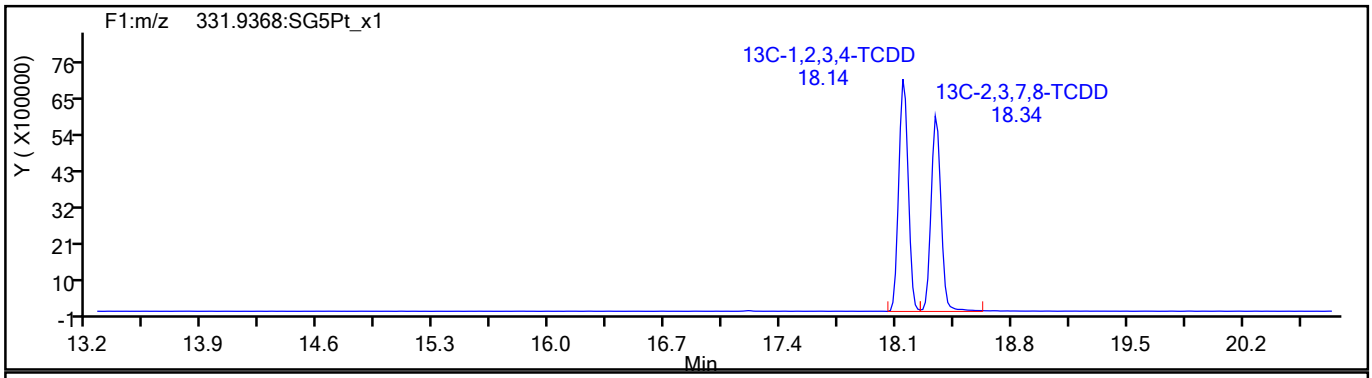

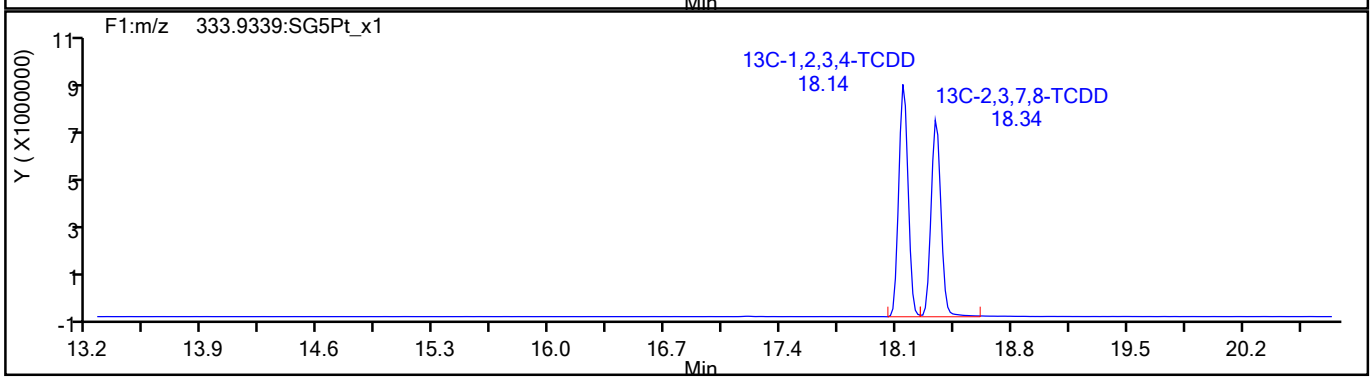

784066

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

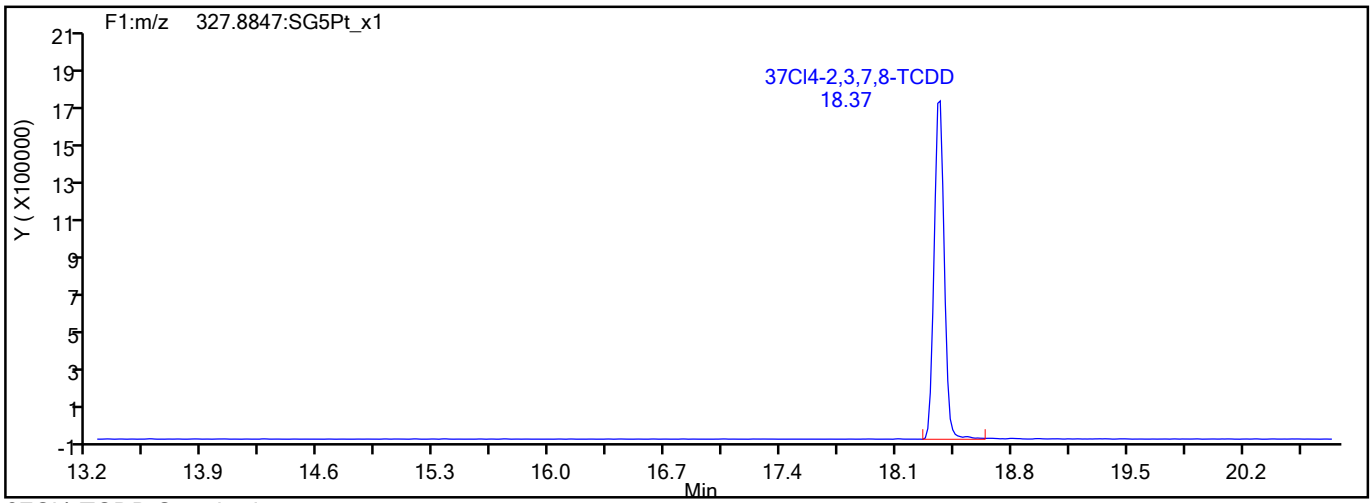

37Cl4-TCDD Standards

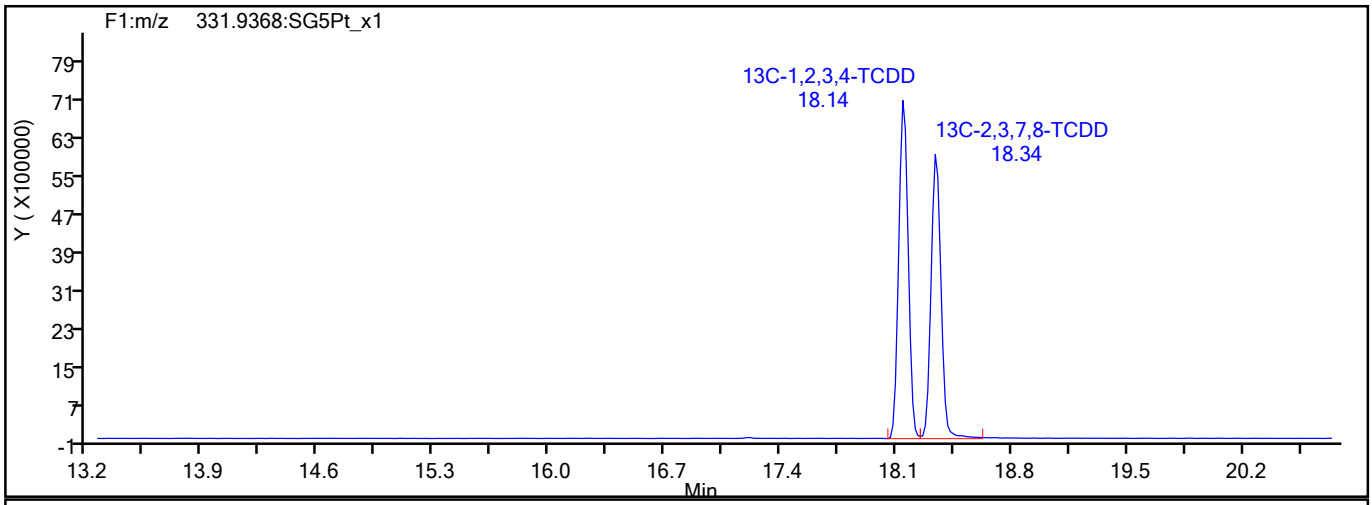

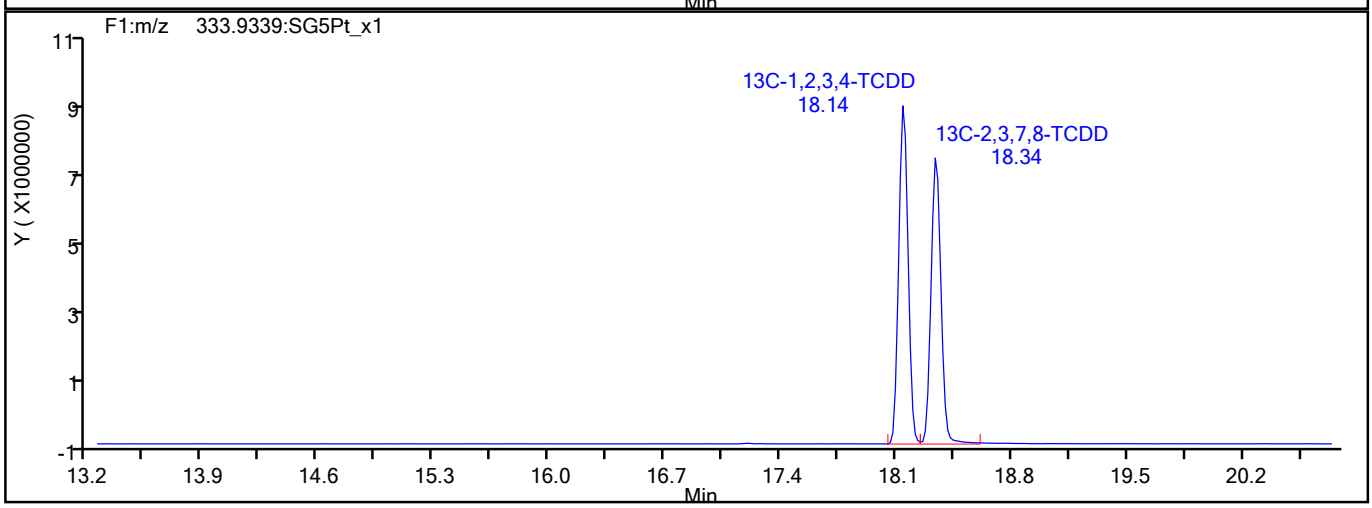

784067

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

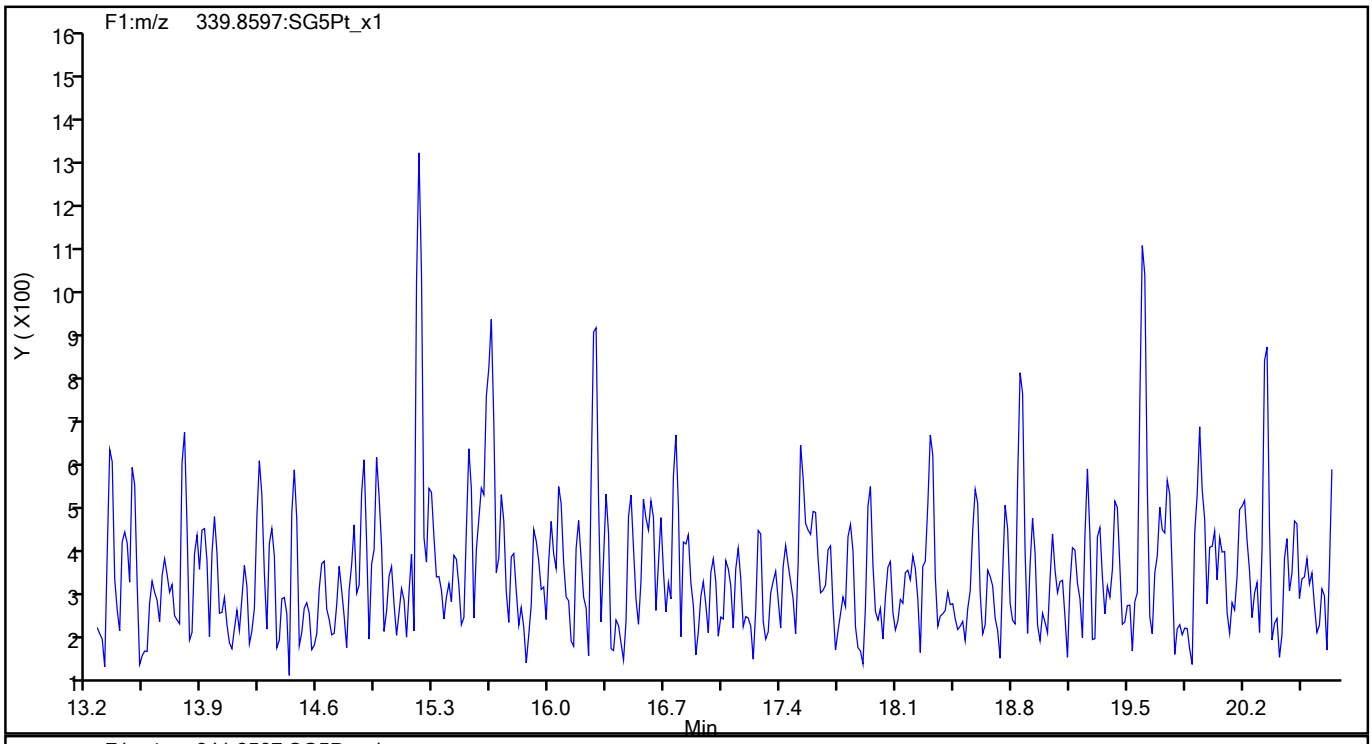

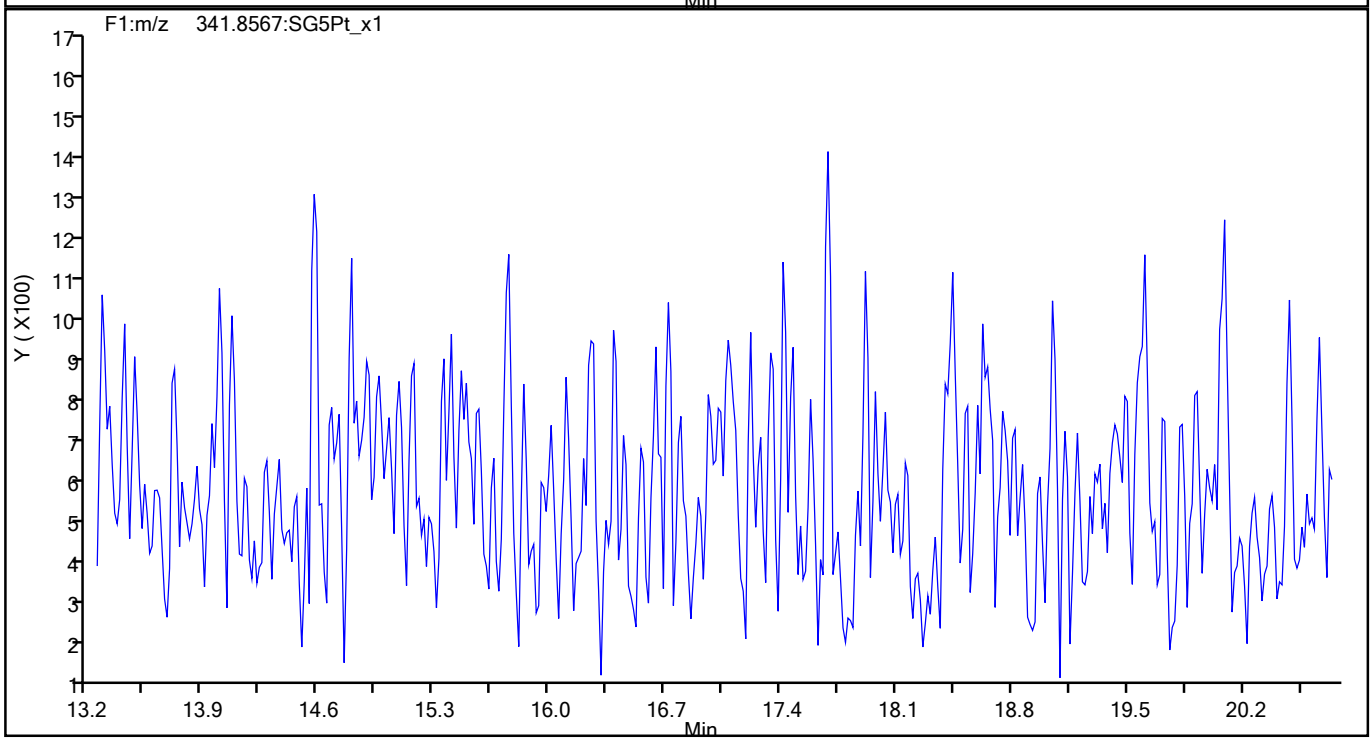

784068

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

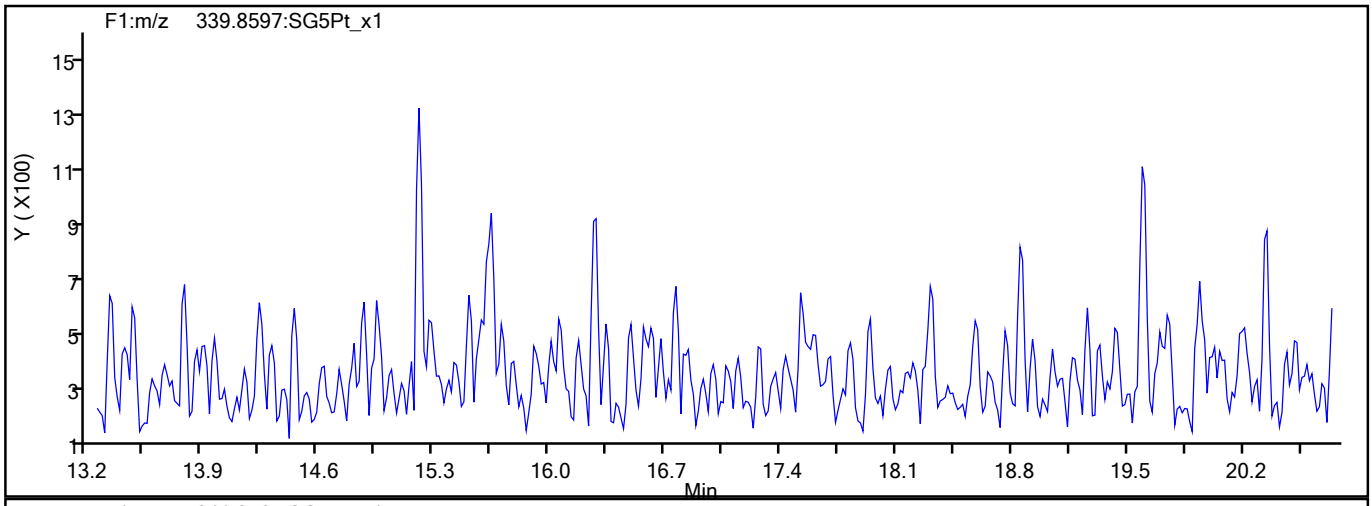

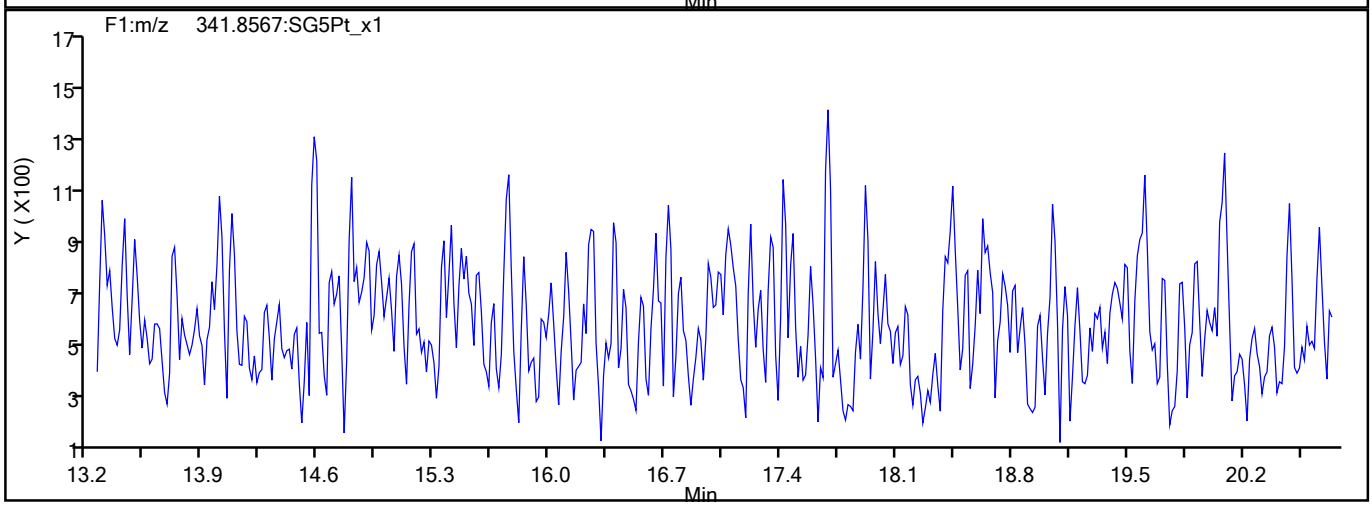

F1 PeCDFs Interference Mass

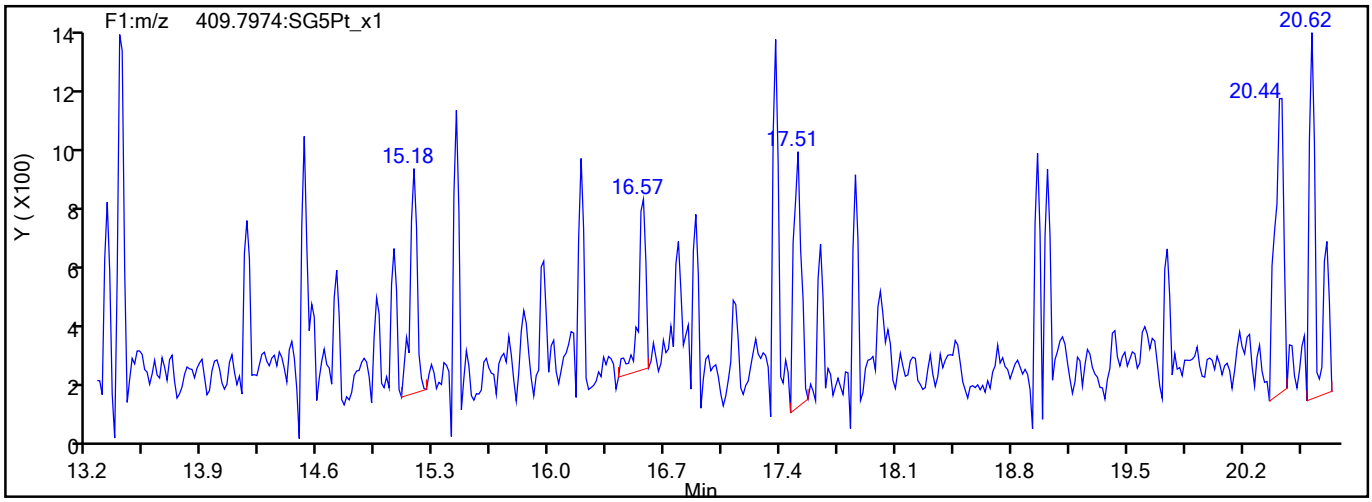

784069

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

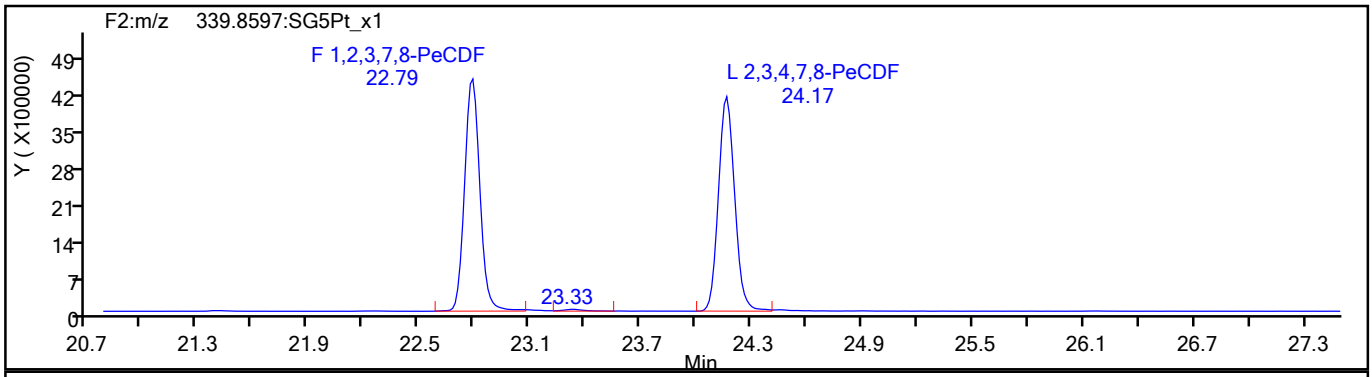

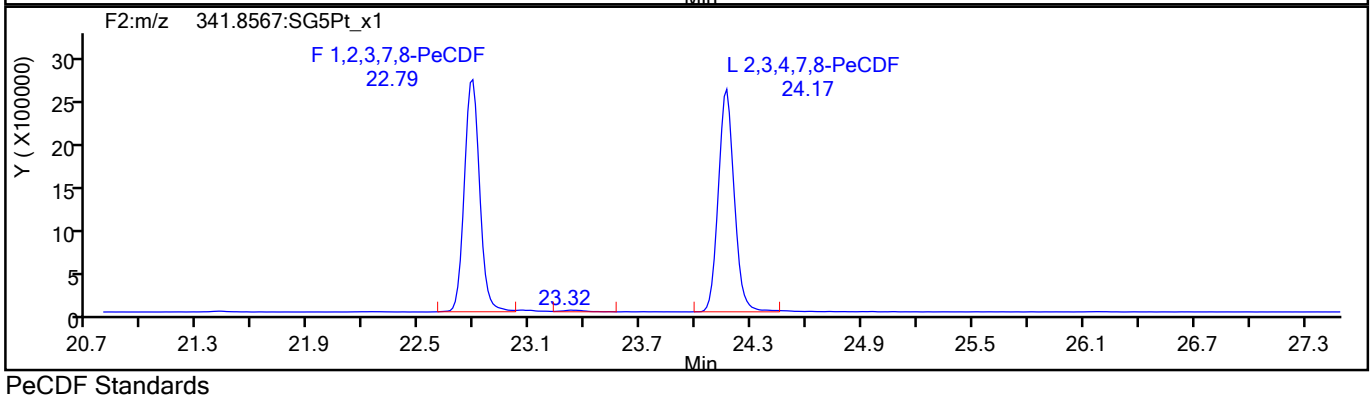

PeCDF Standards

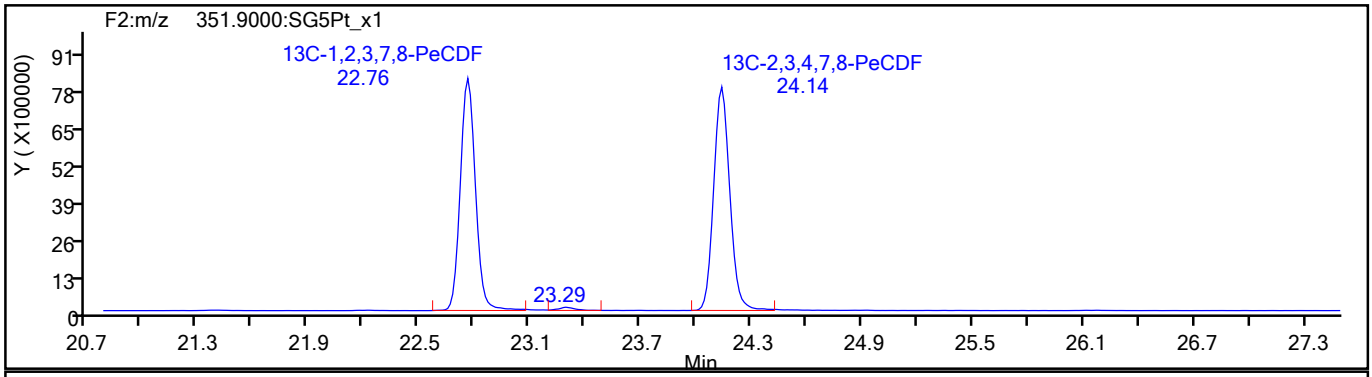

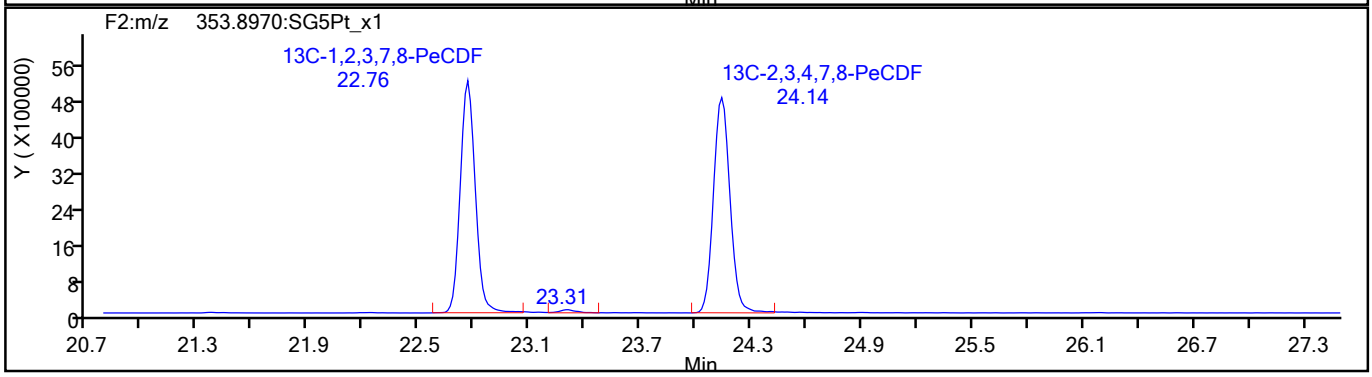

784070

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

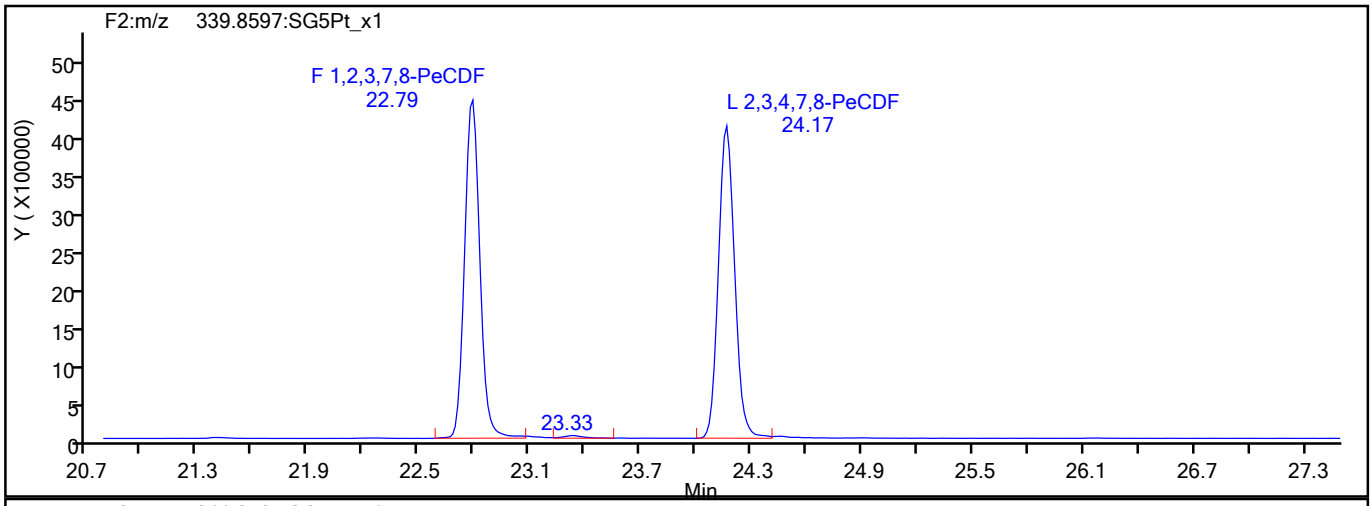

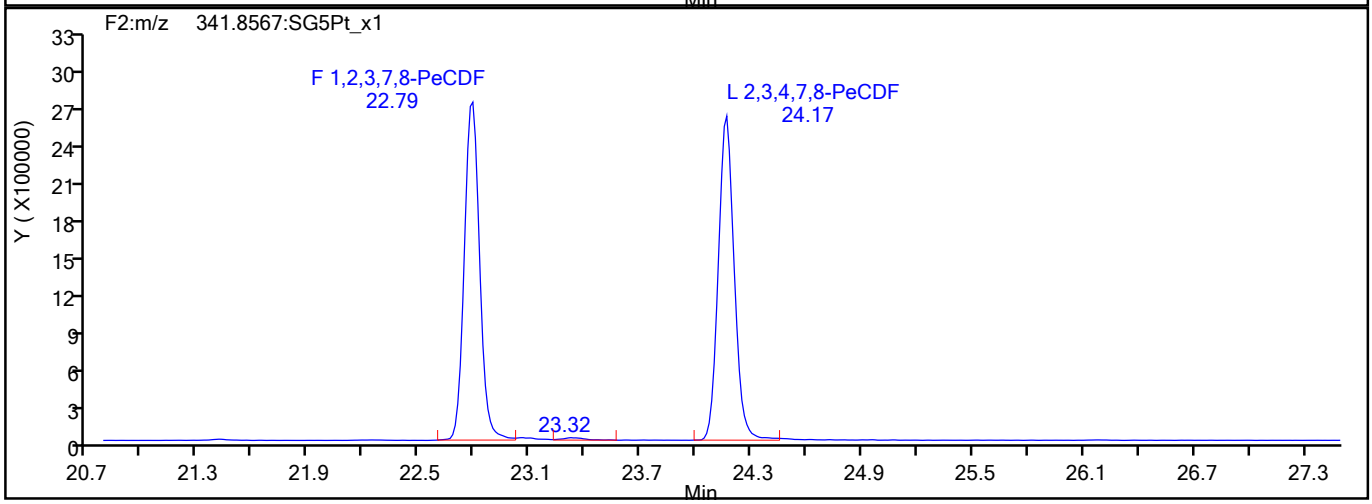

PeCDF Interference Mass

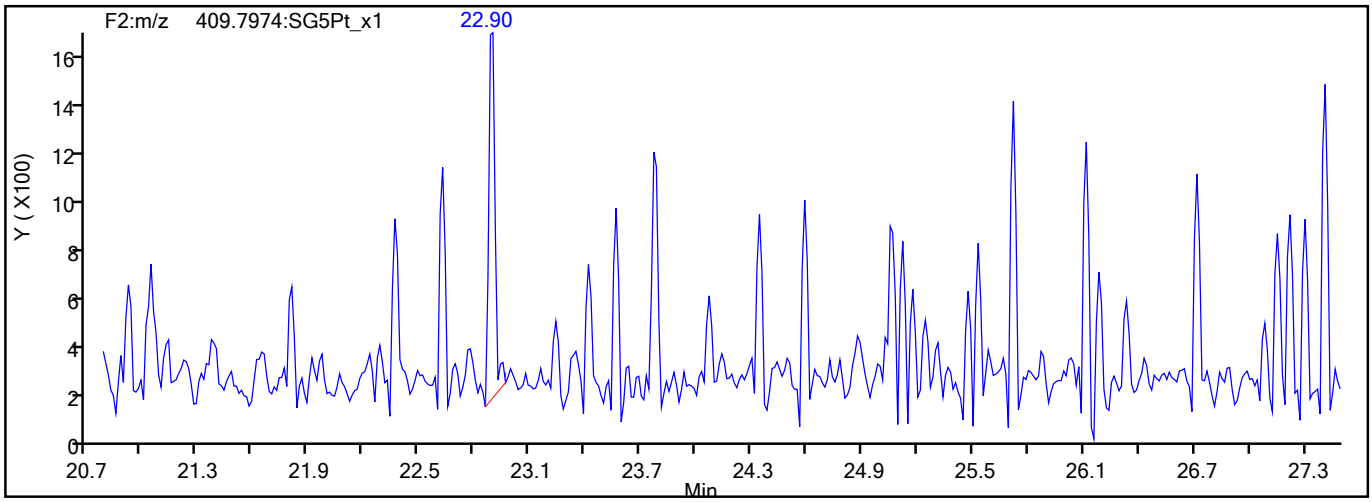

784071

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

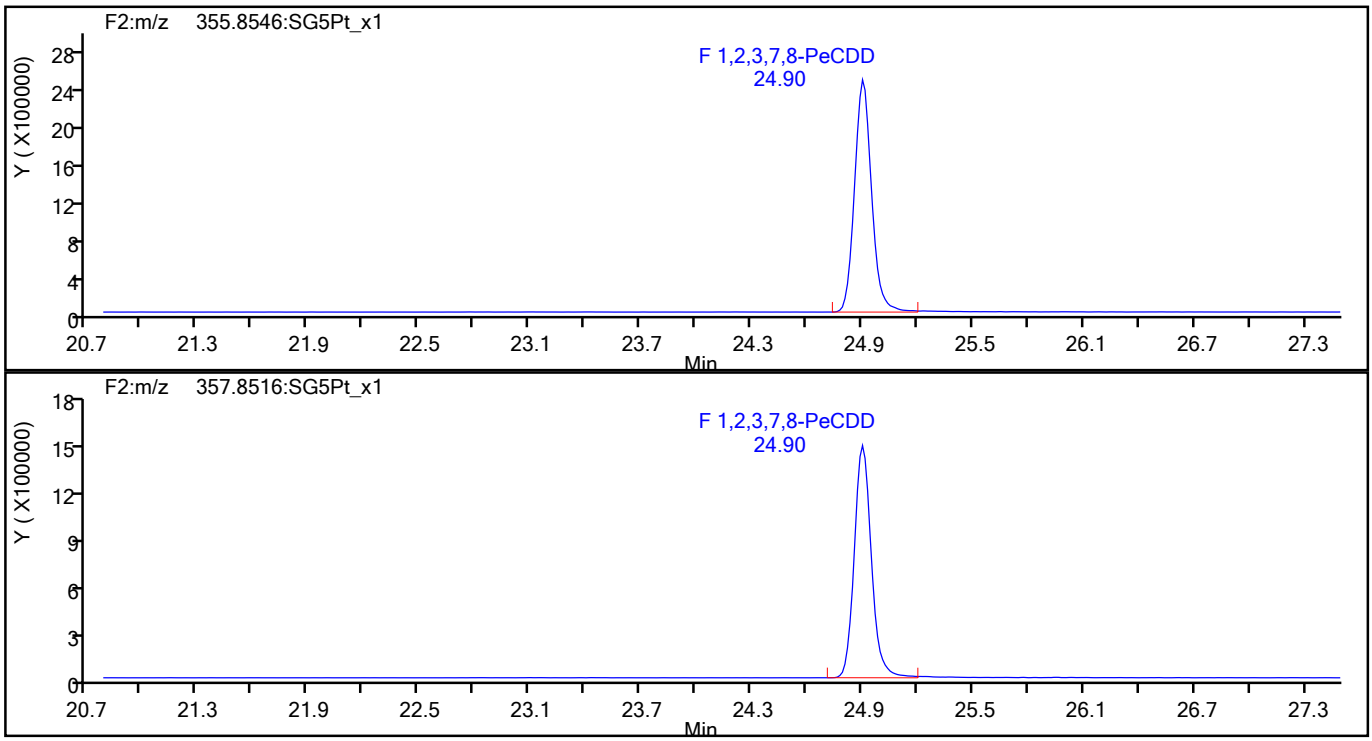

PeCDD Standards

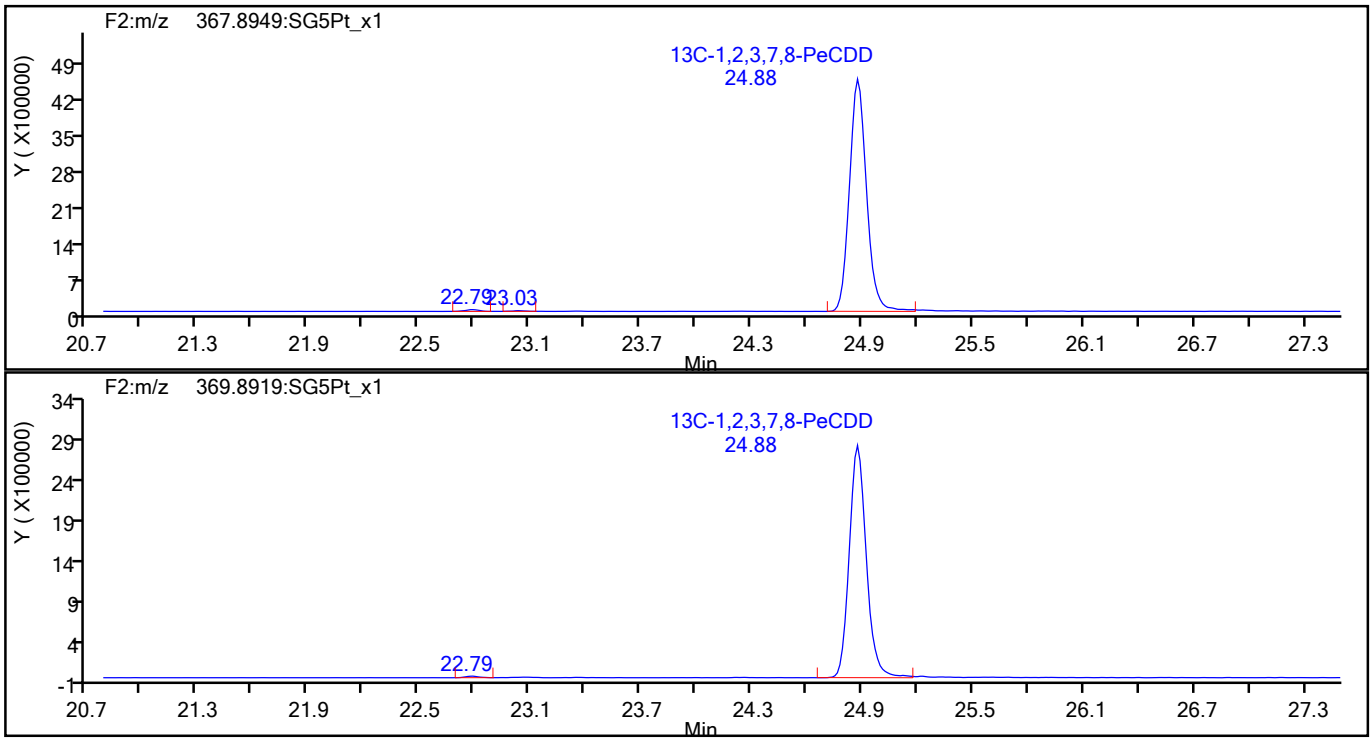

784072

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

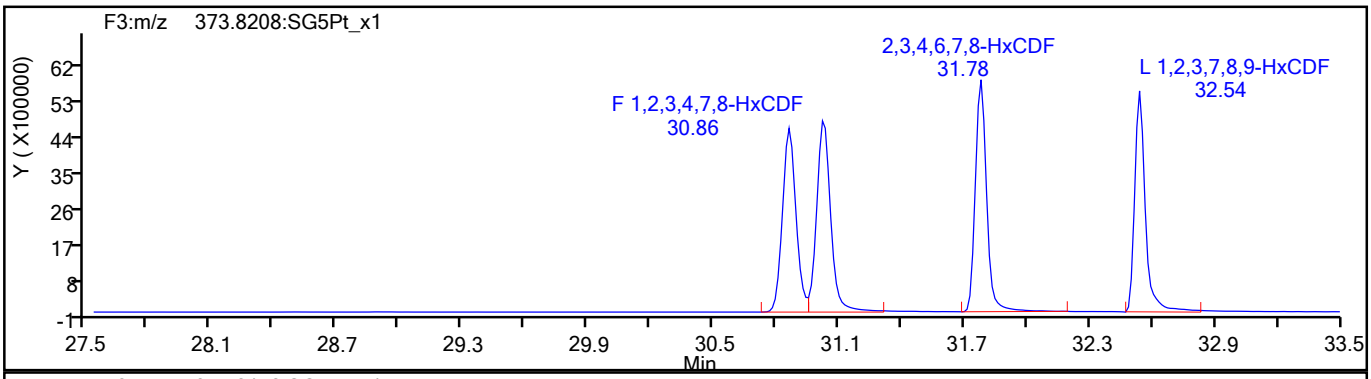

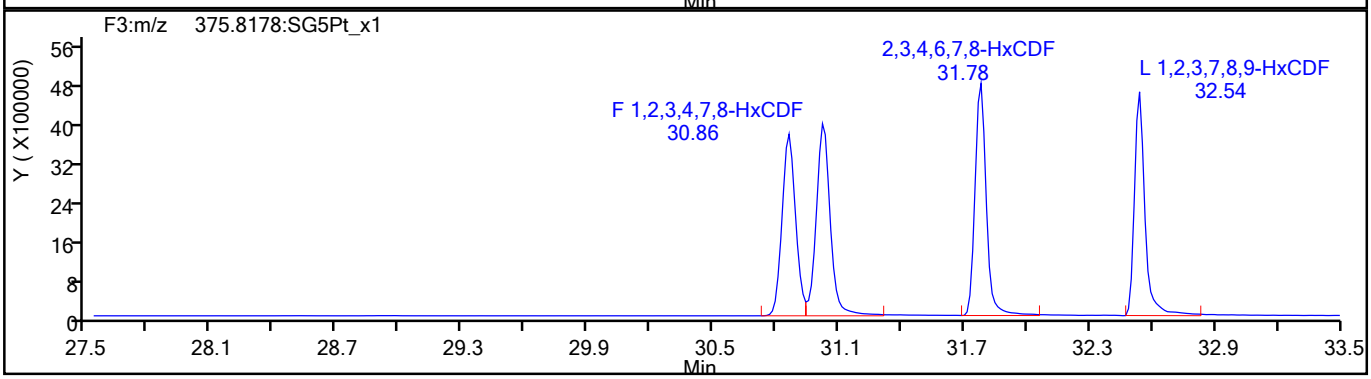

HxCDF Standards

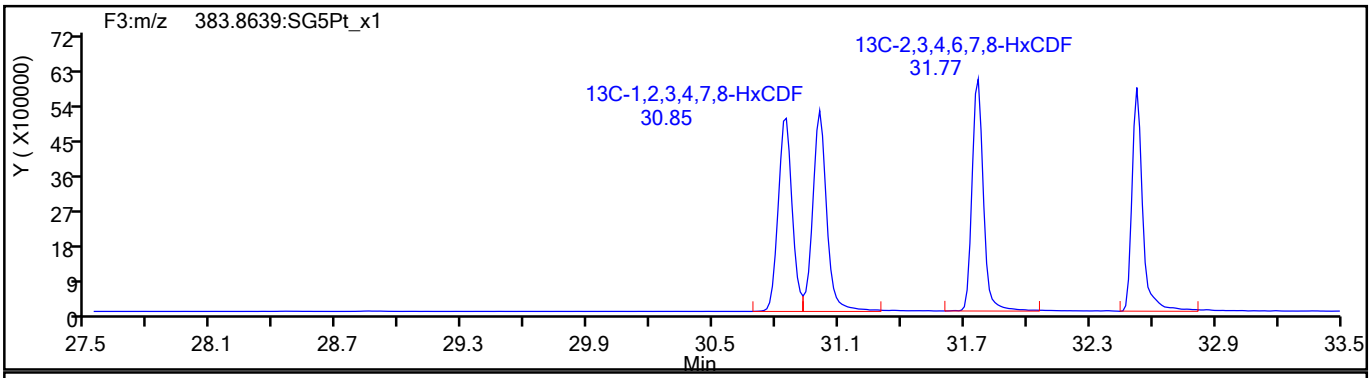

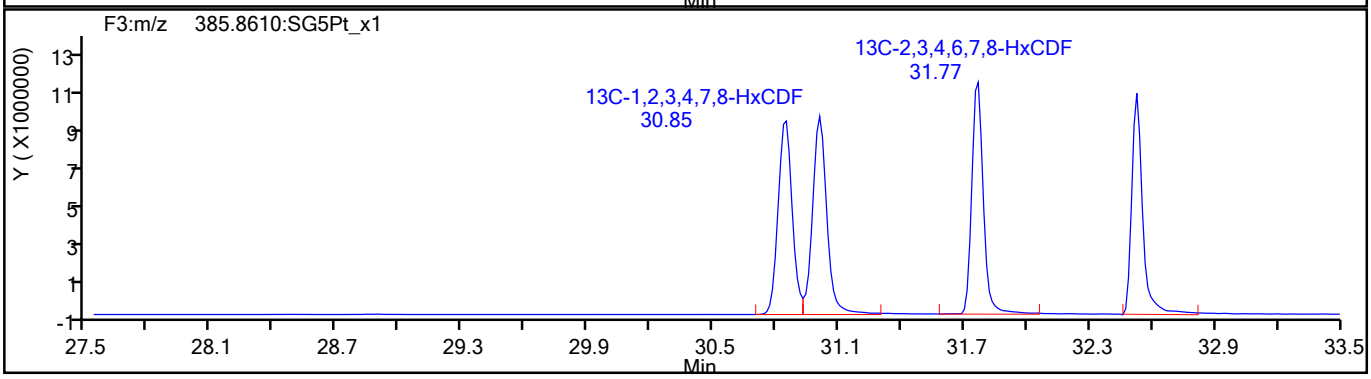

784073

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

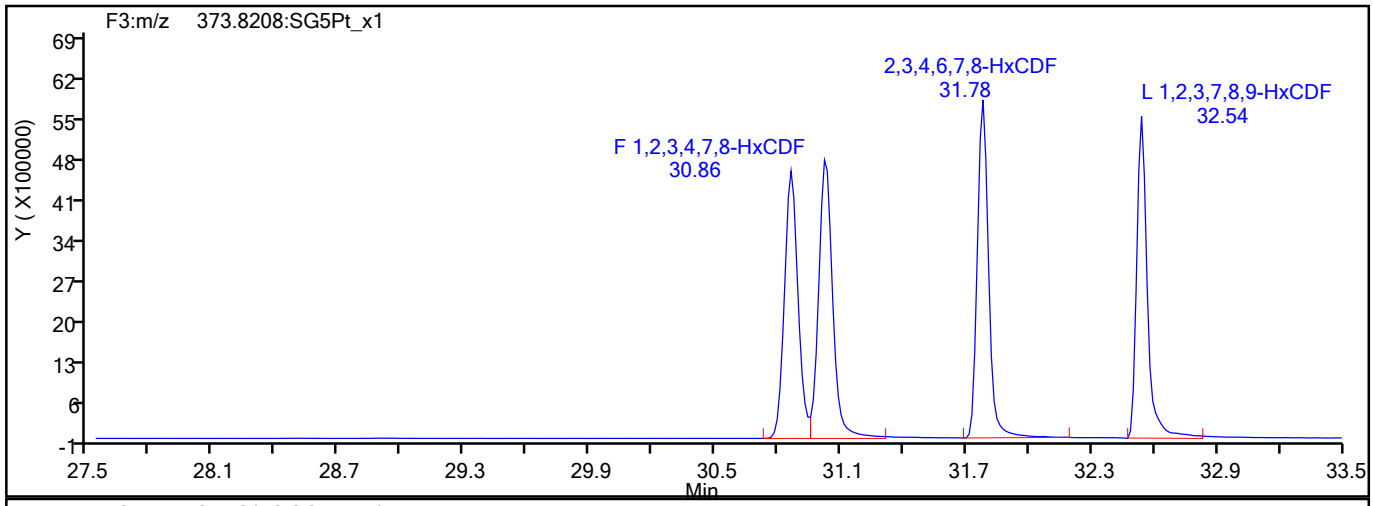

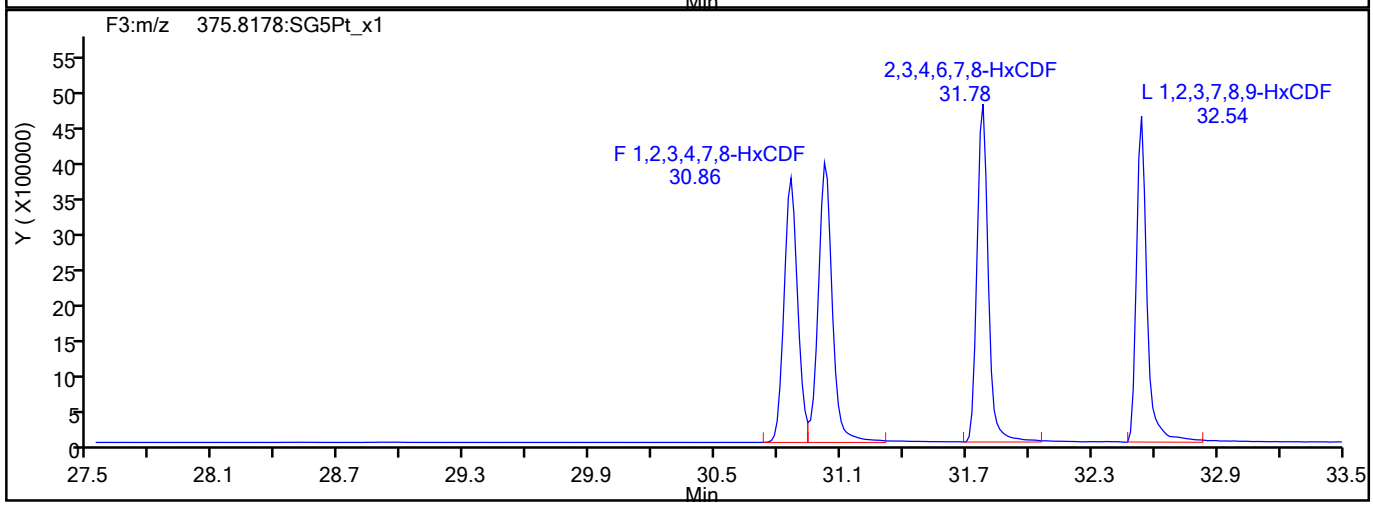

HxCDF Interference Mass

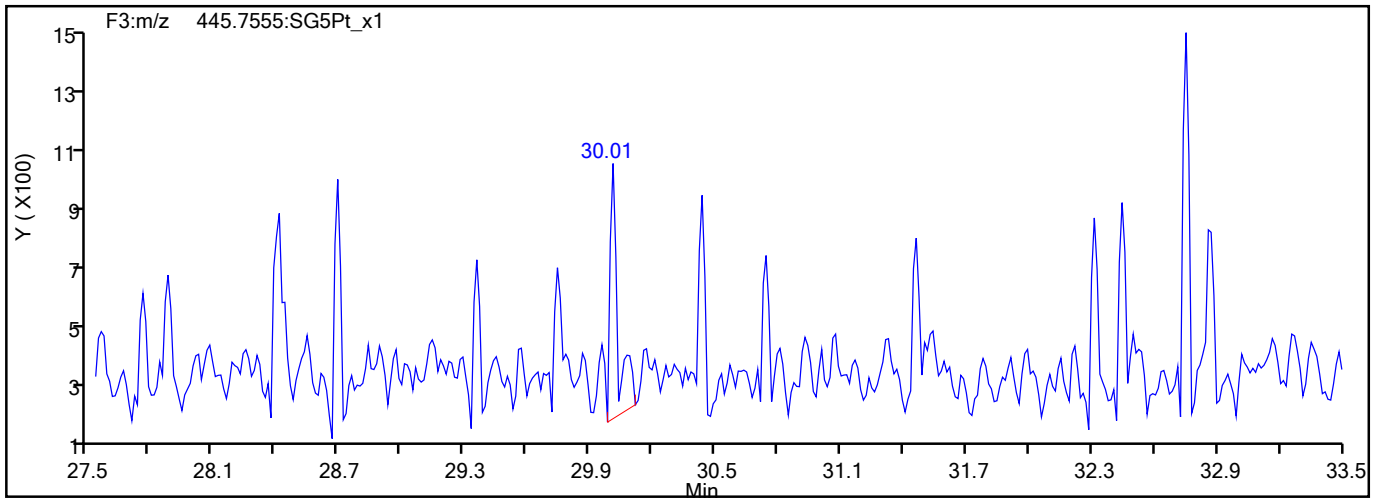

784074

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

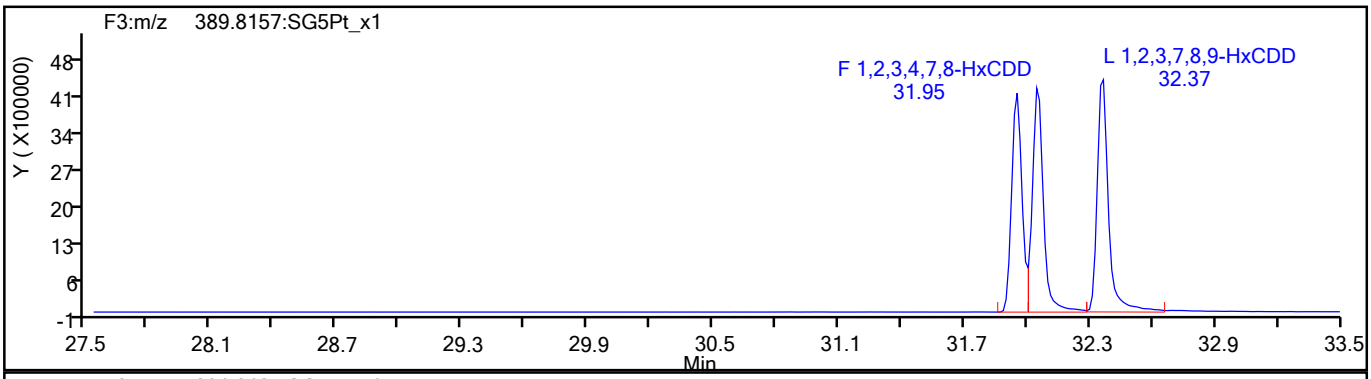

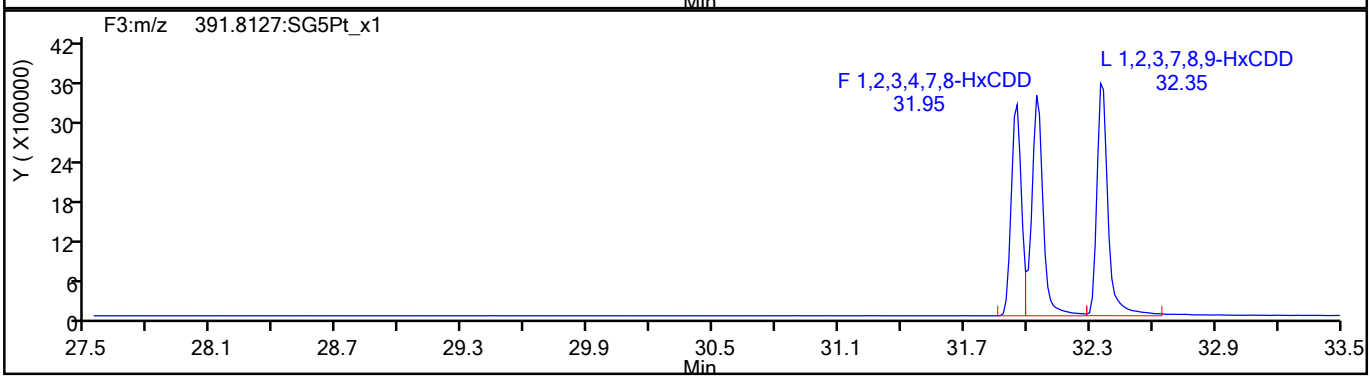

HxCDD Standards

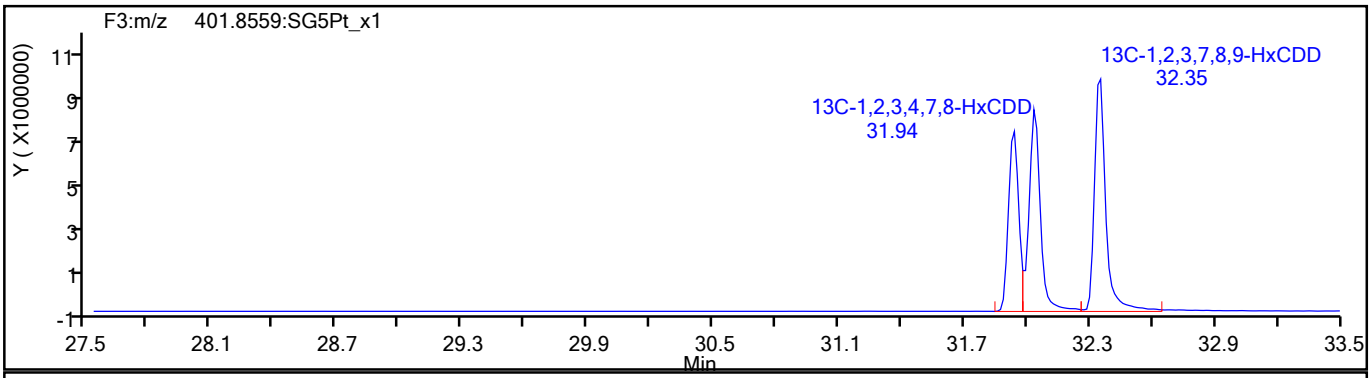

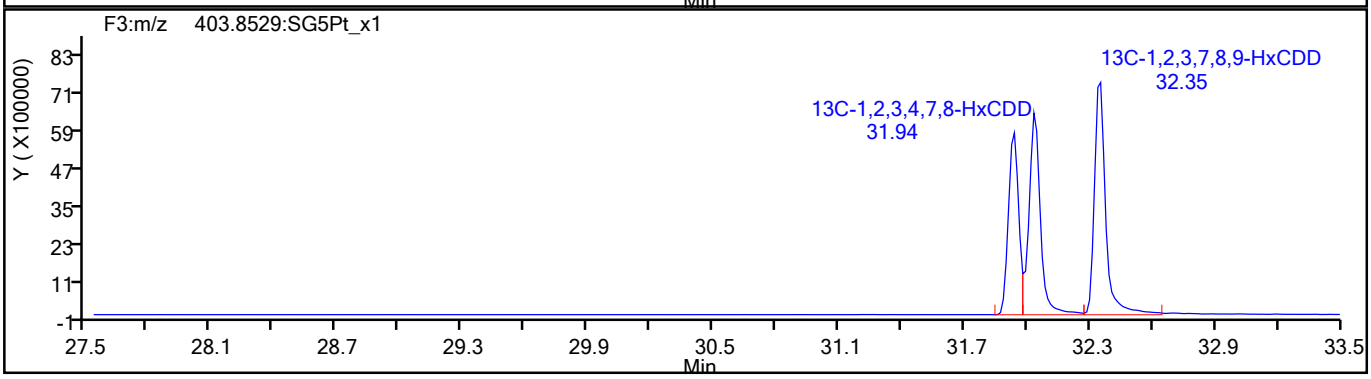

784075

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

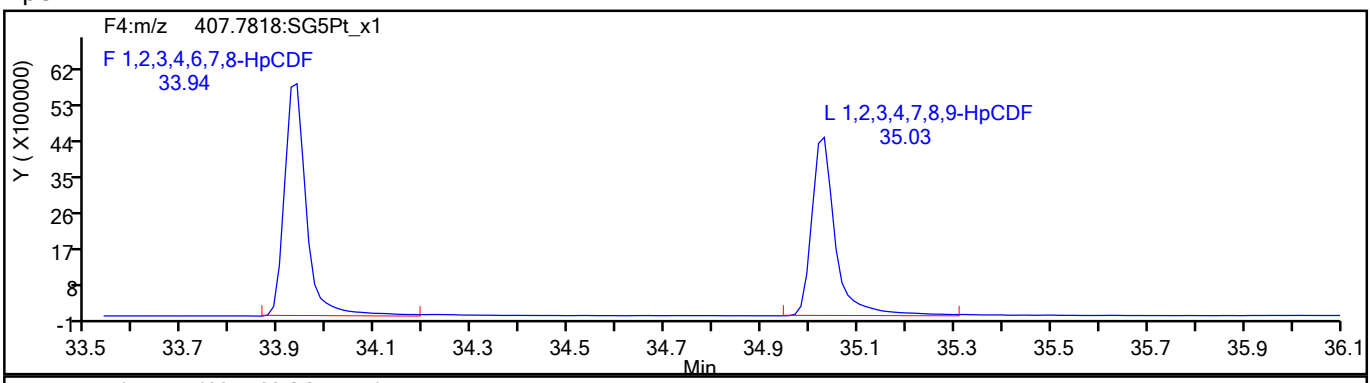

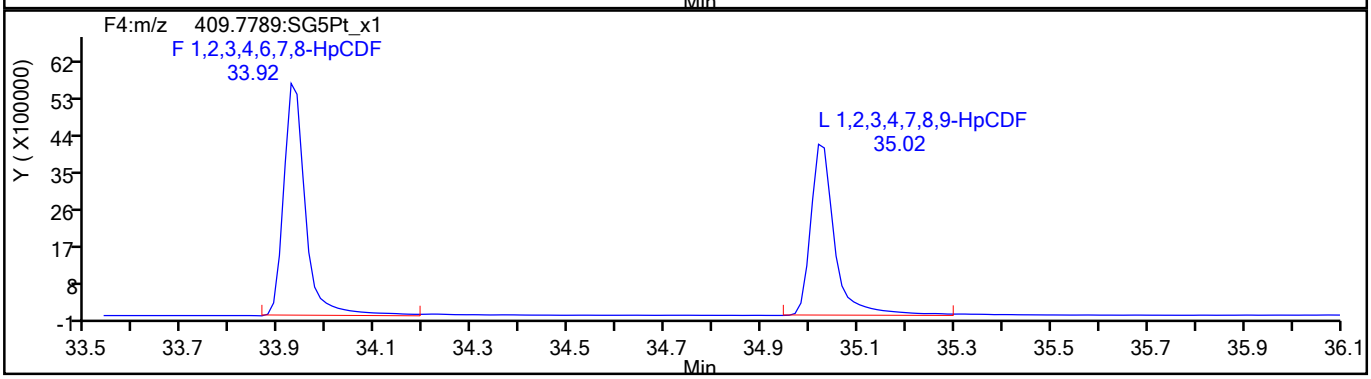

HpCDF Standards

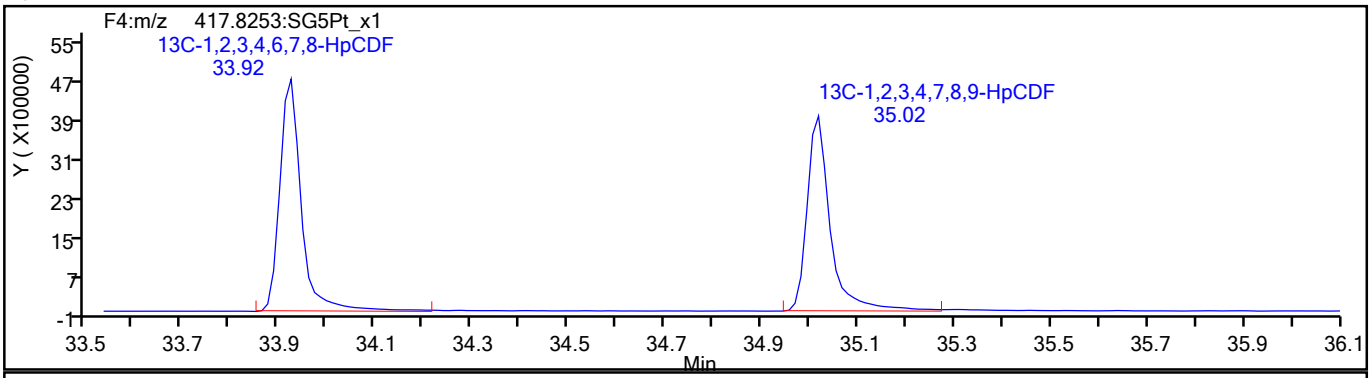

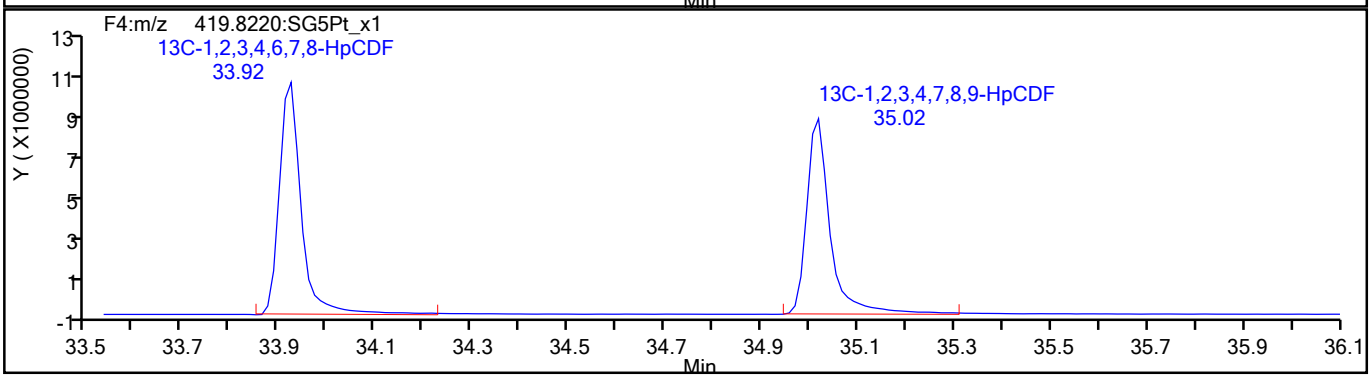

784076

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

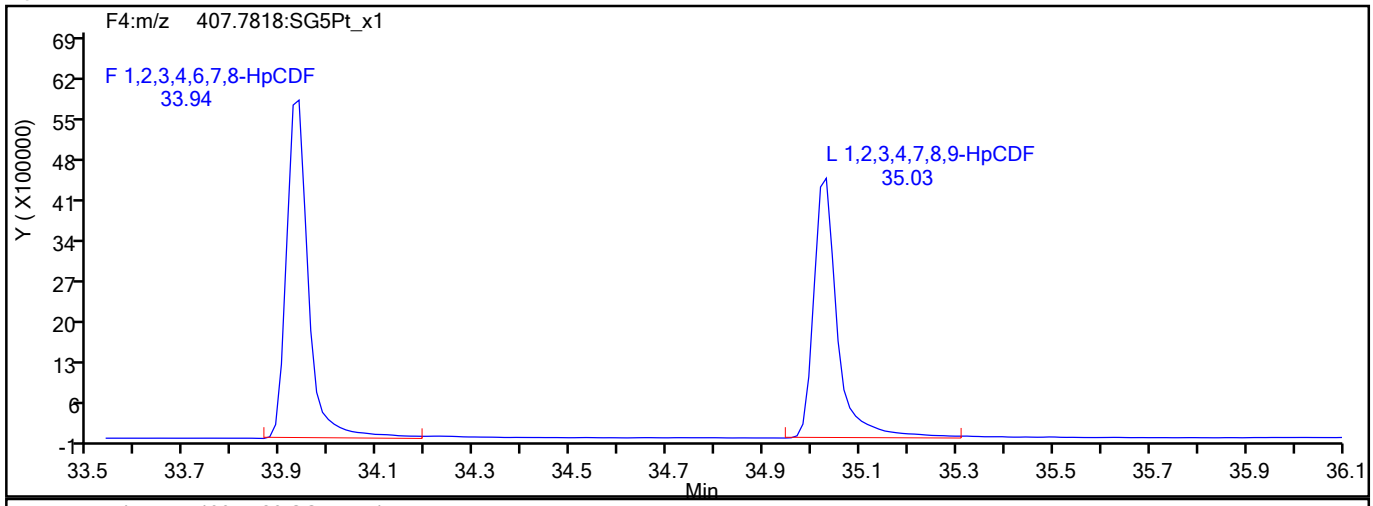

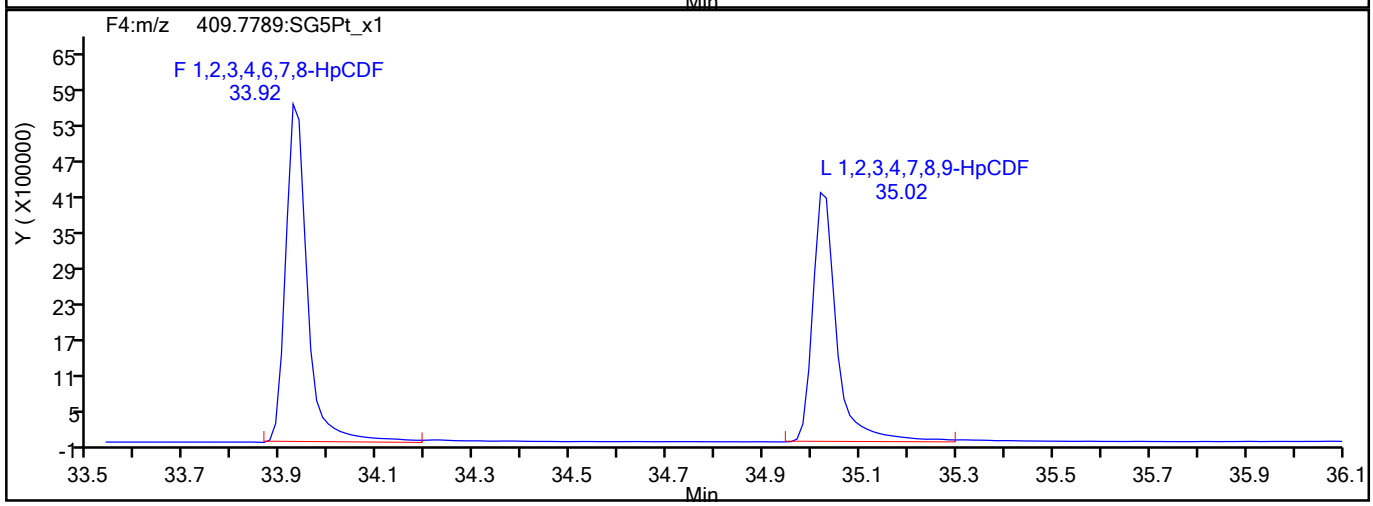

HpCDF Interference Mass

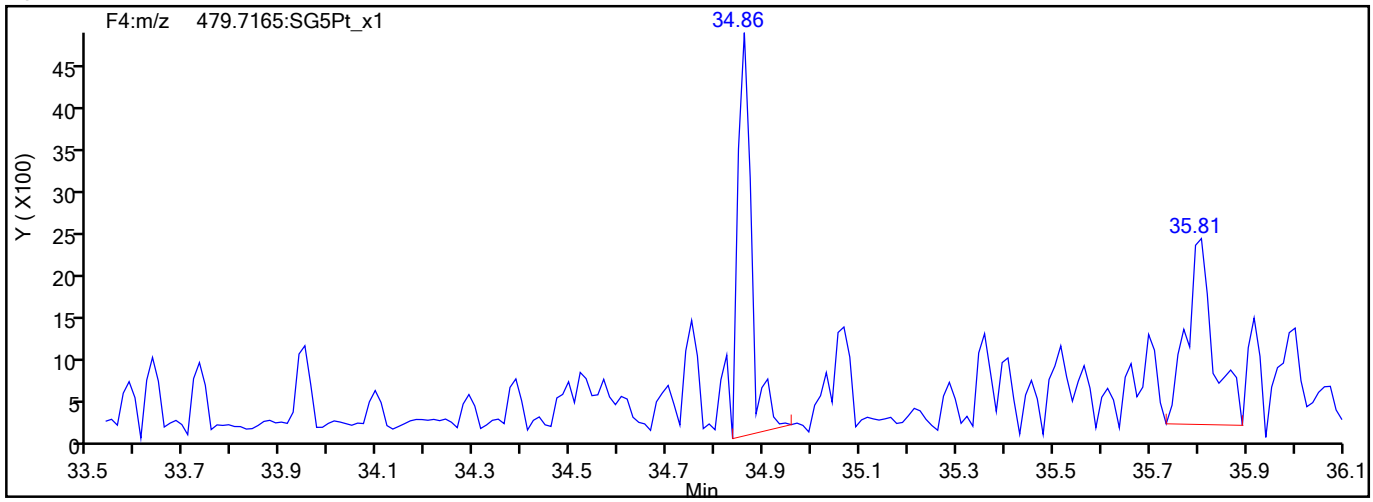

784077

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

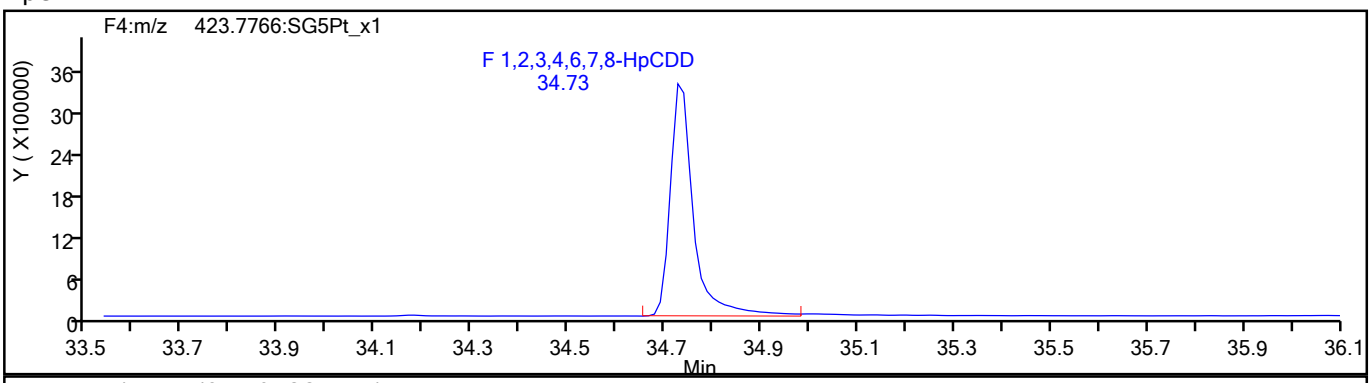

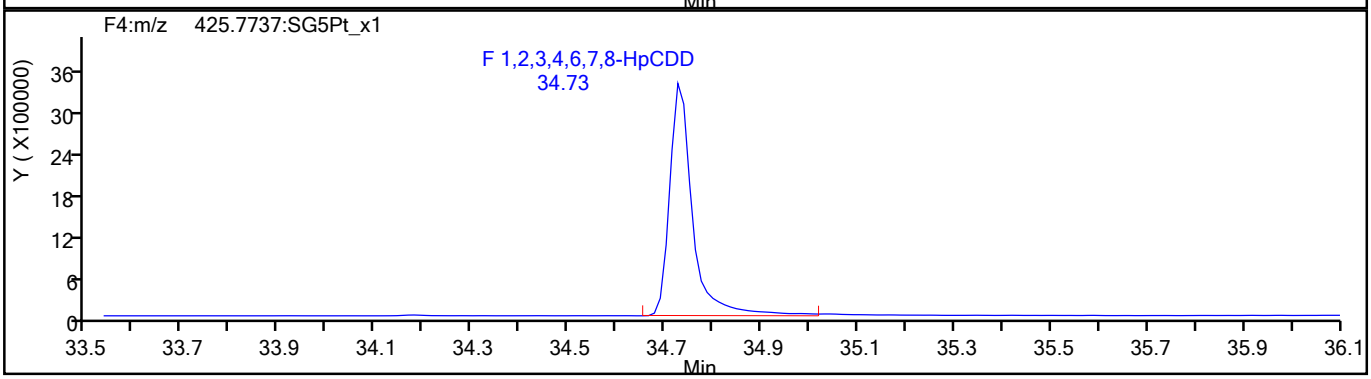

HpCDD Standards

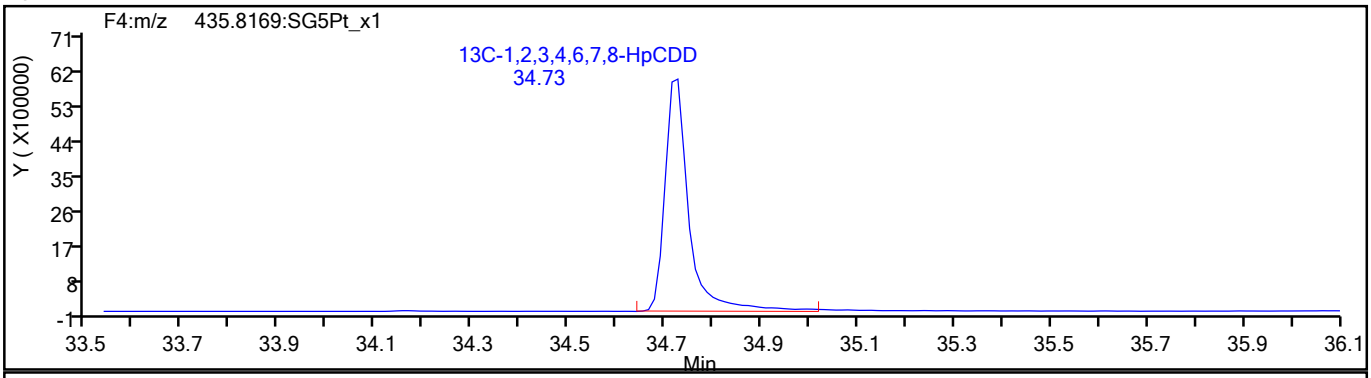

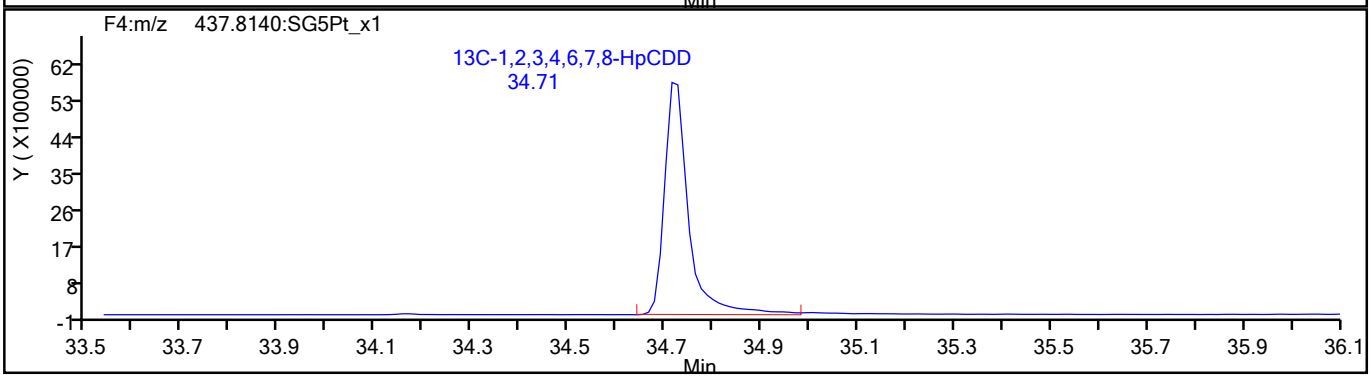

784078

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

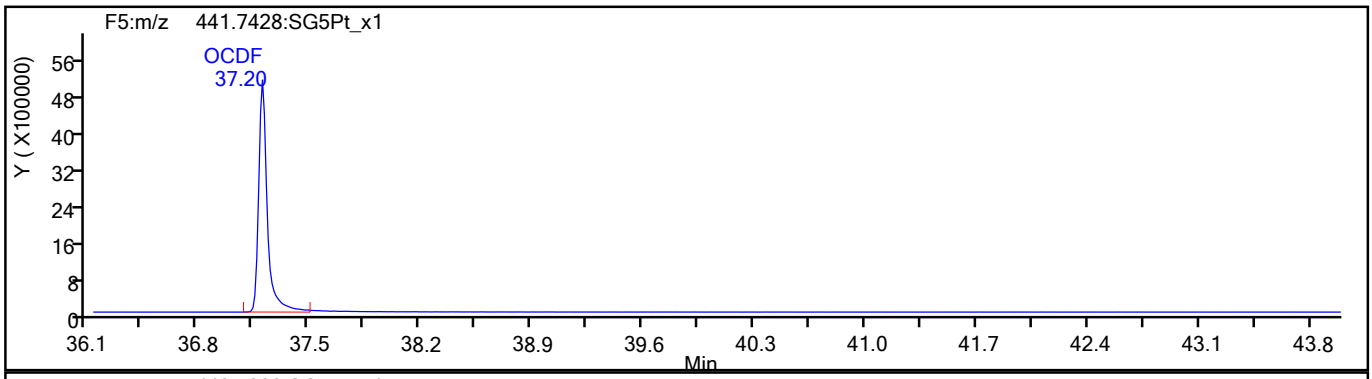

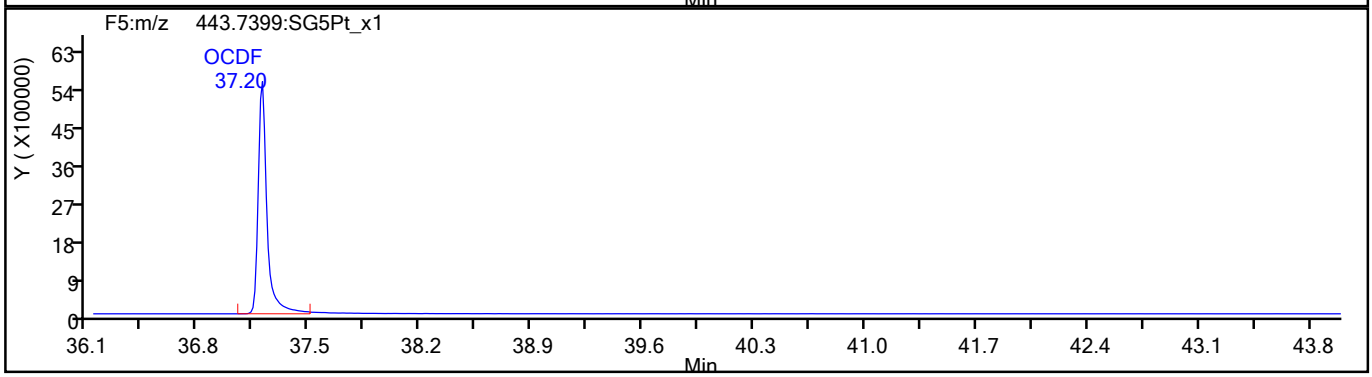

OCDF Standards

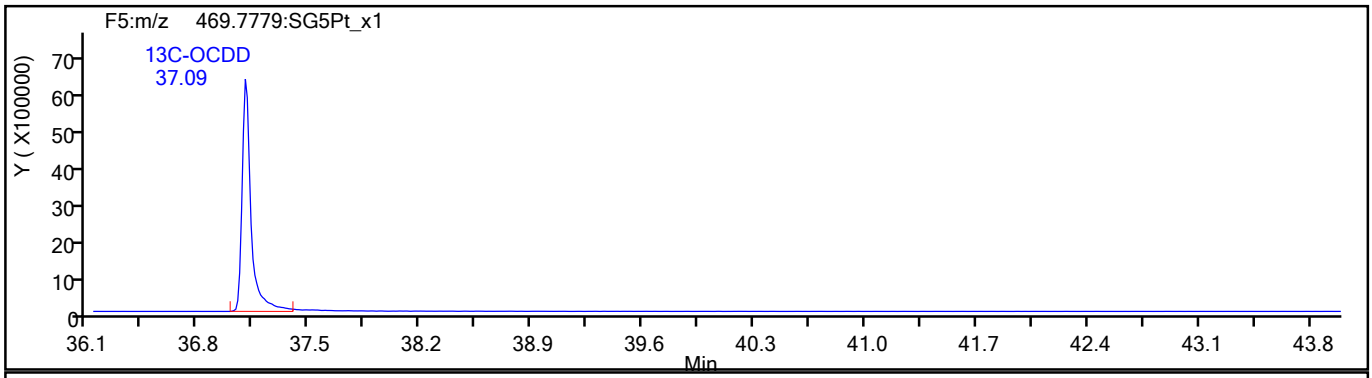

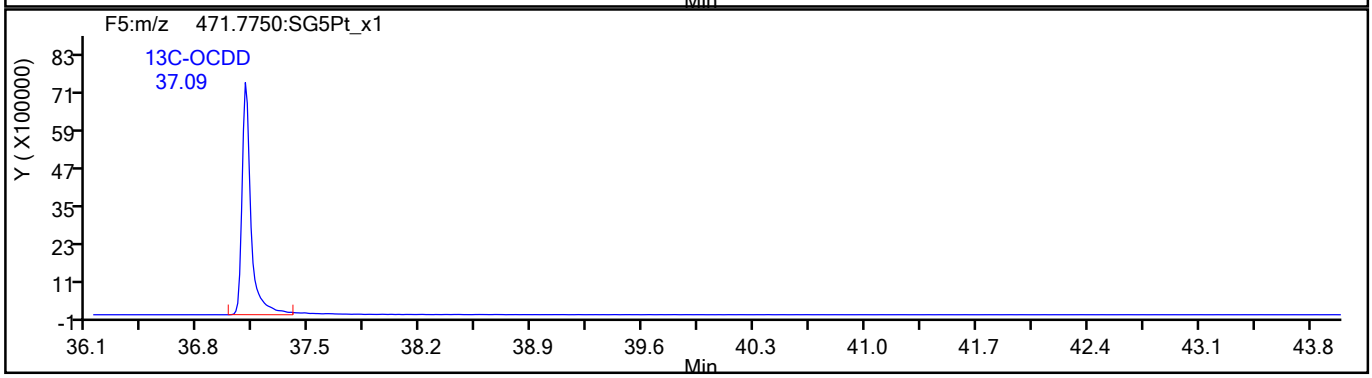

784079

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

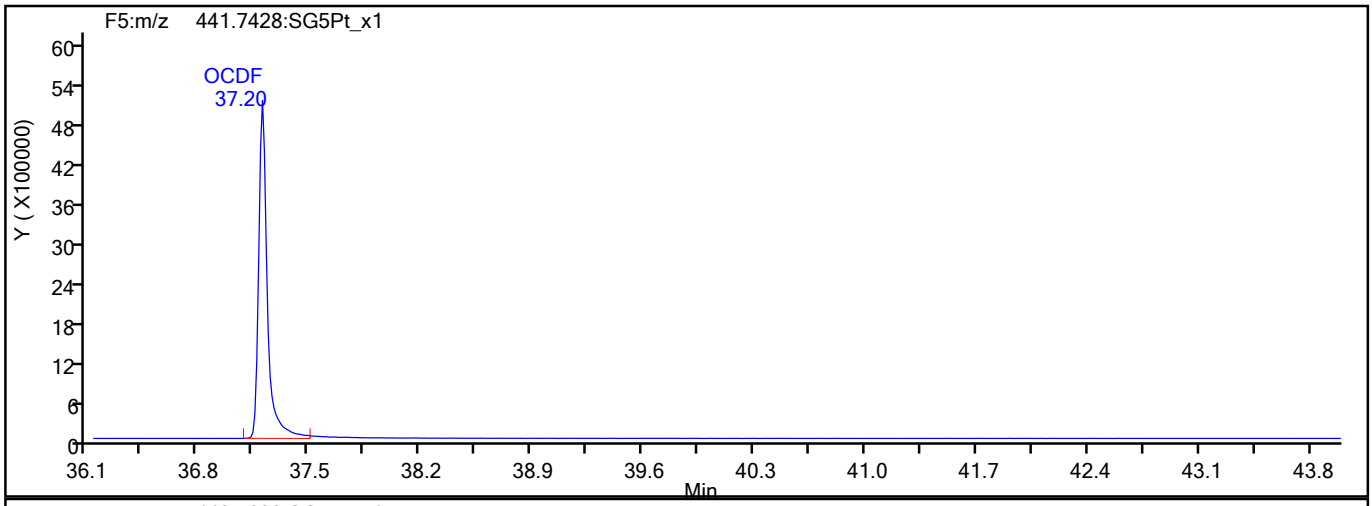

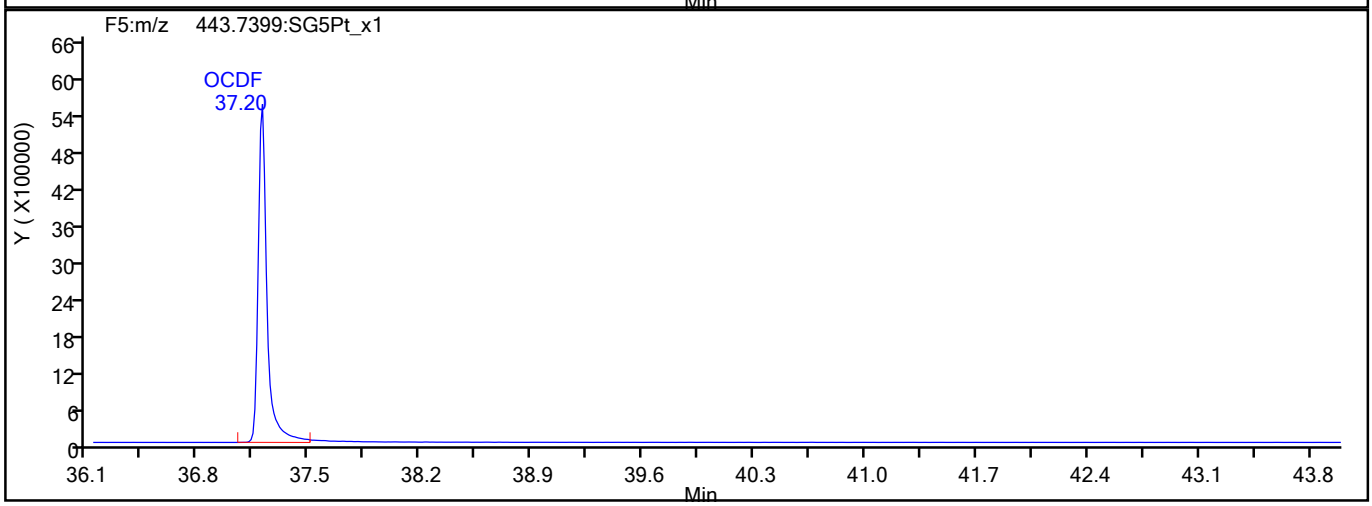

OCDF Interference Mass

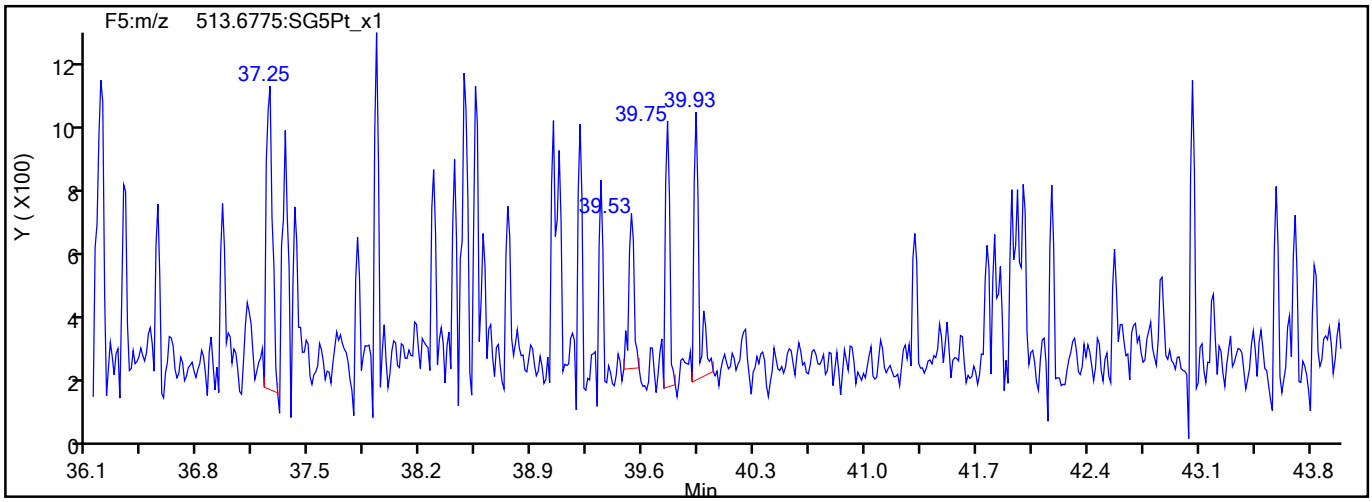

784080

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

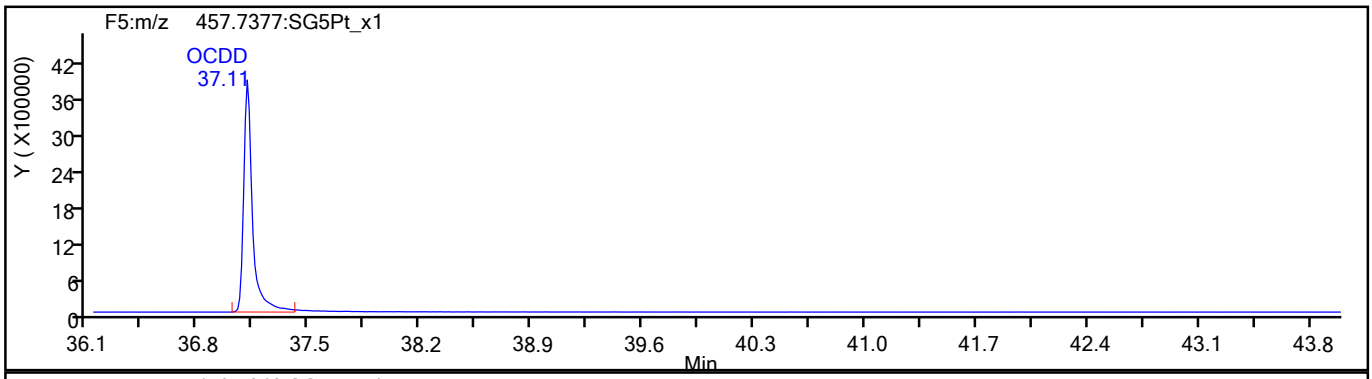

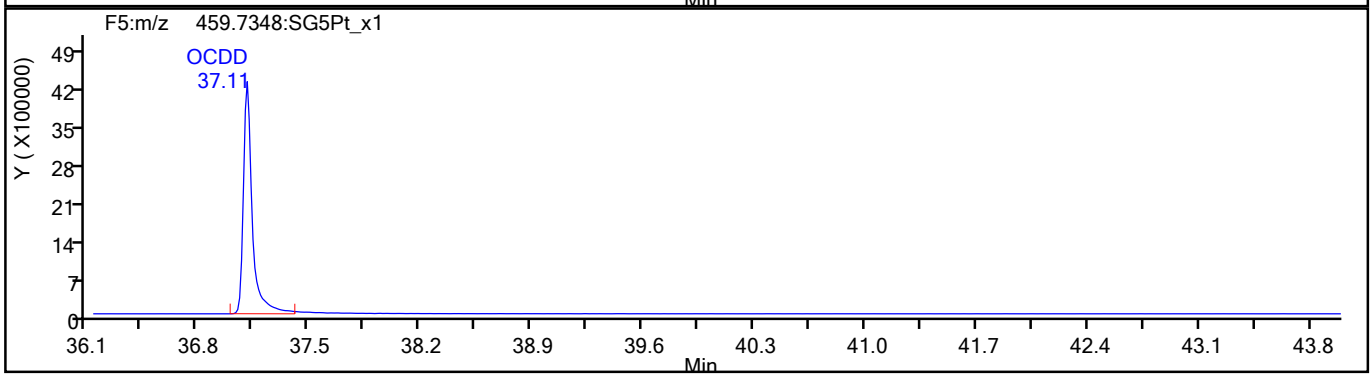

OCDD Standards

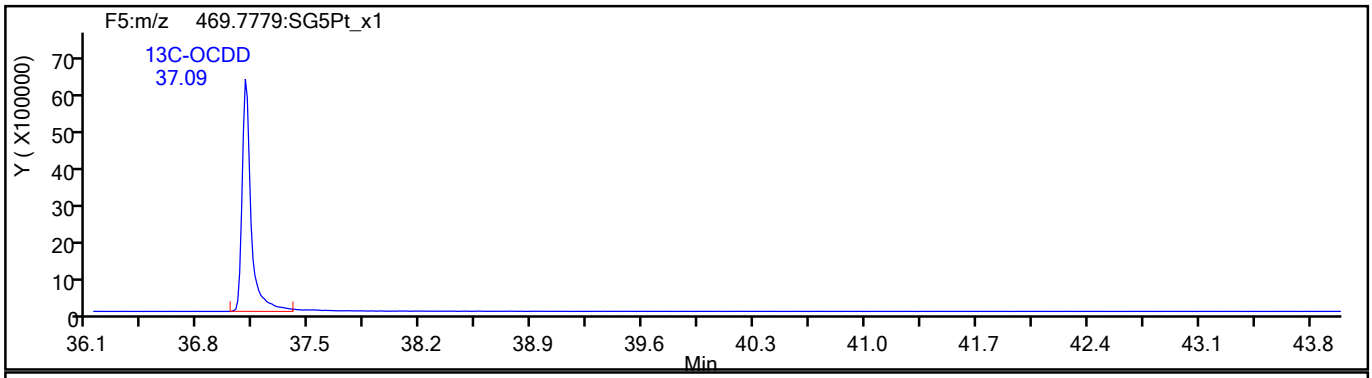

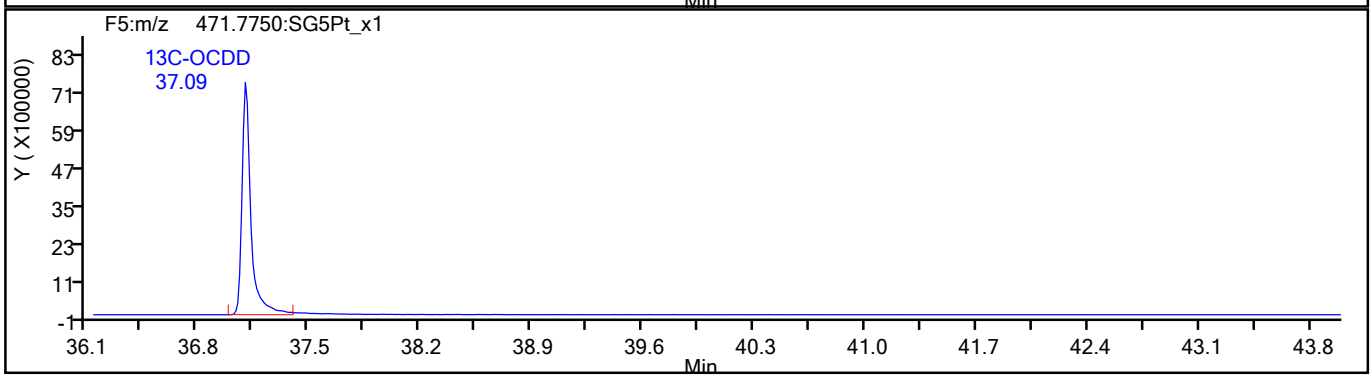

784081

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

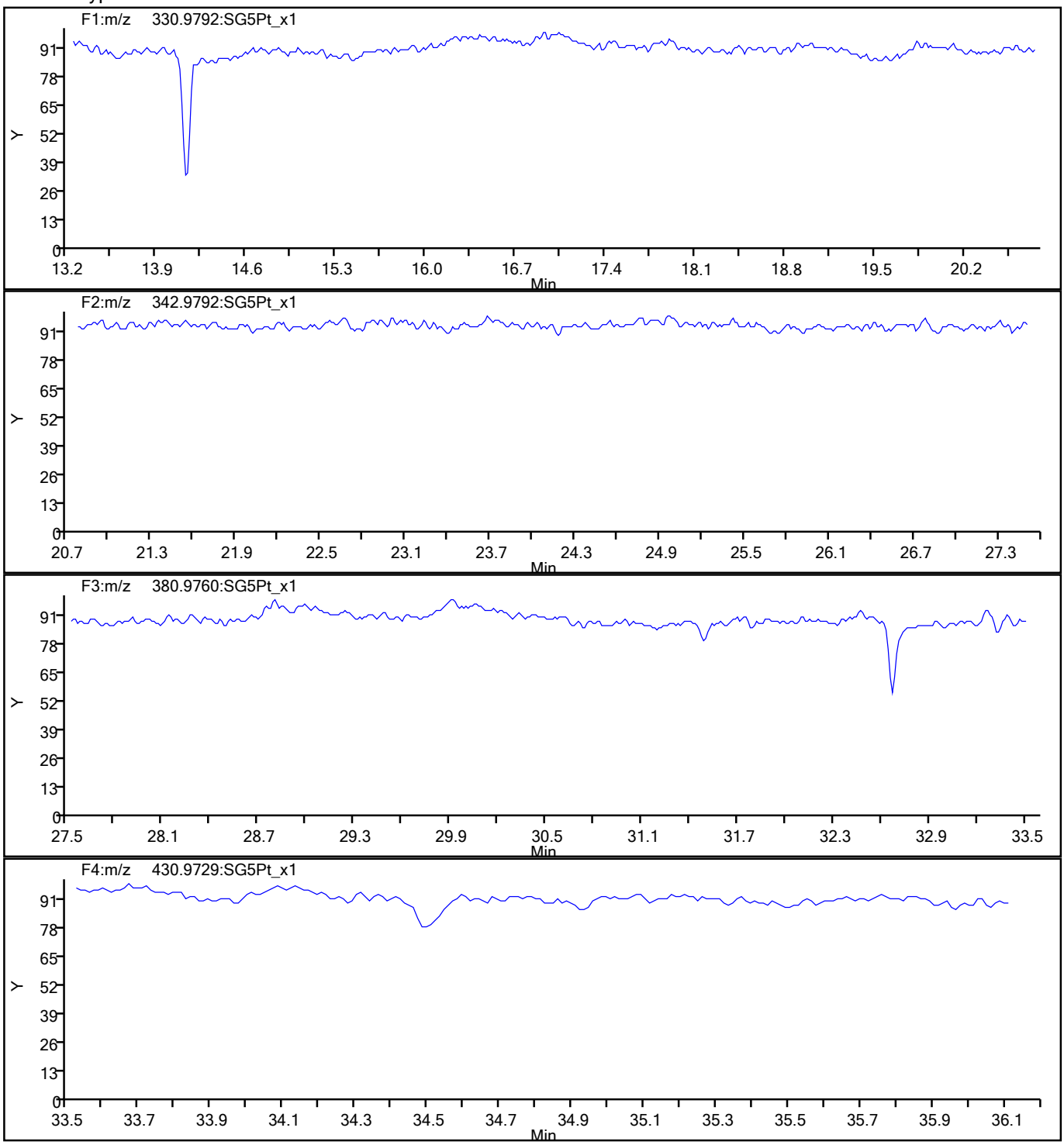

784082

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

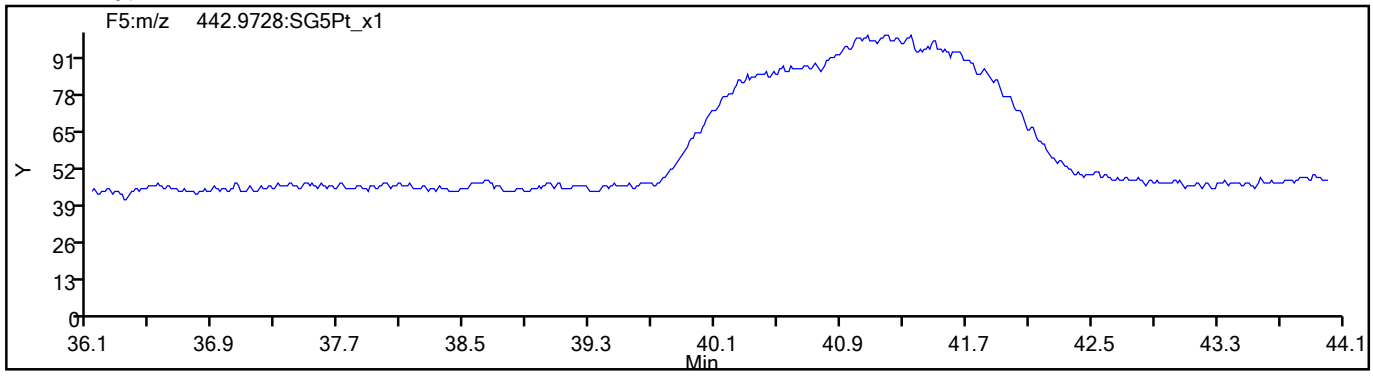

784083

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62046988	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	100332269	0.78	1.6249	99.5	99.5	0.1367	0.1367	99.52	
2,3,7,8-TCDF	17.628	44524782	0.76	1.0239	43.3	43.3	0.0503	0.0503	108	
S Total TCDF					43.3	43.3	0.0503	0.0503		
D 13C-2,3,7,8-TCDD	18.338	55471422	0.81	0.8993	99.4	99.4	0.1780	0.1780	99.41	
$ 37Cl4-2,3,7,8-TCDD	18.354	29474361		1.1071	42.9	42.9	0.0363	0.0363	107	
2,3,7,8-TCDD	18.354	29808948	0.78	1.2541	42.8	42.8	0.0471	0.0471	107	
S Total TCDD					42.8	42.8	0.0471	0.0471		
D 13C-1,2,3,7,8-PeCDF	22.762	75205597	1.60	1.2101	100.2	100.2	0.2087	0.2087	100	
1,2,3,7,8-PeCDF	22.776	171023920	1.60	1.0611	214.3	214.3	0.5904	0.5904	107	
D 13C-2,3,4,7,8-PeCDF	24.126	75259591	1.60	1.2395	97.9	97.9	0.2038	0.2038	97.86	
2,3,4,7,8-PeCDF	24.153	166805723	1.58	1.0184	217.6	217.6	0.6563	0.6563	109	
S Total PeCDF					431.9	431.9	0.6233	0.6233		
D 13C-1,2,3,7,8-PeCDD	24.862	46524396	1.64	0.7612	98.5	98.5	0.1093	0.1093	98.50	
1,2,3,7,8-PeCDD	24.889	105236005	1.57	1.0484	215.7	215.7	0.2317	0.2317	108	
S Total PeCDD					215.7	215.7	0.2317	0.2317		
D 13C-1,2,3,4,7,8-HxCDF	30.835	64951889	0.52	1.0837	95.7	95.7	0.4366	0.4366	95.70	
1,2,3,4,7,8-HxCDF	30.862	155057762	1.22	1.0851	220.0	220.0	1.165	1.165	110	
D 13C-1,2,3,6,7,8-HxCDF	31.008	70459920	0.52	1.1279	99.7	99.7	0.4194	0.4194	99.75	
1,2,3,6,7,8-HxCDF	31.022	168618976	1.23	1.1260	212.5	212.5	1.081	1.081	106	
D 13C-2,3,4,6,7,8-HxCDF	31.754	66145684	0.53	1.0637	99.3	99.3	0.4448	0.4448	99.29	
2,3,4,6,7,8-HxCDF	31.780	164241378	1.21	1.1675	212.7	212.7	0.8912	0.8912	106	
D 13C-1,2,3,7,8,9-HxCDF	32.526	59636084	0.52	0.9676	98.4	98.4	0.4890	0.4890	98.41	
1,2,3,7,8,9-HxCDF	32.539	148834491	1.23	1.1664	214.0	214.0	0.9364	0.9364	107	
S Total HxCDF					859.2	859.2	1.018	1.018		
* 13C-1,2,3,7,8,9-HxCDD	32.339	62627787	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44144841	1.25	0.7334	96.1	96.1	0.3745	0.3745	96.11	
1,2,3,4,7,8-HxCDD	31.953	103044220	1.27	1.0640	219.4	219.4	0.6488	0.6488	110	
D 13C-1,2,3,6,7,8-HxCDD	32.033	54392394	1.25	0.8802	98.7	98.7	0.3120	0.3120	98.67	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	118900298	1.28	1.0001	218.6	218.6	0.5965	0.5965	109	
1,2,3,7,8,9-HxCDD	32.353	122394998	1.26	1.1325	219.4	219.4	0.5651	0.5651	110	
S Total HxCDD					657.3	657.3	0.6034	0.6034		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	47752972	0.44	0.7730	98.6	98.6	1.001	1.001	98.64	
1,2,3,4,6,7,8-HpCDF	33.924	147892240	1.06	1.4413	214.9	214.9	2.024	2.024	107	
D 13C-1,2,3,4,7,8,9-HpCDF	35.017	42687625	0.44	0.7008	97.3	97.3	1.104	1.104	97.26	
1,2,3,4,7,8,9-HpCDF	35.017	123968724	1.06	1.3174	220.4	220.4	2.743	2.743	110	
S Total HpCDF					435.3	435.3	2.383	2.383		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	40442950	1.02	0.6472	99.8	99.8	0.5241	0.5241	99.77	
1,2,3,4,6,7,8-HpCDD	34.726	94435922	1.04	1.0943	213.4	213.4	0.9683	0.9683	107	
S Total HpCDD					213.4	213.4	0.9683	0.9683		
D 13C-OCDD	37.093	57303880	0.88	0.4472	204.6	204.6	0.2753	0.2753	102	
OCDF	37.201	181747068	0.91	1.4382	441.1	441.1	0.4159	0.4159	110	
OCDD	37.105	135570174	0.90	1.1070	427.4	427.4	0.4029	0.4029	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		27754917	7076779	4201	10502	1685		
333.9339	18.142	18.142	0		34292071	8691565	5896	14740	1474	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	43967601	10754823	8470	21175	1270		
317.9389	17.613	17.616	0	0.971	56364668	13840834	5538	13845	2499	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	19278962	4714580	2218	5545	2126		
305.8987	17.628	17.631	0	1.001	25245820	6261705	2854	7135	2194	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24807018	5848000	4201	10502	1392		
333.9339	18.338	18.338	0	1.011	30664404	7186127	5896	14740	1219	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	29474361	7040079	2537	6342	2775		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	13088265	3099418	1571	3927	1973		
321.8936	18.354	18.357	0	1.001	16720683	3961925	1508	3770	2627	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46265218	8069932	9479	23697	851		
353.8970	22.749	22.754	0	1.254	28940379	5072009	6452	16130	786	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	105236981	18677381	20013	50032	933		
341.8567	22.776	22.779	0	1.001	65786939	11693027	12919	32297	905	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46298187	7561650	9479	23697	798		
353.8970	24.126	24.129	0	1.330	28961404	4756017	6452	16130	737	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	102234081	17002363	20013	50032	850		
341.8567	24.153	24.156	0	1.001	64571642	10773383	12919	32297	834	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28884955	4397104	3175	7937	1385		
369.8919	24.862	24.865	0	1.370	17639441	2717935	2071	5177	1312	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	64347111	9837651	3945	9862	2494		
357.8516	24.889	24.892	0	1.001	40888894	6265054	2969	7422	2110	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	22237957	4900100	10775	26937	455		
385.8610	30.835	30.838	0	0.953	42713932	9213265	21190	52975	435	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	85201859	18424877	39257	98142	469		
375.8178	30.849	30.857	0	1.000	69855903	15011303	32096	80240	468	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	23996455	5001651	10775	26937	464		
385.8610	31.008	31.003	0	0.959	46463465	9659865	21190	52975	456	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	92842545	20075526	39257	98142	511		
375.8178	31.022	31.022	0	1.000	75776431	16178695	32096	80240	504	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	22792396	5861290	10775	26937	544		
385.8610	31.754	31.756	0	0.982	43353288	11282982	21190	52975	532	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.780	31.772	0	1.001	89865159	23412461	39257	98142	596		
375.8178	31.767	31.772	0	1.000	74376219	19191516	32096	80240	598	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20506438	5659225	10775	26937	525		
385.8610	32.526	32.523	0	1.006	39129646	10674002	21190	52975	504	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	82057134	22664755	39257	98142	577		
375.8178	32.539	32.534	0	1.000	66777357	17875439	32096	80240	557	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		34509982	9306847	9505	23762	979		
403.8529	32.339	32.342	0		28117805	7584182	9052	22630	838	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	24560847	6976899	9505	23762	734		
403.8529	31.927	31.929	0	0.987	19583994	5667072	9052	22630	626	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.953	31.945	0	1.001	57595942	16510469	19316	48290	855		
391.8127	31.940	31.945	0	1.000	45448278	13107381	15598	38995	840	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	30198617	8138784	9505	23762	856		
403.8529	32.033	32.033	0	0.991	24193777	6493948	9052	22630	717	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	66690137	17959920	19316	48290	930		
391.8127	32.047	32.047	0	1.000	52210161	14135061	15598	38995	906	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	68169382	18483699	19316	48290	957		
391.8127	32.353	32.355	0	1.013	54225616	14872863	15598	38995	954	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14610497	4589210	16388	40970	280		
419.8220	33.912	33.914	0	1.049	33142475	10497182	35883	89707	293	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	75936953	24520194	90693	226732	270		
409.7789	33.924	33.926	0	1.000	71955287	23549459	85368	213420	276	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.017	35.010	0	1.083	12971814	3739945	16388	40970	228		
419.8220	35.017	35.010	0	1.083	29715811	8442322	35883	89707	235	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	63647403	18553677	90693	226732	205		
409.7789	35.017	35.020	0	1.000	60321321	17850429	85368	213420	209	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	20381379	6053926	11567	28917	523		
437.8140	34.714	34.716	0	1.073	20061571	5957434	11351	28377	525	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	48165795	14539111	26079	65197	558		
425.7737	34.726	34.726	0	1.000	46270127	14041663	24831	62077	565	1.04(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26901378	6693523	3896	9740	1718		
471.7750	37.093	37.094	0	1.147	30402502	7661603	4420	11050	1733	0.88(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	86562223	22814939	9244	23110	2468		
443.7399	37.201	37.199	0	1.003	95184845	24785143	7929	19822	3126	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	64116469	16176091	6061	15152	2669		
459.7348	37.105	37.106	0	1.000	71453705	17977820	6746	16865	2665	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

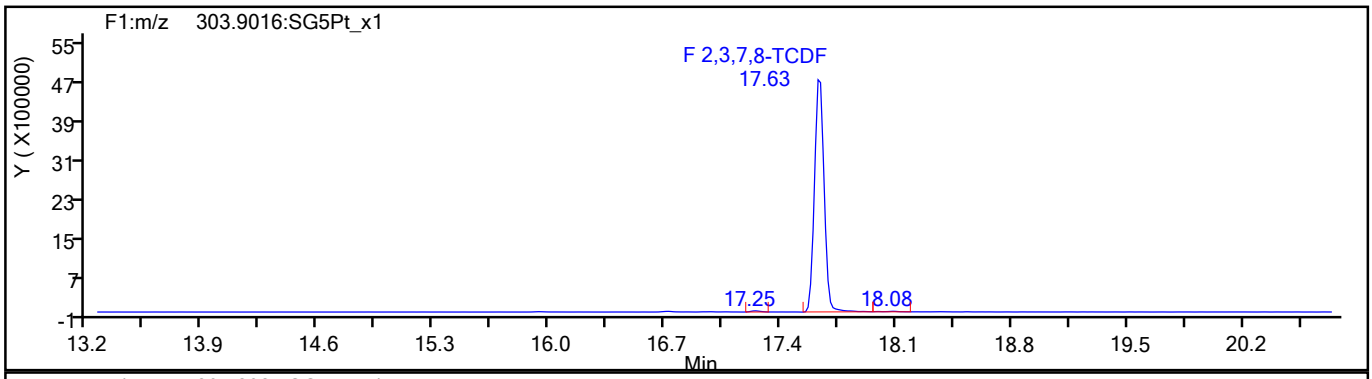

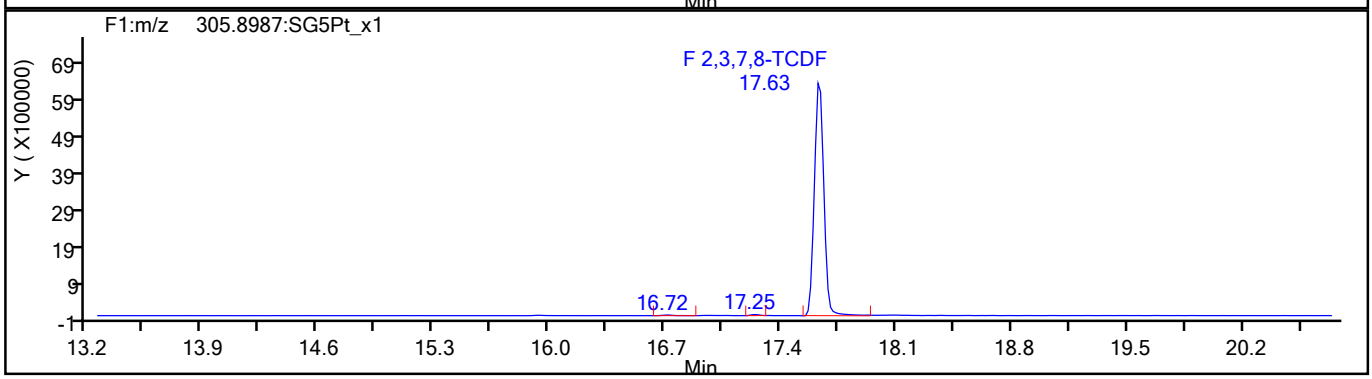

TCDF Standards

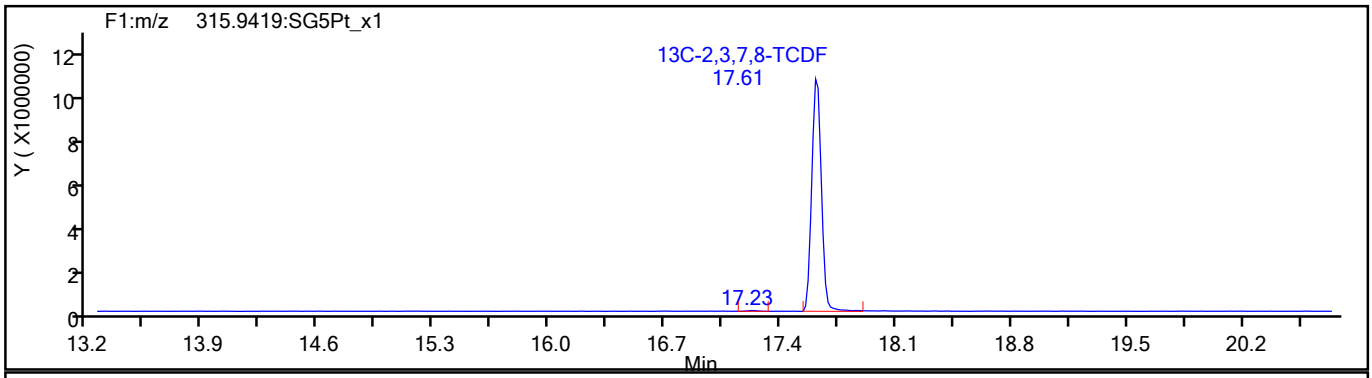

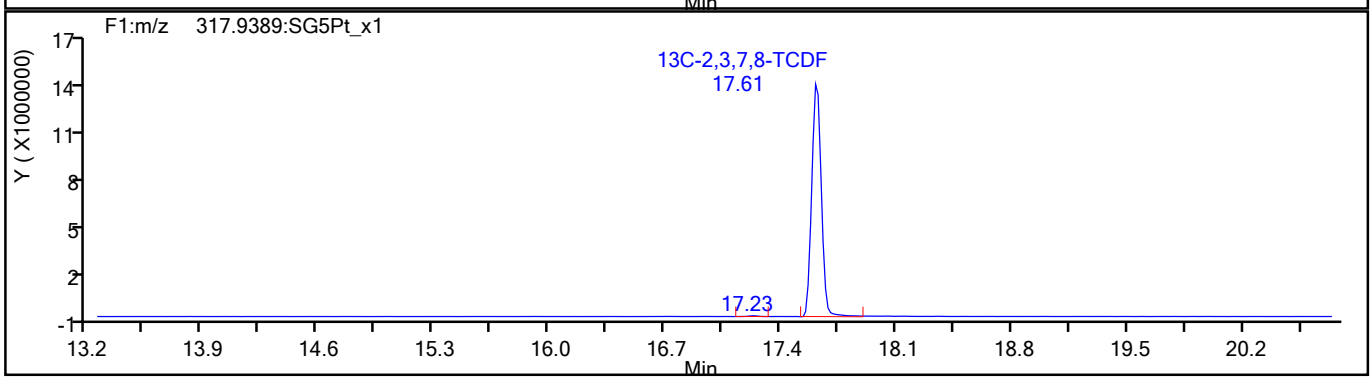

784089

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

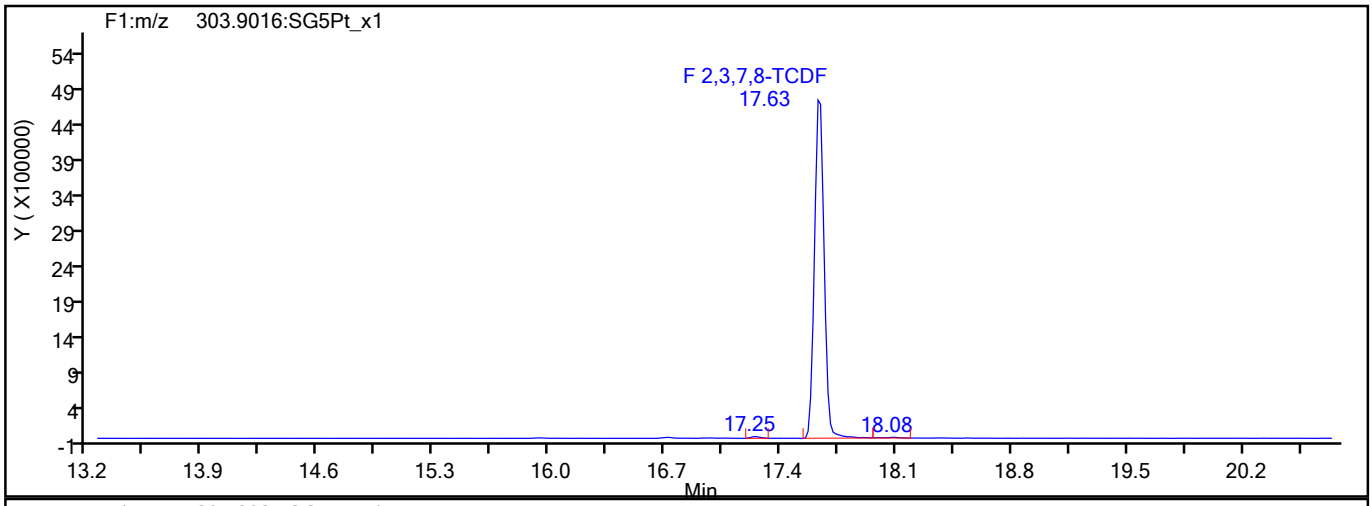

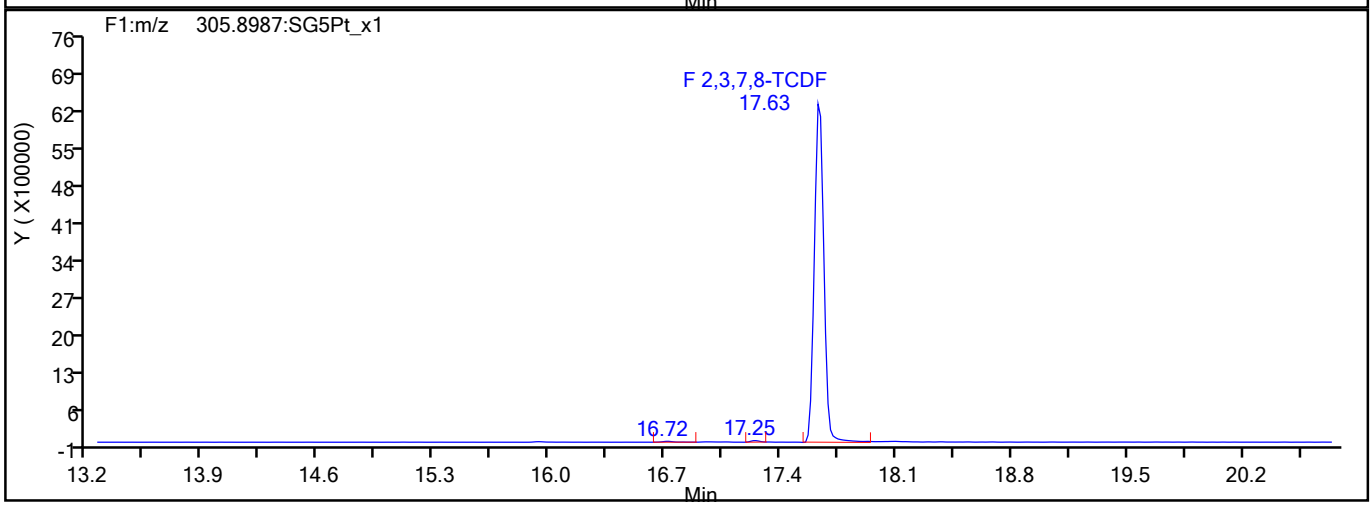

TCDF Interference Mass

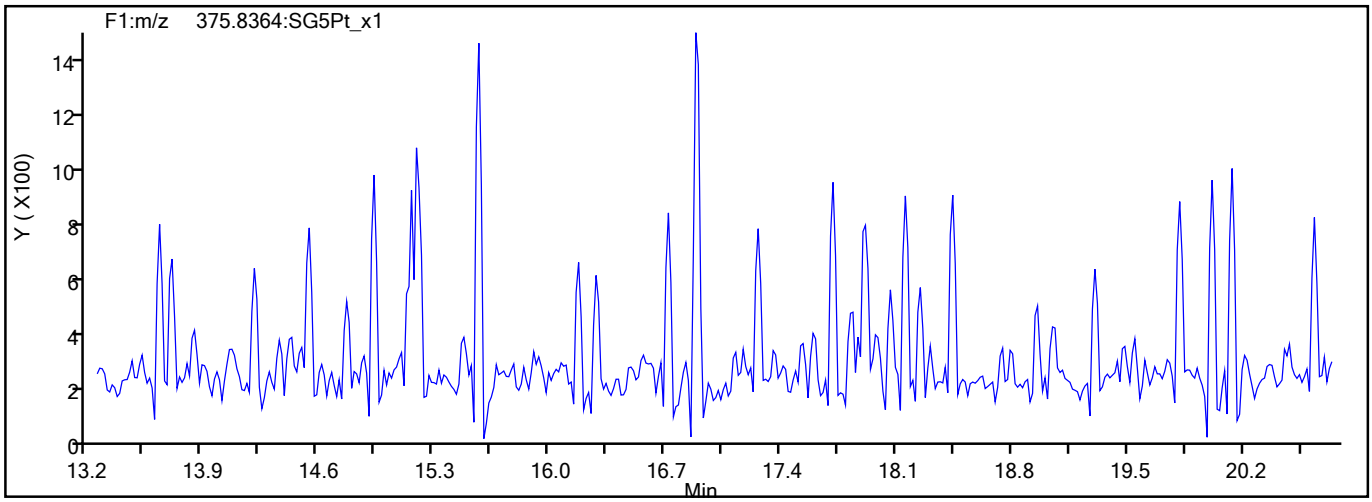

784090

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

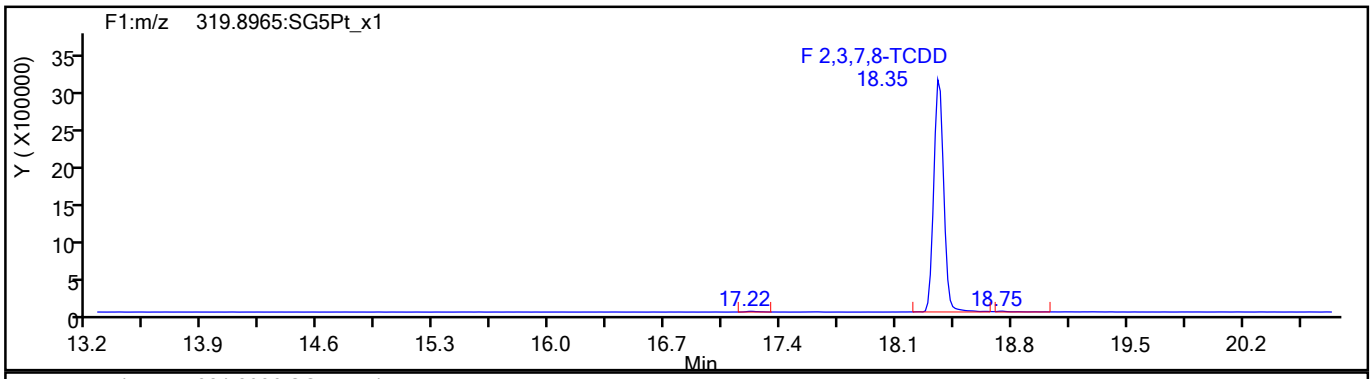

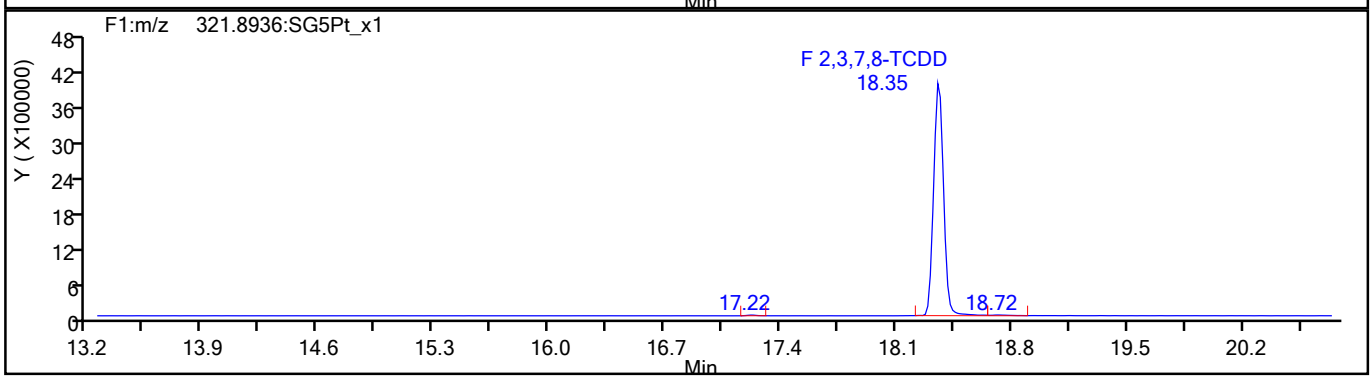

TCDD Standards

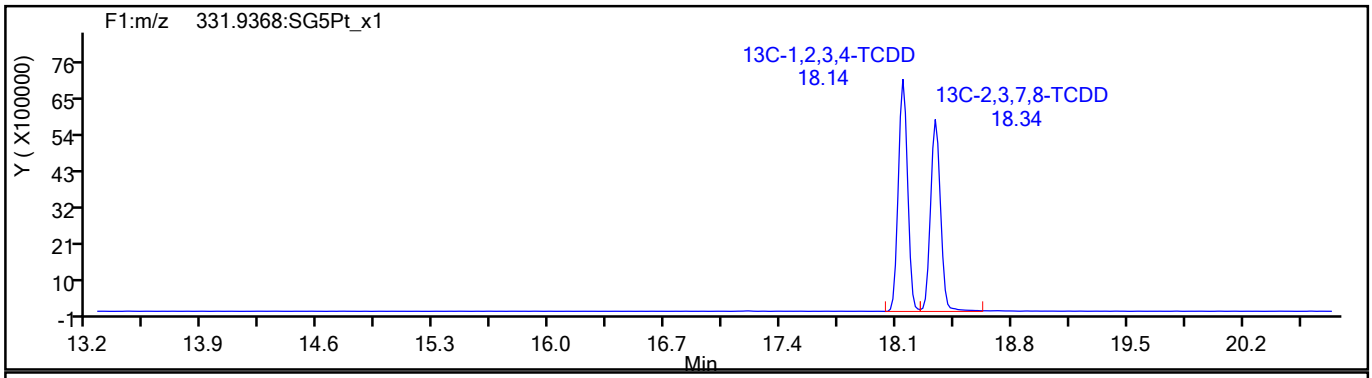

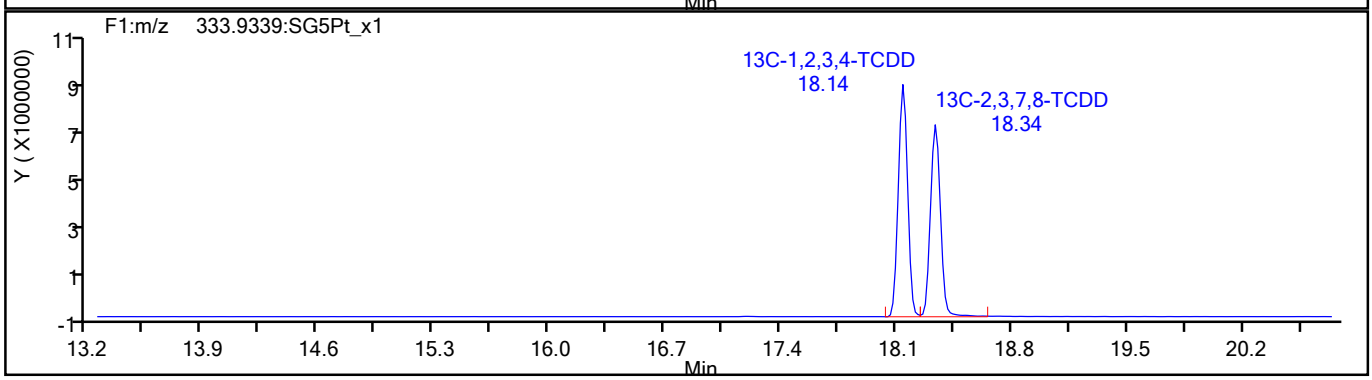

784091

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

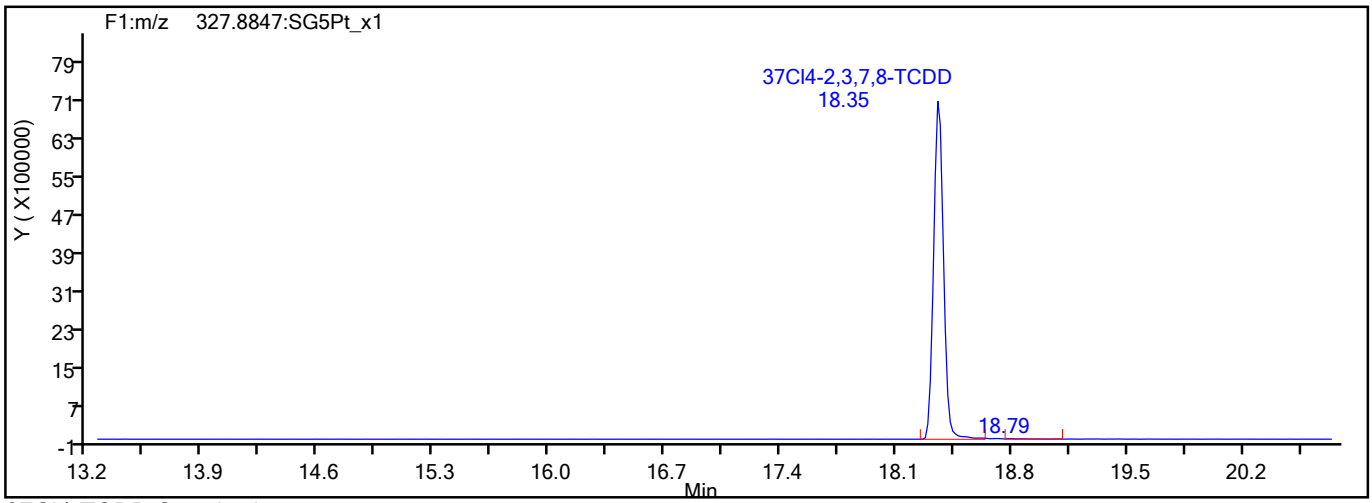

37Cl4-TCDD Standards

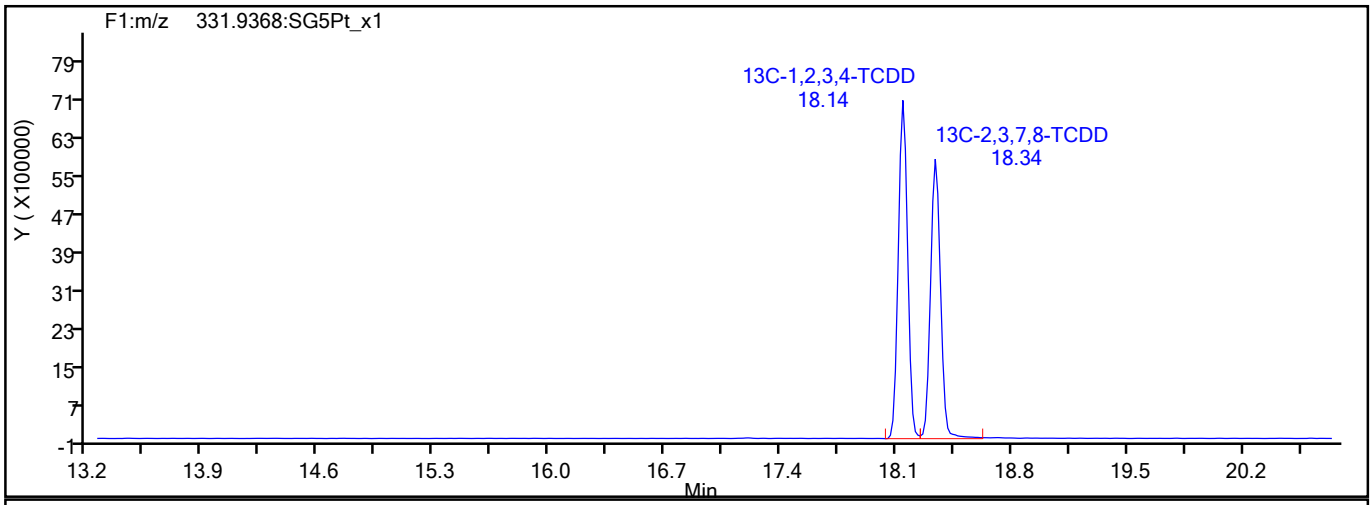

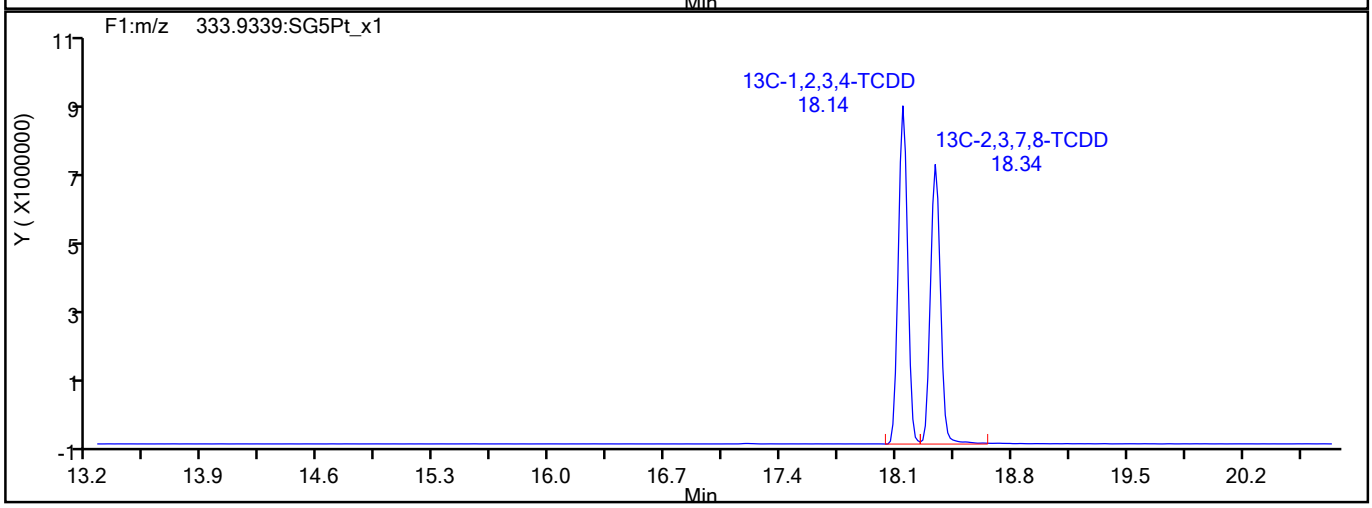

784092

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

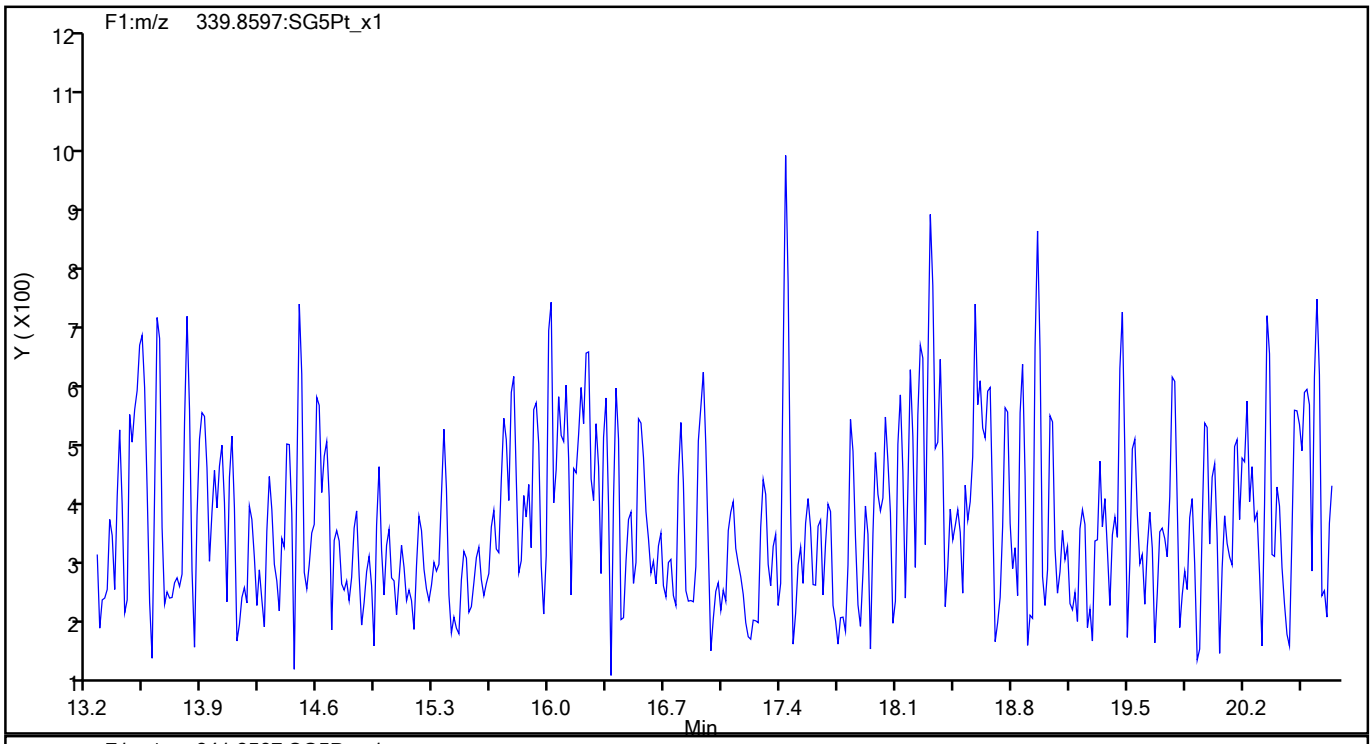

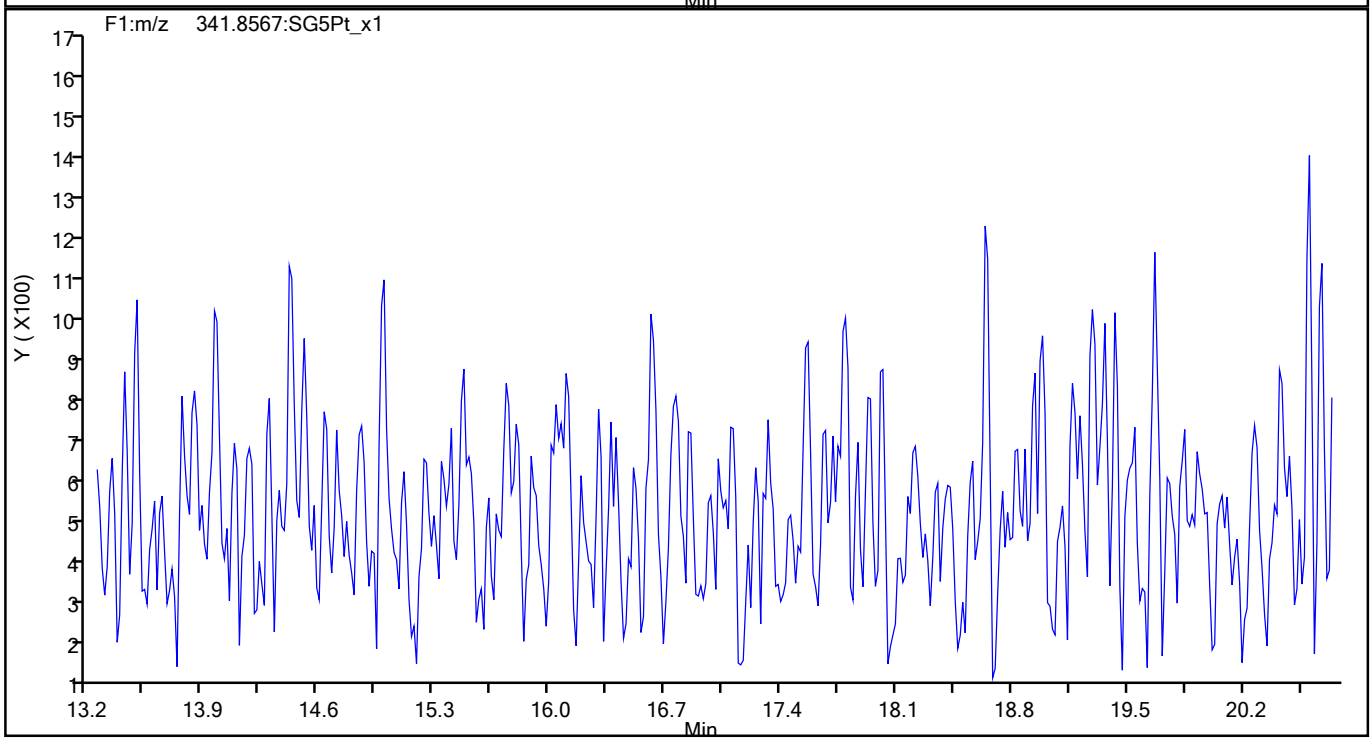

784093

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

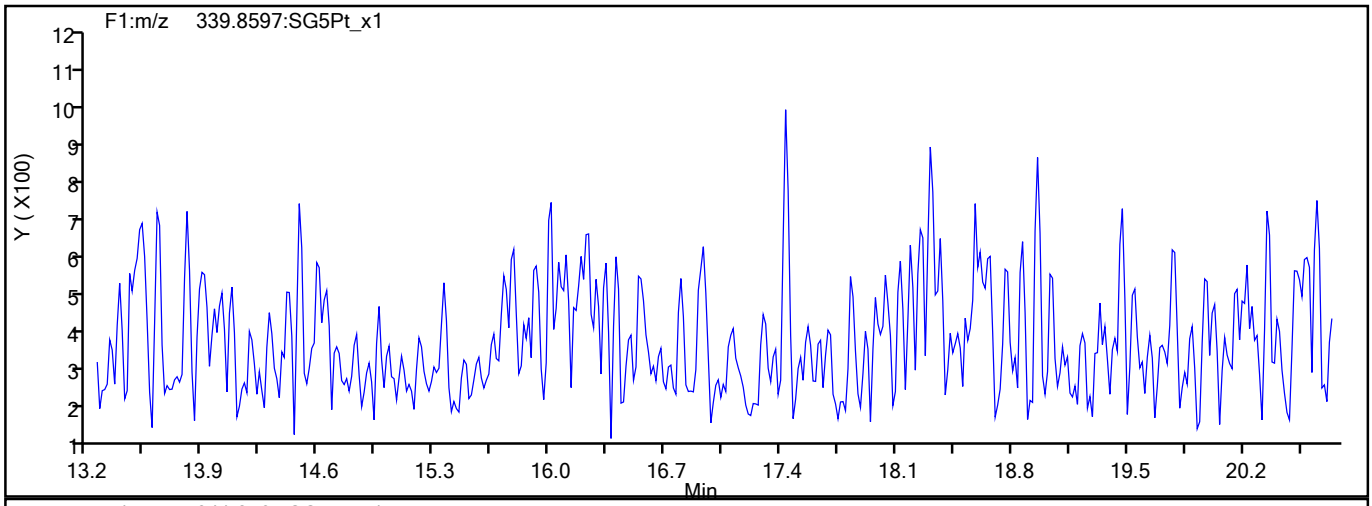

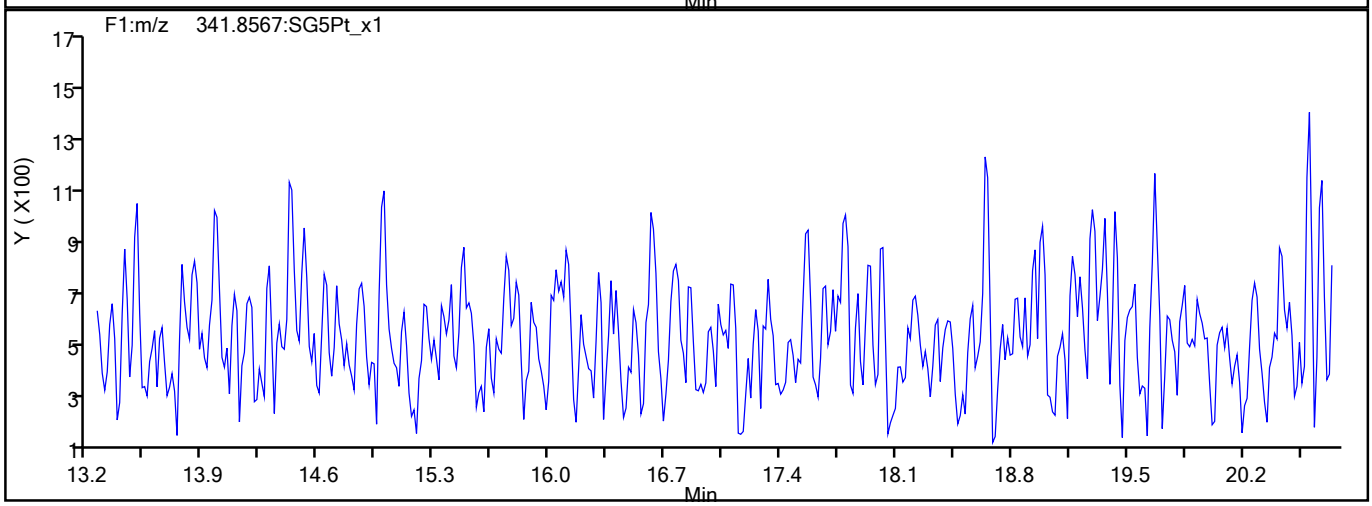

F1 PeCDFs Interference Mass

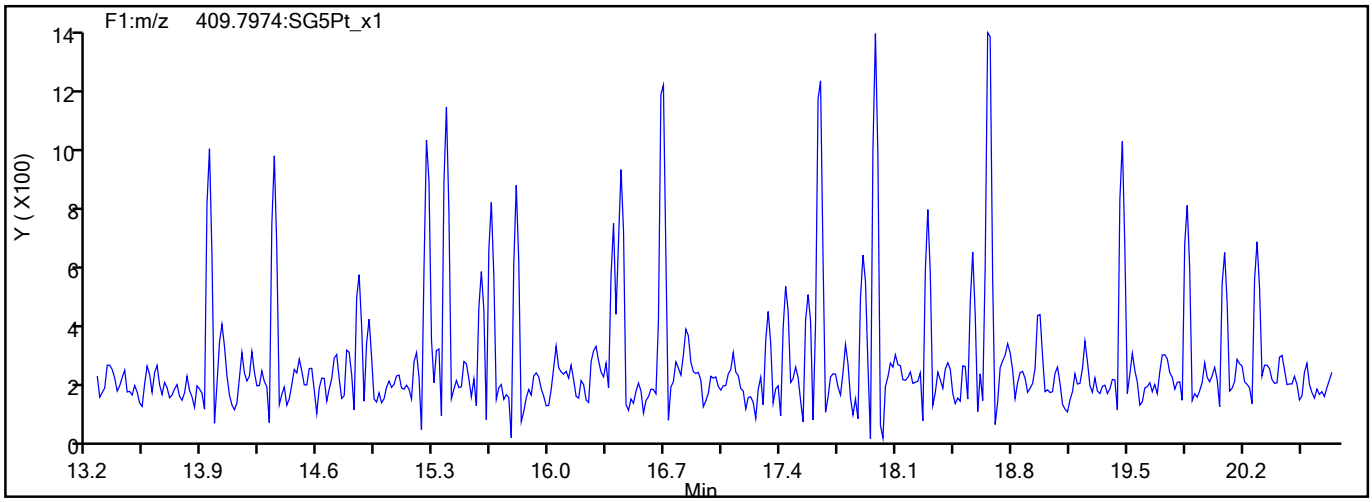

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

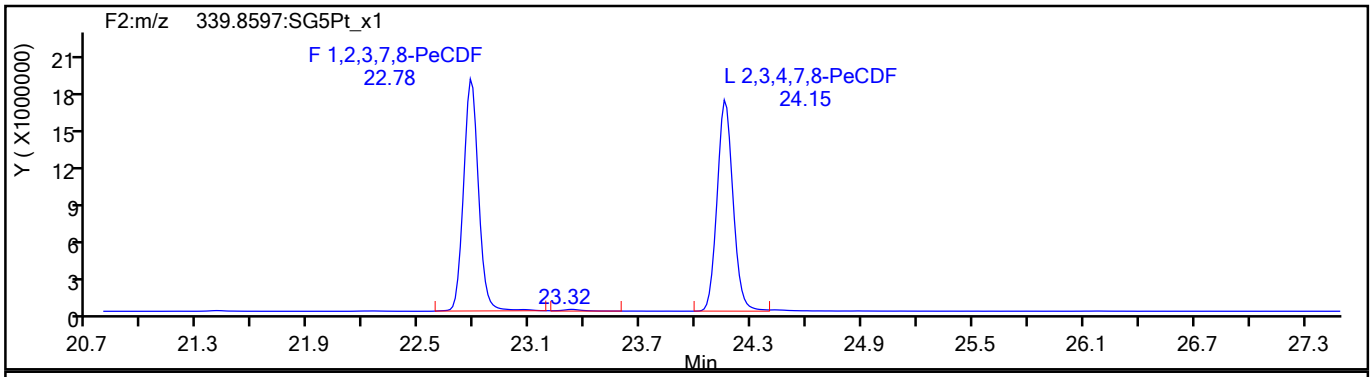

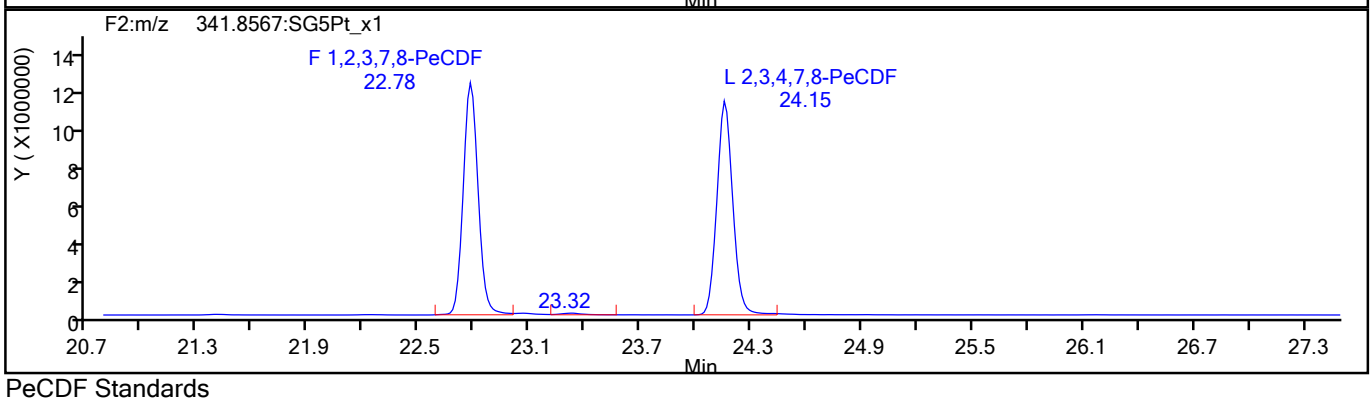

PeCDF Standards

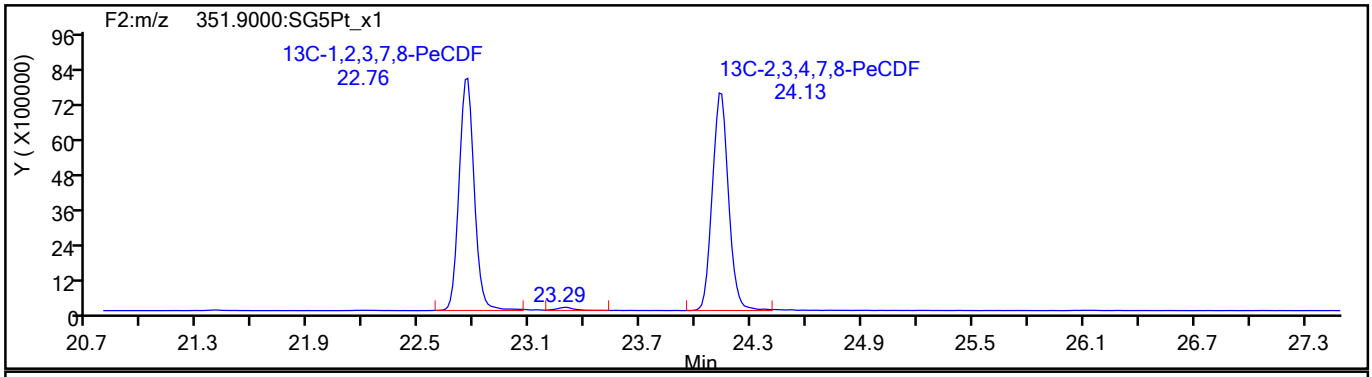

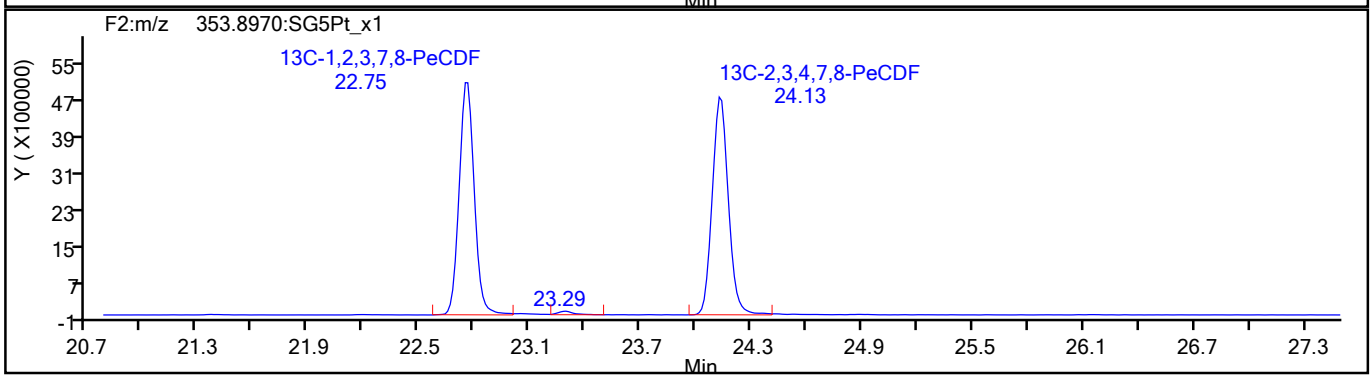

784095

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

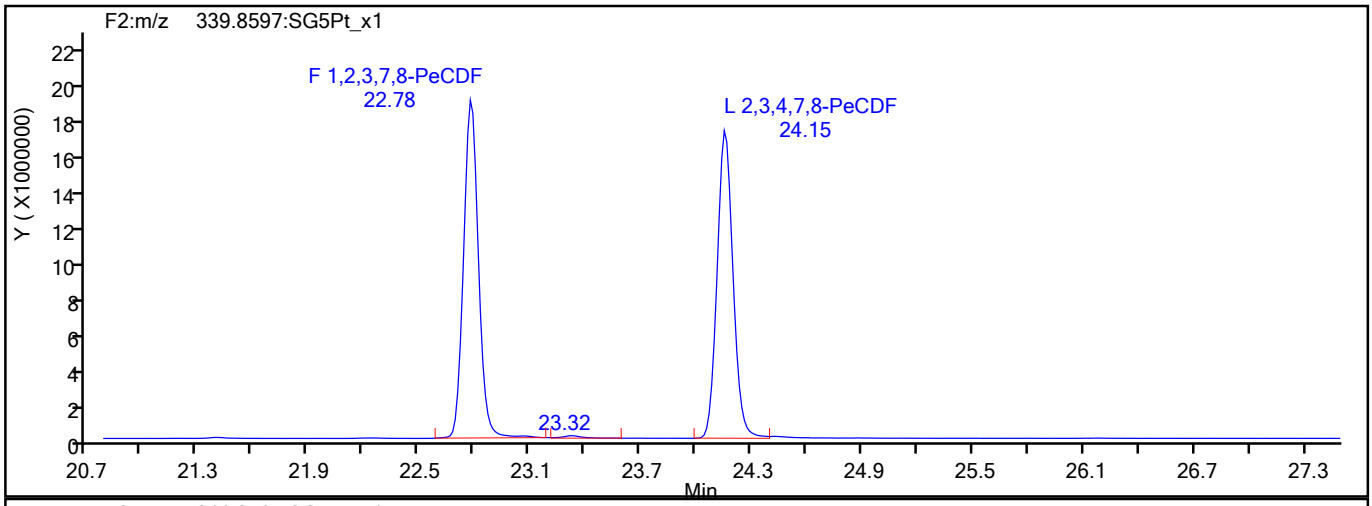

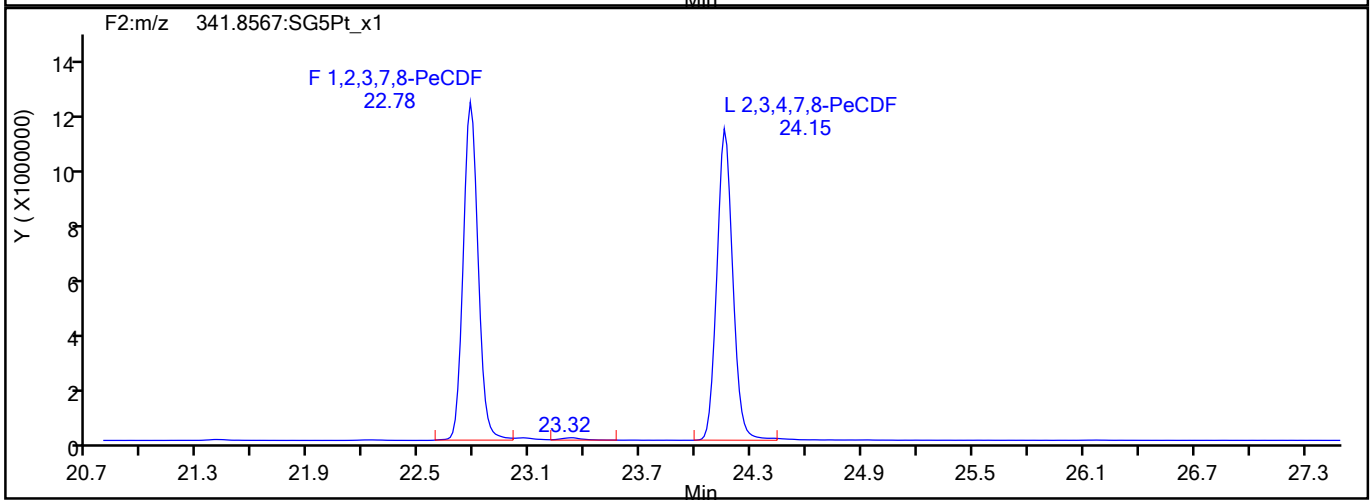

PeCDF Interference Mass

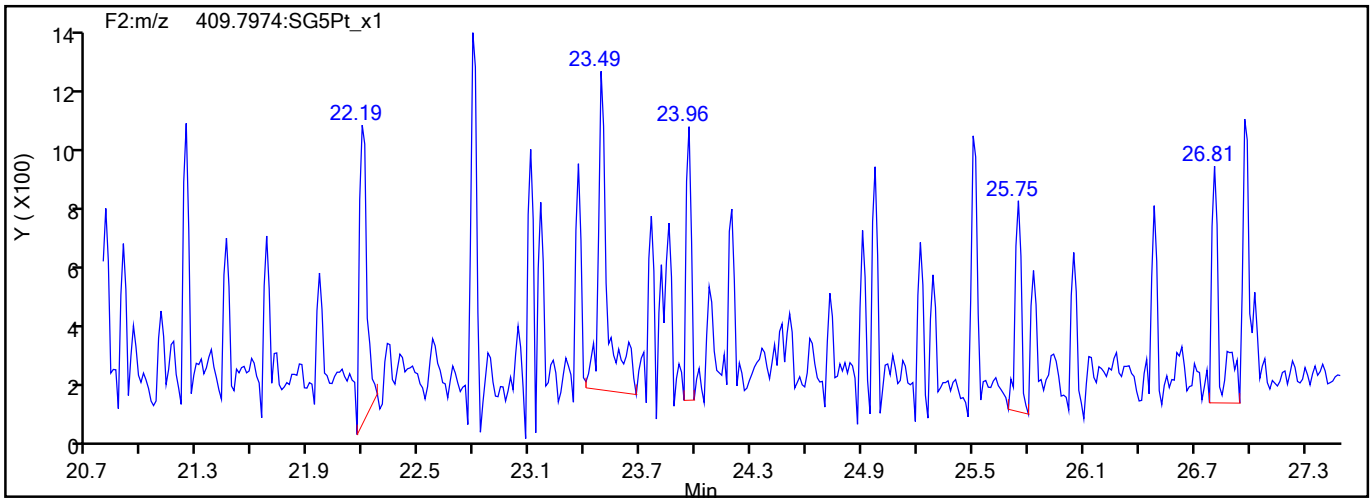

784096

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

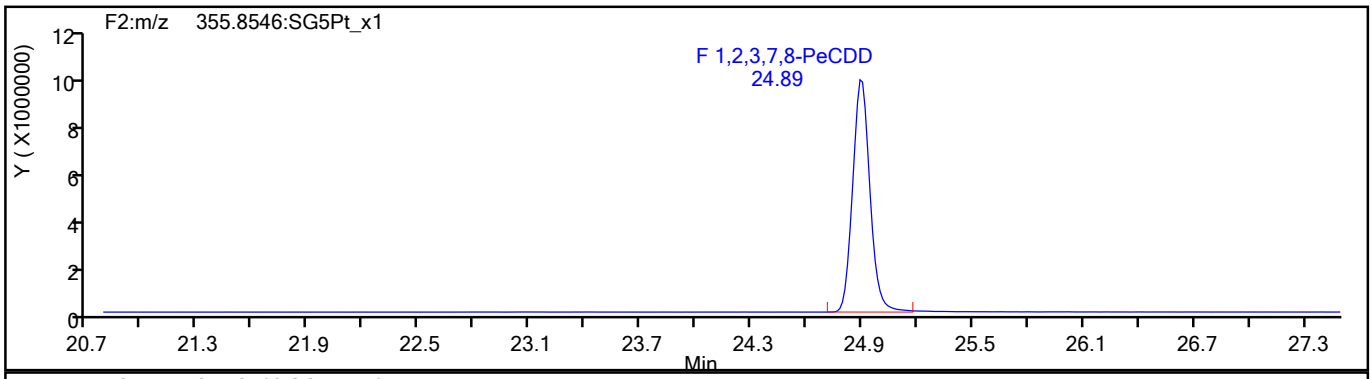

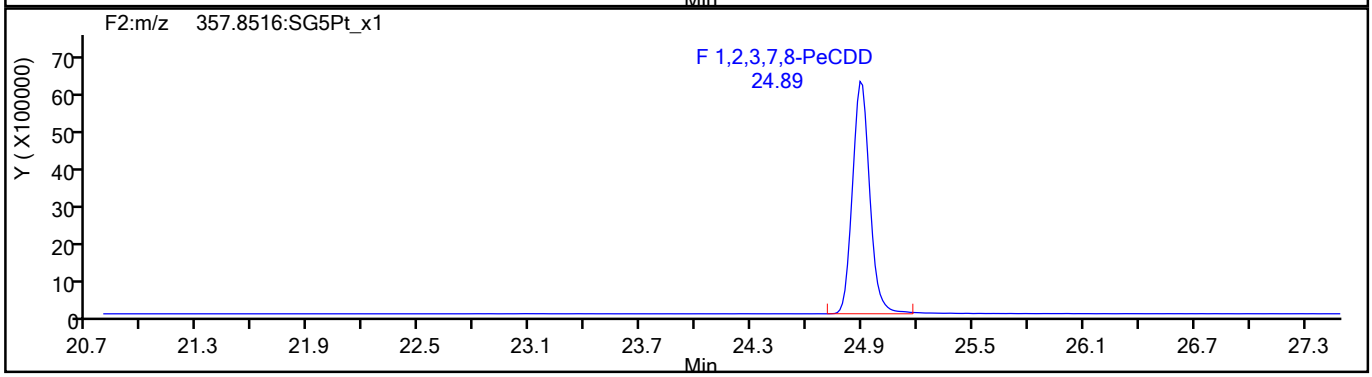

PeCDD Standards

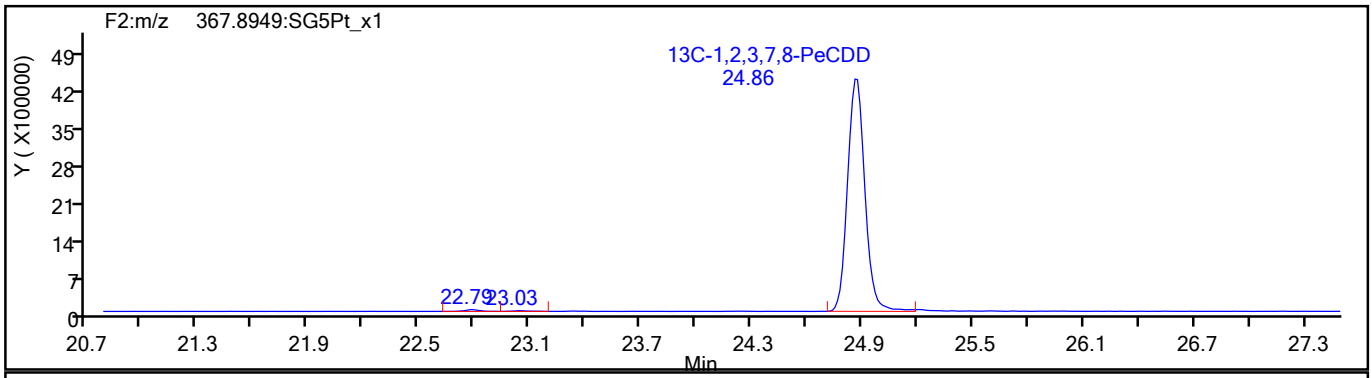

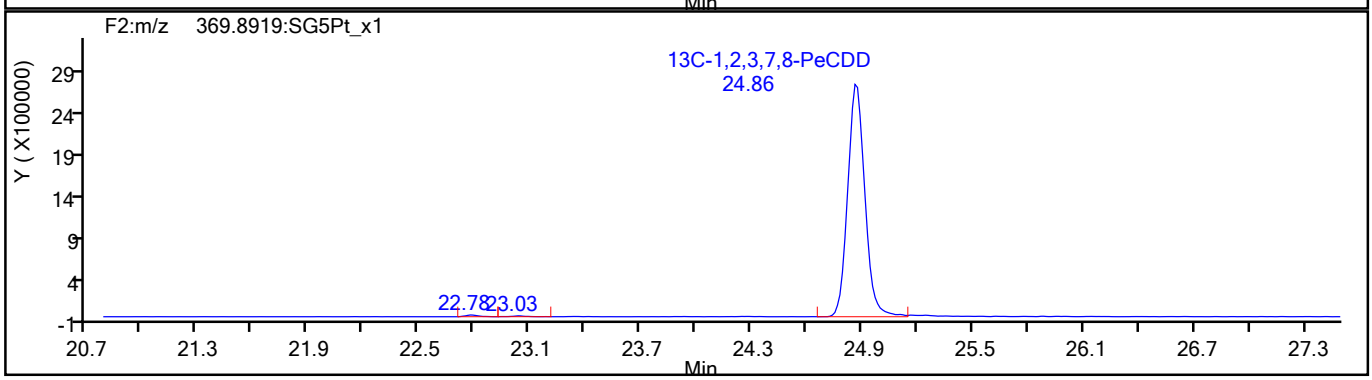

784097

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

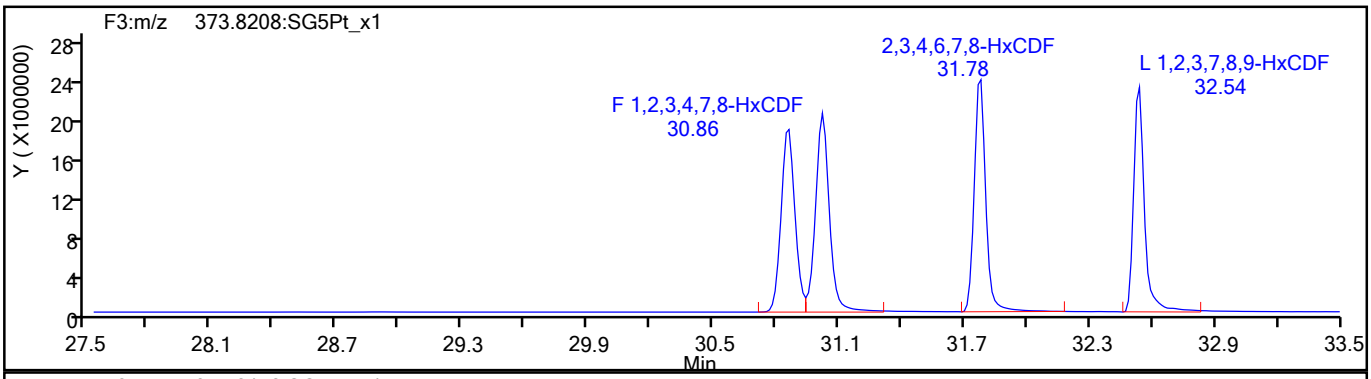

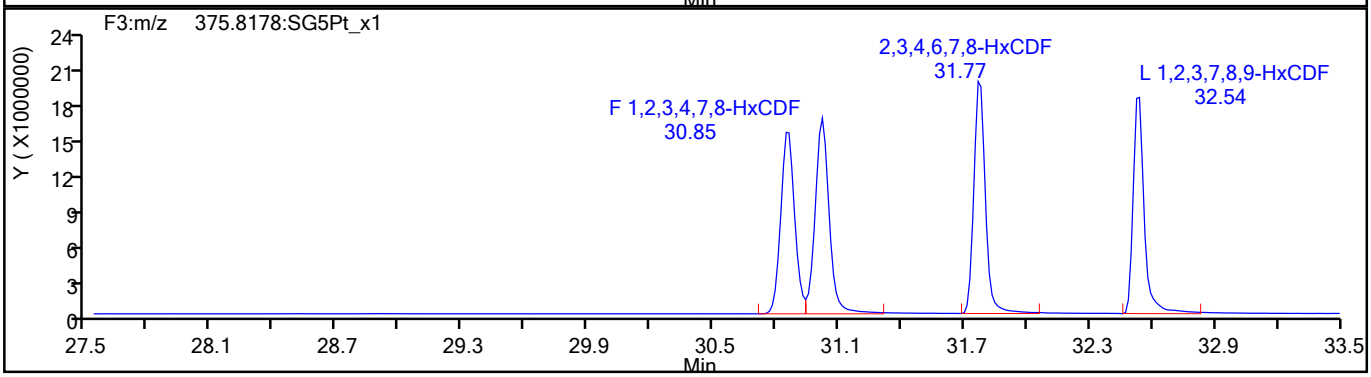

HxCDF Standards

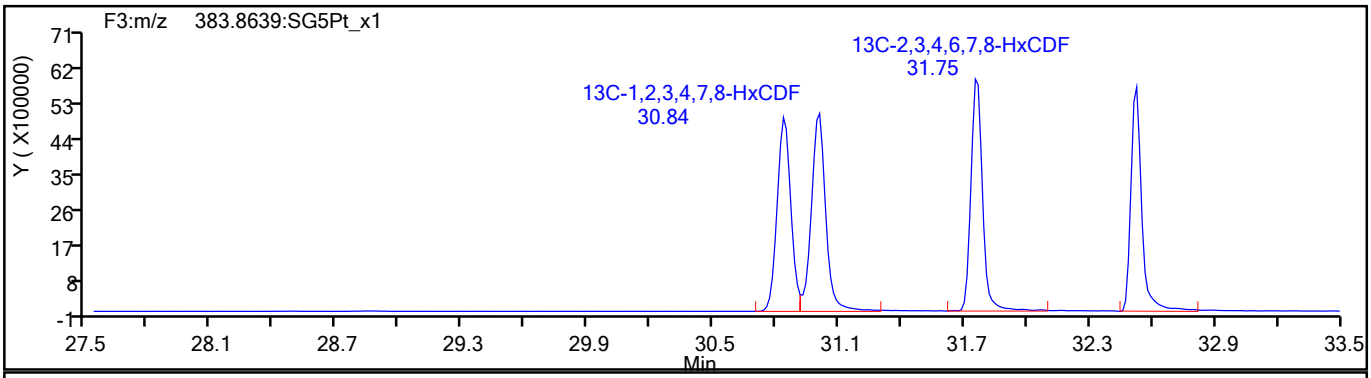

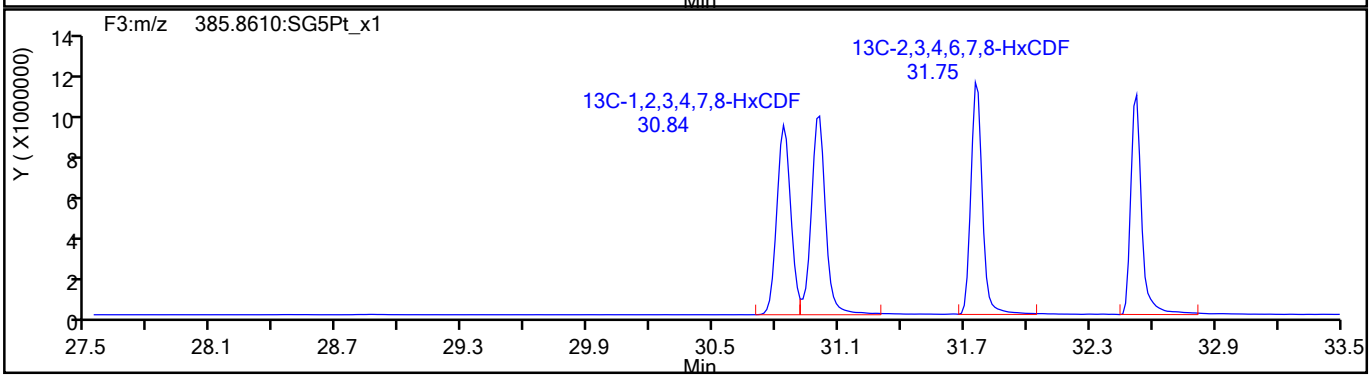

784098

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

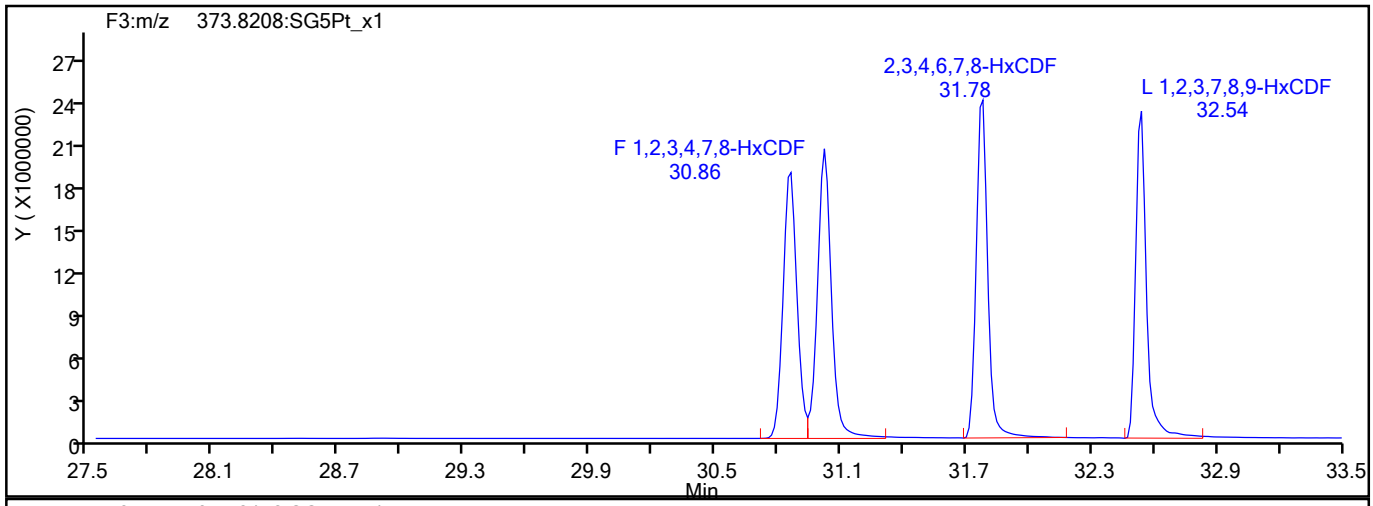

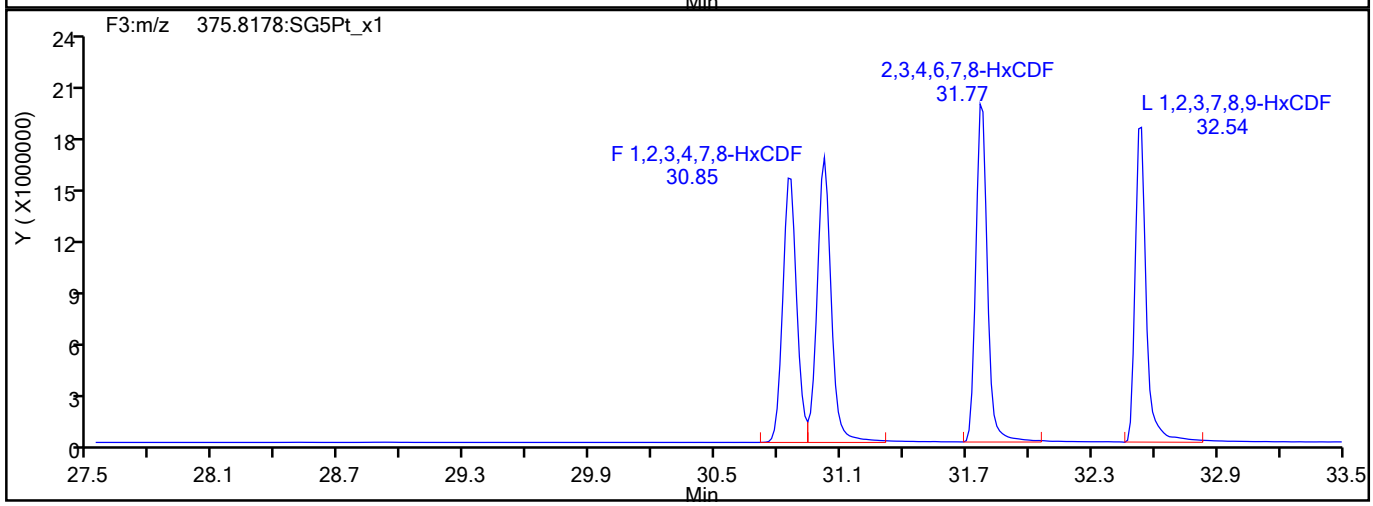

HxCDF Interference Mass

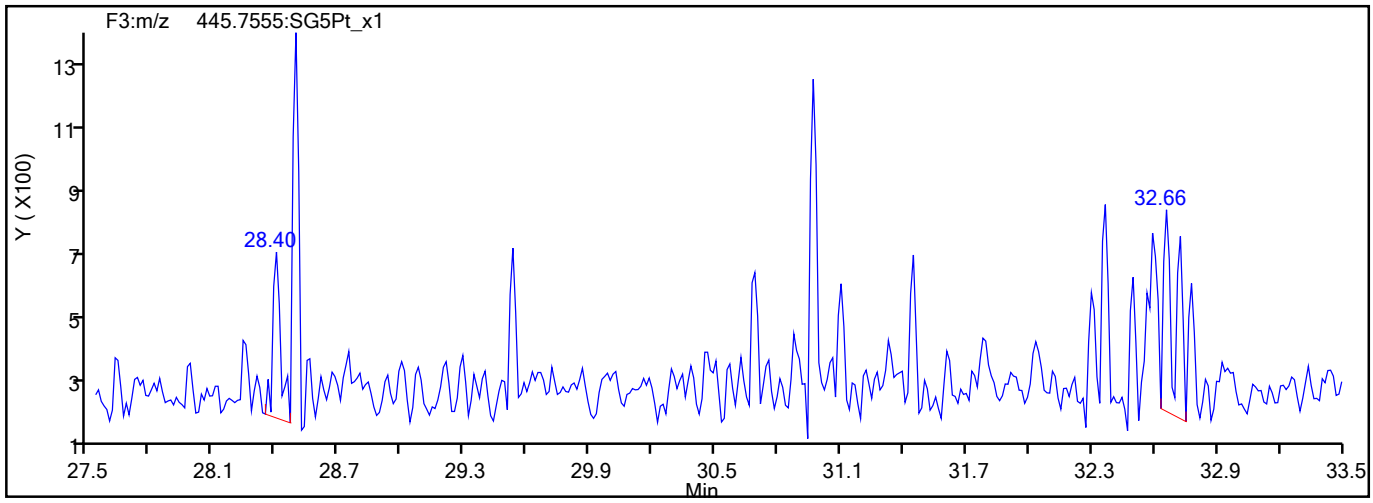

784099

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

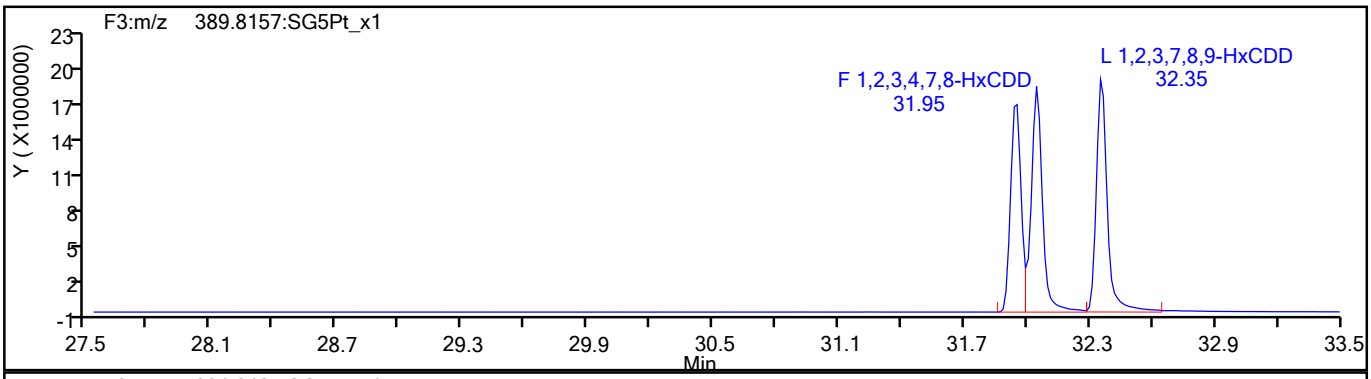

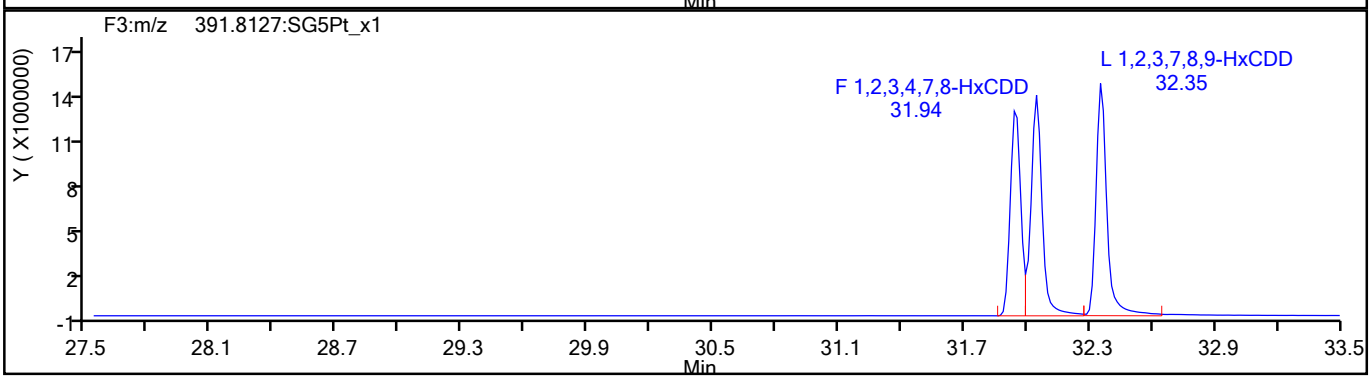

HxCDD Standards

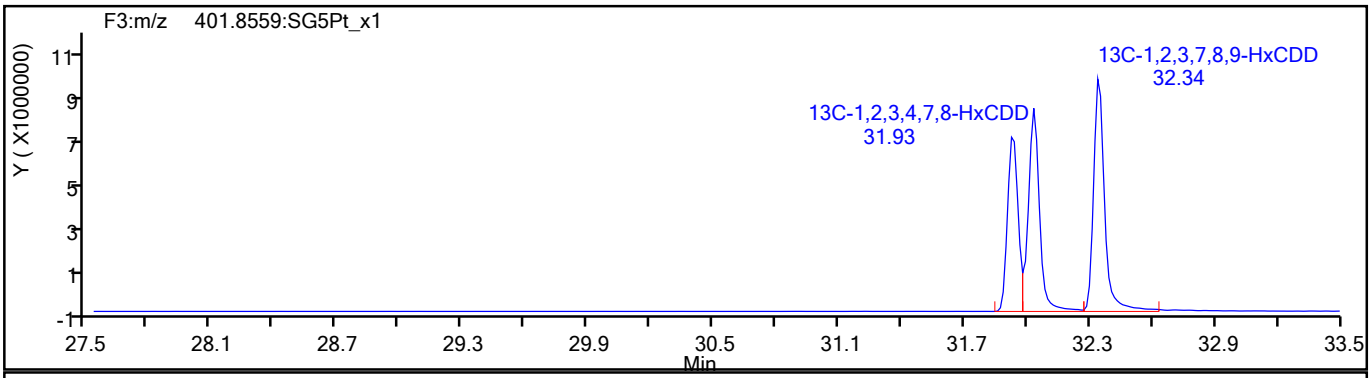

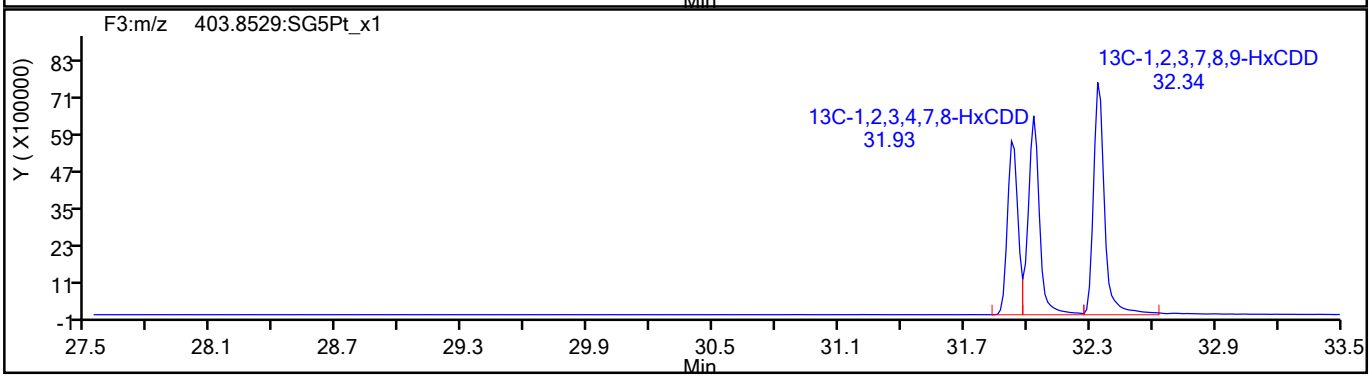

784100

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

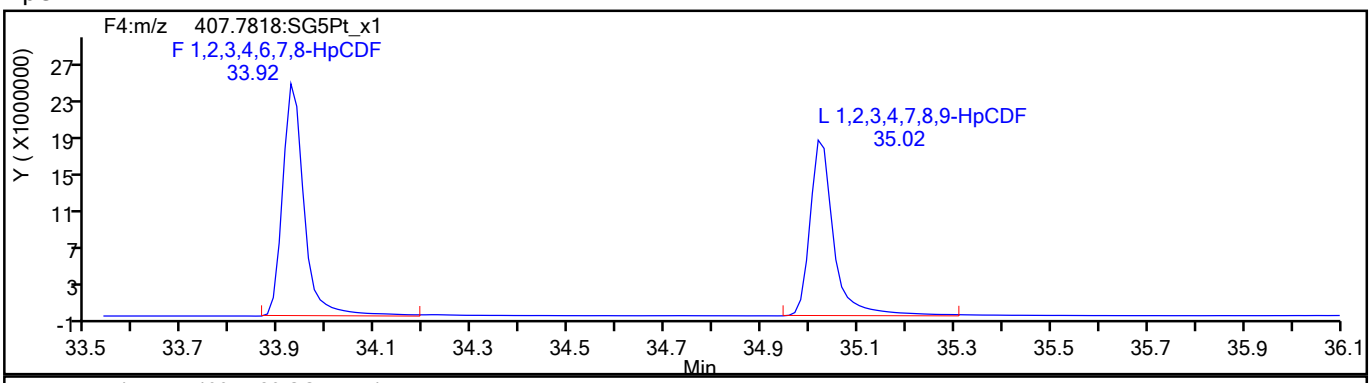

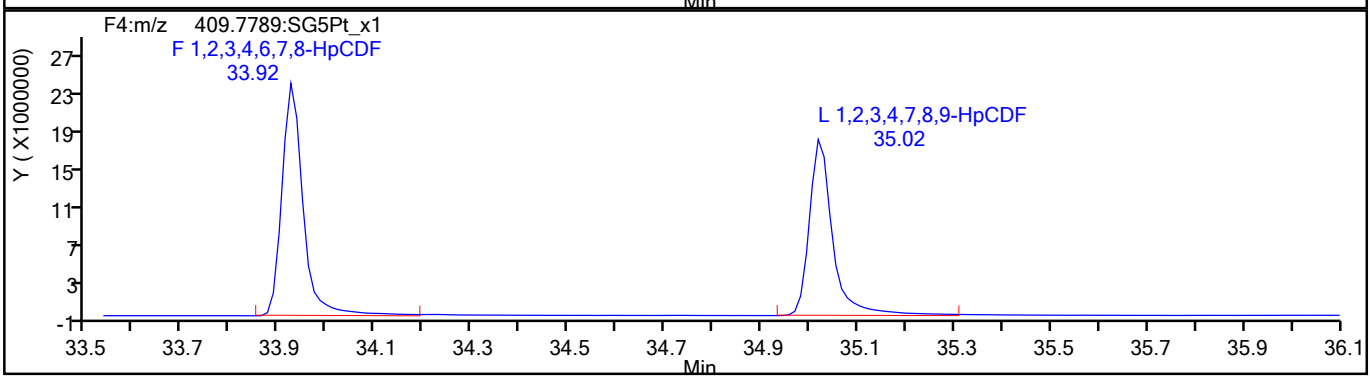

HpCDF Standards

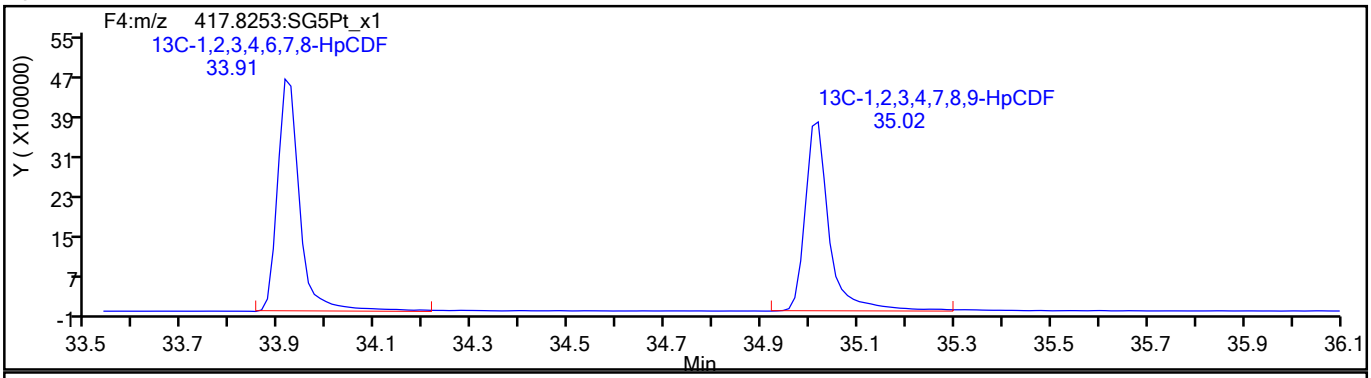

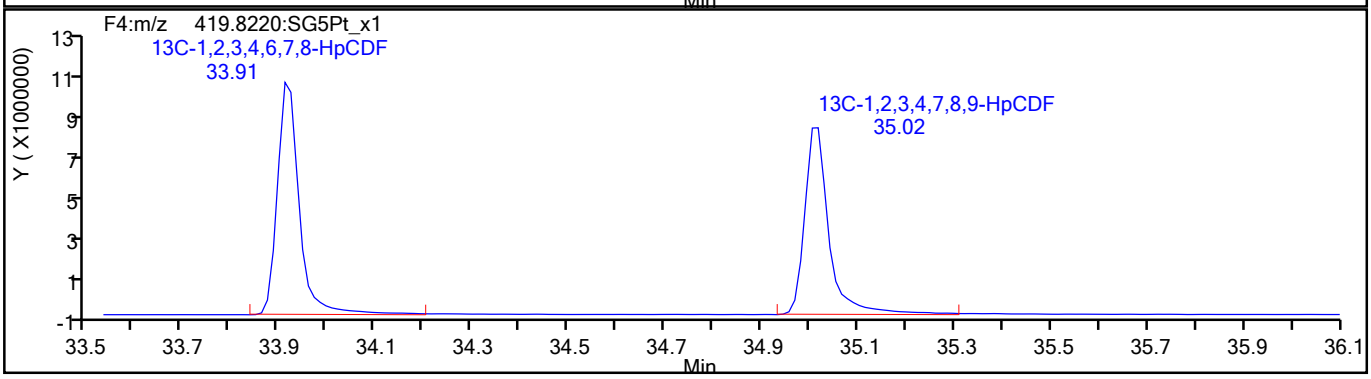

784101

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

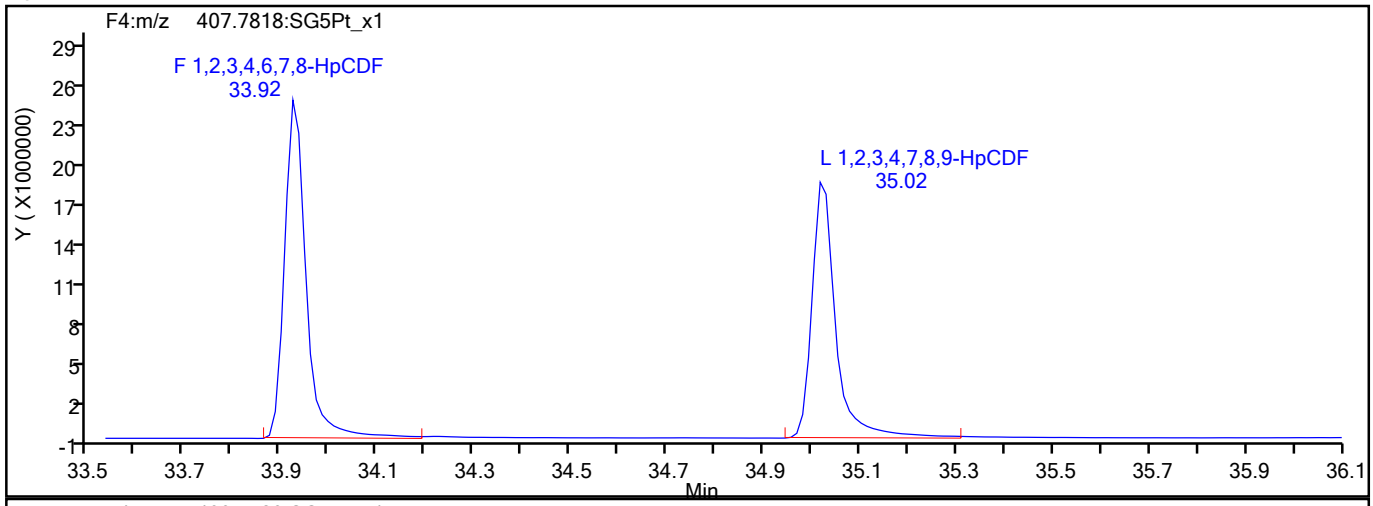

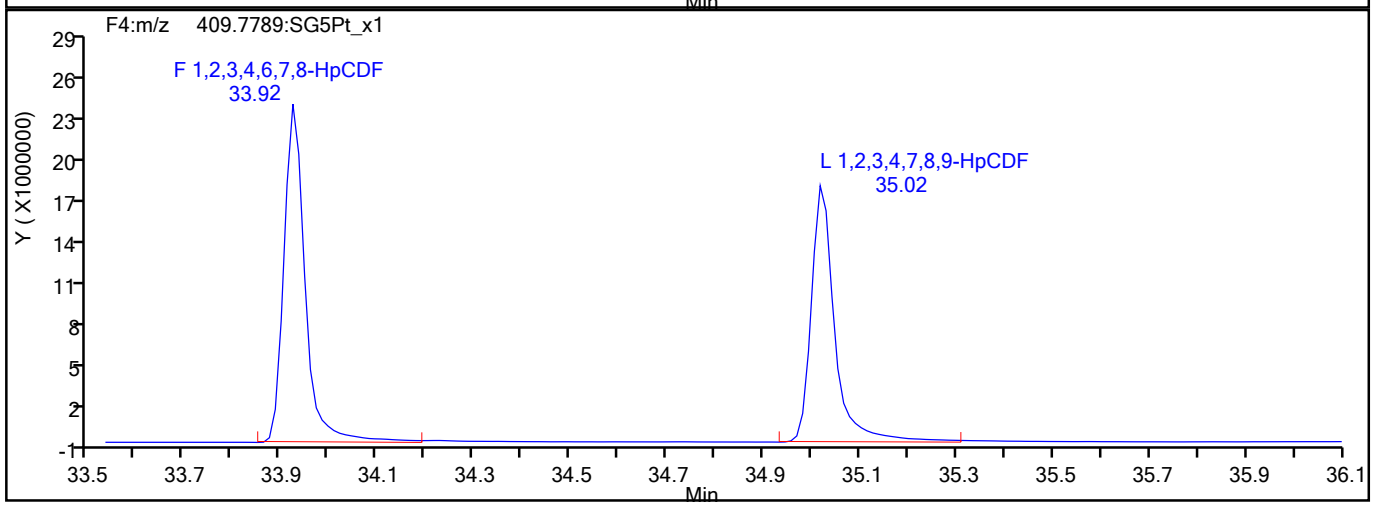

HpCDF Interference Mass

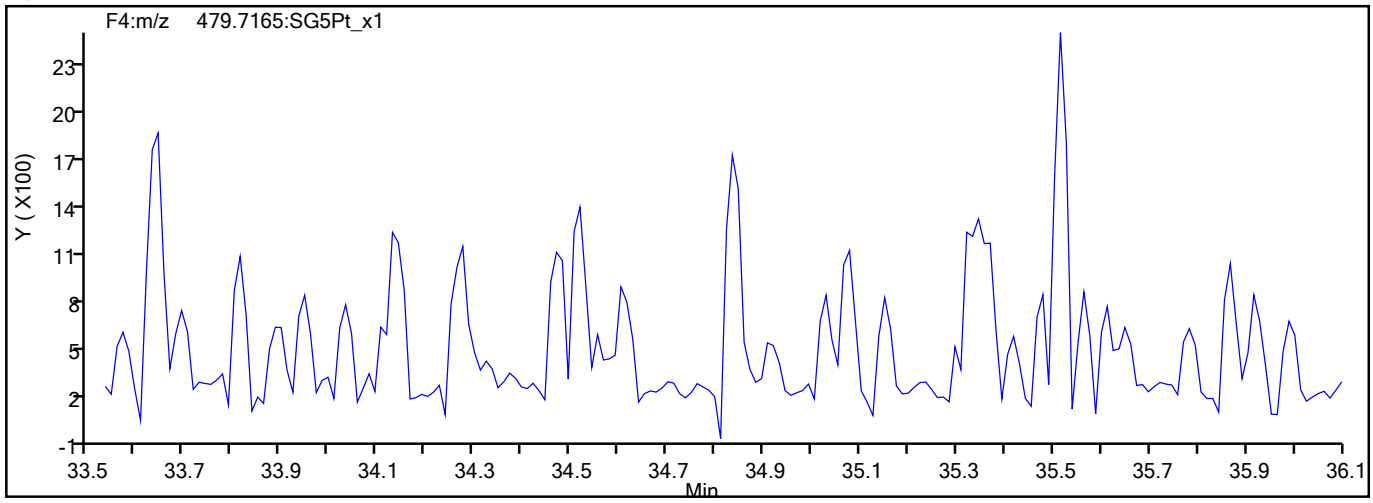

784102

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

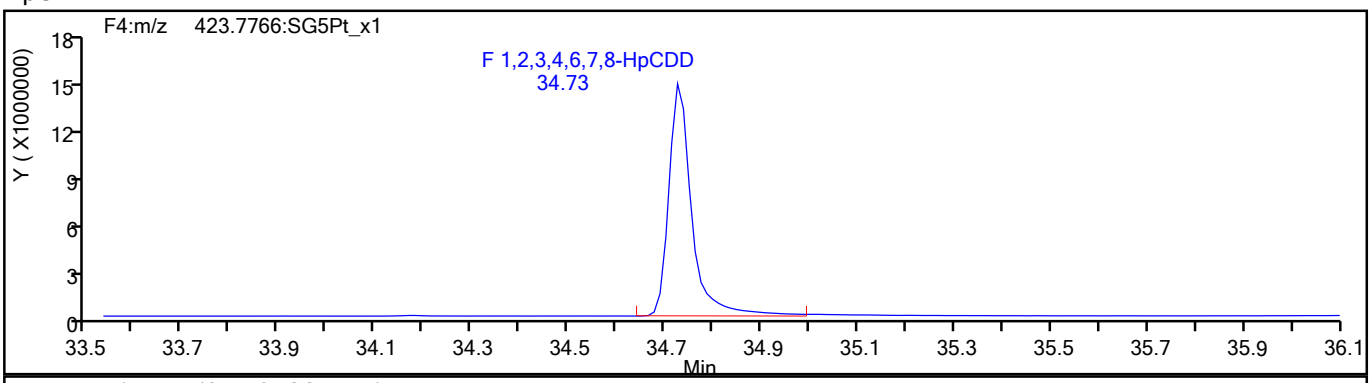

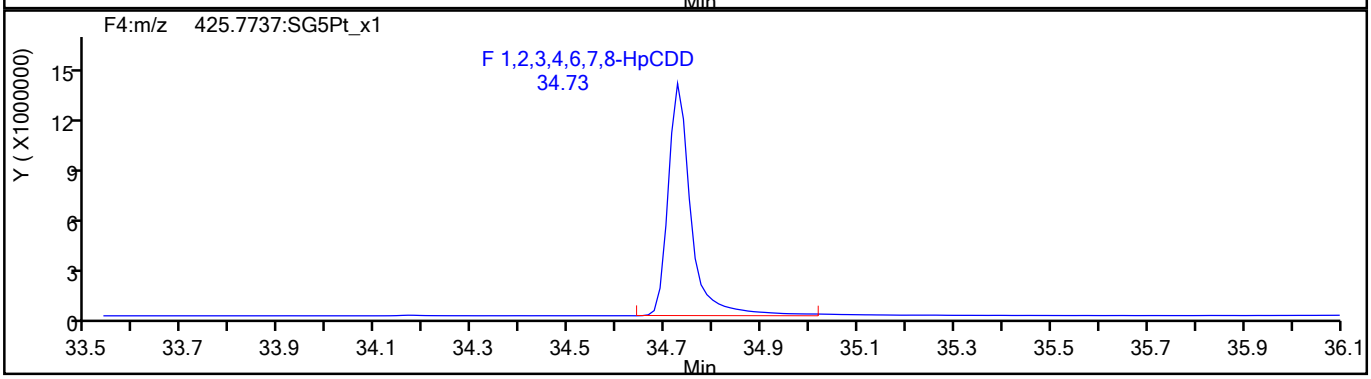

HpCDD Standards

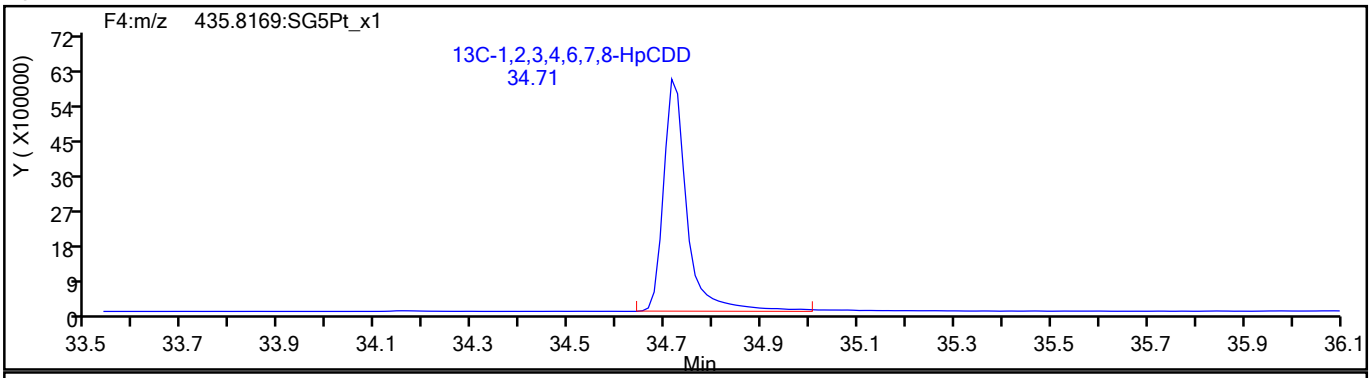

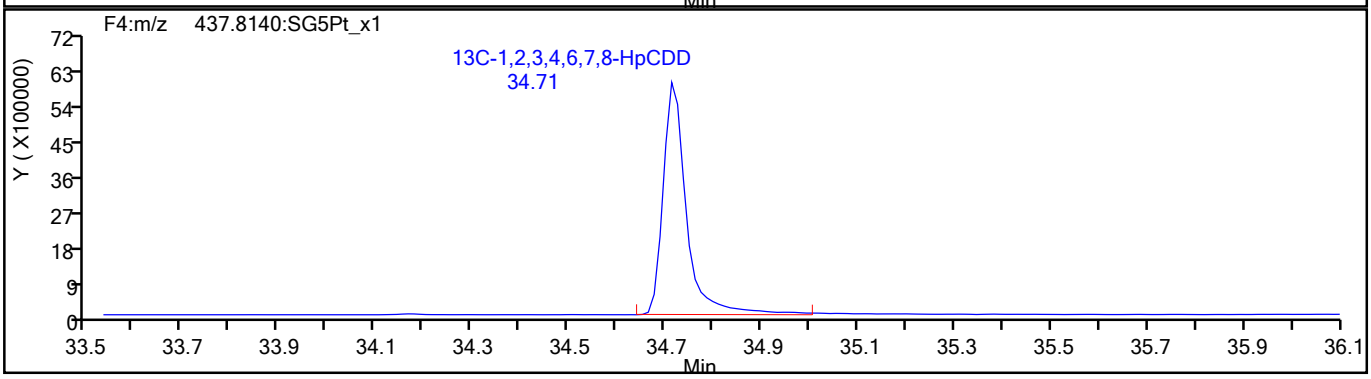

784103

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

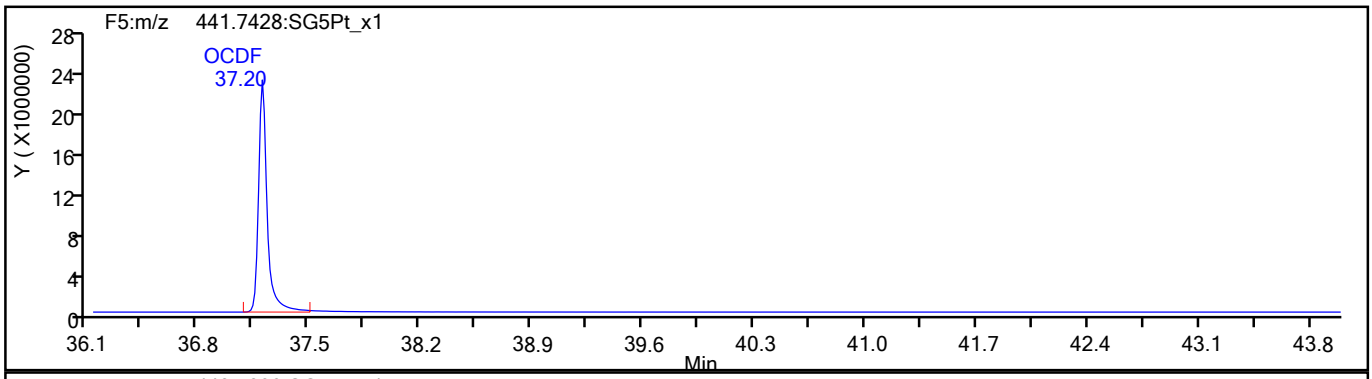

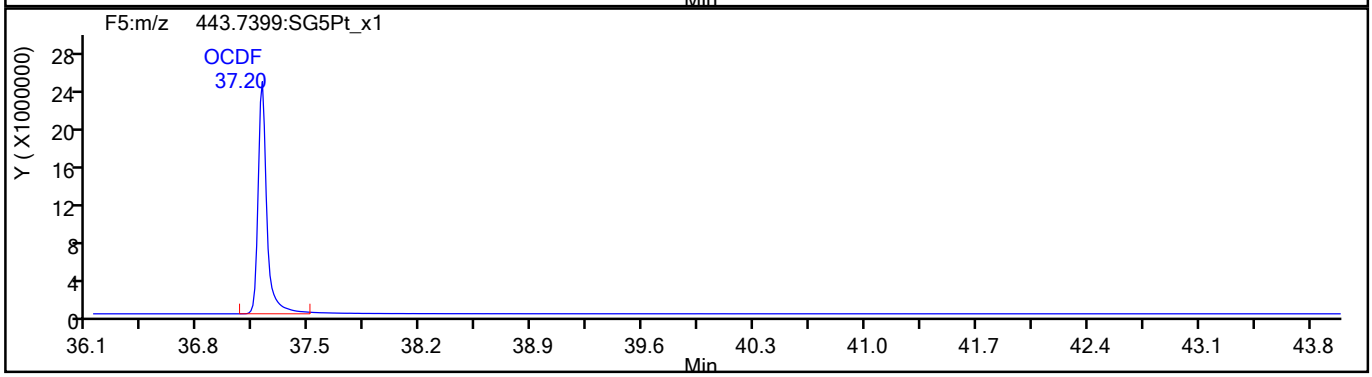

OCDF Standards

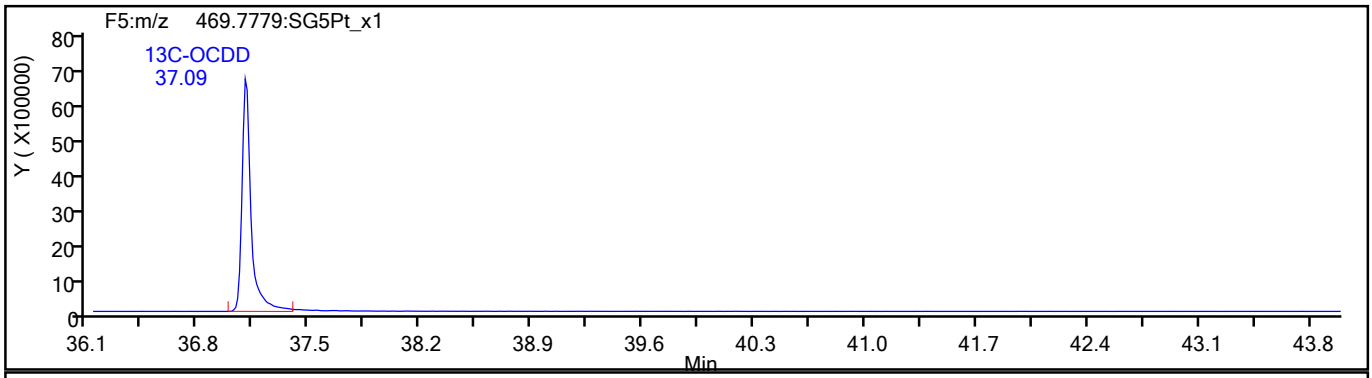

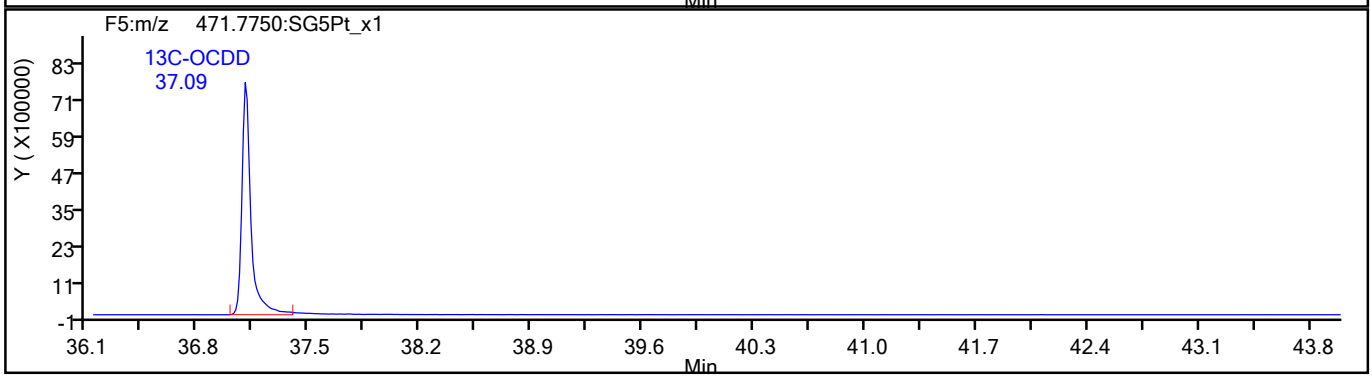

784104

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

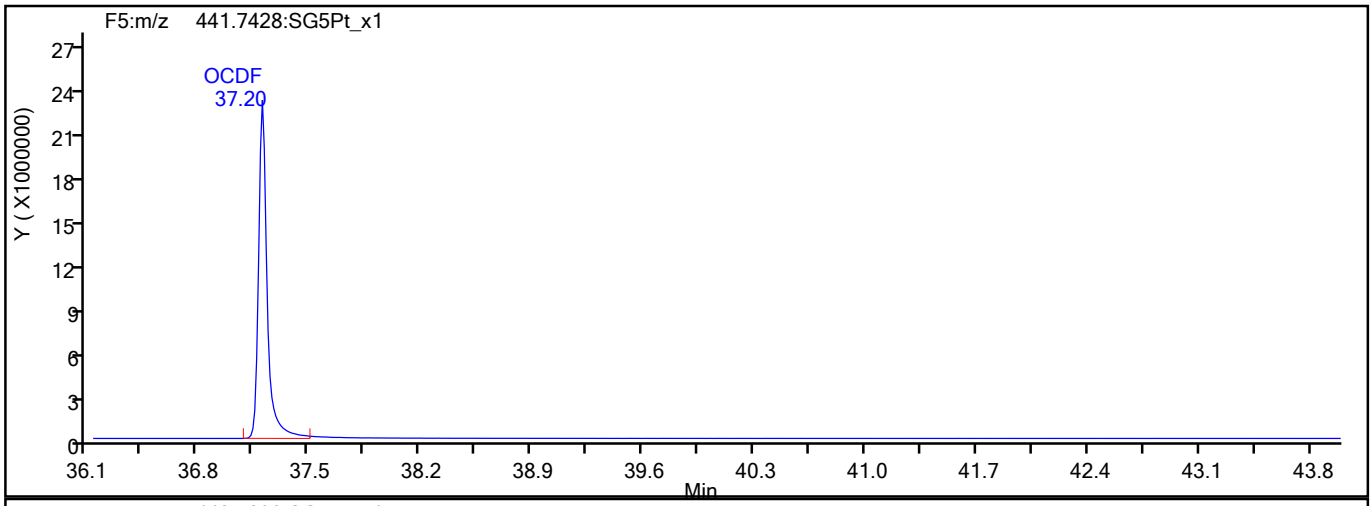

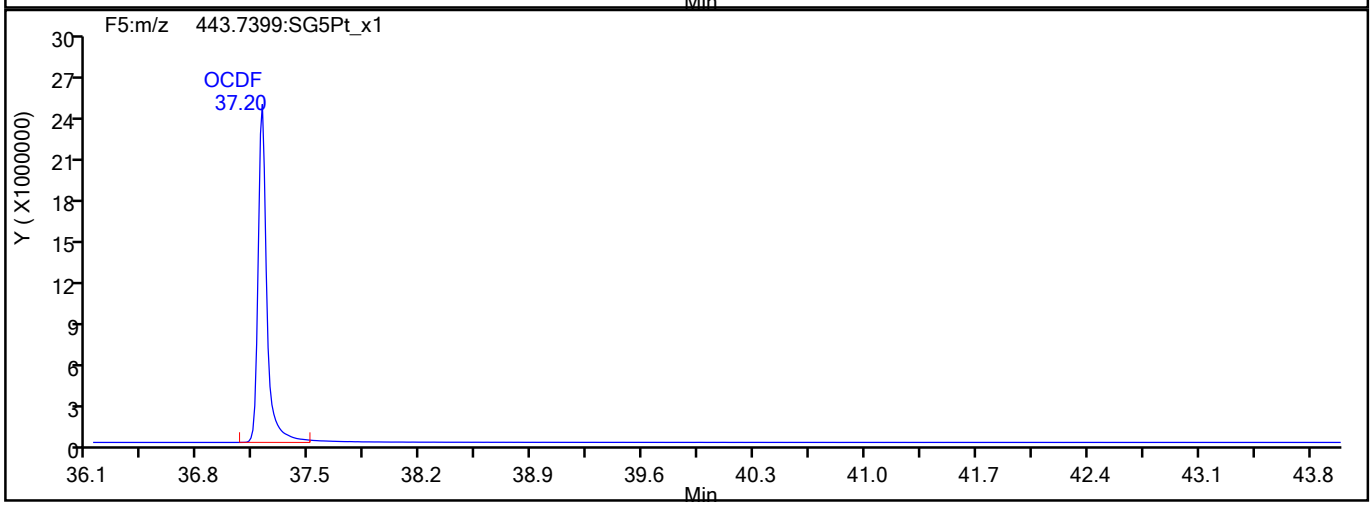

OCDF Interference Mass

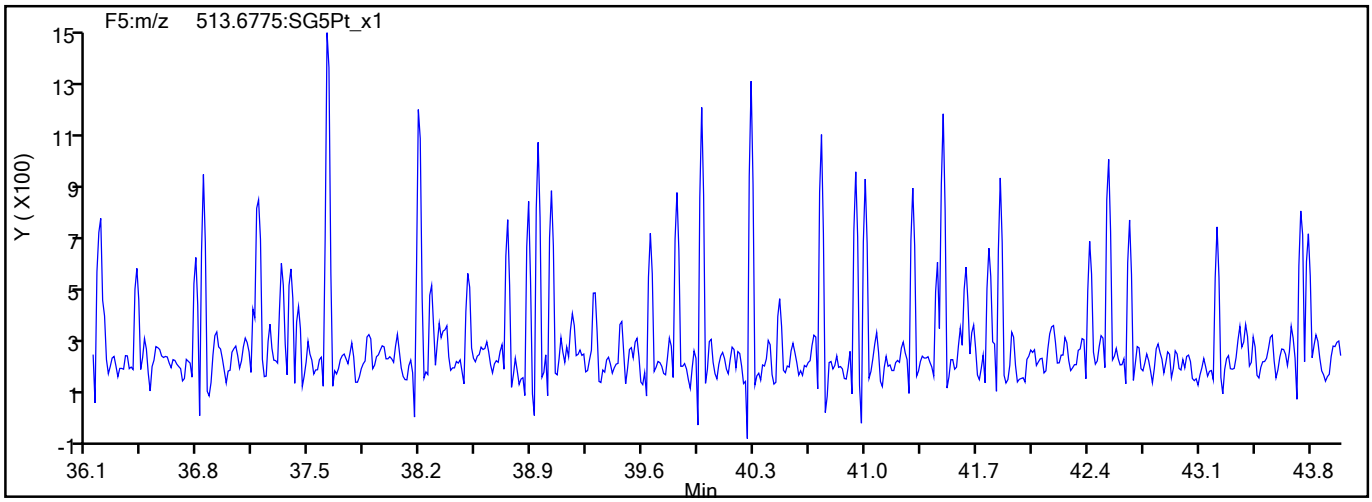

784105

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

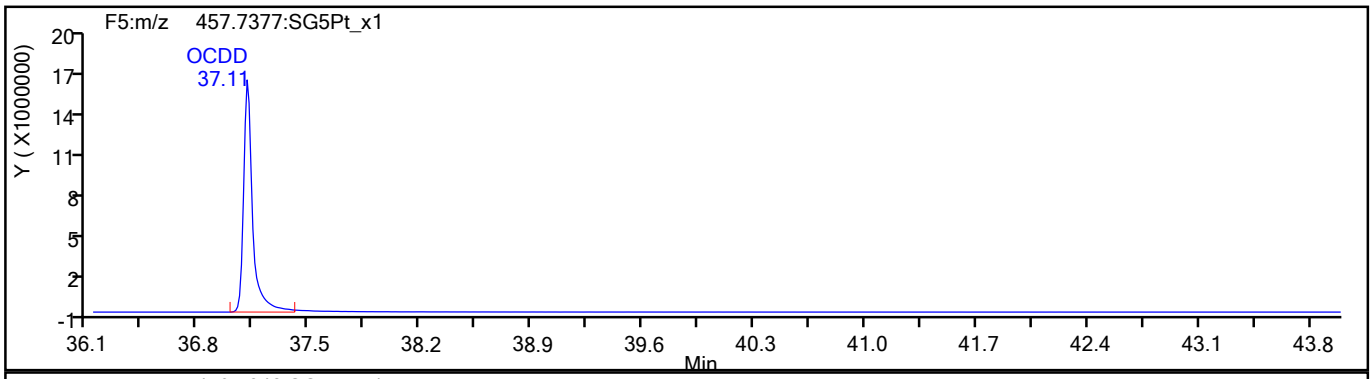

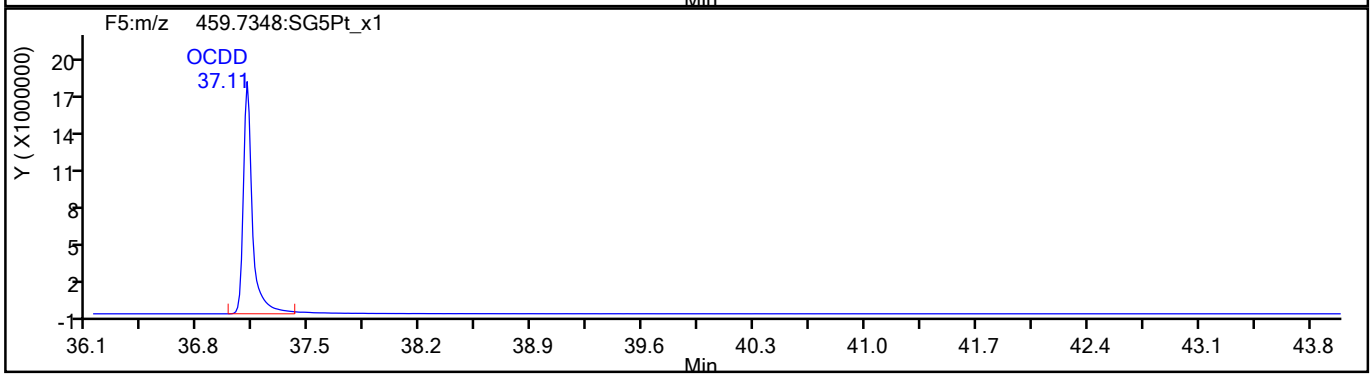

OCDD Standards

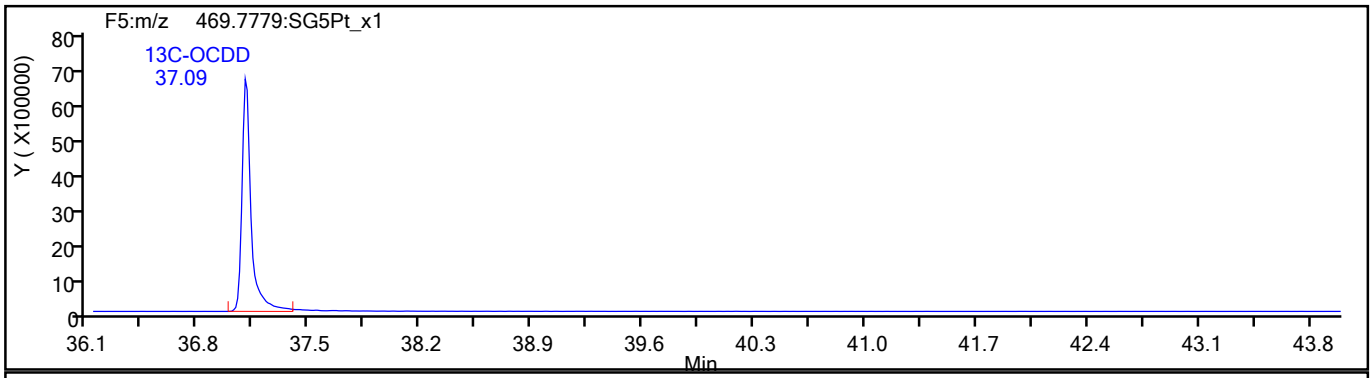

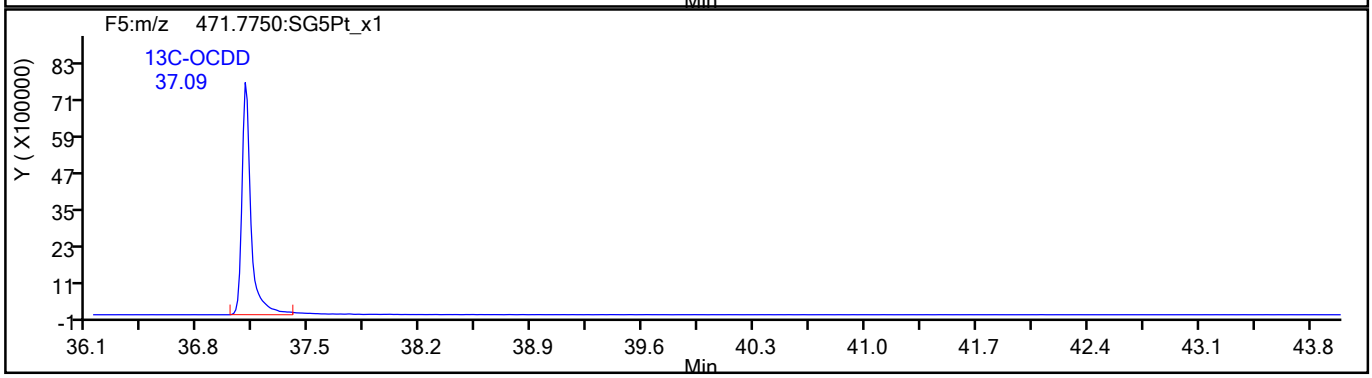

784106

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

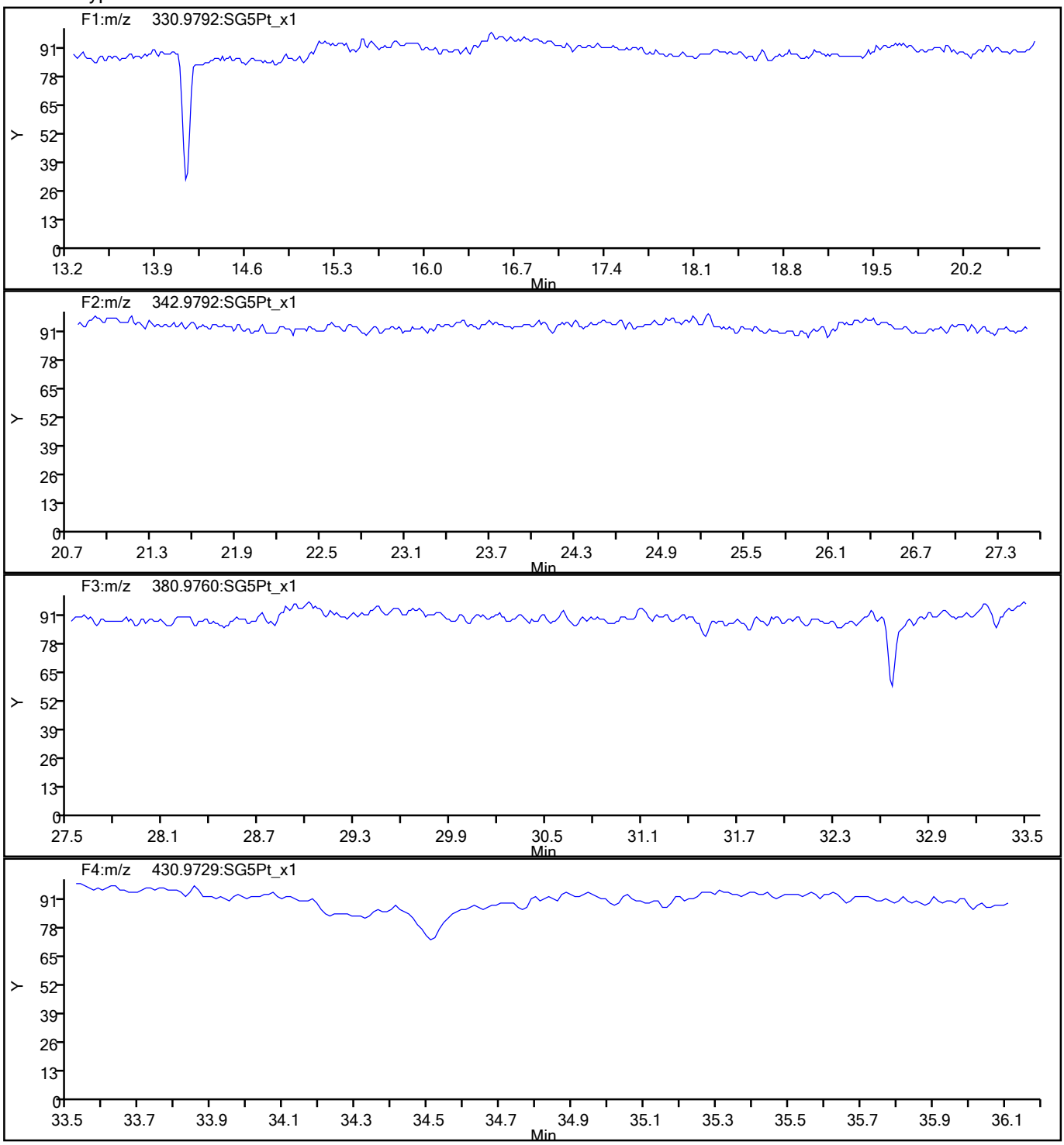

784107

Report Date: 27-Jul-2021 15:17:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

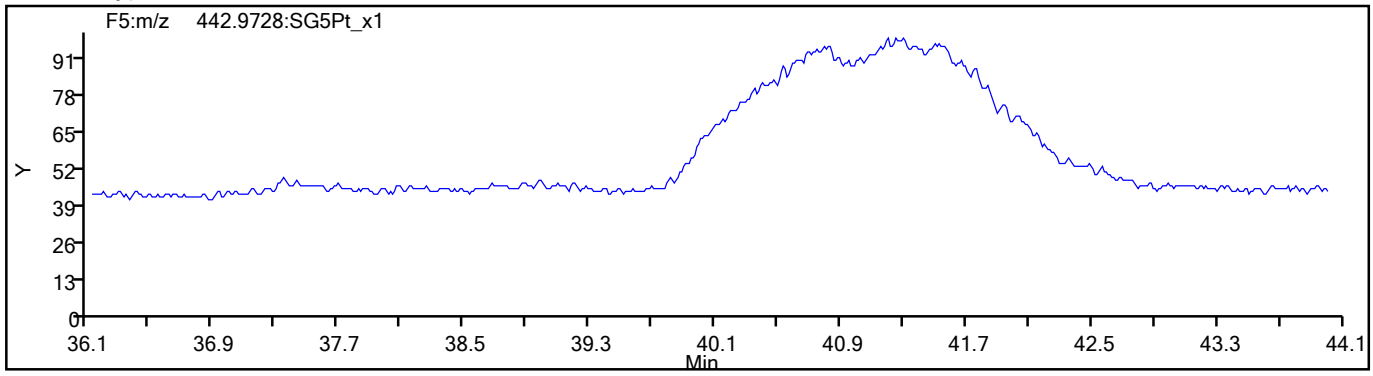

784108

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	57464333	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	95980421	0.79	1.6249	102.8	102.8	0.1660	0.1660	103	
2,3,7,8-TCDF	17.628	204575642	0.78	1.0239	208.2	208.2	0.2336	0.2336	104	
S Total TCDF					208.2	208.2	0.2336	0.2336		
D 13C-2,3,7,8-TCDD	18.338	53698206	0.83	0.8993	103.9	103.9	0.1396	0.1396	104	
$ 37Cl4-2,3,7,8-TCDD	18.354	140953034		1.1071	221.5	221.5	0.1318	0.1318	111	
2,3,7,8-TCDD	18.354	140421448	0.79	1.2541	208.5	208.5	0.1362	0.1362	104	
S Total TCDD					208.5	208.5	0.1362	0.1362		
D 13C-1,2,3,7,8-PeCDF	22.749	72829681	1.58	1.2101	104.7	104.7	0.2112	0.2112	105	
1,2,3,7,8-PeCDF	22.776	795873691	1.61	1.0611	1029.8	1029.8	2.482	2.482	103	
D 13C-2,3,4,7,8-PeCDF	24.126	75649463	1.61	1.2395	106.2	106.2	0.2062	0.2062	106	
2,3,4,7,8-PeCDF	24.153	783403837	1.59	1.0184	1016.8	1016.8	2.723	2.723	102	
S Total PeCDF					2046.7	2046.7	2.602	2.602		
D 13C-1,2,3,7,8-PeCDD	24.862	46251010	1.64	0.7612	105.7	105.7	0.1196	0.1196	106	
1,2,3,7,8-PeCDD	24.889	500555284	1.58	1.0484	1032.3	1032.3	0.8910	0.8910	103	
S Total PeCDD					1032.3	1032.3	0.8910	0.8910		
D 13C-1,2,3,4,7,8-HxCDF	30.835	67741189	0.53	1.0837	103.6	103.6	0.3784	0.3784	104	
1,2,3,4,7,8-HxCDF	30.862	737075796	1.21	1.0851	1002.7	1002.7	4.903	4.903	100	
D 13C-1,2,3,6,7,8-HxCDF	31.008	67363664	0.51	1.1279	99.0	99.0	0.3636	0.3636	98.97	
1,2,3,6,7,8-HxCDF	31.021	785709889	1.22	1.1260	1035.8	1035.8	4.873	4.873	104	
D 13C-2,3,4,6,7,8-HxCDF	31.754	63471184	0.52	1.0637	98.9	98.9	0.3855	0.3855	98.87	
2,3,4,6,7,8-HxCDF	31.767	762810877	1.21	1.1675	1029.4	1029.4	3.909	3.909	103	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58669892	0.52	0.9676	100.5	100.5	0.4238	0.4238	100	
1,2,3,7,8,9-HxCDF	32.539	708280047	1.22	1.1664	1035.0	1035.0	4.123	4.123	104	
S Total HxCDF					4103.0	4103.0	4.452	4.452		
* 13C-1,2,3,7,8,9-HxCDD	32.339	60348148	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	46886171	1.24	0.7334	105.9	105.9	0.3391	0.3391	106	
1,2,3,4,7,8-HxCDD	31.940	484857042	1.26	1.0640	971.9	971.9	2.786	2.786	97.19	
D 13C-1,2,3,6,7,8-HxCDD	32.033	53564396	1.27	0.8802	100.8	100.8	0.2826	0.2826	101	
1,2,3,6,7,8-HxCDD	32.047	543061818	1.27	1.0001	1013.8	1013.8	2.795	2.795	101	
1,2,3,7,8,9-HxCDD	32.353	563888565	1.26	1.1325	991.3	991.3	2.541	2.541	99.13	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDD					2977.0	2977.0	2.707	2.707		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	46328151	0.45	0.7730	99.3	99.3	0.9693	0.9693	99.31	
1,2,3,4,6,7,8-HpCDF	33.924	681312007	1.05	1.4413	1020.4	1020.4	8.187	8.187	102	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44333848	0.44	0.7008	104.8	104.8	1.069	1.069	105	
1,2,3,4,7,8,9-HpCDF	35.017	590555312	1.06	1.3174	1011.1	1011.1	10.5	10.5	101	
S Total HpCDF					2031.5	2031.5	9.356	9.356		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	39395832	1.02	0.6472	100.9	100.9	0.4739	0.4739	101	
1,2,3,4,6,7,8-HpCDD	34.726	441437476	1.05	1.0943	1024.0	1024.0	3.855	3.855	102	
S Total HpCDD					1024.0	1024.0	3.855	3.855		
D 13C-OCDD	37.093	56623863	0.89	0.4472	209.8	209.8	0.2327	0.2327	105	
OCDF	37.201	856685987	0.91	1.4382	2104.0	2104.0	1.905	1.905	105	
OCDD	37.105	635652839	0.90	1.1070	2028.1	2028.1	1.855	1.855	101	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		26125466	6597193	4577	11442	1441		
333.9339	18.142	18.142	0		31338867	7893522	2702	6755	2921	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42243137	10877420	7832	19580	1389		
317.9389	17.613	17.616	0	0.971	53737284	13863668	7802	19505	1777	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	89710432	22799700	10338	25845	2205		
305.8987	17.628	17.631	0	1.001	114865210	29189675	13335	33337	2189	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24360997	5757558	4577	11442	1258		
333.9339	18.338	18.338	0	1.011	29337209	6914283	2702	6755	2559	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	140953034	33738158	8459	21147	3988		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	62065087	14965631	3913	9782	3825		
321.8936	18.354	18.357	0	1.001	78356361	18744482	4747	11867	3949	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44649559	7939527	8573	21432	926		
353.8970	22.749	22.754	0	1.254	28180122	5062354	6242	15605	811	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	490871580	87021007	84135	210337	1034		
341.8567	22.776	22.779	0	1.001	305002111	54503599	52854	132135	1031	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46717935	7613965	8573	21432	888		
353.8970	24.126	24.129	0	1.330	28931528	4737188	6242	15605	759	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	480352978	79104825	84135	210337	940		
341.8567	24.153	24.156	0	1.001	303050859	50060127	52854	132135	947	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28720712	4433240	3087	7717	1436		
369.8919	24.862	24.865	0	1.370	17530298	2751802	2189	5472	1257	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	306292917	47311146	15348	38370	3083		
357.8516	24.889	24.892	0	1.001	194262367	30133208	11499	28747	2621	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23491874	5084915	9674	24185	526		
385.8610	30.835	30.838	0	0.953	44249315	9441190	17790	44475	531	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	404173144	87133654	170642	426605	511		
375.8178	30.848	30.857	0	1.000	332902652	71216591	138478	346195	514	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	22854682	4877346	9674	24185	504		
385.8610	31.008	31.003	0	0.959	44508982	9206926	17790	44475	518	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.000	431948071	93438031	170642	426605	548		
375.8178	31.021	31.022	0	1.000	353761818	76246532	138478	346195	551	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	21747421	5871662	9674	24185	607		
385.8610	31.754	31.756	0	0.982	41723763	11062051	17790	44475	622	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	417841952	110026703	170642	426605	645		
375.8178	31.767	31.772	0	1.000	344968925	92108448	138478	346195	665	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20172563	5575575	9674	24185	576		
385.8610	32.512	32.523	-1	1.005	38497329	10495423	17790	44475	590	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	388834443	107441652	170642	426605	630		
375.8178	32.526	32.534	0	1.000	319445604	89819128	138478	346195	649	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33485933	9289499	8951	22377	1038		
403.8529	32.339	32.342	0		26862215	7454274	7708	19270	967	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	25994948	7598983	8951	22377	849		
403.8529	31.927	31.929	0	0.987	20891223	6054958	7708	19270	786	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	270288224	77533273	86149	215372	900		
391.8127	31.940	31.945	0	1.000	214568818	61952830	75747	189367	818	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29946566	8106259	8951	22377	906		
403.8529	32.033	32.033	0	0.991	23617830	6373294	7708	19270	827	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	303387935	83103965	86149	215372	965		
391.8127	32.047	32.047	0	1.000	239673883	65565020	75747	189367	866	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	314172702	87971106	86149	215372	1021		
391.8127	32.353	32.355	0	1.013	249715863	70210414	75747	189367	927	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14282220	4787635	15981	39952	300		
419.8220	33.912	33.914	0	1.049	32045931	10687518	34202	85505	312	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	349397605	118035783	389676	974190	303		
409.7789	33.924	33.926	0	1.000	331914402	111658032	340706	851765	328	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13509696	4047534	15981	39952	253		
419.8220	35.005	35.010	0	1.082	30824152	9120201	34202	85505	267	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	303260617	91538482	389676	974190	235		
409.7789	35.017	35.020	0	1.000	287294695	87143866	340706	851765	256	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19890119	6131671	10444	26110	587		
437.8140	34.714	34.716	0	1.073	19505713	6051375	10100	25250	599	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	225857690	69087451	102453	256132	674		
425.7737	34.726	34.726	0	1.000	215579786	65898474	103127	257817	639	1.05(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26710485	6689918	2659	6647	2516		
471.7750	37.093	37.094	0	1.147	29913378	7452640	4311	10777	1729	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	409115360	108366645	37076	92690	2923		
443.7399	37.201	37.199	0	1.003	447570627	117808946	40434	101085	2914	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	300559615	76562352	27801	69502	2754		
459.7348	37.105	37.106	0	1.000	335093224	85854399	30277	75692	2836	0.90(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

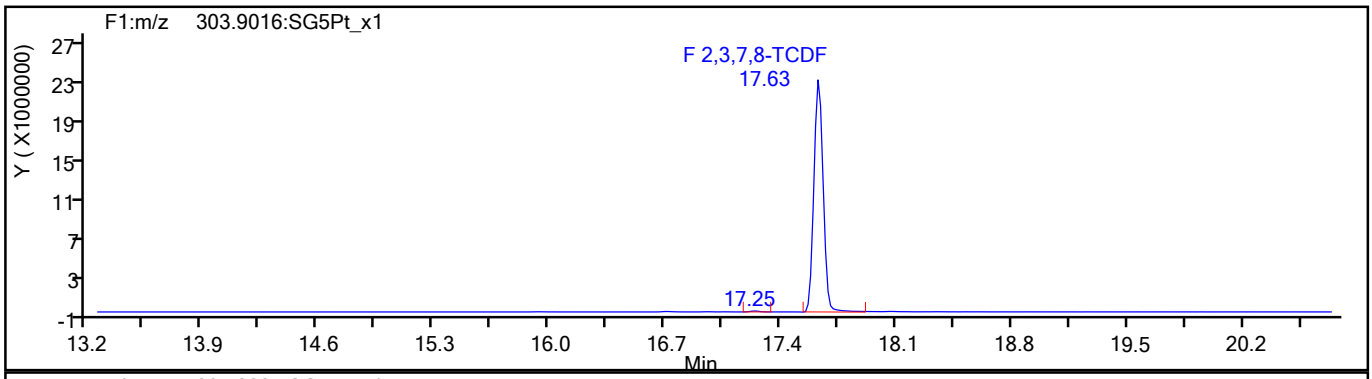

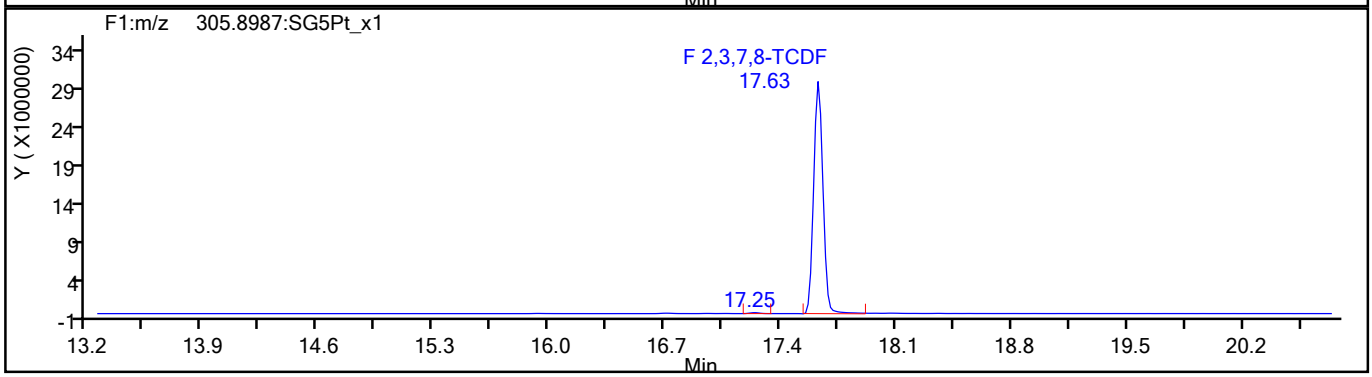

TCDF Standards

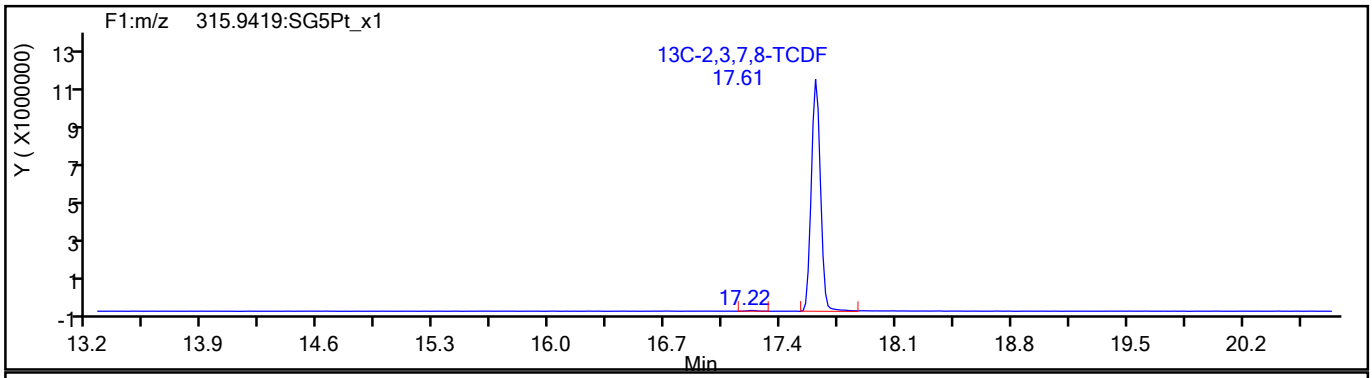

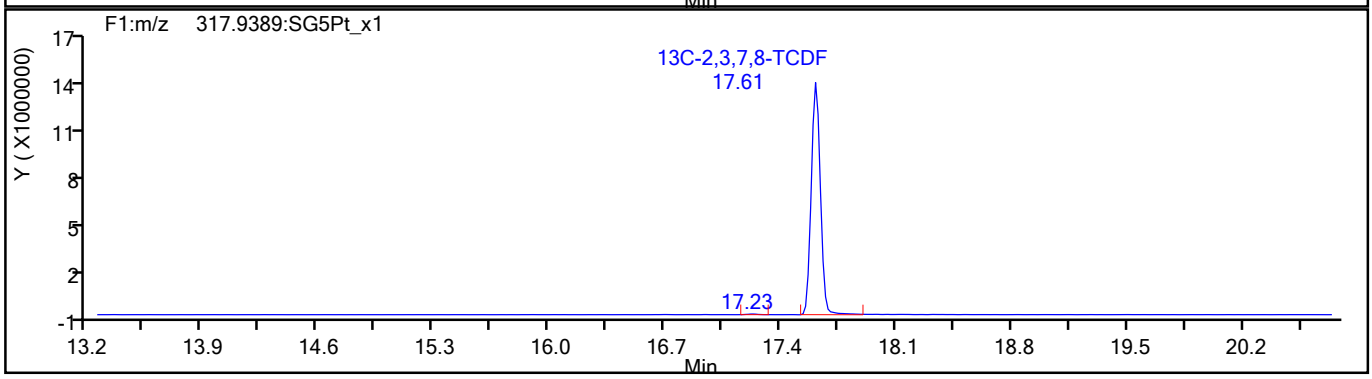

784114

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

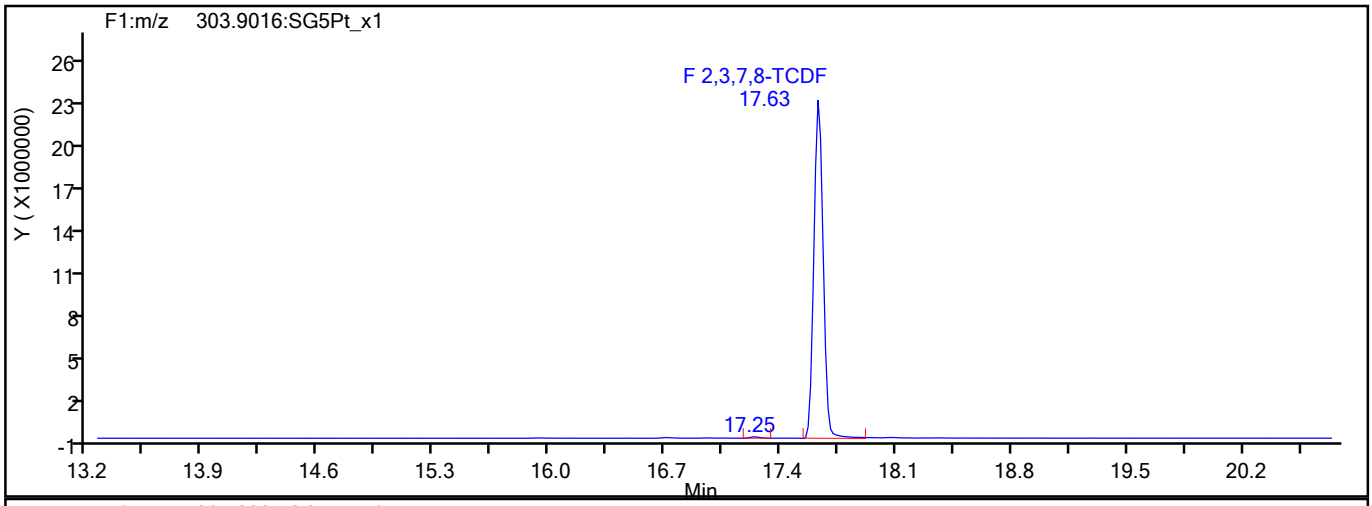

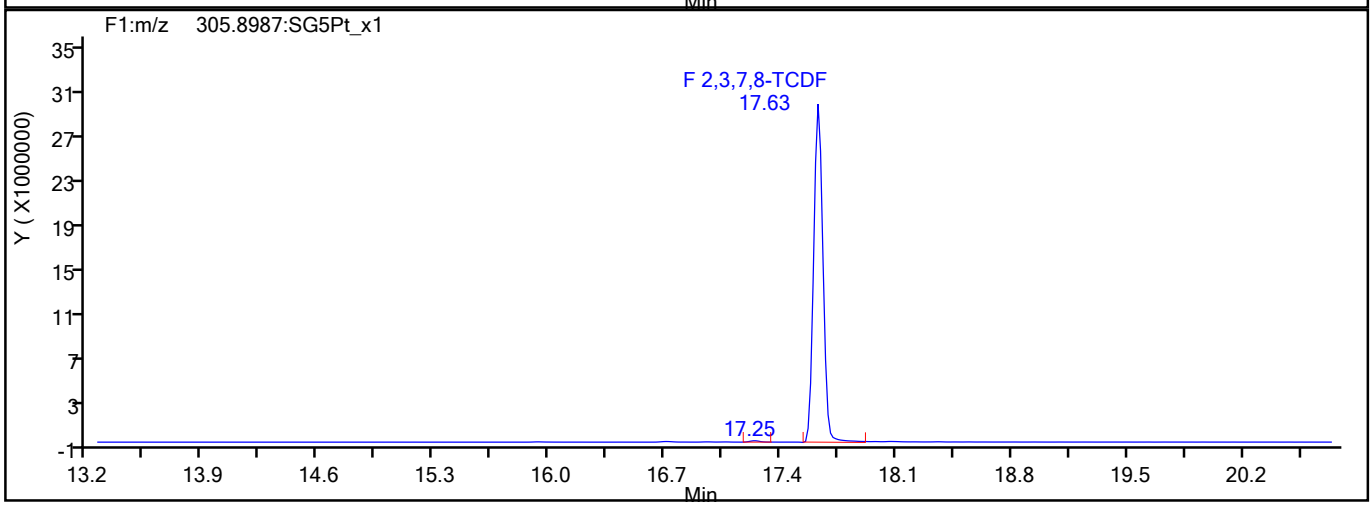

TCDF Interference Mass

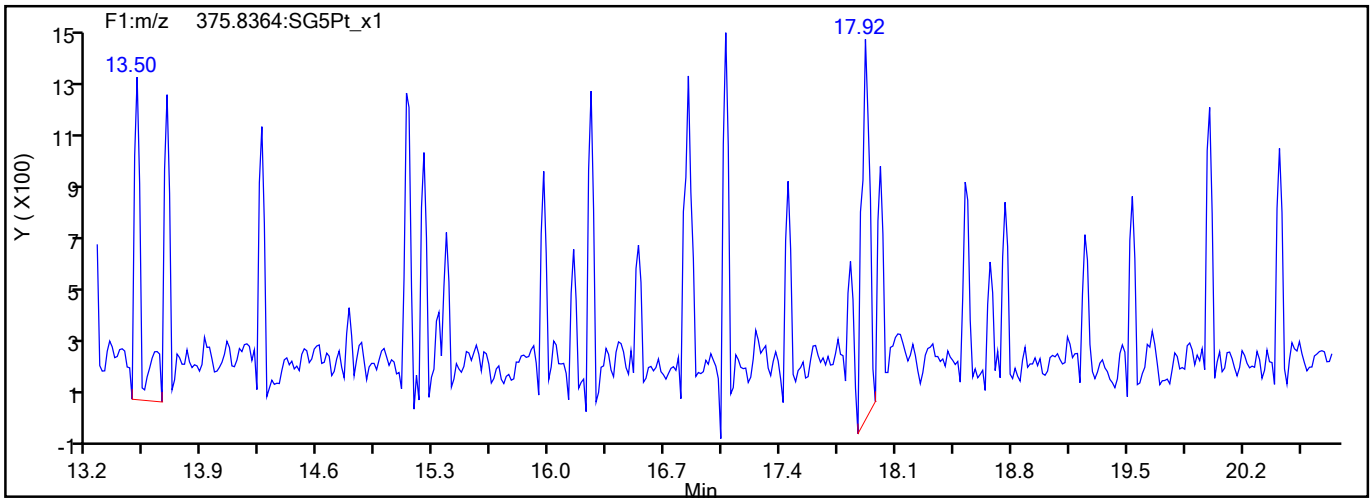

784115

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

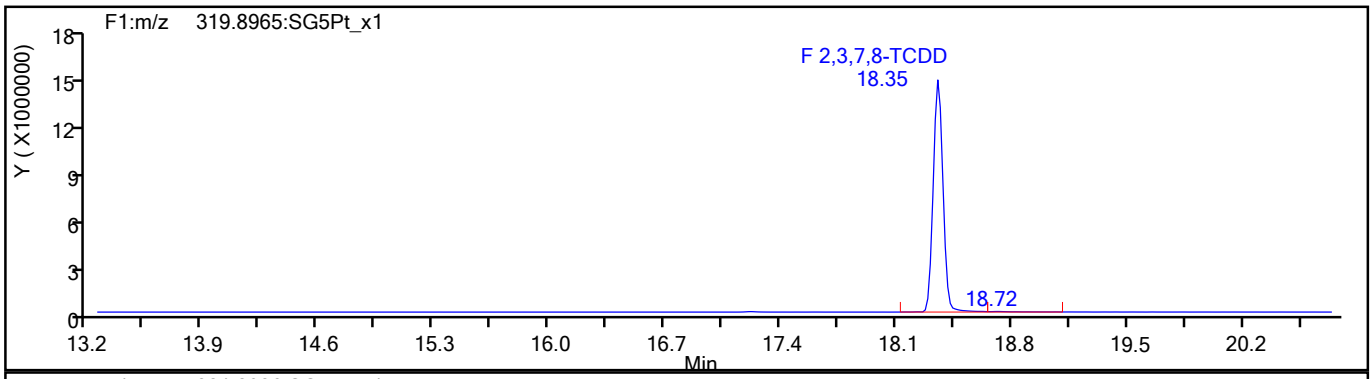

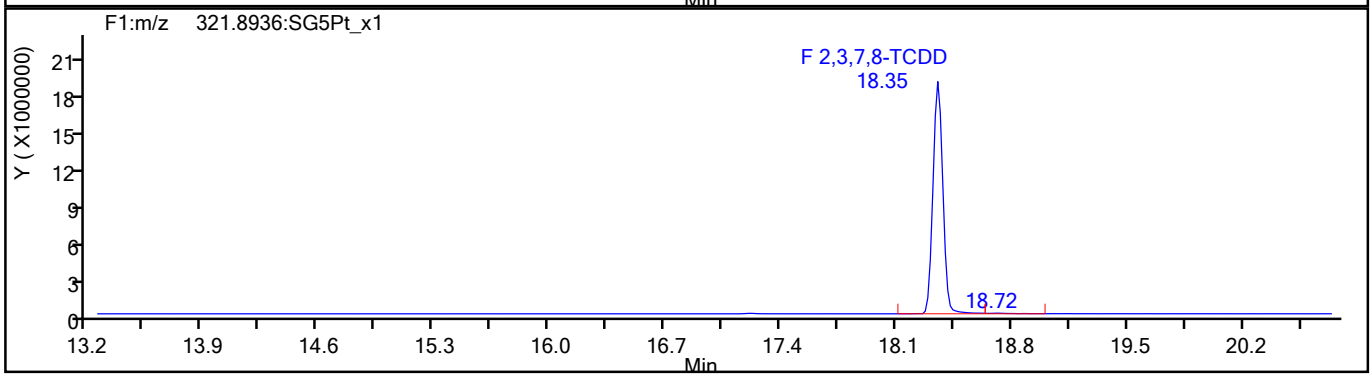

TCDD Standards

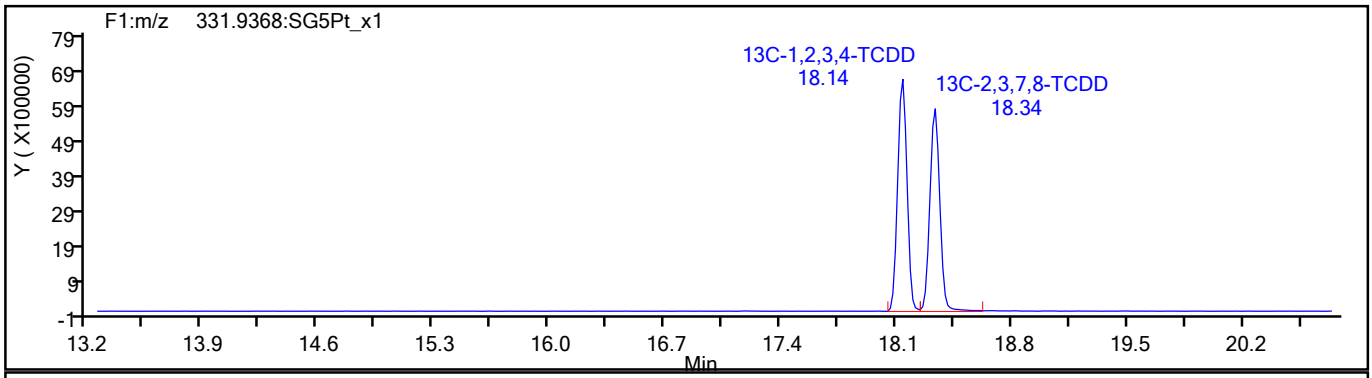

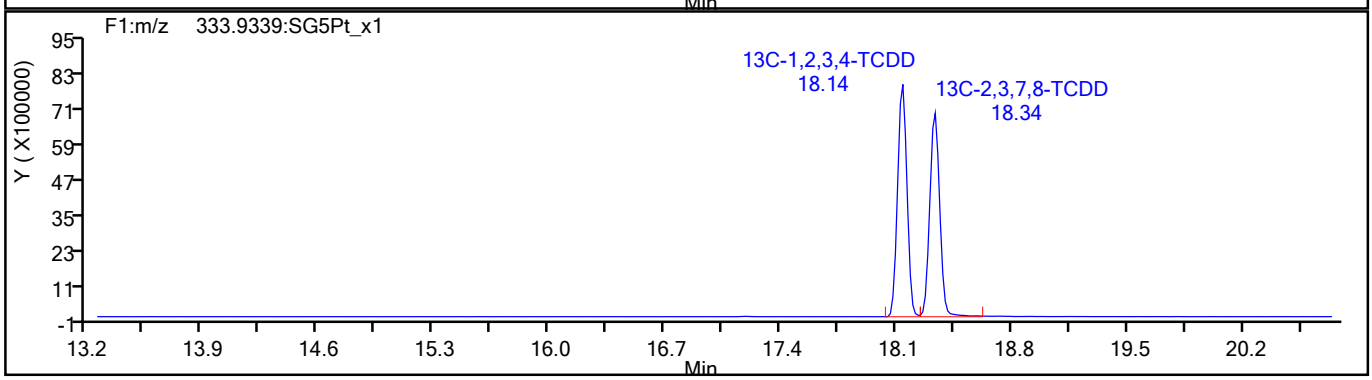

784116

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

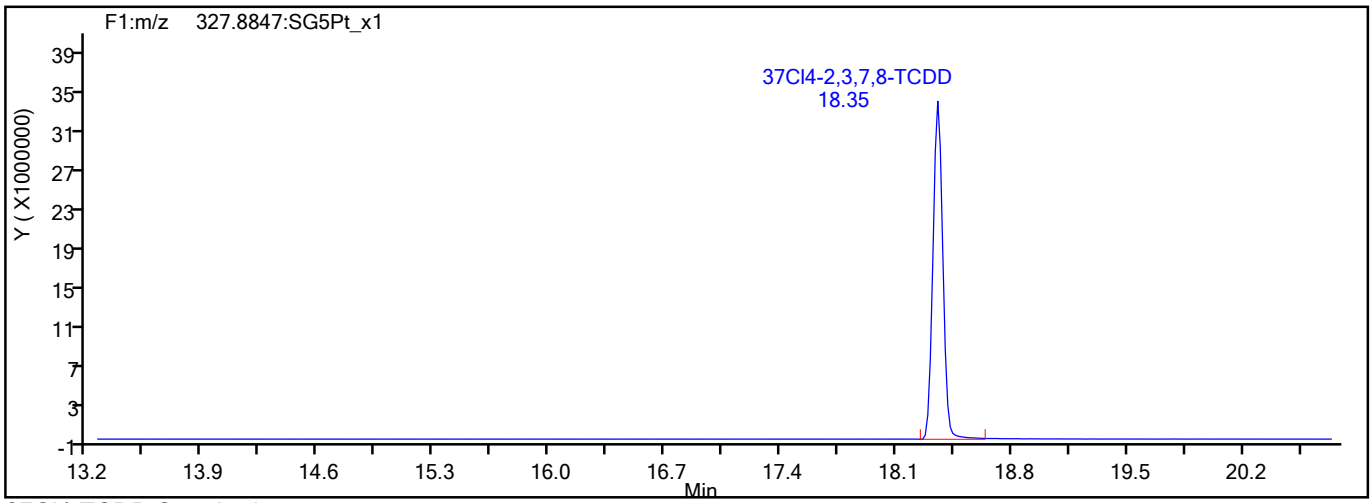

37Cl4-TCDD Standards

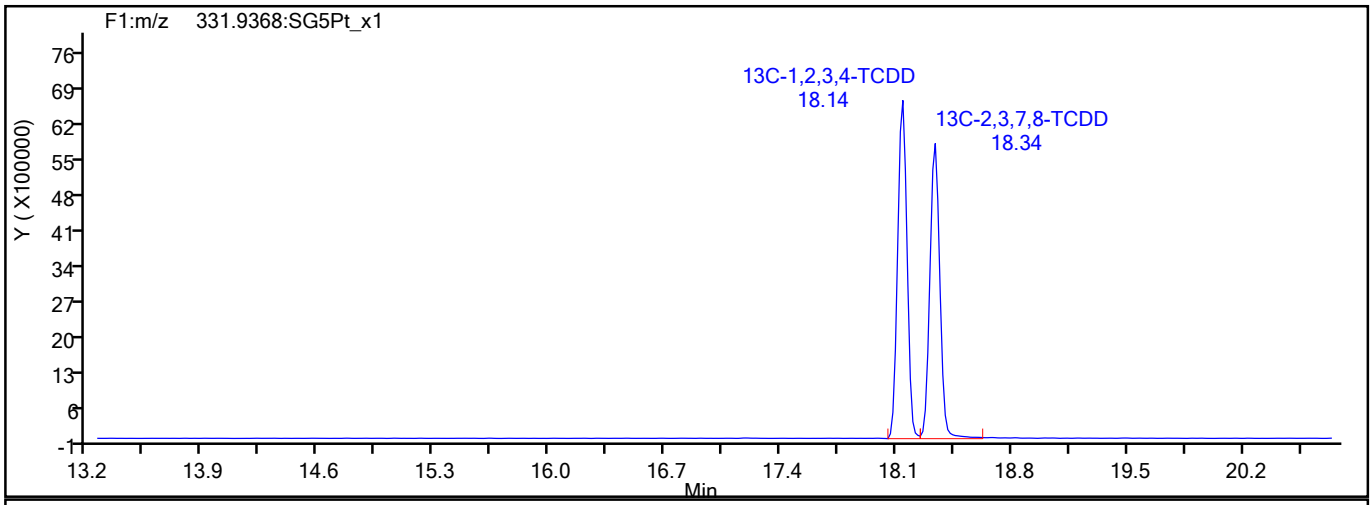

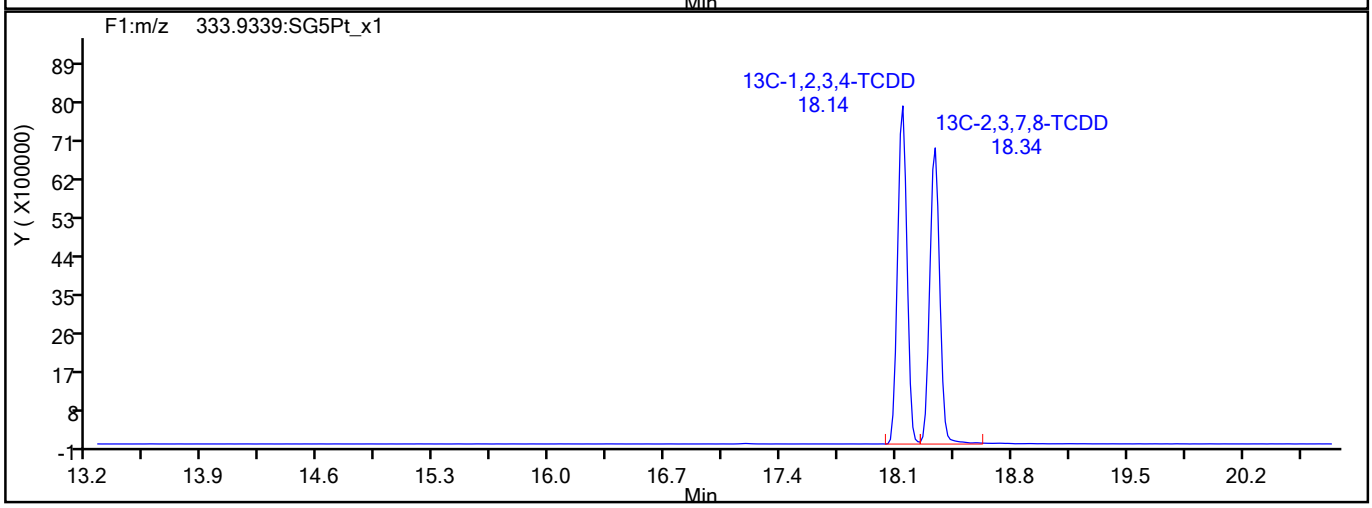

784117

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

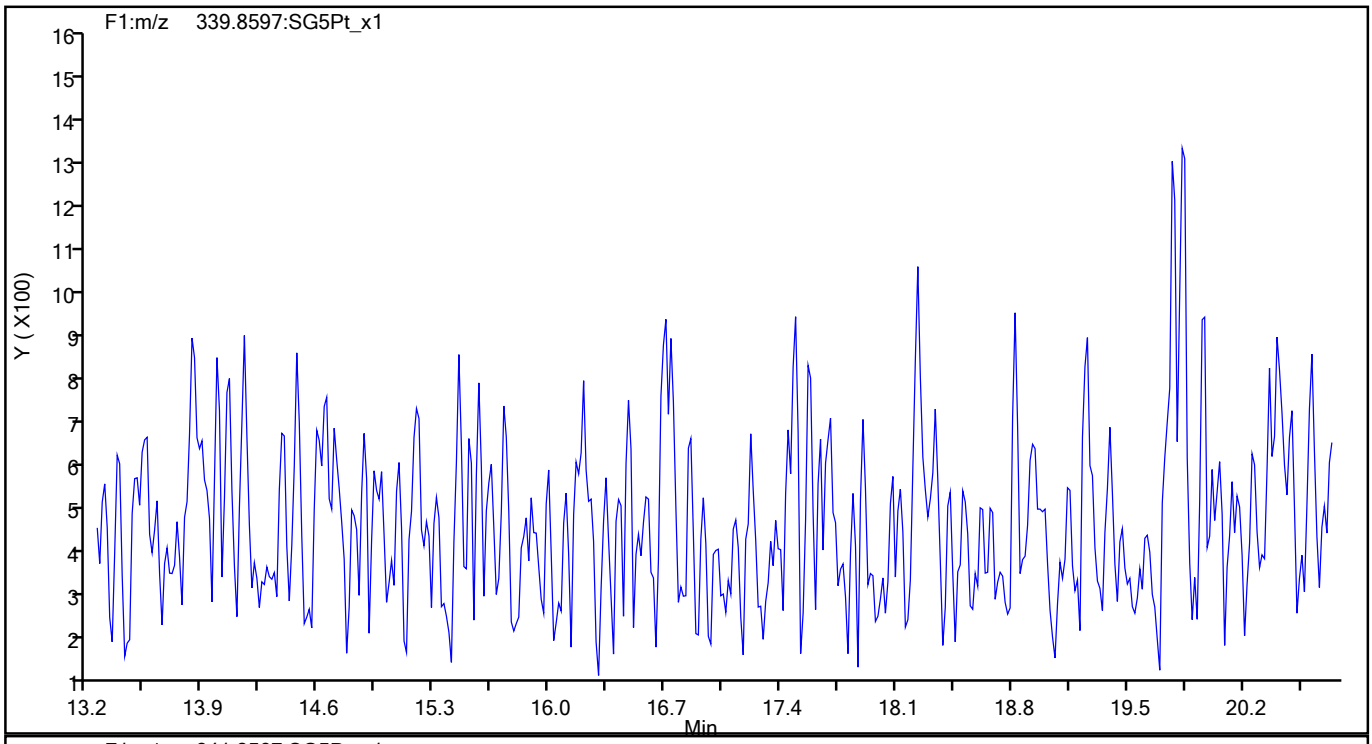

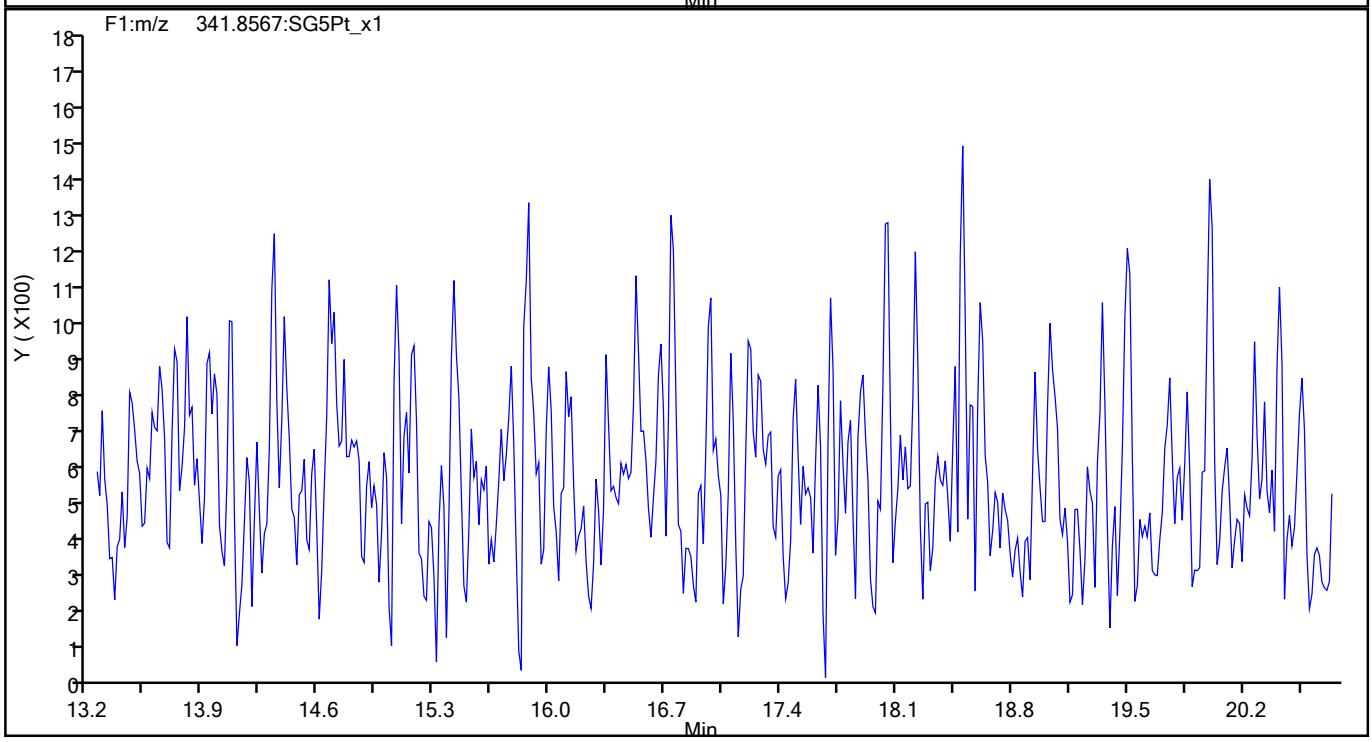

784118

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

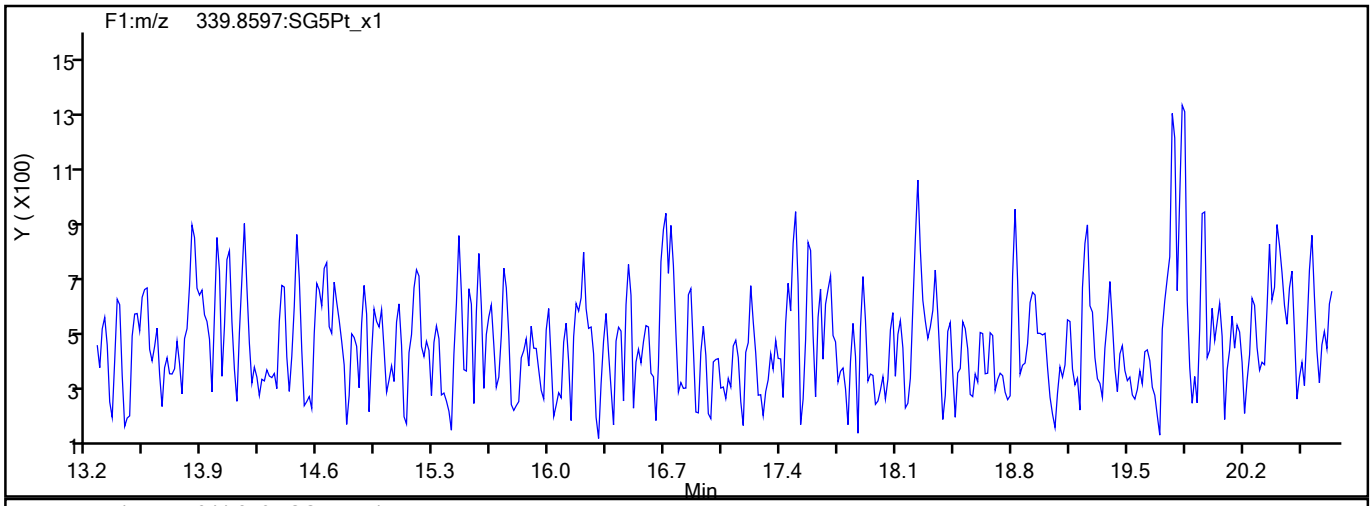

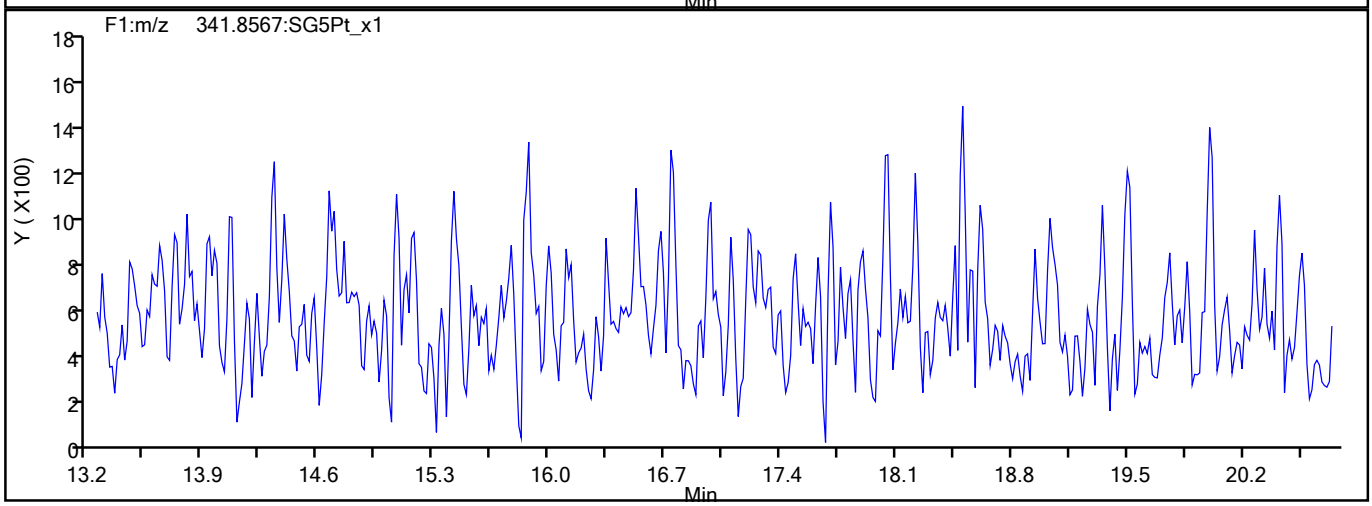

F1 PeCDFs Interference Mass

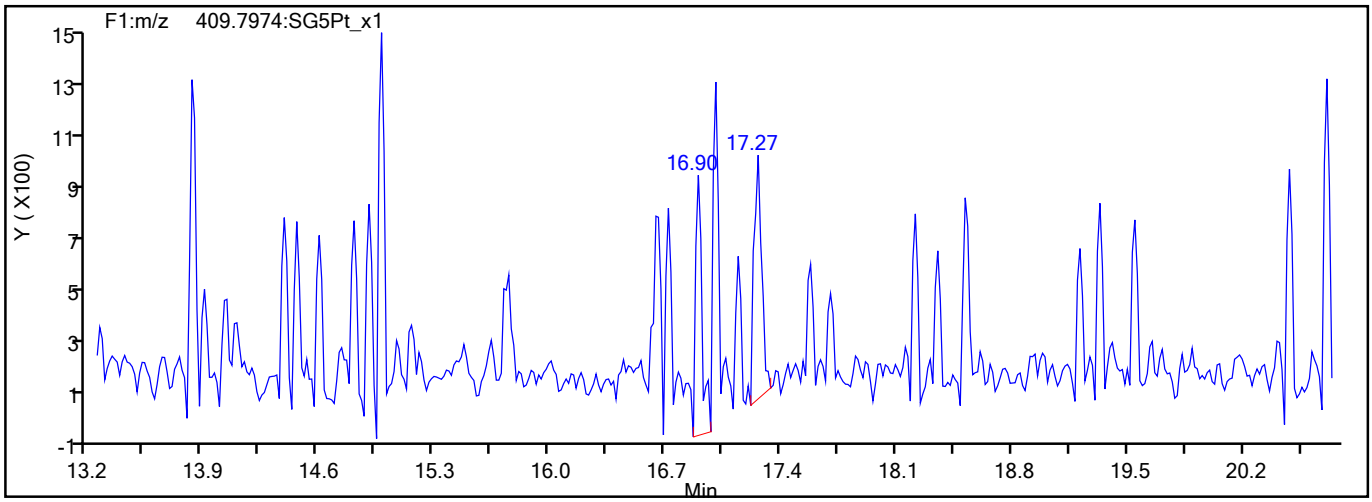

784119

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

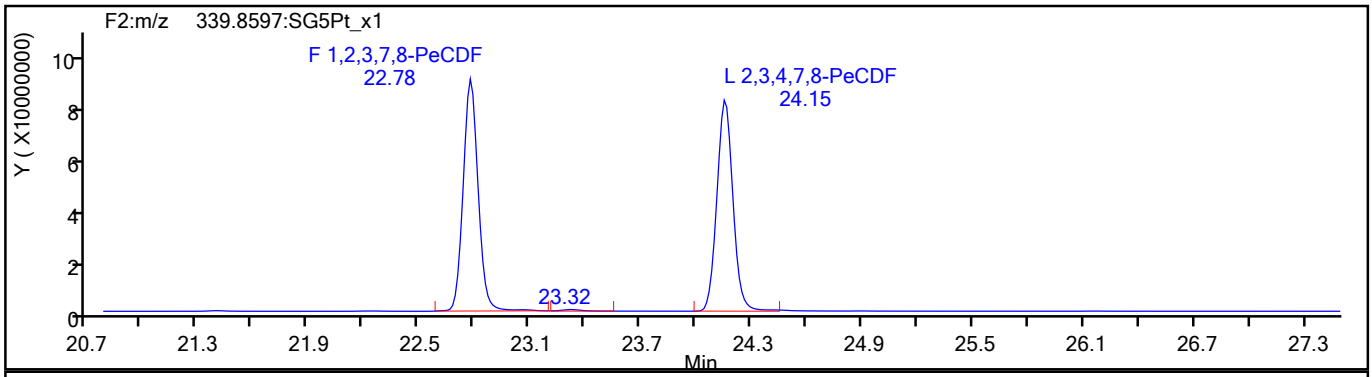

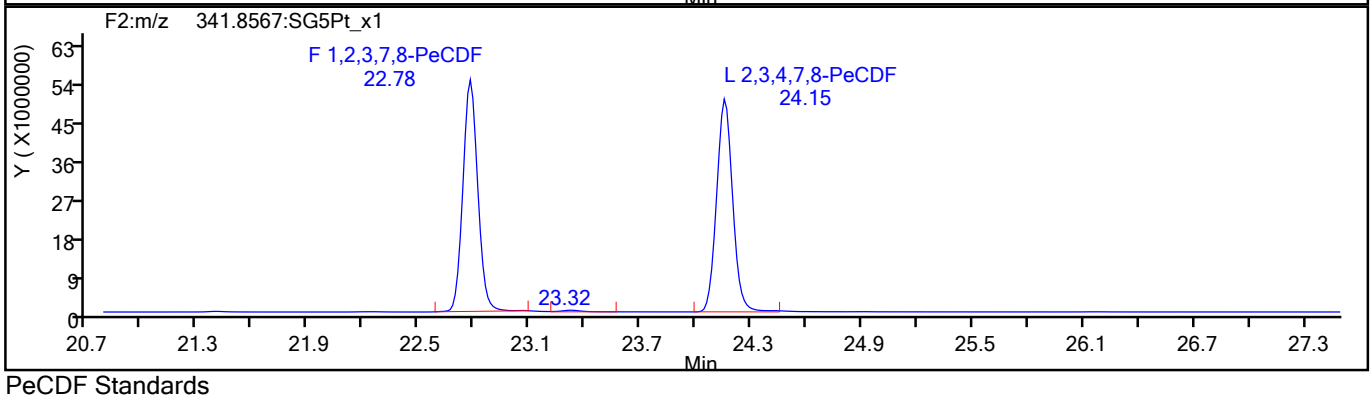

PeCDF Standards

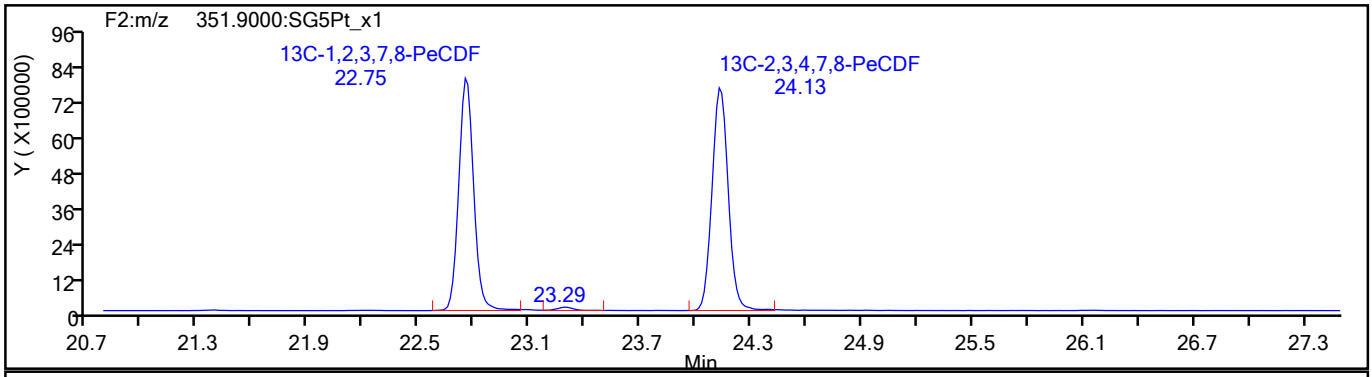

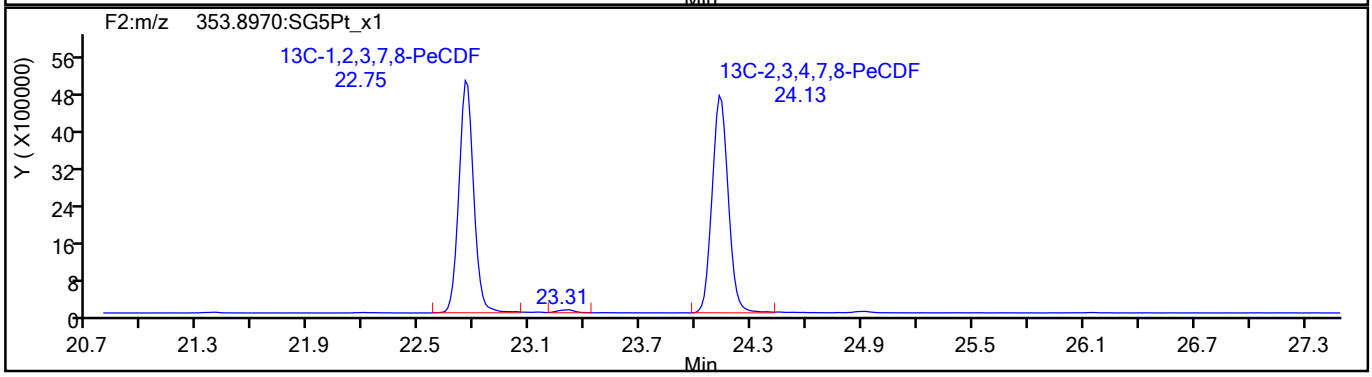

784120

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

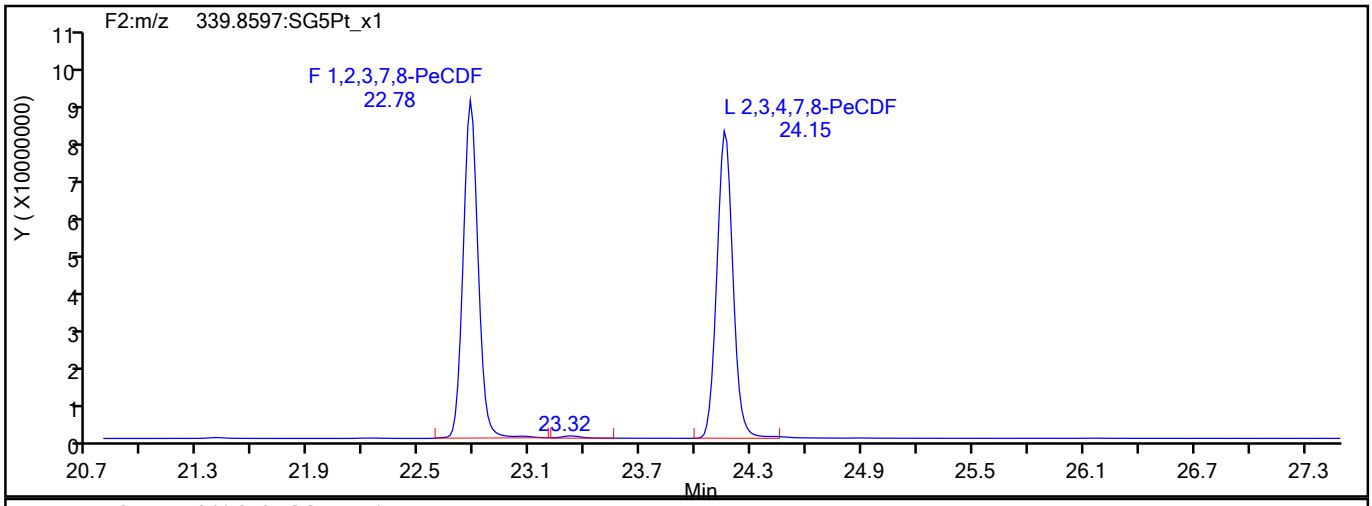

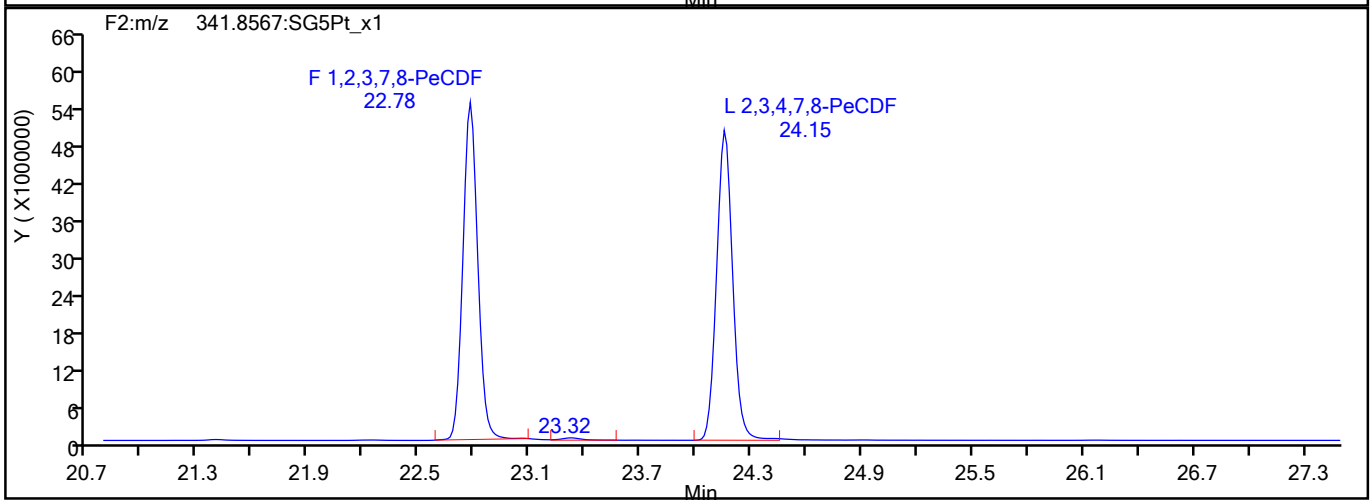

PeCDF Interference Mass

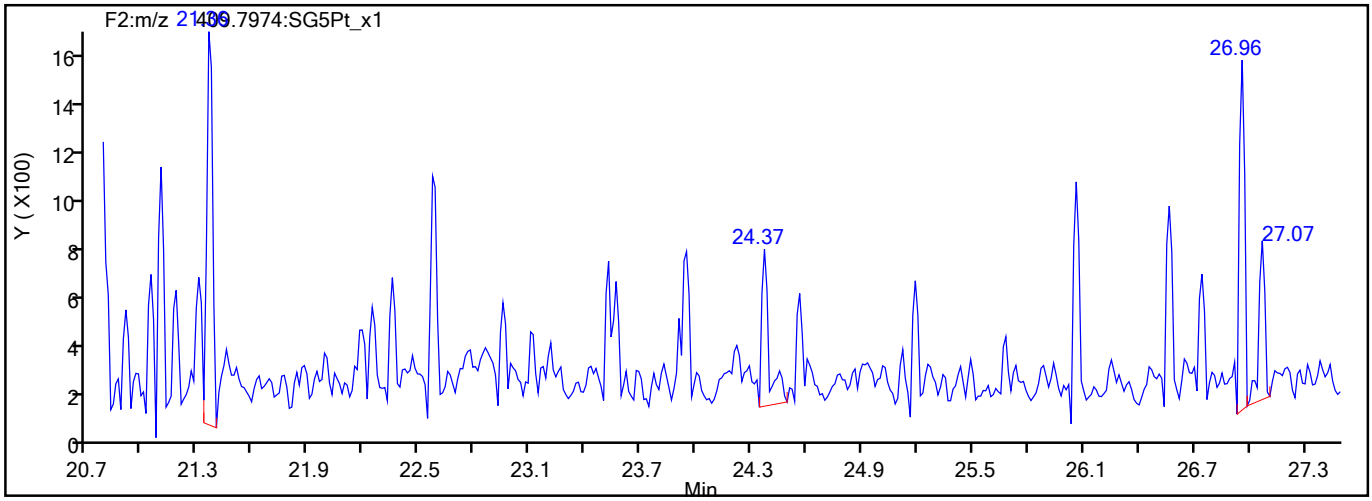

784121

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

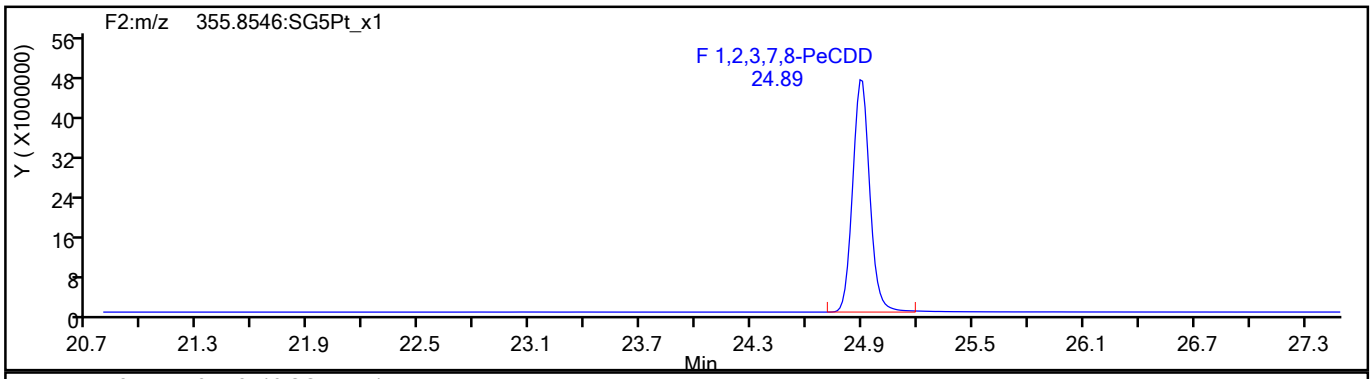

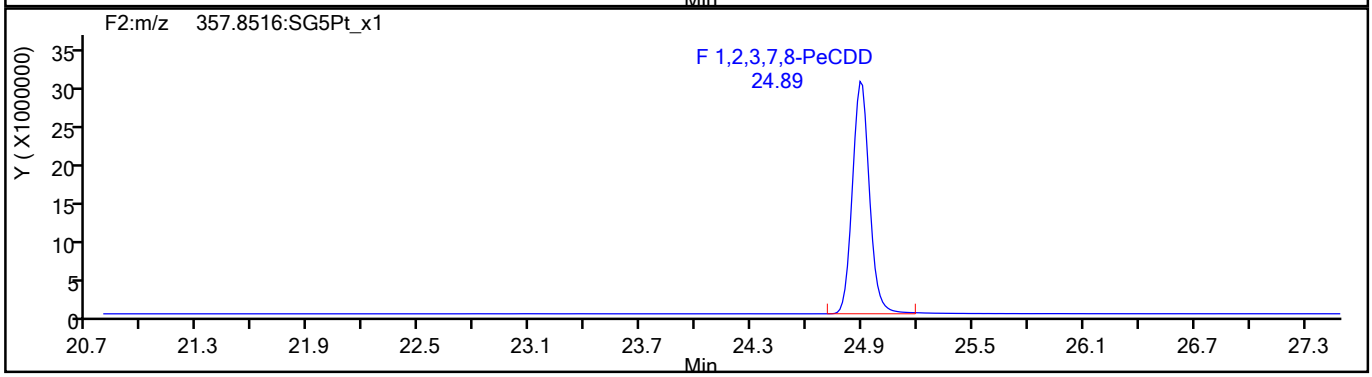

PeCDD Standards

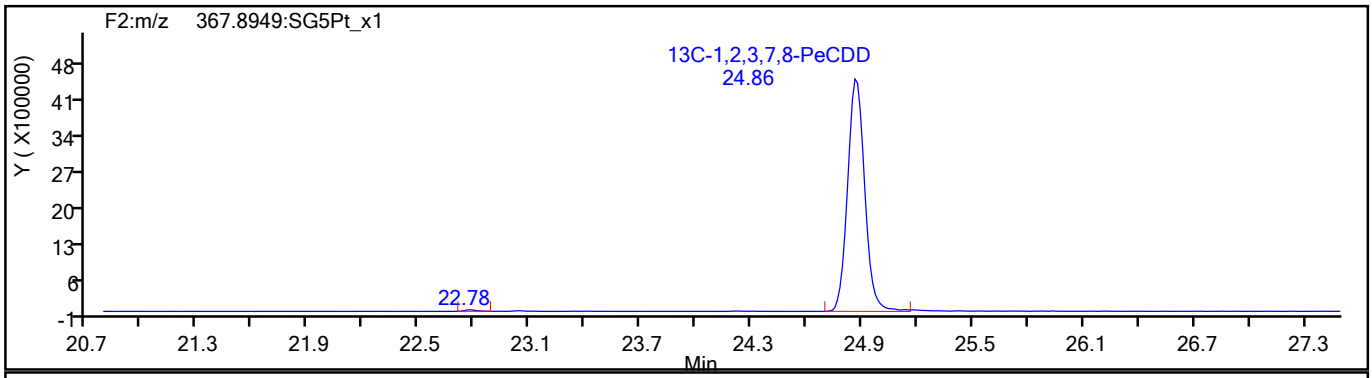

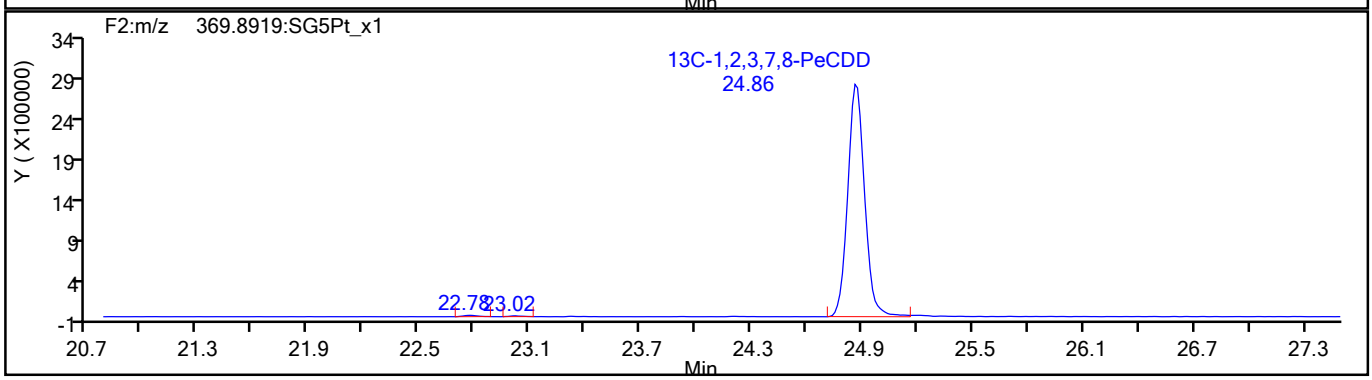

784122

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

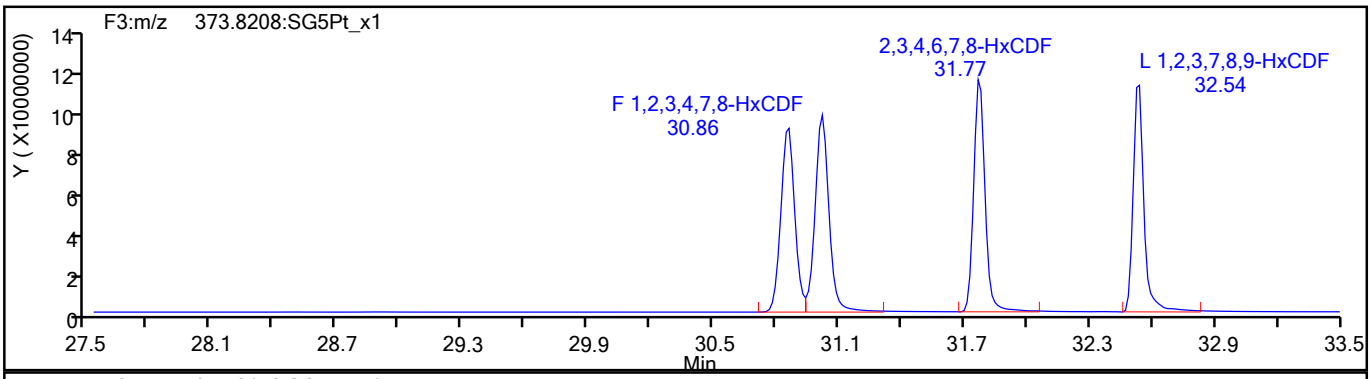

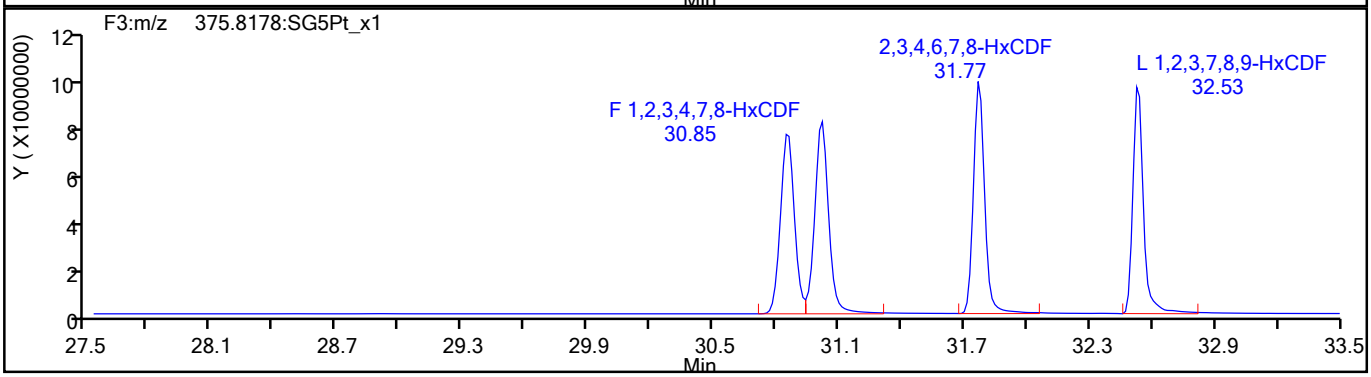

HxCDF Standards

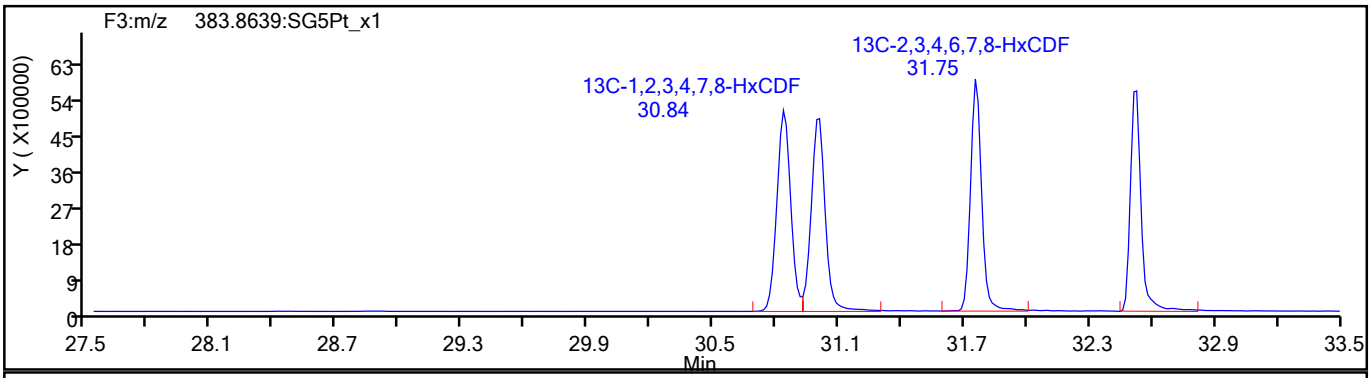

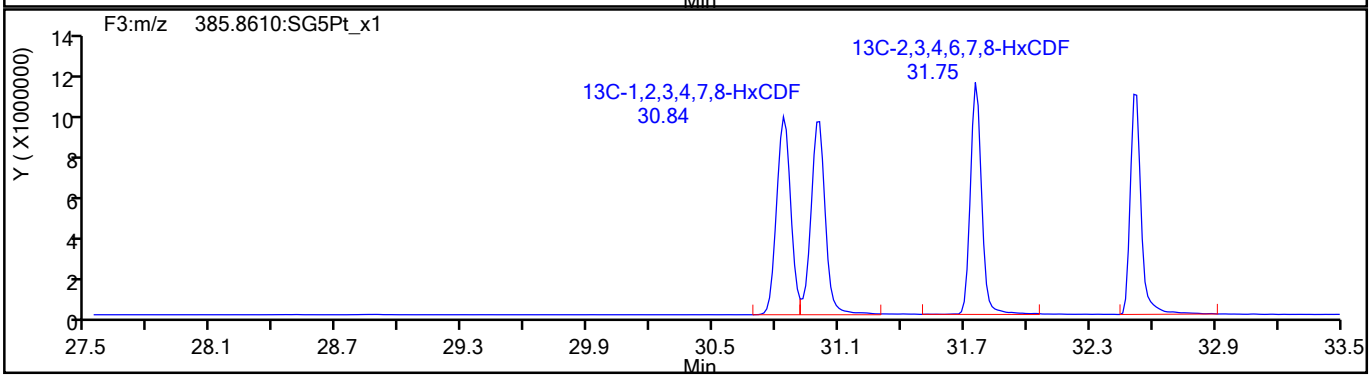

784123

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

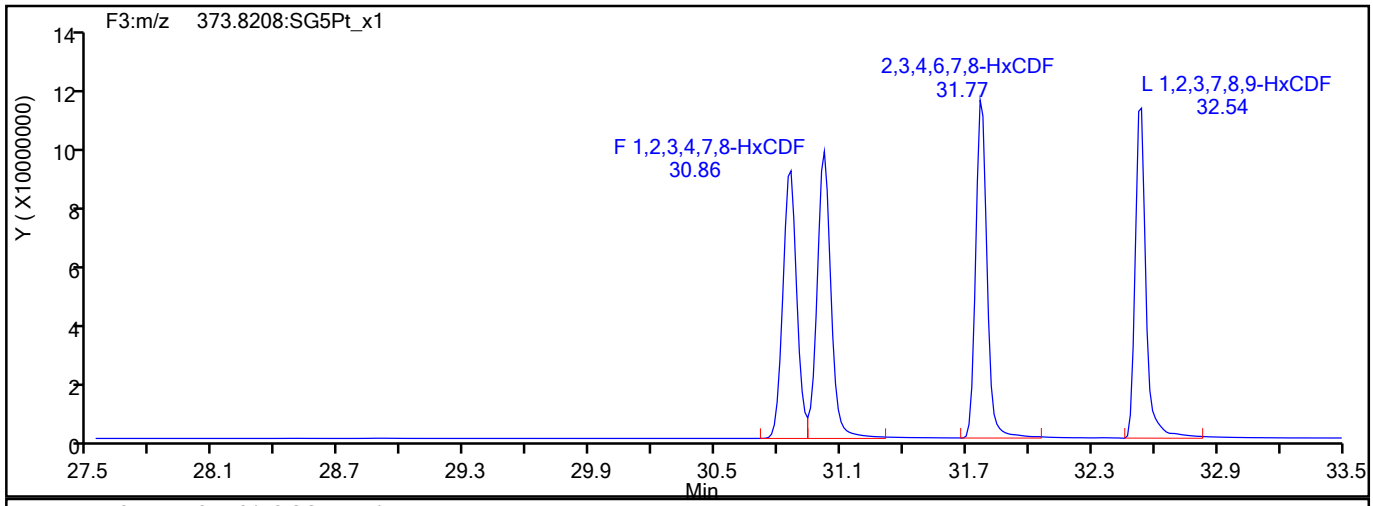

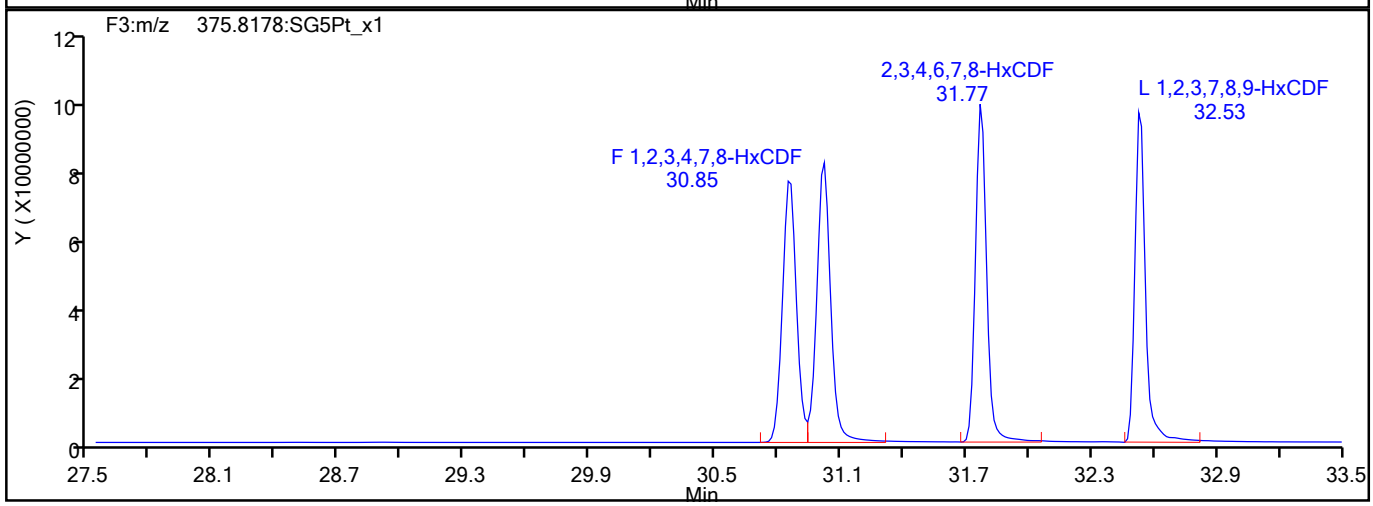

HxCDF Interference Mass

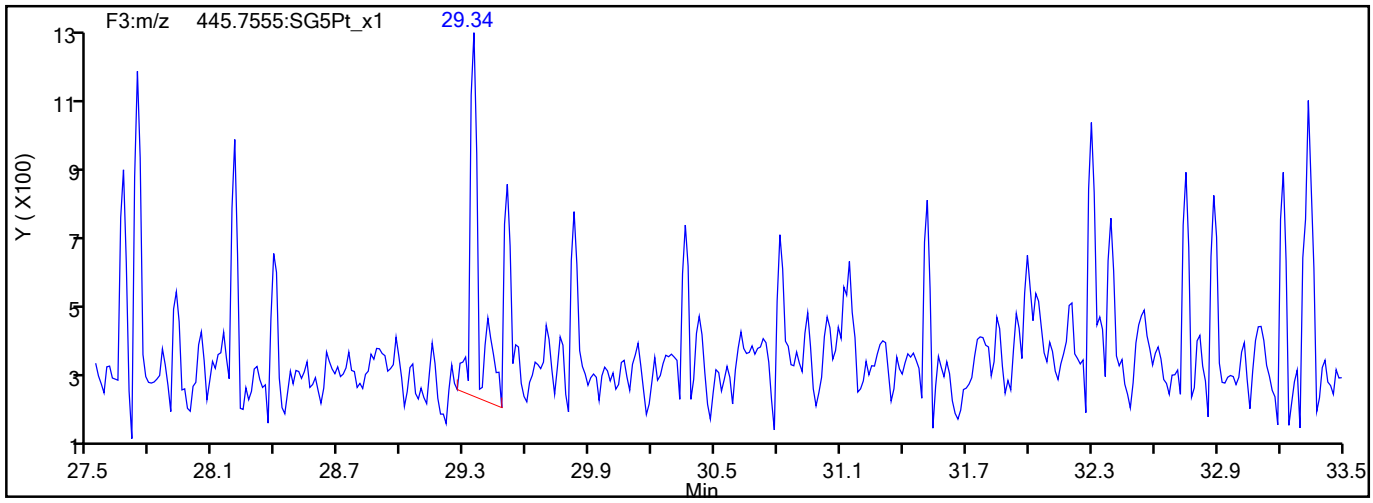

784124

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

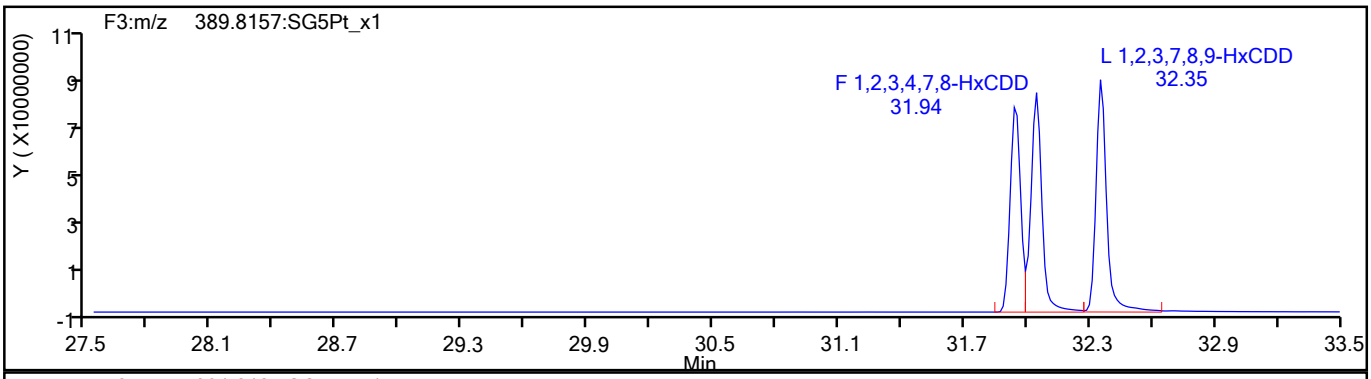

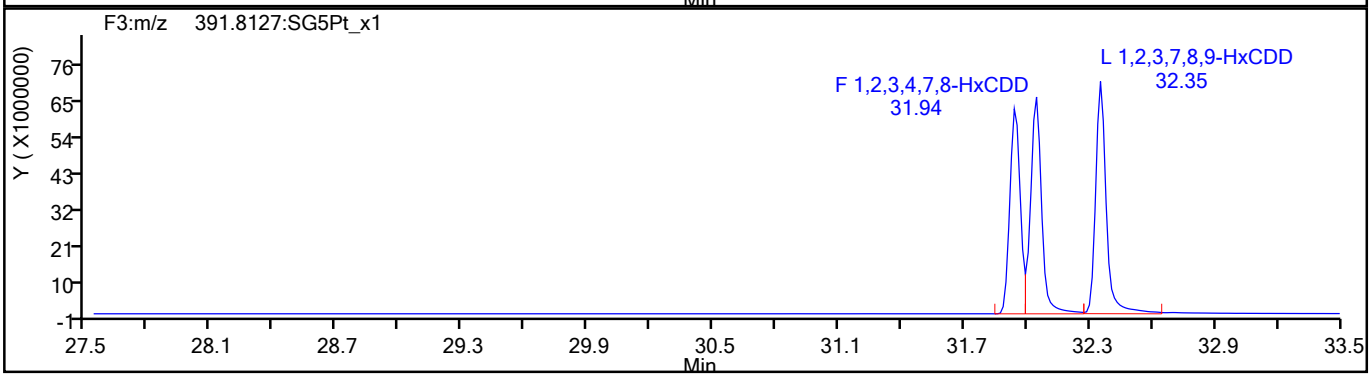

HxCDD Standards

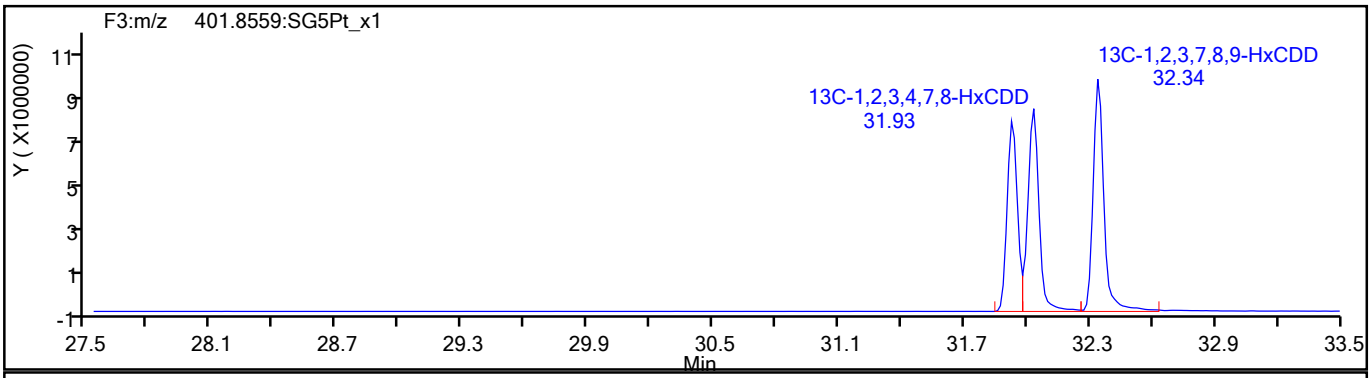

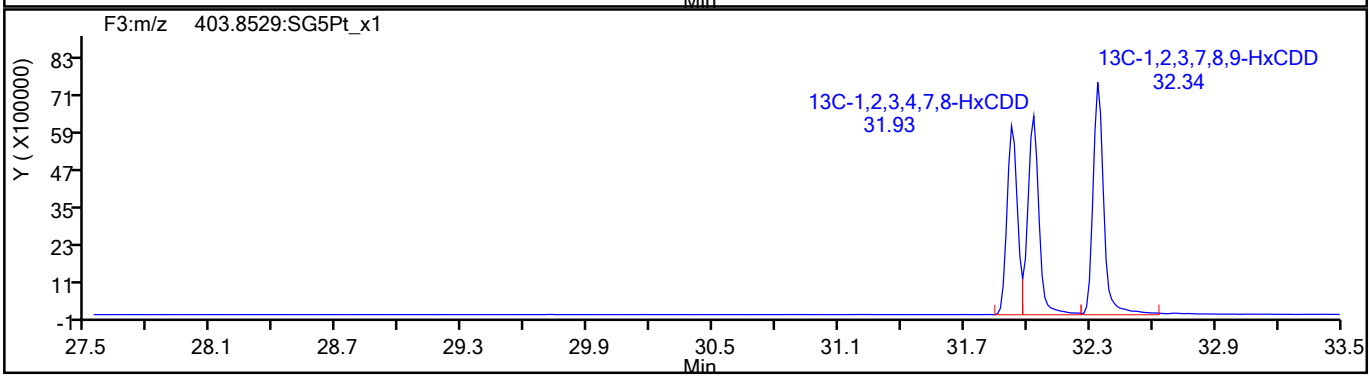

784125

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

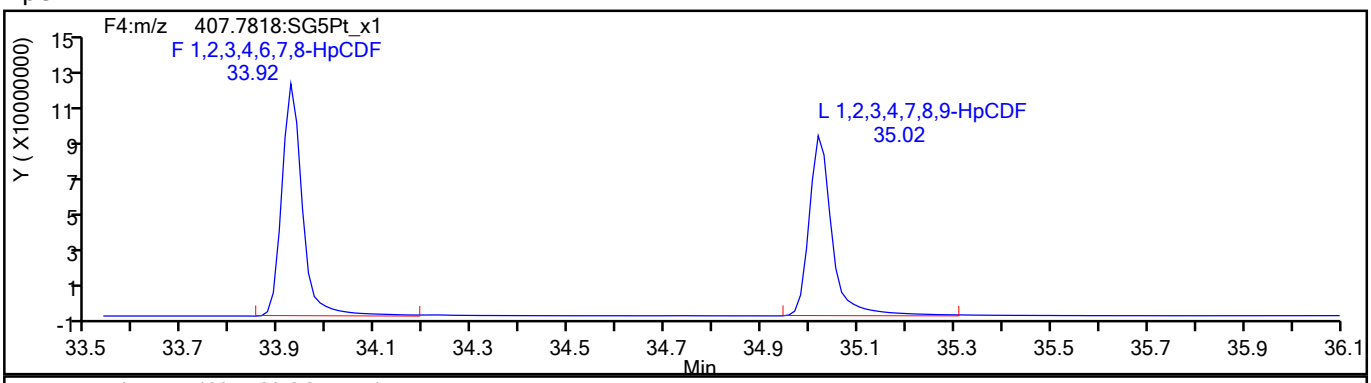

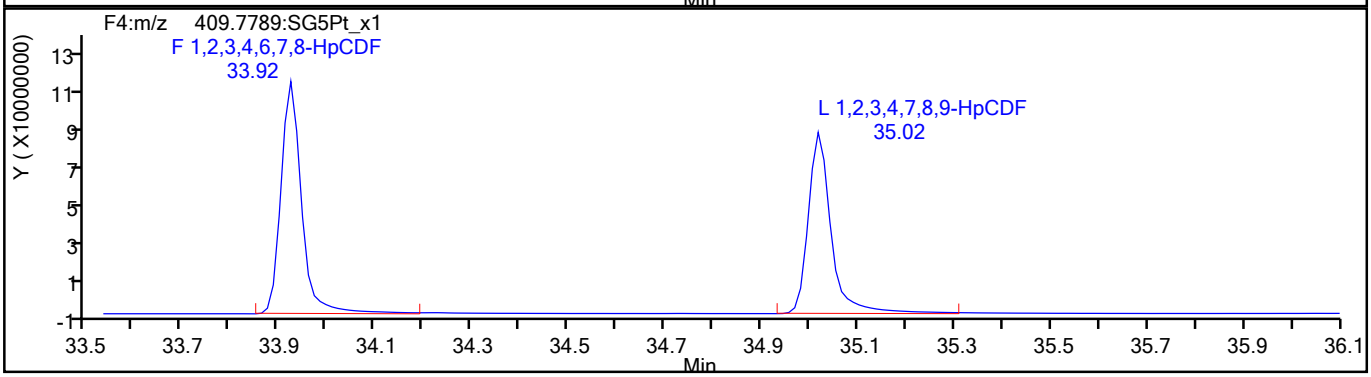

HpCDF Standards

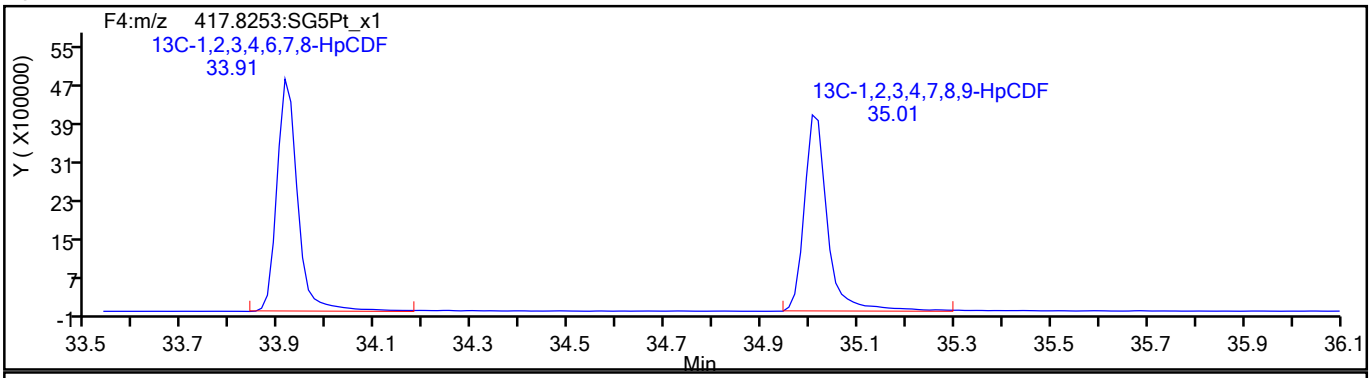

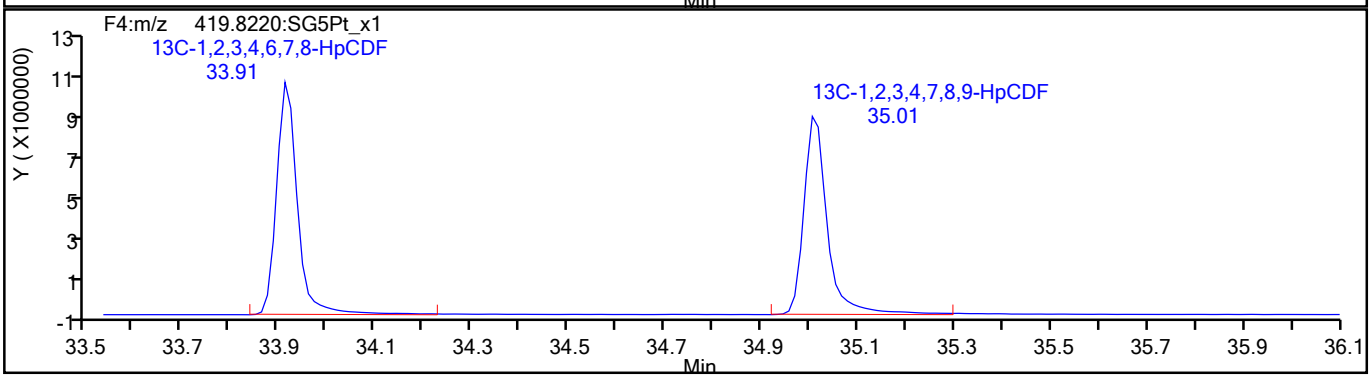

784126

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

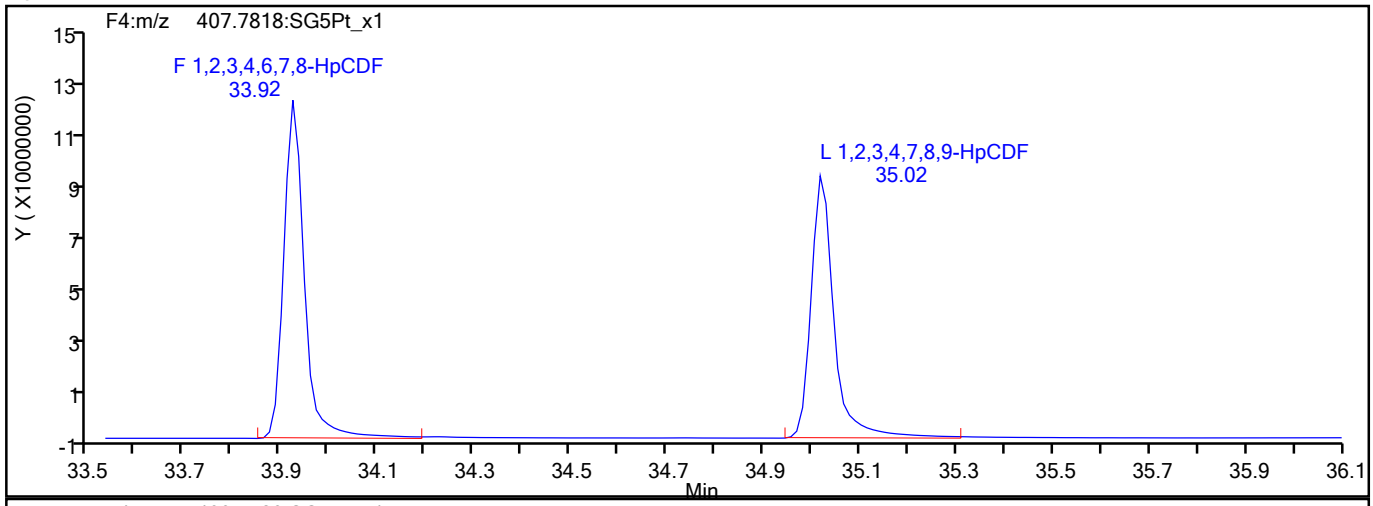

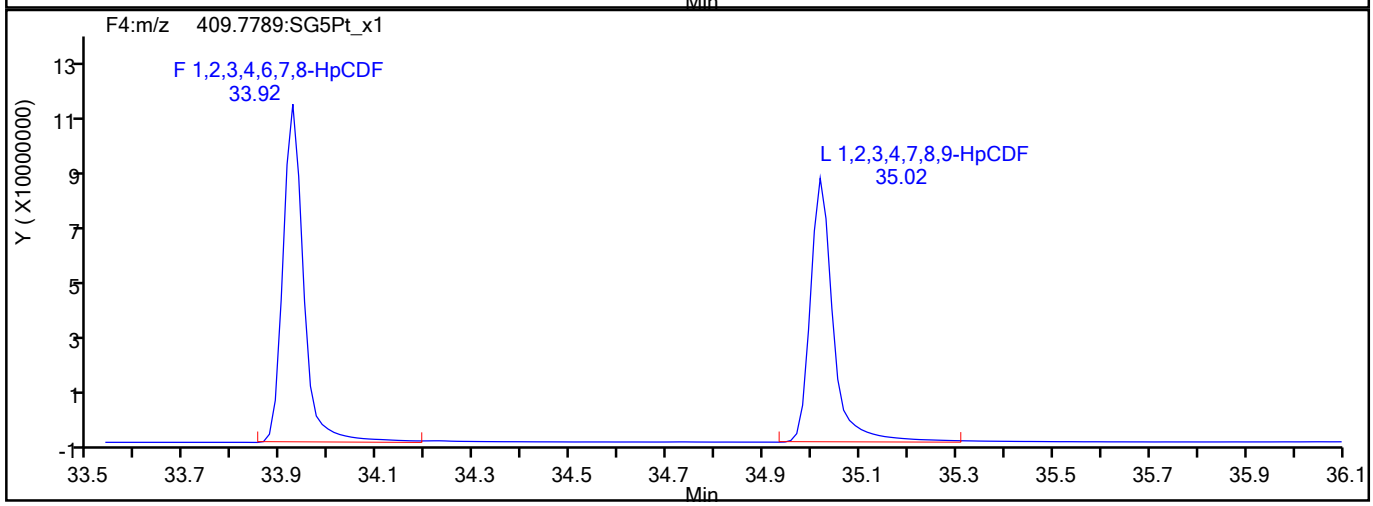

HpCDF Interference Mass

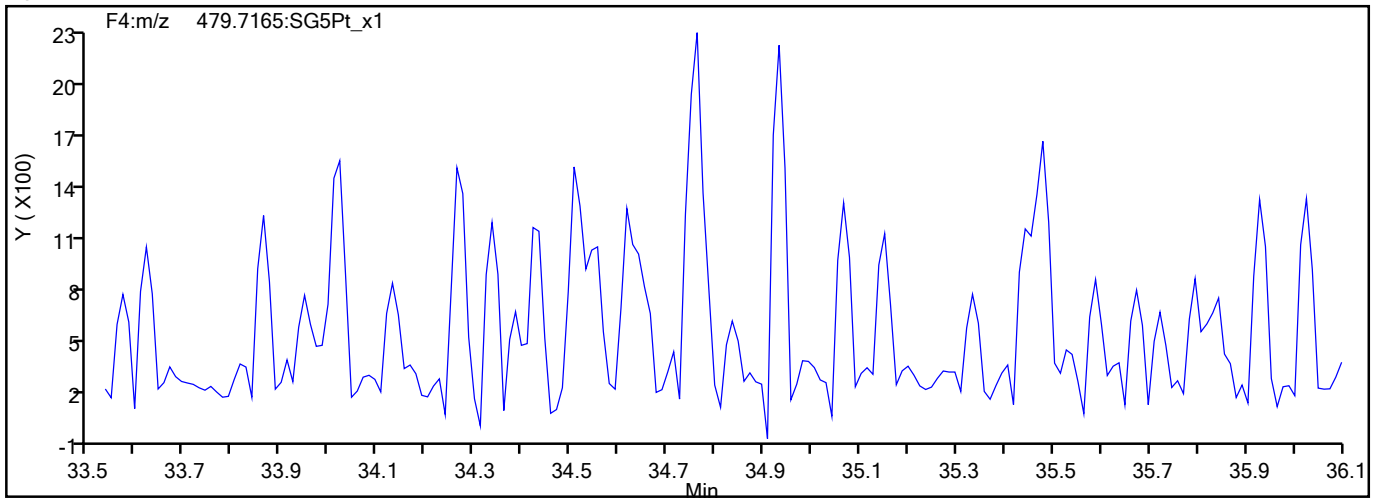

784127

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

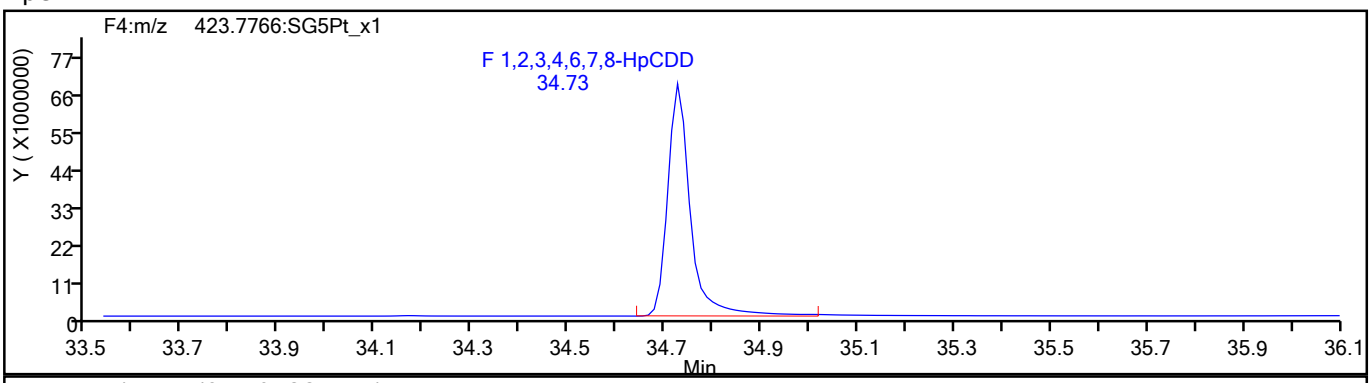

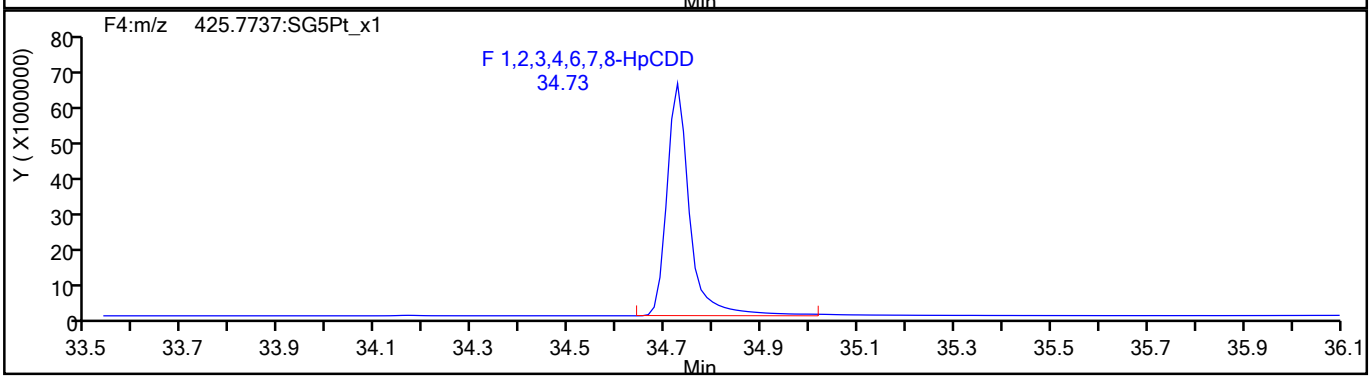

HpCDD Standards

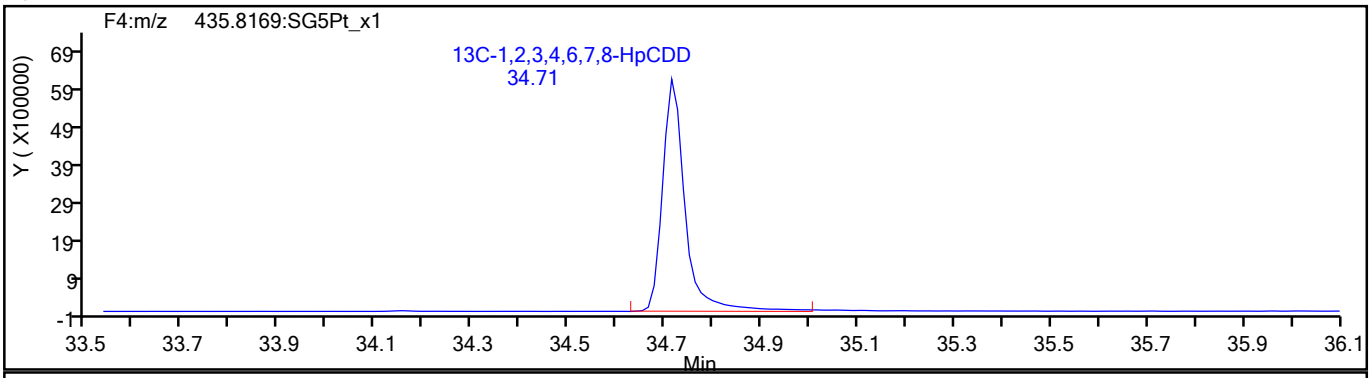

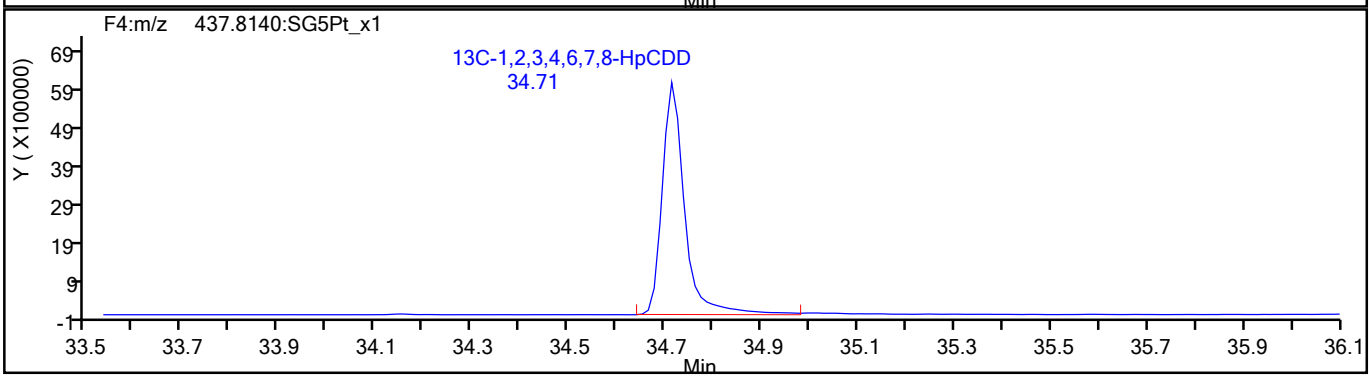

784128

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

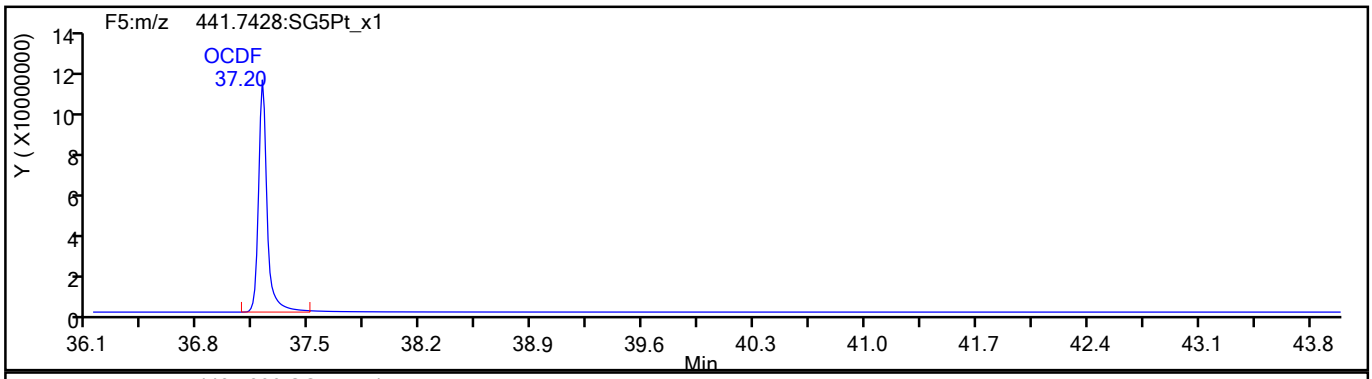

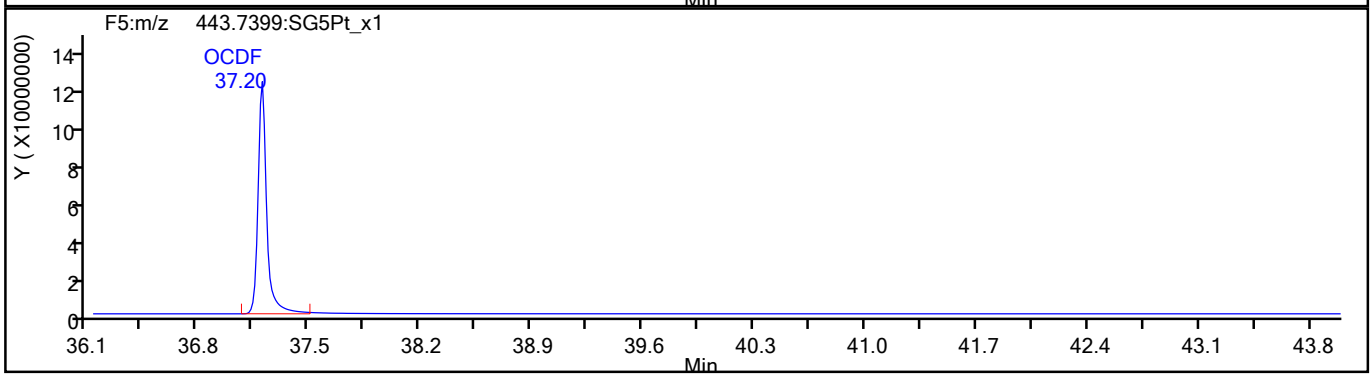

OCDF Standards

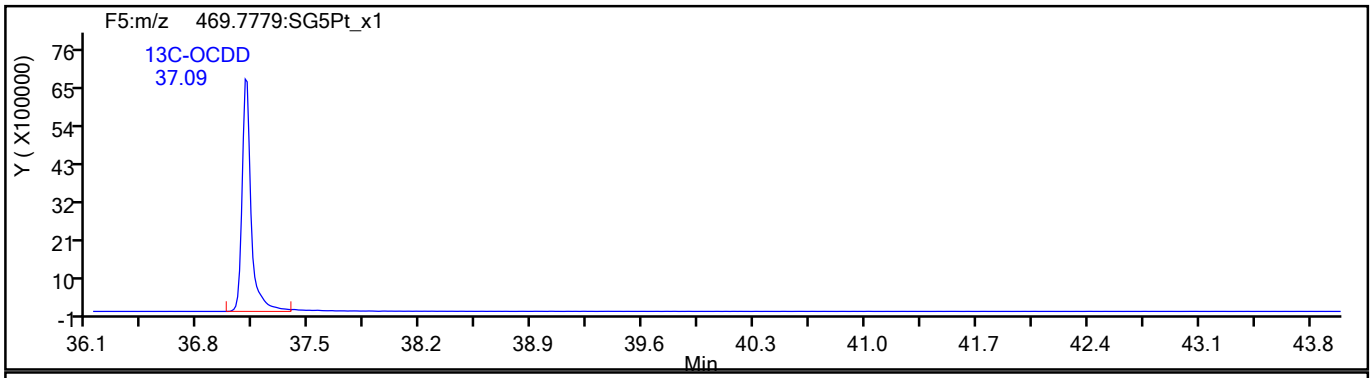

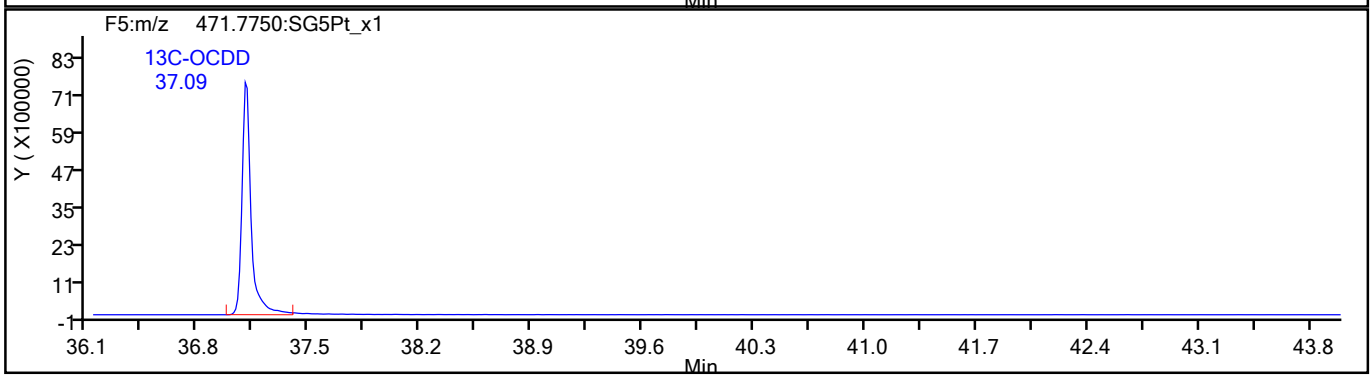

784129

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

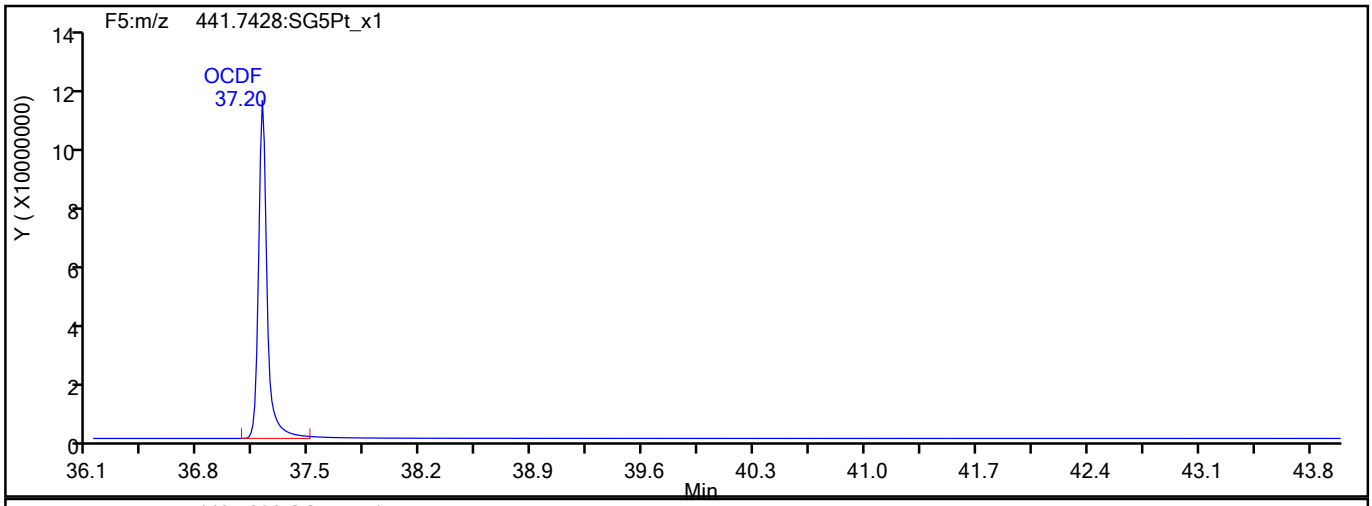

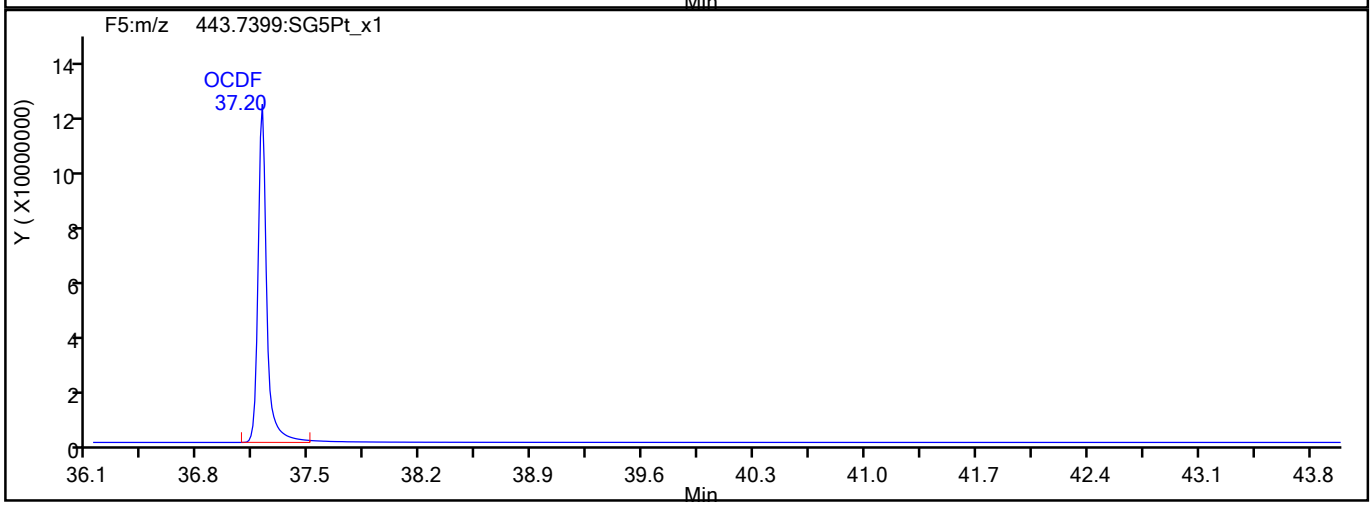

OCDF Interference Mass

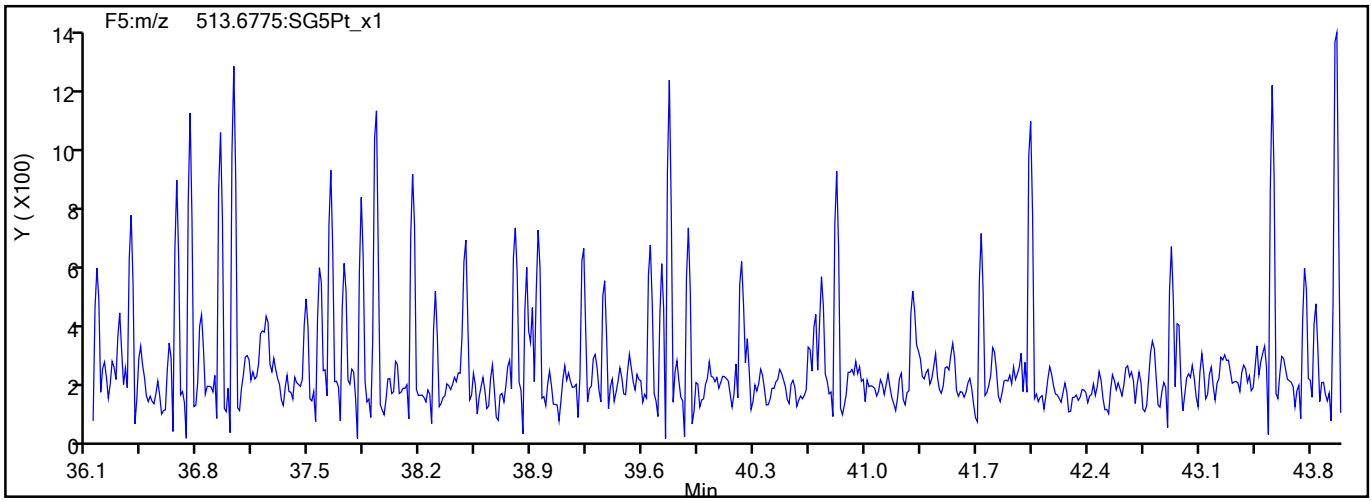

784130

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

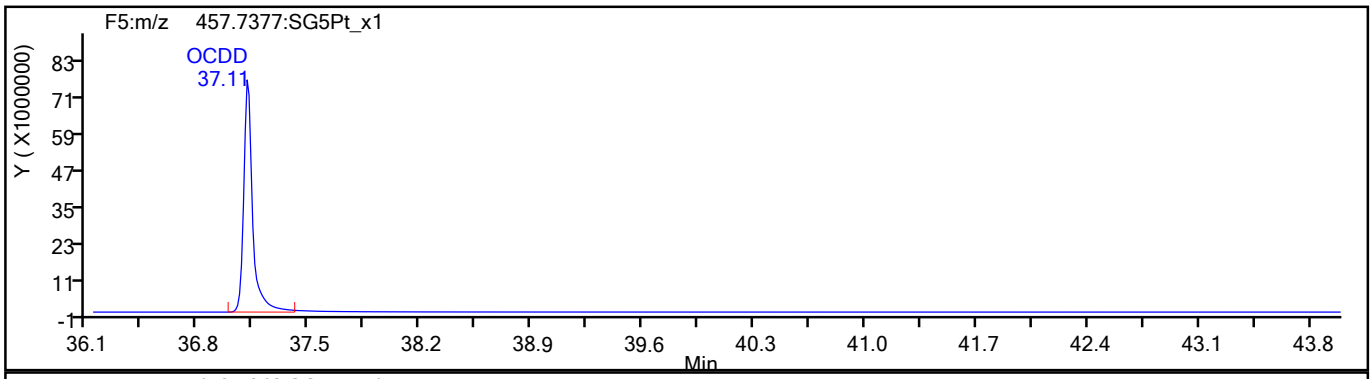

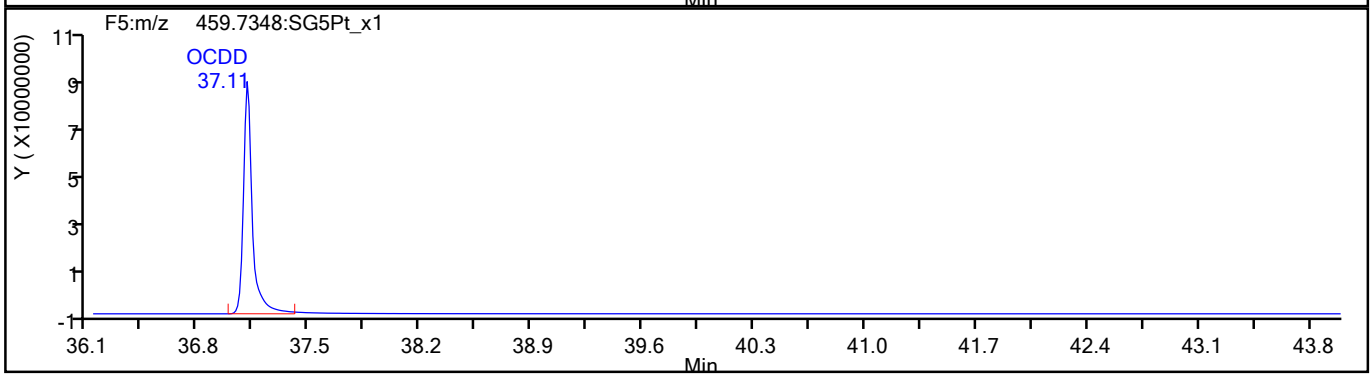

OCDD Standards

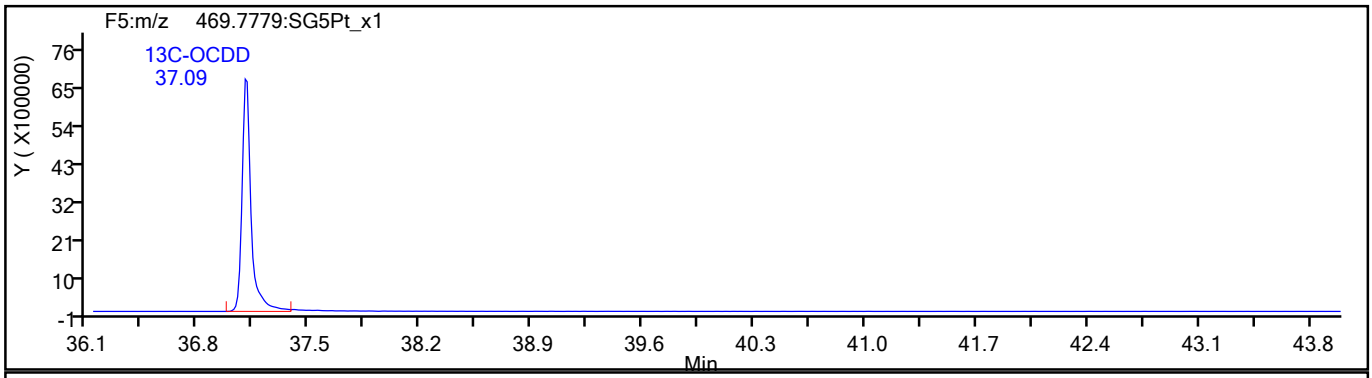

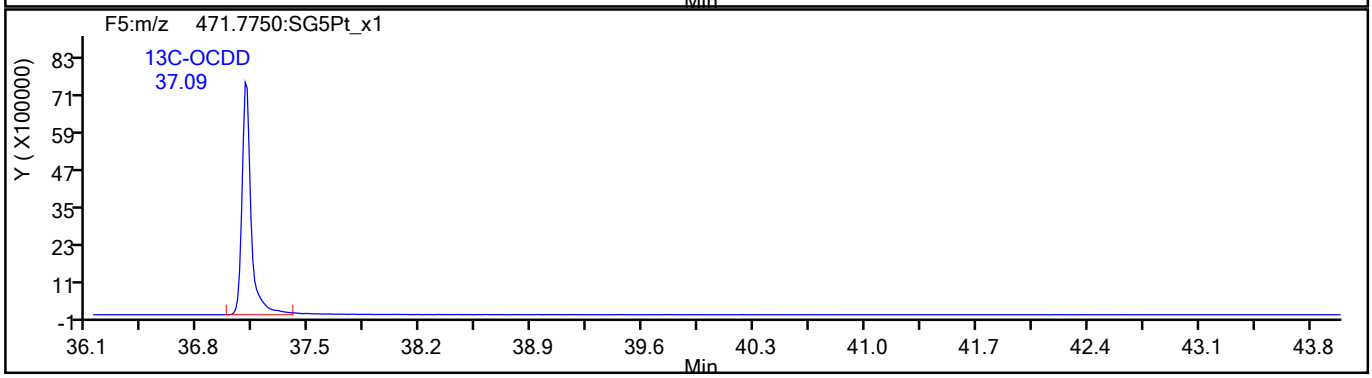

784131

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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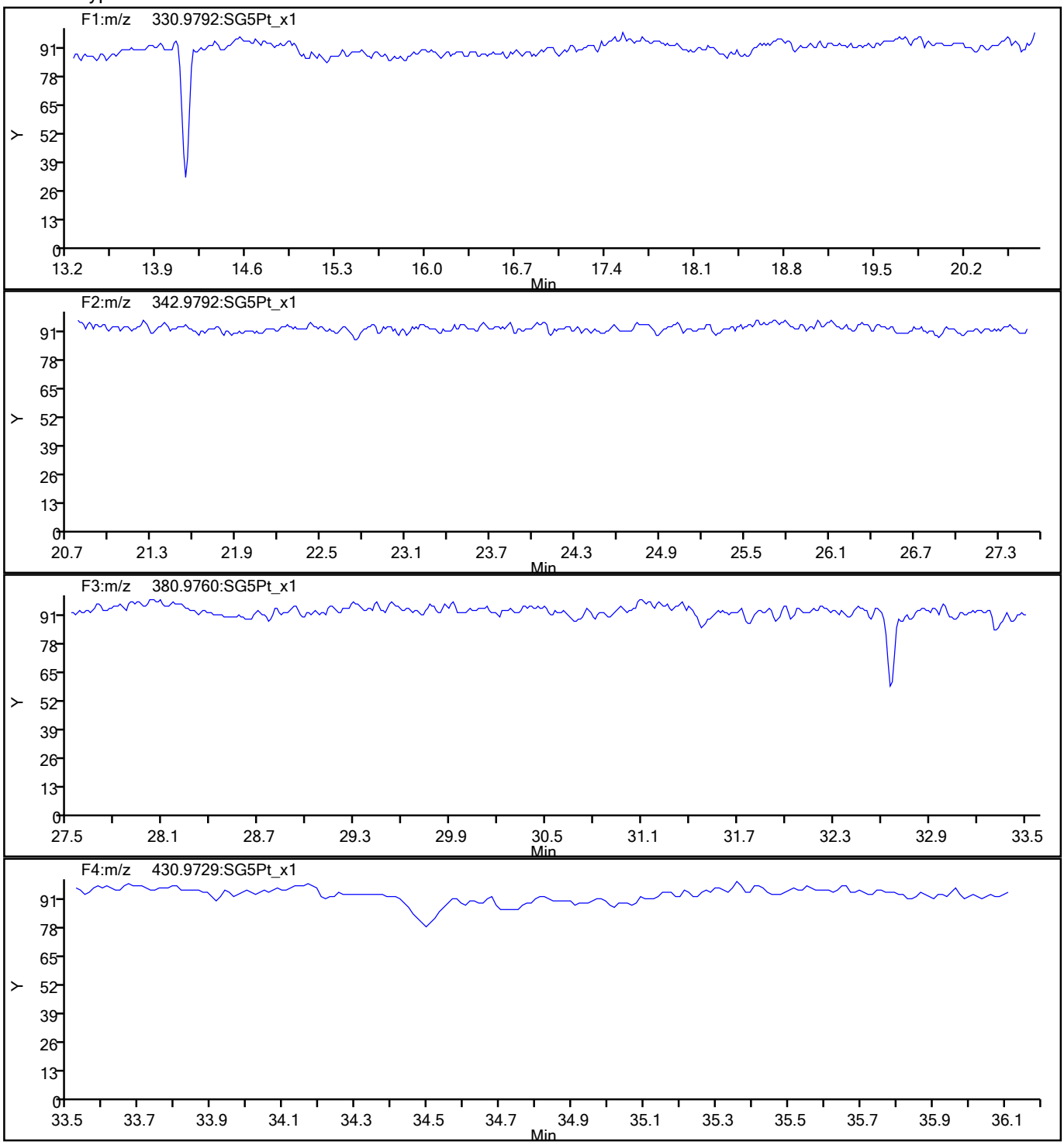

784132

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

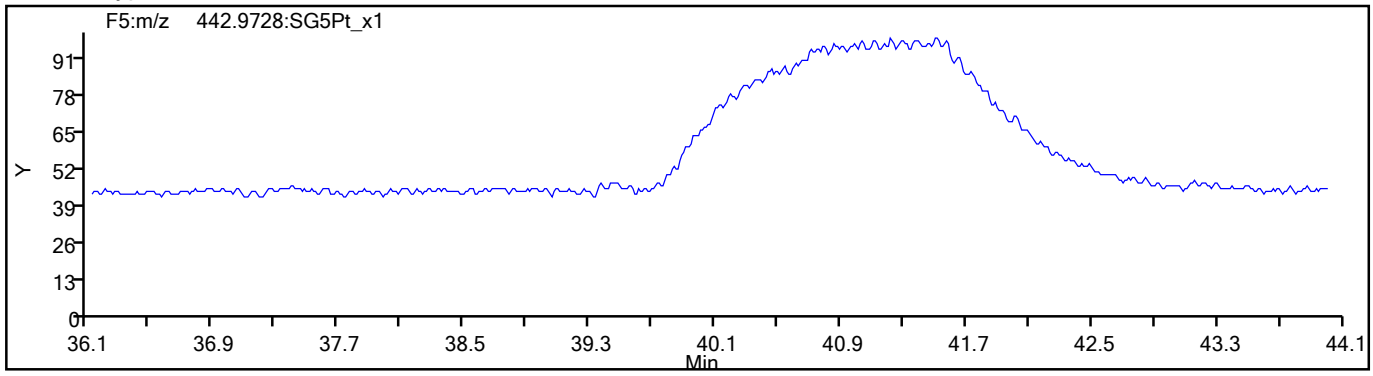

784133

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.094

Error Coefficients

Standard Error:	226000000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.779775	100.0	41876556.0	1.11191	Y
2	IC 320-510264/4	10.0	9.539499	100.0	38689128.0	0.95395	Y
3	IC 320-510264/5	50.0	55.880768	100.0	40333717.0	1.117615	Y
4	IC 320-510264/6	200.0	233.50404	100.0	40442950.0	1.16752	Y
5	IC 320-510264/7	1000.0	1120.518221	100.0	39395832.0	1.120518	Y

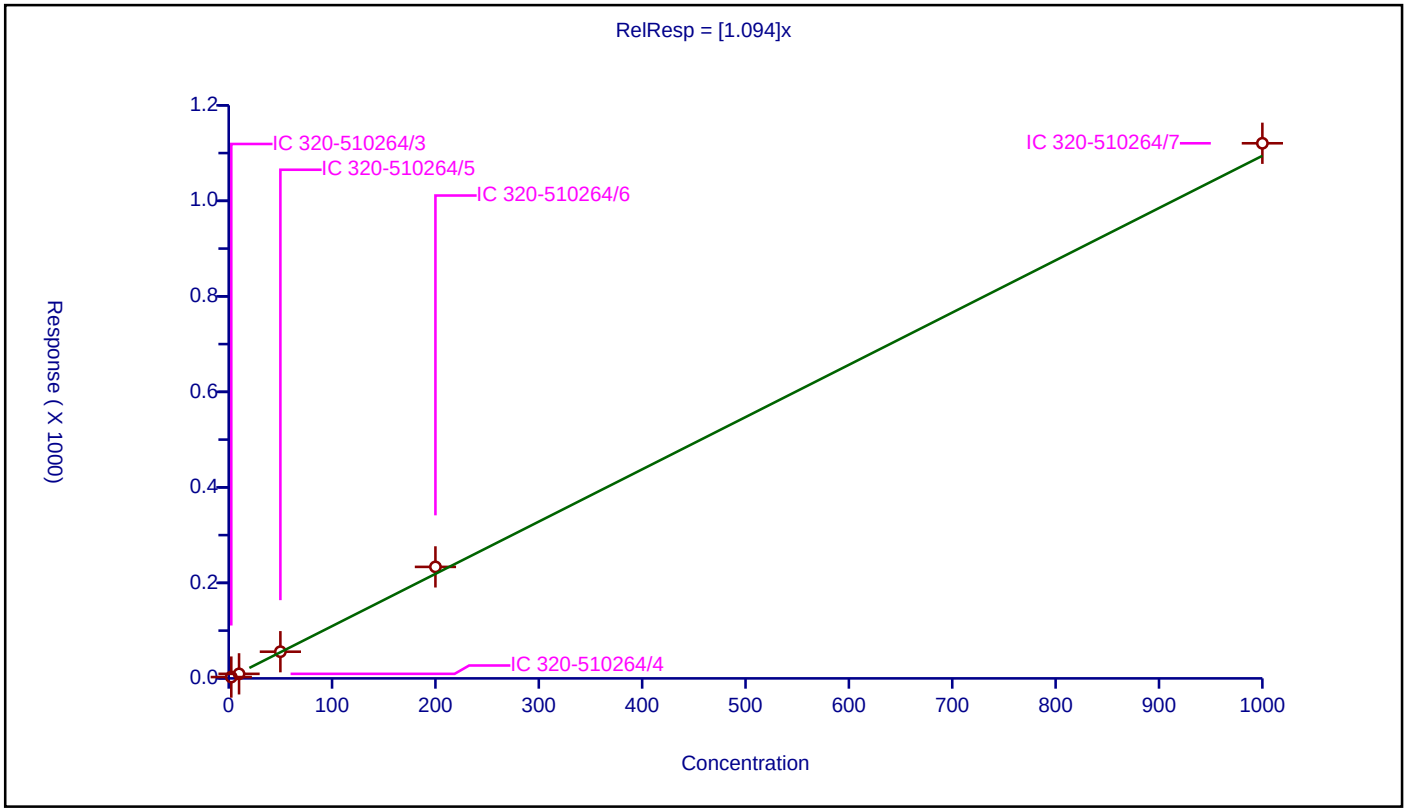

784134

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.441

Error Coefficients

Standard Error:	349000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.618521	100.0	51308225.0	1.447408	Y
2	IC 320-510264/4	10.0	12.412663	100.0	46691158.0	1.241266	Y
3	IC 320-510264/5	50.0	74.932304	100.0	47697671.0	1.498646	Y
4	IC 320-510264/6	200.0	309.702692	100.0	47752972.0	1.548513	Y
5	IC 320-510264/7	1000.0	1470.622057	100.0	46328151.0	1.470622	Y

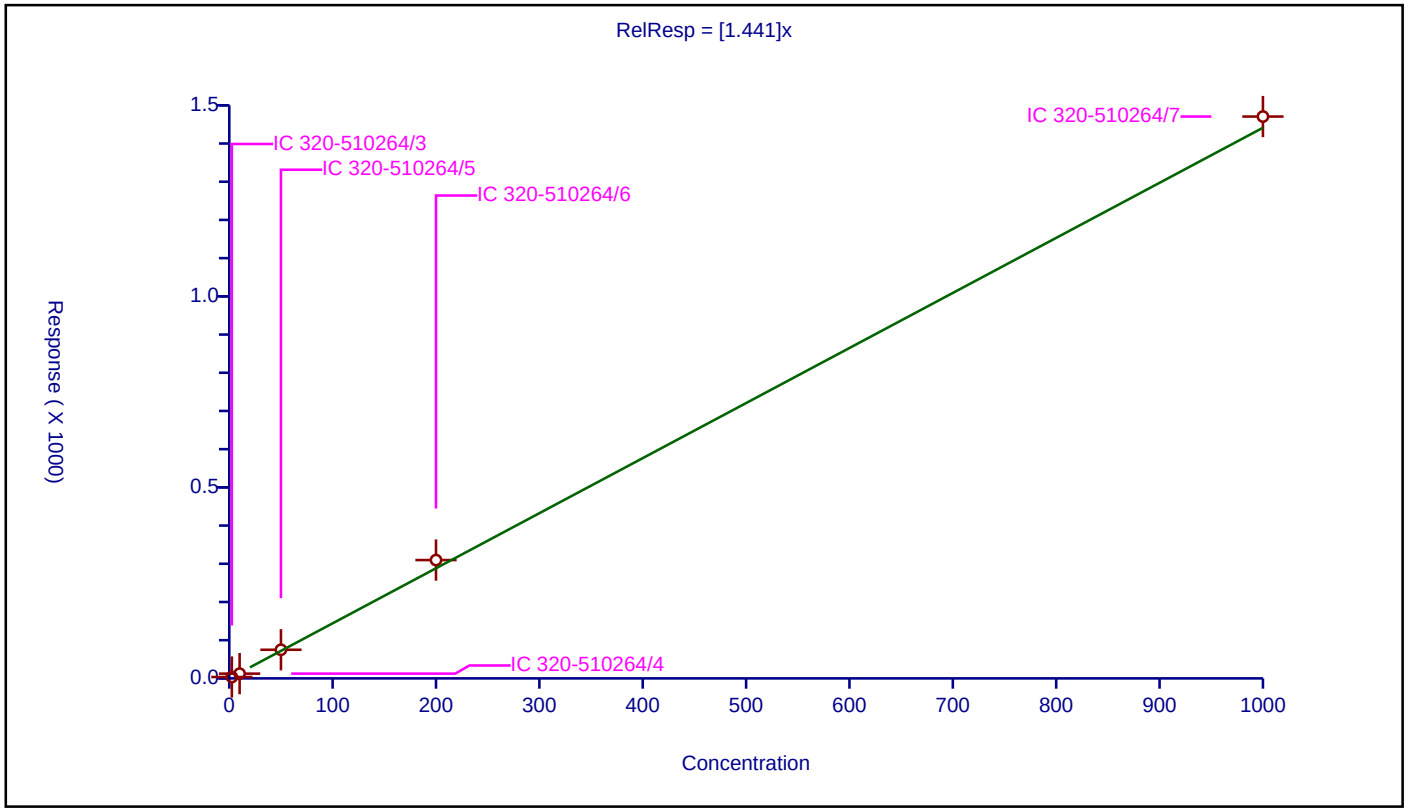

784135

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	302000000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.284087	100.0	44628352.0	1.313635	Y
2	IC 320-510264/4	10.0	11.269366	100.0	42362179.0	1.126937	Y
3	IC 320-510264/5	50.0	68.111875	100.0	43238622.0	1.362237	Y
4	IC 320-510264/6	200.0	290.409045	100.0	42687625.0	1.452045	Y
5	IC 320-510264/7	1000.0	1332.064187	100.0	44333848.0	1.332064	Y

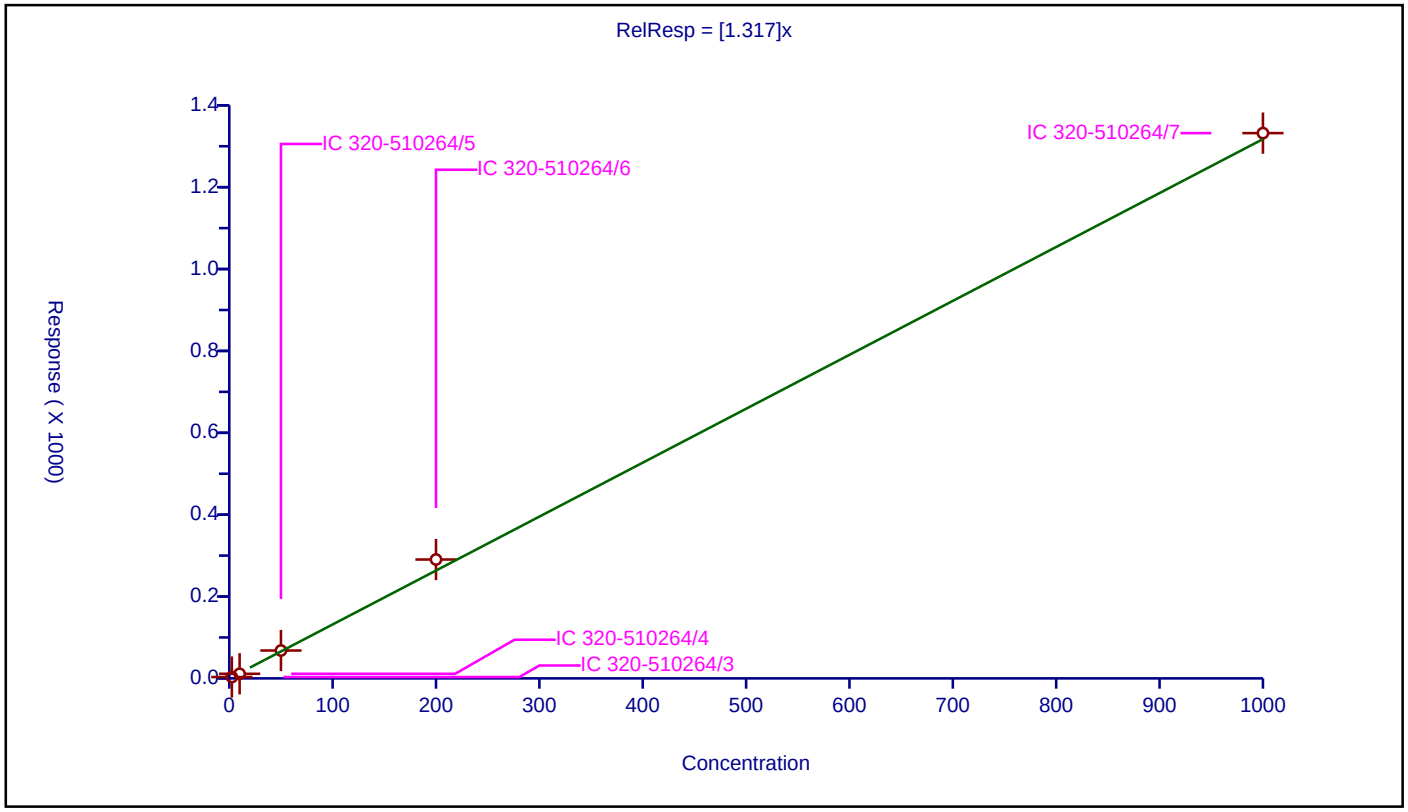

784136

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	248000000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.744793	100.0	47363504.0	1.097917	Y
2	IC 320-510264/4	10.0	8.90634	100.0	44877133.0	0.890634	Y
3	IC 320-510264/5	50.0	56.519553	100.0	44039927.0	1.130391	Y
4	IC 320-510264/6	200.0	233.423018	100.0	44144841.0	1.167115	Y
5	IC 320-510264/7	1000.0	1034.115245	100.0	46886171.0	1.034115	Y

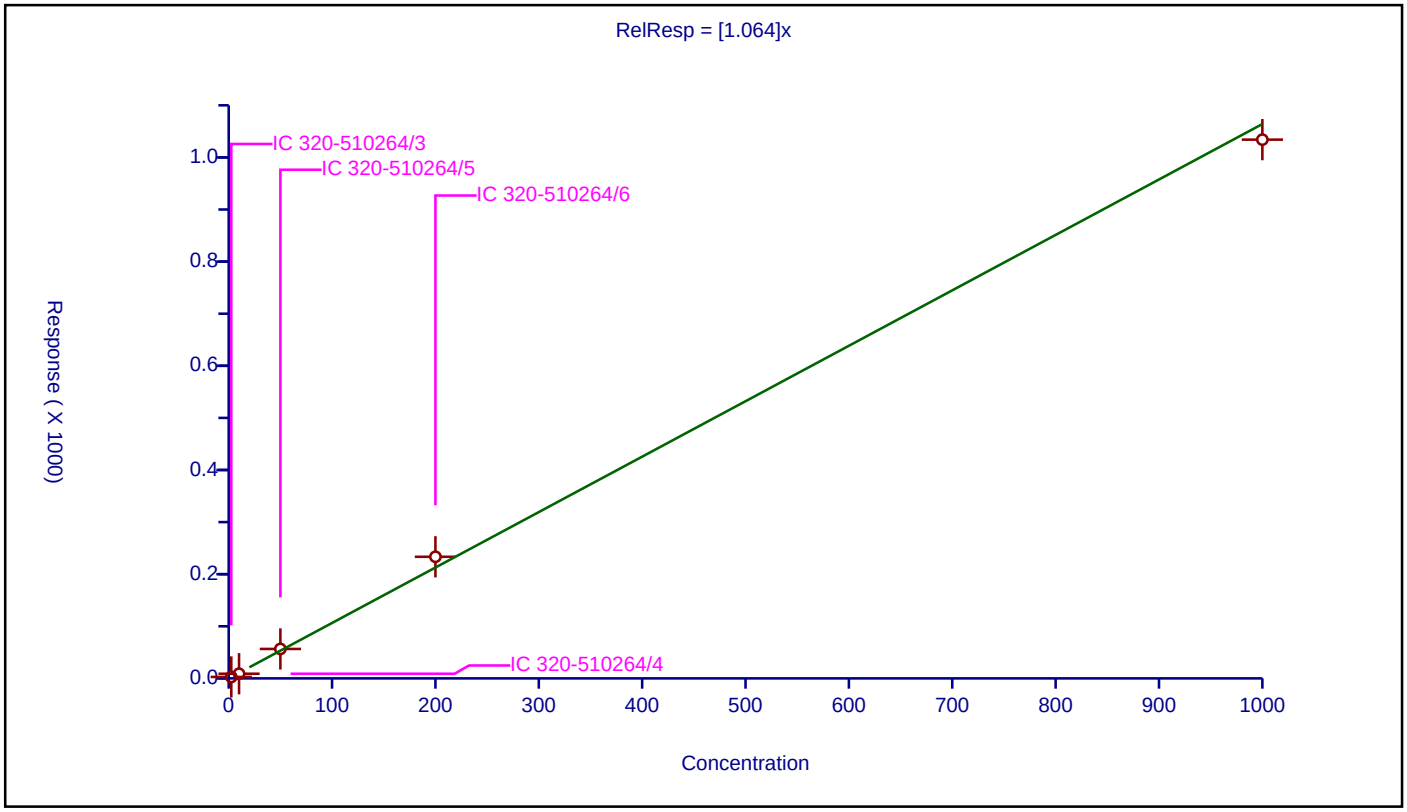

784137

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.085

Error Coefficients

Standard Error:	377000000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.805608	100.0	69484482.0	1.122243	Y
2	IC 320-510264/4	10.0	9.192224	100.0	65726932.0	0.919222	Y
3	IC 320-510264/5	50.0	55.122828	100.0	68075509.0	1.102457	Y
4	IC 320-510264/6	200.0	238.727102	100.0	64951889.0	1.193636	Y
5	IC 320-510264/7	1000.0	1088.07626	100.0	67741189.0	1.088076	Y

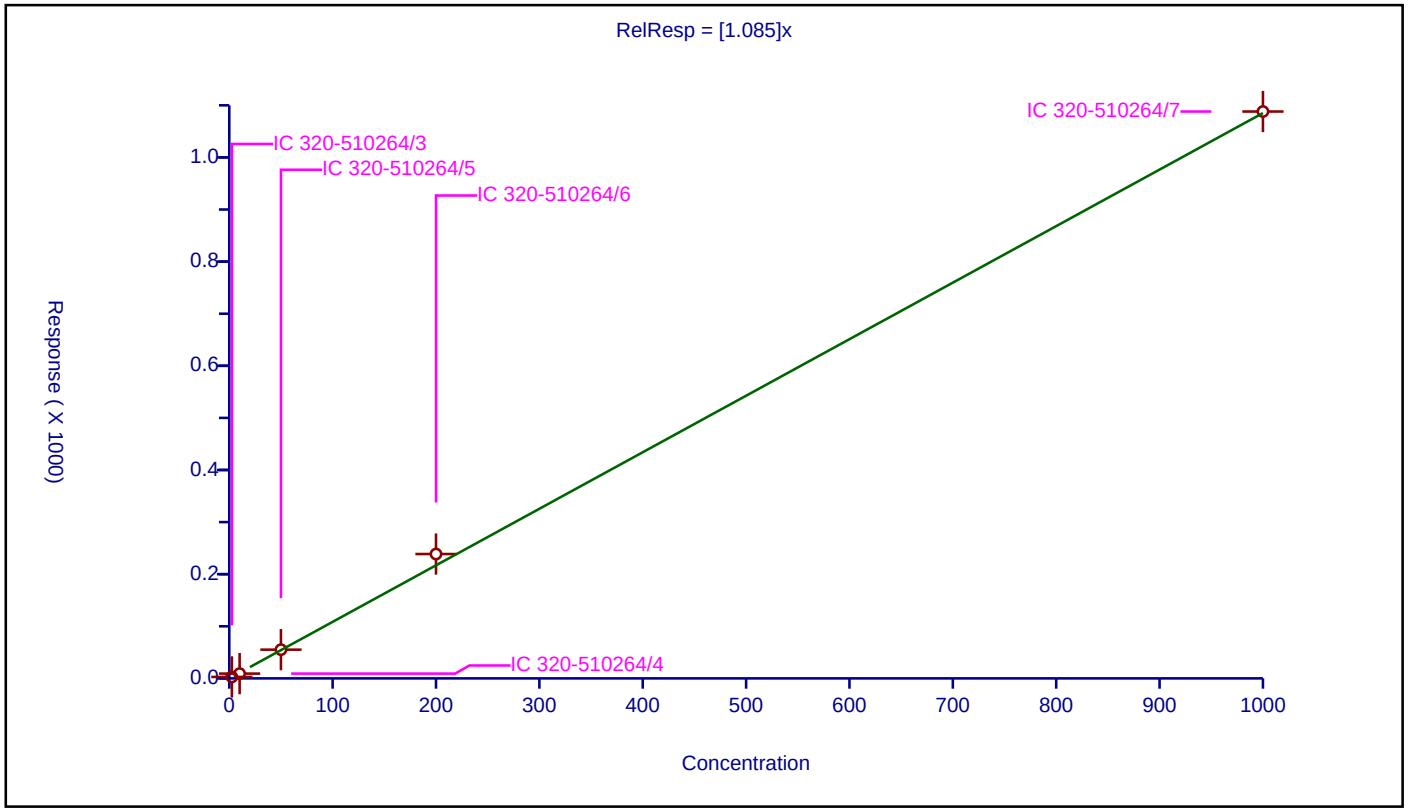

784138

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1

Error Coefficients

Standard Error:	278000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.57359	100.0	56759108.0	1.029436	Y
2	IC 320-510264/4	10.0	8.528531	100.0	52974056.0	0.852853	Y
3	IC 320-510264/5	50.0	50.563423	100.0	55284532.0	1.011268	Y
4	IC 320-510264/6	200.0	218.597288	100.0	54392394.0	1.092986	Y
5	IC 320-510264/7	1000.0	1013.848486	100.0	53564396.0	1.013848	Y

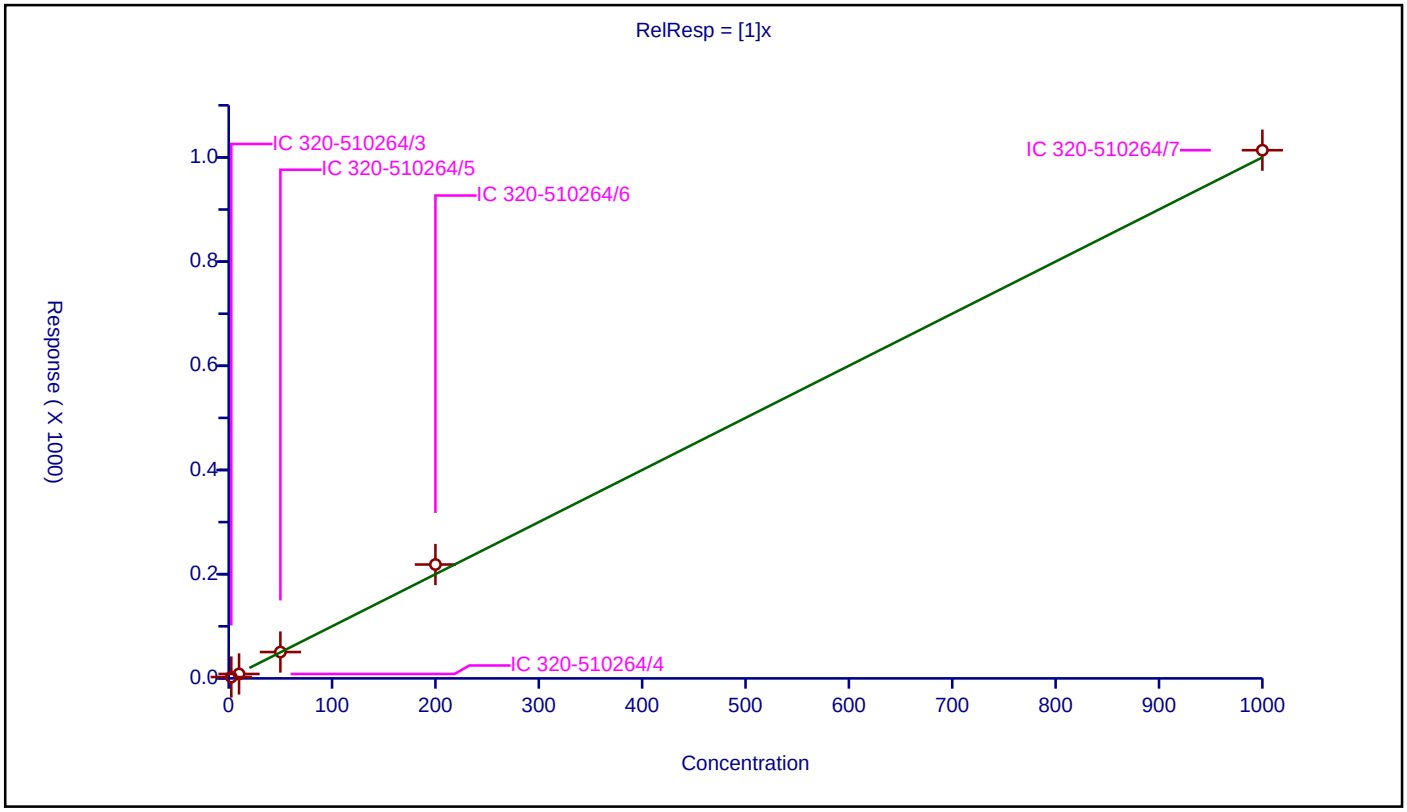

784139

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.126

Error Coefficients

Standard Error:	402000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.871987	100.0	73262388.0	1.148795	Y
2	IC 320-510264/4	10.0	9.63718	100.0	68089005.0	0.963718	Y
3	IC 320-510264/5	50.0	57.730945	100.0	70677463.0	1.154619	Y
4	IC 320-510264/6	200.0	239.311904	100.0	70459920.0	1.19656	Y
5	IC 320-510264/7	1000.0	1166.370477	100.0	67363664.0	1.16637	Y

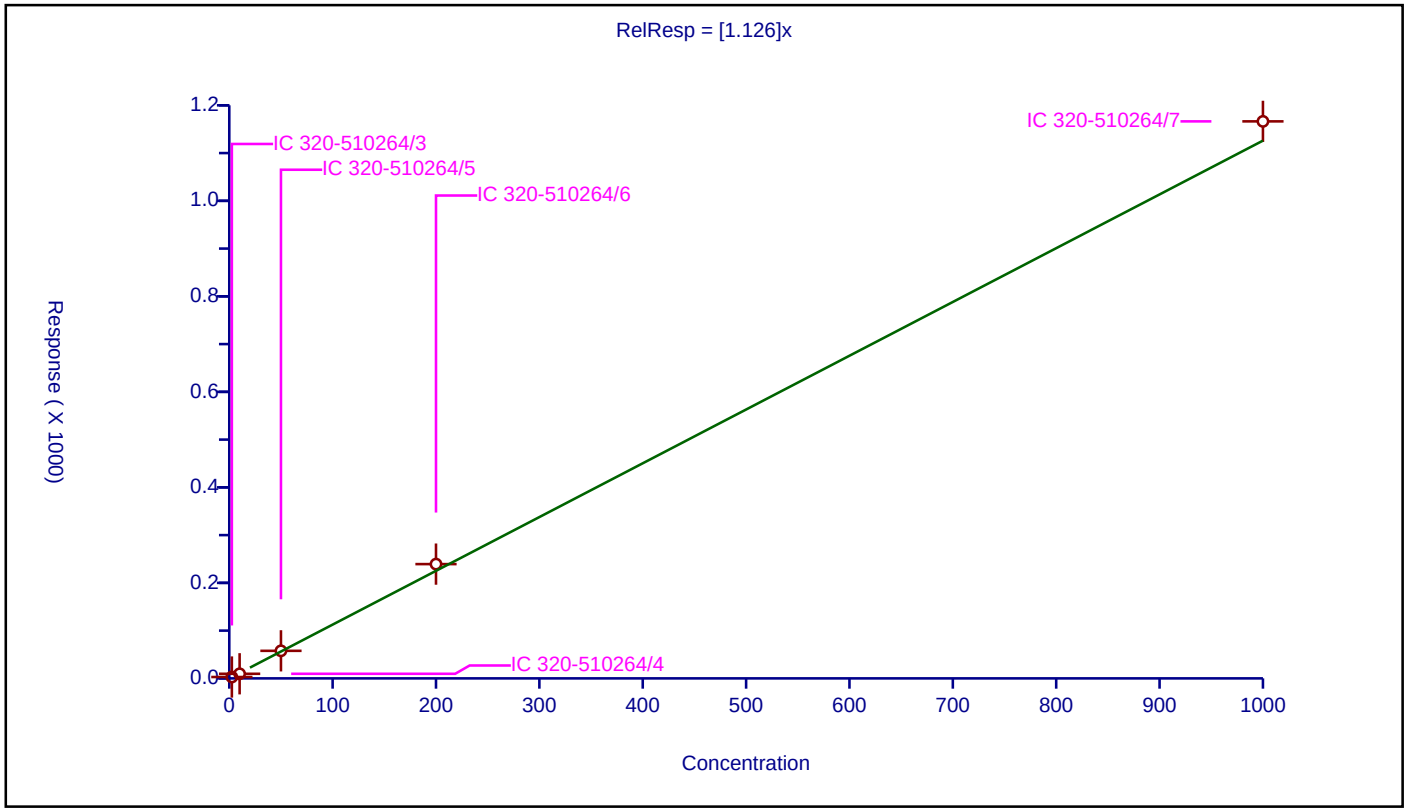

784140

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.248

Error Coefficients

Standard Error:	289000000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.174189	100.0	47363504.0	1.269675	Y
2	IC 320-510264/4	10.0	10.27817	100.0	44877133.0	1.027817	Y
3	IC 320-510264/5	50.0	67.654413	100.0	44039927.0	1.353088	Y
4	IC 320-510264/6	200.0	277.257762	100.0	44144841.0	1.386289	Y
5	IC 320-510264/7	1000.0	1202.675657	100.0	46886171.0	1.202676	Y

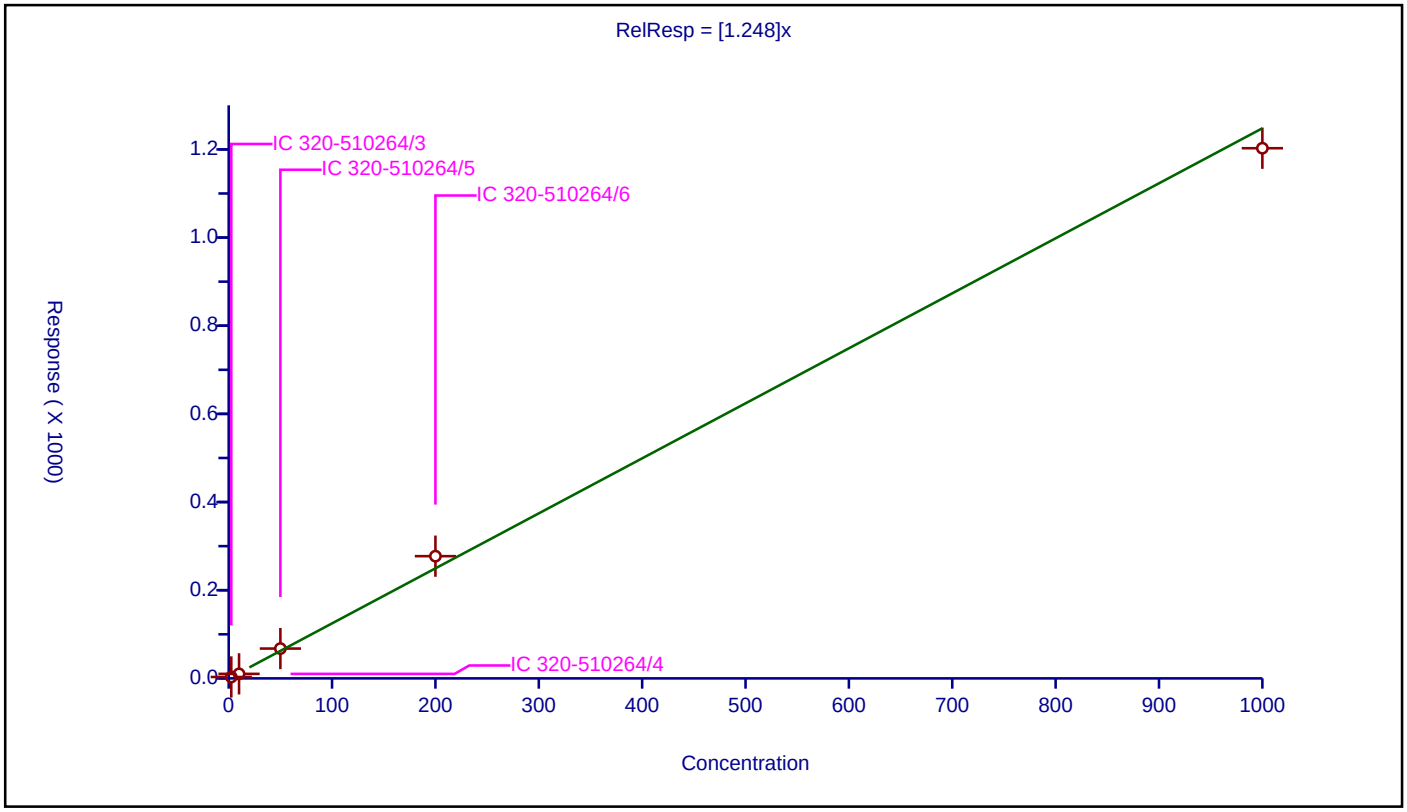

784141

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.166

Error Coefficients

Standard Error:	362000000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.933201	100.0	62528954.0	1.17328	Y
2	IC 320-510264/4	10.0	10.136374	100.0	58828058.0	1.013637	Y
3	IC 320-510264/5	50.0	59.48769	100.0	60389284.0	1.189754	Y
4	IC 320-510264/6	200.0	249.571201	100.0	59636084.0	1.247856	Y
5	IC 320-510264/7	1000.0	1207.229164	100.0	58669892.0	1.207229	Y

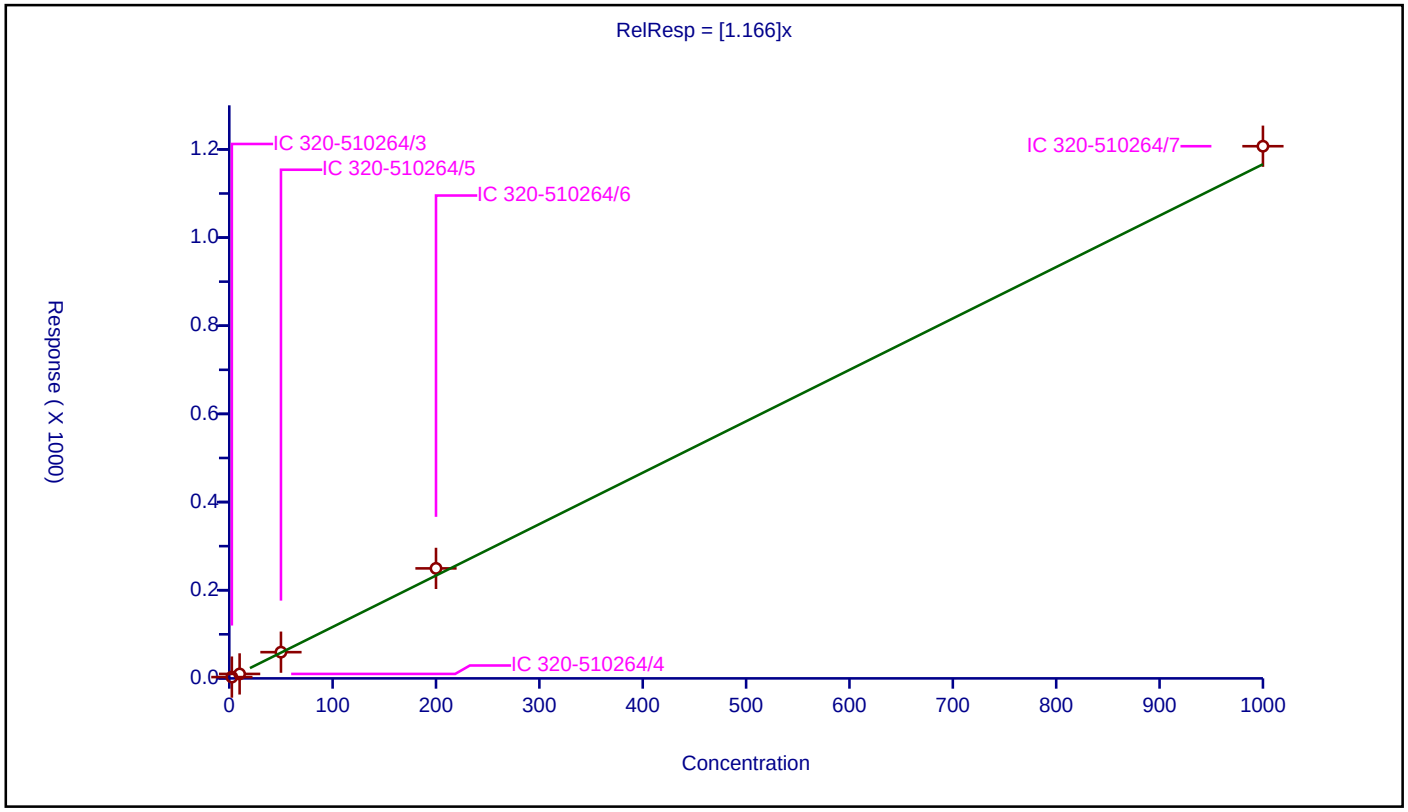

784142

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.048

Error Coefficients

Standard Error:	256000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.644408	100.0	49643581.0	1.057763	Y
2	IC 320-510264/4	10.0	9.031283	100.0	46721712.0	0.903128	Y
3	IC 320-510264/5	50.0	53.401309	100.0	47124414.0	1.068026	Y
4	IC 320-510264/6	200.0	226.195317	100.0	46524396.0	1.130977	Y
5	IC 320-510264/7	1000.0	1082.258061	100.0	46251010.0	1.082258	Y

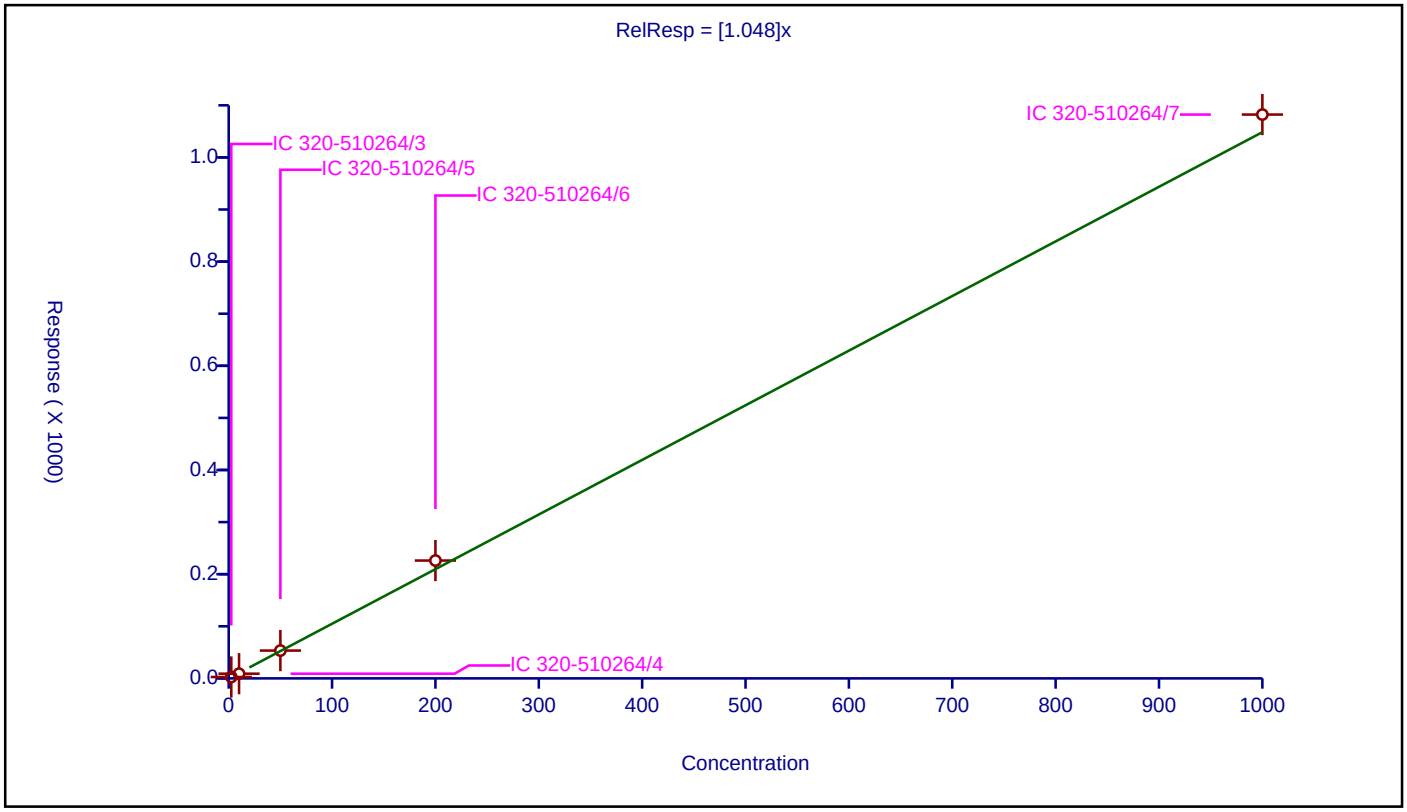

784143

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	408000000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.684664	100.0	78674290.0	1.073865	Y
2	IC 320-510264/4	10.0	9.128293	100.0	72525655.0	0.912829	Y
3	IC 320-510264/5	50.0	54.457439	100.0	76368219.0	1.089149	Y
4	IC 320-510264/6	200.0	227.4085	100.0	75205597.0	1.137042	Y
5	IC 320-510264/7	1000.0	1092.787556	100.0	72829681.0	1.092788	Y

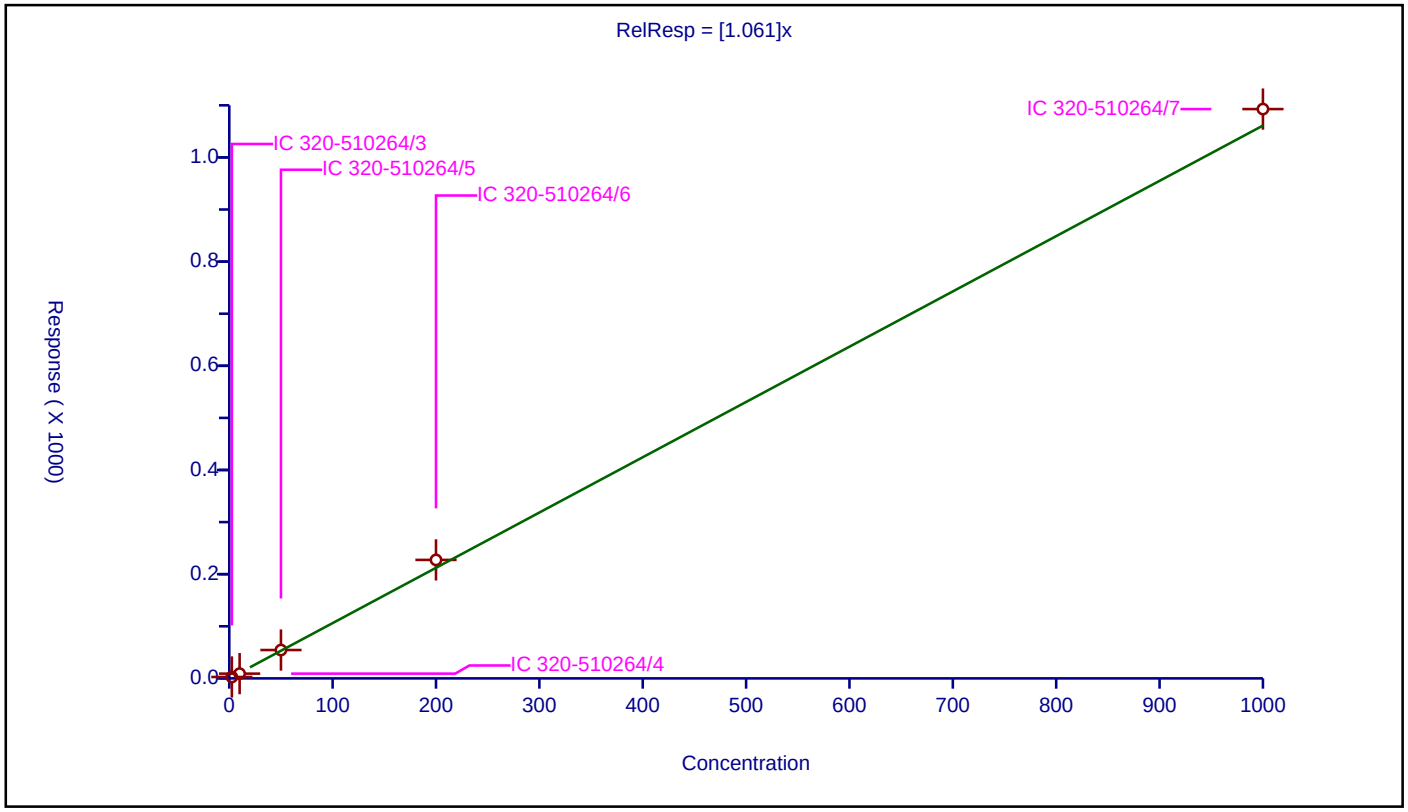

784144

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	391000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.05566	100.0	68885161.0	1.222264	Y
2	IC 320-510264/4	10.0	9.86292	100.0	64406928.0	0.986292	Y
3	IC 320-510264/5	50.0	59.290251	100.0	67028498.0	1.185805	Y
4	IC 320-510264/6	200.0	248.302486	100.0	66145684.0	1.241512	Y
5	IC 320-510264/7	1000.0	1201.822353	100.0	63471184.0	1.201822	Y

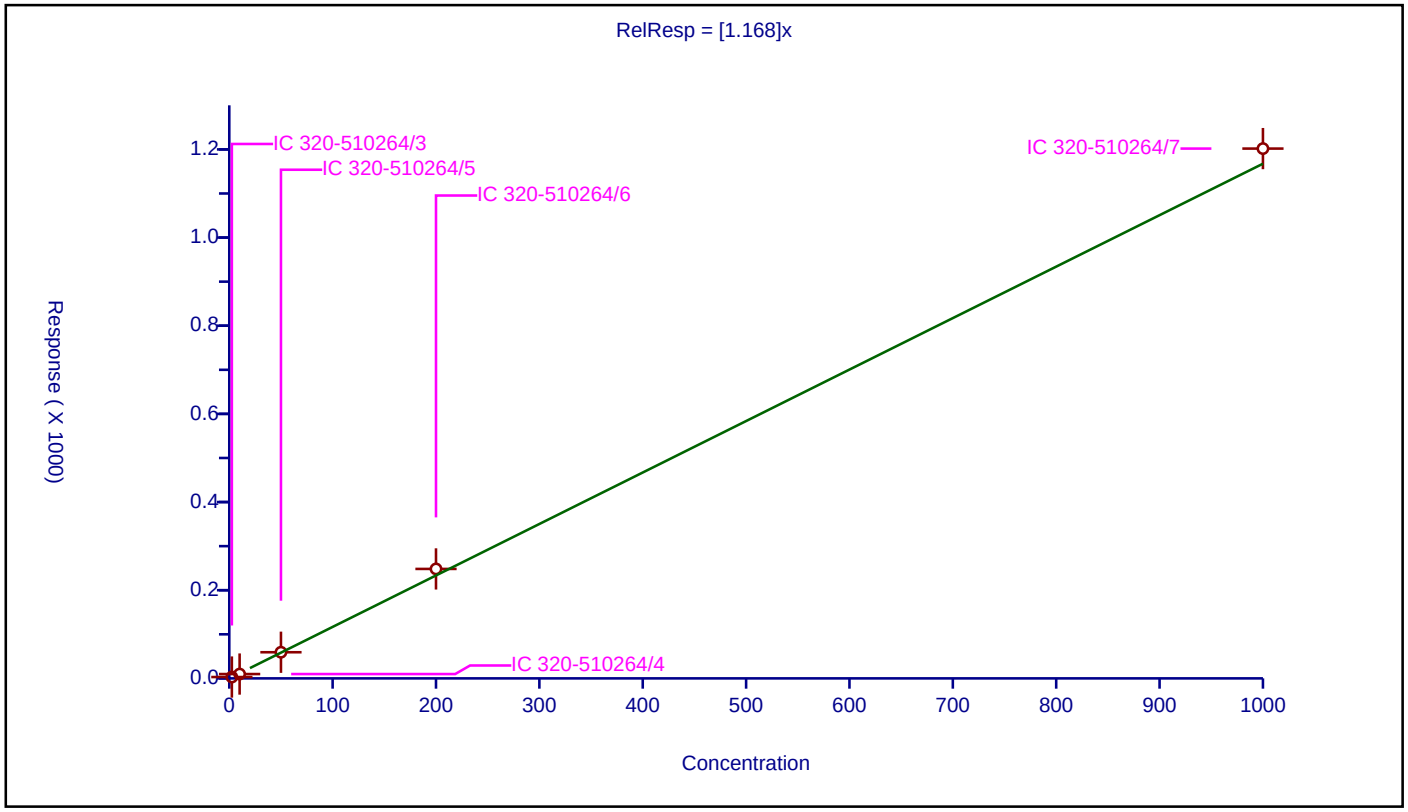

784145

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.018

Error Coefficients

Standard Error:	401000000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.601965	100.0	80591659.0	1.040786	Y
2	IC 320-510264/4	10.0	8.609629	100.0	74944110.0	0.860963	Y
3	IC 320-510264/5	50.0	52.328396	100.0	78214582.0	1.046568	Y
4	IC 320-510264/6	200.0	221.640486	100.0	75259591.0	1.108202	Y
5	IC 320-510264/7	1000.0	1035.570916	100.0	75649463.0	1.035571	Y

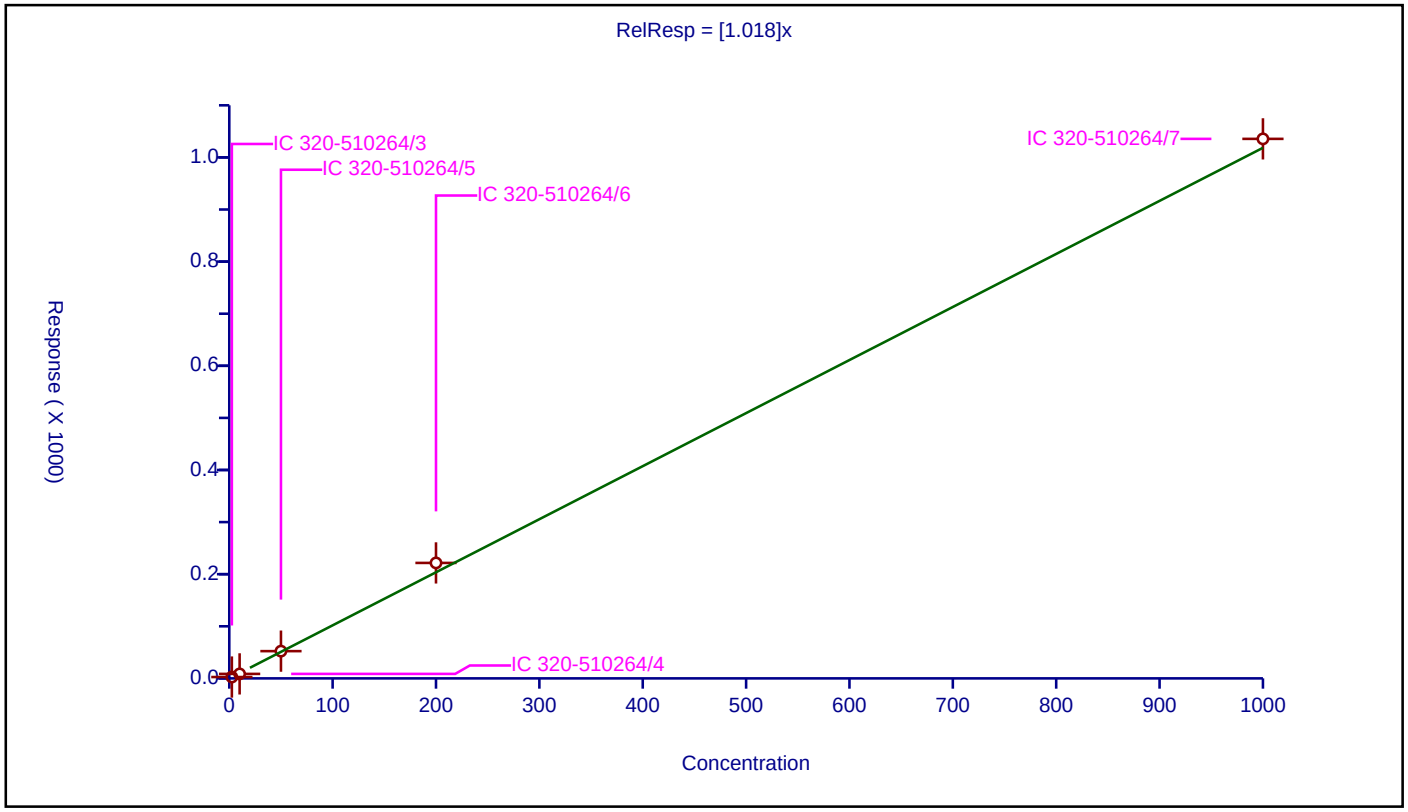

784146

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.254

Error Coefficients

Standard Error:	71900000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.62875	100.0	59957723.0	1.257499	Y
2	IC 320-510264/4	2.0	2.19411	100.0	53975587.0	1.097055	Y
3	IC 320-510264/5	10.0	12.651014	100.0	56155483.0	1.265101	Y
4	IC 320-510264/6	40.0	53.737487	100.0	55471422.0	1.343437	Y
5	IC 320-510264/7	200.0	261.501191	100.0	53698206.0	1.307506	Y

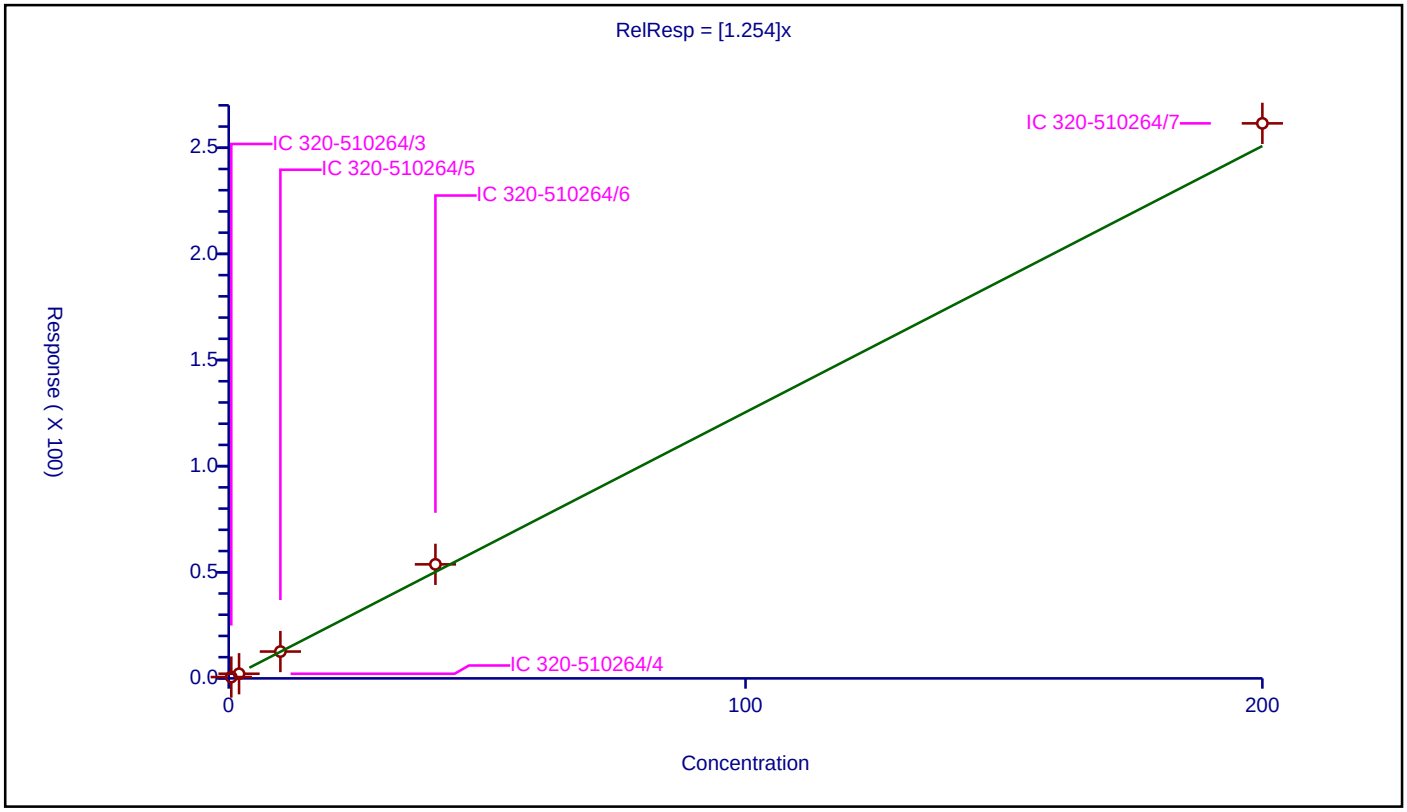

784147

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.024

Error Coefficients

Standard Error:	105000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.514358	100.0	108384725.0	1.028715	Y
2	IC 320-510264/4	2.0	1.739696	100.0	98246522.0	0.869848	Y
3	IC 320-510264/5	10.0	10.458407	100.0	101724636.0	1.045841	Y
4	IC 320-510264/6	40.0	44.37733	100.0	100332269.0	1.109433	Y
5	IC 320-510264/7	200.0	213.143097	100.0	95980421.0	1.065715	Y

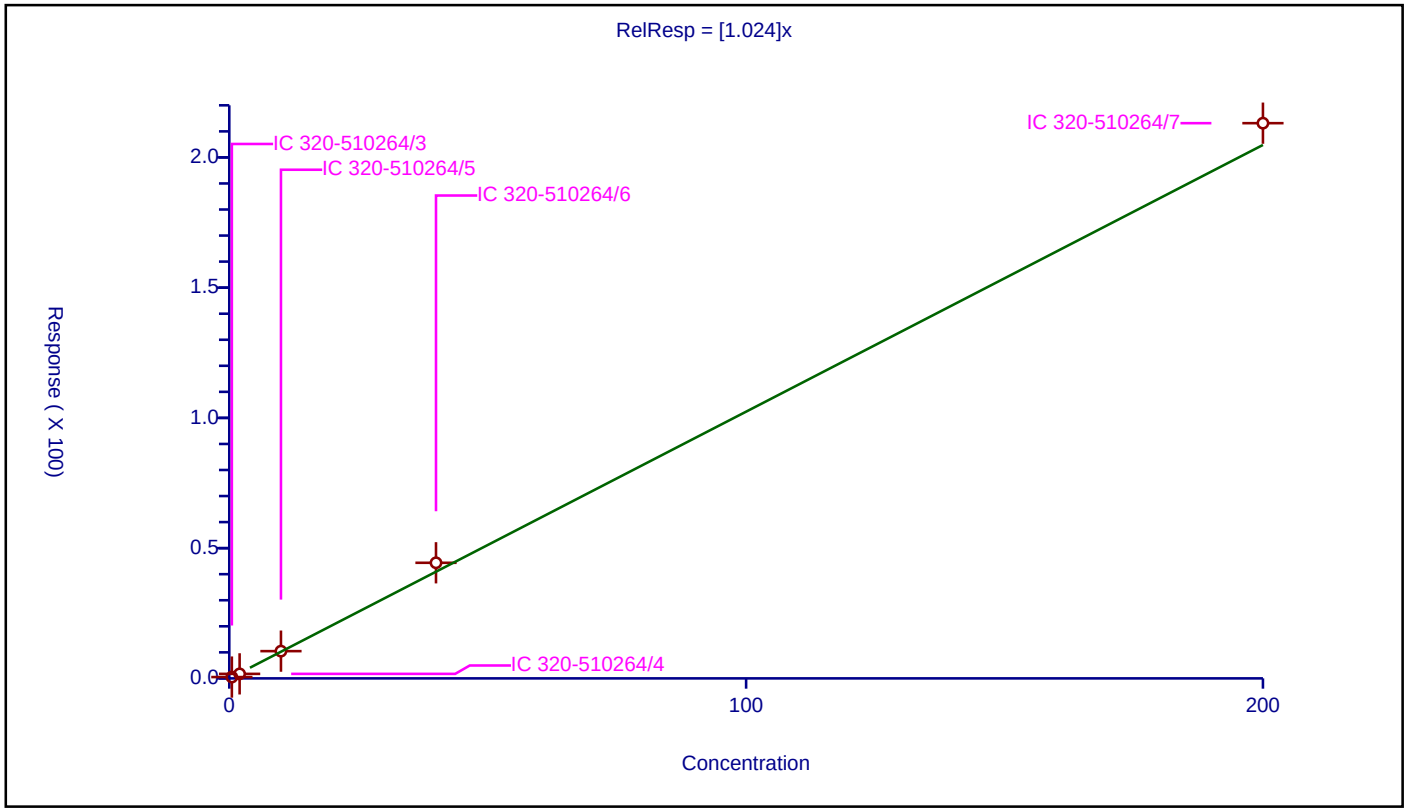

784148

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	72100000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.485229	100.0	65685883.0	0.970458	Y
2	IC 320-510264/4	2.0	1.95888	100.0	62853211.0	0.97944	Y
3	IC 320-510264/5	10.0	11.718119	100.0	62635225.0	1.171812	Y
4	IC 320-510264/6	40.0	47.503291	100.0	62046988.0	1.187582	Y
5	IC 320-510264/7	200.0	245.287862	100.0	57464333.0	1.226439	Y

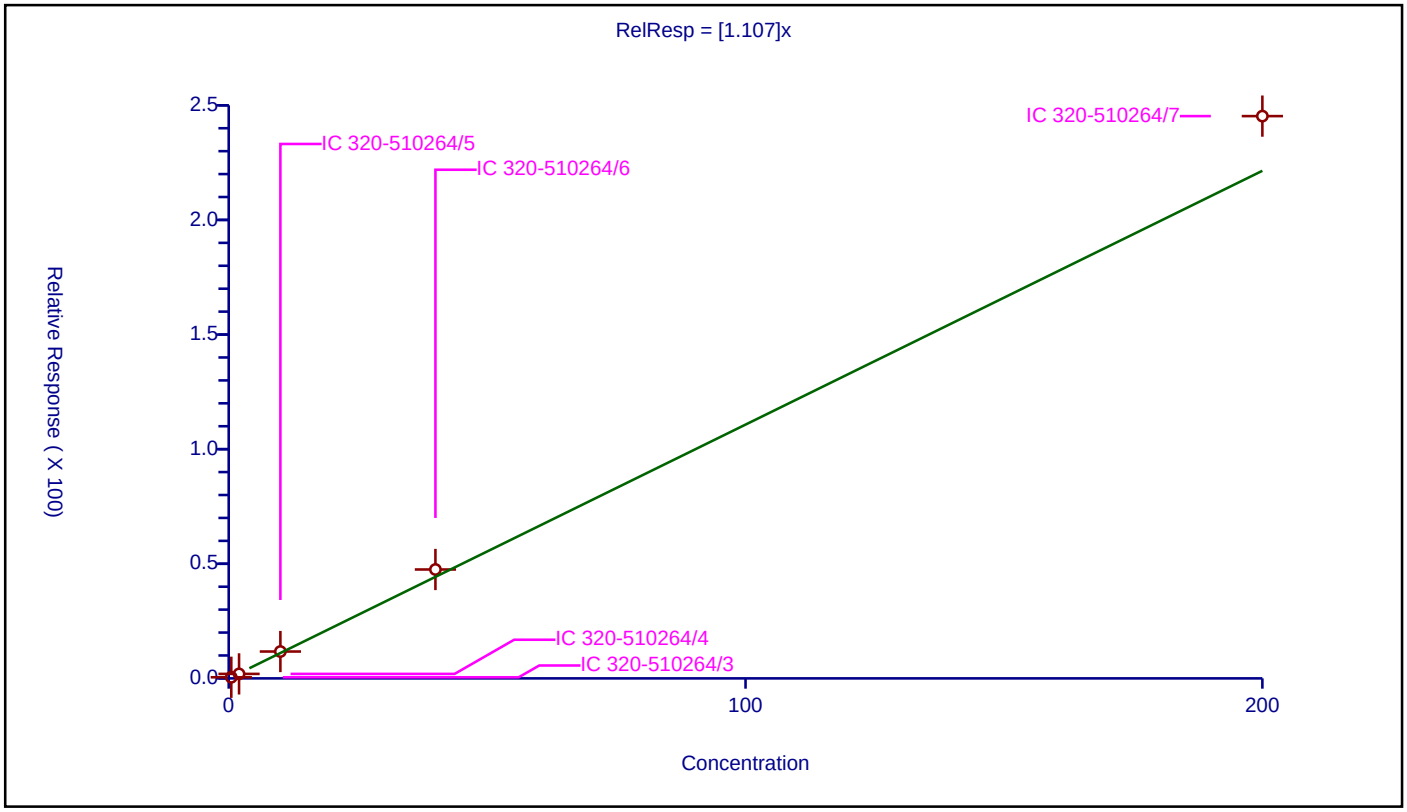

784149

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	325000000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	5.504666	200.0	57018462.0	1.100933	Y
2	IC 320-510264/4	20.0	19.269459	200.0	52034518.0	0.963473	Y
3	IC 320-510264/5	100.0	116.51708	200.0	54338243.0	1.165171	Y
4	IC 320-510264/6	400.0	473.162285	200.0	57303880.0	1.182906	Y
5	IC 320-510264/7	2000.0	2245.176522	200.0	56623863.0	1.122588	Y

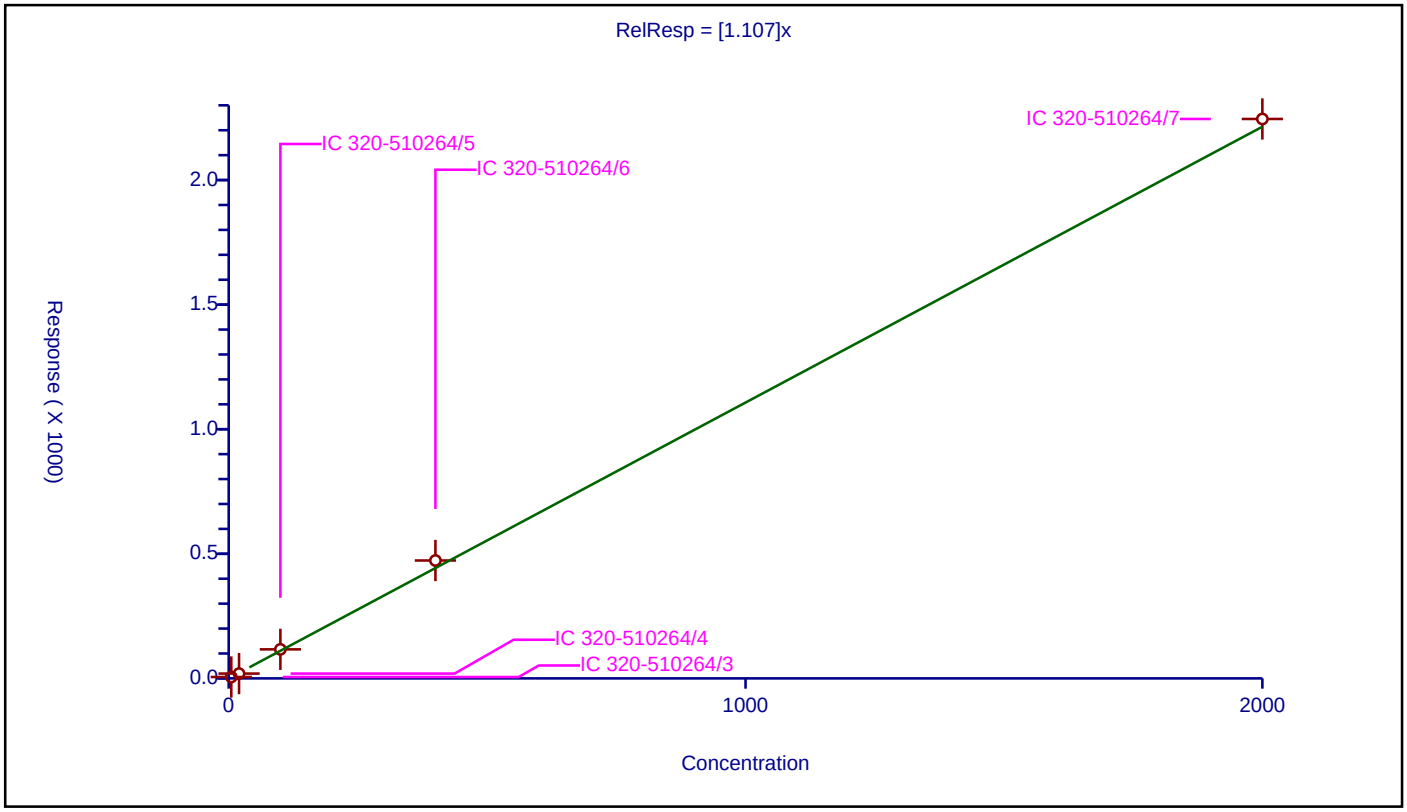

784150

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.438

Error Coefficients

Standard Error:	438000000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	6.931702	200.0	57018462.0	1.38634	Y
2	IC 320-510264/4	20.0	23.824451	200.0	52034518.0	1.191223	Y
3	IC 320-510264/5	100.0	151.448408	200.0	54338243.0	1.514484	Y
4	IC 320-510264/6	400.0	634.327267	200.0	57303880.0	1.585818	Y
5	IC 320-510264/7	2000.0	3025.883229	200.0	56623863.0	1.512942	Y

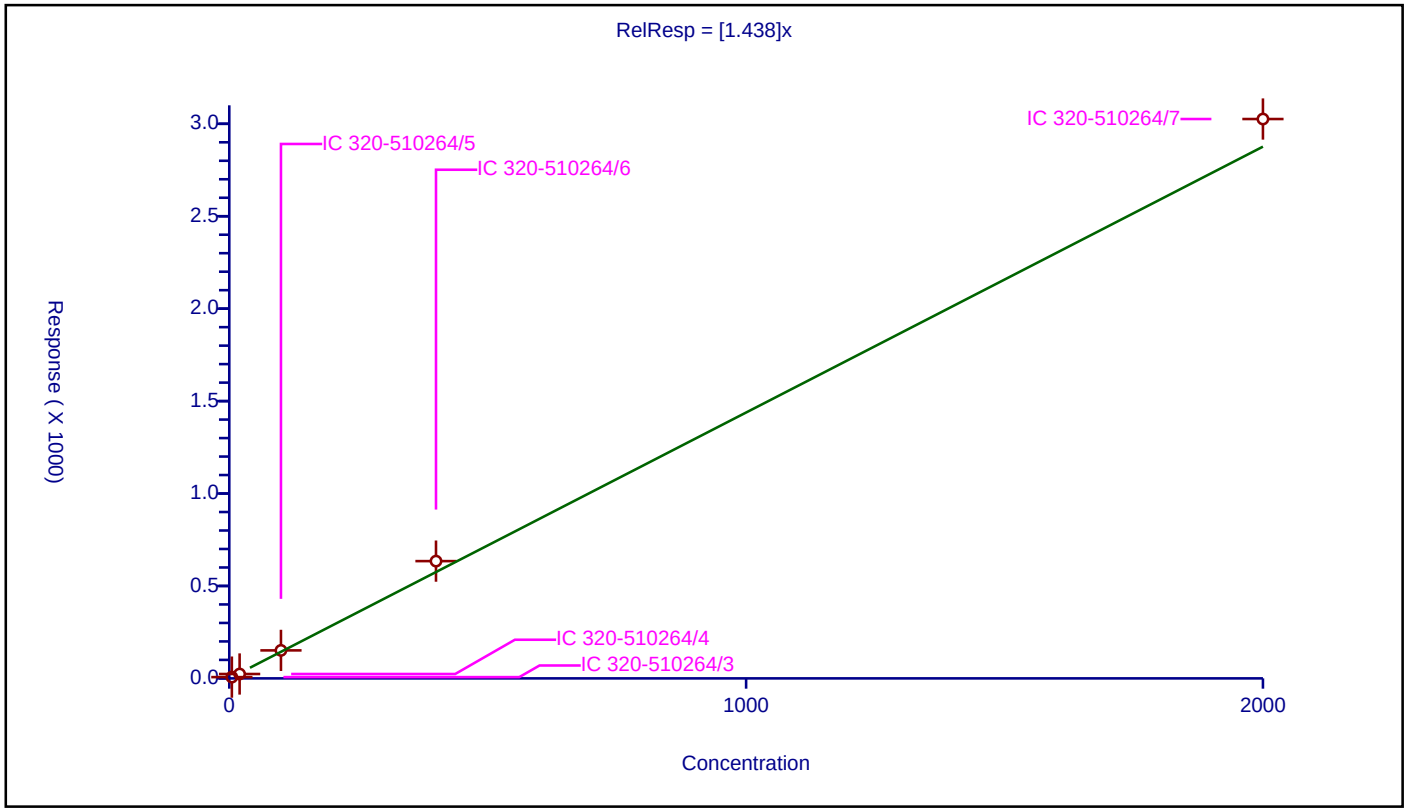

784151

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

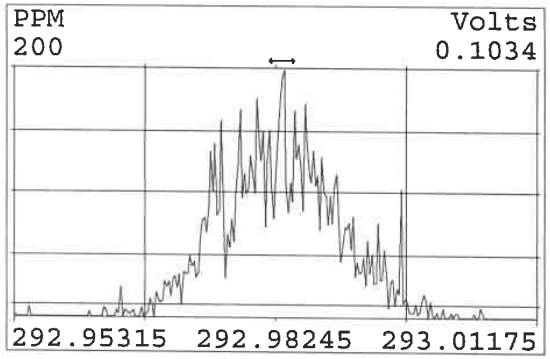

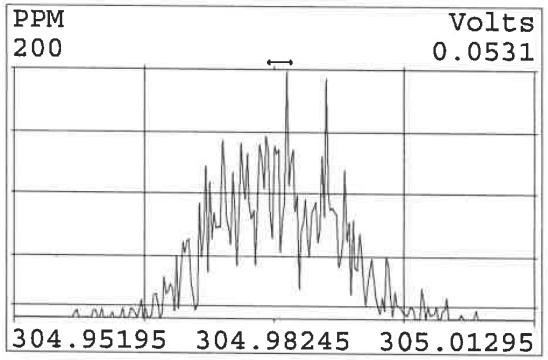

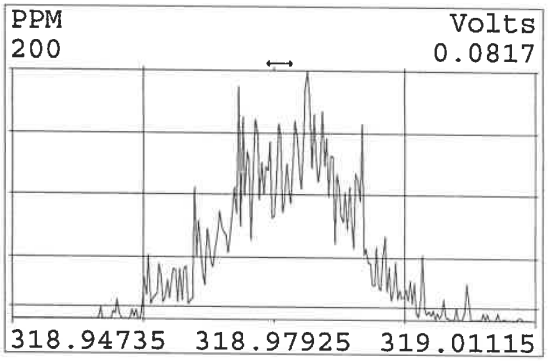

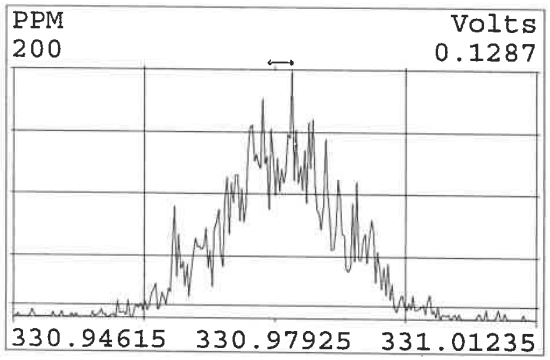

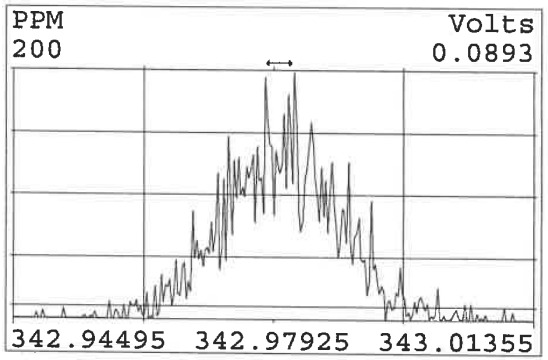

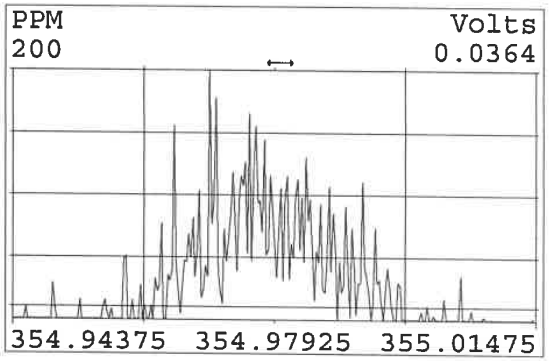

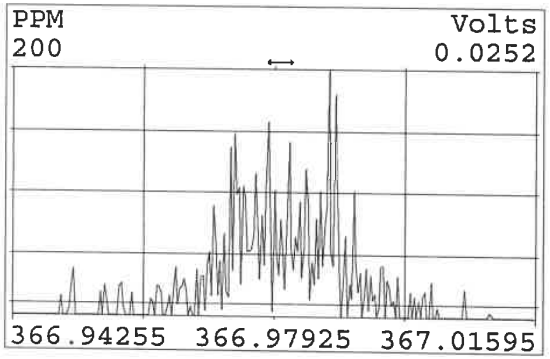

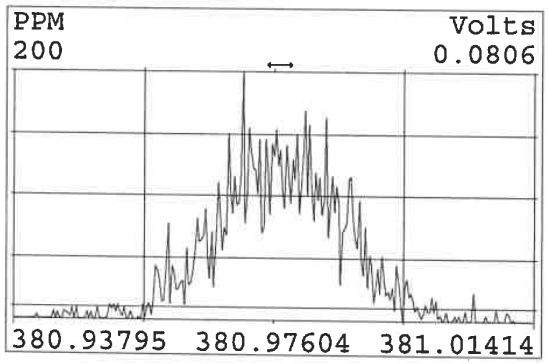

784155

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

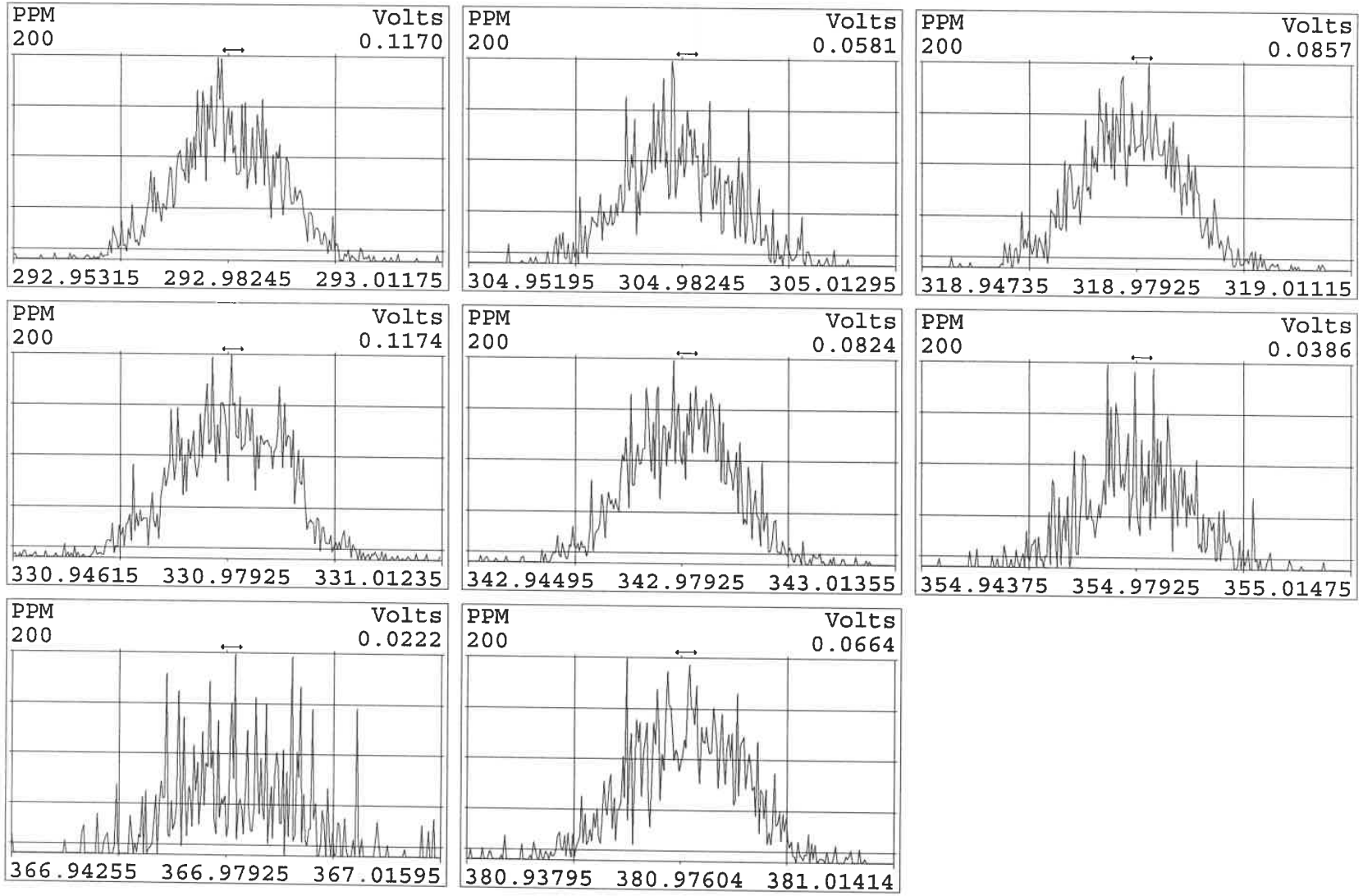

784156

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

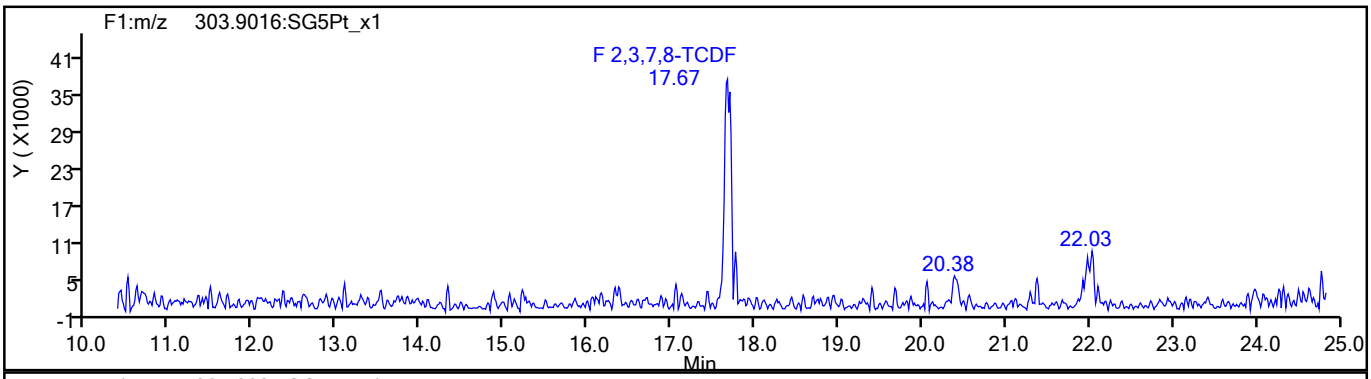

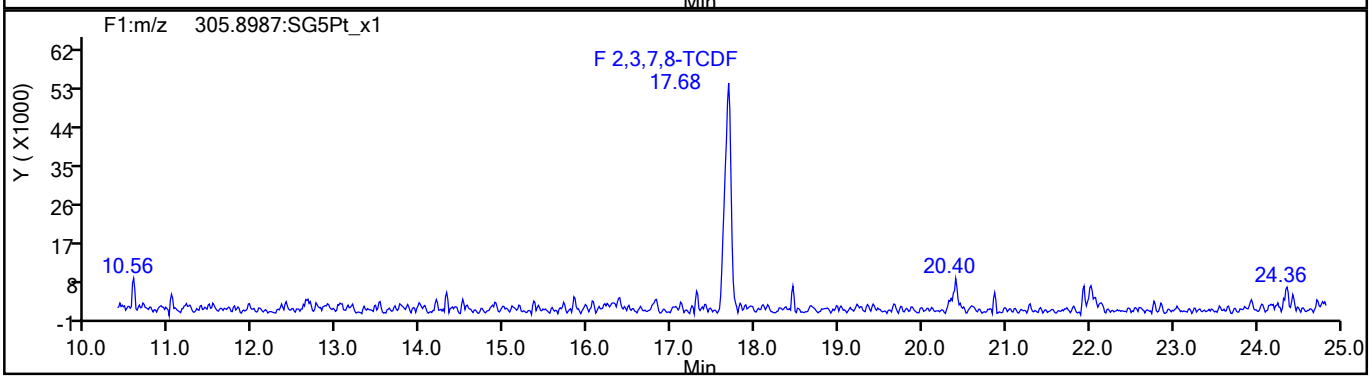

TCDF Standards

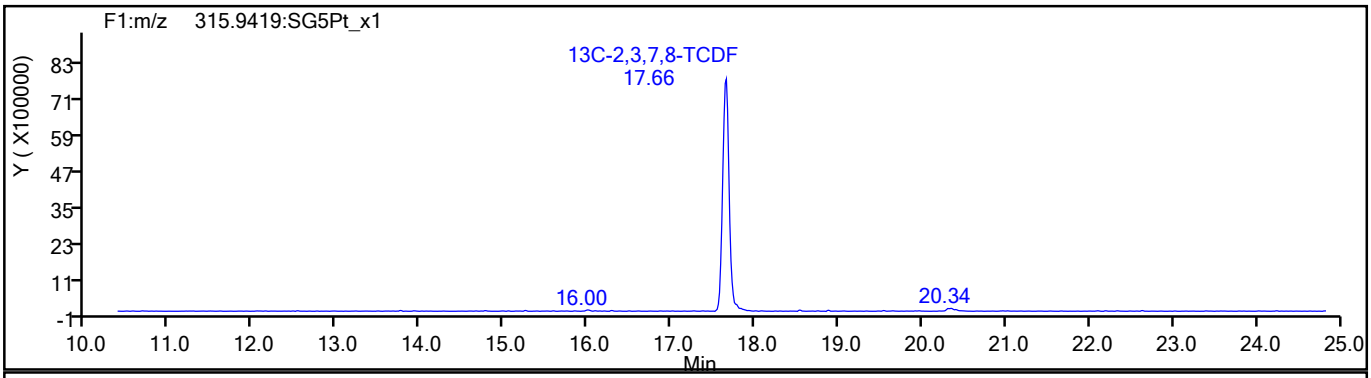

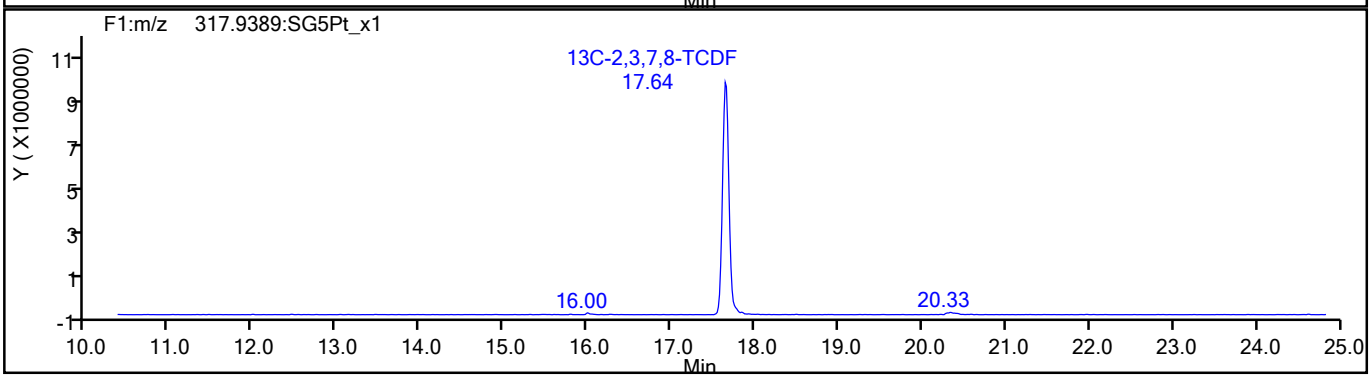

784159

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

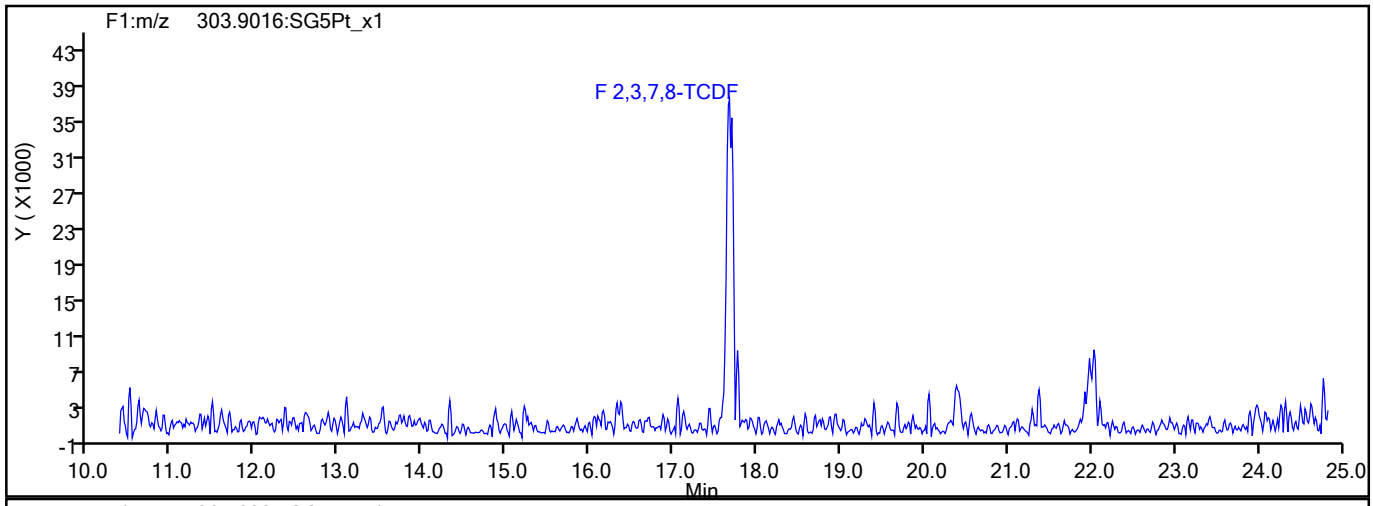

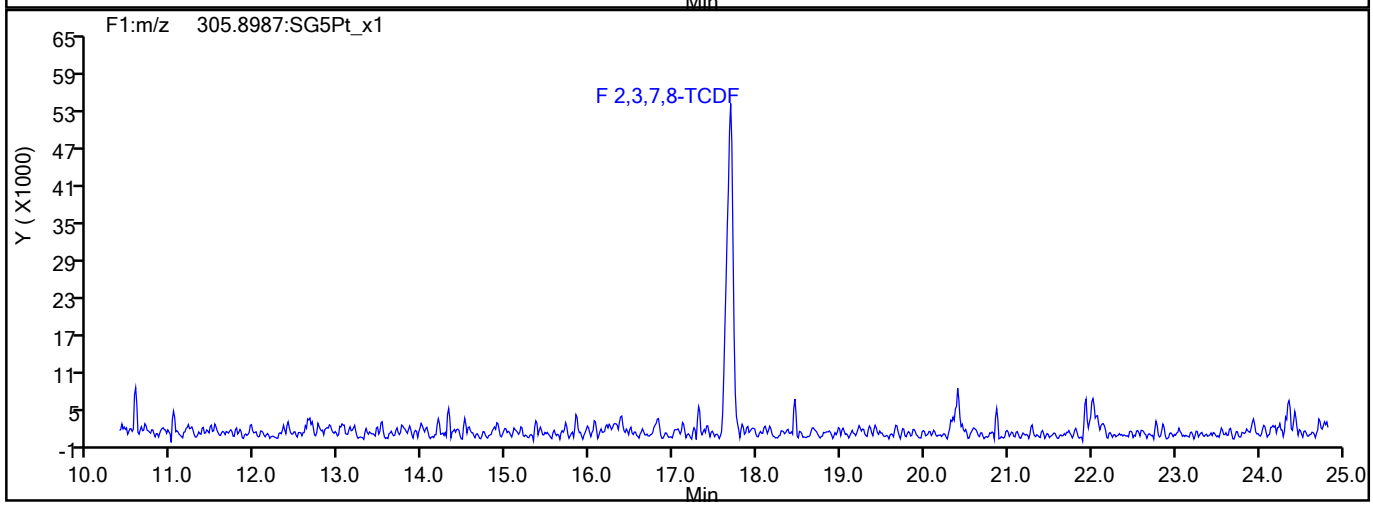

TCDF Interference Mass

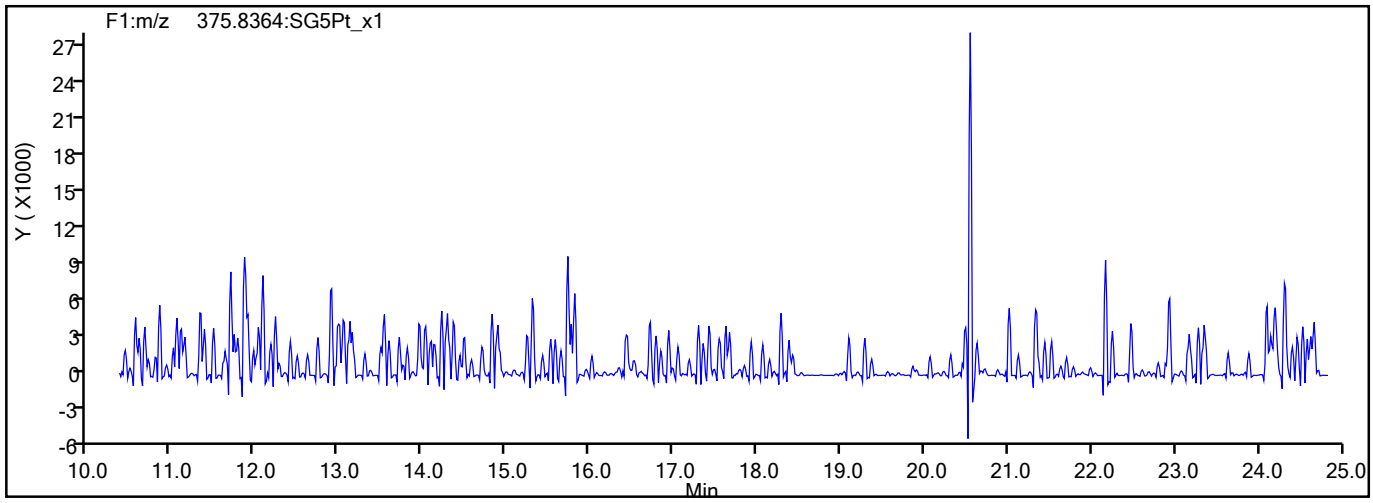

784160

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

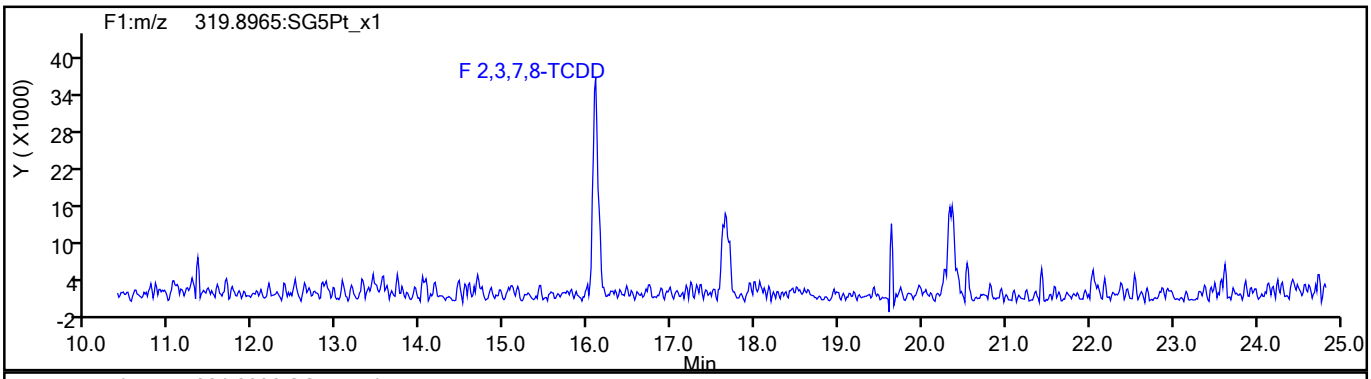

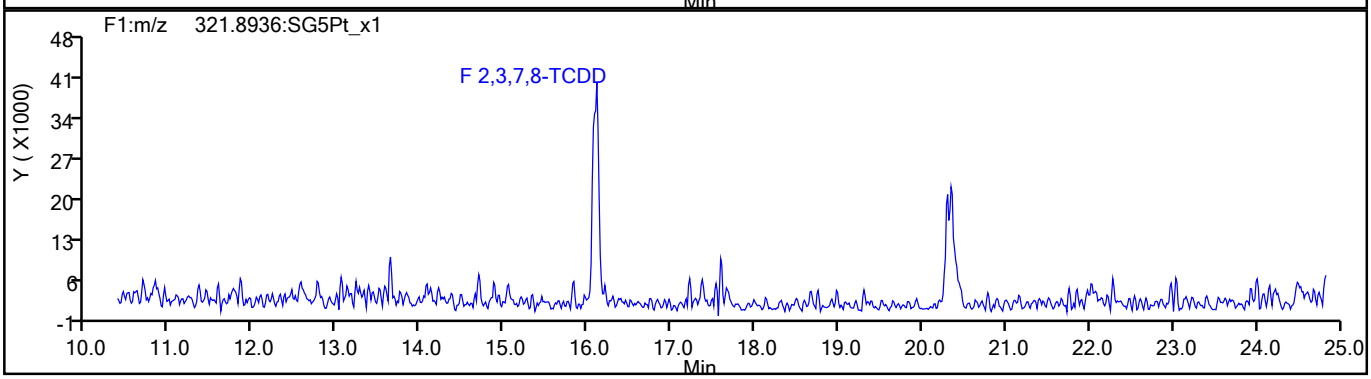

TCDD Standards

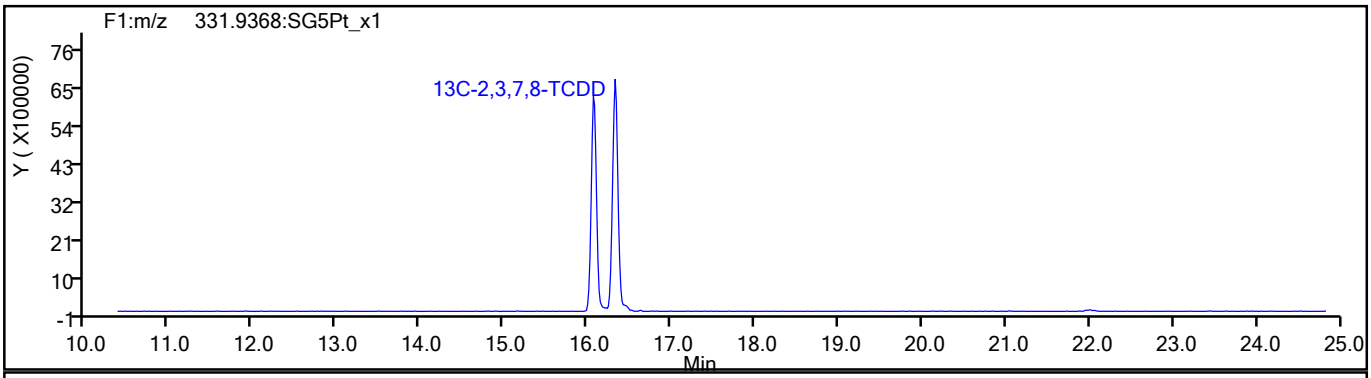

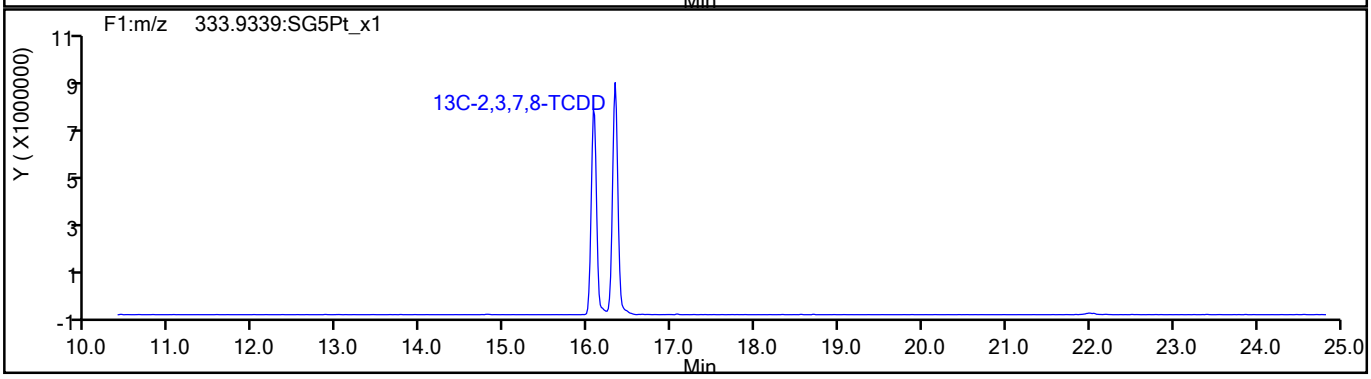

784161

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

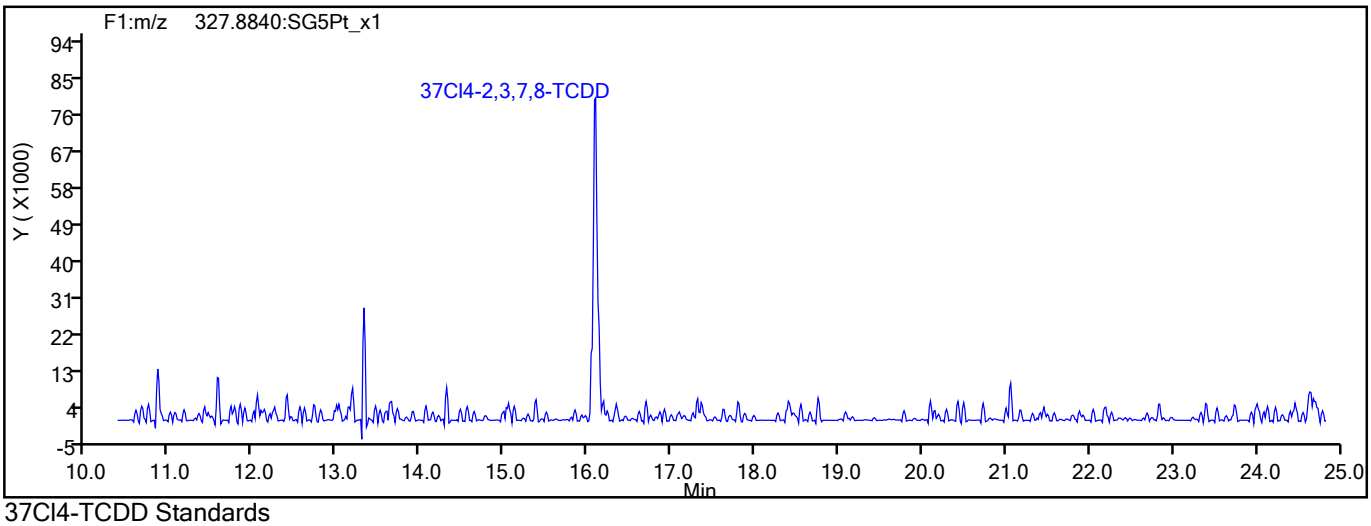

37Cl4-TCDD Standards

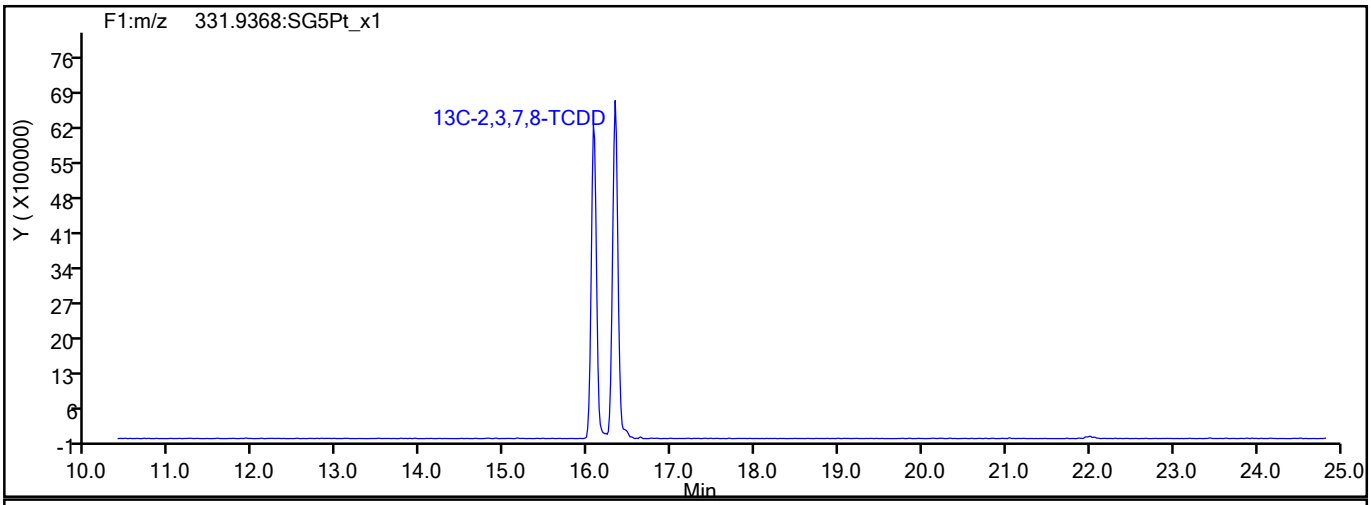

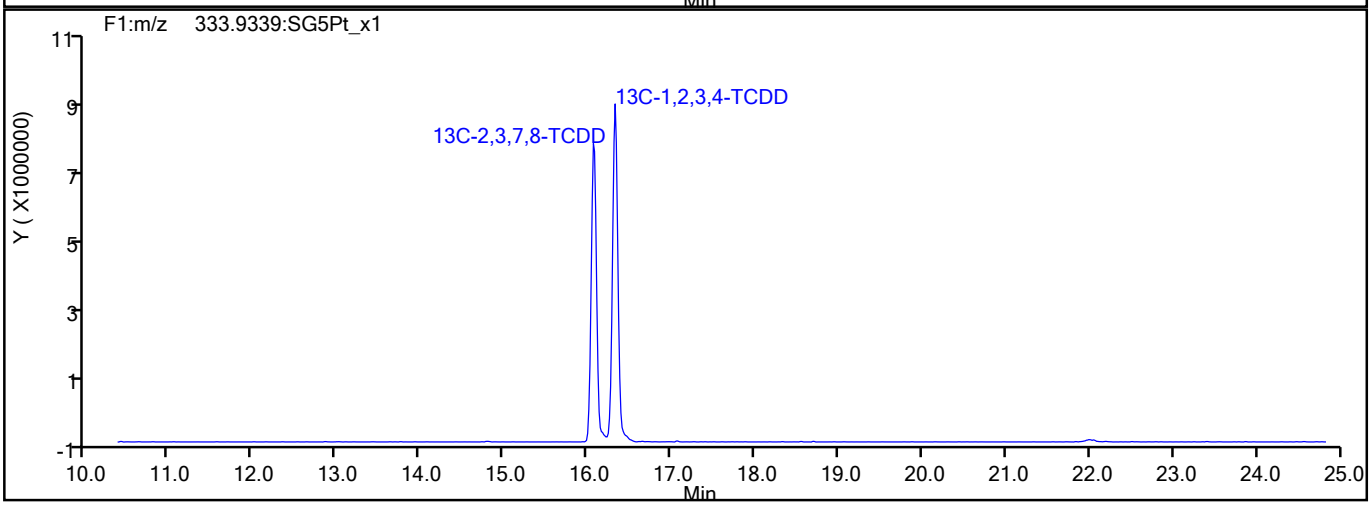

784162

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

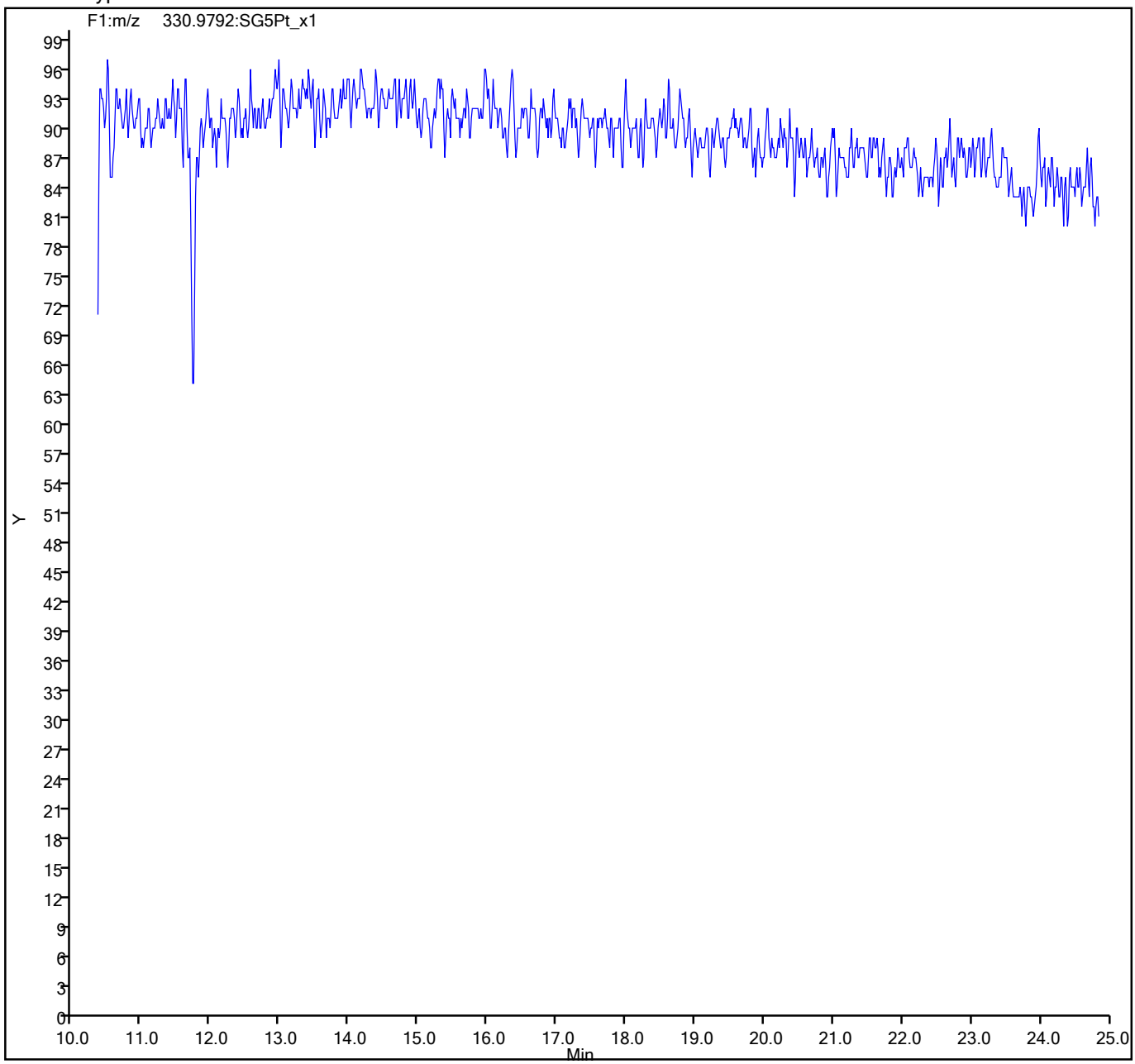

784163

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags
Review Flags
M - Manually Integrated

Reagents:
HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

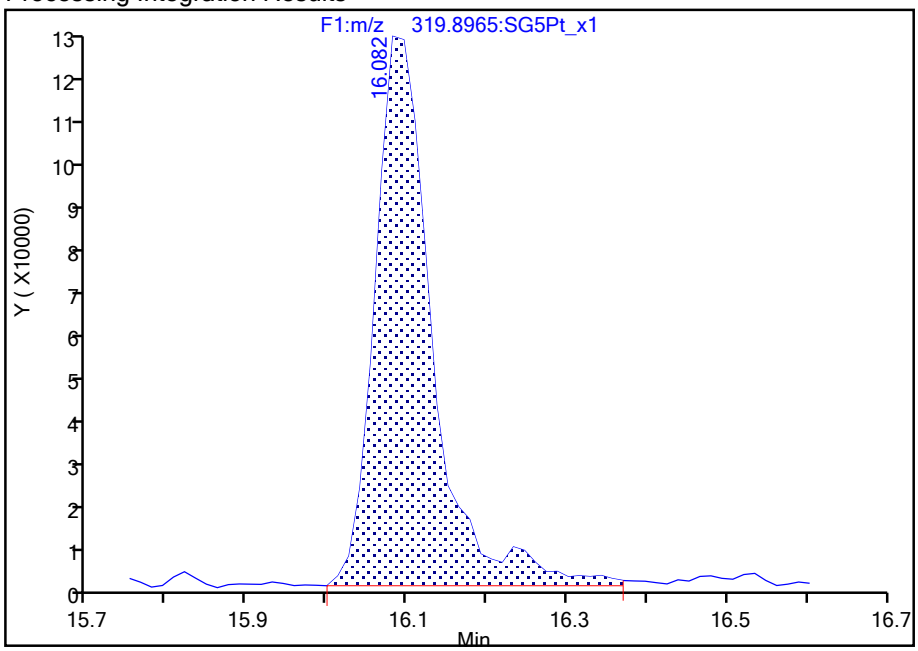

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

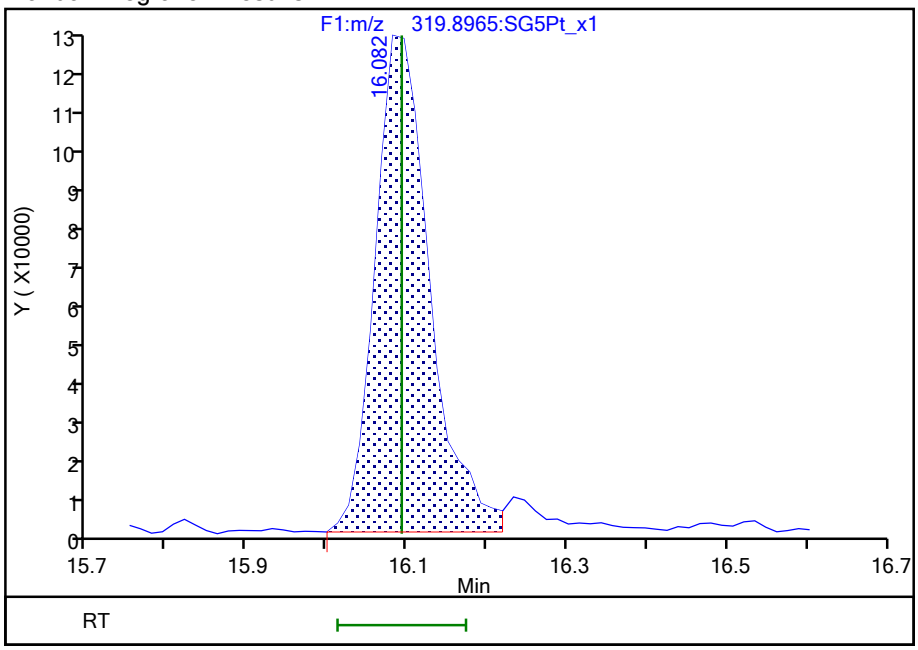

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

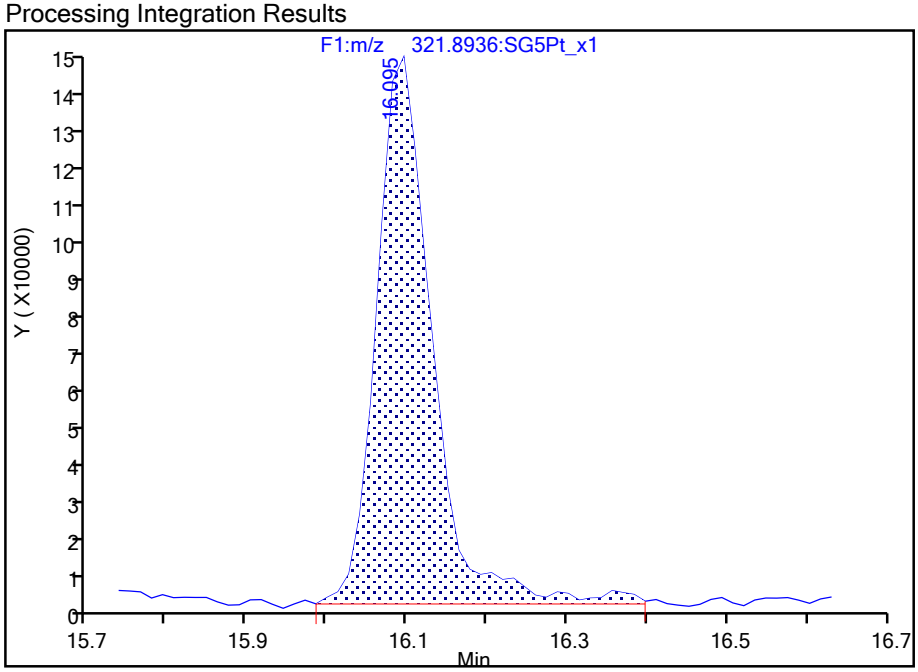

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

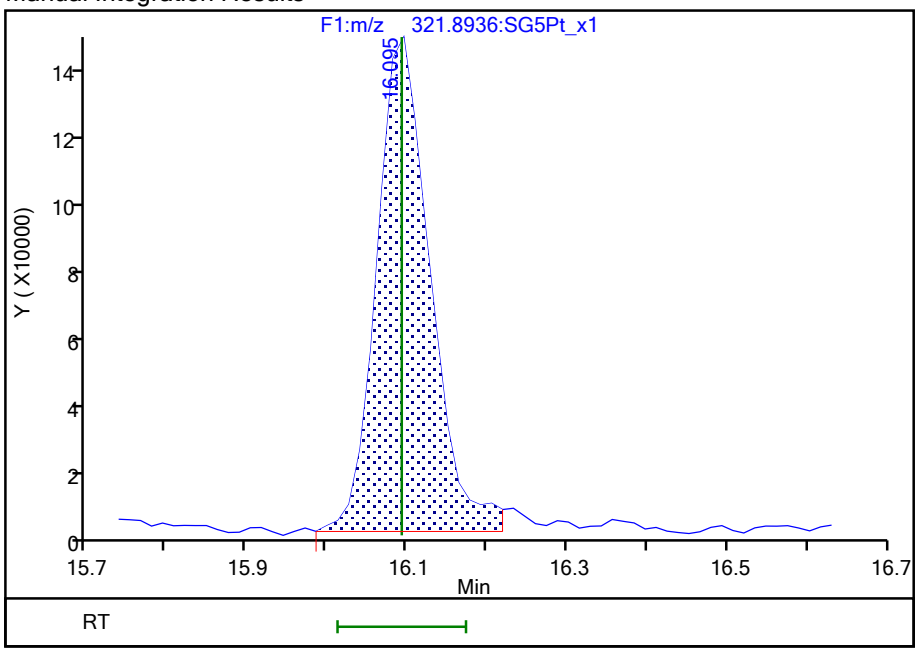

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

784167

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

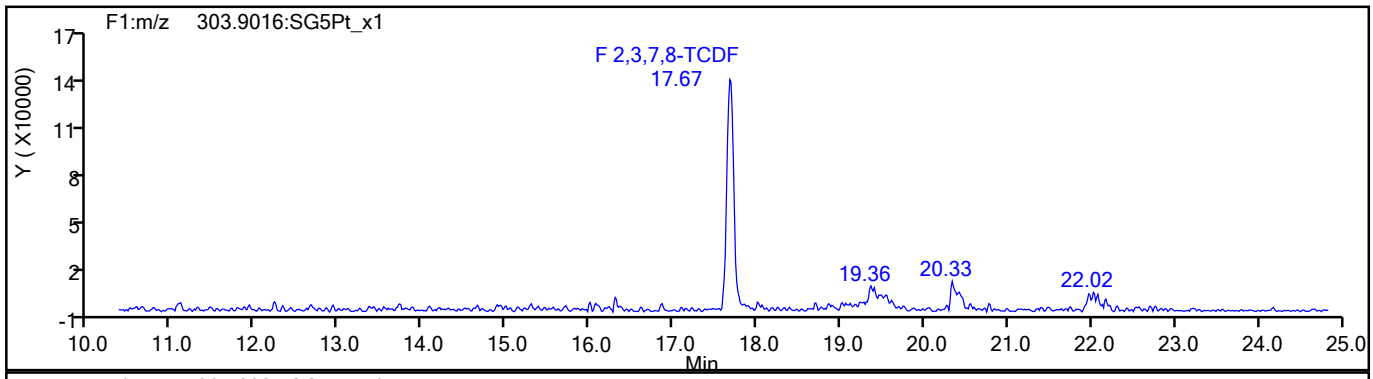

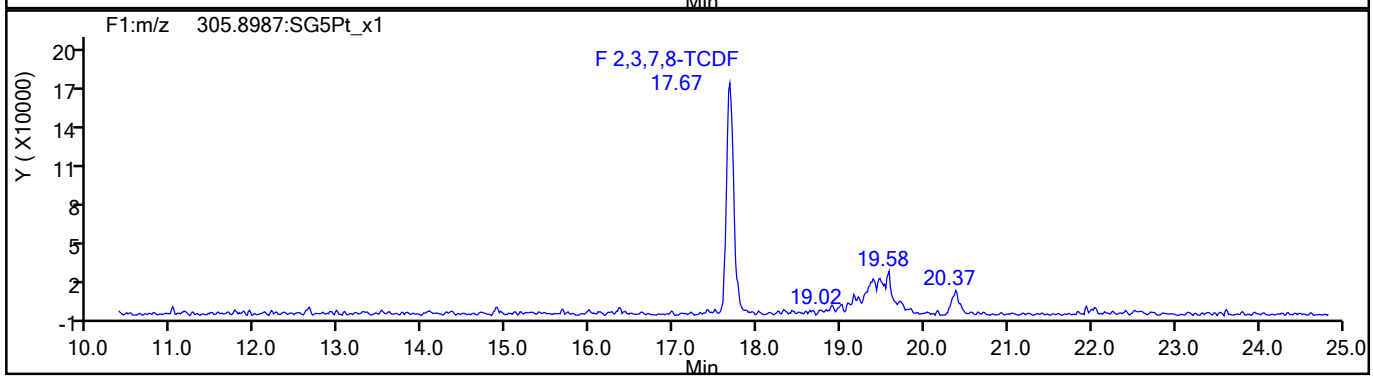

TCDF Standards

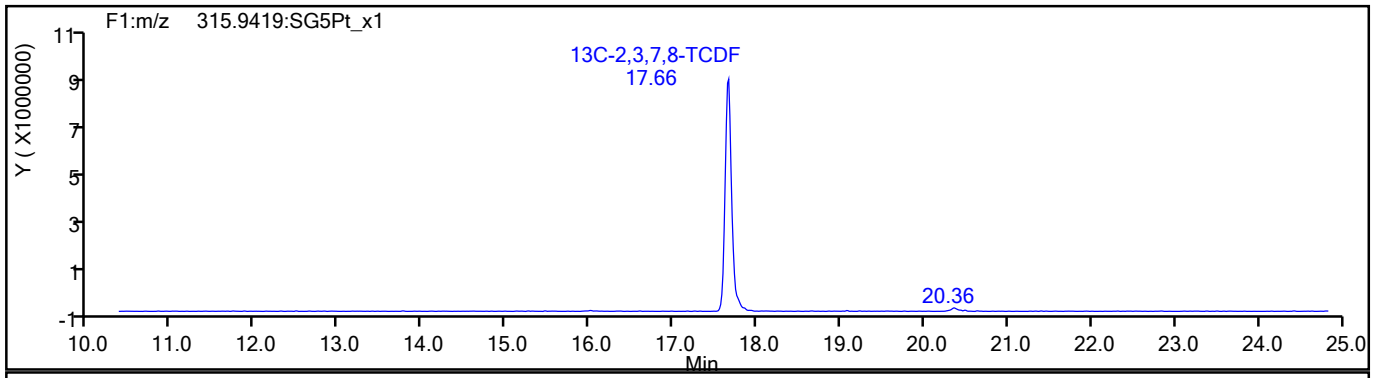

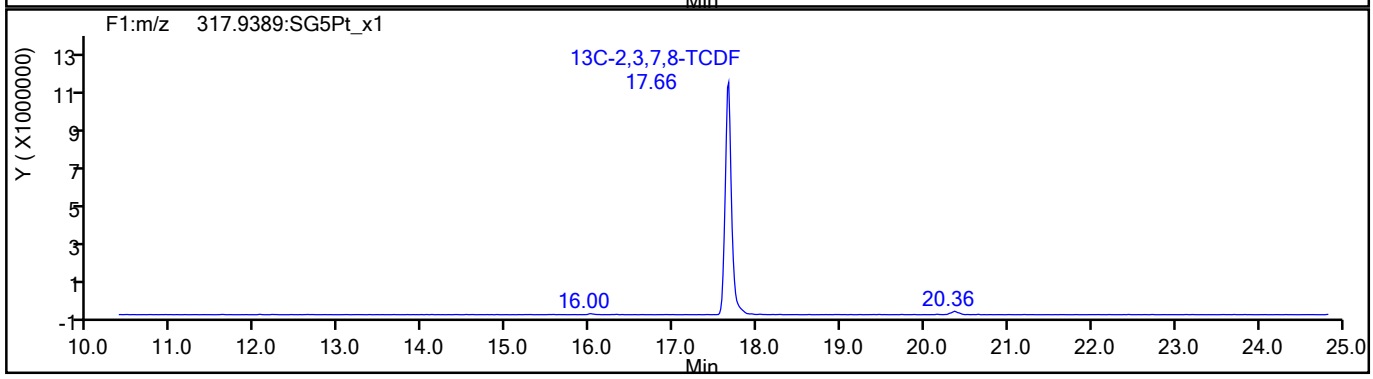

784168

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

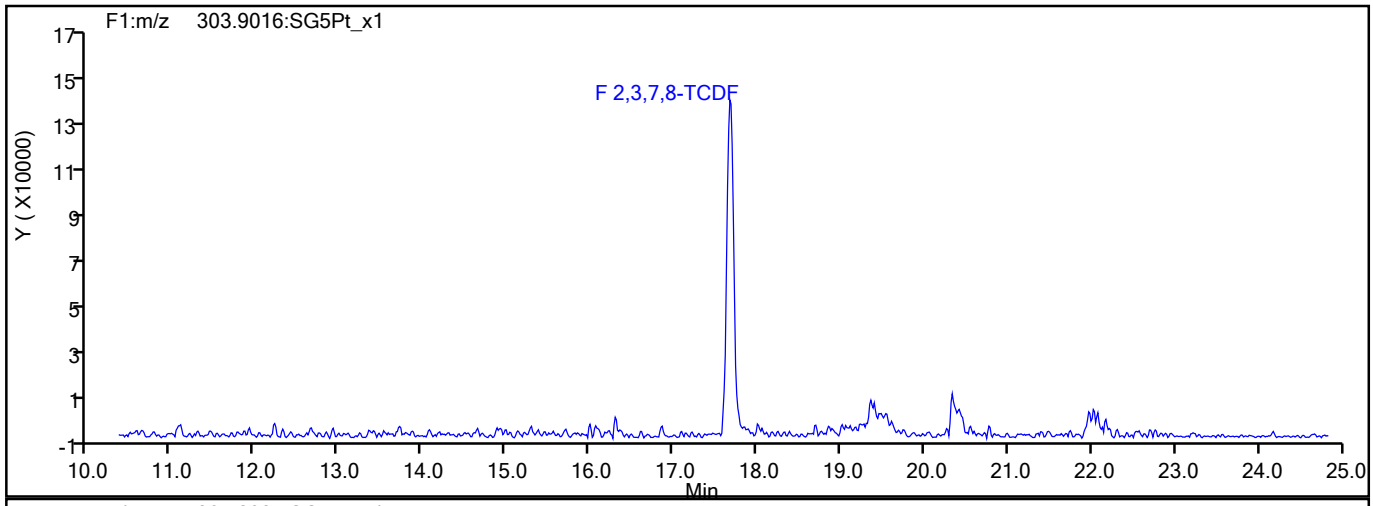

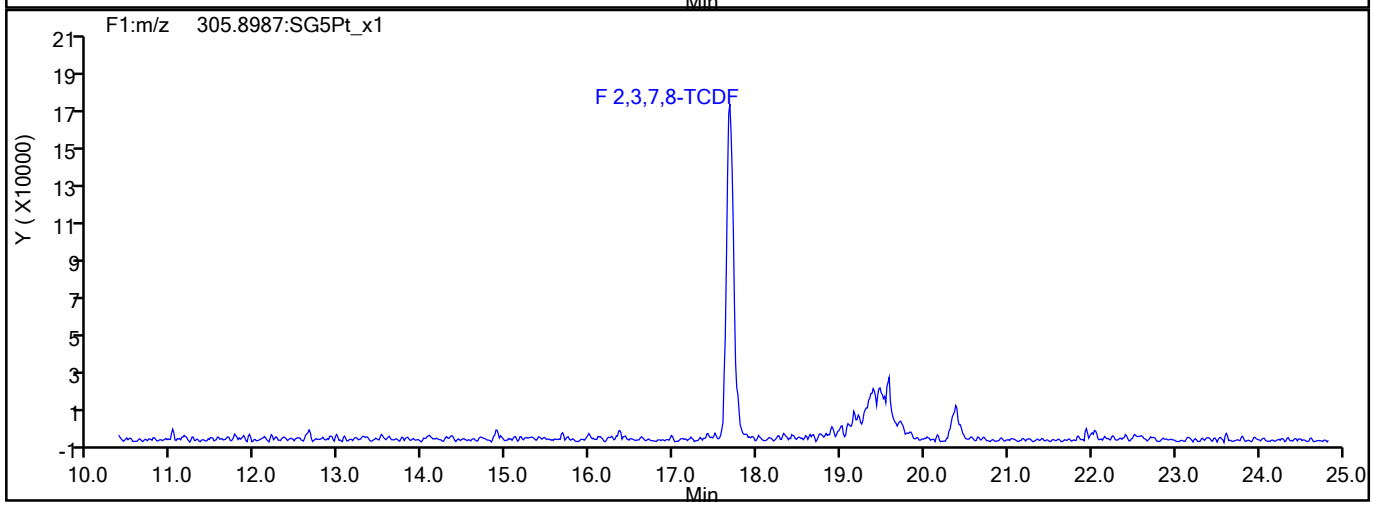

TCDF Interference Mass

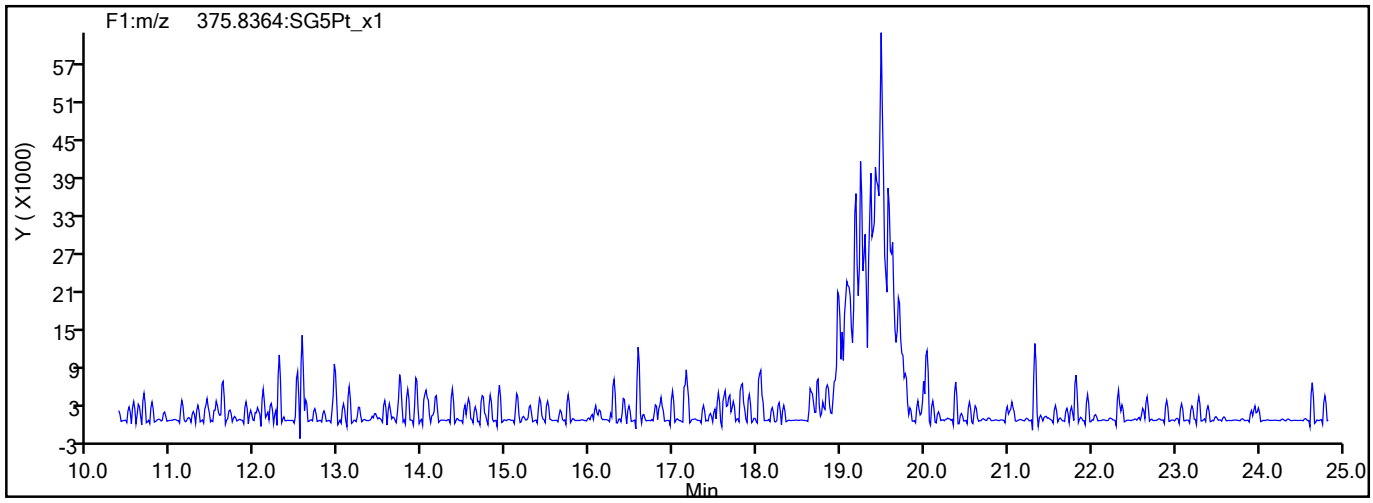

784169

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

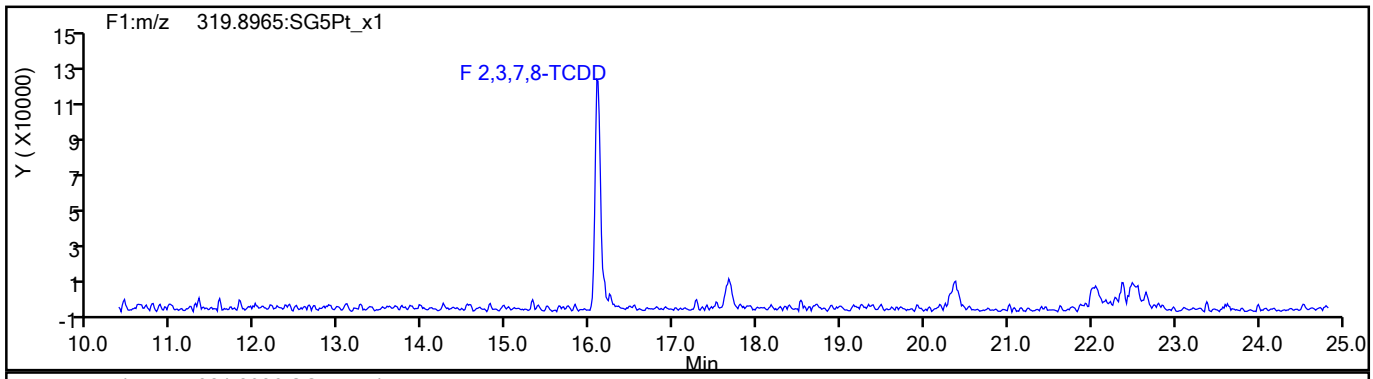

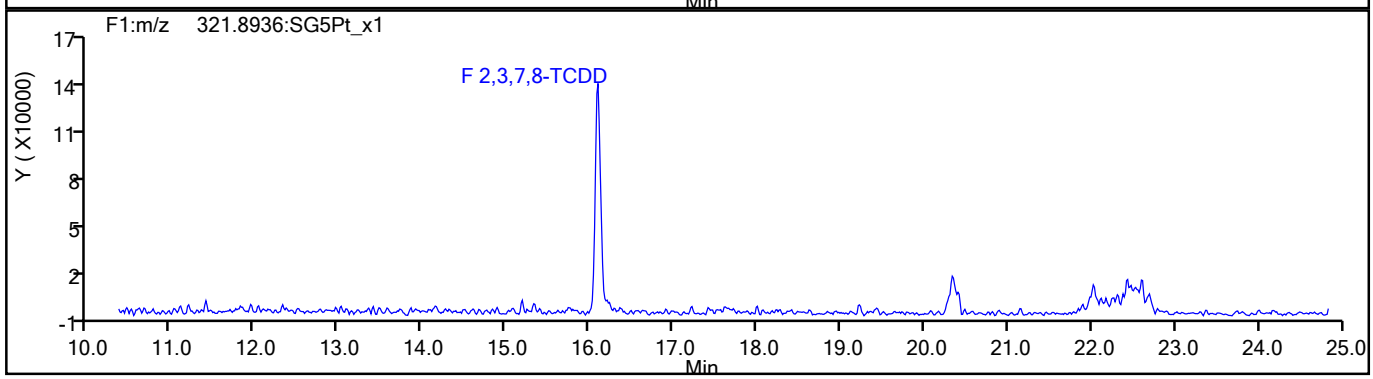

TCDD Standards

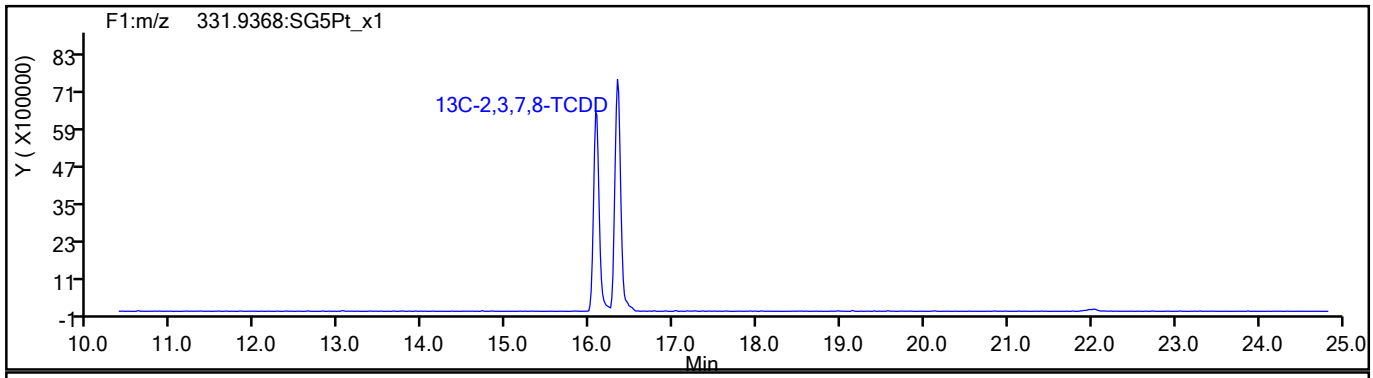

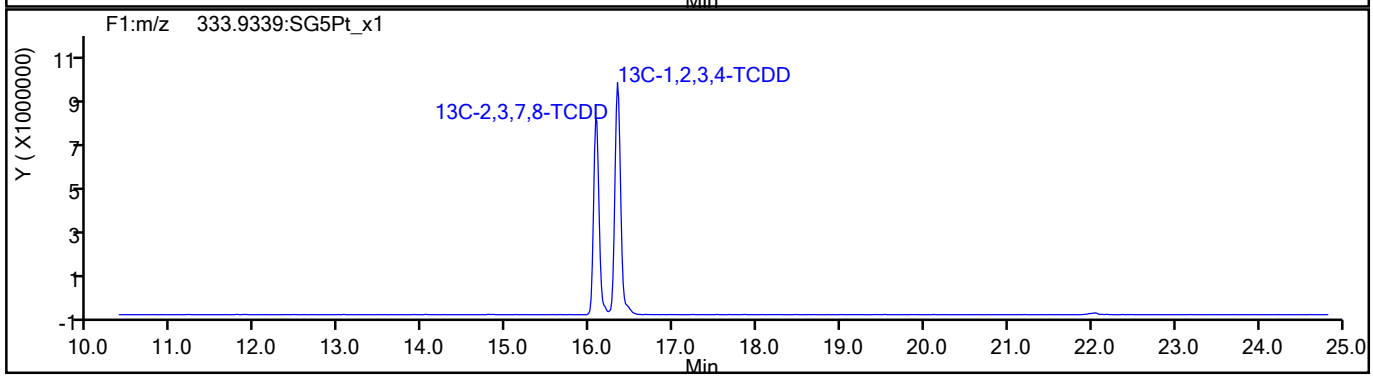

784170

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

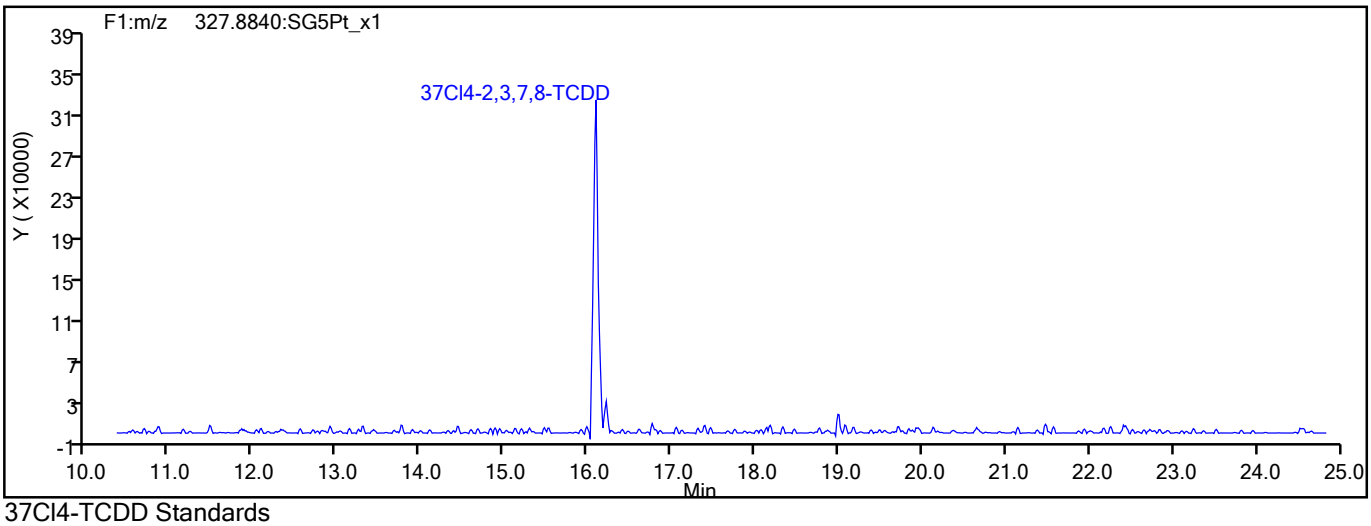

37Cl4-TCDD Standards

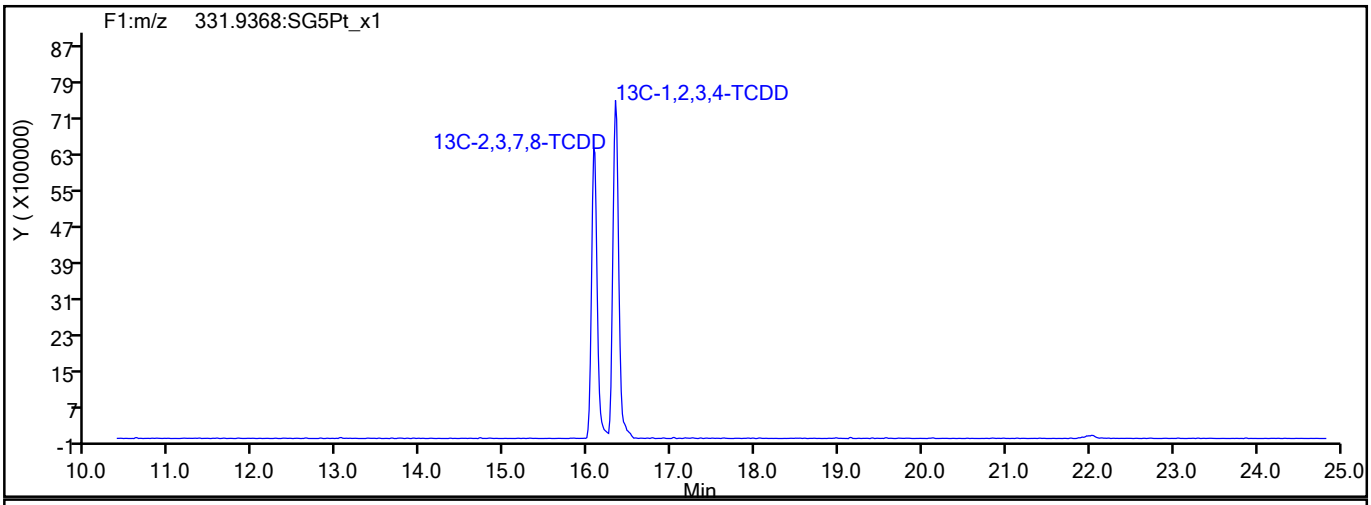

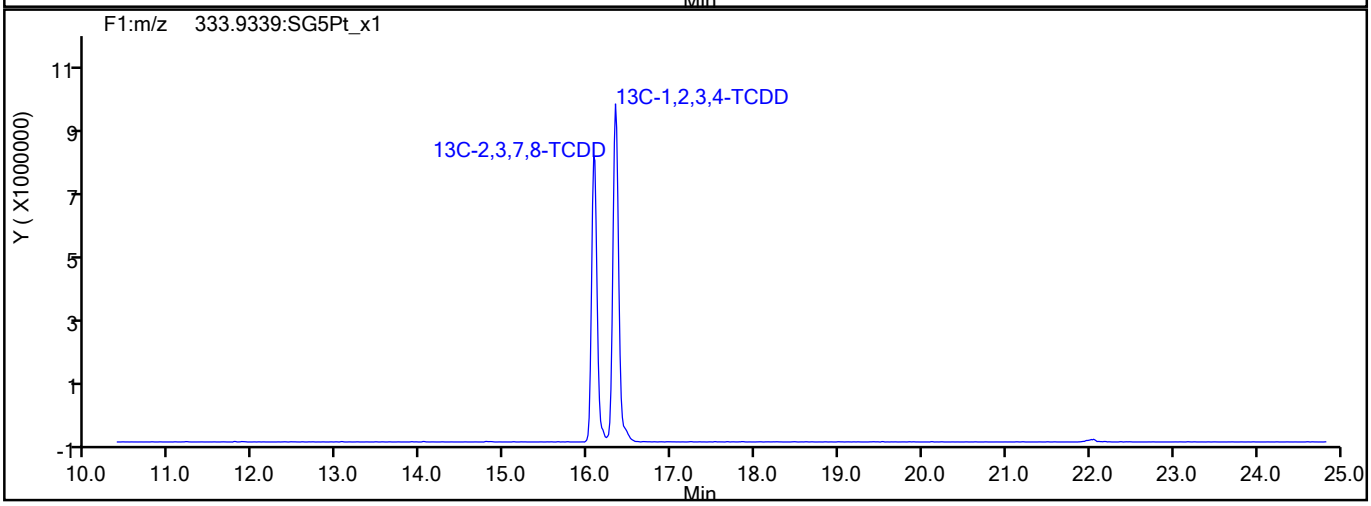

784171

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

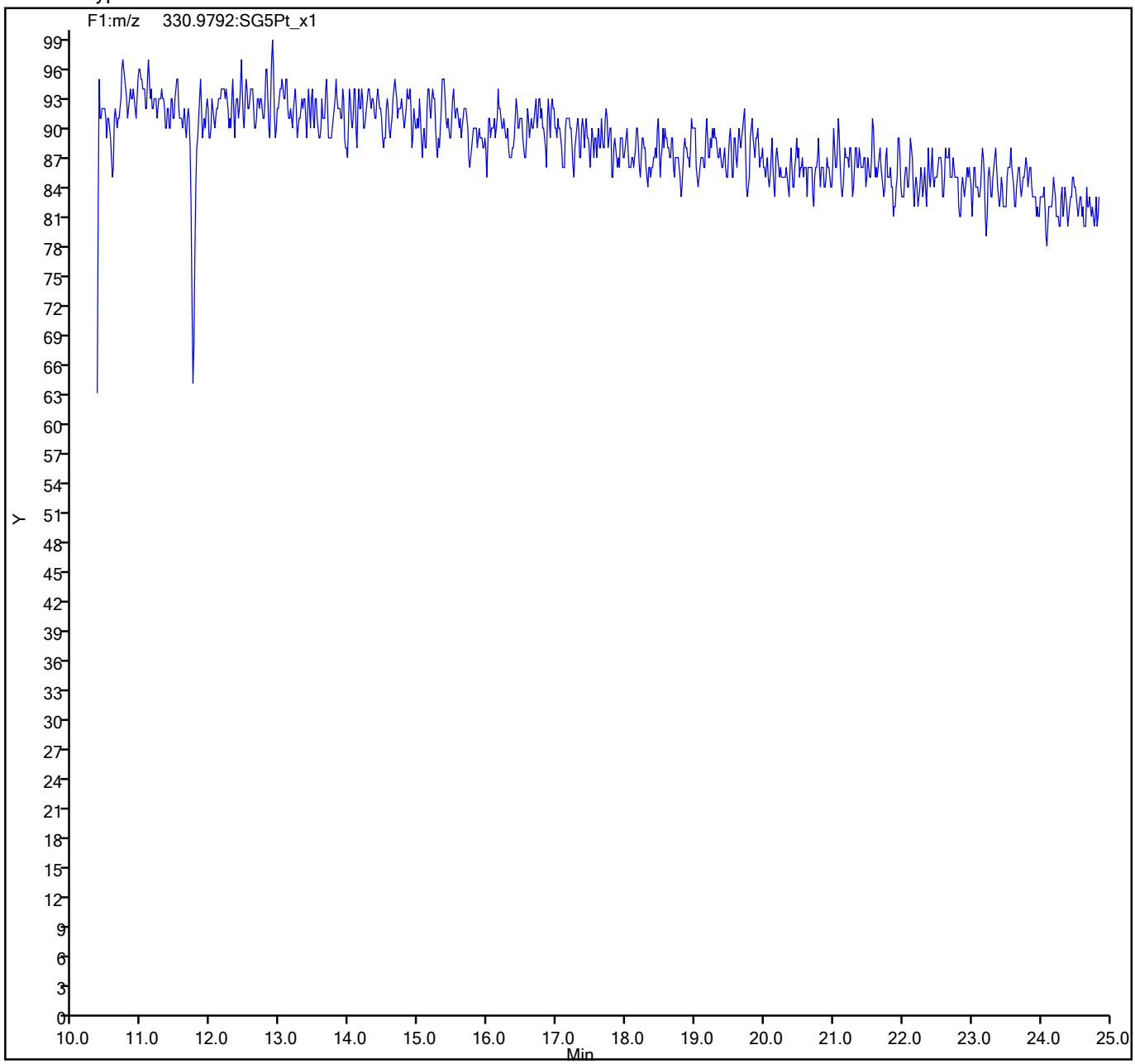

784172

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

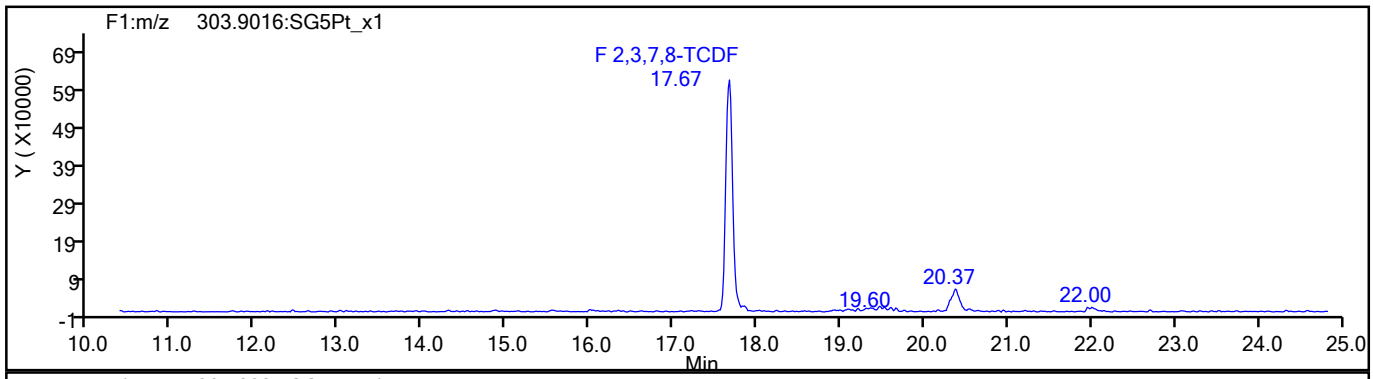

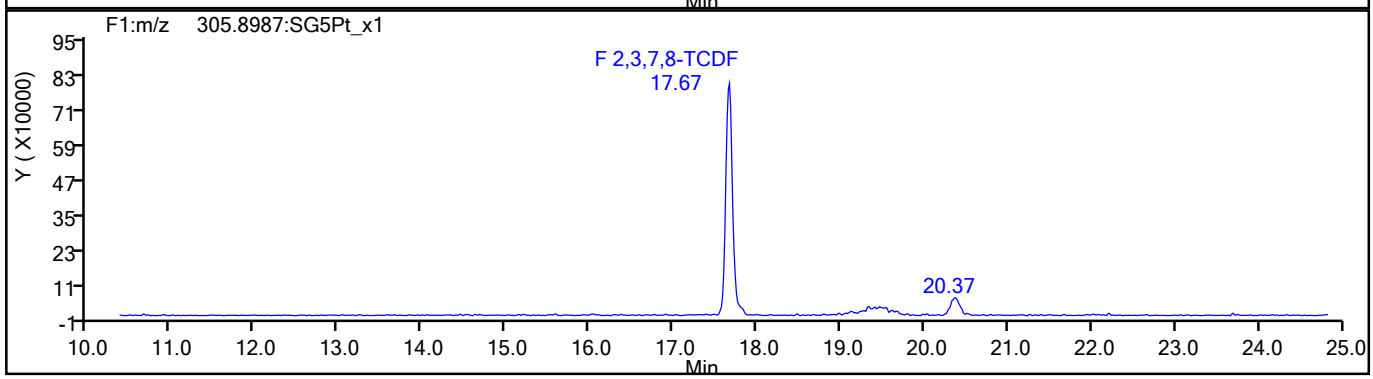

TCDF Standards

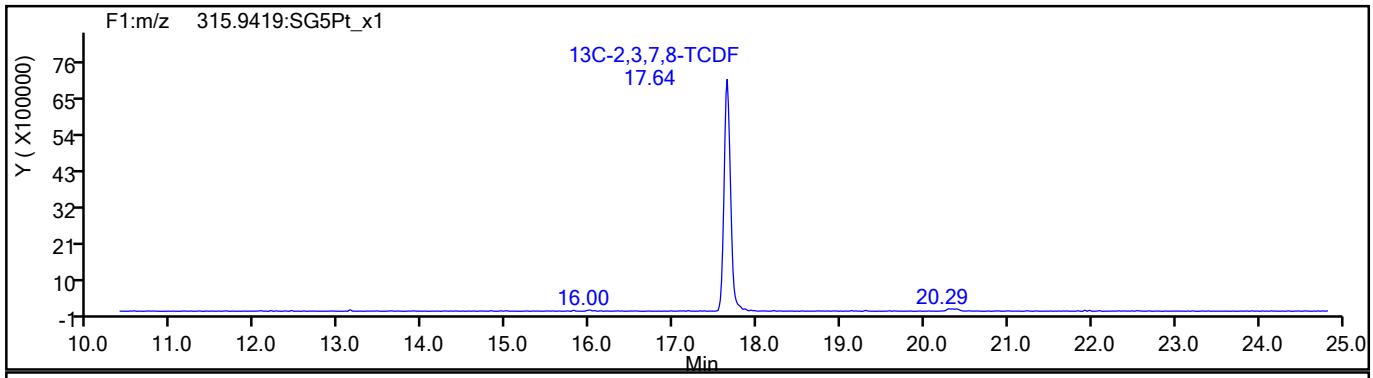

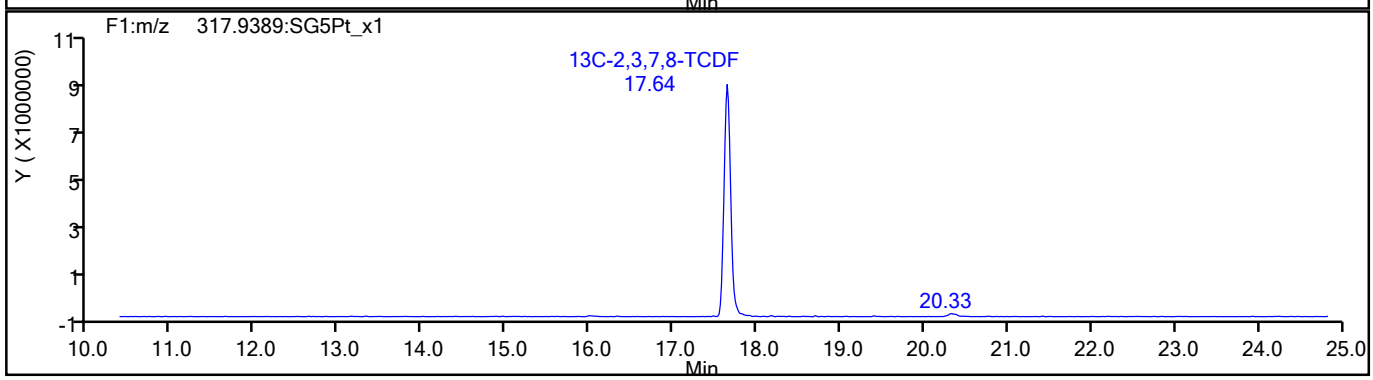

784175

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

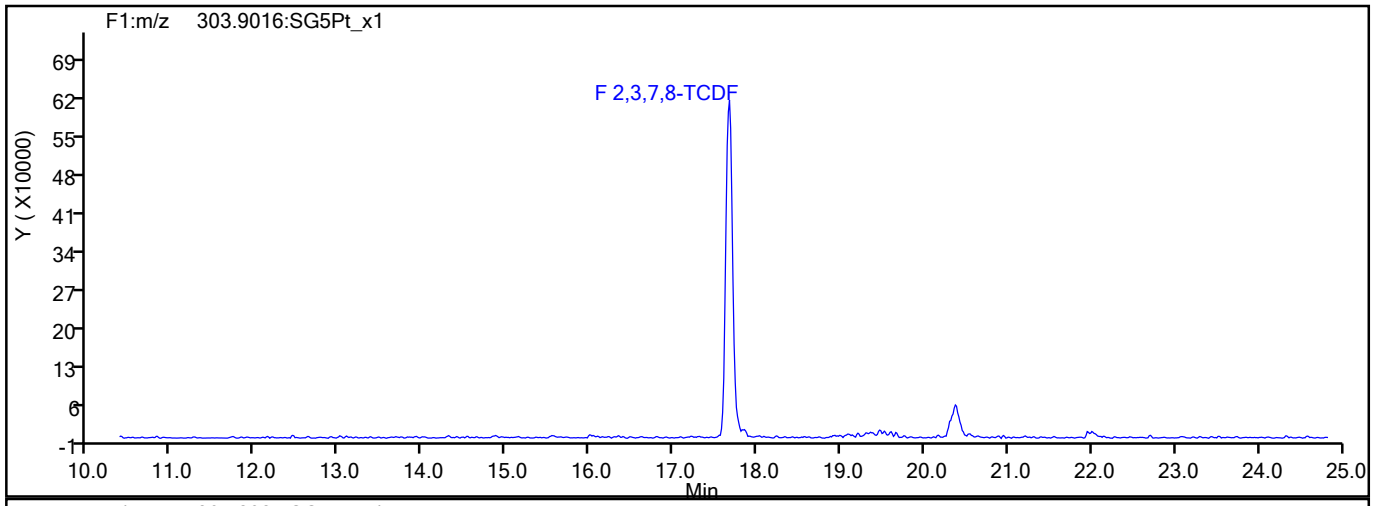

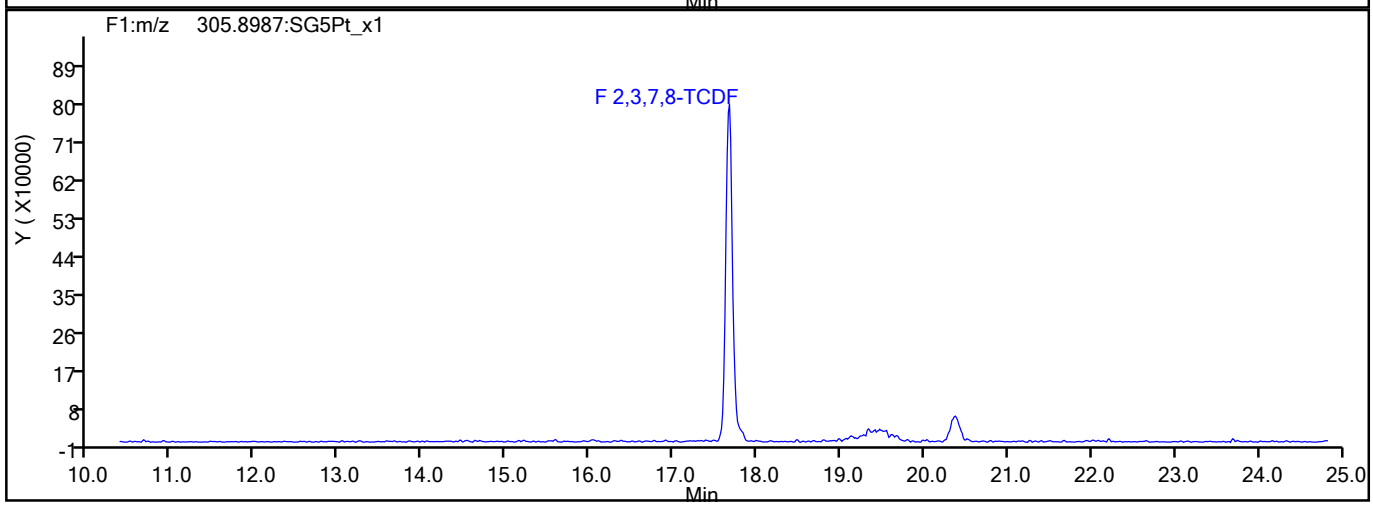

TCDF Interference Mass

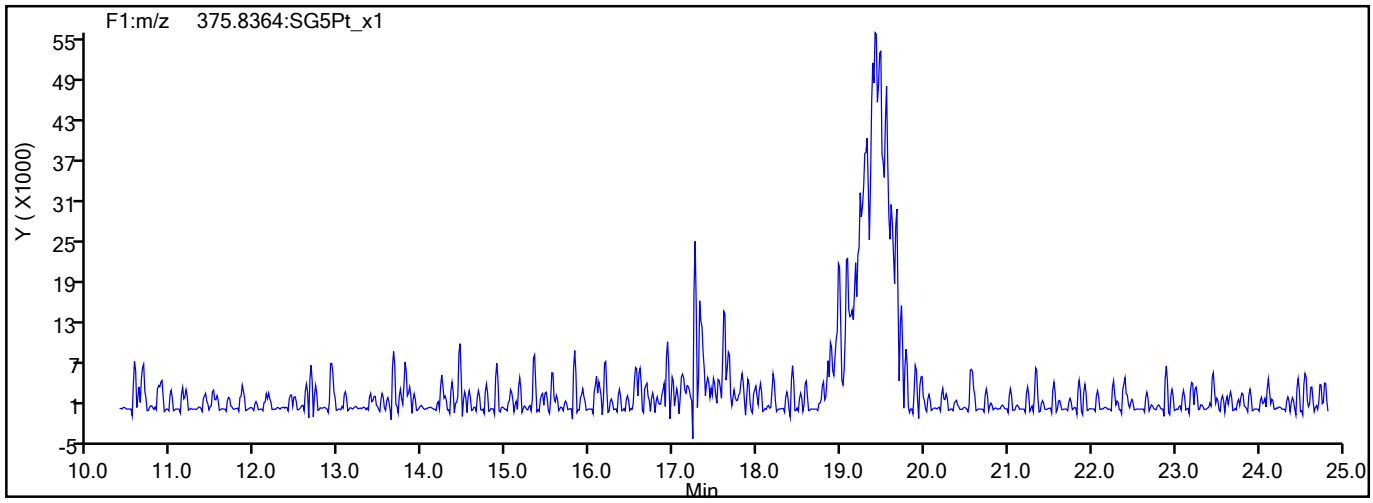

784176

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

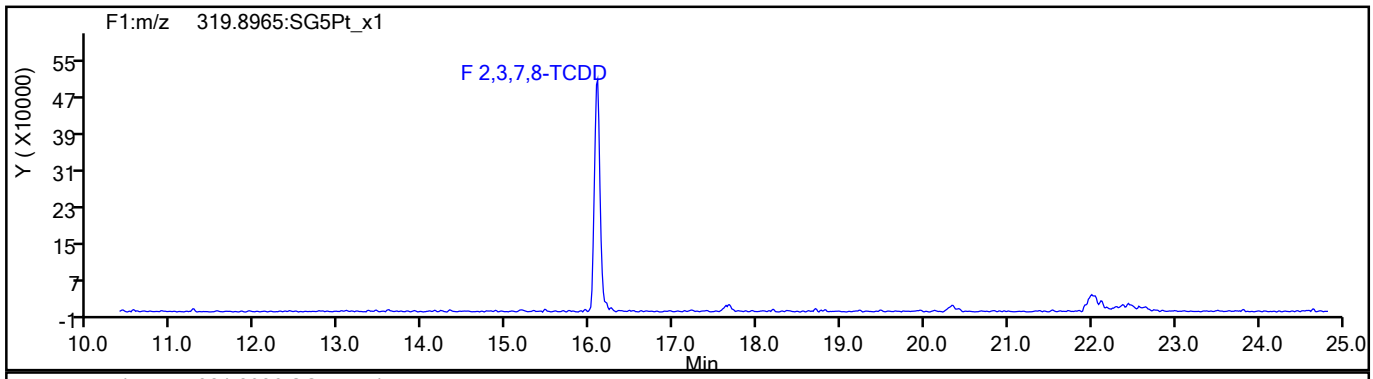

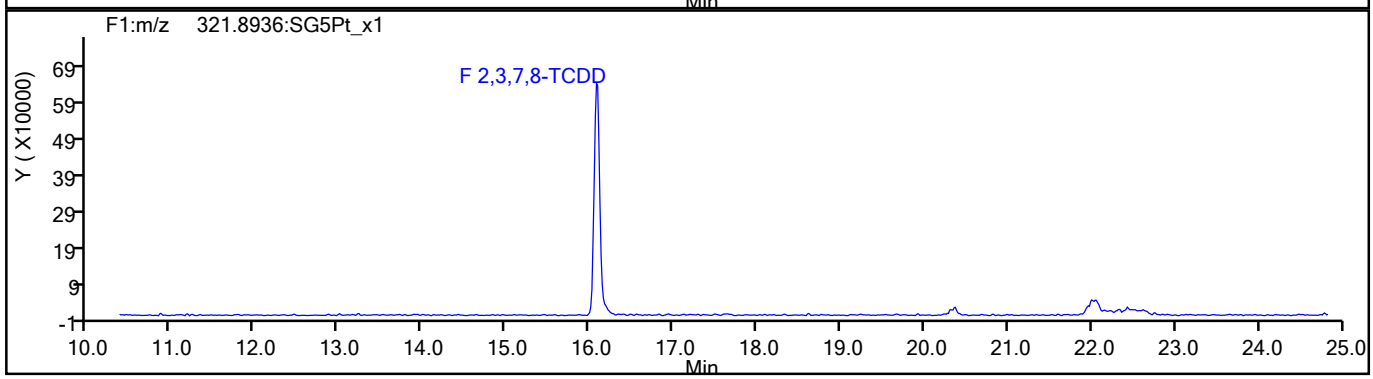

TCDD Standards

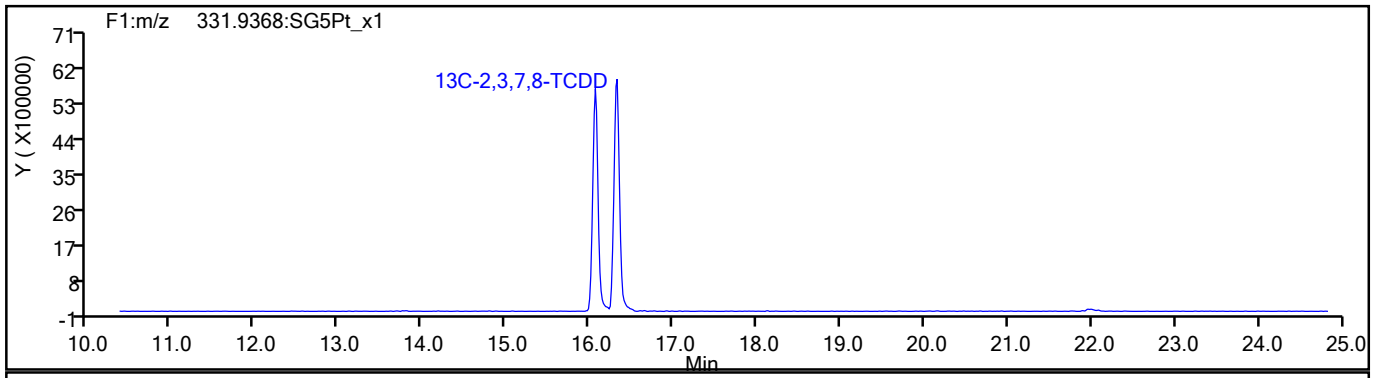

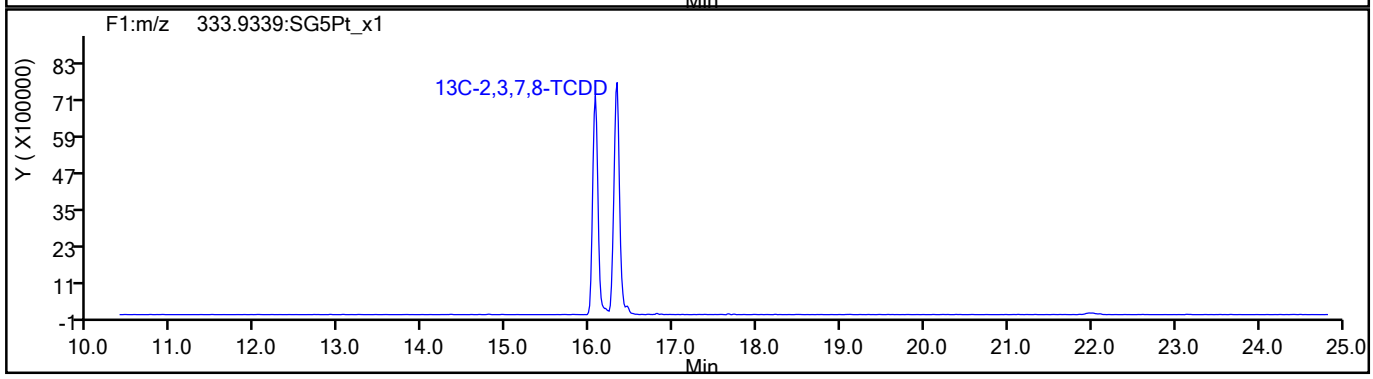

784177

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

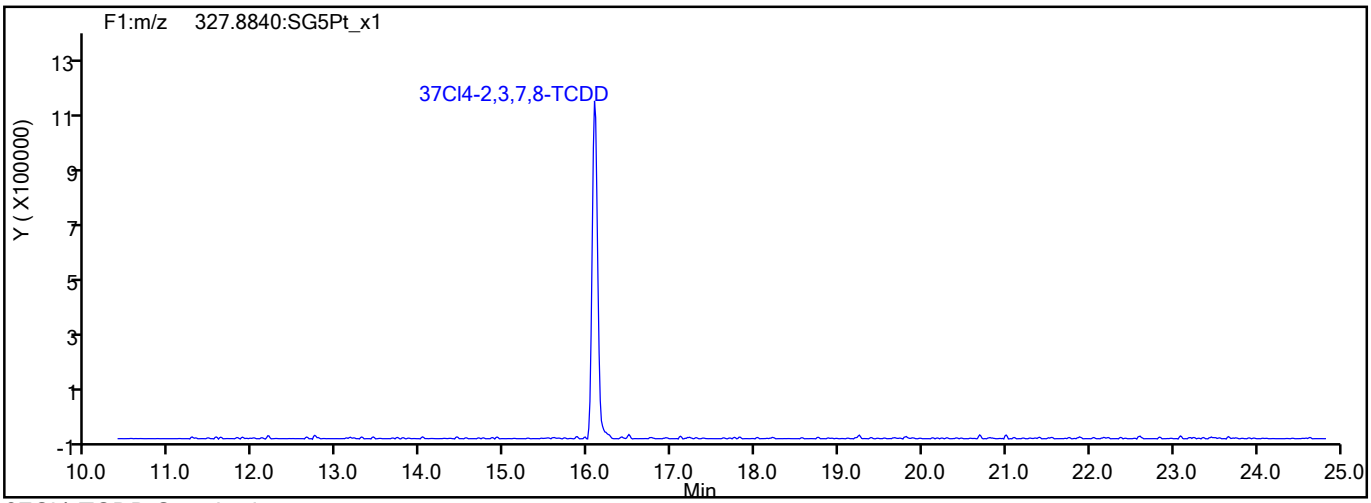

37Cl4-TCDD Standards

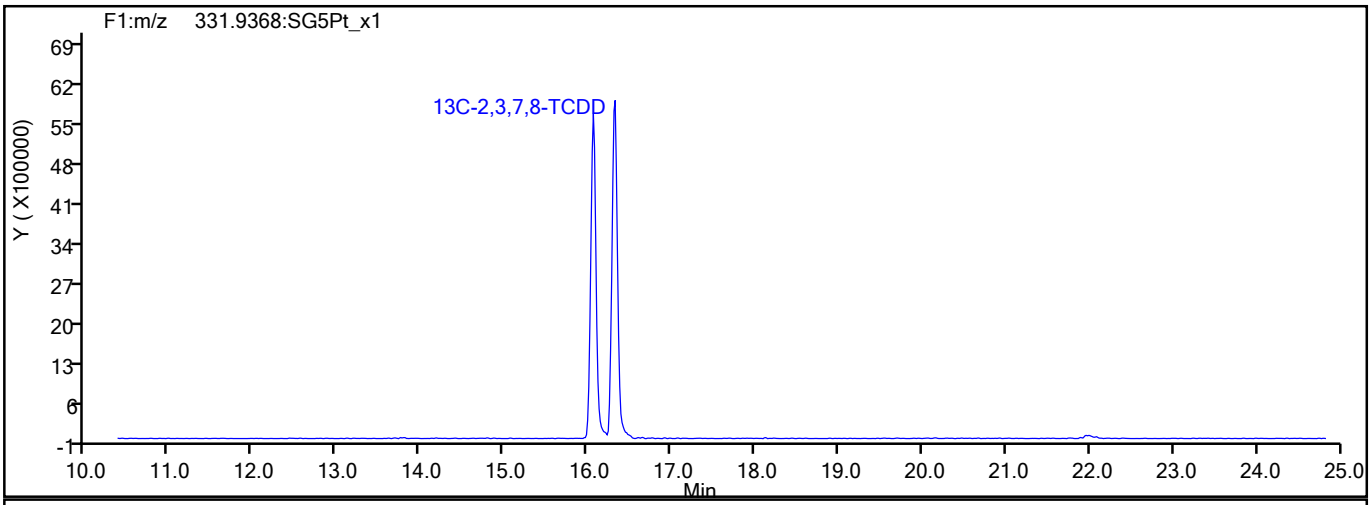

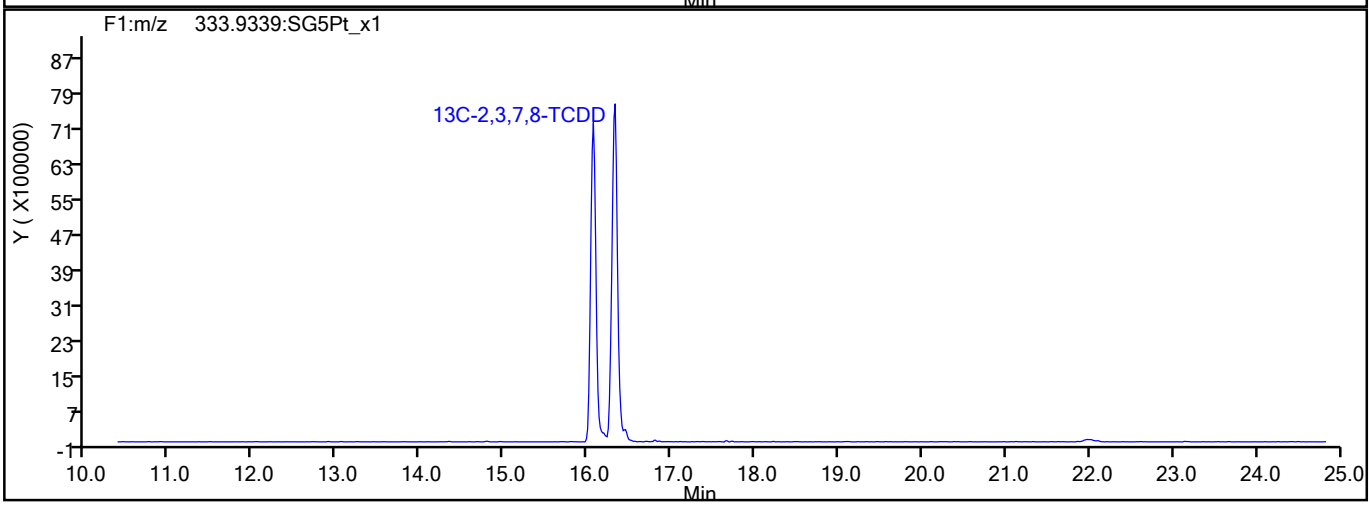

784178

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

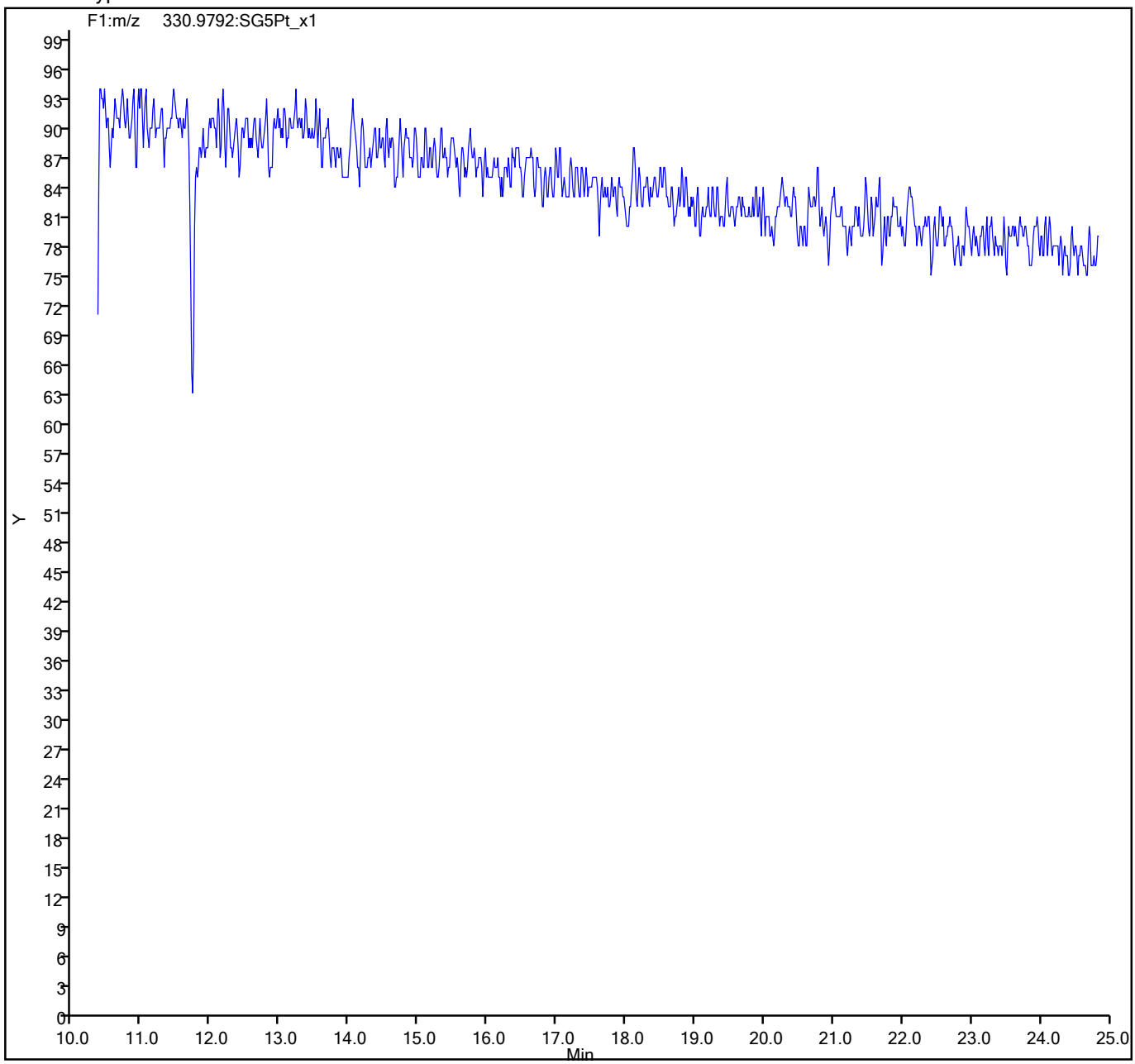

784179

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

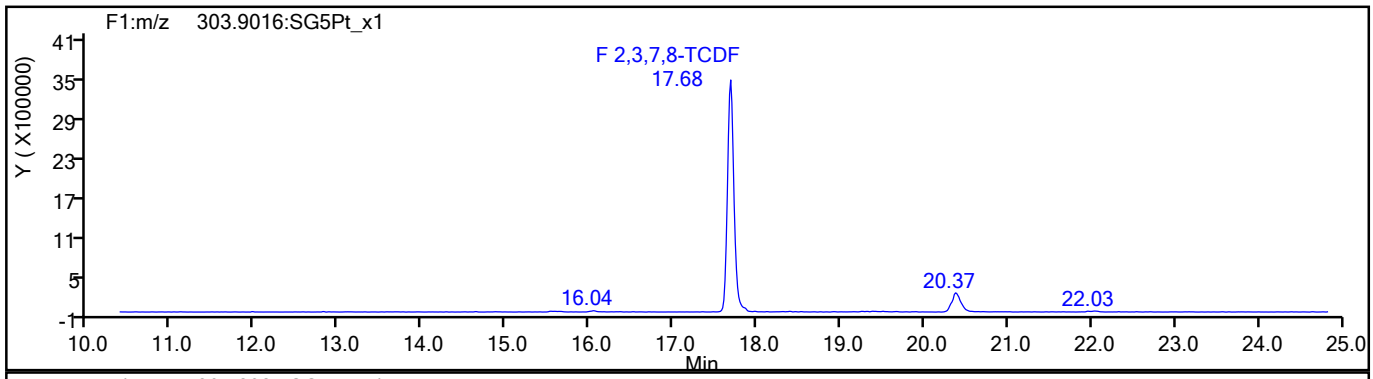

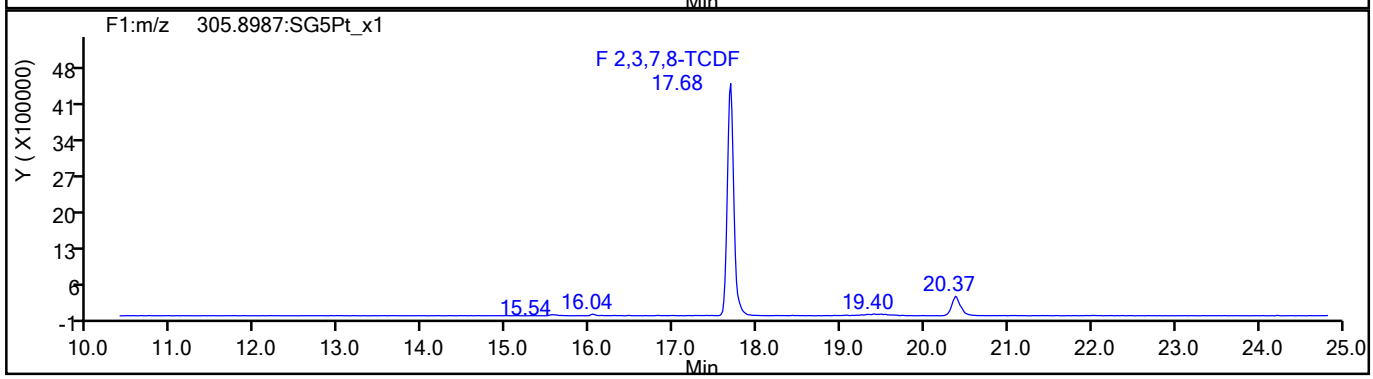

TCDF Standards

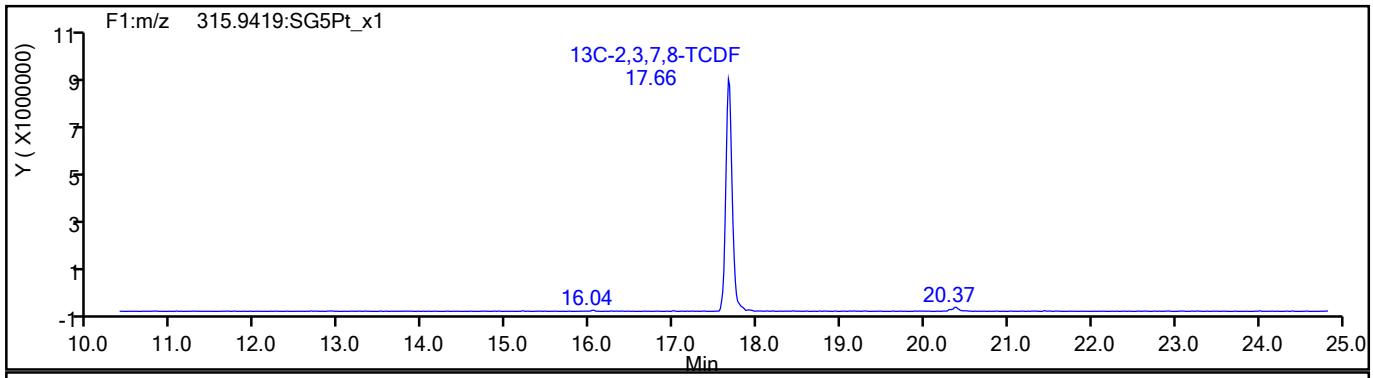

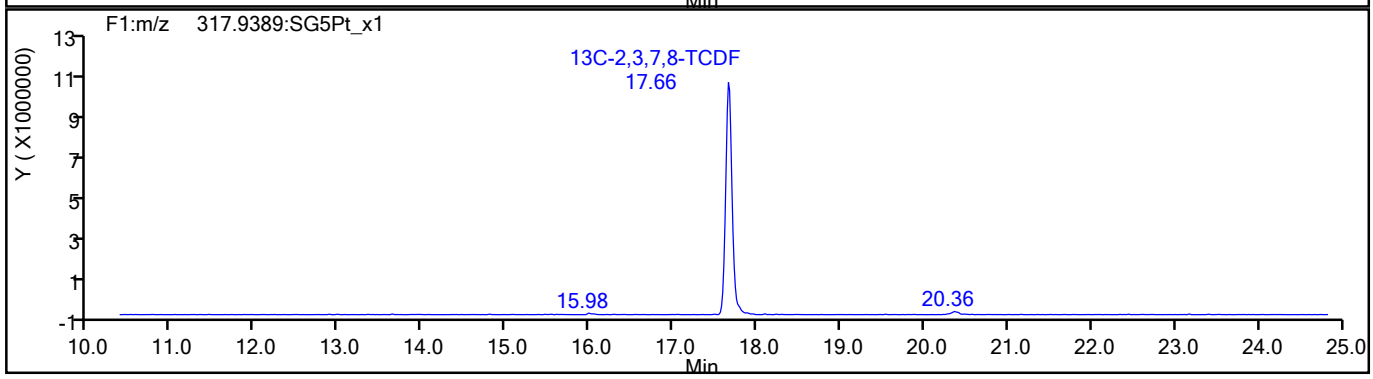

784182

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

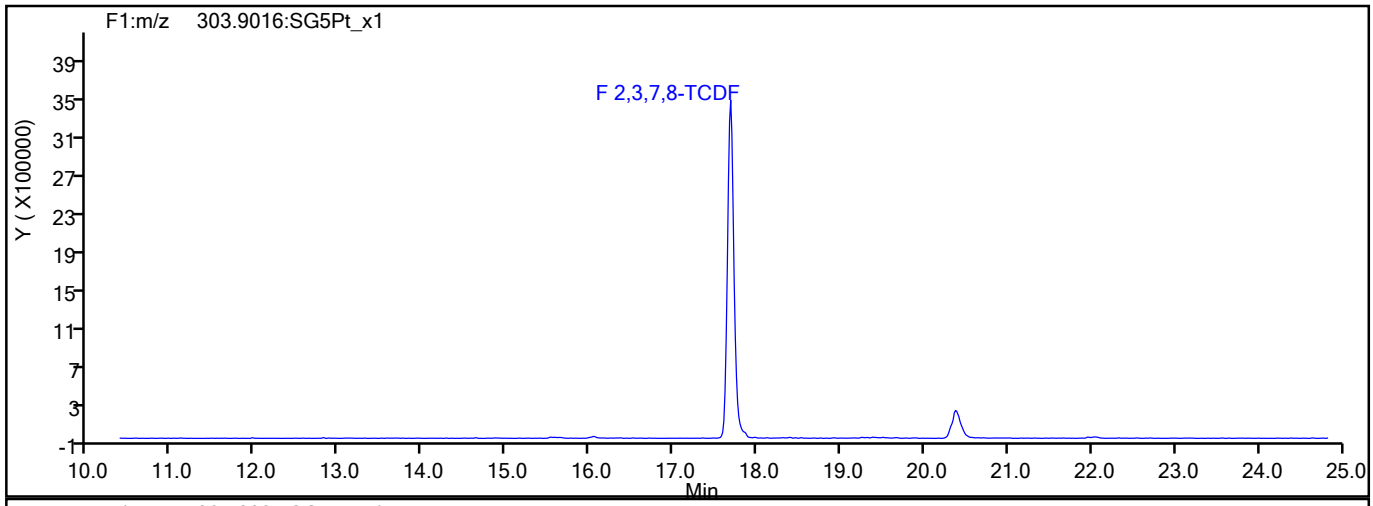

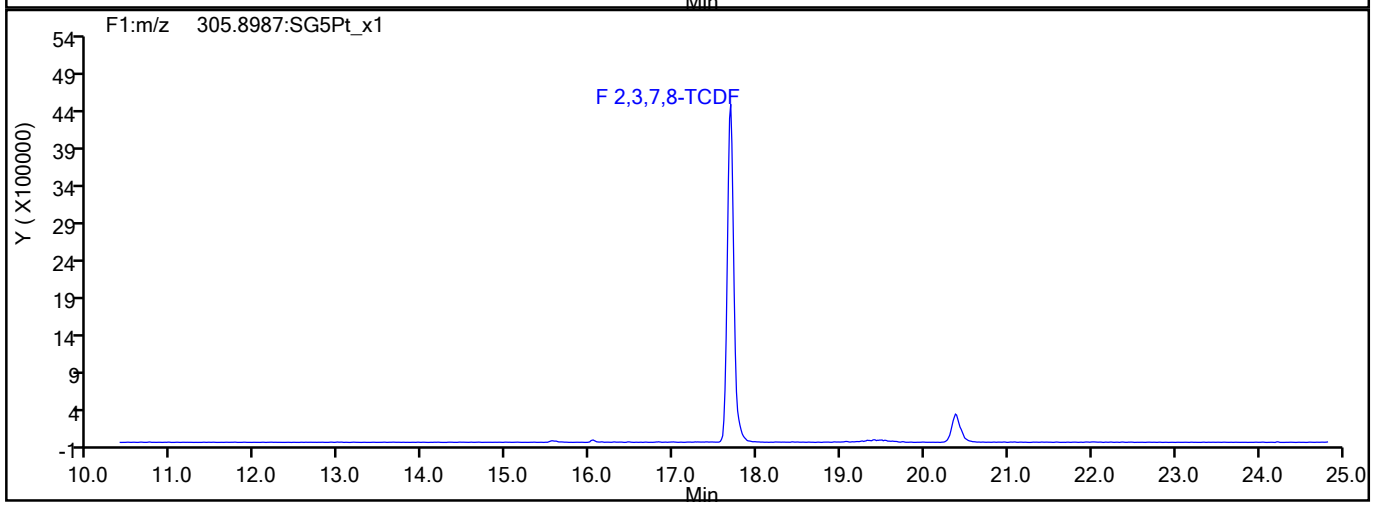

TCDF Interference Mass

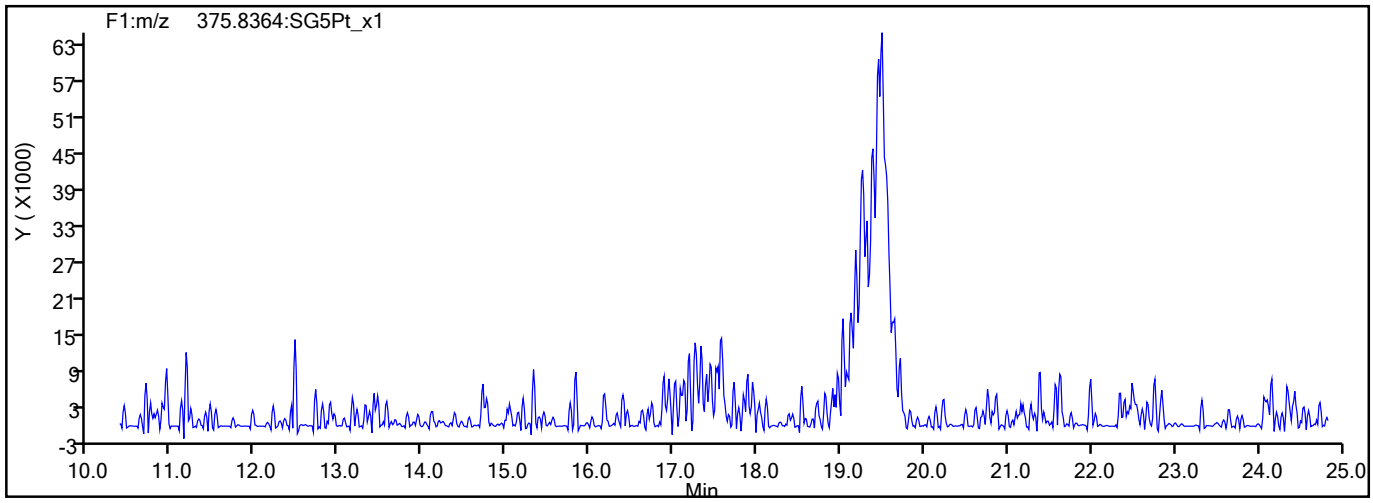

784183

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

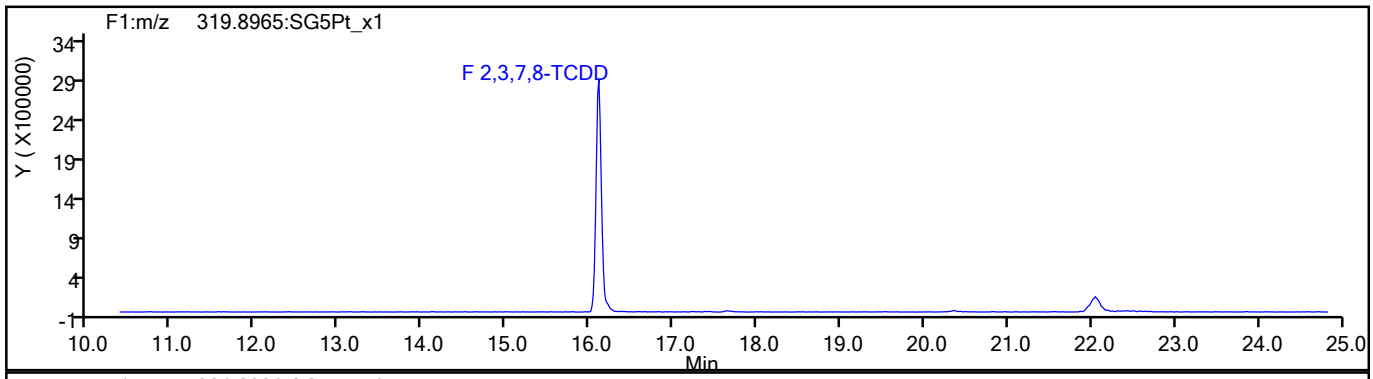

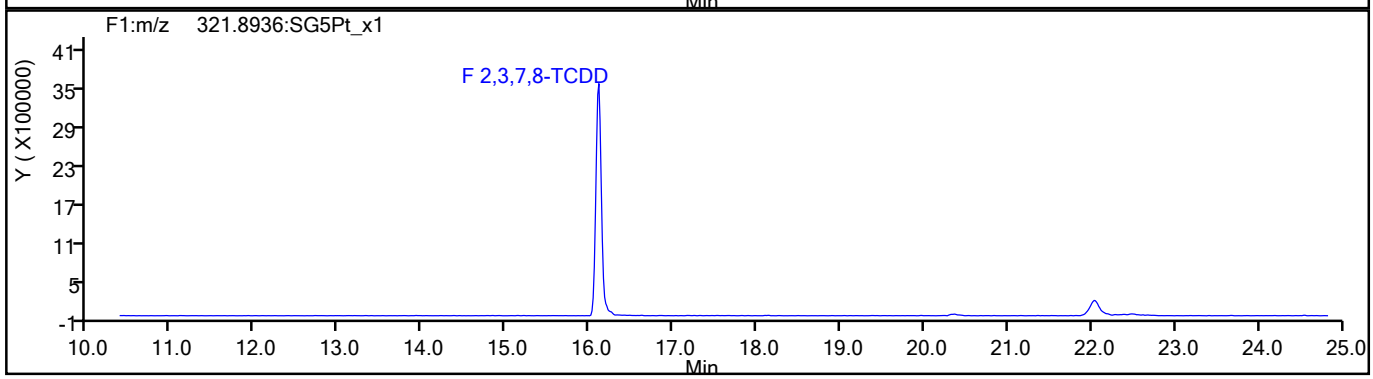

TCDD Standards

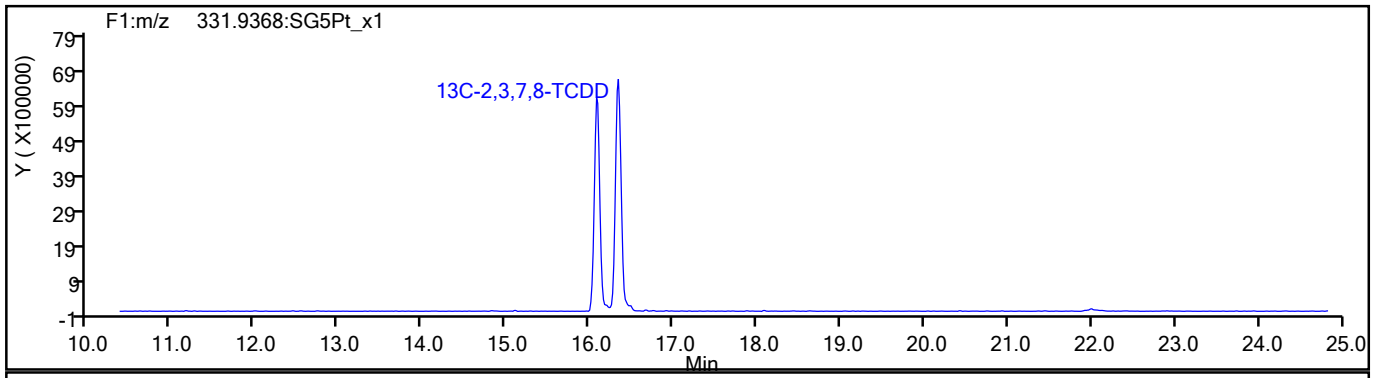

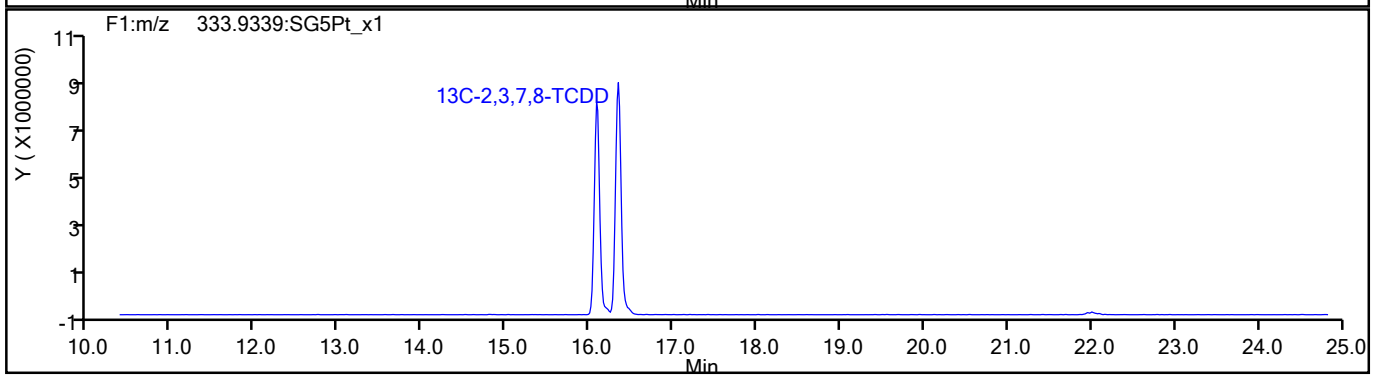

784184

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

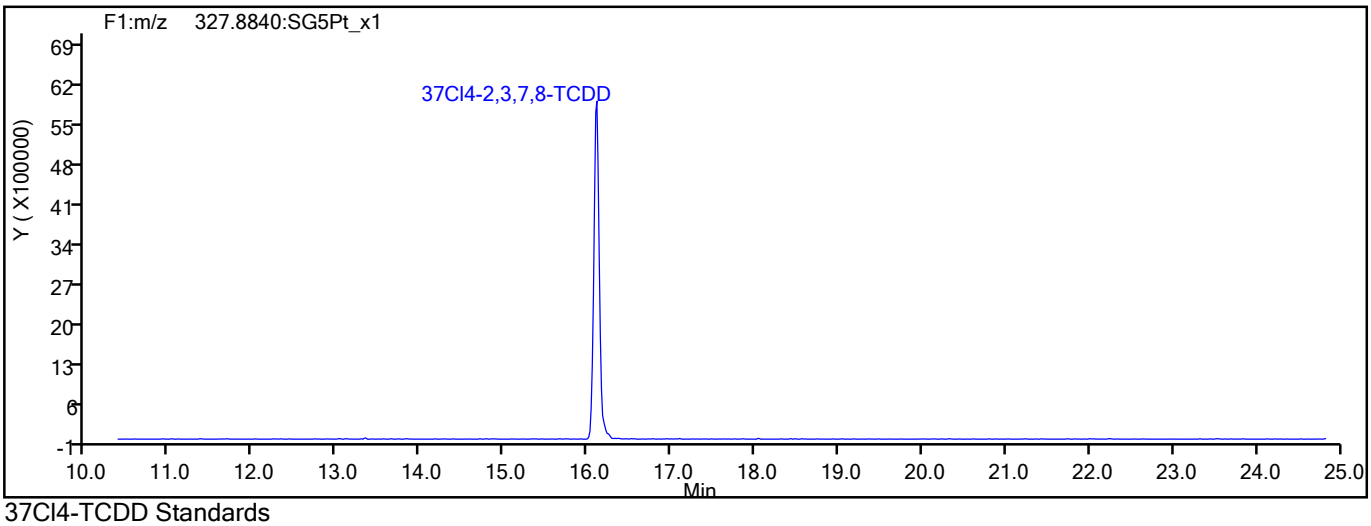

37Cl4-TCDD Standards

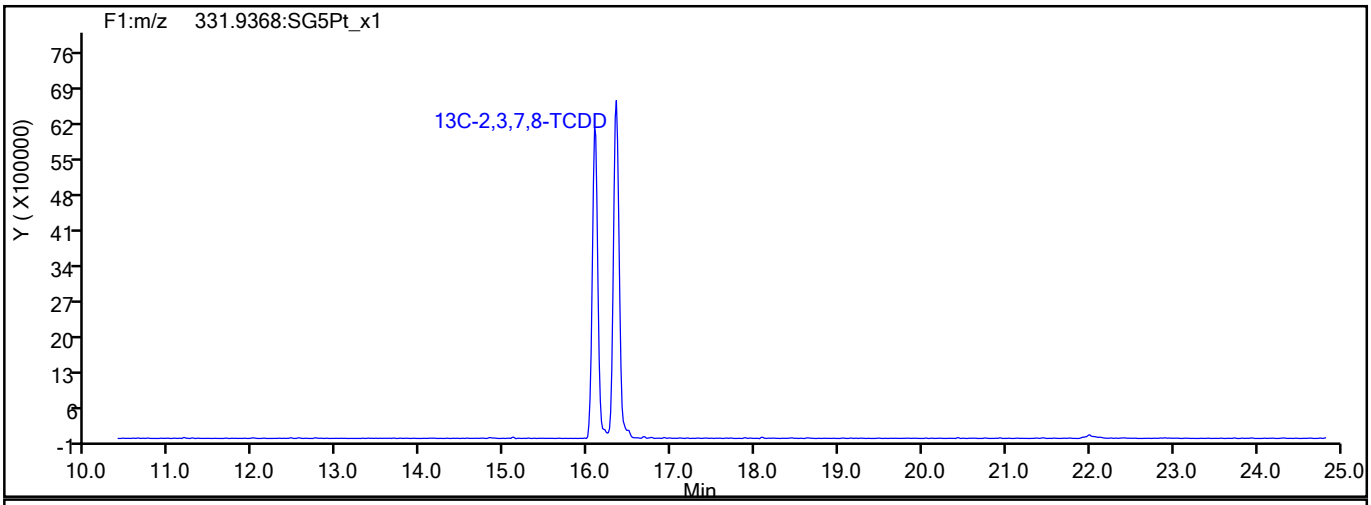

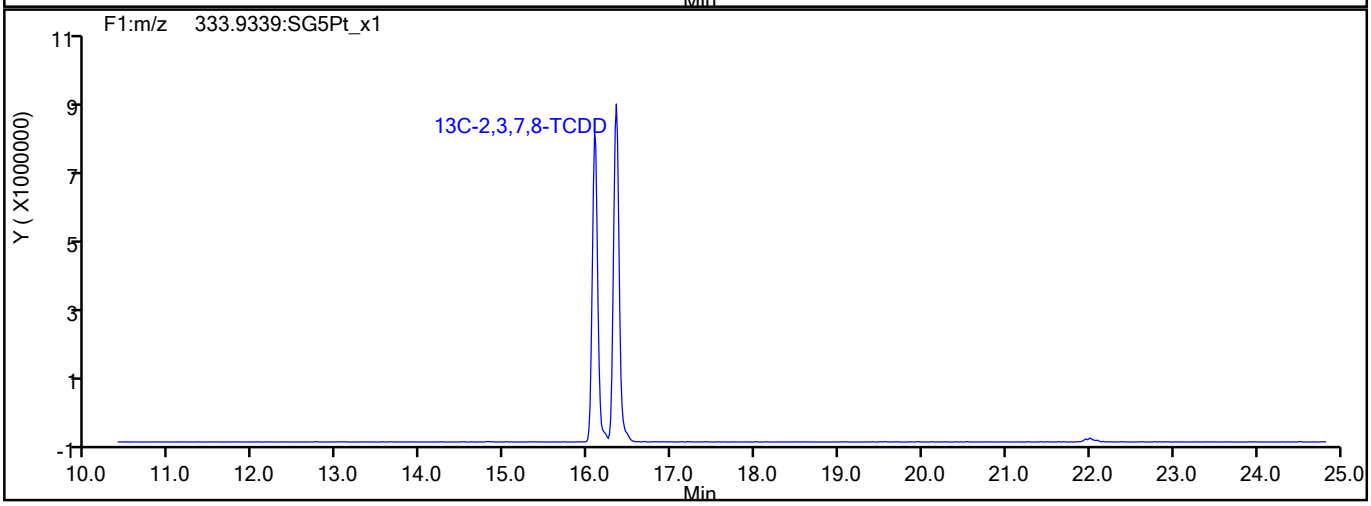

784185

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

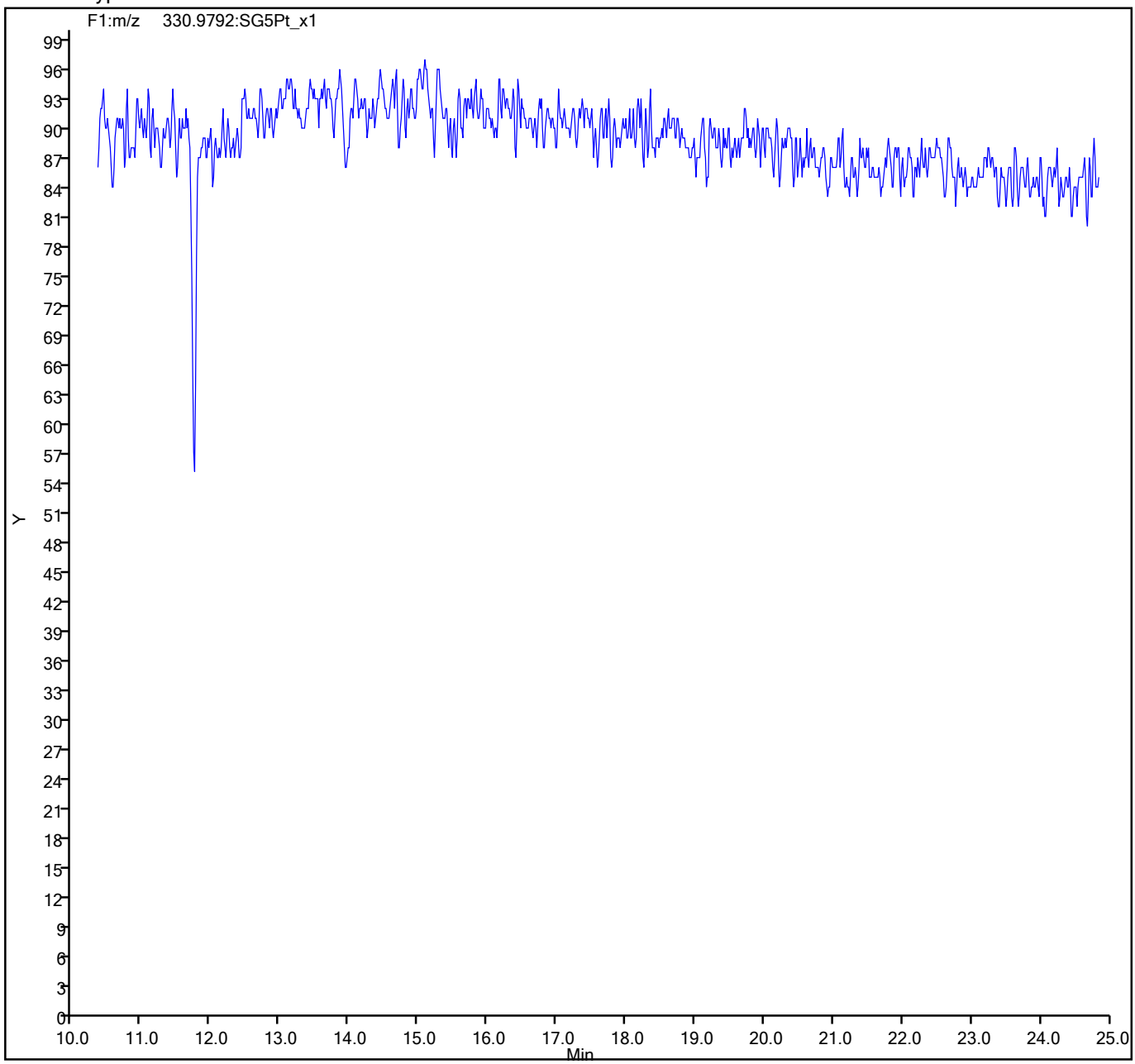

784186

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

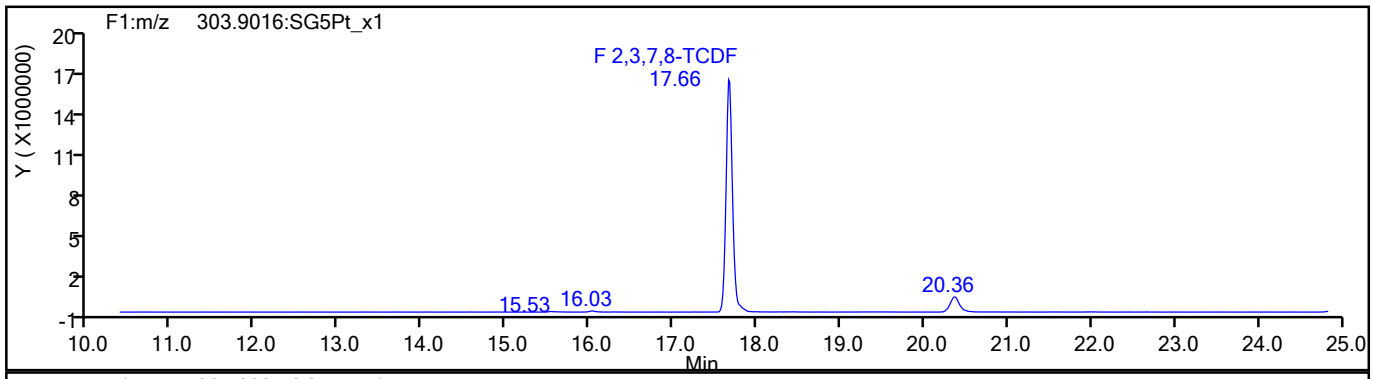

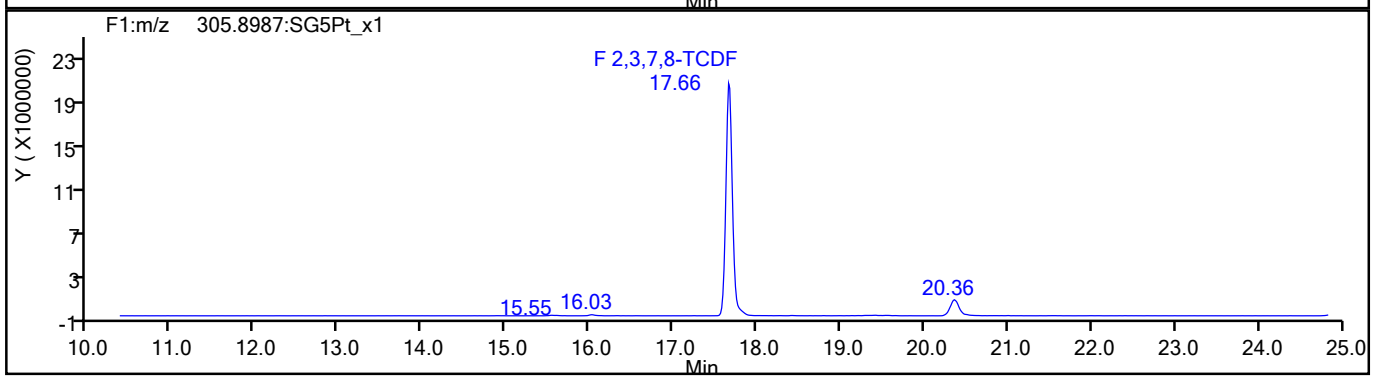

TCDF Standards

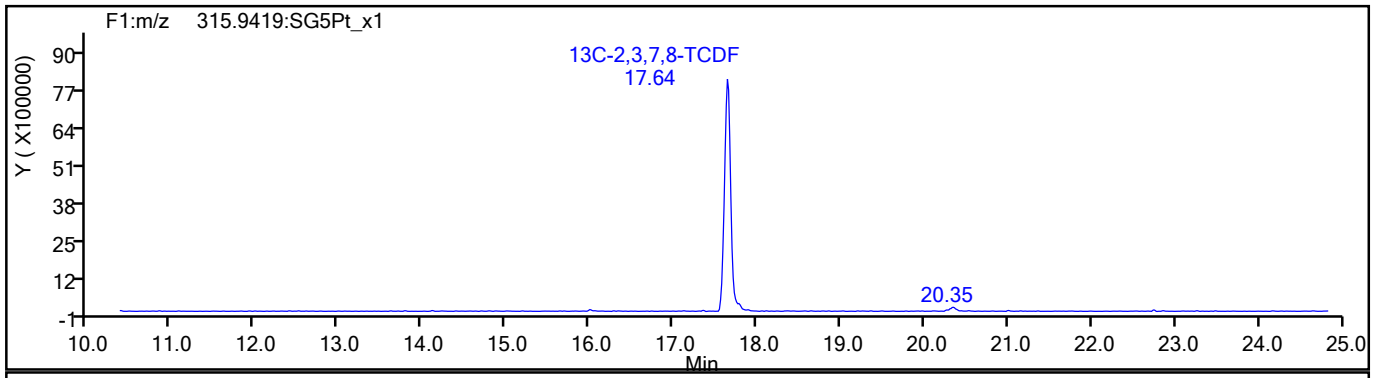

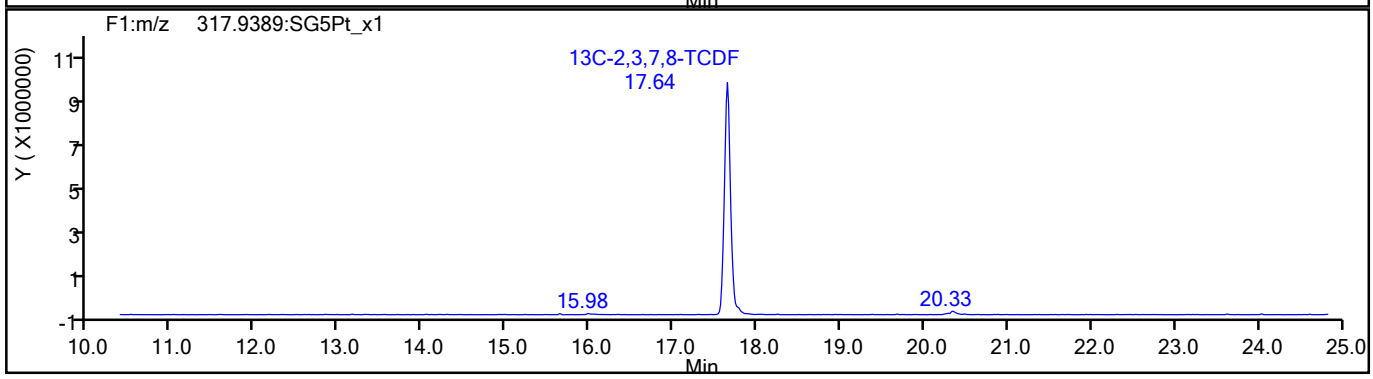

784189

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

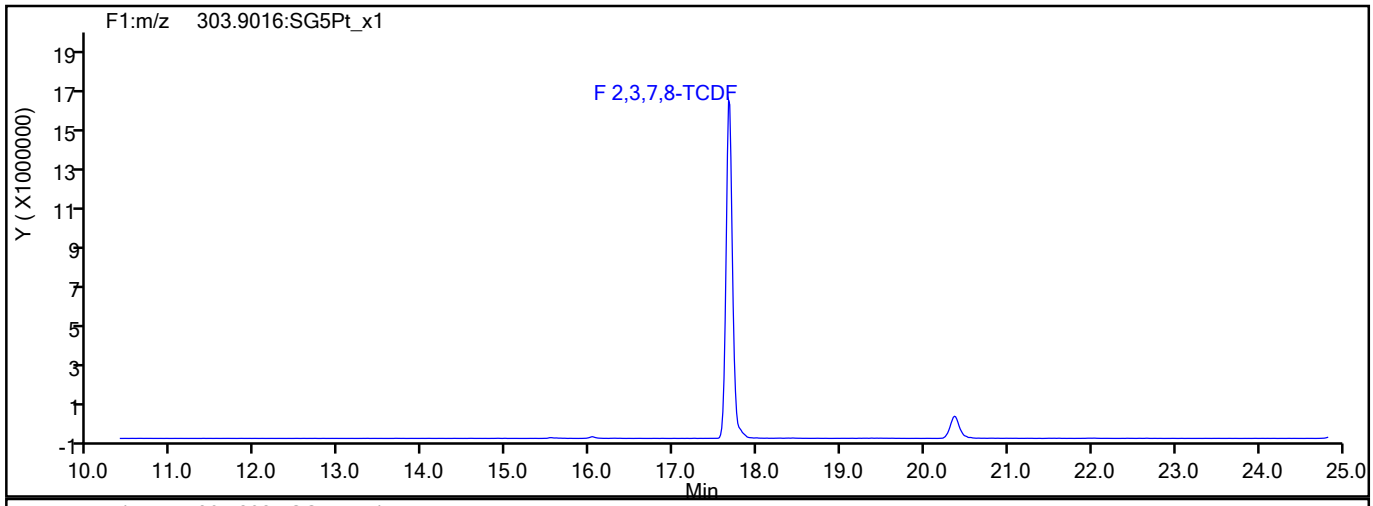

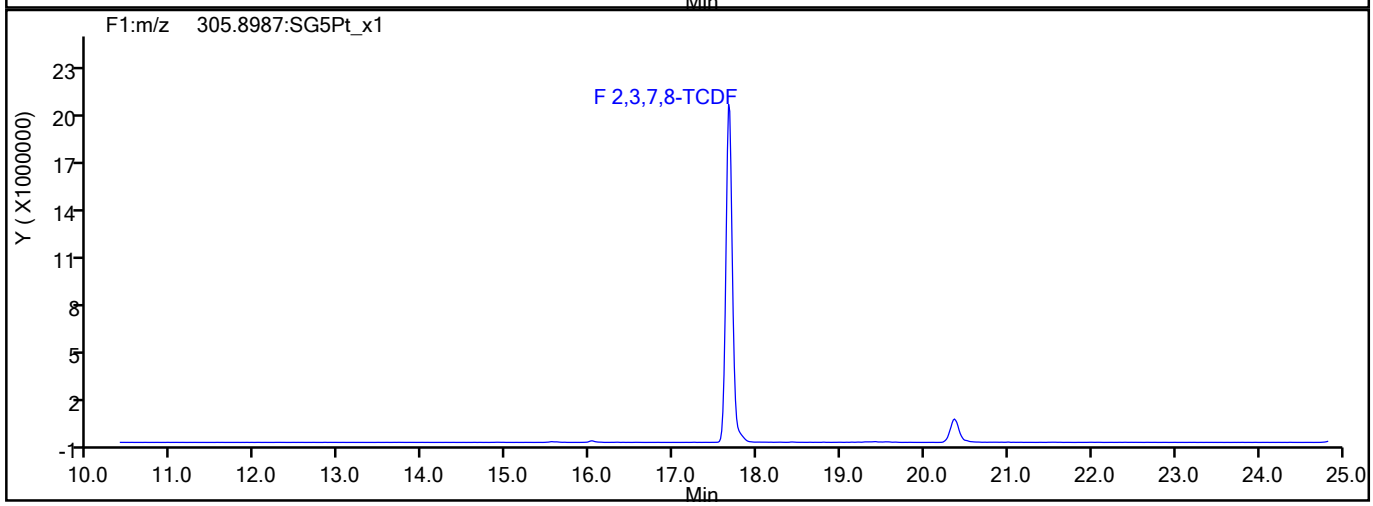

TCDF Interference Mass

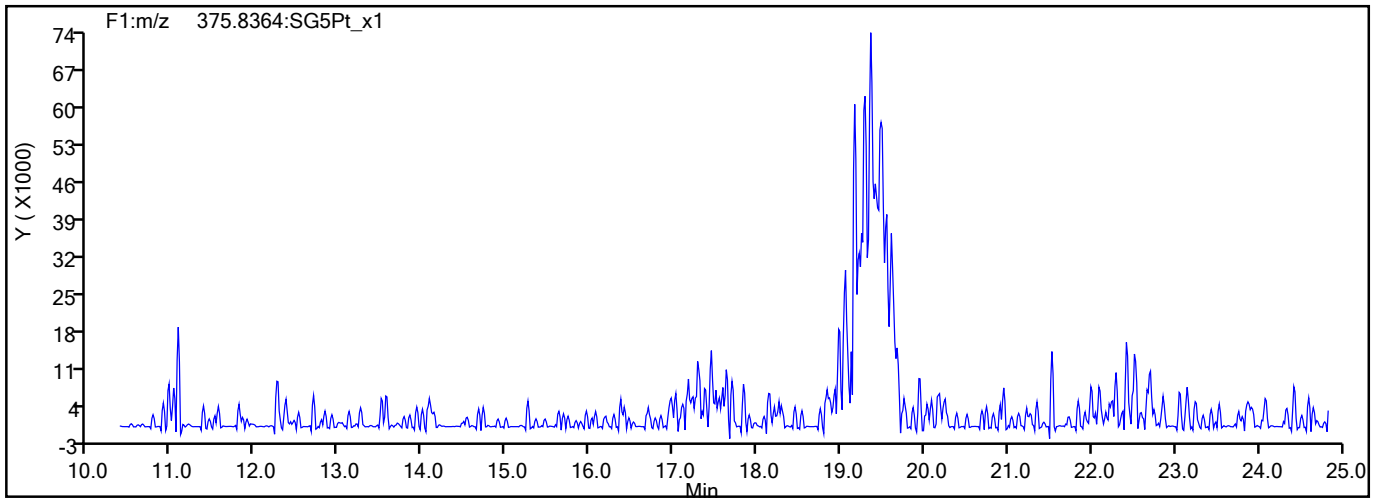

784190

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

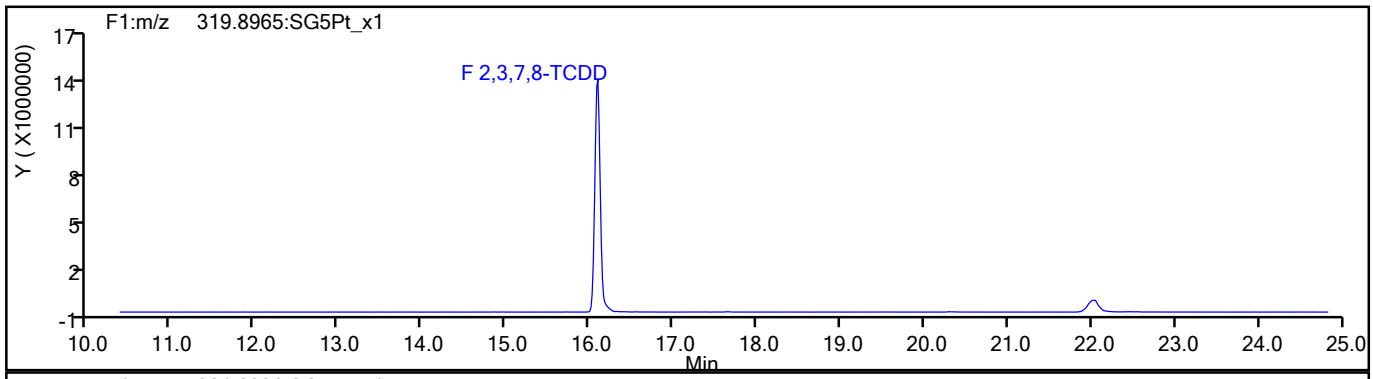

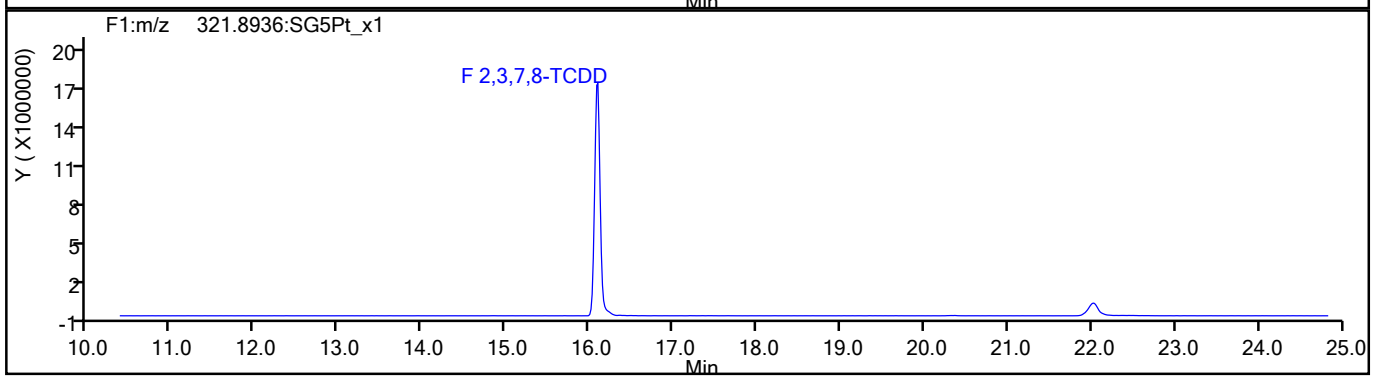

TCDD Standards

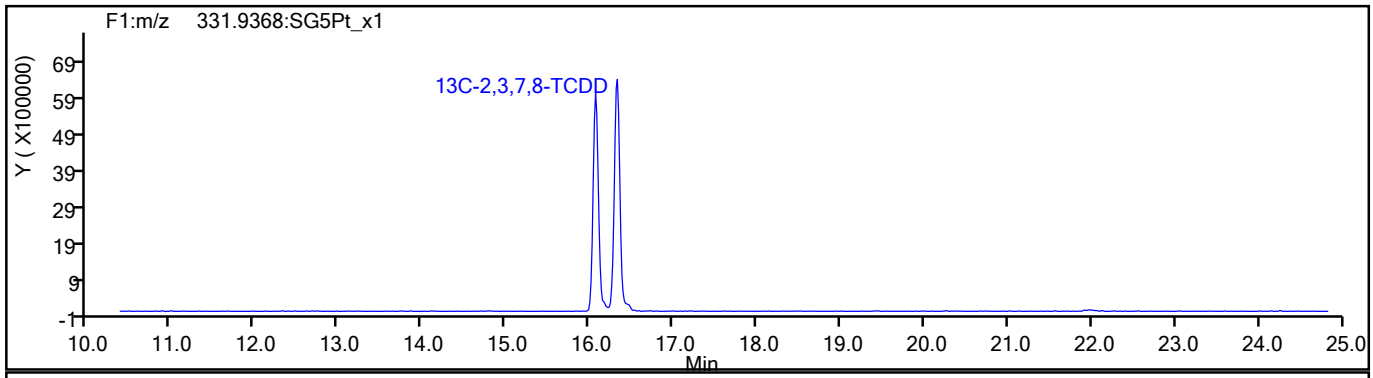

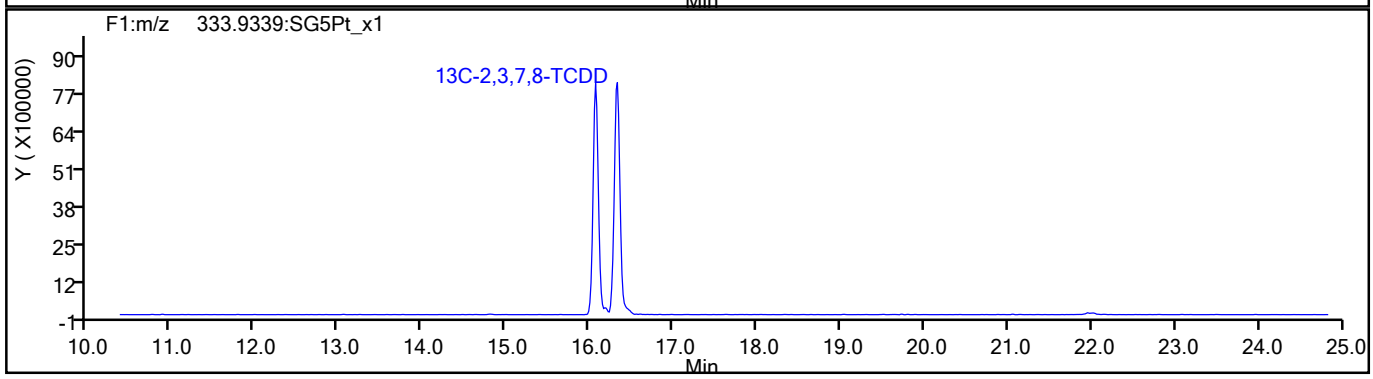

784191

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

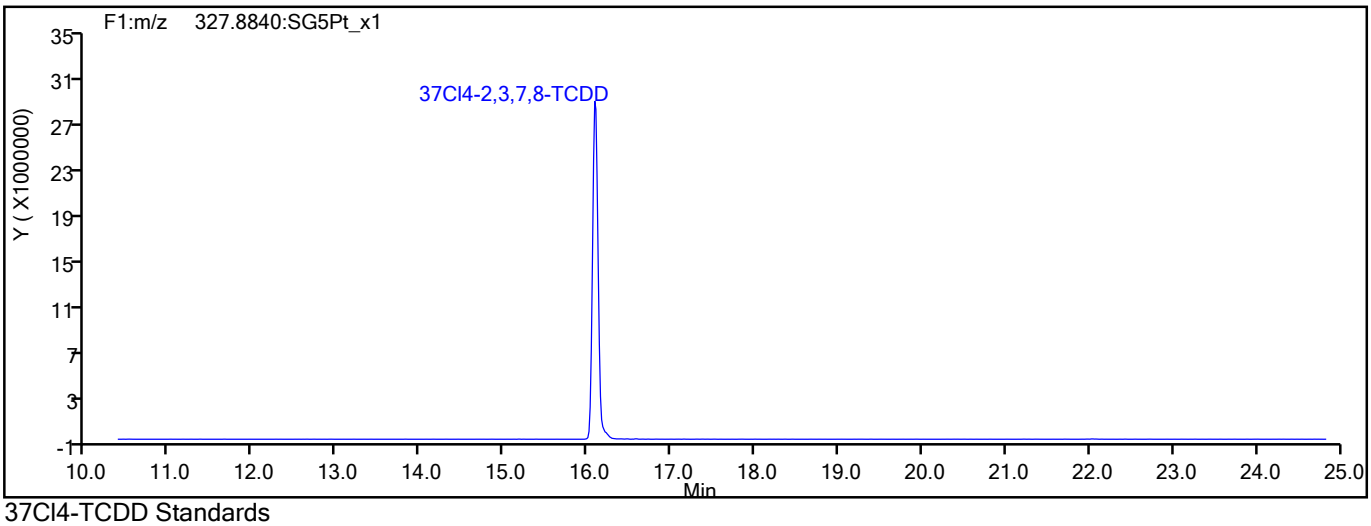

37Cl4-TCDD Standards

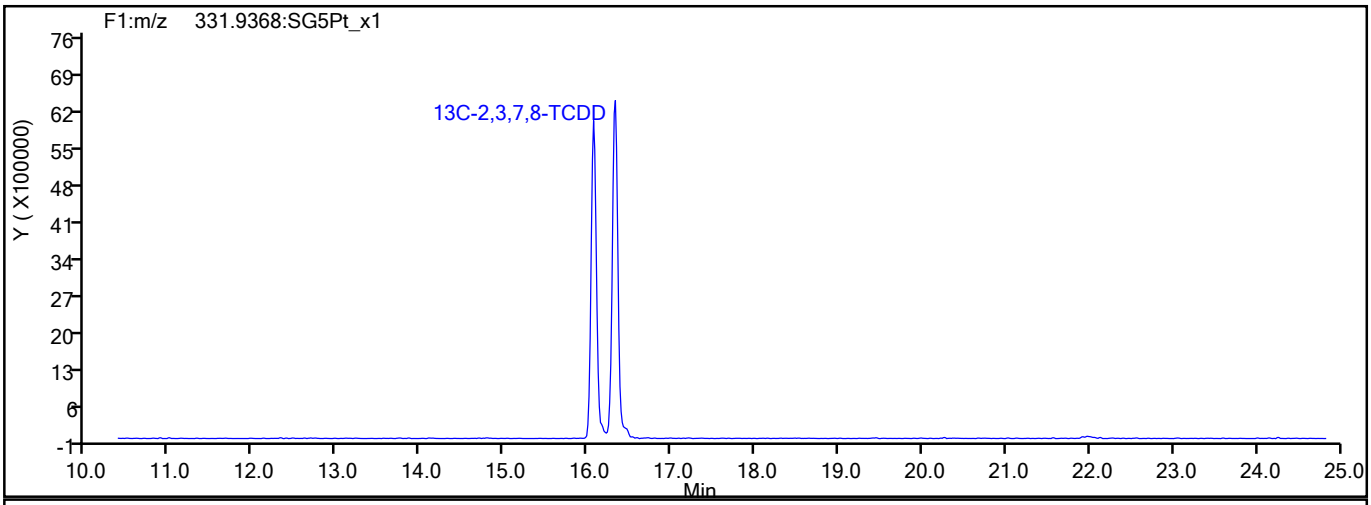

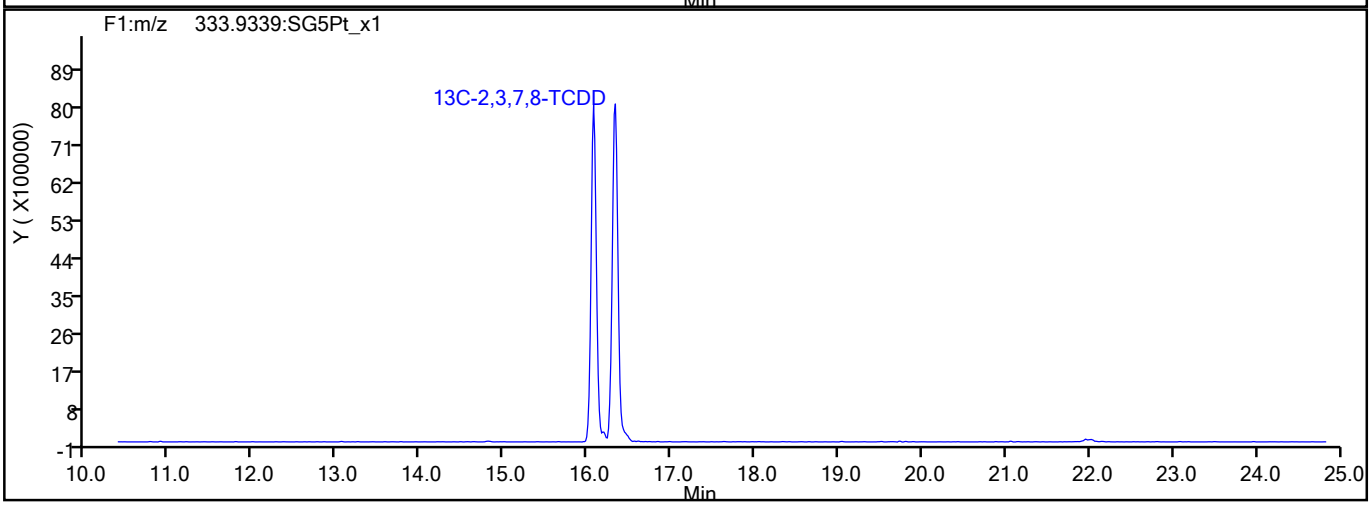

784192

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

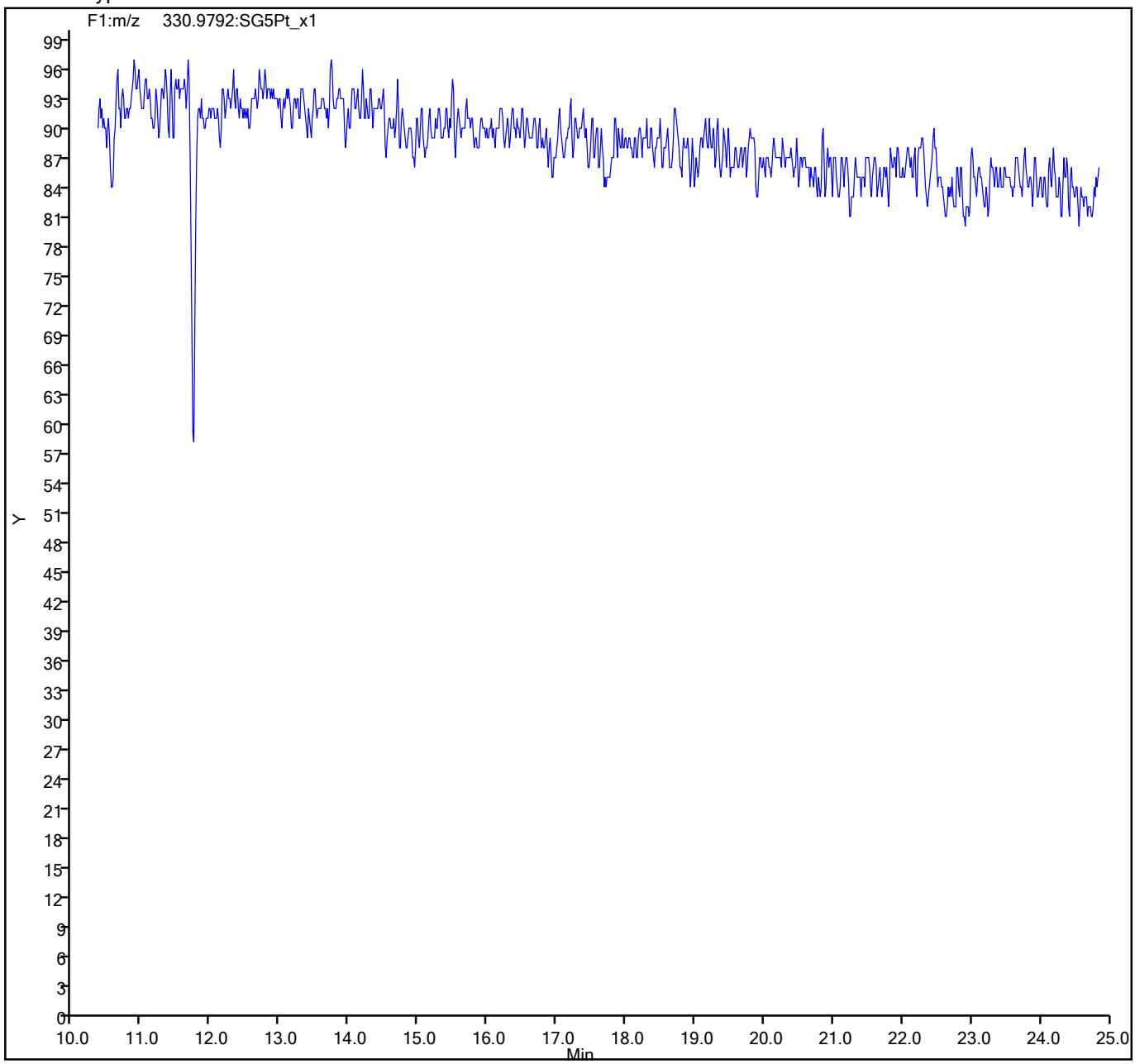

784193

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

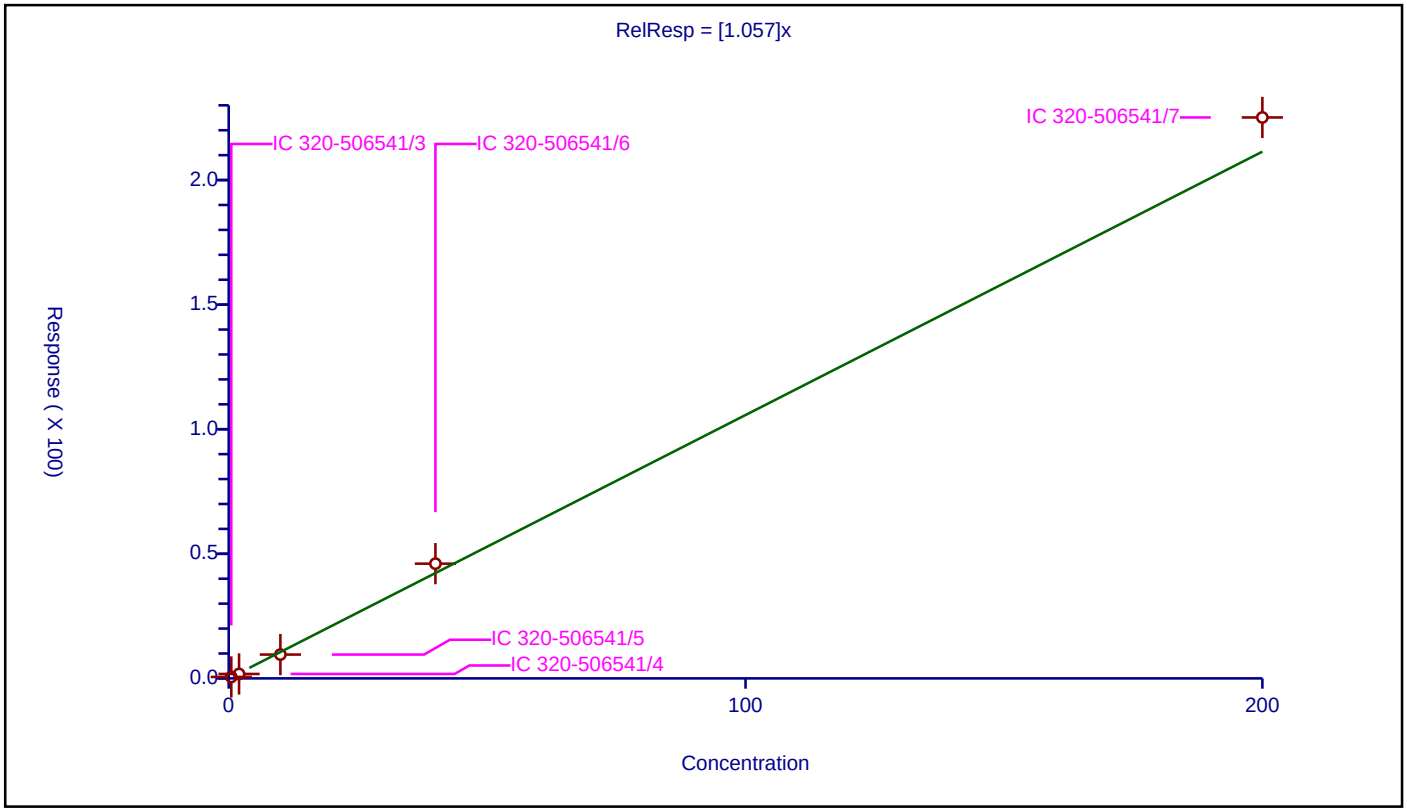

784194

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

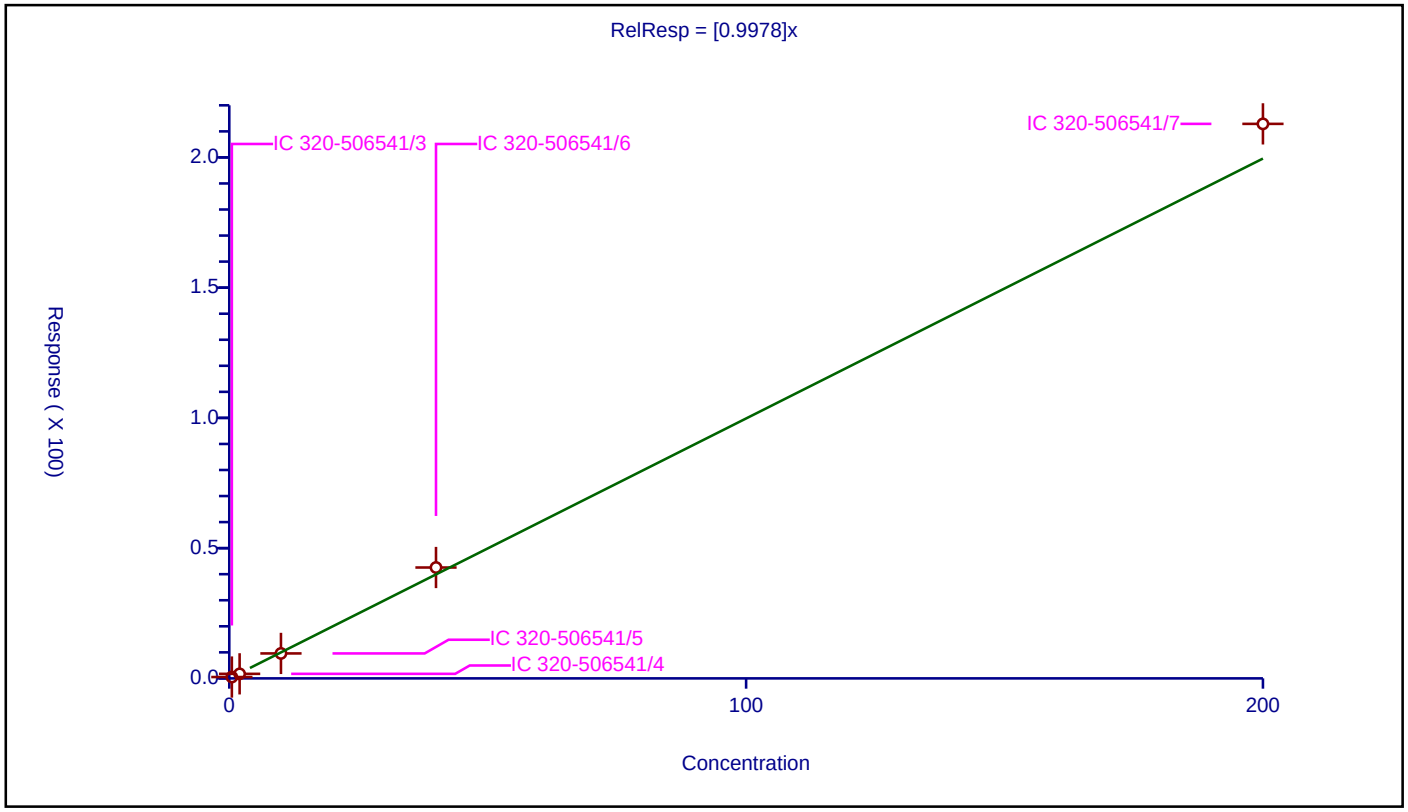

784195

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

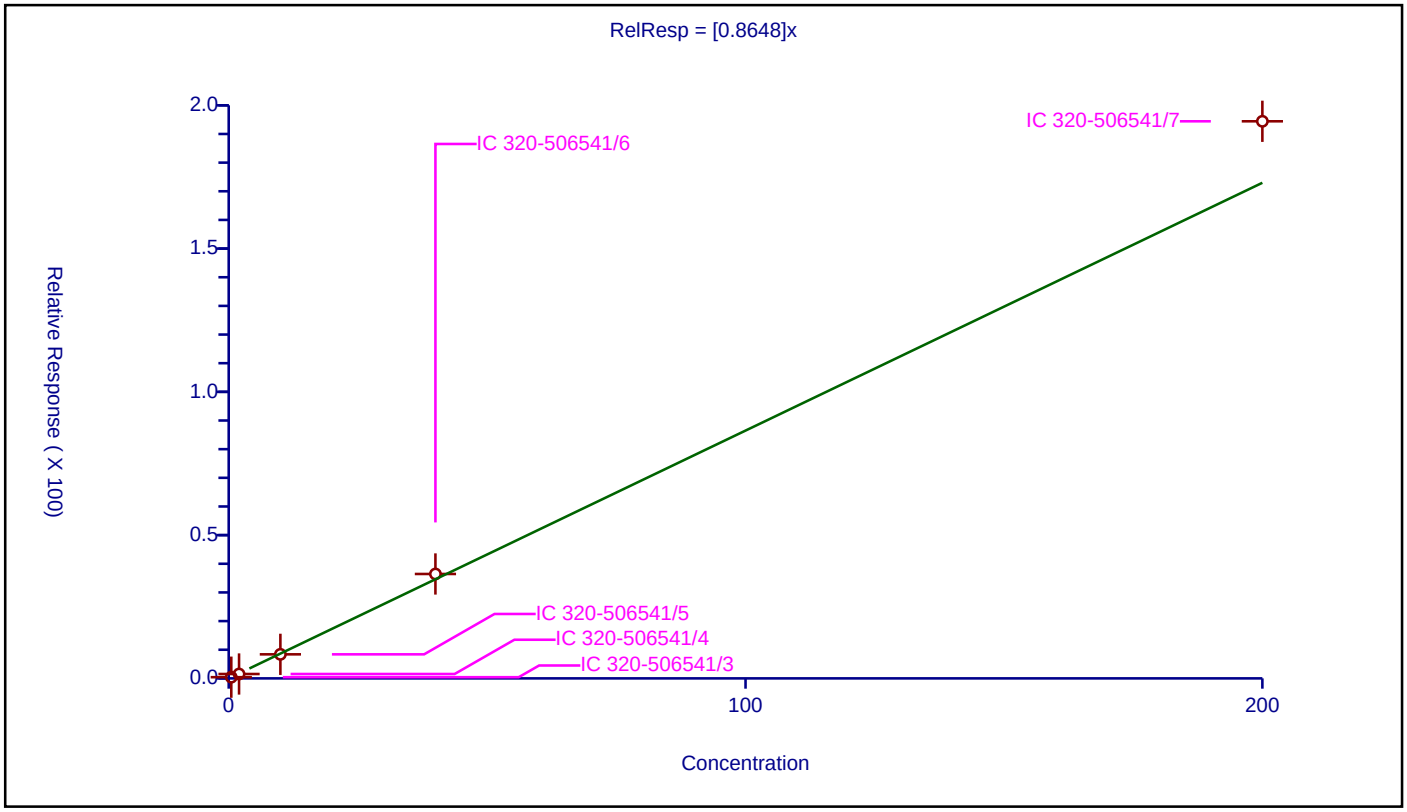

784196

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.2335	0.9635	1.0464	1.1217	1.0358	AveID		1.0802				9.5		20.0			
2,3,7,8-TCDD	1.1335	0.9559	1.0998	1.1237	1.0638	AveID		1.0753				6.7		20.0			
1,2,3,7,8-PeCDF	1.1920	0.9412	1.0373	1.0897	1.0112	AveID		1.0543				8.9		20.0			
2,3,4,7,8-PeCDF	1.1233	0.8984	0.9921	1.0636	0.9619	AveID		1.0079				8.7		20.0			
1,2,3,7,8-PeCDD	1.0719	0.9520	1.0685	1.1015	1.0385	AveID		1.0465				5.5		20.0			
1,2,3,4,7,8-HxCDF	1.2226	1.0072	1.1873	1.2073	1.1126	AveID		1.1474				7.8		20.0			
1,2,3,6,7,8-HxCDF	1.3374	1.0951	1.2359	1.2506	1.1700	AveID		1.2178				7.5		20.0			
2,3,4,6,7,8-HxCDF	1.3135	1.1007	1.2368	1.2623	1.1590	AveID		1.2145				7.0		20.0			
1,2,3,4,7,8-HxCDD	1.1235	0.9702	1.0749	1.1249	1.0104	AveID		1.0608				6.5		20.0			
1,2,3,6,7,8-HxCDD	1.0557	0.8863	1.0416	1.0264	0.9567	AveID		0.9933				7.1		20.0			
1,2,3,7,8,9-HxCDD	1.3093	0.9566	1.1202	1.1079	1.0532	AveID		1.1094				11.6		20.0			
1,2,3,7,8,9-HxCDF	1.3581	1.1239	1.2532	1.2757	1.1897	AveID		1.2401				7.1		20.0			
1,2,3,4,6,7,8-HpCDF	1.5412	1.2896	1.4855	1.5240	1.3700	AveID		1.4421				7.5		20.0			
1,2,3,4,6,7,8-HpCDD	1.1377	0.9531	1.0459	1.0970	1.0178	AveID		1.0503				6.8		20.0			
1,2,3,4,7,8,9-HpCDF	1.4057	1.1770	1.3459	1.3937	1.2235	AveID		1.3092				7.9		20.0			
OCDD	1.1328	0.9954	1.0870	1.1027	0.9920	AveID		1.0620				6.1		20.0			
OCDF	1.3392	1.1863	1.3349	1.3964	1.3271	AveID		1.3168				5.9		20.0			
13C-2,3,7,8-TCDF	1.3569	1.2925	1.2977	1.3484	1.4339	Ave		1.3459				4.2		35.0			
13C-2,3,7,8-TCDD	0.9164	0.8941	0.9478	0.9250	0.9750	Ave		0.9317				3.3		35.0			
13C-1,2,3,7,8-PeCDF	1.0773	1.0923	1.1314	1.1553	1.2461	Ave		1.1405				5.8		35.0			
13C-2,3,4,7,8-PeCDF	1.1109	1.0890	1.0480	1.1277	1.2510	Ave		1.1253				6.8		35.0			
13C-1,2,3,7,8-PeCDD	0.6866	0.6668	0.7308	0.7224	0.7758	Ave		0.7165				5.9		35.0			
13C-1,2,3,4,7,8-HxCDF	0.8656	0.8706	1.1172	0.9651	1.0057	Ave		0.9648				10.8		35.0			
13C-1,2,3,6,7,8-HxCDF	0.9280	0.9536	1.2227	1.0830	1.1668	Ave		1.0708				12.0		35.0			
13C-2,3,4,6,7,8-HxCDF	0.8692	0.9805	1.1292	1.1087	1.1190	Ave		1.0413				10.9		35.0			
13C-1,2,3,4,7,8-HxCDD	0.6435	0.7681	0.8180	0.7773	0.7866	Ave		0.7587				8.8		35.0			
13C-1,2,3,6,7,8-HxCDD	0.7368	0.8783	0.8857	0.9060	0.8896	Ave		0.8593				8.1		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9679	0.9781	1.0054	0.9456	0.9684	Ave		0.9731				2.2		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.7002	0.7170	0.7171	0.7555	0.7898	Ave		0.7359				4.9		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6351	0.6548	0.6640	0.7261	0.6926	Ave		0.6745				5.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6394	0.6623	0.6557	0.7259	0.7437	Ave		0.6854				6.8		35.0			
13C-OCDD	0.5202	0.5165	0.5084	0.5910	0.5871	Ave		0.5446				7.5		35.0			
37Cl4-2,3,7,8-TCDD	0.9654	0.9590	1.0722	1.0074	1.0375	Ave		1.0083				4.8					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	19533	50956	258022	1274052	6137031	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	12122	34971	198062	875630	4286034	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	74934	210335	1114982	5302236	26032333	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	72817	200175	987812	5051373	24861382	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	42943	129872	741897	3351337	16645947	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	46374	155611	1093397	4293581	21902419	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	54388	185321	1245549	4991420	26721257	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	50026	191527	1151149	5157631	25388405	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	31680	132244	724729	3222329	15558498	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	34082	138142	760446	3426727	16661405	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	39595	139741	786511	3436144	17279185	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	57602	195077	1038574	4445357	22553786	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	47287	164108	878086	4243438	21181967	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	31661	110761	572466	2935203	13800004	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	39382	138335	727362	3728415	17812004	2.50	10.0	50.0	200	1000
OCDD		AveID	51642	182470	910980	4803166	22803823	5.00	20.0	100	400	2000
OCDF		AveID	61051	217473	1118740	6082696	30505464	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	3167014	2644389	2465726	2839435	2962515	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	2138853	1829253	1800864	1948011	2014532	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	2514489	2234847	2149791	2432949	2574521	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	2592947	2228025	1991303	2374722	2584740	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	1602476	1364144	1388641	1521254	1602880	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	1517222	1545033	1841825	1778238	1968615	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	1626653	1692336	2015594	1995567	2283961	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	1523436	1740015	1861559	2042874	2190509	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	1127895	1363103	1348471	1432215	1539784	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	1291365	1558668	1460100	1669337	1741498	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	1696557	1735785	1657413	1742331	1895740	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	1227279	1272526	1182209	1392194	1546113	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	1113145	1162117	1094713	1337869	1355803	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	1120663	1175351	1080883	1337573	1455766	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	1823492	1833139	1676139	2177938	2298668	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2 Analy Batch No.: 496688

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Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	11266	39241	203726	848616	4287059	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	08JN21ADFS1_1	Resolution Check	RC 060821A	46			GRB	1.000	
2	08JN21ADFS1_2	WDM HRDXNCP_00042	WDM 060821A	1	Dioxin		GRB	1.000	
3	08JN21ADFS1_3	SB Solvent Blank C-14	SB 060821	3			GRB	1.000	
4	08JN21ADFS1_4	CS-2 HRDXNL2_00032	IC 060821	4	Dioxin		GRB	1.000	
5	08JN21ADFS1_5	CS-3 HRDXNL3_00029	IC 060821A	5	Dioxin		GRB	1.000	
6	08JN21ADFS1_6	CS-4 HRDXNL4_00099	IC 060821B	2	Dioxin		GRB	1.000	
7	08JN21ADFS1_7	CS-5 HRDXNL5_00032	IC 060821C	6	Dioxin		GRB	1.000	
8	08JN21ADFS1_8	CS-6 HRDXNL6_00028	IC 060821D	7	Dioxin		GRB	1.000	
9	08JN21ADFS1_9	Resolution Check	RC 060821B	46			GRB	1.000	
10	08JN21ADFS1_10	SB Solvent Blank C-14	SB 060821A	3			GRB	1.000	
11	08JN21ADFS1_11	ICV HRDXNIC_00047	ICV 060821	8	Dioxin		GRB	1.000	
12	08JN21ADFS1_12	Resolution Check	RC 060821C	46			GRB	1.000	
13	08JN21ADFS1_13	CCV CS-4 HRDXNL4_00099	CCV 060821A	2	Dioxin		GRB	1.000	
14	08JN21ADFS1_14	WDM HRDXNCP_00042	WDM 060821B	1	Dioxin		GRB	1.000	
15	08JN21ADFS1_15	mb 320-482224/1-a RI	mb 320-482224/1-a	10	8290/Solid	100	GRB	20.000	g
16	08JN21ADFS1_16	320-72057-a-23-a mdlv RI (7)	320-72057-a-23-a mdlv	11	8290/Solid		GRB	20.000	g
17	08JN21ADFS1_17	320-72057-a-24-a mdlv RI (8)	320-72057-a-24-a mdlv	12	8290/Solid		GRB	20.000	g
18	08JN21ADFS1_18	320-72057-a-25-a mdlv RI (9)	320-72057-a-25-a mdlv	13	8290/Solid		GRB	20.000	g
19	08JN21ADFS1_19	320-72057-a-26-a loqv RI (10)	320-72057-a-26-a loqv	14	8290/Solid		GRB	20.000	g
20	08JN21ADFS1_20	320-74542-b-3-a	320-74542-b-3-a	15	8290A/Solid	D245	GRB	10.000	g
21	08JN21ADFS1_21	320-74542-b-2-a	320-74542-b-2-a	16	8290A/Solid		GRB	10.000	g
22	08JN21ADFS1_22	320-74542-b-1-a	320-74542-b-1-a	17	8290A/Solid		GRB	10.000	g
23	08JN21ADFS1_23	lcs 320-496101/2-a	lcs 320-496101/2-a	18	8290A/Solid		GRB	10.000	g
24	08JN21ADFS1_24	lcsd 320-496101/3-a	lcsd 320-496101/3-a	19	8290A/Solid		GRB	10.000	g
25	08JN21ADFS1_25	mb 320-496101/1-a	mb 320-496101/1-a	20	8290A/Solid		GRB	10.000	
26	08JN21ADFS1_26	Resolution Check	RC 060821D	46			GRB	1.000	
27	08JN21ADFS1_27	CCV CS-4 HRDXNL4_00099	CCV 060821B	2	Dioxin		GRB	1.000	
28	08JN21ADFS1_28	Resolution Check	RC 060821E	46			GRB	1.000	
29	08JN21ADFS1_29	WDM HRDXNCP_00042	WDM 060821C	1	Dioxin		GRB	1.000	
30	08JN21ADFS1_30	SB Solvent Blank C-14	SB 060821B	3			GRB	1.000	
31	08JN21ADFS1_31	320-74542-b-4-a	320-74542-b-4-a	21	8290A/Solid	D245	GRB	10.000	g
32	08JN21ADFS1_32	320-74542-b-5-a	320-74542-b-5-a	22	8290A/Solid		GRB	10.000	g
33	08JN21ADFS1_33	320-74542-b-6-a	320-74542-b-6-a	23	8290A/Solid		GRB	10.000	g
34	08JN21ADFS1_34	320-74542-b-7-a	320-74542-b-7-a	24	8290A/Solid		GRB	10.000	g
35	08JN21ADFS1_35	320-74542-b-8-a	320-74542-b-8-a	25	8290A/Solid		GRB	10.000	g
36	08JN21ADFS1_36	320-74542-b-9-a	320-74542-b-9-a	26	8290A/Solid		GRB	10.000	g
37	08JN21ADFS1_37	SB Solvent Blank C-14	SB 060821C	3			GRB	1.000	
38	08JN21ADFS1_38	Resolution Check	RC 060821F	46			GRB	1.000	
39	08JN21ADFS1_39	CCV CS-4 HRDXNL4_00099	CCV 060821C	2	Dioxin		GRB	1.000	
40	08JN21ADFS1_40	Resolution Check	RC 060821G	46			GRB	1.000	

LOG FILE ✓'d
06/09/21
GRB

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 12:20
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10809 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10359 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10673 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10724 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10609 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10694 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10161 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10386 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10328 [5%height]

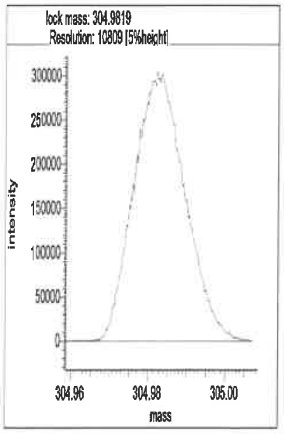

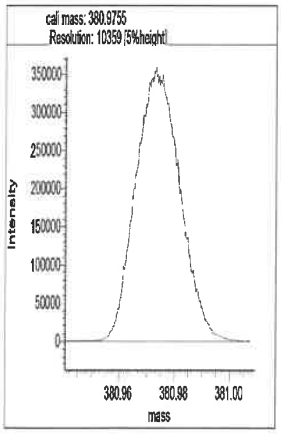

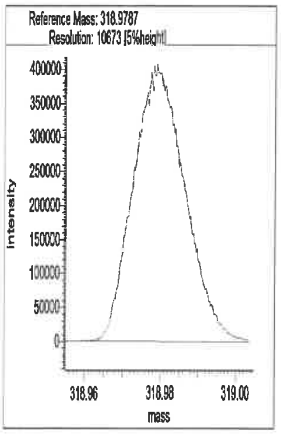

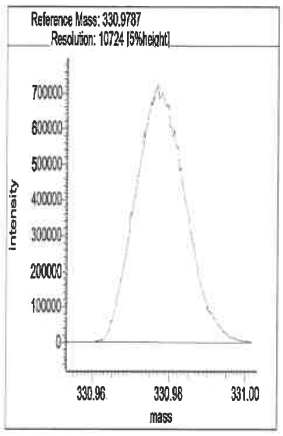

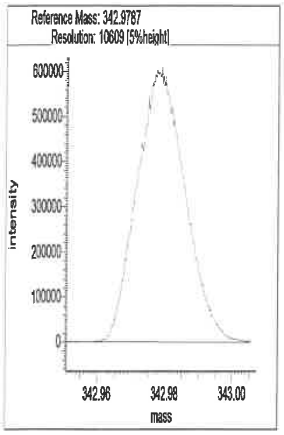

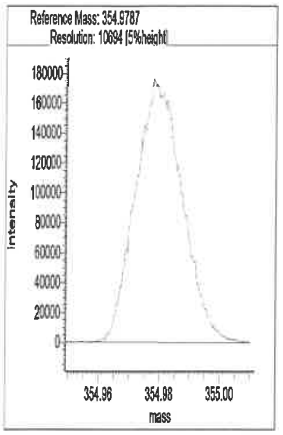

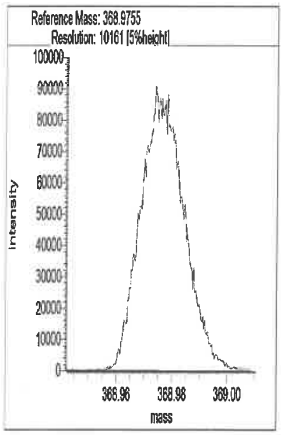

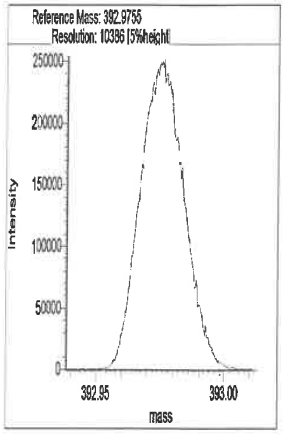

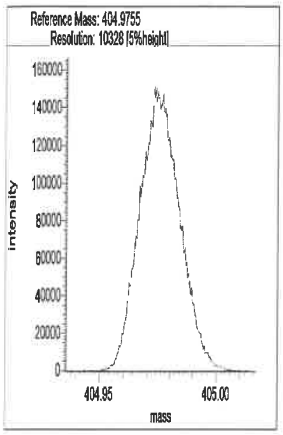

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10749 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10650 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10687 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10661 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10183 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10343 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10397 [5%height]

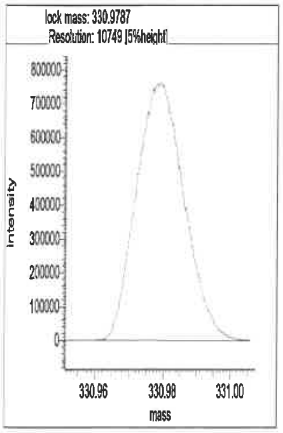

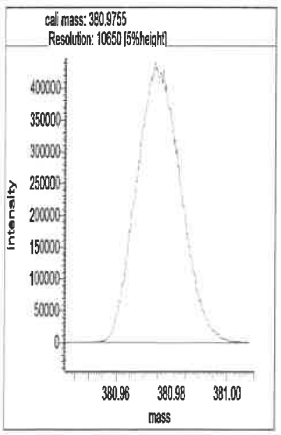

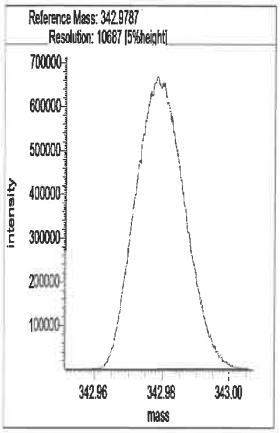

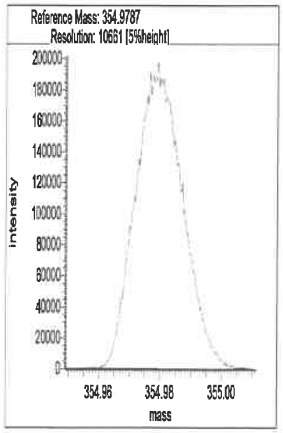

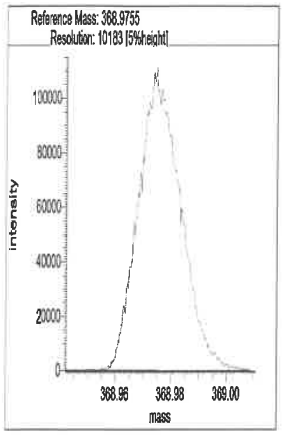

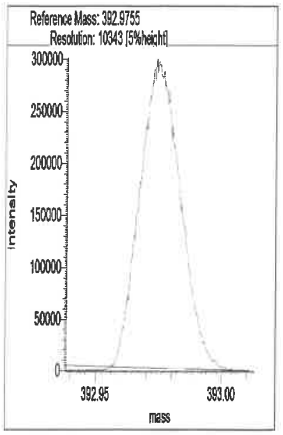

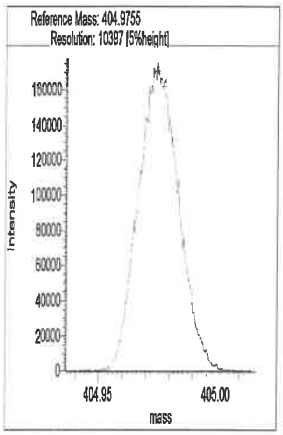

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10665 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10632 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10792 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10868 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10680 [5%height]

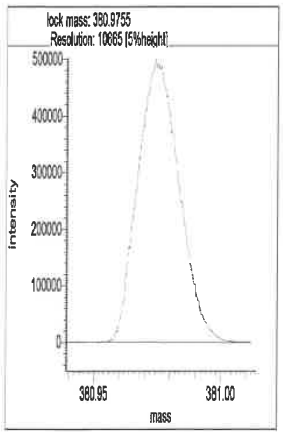

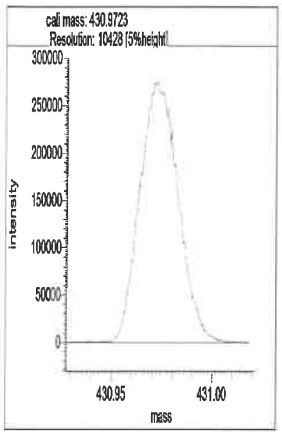

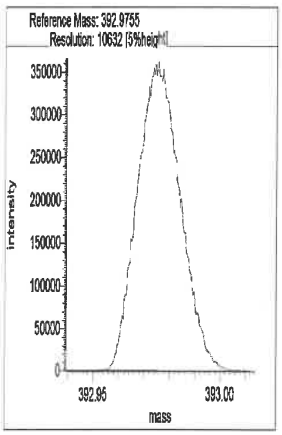

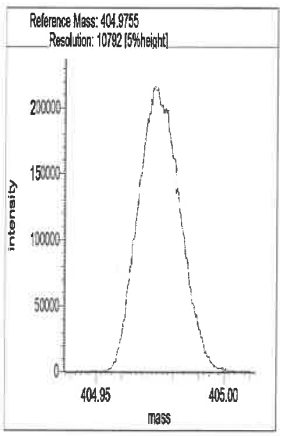

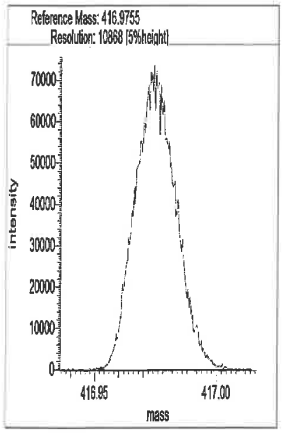

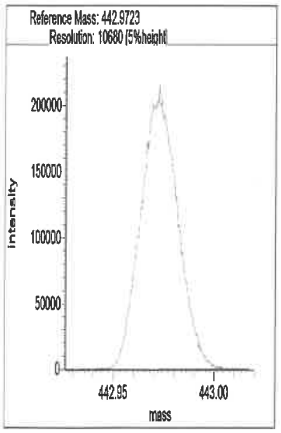

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10780 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10428 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10519 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10746 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10596 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10599 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10334 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10486 [5%height]

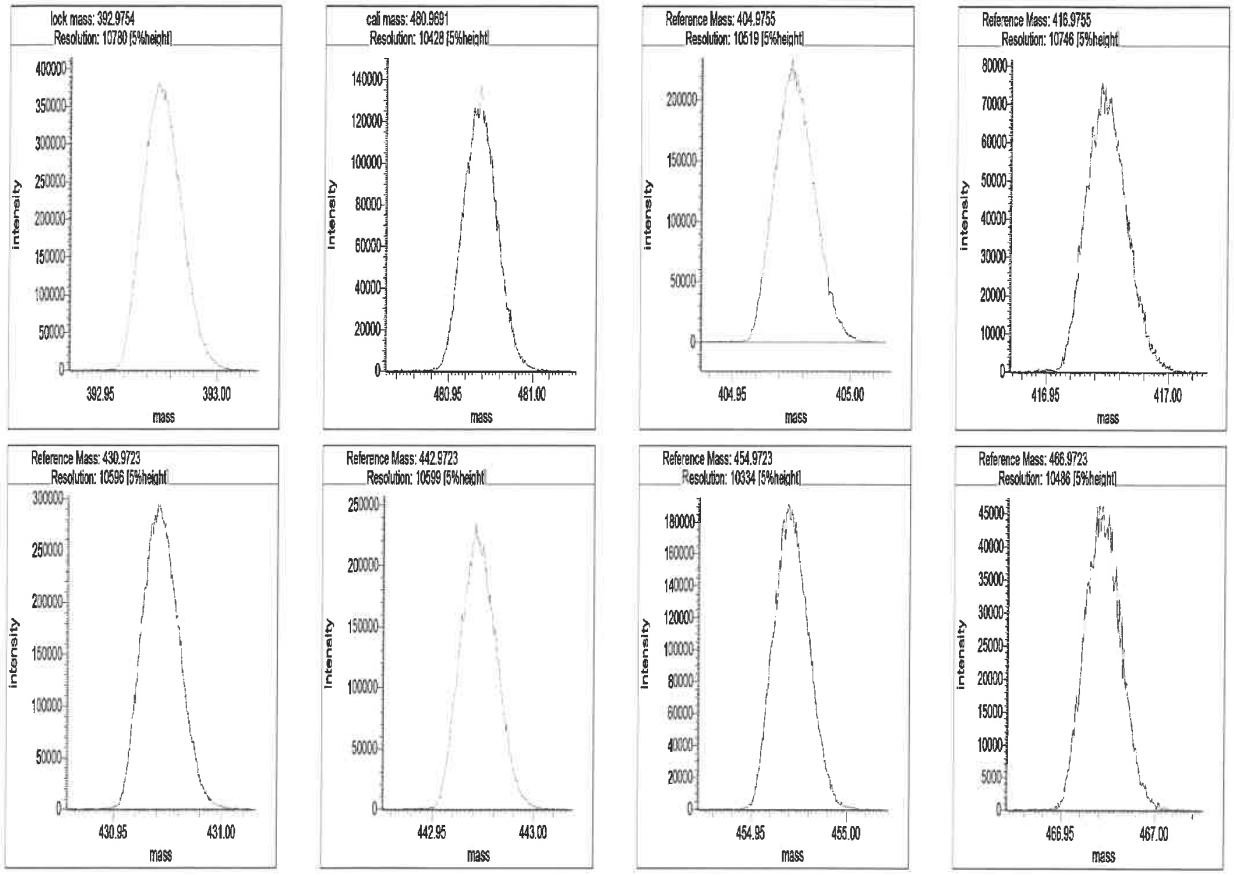

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10812 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10576 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10586 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10905 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10543 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10541 [5%height]

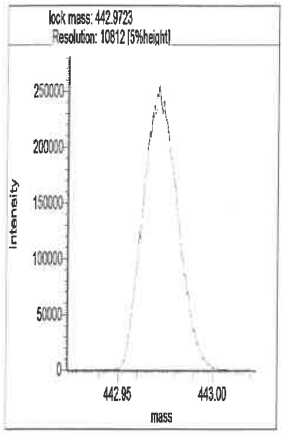
lock mass: 442.9723
Resolution: 10812 [5%height]
Intensity
mass

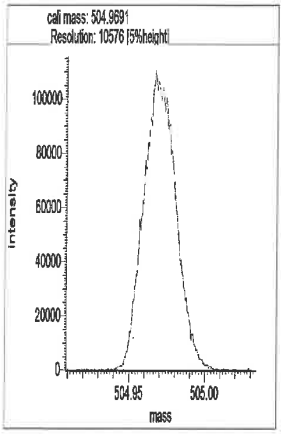
cali mass: 504.9691
Resolution: 10576 [5%height]
Intensity
mass

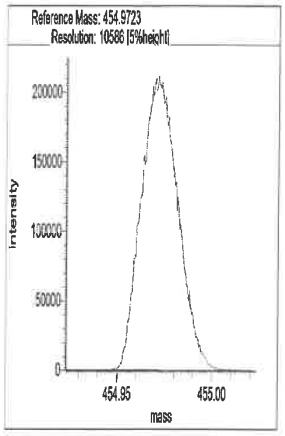
Reference Mass: 454.9723
Resolution: 10566 [5%height]
Intensity
mass

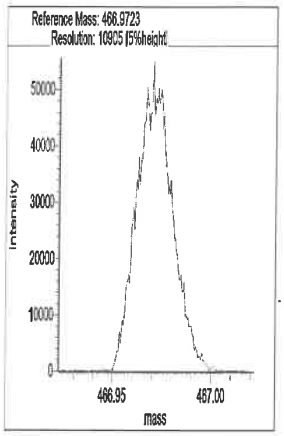
Reference Mass: 466.9723
Resolution: 10905 [5%height]
Intensity
mass

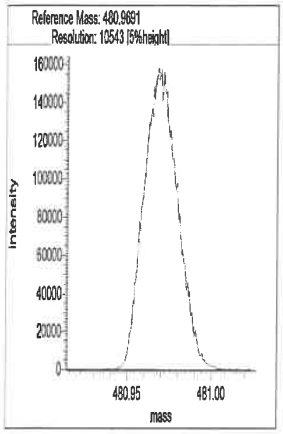
Reference Mass: 480.9691
Resolution: 10543 [5%height]
Intensity
mass

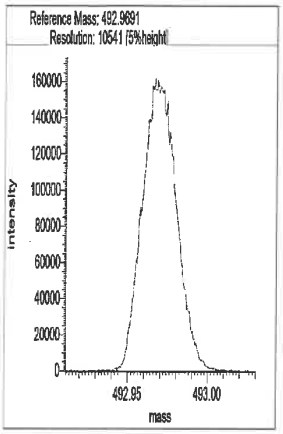
Reference Mass: 492.9691
Resolution: 10541 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 18:18
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11138 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10557 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10815 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11047 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10923 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10964 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10533 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10381 [5%height]

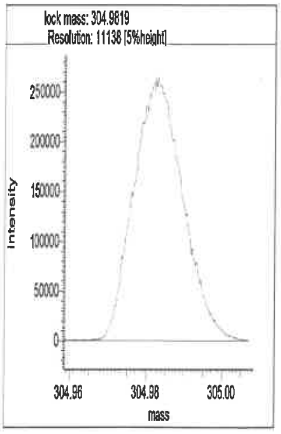

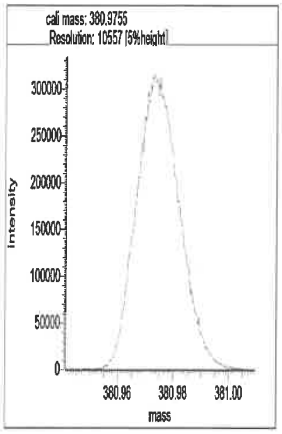

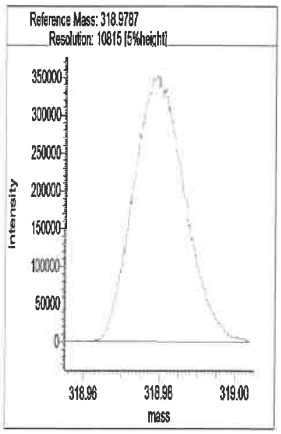

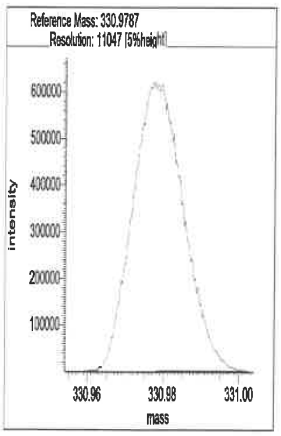

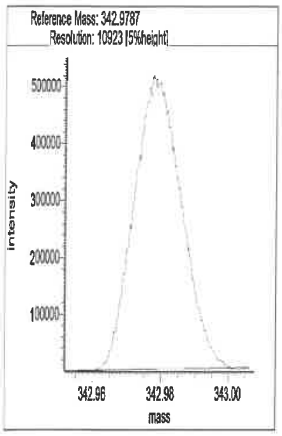

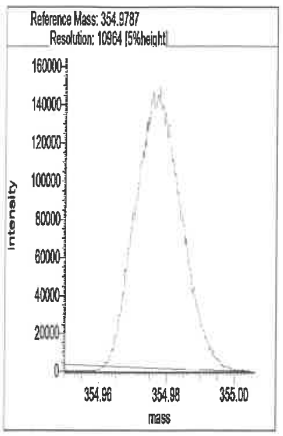

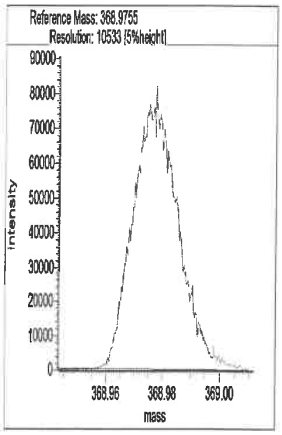

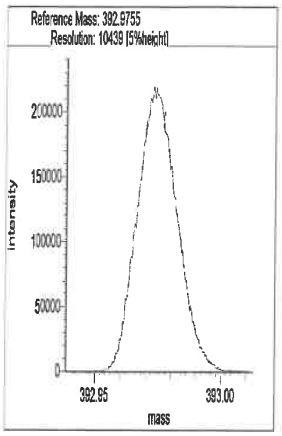

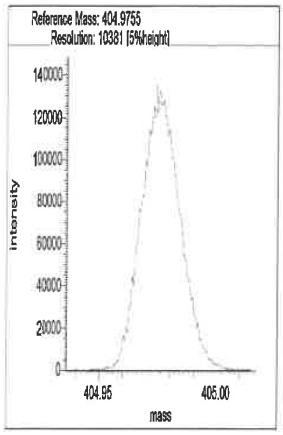

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10931 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10771 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11049 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10941 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10429 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10942 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10794 [5%height]

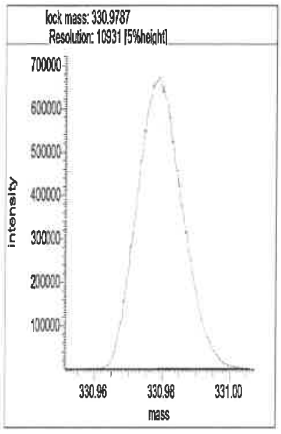

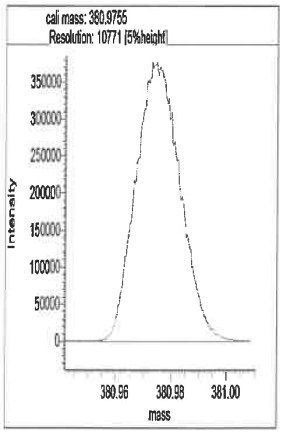

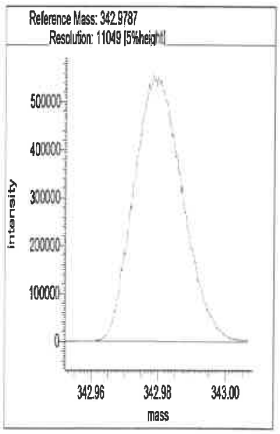

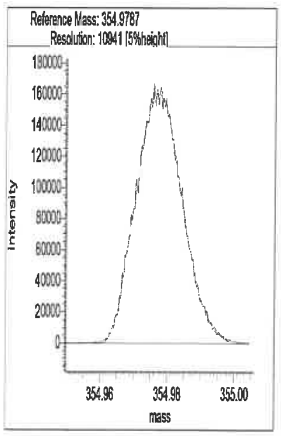

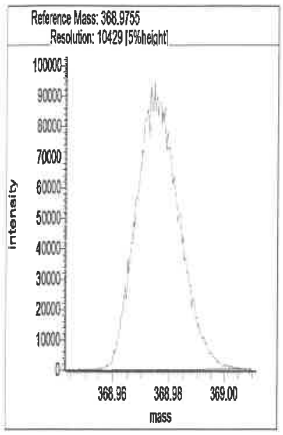

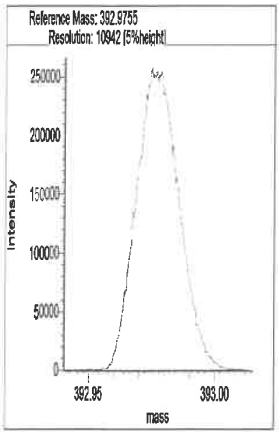

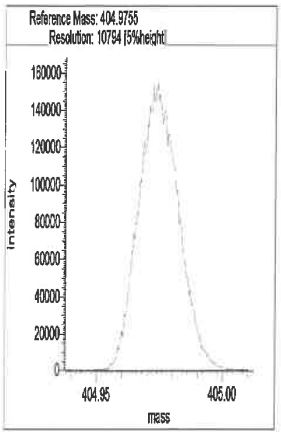

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10885 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10505 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10981 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10838 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11244 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10864 [5%height]

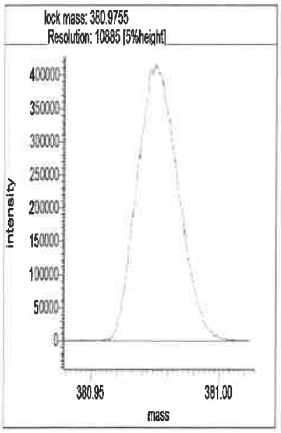

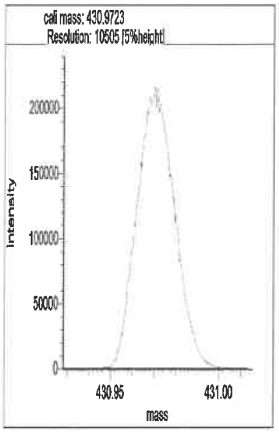

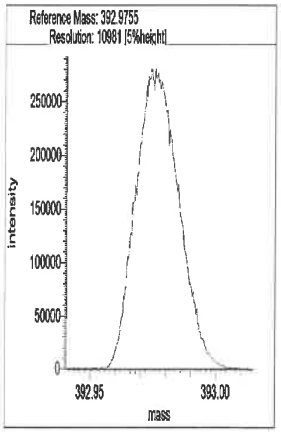

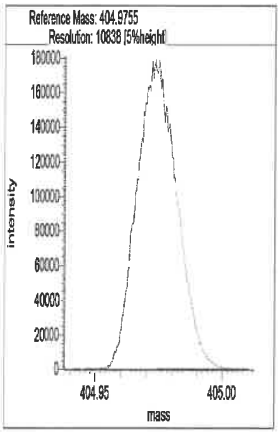

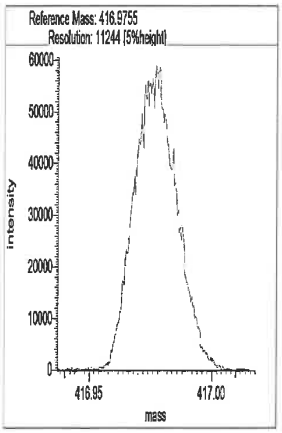

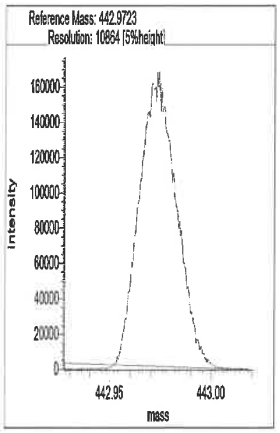

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10912 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10920 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10645 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11021 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10722 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10705 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10886 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11473 [5%height]

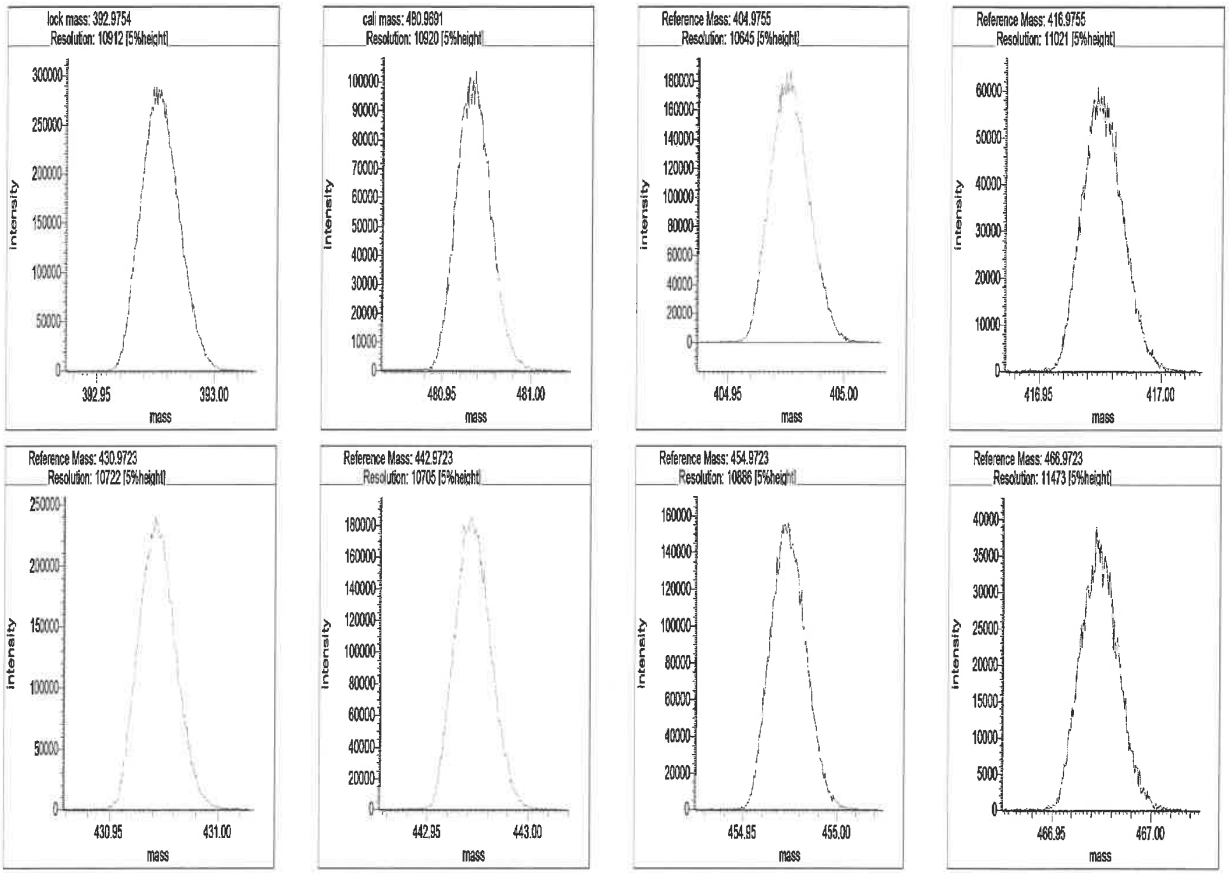

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11094 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10852 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11104 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11145 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10592 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10719 [5%height]

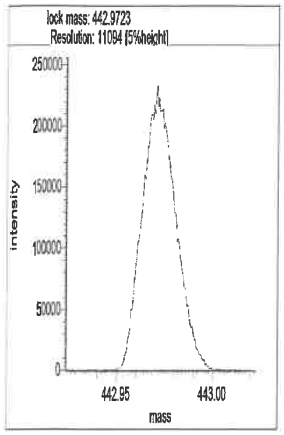
lock mass: 442.9723
Resolution: 11094 [5%height]
Intensity
mass

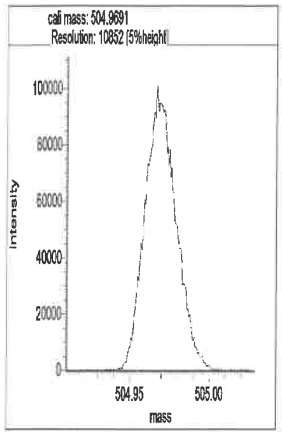
cali mass: 504.9691
Resolution: 10852 [5%height]
Intensity
mass

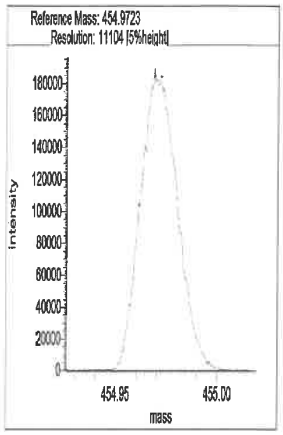
Reference Mass: 454.9723
Resolution: 11104 [5%height]
Intensity
mass

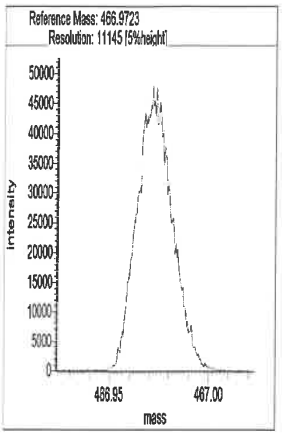
Reference Mass: 466.9723
Resolution: 11145 [5%height]
Intensity
mass

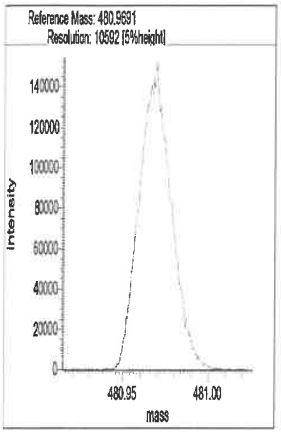
Reference Mass: 480.9691
Resolution: 10592 [5%height]
Intensity
mass

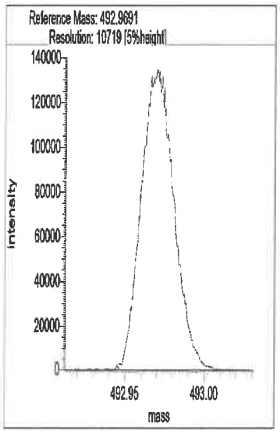
Reference Mass: 492.9691
Resolution: 10719 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 20:13
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11228 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10780 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10868 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10774 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10877 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10591 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10487 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10710 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10243 [5%height]

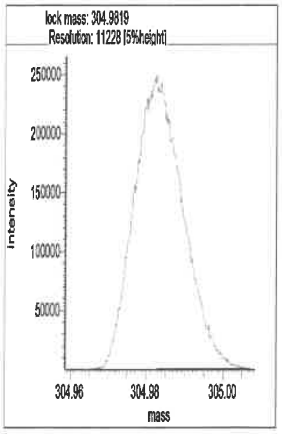

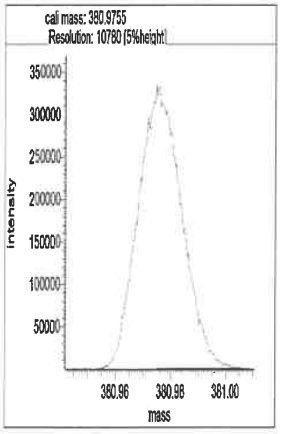

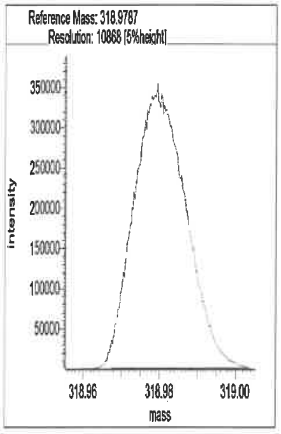

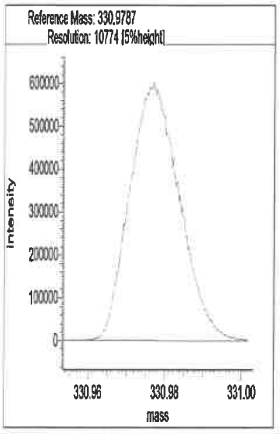

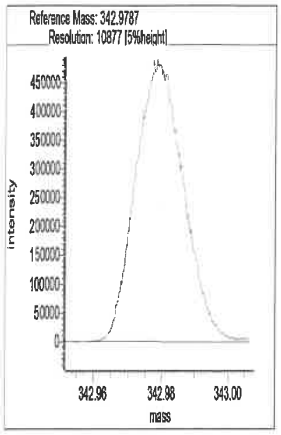

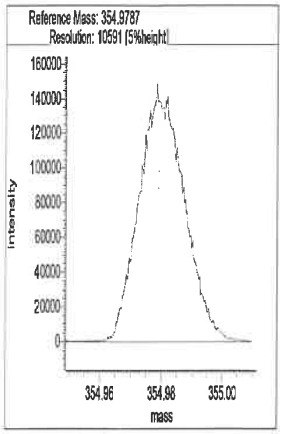

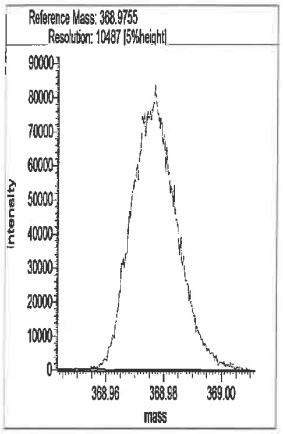

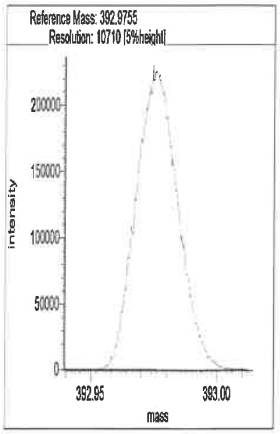

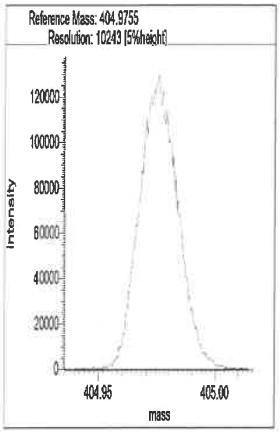

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10867 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10936 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10948 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10910 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10174 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10675 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10514 [5%height]

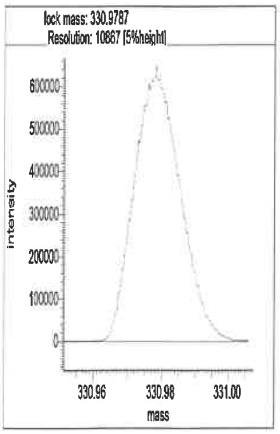

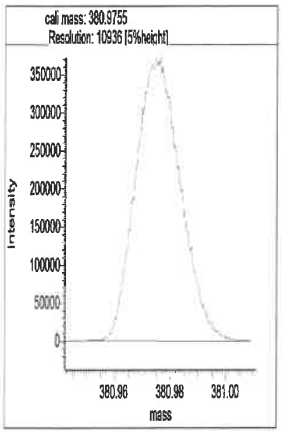

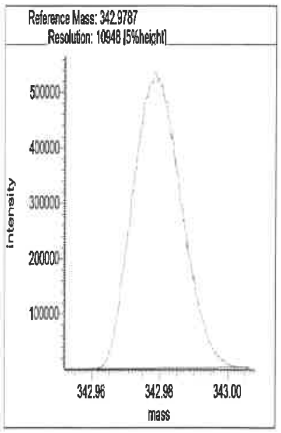

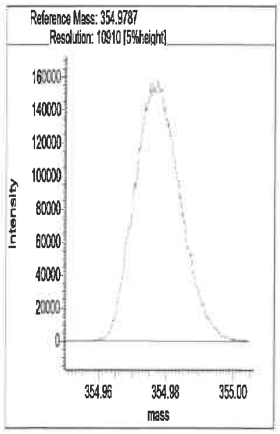

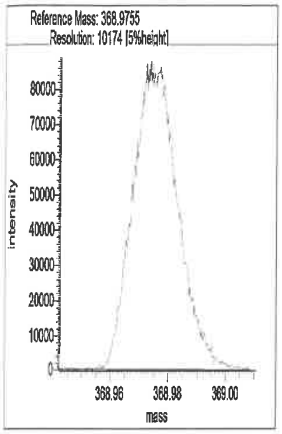

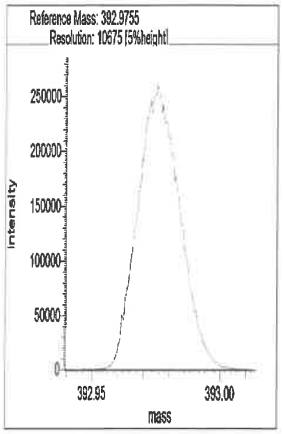

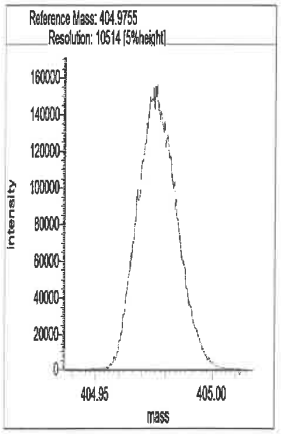

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10898 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10782 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11034 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11134 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10786 [5%height]

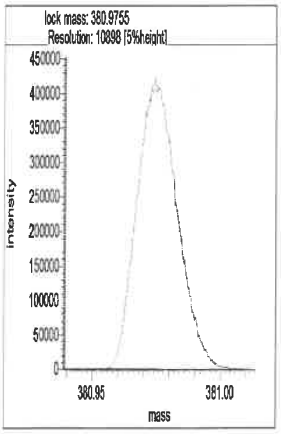

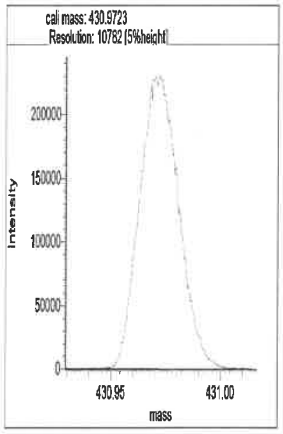

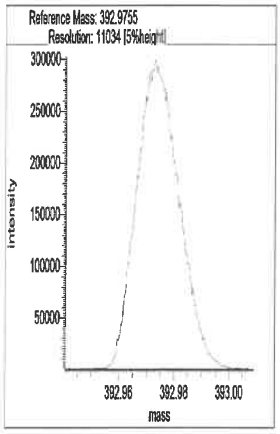

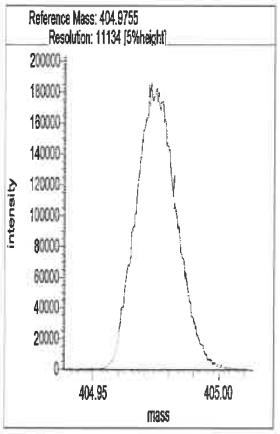

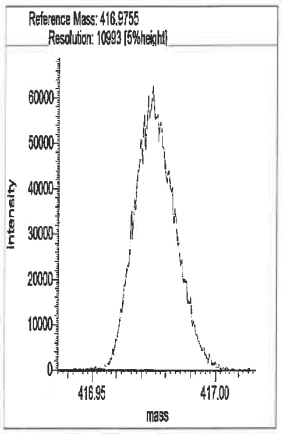

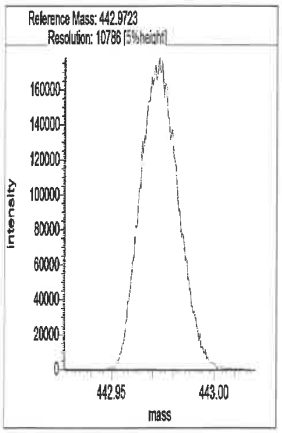

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11155 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10418 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10767 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10954 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10613 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11028 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10950 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10877 [5%height]

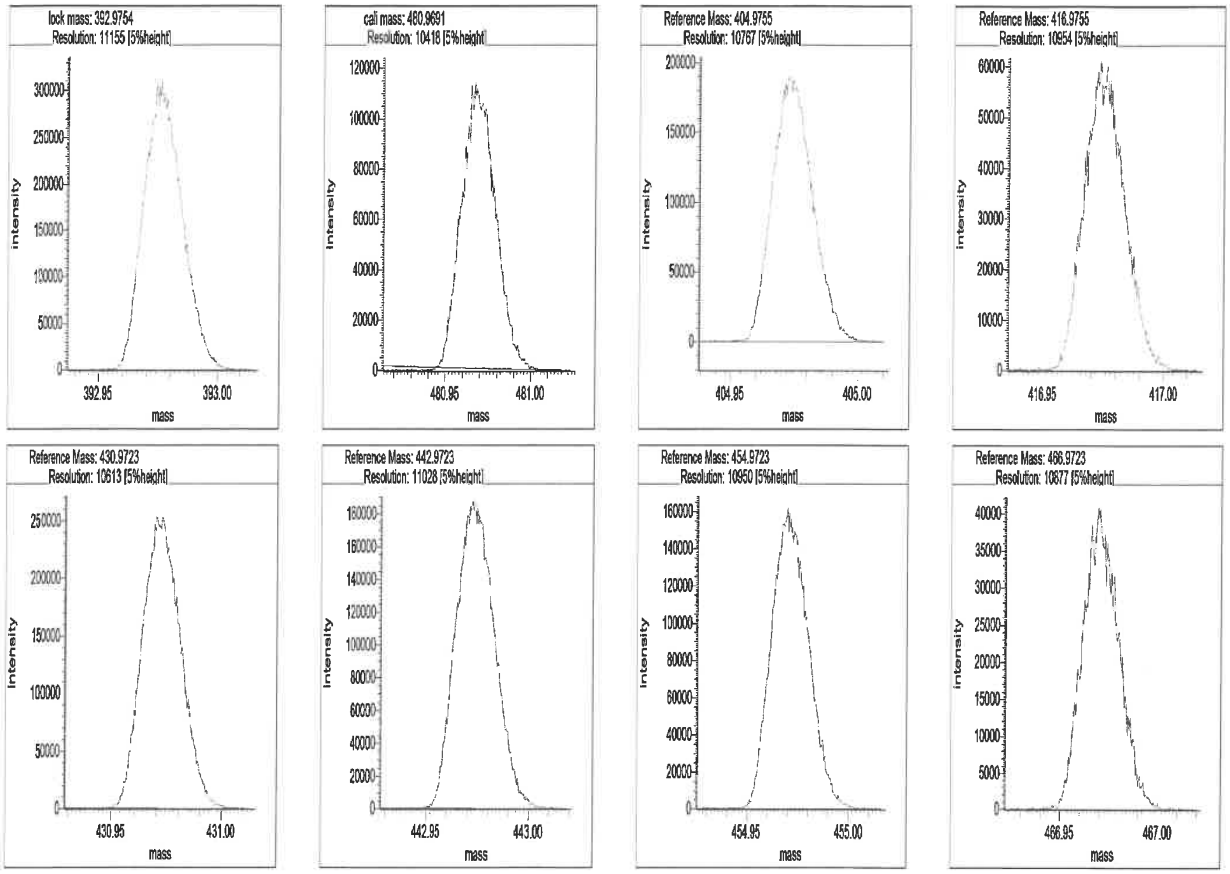

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10985 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10829 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11149 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11382 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11128 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11097 [5%height]

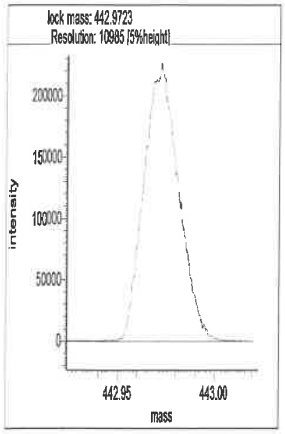
lock mass: 442.9723
Resolution: 10985 [5%height]
intensity
mass

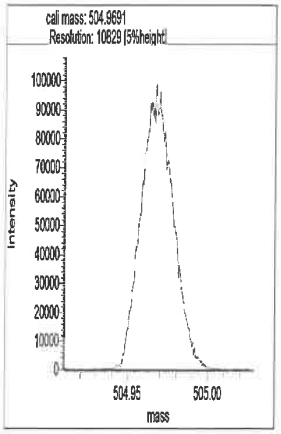
cali mass: 504.9691
Resolution: 10629 [5%height]
intensity
mass

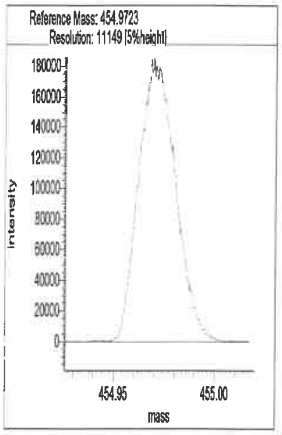
Reference Mass: 454.9723
Resolution: 11149 [5%height]
intensity
mass

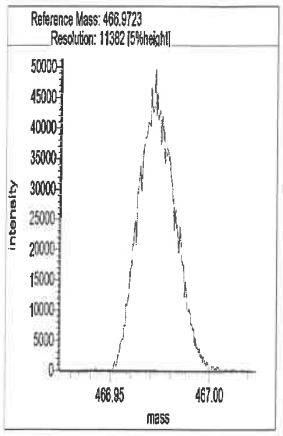
Reference Mass: 466.9723
Resolution: 11382 [5%height]
intensity
mass

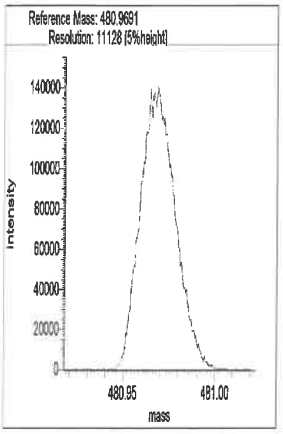
Reference Mass: 480.9691
Resolution: 11128 [5%height]
intensity
mass

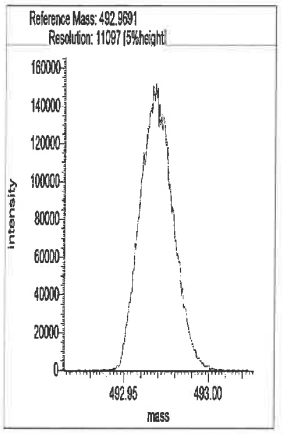
Reference Mass: 492.9691
Resolution: 11097 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.564	2334037	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.628	3167014	0.81	1.3459	100.8	100.8	0.1546	0.1546	101	
2,3,7,8-TCDF	19.662	19533	0.82	1.0802	0.5710	0.5710	0.007637	0.007637	114	
S Total TCDF					0.5710	0.5710	0.007637	0.007637		
D 13C-2,3,7,8-TCDD	20.933	2138853	0.81	0.9317	98.4	98.4	0.1772	0.1772	98.36	
$ 37Cl4-2,3,7,8-TCDD	20.941	11266		1.0083	0.4787	0.4787	0.005933	0.005933	95.74	
2,3,7,8-TCDD	20.967	12122	0.71	1.0753	0.5270	0.5270	0.0223	0.0223	105	
S Total TCDD					0.5270	0.5270	0.0223	0.0223		
D 13C-1,2,3,7,8-PeCDF	26.587	2514489	1.59	1.1405	94.5	94.5	0.3469	0.3469	94.46	
1,2,3,7,8-PeCDF	26.613	74934	1.71	1.0543	2.827	2.827	0.0199	0.0199	113	
D 13C-2,3,4,7,8-PeCDF	28.046	2592947	1.57	1.1253	98.7	98.7	0.3516	0.3516	98.72	
2,3,4,7,8-PeCDF	28.071	72817	1.61	1.0079	2.786	2.786	0.0219	0.0219	111	
S Total PeCDF					5.613	5.613	0.0209	0.0209		
D 13C-1,2,3,7,8-PeCDD	28.830	1602476	1.59	0.7165	95.8	95.8	0.1271	0.1271	95.83	
1,2,3,7,8-PeCDD	28.855	42943	1.72	1.0465	2.561	2.561	0.0215	0.0215	102	
S Total PeCDD					2.561	2.561	0.0215	0.0215		
D 13C-1,2,3,4,7,8-HxCDF	34.406	1517222	0.52	0.9648	89.7	89.7	0.3358	0.3358	89.72	
1,2,3,4,7,8-HxCDF	34.431	46374	1.30	1.1474	2.664	2.664	0.0219	0.0219	107	
D 13C-1,2,3,6,7,8-HxCDF	34.583	1626653	0.54	1.0708	86.7	86.7	0.3026	0.3026	86.67	
1,2,3,6,7,8-HxCDF	34.608	54388	1.19	1.2178	2.746	2.746	0.0201	0.0201	110	
D 13C-2,3,4,6,7,8-HxCDF	35.468	1523436	0.53	1.0413	83.5	83.5	0.3112	0.3112	83.47	
2,3,4,6,7,8-HxCDF	35.485	50026	1.25	1.2145	2.704	2.704	0.0183	0.0183	108	
D 13C-1,2,3,7,8,9-HxCDF	36.404	1696557	0.52	0.9731	99.5	99.5	0.3330	0.3330	99.47	
1,2,3,7,8,9-HxCDF	36.421	57602	1.21	1.2401	2.738	2.738	0.0145	0.0145	110	
S Total HxCDF					10.9	10.9	0.0187	0.0187		
* 13C-1,2,3,7,8,9-HxCDD	36.210	1752780	1.29	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.695	1127895	1.27	0.7587	84.8	84.8	0.2005	0.2005	84.82	
1,2,3,4,7,8-HxCDD	35.712	31680	1.20	1.0608	2.648	2.648	0.0198	0.0198	106	
D 13C-1,2,3,6,7,8-HxCDD	35.822	1291365	1.29	0.8593	85.7	85.7	0.1770	0.1770	85.74	
1,2,3,6,7,8-HxCDD	35.839	34082	1.16	0.9933	2.657	2.657	0.0196	0.0196	106	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.227	39595	1.15	1.1094	2.950	2.950	0.0182	0.0182	118	
S Total HxCDD					8.255	8.255	0.0192	0.0192		
D 13C-1,2,3,4,6,7,8-HpCDF	38.321	1227279	0.46	0.7359	95.1	95.1	0.3550	0.3550	95.14	
1,2,3,4,6,7,8-HpCDF	38.329	47287	1.05	1.4421	2.672	2.672	0.0138	0.0138	107	
D 13C-1,2,3,4,7,8,9-HpCDF	39.611	1120663	0.46	0.6854	93.3	93.3	0.3812	0.3812	93.29	
1,2,3,4,7,8,9-HpCDF	39.619	39382	1.04	1.3092	2.684	2.684	0.0149	0.0149	107	
S Total HpCDF					5.356	5.356	0.0144	0.0144		
D 13C-1,2,3,4,6,7,8-HpCDD	39.307	1113145	1.06	0.6745	94.2	94.2	0.2577	0.2577	94.15	
1,2,3,4,6,7,8-HpCDD	39.316	31661	0.99	1.0503	2.708	2.708	0.0190	0.0190	108	
S Total HpCDD					2.708	2.708	0.0190	0.0190		
D 13C-OCDD	41.797	1823492	0.90	0.5446	191.0	191.0	0.3325	0.3325	95.51	
OCDF	41.890	61051	0.95	1.3168	5.085	5.085	0.0322	0.0322	102	
OCDD	41.805	51642	0.88	1.0620	5.333	5.333	0.0182	0.0182	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.564	20.547	1		1041449	163457	148	370	1104		
333.9338	20.564	20.547	1		1292588	204311	95	237	2151	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.628	19.616	1	0.954	1415927	226149	197	492	1148		
317.9389	19.628	19.616	1	0.954	1751087	282985	109	272	2596	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.662	19.646	1	1.002	8785	1472	3	7	491		
305.8987	19.662	19.646	1	1.002	10748	1598	14	35	114	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.933	20.910	1	1.018	956834	140160	148	370	947		
333.9338	20.924	20.910	1	1.018	1182019	172842	95	237	1819	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.941	20.935	0	1.018	11266	1696	9	22	188		
2,3,7,8-TCDD											
319.8965	20.967	20.939	2	1.002	5046	703	25	62	28		
321.8936	20.950	20.939	1	1.001	7076	1165	5	12	233	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.587	26.560	2	1.293	1544614	271650	354	885	767		
353.8970	26.587	26.560	2	1.293	969875	166951	228	570	732	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.613	26.584	2	1.001	47325	8180	13	32	629		
341.8567	26.596	26.584	1	1.000	27609	5058	24	60	211	1.71(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.046	28.014	2	1.364	1584958	253357	354	885	716		
353.8970	28.037	28.014	1	1.363	1007989	162868	228	570	714	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.071	28.039	2	1.001	44929	7445	13	32	573		
341.8567	28.063	28.039	1	1.001	27888	4385	24	60	183	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.830	28.801	2	1.402	983567	149258	81	202	1843		
369.8919	28.830	28.801	2	1.402	618909	95647	53	132	1805	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.855	28.828	2	1.001	27146	4327	17	42	255		
357.8516	28.863	28.828	2	1.001	15797	2500	5	12	500	1.72(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.406	34.384	1	0.950	521957	103110	186	465	554		
385.8610	34.406	34.384	1	0.950	995265	195967	351	877	558	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.431	34.405	2	1.001	26220	5205	19	47	274		
375.8178	34.431	34.405	2	1.001	20154	4061	11	27	369	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.583	34.562	1	0.955	567371	107545	186	465	578		
385.8610	34.583	34.562	1	0.955	1059282	198264	351	877	565	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.608	34.582	2	1.001	29510	5690	19	47	299		
375.8178	34.600	34.582	1	1.000	24878	4701	11	27	427	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.468	35.444	1	0.980	527302	117266	186	465	630		
385.8610	35.468	35.444	1	0.980	996134	220962	351	877	630	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.485	35.461	1	1.000	27767	6035	19	47	318		
375.8178	35.476	35.461	1	1.000	22259	4941	11	27	449	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.404	36.388	1	1.005	582391	143633	186	465	772		
385.8610	36.404	36.388	1	1.005	1114166	273141	351	877	778	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.421	36.402	1	1.000	31508	7777	19	47	409		
375.8178	36.421	36.402	1	1.000	26094	6045	11	27	550	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.210	36.192	1		987922	232825	142	355	1640		
403.8529	36.210	36.192	1		764858	181339	110	275	1649	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.695	35.680	1	0.986	630506	153231	142	355	1079		
403.8529	35.695	35.680	1	0.986	497389	118761	110	275	1080	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.712	35.695	1	1.000	17291	4375	12	30	365		
391.8127	35.712	35.695	1	1.000	14389	3541	11	27	322	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.822	35.805	1	0.989	727495	166749	142	355	1174		
403.8529	35.822	35.805	1	0.989	563870	125792	110	275	1144	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.839	35.820	1	1.000	18295	4156	12	30	346		
391.8127	35.830	35.820	1	1.000	15787	3353	11	27	305	1.16(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.227	36.208	1	1.015	21159	5138	12	30	428		
391.8127	36.218	36.208	1	1.015	18436	4550	11	27	414	1.15(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.321	38.305	1	1.058	389255	110351	150	375	736		
419.8220	38.321	38.305	1	1.058	838024	240182	283	707	849	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.329	38.317	1	1.000	24164	7010	18	45	389		
409.7788	38.329	38.317	1	1.000	23123	6463	10	25	646	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.611	39.600	1	1.094	351407	112029	150	375	747		
419.8220	39.611	39.600	1	1.094	769256	246420	283	707	871	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.619	39.608	1	1.000	20064	6267	18	45	348		
409.7788	39.628	39.608	1	1.000	19318	5891	10	25	589	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.307	39.293	1	1.086	574080	172930	147	367	1176		
437.8140	39.307	39.293	1	1.086	539065	163690	141	352	1161	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.316	39.301	1	1.000	15770	4799	17	42	282		
425.7737	39.316	39.301	1	1.000	15891	4656	10	25	466	0.99(0.88-1.20)	
13C-OCDD											
469.7780	41.797	41.785	1	1.154	864827	245324	148	370	1658		
471.7750	41.797	41.785	1	1.154	958665	273299	152	380	1798	0.90(0.76-1.02)	
OCDF											
441.7428	41.890	41.875	1	1.002	29681	8172	14	35	584		
443.7399	41.881	41.875	0	1.002	31370	8963	30	75	299	0.95(0.76-1.02)	
OCDD											
457.7377	41.805	41.794	1	1.000	24122	6775	8	20	847		
459.7348	41.805	41.794	1	1.000	27520	7850	12	30	654	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

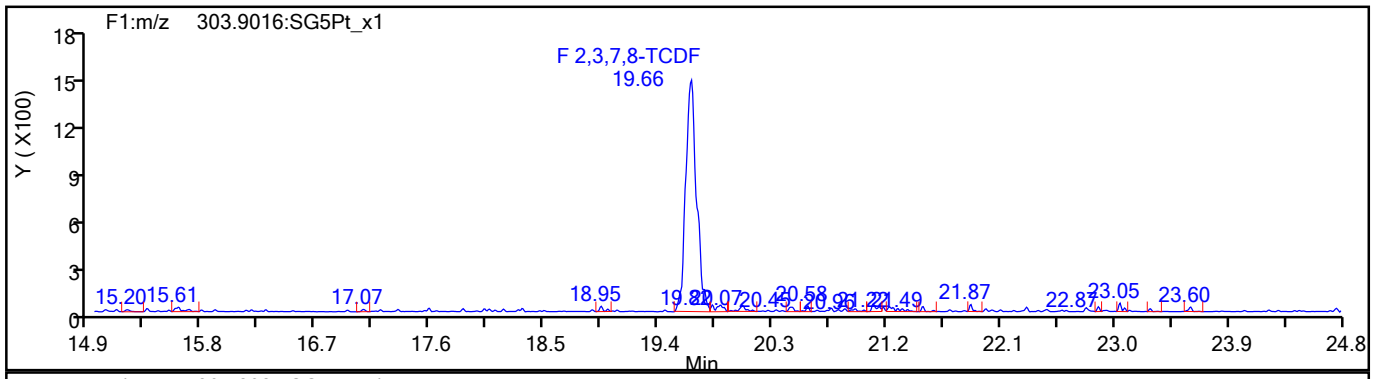

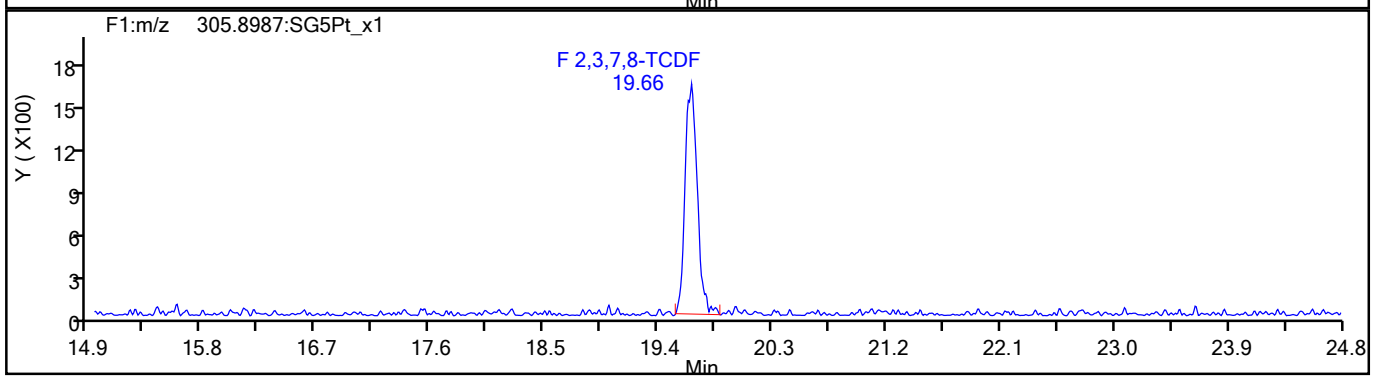

TCDF Standards

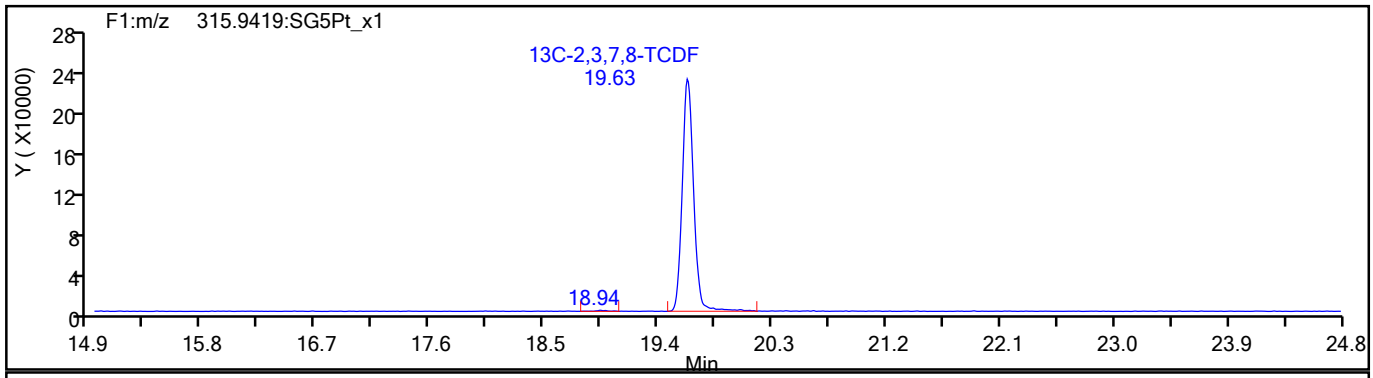

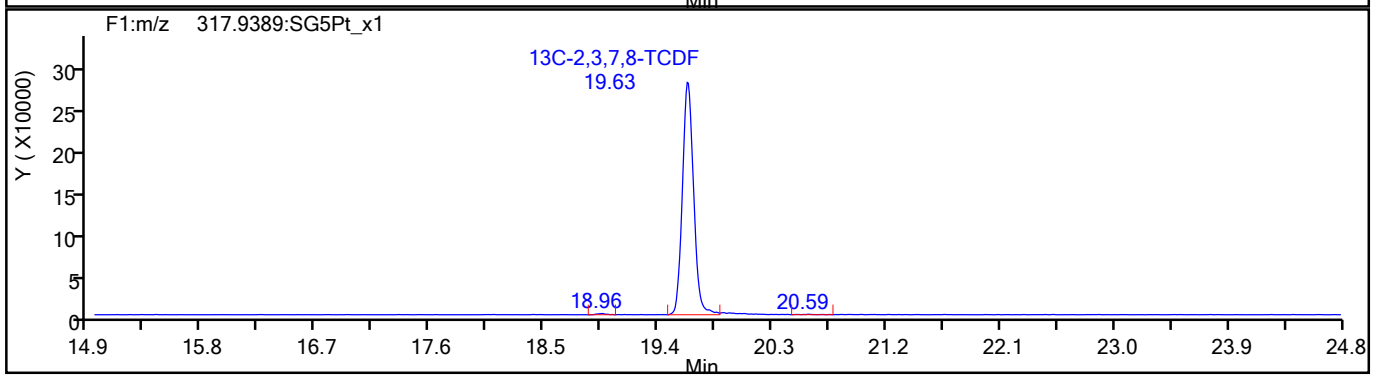

784223

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

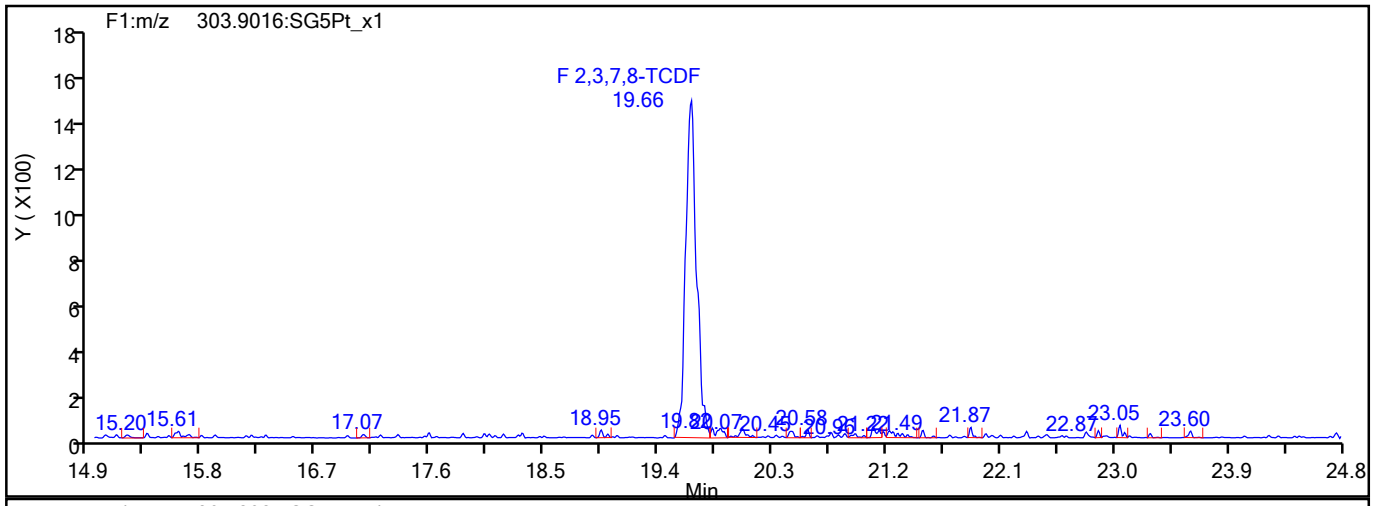

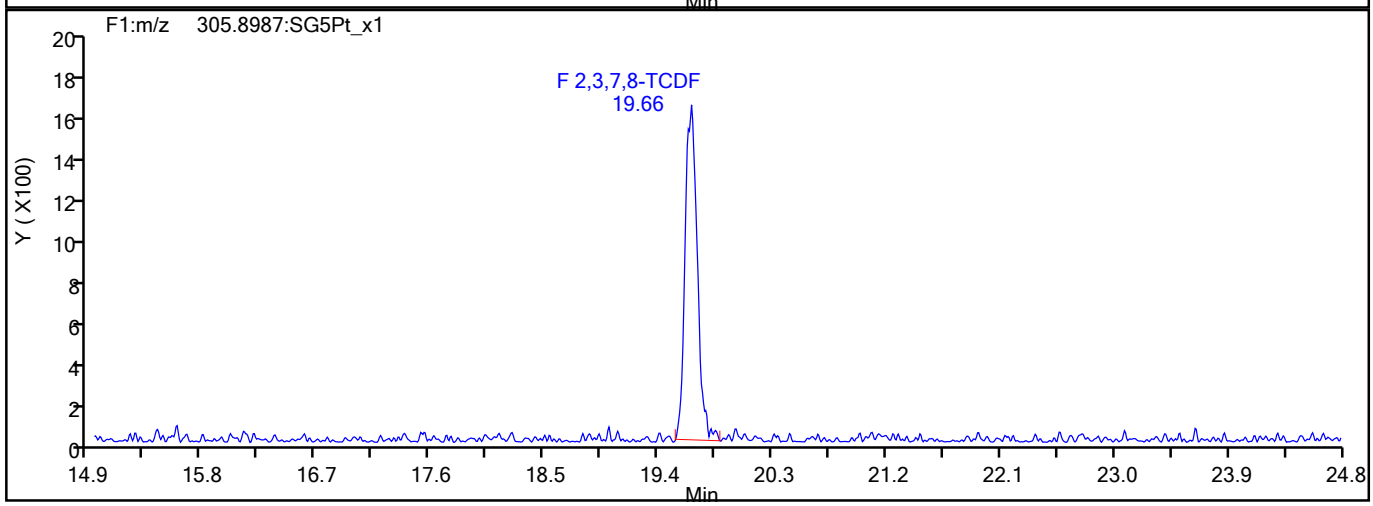

TCDF Interference Mass

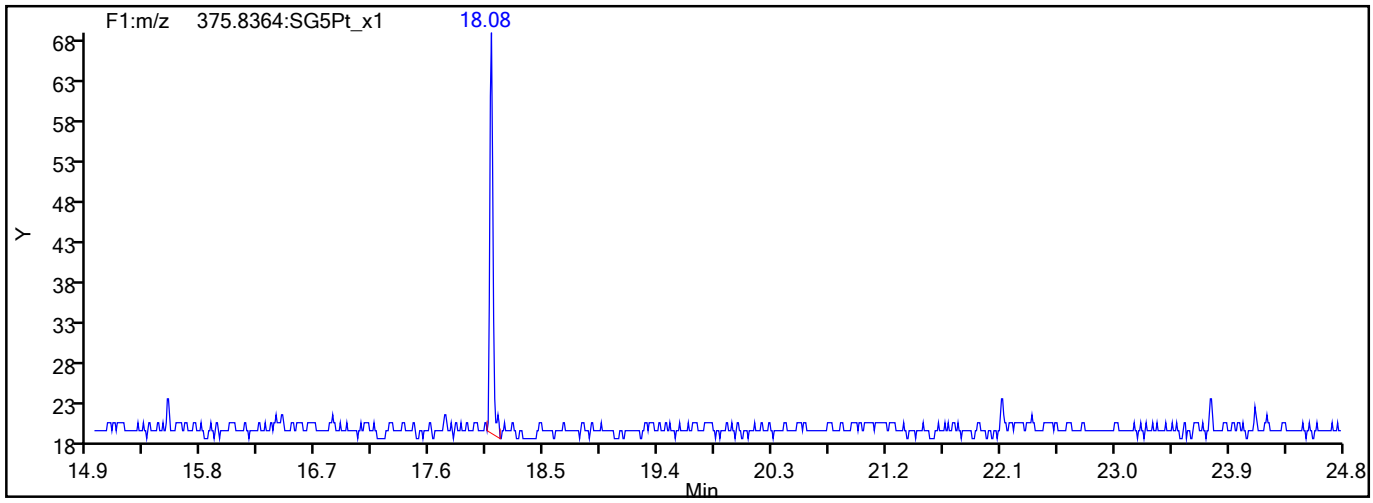

784224

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

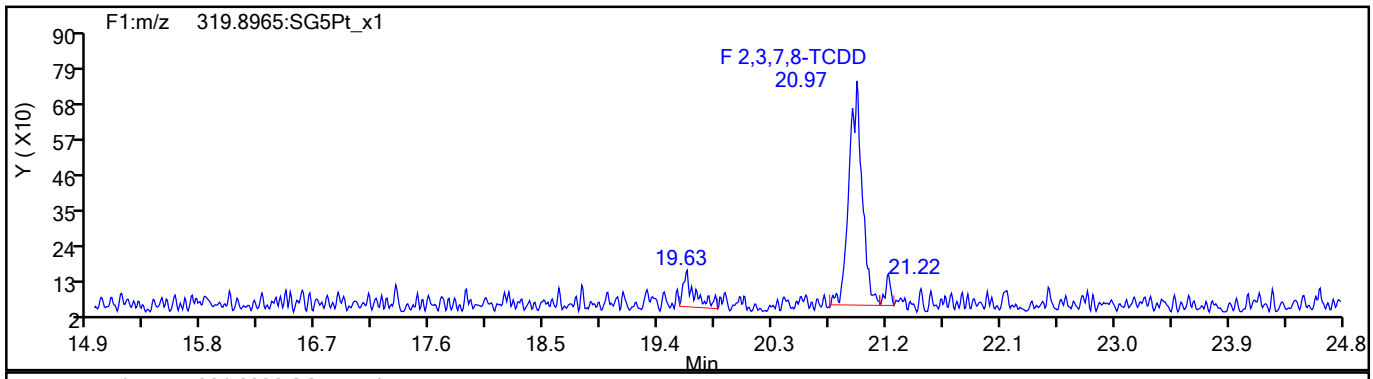

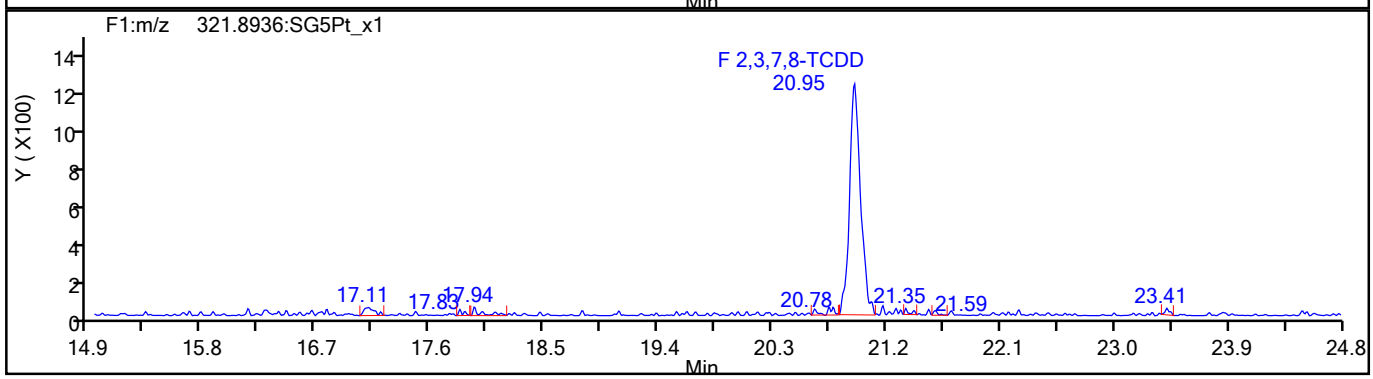

TCDD Standards

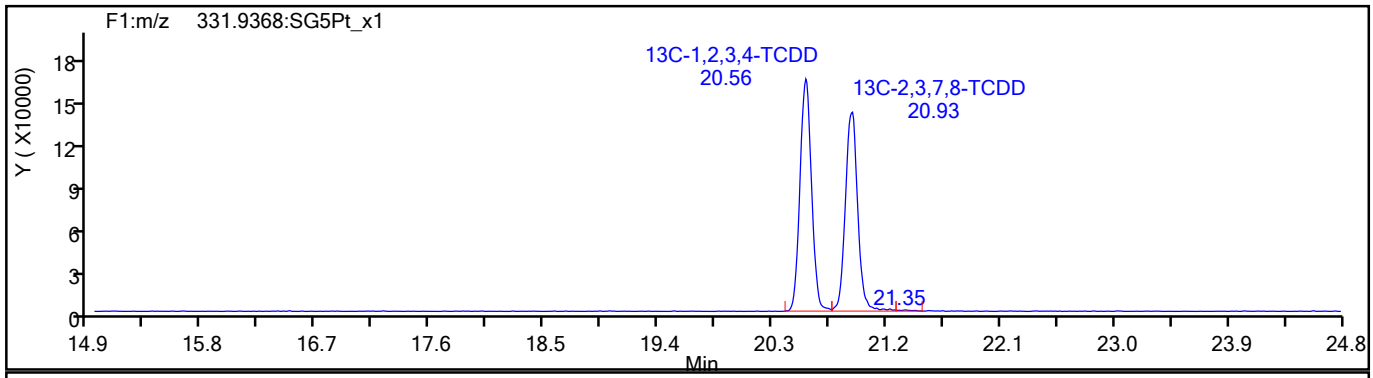

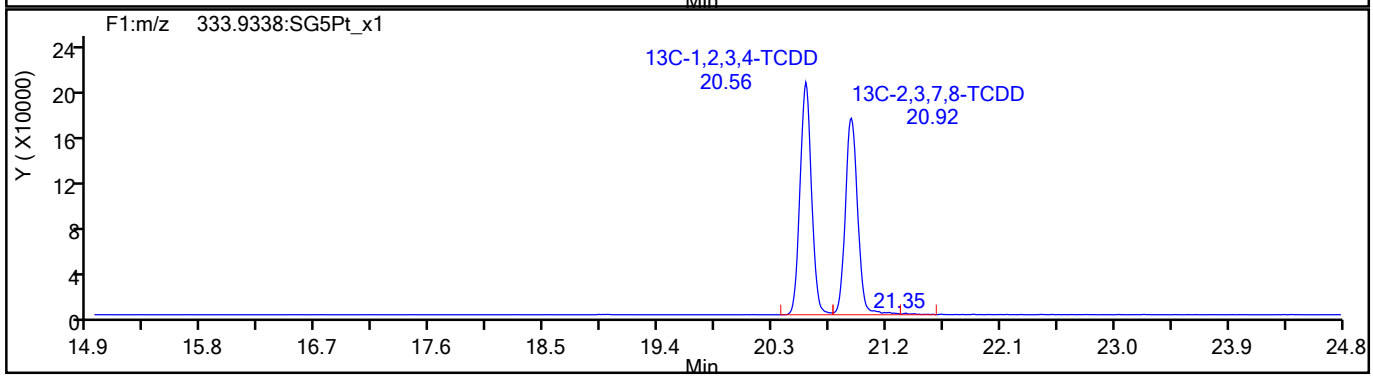

784225

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

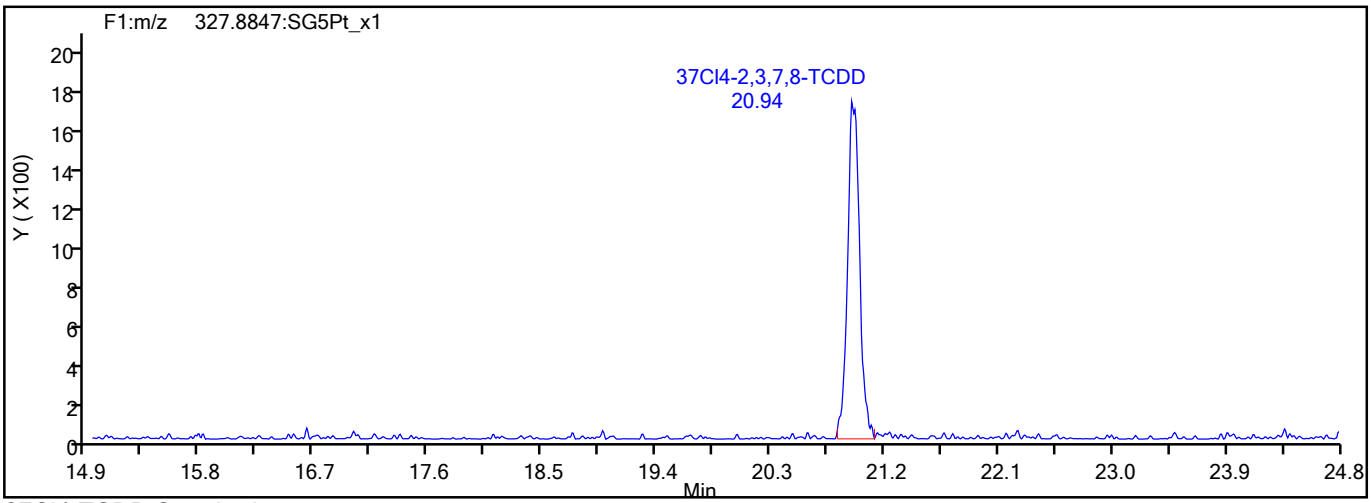

37Cl4-TCDD Standards

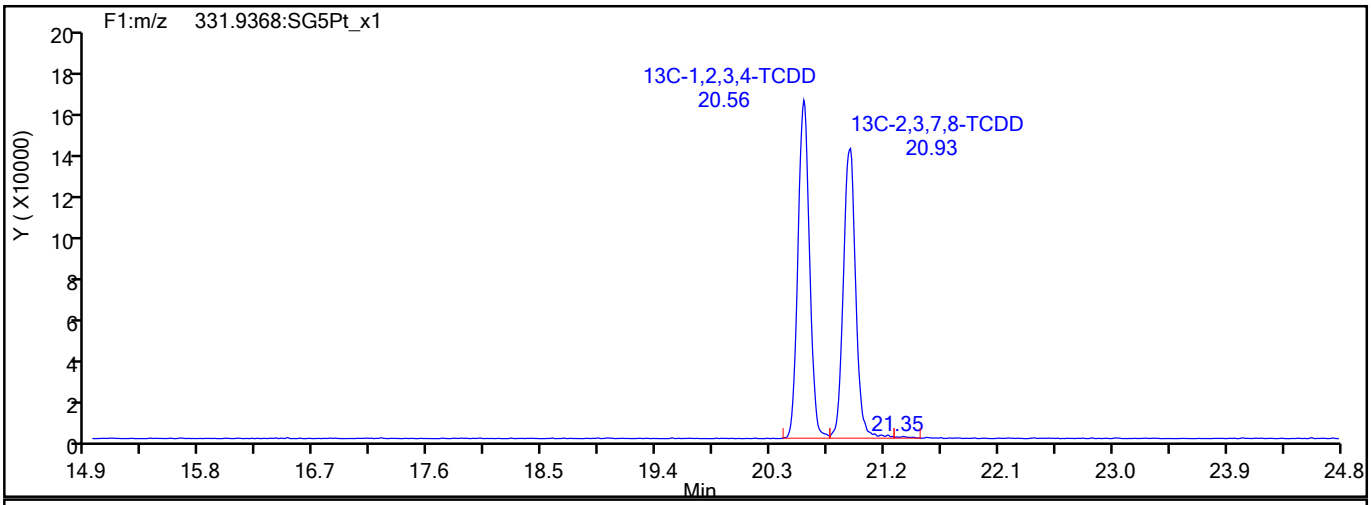

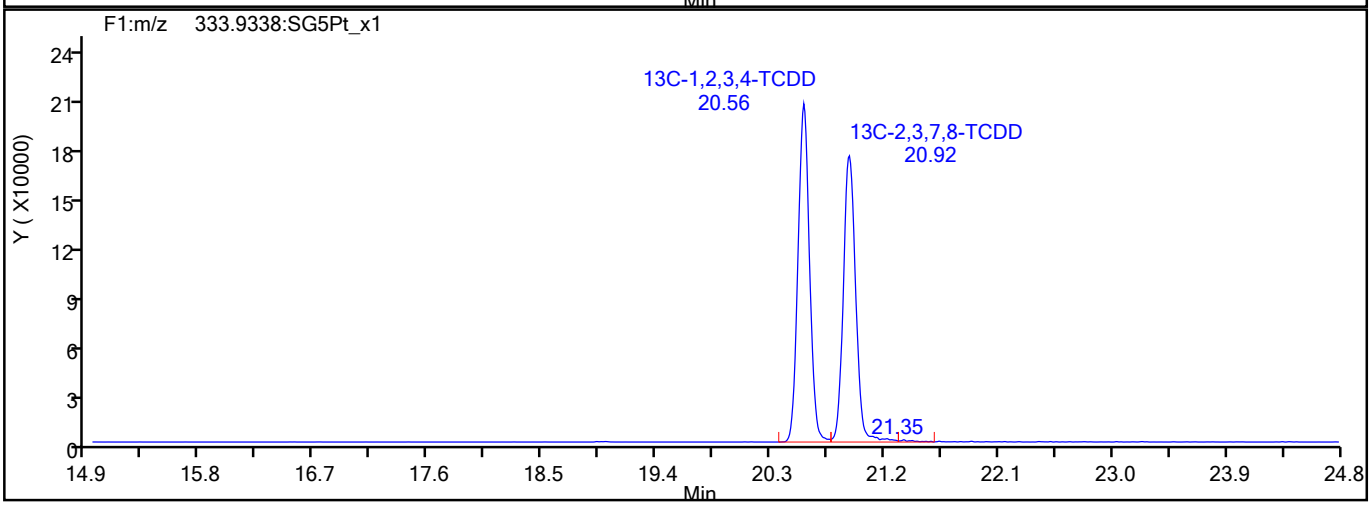

784226

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

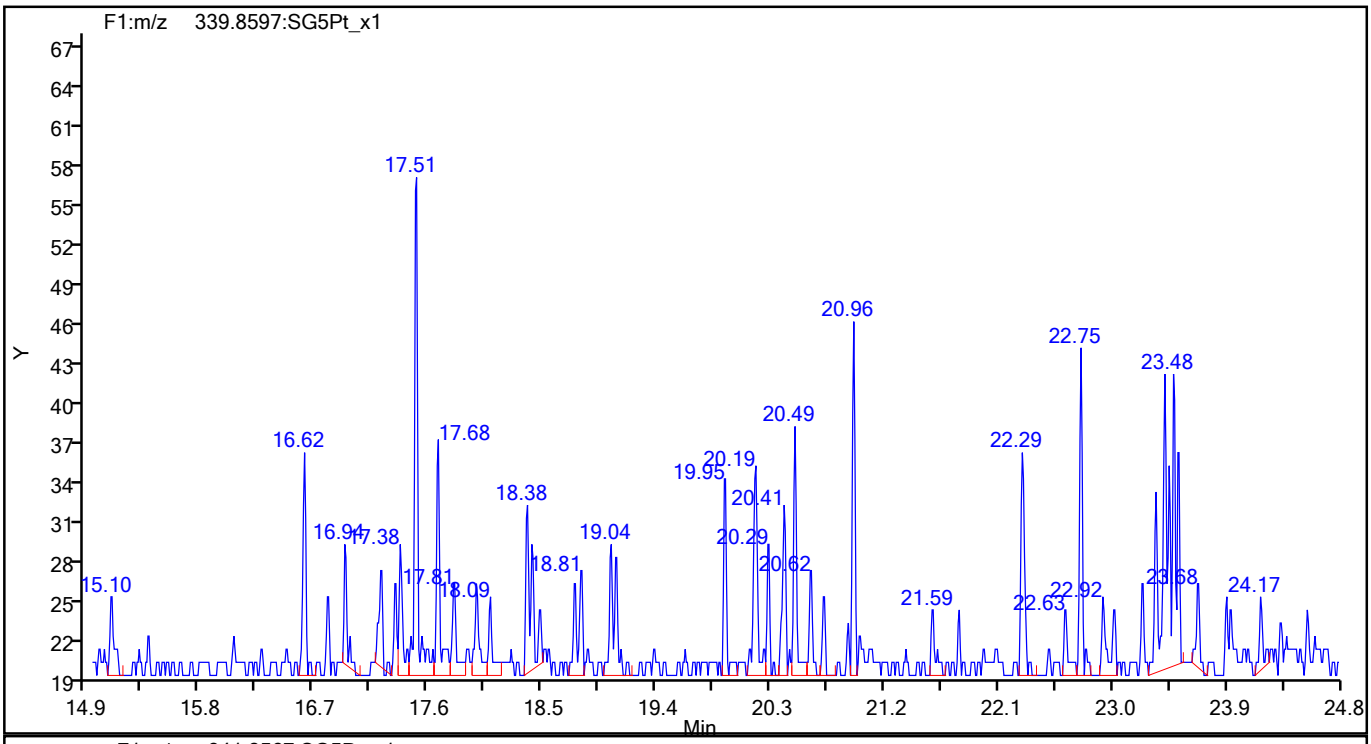

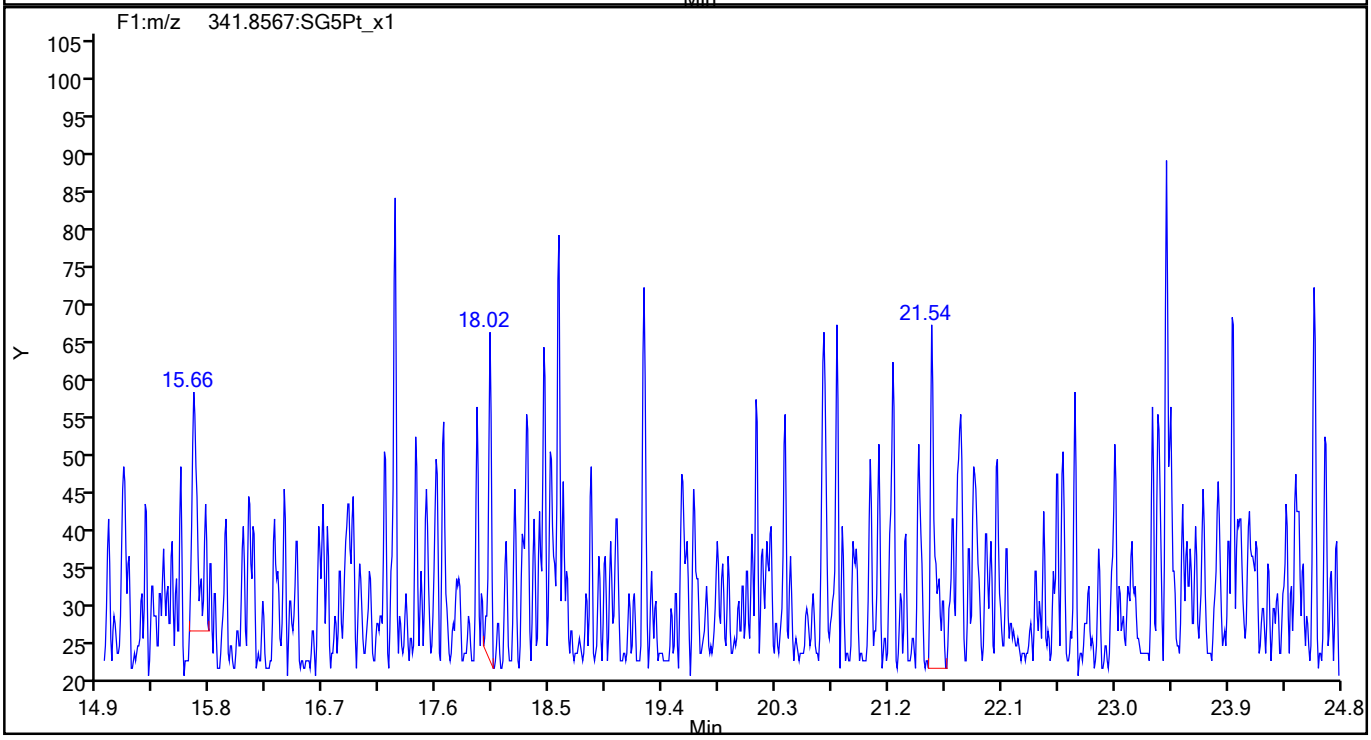

784227

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

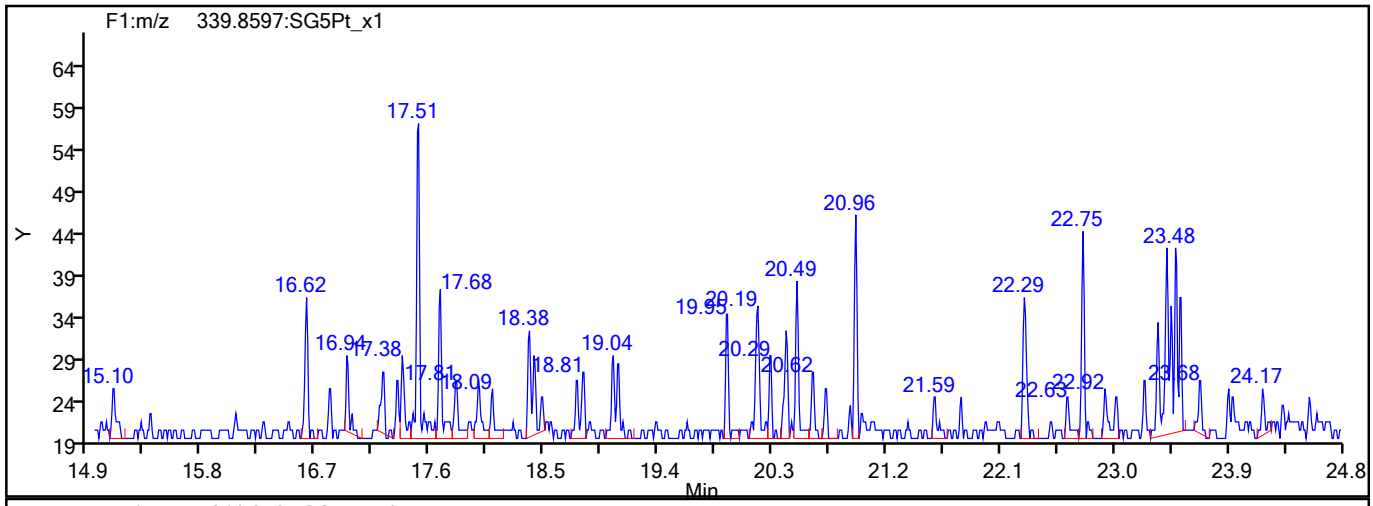

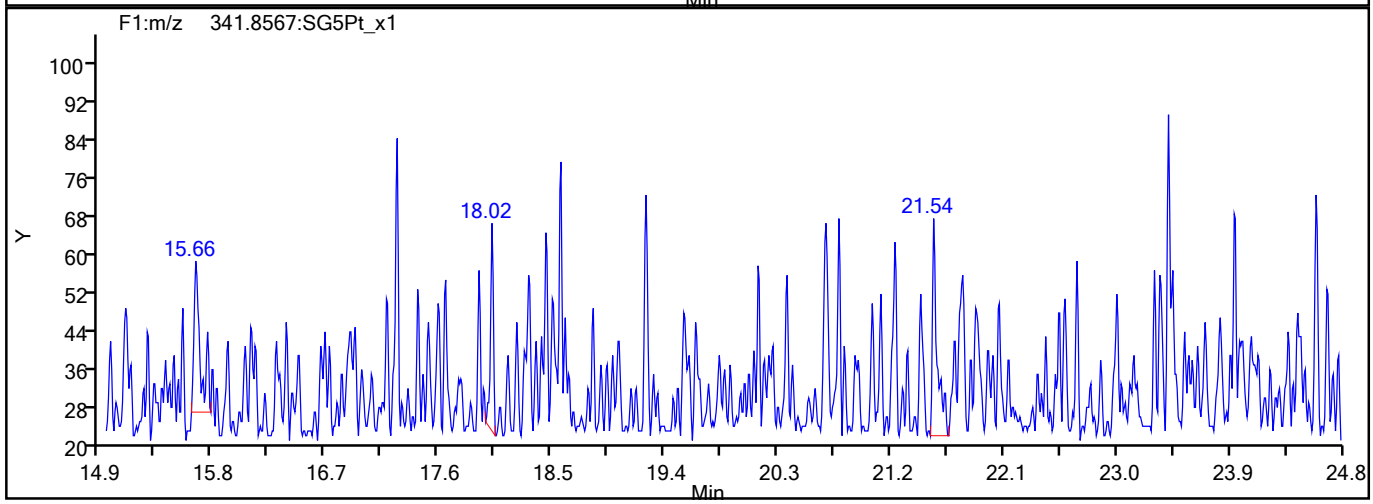

F1 PeCDFs Interference Mass

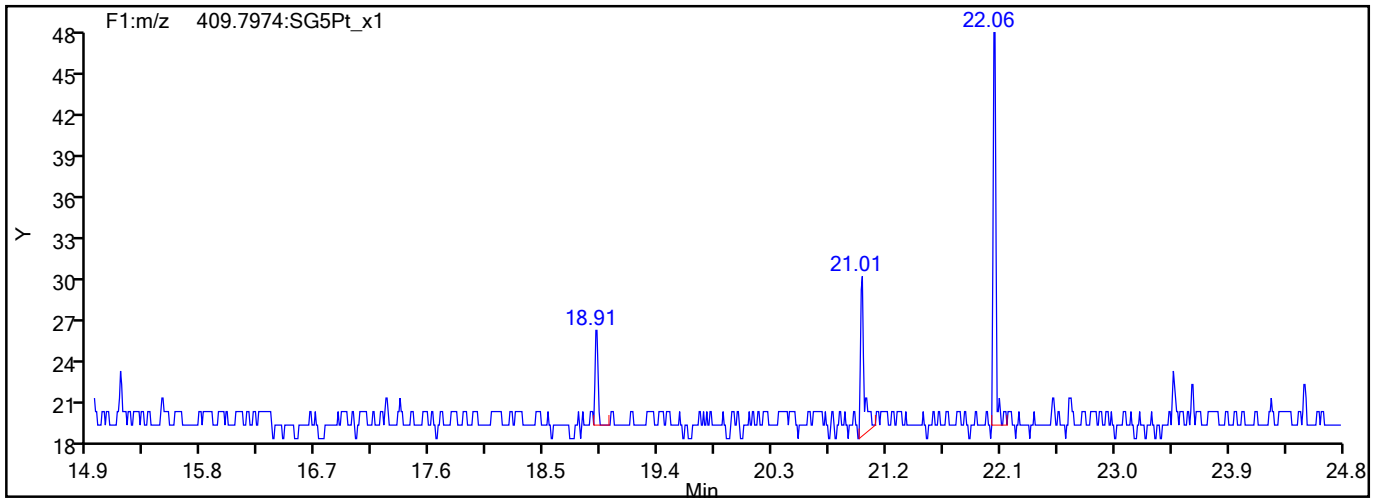

784228

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

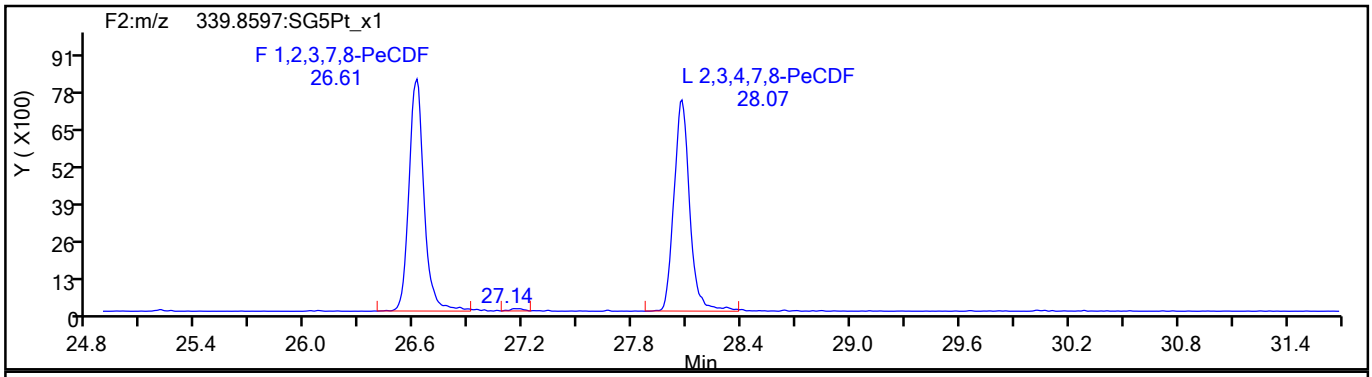

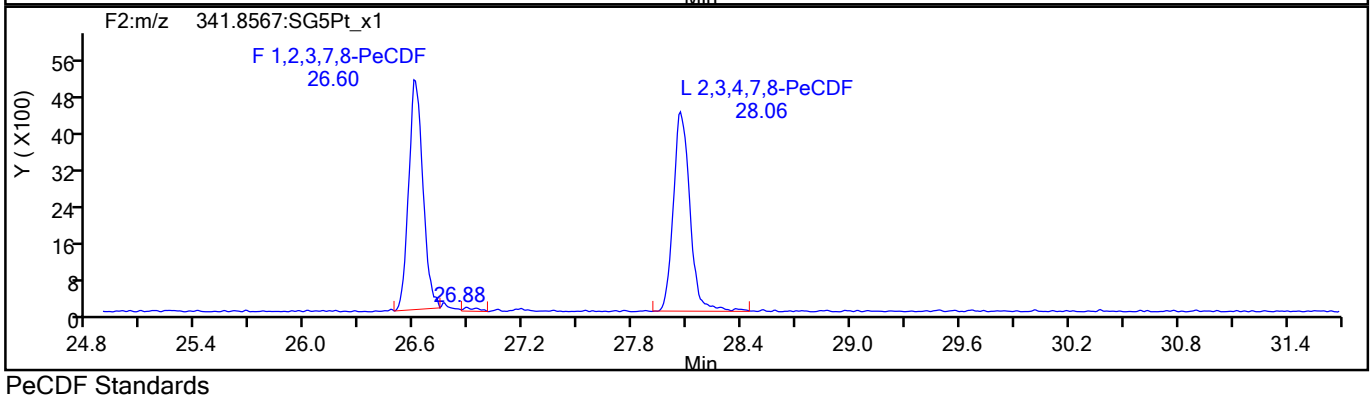

PeCDF Standards

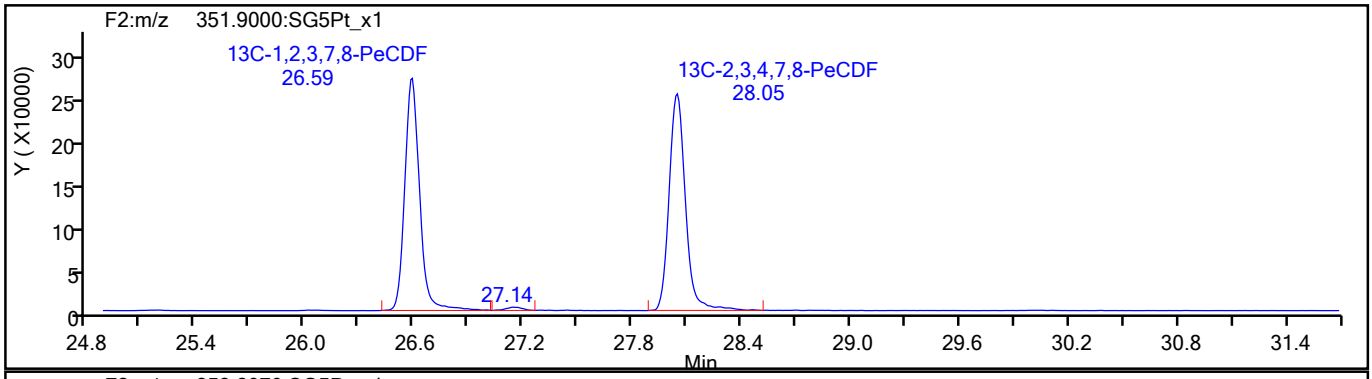

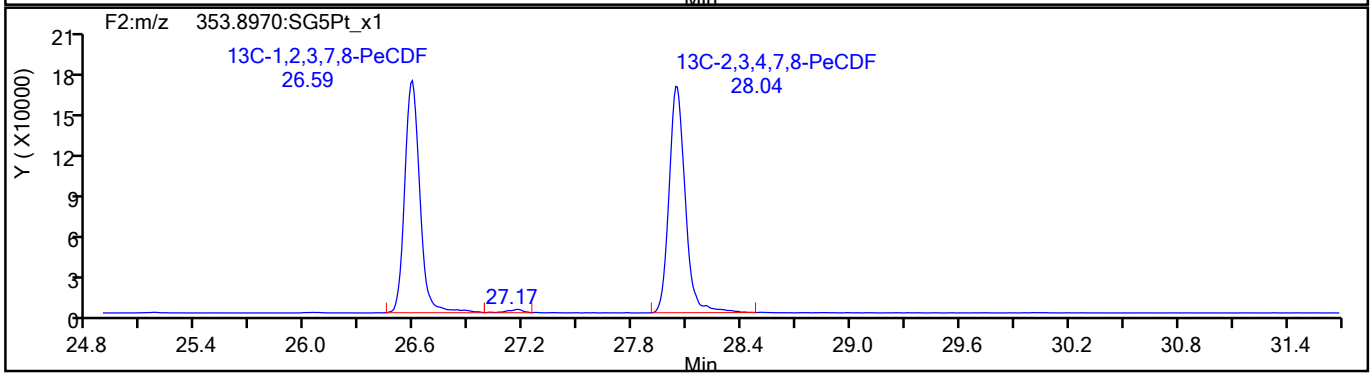

784229

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

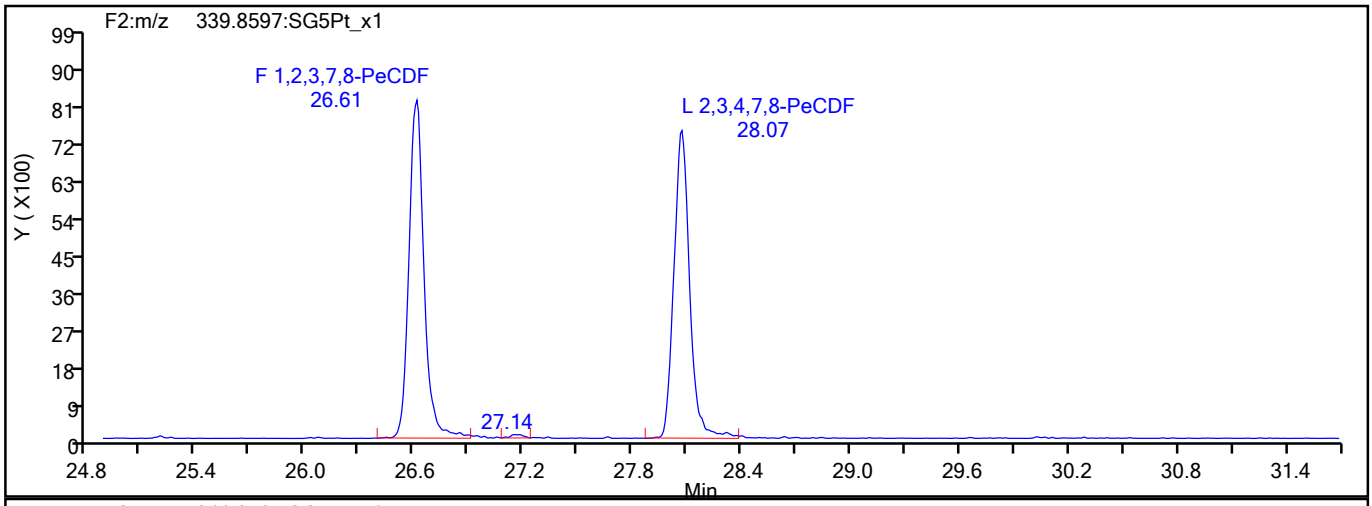

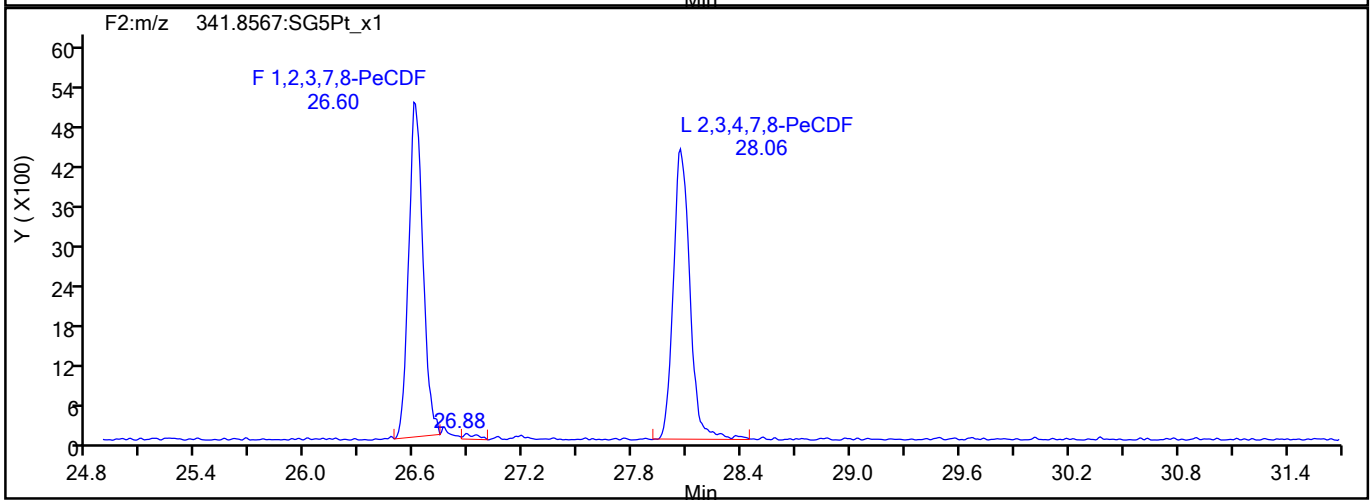

PeCDF Interference Mass

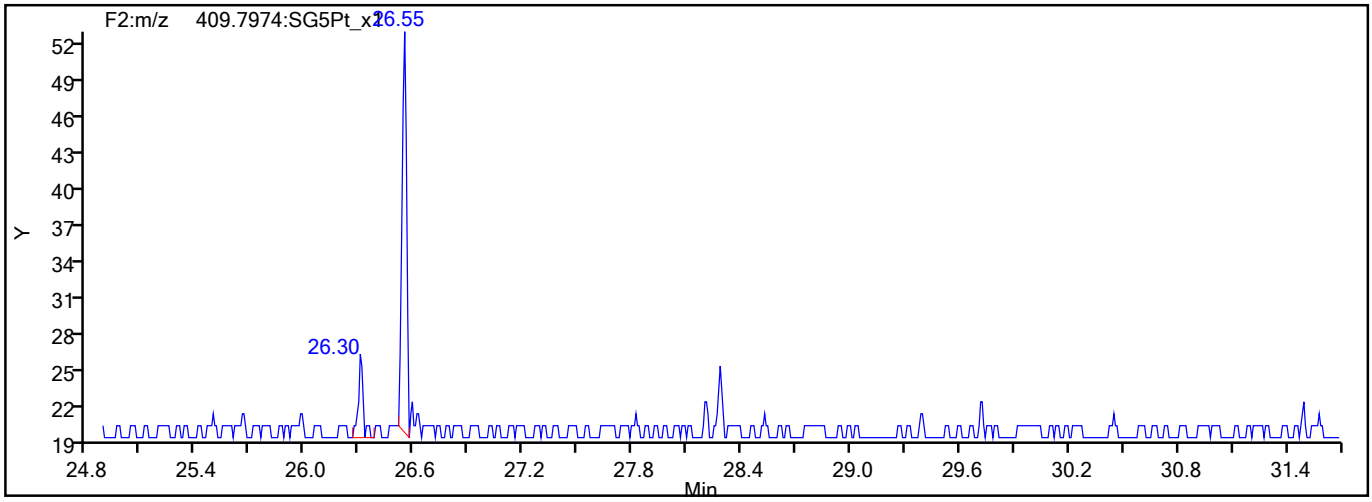

784230

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

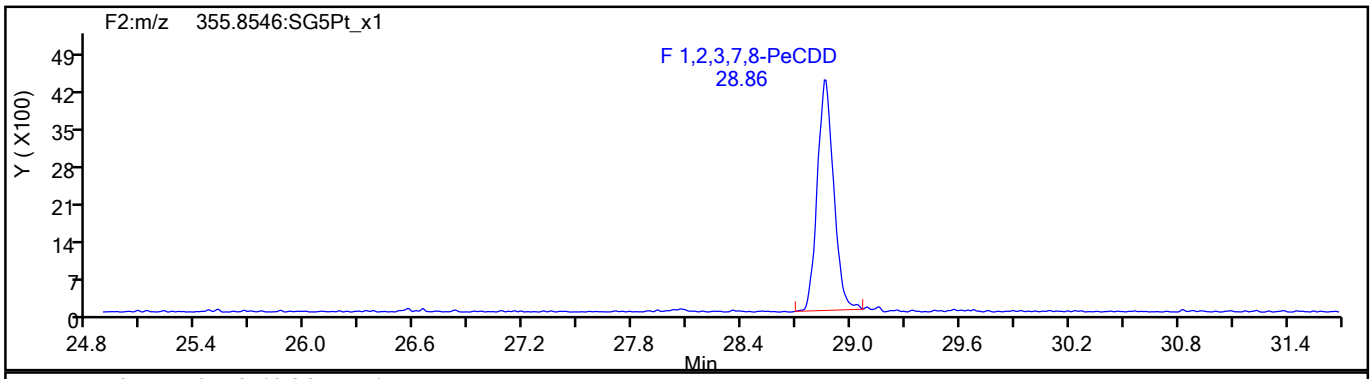

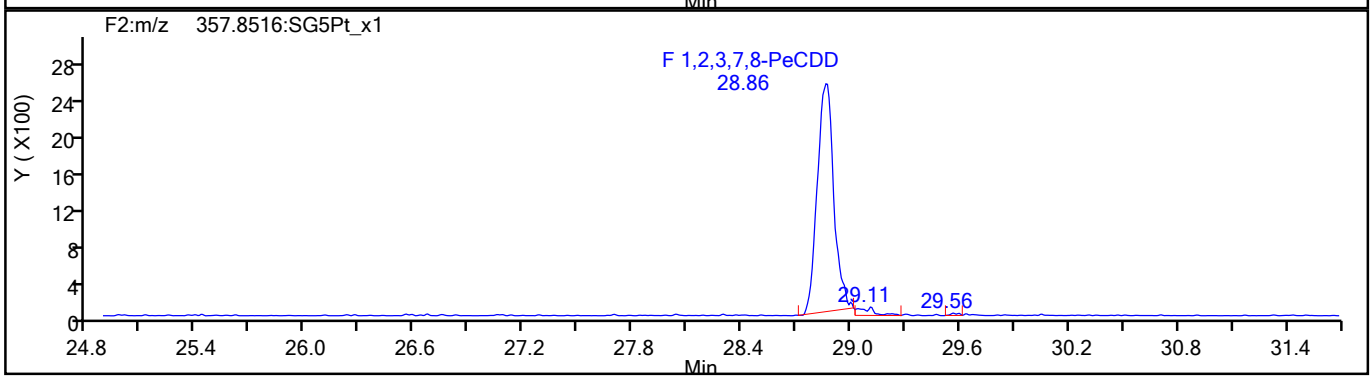

PeCDD Standards

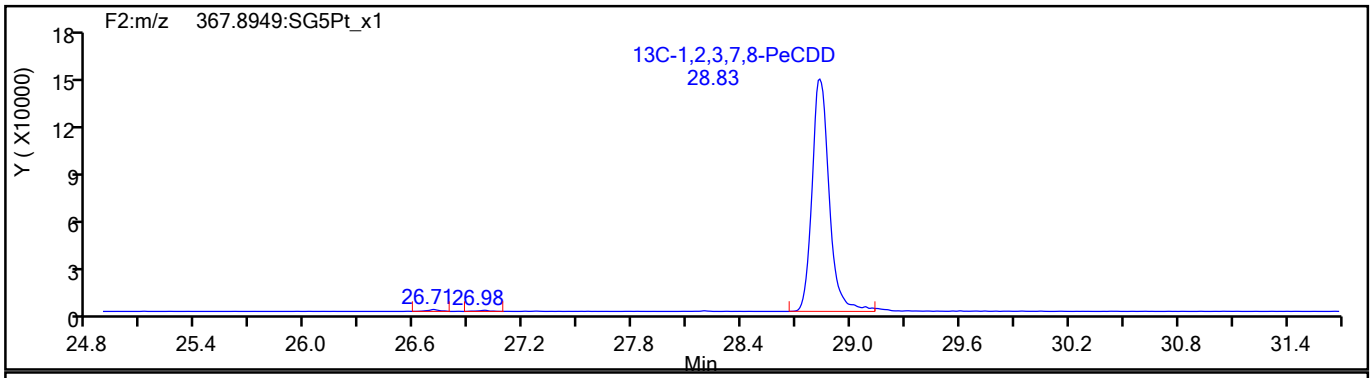

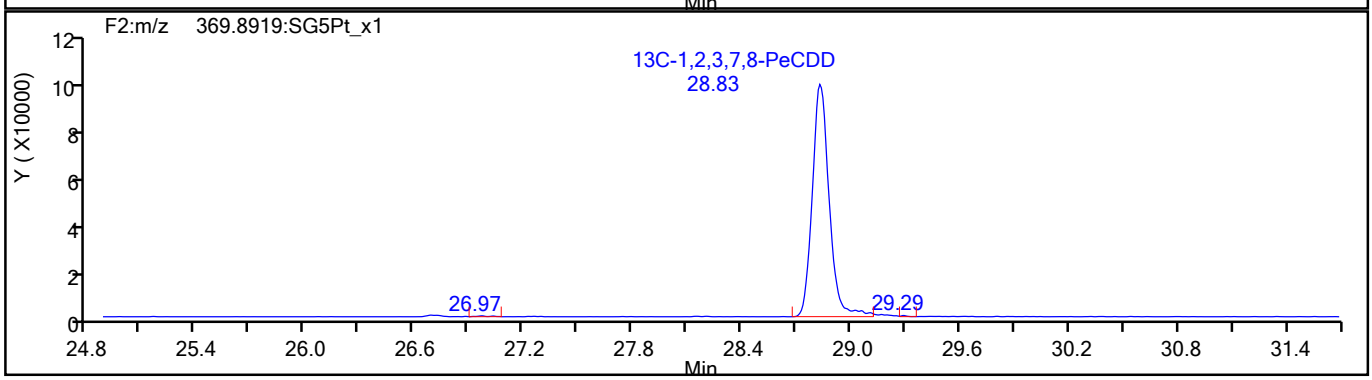

784231

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

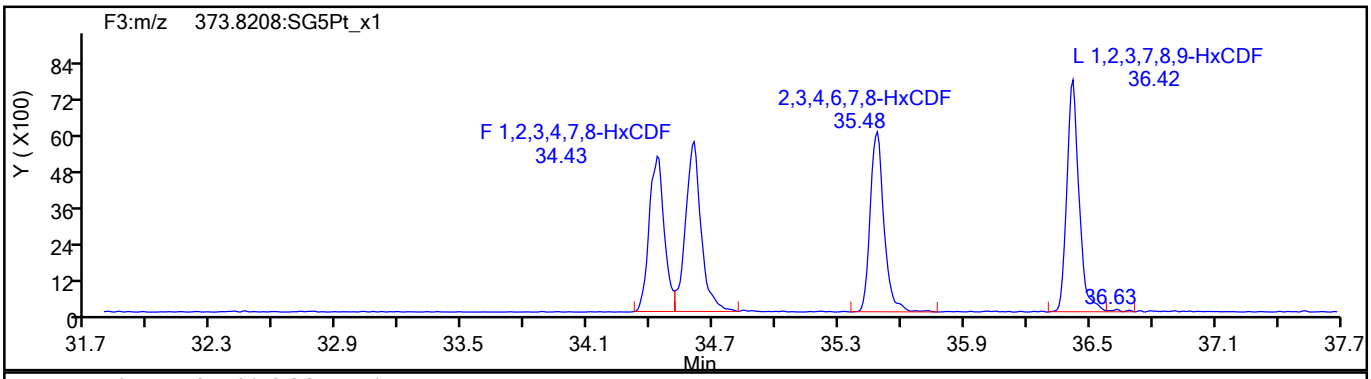

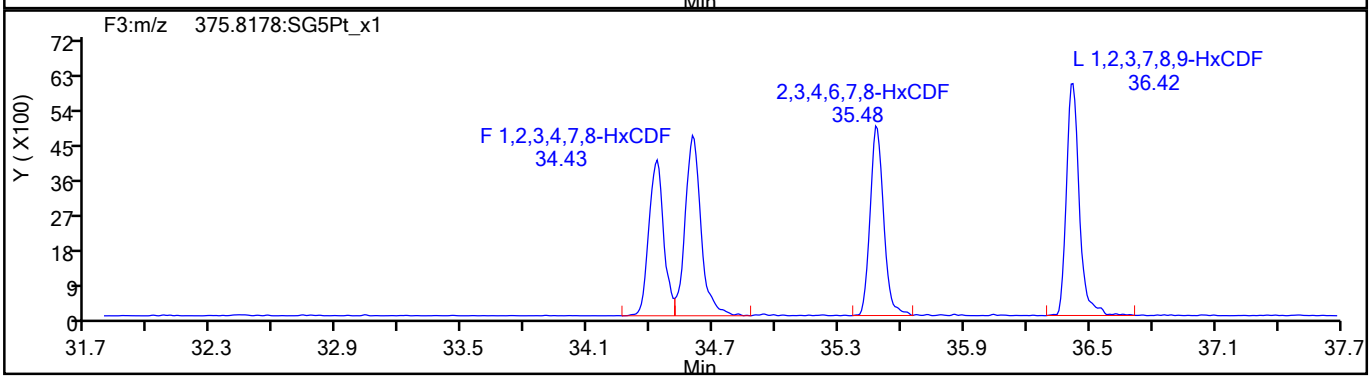

HxCDF Standards

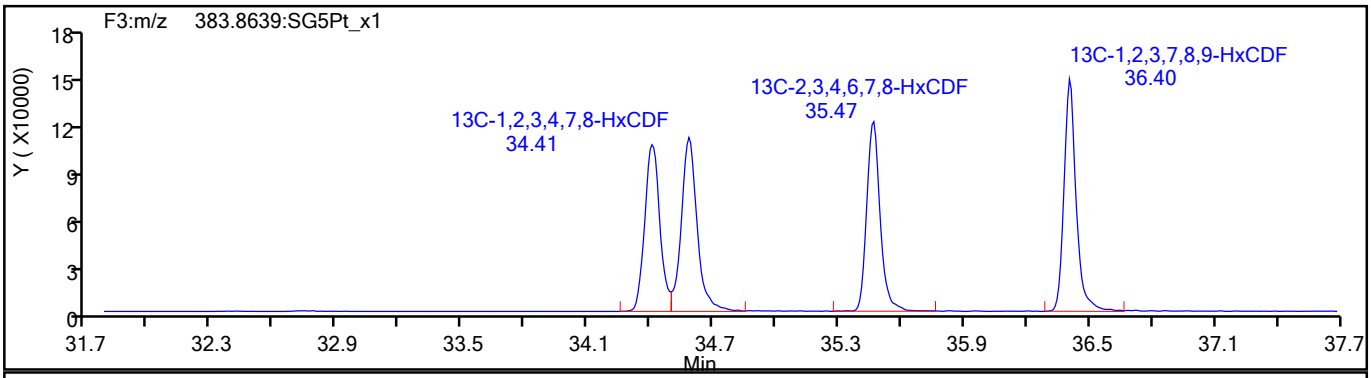

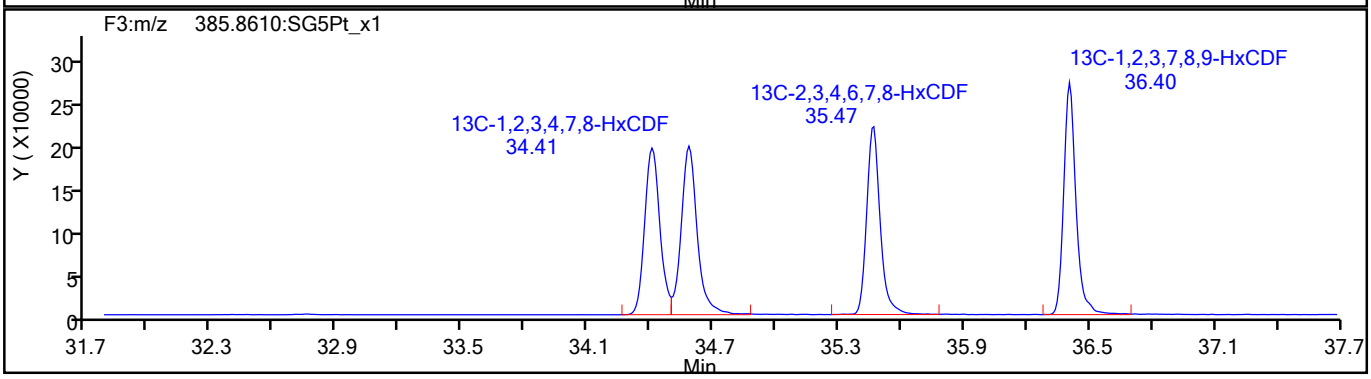

784232

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

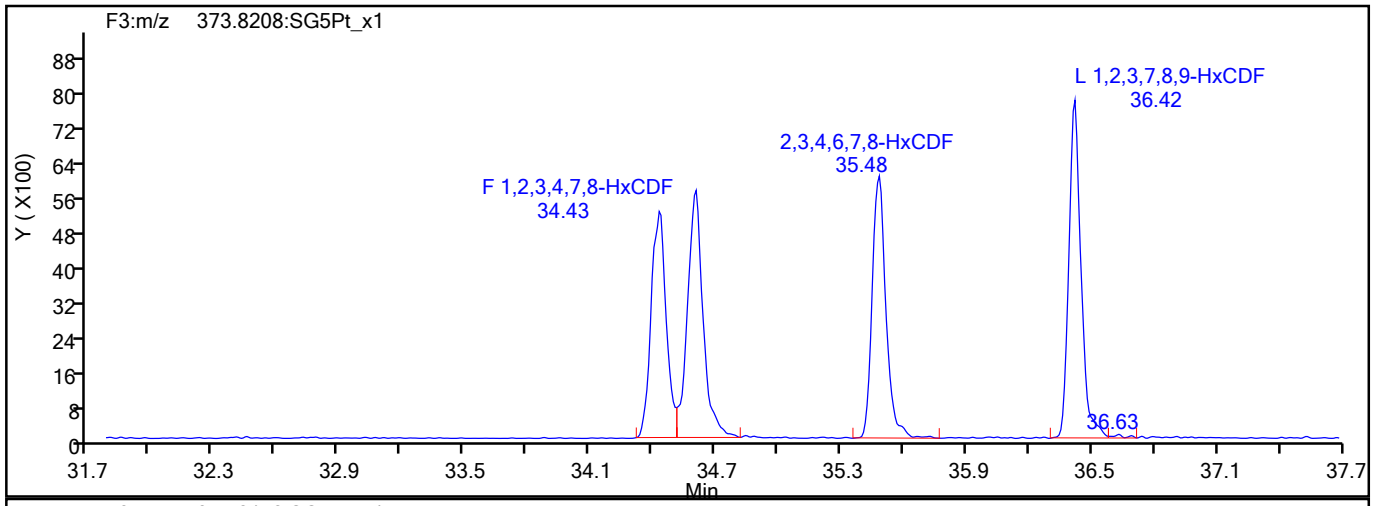

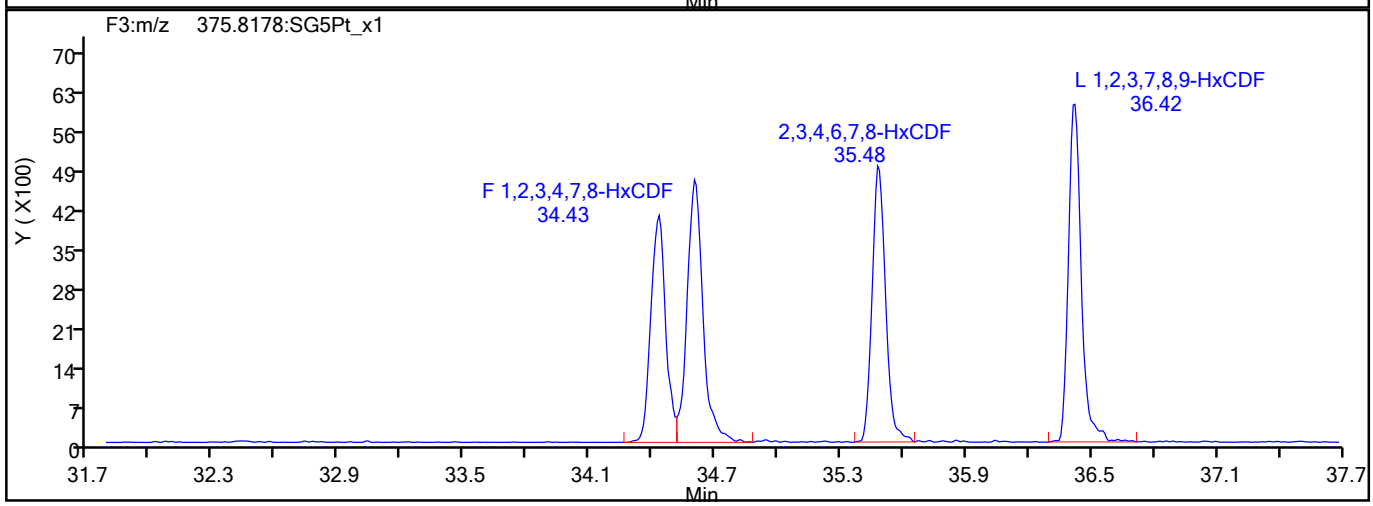

HxCDF Interference Mass

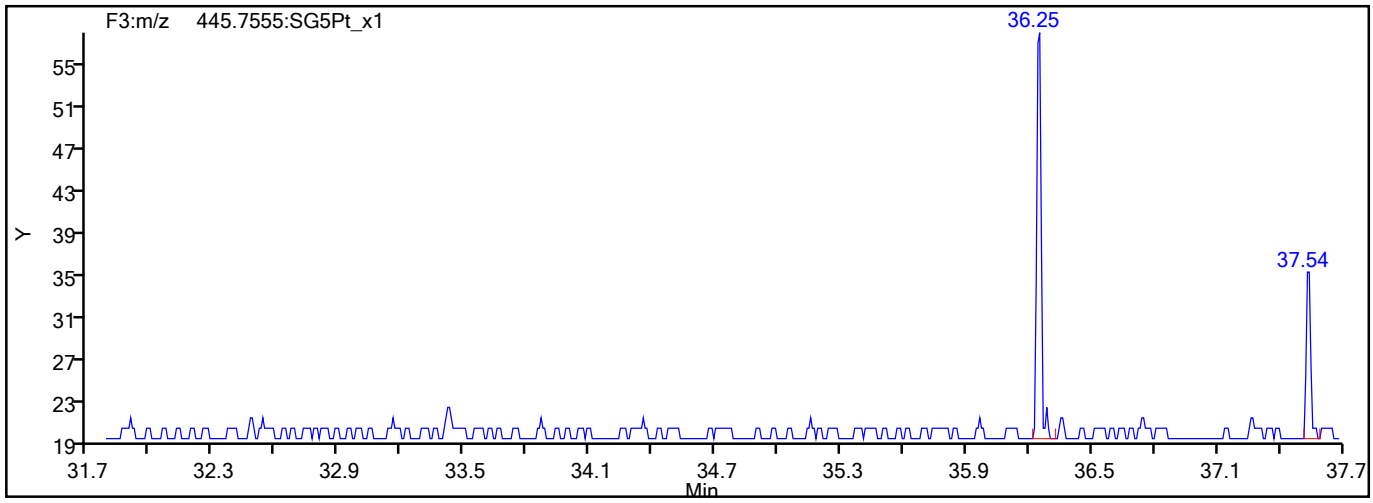

784233

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

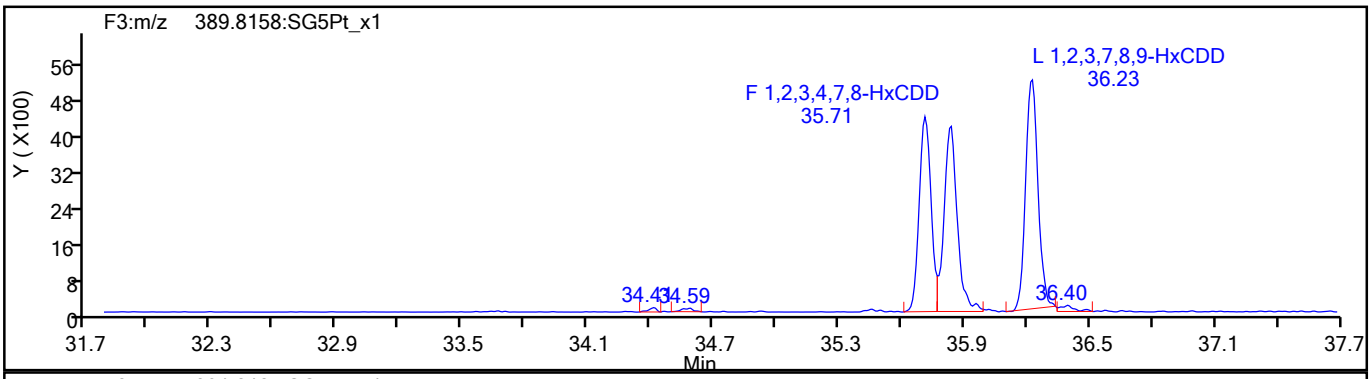

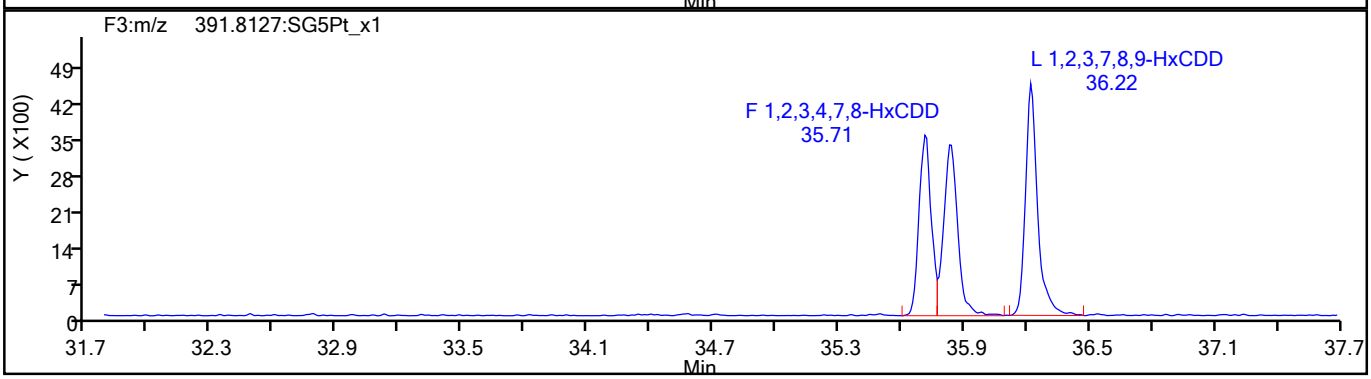

HxCDD Standards

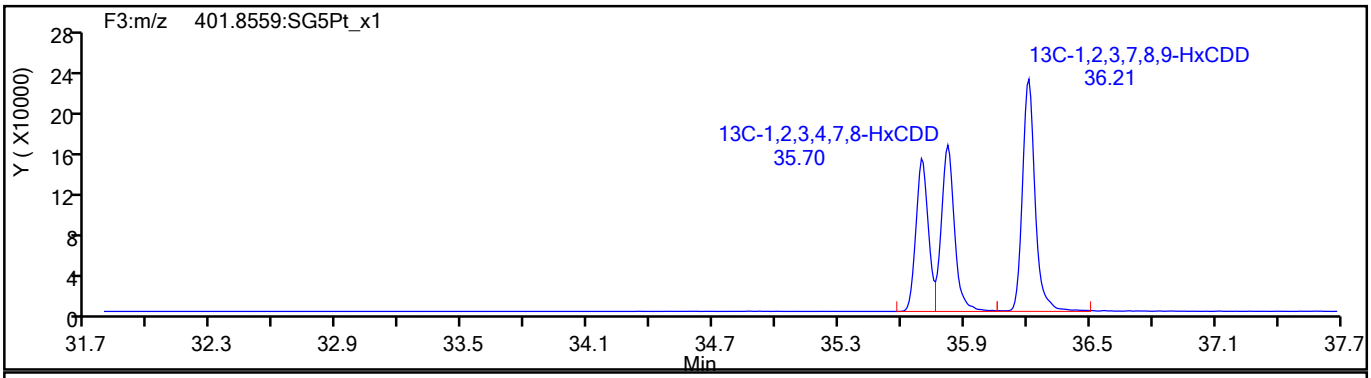

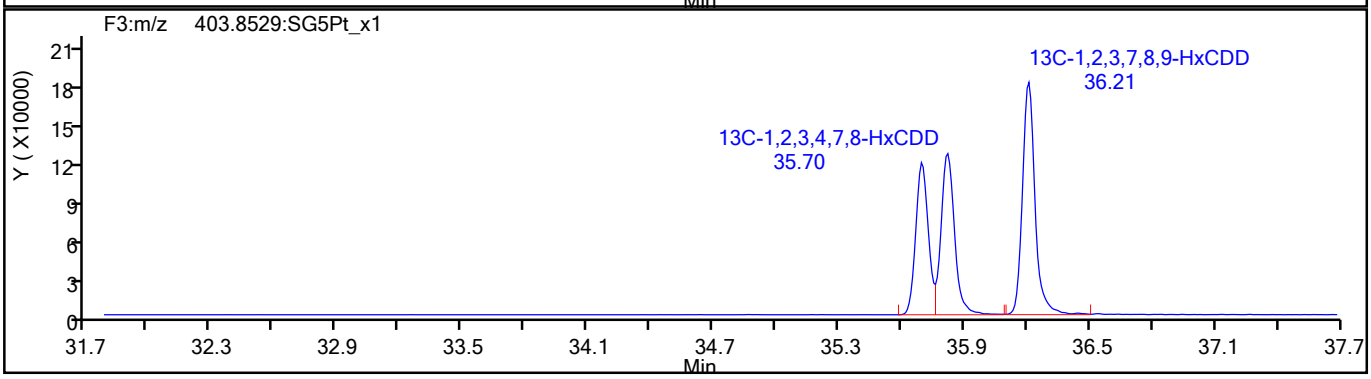

784234

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

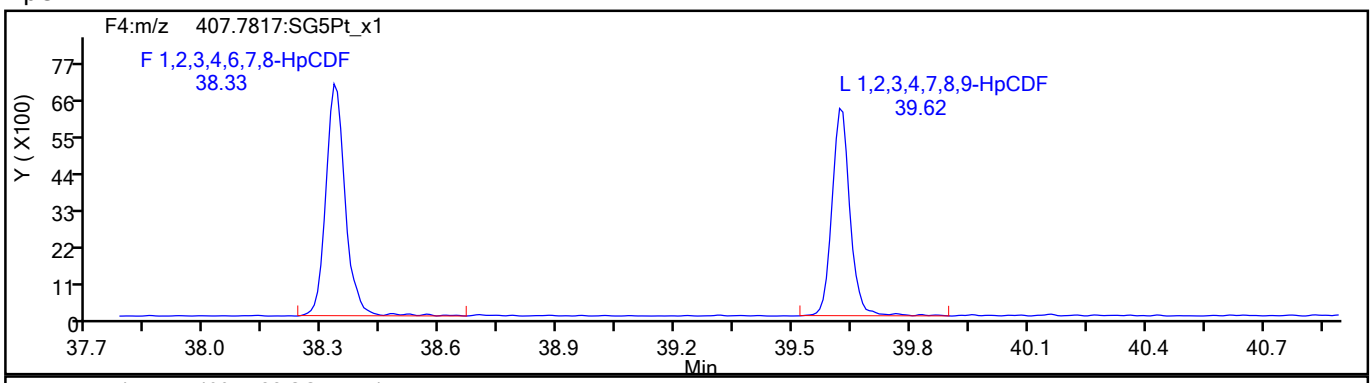

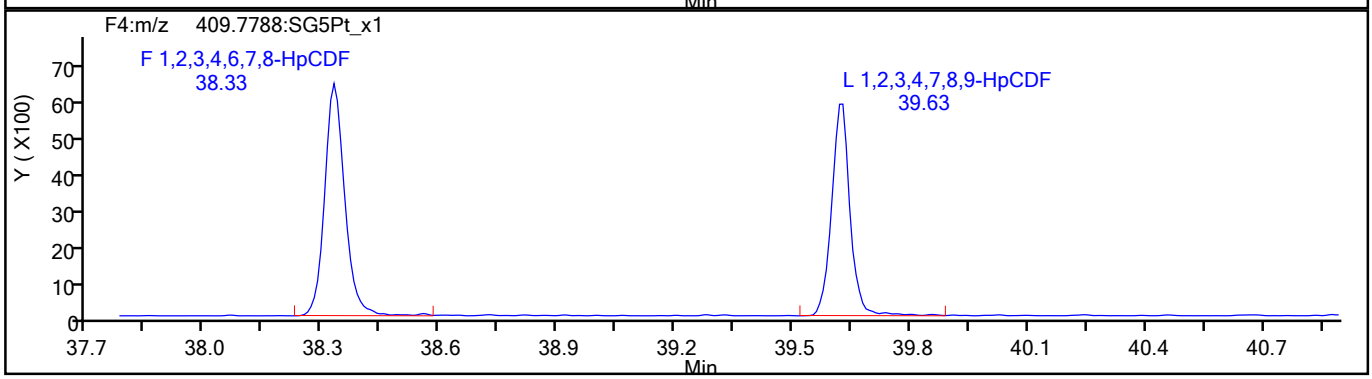

HpCDF Standards

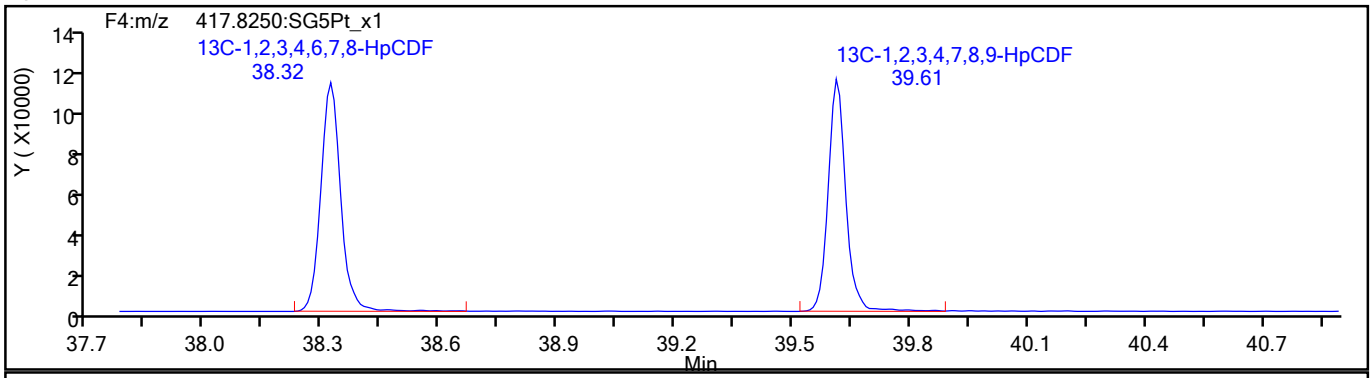

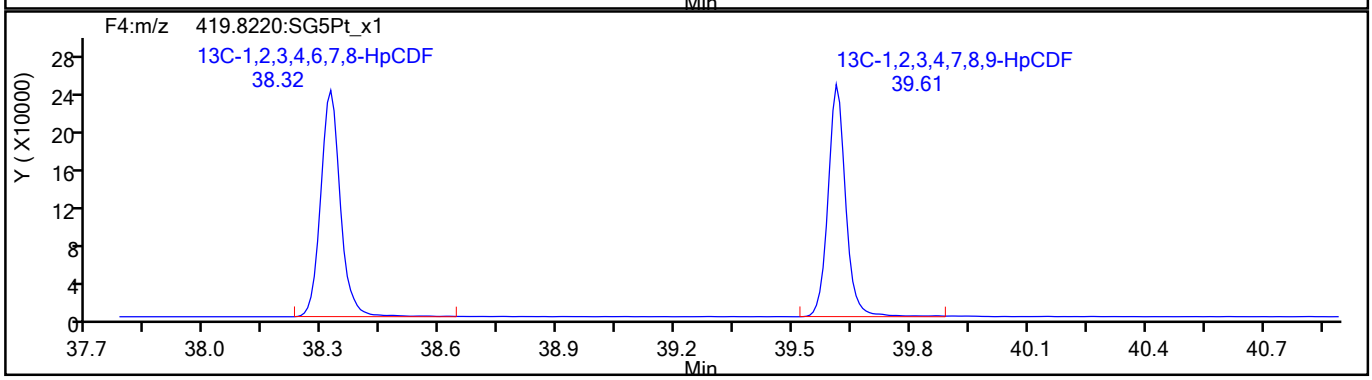

784235

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

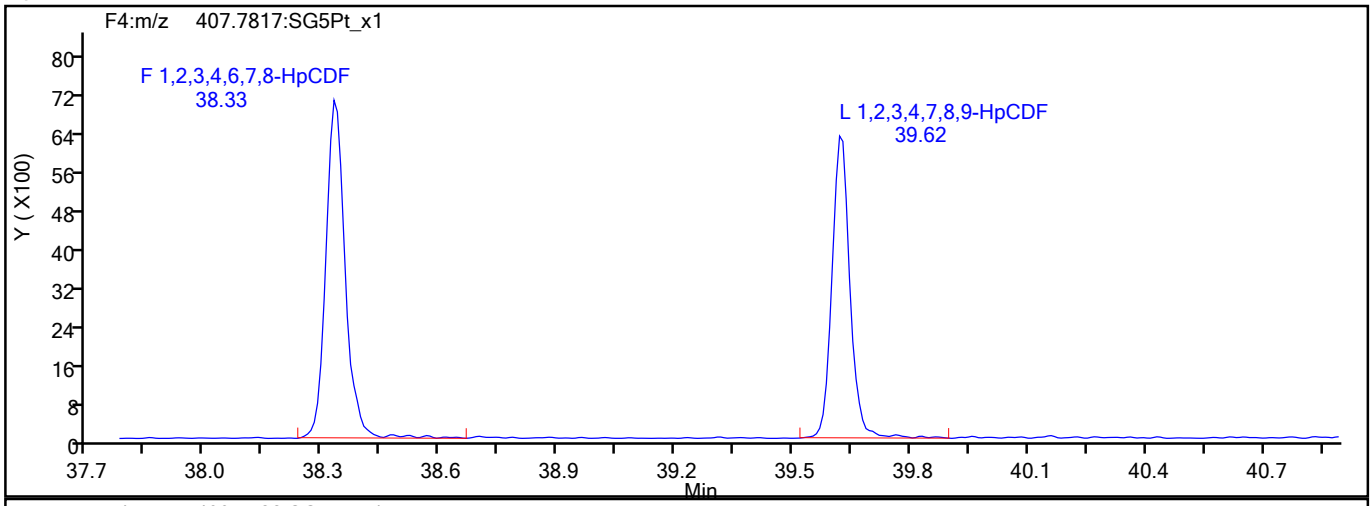

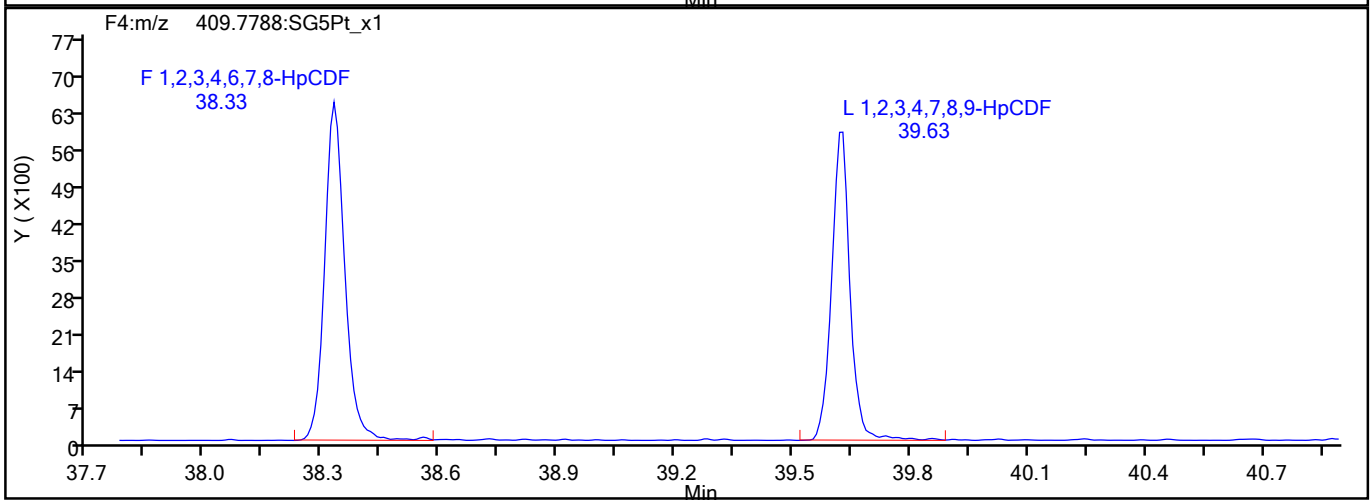

HpCDF Interference Mass

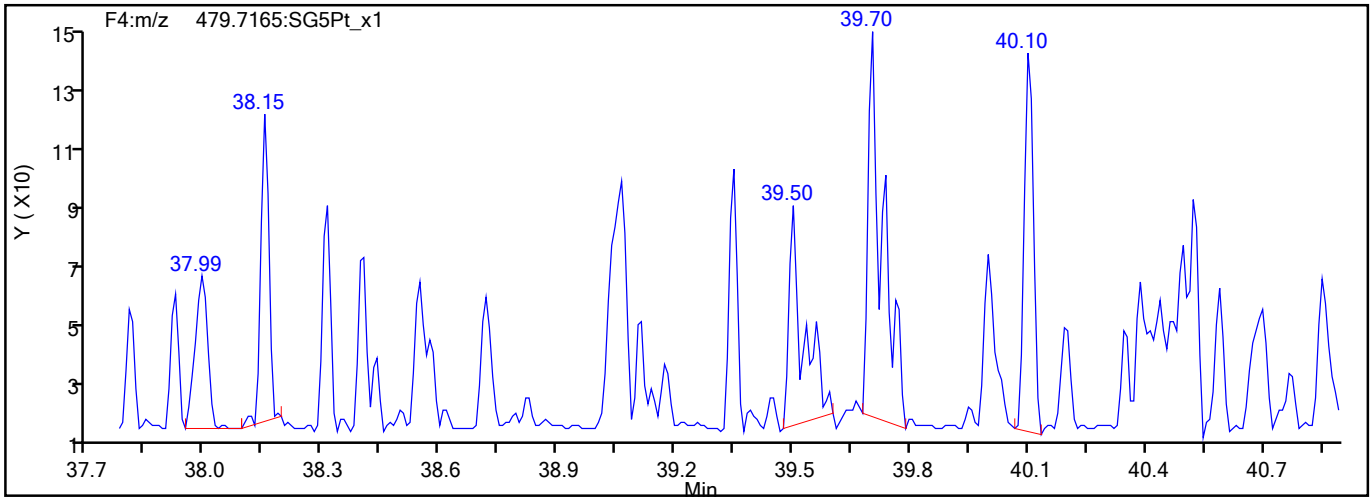

784236

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

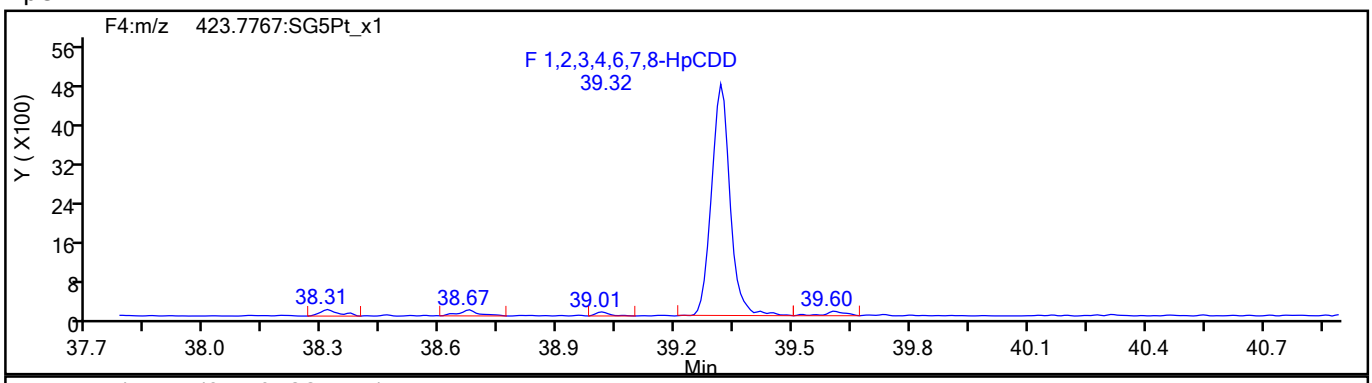

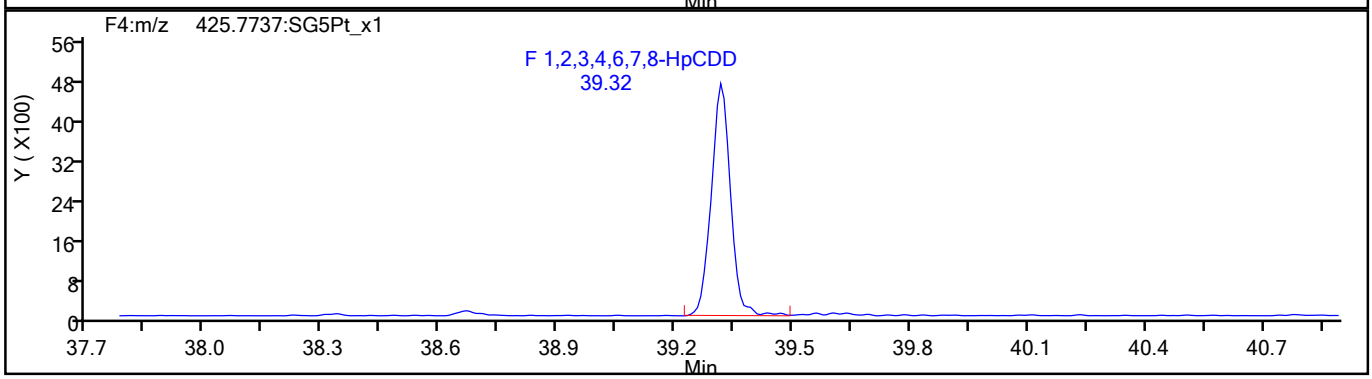

HpCDD Standards

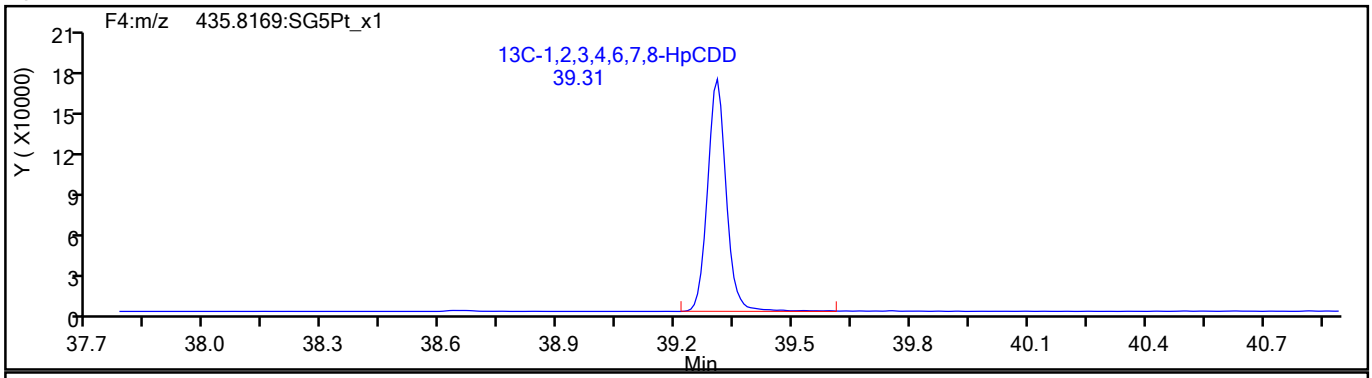

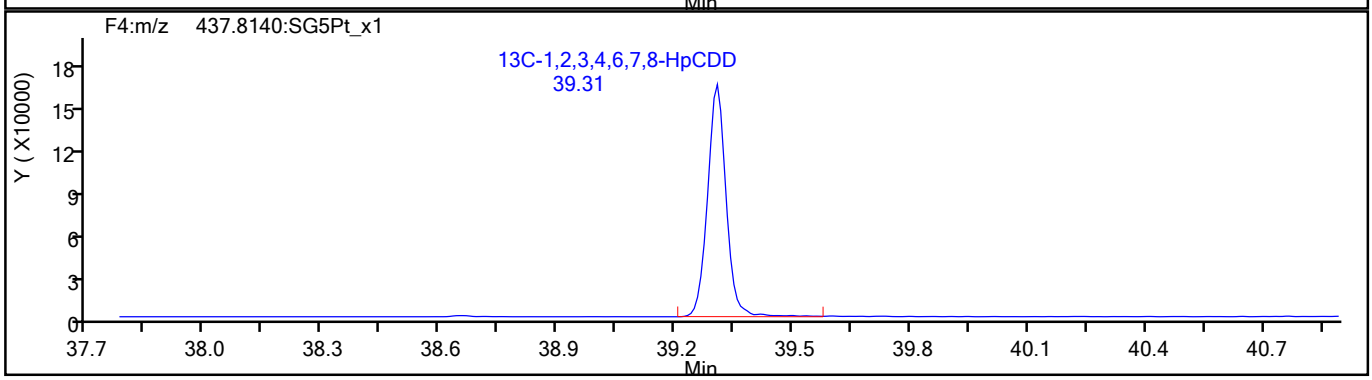

784237

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

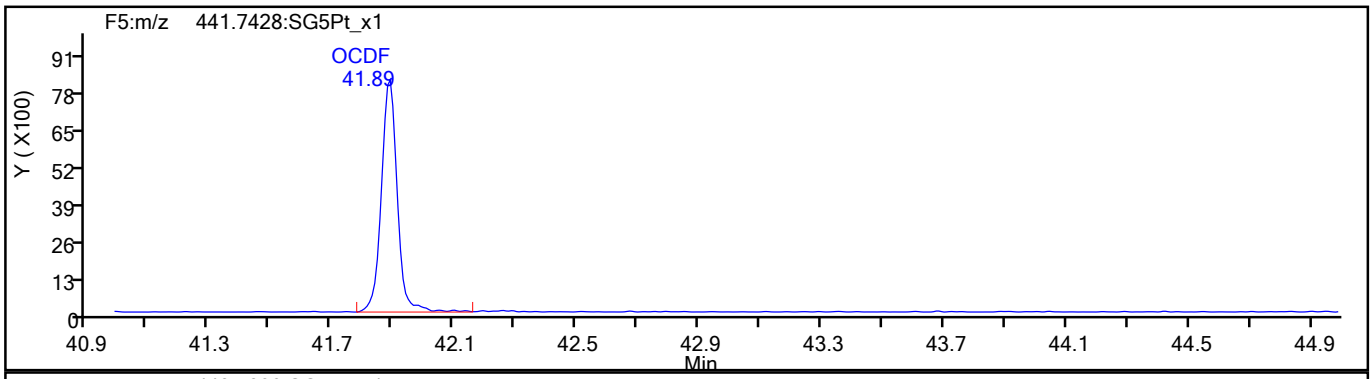

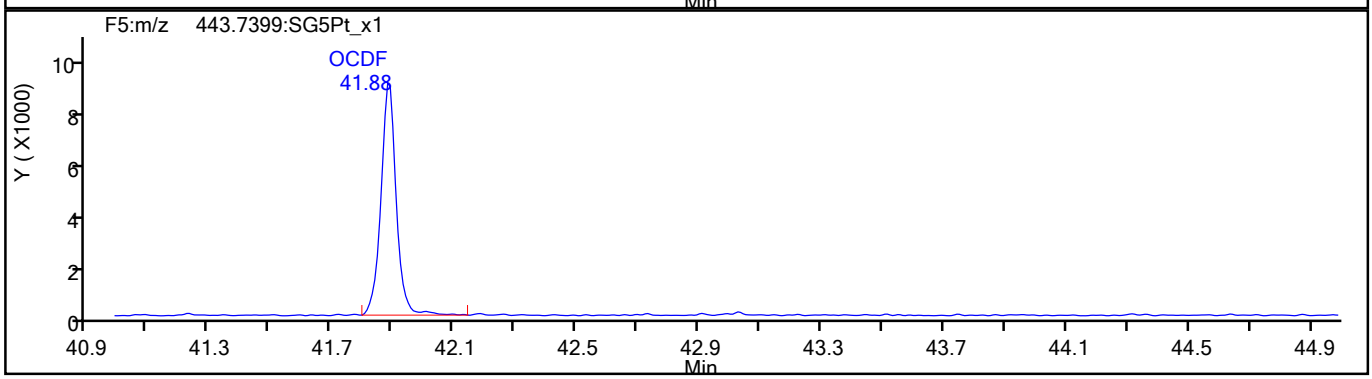

OCDF Standards

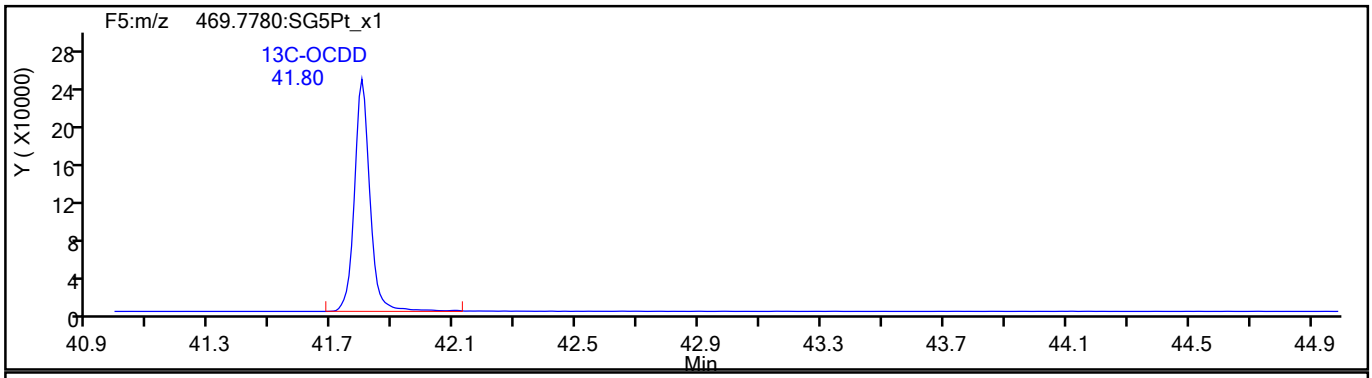

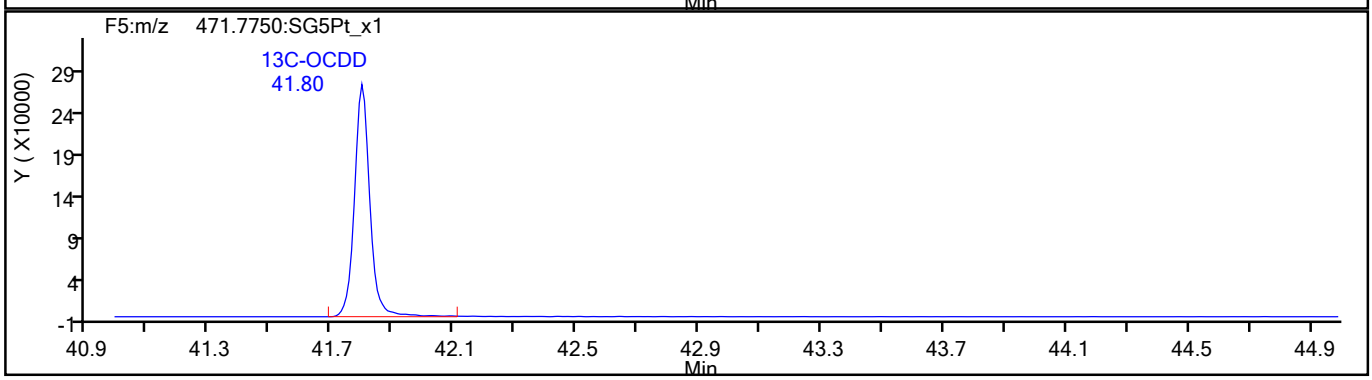

784238

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

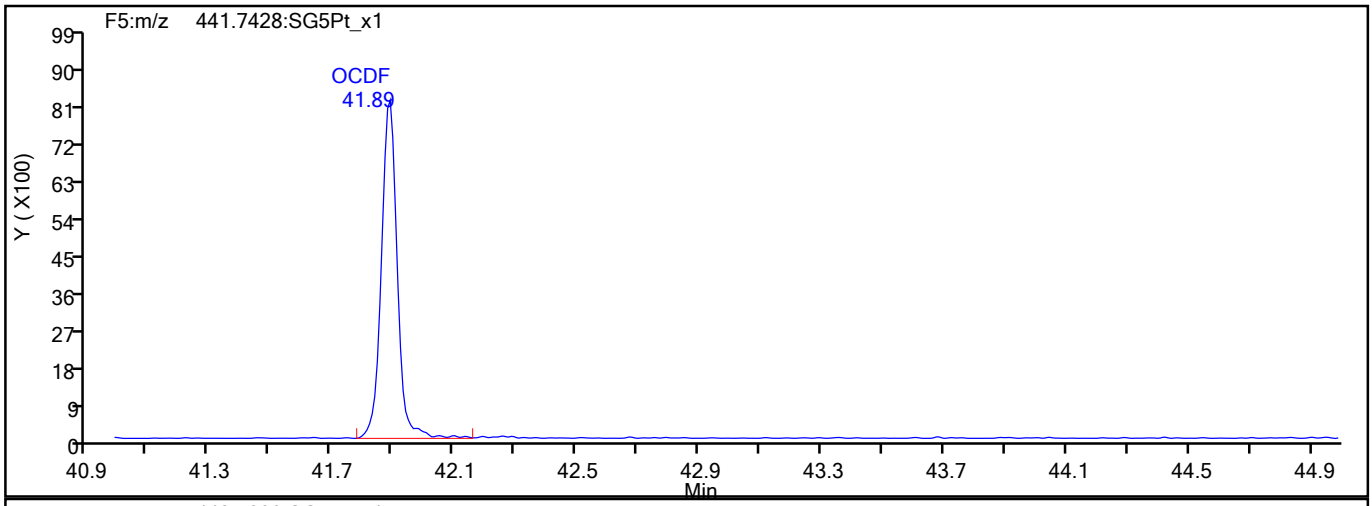

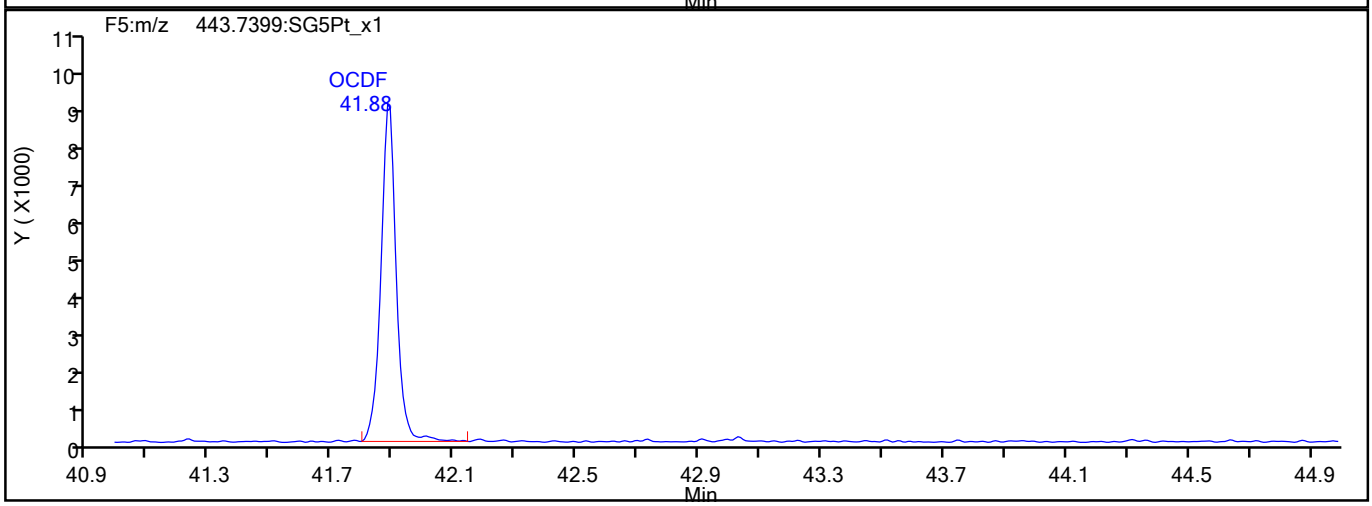

OCDF Interference Mass

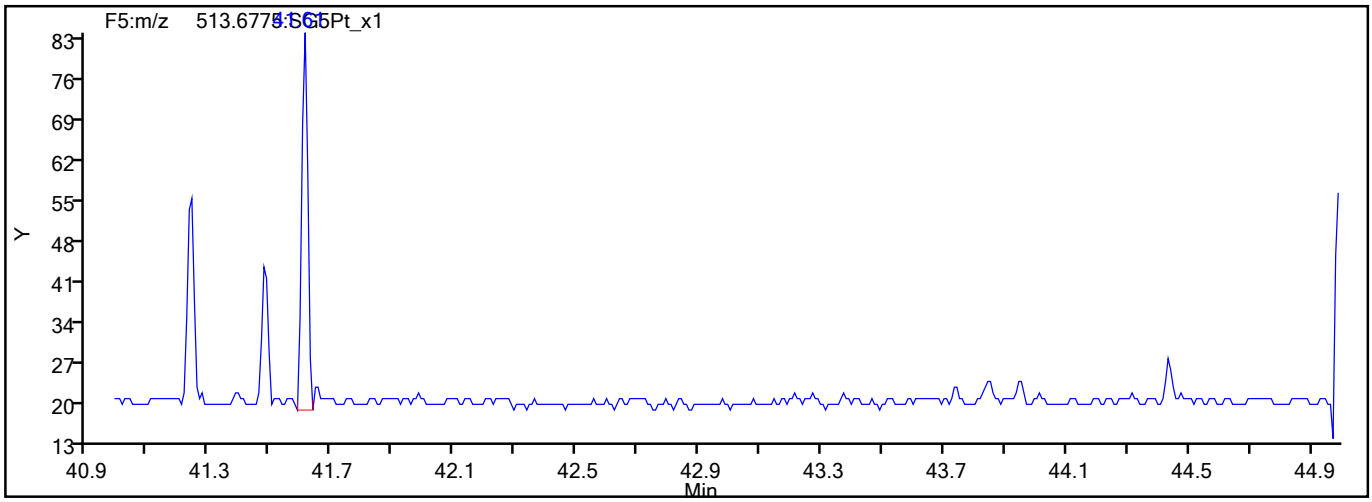

784239

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

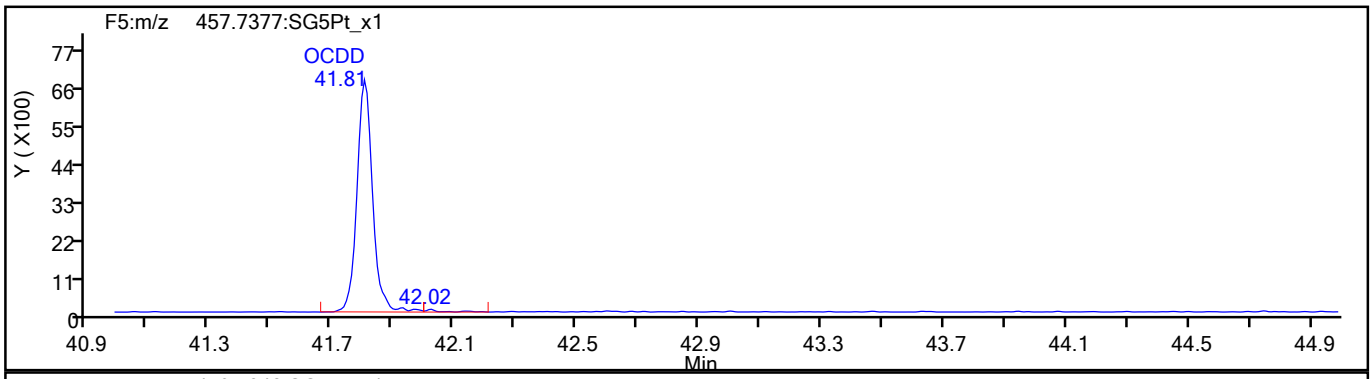

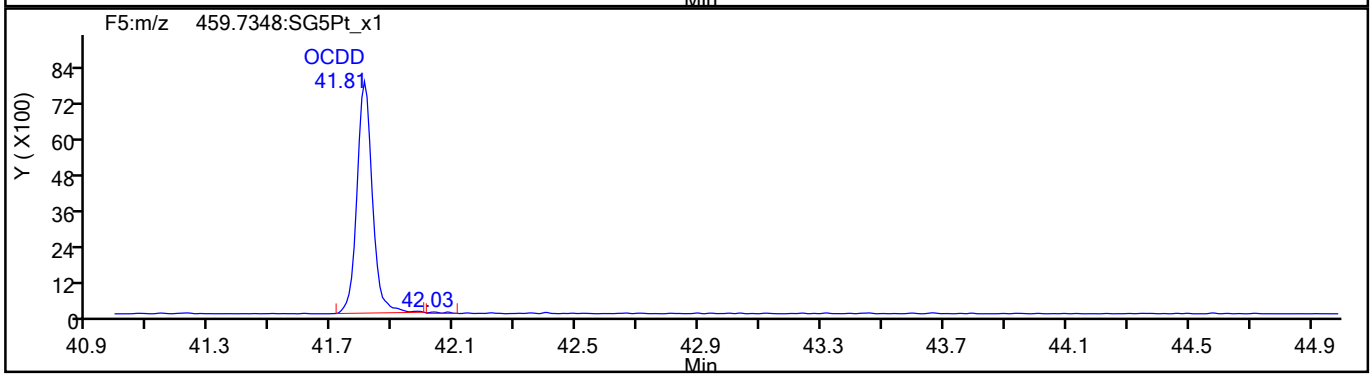

OCDD Standards

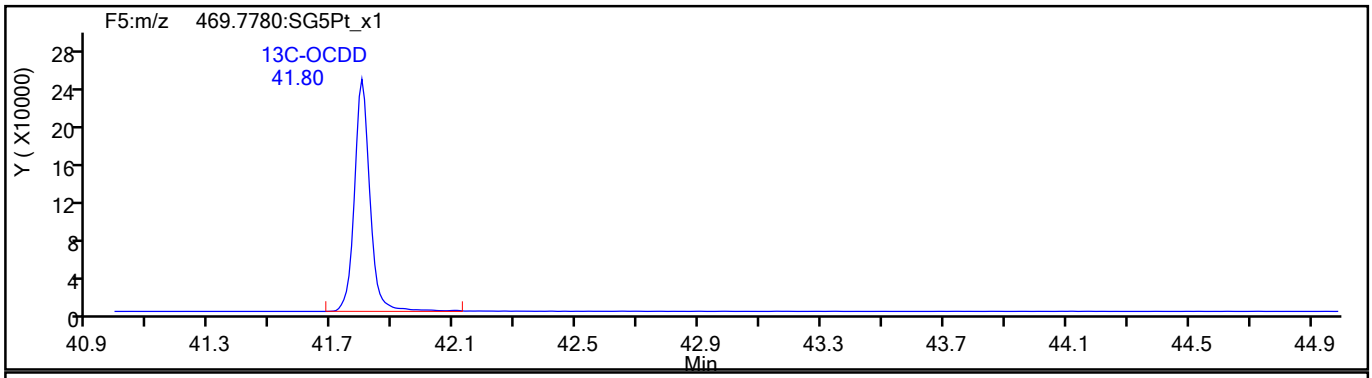

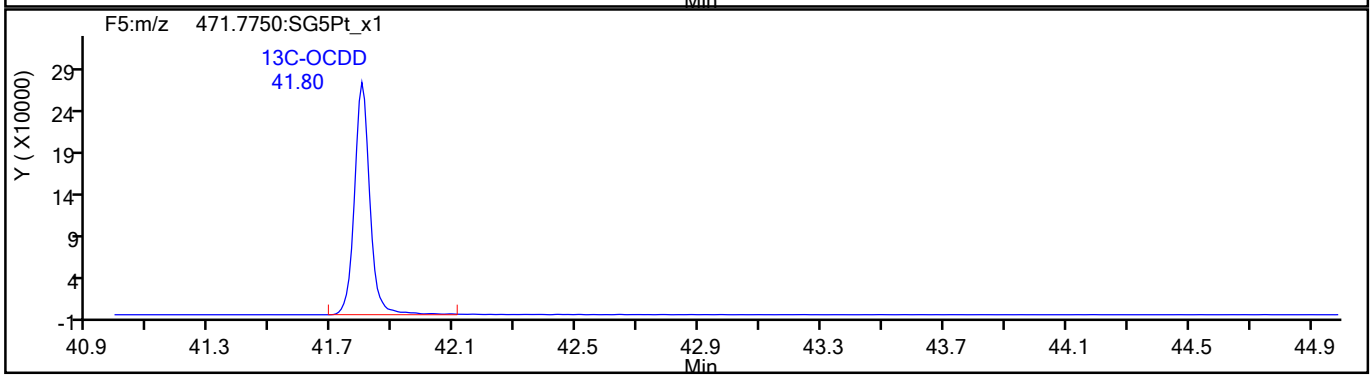

784240

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

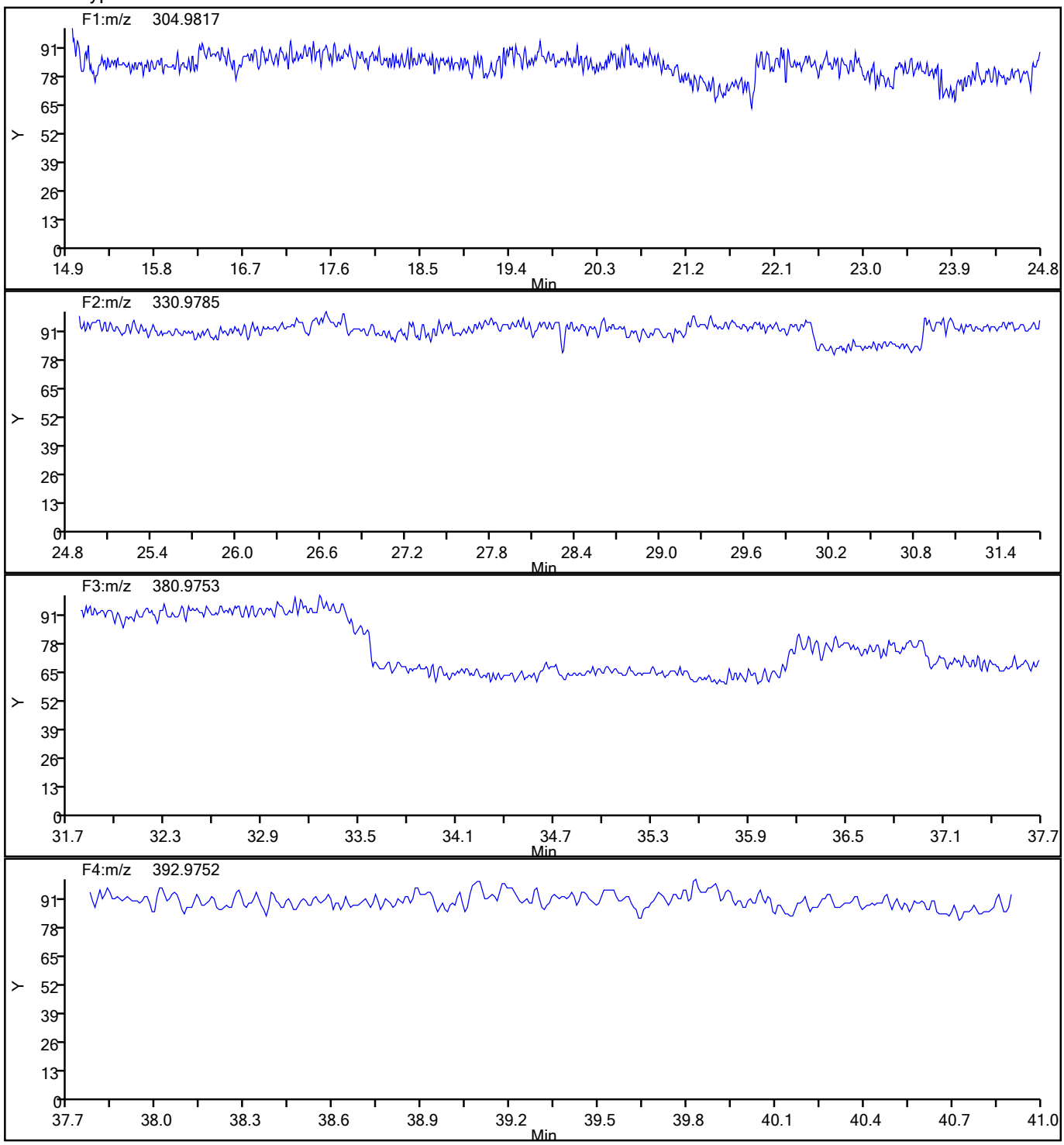

784241

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

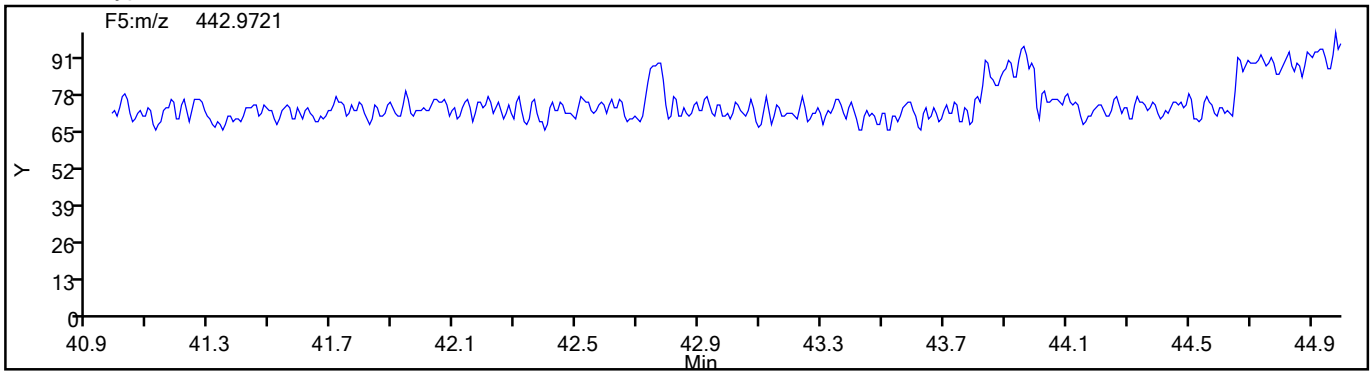

784242

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.534	2045939	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.606	2644389	0.79	1.3459	96.0	96.0	0.2067	0.2067	96.04	
2,3,7,8-TCDF	19.641	50956	0.80	1.0802	1.784	1.784	0.0111	0.0111	89.19	
S Total TCDF					1.784	1.784	0.0111	0.0111		
D 13C-2,3,7,8-TCDD	20.886	1829253	0.79	0.9317	96.0	96.0	0.1871	0.1871	95.97	
$ 37Cl4-2,3,7,8-TCDD	20.929	39241		1.0083	1.902	1.902	0.006151	0.006151	95.11	
2,3,7,8-TCDD	20.929	34971	0.82	1.0753	1.778	1.778	0.0298	0.0298	88.89	
S Total TCDD					1.778	1.778	0.0298	0.0298		
D 13C-1,2,3,7,8-PeCDF	26.541	2234847	1.61	1.1405	95.8	95.8	0.3208	0.3208	95.78	
1,2,3,7,8-PeCDF	26.566	210335	1.55	1.0543	8.927	8.927	0.0325	0.0325	89.27	
D 13C-2,3,4,7,8-PeCDF	27.991	2228025	1.61	1.1253	96.8	96.8	0.3252	0.3252	96.77	
2,3,4,7,8-PeCDF	28.016	200175	1.56	1.0079	8.914	8.914	0.0356	0.0356	89.14	
S Total PeCDF					17.8	17.8	0.0341	0.0341		
D 13C-1,2,3,7,8-PeCDD	28.784	1364144	1.60	0.7165	93.1	93.1	0.1177	0.1177	93.06	
1,2,3,7,8-PeCDD	28.809	129872	1.62	1.0465	9.097	9.097	0.0251	0.0251	90.97	
S Total PeCDD					9.097	9.097	0.0251	0.0251		
D 13C-1,2,3,4,7,8-HxCDF	34.367	1545033	0.52	0.9648	90.2	90.2	0.3810	0.3810	90.23	
1,2,3,4,7,8-HxCDF	34.384	155611	1.20	1.1474	8.778	8.778	0.0522	0.0522	87.78	
D 13C-1,2,3,6,7,8-HxCDF	34.544	1692336	0.52	1.0708	89.1	89.1	0.3433	0.3433	89.05	
1,2,3,6,7,8-HxCDF	34.569	185321	1.24	1.2178	8.992	8.992	0.0483	0.0483	89.92	
D 13C-2,3,4,6,7,8-HxCDF	35.429	1740015	0.54	1.0413	94.2	94.2	0.3530	0.3530	94.16	
2,3,4,6,7,8-HxCDF	35.446	191527	1.25	1.2145	9.063	9.063	0.0405	0.0405	90.63	
D 13C-1,2,3,7,8,9-HxCDF	36.374	1735785	0.52	0.9731	100.5	100.5	0.3778	0.3778	101	
1,2,3,7,8,9-HxCDF	36.390	195077	1.27	1.2401	9.062	9.062	0.0369	0.0369	90.62	
S Total HxCDF					35.9	35.9	0.0445	0.0445		
* 13C-1,2,3,7,8,9-HxCDD	36.180	1774694	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.665	1363103	1.28	0.7587	101.2	101.2	0.1971	0.1971	101	
1,2,3,4,7,8-HxCDD	35.682	132244	1.27	1.0608	9.146	9.146	0.0258	0.0258	91.46	
D 13C-1,2,3,6,7,8-HxCDD	35.792	1558668	1.27	0.8593	102.2	102.2	0.1740	0.1740	102	
1,2,3,6,7,8-HxCDD	35.809	138142	1.21	0.9933	8.922	8.922	0.0262	0.0262	89.22	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.196	139741	1.27	1.1094	8.622	8.622	0.0240	0.0240	86.22	
S Total HxCDD					26.7	26.7	0.0253	0.0253		
D 13C-1,2,3,4,6,7,8-HpCDF	38.291	1272526	0.47	0.7359	97.4	97.4	0.3733	0.3733	97.43	
1,2,3,4,6,7,8-HpCDF	38.308	164108	1.06	1.4421	8.943	8.943	0.0378	0.0378	89.43	
D 13C-1,2,3,4,7,8,9-HpCDF	39.589	1175351	0.46	0.6854	96.6	96.6	0.4008	0.4008	96.63	
1,2,3,4,7,8,9-HpCDF	39.598	138335	1.04	1.3092	8.990	8.990	0.0420	0.0420	89.90	
S Total HpCDF					17.9	17.9	0.0399	0.0399		
D 13C-1,2,3,4,6,7,8-HpCDD	39.286	1162117	1.05	0.6745	97.1	97.1	0.2422	0.2422	97.08	
1,2,3,4,6,7,8-HpCDD	39.294	110761	1.07	1.0503	9.075	9.075	0.0319	0.0319	90.75	
S Total HpCDD					9.075	9.075	0.0319	0.0319		
D 13C-OCDD	41.775	1833139	0.91	0.5446	189.7	189.7	0.2857	0.2857	94.83	
OCDF	41.868	217473	0.91	1.3168	18.0	18.0	0.0452	0.0452	90.09	
OCDD	41.784	182470	0.91	1.0620	18.7	18.7	0.0368	0.0368	93.73	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.534	20.547	-1		908781	140893	128	320	1101		
333.9338	20.542	20.547	0		1137158	181590	97	242	1872	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.606	19.616	-1	0.955	1167638	192853	232	580	831		
317.9389	19.615	19.616	0	0.955	1476751	240851	127	317	1896	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.641	19.646	0	1.002	22722	3787	5	12	757		
305.8987	19.632	19.646	-1	1.001	28234	4422	16	40	276	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.886	20.910	-1	1.017	809102	120100	128	320	938		
333.9338	20.895	20.910	-1	1.018	1020151	151021	97	242	1557	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.929	20.935	0	1.019	39241	6110	8	20	764		
2,3,7,8-TCDD											
319.8965	20.929	20.939	-1	1.002	15743	2433	27	67	90		
321.8936	20.929	20.939	-1	1.002	19228	3031	8	20	379	0.82(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.541	26.560	-1	1.293	1380136	237735	280	700	849		
353.8970	26.549	26.560	-1	1.293	854711	147619	192	480	769	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.566	26.584	-1	1.001	127910	22847	25	62	914		
341.8567	26.566	26.584	-1	1.001	82425	14553	28	70	520	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	27.991	28.014	-1	1.363	1373543	227507	280	700	813		
353.8970	27.991	28.014	-1	1.363	854482	140253	192	480	730	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.016	28.039	-1	1.001	121955	19987	25	62	799		
341.8567	28.016	28.039	-1	1.001	78220	12878	28	70	460	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.784	28.801	-1	1.402	839338	134094	55	137	2438		
369.8919	28.775	28.801	-2	1.401	524806	82953	54	135	1536	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.809	28.828	-1	1.001	80255	12276	18	45	682		
357.8516	28.809	28.828	-1	1.001	49617	7332	5	12	1466	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.367	34.384	-1	0.950	530041	107506	195	487	551		
385.8610	34.367	34.384	-1	0.950	1014992	209541	410	1025	511	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.384	34.405	-1	1.000	84954	17499	46	115	380		
375.8178	34.384	34.405	-1	1.000	70657	14926	30	75	498	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.544	34.562	-1	0.955	582468	111482	195	487	572		
385.8610	34.544	34.562	-1	0.955	1109868	211659	410	1025	516	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.569	34.582	-1	1.001	102510	19443	46	115	423		
375.8178	34.561	34.582	-1	1.000	82811	15785	30	75	526	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.429	35.444	-1	0.979	608469	136128	195	487	698		
385.8610	35.429	35.444	-1	0.979	1131546	250431	410	1025	611	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.446	35.461	-1	1.000	106373	23069	46	115	502		
375.8178	35.446	35.461	-1	1.000	85154	19256	30	75	642	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.374	36.388	-1	1.005	597532	142559	195	487	731		
385.8610	36.374	36.388	-1	1.005	1138253	273050	410	1025	666	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.390	36.402	-1	1.000	109103	26446	46	115	575		
375.8178	36.390	36.402	-1	1.000	85974	20436	30	75	681	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.180	36.192	-1		992912	228100	138	345	1653		
403.8529	36.180	36.192	-1		781782	183211	108	270	1696	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.665	35.680	-1	0.986	765726	187664	138	345	1360		
403.8529	35.665	35.680	-1	0.986	597377	148078	108	270	1371	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.682	35.695	-1	1.000	73908	17289	18	45	961		
391.8127	35.682	35.695	-1	1.000	58336	14382	19	47	757	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.792	35.805	-1	0.989	870562	199612	138	345	1446		
403.8529	35.792	35.805	-1	0.989	688106	154356	108	270	1429	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.809	35.820	-1	1.000	75558	17193	18	45	955		
391.8127	35.809	35.820	-1	1.000	62584	14006	19	47	737	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.196	36.208	-1	1.015	78157	18353	18	45	1020		
391.8127	36.196	36.208	-1	1.015	61584	14405	19	47	758	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.291	38.305	-1	1.058	404086	116332	150	375	776		
419.8220	38.291	38.305	-1	1.058	868440	254106	302	755	841	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.308	38.317	-1	1.000	84325	24268	44	110	552		
409.7788	38.299	38.317	-1	1.000	79783	22737	37	92	615	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.589	39.600	-1	1.094	368476	114509	150	375	763		
419.8220	39.589	39.600	-1	1.094	806875	252758	302	755	837	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	70636	21558	44	110	490		
409.7788	39.598	39.608	-1	1.000	67699	21216	37	92	573	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.286	39.293	0	1.086	594894	185269	137	342	1352		
437.8140	39.286	39.293	0	1.086	567223	172933	132	330	1310	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.294	39.301	0	1.000	57275	17734	30	75	591		
425.7737	39.294	39.301	0	1.000	53486	17016	18	45	945	1.07(0.88-1.20)	
13C-OCDD											
469.7780	41.775	41.785	-1	1.155	873143	243136	128	320	1900		
471.7750	41.775	41.785	-1	1.155	959996	268180	128	320	2095	0.91(0.76-1.02)	
OCDF											
441.7428	41.868	41.875	0	1.002	103359	30074	20	50	1504		
443.7399	41.859	41.875	-1	1.002	114114	32506	41	102	793	0.91(0.76-1.02)	
OCDD											
457.7377	41.784	41.794	-1	1.000	86745	24118	17	42	1419		
459.7348	41.784	41.794	-1	1.000	95725	27065	23	57	1177	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

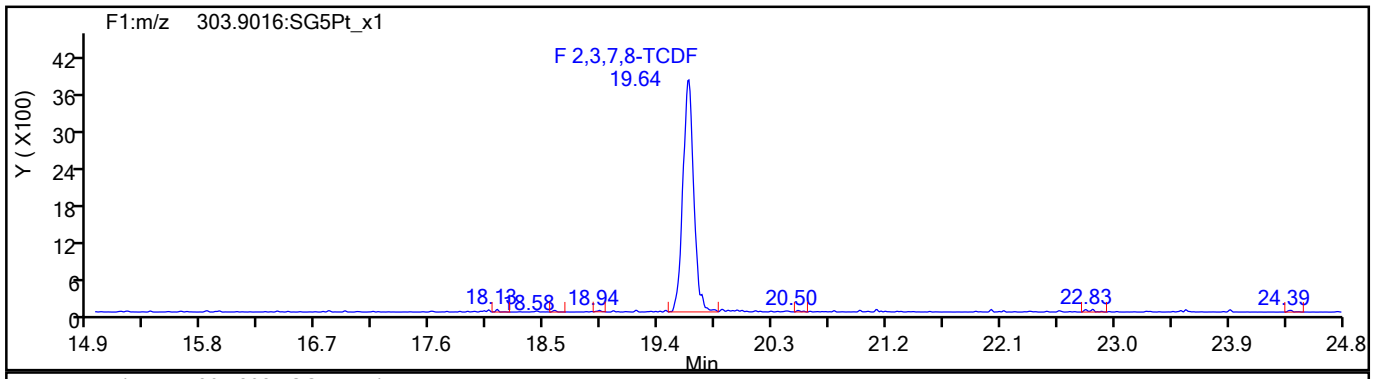

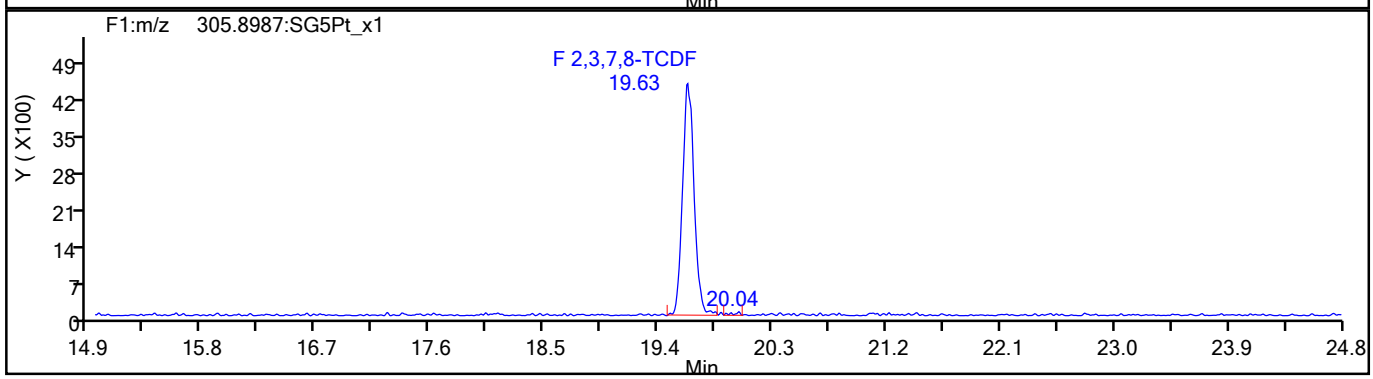

TCDF Standards

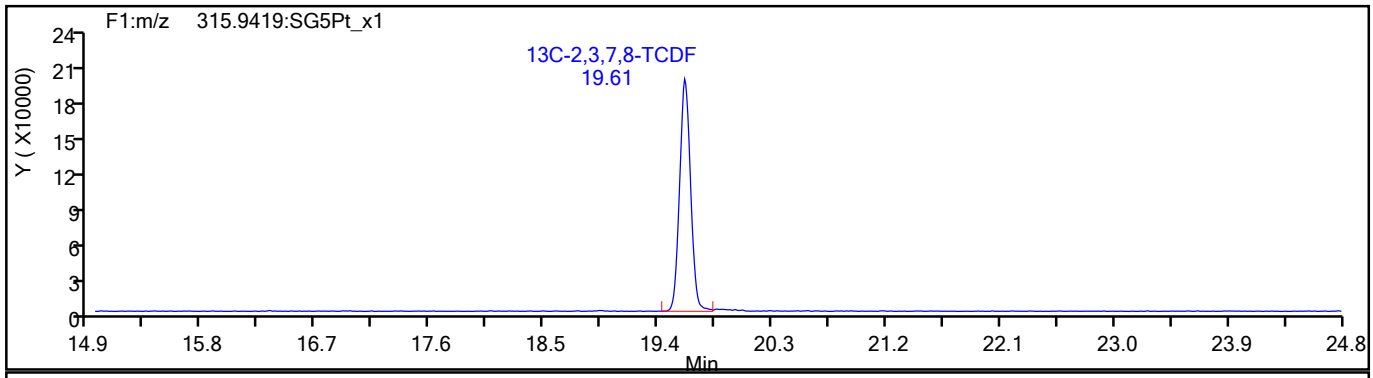

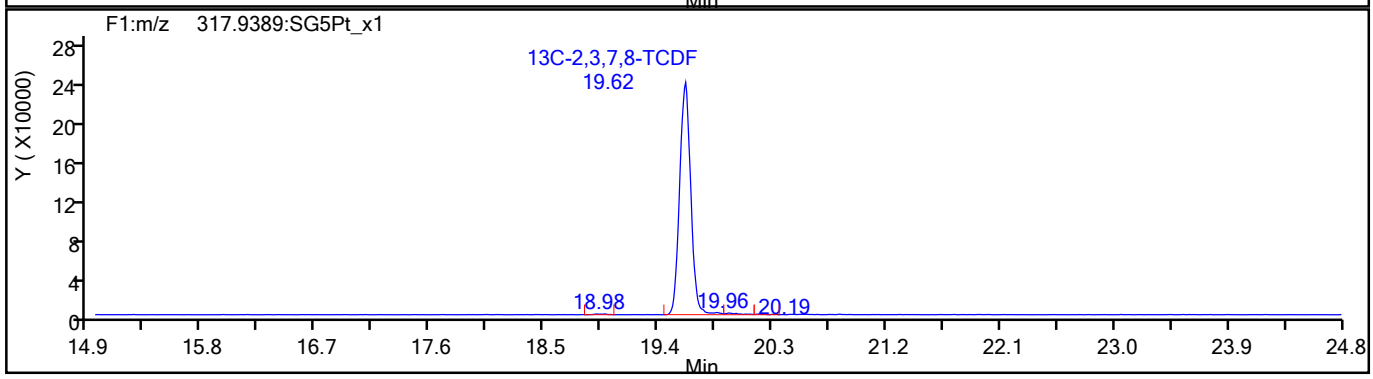

784248

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

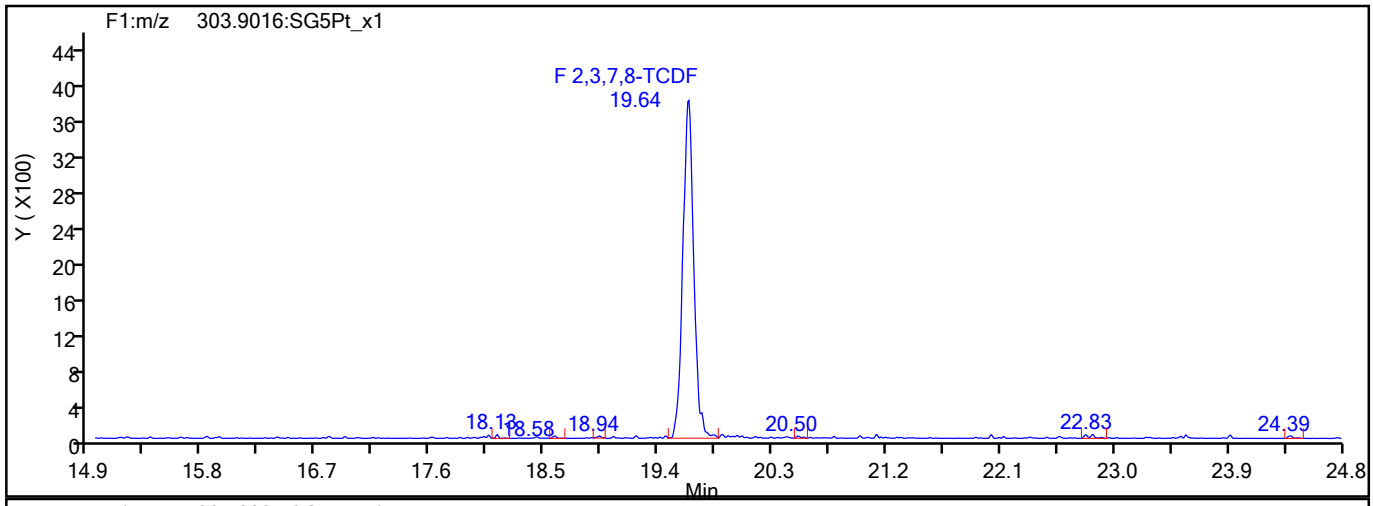

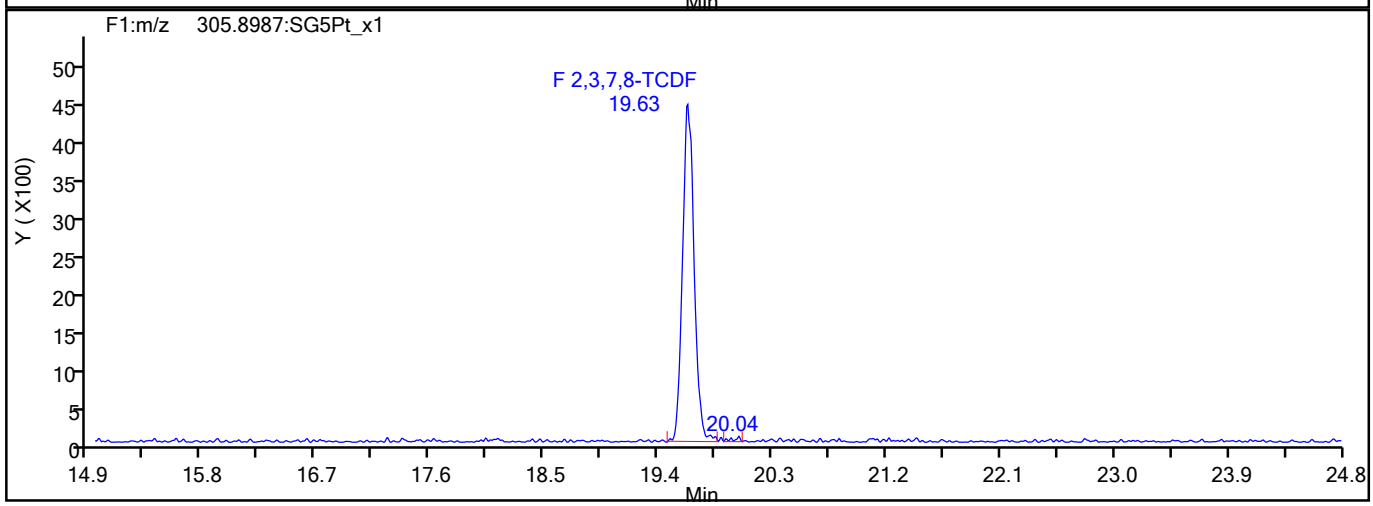

TCDF Interference Mass

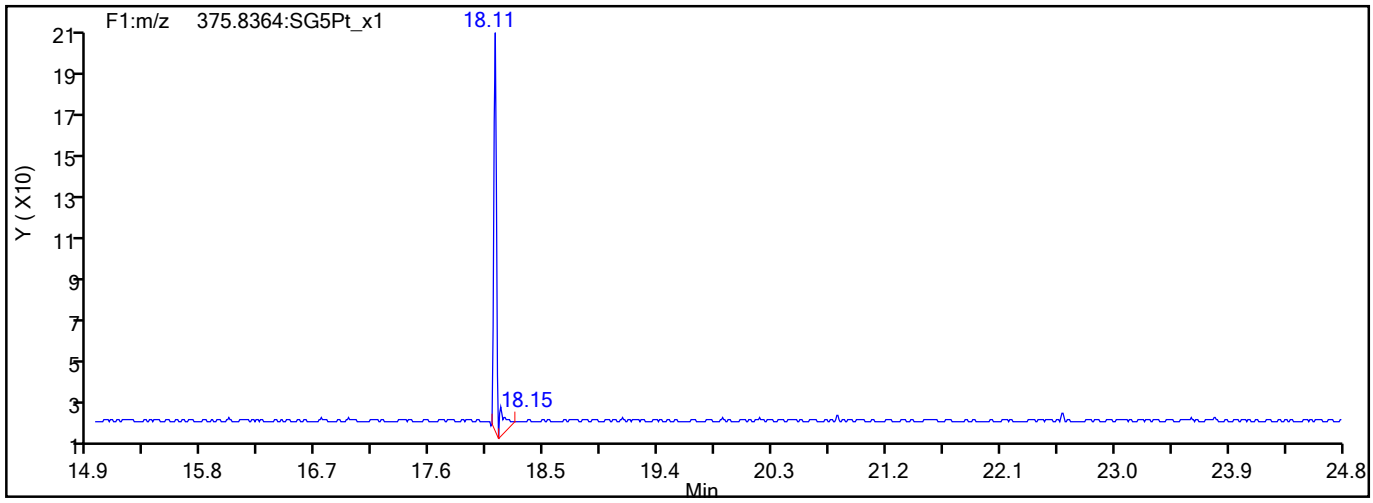

784249

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

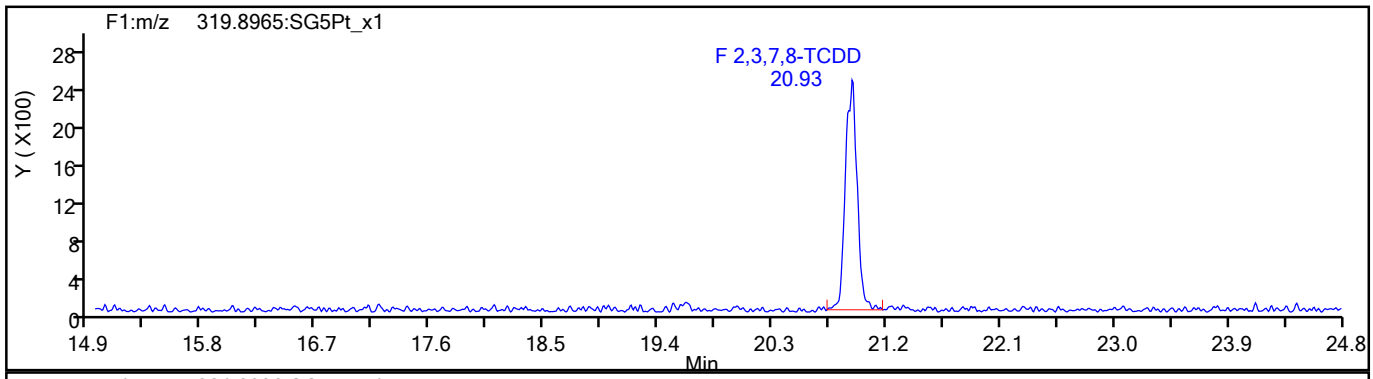

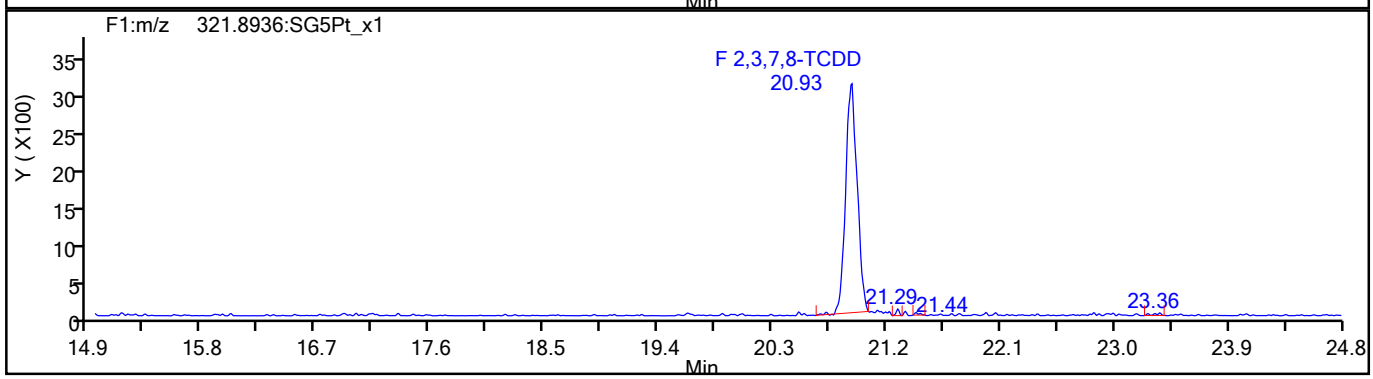

TCDD Standards

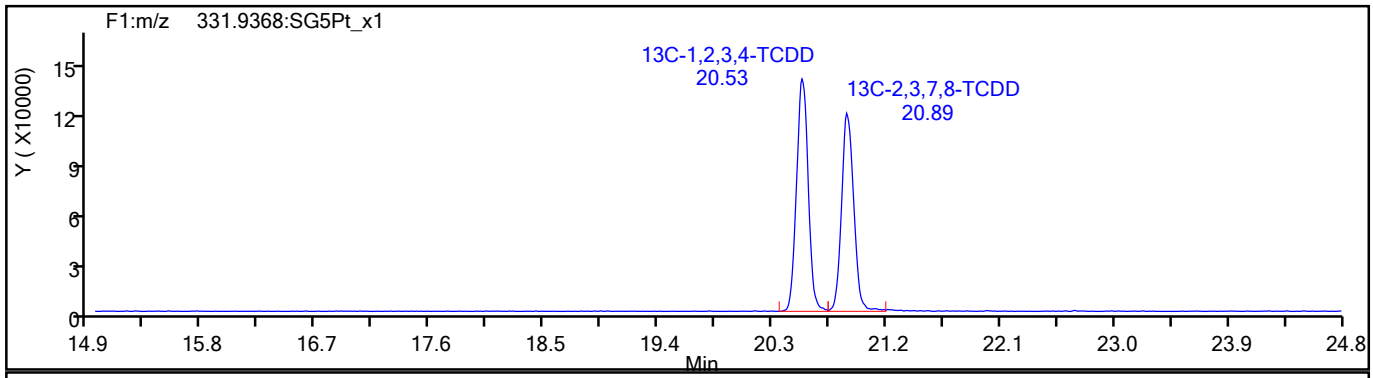

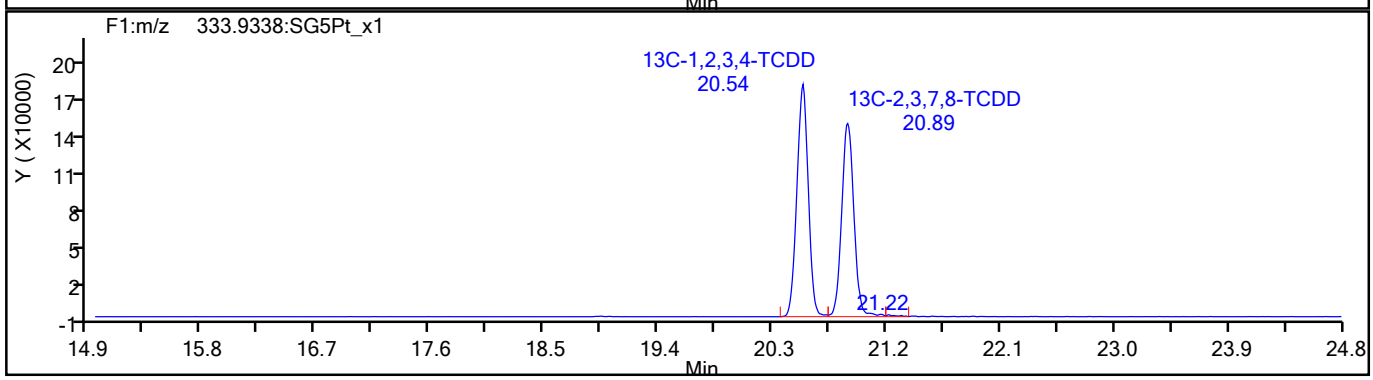

784250

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

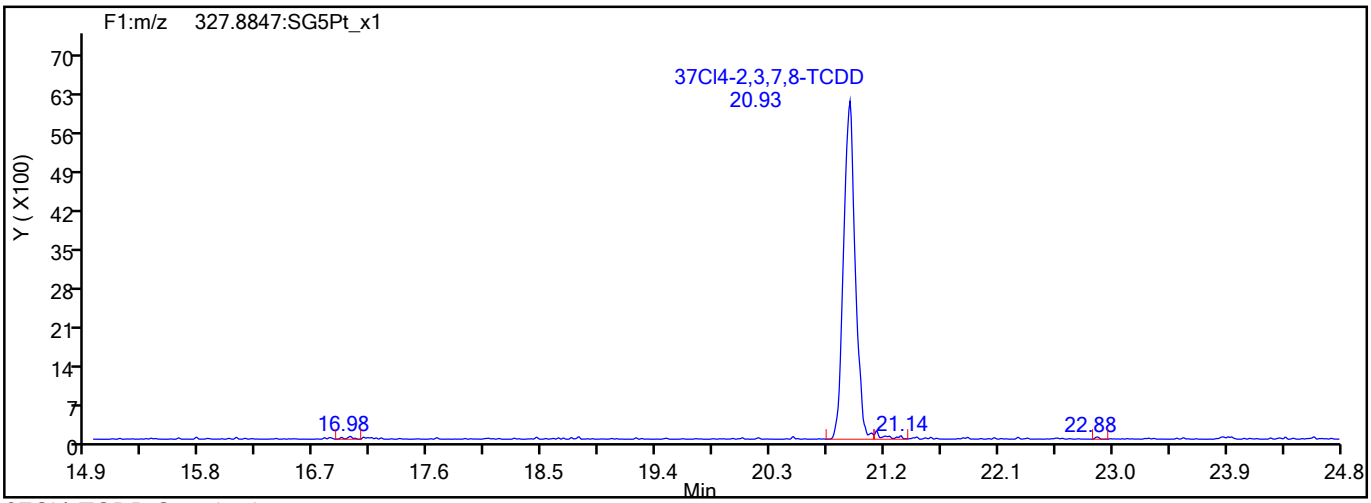

37Cl4-TCDD Standards

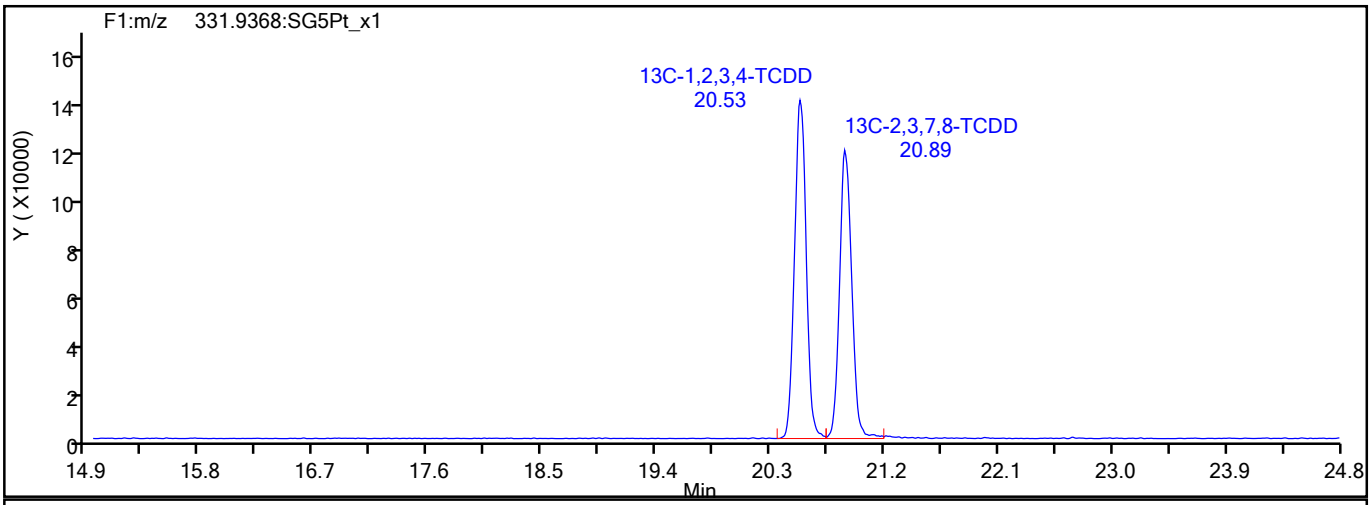

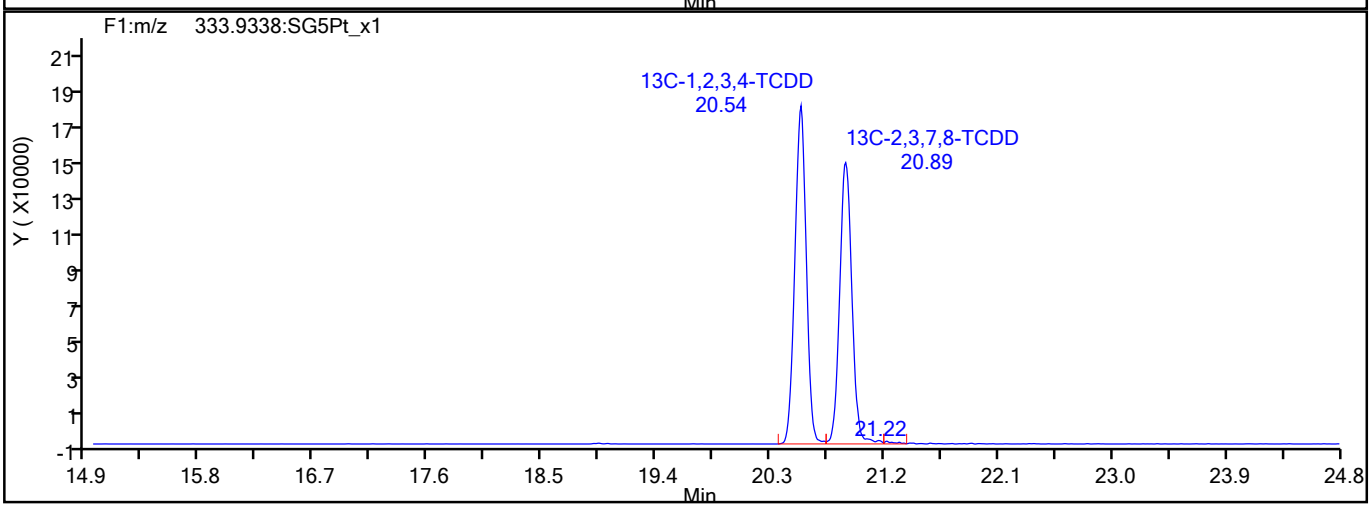

784251

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

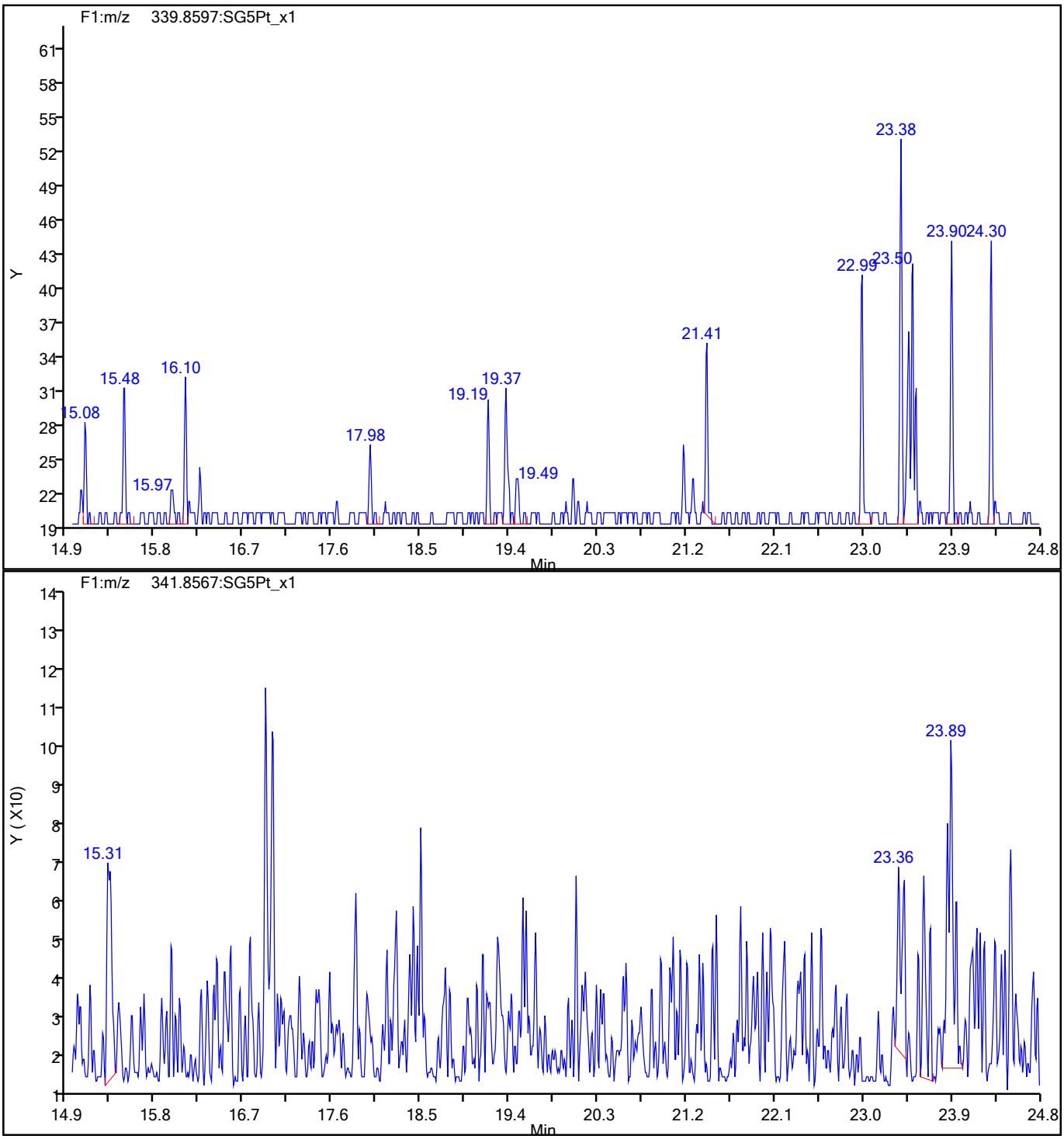

784252

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

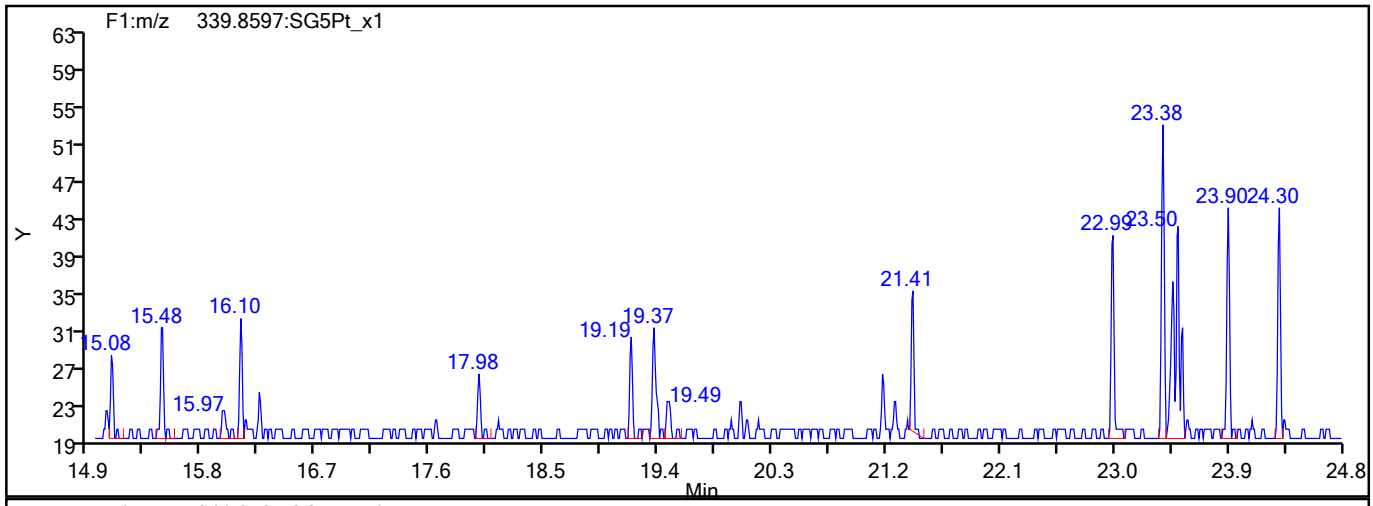

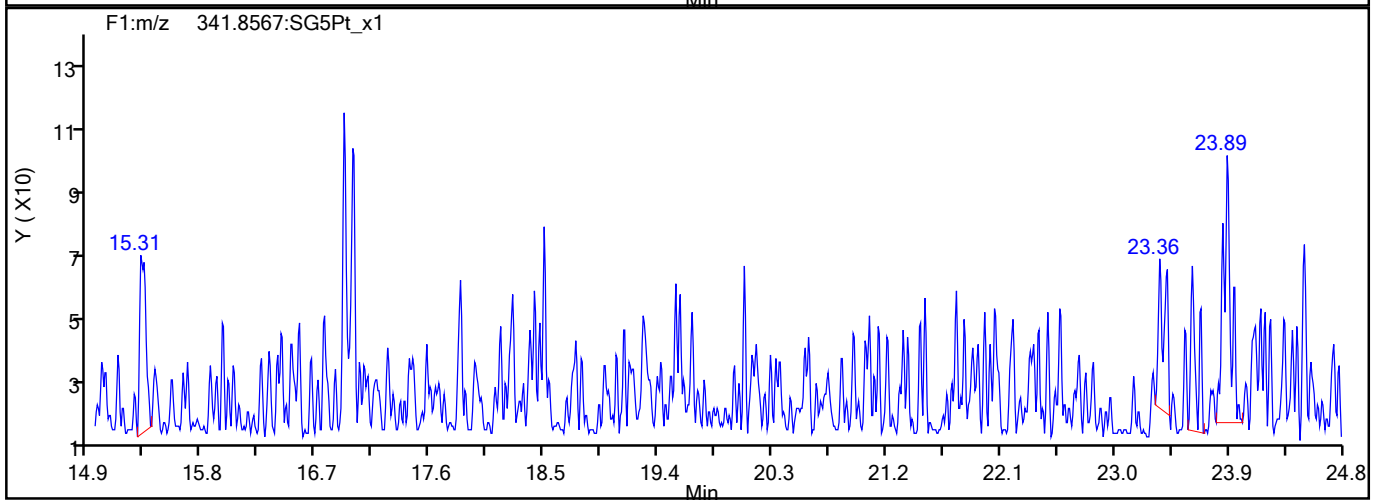

F1 PeCDFs Interference Mass

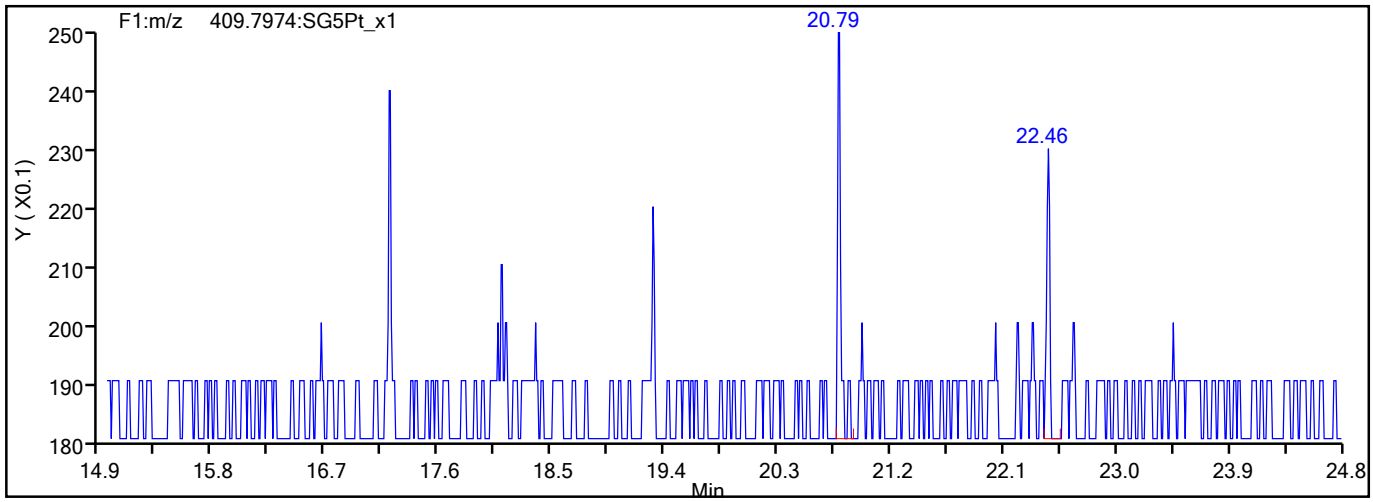

784253

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

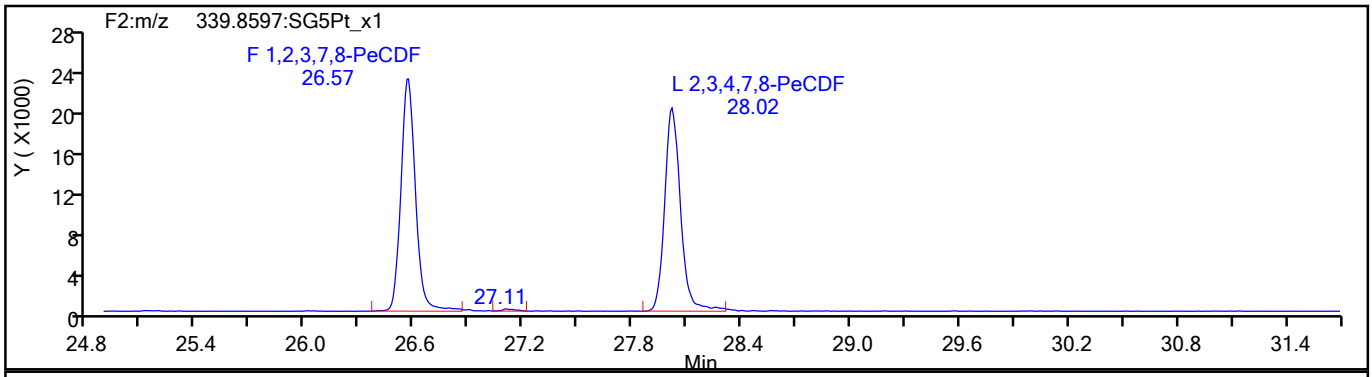

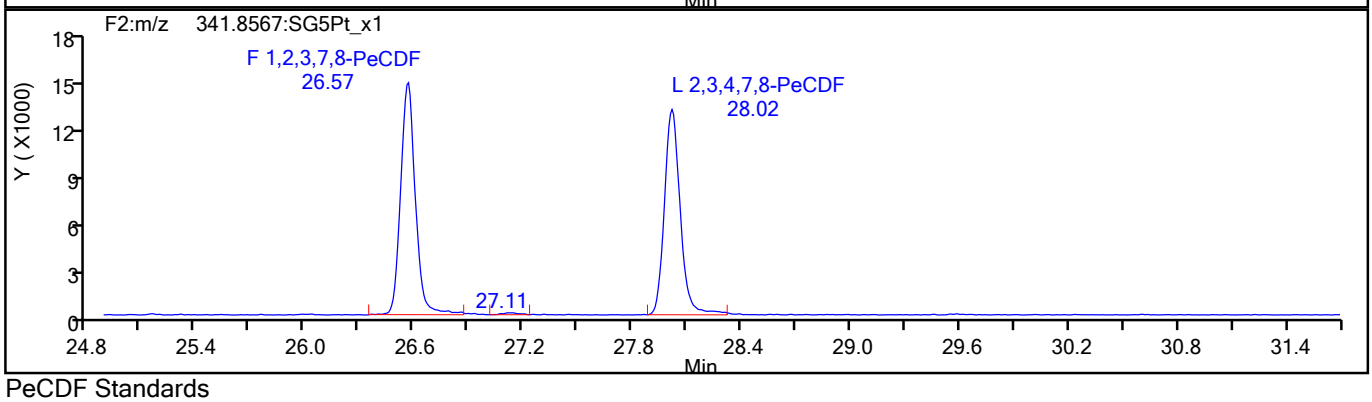

PeCDF Standards

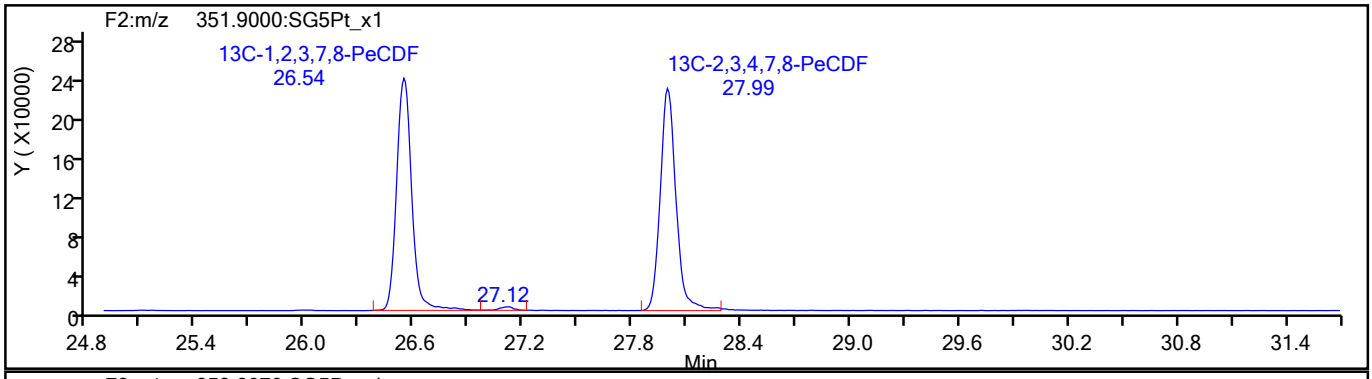

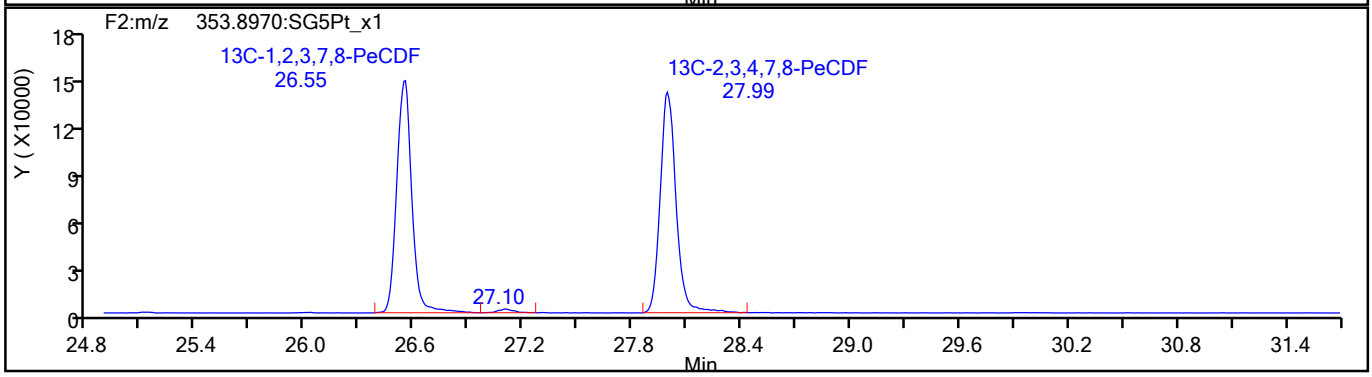

784254

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

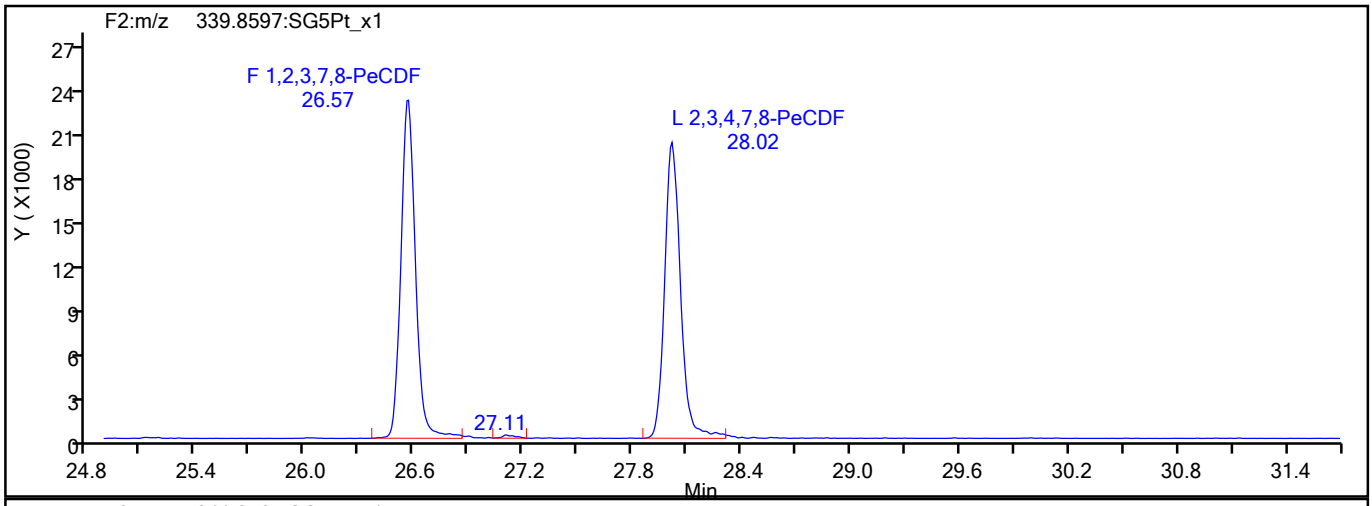

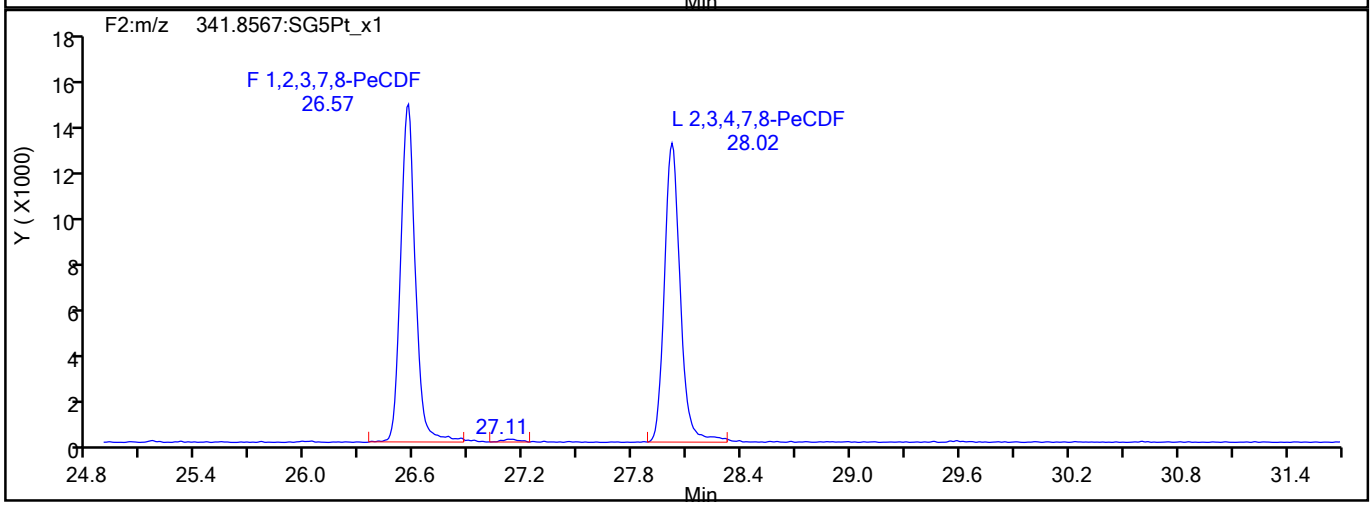

PeCDF Interference Mass

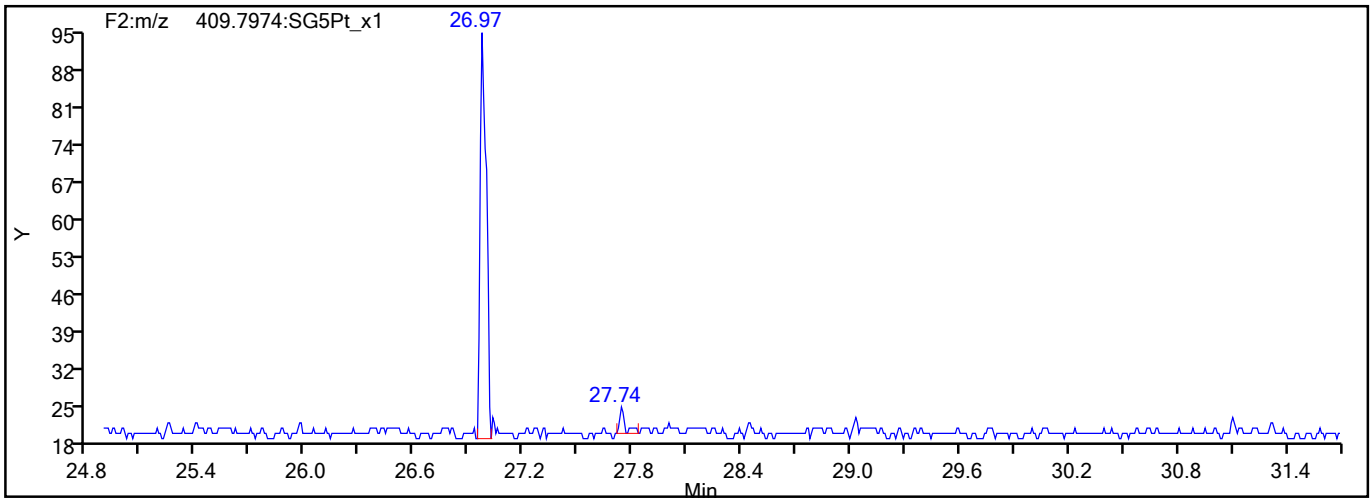

784255

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

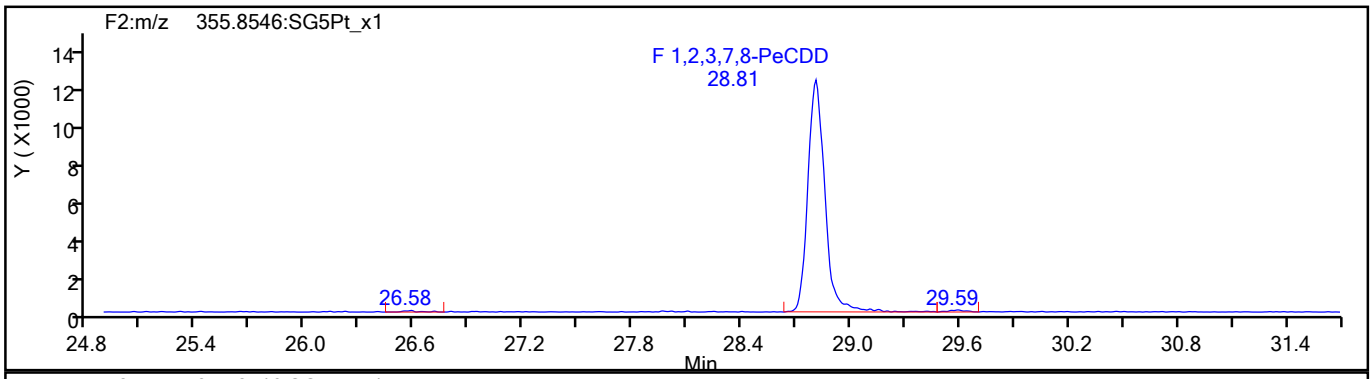

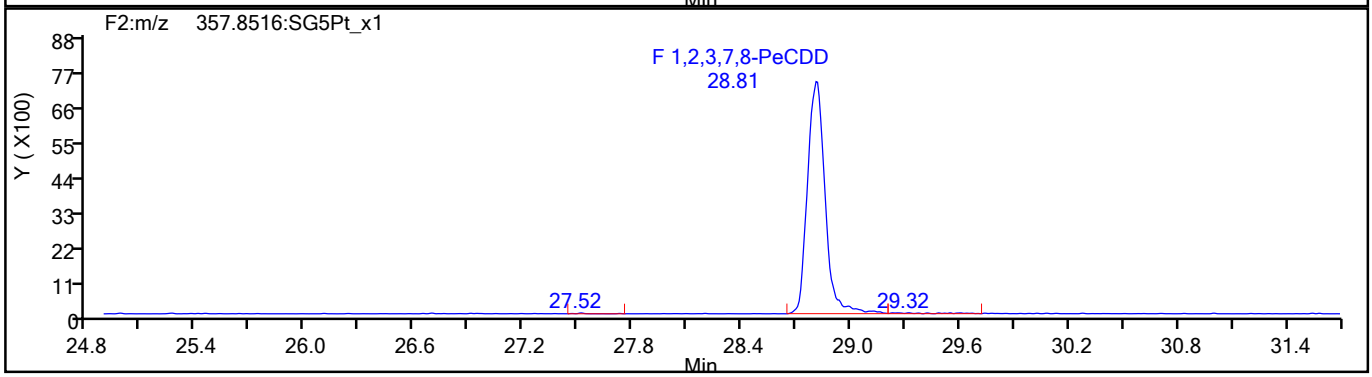

PeCDD Standards

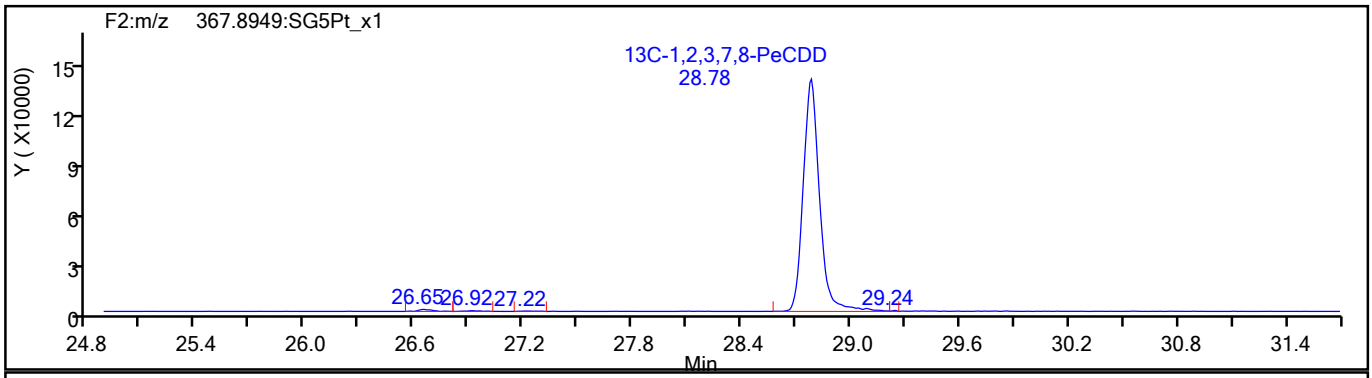

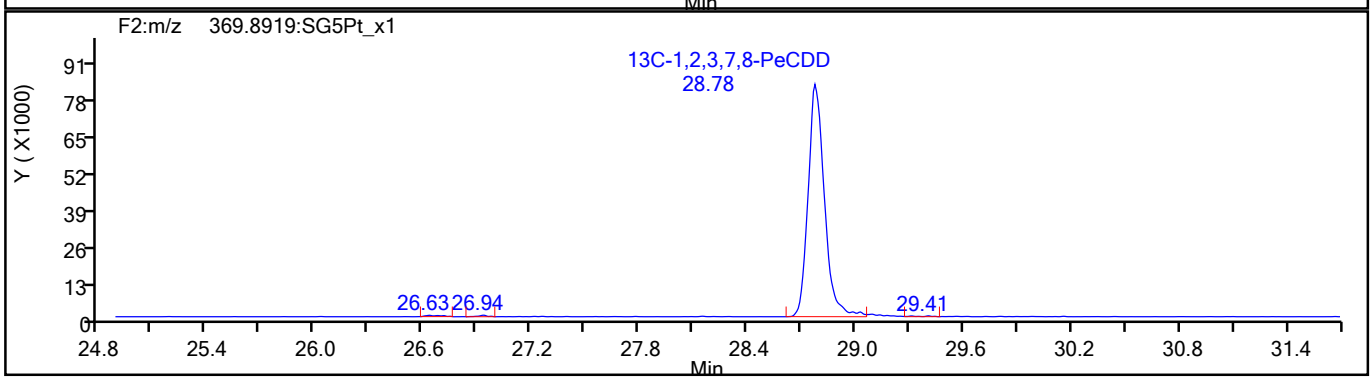

784256

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

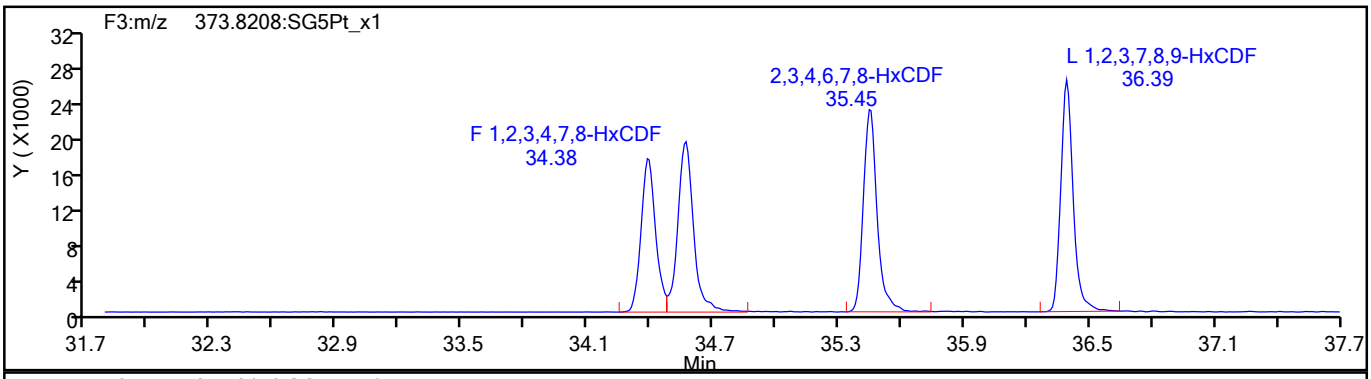

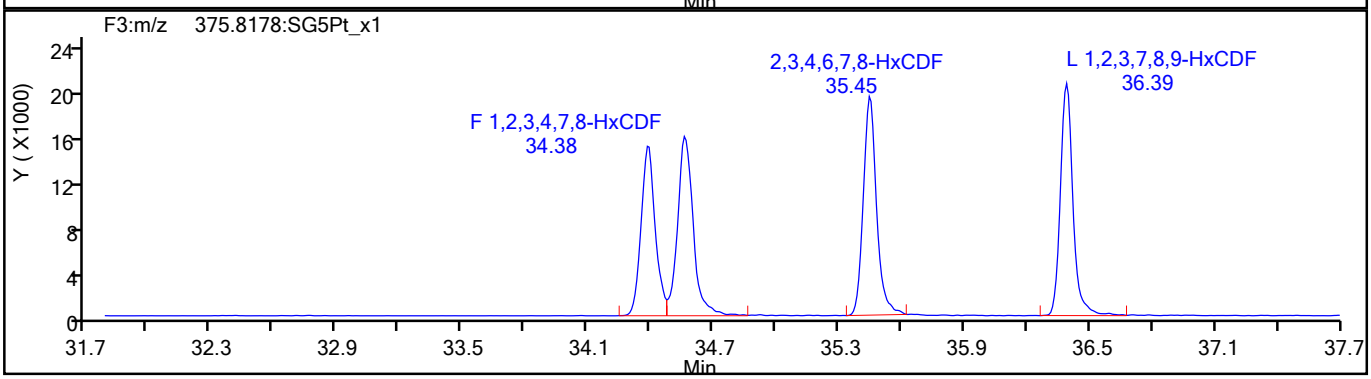

HxCDF Standards

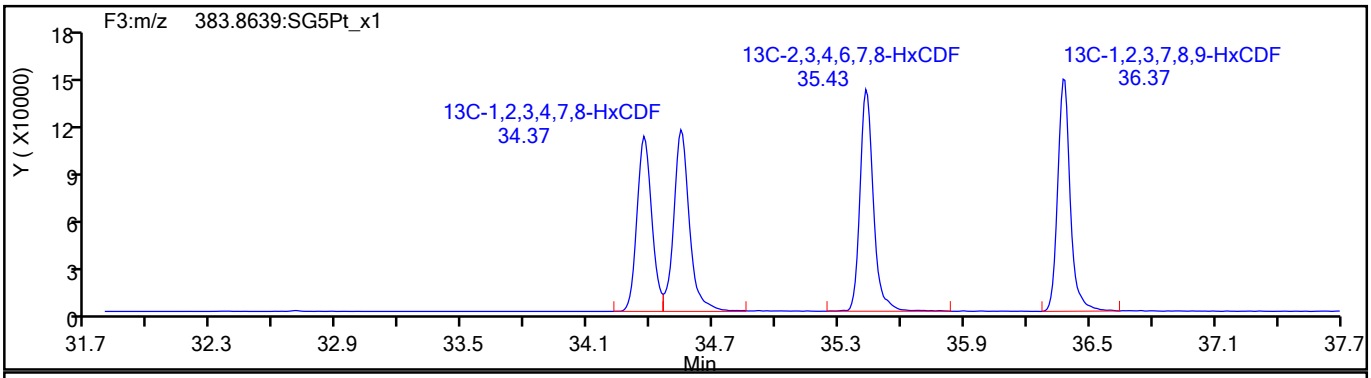

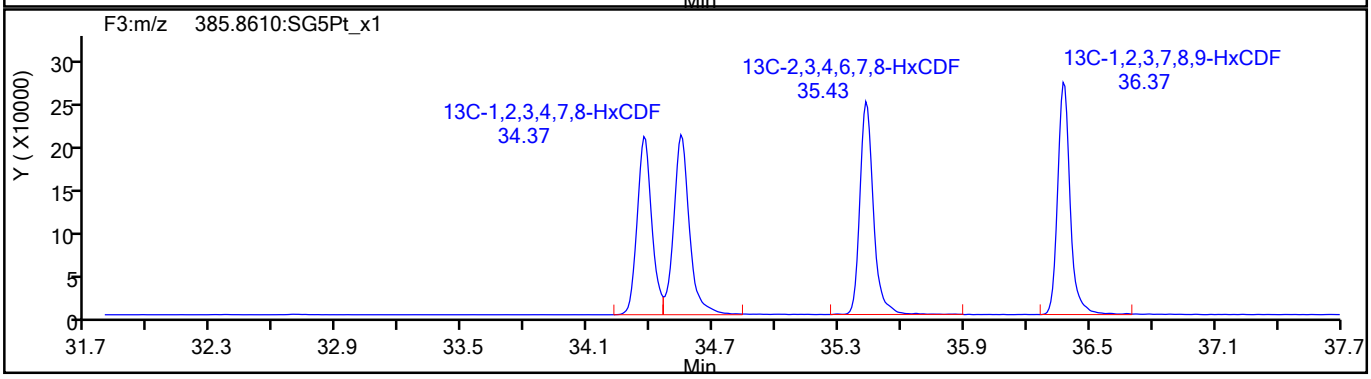

784257

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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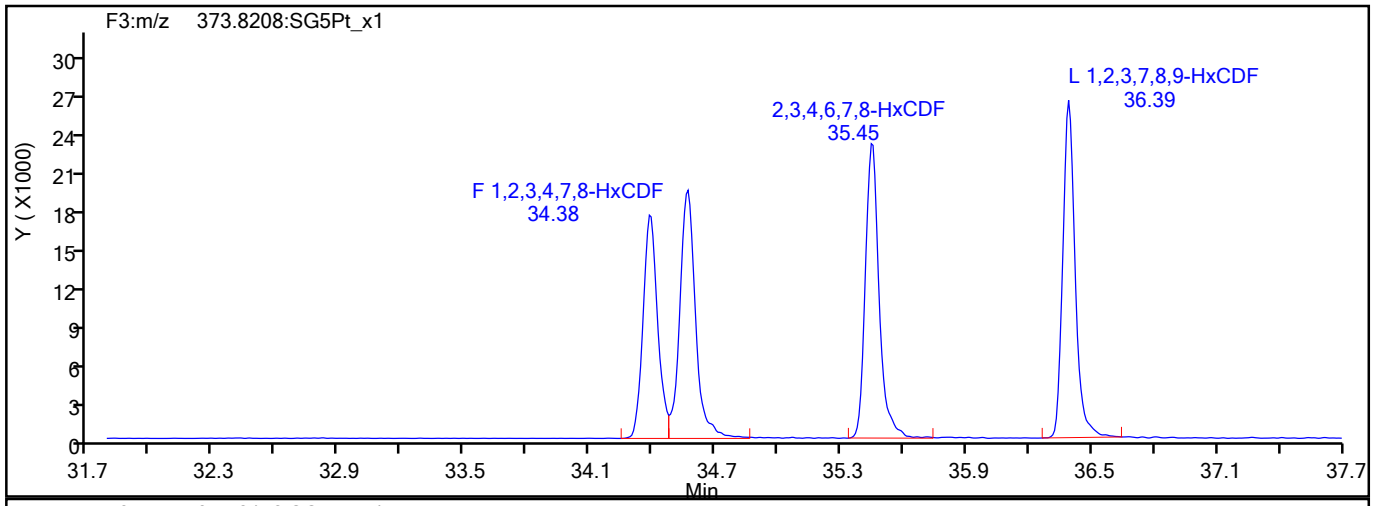

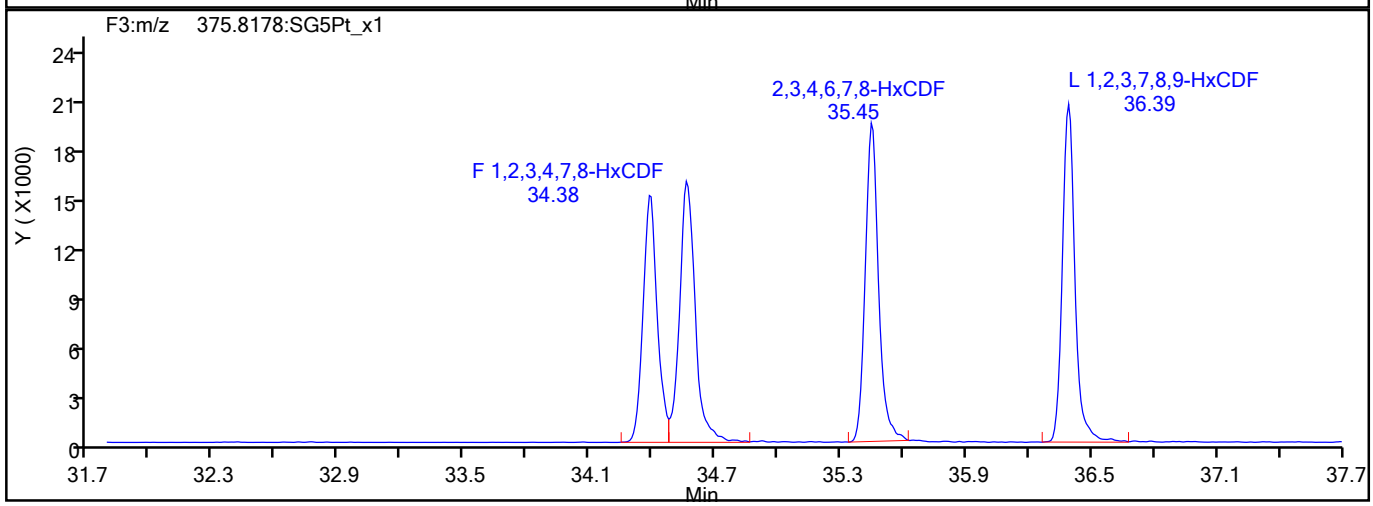

HxCDF Interference Mass

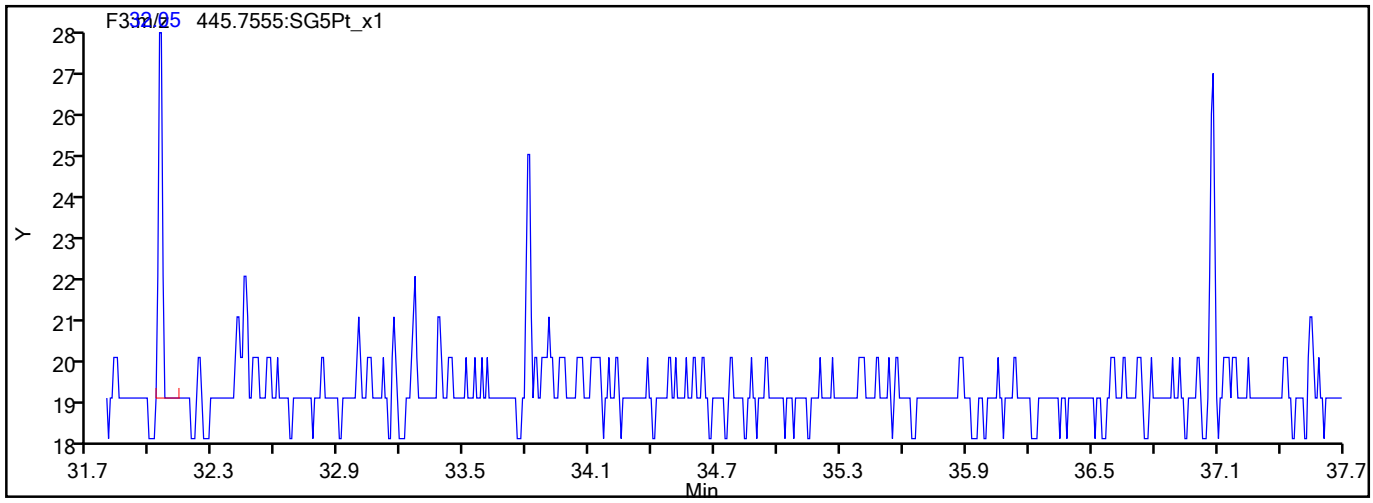

784258

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

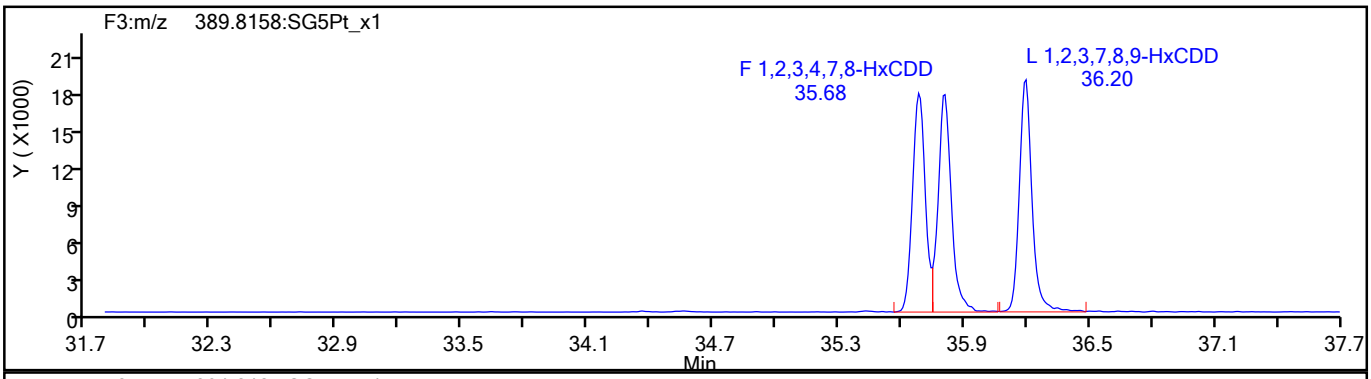

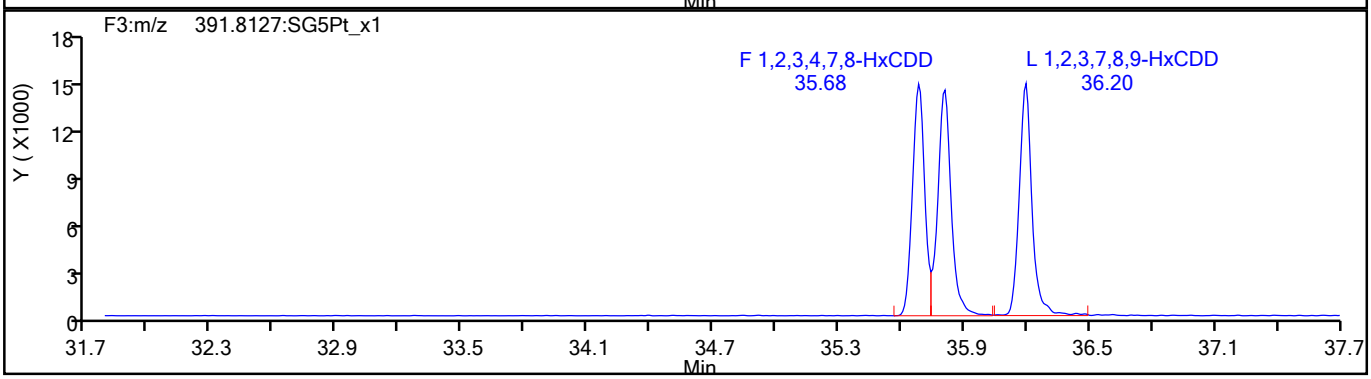

HxCDD Standards

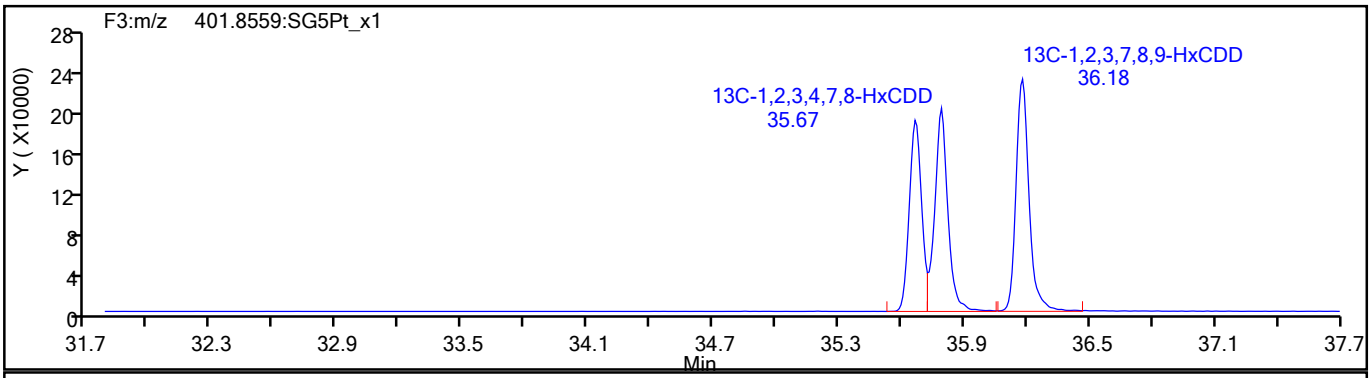

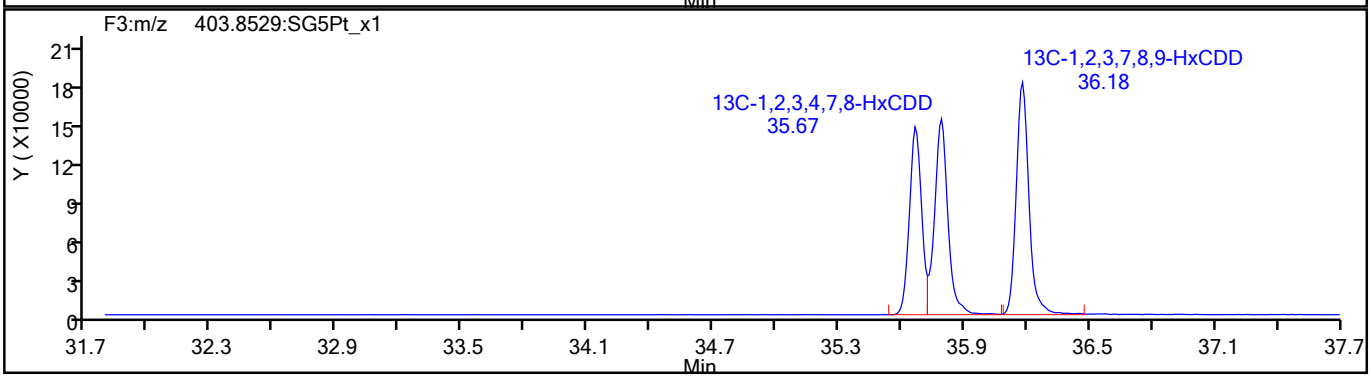

784259

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

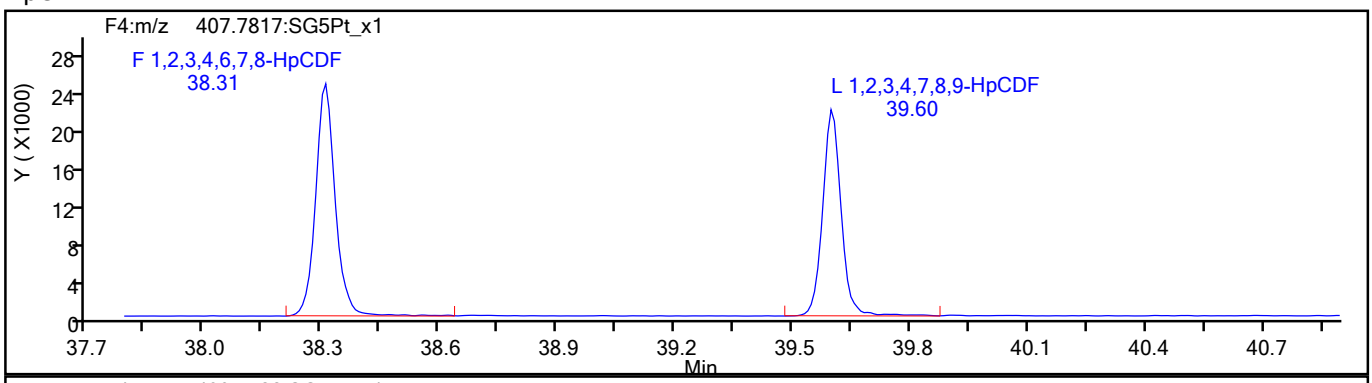

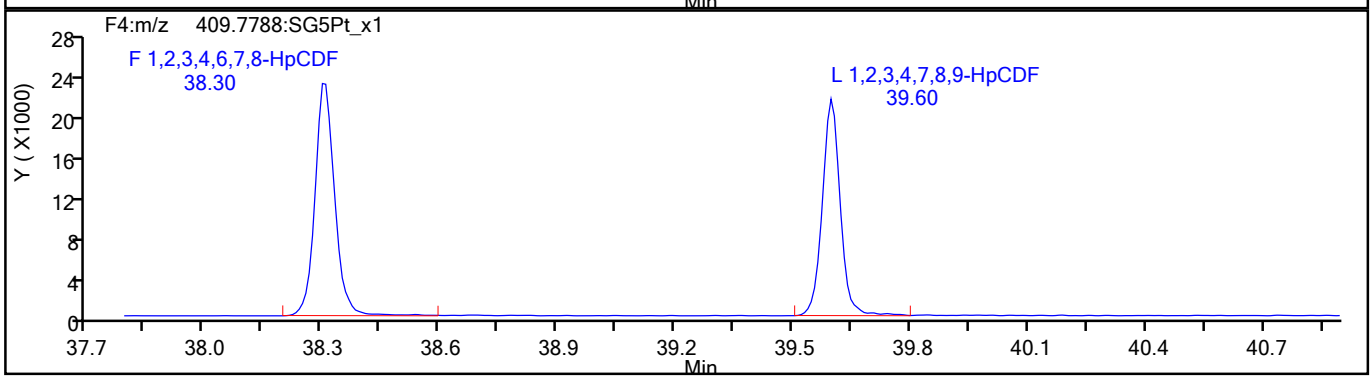

HpCDF Standards

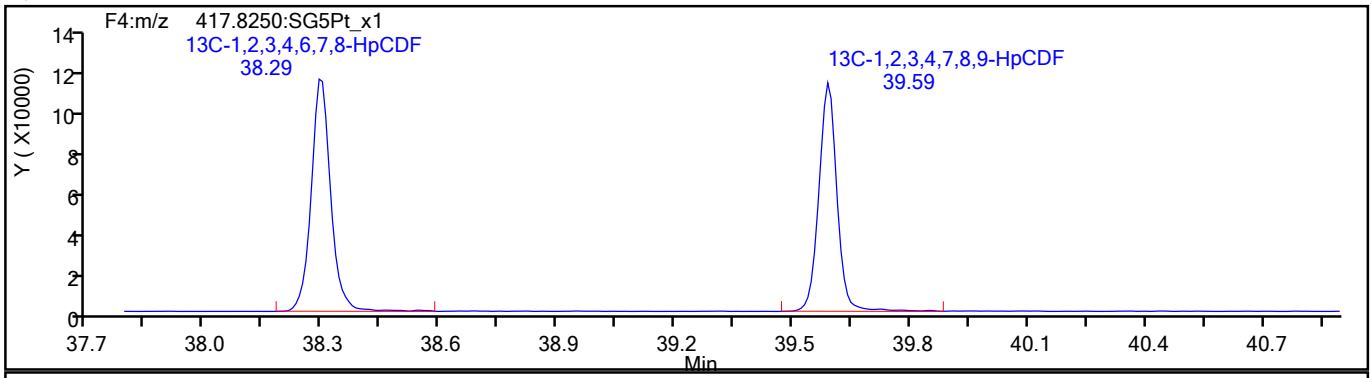

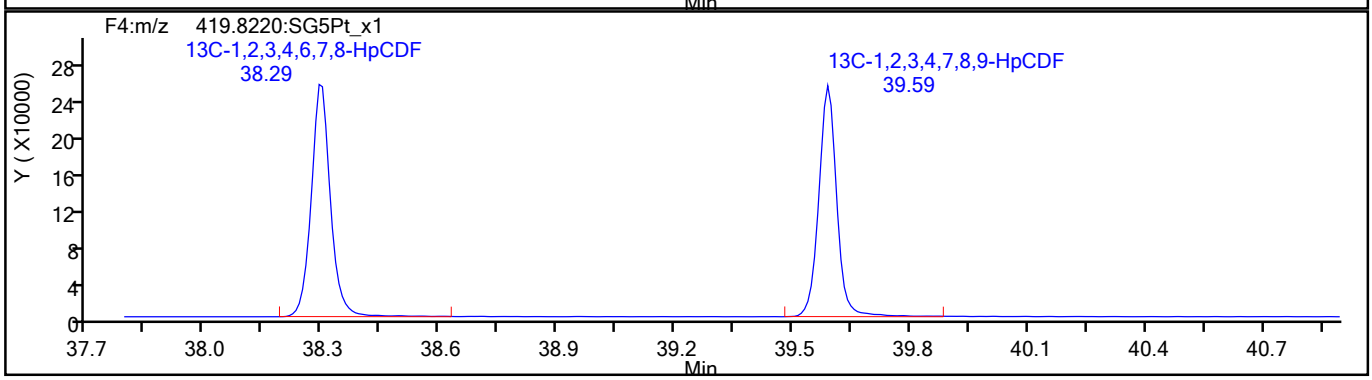

784260

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

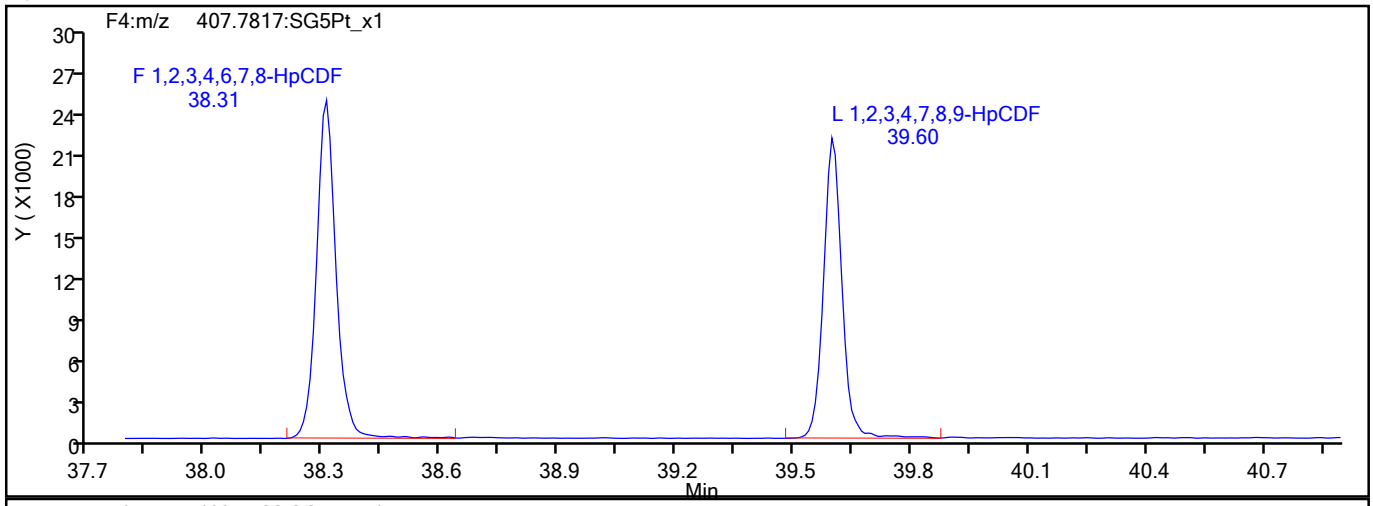

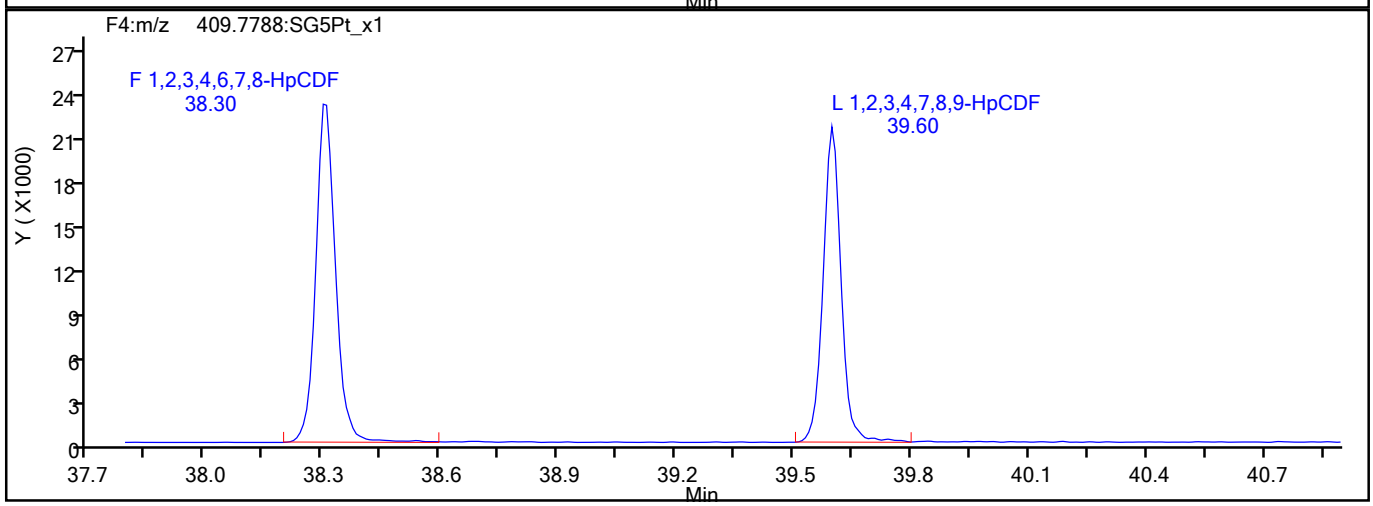

HpCDF Interference Mass

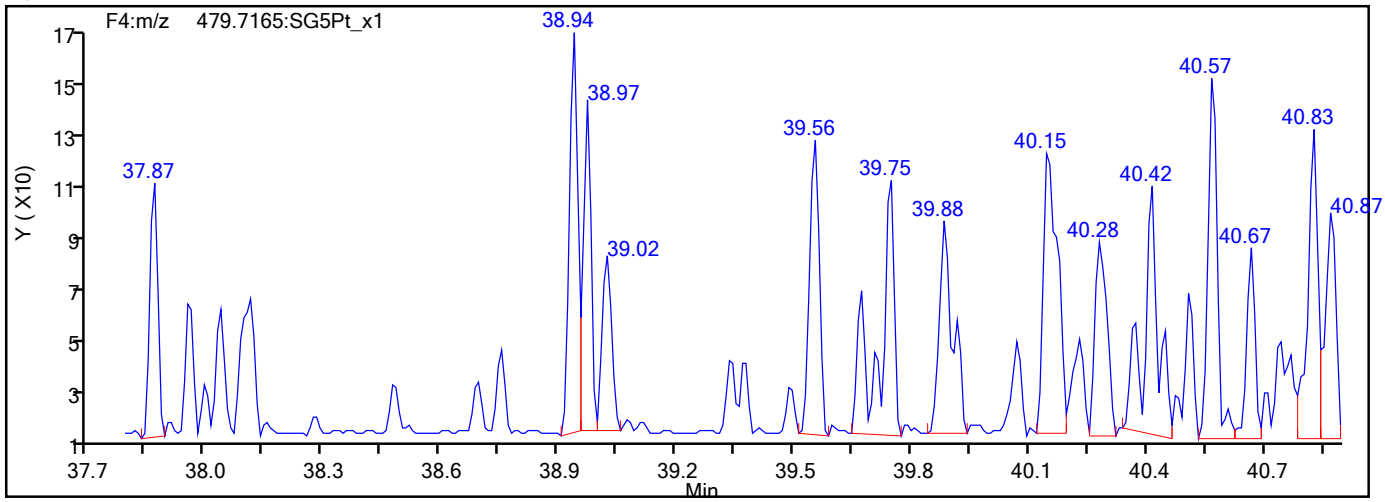

784261

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDD

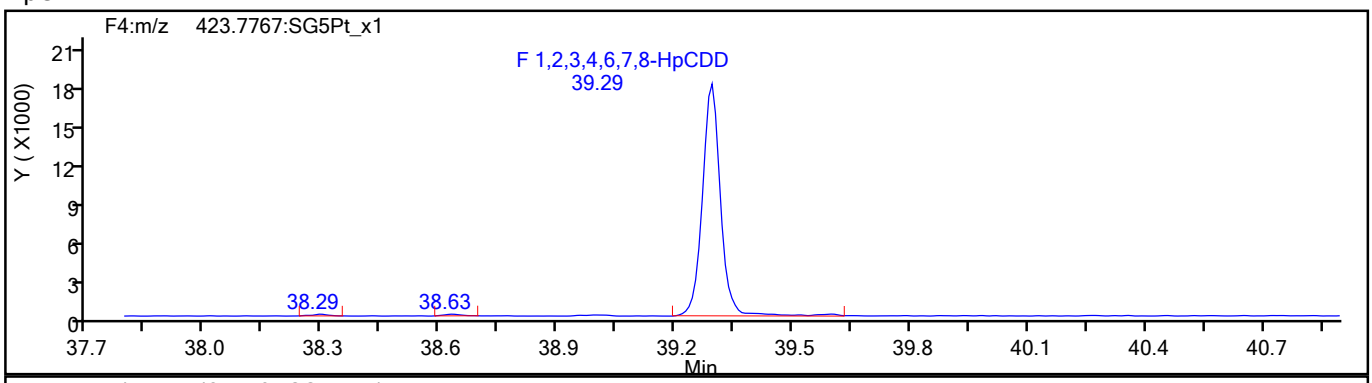

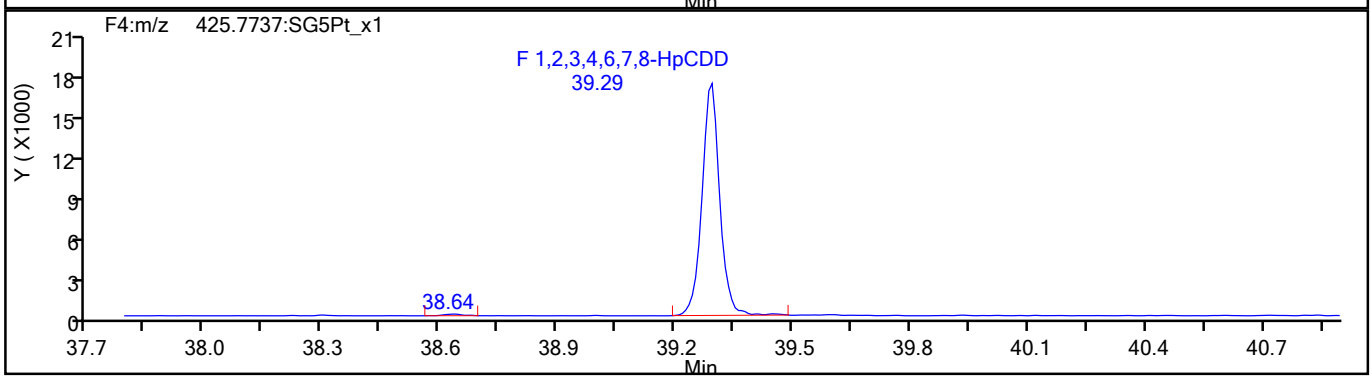

HpCDD Standards

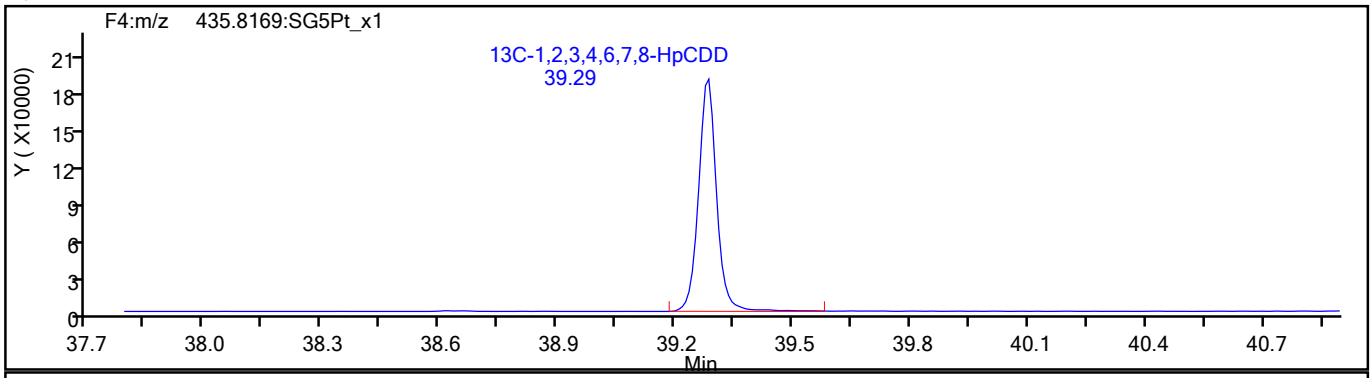

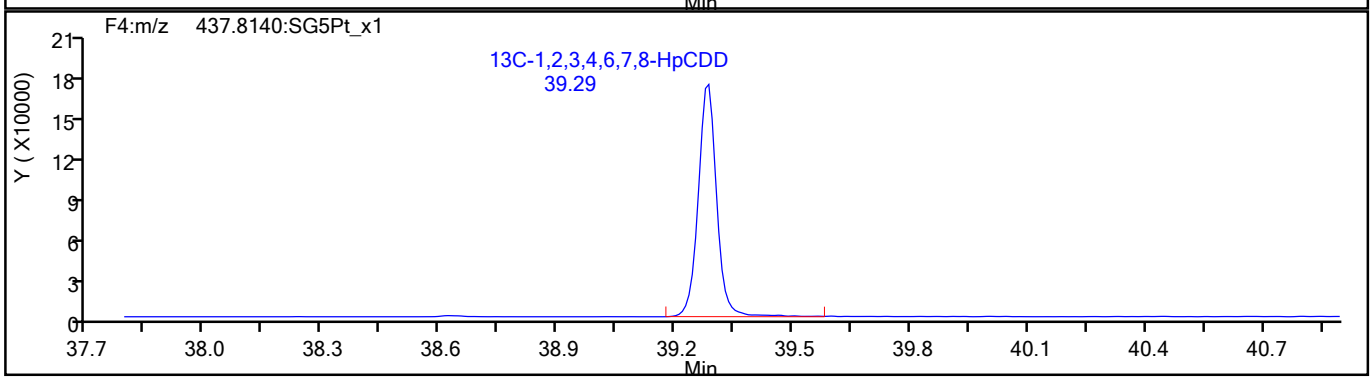

784262

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

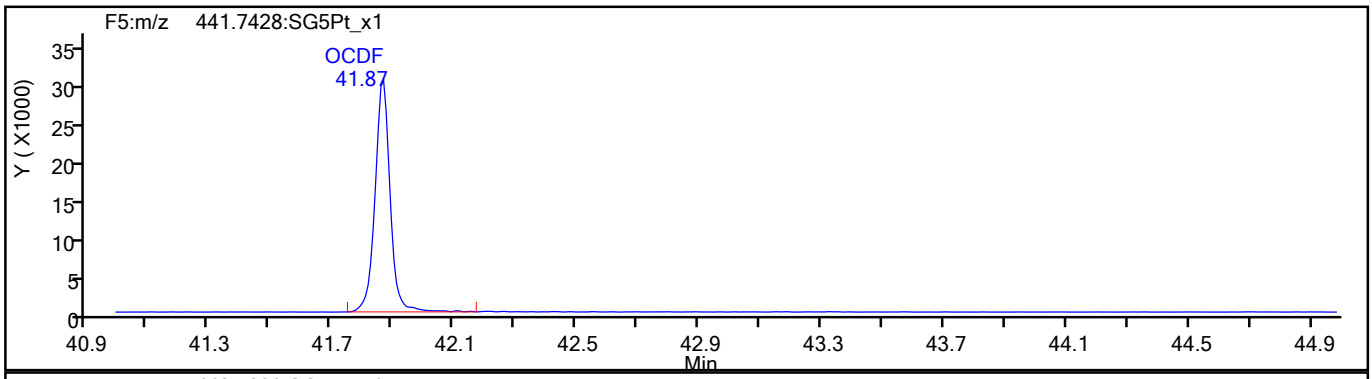

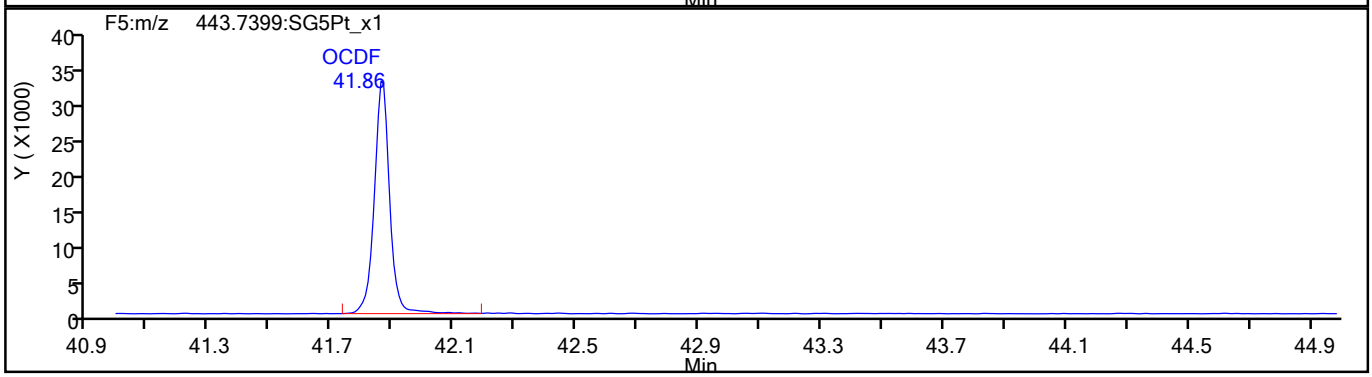

OCDF Standards

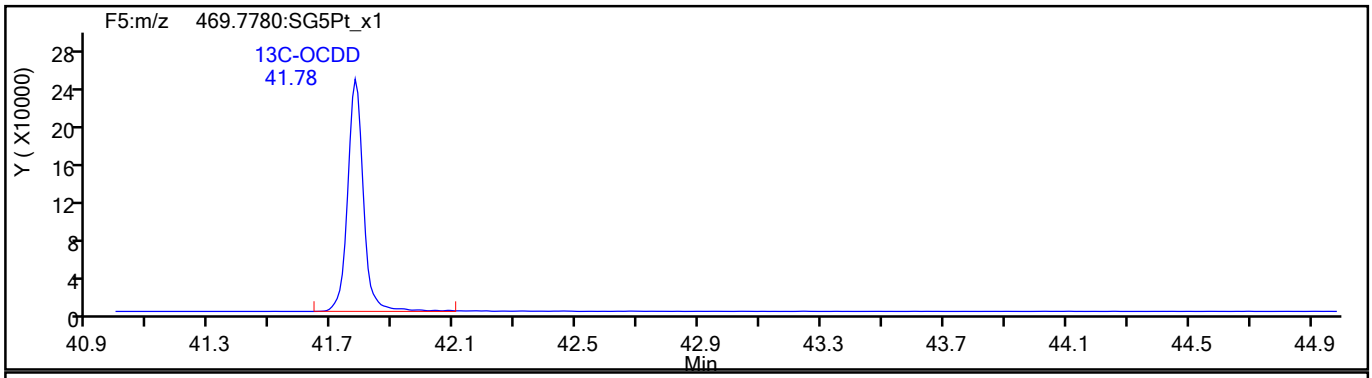

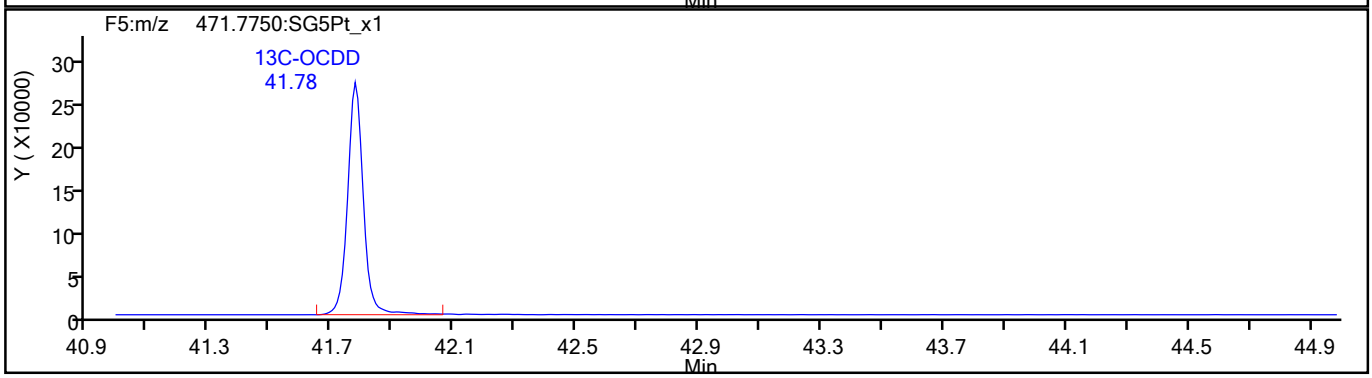

784263

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

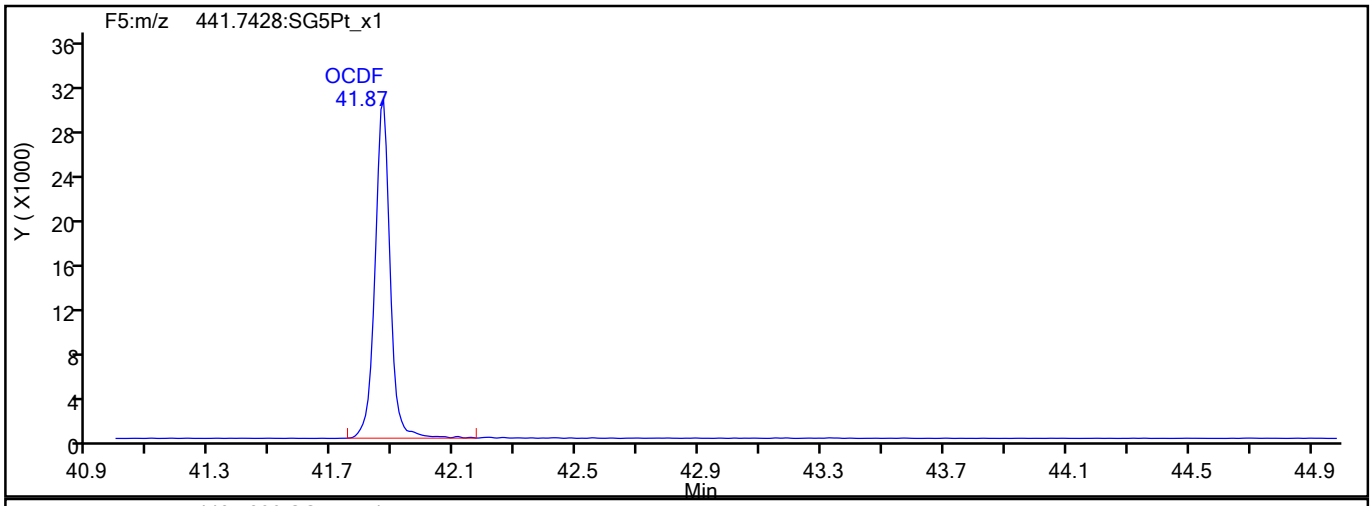

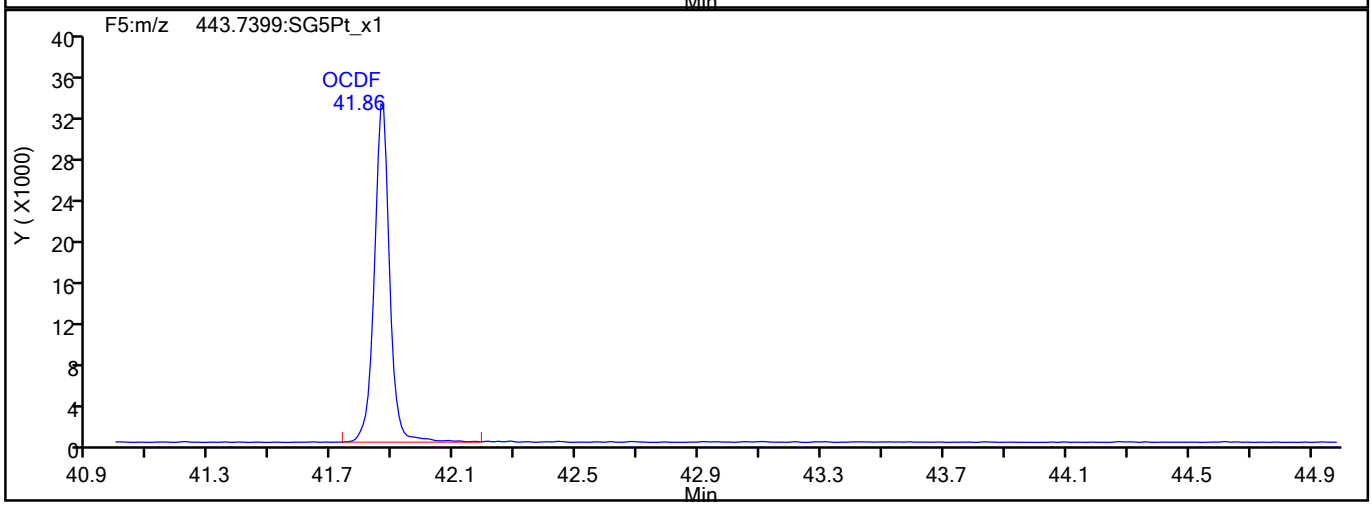

OCDF Interference Mass

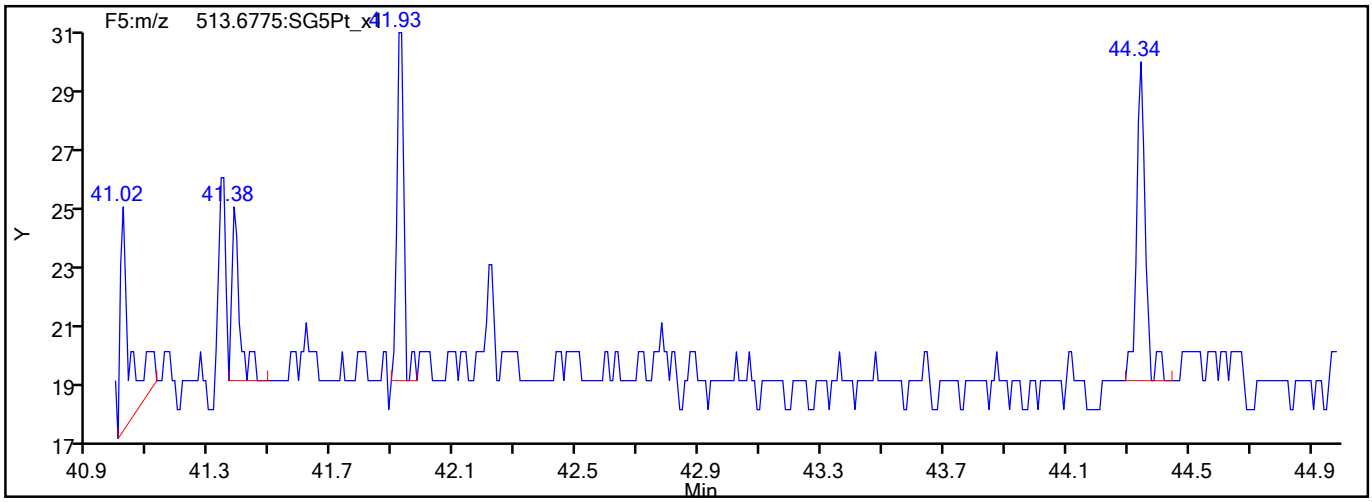

784264

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDD

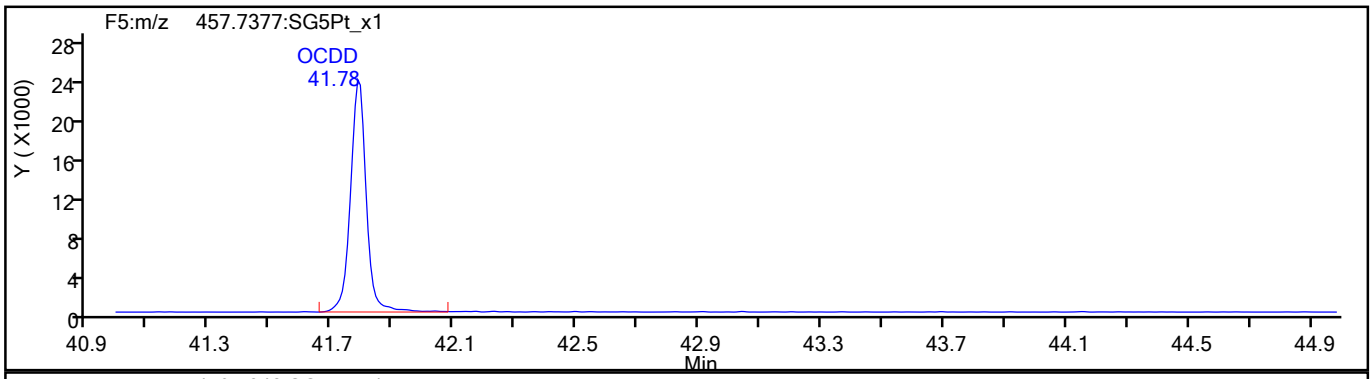

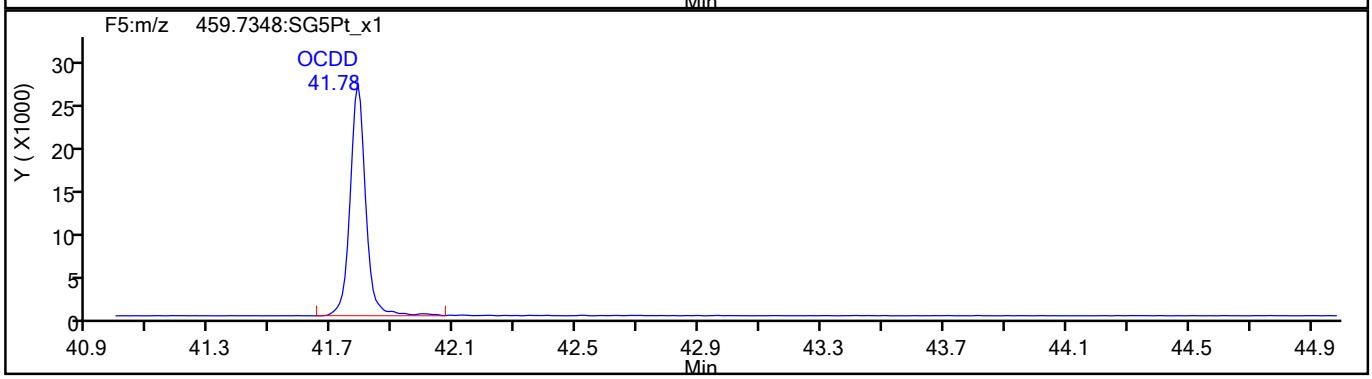

OCDD Standards

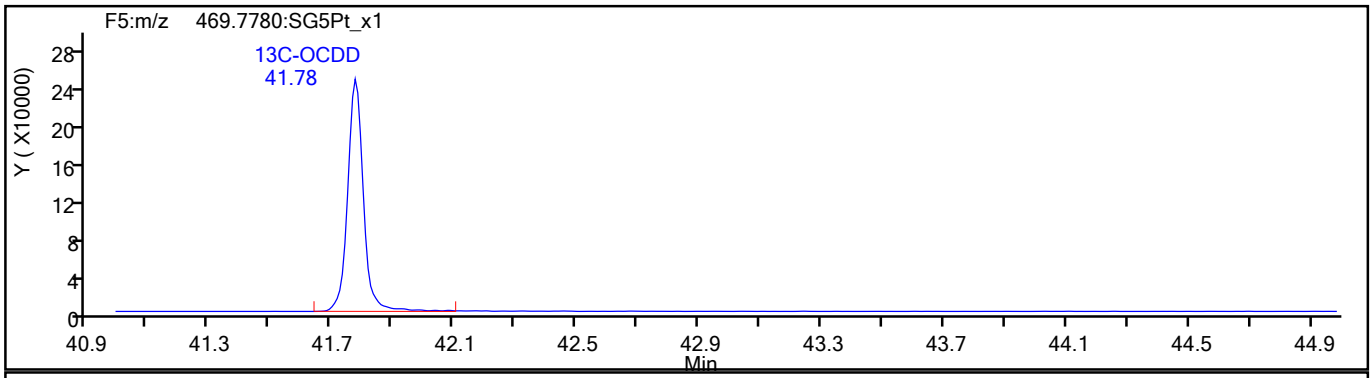

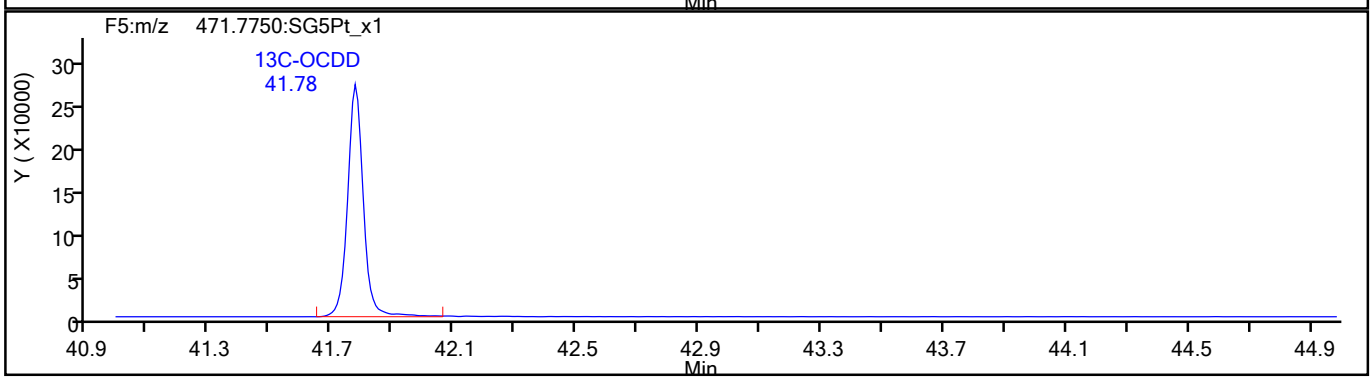

784265

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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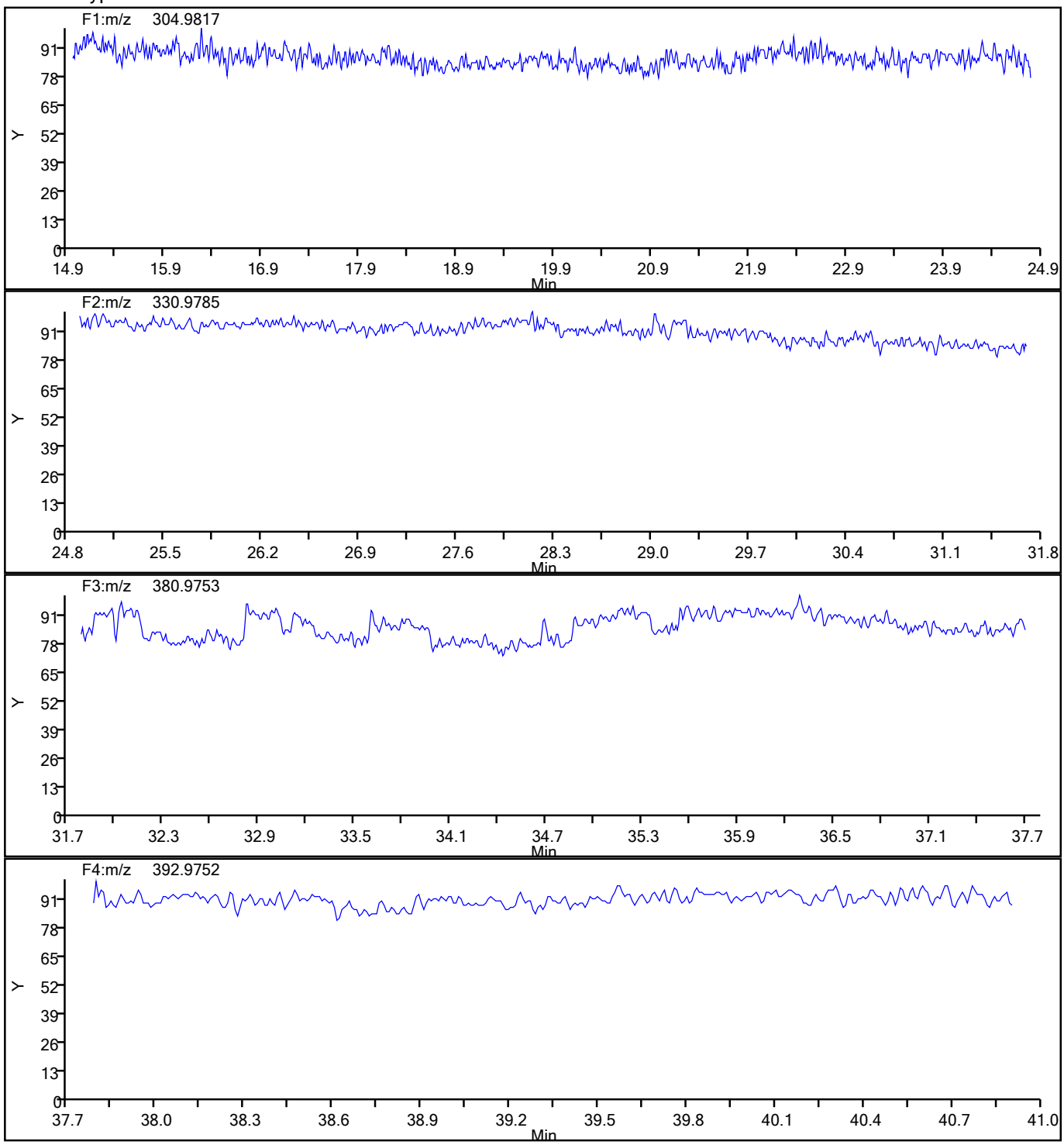

784266

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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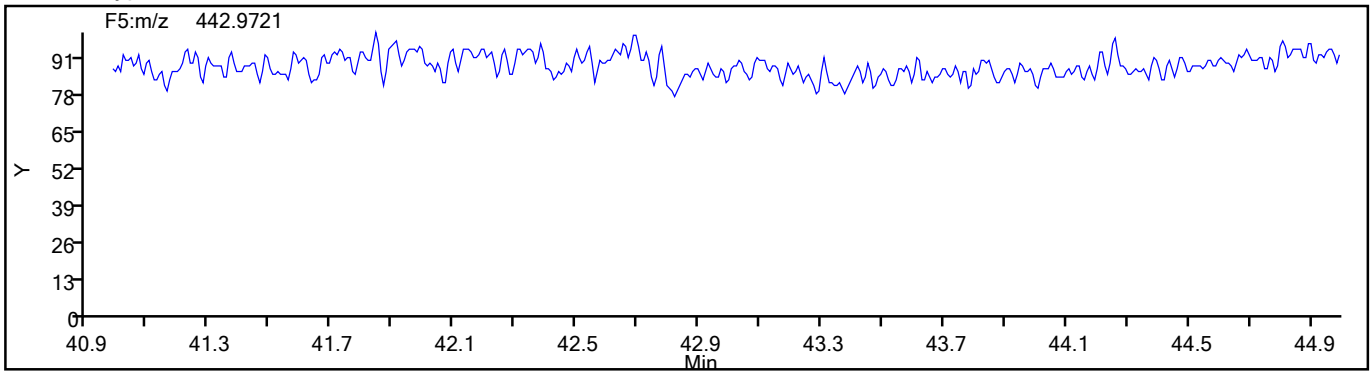

784267

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
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Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.546	1900111	0.78	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.619	2465726	0.79	1.3459	96.4	96.4	0.1978	0.1978	96.42	
2,3,7,8-TCDF	19.645	258022	0.78	1.0802	9.687	9.687	0.0168	0.0168	96.87	
S Total TCDF					9.687	9.687	0.0168	0.0168		
D 13C-2,3,7,8-TCDD	20.907	1800864	0.81	0.9317	101.7	101.7	0.1641	0.1641	102	
$ 37Cl4-2,3,7,8-TCDD	20.933	203726		1.0083	10.6	10.6	0.0134	0.0134	106	
2,3,7,8-TCDD	20.924	198062	0.75	1.0753	10.2	10.2	0.0351	0.0351	102	
S Total TCDD					10.2	10.2	0.0351	0.0351		
D 13C-1,2,3,7,8-PeCDF	26.556	2149791	1.60	1.1405	99.2	99.2	0.3269	0.3269	99.20	
1,2,3,7,8-PeCDF	26.573	1114982	1.57	1.0543	49.2	49.2	0.1379	0.1379	98.39	
D 13C-2,3,4,7,8-PeCDF	28.006	1991303	1.58	1.1253	93.1	93.1	0.3313	0.3313	93.13	
2,3,4,7,8-PeCDF	28.031	987812	1.58	1.0079	49.2	49.2	0.1665	0.1665	98.44	
S Total PeCDF					98.4	98.4	0.1522	0.1522		
D 13C-1,2,3,7,8-PeCDD	28.790	1388641	1.58	0.7165	102.0	102.0	0.1629	0.1629	102	
1,2,3,7,8-PeCDD	28.824	741897	1.57	1.0465	51.1	51.1	0.0499	0.0499	102	
S Total PeCDD					51.1	51.1	0.0499	0.0499		
D 13C-1,2,3,4,7,8-HxCDF	34.384	1841825	0.54	0.9648	115.8	115.8	0.3936	0.3936	116	
1,2,3,4,7,8-HxCDF	34.401	1093397	1.25	1.1474	51.7	51.7	0.1928	0.1928	103	
D 13C-1,2,3,6,7,8-HxCDF	34.561	2015594	0.53	1.0708	114.2	114.2	0.3547	0.3547	114	
1,2,3,6,7,8-HxCDF	34.578	1245549	1.24	1.2178	50.7	50.7	0.1720	0.1720	101	
D 13C-2,3,4,6,7,8-HxCDF	35.447	1861559	0.53	1.0413	108.4	108.4	0.3647	0.3647	108	
2,3,4,6,7,8-HxCDF	35.463	1151149	1.26	1.2145	50.9	50.9	0.1650	0.1650	102	
D 13C-1,2,3,7,8,9-HxCDF	36.399	1657413	0.54	0.9731	103.3	103.3	0.3903	0.3903	103	
1,2,3,7,8,9-HxCDF	36.408	1038574	1.24	1.2401	50.5	50.5	0.1718	0.1718	101	
S Total HxCDF					203.9	203.9	0.1754	0.1754		
* 13C-1,2,3,7,8,9-HxCDD	36.197	1648545	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.691	1348471	1.27	0.7587	107.8	107.8	0.2143	0.2143	108	
1,2,3,4,7,8-HxCDD	35.699	724729	1.28	1.0608	50.7	50.7	0.0918	0.0918	101	
D 13C-1,2,3,6,7,8-HxCDD	35.809	1460100	1.24	0.8593	103.1	103.1	0.1892	0.1892	103	
1,2,3,6,7,8-HxCDD	35.826	760446	1.23	0.9933	52.4	52.4	0.0967	0.0967	105	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.214	786511	1.27	1.1094	50.5	50.5	0.0872	0.0872	101	
S Total HxCDD					153.6	153.6	0.0919	0.0919		
D 13C-1,2,3,4,6,7,8-HpCDF	38.316	1182209	0.45	0.7359	97.4	97.4	0.3866	0.3866	97.44	
1,2,3,4,6,7,8-HpCDF	38.324	878086	1.05	1.4421	51.5	51.5	0.1699	0.1699	103	
D 13C-1,2,3,4,7,8,9-HpCDF	39.614	1080883	0.46	0.6854	95.7	95.7	0.4151	0.4151	95.66	
1,2,3,4,7,8,9-HpCDF	39.622	727362	1.05	1.3092	51.4	51.4	0.1875	0.1875	103	
S Total HpCDF					102.9	102.9	0.1787	0.1787		
D 13C-1,2,3,4,6,7,8-HpCDD	39.302	1094713	1.07	0.6745	98.4	98.4	0.2448	0.2448	98.45	
1,2,3,4,6,7,8-HpCDD	39.310	572466	1.05	1.0503	49.8	49.8	0.1044	0.1044	99.58	
S Total HpCDD					49.8	49.8	0.1044	0.1044		
D 13C-OCDD	41.794	1676139	0.90	0.5446	186.7	186.7	0.2845	0.2845	93.34	
OCDF	41.887	1118740	0.90	1.3168	101.4	101.4	0.1189	0.1189	101	
OCDD	41.803	910980	0.89	1.0620	102.4	102.4	0.1082	0.1082	102	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.546	20.547	0		832498	129736	116	290	1118		
333.9338	20.546	20.547	0		1067613	165878	65	162	2552	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.619	19.616	0	0.955	1091704	180342	213	532	847		
317.9389	19.619	19.616	0	0.955	1374022	217372	102	255	2131	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.645	19.646	0	1.001	113254	18239	10	25	1824		
305.8987	19.645	19.646	0	1.001	144768	23858	19	47	1256	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.907	20.910	0	1.018	803279	117913	116	290	1016		
333.9338	20.907	20.910	0	1.018	997585	152094	65	162	2340	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.933	20.935	0	1.019	203726	29833	16	40	1865		
2,3,7,8-TCDD											
319.8965	20.924	20.939	-1	1.001	85173	13080	31	77	422		
321.8936	20.941	20.939	0	1.002	112889	16258	10	25	1626	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.556	26.560	0	1.292	1323851	238814	266	665	898		
353.8970	26.556	26.560	0	1.292	825940	146442	175	437	837	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.573	26.584	-1	1.001	680306	120693	132	330	914		
341.8567	26.573	26.584	-1	1.001	434676	76404	92	230	830	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.006	28.014	0	1.363	1219332	203015	266	665	763		
353.8970	28.006	28.014	0	1.363	771971	130766	175	437	747	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.031	28.039	0	1.001	604266	98138	132	330	743		
341.8567	28.031	28.039	0	1.001	383546	62644	92	230	681	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.790	28.801	-1	1.401	851334	132655	82	205	1618		
369.8919	28.790	28.801	-1	1.401	537307	81623	56	140	1458	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.824	28.828	0	1.001	452903	70092	31	77	2261		
357.8516	28.824	28.828	0	1.001	288994	44853	14	35	3204	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.384	34.384	0	0.950	645542	131022	198	495	662		
385.8610	34.384	34.384	0	0.950	1196283	248690	400	1000	622	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.401	34.405	0	1.000	607111	119877	181	452	662		
375.8178	34.401	34.405	0	1.000	486286	95304	155	387	615	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.561	34.562	0	0.955	696119	139607	198	495	705		
385.8610	34.561	34.562	0	0.955	1319475	261396	400	1000	653	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.578	34.582	0	1.000	690624	134257	181	452	742		
375.8178	34.578	34.582	0	1.000	554925	106932	155	387	690	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.447	35.444	0	0.979	648311	145832	198	495	737		
385.8610	35.447	35.444	0	0.979	1213248	273234	400	1000	683	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.463	35.461	0	1.000	640849	139500	181	452	771		
375.8178	35.463	35.461	0	1.000	510300	111840	155	387	722	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.399	36.388	1	1.006	579583	134604	198	495	680		
385.8610	36.399	36.388	1	1.006	1077830	259553	400	1000	649	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.408	36.402	0	1.000	575769	139453	181	452	770		
375.8178	36.408	36.402	0	1.000	462805	111702	155	387	721	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.197	36.192	0		918631	219913	146	365	1506		
403.8529	36.197	36.192	0		729914	173739	110	275	1579	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.691	35.680	1	0.986	754120	185149	146	365	1268		
403.8529	35.691	35.680	1	0.986	594351	145418	110	275	1322	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.699	35.695	0	1.000	407415	100236	71	177	1412		
391.8127	35.699	35.695	0	1.000	317314	80745	58	145	1392	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.809	35.805	0	0.989	809032	182963	146	365	1253		
403.8529	35.809	35.805	0	0.989	651068	152224	110	275	1384	1.24(1.05-1.43)	

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.826	35.820	0	1.000	419224	96522	71	177	1359		
391.8127	35.826	35.820	0	1.000	341222	77256	58	145	1332	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.214	36.208	0	1.015	440686	104923	71	177	1478		
391.8127	36.214	36.208	0	1.015	345825	82846	58	145	1428	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.316	38.305	1	1.059	366846	105531	154	385	685		
419.8220	38.316	38.305	1	1.059	815363	231224	294	735	786	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.324	38.317	0	1.000	449936	128816	169	422	762		
409.7788	38.324	38.317	0	1.000	428150	123728	161	402	768	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.614	39.600	1	1.094	340338	106309	154	385	690		
419.8220	39.606	39.600	0	1.094	740545	229697	294	735	781	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.622	39.608	1	1.000	372140	117961	169	422	698		
409.7788	39.622	39.608	1	1.000	355222	111585	161	402	693	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.302	39.293	1	1.086	567057	176920	136	340	1301		
437.8140	39.302	39.293	1	1.086	527656	171361	124	310	1382	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.310	39.301	1	1.000	293602	91347	77	192	1186		
425.7737	39.310	39.301	1	1.000	278864	87962	76	190	1157	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.794	41.785	1	1.155	795323	226496	132	330	1716		
471.7750	41.794	41.785	1	1.155	880816	252365	112	280	2253	0.90(0.76-1.02)	
OCDF											
441.7428	41.887	41.875	1	1.002	530577	155278	73	182	2127		
443.7399	41.887	41.875	1	1.002	588163	168537	77	192	2189	0.90(0.76-1.02)	
OCDD											
457.7377	41.803	41.794	1	1.000	427984	122796	54	135	2274		
459.7348	41.803	41.794	1	1.000	482996	140394	56	140	2507	0.89(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

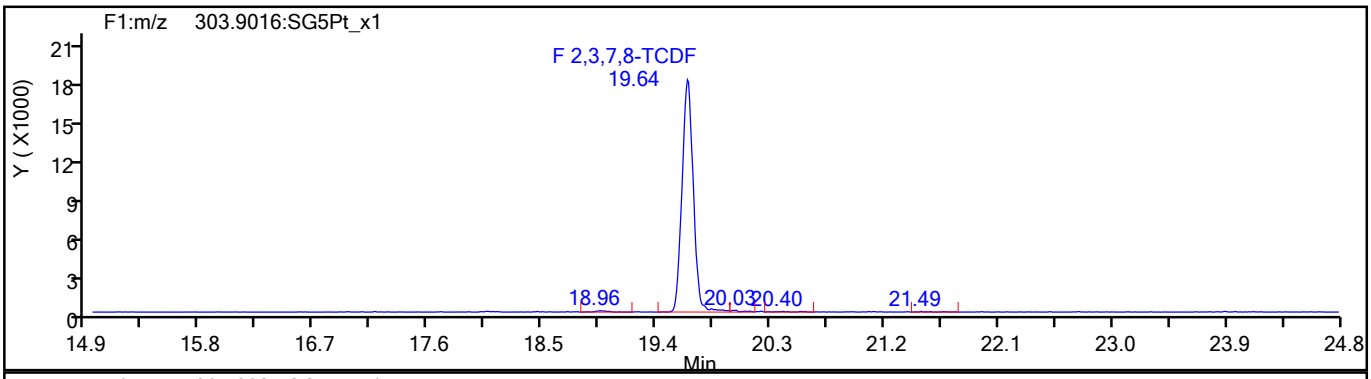

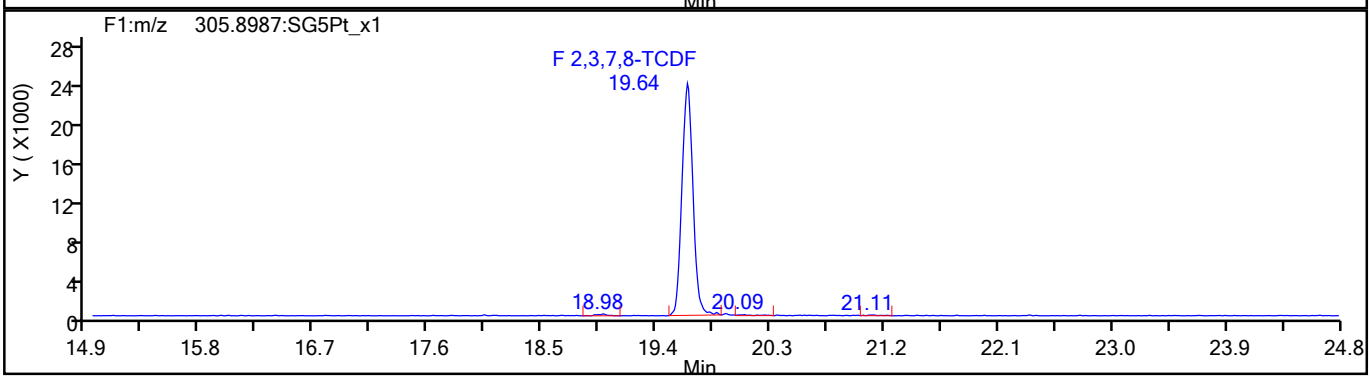

TCDF Standards

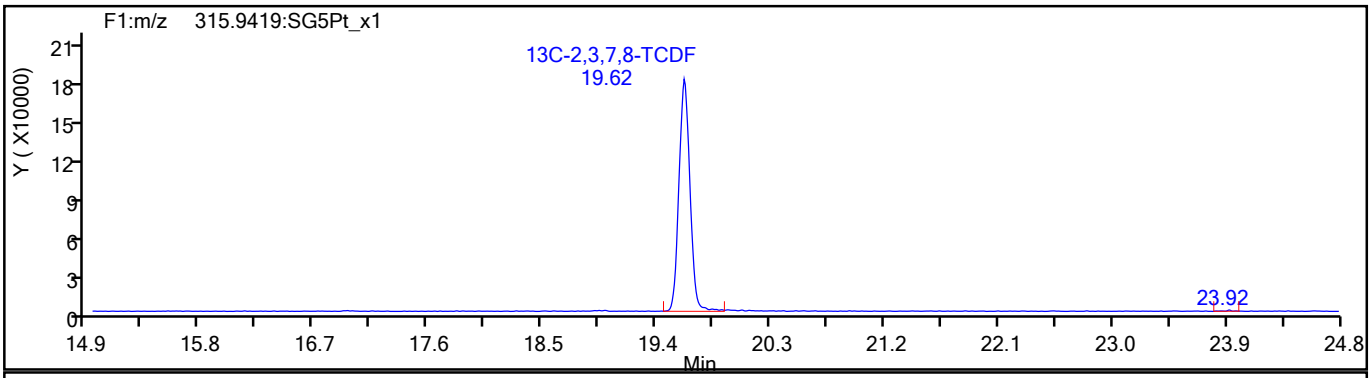

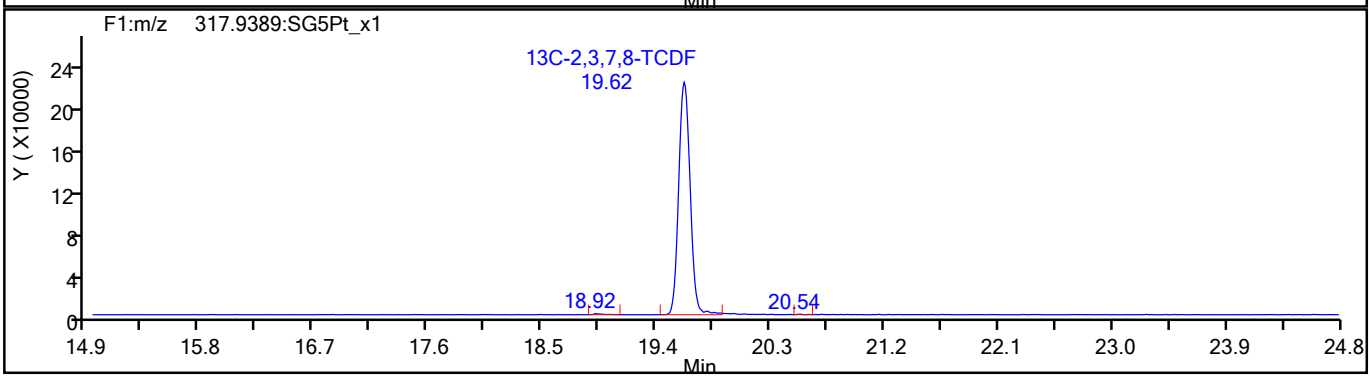

784273

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

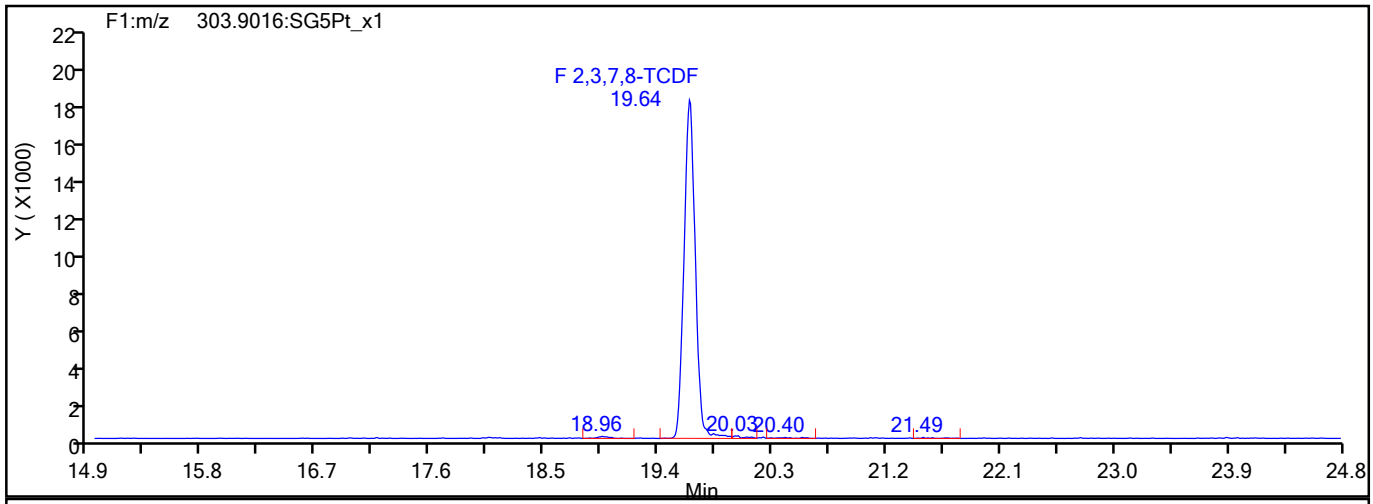

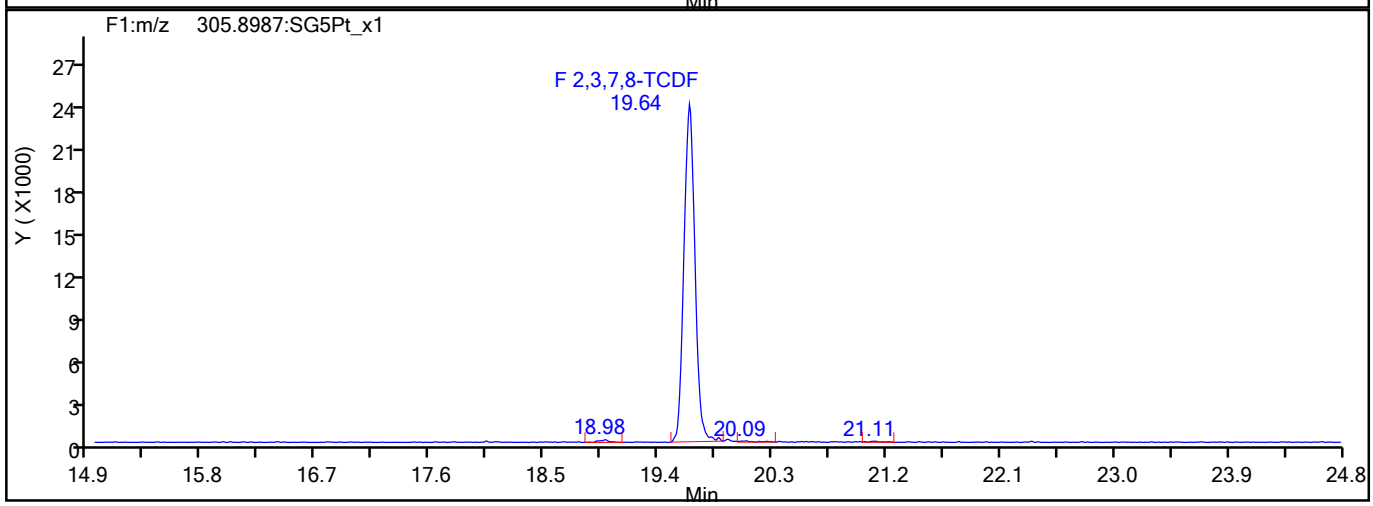

TCDF Interference Mass

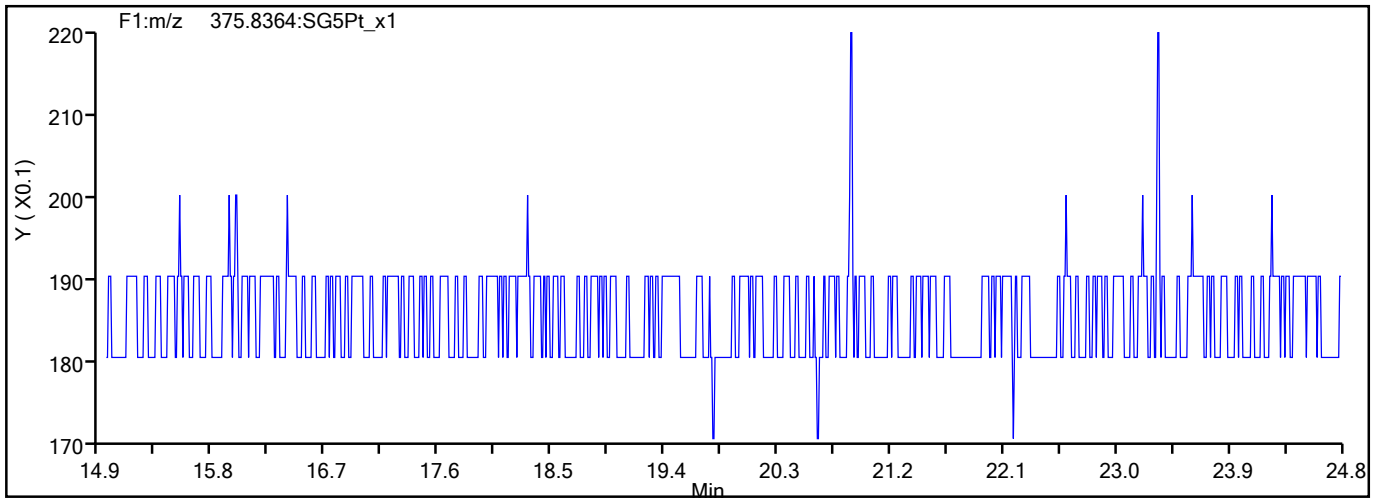

784274

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

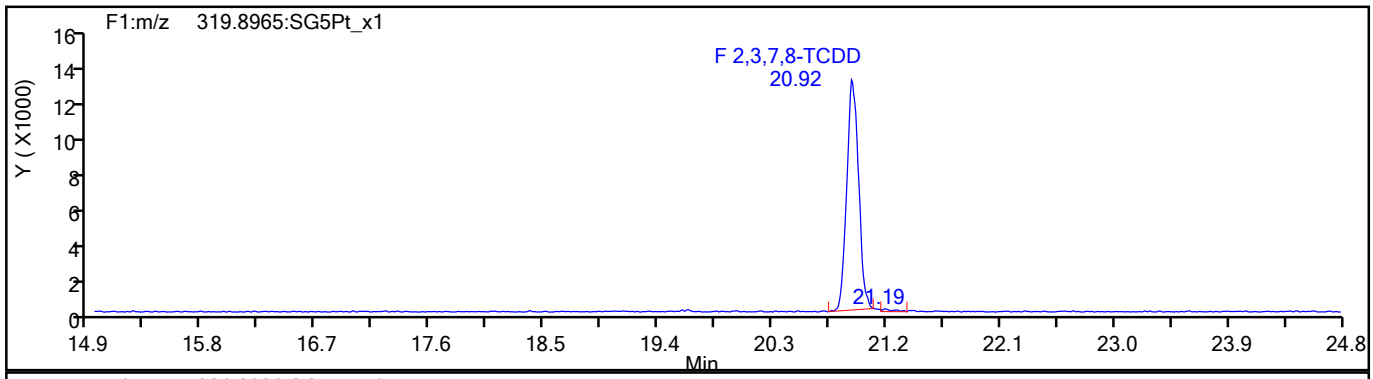

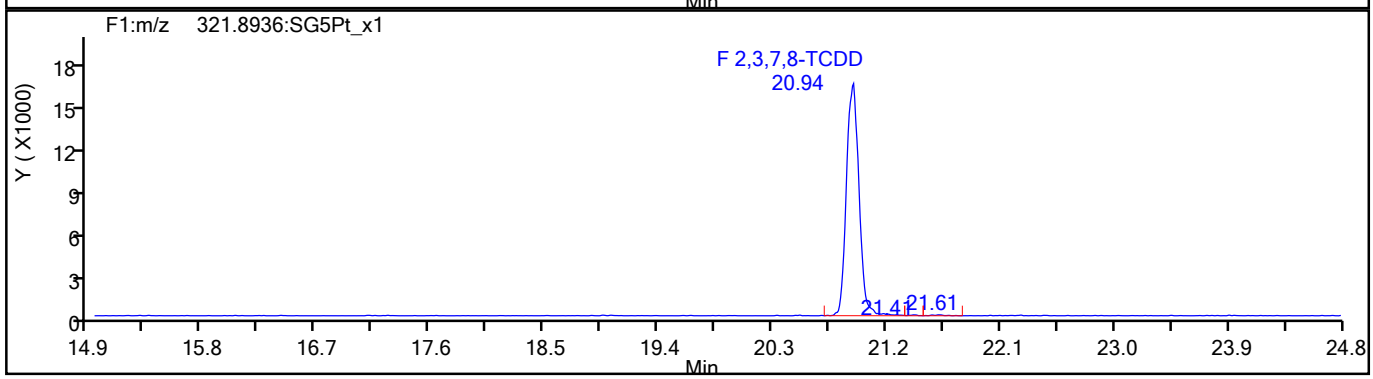

TCDD Standards

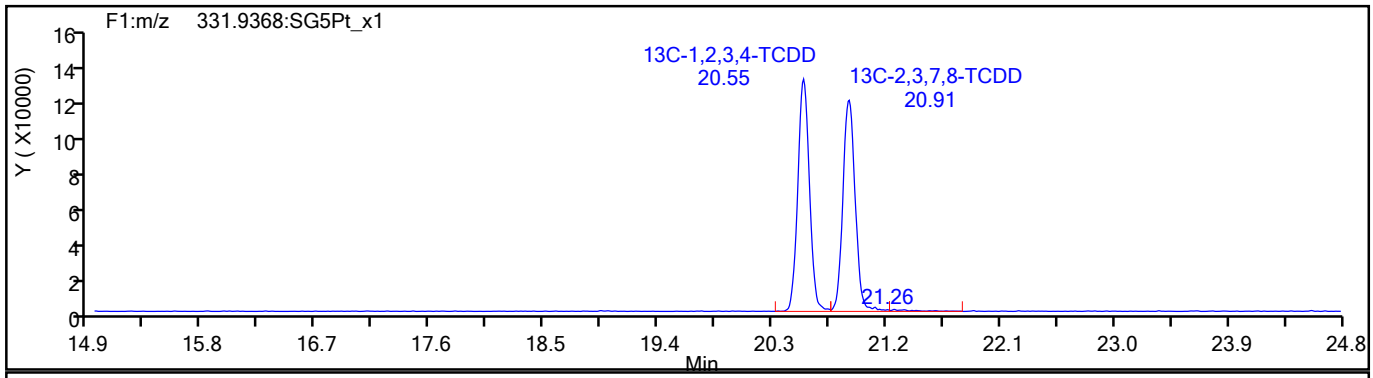

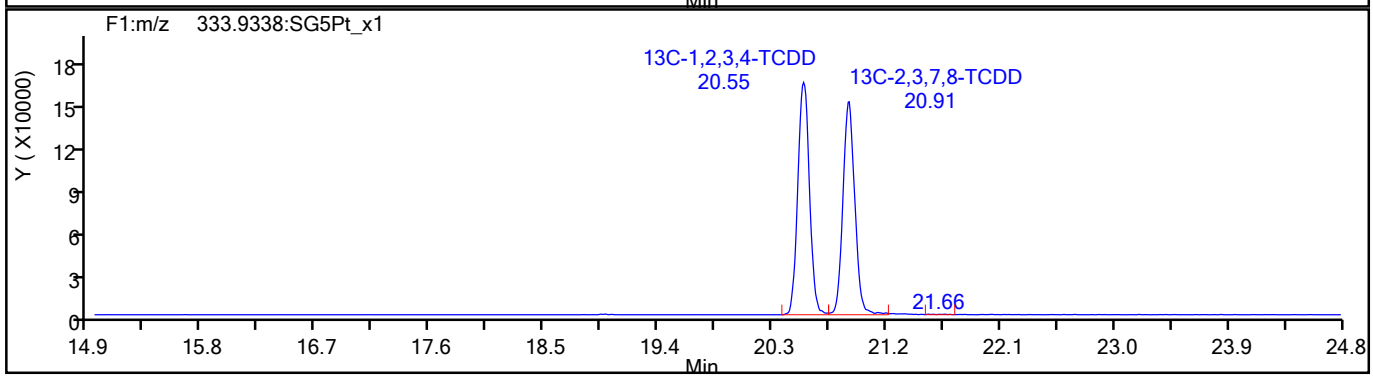

784275

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

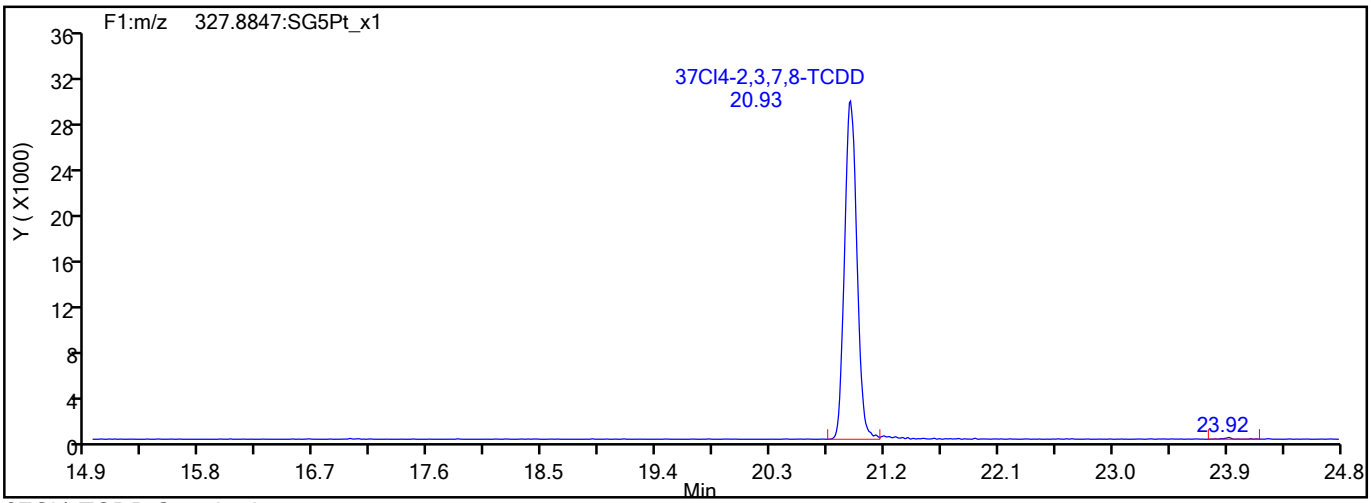

37Cl4-TCDD Standards

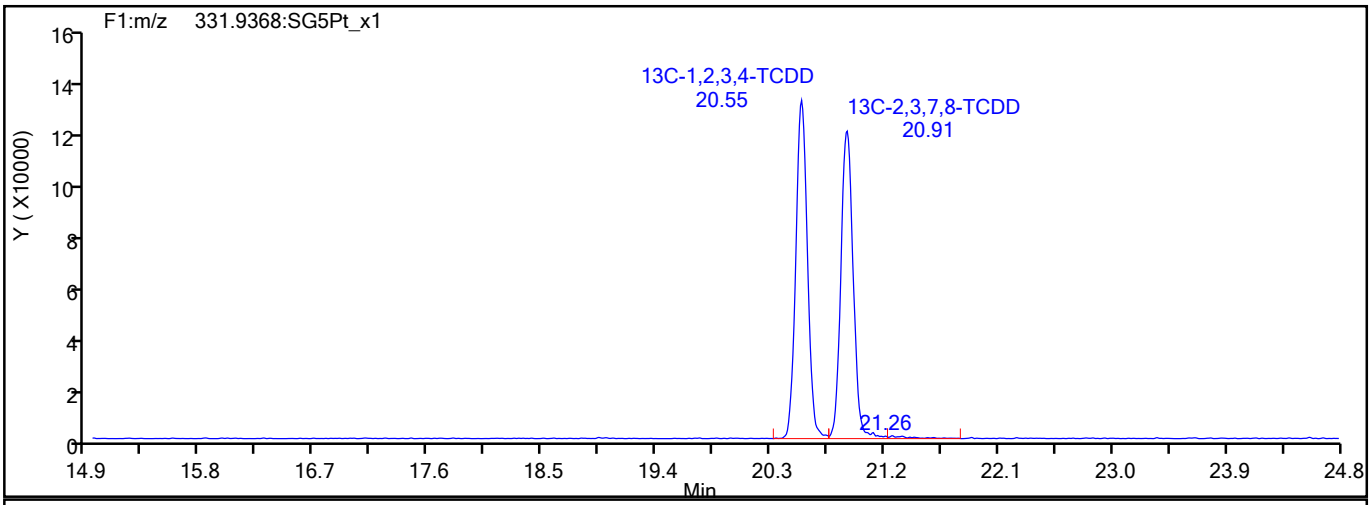

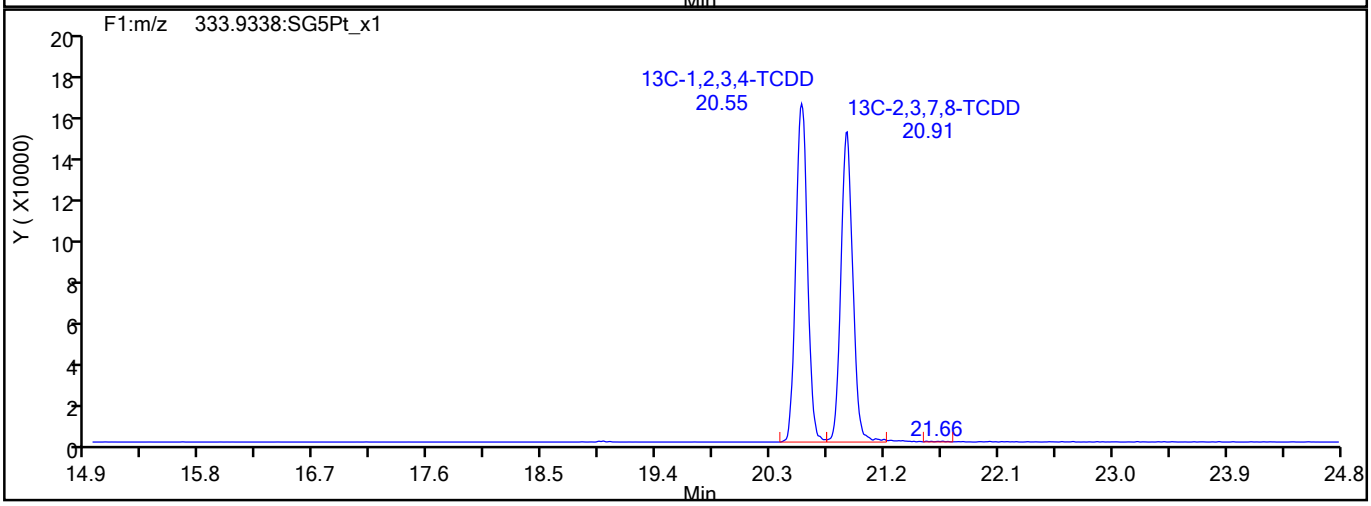

784276

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

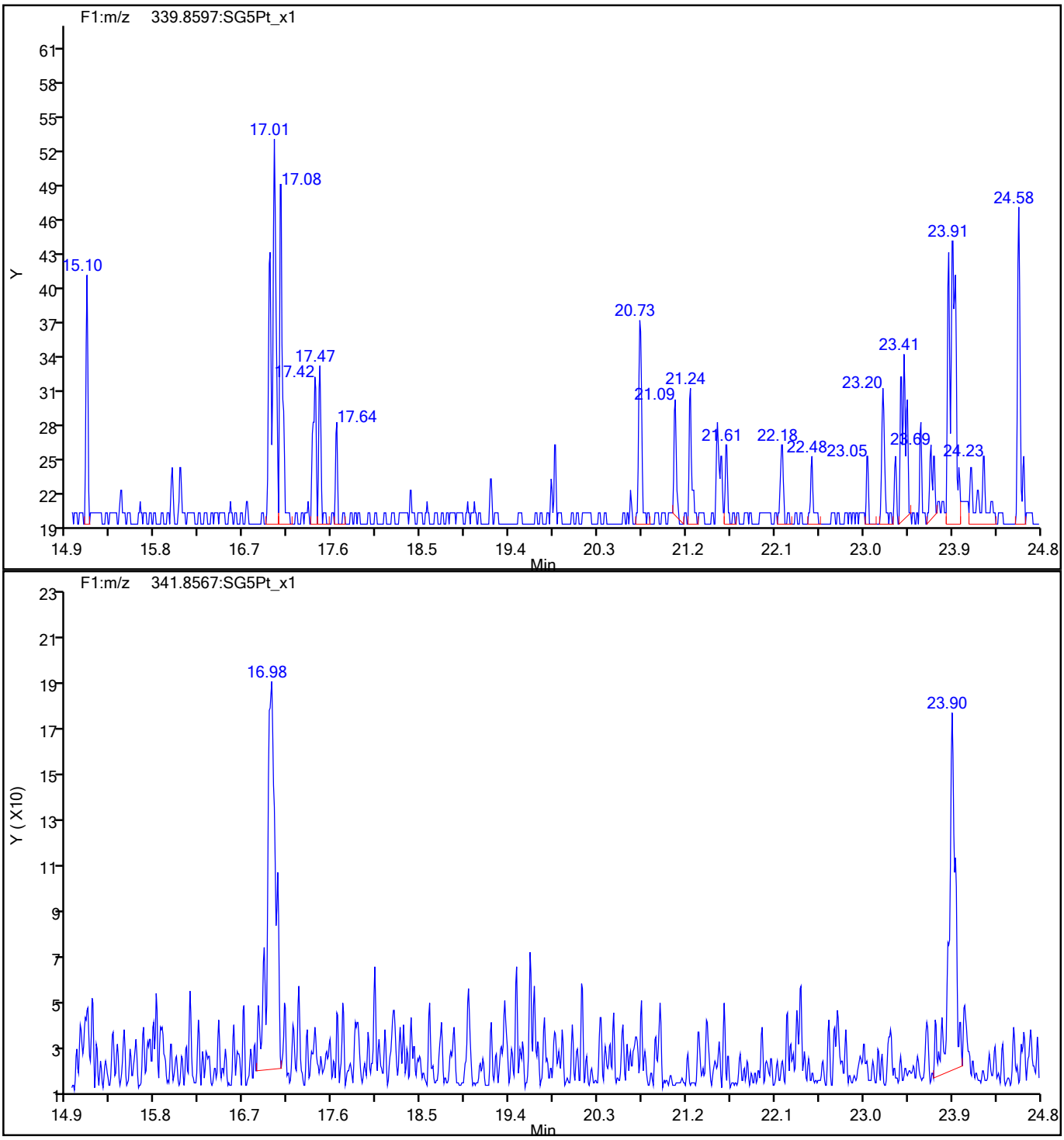

784277

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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F1 PeCDFs

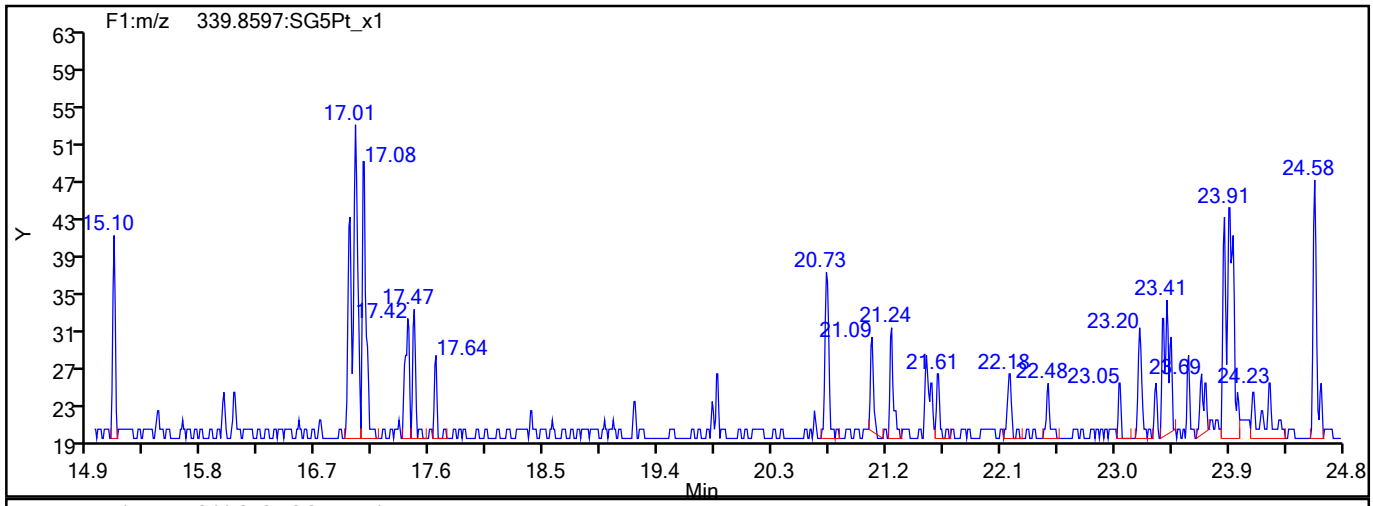

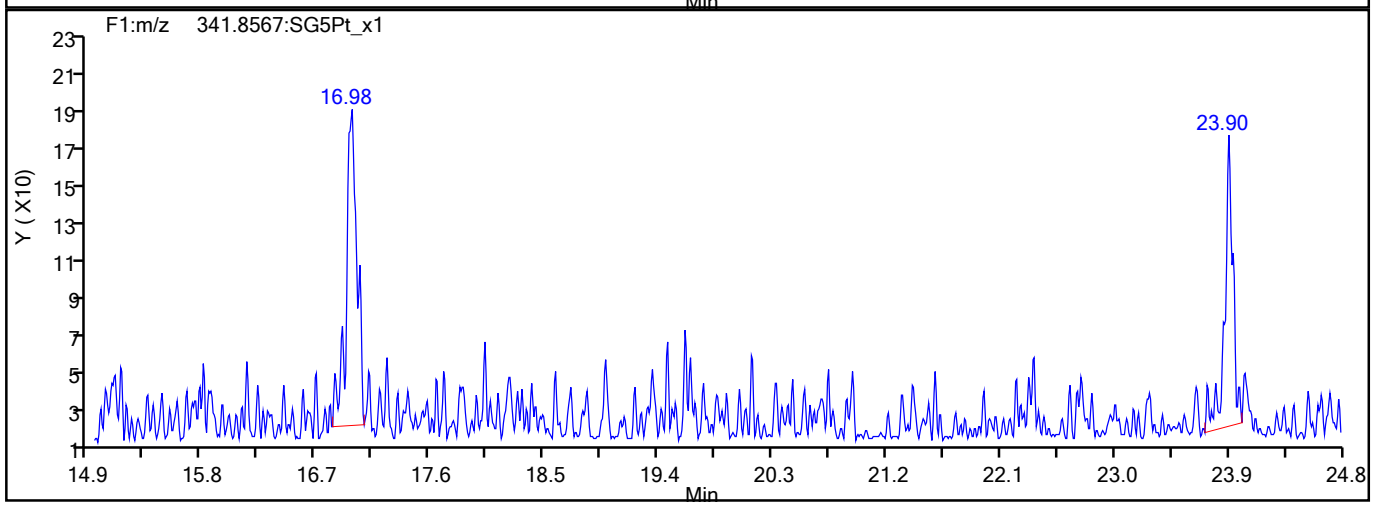

F1 PeCDFs Interference Mass

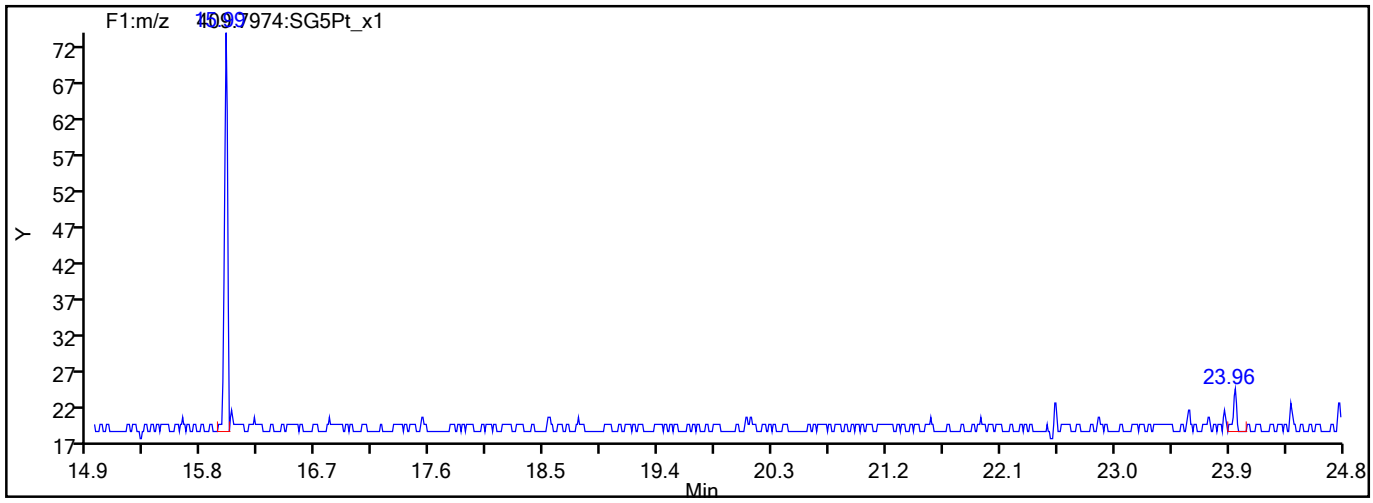

784278

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

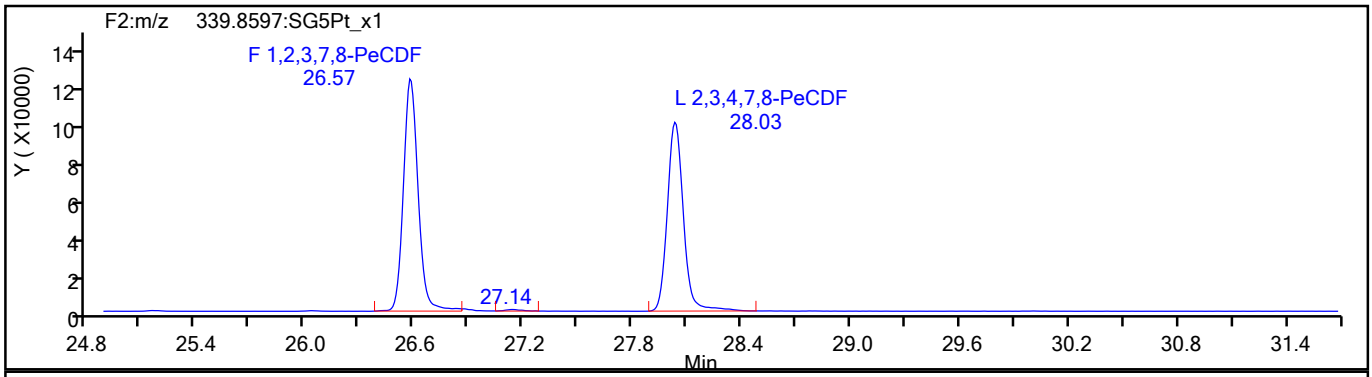

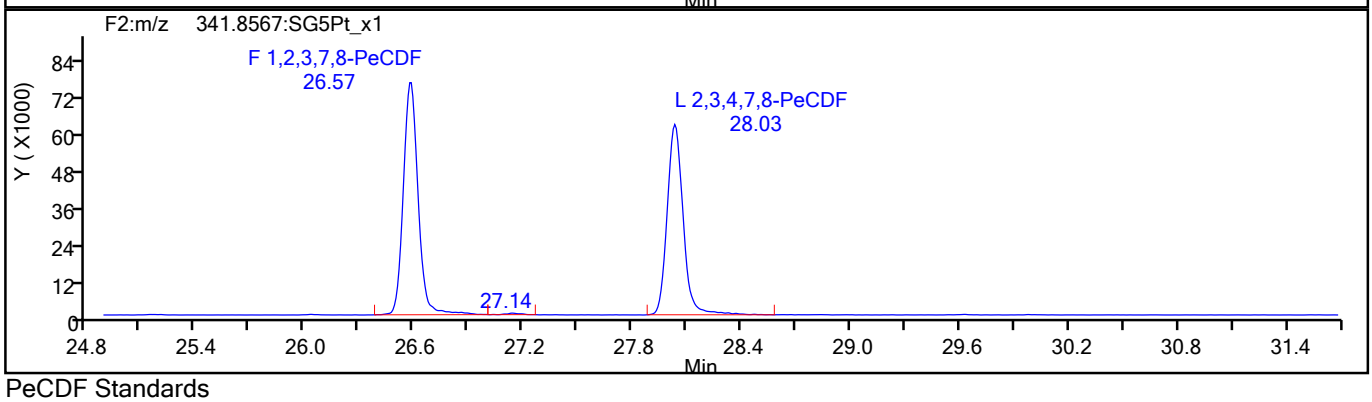

PeCDF Standards

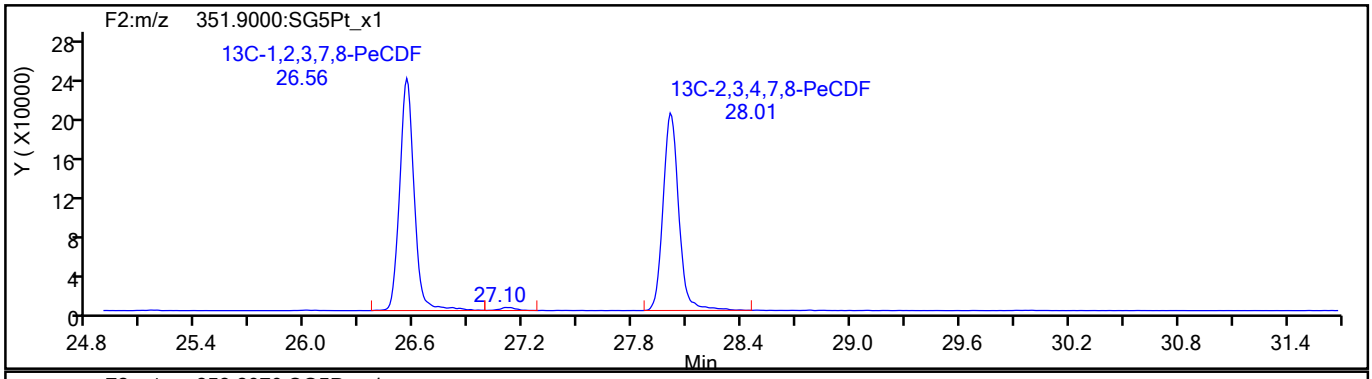

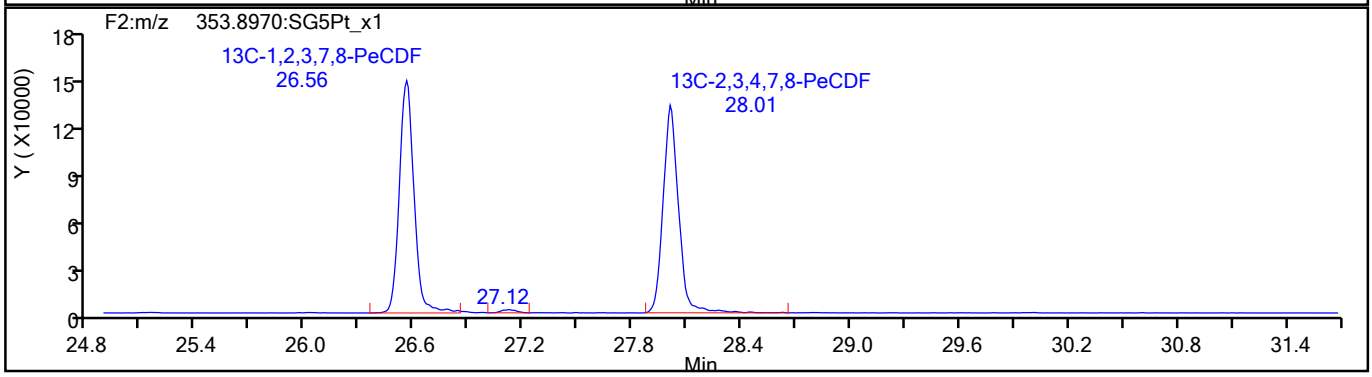

784279

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

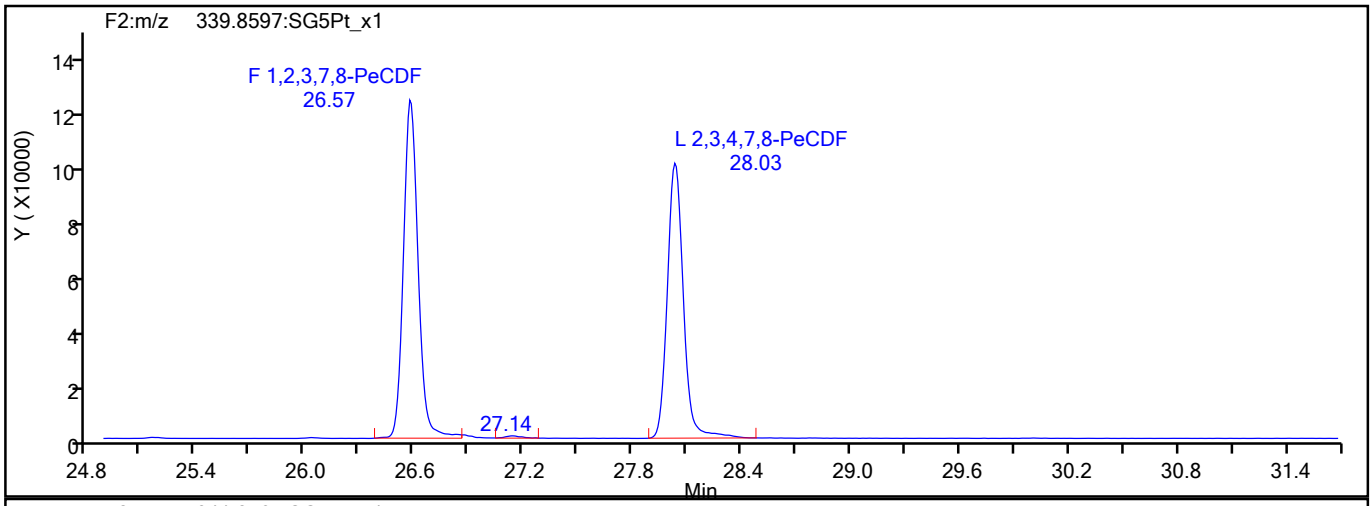

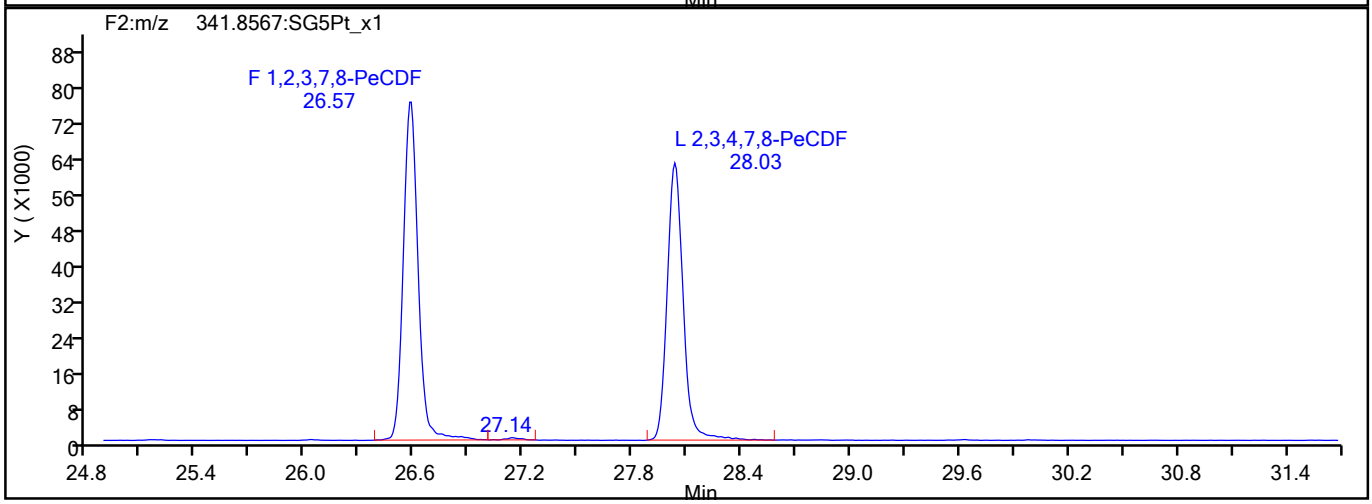

PeCDF Interference Mass

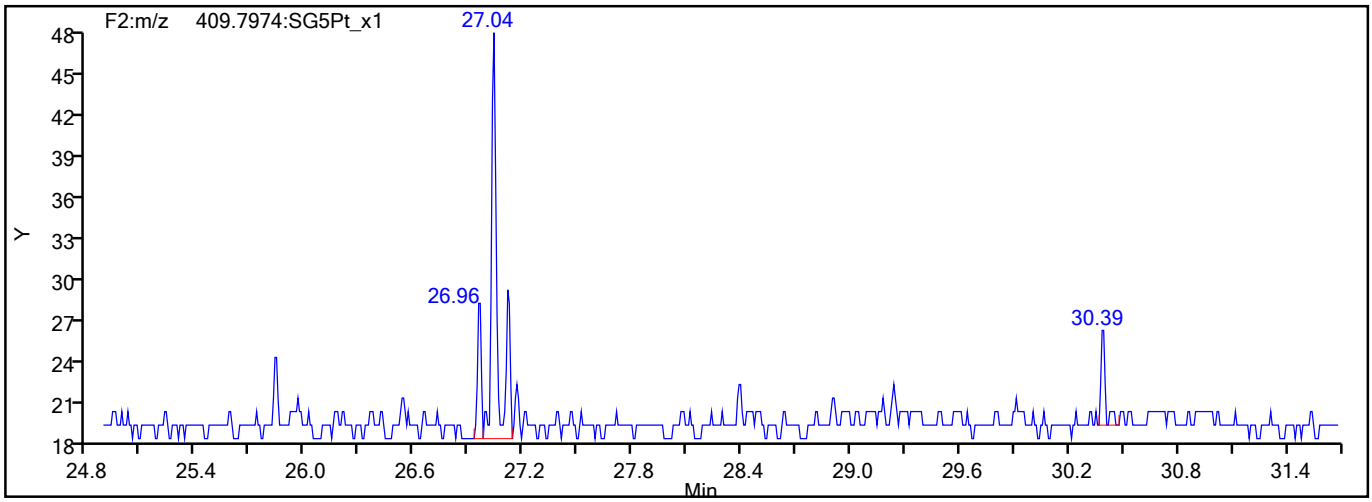

784280

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

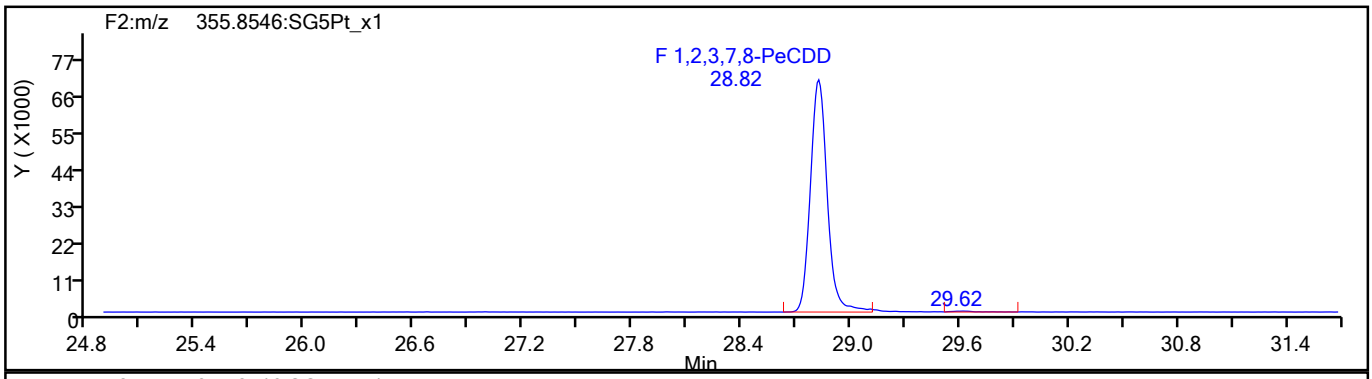

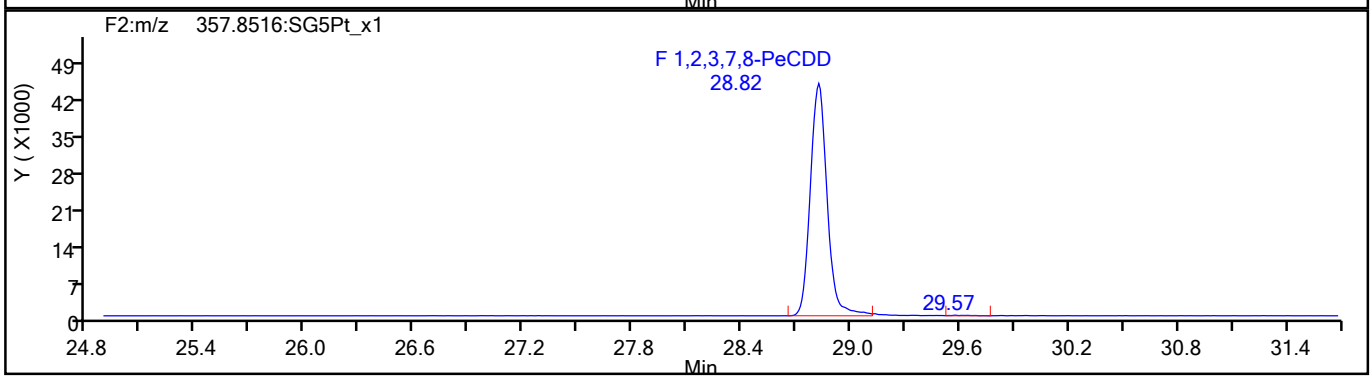

PeCDD Standards

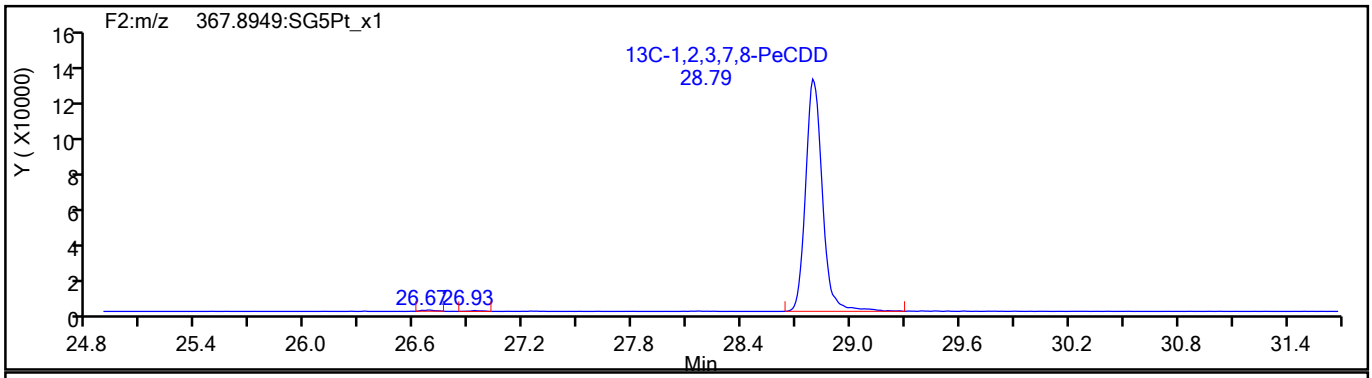

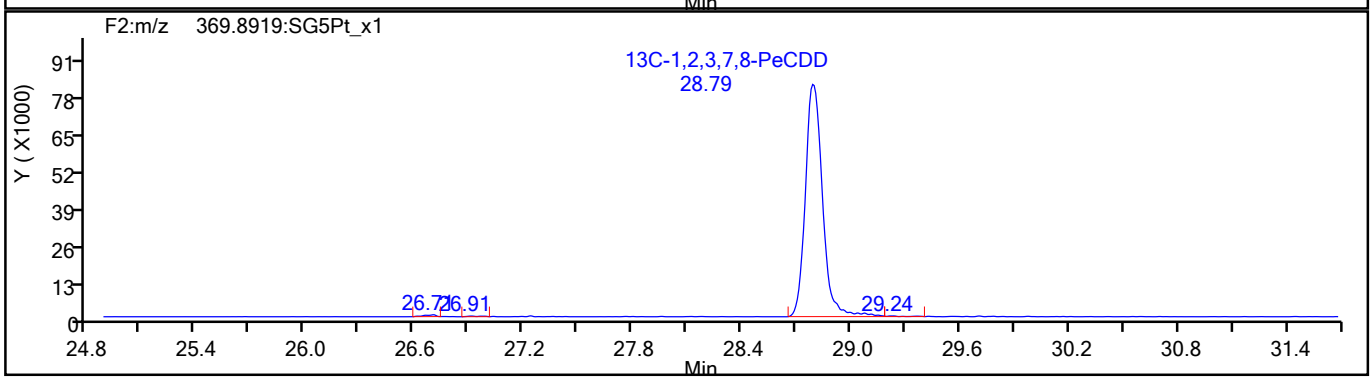

784281

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

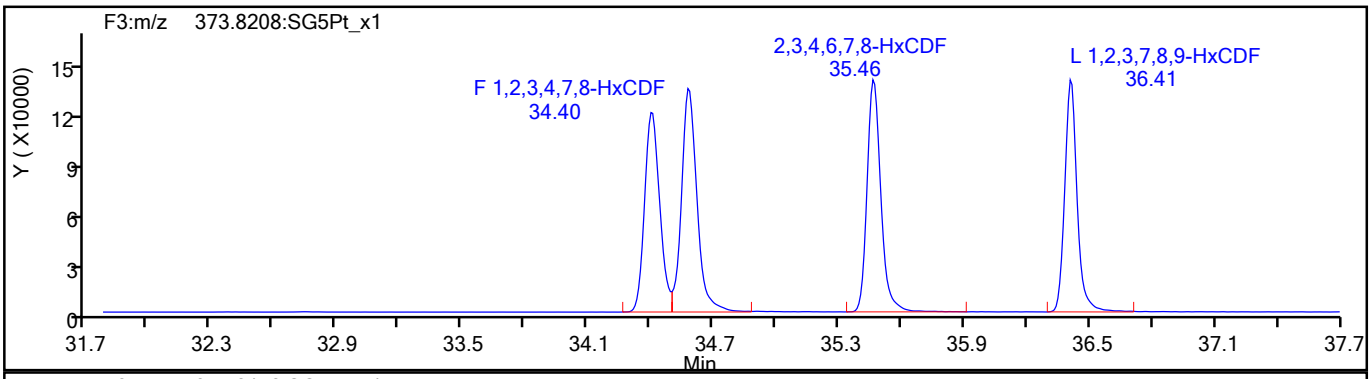

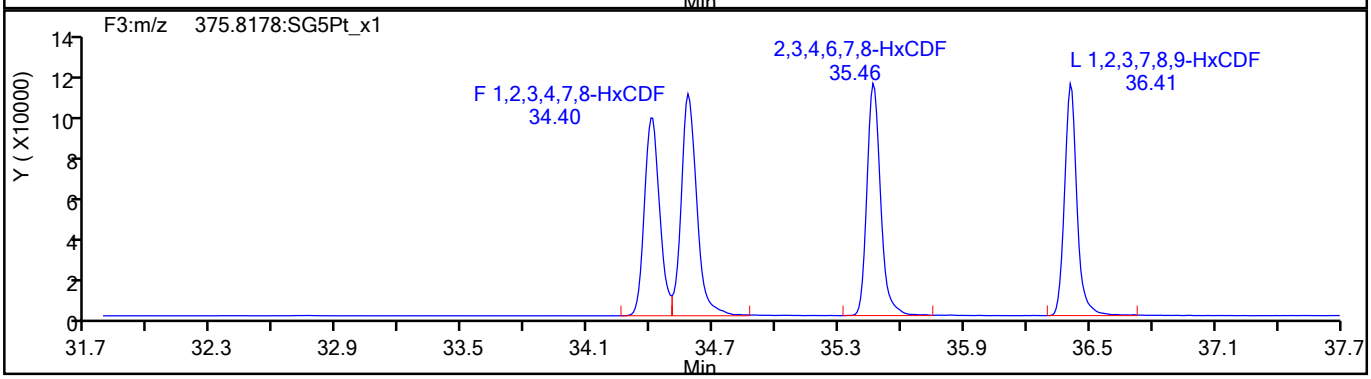

HxCDF Standards

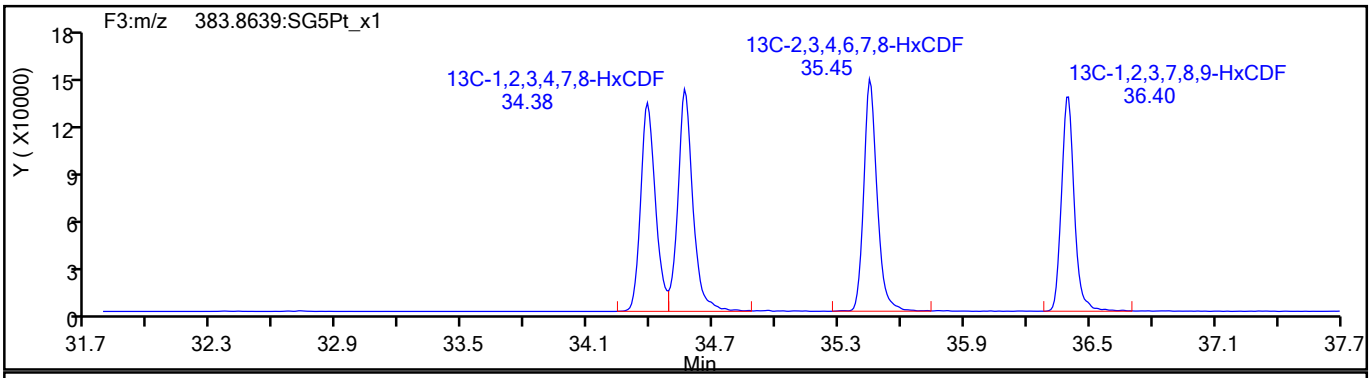

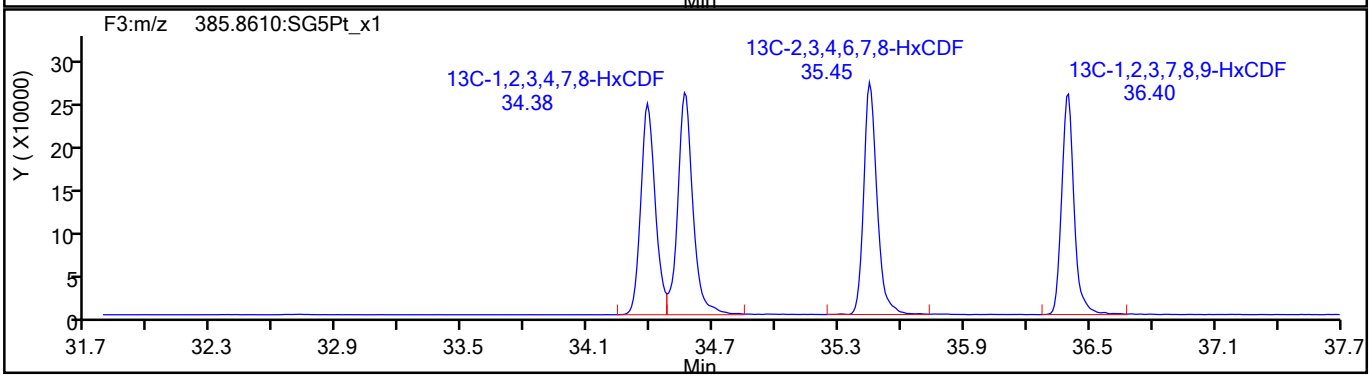

784282

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

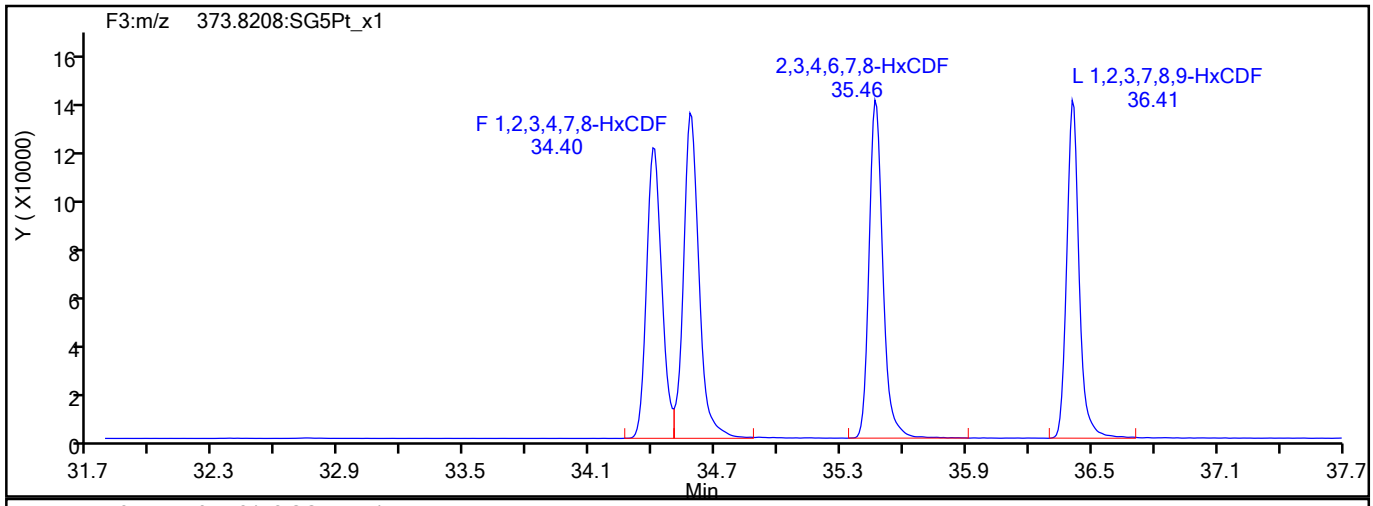

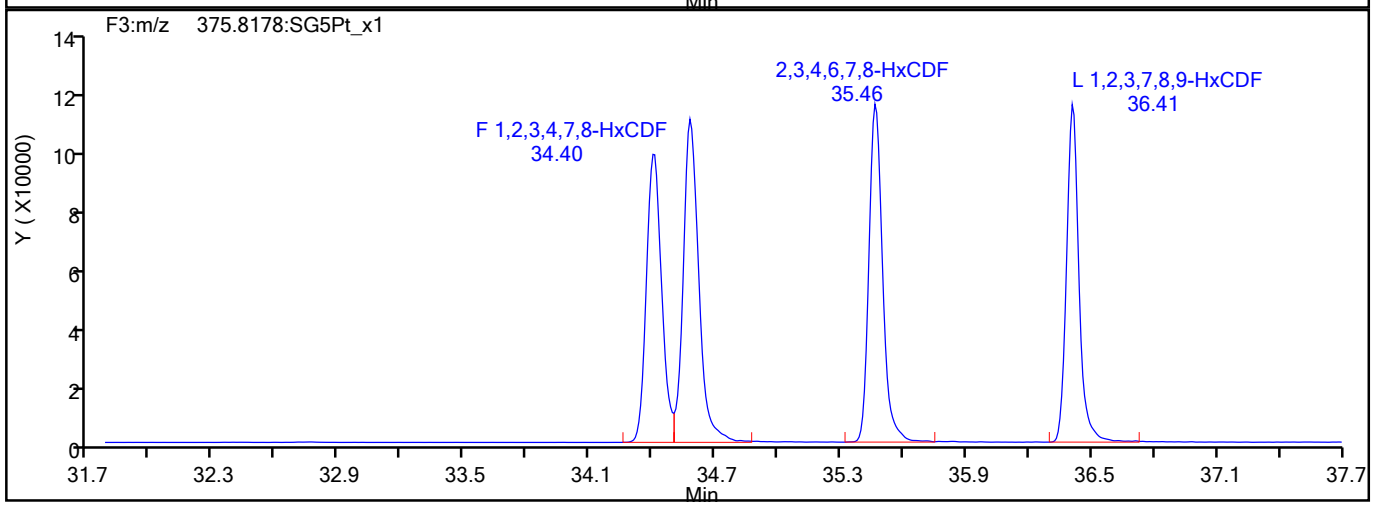

HxCDF Interference Mass

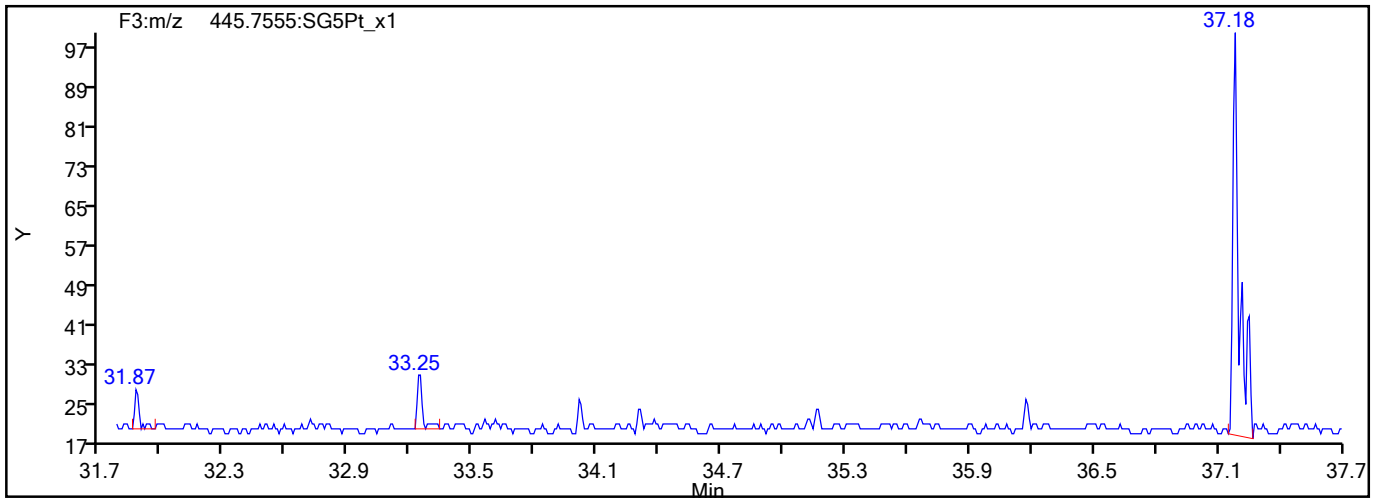

784283

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

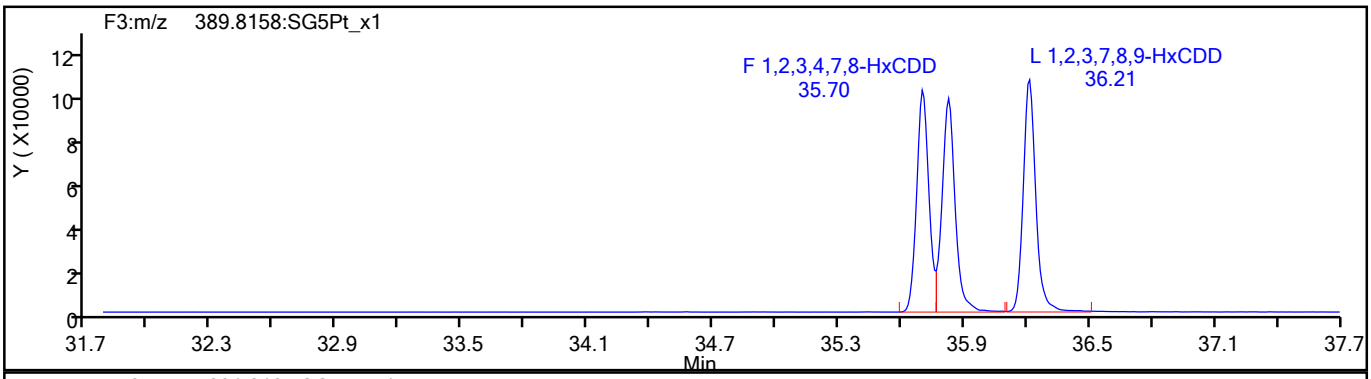

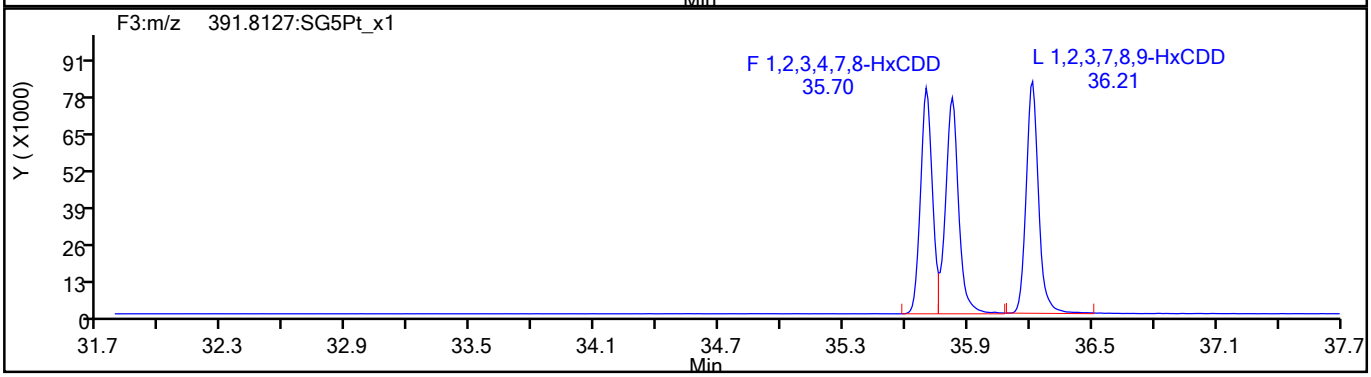

HxCDD Standards

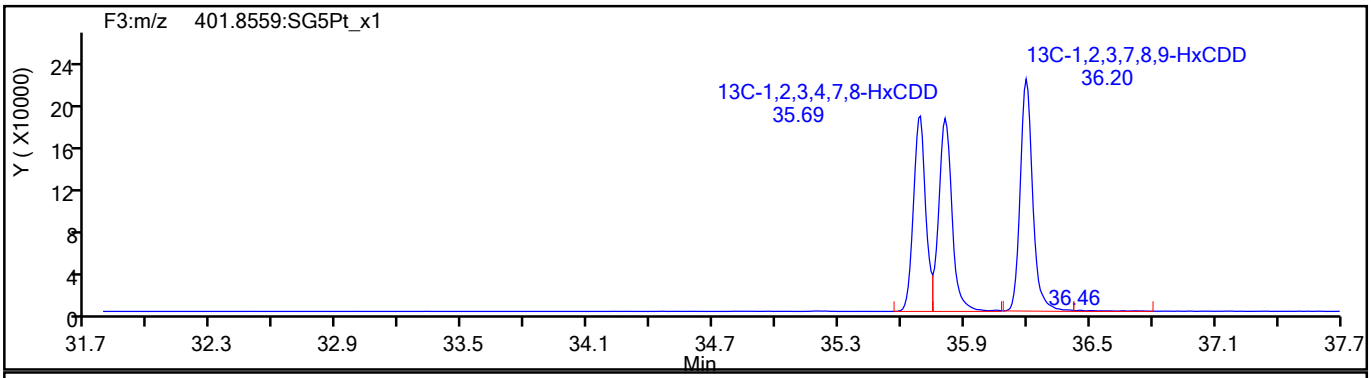

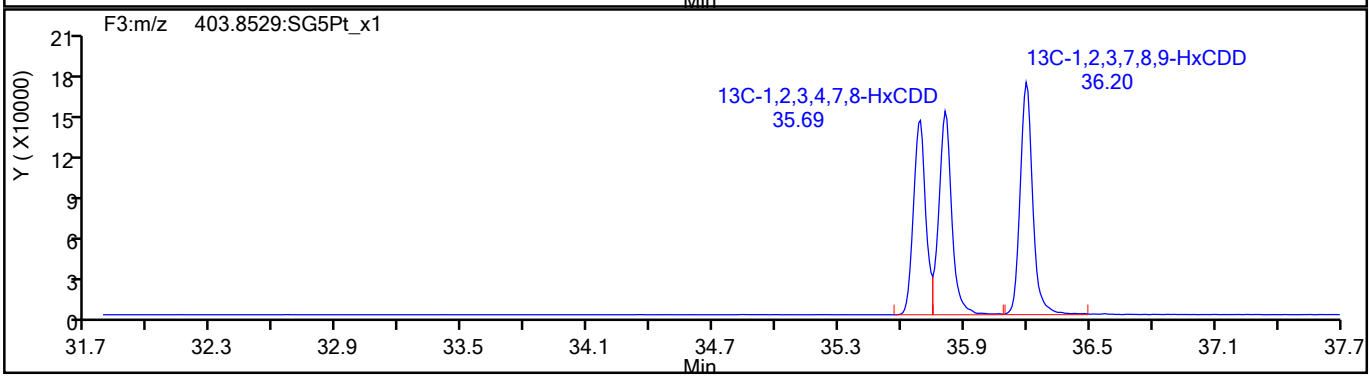

784284

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

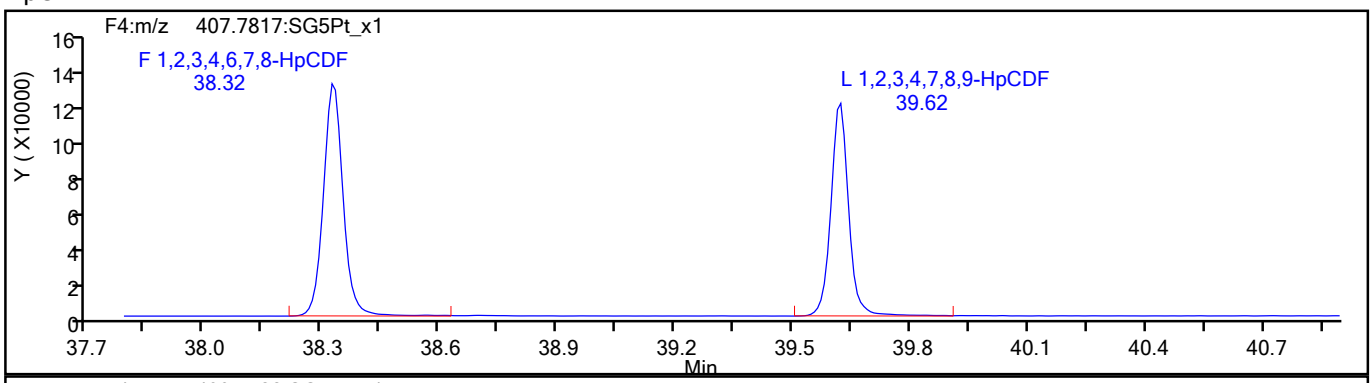

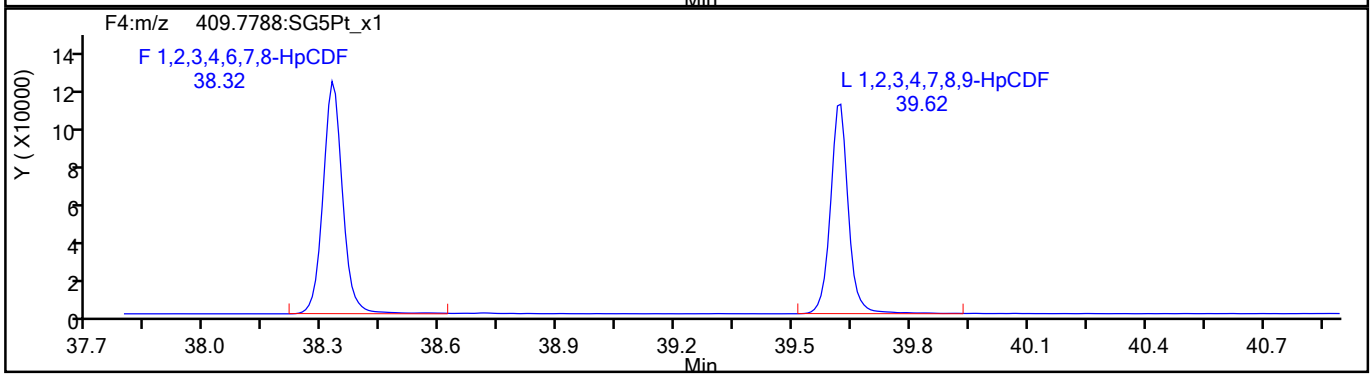

HpCDF Standards

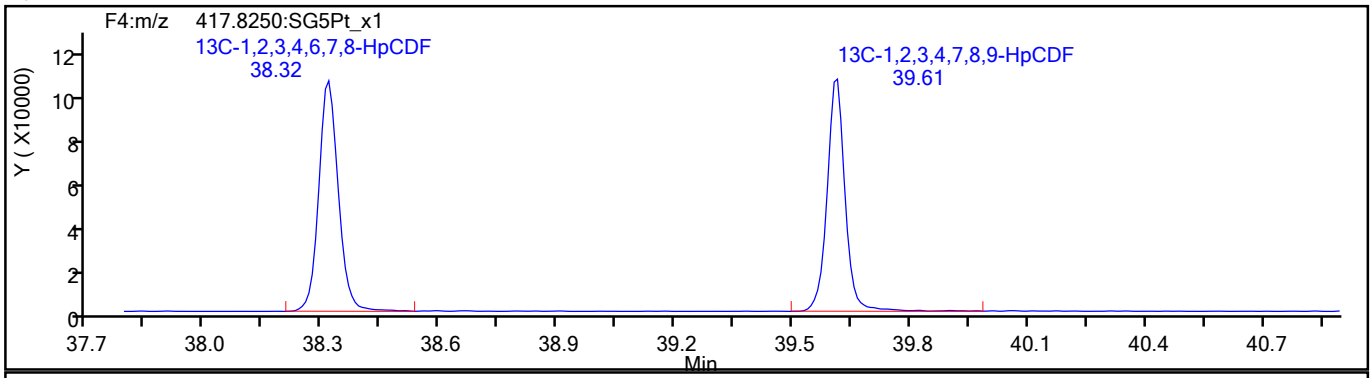

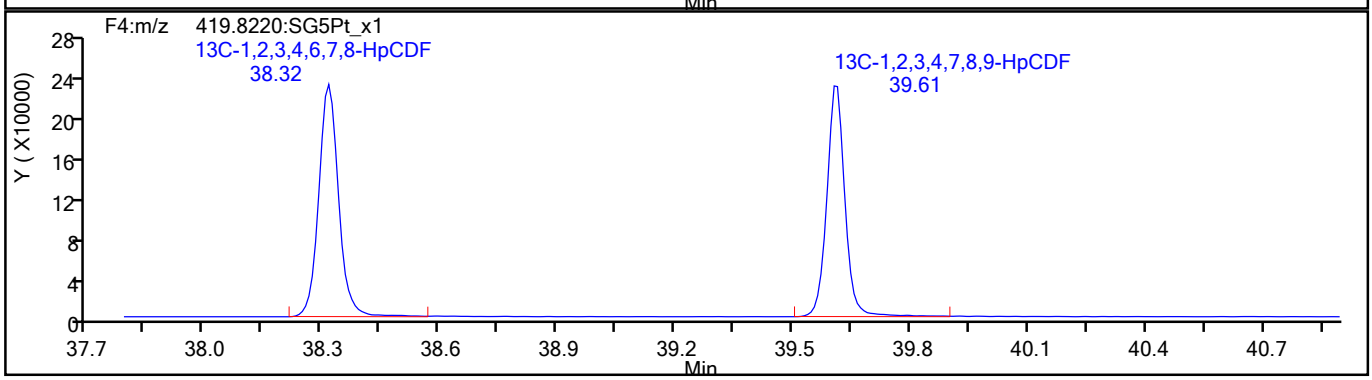

784285

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

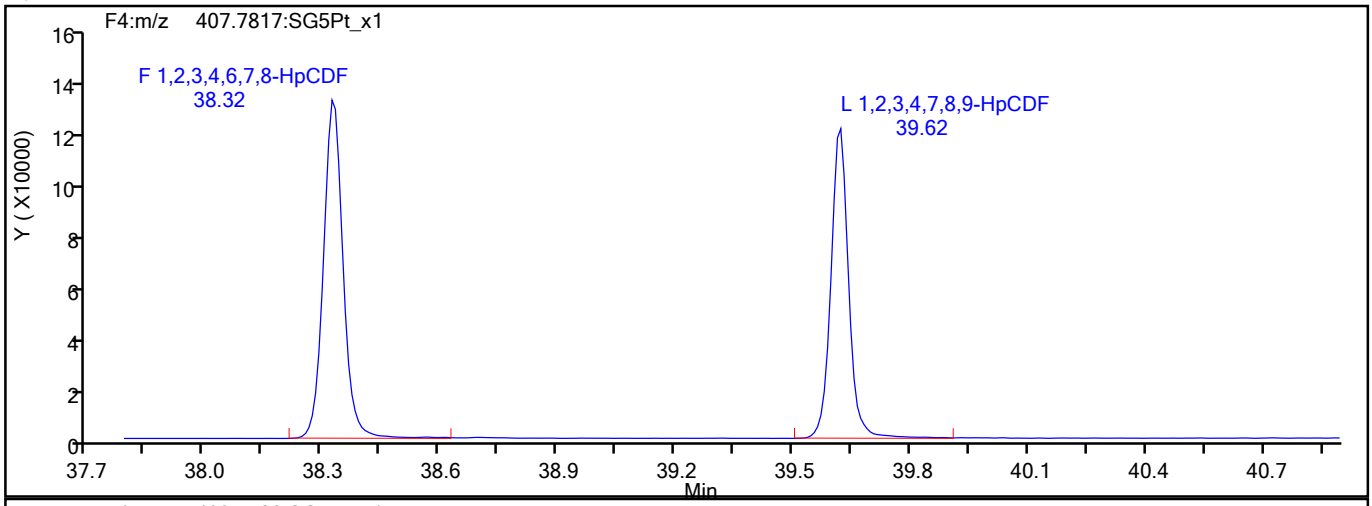

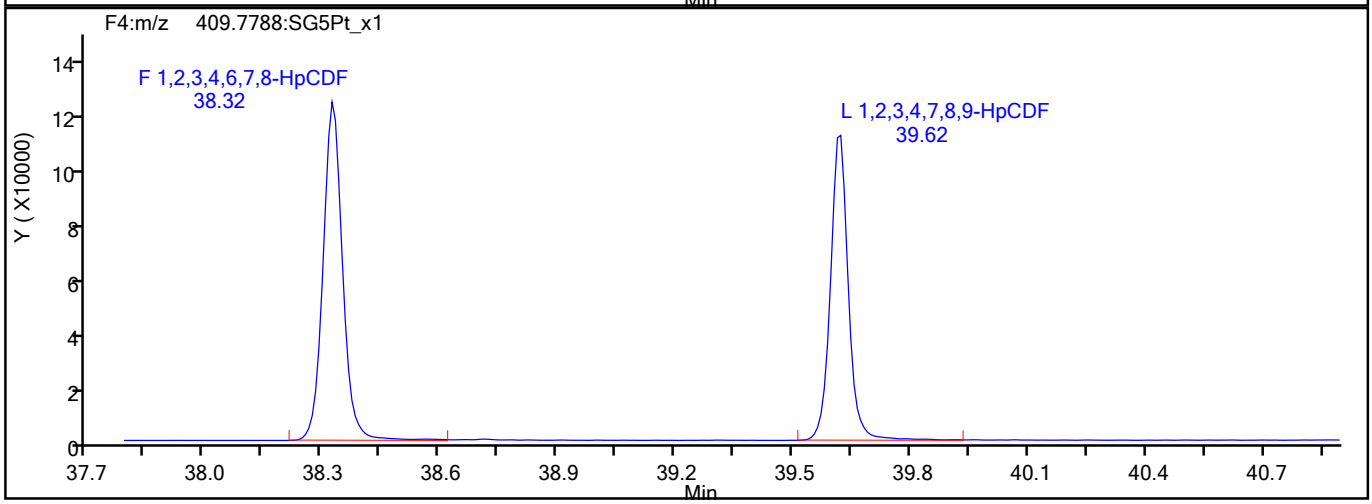

HpCDF Interference Mass

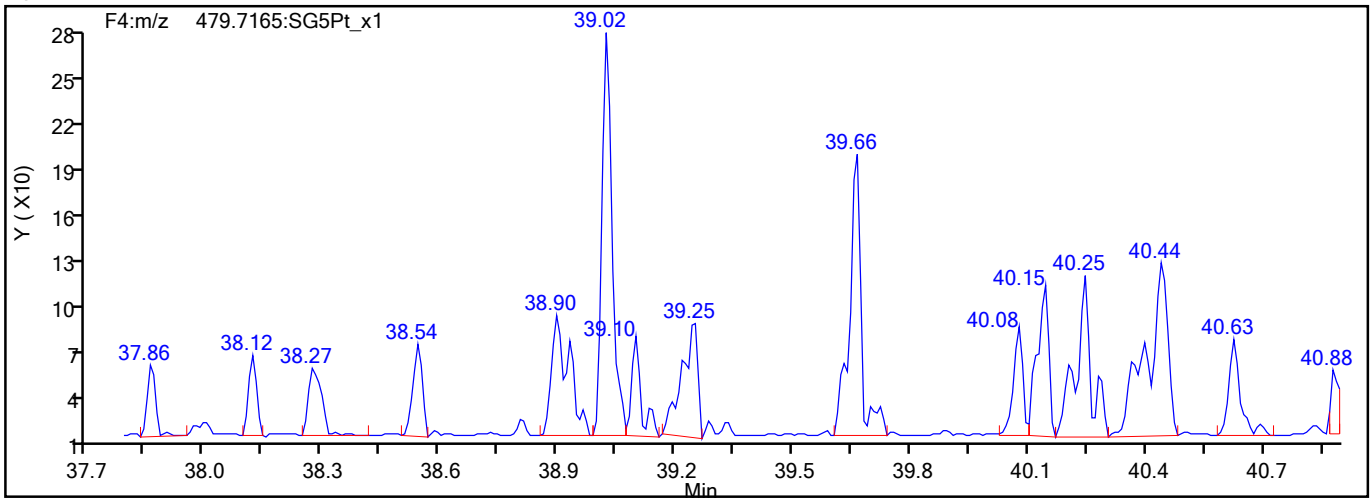

784286

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

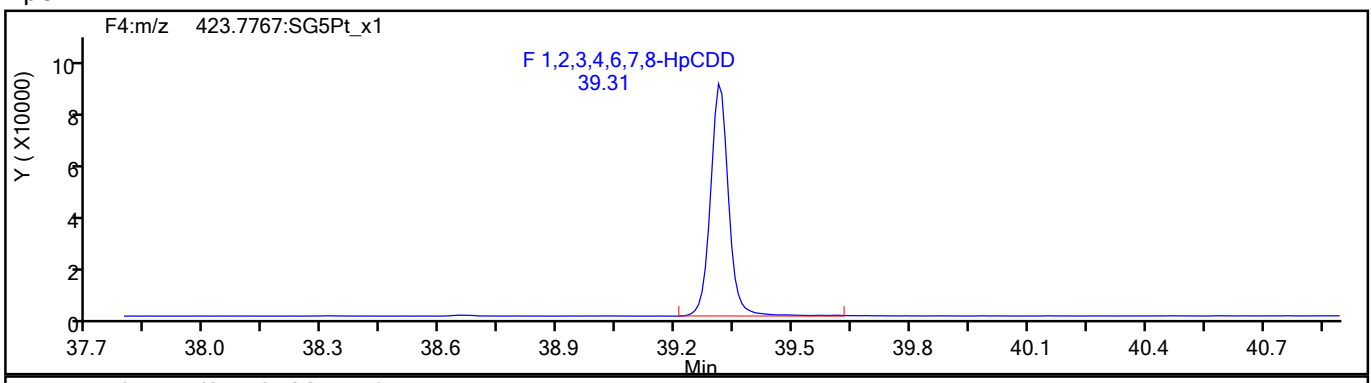

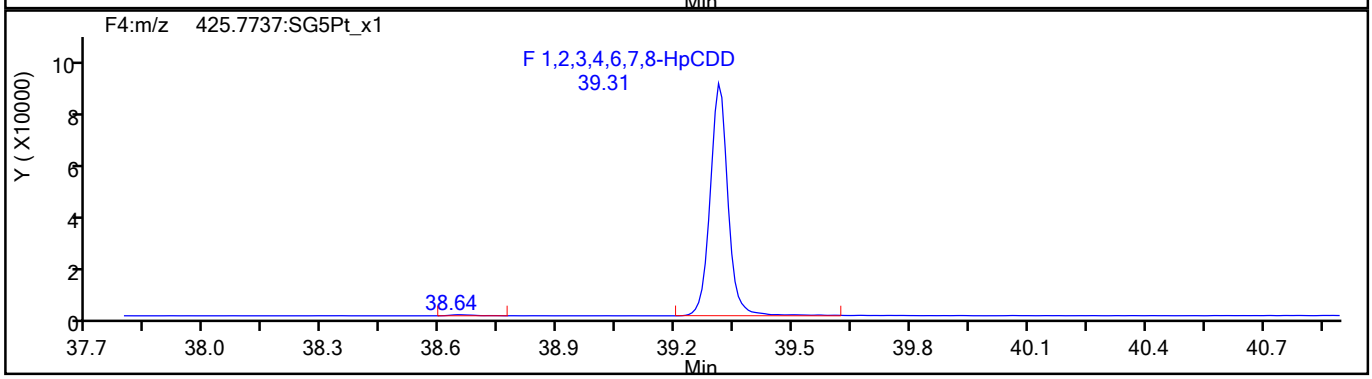

HpCDD Standards

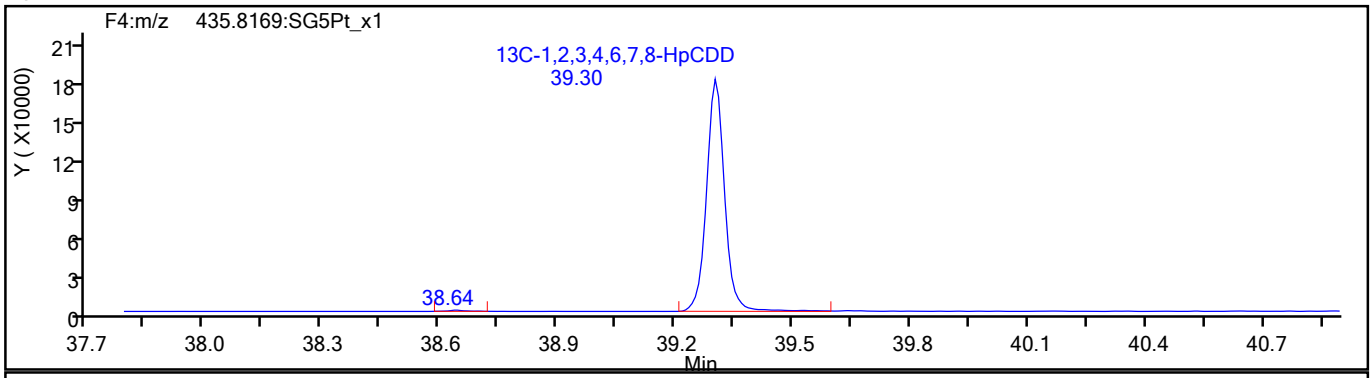

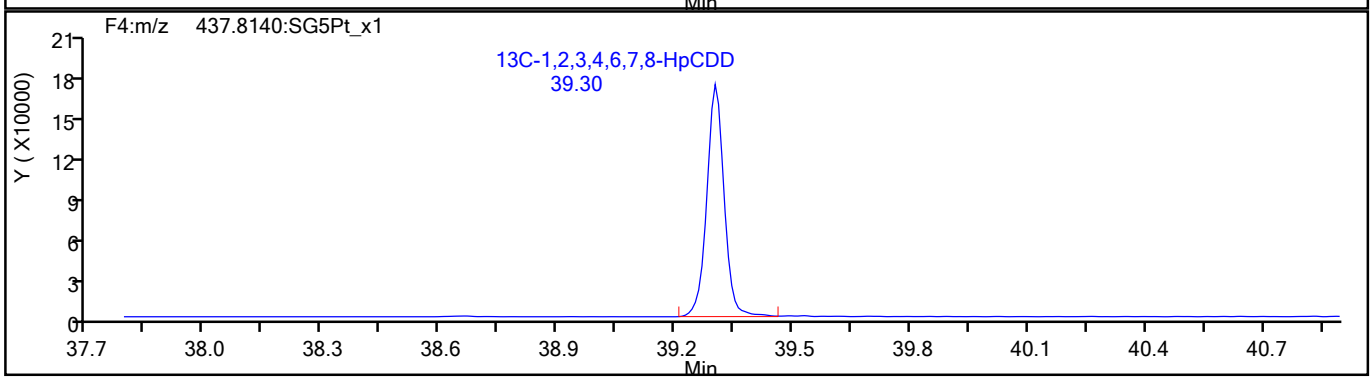

784287

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

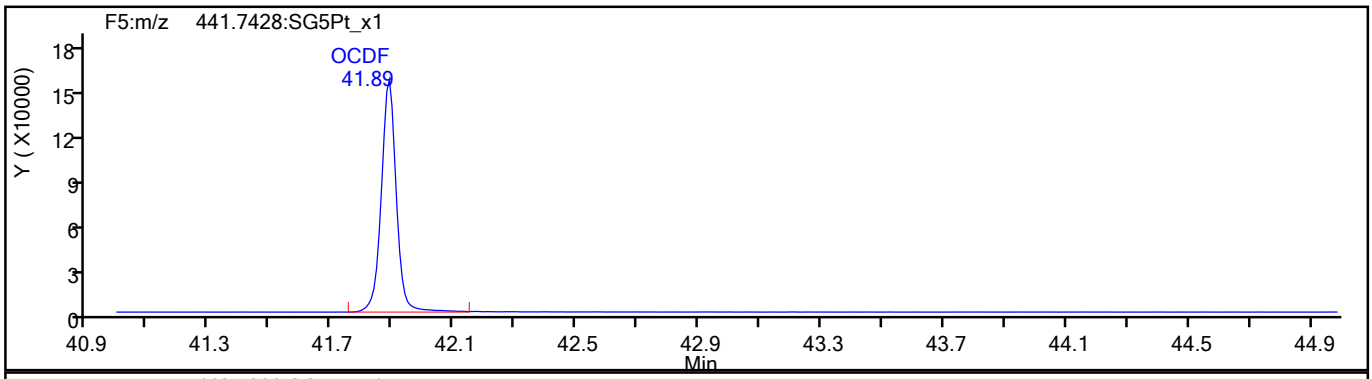

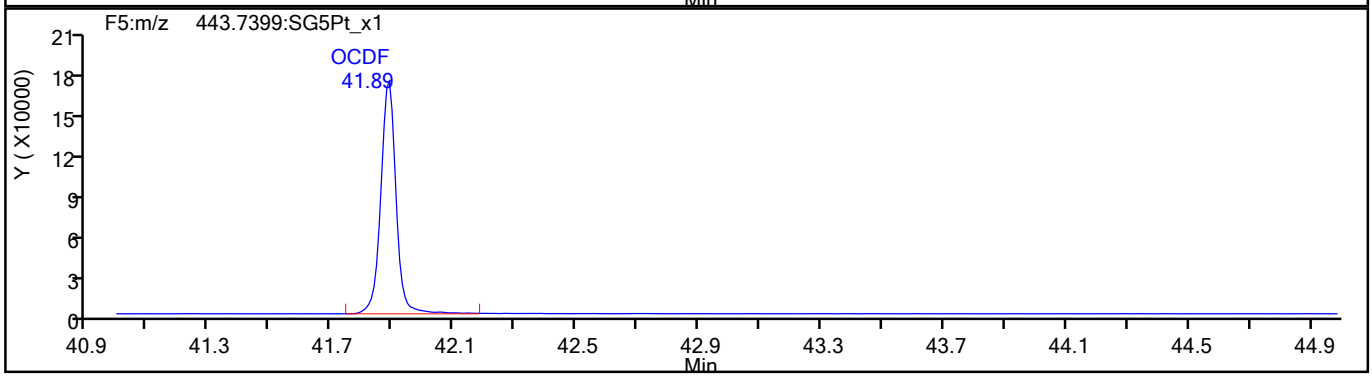

OCDF Standards

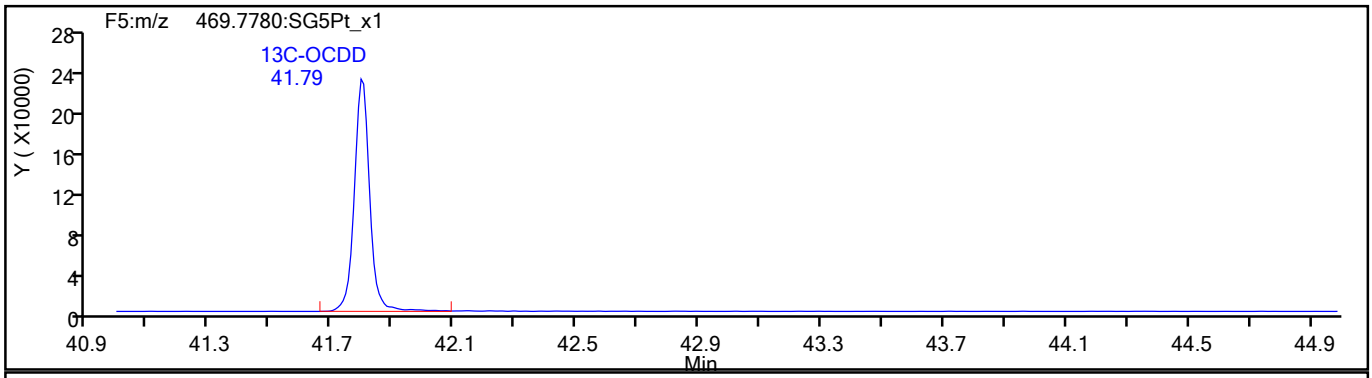

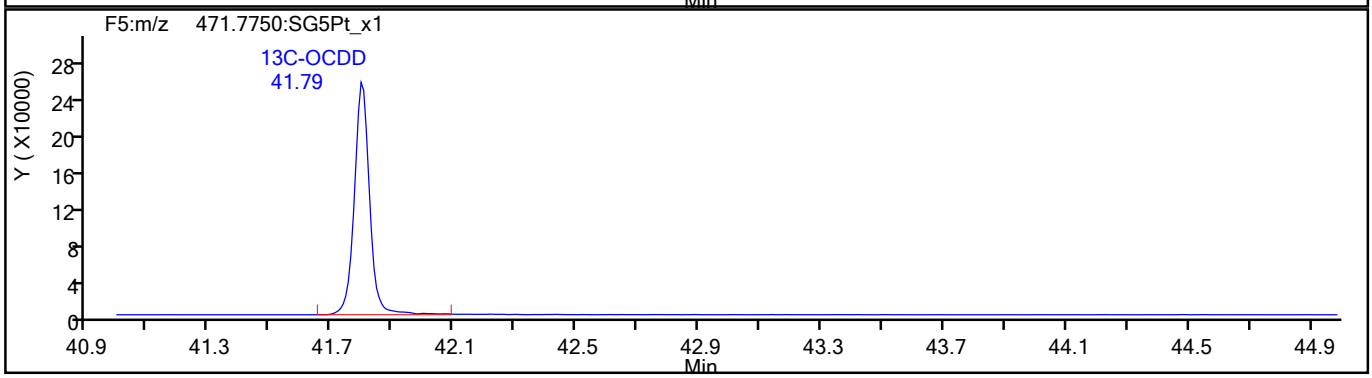

784288

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

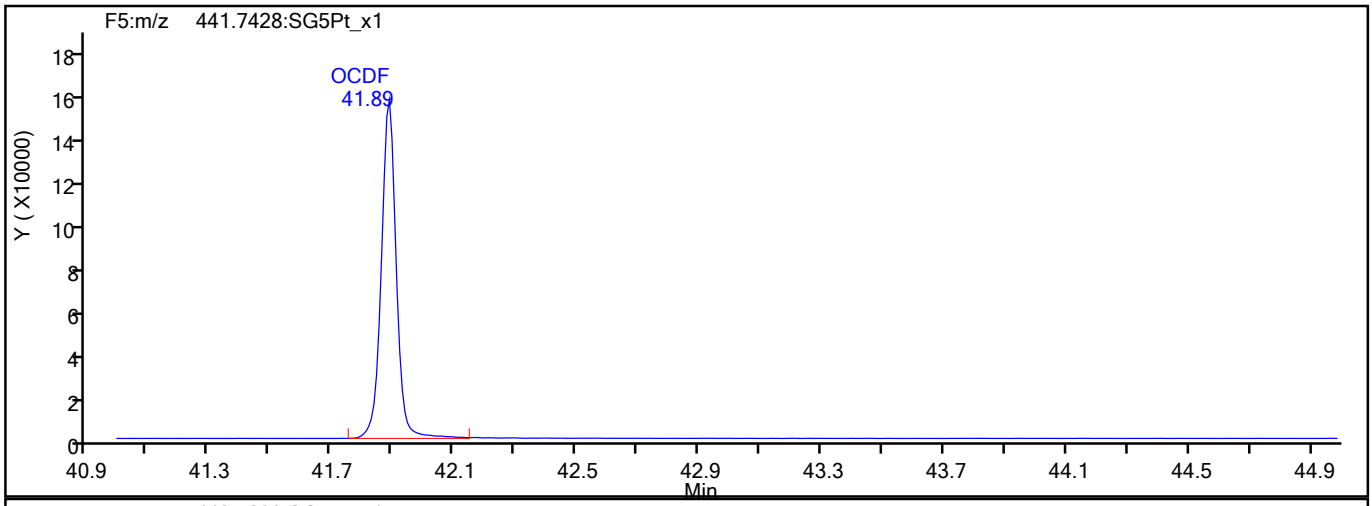

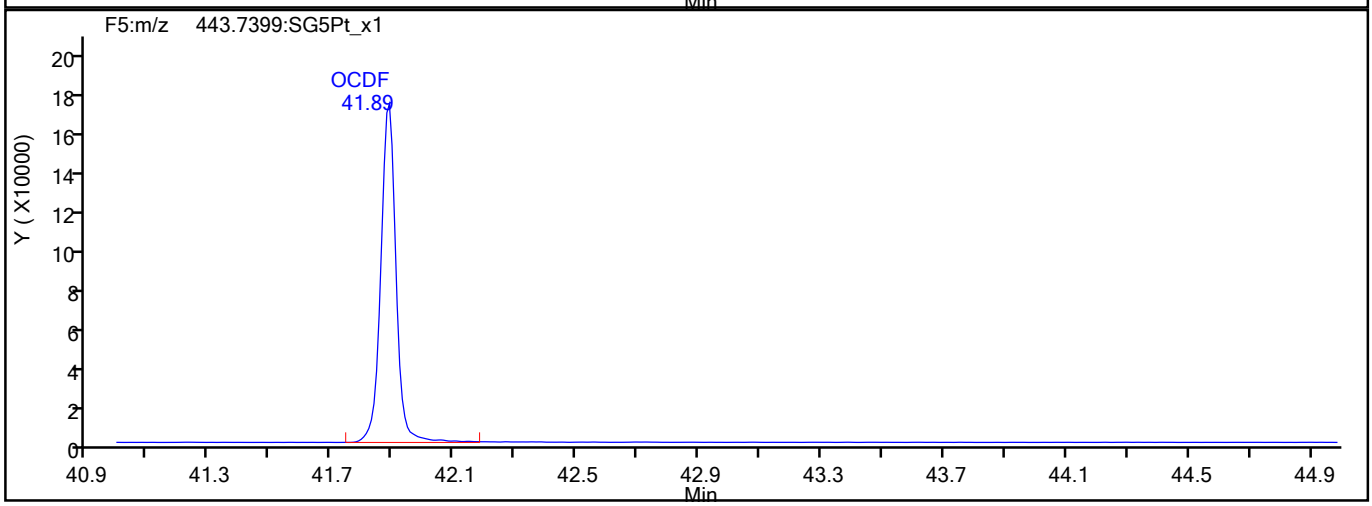

OCDF Interference Mass

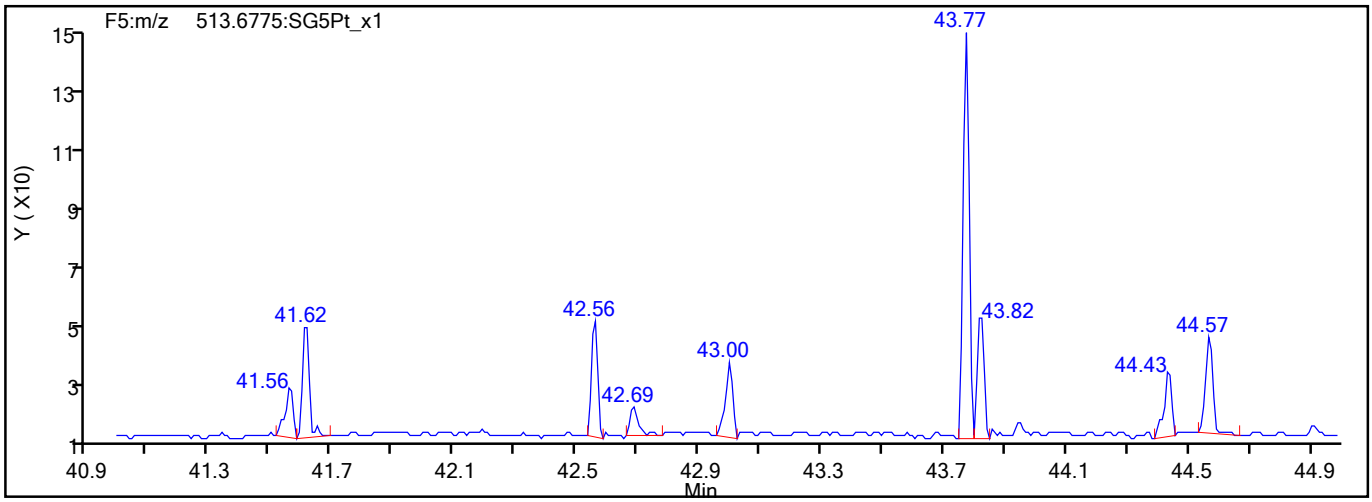

784289

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

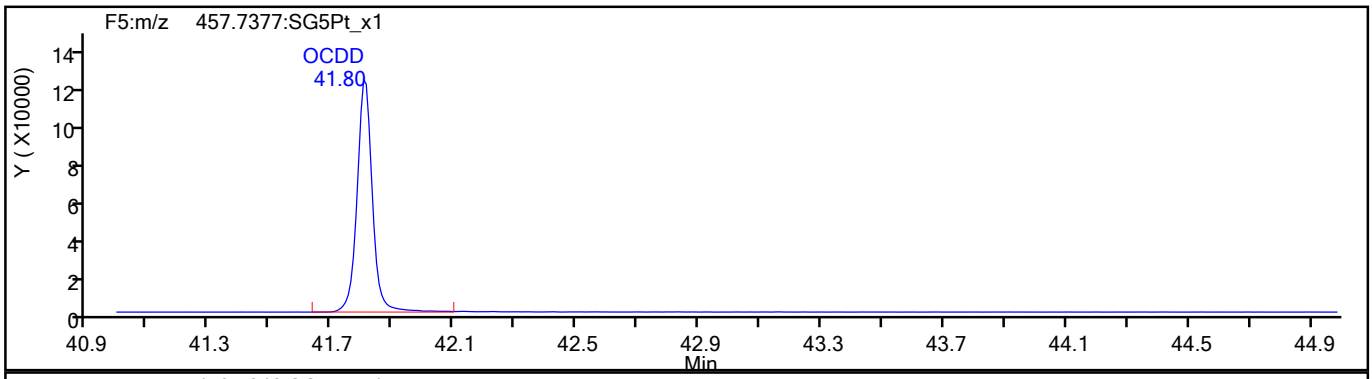

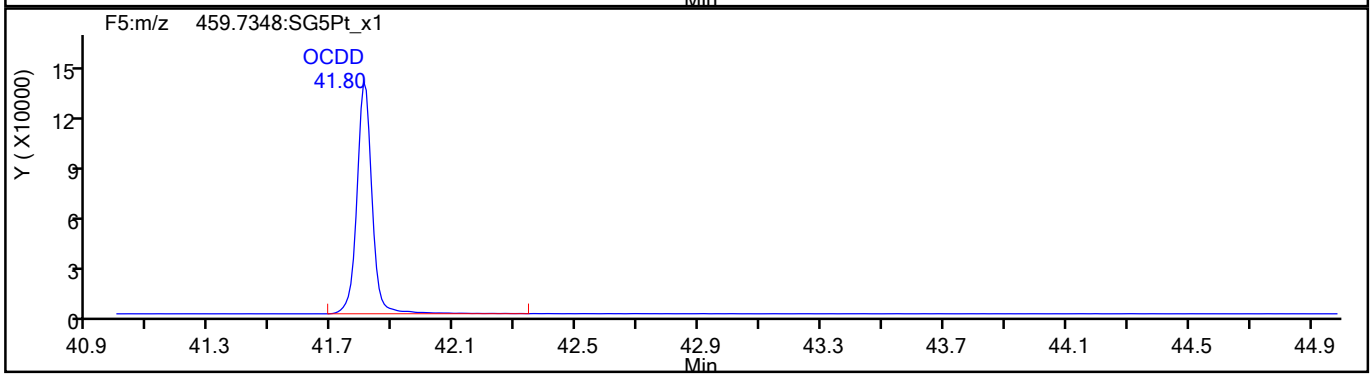

OCDD Standards

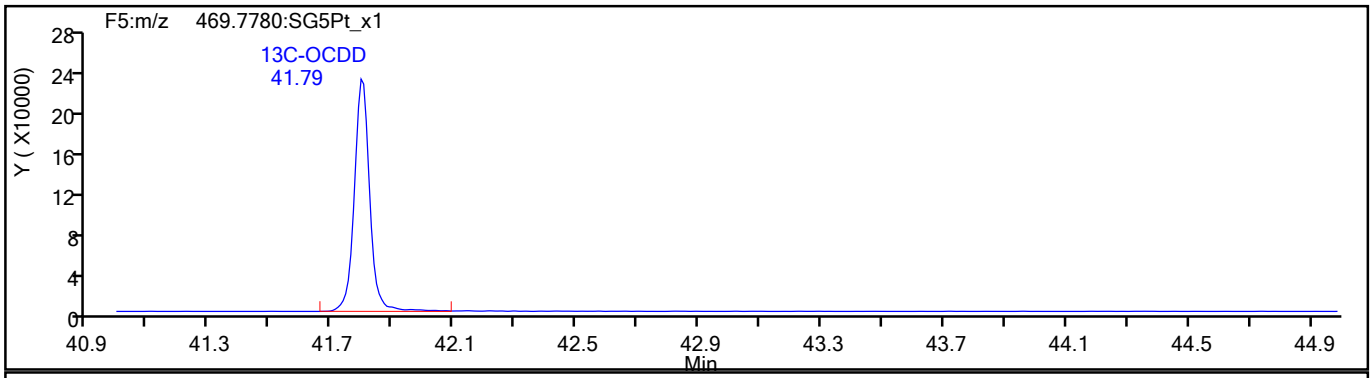

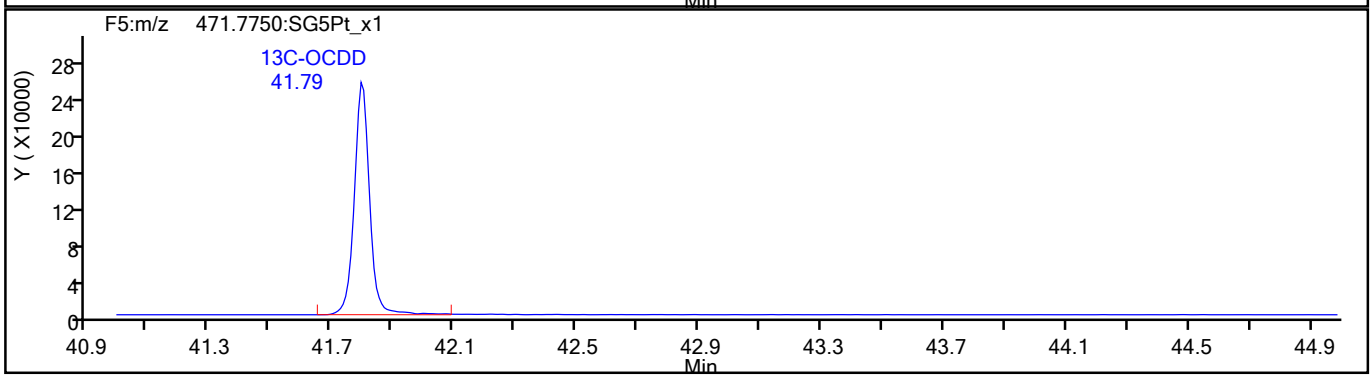

784290

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

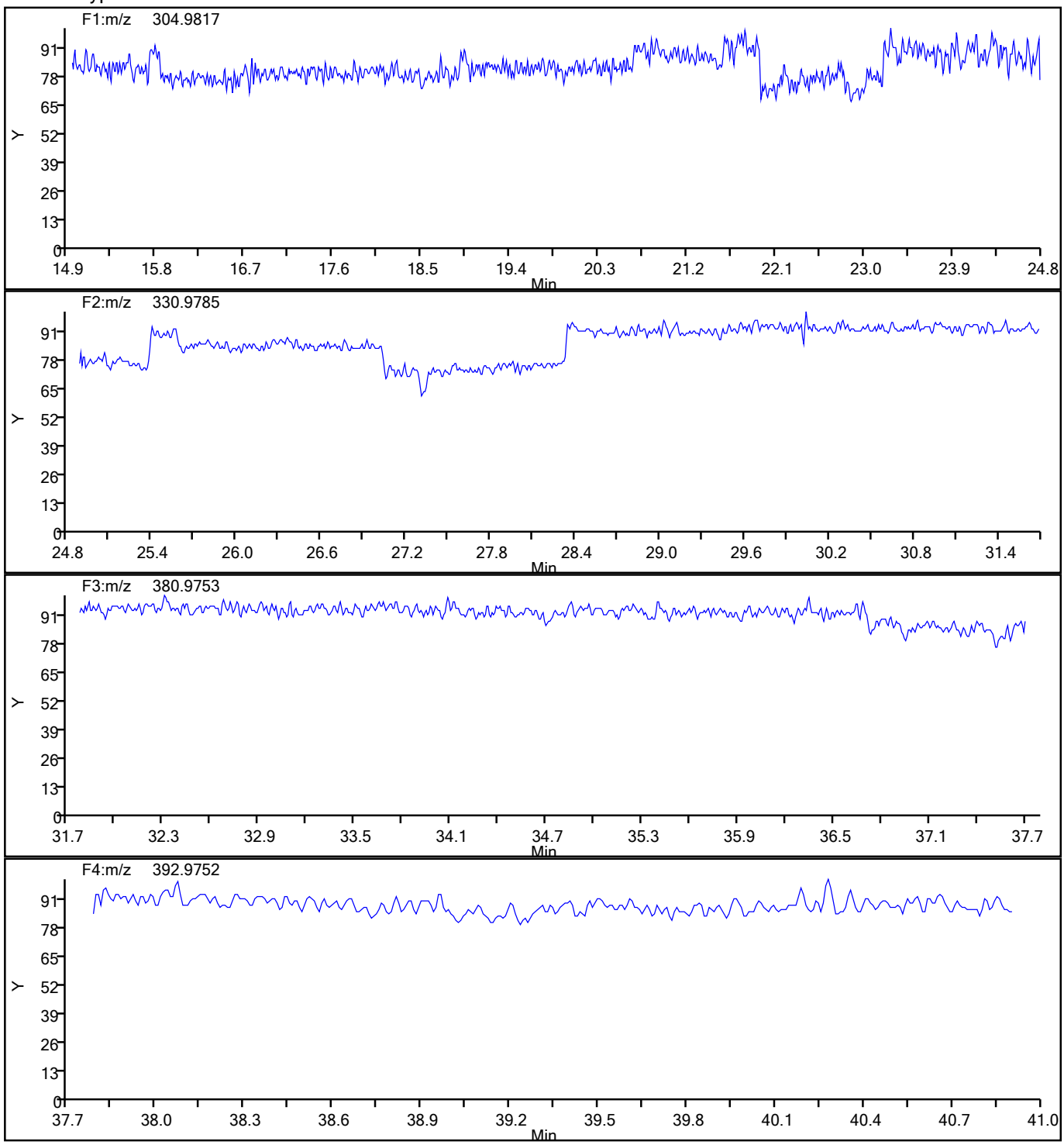

784291

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

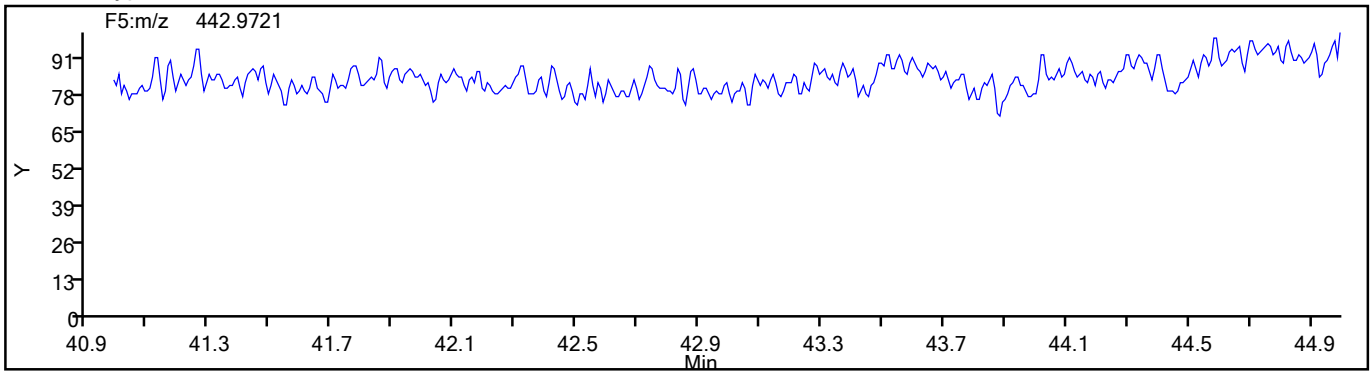

784292

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.548	2105852	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.612	2839435	0.79	1.3459	100.2	100.2	0.1786	0.1786	100	
2,3,7,8-TCDF	19.638	1274052	0.79	1.0802	41.5	41.5	0.0460	0.0460	104	
S Total TCDF					41.5	41.5	0.0460	0.0460		
D 13C-2,3,7,8-TCDD	20.909	1948011	0.81	0.9317	99.3	99.3	0.1662	0.1662	99.29	
$ 37Cl4-2,3,7,8-TCDD	20.935	848616		1.0083	40.0	40.0	0.0168	0.0168	99.92	
2,3,7,8-TCDD	20.935	875630	0.79	1.0753	41.8	41.8	0.0546	0.0546	105	
S Total TCDD					41.8	41.8	0.0546	0.0546		
D 13C-1,2,3,7,8-PeCDF	26.564	2432949	1.58	1.1405	101.3	101.3	0.3082	0.3082	101	
1,2,3,7,8-PeCDF	26.589	5302236	1.57	1.0543	206.7	206.7	0.5886	0.5886	103	
D 13C-2,3,4,7,8-PeCDF	28.023	2374722	1.60	1.1253	100.2	100.2	0.3123	0.3123	100	
2,3,4,7,8-PeCDF	28.048	5051373	1.58	1.0079	211.1	211.1	0.6756	0.6756	106	
S Total PeCDF					417.8	417.8	0.6321	0.6321		
D 13C-1,2,3,7,8-PeCDD	28.806	1521254	1.60	0.7165	100.8	100.8	0.1214	0.1214	101	
1,2,3,7,8-PeCDD	28.832	3351337	1.58	1.0465	210.5	210.5	0.1088	0.1088	105	
S Total PeCDD					210.5	210.5	0.1088	0.1088		
D 13C-1,2,3,4,7,8-HxCDF	34.391	1778238	0.53	0.9648	100.0	100.0	0.3266	0.3266	100	
1,2,3,4,7,8-HxCDF	34.407	4293581	1.24	1.1474	210.4	210.4	0.7958	0.7958	105	
D 13C-1,2,3,6,7,8-HxCDF	34.568	1995567	0.54	1.0708	101.1	101.1	0.2943	0.2943	101	
1,2,3,6,7,8-HxCDF	34.584	4991420	1.25	1.2178	205.4	205.4	0.6778	0.6778	103	
D 13C-2,3,4,6,7,8-HxCDF	35.444	2042874	0.53	1.0413	106.5	106.5	0.3026	0.3026	106	
2,3,4,6,7,8-HxCDF	35.461	5157631	1.25	1.2145	207.9	207.9	0.5811	0.5811	104	
D 13C-1,2,3,7,8,9-HxCDF	36.388	1742331	0.52	0.9731	97.2	97.2	0.3238	0.3238	97.17	
1,2,3,7,8,9-HxCDF	36.397	4445357	1.26	1.2401	205.7	205.7	0.6020	0.6020	103	
S Total HxCDF					829.5	829.5	0.6642	0.6642		
* 13C-1,2,3,7,8,9-HxCDD	36.194	1842630	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.680	1432215	1.28	0.7587	102.4	102.4	0.1598	0.1598	102	
1,2,3,4,7,8-HxCDD	35.697	3222329	1.26	1.0608	212.1	212.1	0.2911	0.2911	106	
D 13C-1,2,3,6,7,8-HxCDD	35.806	1669337	1.24	0.8593	105.4	105.4	0.1411	0.1411	105	
1,2,3,6,7,8-HxCDD	35.815	3426727	1.26	0.9933	206.7	206.7	0.2773	0.2773	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.203	3436144	1.26	1.1094	199.7	199.7	0.2625	0.2625	99.86	
S Total HxCDD					618.5	618.5	0.2770	0.2770		
D 13C-1,2,3,4,6,7,8-HpCDF	38.305	1392194	0.46	0.7359	102.7	102.7	0.3327	0.3327	103	
1,2,3,4,6,7,8-HpCDF	38.314	4243438	1.05	1.4421	211.4	211.4	0.6211	0.6211	106	
D 13C-1,2,3,4,7,8,9-HpCDF	39.595	1337573	0.45	0.6854	105.9	105.9	0.3573	0.3573	106	
1,2,3,4,7,8,9-HpCDF	39.603	3728415	1.05	1.3092	212.9	212.9	0.6974	0.6974	106	
S Total HpCDF					424.3	424.3	0.6592	0.6592		
D 13C-1,2,3,4,6,7,8-HpCDD	39.291	1337869	1.09	0.6745	107.6	107.6	0.2398	0.2398	108	
1,2,3,4,6,7,8-HpCDD	39.300	2935203	1.04	1.0503	208.9	208.9	0.3525	0.3525	104	
S Total HpCDD					208.9	208.9	0.3525	0.3525		
D 13C-OCDD	41.782	2177938	0.90	0.5446	217.0	217.0	0.3019	0.3019	109	
OCDF	41.866	6082696	0.91	1.3168	424.2	424.2	0.3916	0.3916	106	
OCDD	41.790	4803166	0.89	1.0620	415.3	415.3	0.3872	0.3872	104	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.548	20.547	0		944131	150571	127	317	1186		
333.9338	20.548	20.547	0		1161721	185169	81	202	2286	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.612	19.616	0	0.954	1253649	203983	215	537	949		
317.9389	19.621	19.616	0	0.955	1585786	258903	108	270	2397	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.638	19.646	0	1.001	561539	89311	44	110	2030		
305.8987	19.638	19.646	0	1.001	712513	111913	48	120	2332	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.909	20.910	0	1.018	869542	131887	127	317	1038		
333.9338	20.909	20.910	0	1.018	1078469	161266	81	202	1991	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.935	20.935	0	1.019	848616	126683	23	57	5508		
2,3,7,8-TCDD											
319.8965	20.935	20.939	0	1.001	385954	58537	36	90	1626		
321.8936	20.935	20.939	0	1.001	489676	72800	33	82	2206	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.564	26.560	0	1.293	1489826	258263	302	755	855		
353.8970	26.564	26.560	0	1.293	943123	164307	170	425	967	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.589	26.584	0	1.001	3241988	556504	638	1595	872		
341.8567	26.589	26.584	0	1.001	2060248	355863	411	1027	866	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.023	28.014	1	1.364	1460304	235761	302	755	781		
353.8970	28.023	28.014	1	1.364	914418	149333	170	425	878	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.048	28.039	1	1.001	3094556	515182	638	1595	807		
341.8567	28.048	28.039	1	1.001	1956817	323488	411	1027	787	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.806	28.801	0	1.402	936578	147383	82	205	1797		
369.8919	28.806	28.801	0	1.402	584676	95987	35	87	2742	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.832	28.828	0	1.001	2051590	320770	72	180	4455		
357.8516	28.832	28.828	0	1.001	1299747	208335	39	97	5342	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.391	34.384	0	0.950	617675	123602	191	477	647		
385.8610	34.382	34.384	0	0.950	1160563	234726	378	945	621	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.407	34.405	0	1.000	2381065	482843	745	1862	648		
375.8178	34.407	34.405	0	1.000	1912516	389022	564	1410	690	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.568	34.562	0	0.955	696940	140400	191	477	735		
385.8610	34.568	34.562	0	0.955	1298627	255987	378	945	677	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.584	34.582	0	1.000	2775629	556827	745	1862	747		
375.8178	34.584	34.582	0	1.000	2215791	440544	564	1410	781	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.444	35.444	0	0.979	707399	160237	191	477	839		
385.8610	35.444	35.444	0	0.979	1335475	303406	378	945	803	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.461	35.461	0	1.000	2866027	647502	745	1862	869		
375.8178	35.461	35.461	0	1.000	2291604	520419	564	1410	923	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.388	36.388	0	1.005	598306	148820	191	477	779		
385.8610	36.388	36.388	0	1.005	1144025	289476	378	945	766	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.397	36.402	0	1.000	2476452	605954	745	1862	813		
375.8178	36.397	36.402	0	1.000	1968905	483719	564	1410	858	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.194	36.192	0		1026134	250783	116	290	2162		
403.8529	36.186	36.192	0		816496	200495	103	257	1947	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.680	35.680	0	0.986	804332	193336	116	290	1667		
403.8529	35.680	35.680	0	0.986	627883	151493	103	257	1471	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.697	35.695	0	1.000	1795969	436602	241	602	1812		
391.8127	35.697	35.695	0	1.000	1426360	347066	185	462	1876	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.806	35.805	0	0.989	925744	214247	116	290	1847		
403.8529	35.806	35.805	0	0.989	743593	172424	103	257	1674	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.815	35.820	0	1.000	1911971	434863	241	602	1804		
391.8127	35.815	35.820	0	1.000	1514756	347831	185	462	1880	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.203	36.208	0	1.015	1913013	474198	241	602	1968		
391.8127	36.203	36.208	0	1.015	1523131	377483	185	462	2040	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.305	38.305	0	1.058	436356	136587	154	385	887		
419.8220	38.305	38.305	0	1.058	955838	295474	288	720	1026	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.314	38.317	0	1.000	2176116	664265	789	1972	842		
409.7788	38.314	38.317	0	1.000	2067322	632606	759	1897	833	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.595	39.600	0	1.094	416057	129213	154	385	839		
419.8220	39.595	39.600	0	1.094	921516	294690	288	720	1023	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.603	39.608	0	1.000	1911190	607125	789	1972	769		
409.7788	39.603	39.608	0	1.000	1817225	579552	759	1897	764	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.291	39.293	0	1.086	696483	219725	150	375	1465		
437.8140	39.291	39.293	0	1.086	641386	202177	142	355	1424	1.09(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.300	39.301	0	1.000	1499524	478443	315	787	1519		
425.7737	39.300	39.301	0	1.000	1435679	451932	310	775	1458	1.04(0.88-1.20)	
13C-OCDD											
469.7780	41.782	41.785	0	1.154	1033665	317462	144	360	2205		
471.7750	41.782	41.785	0	1.154	1144273	352280	153	382	2302	0.90(0.76-1.02)	
OCDF											
441.7428	41.866	41.875	-1	1.002	2905097	900371	326	815	2762		
443.7399	41.866	41.875	-1	1.002	3177599	981356	365	912	2689	0.91(0.76-1.02)	
OCDD											
457.7377	41.790	41.794	0	1.000	2268006	705330	257	642	2744		
459.7348	41.790	41.794	0	1.000	2535160	785518	294	735	2672	0.89(0.76-1.02)	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

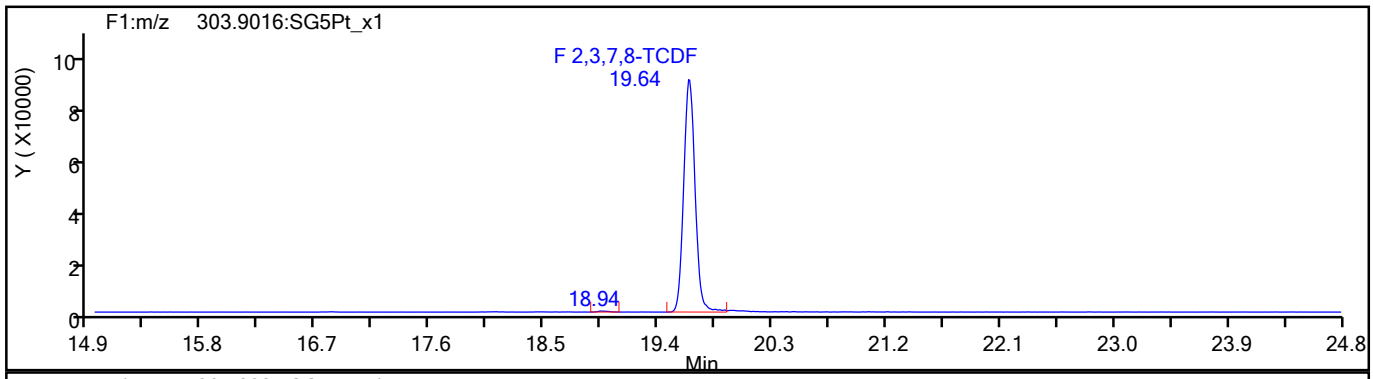

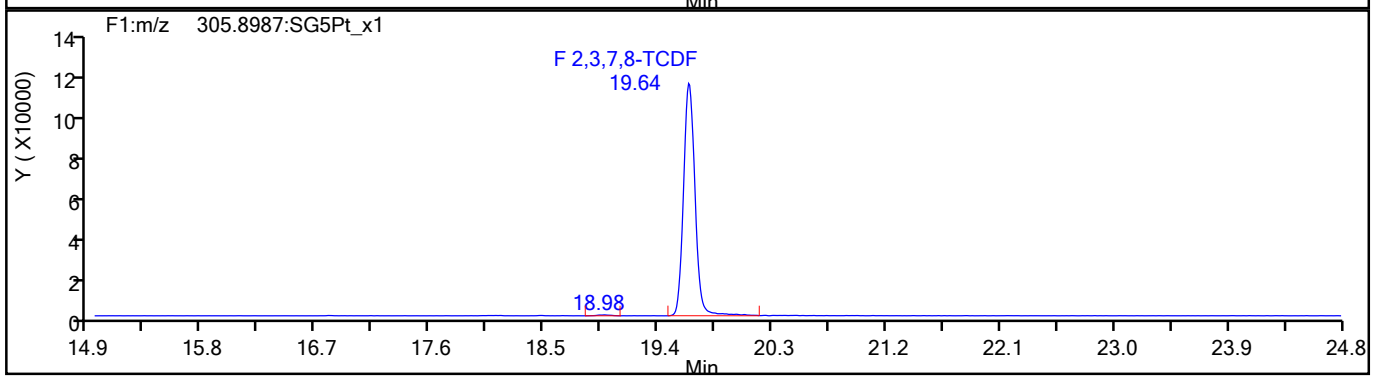

TCDF Standards

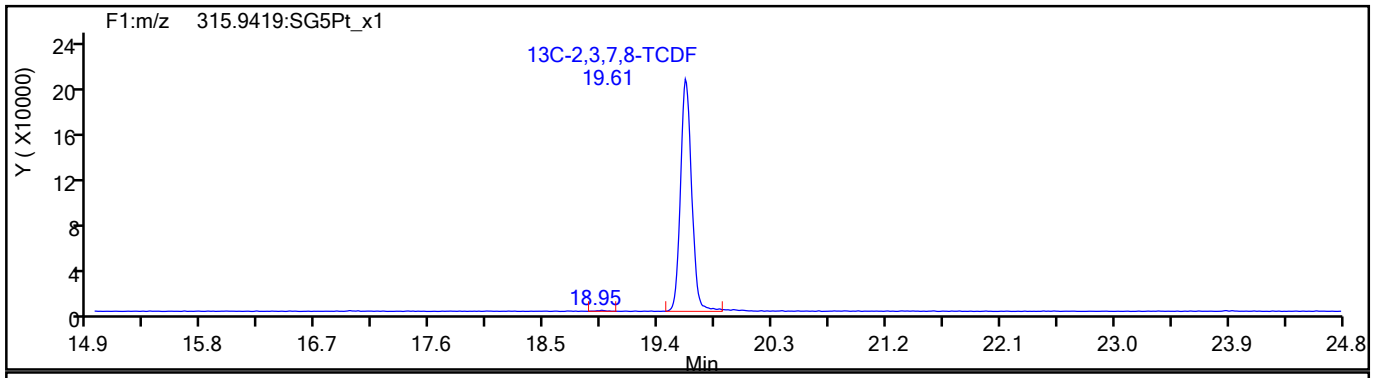

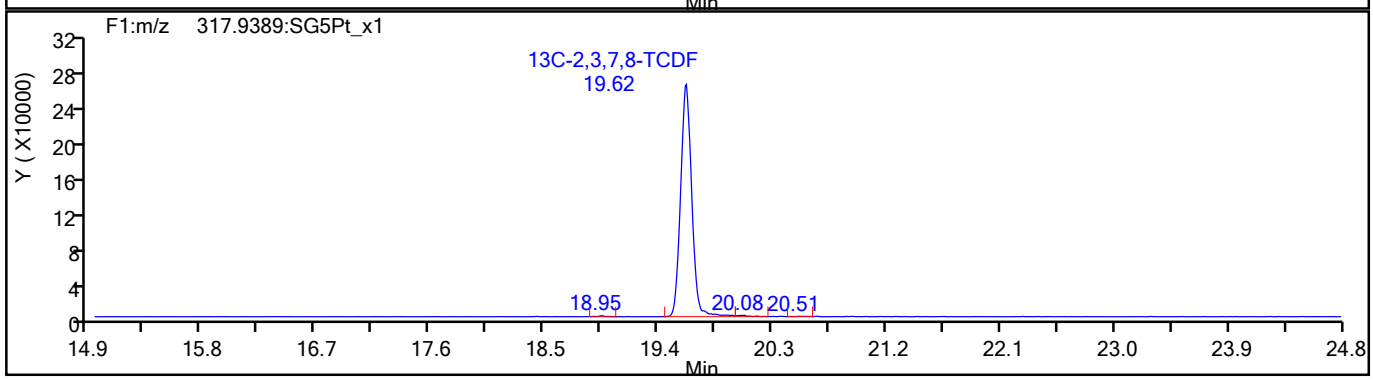

784298

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

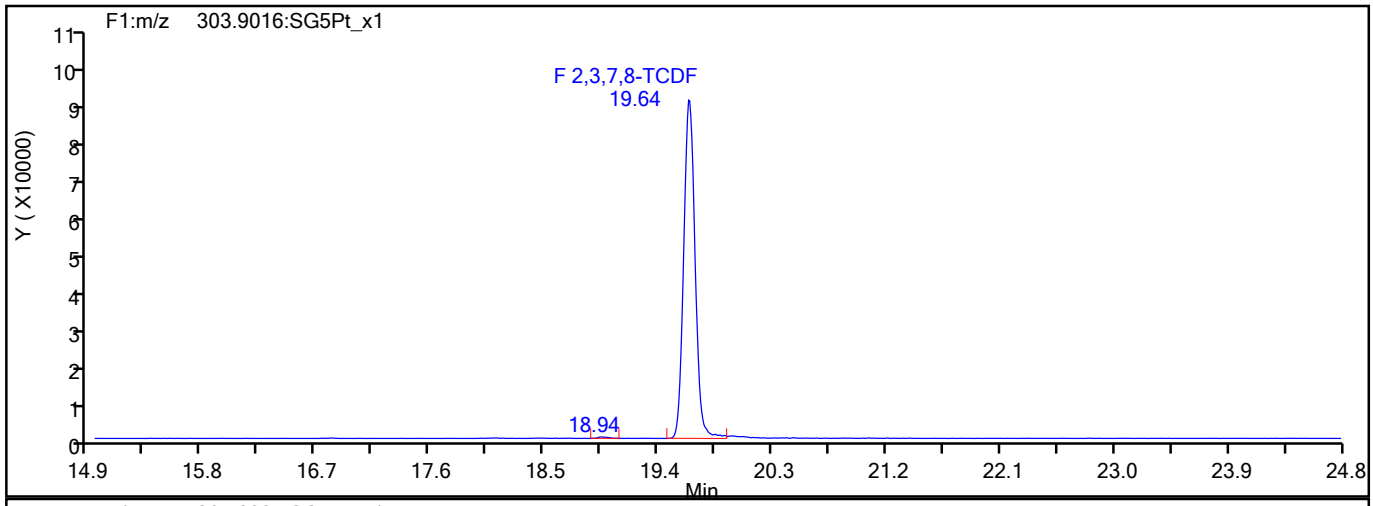

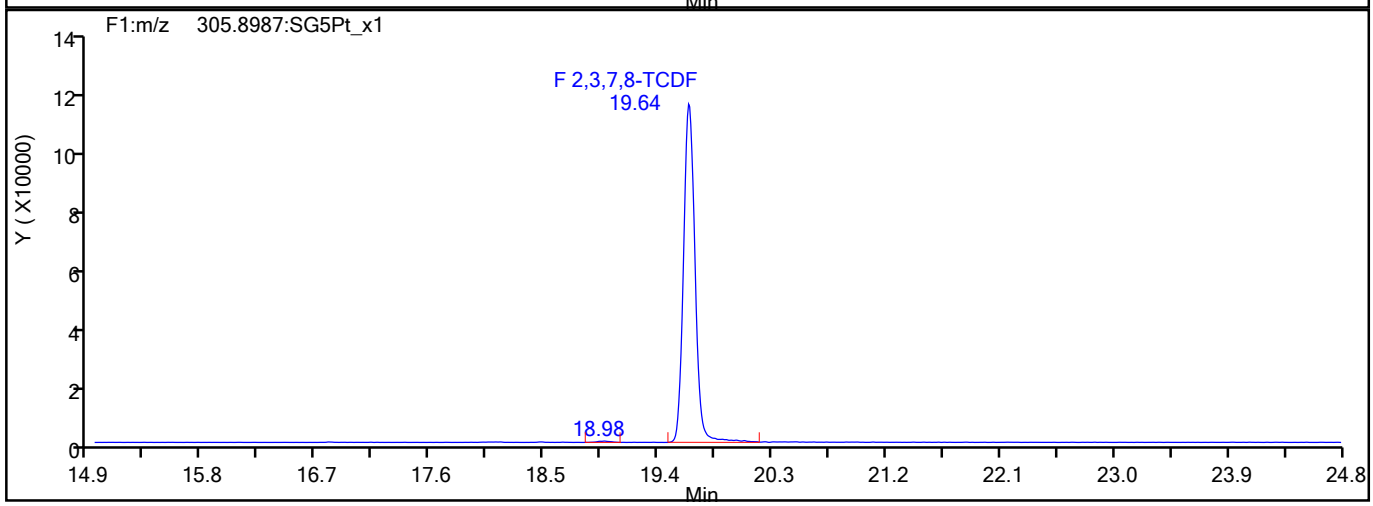

TCDF Interference Mass

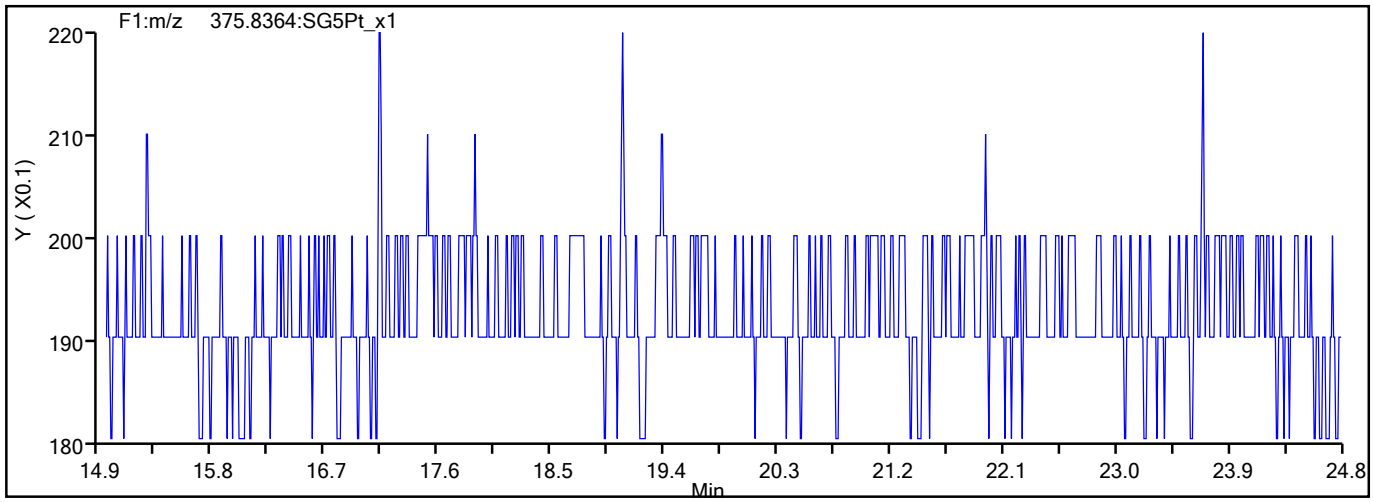

784299

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

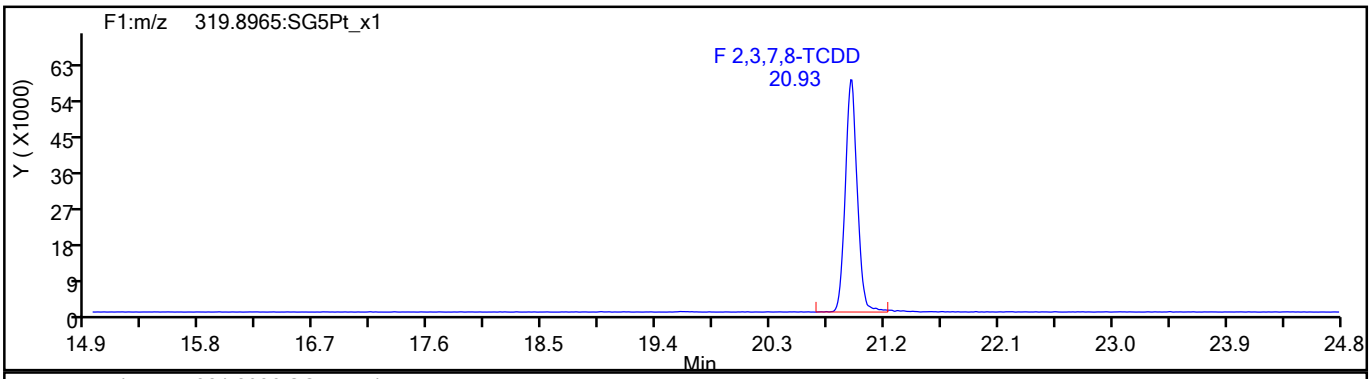

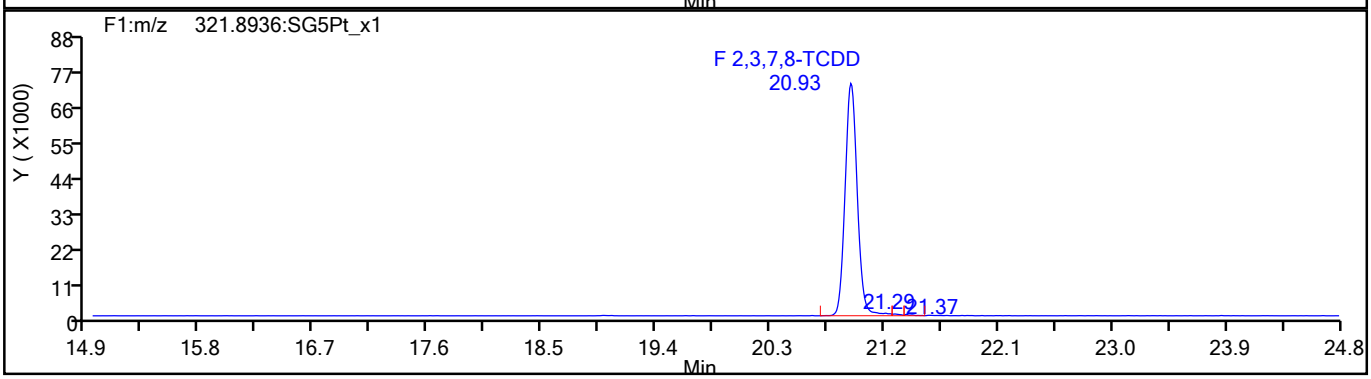

TCDD Standards

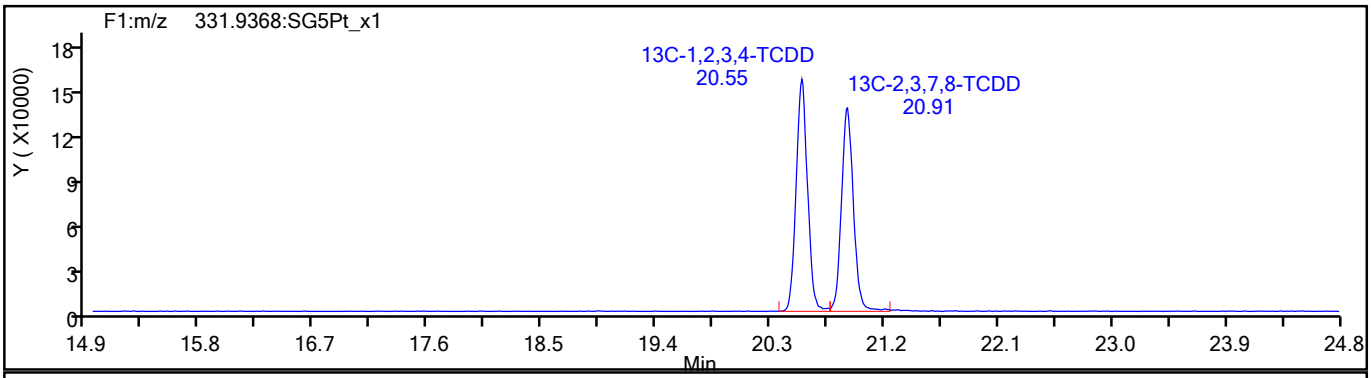

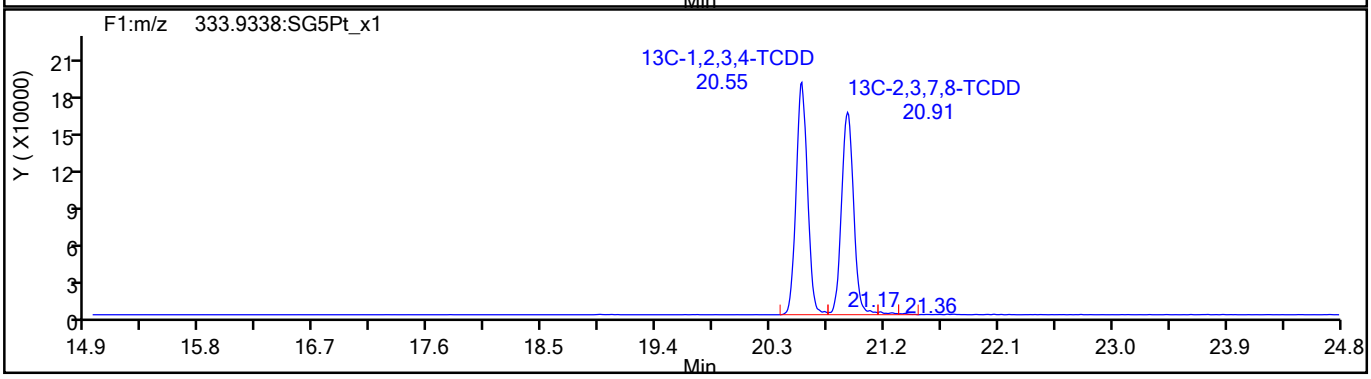

784300

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

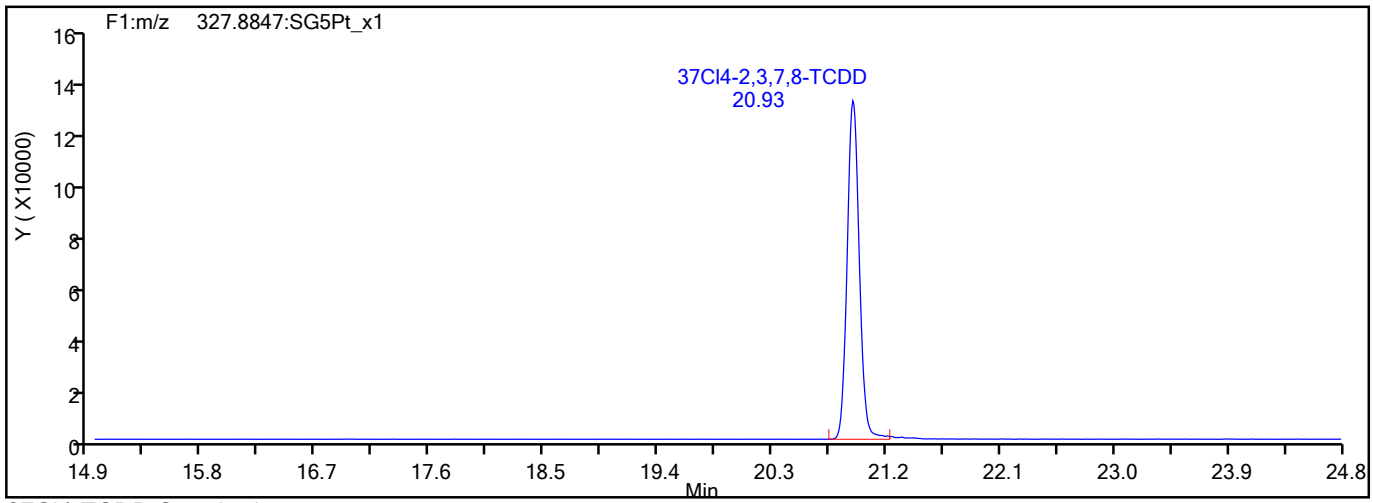

37Cl4-TCDD Standards

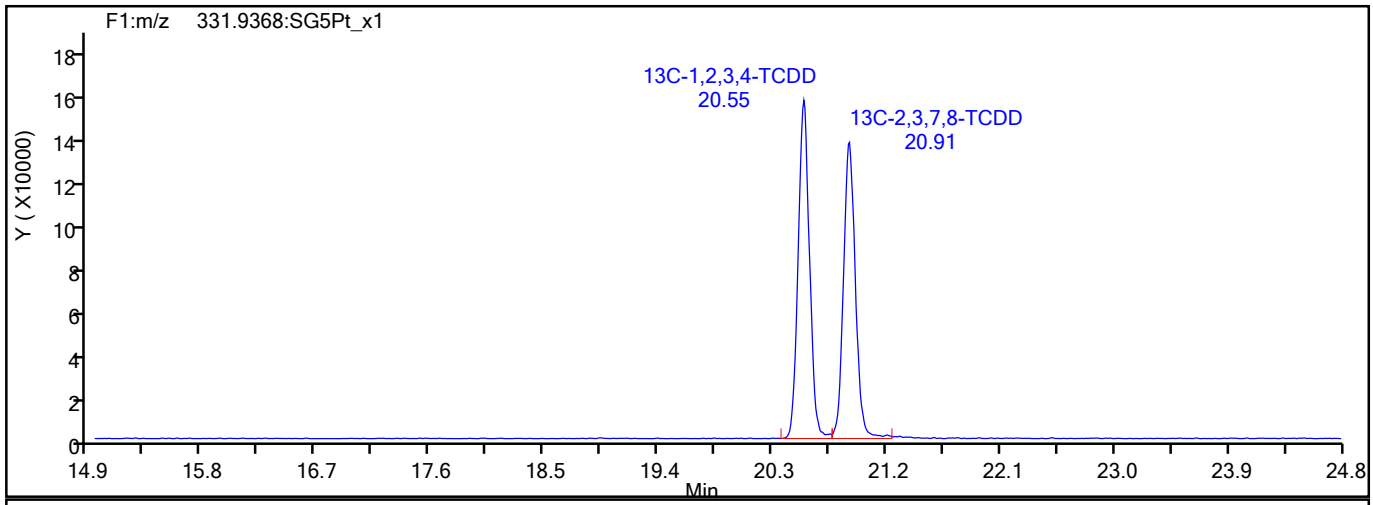

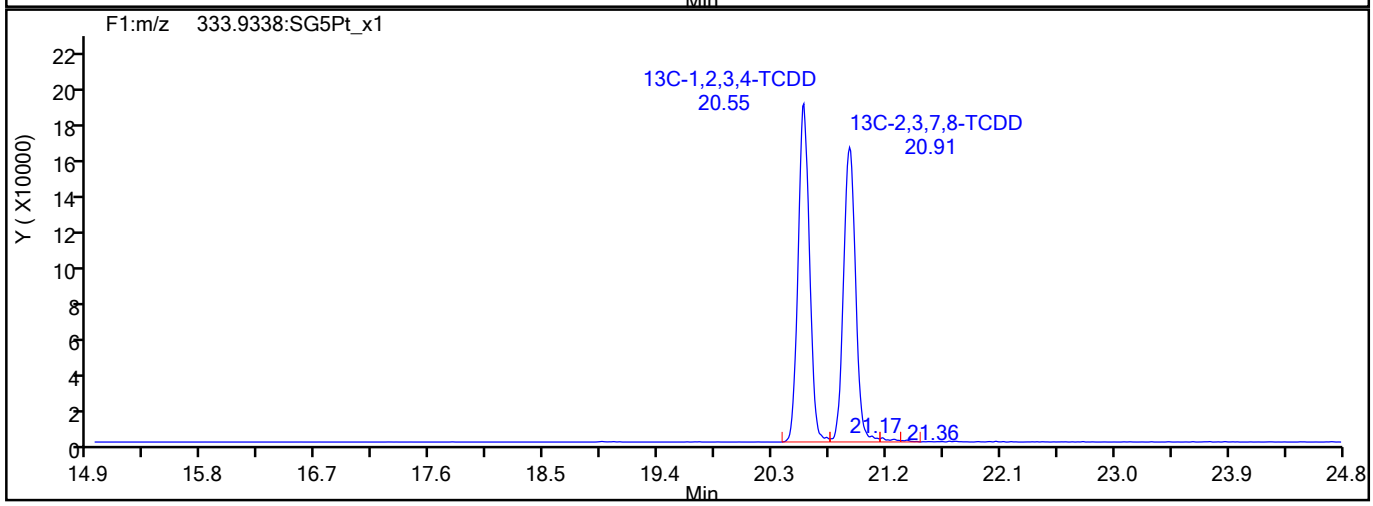

784301

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

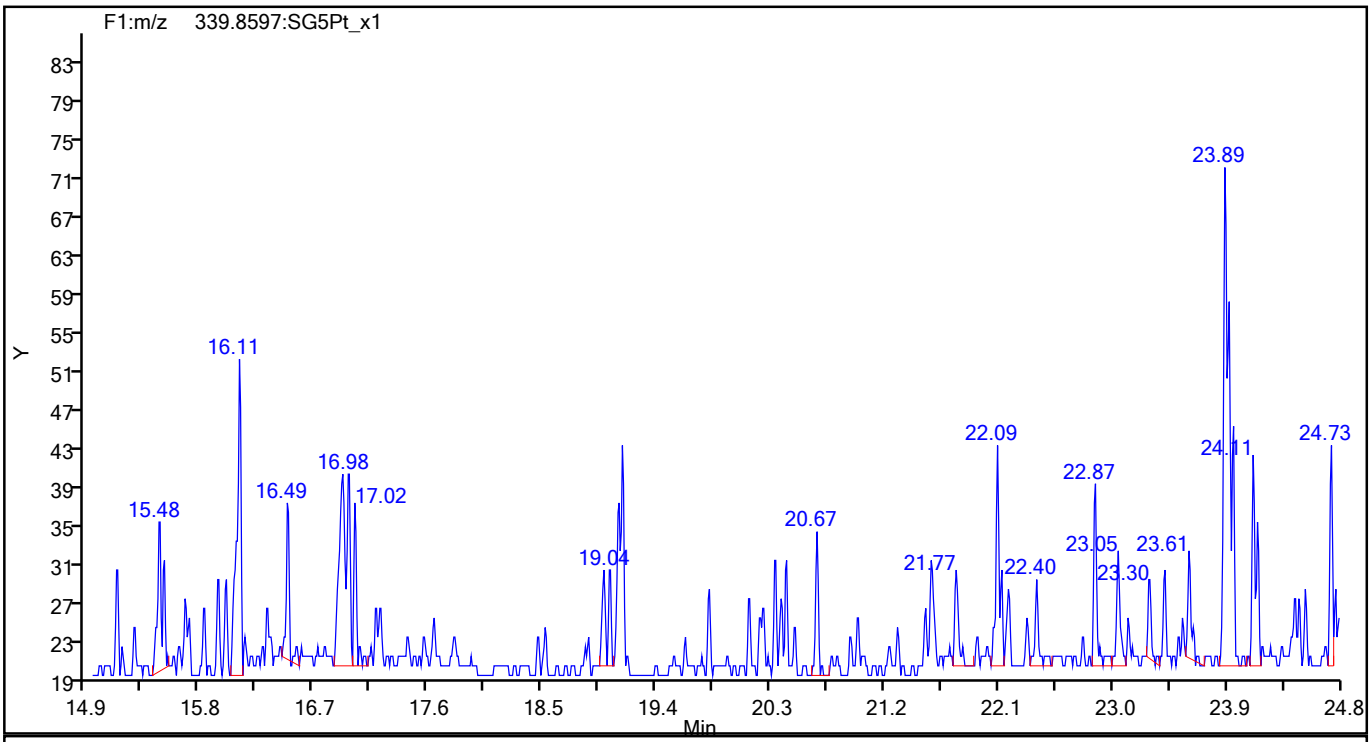

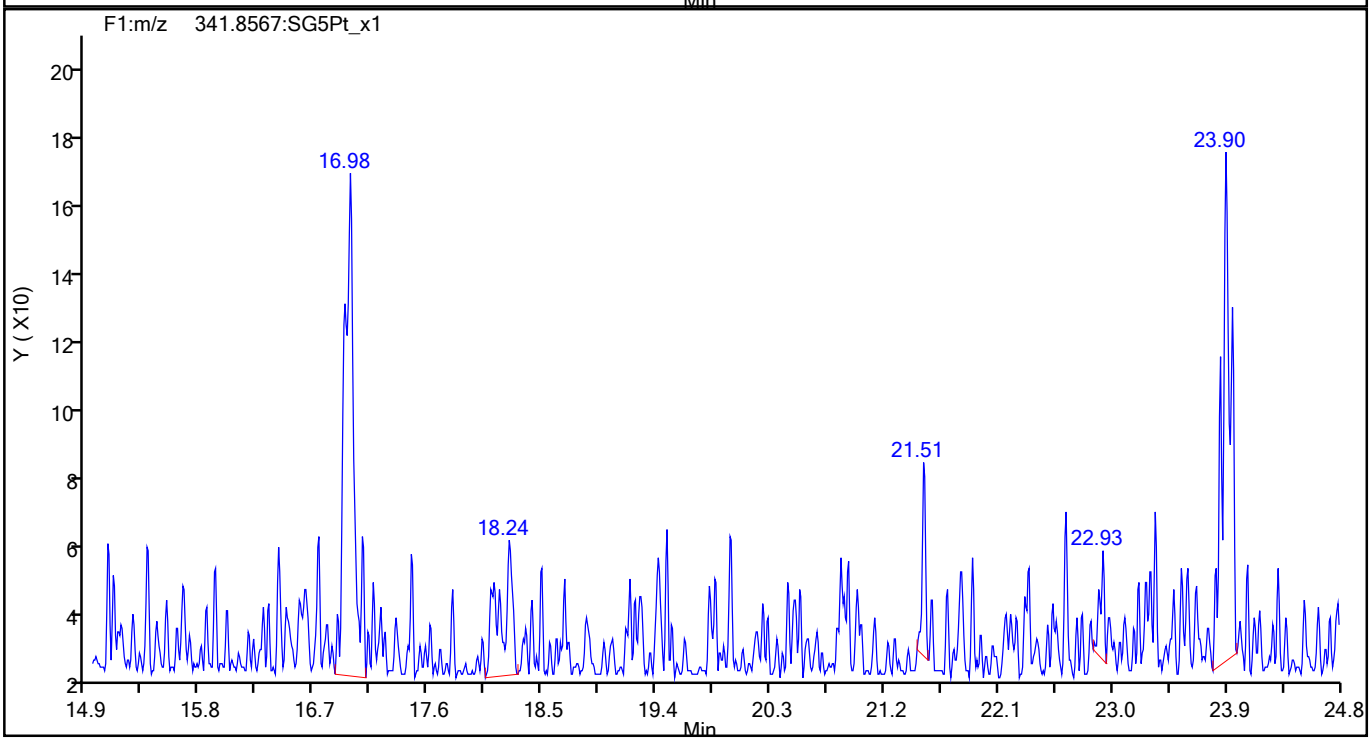

784302

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

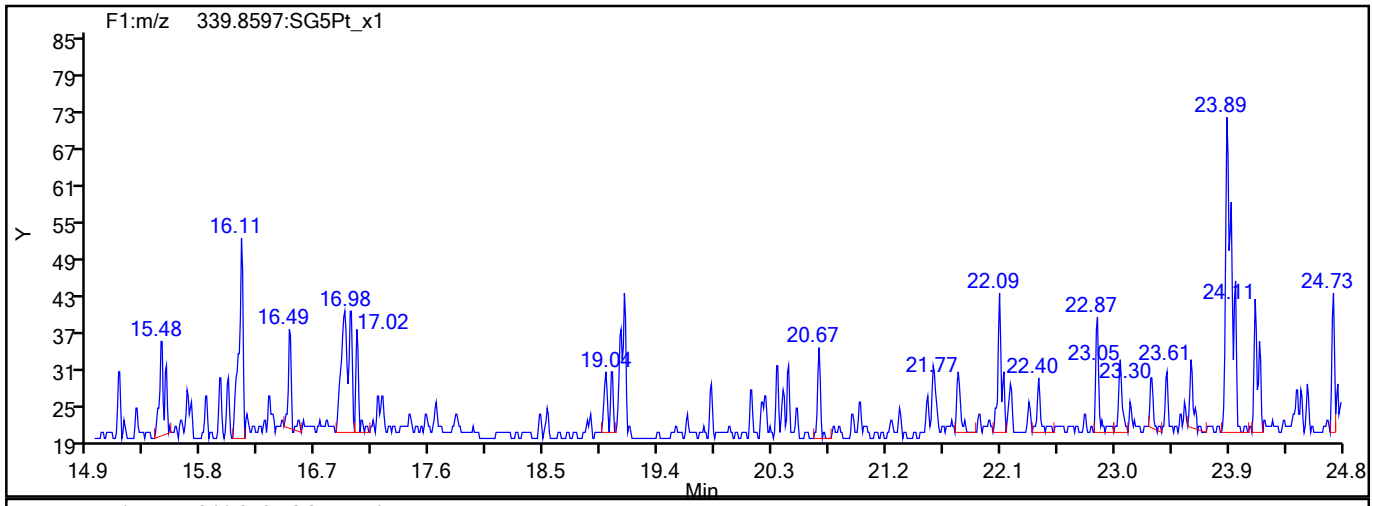

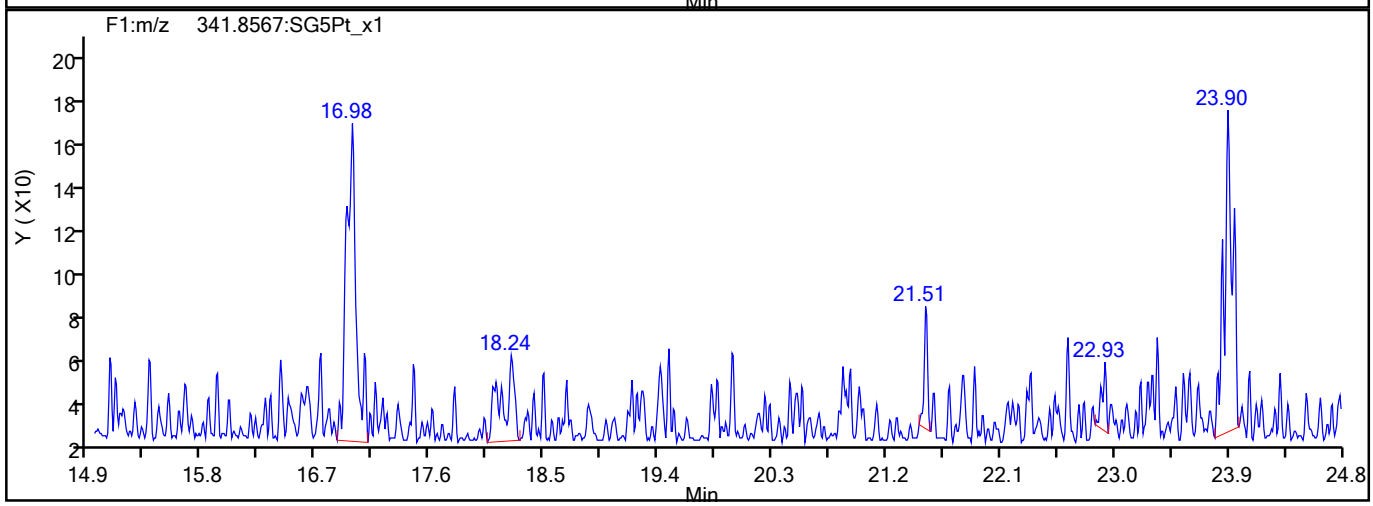

F1 PeCDFs Interference Mass

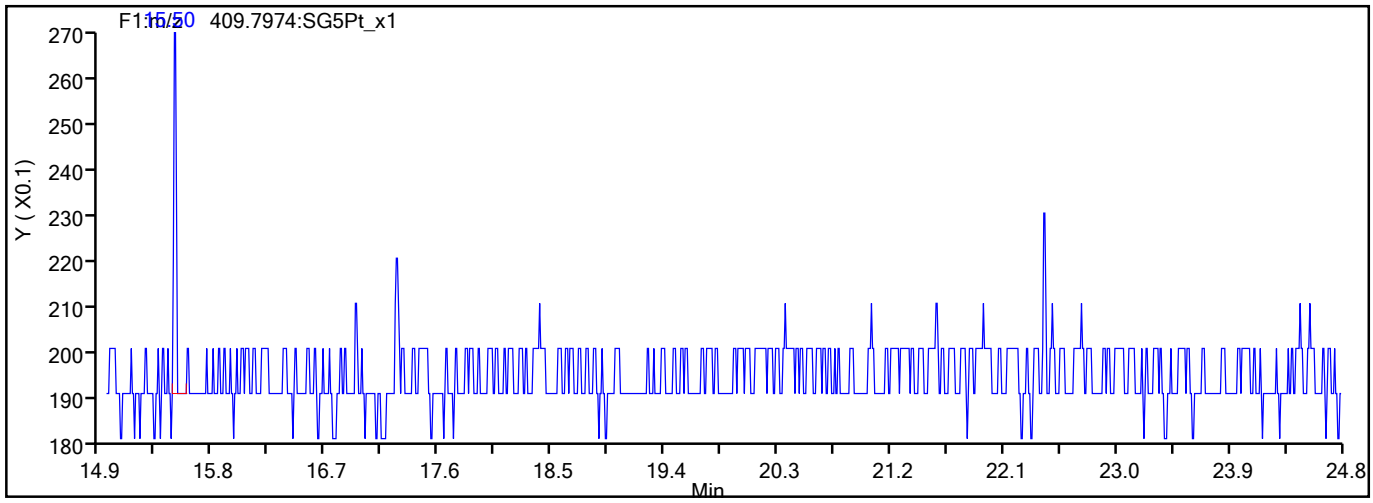

784303

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

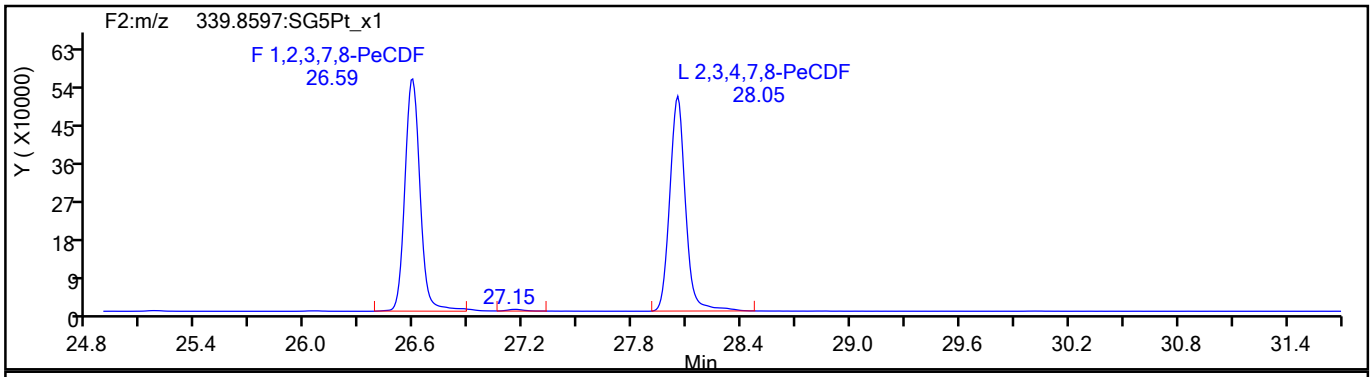

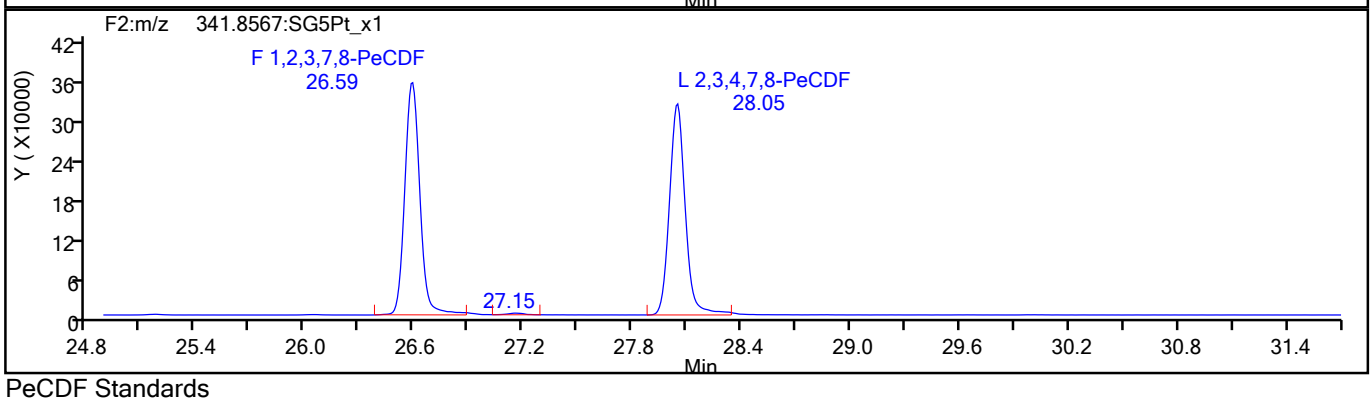

PeCDF Standards

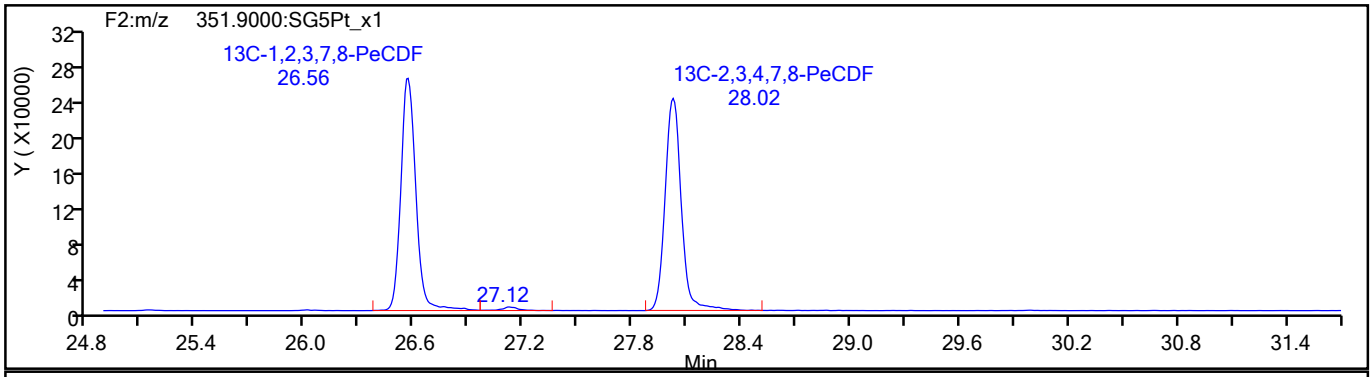

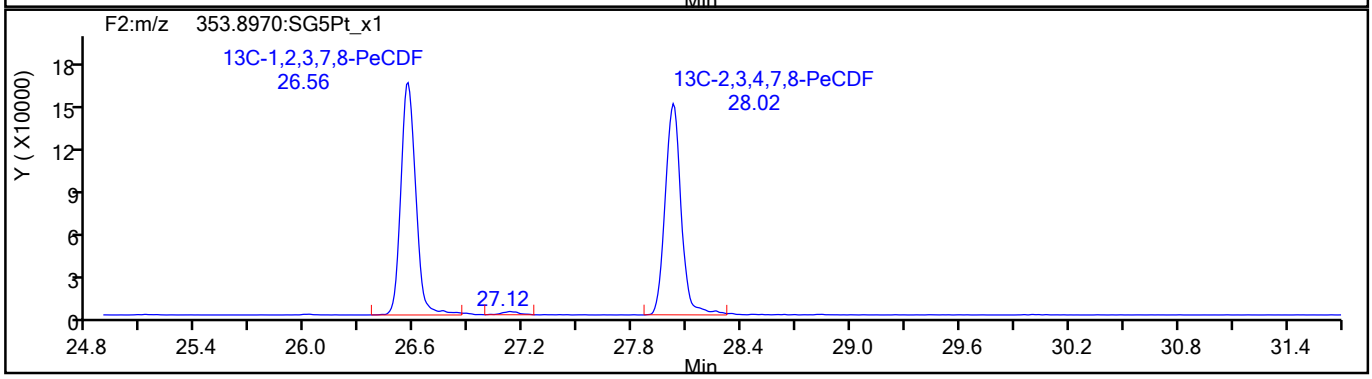

784304

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

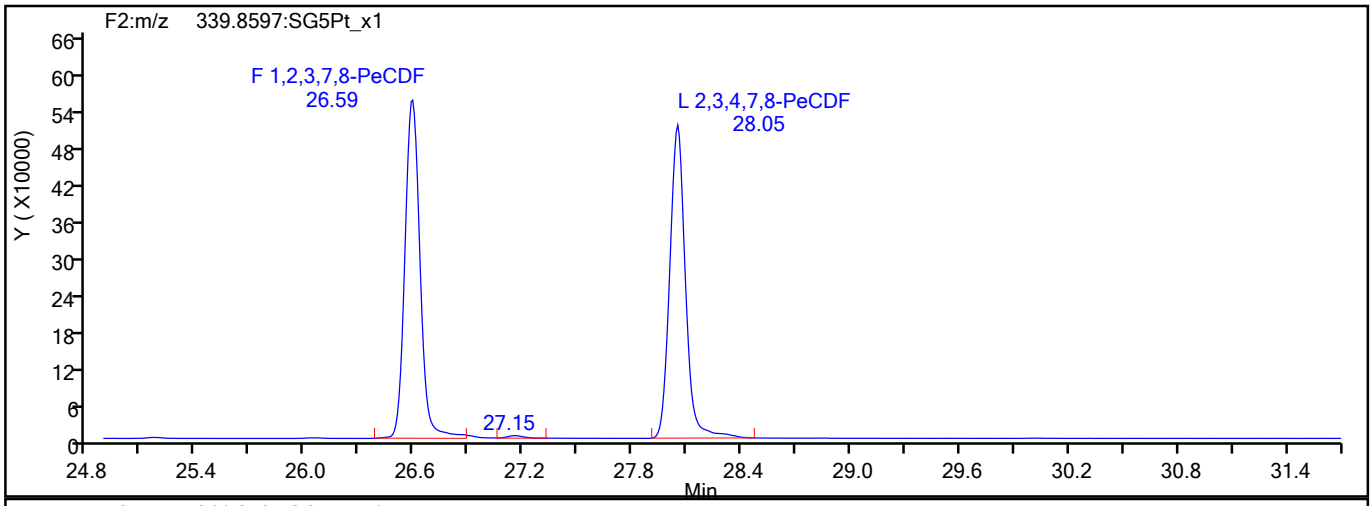

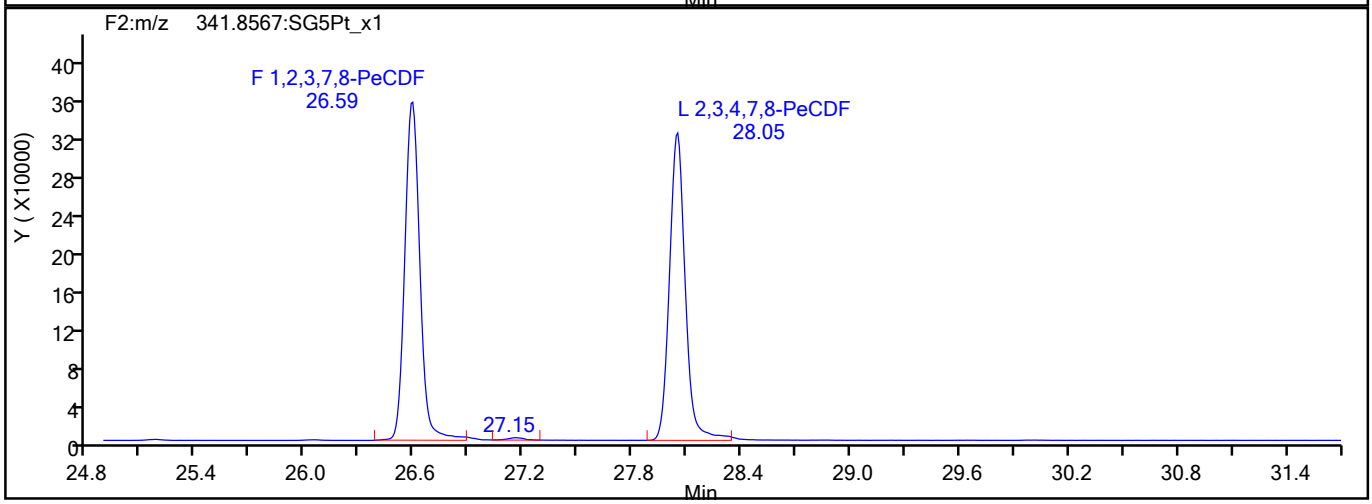

PeCDF Interference Mass

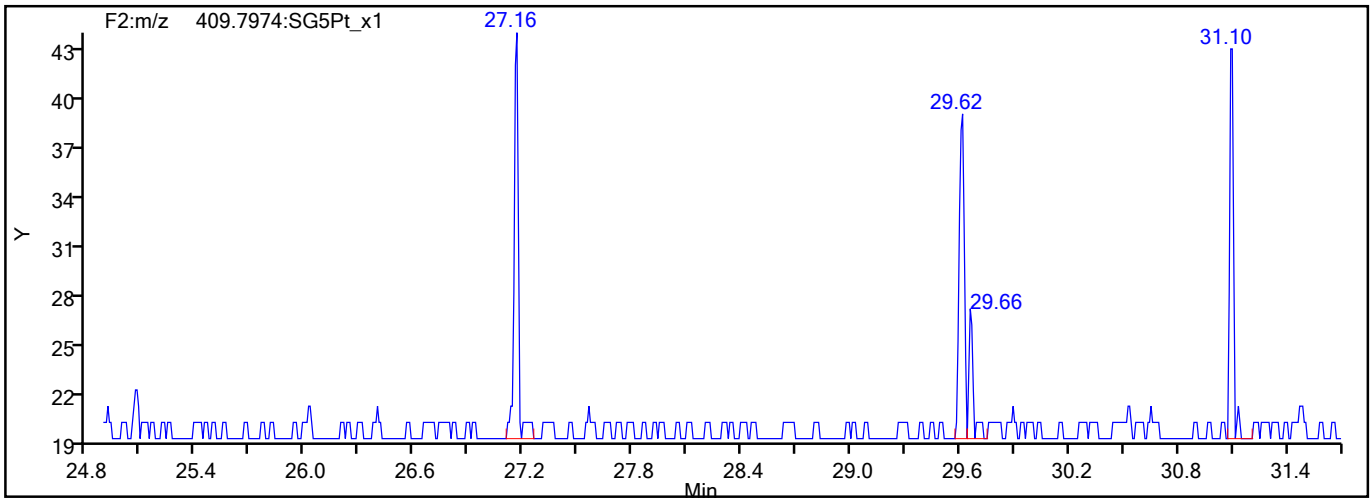

784305

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

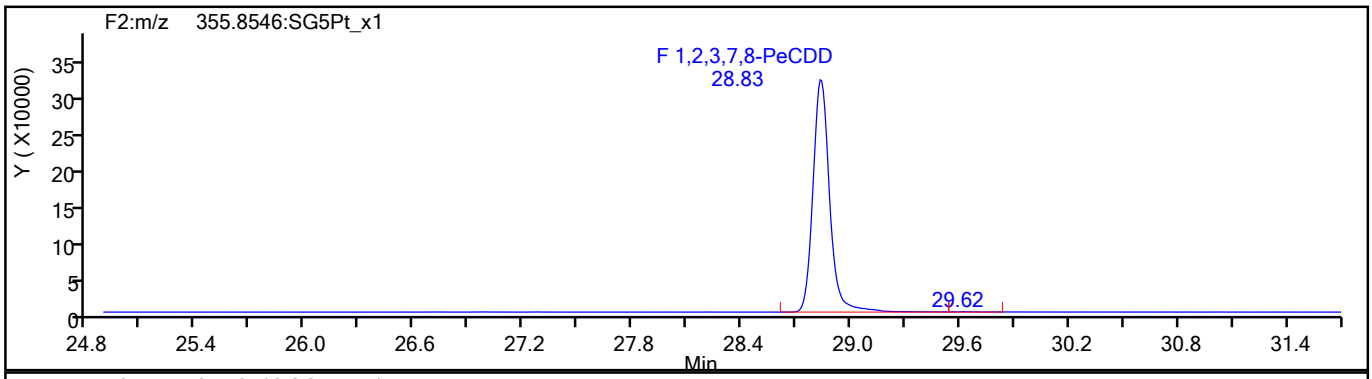

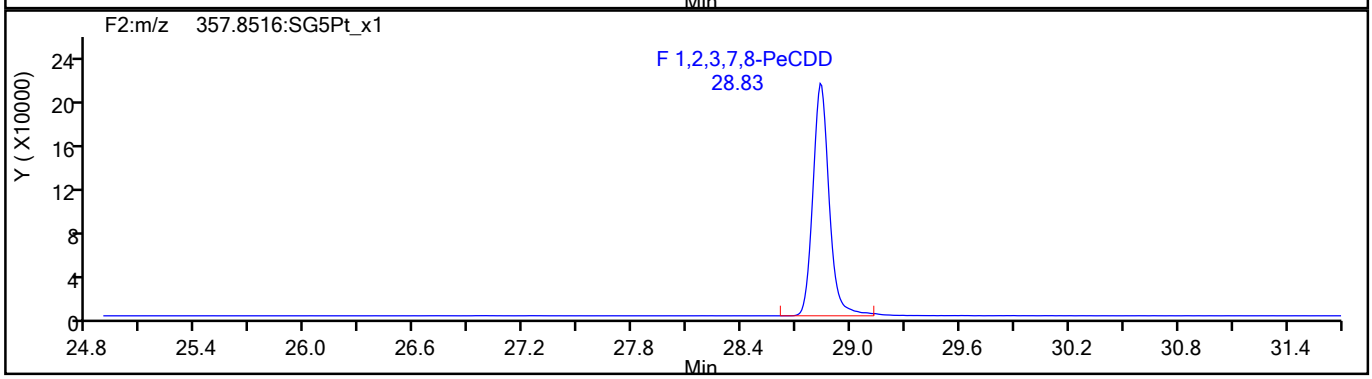

PeCDD Standards

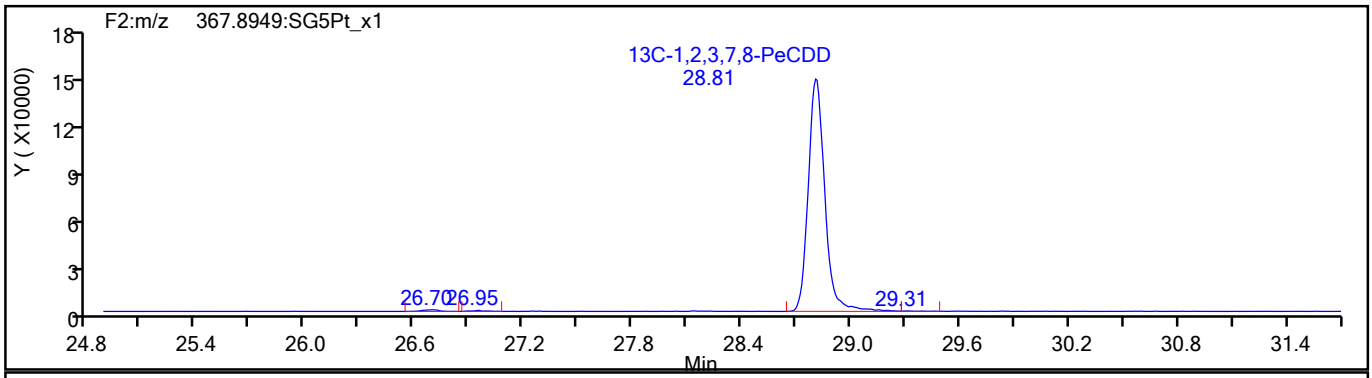

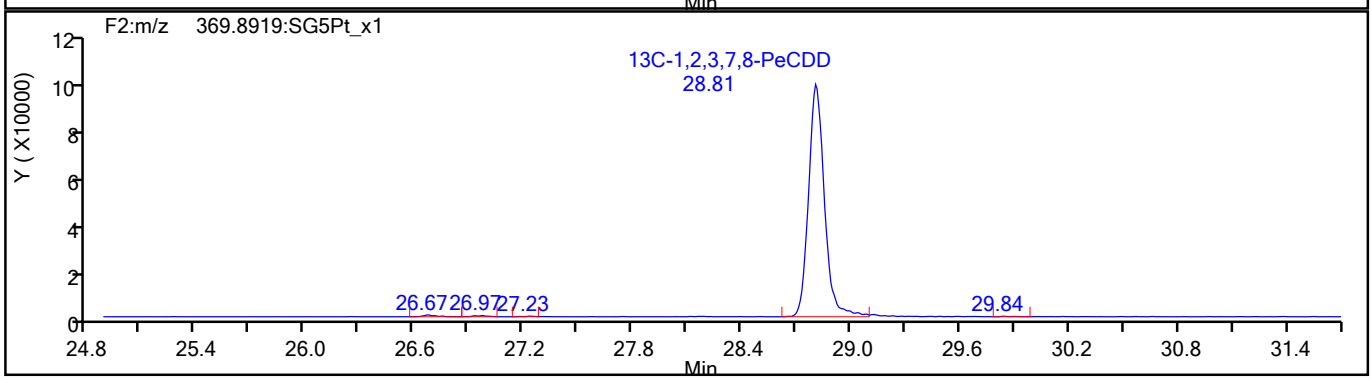

784306

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

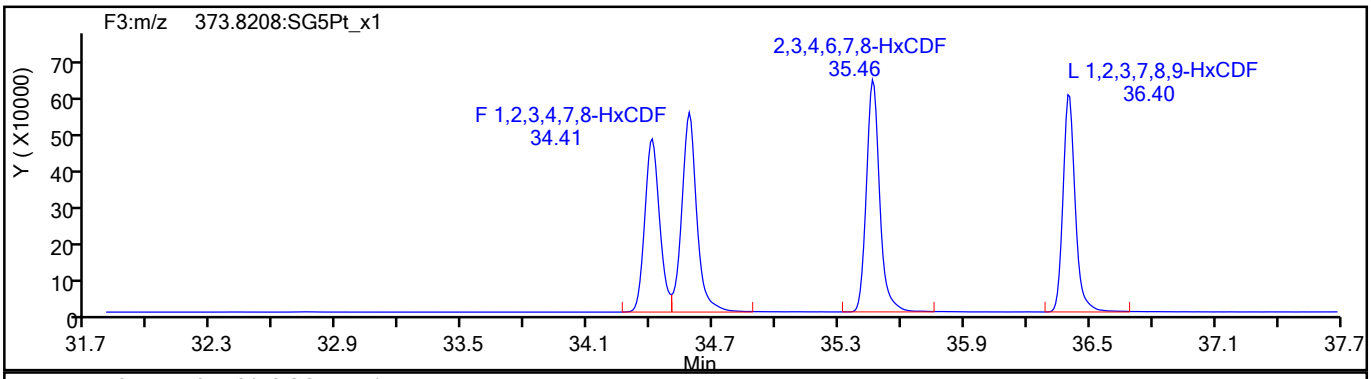

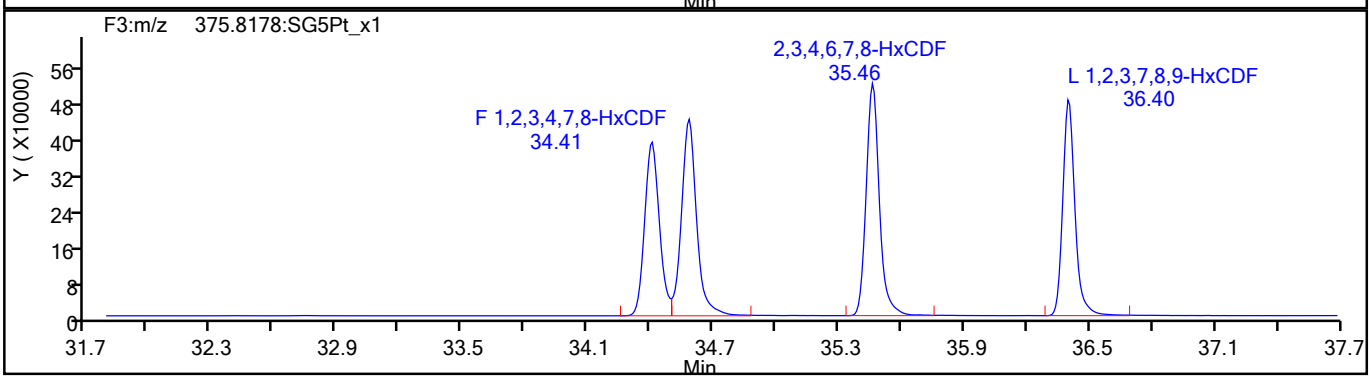

HxCDF Standards

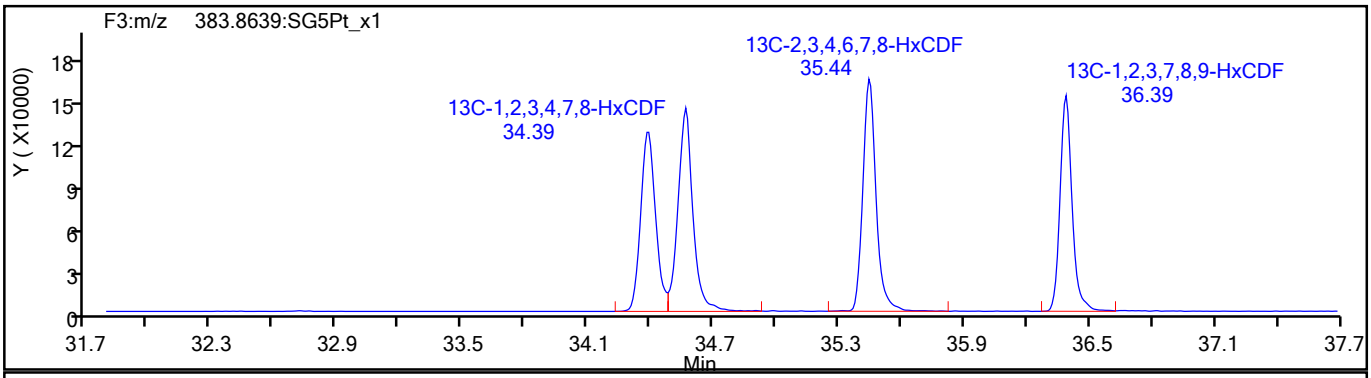

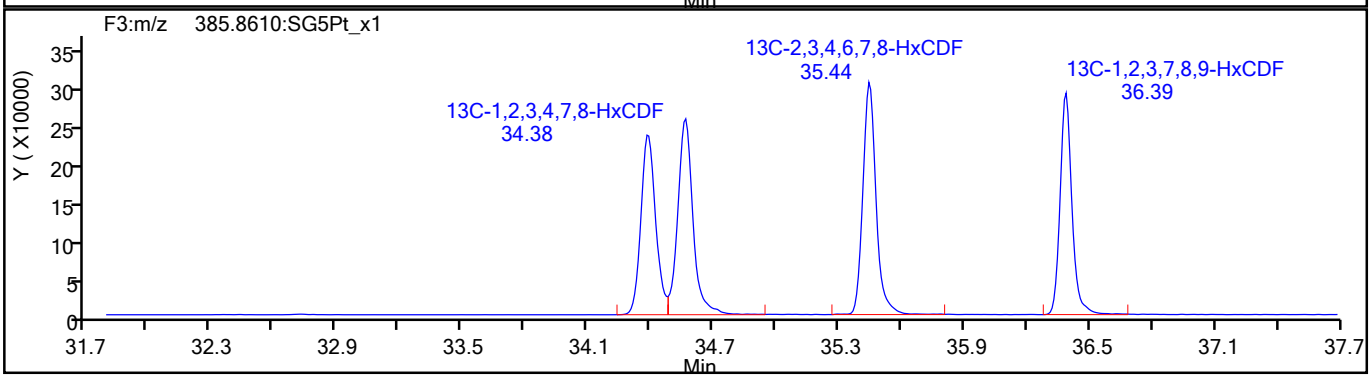

784307

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

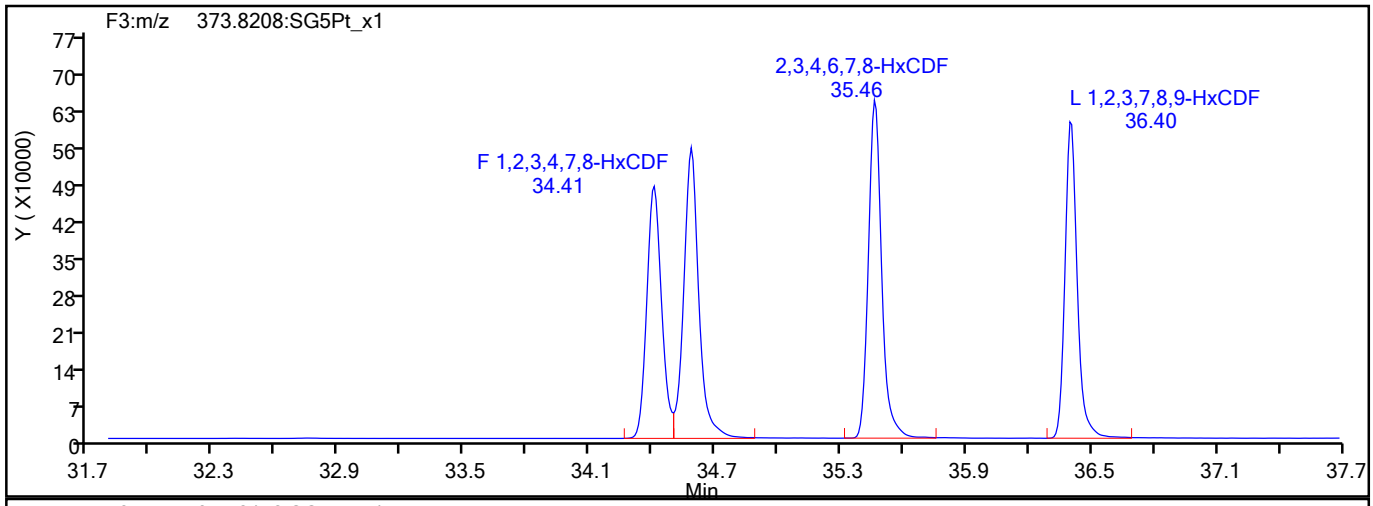

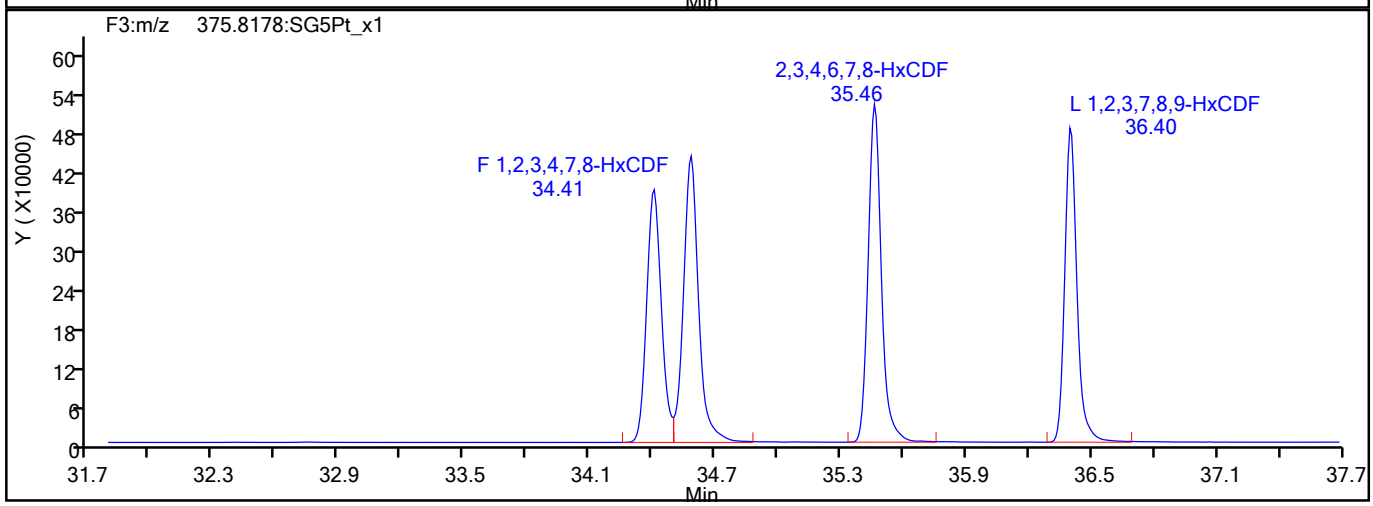

HxCDF Interference Mass

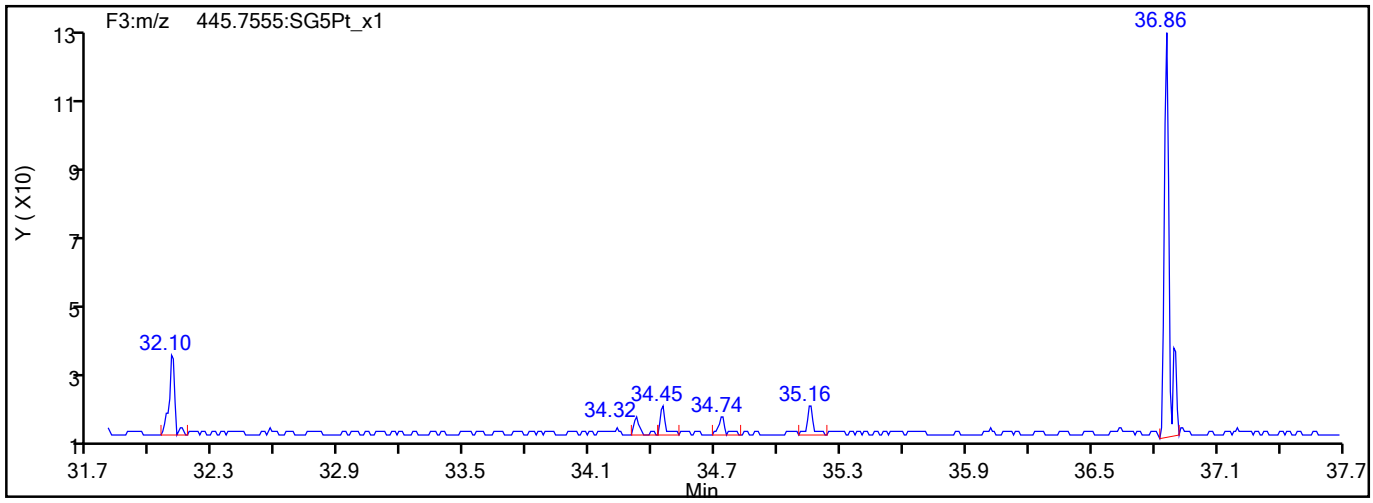

784308

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

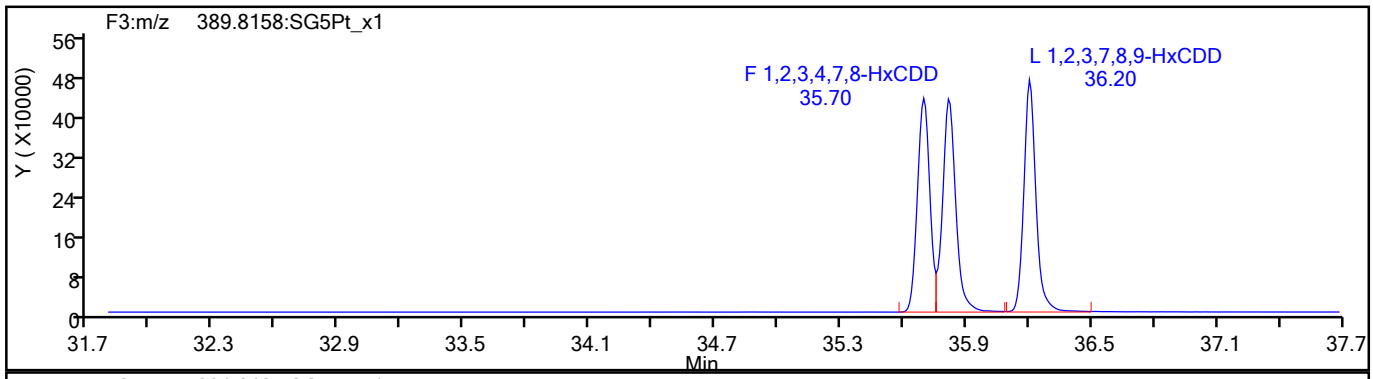

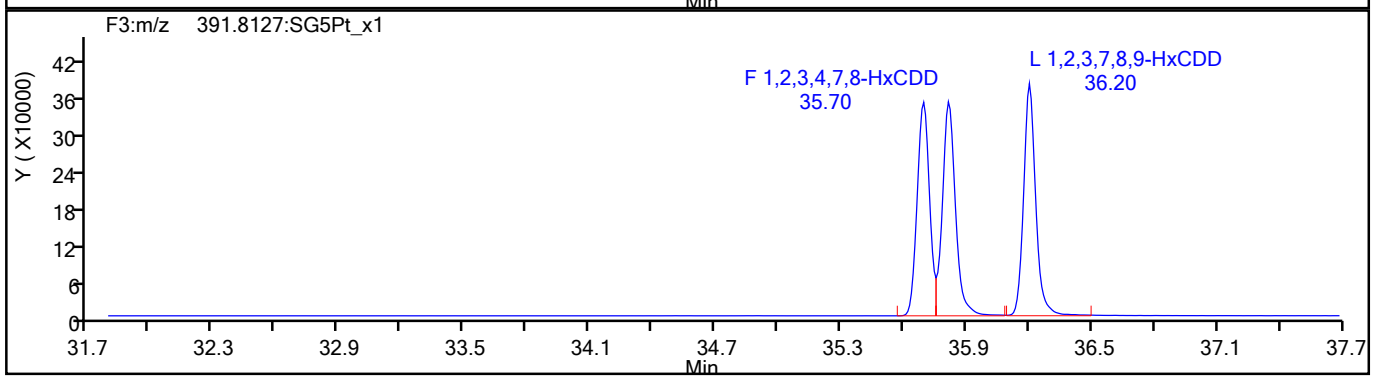

HxCDD Standards

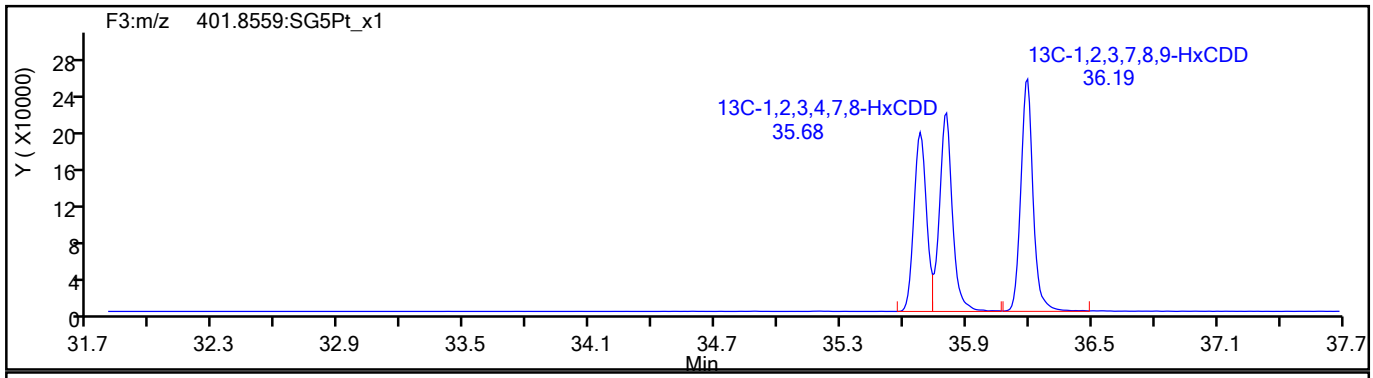

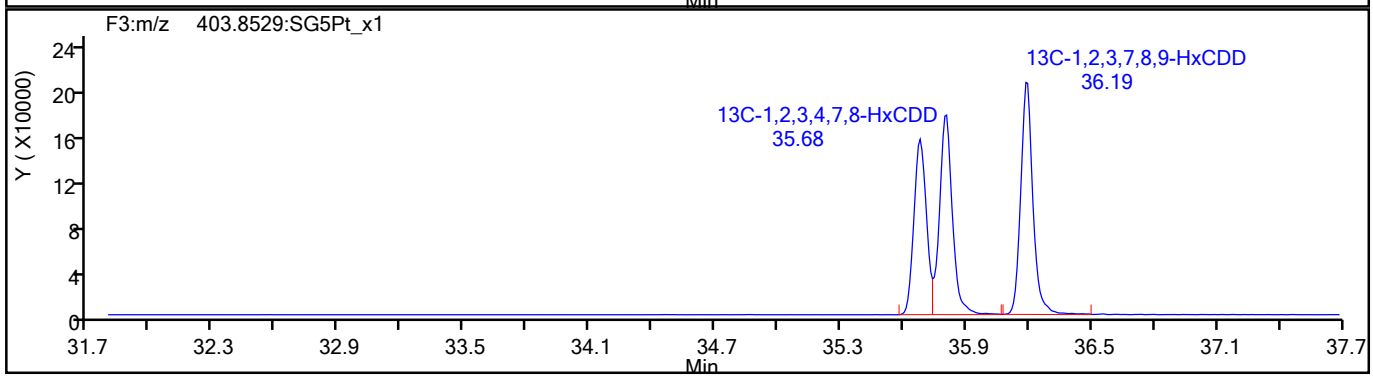

784309

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

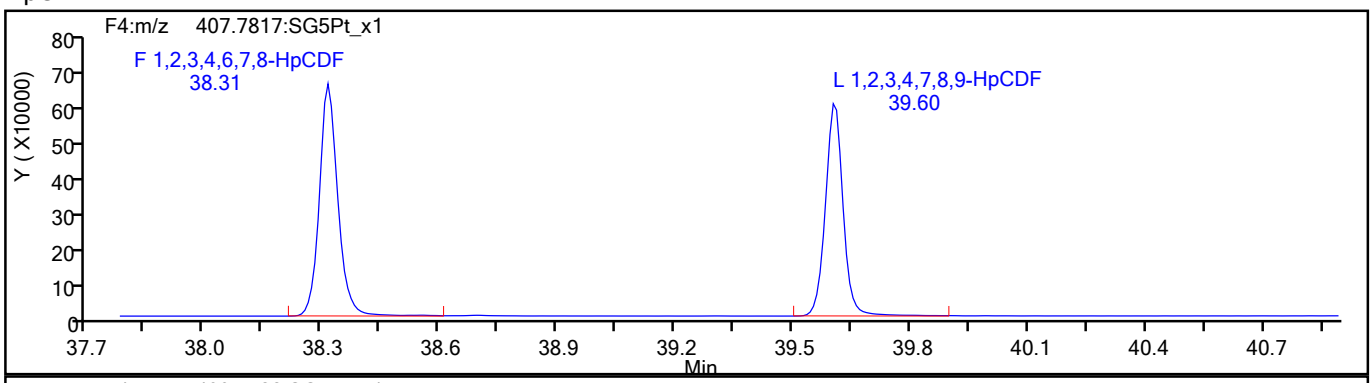

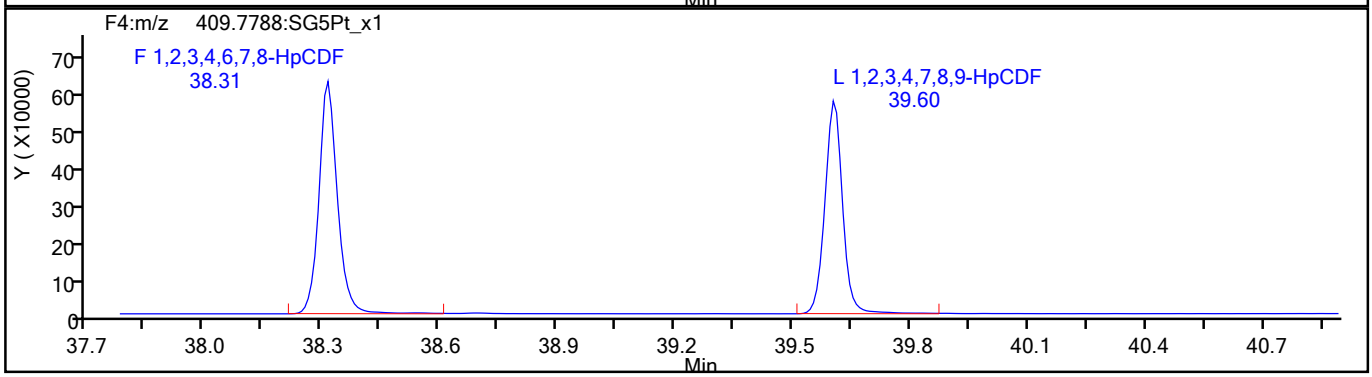

HpCDF Standards

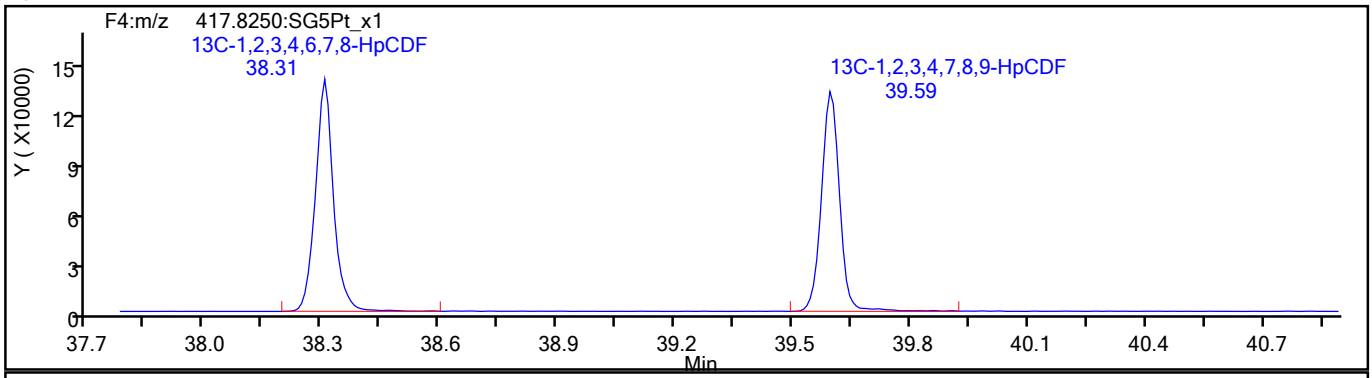

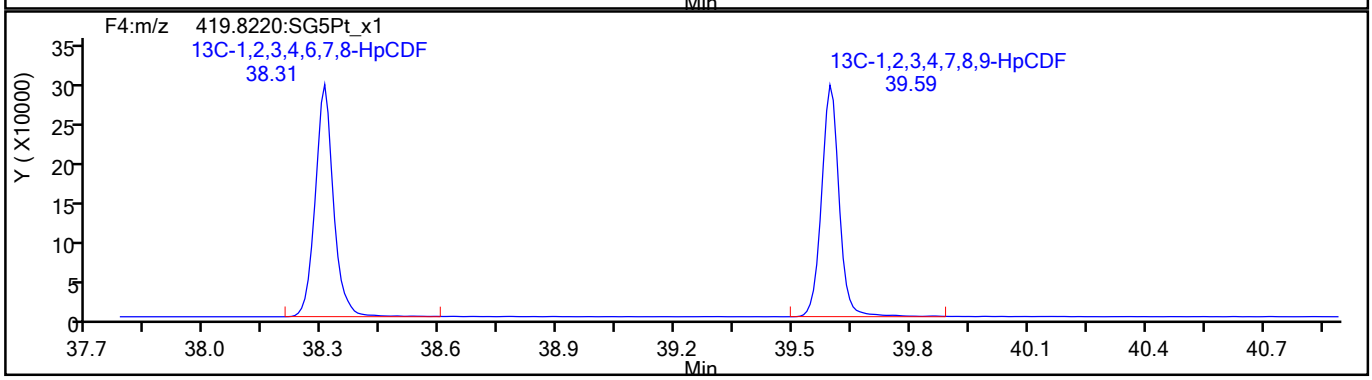

784310

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

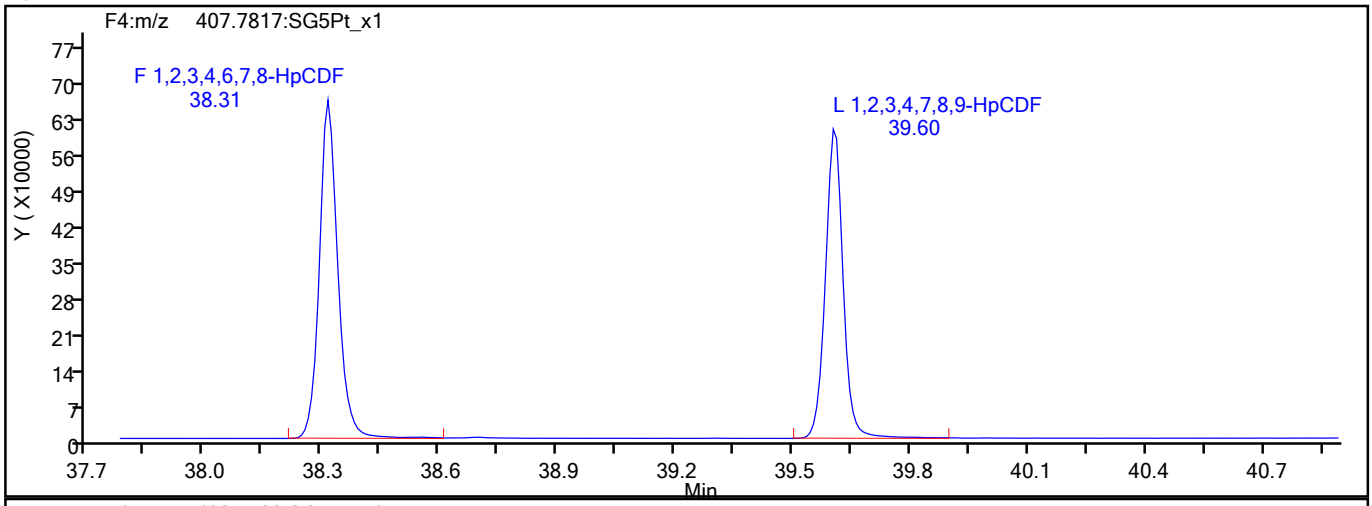

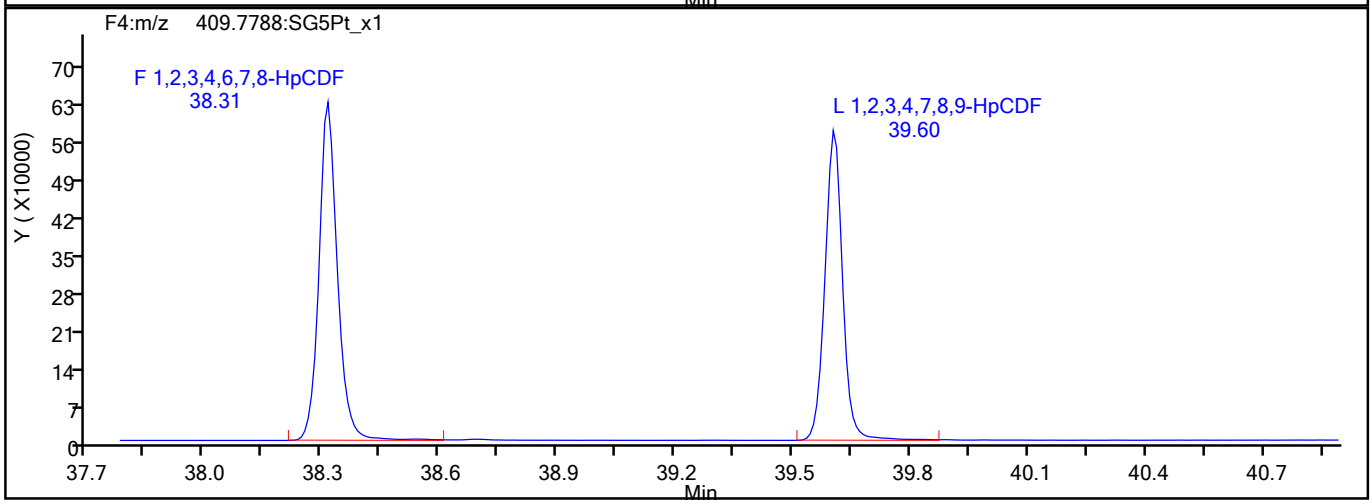

HpCDF Interference Mass

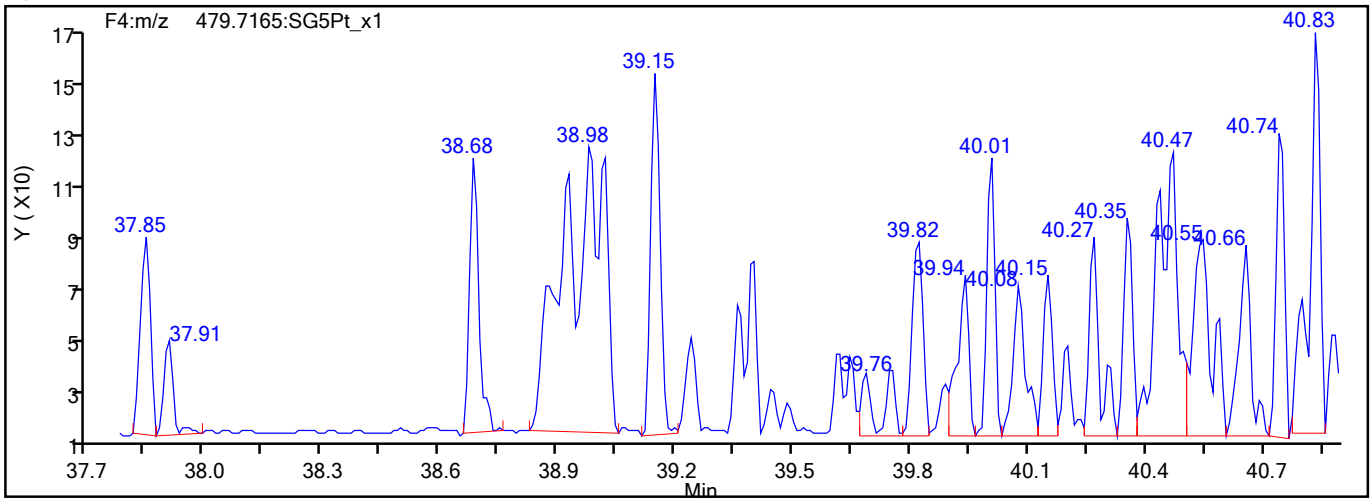

784311

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

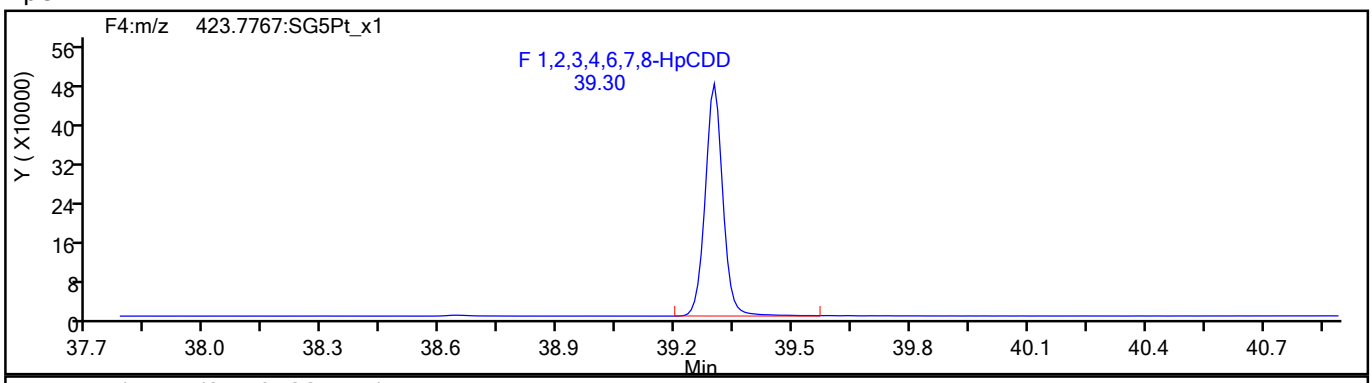

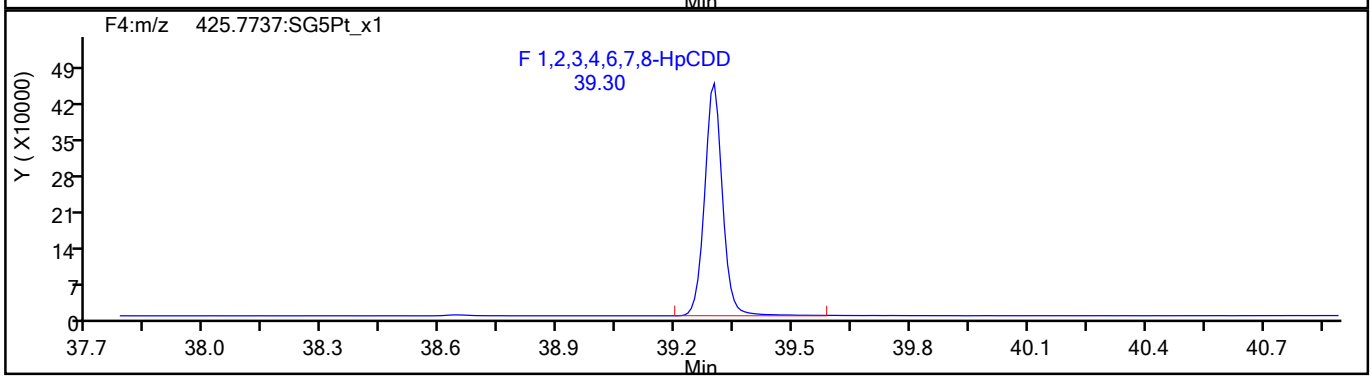

HpCDD Standards

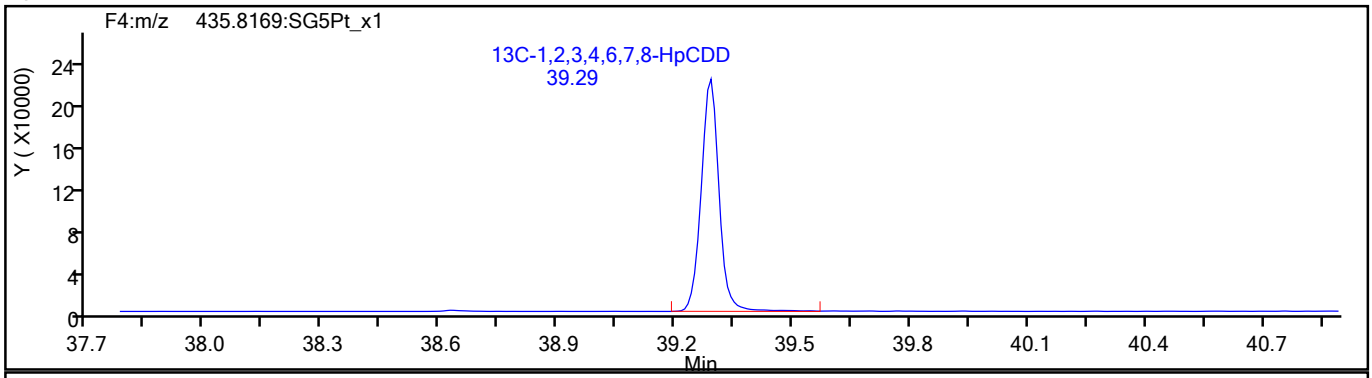

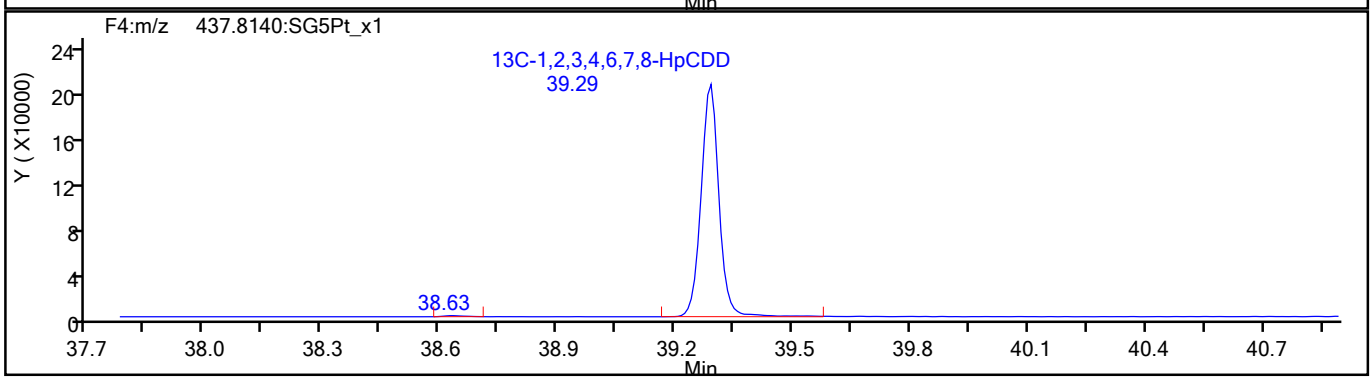

784312

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

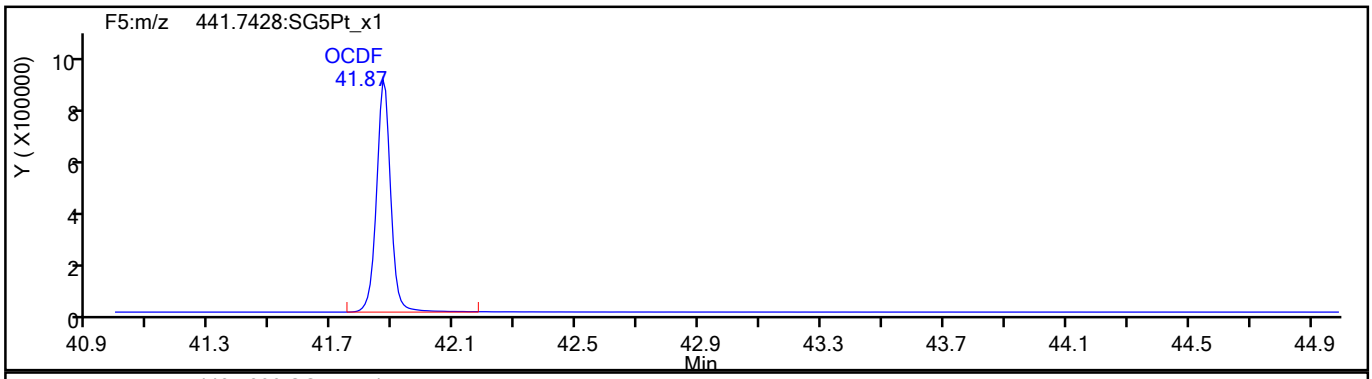

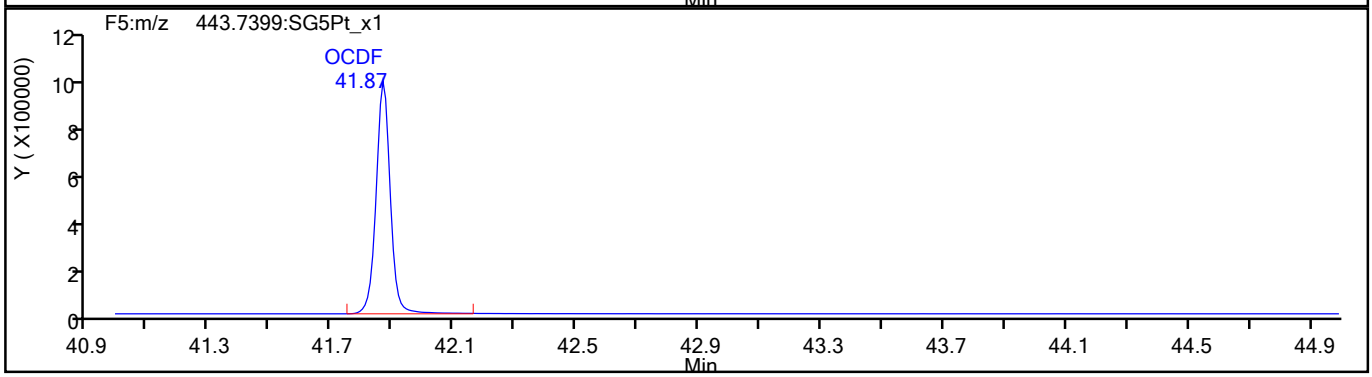

OCDF Standards

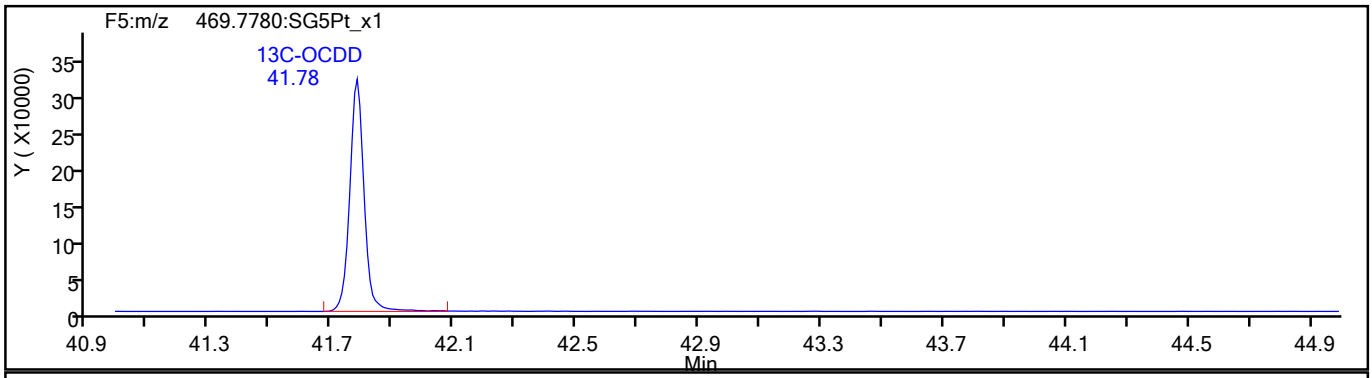

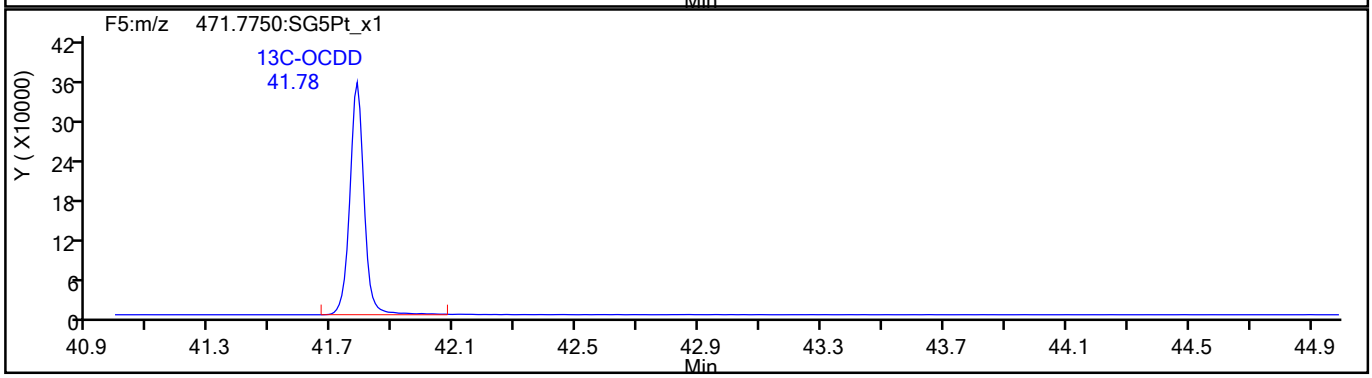

784313

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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OCDF

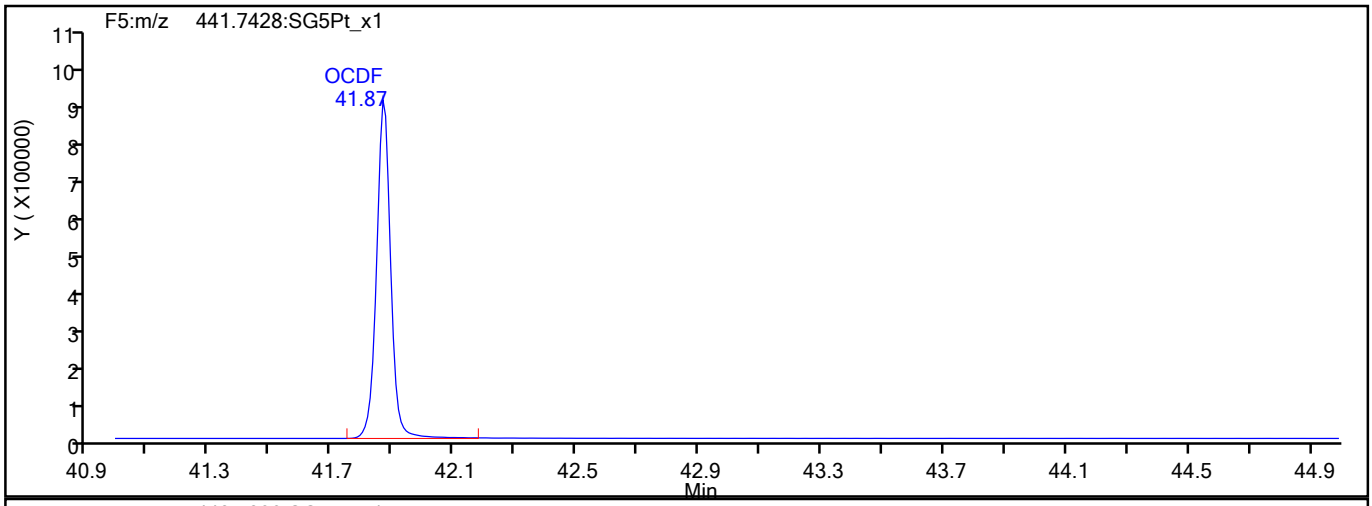

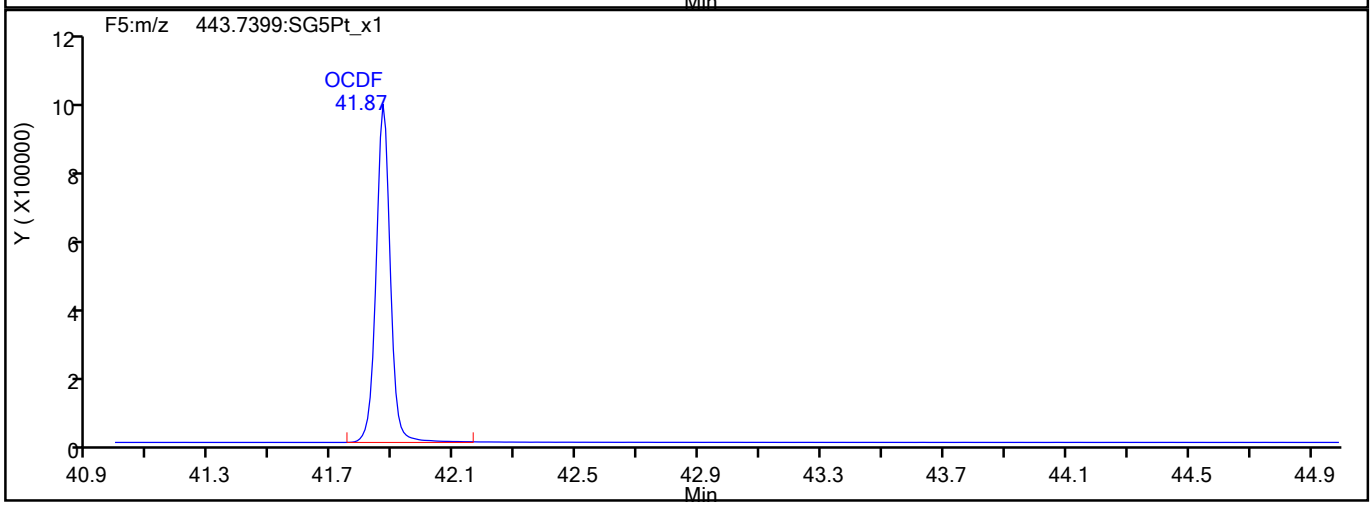

OCDF Interference Mass

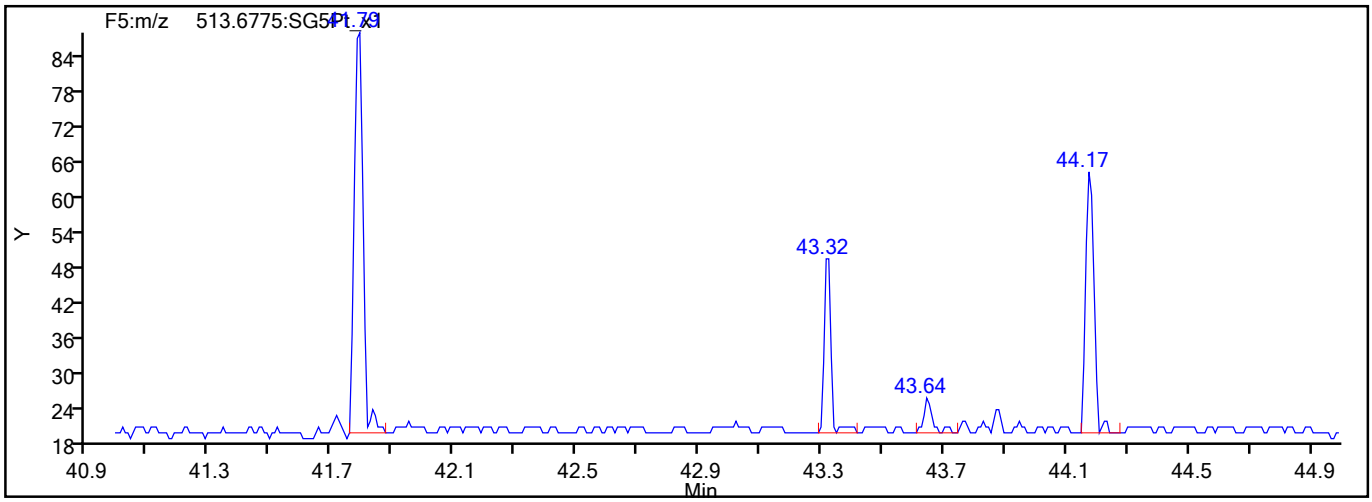

784314

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDD

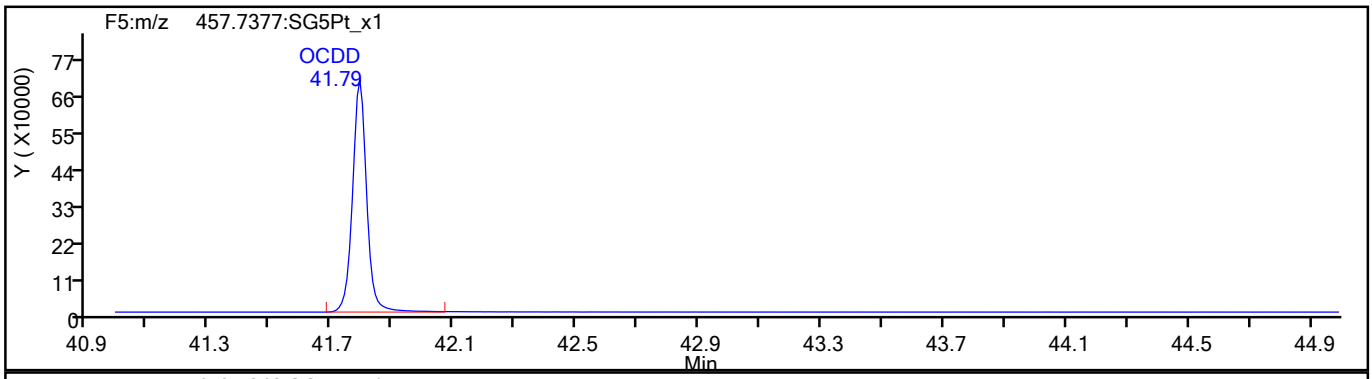

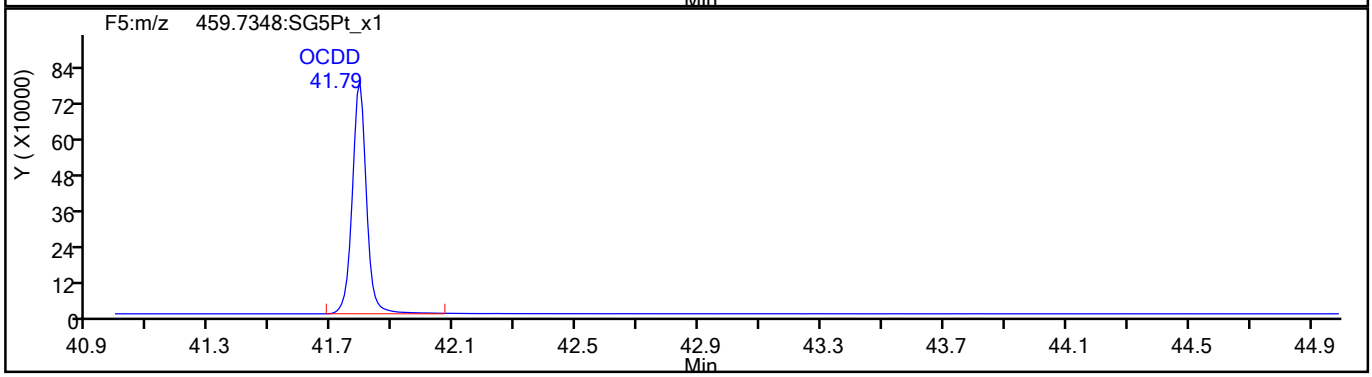

OCDD Standards

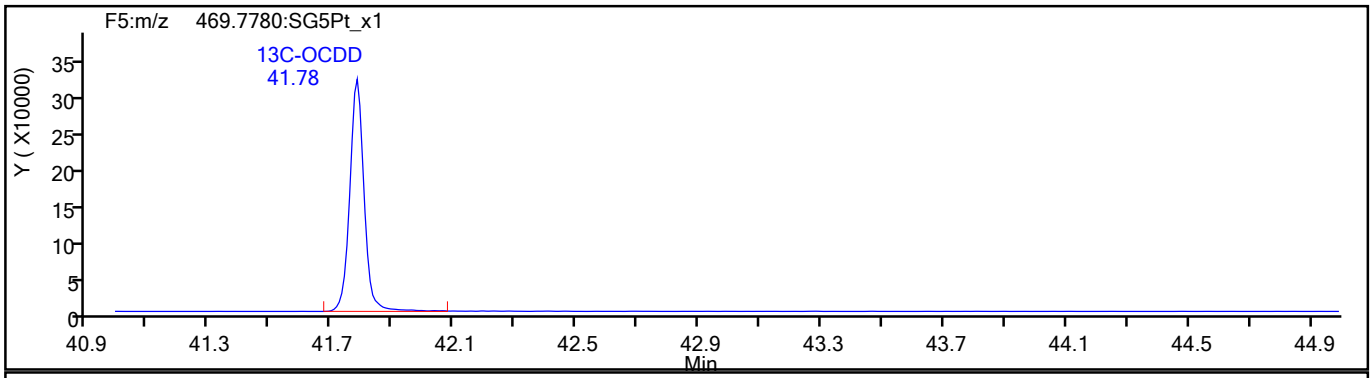

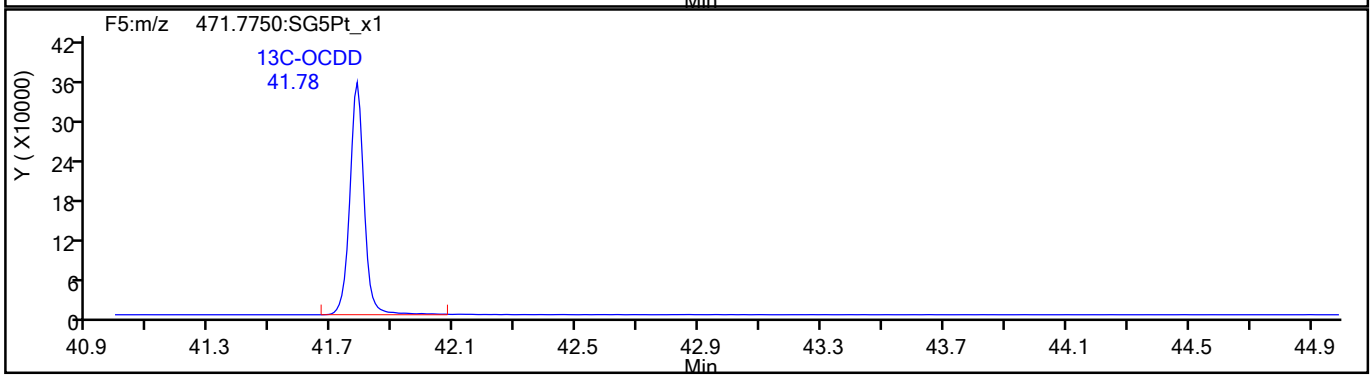

784315

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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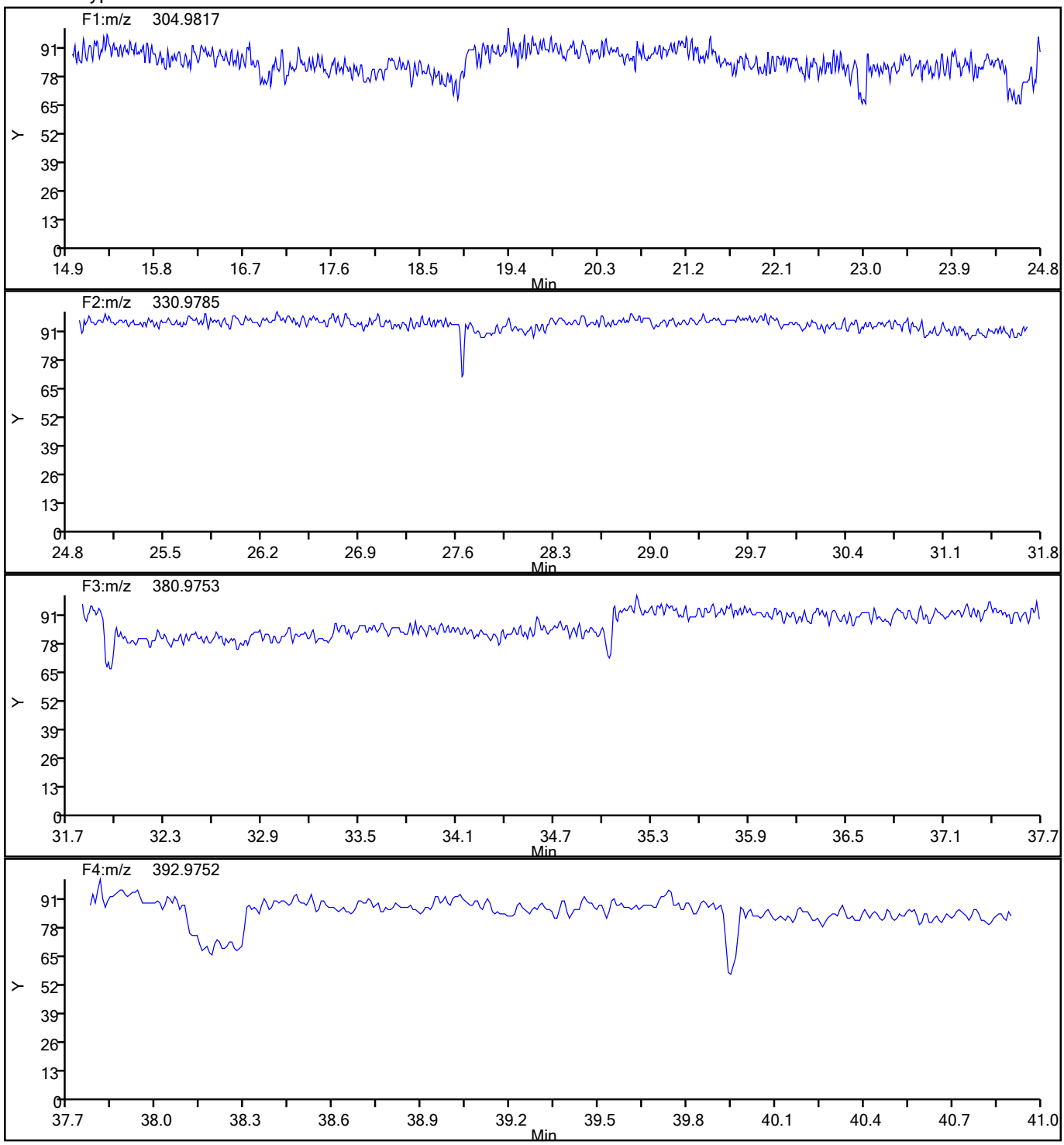

784316

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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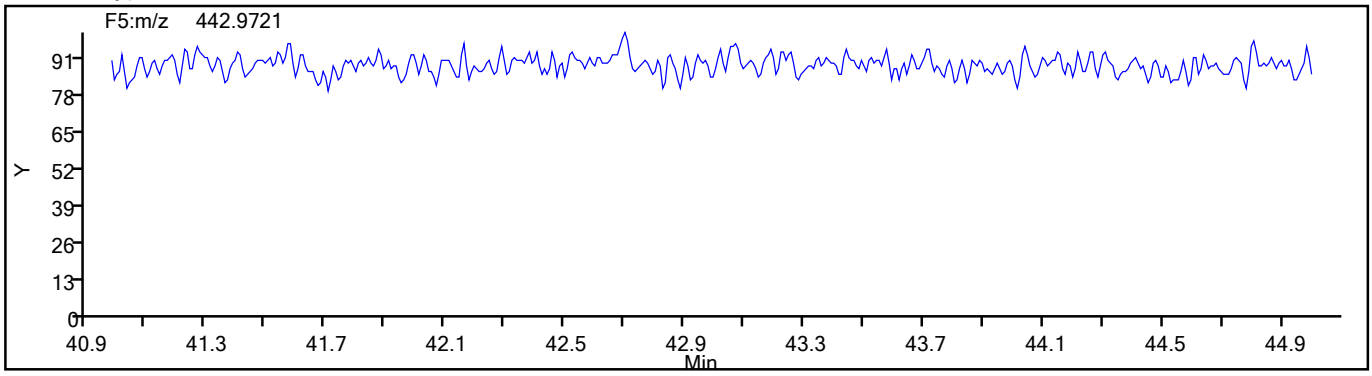

784317

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.544	2066088	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.616	2962515	0.80	1.3459	106.5	106.5	0.1844	0.1844	107	
2,3,7,8-TCDF	19.642	6137031	0.79	1.0802	191.8	191.8	0.1493	0.1493	95.89	
S Total TCDF					191.8	191.8	0.1493	0.1493		
D 13C-2,3,7,8-TCDD	20.913	2014532	0.80	0.9317	104.7	104.7	0.1455	0.1455	105	
$ 37Cl4-2,3,7,8-TCDD	20.939	4287059		1.0083	205.8	205.8	0.0958	0.0958	103	
2,3,7,8-TCDD	20.939	4286034	0.79	1.0753	197.8	197.8	0.1041	0.1041	98.92	
S Total TCDD					197.8	197.8	0.1041	0.1041		
D 13C-1,2,3,7,8-PeCDF	26.552	2574521	1.60	1.1405	109.3	109.3	0.2956	0.2956	109	
1,2,3,7,8-PeCDF	26.578	26032333	1.55	1.0543	959.1	959.1	2.101	2.101	95.91	
D 13C-2,3,4,7,8-PeCDF	28.002	2584740	1.63	1.1253	111.2	111.2	0.2996	0.2996	111	
2,3,4,7,8-PeCDF	28.028	24861382	1.54	1.0079	954.4	954.4	2.393	2.393	95.44	
S Total PeCDF					1913.5	1913.5	2.247	2.247		
D 13C-1,2,3,7,8-PeCDD	28.795	1602880	1.57	0.7165	108.3	108.3	0.1169	0.1169	108	
1,2,3,7,8-PeCDD	28.820	16645947	1.55	1.0465	992.4	992.4	0.3154	0.3154	99.24	
S Total PeCDD					992.4	992.4	0.3154	0.3154		
D 13C-1,2,3,4,7,8-HxCDF	34.370	1968615	0.53	0.9648	104.2	104.2	0.2764	0.2764	104	
1,2,3,4,7,8-HxCDF	34.404	21902419	1.26	1.1474	969.7	969.7	2.964	2.964	96.97	
D 13C-1,2,3,6,7,8-HxCDF	34.555	2283961	0.53	1.0708	109.0	109.0	0.2490	0.2490	109	
1,2,3,6,7,8-HxCDF	34.572	26721257	1.24	1.2178	960.7	960.7	2.280	2.280	96.07	
D 13C-2,3,4,6,7,8-HxCDF	35.432	2190509	0.53	1.0413	107.5	107.5	0.2561	0.2561	107	
2,3,4,6,7,8-HxCDF	35.449	25388405	1.26	1.2145	954.3	954.3	2.195	2.195	95.43	
D 13C-1,2,3,7,8,9-HxCDF	36.376	1895740	0.54	0.9731	99.5	99.5	0.2741	0.2741	99.52	
1,2,3,7,8,9-HxCDF	36.393	22553786	1.25	1.2401	959.4	959.4	2.206	2.206	95.94	
S Total HxCDF					3844.1	3844.1	2.411	2.411		
* 13C-1,2,3,7,8,9-HxCDD	36.182	1957513	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.668	1539784	1.30	0.7587	103.7	103.7	0.1260	0.1260	104	
1,2,3,4,7,8-HxCDD	35.685	15558498	1.24	1.0608	952.5	952.5	0.9710	0.9710	95.25	
D 13C-1,2,3,6,7,8-HxCDD	35.794	1741498	1.29	0.8593	103.5	103.5	0.1112	0.1112	104	
1,2,3,6,7,8-HxCDD	35.811	16661405	1.25	0.9933	963.1	963.1	0.9604	0.9604	96.31	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.198	17279185	1.24	1.1094	949.3	949.3	0.8929	0.8929	94.93	
S Total HxCDD					2865.0	2865.0	0.9414	0.9414		
D 13C-1,2,3,4,6,7,8-HpCDF	38.292	1546113	0.45	0.7359	107.3	107.3	0.2883	0.2883	107	
1,2,3,4,6,7,8-HpCDF	38.309	21181967	1.05	1.4421	950.0	950.0	2.277	2.277	95.00	
D 13C-1,2,3,4,7,8,9-HpCDF	39.591	1455766	0.46	0.6854	108.5	108.5	0.3095	0.3095	109	
1,2,3,4,7,8,9-HpCDF	39.600	17812004	1.04	1.3092	934.6	934.6	2.410	2.410	93.46	
S Total HpCDF					1884.6	1884.6	2.344	2.344		
D 13C-1,2,3,4,6,7,8-HpCDD	39.279	1355803	1.07	0.6745	102.7	102.7	0.1997	0.1997	103	
1,2,3,4,6,7,8-HpCDD	39.287	13800004	1.05	1.0503	969.1	969.1	1.263	1.263	96.91	
S Total HpCDD					969.1	969.1	1.263	1.263		
D 13C-OCDD	41.778	2298668	0.91	0.5446	215.6	215.6	0.2297	0.2297	108	
OCDF	41.862	30505464	0.91	1.3168	2015.6	2015.6	1.318	1.318	101	
OCDD	41.786	22803823	0.89	1.0620	1868.3	1868.3	1.408	1.408	93.41	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.544	20.547	0		920603	150087	115	287	1305		
333.9338	20.544	20.547	0		1145485	178229	63	157	2829	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.616	19.616	0	0.955	1315625	222528	203	507	1096		
317.9389	19.625	19.616	1	0.955	1646890	273662	123	307	2225	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.642	19.646	0	1.001	2713655	446561	138	345	3236		
305.8987	19.642	19.646	0	1.001	3423376	567597	182	455	3119	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.913	20.910	0	1.018	893612	134635	115	287	1171		
333.9338	20.913	20.910	0	1.018	1120920	170916	63	157	2713	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.939	20.935	0	1.019	4287059	670067	127	317	5276		
2,3,7,8-TCDD											
319.8965	20.939	20.939	0	1.001	1891754	292983	63	157	4651		
321.8936	20.939	20.939	0	1.001	2394280	370217	74	185	5003	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.552	26.560	0	1.292	1583459	282119	248	620	1138		
353.8970	26.552	26.560	0	1.292	991062	177690	195	487	911	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.578	26.584	0	1.001	15809872	2840843	2484	6210	1144		
341.8567	26.578	26.584	0	1.001	10222461	1821485	1590	3975	1146	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.002	28.014	-1	1.363	1602860	260320	248	620	1050		
353.8970	28.002	28.014	-1	1.363	981880	162024	195	487	831	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.028	28.039	-1	1.001	15085675	2478093	2484	6210	998		
341.8567	28.028	28.039	-1	1.001	9775707	1618127	1590	3975	1018	1.54(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.795	28.801	0	1.402	978472	153717	62	155	2479		
369.8919	28.795	28.801	0	1.402	624408	97747	48	120	2036	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.820	28.828	0	1.001	10130500	1566899	211	527	7426		
357.8516	28.820	28.828	0	1.001	6515447	1012500	121	302	8368	1.55(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.370	34.384	-1	0.950	681535	131177	206	515	637		
385.8610	34.370	34.384	-1	0.950	1287080	241920	293	732	826	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.404	34.405	0	1.001	12221224	2429393	2850	7125	852		
375.8178	34.404	34.405	0	1.001	9681195	1938109	2226	5565	871	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.555	34.562	0	0.955	787279	159086	206	515	772		
385.8610	34.555	34.562	0	0.955	1496682	297889	293	732	1017	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.572	34.582	-1	1.000	14789206	2955884	2850	7125	1037		
375.8178	34.572	34.582	-1	1.000	11932051	2355841	2226	5565	1058	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.432	35.444	-1	0.979	755749	165004	206	515	801		
385.8610	35.432	35.444	-1	0.979	1434760	311089	293	732	1062	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.449	35.461	-1	1.000	14140079	3143736	2850	7125	1103		
375.8178	35.449	35.461	-1	1.000	11248326	2509936	2226	5565	1128	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.376	36.388	-1	1.005	661276	161798	206	515	785		
385.8610	36.376	36.388	-1	1.005	1234464	302164	293	732	1031	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.393	36.402	-1	1.000	12520528	3053286	2850	7125	1071		
375.8178	36.393	36.402	-1	1.000	10033258	2435227	2226	5565	1094	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.182	36.192	-1		1094886	260943	101	252	2584		
403.8529	36.182	36.192	-1		862627	206665	78	195	2650	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.668	35.680	-1	0.986	871516	210376	101	252	2083		
403.8529	35.668	35.680	-1	0.986	668268	161161	78	195	2066	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.685	35.695	-1	1.000	8624435	2104573	873	2182	2411		
391.8127	35.685	35.695	-1	1.000	6934063	1696812	658	1645	2579	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.794	35.805	-1	0.989	980230	223296	101	252	2211		
403.8529	35.794	35.805	-1	0.989	761268	177860	78	195	2280	1.29(1.05-1.43)	

Report Date: 09-Jun-2021 08:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.811	35.820	-1	1.000	9246987	2090881	873	2182	2395		
391.8127	35.811	35.820	-1	1.000	7414418	1678531	658	1645	2551	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.198	36.208	-1	1.015	9564246	2295203	873	2182	2629		
391.8127	36.198	36.208	-1	1.015	7714939	1845750	658	1645	2805	1.24(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.292	38.305	-1	1.058	482843	137759	141	352	977		
419.8220	38.292	38.305	-1	1.058	1063270	304088	256	640	1188	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	10831802	3065791	3002	7505	1021		
409.7788	38.309	38.317	0	1.000	10350165	2906390	2802	7005	1037	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.591	39.600	-1	1.094	458518	146875	141	352	1042		
419.8220	39.591	39.600	-1	1.094	997248	313009	256	640	1223	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.600	39.608	-1	1.000	9086557	2852631	3002	7505	950		
409.7788	39.600	39.608	-1	1.000	8725447	2728020	2802	7005	974	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.279	39.293	-1	1.086	700550	219811	138	345	1593		
437.8140	39.279	39.293	-1	1.086	655253	202475	114	285	1776	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.287	39.301	-1	1.000	7071387	2141109	1133	2832	1890		
425.7737	39.287	39.301	-1	1.000	6728617	2063900	1107	2767	1864	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.778	41.785	0	1.155	1096060	330168	115	287	2871		
471.7750	41.778	41.785	0	1.155	1202608	365220	119	297	3069	0.91(0.76-1.02)	
OCDF											
441.7428	41.862	41.875	-1	1.002	14551716	4304688	1153	2882	3733		
443.7399	41.862	41.875	-1	1.002	15953748	4798066	1261	3152	3805	0.91(0.76-1.02)	
OCDD											
457.7377	41.786	41.794	0	1.000	10735225	3226535	983	2457	3282		
459.7348	41.786	41.794	0	1.000	12068598	3663774	1097	2742	3340	0.89(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

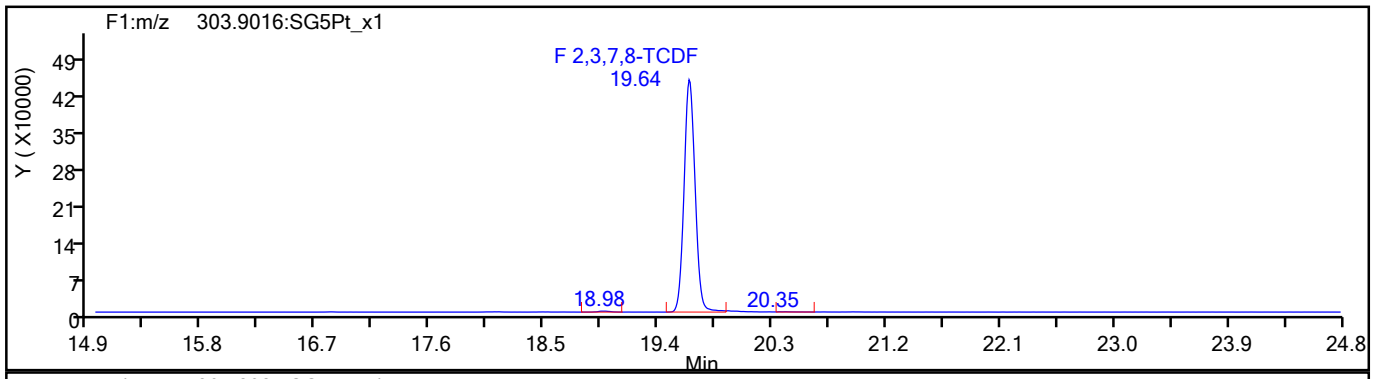

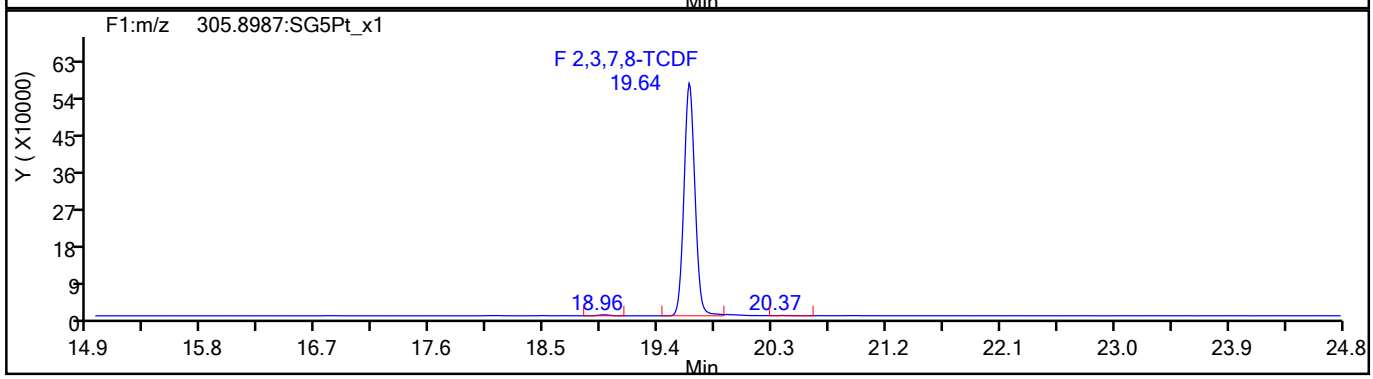

TCDF Standards

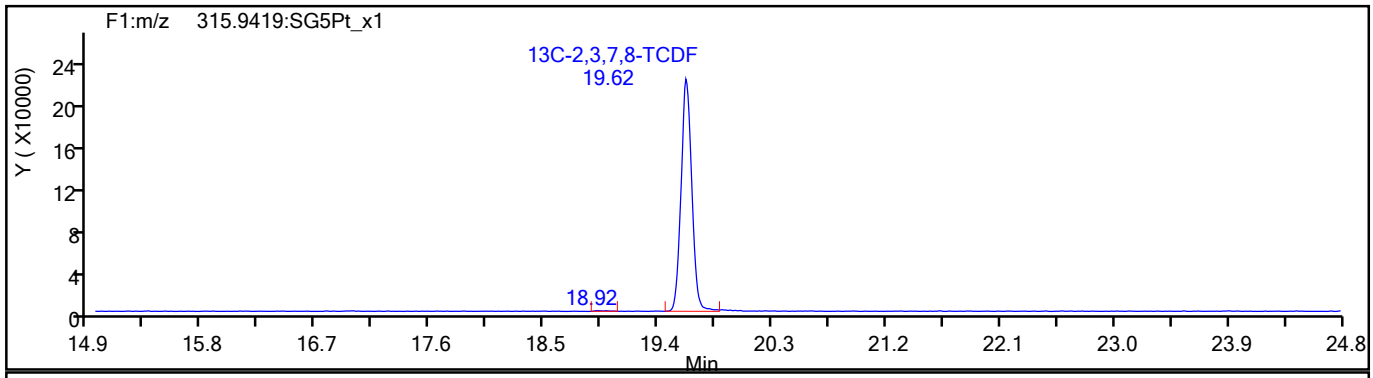

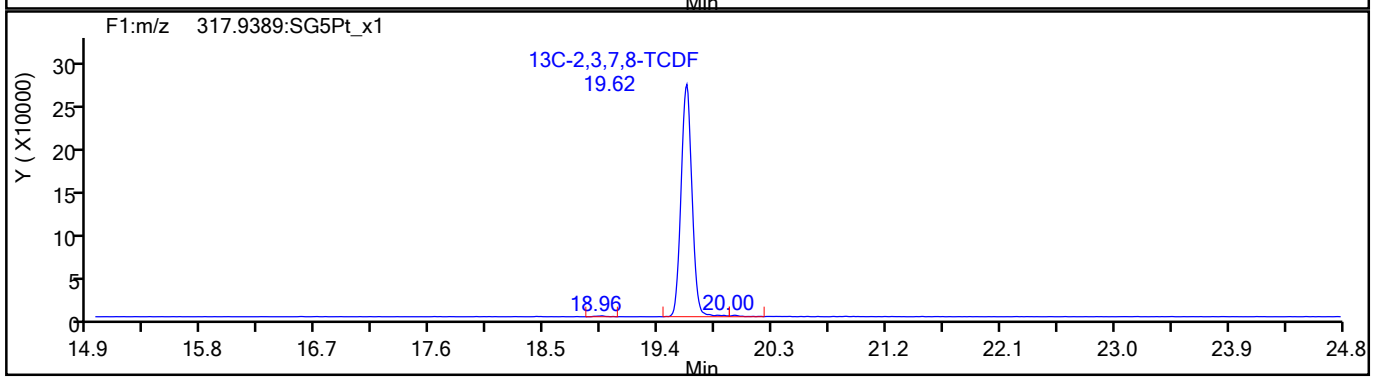

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Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

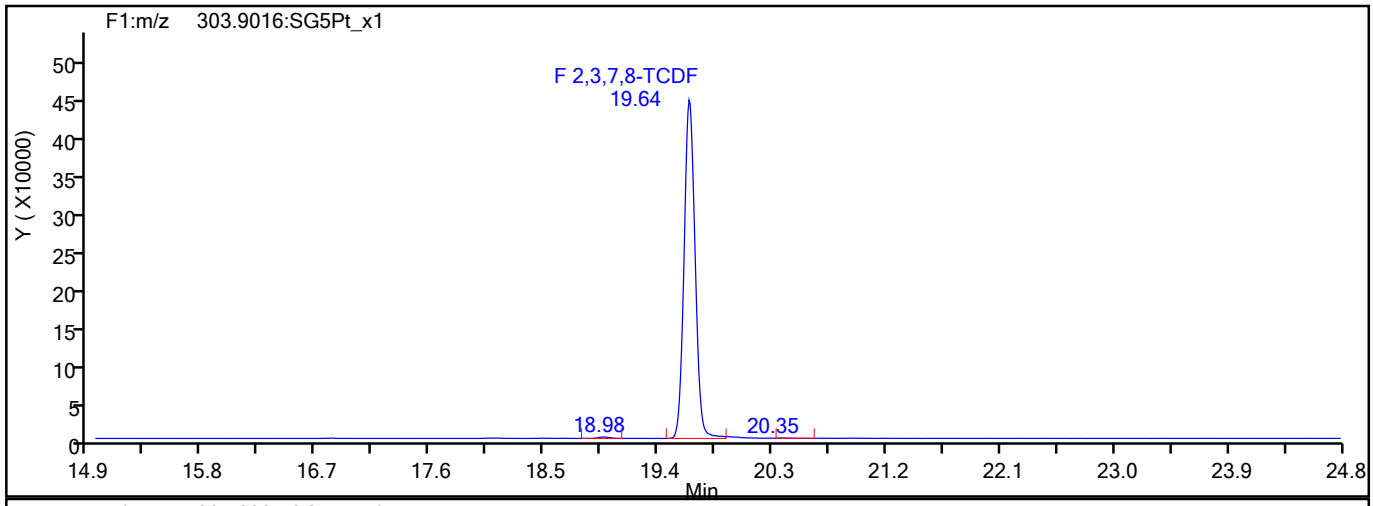

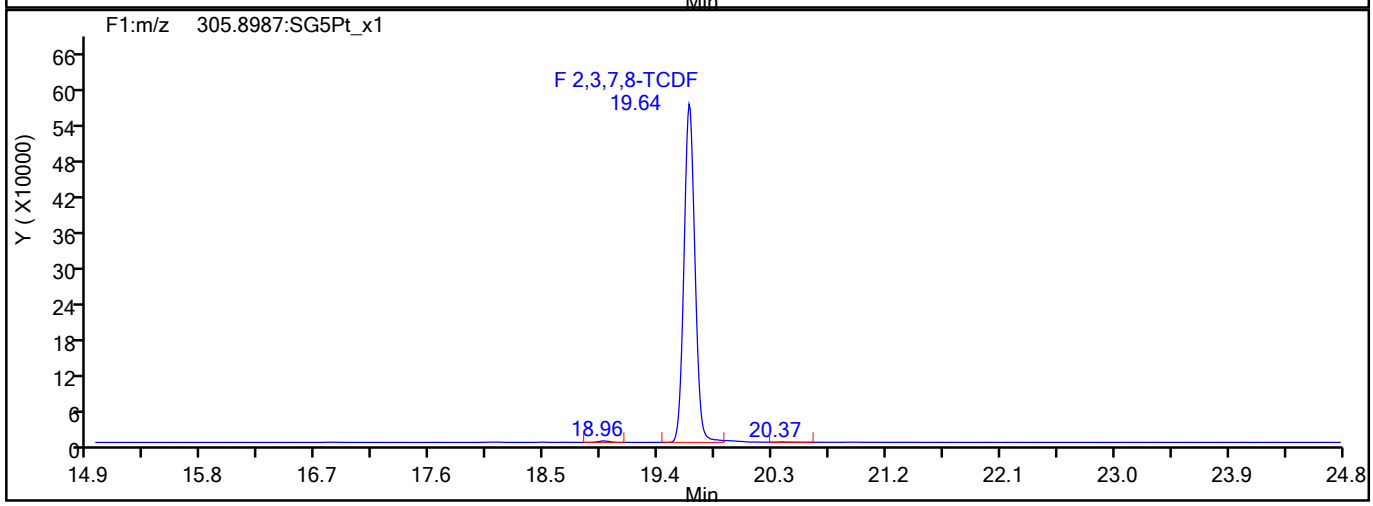

TCDF Interference Mass

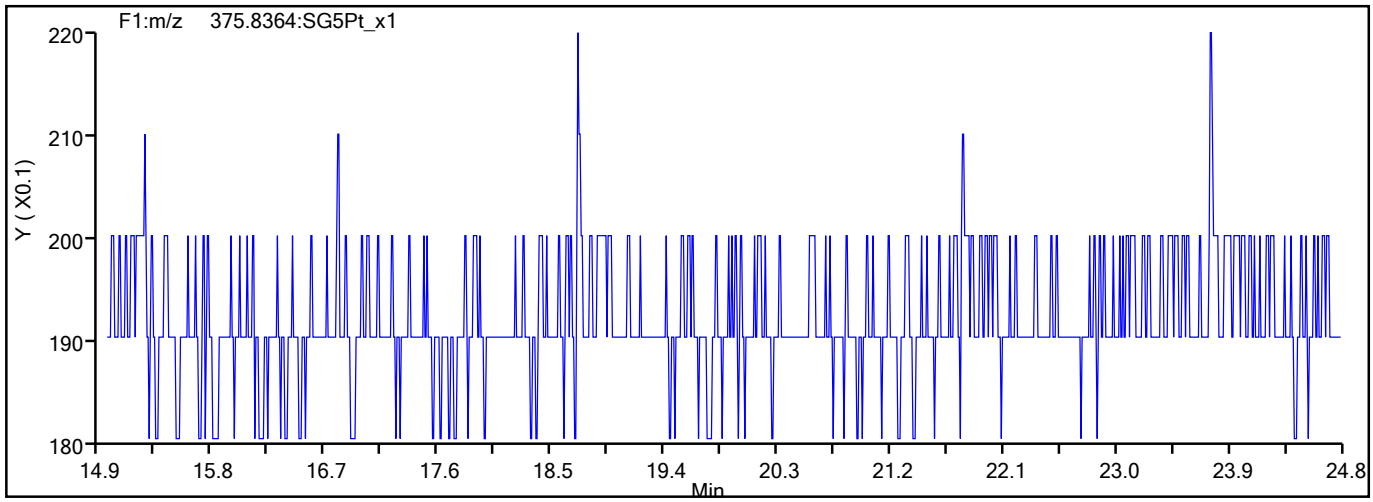

784324

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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TCDD

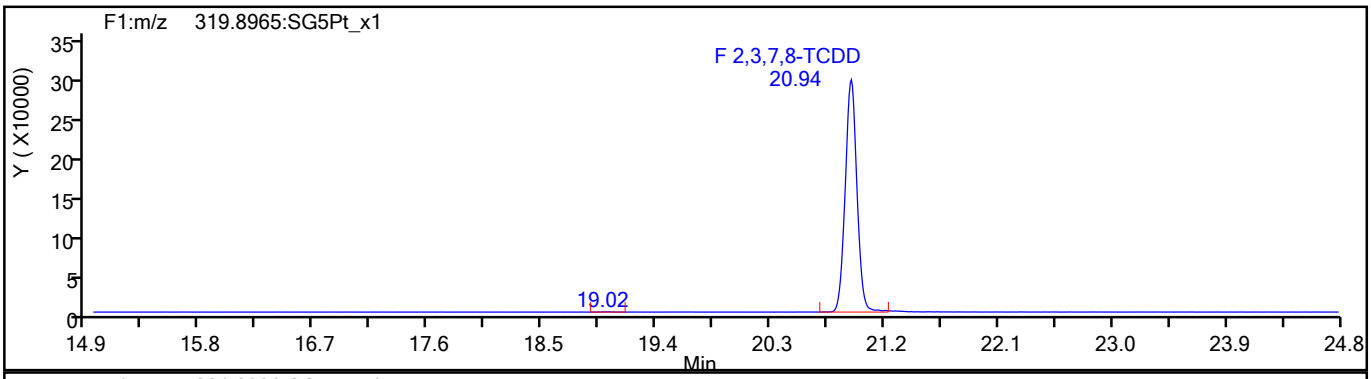

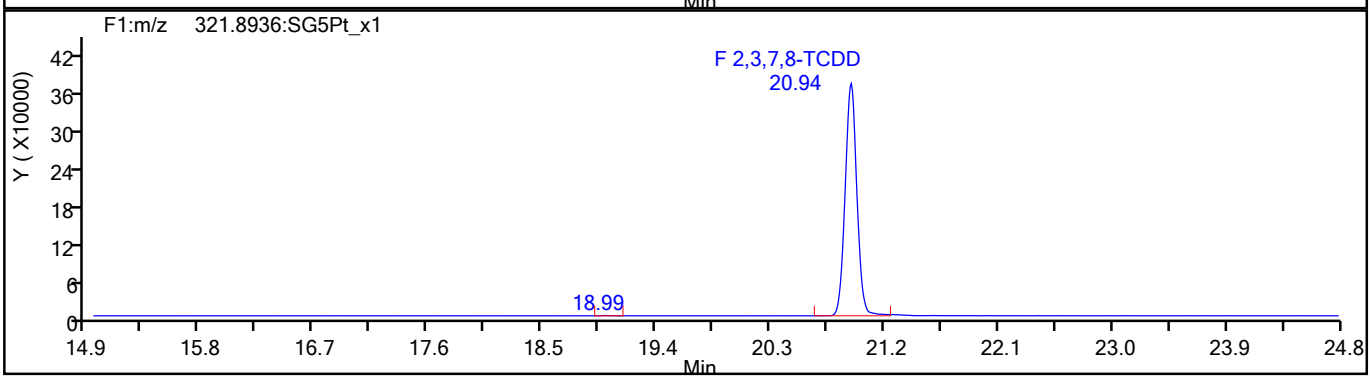

TCDD Standards

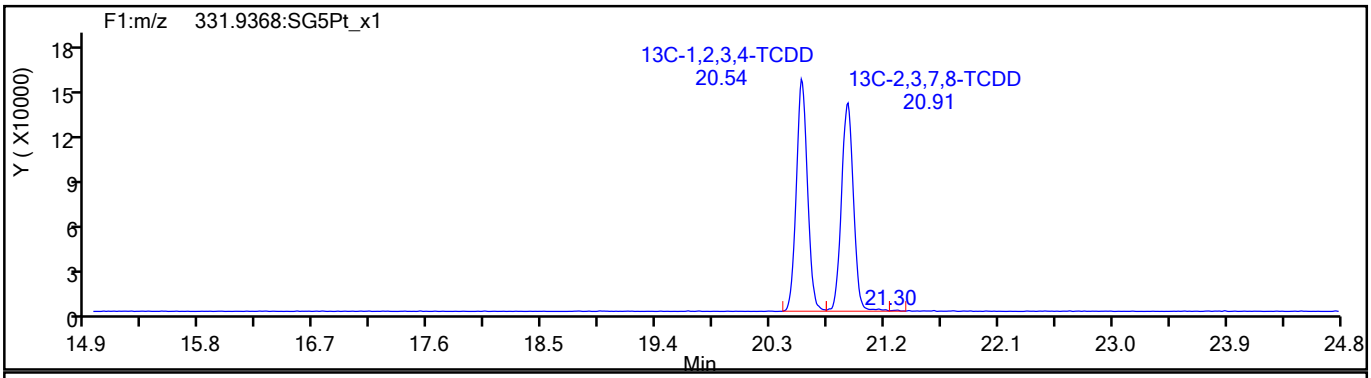

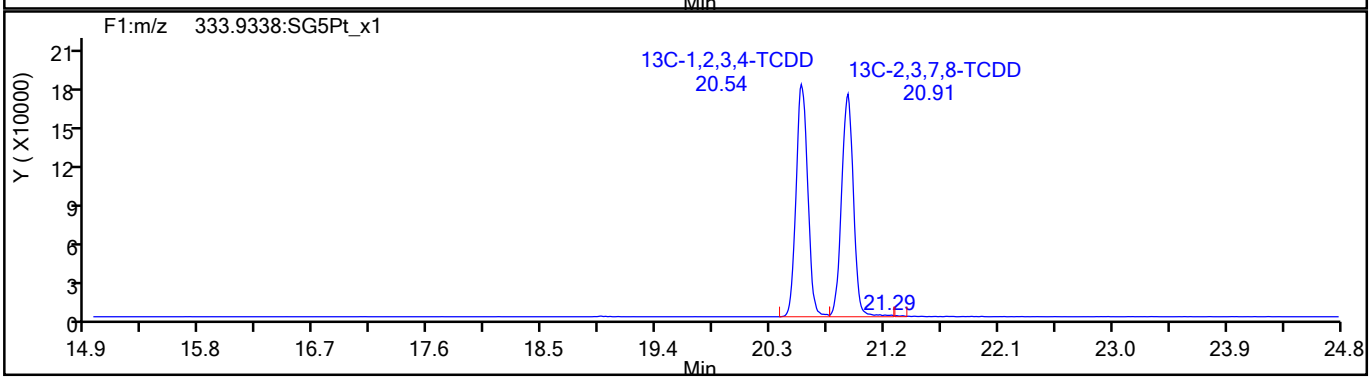

784325

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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37Cl4-TCDD

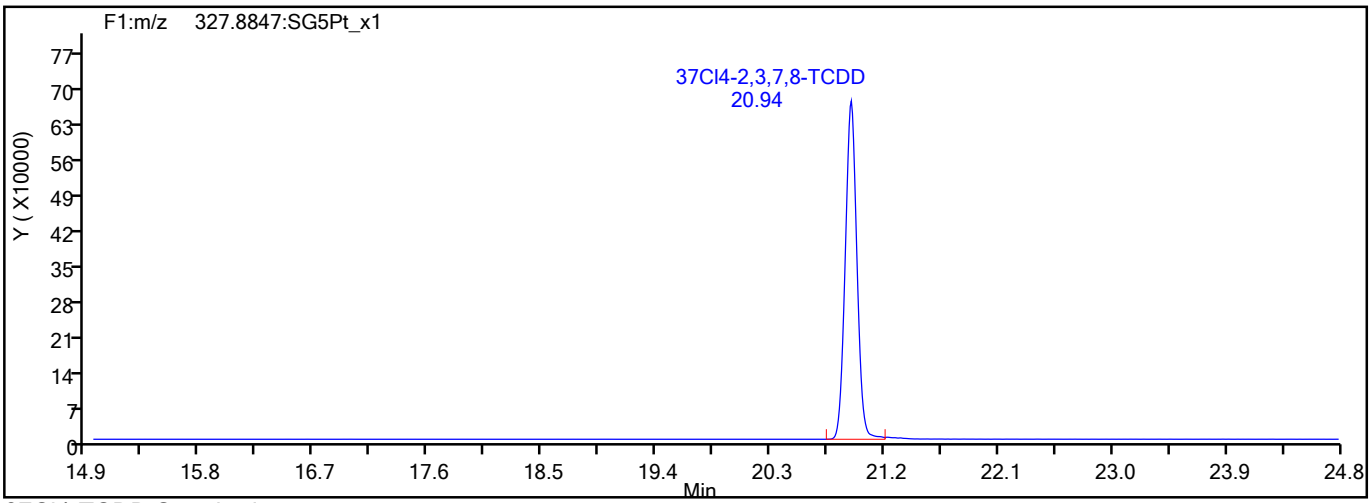

37Cl4-TCDD Standards

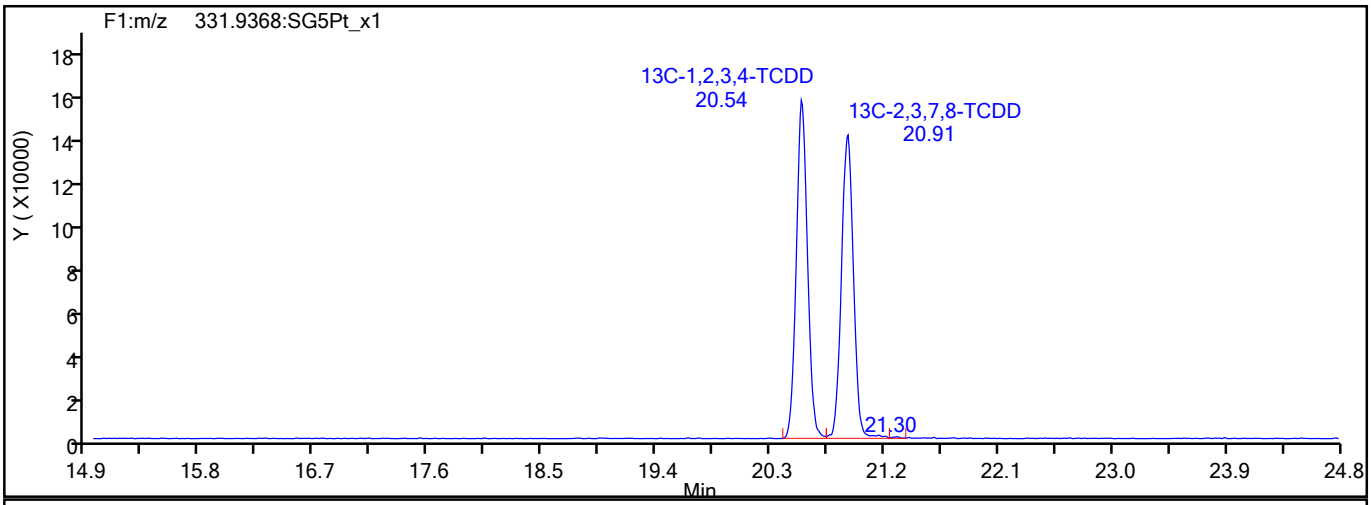

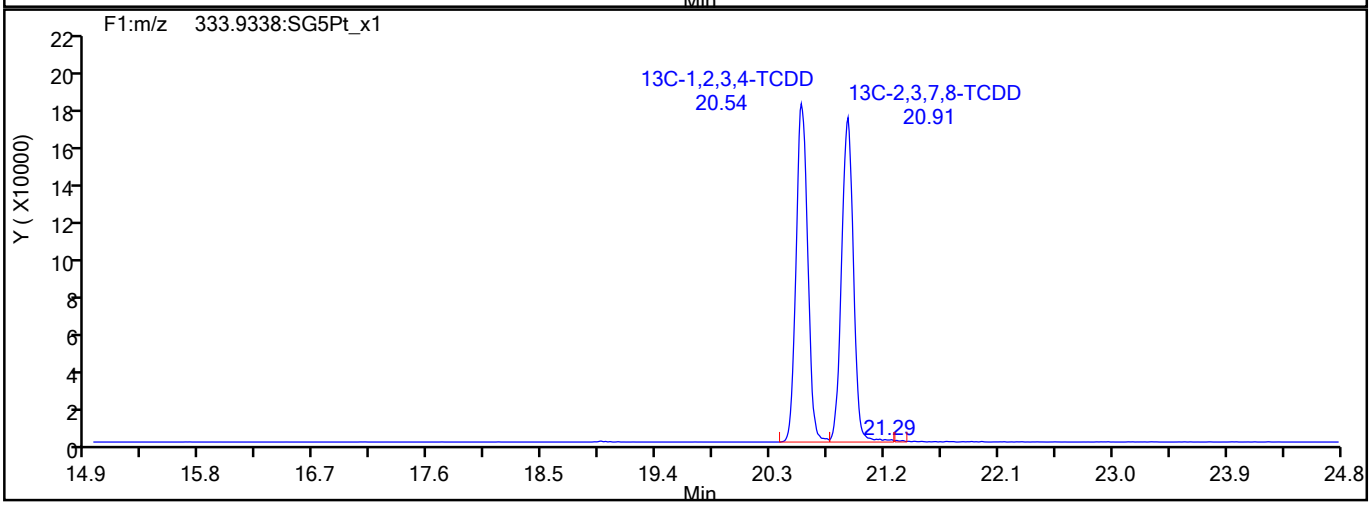

784326

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

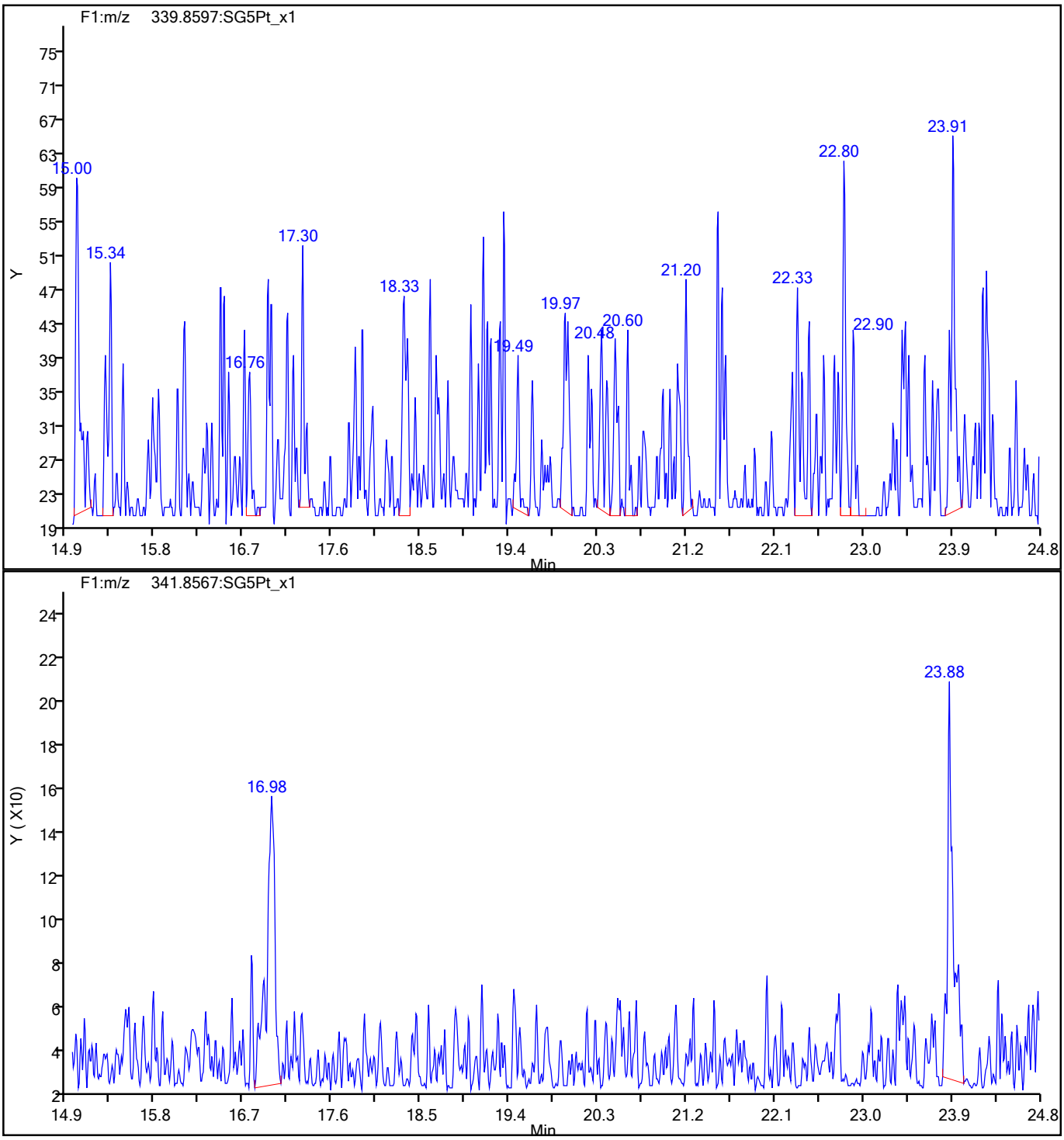

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Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

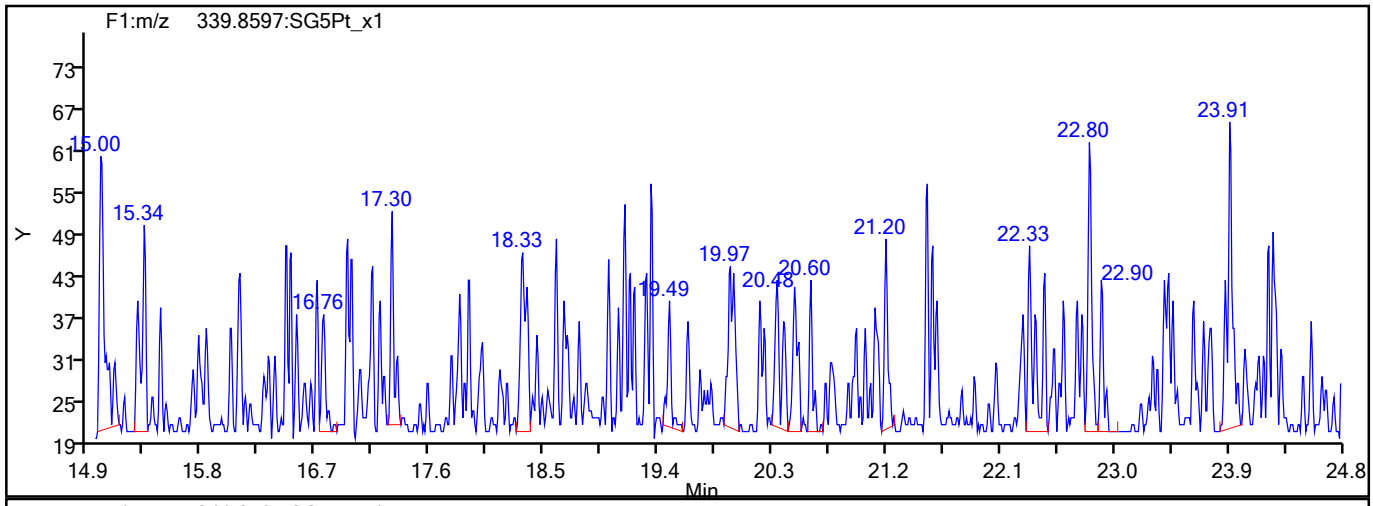

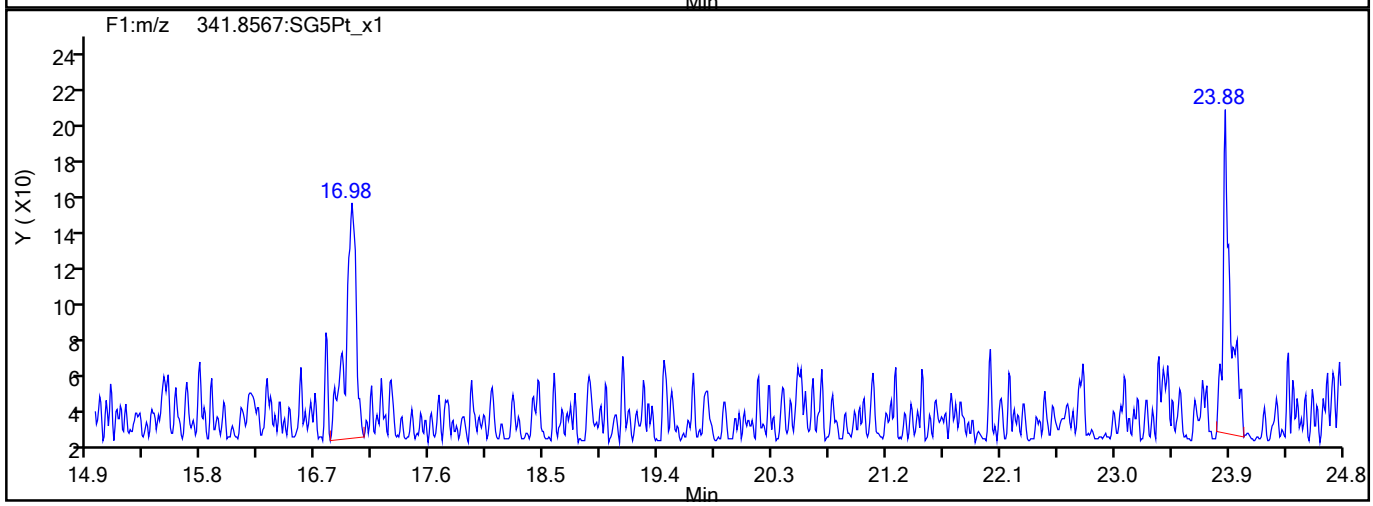

F1 PeCDFs Interference Mass

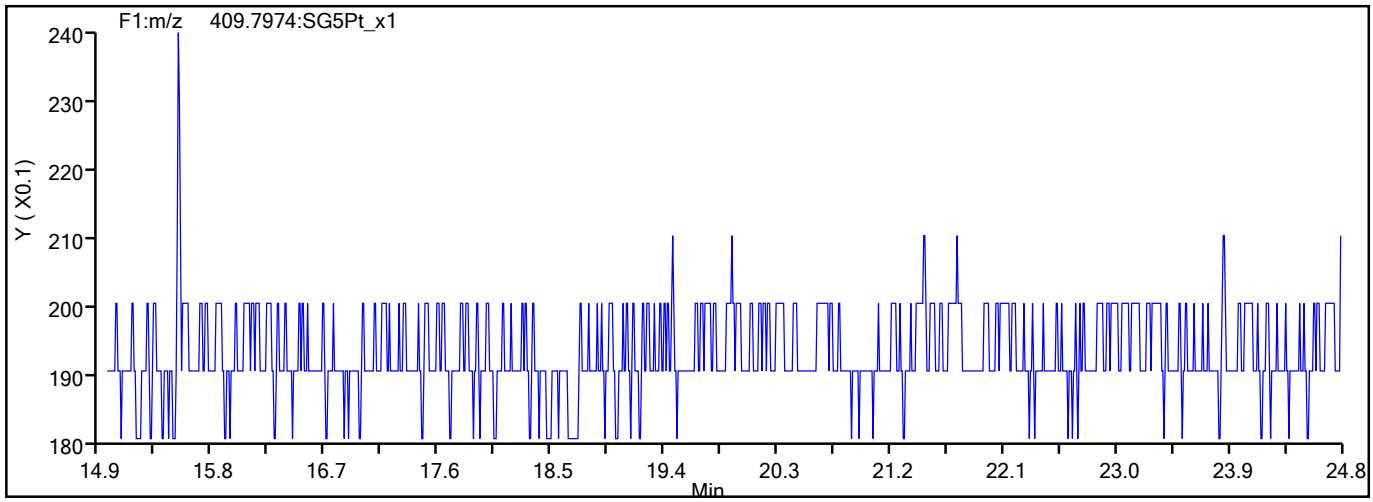

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Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

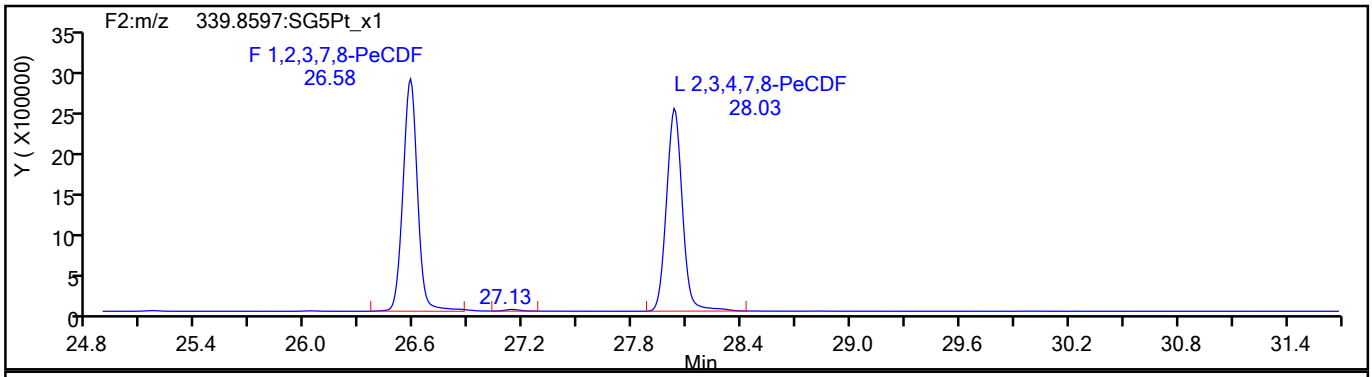

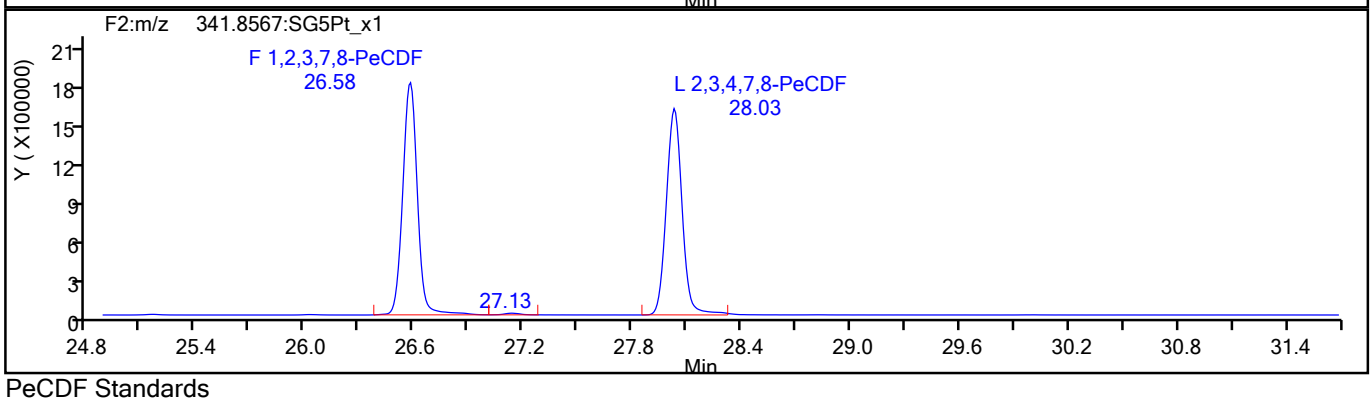

PeCDF Standards

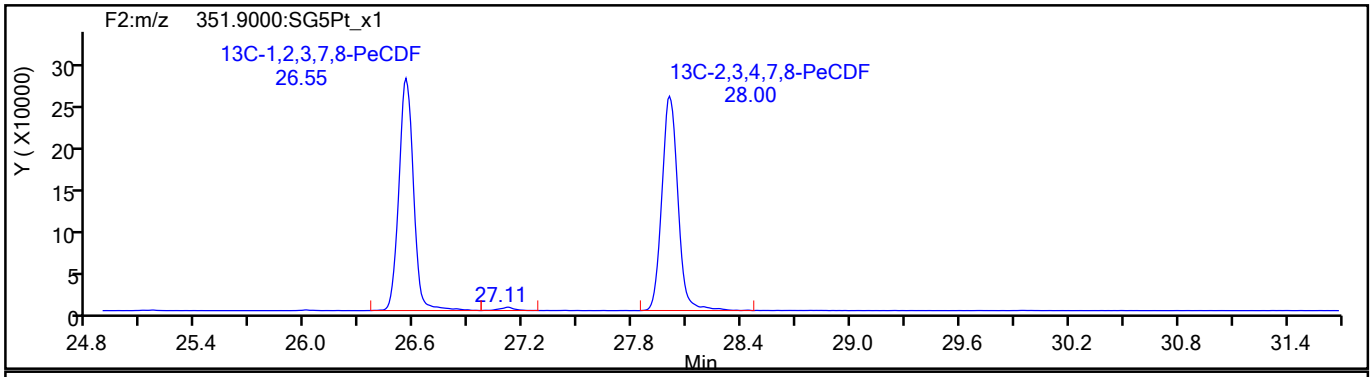

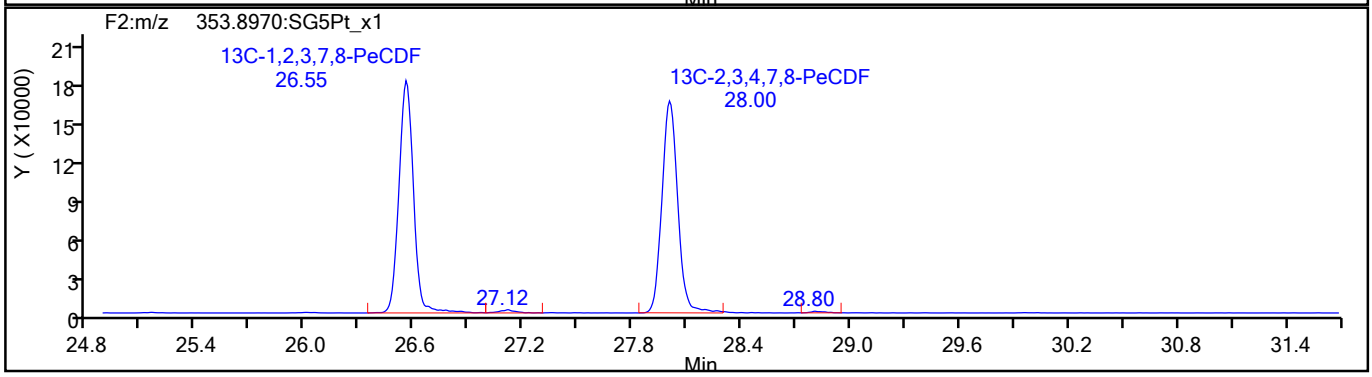

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Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

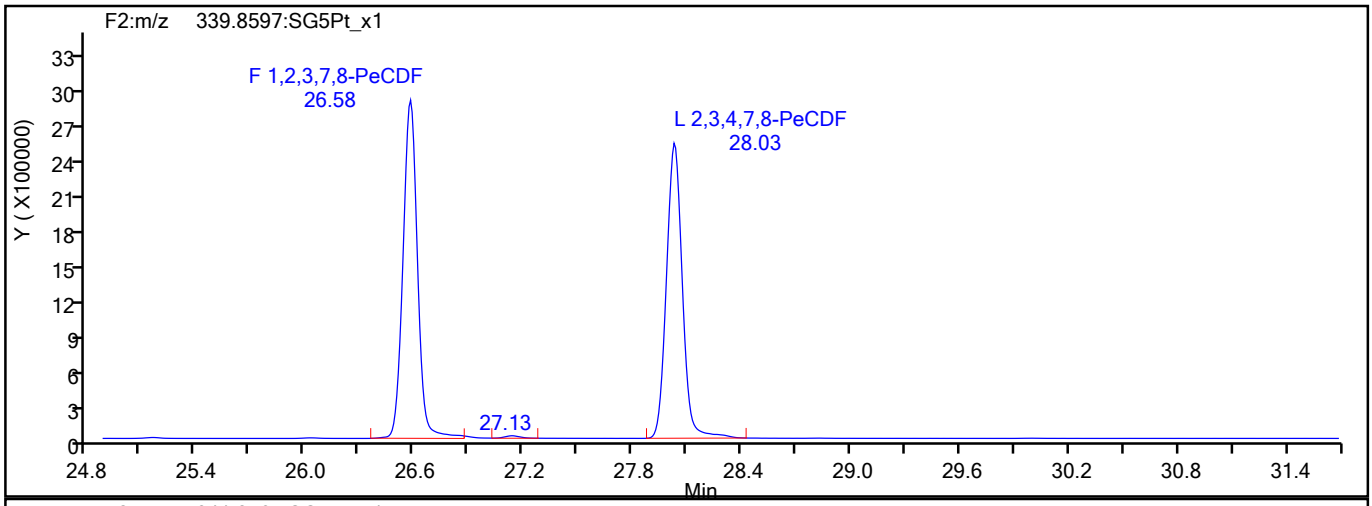

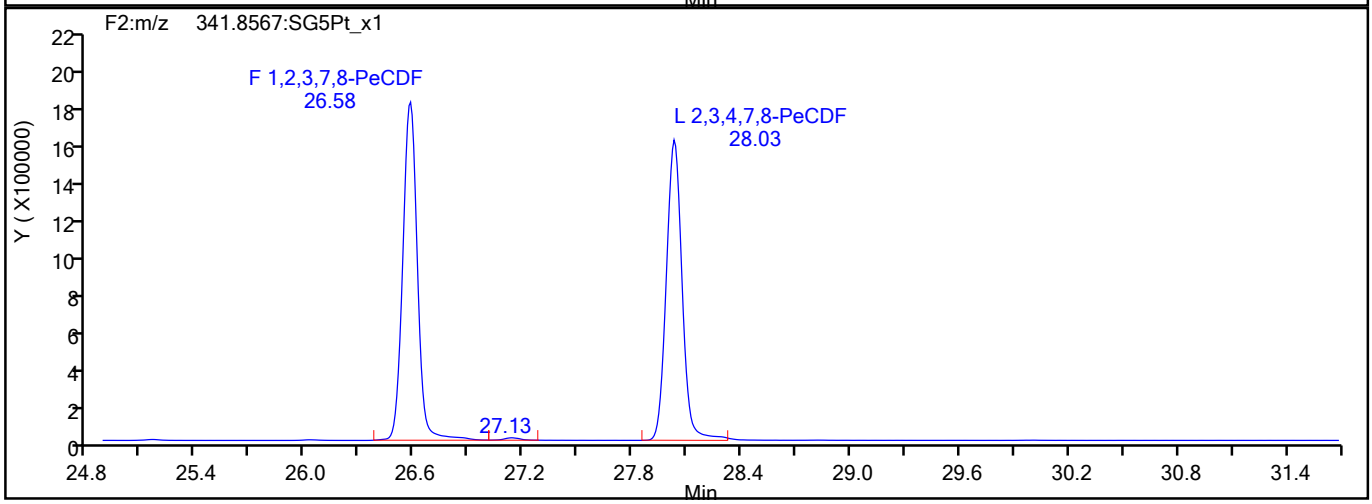

PeCDF Interference Mass

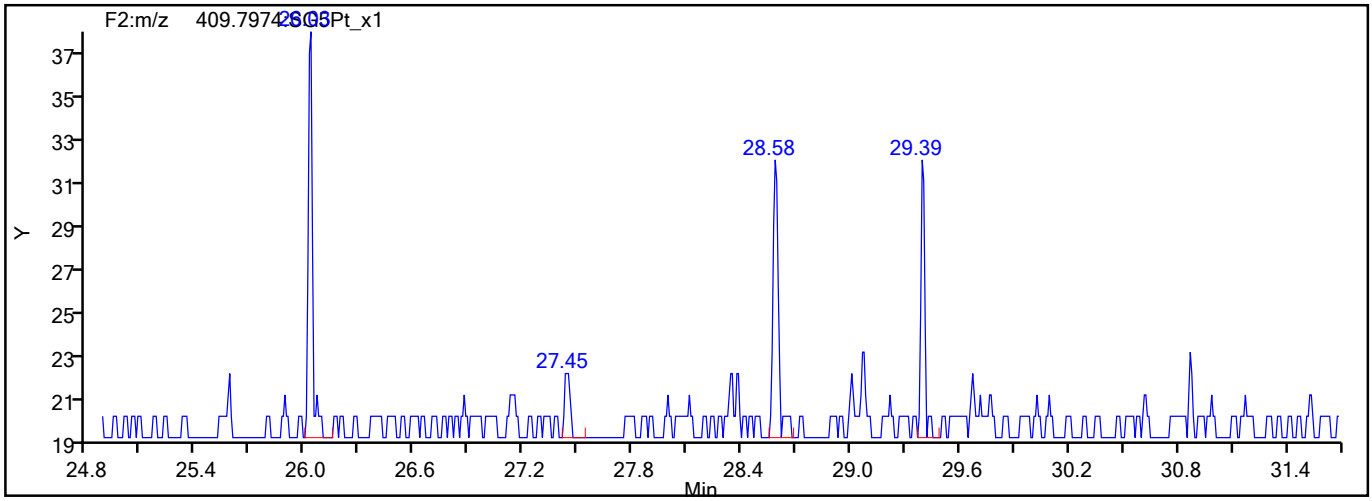

784330

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

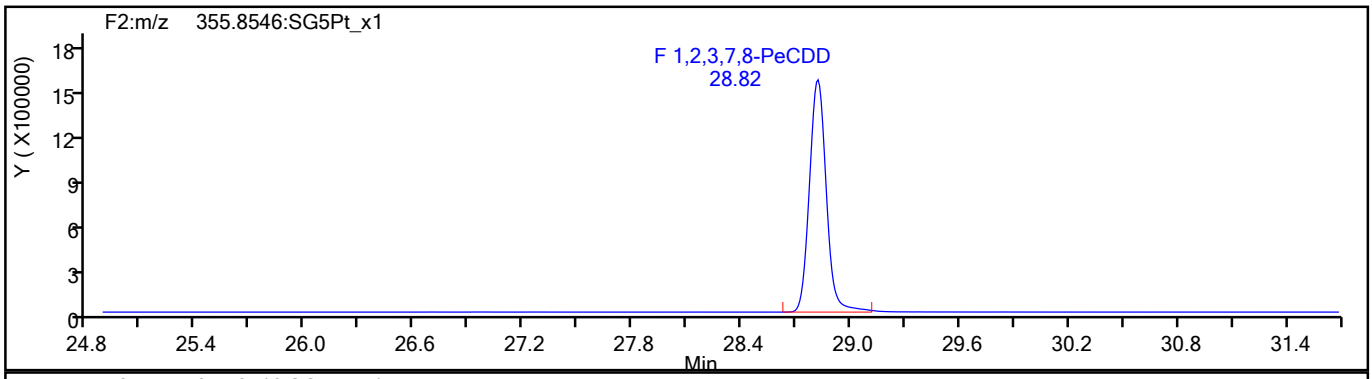

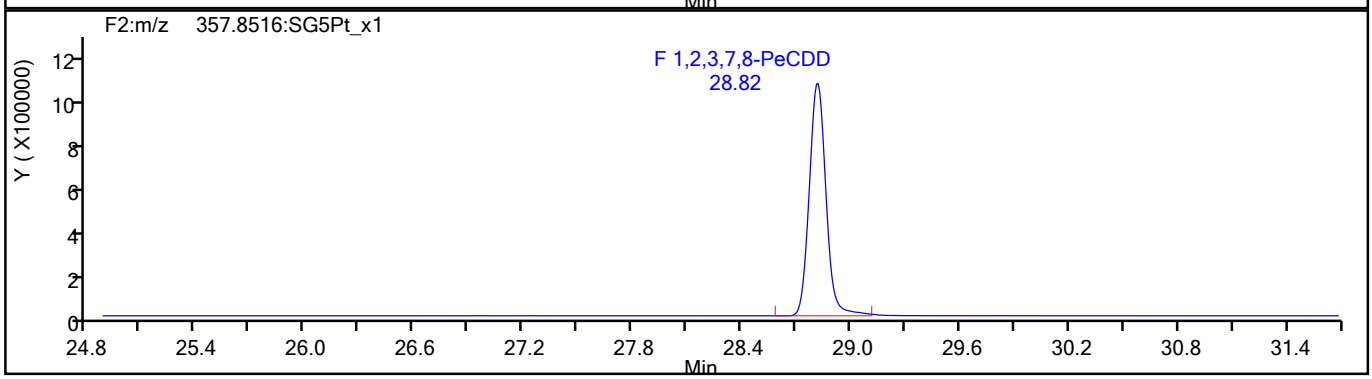

PeCDD Standards

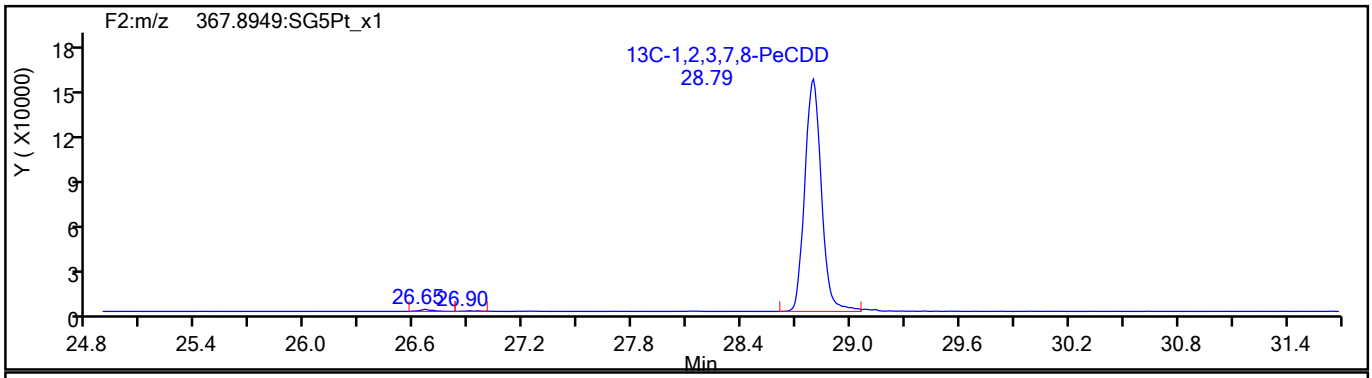

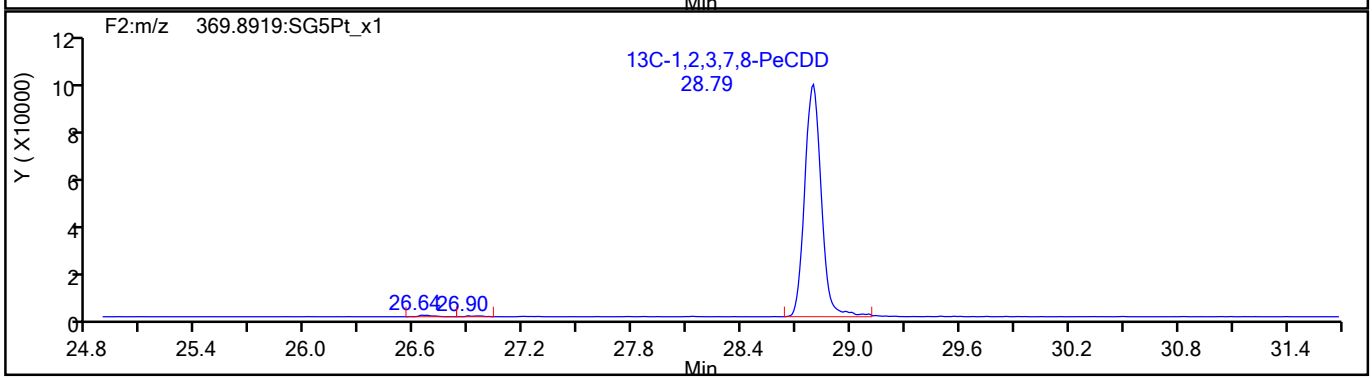

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Eurofins TestAmerica, Sacramento

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HxCDF

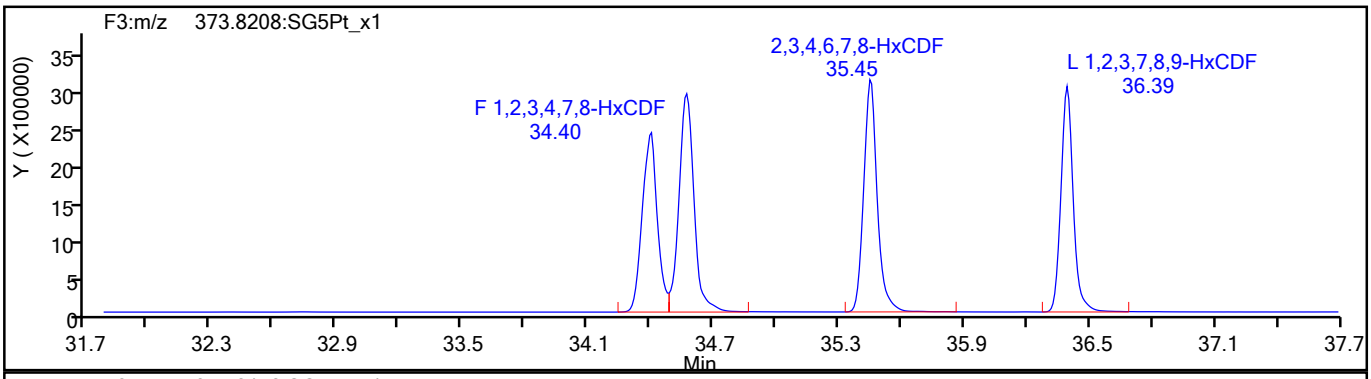

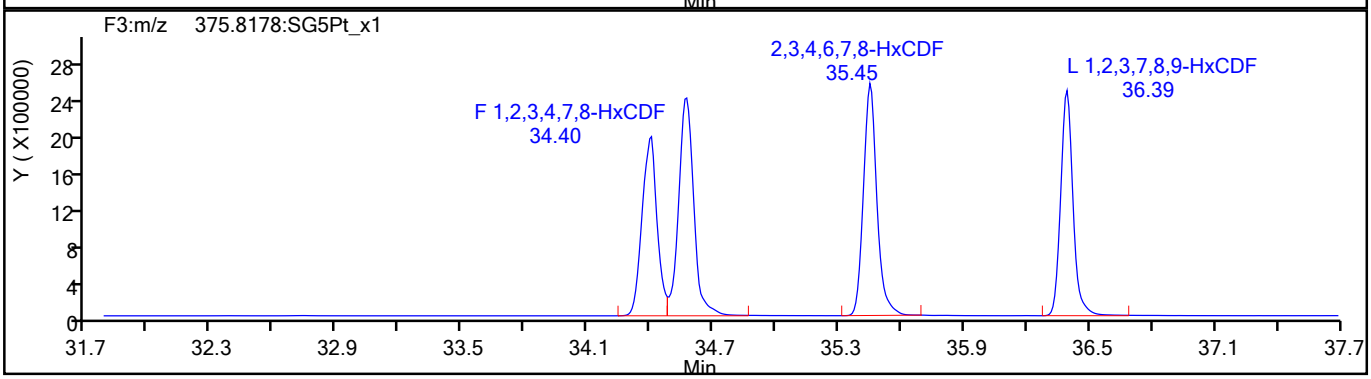

HxCDF Standards

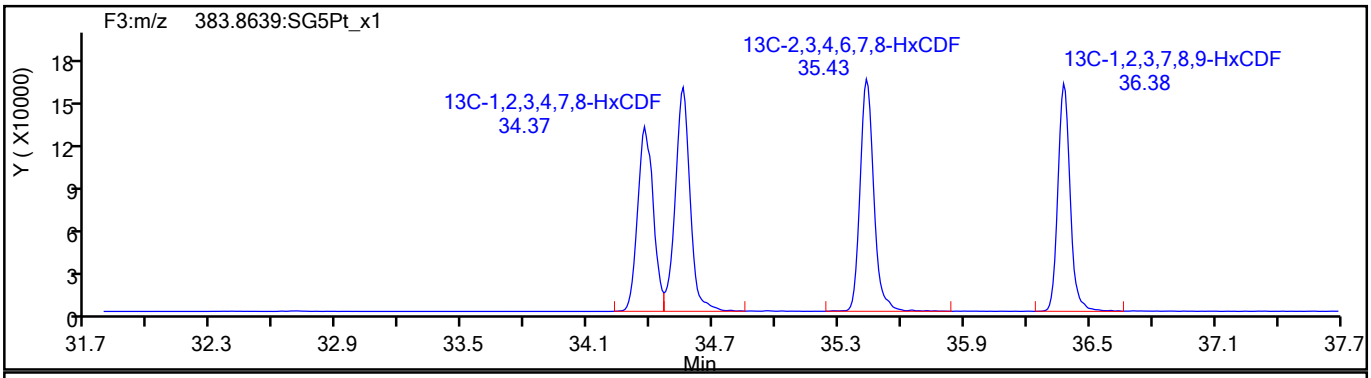

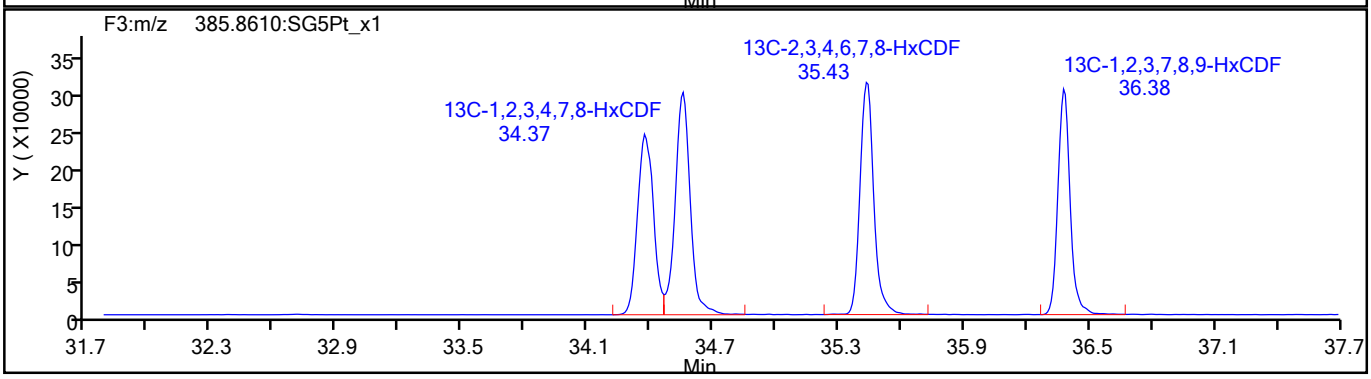

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Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

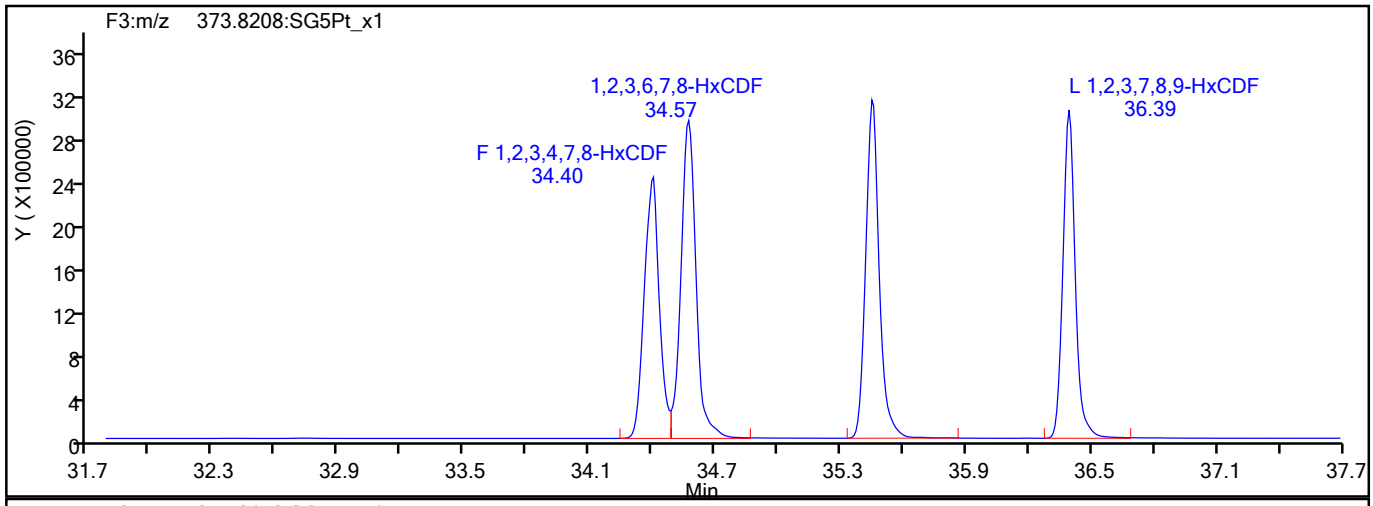

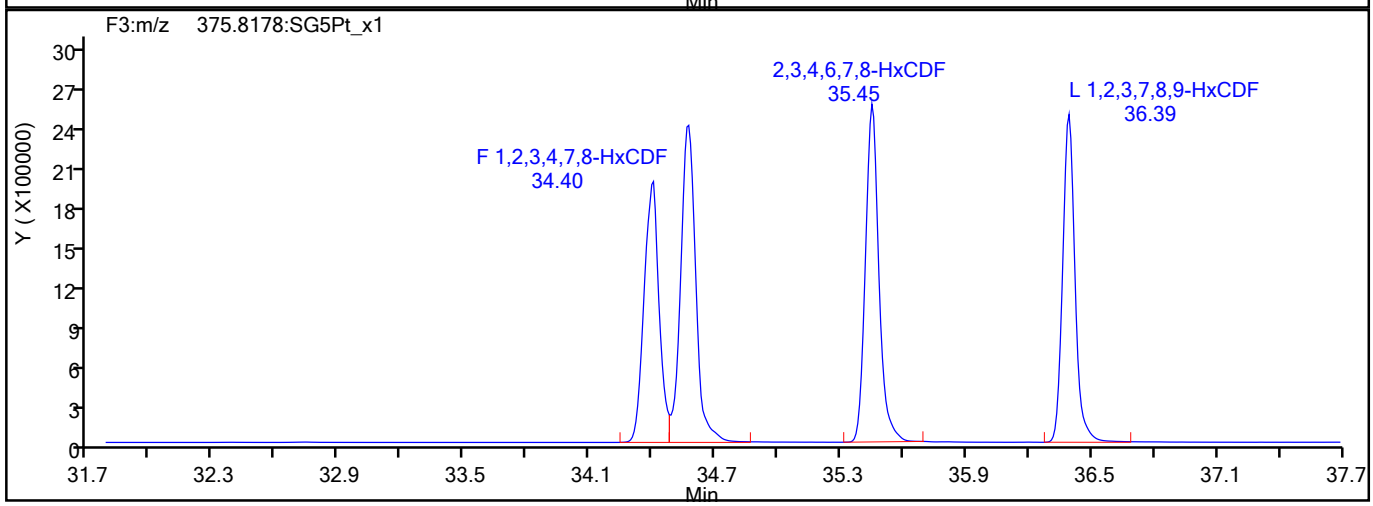

HxCDF Interference Mass

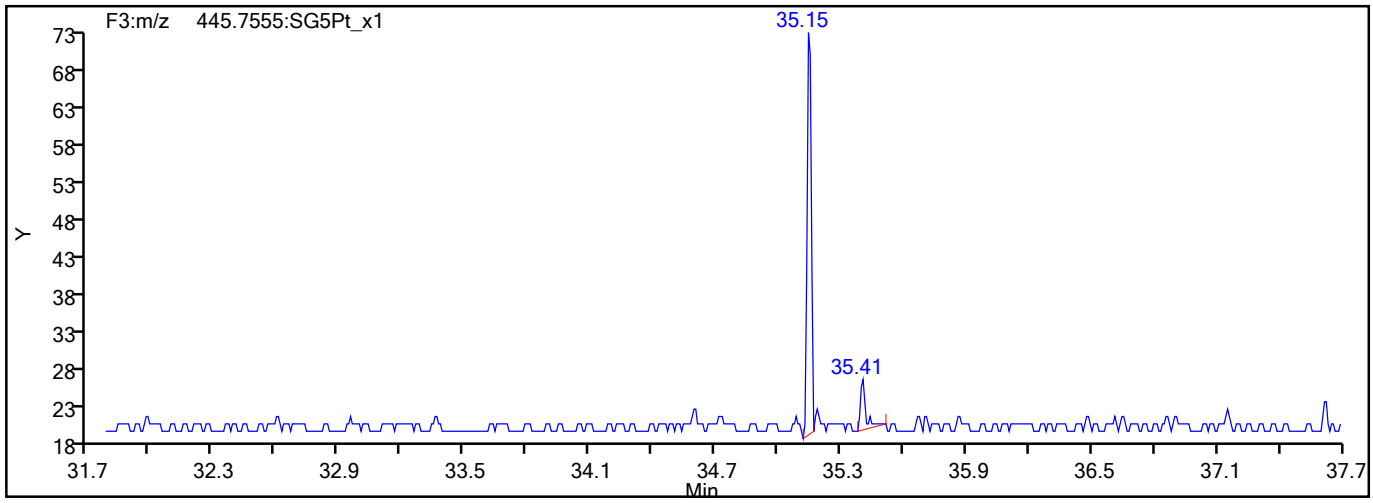

784333

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Eurofins TestAmerica, Sacramento

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HxCDD

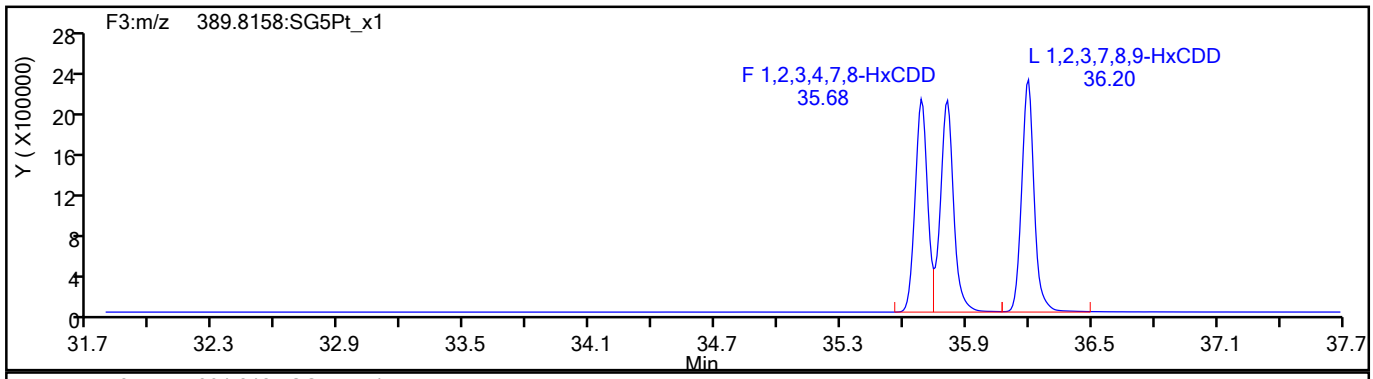

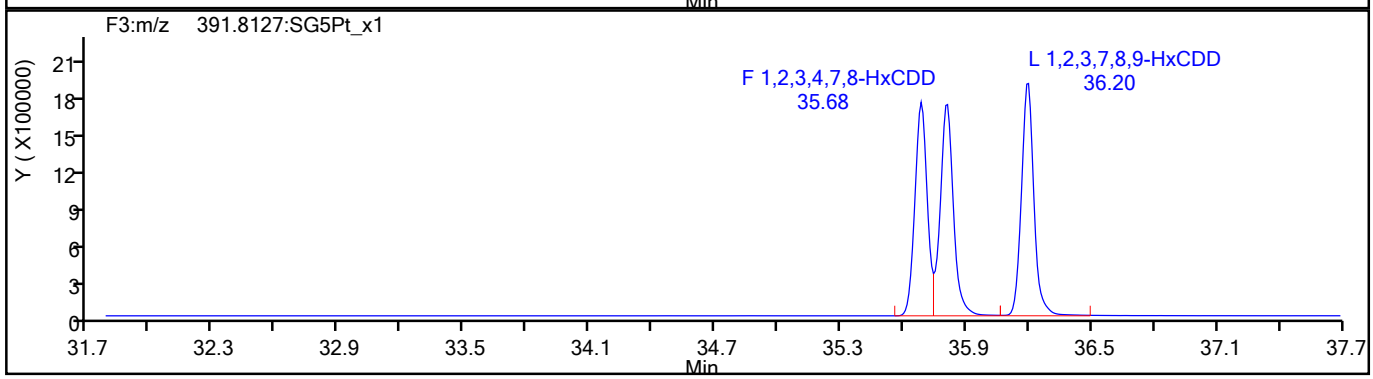

HxCDD Standards

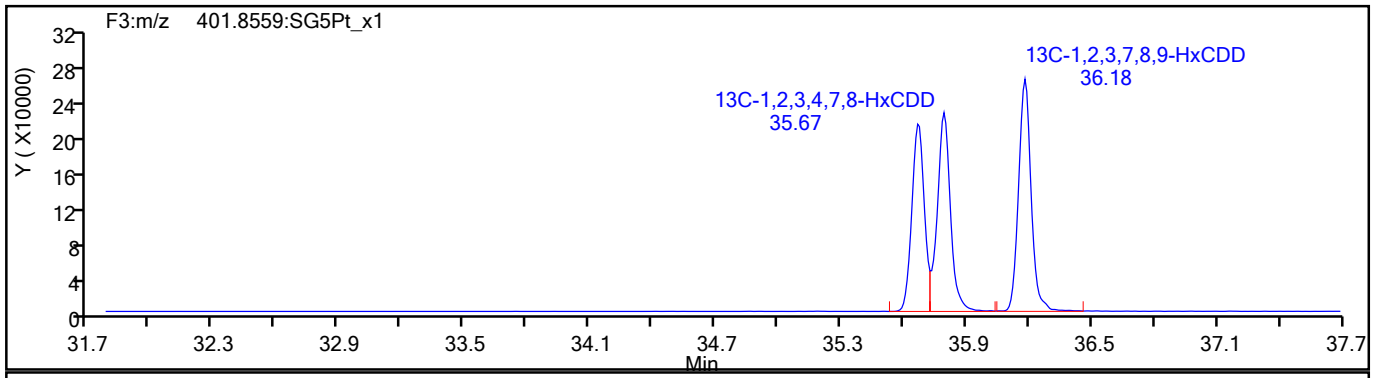

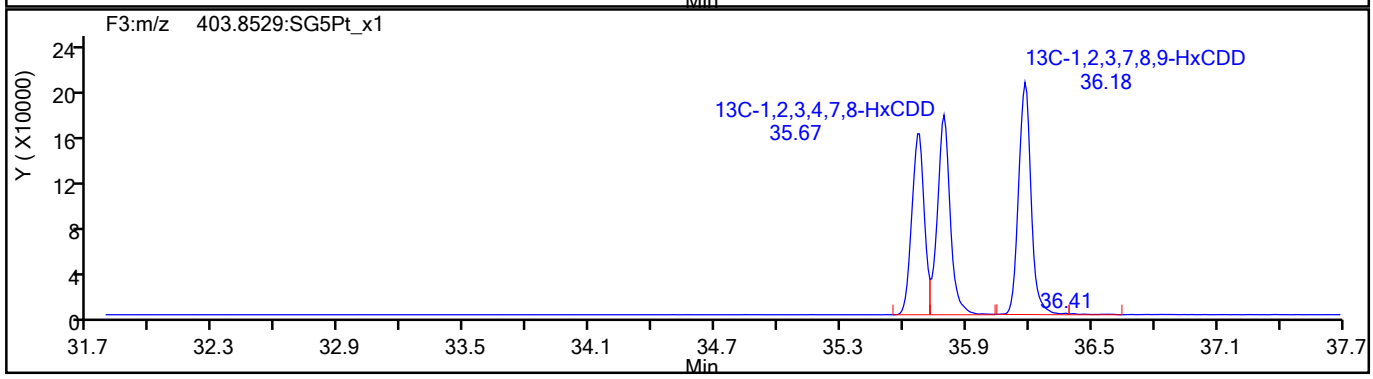

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Eurofins TestAmerica, Sacramento

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HpCDF

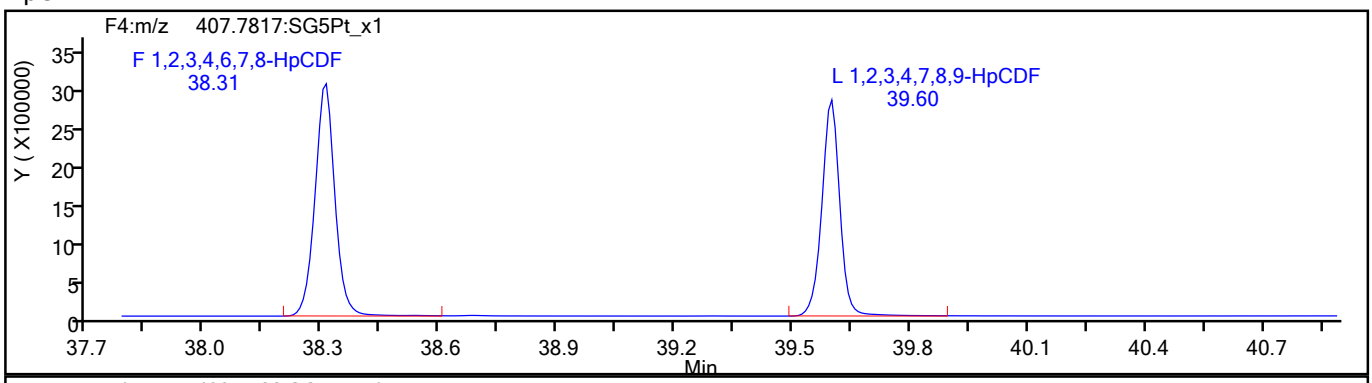

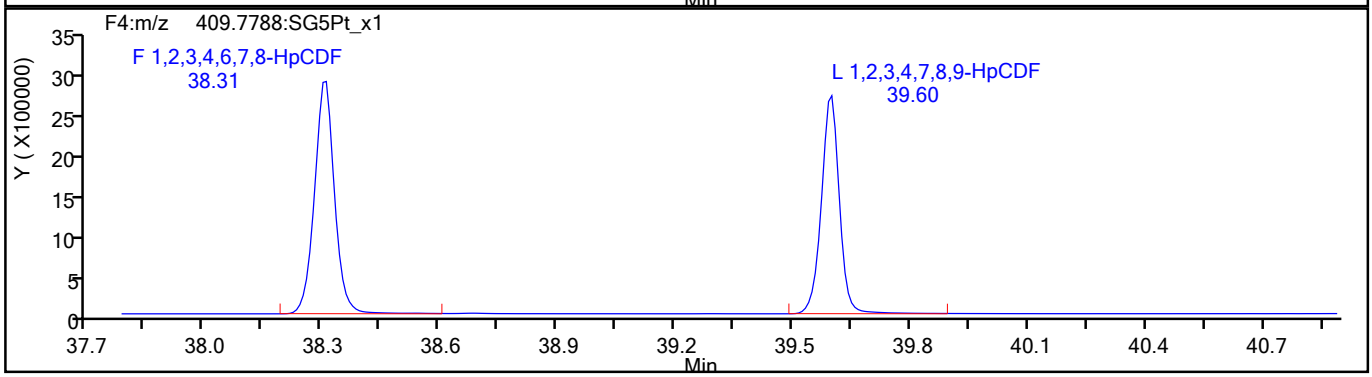

HpCDF Standards

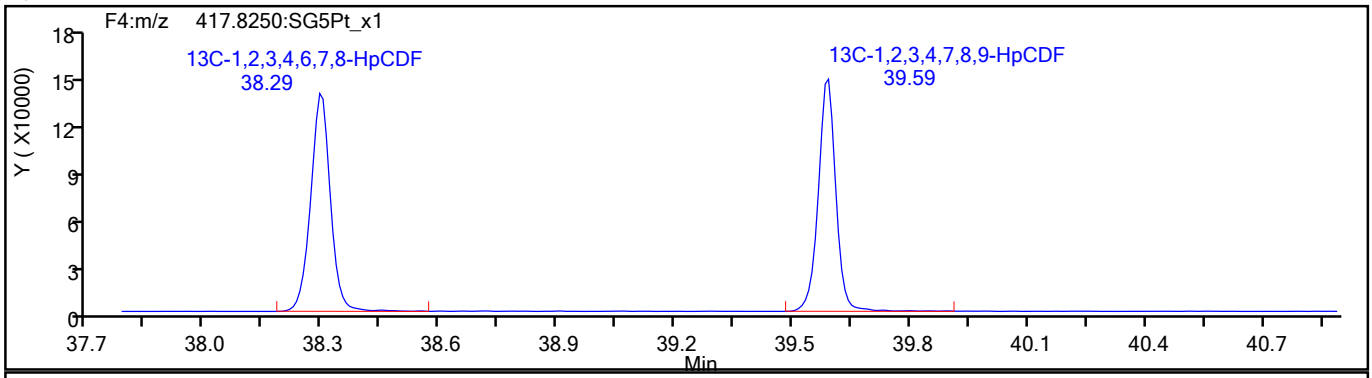

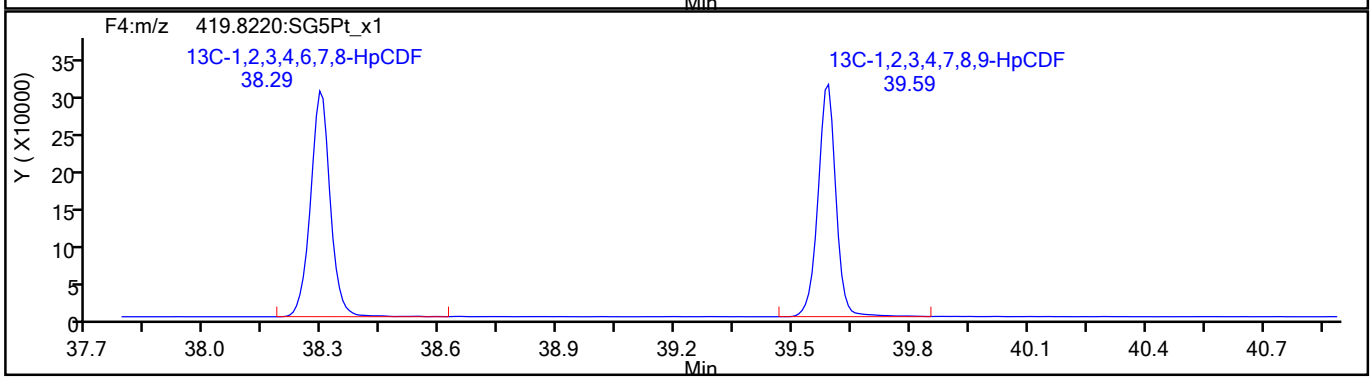

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Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

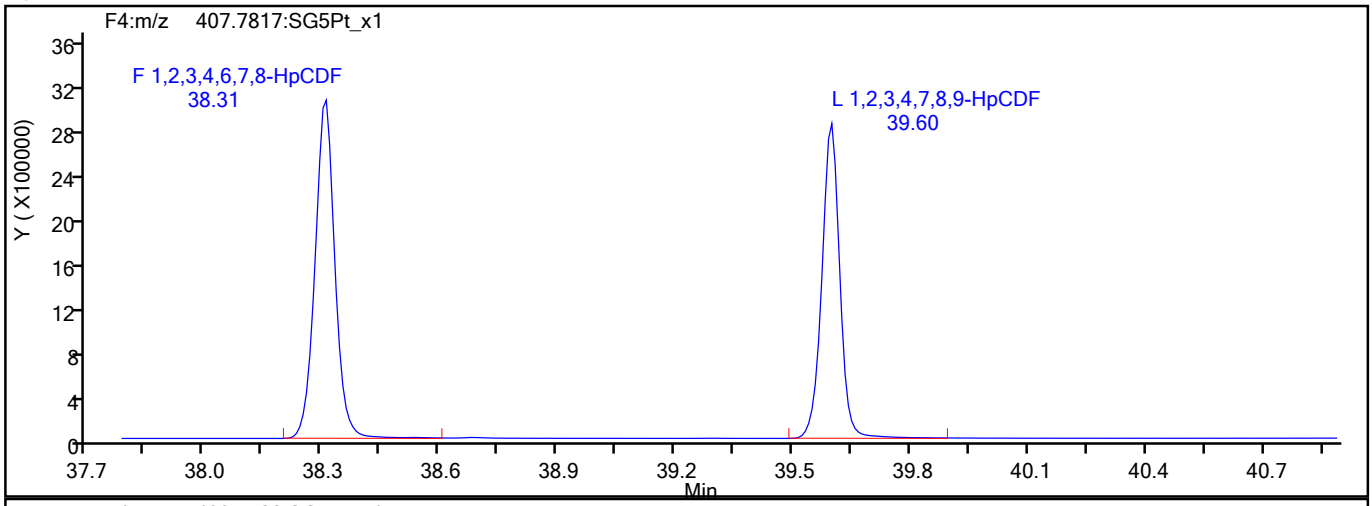

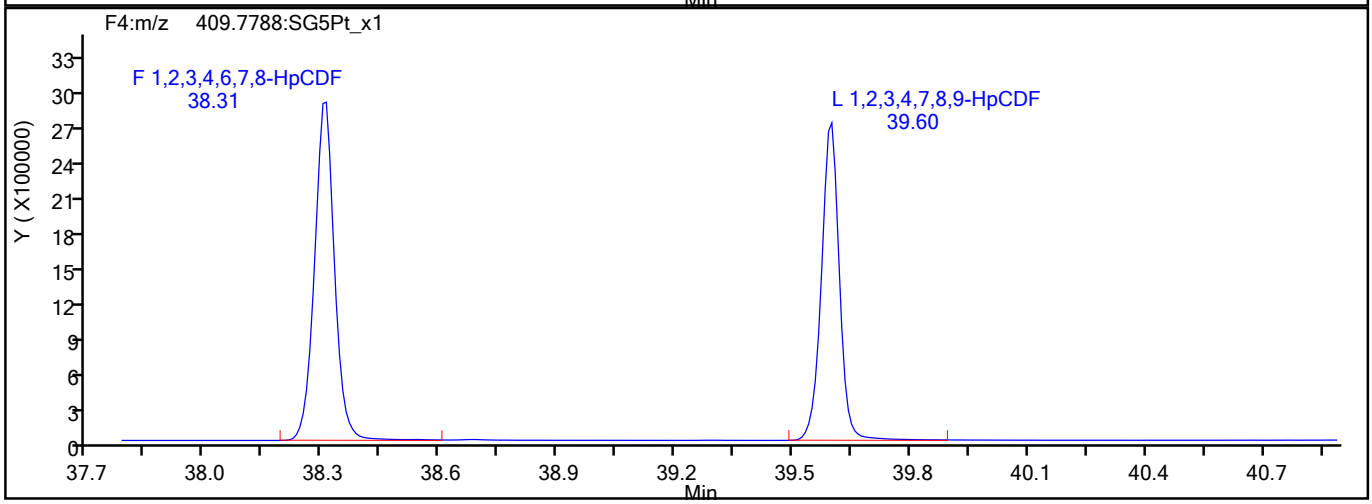

HpCDF Interference Mass

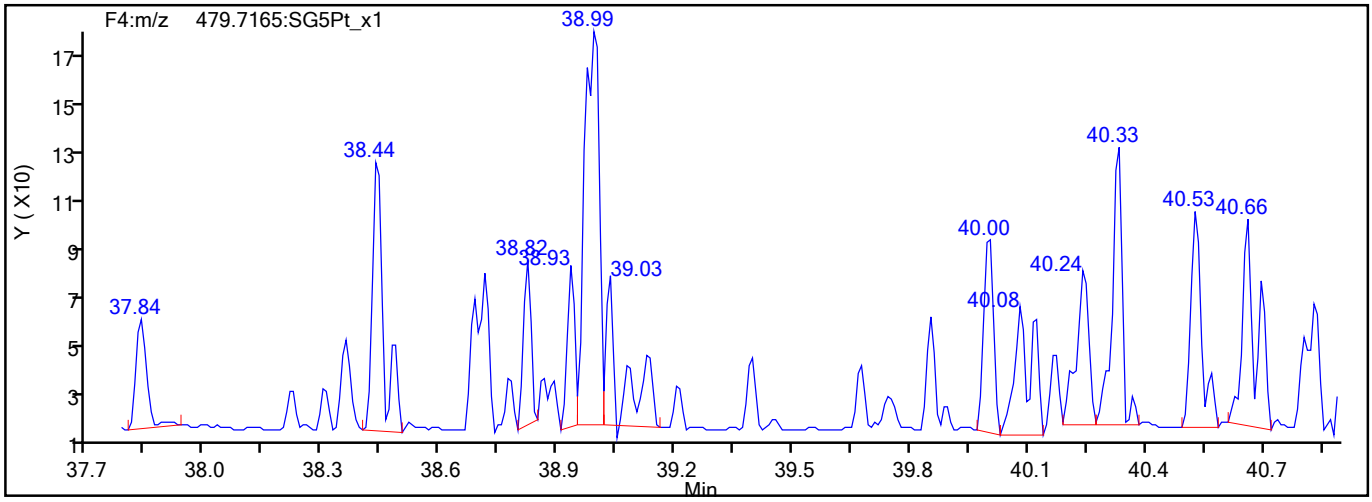

784336

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

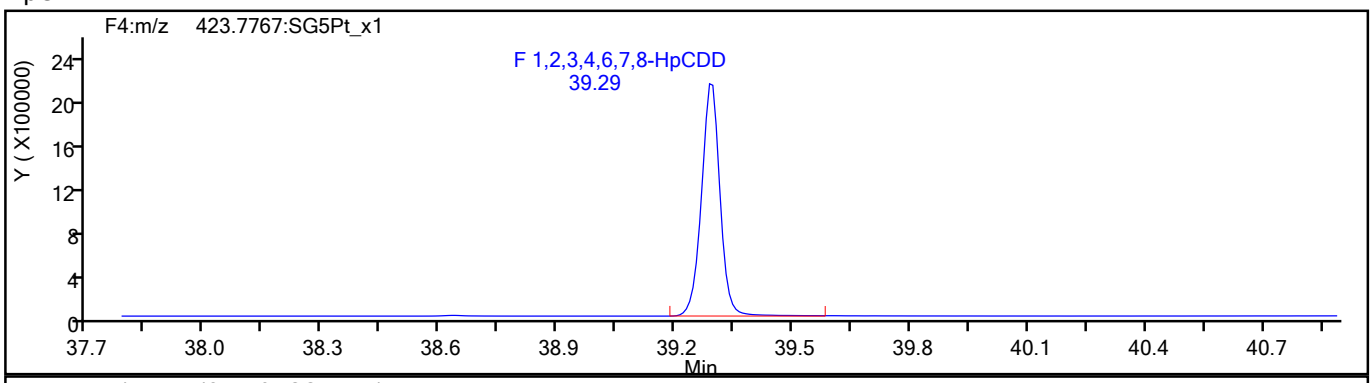

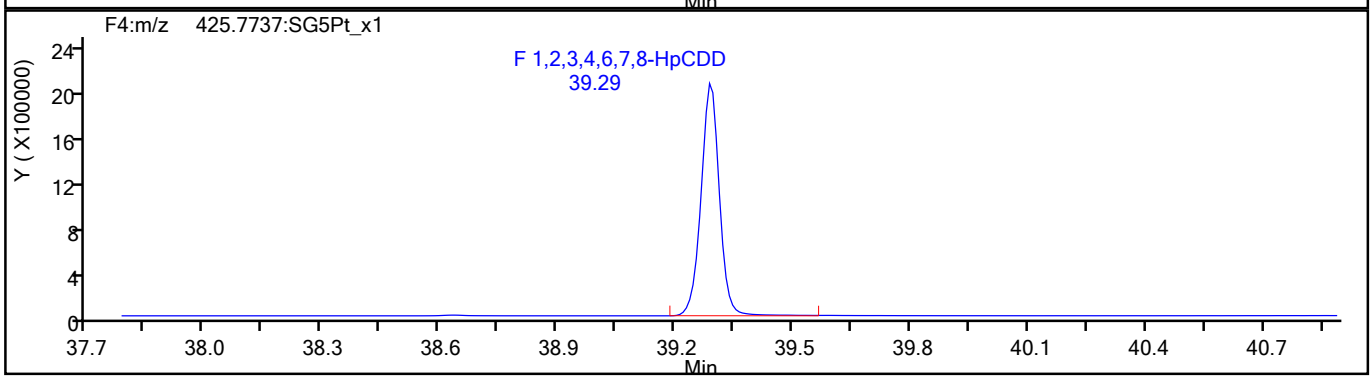

HpCDD Standards

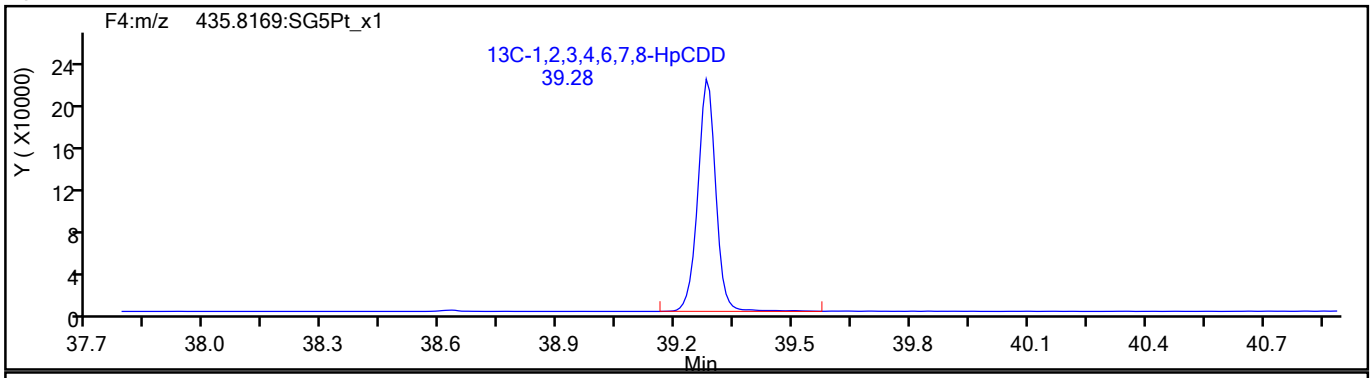

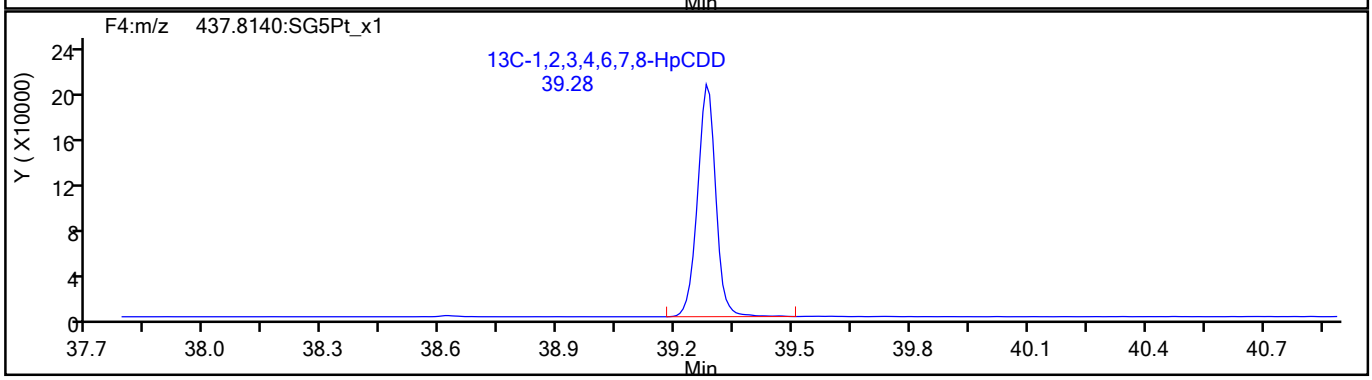

784337

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

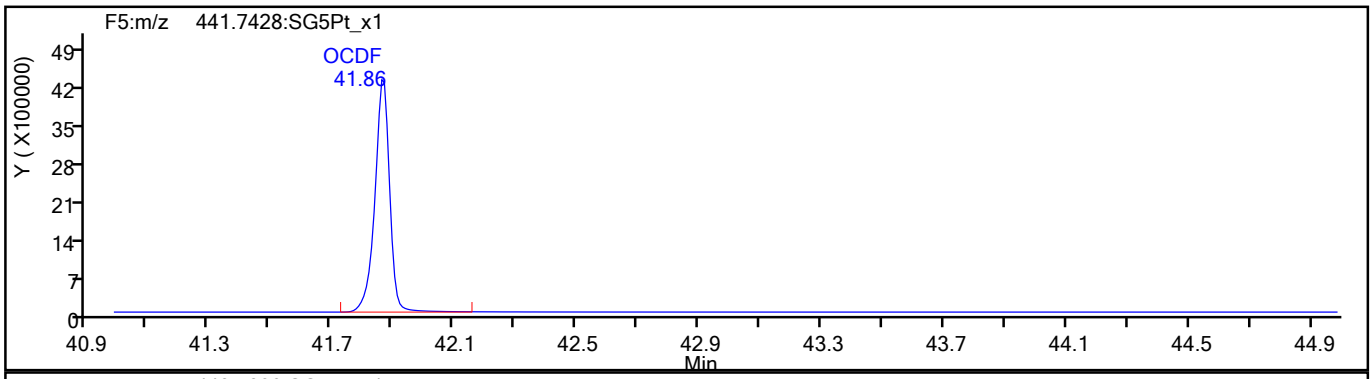

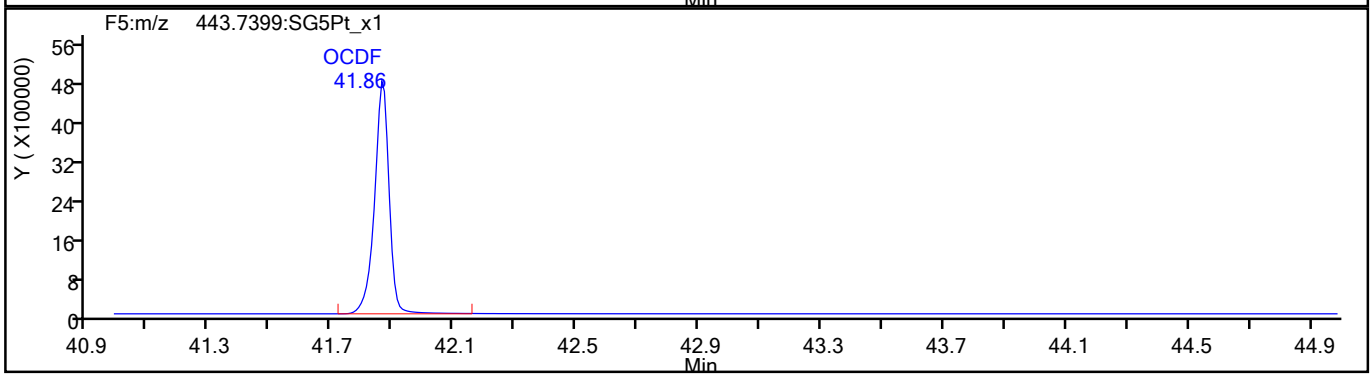

OCDF Standards

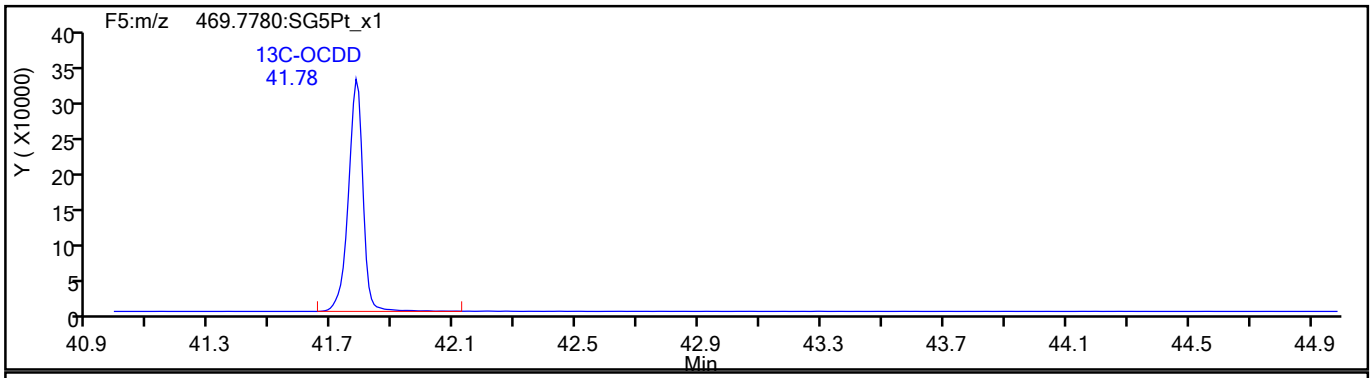

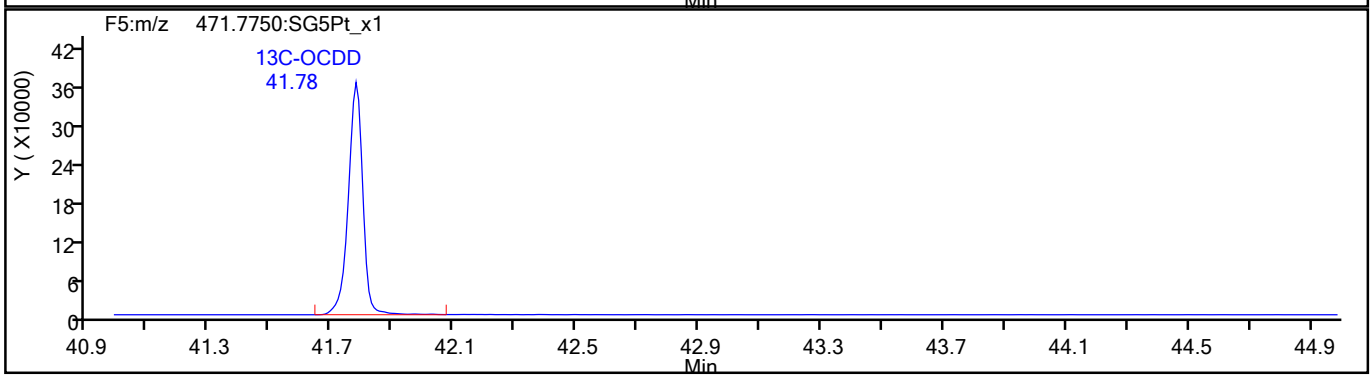

784338

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

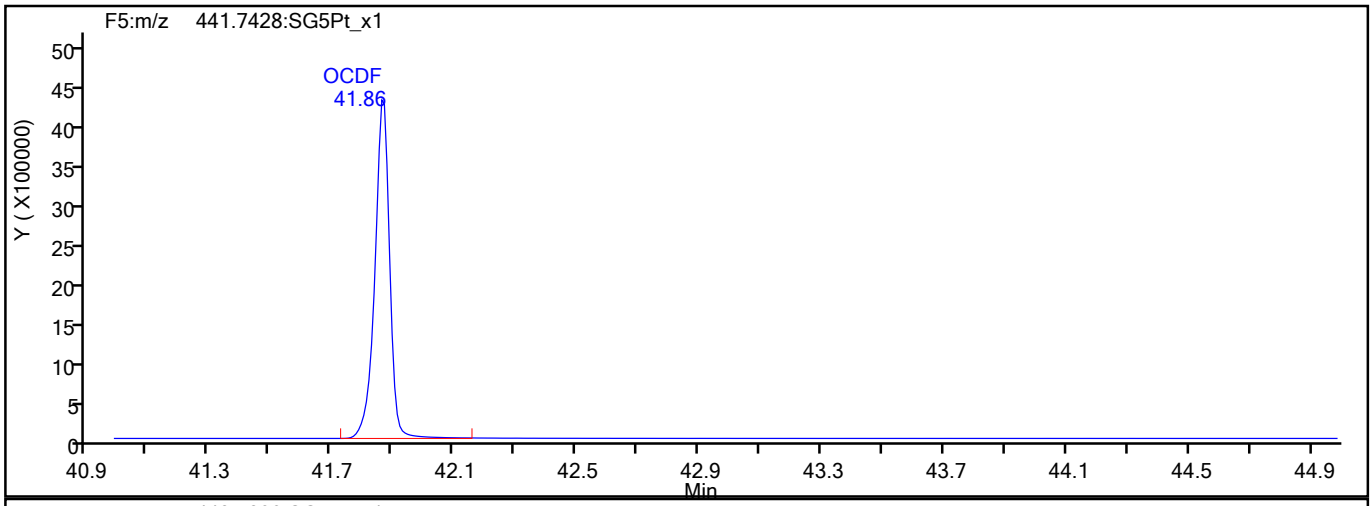

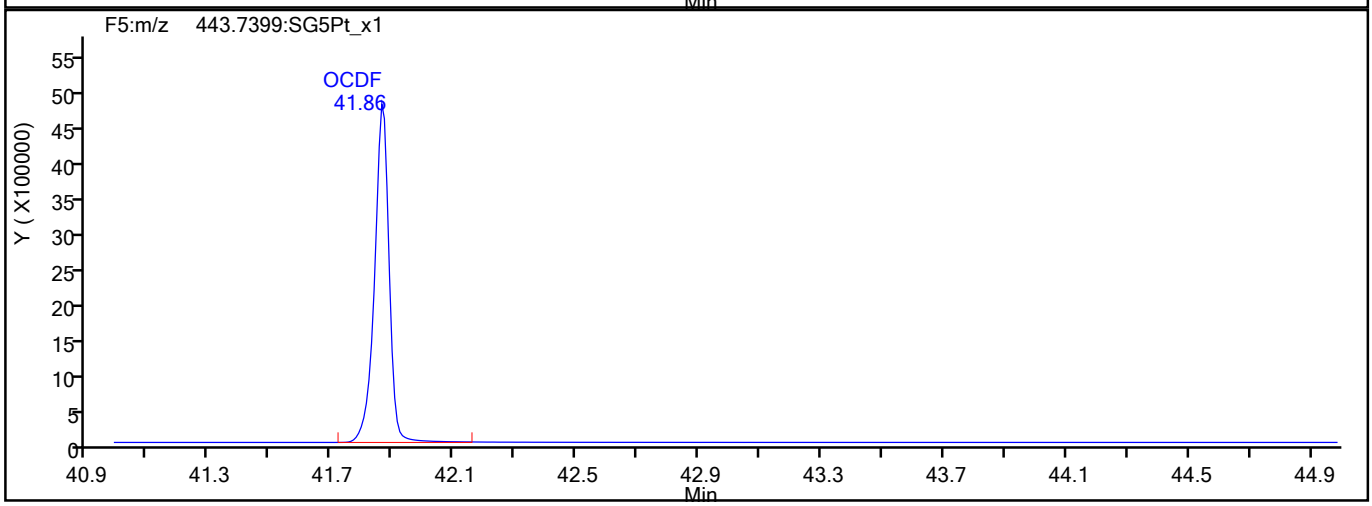

OCDF Interference Mass

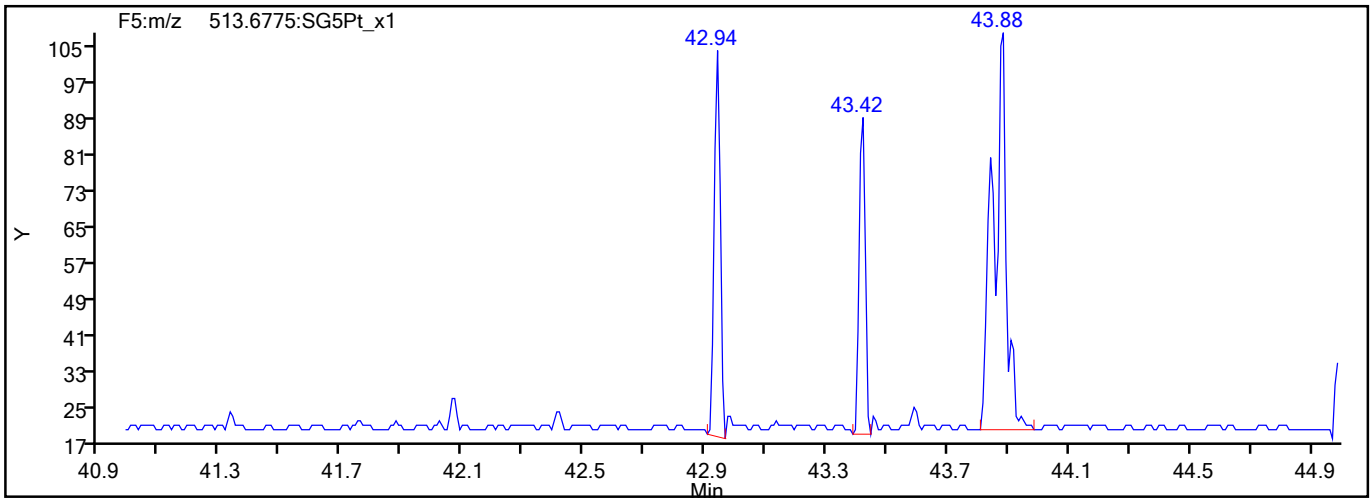

784339

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

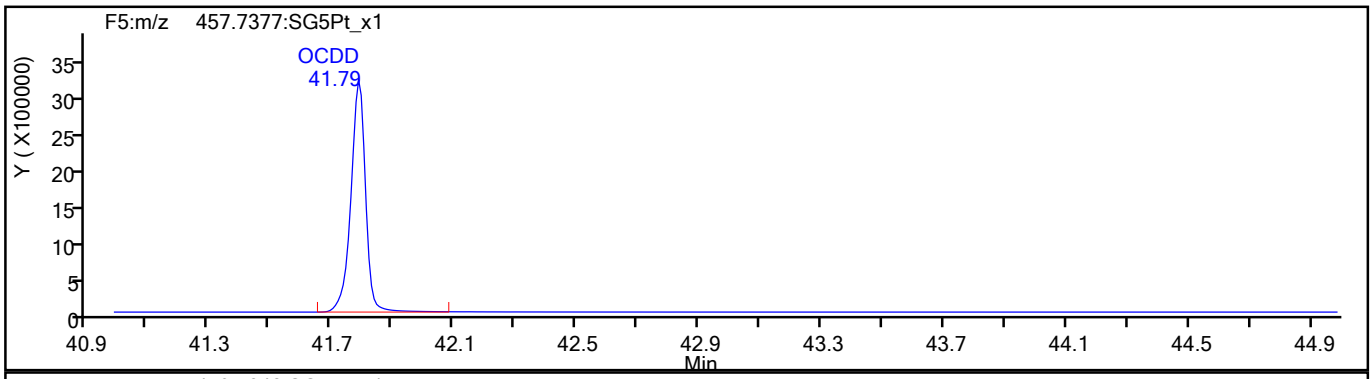

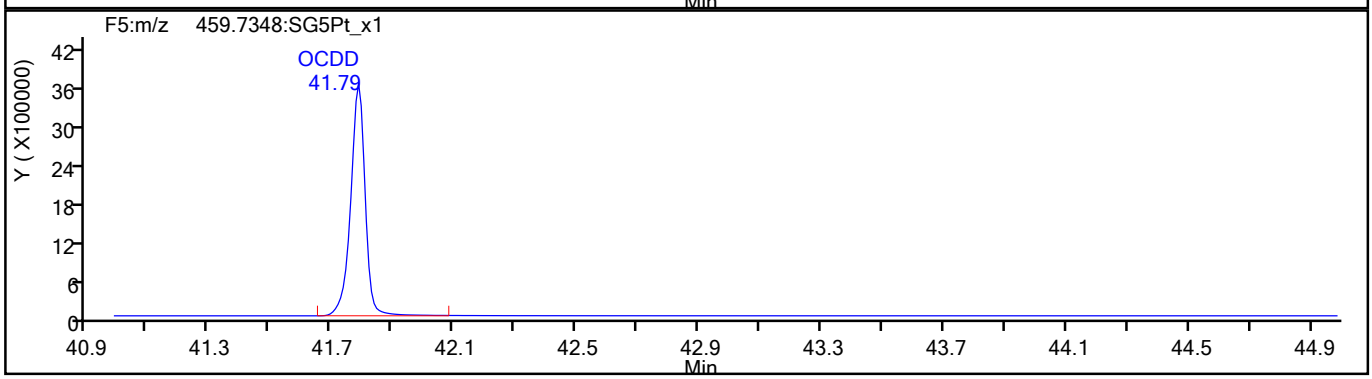

OCDD Standards

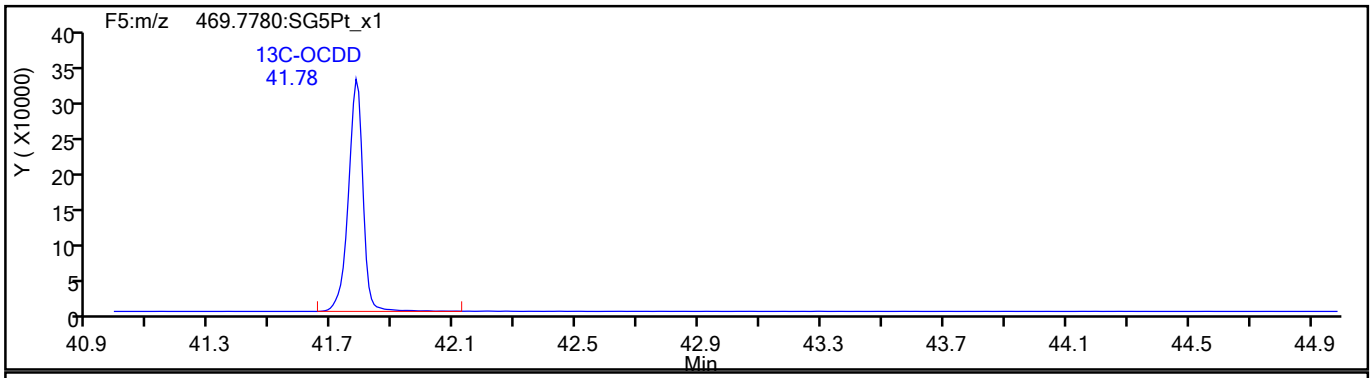

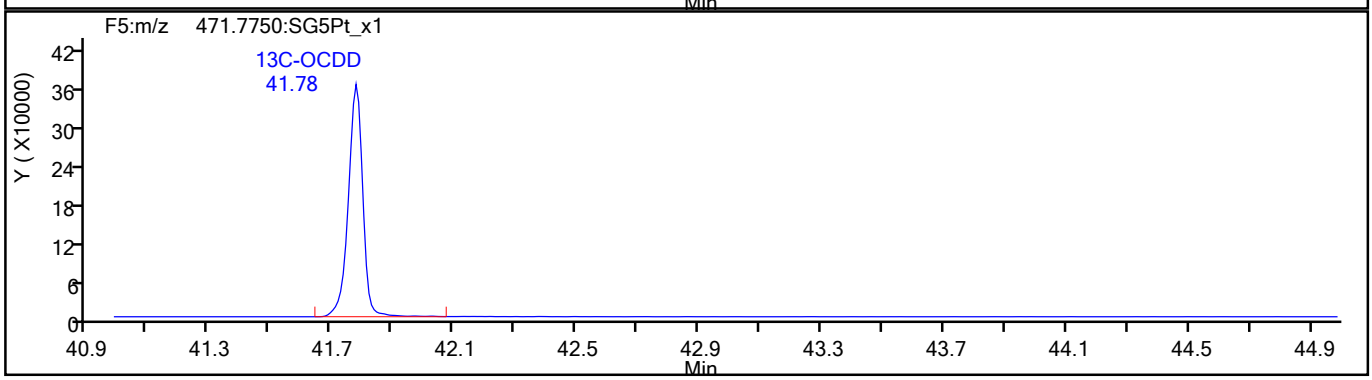

784340

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

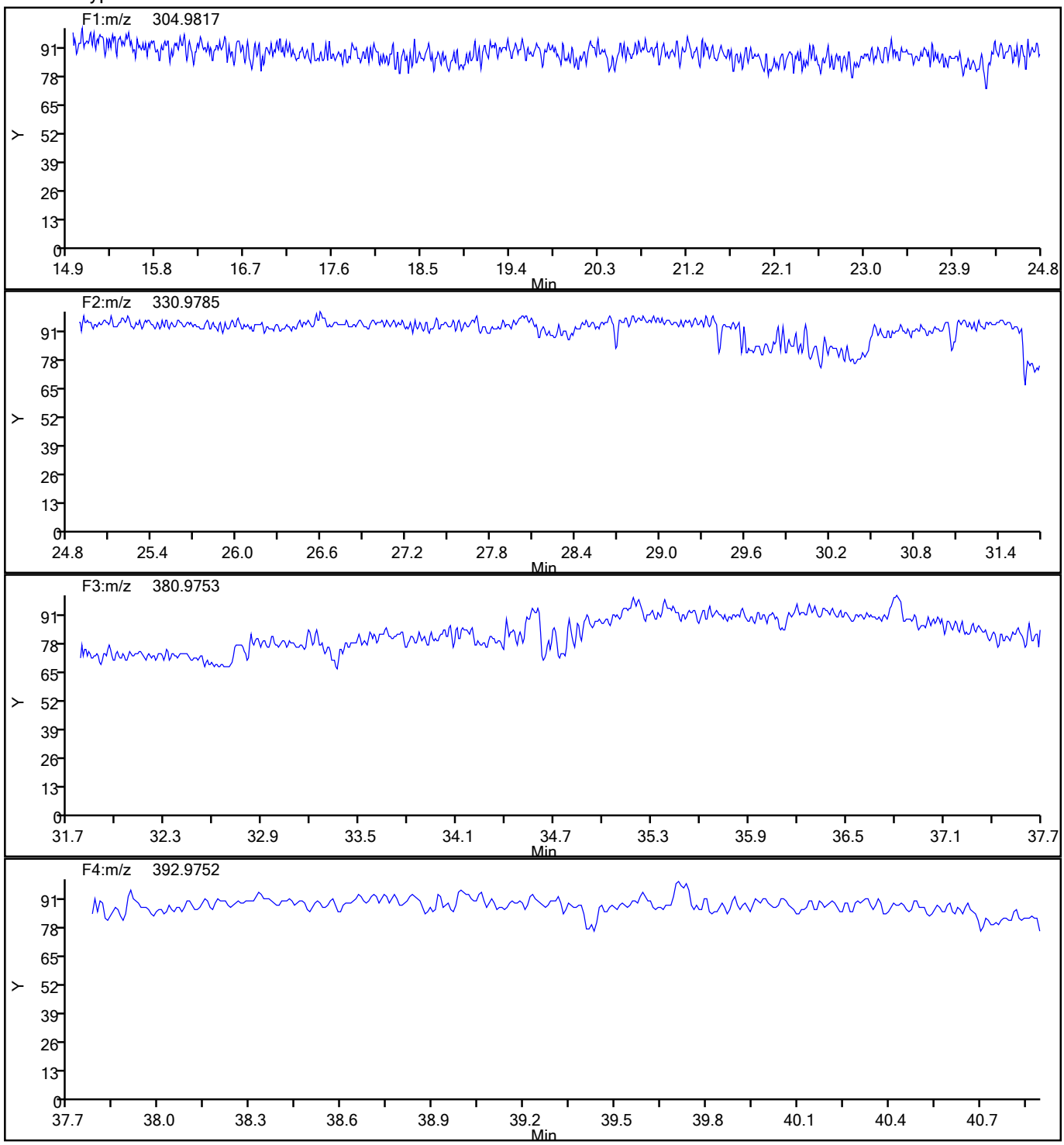

784341

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

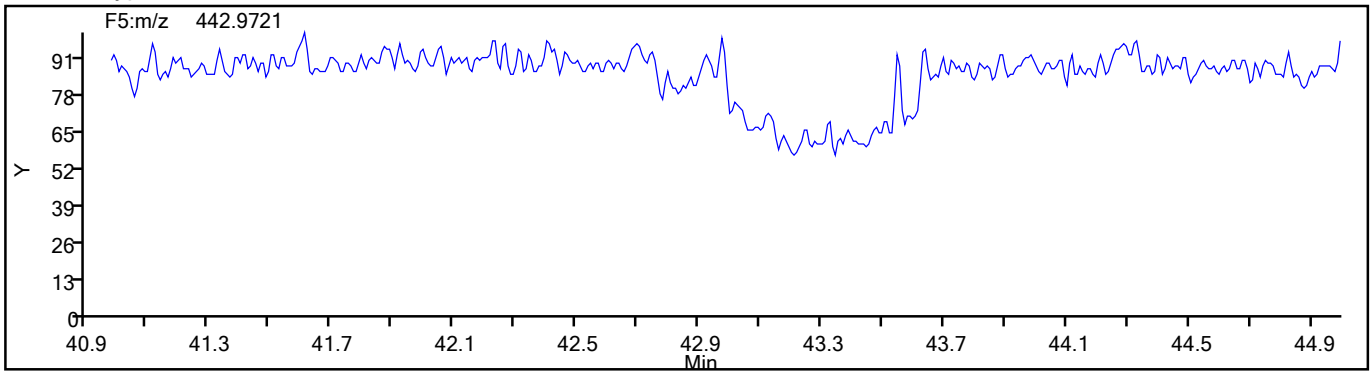

784342

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.05

Error Coefficients

Standard Error:	7060000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.844284	100.0	1113145.0	1.137713	Y
2	IC 320-496688/4	10.0	9.530968	100.0	1162117.0	0.953097	Y
3	IC 320-496688/5	50.0	52.293706	100.0	1094713.0	1.045874	Y
4	IC 320-496688/6	200.0	219.393902	100.0	1337869.0	1.09697	Y
5	IC 320-496688/7	1000.0	1017.847283	100.0	1355803.0	1.017847	Y

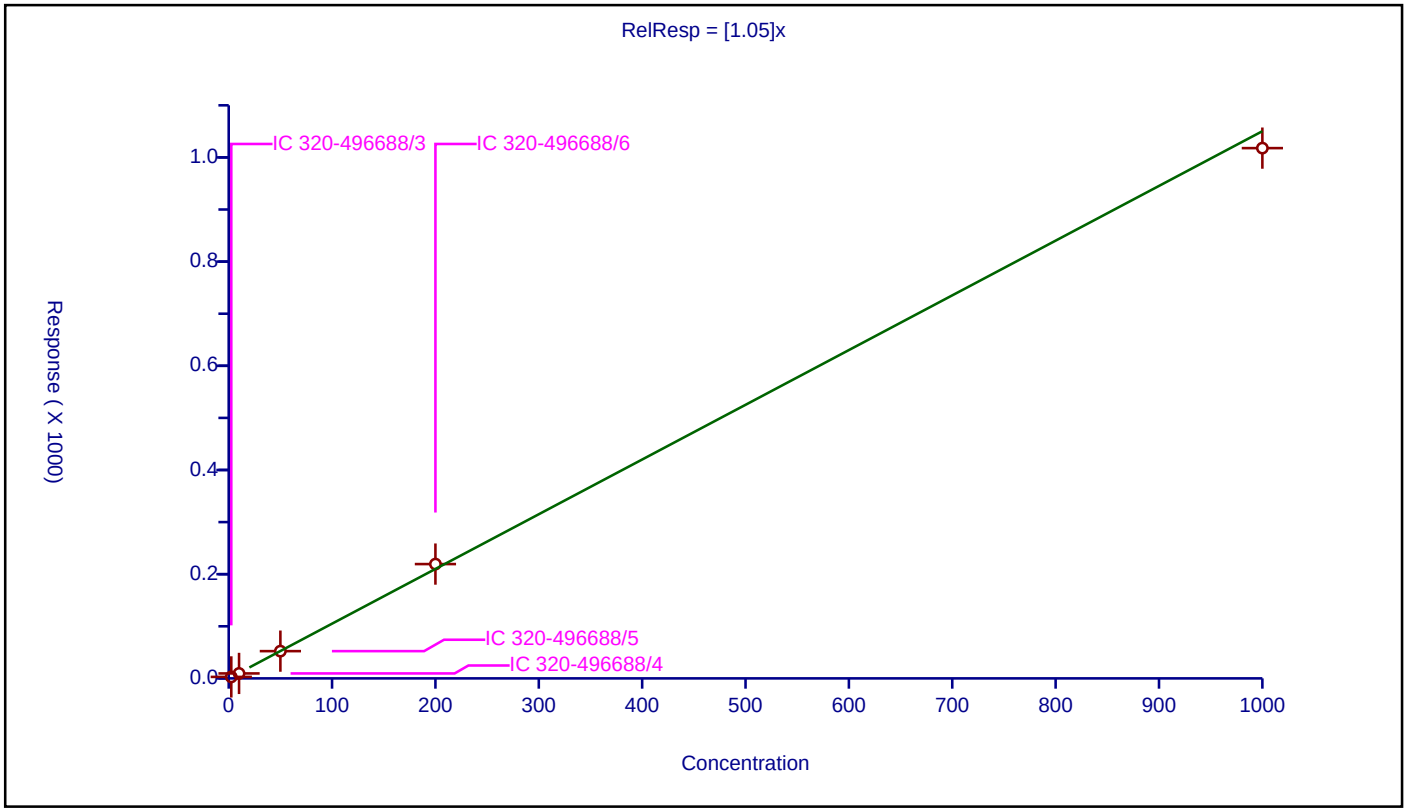

784343

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.442

Error Coefficients

Standard Error:	10800000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.852995	100.0	1227279.0	1.541198	Y
2	IC 320-496688/4	10.0	12.896239	100.0	1272526.0	1.289624	Y
3	IC 320-496688/5	50.0	74.275022	100.0	1182209.0	1.4855	Y
4	IC 320-496688/6	200.0	304.802204	100.0	1392194.0	1.524011	Y
5	IC 320-496688/7	1000.0	1370.014158	100.0	1546113.0	1.370014	Y

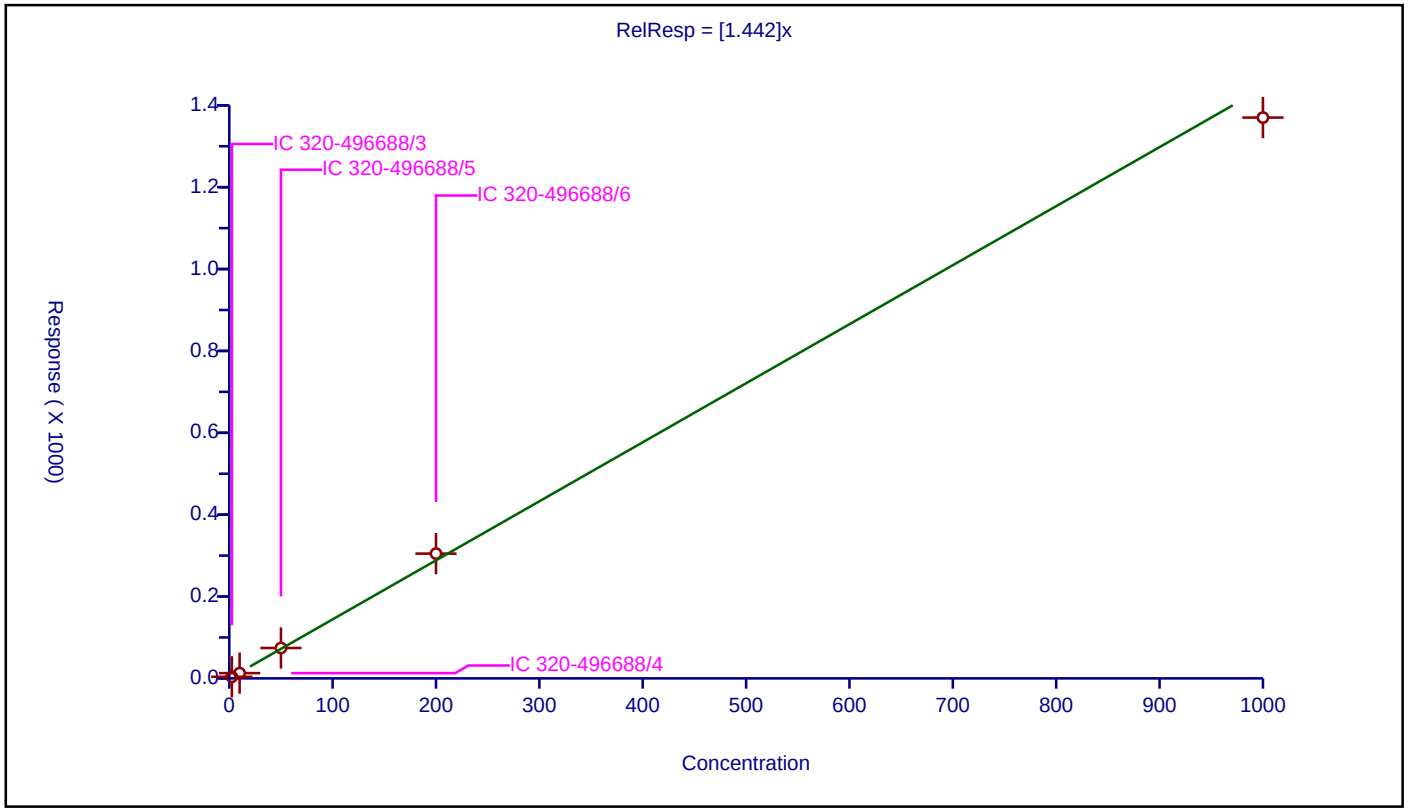

784344

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.309

Error Coefficients

Standard Error:	9110000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.51417	100.0	1120663.0	1.405668	Y
2	IC 320-496688/4	10.0	11.769676	100.0	1175351.0	1.176968	Y
3	IC 320-496688/5	50.0	67.293315	100.0	1080883.0	1.345866	Y
4	IC 320-496688/6	200.0	278.744786	100.0	1337573.0	1.393724	Y
5	IC 320-496688/7	1000.0	1223.548565	100.0	1455766.0	1.223549	Y

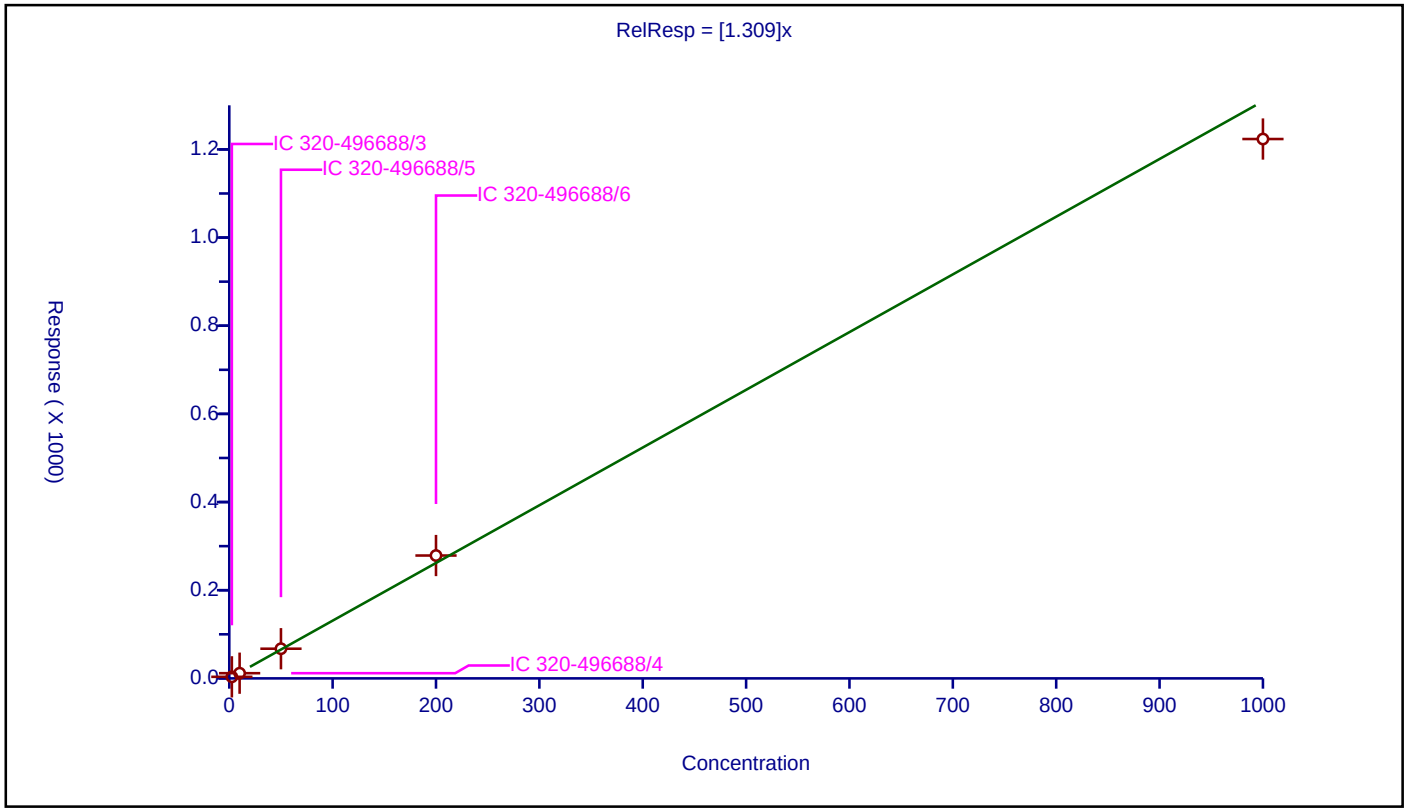

784345

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	7950000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808772	100.0	1127895.0	1.123509	Y
2	IC 320-496688/4	10.0	9.701688	100.0	1363103.0	0.970169	Y
3	IC 320-496688/5	50.0	53.7445	100.0	1348471.0	1.07489	Y
4	IC 320-496688/6	200.0	224.989195	100.0	1432215.0	1.124946	Y
5	IC 320-496688/7	1000.0	1010.433801	100.0	1539784.0	1.010434	Y

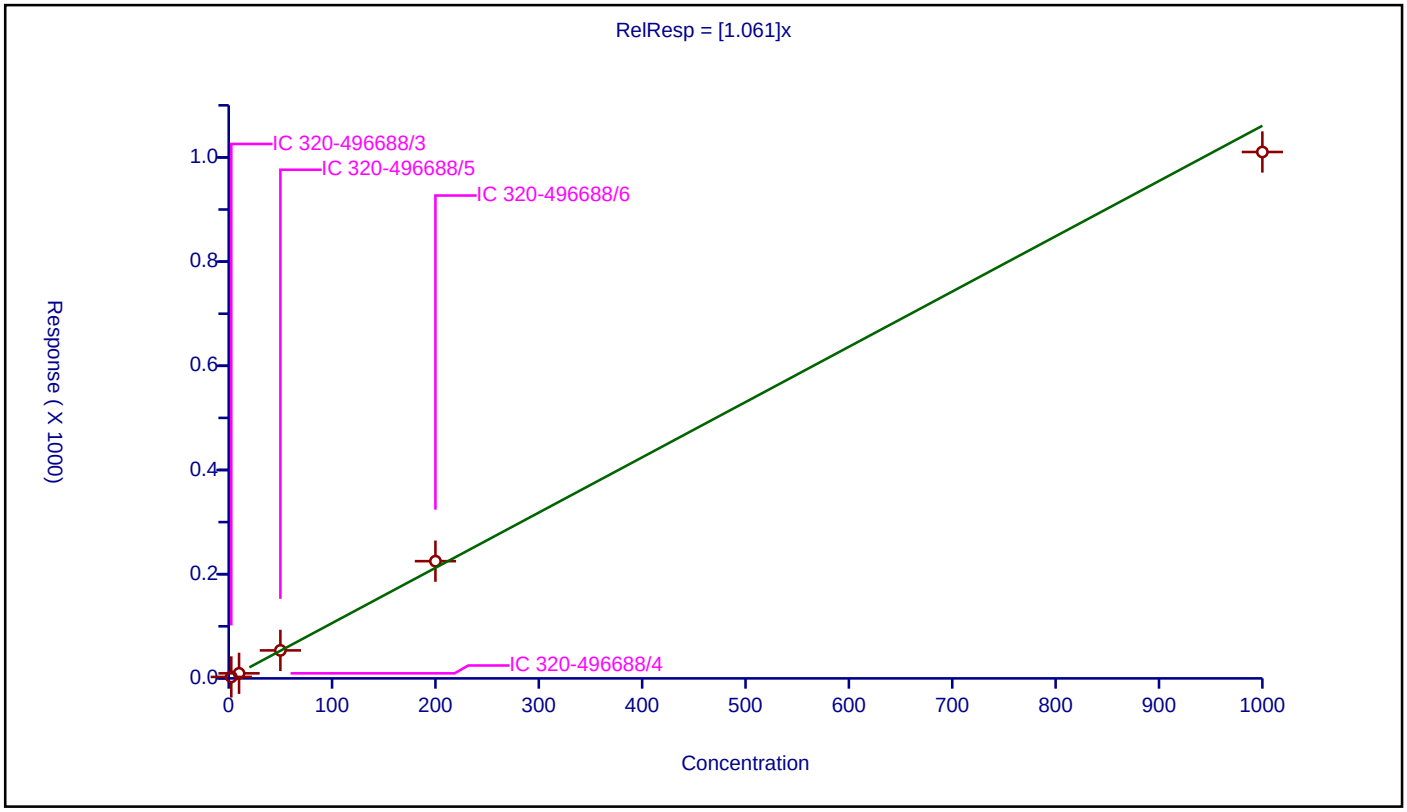

784346

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.147

Error Coefficients

Standard Error:	11200000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.056507	100.0	1517222.0	1.222603	Y
2	IC 320-496688/4	10.0	10.071694	100.0	1545033.0	1.007169	Y
3	IC 320-496688/5	50.0	59.364869	100.0	1841825.0	1.187297	Y
4	IC 320-496688/6	200.0	241.451426	100.0	1778238.0	1.207257	Y
5	IC 320-496688/7	1000.0	1112.580113	100.0	1968615.0	1.11258	Y

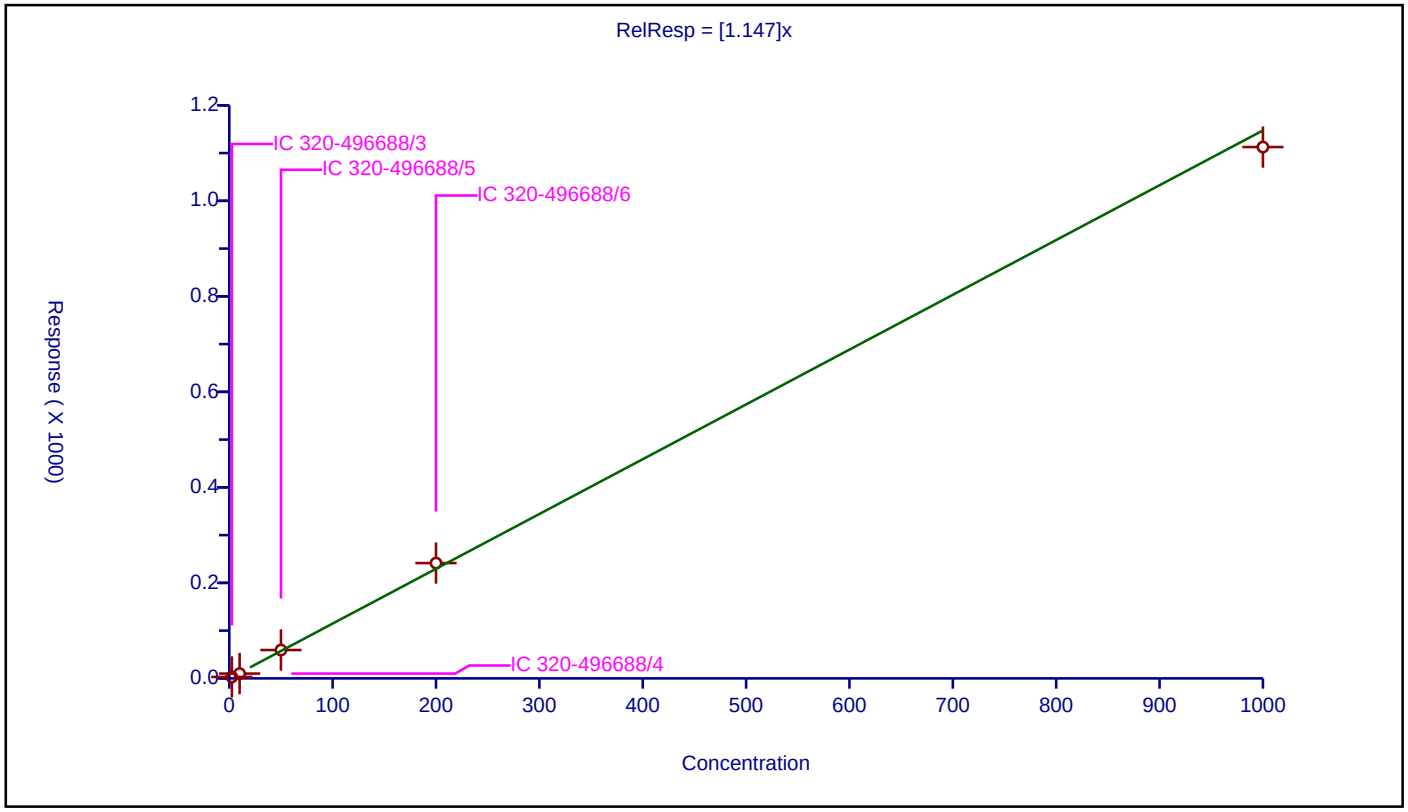

784347

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9933

Error Coefficients

Standard Error:	8510000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.639223	100.0	1291365.0	1.055689	Y
2	IC 320-496688/4	10.0	8.862824	100.0	1558668.0	0.886282	Y
3	IC 320-496688/5	50.0	52.081775	100.0	1460100.0	1.041636	Y
4	IC 320-496688/6	200.0	205.274729	100.0	1669337.0	1.026374	Y
5	IC 320-496688/7	1000.0	956.728345	100.0	1741498.0	0.956728	Y

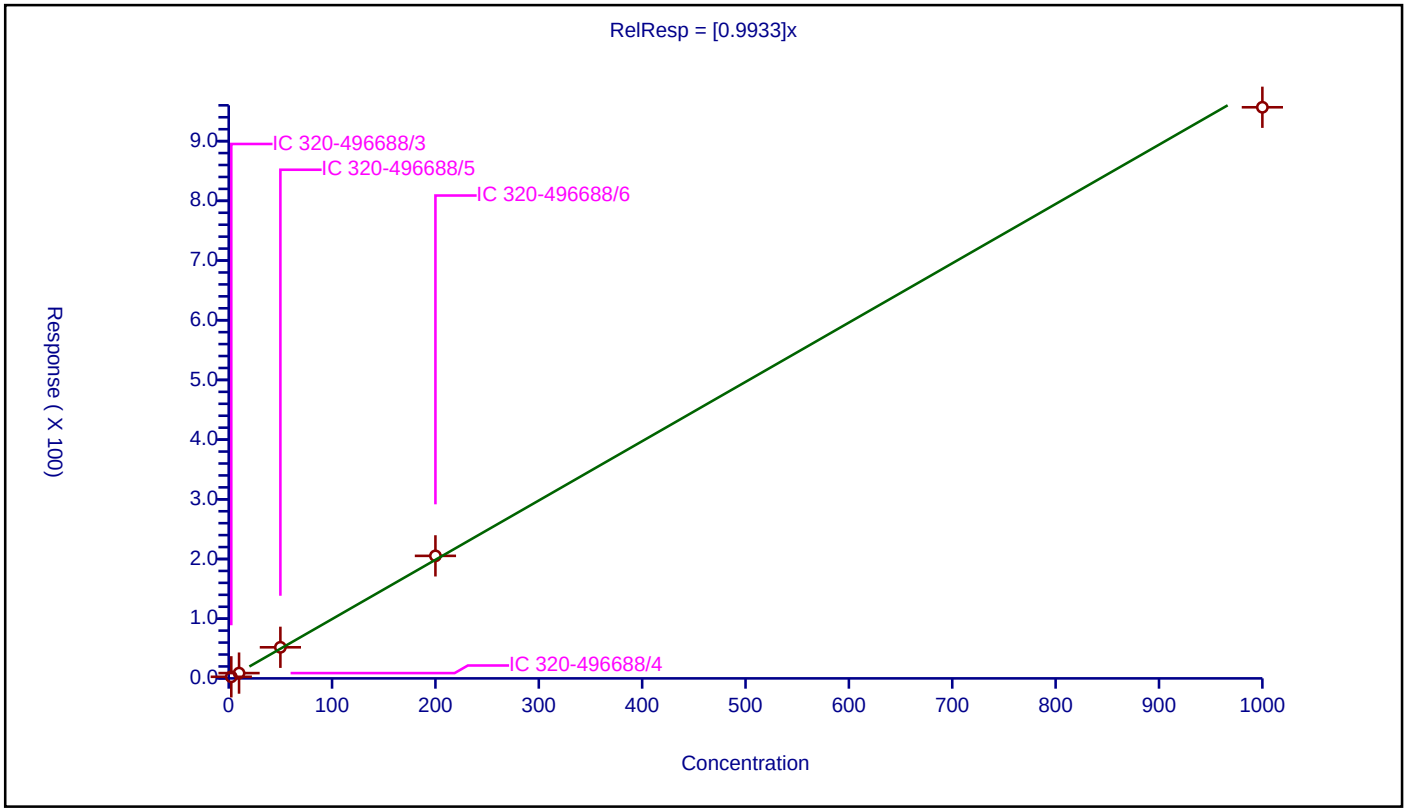

784348

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.218

Error Coefficients

Standard Error:	13600000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.343553	100.0	1626653.0	1.337421	Y
2	IC 320-496688/4	10.0	10.950603	100.0	1692336.0	1.09506	Y
3	IC 320-496688/5	50.0	61.795629	100.0	2015594.0	1.235913	Y
4	IC 320-496688/6	200.0	250.125403	100.0	1995567.0	1.250627	Y
5	IC 320-496688/7	1000.0	1169.95242	100.0	2283961.0	1.169952	Y

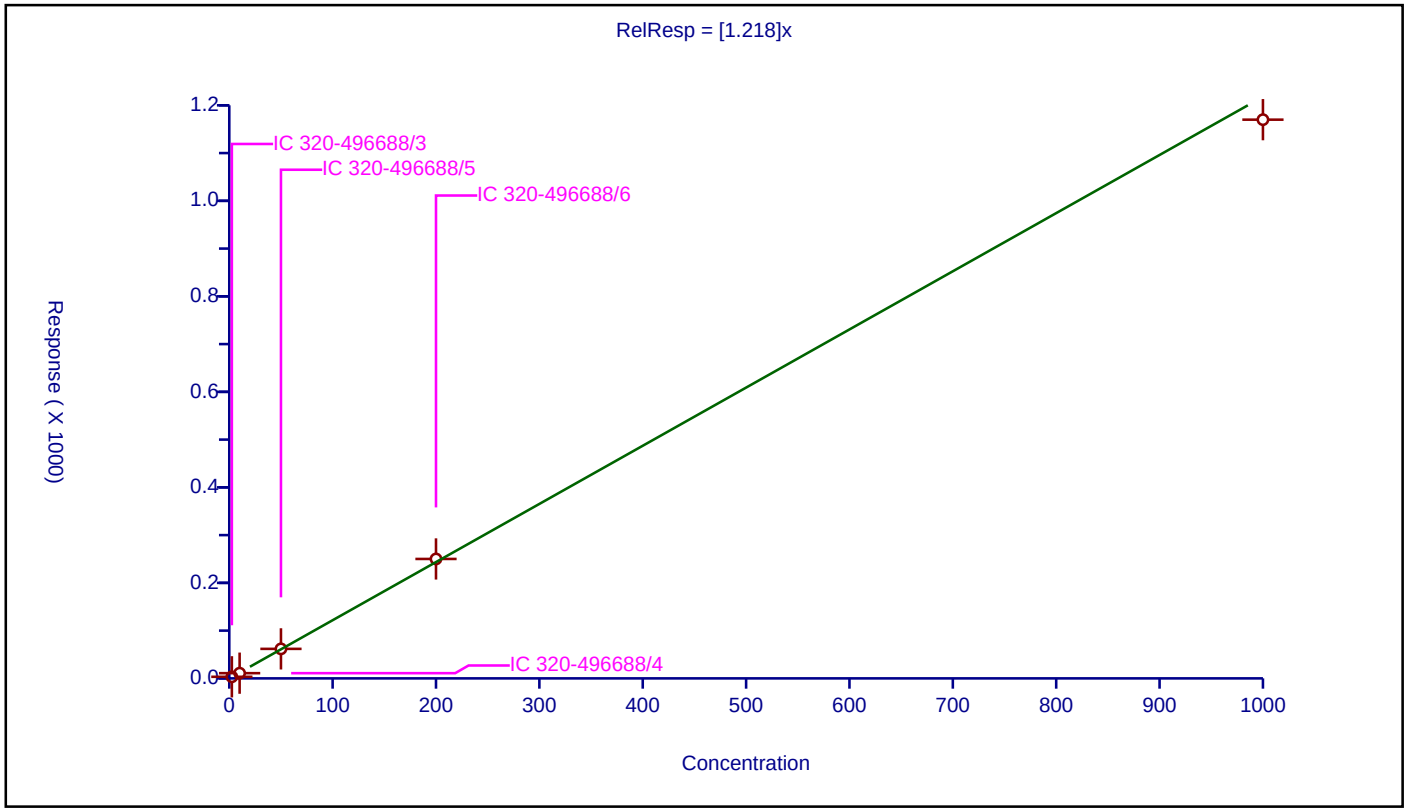

784349

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.184

Error Coefficients

Standard Error:	8820000
Relative Standard Error:	11.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.510522	100.0	1127895.0	1.404209	Y
2	IC 320-496688/4	10.0	10.251683	100.0	1363103.0	1.025168	Y
3	IC 320-496688/5	50.0	58.326134	100.0	1348471.0	1.166523	Y
4	IC 320-496688/6	200.0	239.918169	100.0	1432215.0	1.199591	Y
5	IC 320-496688/7	1000.0	1122.182397	100.0	1539784.0	1.122182	Y

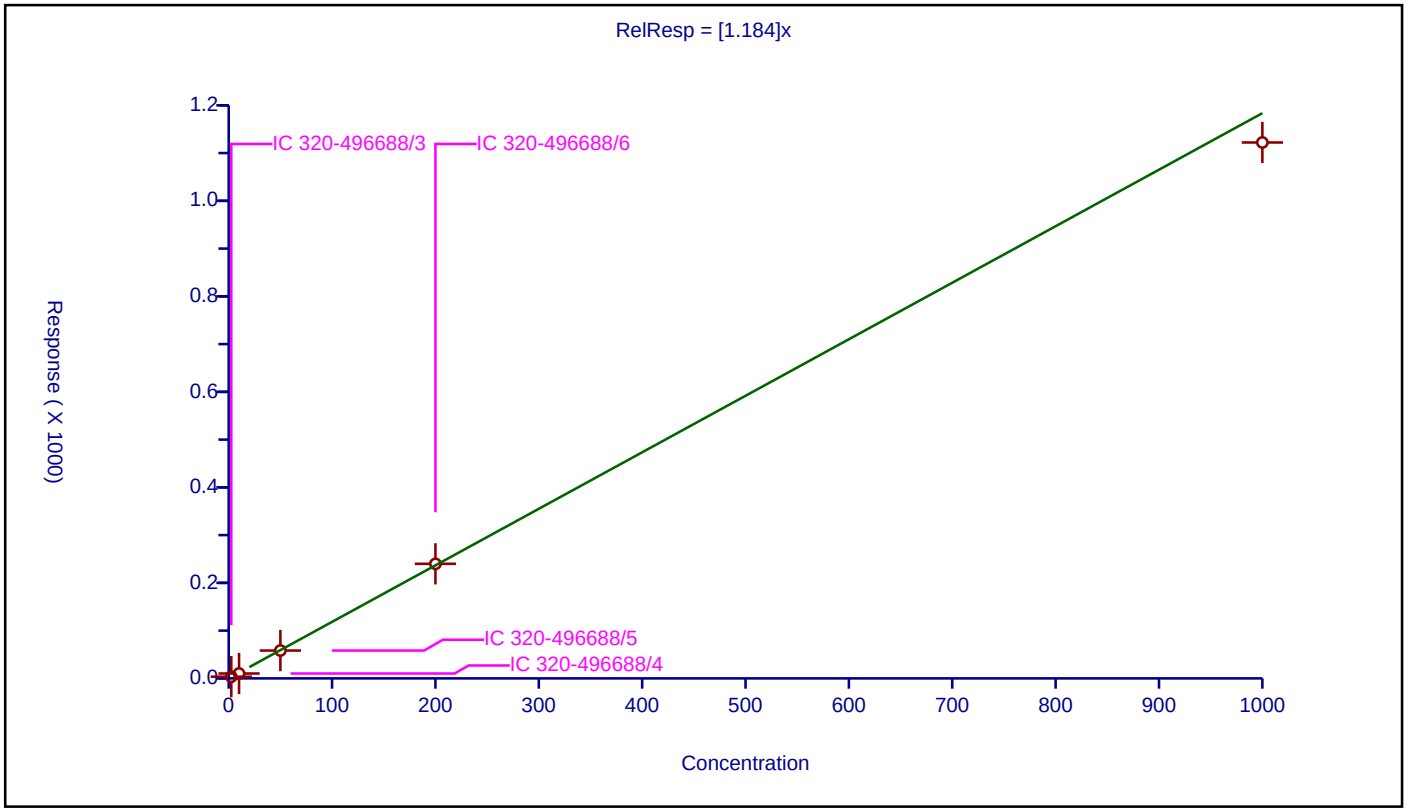

784350

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.24

Error Coefficients

Standard Error:	11500000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.395229	100.0	1696557.0	1.358092	Y
2	IC 320-496688/4	10.0	11.238546	100.0	1735785.0	1.123855	Y
3	IC 320-496688/5	50.0	62.662354	100.0	1657413.0	1.253247	Y
4	IC 320-496688/6	200.0	255.13849	100.0	1742331.0	1.275692	Y
5	IC 320-496688/7	1000.0	1189.708821	100.0	1895740.0	1.189709	Y

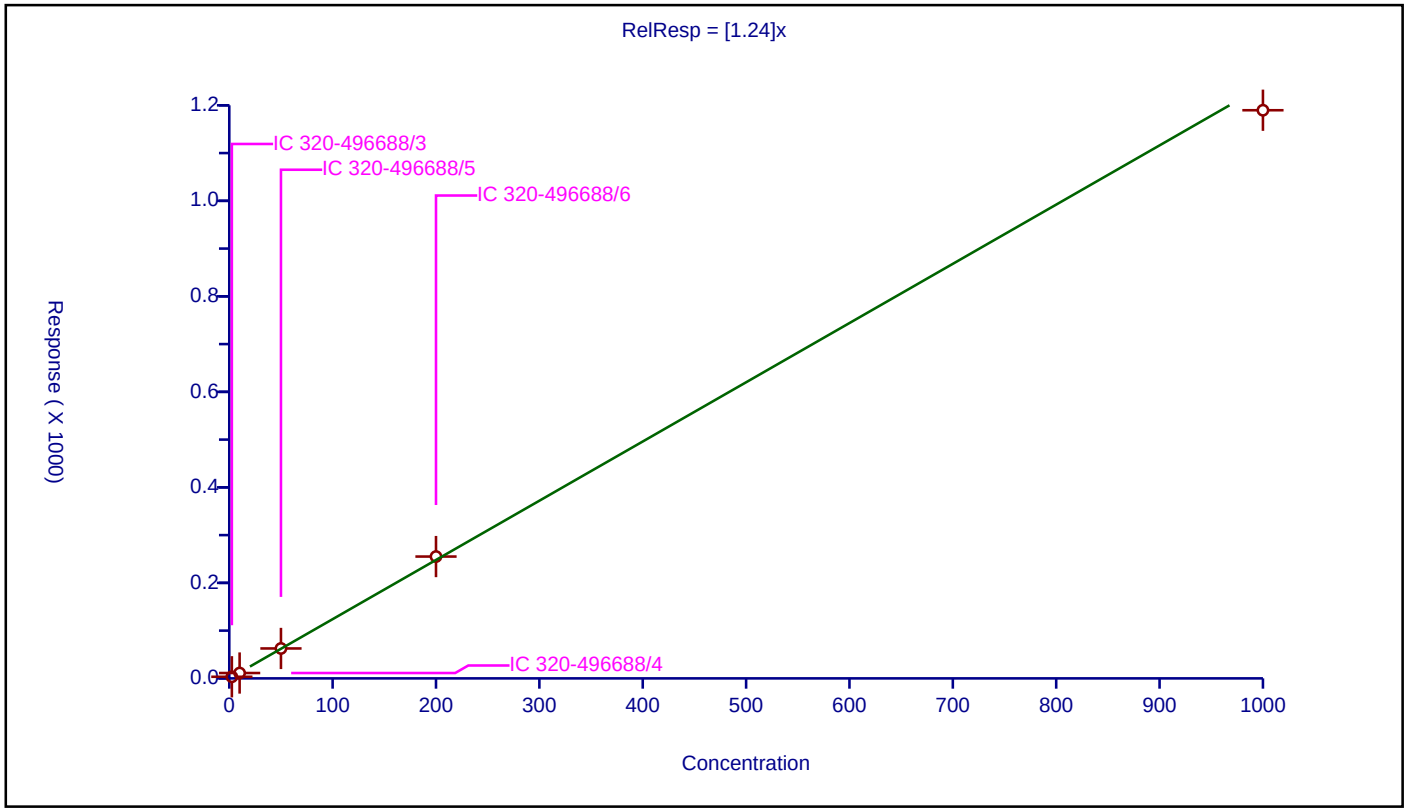

784351

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.046

Error Coefficients

Standard Error:	8500000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.679791	100.0	1602476.0	1.071916	Y
2	IC 320-496688/4	10.0	9.520403	100.0	1364144.0	0.95204	Y
3	IC 320-496688/5	50.0	53.426119	100.0	1388641.0	1.068522	Y
4	IC 320-496688/6	200.0	220.300949	100.0	1521254.0	1.101505	Y
5	IC 320-496688/7	1000.0	1038.502383	100.0	1602880.0	1.038502	Y

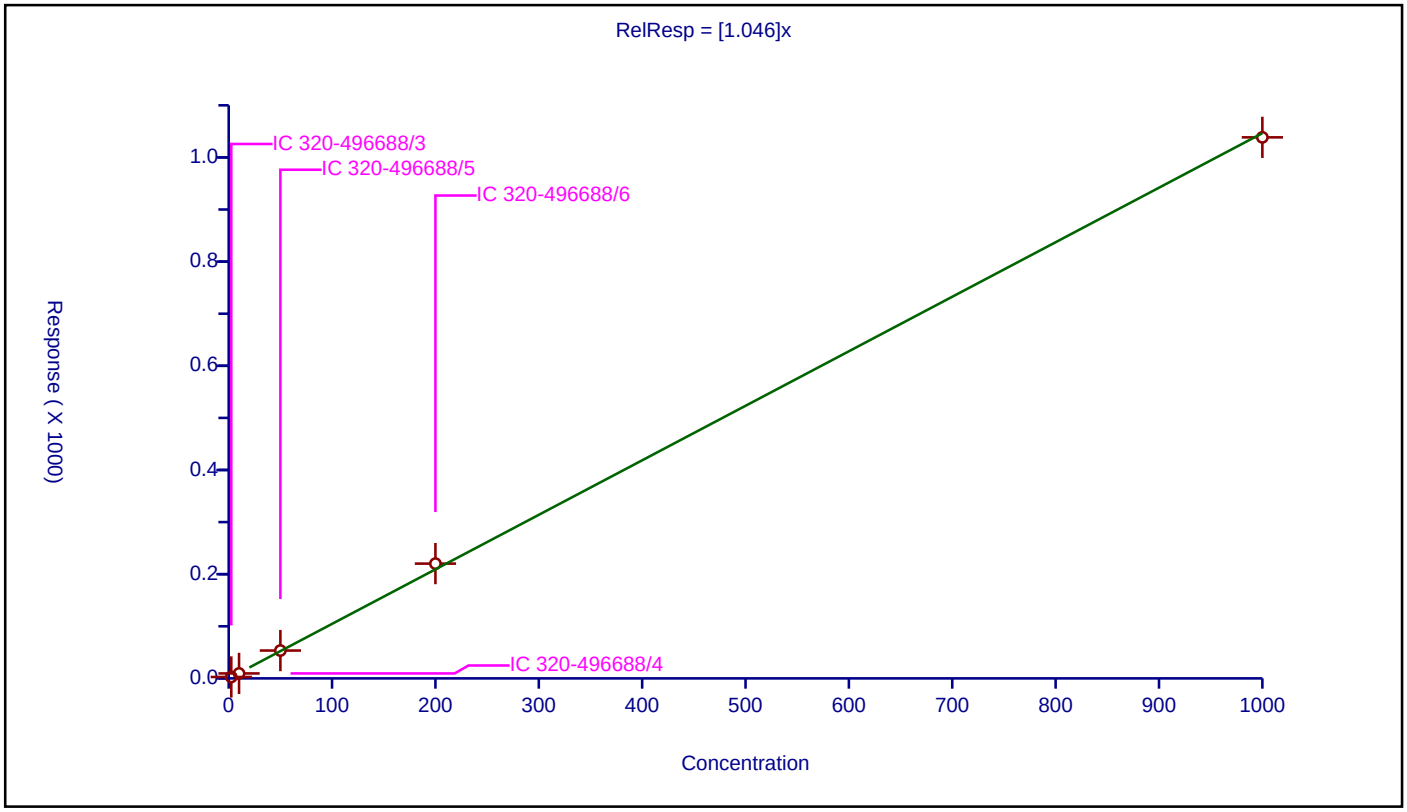

784352

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.054

Error Coefficients

Standard Error:	13300000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.980089	100.0	2514489.0	1.192035	Y
2	IC 320-496688/4	10.0	9.411606	100.0	2234847.0	0.941161	Y
3	IC 320-496688/5	50.0	51.86467	100.0	2149791.0	1.037293	Y
4	IC 320-496688/6	200.0	217.934531	100.0	2432949.0	1.089673	Y
5	IC 320-496688/7	1000.0	1011.152482	100.0	2574521.0	1.011152	Y

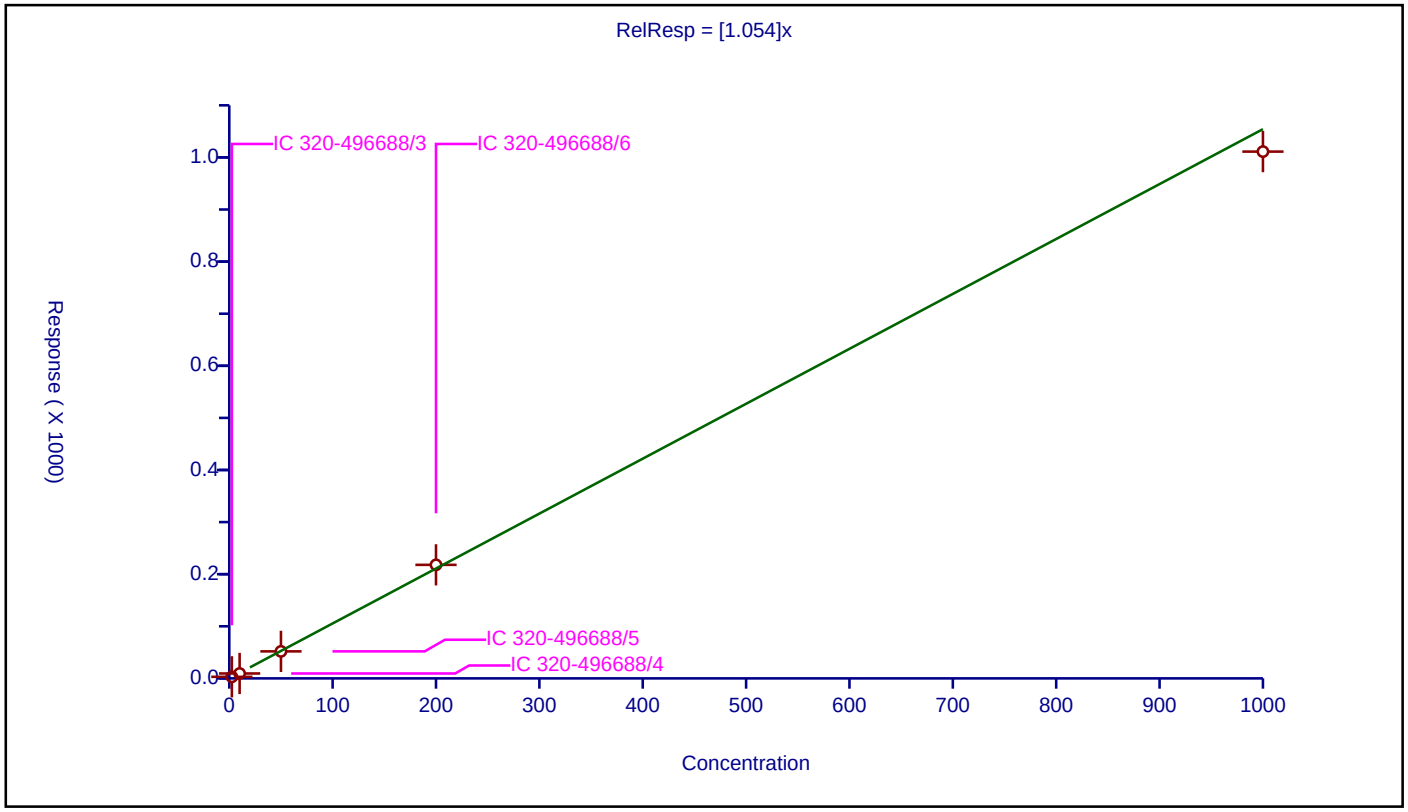

784353

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.214

Error Coefficients

Standard Error:	13000000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.283761	100.0	1523436.0	1.313504	Y
2	IC 320-496688/4	10.0	11.007204	100.0	1740015.0	1.10072	Y
3	IC 320-496688/5	50.0	61.8379	100.0	1861559.0	1.236758	Y
4	IC 320-496688/6	200.0	252.469364	100.0	2042874.0	1.262347	Y
5	IC 320-496688/7	1000.0	1159.01852	100.0	2190509.0	1.159019	Y

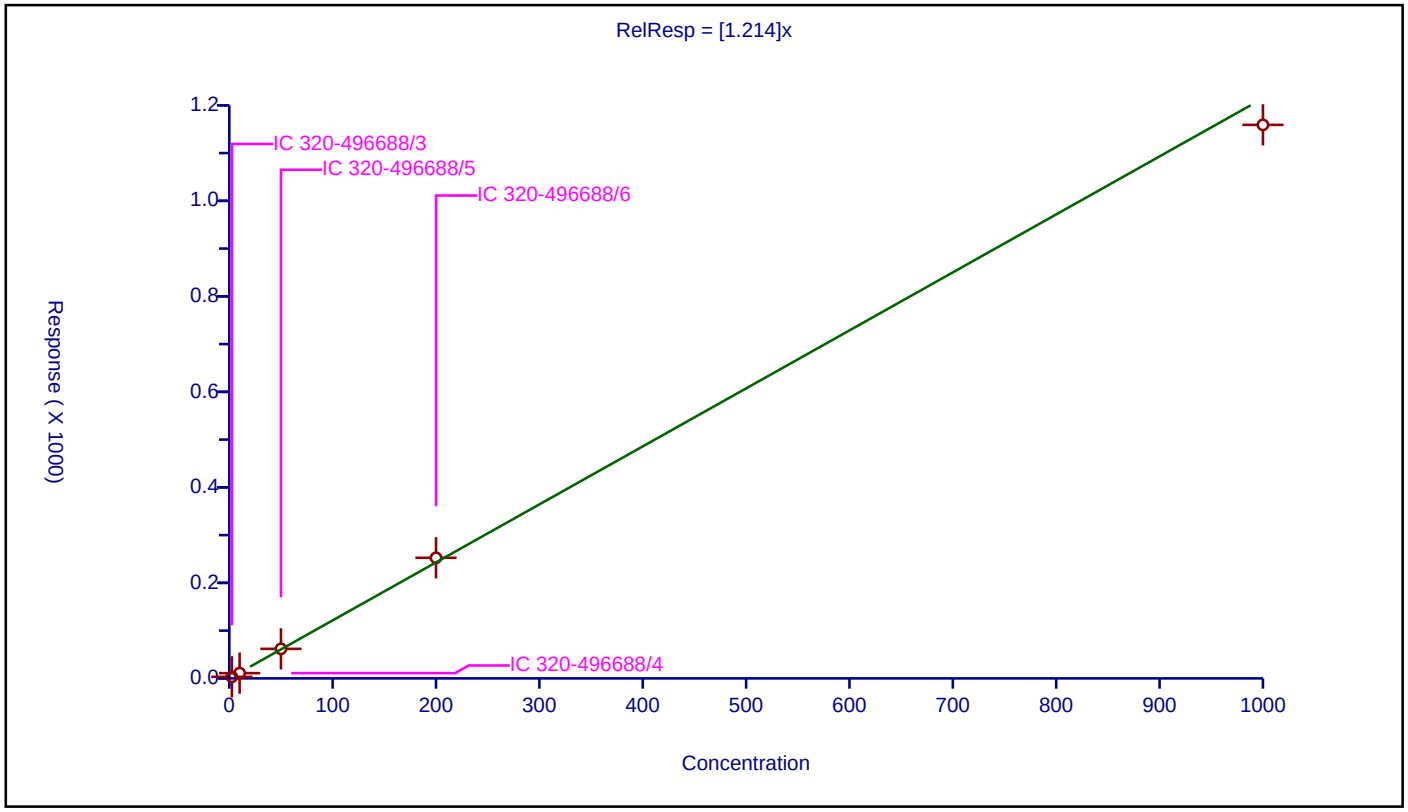

784354

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	12700000
Relative Standard Error:	8.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808272	100.0	2592947.0	1.123309	Y
2	IC 320-496688/4	10.0	8.984414	100.0	2228025.0	0.898441	Y
3	IC 320-496688/5	50.0	49.606313	100.0	1991303.0	0.992126	Y
4	IC 320-496688/6	200.0	212.714288	100.0	2374722.0	1.063571	Y
5	IC 320-496688/7	1000.0	961.852333	100.0	2584740.0	0.961852	Y

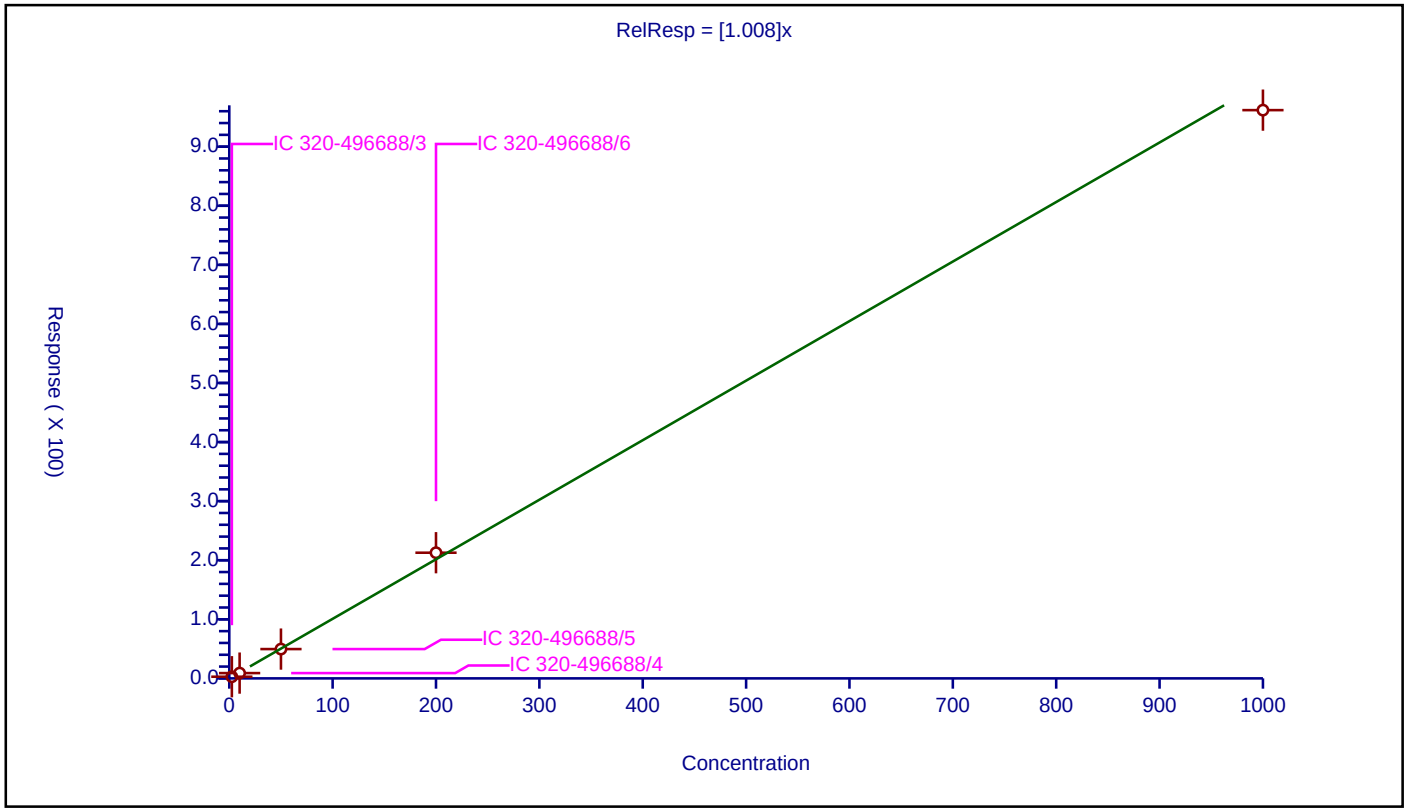

784355

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.075

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.566752	100.0	2138853.0	1.133505	Y
2	IC 320-496688/4	2.0	1.911764	100.0	1829253.0	0.955882	Y
3	IC 320-496688/5	10.0	10.998165	100.0	1800864.0	1.099817	Y
4	IC 320-496688/6	40.0	44.949952	100.0	1948011.0	1.123749	Y
5	IC 320-496688/7	200.0	212.755816	100.0	2014532.0	1.063779	Y

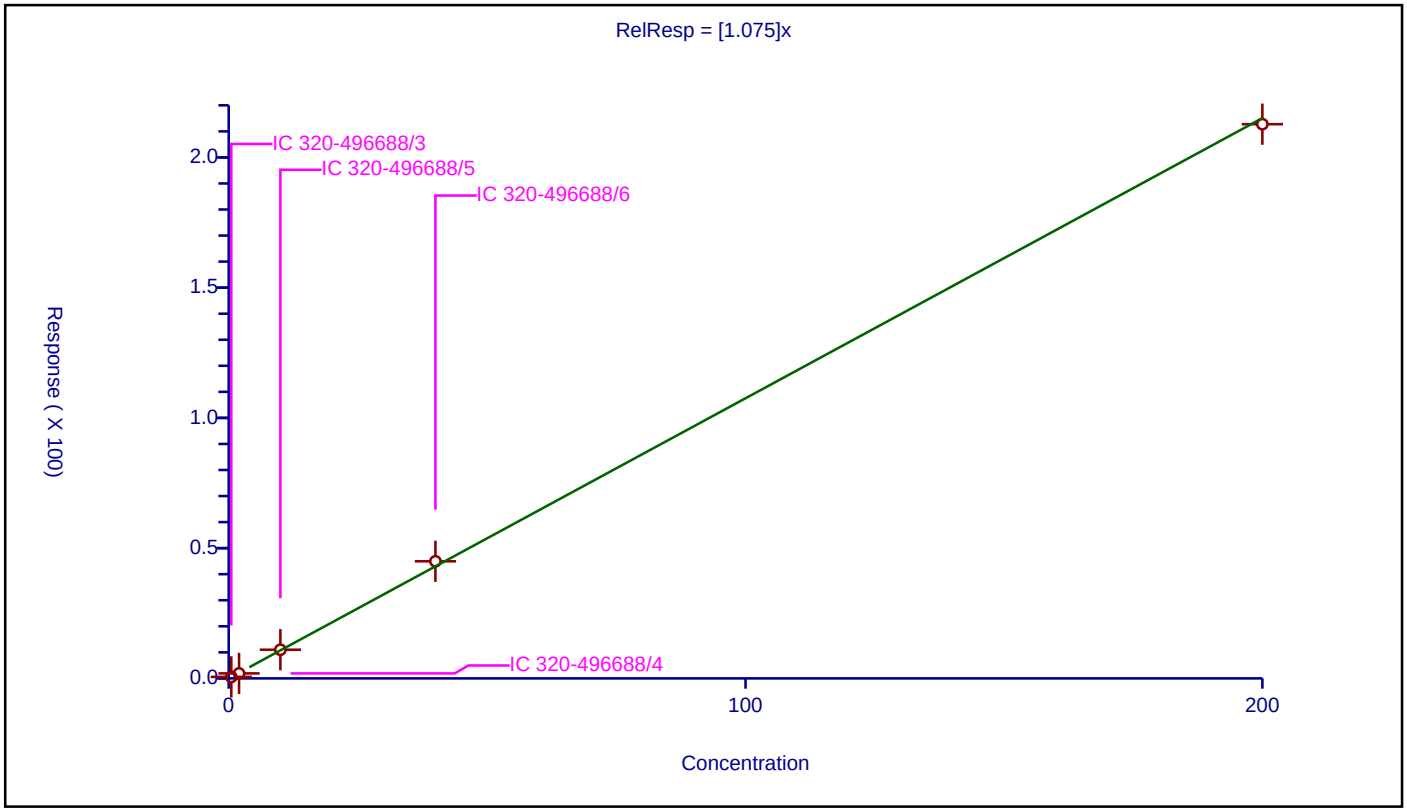

784356

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.08

Error Coefficients

Standard Error:	3140000
Relative Standard Error:	9.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.616764	100.0	3167014.0	1.233528	Y
2	IC 320-496688/4	2.0	1.926948	100.0	2644389.0	0.963474	Y
3	IC 320-496688/5	10.0	10.464342	100.0	2465726.0	1.046434	Y
4	IC 320-496688/6	40.0	44.869913	100.0	2839435.0	1.121748	Y
5	IC 320-496688/7	200.0	207.156116	100.0	2962515.0	1.035781	Y

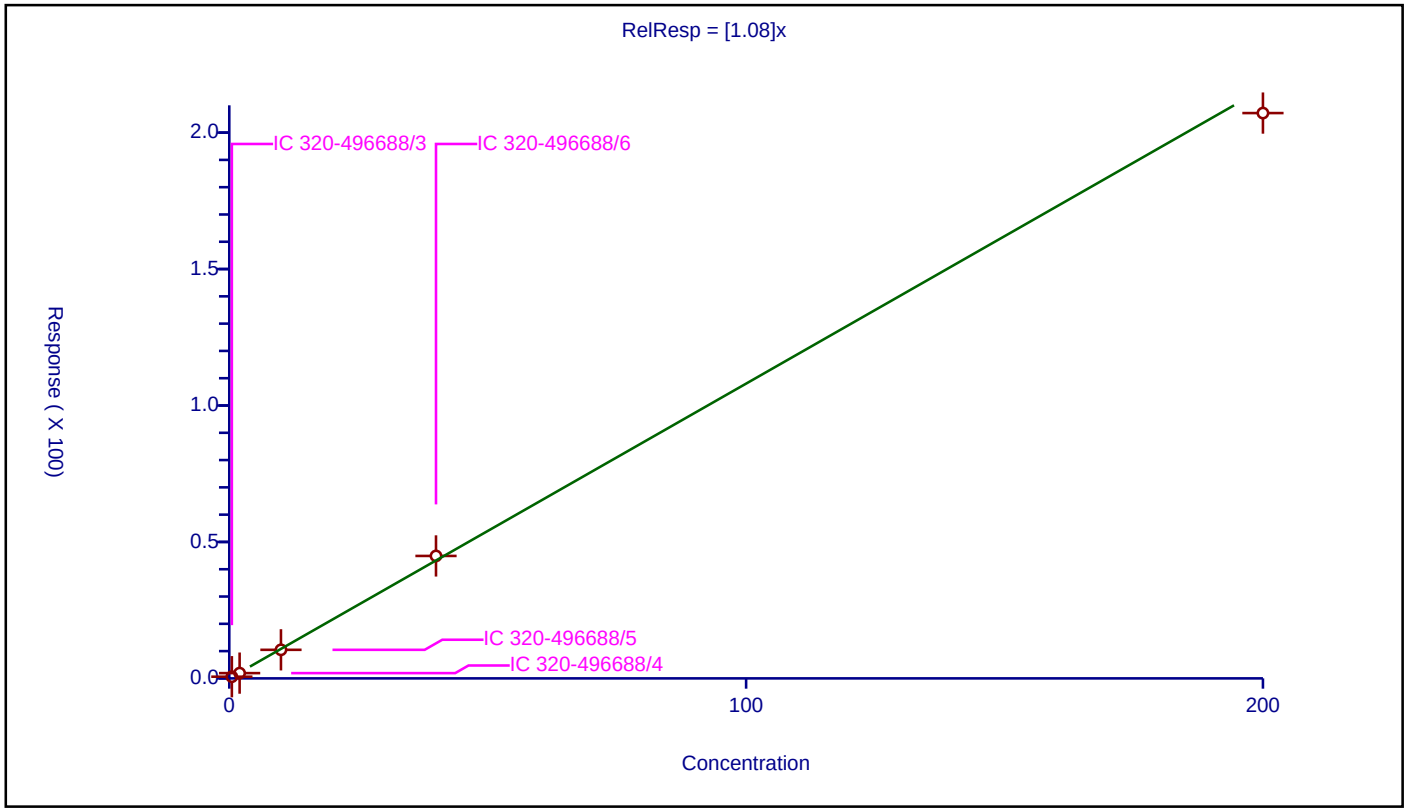

784357

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.482683	100.0	2334037.0	0.965366	Y
2	IC 320-496688/4	2.0	1.917995	100.0	2045939.0	0.958997	Y
3	IC 320-496688/5	10.0	10.721795	100.0	1900111.0	1.072179	Y
4	IC 320-496688/6	40.0	40.297989	100.0	2105852.0	1.00745	Y
5	IC 320-496688/7	200.0	207.496438	100.0	2066088.0	1.037482	Y

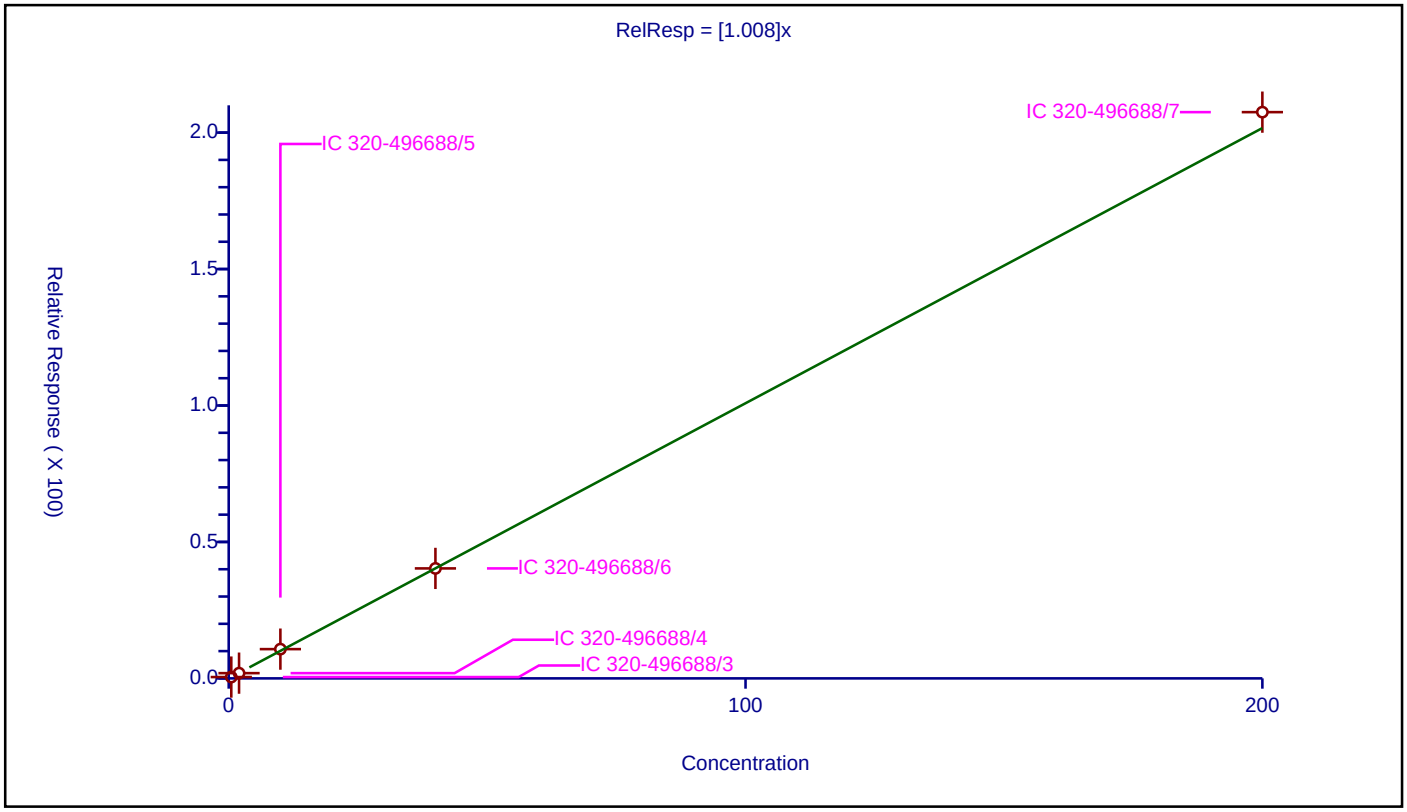

784358

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.062

Error Coefficients

Standard Error:	11700000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	5.664077	200.0	1823492.0	1.132815	Y
2	IC 320-496688/4	20.0	19.907928	200.0	1833139.0	0.995396	Y
3	IC 320-496688/5	100.0	108.699815	200.0	1676139.0	1.086998	Y
4	IC 320-496688/6	400.0	441.074631	200.0	2177938.0	1.102687	Y
5	IC 320-496688/7	2000.0	1984.090177	200.0	2298668.0	0.992045	Y

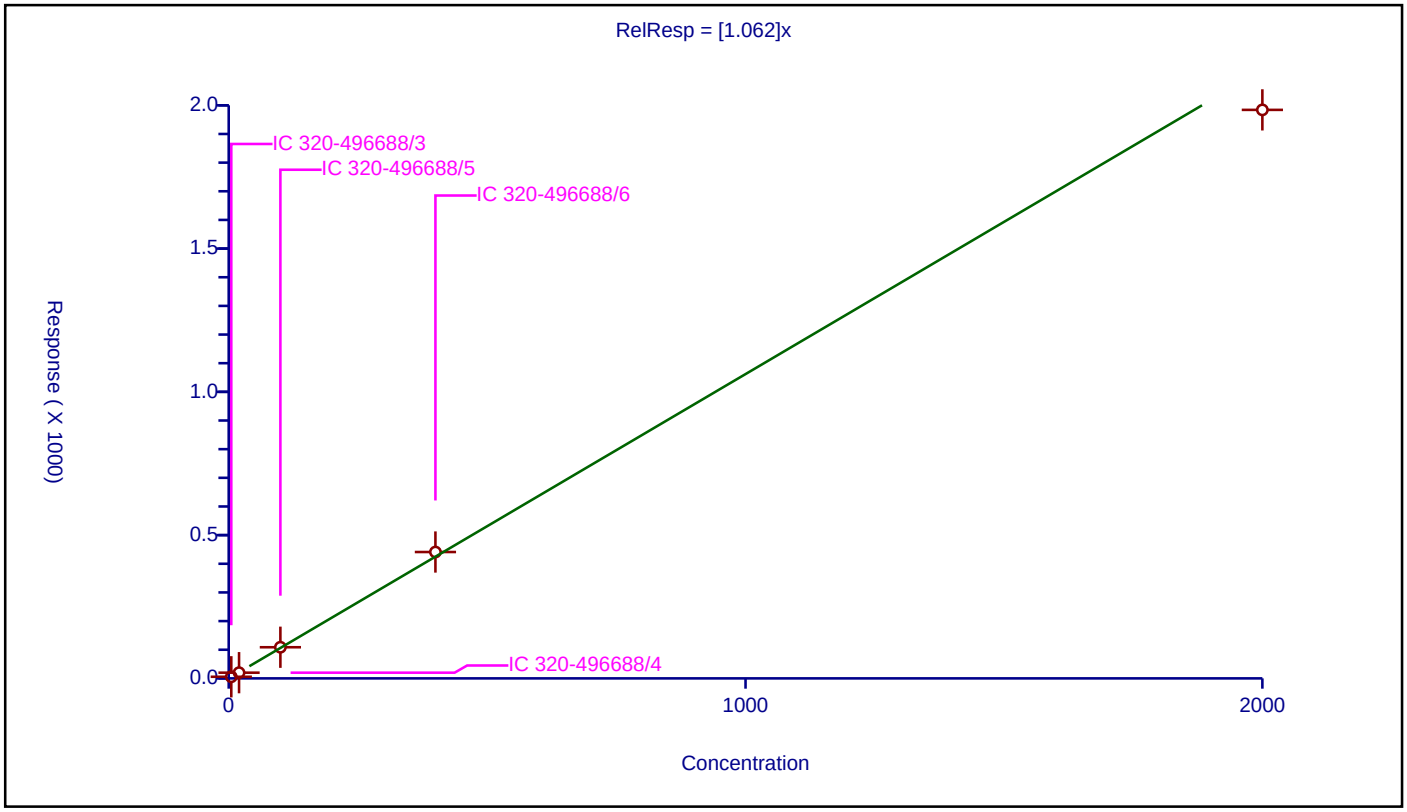

784359

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	15600000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	6.696054	200.0	1823492.0	1.339211	Y
2	IC 320-496688/4	20.0	23.726842	200.0	1833139.0	1.186342	Y
3	IC 320-496688/5	100.0	133.490122	200.0	1676139.0	1.334901	Y
4	IC 320-496688/6	400.0	558.573844	200.0	2177938.0	1.396435	Y
5	IC 320-496688/7	2000.0	2654.186163	200.0	2298668.0	1.327093	Y

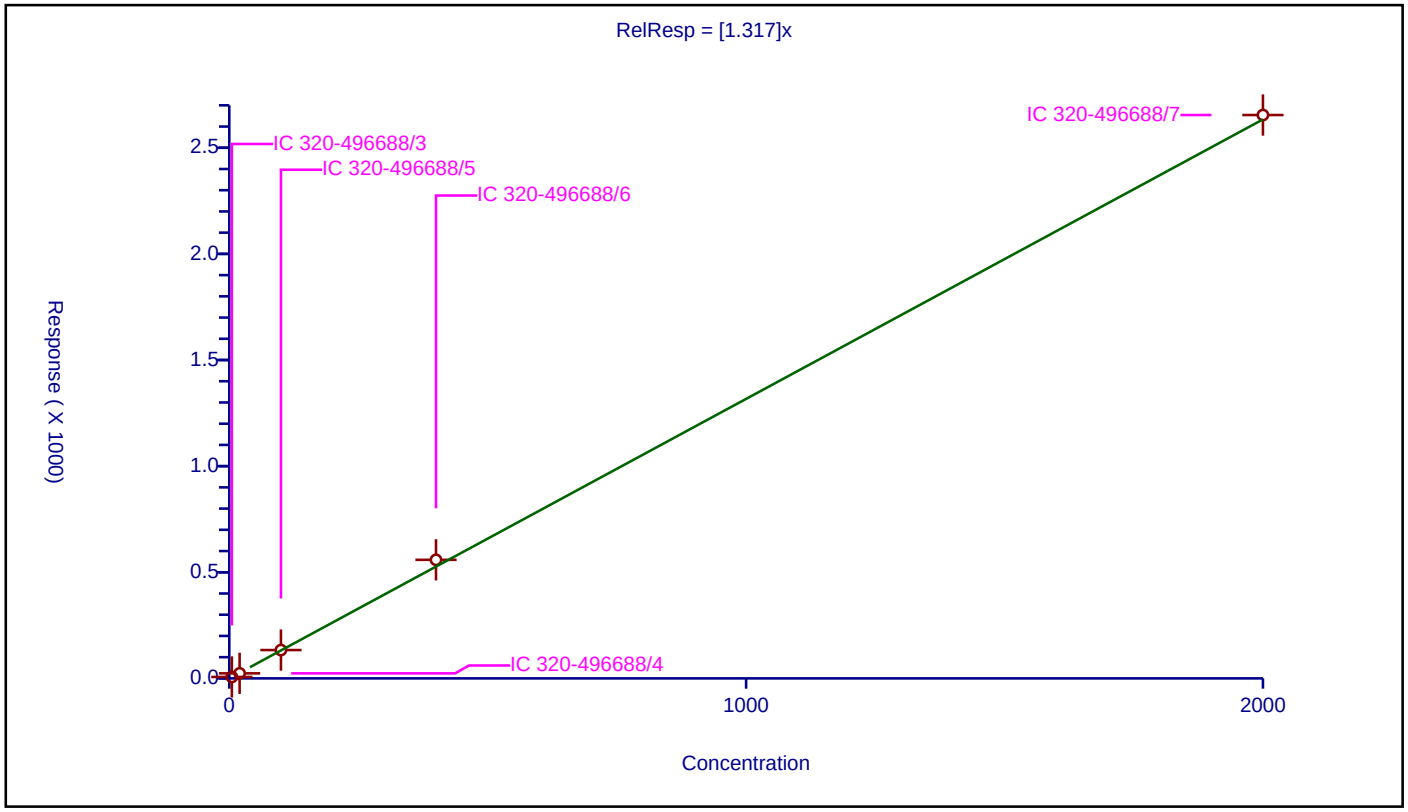

784360

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID (1): WDM 320-496688/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 06/08/2021 12:40

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	20.95	13

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d				
Injection Date:	08-Jun-2021 12:40:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 7095
H (Peak Height) = 55991

%R = 13 <= 25
Passed

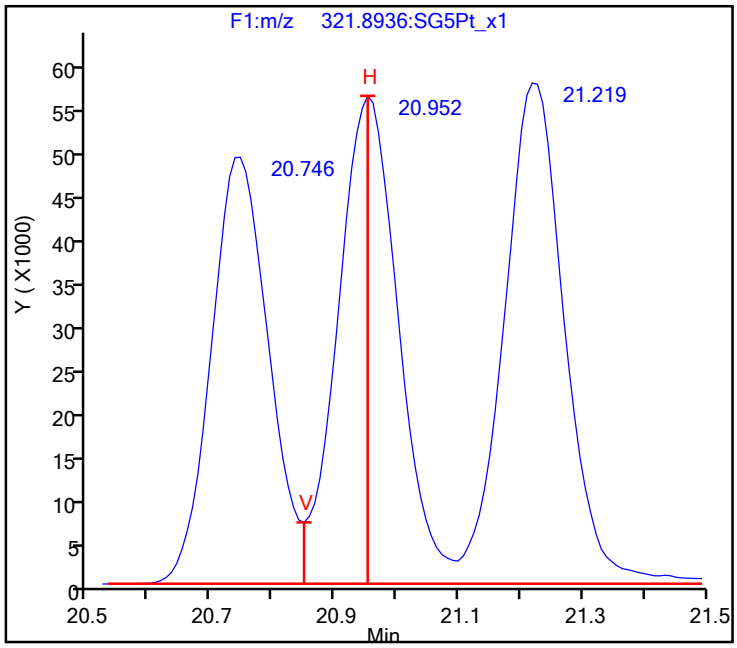

784362

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

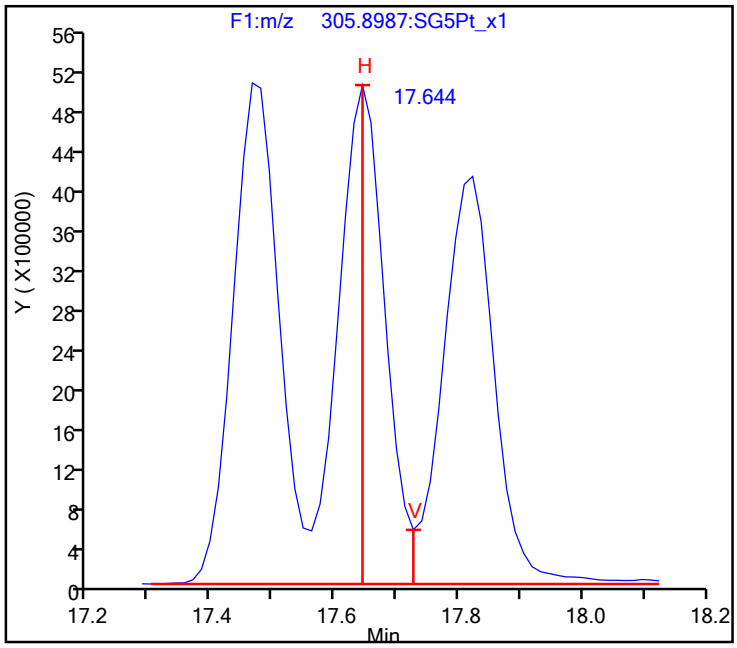

784364

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID (1): WDM 320-510264/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 07/26/2021 09:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.34	18

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d				
Injection Date:	26-Jul-2021 09:21:58	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 725696
H (Peak Height) = 4136533

%R = 18 <= 25
Passed

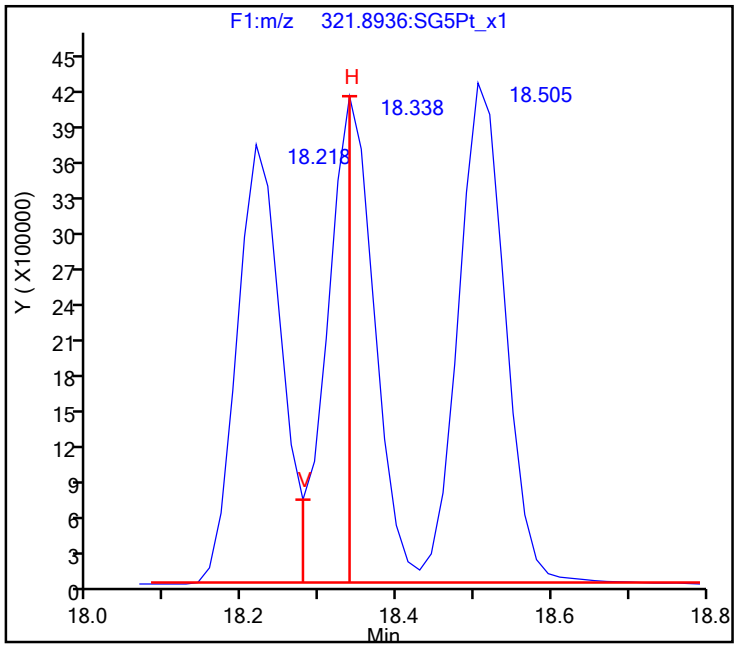

784366

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID (1): WDM 320-517196/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/17/2021 14:27

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.93	19

FORM VI 1613B

784367

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d				
Injection Date:	17-Aug-2021 14:27:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 3883
H (Peak Height) = 20212

%R = 19 <= 25
Passed

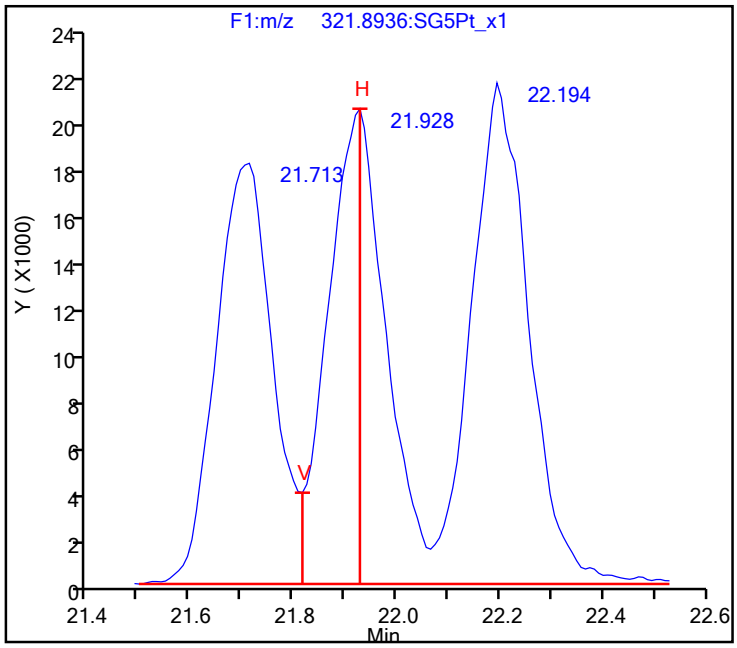

784368

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID (1): WDM 320-517461/30 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/18/2021 14:50

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.89	18

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d				
Injection Date:	18-Aug-2021 14:50:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 791
H (Peak Height) = 4354

%R = 18 <= 25
Passed

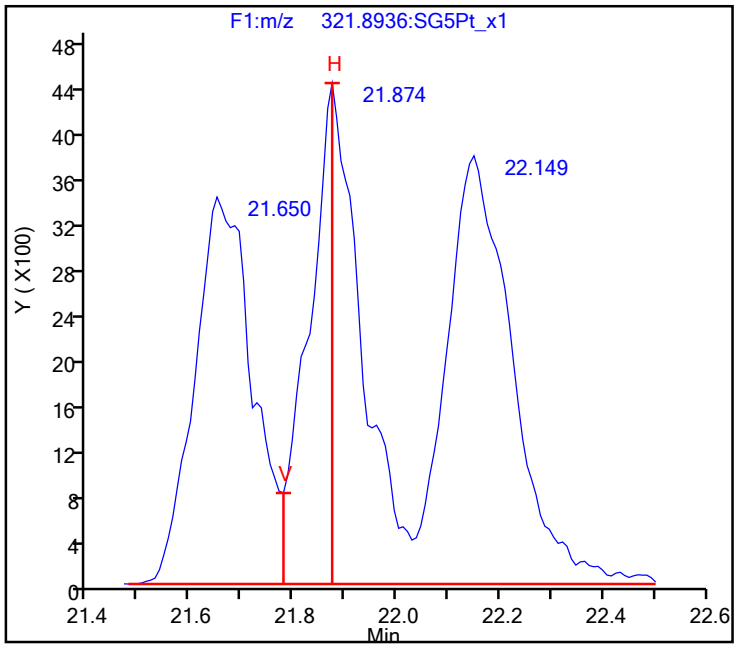

784370

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID (1): WDM 320-517729/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/18/2021 14:15

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.02	23

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d				
Injection Date:	18-Aug-2021 14:15:56	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1518972
H (Peak Height) = 6483954

%R = 23 <= 25
Passed

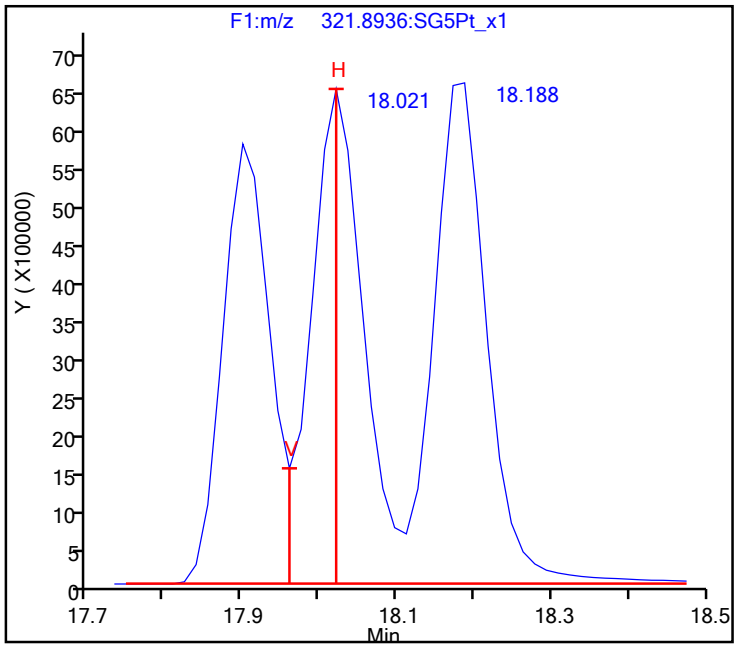

784372

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID (1): CPS 320-518979/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/23/2021 15:34

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	13

Report Date: 24-Aug-2021 09:19:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d				
Injection Date:	23-Aug-2021 15:34:18	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 472819
H (Peak Height) = 3579908

%R = 13 <= 25
Passed

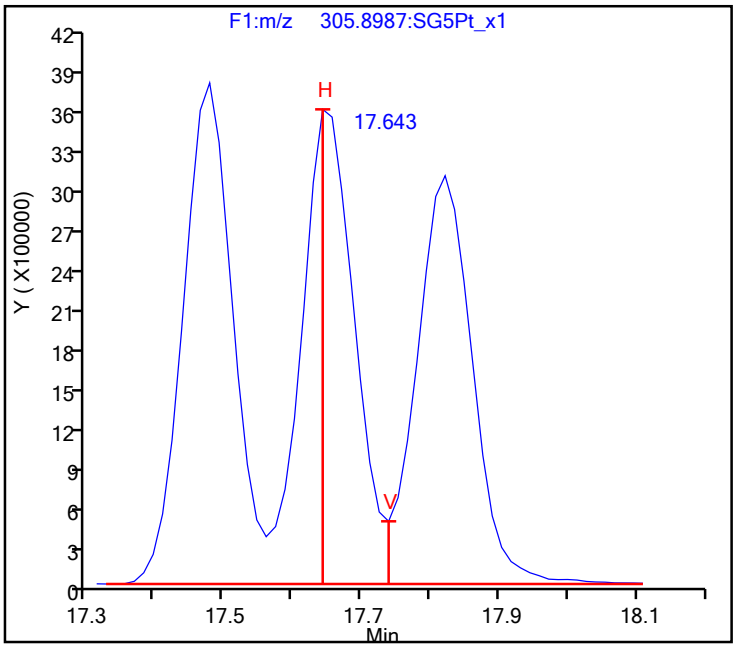

784374

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID (1): CPS 320-519744/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 12:59

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	14

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d				
Injection Date:	25-Aug-2021 12:59:07	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 447420
H (Peak Height) = 3303038

%R = 14 <= 25
Passed

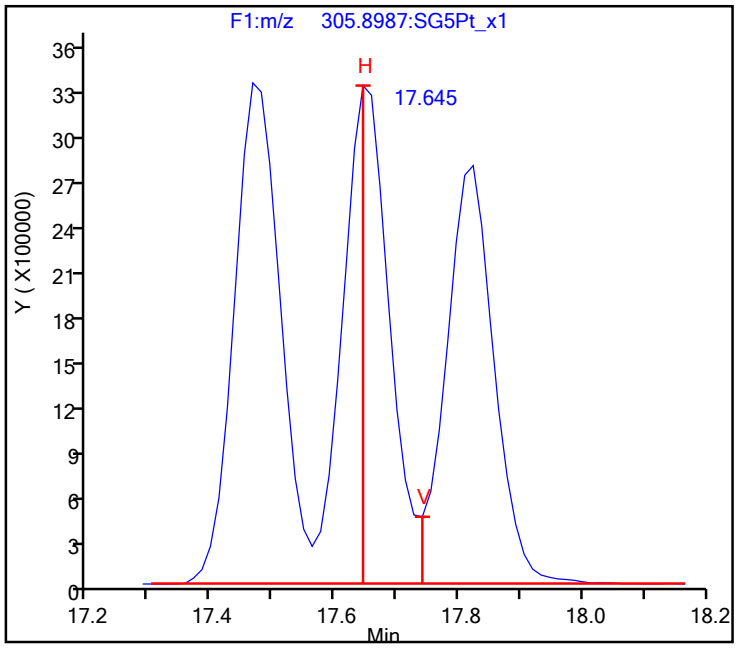

784376

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d				
Injection Date:	25-Aug-2021 12:59:07	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID: ICV 320-510264/9 Calibration Date: 07/26/2021 15:31

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 26JL2110D5_9.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.105		43.2	40.0	108	70-130
2,3,7,8-TCDD	AveID	1.254	1.380		44.0	40.0	110	70-130
1,2,3,7,8-PeCDF	AveID	1.061	1.081		204	200	102	70-130
2,3,4,7,8-PeCDF	AveID	1.018	1.151		226	200	113	70-130
1,2,3,7,8-PeCDD	AveID	1.048	1.044		199	200	100	70-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.128		208	200	104	70-130
1,2,3,6,7,8-HxCDF	AveID	1.126	1.227		218	200	109	70-130
2,3,4,6,7,8-HxCDF	AveID	1.168	1.283		220	200	110	70-130
1,2,3,4,7,8-HxCDD	AveID	1.064	1.151		216	200	108	70-130
1,2,3,6,7,8-HxCDD	AveID	1.000	1.082		216	200	108	70-130
1,2,3,7,8,9-HxCDD	AveID	1.133	1.182		209	200	104	70-130
1,2,3,7,8,9-HxCDF	AveID	1.166	1.200		206	200	103	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.576		219	200	109	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.167		213	200	107	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.373		209	200	104	70-130
OCDD	AveID	1.107	1.211		438	400	109	70-130
OCDF	AveID	1.438	1.574		438	400	109	70-130
13C-2,3,7,8-TCDF	Ave	1.625	1.611		99.2	100	99	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9123		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.236		102	100	102	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.300		105	100	105	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7764		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.089		101	100	101	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.093		96.9	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.036		97.4	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7216		98.4	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8697		98.8	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9447		97.6	100	98	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7492		96.9	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6354		98.2	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7065		101	100	101	77-129
13C-OCDD	Ave	0.4472	0.4464		200	200	100	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.177		42.5	40.0	106	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	55225241	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.598	88976883	0.79	1.6249	99.2	99.2	0.1479	0.1479	99.15	
2,3,7,8-TCDF	17.613	39324874	0.78	1.0239	43.2	43.2	0.0666	0.0666	108	
A Non-2,3,7,8-sub-TCDF	17.311	524958	0.77	1.0239	0.6411	0.5762	0.0666	0.3057		RQ
S Total TCDF					43.8	43.7	0.0666	0.0666		RQ
D 13C-2,3,7,8-TCDD	18.323	50383801	0.80	0.8993	101.4	101.4	0.1314	0.1314	101	
2,3,7,8-TCDD	18.338	27801852	0.78	1.2541	44.0	44.0	0.0443	0.0443	110	
$ 37Cl4-2,3,7,8-TCDD	18.338	26006351		1.1071	42.5	42.5	0.0388	0.0388	106	
A Non-2,3,7,8-sub-TCDD	17.772	551726	0.77	1.2541	0.8732	0.8732	0.0443	0.8732		
S Total TCDD					44.9	44.9	0.0443	0.0443		
D 13C-1,2,3,7,8-PeCDF	22.749	68252478	1.57	1.2101	102.1	102.1	0.2097	0.2097	102	
1,2,3,7,8-PeCDF	22.762	147560573	1.57	1.0611	203.7	203.7	0.7454	0.7454	102	
D 13C-2,3,4,7,8-PeCDF	24.126	71797373	1.60	1.2395	104.9	104.9	0.2047	0.2047	105	
2,3,4,7,8-PeCDF	24.153	165293469	1.59	1.0184	226.1	226.1	0.7930	0.7930	113	
A F1 PeCDFs	20.244						0.0162	0.0162		
A Non-2,3,7,8-sub-PeCDF	23.473	3443801	1.55	1.0398	4.730	4.730	0.7686	4.730		
S Total PeCDF					434.5	434.5	0.7692	0.7692		
D 13C-1,2,3,7,8-PeCDD	24.862	42878117	1.62	0.7612	102.0	102.0	0.1090	0.1090	102	
1,2,3,7,8-PeCDD	24.889	89555111	1.58	1.0484	199.2	199.2	0.2271	0.2271	99.61	
A Non-2,3,7,8-sub-PeCDD	23.744						0.2271	0.2271		
S Total PeCDD					199.2	199.2	0.2271	0.2271		
D 13C-1,2,3,4,7,8-HxCDF	30.836	62488487	0.52	1.0837	100.5	100.5	0.4386	0.4386	101	
1,2,3,4,7,8-HxCDF	30.849	141029922	1.22	1.0851	208.0	208.0	1.073	1.073	104	
D 13C-1,2,3,6,7,8-HxCDF	30.995	62719524	0.52	1.1279	96.9	96.9	0.4214	0.4214	96.91	
1,2,3,6,7,8-HxCDF	31.008	153925065	1.22	1.1260	218.0	218.0	1.035	1.035	109	
D 13C-2,3,4,6,7,8-HxCDF	31.754	59440166	0.52	1.0637	97.4	97.4	0.4468	0.4468	97.39	
2,3,4,6,7,8-HxCDF	31.767	152499923	1.22	1.1675	219.7	219.7	0.8510	0.8510	110	
D 13C-1,2,3,7,8,9-HxCDF	32.513	54205090	0.51	0.9676	97.6	97.6	0.4912	0.4912	97.64	
1,2,3,7,8,9-HxCDF	32.526	130040433	1.23	1.1664	205.7	205.7	0.8755	0.8755	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
A Non-2,3,7,8-sub-HxCDF	30.542						0.9509	0.9509		
S Total HxCDF					851.4	851.4	0.9587	0.9587		
* 13C-1,2,3,7,8,9-HxCDD	32.340	57376962	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	41405543	1.26	0.7334	98.4	98.4	0.3599	0.3599	98.39	
1,2,3,4,7,8-HxCDD	31.940	95311816	1.31	1.0640	216.3	216.3	0.7396	0.7396	108	
D 13C-1,2,3,6,7,8-HxCDD	32.020	49899921	1.25	0.8802	98.8	98.8	0.2999	0.2999	98.81	
1,2,3,6,7,8-HxCDD	32.034	107959577	1.21	1.0001	216.3	216.3	0.7456	0.7456	108	
1,2,3,7,8,9-HxCDD	32.340	107964188	1.26	1.1325	208.8	208.8	0.6762	0.6762	104	
A Non-2,3,7,8-sub-HxCDD	31.215						0.7187	0.7187		
S Total HxCDD					641.5	641.5	0.7205	0.7205		
1,2,3,4,6,7,8-HpCDF	33.912	135529943	1.05	1.4413	218.8	218.8	2.088	2.088	109	
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	42985413	0.44	0.7730	96.9	96.9	0.9749	0.9749	96.91	
D 13C-1,2,3,4,7,8,9-HpCDF	35.006	40537577	0.44	0.7008	100.8	100.8	1.075	1.075	101	
1,2,3,4,7,8,9-HpCDF	35.018	111348980	1.06	1.3174	208.5	208.5	2.580	2.580	104	
A Non-2,3,7,8-sub-HpCDF	34.458						2.314	2.314		
S Total HpCDF					427.3	427.3	2.334	2.334		
D 13C-1,2,3,4,6,7,8-HpCDD	34.702	36455330	1.02	0.6472	98.2	98.2	0.5132	0.5132	98.17	
1,2,3,4,6,7,8-HpCDD	34.714	85115851	1.05	1.0943	213.4	213.4	1.044	1.044	107	
A Non-2,3,7,8-sub-HpCDD	33.504						1.044	1.044		
S Total HpCDD					213.4	213.4	1.044	1.044		
D 13C-OCDD	37.082	51228940	0.89	0.4472	199.7	199.7	0.2232	0.2232	99.84	
OCDF	37.189	161294219	0.91	1.4382	437.9	437.9	0.4409	0.4409	109	
OCDD	37.094	124067491	0.90	1.1070	437.5	437.5	0.5859	0.5859	109	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.127	18.142	-1		24811260	6334063	3297	8242	1921		
333.9339	18.127	18.142	-1		30413981	7612051	3296	8240	2309	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	0.971	39276583	9941961	7868	19670	1264		
317.9389	17.598	17.598	0	0.971	49700300	12596795	5536	13840	2275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.613	17.628	-1	1.001	17265923	4373947	2358	5895	1855		
305.8987	17.613	17.628	-1	1.001	22058951	5573170	3788	9470	1471	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.933	17.311	-23	0.962	161517	37808	2358	5895	16		
	Empc Correction				121157	34090	2358	5895	14		
305.8987	16.933	17.311	-23	0.962	157347	44274	3788	9470	12	1.03(0.65-0.89)	
303.9016	17.235	17.311	-5	0.979	125955	28258	2358	5895	12		
	Empc Correction				107214	28155	2358	5895	12		
305.8987	17.220	17.311	-5	0.979	139240	36566	3788	9470	10	0.90(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.011	22418240	5434734	3297	8242	1648		
333.9339	18.323	18.323	0	1.011	27965561	6697610	3296	8240	2032	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.338	0	1.001	12170563	2933733	1303	3257	2252		
321.8936	18.338	18.338	0	1.001	15631289	3775919	1394	3485	2709	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.012	26006351	6295077	2398	5995	2625		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											
319.8965	18.233	17.772	28	0.995	239239	60004	1303	3257	46		
321.8936	18.233	17.772	28	0.995	312487	80578	1394	3485	58	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.749	0	1.255	41668599	7333690	8485	21212	864		
353.8970	22.749	22.749	0	1.255	26583879	4652625	5670	14175	821	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.762	22.776	-1	1.001	90206138	15696498	23147	57867	678		
341.8567	22.762	22.776	-1	1.001	57354435	10012296	14777	36942	678	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.126	0	1.331	44217600	7271382	8485	21212	857		
353.8970	24.126	24.126	0	1.331	27579773	4468756	5670	14175	788	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.153	0	1.001	101392394	16526277	23147	57867	714		
341.8567	24.153	24.153	0	1.001	63901075	10428415	14777	36942	706	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.244						338	845			
341.8567	20.244						462	1155			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.308	23.473	-10	1.025	2092429	352488	23147	57867	15		
341.8567	23.308	23.473	-10	1.025	1351372	223195	14777	36942	15	1.55(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.862	0	1.372	26514155	4045355	2631	6577	1538		
369.8919	24.862	24.862	0	1.372	16363962	2537743	2000	5000	1269	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.889	0	1.001	54803563	8416527	3860	9650	2180		
357.8516	24.889	24.889	0	1.001	34751548	5423049	2410	6025	2250	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.744						3860	9650			
357.8516	23.744						2410	6025			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.836	30.835	0	0.953	21423741	4602993	10138	25345	454		
385.8610	30.836	30.835	0	0.953	41064746	8805011	18904	47260	466	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.862	-1	1.000	77446041	17056861	34028	85070	501		
375.8178	30.849	30.862	-1	1.000	63583881	14029731	28421	71052	494	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.008	-1	0.958	21527343	4645676	10138	25345	458		
385.8610	30.995	31.008	-1	0.958	41192181	8744916	18904	47260	463	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.008	31.021	-1	1.000	84458486	18178004	34028	85070	534		
375.8178	31.008	31.021	-1	1.000	69466579	15063201	28421	71052	530	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.754	0	0.982	20418672	5425134	10138	25345	535		
385.8610	31.754	31.754	0	0.982	39021494	10287607	18904	47260	544	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.767	0	1.000	83657687	22340712	34028	85070	657		
375.8178	31.767	31.767	0	1.000	68842236	18269489	28421	71052	643	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.513	32.526	-1	1.005	18351639	5227320	10138	25345	516		
385.8610	32.513	32.526	-1	1.005	35853451	10061715	18904	47260	532	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.539	-1	1.000	71665418	20282625	34028	85070	596		
375.8178	32.526	32.539	-1	1.000	58375015	16239209	28421	71052	571	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.542						34028	85070			
375.8178	30.542						28421	71052			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.340	32.339	0		32156760	8544429	8352	20880	1023		
403.8529	32.326	32.339	-1		25220202	6731682	7778	19445	865	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.927	0	0.987	23052563	6987052	8352	20880	837		
403.8529	31.927	31.927	0	0.987	18352980	5468630	7778	19445	703	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.940	0	1.000	54057818	15589077	22398	55995	696		
391.8127	31.940	31.940	0	1.000	41253998	12285721	16811	42027	731	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.020	32.033	-1	0.990	27736555	7273068	8352	20880	871		
403.8529	32.020	32.033	-1	0.990	22163366	5871752	7778	19445	755	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.034	32.047	-1	1.000	59116629	16185483	22398	55995	723		
391.8127	32.034	32.047	-1	1.000	48842948	13061351	16811	42027	777	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.340	32.353	-1	1.013	60106510	15800454	22398	55995	705		
391.8127	32.340	32.353	-1	1.013	47857678	12979231	16811	42027	772	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	31.215						22398	55995			
391.8127	31.215						16811	42027			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.912	33.911	0	1.000	69518297	21985720	82461	206152	267		
409.7789	33.912	33.911	0	1.000	66011646	21358881	78734	196835	271	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.912	0	1.049	13138473	4149229	14216	35540	292		
419.8220	33.900	33.912	-1	1.048	29846940	9243997	31835	79587	290	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.006	35.005	0	1.082	12375038	3705586	14216	35540	261		
419.8220	35.006	35.005	0	1.082	28162539	8151296	31835	79587	256	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.018	35.005	1	1.000	57298984	16523888	82461	206152	200		
409.7789	35.006	35.005	0	1.000	54049996	15559126	78734	196835	198	1.06(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						82461	206152			
409.7789	34.458						78734	196835			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.702	34.714	-1	1.073	18400619	5331850	10315	25787	517		
437.8140	34.702	34.714	-1	1.073	18054711	5313047	9982	24955	532	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.714	0	1.000	43603241	12970820	24860	62150	522		
425.7737	34.714	34.714	0	1.000	41512610	12528364	23796	59490	526	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						24860	62150			
425.7737	33.504						23796	59490			
13C-OCDD											
469.7779	37.082	37.093	-1	1.147	24118371	6015882	2552	6380	2357		
471.7750	37.082	37.093	-1	1.147	27110569	6692443	3547	8867	1887	0.89(0.76-1.02)	
OCDF											
441.7428	37.189	37.201	-1	1.003	76746145	20468133	7616	19040	2688		
443.7399	37.189	37.201	-1	1.003	84548074	22394214	8501	21252	2634	0.91(0.76-1.02)	
OCDD											
457.7377	37.094	37.105	-1	1.000	58682484	14688537	7599	18997	1933		
459.7348	37.094	37.105	-1	1.000	65385007	16510536	8885	22212	1858	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	88976883	22538756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	88976883	22538756

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.933	161517	37808	157347	44274	0.3500	1.03	RQ
16.933	121157	34090	157347	44274	0.3057		Empc Correction
17.235	125955	28258	139240	36566	0.2911	0.90	RnQ
17.235	107214	28155	139240	36566	0.2705		Empc Correction
Signal Totals:							
	228371	62245	296587	80840			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	584059	146906				0.97	RQ
	524958	143085					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6411 = (584059 * 100.000) / (88976883 * 1.024)
Empc Amount: 0.5762 = (524958 * 100.000) / (88976883 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50383801	12132344

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50383801	12132344

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.233	239239	60004	312487	80578	0.8732	0.77	
Signal Totals:							
	239239	60004	312487	80578			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	551726	140582				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8732 = (551726 * 100.000) / (50383801 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68252478	11986315
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71797373	11740138

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70024925	11863226

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
23.308	2092429	352488	1351372	223195	4.73	1.55	
Signal Totals:							
	2092429	352488	1351372	223195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3443801	575683				1.55	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.730 = (3443801 * 100.000) / (70024925 * 1.040)

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

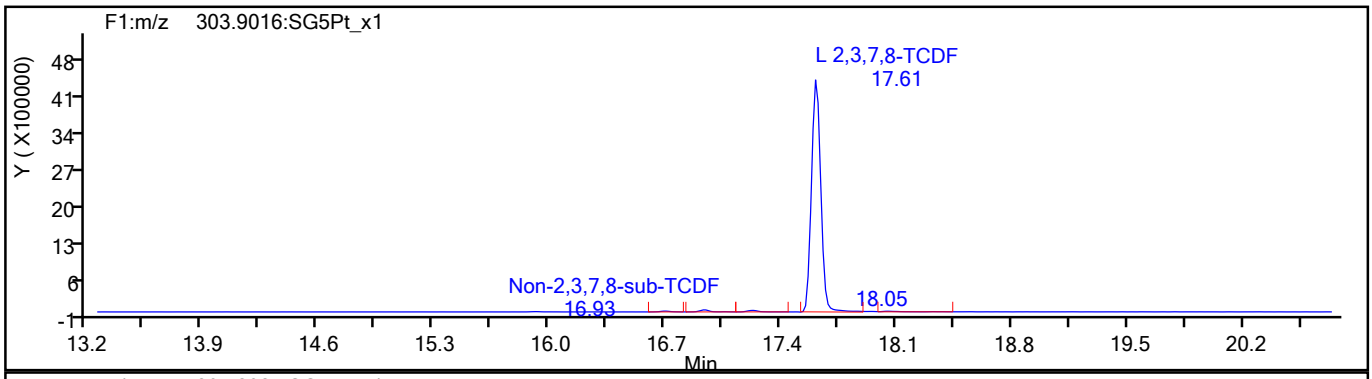

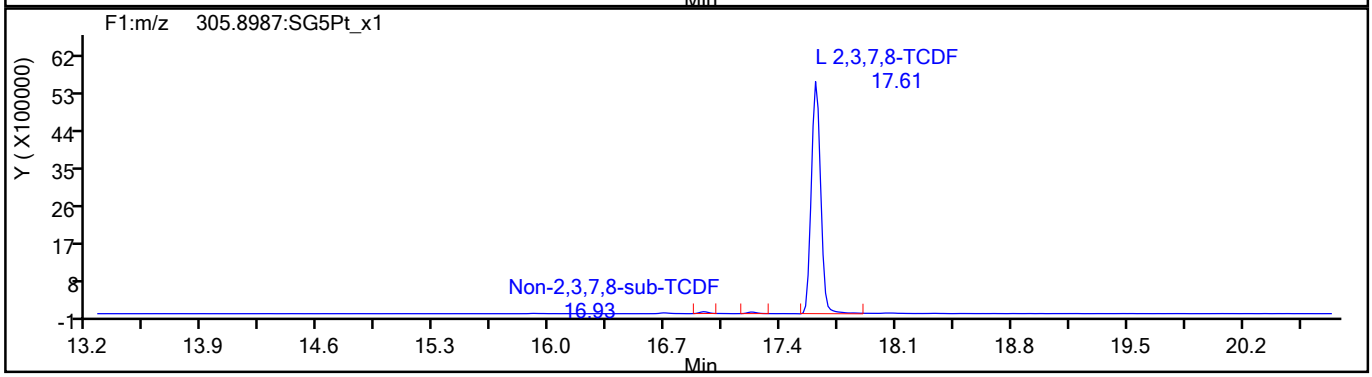

TCDF Standards

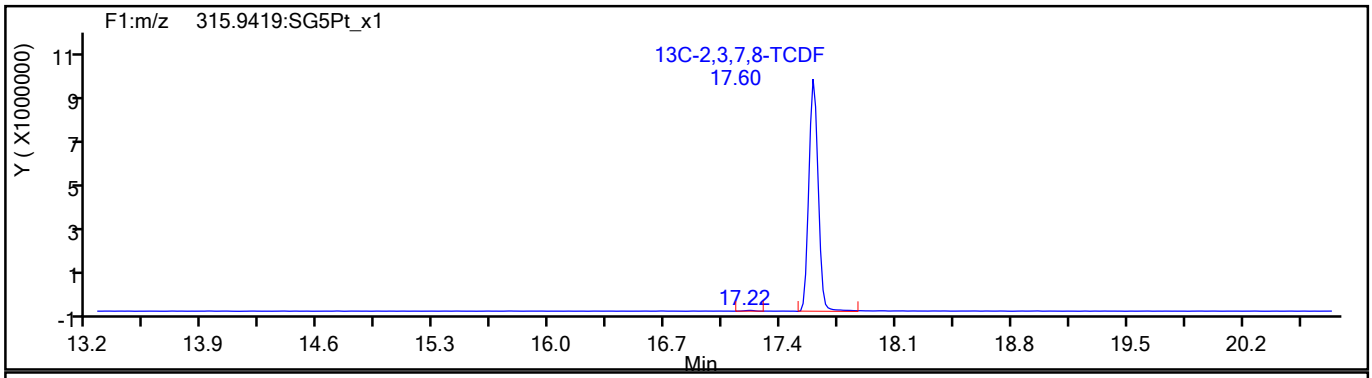

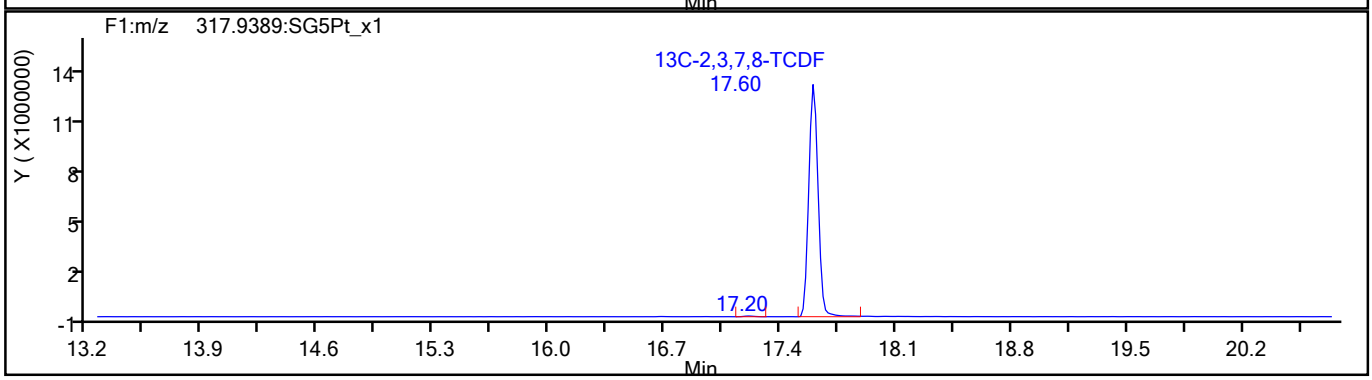

784388

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

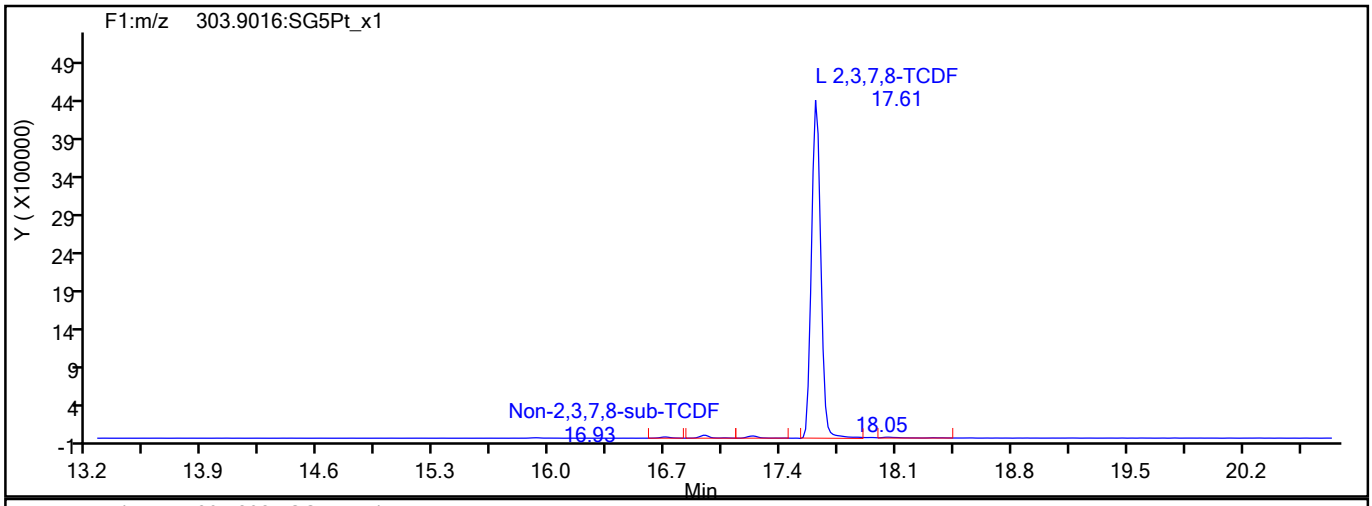

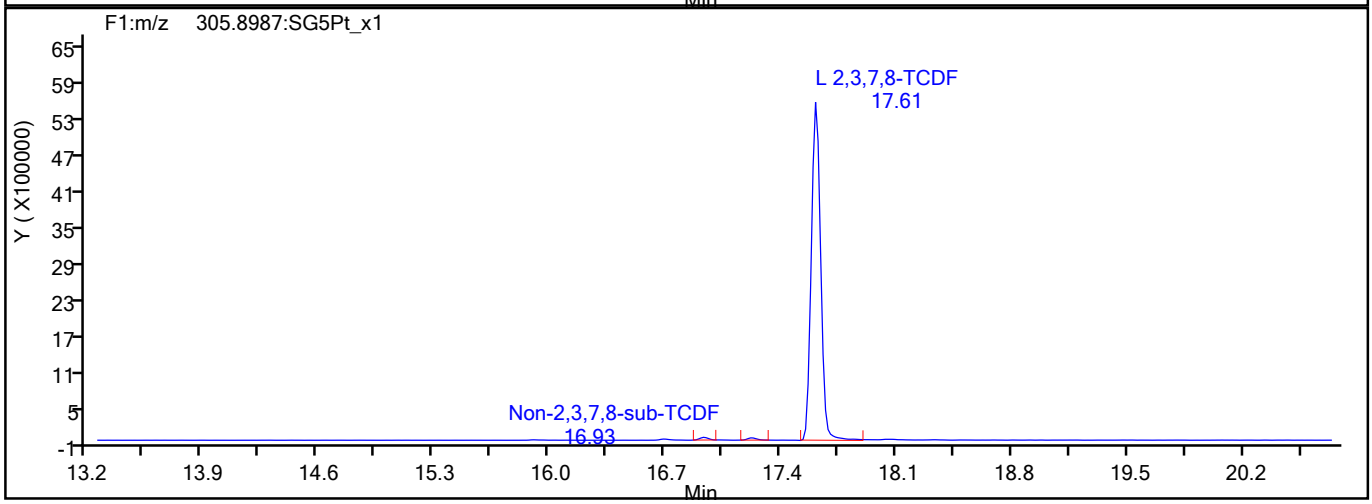

TCDF Interference Mass

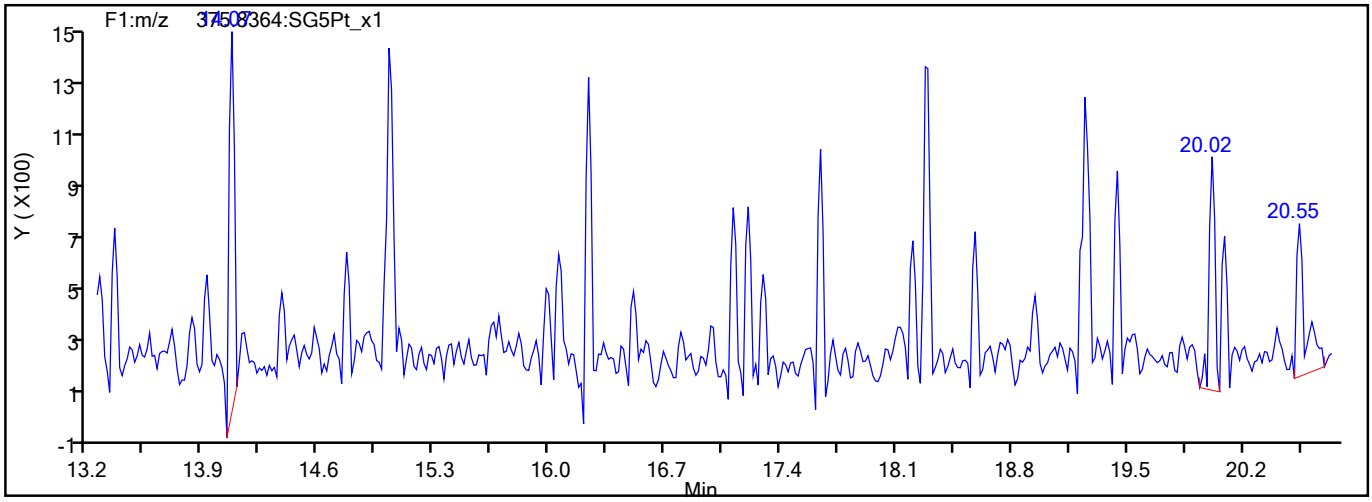

784389

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

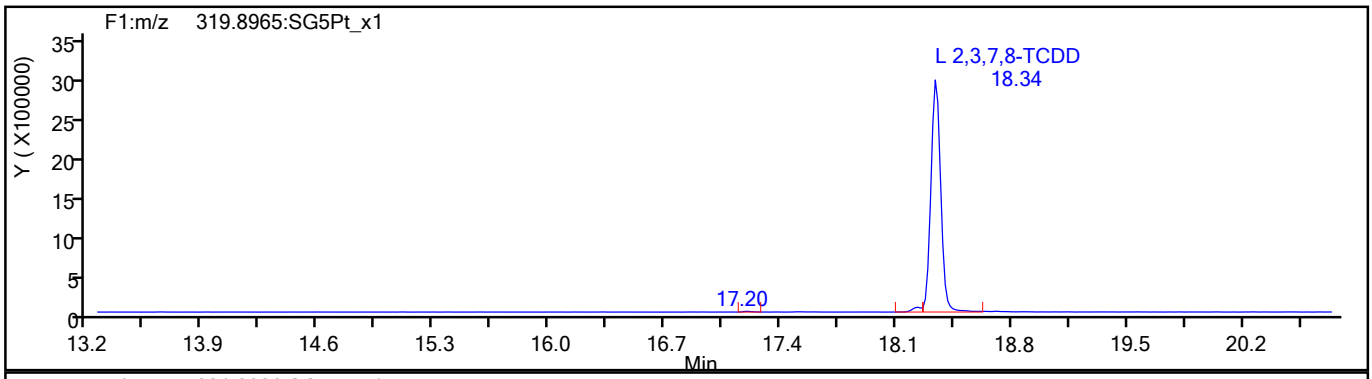

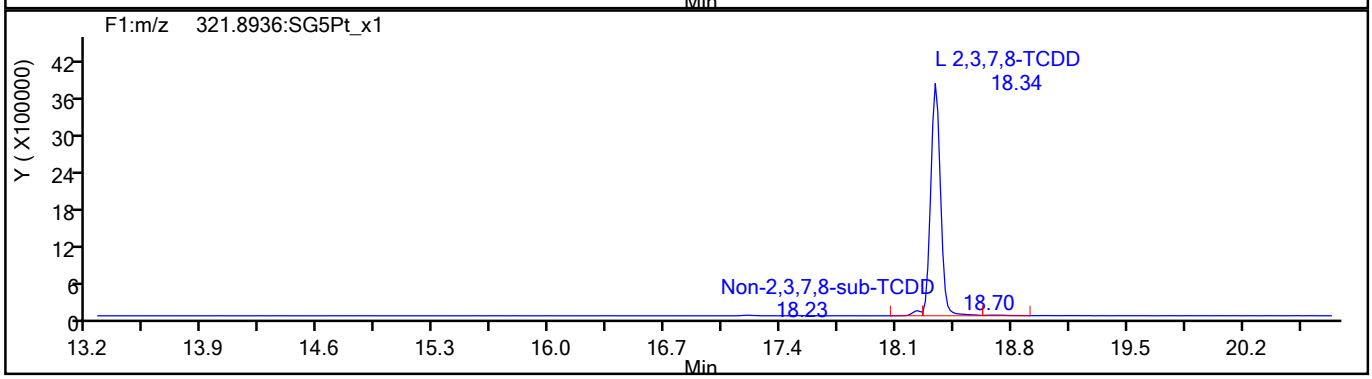

TCDD Standards

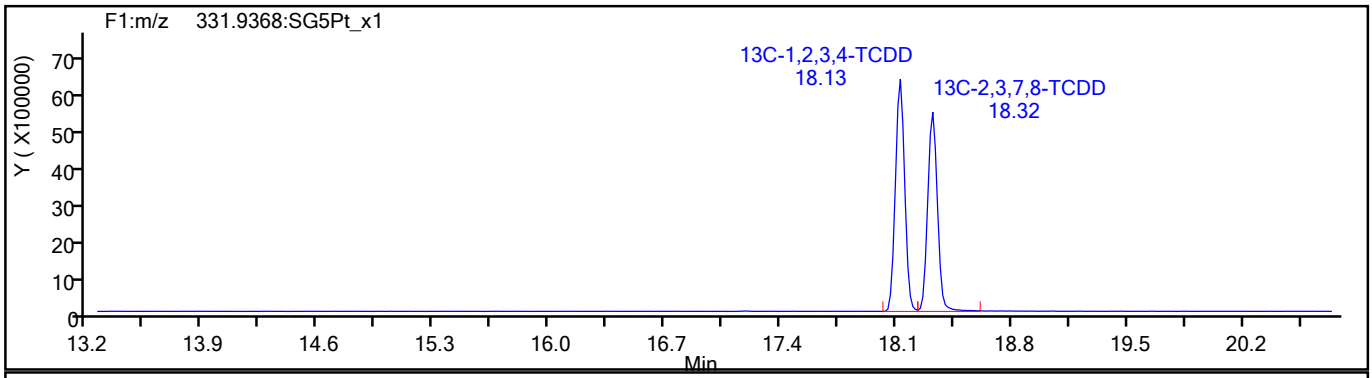

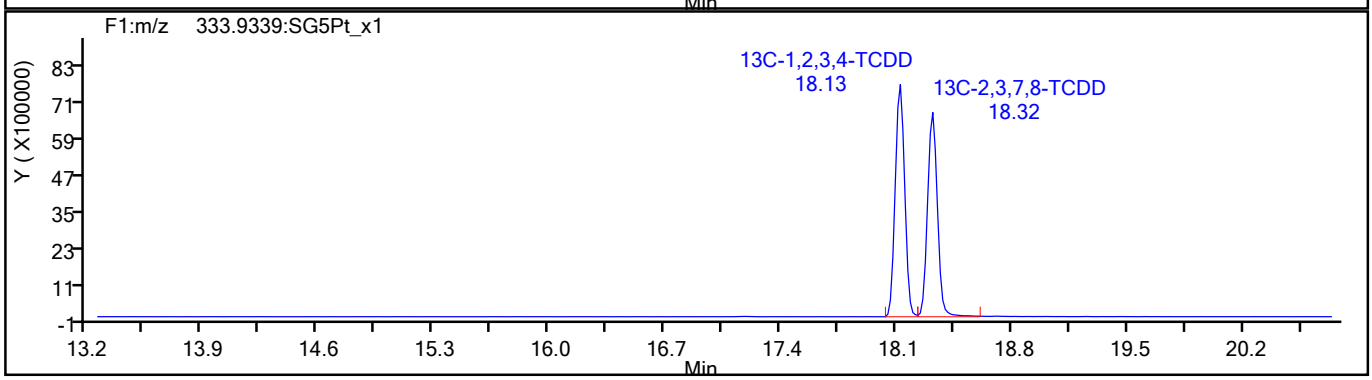

784390

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

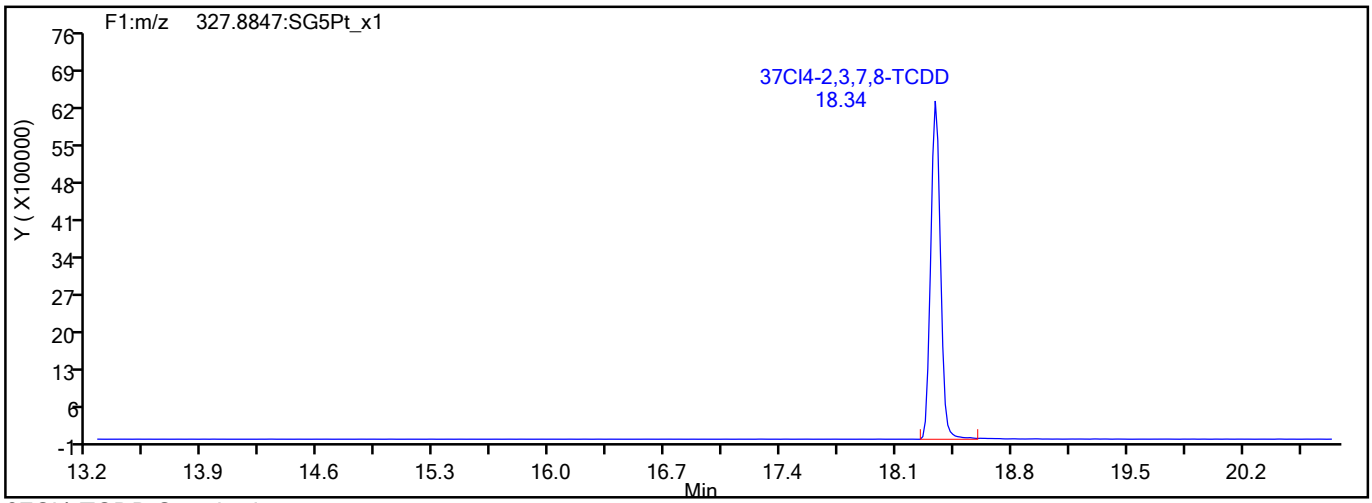

37Cl4-TCDD Standards

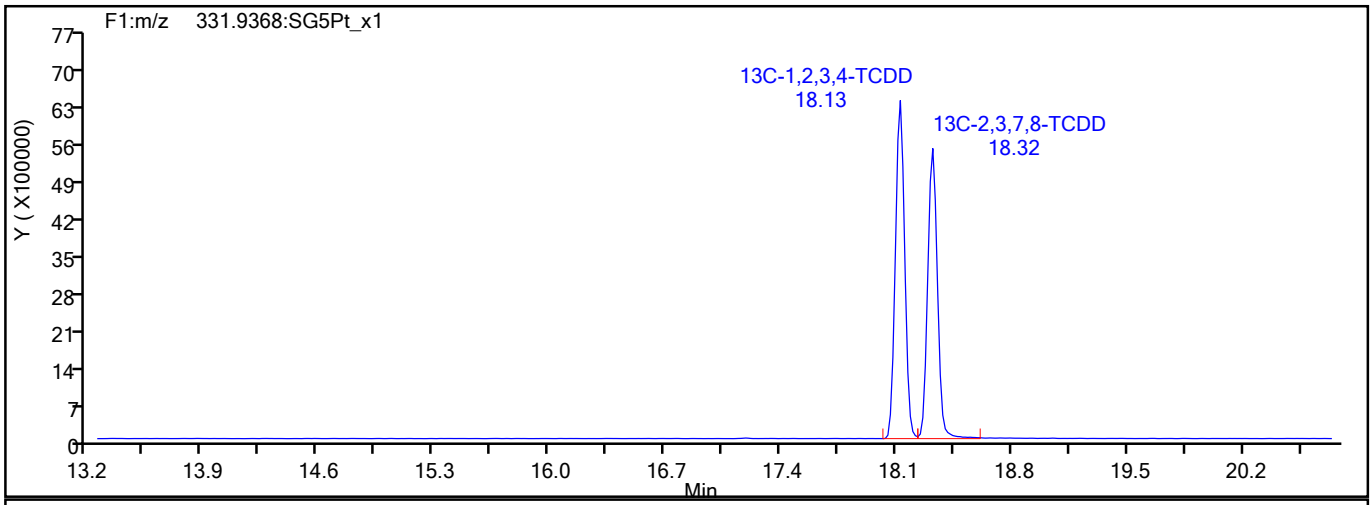

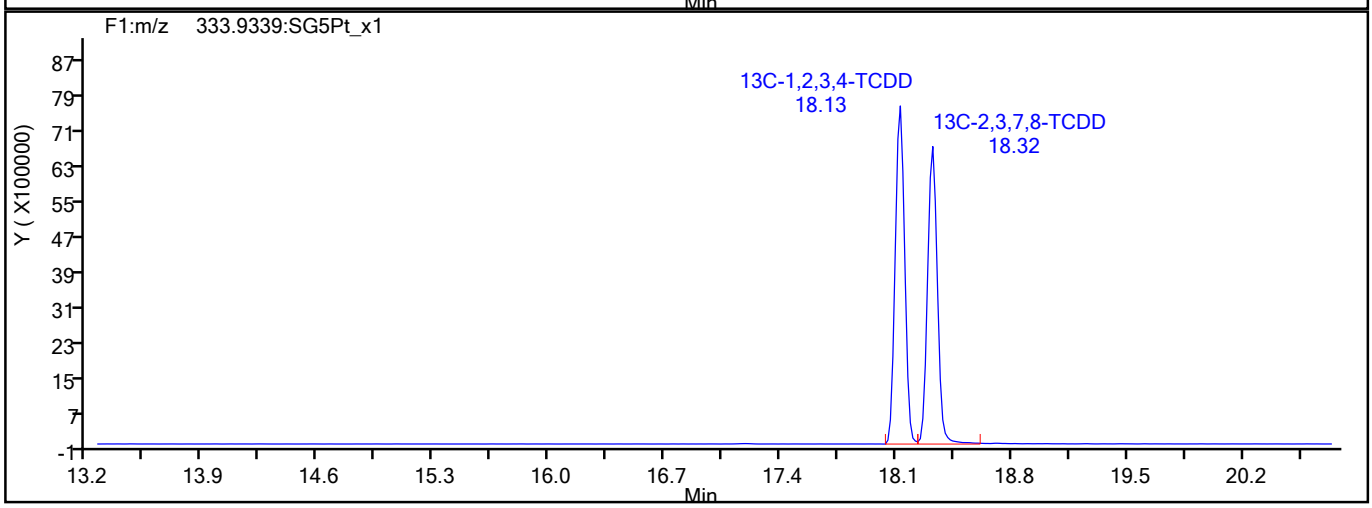

784391

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

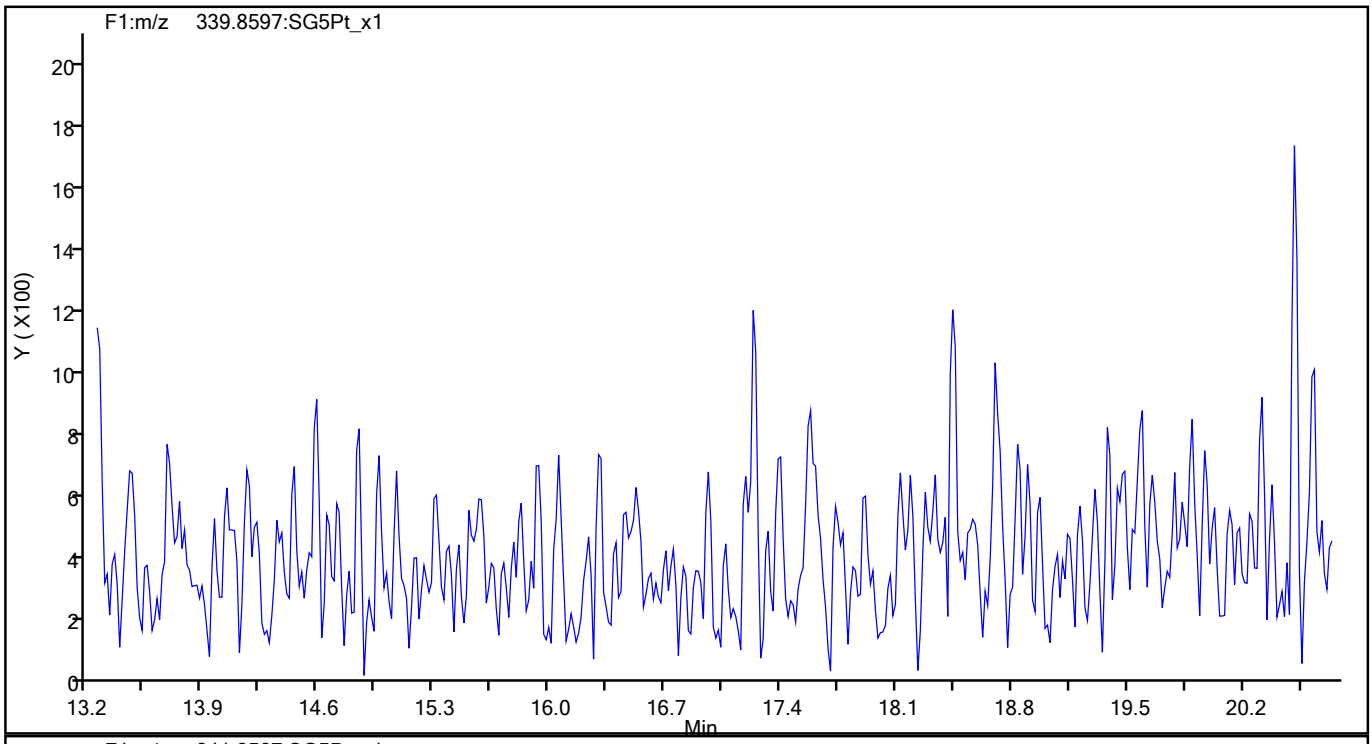

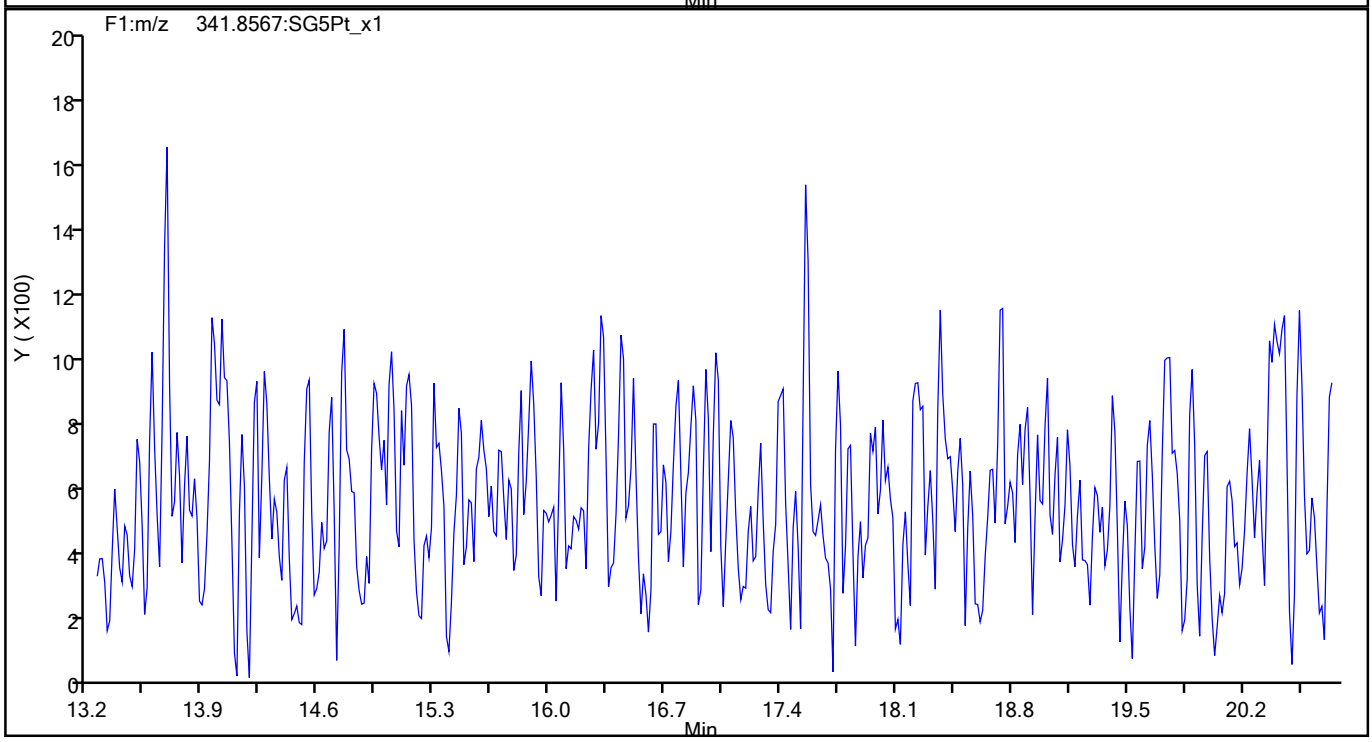

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Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

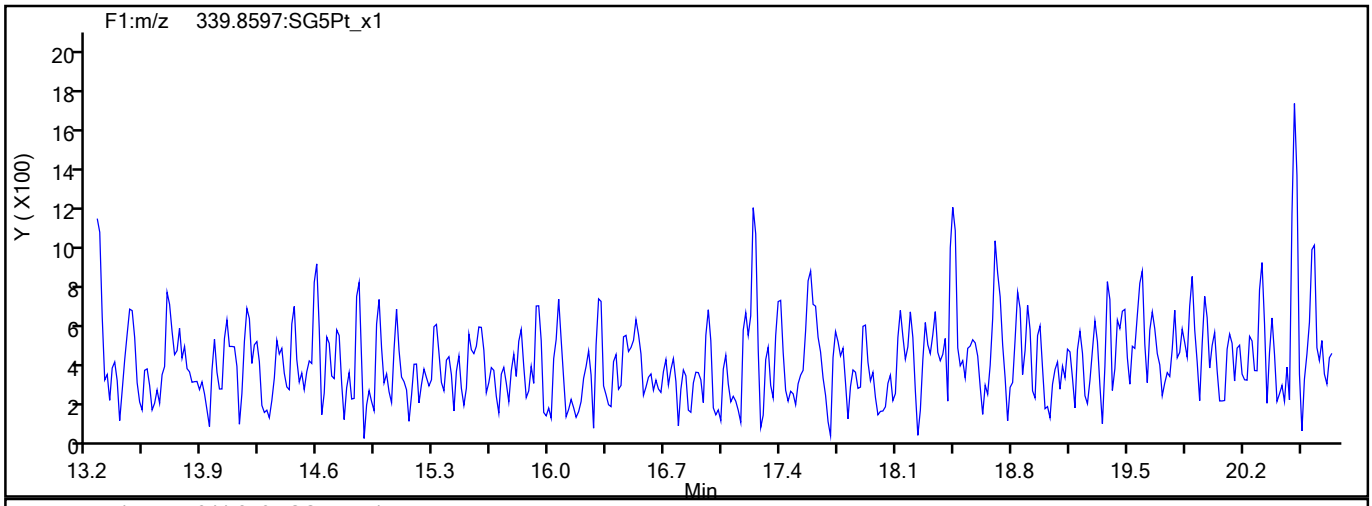

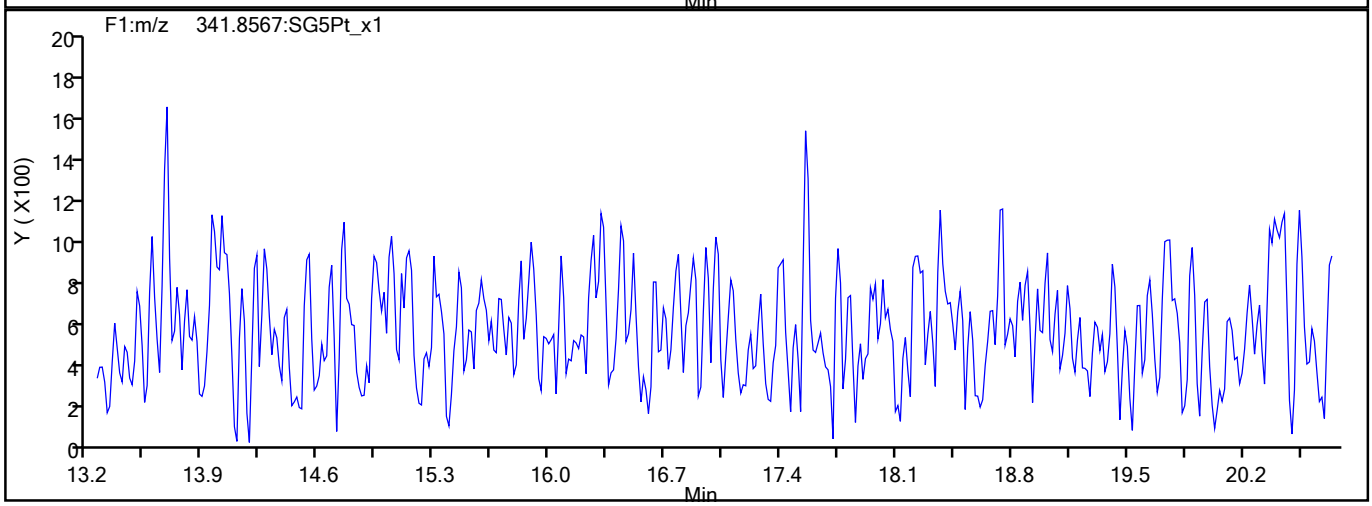

F1 PeCDFs Interference Mass

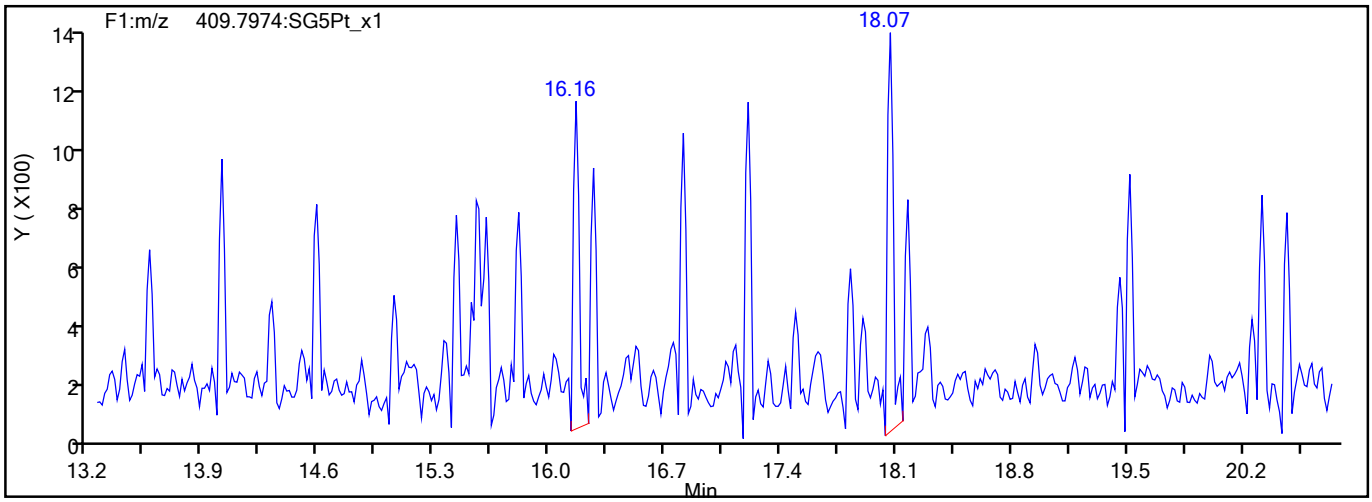

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Eurofins TestAmerica, Sacramento

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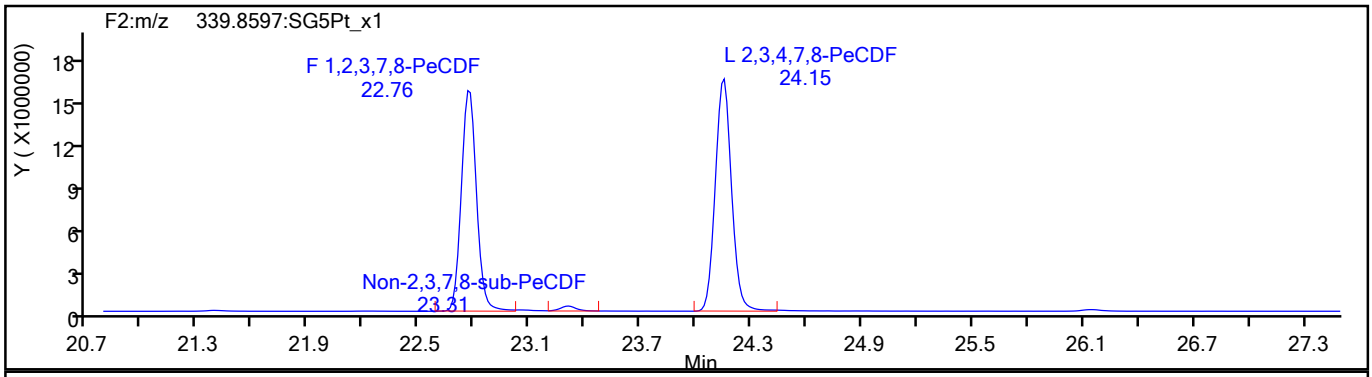

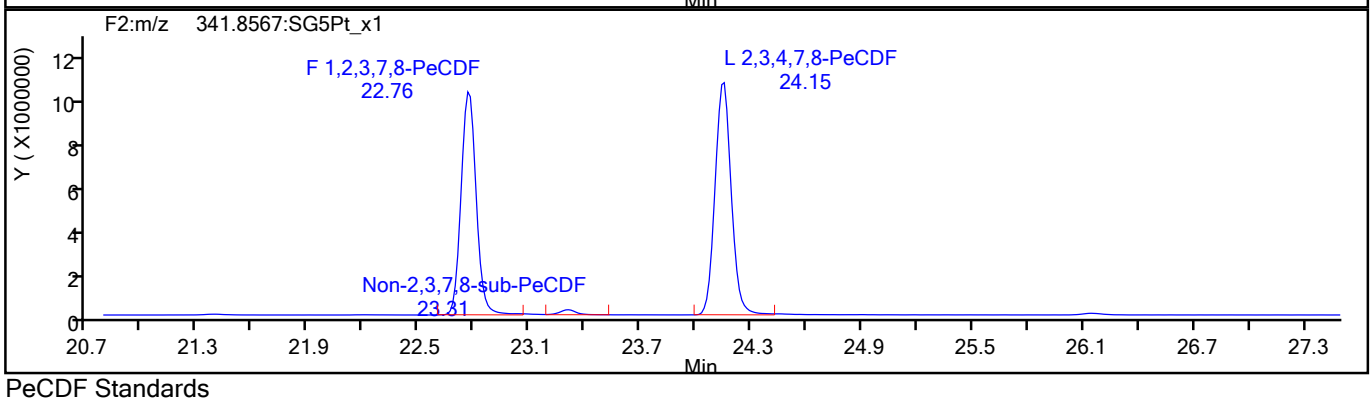

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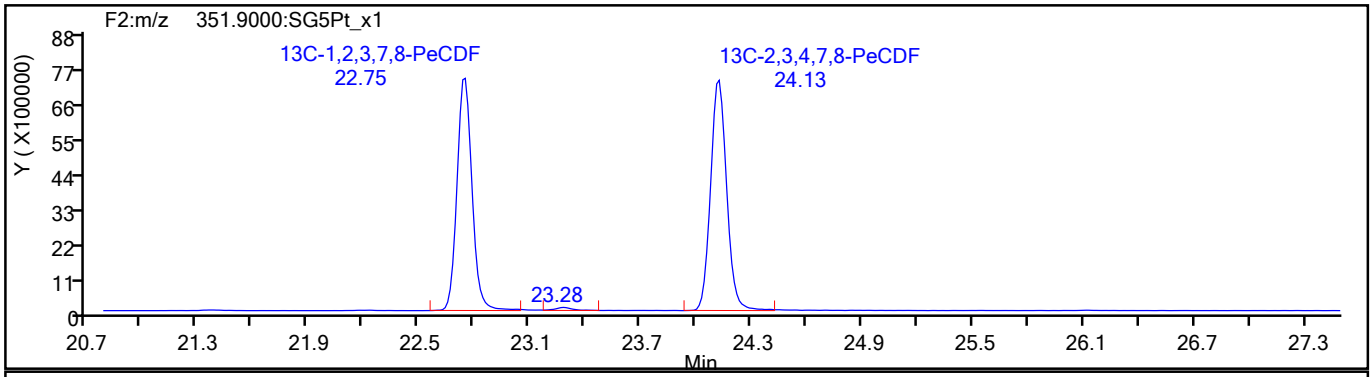

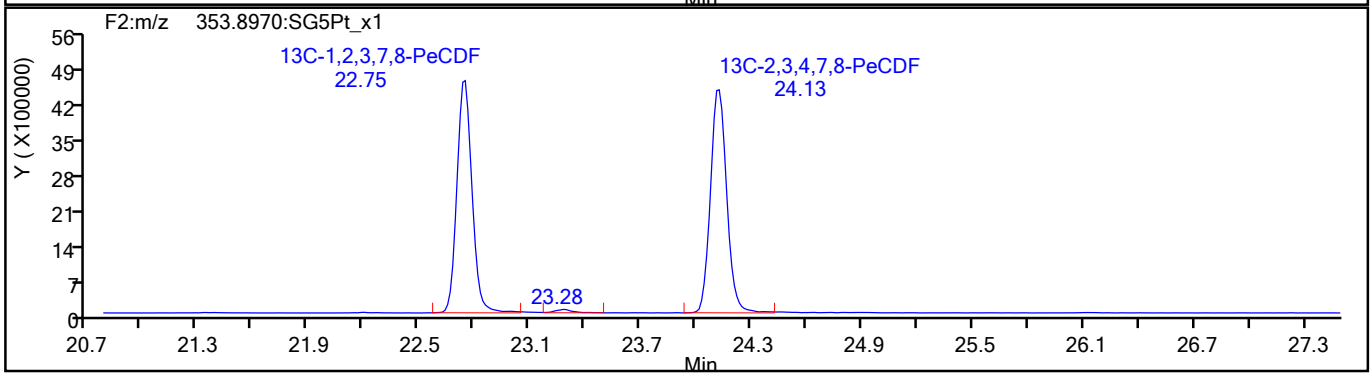

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Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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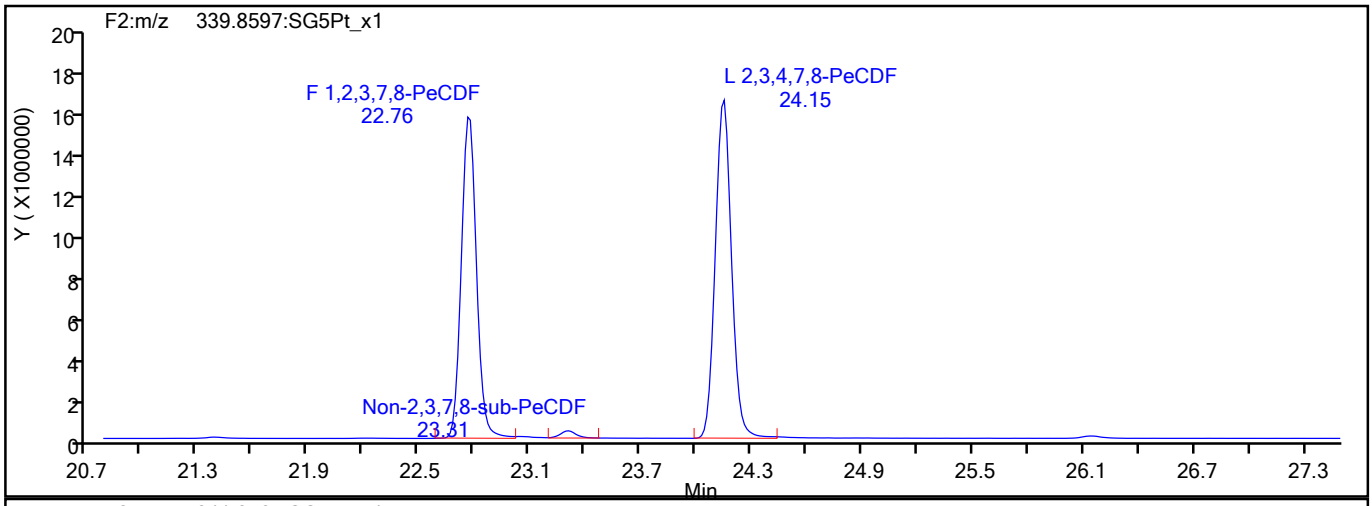

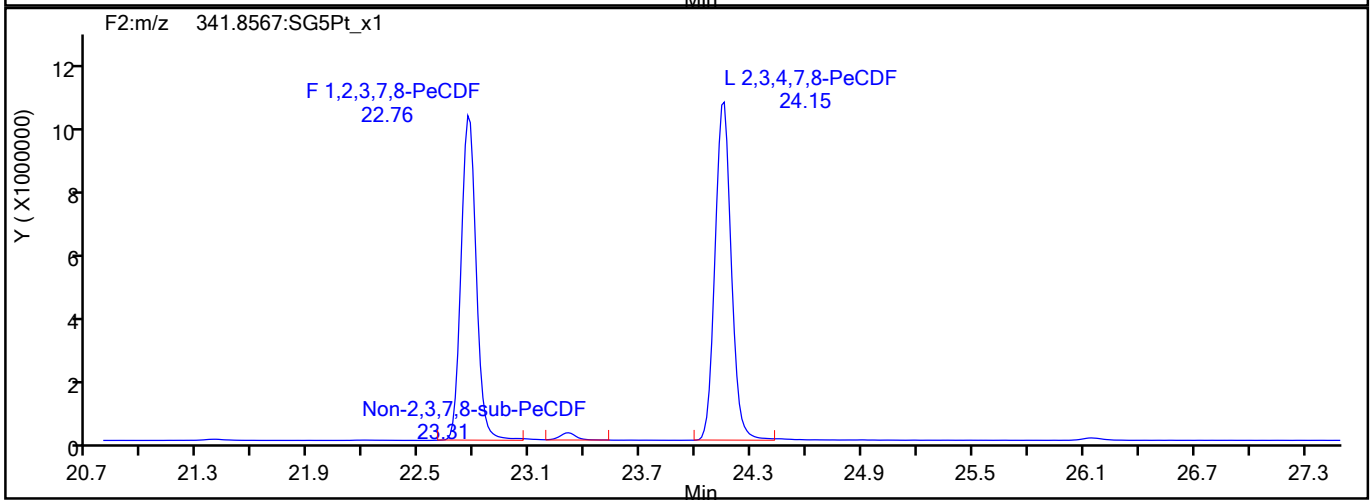

PeCDF Interference Mass

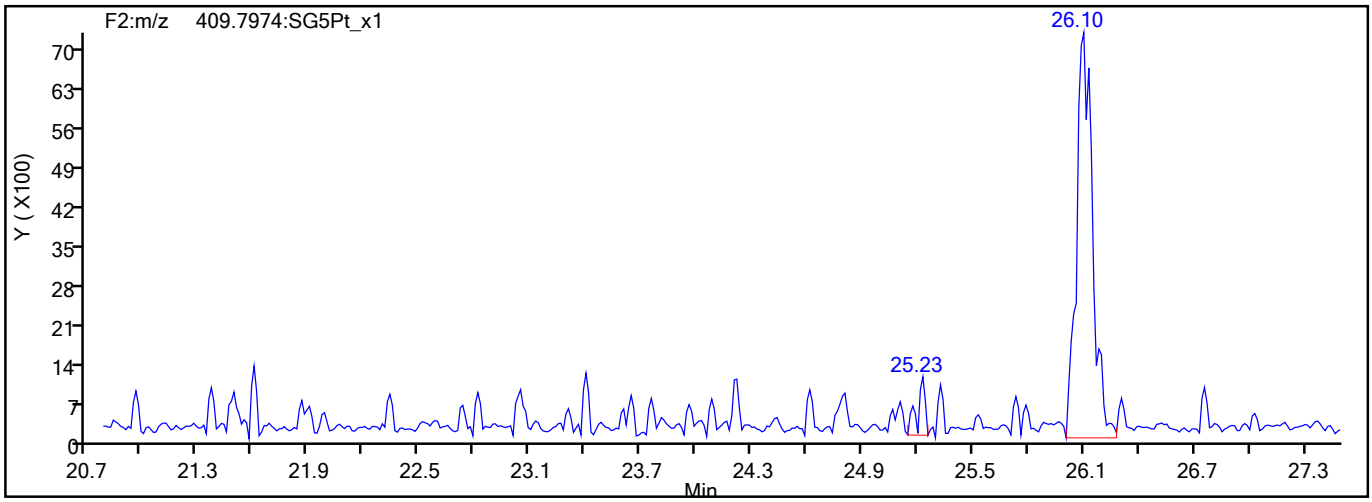

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Eurofins TestAmerica, Sacramento

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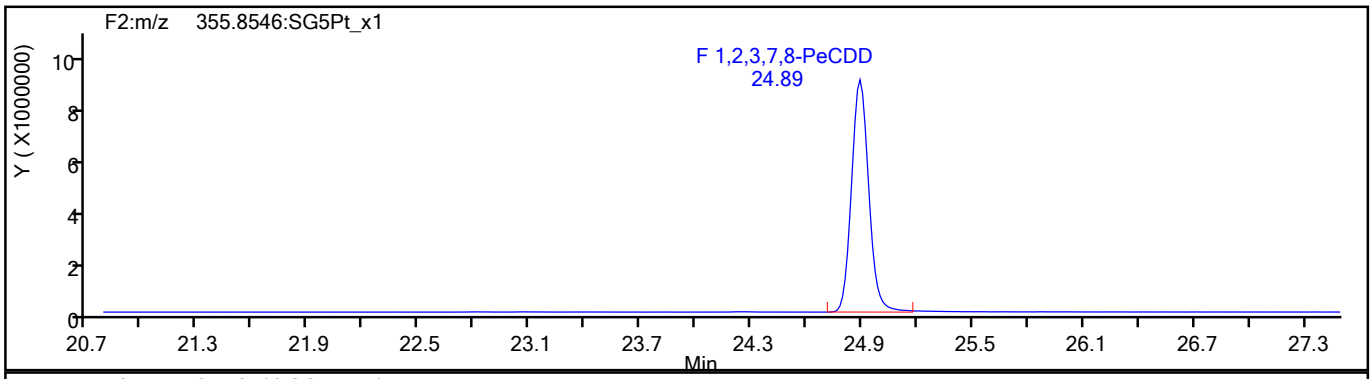

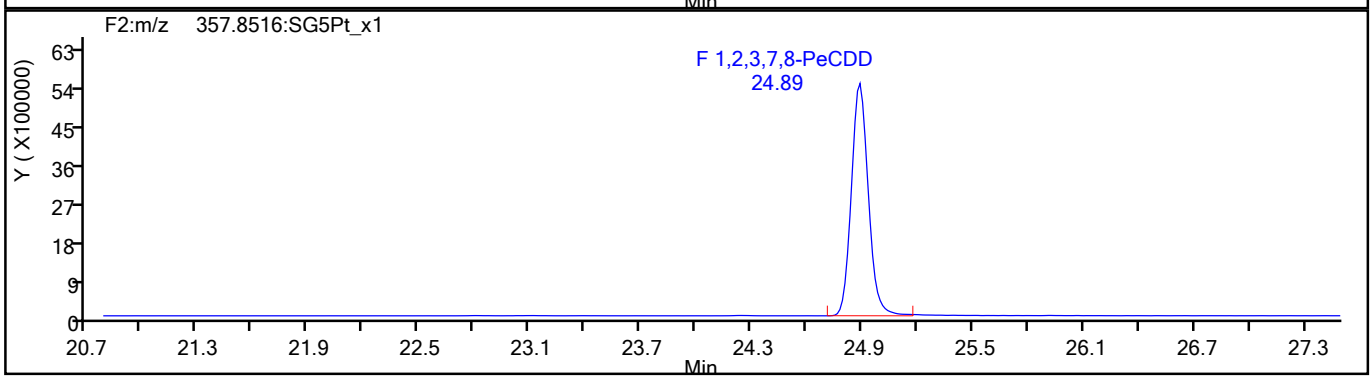

PeCDD Standards

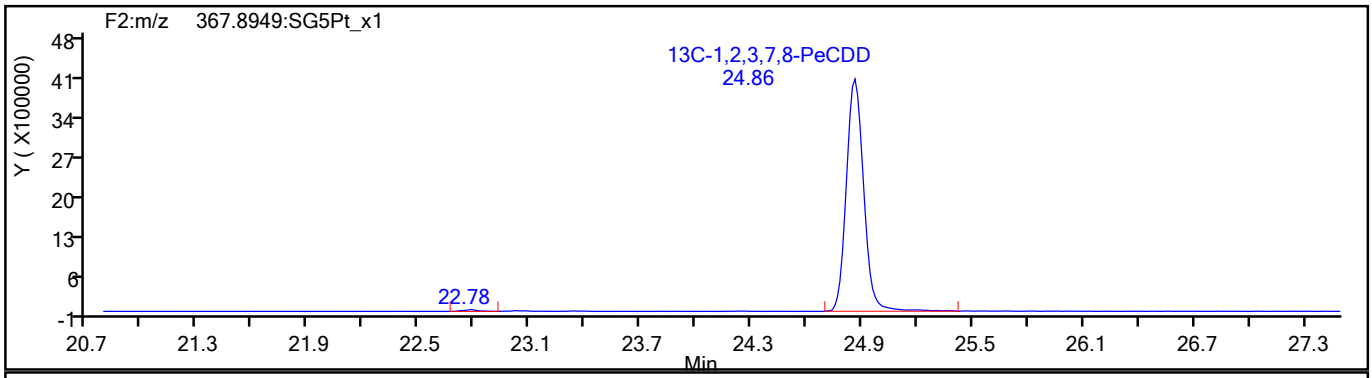

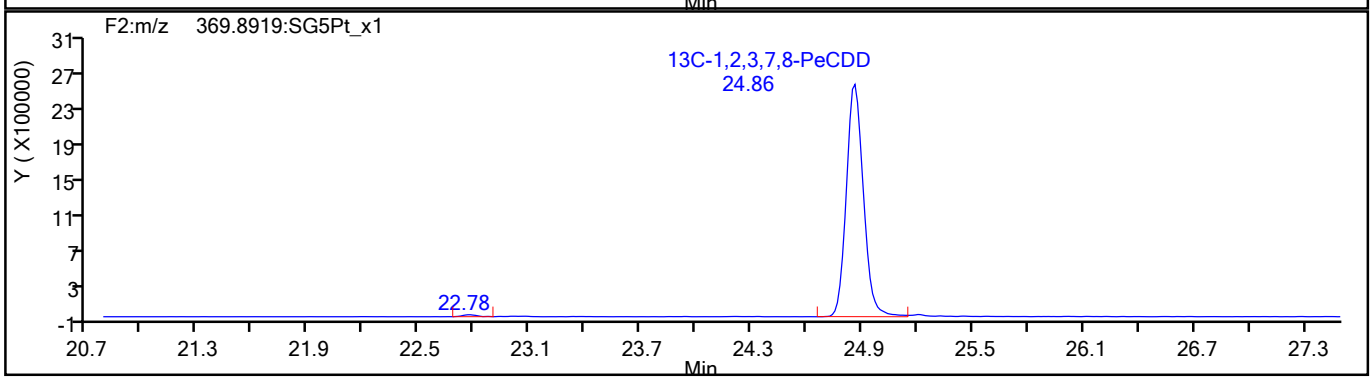

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Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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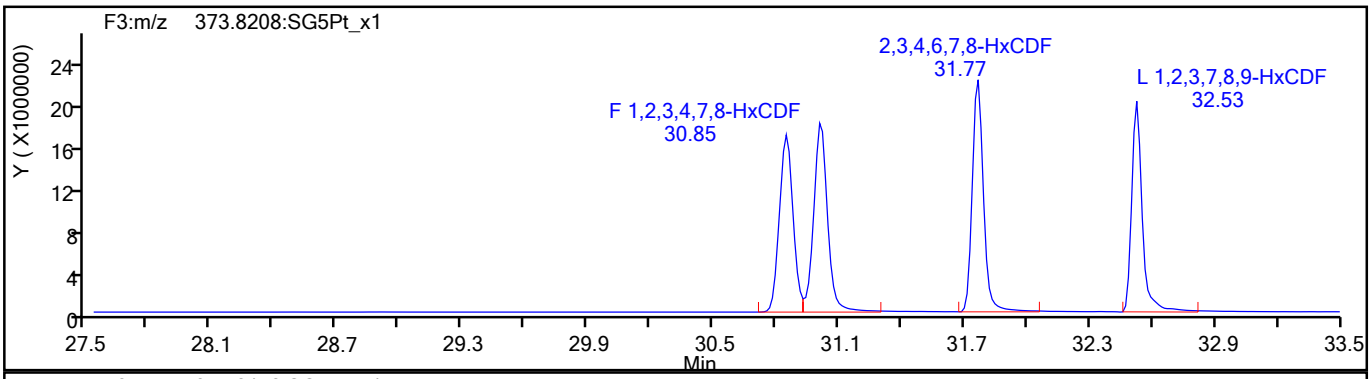

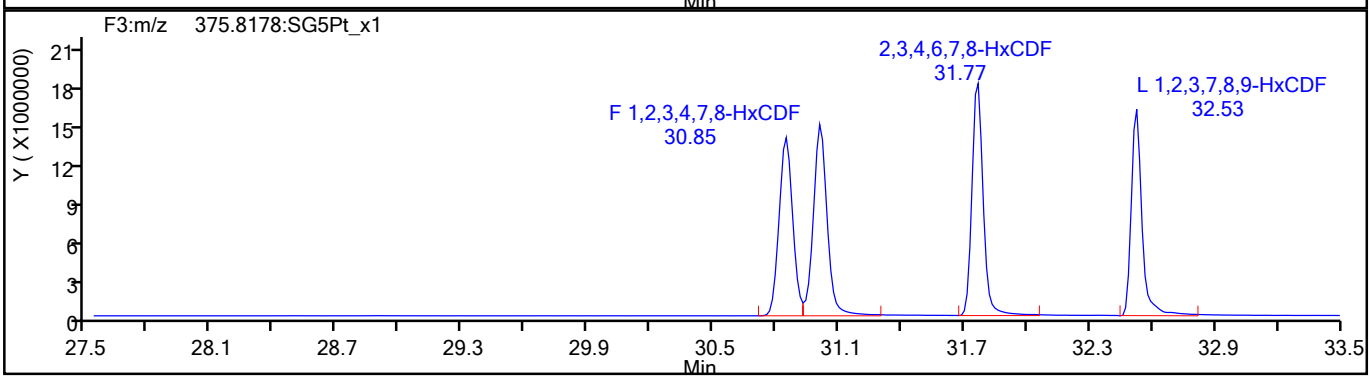

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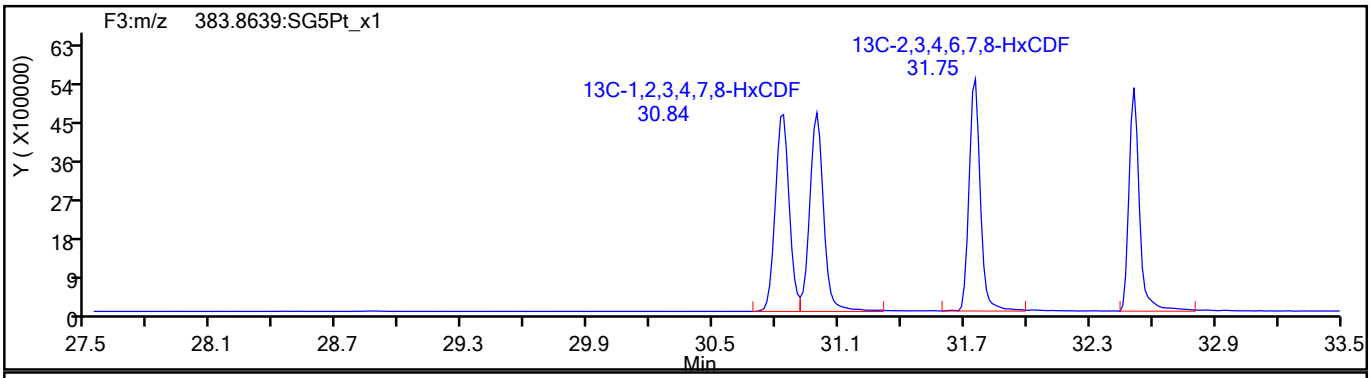

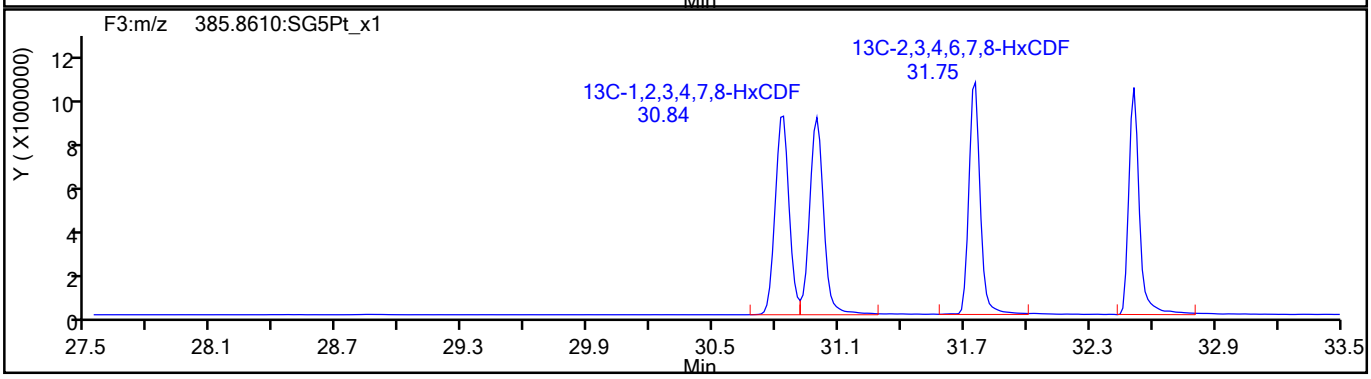

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Eurofins TestAmerica, Sacramento

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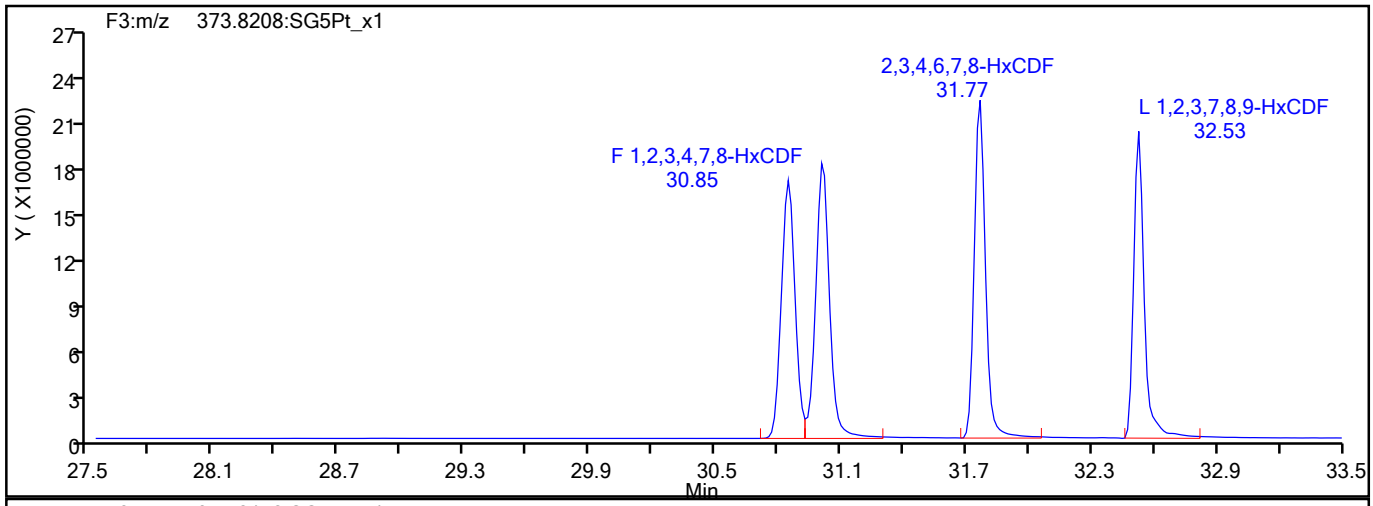

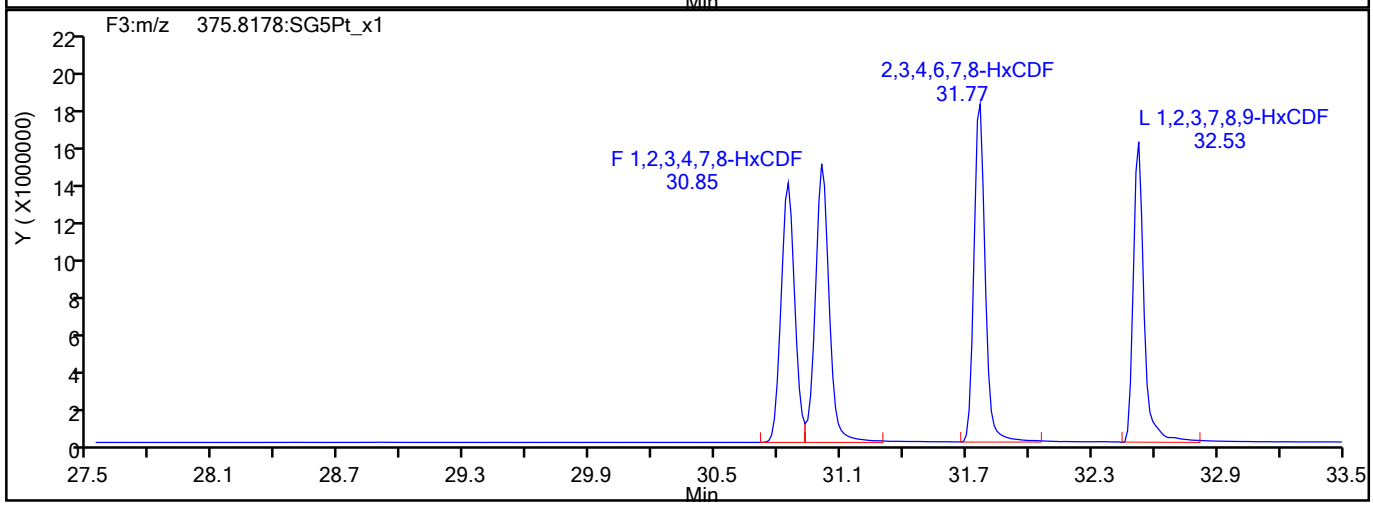

HxCDF Interference Mass

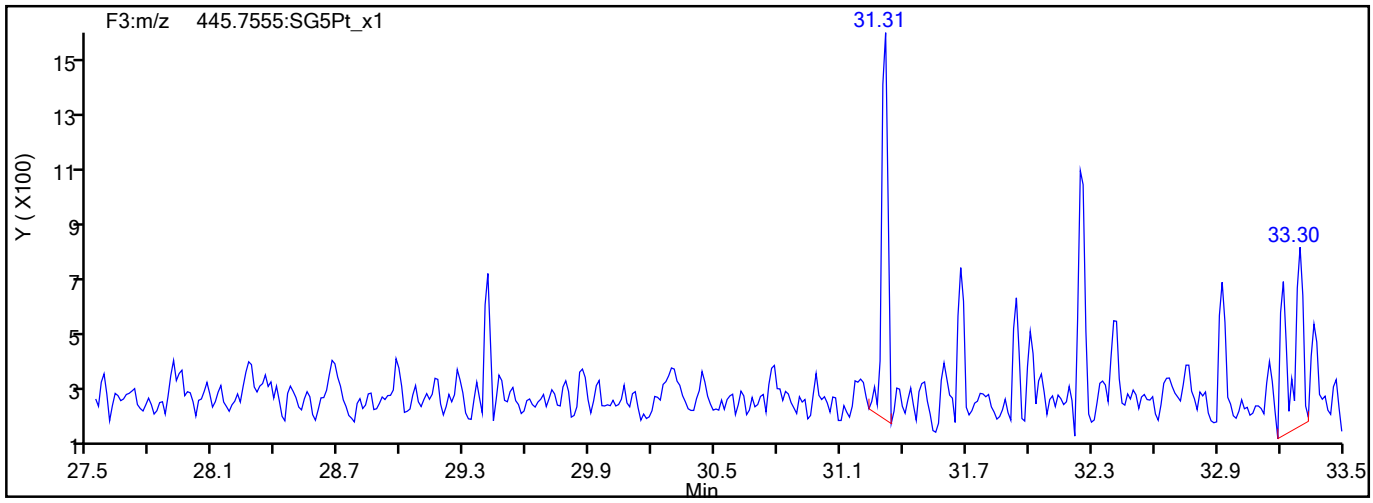

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Eurofins TestAmerica, Sacramento

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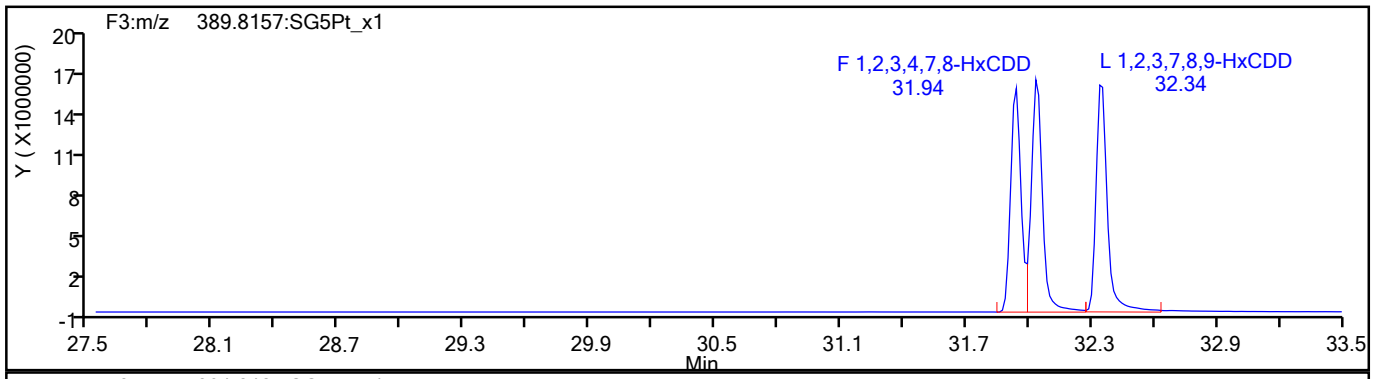

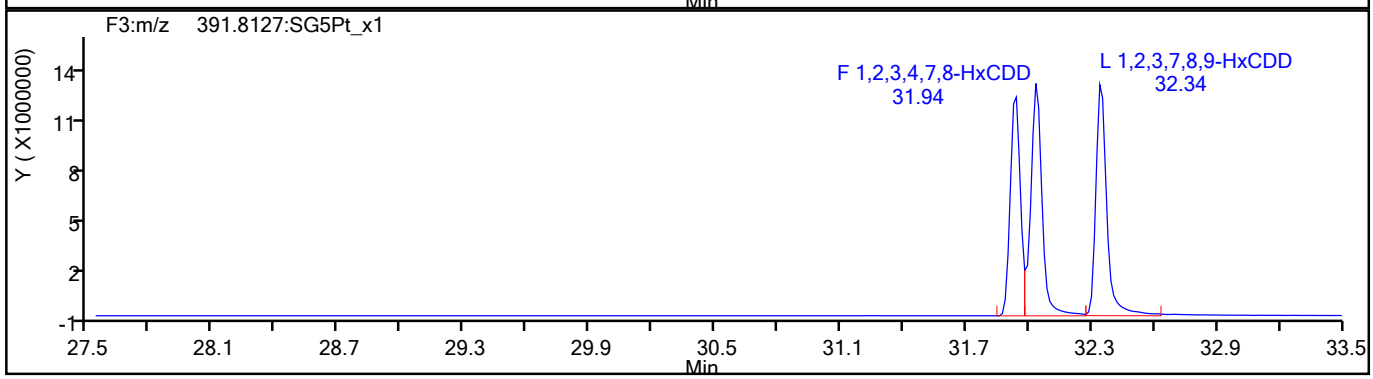

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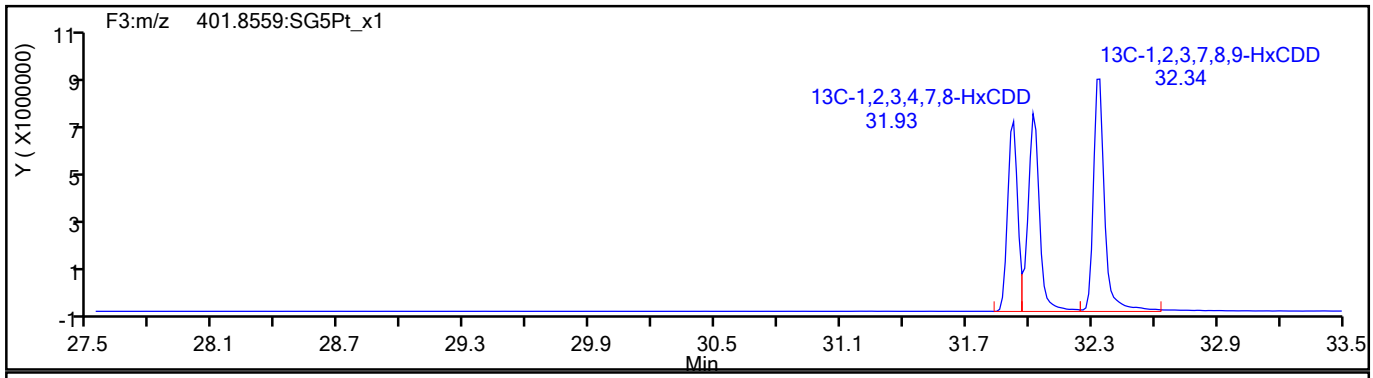

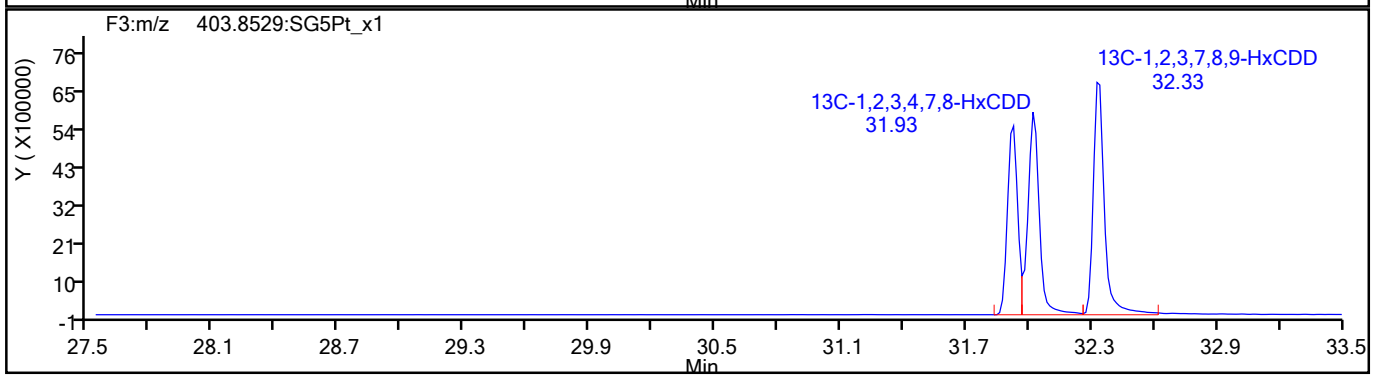

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Eurofins TestAmerica, Sacramento

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HpCDF

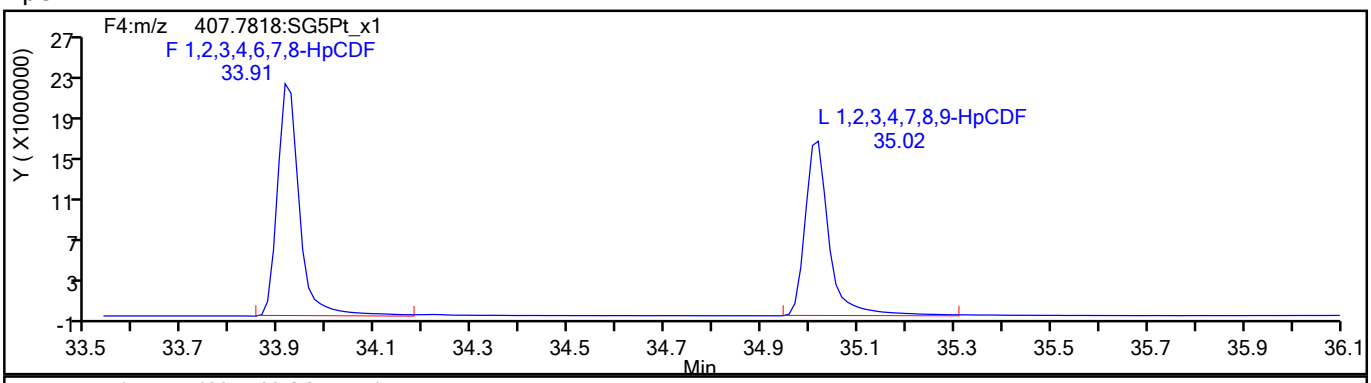

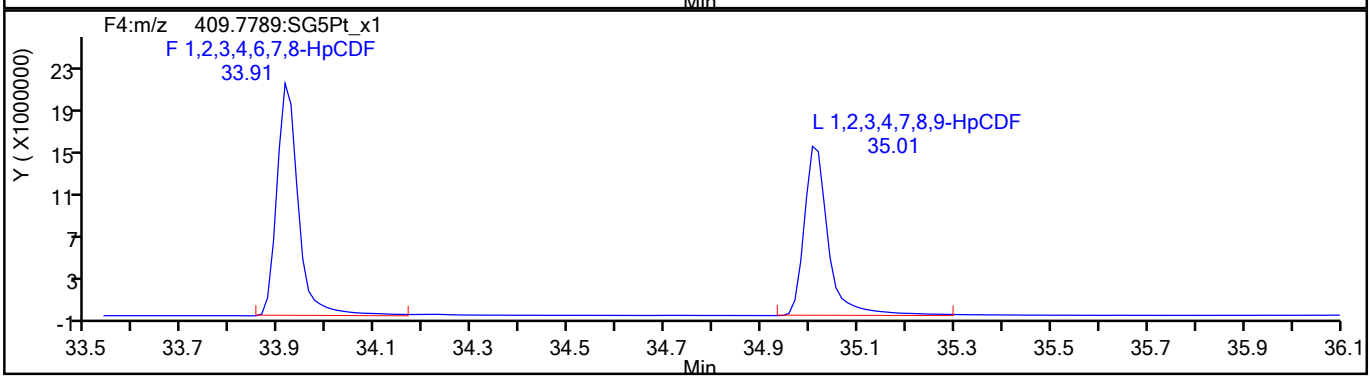

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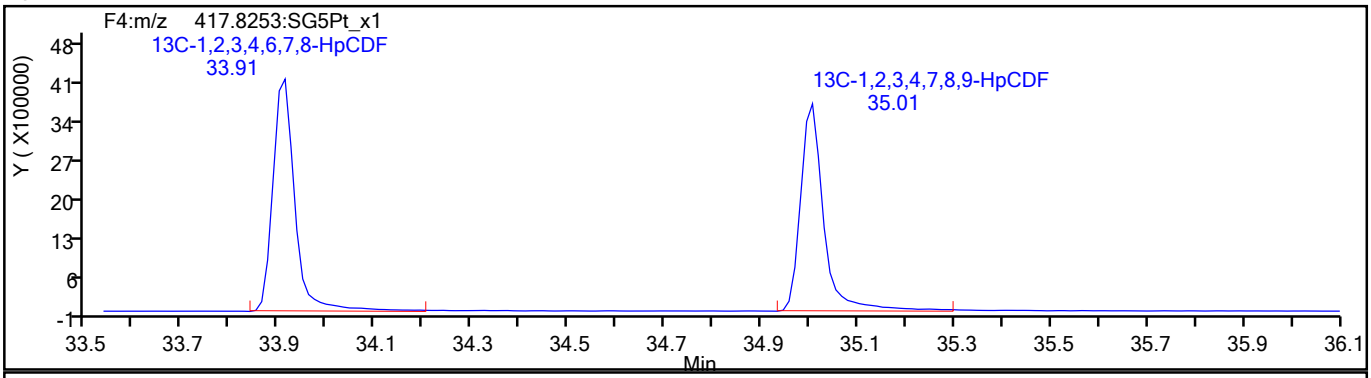

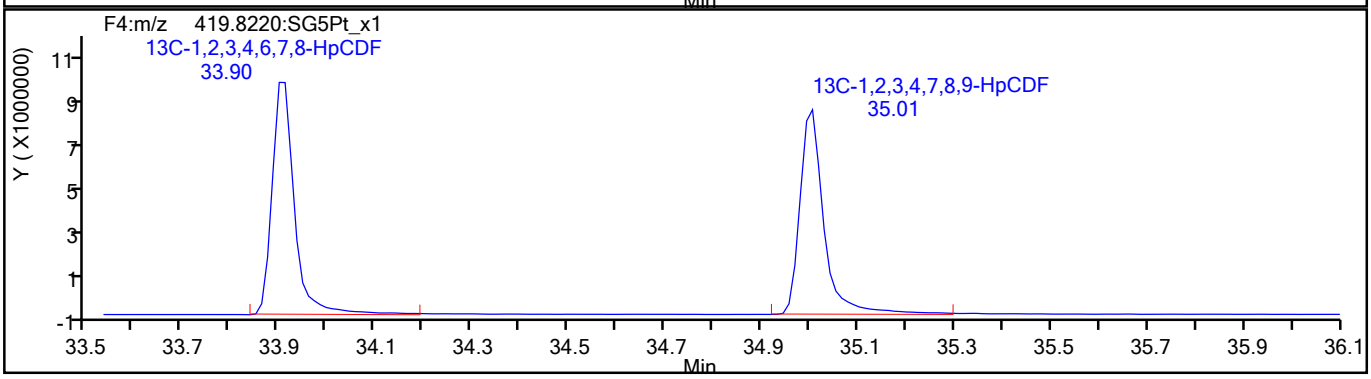

784400

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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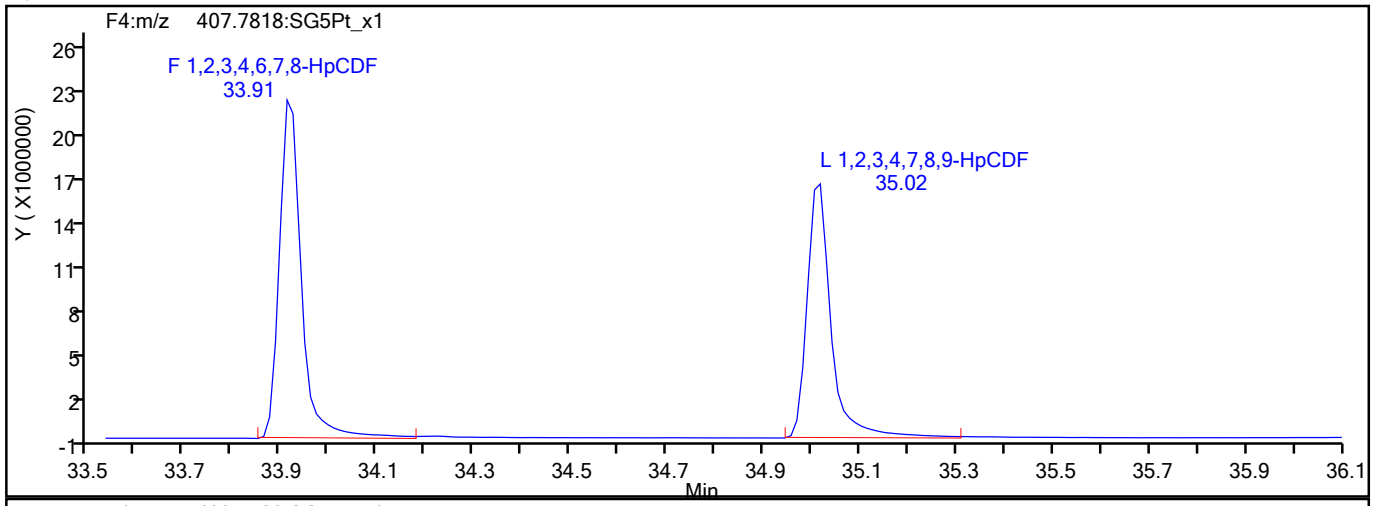

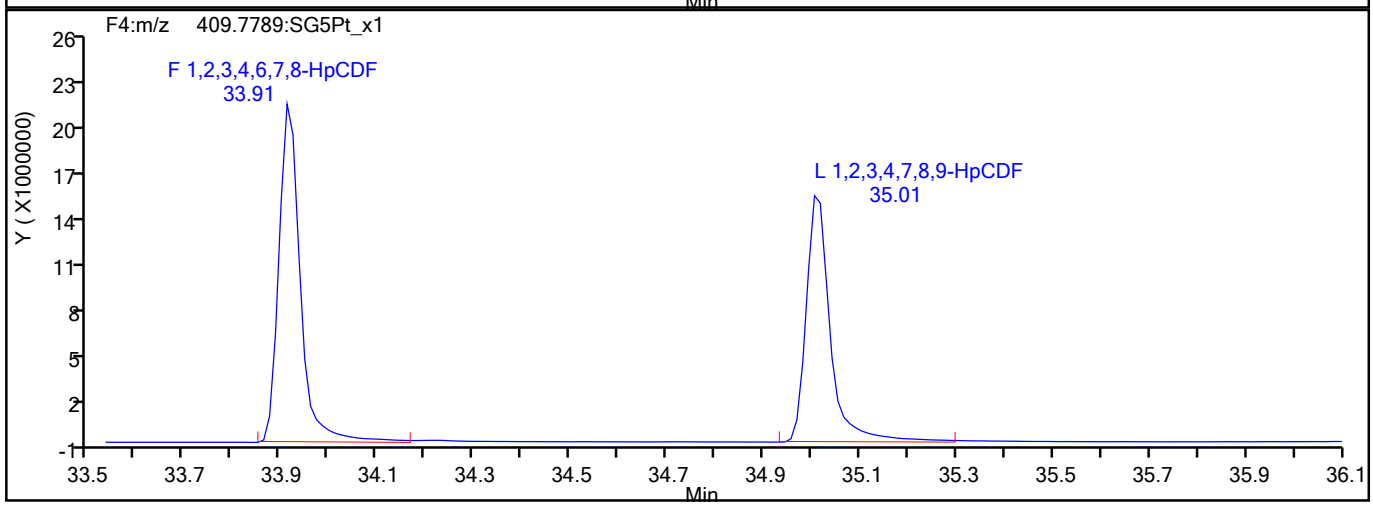

HpCDF Interference Mass

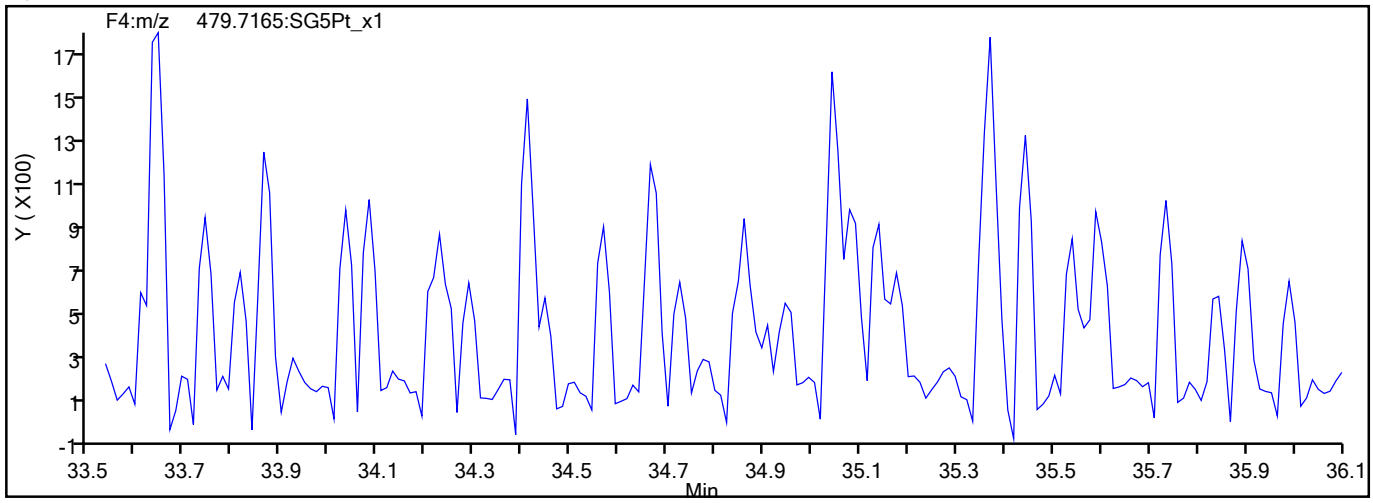

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Eurofins TestAmerica, Sacramento

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HpCDD

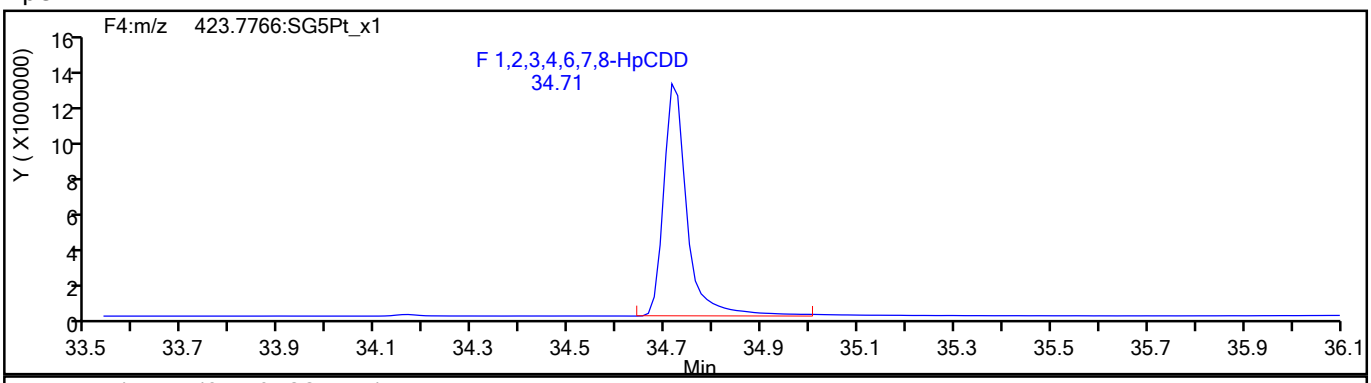

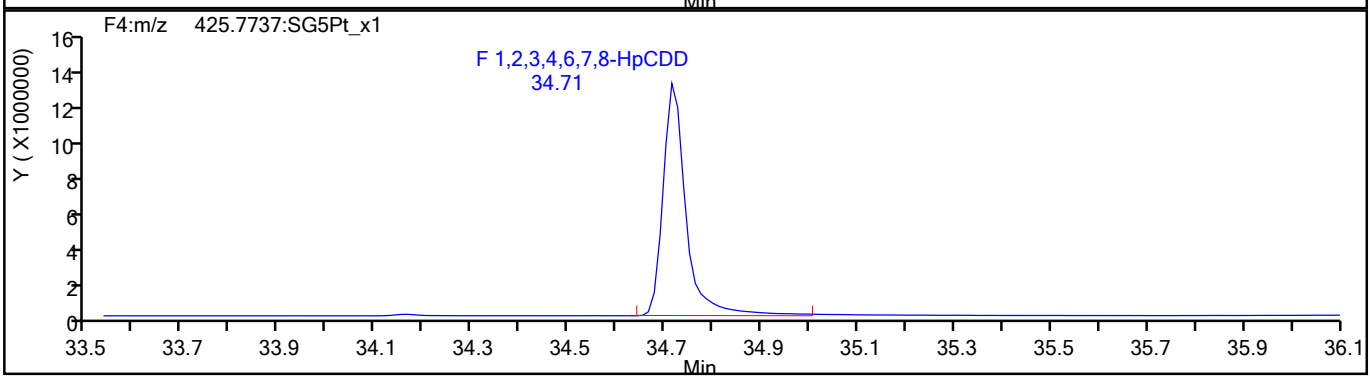

HpCDD Standards

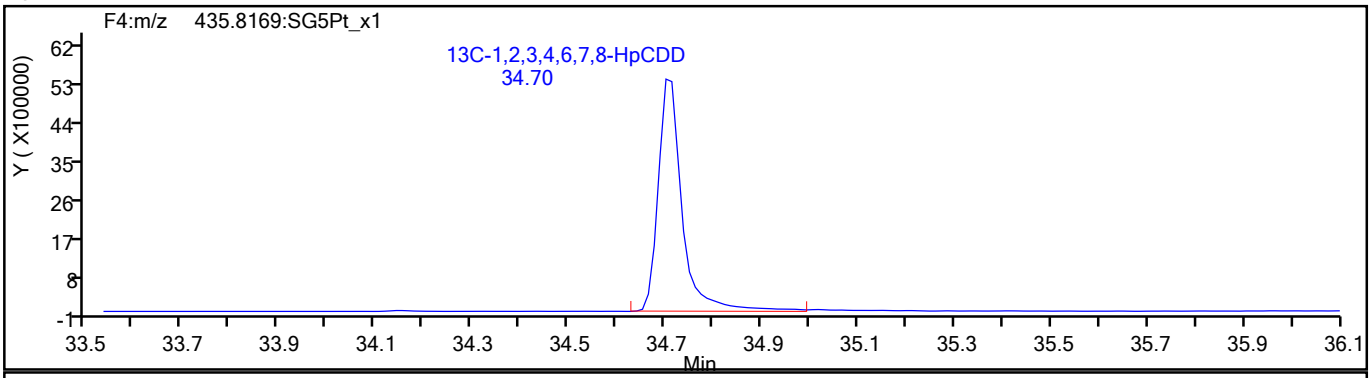

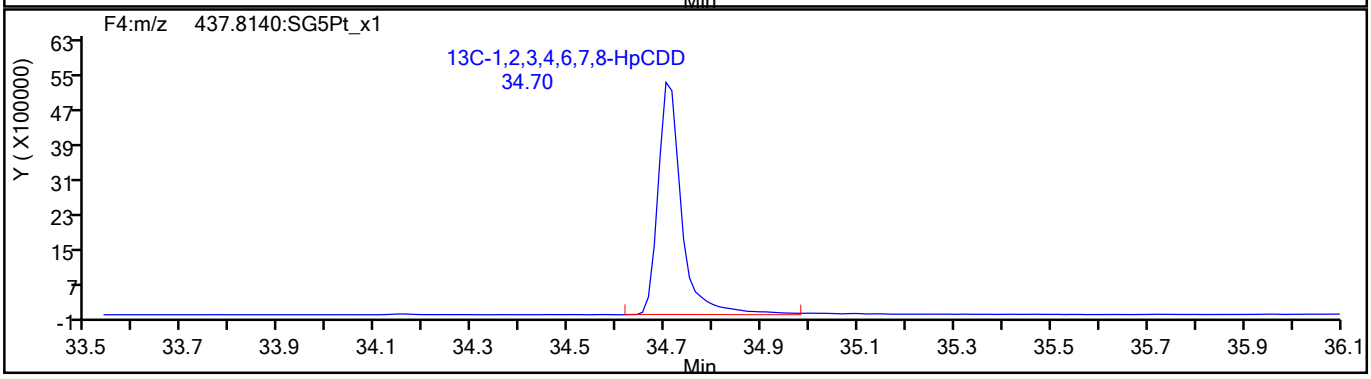

784402

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

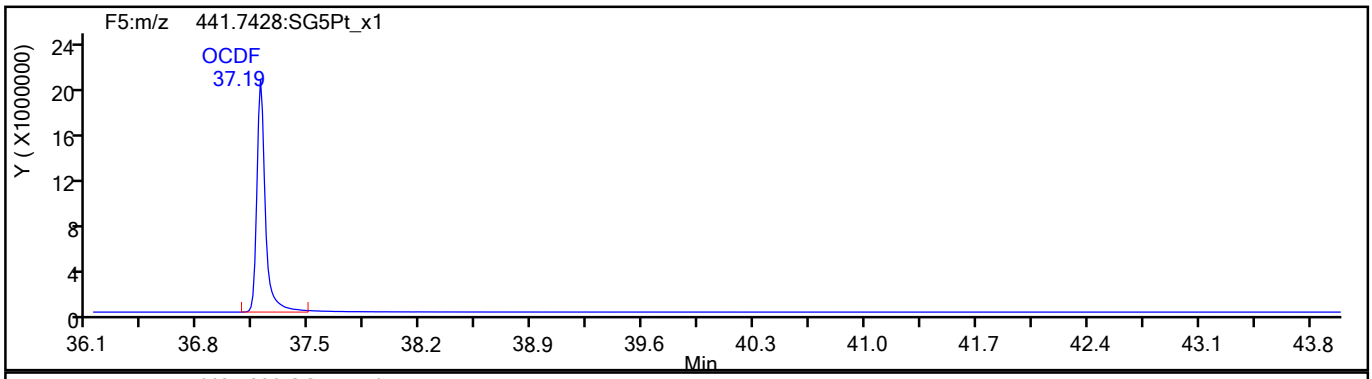

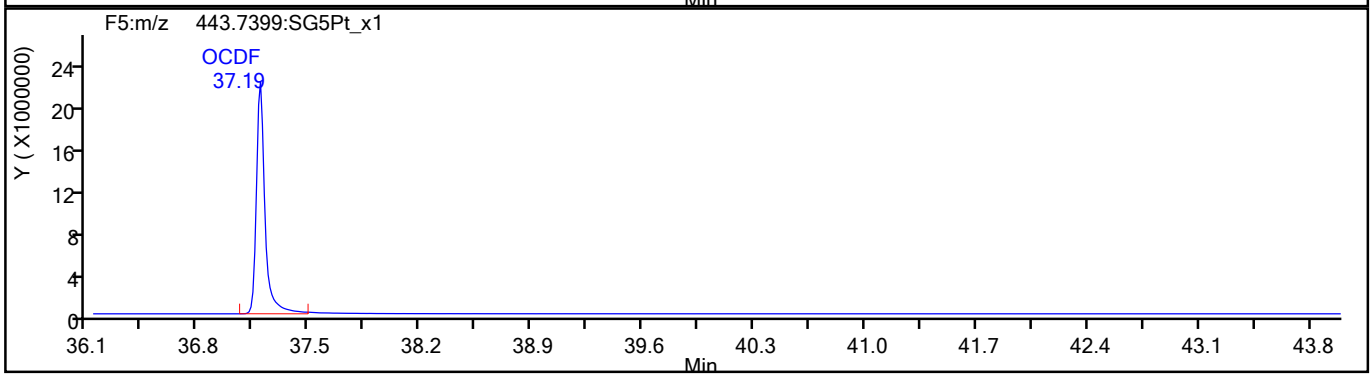

OCDF Standards

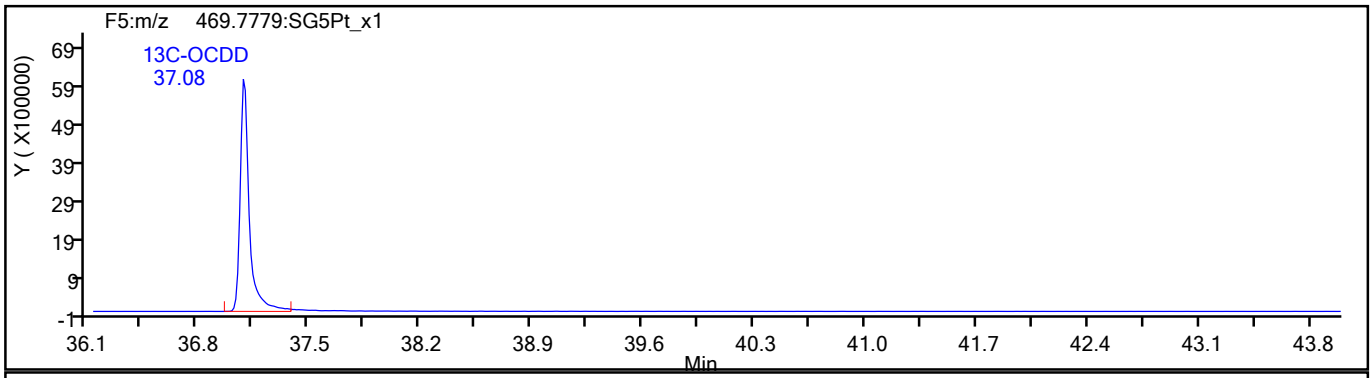

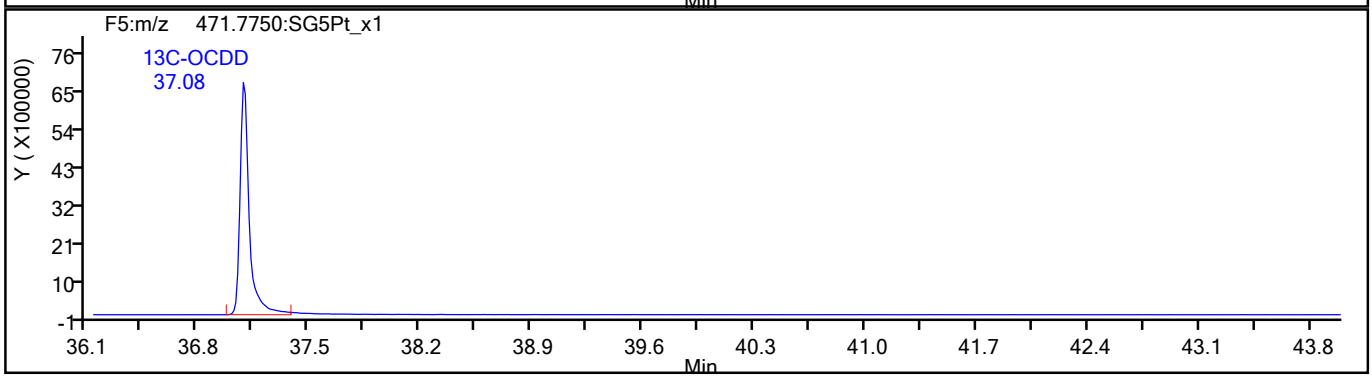

784403

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

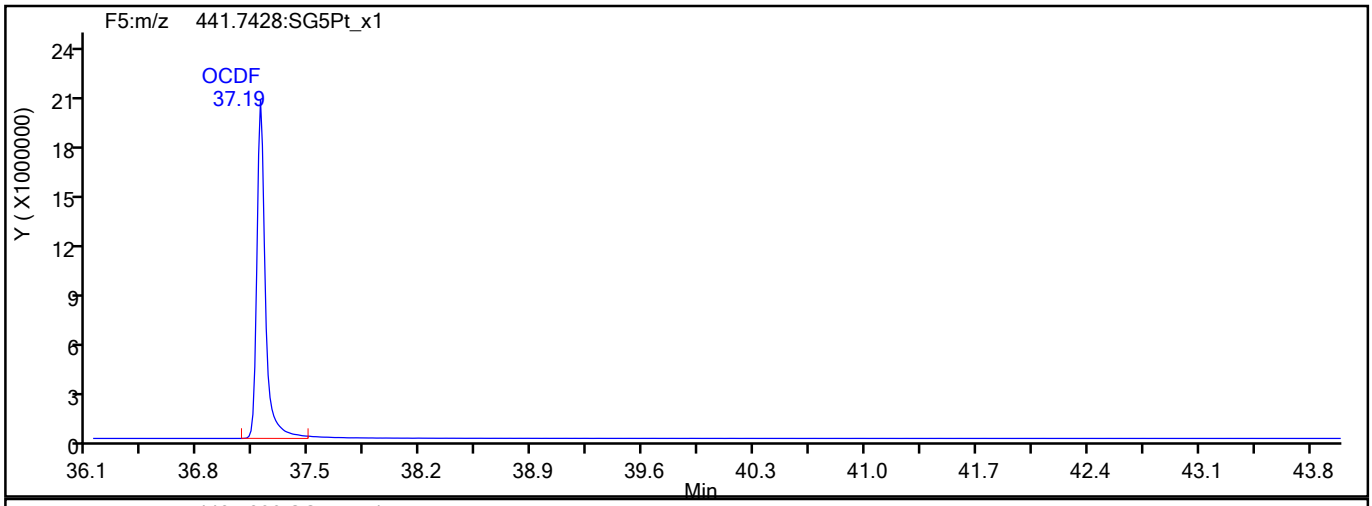

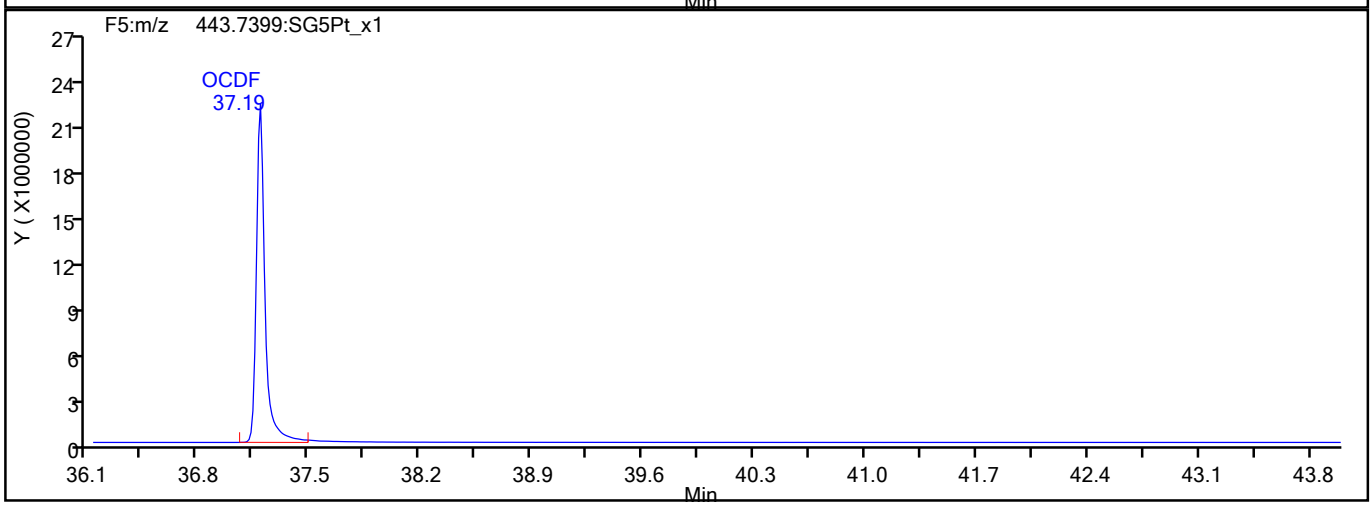

OCDF Interference Mass

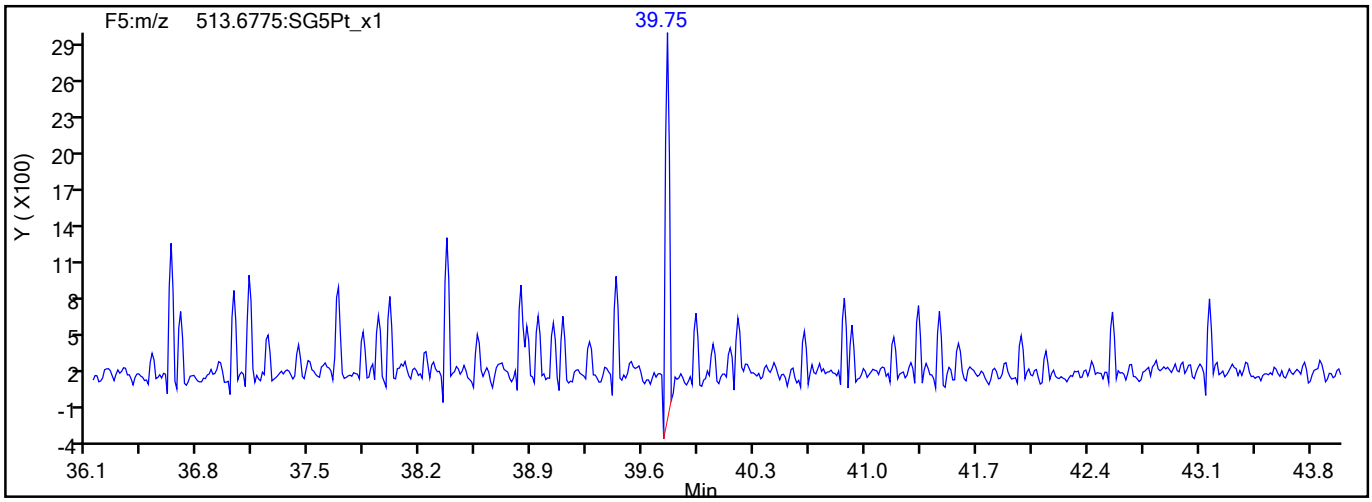

784404

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

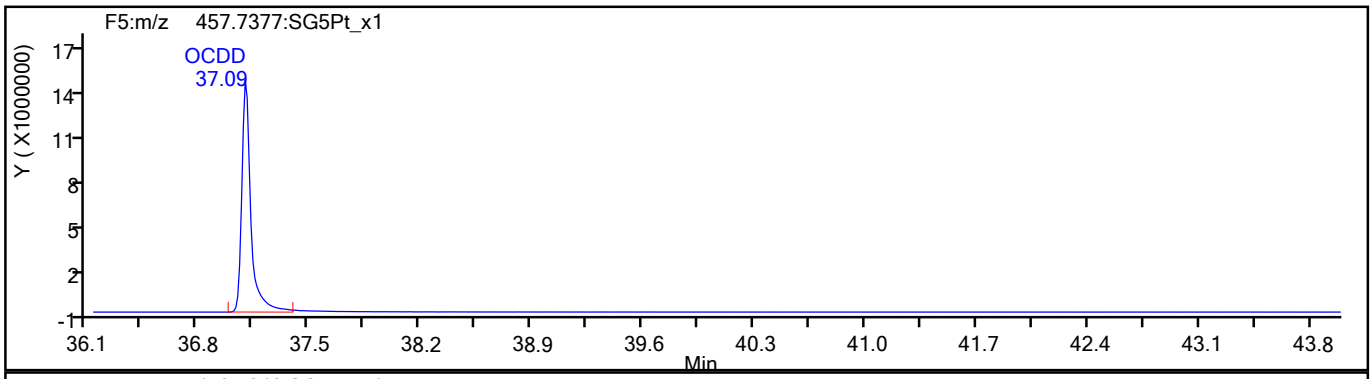

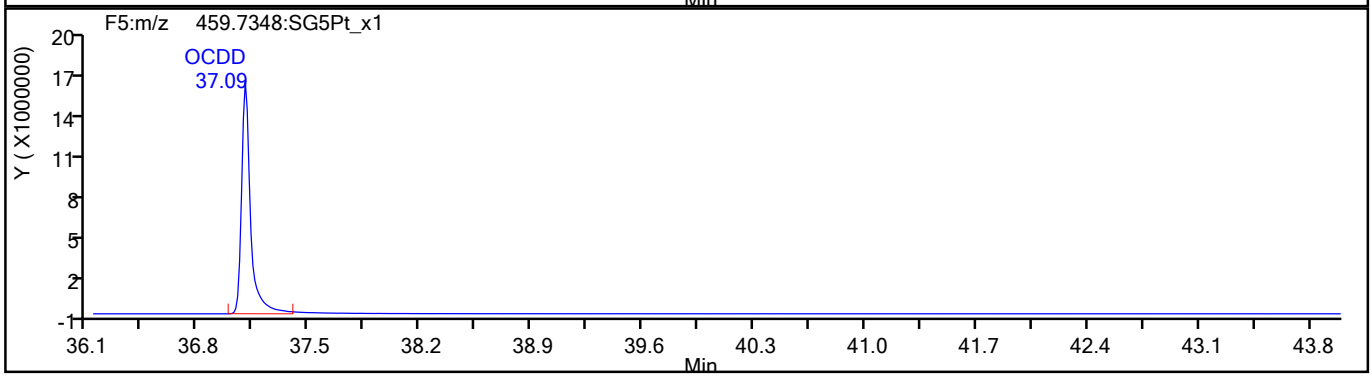

OCDD Standards

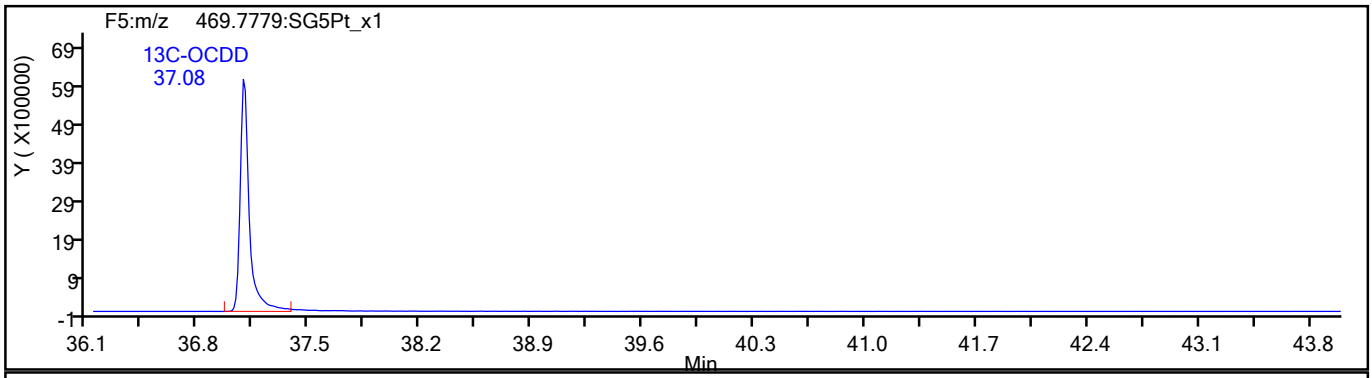

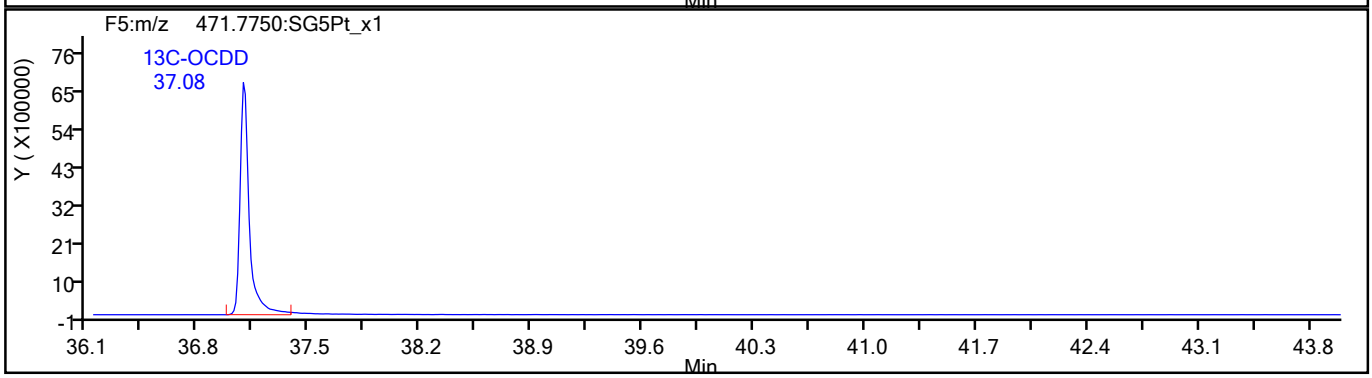

784405

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

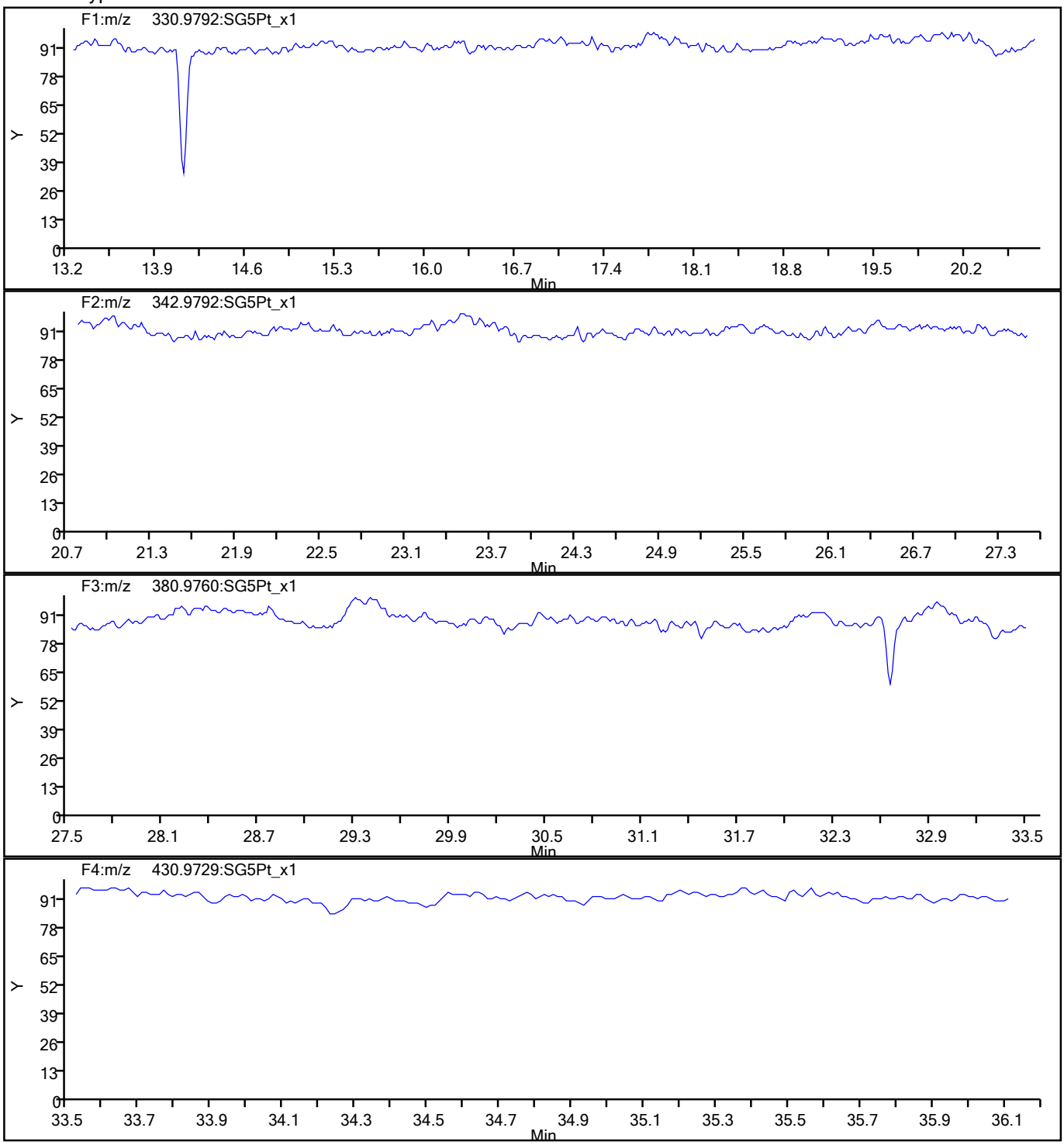

784406

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

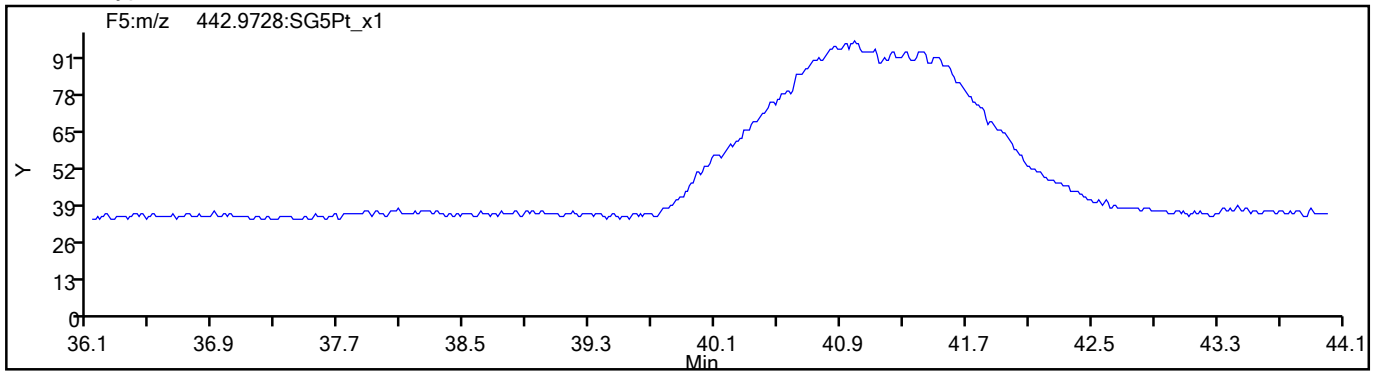

784407

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID: CCV 320-517729/2 Calibration Date: 08/18/2021 15:00

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 18AU2110D5_2.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.051		10.3	10.0	103	84-120
2,3,7,8-TCDD	AveID	1.254	1.248		9.95	10.0	100	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.088		51.3	50.0	103	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.052		51.6	50.0	103	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.049		50.0	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.086		50.1	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.161		51.5	50.0	103	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.177		50.4	50.0	101	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.079		50.7	50.0	101	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.058		52.9	50.0	106	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.213		53.6	50.0	107	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.185		50.8	50.0	102	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.494		51.8	50.0	104	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.109		50.7	50.0	101	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.368		51.9	50.0	104	86-116
OCDD	AveID	1.107	1.143		103	100	103	79-126
OCDF	AveID	1.438	1.474		103	100	103	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.547		95.2	100	95	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9226		103	100	103	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.187		98.1	100	98	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.216		98.1	100	98	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8005		105	100	105	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.047		96.6	100	97	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.088		96.5	100	96	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.014		95.3	100	95	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7203		98.2	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8225		93.4	100	93	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9221		95.3	100	95	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7270		94.0	100	94	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6349		98.1	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6573		93.8	100	94	77-129
13C-OCDD	Ave	0.4472	0.4528		203	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.162		10.5	10.0	105	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\18AU2110D5.SPL
Last Modified: Wednesday, August 18, 2021 16:19:48 Pacific Daylight Time
Printed: Wednesday, August 18, 2021 16:25:53 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix
1	18AU2110D5_1	WDM HRDXNCP_00044	WDM 081821	Tray01:1	Dioxin
2	18AU2110D5_2	CS-4 HRDXNL4_00099	CCV 081821	Tray01:2	Dioxin
3	18AU2110D5_3	Hexan QC 081721	Hexan QC 081721	Tray01:4	QC
4	18AU2110D5_4	580-104749-a-21-a RI	580-104749-a-21-a RI	Tray01:5	8290A_D5/Solid
5	18AU2110D5_5	320-76769-A-31-A RI	320-76769-A-31-A	Tray01:6	1613B/Solid
6	18AU2110D5_6	320-76769-A-34-A RI	320-76769-A-34-A RI	Tray01:7	1613B/Solid
7	18AU2110D5_7	320-76887-A-4-A RI	320-76887-A-4-A RI	Tray01:8	1613B/Solid
8	18AU2110D5_8	320-76887-a-2-a 10x	320-76887-a-2-a 10x	Tray01:9	1613B/Solid
9	18AU2110D5_9	320-76887-a-2-b ms 10x	320-76887-a-2-b ms 10x	Tray01:10	1613B/Solid
10	18AU2110D5_10	320-76887-a-2-c msd 10x	320-76887-a-2-c msd 10x	Tray01:11	1613B/Solid
11	18AU2110D5_11	SB Solvent Blank C-14	SB 081821	Tray01:3	
12	18AU2110D5_12	CS-4 HRDXNL4_00099	CCV 081821A	Tray01:2	Dioxin
13	18AU2110D5_13	WDM HRDXNCP_00044	WDM 081821A	Tray01:1	Dioxin
14	18AU2110D5_14	QC DH28_00196 1A 20%	QC DH28_00196 1A 20%	Tray01:15	1613B/8290/QC
15	18AU2110D5_15	QC DH28_00196 2A 65%	QC DH28_00196 2A 65%	Tray01:16	1613B/8290/QC
16	18AU2110D5_16	QC DH6535_00550 65%	QC DH6535_00550 65%	Tray01:17	1613B/8290/QC
17	18AU2110D5_17	QC DH6535_00551 65%	QC DH6535_00551 65%	Tray01:18	1613B/8290/QC
18	18AU2110D5_18	QC DH6535_00552 65%	QC DH6535_00552 65%	Tray01:19	1613B/8290/QC
19	18AU2110D5_19	570-65710-bc-1-a	570-65710-bc-1-a	Tray01:20	8290/Water
20	18AU2110D5_20	570-65471-ap-2-a	570-65471-ap-2-a	Tray01:21	8290/Water
21	18AU2110D5_21	240-153449-p-3-a	240-153449-p-3-a	Tray01:22	8290A/Water
22	18AU2110D5_22	SB Solvent Blank C-14	SB 081821A	Tray01:3	
23	18AU2110D5_23	CS-4 HRDXNL4_00099	CCV 081821B	Tray01:2	Dioxin
24	18AU2110D5_24	081721- DIOXIN IDA QC00481	081721- DIOXIN IDA QC00481	Tray01:23	Dioxin
25	18AU2110D5_25	WDM HRDXNCP_00044	WDM 081821B	Tray01:1	Dioxin
26	18AU2110D5_26	SB Solvent Blank C-14	SB 081821B	Tray01:3	
27	18AU2110D5_27	240-153367-C-5-A	240-153367-C-5-A	Tray01:29	8290A/Solid
28	18AU2110D5_28	240-153367-C-6-A	240-153367-C-6-A	Tray01:30	8290A/Solid
29	18AU2110D5_29	240-153367-C-7-A	240-153367-C-7-A	Tray01:31	8290A/Solid
30	18AU2110D5_30	240-153367-C-8-A	240-153367-C-8-A	Tray01:32	8290A/Solid
31	18AU2110D5_31	240-153367ZC-9-A	240-153367ZC-9-A	Tray01:33	8290A/Solid
32	18AU2110D5_32	240-153367-C-10-A	240-153367-C-10-A	Tray01:34	8290A/Solid
33	18AU2110D5_33	240-153367-C-11-A	240-153367-C-11-A	Tray01:35	8290A/Solid
34	18AU2110D5_34	SB Solvent Blank C-14	SB 081821A	Tray01:3	
35	18AU2110D5_35	CS-4 HRDXNL4_00099	CCV 081821	Tray01:2	Dioxin
36	18AU2110D5_36	WDM HRDXNCP_00044	WDM 081821C	Tray01:1	Dioxin

LOGFILE CHECKED
DB 8/19/21

784409

Box #	User	Sample Size	Units	MS File	Inlet File	Inject Volume	Process
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
---	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D260	SMA	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D266	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
---	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
QC90	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D262	SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
---	SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
QC 90	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
---	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D259	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
D259	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
---	SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
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---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Wednesday, August 18, 2021 14:07:25 Pacific Daylight Time

M 292.9824 R 12252

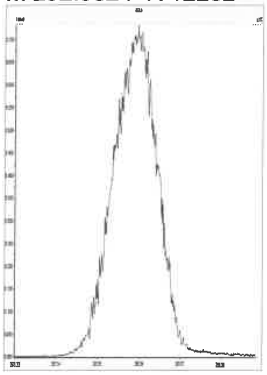

M 304.9824 R 12439

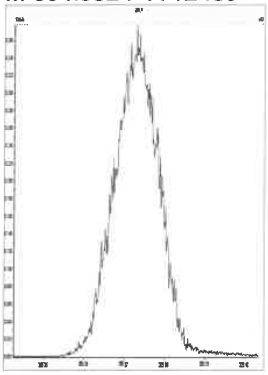

M 318.9792 R 12755

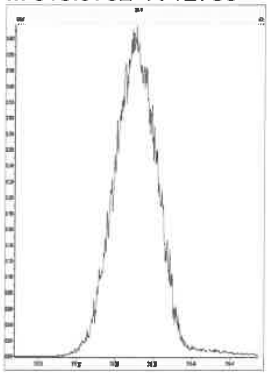

M 330.9792 R 12561

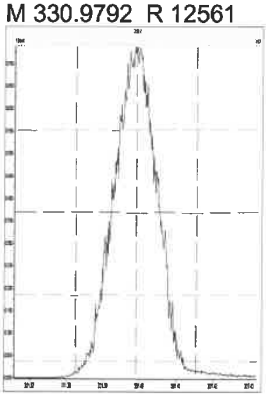

M 342.9792 R 12566

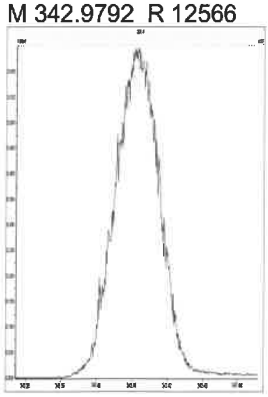

M 354.9792 R 12627

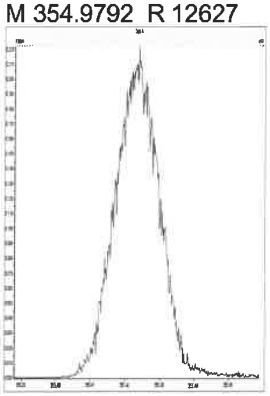

M 366.9792 R 12437

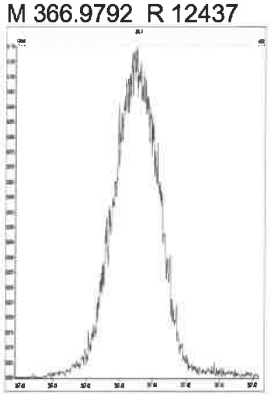

M 380.9760 R 12957

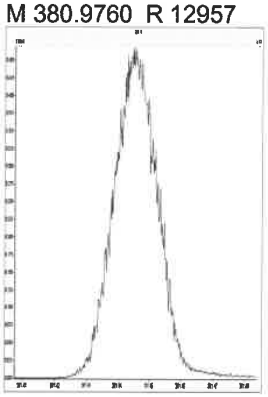

M 392.9760 R 12313

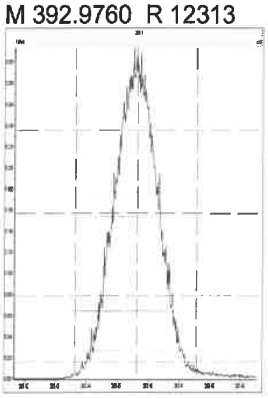

M 404.9760 R 11958

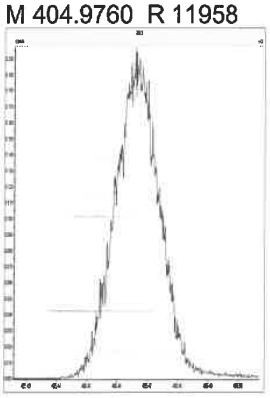

M 416.9760 R 12254

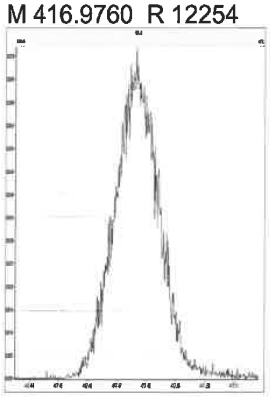

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Wednesday, August 18, 2021 14:08:28 Pacific Daylight Time

M 318.9792 R 12815

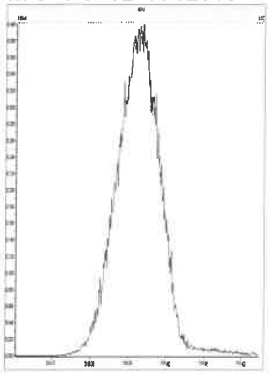

M 330.9792 R 13297

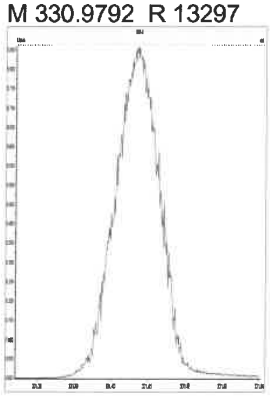

M 342.9792 R 12441

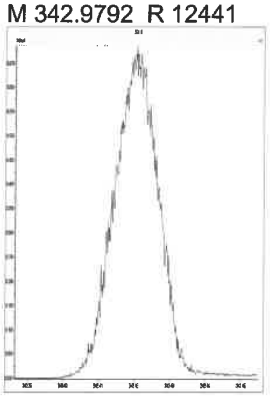

M 354.9792 R 12692

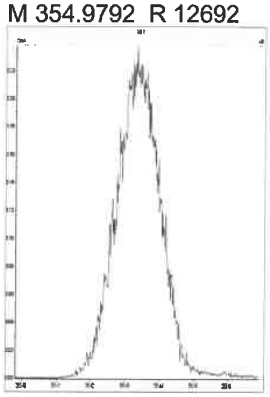

M 366.9792 R 12563

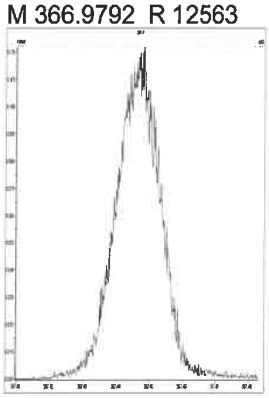

M 380.9760 R 12625

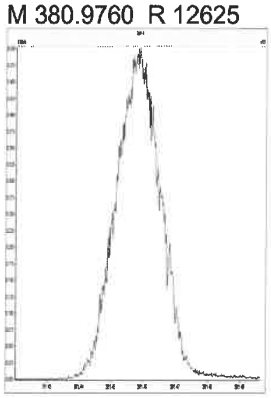

M 392.9760 R 12193

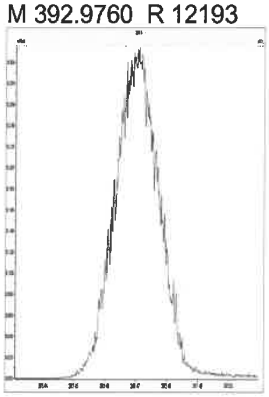

M 404.9760 R 12078

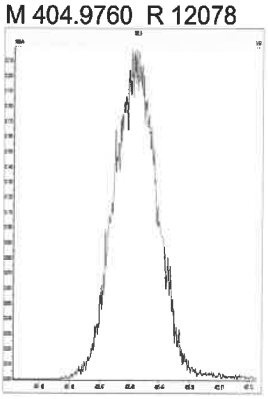

M 416.9760 R 12626

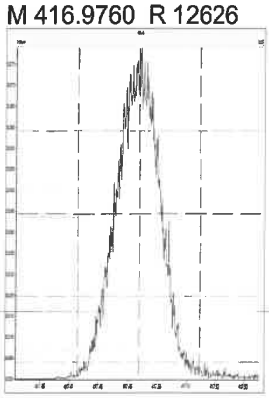

784413

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Wednesday, August 18, 2021 14:09:37 Pacific Daylight Time

M 366.9792 R 12251

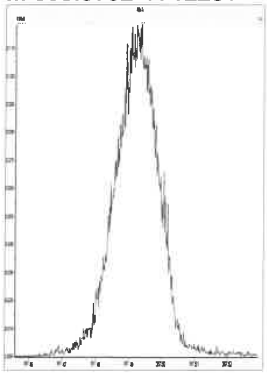

M 380.9760 R 12691

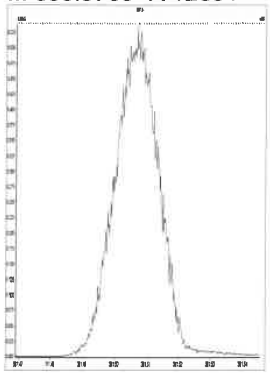

M 392.9760 R 13025

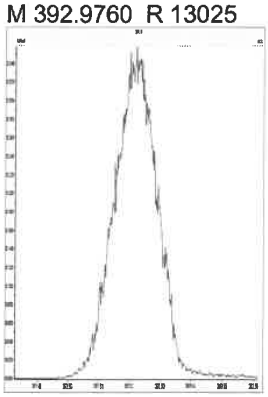

M 404.9760 R 12890

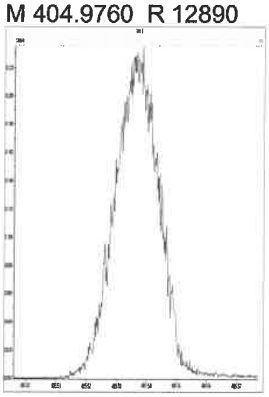

M 416.9760 R 13023

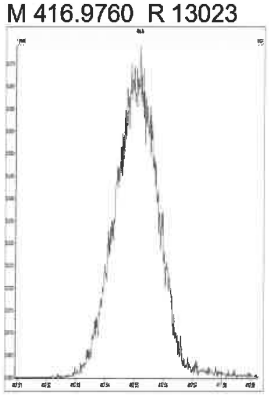

M 430.9728 R 12817

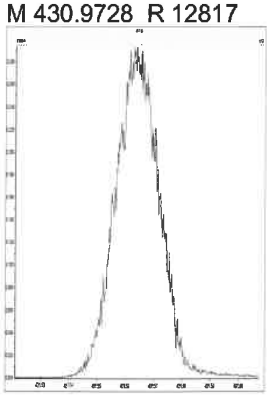

M 442.9728 R 12191

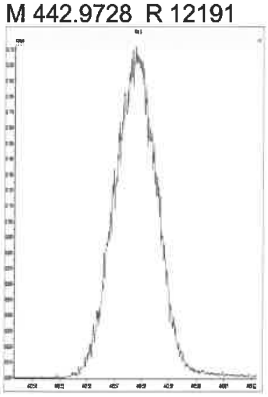

M 454.9728 R 12889

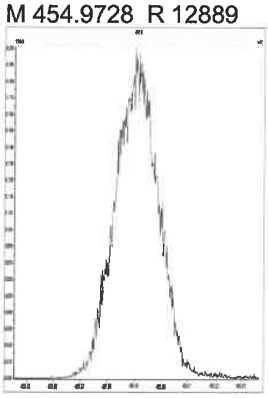

784414

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed: Wednesday, August 18, 2021 14:10:19 Pacific Daylight Time

M 380.9760 R 12693

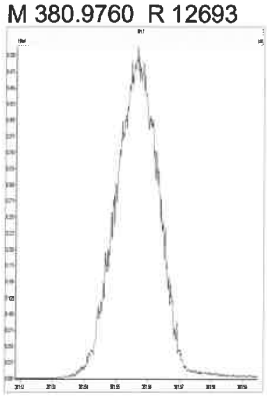

M 392.9760 R 12954

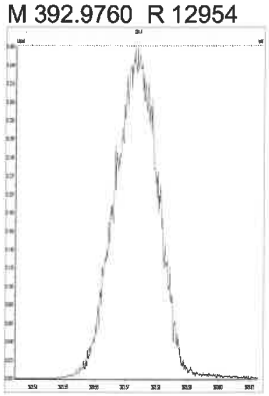

M 404.9760 R 12195

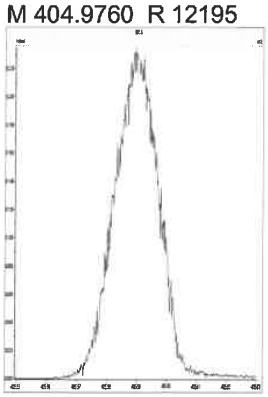

M 416.9760 R 12819

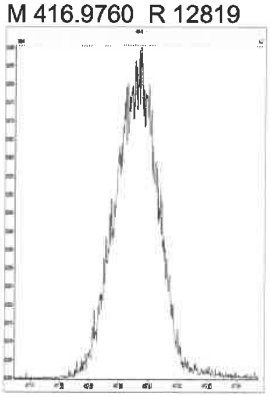

M 430.9728 R 12753

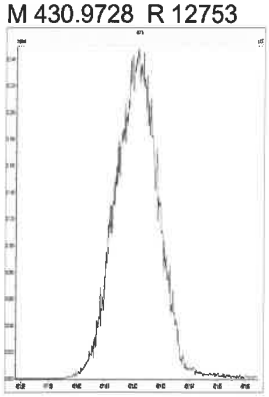

M 442.9728 R 13022

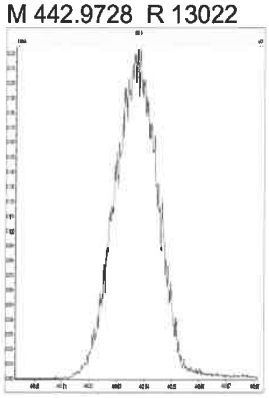

M 454.9728 R 12887

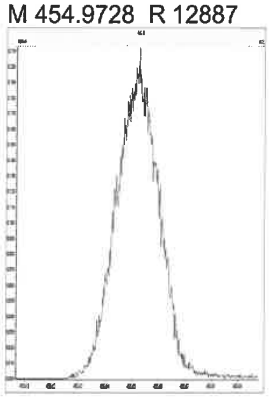

M 466.9728 R 12375

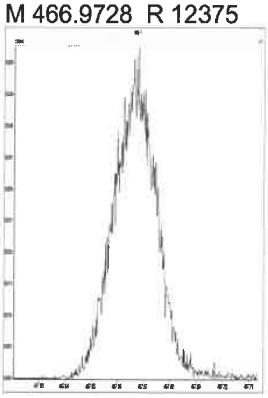

M 480.9696 R 12498

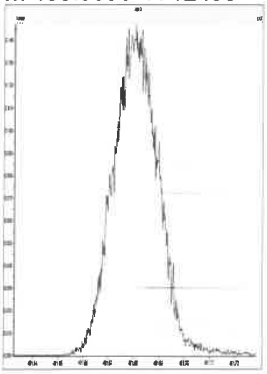

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

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M 380.9760 R 12440

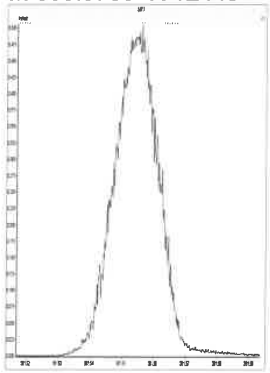

M 392.9760 R 12756

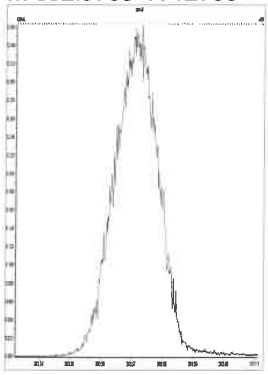

M 404.9760 R 12690

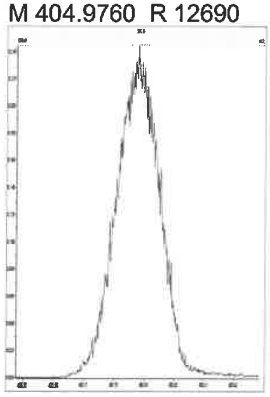

M 416.9760 R 12625

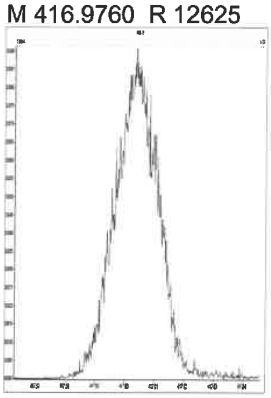

M 430.9728 R 12753

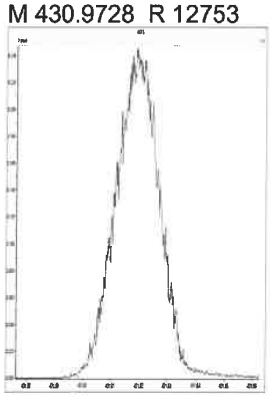

M 442.9728 R 13229

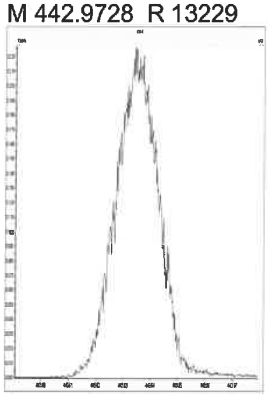

M 454.9728 R 12690

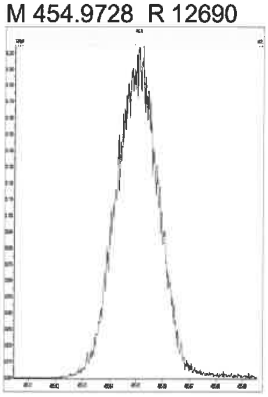

M 466.9728 R 13020

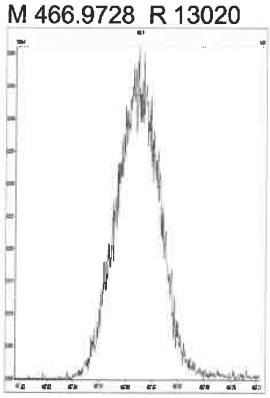

M 480.9696 R 12257

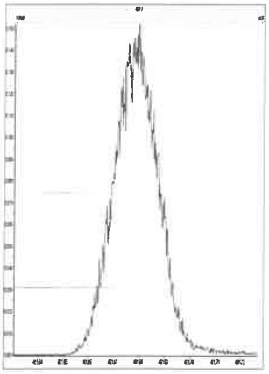

M 492.9696 R 12196

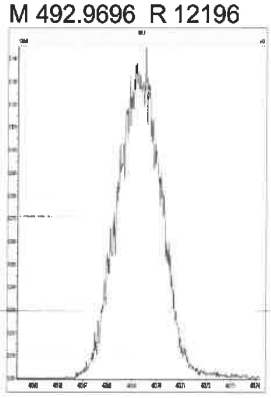

M 504.9696 R 12755

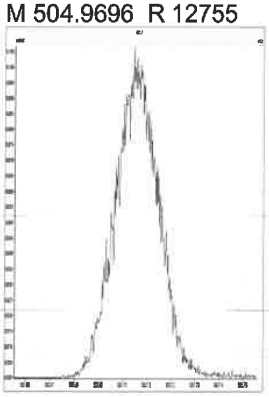

M 516.9697 R 12251

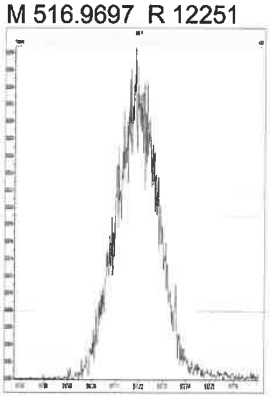

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M 292.9824_R 12026

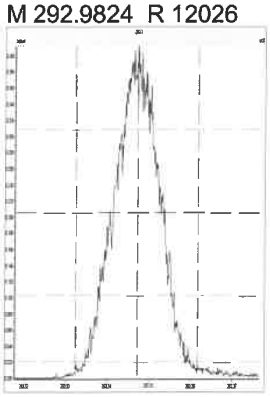

M 304.9824_R 11908

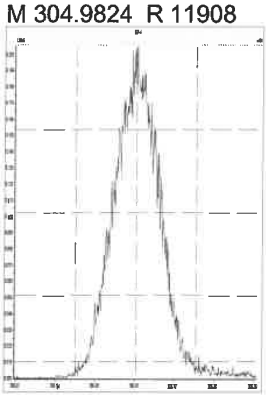

M 318.9792_R 12084

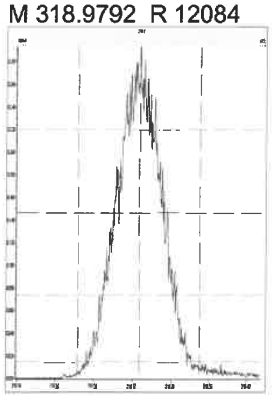

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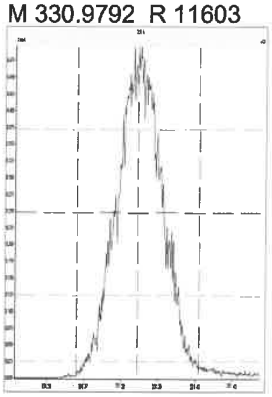

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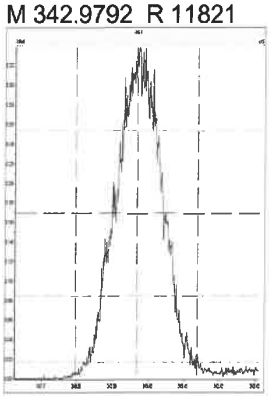

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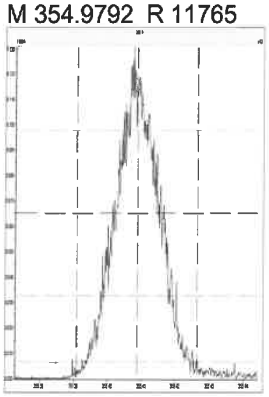

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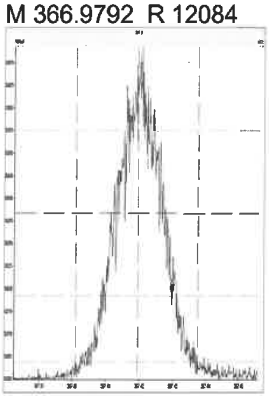

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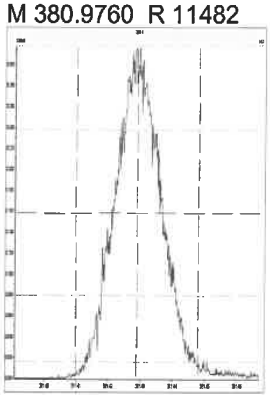

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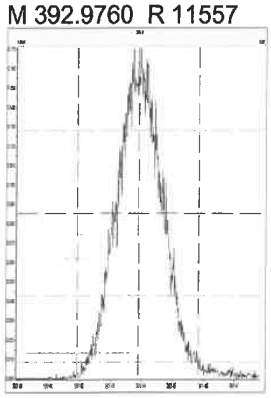

M 404.9760_R 11798

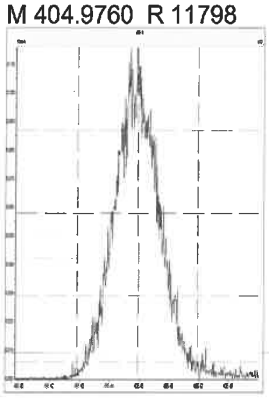

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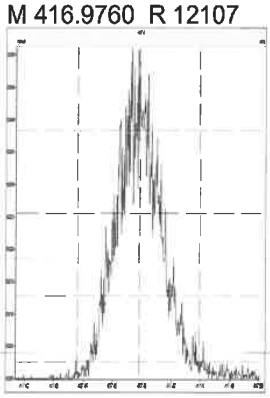

M 318.9792_R 11876

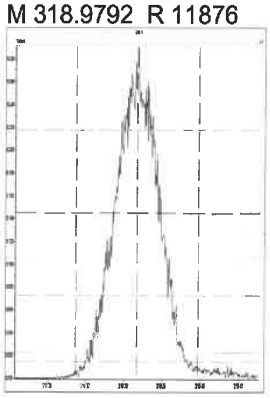

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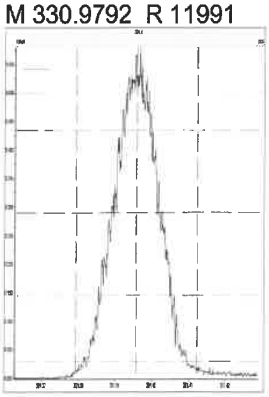

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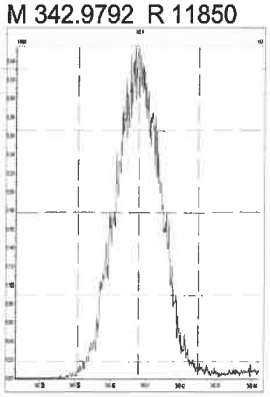

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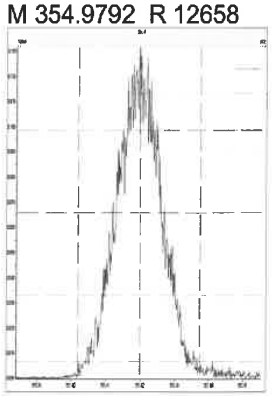

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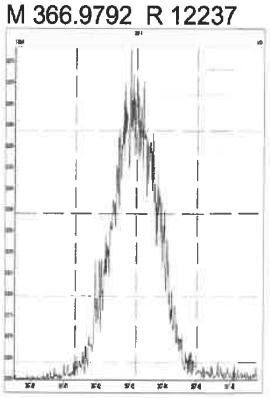

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M 380.9760 R 11684

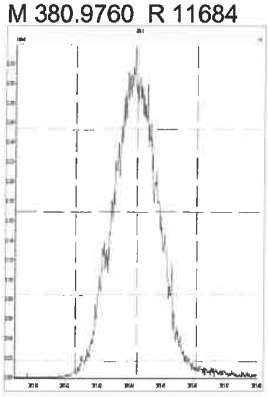

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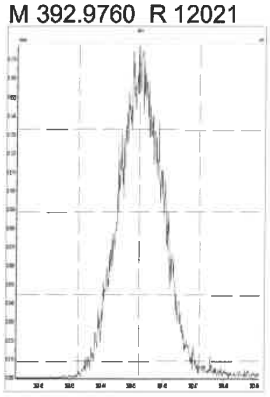

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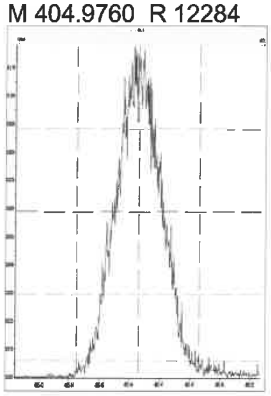

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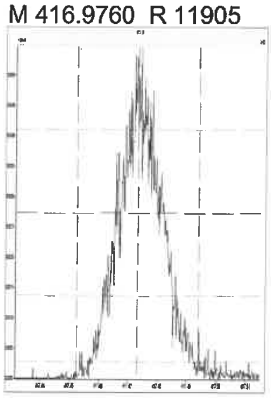

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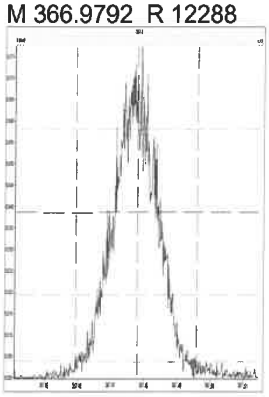

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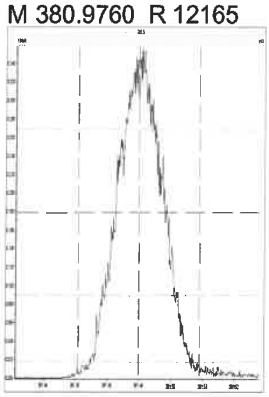

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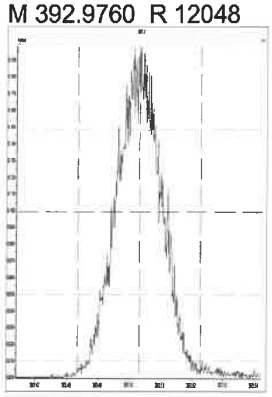

M 404.9760 R 12428

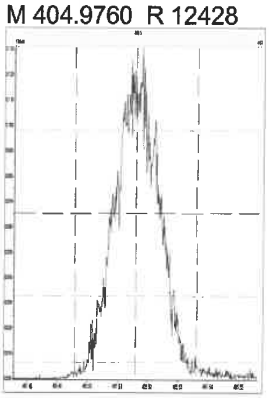

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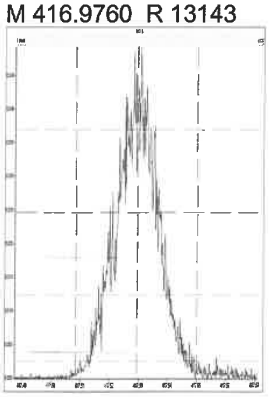

M 430.9728 R 12376

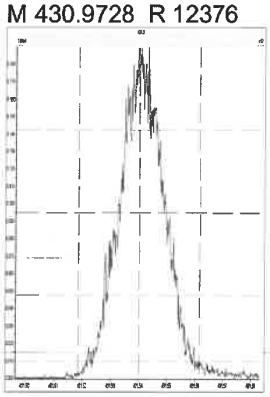

M 442.9728 R 12225

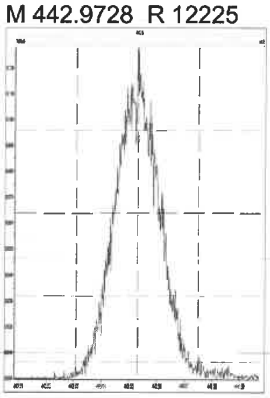

M 454.9728 R 12019

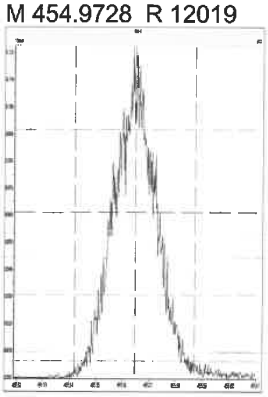

M 380.9760 R 12186

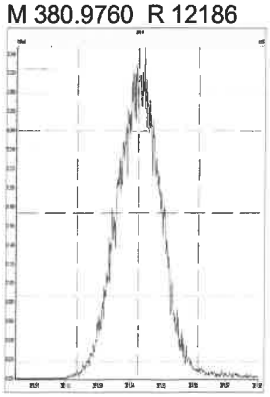

M 392.9760 R 12315

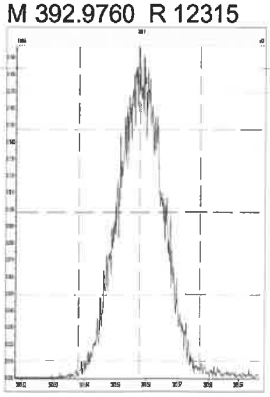

M 404.9760 R 11852

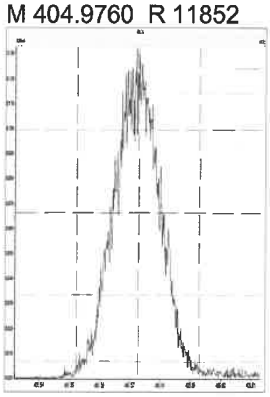

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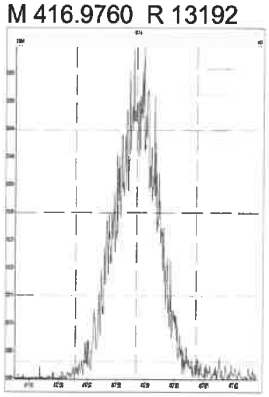

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M 430.9728 R 11798

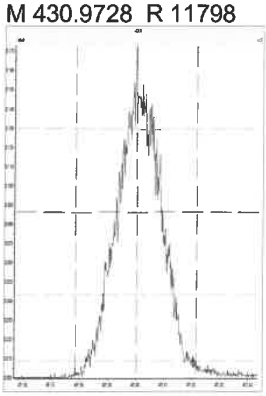

M 442.9728 R 13101

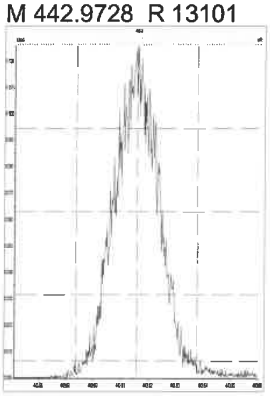

M 454.9728 R 12378

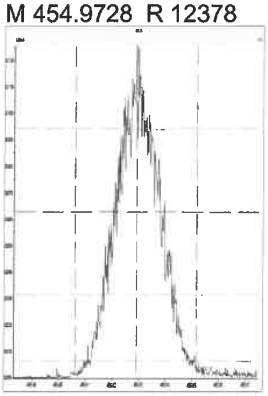

M 466.9728 R 12345

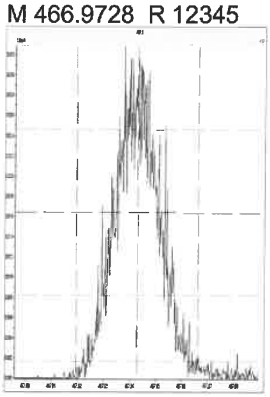

M 480.9696 R 12107

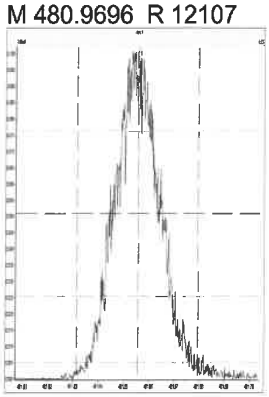

M 380.9760 R 12316

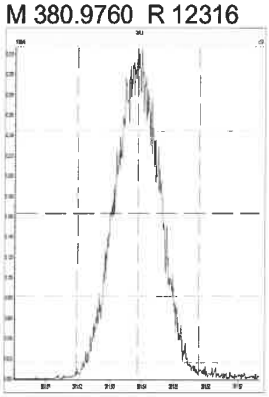

M 392.9760 R 12316

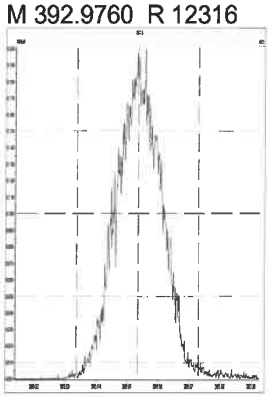

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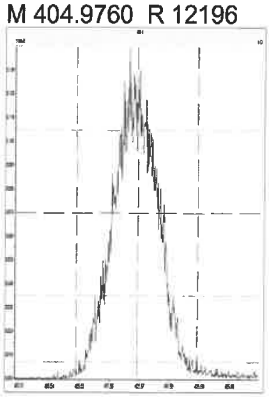

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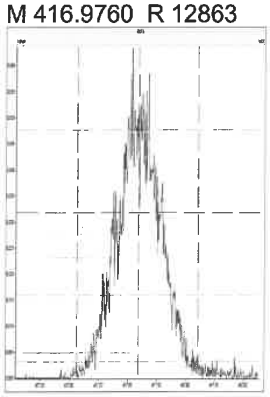

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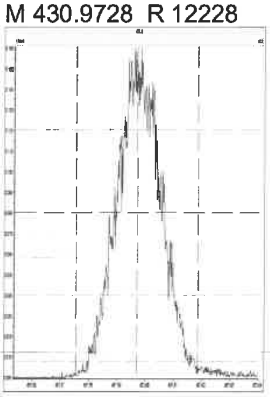

M 442.9728 R 12376

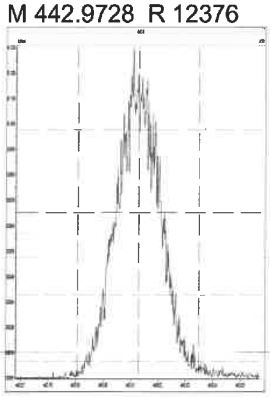

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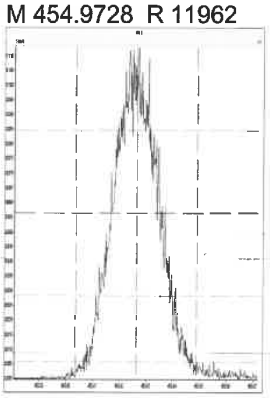

M 466.9728 R 12627

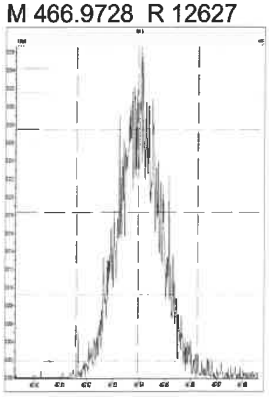

M 480.9696 R 12376

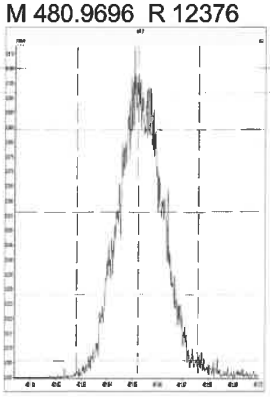

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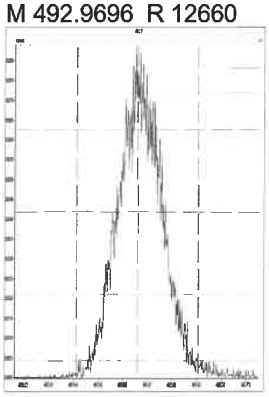

M 504.9696 R 11991

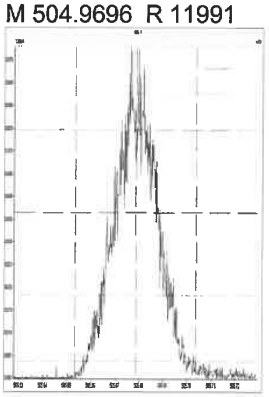

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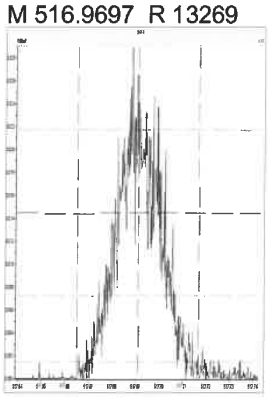

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M 292.9824 R 11600

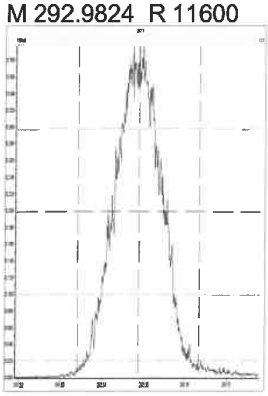

M 304.9824 R 12705

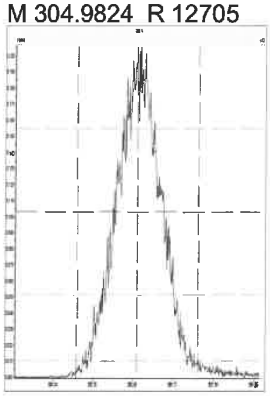

M 318.9792 R 11876

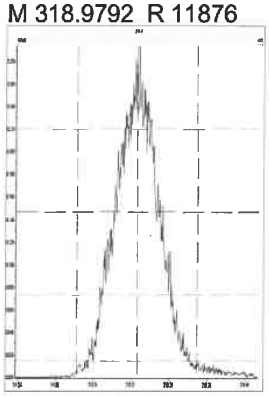

M 330.9792 R 12081

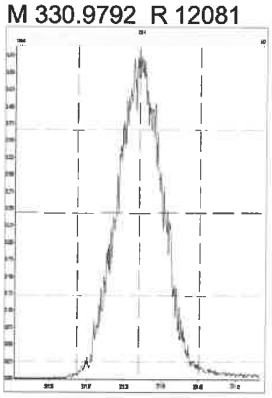

M 342.9792 R 11907

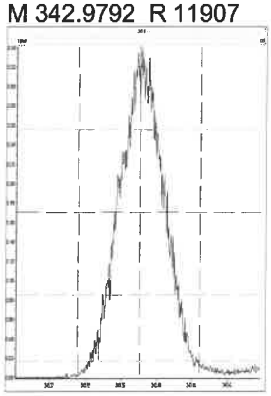

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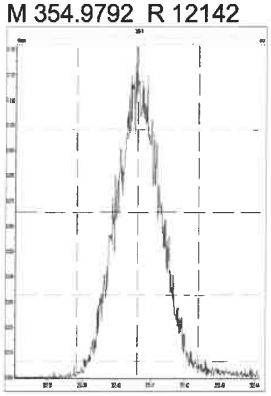

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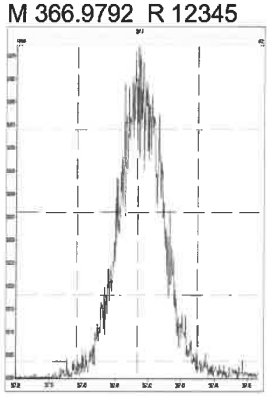

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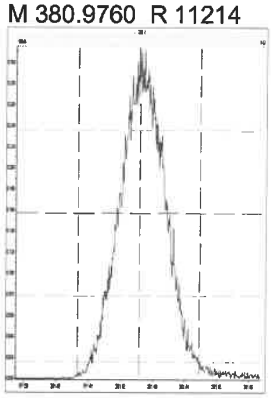

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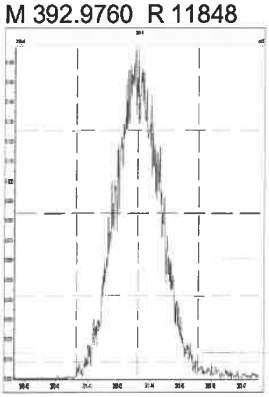

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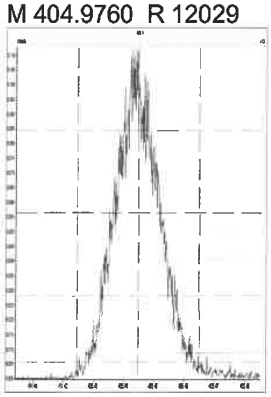

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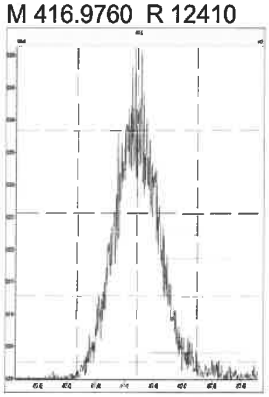

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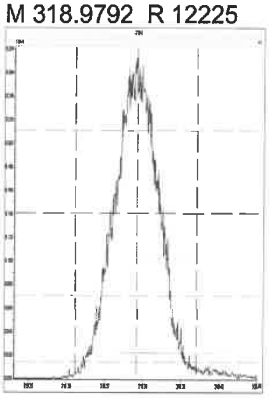

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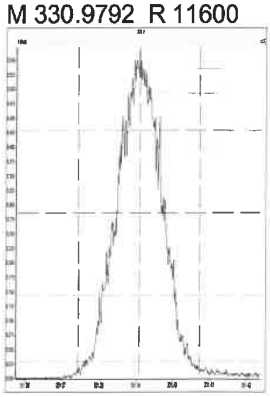

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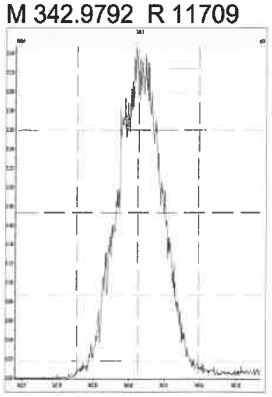

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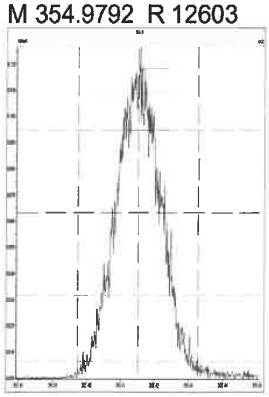

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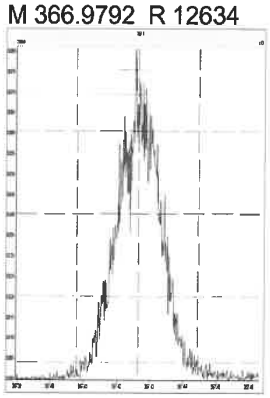

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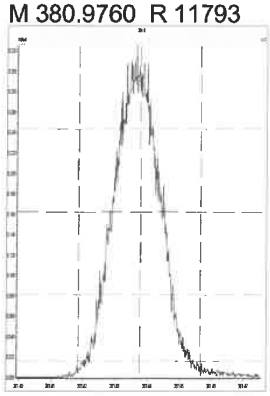

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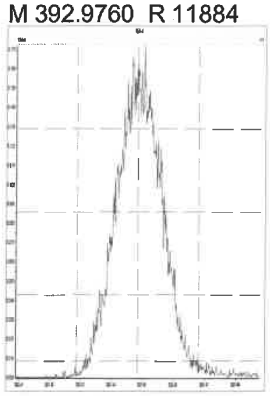

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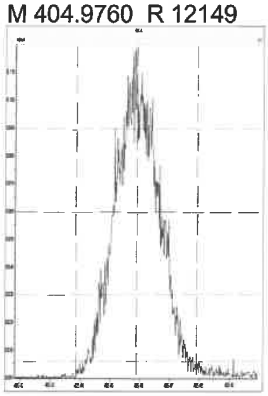

M 416.9760 R 12510

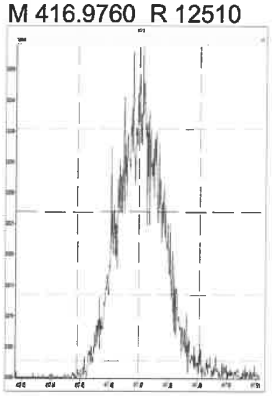

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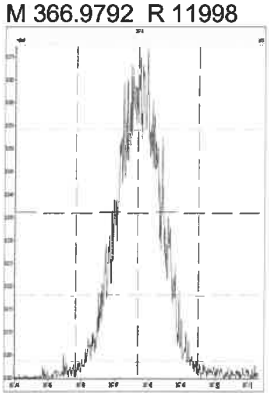

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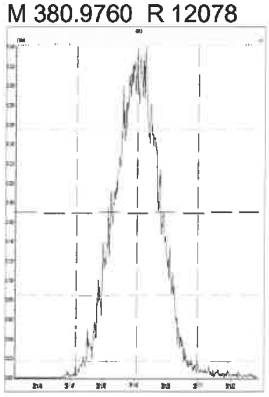

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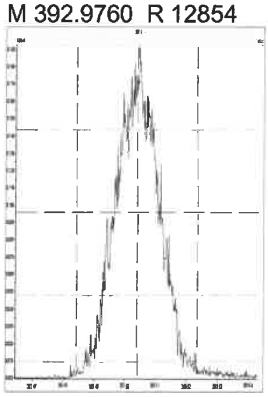

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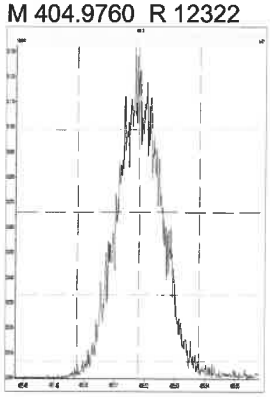

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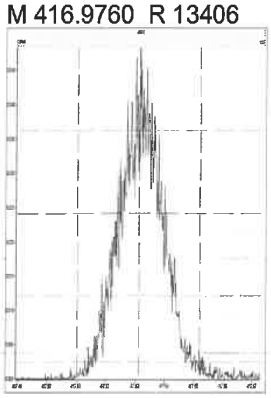

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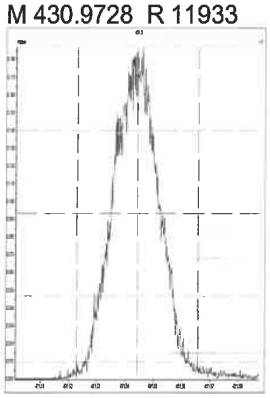

M 442.9728 R 12378

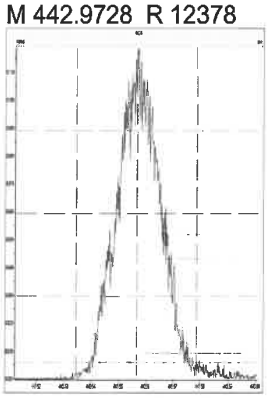

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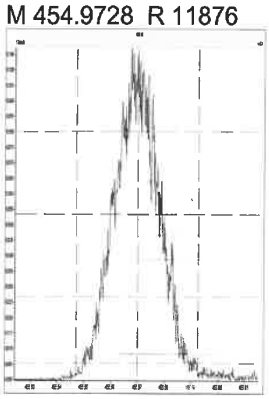

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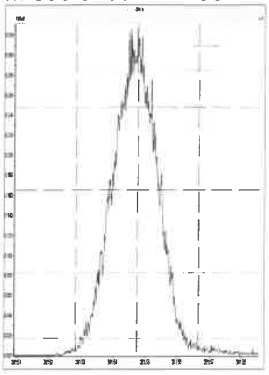

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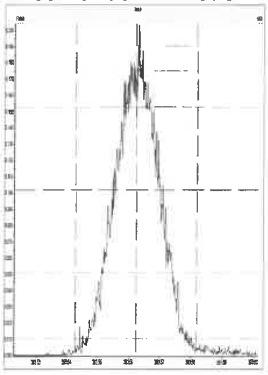

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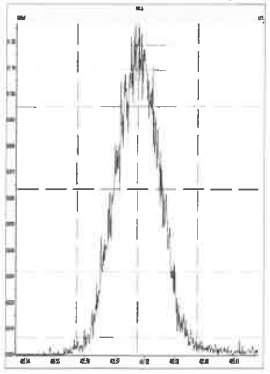

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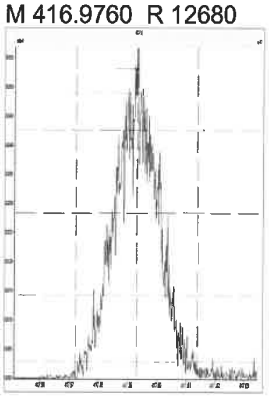

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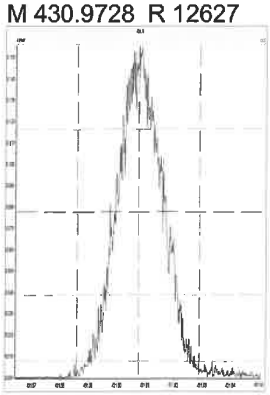

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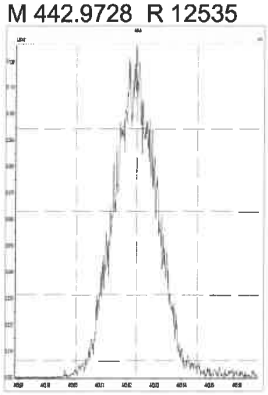

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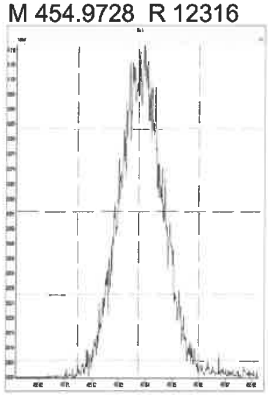

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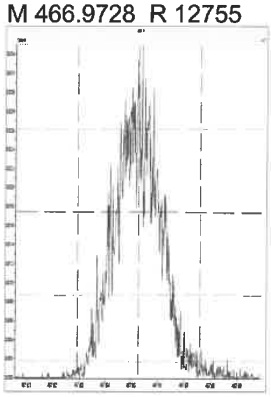

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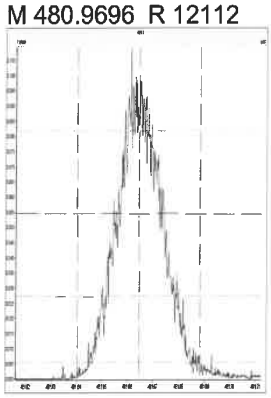

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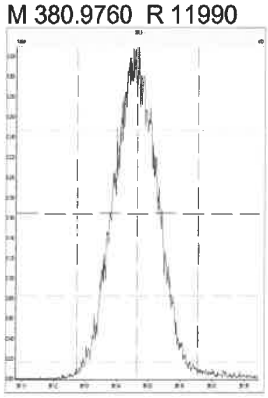

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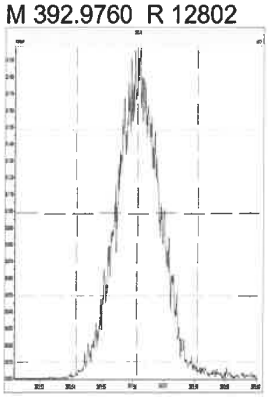

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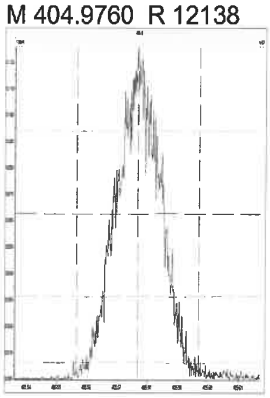

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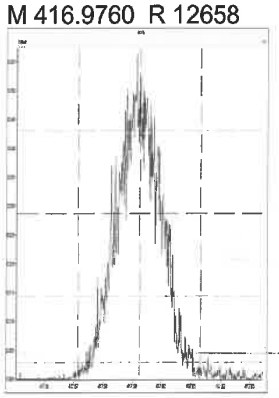

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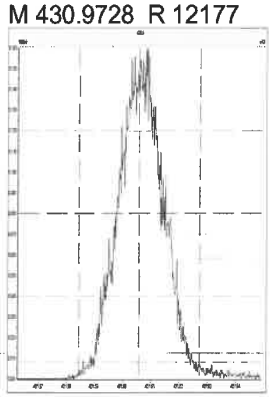

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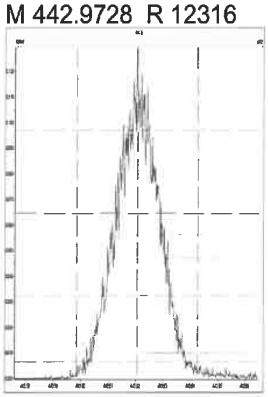

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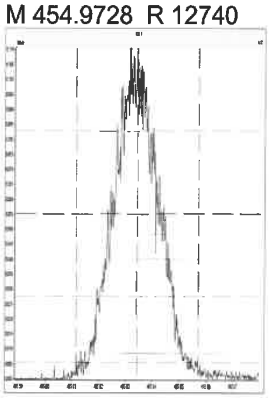

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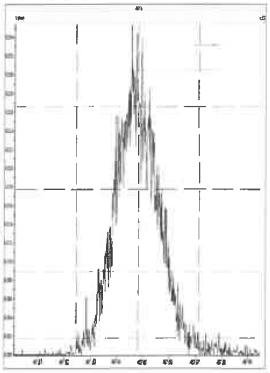

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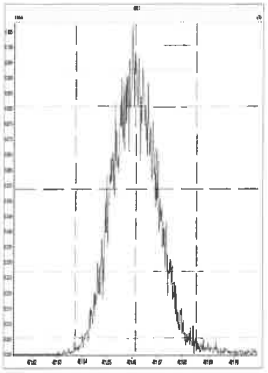

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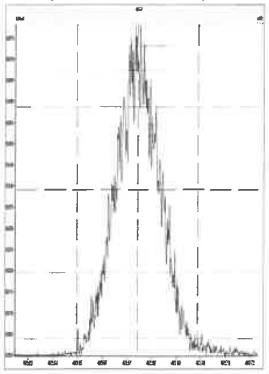

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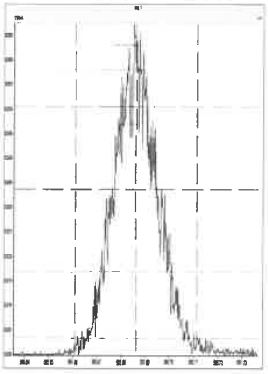

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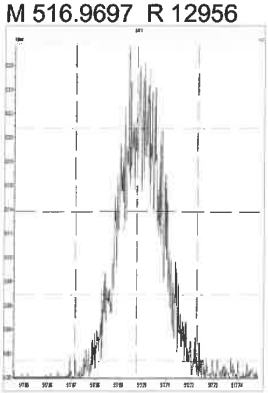

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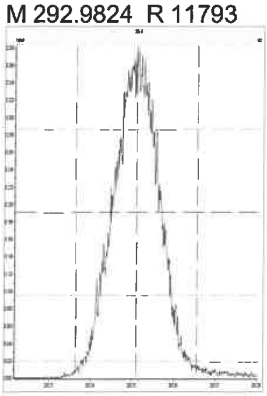

M 304.9824 R 12077

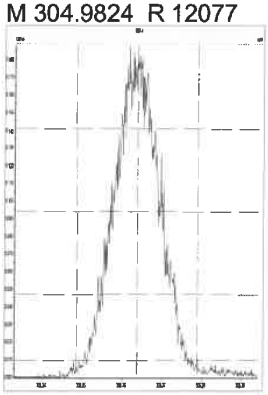

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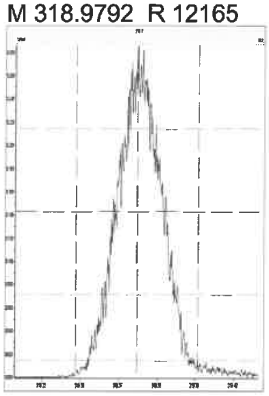

M 330.9792 R 11711

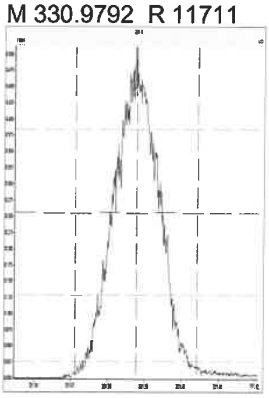

M 342.9792 R 11290

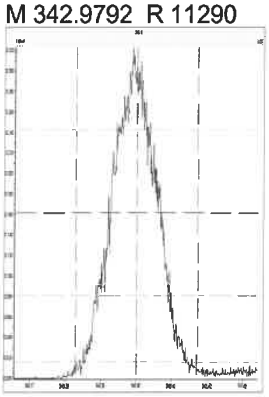

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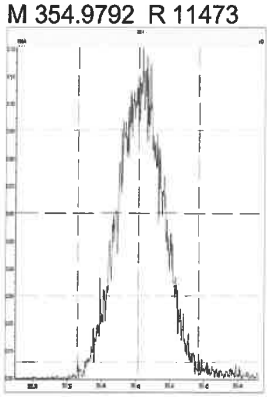

M 366.9792 R 11820

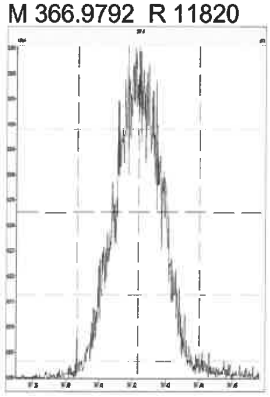

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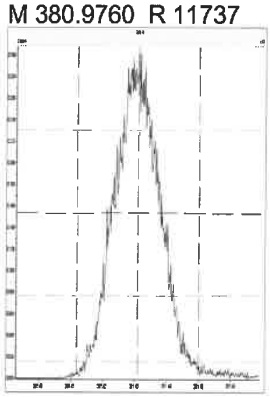

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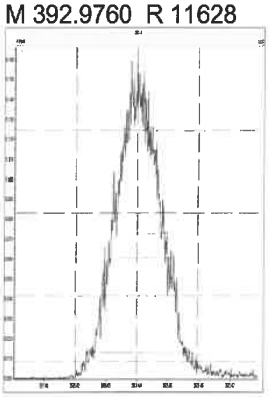

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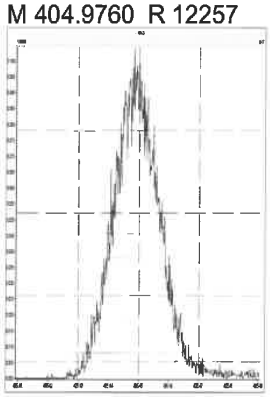

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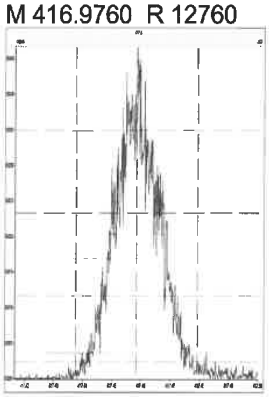

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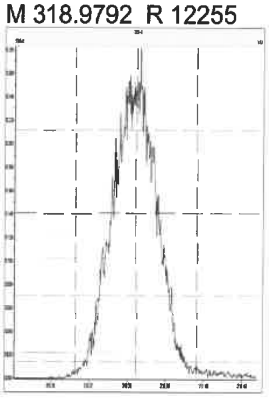

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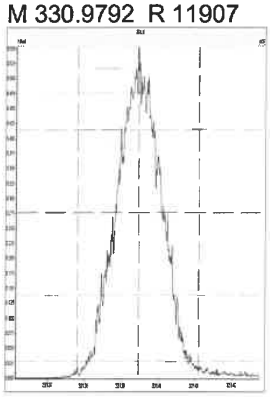

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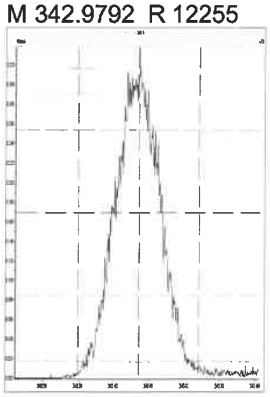

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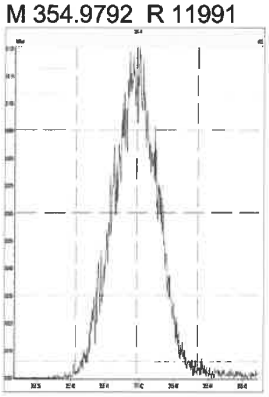

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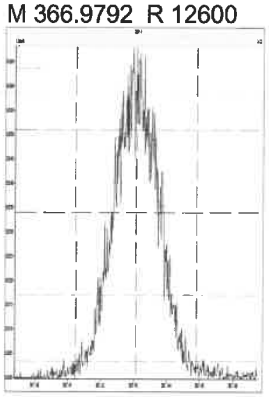

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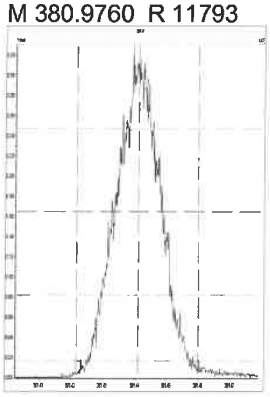

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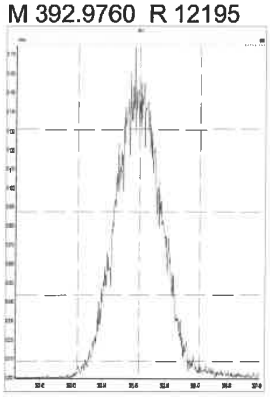

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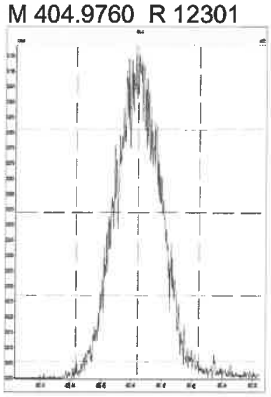

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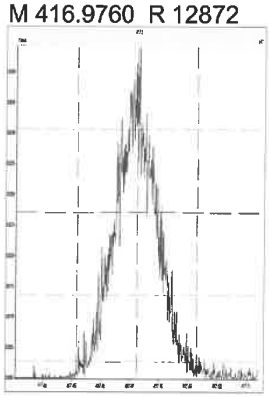

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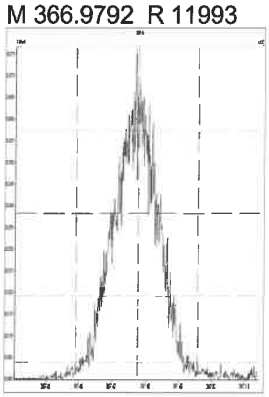

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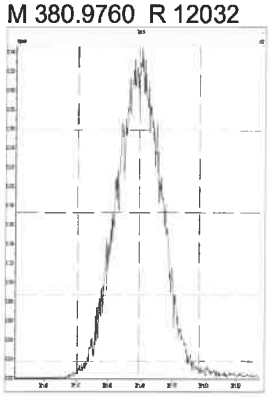

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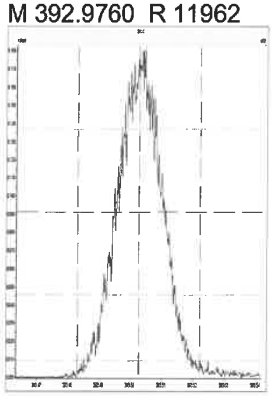

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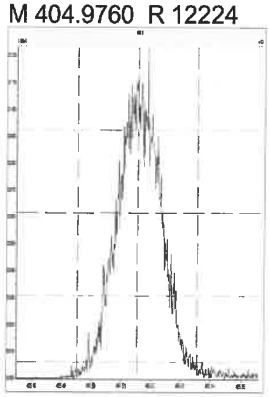

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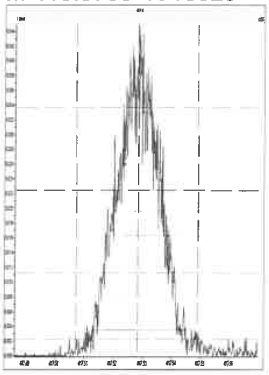

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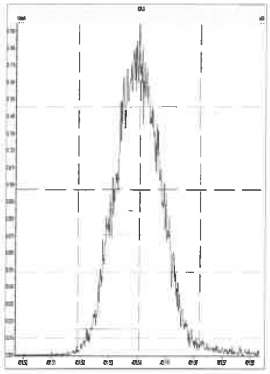

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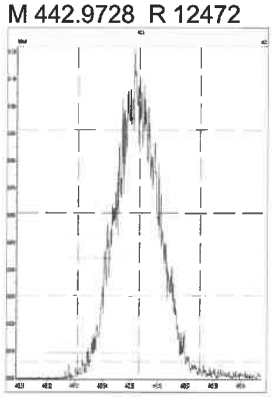

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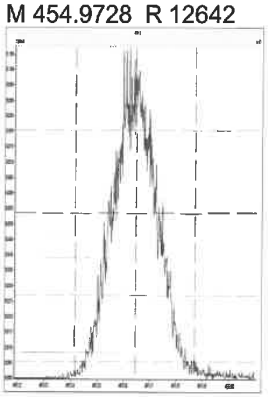

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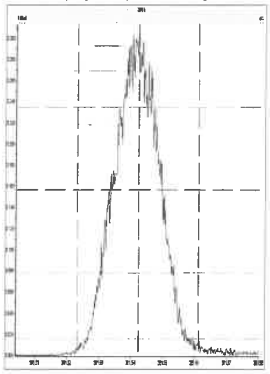

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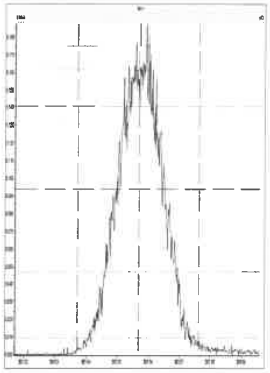

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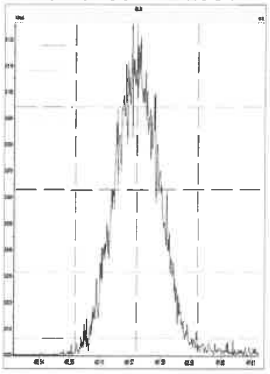

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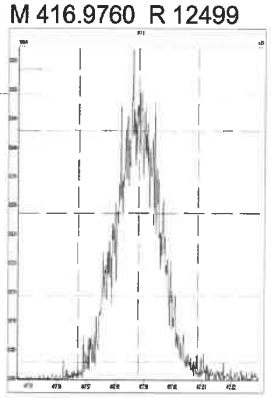

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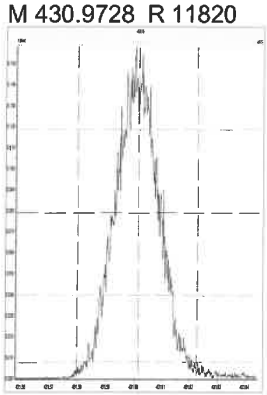

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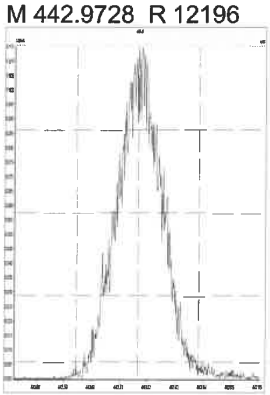

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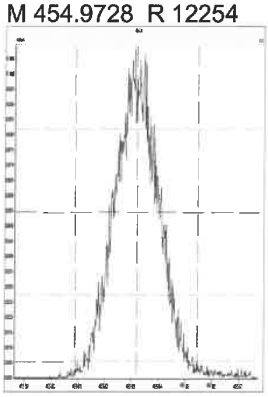

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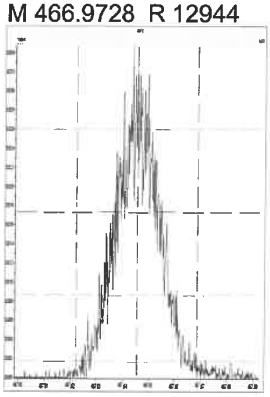

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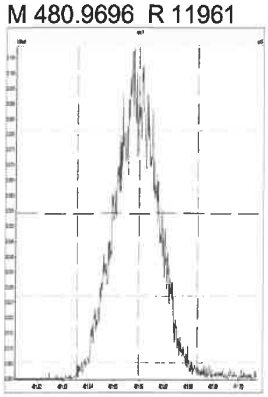

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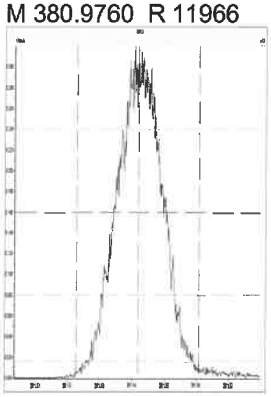

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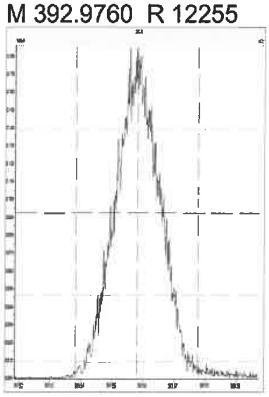

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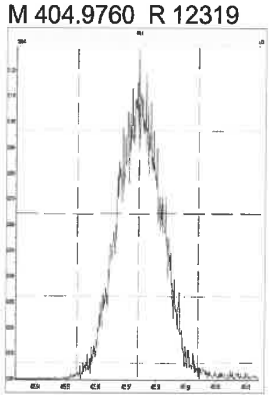

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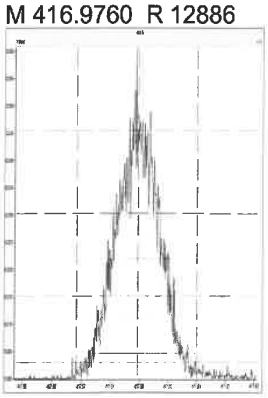

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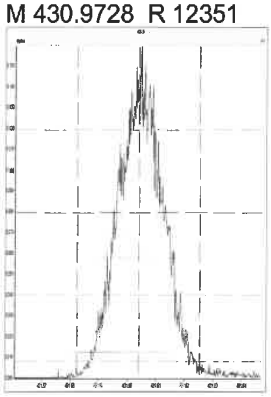

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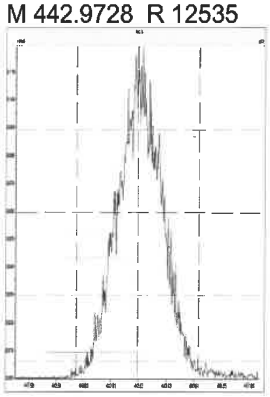

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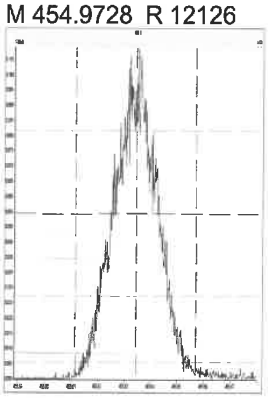

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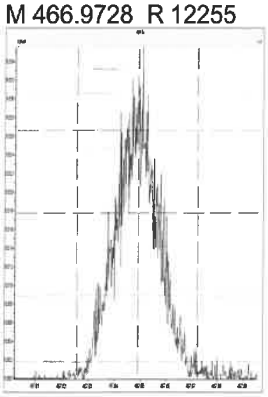

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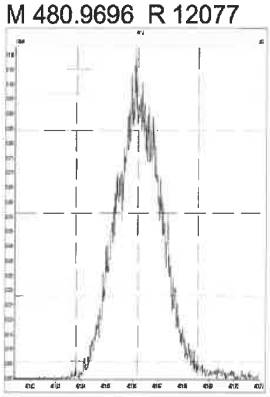

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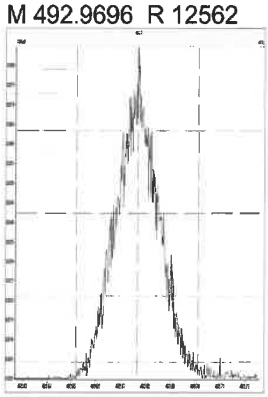

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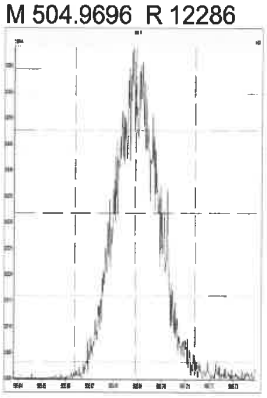

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M 516.9697 R 13640

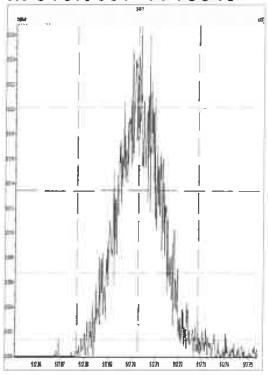

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 15:00:59 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081821 CS-4 HRDXNL4_00099
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:20:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.809	125274630	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.295	193804057	0.76	1.6249	95.2	95.2	0.2628	0.2628	95.21	
2,3,7,8-TCDF	17.310	20374957	0.74	1.0239	10.3	10.3	0.0202	0.0202	103	
A Non-2,3,7,8-sub-TCDF	17.159						0.0202	0.0202		n
S Total TCDF					10.3	10.3	0.0202	0.0202		
D 13C-2,3,7,8-TCDD	18.006	115575767	0.81	0.8993	102.6	102.6	0.2501	0.2501	103	
2,3,7,8-TCDD	18.021	14428107	0.79	1.2541	9.954	9.954	0.0216	0.0216	99.54	
$ 37Cl4-2,3,7,8-TCDD	18.021	14558317		1.1071	10.5	10.5	0.0226	0.0226	105	
A Non-2,3,7,8-sub-TCDD	17.620						0.0216	0.0216		
S Total TCDD					9.954	9.954	0.0216	0.0216		
D 13C-1,2,3,7,8-PeCDF	22.299	148698470	1.55	1.2101	98.1	98.1	0.2691	0.2691	98.09	
1,2,3,7,8-PeCDF	22.326	80901540	1.64	1.0611	51.3	51.3	0.1979	0.1979	103	
D 13C-2,3,4,7,8-PeCDF	23.635	152292643	1.52	1.2395	98.1	98.1	0.2627	0.2627	98.08	
2,3,4,7,8-PeCDF	23.649	80074314	1.58	1.0184	51.6	51.6	0.2180	0.2180	103	
A F1 PeCDFs	20.229						0.007854	0.007854		
A Non-2,3,7,8-sub-PeCDF	23.445						0.2076	0.2076		
S Total PeCDF					102.9	102.9	0.2079	0.2079		
D 13C-1,2,3,7,8-PeCDD	24.358	100276778	1.62	0.7612	105.2	105.2	0.1168	0.1168	105	
1,2,3,7,8-PeCDD	24.372	52599761	1.60	1.0484	50.0	50.0	0.0700	0.0700	100	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0700	0.0700		
S Total PeCDD					50.0	50.0	0.0700	0.0700		
D 13C-1,2,3,4,7,8-HxCDF	30.436	129822416	0.52	1.0837	96.6	96.6	0.4989	0.4989	96.59	
1,2,3,4,7,8-HxCDF	30.463	70522304	1.23	1.0851	50.1	50.1	0.3519	0.3519	100	
D 13C-1,2,3,6,7,8-HxCDF	30.623	134938060	0.53	1.1279	96.5	96.5	0.4793	0.4793	96.46	
1,2,3,6,7,8-HxCDF	30.649	78321574	1.21	1.1260	51.5	51.5	0.3215	0.3215	103	
D 13C-2,3,4,6,7,8-HxCDF	31.461	125717060	0.51	1.0637	95.3	95.3	0.5083	0.5083	95.29	
2,3,4,6,7,8-HxCDF	31.488	73972576	1.22	1.1675	50.4	50.4	0.2542	0.2542	101	
D 13C-1,2,3,7,8,9-HxCDF	32.273	114363903	0.51	0.9676	95.3	95.3	0.5588	0.5588	95.30	
1,2,3,7,8,9-HxCDF	32.286	67787700	1.23	1.1664	50.8	50.8	0.2705	0.2705	102	
A Non-2,3,7,8-sub-HxCDF	30.410						0.2953	0.2953		

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					202.8	202.8	0.2995	0.2995		
* 13C-1,2,3,7,8,9-HxCDD	32.100	124026185	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.661	89334733	1.24	0.7334	98.2	98.2	0.3905	0.3905	98.21	
1,2,3,4,7,8-HxCDD	31.674	48210928	1.25	1.0640	50.7	50.7	0.1818	0.1818	101	
D 13C-1,2,3,6,7,8-HxCDD	31.767	102007309	1.20	0.8802	93.4	93.4	0.3254	0.3254	93.44	
1,2,3,6,7,8-HxCDD	31.781	53948690	1.26	1.0001	52.9	52.9	0.1851	0.1851	106	
1,2,3,7,8,9-HxCDD	32.113	58022287	1.26	1.1325	53.6	53.6	0.1671	0.1671	107	
A Non-2,3,7,8-sub-HxCDD	30.816						0.1776	0.1776		
S Total HxCDD					157.2	157.2	0.1780	0.1780		
D 13C-1,2,3,4,6,7,8-HpCDF	33.718	90162961	0.44	0.7730	94.0	94.0	1.028	1.028	94.04	
1,2,3,4,6,7,8-HpCDF	33.730	67354435	1.05	1.4413	51.8	51.8	0.5166	0.5166	104	
D 13C-1,2,3,4,7,8,9-HpCDF	34.811	81525679	0.44	0.7008	93.8	93.8	1.134	1.134	93.79	
1,2,3,4,7,8,9-HpCDF	34.811	55774124	1.06	1.3174	51.9	51.9	0.7362	0.7362	104	
A Non-2,3,7,8-sub-HpCDF	34.283						0.6108	0.6108		
S Total HpCDF					103.8	103.8	0.6264	0.6264		
D 13C-1,2,3,4,6,7,8-HpCDD	34.520	78738609	1.00	0.6472	98.1	98.1	0.5070	0.5070	98.09	
1,2,3,4,6,7,8-HpCDD	34.532	43664822	1.04	1.0943	50.7	50.7	0.2388	0.2388	101	
A Non-2,3,7,8-sub-HpCDD	33.504						0.2388	0.2388		
S Total HpCDD					50.7	50.7	0.2388	0.2388		
D 13C-OCDD	36.866	112330513	0.88	0.4472	202.5	202.5	0.1921	0.1921	101	
OCDF	36.962	82814446	0.89	1.4382	102.5	102.5	0.0885	0.0885	103	
OCDD	36.878	64177494	0.90	1.1070	103.2	103.2	0.1016	0.1016	103	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 15:00:59 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 081821 CS-4 HRDXNL4_00099
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:20:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.809	17.809	0		55736498	13587558	13374	33435	1016		
333.9339	17.809	17.809	0		69538132	16878371	14038	35095	1202	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.295	17.295	0	0.971	83586866	19721140	19889	49722	992		
317.9389	17.295	17.295	0	0.971	110217191	26049370	32151	80377	810	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.310	17.310	0	1.001	8692442	2077936	1567	3917	1326		
305.8987	17.310	17.310	0	1.001	11682515	2758484	2227	5567	1239	0.74(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.948	17.159	-13	0.980	42020	10555	1567	3917	7		
305.8987	16.933	17.159	-14	0.979	55712	14433	2227	5567	6	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.006	18.006	0	1.011	51785893	11505545	13374	33435	860		
333.9339	18.006	18.006	0	1.011	63789874	14200675	14038	35095	1012	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.021	18.021	0	1.001	6369095	1448386	1525	3812	950		
321.8936	18.021	18.021	0	1.001	8059012	1827583	1260	3150	1450	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.021	18.021	0	1.012	14558317	3268578	3049	7622	1072		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.620						1525	3812			
321.8936	17.620						1260	3150			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.299	22.299	0	1.252	90271970	15041763	24310	60775	619		
353.8970	22.299	22.299	0	1.252	58426500	9561596	15368	38420	622	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.326	22.326	0	1.001	50207714	8182842	12381	30952	661		
341.8567	22.312	22.326	-1	1.001	30693826	5086401	8286	20715	614	1.64(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.635	23.635	0	1.327	91910933	14097277	24310	60775	580		
353.8970	23.635	23.635	0	1.327	60381710	9178004	15368	38420	597	1.52(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.649	23.649	0	1.001	49069040	7334316	12381	30952	592		
341.8567	23.649	23.649	0	1.001	31005274	4671897	8286	20715	564	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.229						299	747			
341.8567	20.229						483	1207			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.445						12381	30952			
341.8567	23.445						8286	20715			
13C-1,2,3,7,8-PeCDD											
367.8949	24.358	24.358	0	1.368	61945783	8910689	6562	16405	1358		
369.8919	24.358	24.358	0	1.368	38330995	5550706	4275	10687	1298	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.372	24.372	0	1.001	32358326	4704662	2703	6757	1741		
357.8516	24.372	24.372	0	1.001	20241435	2938127	1542	3855	1905	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						2703	6757			
357.8516	23.696						1542	3855			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.436	30.436	0	0.948	44506160	7943612	22718	56795	350		
385.8610	30.436	30.436	0	0.948	85316256	15360951	43547	108867	353	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.463	30.463	0	1.001	38844012	7190710	19541	48852	368		
375.8178	30.463	30.463	0	1.001	31678292	5902956	16060	40150	368	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.623	30.623	0	0.954	46488347	8438650	22718	56795	371		
385.8610	30.623	30.623	0	0.954	88449713	16149971	43547	108867	371	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.649	30.649	0	1.001	42953118	7782499	19541	48852	398		
375.8178	30.649	30.649	0	1.001	35368456	6456942	16060	40150	402	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.461	31.461	0	0.980	42655418	10160970	22718	56795	447		
385.8610	31.461	31.461	0	0.980	83061642	19823875	43547	108867	455	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.488	31.488	0	1.001	40621532	9421030	19541	48852	482		
375.8178	31.475	31.488	-1	1.000	33351044	7911439	16060	40150	493	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.273	32.273	0	1.005	38827641	9607307	22718	56795	423		
385.8610	32.273	32.273	0	1.005	75536262	18600026	43547	108867	427	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.286	32.286	0	1.000	37444442	9256034	19541	48852	474		
375.8178	32.286	32.286	0	1.000	30343258	7642697	16060	40150	476	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.410						19541	48852			
375.8178	30.410						16060	40150			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.100	32.100	0		68288771	16888912	18190	45475	928		
403.8529	32.100	32.100	0		55737414	13752307	16910	42275	813	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.661	31.661	0	0.986	49496871	13062548	18190	45475	718		
403.8529	31.661	31.661	0	0.986	39837862	10484312	16910	42275	620	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.674	31.674	0	1.000	26830218	7268440	9858	24645	737		
391.8127	31.674	31.674	0	1.000	21380710	5721266	8360	20900	684	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.767	31.767	0	0.990	55587908	13310800	18190	45475	732		
403.8529	31.754	31.767	-1	0.989	46419401	11286560	16910	42275	667	1.20(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.781	31.781	0	1.000	30110702	7380107	9858	24645	749		
391.8127	31.781	31.781	0	1.000	23837988	5817525	8360	20900	696	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.113	32.113	0	1.014	32338097	8008979	9858	24645	812		
391.8127	32.100	32.113	-1	1.014	25684190	6429936	8360	20900	769	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.816						9858	24645			
391.8127	30.816						8360	20900			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.718	33.718	0	1.050	27516469	8483012	30008	75020	283		
419.8220	33.718	33.718	0	1.050	62646492	19337147	67426	168565	287	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.730	33.730	0	1.000	34518971	10819501	40732	101830	266		
409.7789	33.730	33.730	0	1.000	32835464	10367364	42129	105322	246	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.811	34.811	0	1.084	24922068	6496289	30008	75020	216		
419.8220	34.799	34.811	-1	1.084	56603611	14862341	67426	168565	220	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.811	34.811	0	1.000	28680940	7773364	40732	101830	191		
409.7789	34.811	34.811	0	1.000	27093184	7389057	42129	105322	175	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.283						40732	101830			
409.7789	34.283						42129	105322			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.520	34.520	0	1.075	39416837	11323012	21641	54102	523		
437.8140	34.520	34.520	0	1.075	39321772	11021895	18578	46445	593	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.532	34.532	0	1.000	22231118	6282473	11282	28205	557		
425.7737	34.532	34.532	0	1.000	21433704	5941517	12071	30177	492	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						11282	28205			
425.7737	33.504						12071	30177			
13C-OCDD											
469.7779	36.866	36.866	0	1.148	52534568	12396640	4359	10897	2844		
471.7750	36.866	36.866	0	1.148	59795945	14331014	6168	15420	2323	0.88(0.76-1.02)	
OCDF											
441.7428	36.962	36.962	0	1.003	39008933	9420516	3208	8020	2937		
443.7399	36.962	36.962	0	1.003	43805513	10637880	3598	8995	2957	0.89(0.76-1.02)	
OCDD											
457.7377	36.878	36.878	0	1.000	30441767	7255018	3155	7887	2300		
459.7348	36.878	36.878	0	1.000	33735727	8026620	2858	7145	2808	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

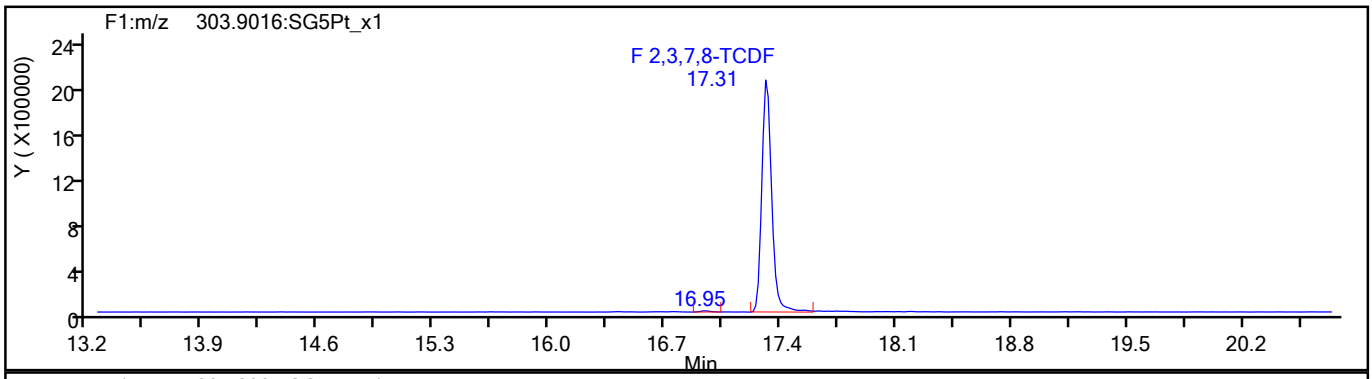

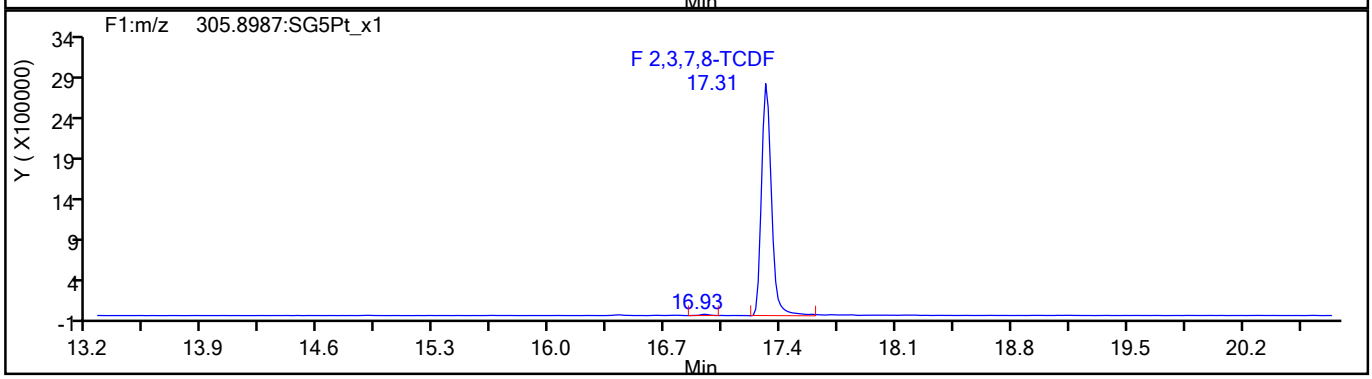

TCDF Standards

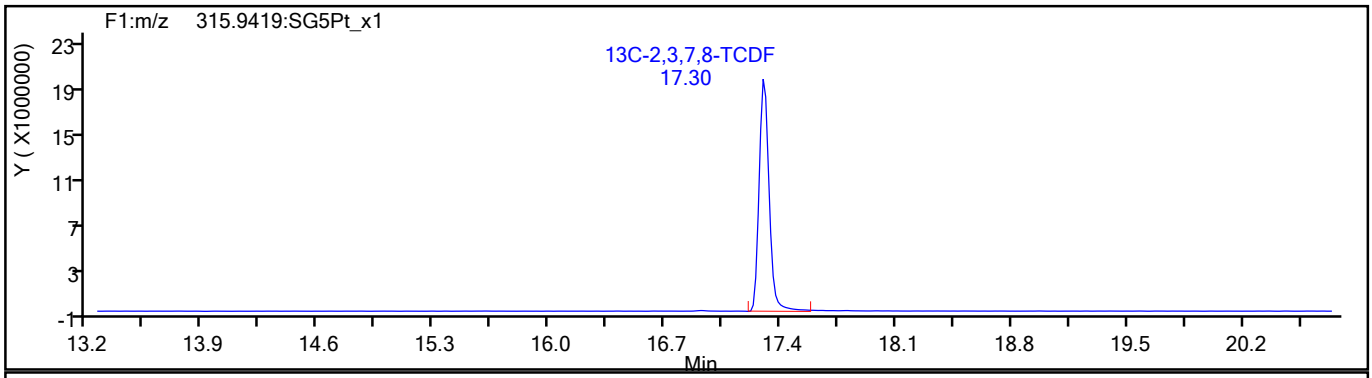

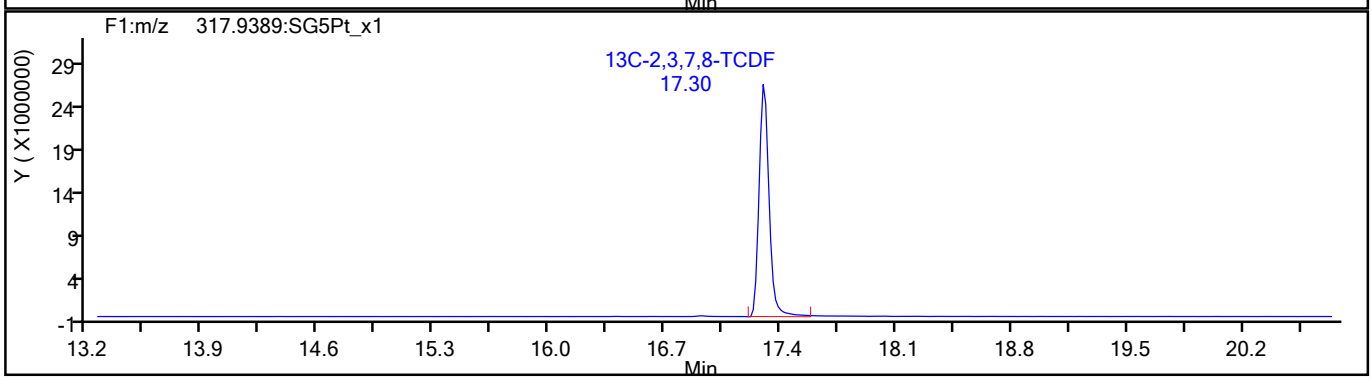

784435

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

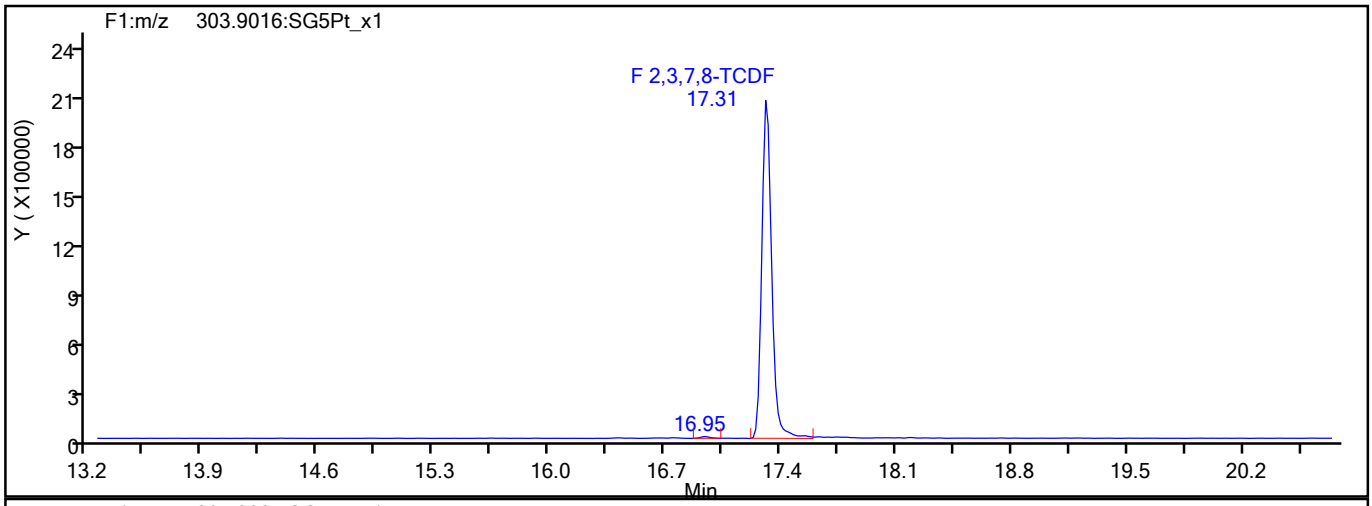

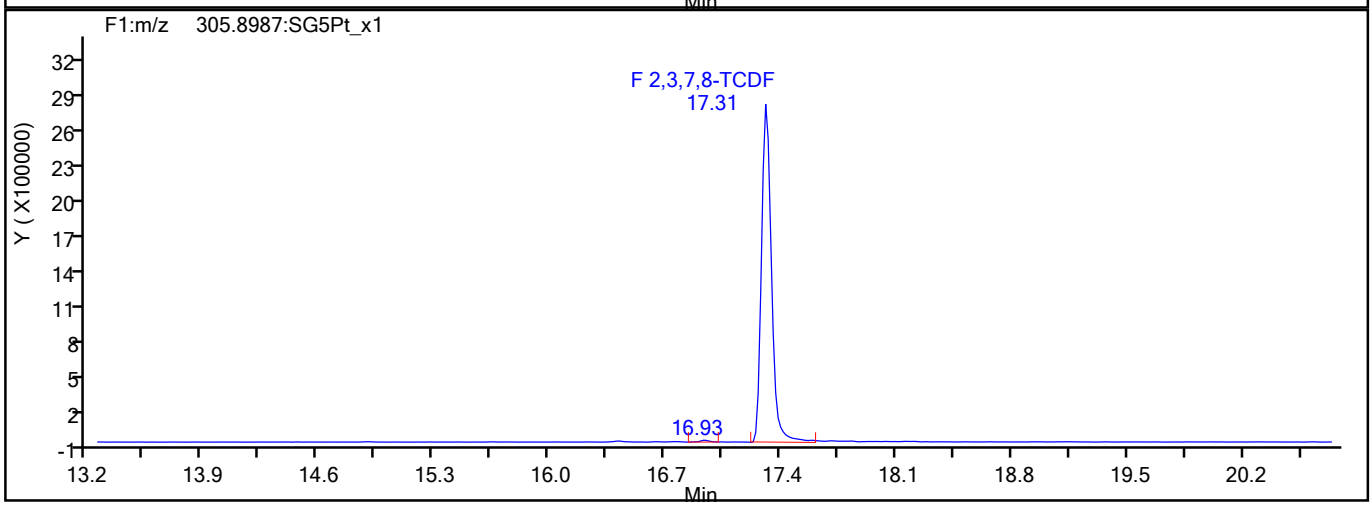

TCDF Interference Mass

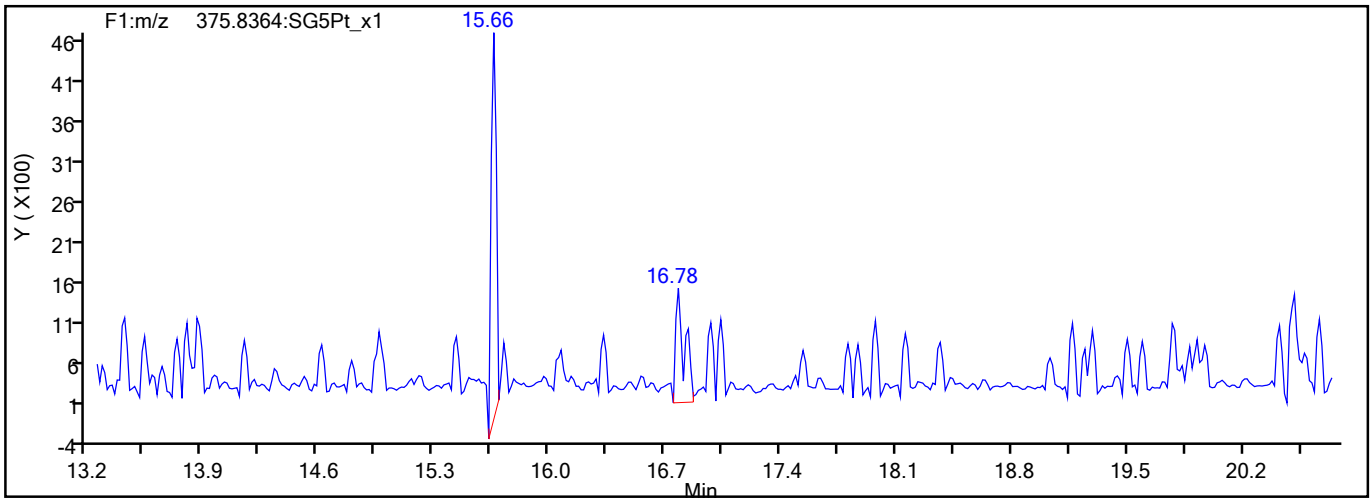

784436

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

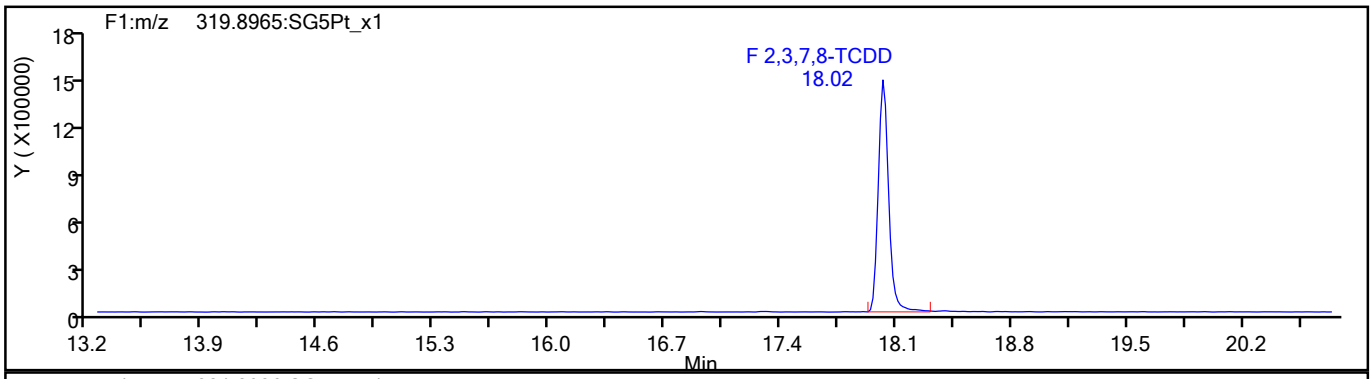

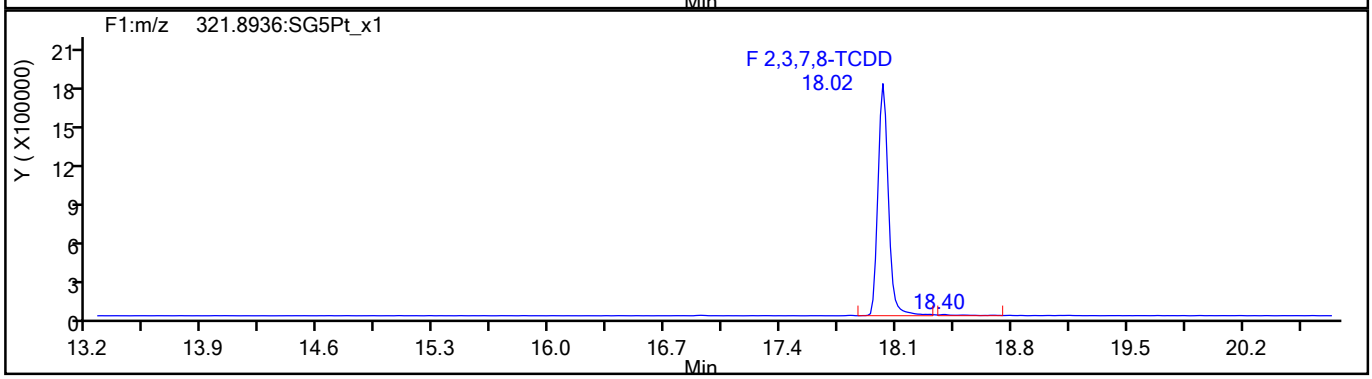

TCDD Standards

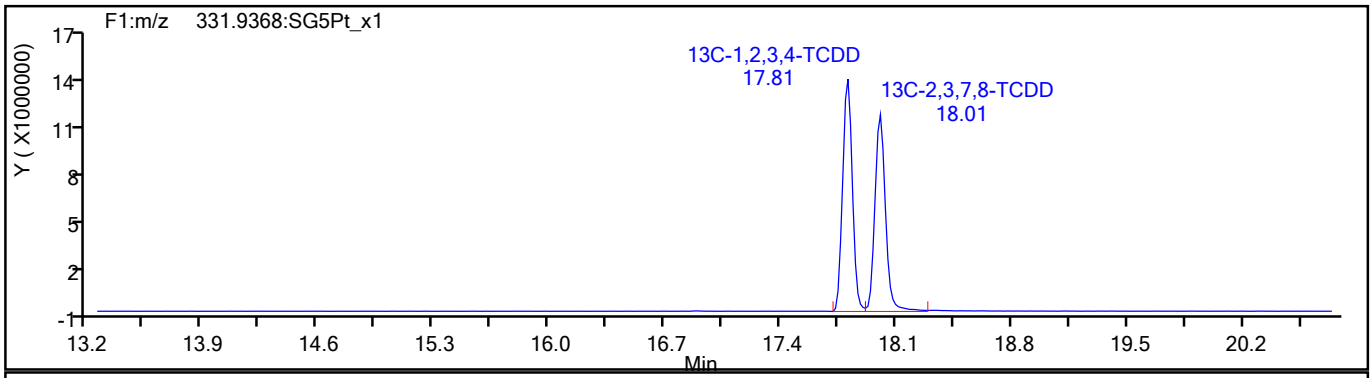

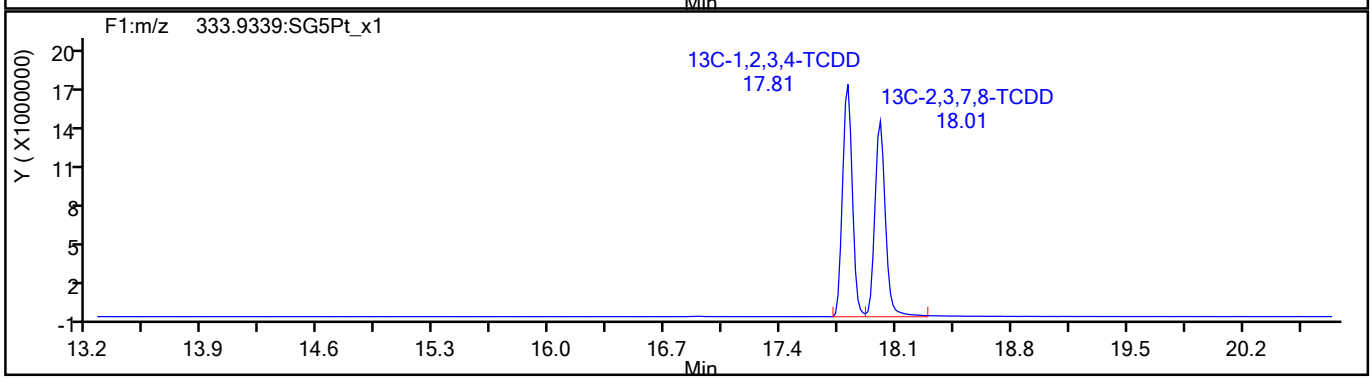

784437

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

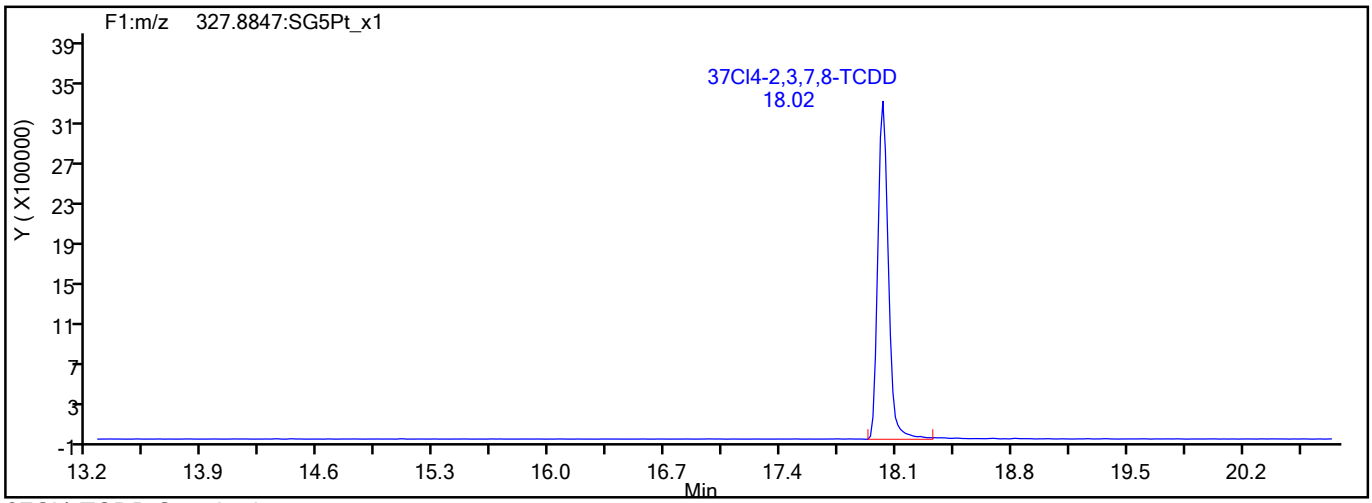

37Cl4-TCDD Standards

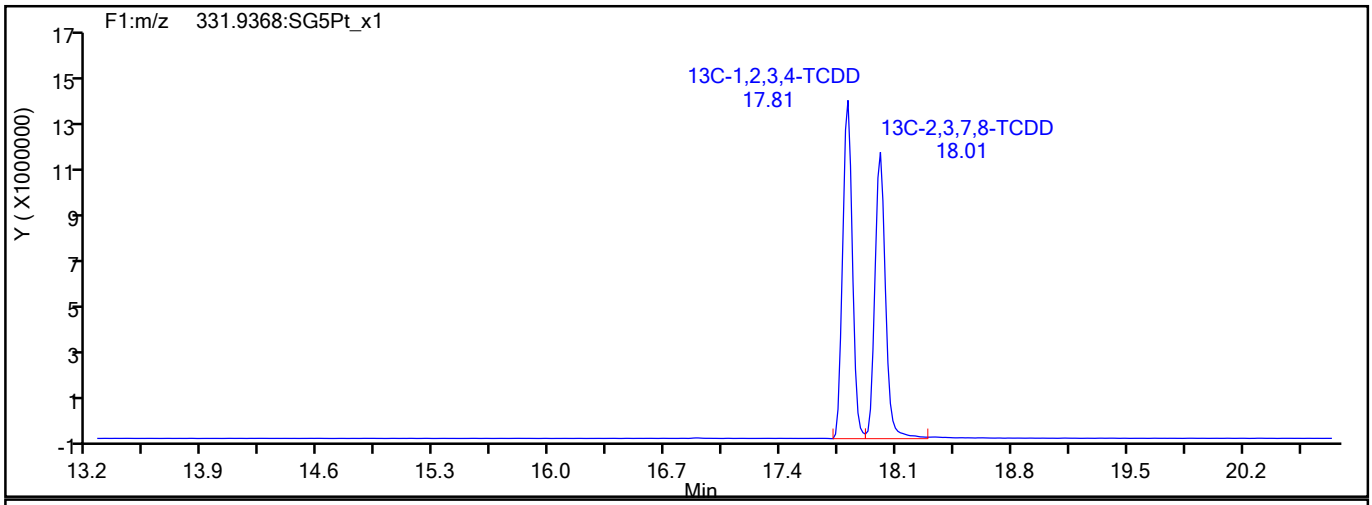

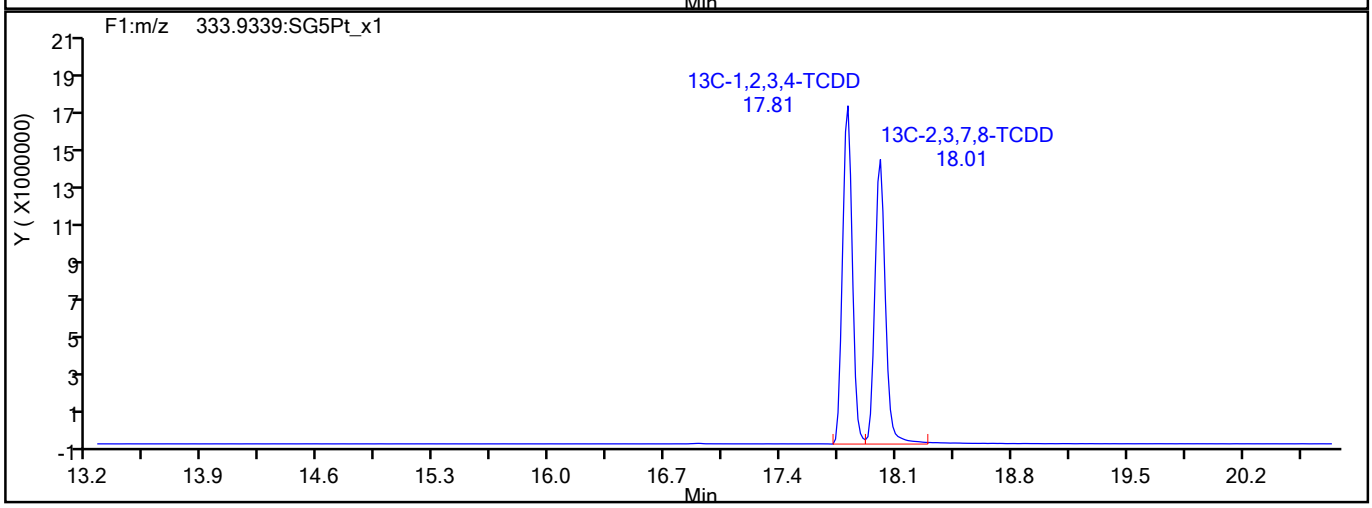

784438

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

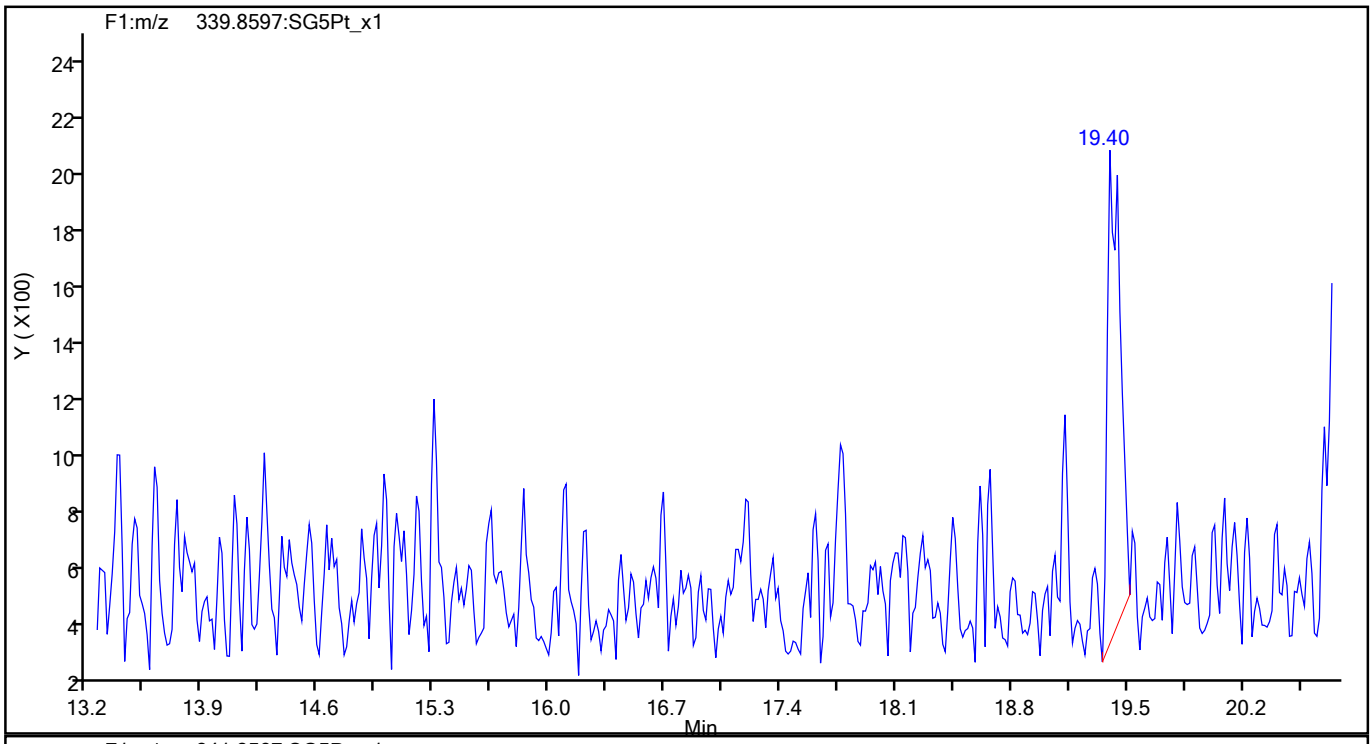

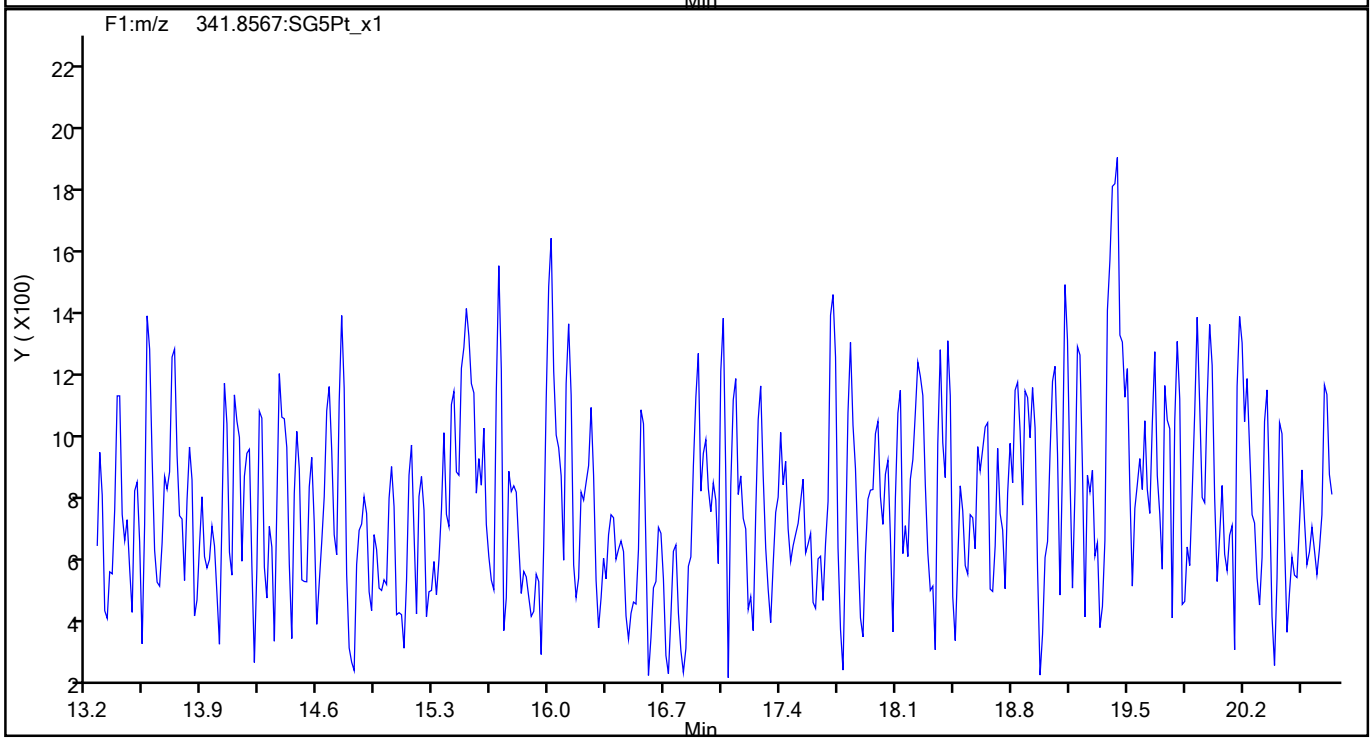

784439

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

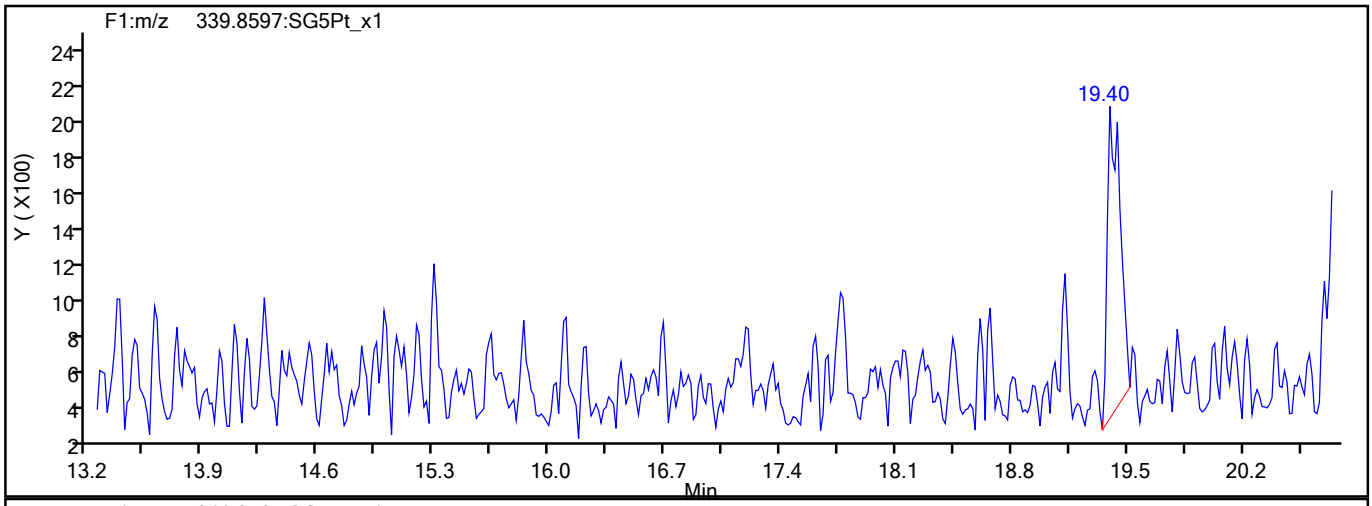

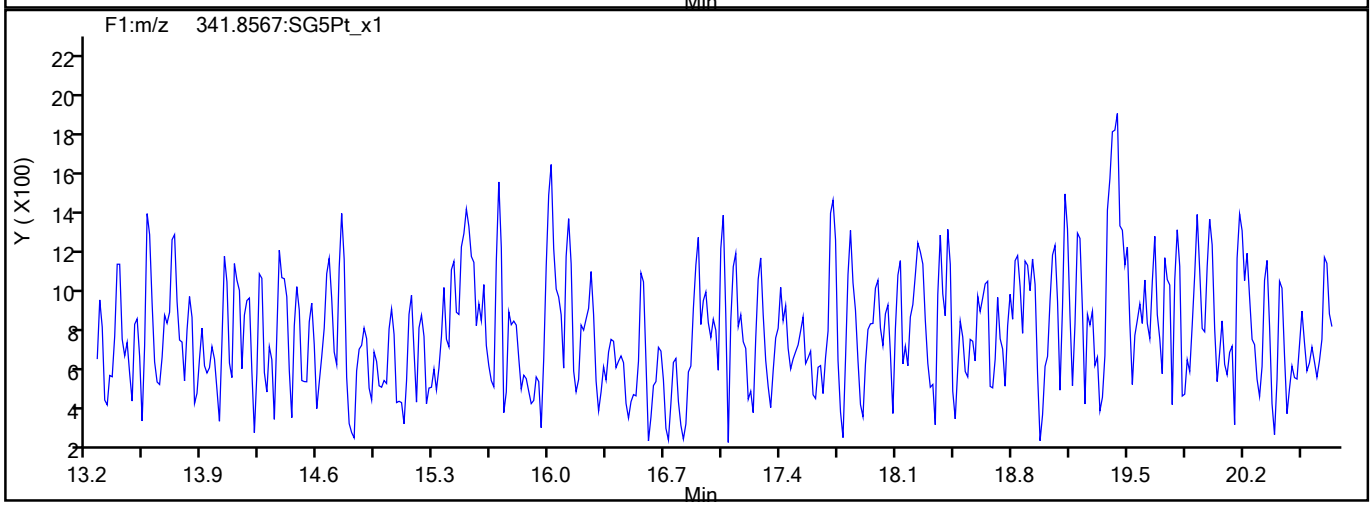

F1 PeCDFs Interference Mass

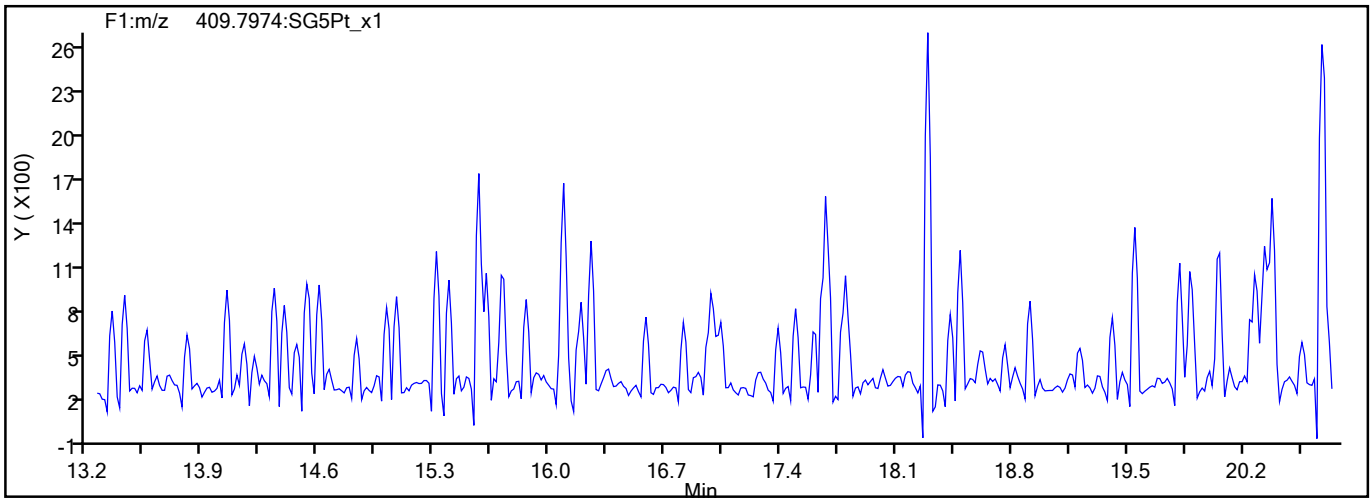

784440

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

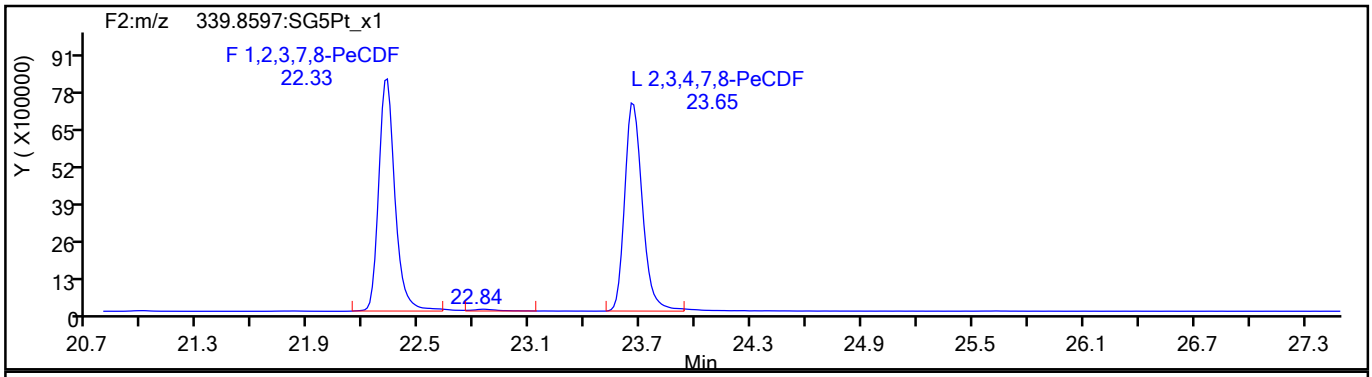

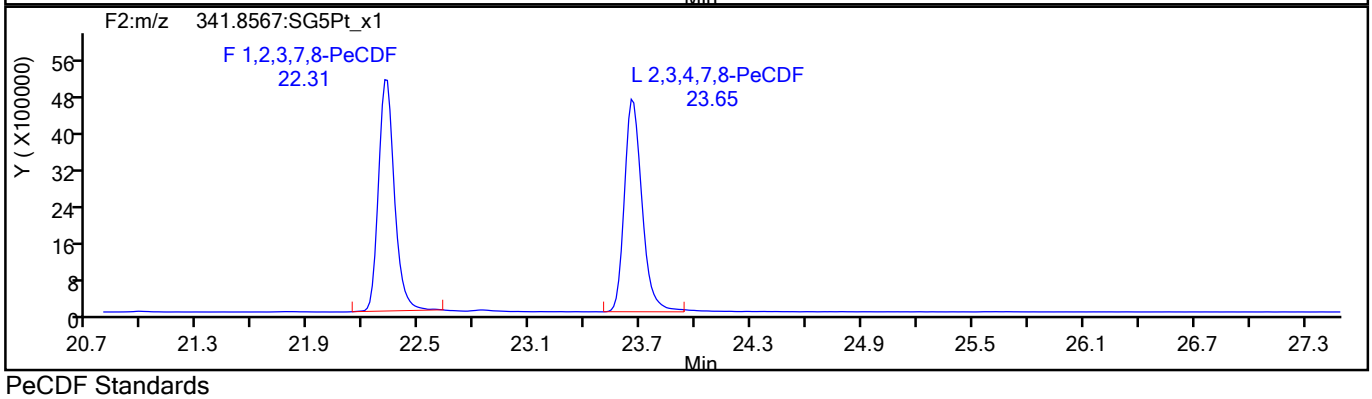

PeCDF Standards

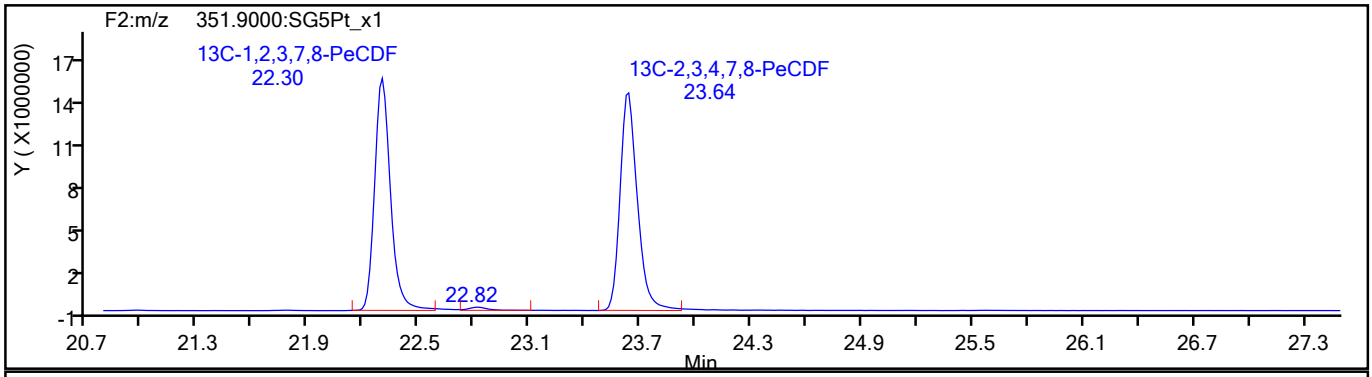

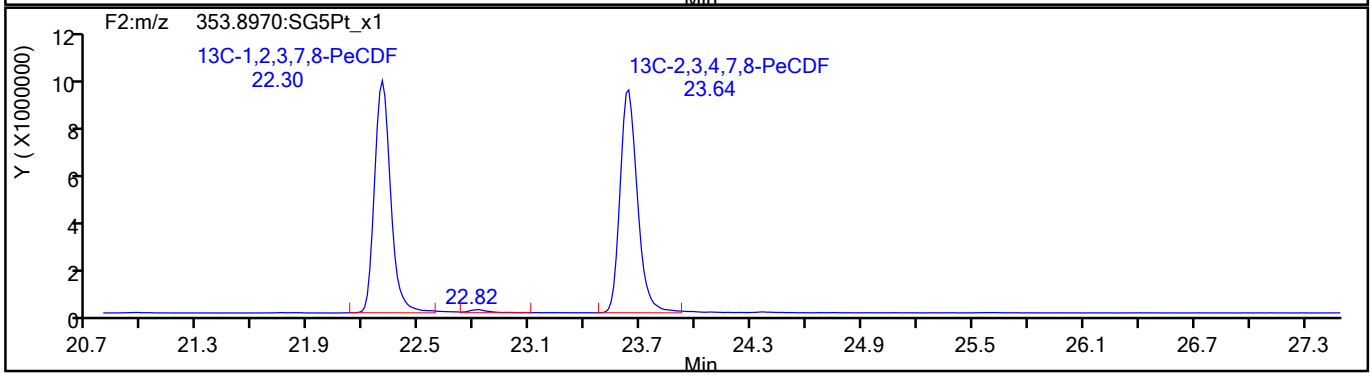

784441

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

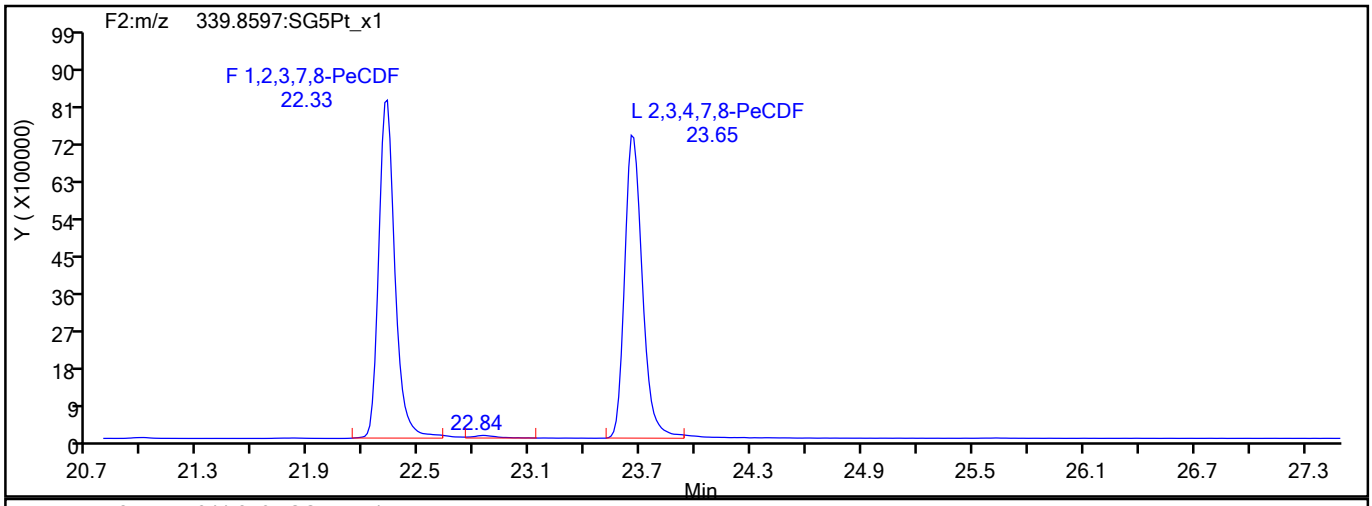

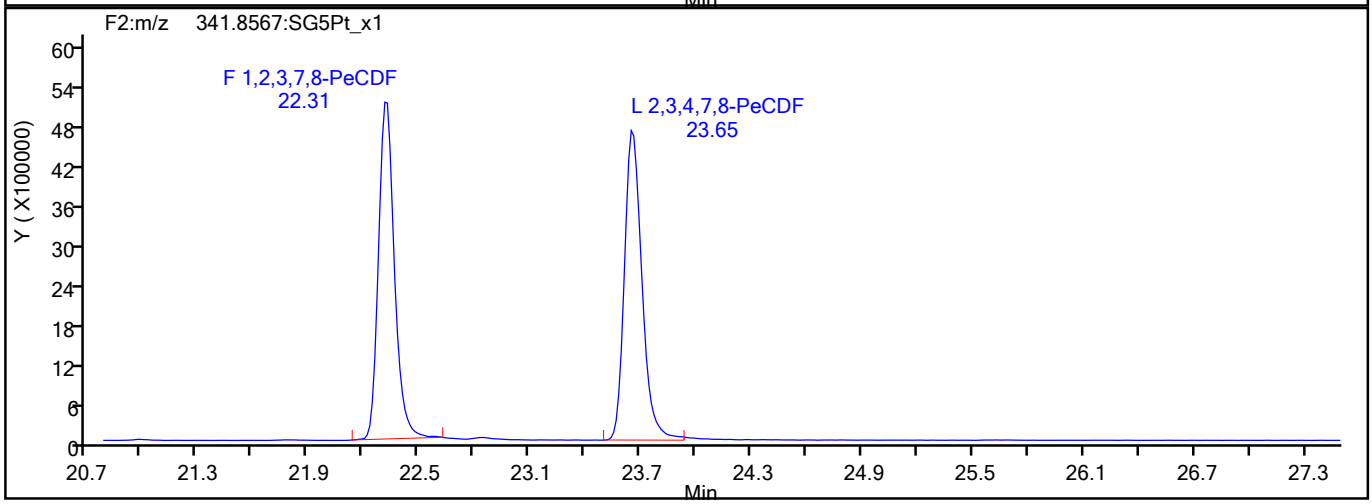

PeCDF Interference Mass

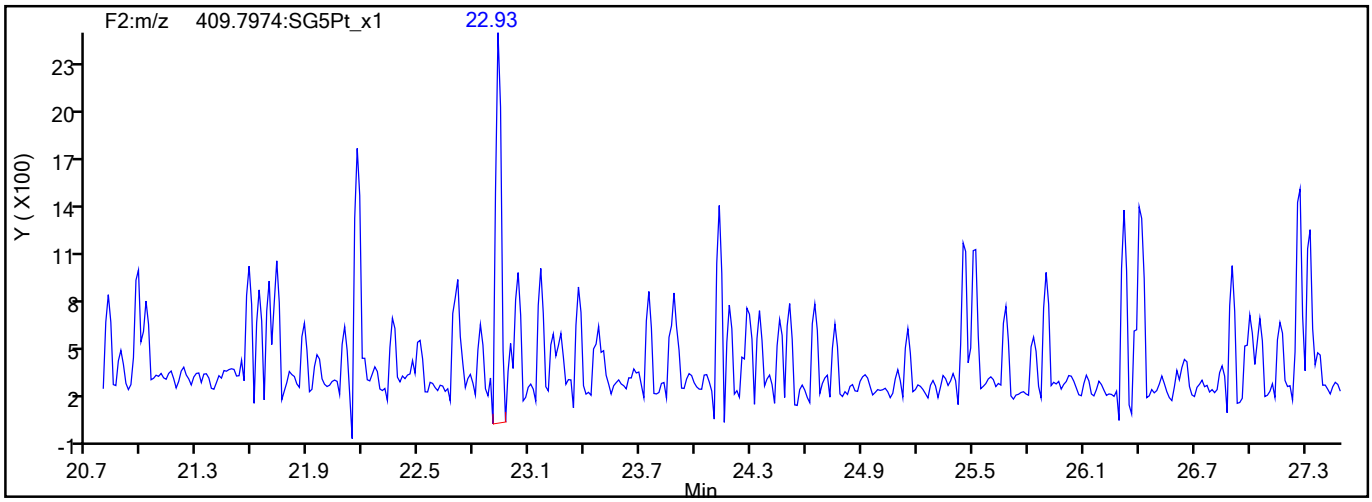

784442

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

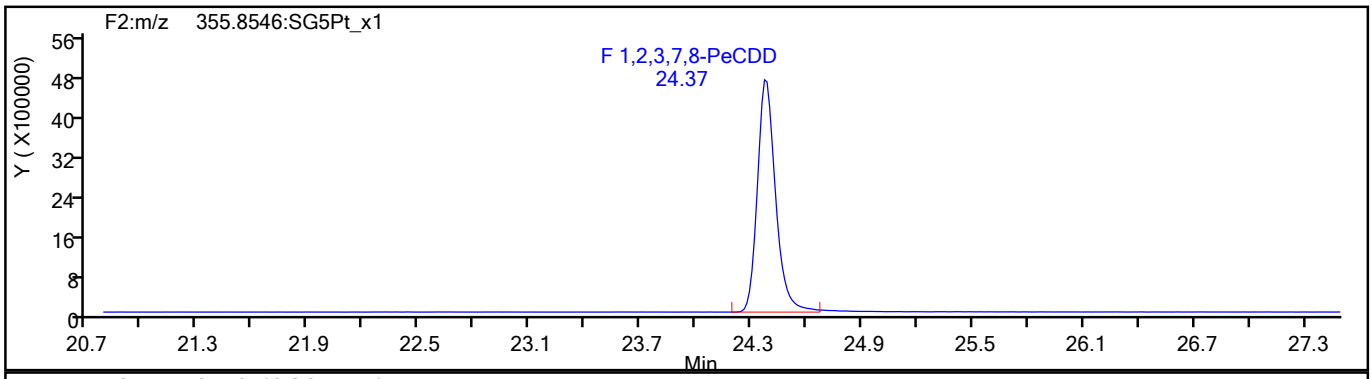

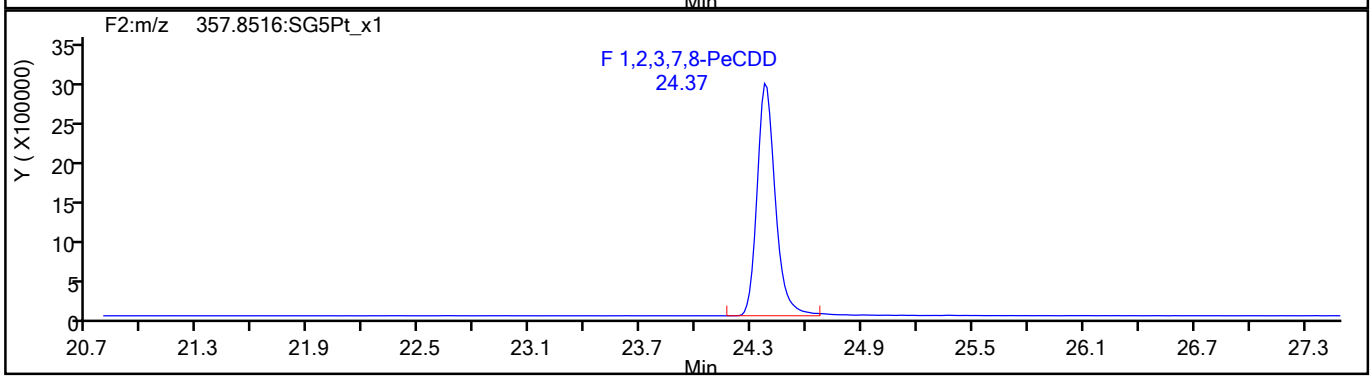

PeCDD Standards

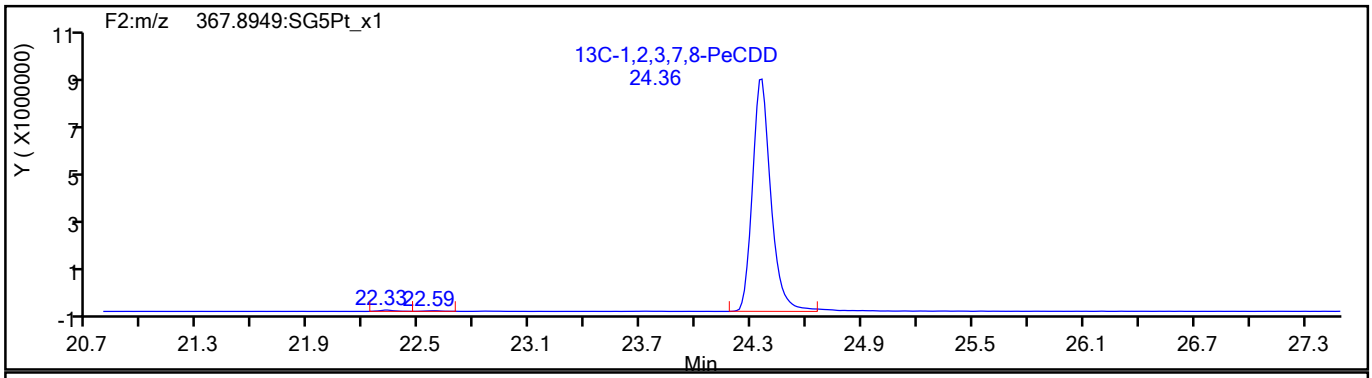

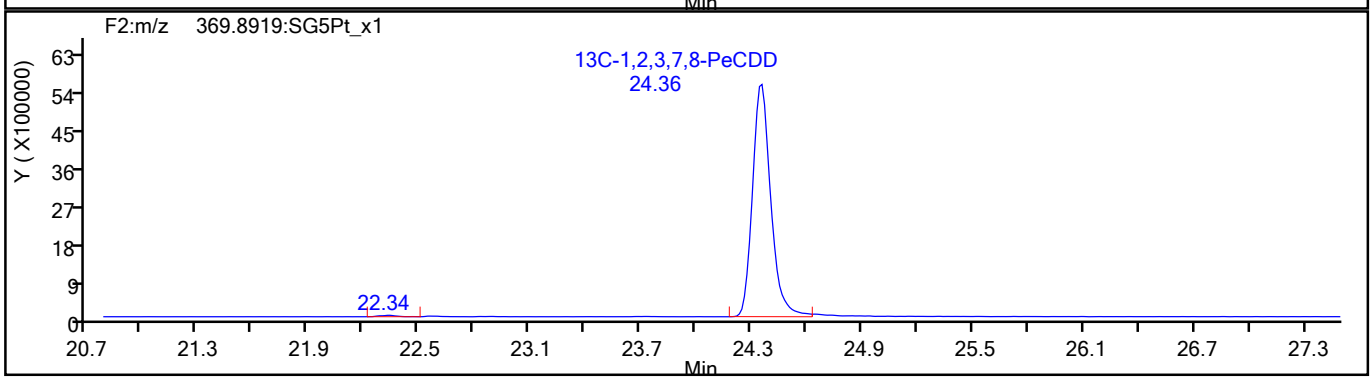

784443

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

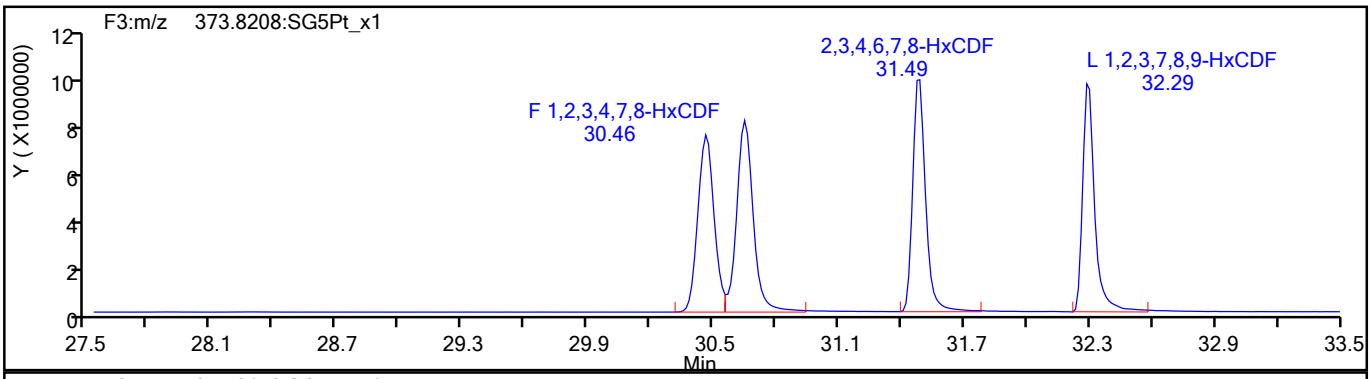

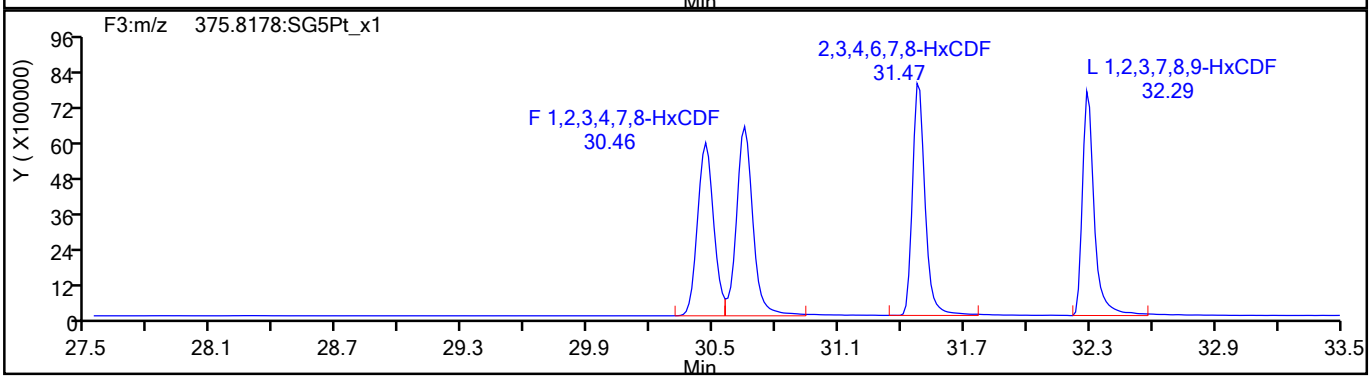

HxCDF Standards

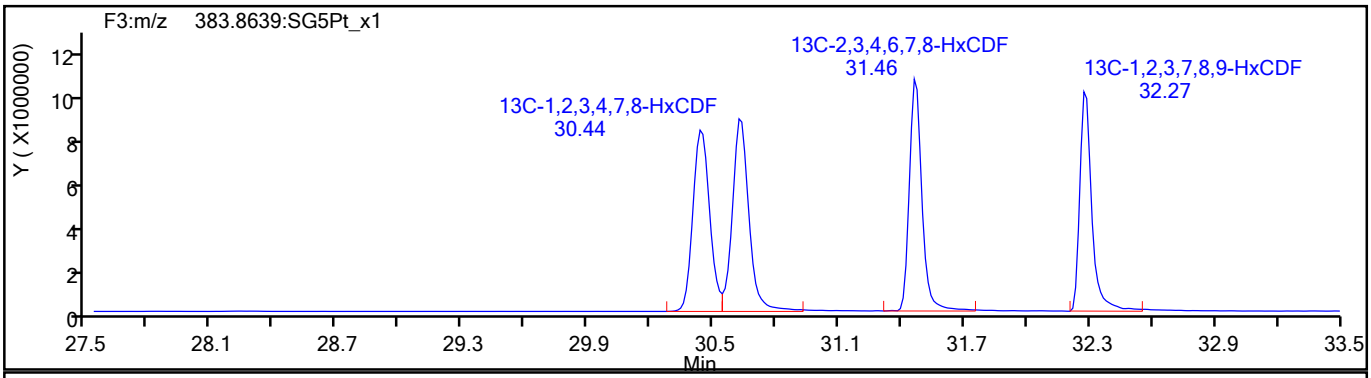

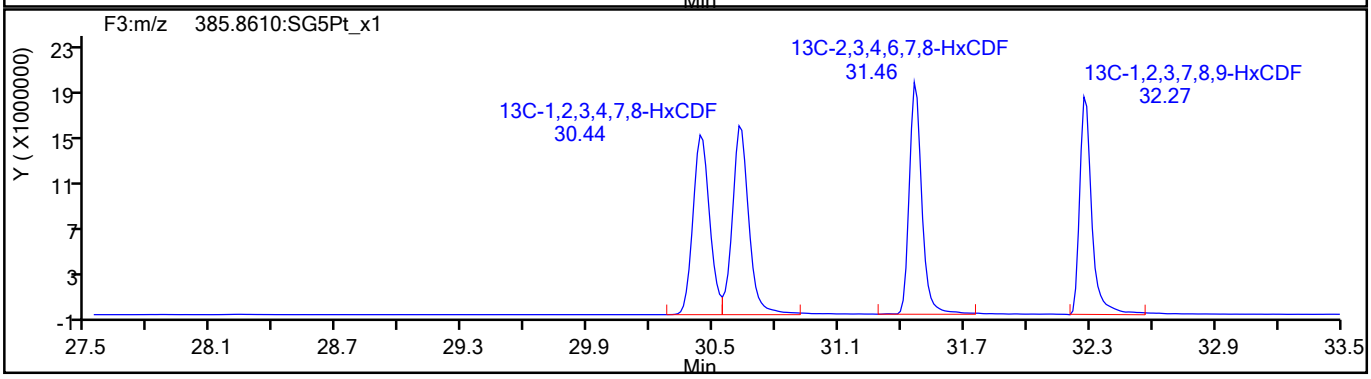

784444

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

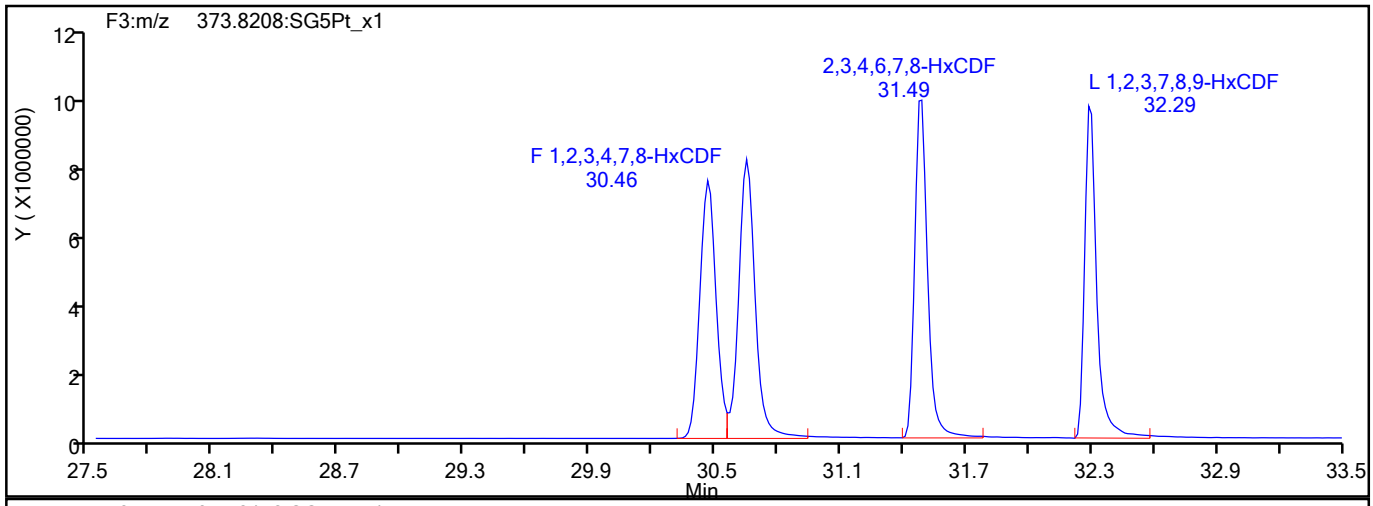

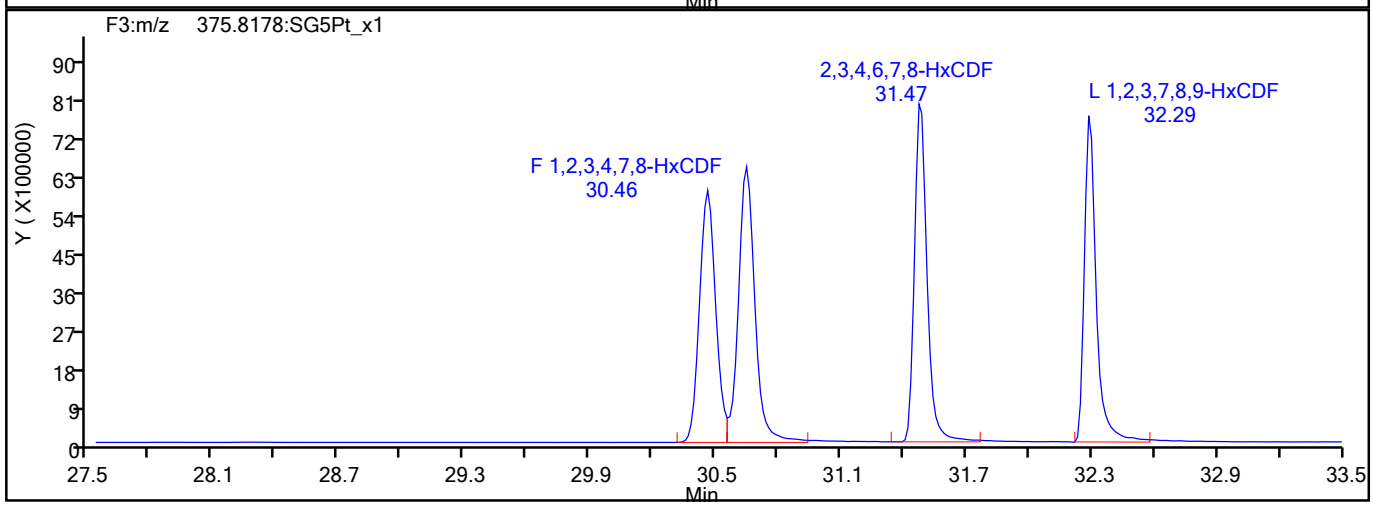

HxCDF Interference Mass

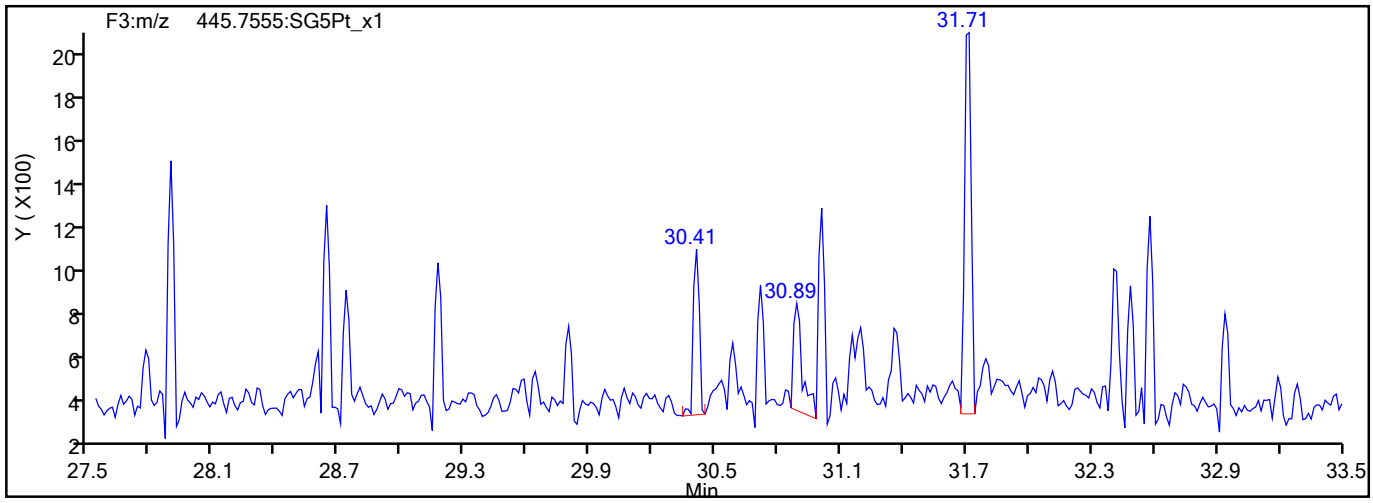

784445

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

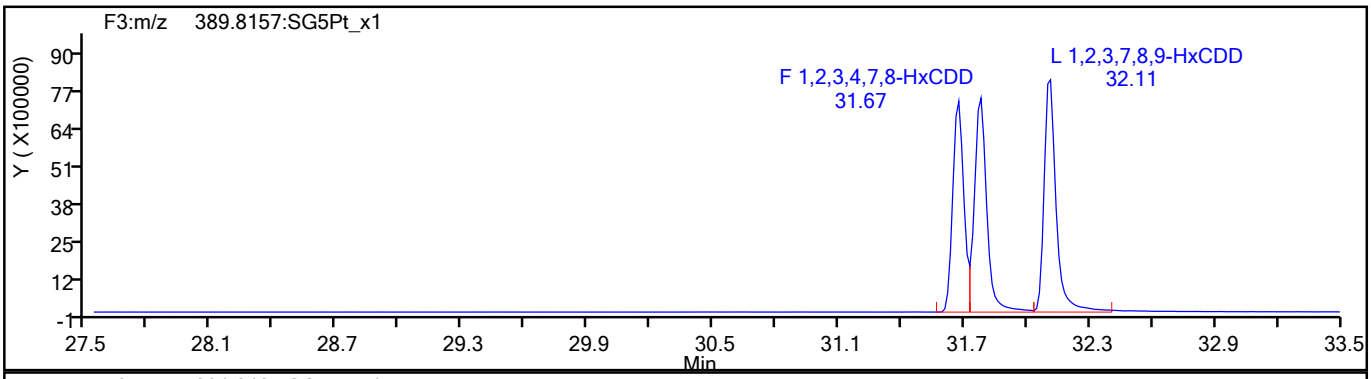

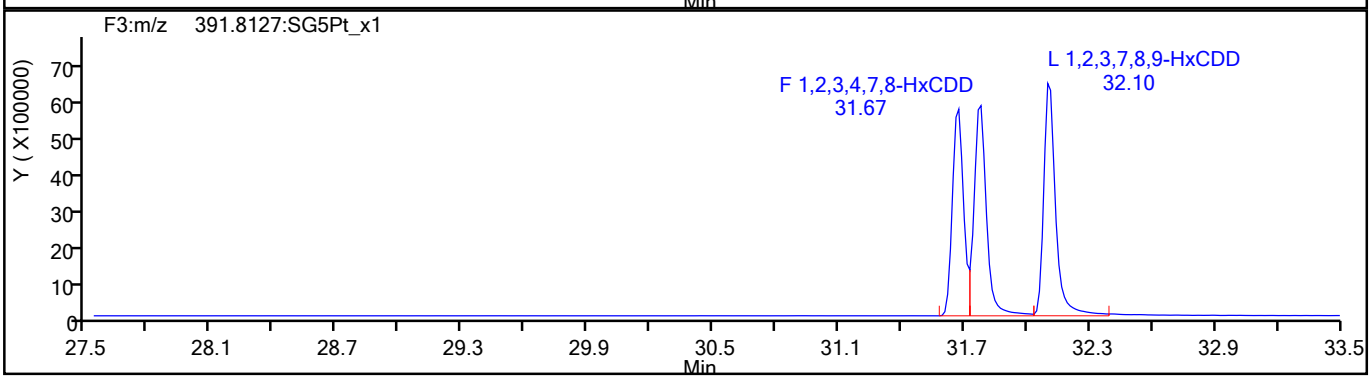

HxCDD Standards

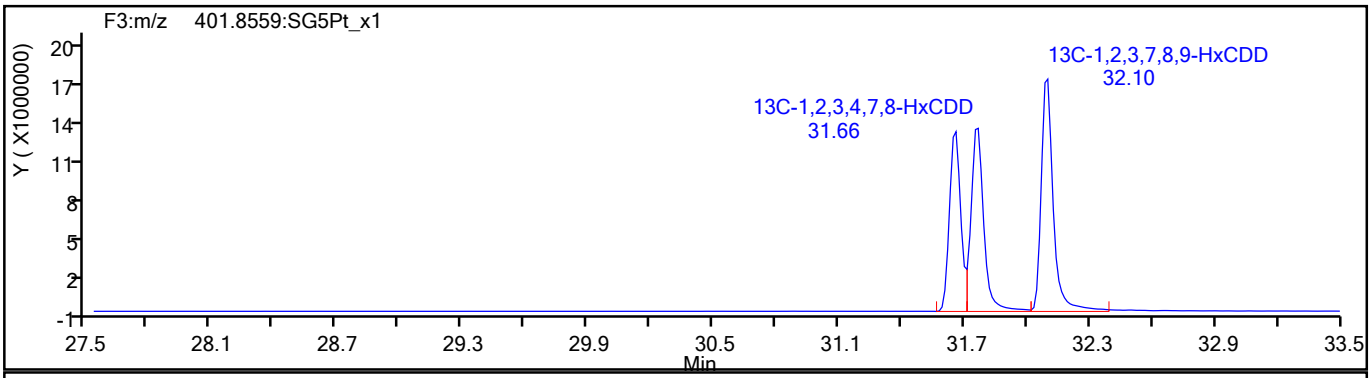

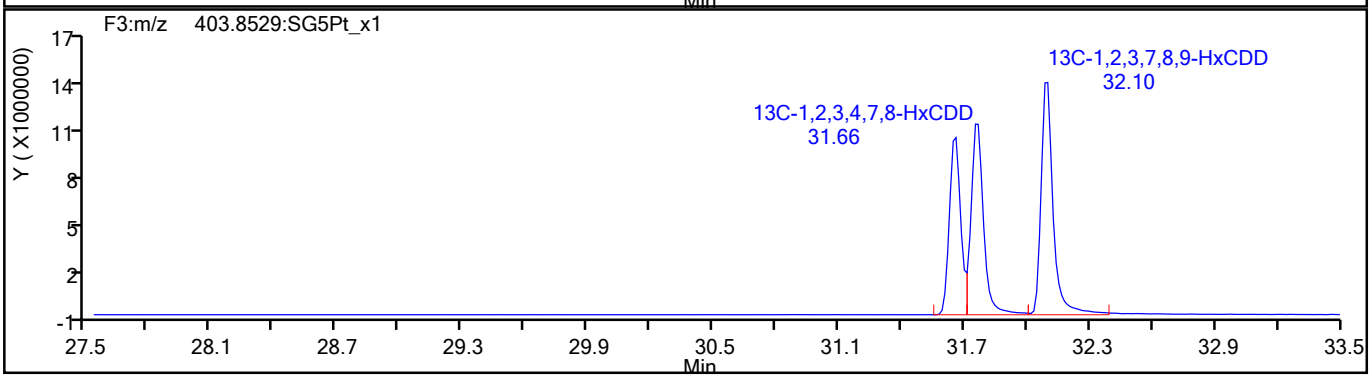

784446

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

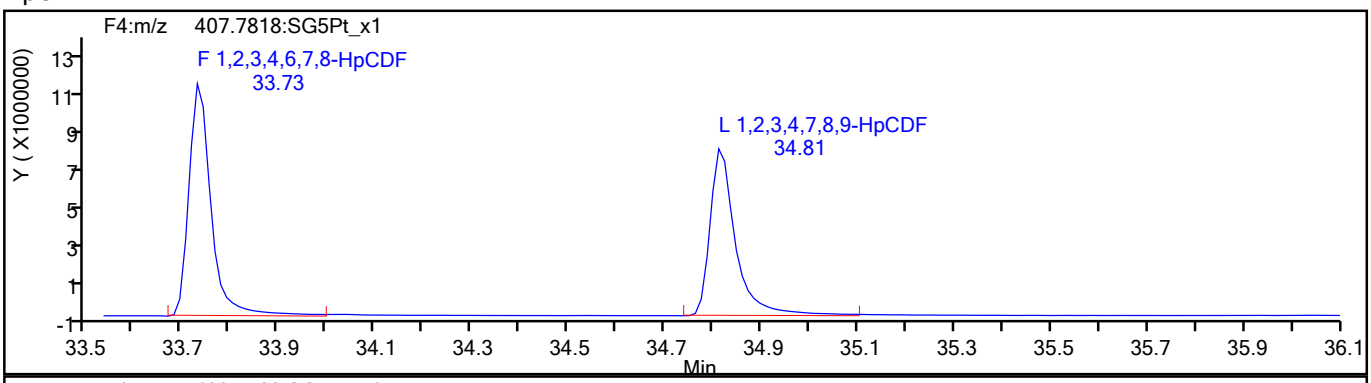

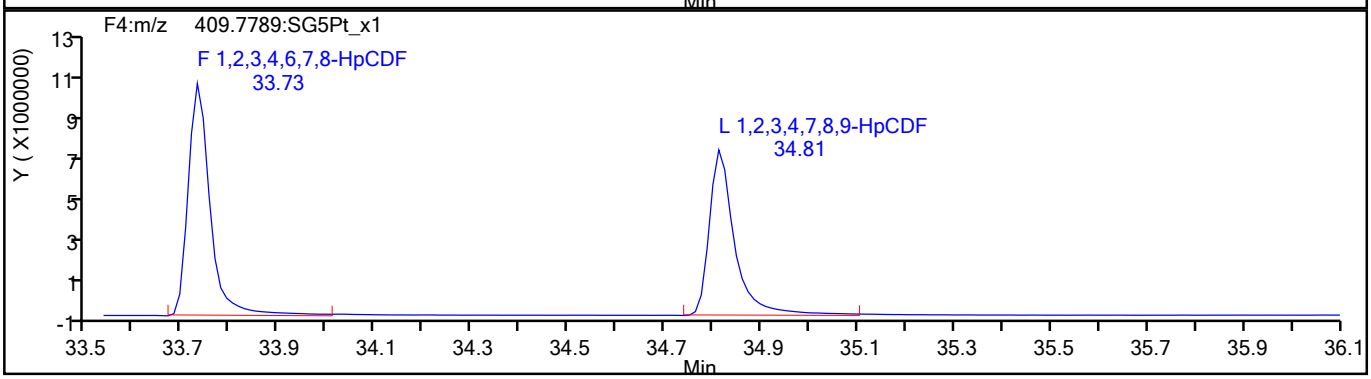

HpCDF Standards

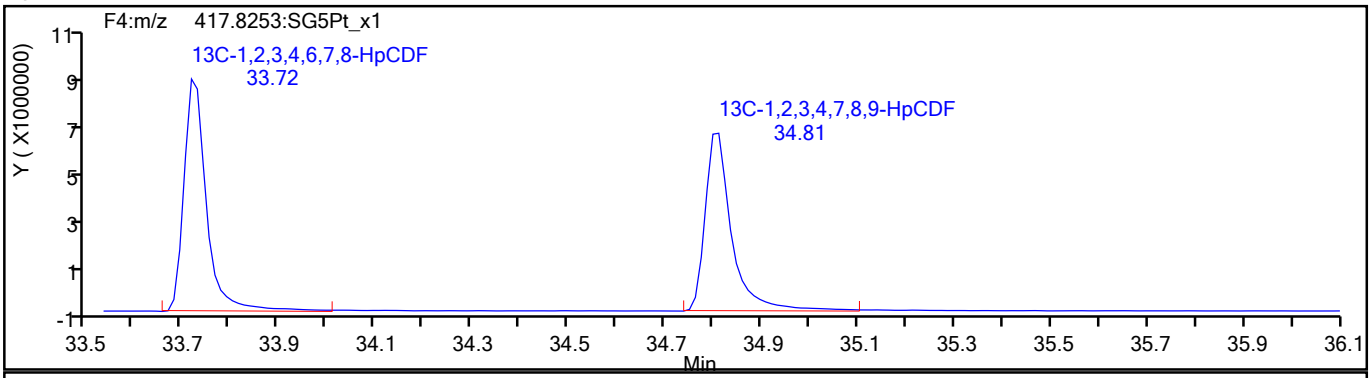

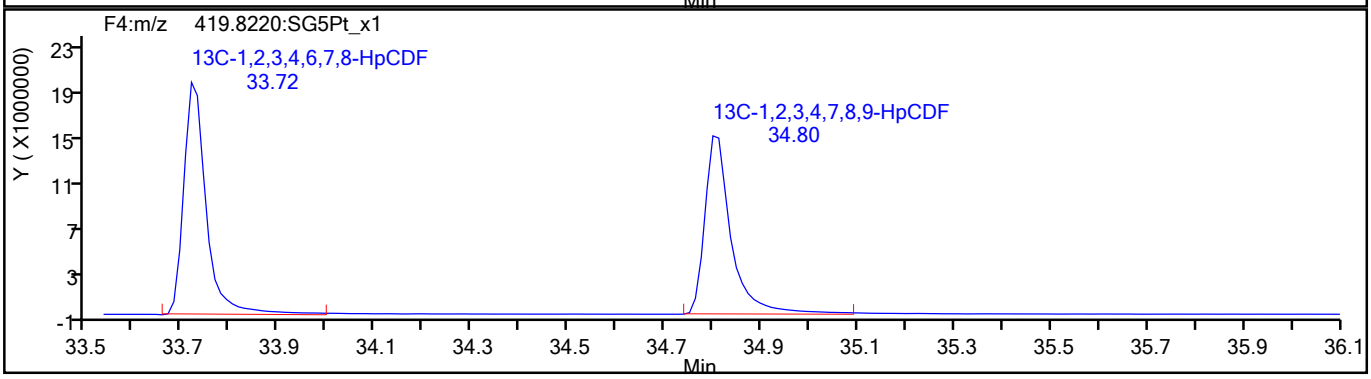

784447

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

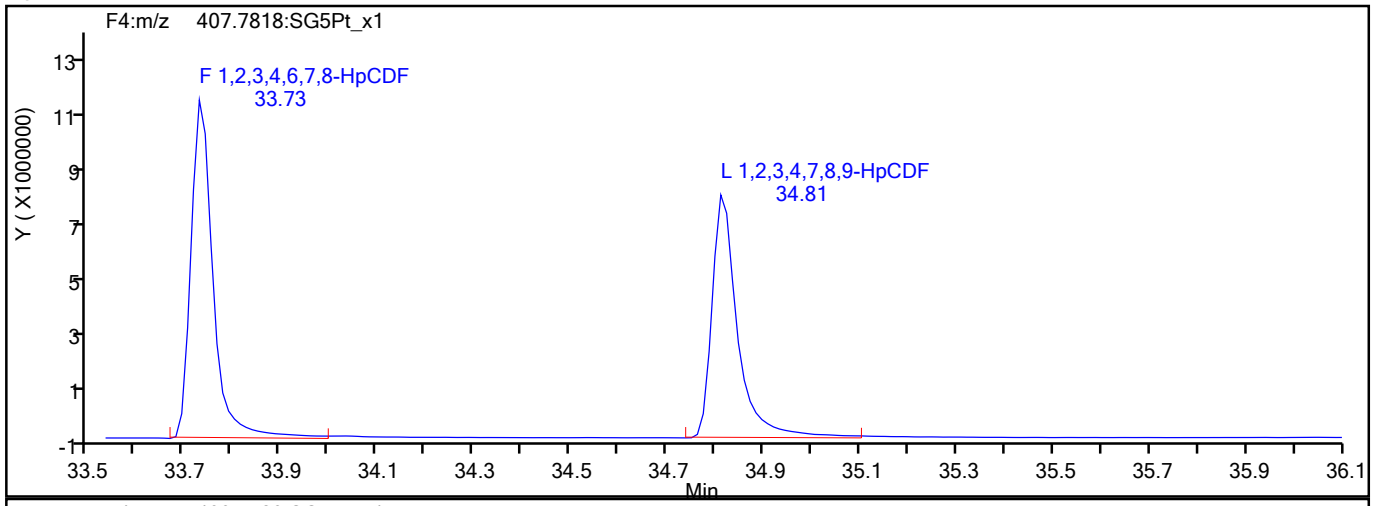

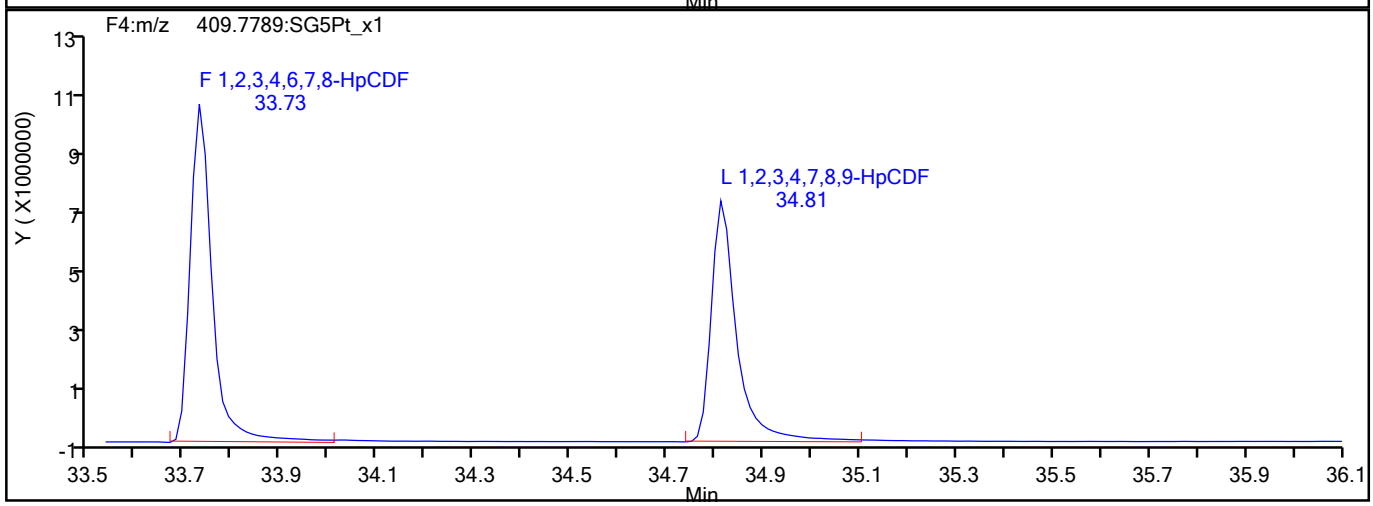

HpCDF Interference Mass

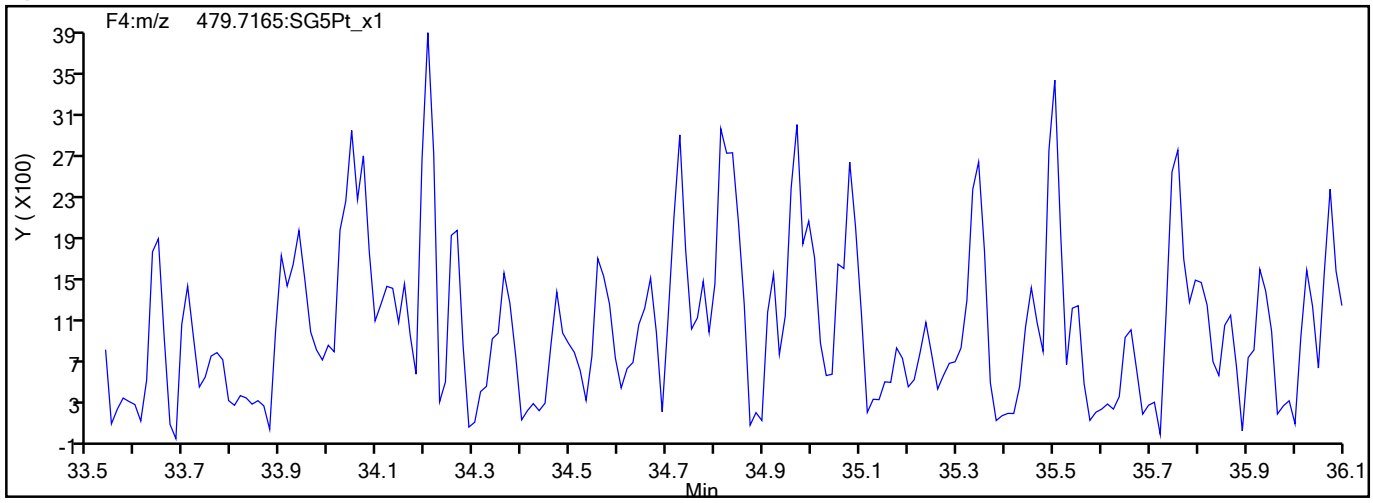

784448

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

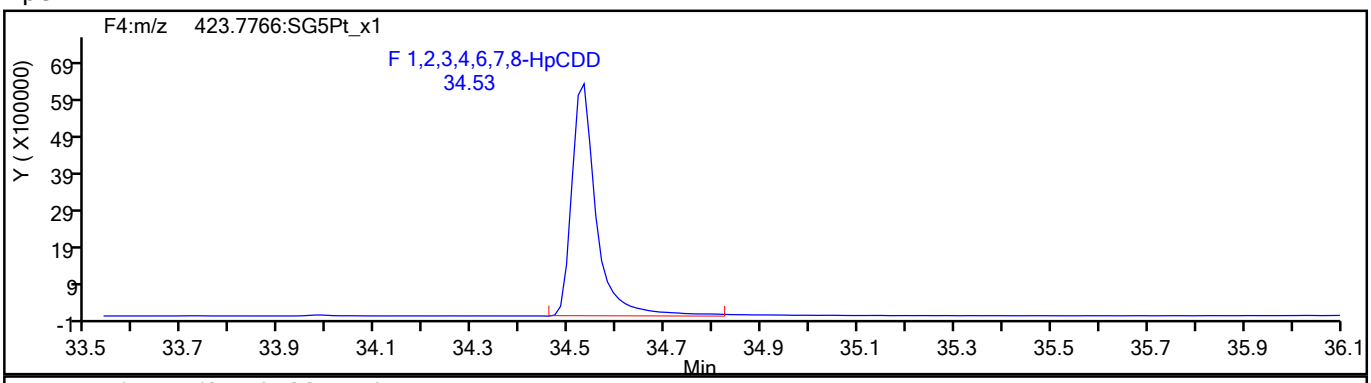

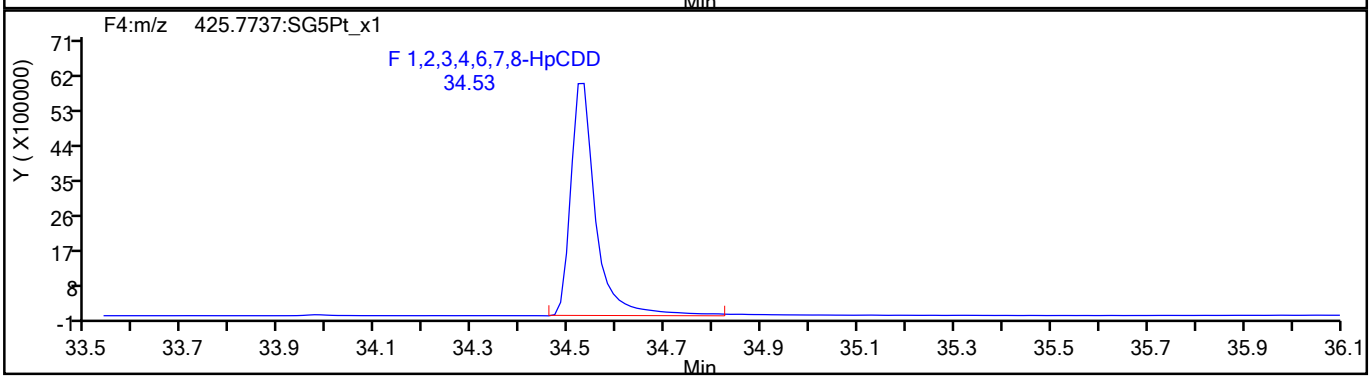

HpCDD Standards

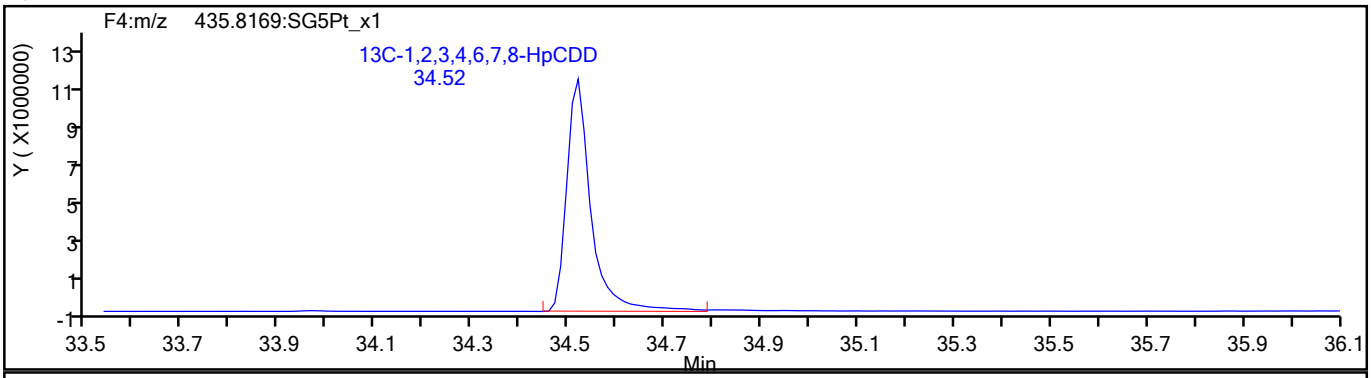

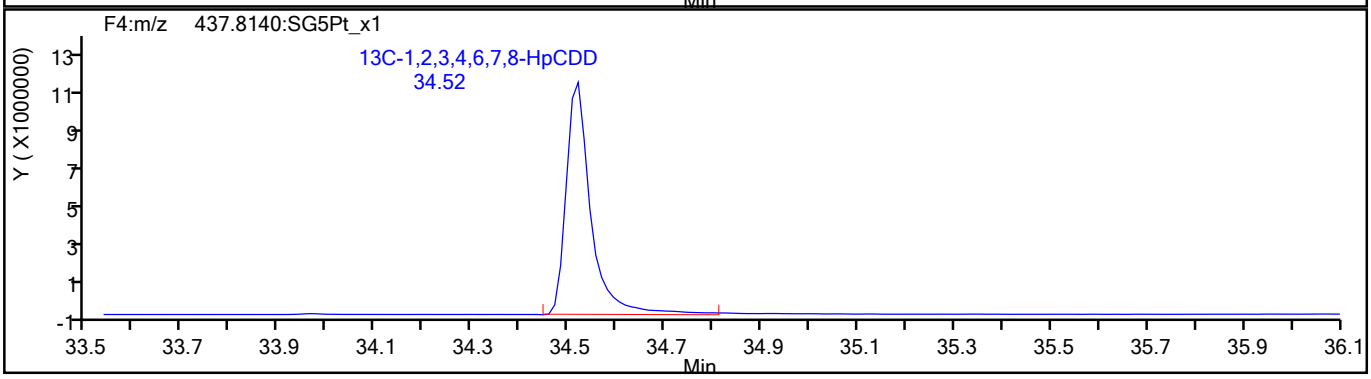

784449

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

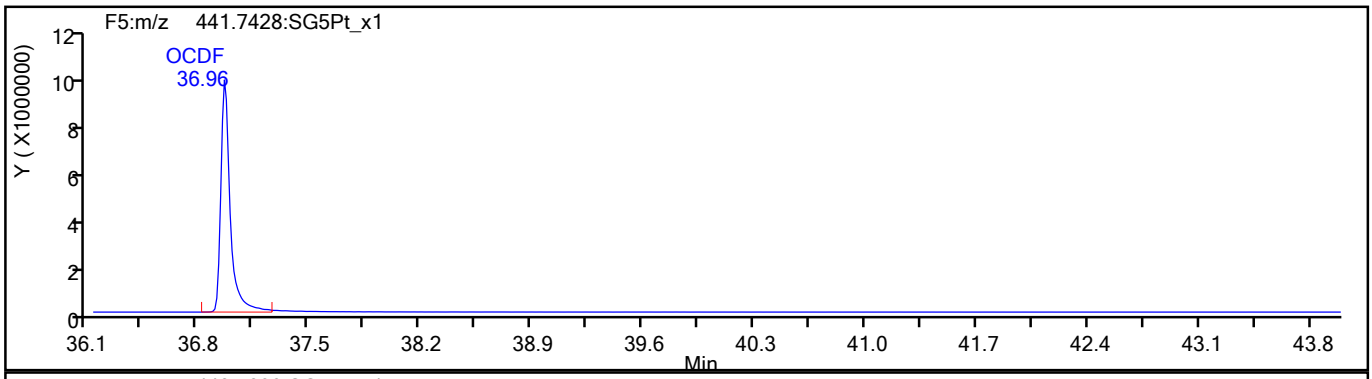

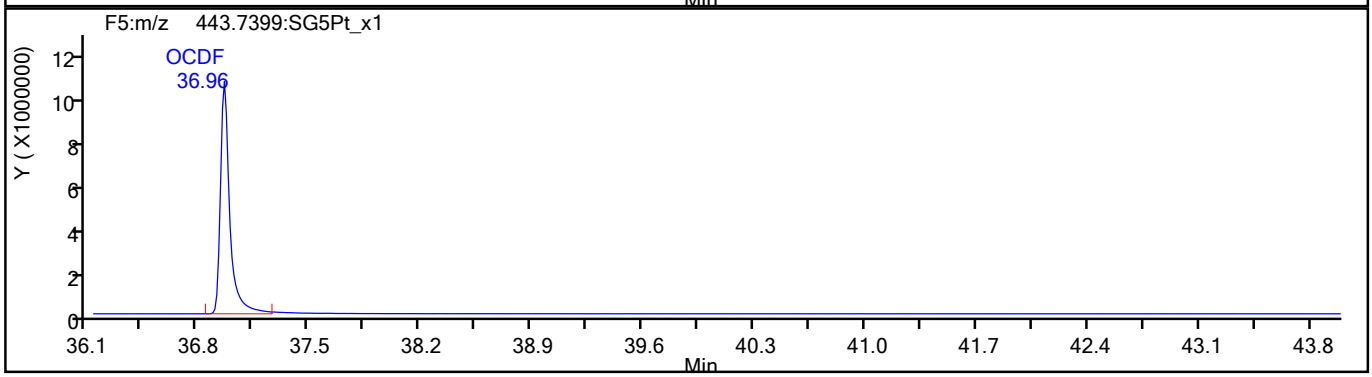

OCDF Standards

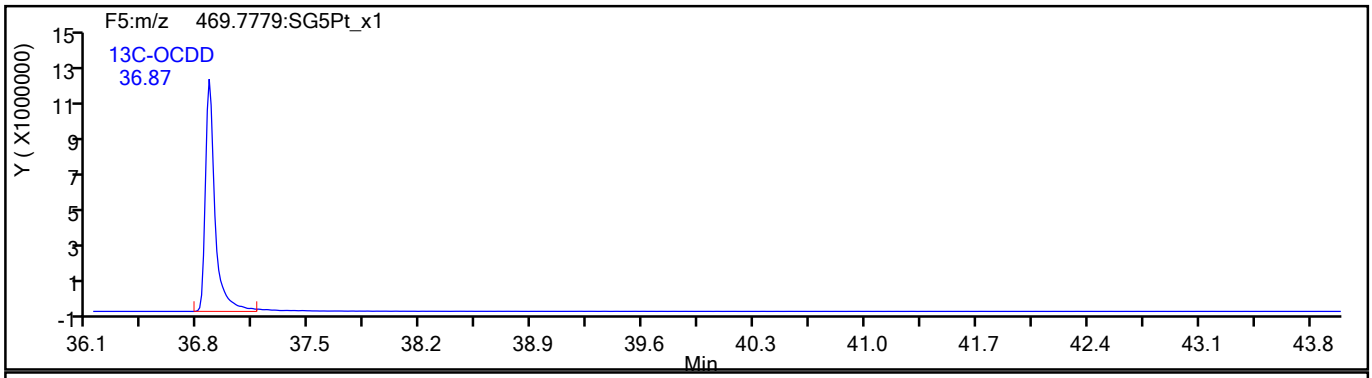

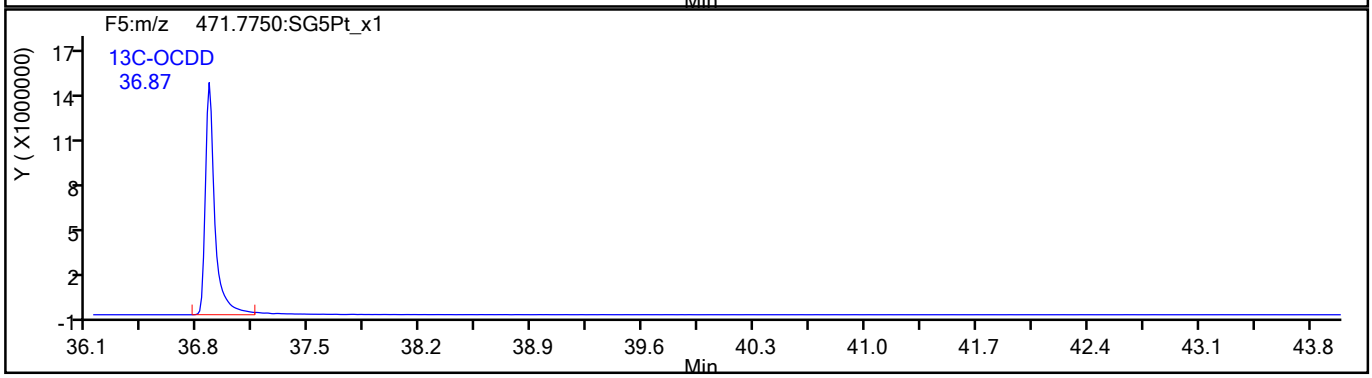

784450

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

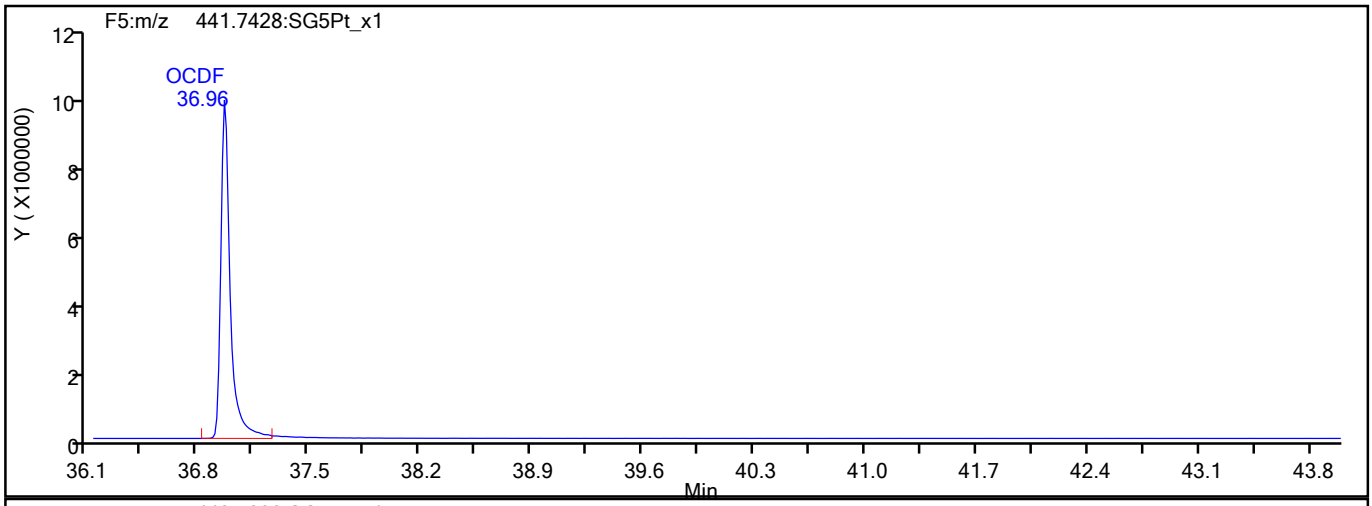

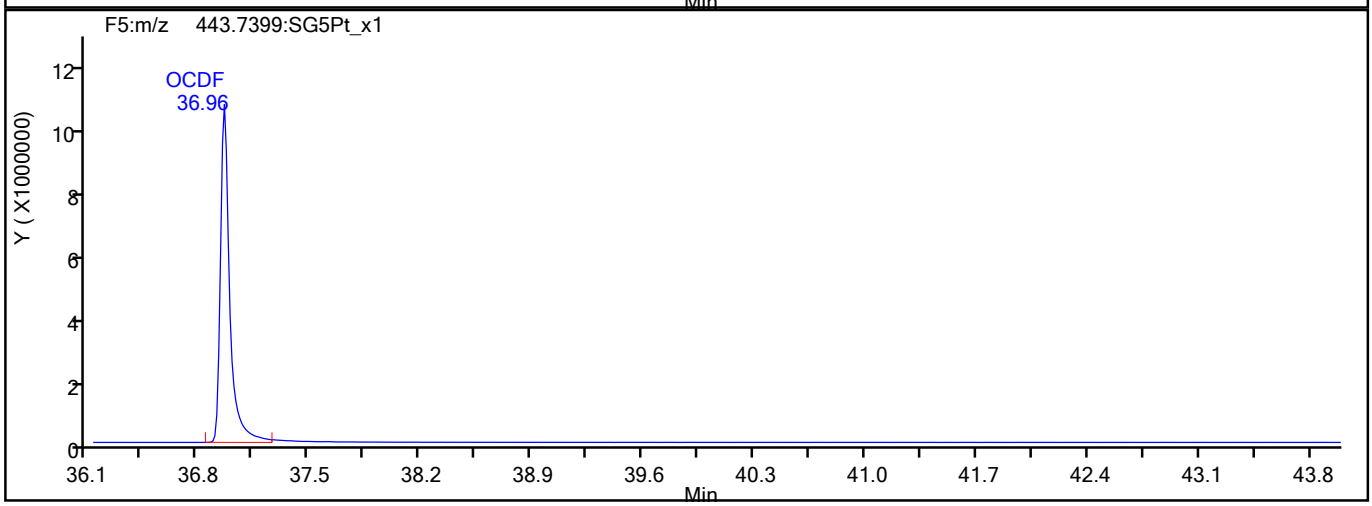

OCDF Interference Mass

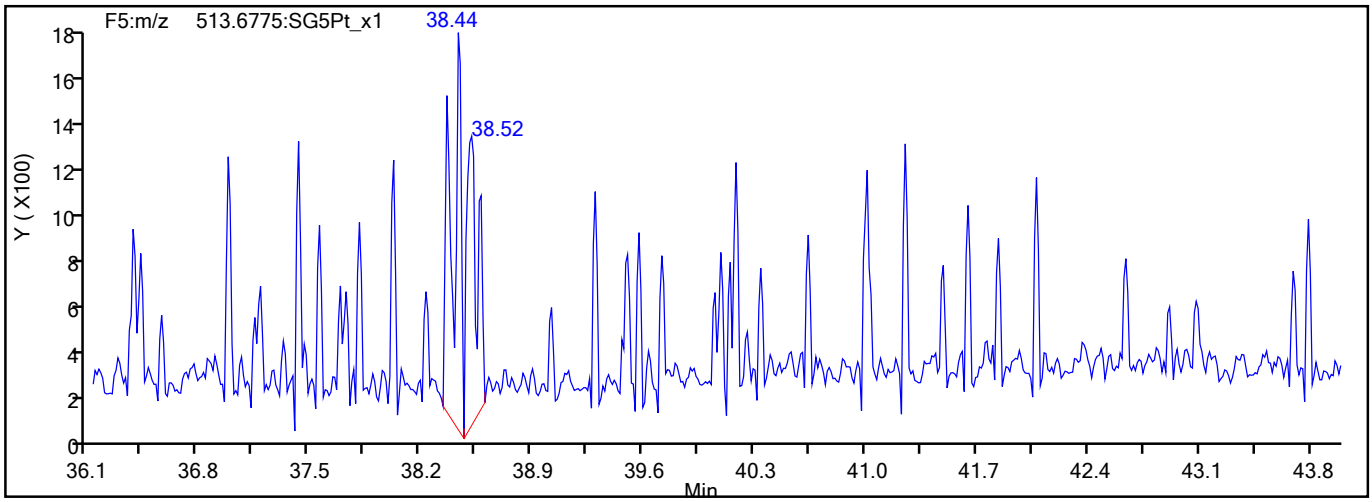

784451

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

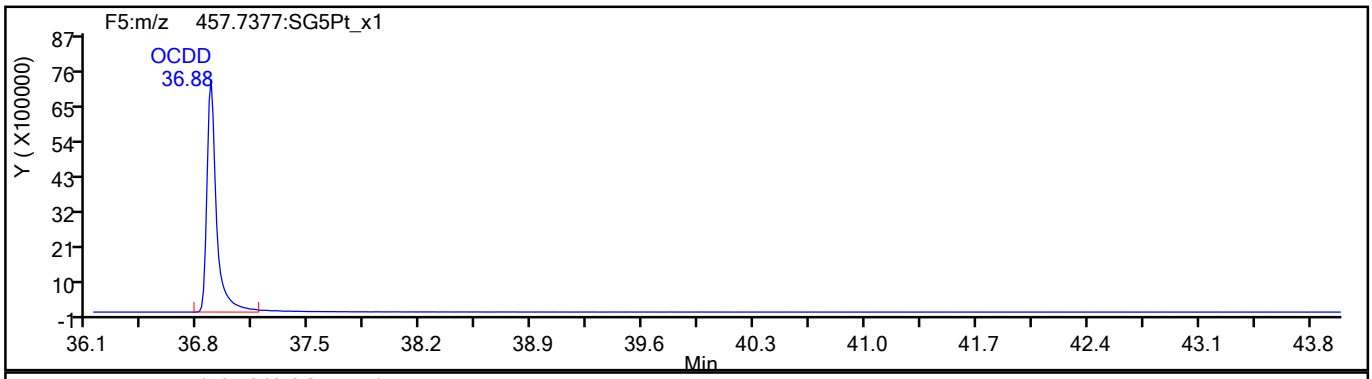

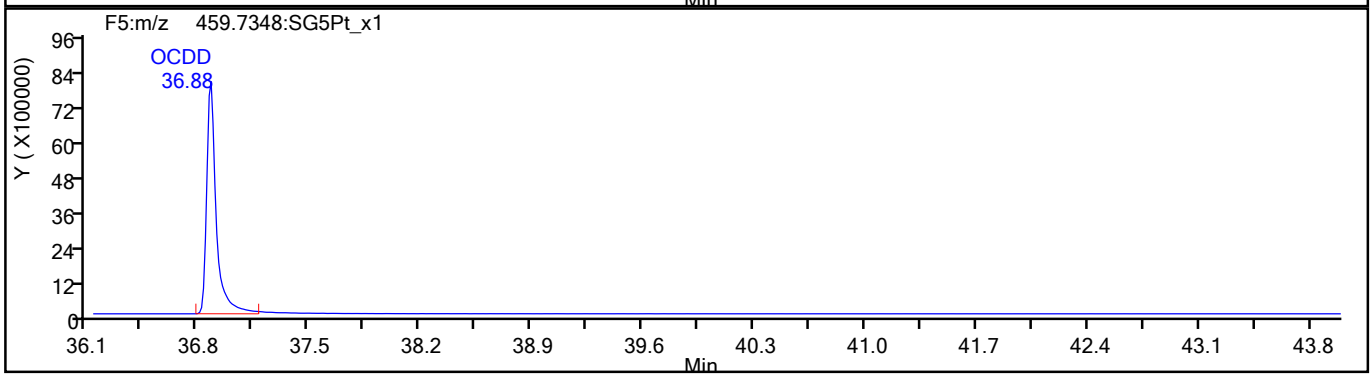

OCDD Standards

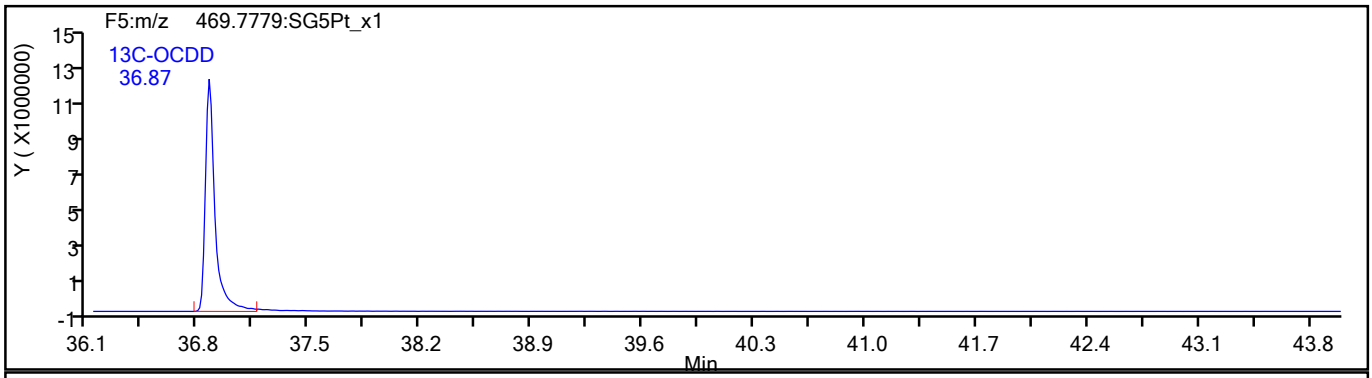

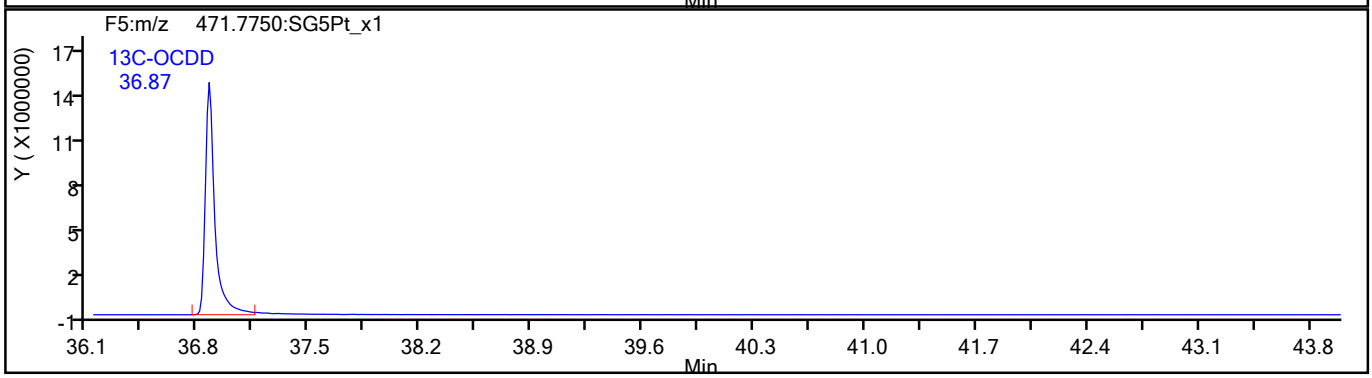

784452

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

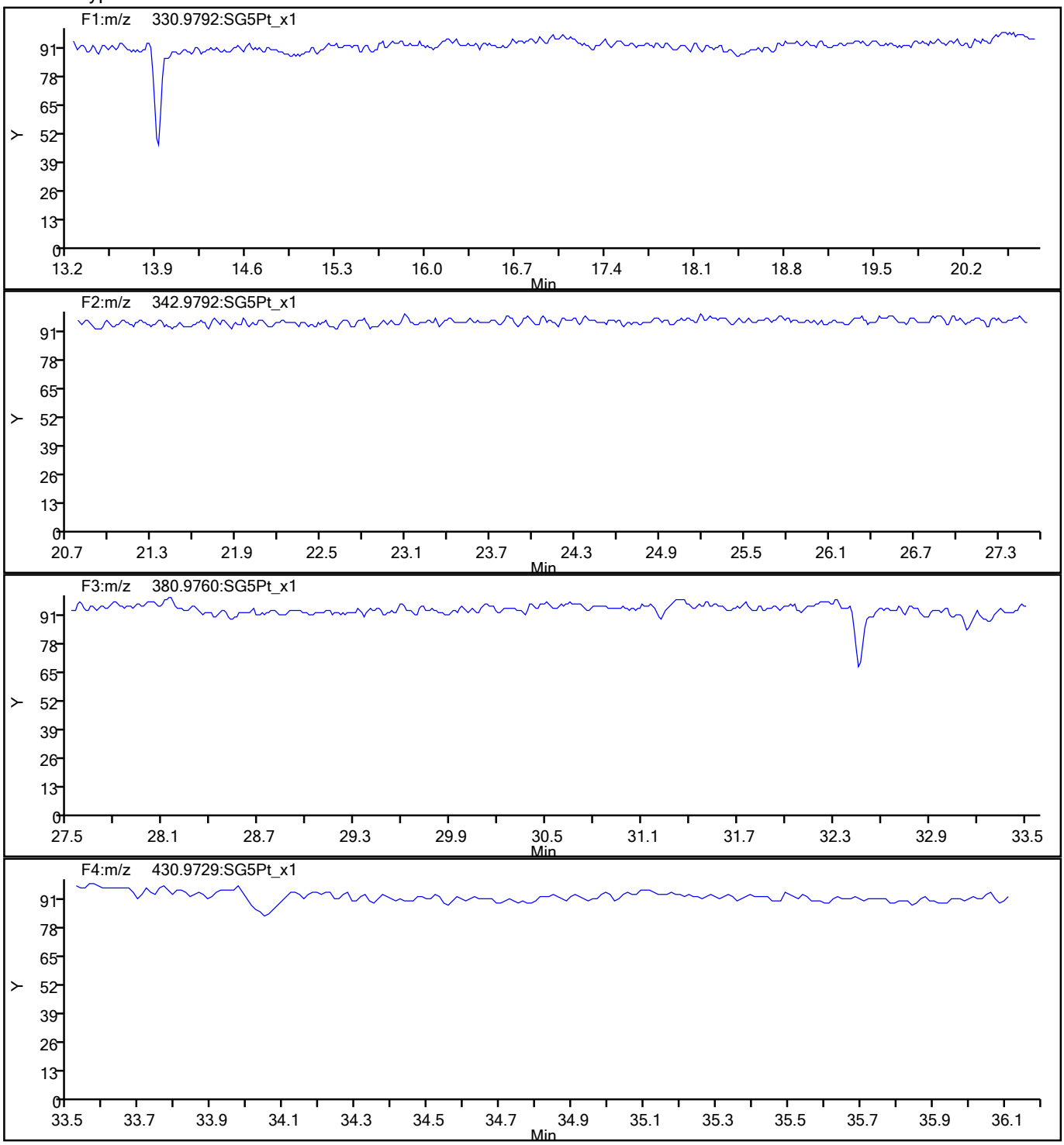

784453

Report Date: 19-Aug-2021 13:08:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_2.d		
Injection Date:	18-Aug-2021 15:00:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

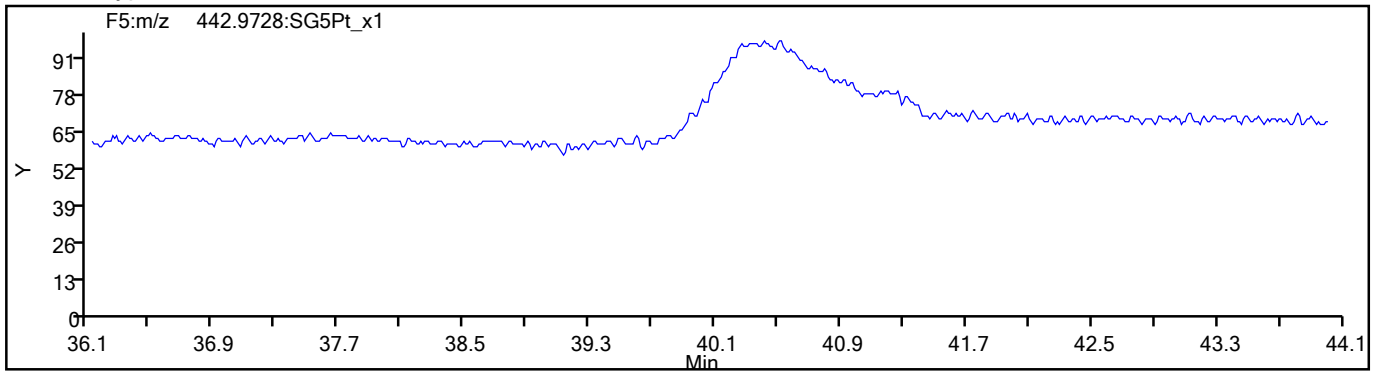

784454

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

784456

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

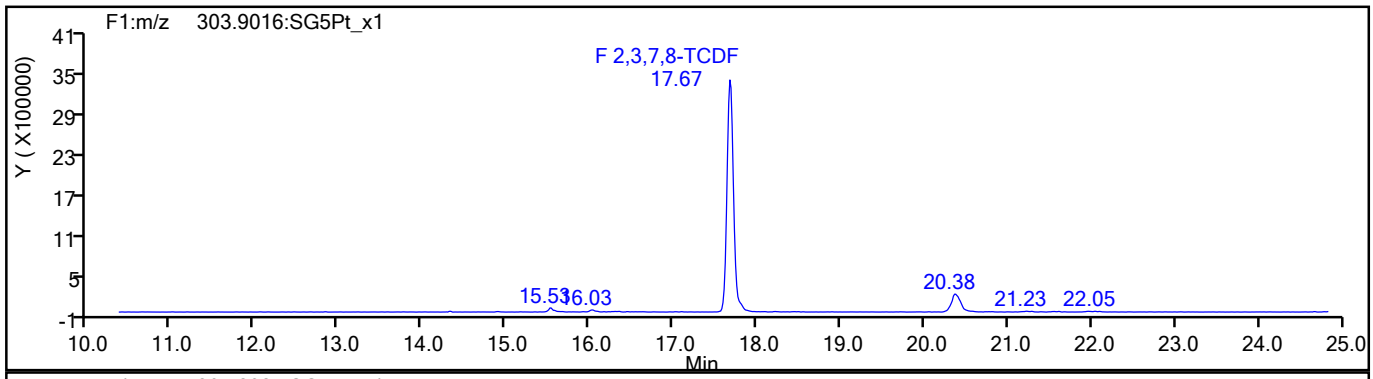

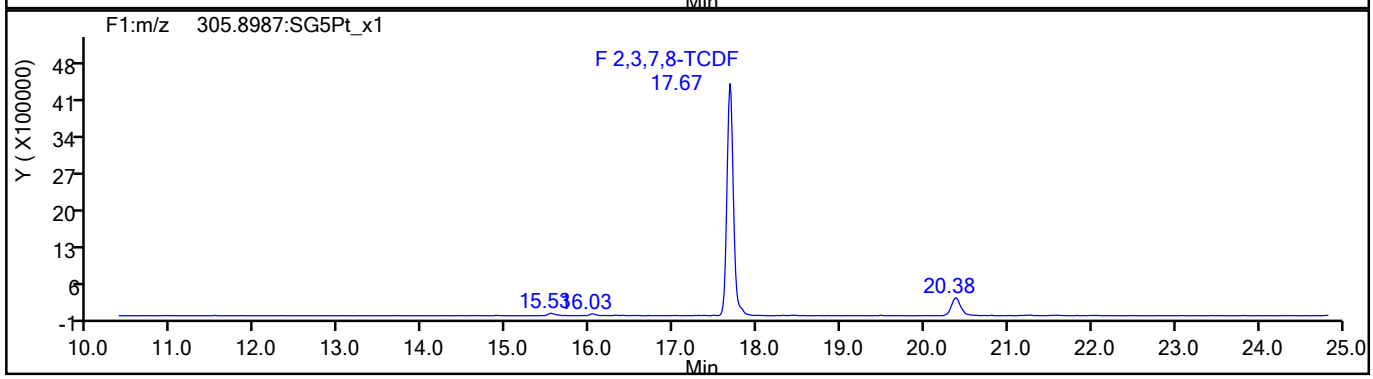

TCDF Standards

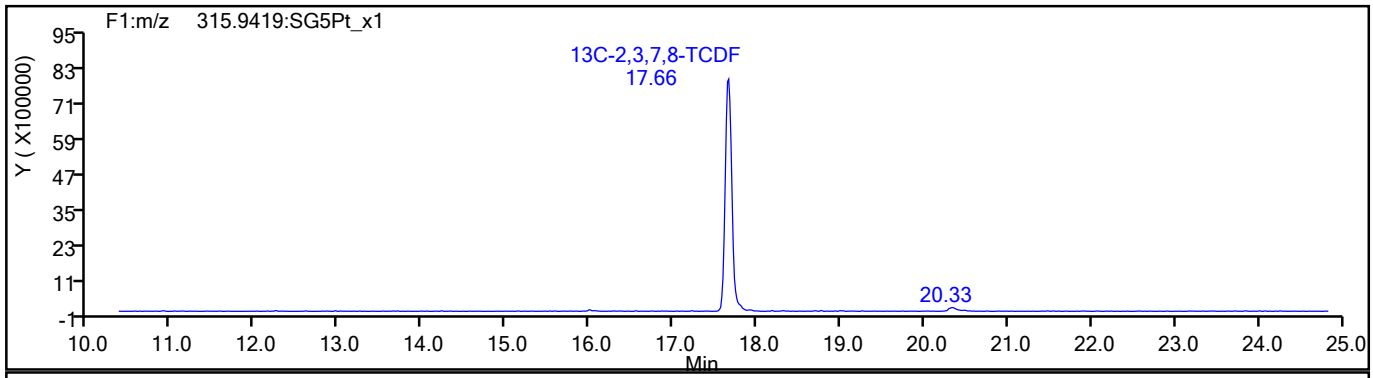

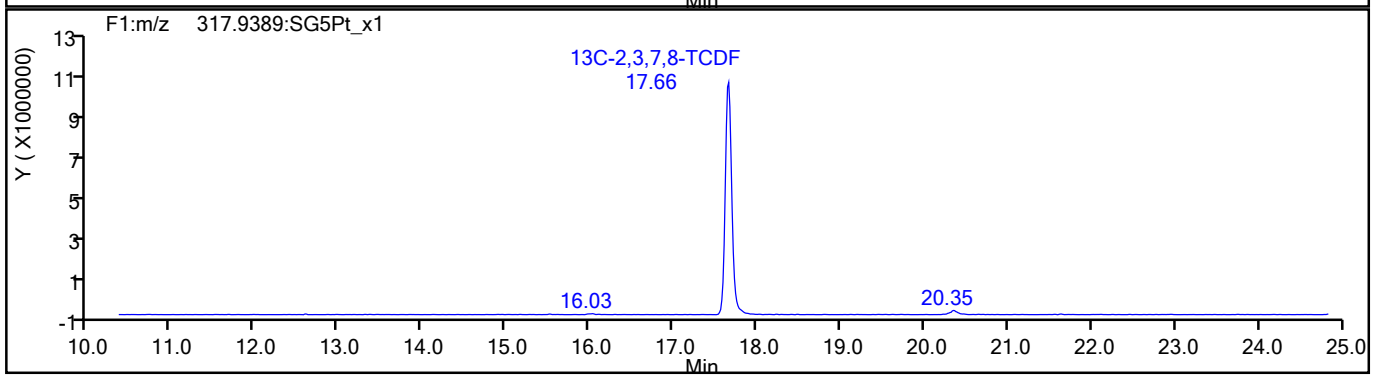

784458

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

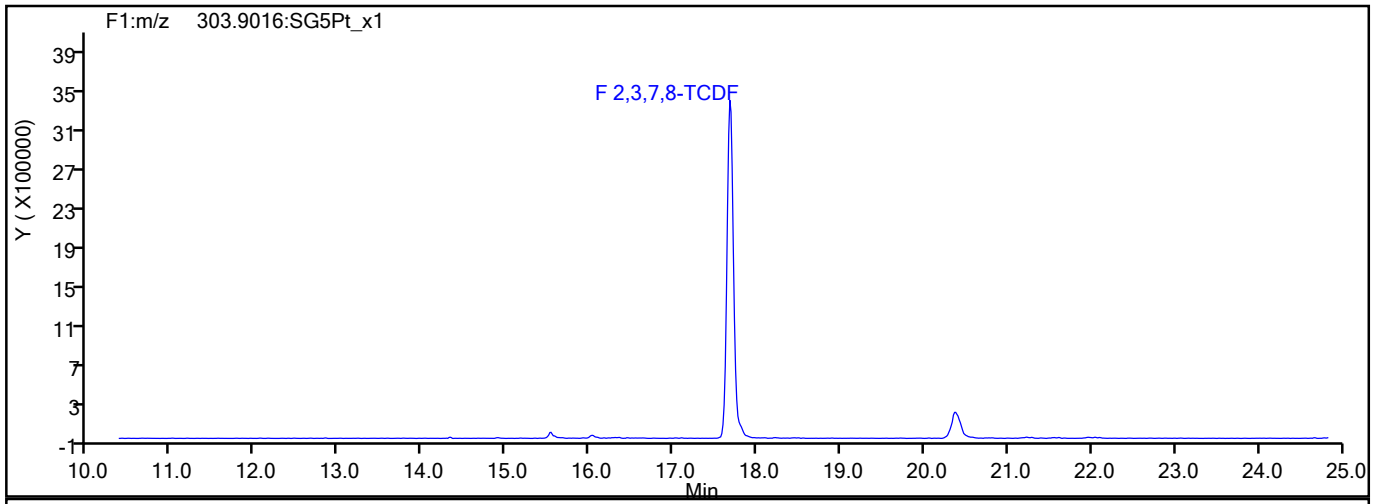

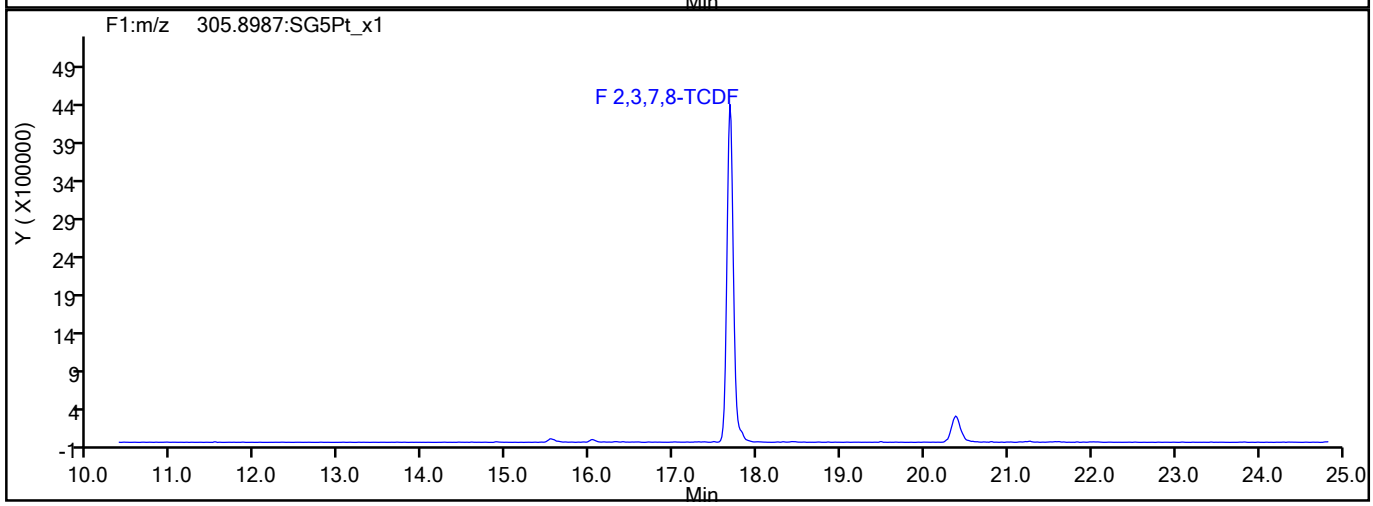

TCDF Interference Mass

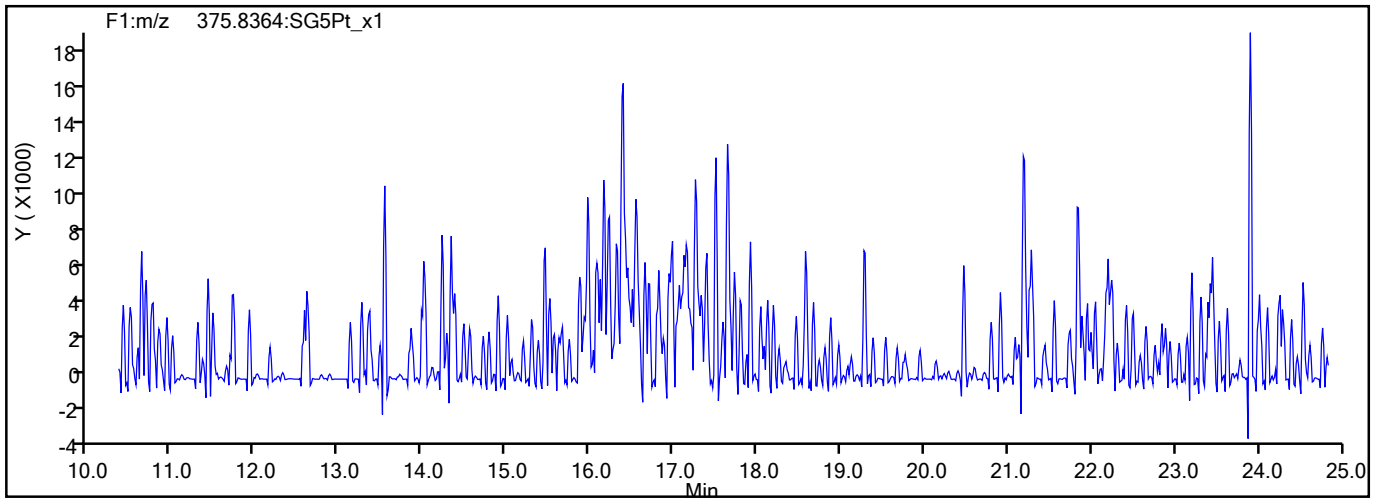

784459

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

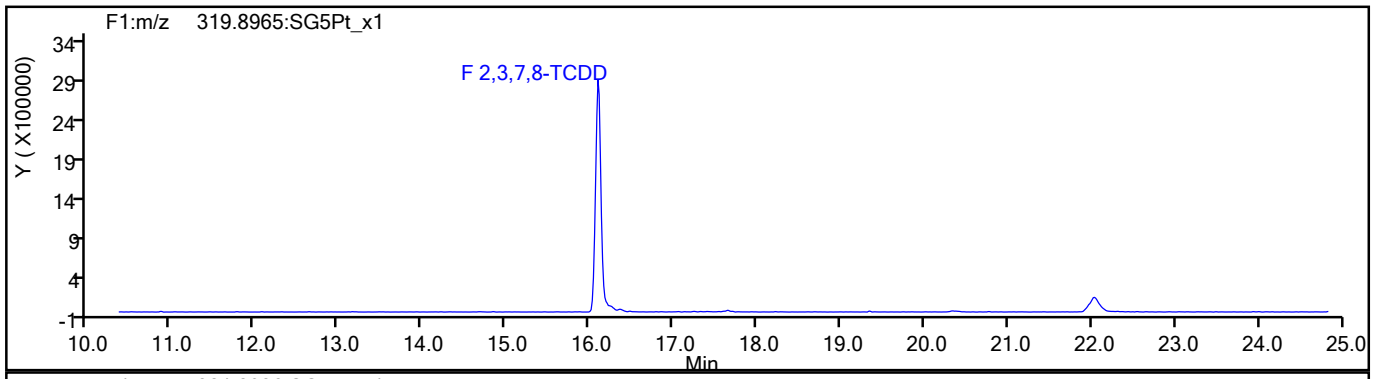

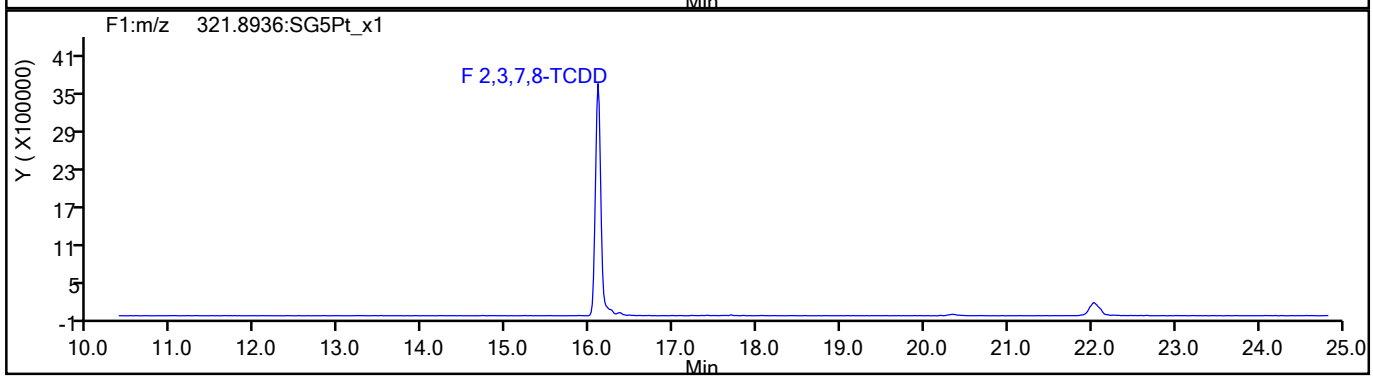

TCDD Standards

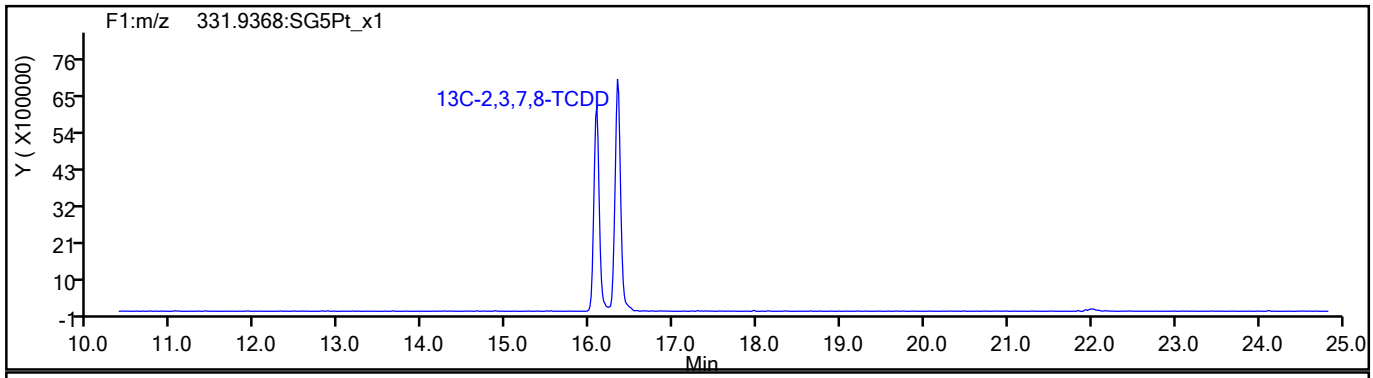

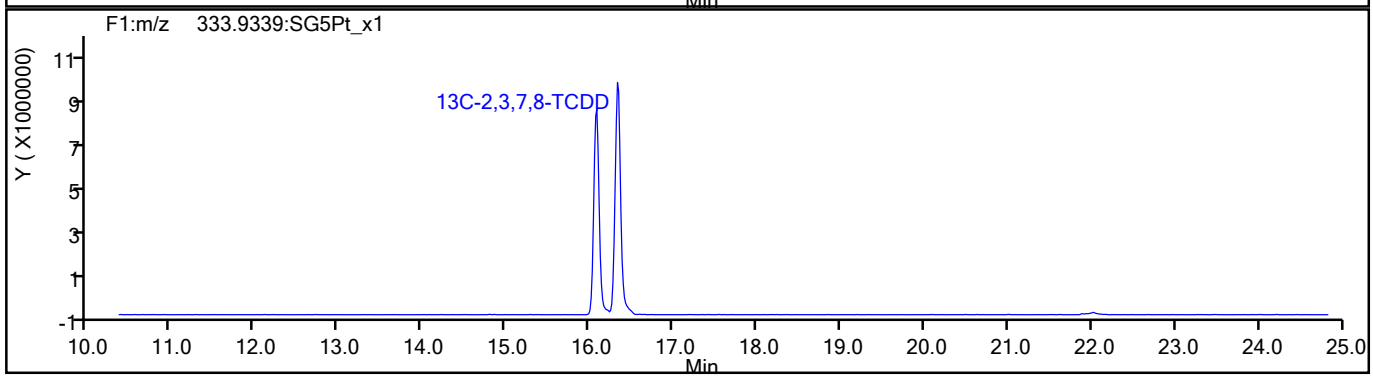

784460

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

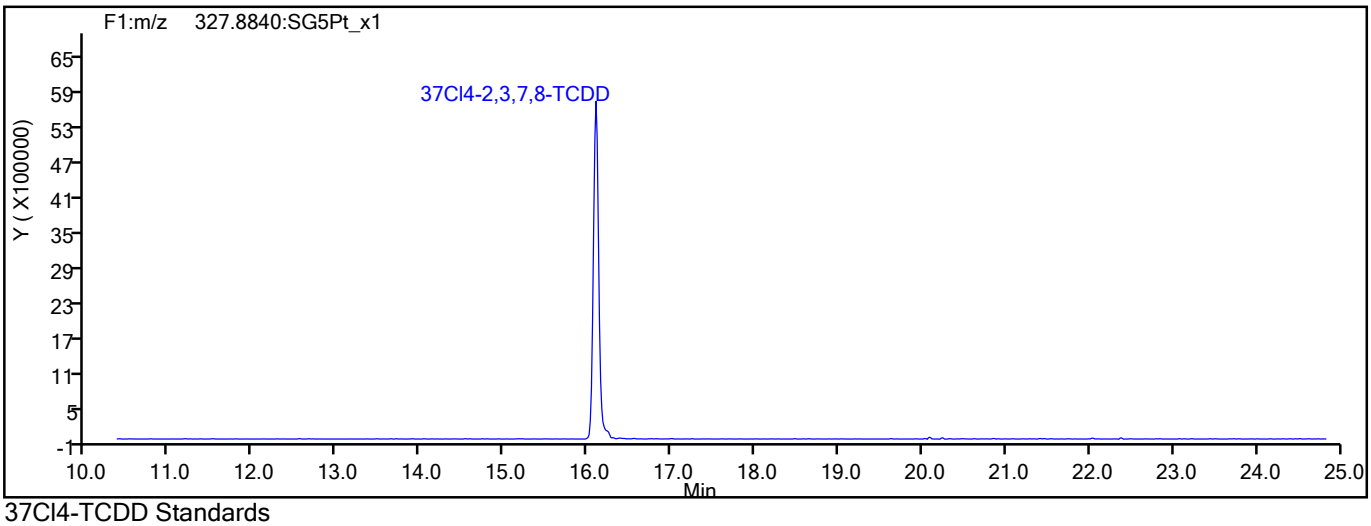

37Cl4-TCDD Standards

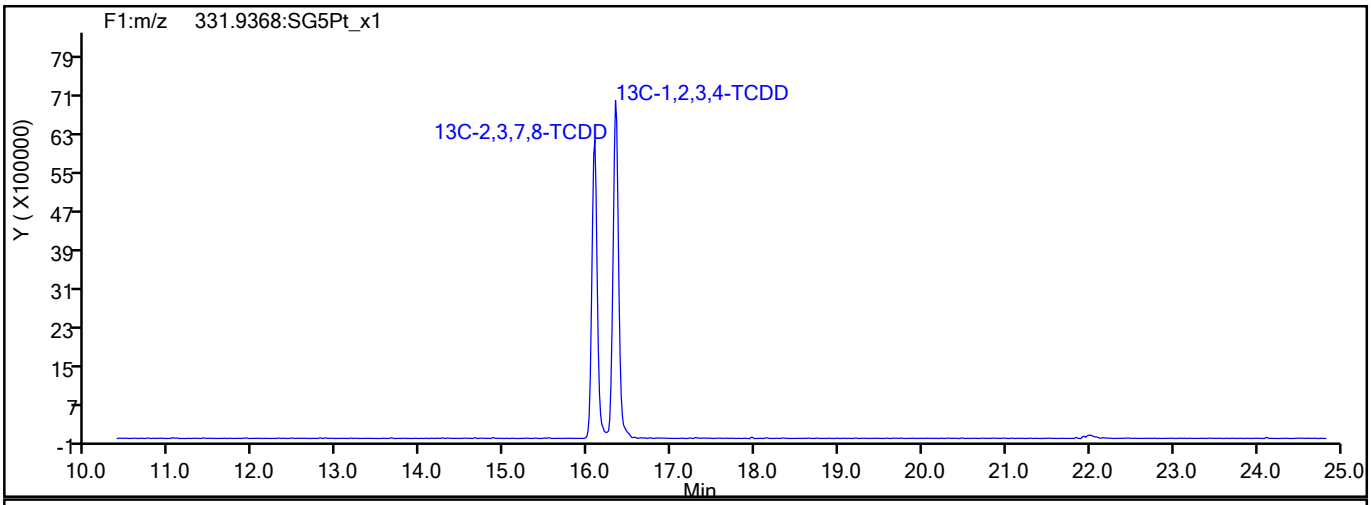

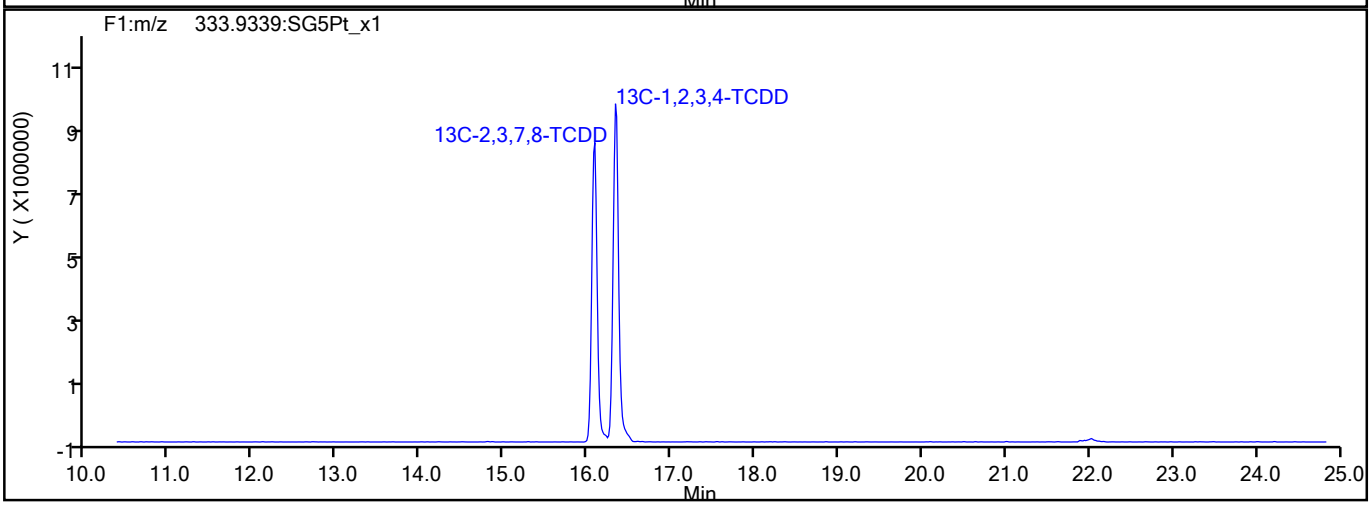

784461

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

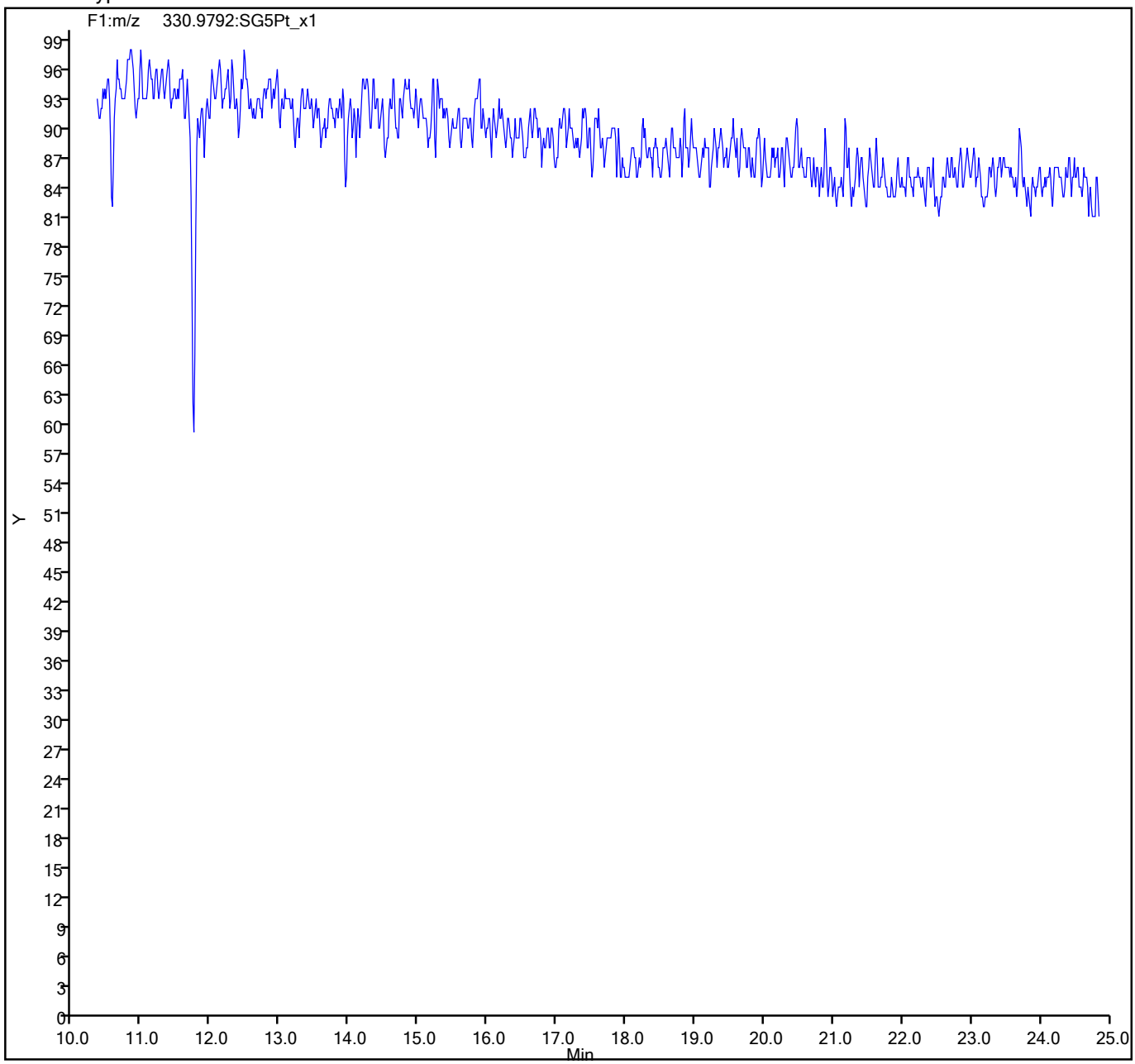

784462

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID: CCV 320-518979/2 Calibration Date: 08/23/2021 16:12

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 23AU21A11D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	0.9770		9.24	10.0	92	78-129
2,3,7,8-TCDF	AveID	0.998	0.9288		9.31	10.0	93	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9322		107	100	107	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.415		106	100	106	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8519		9.85	10.0	99	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
23AU21A11D2	1	CPS 082321A	CPS HRDXNCP_00044				1.00000	
23AU21A11D2	2	CCV 082321A	CCV CS-4 HRDXNL4_00100				1.00000	
23AU21A11D2	3	SB 082321A	Solvent Blank C-14				1.00000	
23AU21A11D2	4	320-512871	320-76788-A-9-A	20	1613B/Solid	D265	10.00000	g
23AU21A11D2	5	320-513586	320-76887-A-9-A	20	1613B/Solid	D266	10.00000	g
23AU21A11D2	6	320-513585	320-76769-A-8-A	20	1613B/Solid	D265	10.00000	g
23AU21A11D2	7	320-513585	320-76769-A-6-A	20	1613B/Solid		10.00000	g
23AU21A11D2	8	320-513585	320-76769-A-7-A	20	1613B/Solid		10.00000	g
23AU21A11D2	9	320-513585	320-76769-A-25-A	20	1613B/Solid		10.00000	g
23AU21A11D2	10	320-513585	320-76769-A-18-A	20	1613B/Solid		10.00000	g
23AU21A11D2	11	320-513586	320-76769-A-34-A	20	1613B/Solid	D266	10.00000	g
23AU21A11D2	12	320-513585	320-76769-A-17-A	20	1613B/Solid	D265	10.00000	g
23AU21A11D2	13	320-513586	320-76769-A-31-A	20	1613B/Solid	D266	10.00000	g
23AU21A11D2	14	320-513586	320-76769-A-33-A	20	1613B/Solid		10.00000	g
23AU21A11D2	15	320-513585	320-76769-A-16-A	20	1613B/Solid	D265	10.00000	g
23AU21A11D2	16	320-513586	320-76769-A-32-A	20	1613B/Solid	D266	10.00000	g
23AU21A11D2	17	320-513586	320-76769-A-30-A	20	1613B/Solid		10.00000	g
23AU21A11D2	18	320-513879	320-76769-A-4-B	20	1613B/Solid	D267	10.00000	g
23AU21A11D2	19						1.00000	
23AU21A11D2	20						1.00000	
23AU21A11D2	21						1.00000	
23AU21A11D2	22						1.00000	
23AU21A11D2	23						1.00000	
23AU21A11D2	24		DB 08-23-21				1.00000	
23AU21A11D2	25						1.00000	

Logfile ✓'d
8/24/21 KSS

Peak Locate Examination:23-AUG-2021:15:33 File:23AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

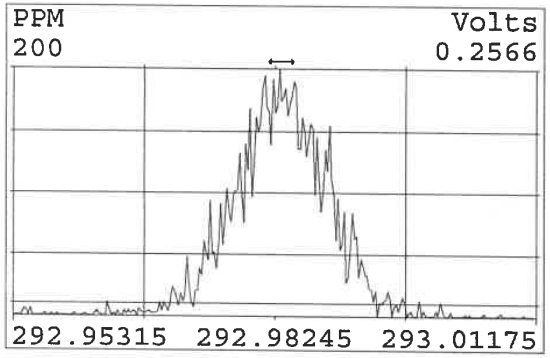

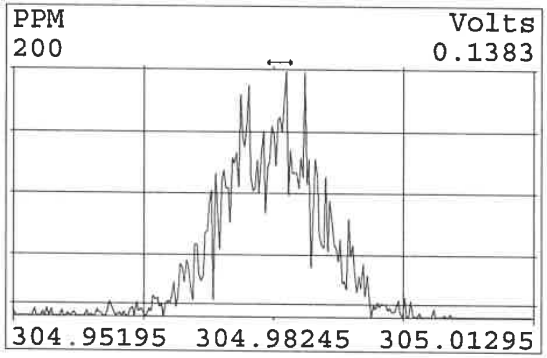

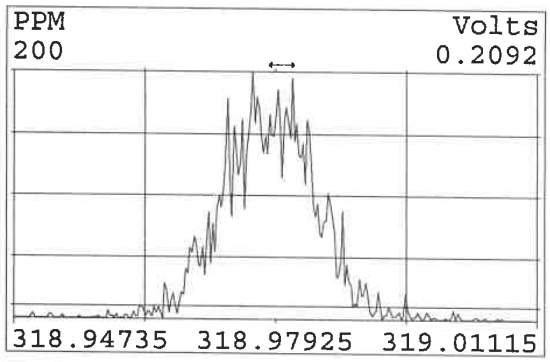

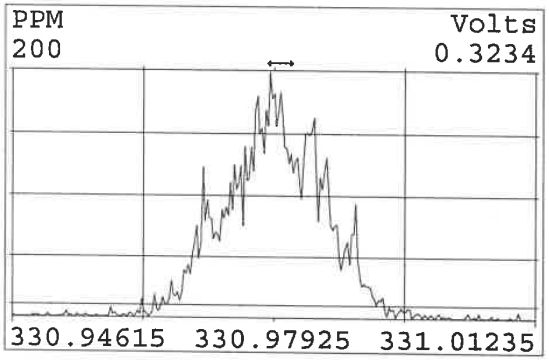

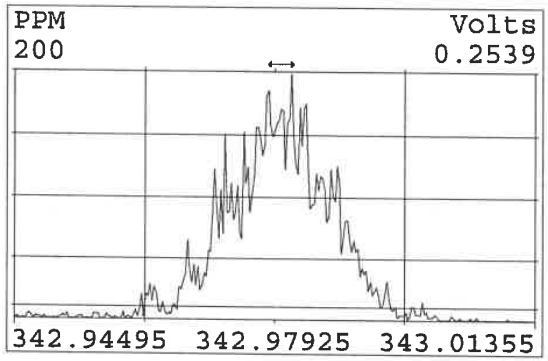

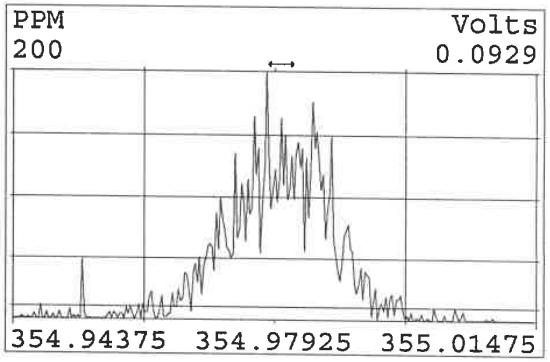

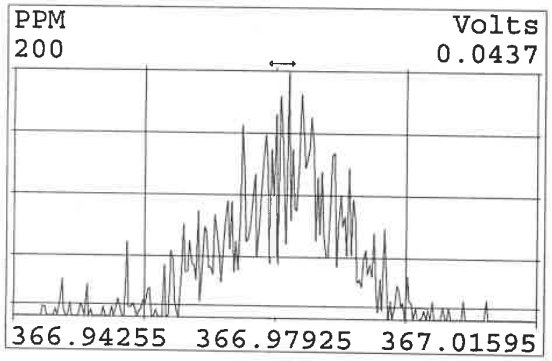

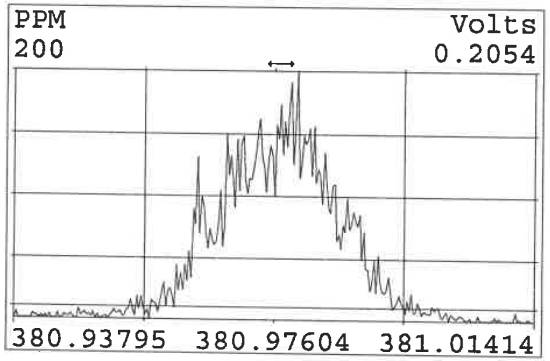

784465

Peak Locate Examination:24-AUG-2021:03:30 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

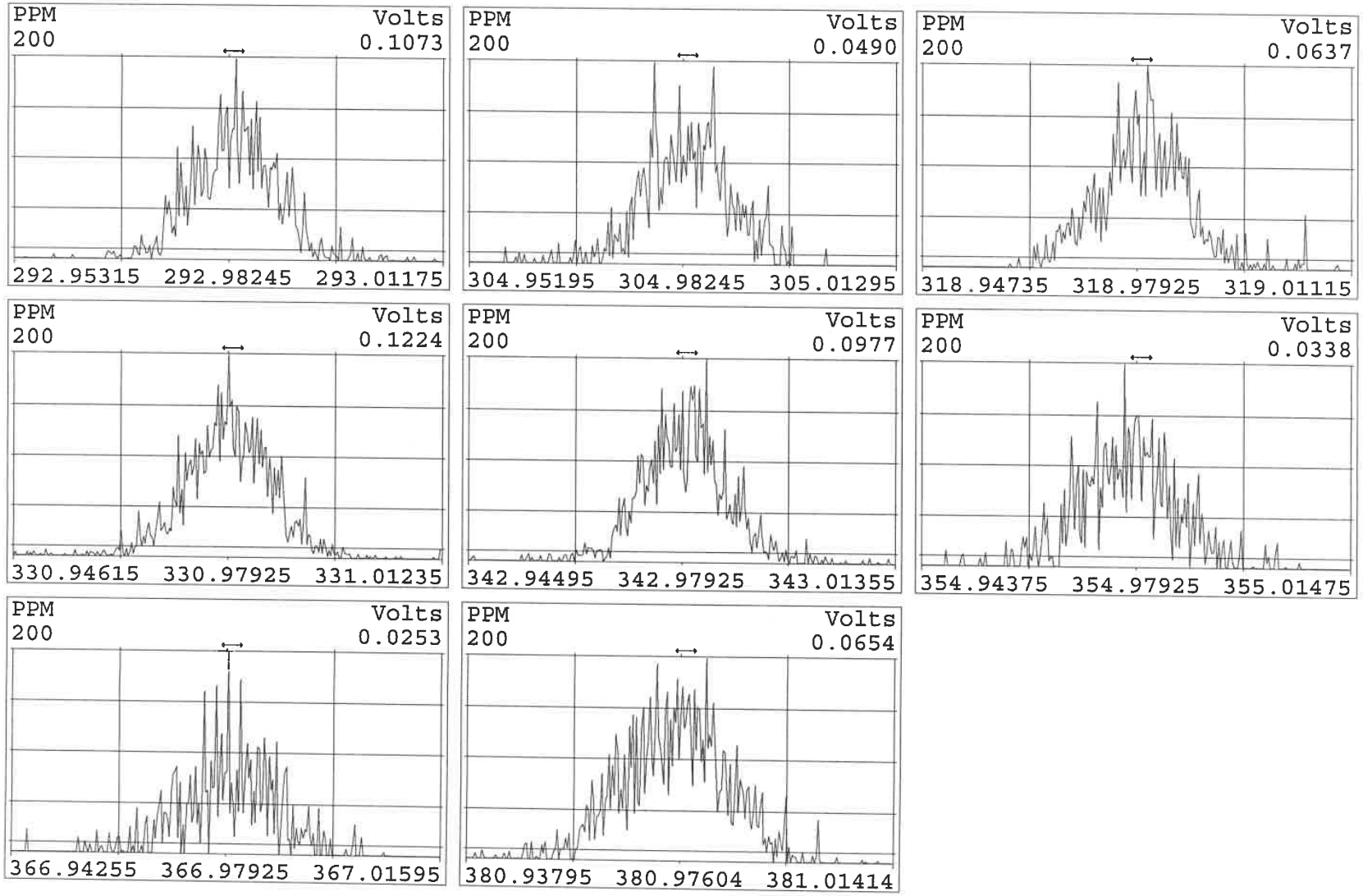

784466

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2021 16:12:40 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:13:16

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	54200262	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	76698090	0.78	1.3327	106.2	106.2	0.2954	0.2954	106	
2,3,7,8-TCDF	17.643	7123807	0.81	0.9978	9.309	9.309	0.0640	0.0640	93.09	
D 13C-2,3,7,8-TCDD	16.065	50526805	0.75	0.8749	106.5	106.5	0.3200	0.3200	107	
2,3,7,8-TCDD	16.079	4936344	0.79	1.0570	9.243	9.243	0.0661	0.0661	92.43	
$ 37Cl4-2,3,7,8-TCDD	16.093	4617218		0.8648	9.850	9.850	0.0451	0.0451	98.50	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2021 16:12:40 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:40 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:13:16

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.298	16.298	0		23828852	5208477	8177	20442	637		
333.9339	16.298	16.298	0		30371410	6668751	5123	12807	1302	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.081	33708553	6168866	9314	23285	662		
317.9389	17.629	17.615	1	1.082	42989537	8144875	9390	23475	867	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.643	0	1.002	3178735	579321	1438	3595	403		
305.8987	17.643	17.643	0	1.002	3945072	703015	2219	5547	317	0.81(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	0.986	21653368	4888638	8177	20442	598		
333.9339	16.065	16.065	0	0.986	28873437	6356793	5123	12807	1241	0.75(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.079	16.079	0	1.001	2182274	476513	1780	4450	268		
321.8936	16.079	16.079	0	1.001	2754070	588013	1361	3402	432	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.093	16.093	0	0.987	4617218	1056796	1855	4637	570		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

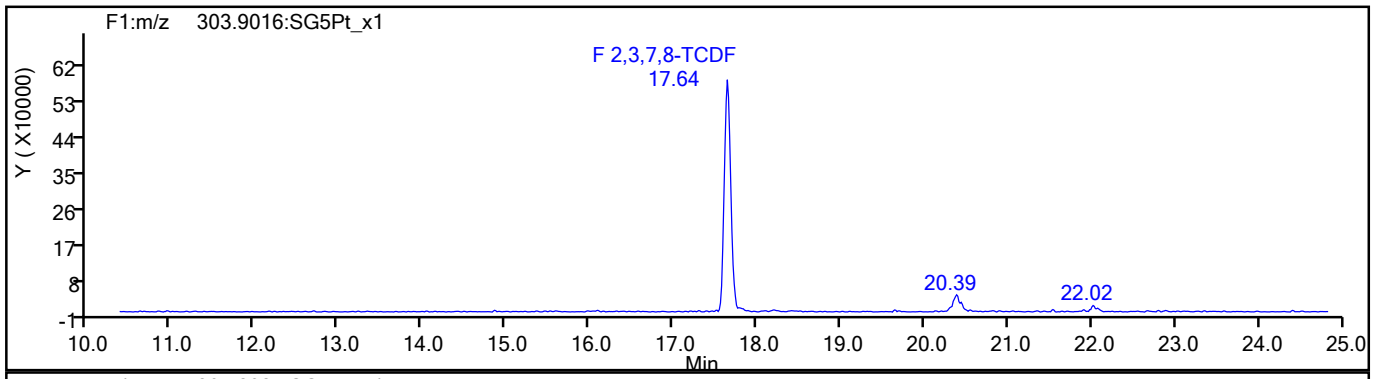

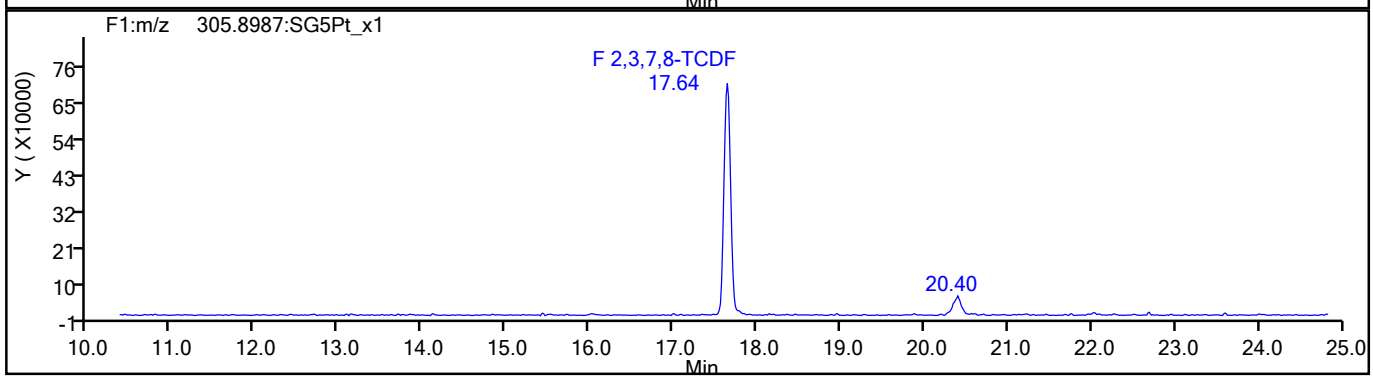

TCDF Standards

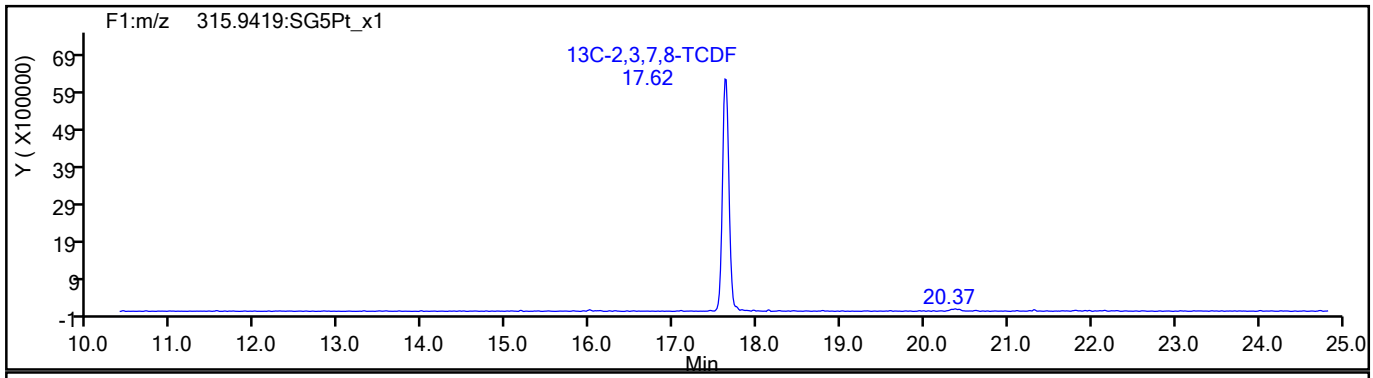

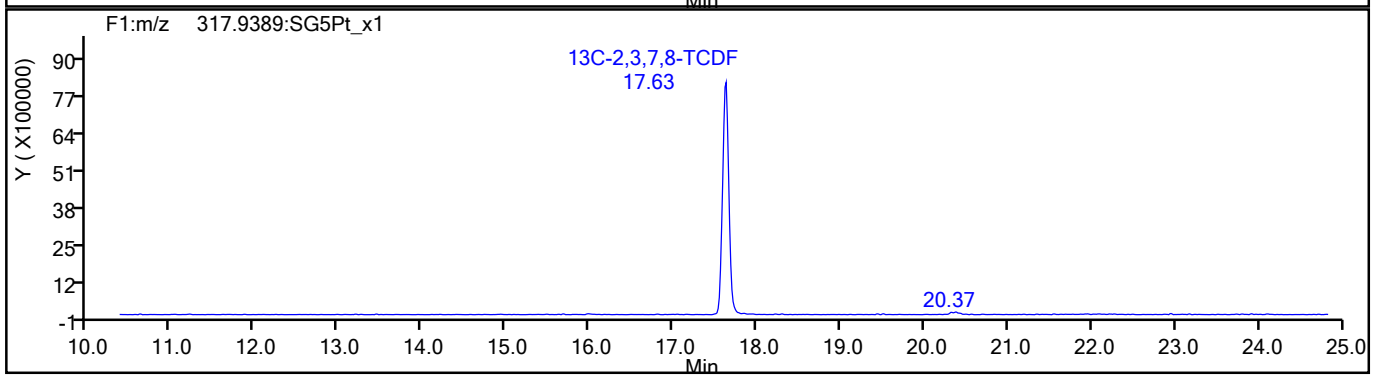

784469

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

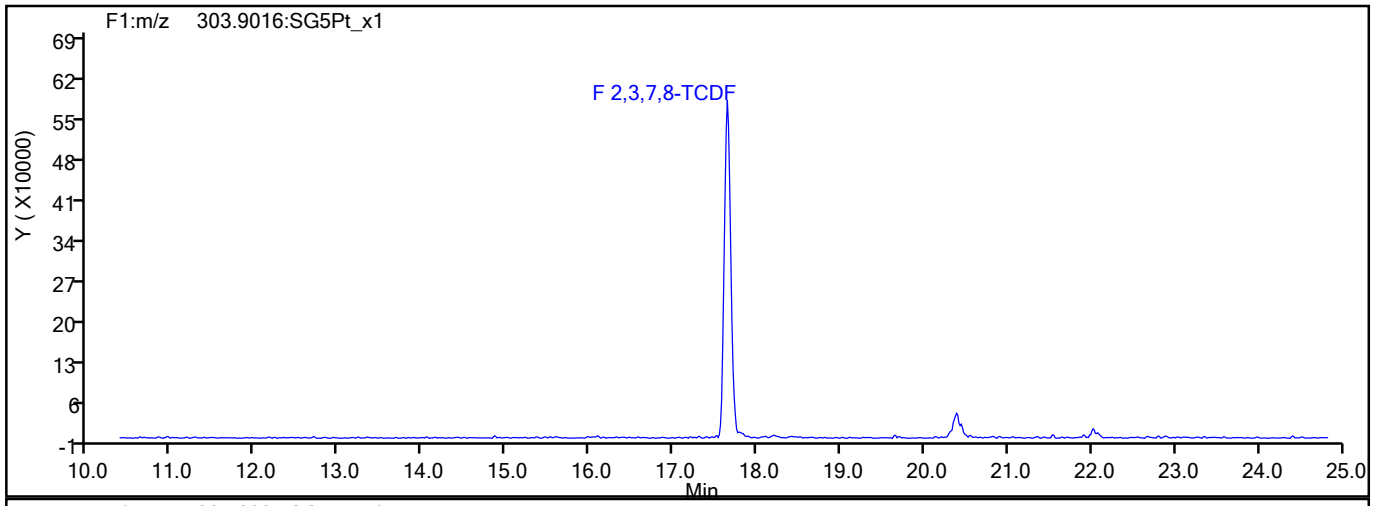

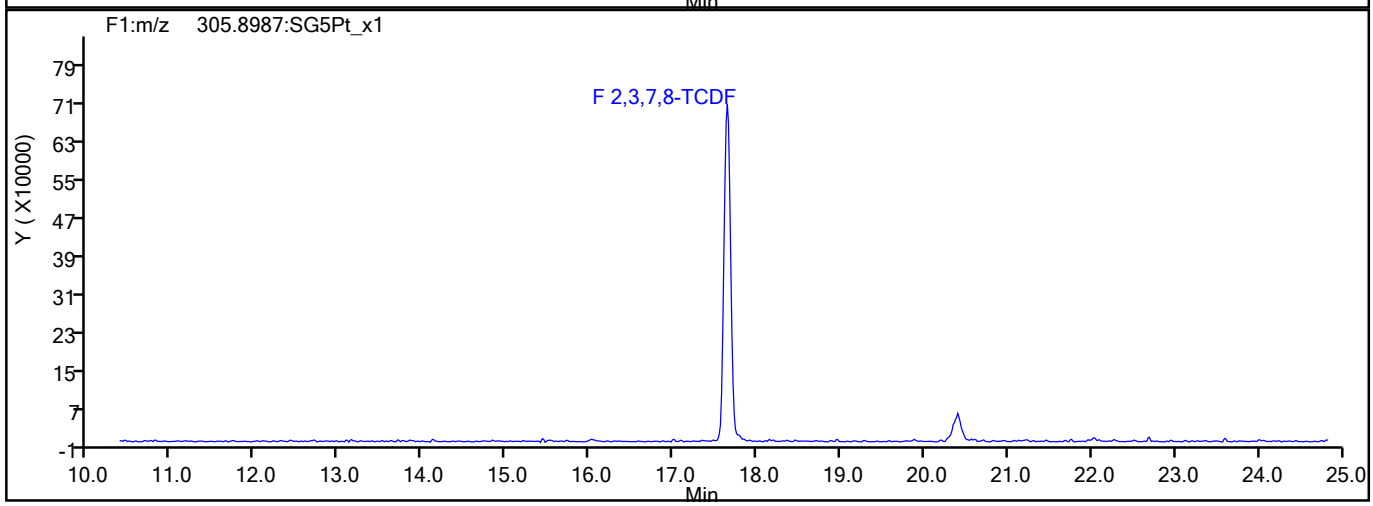

TCDF Interference Mass

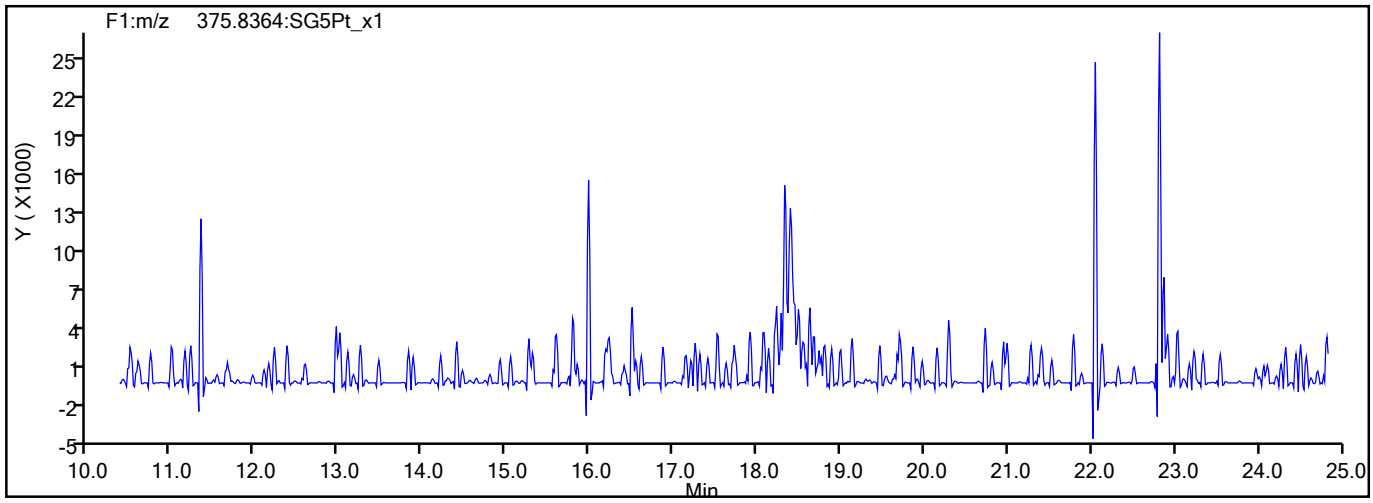

784470

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

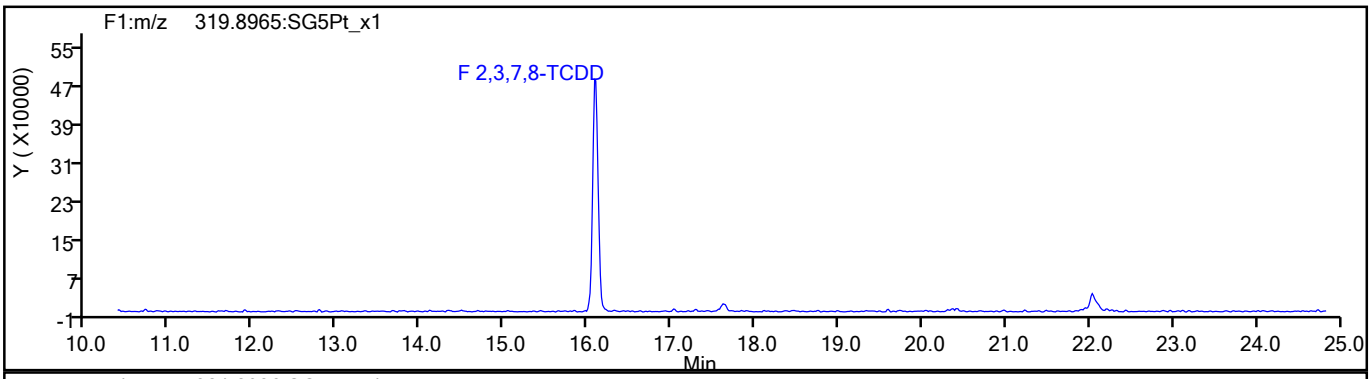

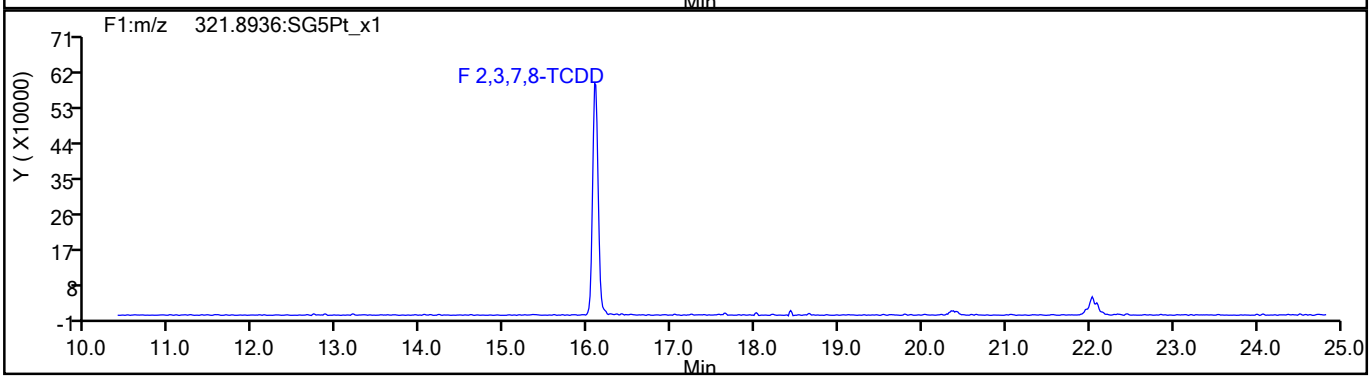

TCDD Standards

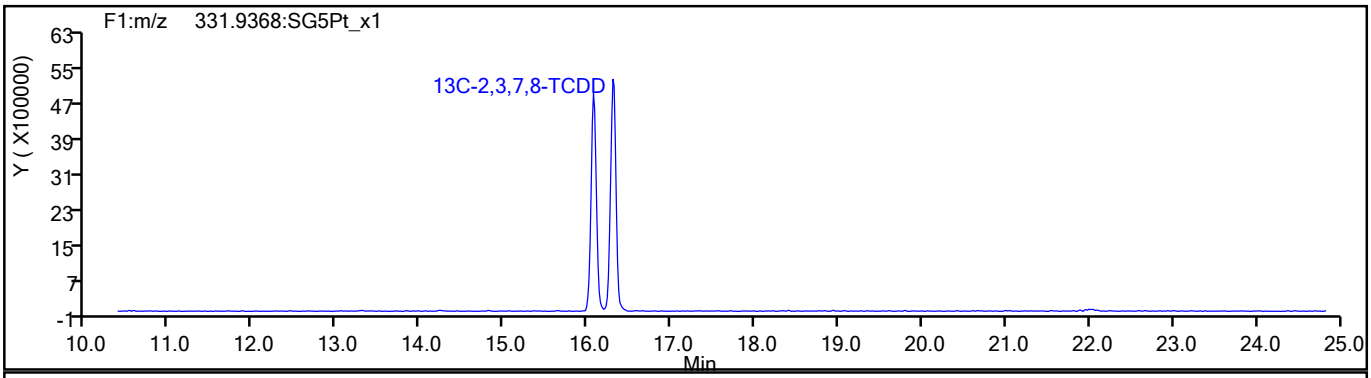

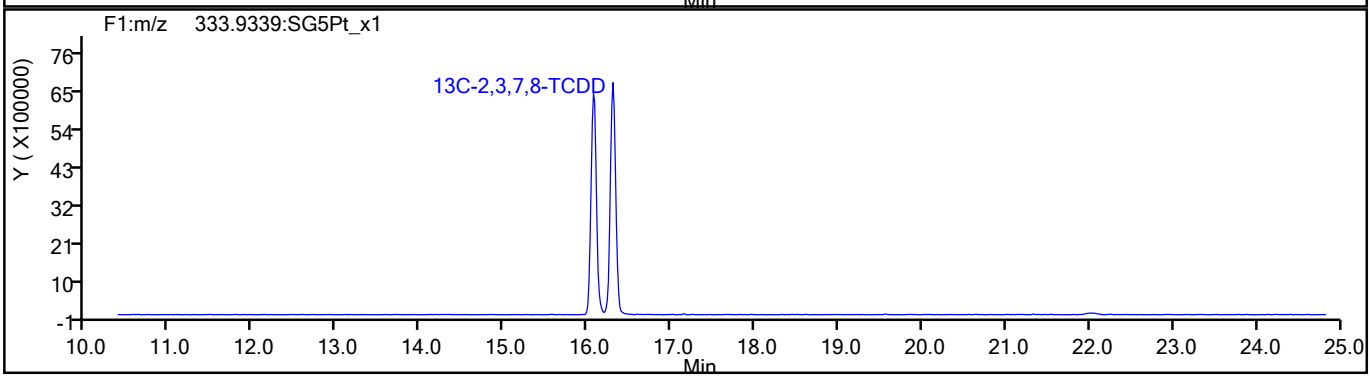

784471

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

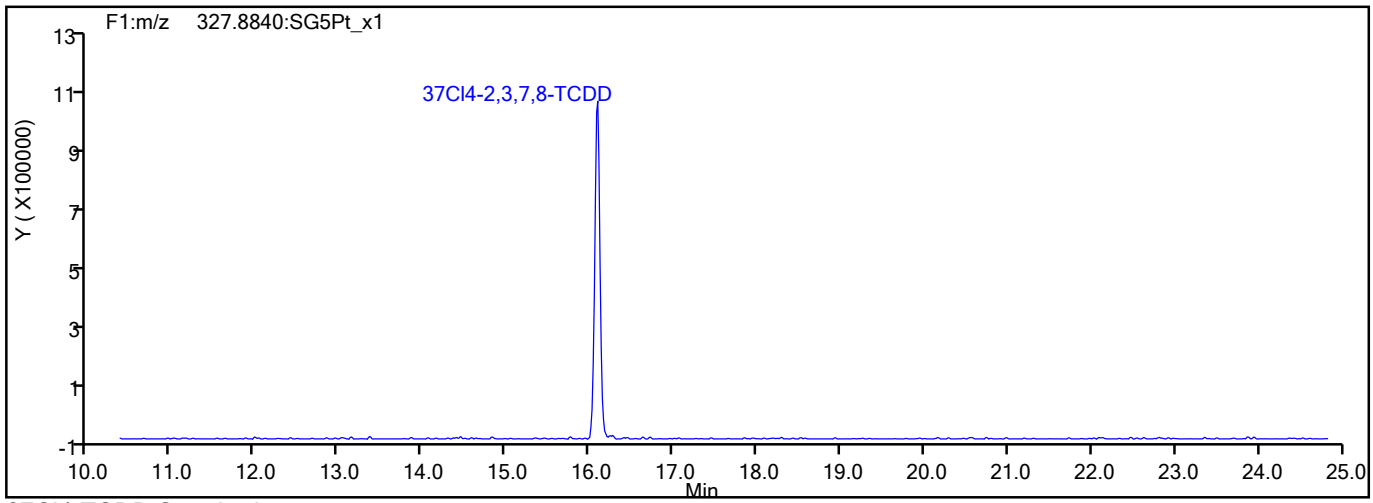

37Cl4-TCDD Standards

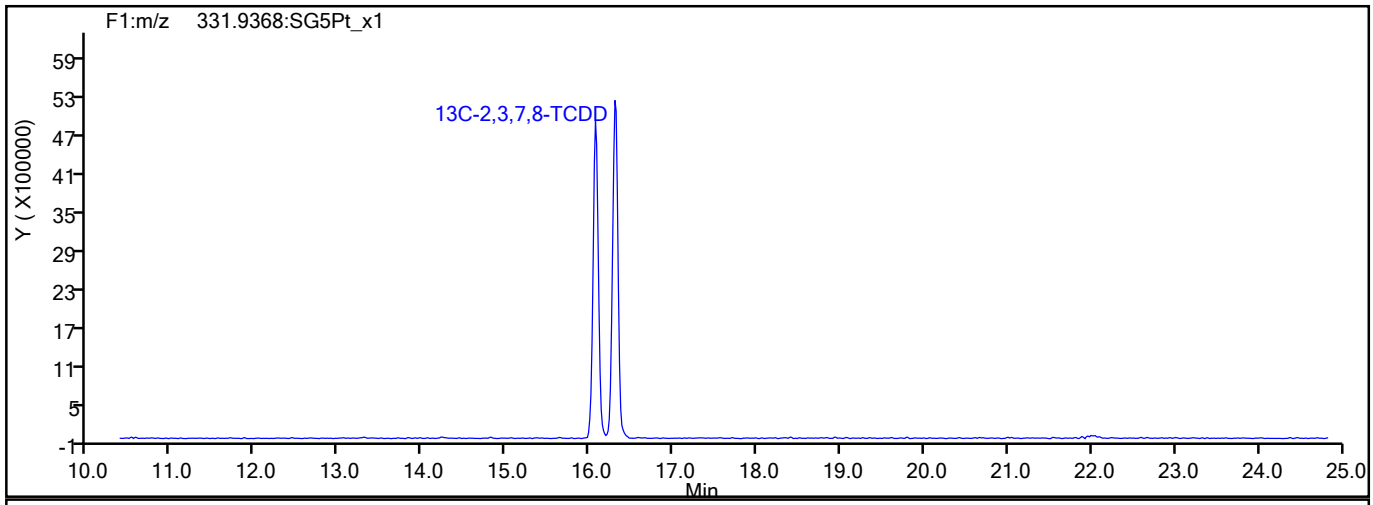

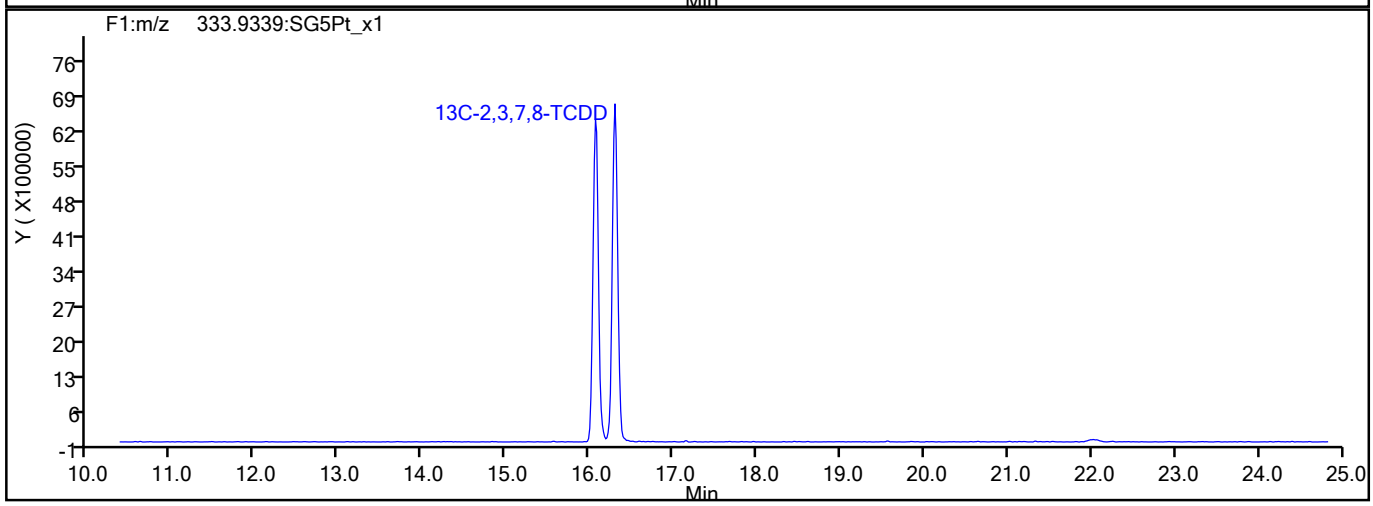

784472

Report Date: 24-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_002.d		
Injection Date:	23-Aug-2021 16:12:40	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

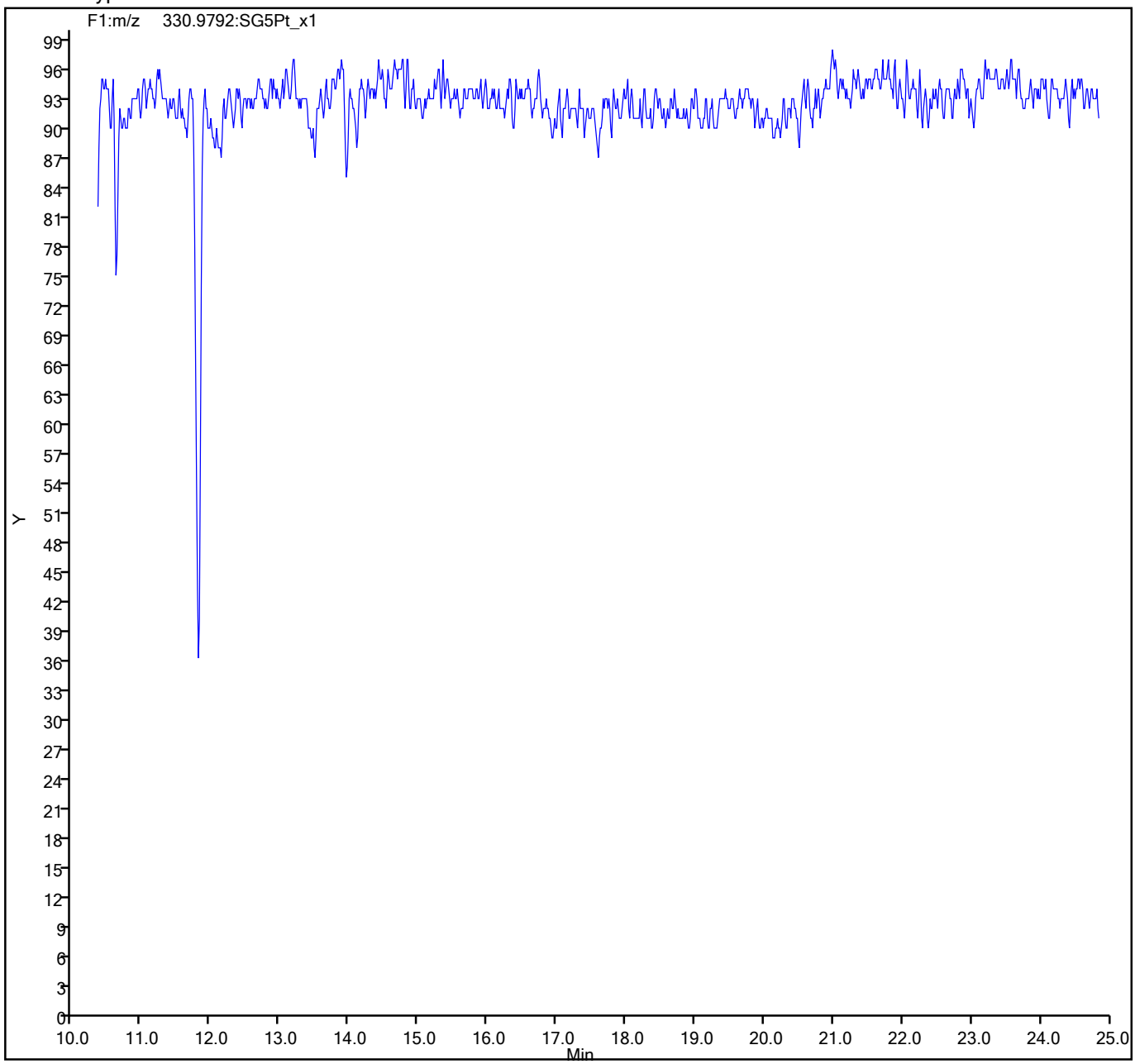

784473

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID: CCV 320-519744/2 Calibration Date: 08/25/2021 13:37

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 25AU21A11D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.014		9.59	10.0	96	78-129
2,3,7,8-TCDF	AveID	0.998	0.9106		9.13	10.0	91	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9659		110	100	110	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.534		115	100	115	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9227		10.7	10.0	107	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
25AU21A11D2	1	CPS 082521A	CPS HRDXNCP_00044				1.00000	
25AU21A11D2	2	CCV 082521A	CCV CS-4 HRDXNL4_00100				1.00000	
25AU21A11D2	3	SB 082521A	Solvent Blank C-14				1.00000	
25AU21A11D2	4	320-513586	320-76887-A-8-A	20	1613B/Solid	D266	10.00000	g
25AU21A11D2	5	320-513586	320-76887-A-13-A	20	1613B/Solid		10.00000	g
25AU21A11D2	6	320-513586	320-76887-A-4-A	20	1613B/Solid		10.00000	g
25AU21A11D2	7	320-513586	320-76887-A-7-A	20	1613B/Solid		10.00000	g
25AU21A11D2	8	320-513586	320-76887-A-6-A	20	1613B/Solid		10.00000	g
25AU21A11D2	9	320-513586	320-76887-A-3-A	20	1613B/Solid		10.00000	g
25AU21A11D2	10	320-513586	320-76888-A-13-A	20	1613B/Solid		10.00000	g
25AU21A11D2	11	320-513586	320-76887-A-5-A	20	1613B/Solid		10.00000	g
25AU21A11D2	12	320-512871	320-76788-A-1-A X5	20	1613B/Solid	D265	10.00000	g
25AU21A11D2	13	320-512871	320-76788-A-13-A X5	20	1613B/Solid		10.00000	g
25AU21A11D2	14	320-512871	320-76788-A-14-A X5	20	1613B/Solid		10.00000	g
25AU21A11D2	15	320-513586	320-76887-A-2-A X10	20	1613B/Solid	D266	10.00000	g
25AU21A11D2	16	320-513586	320-76887-A-2-B MS X10	20	1613B/Solid		10.00000	g
25AU21A11D2	17	320-513586	320-76887-A-2-C MSD X10	20	1613B/Solid		10.00000	g
25AU21A11D2	18	320-513586	320-76887-A-1-A X10	20	1613B/Solid		10.00000	g
25AU21A11D2	19						1.00000	
25AU21A11D2	20						1.00000	
25AU21A11D2	21						1.00000	
25AU21A11D2	22						1.00000	
25AU21A11D2	23						1.00000	
25AU21A11D2	24		DB 08-25-21		Logfile ✓ id 8/26/21 WSS		1.00000	
25AU21A11D2	25						1.00000	

Peak Locate Examination:25-AUG-2021:12:57 File:25AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

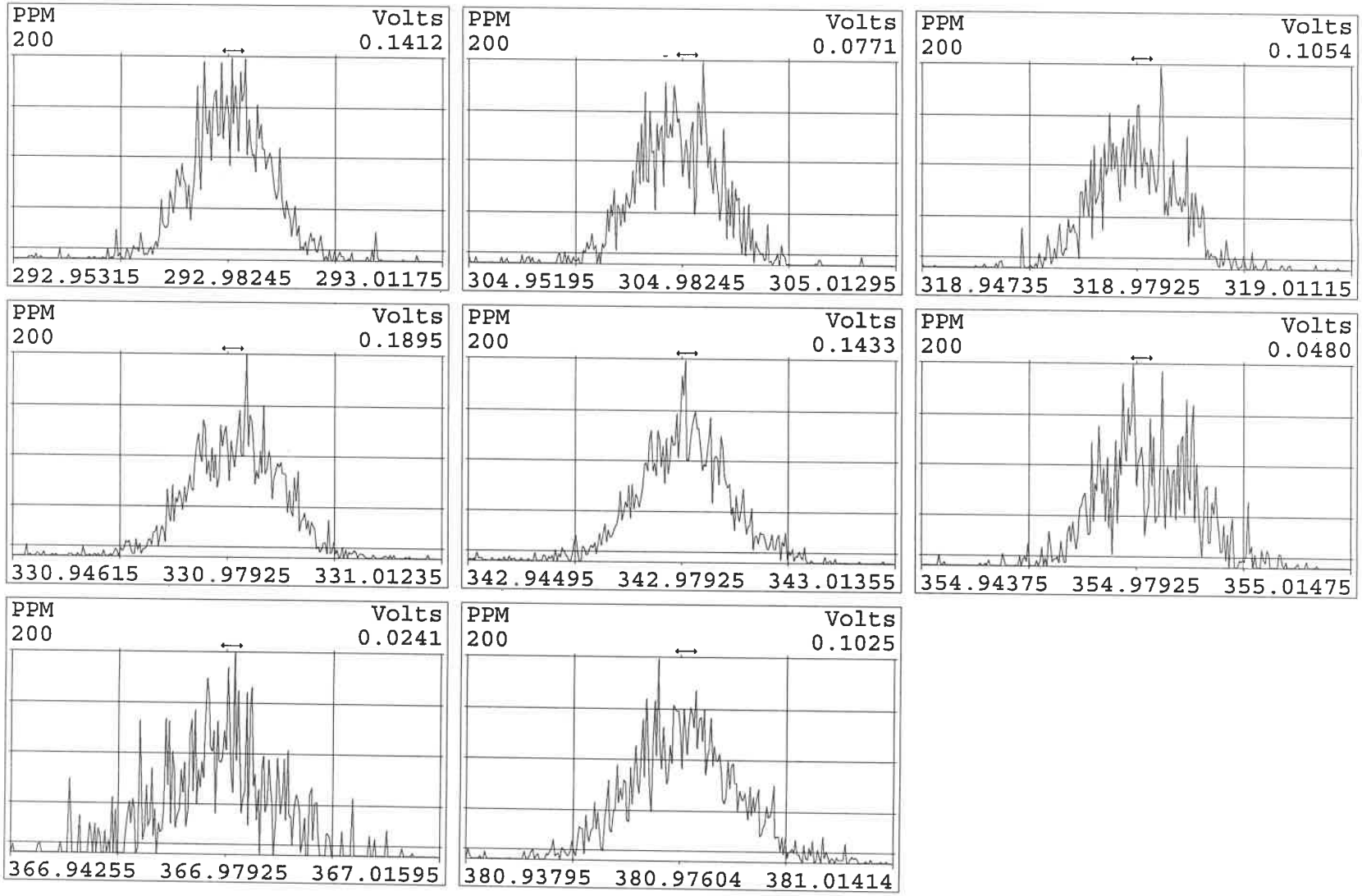

784476

Peak Locate Examination:26-AUG-2021:00:53 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

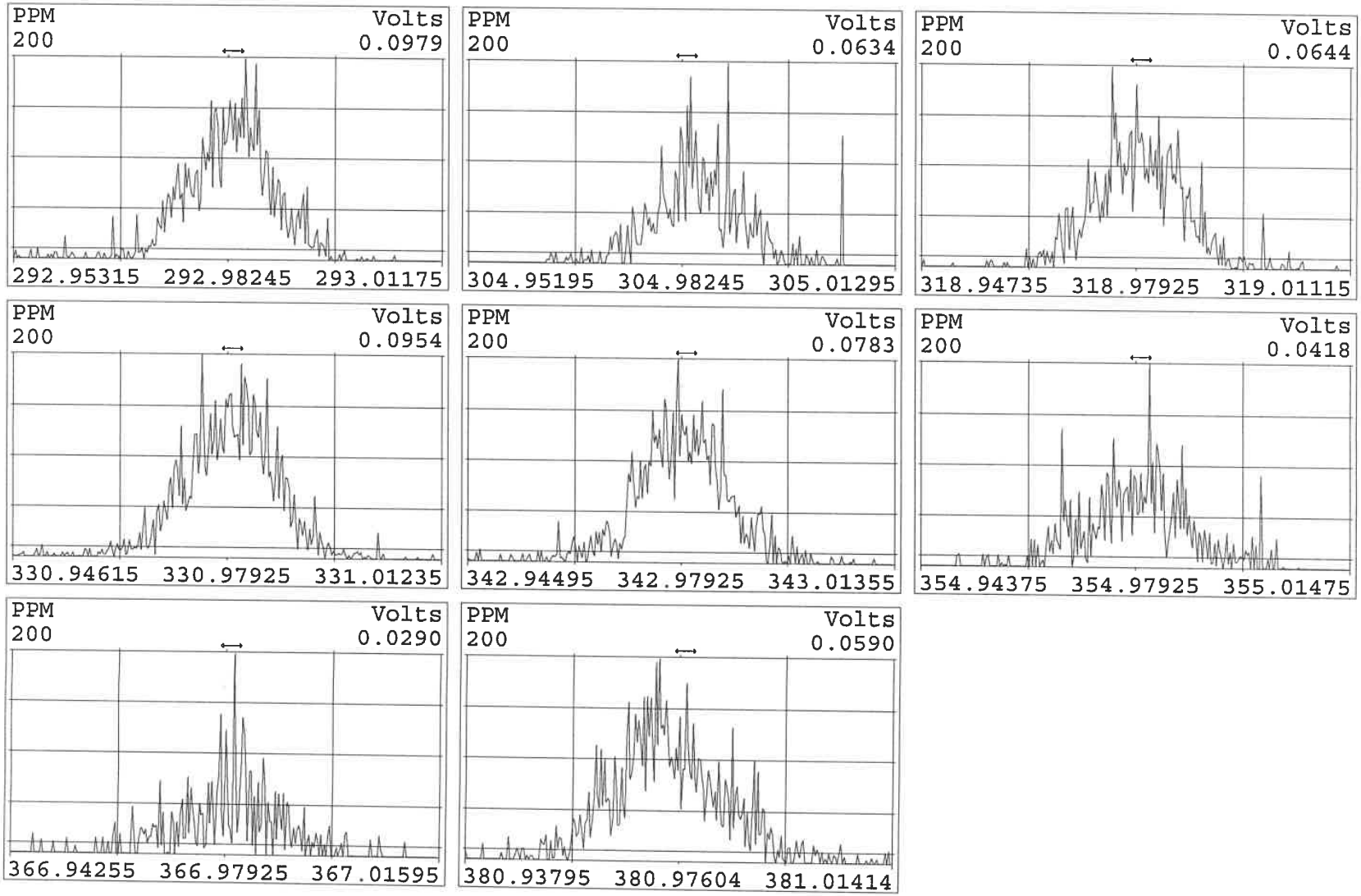

784477

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 13:37:25 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:58:03

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	44613223	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	68447211	0.78	1.3327	115.1	115.1	0.4009	0.4009	115	
2,3,7,8-TCDF	17.628	6233038	0.76	0.9978	9.126	9.126	0.0456	0.0456	91.26	
D 13C-2,3,7,8-TCDD	16.065	43090707	0.78	0.8749	110.4	110.4	0.4999	0.4999	110	
2,3,7,8-TCDD	16.078	4369493	0.82	1.0570	9.593	9.593	0.0503	0.0503	95.93	
$ 37Cl4-2,3,7,8-TCDD	16.078	4116418		0.8648	10.7	10.7	0.0403	0.0403	107	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 13:37:25 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:58:03

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.298	16.298	0		19220204	4118470	10824	27060	380		
333.9339	16.298	16.298	0		25393019	5598505	6177	15442	906	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.081	30012344	5677395	10361	25902	548		
317.9389	17.615	17.615	0	1.081	38434867	7538958	10404	26010	725	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.628	0	1.001	2692252	497103	1141	2852	436		
305.8987	17.628	17.628	0	1.001	3540786	659047	1262	3155	522	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	0.986	18814987	4187657	10824	27060	387		
333.9339	16.065	16.065	0	0.986	24275720	5412651	6177	15442	876	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.078	16.078	0	1.001	1970068	437591	1166	2915	375		
321.8936	16.078	16.078	0	1.001	2399425	530002	877	2192	604	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.078	0	0.987	4116418	976537	1354	3385	721		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

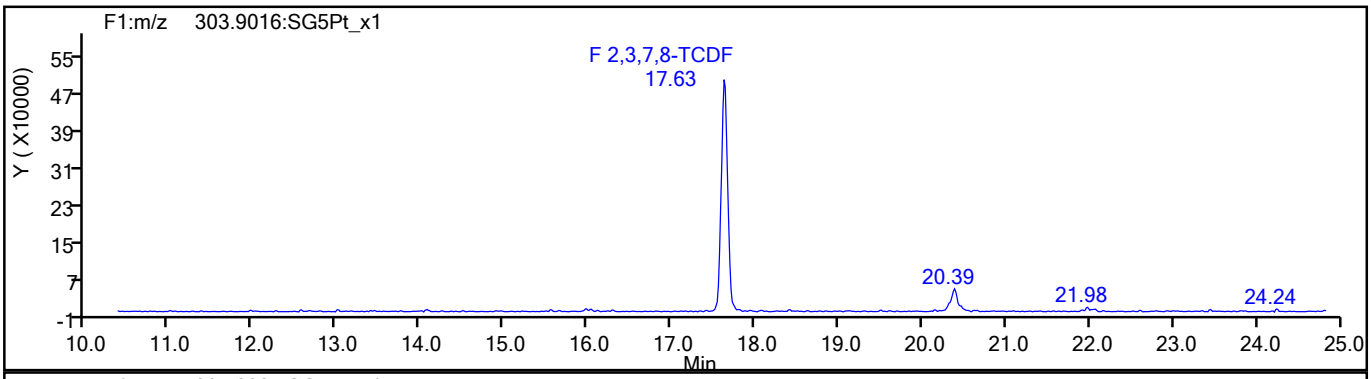

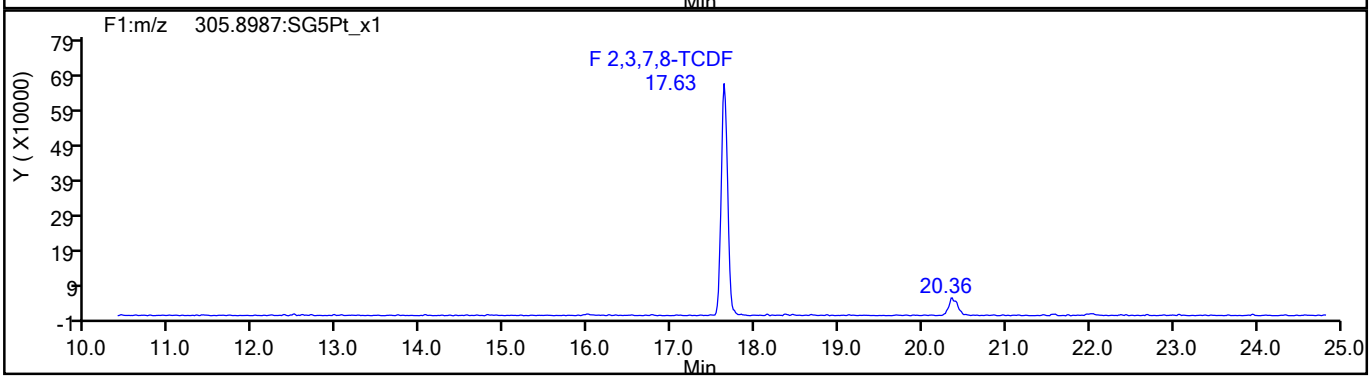

TCDF Standards

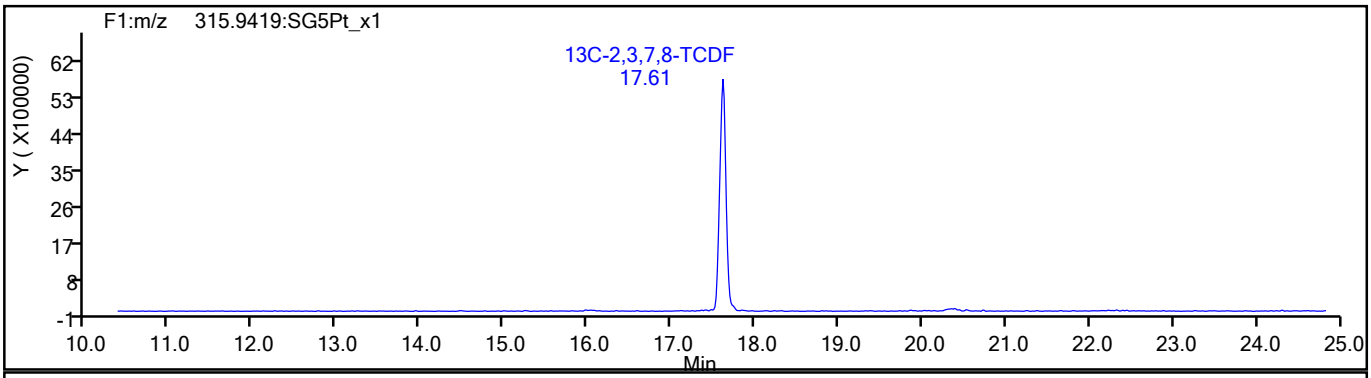

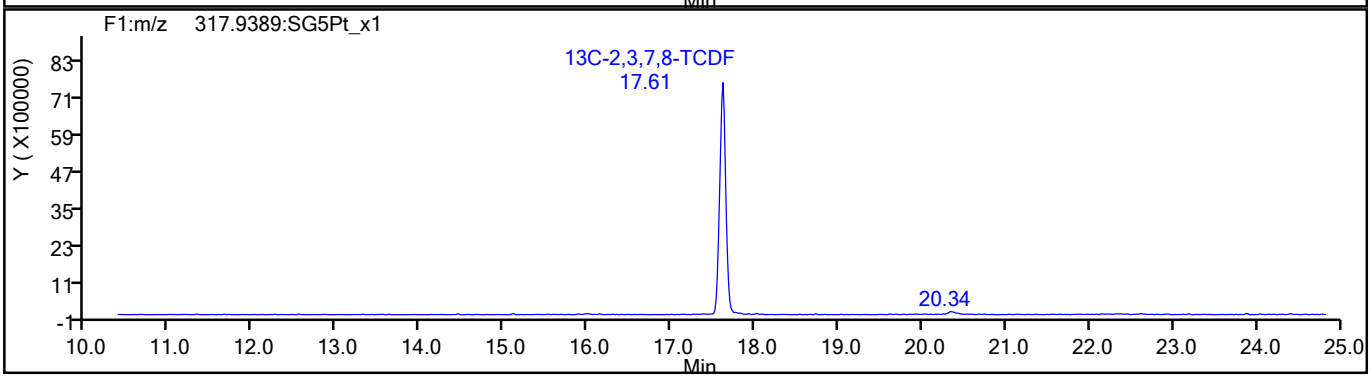

784480

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

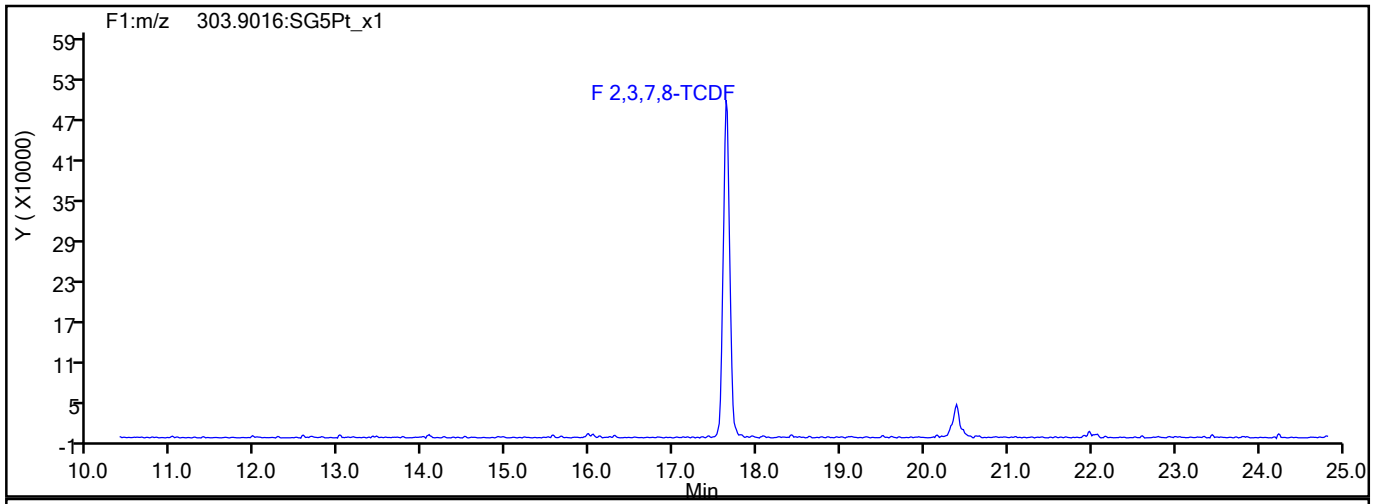

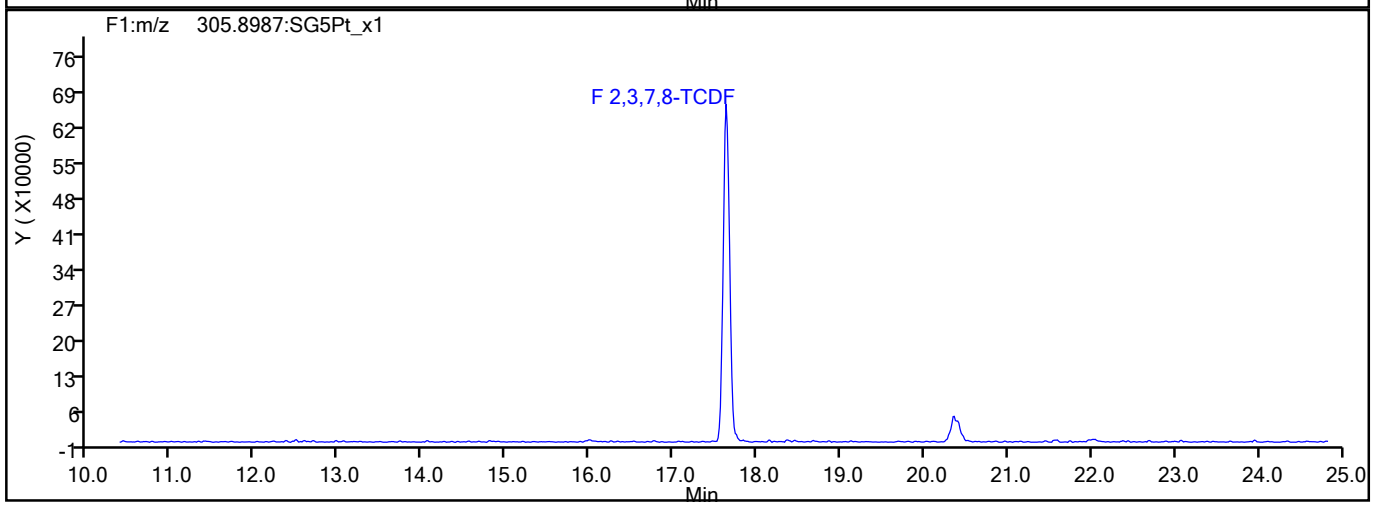

TCDF Interference Mass

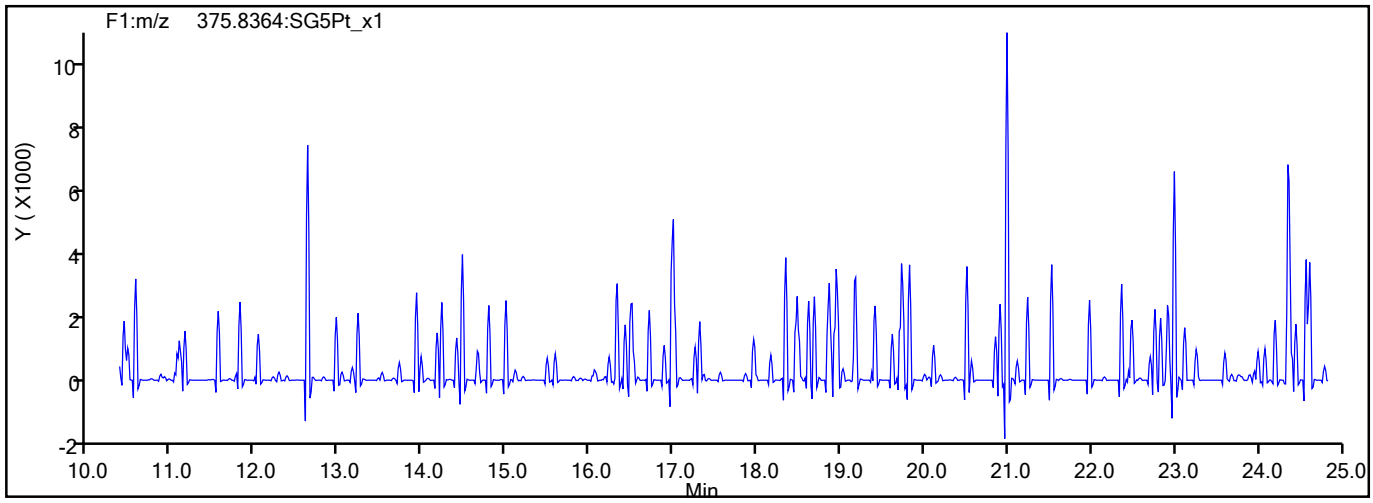

784481

Report Date: 26-Aug-2021 09:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

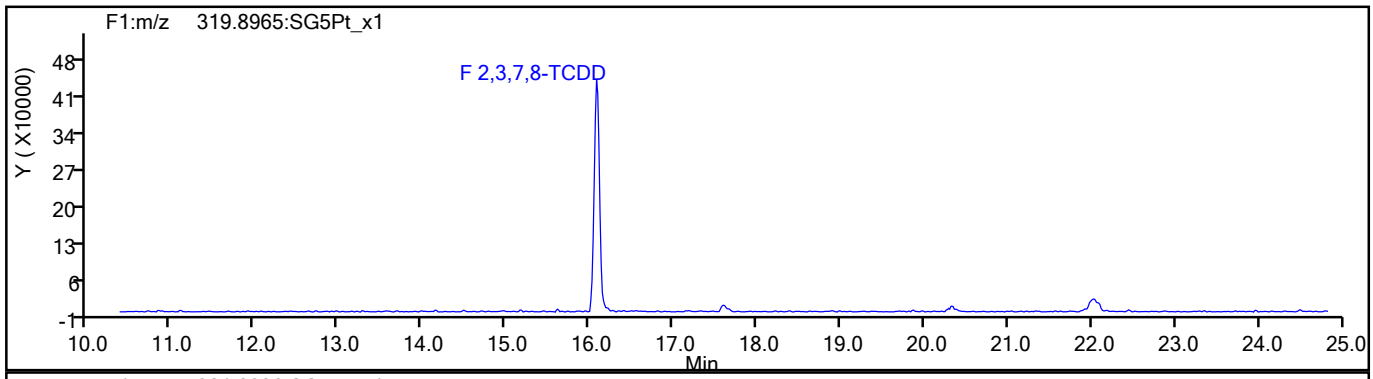

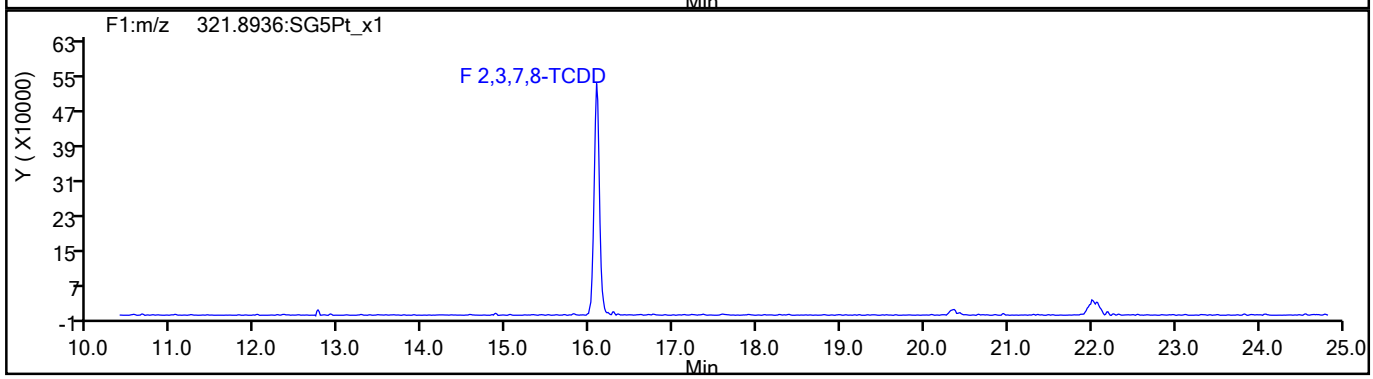

TCDD Standards

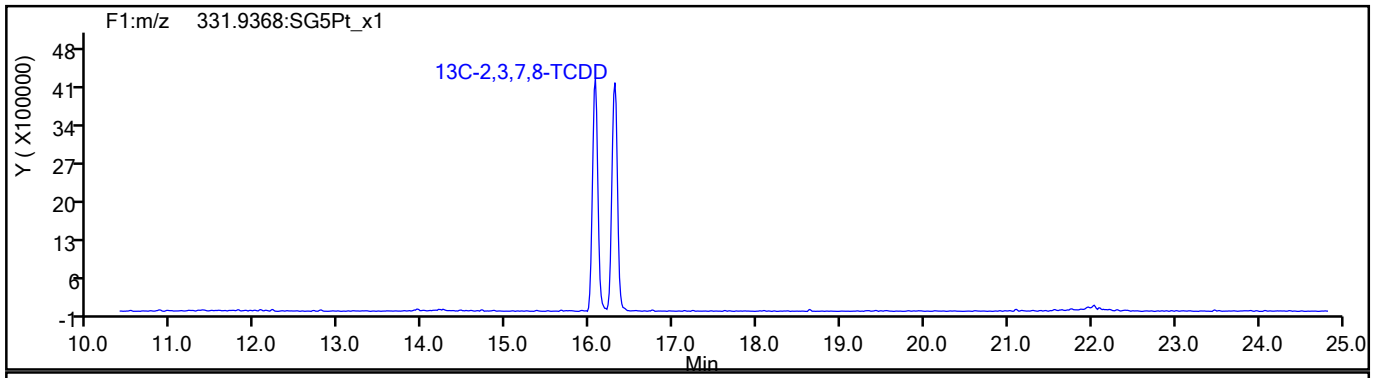

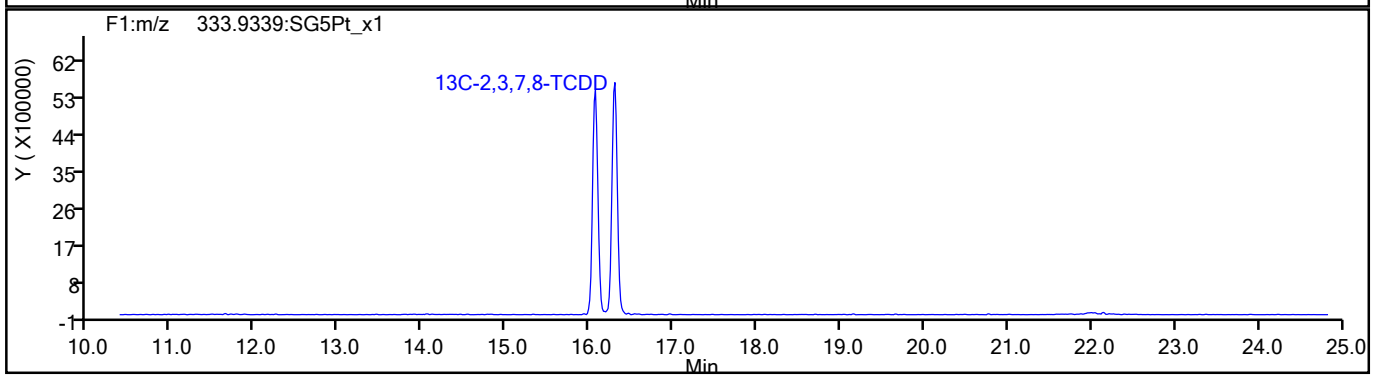

784482

Report Date: 26-Aug-2021 09:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

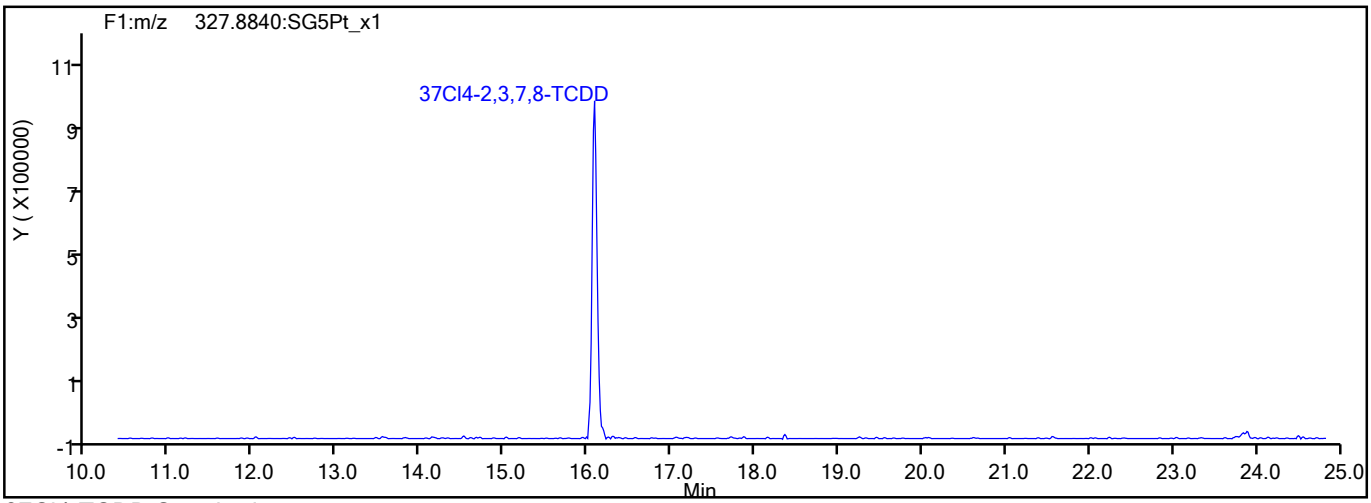

37Cl4-TCDD Standards

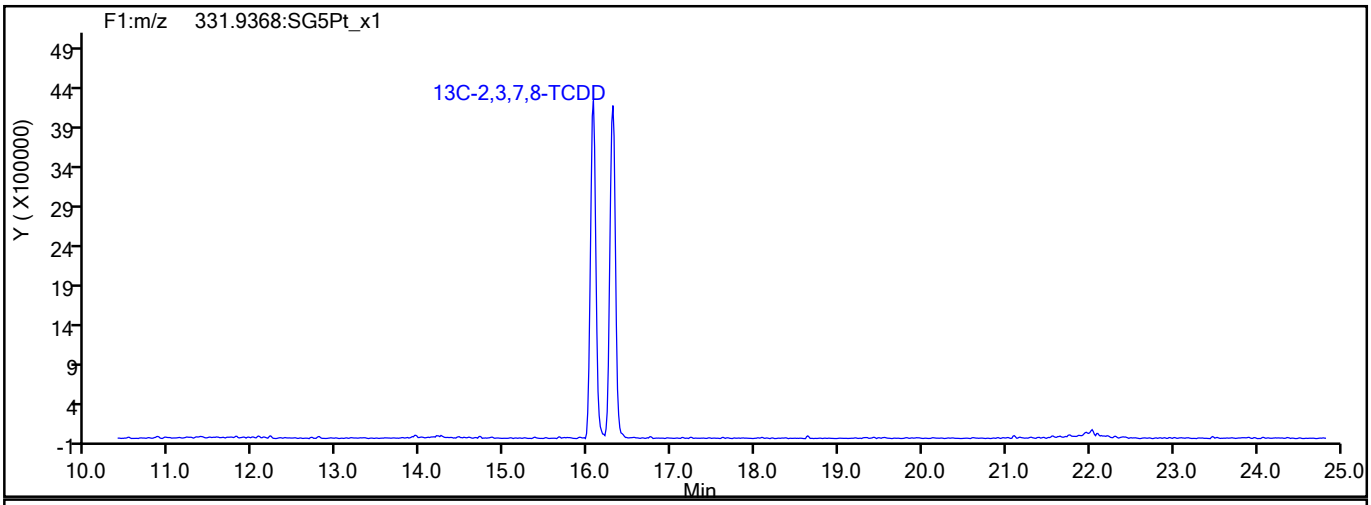

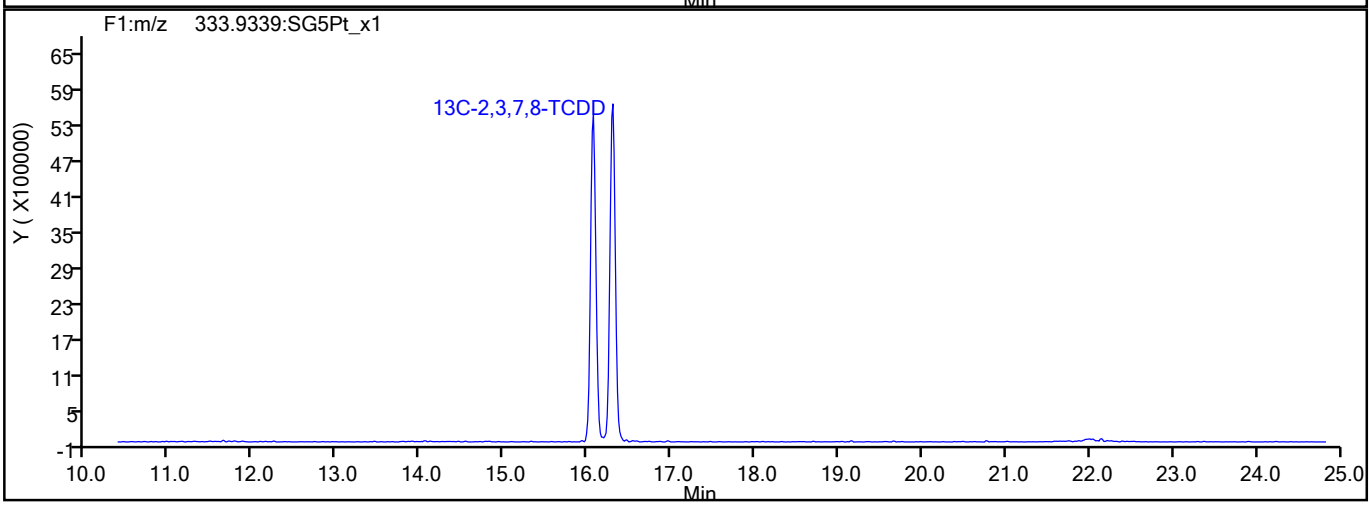

784483

Report Date: 26-Aug-2021 09:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

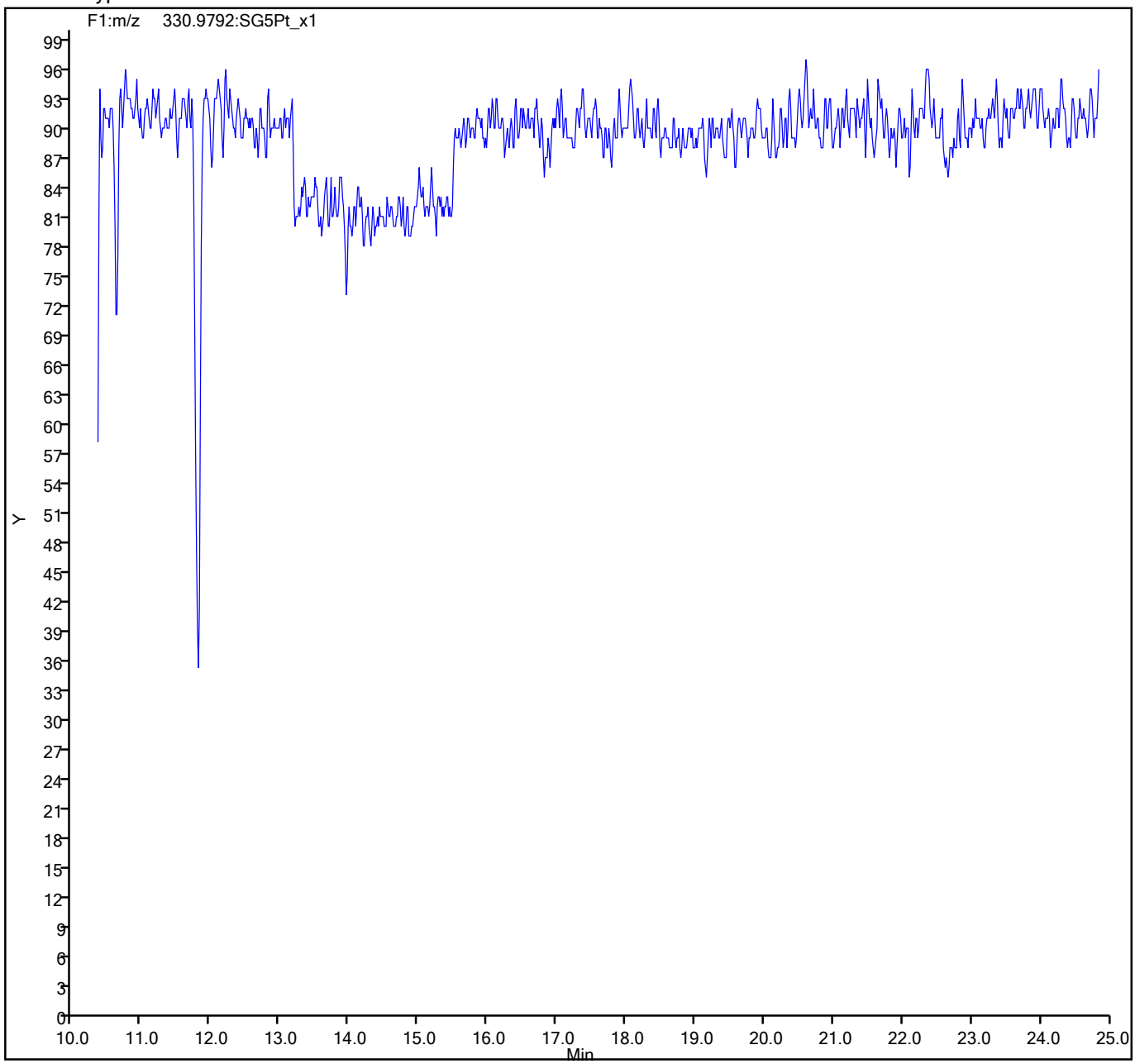

784484

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID: ICV 320-496688/9 Calibration Date: 06/08/2021 19:25

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 08jn21adfs1_11.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.086		40.2	40.0	101	70-130
2,3,7,8-TCDD	AveID	1.075	1.121		41.7	40.0	104	70-130
1,2,3,7,8-PeCDF	AveID	1.054	1.024		194	200	97	70-130
2,3,4,7,8-PeCDF	AveID	1.008	1.118		222	200	111	70-130
1,2,3,7,8-PeCDD	AveID	1.046	1.030		197	200	98	70-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.173		204	200	102	70-130
1,2,3,6,7,8-HxCDF	AveID	1.218	1.270		209	200	104	70-130
2,3,4,6,7,8-HxCDF	AveID	1.214	1.289		212	200	106	70-130
1,2,3,4,7,8-HxCDD	AveID	1.061	1.071		202	200	101	70-130
1,2,3,6,7,8-HxCDD	AveID	0.9933	1.055		212	200	106	70-130
1,2,3,7,8,9-HxCDD	AveID	1.109	1.001		180	200	90	70-130
1,2,3,7,8,9-HxCDF	AveID	1.240	1.220		197	200	98	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.505		209	200	104	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.076		205	200	102	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.299		198	200	99	70-130
OCDD	AveID	1.062	1.116		420	400	105	70-130
OCDF	AveID	1.317	1.367		415	400	104	70-130
13C-2,3,7,8-TCDF	Ave	1.346	1.311		97.4	100	97	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9331		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.095		96.0	100	96	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.137		101	100	101	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7038		98.2	100	98	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.080		112	100	112	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.244		116	100	116	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.134		109	100	109	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8428		111	100	111	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9479		110	100	110	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9309		95.7	100	96	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7732		105	100	105	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7344		109	100	109	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7385		108	100	108	77-129
13C-OCDD	Ave	0.5446	0.5501		202	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.000		39.7	40.0	99	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.559	1125768	0.79	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.623	1476391	0.81	1.3459	97.4	97.4	0.3116	0.3116	97.44	
2,3,7,8-TCDF	19.648	641186	0.78	1.0802	40.2	40.2	0.0827	0.0827	101	
A Non-2,3,7,8-sub-TCDF	19.213	10768	0.77	1.0802	0.7248	0.6752	0.0827	0.3523		RQ
S Total TCDF					40.9	40.9	0.0827	0.0827		RQ
D 13C-2,3,7,8-TCDD	20.928	1050504	0.81	0.9317	100.2	100.2	0.3032	0.3032	100	
$ 37Cl4-2,3,7,8-TCDD	20.946	450121		1.0083	39.7	39.7	0.0185	0.0185	99.14	
2,3,7,8-TCDD	20.946	471118	0.76	1.0753	41.7	41.7	0.1073	0.1073	104	
A Non-2,3,7,8-sub-TCDD	20.025	9415	0.75	1.0753	0.8334	0.8334	0.1073	0.8334		
S Total TCDD					42.5	42.5	0.1073	0.1073		
D 13C-1,2,3,7,8-PeCDF	26.596	1232285	1.59	1.1405	96.0	96.0	0.3457	0.3457	95.98	
1,2,3,7,8-PeCDF	26.612	2524406	1.56	1.0543	194.3	194.3	0.8579	0.8579	97.16	
D 13C-2,3,4,7,8-PeCDF	28.053	1280265	1.57	1.1253	101.1	101.1	0.3504	0.3504	101	
2,3,4,7,8-PeCDF	28.079	2861521	1.56	1.0079	221.8	221.8	0.9445	0.9445	111	
A F1 PeCDFs	24.098						0.0158	0.0158		
A Non-2,3,7,8-sub-PeCDF	27.473	63446	1.59	1.0311	4.898	4.898	0.8996	4.898		
S Total PeCDF					421.0	421.0	0.9012	0.9012		
D 13C-1,2,3,7,8-PeCDD	28.846	792316	1.60	0.7165	98.2	98.2	0.1154	0.1154	98.23	
1,2,3,7,8-PeCDD	28.871	1631677	1.56	1.0465	196.8	196.8	0.1550	0.1550	98.39	
A Non-2,3,7,8-sub-PeCDD	27.656						0.1550	0.1550		n
S Total PeCDD					196.8	196.8	0.1550	0.1550		
D 13C-1,2,3,4,7,8-HxCDF	34.420	999392	0.53	0.9648	111.9	111.9	0.3215	0.3215	112	
1,2,3,4,7,8-HxCDF	34.437	2343900	1.24	1.1474	204.4	204.4	0.8372	0.8372	102	
D 13C-1,2,3,6,7,8-HxCDF	34.597	1151145	0.54	1.0708	116.1	116.1	0.2896	0.2896	116	
1,2,3,6,7,8-HxCDF	34.614	2923094	1.25	1.2178	208.5	208.5	0.6918	0.6918	104	
D 13C-2,3,4,6,7,8-HxCDF	35.473	1049318	0.52	1.0413	108.9	108.9	0.2978	0.2978	109	
2,3,4,6,7,8-HxCDF	35.490	2704850	1.25	1.2145	212.3	212.3	0.6697	0.6697	106	
D 13C-1,2,3,7,8,9-HxCDF	36.409	861729	0.52	0.9731	95.7	95.7	0.3187	0.3187	95.67	
1,2,3,7,8,9-HxCDF	36.425	2103282	1.26	1.2401	196.8	196.8	0.7295	0.7295	98.41	
A Non-2,3,7,8-sub-HxCDF	34.470						0.7275	0.7275		

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					822.0	822.0	0.7320	0.7320		
* 13C-1,2,3,7,8,9-HxCDD	36.215	925657	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.709	780111	1.25	0.7587	111.1	111.1	0.1965	0.1965	111	
1,2,3,4,7,8-HxCDD	35.726	1671580	1.25	1.0608	202.0	202.0	0.2912	0.2912	101	
D 13C-1,2,3,6,7,8-HxCDD	35.827	877428	1.29	0.8593	110.3	110.3	0.1735	0.1735	110	
1,2,3,6,7,8-HxCDD	35.844	1852033	1.25	0.9933	212.5	212.5	0.2936	0.2936	106	
1,2,3,7,8,9-HxCDD	36.232	1658680	1.25	1.1094	180.4	180.4	0.2704	0.2704	90.20	
A Non-2,3,7,8-sub-HxCDD	34.896						0.2845	0.2845		
S Total HxCDD					594.9	594.9	0.2851	0.2851		
D 13C-1,2,3,4,6,7,8-HpCDF	38.325	715749	0.46	0.7359	105.1	105.1	0.4232	0.4232	105	
1,2,3,4,6,7,8-HpCDF	38.334	2154882	1.05	1.4421	208.8	208.8	0.7056	0.7056	104	
D 13C-1,2,3,4,7,8,9-HpCDF	39.615	683594	0.46	0.6854	107.8	107.8	0.4545	0.4545	108	
1,2,3,4,7,8,9-HpCDF	39.623	1775948	1.06	1.3092	198.4	198.4	0.7773	0.7773	99.22	
A Non-2,3,7,8-sub-HpCDF	38.954						0.7397	0.7397		
S Total HpCDF					407.2	407.2	0.7415	0.7415		
D 13C-1,2,3,4,6,7,8-HpCDD	39.311	679765	1.07	0.6745	108.9	108.9	0.3101	0.3101	109	
1,2,3,4,6,7,8-HpCDD	39.320	1462615	1.05	1.0503	204.9	204.9	0.4465	0.4465	102	
A Non-2,3,7,8-sub-HpCDD	38.962						0.4465	0.4465		n
S Total HpCDD					204.9	204.9	0.4465	0.4465		
D 13C-OCDD	41.801	1018443	0.90	0.5446	202.0	202.0	0.2655	0.2655	101	
OCDF	41.885	2784055	0.91	1.3168	415.2	415.2	0.4728	0.4728	104	
OCDD	41.809	2272994	0.89	1.0620	420.3	420.3	0.4613	0.4613	105	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.559	20.544	1		497786	76231	115	287	663		
333.9338	20.550	20.544	0		627982	95455	79	197	1208	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.623	19.630	0	0.954	658944	105750	176	440	601		
317.9389	19.623	19.630	0	0.954	817447	135001	112	280	1205	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.648	19.673	-1	1.001	281905	45248	31	77	1460		
305.8987	19.648	19.673	-1	1.001	359281	56056	55	137	1019	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.489	19.213	-43	0.942	2444	489	31	77	16		
305.8987	18.489	19.213	-43	0.942	3965	647	55	137	12	0.62(0.65-0.89)	
	Empc Correction				3174	635	55	137	12		
303.9016	18.961	19.213	-15	0.966	2103	355	31	77	11		
305.8987	18.961	19.213	-15	0.966	3047	540	55	137	10	0.69(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.928	20.918	1	1.018	469892	68601	115	287	597		
333.9338	20.920	20.918	0	1.018	580612	84734	79	197	1073	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.946	20.939	0	1.019	450121	64795	13	32	4984		
2,3,7,8-TCDD											
319.8965	20.946	20.952	0	1.001	203710	30841	43	107	717		
321.8936	20.946	20.952	0	1.001	267408	39251	28	70	1402	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	20.748	20.025	43	0.991	4027	748	43	107	17		
321.8936	20.748	20.025	43	0.991	5388	912	28	70	33	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.596	26.552	3	1.294	756622	134257	176	440	763		
353.8970	26.596	26.552	3	1.294	475663	85437	95	237	899	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.612	26.578	2	1.001	1538811	266495	482	1205	553		
341.8567	26.612	26.578	2	1.001	985595	170105	313	782	543	1.56(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.053	28.002	3	1.365	781677	129402	176	440	735		
353.8970	28.062	28.002	4	1.365	498588	79335	95	237	835	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.079	28.028	3	1.001	1744490	280566	482	1205	582		
341.8567	28.079	28.028	3	1.001	1117031	182233	313	782	582	1.56(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.098						3	7			
341.8567	24.098						11	27			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.186	27.473	-17	1.022	38961	6595	482	1205	14		
341.8567	27.177	27.473	-18	1.022	24485	4217	313	782	13	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.846	28.795	3	1.403	487930	72898	31	77	2352		
369.8919	28.846	28.795	3	1.403	304386	45466	26	65	1749	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.871	28.820	3	1.001	995242	153111	50	125	3062		
357.8516	28.871	28.820	3	1.001	636435	96130	27	67	3560	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.214	27.656	33	0.978	1514	293	50	125	6		
357.8516	28.197	27.656	32	0.978	953	151	27	67	6	1.59(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.420	34.370	3	0.950	347982	68430	100	250	684		
385.8610	34.411	34.370	2	0.950	651410	129057	179	447	721	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.437	34.404	2	1.000	1299118	260435	435	1087	599		
375.8178	34.437	34.404	2	1.000	1044782	207176	324	810	639	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.597	34.555	2	0.955	402116	75630	100	250	756		
385.8610	34.597	34.555	2	0.955	749029	149555	179	447	836	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.614	34.572	2	1.000	1625084	318250	435	1087	732		
375.8178	34.614	34.572	2	1.000	1298010	254878	324	810	787	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.473	35.432	2	0.980	359196	80141	100	250	801		
385.8610	35.473	35.432	2	0.980	690122	153108	179	447	855	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.490	35.449	2	1.000	1504442	338765	435	1087	779		
375.8178	35.490	35.449	2	1.000	1200408	271192	324	810	837	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.409	36.376	2	1.005	295983	71192	100	250	712		
385.8610	36.409	36.376	2	1.005	565746	138504	179	447	774	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.425	36.393	2	1.000	1172455	286668	435	1087	659		
375.8178	36.425	36.393	2	1.000	930827	227290	324	810	702	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						435	1087			
375.8178	34.470						324	810			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.215	36.182	2		517474	125327	80	200	1567		
403.8529	36.215	36.182	2		408183	99401	54	135	1841	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.709	35.668	2	0.986	434094	107490	80	200	1344		
403.8529	35.709	35.668	2	0.986	346017	85806	54	135	1589	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.726	35.685	2	1.000	928783	231750	132	330	1756		
391.8127	35.726	35.685	2	1.000	742797	185332	107	267	1732	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.827	35.794	2	0.989	493784	113946	80	200	1424		
403.8529	35.827	35.794	2	0.989	383644	90754	54	135	1681	1.29(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	35.844	35.811	2	1.000	1030480	241468	132	330	1829		
391.8127	35.844	35.811	2	1.000	821553	192627	107	267	1800	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.232	36.198	2	1.015	920944	222717	132	330	1687		
391.8127	36.223	36.198	1	1.014	737736	175856	107	267	1644	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.896						132	330			
391.8127	34.896						107	267			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.325	38.292	2	1.058	225843	65327	102	255	640		
419.8220	38.325	38.292	2	1.058	489906	143703	178	445	807	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.334	38.309	1	1.000	1104308	315033	437	1092	721		
409.7788	38.334	38.309	1	1.000	1050574	298985	414	1035	722	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.615	39.591	1	1.094	215253	65848	102	255	646		
419.8220	39.615	39.591	1	1.094	468341	143162	178	445	804	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.623	39.598	1	1.000	914515	283964	437	1092	650		
409.7788	39.623	39.598	1	1.000	861433	268143	414	1035	648	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						437	1092			
409.7788	38.954						414	1035			

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.311	39.279	2	1.086	351100	106957	105	262	1019		
437.8140	39.311	39.279	2	1.086	328665	103097	83	207	1242	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.320	39.295	1	1.000	749316	235728	209	522	1128		
425.7737	39.320	39.295	1	1.000	713299	221333	185	462	1196	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.662	38.962	-18	0.983	5341	1580	209	522	8		
425.7737	38.662	38.962	-18	0.983	5423	1624	185	462	9	0.98(0.88-1.20)	
13C-OCDD											
469.7780	41.801	41.778	1	1.154	483015	136908	66	165	2074		
471.7750	41.801	41.778	1	1.154	535428	149653	64	160	2338	0.90(0.76-1.02)	
OCDF											
441.7428	41.885	41.862	1	1.002	1324086	386680	165	412	2344		
443.7399	41.885	41.862	1	1.002	1459969	425131	192	480	2214	0.91(0.76-1.02)	
OCDD											
457.7377	41.809	41.786	1	1.000	1072812	307543	147	367	2092		
459.7348	41.809	41.786	1	1.000	1200182	343135	134	335	2561	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1476391	240751

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1476391	240751

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.489	2444	489	3965	647	0.4019	0.62	RQ
18.489	2444	489	3174	635	0.3523		Empc Correction
18.961	2103	355	3047	540	0.3229	0.69	n
Signal Totals:							
	4547	844	6221	1175			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11559	2031				0.65	RQ
	10768	2019					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7248 = (11559 * 100.000) / (1476391 * 1.080)
Empc Amount: 0.6752 = (10768 * 100.000) / (1476391 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDD, RT: 20.025

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	1050504	153335

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	1050504	153335

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
20.748	4027	748	5388	912	0.8334	0.75	
Signal Totals:							
	4027	748	5388	912			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9415	1660				0.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8334 = (9415 * 100.000) / (1050504 * 1.075)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1232285	219694
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1280265	208737

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1256275	214215

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.186	38961	6595	24485	4217	4.90	1.59	
Signal Totals:							
	38961	6595	24485	4217			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63446	10812				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.898 = (63446 * 100.000) / (1256275 * 1.031)

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

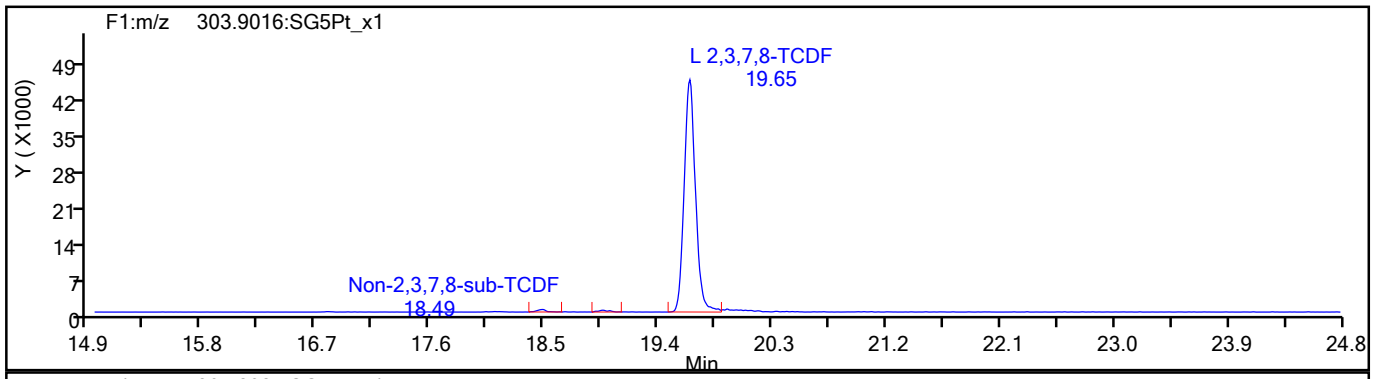

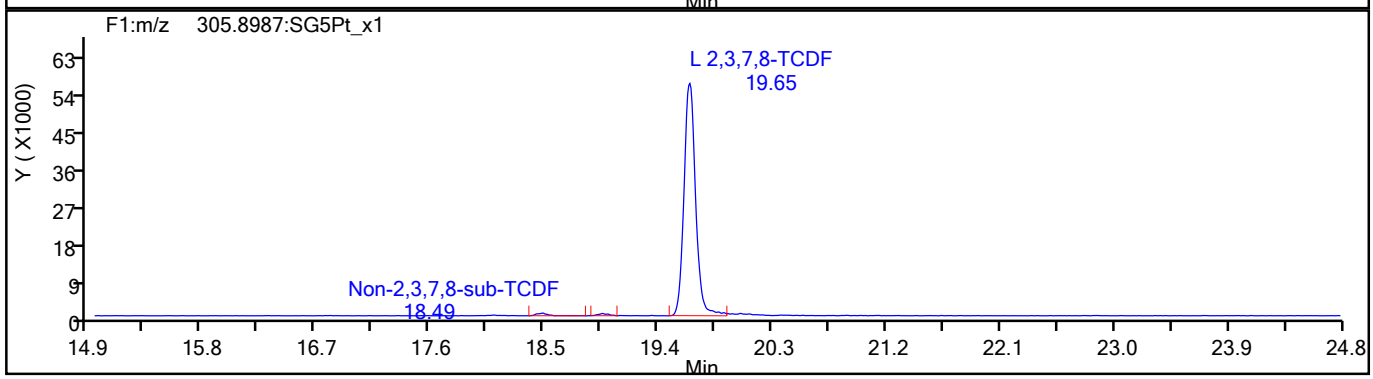

TCDF Standards

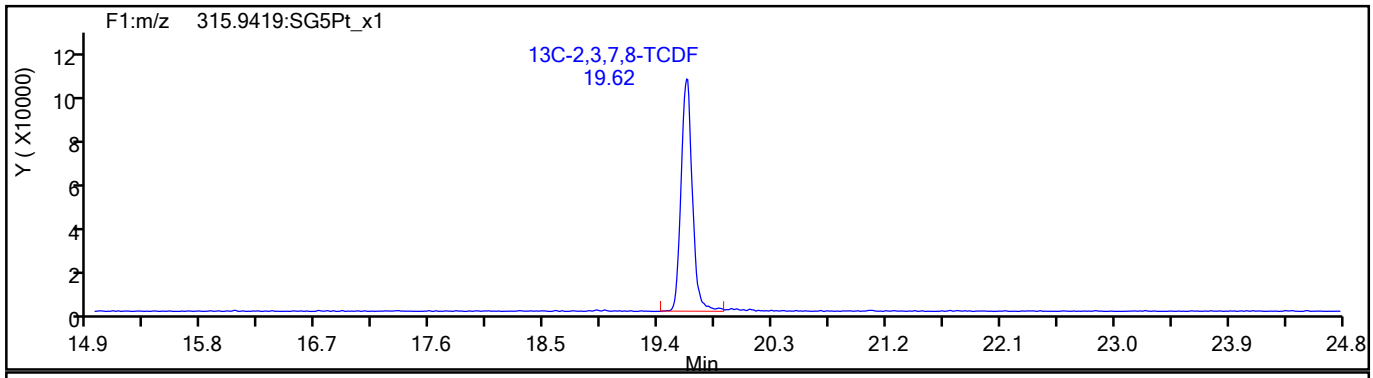

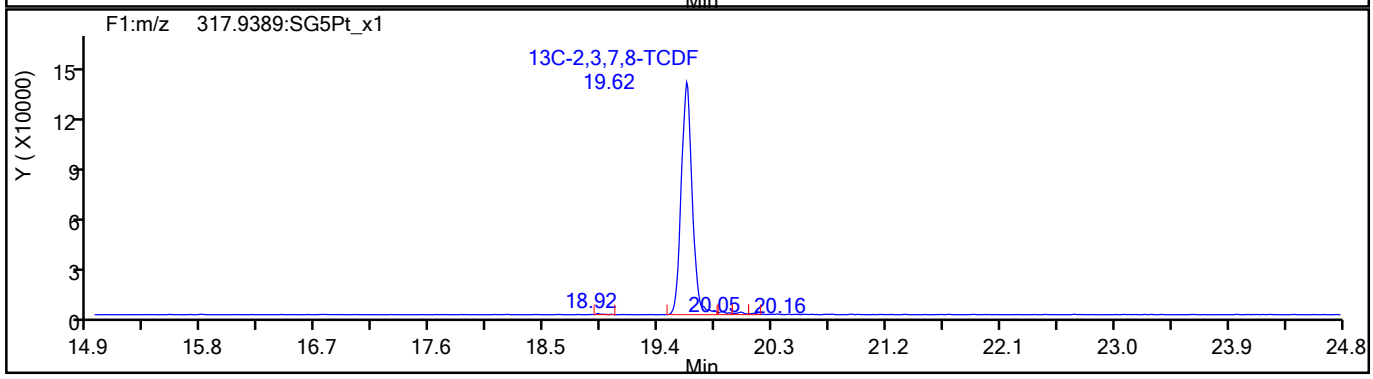

784495

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

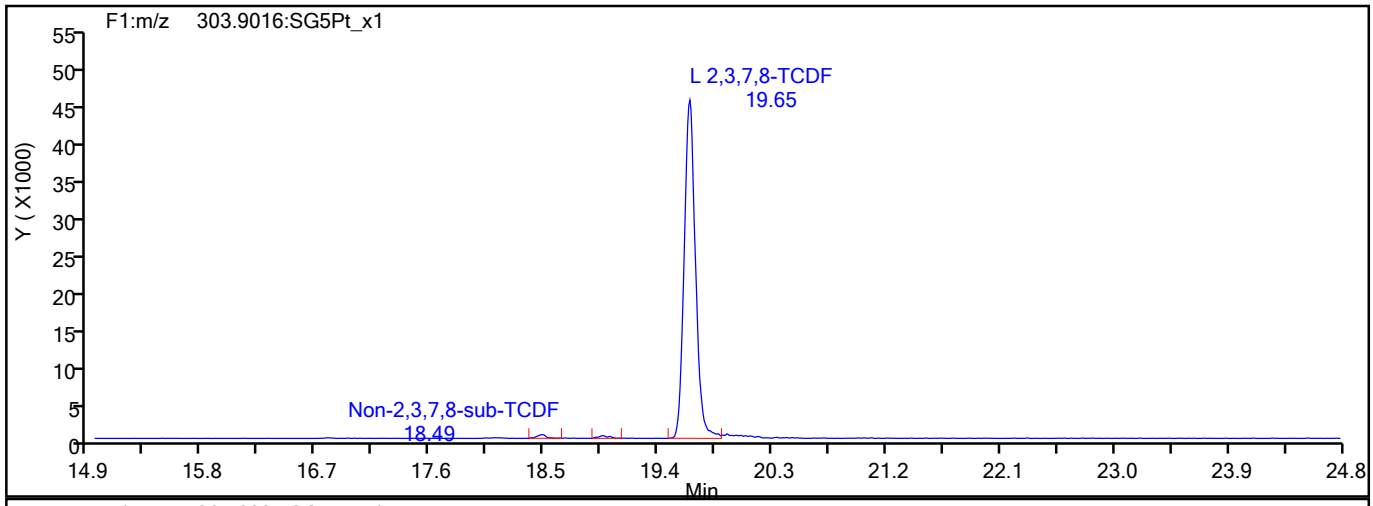

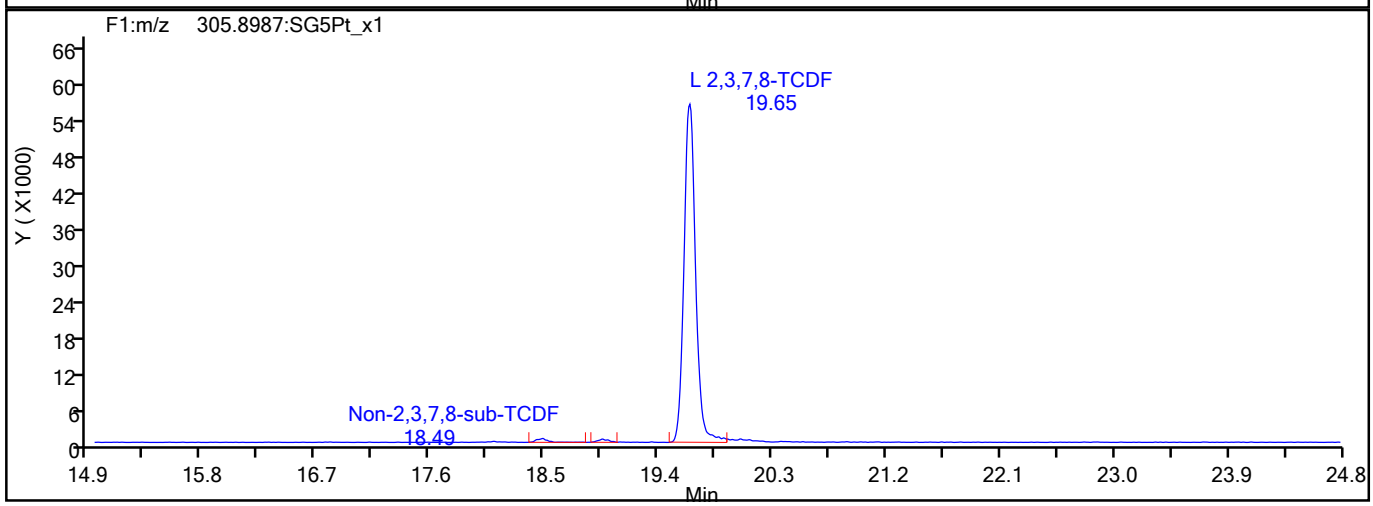

TCDF Interference Mass

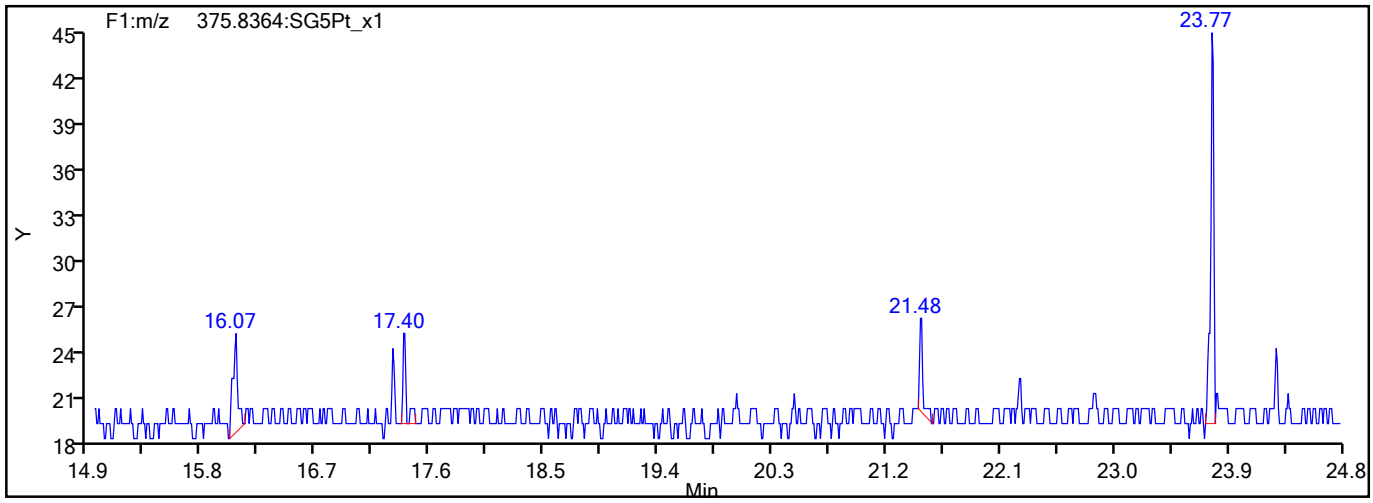

784496

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

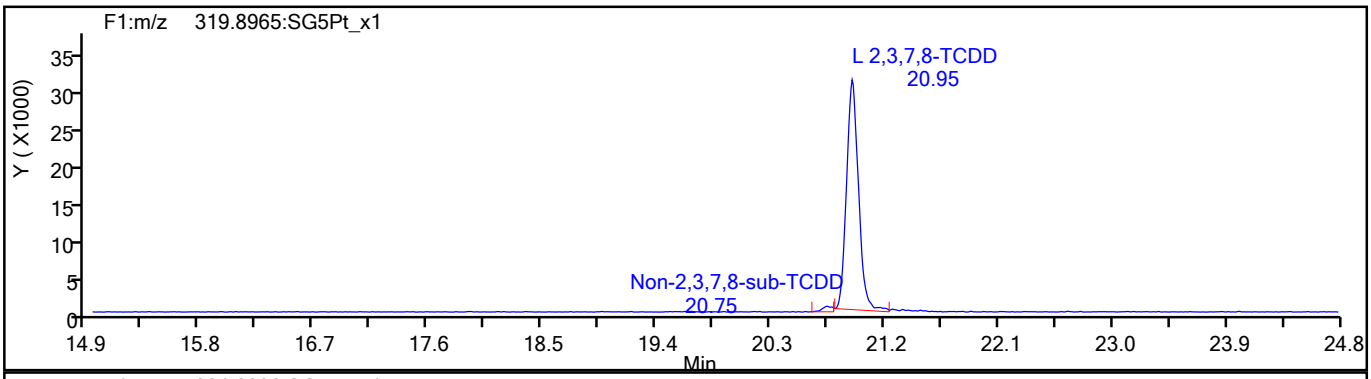

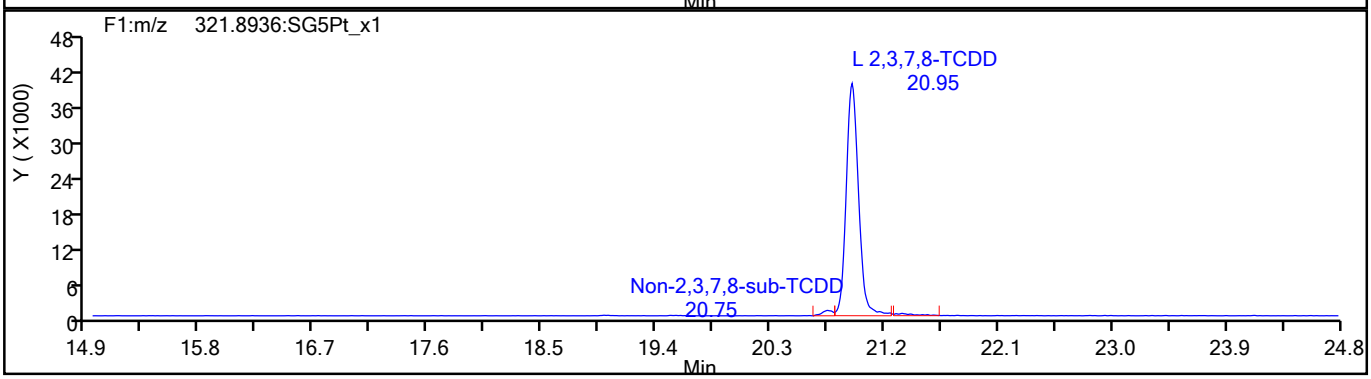

TCDD Standards

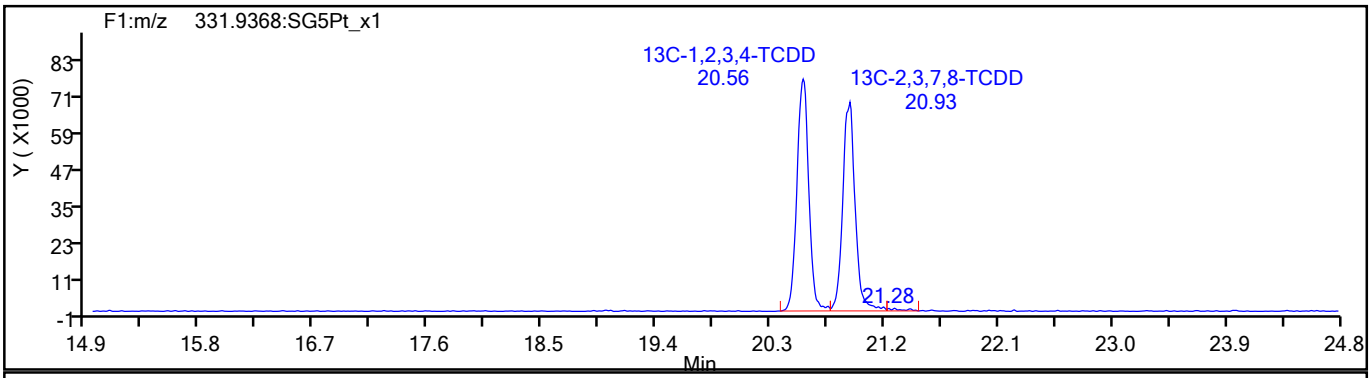

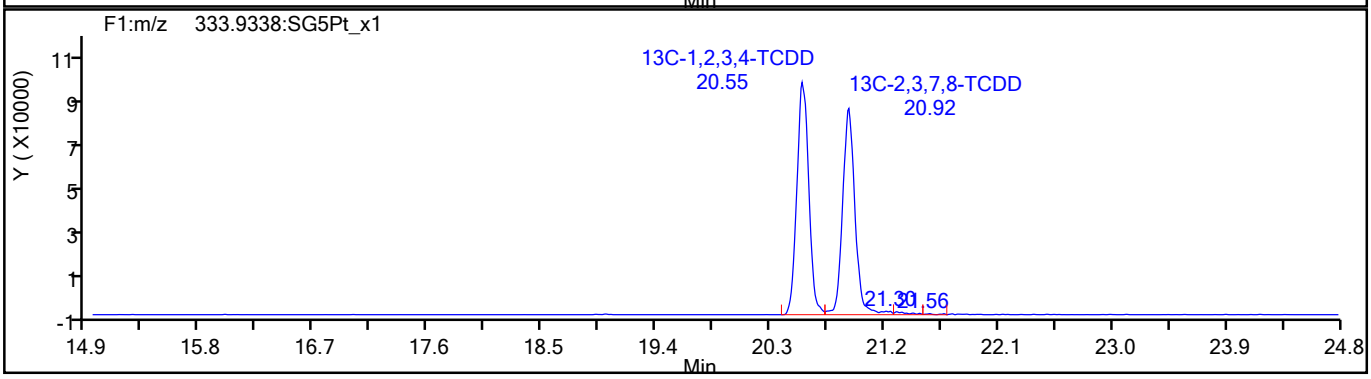

784497

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

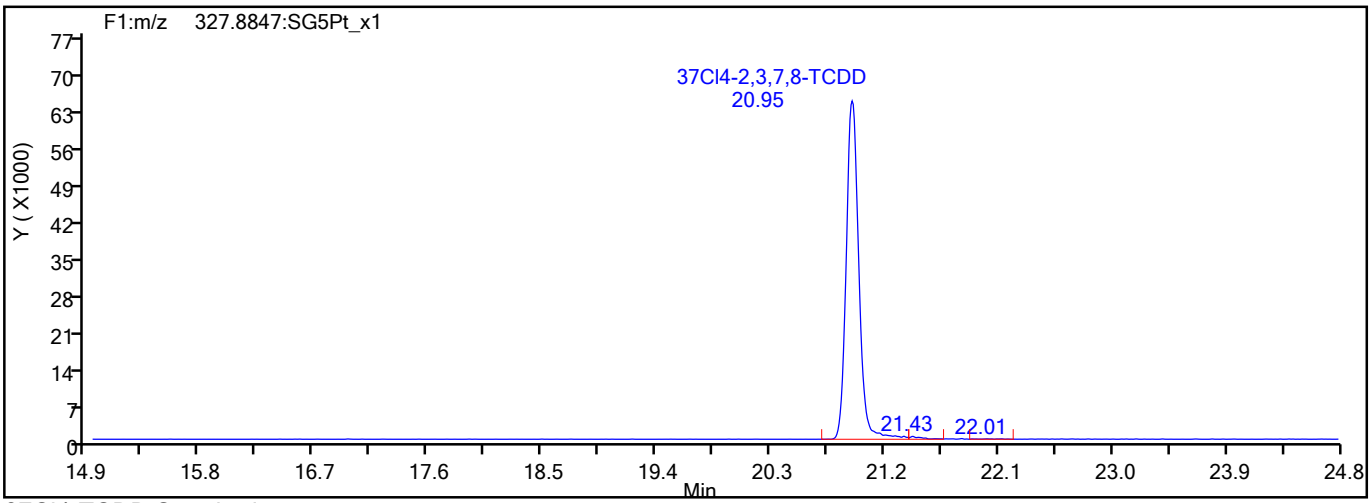

37Cl4-TCDD Standards

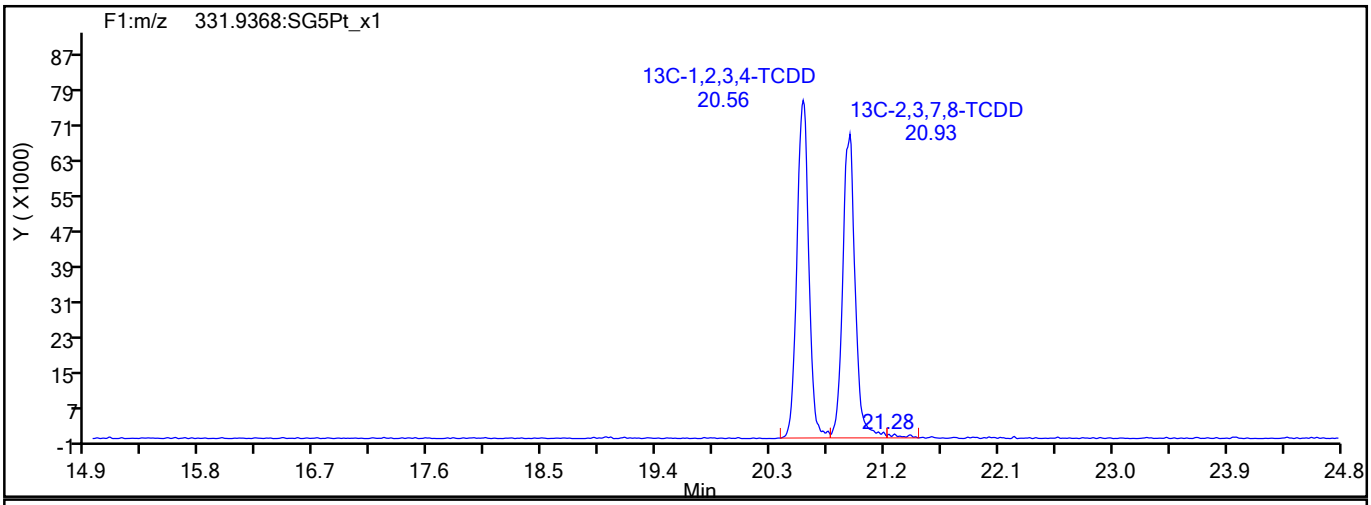

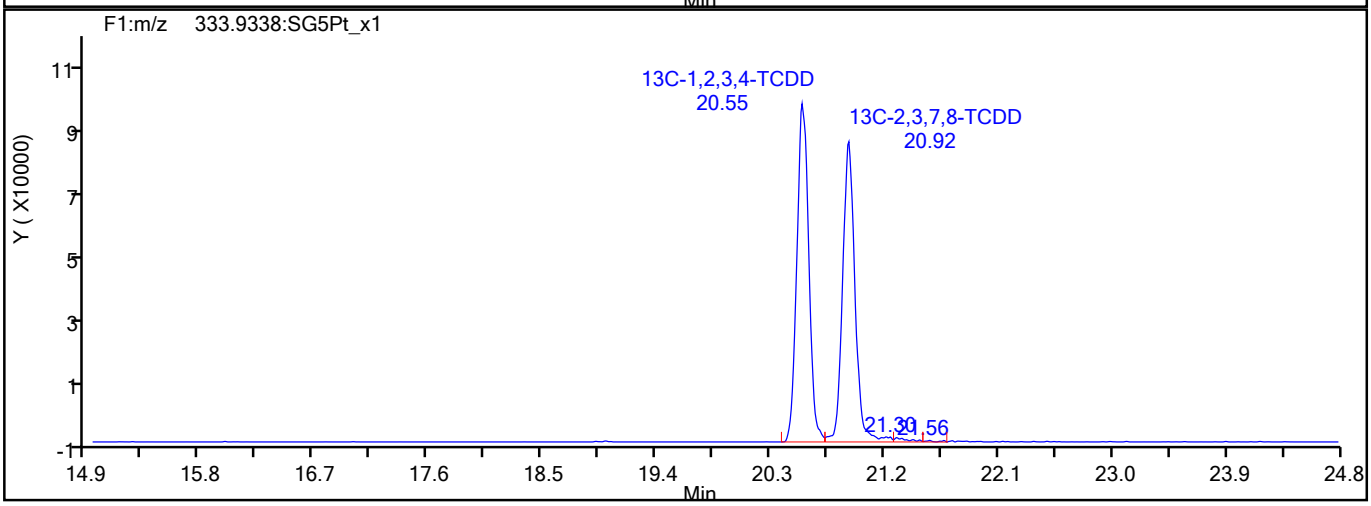

784498

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

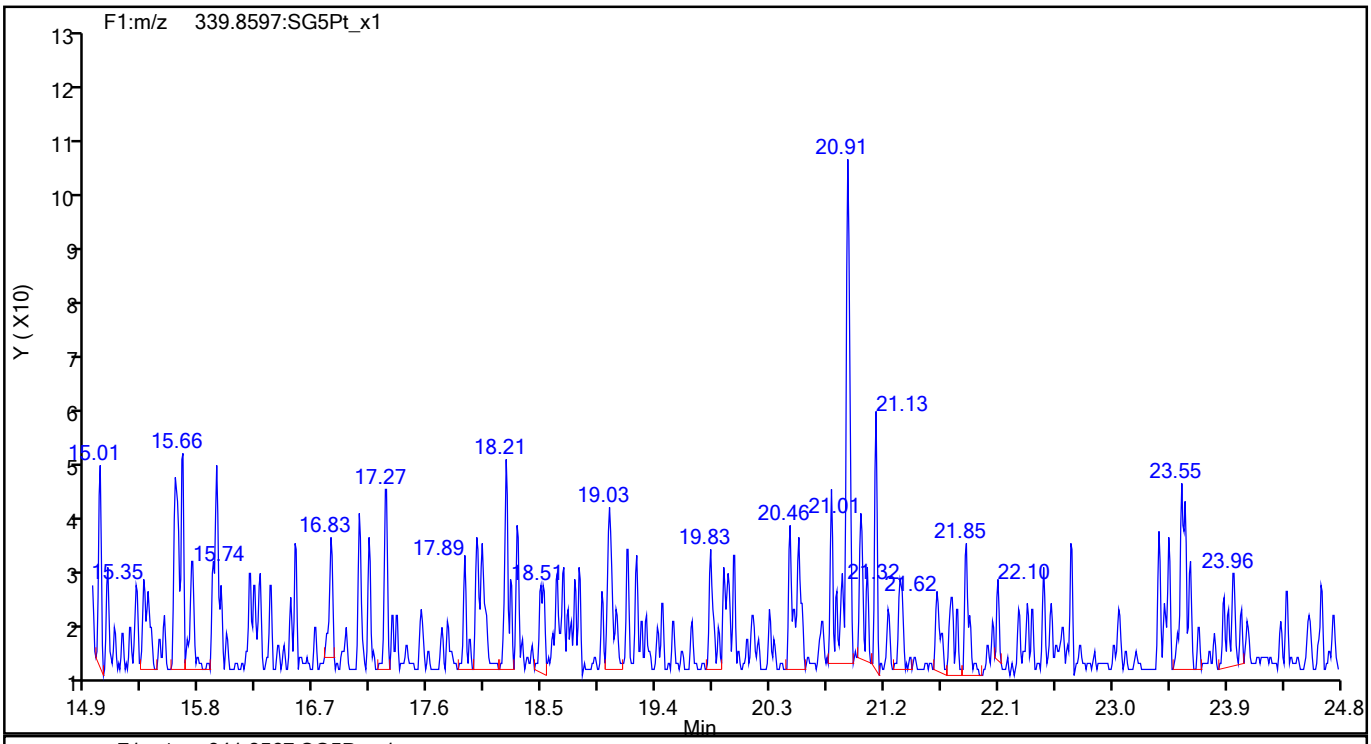

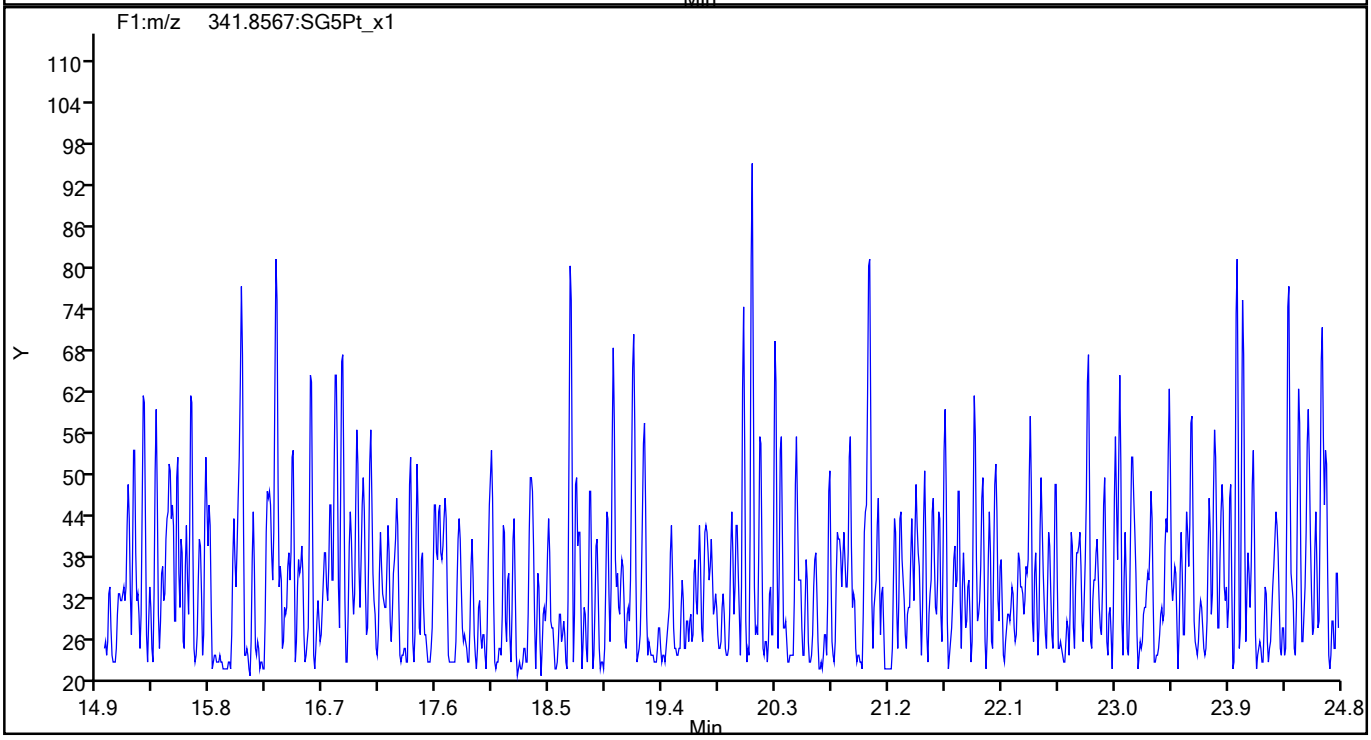

784499

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

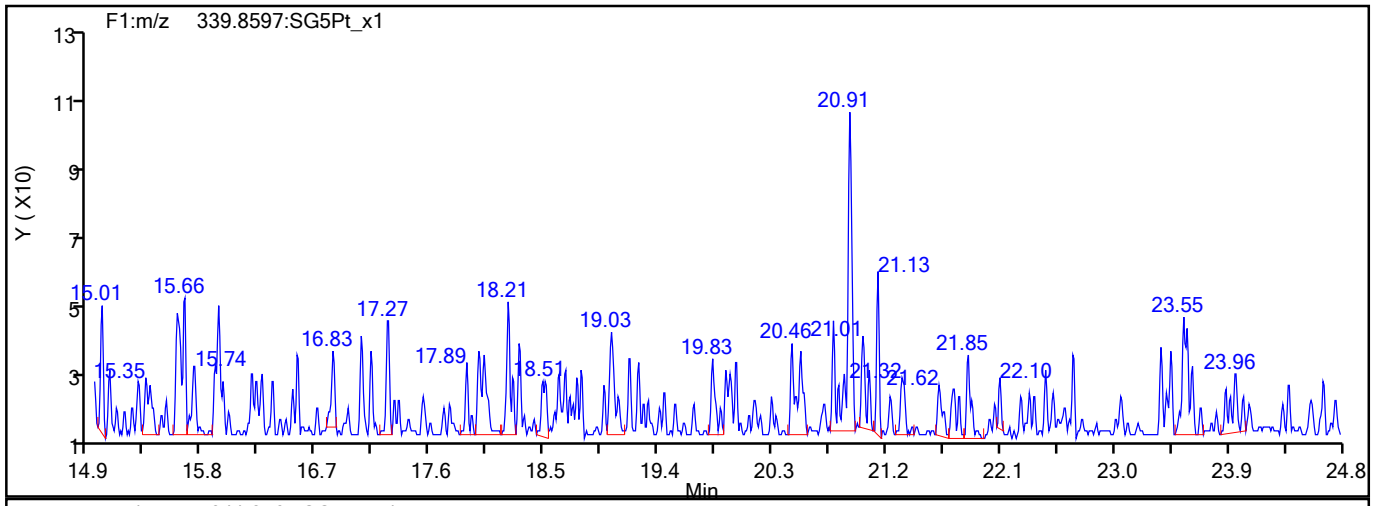

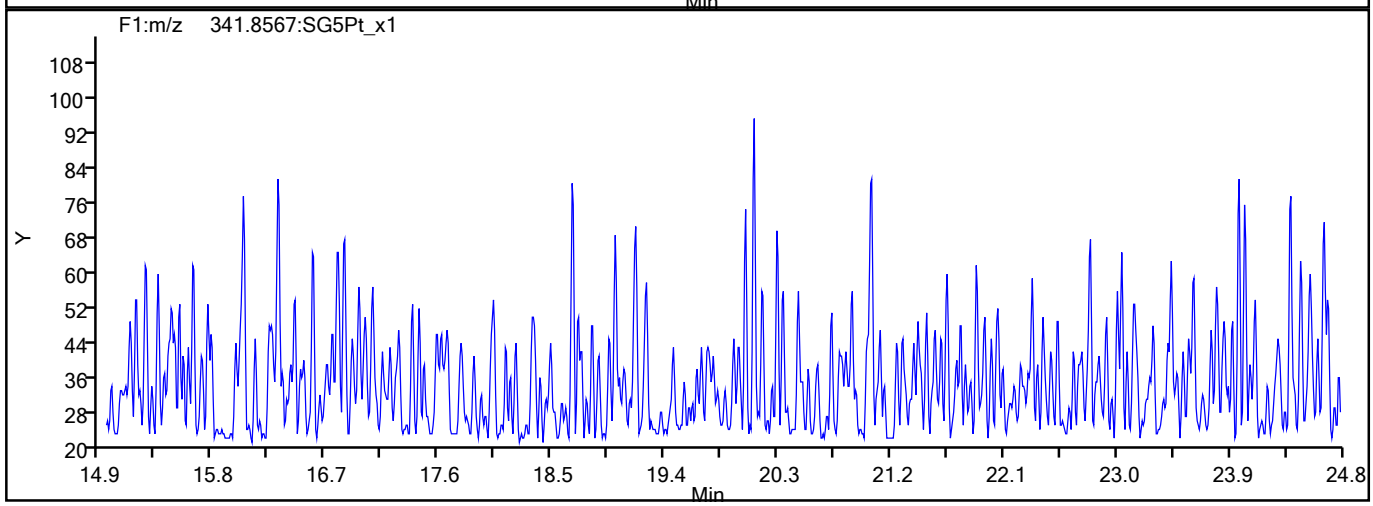

F1 PeCDFs Interference Mass

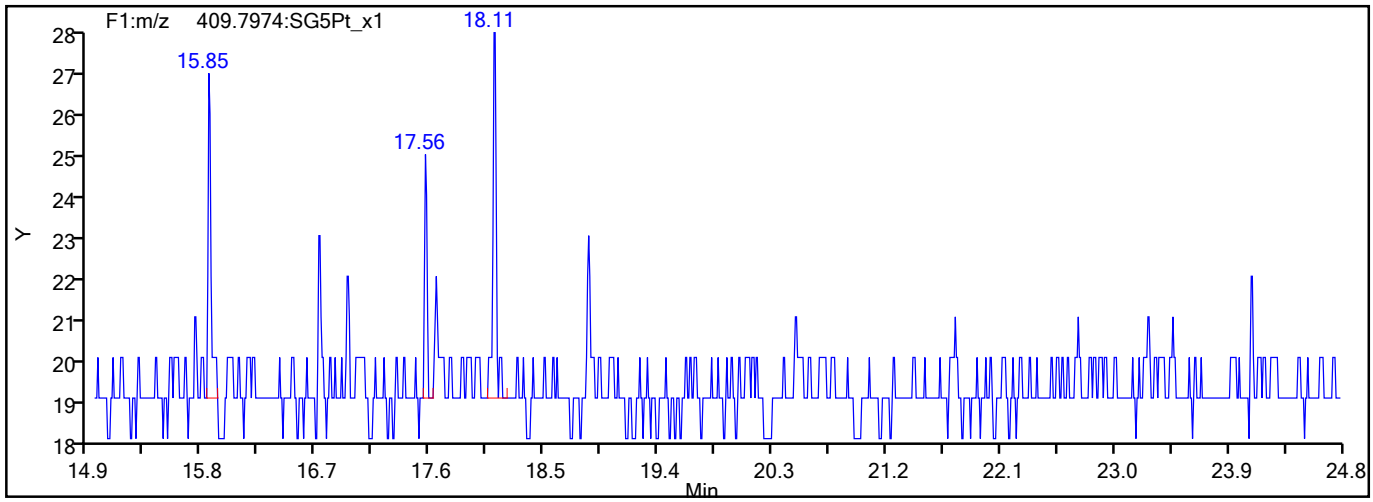

784500

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

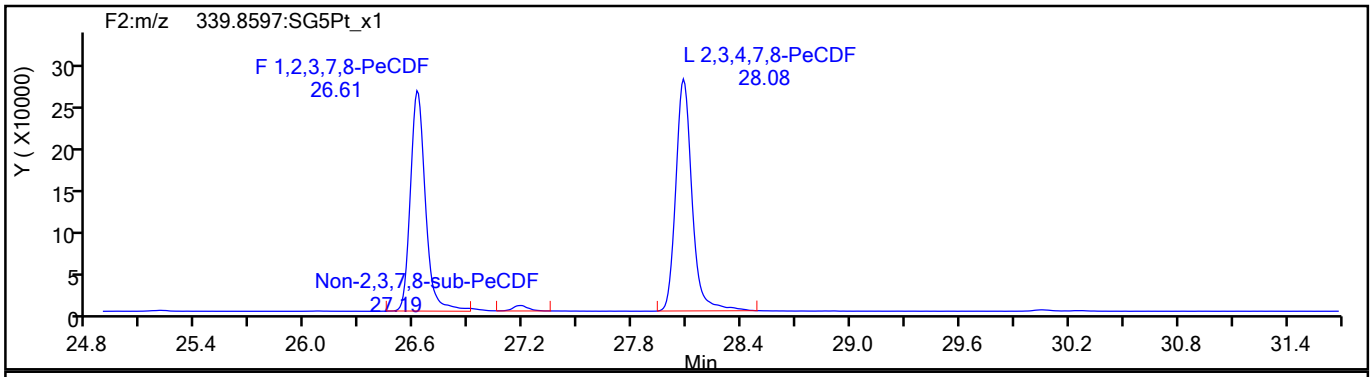

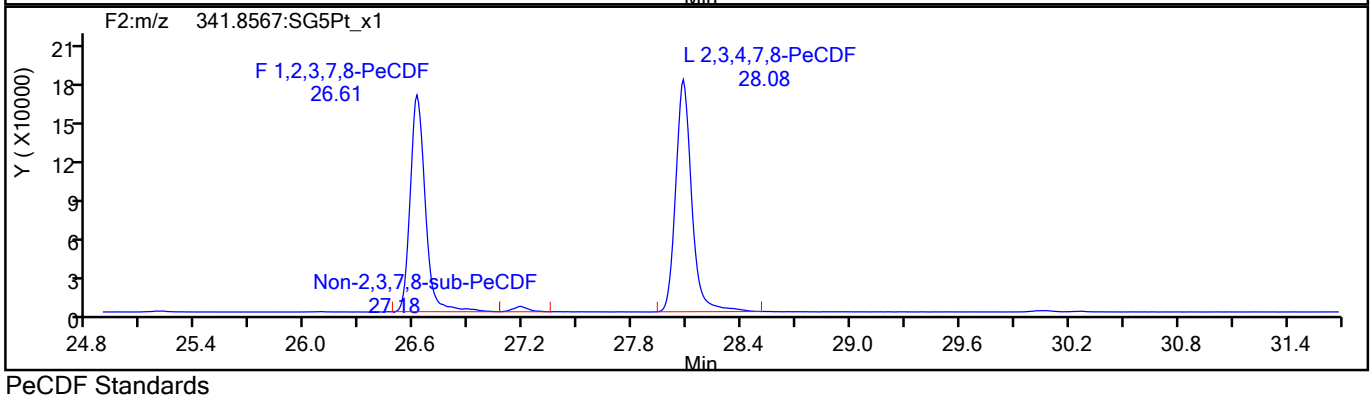

PeCDF Standards

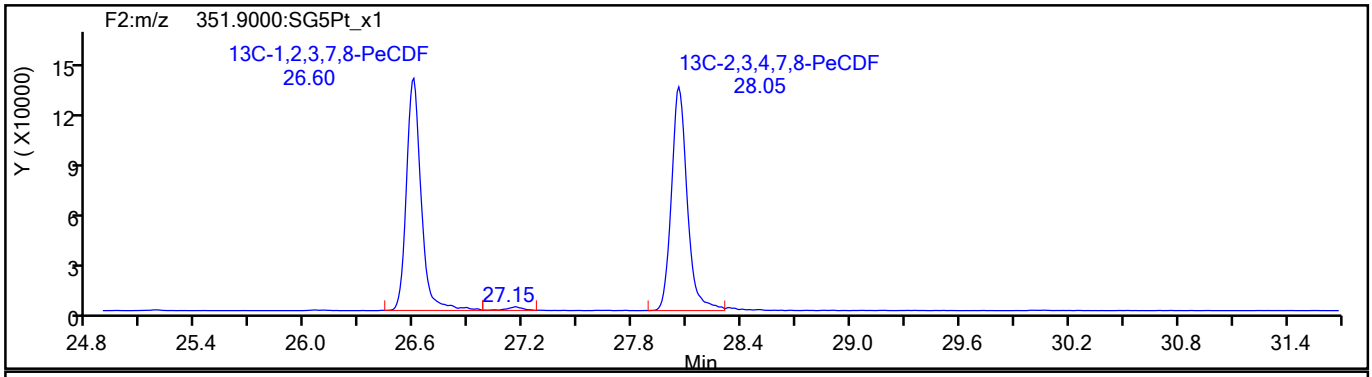

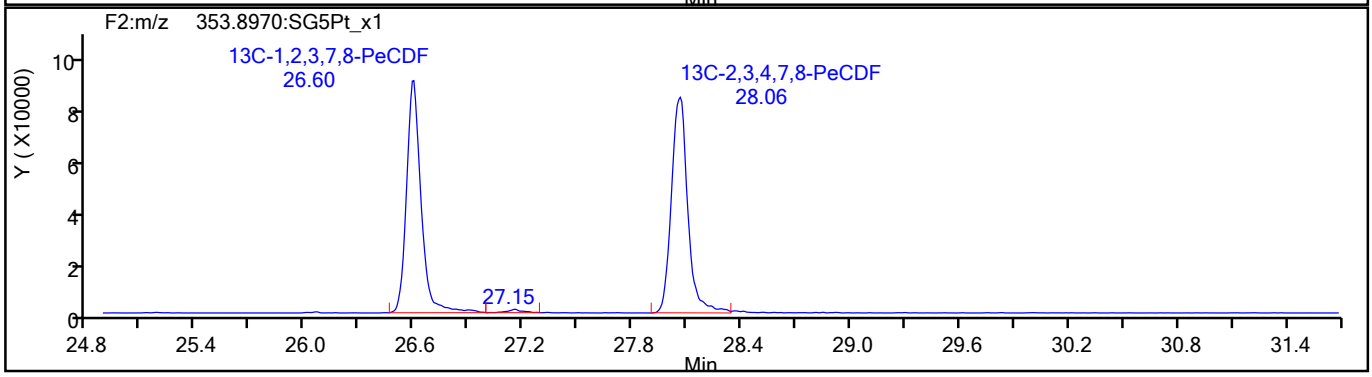

784501

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

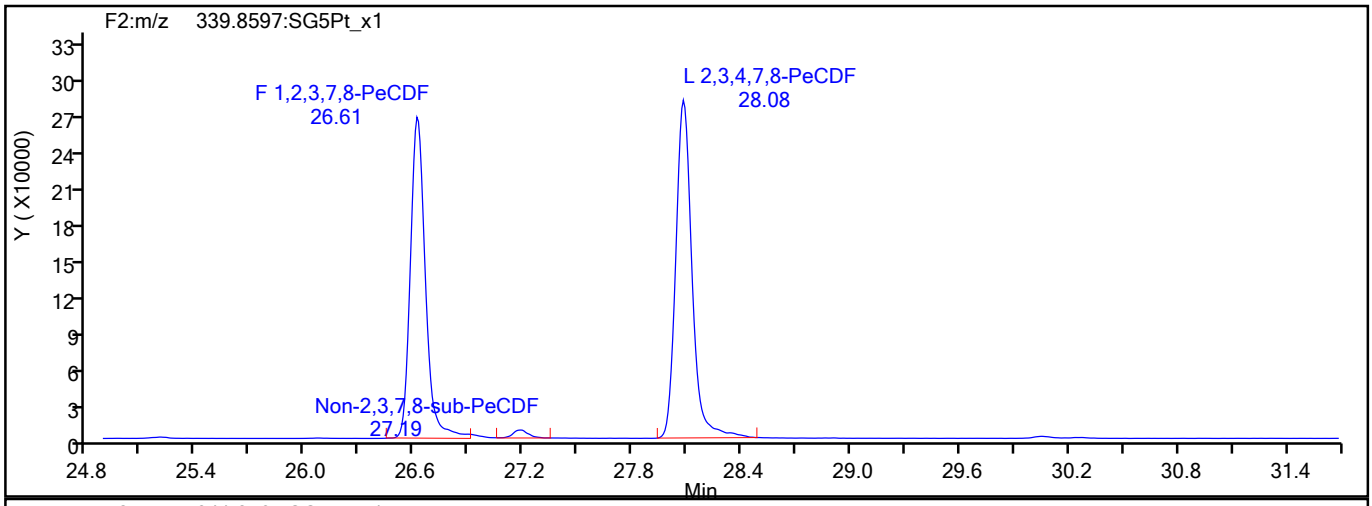

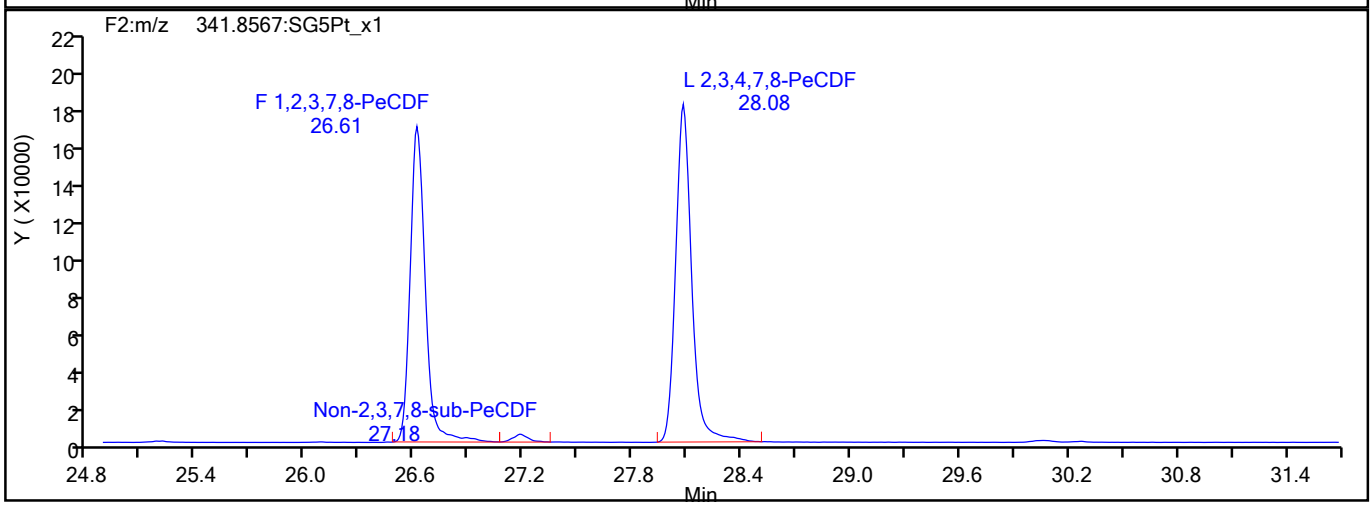

PeCDF Interference Mass

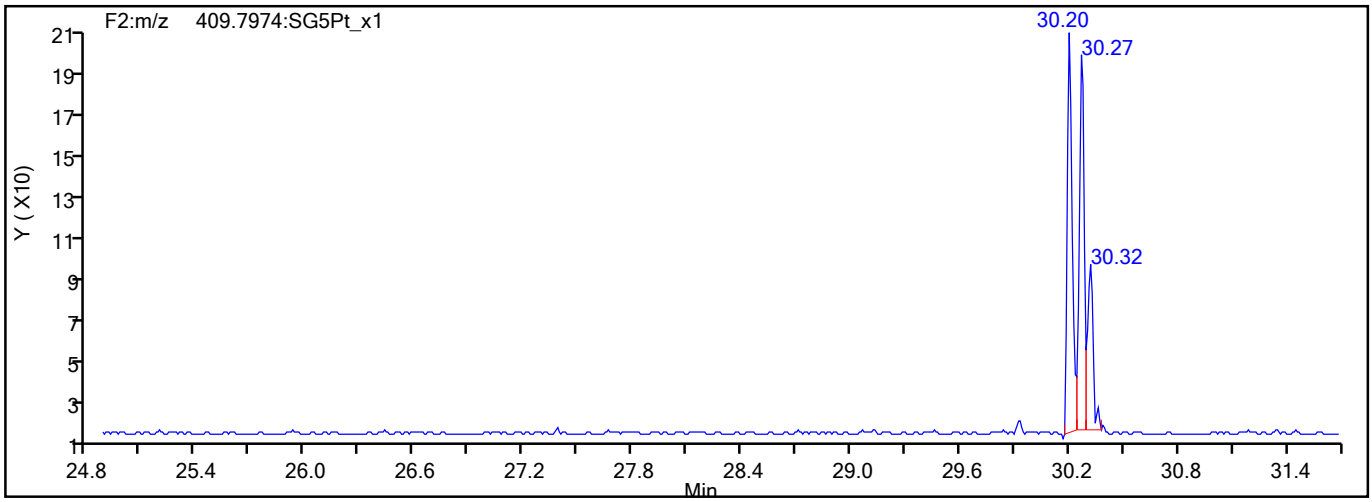

784502

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDD

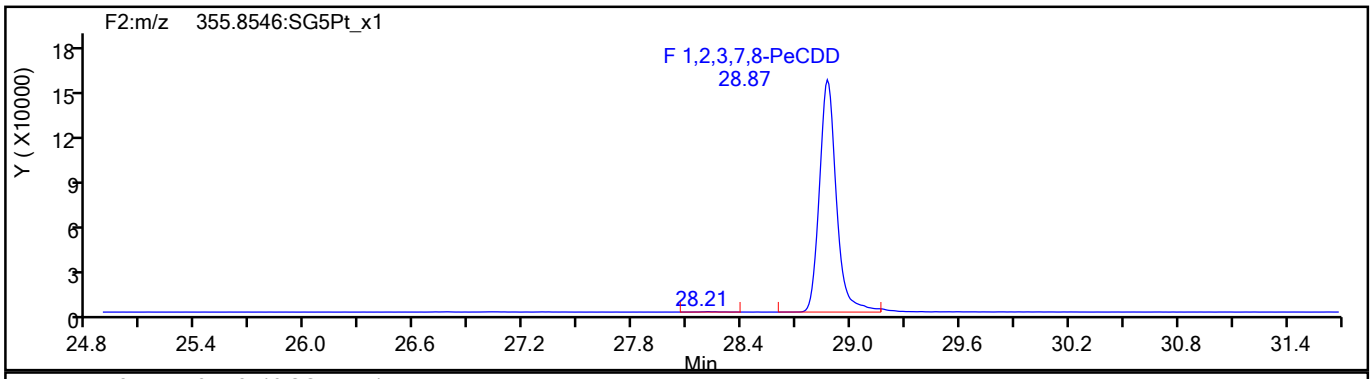

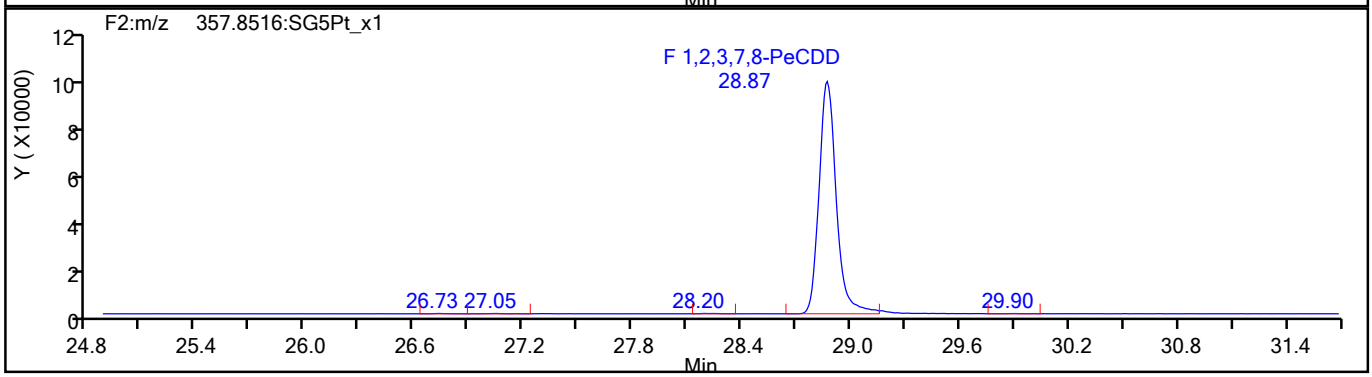

PeCDD Standards

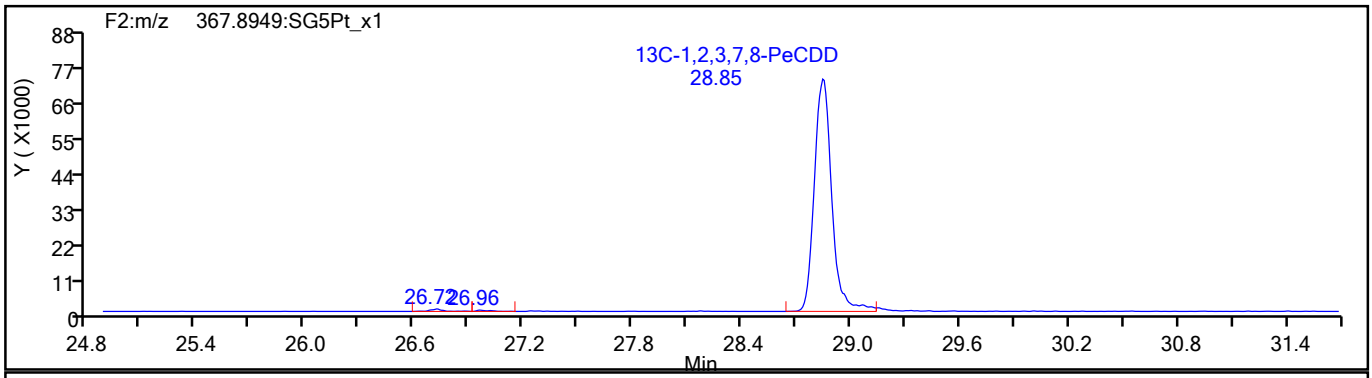

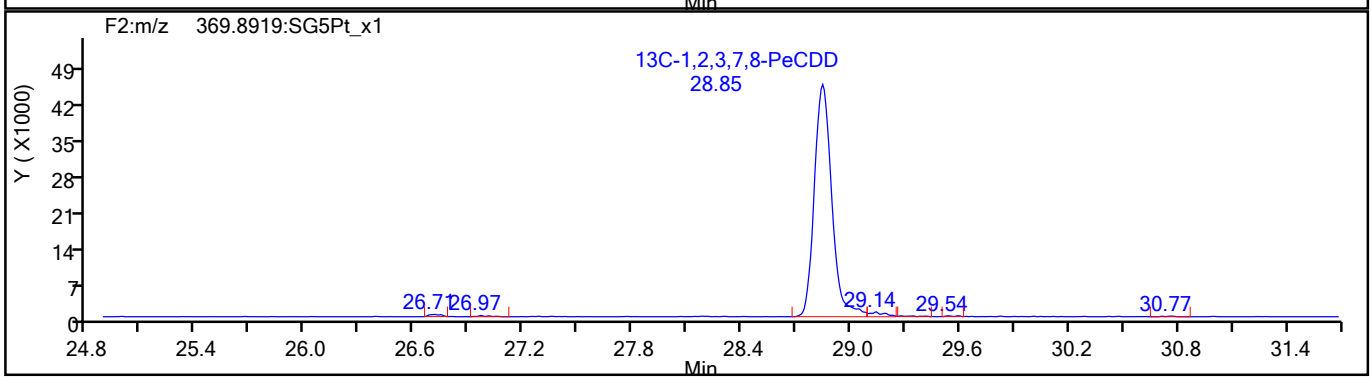

784503

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

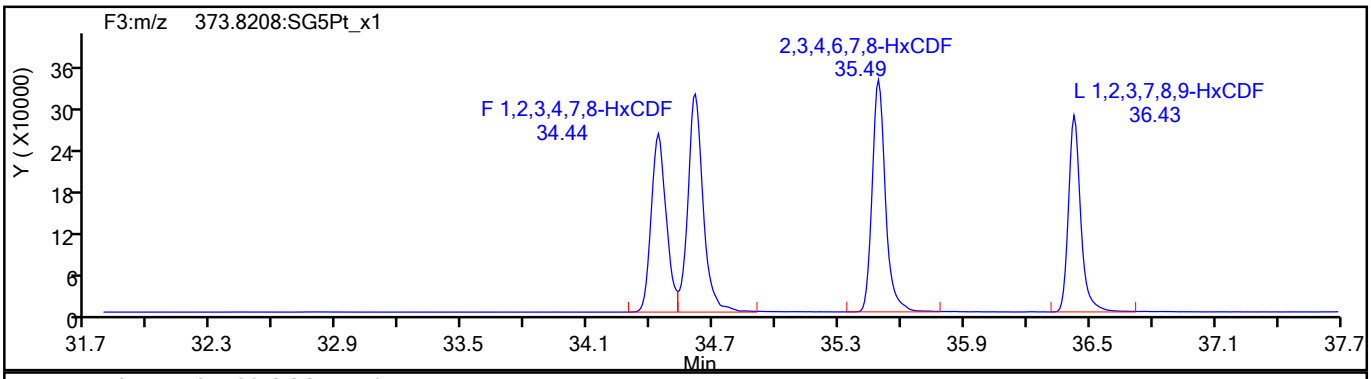

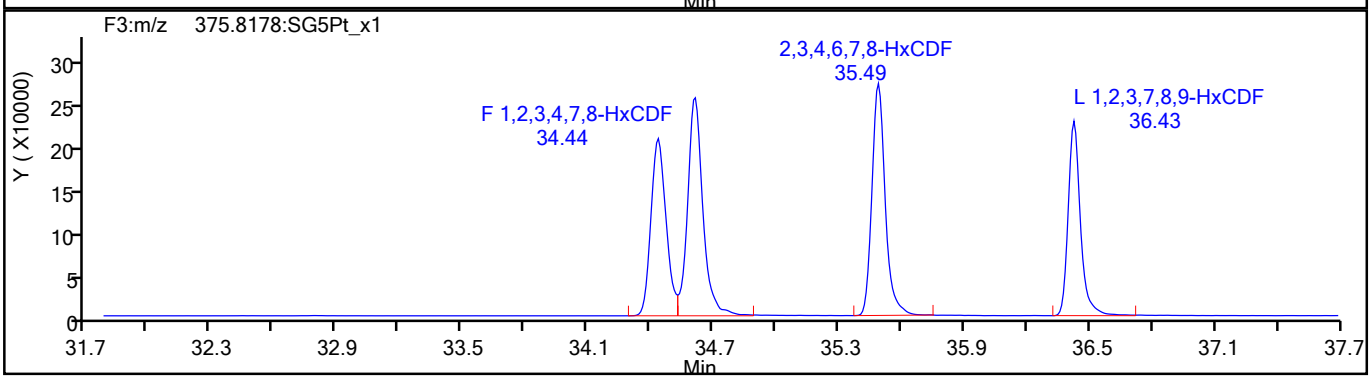

HxCDF Standards

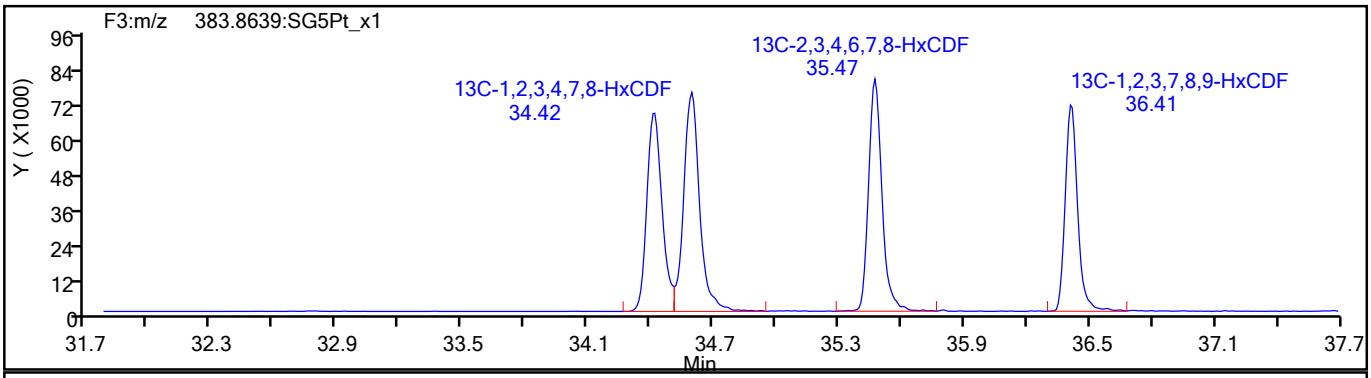

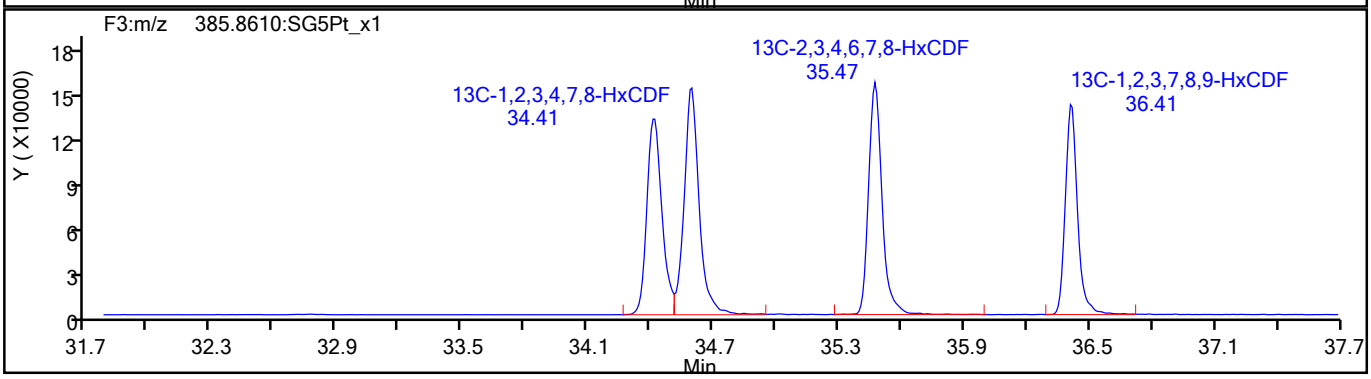

784504

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

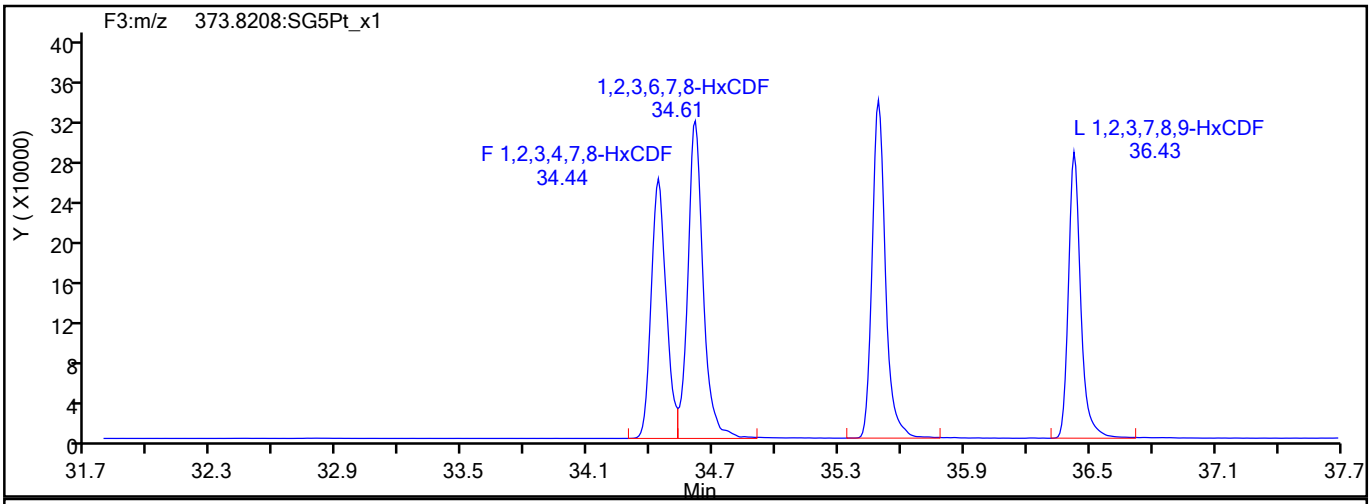

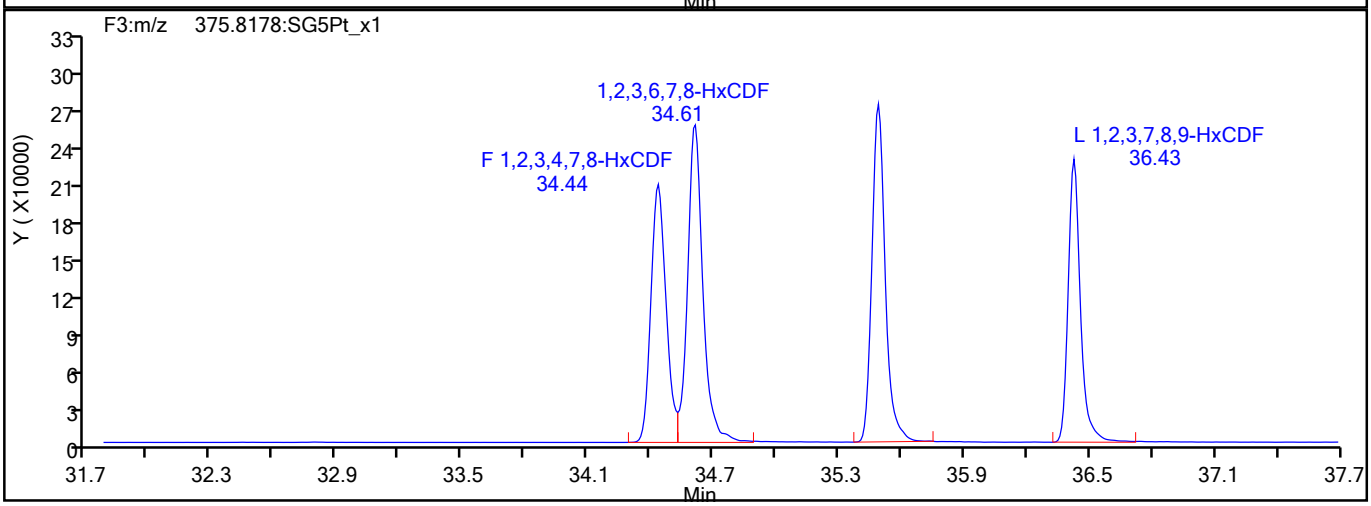

HxCDF Interference Mass

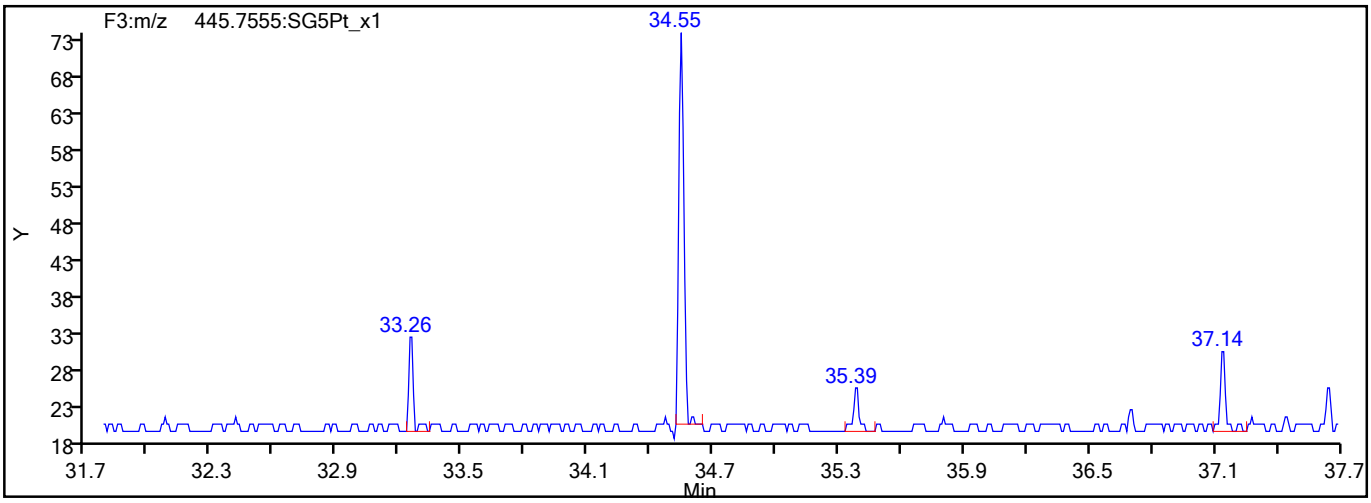

784505

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

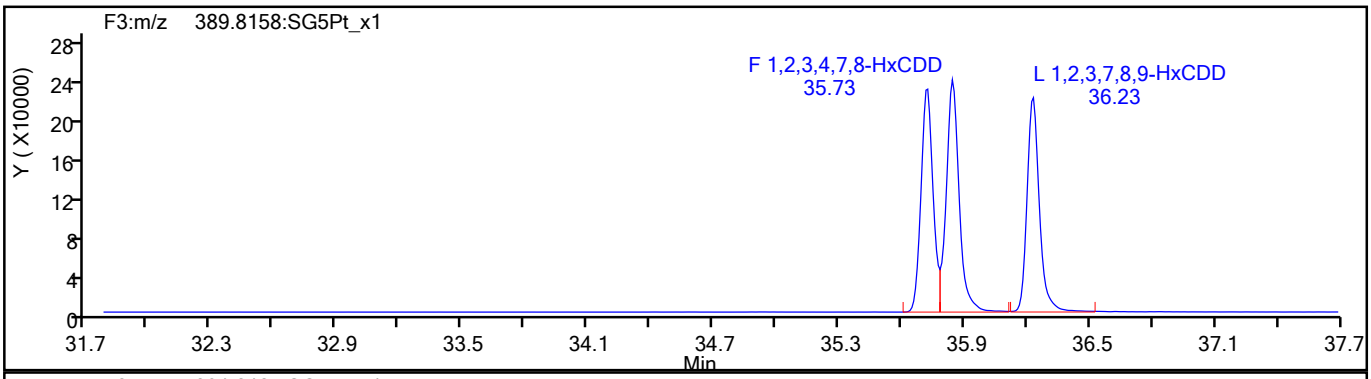

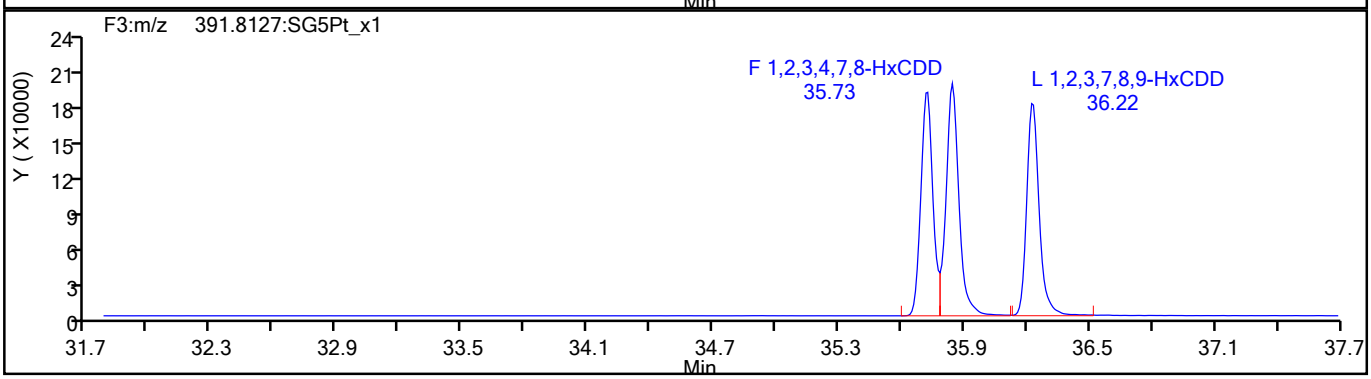

HxCDD Standards

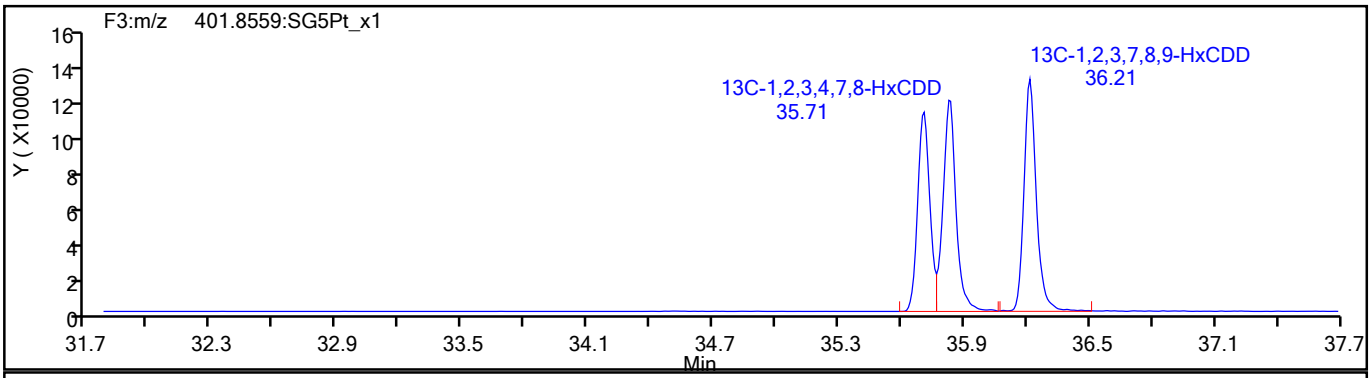

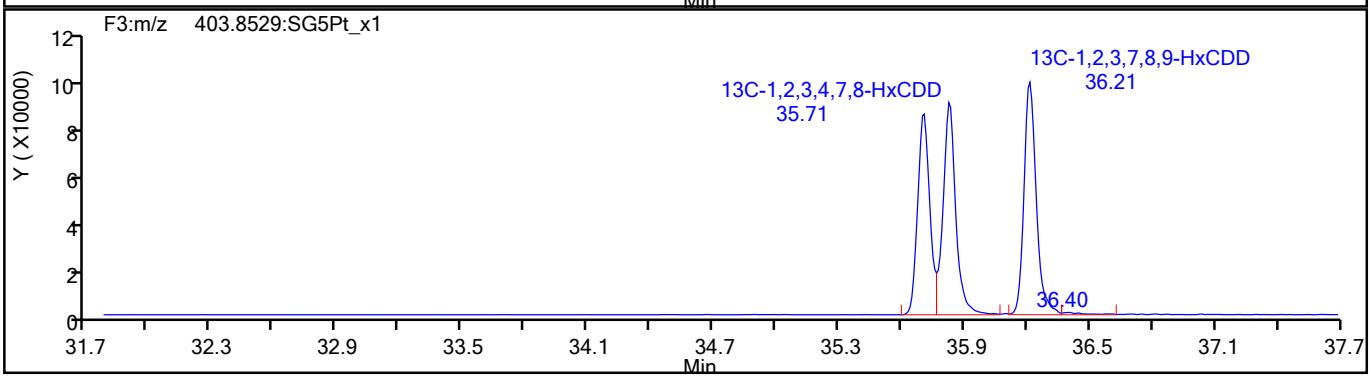

784506

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

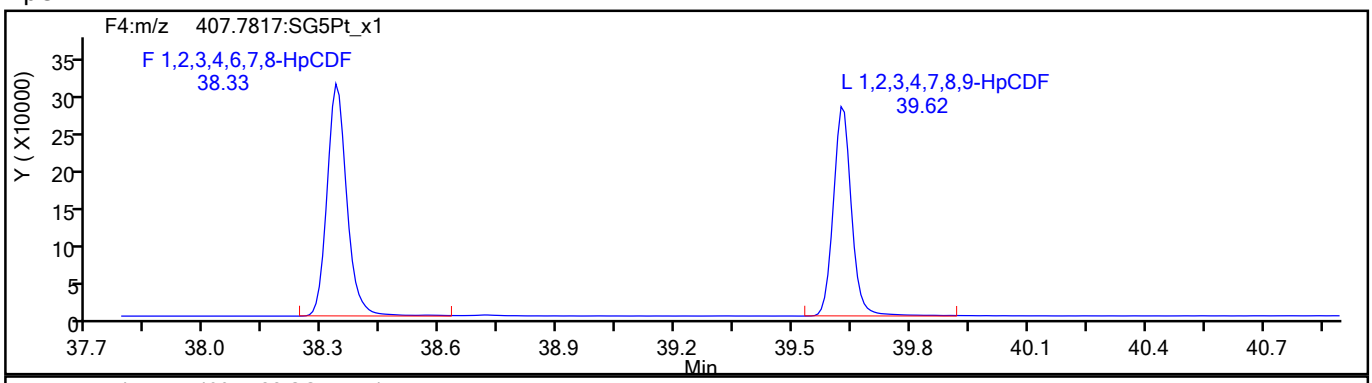

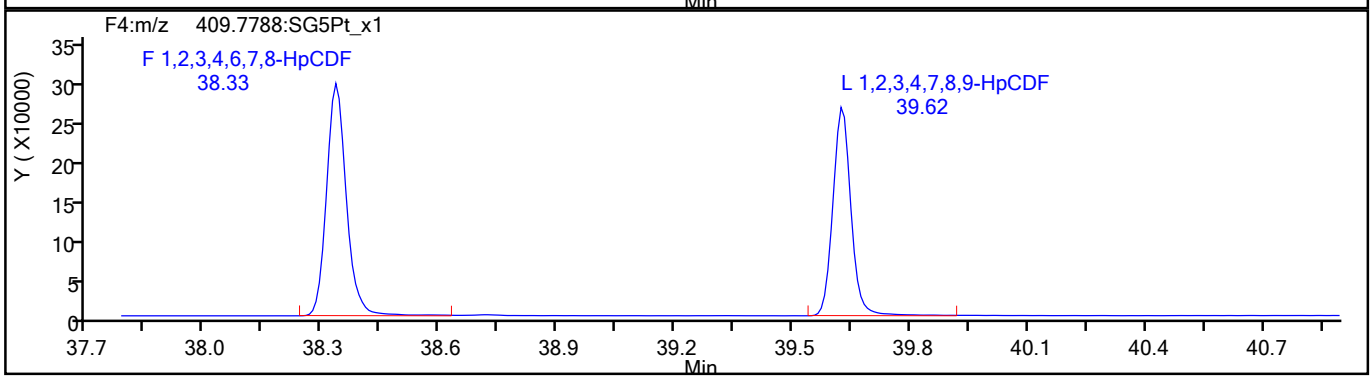

HpCDF Standards

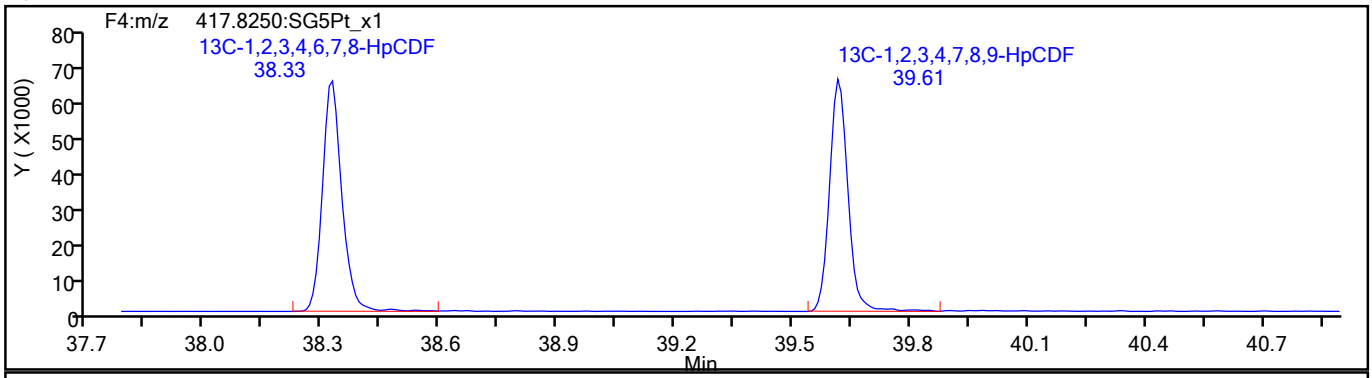

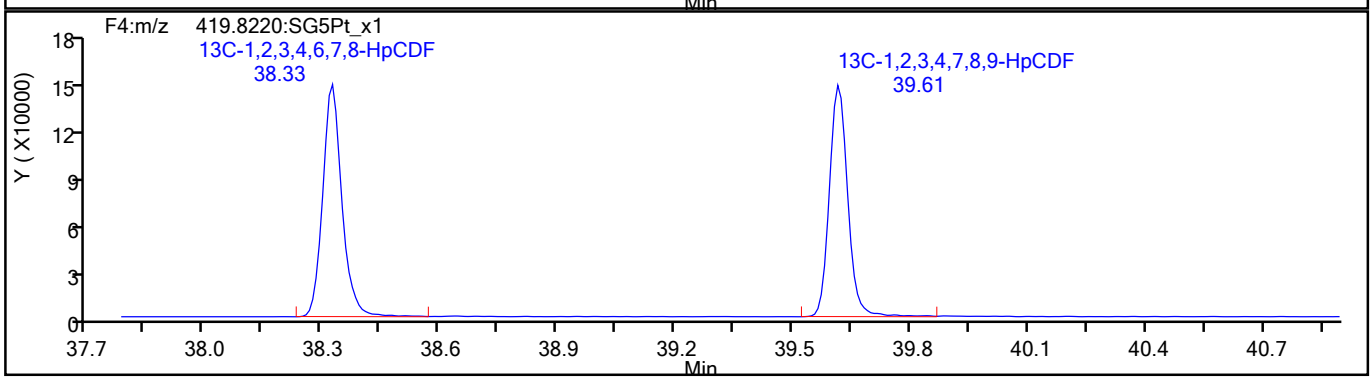

784507

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

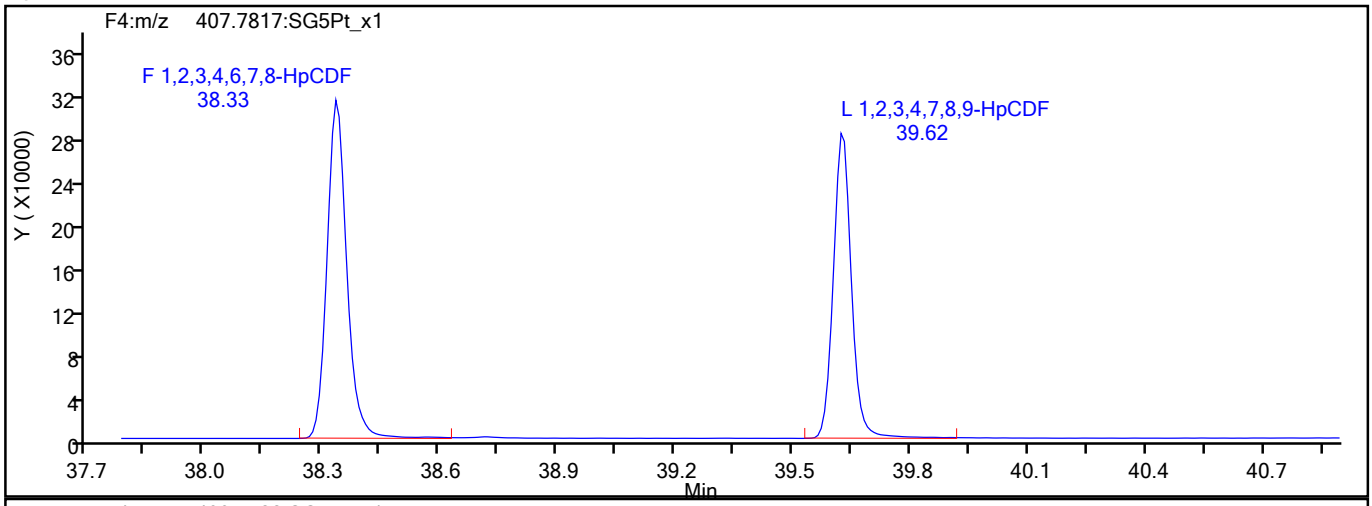

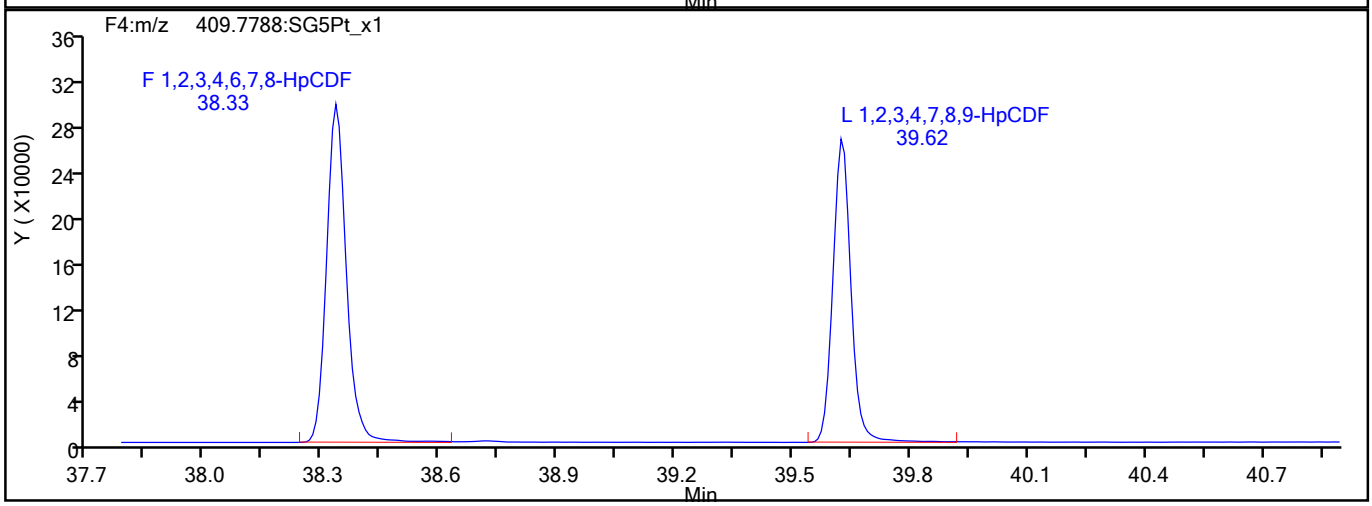

HpCDF Interference Mass

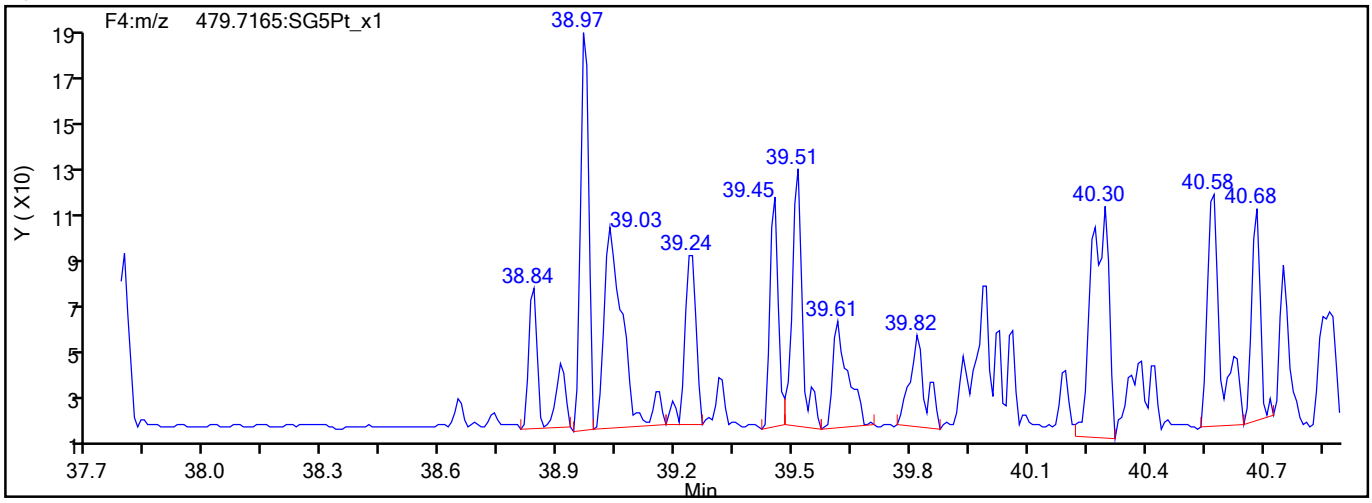

784508

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDD

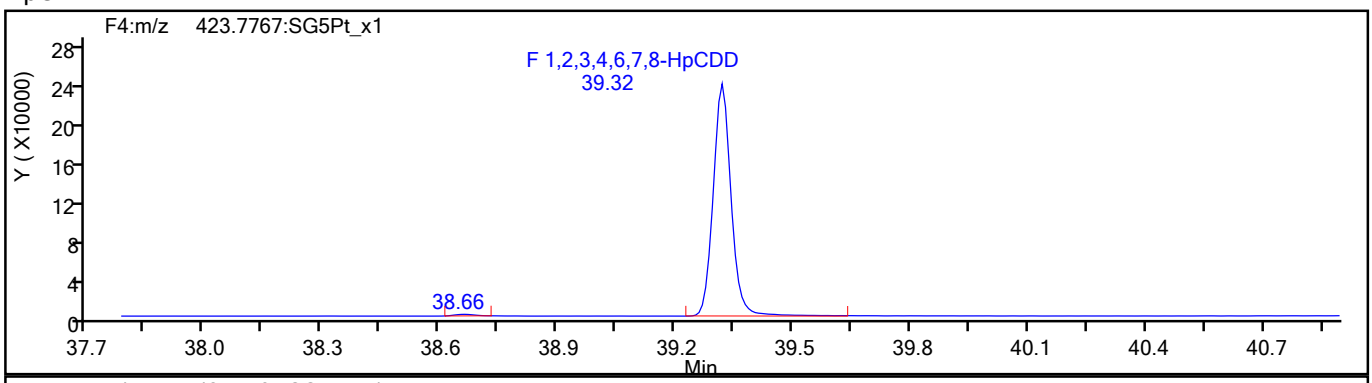

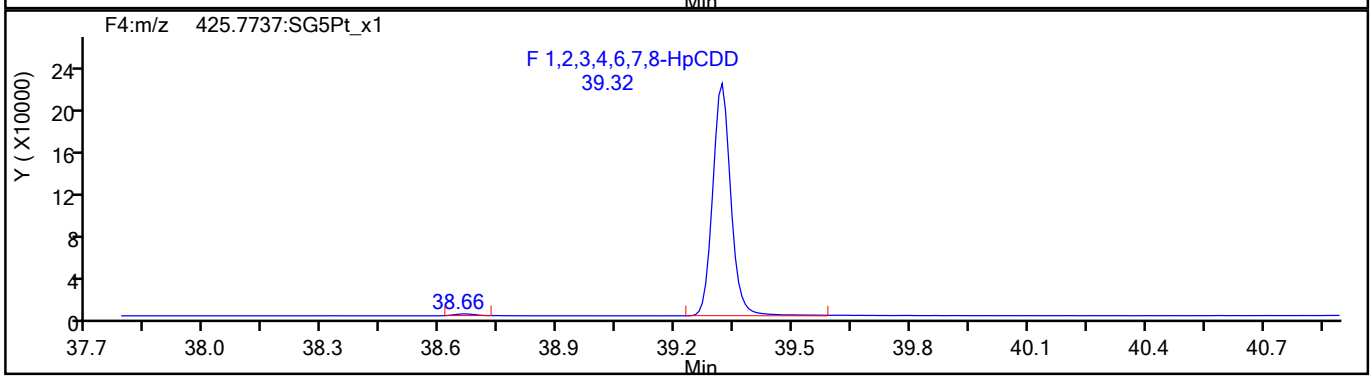

HpCDD Standards

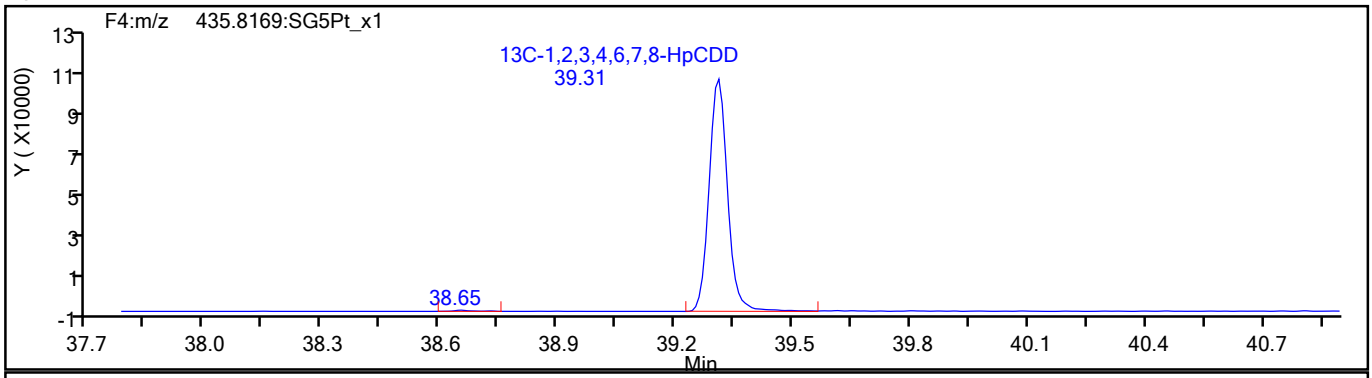

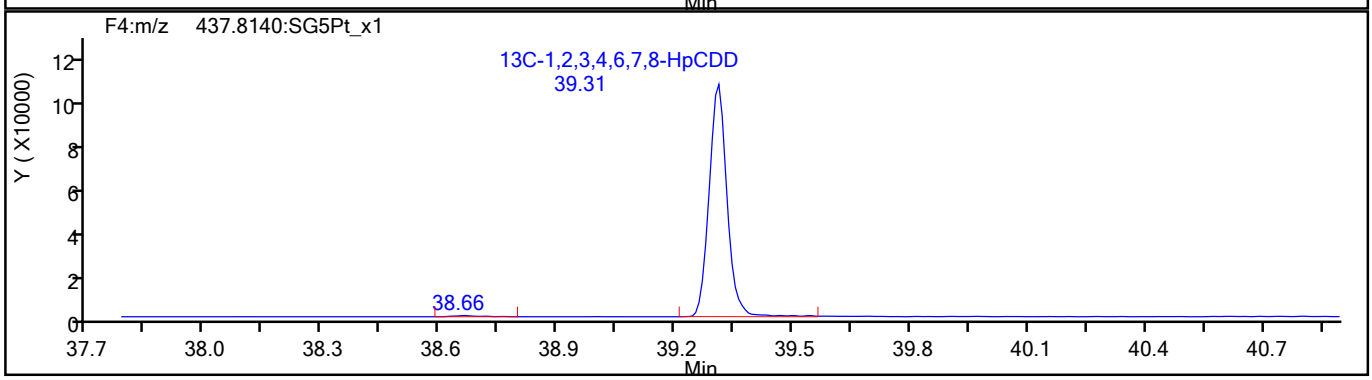

784509

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

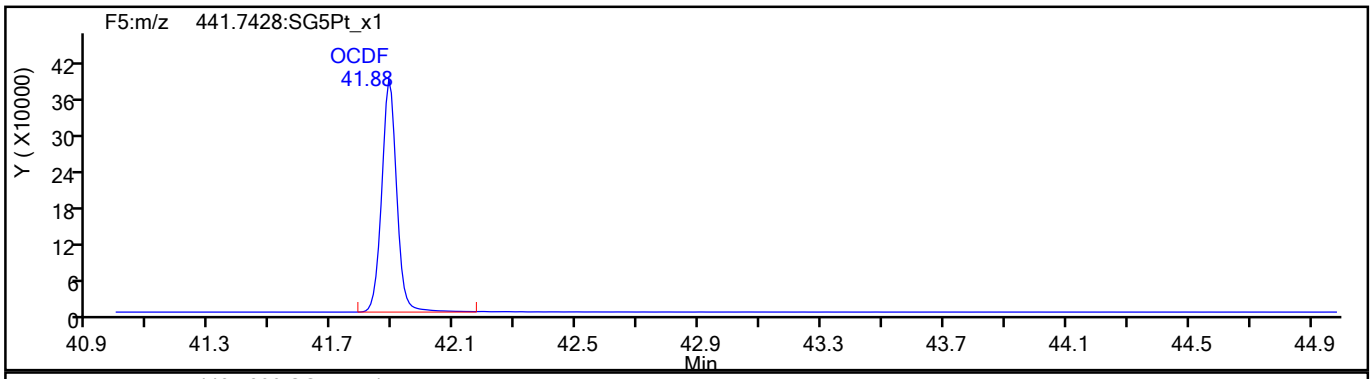

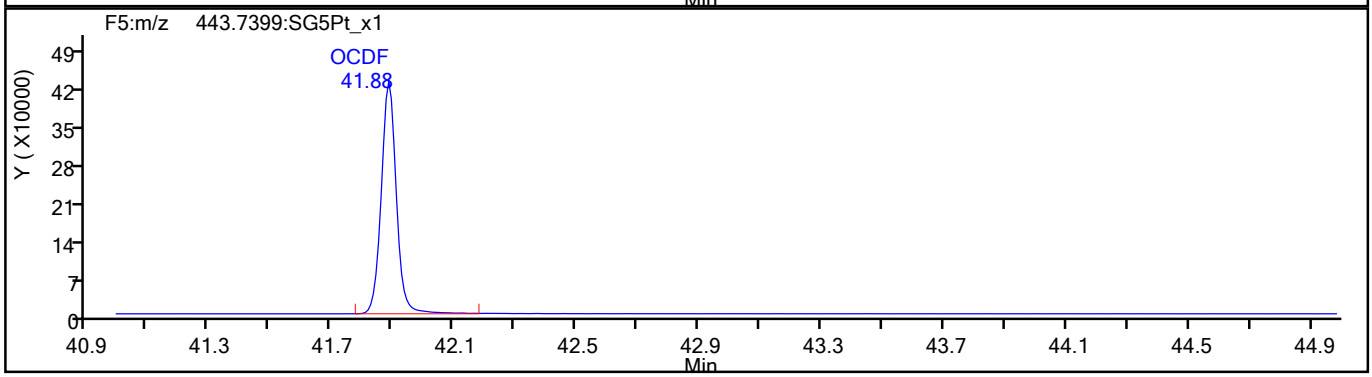

OCDF Standards

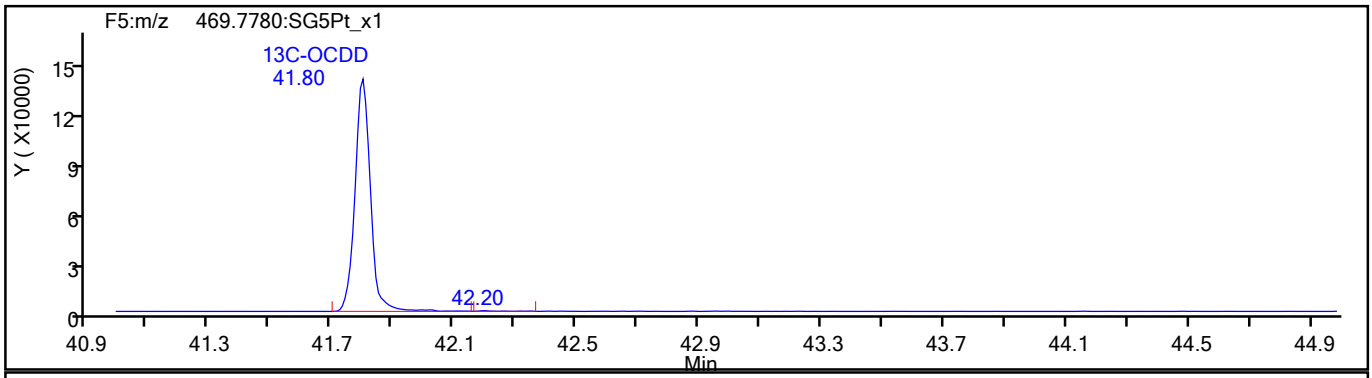

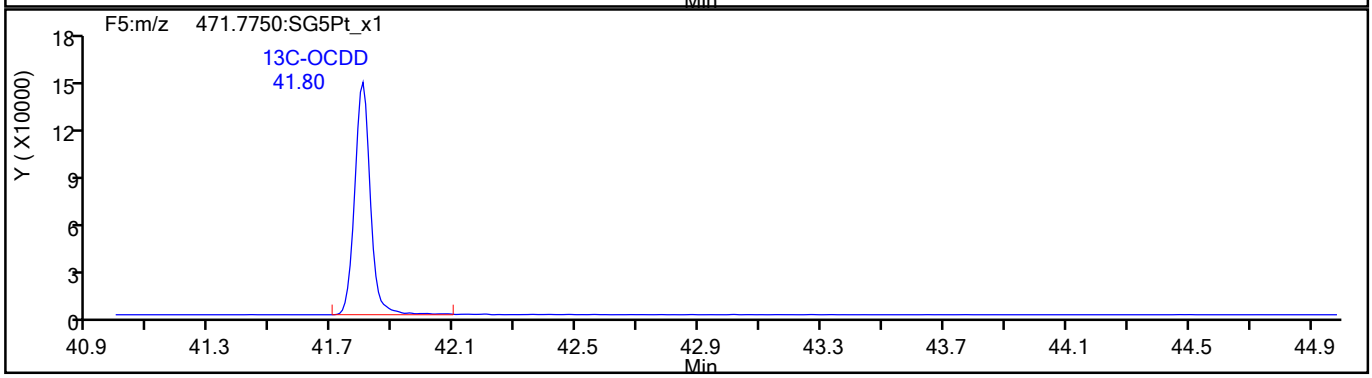

784510

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

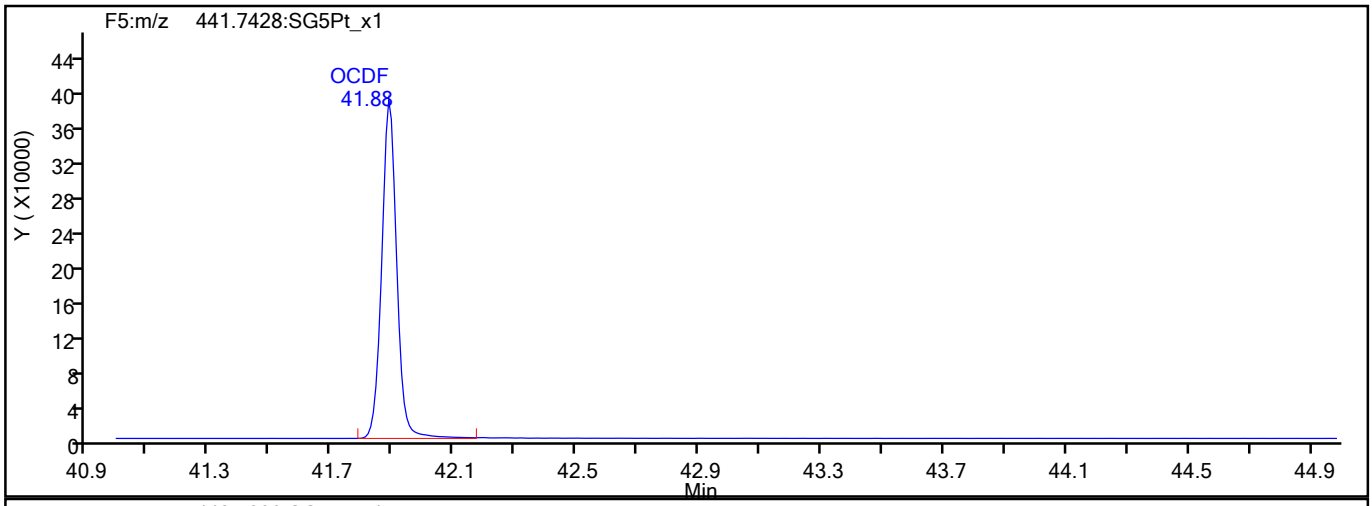

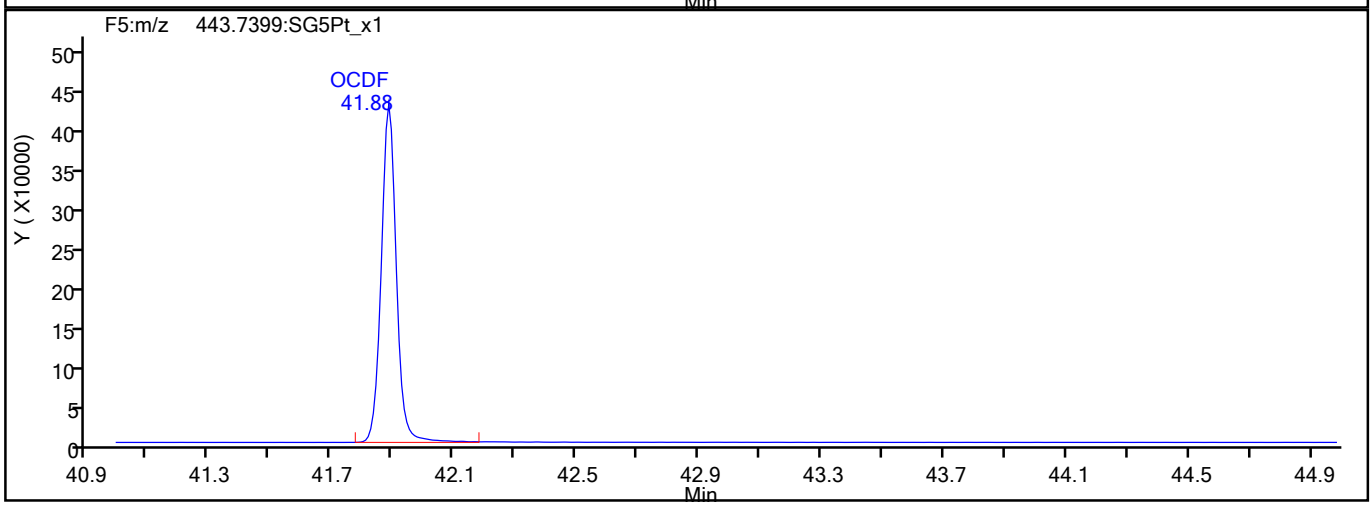

OCDF Interference Mass

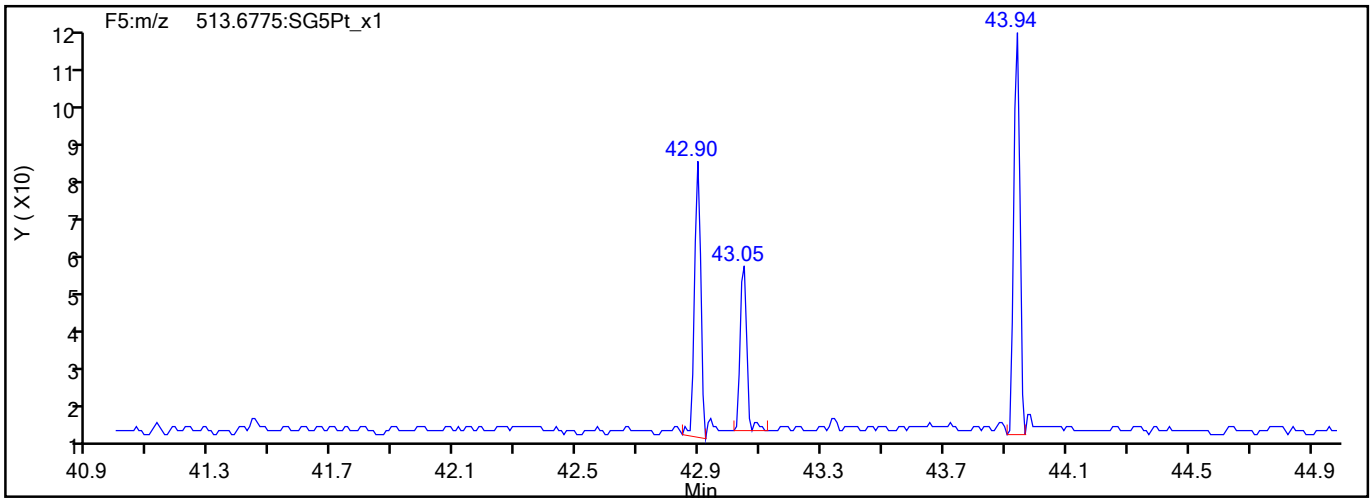

784511

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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OCDD

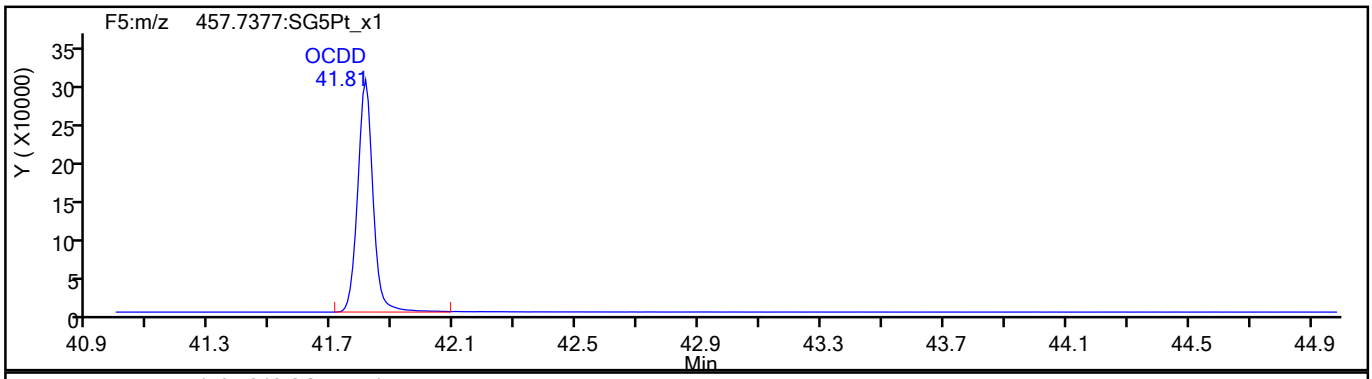

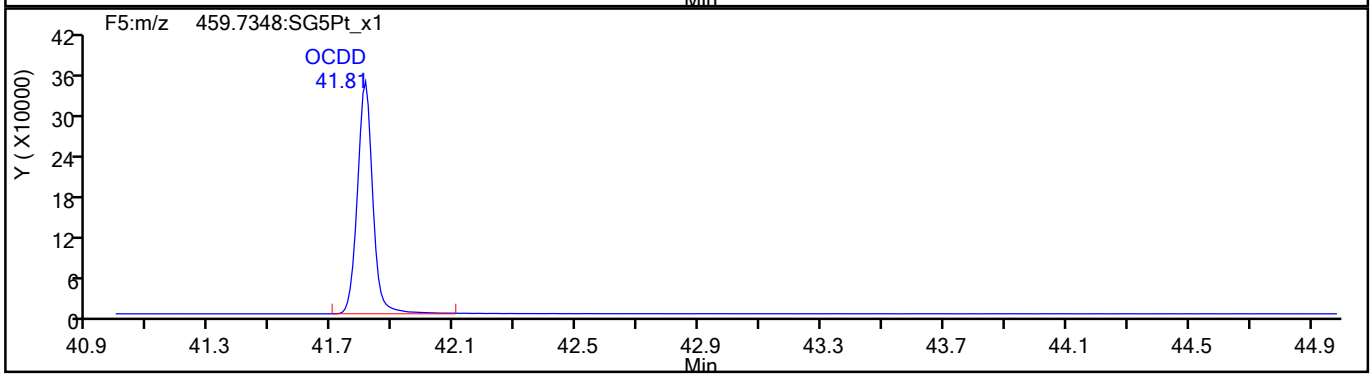

OCDD Standards

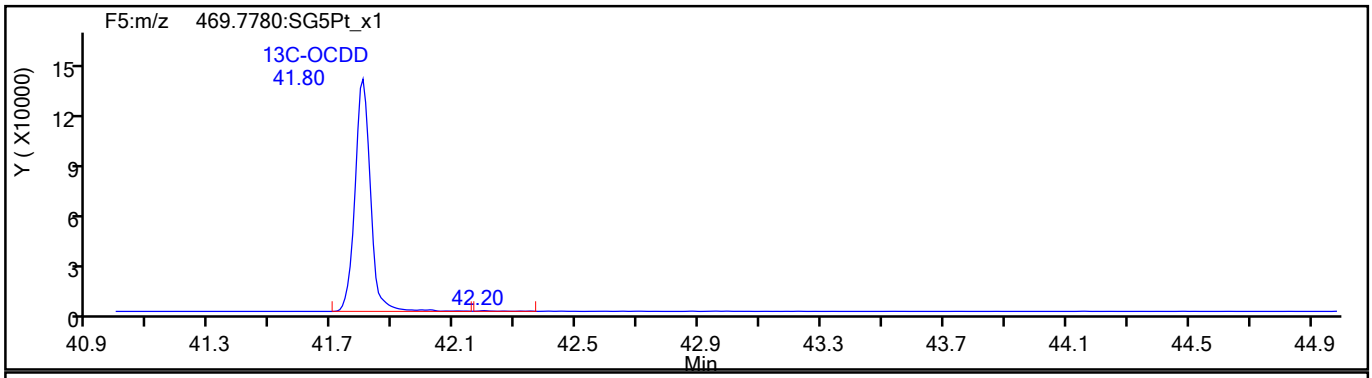

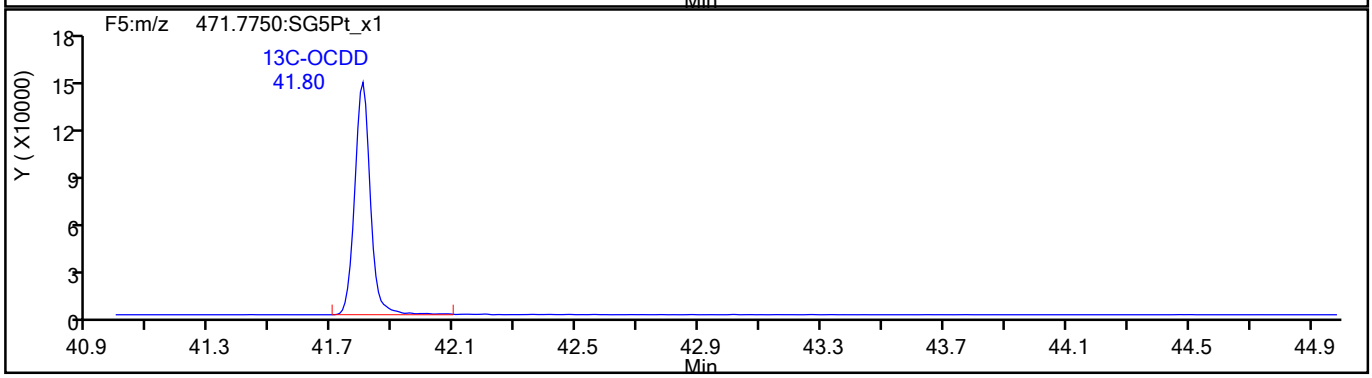

784512

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

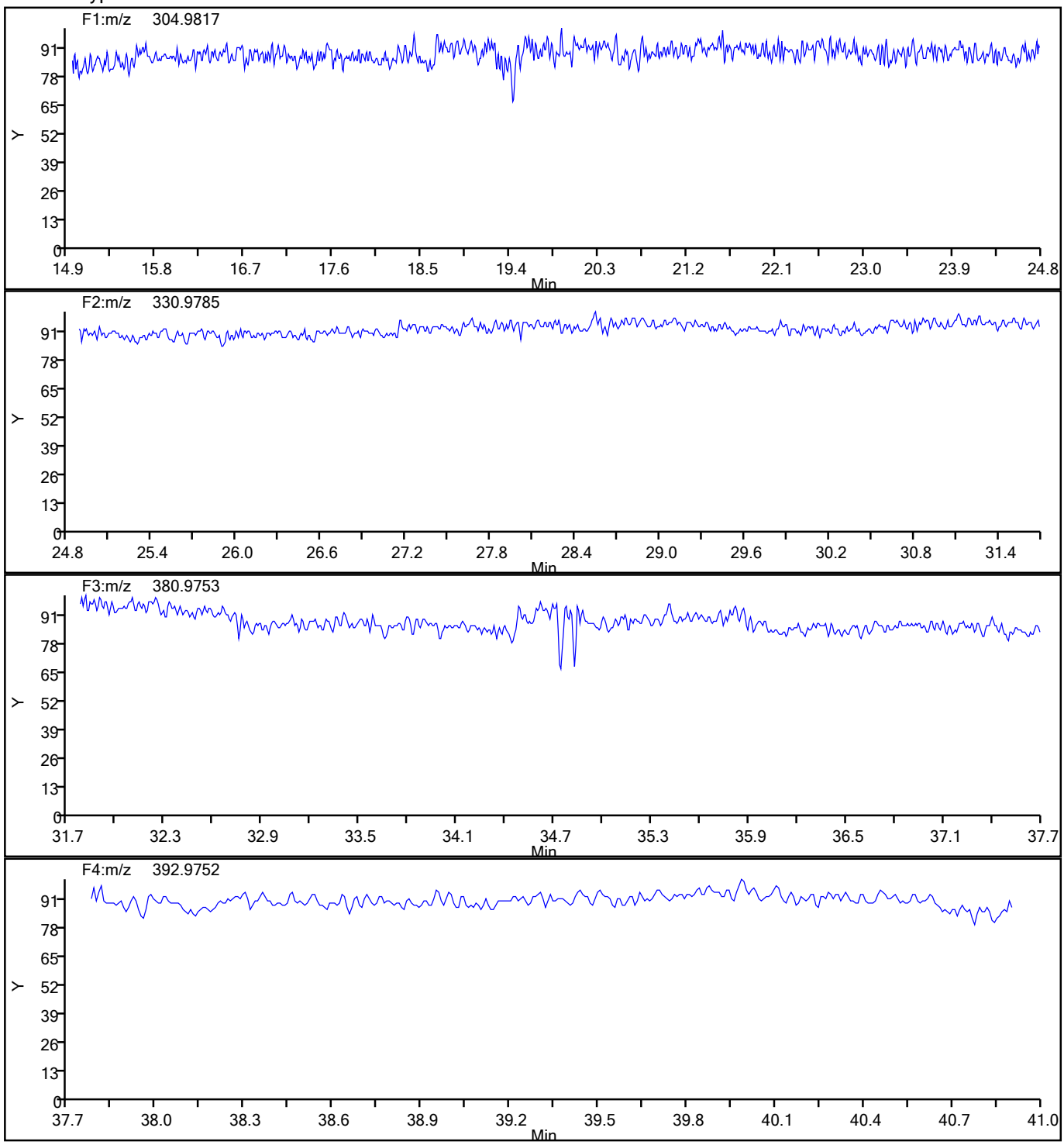

784513

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

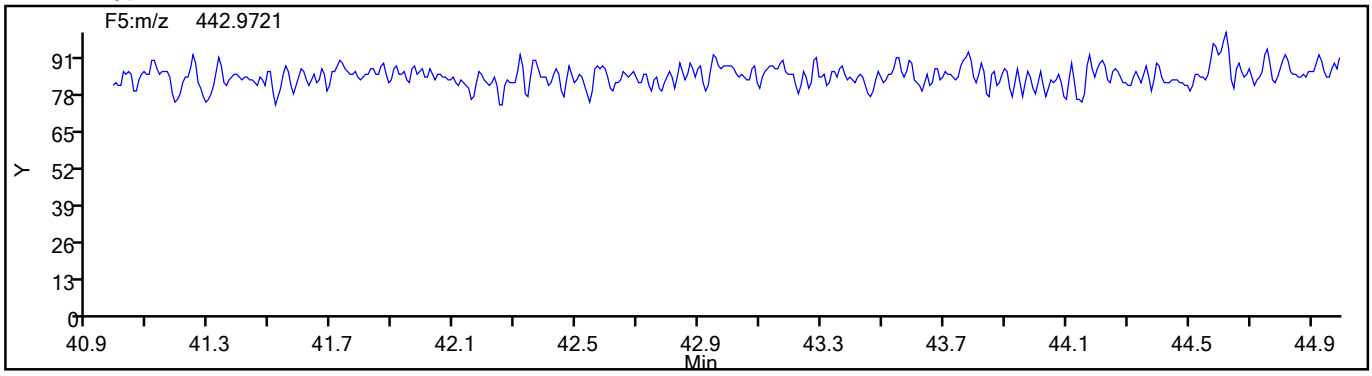

784514

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID: CCV 320-517196/2 Calibration Date: 08/17/2021 15:14

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_3.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.077		9.97	10.0	100	84-120
2,3,7,8-TCDD	AveID	1.075	0.9913		9.22	10.0	92	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.070		50.8	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9639		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.056		50.5	50.0	101	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.128		49.1	50.0	98	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.287		52.8	50.0	106	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.292		53.2	50.0	106	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	1.011		47.7	50.0	95	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9724		48.9	50.0	98	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.091		49.2	50.0	98	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.320		53.2	50.0	106	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.363		47.2	50.0	94	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.056		50.3	50.0	101	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.271		48.6	50.0	97	86-116
OCDD	AveID	1.062	1.047		98.6	100	99	79-126
OCDF	AveID	1.317	1.405		107	100	107	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.353		101	100	101	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9742		105	100	105	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.209		106	100	106	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.245		111	100	111	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7328		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.102		114	100	114	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.114		104	100	104	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.089		105	100	105	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7976		105	100	105	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9094		106	100	106	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.082		111	100	111	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.9310		127	100	127	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.8156		121	100	121	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.8837		129	100	129	77-129
13C-OCDD	Ave	0.5446	0.7572		278	200	139	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.015		10.1	10.0	101	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	17AU21DFS1_1	Resolution Check	RC 081721	46			KSS	1.000	
2	17AU21DFS1_2	WDM HRDXNCP_00044	WDM 081721	1	Dioxin		KSS	1.000	
3	17AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081621	2	Dioxin		KSS	1.000	
4	17AU21DFS1_4	SB Solvent Blank C14	SB 081621	3	Dioxin		KSS	1.000	
5	17AU21DFS1_5	mb 320-513586/1-a	mb 320-513586/1-a	4	1613B/Solid	D266	KSS	1.000	g
6	17AU21DFS1_6	lcs 320-513586/2-a	lcs 320-513586/2-a	5	1613B/Solid		KSS	1.000	g
7	17AU21DFS1_7	320-76724-a-16-a 10X	320-76724-a-16-a	6	1613B/Solid	D261	KSS	1.000	g
8	17AU21DFS1_8	320-76764-a-14-a 10X	320-76764-a-14-a	7	1613B/Solid	D263	KSS	1.000	g
9	17AU21DFS1_9	320-76764-a-16-a 10X	320-76764-a-16-a	8	1613B/Solid		KSS	1.000	g
10	17AU21DFS1_10	320-76764-a-38-a 10X	320-76764-a-38-a	9	1613B/Solid		KSS	1.000	g
11	17AU21DFS1_11	320-76765-a-4-a 5X	320-76765-a-4-a	10	1613B/Solid	D264	KSS	1.000	g
12	17AU21DFS1_12	320-76769-A-30-A	320-76769-A-30-A	11	1613B/Solid	D266	KSS	1.000	g
13	17AU21DFS1_13	320-76769-A-31-A	320-76769-A-31-A	12	1613B/Solid		KSS	1.000	g
14	17AU21DFS1_14	320-76769-A-32-A	320-76769-A-32-A	13	1613B/Solid		KSS	1.000	g
15	17AU21DFS1_15	SB Solvent Blank C14	SB 081721A	3	Dioxin		KSS	1.000	
16	17AU21DFS1_16	Resolution Check	RC 081721A	46			KSS	1.000	
17	17AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081621A	2	Dioxin		KSS	1.000	
18	17AU21DFS1_18	WDM HRDXNCP_00044	WDM 081721A	1	Dioxin		KSS	1.000	
19	17AU21DFS1_19	SB Solvent Blank C14	SB 081721B	3	Dioxin		KSS	1.000	
20	17AU21DFS1_20	320-76769-A-33-A	320-76769-A-33-A	14	1613B/Solid	D266	KSS	1.000	g
21	17AU21DFS1_21	320-76769-A-34-A	320-76769-A-34-A	15	1613B/Solid		KSS	1.000	g
22	17AU21DFS1_22	320-76887-A-2-A	320-76887-A-2-A	16	1613B/Solid		KSS	1.000	g
23	17AU21DFS1_23	320-76887-A-2-B MS	320-76887-A-2-B MS	17	1613B/Solid		KSS	1.000	g
24	17AU21DFS1_24	320-76887-A-2-C MSD	320-76887-A-2-C MSD	18	1613B/Solid		KSS	1.000	g
25	17AU21DFS1_25	320-76887-A-3-A	320-76887-A-3-A	19	1613B/Solid		KSS	1.000	g
26	17AU21DFS1_26	320-76887-A-4-A	320-76887-A-4-A	20	1613B/Solid		KSS	1.000	g
27	17AU21DFS1_27	320-76887-A-5-A	320-76887-A-5-A	21	1613B/Solid		KSS	1.000	g
28	17AU21DFS1_28	320-76887-A-6-A	320-76887-A-6-A	22	1613B/Solid		KSS	1.000	g
29	17AU21DFS1_29	320-76887-A-7-A	320-76887-A-7-A	23	1613B/Solid		KSS	1.000	g
30	17AU21DFS1_30	SB Solvent Blank C14	SB 081721C	3	Dioxin		KSS	1.000	
31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A	12	1613B/Solid	D266	KSS	1.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	1.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	1.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	1.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A	27	1613B/Solid		KSS	1.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	1.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	1.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	1.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A	31	1613B/Solid		KSS	1.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32	1613B/Solid		KSS	1.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	

Log file checked
08/18/21 SMA

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	17 Aug 2021 14:07
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11192 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10617 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10669 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10902 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10643 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10651 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 9999 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10320 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10065 [5%height]

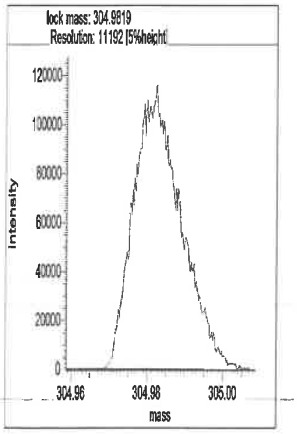

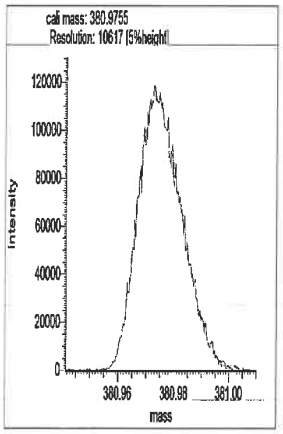

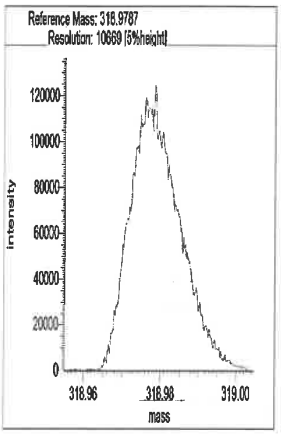

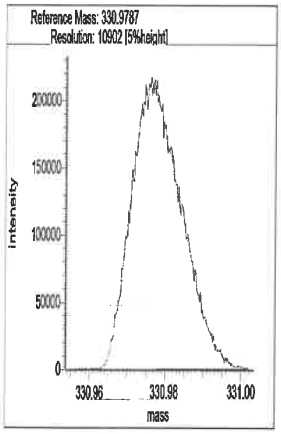

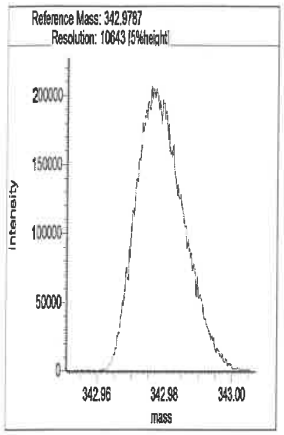

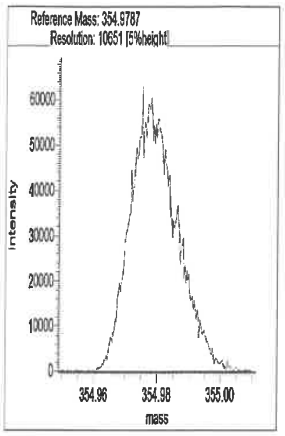

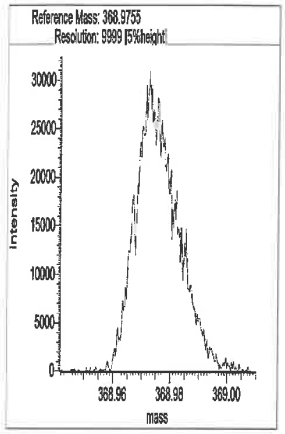

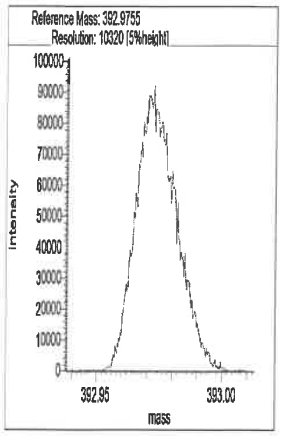

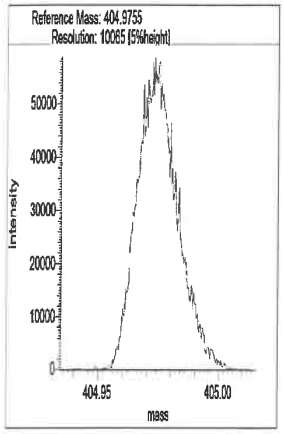

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11006 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10213 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10478 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11117 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10460 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10915 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10374 [5%height]

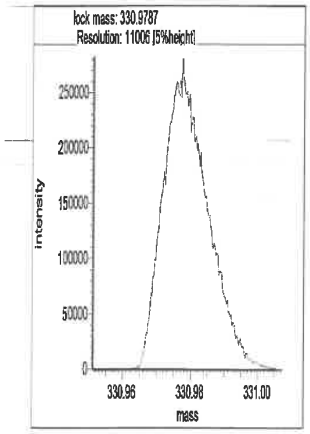

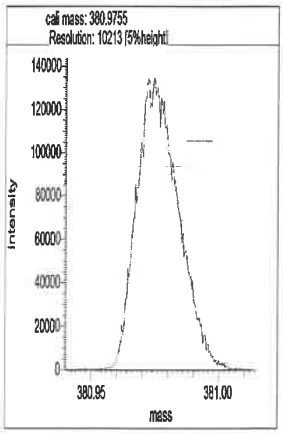

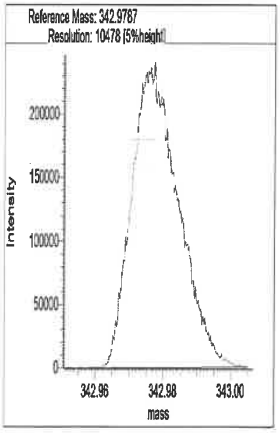

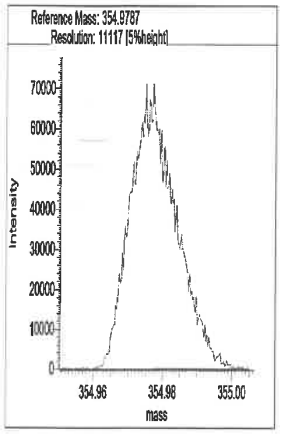

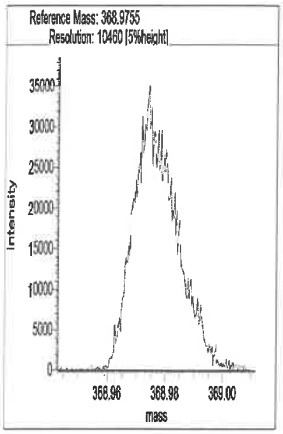

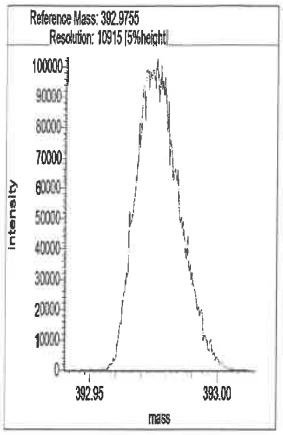

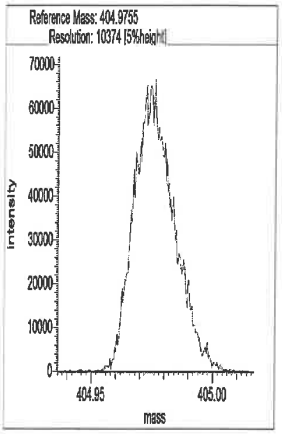

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10663 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10424 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10673 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10509 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11250 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10511 [5%height]

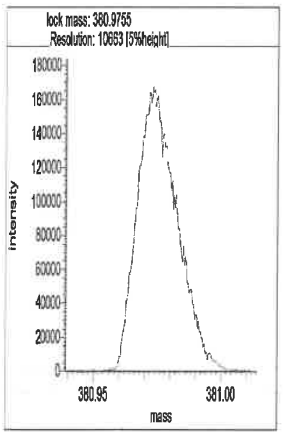

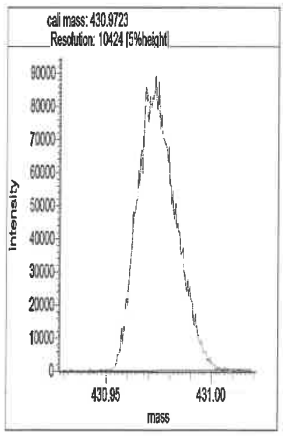

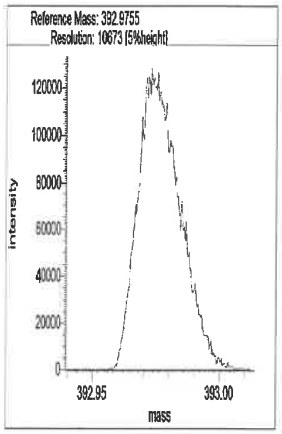

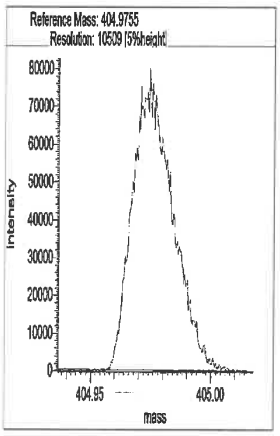

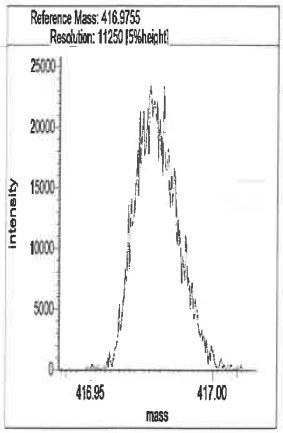

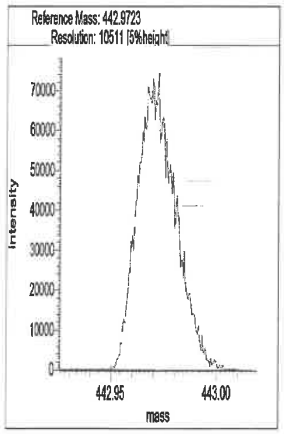

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10570 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11001 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10492 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10831 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10371 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10525 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 9876 [5%height]

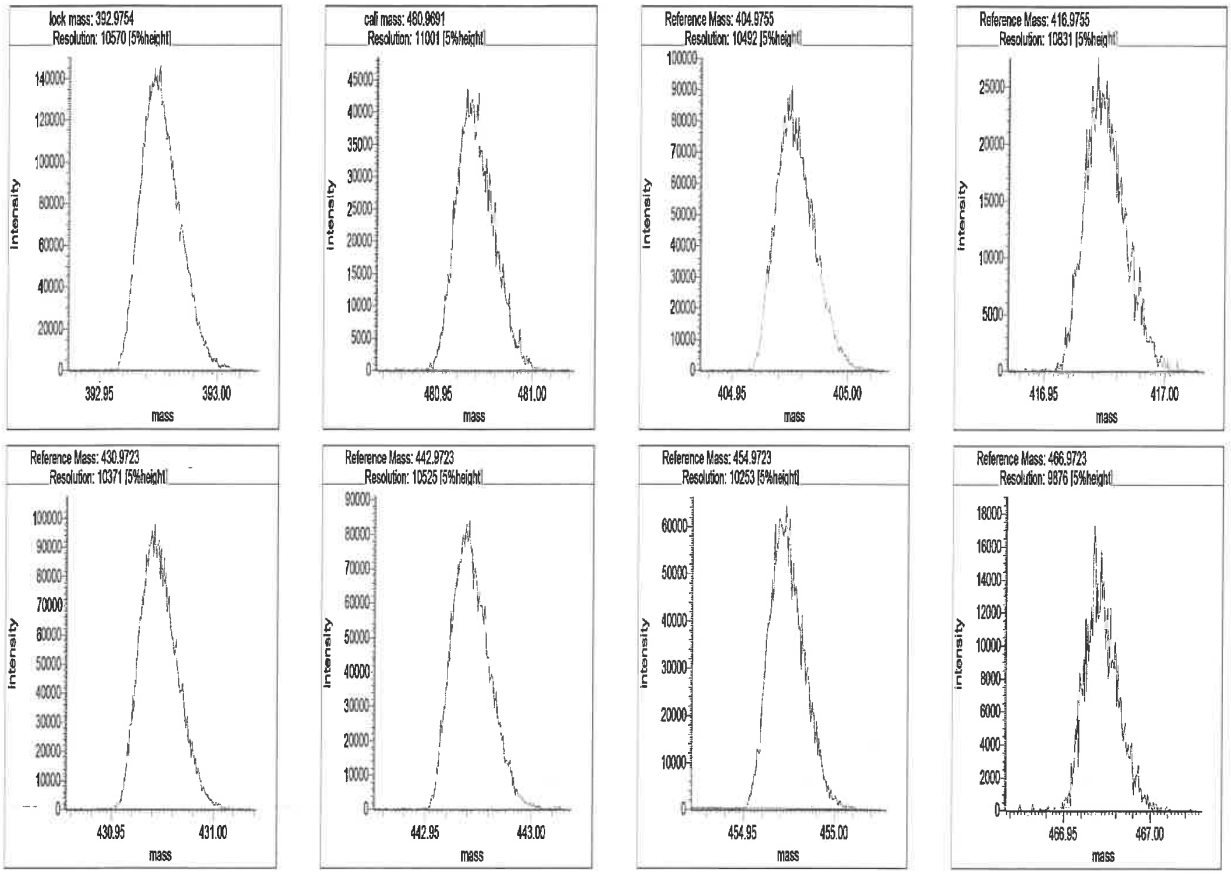

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10598 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10769 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11729 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10589 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10479 [5%height]

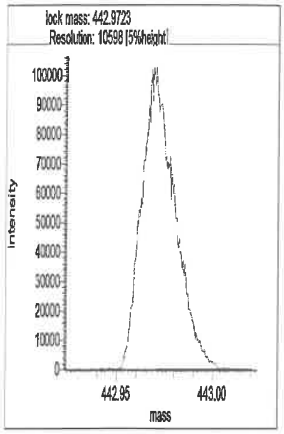
lock mass: 442.9723
Resolution: 10598 [5%height]
Intensity
mass

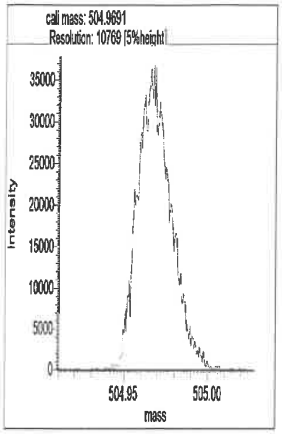
cali mass: 504.9691
Resolution: 10769 [5%height]
Intensity
mass

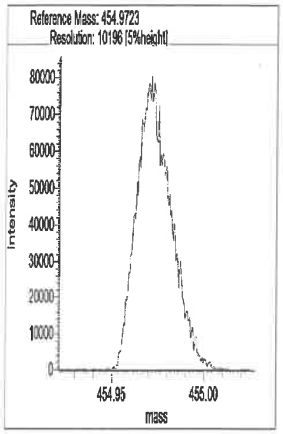
Reference Mass: 454.9723
Resolution: 10196 [5%height]
Intensity
mass

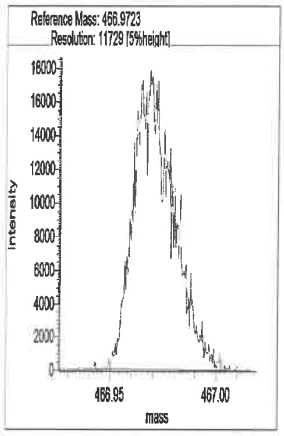
Reference Mass: 466.9723
Resolution: 11729 [5%height]
Intensity
mass

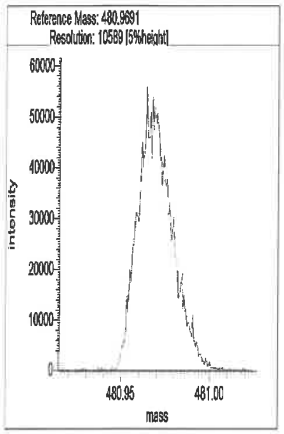
Reference Mass: 480.9691
Resolution: 10589 [5%height]
Intensity
mass

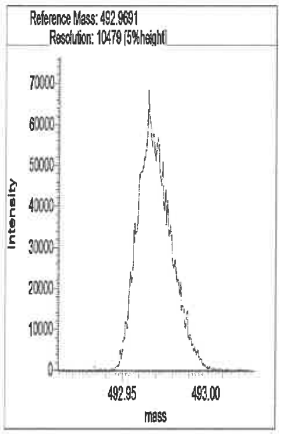
Reference Mass: 492.9691
Resolution: 10479 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 01:48
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10717 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10164 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10292 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10631 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10633 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10192 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10253 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9908 [5%height] 8/18/21 KS
Ref. mass 404.9755 [m/z] Resolution: 10394 [5%height]

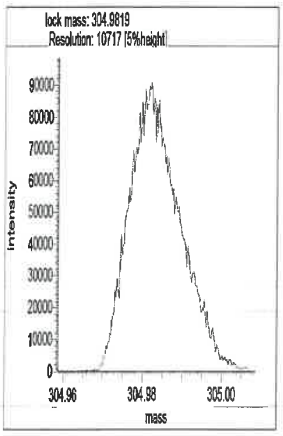

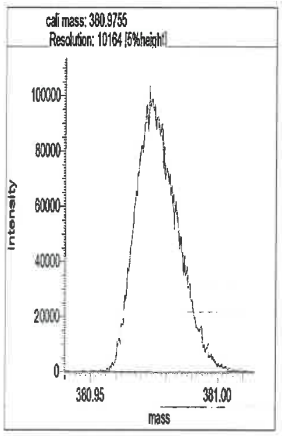

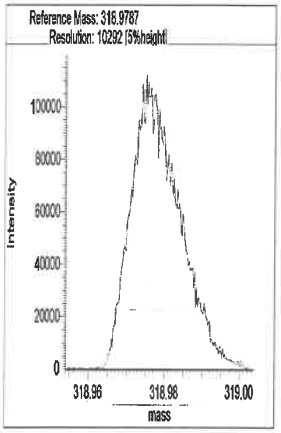

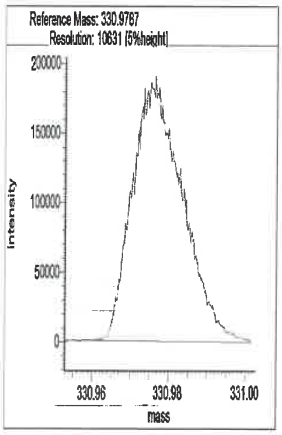

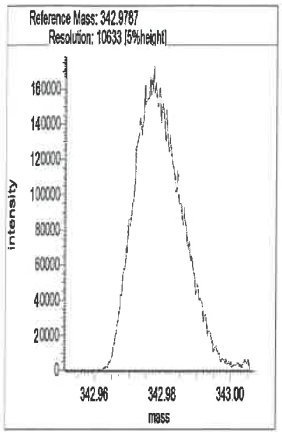

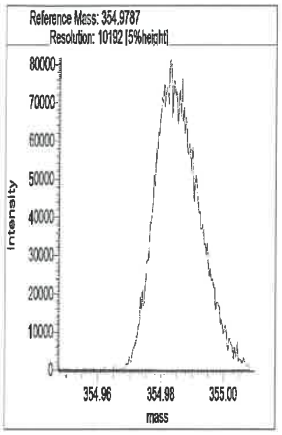

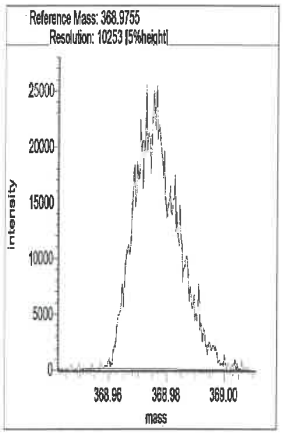

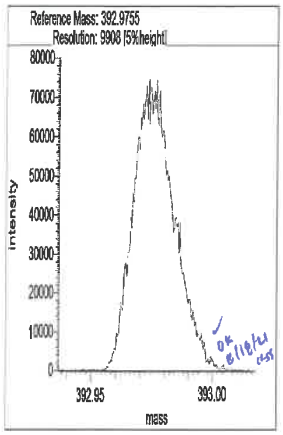

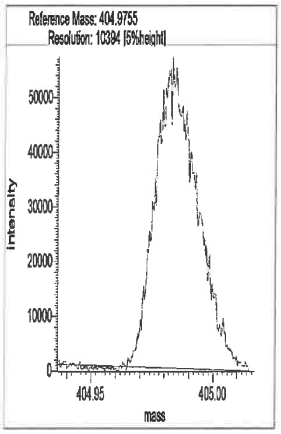

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10724 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10571 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10185 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10507 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 9890 [5%height] ✓

Ref. mass 392.9755 [m/z] Resolution: 10160 [5%height] 8/10/24 KJS

Ref. mass 404.9755 [m/z] Resolution: 9838 [5%height] ✓

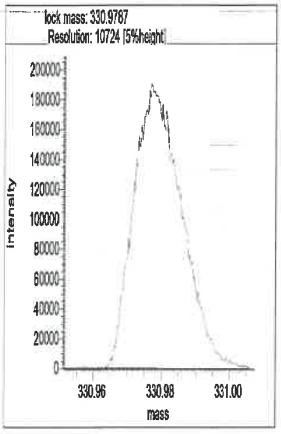

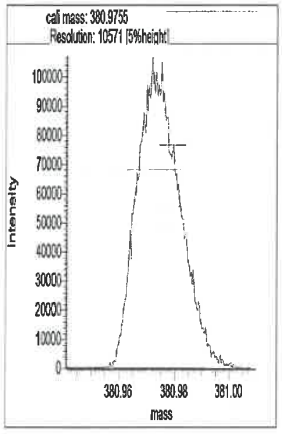

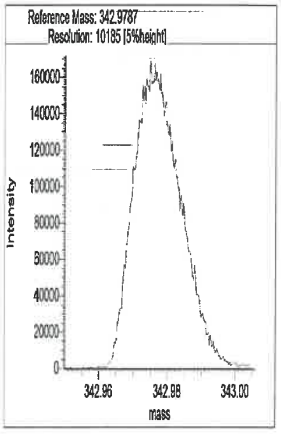

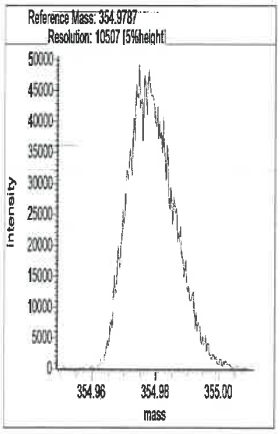

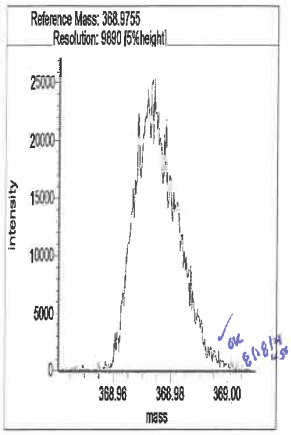

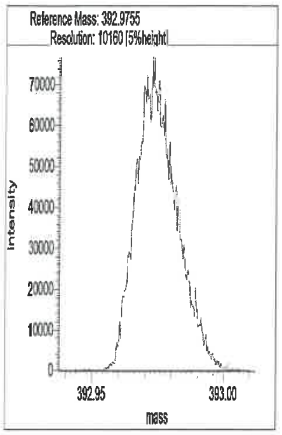

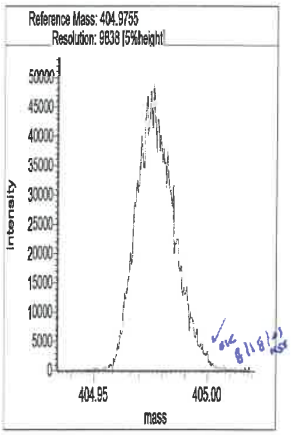

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10569 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10686 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10326 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11023 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11063 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11204 [5%height]

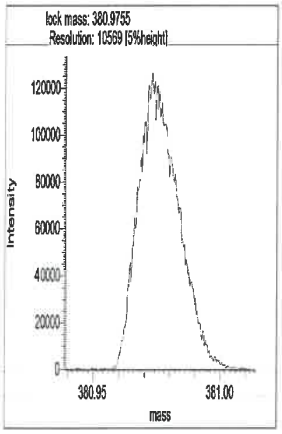

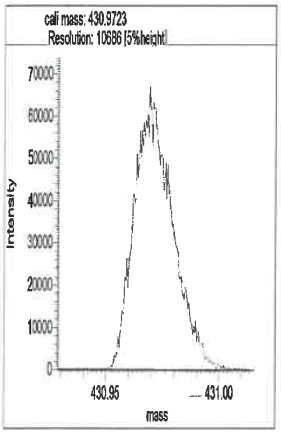

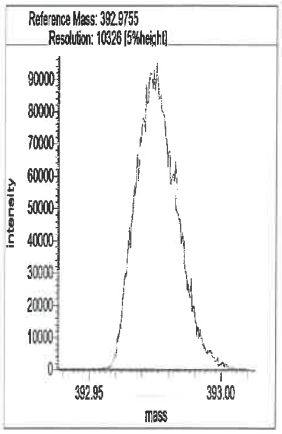

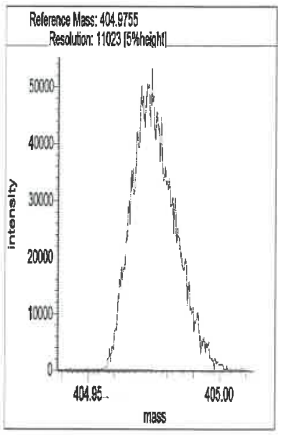

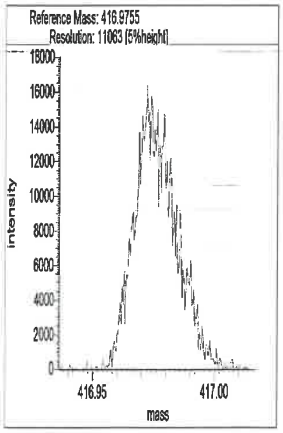

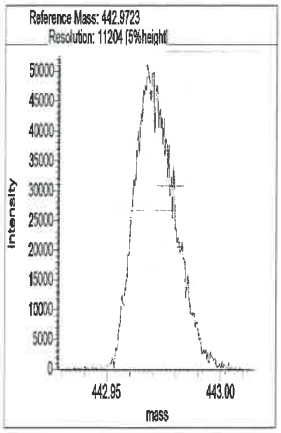

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10576 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10771 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10184 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11006 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10416 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11131 [5%height]

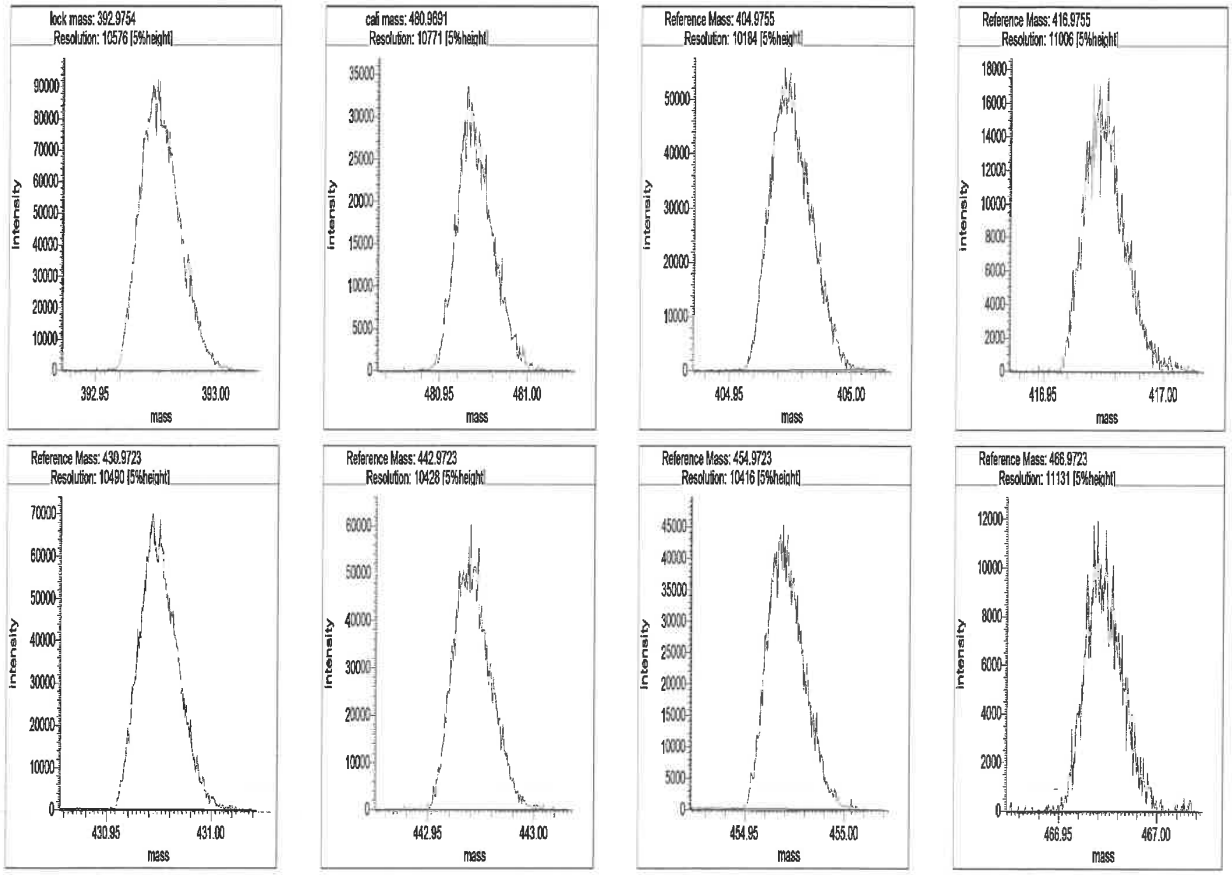

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10847 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11373 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10903 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10602 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10379 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10595 [5%height]

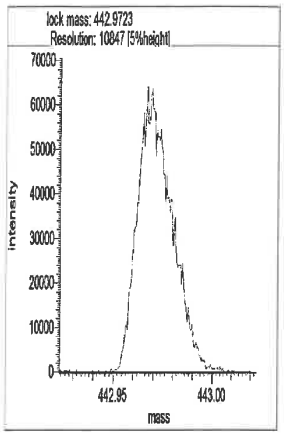
lock mass: 442.9723
Resolution: 10847 [5%height]
Intensity
mass

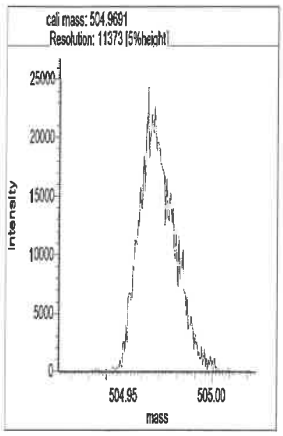
cali mass: 504.9691
Resolution: 11373 [5%height]
Intensity
mass

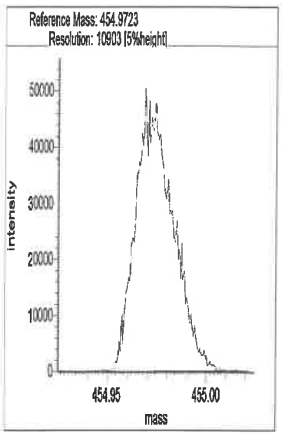
Reference Mass: 454.9723
Resolution: 10903 [5%height]
Intensity
mass

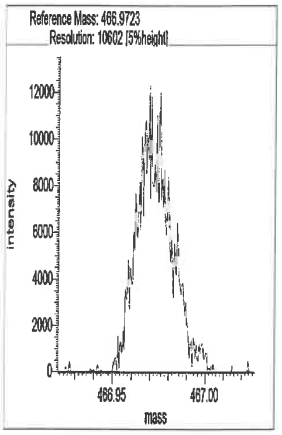
Reference Mass: 466.9723
Resolution: 10602 [5%height]
Intensity
mass

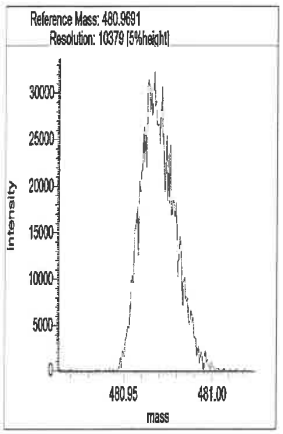
Reference Mass: 480.9691
Resolution: 10379 [5%height]
Intensity
mass

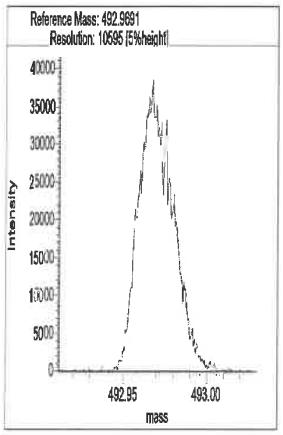
Reference Mass: 492.9691
Resolution: 10595 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

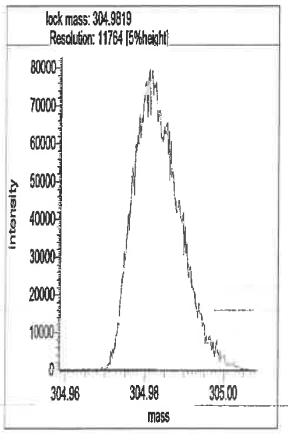

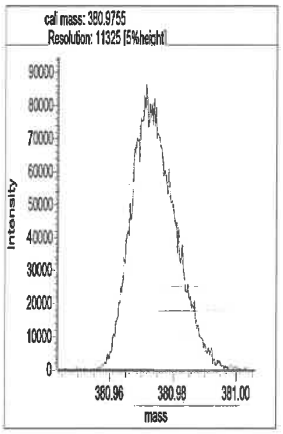

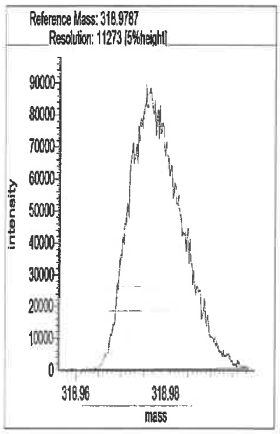

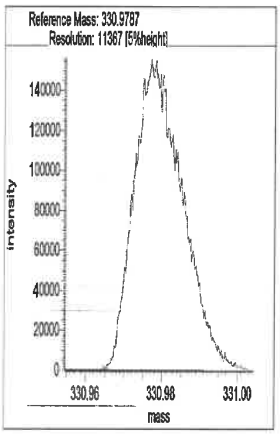

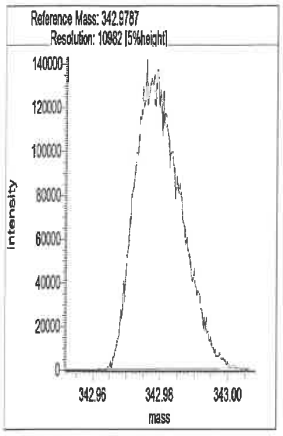

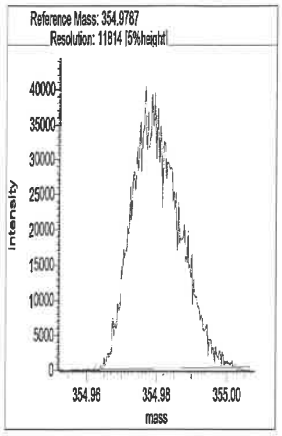

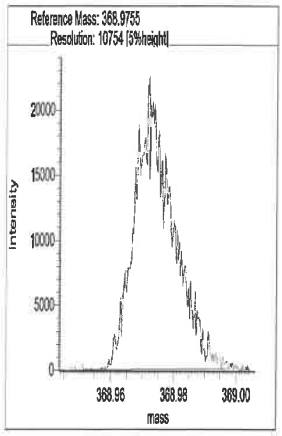

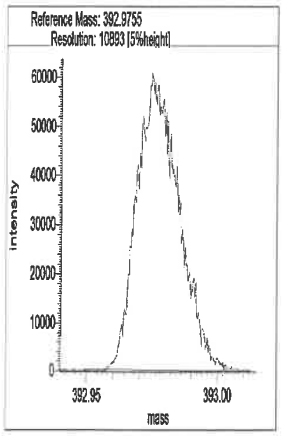

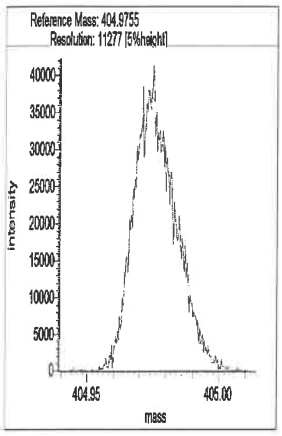

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

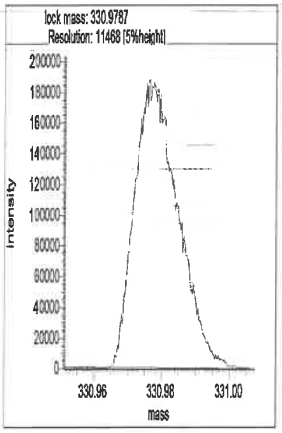

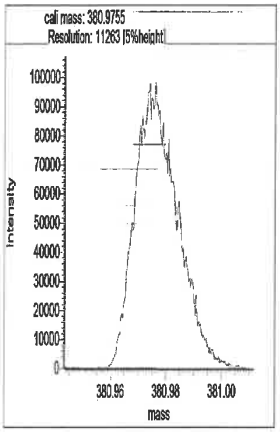

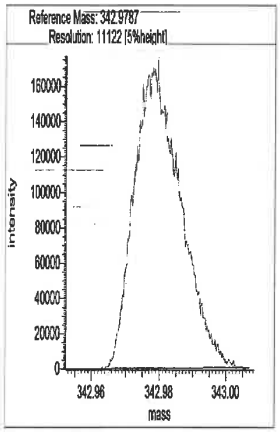

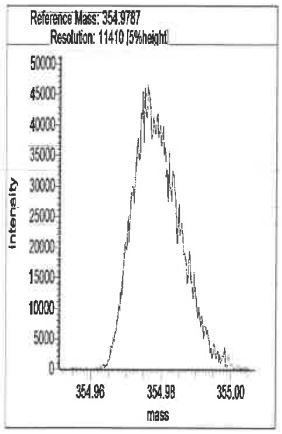

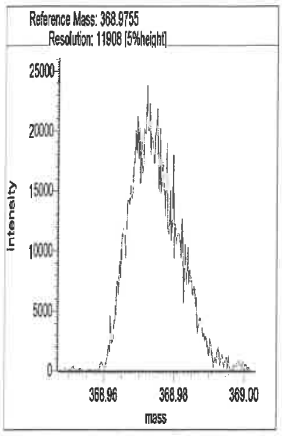

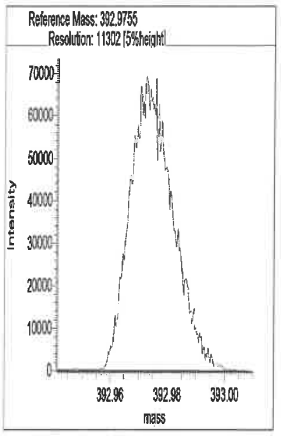

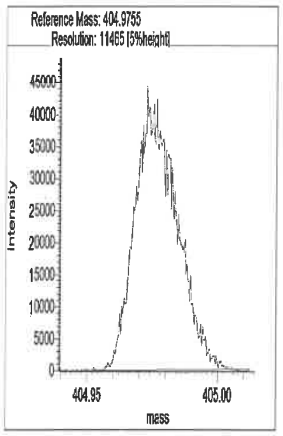

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

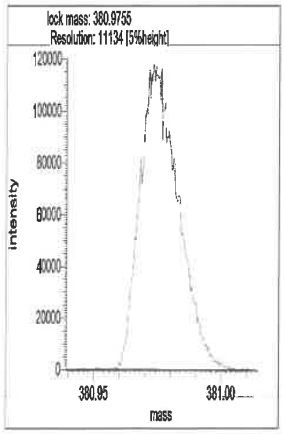

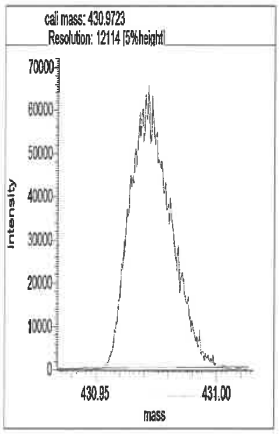

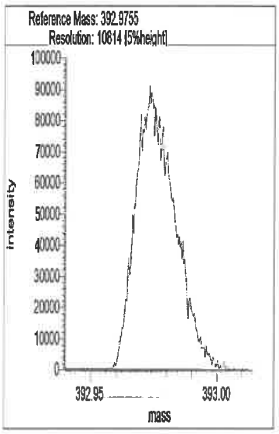

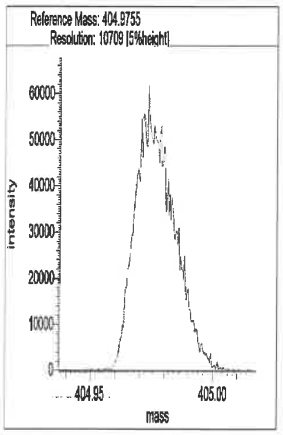

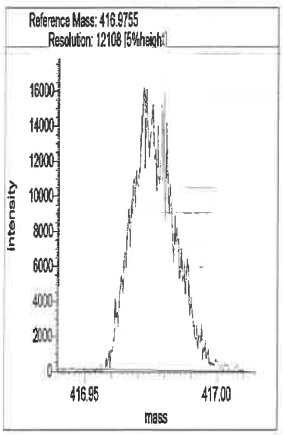

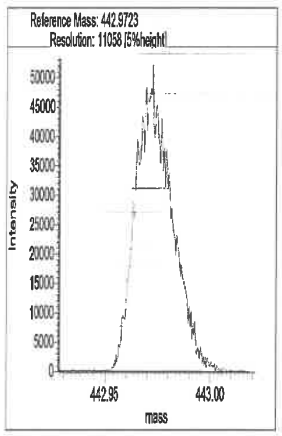

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

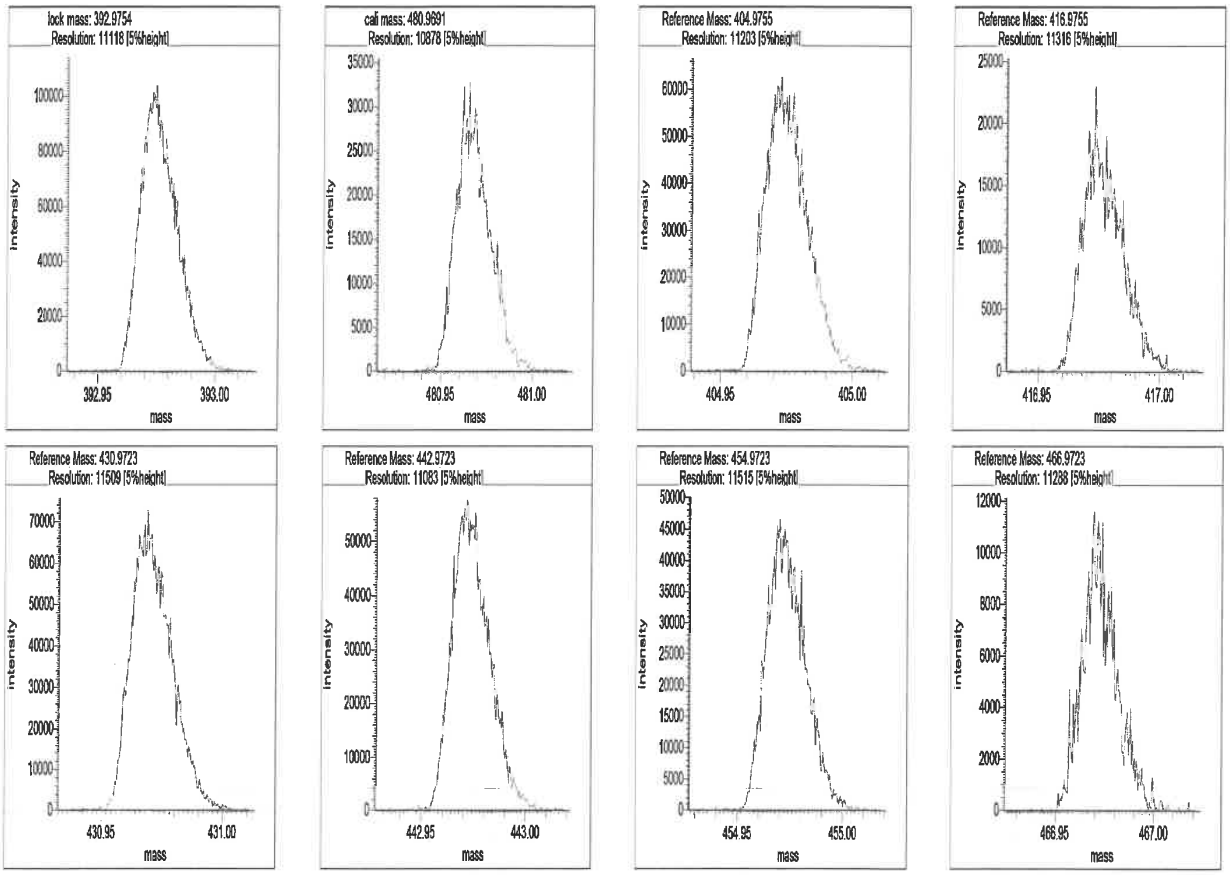

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

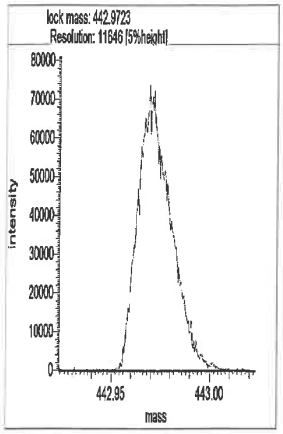
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

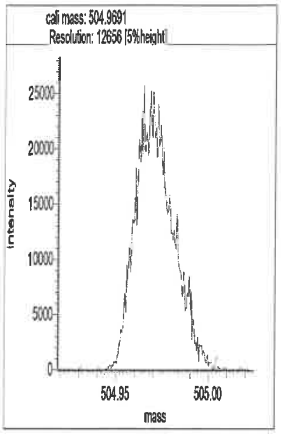
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

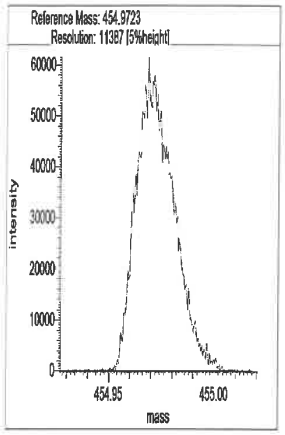
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

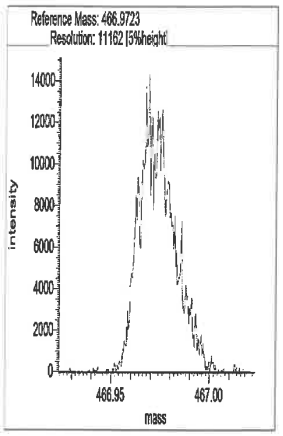
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

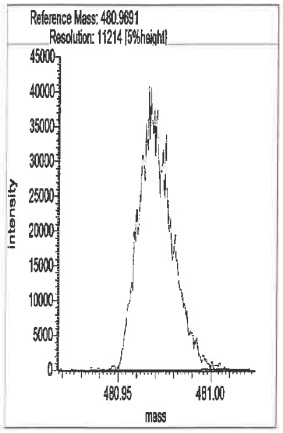
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

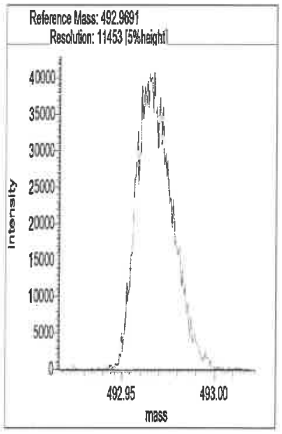
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Aug-2021 15:14:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:12 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 17:09:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.505	872844	0.84	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.517	1180751	0.79	1.3459	100.5	100.5	0.2362	0.2362	101	
2,3,7,8-TCDF	20.535	127151	0.81	1.0802	9.969	9.969	0.0201	0.0201	99.69	M
A Non-2,3,7,8-sub-TCDF	19.983	4146	0.77	1.0802	0.3965	0.3251	0.0201	0.1142	0.00	RQ
S Total TCDF					10.4	10.3	0.0201	0.0201		RQ
D 13C-2,3,7,8-TCDD	21.891	850336	0.79	0.9317	104.6	104.6	0.1468	0.1468	105	
$ 37Cl4-2,3,7,8-TCDD	21.926	88617		1.0083	10.1	10.1	0.006047	0.006047	101	
2,3,7,8-TCDD	21.900	84293	0.79	1.0753	9.218	9.218	0.0312	0.0312	92.18	
A Non-2,3,7,8-sub-TCDD	20.816	223	0.77	1.0753	0.0629	0.0244	0.0312	0.0312	0.00	RQ
S Total TCDD					9.281	9.243	0.0312	0.0312		RQ
D 13C-1,2,3,7,8-PeCDF	27.375	1055618	1.59	1.1405	106.0	106.0	0.3337	0.3337	106	
1,2,3,7,8-PeCDF	27.401	564968	1.61	1.0543	50.8	50.8	0.1524	0.1524	102	
D 13C-2,3,4,7,8-PeCDF	28.900	1086262	1.60	1.1253	110.6	110.6	0.3382	0.3382	111	
2,3,4,7,8-PeCDF	28.934	523506	1.59	1.0079	47.8	47.8	0.1622	0.1622	95.63	
A F1 PeCDFs	24.695	113	1.55	1.0311	0.0243	0.0102	0.003144	0.008151	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.196						0.1572	0.1572		n
S Total PeCDF					98.6	98.6	0.1573	0.1573		RQ
D 13C-1,2,3,7,8-PeCDD	29.734	639607	1.60	0.7165	102.3	102.3	0.1969	0.1969	102	
1,2,3,7,8-PeCDD	29.750	337811	1.56	1.0465	50.5	50.5	0.0678	0.0678	101	
A Non-2,3,7,8-sub-PeCDD	28.556						0.0678	0.0678		
S Total PeCDD					50.5	50.5	0.0678	0.0678		
D 13C-1,2,3,4,7,8-HxCDF	35.008	1081014	0.54	0.9648	114.2	114.2	0.3692	0.3692	114	
1,2,3,4,7,8-HxCDF	35.034	609522	1.29	1.1474	49.1	49.1	0.2200	0.2200	98.28	
D 13C-1,2,3,6,7,8-HxCDF	35.177	1092903	0.52	1.0708	104.0	104.0	0.3326	0.3326	104	
1,2,3,6,7,8-HxCDF	35.185	703282	1.26	1.2178	52.8	52.8	0.2080	0.2080	106	
D 13C-2,3,4,6,7,8-HxCDF	35.977	1067773	0.54	1.0413	104.5	104.5	0.3421	0.3421	105	
2,3,4,6,7,8-HxCDF	35.994	689655	1.27	1.2145	53.2	53.2	0.1898	0.1898	106	
D 13C-1,2,3,7,8,9-HxCDF	36.861	1061355	0.53	0.9731	111.2	111.2	0.3660	0.3660	111	
1,2,3,7,8,9-HxCDF	36.878	700315	1.29	1.2401	53.2	53.2	0.1808	0.1808	106	
A Non-2,3,7,8-sub-HxCDF	35.117						0.1987	0.1987		

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					208.4	208.4	0.1996	0.1996		
* 13C-1,2,3,7,8,9-HxCDD	36.667	980938	1.26	1.8E+04	100.0	100.0				M
D 13C-1,2,3,4,7,8-HxCDD	36.196	782379	1.29	0.7587	105.1	105.1	0.2282	0.2282	105	
1,2,3,4,7,8-HxCDD	36.204	395636	1.27	1.0608	47.7	47.7	0.1125	0.1125	95.34	
D 13C-1,2,3,6,7,8-HxCDD	36.305	892057	1.27	0.8593	105.8	105.8	0.2015	0.2015	106	
1,2,3,6,7,8-HxCDD	36.322	433723	1.26	0.9933	48.9	48.9	0.1139	0.1139	97.89	
1,2,3,7,8,9-HxCDD	36.684	456594	1.27	1.1094	49.2	49.2	0.1047	0.1047	98.32	
A Non-2,3,7,8-sub-HxCDD	35.475						0.1102	0.1102		
S Total HxCDD					145.8	145.8	0.1104	0.1104		
D 13C-1,2,3,4,6,7,8-HpCDF	38.668	913255	0.46	0.7359	126.5	126.5	0.4372	0.4372	127	
1,2,3,4,6,7,8-HpCDF	38.685	622245	1.03	1.4421	47.2	47.2	0.2066	0.2066	94.50	
D 13C-1,2,3,4,7,8,9-HpCDF	39.923	866894	0.46	0.6854	128.9	128.9	0.4695	0.4695	129	M
1,2,3,4,7,8,9-HpCDF	39.932	551031	1.06	1.3092	48.6	48.6	0.2261	0.2261	97.11	
A Non-2,3,7,8-sub-HpCDF	39.301						0.2159	0.2159		n
S Total HpCDF					95.8	95.8	0.2164	0.2164		
D 13C-1,2,3,4,6,7,8-HpCDD	39.612	800046	1.03	0.6745	120.9	120.9	0.3371	0.3371	121	
1,2,3,4,6,7,8-HpCDD	39.620	422590	1.04	1.0503	50.3	50.3	0.1108	0.1108	101	
A Non-2,3,7,8-sub-HpCDD	39.297	9241	1.16	1.0503	1.100	1.100	0.1108	1.100	0.00	
S Total HpCDD					51.4	51.4	0.1108	0.1108		
D 13C-OCDD	42.118	1485464	0.88	0.5446	278.0	278.0	0.3266	0.3266	139	
OCDF	42.211	1043496	0.93	1.3168	106.7	106.7	0.1409	0.1409	107	
OCDD	42.126	777414	0.91	1.0620	98.6	98.6	0.1110	0.1110	98.56	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Aug-2021 15:14:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:12 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 17:09:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.505	21.505	0		399246	51899	51	127	1018		a
333.9338	21.470	21.505	-2		473598	62915	12	30	5243	0.84(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.517	20.517	0	0.954	520031	67444	106	265	636		
317.9389	20.509	20.517	-1	0.954	660720	93847	40	100	2346	0.79(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.535	20.580	-3	1.001	56730	7695	5	12	1539		M
305.8987	20.543	20.580	-2	1.001	70421	9641	9	22	1071	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.938	19.983	-63	0.923	170	62	5	12	12		
305.8987	18.955	19.983	-62	0.924	483	58	9	22	6	0.35(0.65-0.89)	
	Empc Correction				220	80	9	22	9		
303.9016	19.805	19.983	-11	0.965	792	127	5	12	25		
	Empc Correction				587	121	5	12	24		
305.8987	19.840	19.983	-9	0.967	763	158	9	22	18	1.04(0.65-0.89)	
303.9016	20.809	19.983	49	1.014	966	211	5	12	42		
	Empc Correction				633	132	5	12	26		
305.8987	20.809	19.983	49	1.014	823	172	9	22	19	1.17(0.65-0.89)	
303.9016	20.869	19.983	53	1.017	259	106	5	12	21		
305.8987	20.904	19.983	55	1.019	397	182	9	22	20	0.65(0.65-0.89)	
303.9016	22.123	19.983	128	1.078	128	60	5	12	12		
305.8987	22.115	19.983	128	1.078	276	92	9	22	10	0.46(0.65-0.89)	
	Empc Correction				166	77	9	22	9		
13C-2,3,7,8-TCDD											
331.9368	21.891	21.891	0	1.018	376057	46512	51	127	912		
333.9338	21.866	21.891	-2	1.017	474279	57849	12	30	4821	0.79(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											
327.8847	21.926	21.926	0	1.020	88617	11185	3	7	3728		
2,3,7,8-TCDD											
319.8965	21.900	21.928	-2	1.000	37238	5208	11	27	473		
321.8936	21.917	21.928	-1	1.001	47055	5923	3	7	1974	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.347	20.816	92	1.021	449	96	11	27	9		
	Empc Correction				97	52	11	27	5		
321.8936	22.364	20.816	93	1.022	126	68	3	7	23	3.56(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.375	27.375	0	1.273	648386	95776	93	232	1030		
353.8970	27.375	27.375	0	1.273	407232	59794	82	205	729	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.401	27.401	0	1.001	348720	51626	58	145	890		
341.8567	27.401	27.401	0	1.001	216248	31764	42	105	756	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.900	28.900	0	1.344	668645	94221	93	232	1013		
353.8970	28.908	28.900	1	1.344	417617	58719	82	205	716	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.934	28.934	0	1.001	321600	44628	58	145	769		
341.8567	28.934	28.934	0	1.001	201906	27959	42	105	666	1.59(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.107	24.695	-35	0.881	55	39	1	2	39		
341.8567	24.098	24.695	-36	0.880	103	52	1	2	52	0.53(1.32-1.78)	
	Empc Correction				35	25	1	2	25		
339.8597	24.167	24.695	-32	0.883	14	7	1	2	7		
341.8567	24.158	24.695	-32	0.882	96	38	1	2	38	0.15(1.32-1.78)	
	Empc Correction				9	4	1	2	4		
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.990	28.196	-12	1.022	3347	463	58	145	8		
341.8567	28.007	28.196	-11	1.023	1993	308	42	105	7	1.68(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.734	29.734	0	1.383	393342	53131	43	107	1236		
369.8919	29.717	29.734	-1	1.382	246265	31489	22	55	1431	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.750	29.750	0	1.001	206041	26780	17	42	1575		
357.8516	29.742	29.750	-1	1.000	131770	17431	7	17	2490	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						17	42			
357.8516	28.556						7	17			
13C-1,2,3,4,7,8-HxCDF											
383.8639	35.008	35.008	0	0.955	377816	74219	109	272	681		
385.8610	35.017	35.008	1	0.955	703198	136560	193	482	708	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.034	35.034	0	1.001	343279	67338	118	295	571		
375.8178	35.034	35.034	0	1.001	266243	52523	95	237	553	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.177	35.177	0	0.959	376027	74811	109	272	686		
385.8610	35.177	35.177	0	0.959	716876	135202	193	482	701	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.185	35.185	0	1.000	392015	74402	118	295	631		
375.8178	35.185	35.185	0	1.000	311267	58994	95	237	621	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.977	35.977	0	0.981	372963	83270	109	272	764		
385.8610	35.985	35.977	1	0.981	694810	147559	193	482	765	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.994	35.994	0	1.000	386238	84058	118	295	712		
375.8178	35.994	35.994	0	1.000	303417	65154	95	237	686	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.861	36.861	0	1.005	369514	83111	109	272	762		
385.8610	36.870	36.861	1	1.006	691841	154196	193	482	799	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.878	36.878	0	1.000	393832	87889	118	295	745		
375.8178	36.878	36.878	0	1.000	306483	68413	95	237	720	1.29(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.117						118	295			
375.8178	35.117						95	237			
13C-1,2,3,7,8,9-HxCDD											M
401.8559	36.667	36.667	0		547692	117622	80	200	1470		M
403.8529	36.667	36.667	0		433246	94341	67	167	1408	1.26(1.05-1.43)	M
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.196	36.196	0	0.987	440249	100900	80	200	1261		
403.8529	36.187	36.196	-1	0.987	342130	79230	67	167	1183	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.204	36.204	0	1.000	221550	51035	52	130	981		
391.8127	36.204	36.204	0	1.000	174086	38510	34	85	1133	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.305	36.305	0	0.990	498419	104261	80	200	1303		
403.8529	36.305	36.305	0	0.990	393638	85751	67	167	1280	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.322	36.322	0	1.000	242161	51161	52	130	984		
391.8127	36.322	36.322	0	1.000	191562	39885	34	85	1173	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.684	36.684	0	1.013	255516	54919	52	130	1056		
391.8127	36.684	36.684	0	1.013	201078	43958	34	85	1293	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.475						52	130			
391.8127	35.475						34	85			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.668	38.668	0	1.055	285619	74123	93	232	797		
419.8220	38.668	38.668	0	1.055	627636	159832	180	450	888	0.46(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											
407.7817	38.685	38.685	0	1.000	315818	79975	147	367	544		
409.7788	38.685	38.685	0	1.000	306427	78448	132	330	594	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											M
417.8250	39.923	39.923	0	1.089	274228	74693	93	232	803		M
419.8220	39.923	39.923	0	1.089	592666	160744	180	450	893	0.46(0.37-0.51)	M
1,2,3,4,7,8,9-HpCDF											
407.7817	39.932	39.932	0	1.000	282904	78576	147	367	535		
409.7788	39.932	39.932	0	1.000	268127	73201	132	330	555	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.912	39.301	-23	1.006	4859	976	147	367	7		
409.7788	38.912	39.301	-23	1.006	4264	991	132	330	8	1.14(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.612	39.612	0	1.080	406701	112657	68	170	1657		
437.8140	39.612	39.612	0	1.080	393345	110709	125	312	886	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.620	39.620	0	1.000	215461	58465	40	100	1462		
425.7737	39.620	39.620	0	1.000	207129	56768	64	160	887	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.988	39.297	-19	0.984	4970	1304	40	100	33		
425.7737	38.996	39.297	-18	0.984	4271	1241	64	160	19	1.16(0.88-1.20)	
13C-OCDD											
469.7780	42.118	42.118	0	1.149	697151	158566	72	180	2202		
471.7750	42.109	42.118	-1	1.148	788313	180878	79	197	2290	0.88(0.76-1.02)	
OCDF											
441.7428	42.211	42.211	0	1.002	502591	114869	45	112	2553		
443.7399	42.211	42.211	0	1.002	540905	125676	81	202	1552	0.93(0.76-1.02)	
OCDD											
457.7377	42.126	42.126	0	1.000	369625	84840	36	90	2357		
459.7348	42.126	42.126	0	1.000	407789	93747	44	110	2131	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 17-Aug-2021 15:14:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.983

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1180751	161291

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1180751	161291

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.938	170	62	483	58	0.0512	0.35	RnQ
18.938	170	62	220	80	0.0306		Empc Correction
19.805	792	127	763	158	0.1219	1.04	RQ
19.805	587	121	763	158	0.1058		Empc Correction
20.809	966	211	823	172	0.1403	1.17	RQ
20.809	633	132	823	172	0.1142		Empc Correction
20.869	259	106	397	182	0.0514	0.65	
22.123	128	60	276	92	0.0317	0.46	RQ
22.123	128	60	166	77	0.0231		Empc Correction
Signal Totals:							
	1777	481	2369	669			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5057	1228				0.84	RQ
	4146	1150					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3965 = (5057 * 100.000) / (1180751 * 1.080)
Empc Amount: 0.3251 = (4146 * 100.000) / (1180751 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	17-Aug-2021 15:14:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-TCDD, RT: 20.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	850336	104361

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	850336	104361

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.347	449	96	126	68	0.0629	3.56	RnQ
22.347	97	52	126	68	0.0244		Empc Correction
Signal Totals:							
	97	52	126	68			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	575	164				3.56	RQ
	223	120					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0629 = (575 * 100.000) / (850336 * 1.075)

Empc Amount: 0.0244 = (223 * 100.000) / (850336 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 17-Aug-2021 15:14:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.695

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1055618	155570
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1086262	152940

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1070940	154255

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.107	55	39	103	52	0.0143	0.53	RQ
24.107	55	39	35	25	0.008151		Empc Correction
24.167	14	7	96	38	0.0100	0.15	RnQ
24.167	14	7	9	4	0.002083		Empc Correction
Signal Totals:							
	69	46	44	29			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	268	136				0.35	RQ
	113	75					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0243 = (268 * 100.000) / (1070940 * 1.031)
Empc Amount: 0.0102 = (113 * 100.000) / (1070940 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 17-Aug-2021 15:14:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.297

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	800046	223366

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	800046	223366

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.988	4970	1304	4271	1241	1.10	1.16	
Signal Totals:							
	4970	1304	4271	1241			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9241	2545				1.16	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.100 = (9241 * 100.000) / (800046 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Not Detected
Expected RT: 21.50

Processing Integration Results

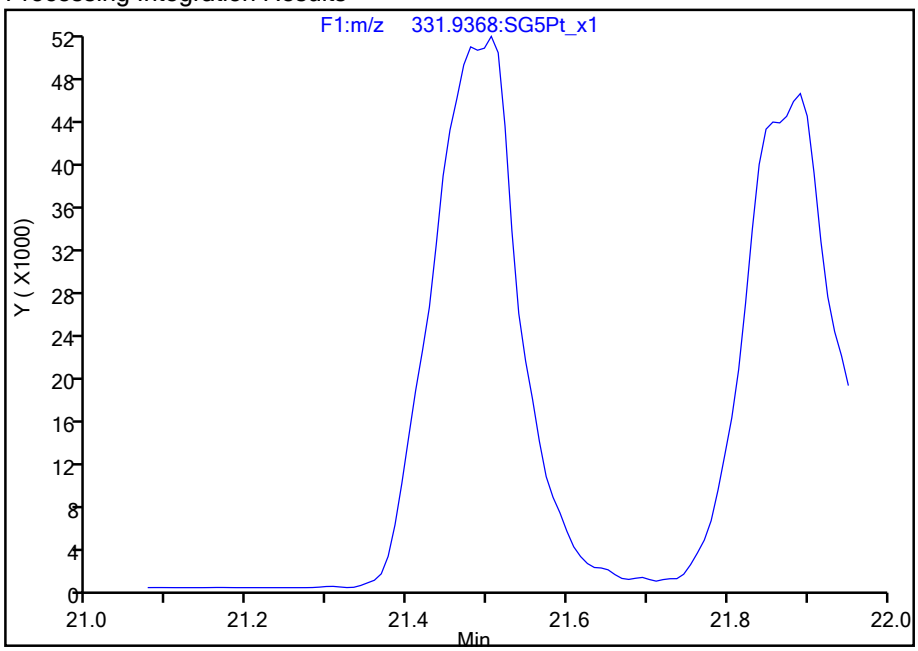

Manual Integration Results

RT: 21.50
Area: 399246
Amount: 100.0000
Amount Units: pg/ul

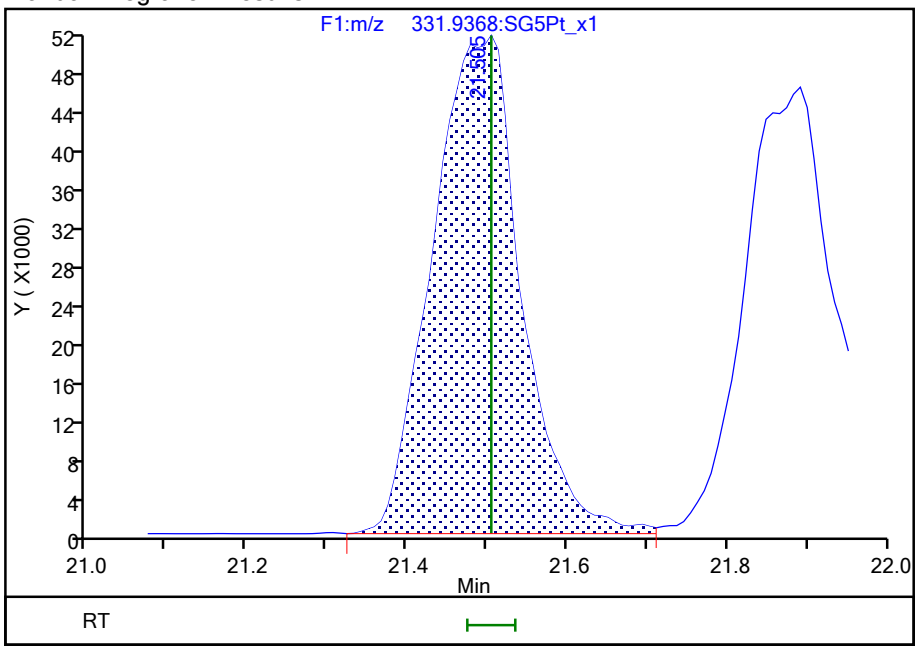

Reviewer: stephensk, 17-Aug-2021 16:07:19
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

784543

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.53
Area: 54682
Amount: 9.808624
Amount Units: pg/ul

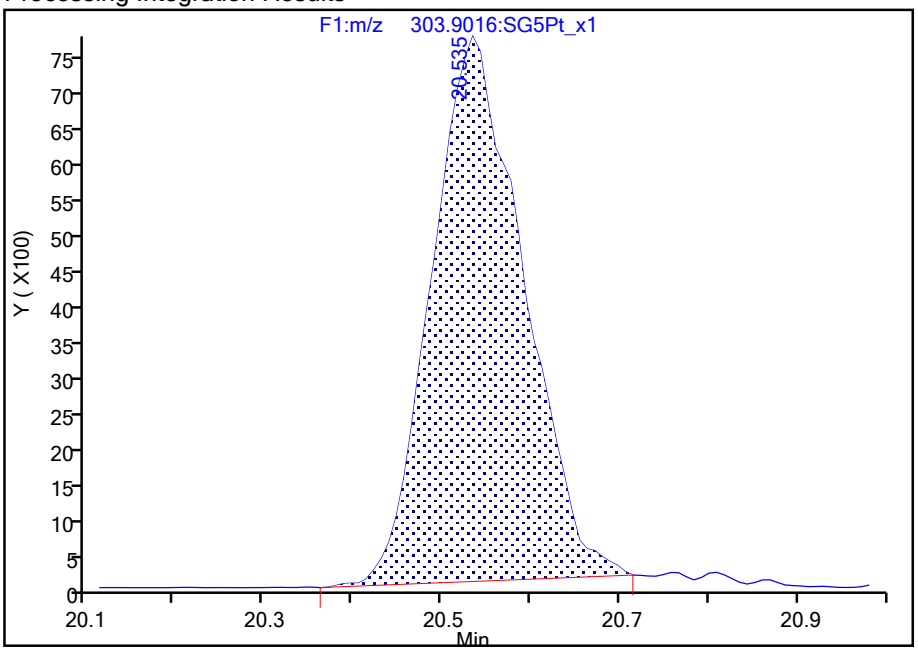

Manual Integration Results

RT: 20.53
Area: 56730
Amount: 9.969196
Amount Units: pg/ul

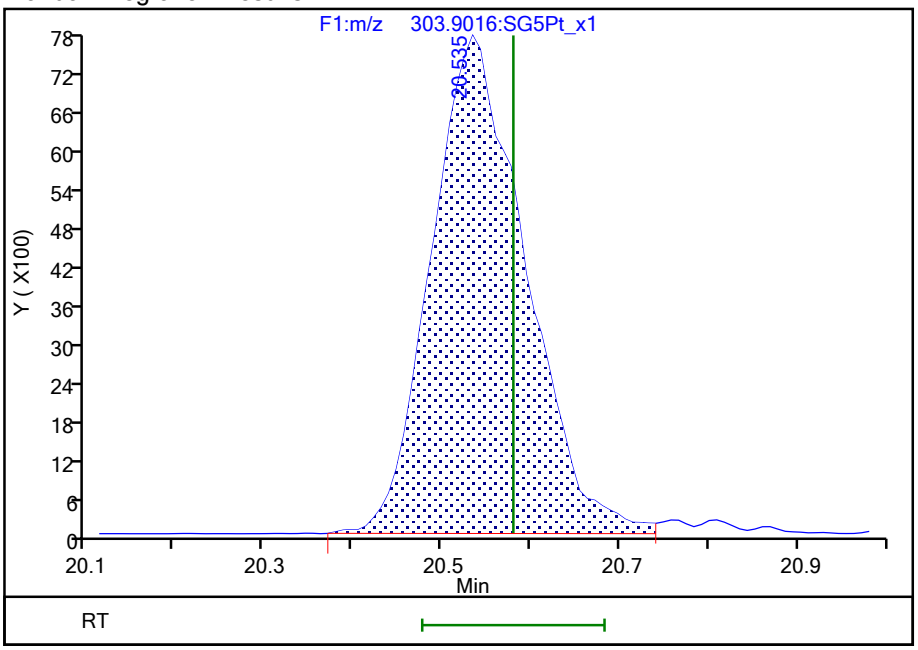

Reviewer: stephensk, 17-Aug-2021 16:07:38

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 1

Processing Integration Results

RT: 36.67
Area: 546030
Amount: 100.0000
Amount Units: pg/ul

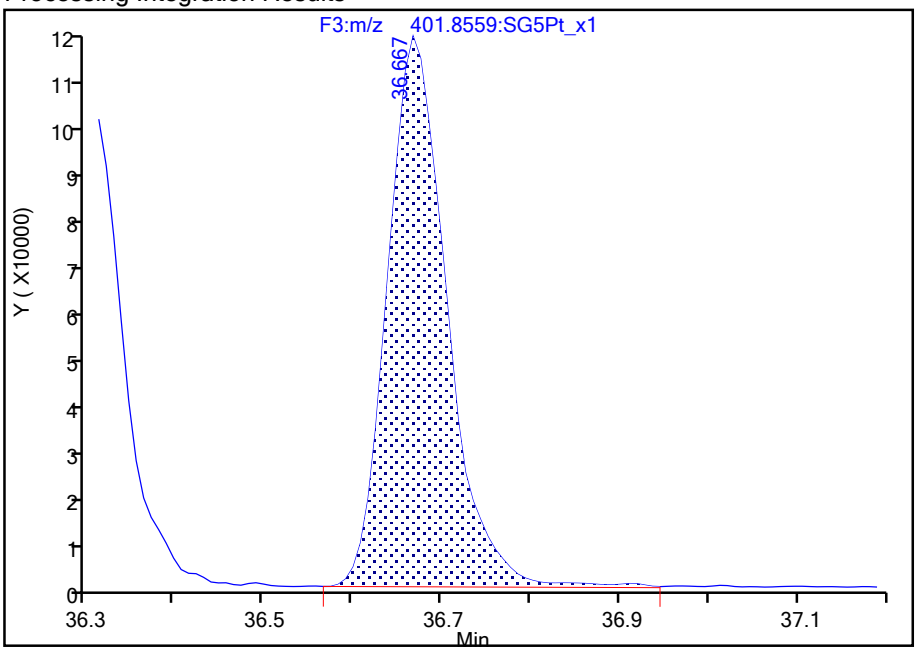

Manual Integration Results

RT: 36.67
Area: 547692
Amount: 100.0000
Amount Units: pg/ul

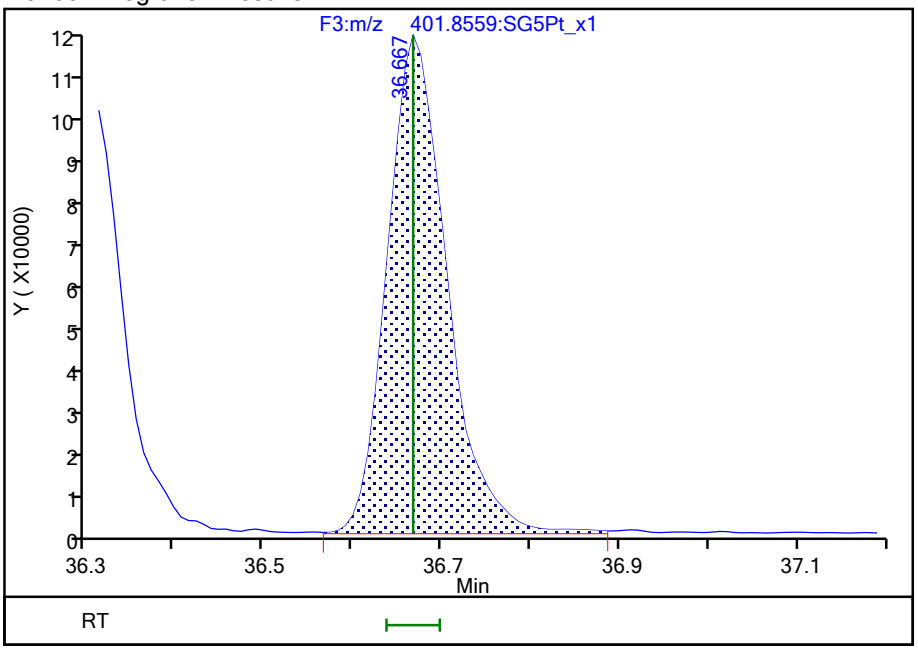

Reviewer: stephensk, 17-Aug-2021 16:09:43

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 2

Processing Integration Results

RT: 36.67
Area: 430515
Amount: 100.0000
Amount Units: pg/ul

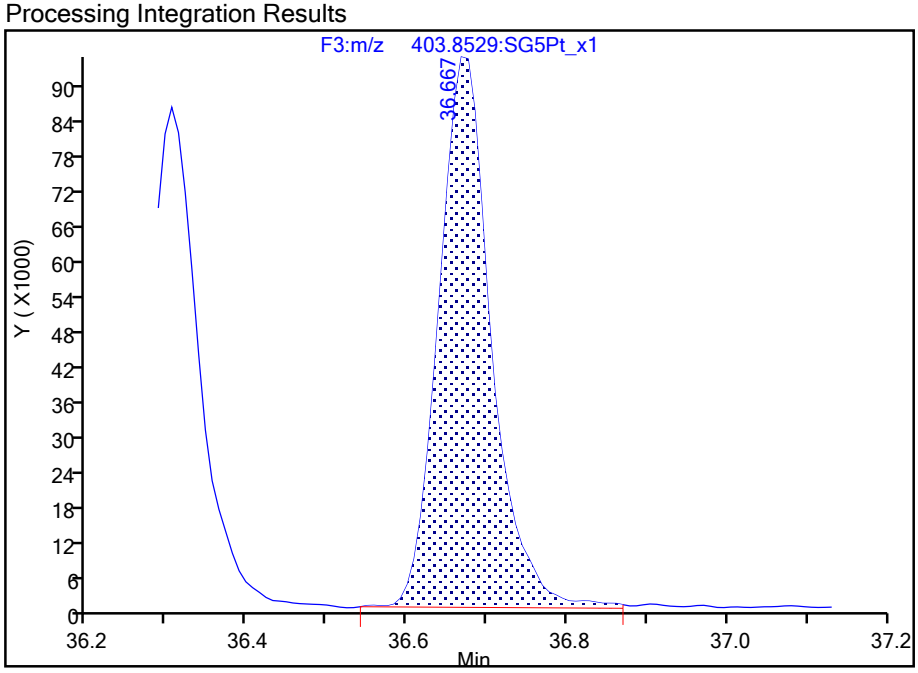

Manual Integration Results

RT: 36.67
Area: 433246
Amount: 100.0000
Amount Units: pg/ul

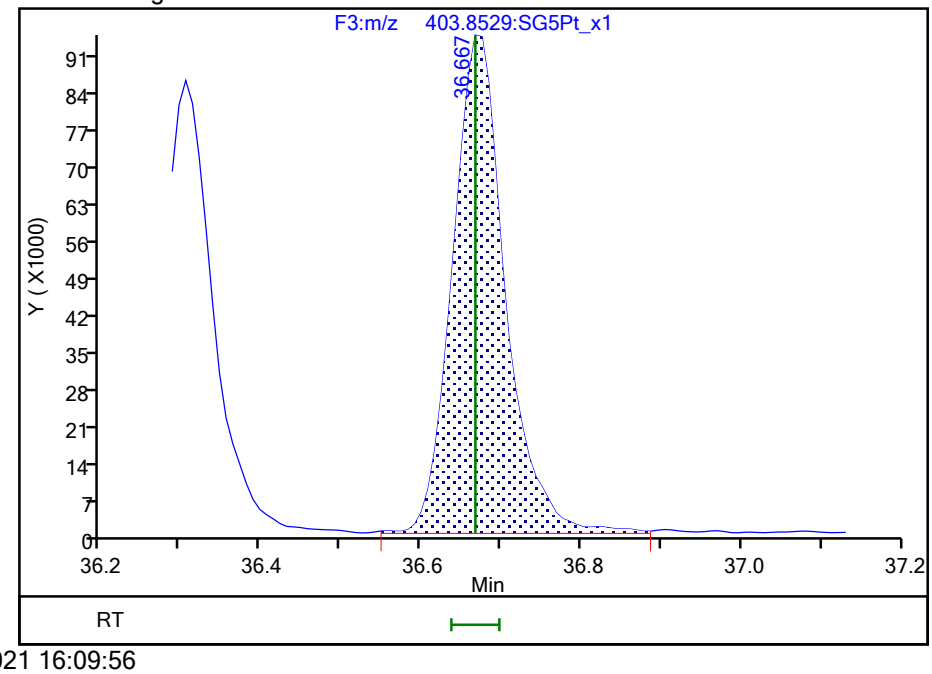

Reviewer: stephensk, 17-Aug-2021 16:09:56

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

RT: 39.92
Area: 275099
Amount: 130.6760
Amount Units: pg/ul

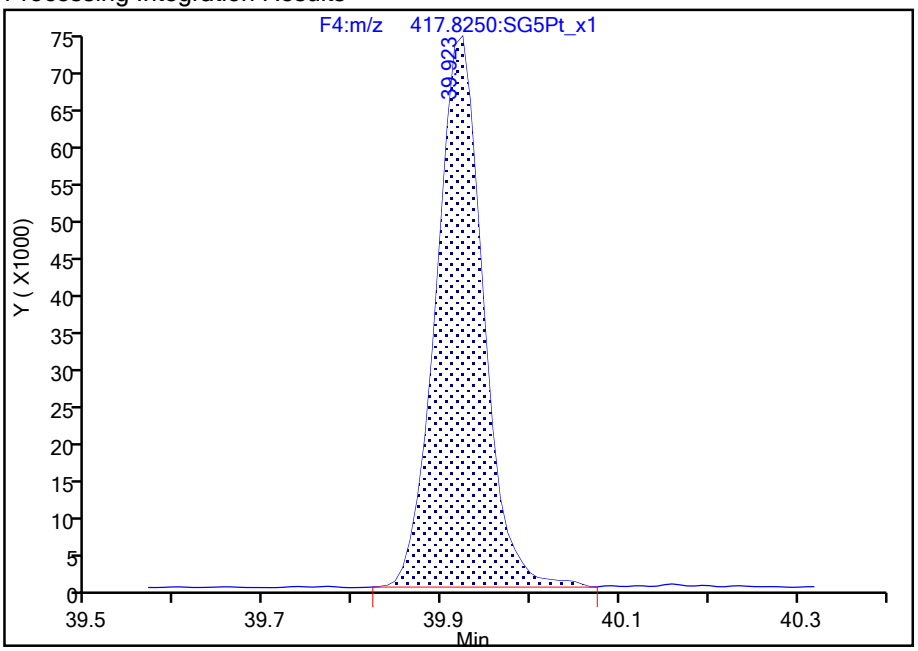

Manual Integration Results

RT: 39.92
Area: 274228
Amount: 128.9419
Amount Units: pg/ul

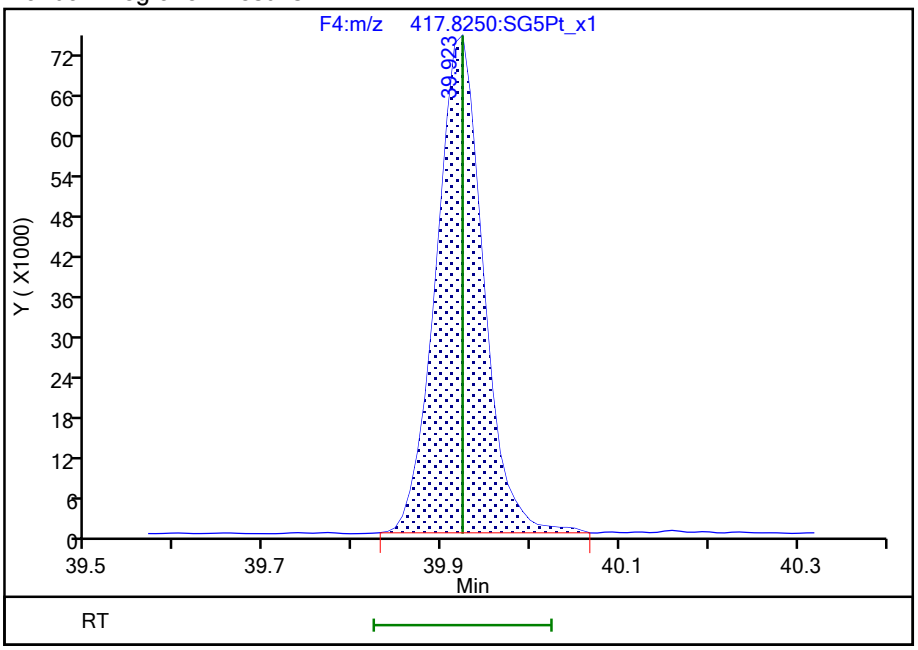

Reviewer: stephensk, 17-Aug-2021 16:09:13

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 2

Processing Integration Results

RT: 39.92
Area: 599519
Amount: 130.6760
Amount Units: pg/ul

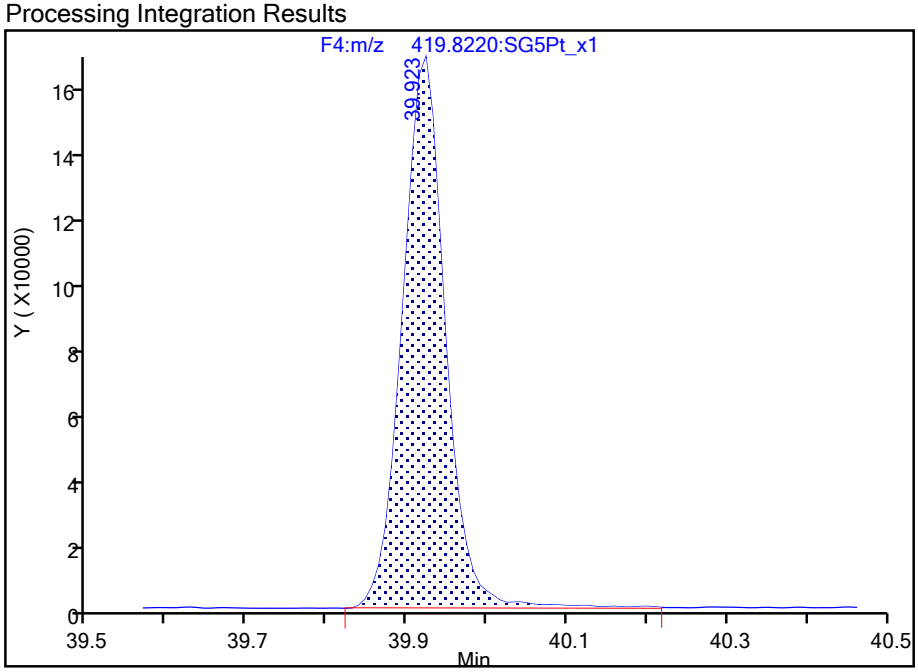

Manual Integration Results

RT: 39.92
Area: 592666
Amount: 128.9419
Amount Units: pg/ul

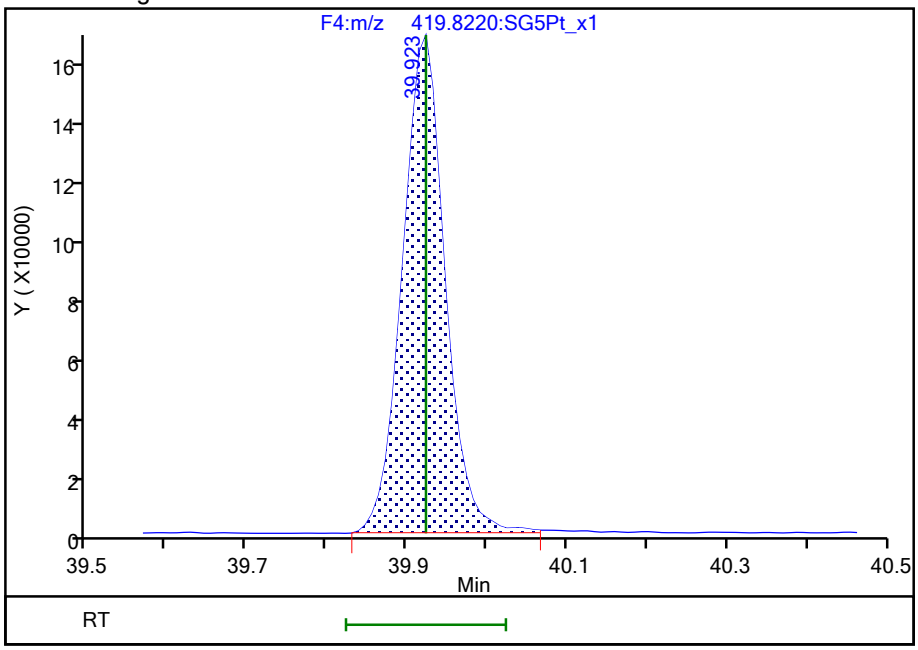

Reviewer: stephensk, 17-Aug-2021 16:09:23

Audit Action: Manually Integrated Audit Reason: Baseline

784548

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

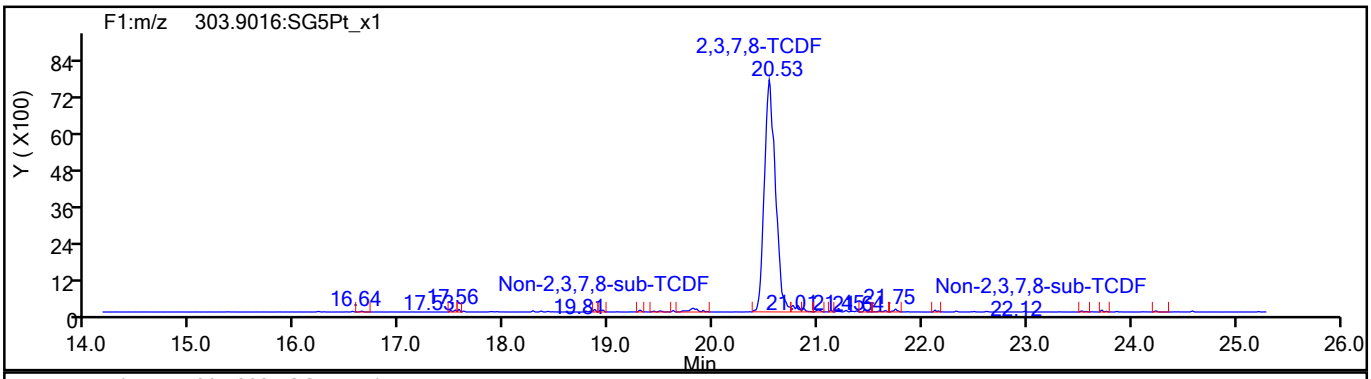

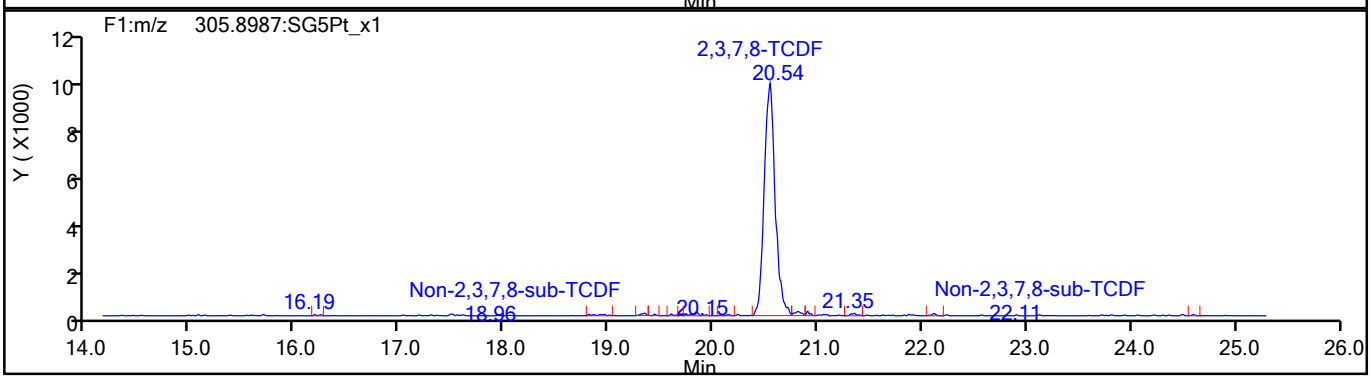

TCDF Standards

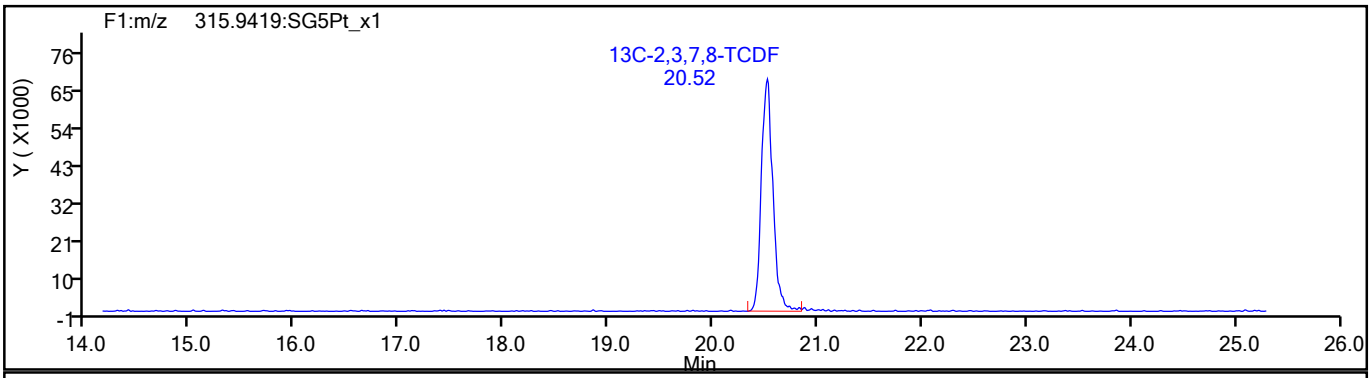

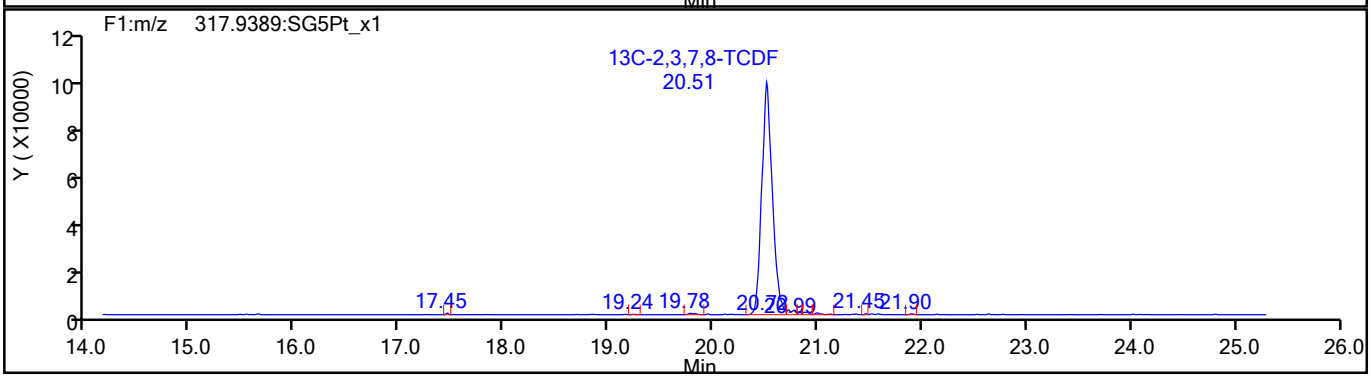

784549

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

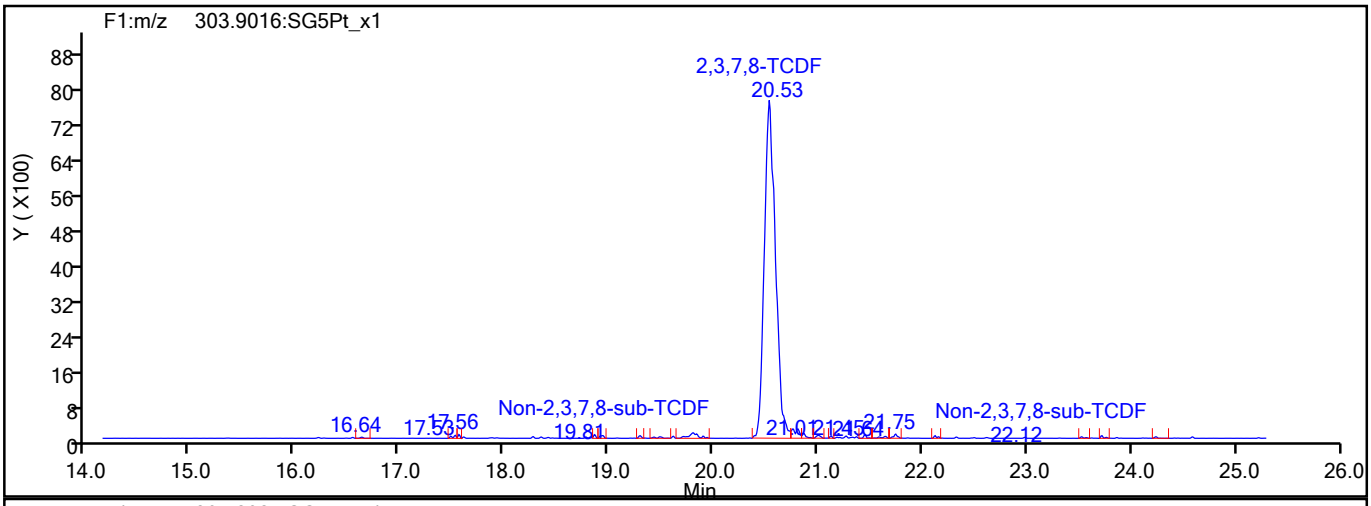

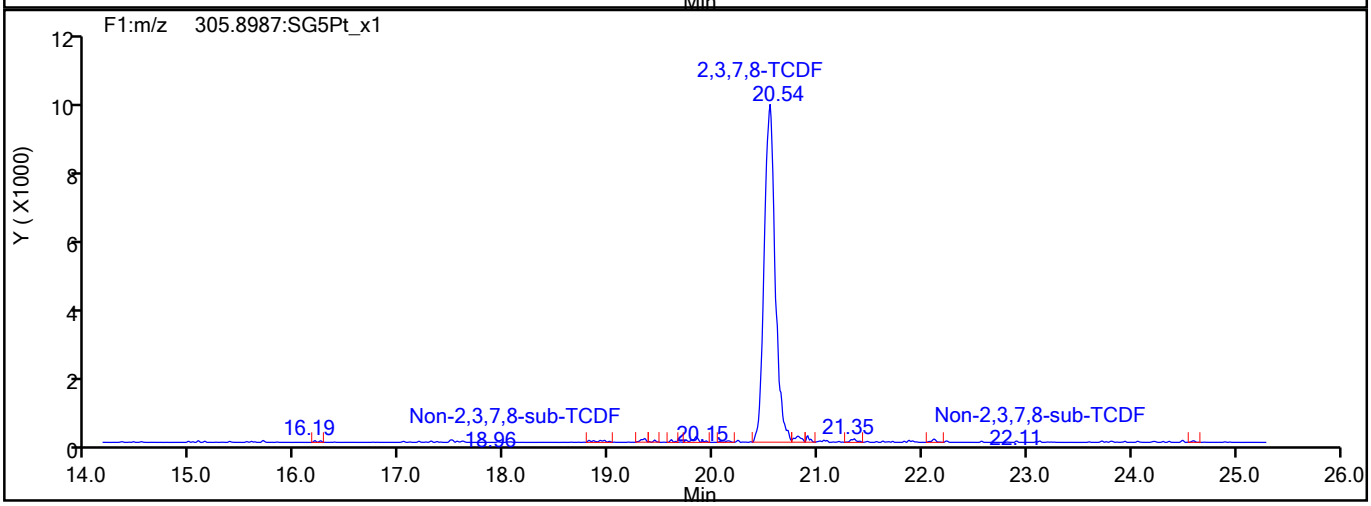

TCDF Interference Mass

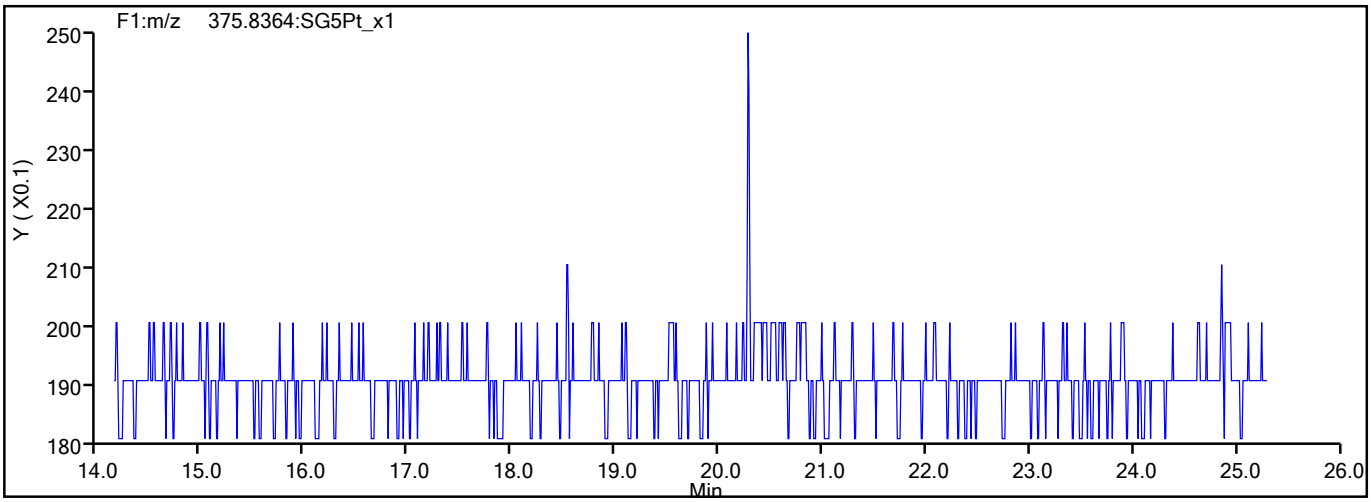

784550

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

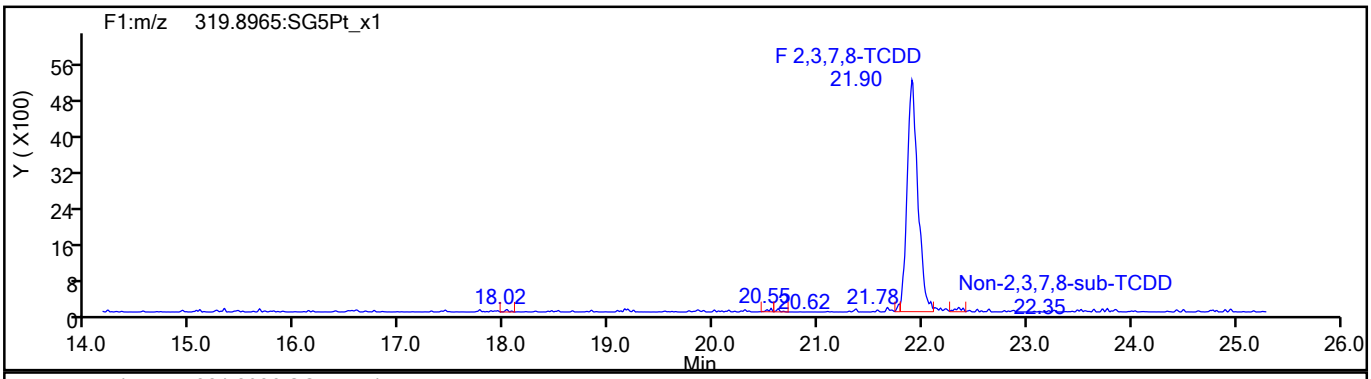

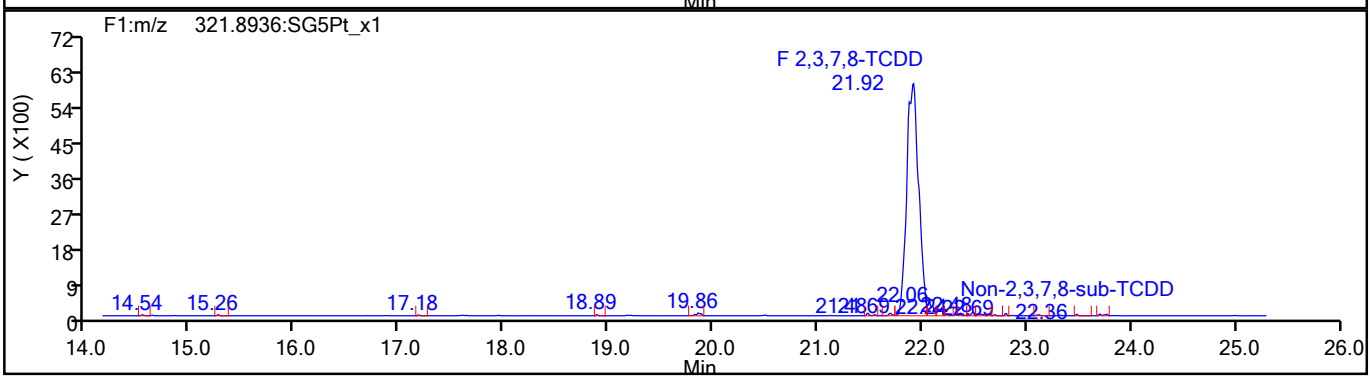

TCDD Standards

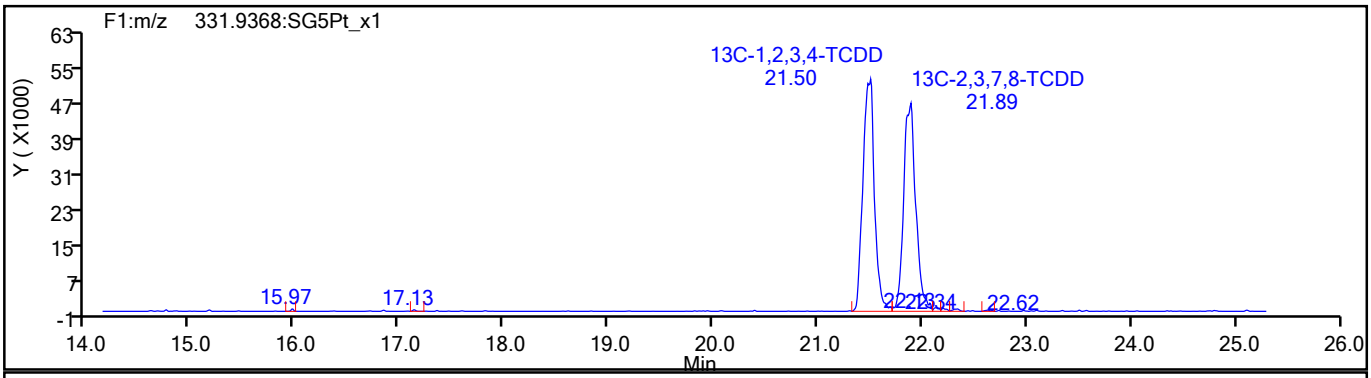

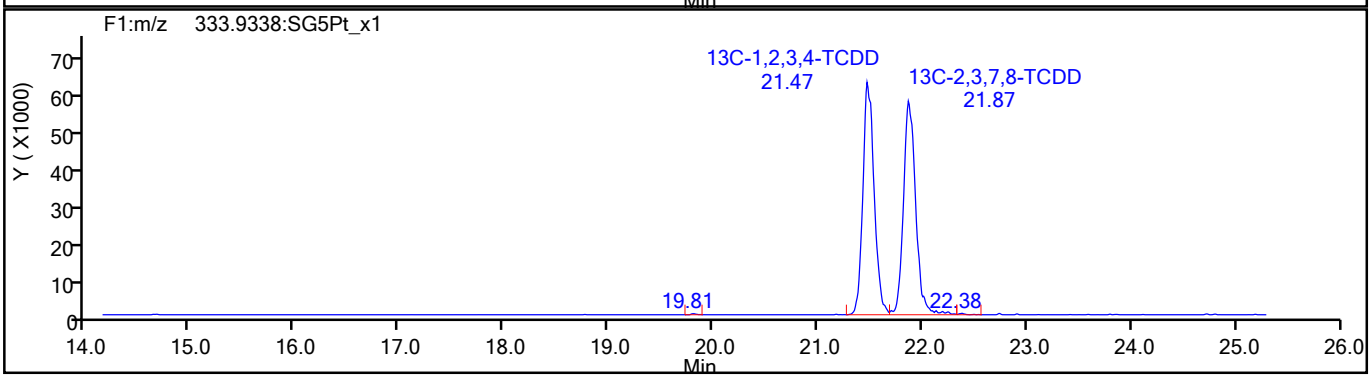

784551

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

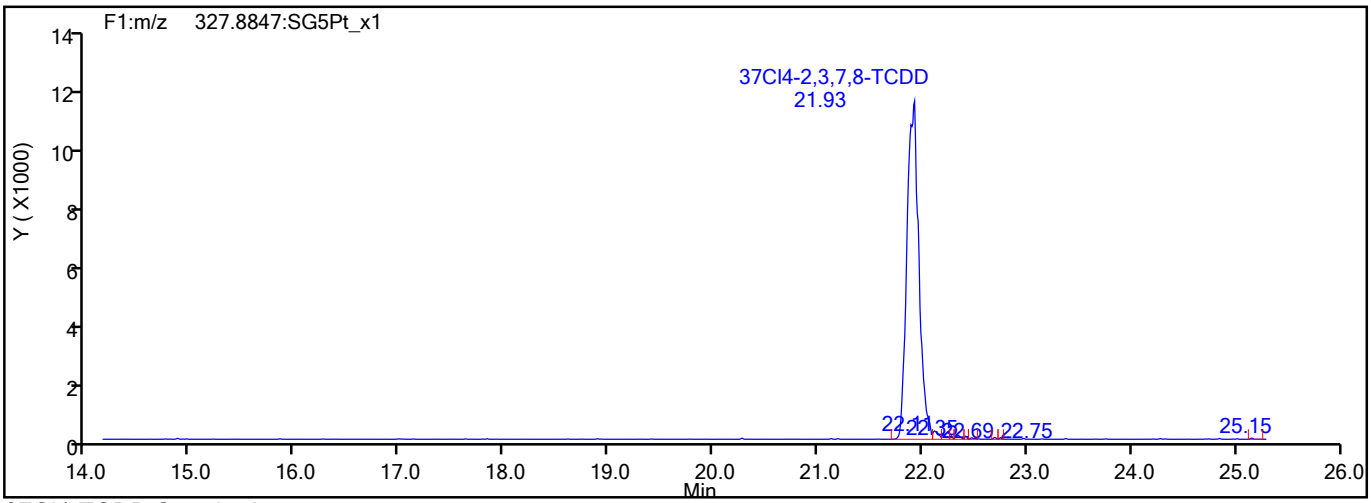

37Cl4-TCDD Standards

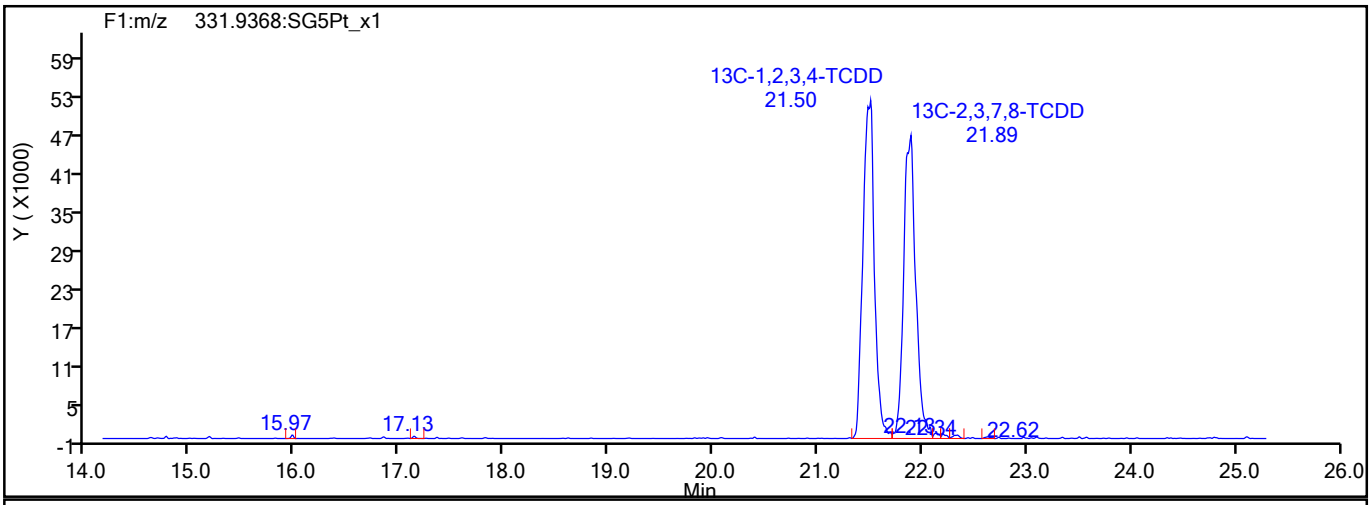

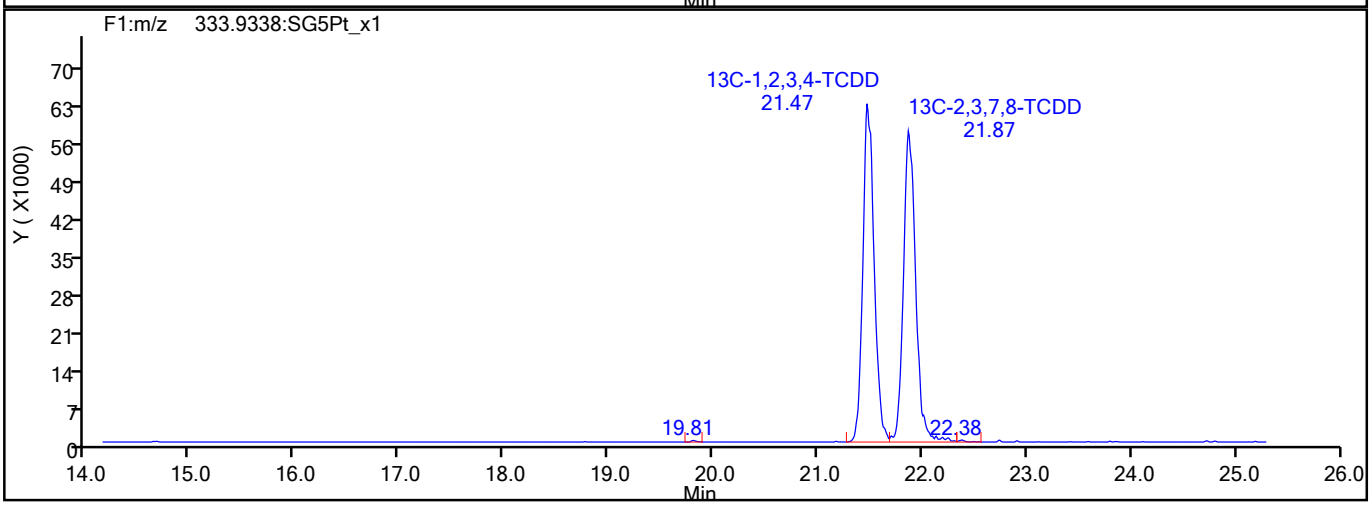

784552

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

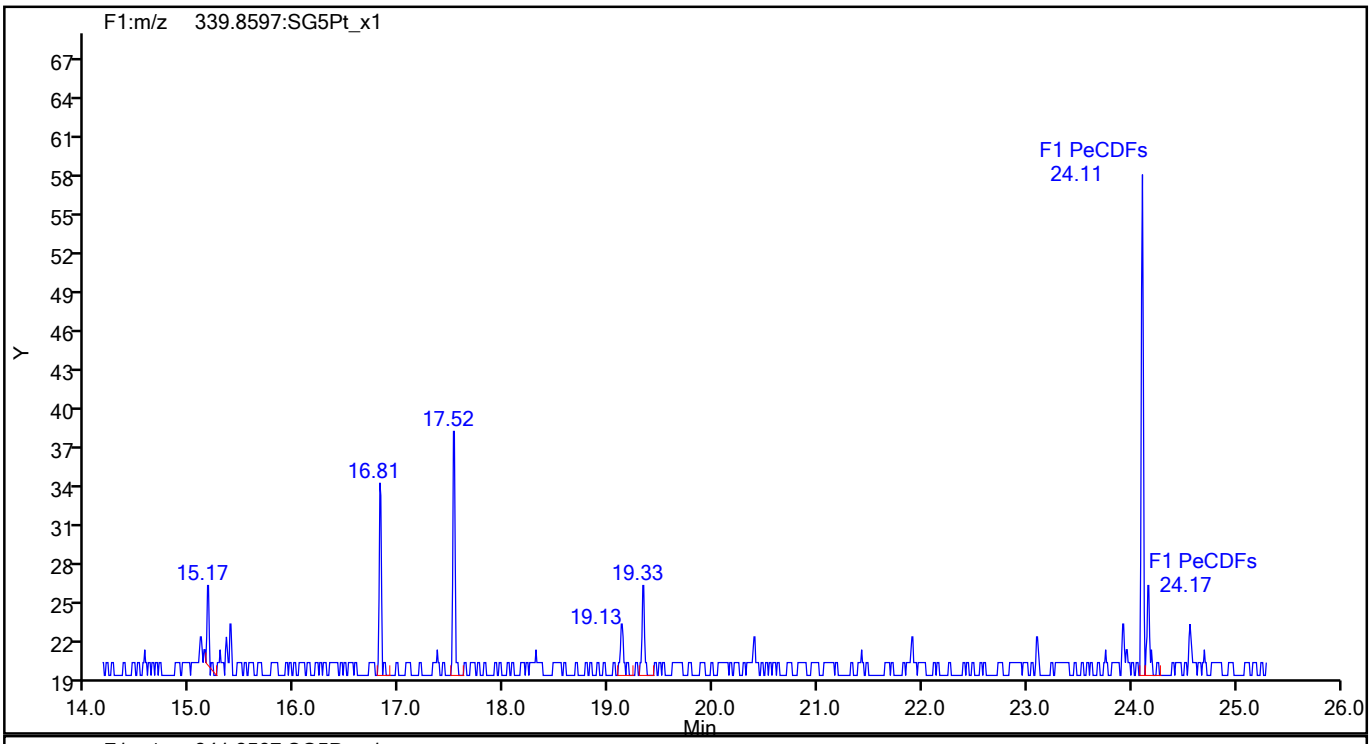

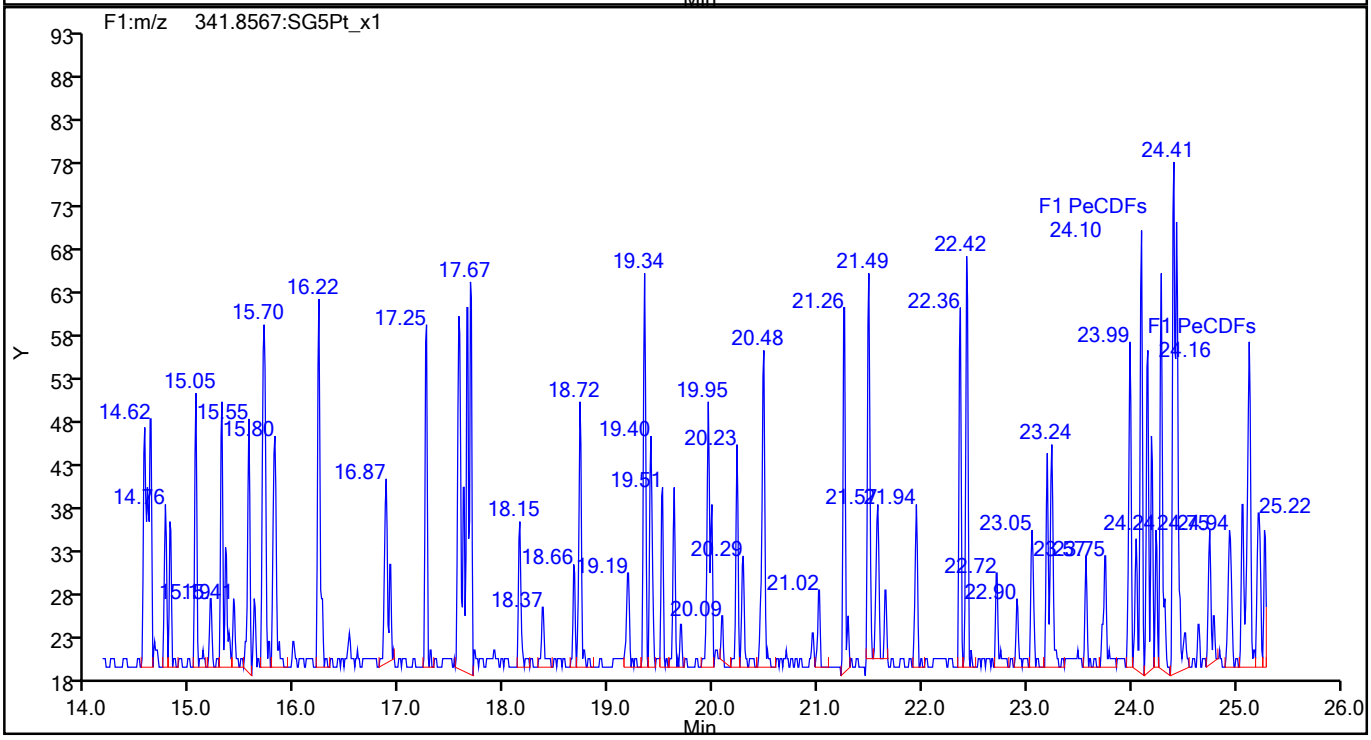

784553

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

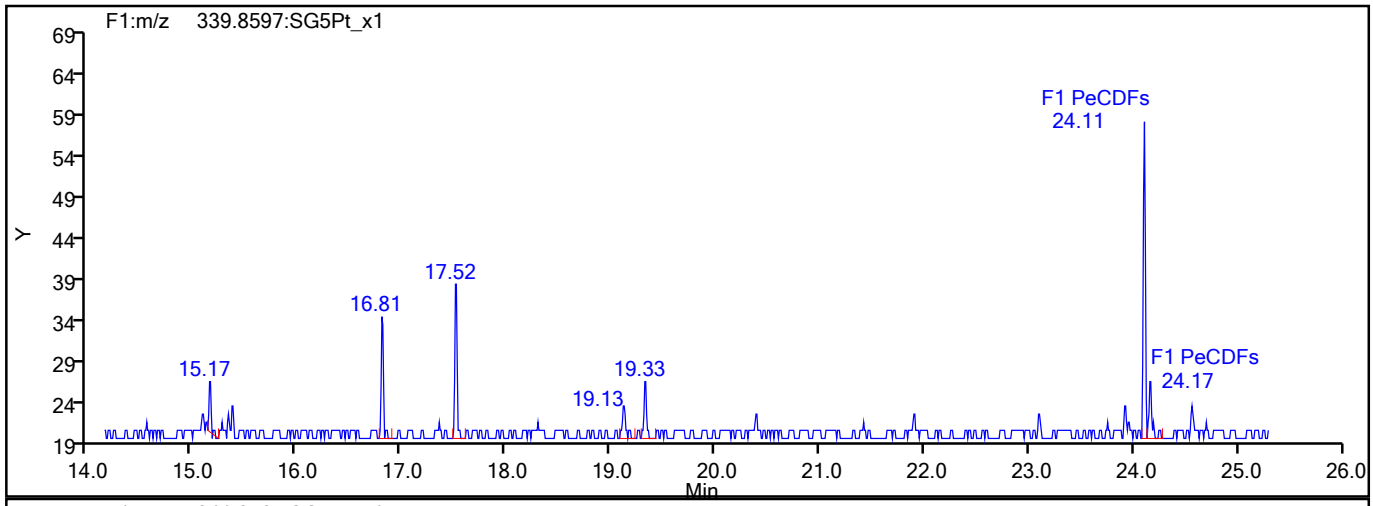

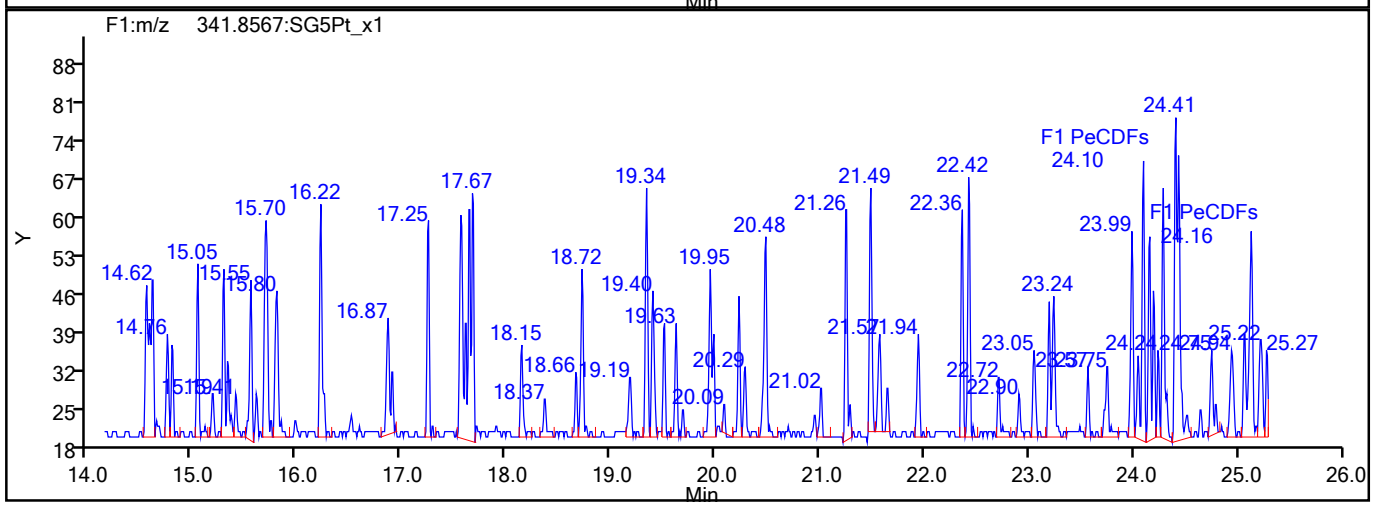

F1 PeCDFs Interference Mass

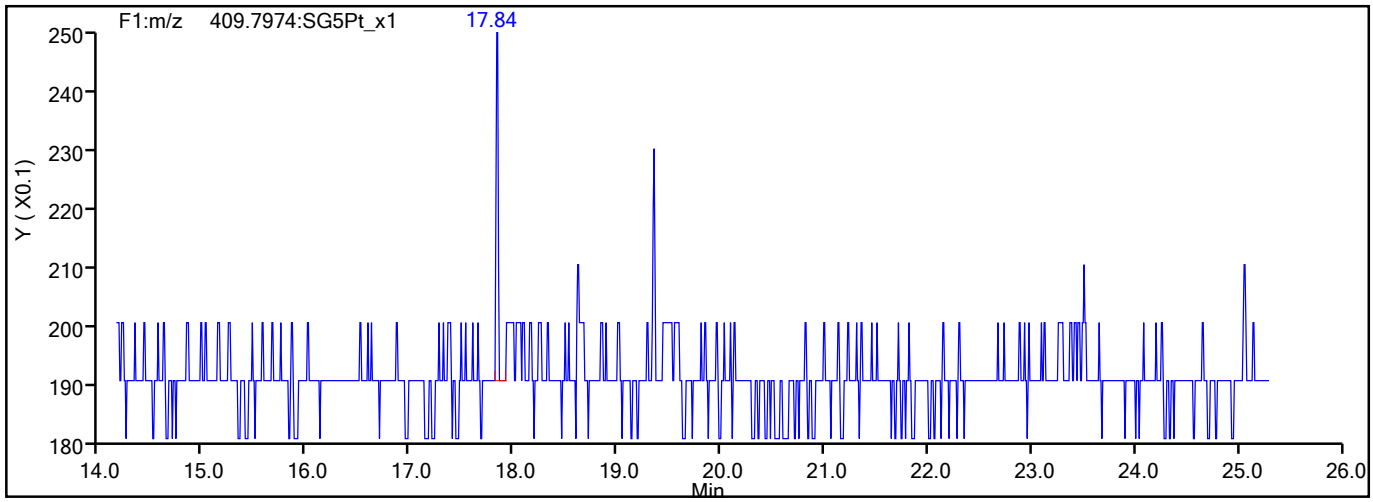

784554

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

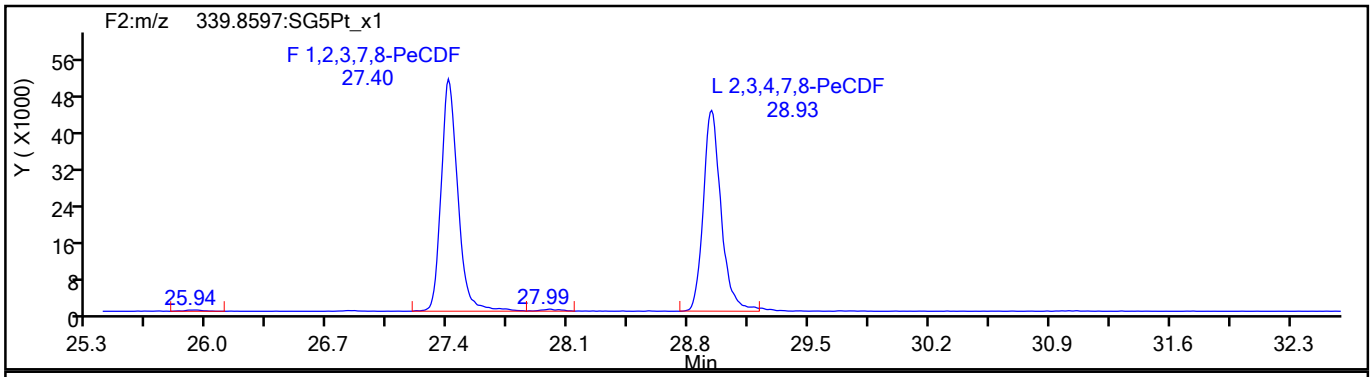

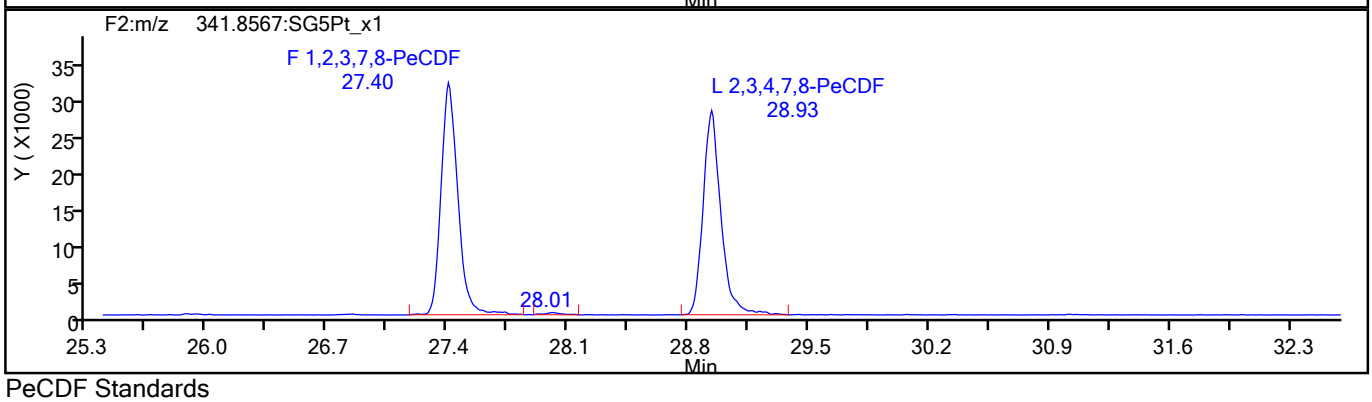

PeCDF Standards

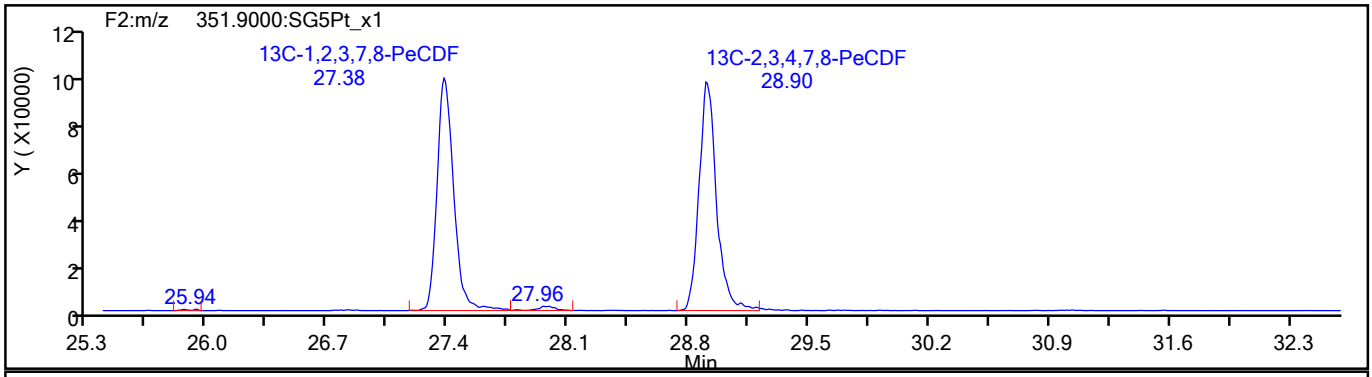

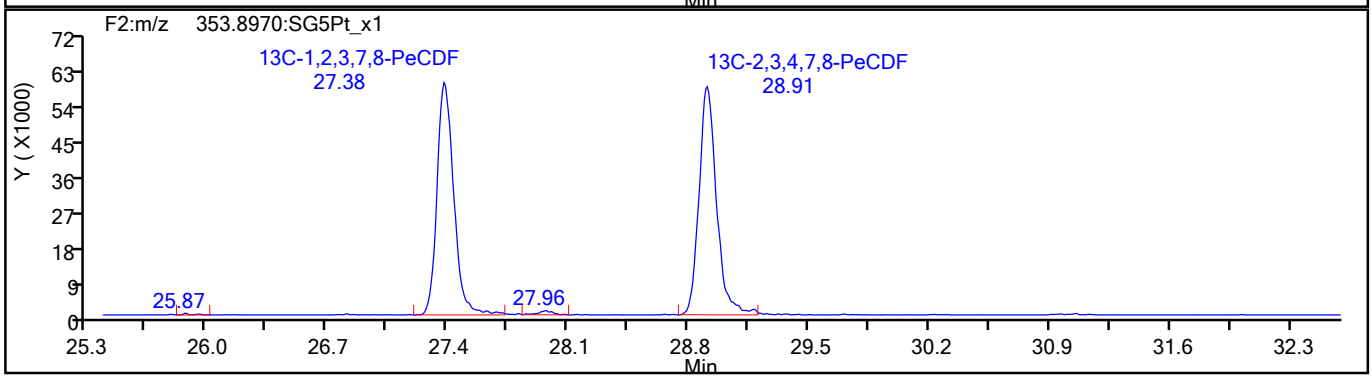

784555

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

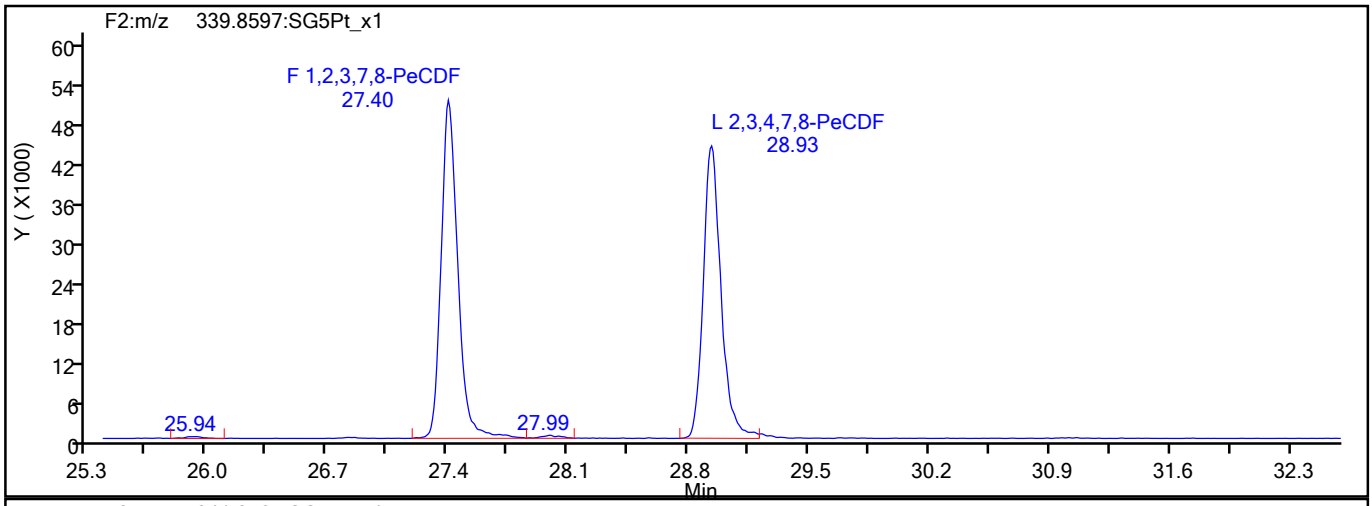

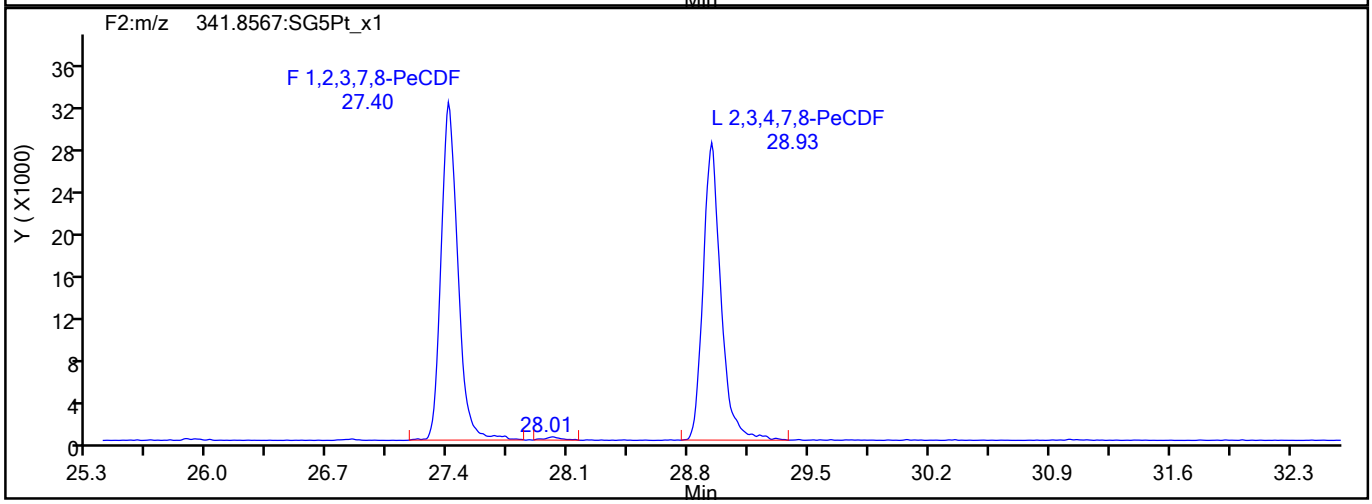

PeCDF Interference Mass

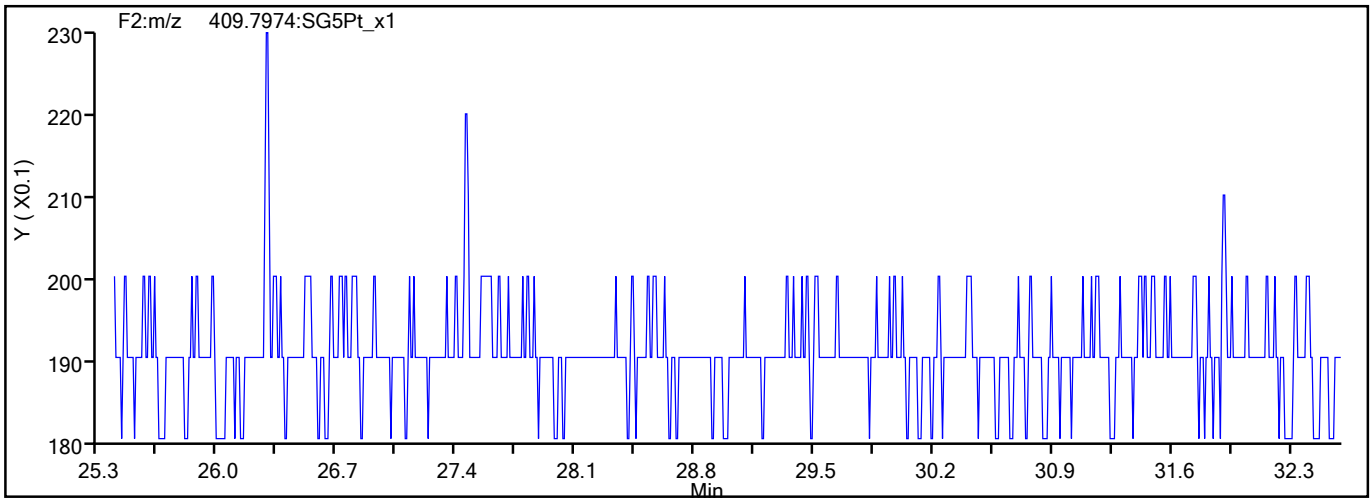

784556

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

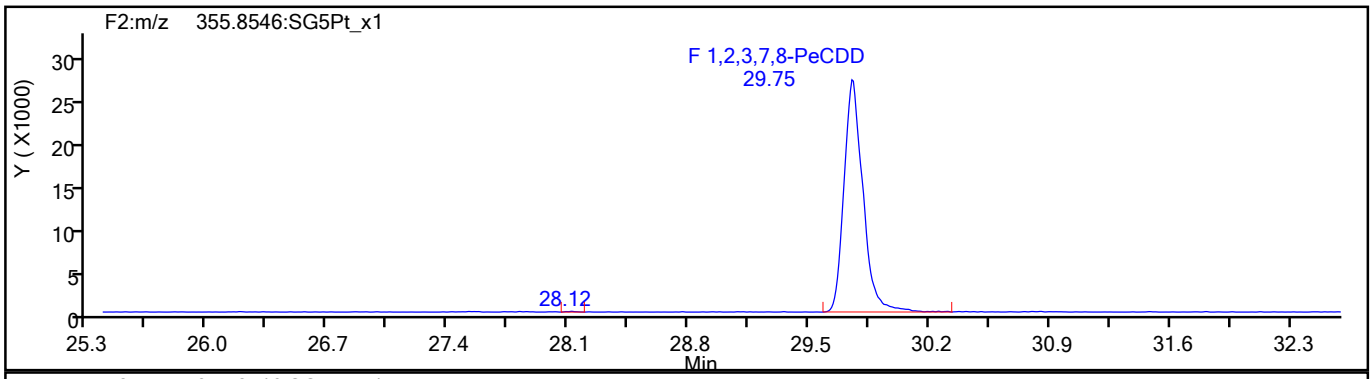

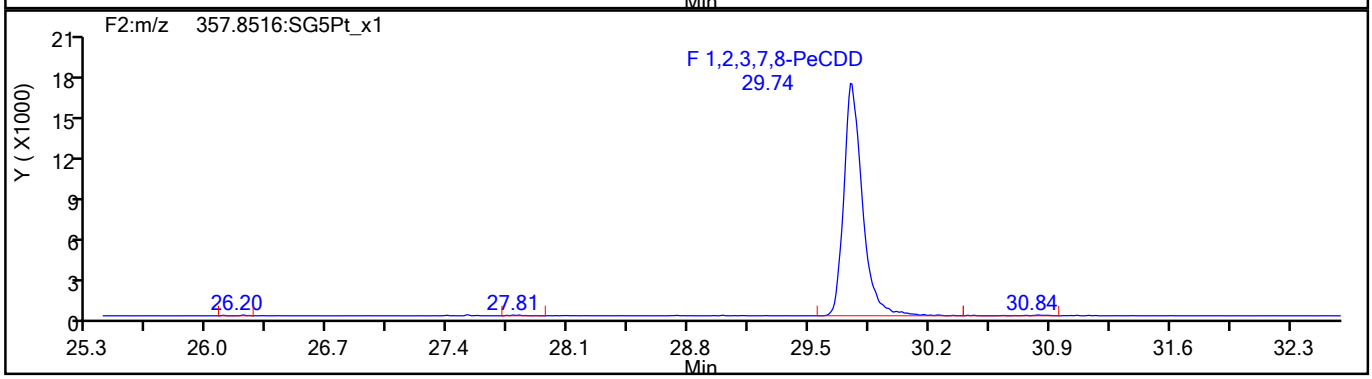

PeCDD Standards

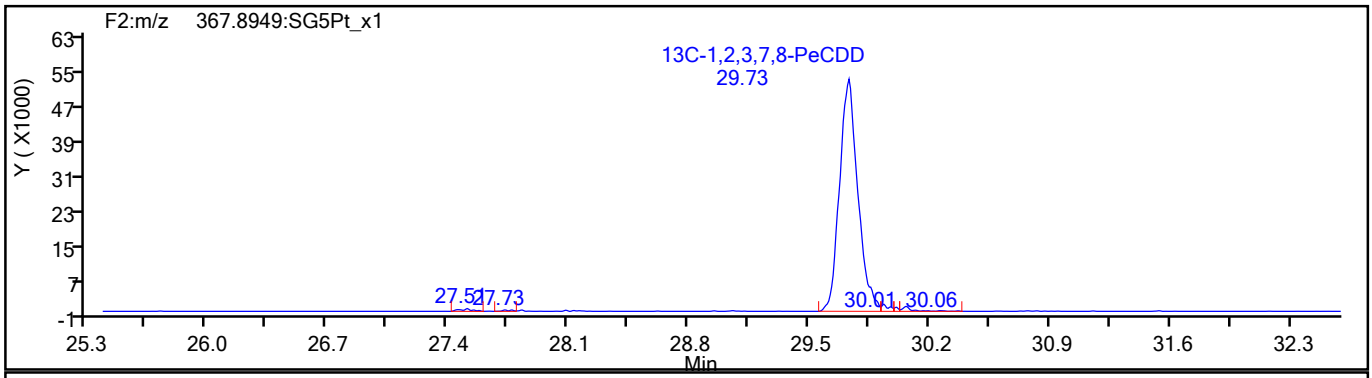

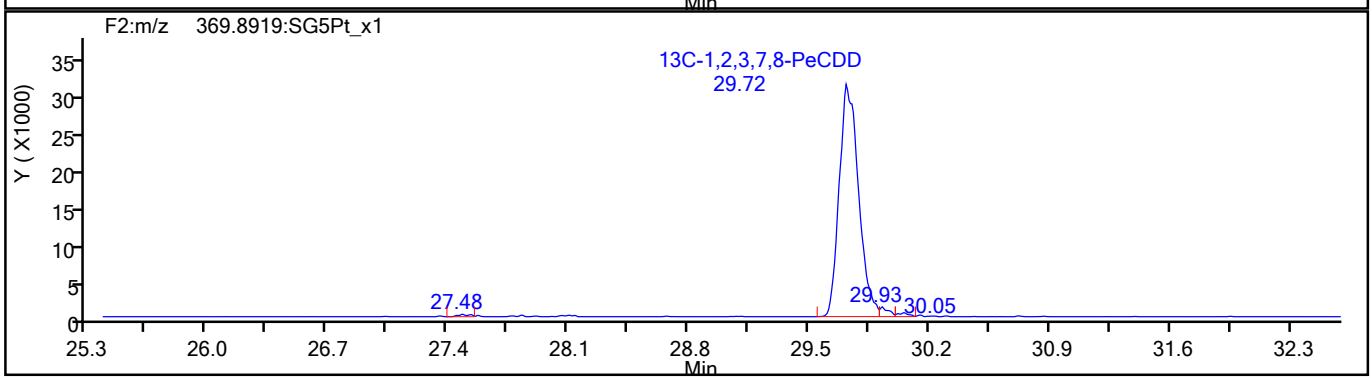

784557

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

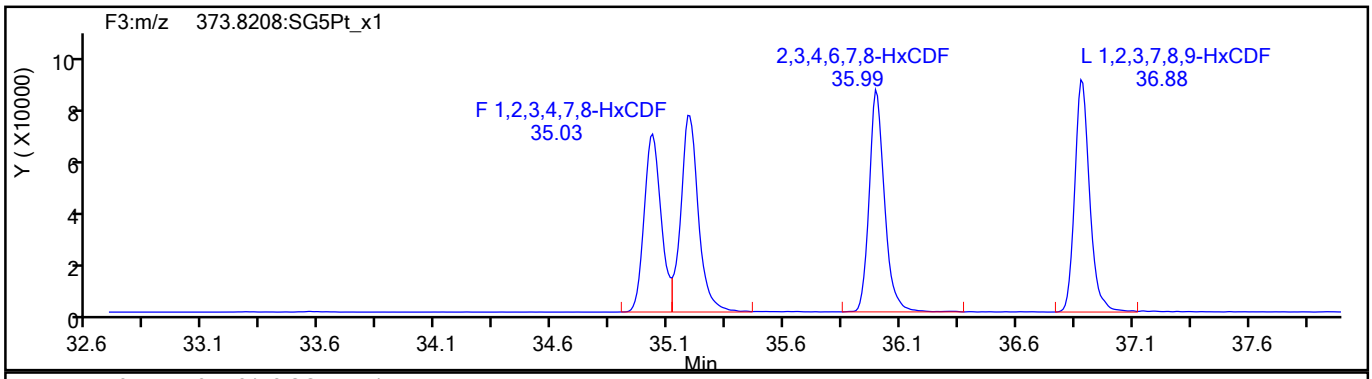

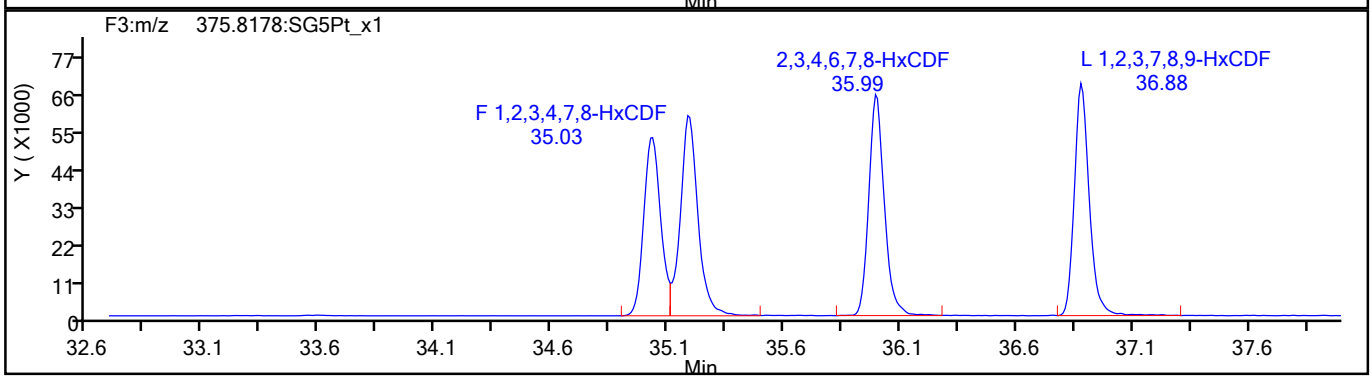

HxCDF Standards

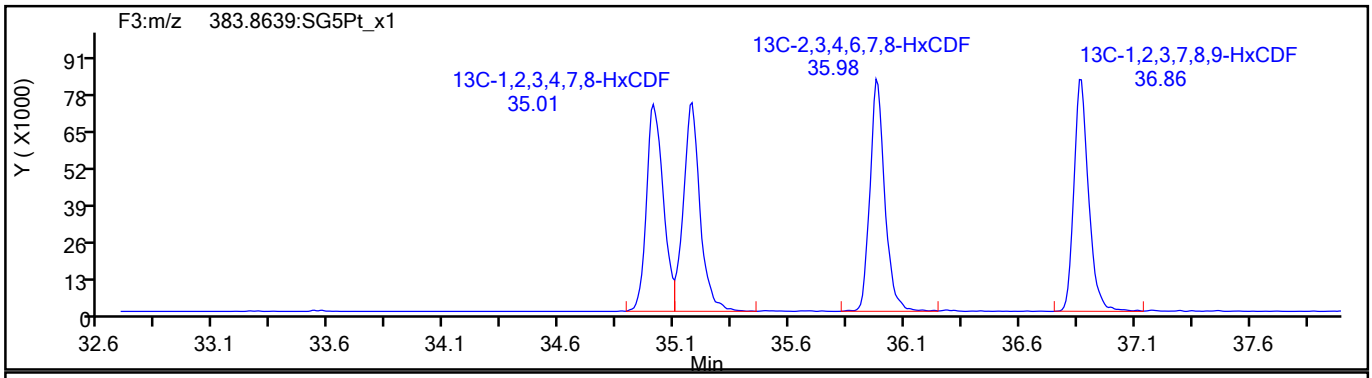

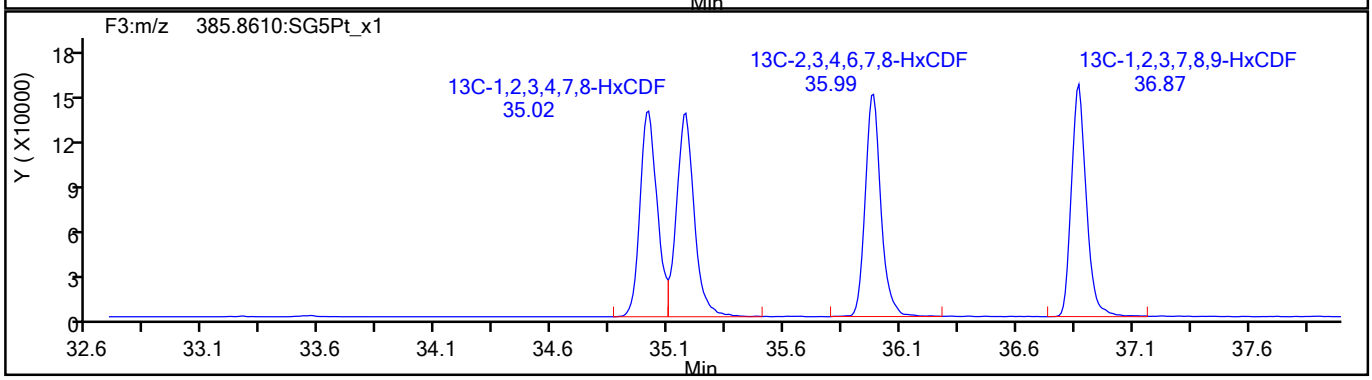

784558

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

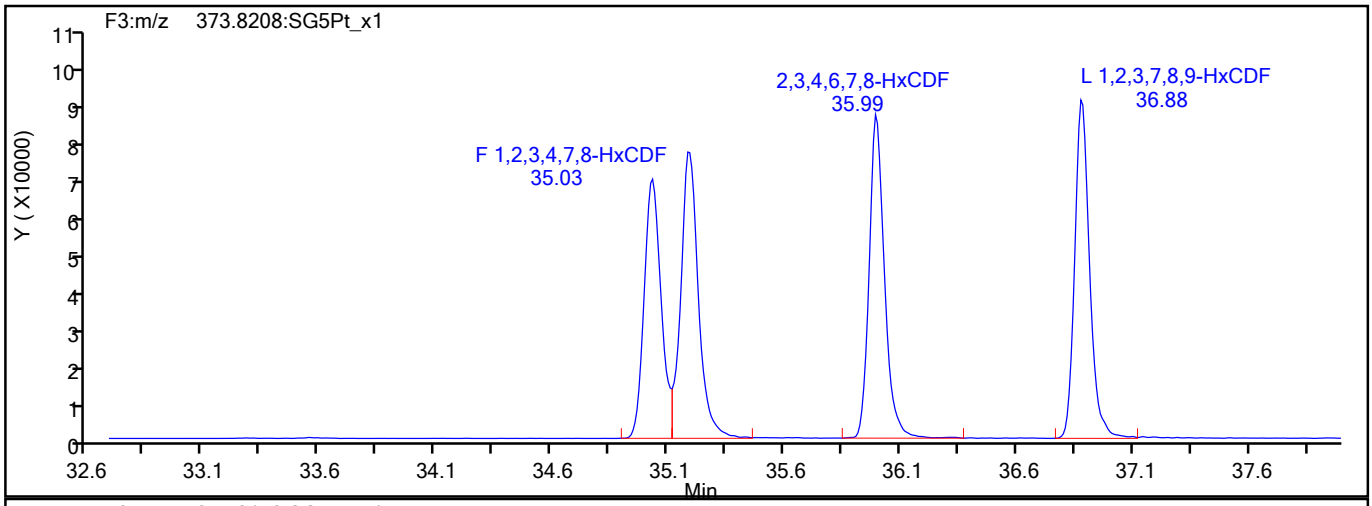

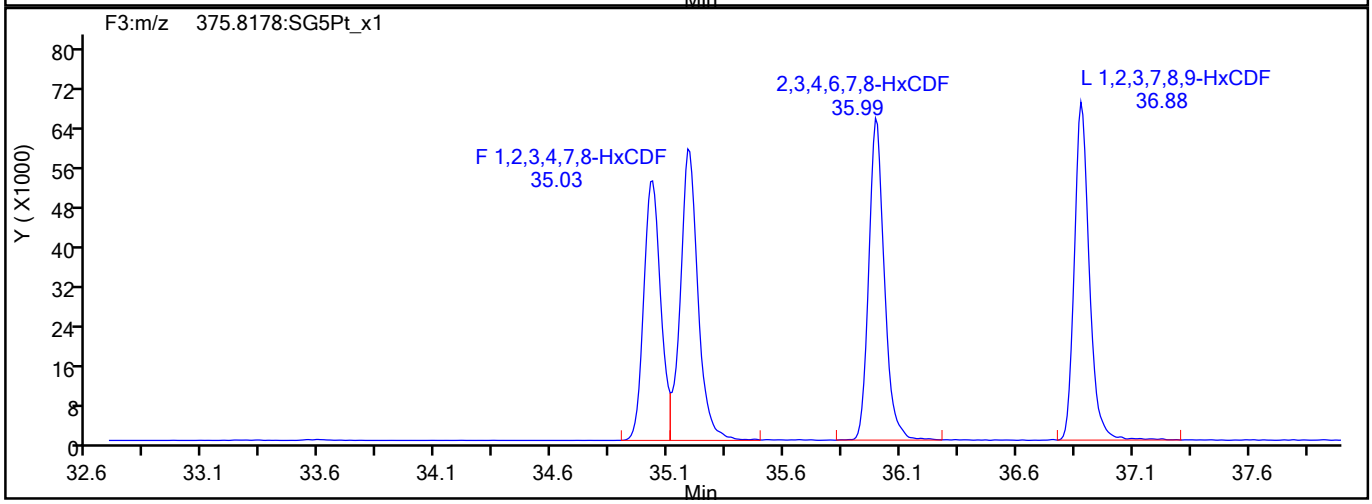

HxCDF Interference Mass

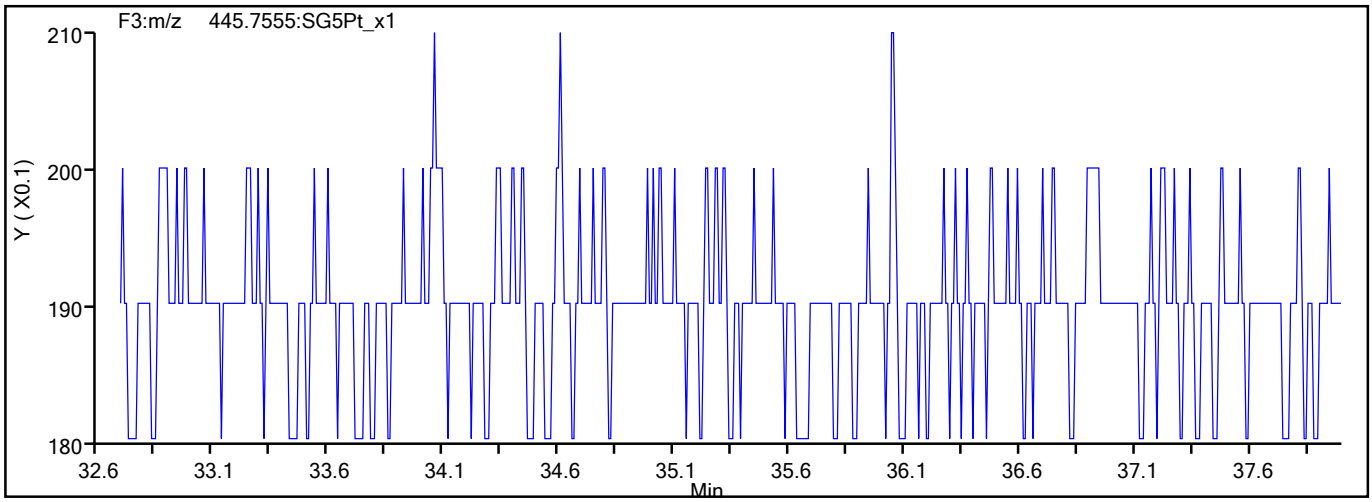

784559

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

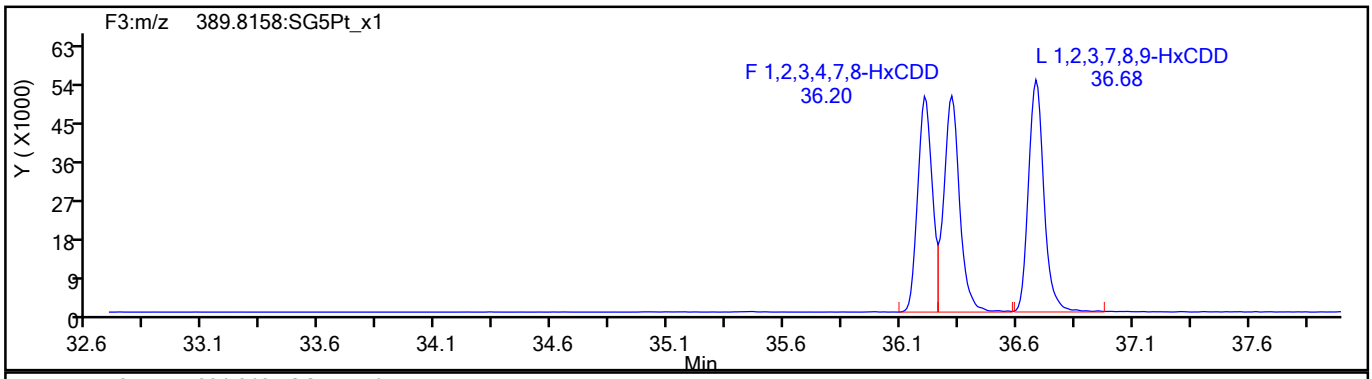

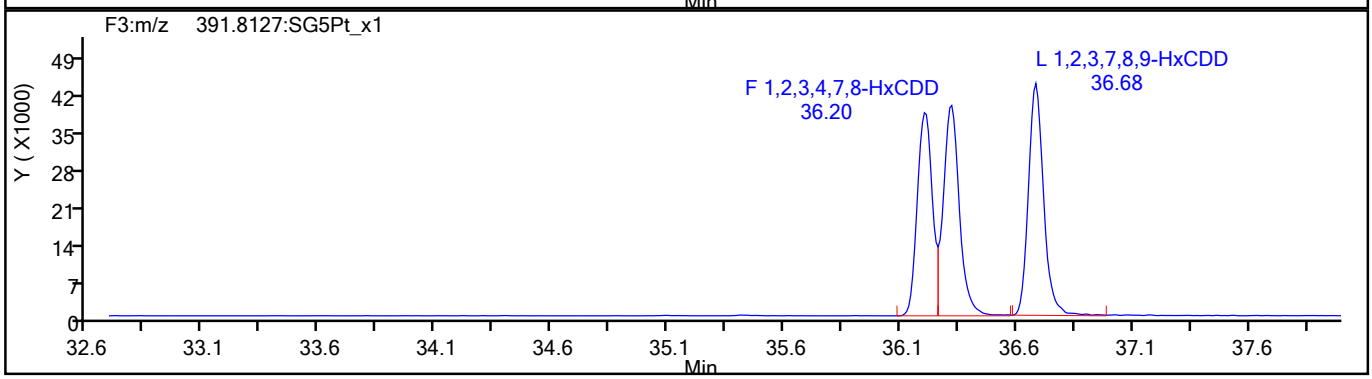

HxCDD Standards

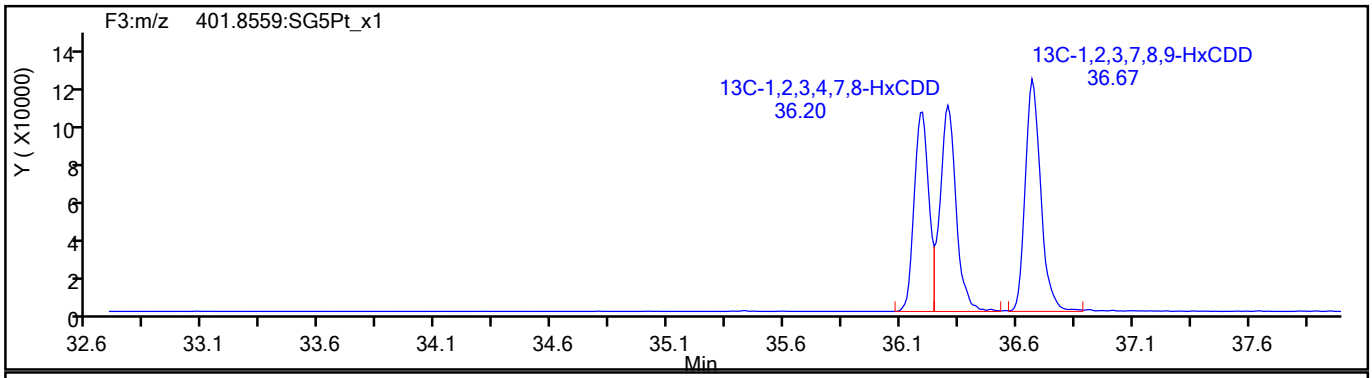

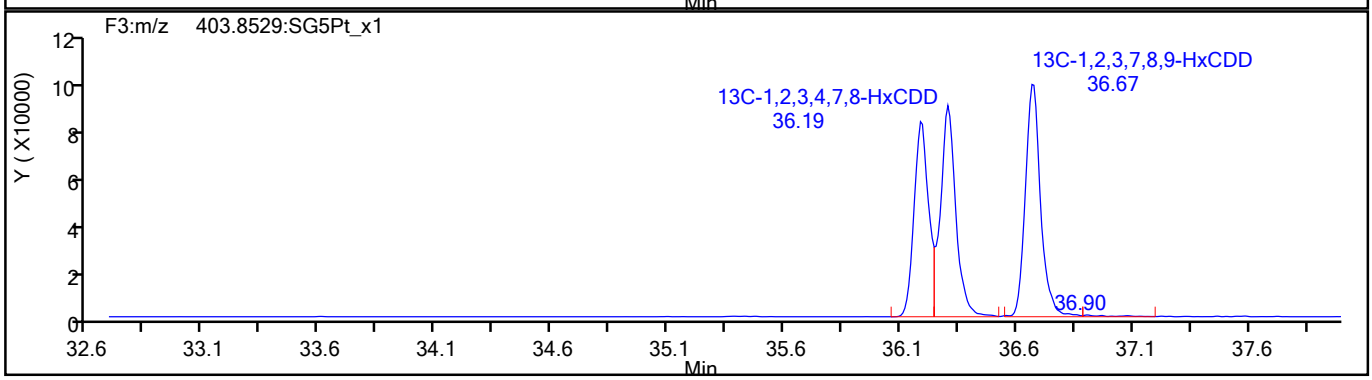

784560

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

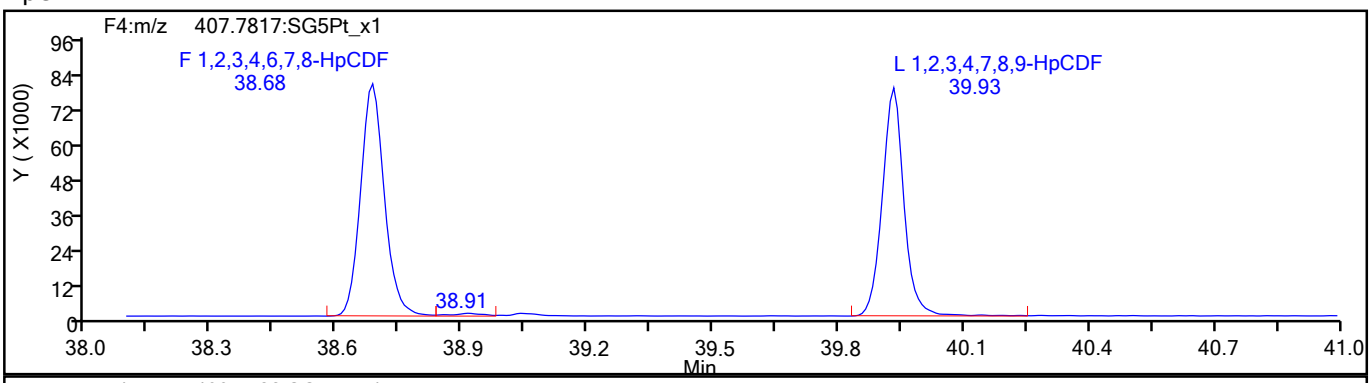

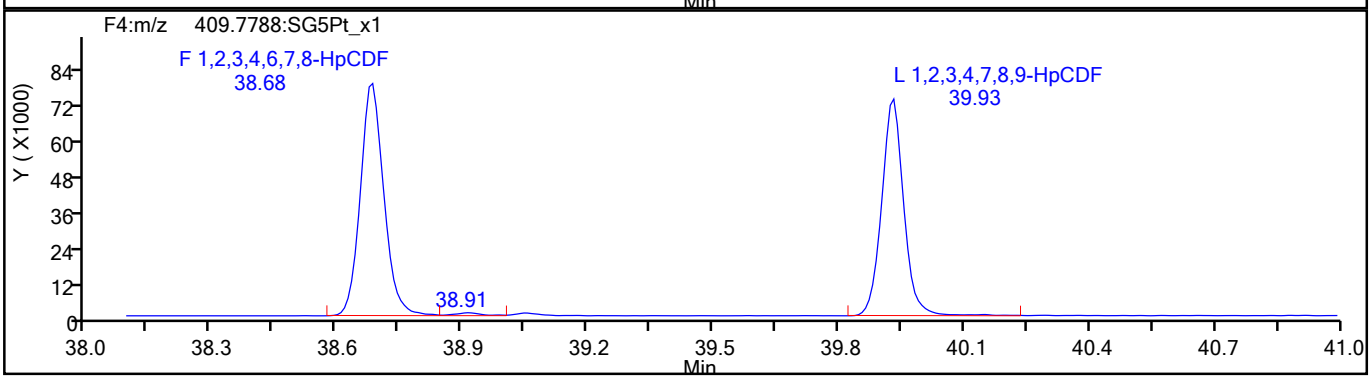

HpCDF Standards

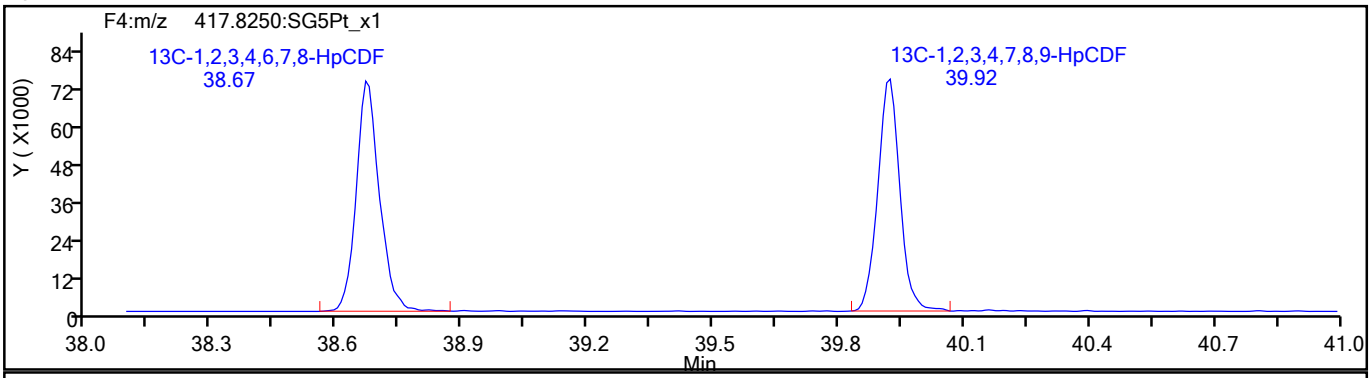

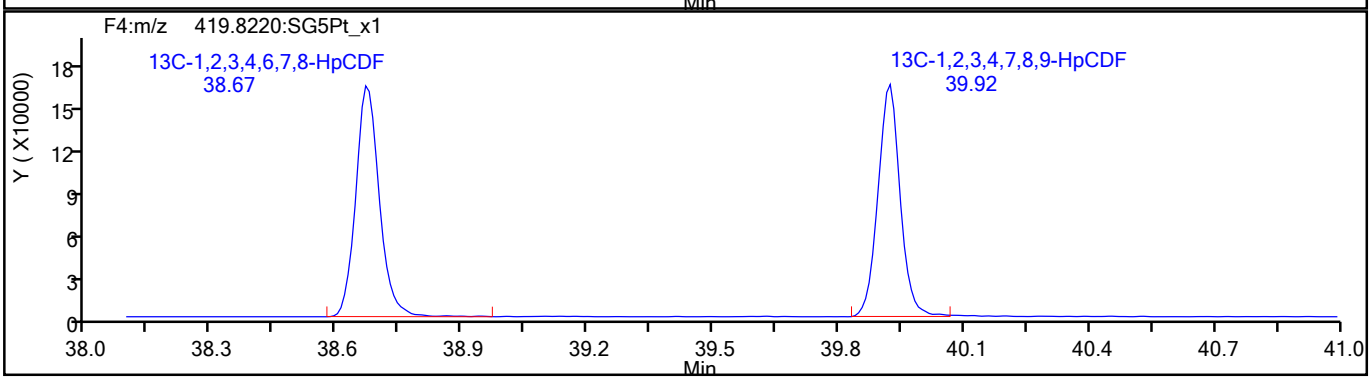

784561

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

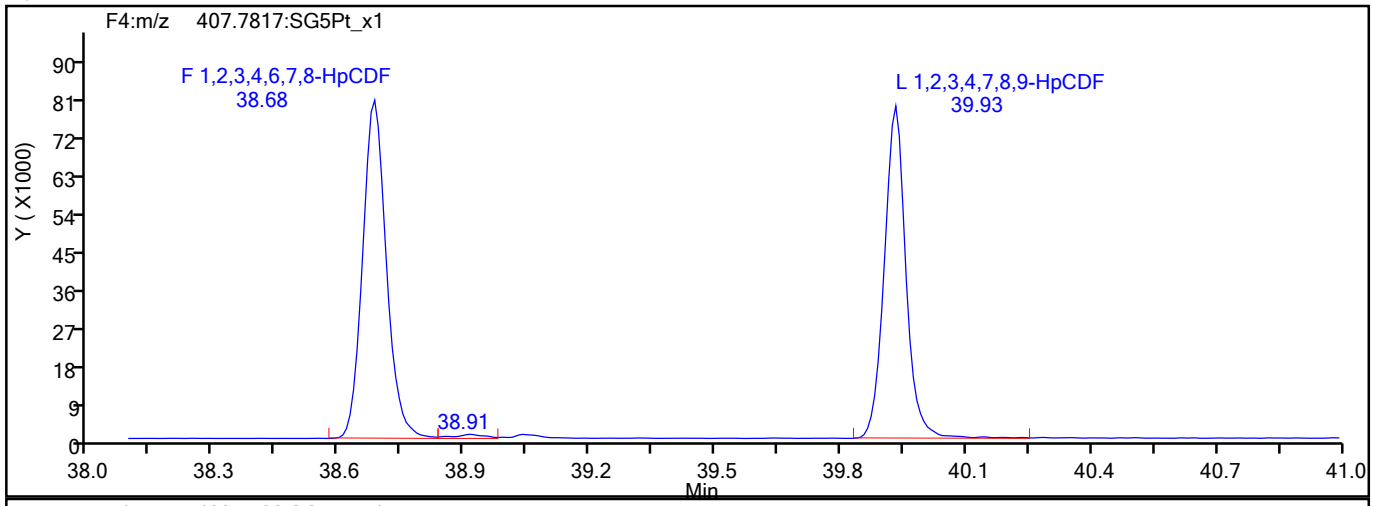

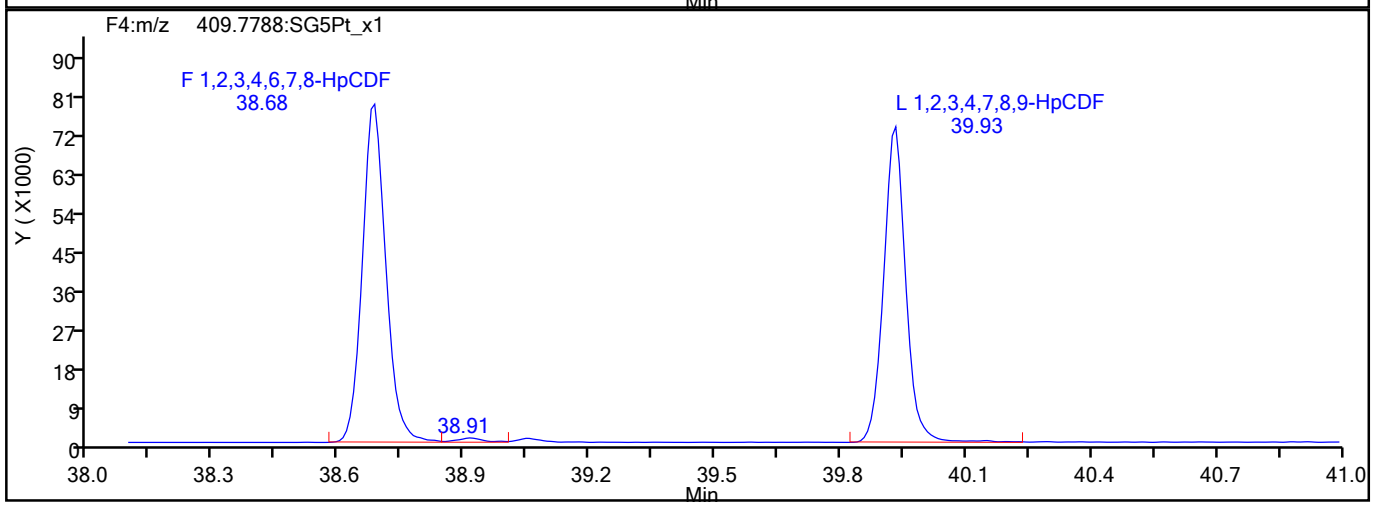

HpCDF Interference Mass

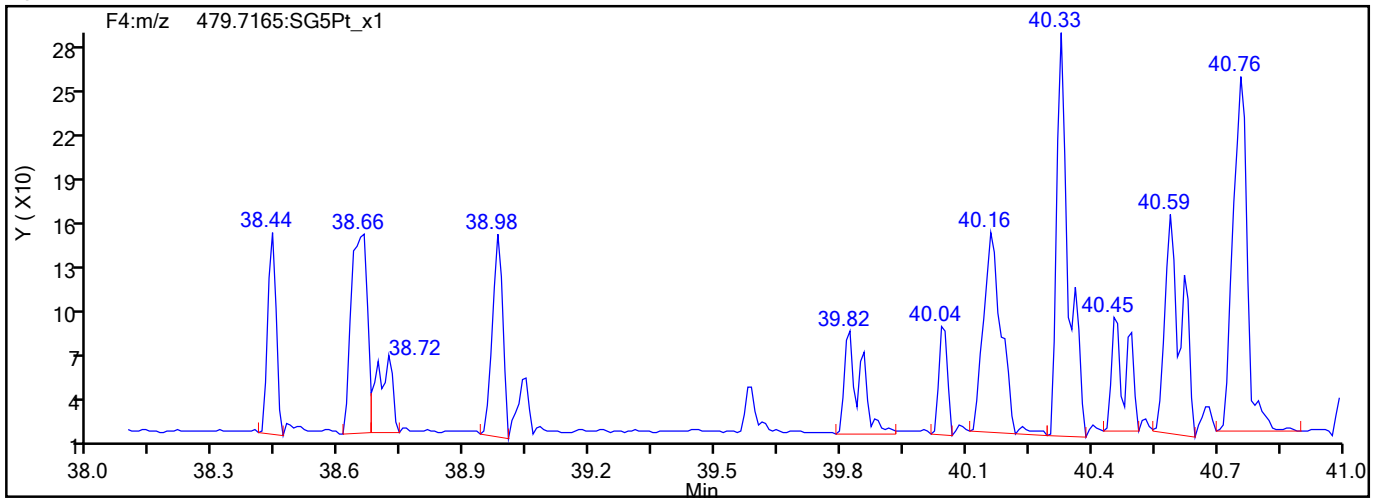

784562

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

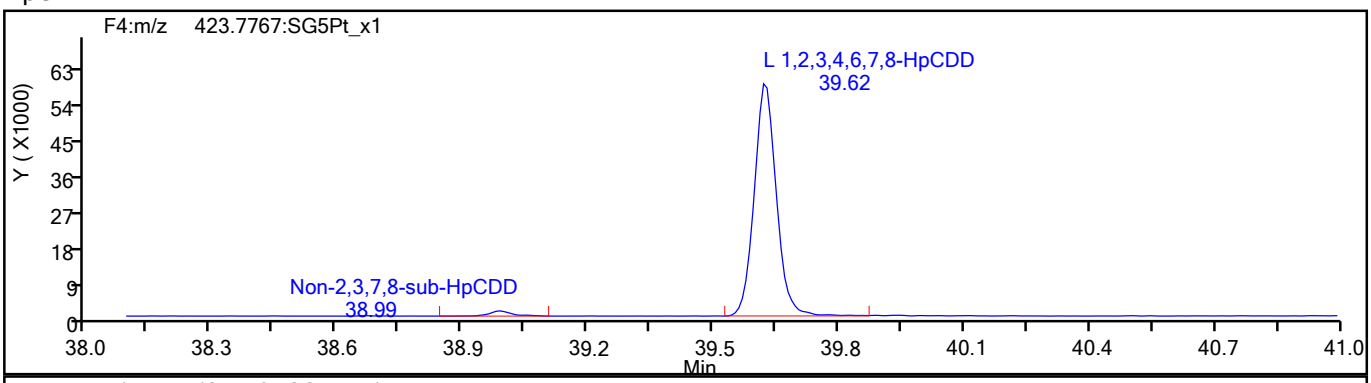

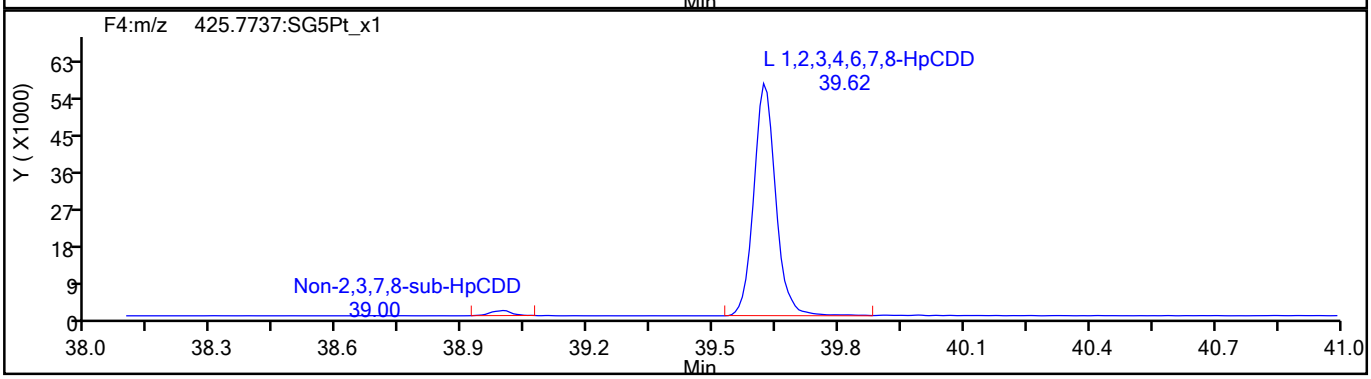

HpCDD Standards

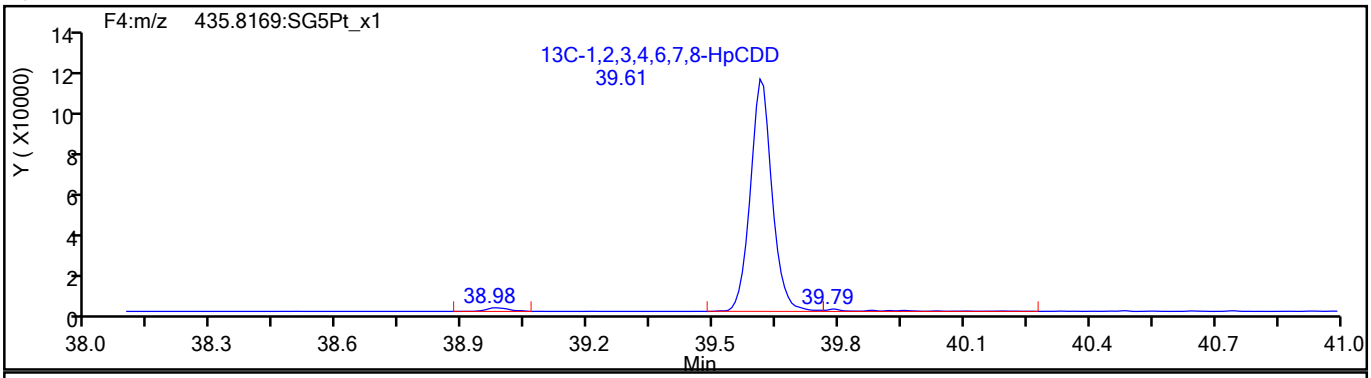

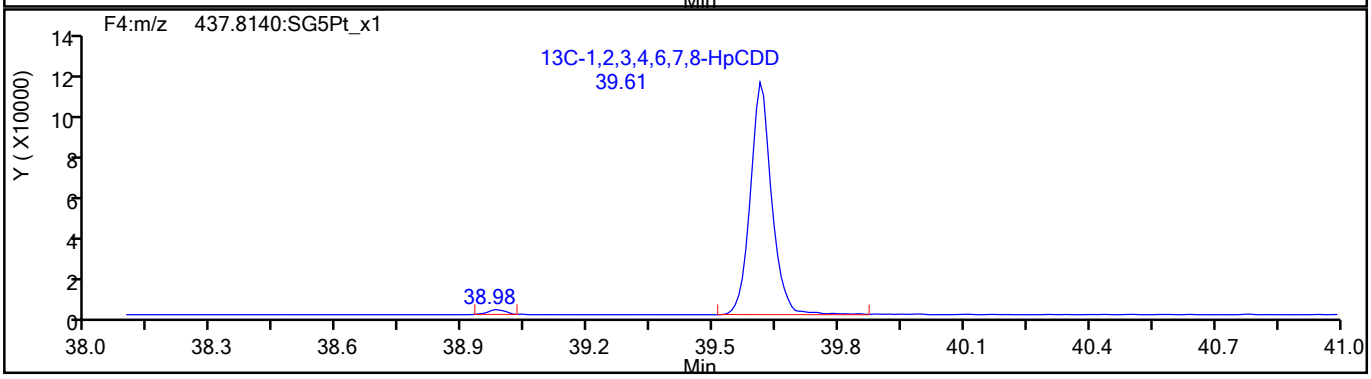

784563

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

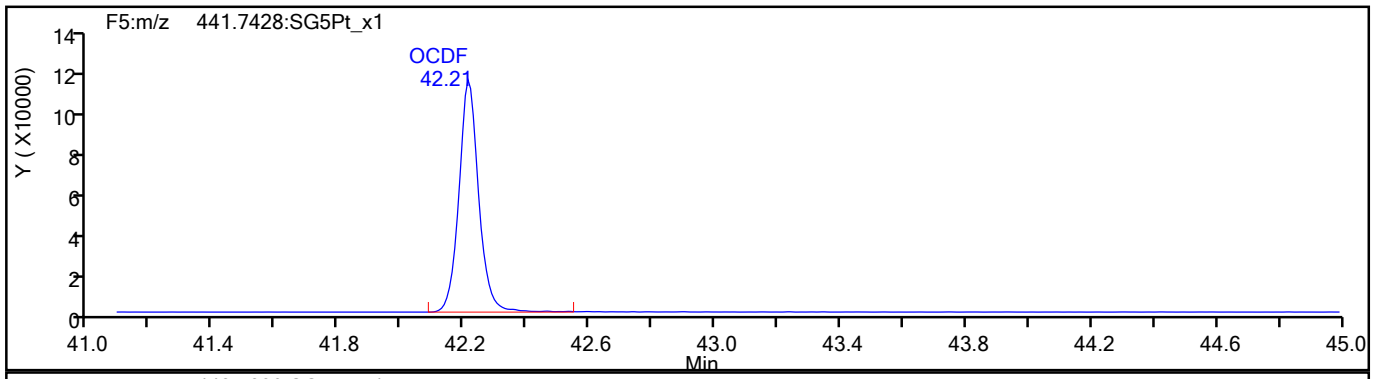

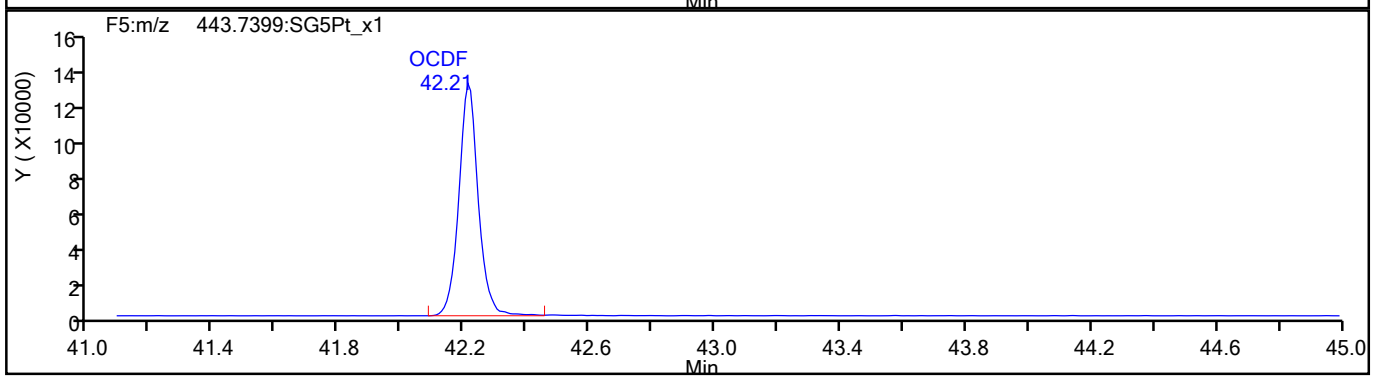

OCDF Standards

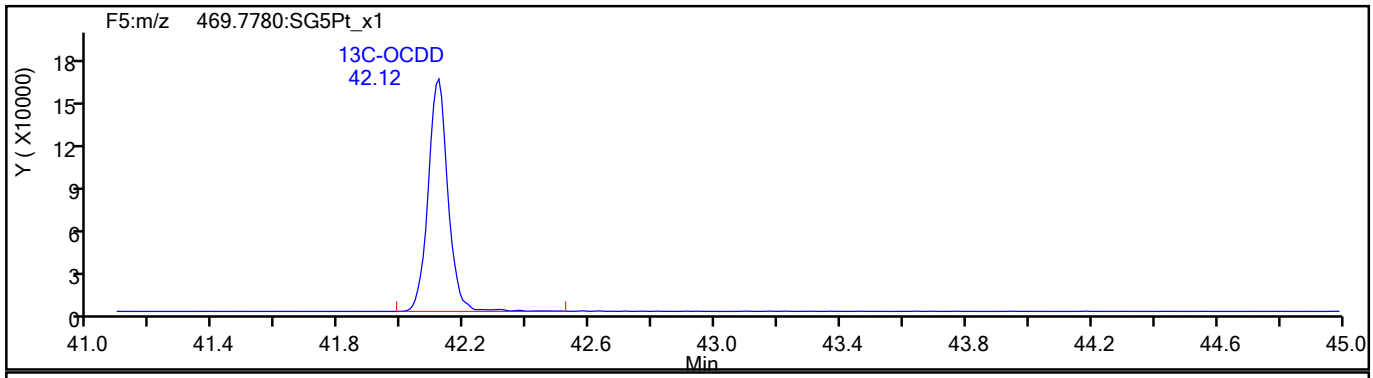

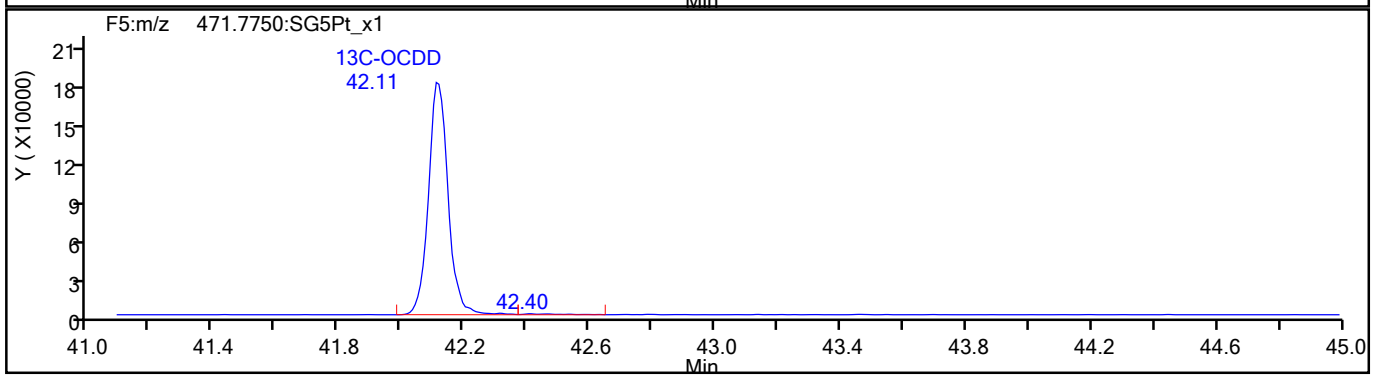

784564

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

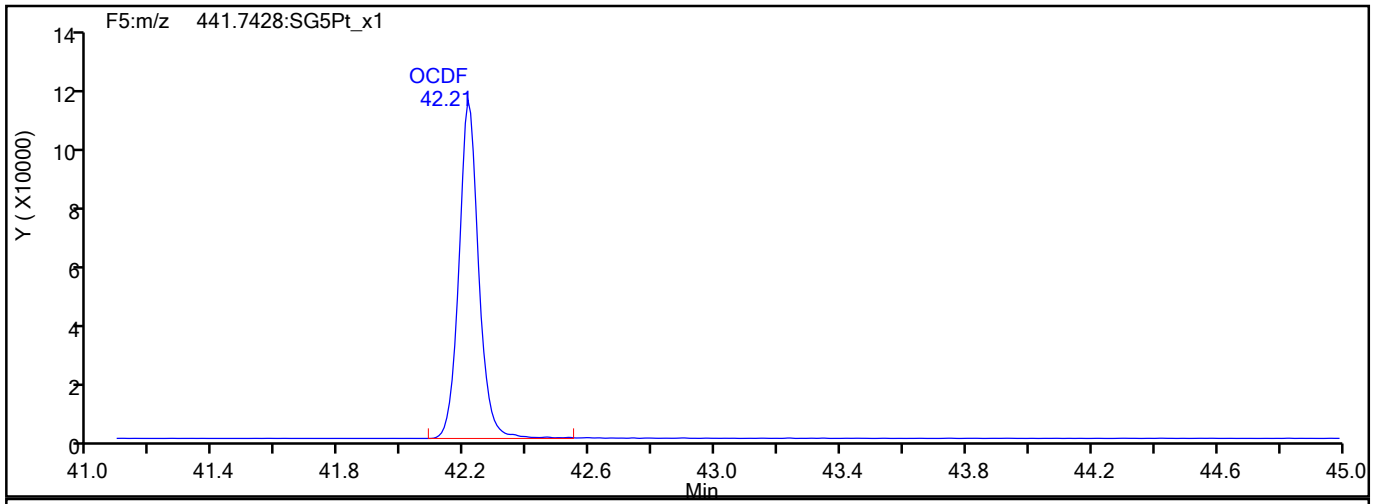

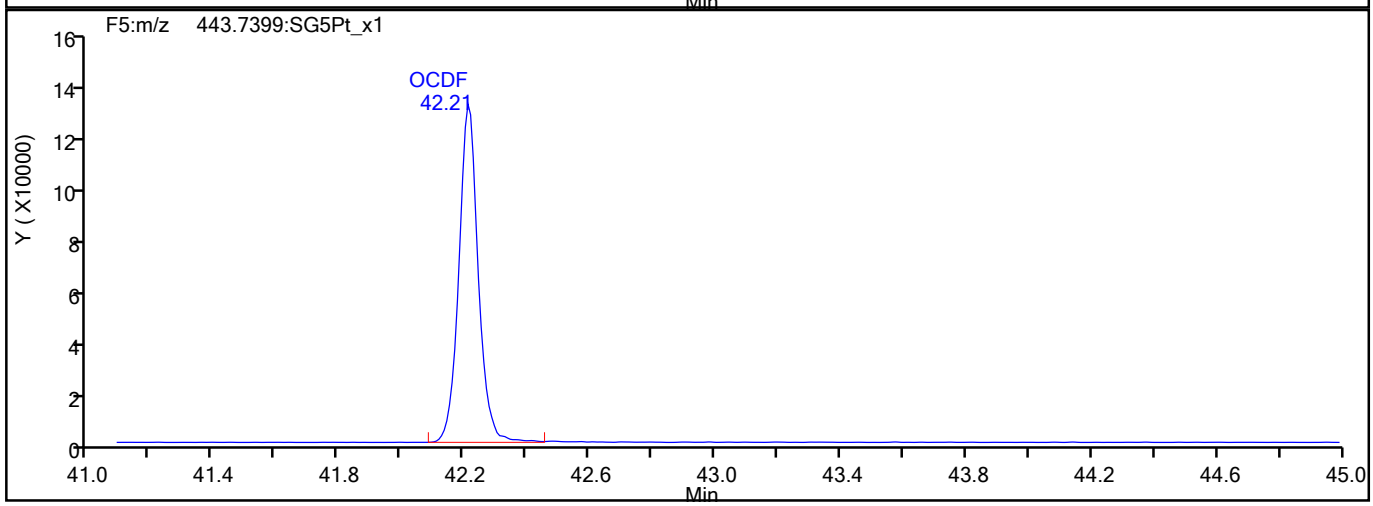

OCDF Interference Mass

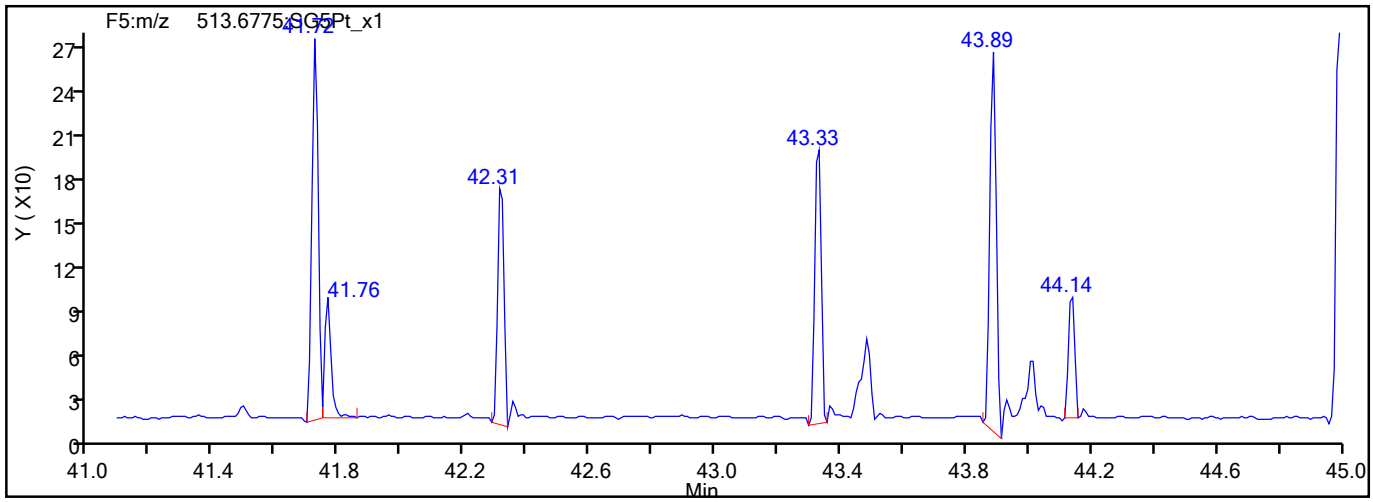

784565

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

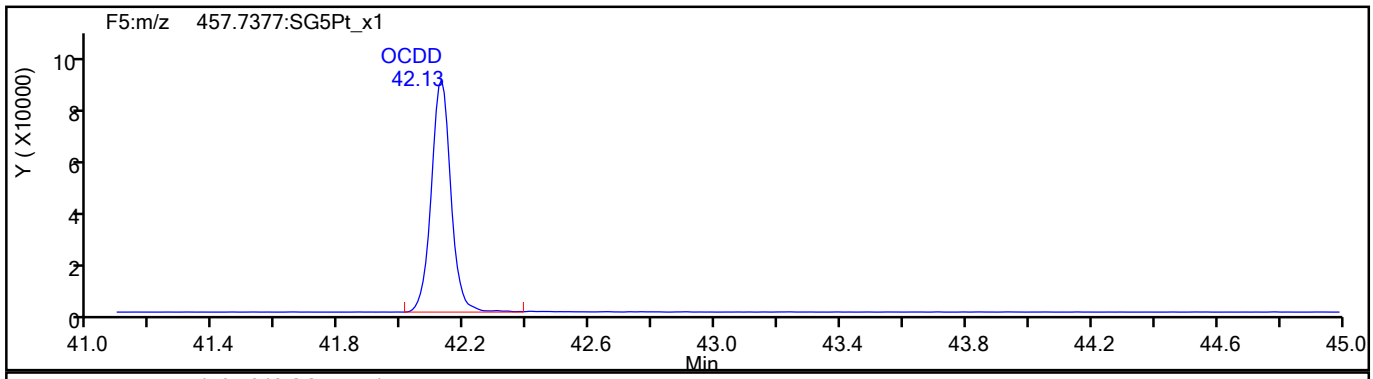

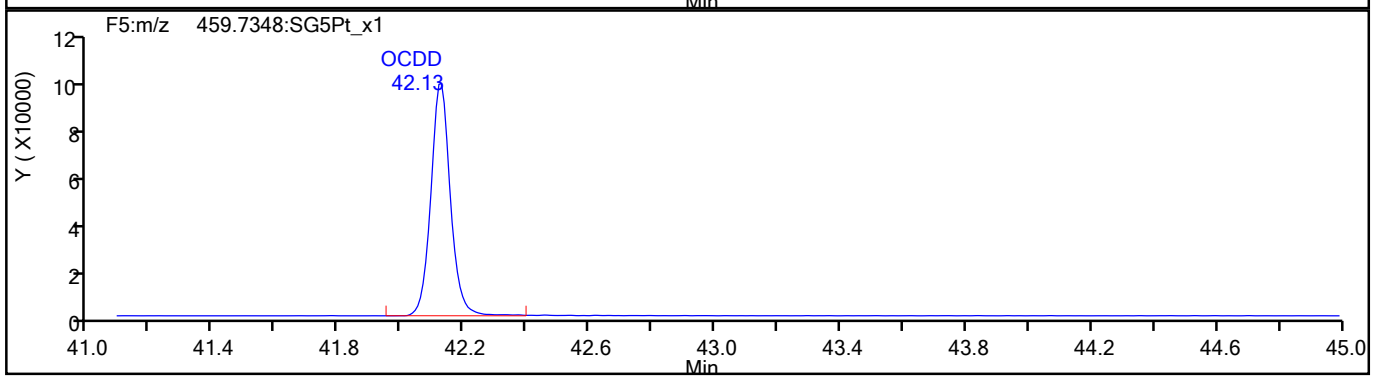

OCDD Standards

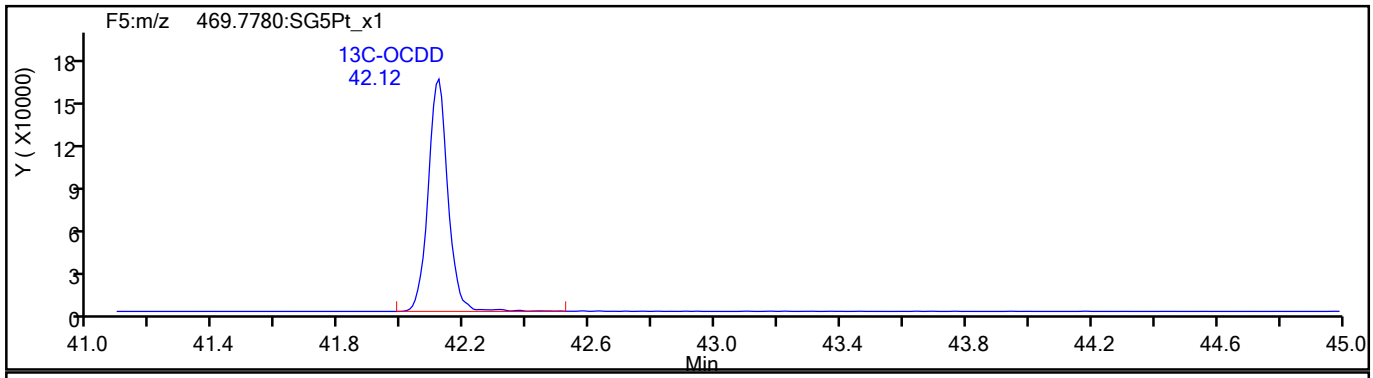

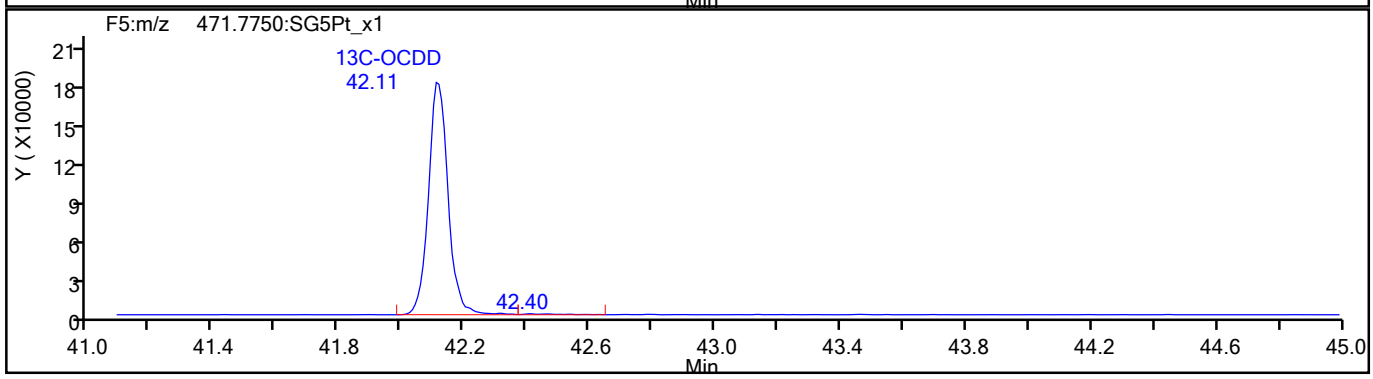

784566

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

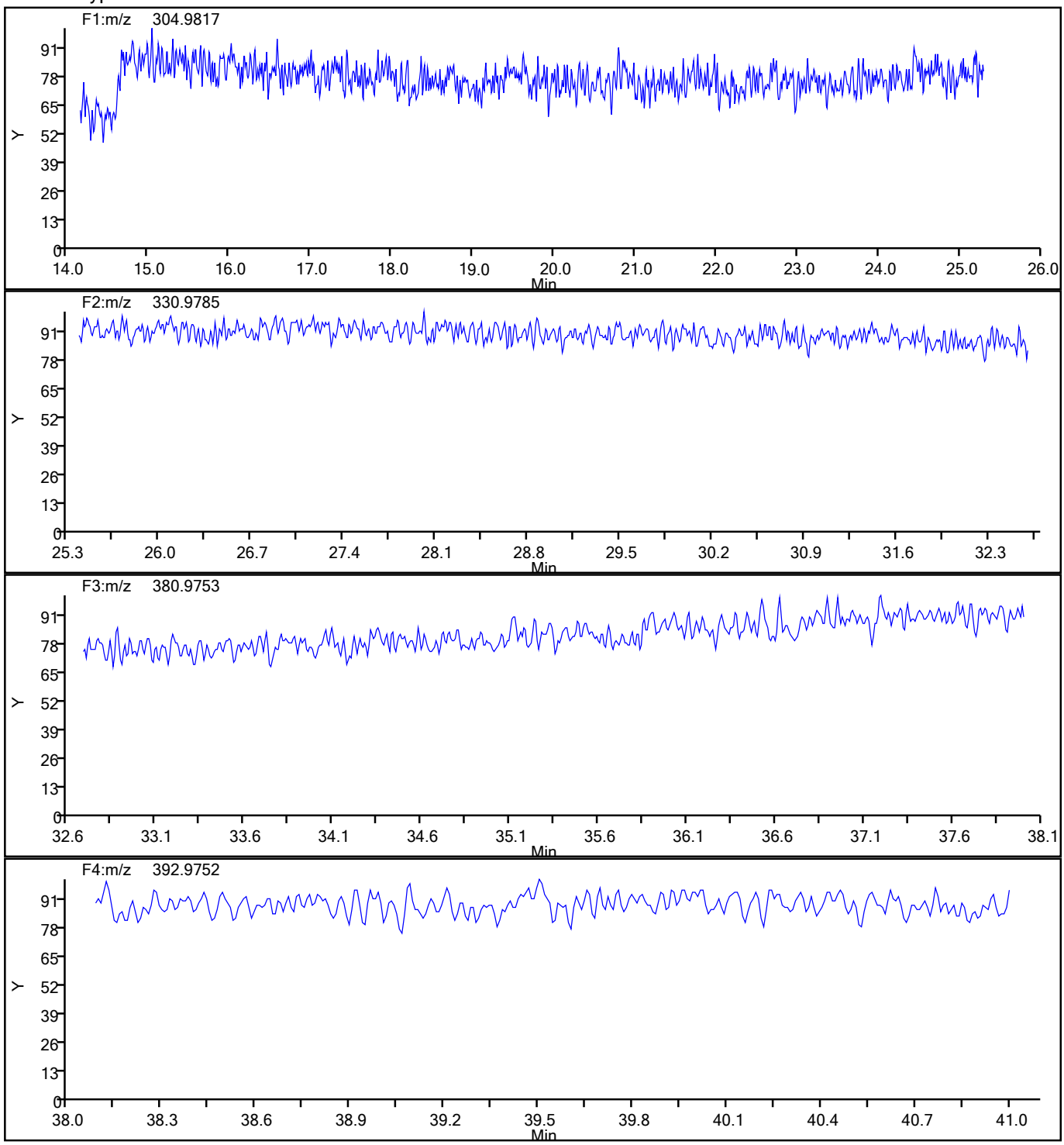

784567

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

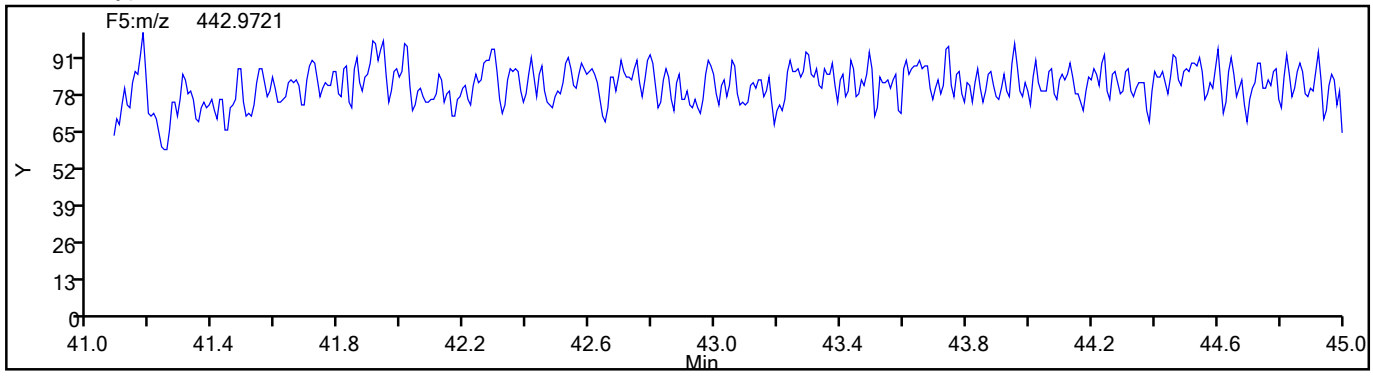

784568

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Lab Sample ID: CCV 320-517461/29 Calibration Date: 08/18/2021 13:48

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_32.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.039		9.61	10.0	96	84-120
2,3,7,8-TCDD	AveID	1.075	1.014		9.43	10.0	94	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.060		50.3	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9459		46.9	50.0	94	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.062		50.8	50.0	102	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.121		48.9	50.0	98	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.226		50.3	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.252		51.5	50.0	103	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9839		46.4	50.0	93	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9275		46.7	50.0	93	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.136		51.2	50.0	102	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.262		50.9	50.0	102	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.407		48.8	50.0	98	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.031		49.1	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.253		47.9	50.0	96	86-116
OCDD	AveID	1.062	1.015		95.6	100	96	79-126
OCDF	AveID	1.317	1.285		97.6	100	98	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.493		111	100	111	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	1.020		109	100	109	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.199		105	100	105	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.262		112	100	112	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7188		100	100	100	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.068		111	100	111	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.069		99.8	100	100	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.005		96.5	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7788		103	100	103	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.8427		98.1	100	98	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.020		105	100	105	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.8333		113	100	113	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7590		113	100	113	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.8873		129	100	129	77-129
13C-OCDD	Ave	0.5446	0.7162		263	200	132	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.104		11.0	10.0	110	79-127

31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A b.i. NU	12	1613B/Solid	D266	KSS	10.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	10.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	10.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	10.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A bad inj.	27	1613B/Solid		KSS	10.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	10.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	10.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	10.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A needs 20x	31 } reanalyze	1613B/Solid		KSS	10.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32 }	1613B/Solid		KSS	10.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	
47	17AU21DFS1_47	CCV CS-4 HRDXNL4_00100	CCV 081721C	2	Dioxin		KSS	1.000	
48	17AU21DFS1_48	WDM HRDXNCP_00044	WDM 081721C	1	Dioxin		KSS	1.000	
49	17AU21DFS1_49	SB Solvent Blank C14	SB 081721F	3	Dioxin		KSS	1.000	
50	17AU21DFS1_50	mb 320-513879/1-a	mb 320-513879/1-a	33	1613B/Solid	D267	KSS	10.000	g
51	17AU21DFS1_51	lcs 320-513879/2-a	lcs 320-513879/2-a	34	1613B/Solid		KSS	10.000	g
52	17AU21DFS1_52	320-76901-a-2-a	320-76901-a-2-a	35	1613B/Solid		KSS	10.000	g
53	17AU21DFS1_53	320-76901-a-2-b ms	320-76901-a-2-b ms	36	1613B/Solid		KSS	10.000	g
54	17AU21DFS1_54	320-76901-a-2-c msd	320-76901-a-2-c msd	37	1613B/Solid		KSS	10.000	g
55	17AU21DFS1_55	320-76769-a-4-b	320-76769-a-4-b	38	1613B/Solid		KSS	10.000	g
56	17AU21DFS1_56	320-76888-a-6-a	320-76888-a-6-a	39	1613B/Solid		KSS	10.000	g
57	17AU21DFS1_57	320-76888-a-7-a	320-76888-a-7-a	40	1613B/Solid		KSS	10.000	g
58	17AU21DFS1_58	320-76888-a-8-a	320-76888-a-8-a	41	1613B/Solid		KSS	10.000	g
59	17AU21DFS1_59	320-76888-a-9-a	320-76888-a-9-a	42	1613B/Solid		KSS	10.000	g
60	17AU21DFS1_60	SB Solvent Blank C14	SB 081721G	3	Dioxin		KSS	1.000	
61	17AU21DFS1_61	Resolution Check	RC 081721D	46			KSS	1.000	

LOGFILE CHECKED)
DB 8/18/21

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

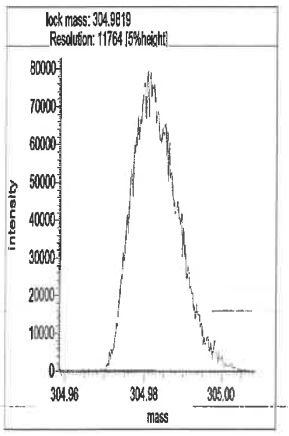

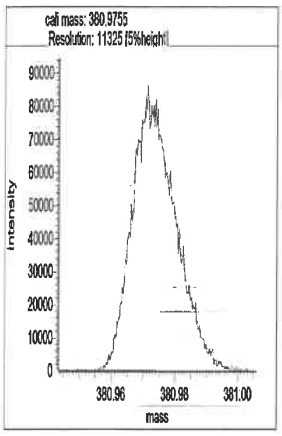

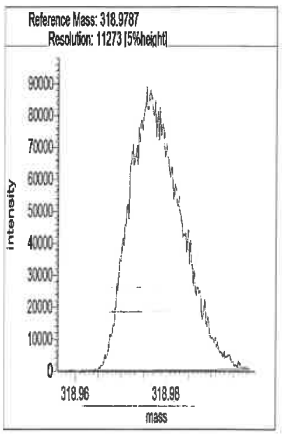

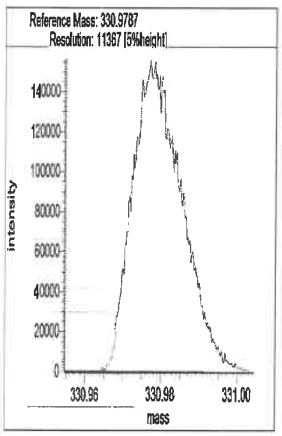

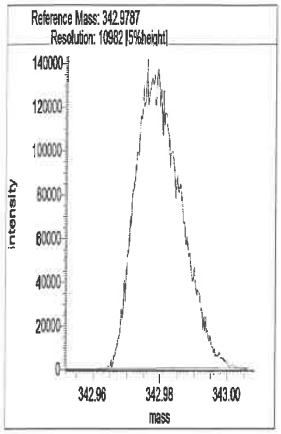

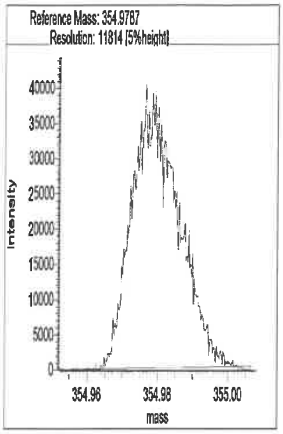

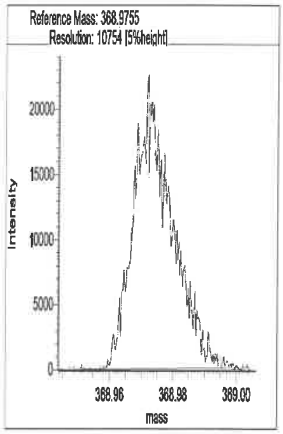

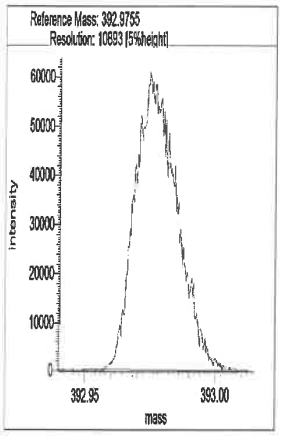

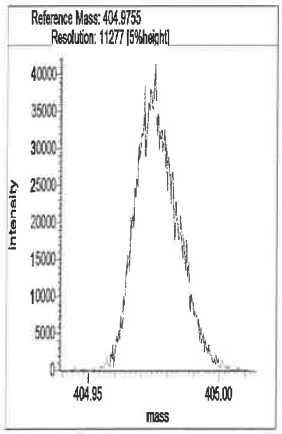

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

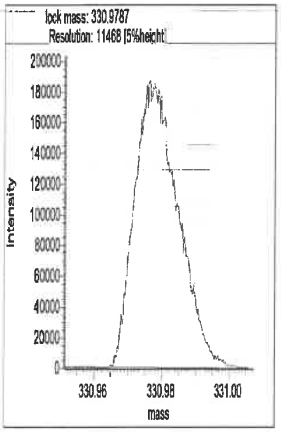

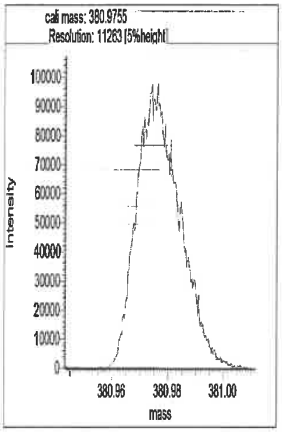

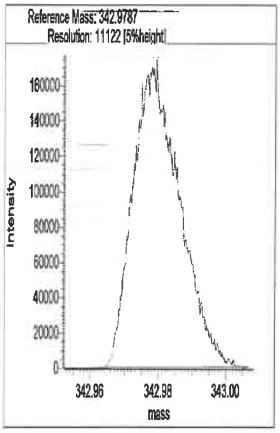

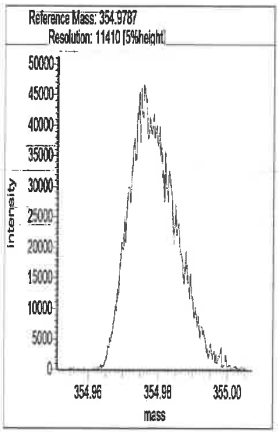

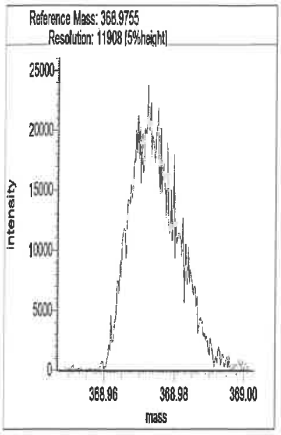

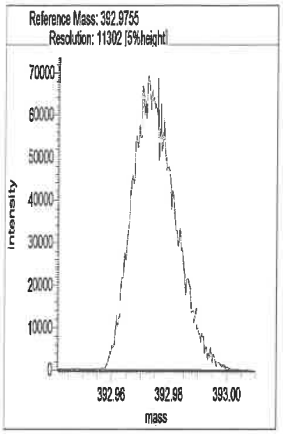

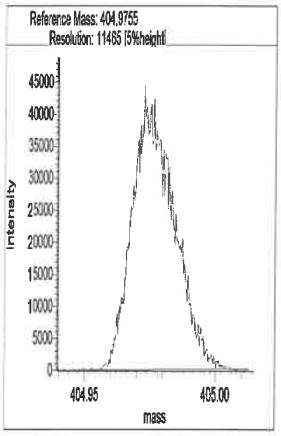

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

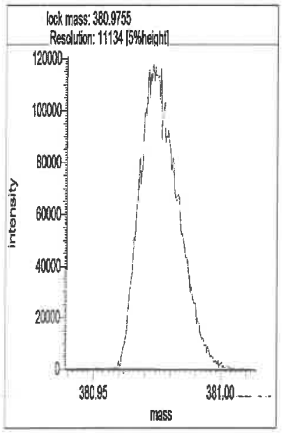

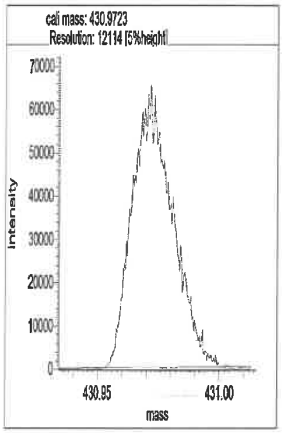

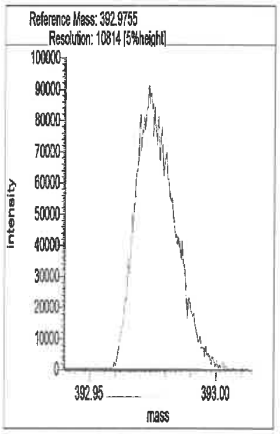

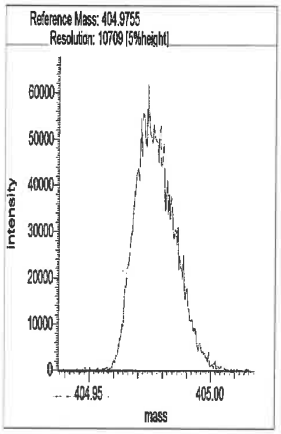

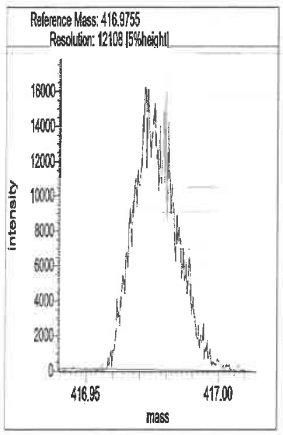

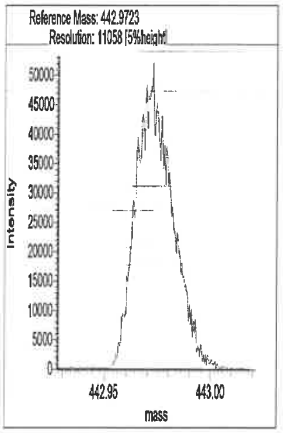

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

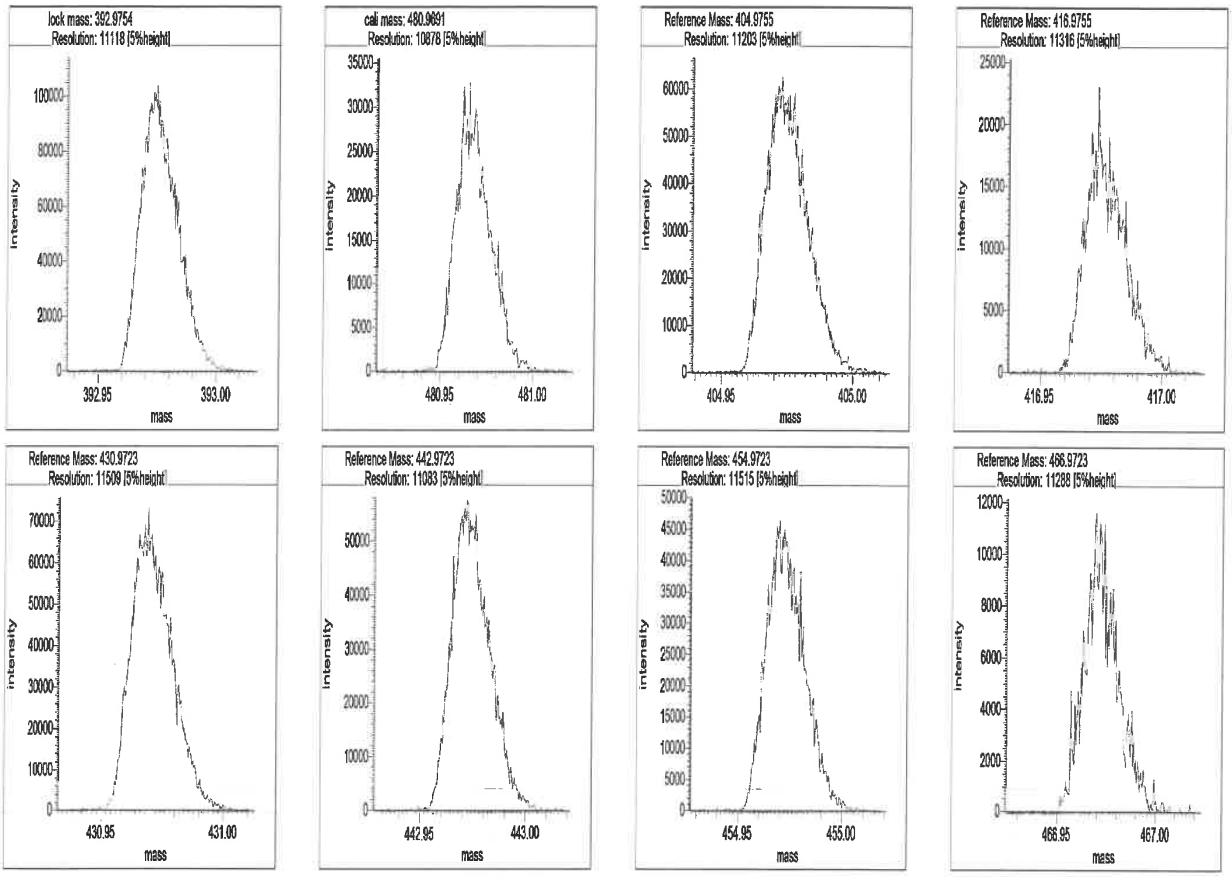

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

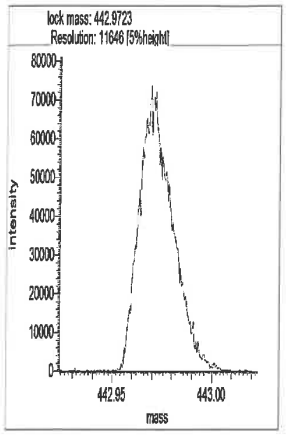
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

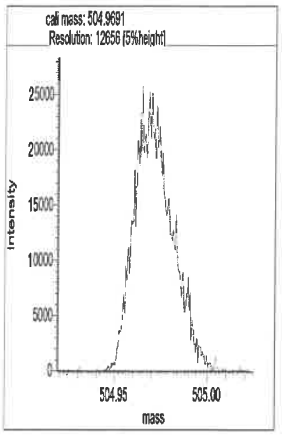
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

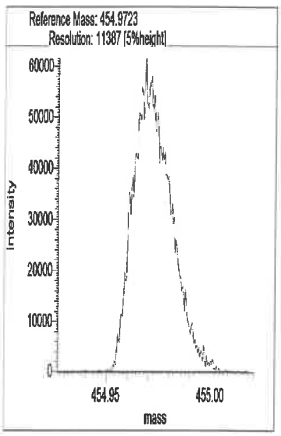
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

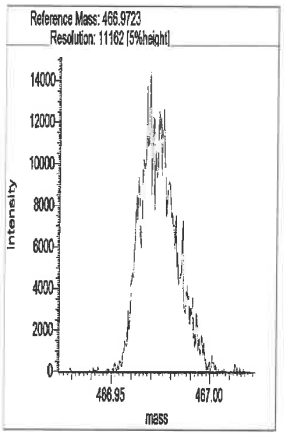
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

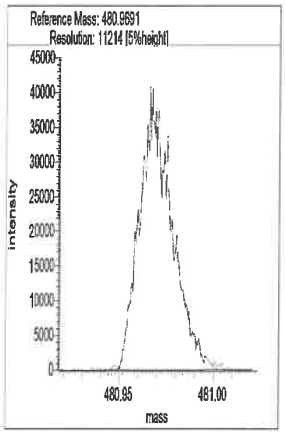
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

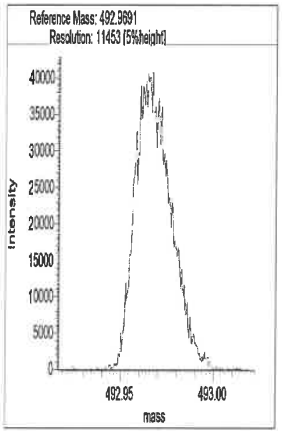
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 01:12
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10755 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10064 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11004 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10862 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10493 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11020 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10113 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10231 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9724 [5%height] ok 8/19/21

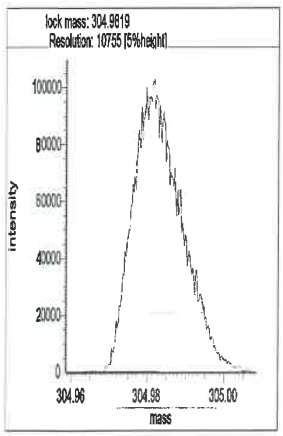

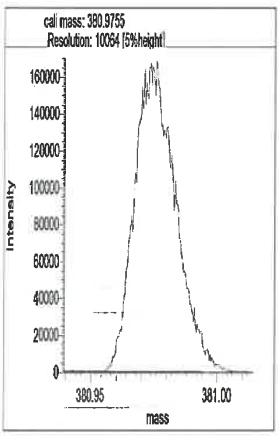

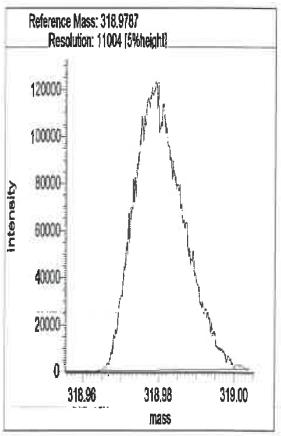

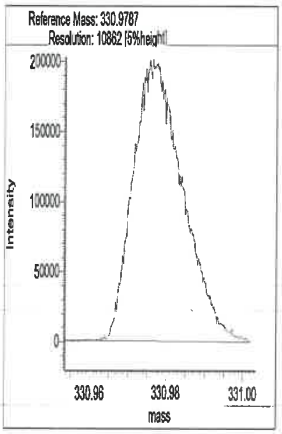

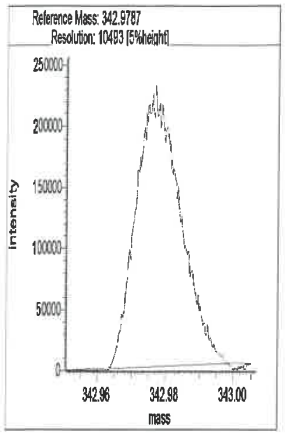

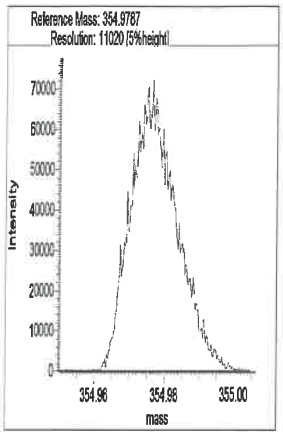

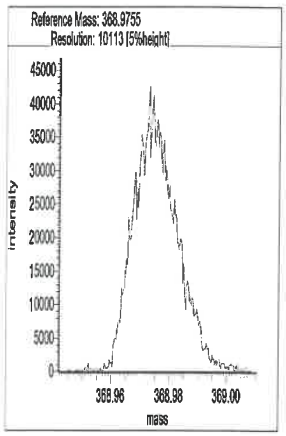

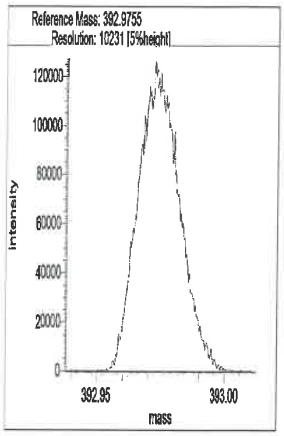

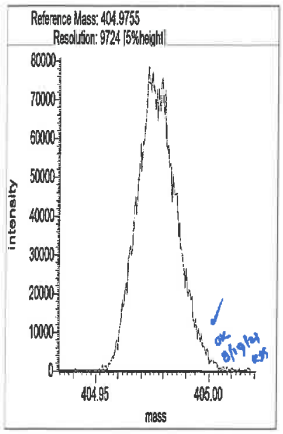

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10868 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10796 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10893 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11154 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10747 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10242 [5%height]

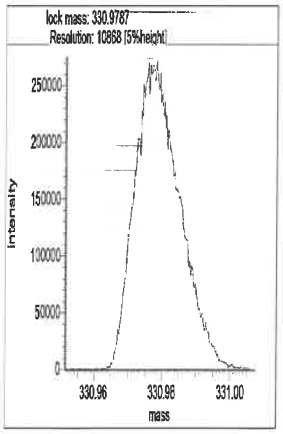

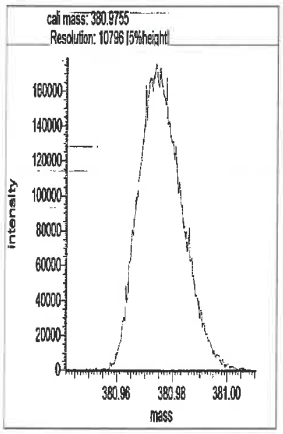

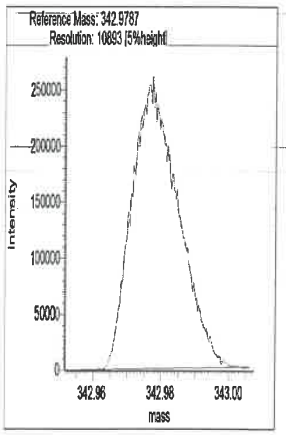

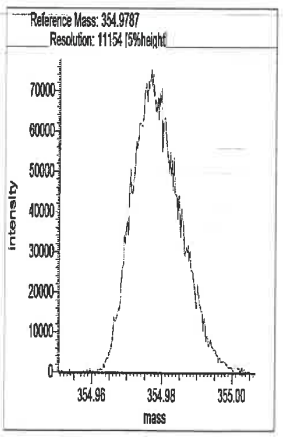

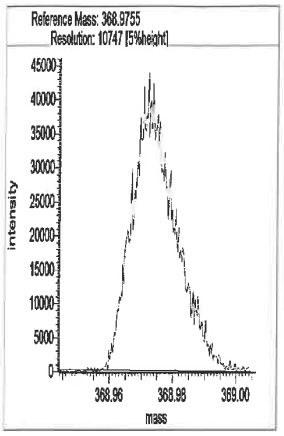

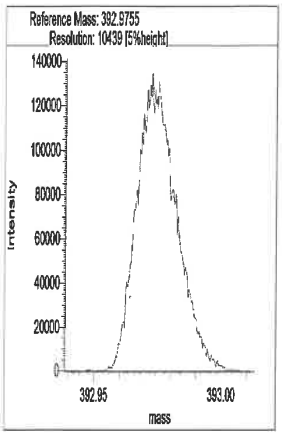

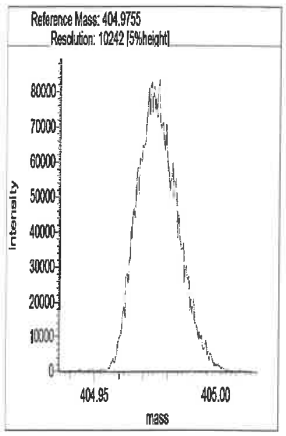

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11012 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10577 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11026 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10658 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11077 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10816 [5%height]

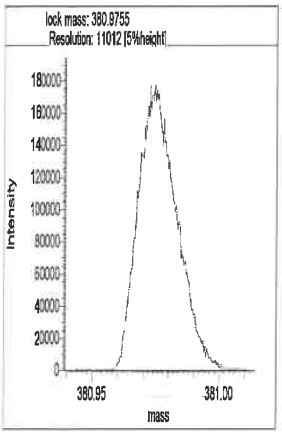

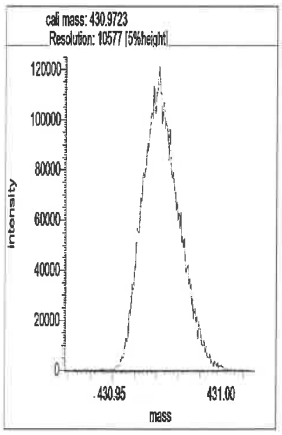

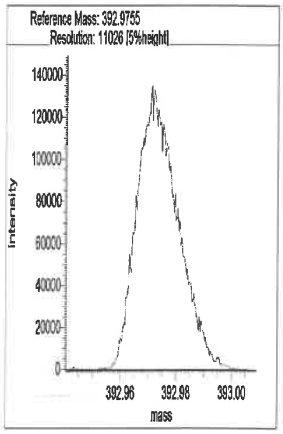

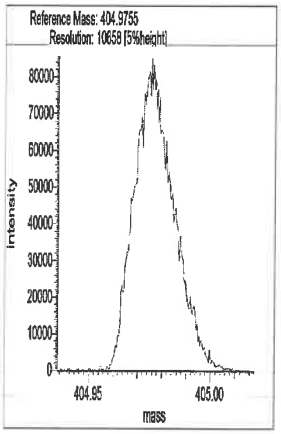

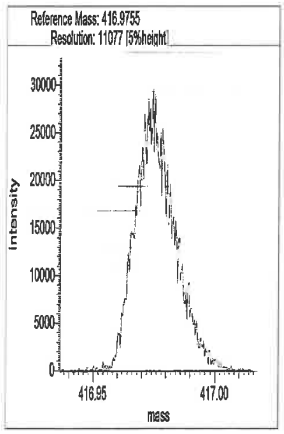

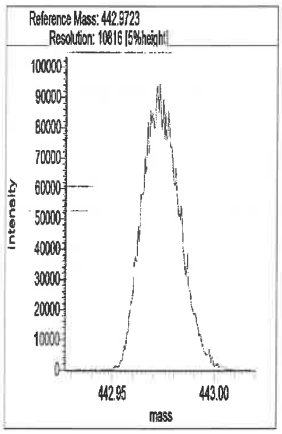

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11599 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10409 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11028 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11067 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10523 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10883 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10838 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11180 [5%height]

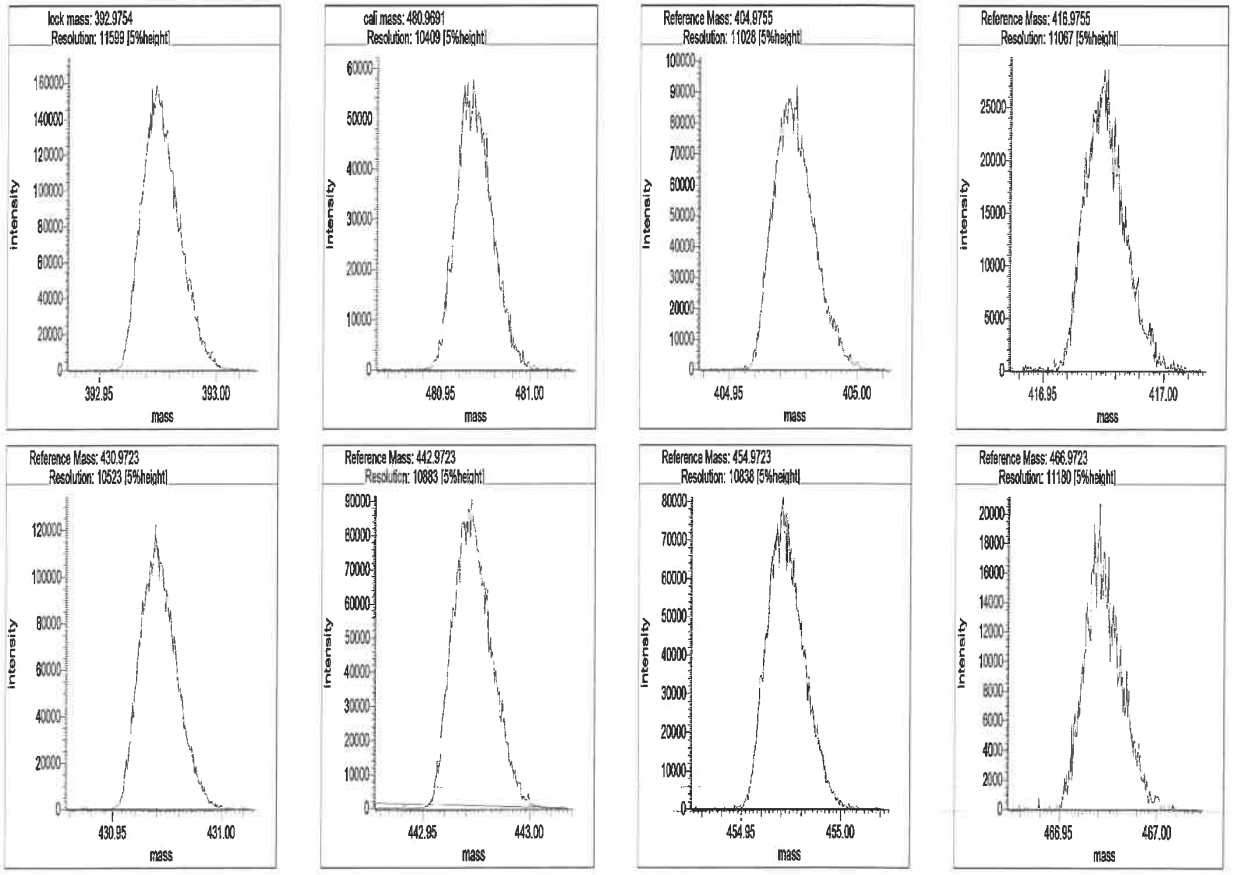

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11216 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10772 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11002 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11259 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10778 [5%height]

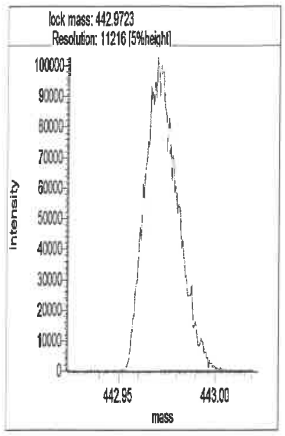
lock mass: 442.9723
Resolution: 11216 [5%height]
Intensity
mass

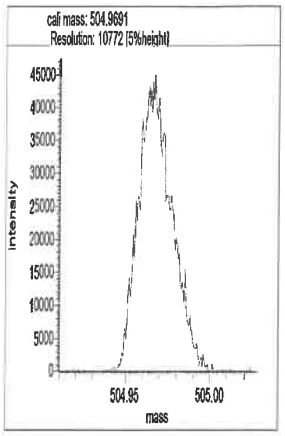
cali mass: 504.9691
Resolution: 10772 [5%height]
Intensity
mass

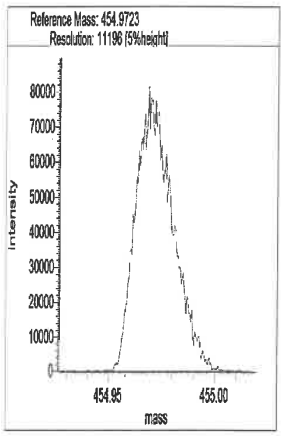
Reference Mass: 454.9723
Resolution: 11196 [5%height]
Intensity
mass

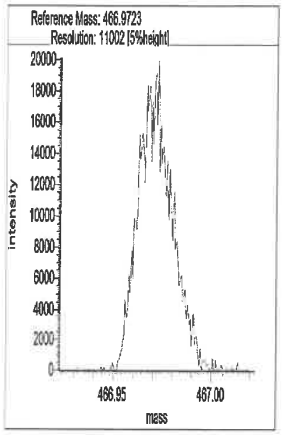
Reference Mass: 466.9723
Resolution: 11002 [5%height]
Intensity
mass

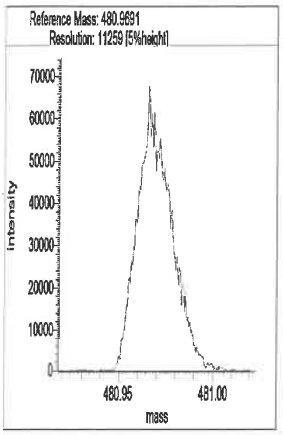
Reference Mass: 480.9691
Resolution: 11259 [5%height]
Intensity
mass

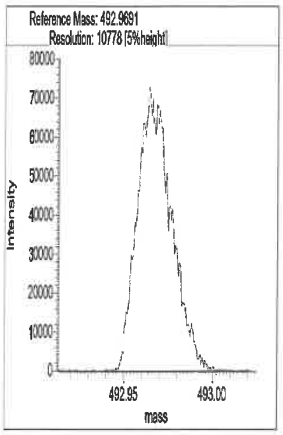
Reference Mass: 492.9691
Resolution: 10778 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 12:47
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11862 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10668 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 11408 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 11603 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11057 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11275 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11232 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10101 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9688 [5%height] ✓ 8/19/21 KCF

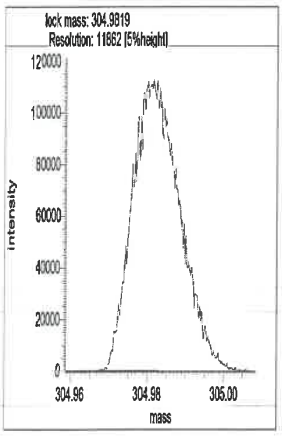

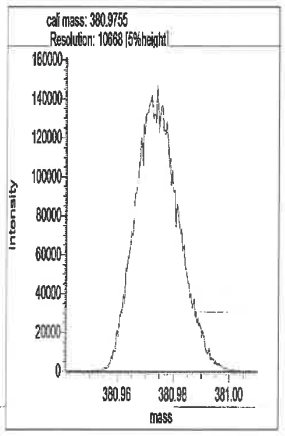

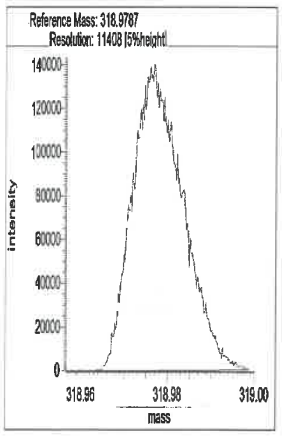

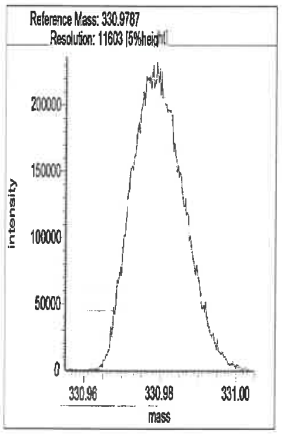

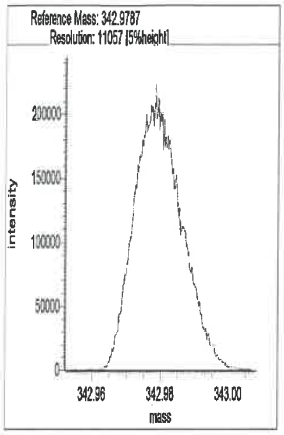

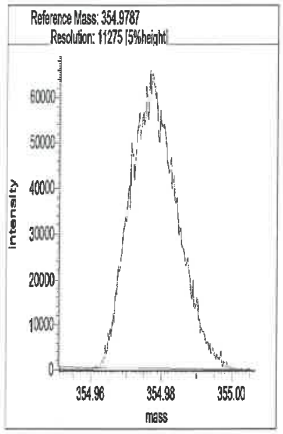

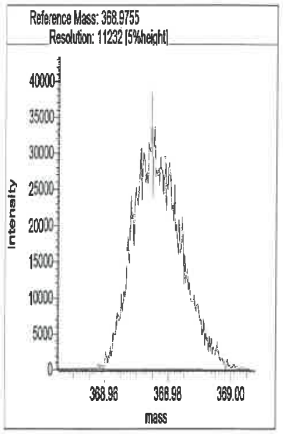

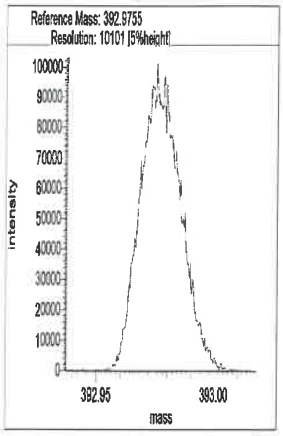

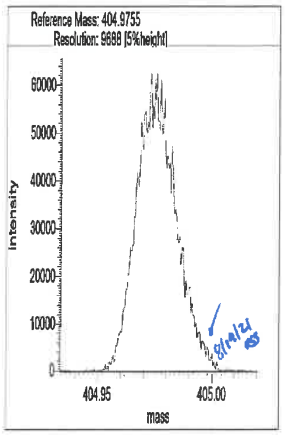

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11409 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11096 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11275 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10877 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10816 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11177 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10770 [5%height]

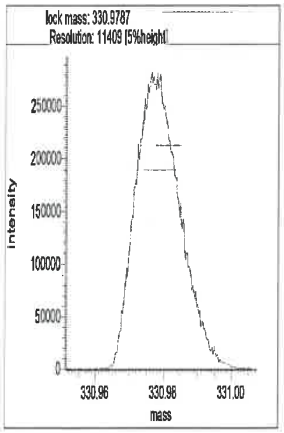

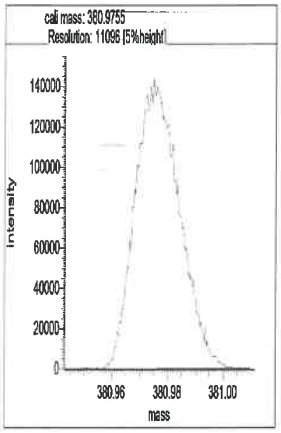

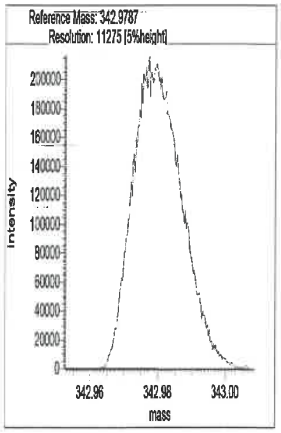

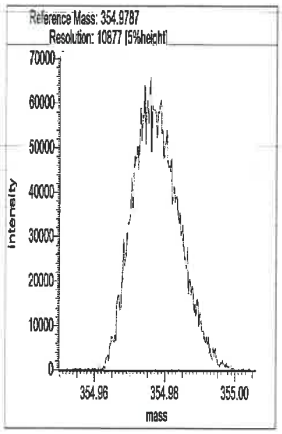

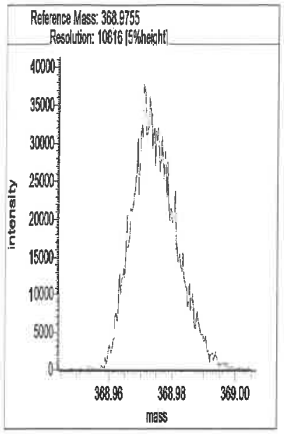

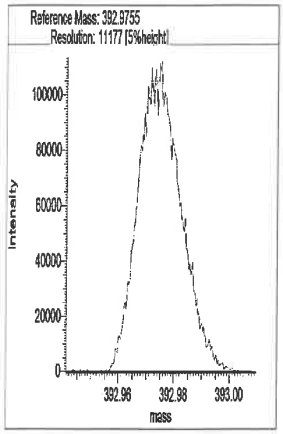

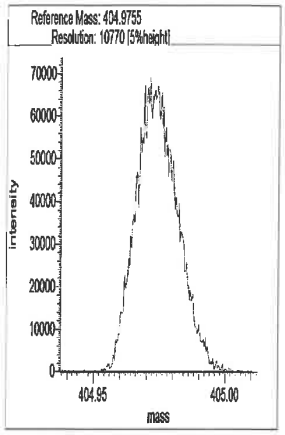

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11068 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11154 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11414 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11295 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10788 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10614 [5%height]

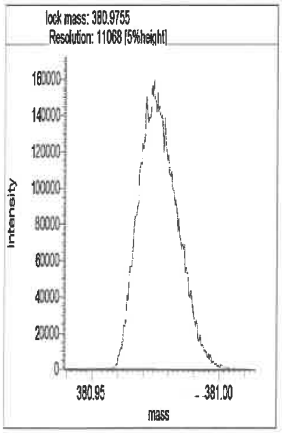

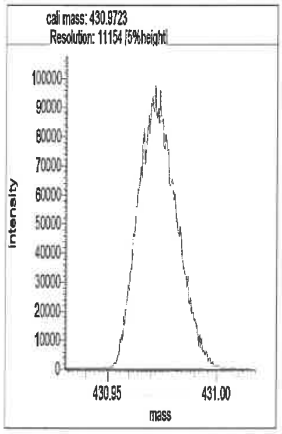

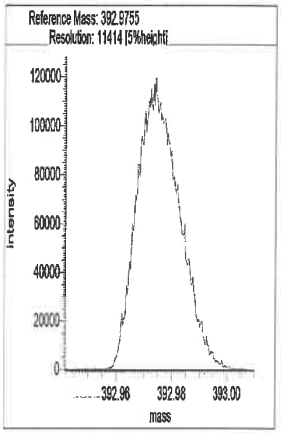

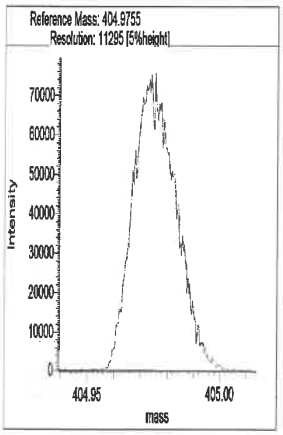

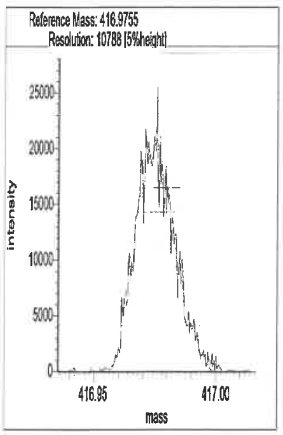

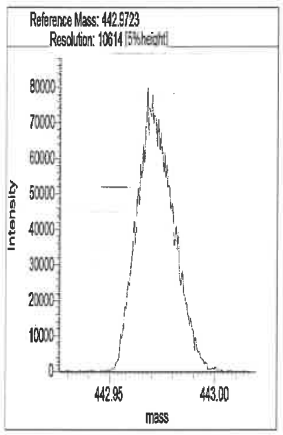

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11418 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11823 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11599 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11335 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10811 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11056 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10732 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10827 [5%height]

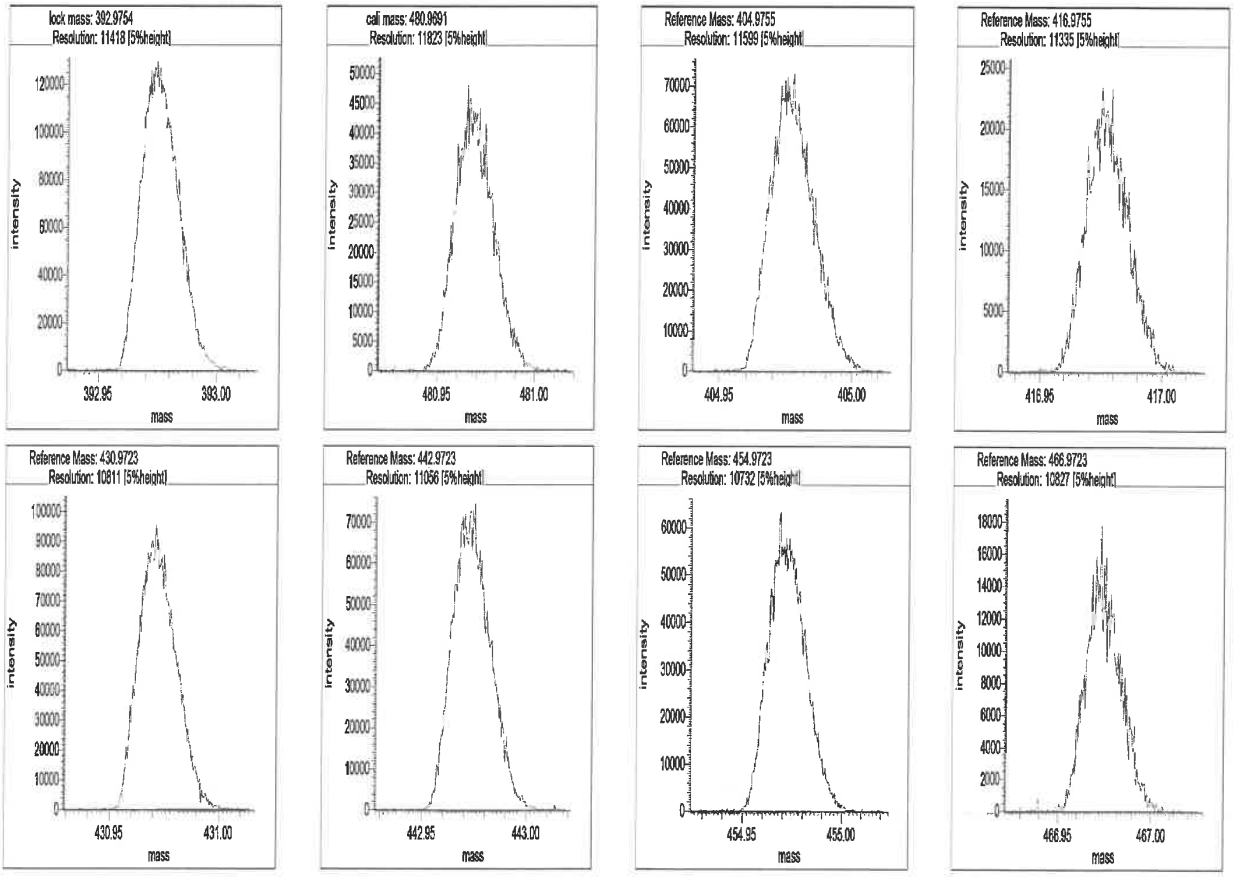

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11579 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11377 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11119 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12204 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10698 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10928 [5%height]

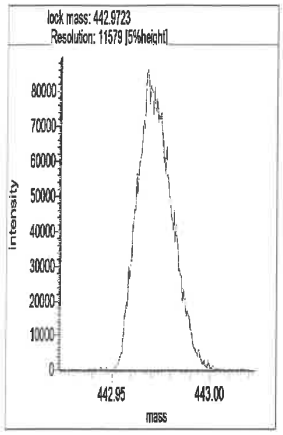
lock mass: 442.9723
Resolution: 11579 [5%height]
Intensity
mass

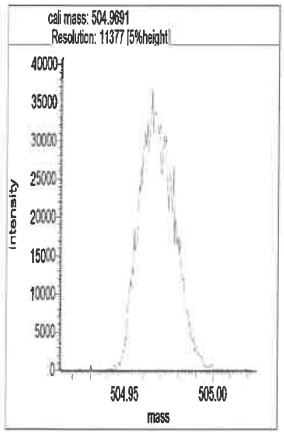
cali mass: 504.9691
Resolution: 11377 [5%height]
Intensity
mass

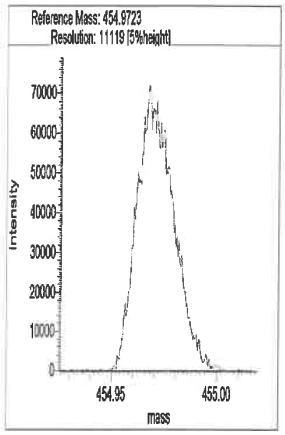
Reference Mass: 454.9723
Resolution: 11119 [5%height]
Intensity
mass

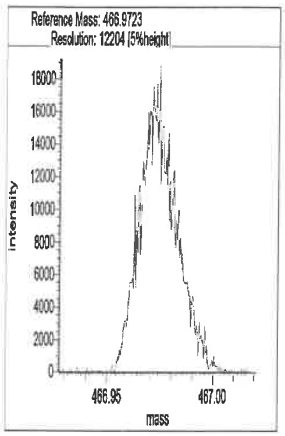
Reference Mass: 466.9723
Resolution: 12204 [5%height]
Intensity
mass

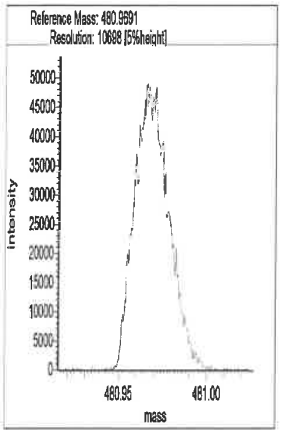
Reference Mass: 480.9691
Resolution: 10628 [5%height]
Intensity
mass

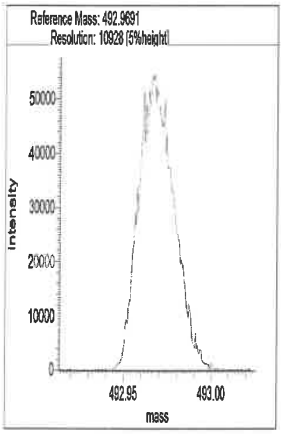
Reference Mass: 492.9691
Resolution: 10928 [5%height]
Intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 13:48:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:36 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 15:08:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.444	583584	0.84	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.480	871422	0.81	1.3459	110.9	110.9	0.2490	0.2490	111	
2,3,7,8-TCDF	20.523	90505	0.83	1.0802	9.615	9.615	0.0222	0.0222	96.15	M
A Non-2,3,7,8-sub-TCDF	19.878	1359	0.77	1.0802	0.2814	0.1444	0.0222	0.0337	0.00	RQM
S Total TCDF					9.896	9.759	0.0222	0.0222		RQ
D 13C-2,3,7,8-TCDD	21.831	595187	0.83	0.9317	109.5	109.5	0.2082	0.2082	109	
$ 37Cl4-2,3,7,8-TCDD	21.857	64449		1.0083	11.0	11.0	0.0117	0.0117	110	
2,3,7,8-TCDD	21.882	60333	0.89	1.0753	9.427	9.427	0.0245	0.0245	94.27	M
A Non-2,3,7,8-sub-TCDD	20.707	208	0.77	1.0753	0.0619	0.0325	0.0245	0.0245	0.00	RQM
S Total TCDD					9.488	9.459	0.0245	0.0245		RQ
D 13C-1,2,3,7,8-PeCDF	27.304	699918	1.55	1.1405	105.2	105.2	0.2134	0.2134	105	
1,2,3,7,8-PeCDF	27.330	370990	1.59	1.0543	50.3	50.3	0.1259	0.1259	101	
D 13C-2,3,4,7,8-PeCDF	28.820	736640	1.63	1.1253	112.2	112.2	0.2163	0.2163	112	
2,3,4,7,8-PeCDF	28.845	348407	1.57	1.0079	46.9	46.9	0.1301	0.1301	93.86	
A F1 PeCDFs	24.648	81	1.55	1.0311	0.0600	0.0109	0.004669	0.008777	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.125	4158	1.55	1.0311	0.6367	0.5614	0.1279	0.5614	0.00	RQ
S Total PeCDF					97.9	97.8	0.1280	0.1280		RQ
D 13C-1,2,3,7,8-PeCDD	29.645	419476	1.56	0.7165	100.3	100.3	0.1428	0.1428	100	
1,2,3,7,8-PeCDD	29.670	222798	1.53	1.0465	50.8	50.8	0.0611	0.0611	102	
A Non-2,3,7,8-sub-PeCDD	28.489						0.0611	0.0611		
S Total PeCDD					50.8	50.8	0.0611	0.0611		
D 13C-1,2,3,4,7,8-HxCDF	34.955	674175	0.54	0.9648	110.7	110.7	0.3609	0.3609	111	
1,2,3,4,7,8-HxCDF	34.972	377904	1.23	1.1474	48.9	48.9	0.1894	0.1894	97.71	
D 13C-1,2,3,6,7,8-HxCDF	35.123	674580	0.52	1.0708	99.8	99.8	0.3252	0.3252	99.80	
1,2,3,6,7,8-HxCDF	35.132	413479	1.26	1.2178	50.3	50.3	0.1934	0.1934	101	
D 13C-2,3,4,6,7,8-HxCDF	35.932	634377	0.53	1.0413	96.5	96.5	0.3344	0.3344	96.51	
2,3,4,6,7,8-HxCDF	35.949	397022	1.26	1.2145	51.5	51.5	0.1754	0.1754	103	
D 13C-1,2,3,7,8,9-HxCDF	36.816	643754	0.55	0.9731	104.8	104.8	0.3579	0.3579	105	
1,2,3,7,8,9-HxCDF	36.833	406240	1.28	1.2401	50.9	50.9	0.1567	0.1567	102	
A Non-2,3,7,8-sub-HxCDF	35.028						0.1777	0.1777		

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					201.6	201.6	0.1788	0.1788		
* 13C-1,2,3,7,8,9-HxCDD	36.623	631247	1.29	1.8E+04	100.0	100.0				M
D 13C-1,2,3,4,7,8-HxCDD	36.134	491591	1.35	0.7587	102.6	102.6	0.2264	0.2264	103	
1,2,3,4,7,8-HxCDD	36.159	241838	1.29	1.0608	46.4	46.4	0.0904	0.0904	92.75	
D 13C-1,2,3,6,7,8-HxCDD	36.260	531922	1.23	0.8593	98.1	98.1	0.1999	0.1999	98.07	
1,2,3,6,7,8-HxCDD	36.269	246666	1.18	0.9933	46.7	46.7	0.0900	0.0900	93.37	
1,2,3,7,8,9-HxCDD	36.631	290723	1.25	1.1094	51.2	51.2	0.0834	0.0834	102	
A Non-2,3,7,8-sub-HxCDD	35.394						0.0878	0.0878		
S Total HxCDD					144.3	144.3	0.0880	0.0880		
D 13C-1,2,3,4,6,7,8-HpCDF	38.630	526049	0.45	0.7359	113.2	113.2	0.4054	0.4054	113	
1,2,3,4,6,7,8-HpCDF	38.638	370093	1.06	1.4421	48.8	48.8	0.1783	0.1783	97.57	
D 13C-1,2,3,4,7,8,9-HpCDF	39.876	560124	0.44	0.6854	129.5	129.5	0.4354	0.4354	129	M
1,2,3,4,7,8,9-HpCDF	39.885	351003	1.05	1.3092	47.9	47.9	0.1621	0.1621	95.73	
A Non-2,3,7,8-sub-HpCDF	39.258						0.1690	0.1690		
S Total HpCDF					96.7	96.7	0.1702	0.1702		
D 13C-1,2,3,4,6,7,8-HpCDD	39.573	479110	1.01	0.6745	112.5	112.5	0.3461	0.3461	113	
1,2,3,4,6,7,8-HpCDD	39.582	246982	1.07	1.0503	49.1	49.1	0.1221	0.1221	98.16	
A Non-2,3,7,8-sub-HpCDD	39.258	2973	1.04	1.0503	0.7180	0.5908	0.1221	0.5908	0.00	RQ
S Total HpCDD					49.8	49.7	0.1221	0.1221		RQ
D 13C-OCDD	42.069	904193	0.89	0.5446	263.0	263.0	0.3342	0.3342	132	
OCDF	42.170	580843	0.91	1.3168	97.6	97.6	0.0938	0.0938	97.57	
OCDD	42.078	458801	0.90	1.0620	95.6	95.6	0.0951	0.0951	95.56	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 13:48:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:36 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 15:08:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.444	21.444	0		265855	39874	42	105	949		a
333.9338	21.453	21.444	1		317729	45174	24	60	1882	0.84(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.480	20.480	0	0.955	389124	57100	79	197	723		
317.9389	20.489	20.480	1	0.955	482298	68240	35	87	1950	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.523	20.523	0	1.002	40929	5463	4	10	1366		M
305.8987	20.506	20.523	-1	1.001	49576	7254	8	20	907	0.83(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	17.486	19.878	-143	0.854	72	49	4	10	12		
305.8987	17.503	19.878	-142	0.855	325	77	8	20	10	0.22(0.65-0.89)	
	Empc Correction				93	63	8	20	8		
303.9016	19.749	19.878	-8	0.964	138	54	4	10	14		
305.8987	19.775	19.878	-6	0.966	511	125	8	20	16	0.27(0.65-0.89)	
	Empc Correction				179	70	8	20	9		
303.9016	20.911	19.878	62	1.021	628	84	4	10	21		
	Empc Correction				136	73	4	10	18		
305.8987	20.893	19.878	61	1.020	177	96	8	20	12	3.55(0.65-0.89)	
303.9016	21.005	19.878	67	1.026	138	57	4	10	14		
305.8987	20.988	19.878	66	1.025	265	51	8	20	6	0.52(0.65-0.89)	
	Empc Correction				179	74	8	20	9		
303.9016	21.281	19.878	84	1.039	255	95	4	10	24		
	Empc Correction				107	72	4	10	18		
305.8987	21.315	19.878	86	1.041	140	94	8	20	12	1.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											
331.9368	21.831	21.831	0	1.018	269248	34531	42	105	822		
333.9338	21.822	21.831	-1	1.018	325939	41230	24	60	1718	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.857	21.857	0	1.019	64449	8479	4	10	2120		
2,3,7,8-TCDD											M
319.8965	21.882	21.882	0	1.002	28457	3845	7	17	549		M
321.8936	21.882	21.882	0	1.002	31876	3953	1	2	3953	0.89(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQM
319.8965	21.668	20.707	58	0.993	120	81	7	17	12		
	Empc Correction				33	23	7	17	3		
321.8936	21.693	20.707	59	0.994	43	31	1	2	31	2.79(0.65-0.89)	
319.8965	22.399	20.707	101	1.026	158	67	7	17	10		
	Empc Correction				57	22	7	17	3		
321.8936	22.330	20.707	97	1.023	75	29	1	2	29	2.11(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.304	27.304	0	1.273	425195	63633	45	112	1414		
353.8970	27.313	27.304	1	1.274	274723	39611	38	95	1042	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.330	27.330	0	1.001	227987	33133	32	80	1035		
341.8567	27.338	27.330	1	1.001	143003	20797	23	57	904	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.820	28.820	0	1.344	456611	65087	45	112	1446		
353.8970	28.812	28.820	-1	1.344	280029	39384	38	95	1036	1.63(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.845	28.845	0	1.001	212877	28369	32	80	887		
341.8567	28.837	28.845	-1	1.001	135530	17603	23	57	765	1.57(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.256	24.648	-23	0.888	10	6	1	2	6		
341.8567	24.230	24.648	-25	0.887	25	14	1	2	14	0.40(1.32-1.78)	
	Empc Correction				6	3	1	2	3		
339.8597	24.420	24.648	-14	0.894	40	22	1	2	22		
341.8567	24.394	24.648	-15	0.893	369	90	1	2	90	0.11(1.32-1.78)	
	Empc Correction				25	14	1	2	14		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.919	28.125	-12	1.023	2528	386	32	80	12		
341.8567	27.953	28.125	-10	1.024	2187	262	23	57	11	1.16(1.32-1.78)	
	Empc Correction				1630	249	23	57	11		
13C-1,2,3,7,8-PeCDD											
367.8949	29.645	29.645	0	1.382	255348	35062	26	65	1349		
369.8919	29.636	29.645	-1	1.382	164128	22831	9	22	2537	1.56(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.670	29.670	0	1.001	134733	17174	10	25	1717		
357.8516	29.662	29.670	-1	1.001	88065	11340	5	12	2268	1.53(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						10	25			
357.8516	28.489						5	12			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.955	34.955	0	0.954	237033	46467	65	162	715		
385.8610	34.955	34.955	0	0.954	437142	82345	111	277	742	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.972	34.972	0	1.000	208303	39400	62	155	635		
375.8178	34.972	34.972	0	1.000	169601	31161	50	125	623	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.123	35.123	0	0.959	230353	41039	65	162	631		
385.8610	35.106	35.123	-1	0.959	444227	77817	111	277	701	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.132	35.132	0	1.000	230885	42672	62	155	688		
375.8178	35.132	35.132	0	1.000	182594	33631	50	125	673	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.932	35.932	0	0.981	219287	44412	65	162	683		
385.8610	35.923	35.932	-1	0.981	415090	86999	111	277	784	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.949	35.949	0	1.000	221069	46435	62	155	749		
375.8178	35.940	35.949	-1	1.000	175953	36135	50	125	723	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.816	36.816	0	1.005	227331	51062	65	162	786		
385.8610	36.816	36.816	0	1.005	416423	93051	111	277	838	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.833	36.833	0	1.000	228342	52008	62	155	839		
375.8178	36.833	36.833	0	1.000	177898	40049	50	125	801	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						62	155			
375.8178	35.028						50	125			
13C-1,2,3,7,8,9-HxCDD											M
401.8559	36.623	36.623	0		355684	70512	58	145	1216		M
403.8529	36.623	36.623	0		275563	55836	29	72	1925	1.29(1.05-1.43)	M
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.134	36.134	0	0.987	282661	63231	58	145	1090		
403.8529	36.134	36.134	0	0.987	208930	46276	29	72	1596	1.35(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.159	36.159	0	1.001	136378	30119	23	57	1310		
391.8127	36.151	36.159	-1	1.000	105460	23953	19	47	1261	1.29(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.260	36.260	0	0.990	293421	65852	58	145	1135		
403.8529	36.252	36.260	-1	0.990	238501	51544	29	72	1777	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.269	36.269	0	1.000	133735	29949	23	57	1302		
391.8127	36.269	36.269	0	1.000	112931	23931	19	47	1260	1.18(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDD											
389.8158	36.631	36.631	0	1.014	161603	35208	23	57	1531		
391.8127	36.640	36.631	1	1.014	129120	27227	19	47	1433	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.394						23	57			
391.8127	35.394						19	47			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.630	38.630	0	1.055	163701	41181	54	135	763		
419.8220	38.630	38.630	0	1.055	362348	91864	97	242	947	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.638	38.638	0	1.000	190629	47504	72	180	660		
409.7788	38.638	38.638	0	1.000	179464	44416	65	162	683	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											M
417.8250	39.876	39.876	0	1.089	170131	49846	54	135	923		M
419.8220	39.876	39.876	0	1.089	389993	111269	97	242	1147	0.44(0.37-0.51)	M
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885	39.885	0	1.000	180078	50639	72	180	703		
409.7788	39.885	39.885	0	1.000	170925	47586	65	162	732	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						72	180			
409.7788	39.258						65	162			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.573	39.573	0	1.081	240258	68218	63	157	1083		
437.8140	39.573	39.573	0	1.081	238852	65955	55	137	1199	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.582	39.582	0	1.000	127862	35481	35	87	1014		
425.7737	39.582	39.582	0	1.000	119120	33435	34	85	983	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.950	39.258	-18	0.984	1516	518	35	87	15		
425.7737	38.941	39.258	-19	0.984	2097	634	34	85	19	0.72(0.88-1.20)	
	Empc Correction				1457	498	34	85	15		
13C-OCDD											
469.7780	42.069	42.069	0	1.149	426510	101505	54	135	1880		
471.7750	42.069	42.069	0	1.149	477683	120225	38	95	3164	0.89(0.76-1.02)	
OCDF											
441.7428	42.170	42.170	0	1.002	277003	63466	24	60	2644		
443.7399	42.170	42.170	0	1.002	303840	69097	31	77	2229	0.91(0.76-1.02)	
OCDD											
457.7377	42.078	42.078	0	1.000	217935	51979	16	40	3249		
459.7348	42.078	42.078	0	1.000	240866	57297	29	72	1976	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 13:48:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 29
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	871422	125340

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	871422	125340

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.486	72	49	325	77	0.0422	0.22	RnQ
17.486	72	49	93	63	0.0175		Empc Correction
19.749	138	54	511	125	0.0689	0.27	RQ
19.749	138	54	179	70	0.0337		Empc Correction
20.911	628	84	177	96	0.0855	3.55	RQ
20.911	136	73	177	96	0.0333		Empc Correction
21.005	138	57	265	51	0.0428	0.52	RnQ
21.005	138	57	179	74	0.0337		Empc Correction
21.281	255	95	140	94	0.0420	1.82	RQ
21.281	107	72	140	94	0.0262		Empc Correction
Signal Totals:							
	591	305	768	397			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2649	782				0.87	RQ
	1359	702					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2814 = (2649 * 100.000) / (871422 * 1.080)
Empc Amount: 0.1444 = (1359 * 100.000) / (871422 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	18-Aug-2021 13:48:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	29
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	595187	75761

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	595187	75761

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.668	120	81	43	31	0.0255	2.79	RQ
21.668	33	23	43	31	0.0119		Empc Correction
22.399	158	67	75	29	0.0364	2.11	RnQ
22.399	57	22	75	29	0.0206		Empc Correction
Signal Totals:							
	90	45	118	60			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	396	208				2.36	RQ
	208	105					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0619 = (396 * 100.000) / (595187 * 1.075)

Empc Amount: 0.0325 = (208 * 100.000) / (595187 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 13:48:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 29
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	699918	103244
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	736640	104471

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	718279	103857

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.256	10	6	25	14	0.004726	0.40	RnQ
24.256	10	6	6	3	0.002160		Empc Correction
24.420	40	22	369	90	0.0552	0.11	RQ
24.420	40	22	25	14	0.008777		Empc Correction
Signal Totals:							
	50	28	31	17			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	444	132				0.13	RQ
	81	45					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0600 = (444 * 100.000) / (718279 * 1.031)
Empc Amount: 0.0109 = (81 * 100.000) / (718279 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 13:48:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 29
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	699918	103244
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	736640	104471

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	718279	103857

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.919	2528	386	2187	262	0.6367	1.16	RQ
27.919	2528	386	1630	249	0.5614		Empc Correction
Signal Totals:							
	2528	386	1630	249			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4715	648				1.16	RQ
	4158	635					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6367 = (4715 * 100.000) / (718279 * 1.031)
Empc Amount: 0.5614 = (4158 * 100.000) / (718279 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 13:48:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 29
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	479110	134173

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	479110	134173

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.950	1516	518	2097	634	0.7180	0.72	RQ
38.950	1516	518	1457	498	0.5908		Empc Correction
Signal Totals:							
	1516	518	1457	498			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3613	1152				0.72	RQ
	2973	1016					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7180 = (3613 * 100.000) / (479110 * 1.050)
Empc Amount: 0.5908 = (2973 * 100.000) / (479110 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.44

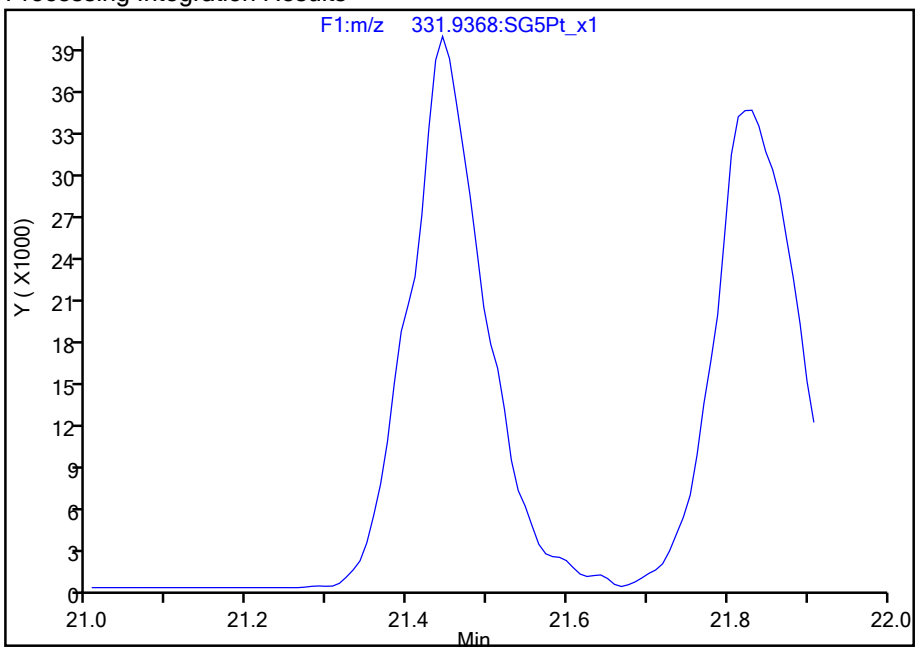

Manual Integration Results

RT: 21.44
Area: 265855
Amount: 100.0000
Amount Units: pg/ul

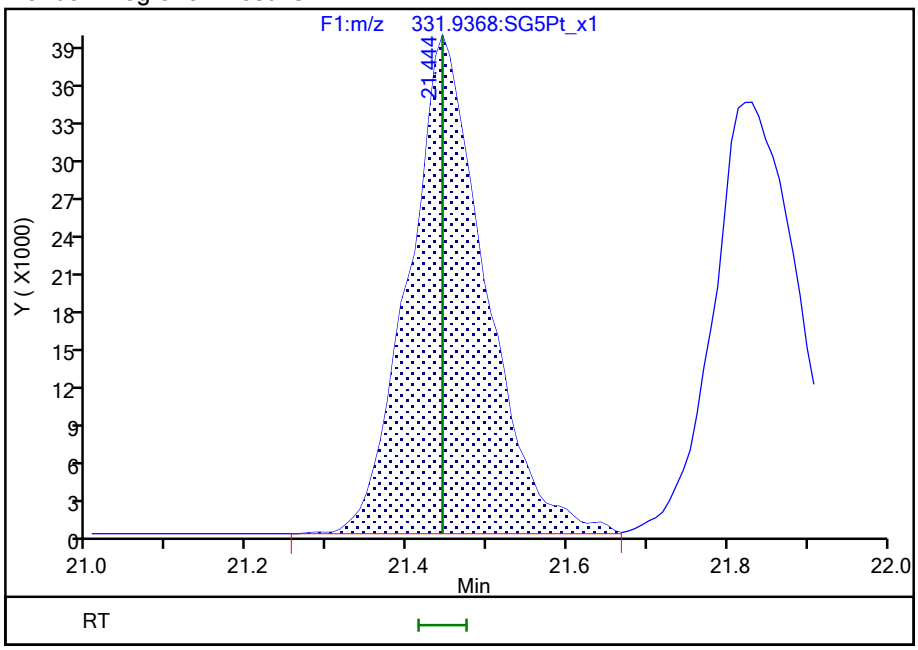

Reviewer: stephensk, 18-Aug-2021 14:37:53

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

784599

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.52
Area: 39804
Amount: 9.495340
Amount Units: pg/ul

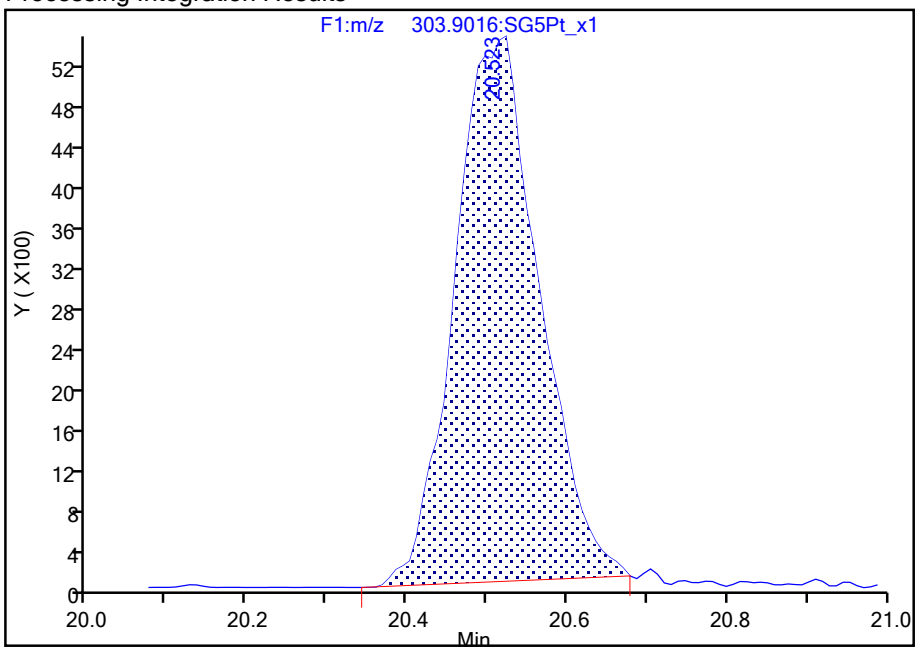

Manual Integration Results

RT: 20.52
Area: 40929
Amount: 9.614855
Amount Units: pg/ul

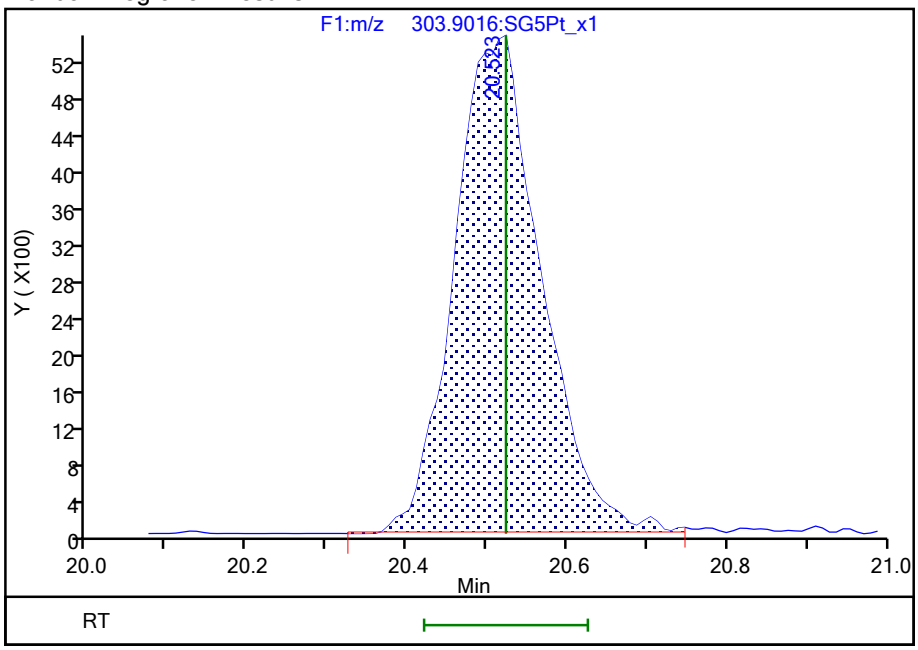

Reviewer: stephensk, 18-Aug-2021 14:38:12

Audit Action: Manually Integrated Audit Reason: Baseline

784600

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.88
Area: 26782
Amount: 9.164853
Amount Units: pg/ul

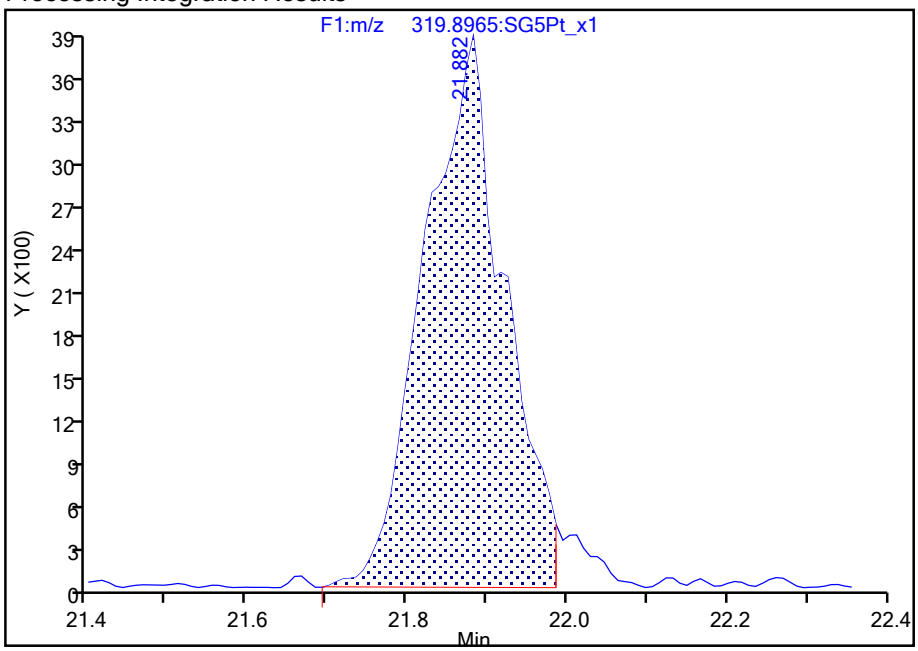

Manual Integration Results

RT: 21.88
Area: 28457
Amount: 9.426559
Amount Units: pg/ul

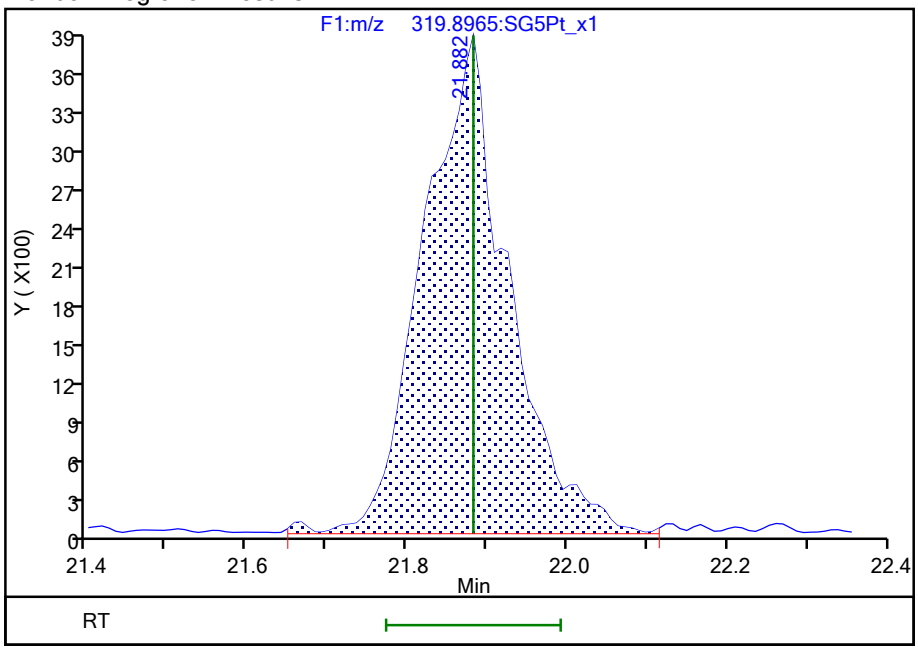

Reviewer: stephensk, 18-Aug-2021 14:38:34

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 1

Processing Integration Results

RT: 36.62
Area: 350740
Amount: 100.0000
Amount Units: pg/ul

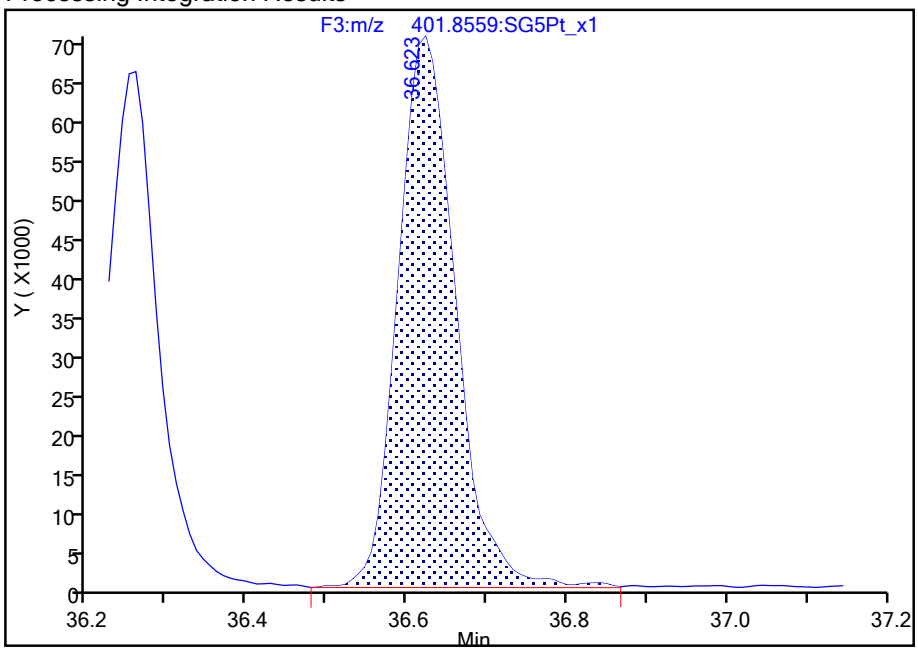

Manual Integration Results

RT: 36.62
Area: 355684
Amount: 100.0000
Amount Units: pg/ul

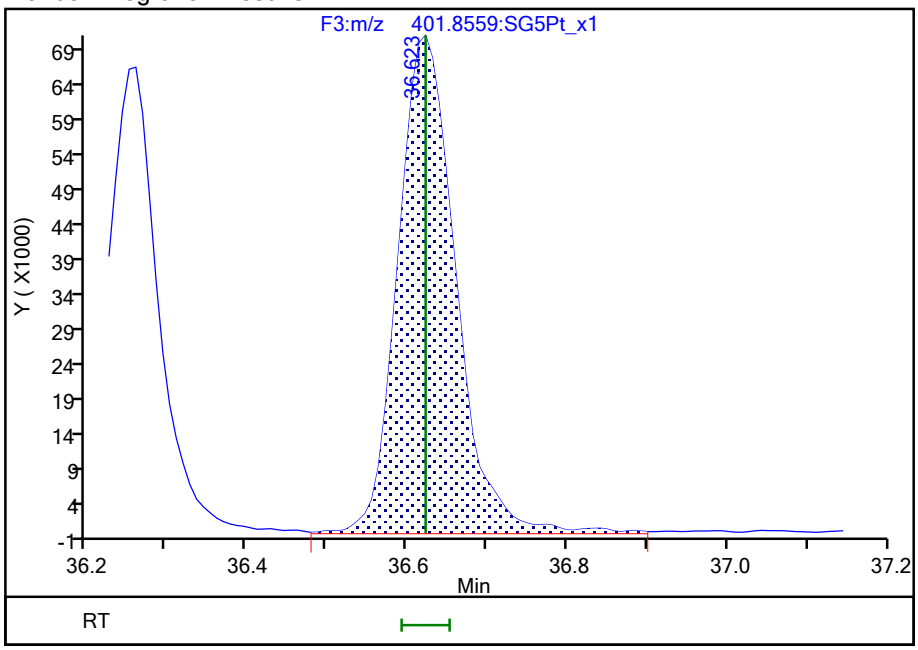

Reviewer: stephensk, 18-Aug-2021 15:08:03

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 2

Processing Integration Results

RT: 36.62
Area: 267152
Amount: 100.0000
Amount Units: pg/ul

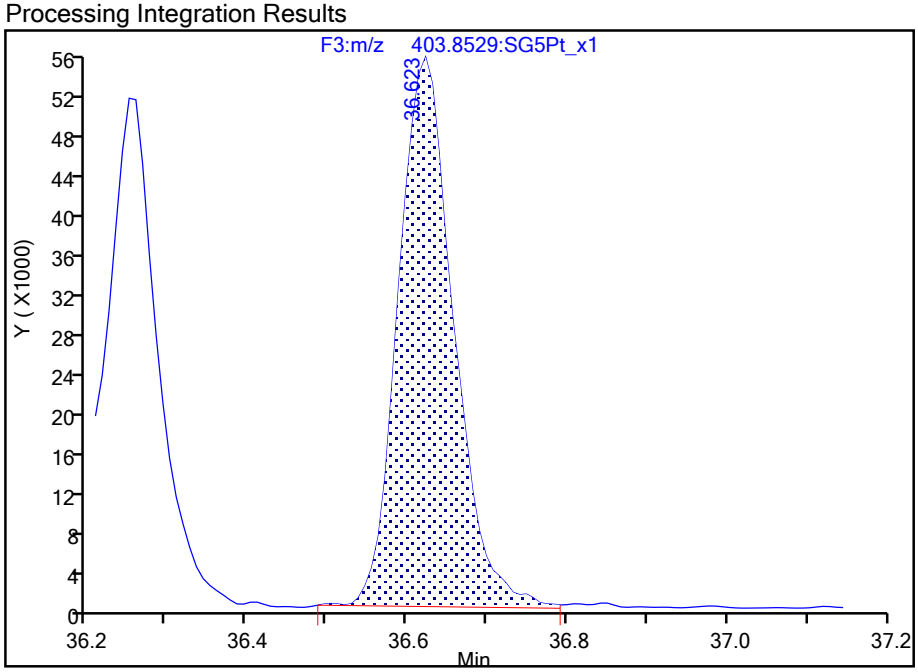

Manual Integration Results

RT: 36.62
Area: 275563
Amount: 100.0000
Amount Units: pg/ul

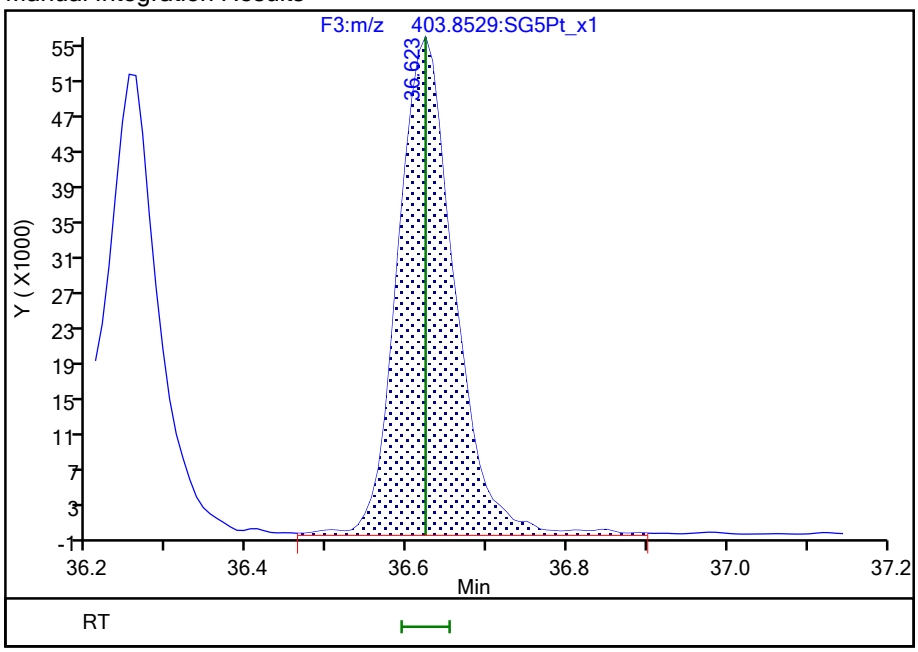

Reviewer: stephensk, 18-Aug-2021 15:08:18

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

RT: 39.88
Area: 171335
Amount: 133.8873
Amount Units: pg/ul

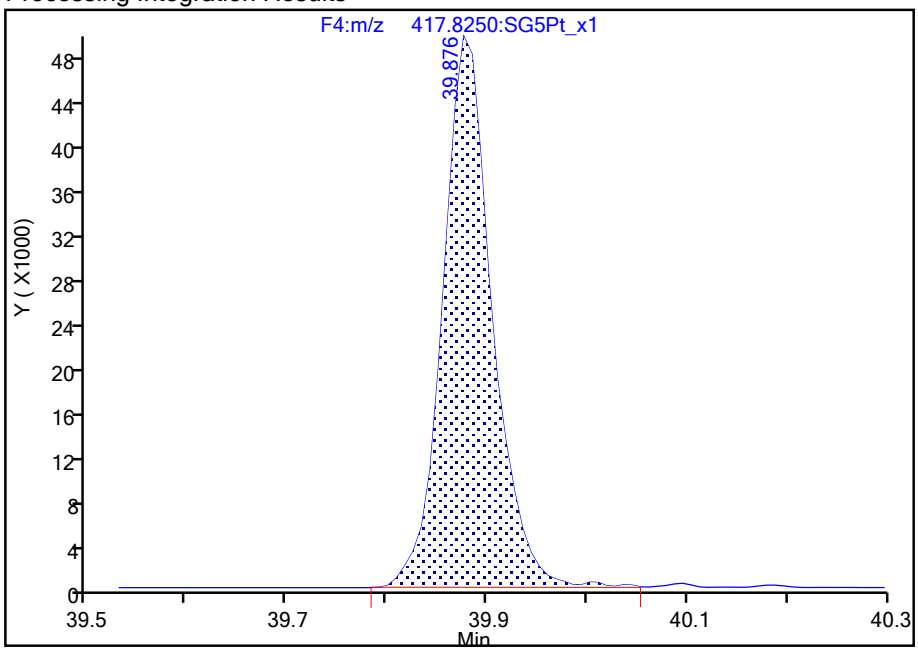

Manual Integration Results

RT: 39.88
Area: 170131
Amount: 129.4656
Amount Units: pg/ul

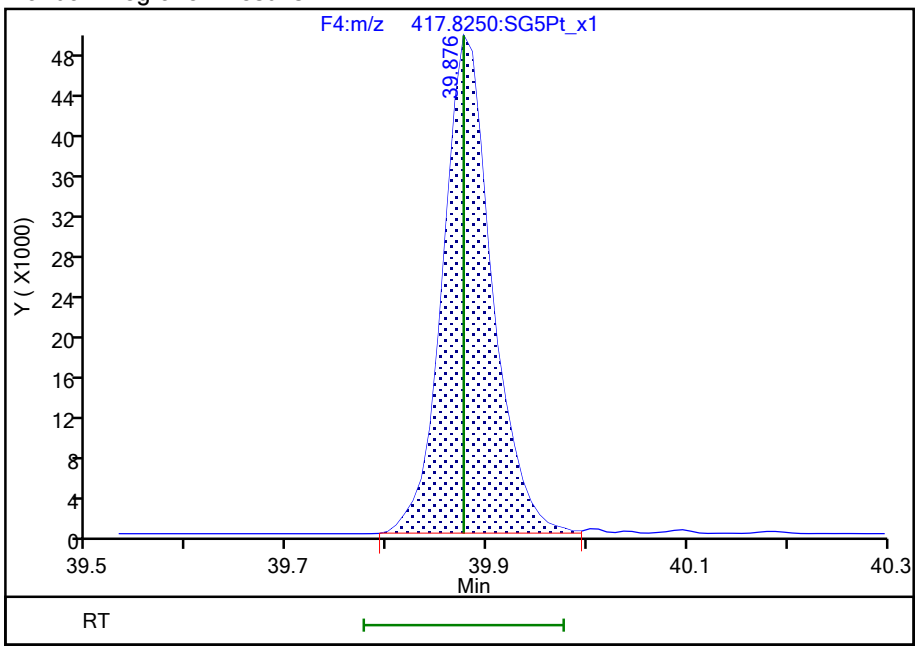

Reviewer: stephensk, 18-Aug-2021 14:43:11

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 2

Processing Integration Results

RT: 39.88
Area: 395664
Amount: 133.8873
Amount Units: pg/ul

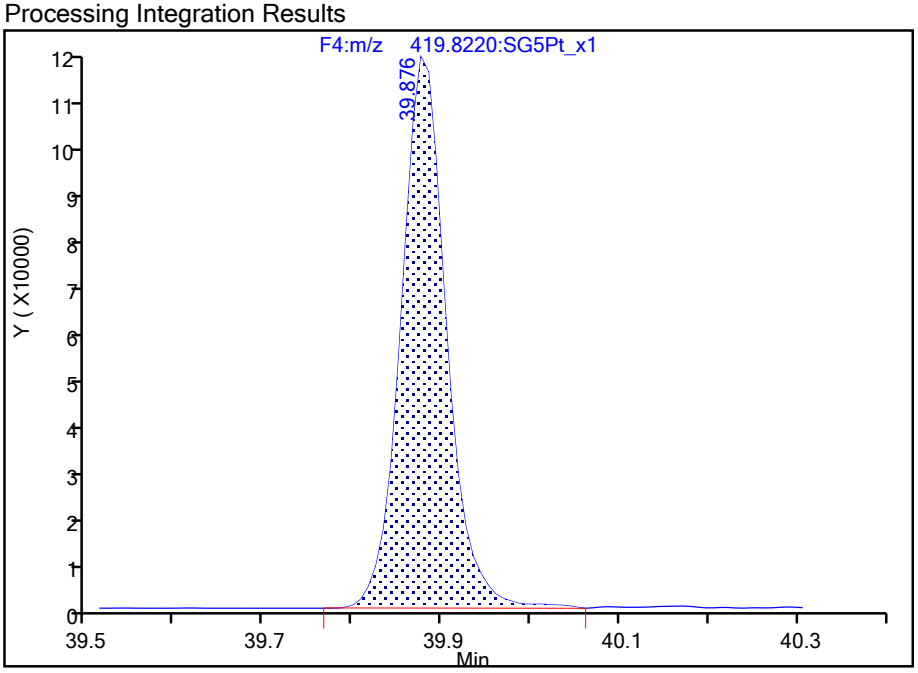

Manual Integration Results

RT: 39.88
Area: 389993
Amount: 129.4656
Amount Units: pg/ul

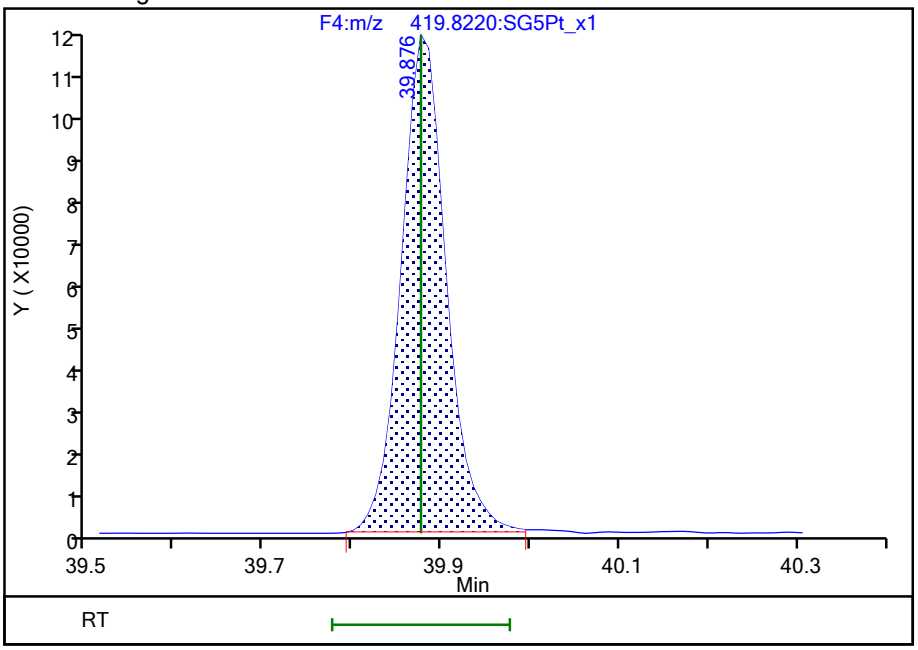

Reviewer: stephensk, 18-Aug-2021 14:43:21

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

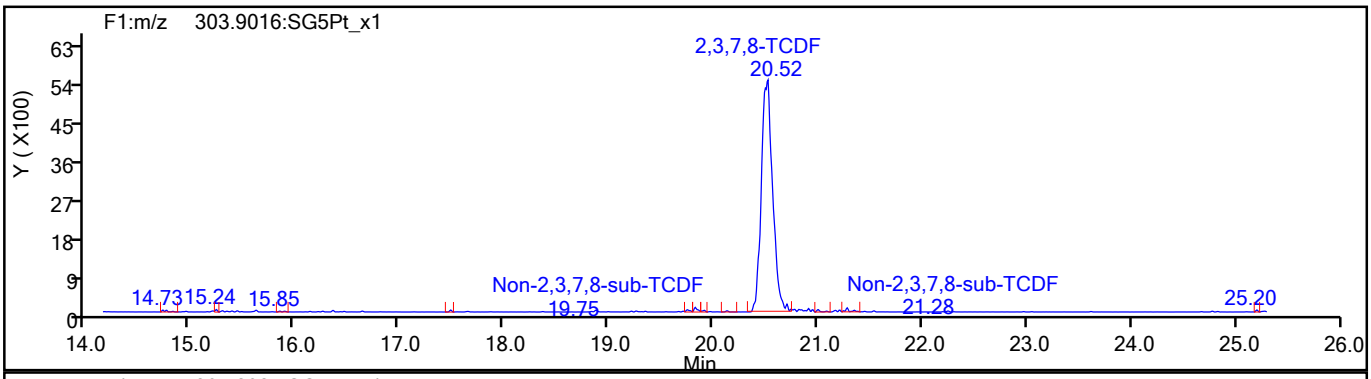

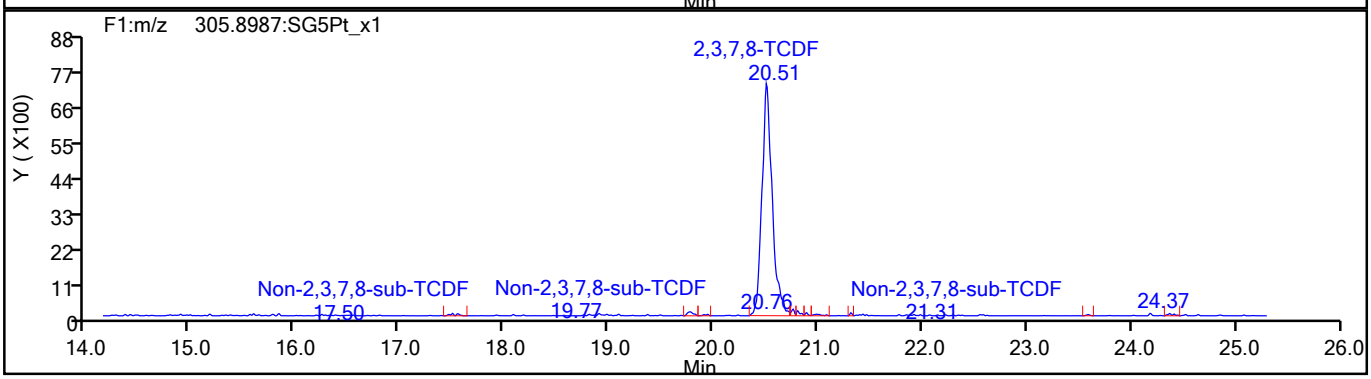

TCDF Standards

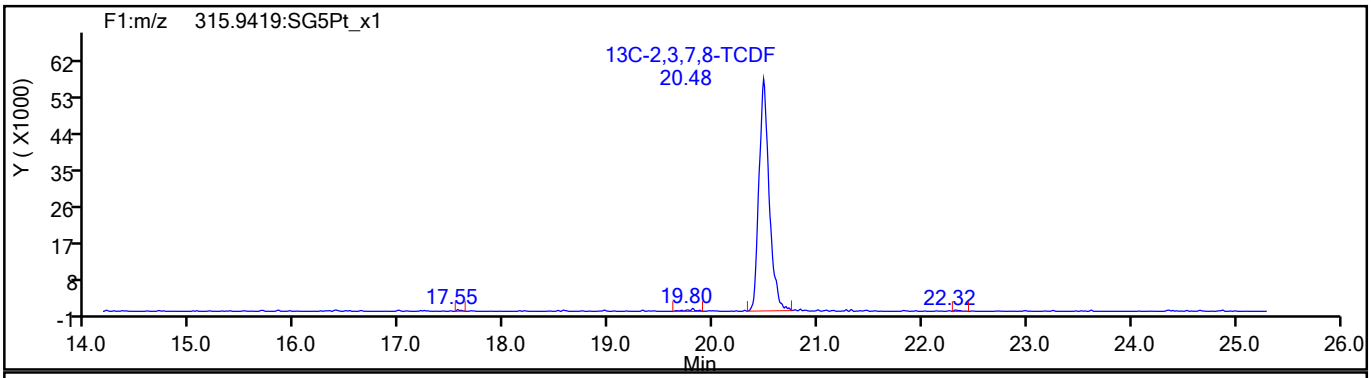

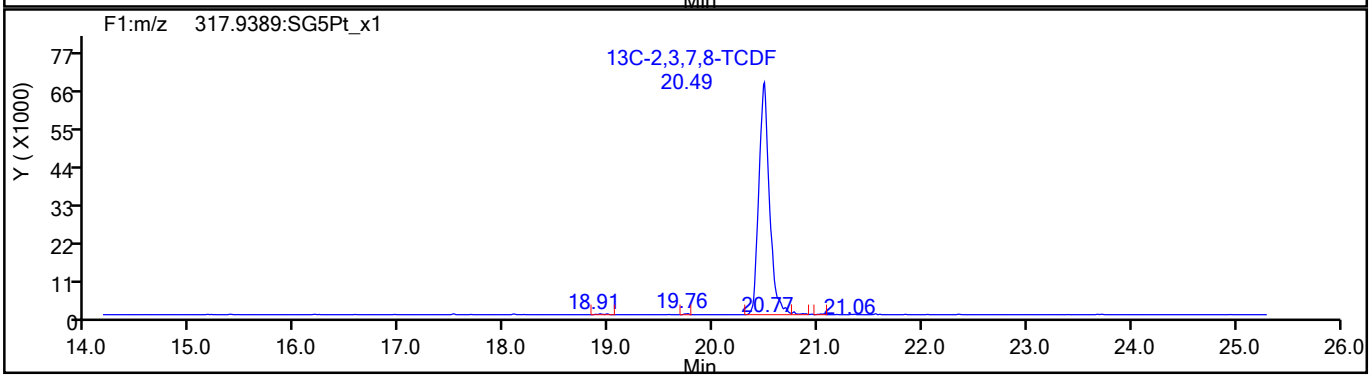

784606

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

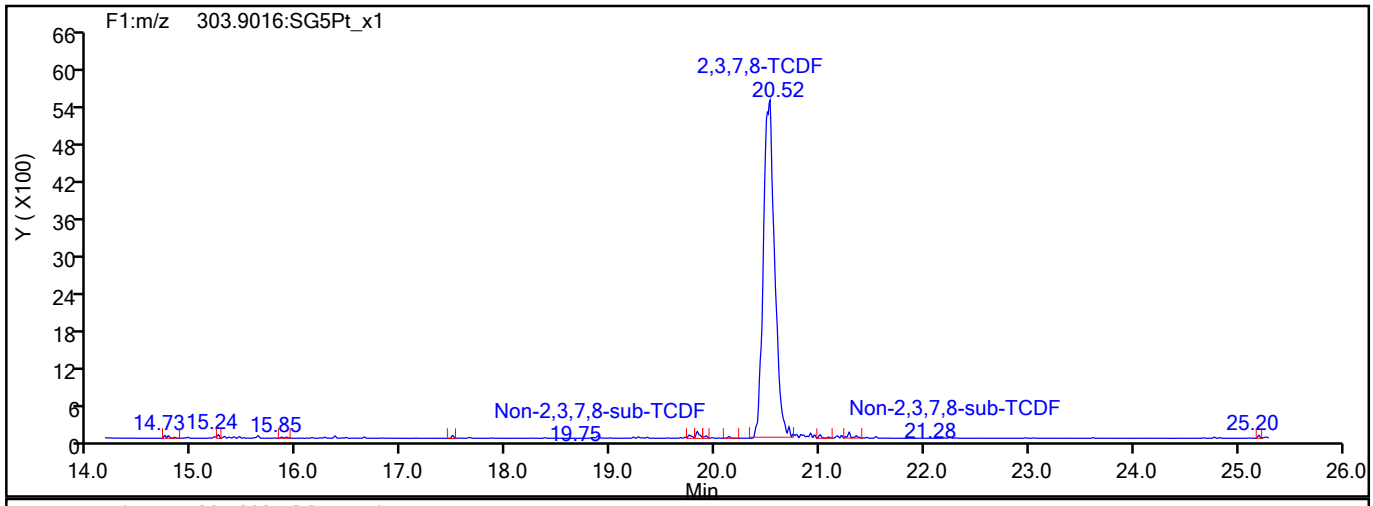

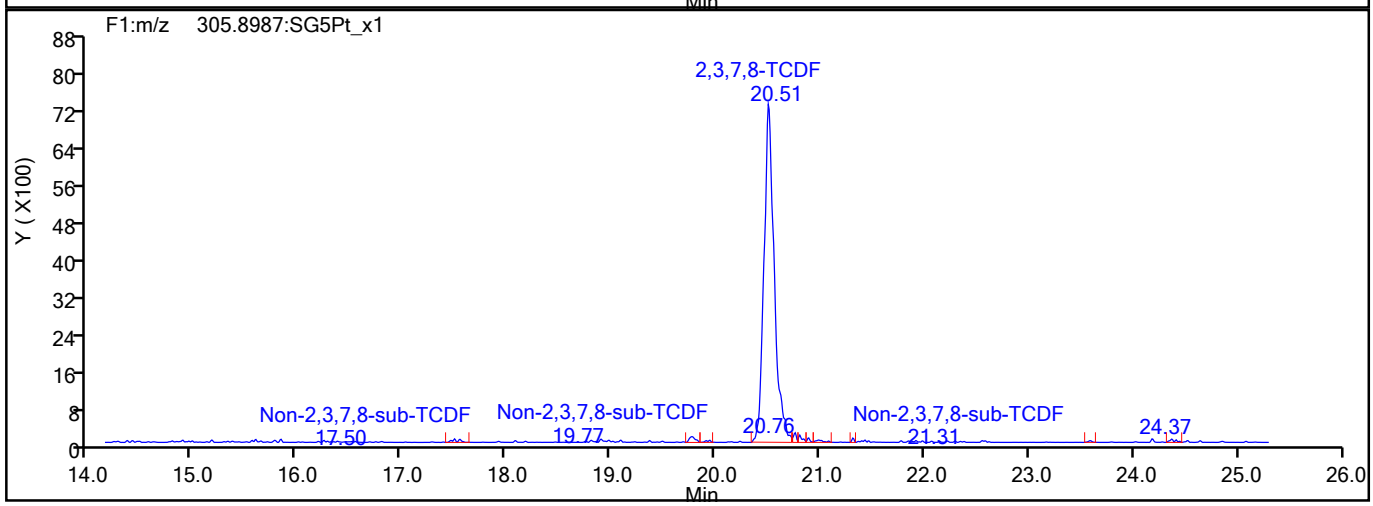

TCDF Interference Mass

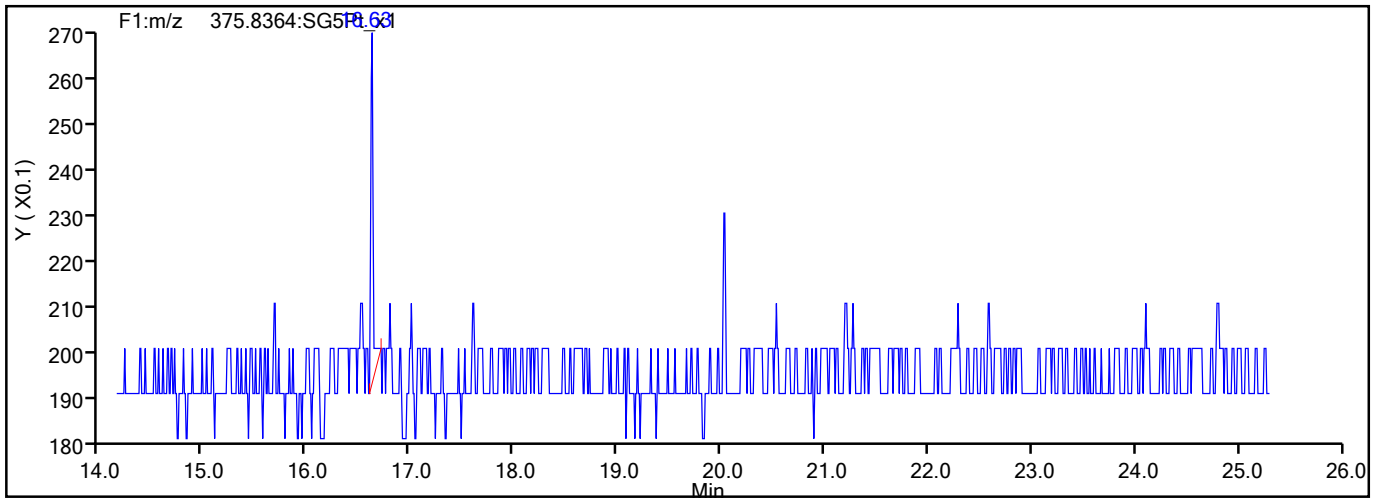

784607

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

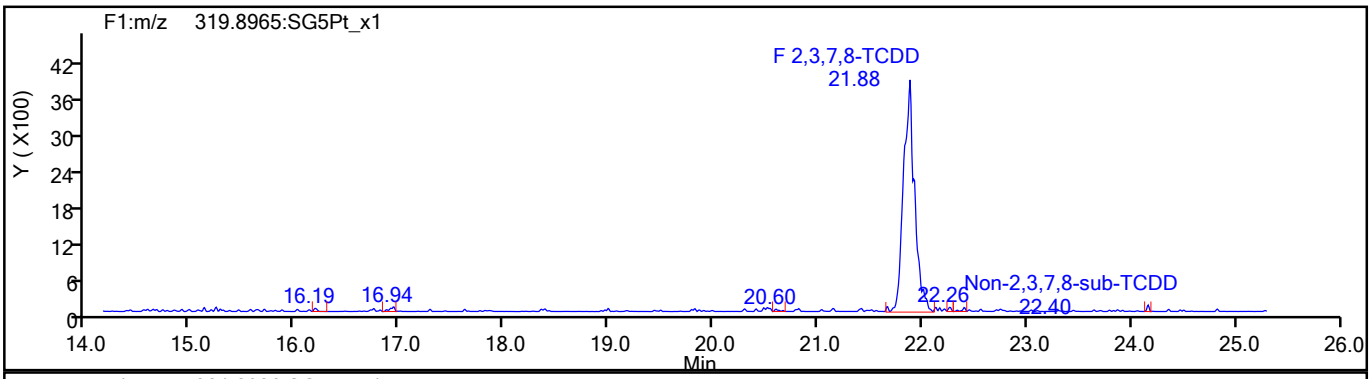

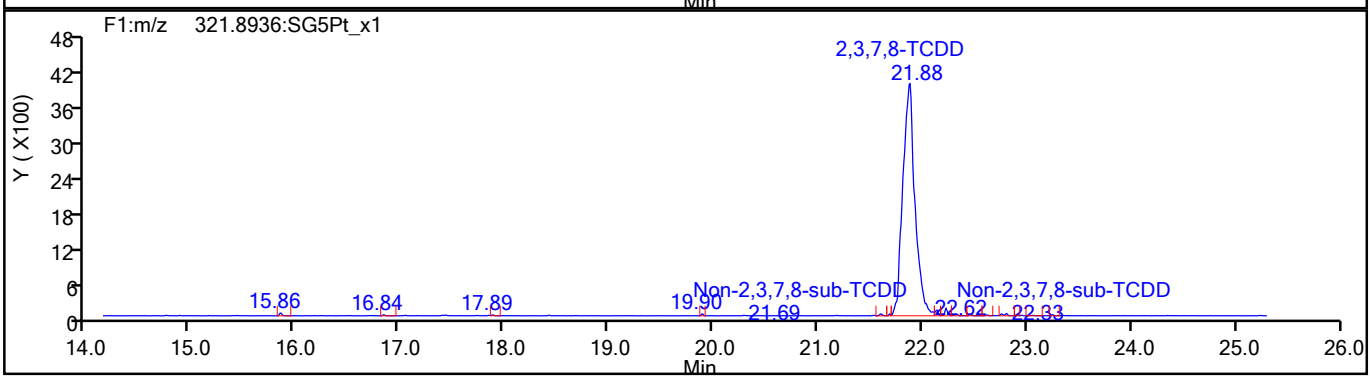

TCDD Standards

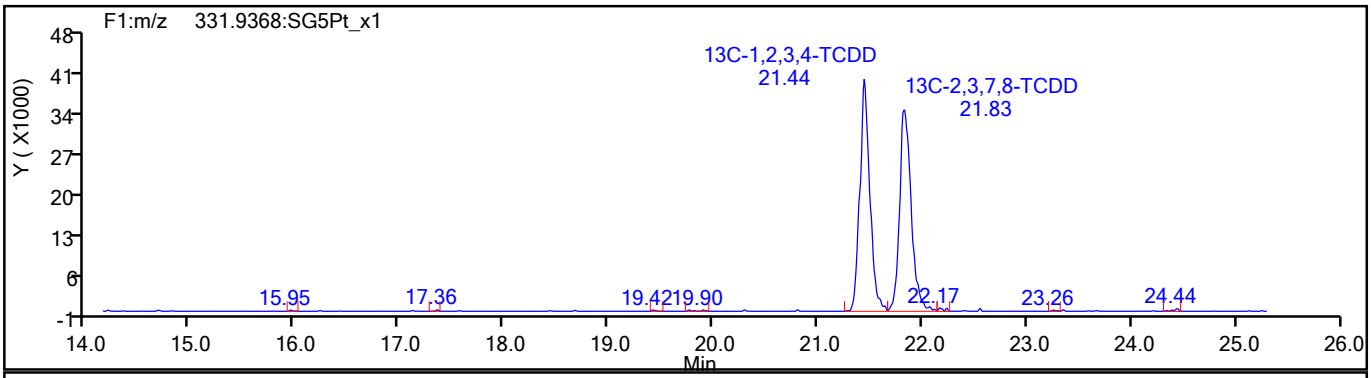

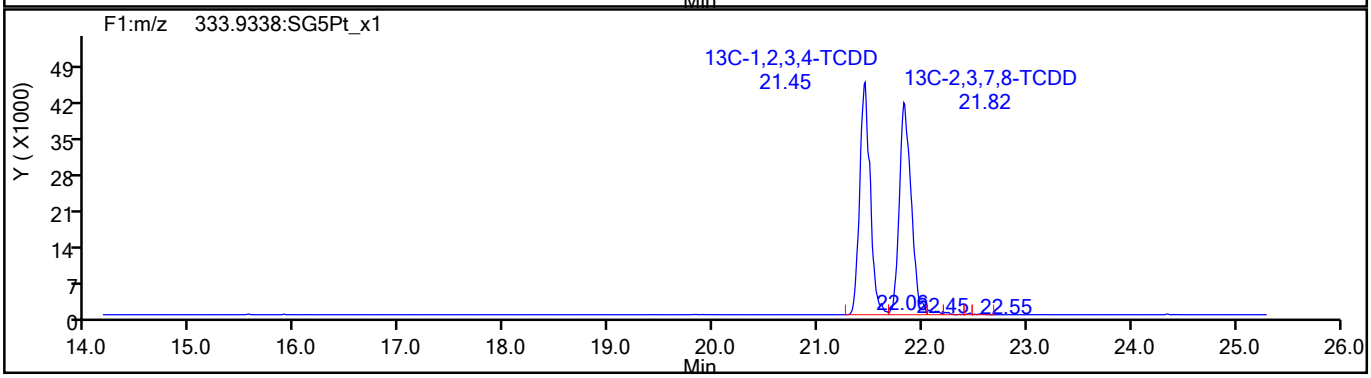

784608

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

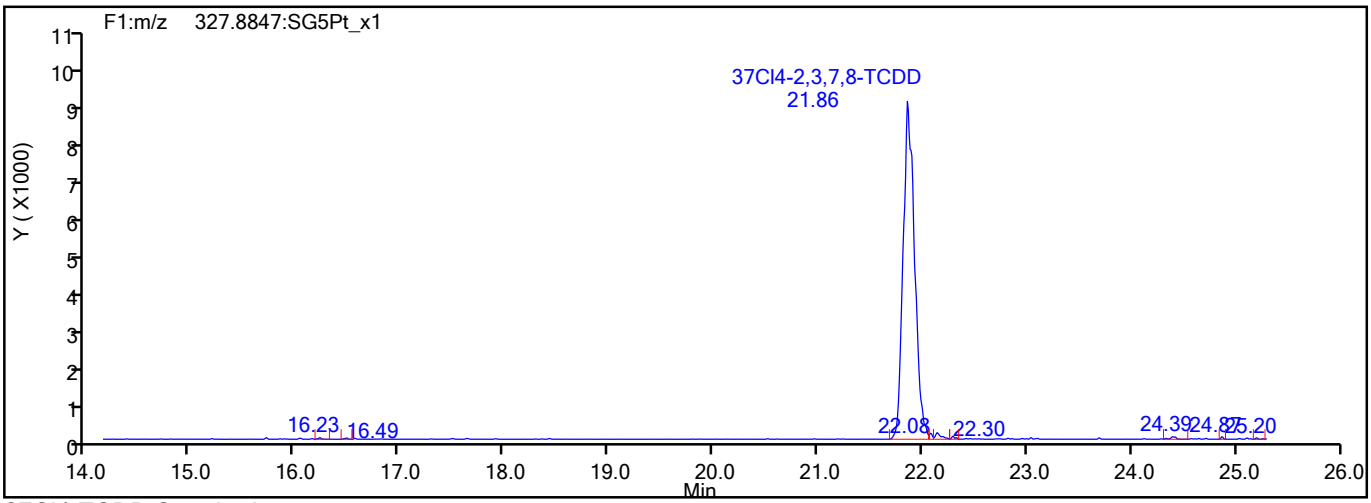

37Cl4-TCDD Standards

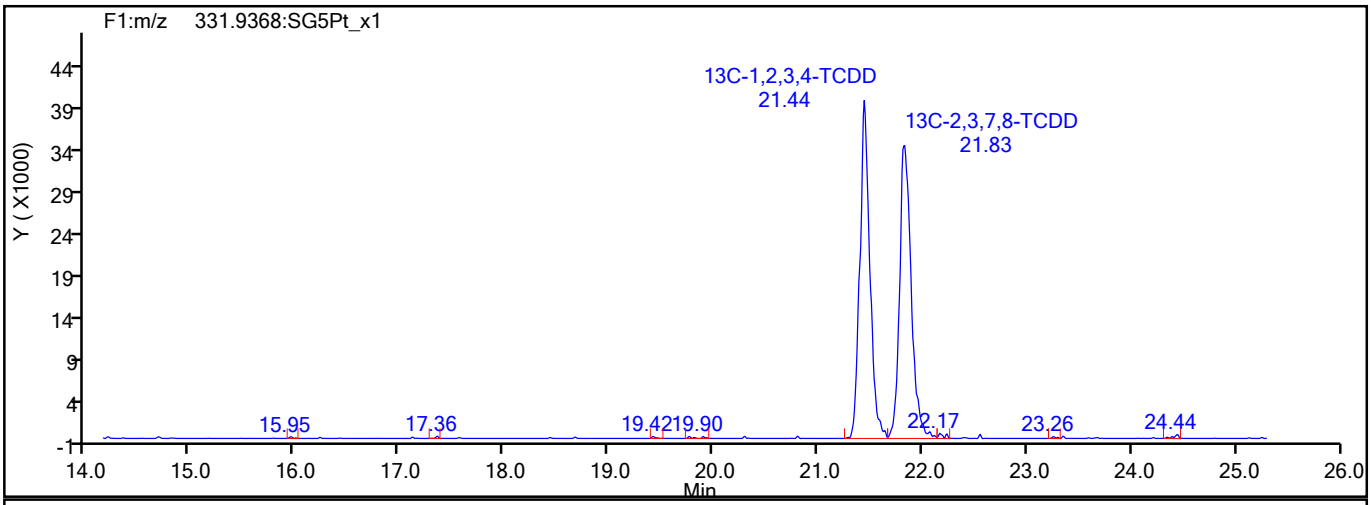

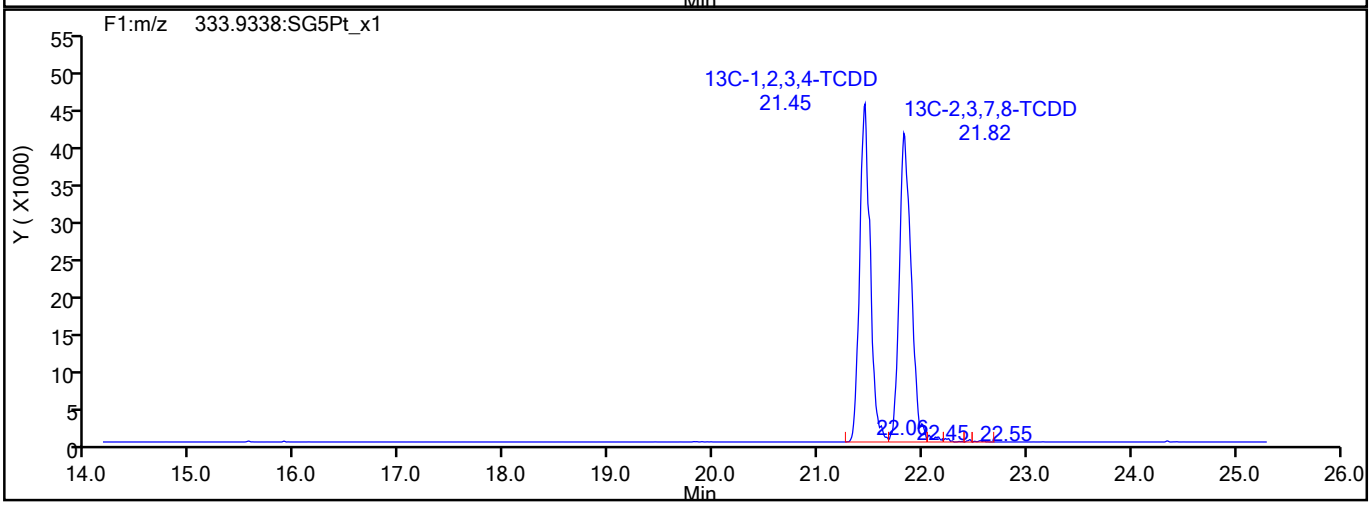

784609

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

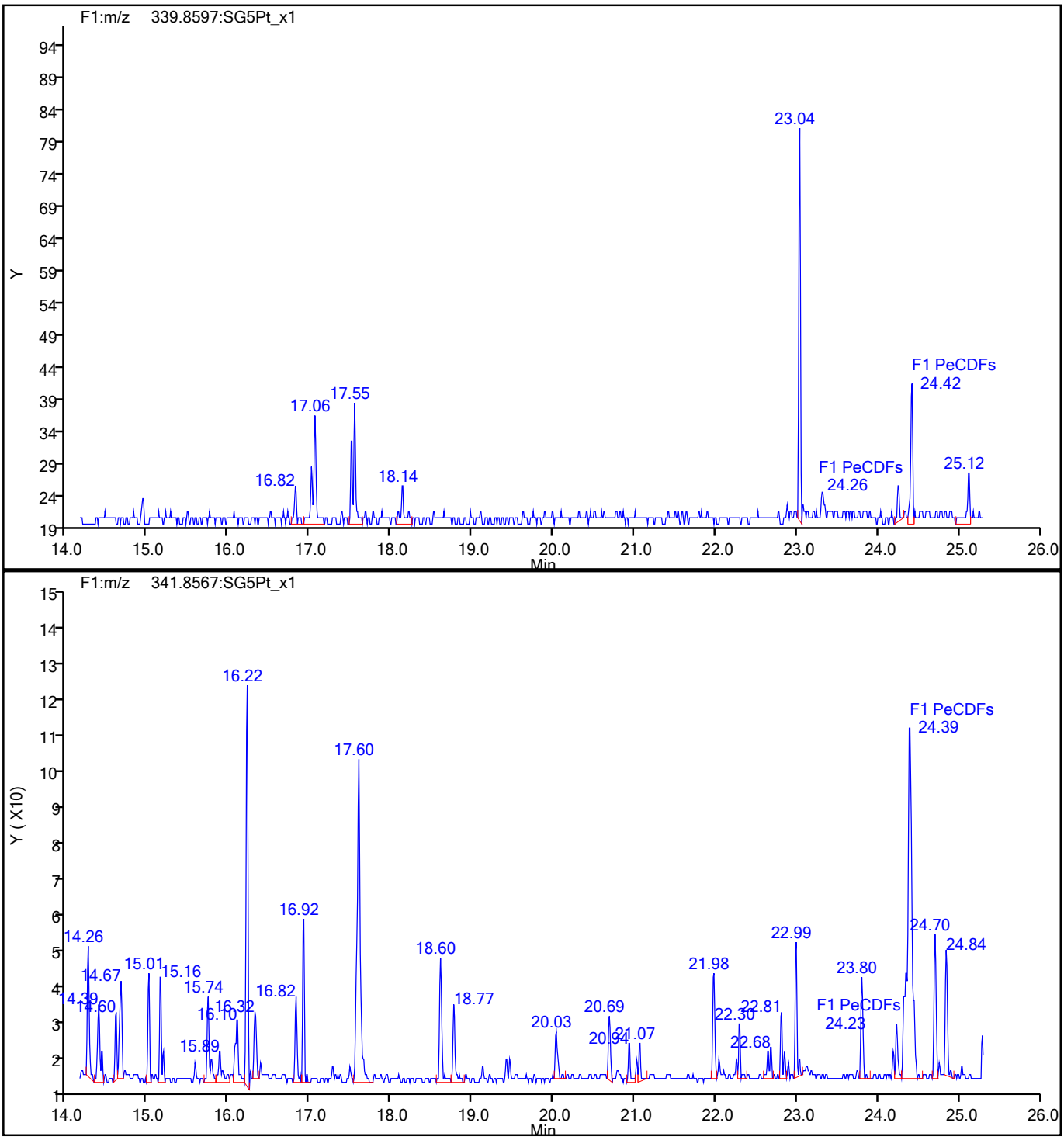

784610

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

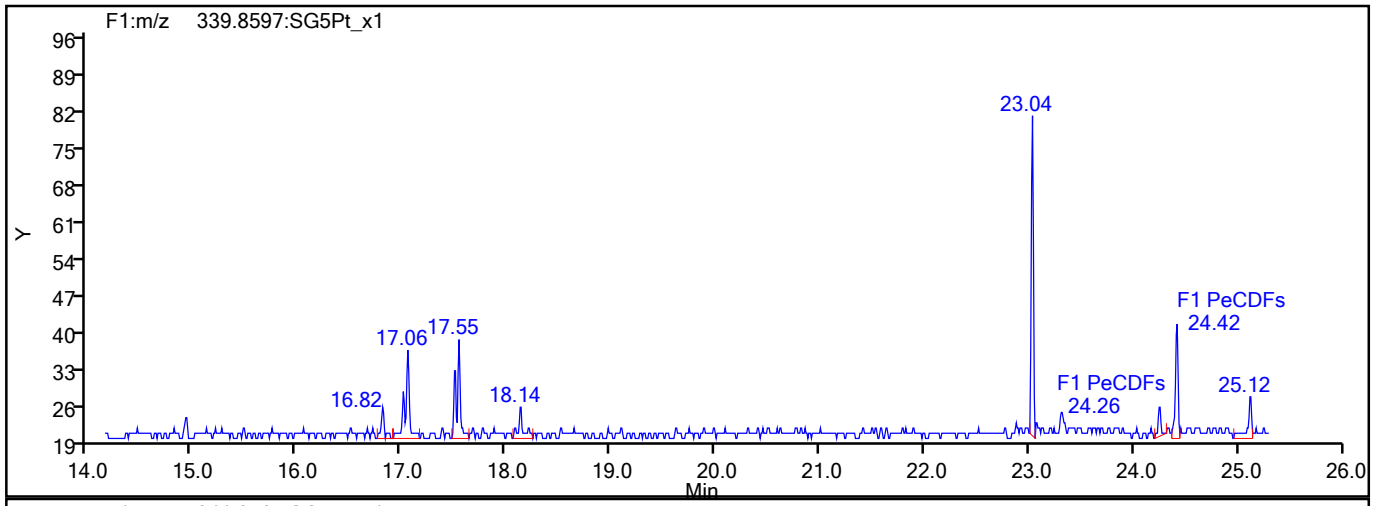

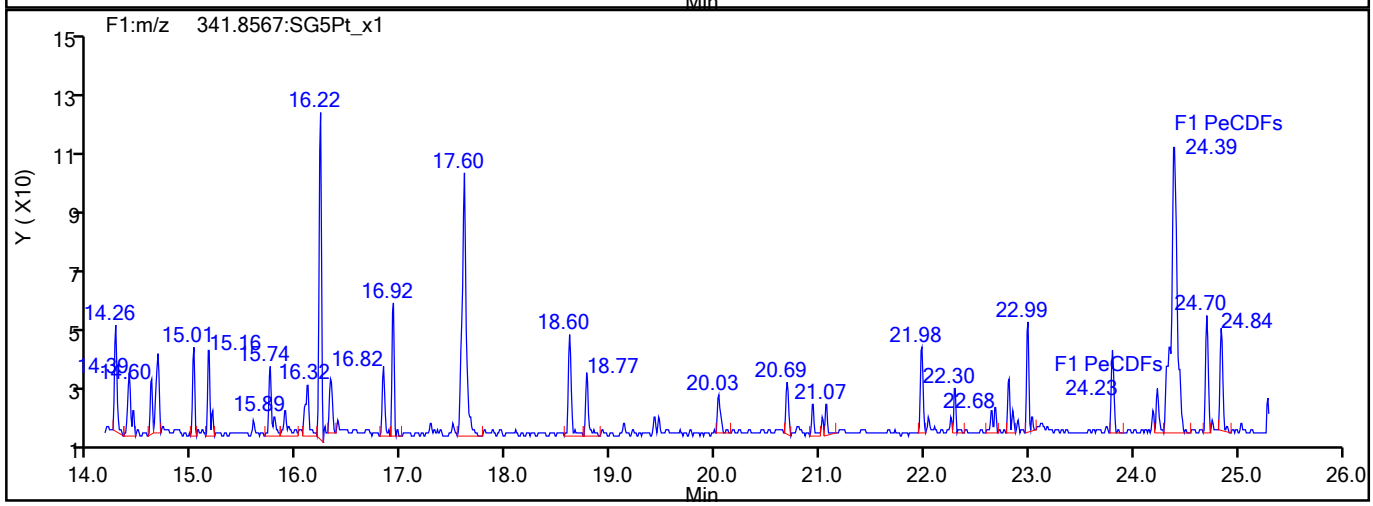

F1 PeCDFs Interference Mass

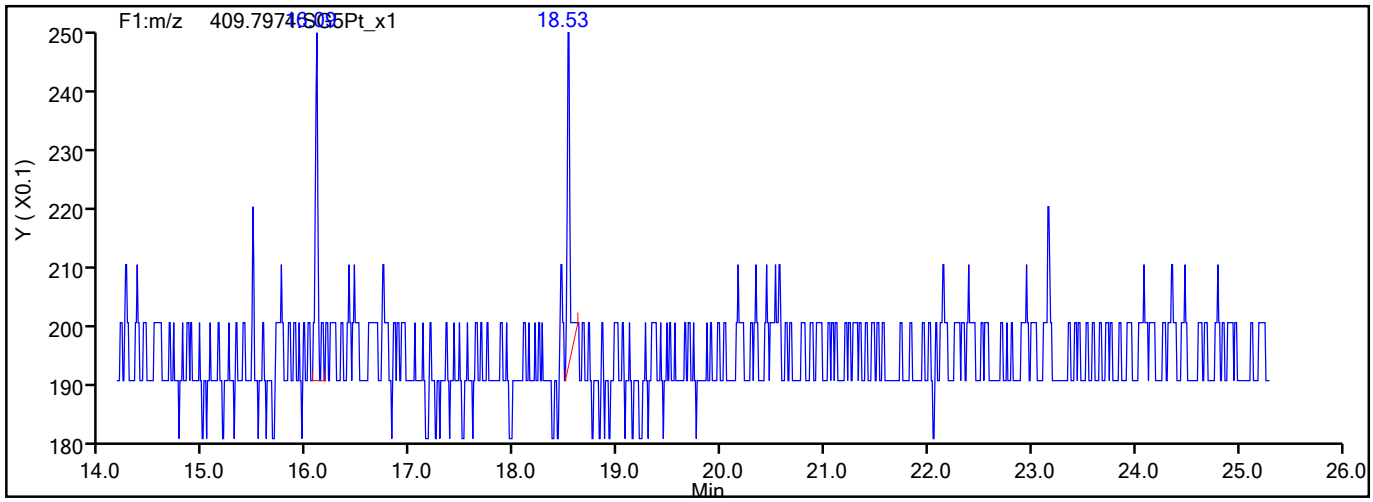

784611

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

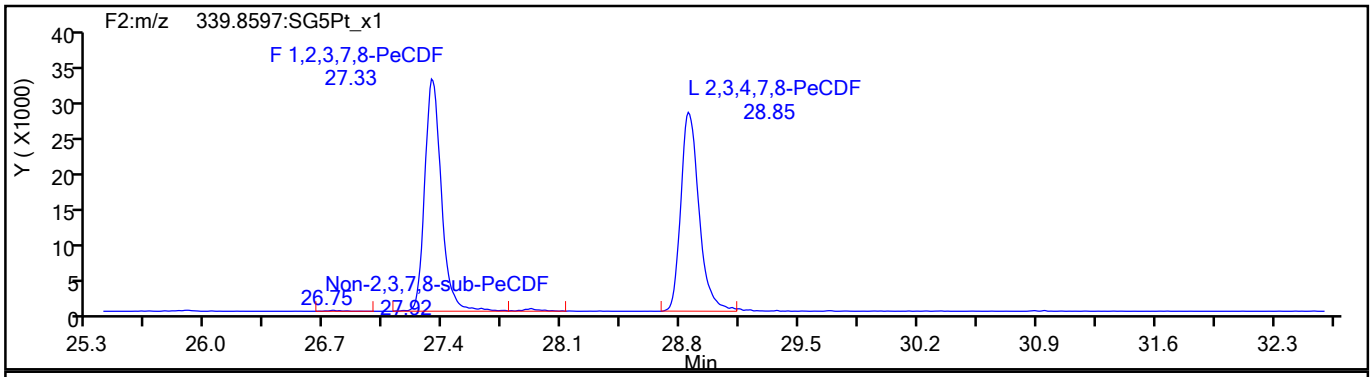

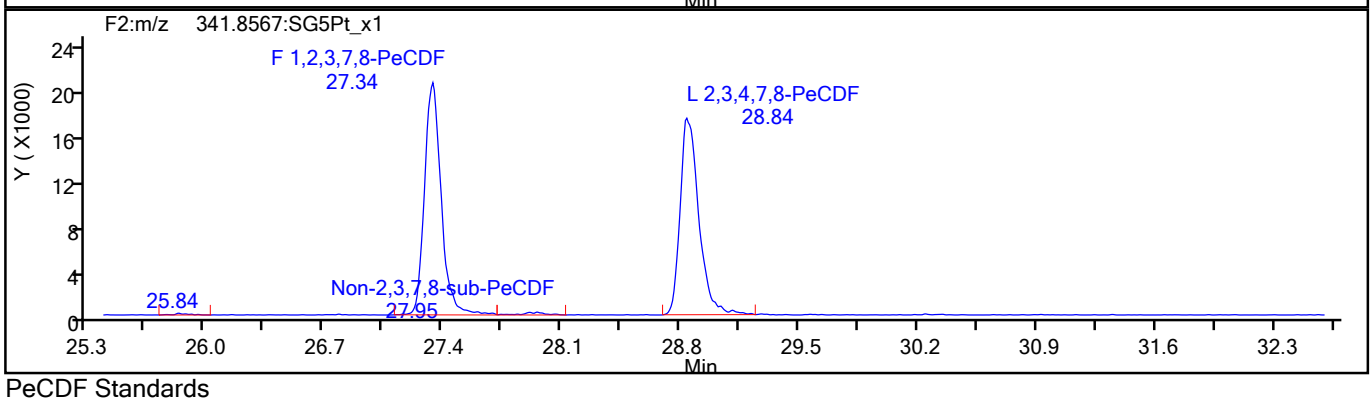

PeCDF Standards

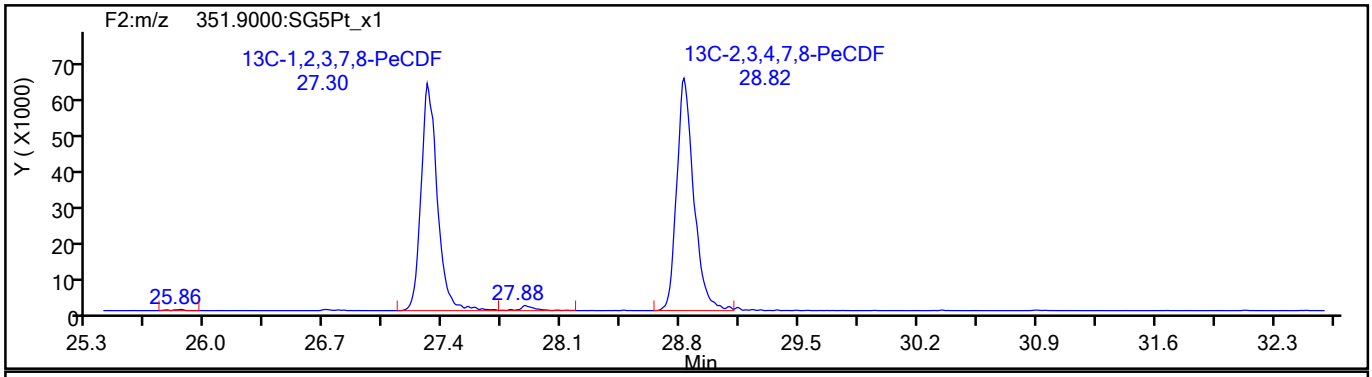

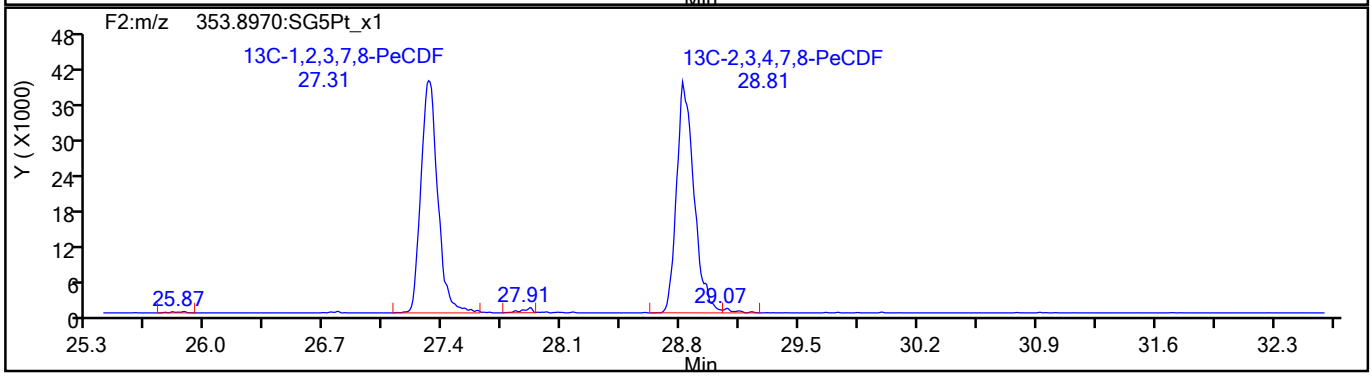

784612

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

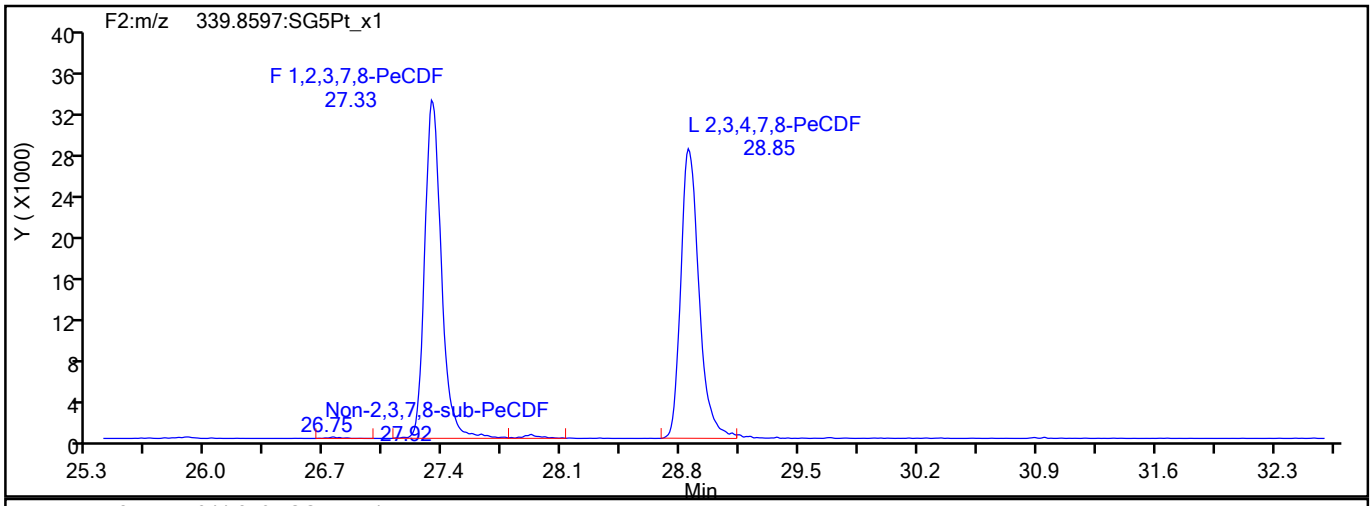

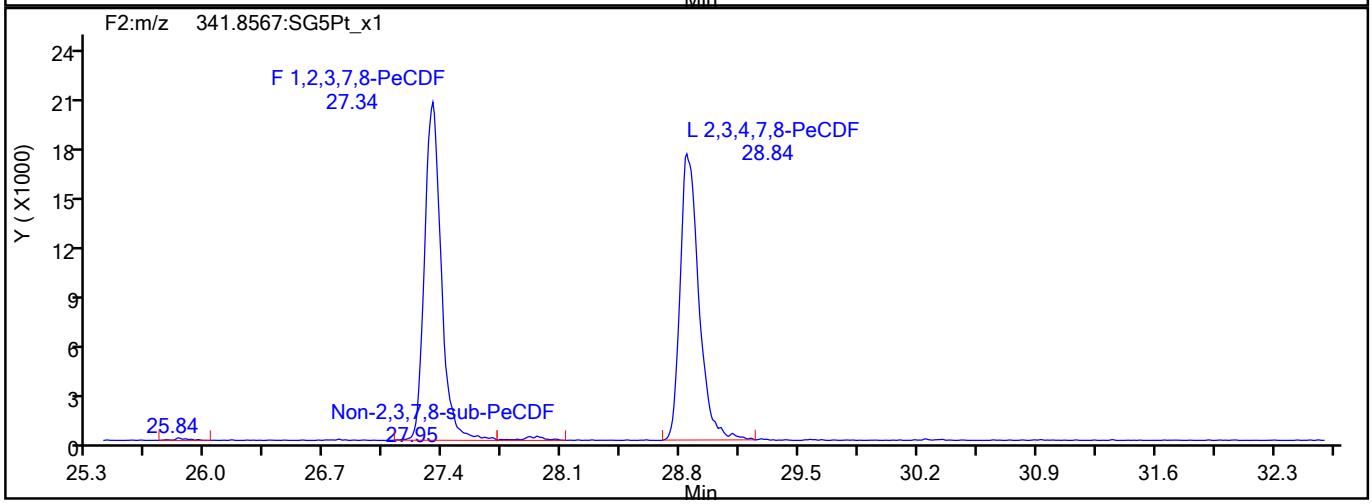

PeCDF Interference Mass

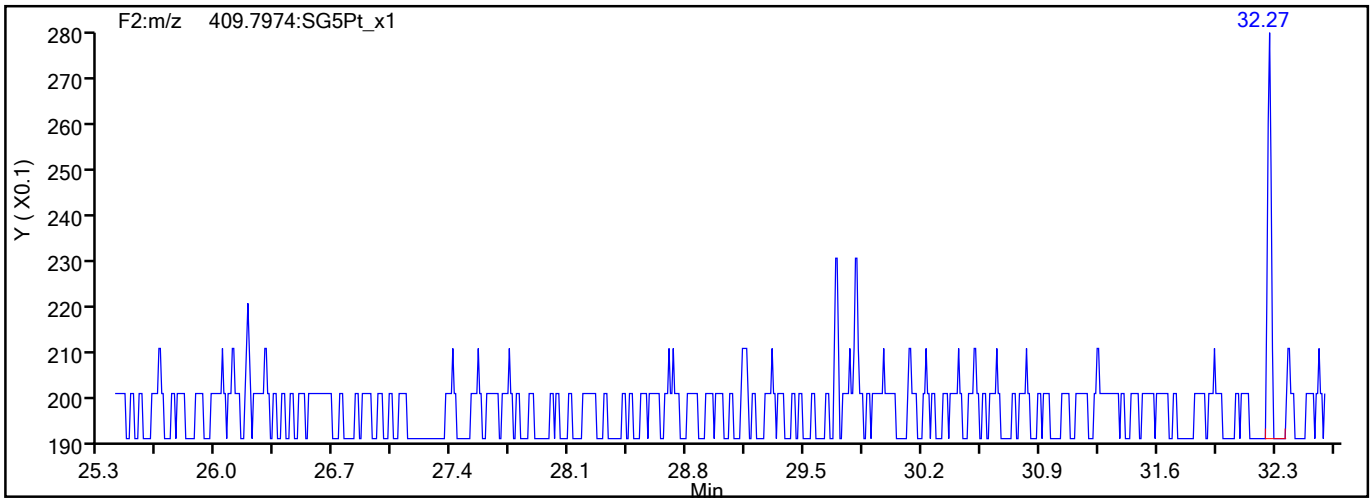

784613

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

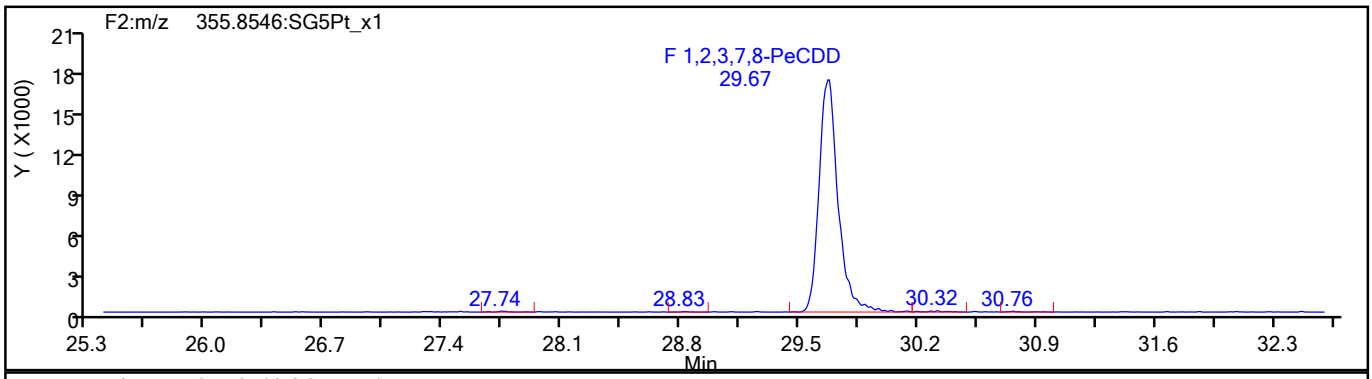

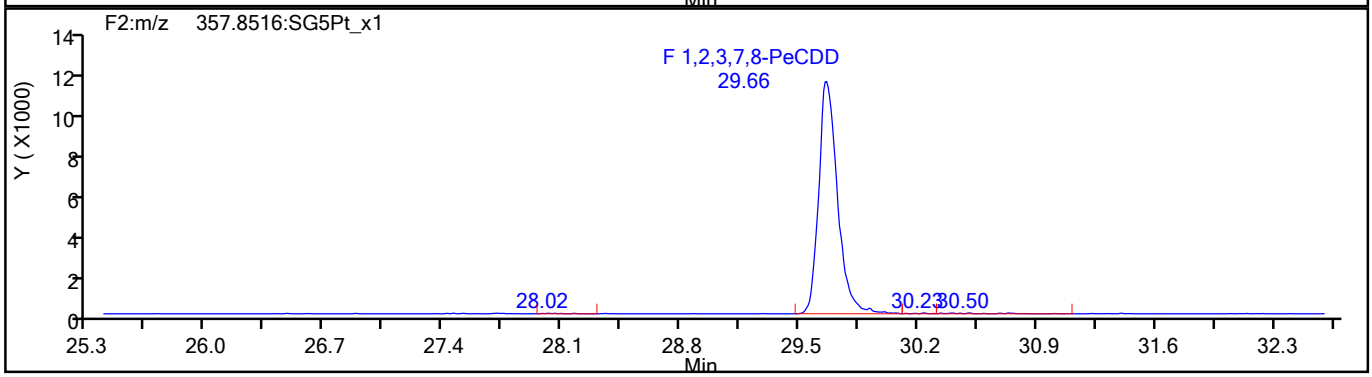

PeCDD Standards

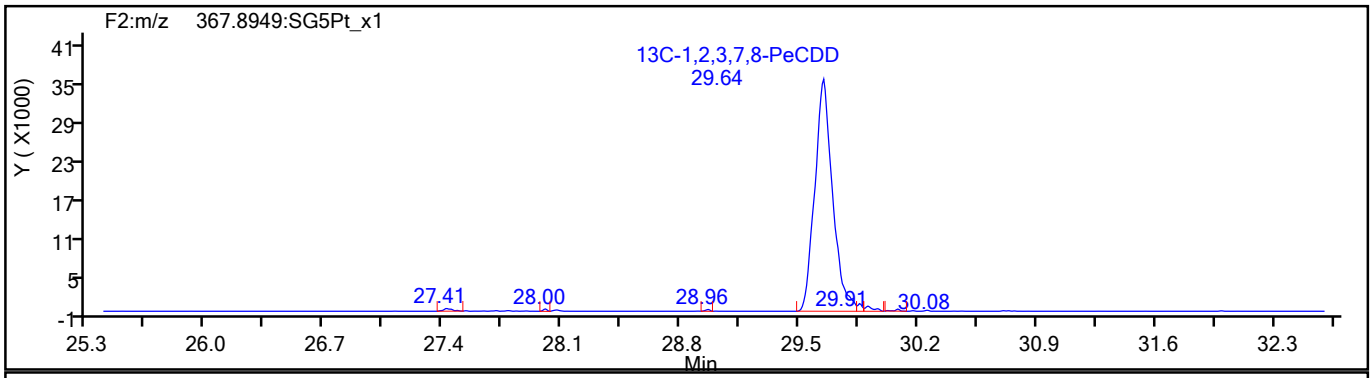

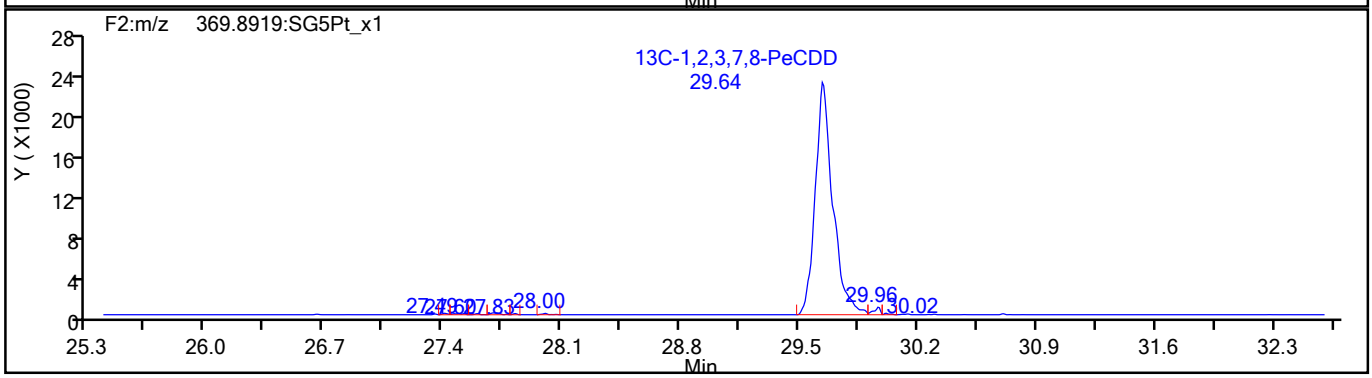

784614

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

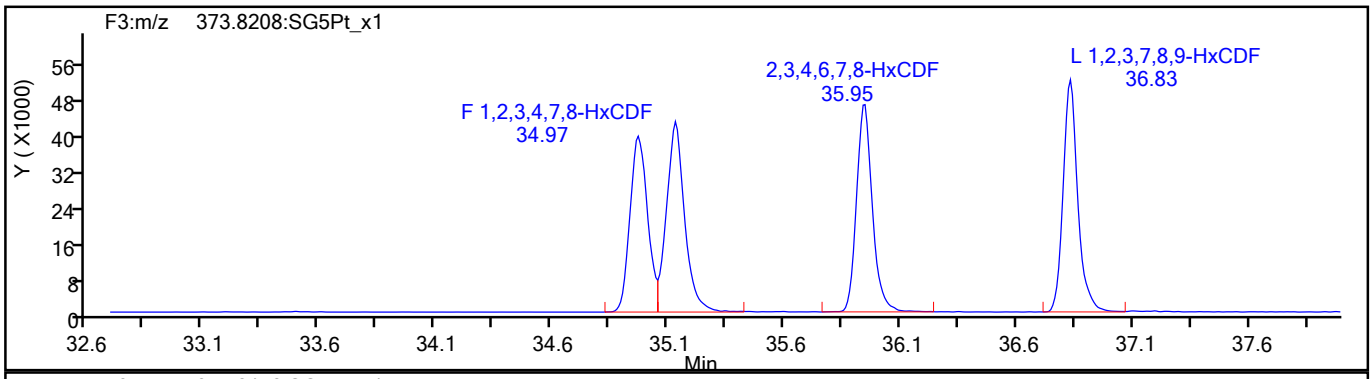

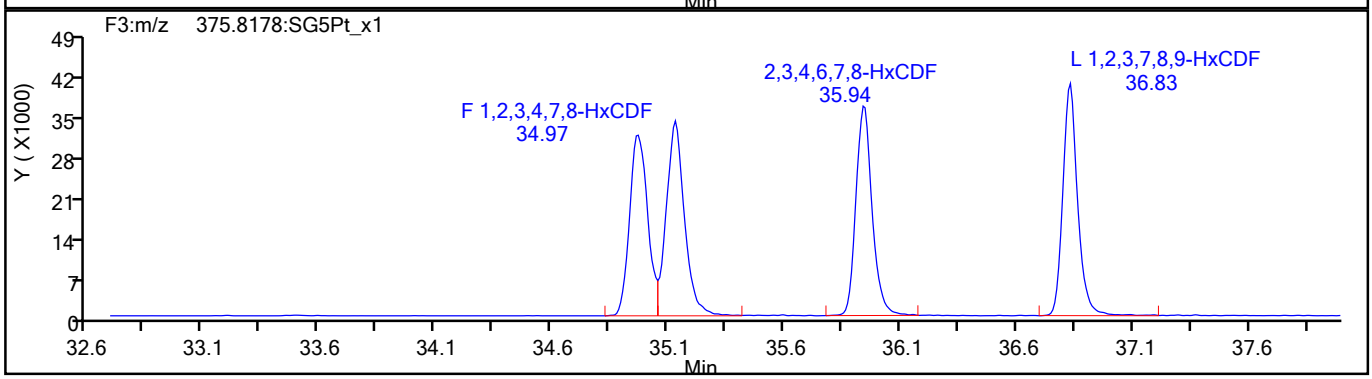

HxCDF Standards

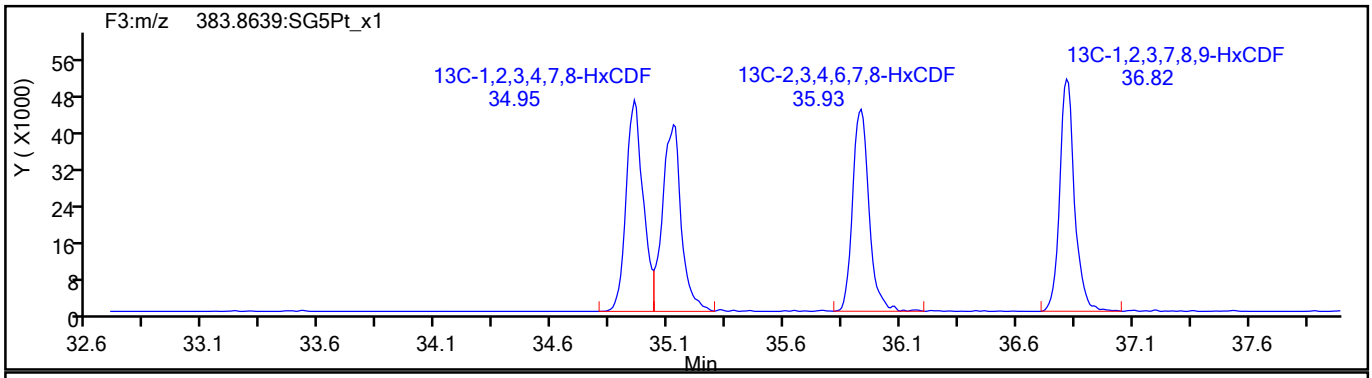

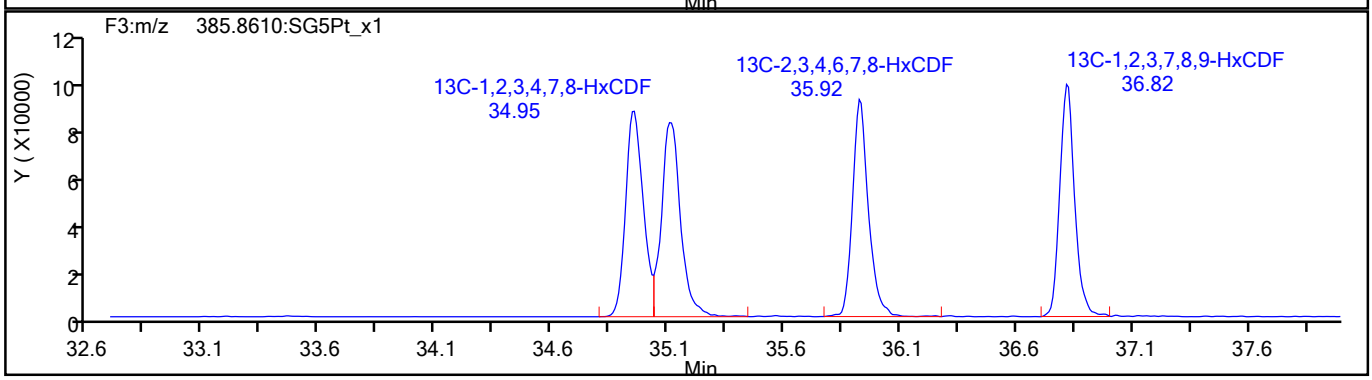

784615

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

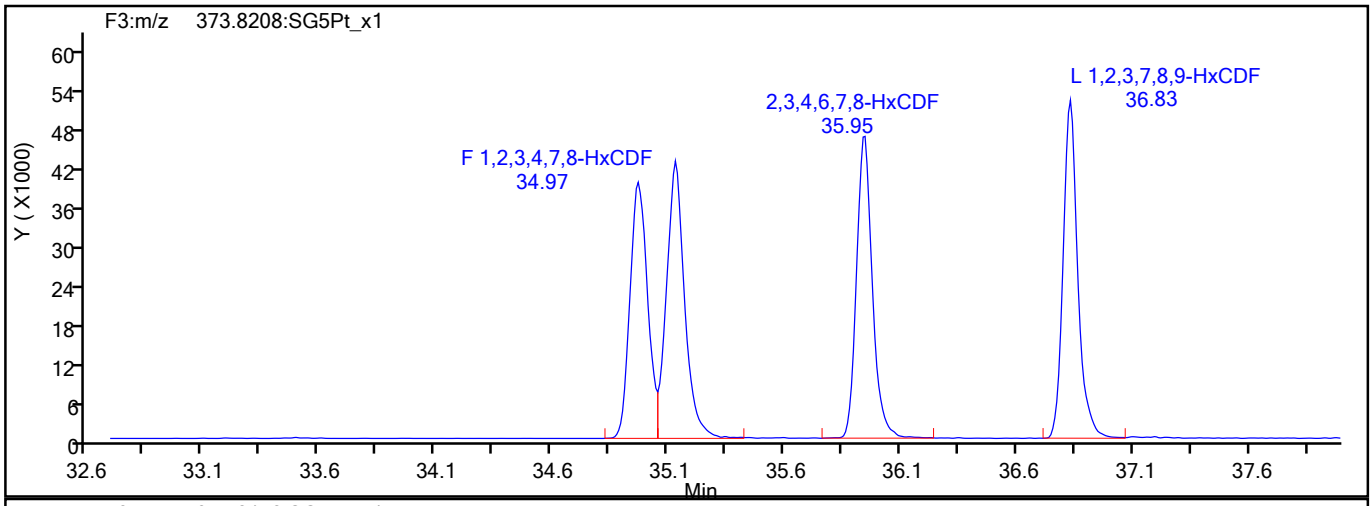

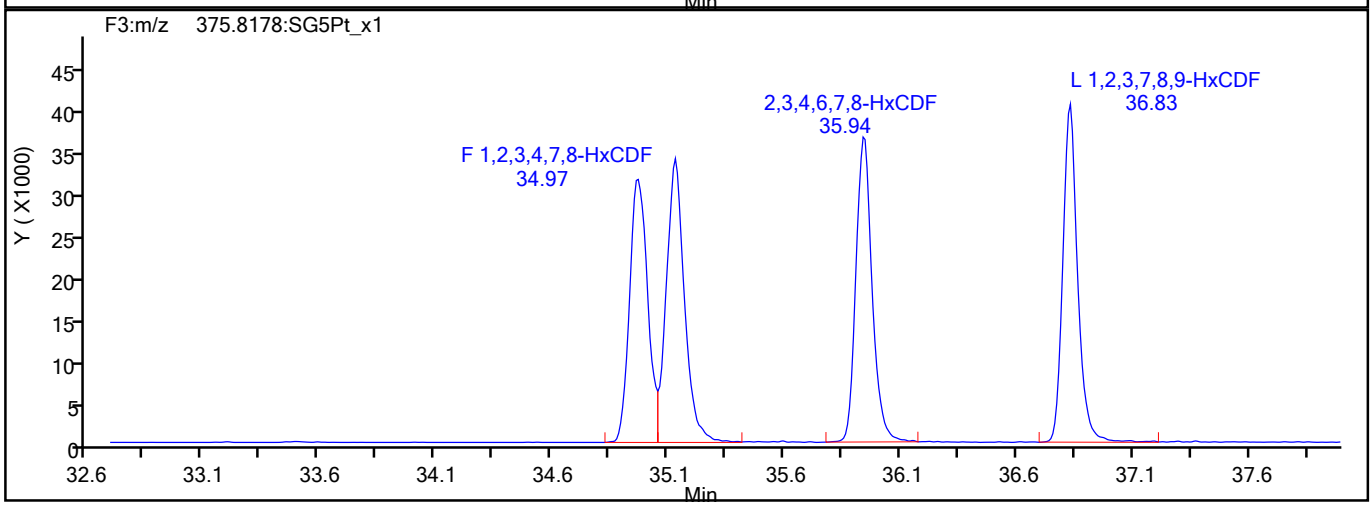

HxCDF Interference Mass

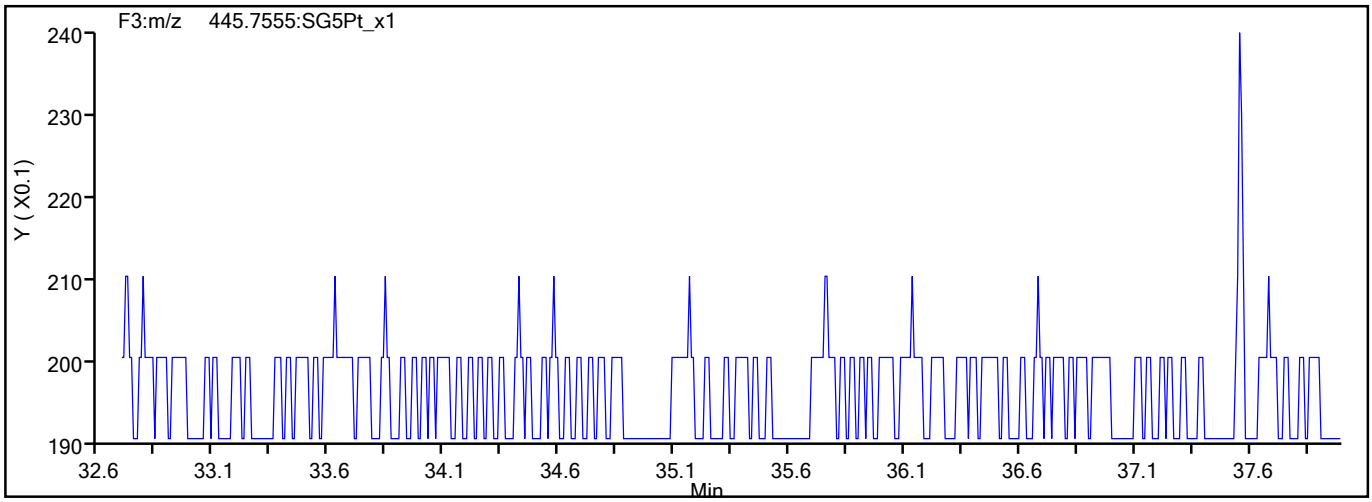

784616

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

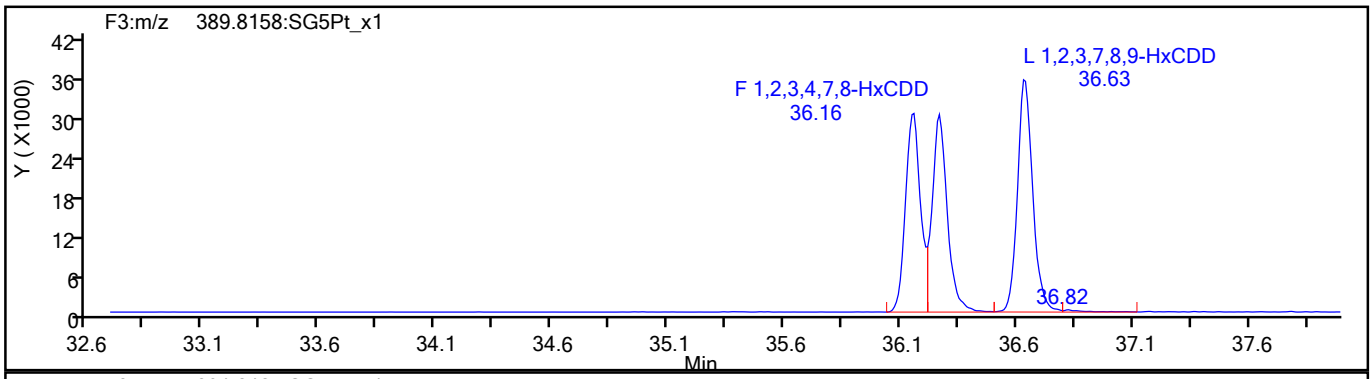

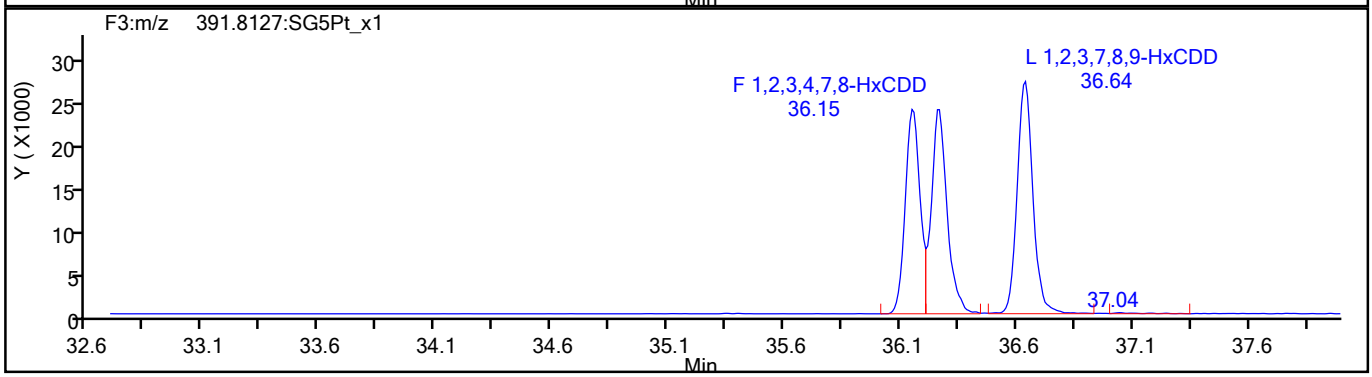

HxCDD Standards

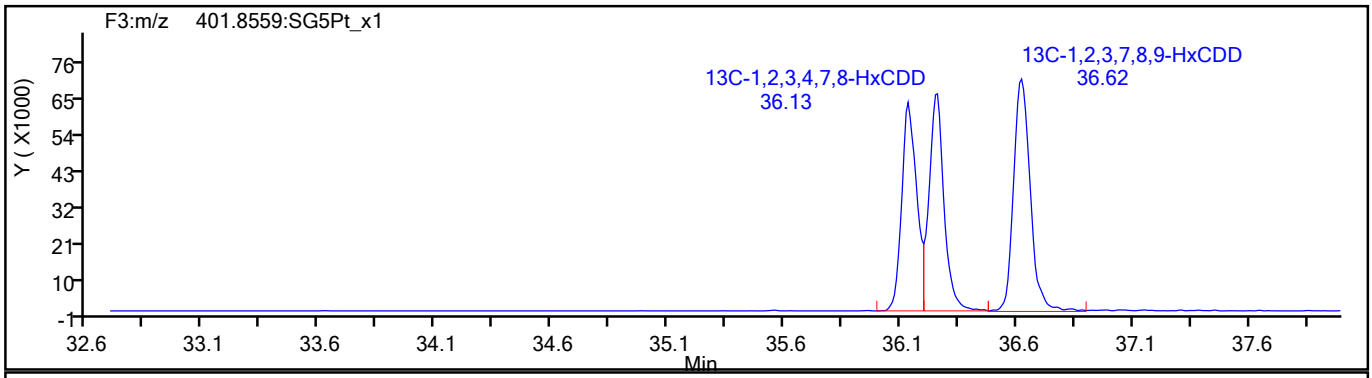

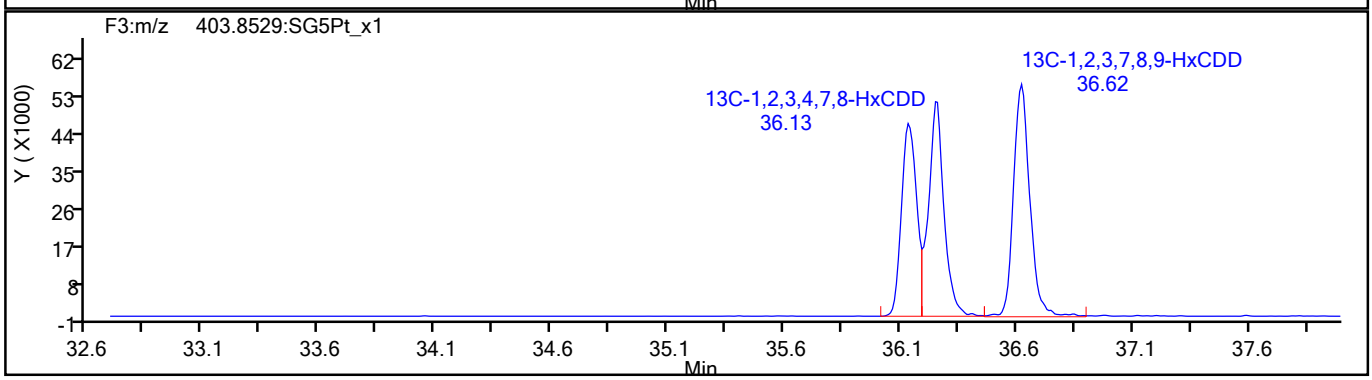

784617

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

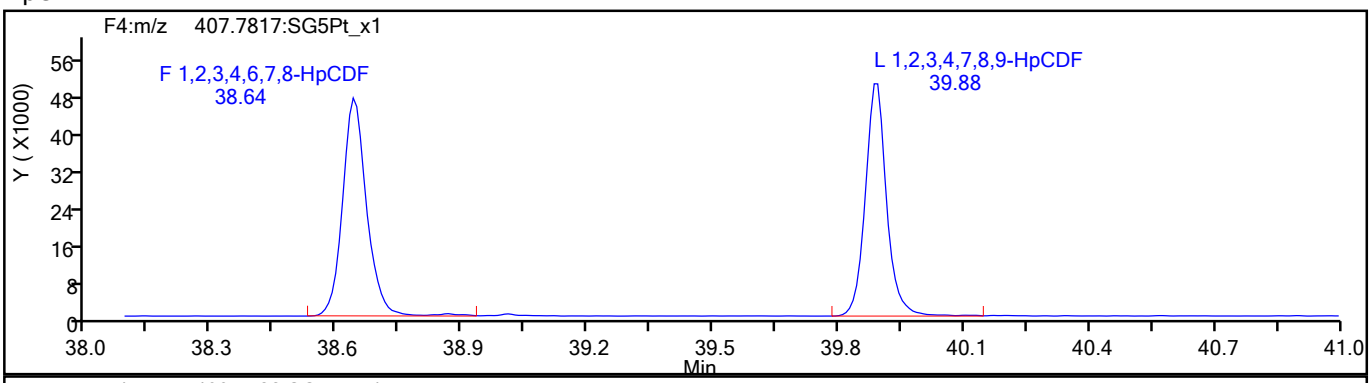

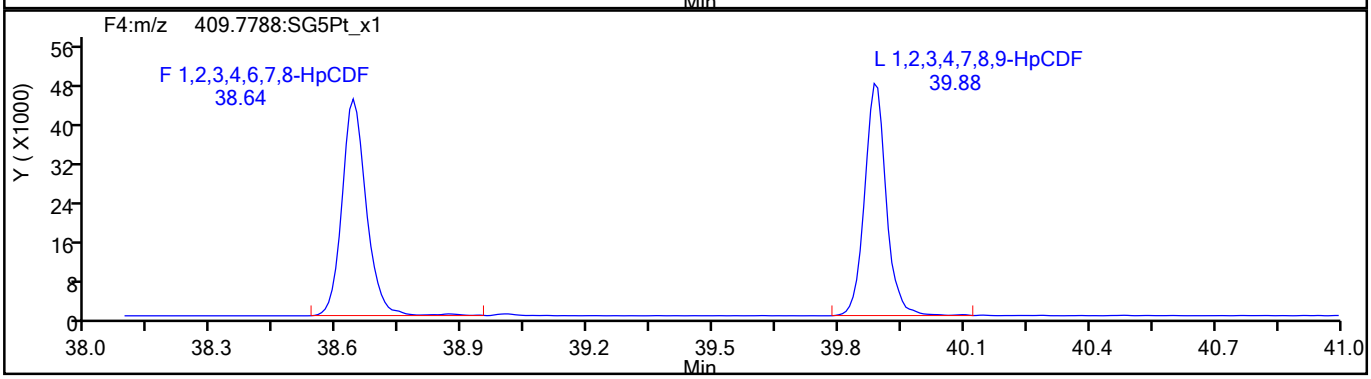

HpCDF Standards

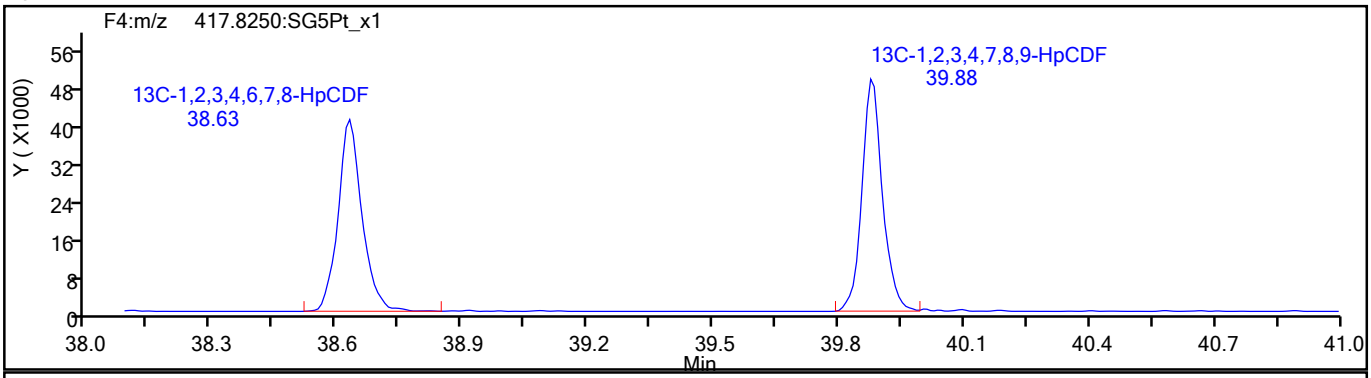

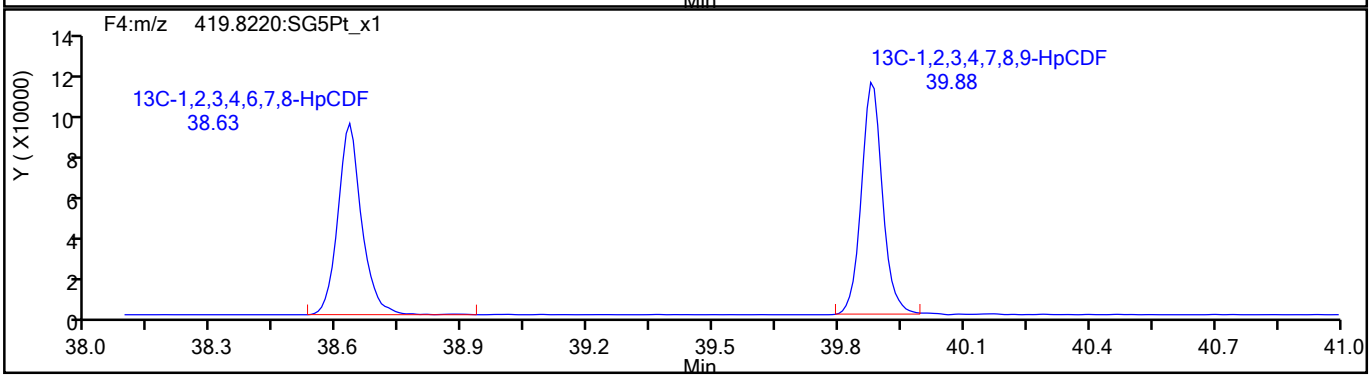

784618

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

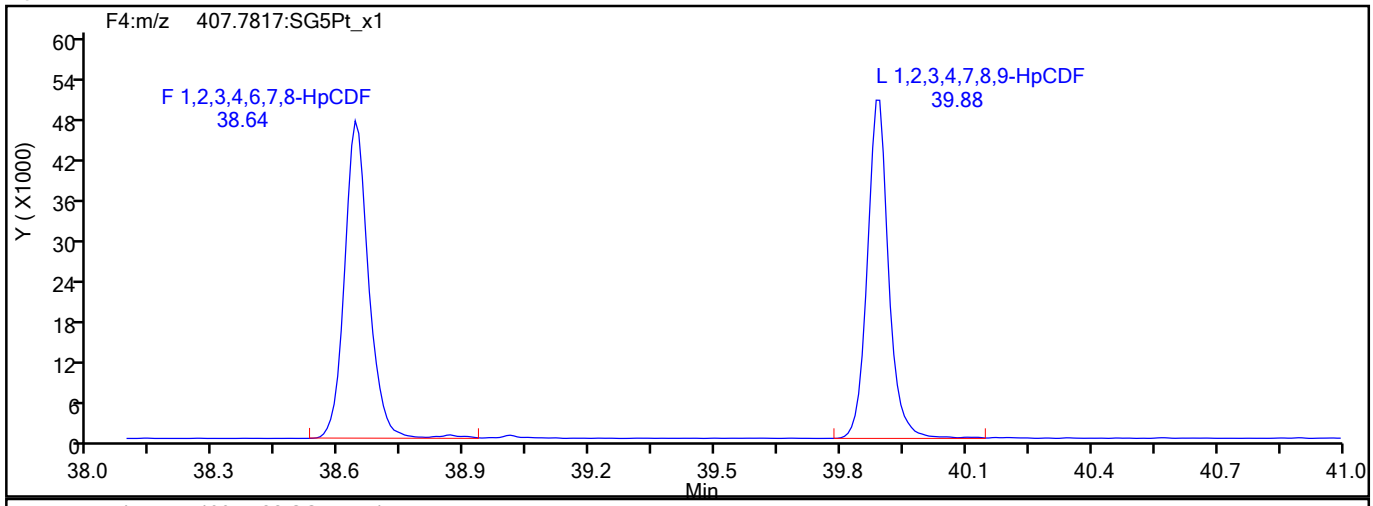

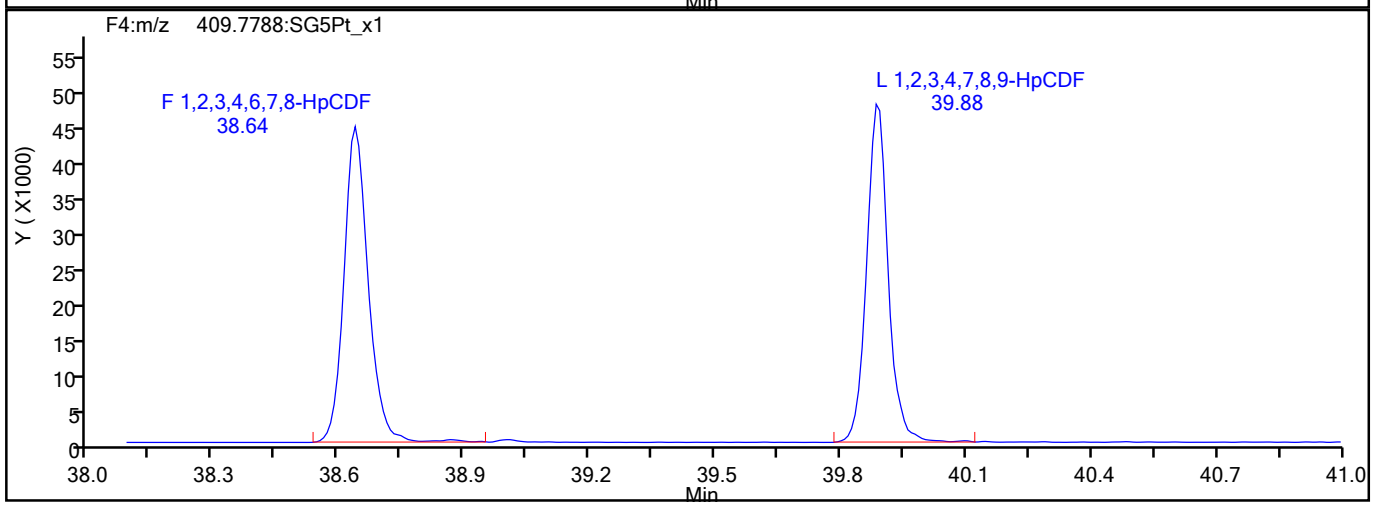

HpCDF Interference Mass

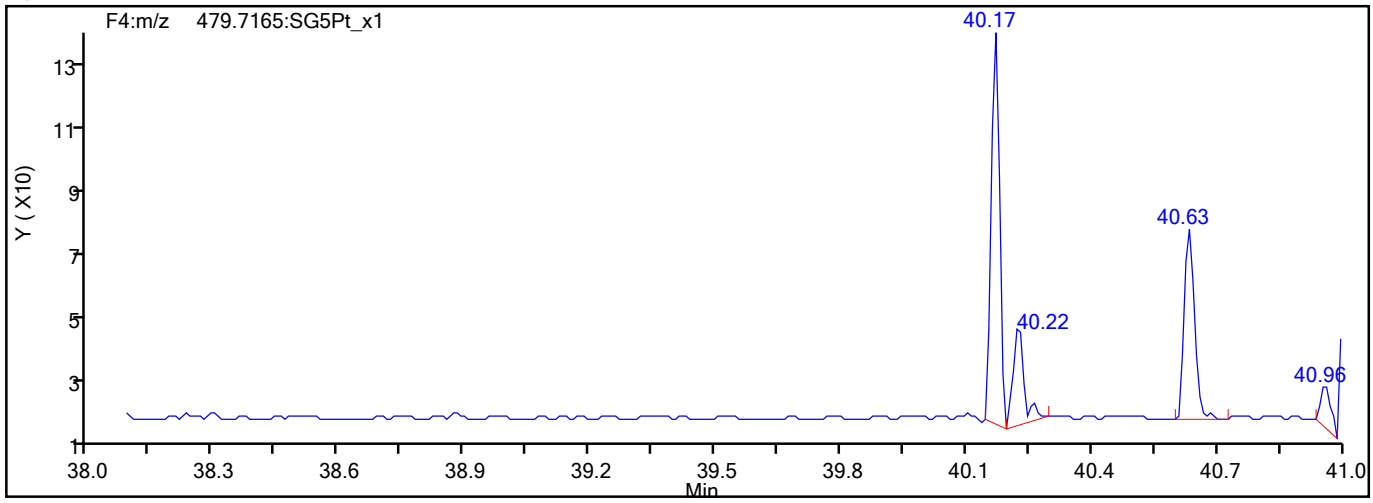

784619

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

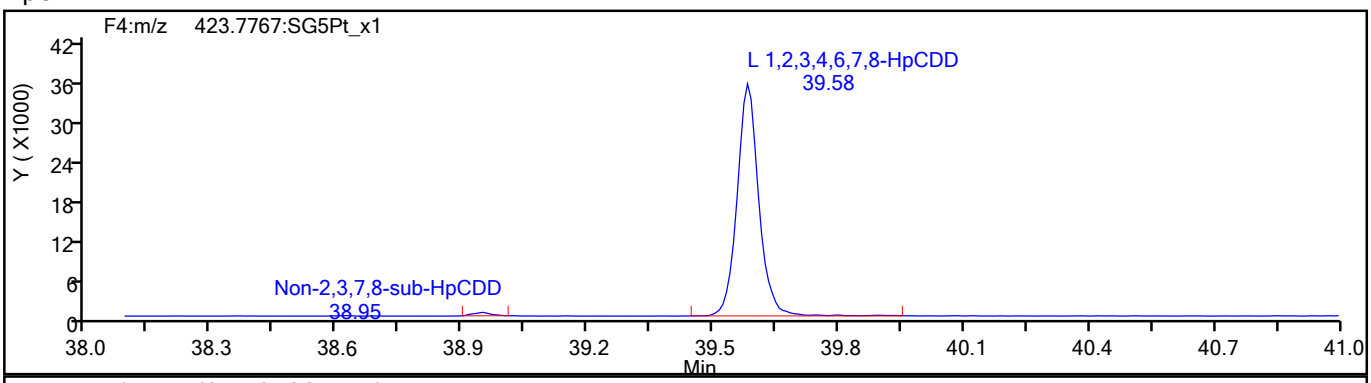

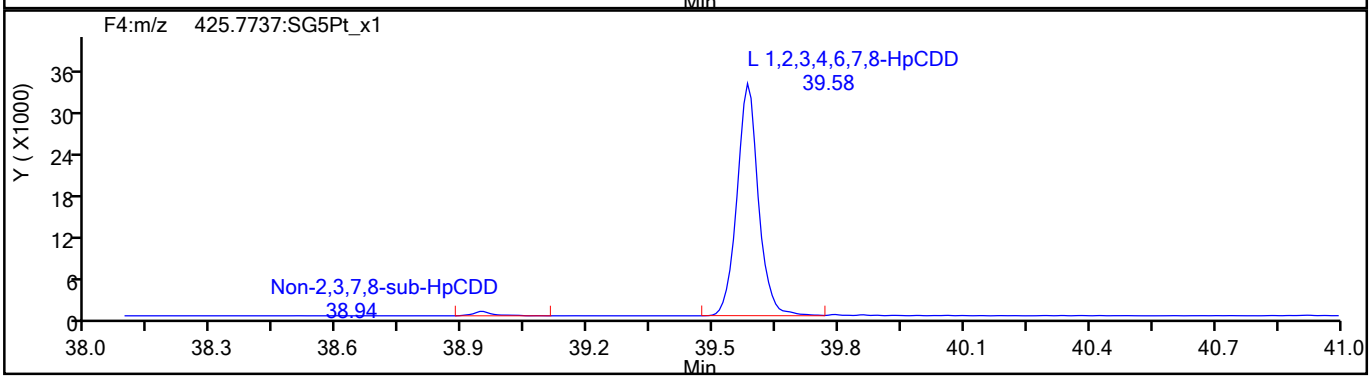

HpCDD Standards

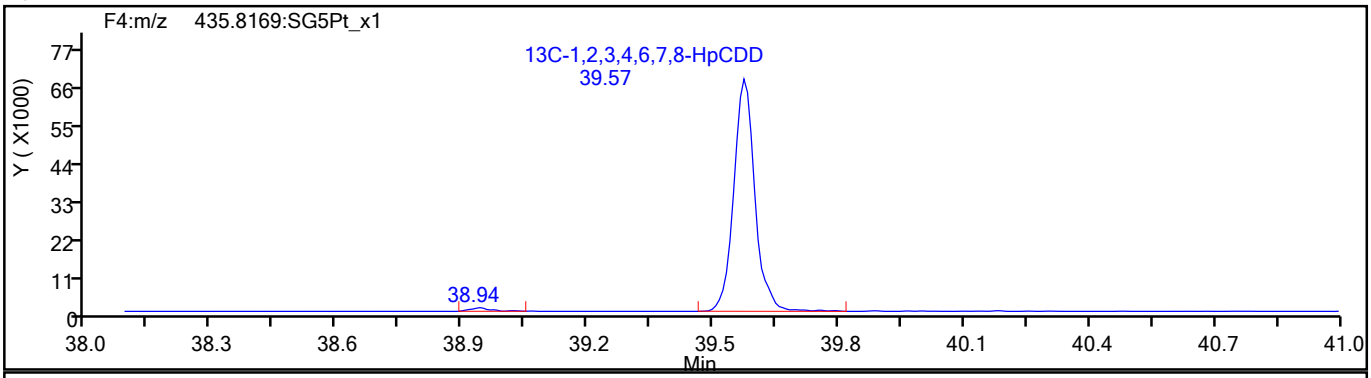

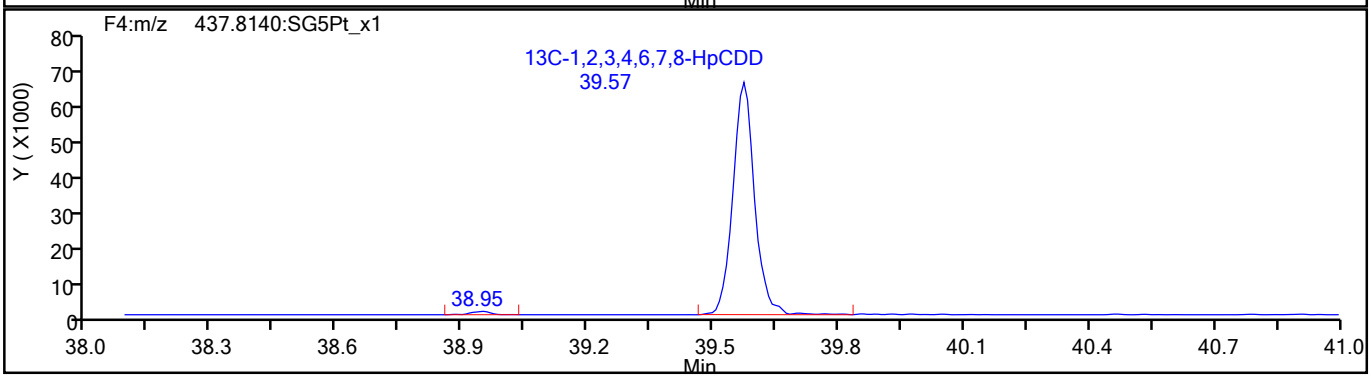

784620

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

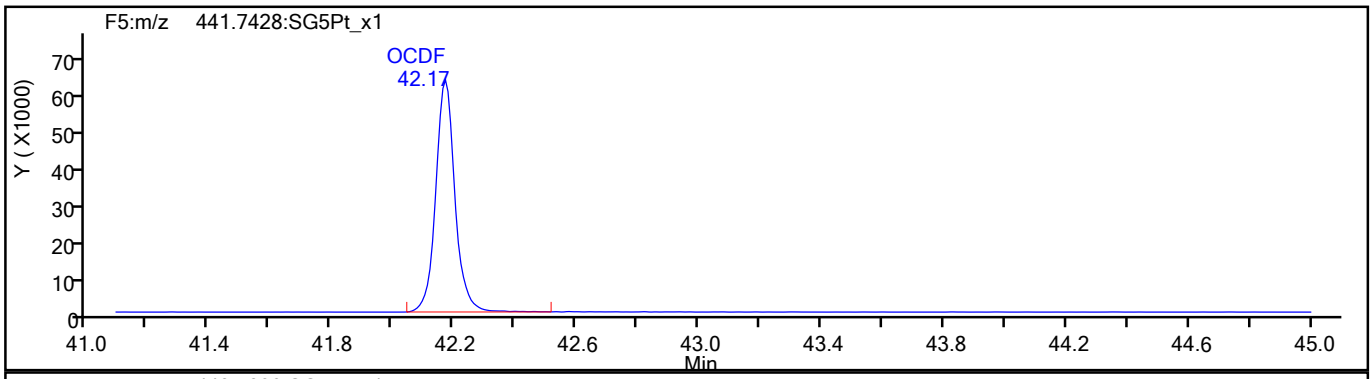

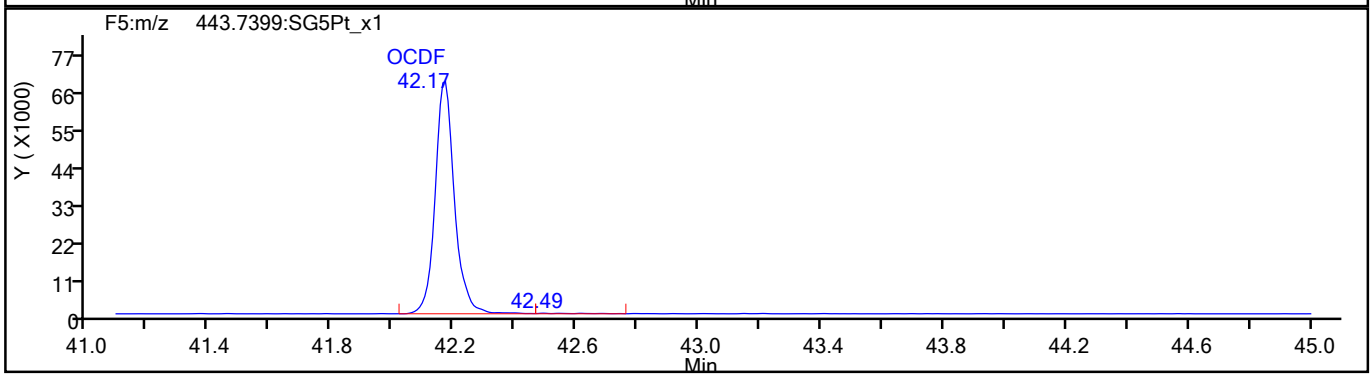

OCDF Standards

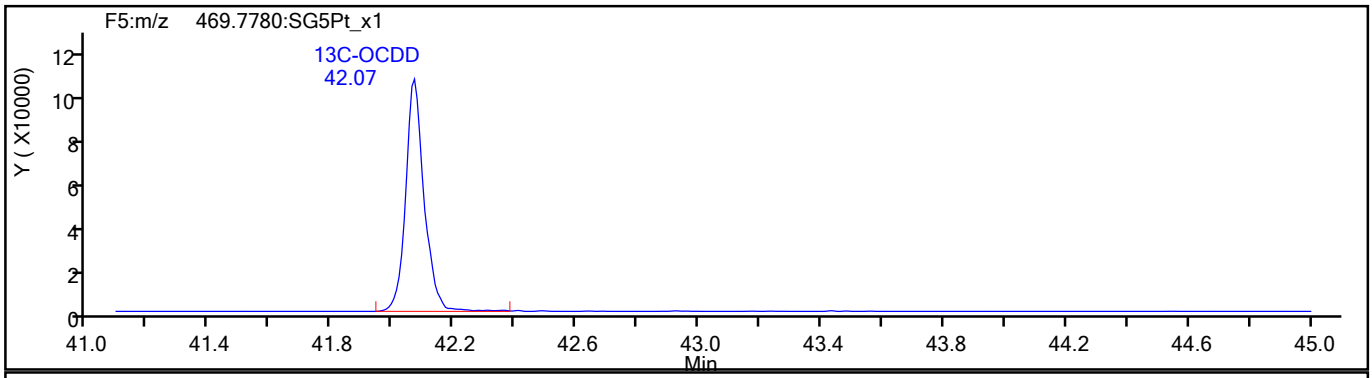

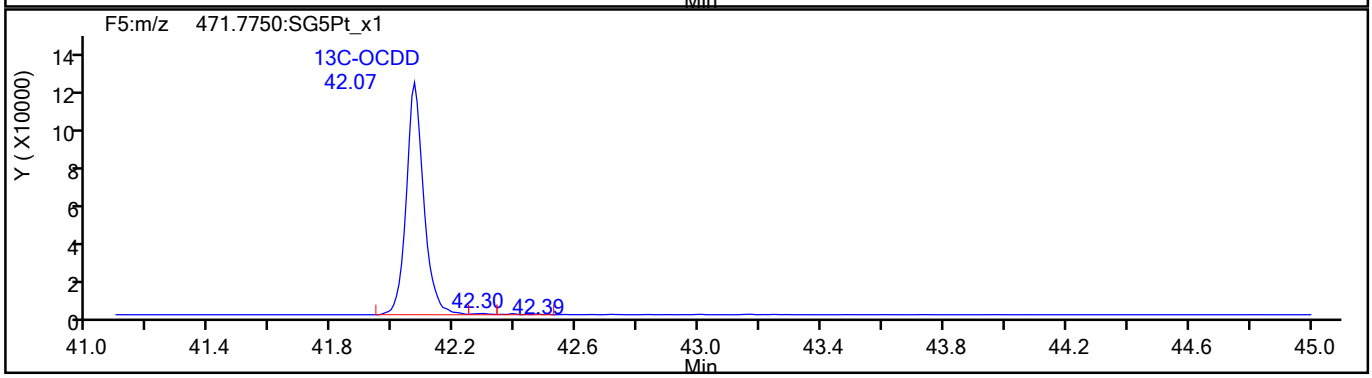

784621

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

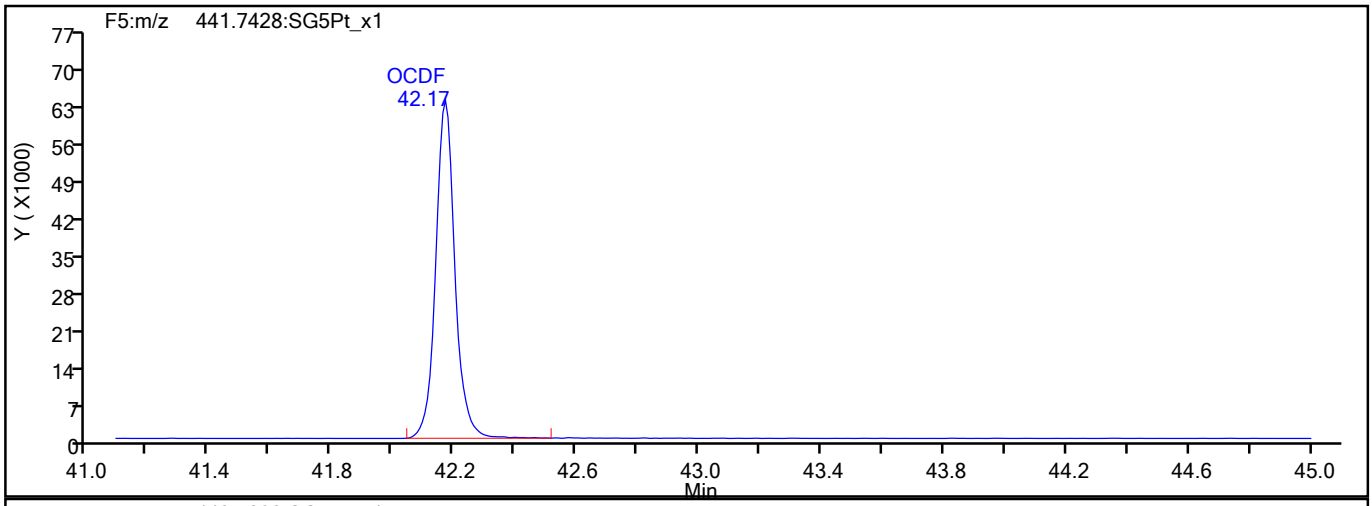

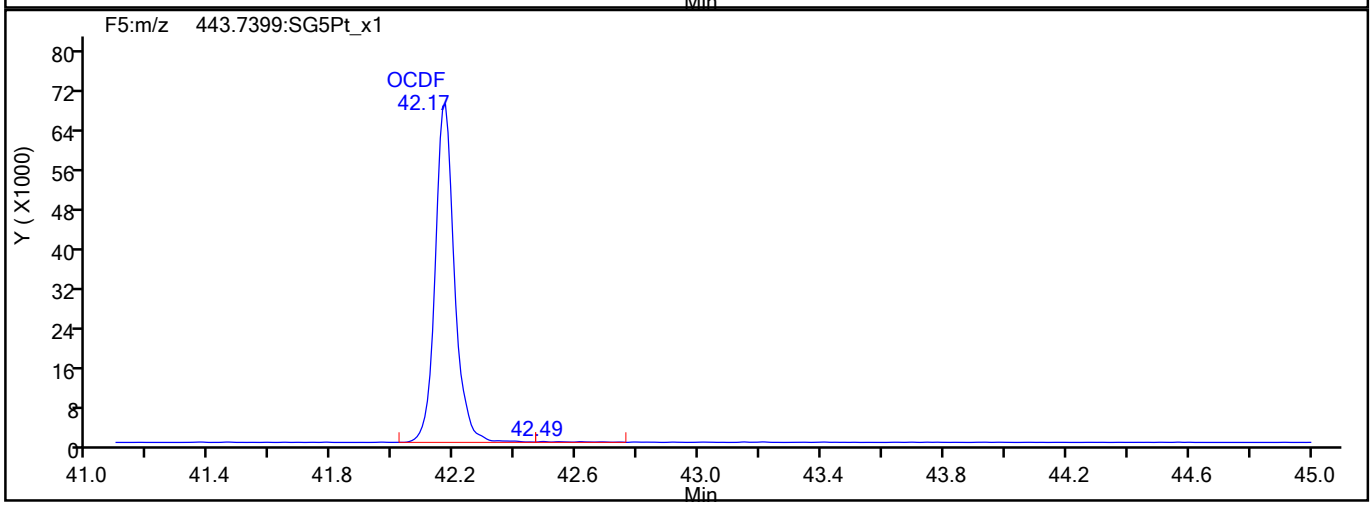

OCDF Interference Mass

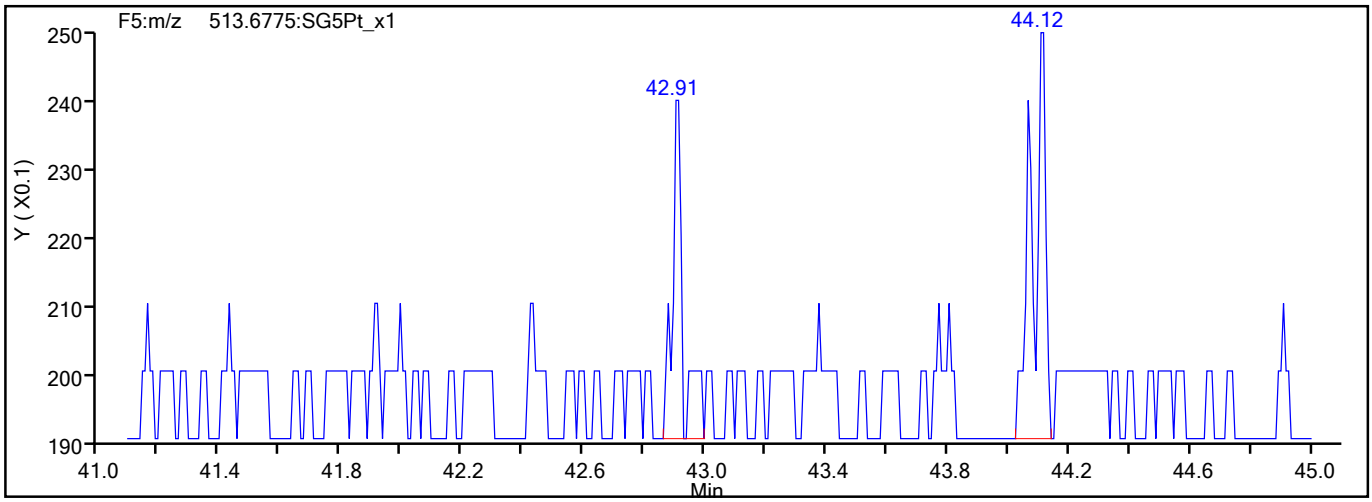

784622

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

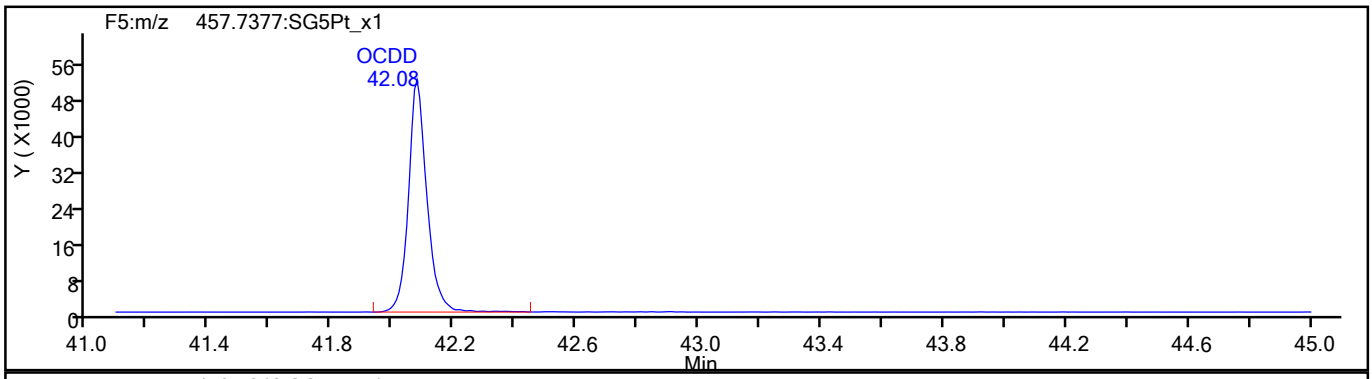

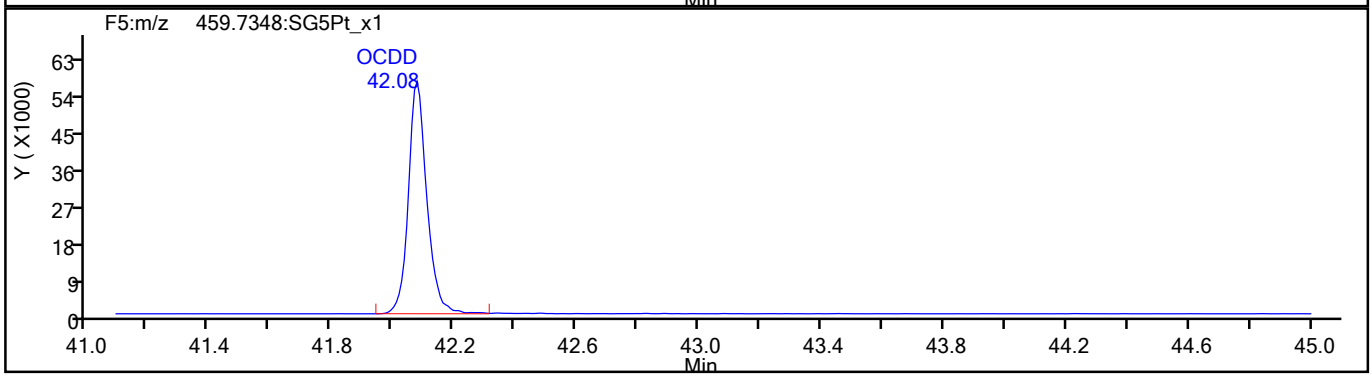

OCDD Standards

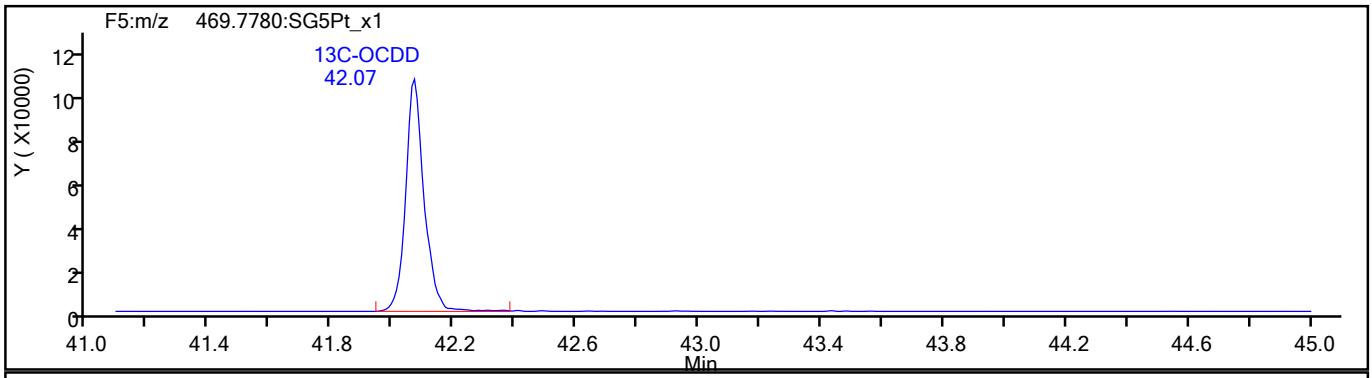

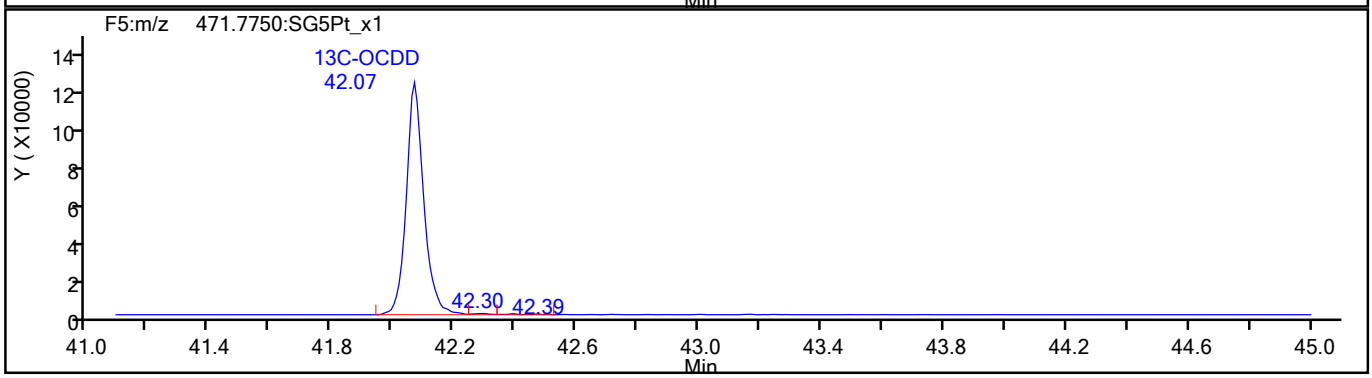

784623

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

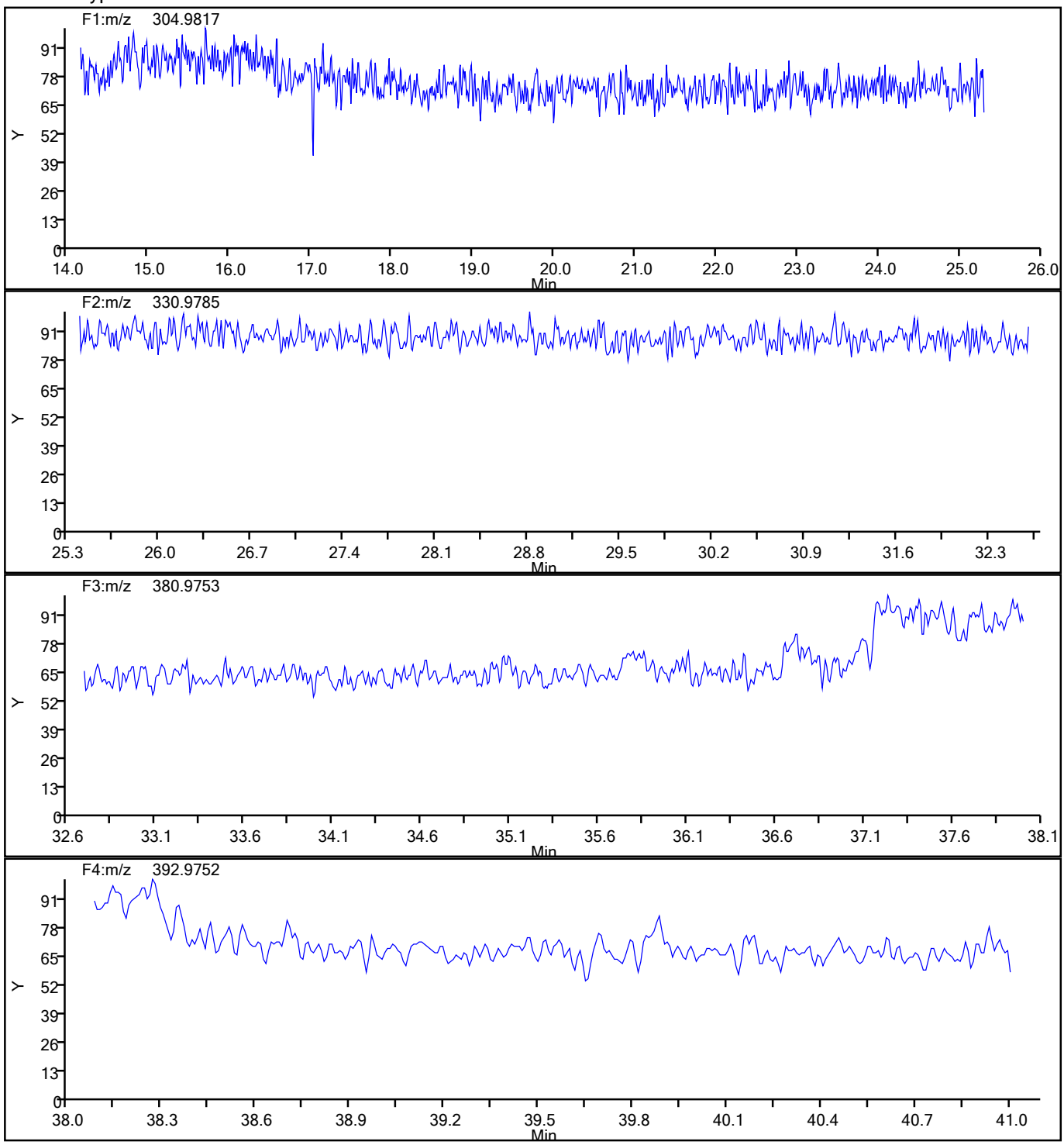

784624

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

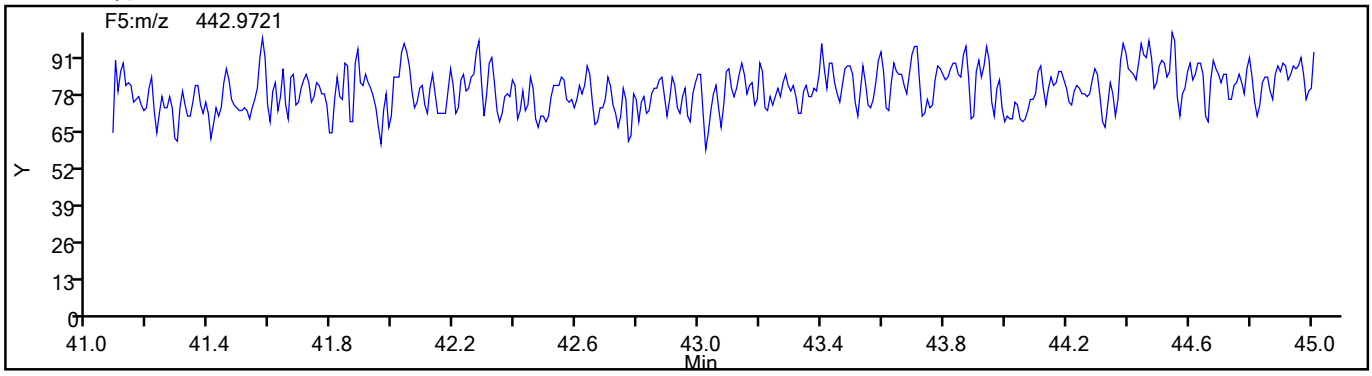

784625

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.598	43192451	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.628	95812265	0.77	1.0239	86.7	86.7	0.4368	0.4368		
A Non-2,3,7,8-sub-TCDF	17.311	141340622	0.77	1.0239	127.8	127.8	0.4368	50.4		
S Total TCDF					214.5	214.5	0.4368	0.4368		
D 13C-2,3,7,8-TCDD	18.323	22643725	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.338	31002300	0.78	1.2541	43.7	43.7	0.2199	0.2199		
A Non-2,3,7,8-sub-TCDD	17.772	120319254	0.78	1.2541	169.5	169.5	0.2199	46.0		
S Total TCDD					213.1	213.1	0.2199	0.2199		
A F1 PeCDFs	20.244	36548211	1.59	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.473	28699153	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.744	44367204	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.542	988216341	1.23	0.0000						
A Non-2,3,7,8-sub-HxCDF	30.542	1016402527	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	31.215	43254937	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.911	28490431	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	35.005	21744380	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.458						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.714	17168827	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.133	55744963	0.78							a
1,3,6,8-TCDD	16.071	32157911	0.78							a
2,3,4,7-TCDF	17.628	95812265	0.77							a
1,2,3,7-TCDD	18.218	26254918	0.77							a
1,2,3,9-TCDF	18.505	41465019	0.77							a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,9-TCDD	18.505	32677146	0.79							a
1,2,8,9-TCDD	19.472	12707183								a
1,2,8,9-TCDF	19.488	41982512	0.76							a
1,3,4,6,8-PeCDF	19.760	36548211	1.59							a
1,2,4,7,9-PeCDD	21.576	23369968	1.58							a
1,2,3,8,9-PeCDD	25.912	20997236	1.59							a
1,2,3,8,9-PeCDF	26.144	28026312	1.61							a
1,2,3,4,6,8-HxCDF	28.479	29886017	1.22							a
1,2,4,6,7,9-HxCDD	30.023	21768457	1.27							a
1,2,3,4,6,7-HxCDD	32.299	21486480	1.24							a
1,2,3,4,8,9-HxCDF	32.605	28186186	1.23							a
1,2,3,4,6,7,9-HpCDD	34.154						0.0	0.0		U

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	1.000	18796968	4666881	8168	20420	571		
317.9389	17.598	17.598	0	1.000	24395483	6066397	3473	8682	1747	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.002	41629702	9682578	19585	48962	494		
305.8987	17.628	17.631	0	1.002	54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.133	17.311	-130	0.860	24509538	7569037	19585	48962	386		
305.8987	15.133	17.311	-130	0.860	31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
303.9016	18.505	17.311	72	1.052	18061189	4195885	19585	48962	214		
305.8987	18.505	17.311	72	1.052	23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
303.9016	19.488	17.311	130	1.107	18098944	4035450	19585	48962	206		
305.8987	19.488	17.311	130	1.107	23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
303.9016	19.775	17.311	148	1.124	944774	152570	19585	48962	8		
305.8987	19.775	17.311	148	1.124	1203354	204203	28414	71035	7	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.000	10063481	2396990	3086	7715	777		
333.9339	18.323	18.323	0	1.000	12580244	3018588	1527	3817	1977	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.357	-1	1.001	13597515	3193209	6116	15290	522		
321.8936	18.338	18.357	-1	1.001	17404785	4135946	8817	22042	469	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	16.071	17.772	-102	0.877	14103074	4061475	6116	15290	664		
321.8936	16.071	17.772	-102	0.877	18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
319.8965	18.218	17.772	27	0.994	11446127	2829889	6116	15290	463		
321.8936	18.218	17.772	27	0.994	14808791	3726958	8817	22042	423	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	18.505	17.772	44	1.010	14439496	3301963	6116	15290	540		
321.8936	18.505	17.772	44	1.010	18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
319.8965	19.472	17.772	102	1.063	12707183	2751784	6116	15290	450		
321.8936	19.472	17.772	102	1.063	16522096	3661962	8817	22042	415	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.760	20.244	-29	1.000	22414023	4920048	649	1622	7581		
341.8567	19.760	20.244	-29	1.000	14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.344	23.473	-127	1.000	84191	14080	2633	6582	5		
341.8567	21.344	23.473	-127	1.000	53909	7615	1950	4875	4	1.56(1.32-1.78)	
339.8597	22.176	23.473	-78	1.000	88076	13805	2633	6582	5		
341.8567	22.190	23.473	-77	1.000	48170	9635	1950	4875	5	1.83(1.32-1.78)	
339.8597	22.749	23.473	-43	1.000	168309	20506	2633	6582	8		
341.8567	22.762	23.473	-43	1.000	82177	12827	1950	4875	7	2.05(1.32-1.78)	
339.8597	23.321	23.473	-9	1.000	142716	22963	2633	6582	9		
341.8567	23.321	23.473	-9	1.000	79356	11480	1950	4875	6	1.80(1.32-1.78)	
339.8597	26.144	23.473	160	1.000	17301746	2425915	2633	6582	921		
341.8567	26.144	23.473	160	1.000	10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.576	23.744	-130	1.000	14314296	2552271	2414	6035	1057		
357.8516	21.576	23.744	-130	1.000	9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
355.8546	25.912	23.744	130	1.000	12881489	1801570	2414	6035	746		
357.8516	25.912	23.744	130	1.000	8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	32.605	30.542	124	1.000	15534015	4607321	4603	11507	1001		
375.8178	32.605	30.542	124	1.000	12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.023	31.215	-71	1.000	12175655	1922535	6506	16265	296		
391.8127	30.023	31.215	-71	1.000	9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
389.8157	32.299	31.215	65	1.000	11903453	3254284	6506	16265	500		
391.8127	32.299	31.215	65	1.000	9583027	2649988	5715	14287	464	1.24(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.911	33.926	-1	1.000	14581587	4505694	20273	50682	222		
409.7789	33.911	33.926	-1	1.000	13908844	4348275	17441	43602	249	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.005	35.020	-1	1.000	11106344	3153936	20273	50682	156		
409.7789	35.005	35.020	-1	1.000	10638036	3040493	17441	43602	174	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						20273	50682			
409.7789	34.458						17441	43602			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.726	-1	1.000	8809155	2526480	13831	34577	183		
425.7737	34.714	34.726	-1	1.000	8359672	2427581	13744	34360	177	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						13831	34577			
425.7737	33.504						13744	34360			
1,3,6,8-TCDF											a
303.9016	15.133	15.133	0		24509538	7569037	19585	48962	386		a
305.8987	15.133	15.133	0		31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
1,3,6,8-TCDD											a
319.8965	16.071	16.071	0		14103074	4061475	6116	15290	664		a
321.8936	16.071	16.071	0		18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
2,3,4,7-TCDF											a
303.9016	17.628	17.628	0		41629702	9682578	19585	48962	494		a
305.8987	17.628	17.628	0		54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
1,2,3,7-TCDD											a
319.8965	18.218	18.218	0		11446127	2829889	6116	15290	463		a
321.8936	18.218	18.218	0		14808791	3726958	8817	22042	423	0.77(0.65-0.89)	
1,2,3,9-TCDF											a
303.9016	18.505	18.505	0		18061189	4195885	19585	48962	214		a
305.8987	18.505	18.505	0		23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
1,2,3,9-TCDD											a
319.8965	18.505	18.505	0		14439496	3301963	6116	15290	540		a
321.8936	18.505	18.505	0		18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
1,2,8,9-TCDD											a
319.8965	19.472	19.472	0		12707183	2751784	6116	15290	450		a
1,2,8,9-TCDF											a
303.9016	19.488	19.488	0		18098944	4035450	19585	48962	206		a
305.8987	19.488	19.488	0		23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
1,3,4,6,8-PeCDF											a
339.8597	19.760	19.760	0		22414023	4920048	649	1622	7581		a
341.8567	19.760	19.760	0		14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	21.576	21.576	0		14314296	2552271	2414	6035	1057		a
357.8516	21.576	21.576	0		9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											a
355.8546	25.912	25.912	0		12881489	1801570	2414	6035	746		a
357.8516	25.912	25.912	0		8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	26.144	26.144	0		17301746	2425915	2633	6582	921		a
341.8567	26.144	26.144	0		10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											a
373.8208	28.479	28.479	0		16406487	2121744	4603	11507	461		a
375.8178	28.479	28.479	0		13479530	1752621	3729	9322	470	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											a
389.8157	30.023	30.023	0		12175655	1922535	6506	16265	296		a
391.8127	30.023	30.023	0		9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											a
389.8157	32.299	32.299	0		11903453	3254284	6506	16265	500		a
391.8127	32.299	32.299	0		9583027	2649988	5715	14287	464	1.24(1.05-1.43)	

Report Date: 27-Jul-2021 15:09:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,8,9-HxCDF											a
373.8208	32.605	32.605	0		15534015	4607321	4603	11507	1001		a
375.8178	32.605	32.605	0		12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.154						13831	34577			
425.7737	34.154						13744	34360			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	43192451	10733278

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	43192451	10733278

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.133	24509538	7569037	31235425	9722736	50.4	0.78	
18.505	18061189	4195885	23403830	5509968	37.5	0.77	
19.488	18098944	4035450	23883568	5304928	38.0	0.76	
19.775	944774	152570	1203354	204203	1.94	0.79	
Signal Totals:	61614445	15952942	79726177	20741835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141340622	36694777				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 127.837 = (141340622 * 40.000) / (43192451 * 1.024)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	22643725	5415578

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	22643725	5415578

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.071	14103074	4061475	18054837	5166402	45.3	0.78	
18.218	11446127	2829889	14808791	3726958	37.0	0.77	
18.505	14439496	3301963	18237650	4248308	46.0	0.79	
19.472	12707183	2751784	16522096	3661962	41.2	0.77	
Signal Totals:							
	52695880	12945111	67623374	16803630			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	120319254	29748741				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 169.476 = (120319254 * 40.000) / (22643725 * 1.254)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

F1 PeCDFs, RT: 20.244

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.760	22414023	4920048	14134188	3116108		1.59	
Signal Totals:							
	22414023	4920048	14134188	3116108			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	36548211	8036156				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (36548211 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.344	84191	14080	53909	7615		1.56	
22.176	88076	13805	48170	9635		1.83	R
22.749	168309	20506	82177	12827		2.05	R
23.321	142716	22963	79356	11480		1.80	R
26.144	17301746	2425915	10724566	1530575		1.61	
Signal Totals:							
	17785038	2497269	10988178	1572132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28773216	4069401				1.62	RQ
	28699153	4064735					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (28773216 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (28699153 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.744

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.576	14314296	2552271	9055672	1599456		1.58	
25.912	12881489	1801570	8115747	1169053		1.59	
Signal Totals:							
	27195785	4353841	17171419	2768509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	44367204	7122350				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (44367204 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.542

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
32.605	15534015	4607321	12652171	3734547		1.23	
Signal Totals:							
	15534015	4607321	12652171	3734547			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	988216341	287497877				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (988216341 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 31.215

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.023	12175655	1922535	9592802	1497827		1.27	
32.299	11903453	3254284	9583027	2649988		1.24	
Signal Totals:							
	24079108	5176819	19175829	4147815			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43254937	9324634				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43254937 * 0.0) / (0 * 0.000)

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AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

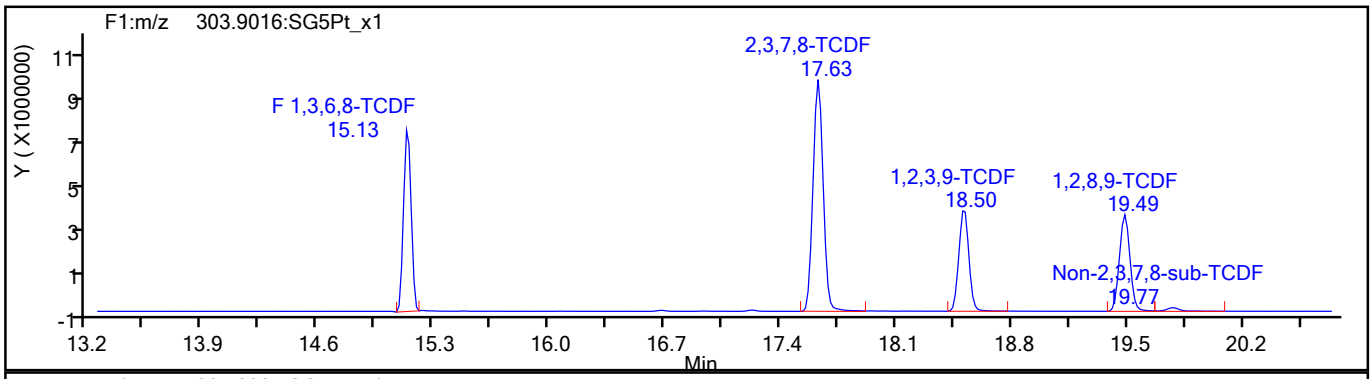

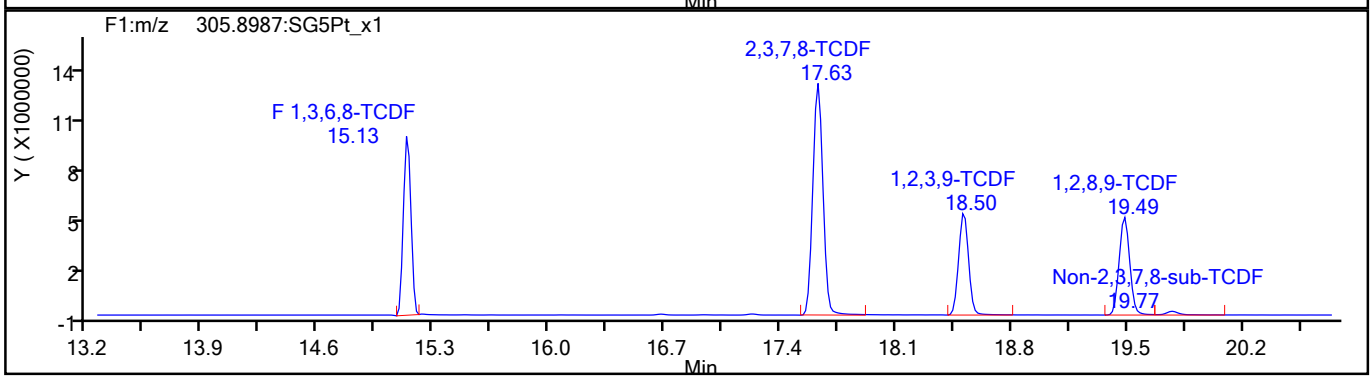

TCDF Standards

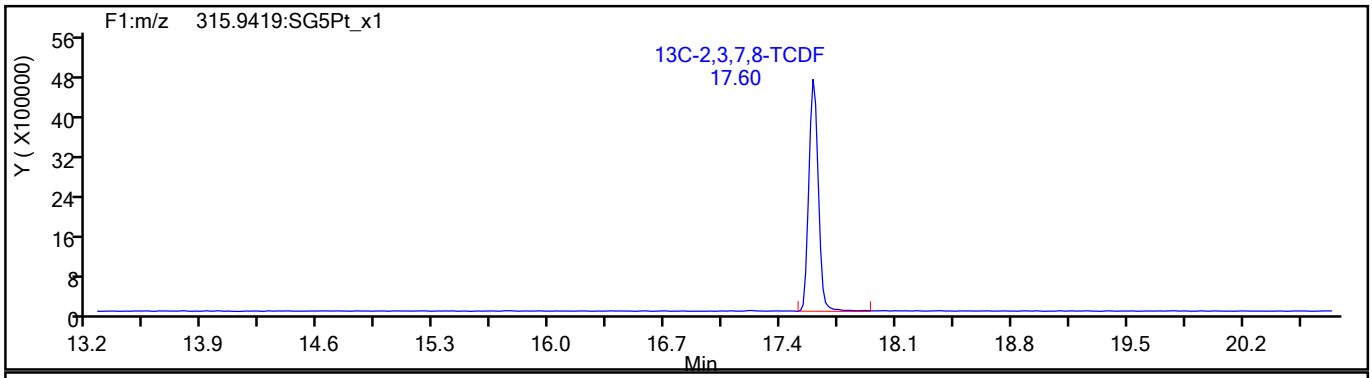

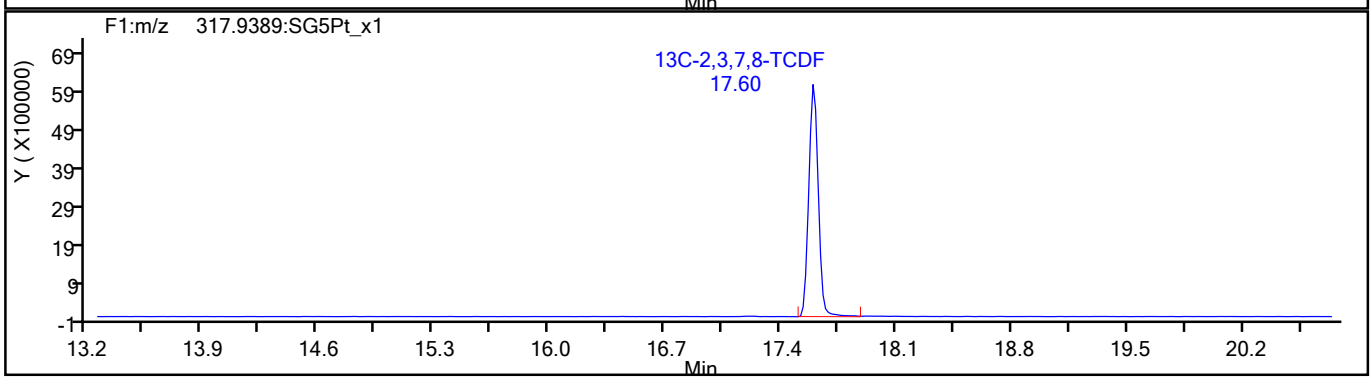

784640

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

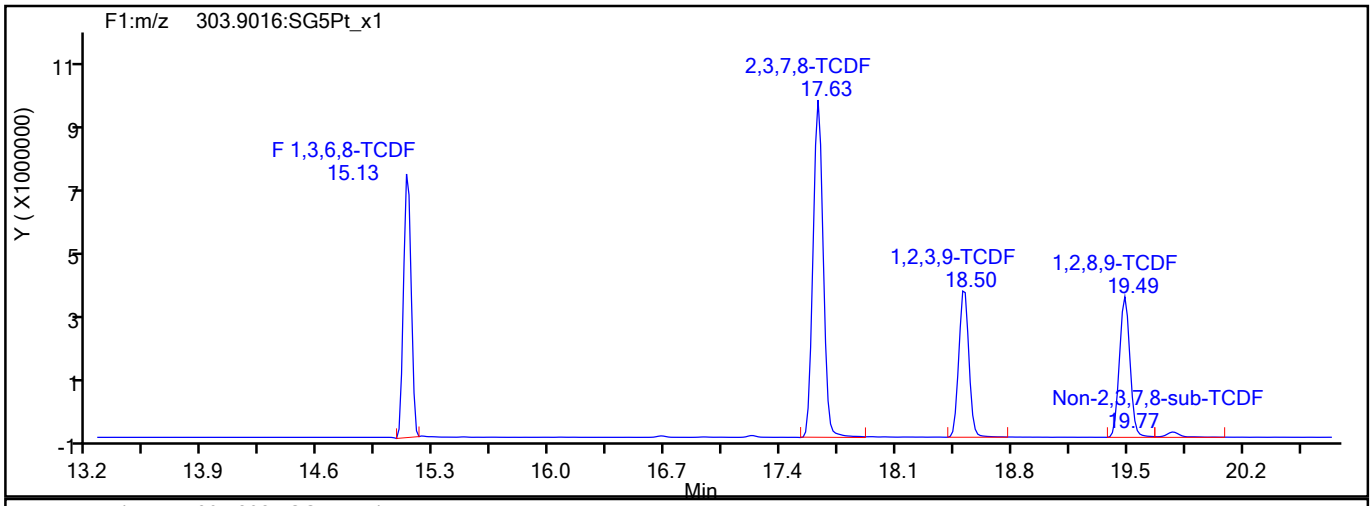

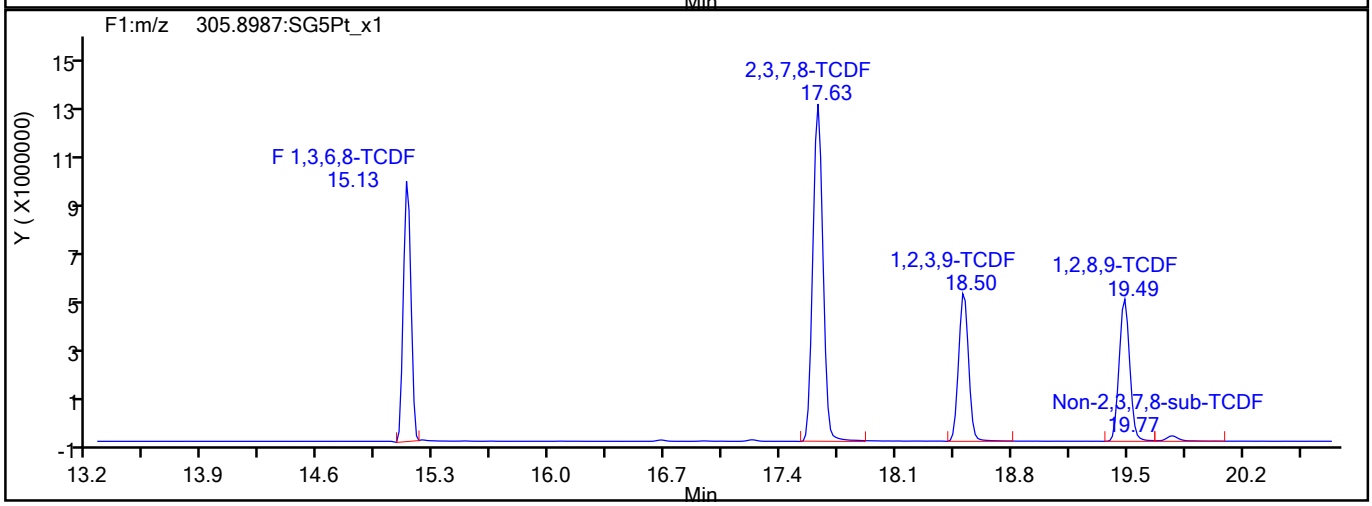

TCDF Interference Mass

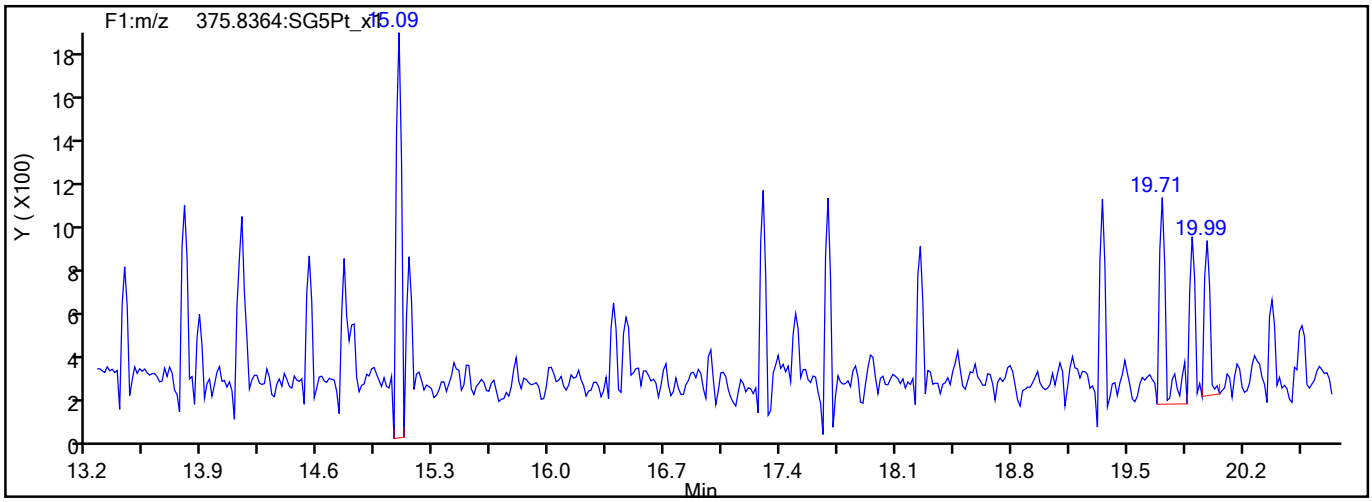

784641

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

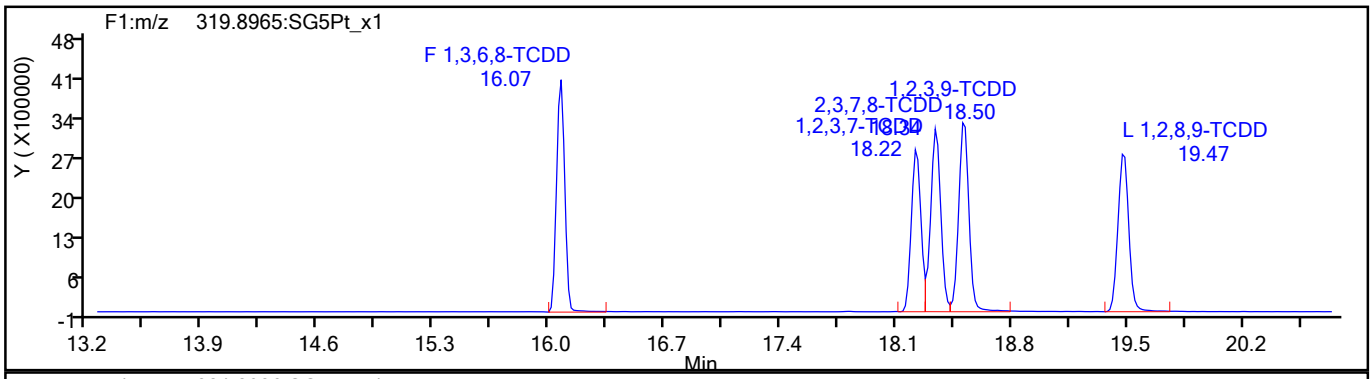

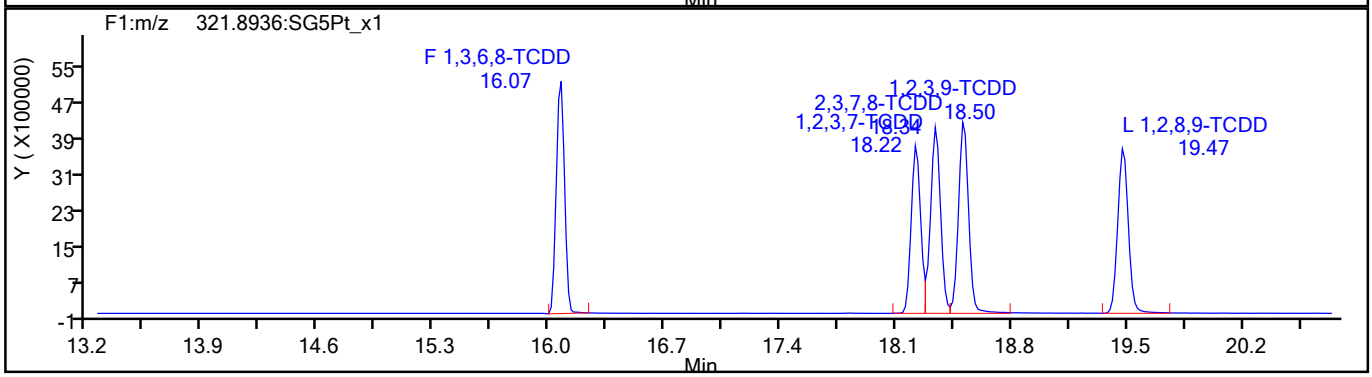

TCDD Standards

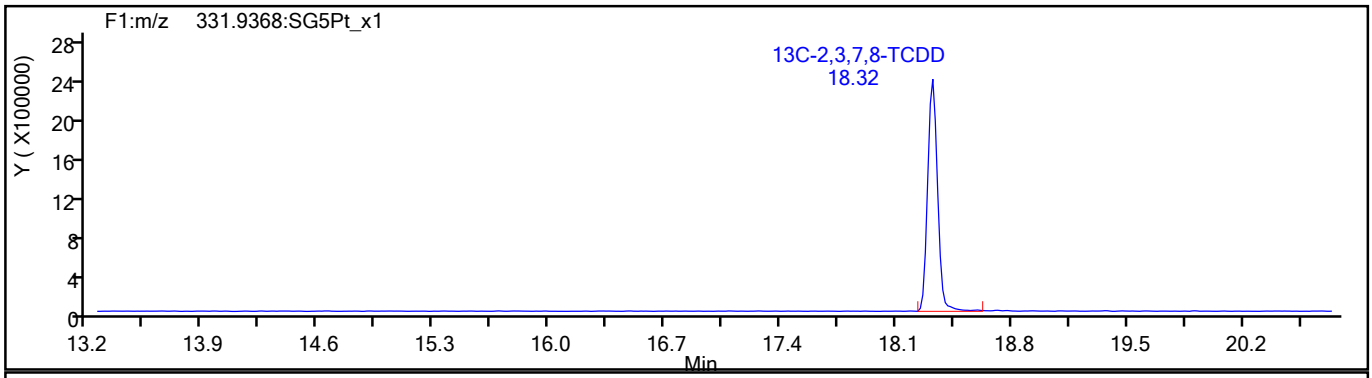

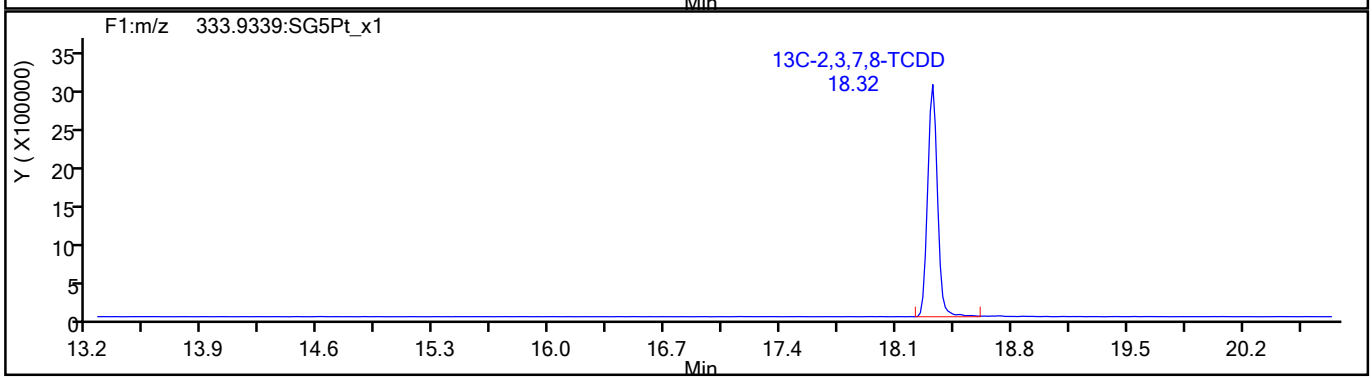

784642

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

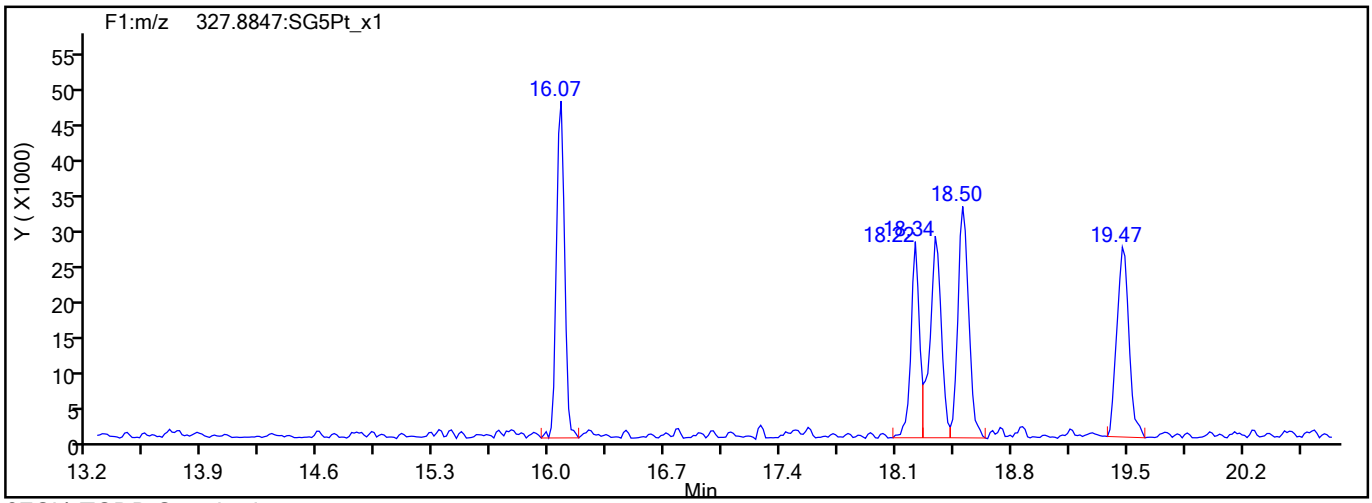

37Cl4-TCDD Standards

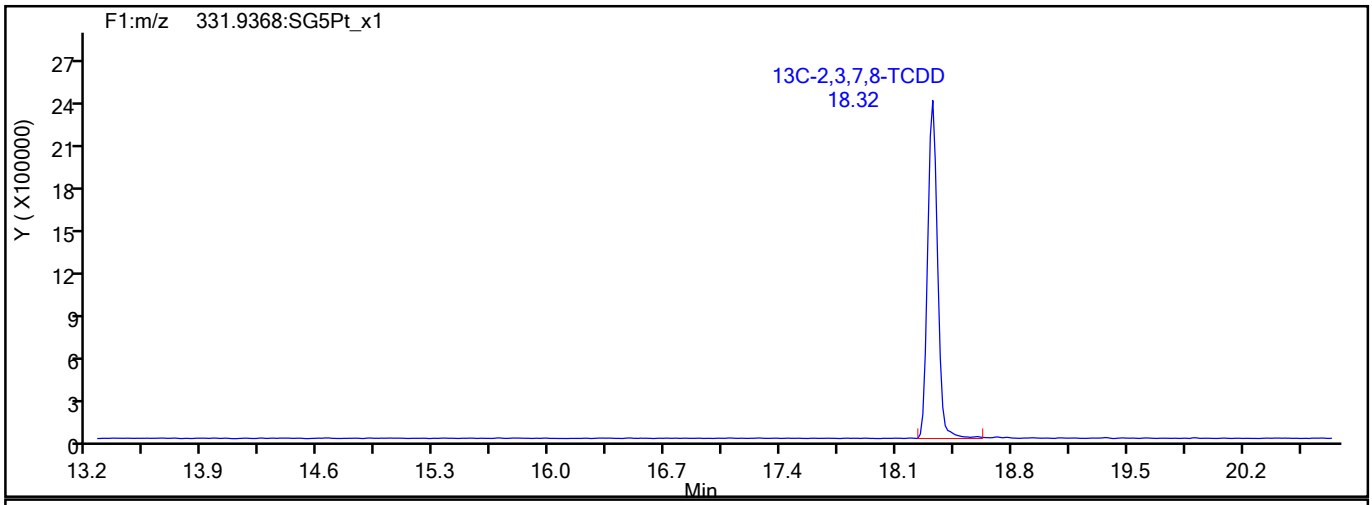

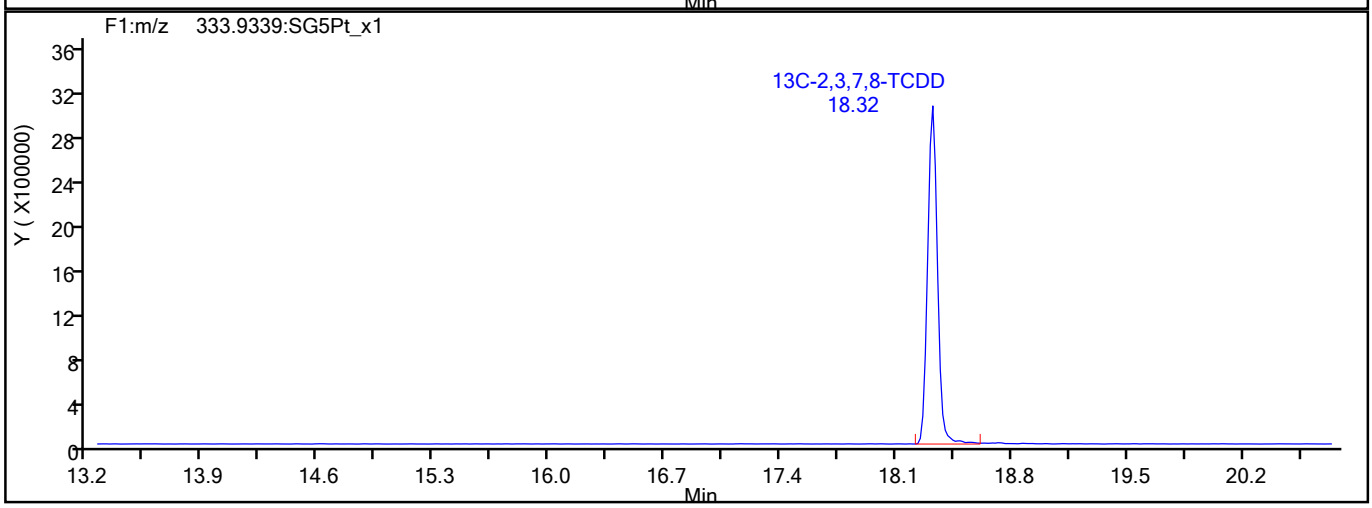

784643

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

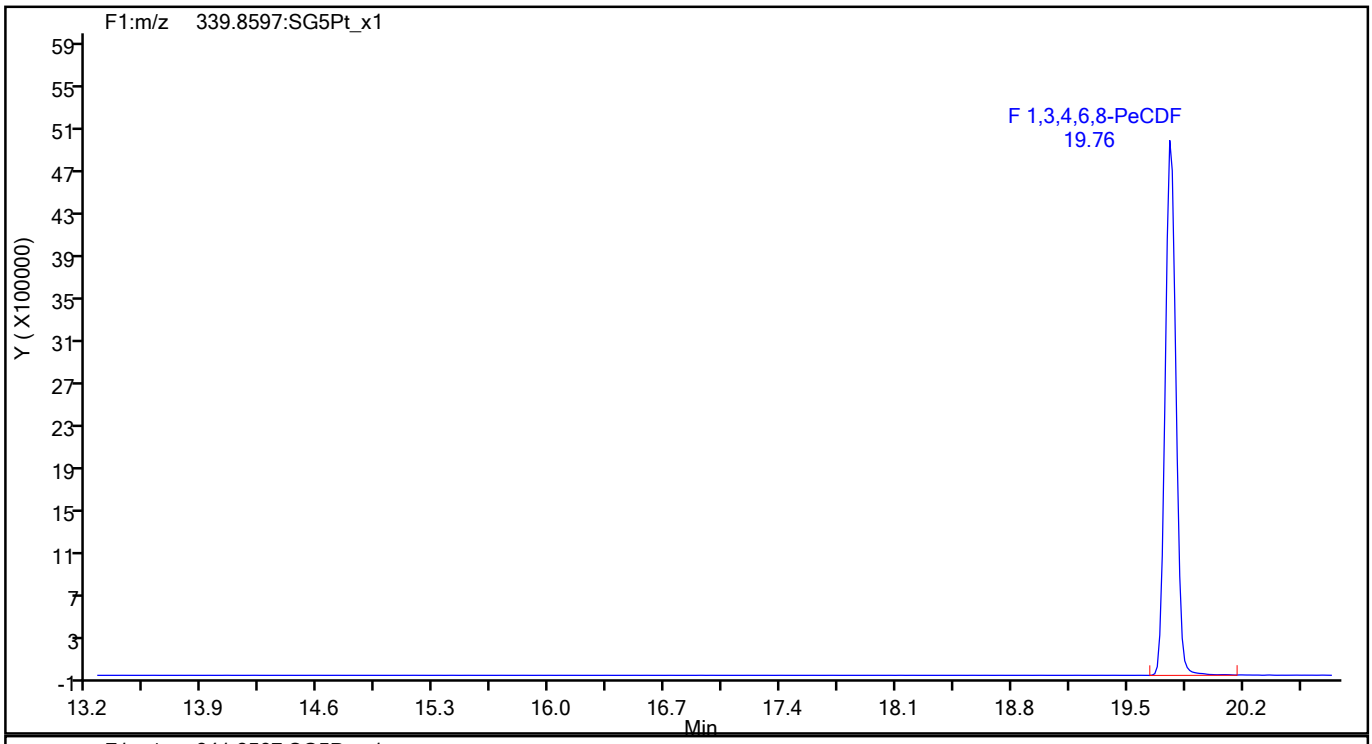

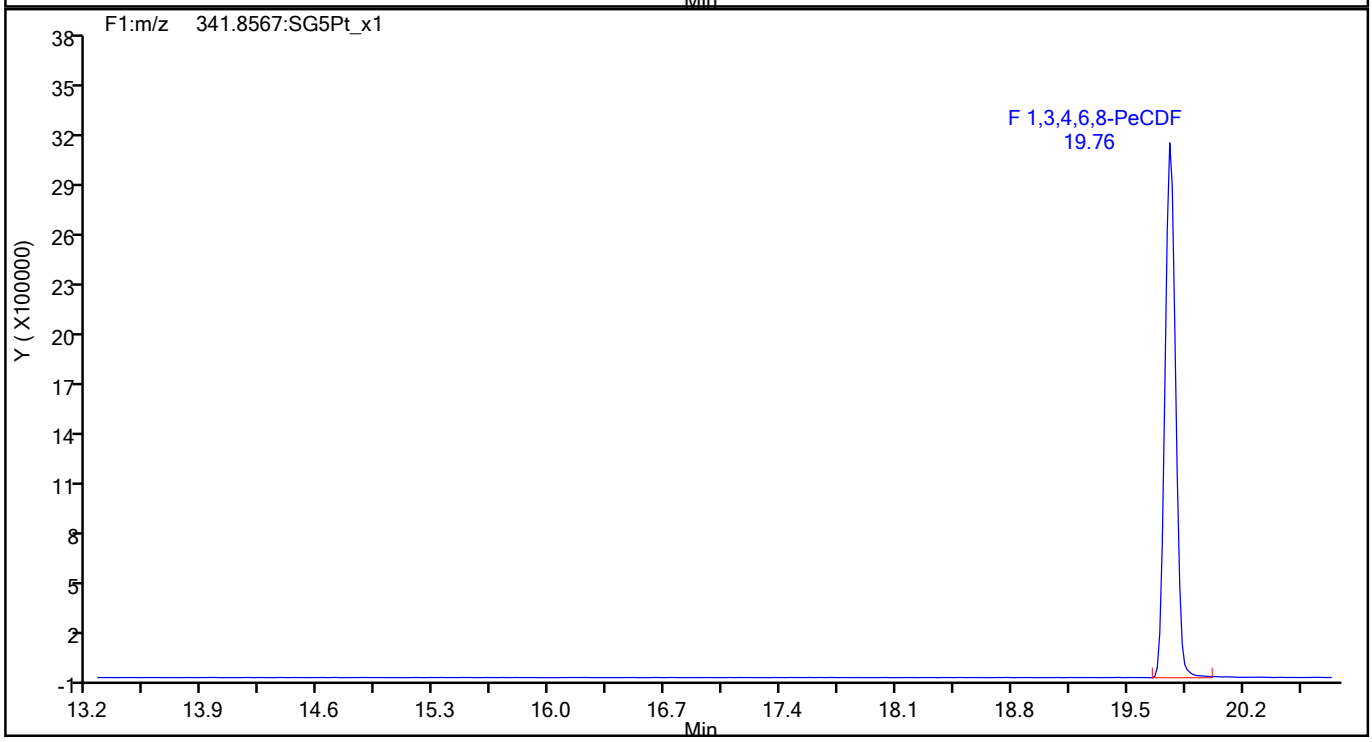

784644

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

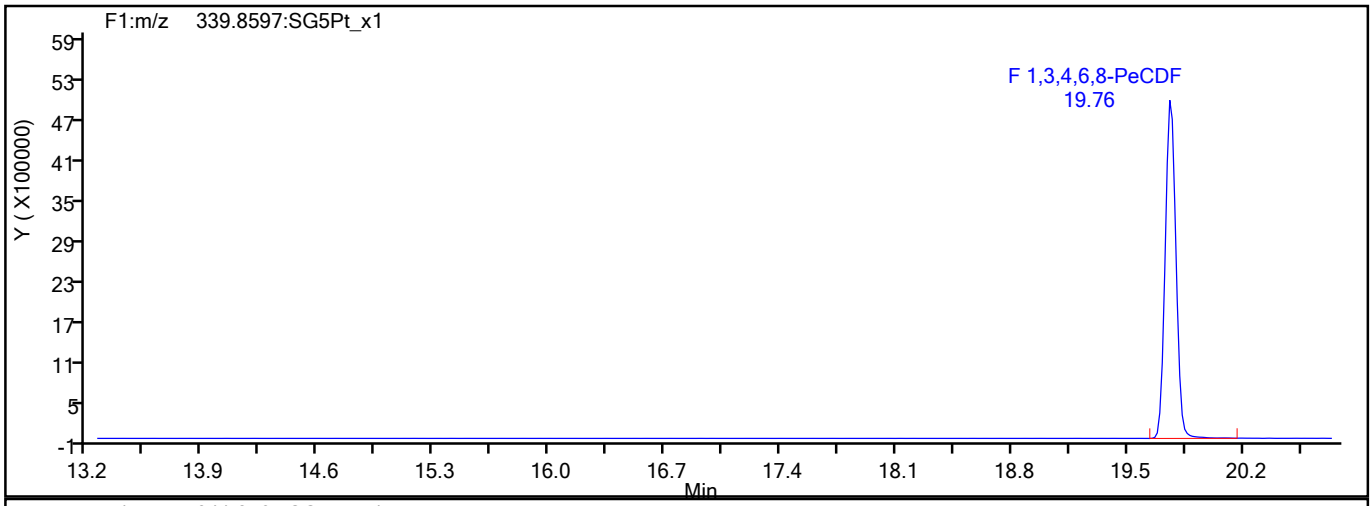

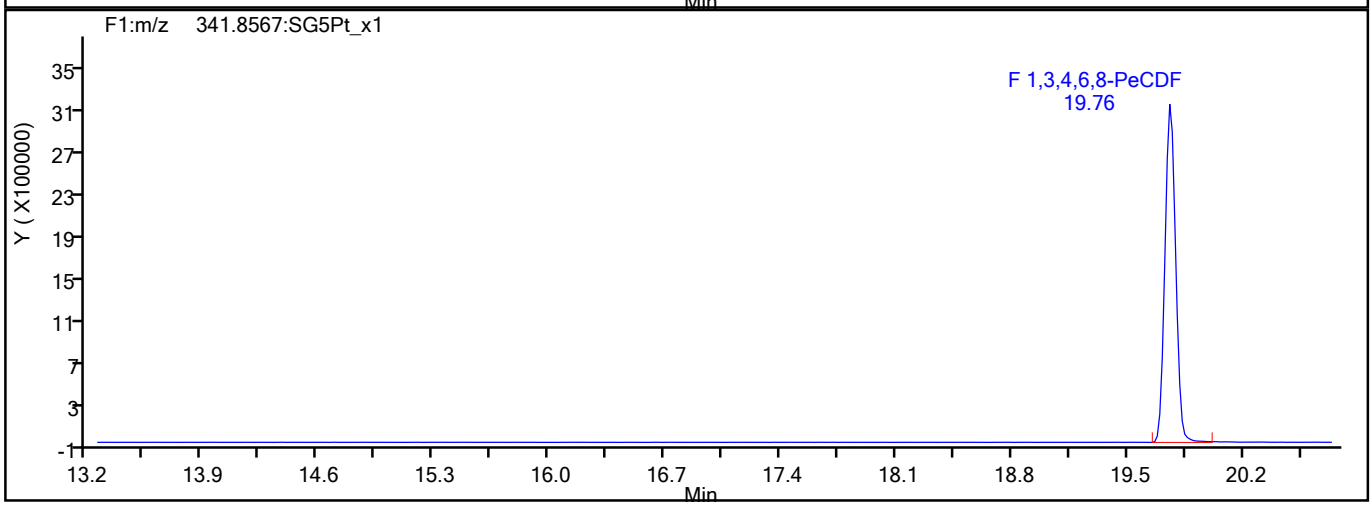

F1 PeCDFs Interference Mass

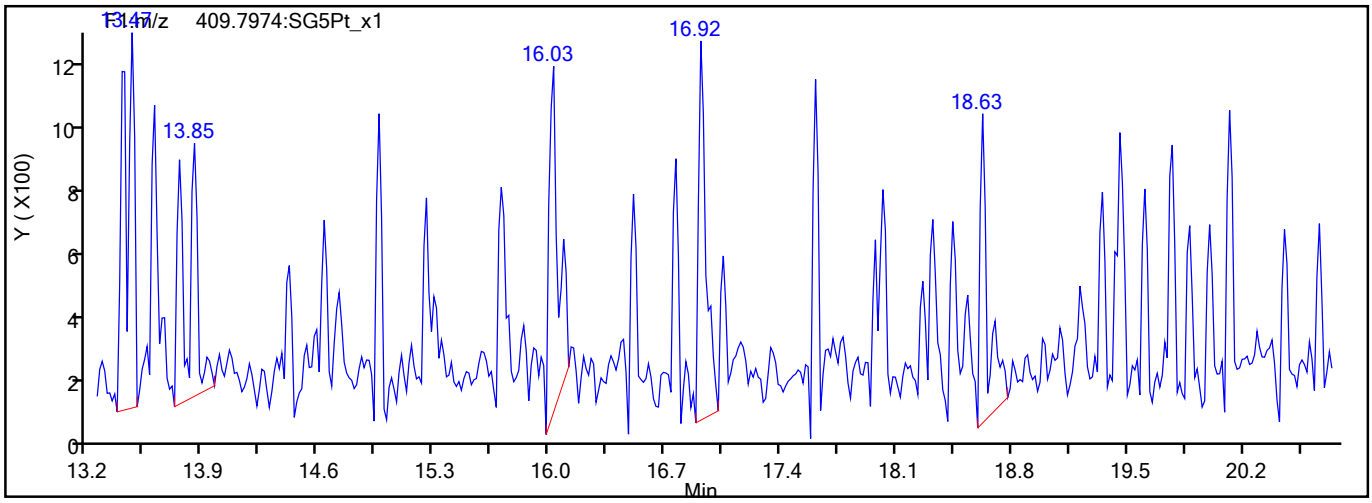

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Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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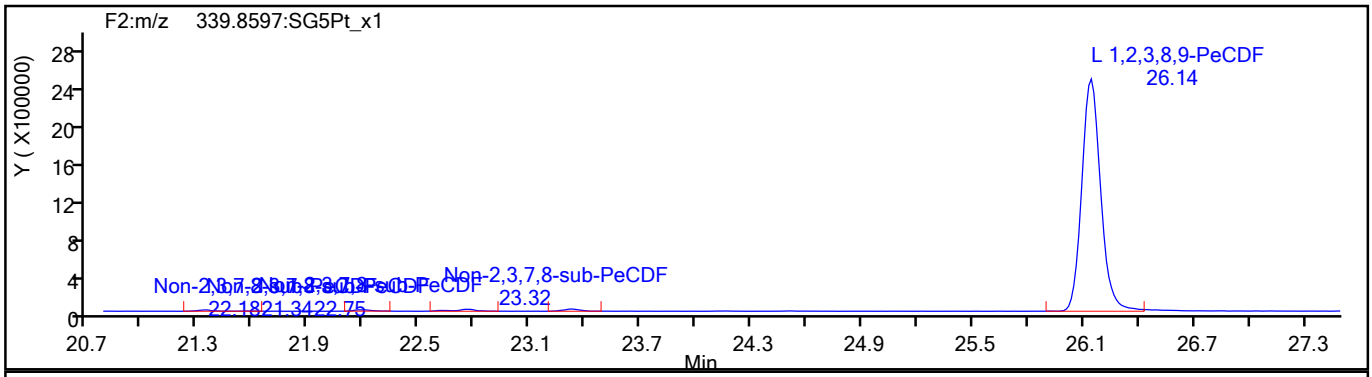

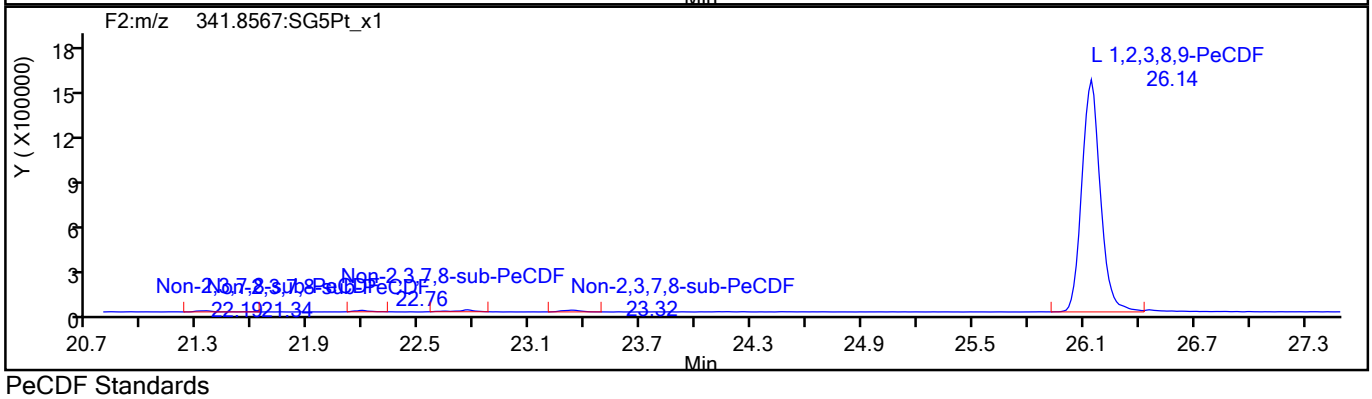

PeCDF Standards

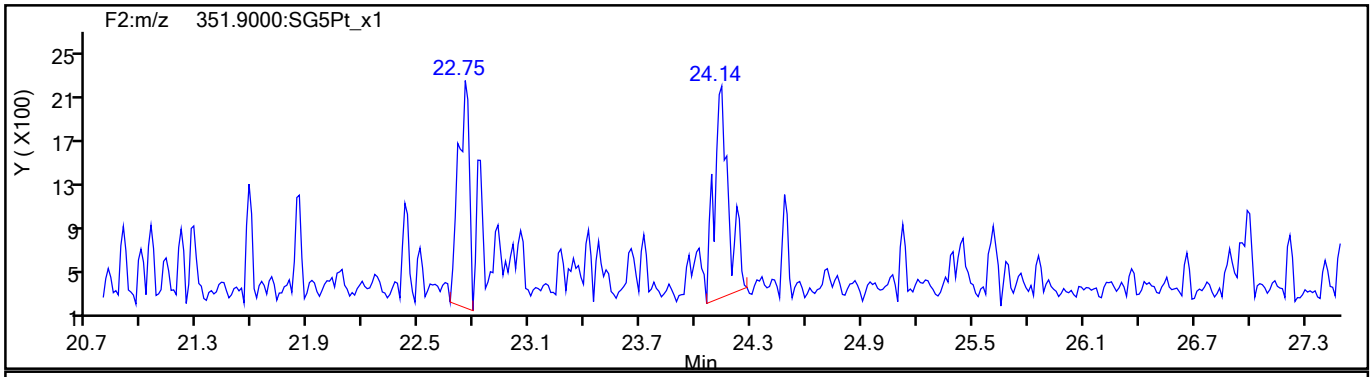

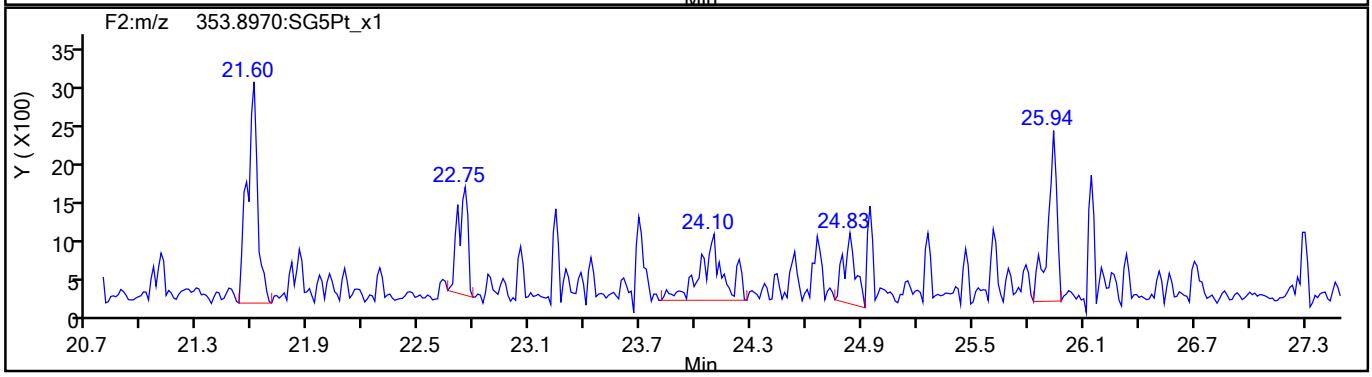

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Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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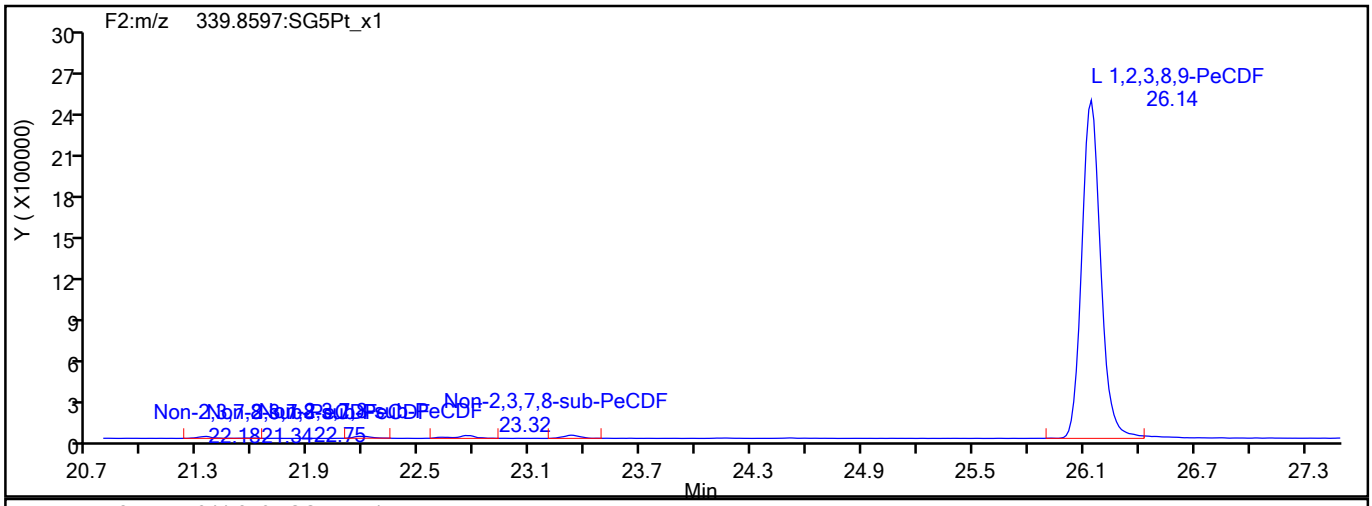

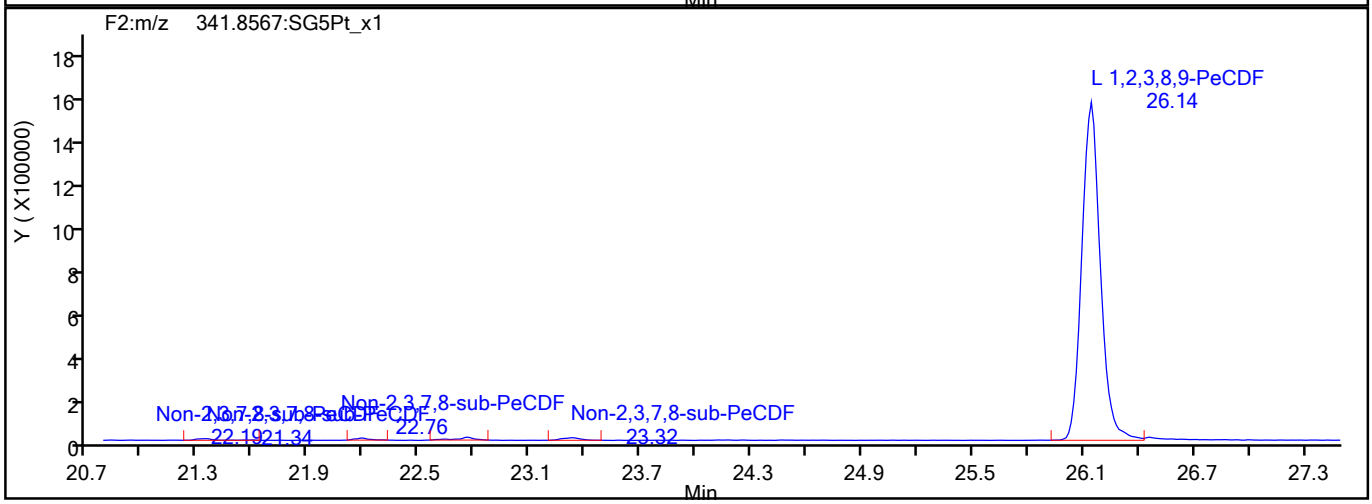

PeCDF Interference Mass

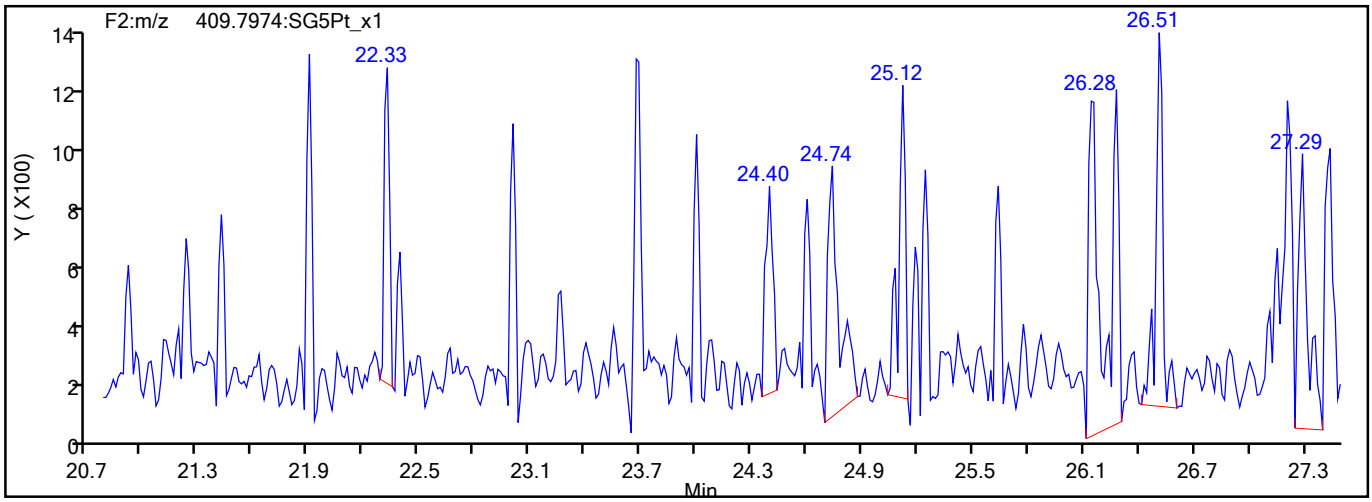

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Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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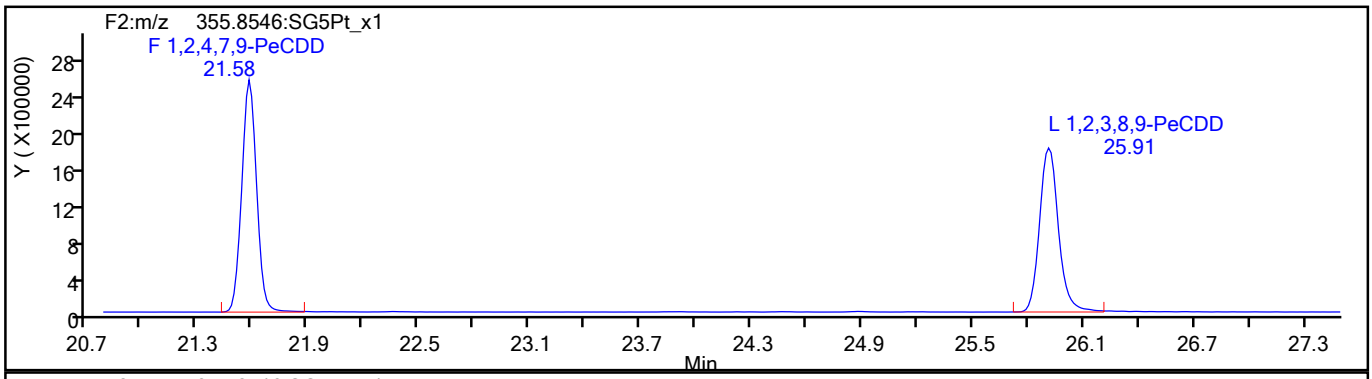

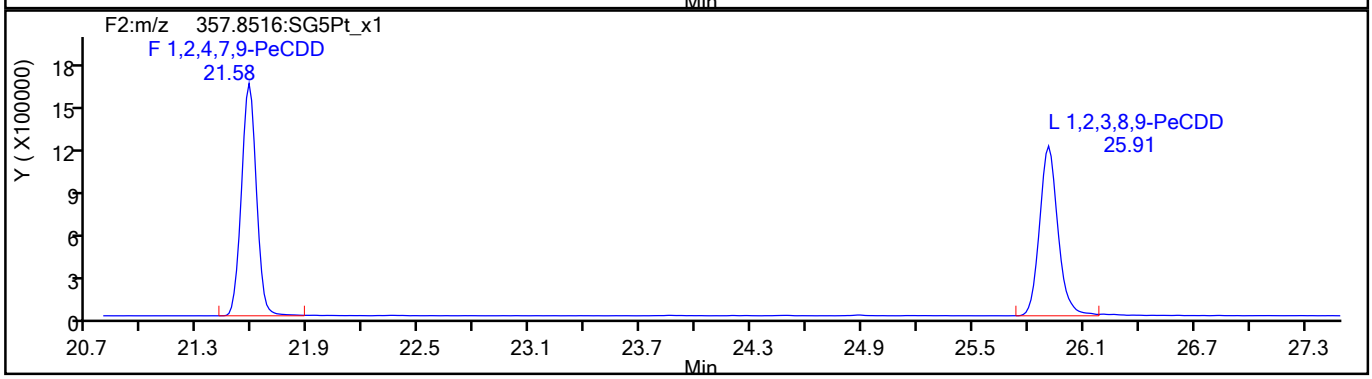

PeCDD Standards

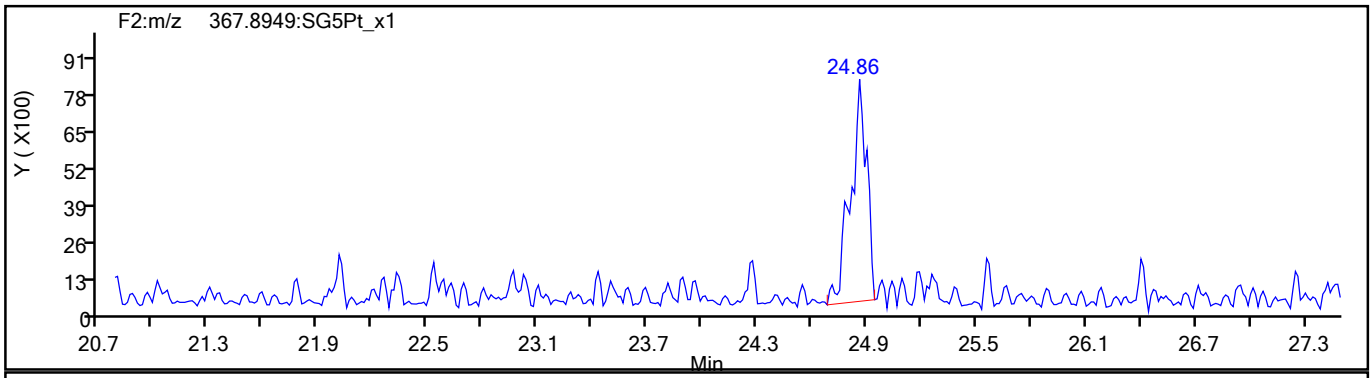

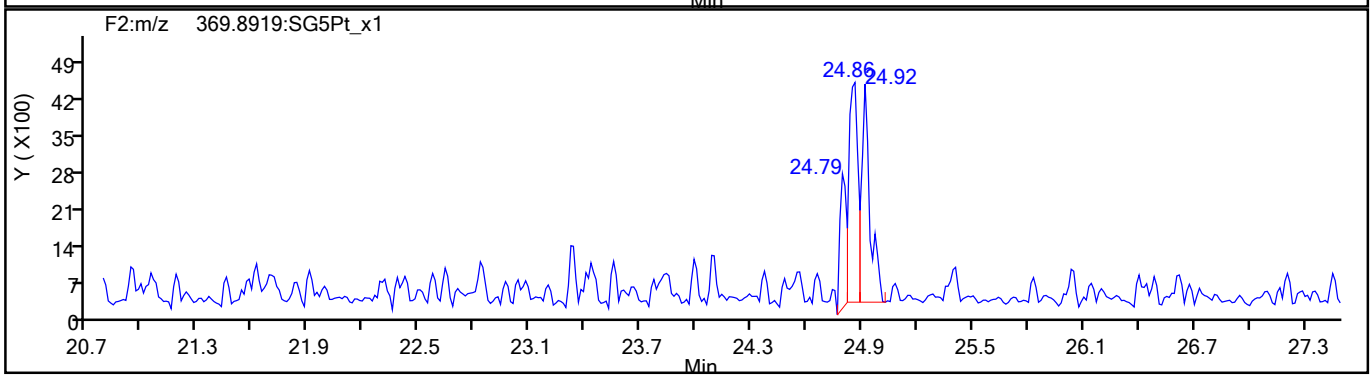

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

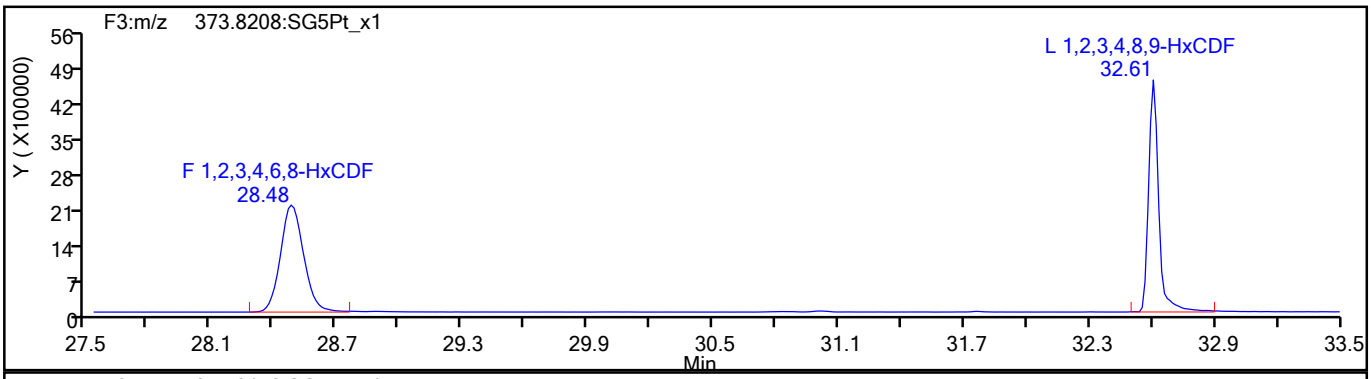

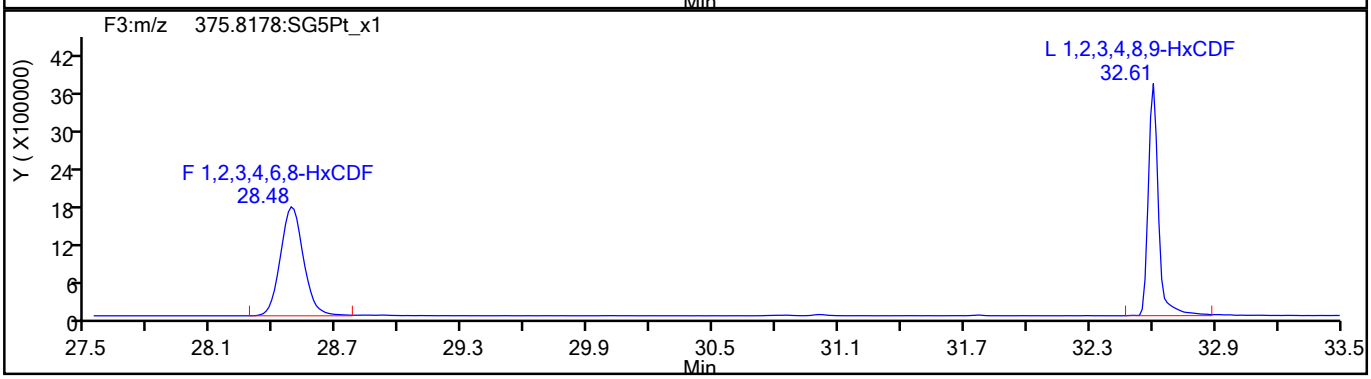

HxCDF Standards

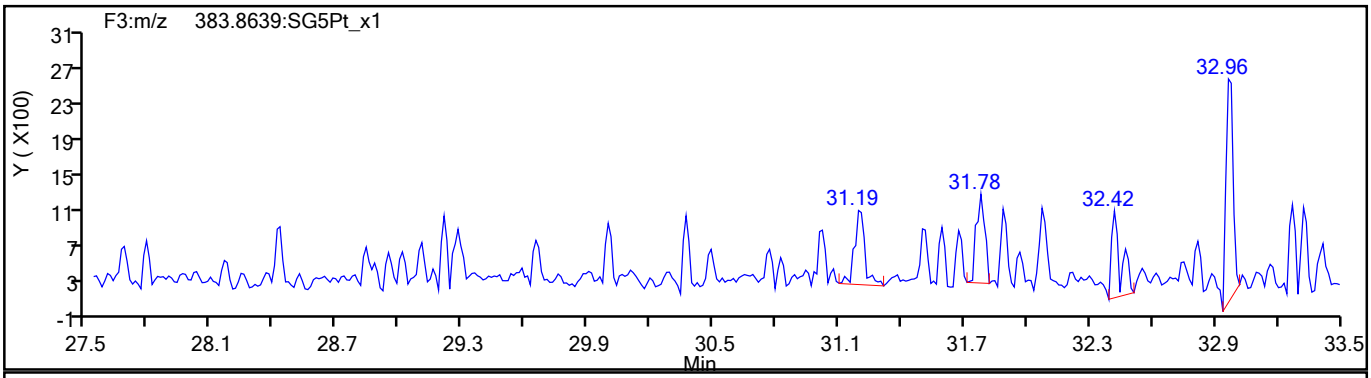

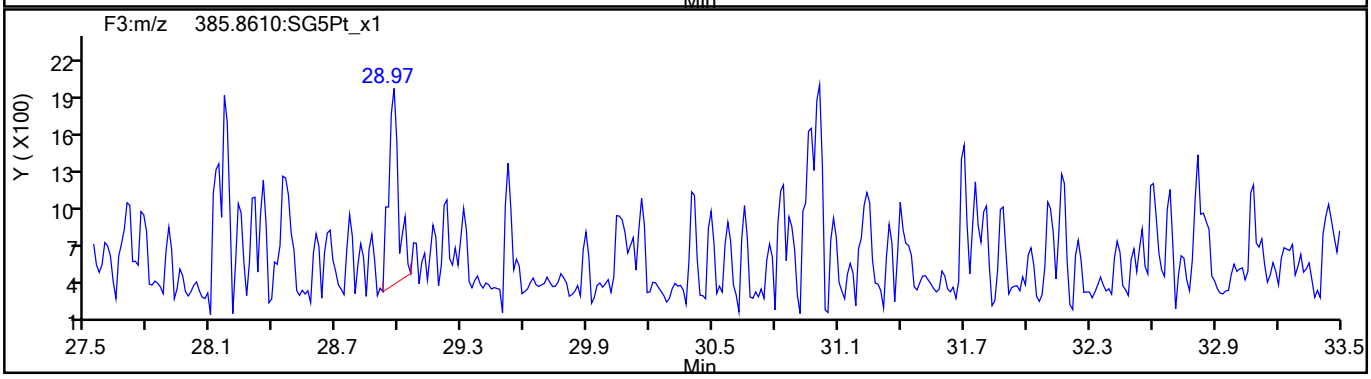

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Eurofins TestAmerica, Sacramento

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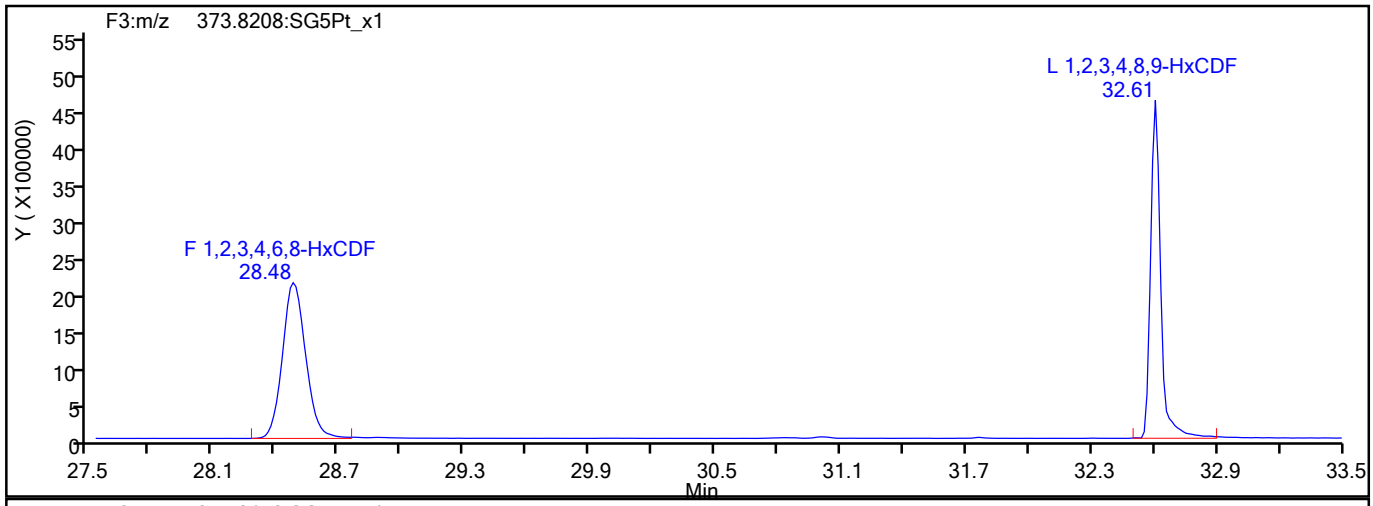

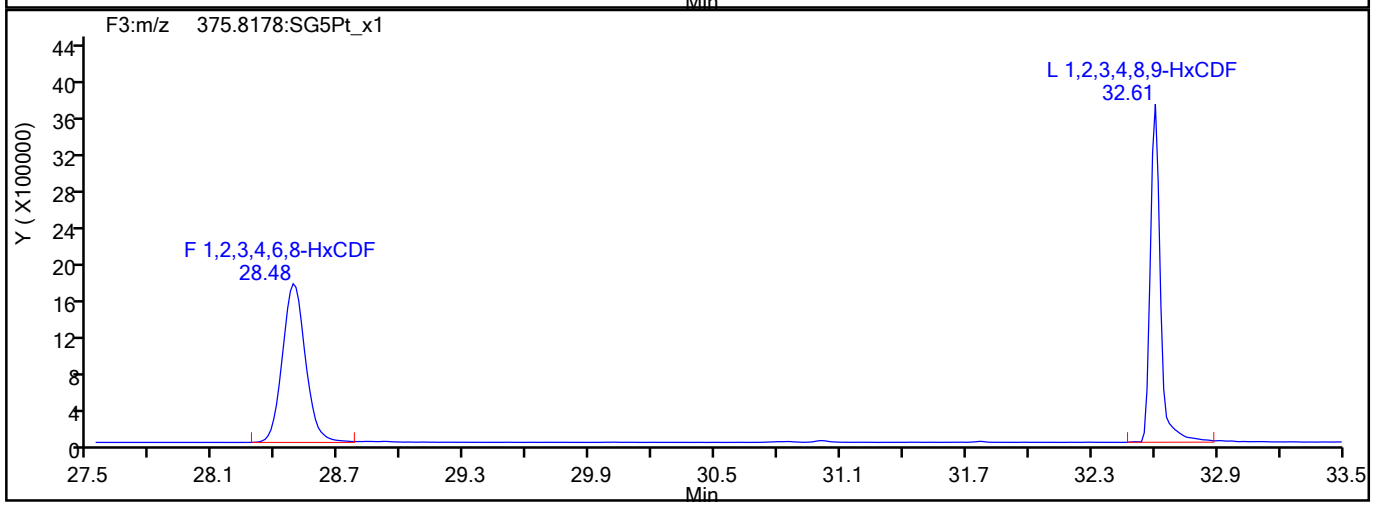

HxCDF Interference Mass

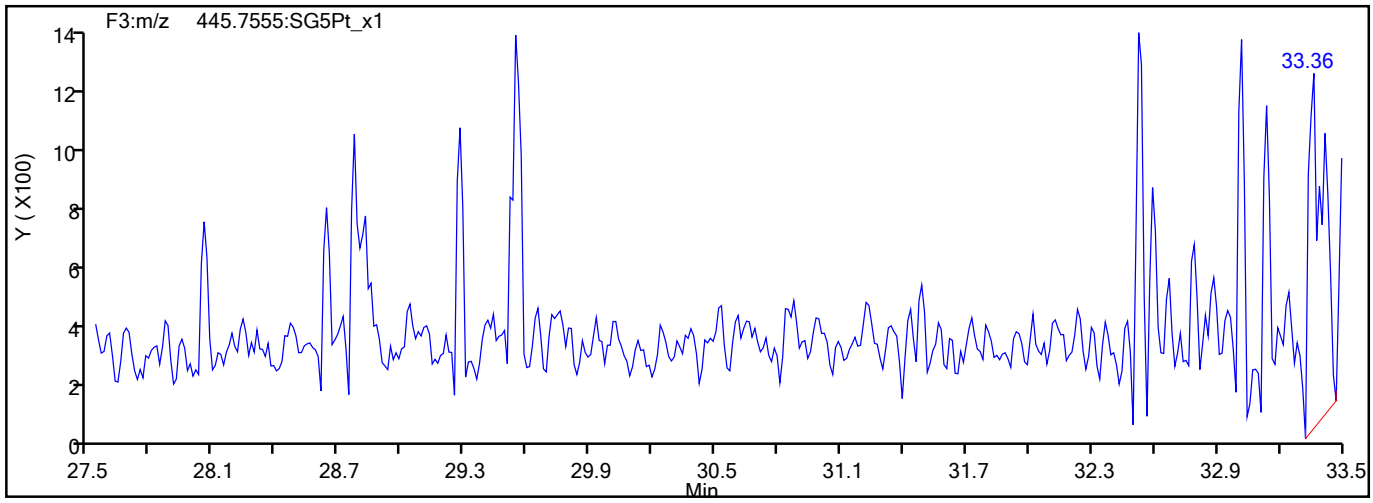

784650

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

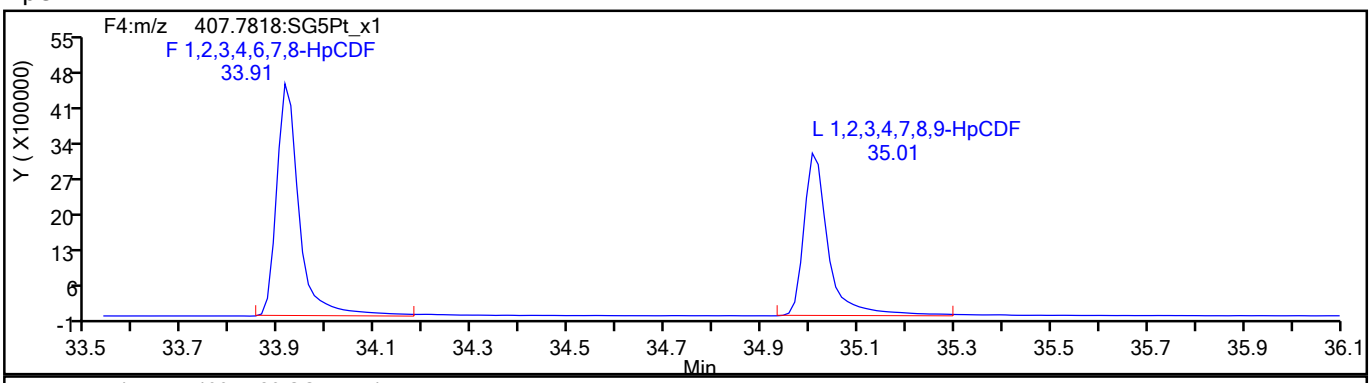

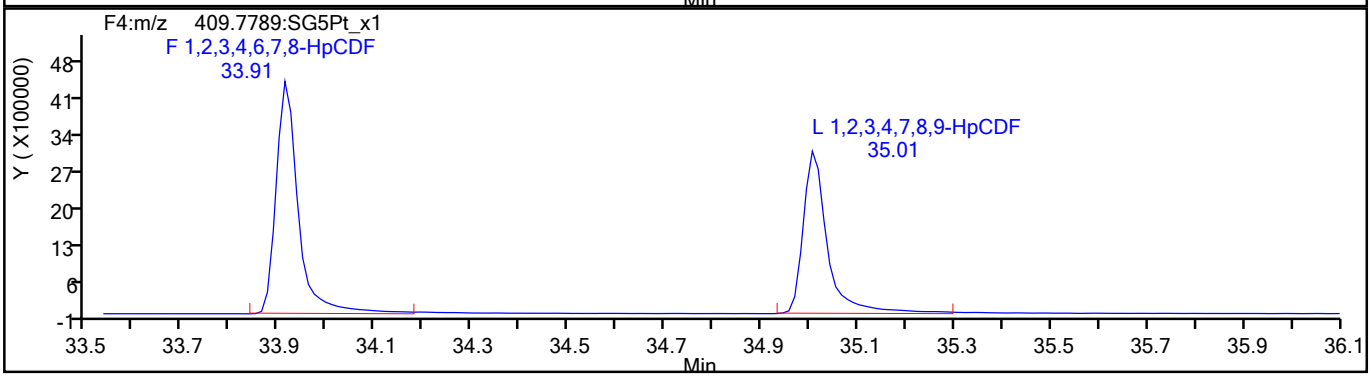

HpCDF Standards

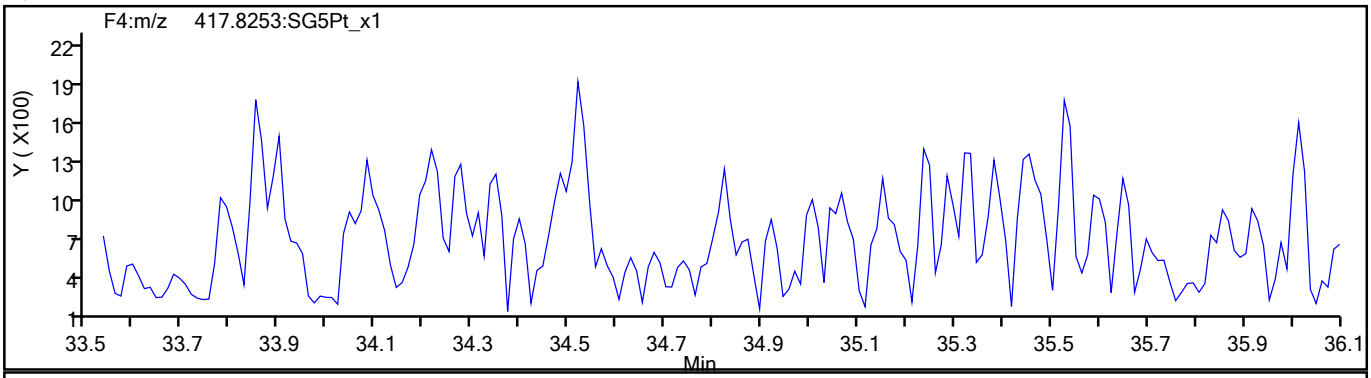

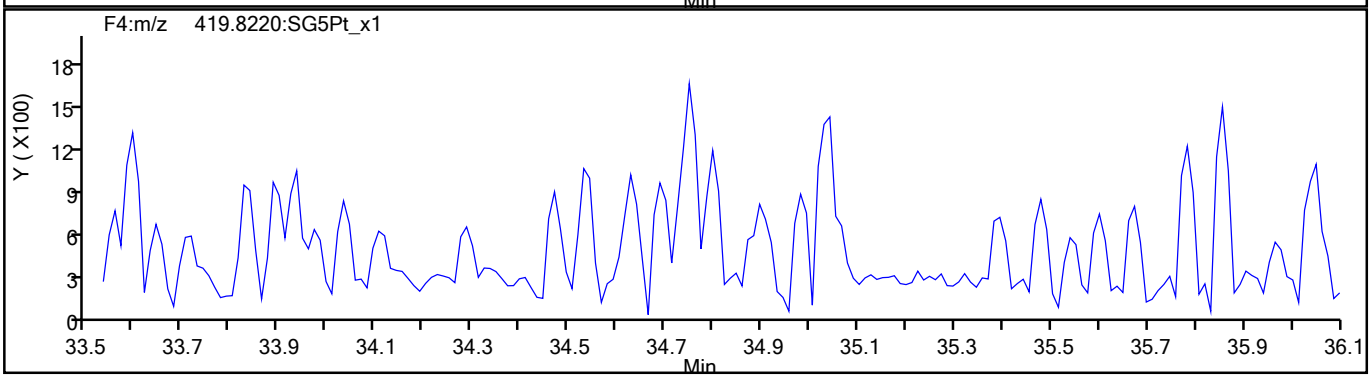

784651

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Eurofins TestAmerica, Sacramento

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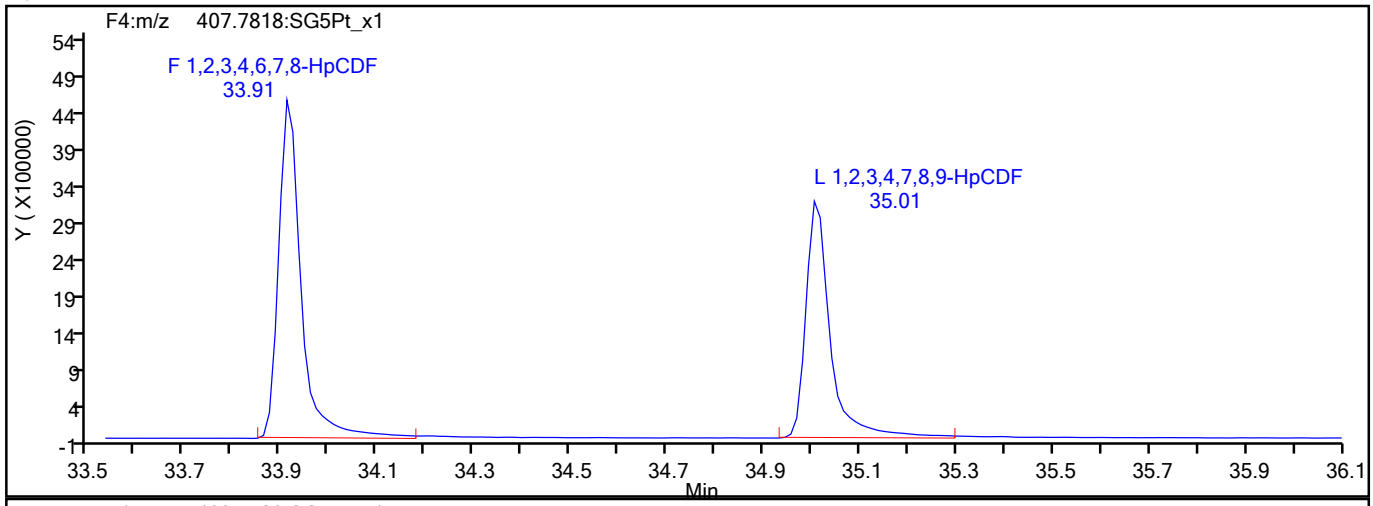

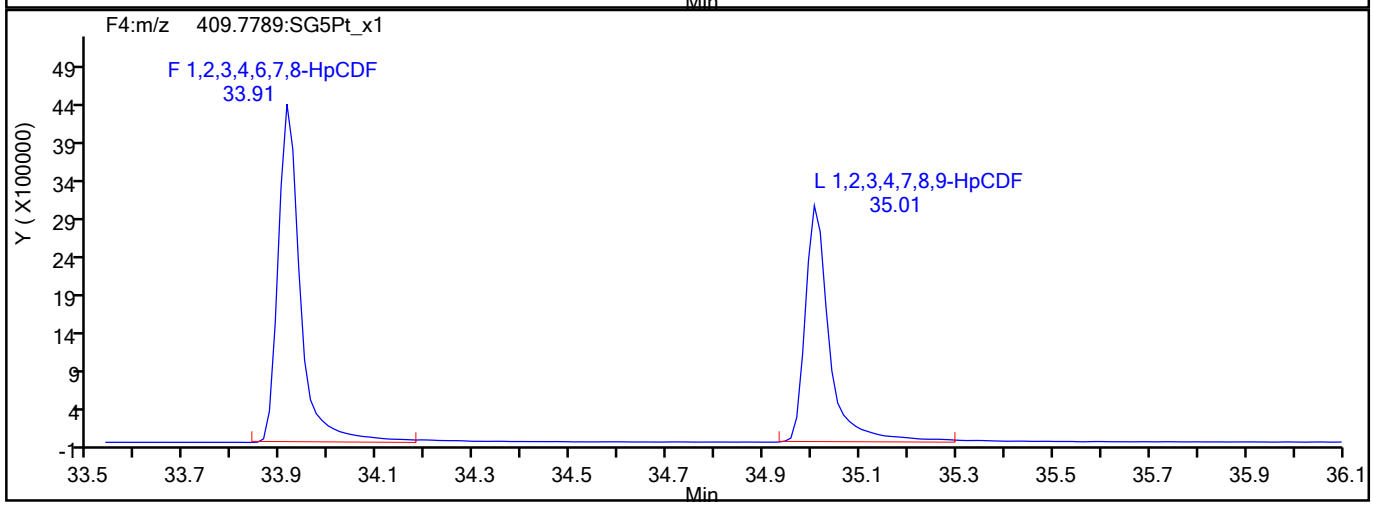

HpCDF Interference Mass

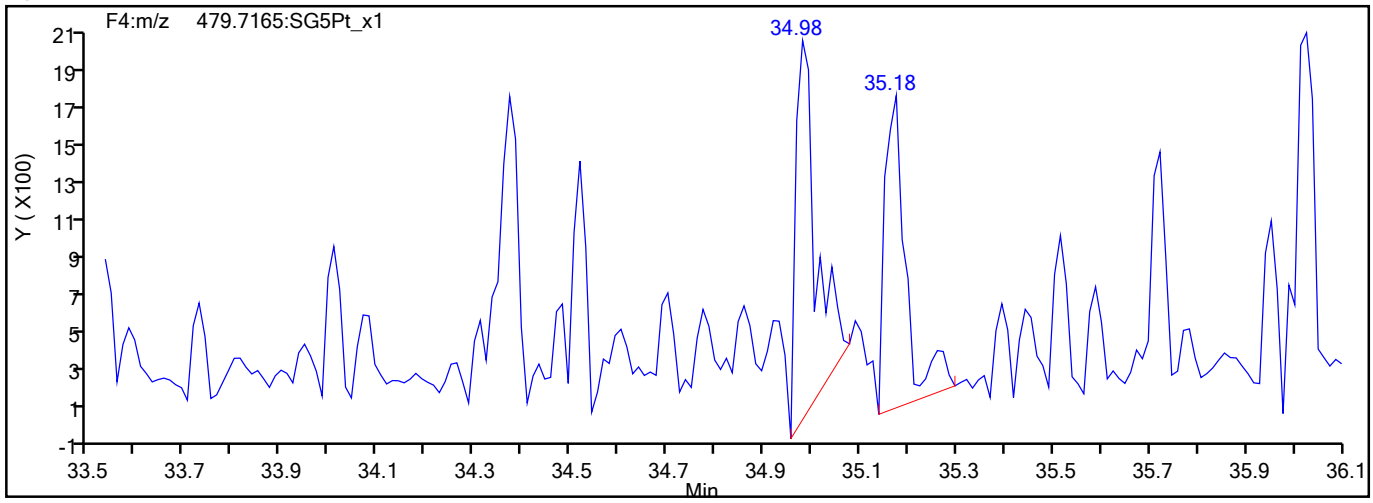

784652

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDD

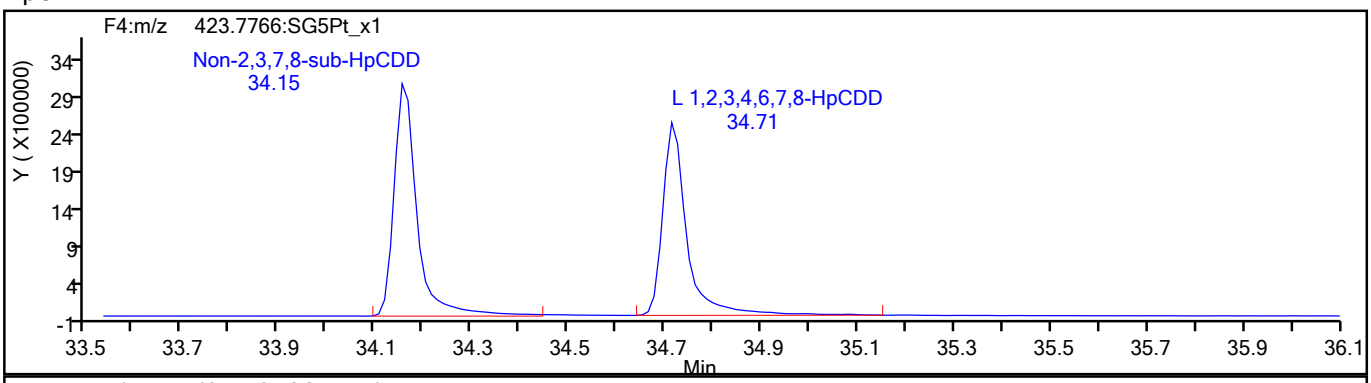

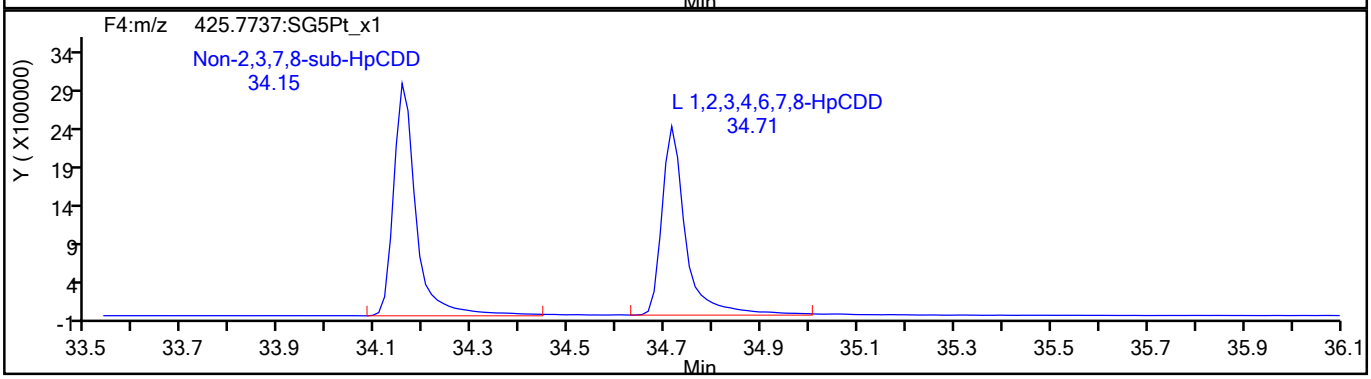

HpCDD Standards

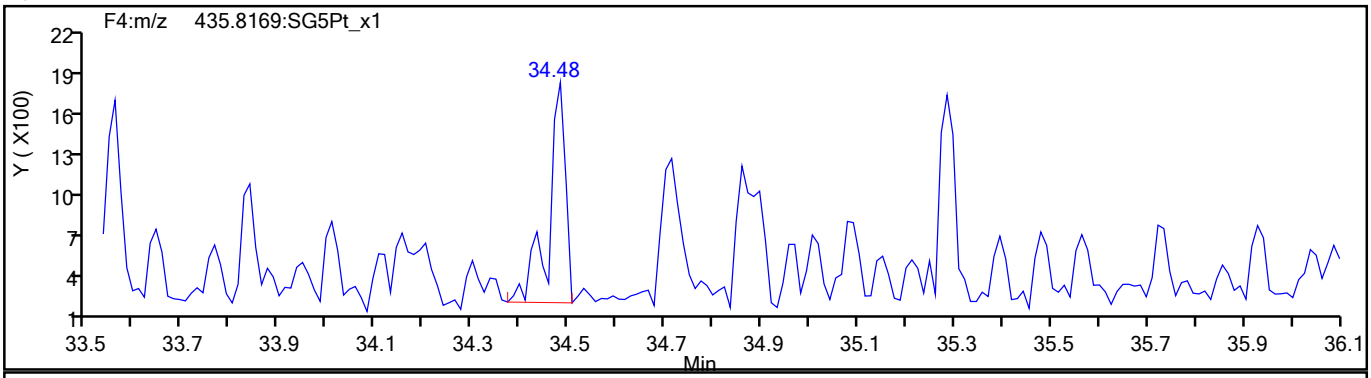

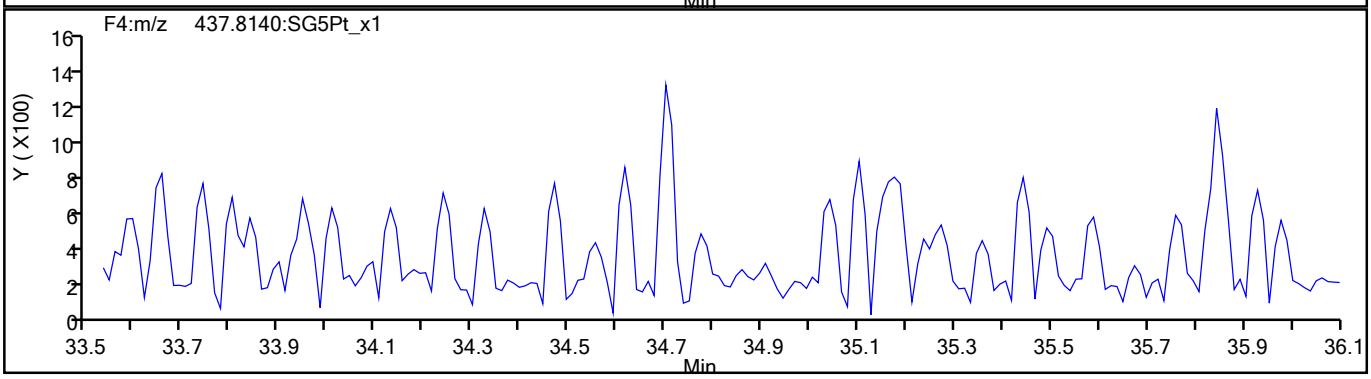

784653

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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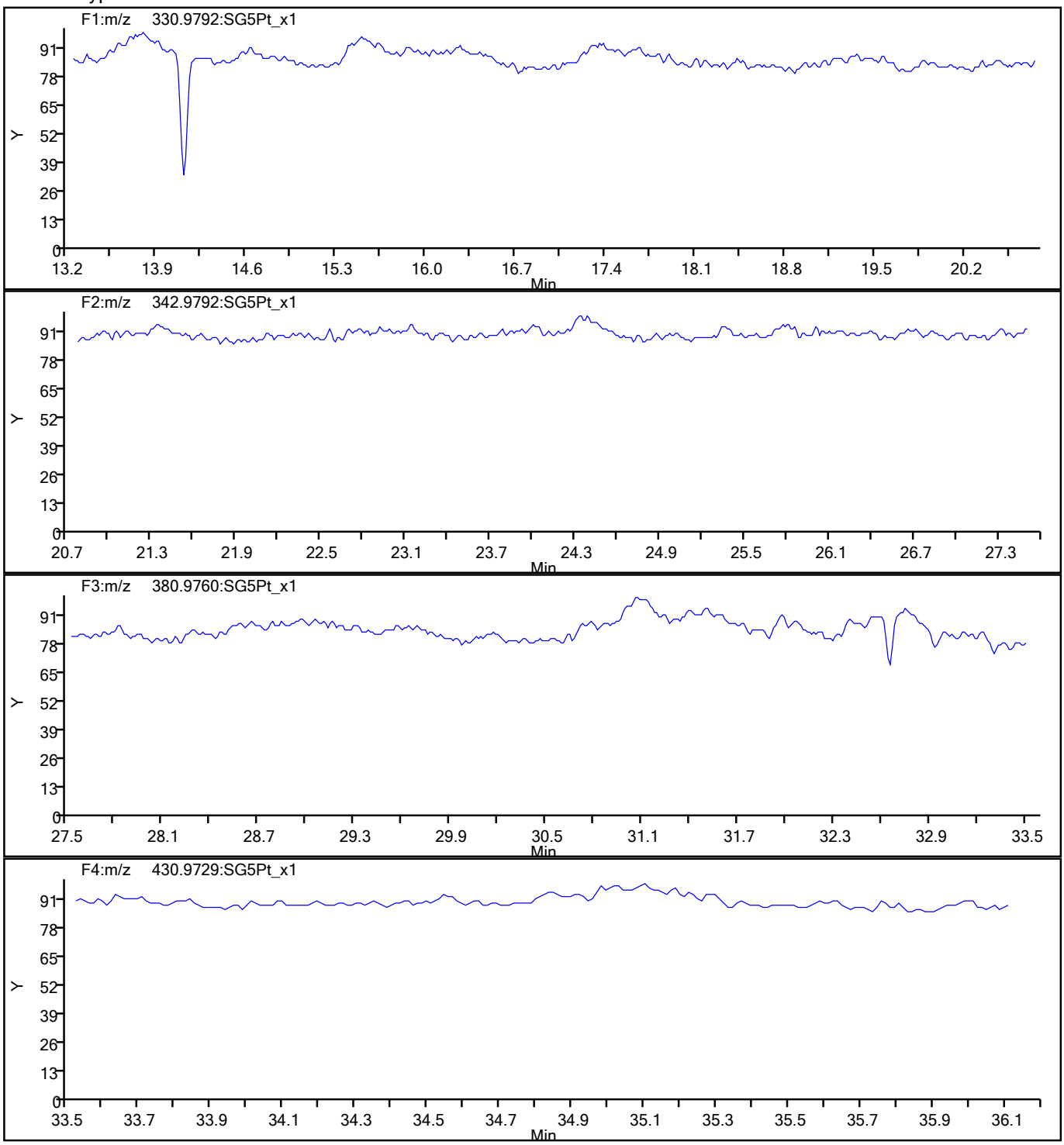

784654

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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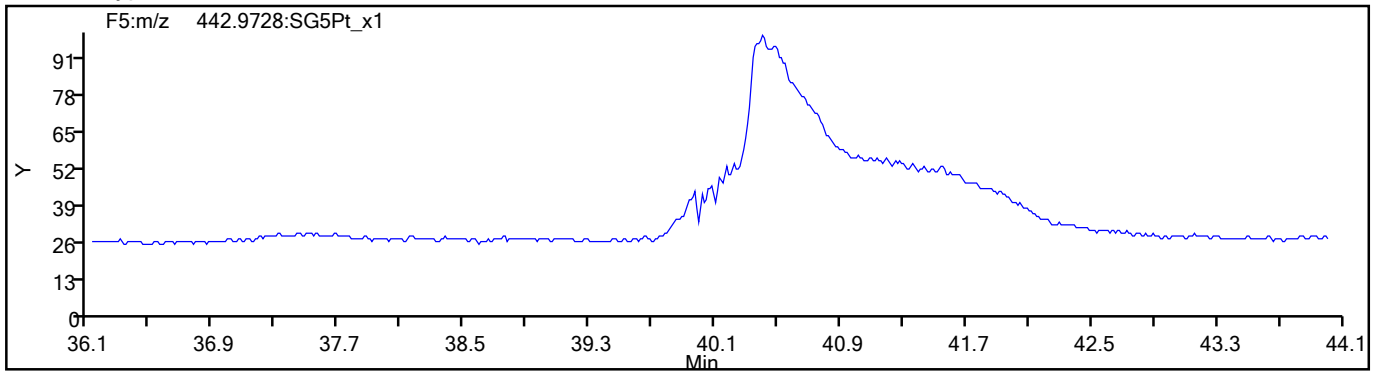

784655

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

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Client ID:
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Inject. Date: 18-Aug-2021 14:15:56 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081821 WDM HRDXNCP_00044
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:08 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:20:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.295	69420187	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.326	151843787	0.77	1.0239	85.4	85.4	0.4310	0.4310		
A Non-2,3,7,8-sub-TCDF	17.159	133612459	0.77	1.0239	75.2	75.2	0.4310	38.3		
S Total TCDF					160.6	160.6	0.4310	0.4310		
D 13C-2,3,7,8-TCDD	18.006	37918605	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.021	53423673	0.78	1.2541	44.9	44.9	0.2530	0.2530		
A Non-2,3,7,8-sub-TCDD	17.620	92642138	0.77	1.2541	77.9	77.9	0.2530	42.0		
S Total TCDD					122.9	122.9	0.2530	0.2530		
A F1 PeCDFs	20.229	63182212	1.57	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.445	50866521	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.696	79837324	1.59	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.410	52807043	1.22	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.816	39471925	1.25	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.742	46907850	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	34.823	37538389	1.06	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.283						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.544	29701953	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.892	84061745	0.77							
1,3,6,8-TCDD	15.799	52404413	0.79							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.188	55973679	0.78							
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427	2869844	0.78							
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	32.074	38128527	1.28							
1,2,3,4,8,9-HxCDF	32.393	46915349	1.22							
1,2,3,4,6,7,9-HpCDD	33.985	33701057	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:15:56 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 081821 WDM HRDXNCP_00044
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:08 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 12:20:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.295	17.295	0	1.000	30119156	7040410	10258	25645	686		
317.9389	17.295	17.295	0	1.000	39301031	9052899	8361	20902	1083	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.326	17.326	0	1.002	65844552	14068992	28643	71607	491		
305.8987	17.326	17.326	0	1.002	85999235	18144170	42380	105950	428	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	18.188	17.159	62	1.052	28576959	6224057	28643	71607	217		
305.8987	18.173	17.159	61	1.051	36892458	8010443	42380	105950	189	0.77(0.65-0.89)	
303.9016	19.125	17.159	118	1.106	29540653	6011607	28643	71607	210		
305.8987	19.125	17.159	118	1.106	38602389	7894370	42380	105950	186	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.006	18.006	0	1.000	16843563	3663772	4259	10647	860		
333.9339	18.006	18.006	0	1.000	21075042	4575106	3564	8910	1284	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.021	18.021	0	1.001	23429132	5046080	11037	27592	457		
321.8936	18.021	18.021	0	1.001	29994541	6481319	15105	37762	429	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.900	17.620	17	0.994	18501501	4422101	11037	27592	401		
321.8936	17.900	17.620	17	0.994	24188347	5763757	15105	37762	382	0.76(0.65-0.89)	
319.8965	19.125	17.620	90	1.062	21846080	4468756	11037	27592	405		
321.8936	19.125	17.620	90	1.062	28106210	5724522	15105	37762	379	0.78(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.412	20.229	-49	1.000	38615522	8205117	1956	4890	4195		
341.8567	19.412	20.229	-49	1.000	24566690	5135283	1400	3500	3668	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	22.340	23.445	-66	1.000	228968	28585	4870	12175	6		
341.8567	22.353	23.445	-65	1.000	192408	20551	3418	8545	6	1.19(1.32-1.78)	
339.8597	22.913	23.445	-32	1.000	154598	20633	4870	12175	4		
341.8567	22.913	23.445	-32	1.000	84101	12272	3418	8545	4	1.84(1.32-1.78)	
339.8597	25.612	23.445	130	1.000	30966531	3822830	4870	12175	785		
341.8567	25.612	23.445	130	1.000	19308844	2404223	3418	8545	703	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.181	23.696	-151	1.000	25265729	4092592	5766	14415	710		
357.8516	21.181	23.696	-151	1.000	15918876	2558015	3809	9522	672	1.59(1.32-1.78)	
355.8546	25.394	23.696	102	1.000	23797384	3085081	5766	14415	535		
357.8516	25.394	23.696	102	1.000	14855335	1944381	3809	9522	510	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.894	30.410	-151	1.000	28980246	3431886	9045	22612	379		
375.8178	27.894	30.410	-151	1.000	23826797	2865744	7126	17815	402	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.465	30.816	-81	1.000	21961037	2463781	13897	34742	177		
391.8127	29.465	30.816	-81	1.000	17510888	1966381	7540	18850	261	1.25(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.742	33.742	0	1.000	23982917	7200292	41768	104420	172		
409.7789	33.742	33.742	0	1.000	22924933	7020417	31948	79870	220	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.823	34.823	0	1.000	19292477	4755591	41768	104420	114		
409.7789	34.823	34.823	0	1.000	18245912	4549449	31948	79870	142	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.283						41768	104420			
409.7789	34.283						31948	79870			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.544	34.544	0	1.000	15149420	4052775	21767	54417	186		
425.7737	34.544	34.544	0	1.000	14552533	3832849	21109	52772	182	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						21767	54417			
425.7737	33.504						21109	52772			
1,3,6,8-TCDF											
303.9016	14.892	14.892	0		36536834	10411762	28643	71607	364		
305.8987	14.876	14.892	-1		47524911	13356055	42380	105950	315	0.77(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.799	15.799	0		23209186	6396511	11037	27592	580		
321.8936	15.799	15.799	0		29195227	8036642	15105	37762	532	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.537						28643	71607			
305.8987	17.537						42380	105950			
1,2,3,7-TCDD											
319.8965	18.188	18.188	0		24514458	5166590	11037	27592	468		
321.8936	18.188	18.188	0		31459221	6563099	15105	37762	434	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,9-TCDF											
303.9016	18.414						28643	71607			
305.8987	18.414						42380	105950			
1,2,3,9-TCDD											
319.8965	18.414						11037	27592			
321.8936	18.414						15105	37762			
1,2,8,9-TCDD											
319.8965	19.382						11037	27592			
1,2,8,9-TCDF											
303.9016	19.427	19.427	0		1254031	169921	28643	71607	6		
305.8987	19.427	19.427	0		1615813	214042	42380	105950	5	0.78(0.65-0.89)	
1,3,4,6,8-PeCDF											
339.8597	19.669						1956	4890			
341.8567	19.669						1400	3500			
1,2,4,7,9-PeCDD											
355.8546	21.480						5766	14415			
357.8516	21.480						3809	9522			
1,2,3,8,9-PeCDD											
355.8546	25.790						5766	14415			
357.8516	25.790						3809	9522			
1,2,3,8,9-PeCDF											
339.8597	26.021						4870	12175			
341.8567	26.021						3418	8545			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						9045	22612			
375.8178	28.333						7126	17815			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						13897	34742			
391.8127	29.890						7540	18850			
1,2,3,4,6,7-HxCDD											
389.8157	32.074	32.074	0		21375834	5308020	13897	34742	382		
391.8127	32.074	32.074	0		16752693	4221204	7540	18850	560	1.28(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.393	32.393	0		25737556	6730514	9045	22612	744		
375.8178	32.393	32.393	0		21177793	5495534	7126	17815	771	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.985	33.985	0		17203699	5138812	21767	54417	236		
425.7737	33.985	33.985	0		16497358	4928736	21109	52772	233	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.159

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	69420187	16093309

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	69420187	16093309

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.188	28576959	6224057	36892458	8010443	36.8	0.77	
19.125	29540653	6011607	38602389	7894370	38.3	0.77	
Signal Totals:							
	58117612	12235664	75494847	15904813			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	133612459	28140477				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 75.190 = (133612459 * 40.000) / (69420187 * 1.024)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.620

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	37918605	8238878

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	37918605	8238878

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.900	18501501	4422101	24188347	5763757	35.9	0.76	
19.125	21846080	4468756	28106210	5724522	42.0	0.78	
Signal Totals:							
	40347581	8890857	52294557	11488279			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	92642138	20379136				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 77.925 = (92642138 * 40.000) / (37918605 * 1.254)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

F1 PeCDFs, RT: 20.229

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.412	38615522	8205117	24566690	5135283		1.57	
Signal Totals:							
	38615522	8205117	24566690	5135283			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63182212	13340400				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (63182212 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.445

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.340	228968	28585	192408	20551		1.19	R
22.913	154598	20633	84101	12272		1.84	R
25.612	30966531	3822830	19308844	2404223		1.60	
Signal Totals:							
	31350097	3872048	19585353	2437046			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	50935450	6309094				1.60	RQ
	50866521	6305372					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (50935450 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (50866521 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.181	25265729	4092592	15918876	2558015		1.59	
25.394	23797384	3085081	14855335	1944381		1.60	
Signal Totals:							
	49063113	7177673	30774211	4502396			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	79837324	11680069				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (79837324 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.410

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.894	28980246	3431886	23826797	2865744		1.22	
Signal Totals:							
	28980246	3431886	23826797	2865744			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	52807043	6297630				1.22	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (52807043 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:15:56 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 30.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.465	21961037	2463781	17510888	1966381		1.25	
Signal Totals:							
	21961037	2463781	17510888	1966381			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	39471925	4430162				1.25	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (39471925 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

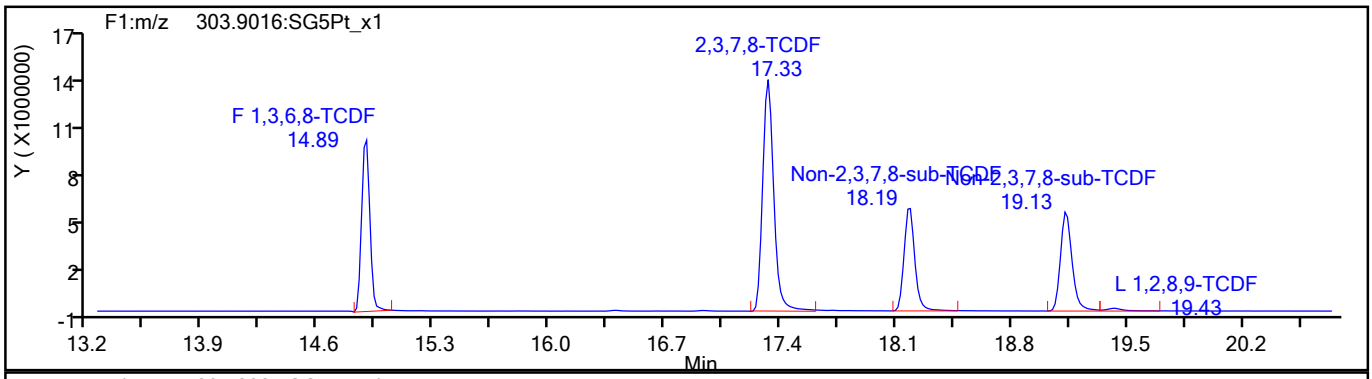

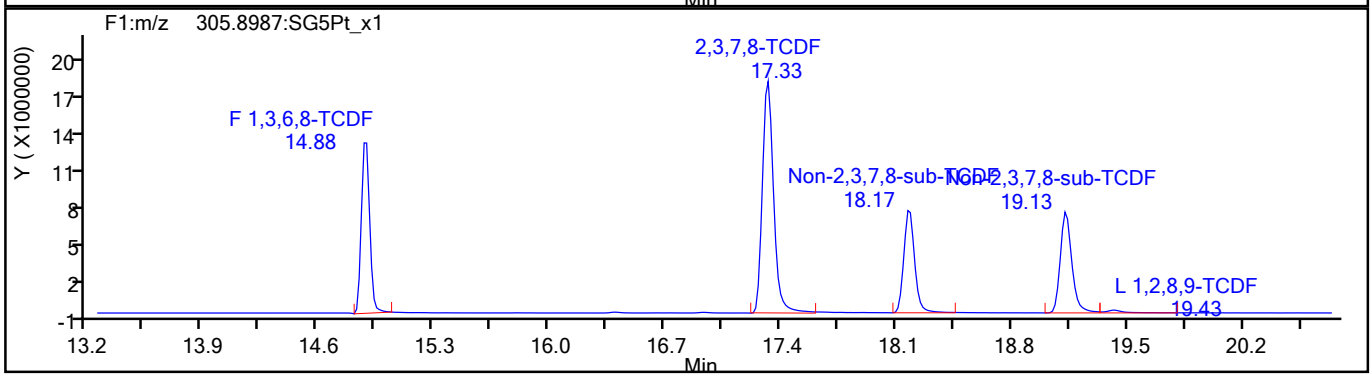

TCDF Standards

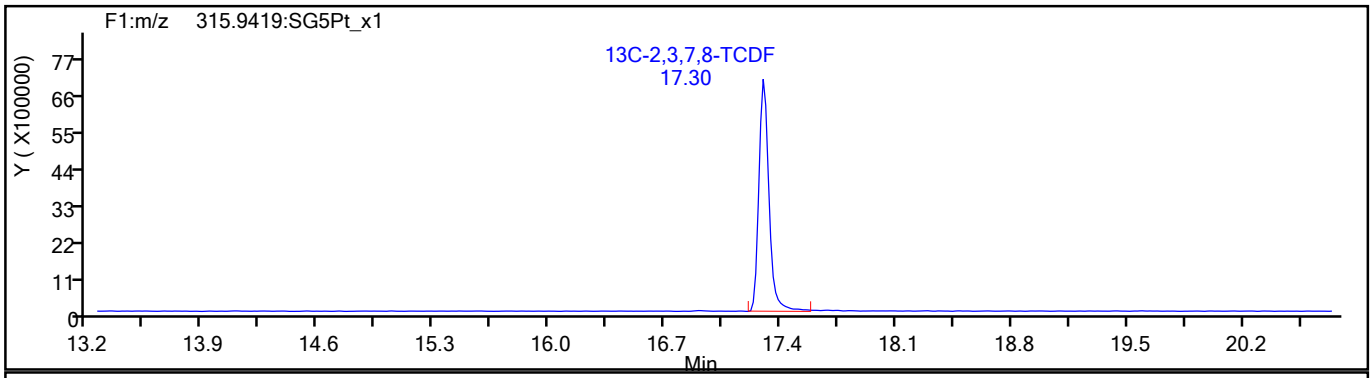

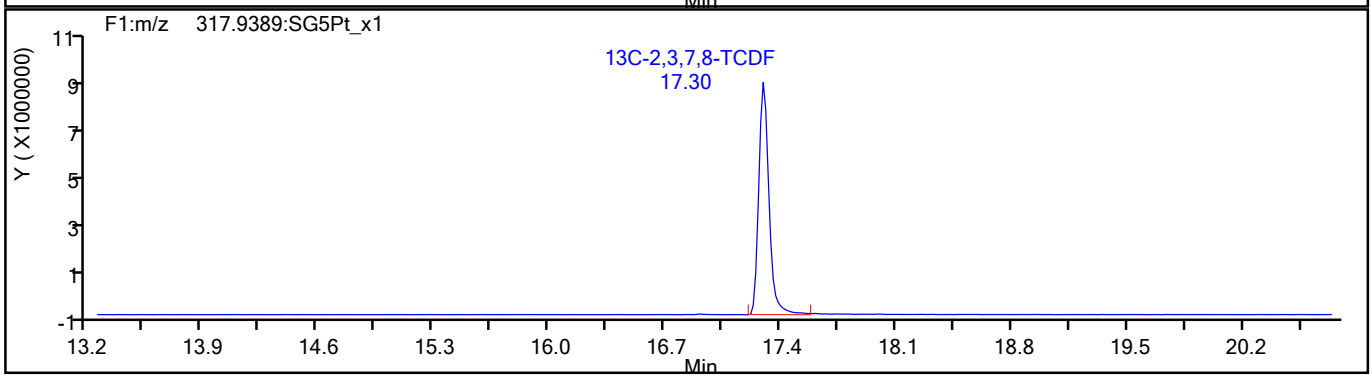

784668

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

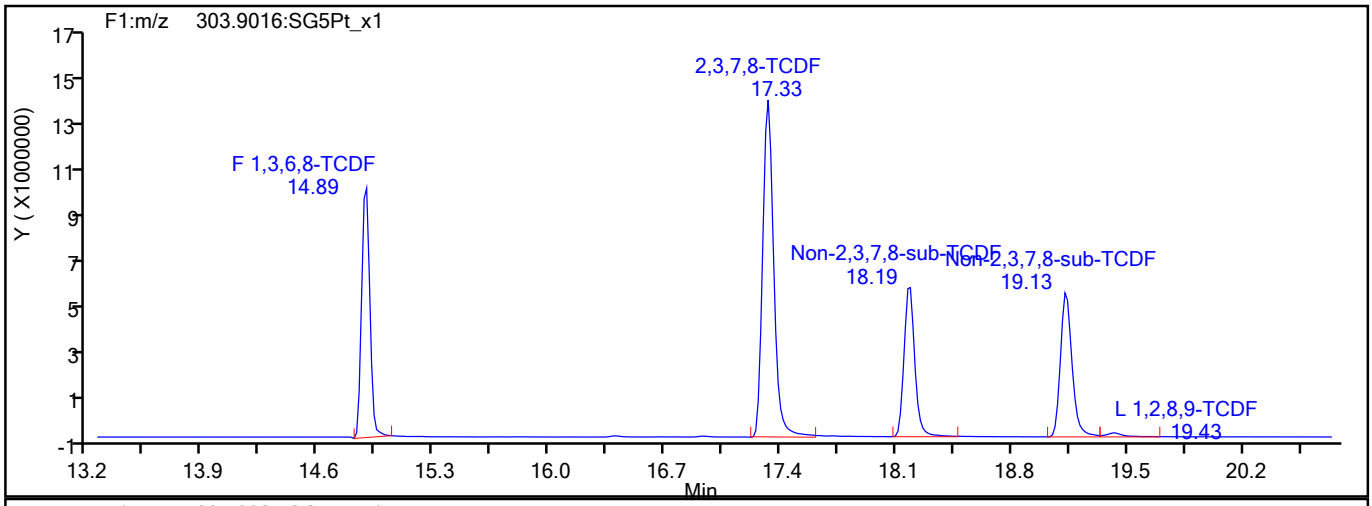

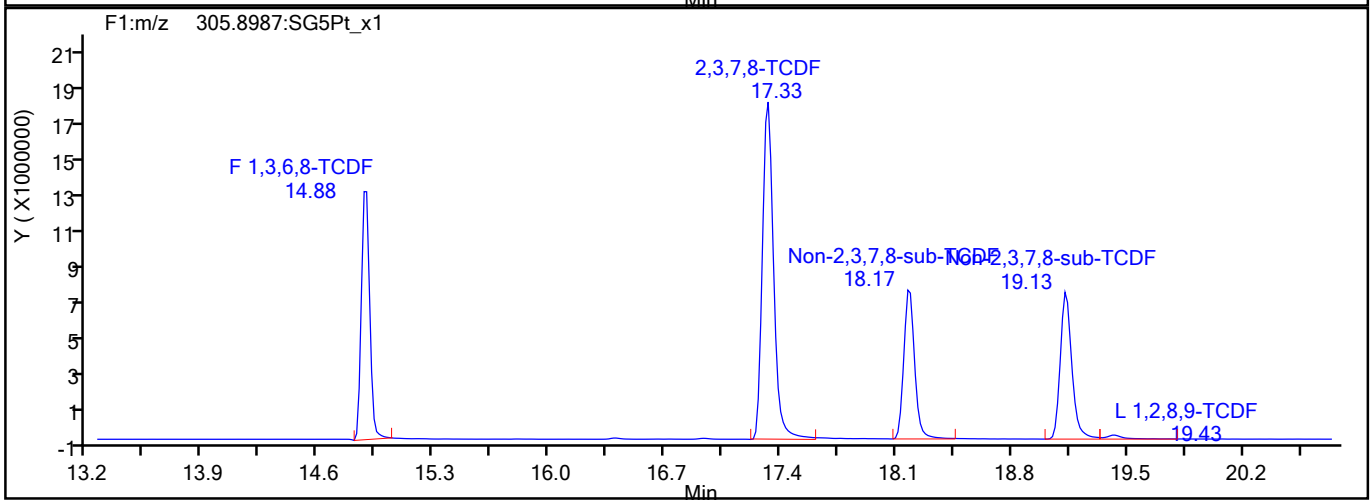

TCDF Interference Mass

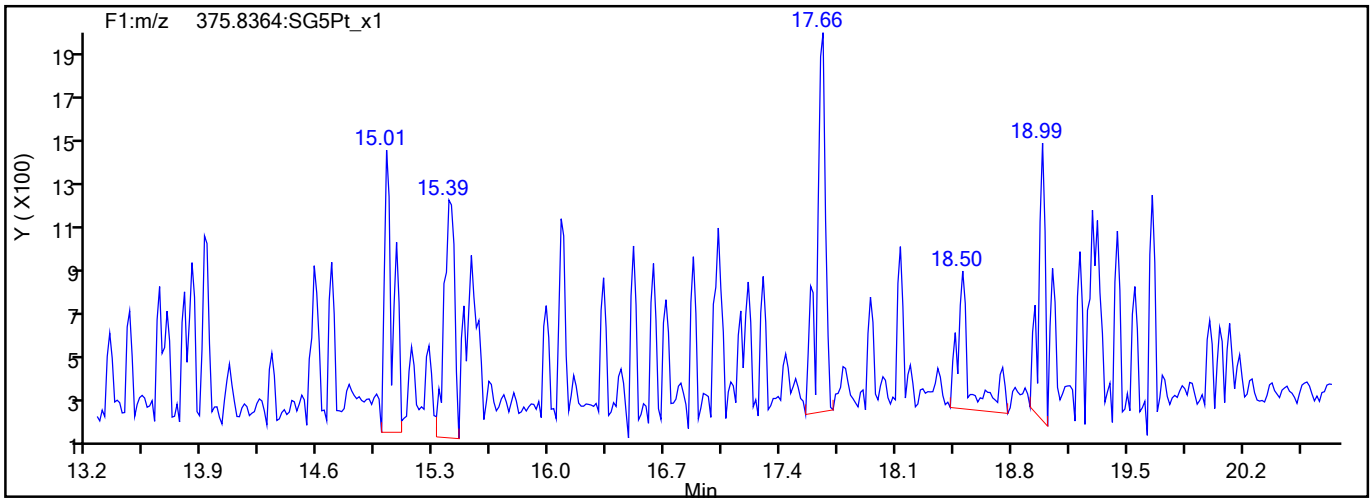

784669

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

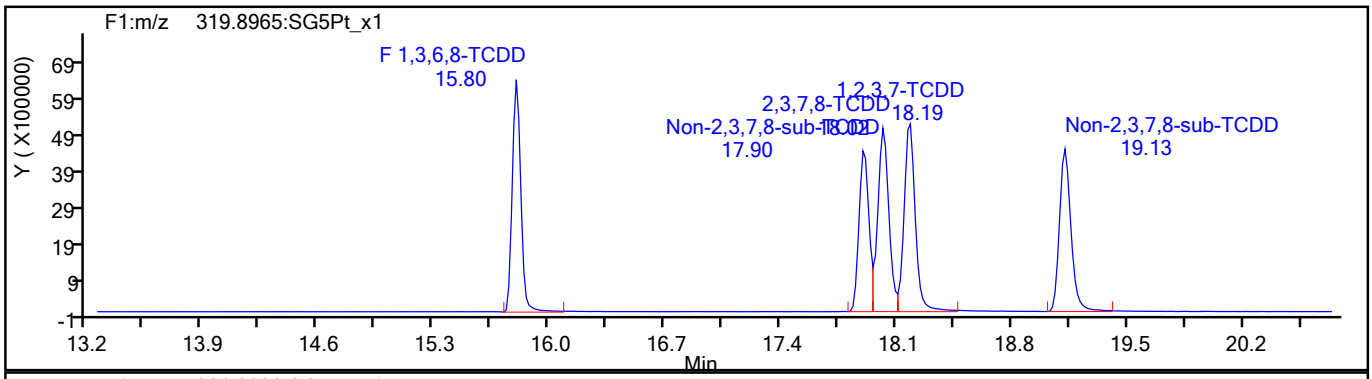

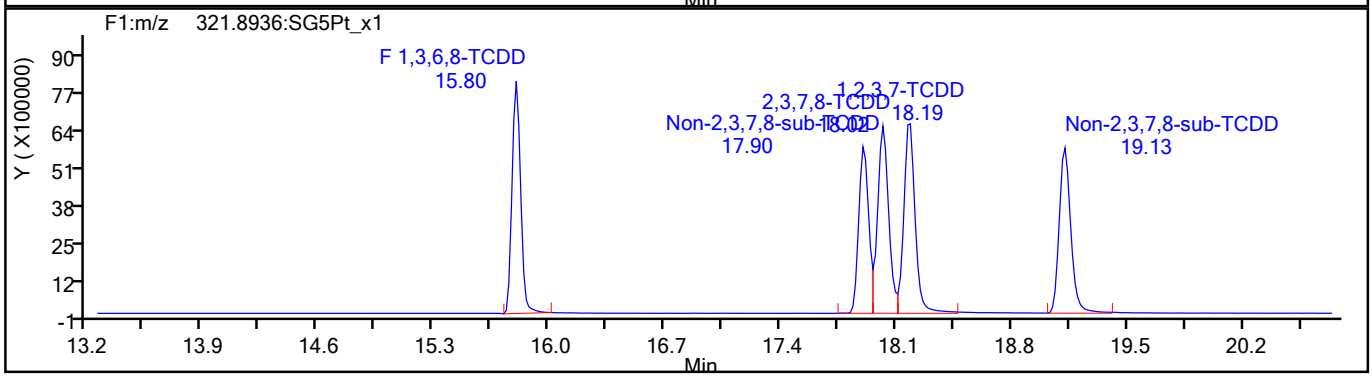

TCDD Standards

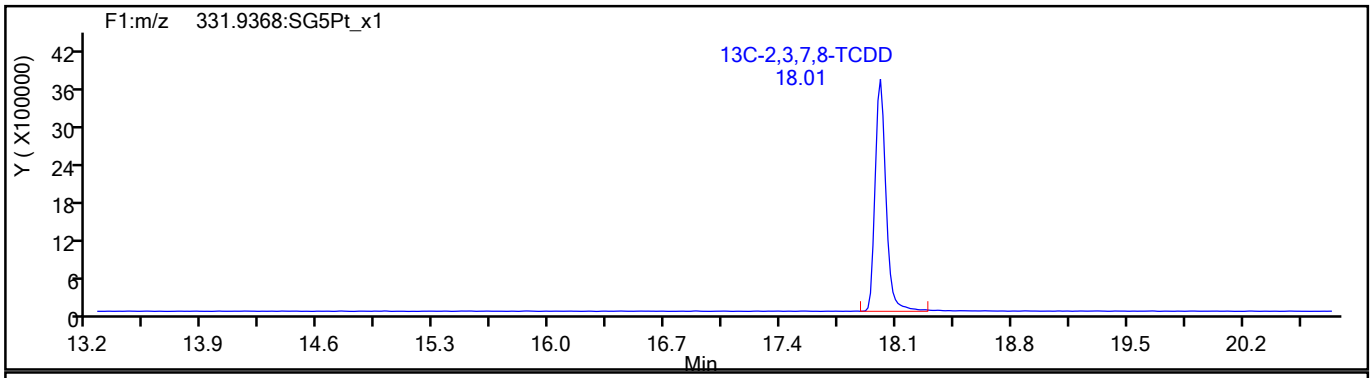

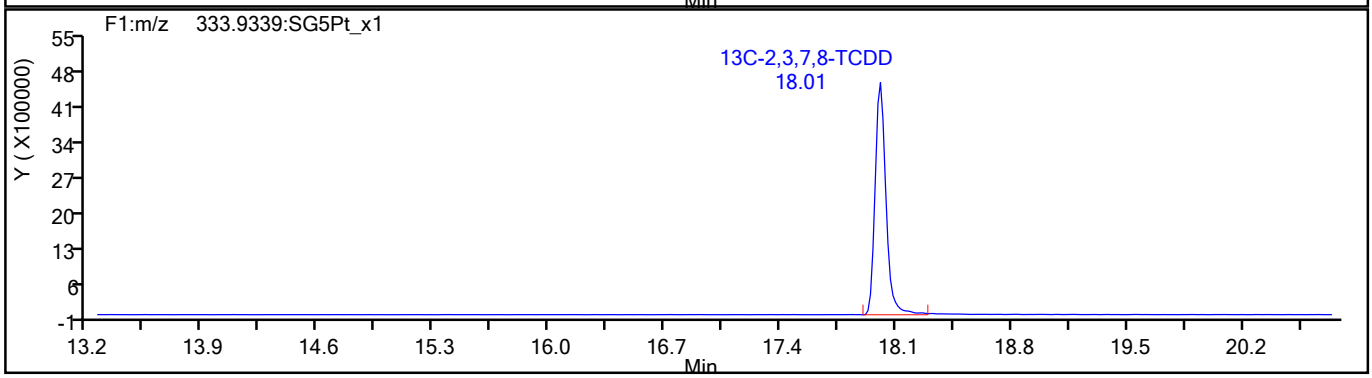

784670

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

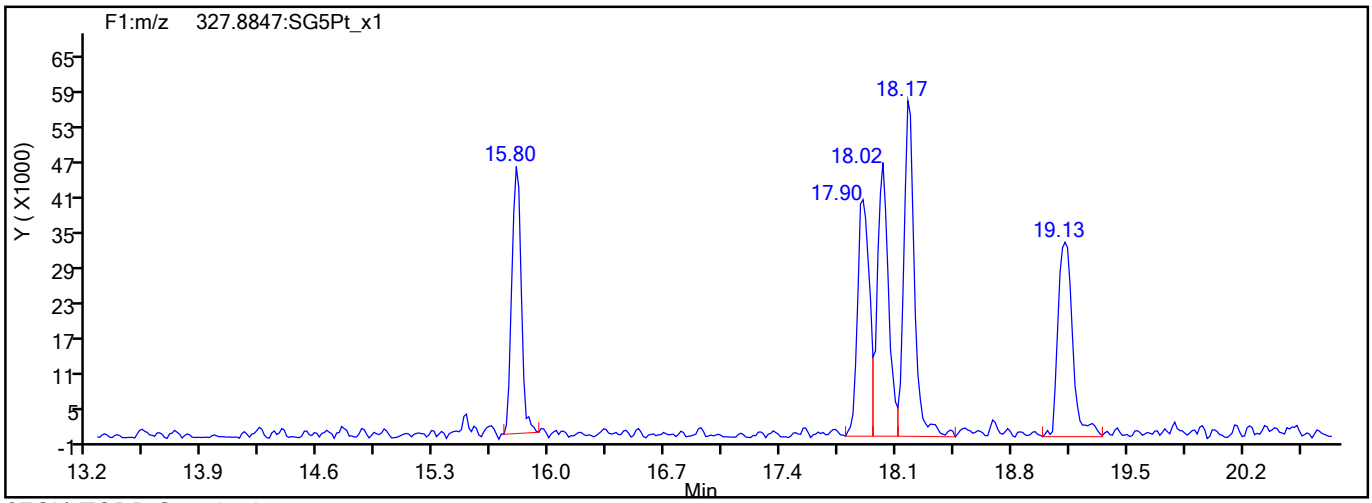

37Cl4-TCDD Standards

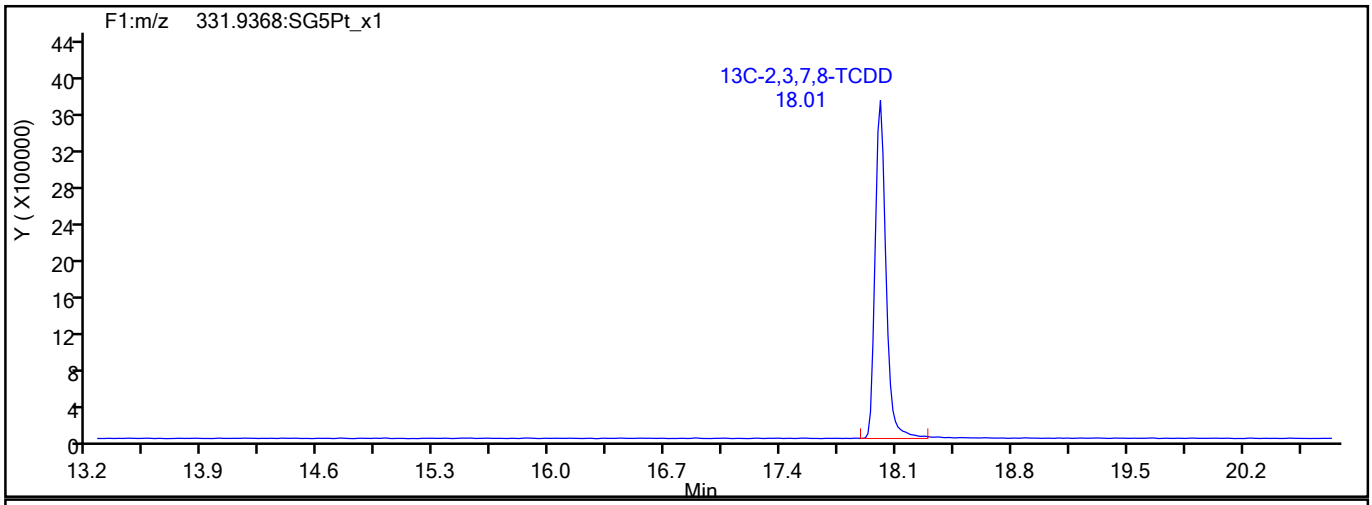

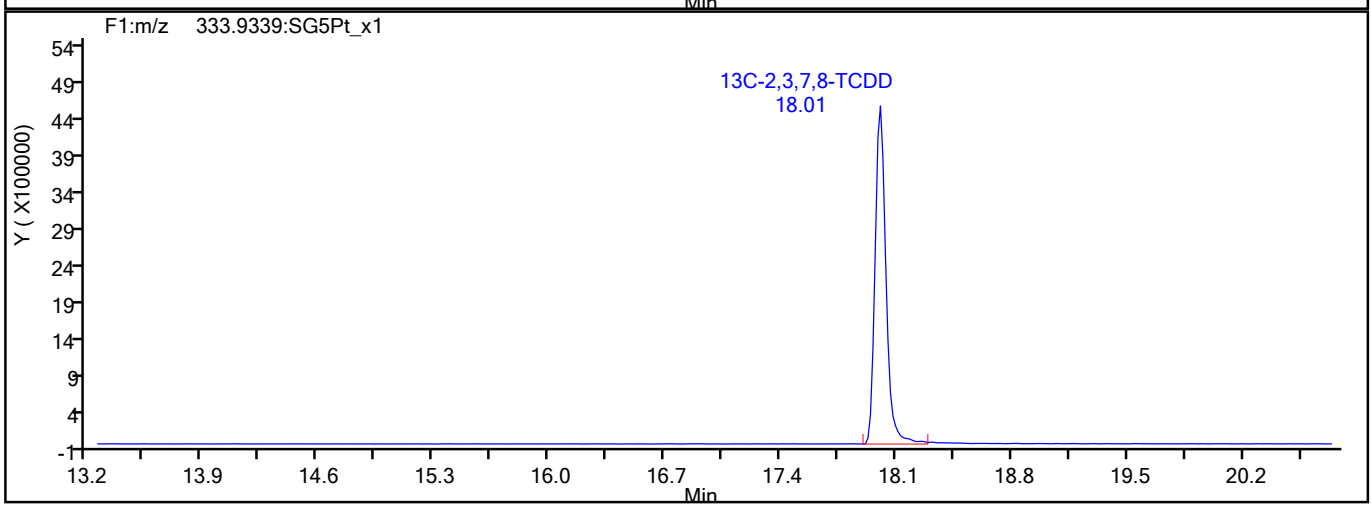

784671

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

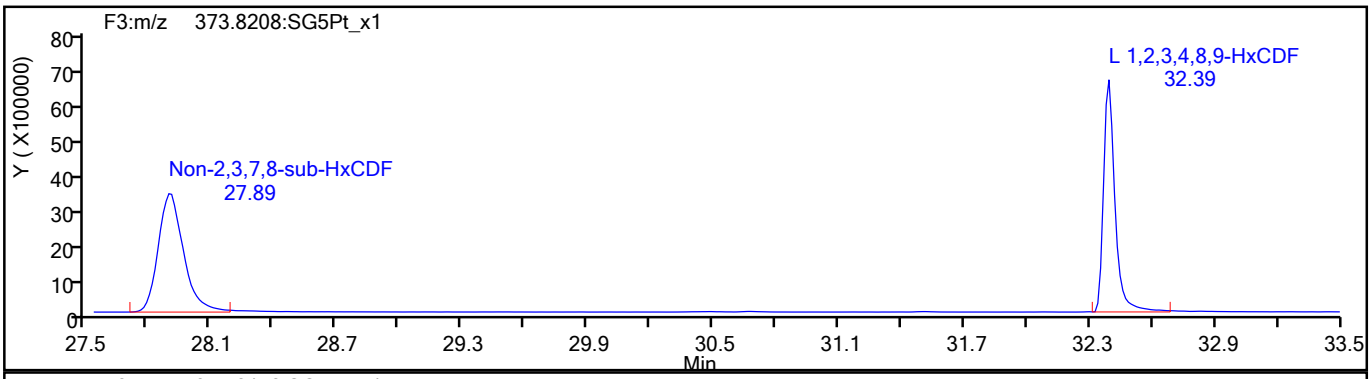

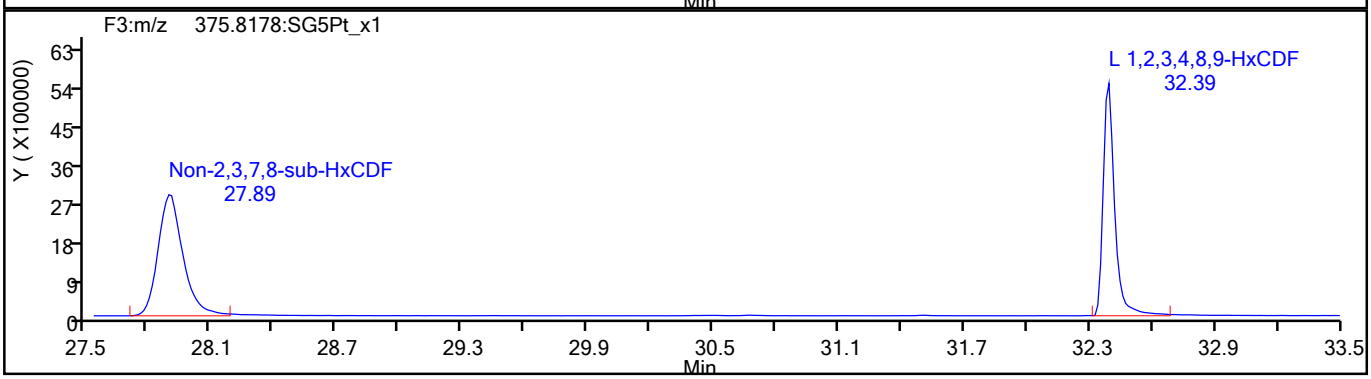

HxCDF Standards

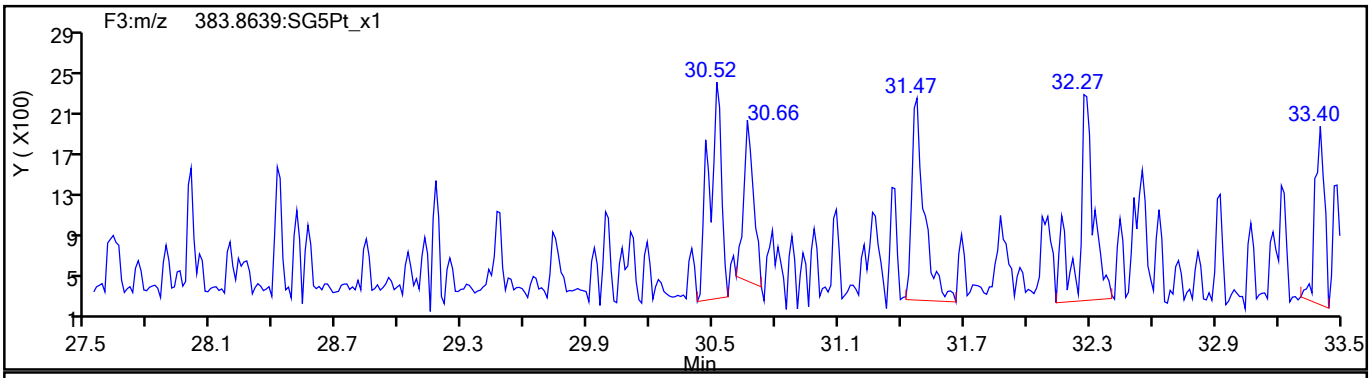

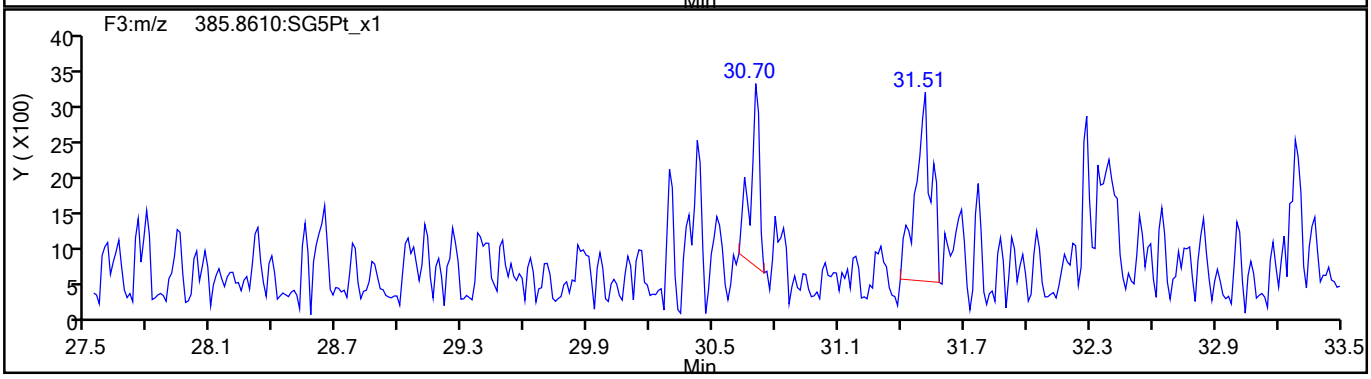

784672

Report Date: 19-Aug-2021 13:08:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

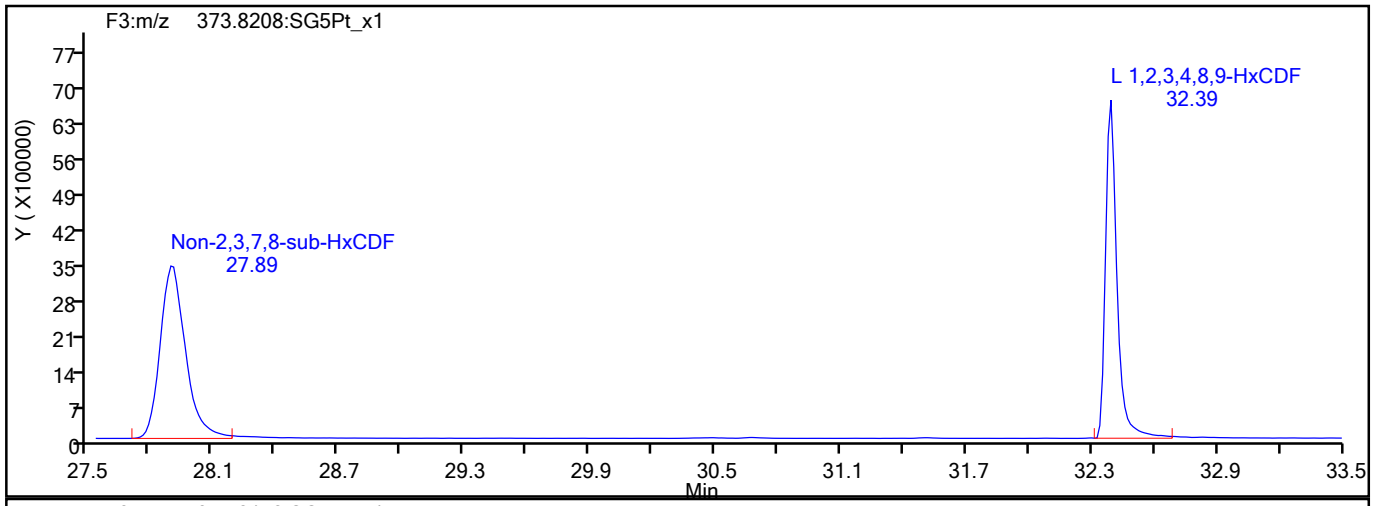

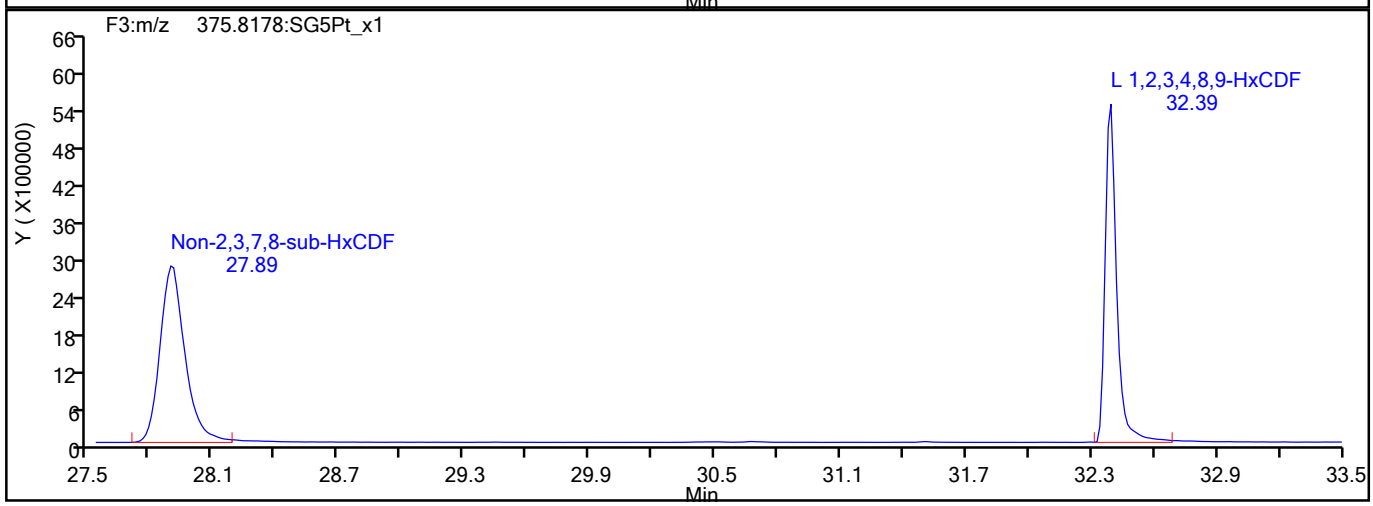

HxCDF Interference Mass

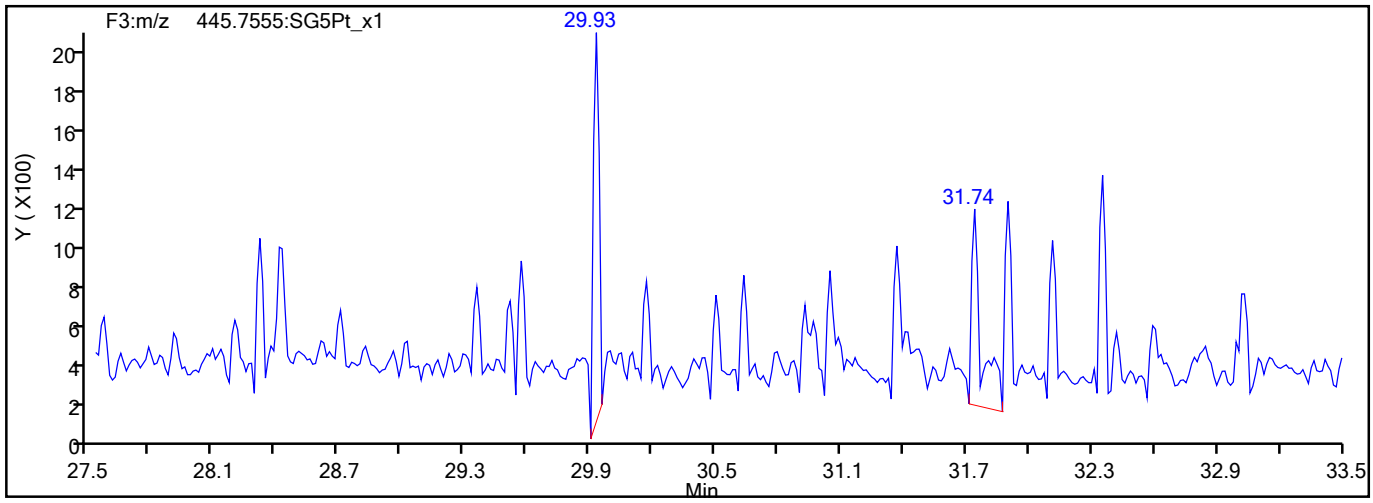

784673

Report Date: 19-Aug-2021 13:08:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

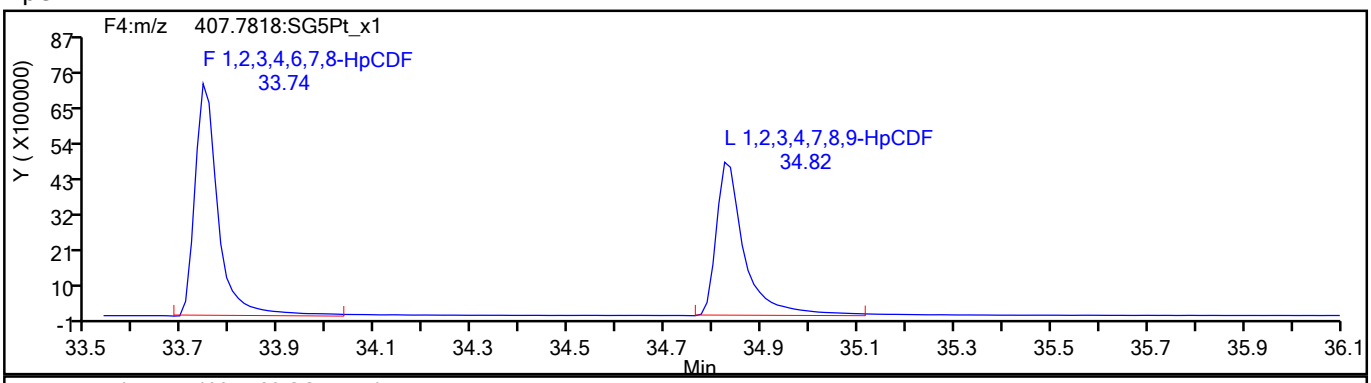

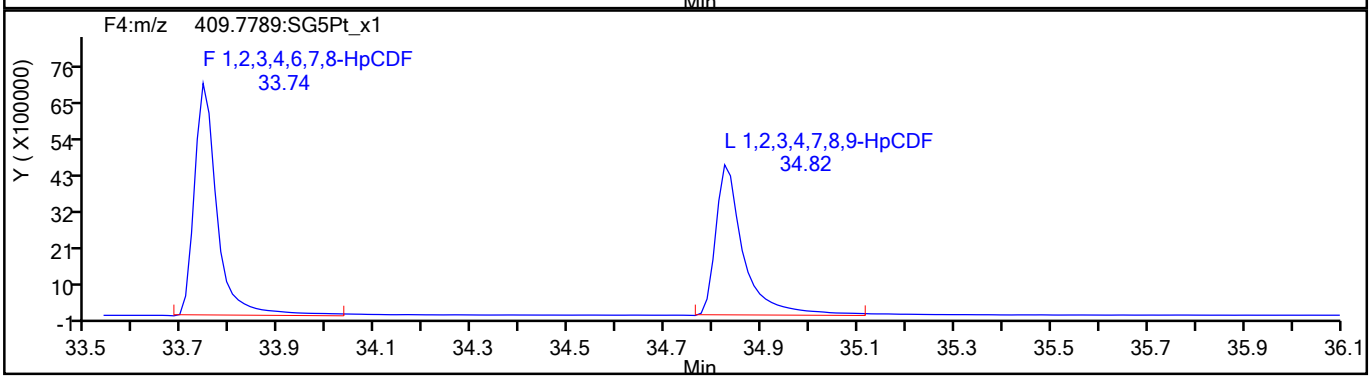

HpCDF Standards

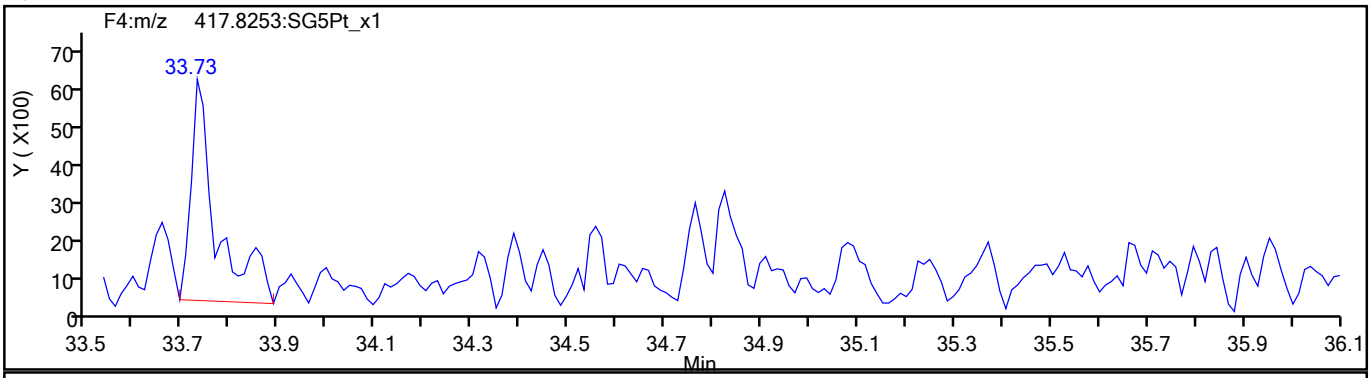

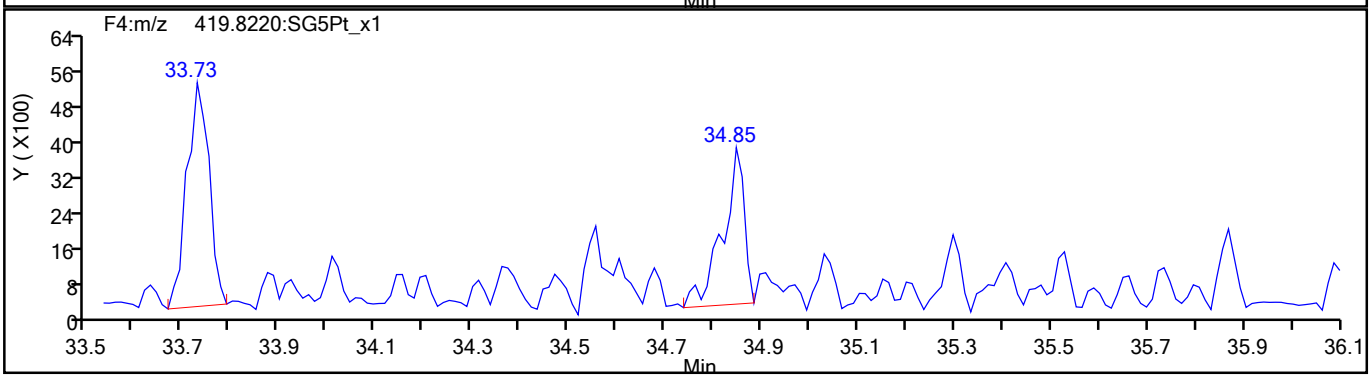

784674

Report Date: 19-Aug-2021 13:08:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

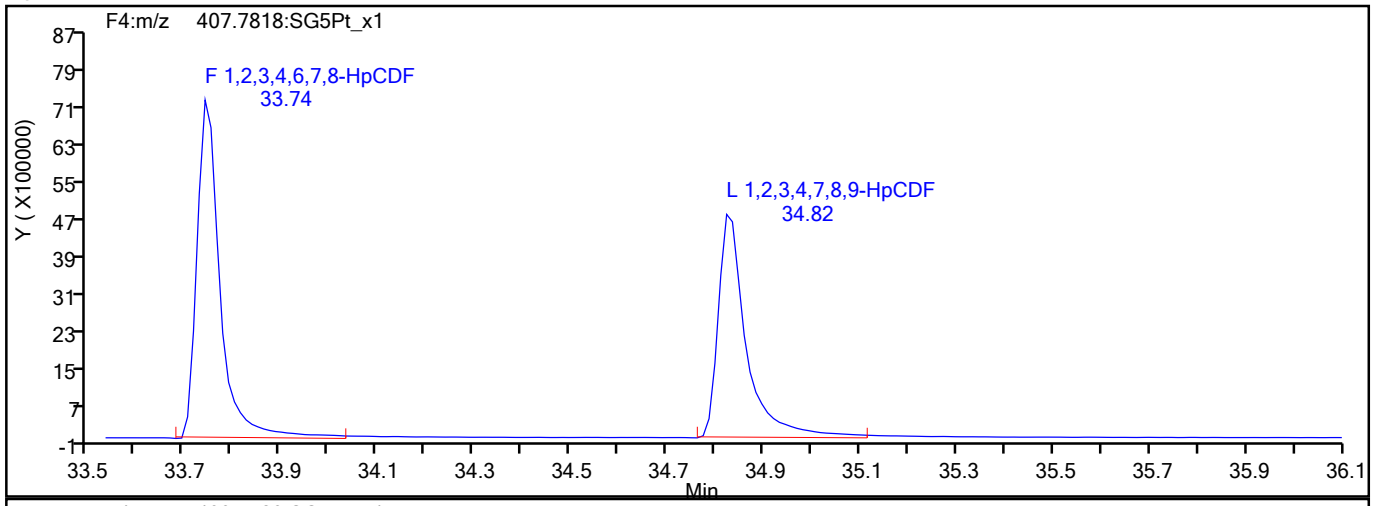

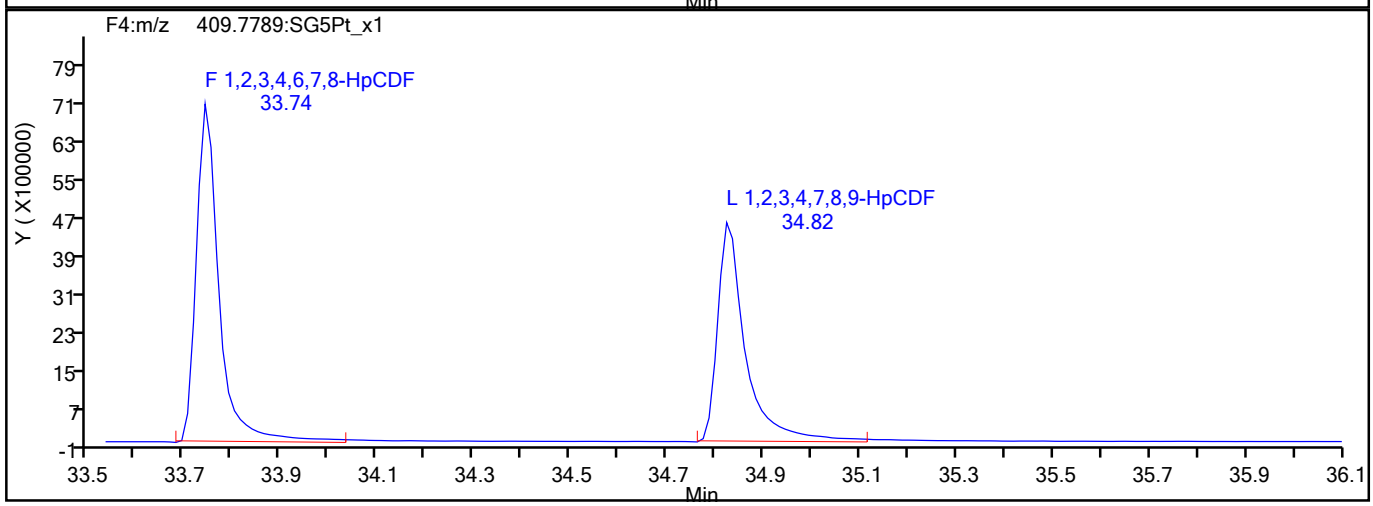

HpCDF Interference Mass

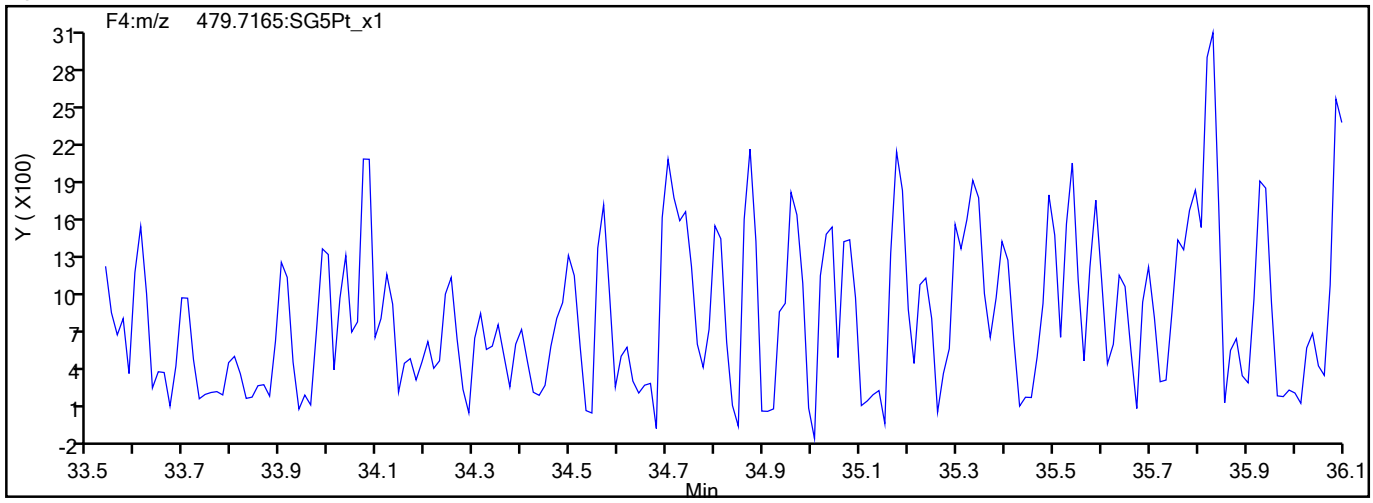

784675

Report Date: 19-Aug-2021 13:08:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

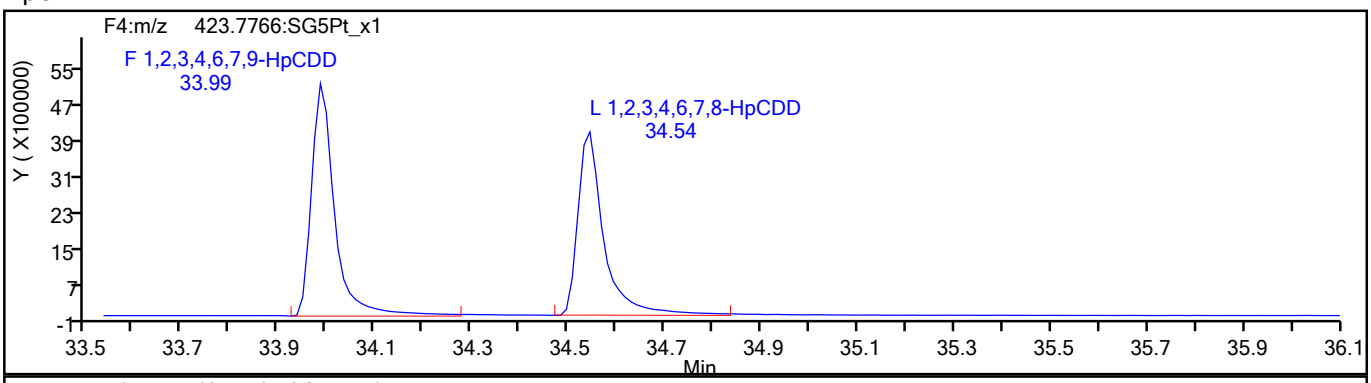

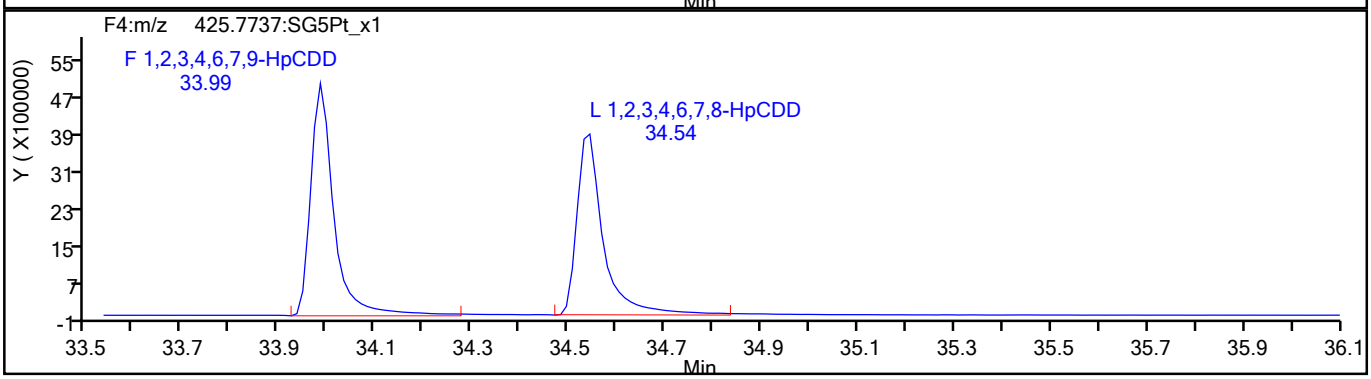

HpCDD Standards

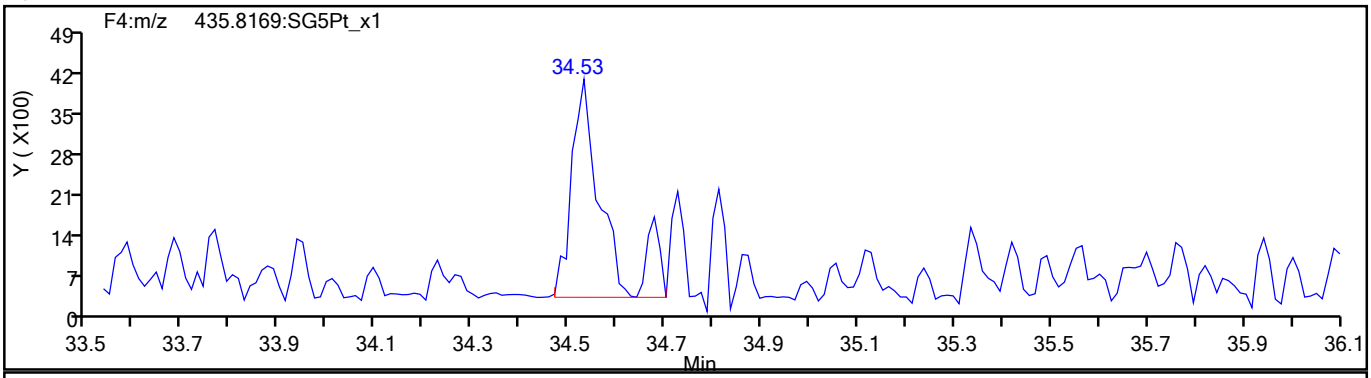

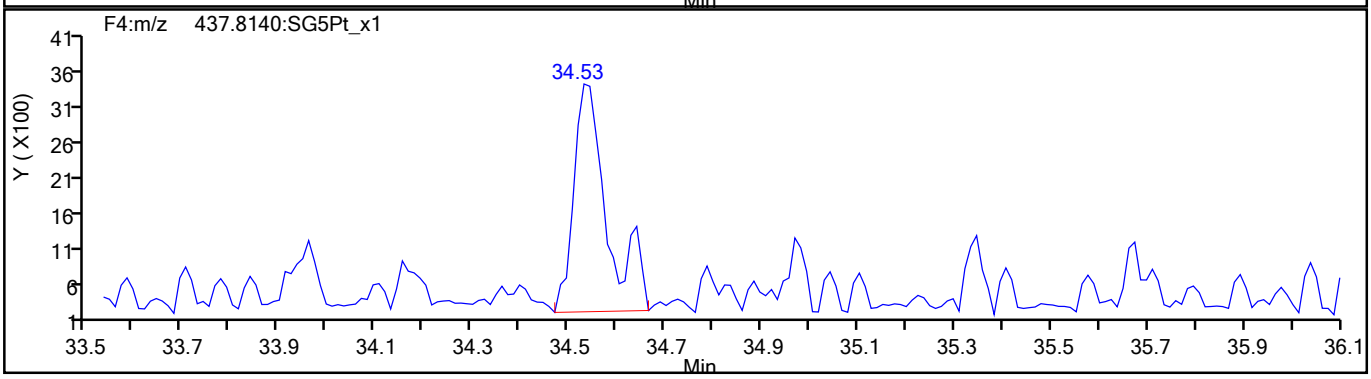

784676

Report Date: 19-Aug-2021 13:08:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

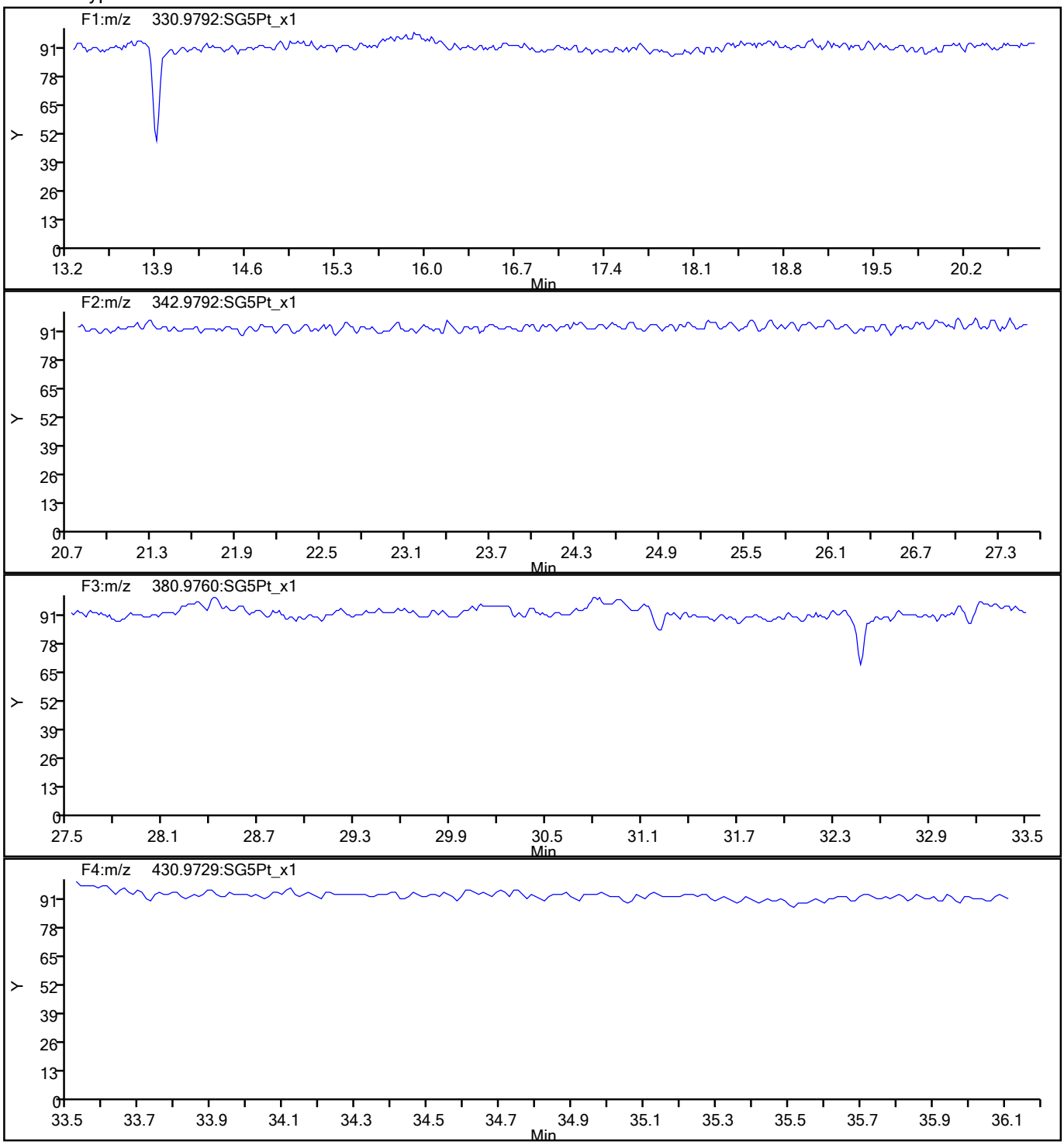

784677

Report Date: 19-Aug-2021 13:08:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_1.d		
Injection Date:	18-Aug-2021 14:15:56	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517729	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

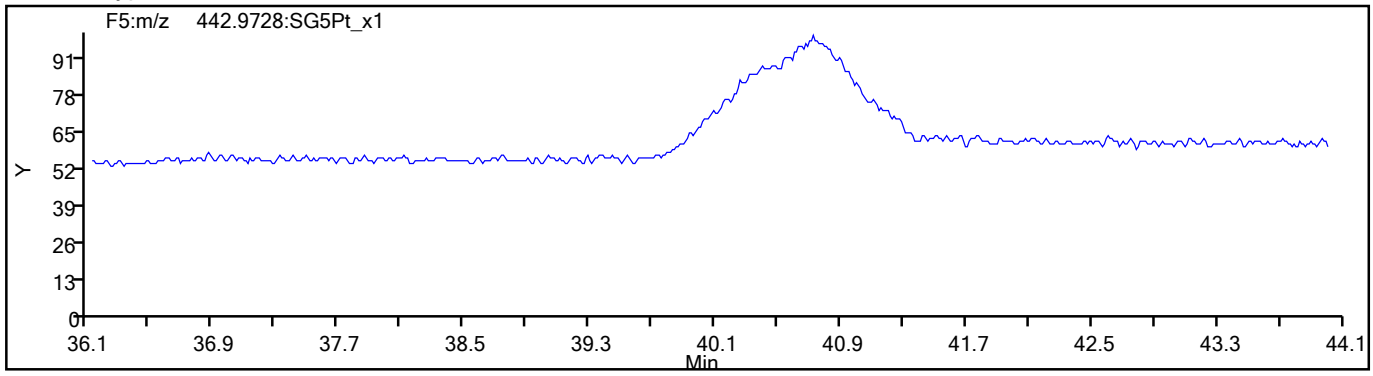

784678

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

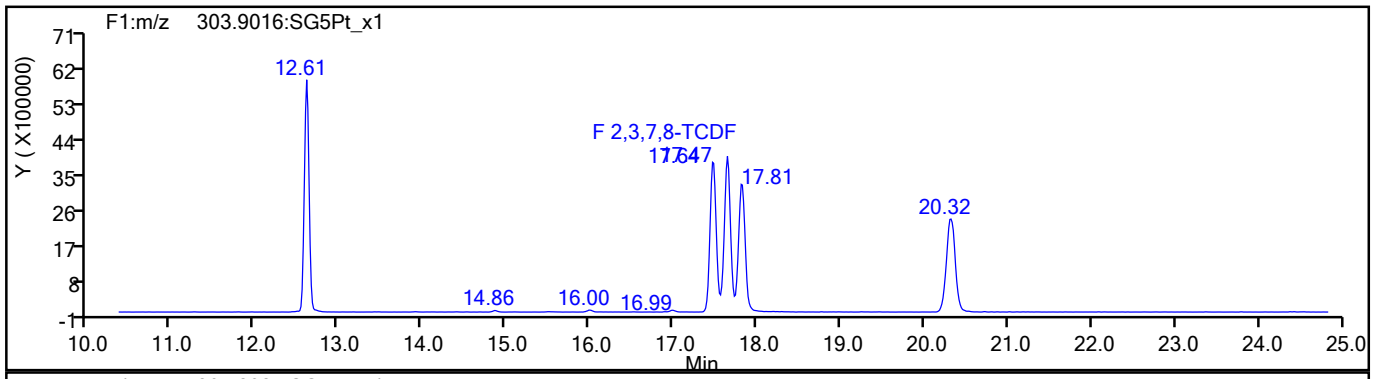

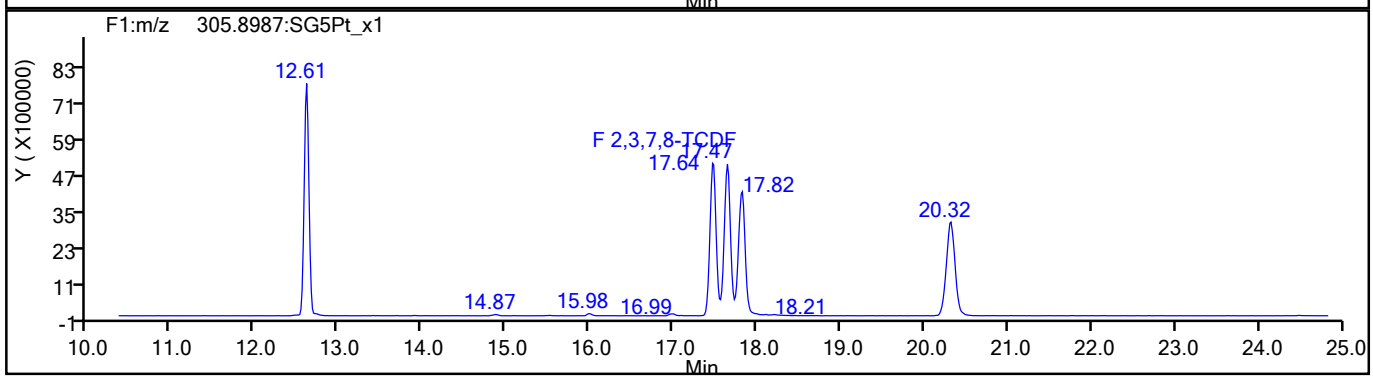

TCDF Standards

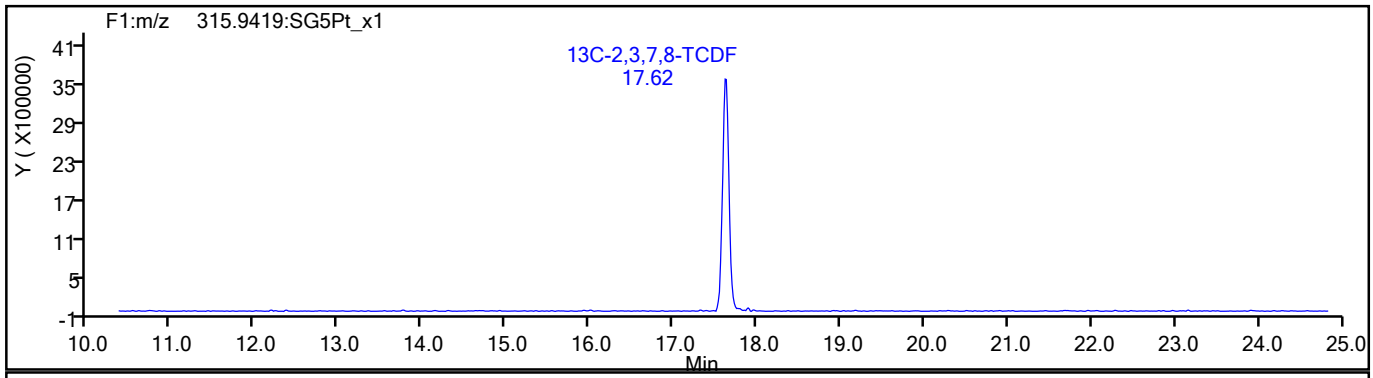

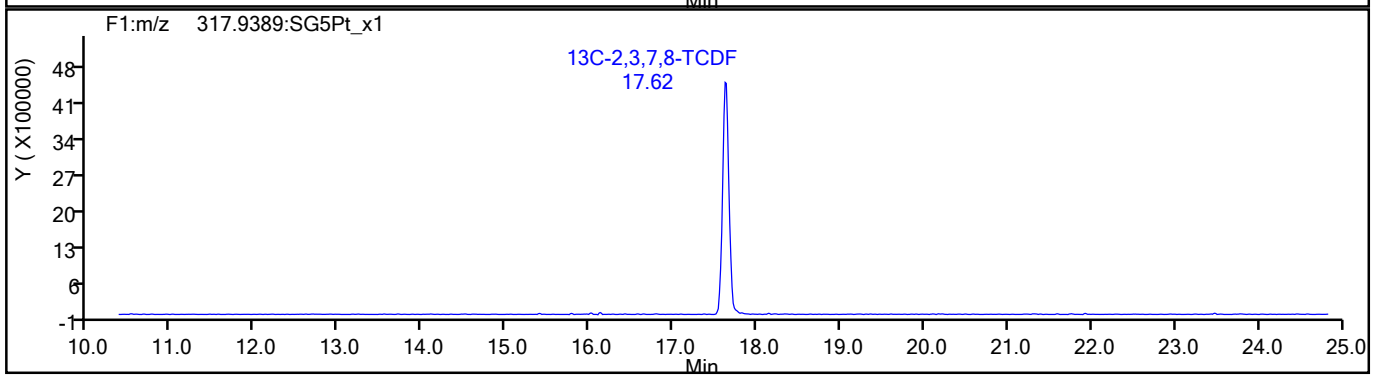

784681

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

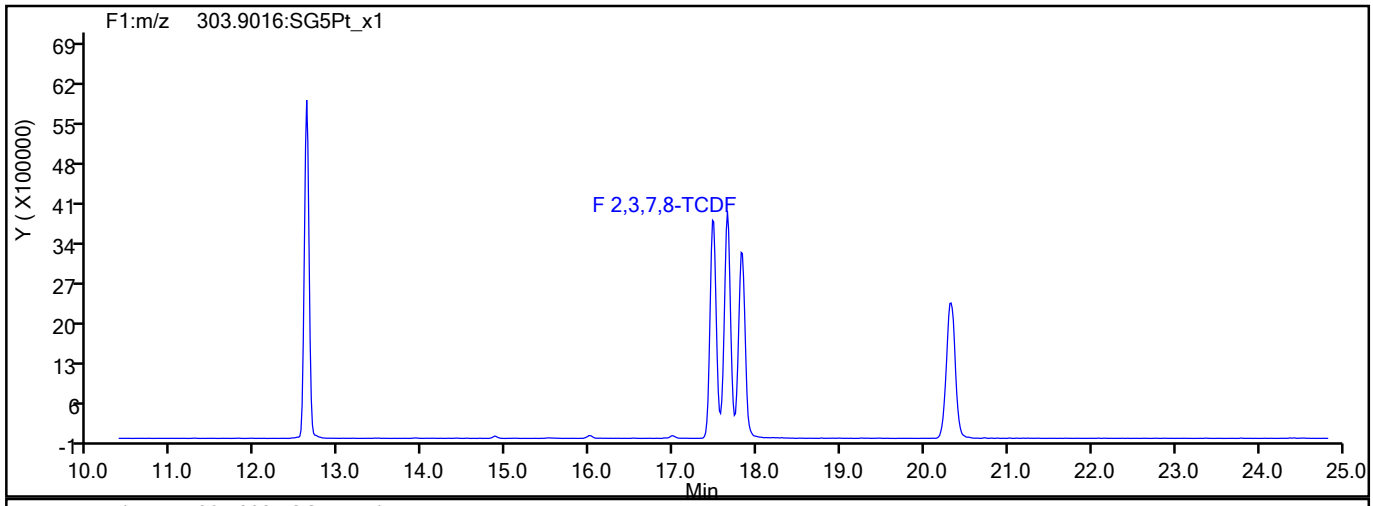

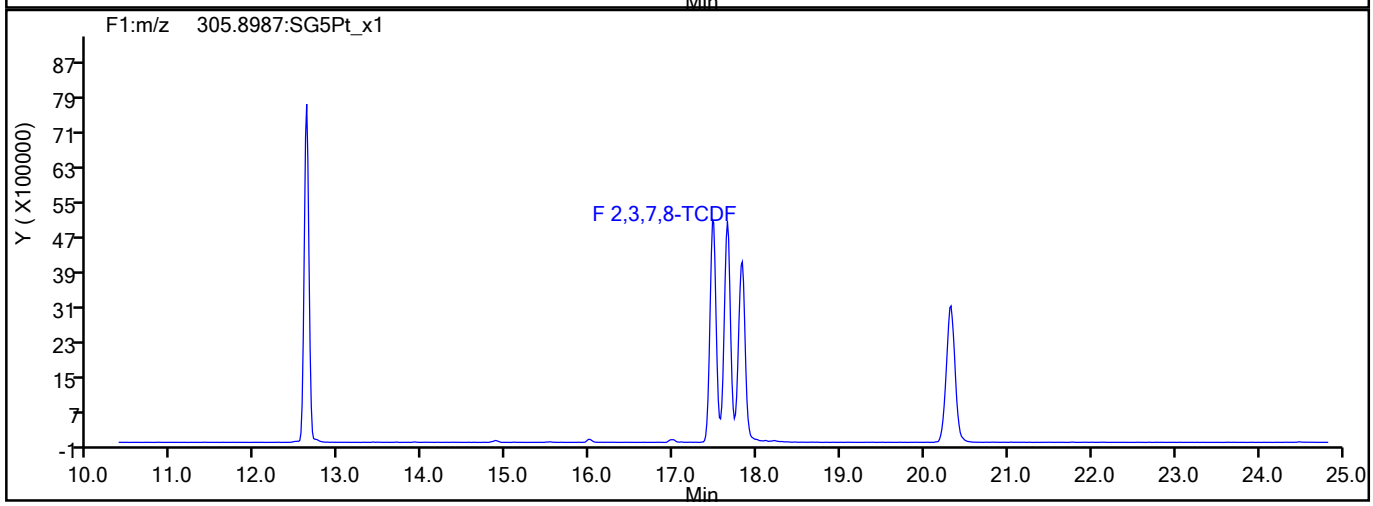

TCDF Interference Mass

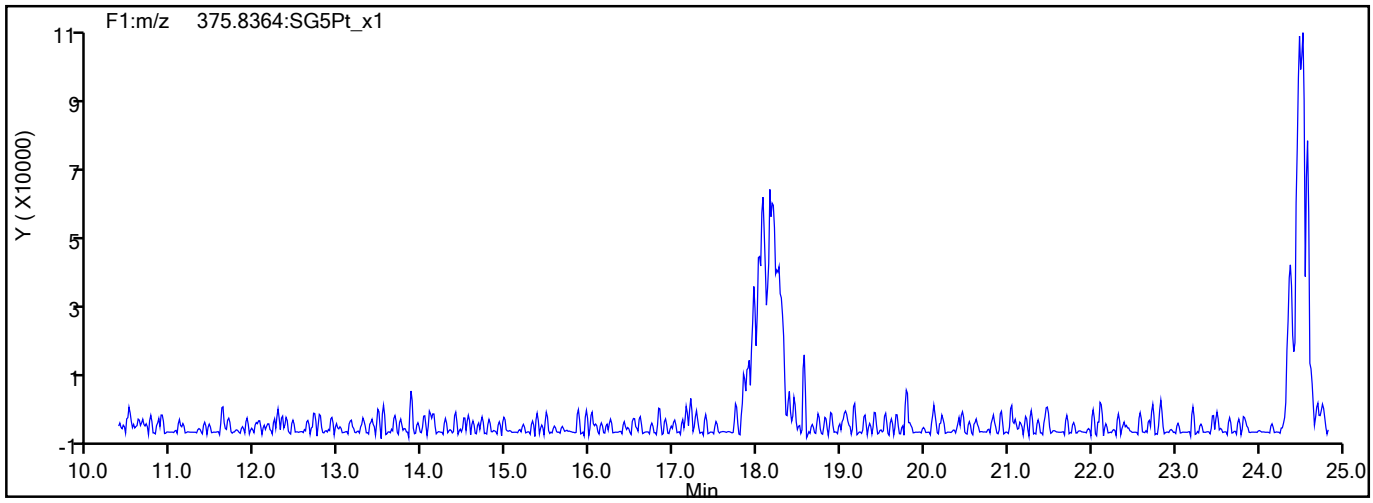

784682

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

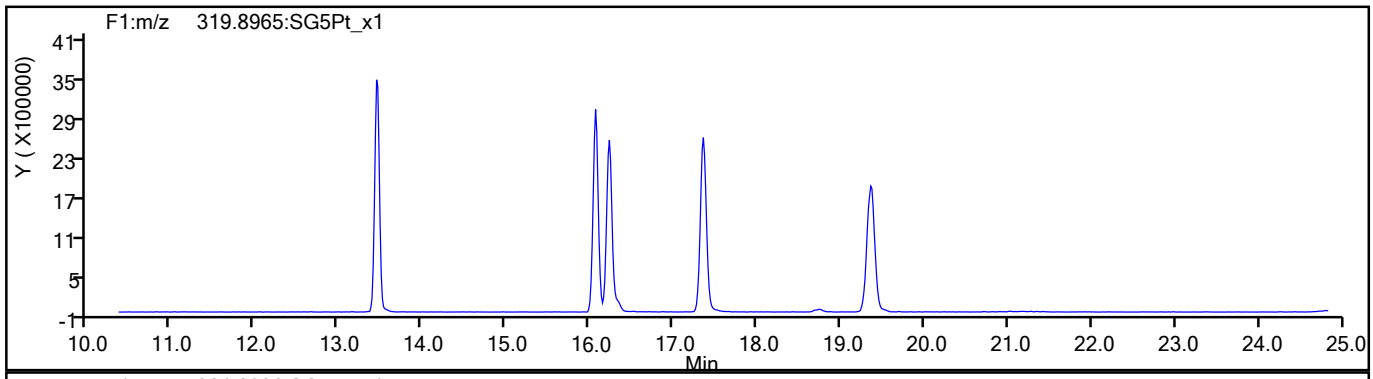

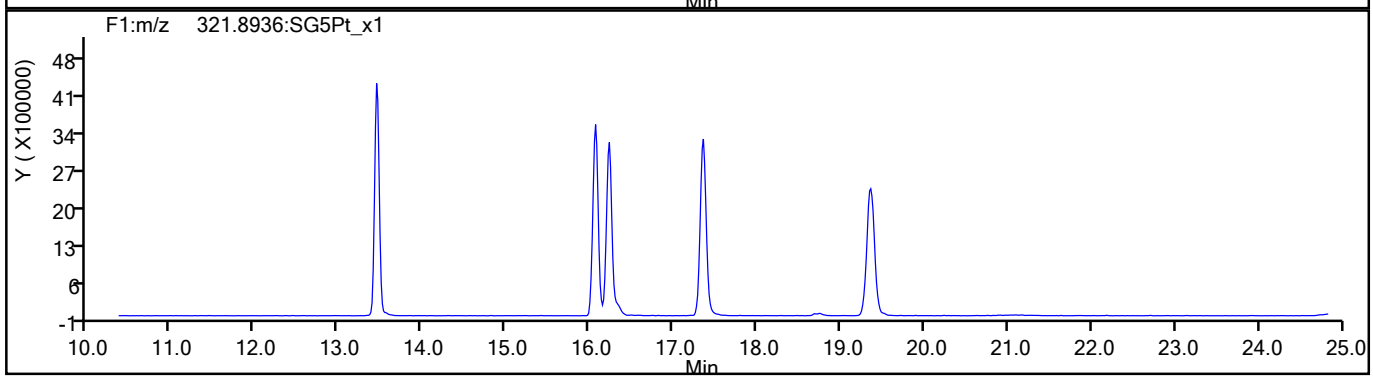

TCDD Standards

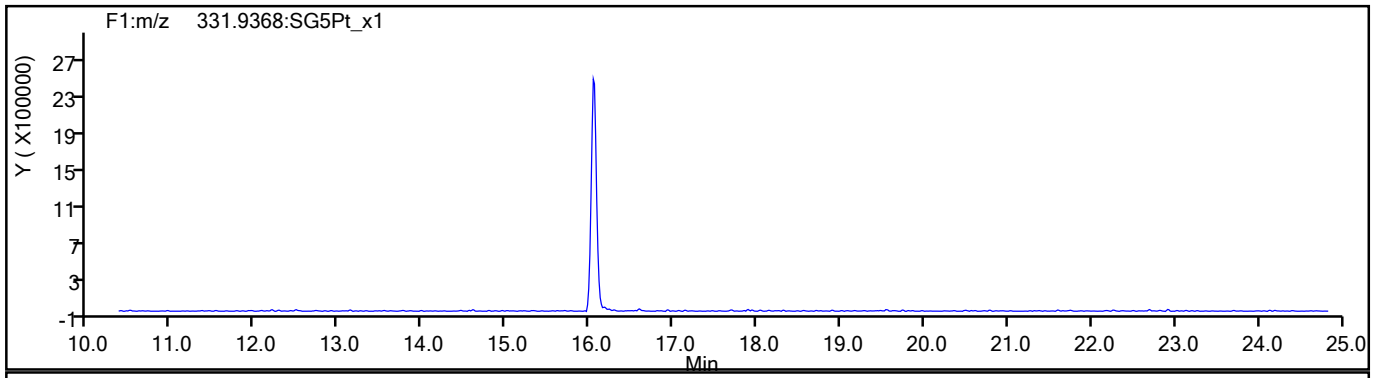

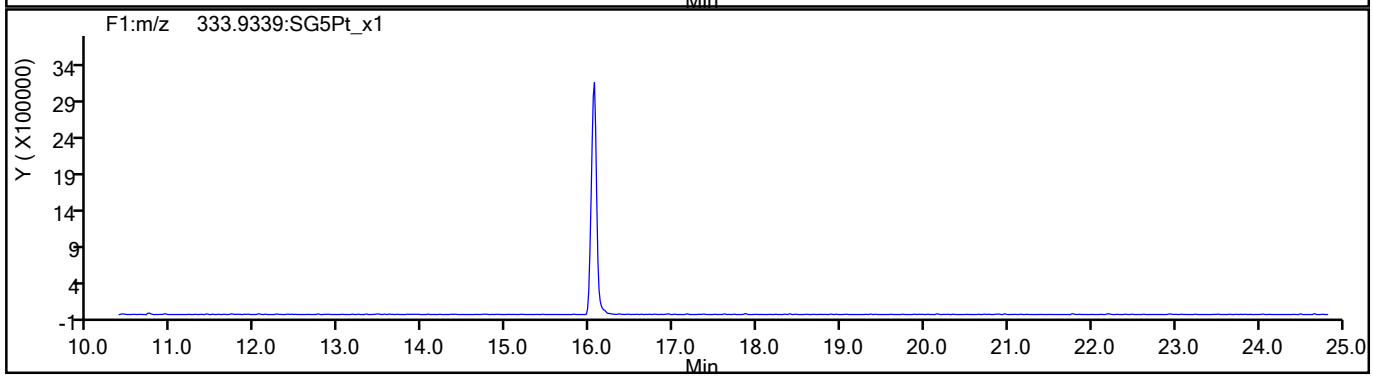

784683

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

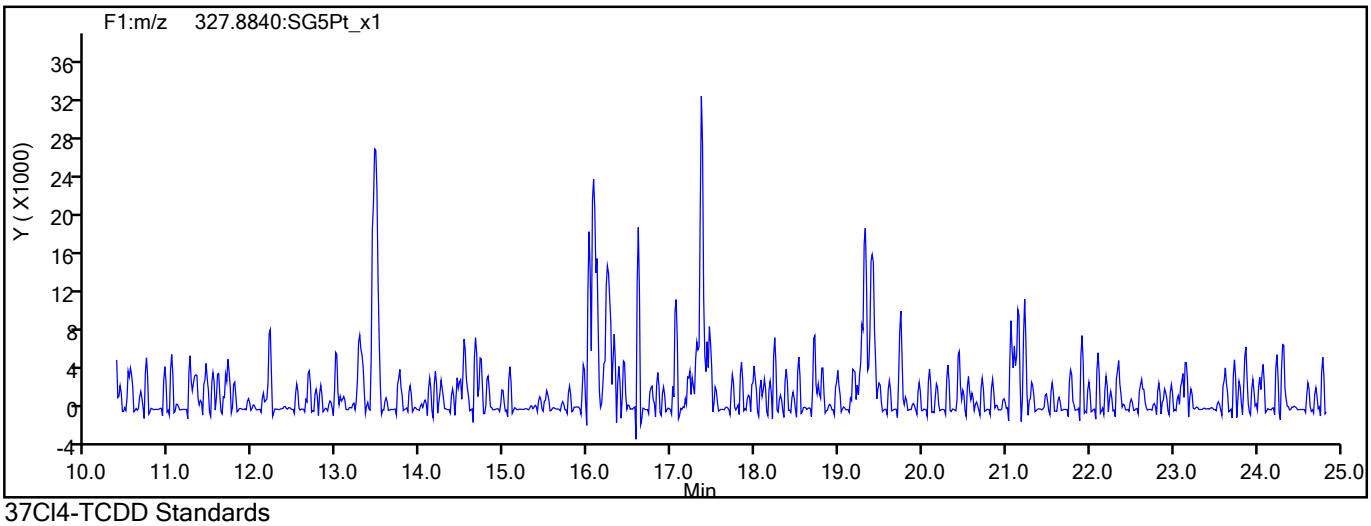

37Cl4-TCDD Standards

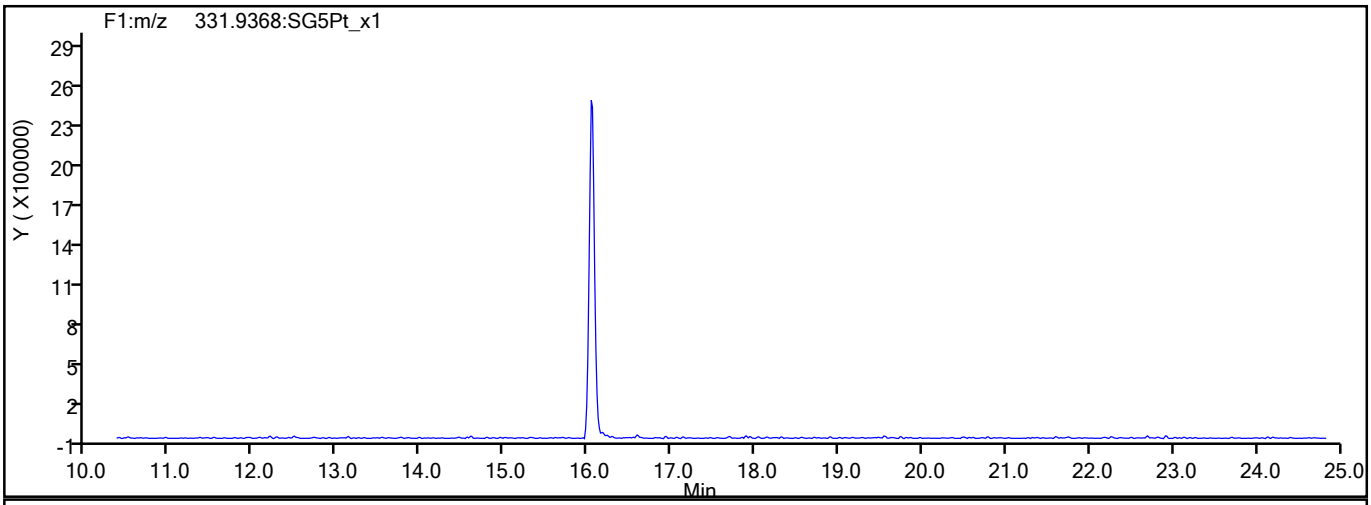

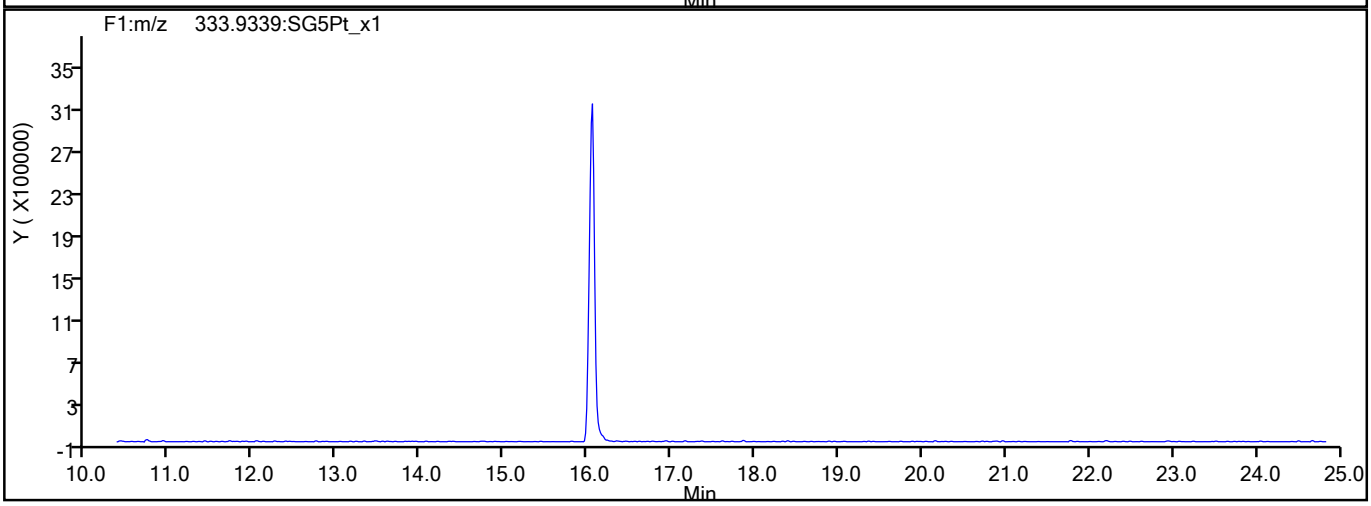

784684

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

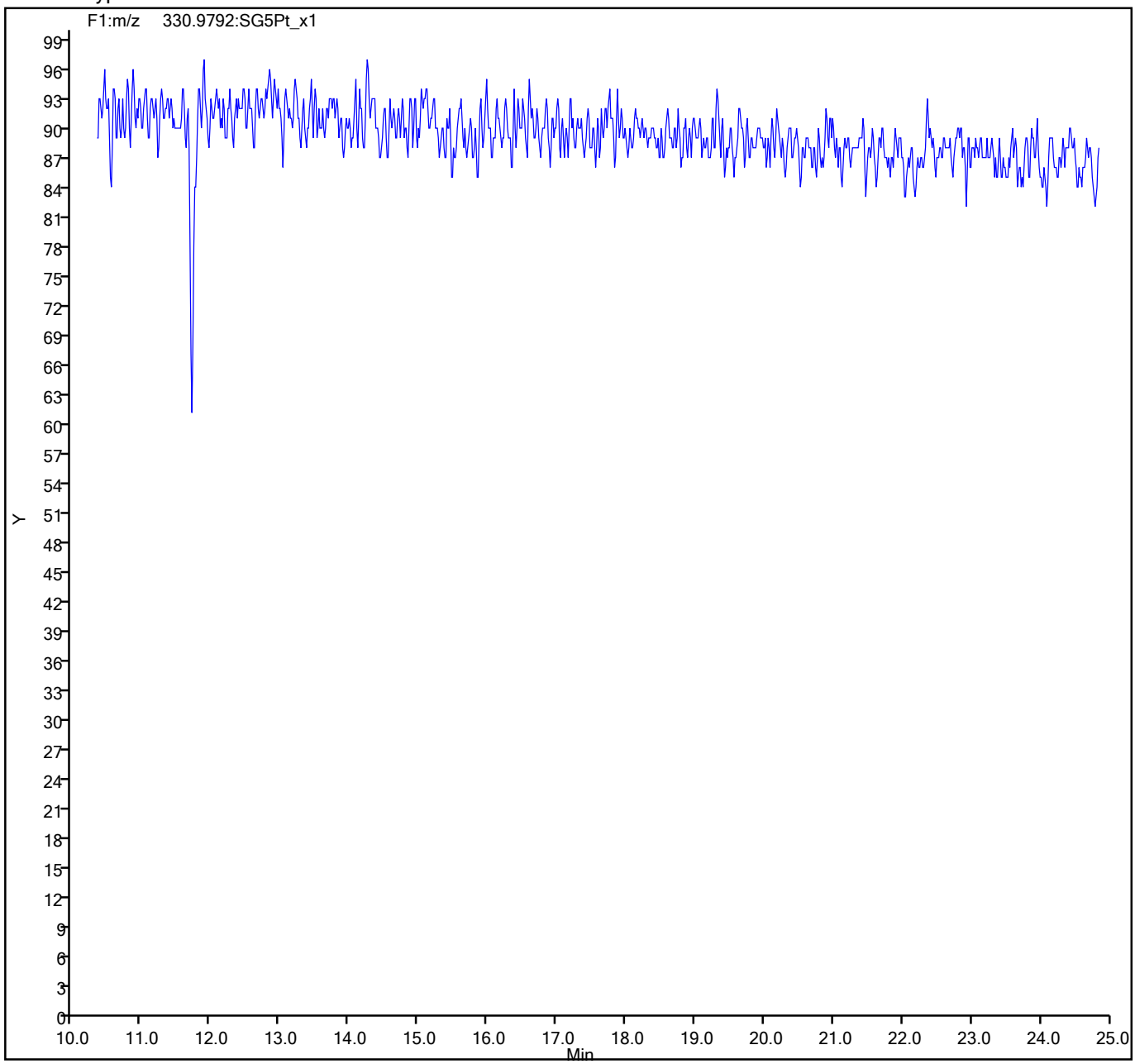

784685

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 23-Aug-2021 15:34:18 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:39 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:13:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.629	32758937	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.657	34131251	0.78	0.9978	41.8	41.8	0.1128	0.1128		
D 13C-2,3,7,8-TCDD	16.079	19405997	0.76	0.8749					0.00	
2,3,7,8-TCDD	16.093	21994765	0.79	1.0570	42.9	42.9	0.1176	0.1176		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 23-Aug-2021 15:34:18 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 09:19:39 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 09:13:04

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.629	17.629	0	1.000	14792047	2886457	8002	20005	361		
317.9389	17.629	17.629	0	1.000	17966890	3466817	8253	20632	420	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.657	17.657	0	1.002	14965952	2812417	3180	7950	884		
305.8987	17.643	17.657	-1	1.001	19165299	3579927	3970	9925	902	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.079	16.079	0	1.000	8398782	1875390	22329	55822	84		
333.9339	16.079	16.079	0	1.000	11007215	2396714	10997	27492	218	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.093	0	1.001	9703507	2157313	2641	6602	817		
321.8936	16.093	16.093	0	1.001	12291258	2740074	2671	6677	1026	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 24-Aug-2021 09:19:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d		
Injection Date:	23-Aug-2021 15:34:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

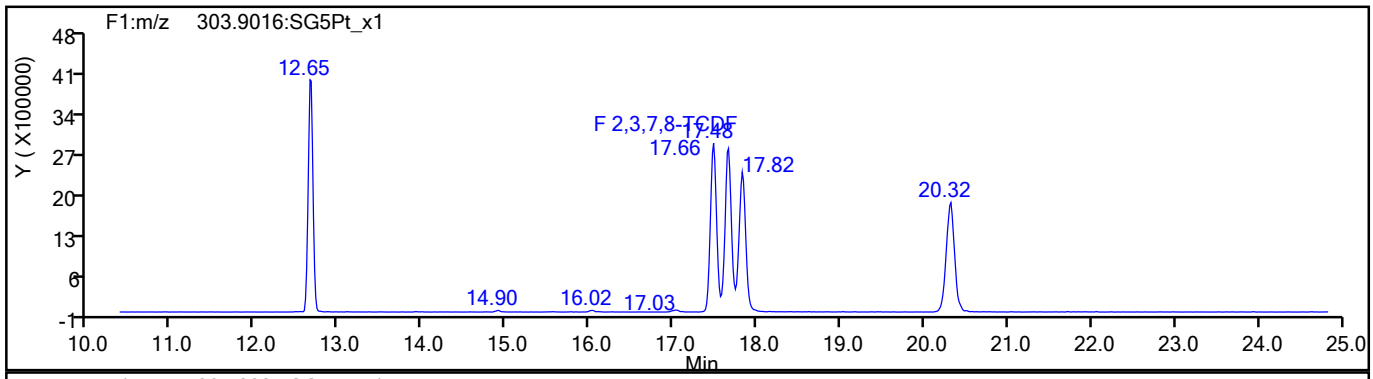

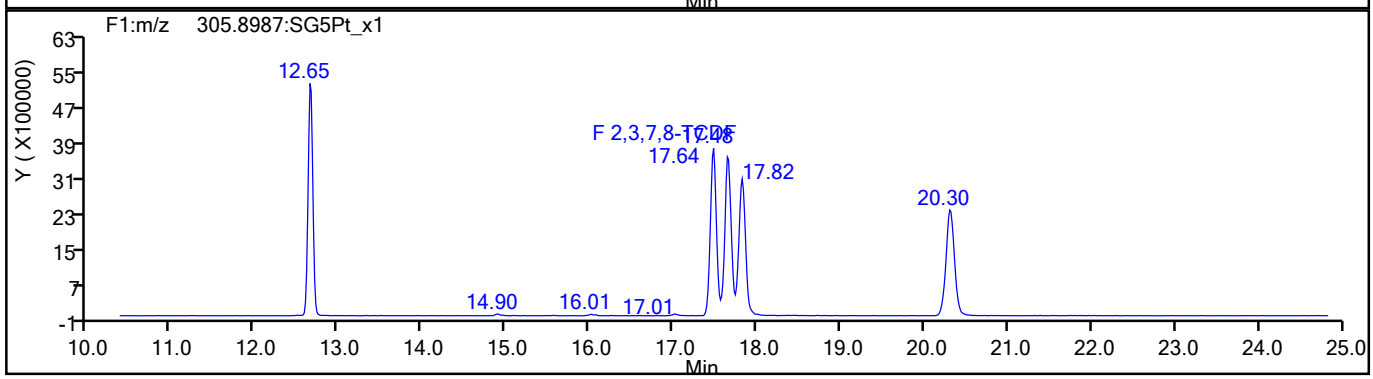

TCDF Standards

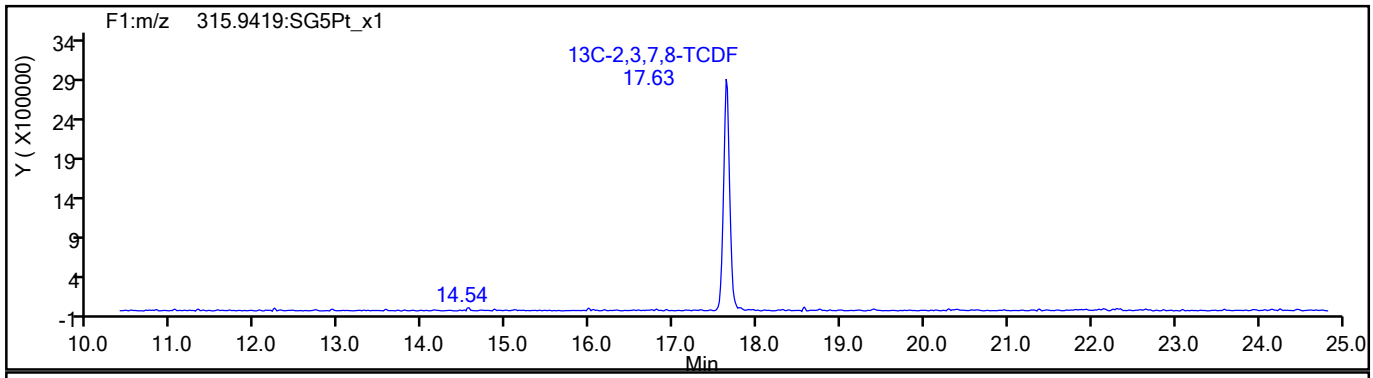

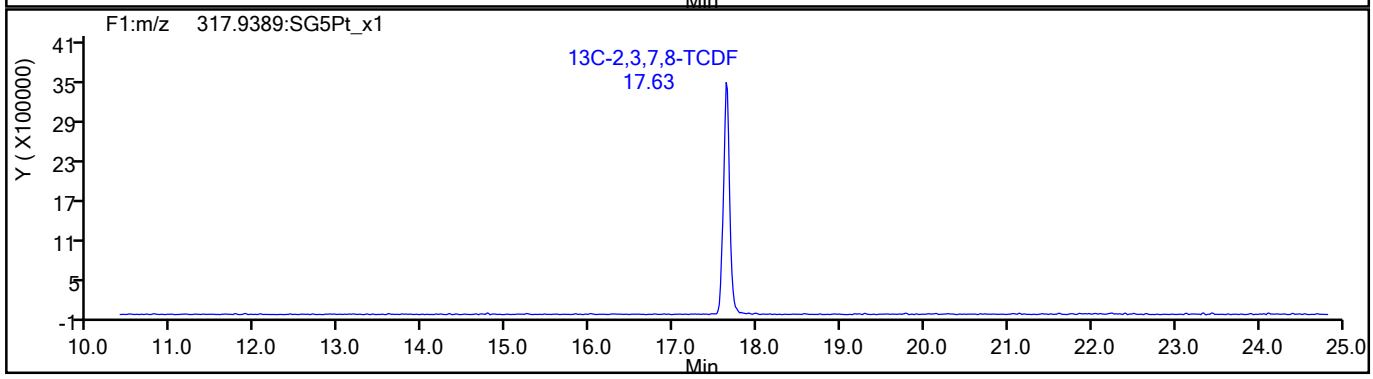

784688

Report Date: 24-Aug-2021 09:19:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d		
Injection Date:	23-Aug-2021 15:34:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

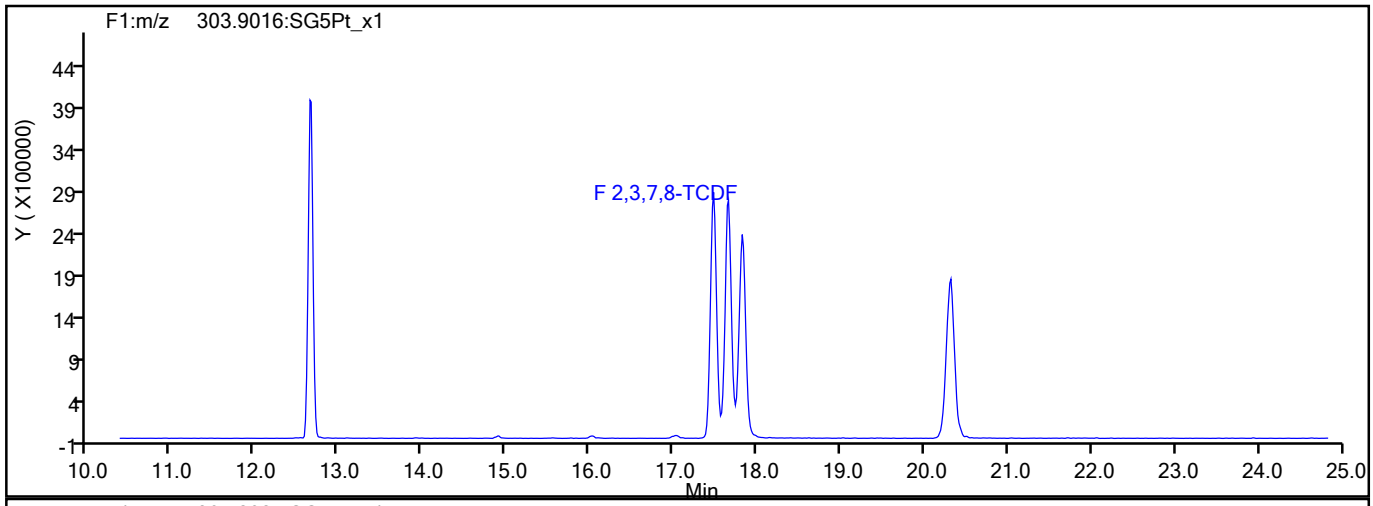

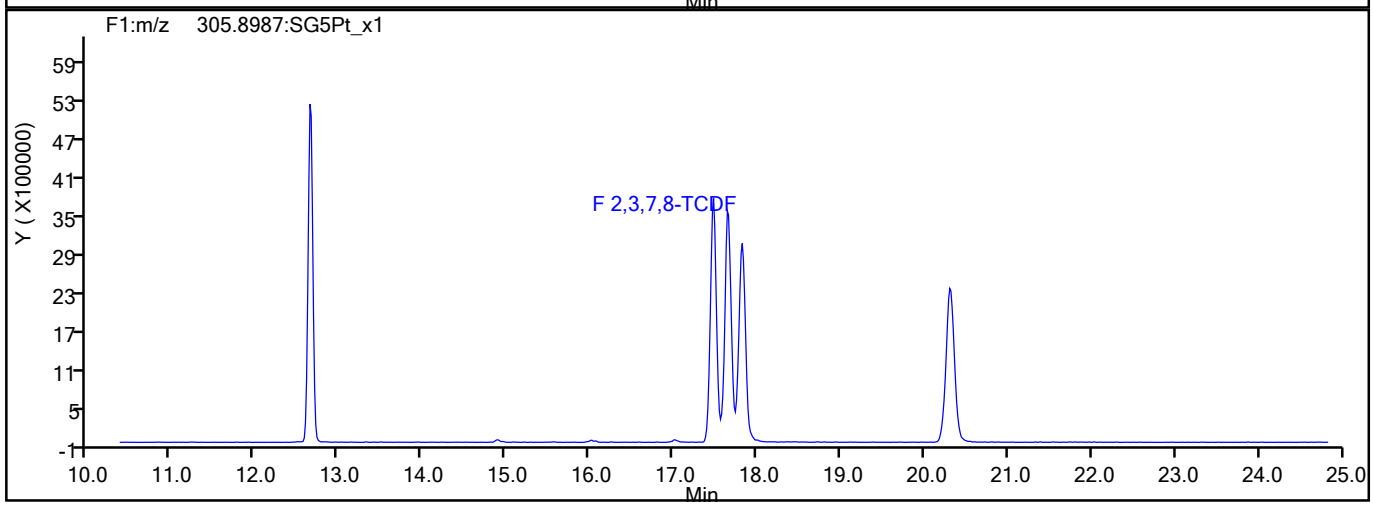

TCDF Interference Mass

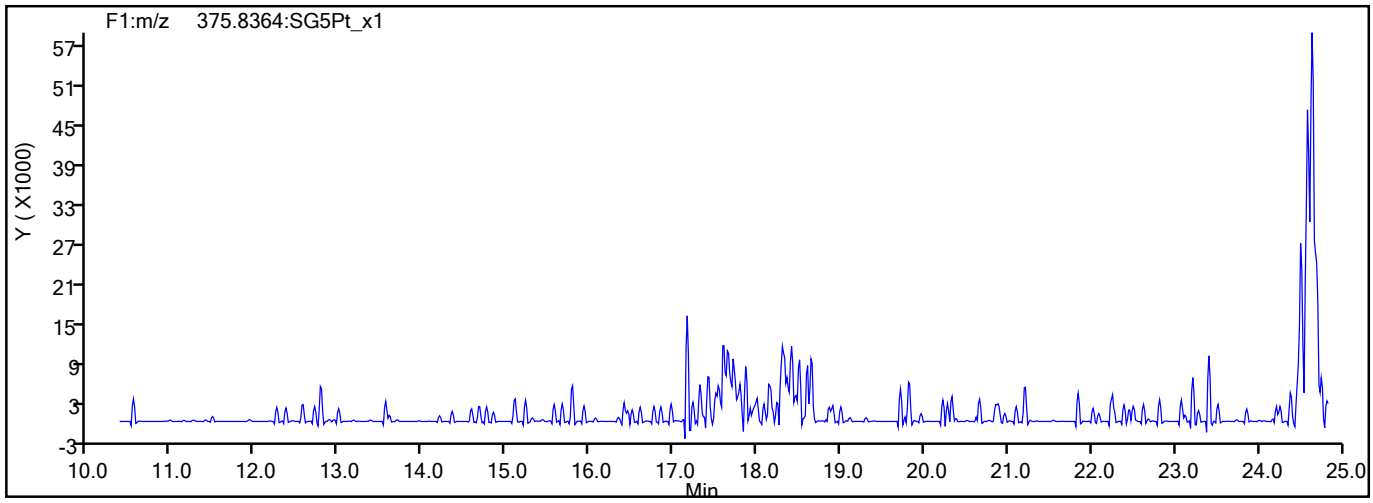

784689

Report Date: 24-Aug-2021 09:19:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125560.b\23AU21A11D2_001.d		
Injection Date:	23-Aug-2021 15:34:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518979	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

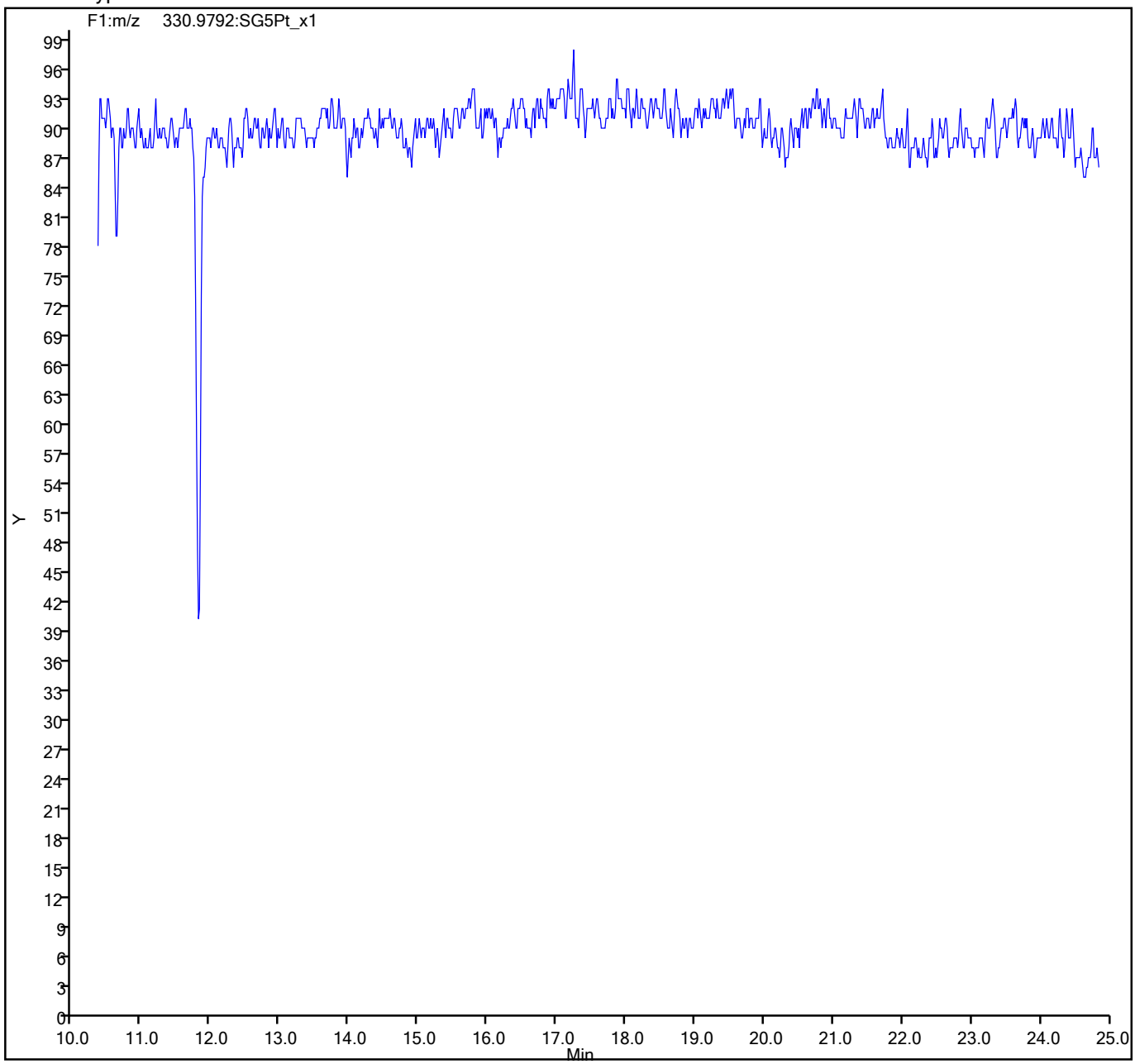

784690

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 12:59:07 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:33 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:56:58

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.631	29054878	0.79	1.3327					0.00	
2,3,7,8-TCDF	17.659	30793724	0.77	0.9978	42.5	42.5	0.0965	0.0965		
D 13C-2,3,7,8-TCDD	16.081	17349695	0.82	0.8749					0.00	
2,3,7,8-TCDD	16.095	19254291	0.78	1.0570	42.0	42.0	0.1075	0.1075		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 26-Aug-2021 09:30:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 12:59:07 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:33 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:56:58

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.631	17.631	0	1.000	12787012	2551981	13654	34135	187		
317.9389	17.631	17.631	0	1.000	16267866	3076922	11183	27957	275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.659	17.659	0	1.002	13417414	2552580	2769	6922	922		
305.8987	17.645	17.659	-1	1.001	17376310	3303374	2652	6630	1246	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.081	16.081	0	1.000	7825356	1694452	30090	75225	56		
333.9339	16.068	16.081	-1	1.000	9524339	2014028	12442	31105	162	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.095	16.095	0	1.001	8416026	1883087	1907	4767	987		
321.8936	16.095	16.095	0	1.001	10838265	2417244	2305	5762	1049	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

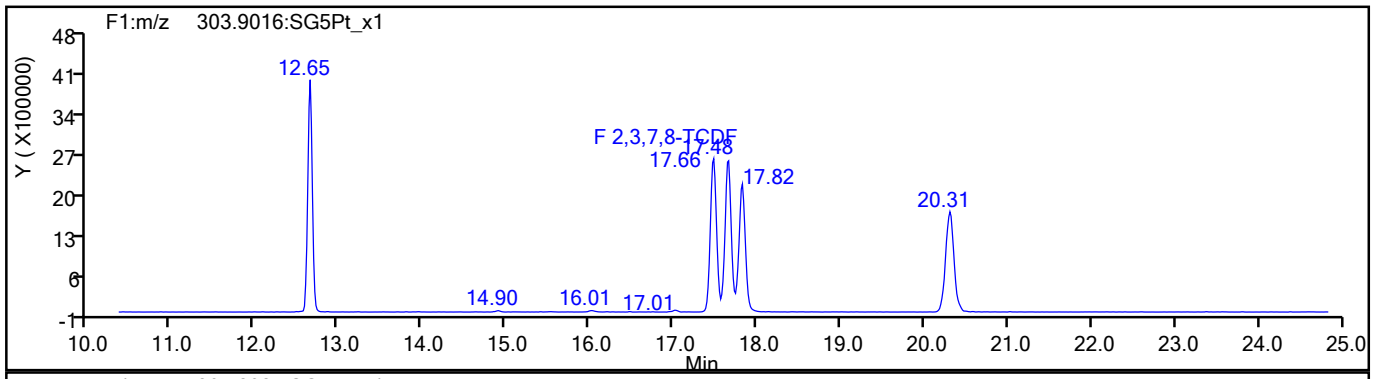

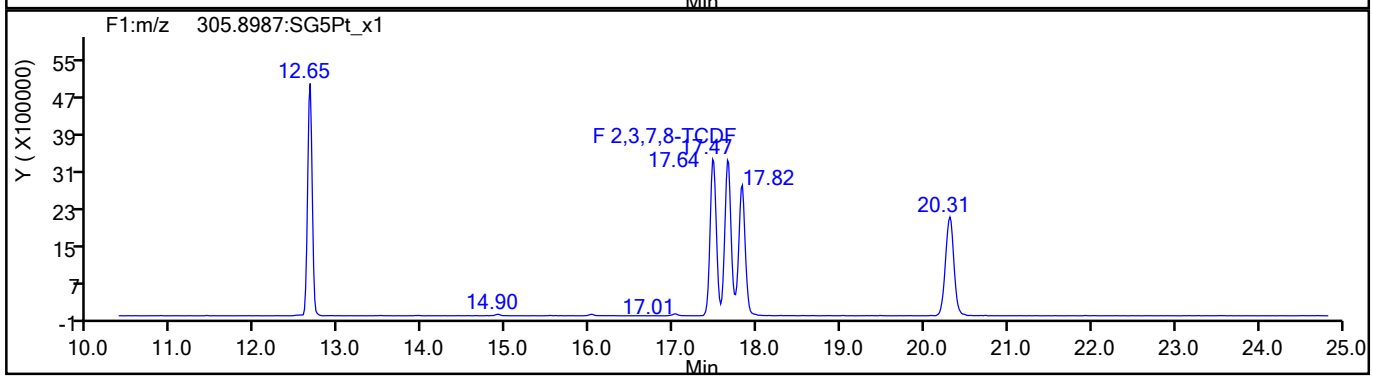

TCDF Standards

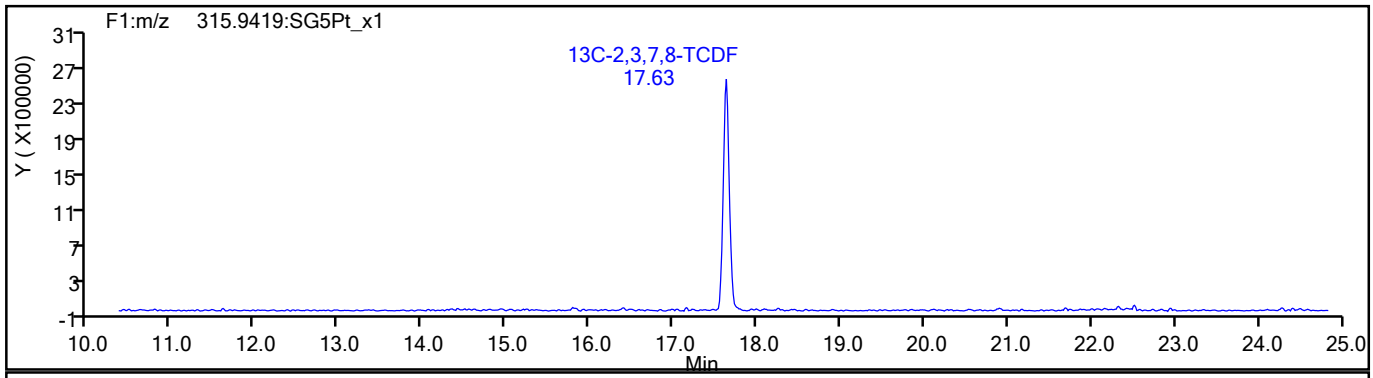

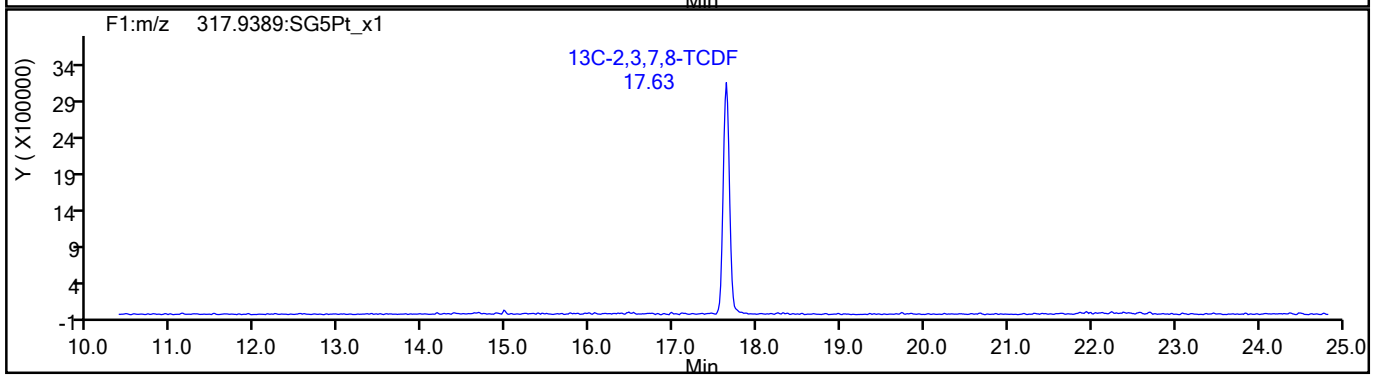

784693

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

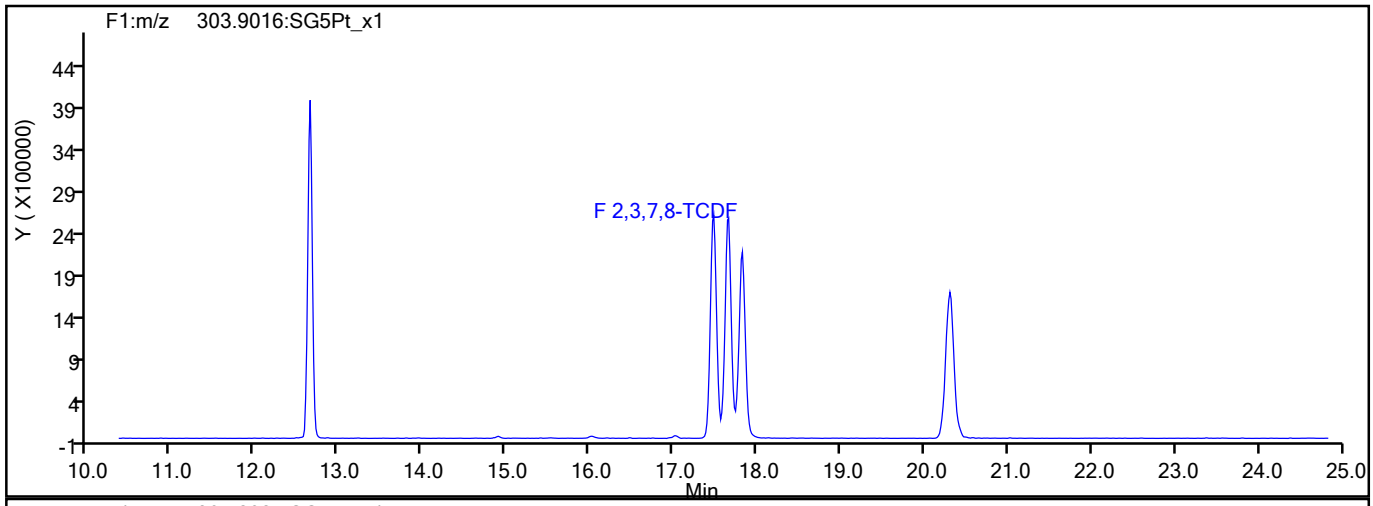

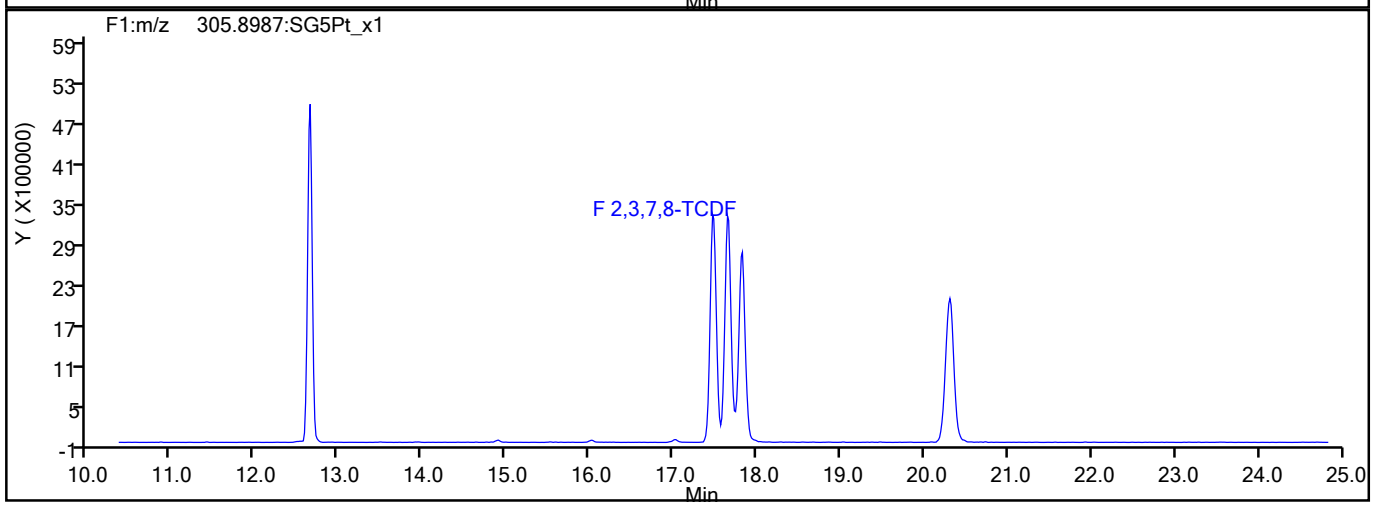

TCDF Interference Mass

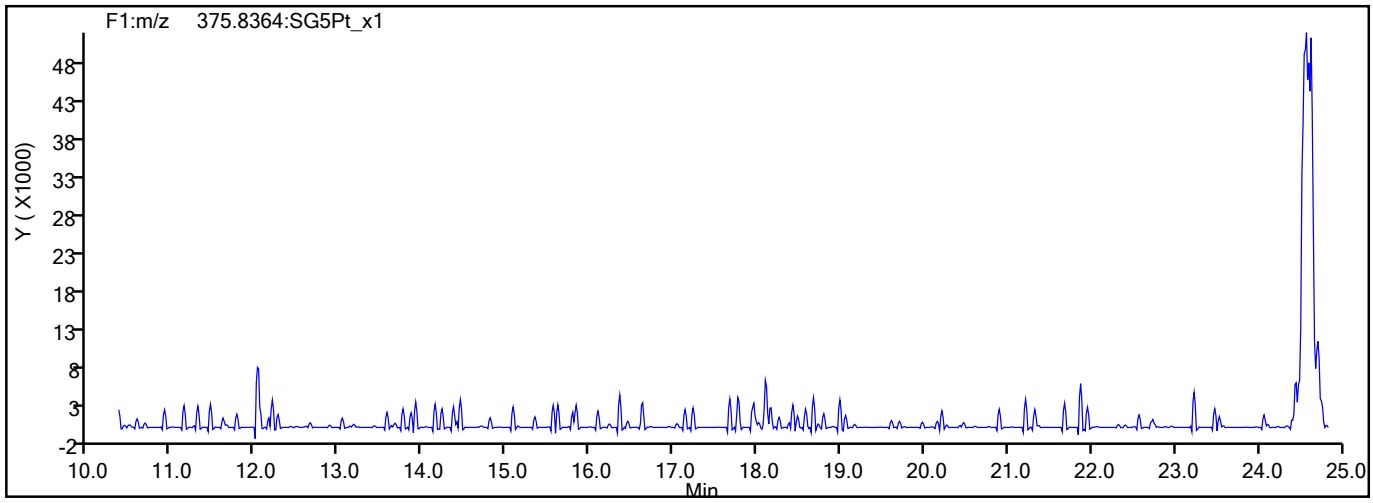

784694

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

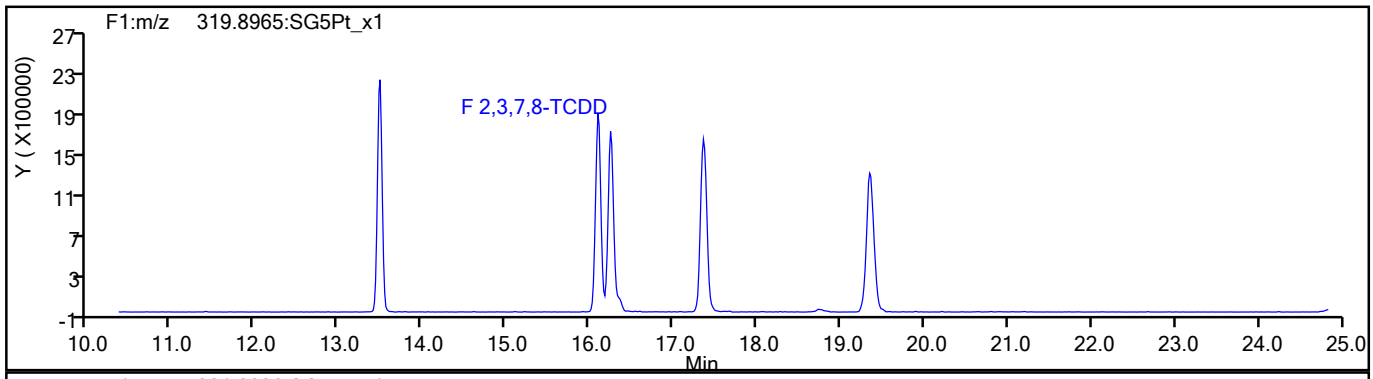

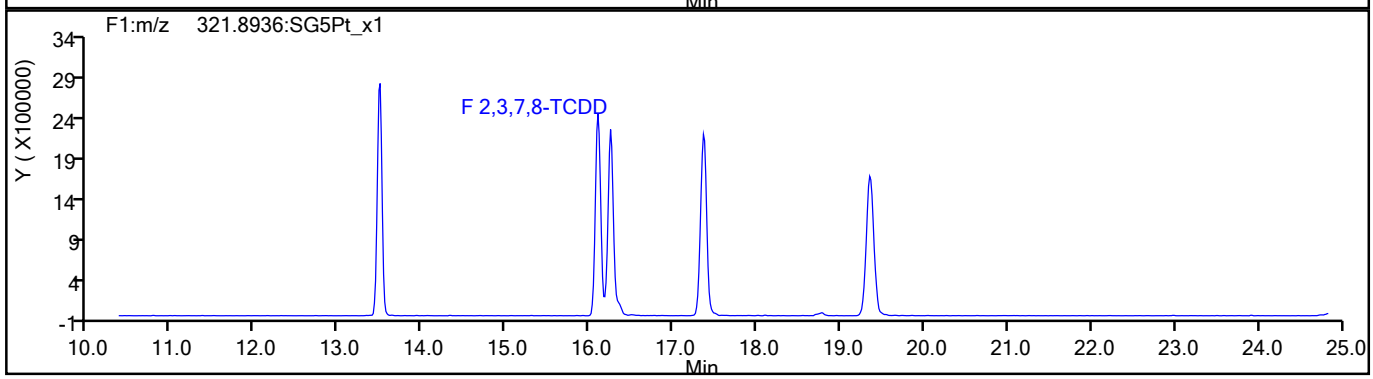

TCDD Standards

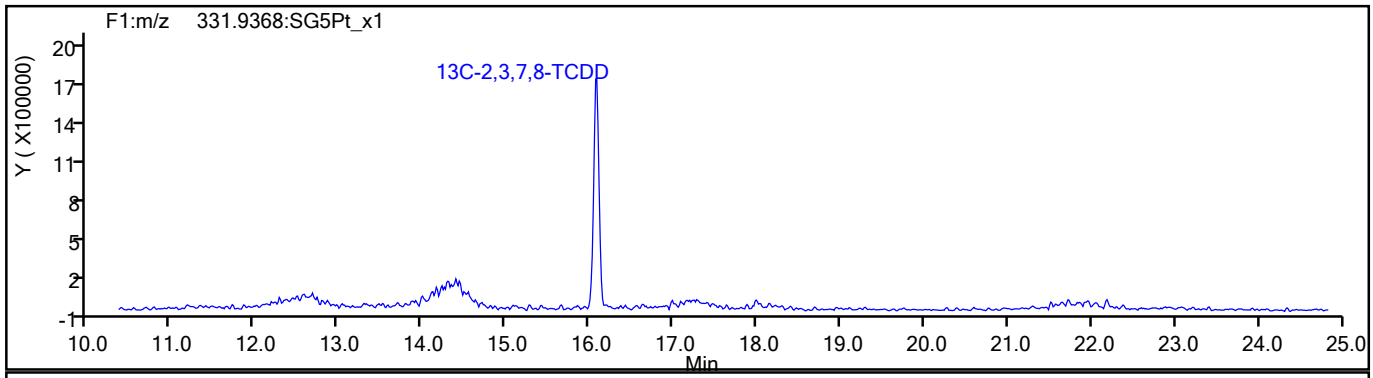

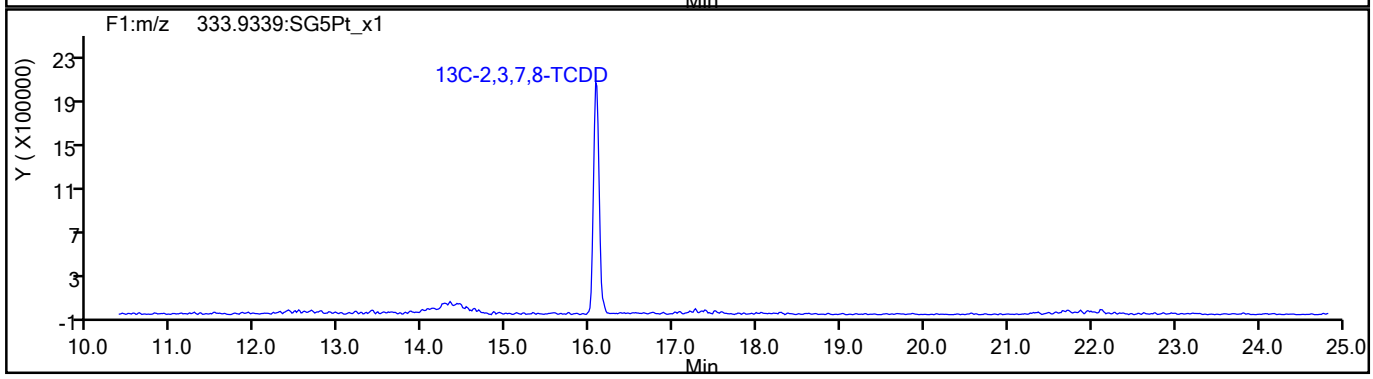

784695

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

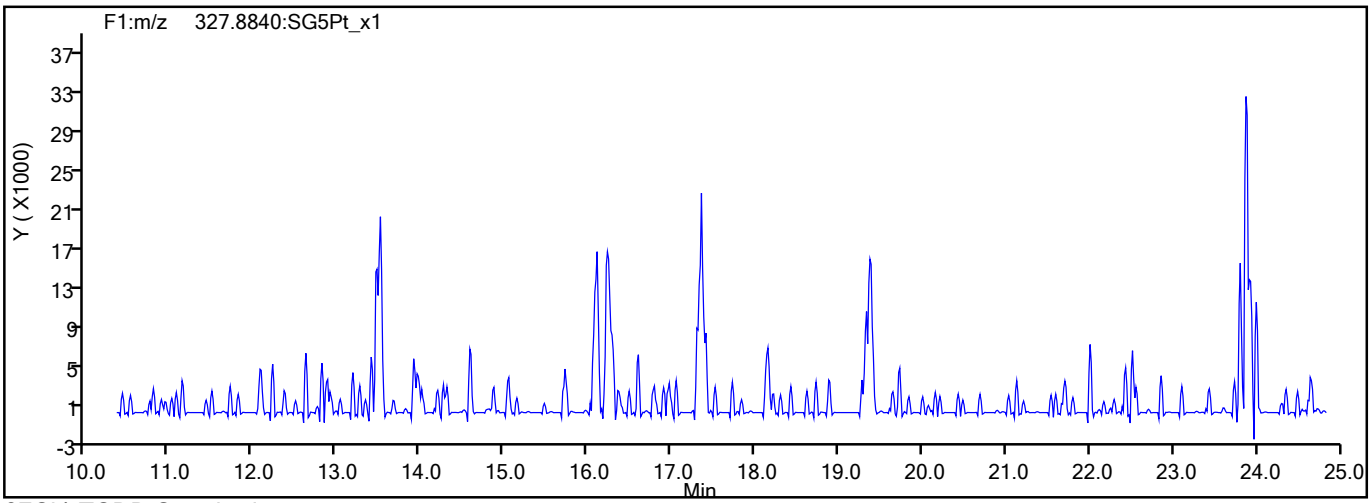

37Cl4-TCDD Standards

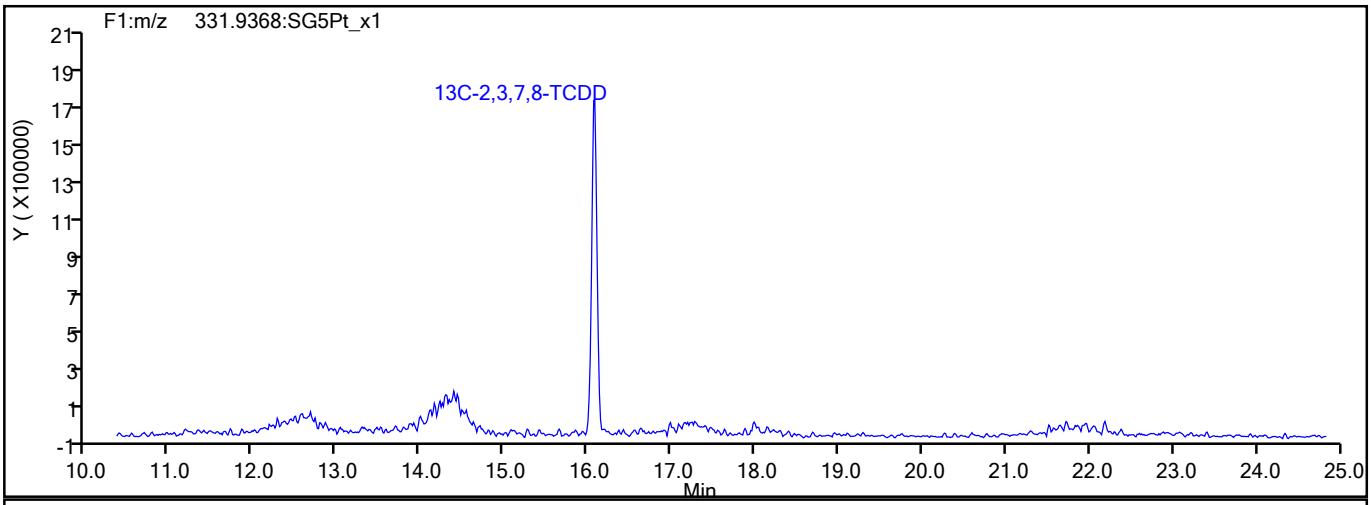

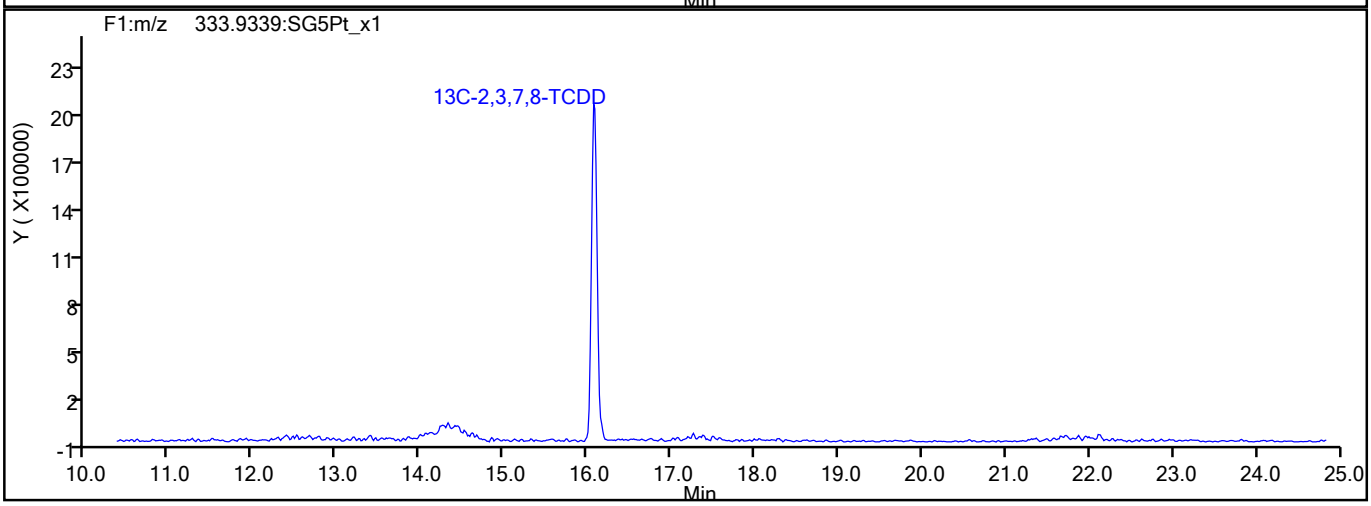

784696

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

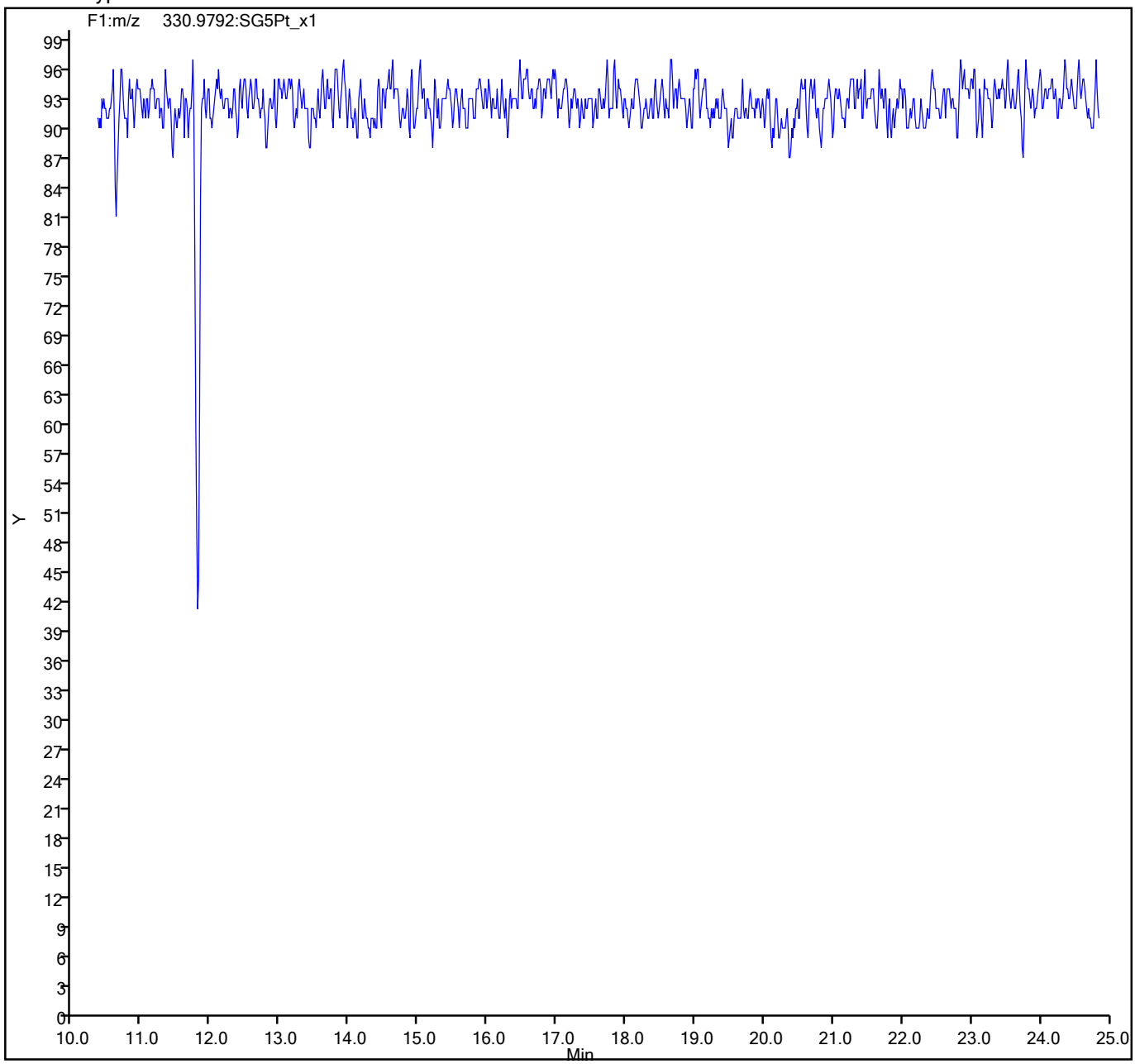

784697

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	19.630	956054	0.80	1.3459					0.00	
2,3,7,8-TCDF	19.673	1998250	0.78	1.0802	77.4	77.4	0.2129	0.2129		
A Non-2,3,7,8-sub-TCDF	19.213	12503	0.80	1.0802	0.4843	0.4843	0.2129	0.4843		
S Total TCDF					77.9	77.9	0.2129	0.2129		
D 13C-2,3,7,8-TCDD	20.918	596833	0.84	0.9317					0.00	
2,3,7,8-TCDD	20.952	682873	0.80	1.0753	42.6	42.6	0.1742	0.1742		
A Non-2,3,7,8-sub-TCDD	20.025						0.1742	0.1742		
S Total TCDD					42.6	42.6	0.1742	0.1742		
A F1 PeCDFs	24.098						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	27.473	14452	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	27.656						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	34.470						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	34.896	7360	1.11	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.309	643675	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.598	537364	1.05	1.3092						
A Non-2,3,7,8-sub-HpCDF	38.954						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.295	435480	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	38.962						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.592	1199920	0.78							
1,3,6,8-TCDD	17.122	706482	0.80							
2,3,4,7-TCDF	19.673	1998250	0.78							
1,2,3,7-TCDD	20.746	567957	0.79							
1,2,3,9-TCDF	21.124	860286	0.78							
1,2,3,9-TCDD	21.227	705730	0.80							
1,2,8,9-TCDF	22.833	906629	0.79							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	22.927	290535								
1,3,4,6,8-PeCDF	23.417	833719	1.57							
1,2,4,7,9-PeCDD	25.443	580592	1.56							
1,2,3,8,9-PeCDD	29.870	532099	1.58							
1,2,3,8,9-PeCDF	30.030	680377	1.58							
1,2,3,4,6,8-HxCDF	32.430	811785	1.23							
1,2,4,6,7,9-HxCDD	33.644	577087	1.25							
1,2,3,4,6,7-HxCDD	36.148	580699	1.24							
1,2,3,4,8,9-HxCDF	36.510	710754	1.25							
1,2,3,4,6,7,9-HpCDD	38.629	486479	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	19.630	19.630	0	1.000	423520	68874	224	560	307		
317.9389	19.639	19.630	1	1.000	532534	85912	93	232	924	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.673	19.646	2	1.002	874984	129163	148	370	873		
305.8987	19.673	19.646	2	1.002	1123266	166698	208	520	801	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	23.417	19.213	252	1.193	5547	1019	148	370	7		
305.8987	23.417	19.213	252	1.193	6956	1132	208	520	5	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.918	20.918	0	1.000	272607	40247	106	265	380		
333.9338	20.927	20.918	1	1.000	324226	50518	46	115	1098	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	20.952	20.939	1	1.002	302613	44836	90	225	498		
321.8936	20.952	20.939	1	1.002	380260	55991	80	200	700	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.025						90	225			
321.8936	20.025						80	200			
A F1 PeCDFs											
339.8597	24.098						6	15			
341.8567	24.098						22	55			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.114	27.473	-141	1.000	1272	231	55	137	4		
341.8567	25.123	27.473	-141	1.000	842	169	40	100	4	1.51(1.32-1.78)	
339.8597	26.033	27.473	-86	1.000	1834	347	55	137	6		
341.8567	26.067	27.473	-84	1.000	1408	247	40	100	6	1.30(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	26.623	27.473	-51	1.000	3412	452	55	137	8		
341.8567	26.606	27.473	-52	1.000	2424	350	40	100	9	1.41(1.32-1.78)	
339.8597	27.205	27.473	-16	1.000	2495	380	55	137	7		
341.8567	27.188	27.473	-17	1.000	1367	235	40	100	6	1.83(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	27.656						71	177			
357.8516	27.656						35	87			
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						89	222			
375.8178	34.470						66	165			
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.875	34.896	-1	1.000	3879	711	57	142	12		
391.8127	34.866	34.896	-2	1.000	3481	707	48	120	15	1.11(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	330574	91984	132	330	697		
409.7788	38.309	38.317	0	1.000	313101	85674	117	292	732	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	275340	83564	132	330	633		
409.7788	39.598	39.608	-1	1.000	262024	79894	117	292	683	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						132	330			
409.7788	38.954						117	292			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.295	39.301	0	1.000	225083	68745	95	237	724		
425.7737	39.295	39.301	0	1.000	210397	63713	87	217	732	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.962						95	237			
425.7737	38.962						87	217			
1,3,6,8-TCDF											
303.9016	15.592	15.592	0		526894	111834	148	370	756		
305.8987	15.583	15.592	-1		673026	142703	208	520	686	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.122	17.122	0		313043	59426	90	225	660		
321.8936	17.122	17.122	0		393439	76022	80	200	950	0.80(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	19.673	19.673	0		874984	129163	148	370	873		
305.8987	19.673	19.673	0		1123266	166698	208	520	801	0.78(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	20.746	20.746	0		250988	38559	90	225	428		
321.8936	20.746	20.746	0		316969	48950	80	200	612	0.79(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.124	21.124	0		377767	55151	148	370	373		
305.8987	21.124	21.124	0		482519	70000	208	520	337	0.78(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	21.227	21.227	0		313060	44546	90	225	495		
321.8936	21.219	21.227	-1		392670	57474	80	200	718	0.80(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	22.833	22.833	0		399193	52133	148	370	352		
305.8987	22.833	22.833	0		507436	68524	208	520	329	0.79(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	22.927	22.927	0		290535	38894	90	225	432		
1,3,4,6,8-PeCDF											
339.8597	23.417	23.417	0		509034	87286	6	15	14548		
341.8567	23.417	23.417	0		324685	55380	22	55	2517	1.57(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	25.443	25.443	0		354036	58724	71	177	827		
357.8516	25.443	25.443	0		226556	37367	35	87	1068	1.56(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	29.870	29.870	0		325767	47119	71	177	664		
357.8516	29.870	29.870	0		206332	29856	35	87	853	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.030	30.030	0		416382	57063	55	137	1038		
341.8567	30.030	30.030	0		263995	36391	40	100	910	1.58(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	32.430	32.430	0		447956	61361	89	222	689		
375.8178	32.421	32.430	-1		363829	50870	66	165	771	1.23(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	33.644	33.644	0		320872	55052	57	142	966		
391.8127	33.644	33.644	0		256215	45045	48	120	938	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.148	36.148	0		321739	75271	57	142	1321		
391.8127	36.148	36.148	0		258960	61340	48	120	1278	1.24(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.510	36.510	0		394836	96545	89	222	1085		
375.8178	36.510	36.510	0		315918	78144	66	165	1184	1.25(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.629	38.629	0		248662	72309	95	237	761		
425.7737	38.629	38.629	0		237817	69783	87	217	802	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	956054	154786

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	956054	154786

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
23.417	5547	1019	6956	1132	0.4843	0.80	
Signal Totals:							
	5547	1019	6956	1132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12503	2151				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4843 = (12503 * 40.000) / (956054 * 1.080)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	08-Jun-2021 12:40:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	496688	Lims Sample ID:	1

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.114	1272	231	842	169		1.51	
26.033	1834	347	1408	247		1.30	R
26.623	3412	452	2424	350		1.41	
27.205	2495	380	1367	235		1.83	R
Signal Totals:							
	9013	1410	6041	1001			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15054	2411				1.49	RQ
	14452	2371					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (15054 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (14452 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 34.896

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.875	3879	711	3481	707		1.11	
Signal Totals:							
	3879	711	3481	707			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7360	1418				1.11	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (7360 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

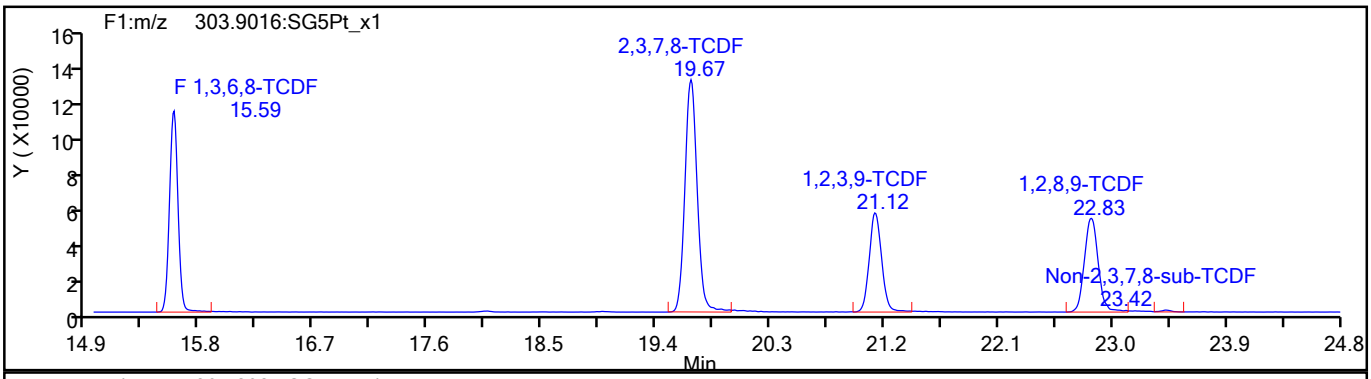

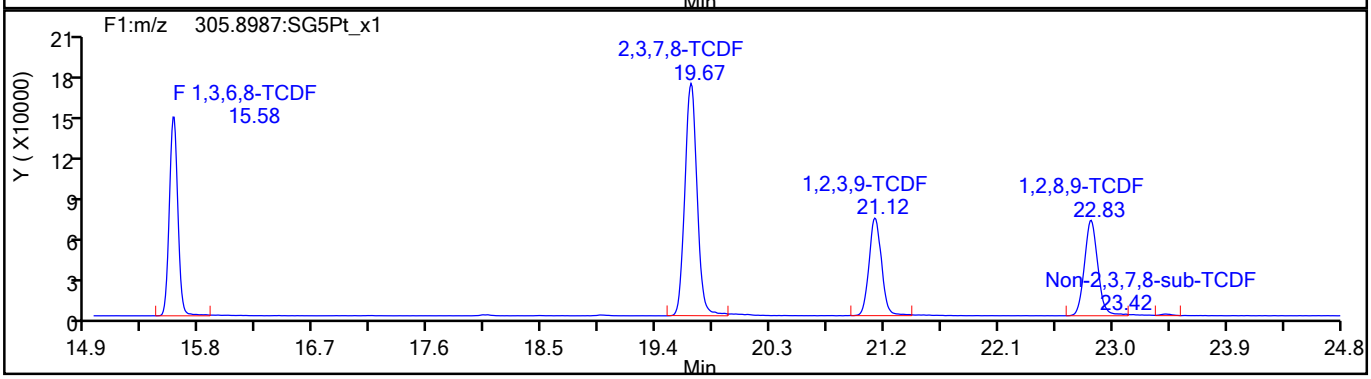

TCDF Standards

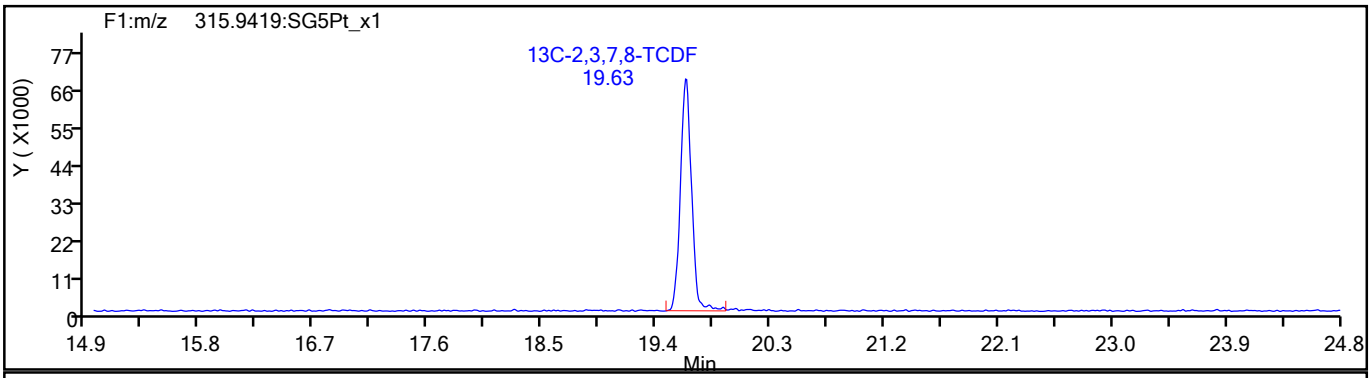

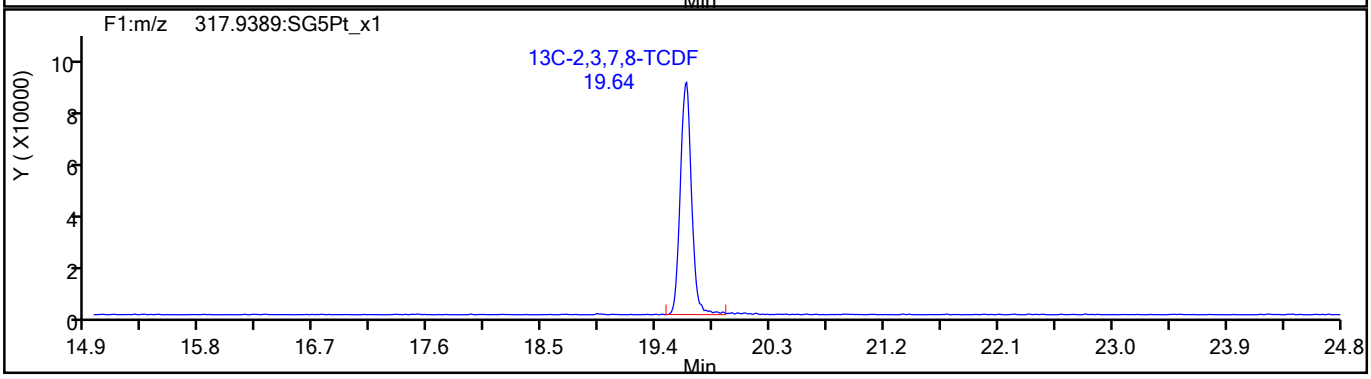

784706

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

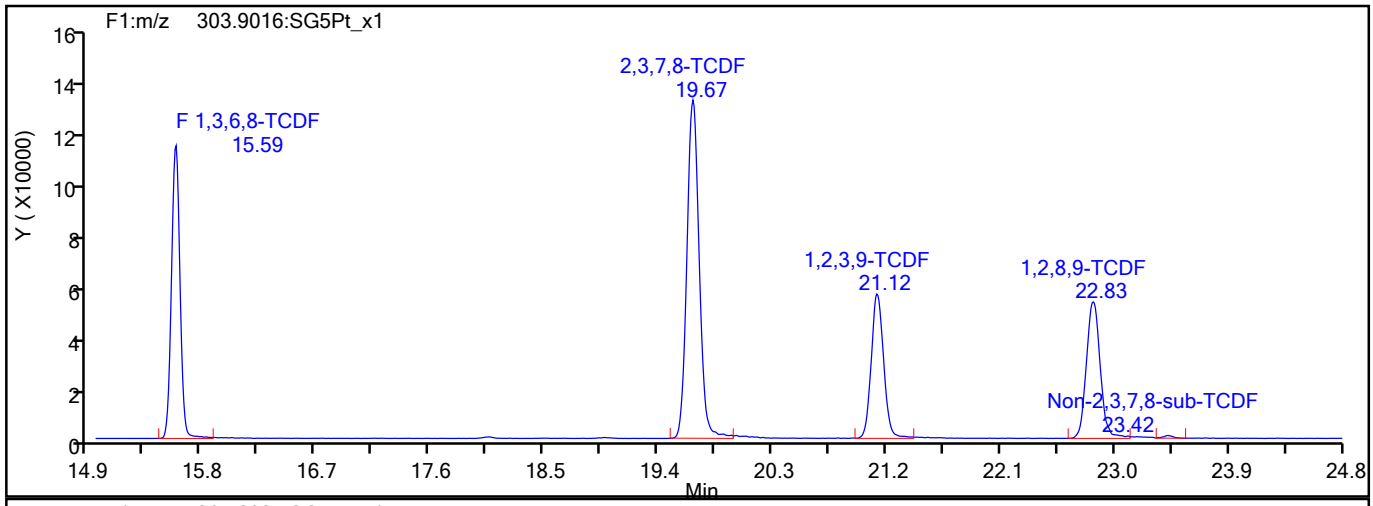

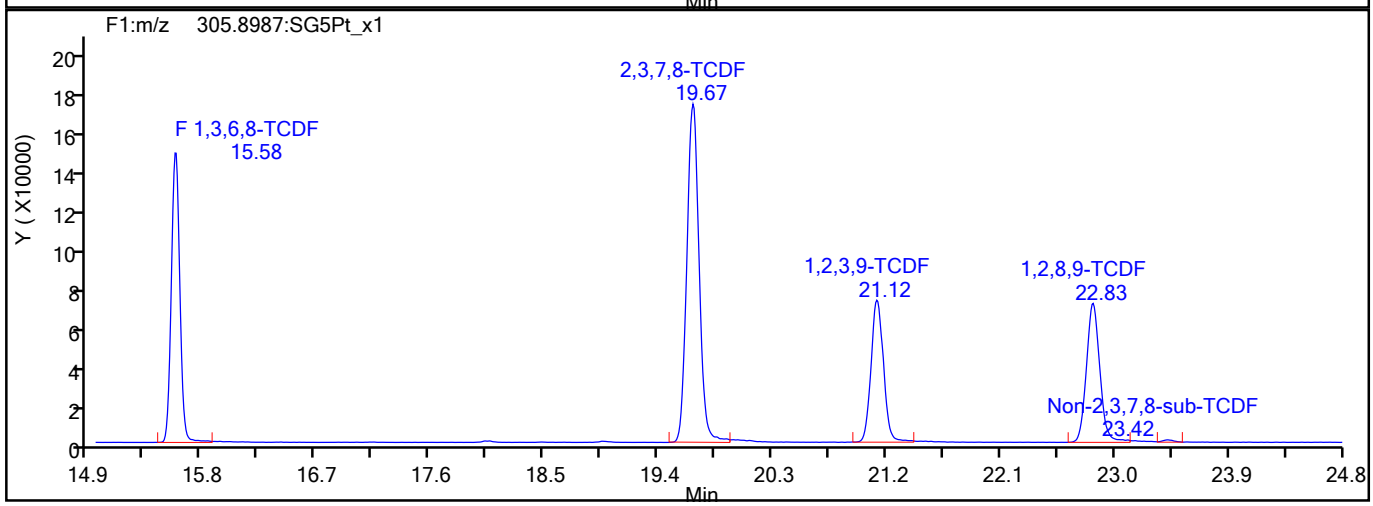

TCDF Interference Mass

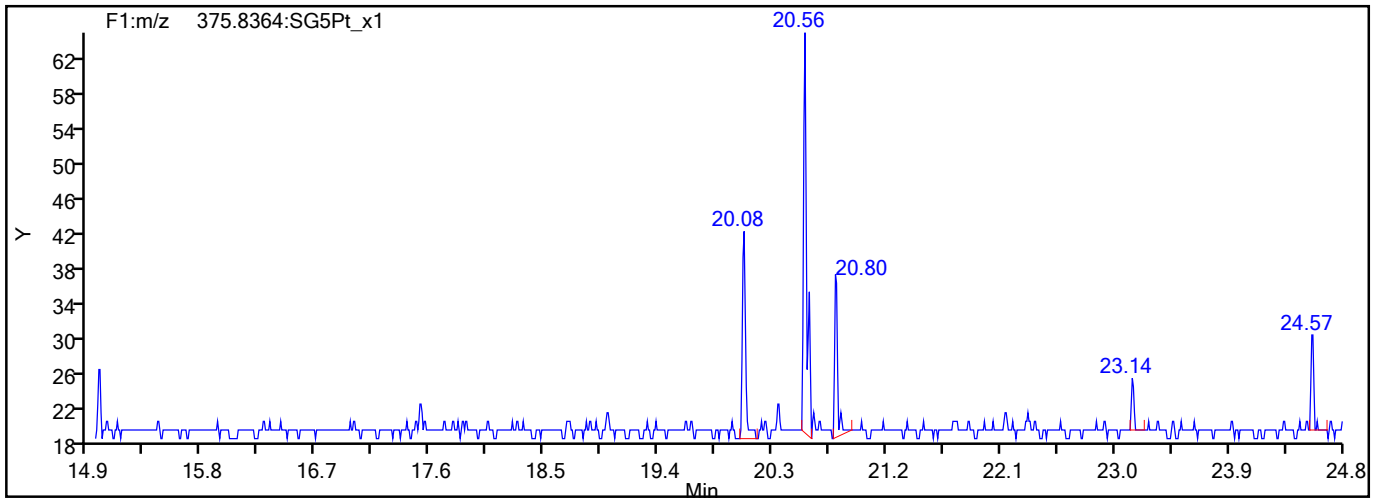

784707

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

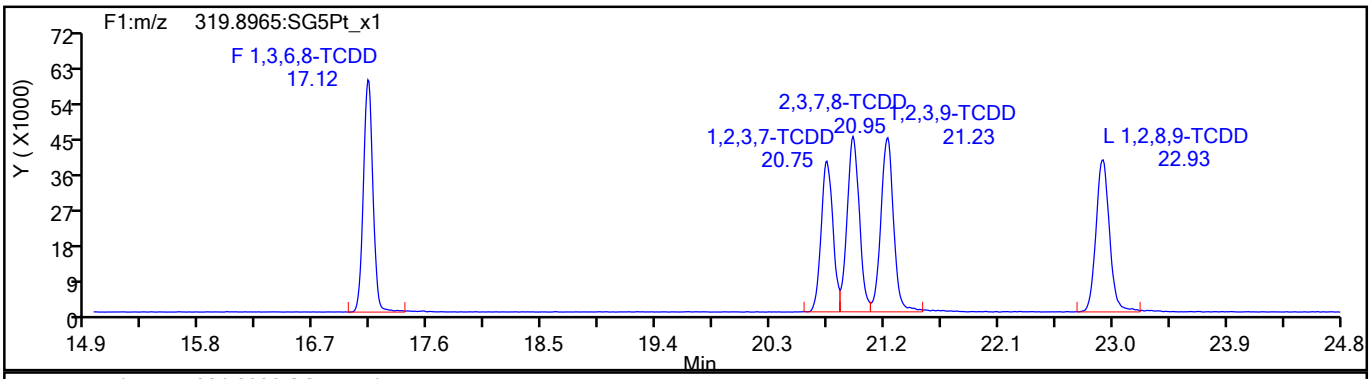

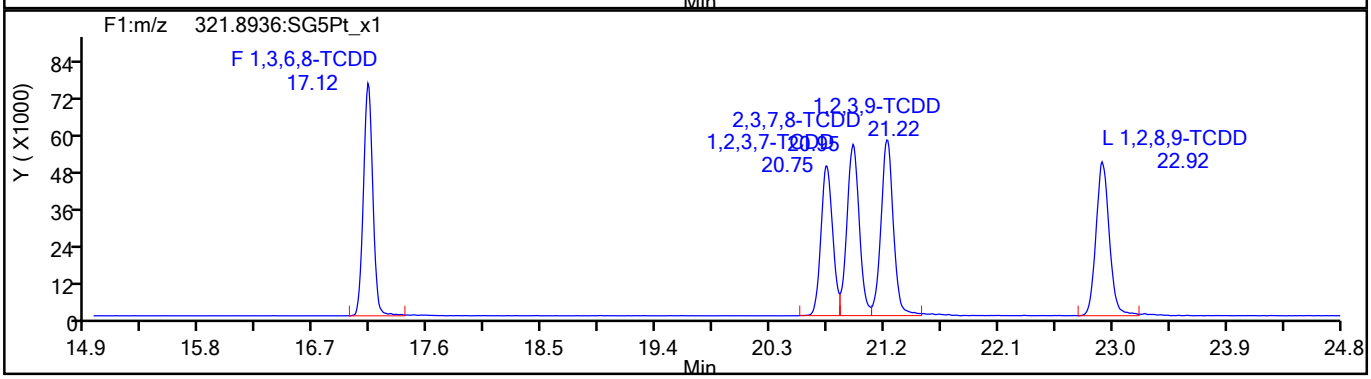

TCDD Standards

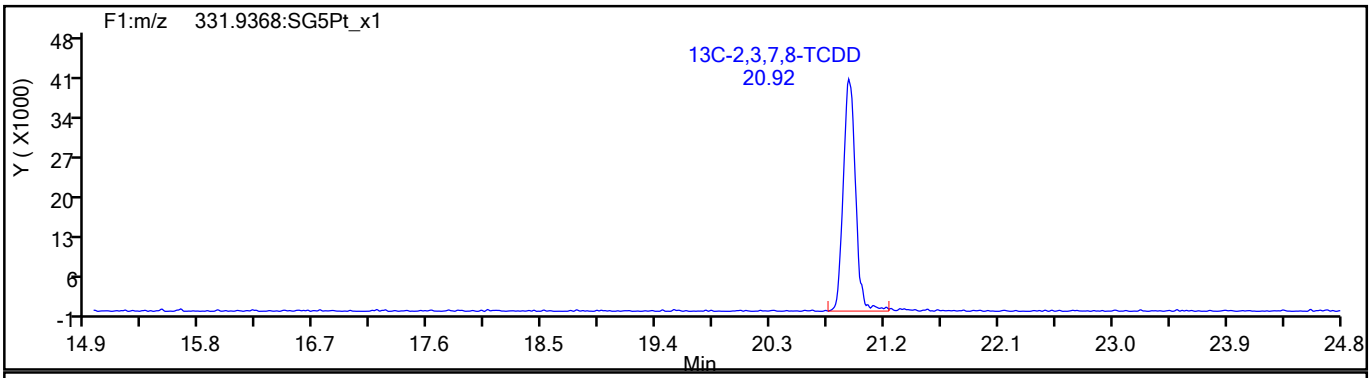

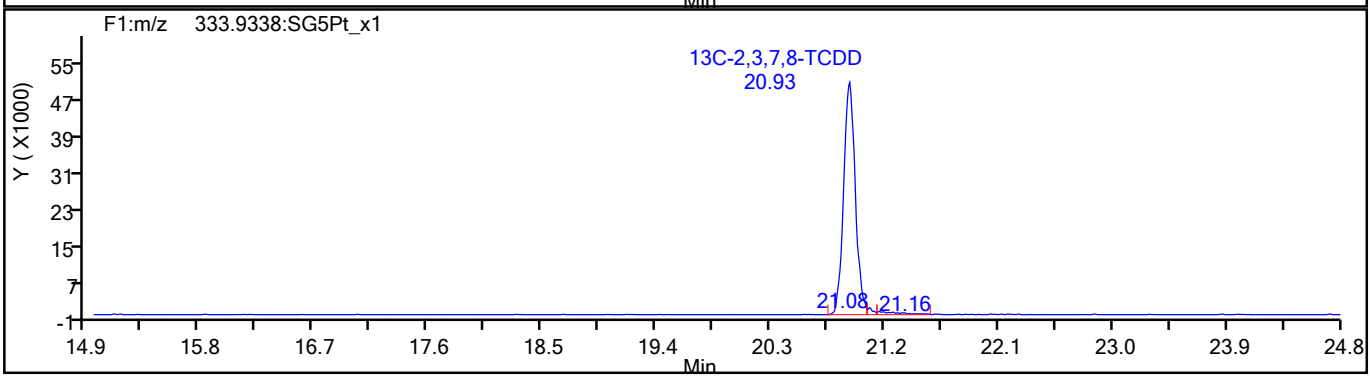

784708

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

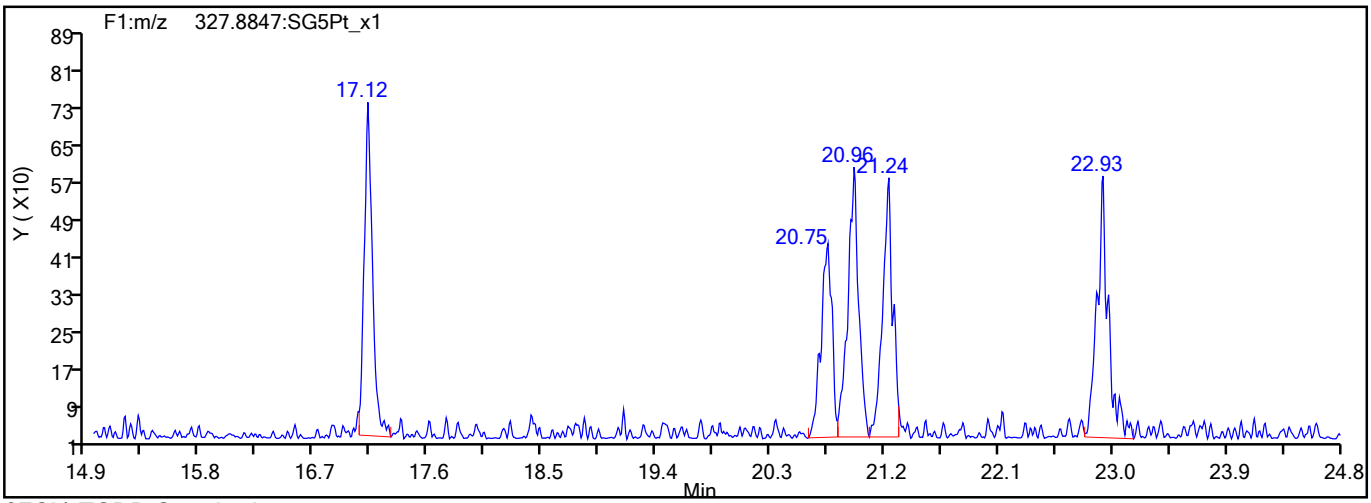

37Cl4-TCDD Standards

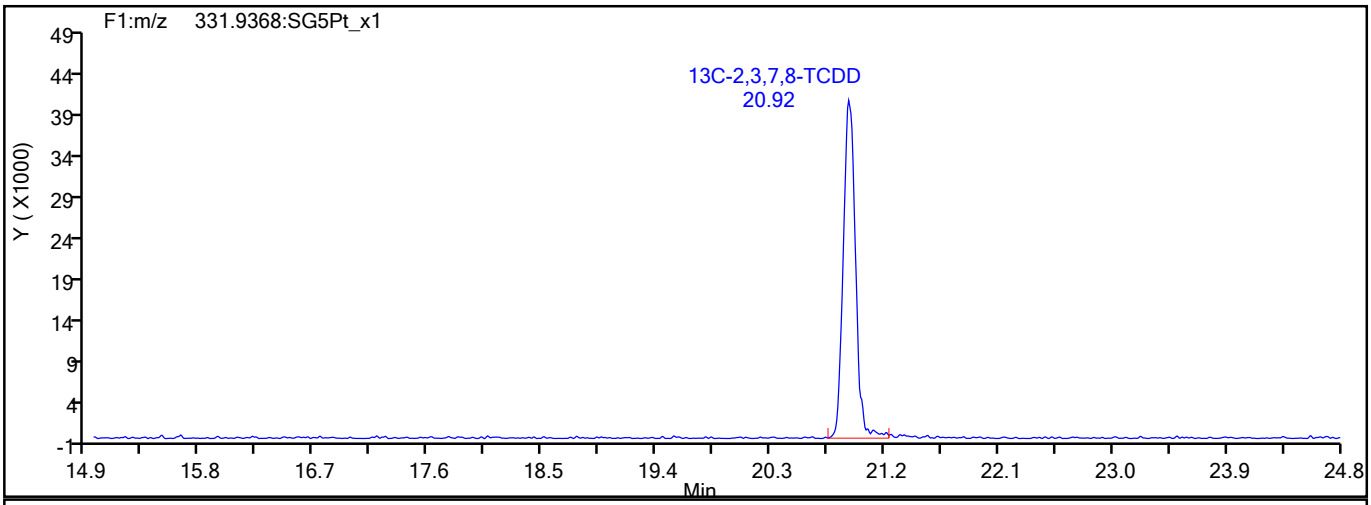

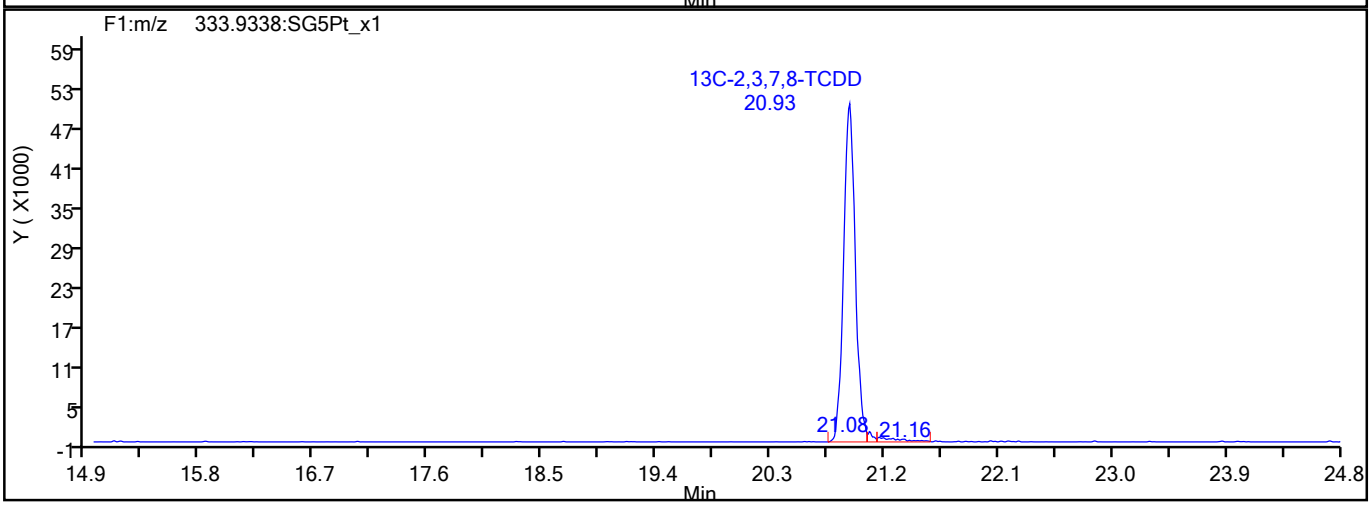

784709

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

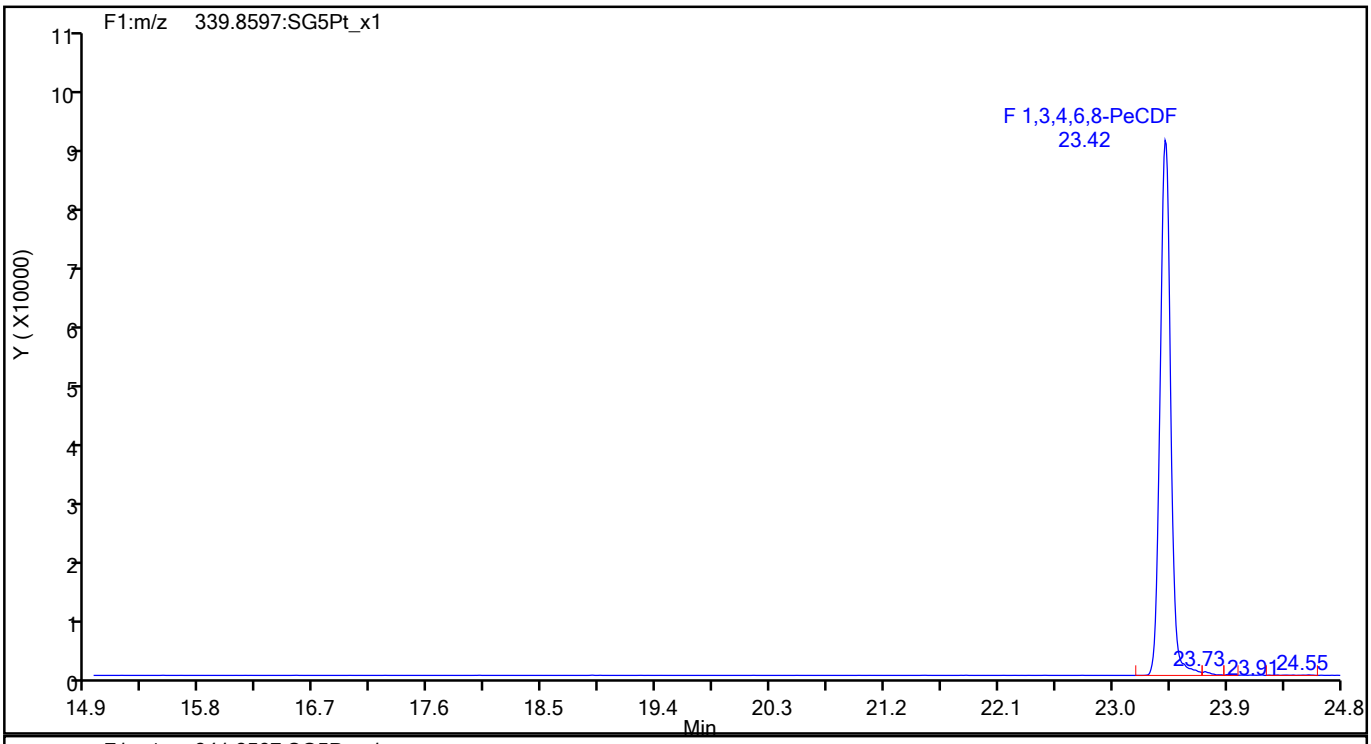

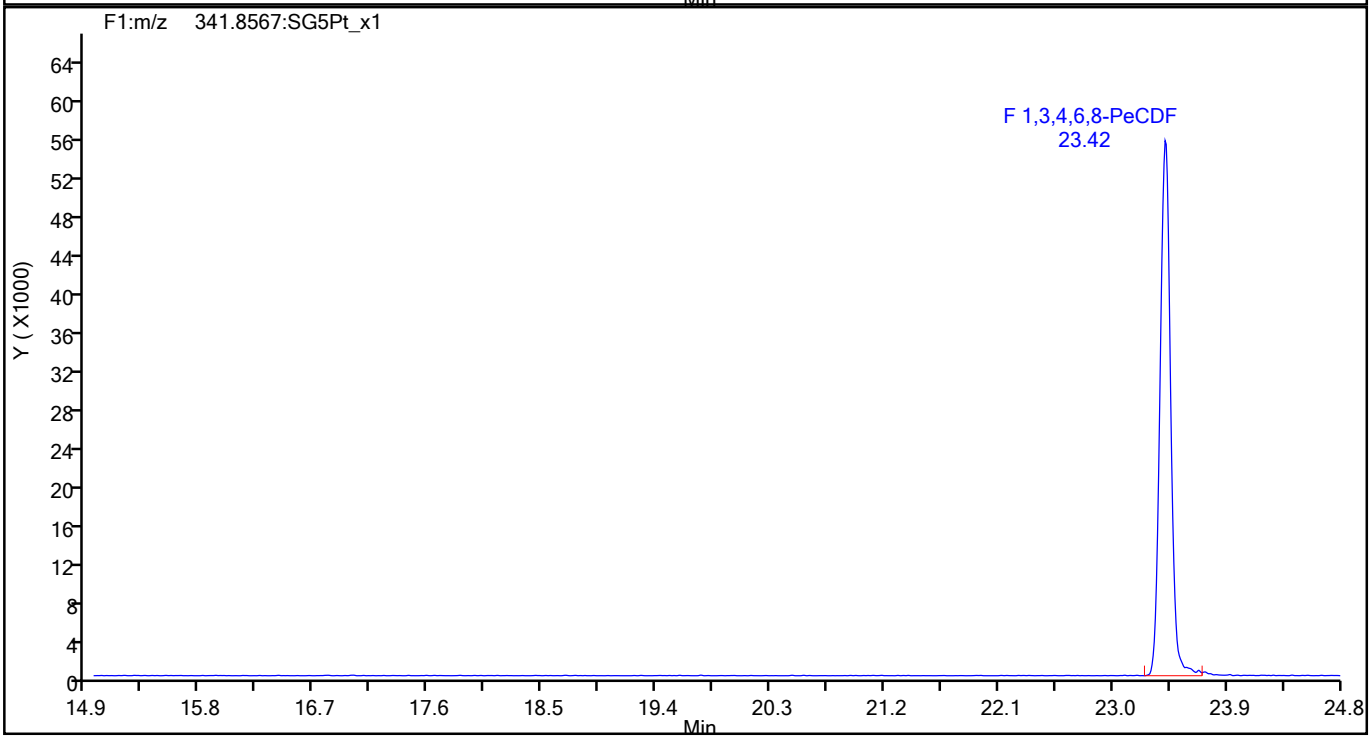

784710

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

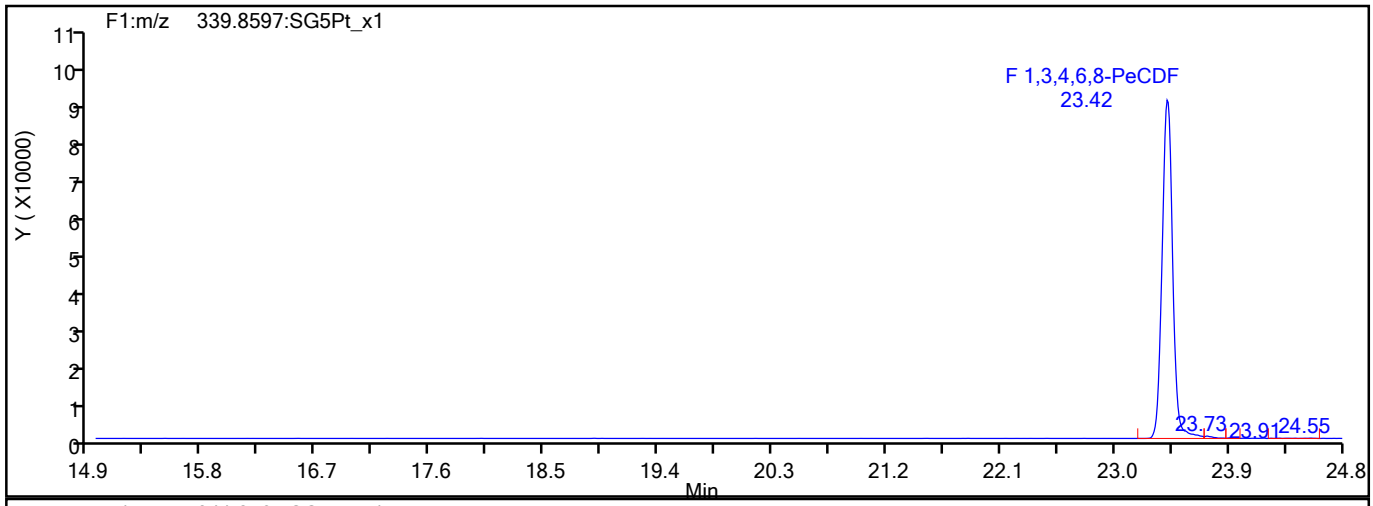

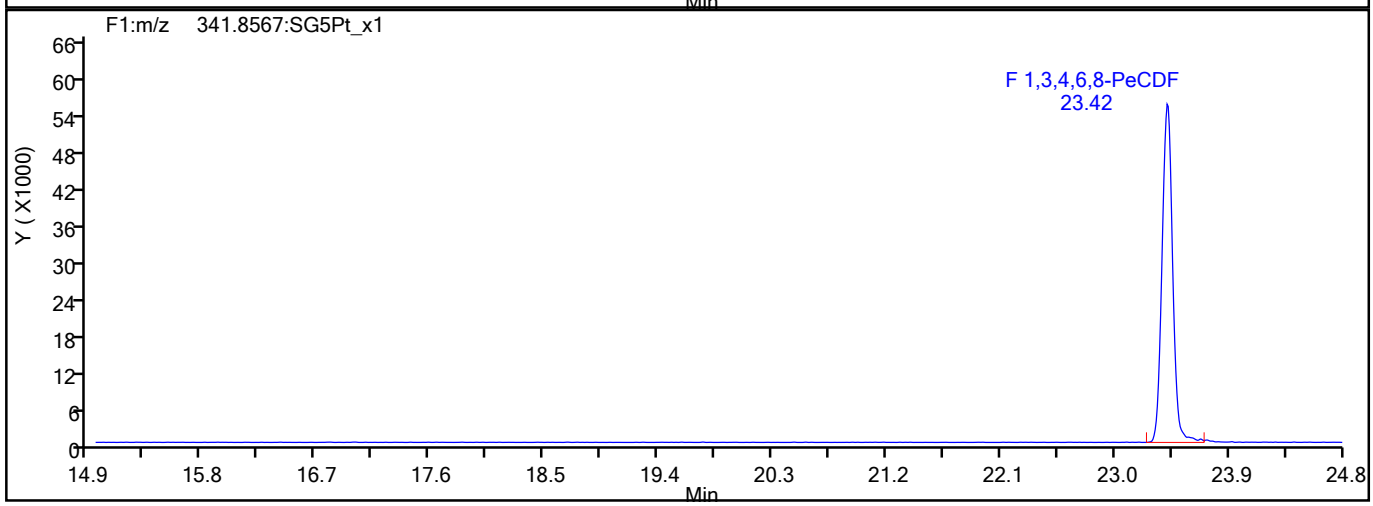

F1 PeCDFs Interference Mass

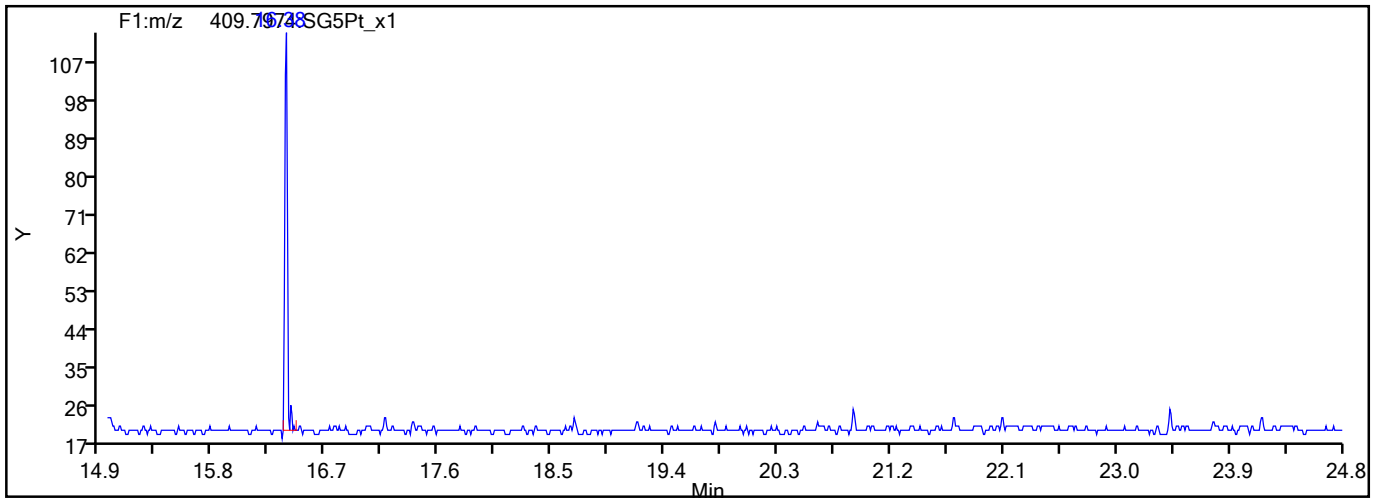

784711

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

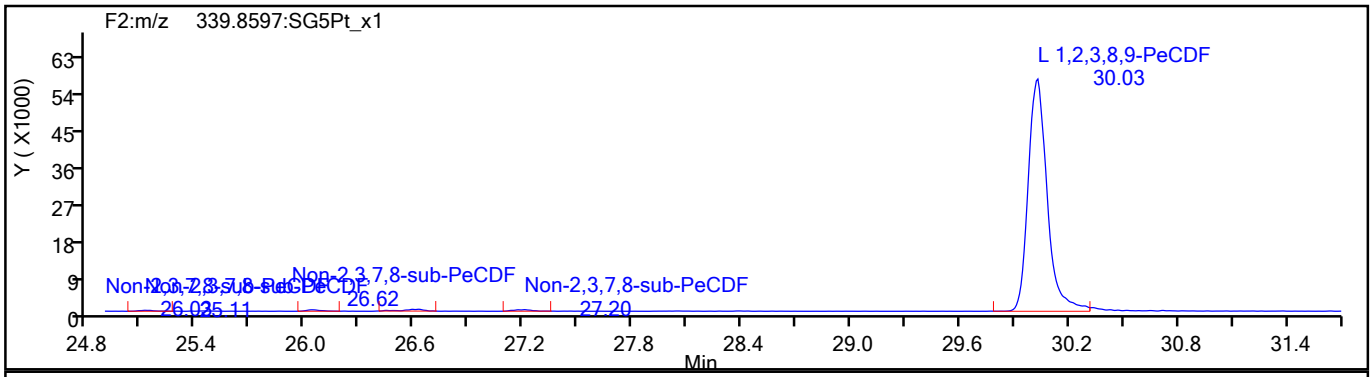

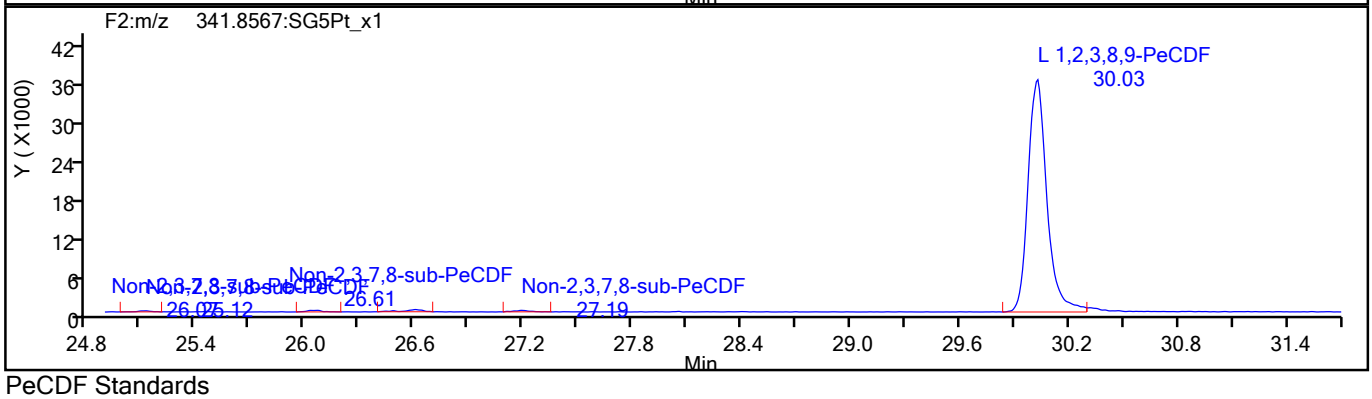

PeCDF Standards

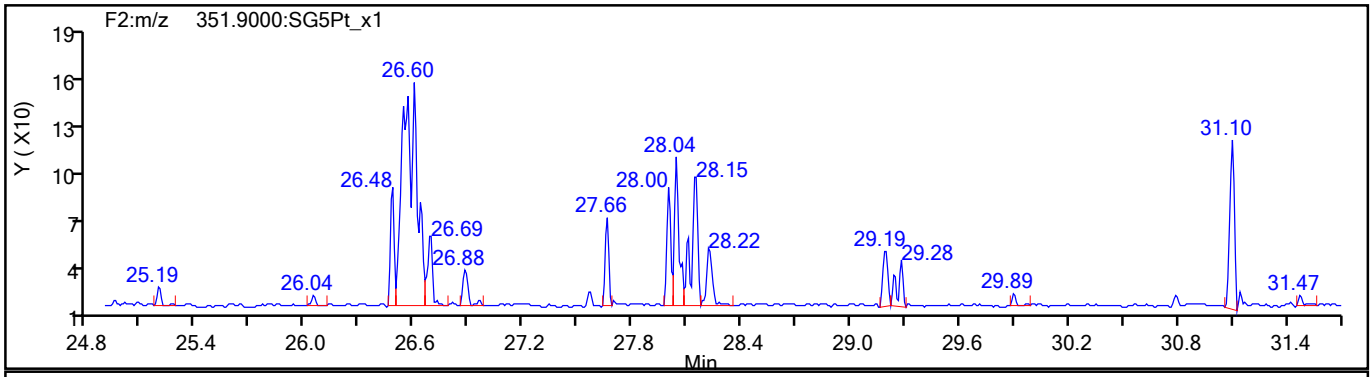

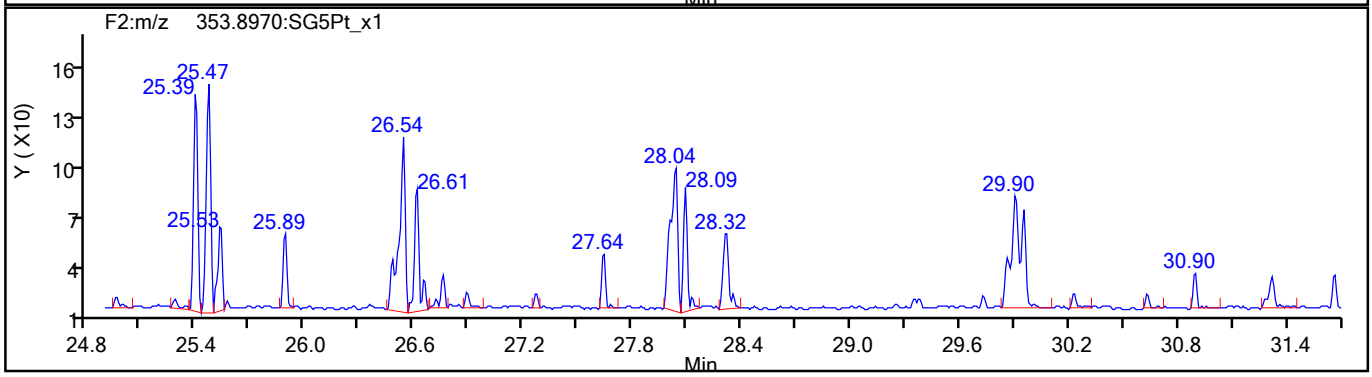

784712

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

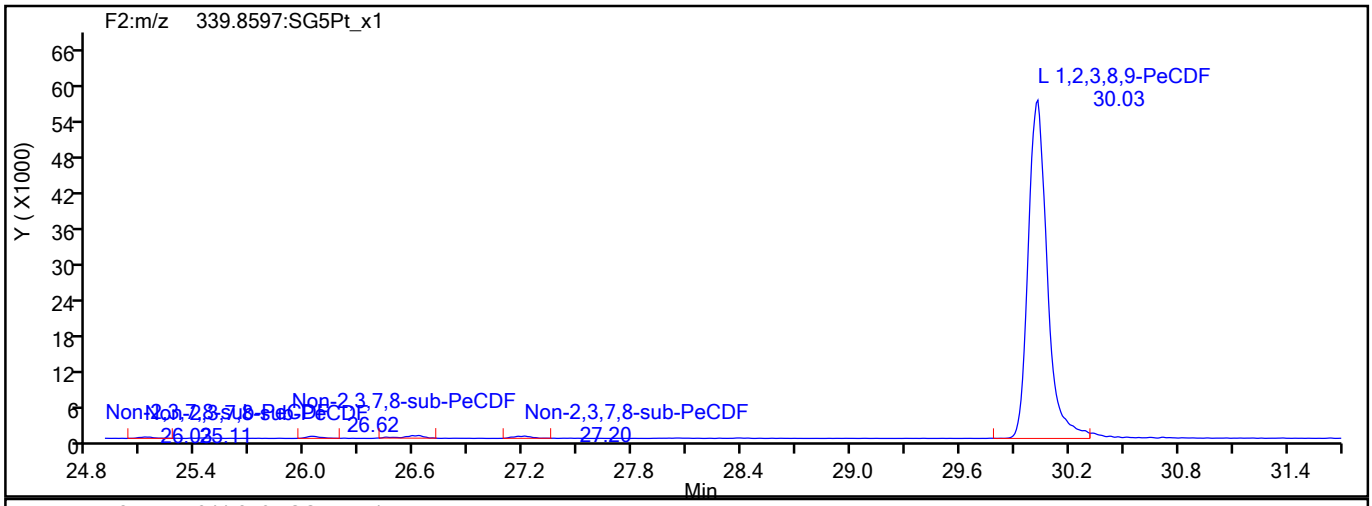

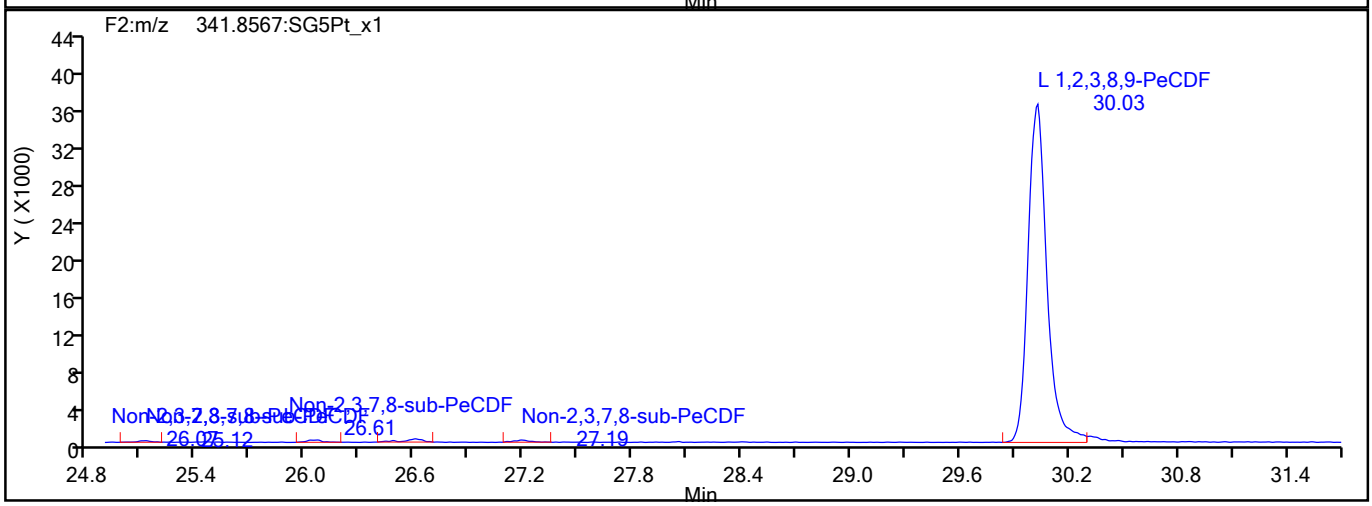

PeCDF Interference Mass

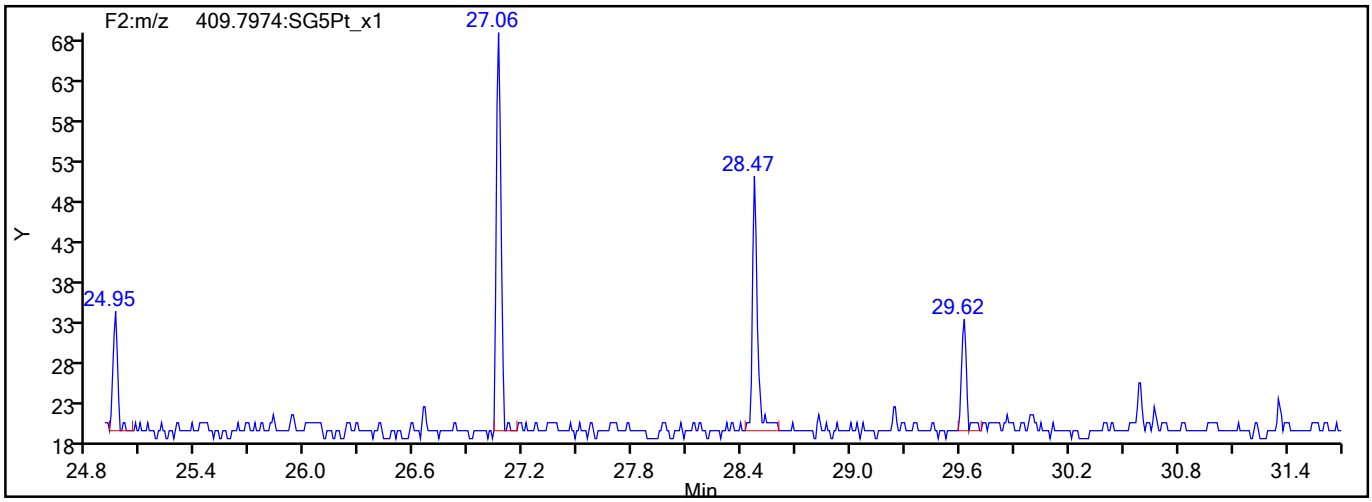

784713

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

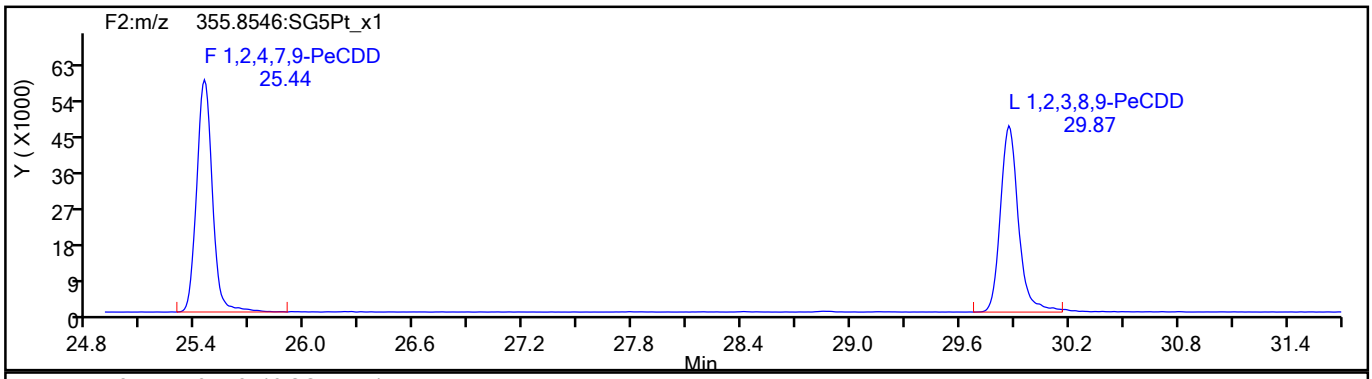

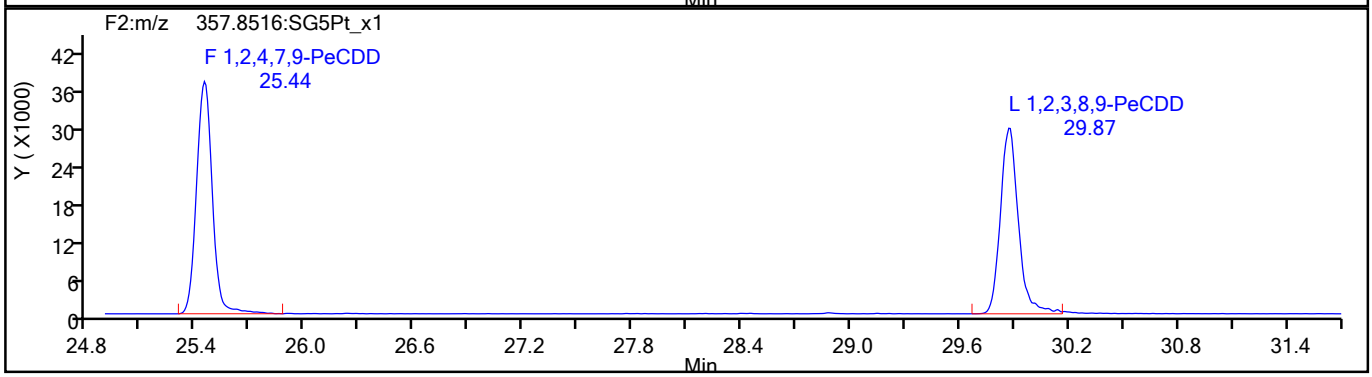

PeCDD Standards

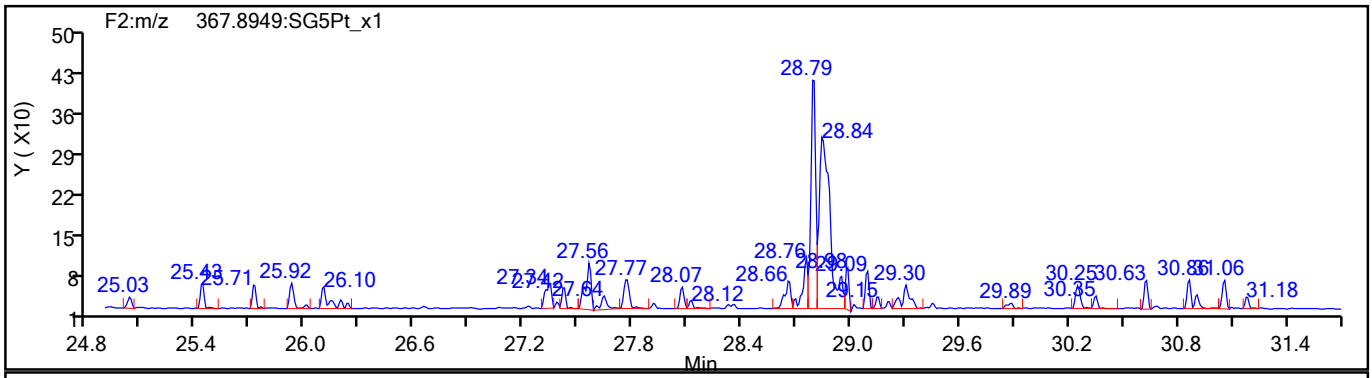

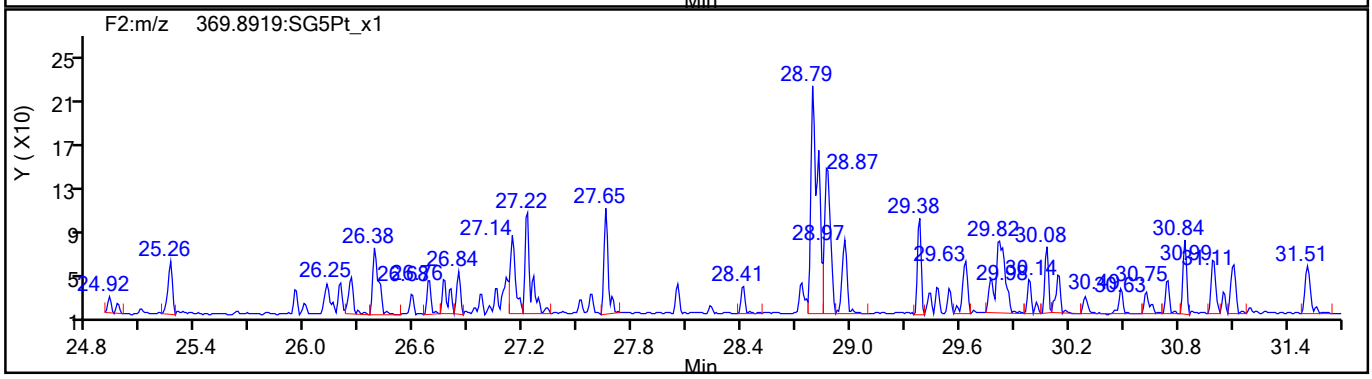

784714

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

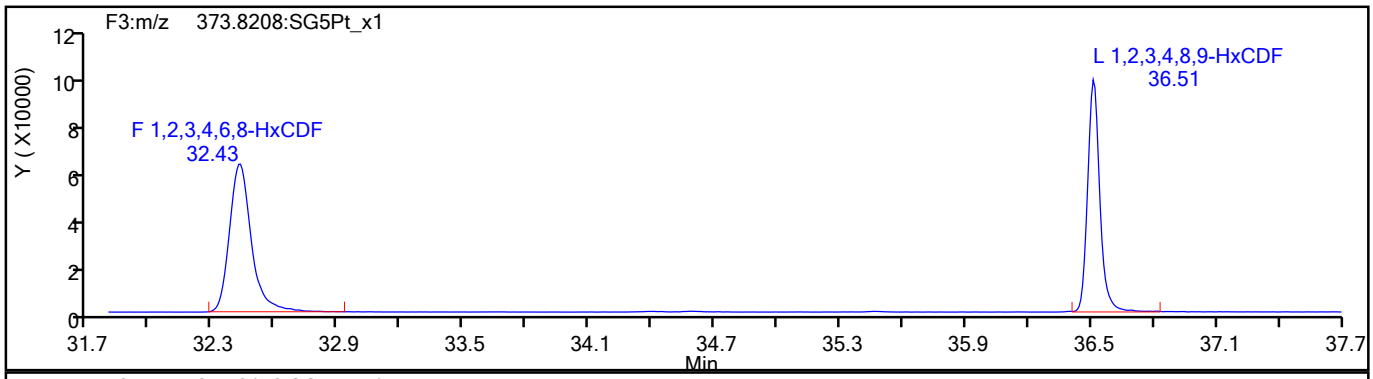

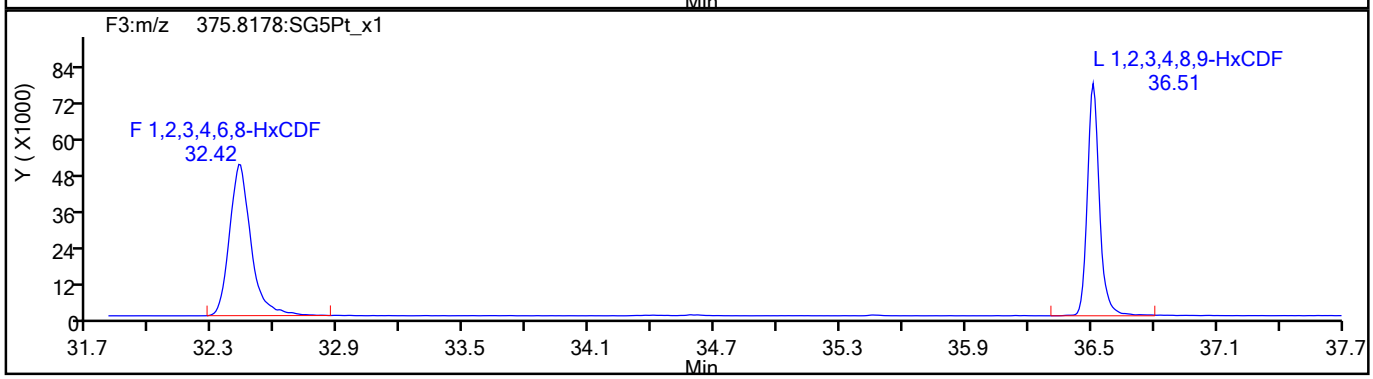

HxCDF Standards

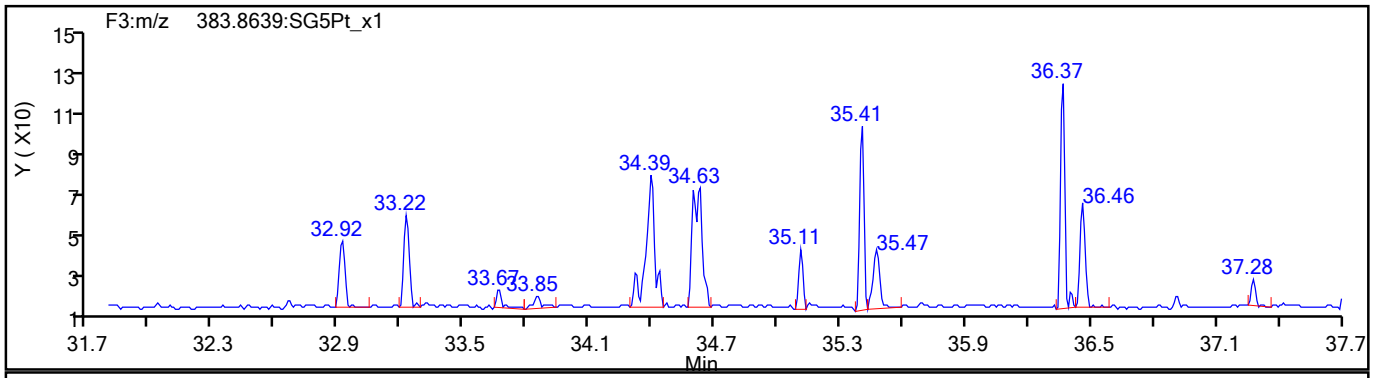

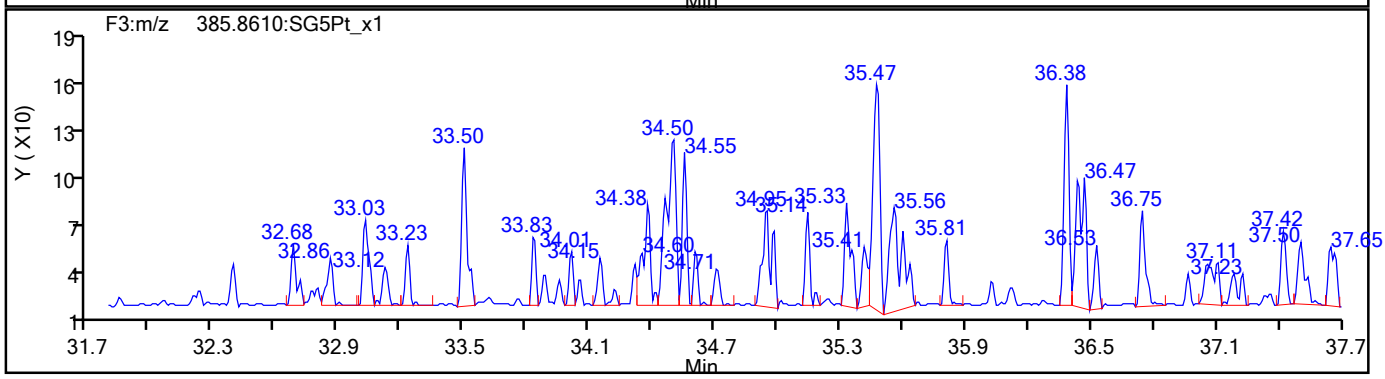

784715

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

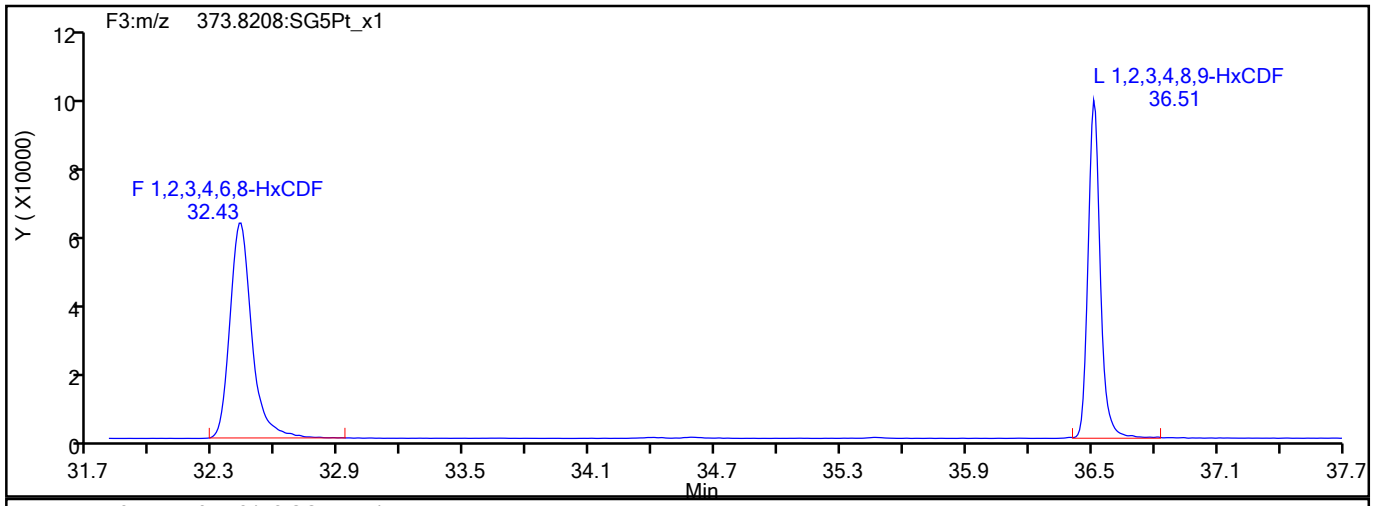

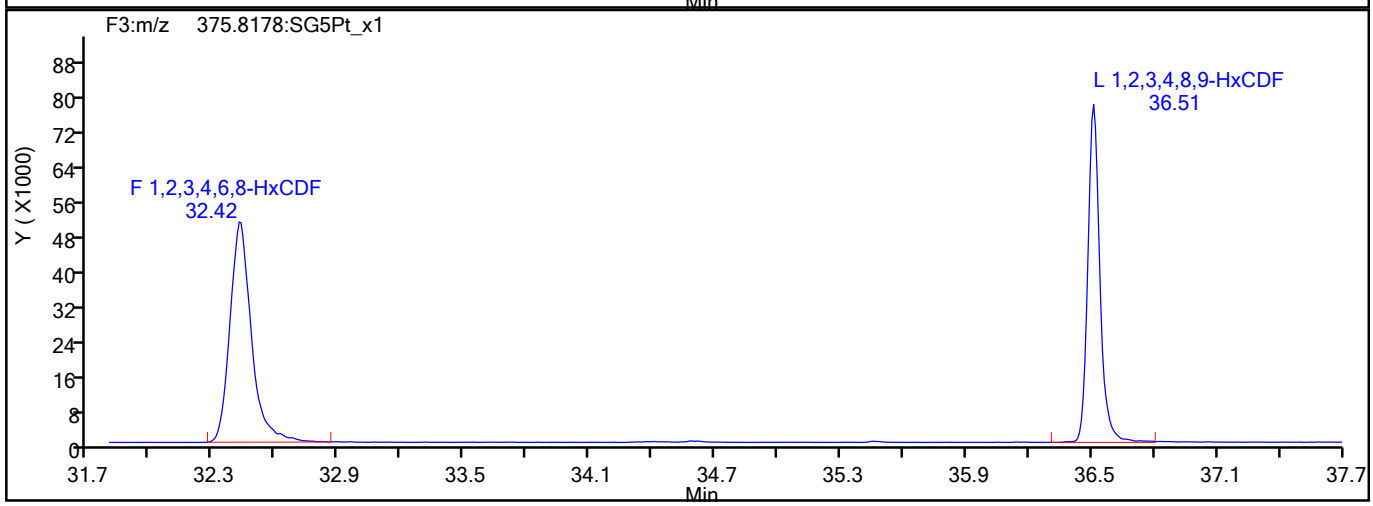

HxCDF Interference Mass

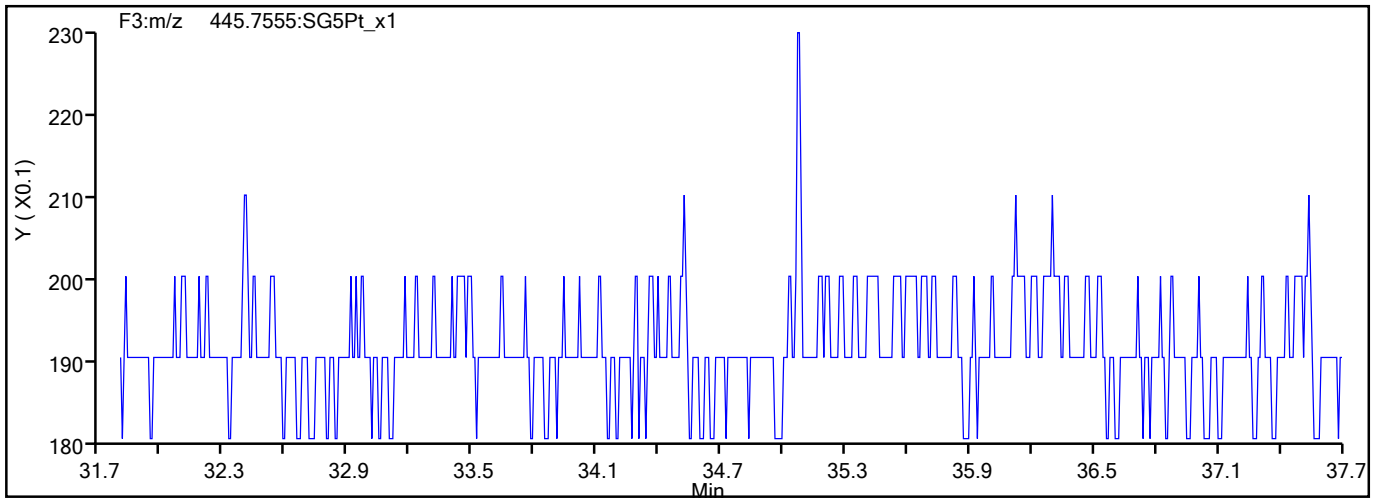

784716

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

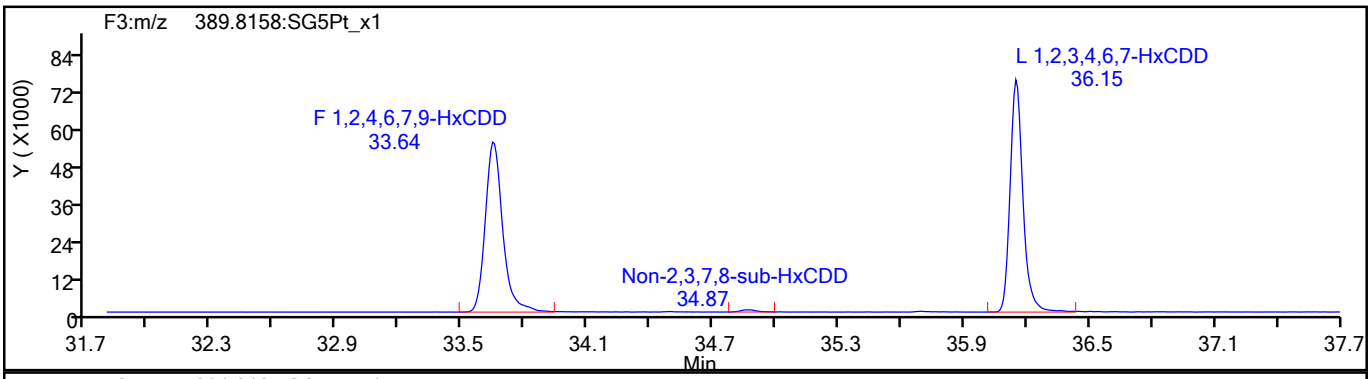

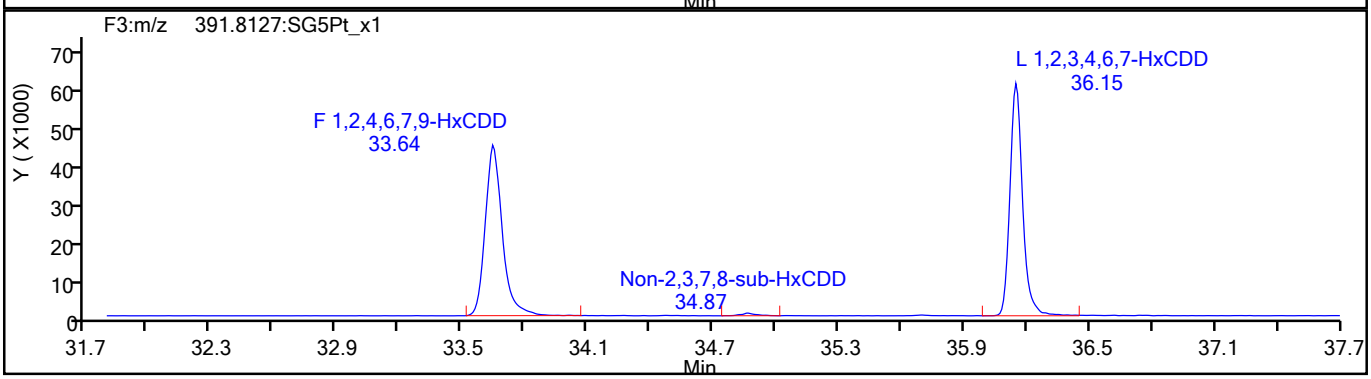

HxCDD Standards

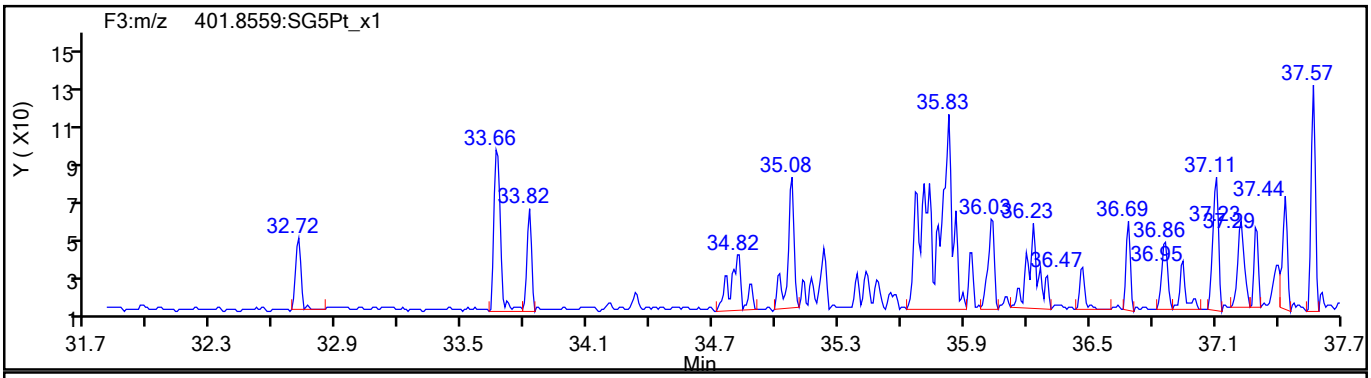

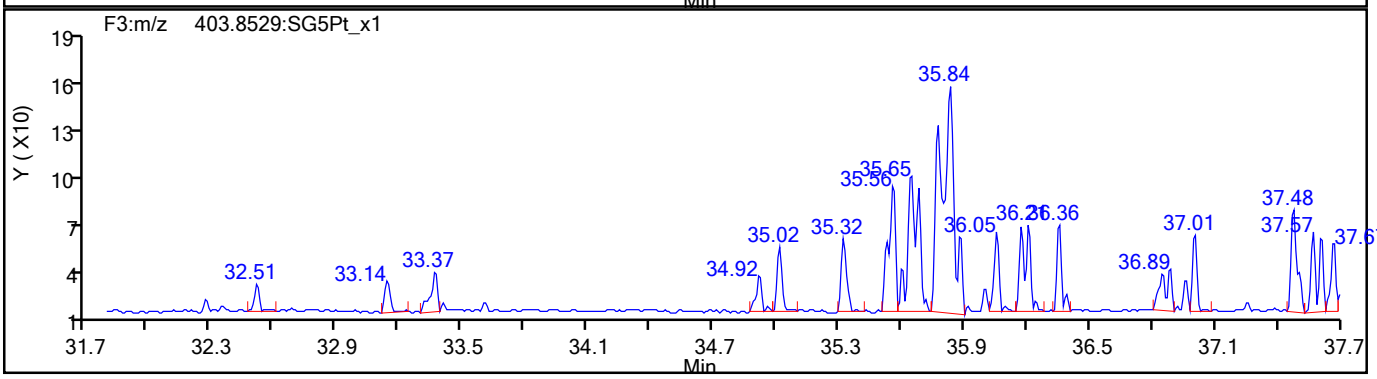

784717

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

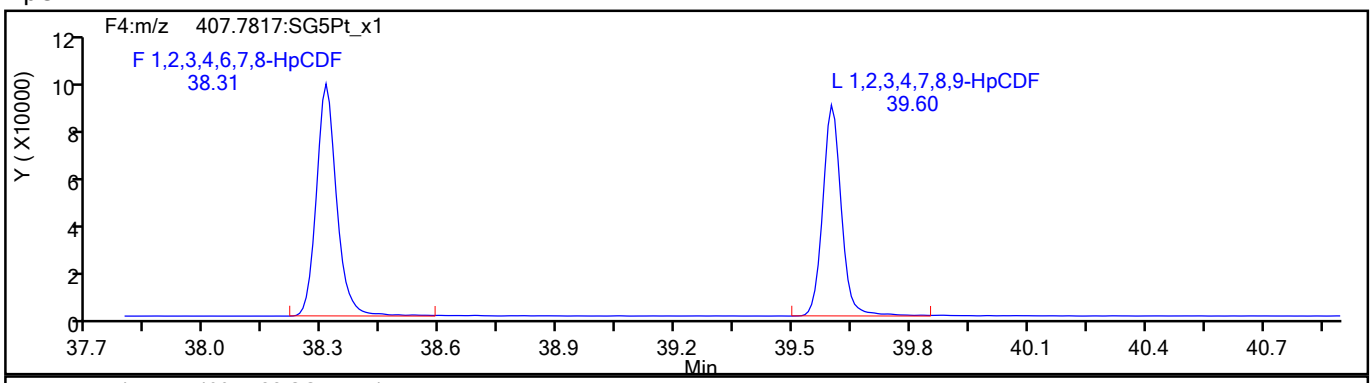

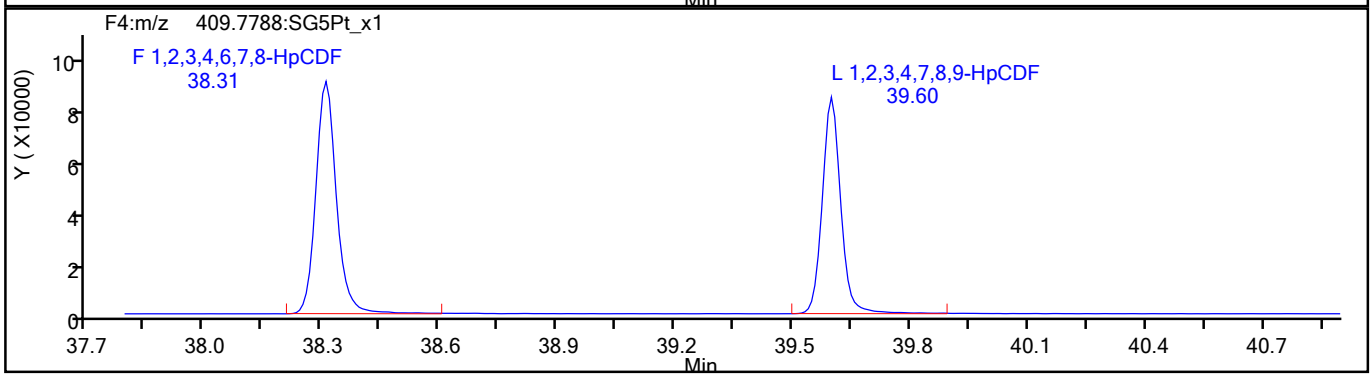

HpCDF Standards

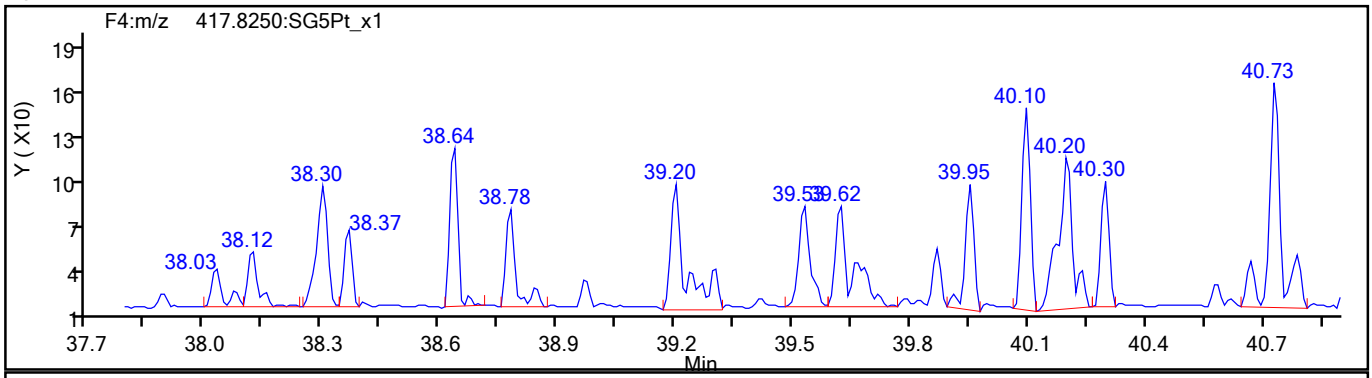

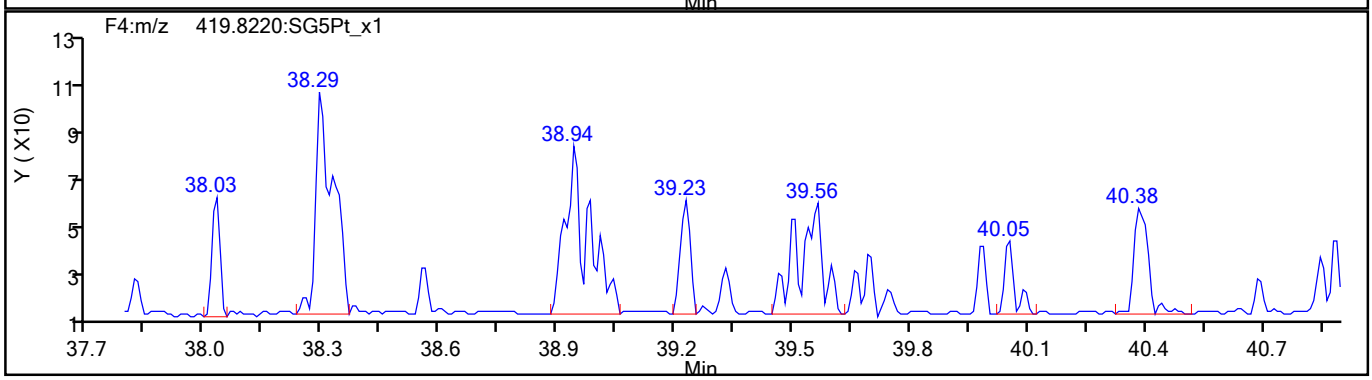

784718

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

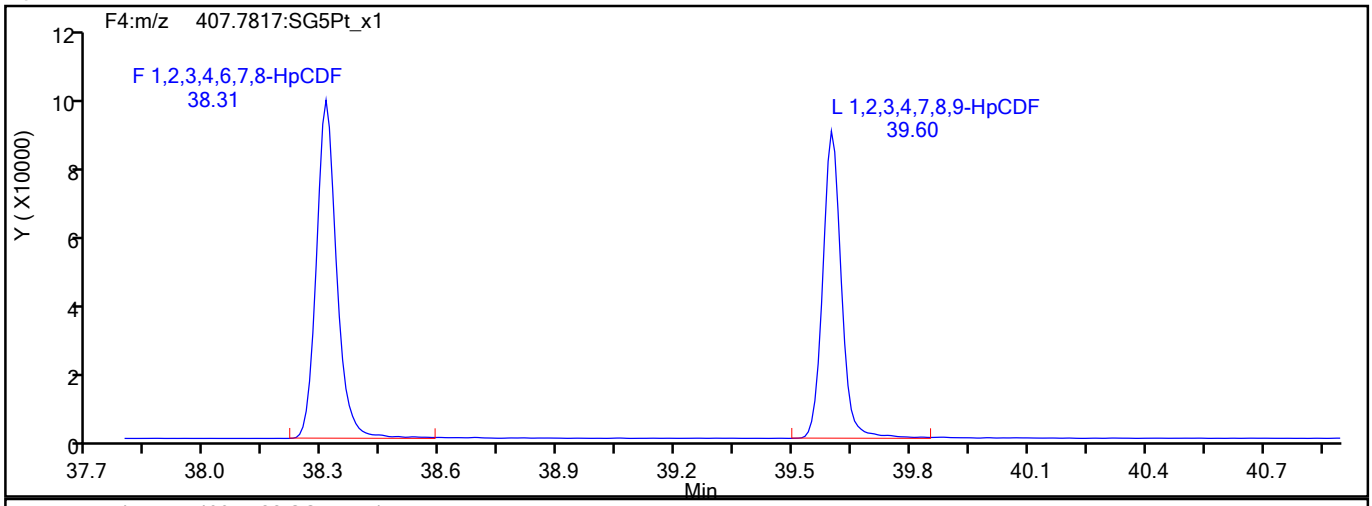

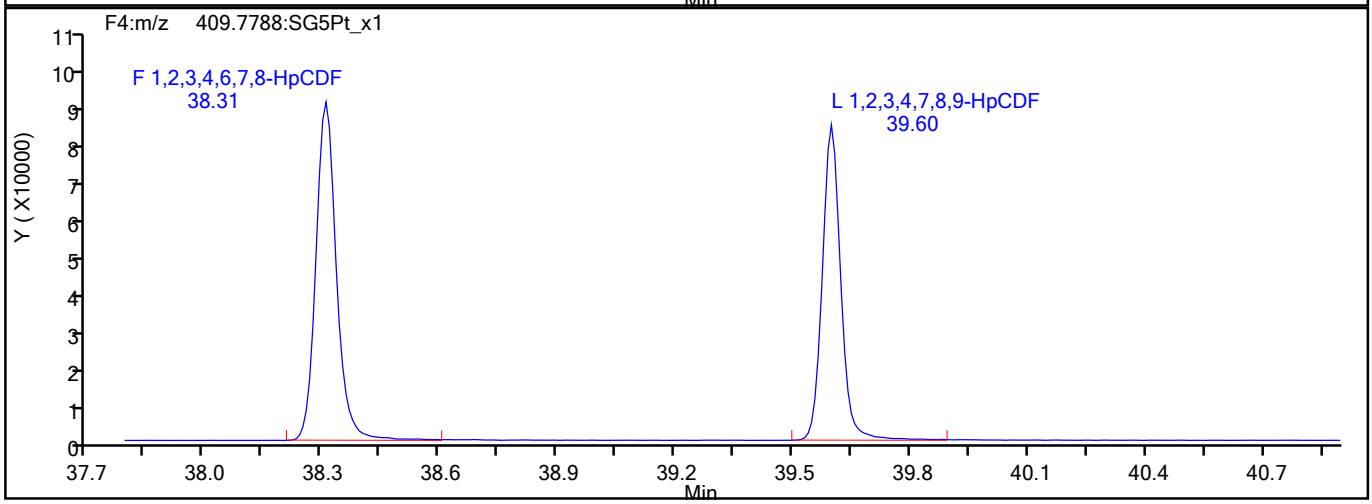

HpCDF Interference Mass

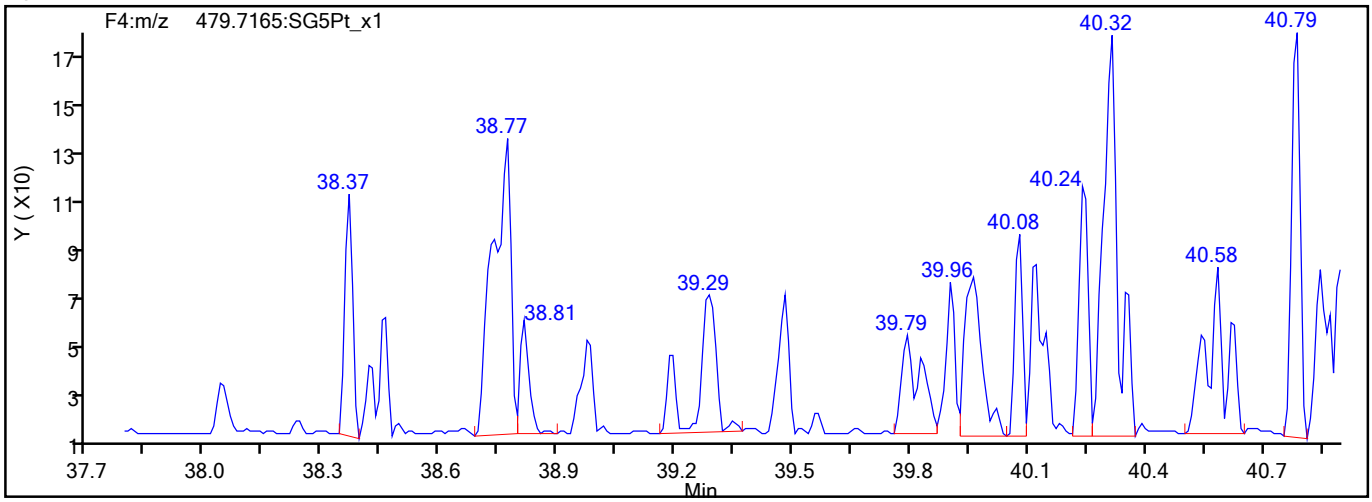

784719

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

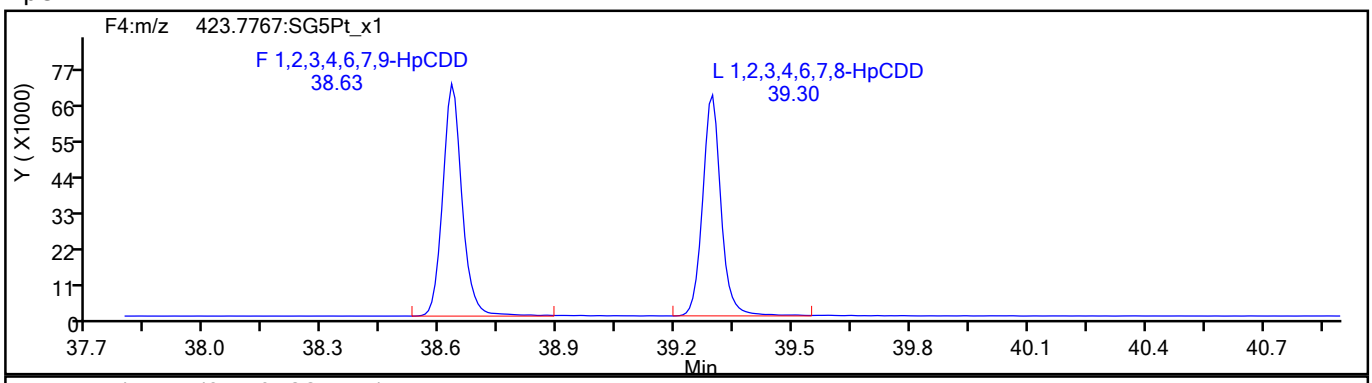

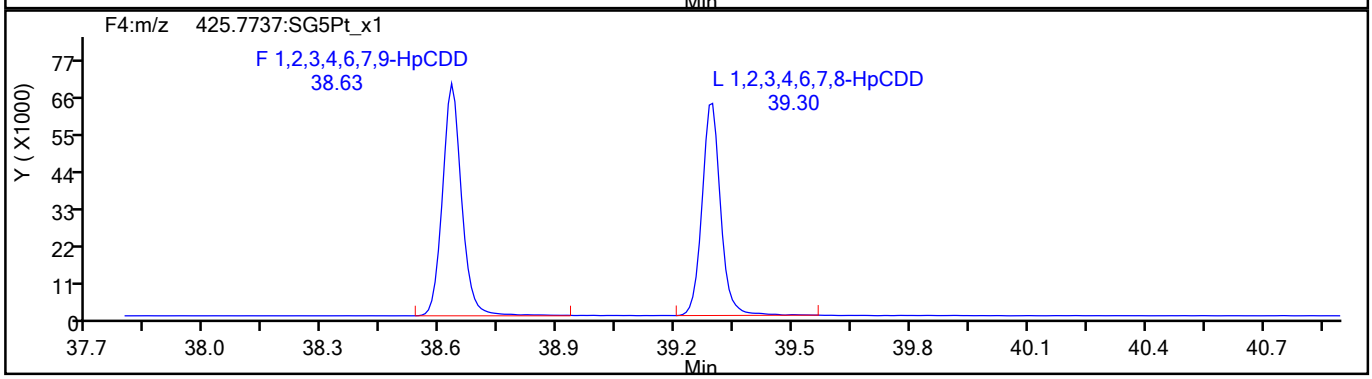

HpCDD Standards

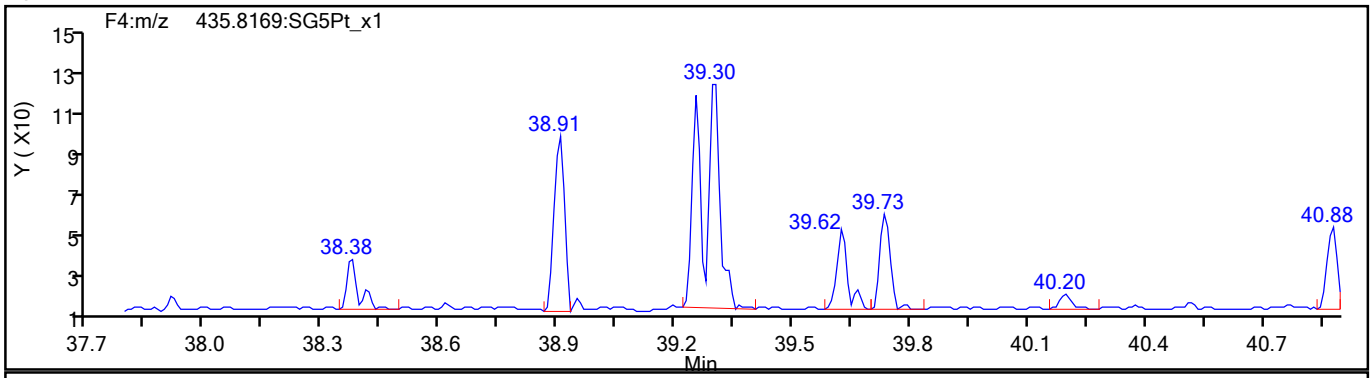

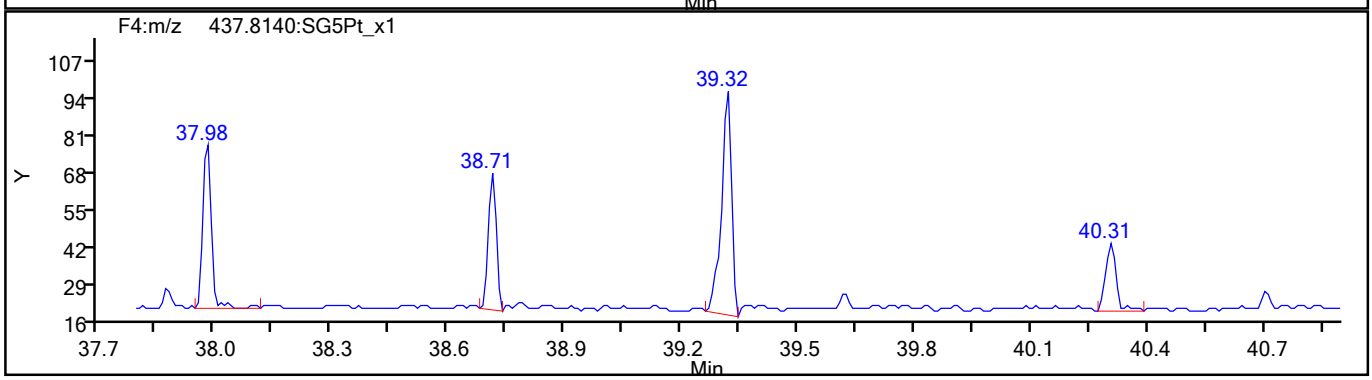

784720

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

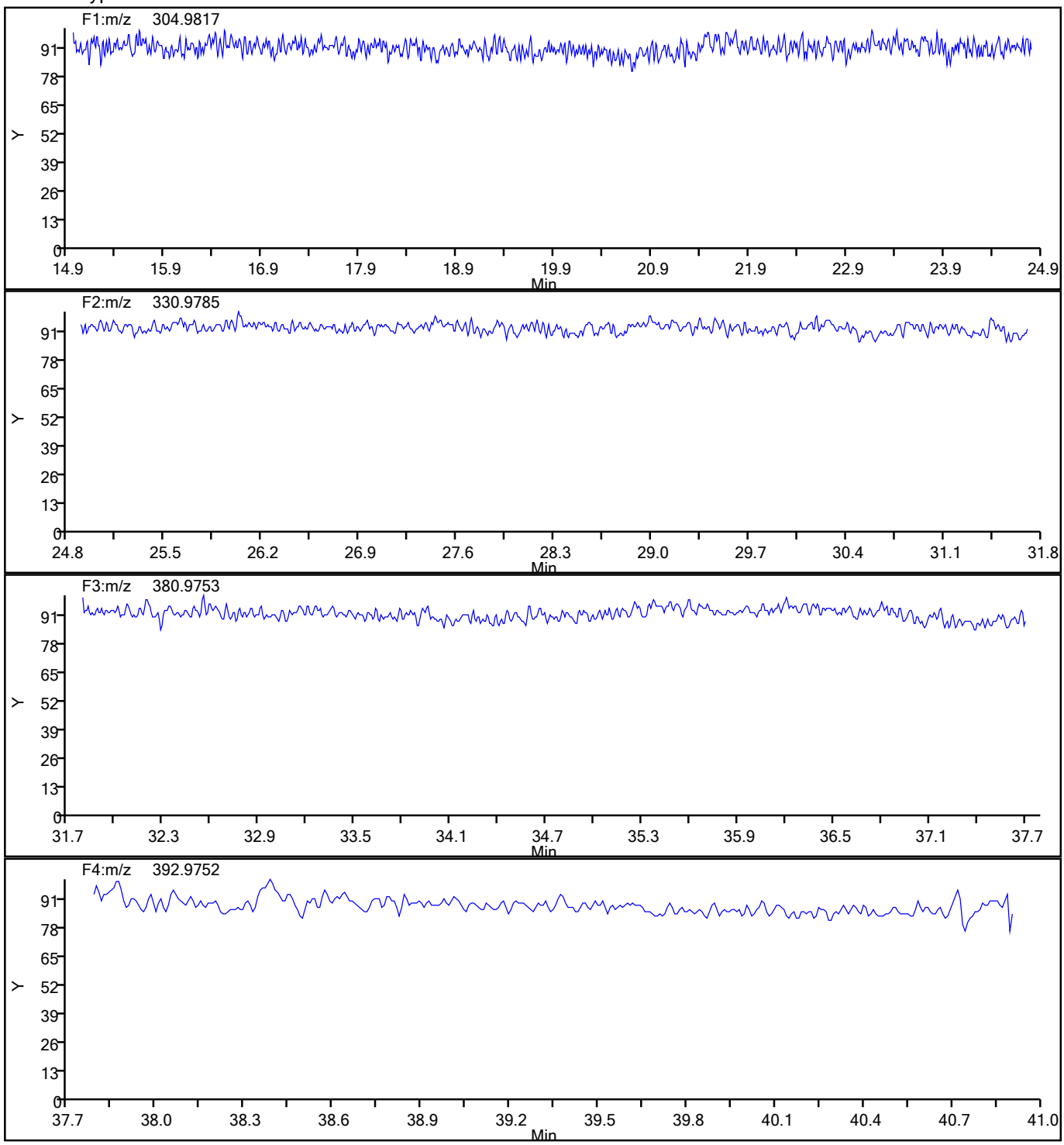

784721

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

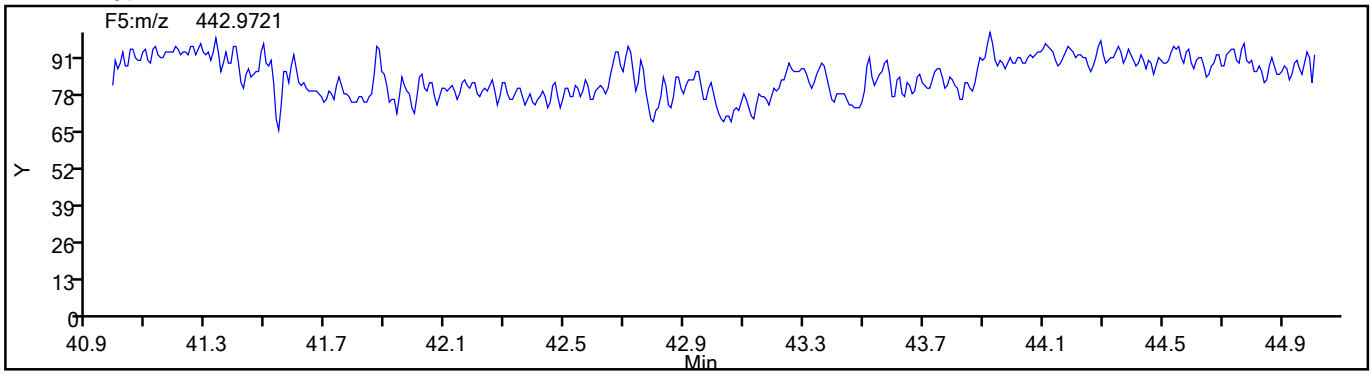

784722

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 17-Aug-2021 14:27:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 16:07:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.529	393112	0.77	1.3459					0.00	
2,3,7,8-TCDF	20.580	883074	0.78	1.0802	83.2	83.2	0.1765	0.1765		
A Non-2,3,7,8-sub-TCDF	19.983	14516	0.77	1.0802	1.441	1.367	0.1765	0.7533		RQ
S Total TCDF					84.6	84.6	0.1765	0.1765		RQ
D 13C-2,3,7,8-TCDD	21.902	237674	0.79	0.9317					0.00	
2,3,7,8-TCDD	21.928	282066	0.80	1.0753	44.1	44.1	0.1251	0.1251		
A Non-2,3,7,8-sub-TCDD	20.816						0.1251	0.1251		
S Total TCDD					44.1	44.1	0.1251	0.1251		
A F1 PeCDFs	24.695	314	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.196	12272	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.556						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.117	9319	1.28	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.475	5418	1.08	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.678	524513	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.925	436983	1.02	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.301						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.613	344276	1.05	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.297						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.251	552143	0.76							
1,3,6,8-TCDD	17.867	286795	0.81							
2,3,4,7-TCDF	20.580	883074	0.78							
1,2,3,7-TCDD	21.713	246746	0.80							
1,2,3,9-TCDF	22.091	375235	0.81							
1,2,3,9-TCDD	22.203	294638	0.78							
1,2,8,9-TCDF	23.714	427941	0.80							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.766	127271								
1,3,4,6,8-PeCDF	24.126	385071	1.61							
1,2,3,8,9-PeCDD	26.181	276939	1.58							
1,2,4,7,9-PeCDD	30.804	272114	1.59							
1,2,3,8,9-PeCDF	30.989	368041	1.62							
1,2,3,4,6,8-HxCDF	33.260	451714	1.27							
1,2,4,6,7,9-HxCDD	34.329	334369	1.26							
1,2,3,4,6,7-HxCDD	36.620	364948	1.23							
1,2,3,4,8,9-HxCDF	36.973	519420	1.27							
1,2,3,4,6,7,9-HpCDD	38.981	383342	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 17-Aug-2021 14:27:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 16:07:09

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.529	20.529	0	1.000	170513	24451	60	150	408		
317.9389	20.537	20.529	1	1.000	222599	31155	14	35	2225	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.580	20.580	0	1.003	386703	50727	45	112	1127		
305.8987	20.572	20.580	-1	1.002	496371	65154	61	152	1068	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.889	19.983	-65	0.920	1545	292	45	112	6		
305.8987	18.889	19.983	-65	0.920	1924	396	61	152	6	0.80(0.65-0.89)	
303.9016	19.808	19.983	-10	0.965	3532	597	45	112	13		
305.8987	19.825	19.983	-9	0.966	4465	768	61	152	13	0.79(0.65-0.89)	
303.9016	24.160	19.983	250	1.177	1327	241	45	112	5		
305.8987	24.126	19.983	248	1.175	2504	449	61	152	7	0.53(0.65-0.89)	
	Empc Correction				1723	312	61	152	5		
13C-2,3,7,8-TCDD											
331.9368	21.902	21.902	0	1.000	105089	13957	10	25	1396		
333.9338	21.876	21.902	-2	1.000	132585	19347	14	35	1382	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.928	21.928	0	1.001	125335	16412	25	62	656		
321.8936	21.928	21.928	0	1.001	156731	20206	20	50	1010	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.816						25	62			
321.8936	20.816						20	50			
A F1 PeCDFs											RQ
339.8597	24.925	24.695	14	1.000	191	35	2	5	18		
341.8567	24.950	24.695	15	1.000	174	103	8	20	13	1.10(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.844	28.196	-141	1.000	766	192	27	67	7		
341.8567	25.827	28.196	-142	1.000	749	122	20	50	6	1.02(1.32-1.78)	
339.8597	26.812	28.196	-83	1.000	1473	236	27	67	9		
341.8567	26.804	28.196	-83	1.000	1238	175	20	50	9	1.19(1.32-1.78)	
339.8597	27.242	28.196	-57	1.000	774	228	27	67	8		
341.8567	27.242	28.196	-57	1.000	414	129	20	50	6	1.87(1.32-1.78)	
339.8597	27.410	28.196	-47	1.000	2007	272	27	67	10		
341.8567	27.419	28.196	-47	1.000	1023	119	20	50	6	1.96(1.32-1.78)	
339.8597	28.009	28.196	-11	1.000	3045	480	27	67	18		
341.8567	28.000	28.196	-12	1.000	1881	272	20	50	14	1.62(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						31	77			
357.8516	28.556						12	30			
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028	35.117	-5	1.000	1563	301	78	195	4		
375.8178	35.028	35.117	-5	1.000	1453	309	63	157	5	1.08(1.05-1.43)	
373.8208	35.180	35.117	4	1.000	3670	776	78	195	10		
375.8178	35.171	35.117	3	1.000	2633	573	63	157	9	1.39(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.424	35.475	-3	1.000	2814	512	49	122	10		
391.8127	35.415	35.475	-4	1.000	2604	510	37	92	14	1.08(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.678	38.678	0	1.000	269858	70534	95	237	742		
409.7788	38.678	38.678	0	1.000	254655	66103	84	210	787	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.925	39.925	0	1.000	221169	60461	95	237	636		
409.7788	39.916	39.925	-1	1.000	215814	60231	84	210	717	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.301						95	237			
409.7788	39.301						84	210			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.613	39.613	0	1.000	176113	47810	61	152	784		
425.7737	39.613	39.613	0	1.000	168163	46077	62	155	743	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.297						61	152			
425.7737	39.297						62	155			
1,3,6,8-TCDF											
303.9016	16.251	16.251	0		238917	44390	45	112	986		
305.8987	16.251	16.251	0		313226	56510	61	152	926	0.76(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.867	17.867	0		128143	22094	25	62	884		
321.8936	17.876	17.867	1		158652	27668	20	50	1383	0.81(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.580	20.580	0		386703	50727	45	112	1127		
305.8987	20.572	20.580	-1		496371	65154	61	152	1068	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7-TCDD											
319.8965	21.713	21.713	0		109917	14539	25	62	582		
321.8936	21.713	21.713	0		136829	17891	20	50	895	0.80(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.091	22.091	0		167447	21351	45	112	474		
305.8987	22.100	22.091	1		207788	27306	61	152	448	0.81(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.203	22.203	0		128657	16375	25	62	655		
321.8936	22.194	22.203	-1		165981	21311	20	50	1066	0.78(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.714	23.714	0		189792	31730	45	112	705		
305.8987	23.714	23.714	0		238149	40152	61	152	658	0.80(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.766	23.766	0		127271	24228	25	62	969		
1,3,4,6,8-PeCDF											
339.8597	24.126	24.126	0		237485	45645	2	5	22823		
341.8567	24.117	24.126	-1		147586	28368	8	20	3546	1.61(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.181	26.181	0		169516	25557	31	77	824		
357.8516	26.181	26.181	0		107423	16002	12	30	1334	1.58(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.804	30.804	0		166968	21361	31	77	689		
357.8516	30.796	30.804	-1		105146	13117	12	30	1093	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.989	30.989	0		227678	26376	27	67	977		
341.8567	30.973	30.989	-1		140363	16634	20	50	832	1.62(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.260	33.260	0		252670	38083	78	195	488		
375.8178	33.260	33.260	0		199044	29014	63	157	461	1.27(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.329	34.329	0		186543	32347	49	122	660		
391.8127	34.321	34.329	-1		147826	25220	37	92	682	1.26(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.620	36.620	0		200927	47066	49	122	961		
391.8127	36.620	36.620	0		164021	38120	37	92	1030	1.23(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.973	36.973	0		290634	66772	78	195	856		
375.8178	36.973	36.973	0		228786	52982	63	157	841	1.27(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.981	38.981	0		196303	52734	61	152	864		
425.7737	38.981	38.981	0		187039	50357	62	155	812	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 17-Aug-2021 14:27:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.983

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	393112	55606

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	393112	55606

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.889	1545	292	1924	396	0.3268	0.80	
19.808	3532	597	4465	768	0.7533	0.79	
24.160	1327	241	2504	449	0.3609	0.53	RQ
24.160	1327	241	1723	312	0.2873		Empc Correction
Signal Totals:							
	6404	1130	8112	1476			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15297	2743				0.72	RQ
	14516	2606					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.441 = (15297 * 40.000) / (393112 * 1.080)
Empc Amount: 1.367 = (14516 * 40.000) / (393112 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 17-Aug-2021 14:27:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 1

F1 PeCDFs, RT: 24.695

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.925	191	35	174	103		1.10	R
Signal Totals:							
	191	35	174	103			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	365	138				1.10	RQ
	314	57					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (365 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (314 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

Non-2,3,7,8-sub-PeCDF, RT: 28.196

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.844	766	192	749	122		1.02	R
26.812	1473	236	1238	175		1.19	R
27.242	774	228	414	129		1.87	R
27.410	2007	272	1023	119		1.96	R
28.009	3045	480	1881	272		1.62	
Signal Totals:							
	8065	1408	5305	817			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13370	2225				1.52	RQ
	12272	2086					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (13370 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (12272 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 17-Aug-2021 14:27:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 35.117

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
35.028	1563	301	1453	309		1.08	
35.180	3670	776	2633	573		1.39	
Signal Totals:							
	5233	1077	4086	882			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9319	1959				1.28	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (9319 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 17-Aug-2021 14:27:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 35.475

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.424	2814	512	2604	510		1.08	
Signal Totals:							
	2814	512	2604	510			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5418	1022				1.08	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (5418 * 0.0) / (0 * 0.000)

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

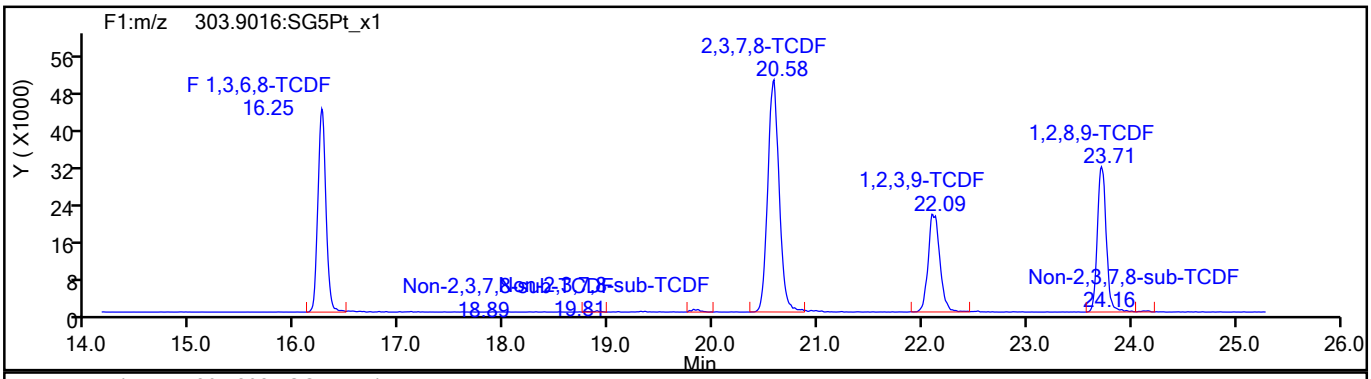

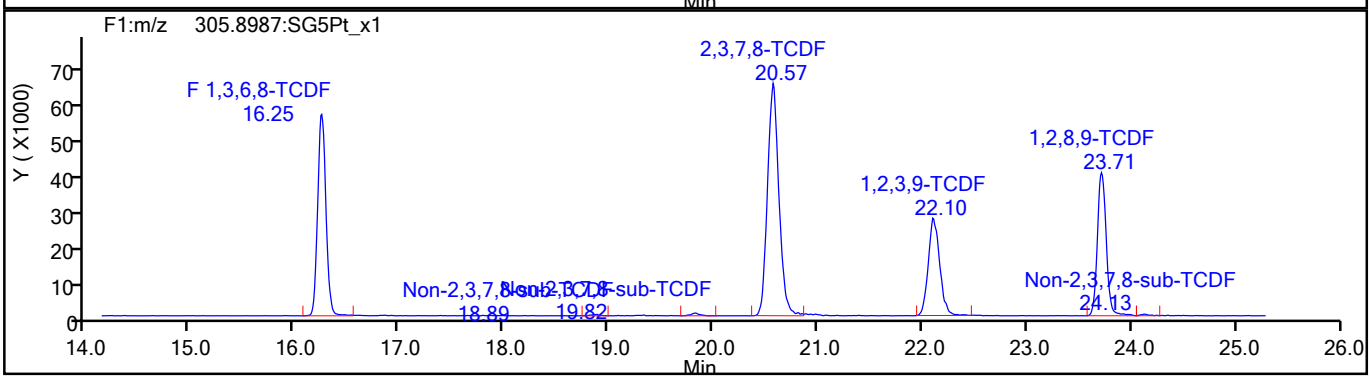

TCDF Standards

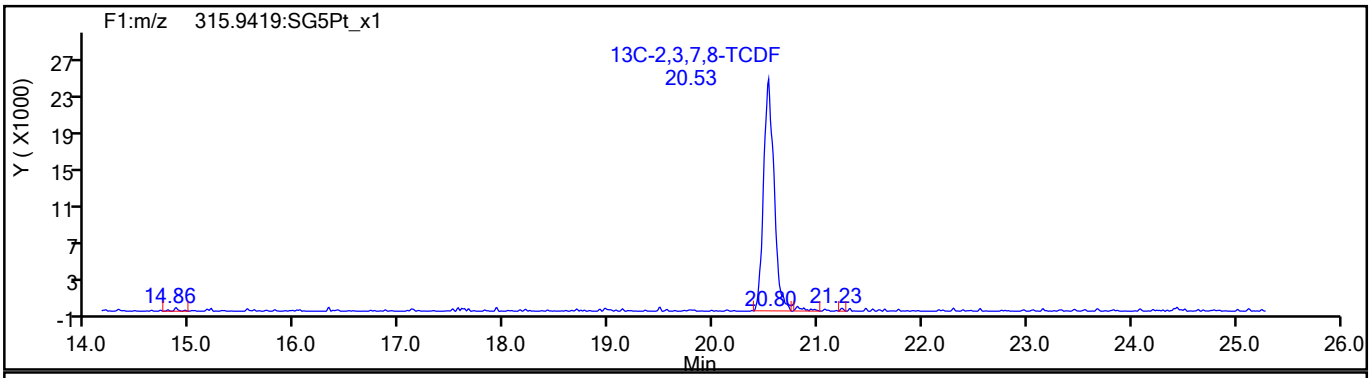

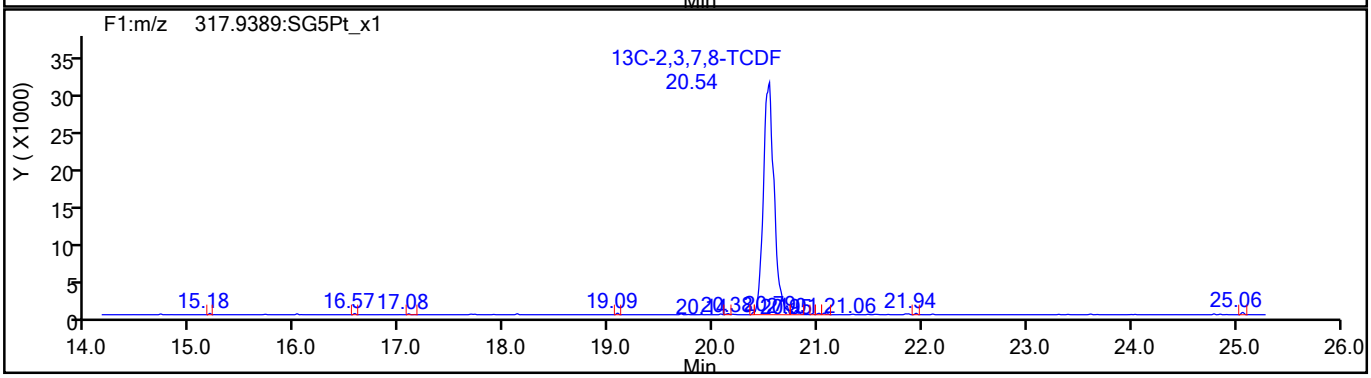

784734

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

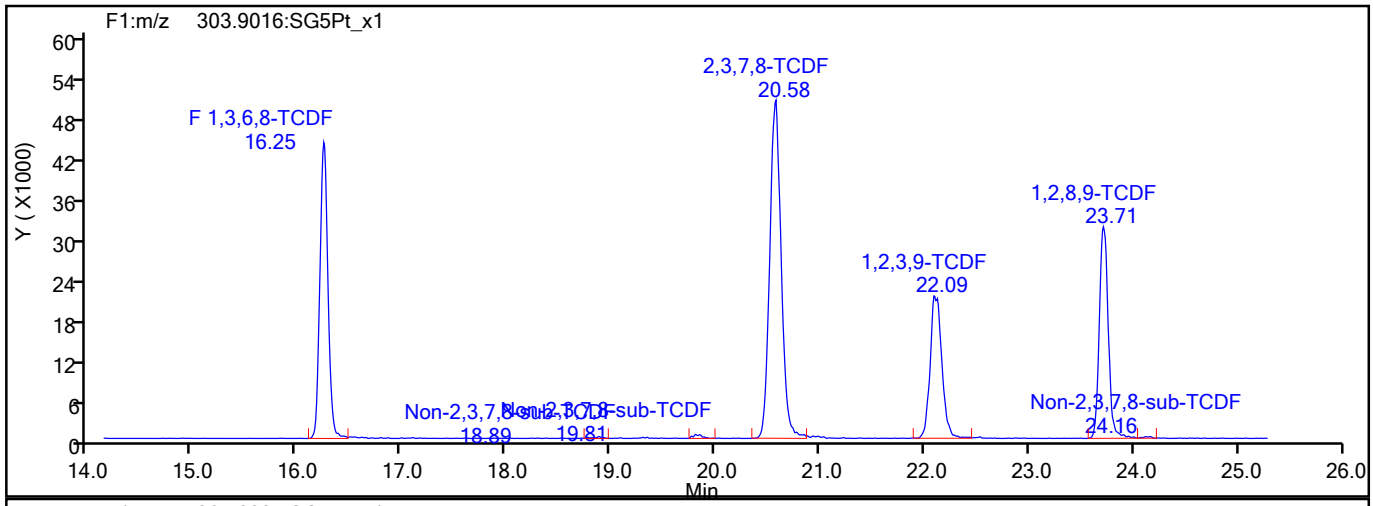

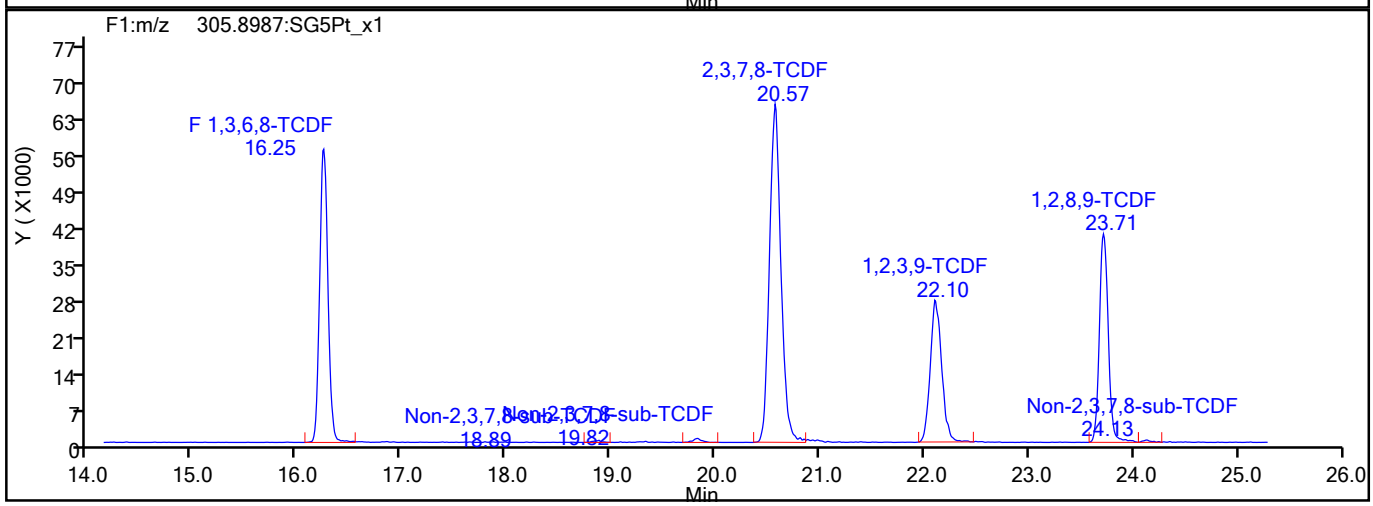

TCDF Interference Mass

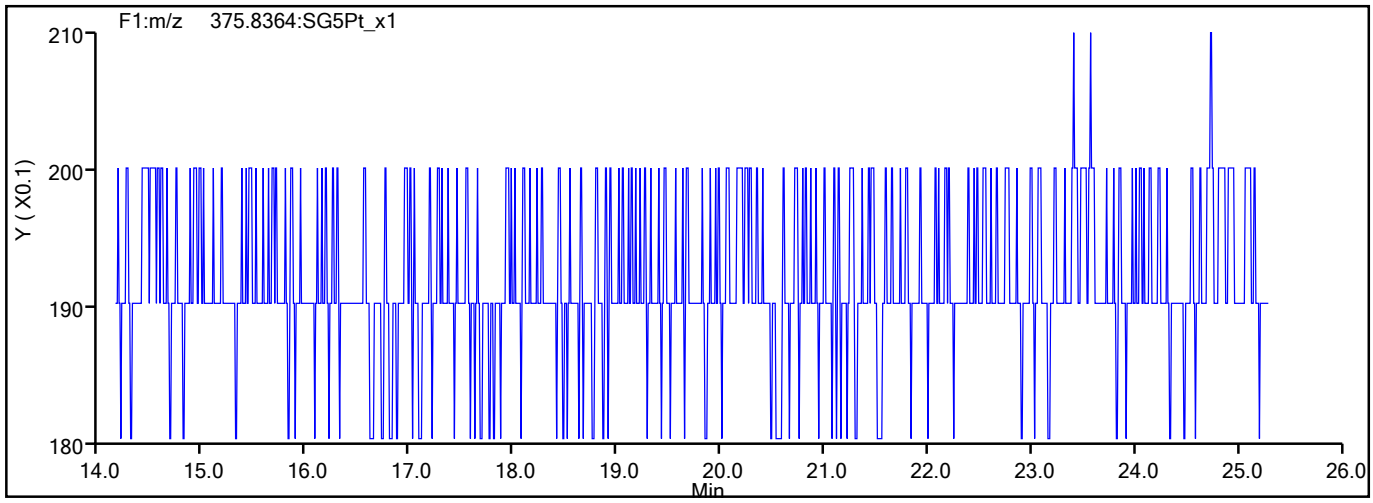

784735

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

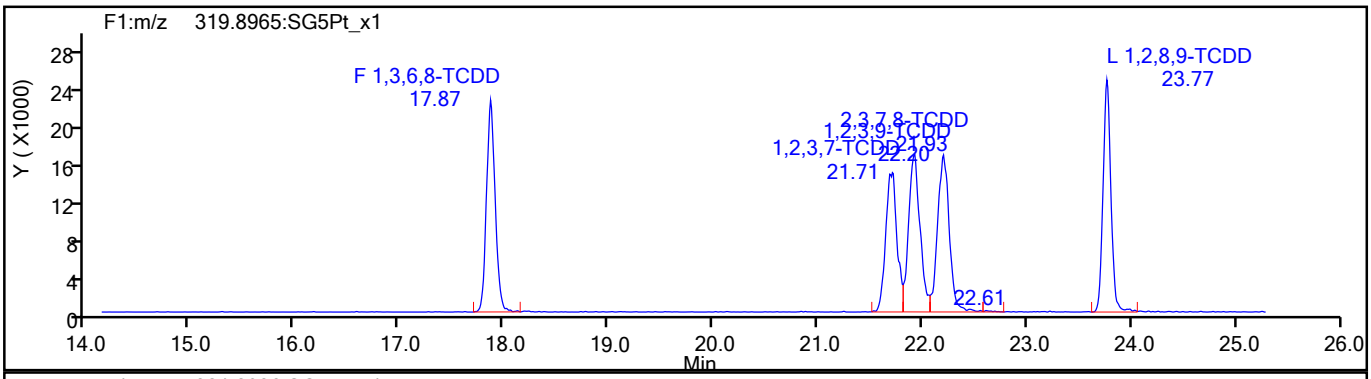

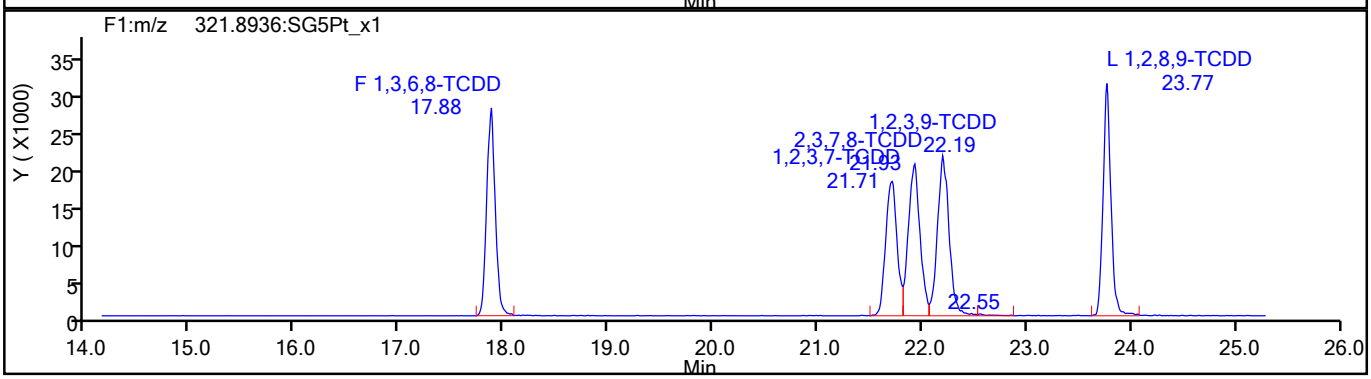

TCDD Standards

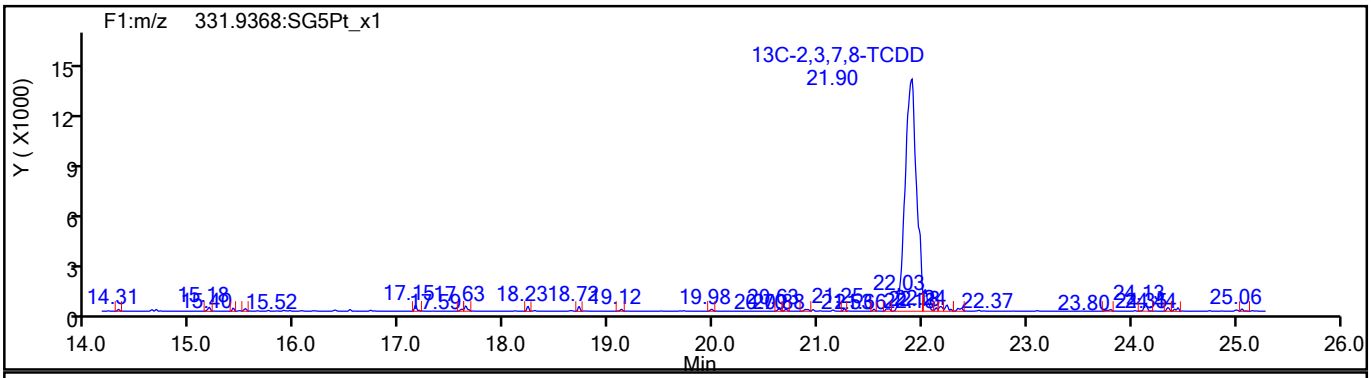

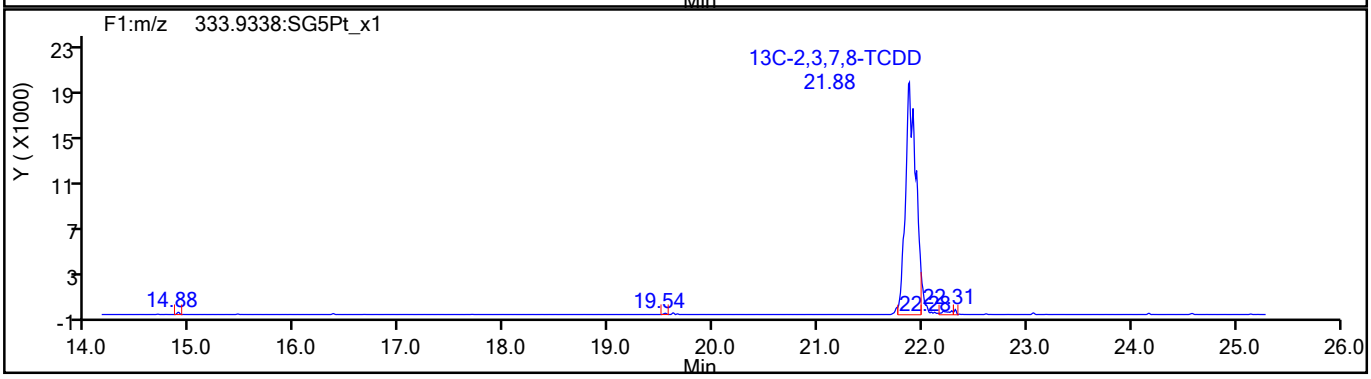

784736

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

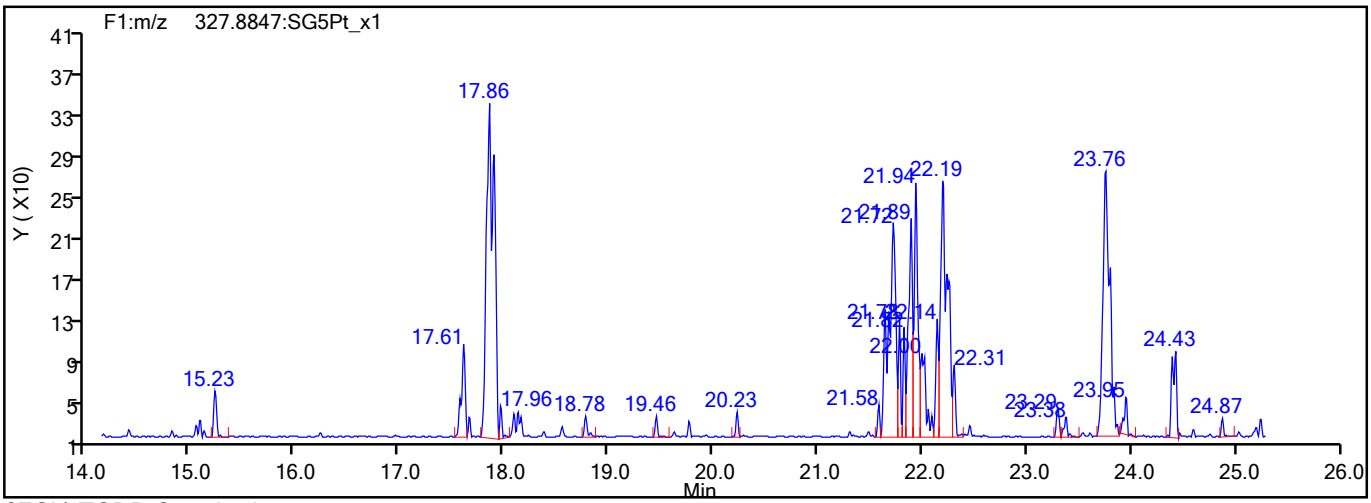

37Cl4-TCDD Standards

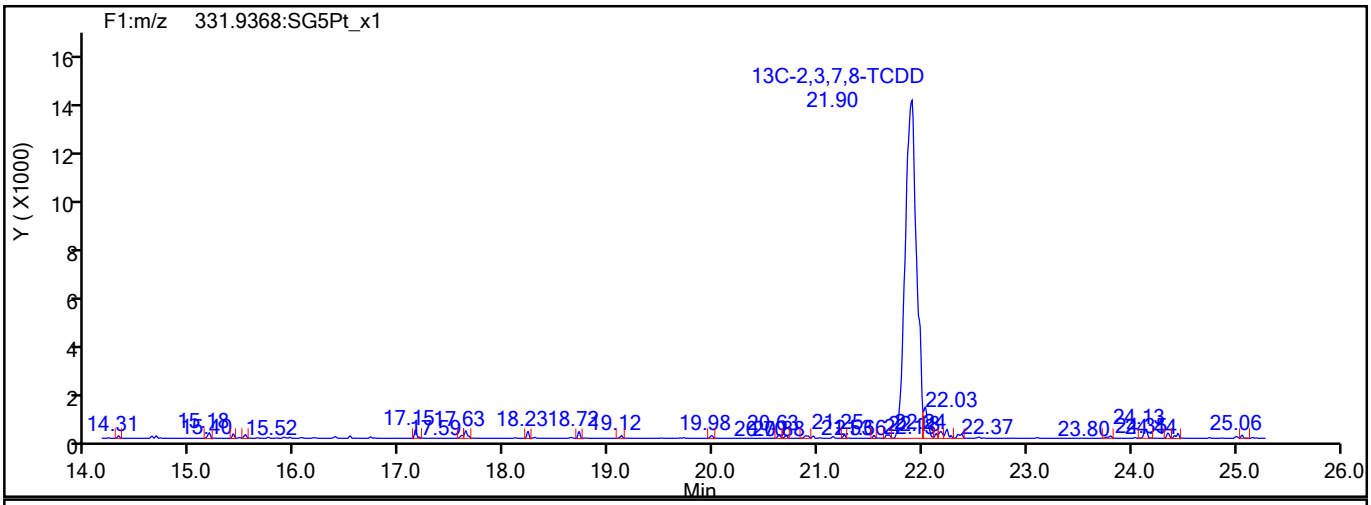

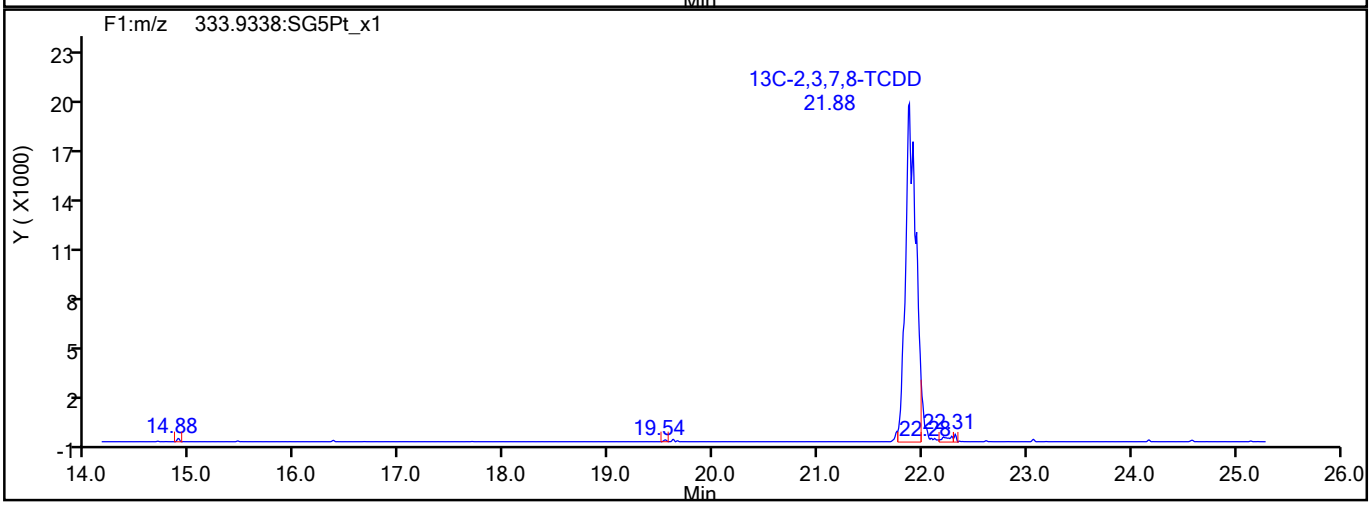

784737

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

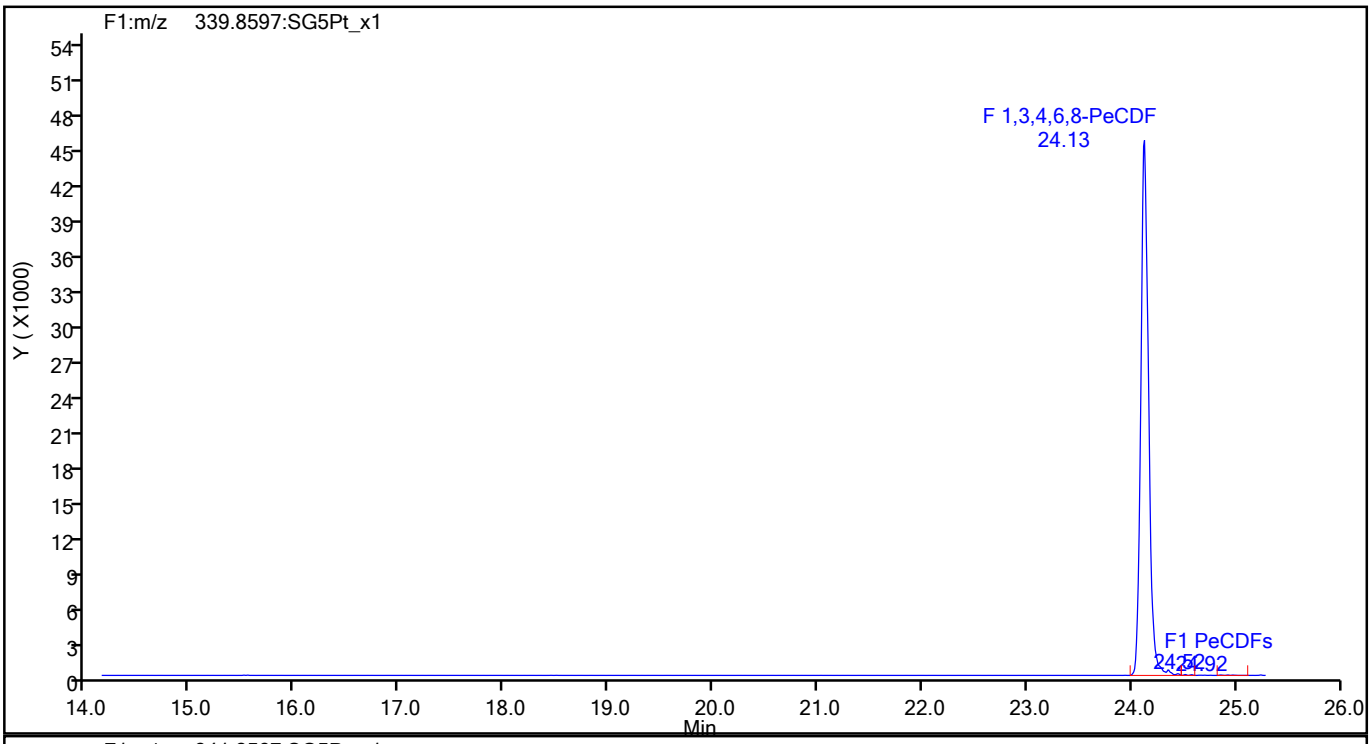

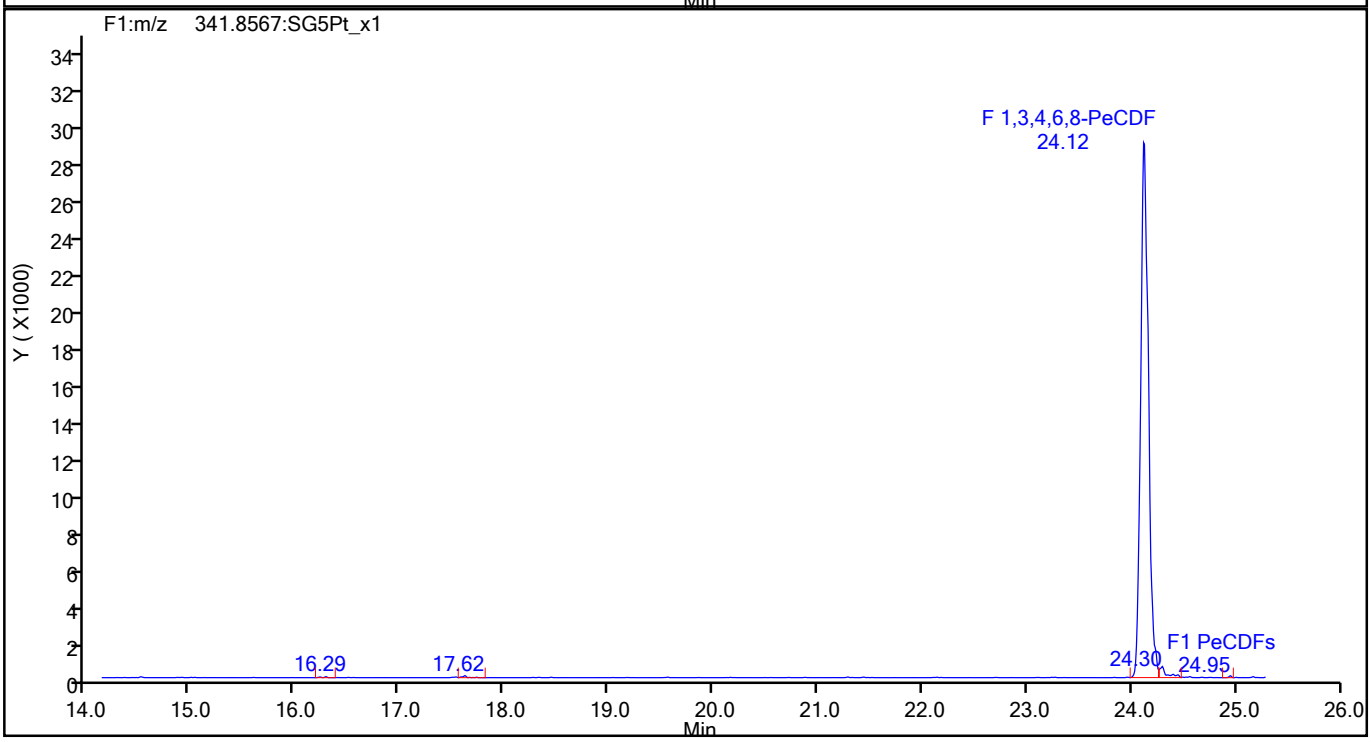

784738

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

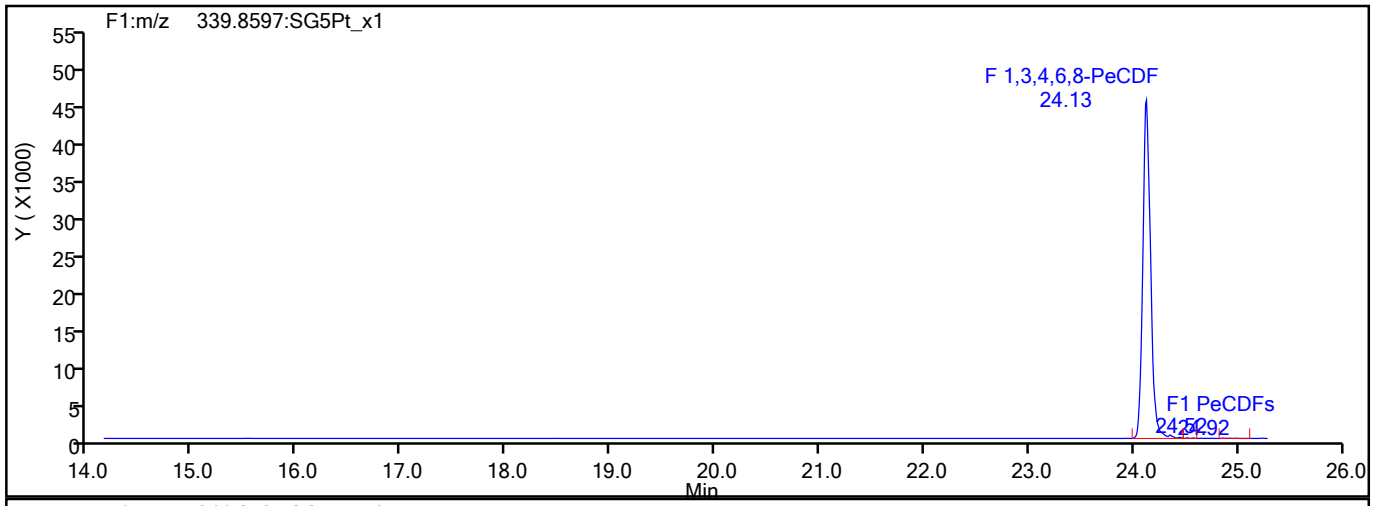

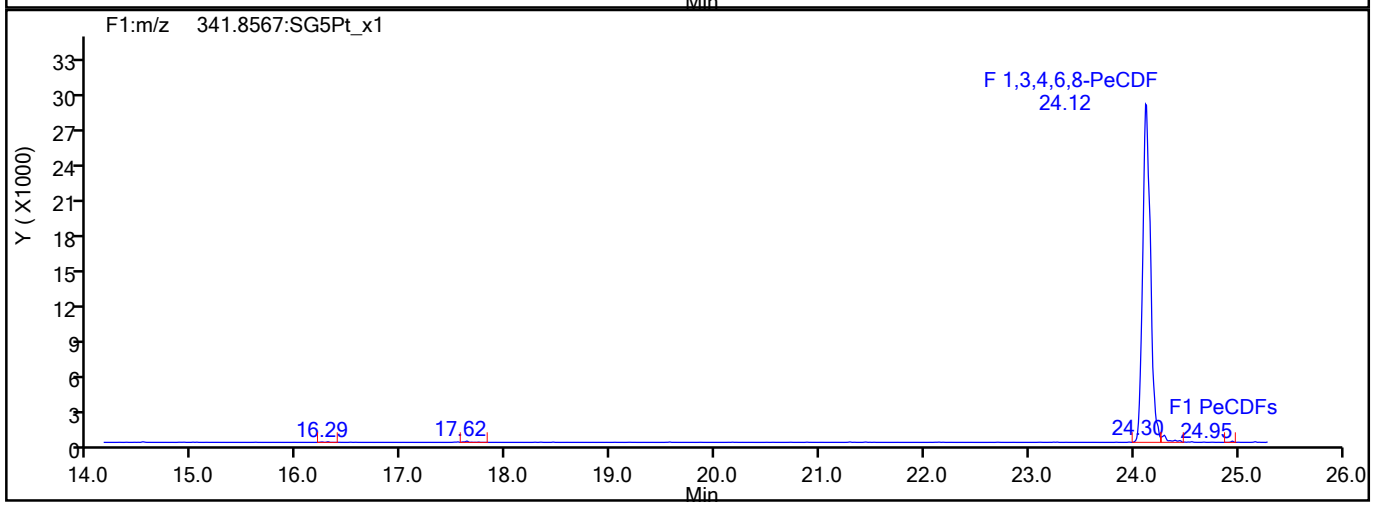

F1 PeCDFs Interference Mass

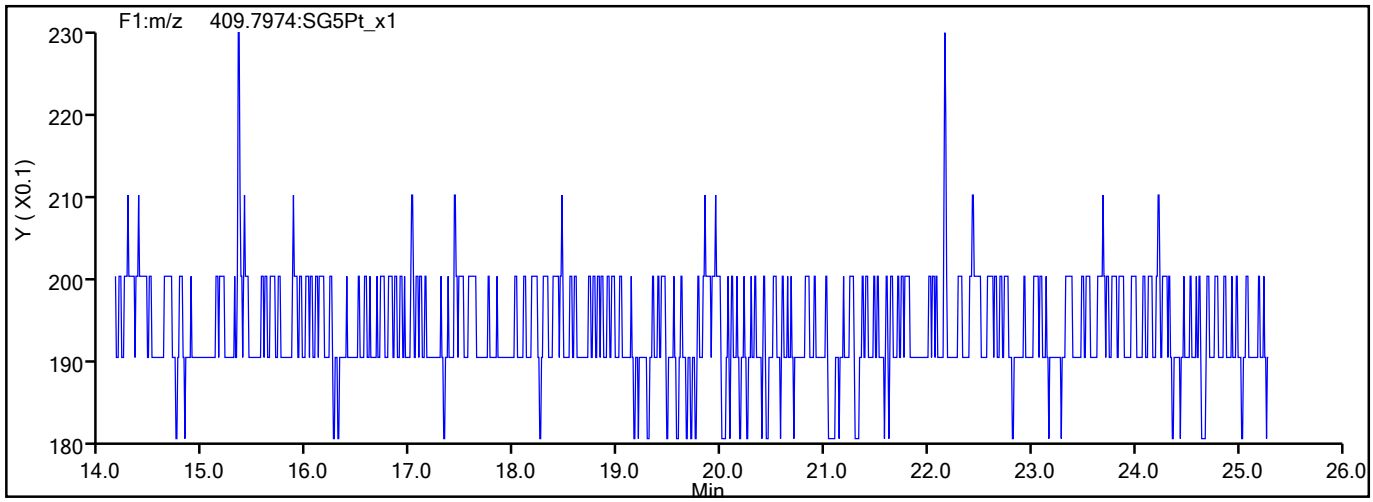

784739

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

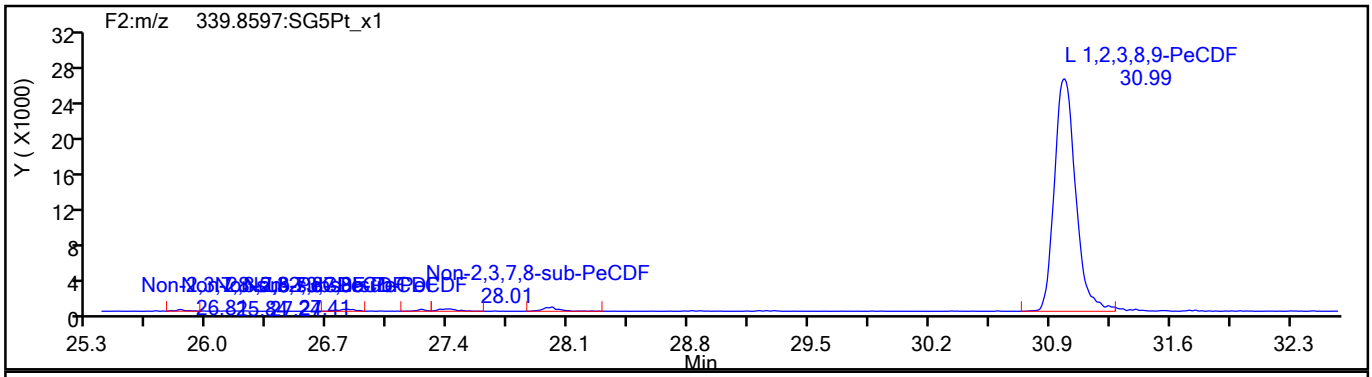

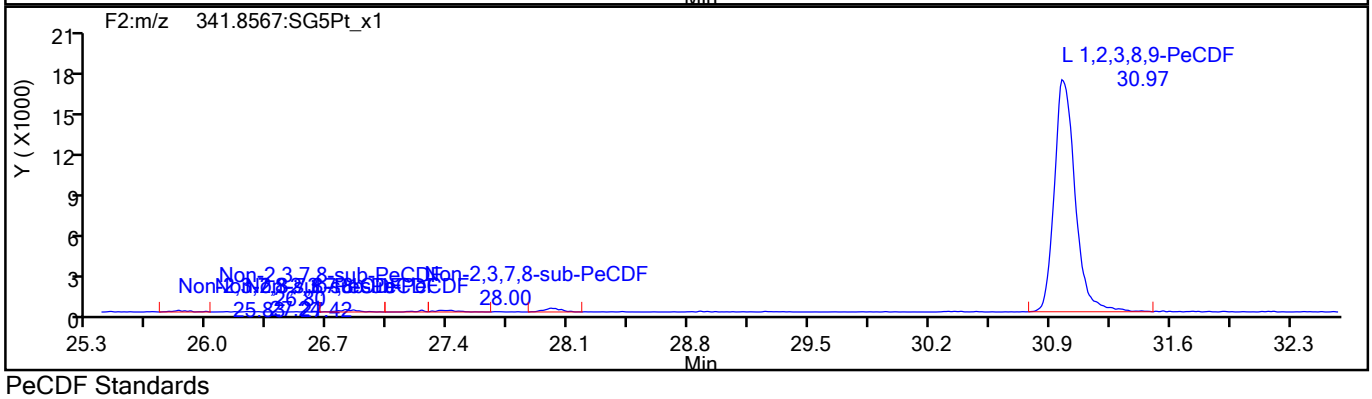

PeCDF Standards

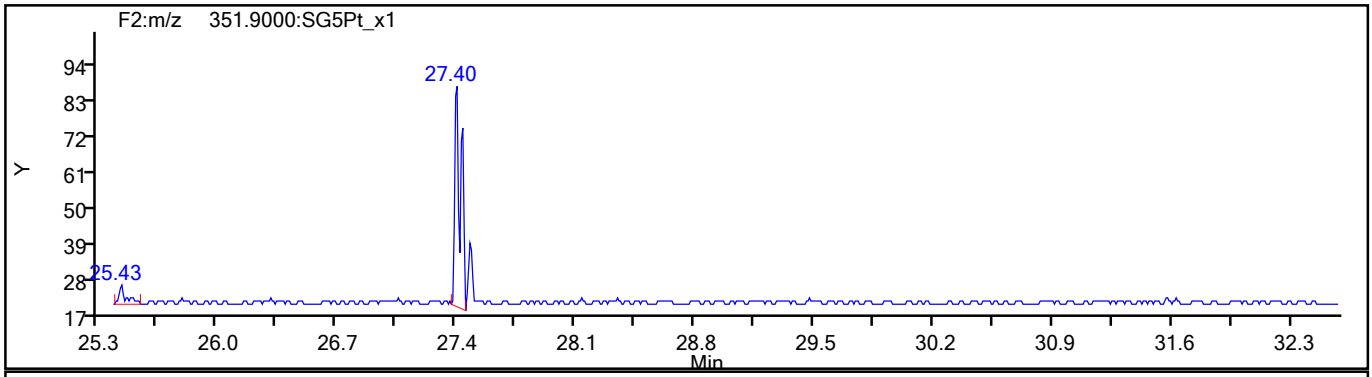

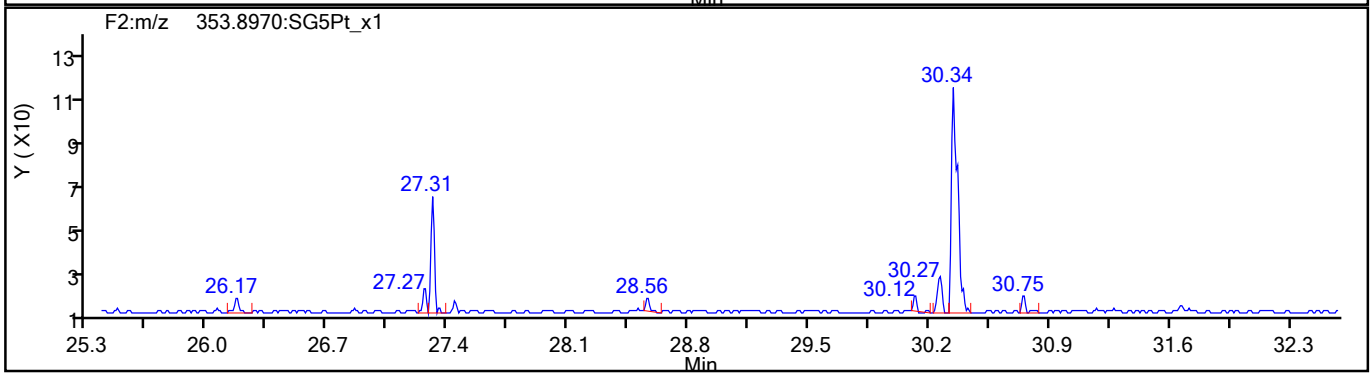

784740

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

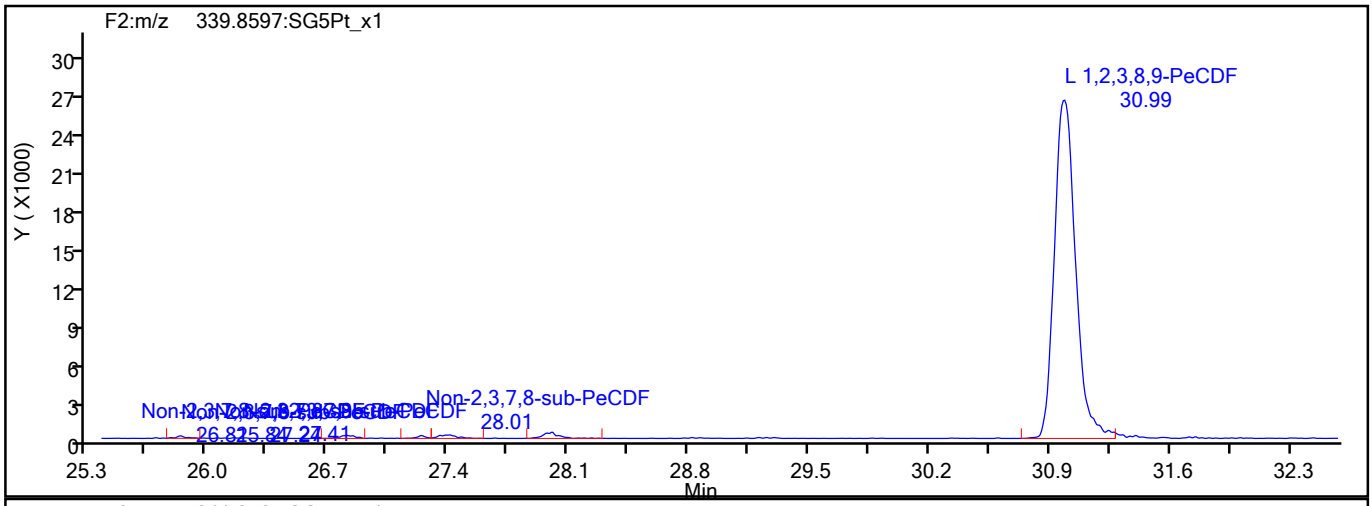

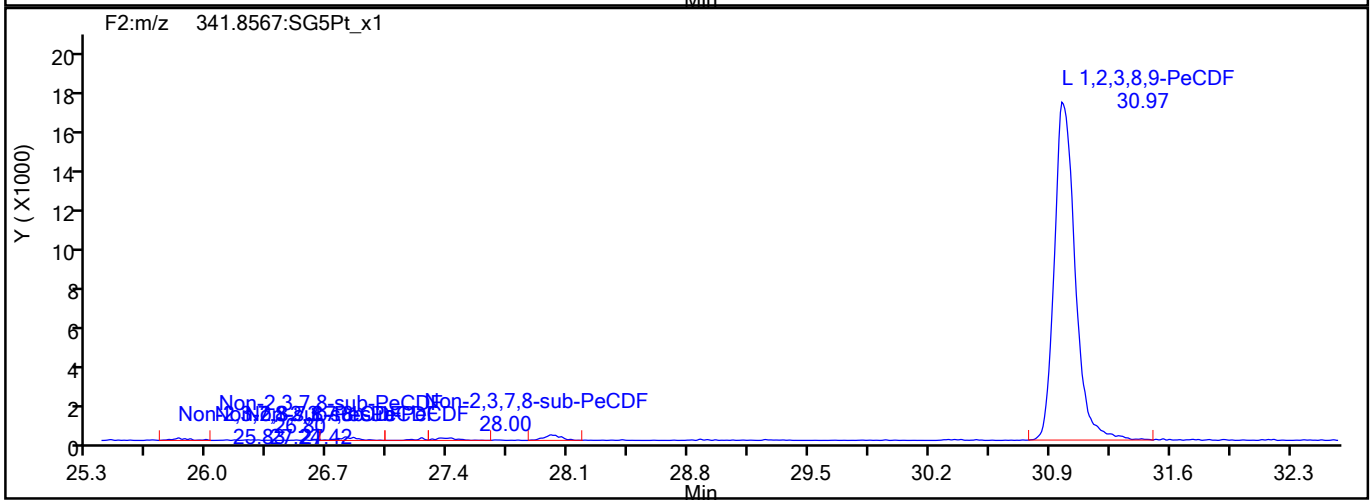

PeCDF Interference Mass

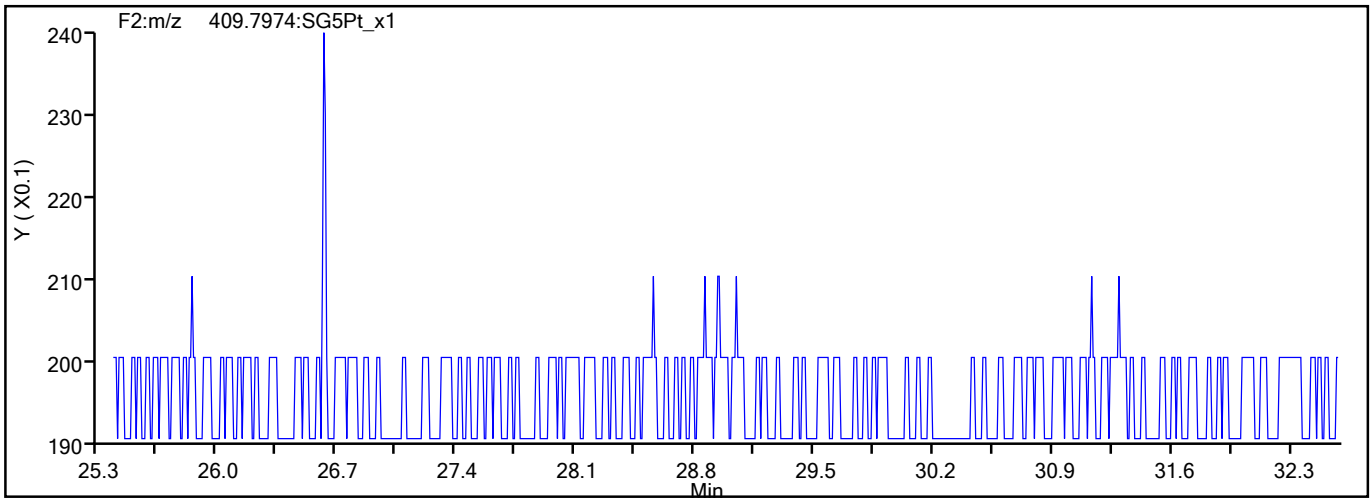

784741

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

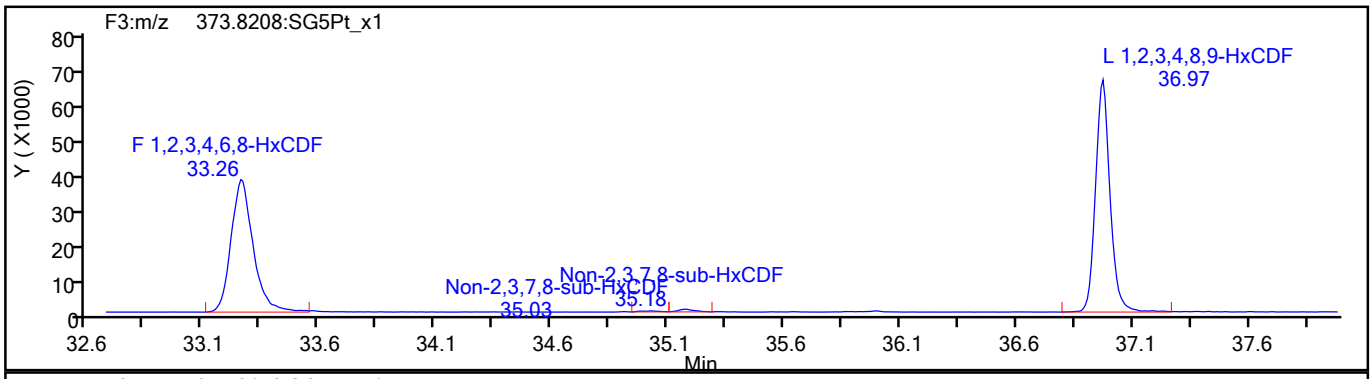

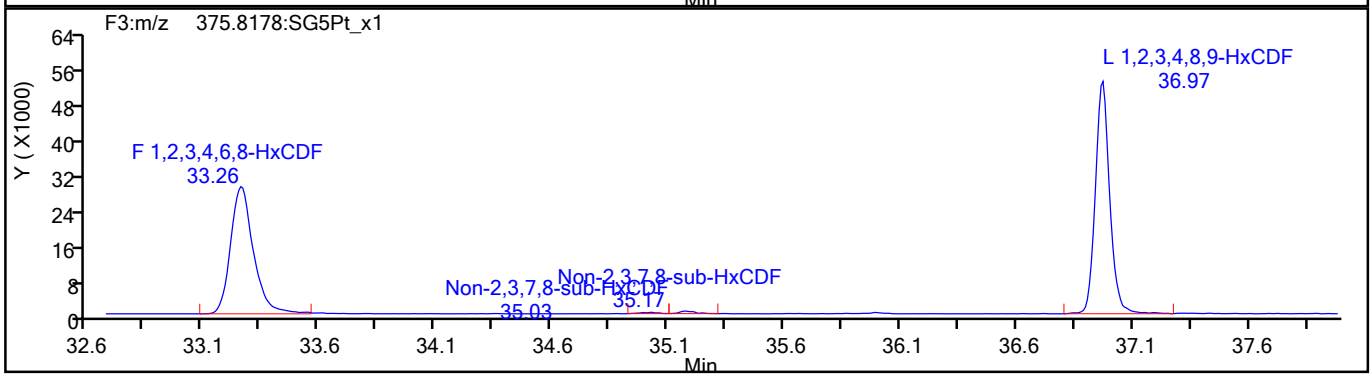

HxCDF Standards

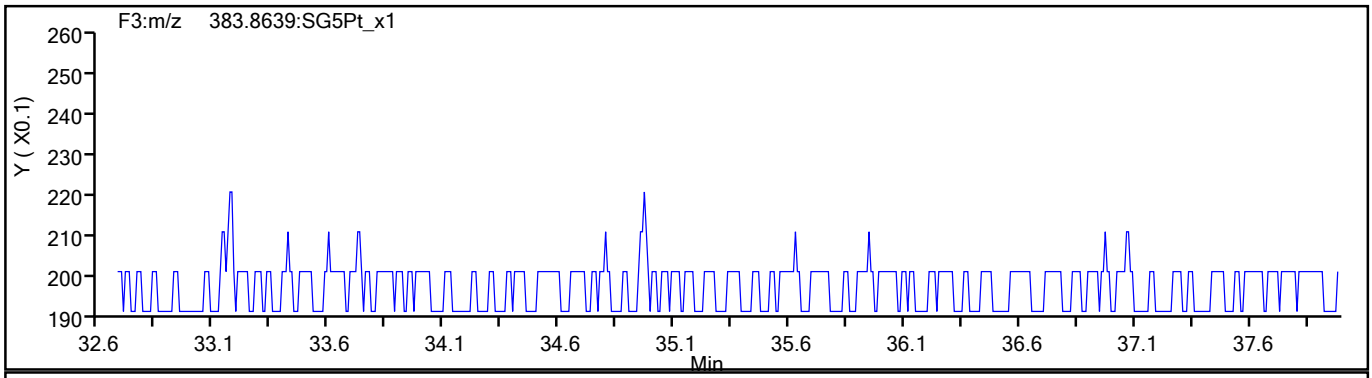

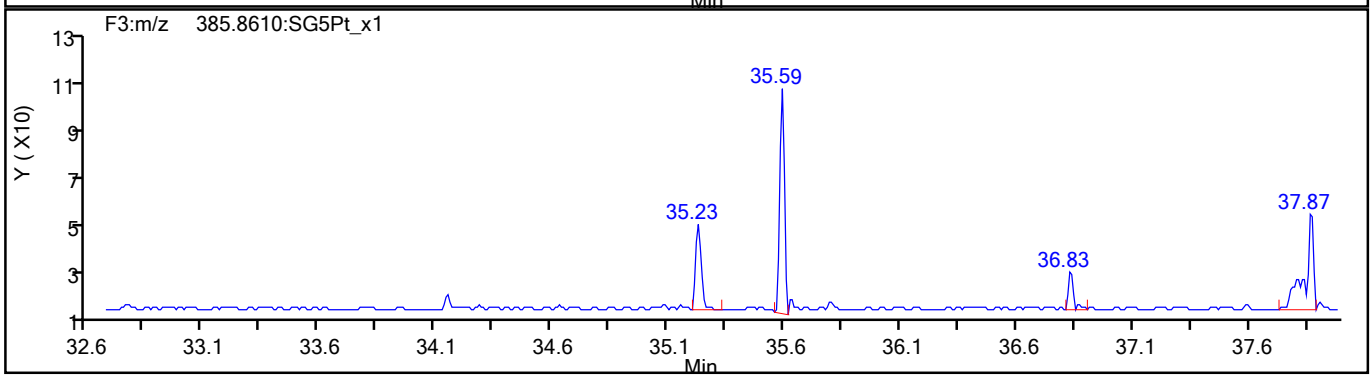

784742

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

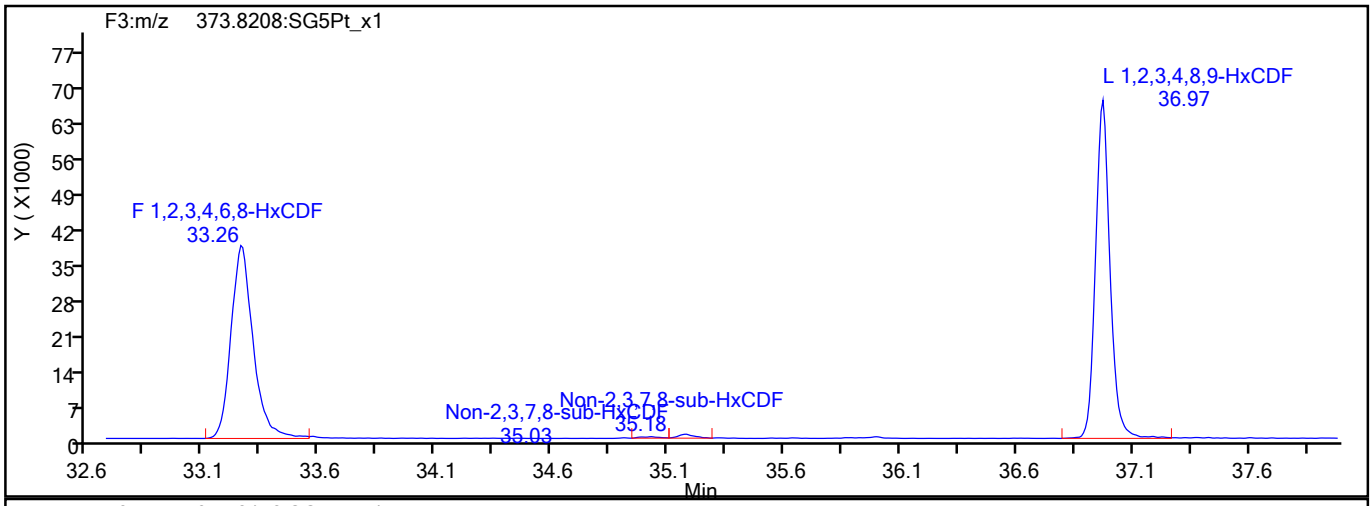

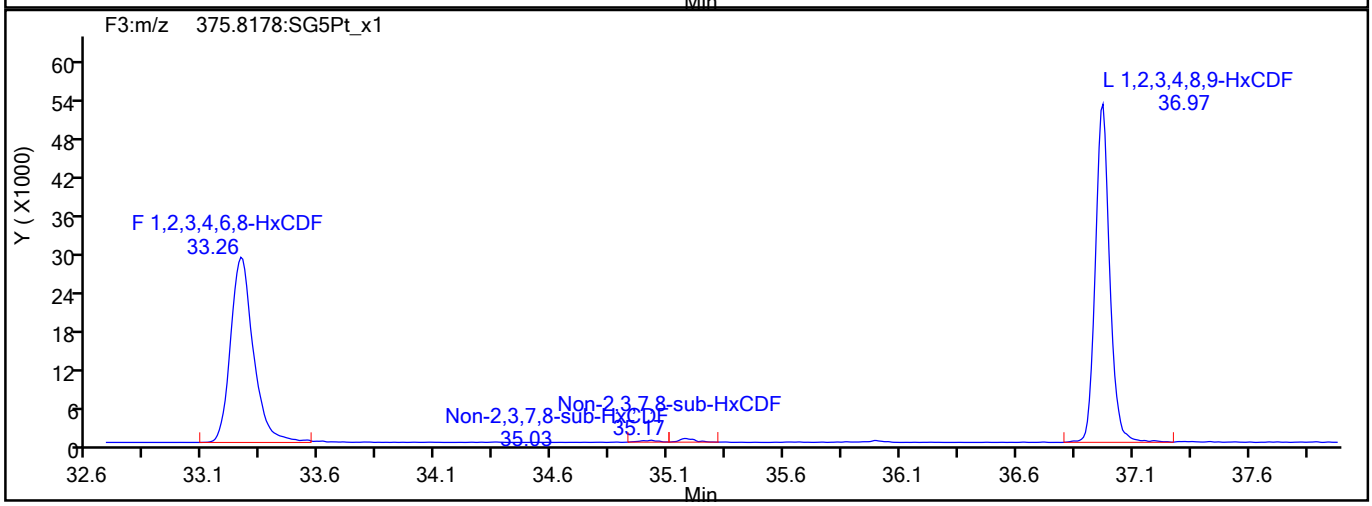

HxCDF Interference Mass

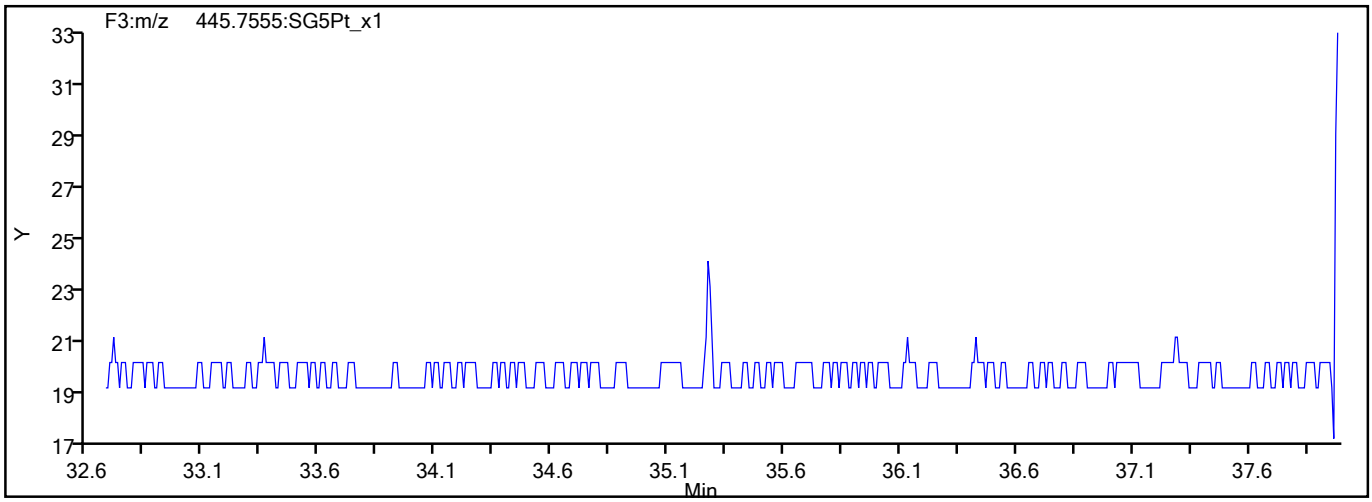

784743

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

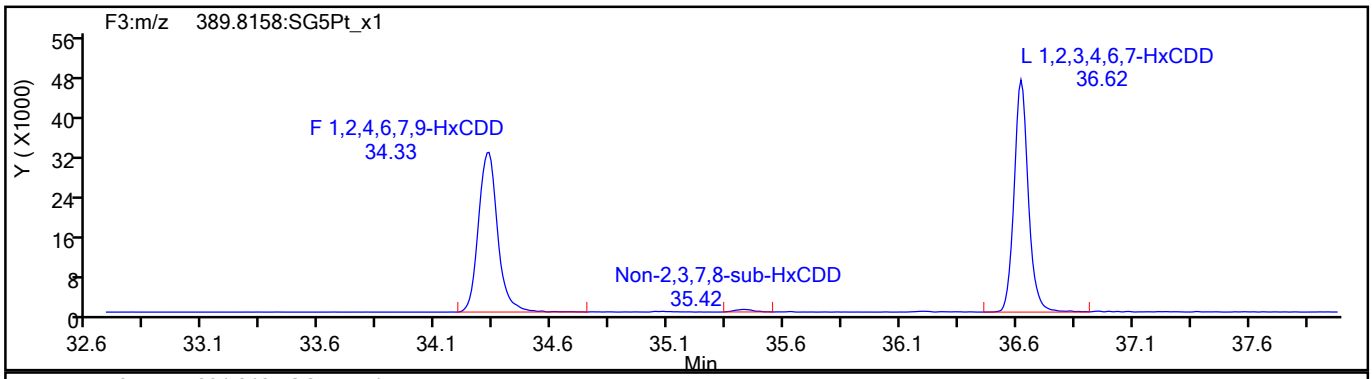

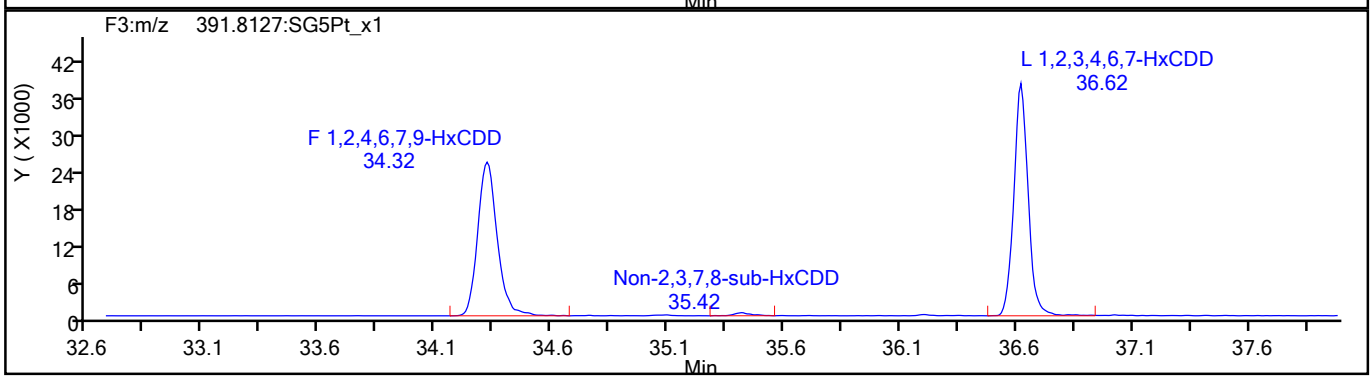

HxCDD Standards

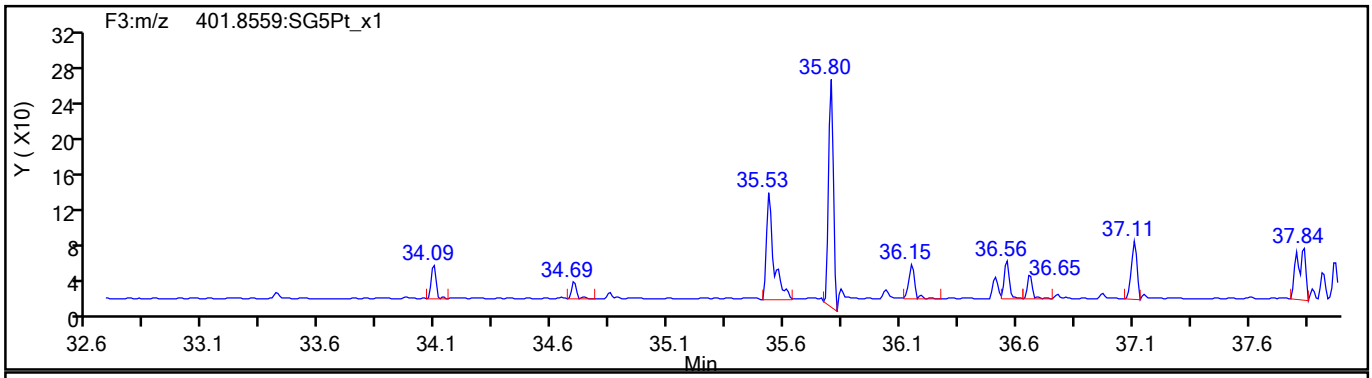

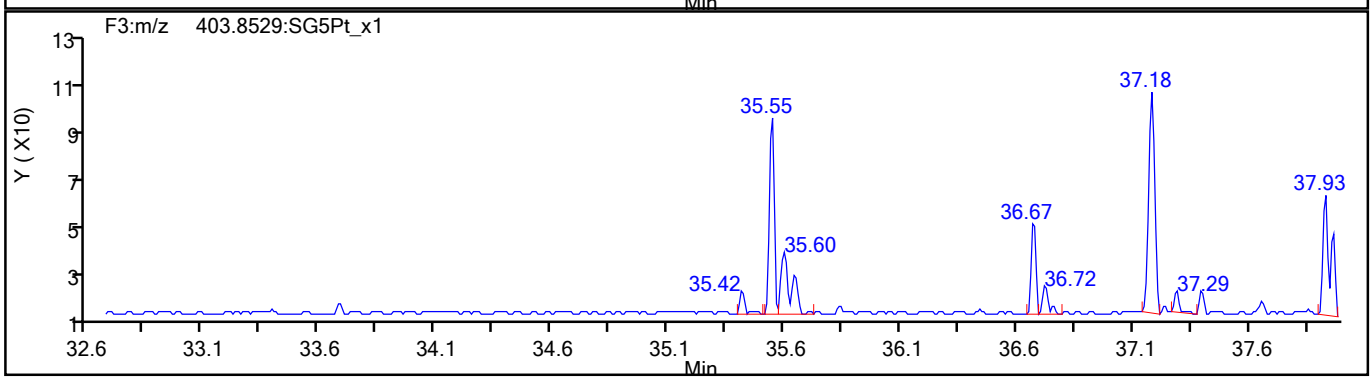

784744

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

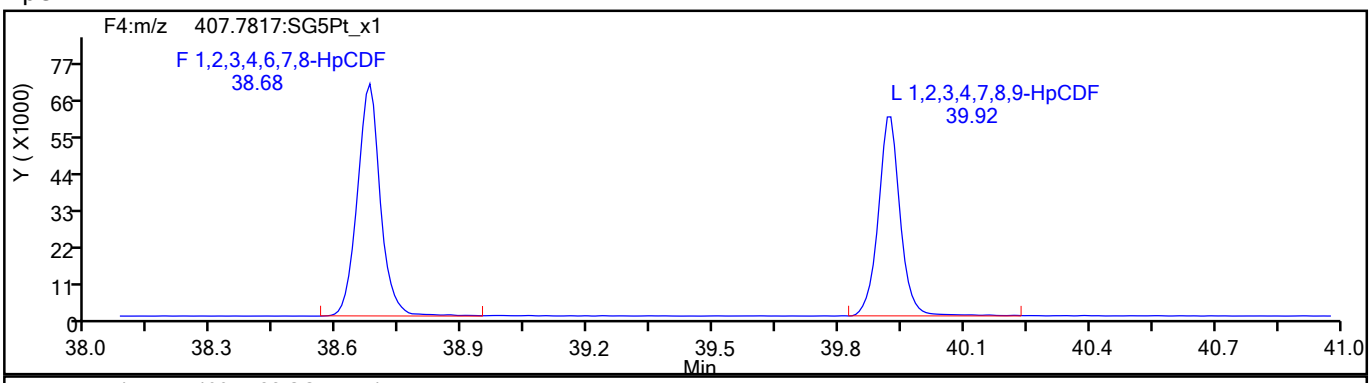

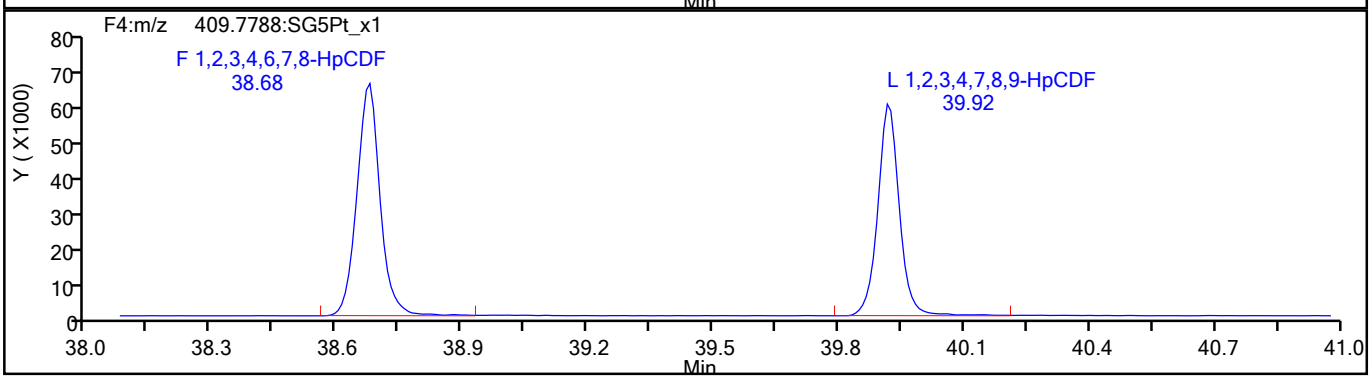

HpCDF Standards

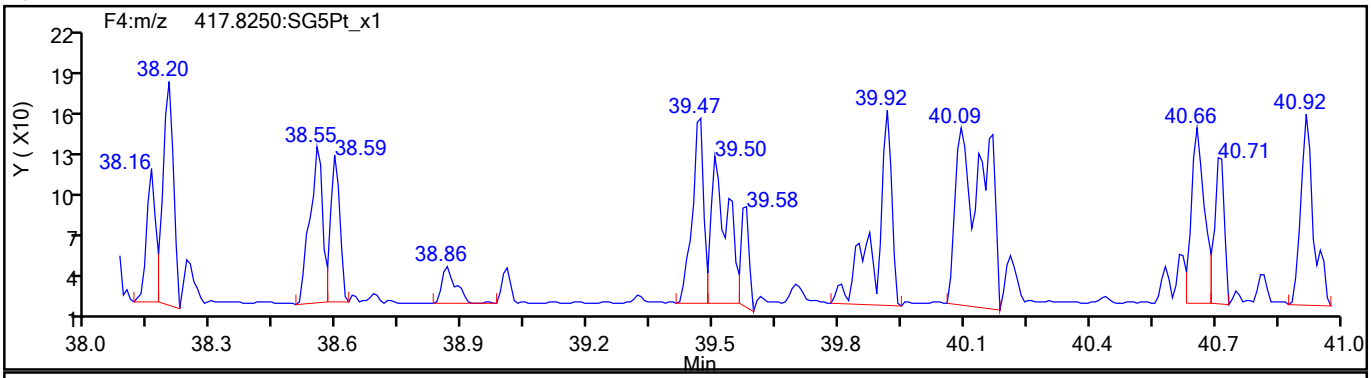

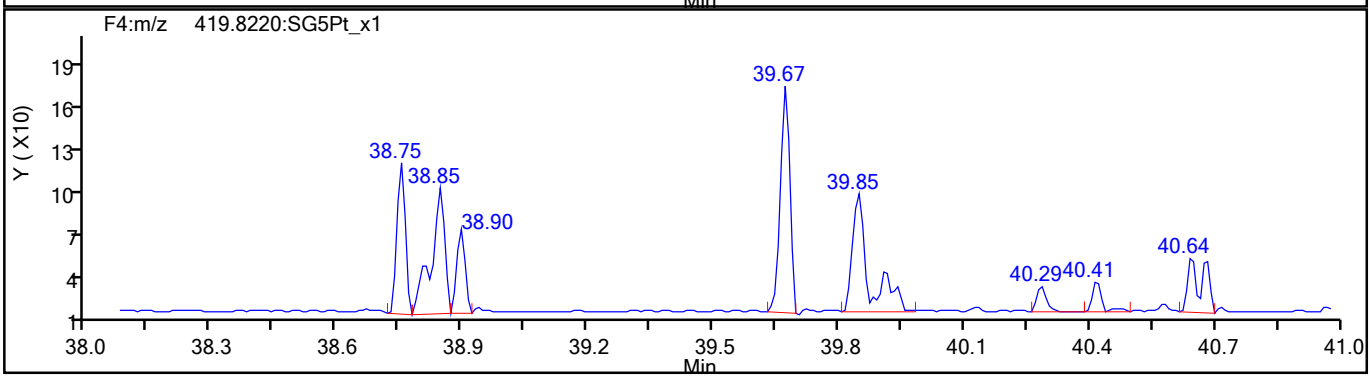

784745

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

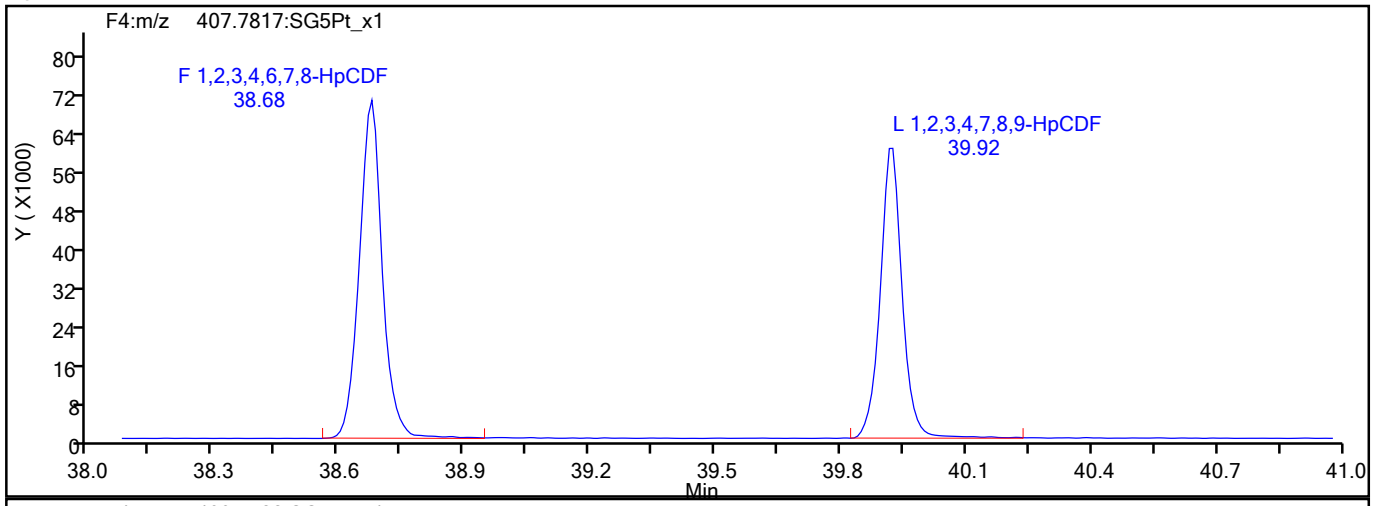

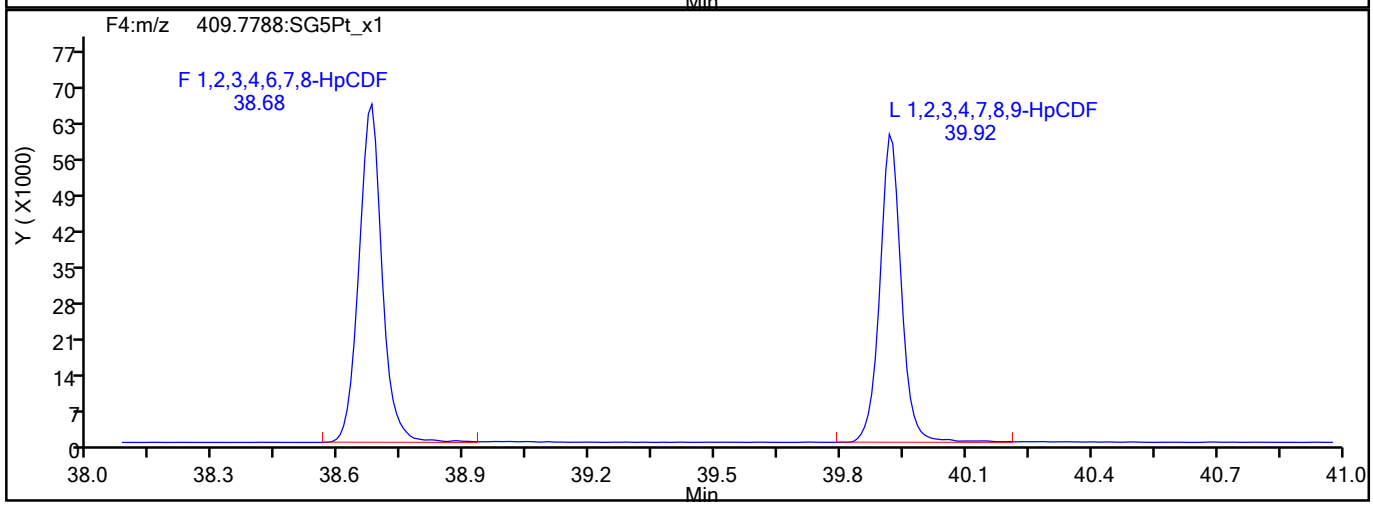

HpCDF Interference Mass

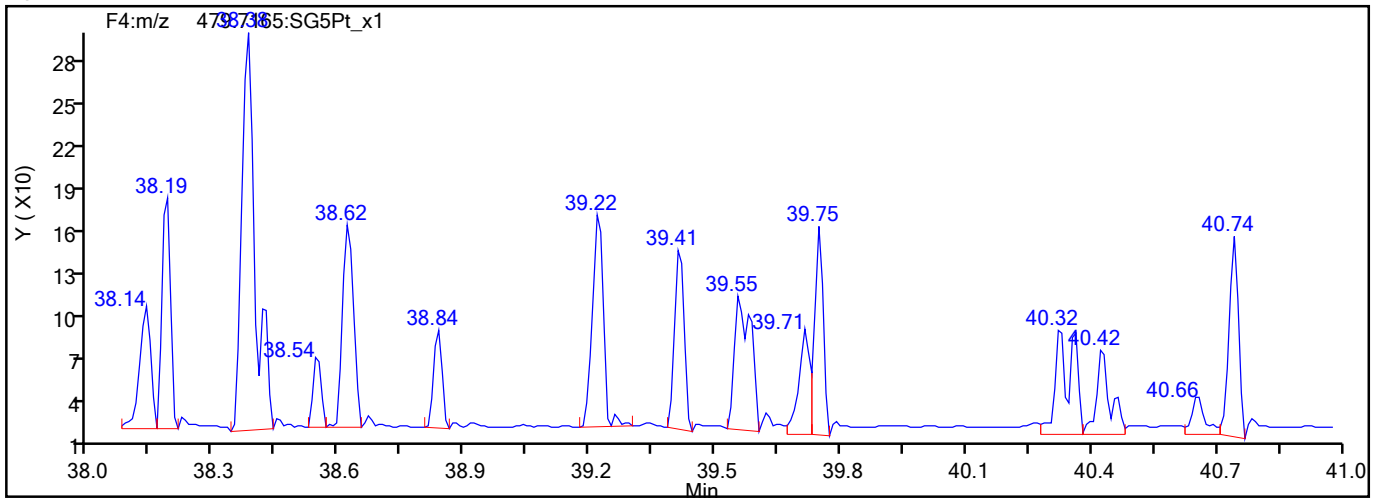

784746

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

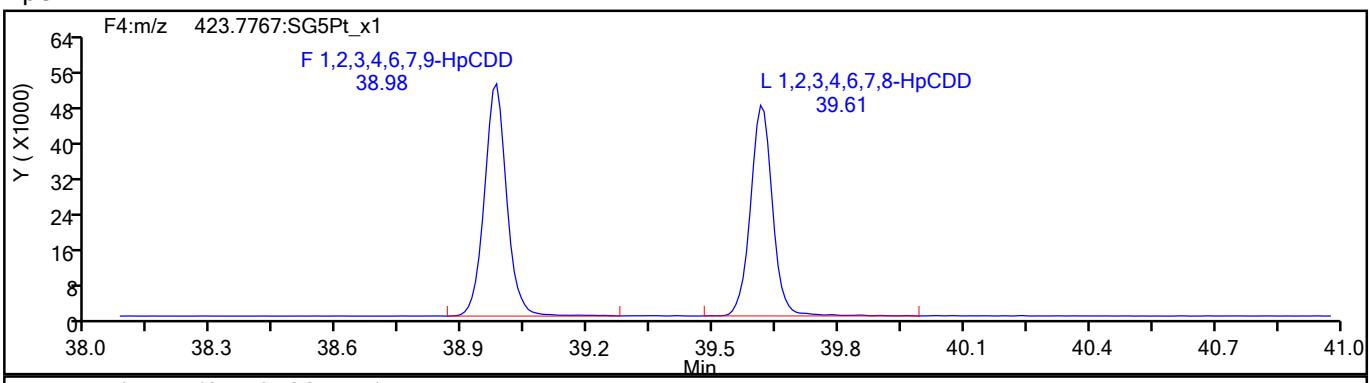

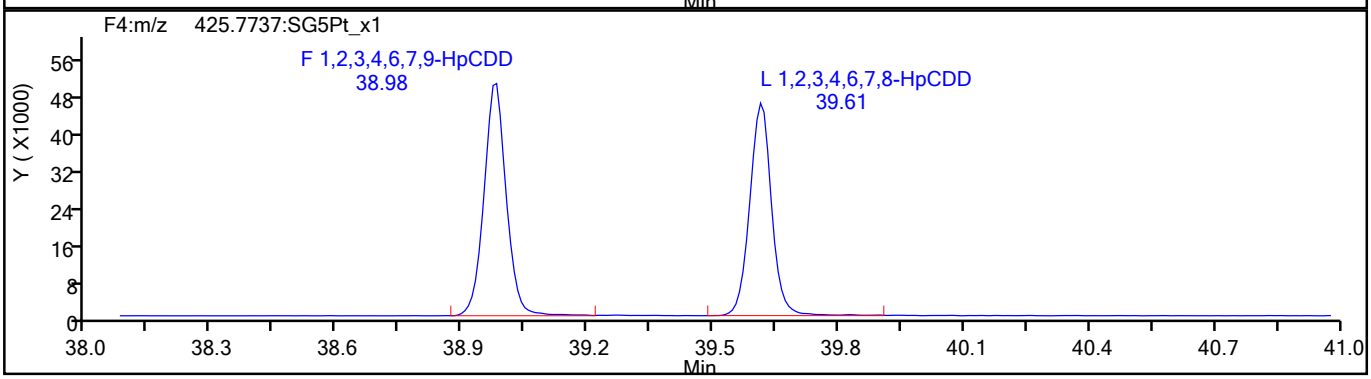

HpCDD Standards

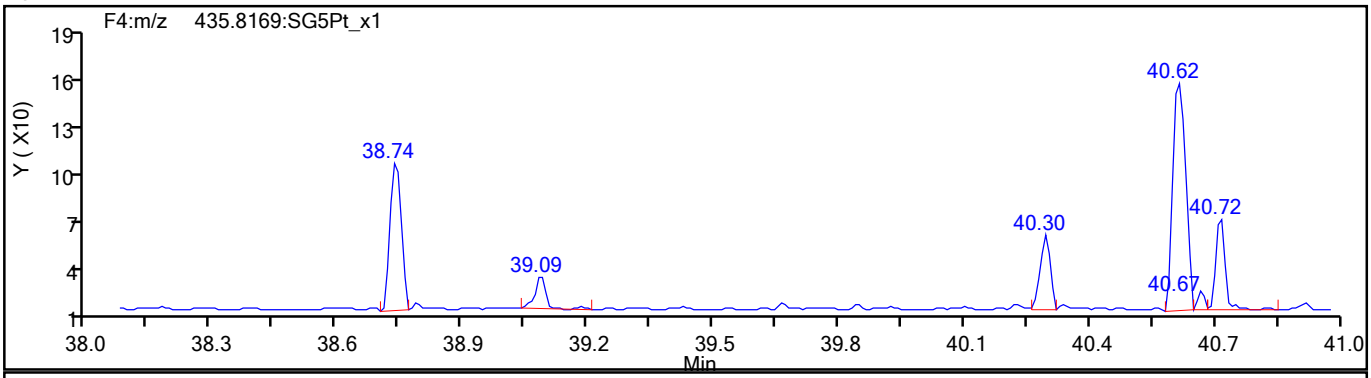

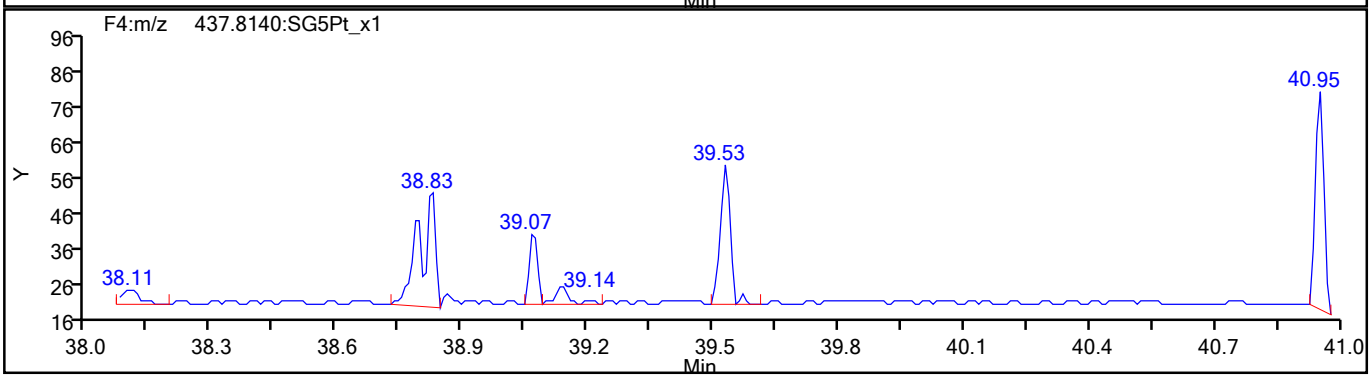

784747

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

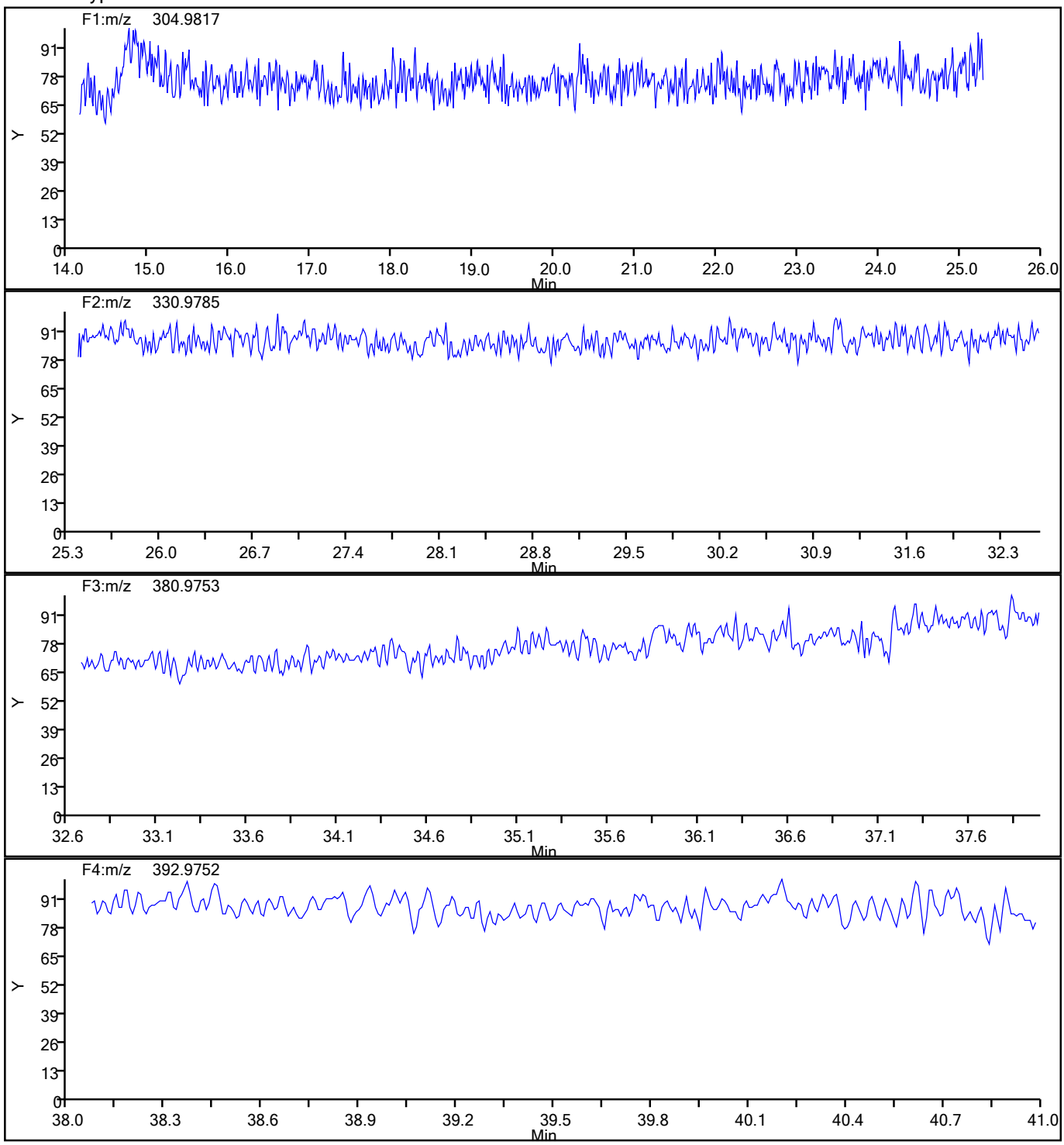

784748

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

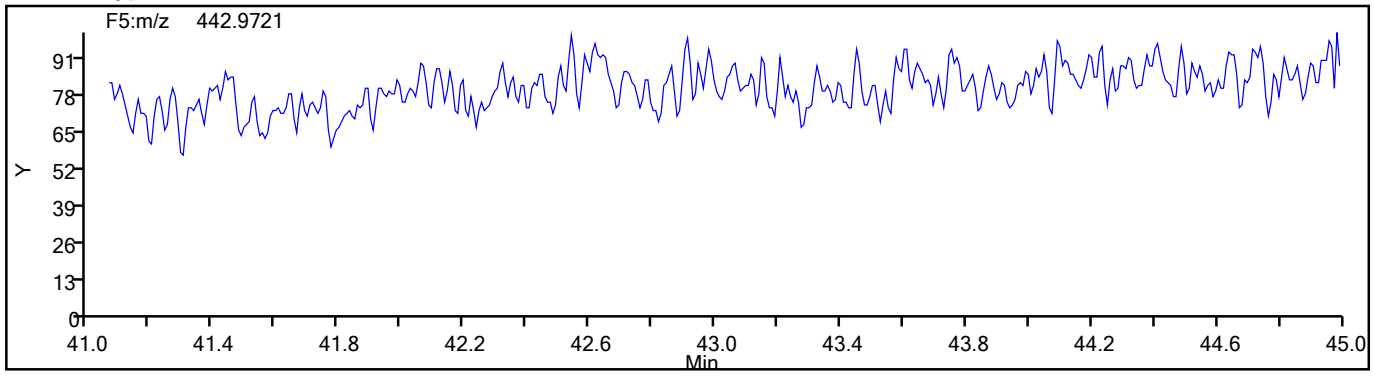

784749

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:50:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:40 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 17:49:01

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.515	79976	0.91	1.3459					0.00	R
2,3,7,8-TCDF	20.532	165011	0.80	1.0802	76.4	76.4	0.3112	0.3112		
A Non-2,3,7,8-sub-TCDF	19.946	3139	0.77	1.0802	2.721	1.453	0.3112	0.7927		RQ
S Total TCDF					79.1	77.9	0.3112	0.3112		RQ
D 13C-2,3,7,8-TCDD	21.874	21127	3.29	0.9317					0.00	R
2,3,7,8-TCDD	21.891	55608	0.81	1.0753	97.9	97.9	0.6109	0.6109		
A Non-2,3,7,8-sub-TCDD	20.781						0.6109	0.6109		
S Total TCDD					97.9	97.9	0.6109	0.6109		
A F1 PeCDFs	24.697	1039	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.194						0.0	0.0		
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.489						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.107						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.460	880	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.669	68328	1.07	1.4421						
1,2,3,4,7,8,9-HpCDF	39.907	44006	1.13	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.288						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.604	40915	1.01	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.288						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.186	98623	0.78							
1,3,6,8-TCDD	17.804	59806	0.85							
2,3,4,7-TCDF	20.532	165011	0.80							
1,2,3,7-TCDD	21.659	47985	0.81							
1,2,3,9-TCDF	22.072	74538	0.76							
1,2,3,9-TCDD	22.167	58731	0.76							
1,2,8,9-TCDF	23.706	76728	0.73							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.757	24107								
1,3,4,6,8-PeCDF	24.119	69782	1.60							
1,2,3,8,9-PeCDD	26.166	50624	1.46							
1,2,4,7,9-PeCDD	30.806	43678	1.58							
1,2,3,8,9-PeCDF	30.974	58543	1.62							
1,2,3,4,6,8-HxCDF	33.250	76257	1.26							
1,2,4,6,7,9-HxCDD	34.311	50756	1.33							
1,2,3,4,6,7-HxCDD	36.610	49652	1.28							
1,2,3,4,8,9-HxCDF	36.963	67795	1.20							
1,2,3,4,6,7,9-HpCDD	38.972	47358	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:50:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:40 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 17:49:01

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											R
315.9419	20.515	20.515	0	1.000	38178	5878	63	157	93		
317.9389	20.498	20.515	-1	1.000	41798	6617	4	10	1654	0.91(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.532	20.523	1	1.001	73204	9732	18	45	541		
305.8987	20.523	20.523	0	1.000	91807	11784	24	60	491	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	20.842	19.946	54	1.016	745	243	18	45	14		
305.8987	20.859	19.946	55	1.017	3144	272	24	60	11	0.24(0.65-0.89)	
	Empc Correction				967	315	24	60	13		
303.9016	24.075	19.946	247	1.174	621	118	18	45	7		
305.8987	24.119	19.946	250	1.176	1367	222	24	60	9	0.45(0.65-0.89)	
	Empc Correction				806	153	24	60	6		
13C-2,3,7,8-TCDD											R
331.9368	21.874	21.874	0	1.000	16200	2990	21	52	142		
333.9338	21.908	21.874	2	1.000	4927	2186	1	2	2186	3.29(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.891	21.882	1	1.001	24886	3342	27	67	124		
321.8936	21.874	21.882	-1	1.000	30722	4352	7	17	622	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.781						27	67			
321.8936	20.781						7	17			
A F1 PeCDFs											RQ
339.8597	15.816	24.697	-532	1.000	99	51	2	5	26		
341.8567	15.893	24.697	-527	1.000	68	44	4	10	11	1.46(1.32-1.78)	
339.8597	24.325	24.697	-22	1.000	587	136	2	5	68		
341.8567	24.316	24.697	-23	1.000	294	137	4	10	34	2.00(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	24.737	24.697	2	1.000	75	52	2	5	26		
341.8567	24.755	24.697	3	1.000	78	54	4	10	14	0.96(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.194						9	22			
341.8567	28.194						12	30			
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						13	32			
357.8516	28.489						10	25			
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.107						50	125			
375.8178	35.107						15	37			
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.430	35.460	-2	1.000	583	185	14	35	13		
391.8127	35.414	35.460	-3	1.000	393	84	12	30	7	1.48(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.669	38.638	2	1.000	35335	9256	22	55	421		
409.7788	38.669	38.638	2	1.000	32993	8367	11	27	761	1.07(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.907	39.885	1	1.000	23333	6317	22	55	287		
409.7788	39.916	39.885	2	1.000	20673	5103	11	27	464	1.13(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.288						22	55			
409.7788	39.288						11	27			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.604	39.582	1	1.000	20550	5578	12	30	465		
425.7737	39.596	39.582	1	1.000	20365	5300	10	25	530	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.288						12	30			
425.7737	39.288						10	25			
1,3,6,8-TCDF											
303.9016	16.186	16.186	0		43329	7699	18	45	428		
305.8987	16.186	16.186	0		55294	9985	24	60	416	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.804	17.804	0		27400	4703	27	67	174		
321.8936	17.813	17.804	1		32406	5212	7	17	745	0.85(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.532	20.532	0		73204	9732	18	45	541		
305.8987	20.523	20.532	-1		91807	11784	24	60	491	0.80(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.659	21.659	0		21515	2915	27	67	108		
321.8936	21.650	21.659	-1		26470	3363	7	17	480	0.81(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.072	22.072	0		32270	4169	18	45	232		
305.8987	22.063	22.072	-1		42268	5203	24	60	217	0.76(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.167	22.167	0		25374	3037	27	67	112		
321.8936	22.149	22.167	-1		33357	3722	7	17	532	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	23.706	23.706	0		32443	5107	18	45	284		
305.8987	23.697	23.706	-1		44285	7203	24	60	300	0.73(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.757	23.757	0		24107	4090	27	67	151		
1,3,4,6,8-PeCDF											
339.8597	24.119	24.119	0		42897	7179	2	5	3590		
341.8567	24.101	24.119	-1		26885	5048	4	10	1262	1.60(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.166	26.166	0		30013	4216	13	32	324		
357.8516	26.158	26.166	-1		20611	3257	10	25	326	1.46(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.806	30.806	0		26774	3220	13	32	248		
357.8516	30.815	30.806	1		16904	2007	10	25	201	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.974	30.974	0		36159	4045	9	22	449		
341.8567	31.000	30.974	2		22384	2622	12	30	219	1.62(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.250	33.250	0		42505	5788	50	125	116		
375.8178	33.267	33.250	1		33752	5024	15	37	335	1.26(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.311	34.311	0		29002	4807	14	35	343		
391.8127	34.319	34.311	1		21754	3912	12	30	326	1.33(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.610	36.610	0		27870	6094	14	35	435		
391.8127	36.610	36.610	0		21782	4999	12	30	417	1.28(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.963	36.963	0		37010	8343	50	125	167		
375.8178	36.963	36.963	0		30785	7337	15	37	489	1.20(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.972	38.972	0		24197	6959	12	30	580		
425.7737	38.972	38.972	0		23161	6428	10	25	643	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:50:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 30

Non-2,3,7,8-sub-TCDF, RT: 19.946

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	79976	12495

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	79976	12495

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
20.842	745	243	3144	272	1.80	0.24	RQ
20.842	745	243	967	315	0.7927		Empc Correction
24.075	621	118	1367	222	0.9205	0.45	RQ
24.075	621	118	806	153	0.6607		Empc Correction
Signal Totals:							
	1366	361	1773	468			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5877	855				0.30	RQ
	3139	829					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.721 = (5877 * 40.000) / (79976 * 1.080)
Empc Amount: 1.453 = (3139 * 40.000) / (79976 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:50:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 30

F1 PeCDFs, RT: 24.697

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
15.816	99	51	68	44		1.46	
24.325	587	136	294	137		2.00	R
24.737	75	52	78	54		0.96	R
Signal Totals:							
	761	239	440	235			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1201	474				1.73	RQ
	1039	529					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1201 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (1039 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	18-Aug-2021 14:50:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	30

Non-2,3,7,8-sub-HxCDD, RT: 35.460

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.430	583	185	393	84		1.48	R
Signal Totals:							
	583	185	393	84			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	976	269				1.48	RQ
	880	188					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (976 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (880 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

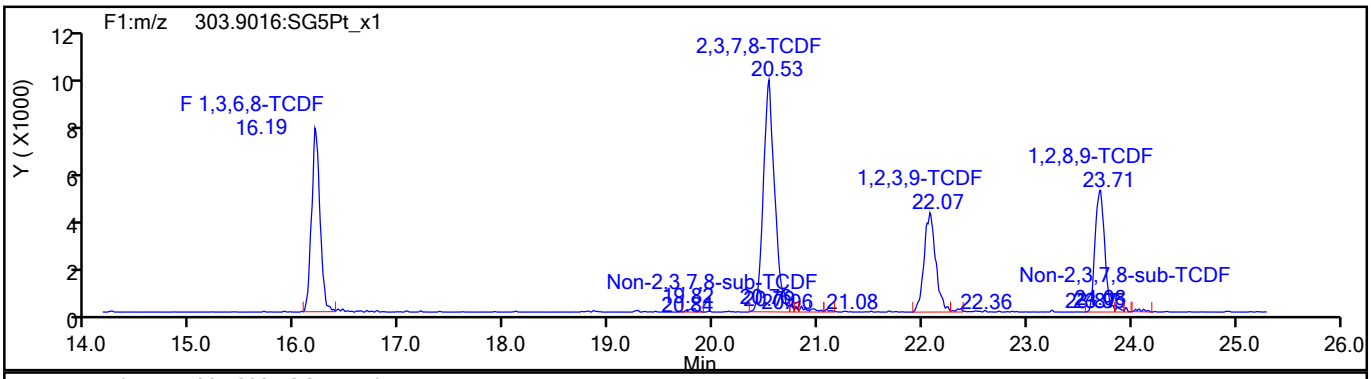

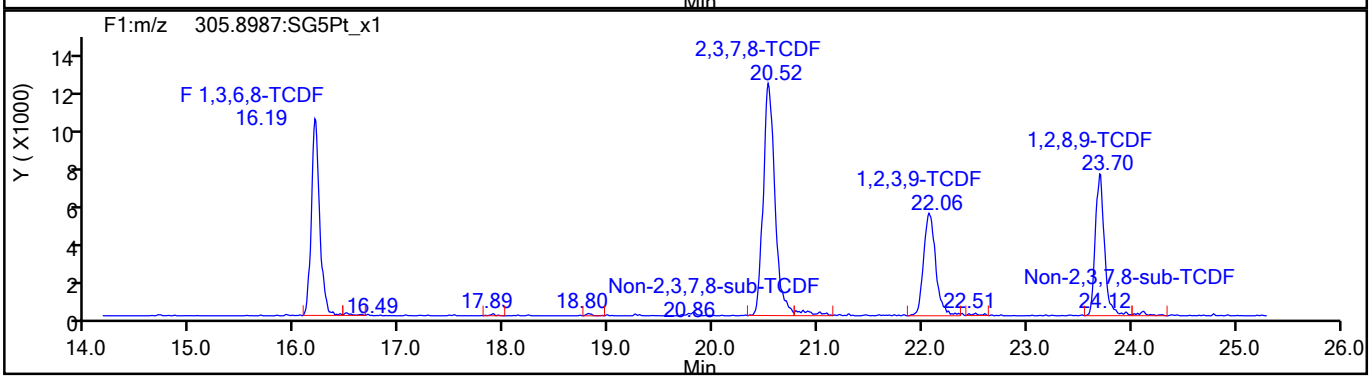

TCDF Standards

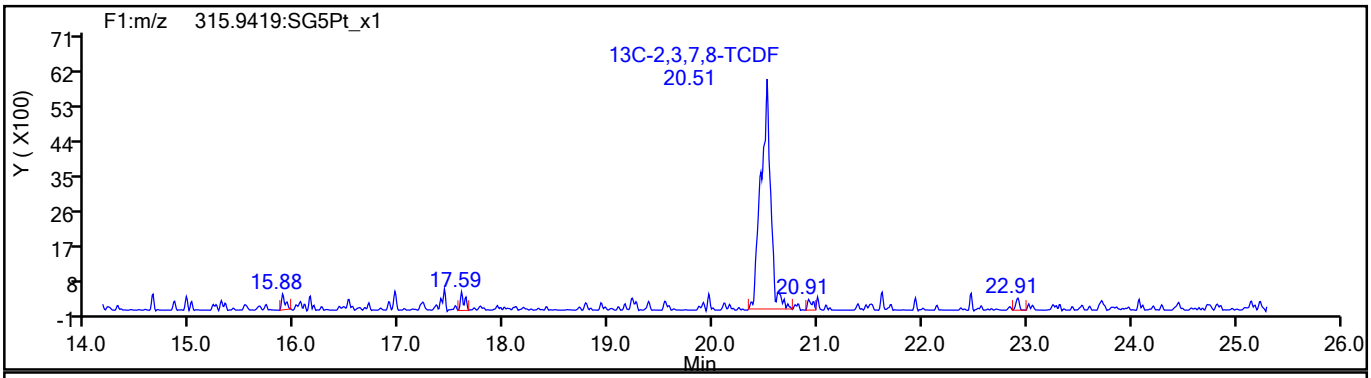

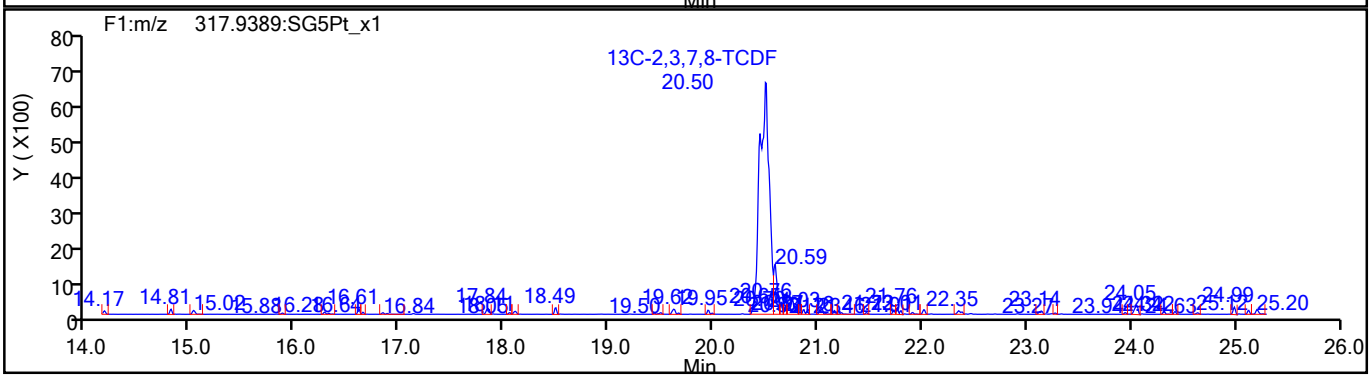

784758

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

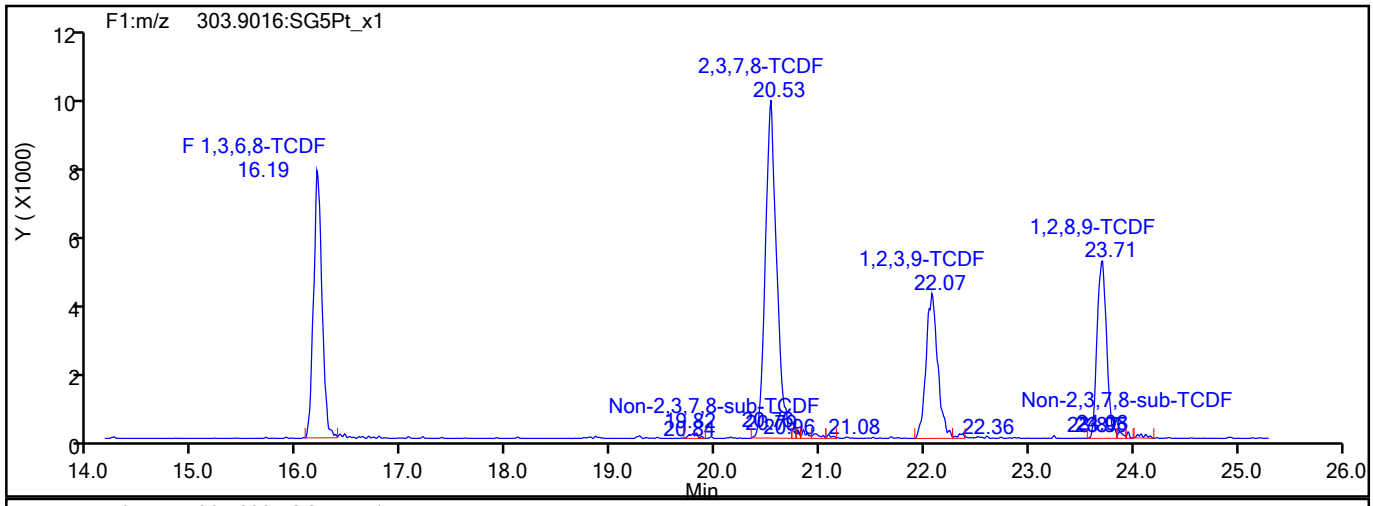

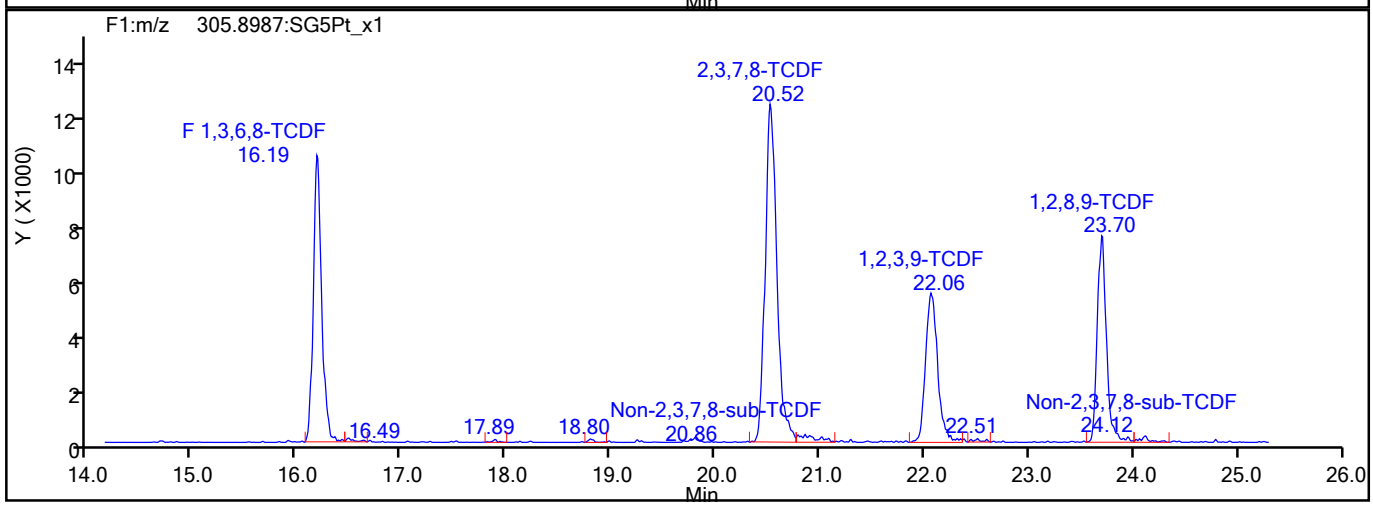

TCDF Interference Mass

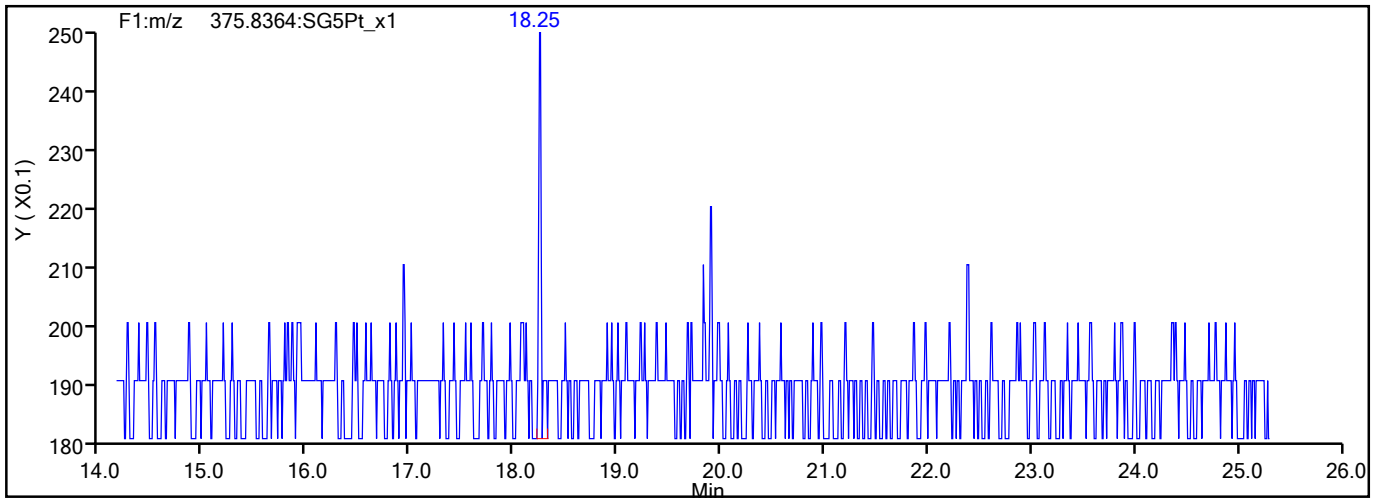

784759

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

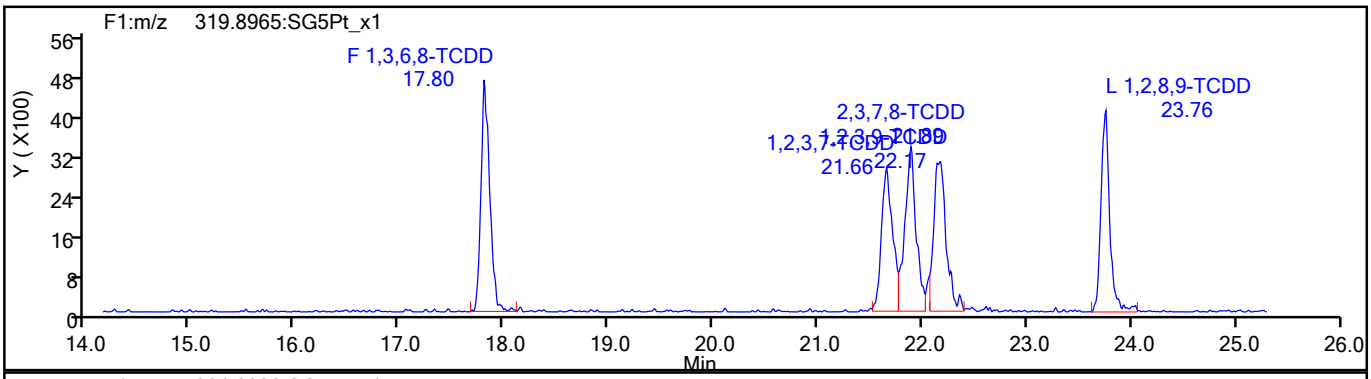

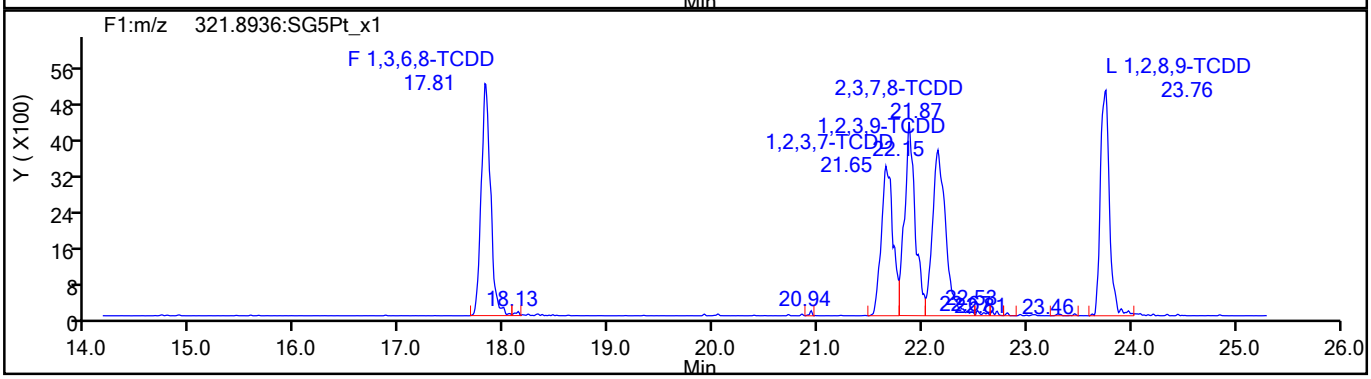

TCDD Standards

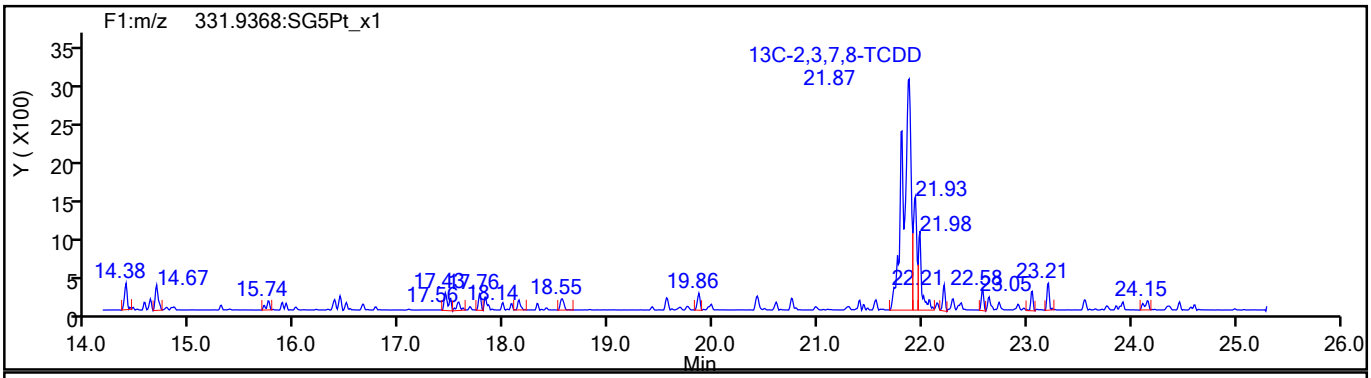

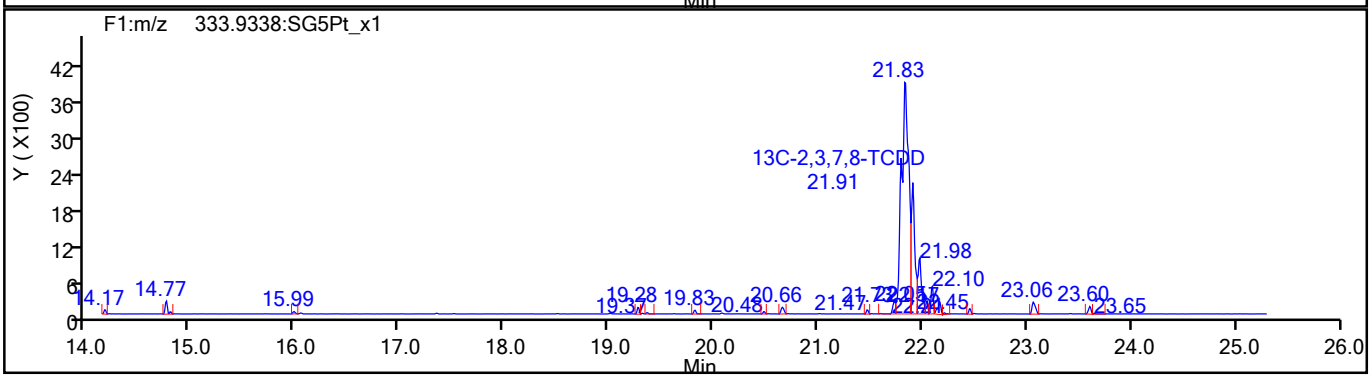

784760

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

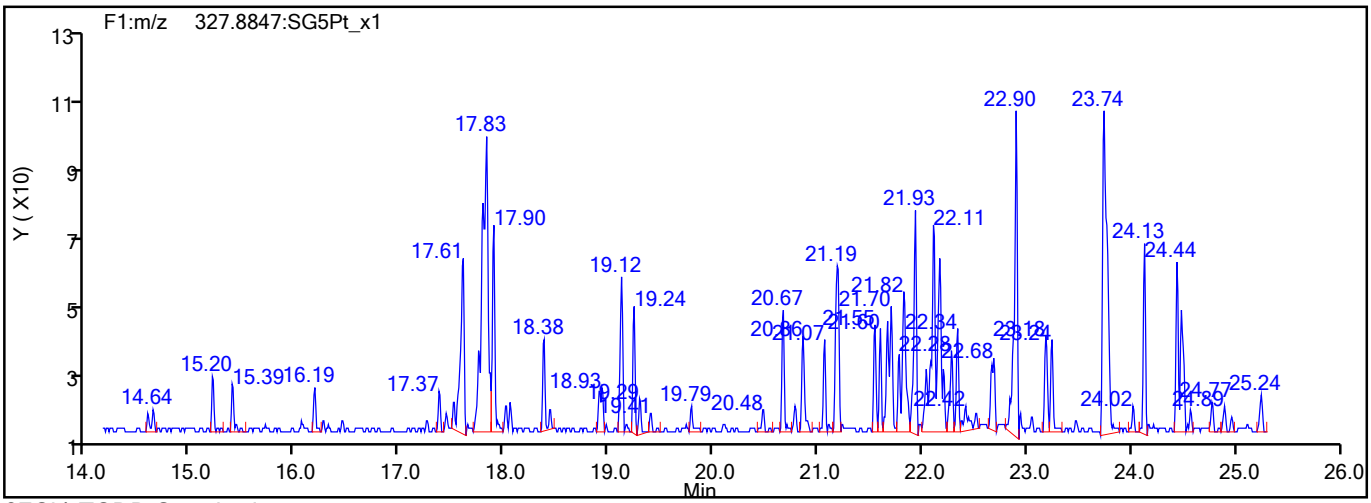

37Cl4-TCDD Standards

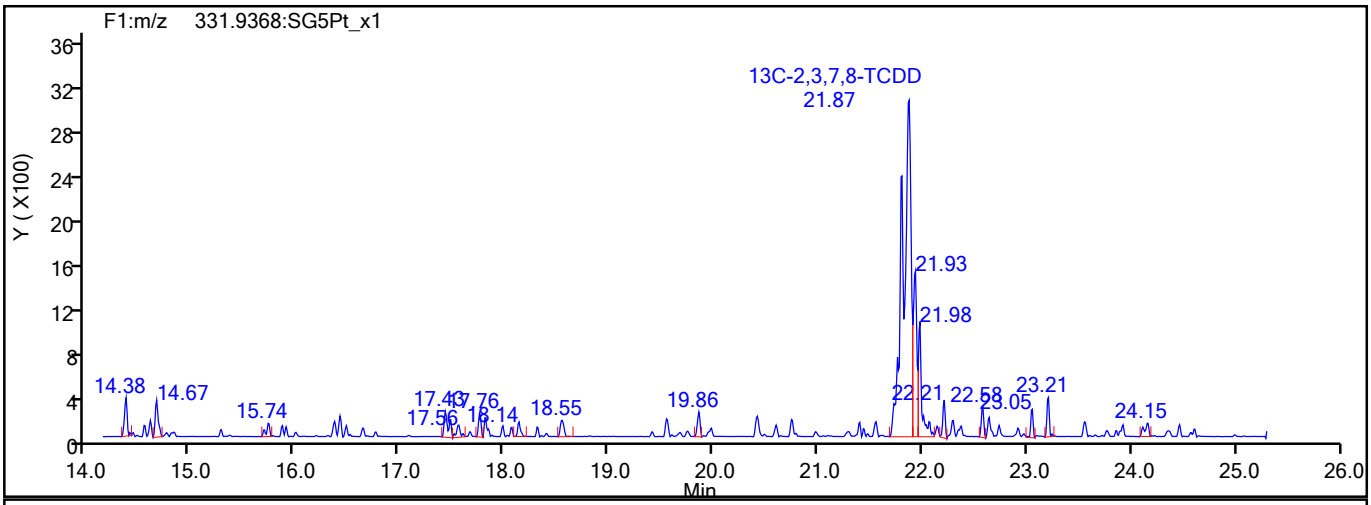

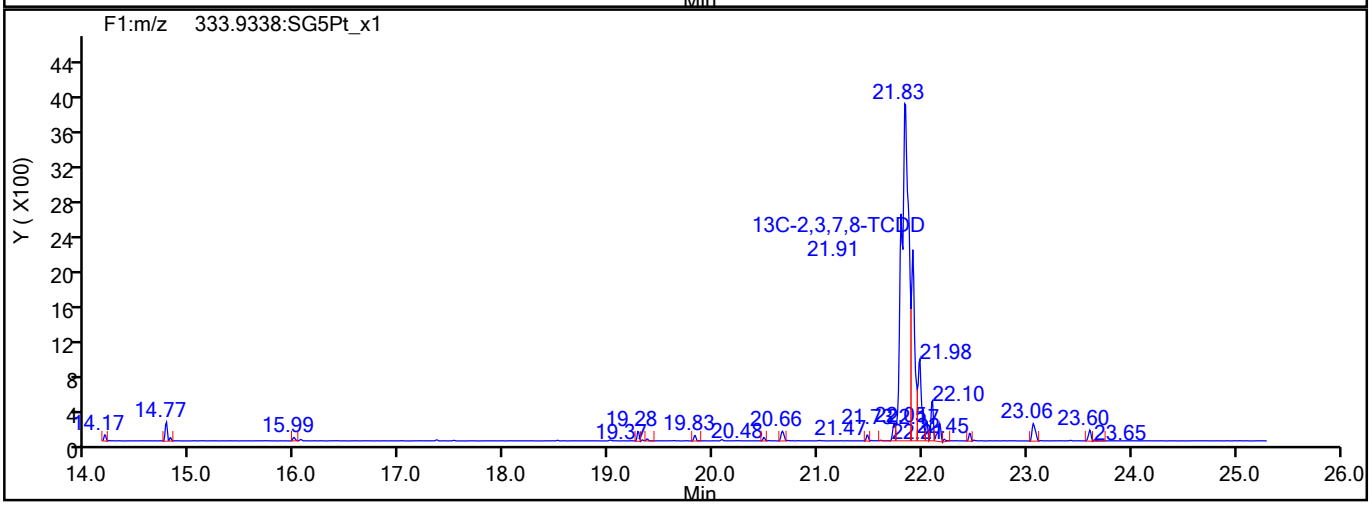

784761

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

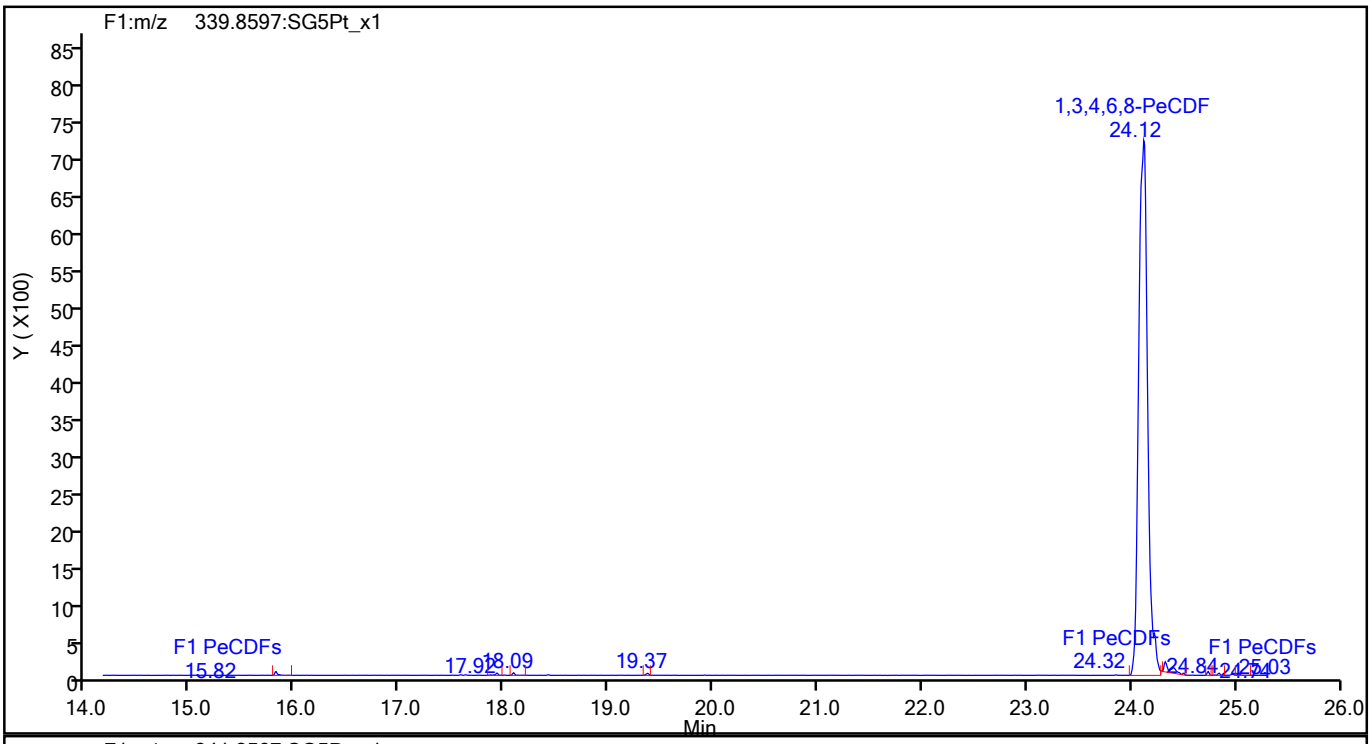

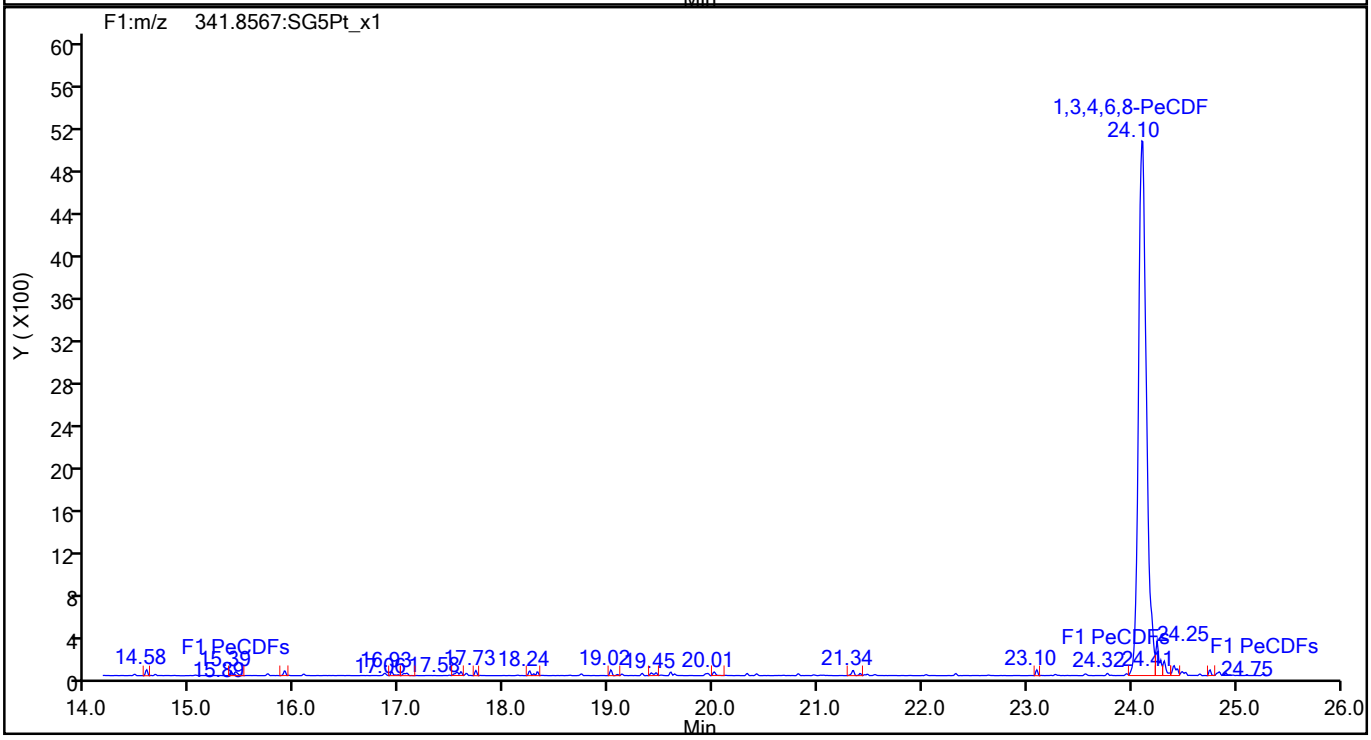

784762

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

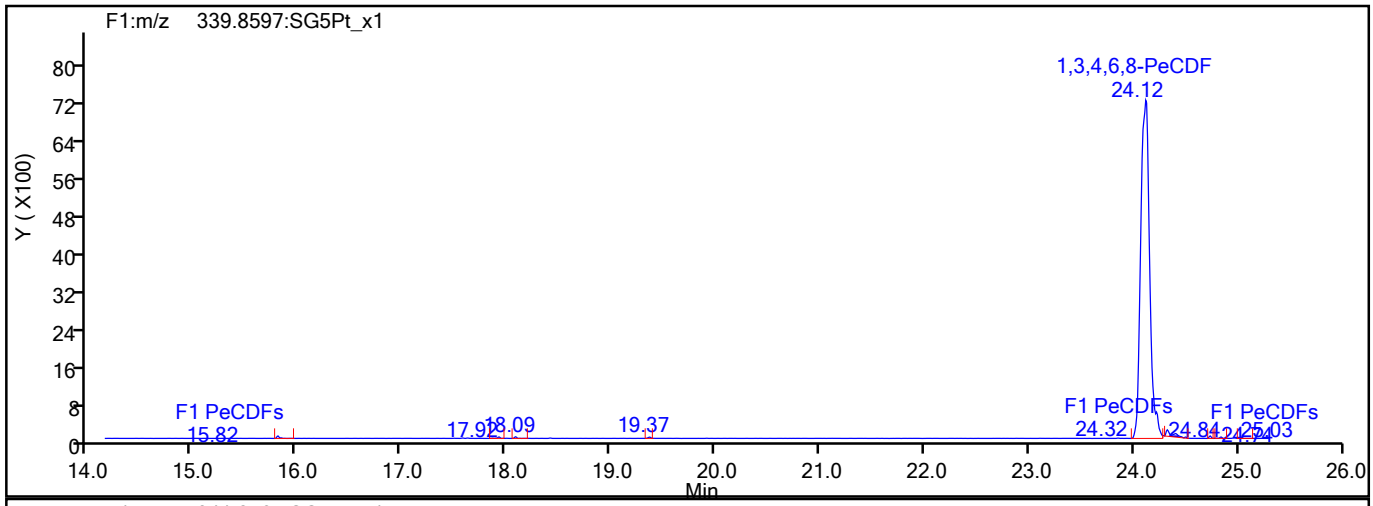

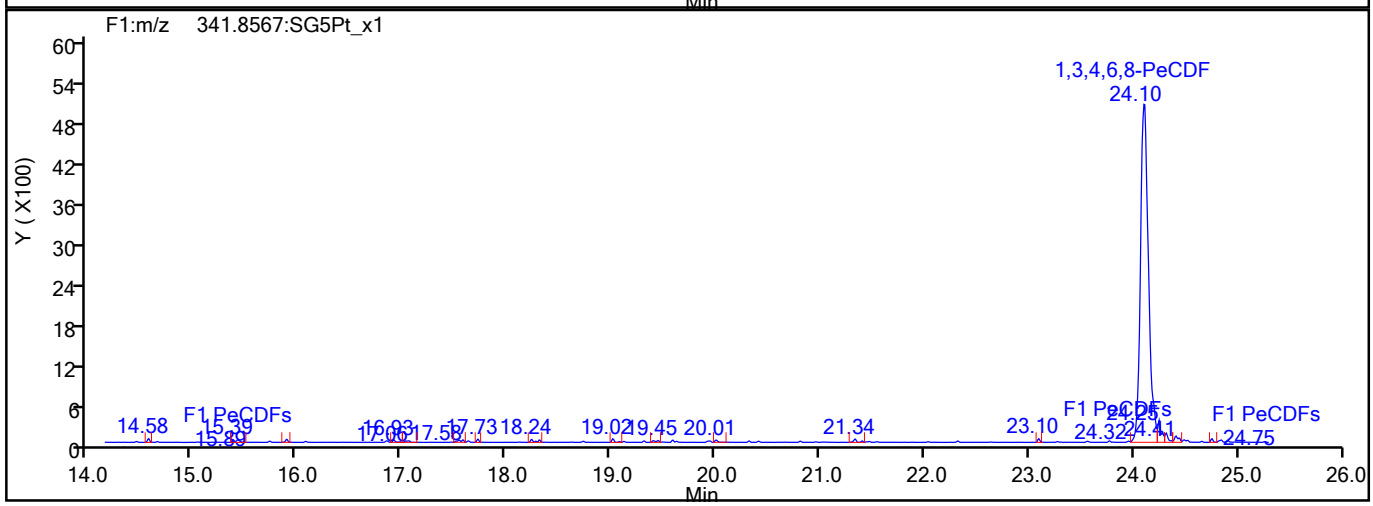

F1 PeCDFs Interference Mass

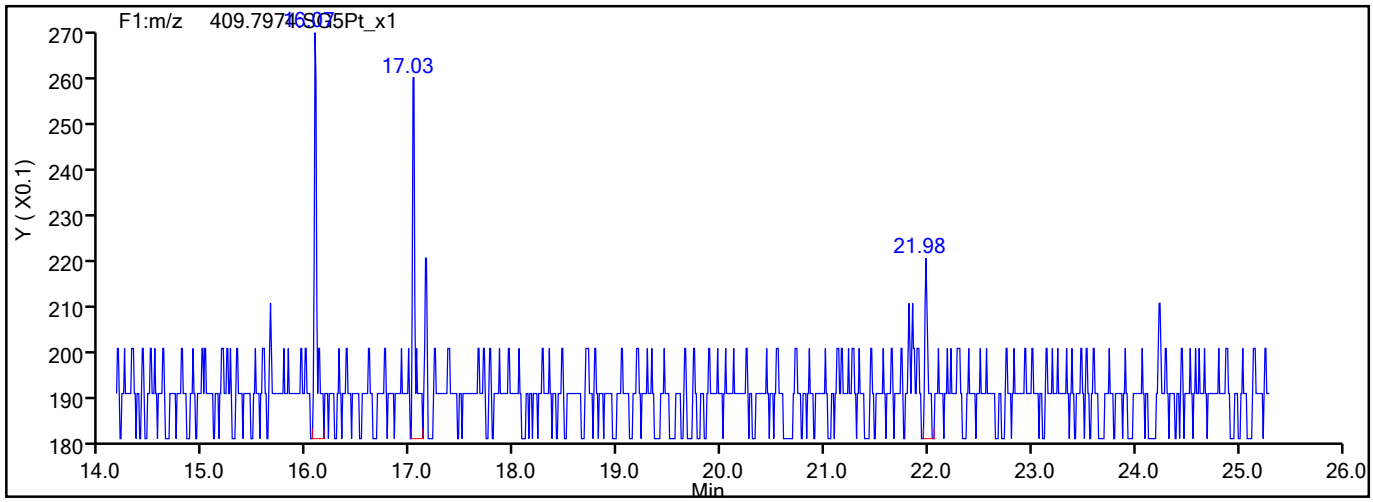

784763

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

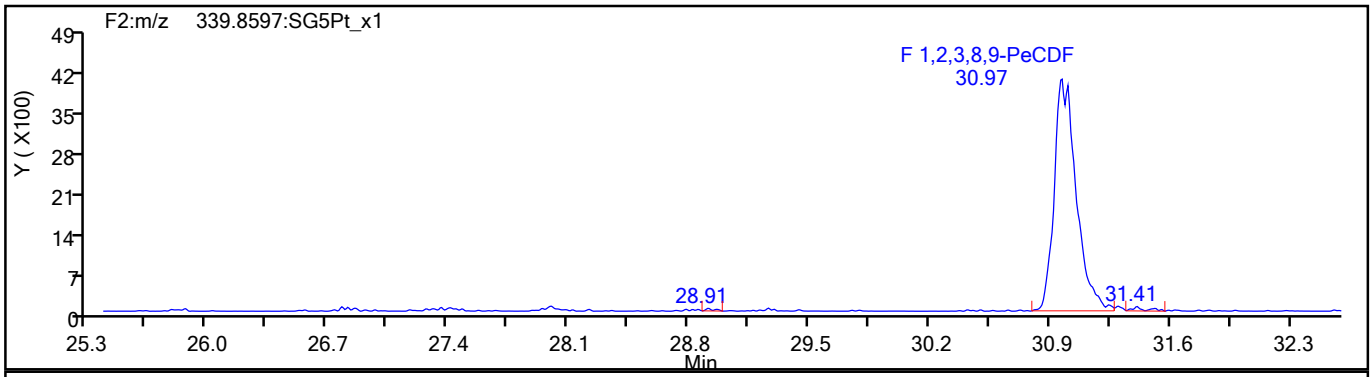

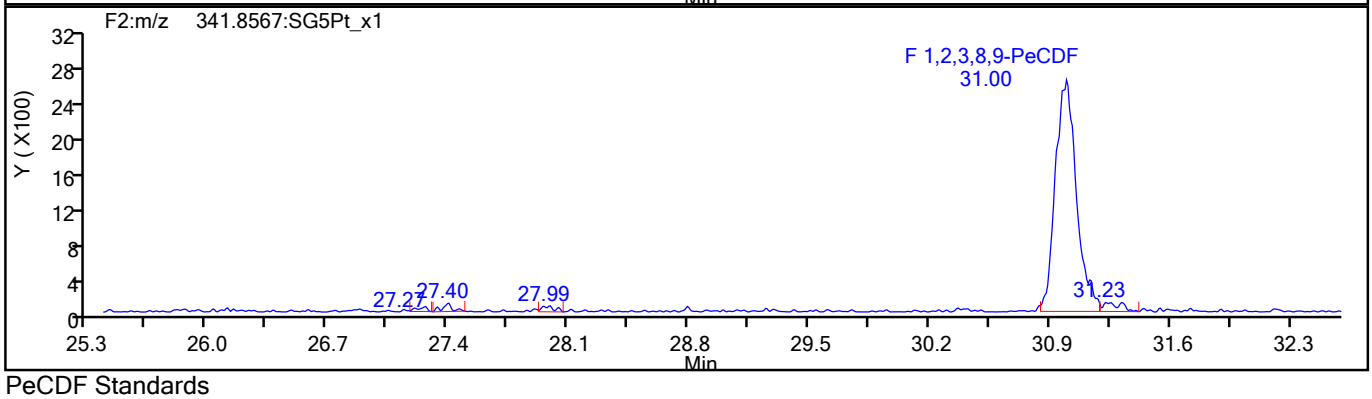

PeCDF Standards

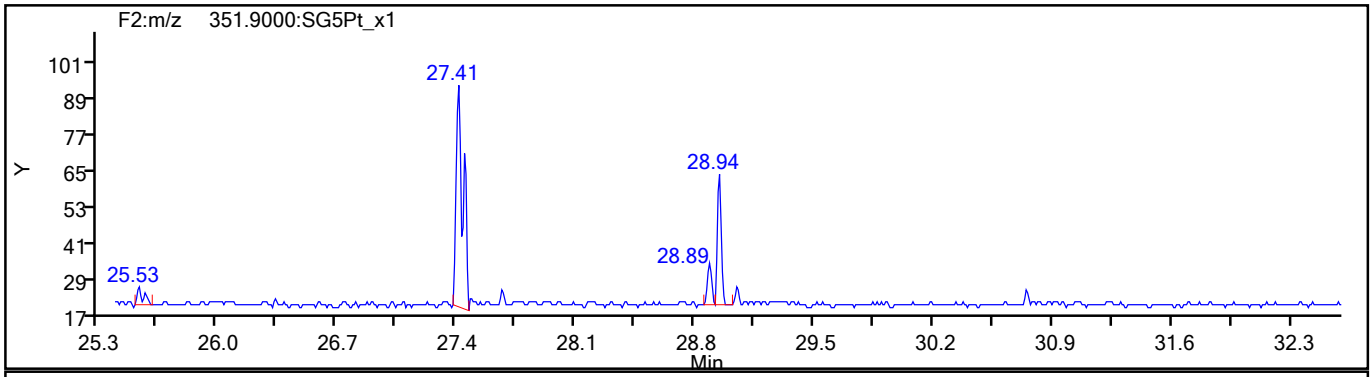

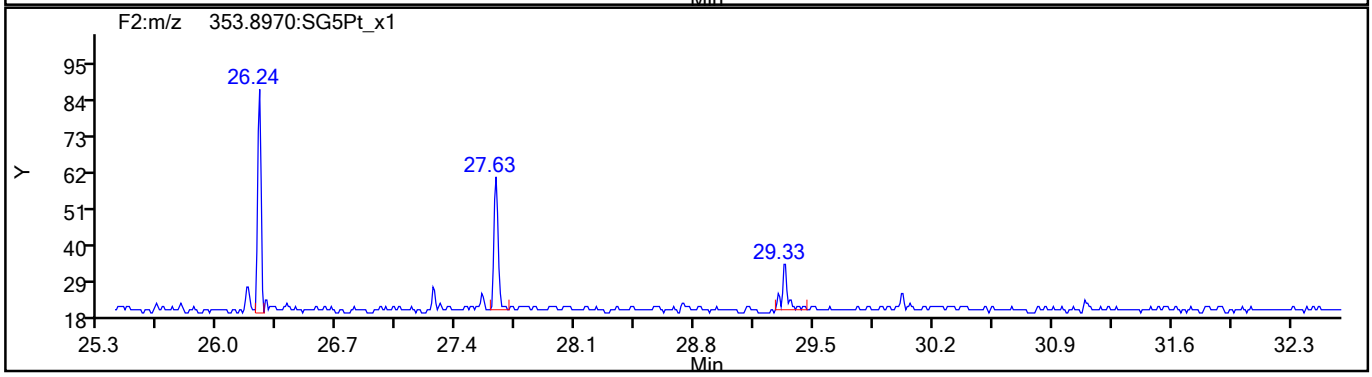

784764

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

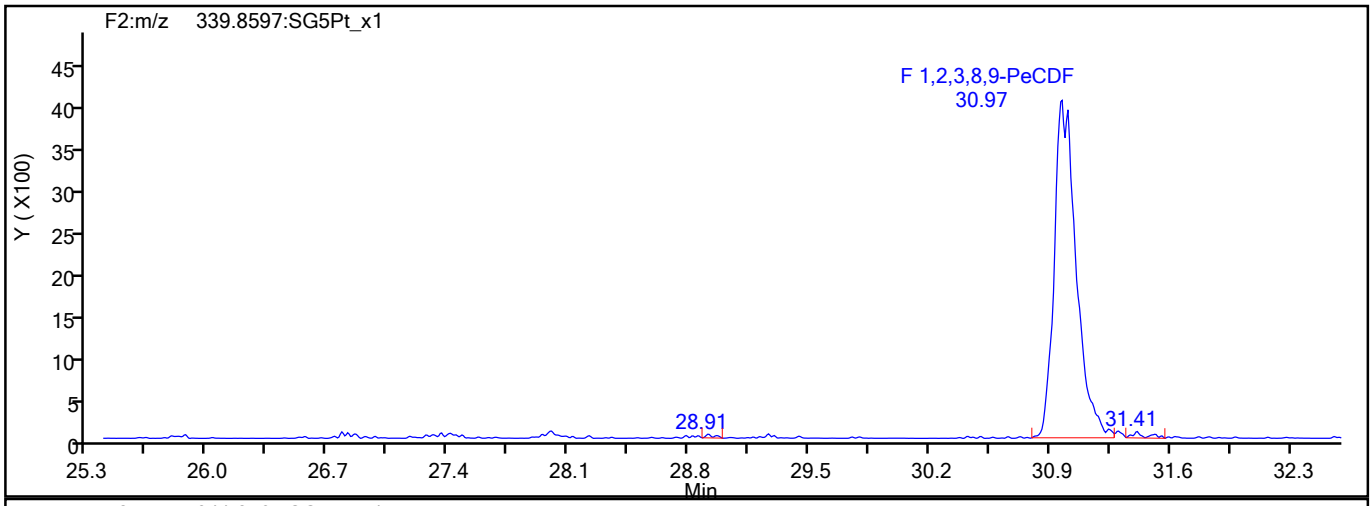

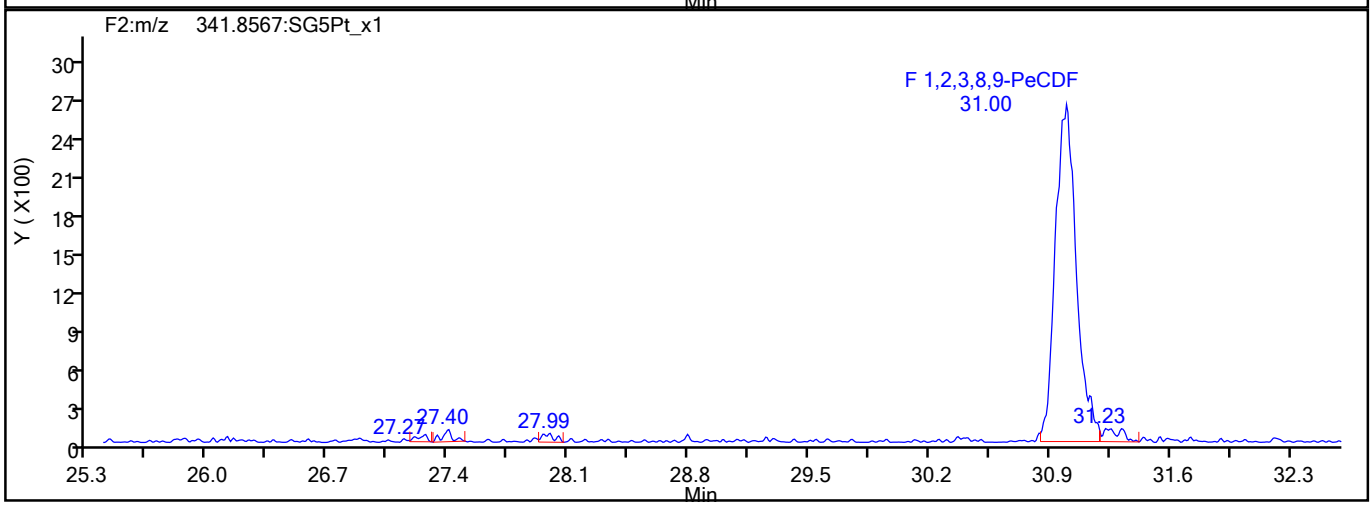

PeCDF Interference Mass

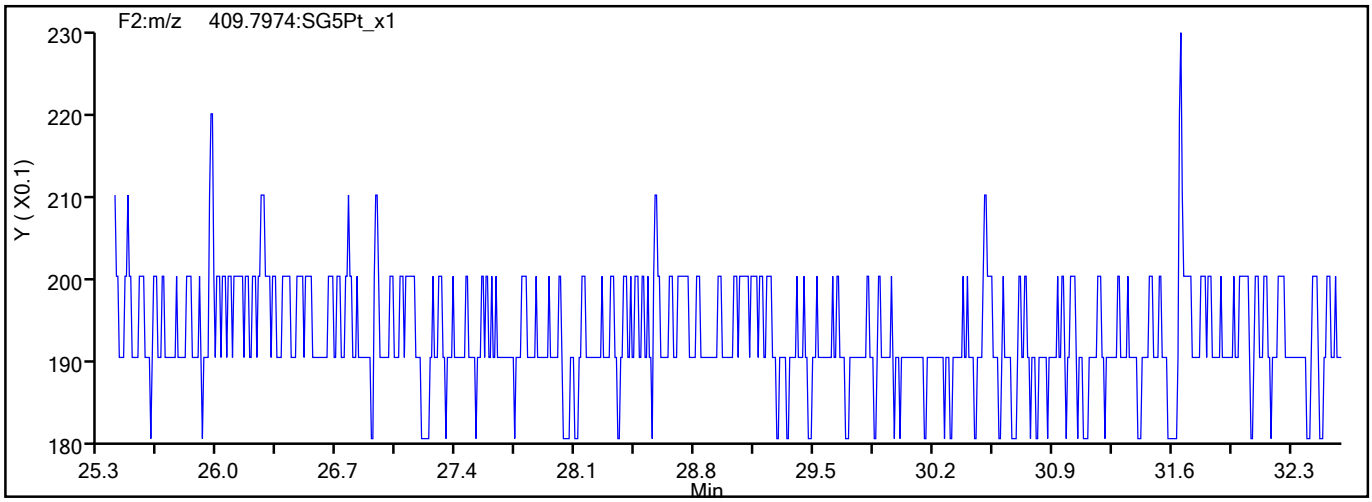

784765

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

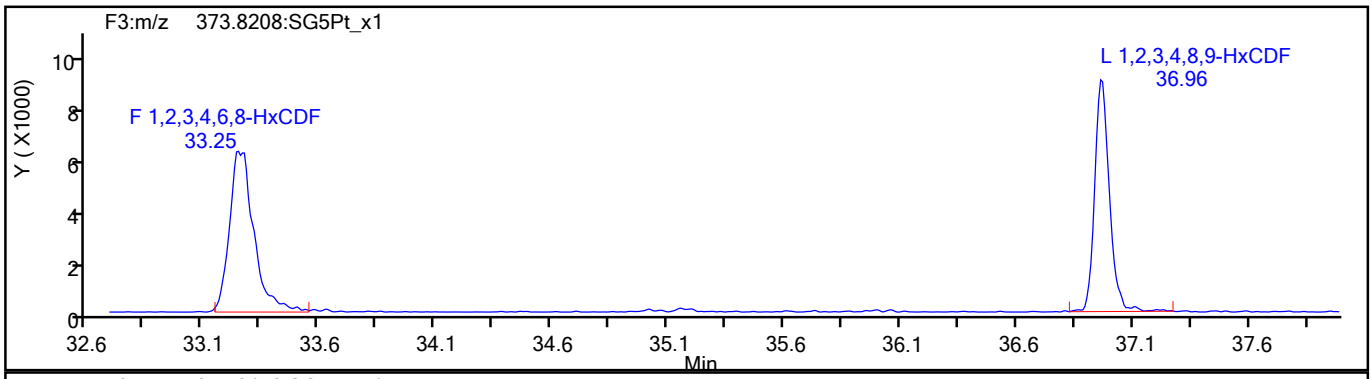

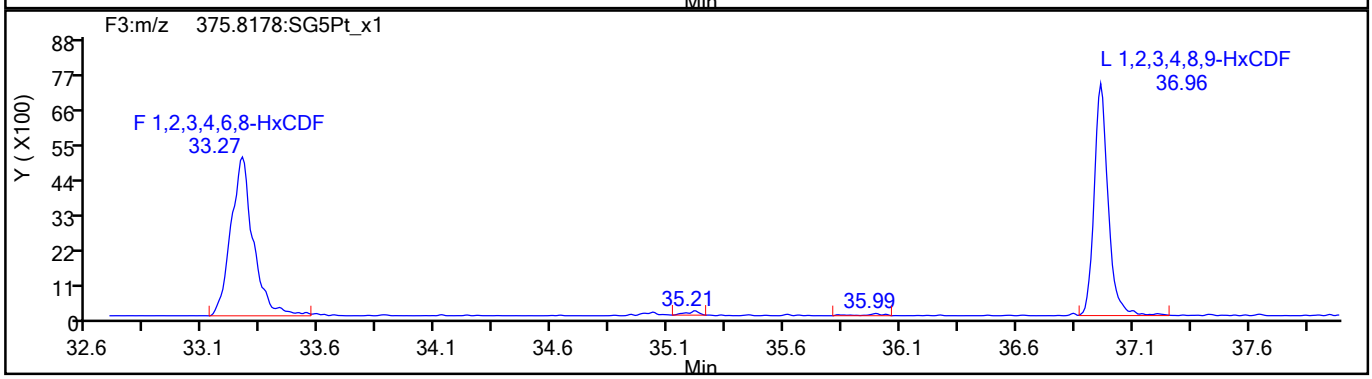

HxCDF Standards

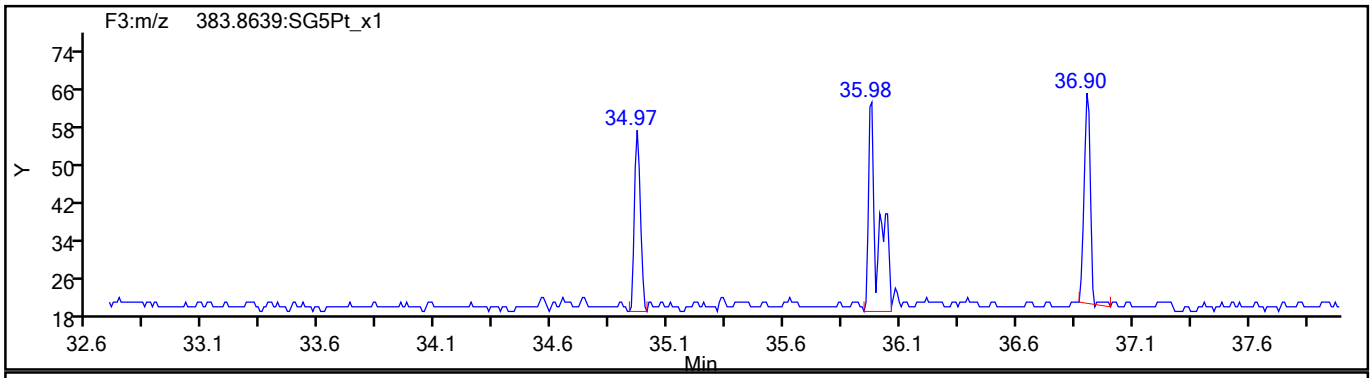

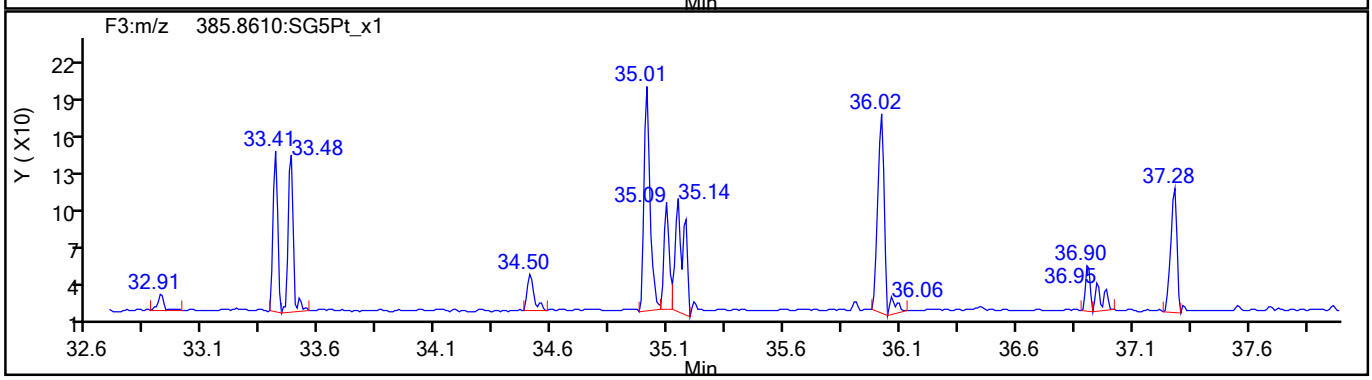

784766

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

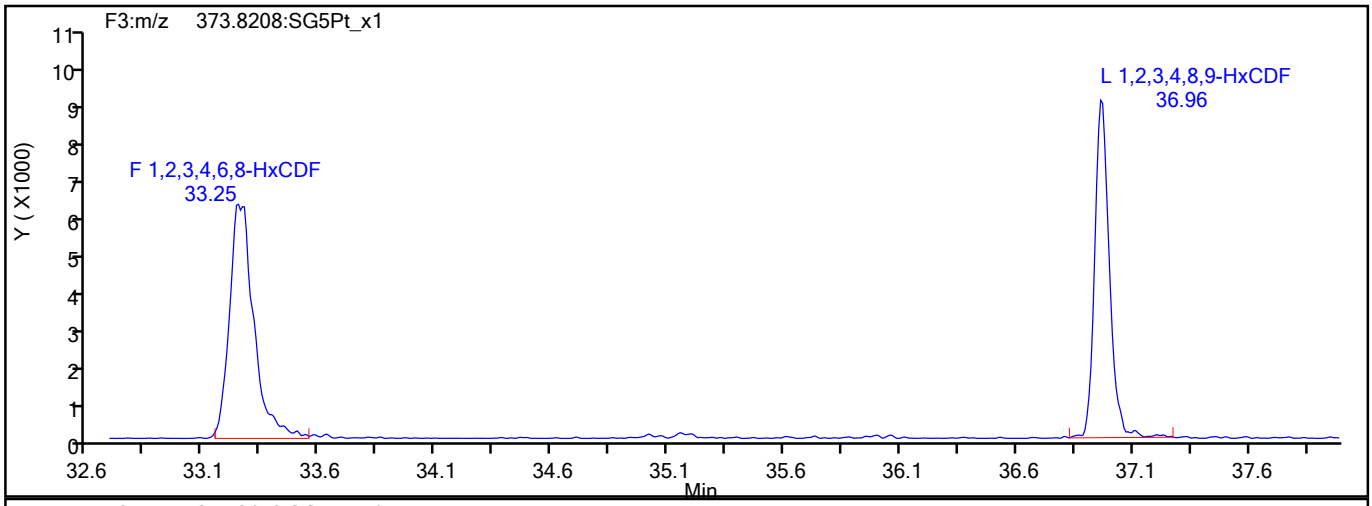

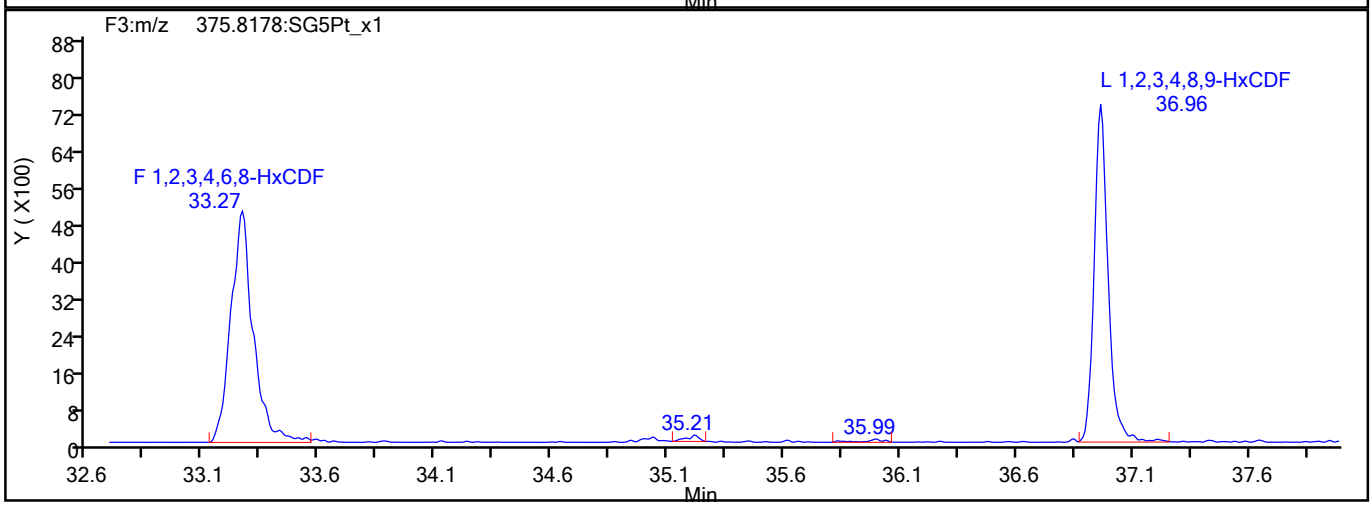

HxCDF Interference Mass

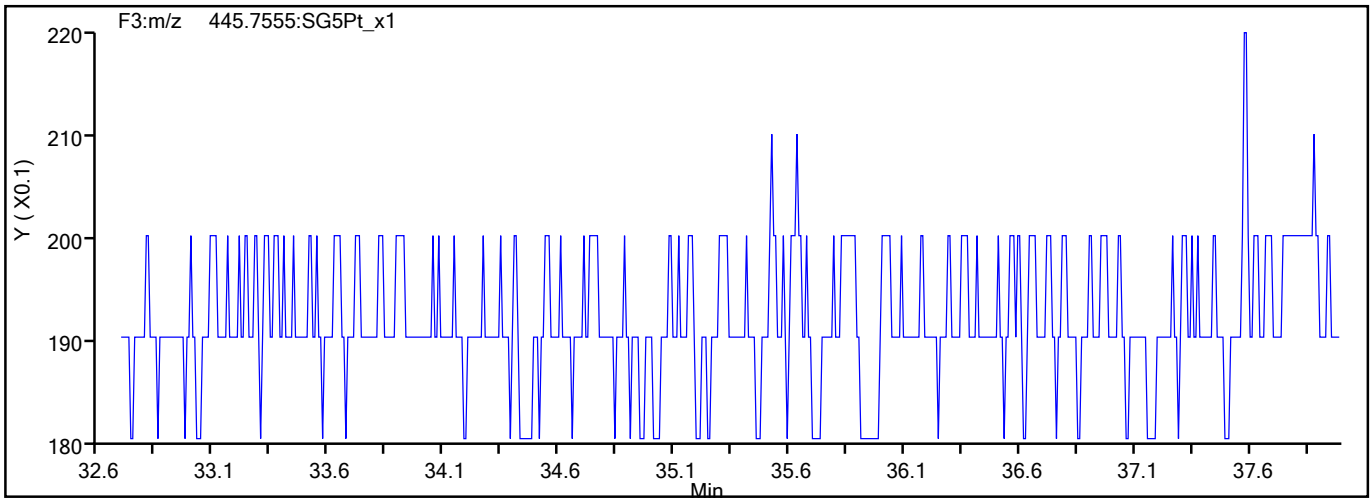

784767

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

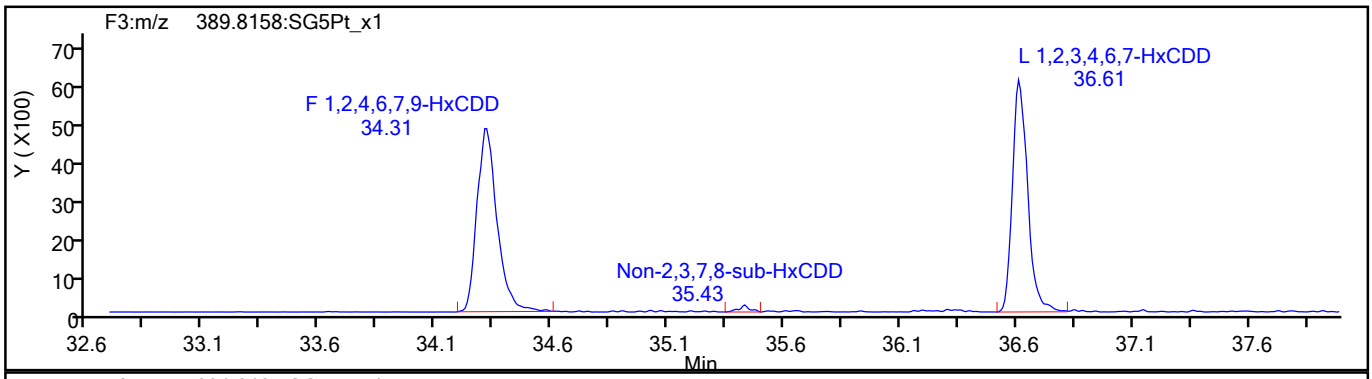

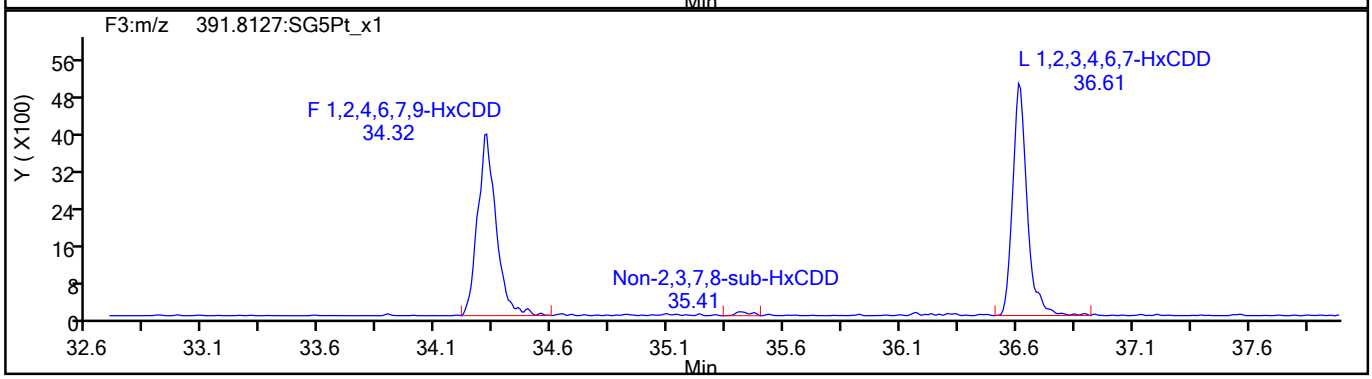

HxCDD Standards

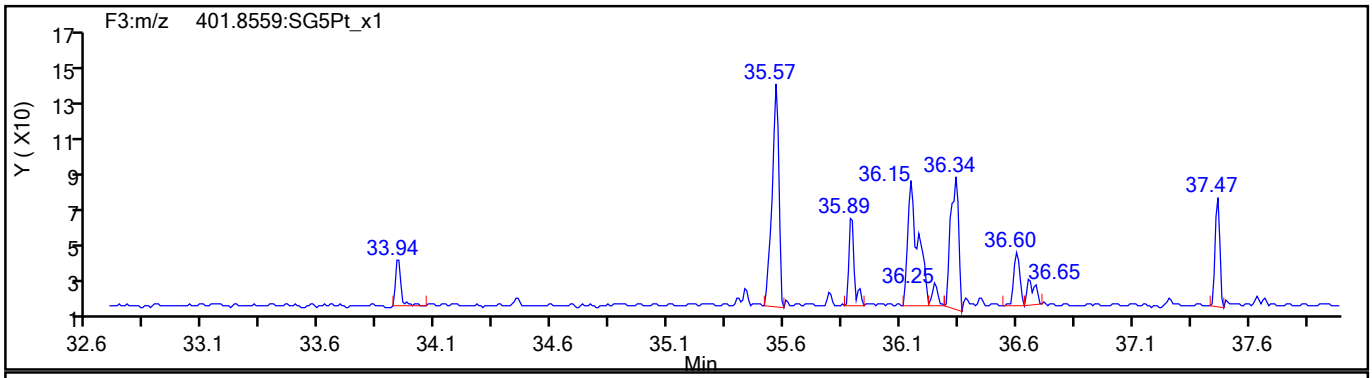

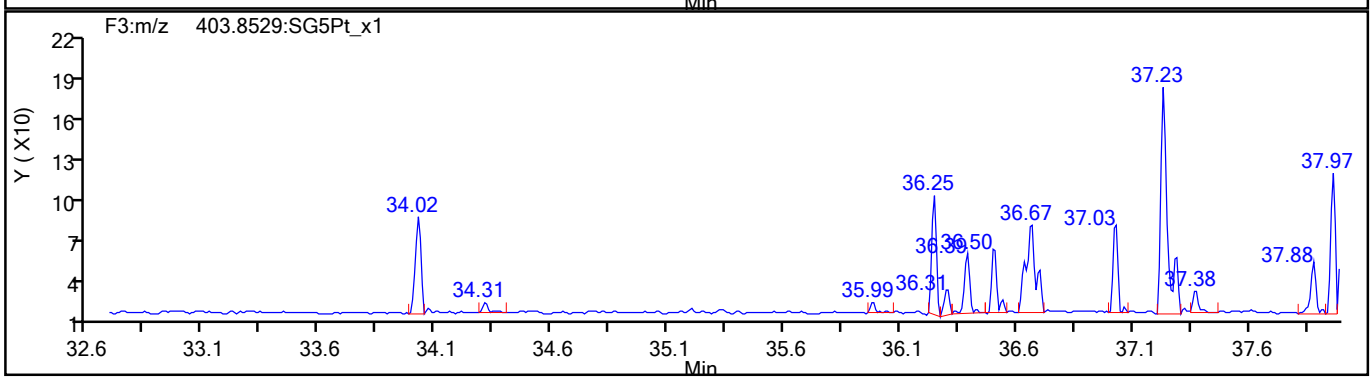

784768

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

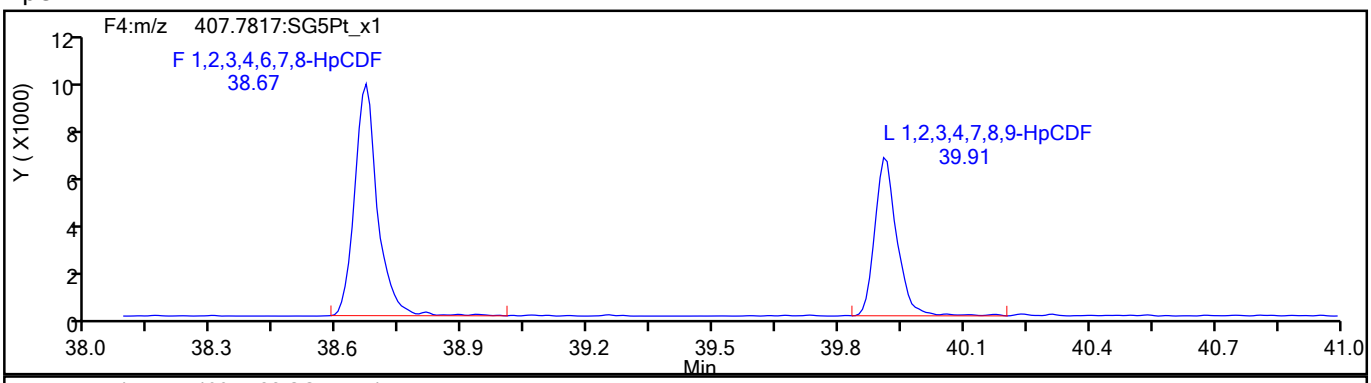

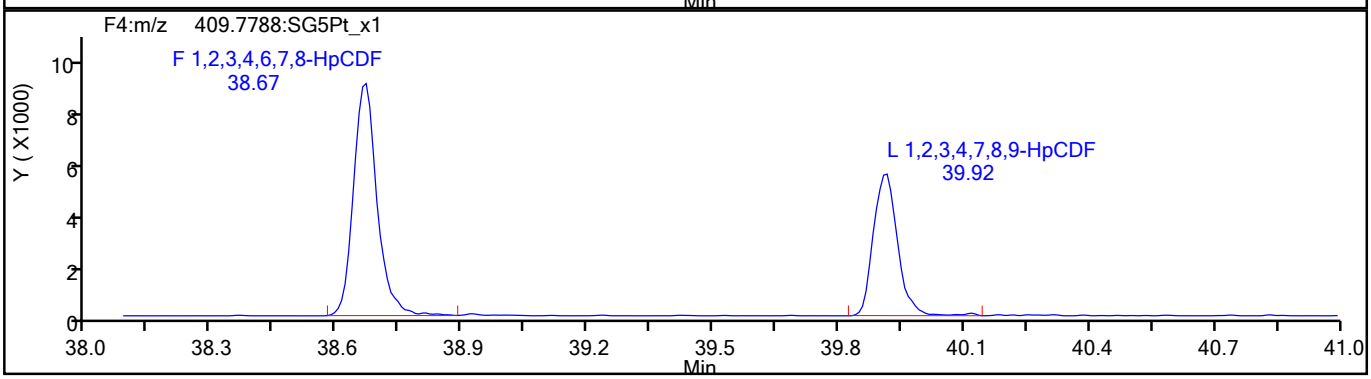

HpCDF Standards

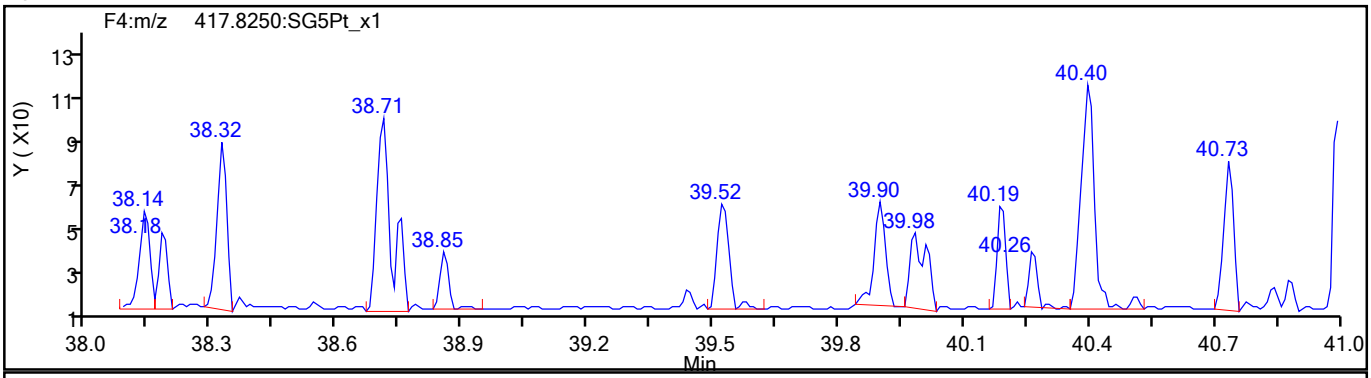

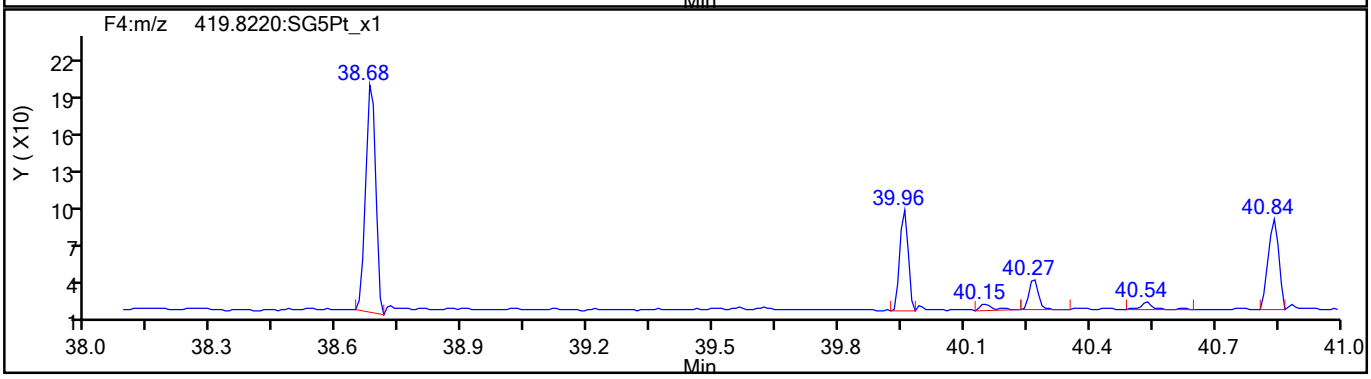

784769

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

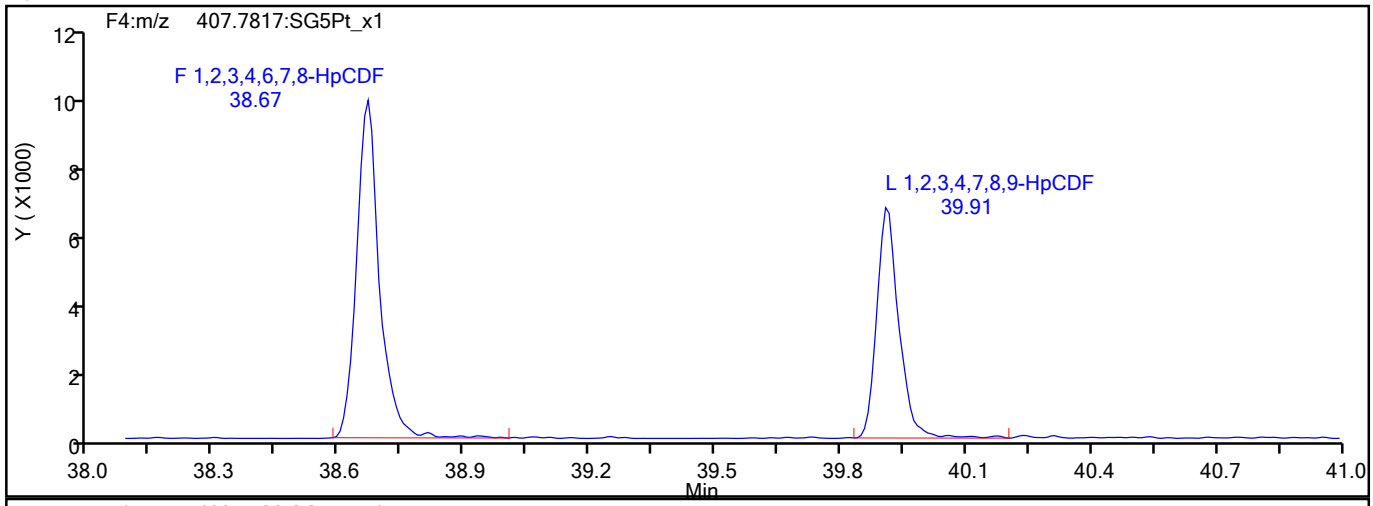

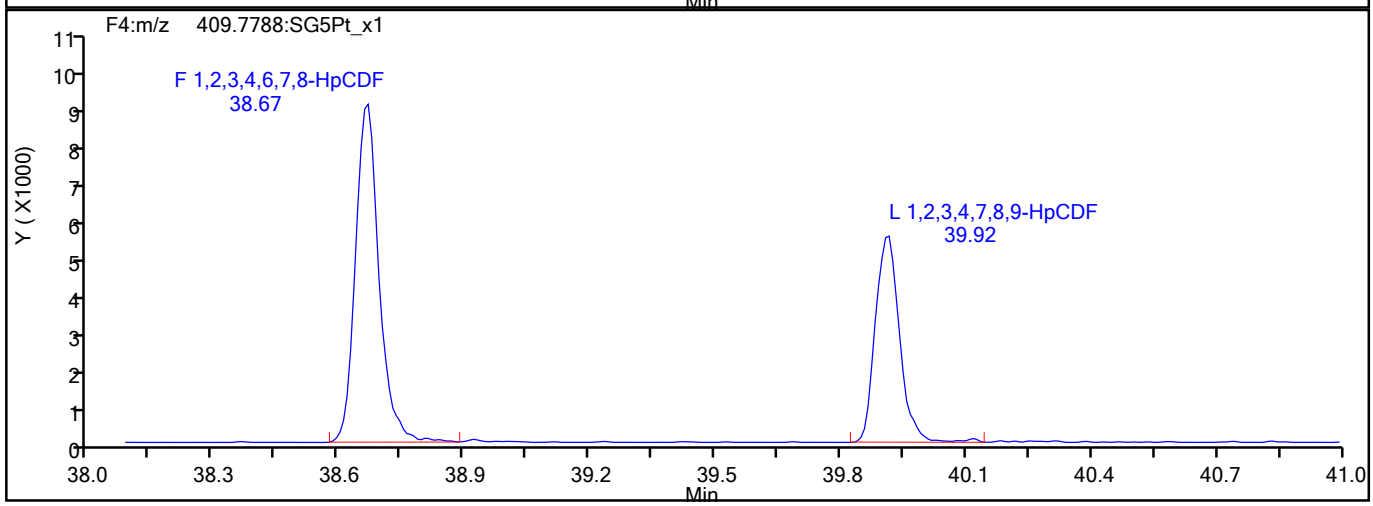

HpCDF Interference Mass

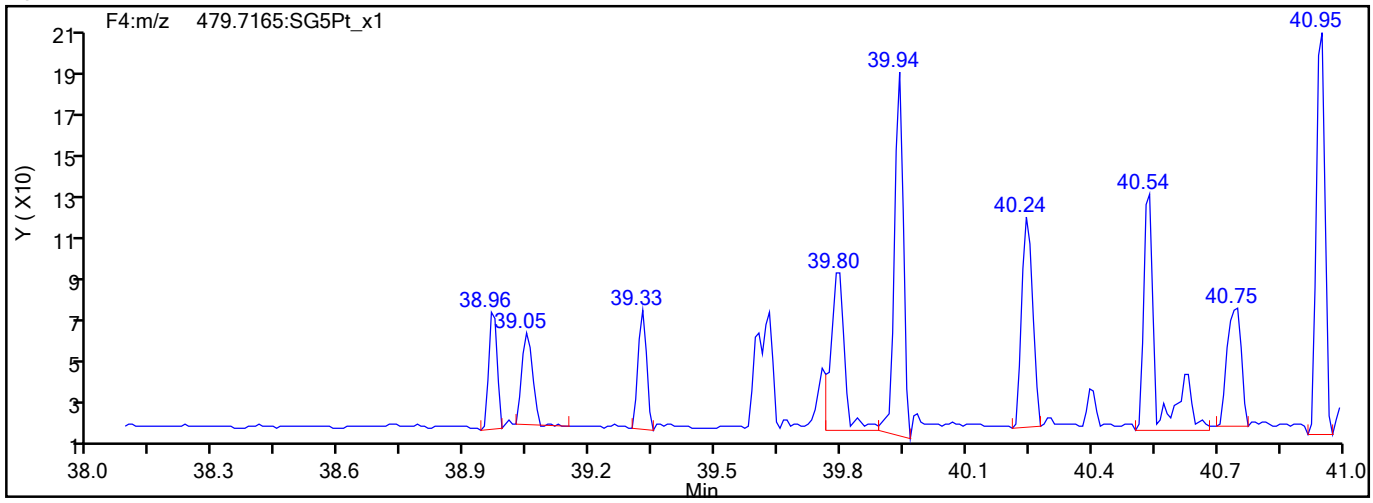

784770

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

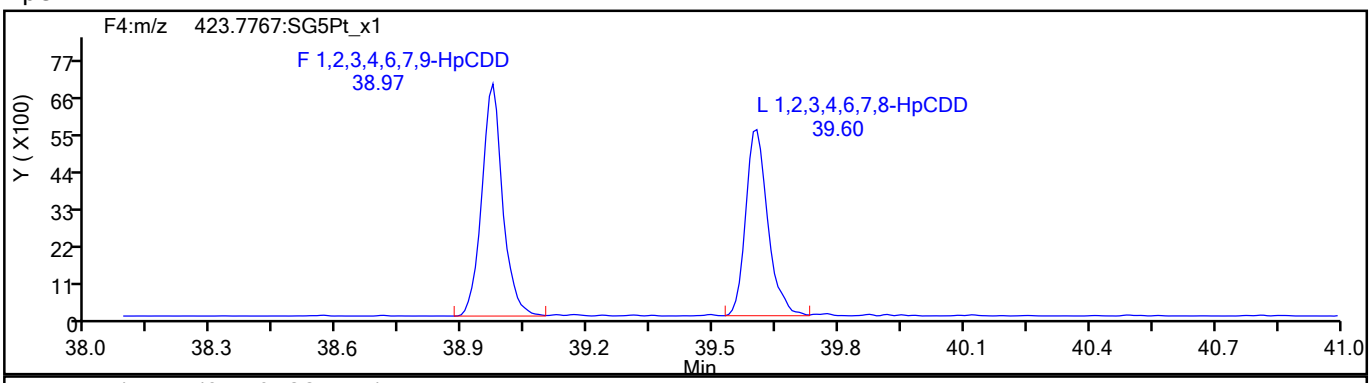

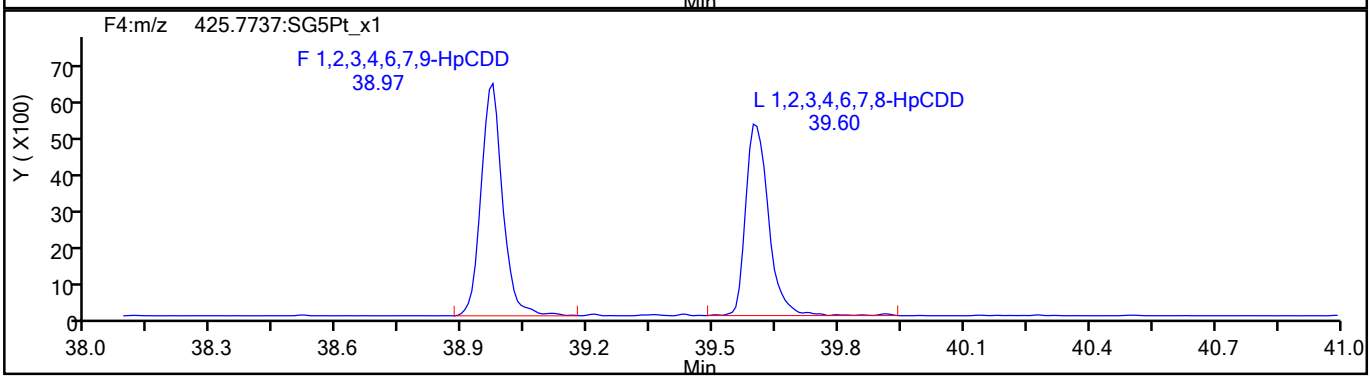

HpCDD Standards

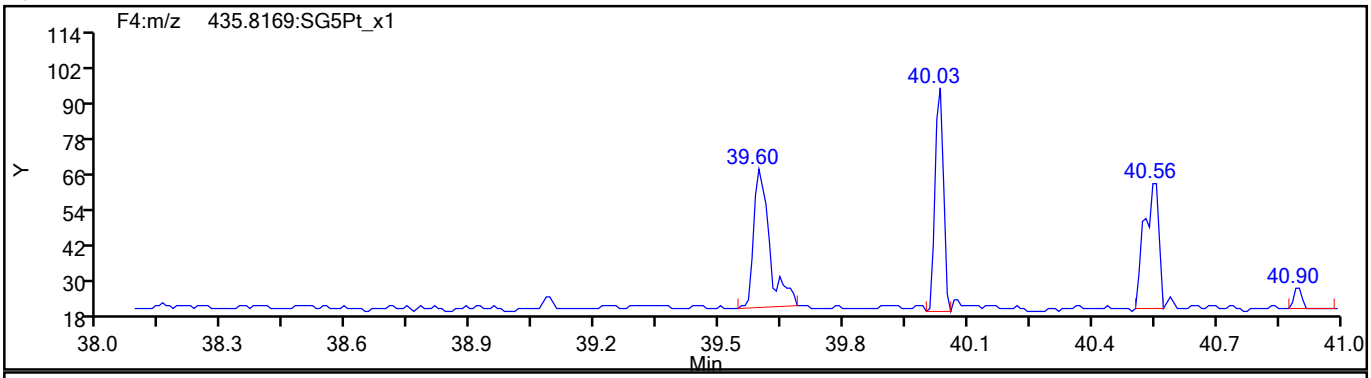

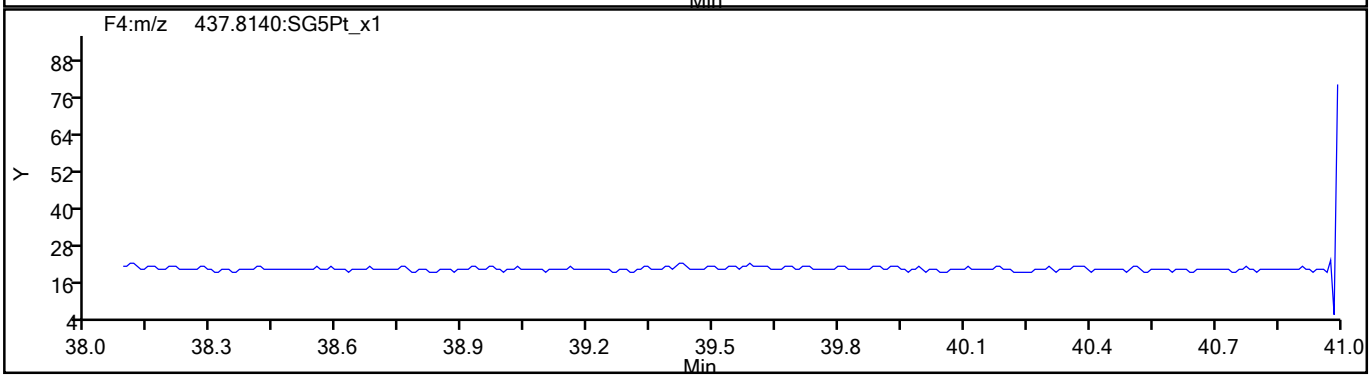

784771

Report Date: 19-Aug-2021 15:48:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

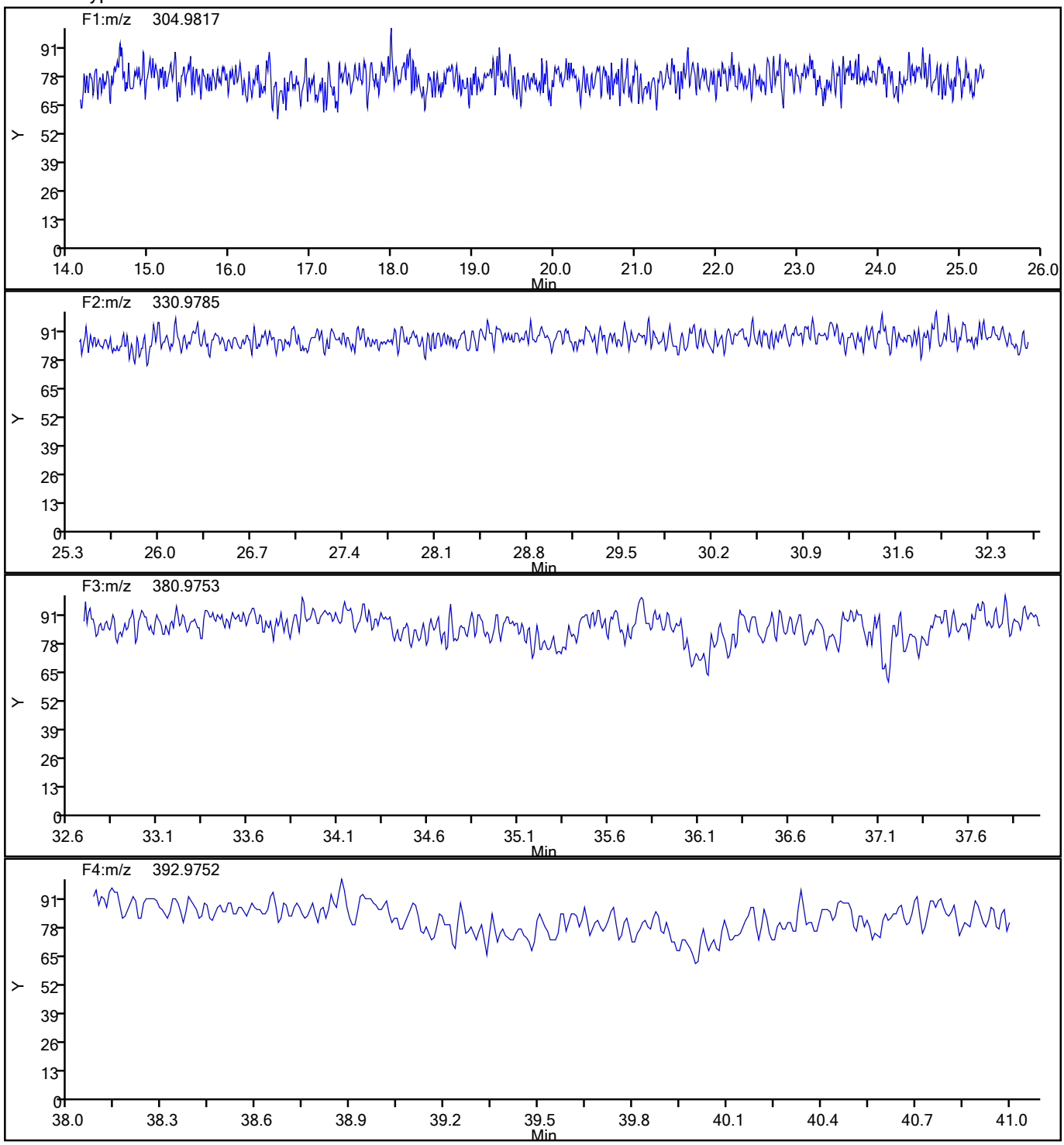

784772

Report Date: 19-Aug-2021 15:48:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

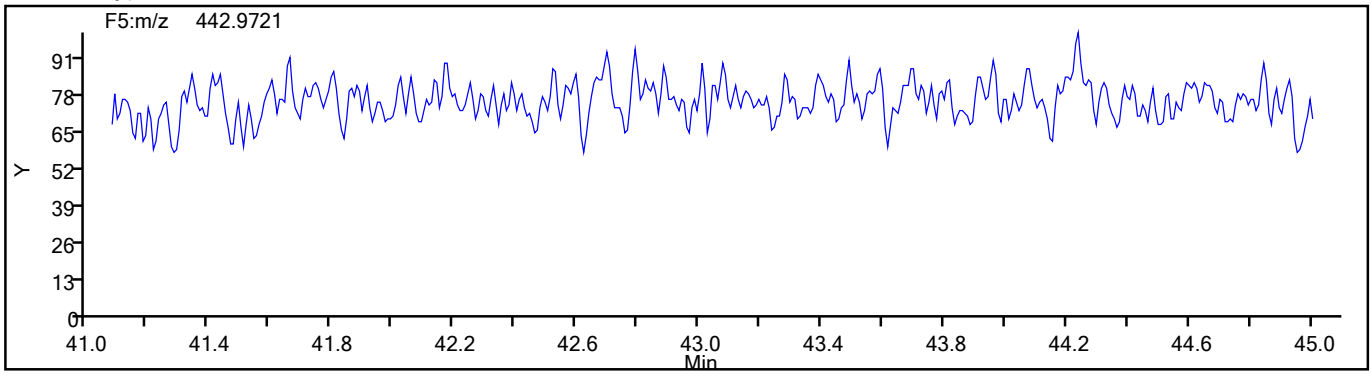

784773

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513586/1-A

Matrix: Sediment Lab File ID: 17au21dfs1_5.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10(g) Date Analyzed: 08/17/2021 17:01

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517196 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.031
51207-31-9	2,3,7,8-TCDF	ND		1.0	0.011
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.041
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.026
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.028
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.0	0.034
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.034
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.031
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.015
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.016
72918-21-9	1,2,3,7,8,9-HxCDF	ND		5.0	0.015
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.015
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.198	J	5.0	0.021
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		5.0	0.039
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.037
3268-87-9	OCDD	0.435	J	10	0.035
39001-02-0	OCDF	ND		10	0.061
41903-57-5	Total TCDD	ND		1.0	0.031
30402-14-3	Total TCDF	ND		1.0	0.13
36088-22-9	Total PeCDD	ND		5.0	0.16
30402-15-4	Total PeCDF	ND		5.0	0.028
34465-46-8	Total HxCDD	ND		5.0	0.16
55684-94-1	Total HxCDF	ND		5.0	0.036
37871-00-4	Total HpCDD	0.357	J	5.0	0.021
38998-75-3	Total HpCDF	ND		5.0	0.039

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513586/1-A

Matrix: Sediment Lab File ID: 17au21dfs1_5.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10(g) Date Analyzed: 08/17/2021 17:01

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517196 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	57		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	61		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	65		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	65		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	60		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	74		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	64		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	61		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	61		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	72		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	65		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	78		26-138
114423-97-1	13C-OCDD	76		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	68		35-197

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d
Lims ID: MB 320-513586/1-A
Client ID:
Sample Type: MB
Inject. Date: 17-Aug-2021 17:01:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513586/1-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:08:49 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 18:32:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.495	799097	0.80	2.1E+04	100.0	100.0				
2,3,7,8-TCDF	20.533						0.005480	0.005480		MU
D 13C-2,3,7,8-TCDF	20.533	613921	0.82	1.3459	57.1	57.1	0.1280	0.1280	57.08	
A Non-2,3,7,8-sub-TCDF	19.916						0.005480	0.0627		RQMU
S Total TCDF							0.0627	0.0627		
D 13C-2,3,7,8-TCDD	21.864	441482	0.78	0.9317	59.3	59.3	0.1206	0.1206	59.30	
2,3,7,8-TCDD	21.899						0.0157	0.0157		U
$ 37Cl4-2,3,7,8-TCDD	21.907	219939		1.0083	27.3	27.3	0.0155	0.0155	68.24	
A Non-2,3,7,8-sub-TCDD	20.750						0.0157	0.0157		RQU
S Total TCDD							0.0157	0.0157		
D 13C-1,2,3,7,8-PeCDF	27.350	557472	1.51	1.1405	61.2	61.2	0.2141	0.2141	61.17	
1,2,3,7,8-PeCDF	27.401						0.0130	0.0130		
D 13C-2,3,4,7,8-PeCDF	28.859	583289	1.60	1.1253	64.9	64.9	0.2170	0.2170	64.86	
2,3,4,7,8-PeCDF	28.934						0.0142	0.0142		
A F1 PeCDFs	24.676						0.005660	0.005660		
A Non-2,3,7,8-sub-PeCDF	28.167						0.0136	0.0136		
S Total PeCDF							0.0142	0.0142		
D 13C-1,2,3,7,8-PeCDD	29.675	334387	1.53	0.7165	58.4	58.4	0.0836	0.0836	58.41	
1,2,3,7,8-PeCDD	29.734						0.0203	0.0203		RQU
A Non-2,3,7,8-sub-PeCDD	28.556						0.0203	0.0777		RQU
S Total PeCDD							0.0777	0.0777		
D 13C-1,2,3,4,7,8-HxCDF	34.986	562635	0.53	0.9648	74.0	74.0	0.2255	0.2255	74.01	
1,2,3,4,7,8-HxCDF	35.028						0.007677	0.007677		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.146	535930	0.52	1.0708	63.5	63.5	0.2032	0.2032	63.52	
1,2,3,6,7,8-HxCDF	35.028						0.008144	0.008144		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.963	499899	0.53	1.0413	60.9	60.9	0.2089	0.2089	60.92	
2,3,4,6,7,8-HxCDF	36.148						0.007599	0.007599		RQU
D 13C-1,2,3,7,8,9-HxCDF	36.856	469783	0.53	0.9731	61.3	61.3	0.2236	0.2236	61.27	
1,2,3,7,8,9-HxCDF	37.025						0.007441	0.007441		RQU
A Non-2,3,7,8-sub-HxCDF	35.074						0.007701	0.0180		RQU
S Total HxCDF							0.0180	0.0180		
* 13C-1,2,3,7,8,9-HxCDD	36.654	787976	1.29	1.8E+04	100.0	100.0				

784776

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-1,2,3,4,7,8-HxCDD	36.174	391222	1.29	0.7587	65.4	65.4	0.1682	0.1682	65.44	
1,2,3,4,7,8-HxCDD	36.182						0.0168	0.0168		U
D 13C-1,2,3,6,7,8-HxCDD	36.283	409175	1.25	0.8593	60.4	60.4	0.1485	0.1485	60.43	
1,2,3,6,7,8-HxCDD	36.182						0.0170	0.0170		U
1,2,3,7,8,9-HxCDD	36.684						0.0156	0.0156		
A Non-2,3,7,8-sub-HxCDD	35.432						0.0164	0.0822		RQU
S Total HxCDD							0.0822	0.0822		
D 13C-1,2,3,4,6,7,8-HpCDF	38.669	378902	0.49	0.7359	65.3	65.3	0.3017	0.3017	65.34	
1,2,3,4,6,7,8-HpCDF	38.686						0.0193	0.0193		RQU
1,2,3,4,7,8,9-HpCDF	40.043						0.0187	0.0187		RQU
D 13C-1,2,3,4,7,8,9-HpCDF	39.916	420192	0.49	0.6854	77.8	77.8	0.3240	0.3240	77.80	
A Non-2,3,7,8-sub-HpCDF	39.277						0.0189	0.0189		
S Total HpCDF							0.0193	0.0193		
D 13C-1,2,3,4,6,7,8-HpCDD	39.604	381174	1.05	0.6745	71.7	71.7	0.2350	0.2350	71.72	
1,2,3,4,6,7,8-HpCDD	39.613	397	1.04	1.0503	0.1097	0.0992	0.0107	0.0107		RQM
A Non-2,3,7,8-sub-HpCDD	39.277	318	1.04	1.0503	0.1034	0.0794	0.0107	0.0794		RQ
S Total HpCDD					0.2131	0.1786	0.0107	0.0107		RQ
D 13C-OCDD	42.111	656031	0.92	0.5446	152.9	152.9	0.1569	0.1569	76.43	
OCDF	42.170						0.0304	0.0304		RQU
OCDD	42.119	757	0.89	1.0620	0.2701	0.2173	0.0177	0.0177		RQM

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d
Lims ID: MB 320-513586/1-A
Client ID:
Sample Type: MB
Inject. Date: 17-Aug-2021 17:01:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513586/1-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:08:49 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 18:32:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.495	21.483	1		354691	47564	32	80	1486		
333.9338	21.486	21.483	0		444406	60975	17	42	3587	0.80(0.65-0.89)	
2,3,7,8-TCDF											MU
303.9016	20.482						1	2			
305.8987	20.482						1	2			
13C-2,3,7,8-TCDF											
315.9419	20.533	20.594	-4	0.955	276238	38140	51	127	748		
317.9389	20.533	20.594	-4	0.955	337683	46326	24	60	1930	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											MU
303.9016	17.312	19.916	-156	0.843	28	13	1	2	13		
305.8987	17.355	19.916	-153	0.845	68	44	1	2	44	0.41(0.65-0.89)	
	Empc Correction				36	16	1	2	16		
13C-2,3,7,8-TCDD											
331.9368	21.864	21.790	4	1.017	193397	25177	32	80	787		
333.9338	21.881	21.790	5	1.018	248085	34117	17	42	2007	0.78(0.65-0.89)	
2,3,7,8-TCDD											U
319.8965	21.825						3	7			
321.8936	21.825						1	2			
37Cl4-2,3,7,8-TCDD											
327.8847	21.907	21.905	0	1.019	219939	28238	7	17	4034		
A Non-2,3,7,8-sub-TCDD											U
319.8965	20.750	20.750	0	0.949	48	23	3	7			
	Empc Correction				30	19	3	7	0		
321.8936	20.750	20.750	0	0.949	40	25	1	2		1.20(0.65-0.89)	

784778

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	27.350	27.343	0	1.272	335540	53824	58	145	928		
353.8970	27.350	27.343	0	1.272	221932	33777	48	120	704	1.51(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.368						1	2			
341.8567	27.368						4	10			
13C-2,3,4,7,8-PeCDF											
351.9000	28.859	28.867	0	1.343	359159	51112	58	145	881		
353.8970	28.875	28.867	1	1.343	224130	32642	48	120	680	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.884						1	2			
341.8567	28.884						4	10			
A F1 PeCDFs											
339.8597	24.676						1	2			
341.8567	24.676						1	2			
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.167						1	2			
341.8567	28.167						4	10			
13C-1,2,3,7,8-PeCDD											
367.8949	29.675	29.667	0	1.381	202336	27337	16	40	1709		
369.8919	29.684	29.667	1	1.381	132051	19768	10	25	1977	1.53(1.32-1.78)	
1,2,3,7,8-PeCDD											RQU
355.8546	29.692						3	7			
357.8516	29.692						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.556	28.556	0	0.962	304	118	3	7			
	Empc Correction				210	84	3	7	0		
357.8516	28.556	28.556	0	0.962	156	68	1	2		1.95(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.986	34.974	1	0.954	195123	37085	54	135	687		
385.8610	34.986	34.974	1	0.954	367512	76444	101	252	757	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	35.000						2	5			
375.8178	35.000						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.146	35.134	1	0.959	184147	34968	54	135	648		
385.8610	35.154	35.134	1	0.959	351783	65864	101	252	652	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.151						2	5			
375.8178	35.151						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.963	35.951	1	0.981	172829	38826	54	135	719		
385.8610	35.963	35.951	1	0.981	327070	69530	101	252	688	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQU
373.8208	35.968						2	5			
375.8178	35.968						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.856	36.843	1	1.006	163509	37541	54	135	695		
385.8610	36.848	36.843	0	1.005	306274	70829	101	252	701	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQU
373.8208	36.852						2	5			
375.8178	36.852						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.529	35.074	-93	0.958	61	31	2	5	16		
375.8178	33.571	35.074	-90	0.960	51	23	2	5	12	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.654	36.641	1		443438	99421	59	147	1685		
403.8529	36.654	36.641	1		344538	78478	32	80	2452	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.174	36.161	1	0.987	220623	48424	59	147	821		
403.8529	36.182	36.161	1	0.987	170599	35600	32	80	1113	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											U
389.8158	36.178						3	7			
391.8127	36.178						3	7			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.283	36.279	0	0.990	227133	50882	59	147	862		
403.8529	36.283	36.279	0	0.990	182042	38077	32	80	1190	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											U
389.8158	36.296						3	7			
391.8127	36.296						3	7			
1,2,3,7,8,9-HxCDD											
389.8158	36.658						3	7			
391.8127	36.658						3	7			
A Non-2,3,7,8-sub-HxCDD											U
389.8158	35.053	35.432	-23	0.966	183	48	3	7	16		
391.8127	35.062	35.432	-22	0.966	164	56	3	7	19	1.12(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.669	38.647	1	1.055	124116	30519	63	157	484		
419.8220	38.661	38.647	1	1.055	254786	66630	95	237	701	0.49(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQU
407.7817	38.654						9	22			
409.7788	38.654						2	5			
1,2,3,4,7,8,9-HpCDF											RQU
407.7817	39.900						9	22			
409.7788	39.900						2	5			
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.916	39.901	1	1.089	138143	37432	63	157	594		
419.8220	39.916	39.901	1	1.089	282049	73073	95	237	769	0.49(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.277						9	22			
409.7788	39.277						2	5			

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.604	39.590	1	1.080	195625	54023	53	132	1019		
437.8140	39.604	39.590	1	1.080	185549	52645	60	150	877	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											RQM
423.7767	39.613	39.597	1	1.000	244	64	4	10	16		M
	Empc Correction				202	77	4	10	19		
425.7737	39.621	39.597	1	1.000	195	75	1	2	75	1.25(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.989	39.277	-17	0.984	258	73	4	10	18		
	Empc Correction				162	42	4	10	11		
425.7737	38.964	39.277	-19	0.984	156	41	1	2	41	1.65(0.88-1.20)	
13C-OCDD											
469.7780	42.111	42.094	1	1.149	314902	77358	24	60	3223		
471.7750	42.111	42.094	1	1.149	341129	82612	37	92	2233	0.92(0.76-1.02)	
OCDF											RQU
441.7428	42.187						2	5			
443.7399	42.187						11	27			
OCDD											RQM
457.7377	42.119	42.103	1	1.000	540	229	3	7	76		M
	Empc Correction				356	164	3	7	55		
459.7348	42.119	42.103	1	1.000	401	185	3	7	62	1.35(0.76-1.02)	M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	613921	84466

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	613921	84466

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.312	28	13	68	44	0.0145	0.41	RQ
17.312	28	13	36	16	0.009651		Empc Correction
18.815	37	23	79	16	0.0175	0.47	RQ
18.815	37	23	48	29	0.0128		Empc Correction
19.253	9	7	53	21	0.009349	0.17	RQ
19.253	9	7	11	9	0.003016		Empc Correction
19.820	181	83	291	94	0.0712	0.62	RQ
19.820	181	83	235	107	0.0627		Empc Correction
19.863	92	55	104	72	0.0296	0.88	
20.645	94	53	64	39	0.0238	1.47	RQ
20.645	49	30	64	39	0.0170		Empc Correction
20.928	31	18	31	19	0.009349	1.00	RQ
20.928	23	14	31	19	0.008143		Empc Correction
23.547	26	13	31	15	0.008595	0.84	

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	441482	59294

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	441482	59294

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.122	48	23	40	25	0.0185	1.20	RQ
22.122	30	19	40	25	0.0147		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDD, RT: 28.556

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	334387	47105

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	334387	47105

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
28.791	42	25	12	7	0.0154	3.50	RQ
28.791	18	10	12	7	0.008573		Empc Correction
28.993	27	14	37	22	0.0183	0.73	RQ
28.993	27	14	17	9	0.0126		Empc Correction
30.307	235	79	107	39	0.0977	2.20	RQ
30.307	165	60	107	39	0.0777		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	562635	113529
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	535930	100832
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	499899	108356
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	469783	108370

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	517061	107771

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.529	61	31	51	23	0.0180	1.20	
36.308	89	40	34	21	0.0197	2.62	RQ
36.308	42	26	34	21	0.0122		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	391222	84024
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	409175	88959
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	400198	86491

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.053	183	48	164	56	0.0822	1.12	
35.963	128	44	157	22	0.0675	0.82	RQ
35.963	128	44	103	35	0.0547		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDF, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	378902	97149
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	420192	110505

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	399547	103827

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	381174	106668

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	381174	106668

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.989	258	73	156	41	0.1034	1.65	RQ
38.989	162	42	156	41	0.0794		Empc Correction
Signal Totals:							
	162	42	156	41			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	414	114				1.65	RQ
	318	83					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.1034 = (414 * 100.000) / (381174 * 1.050)

Empc Amount: 0.0794 = (318 * 100.000) / (381174 * 1.050)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 3

Processing Integration Results

RT: 39.61
Area: 310
Amount: 0.077433
Amount Units: pg/ul

Manual Integration Results

RT: 39.61
Area: 439
Amount: 0.109655
Amount Units: pg/ul
Reviewer: dadunj, 19-Aug-2021 12:07:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 39.61
Area: 153
Amount: 0.077433
Amount Units: pg/ul

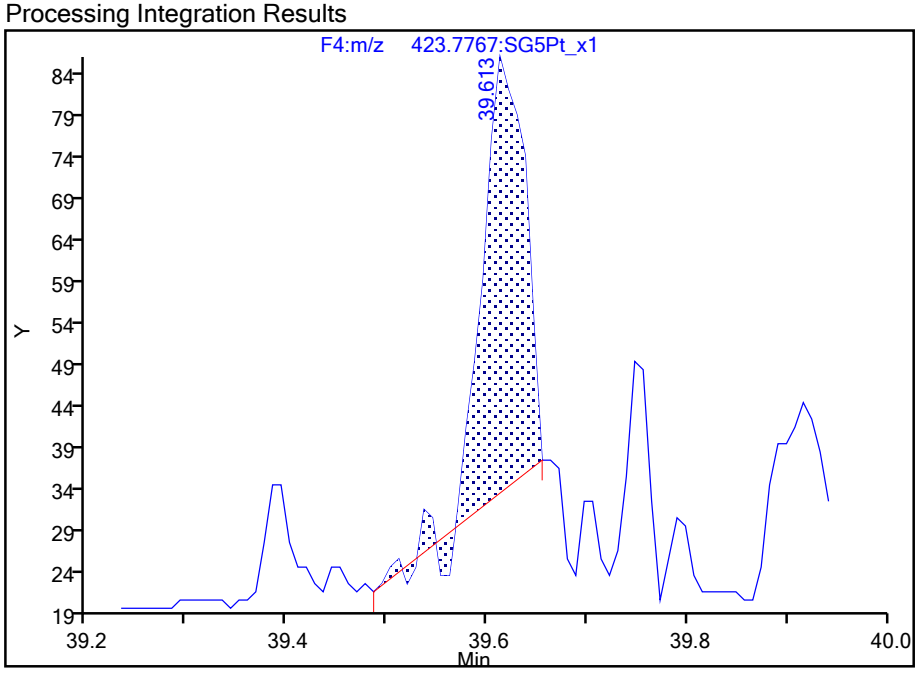

Manual Integration Results

RT: 39.61
Area: 244
Amount: 0.109655
Amount Units: pg/ul

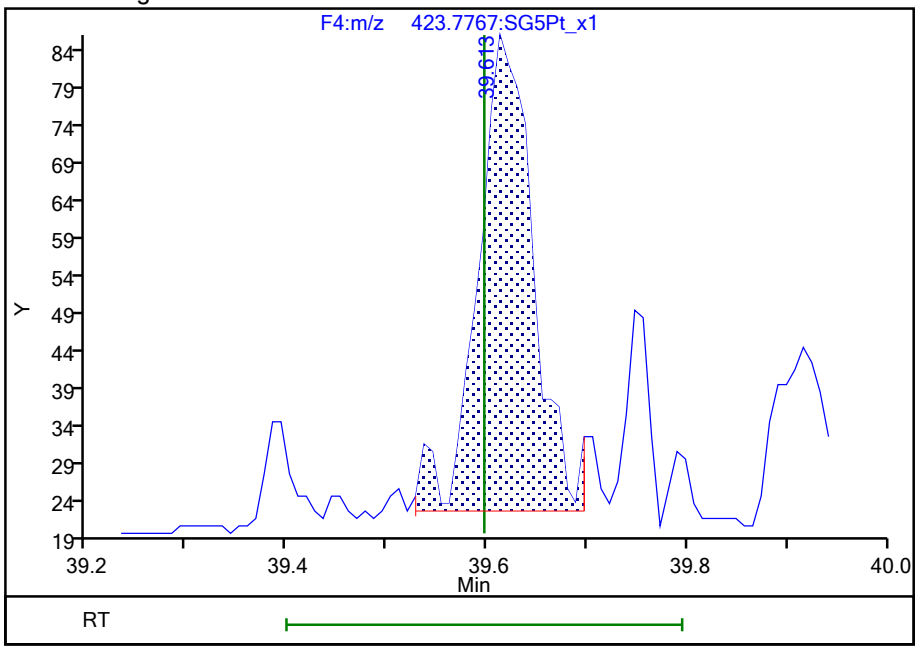

Reviewer: dadunj, 19-Aug-2021 12:07:16
Audit Action: Manually Integrated Audit Reason: Baseline

784790

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 39.62
Area: 157
Amount: 0.077433
Amount Units: pg/ul

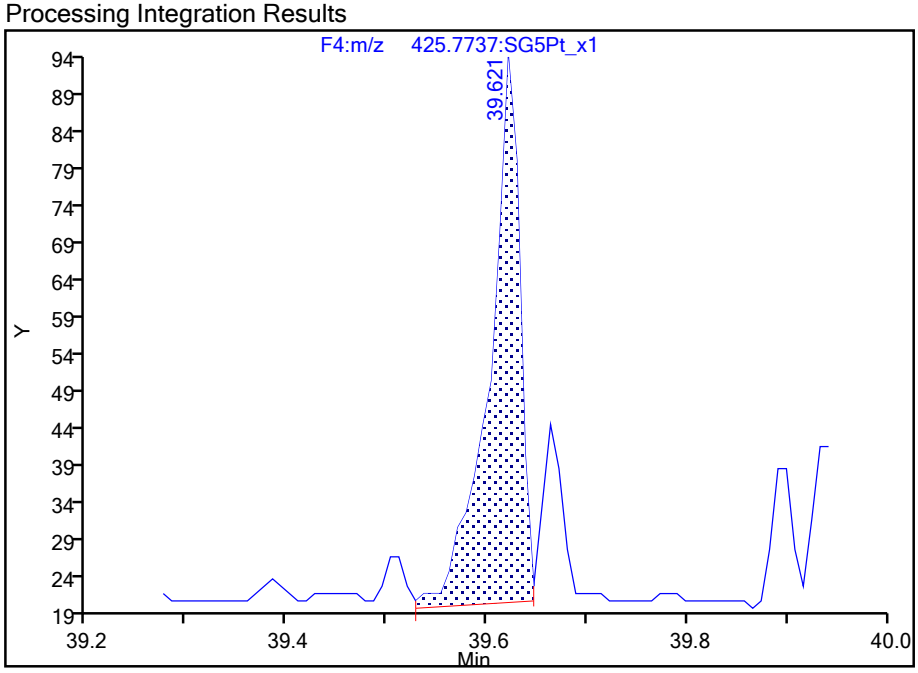

Manual Integration Results

RT: 39.62
Area: 195
Amount: 0.109655
Amount Units: pg/ul

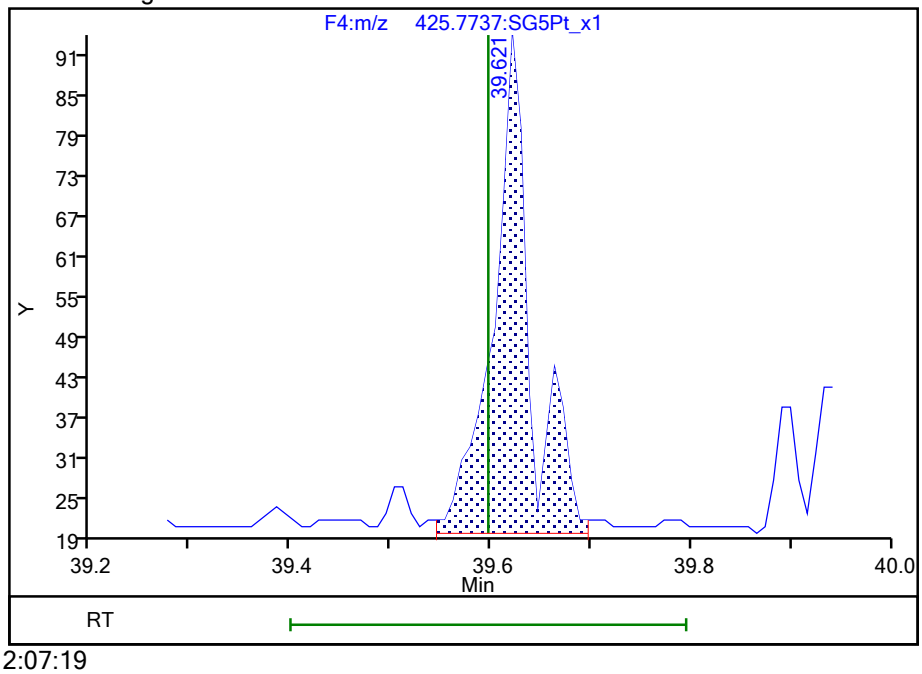

Reviewer: dadunj, 19-Aug-2021 12:07:19

Audit Action: Manually Integrated Audit Reason: Baseline

784791

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 2

Processing Integration Results

RT: 42.12
Area: 542
Amount: 0.343334
Amount Units: pg/ul

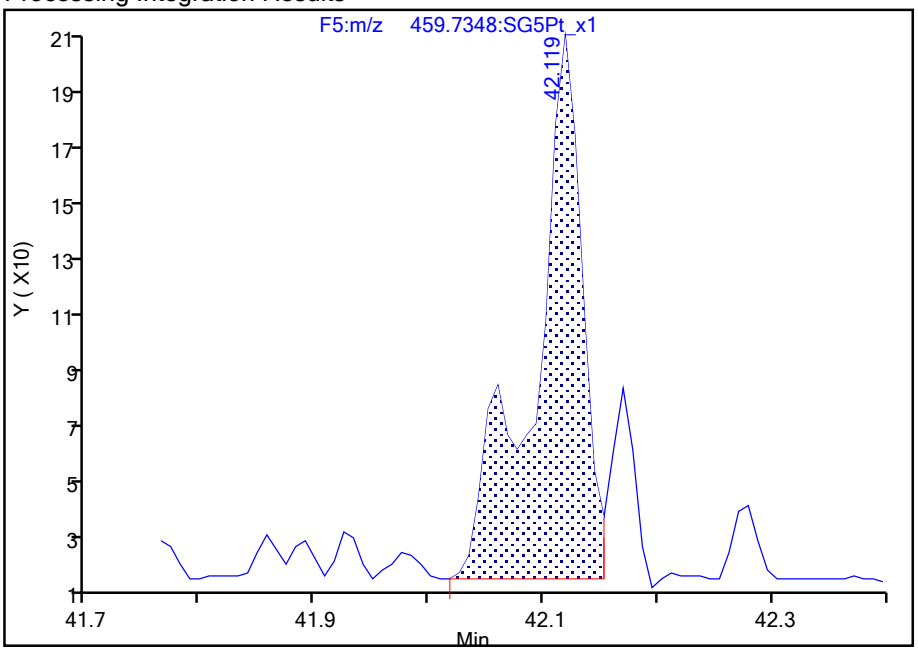

Manual Integration Results

RT: 42.12
Area: 401
Amount: 0.270132
Amount Units: pg/ul

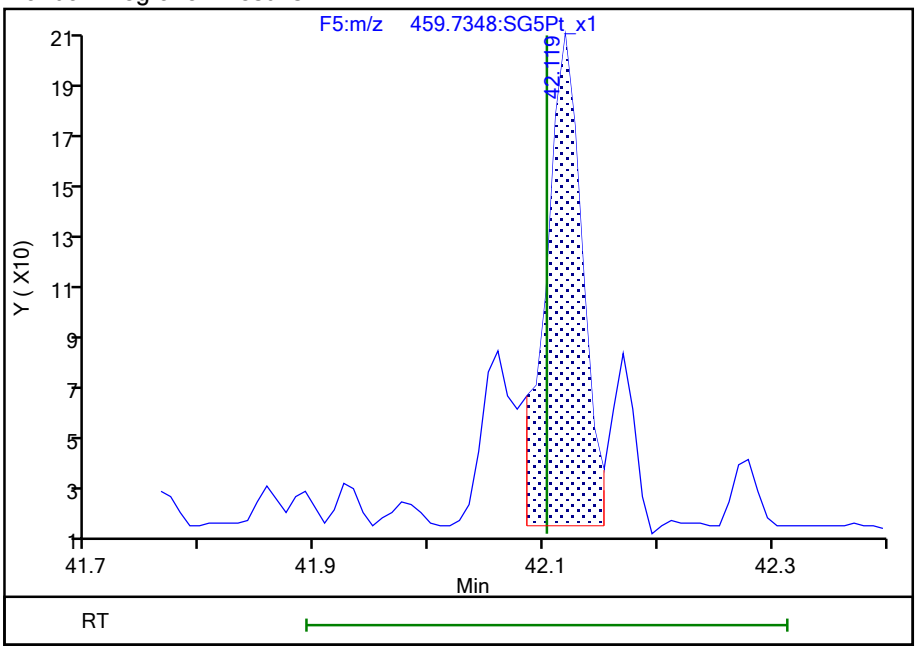

Reviewer: dadunj, 19-Aug-2021 12:07:46

Audit Action: Split an Integrated Peak Audit Reason: Baseline

784792

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 42.12
Area: 654
Amount: 0.343334
Amount Units: pg/ul

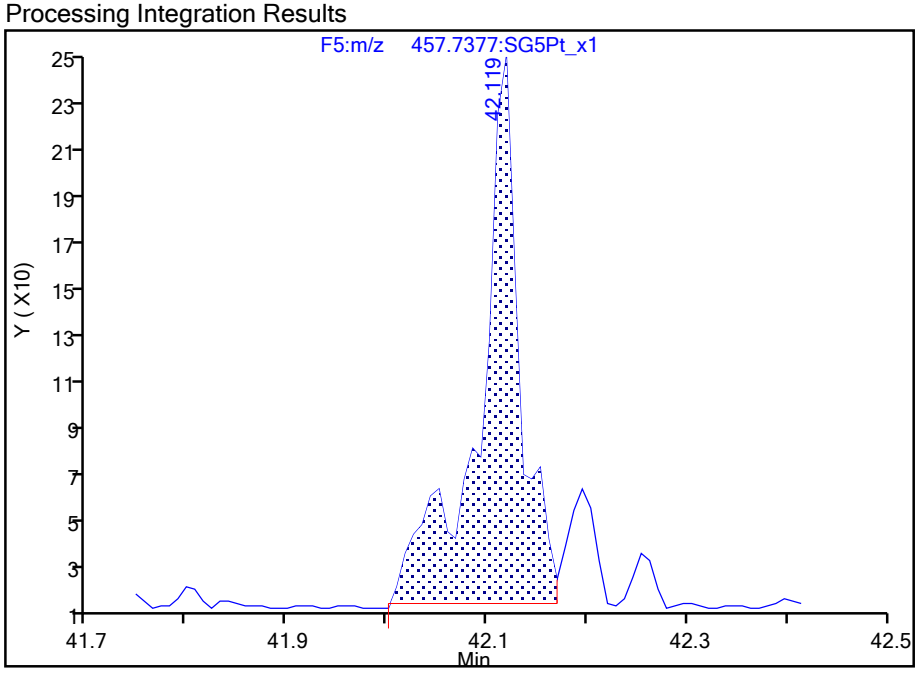

Manual Integration Results

RT: 42.12
Area: 540
Amount: 0.270132
Amount Units: pg/ul

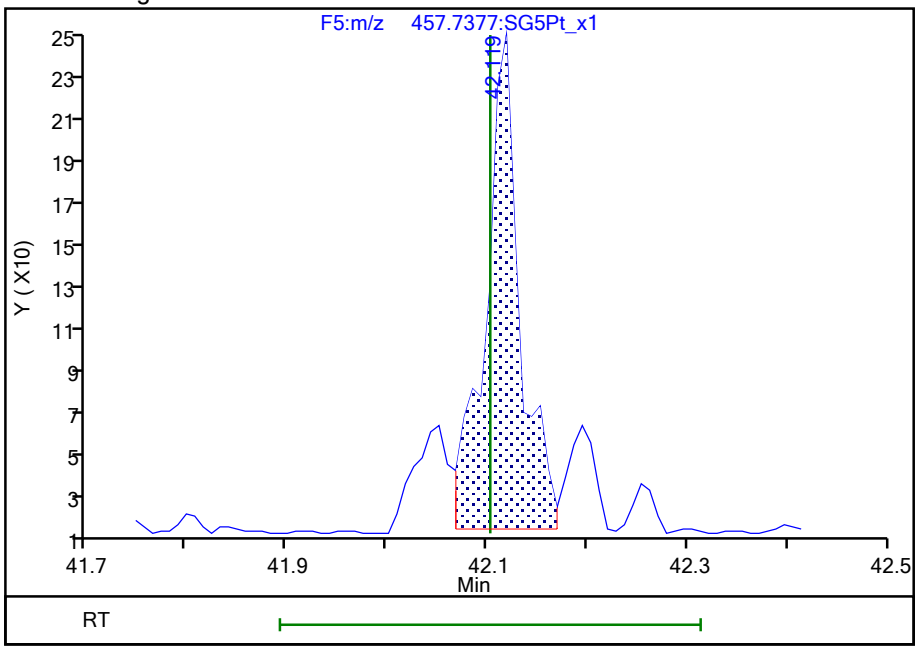

Reviewer: dadunj, 19-Aug-2021 12:07:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

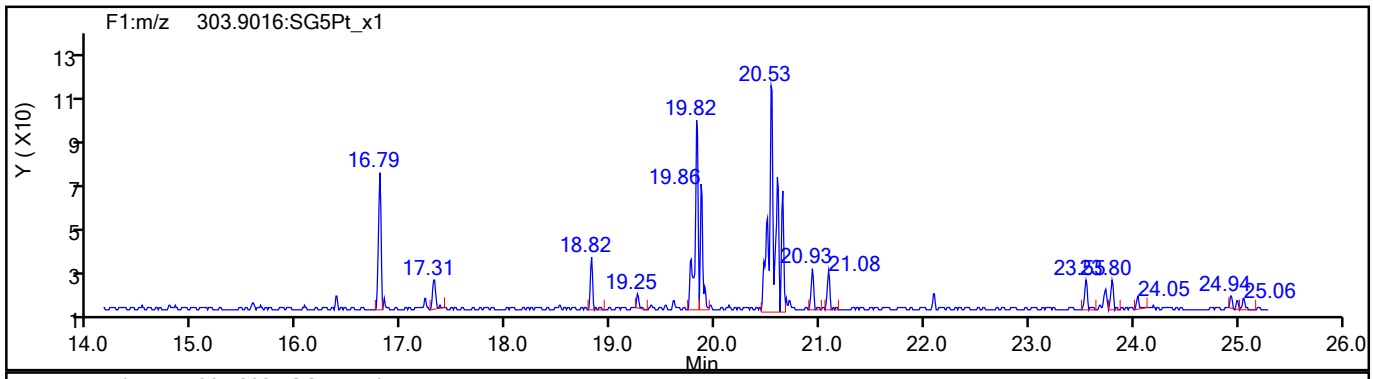

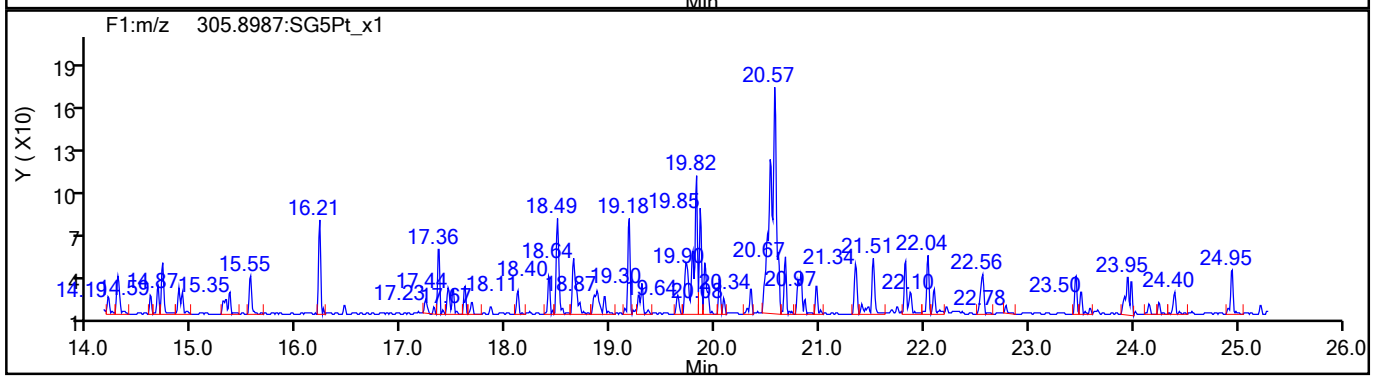

TCDF Standards

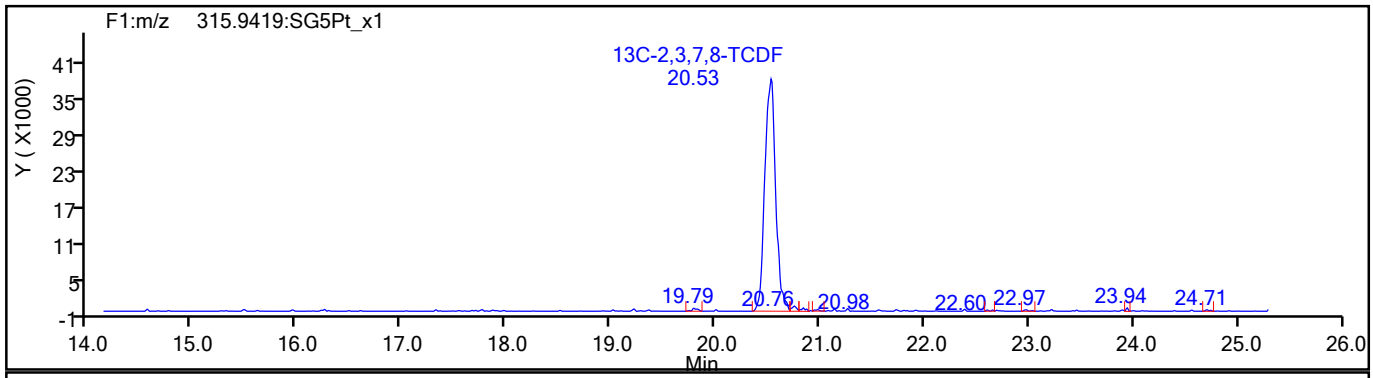

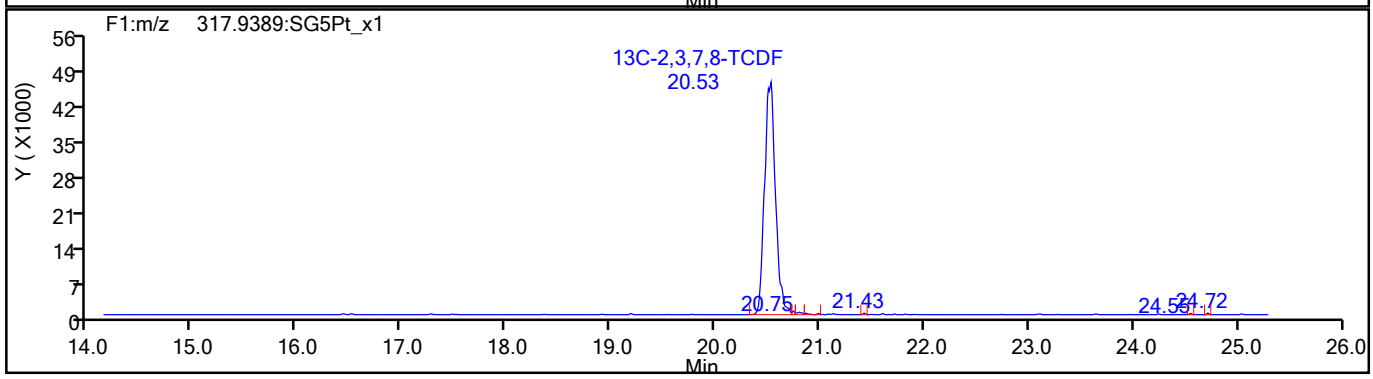

784794

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

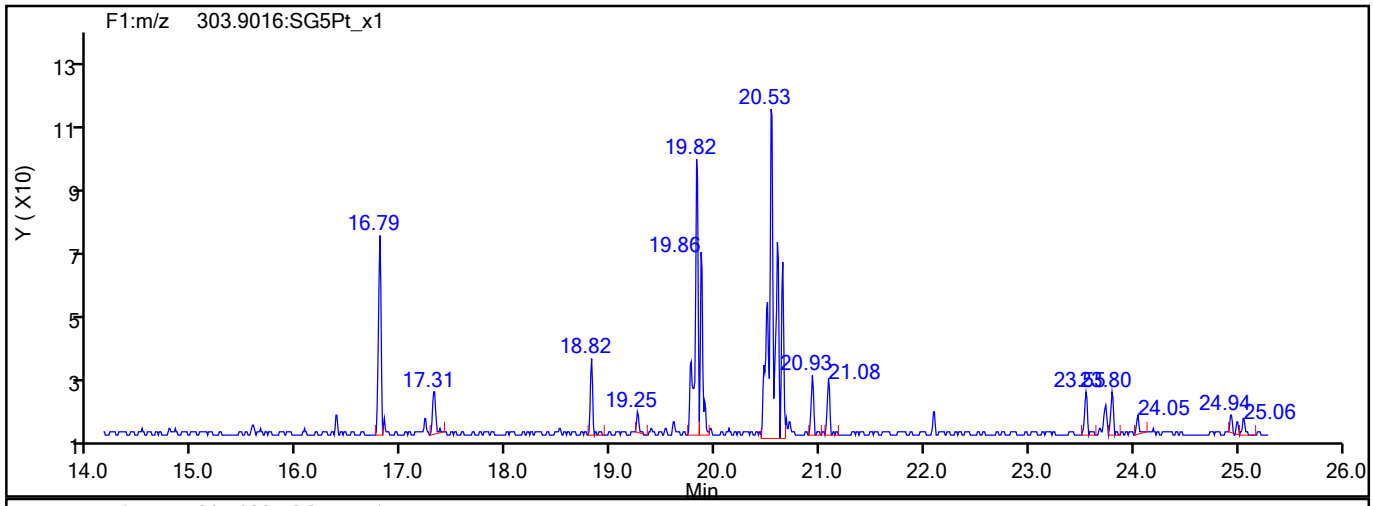

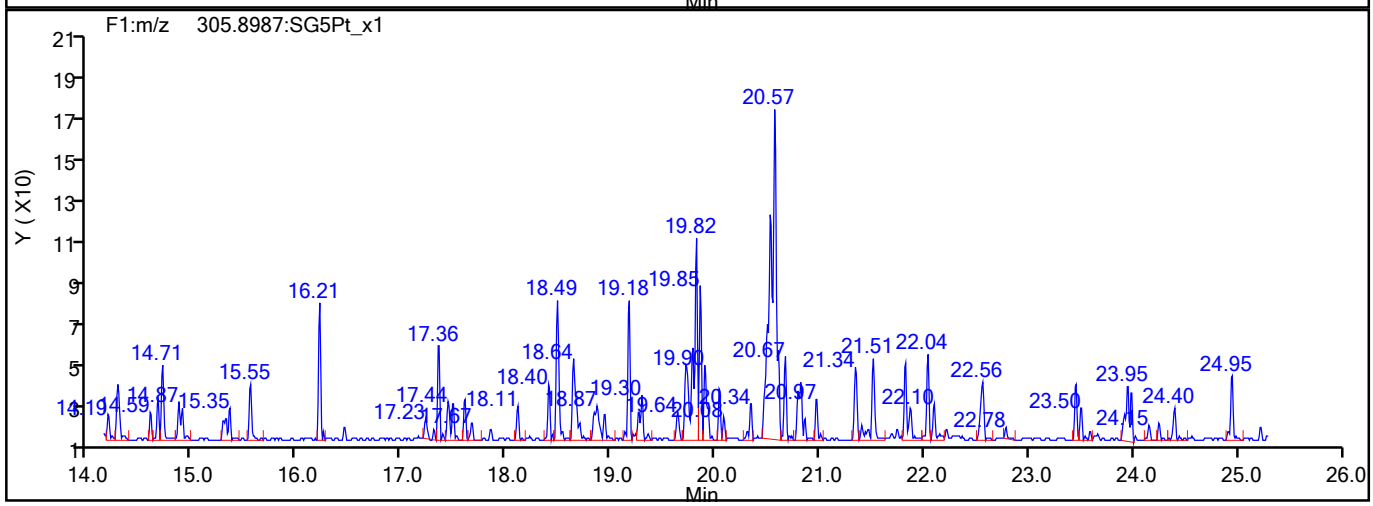

TCDF Interference Mass

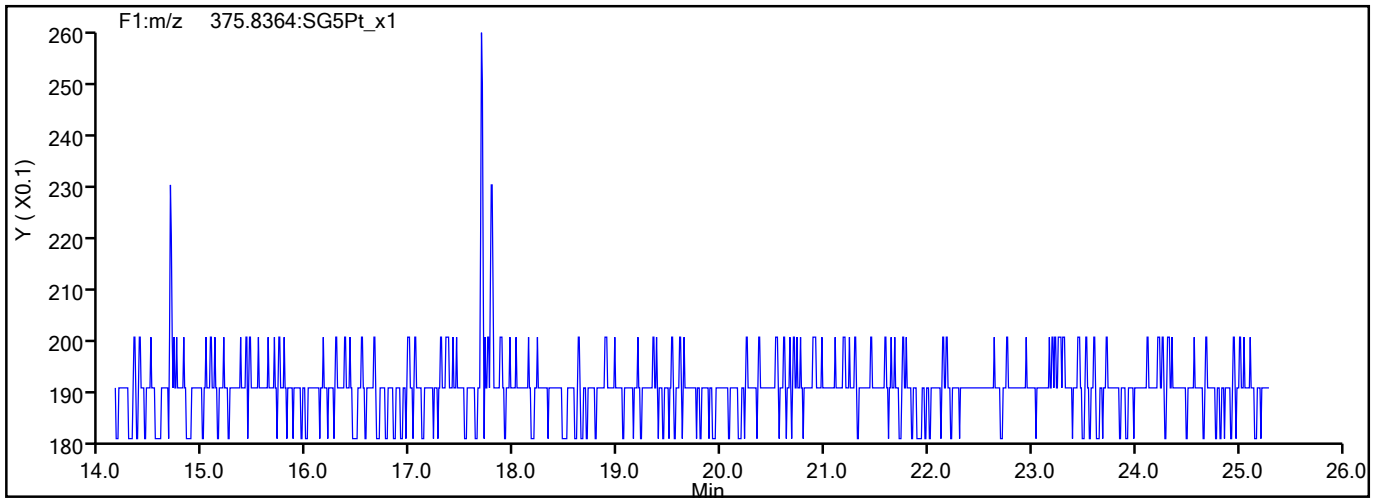

784795

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

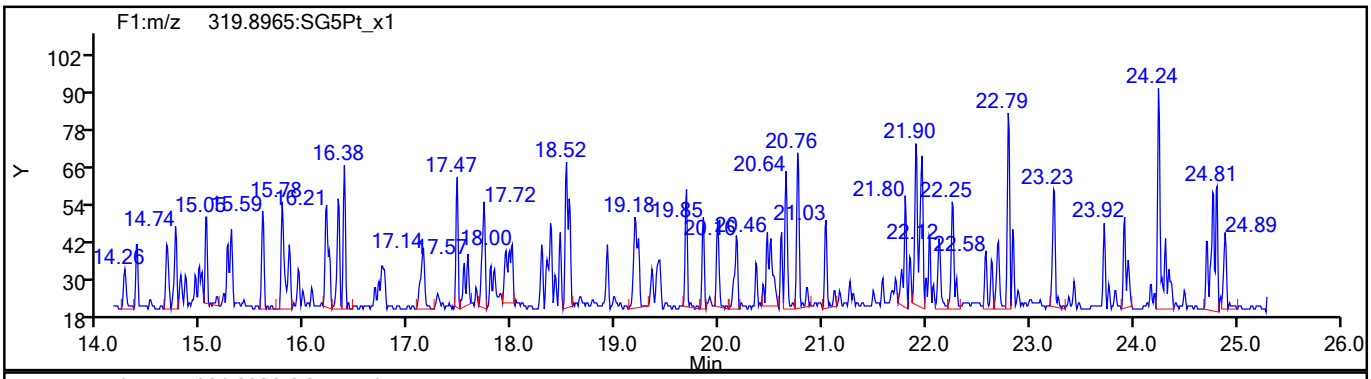

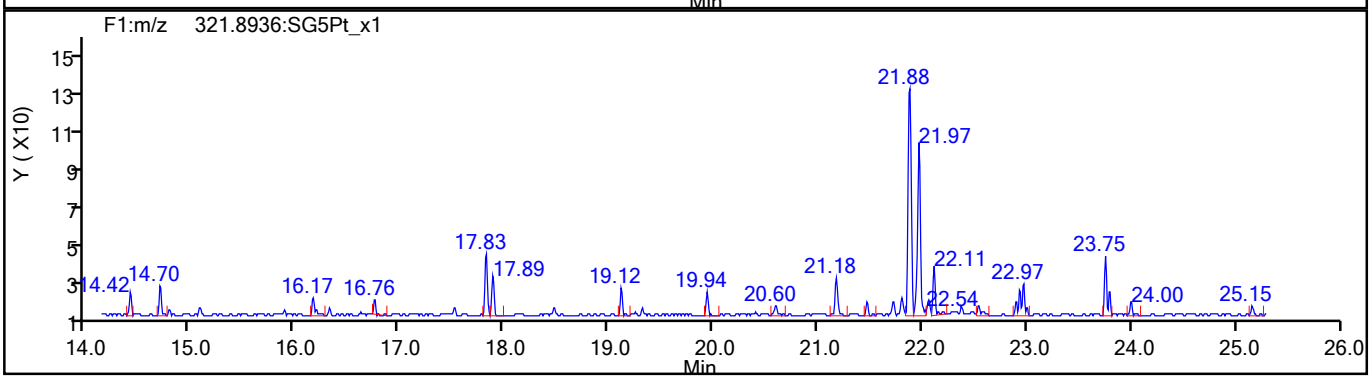

TCDD Standards

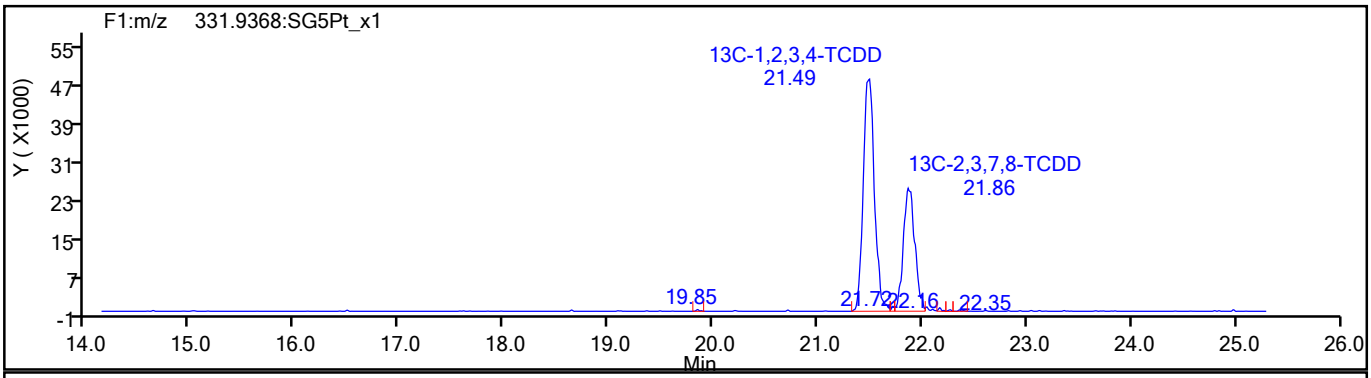

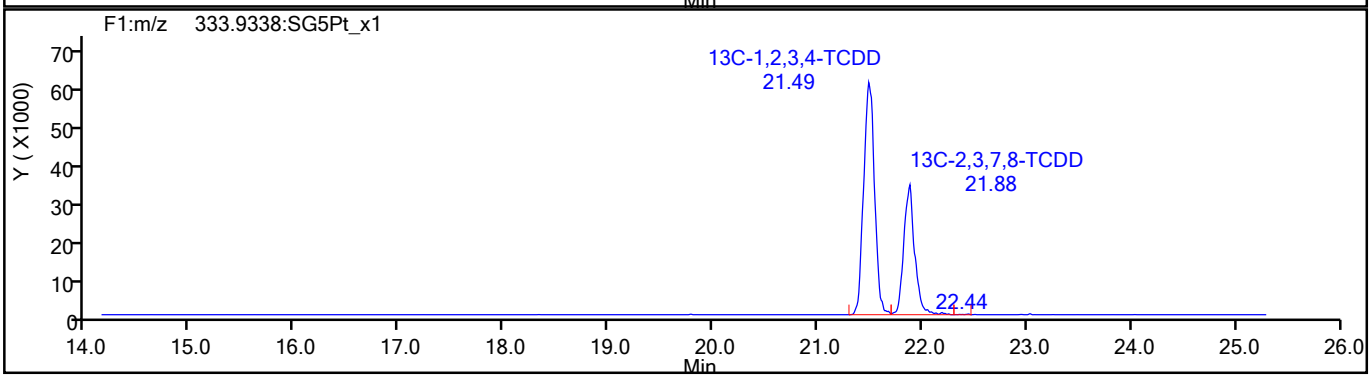

784796

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

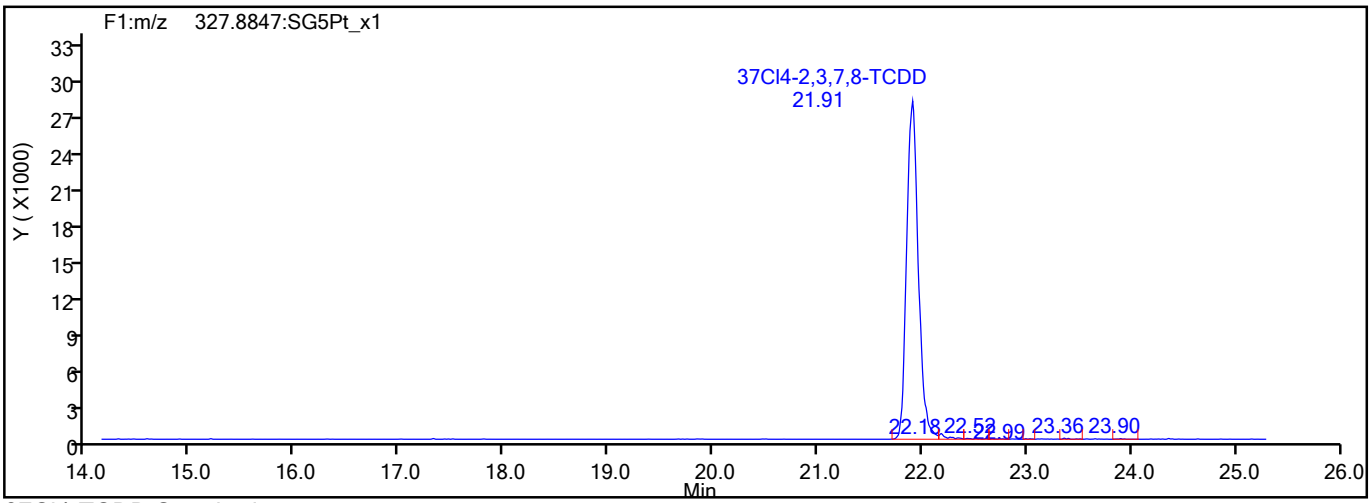

37Cl4-TCDD Standards

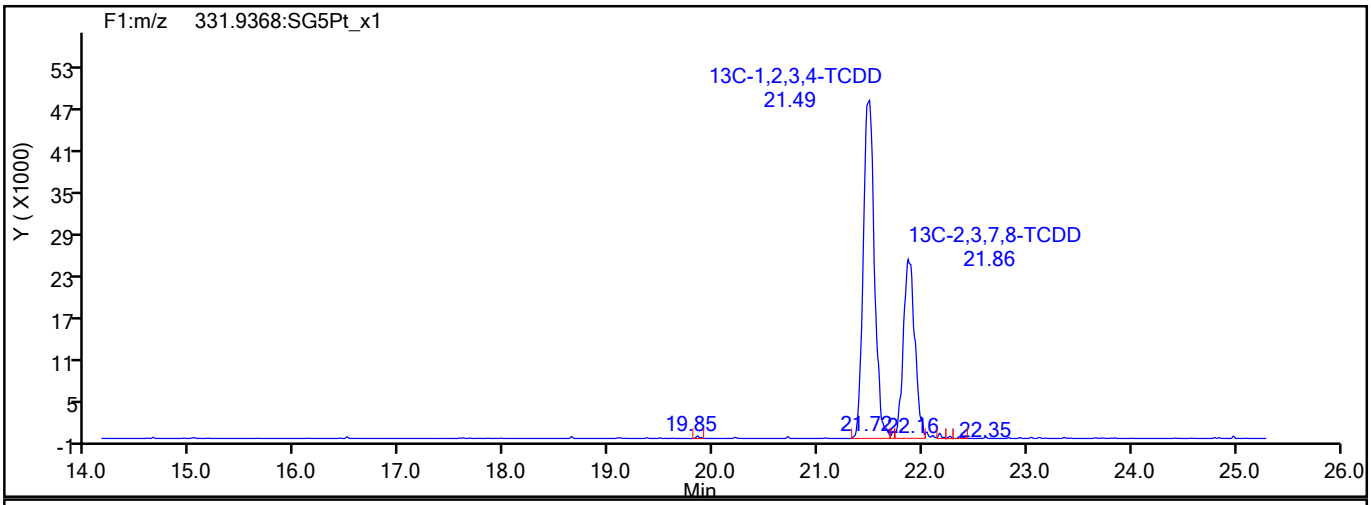

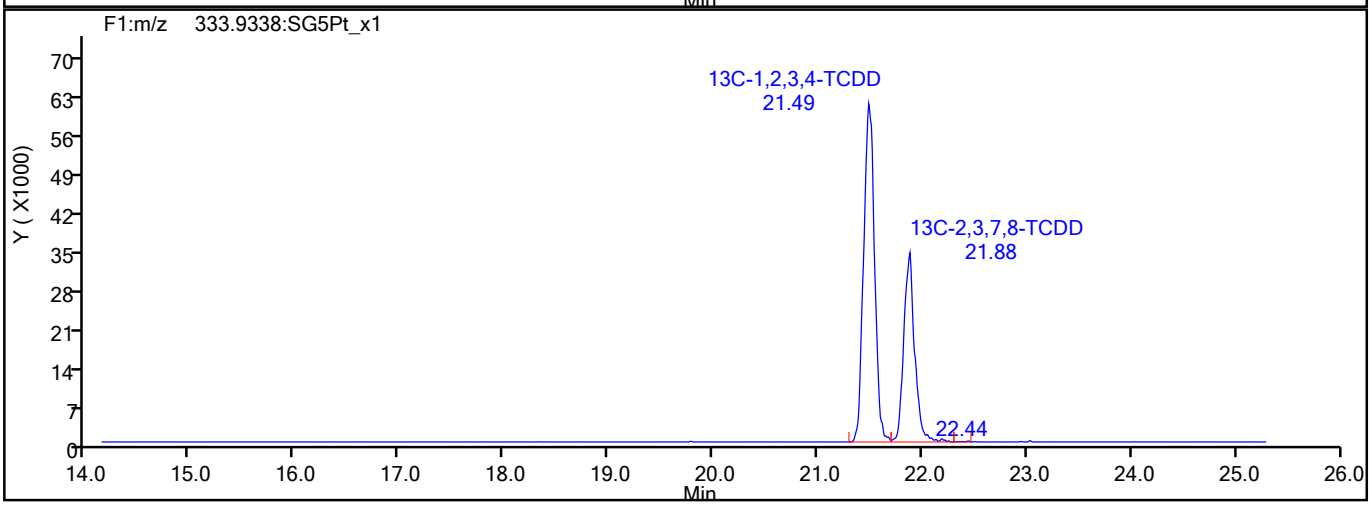

784797

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

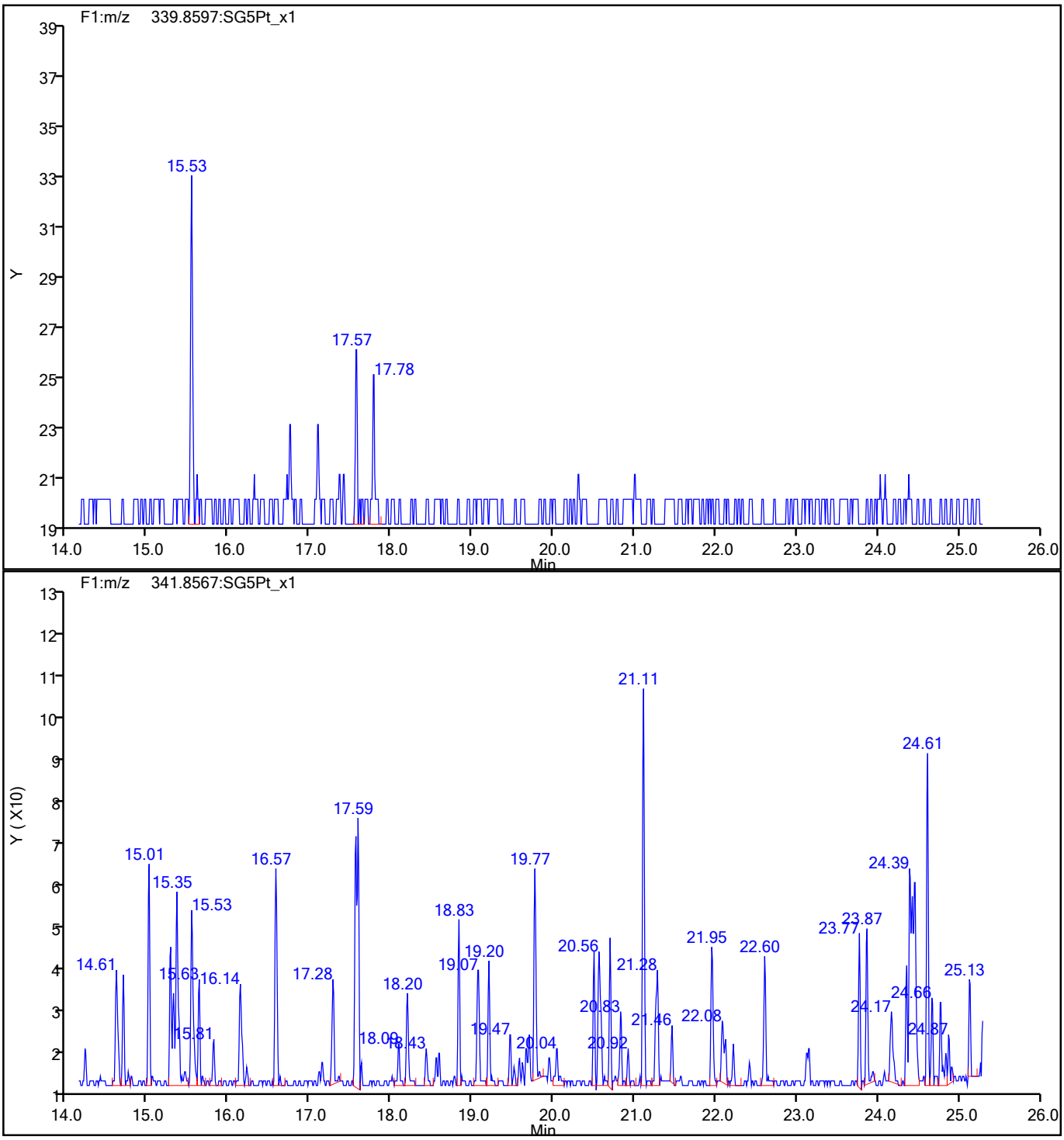

784798

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

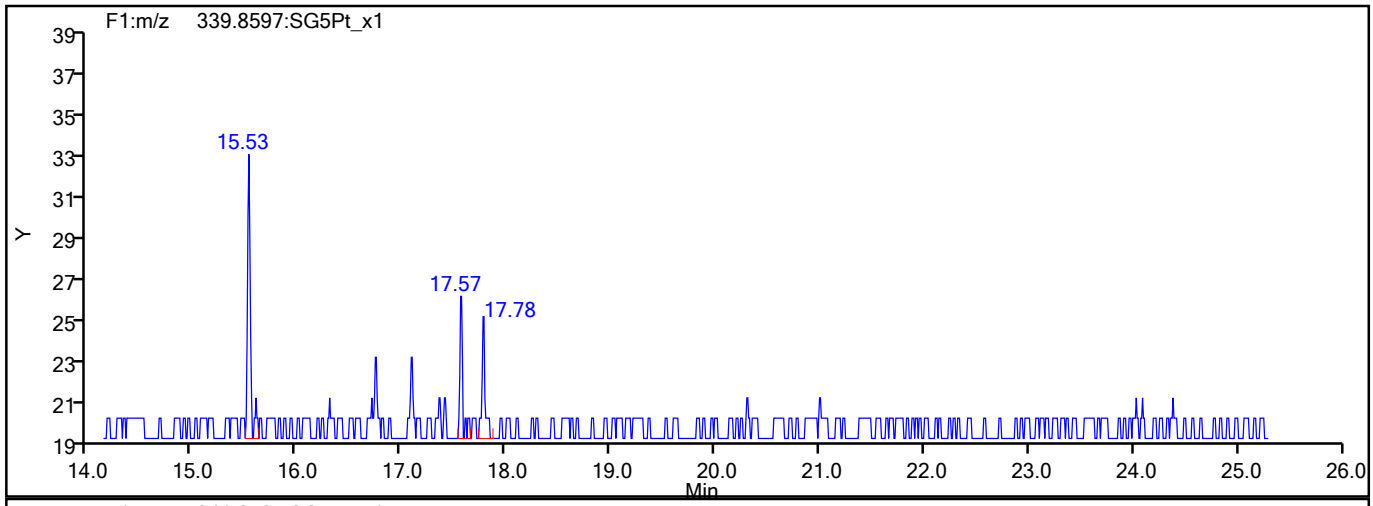

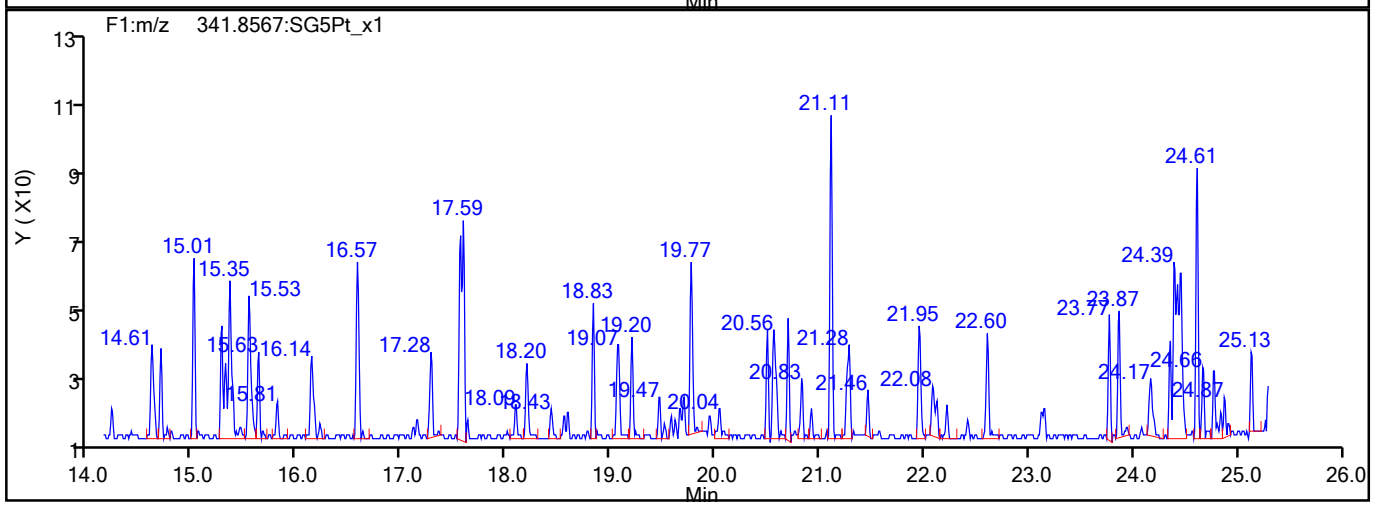

F1 PeCDFs Interference Mass

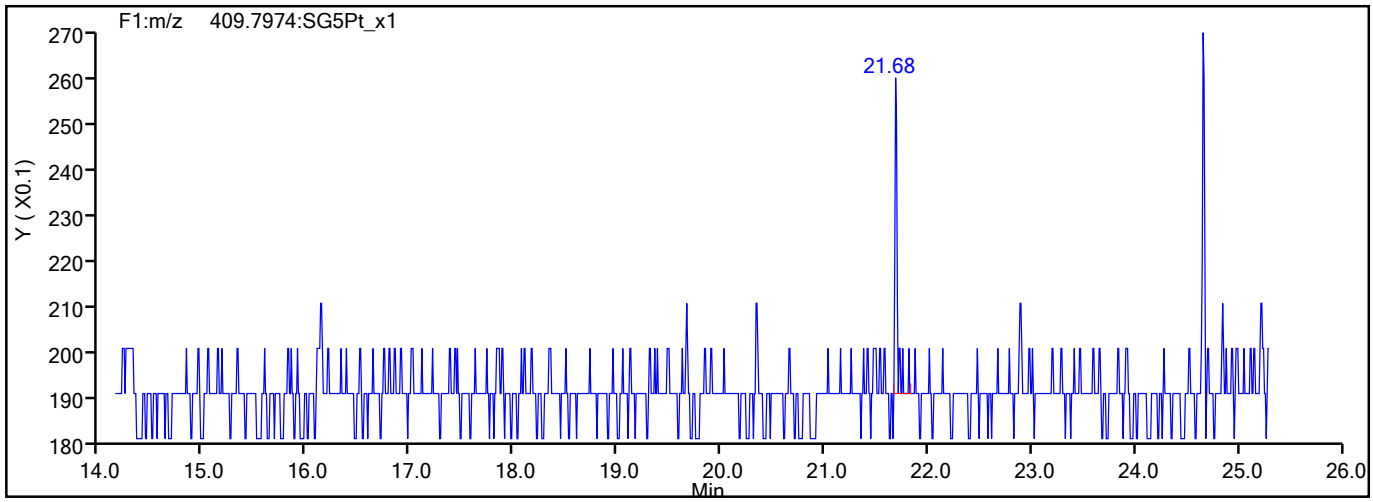

784799

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

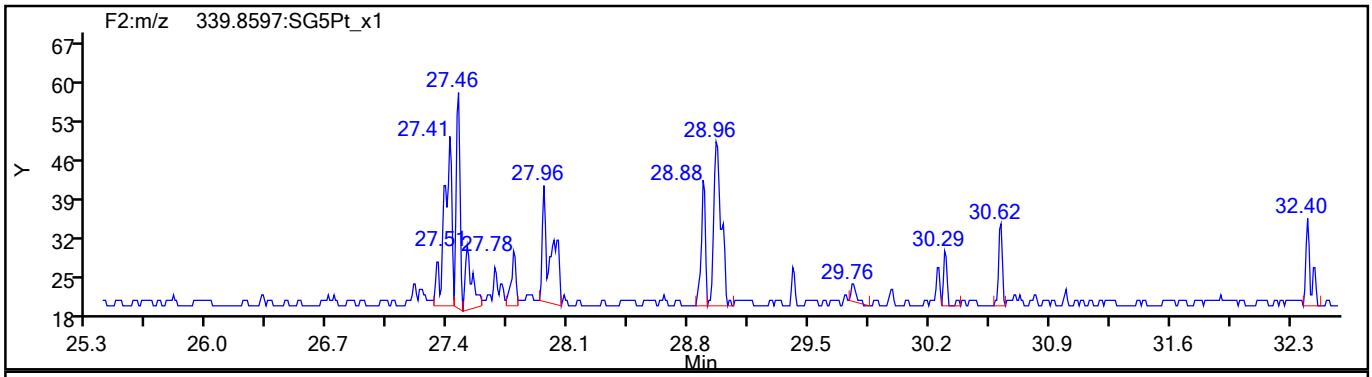

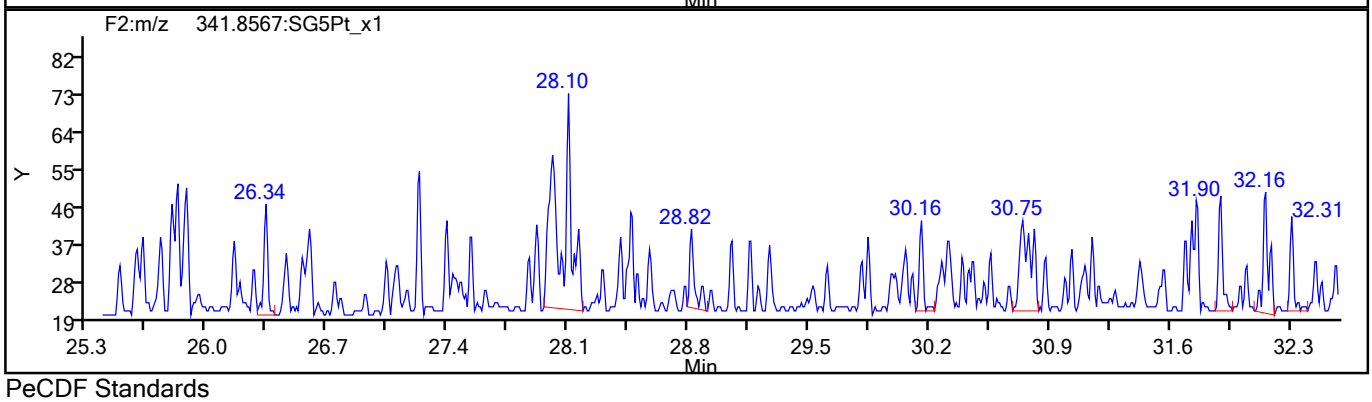

PeCDF Standards

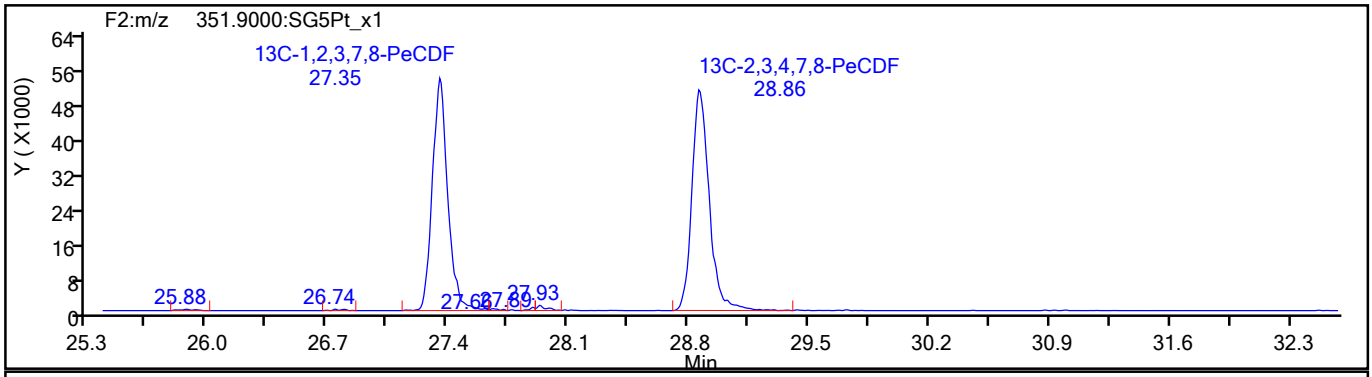

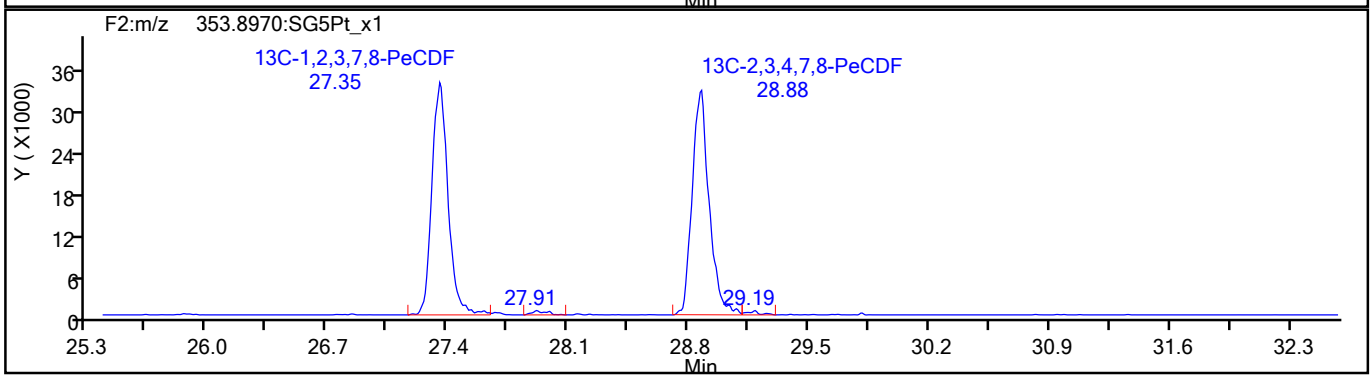

784800

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

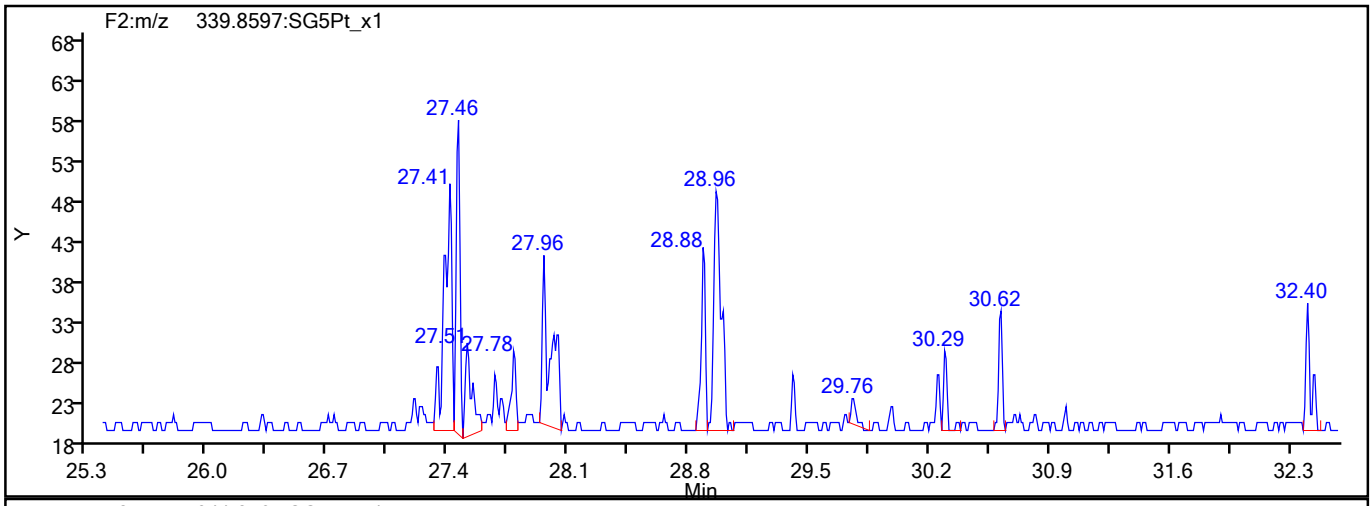

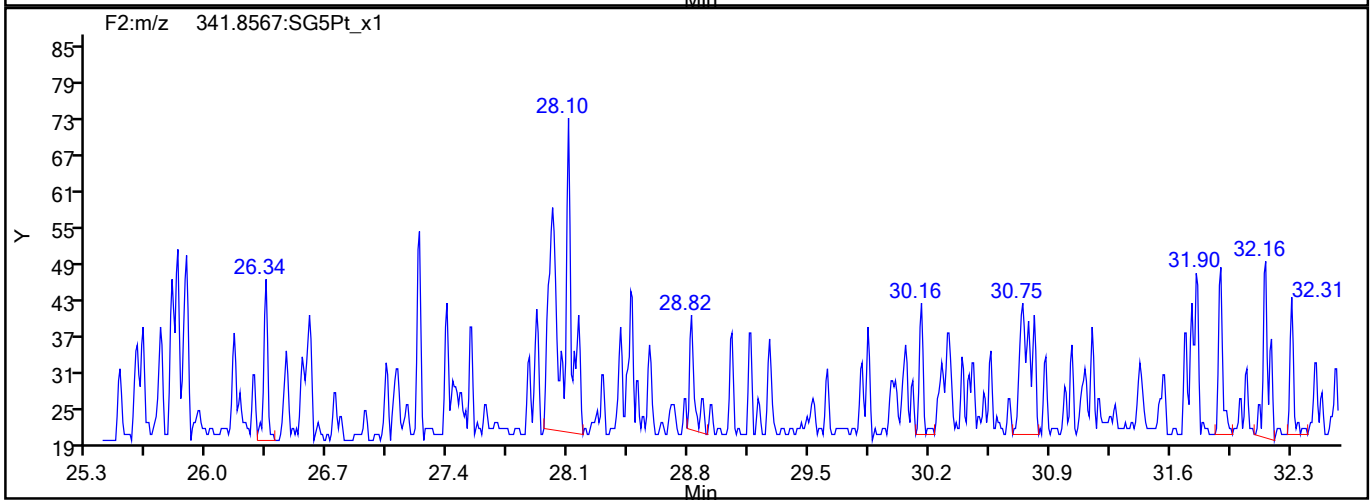

PeCDF Interference Mass

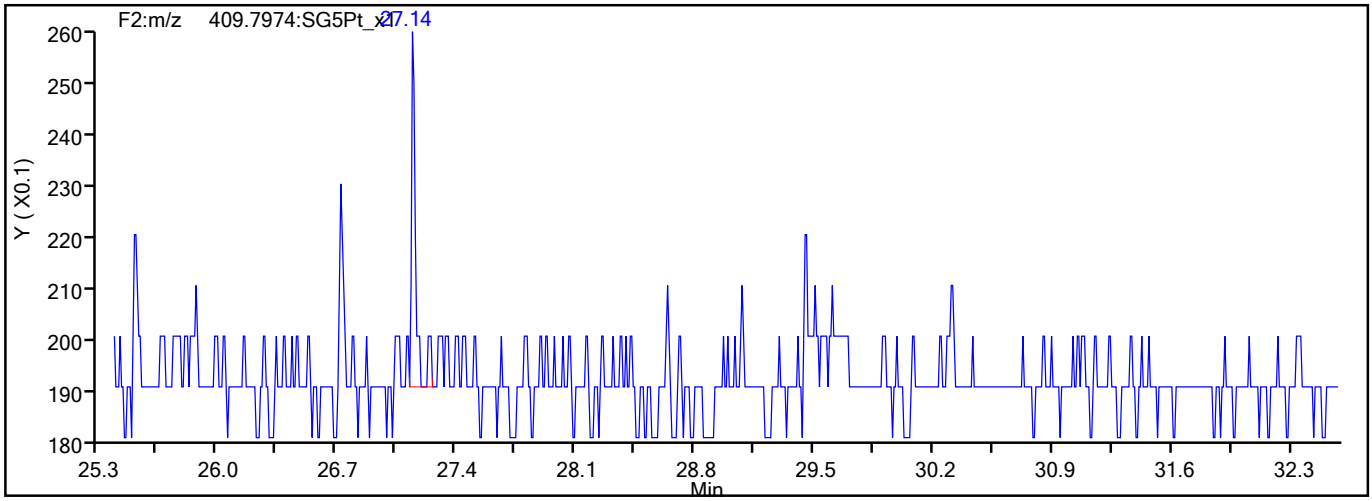

784801

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

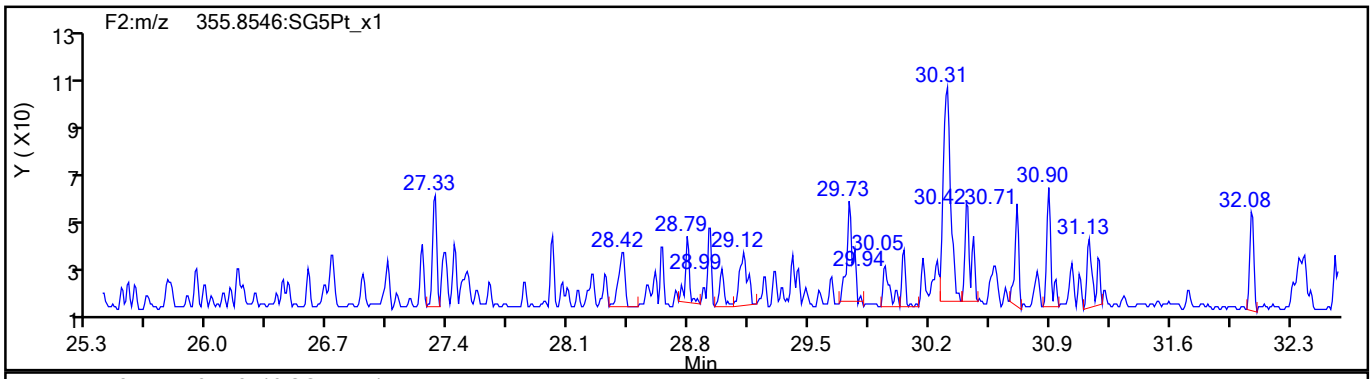

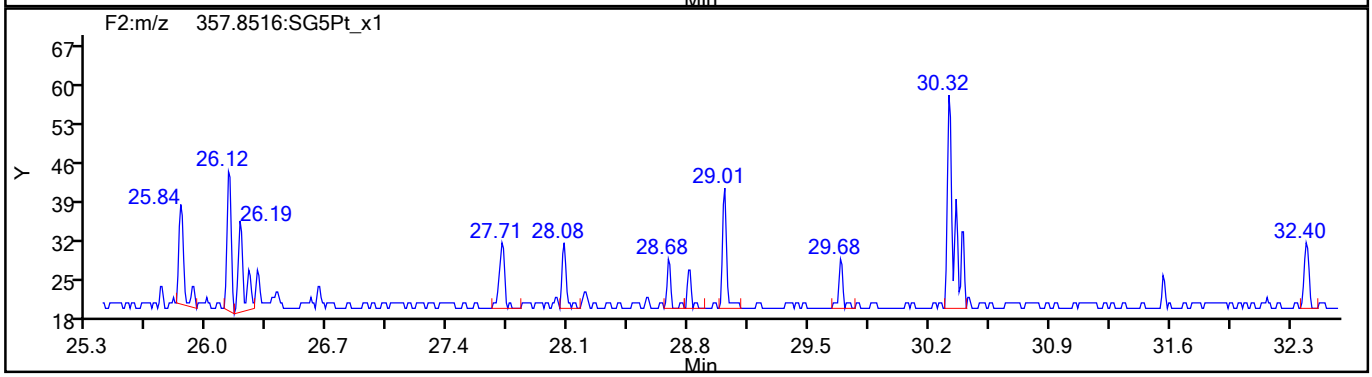

PeCDD Standards

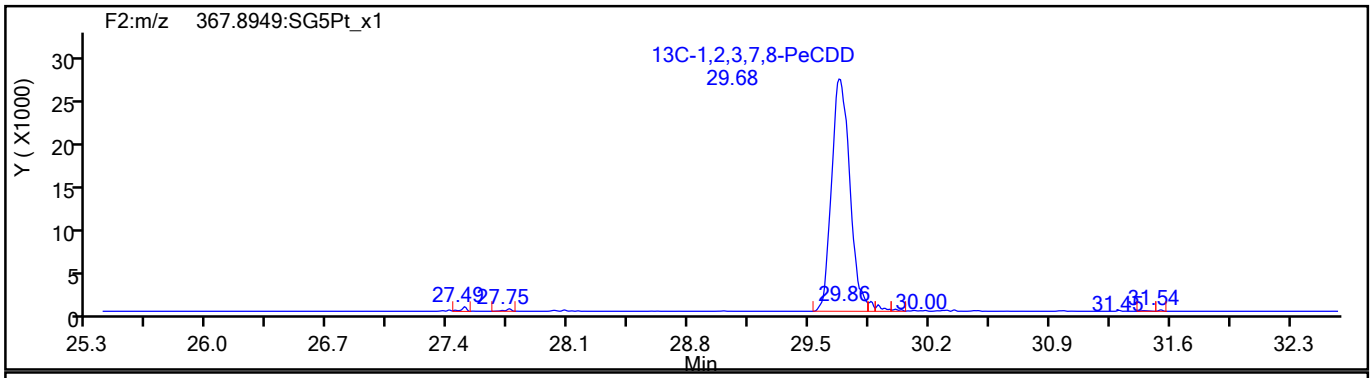

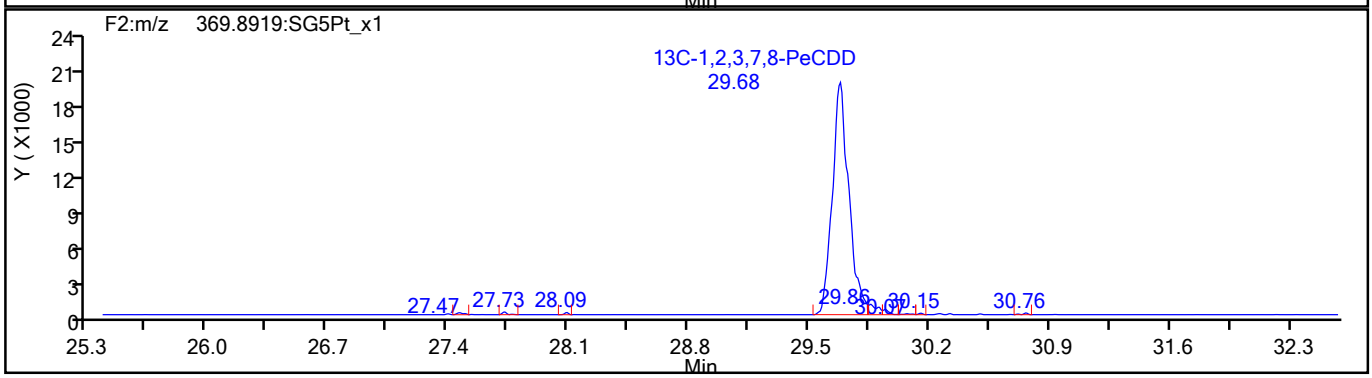

784802

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

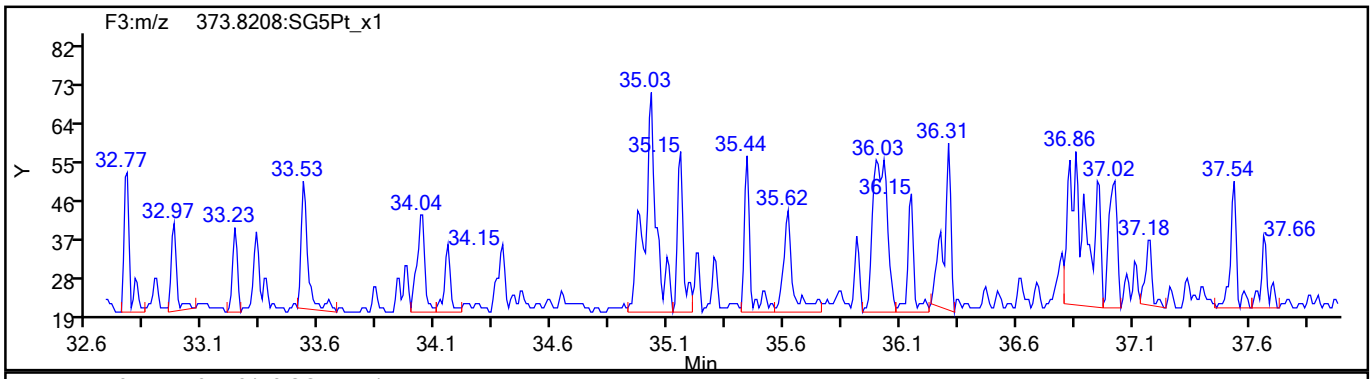

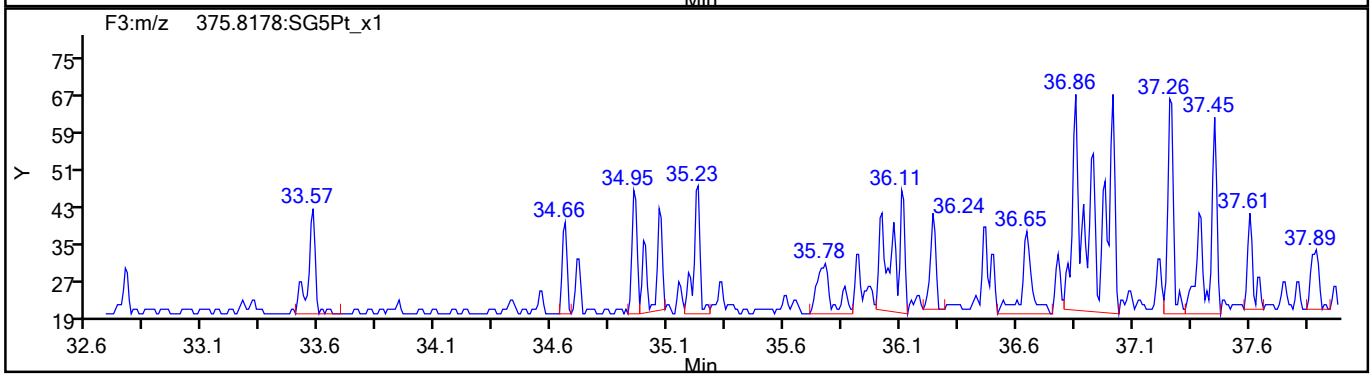

HxCDF Standards

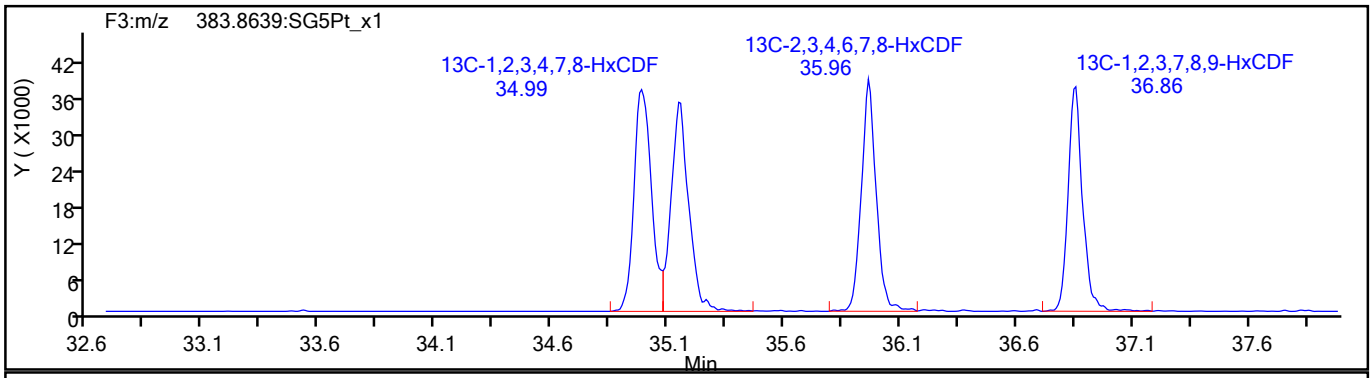

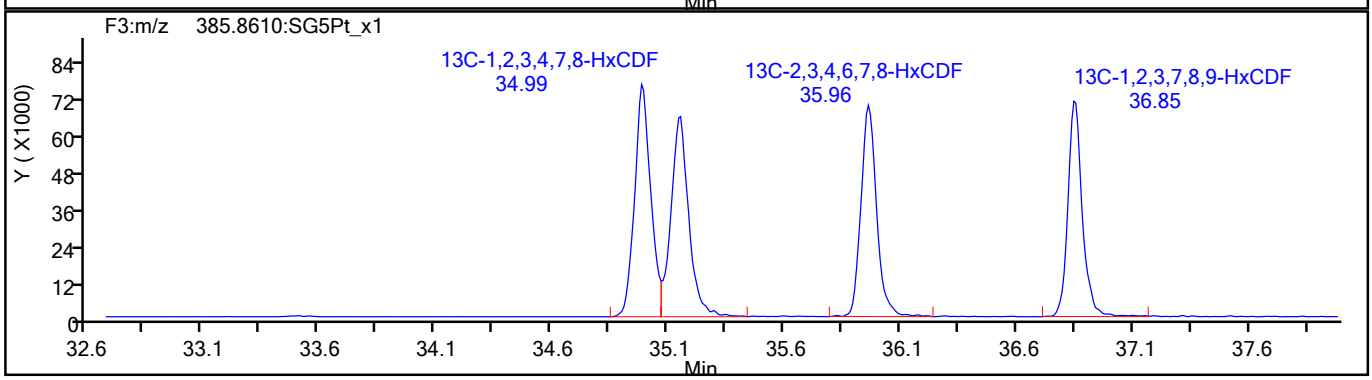

784803

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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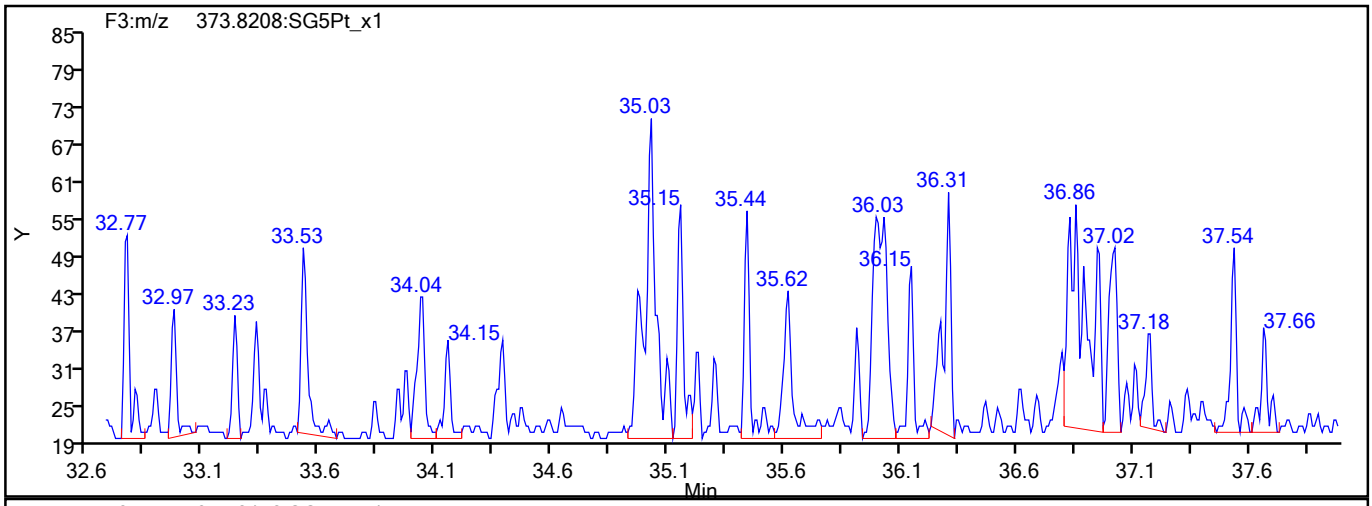

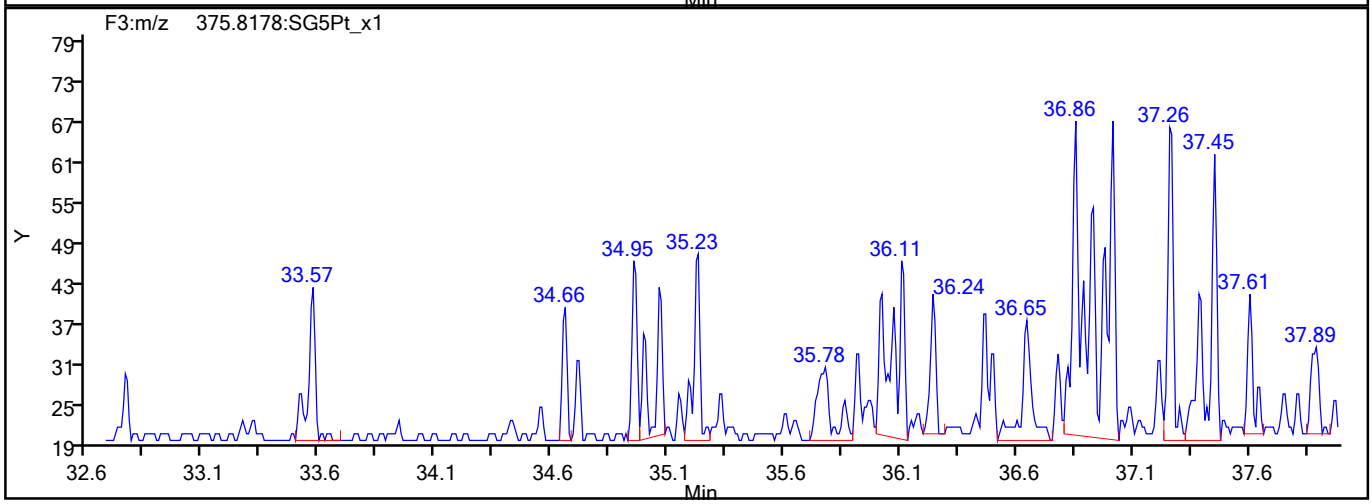

HxCDF Interference Mass

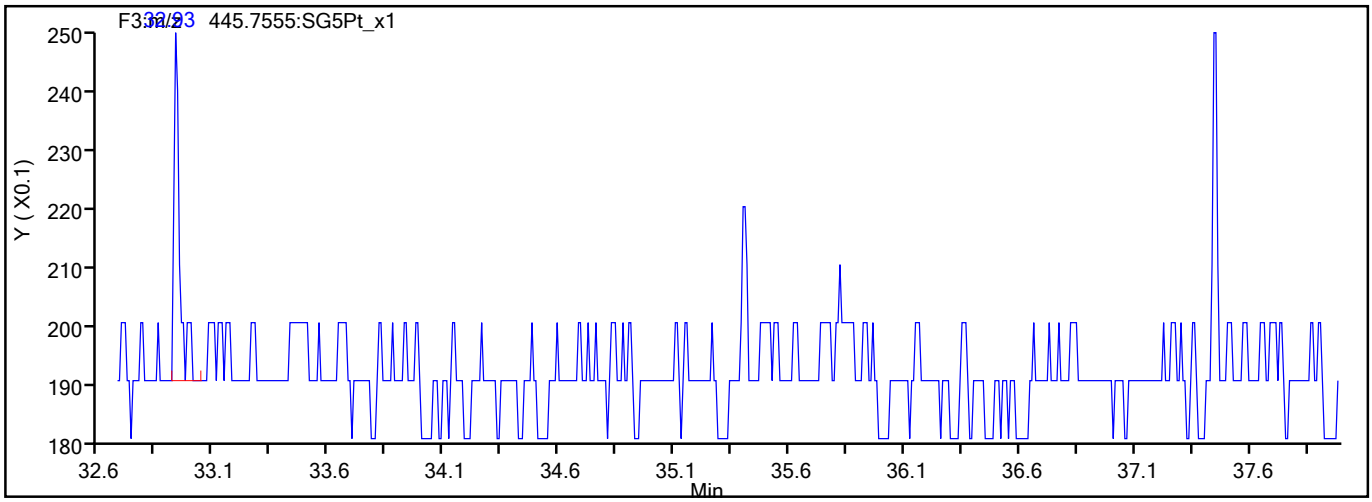

784804

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

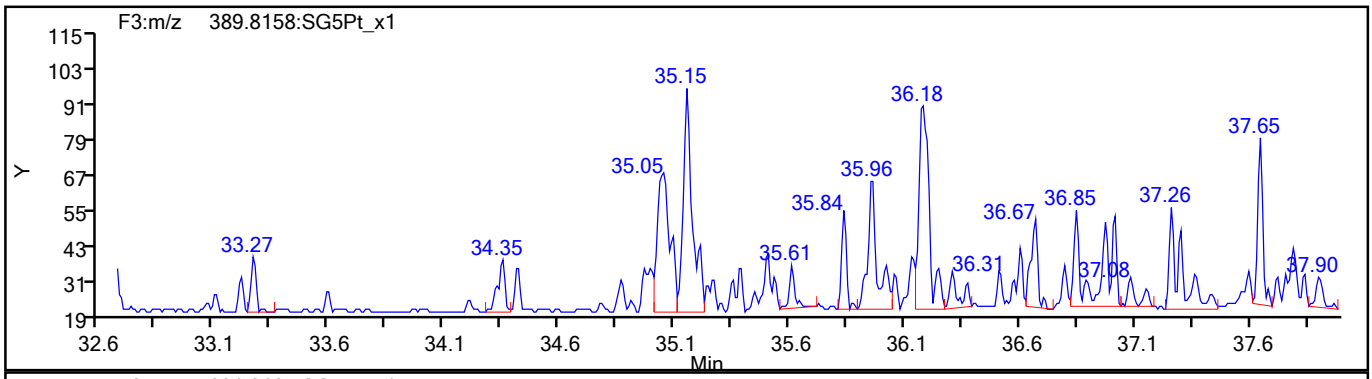

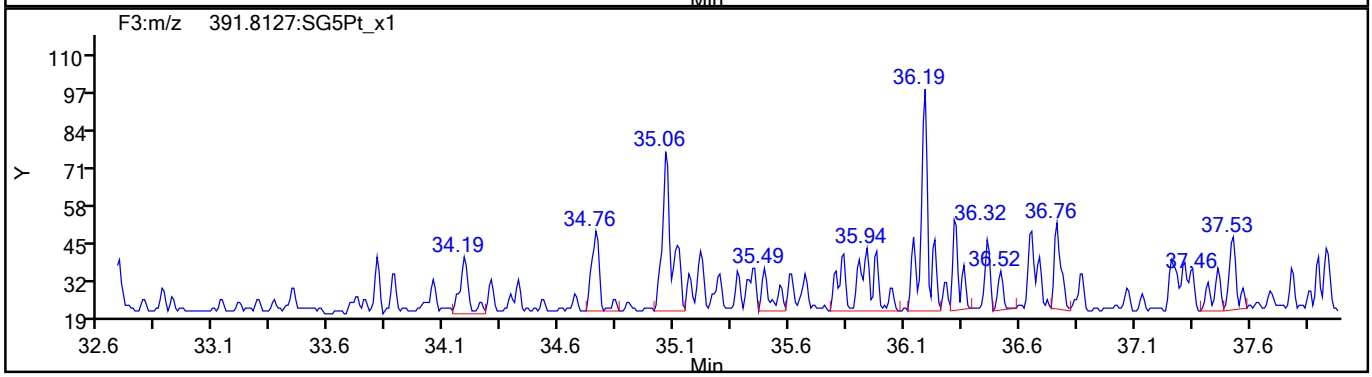

HxCDD Standards

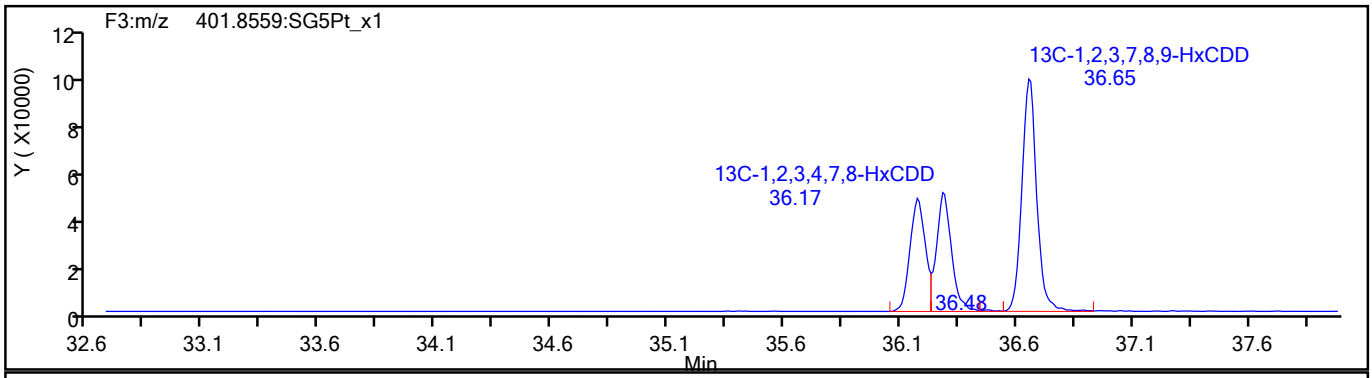

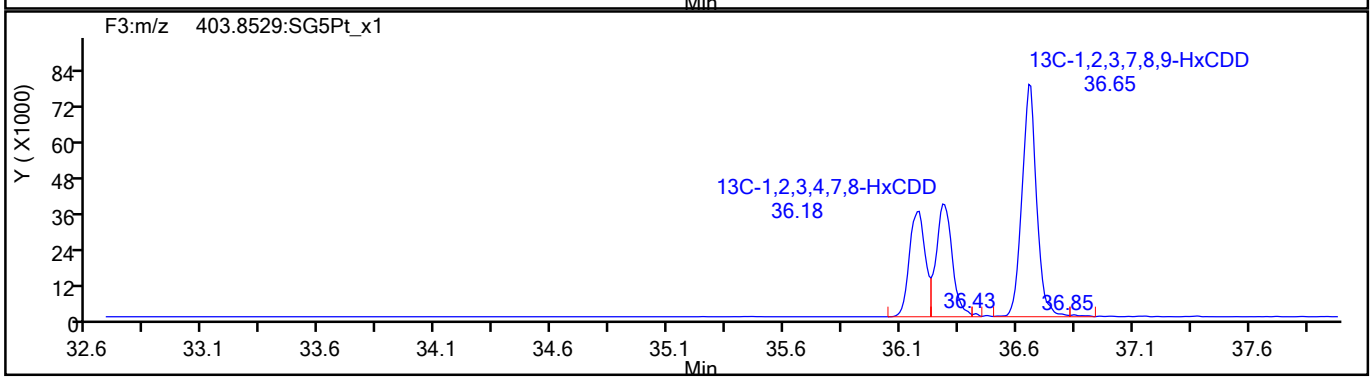

784805

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

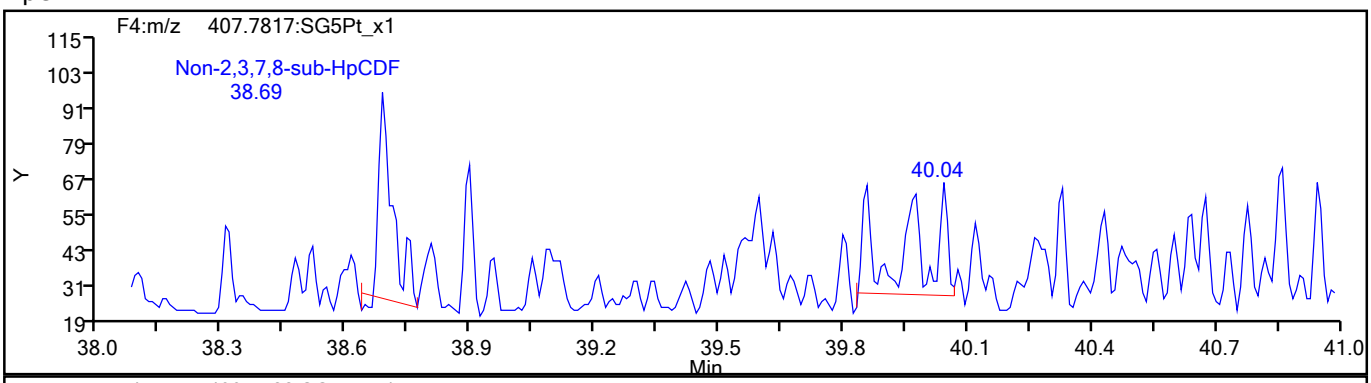

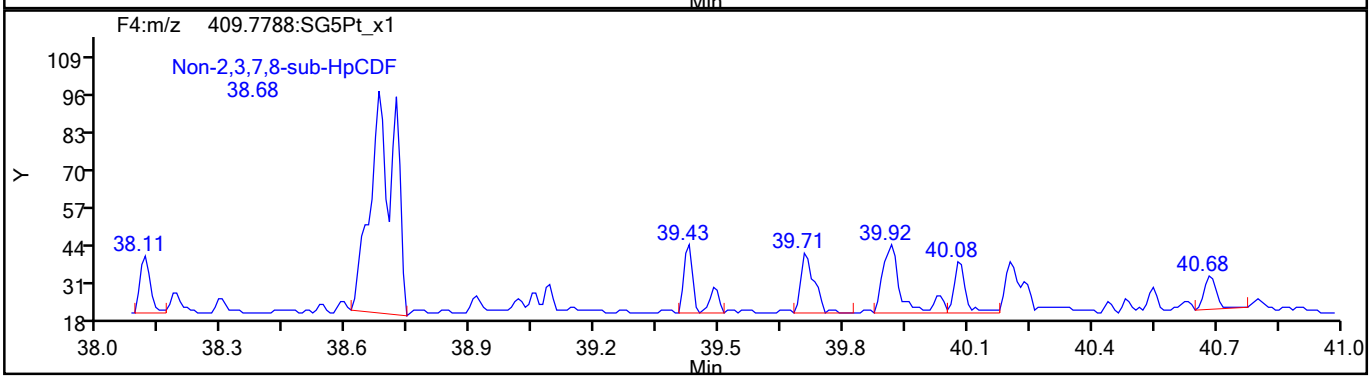

HpCDF Standards

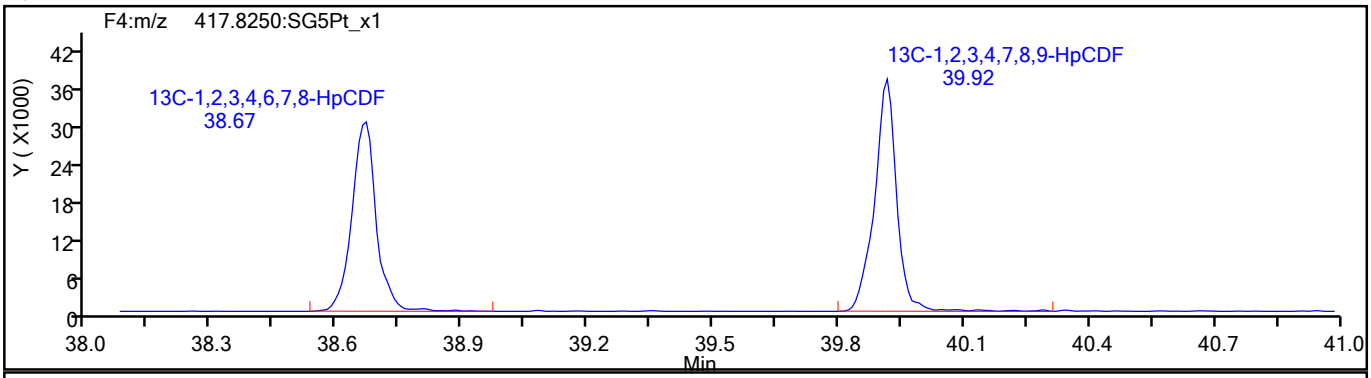

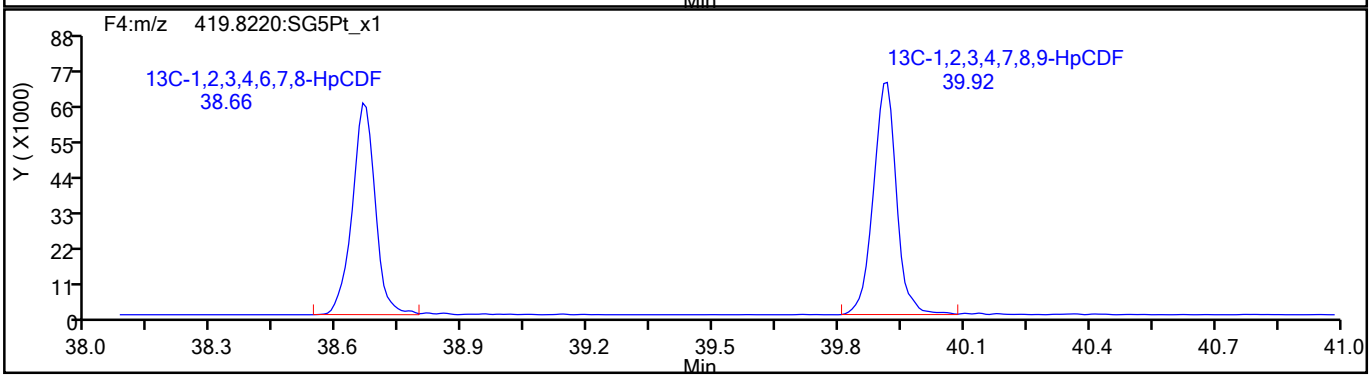

784806

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

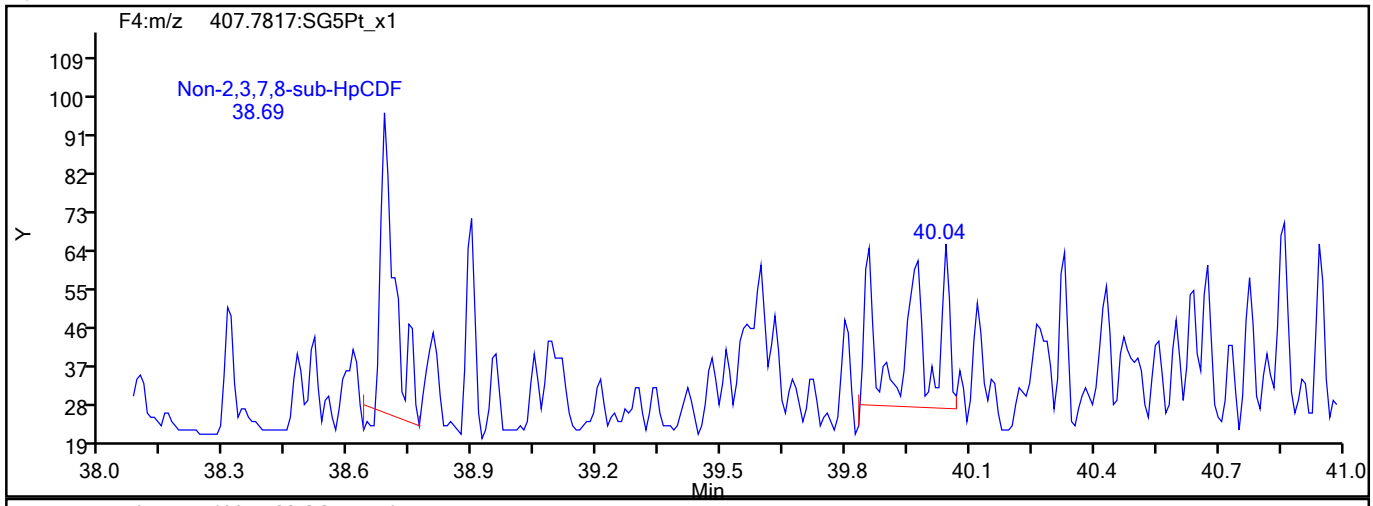

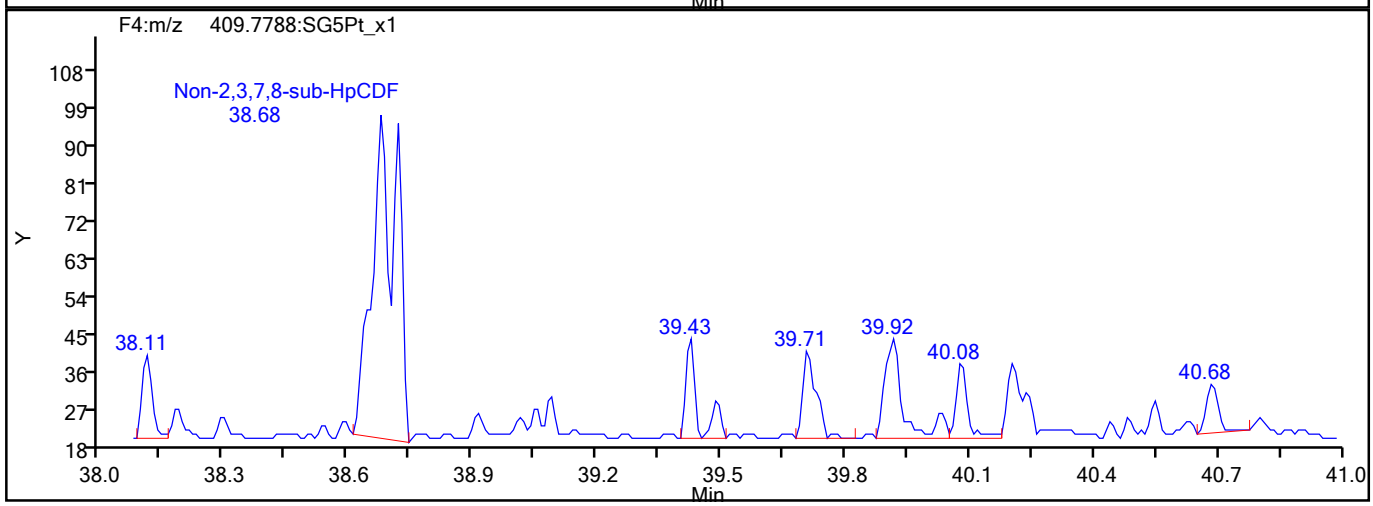

HpCDF Interference Mass

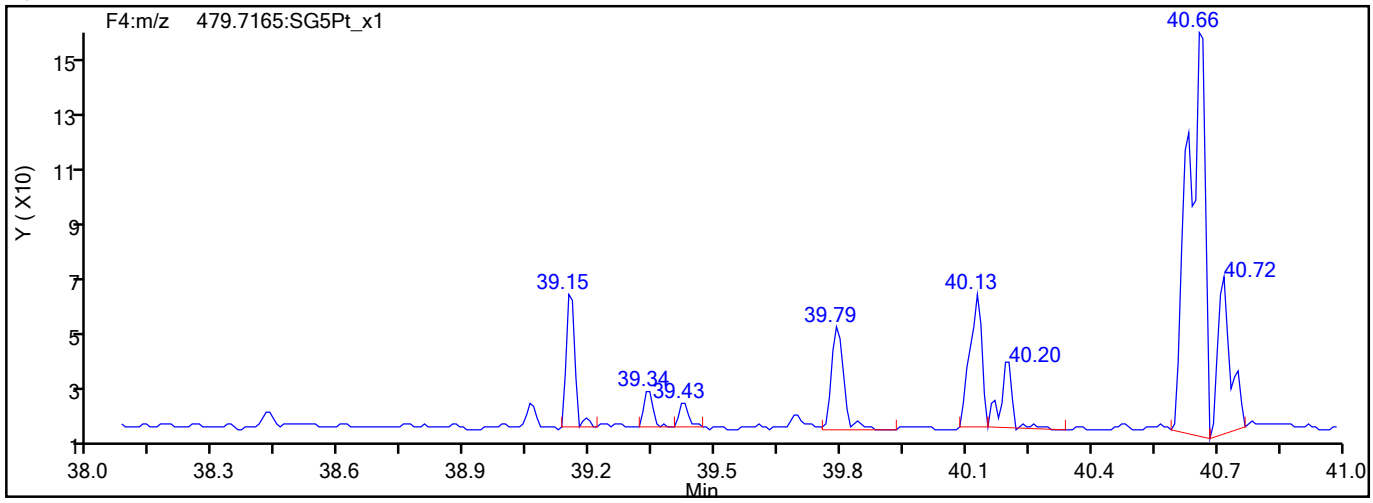

784807

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDD

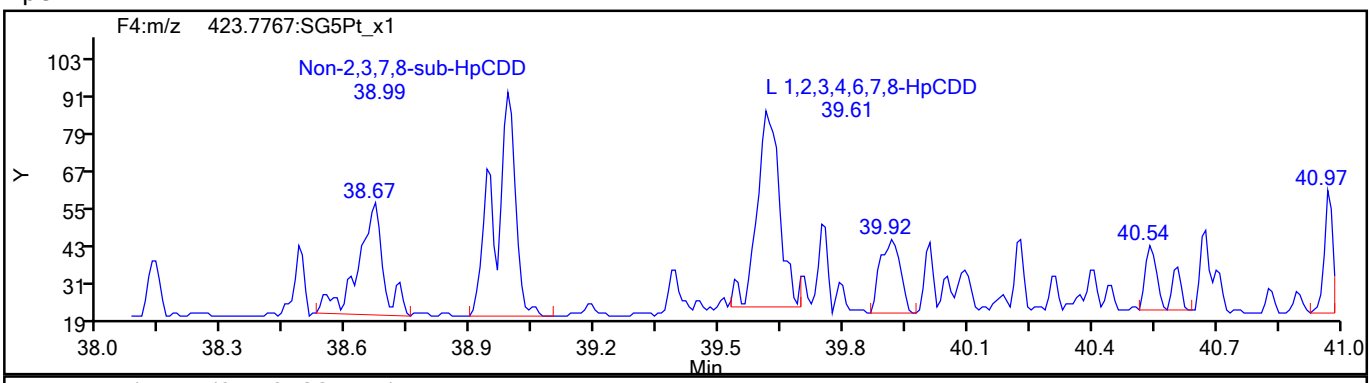

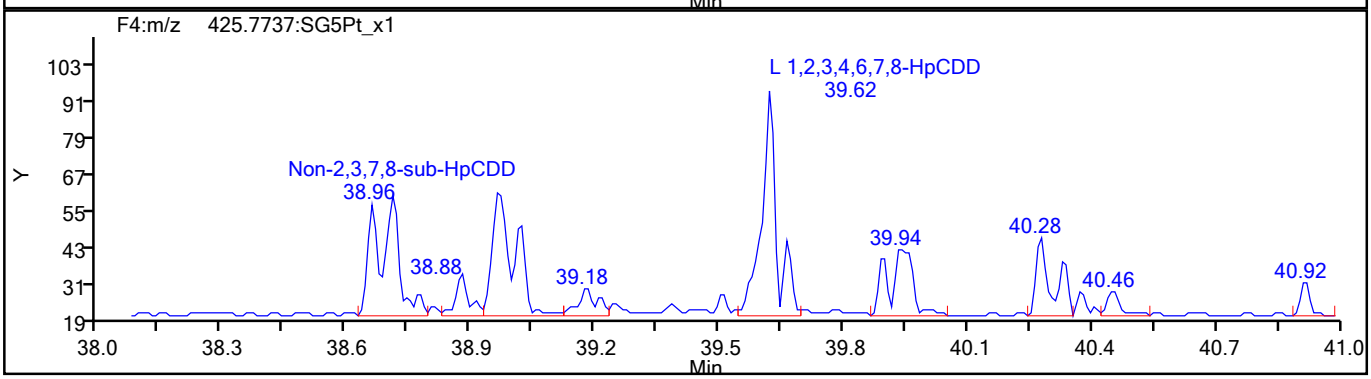

HpCDD Standards

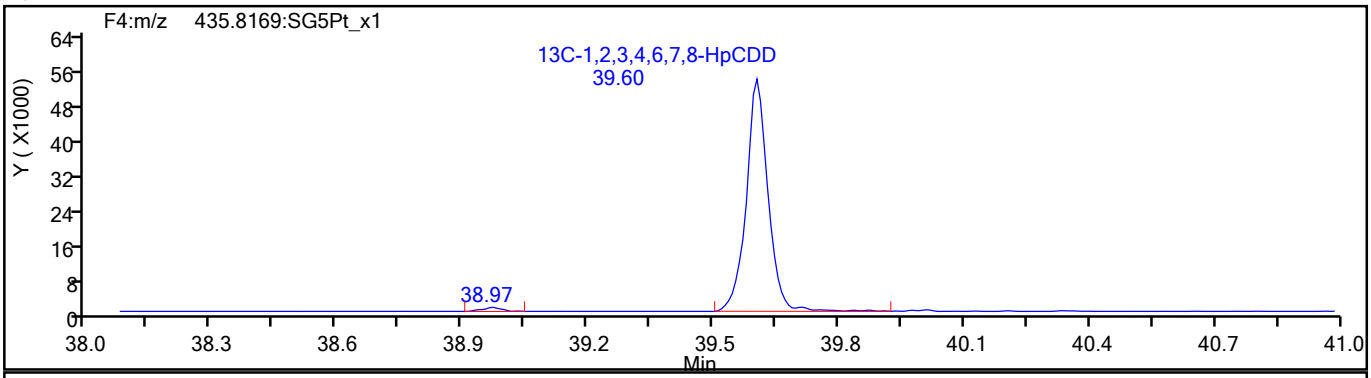

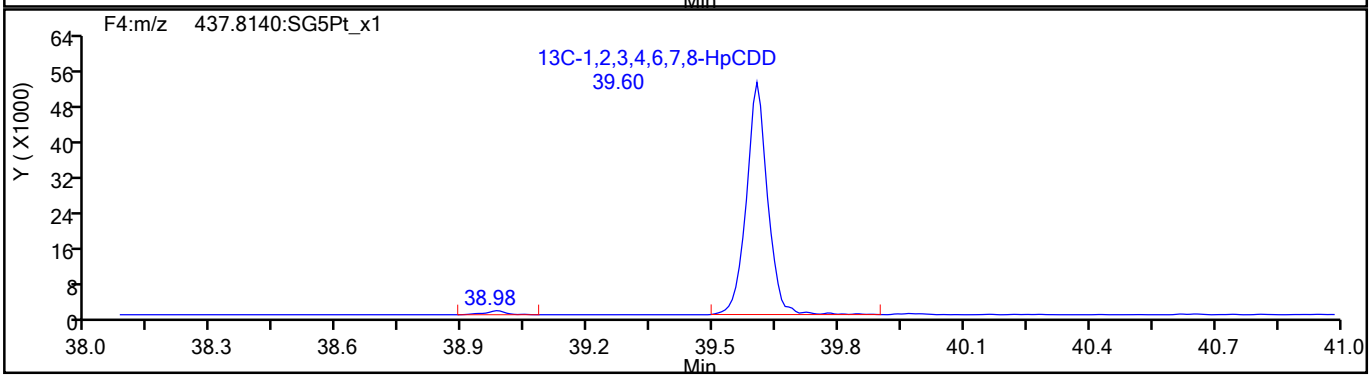

784808

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

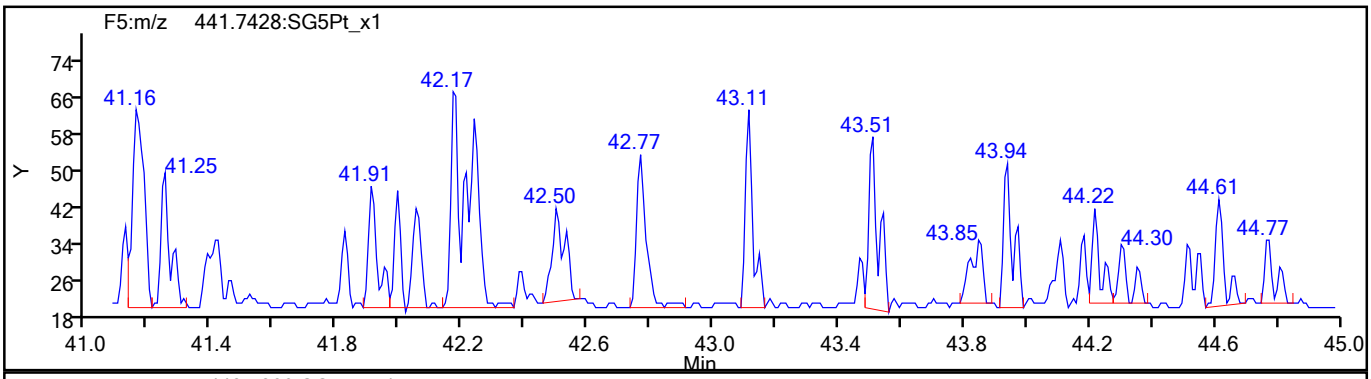

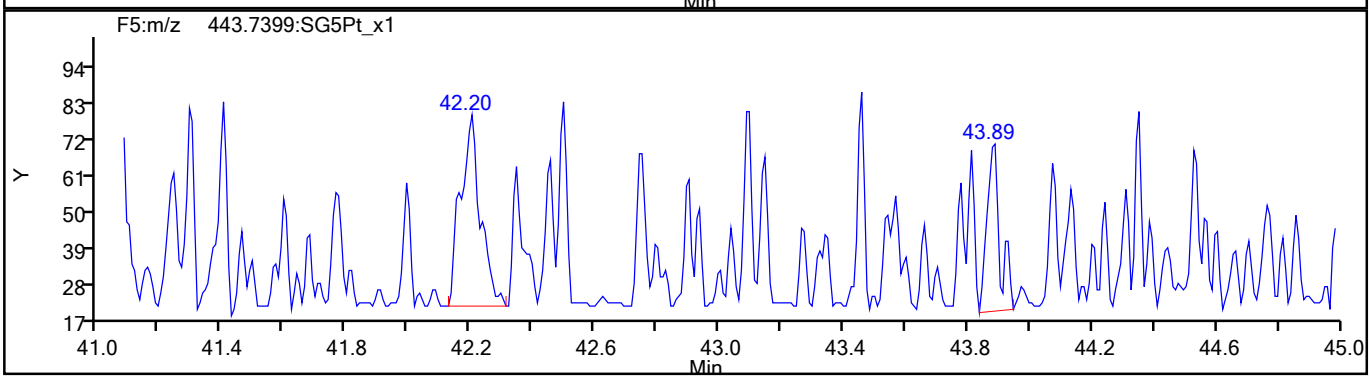

OCDF Standards

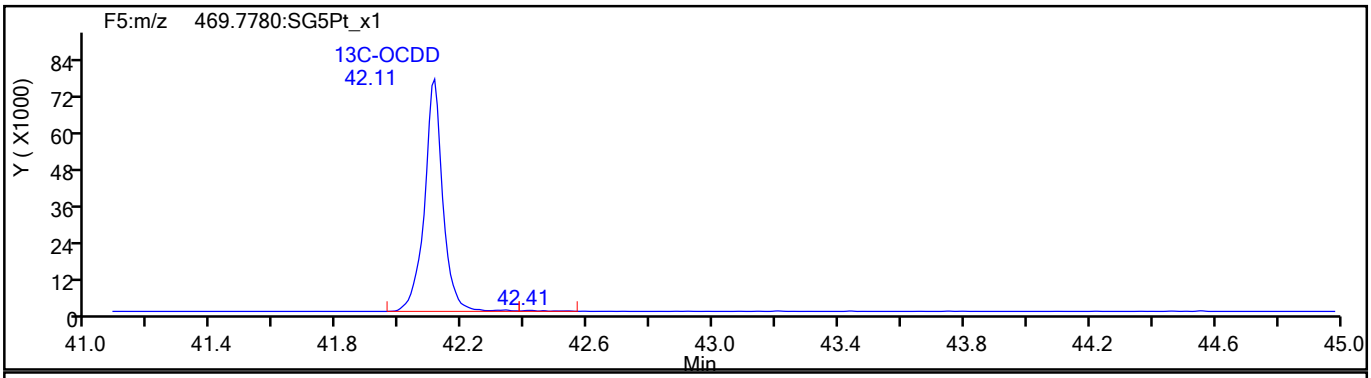

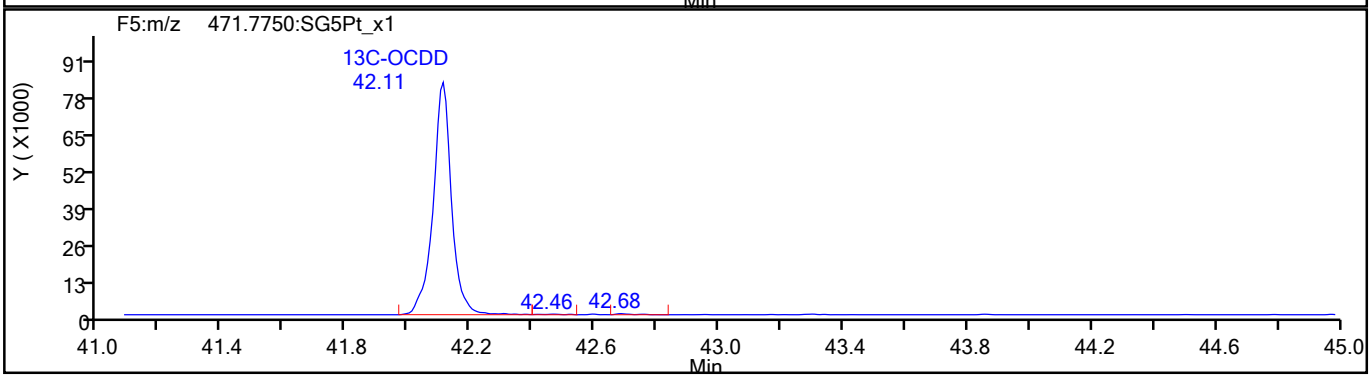

784809

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

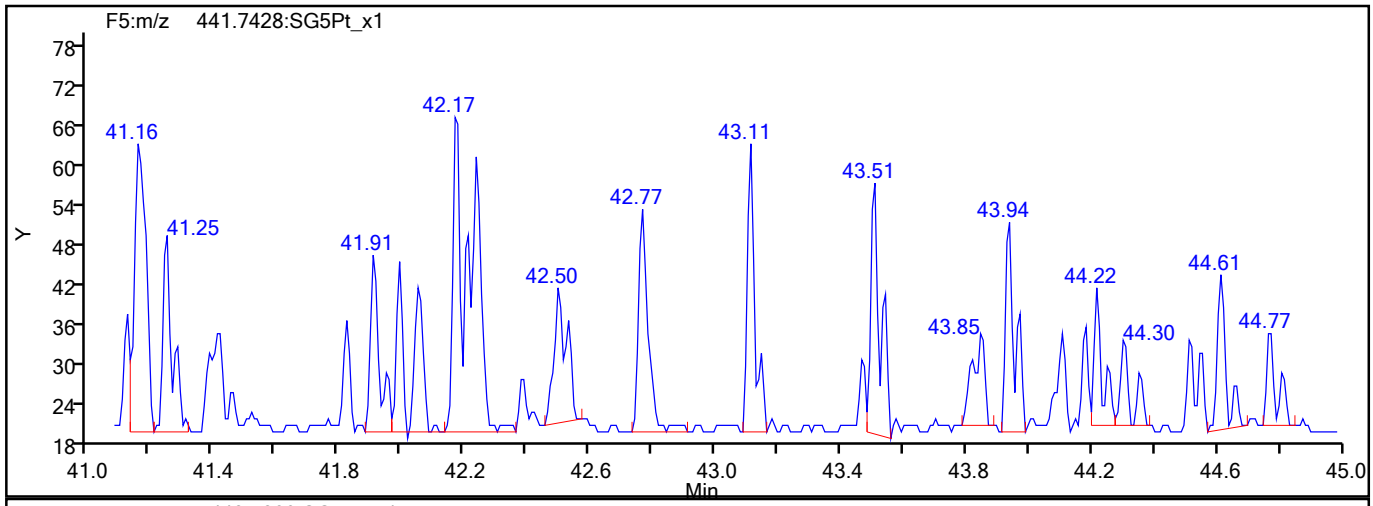

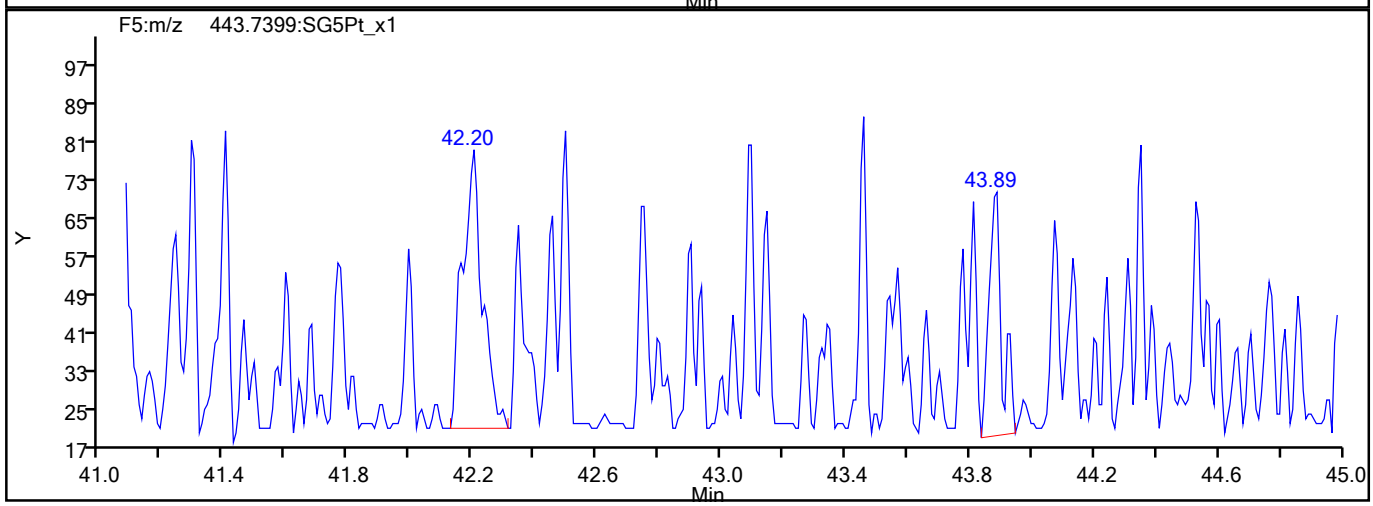

OCDF Interference Mass

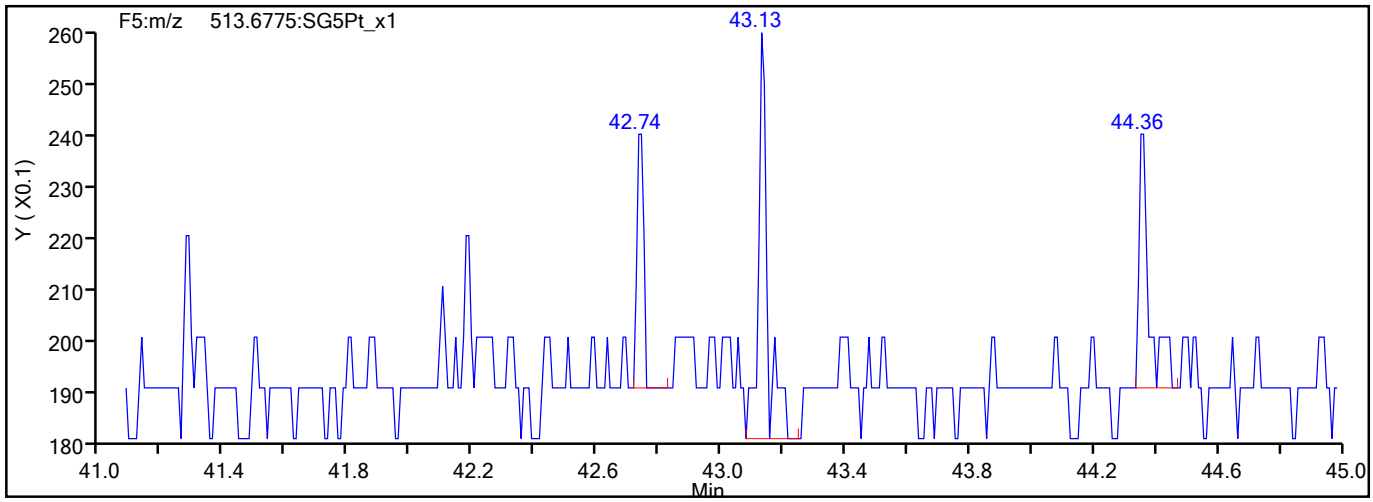

784810

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDD

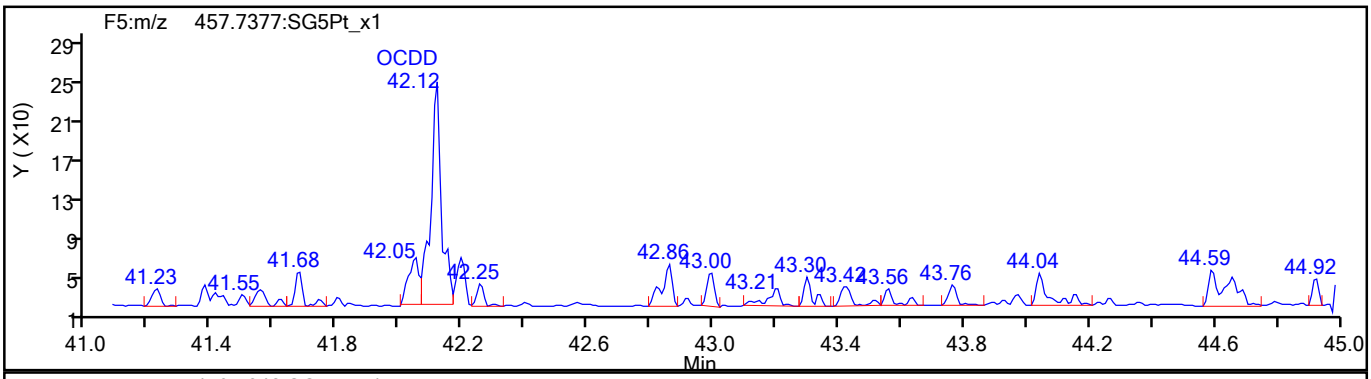

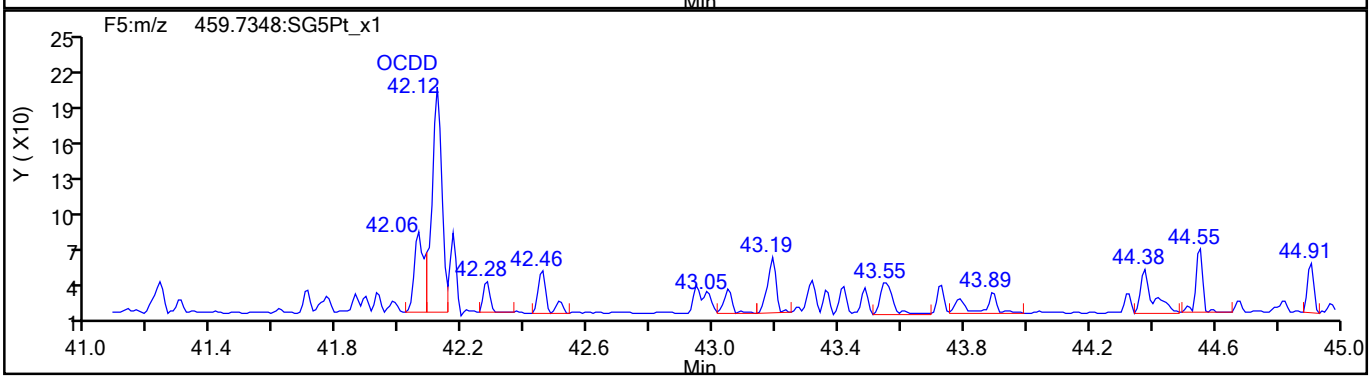

OCDD Standards

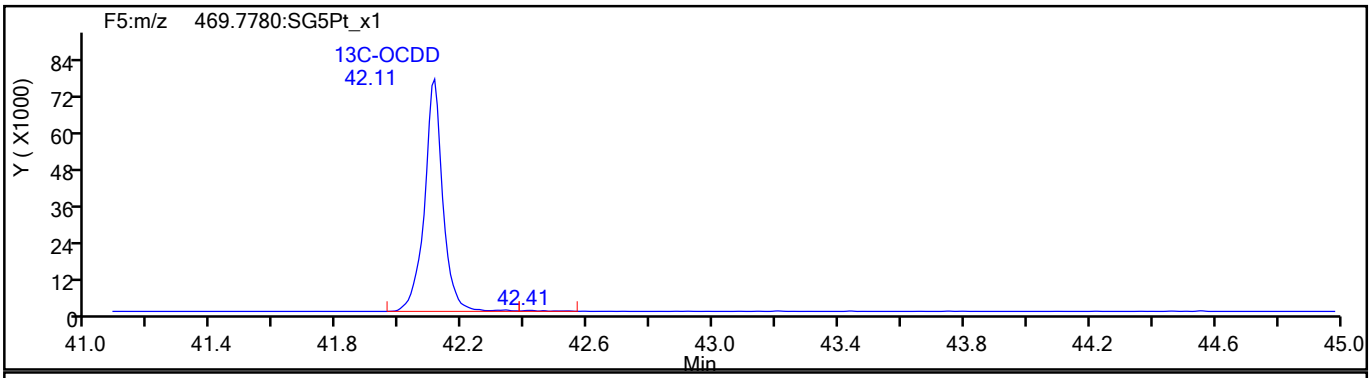

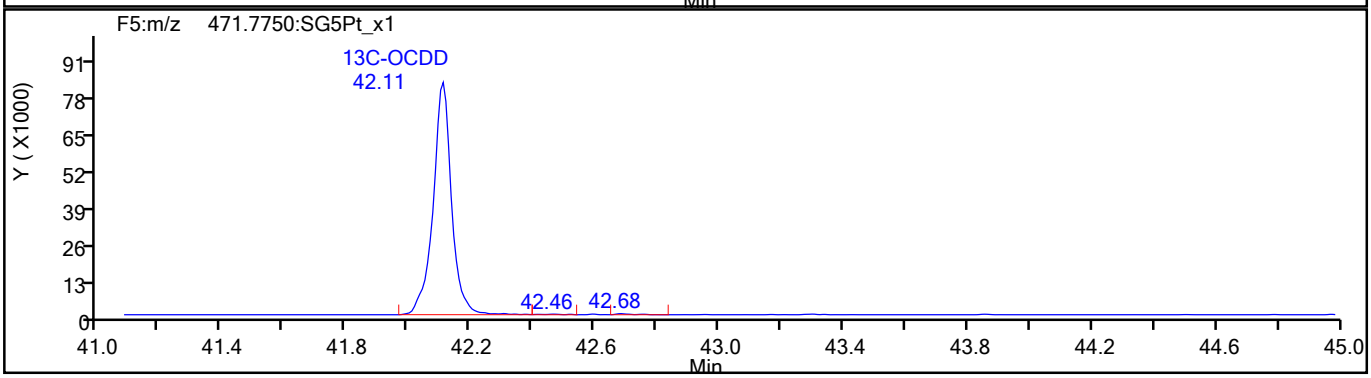

784811

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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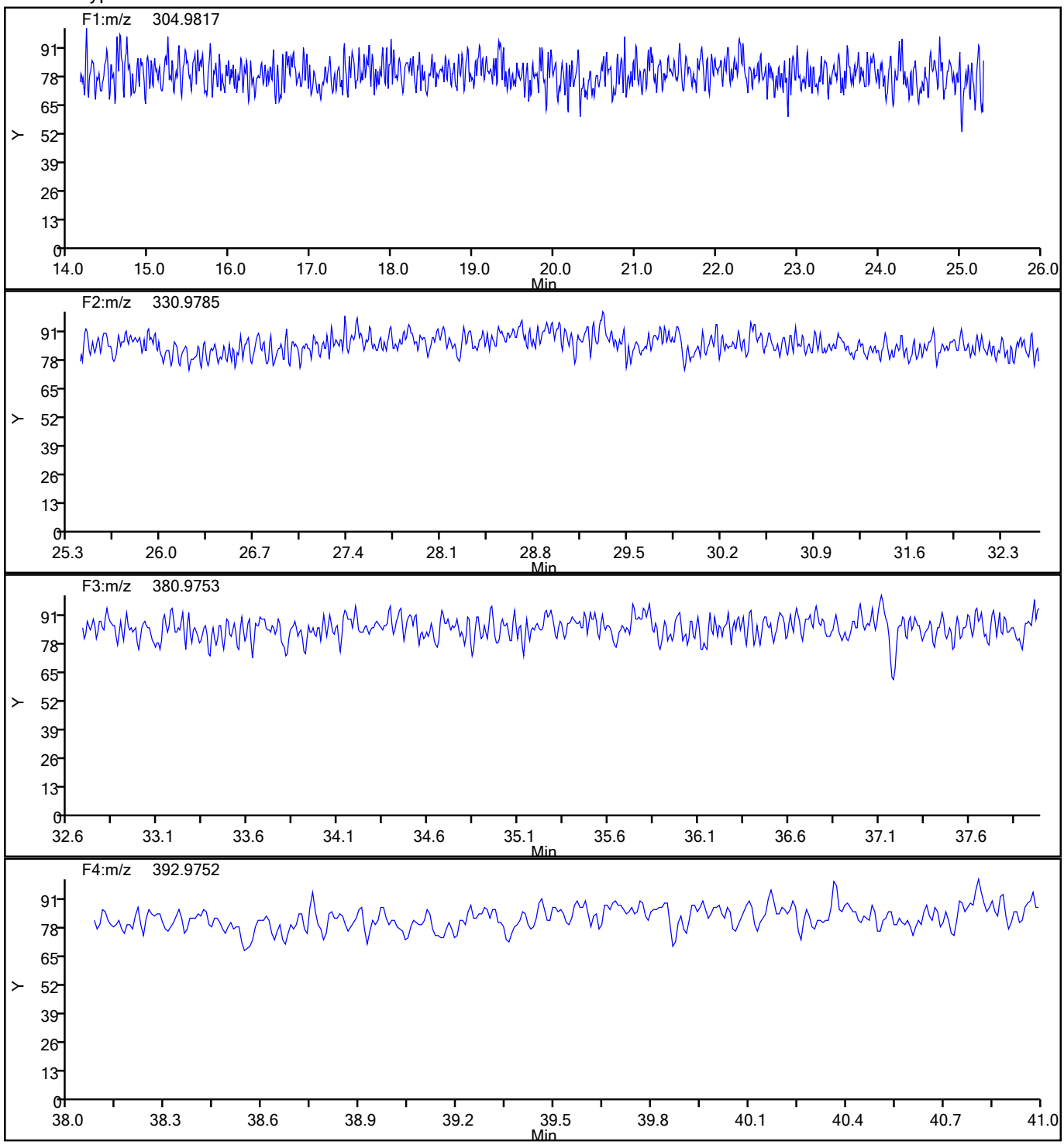

784812

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

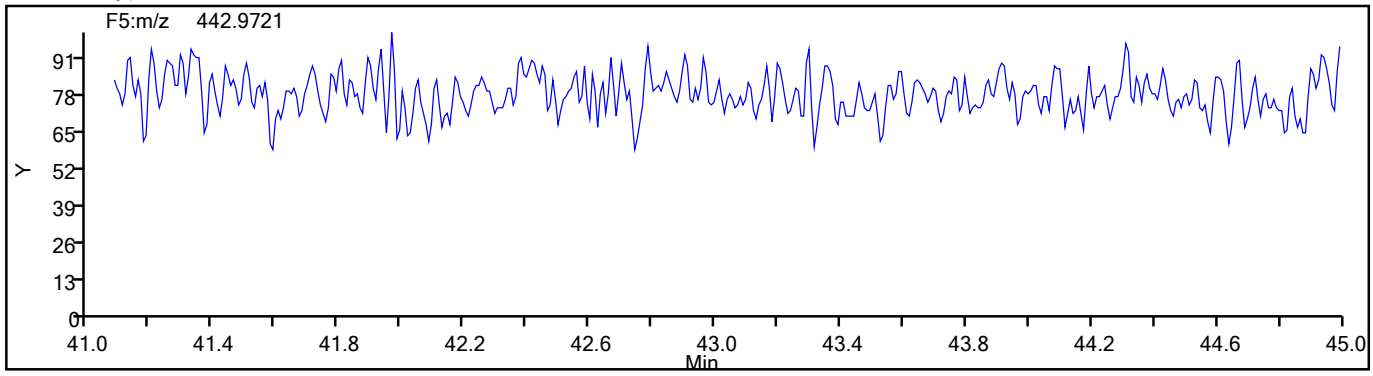

784813

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-2
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-513586/2-A
Matrix: Sediment
Lab File ID: 17au21dfs1_6.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10(g)
Date Analyzed: 08/17/2021 17:49
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517196
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	21.3		1.0	0.15
51207-31-9	2,3,7,8-TCDF	21.8		1.0	0.046
40321-76-4	1,2,3,7,8-PeCDD	112		5.0	0.19
57117-41-6	1,2,3,7,8-PeCDF	114		5.0	0.31
57117-31-4	2,3,4,7,8-PeCDF	105		5.0	0.32
39227-28-6	1,2,3,4,7,8-HxCDD	101		5.0	0.22
57653-85-7	1,2,3,6,7,8-HxCDD	111		5.0	0.26
19408-74-3	1,2,3,7,8,9-HxCDD	110		5.0	0.22
70648-26-9	1,2,3,4,7,8-HxCDF	107		5.0	0.41
57117-44-9	1,2,3,6,7,8-HxCDF	112		5.0	0.40
72918-21-9	1,2,3,7,8,9-HxCDF	116		5.0	0.41
60851-34-5	2,3,4,6,7,8-HxCDF	117		5.0	0.41
35822-46-9	1,2,3,4,6,7,8-HpCDD	108		5.0	0.29
67562-39-4	1,2,3,4,6,7,8-HpCDF	112		5.0	0.51
55673-89-7	1,2,3,4,7,8,9-HpCDF	105		5.0	0.48
3268-87-9	OCDD	228		10	0.25
39001-02-0	OCDF	248		10	0.31
41903-57-5	Total TCDD	21.3		1.0	0.15
30402-14-3	Total TCDF	21.8		1.0	0.046
36088-22-9	Total PeCDD	112		5.0	0.19
30402-15-4	Total PeCDF	221		5.0	0.31
34465-46-8	Total HxCDD	322		5.0	0.24
55684-94-1	Total HxCDF	452		5.0	0.41
37871-00-4	Total HpCDD	110		5.0	0.29
38998-75-3	Total HpCDF	217		5.0	0.49

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-2
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-513586/2-A
Matrix: Sediment
Lab File ID: 17au21dfs1_6.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10(g)
Date Analyzed: 08/17/2021 17:49
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517196
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		20-175
89059-46-1	13C-2,3,7,8-TCDF	54		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	59		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	56		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	63		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	60		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	67		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	58		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	67		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	63		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	72		20-186
114423-97-1	13C-OCDD	71		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	69		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d
Lims ID: LCS 320-513586/2-A
Client ID:
Sample Type: LCS
Inject. Date: 17-Aug-2021 17:49:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513586/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:09:35 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 19:22:53

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.491	781428	0.79	2.1E+04	100.0	100.0				
2,3,7,8-TCDF	20.555	66994	0.76	1.0802	10.9	10.9	0.0232	0.0232	109	
D 13C-2,3,7,8-TCDF	20.520	568874	0.80	1.3459	54.1	54.1	0.1036	0.1036	54.09	
A Non-2,3,7,8-sub-TCDF	19.916						0.0232	0.1455		RQU
S Total TCDF					10.9	10.9	0.0232	0.0232		
D 13C-2,3,7,8-TCDD	21.860	395704	0.85	0.9317	54.4	54.4	0.2364	0.2364	54.35	
2,3,7,8-TCDD	21.894	45397	0.79	1.0753	10.7	10.7	0.0774	0.0774	107	
$ 37Cl4-2,3,7,8-TCDD	21.903	217136		1.0083	27.6	27.6	0.0138	0.0138	68.90	
A Non-2,3,7,8-sub-TCDD	20.750						0.0774	0.0774		
S Total TCDD					10.7	10.7	0.0774	0.0774		
D 13C-1,2,3,7,8-PeCDF	27.335	501609	1.68	1.1405	56.3	56.3	0.2160	0.2160	56.28	
1,2,3,7,8-PeCDF	27.368	301701	1.58	1.0543	57.1	57.1	0.1540	0.1540	114	
D 13C-2,3,4,7,8-PeCDF	28.868	556312	1.55	1.1253	63.3	63.3	0.2189	0.2189	63.26	
2,3,4,7,8-PeCDF	28.893	295657	1.58	1.0079	52.7	52.7	0.1609	0.1609	105	
A F1 PeCDFs	24.676						0.006051	0.006051		
A Non-2,3,7,8-sub-PeCDF	28.167	3852	1.43	1.0311	0.7063	0.7063	0.1573	0.7063	0.00	
S Total PeCDF					110.5	110.5	0.1574	0.1574		
D 13C-1,2,3,7,8-PeCDD	29.685	328312	1.73	0.7165	58.6	58.6	0.0778	0.0778	58.64	
1,2,3,7,8-PeCDD	29.710	192359	1.58	1.0465	56.0	56.0	0.0962	0.0962	112	
A Non-2,3,7,8-sub-PeCDD	28.556						0.0962	0.0962		
S Total PeCDD					56.0	56.0	0.0962	0.0962		
D 13C-1,2,3,4,7,8-HxCDF	34.995	518980	0.54	0.9648	66.5	66.5	0.2256	0.2256	66.55	
1,2,3,4,7,8-HxCDF	35.012	317201	1.24	1.1474	53.3	53.3	0.2039	0.2039	107	
D 13C-1,2,3,6,7,8-HxCDF	35.147	504596	0.52	1.0708	58.3	58.3	0.2032	0.2032	58.30	
1,2,3,6,7,8-HxCDF	35.163	344779	1.28	1.2178	56.1	56.1	0.2020	0.2020	112	
D 13C-2,3,4,6,7,8-HxCDF	35.964	451934	0.54	1.0413	53.7	53.7	0.2090	0.2090	53.70	
2,3,4,6,7,8-HxCDF	35.981	321341	1.25	1.2145	58.5	58.5	0.2027	0.2027	117	
D 13C-1,2,3,7,8,9-HxCDF	36.849	420297	0.54	0.9731	53.4	53.4	0.2236	0.2236	53.44	
1,2,3,7,8,9-HxCDF	36.865	303602	1.26	1.2401	58.2	58.2	0.2065	0.2065	116	
A Non-2,3,7,8-sub-HxCDF	35.074						0.2036	0.2036		
S Total HxCDF					226.2	226.2	0.2038	0.2038		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.663	808260	1.30	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.174	370303	1.28	0.7587	60.4	60.4	0.1486	0.1486	60.39	
1,2,3,4,7,8-HxCDD	36.191	199314	1.29	1.0608	50.7	50.7	0.1112	0.1112	101	
D 13C-1,2,3,6,7,8-HxCDD	36.301	375488	1.28	0.8593	54.1	54.1	0.1312	0.1312	54.07	
1,2,3,6,7,8-HxCDD	36.309	206353	1.27	0.9933	55.3	55.3	0.1309	0.1309	111	
1,2,3,7,8,9-HxCDD	36.672	226911	1.24	1.1094	54.8	54.8	0.1115	0.1115	110	
A Non-2,3,7,8-sub-HxCDD	35.432						0.1173	0.1173		
S Total HxCDD					160.9	160.9	0.1178	0.1178		
D 13C-1,2,3,4,6,7,8-HpCDF	38.662	374575	0.44	0.7359	63.0	63.0	0.2745	0.2745	62.97	
1,2,3,4,6,7,8-HpCDF	38.679	302379	1.04	1.4421	56.0	56.0	0.2544	0.2544	112	
1,2,3,4,7,8,9-HpCDF	39.926	272343	1.03	1.3092	52.5	52.5	0.2383	0.2383	105	
D 13C-1,2,3,4,7,8,9-HpCDF	39.918	396261	0.47	0.6854	71.5	71.5	0.2947	0.2947	71.53	
A Non-2,3,7,8-sub-HpCDF	39.277						0.2451	0.2451		
S Total HpCDF					108.5	108.5	0.2463	0.2463		
D 13C-1,2,3,4,6,7,8-HpCDD	39.606	363095	1.10	0.6745	66.6	66.6	0.1365	0.1365	66.60	
1,2,3,4,6,7,8-HpCDD	39.614	206552	1.03	1.0503	54.2	54.2	0.1430	0.1430	108	
A Non-2,3,7,8-sub-HpCDD	39.277	2982	1.01	1.0503	0.7819	0.7819	0.1430	0.7819	0.00	
S Total HpCDD					54.9	54.9	0.1430	0.1430		
D 13C-OCDD	42.111	621791	0.91	0.5446	141.3	141.3	0.2018	0.2018	70.63	
OCDF	42.203	507114	0.92	1.3168	123.9	123.9	0.1527	0.1527	124	
OCDD	42.119	376368	0.89	1.0620	114.0	114.0	0.1262	0.1262	114	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d
Lims ID: LCS 320-513586/2-A
Client ID:
Sample Type: LCS
Inject. Date: 17-Aug-2021 17:49:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513586/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:09:35 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 19:22:53

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.491	21.483	0		345437	48384	25	62	1935		
333.9338	21.499	21.483	1		435991	59201	70	175	846	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.555	20.482	4	1.002	28976	4280	3	7	1427		
305.8987	20.546	20.482	4	1.001	38018	5339	5	12	1068	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.520	20.594	-4	0.955	253688	35207	40	100	880		
317.9389	20.503	20.594	-5	0.954	315186	44524	20	50	2226	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											U
303.9016	18.958	19.916	-57	0.924	113	44	3	7	15		
305.8987	18.915	19.916	-60	0.922	130	46	5	12	9	0.87(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.860	21.790	4	1.017	181844	25019	25	62	1001		
333.9338	21.860	21.790	4	1.017	213860	31474	70	175	450	0.85(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.894	21.825	4	1.002	20103	2896	5	12	579		
321.8936	21.885	21.825	4	1.001	25294	3228	14	35	231	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.903	21.905	0	1.019	217136	27685	6	15	4614		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.750						5	12			
321.8936	20.750						14	35			
13C-1,2,3,7,8-PeCDF											
351.9000	27.335	27.343	-1	1.272	314240	51089	53	132	964		
353.8970	27.335	27.343	-1	1.272	187369	29006	53	132	547	1.68(1.32-1.78)	

784818

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.368	27.368	0	1.001	184883	27670	28	70	988		
341.8567	27.377	27.368	1	1.002	116818	17194	24	60	716	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.868	28.867	0	1.343	337792	50728	53	132	957		
353.8970	28.851	28.867	-1	1.343	218520	29455	53	132	556	1.55(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.893	28.884	1	1.001	181094	26198	28	70	936		
341.8567	28.893	28.884	1	1.001	114563	15264	24	60	636	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.676						1	2			
341.8567	24.676						1	2			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.950	28.167	-13	1.023	2268	309	28	70	11		
341.8567	27.950	28.167	-13	1.023	1584	237	24	60	10	1.43(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.685	29.667	1	1.381	207955	29249	18	45	1625		
369.8919	29.668	29.667	0	1.381	120357	17448	6	15	2908	1.73(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.710	29.692	1	1.001	117826	15707	10	25	1571		
357.8516	29.710	29.692	1	1.001	74533	10483	9	22	1165	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						10	25			
357.8516	28.556						9	22			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.995	34.974	1	0.954	182167	37932	50	125	759		
385.8610	34.995	34.974	1	0.954	336813	65518	106	265	618	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.012	35.000	1	1.000	175404	35496	51	127	696		
375.8178	35.012	35.000	1	1.000	141797	28810	46	115	626	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.147	35.134	1	0.959	173057	33255	50	125	665		
385.8610	35.147	35.134	1	0.959	331539	65113	106	265	614	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.163	35.151	1	1.000	193669	35743	51	127	701		
375.8178	35.163	35.151	1	1.000	151110	27401	46	115	596	1.28(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.964	35.951	1	0.981	158326	33846	50	125	677		
385.8610	35.972	35.951	1	0.981	293608	64464	106	265	608	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.981	35.968	1	1.000	178371	37689	51	127	739		
375.8178	35.981	35.968	1	1.000	142970	29993	46	115	652	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.849	36.843	0	1.005	147959	32965	50	125	659		
385.8610	36.857	36.843	1	1.005	272338	61538	106	265	581	0.54(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	36.865	36.852	1	1.000	169544	38440	51	127	754		
375.8178	36.865	36.852	1	1.000	134058	29629	46	115	644	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.074						51	127			
375.8178	35.074						46	115			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.663	36.641	1		456380	101107	56	140	1805		
403.8529	36.663	36.641	1		351880	78100	25	62	3124	1.30(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.174	36.161	1	0.987	208027	48736	56	140	870		
403.8529	36.174	36.161	1	0.987	162276	37765	25	62	1511	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.191	36.178	1	1.000	112420	24753	24	60	1031		
391.8127	36.183	36.178	0	1.000	86894	19685	17	42	1158	1.29(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.301	36.279	1	0.990	211074	44321	56	140	791		
403.8529	36.292	36.279	1	0.990	164414	34129	25	62	1365	1.28(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.309	36.296	1	1.000	115636	24833	24	60	1035		
391.8127	36.309	36.296	1	1.000	90717	19079	17	42	1122	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.672	36.658	1	1.014	125718	28435	24	60	1185		
391.8127	36.672	36.658	1	1.014	101193	23432	17	42	1378	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.432						24	60			
391.8127	35.432						17	42			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.662	38.647	1	1.055	114724	29183	61	152	478		
419.8220	38.662	38.647	1	1.055	259851	63486	84	210	756	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.679	38.654	1	1.000	154442	40275	70	175	575		
409.7788	38.679	38.654	1	1.000	147937	37501	66	165	568	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.926	39.900	2	1.000	138266	38599	70	175	551		
409.7788	39.926	39.900	2	1.000	134077	37292	66	165	565	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.918	39.901	1	1.089	127445	35018	61	152	574		
419.8220	39.918	39.901	1	1.089	268816	73983	84	210	881	0.47(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.277						70	175			
409.7788	39.277						66	165			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.606	39.590	1	1.080	190429	52166	37	92	1410		
437.8140	39.606	39.590	1	1.080	172666	51054	29	72	1760	1.10(0.88-1.20)	

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.614	39.597	1	1.000	104986	29398	34	85	865		
425.7737	39.614	39.597	1	1.000	101566	28626	28	70	1022	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.982	39.277	-18	0.984	1500	459	34	85	14		
425.7737	38.982	39.277	-18	0.984	1482	509	28	70	18	1.01(0.88-1.20)	
13C-OCDD											
469.7780	42.111	42.094	1	1.149	296333	71223	40	100	1781		
471.7750	42.111	42.094	1	1.149	325458	77952	39	97	1999	0.91(0.76-1.02)	
OCDF											
441.7428	42.203	42.187	1	1.002	242906	58135	26	65	2236		
443.7399	42.203	42.187	1	1.002	264208	61787	34	85	1817	0.92(0.76-1.02)	
OCDD											
457.7377	42.119	42.103	1	1.000	177310	43889	19	47	2310		
459.7348	42.119	42.103	1	1.000	199058	47902	21	52	2281	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Lims ID:	LCS 320-513586/2-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:49:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	5

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	568874	79731

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	568874	79731

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.958	113	44	130	46	0.0395	0.87	
19.842	389	66	786	257	0.1912	0.49	RQ
19.842	389	66	505	85	0.1455		Empc Correction
20.847	174	115	289	72	0.0753	0.60	RQ
20.847	174	115	225	149	0.0649		Empc Correction
20.941	55	26	93	39	0.0241	0.59	RQ
20.941	55	26	71	33	0.0205		Empc Correction
21.336	192	40	250	57	0.0719	0.77	

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Lims ID:	LCS 320-513586/2-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:49:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	5

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	501609	80095
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	556312	80183

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	528960	80139

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.950	2268	309	1584	237	0.7063	1.43	
Signal Totals:							
	2268	309	1584	237			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3852	546				1.43	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.7063 = (3852 * 100.000) / (528960 * 1.031)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Lims ID:	LCS 320-513586/2-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:49:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	5

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	363095	103220

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	363095	103220

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.982	1500	459	1482	509	0.7819	1.01	
Signal Totals:							
	1500	459	1482	509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2982	968				1.01	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.7819 = (2982 * 100.000) / (363095 * 1.050)

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

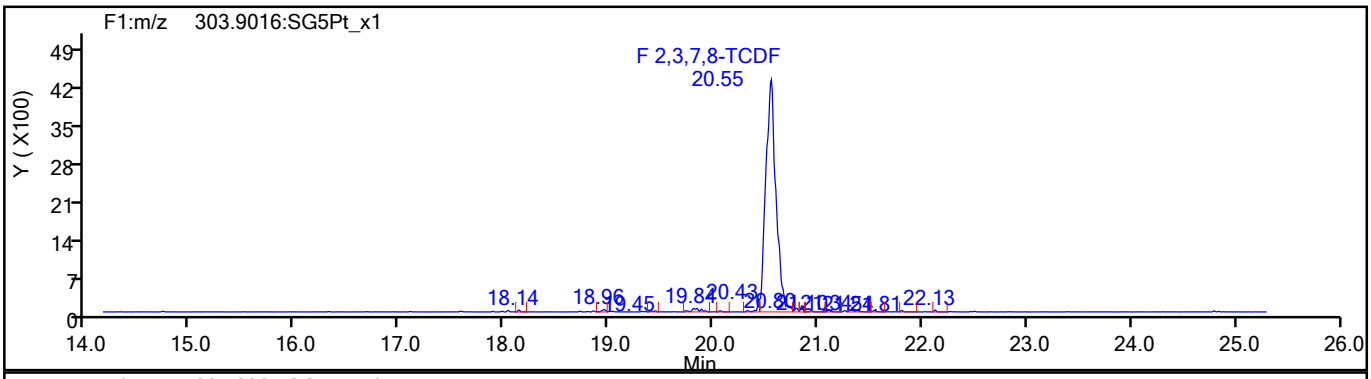

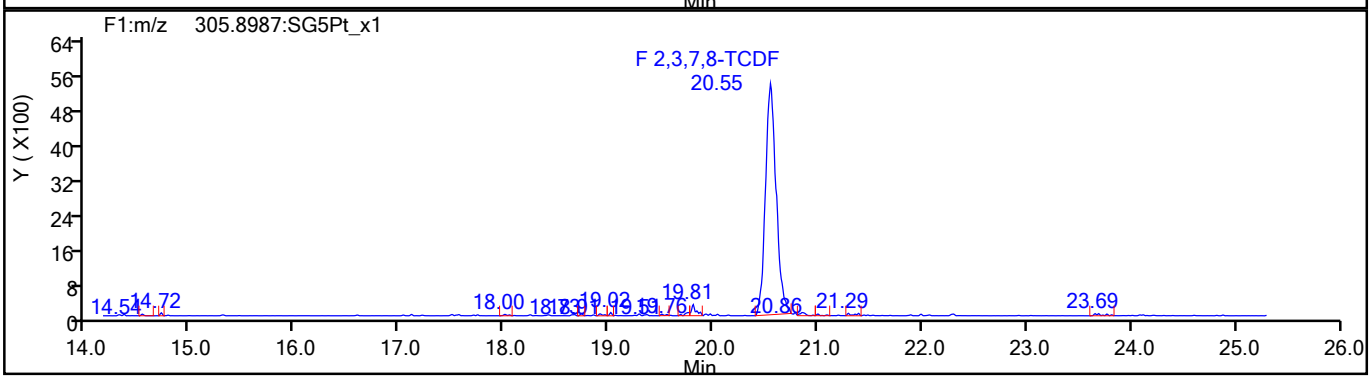

TCDF Standards

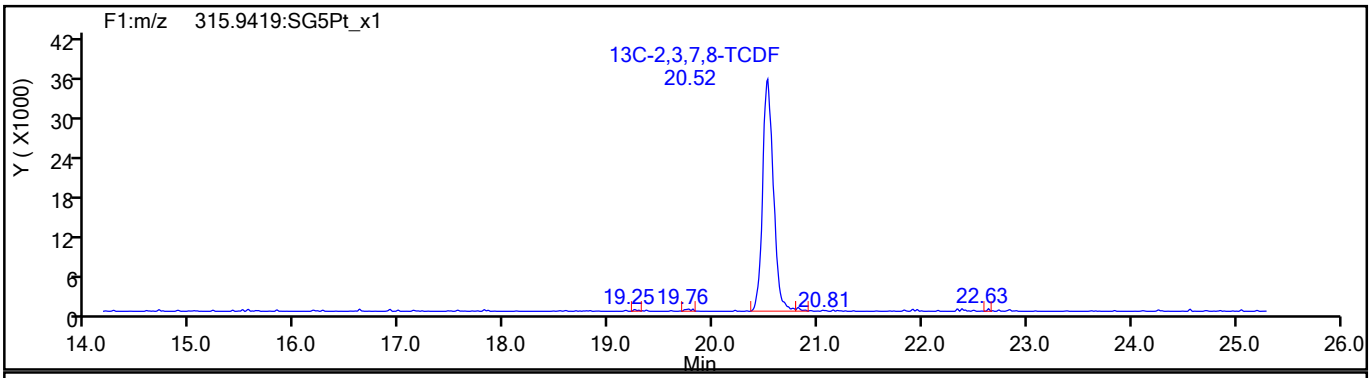

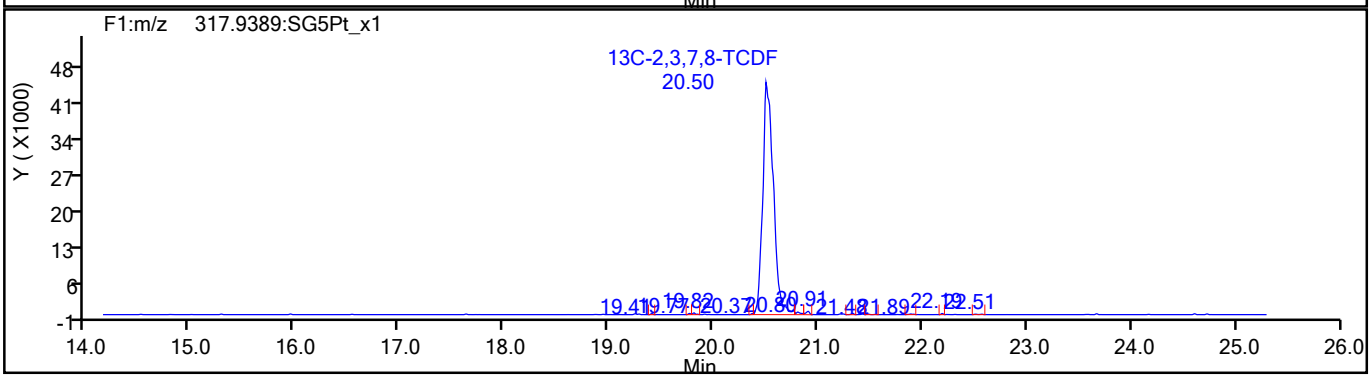

784825

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

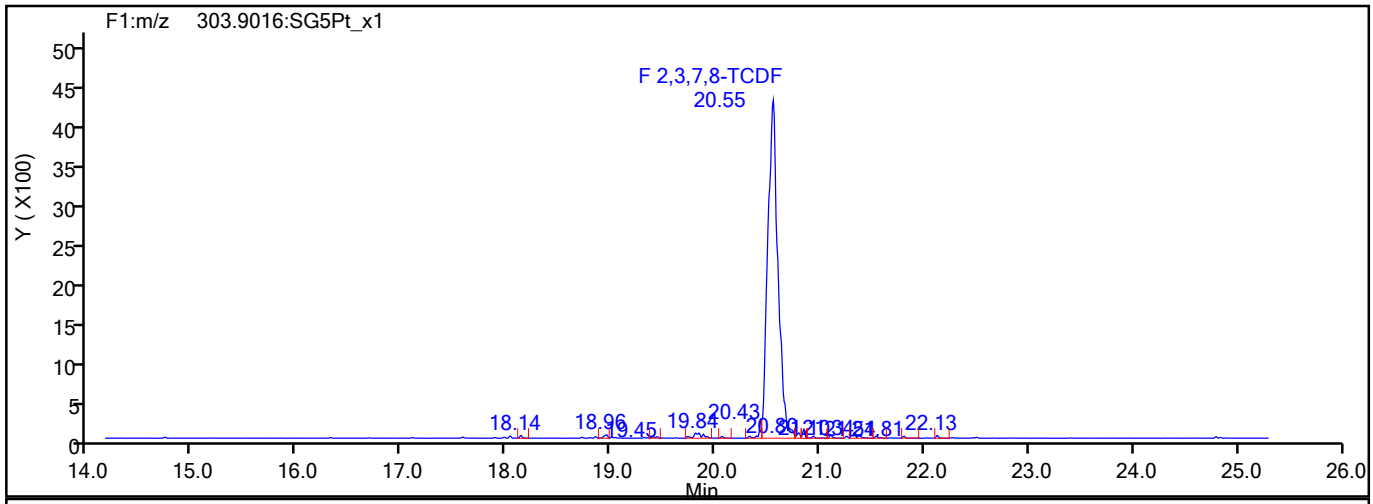

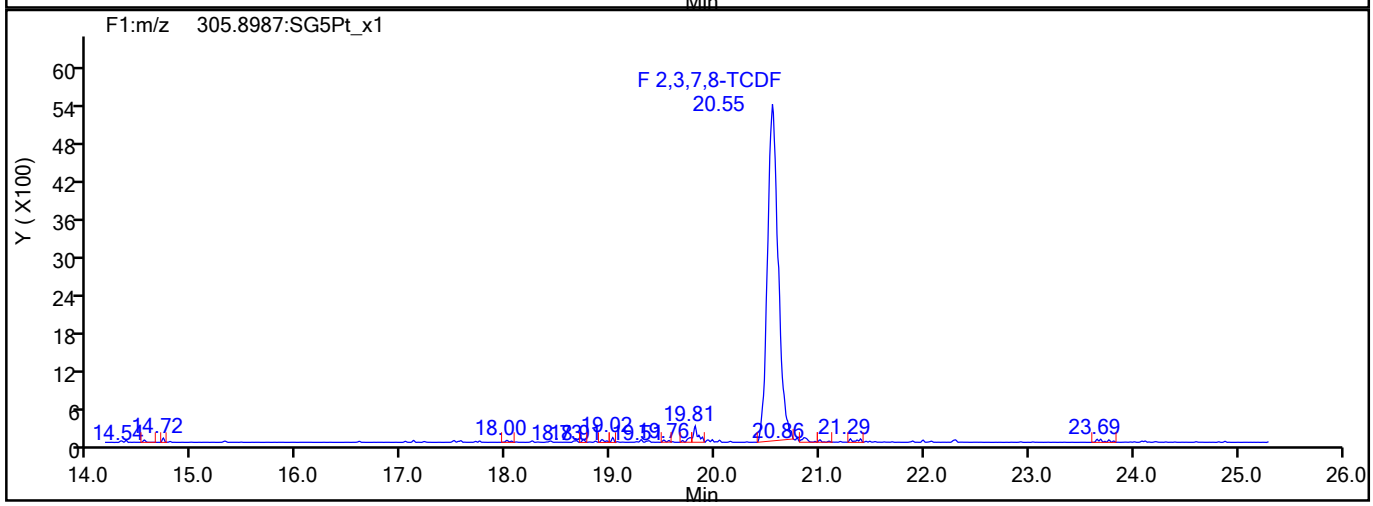

TCDF Interference Mass

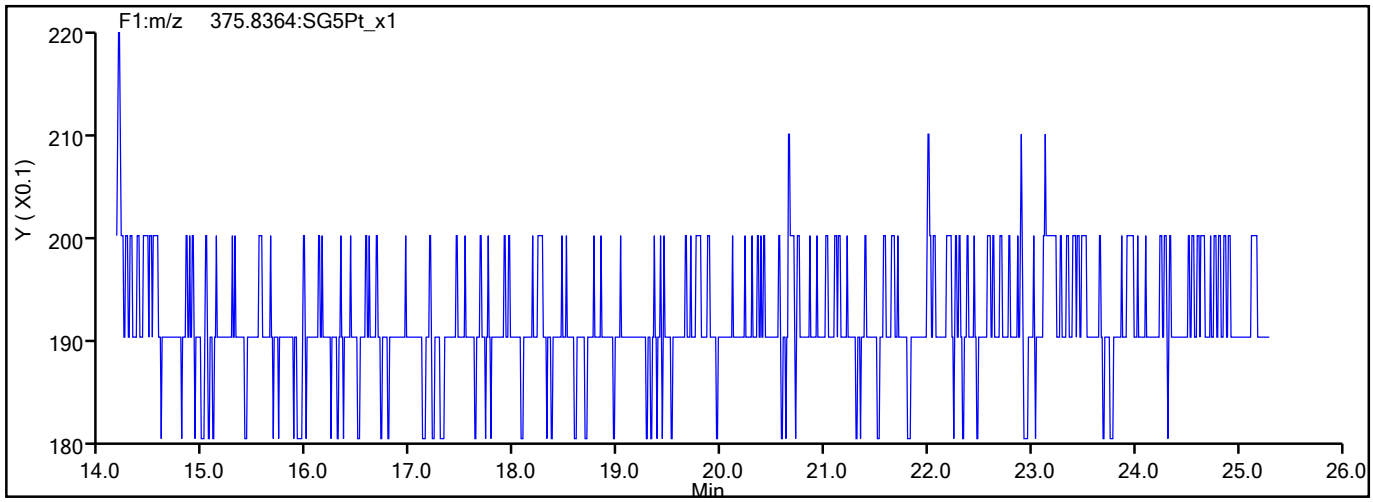

784826

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

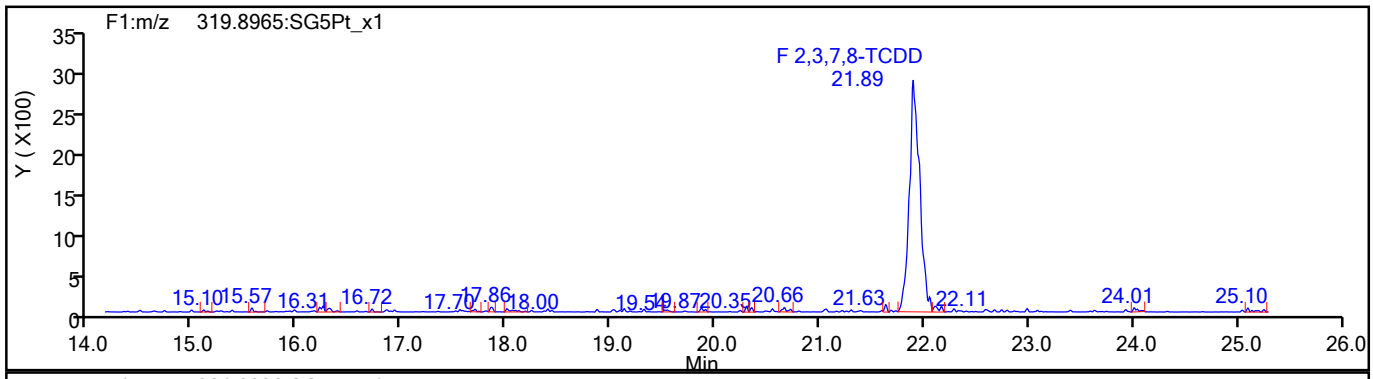

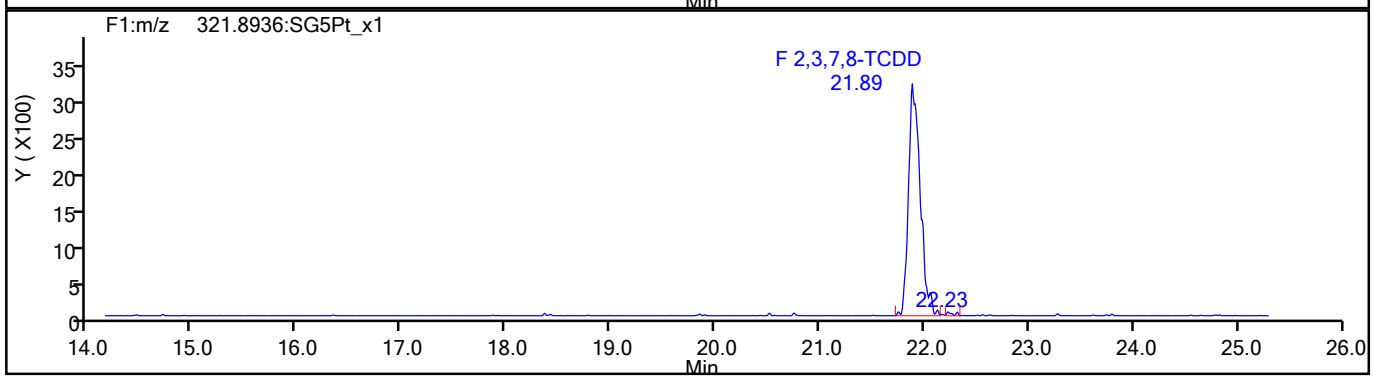

TCDD Standards

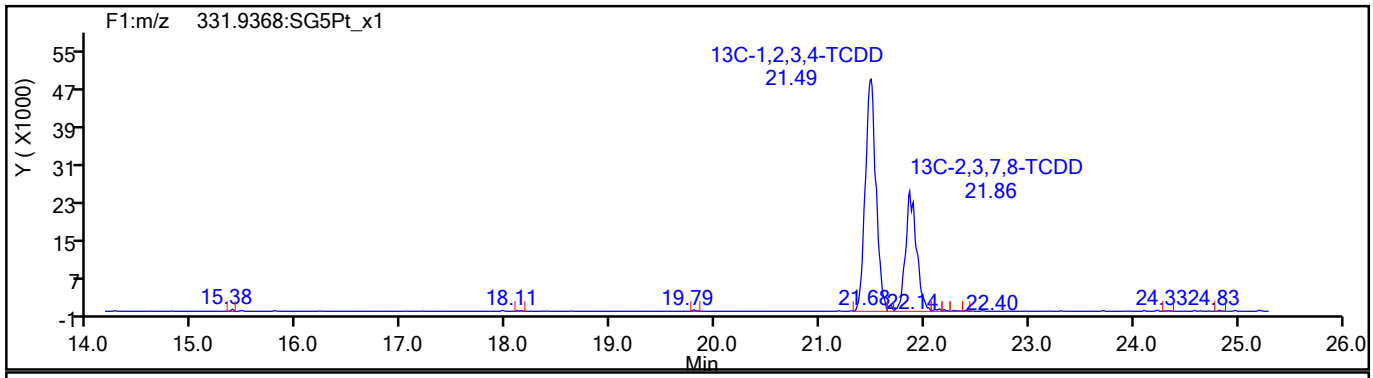

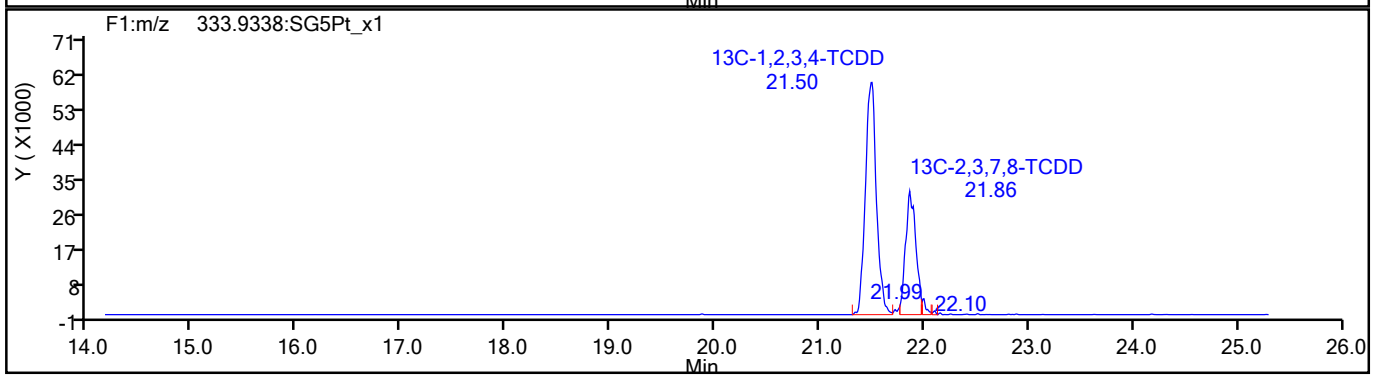

784827

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

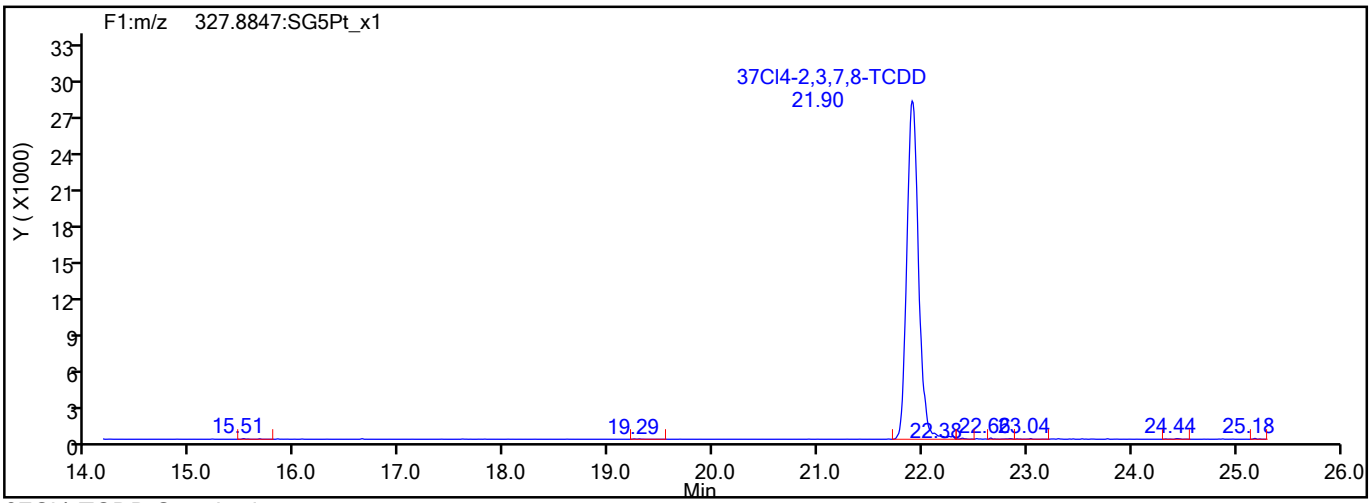

37Cl4-TCDD Standards

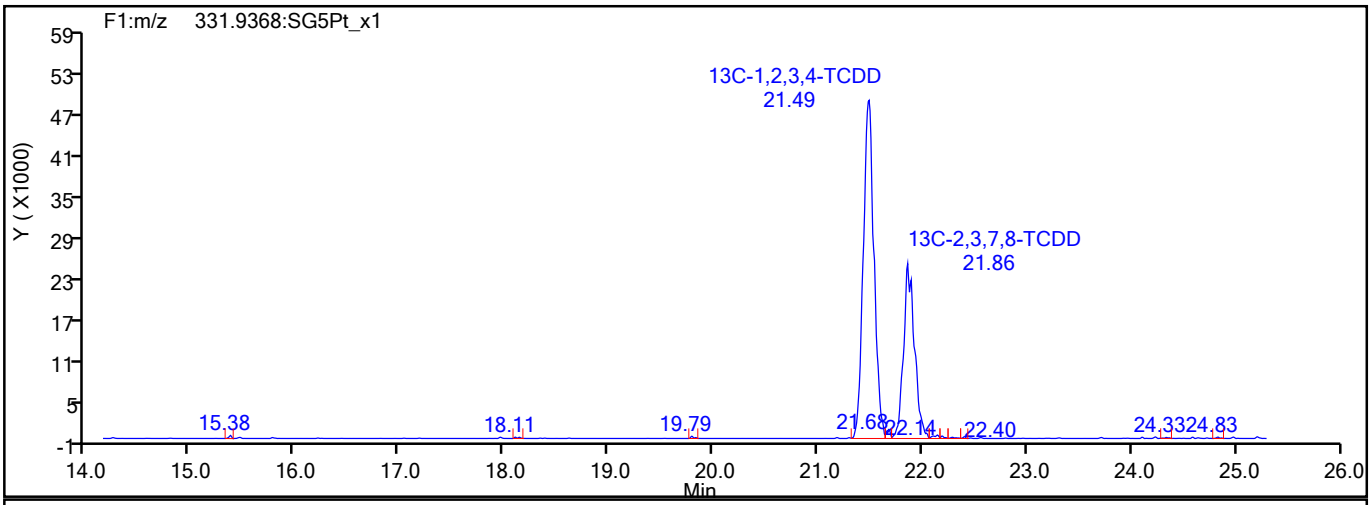

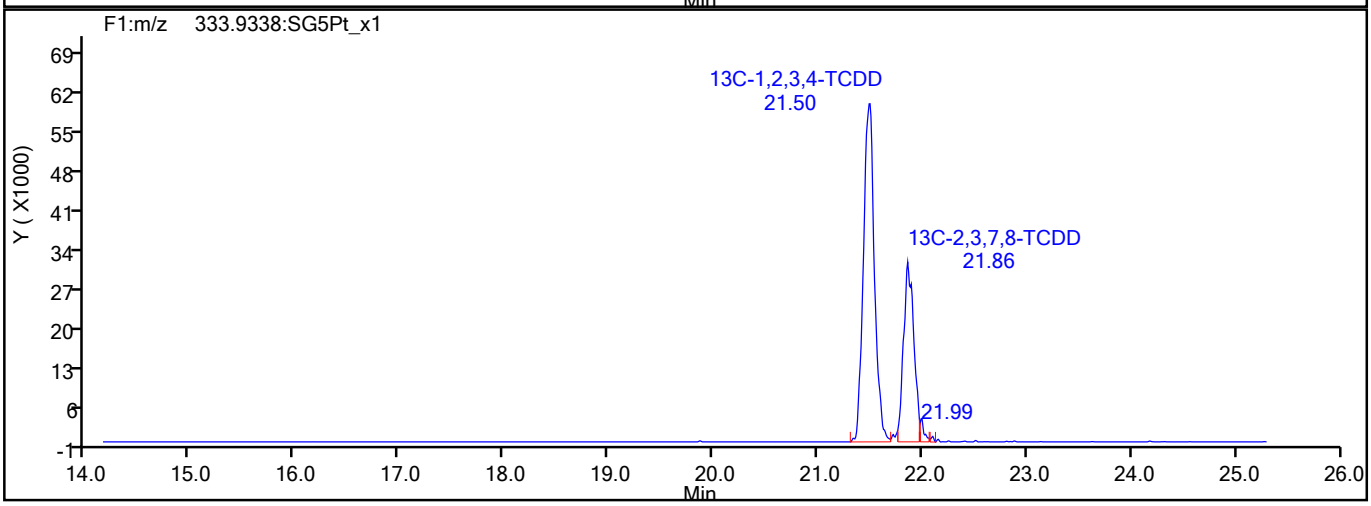

784828

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

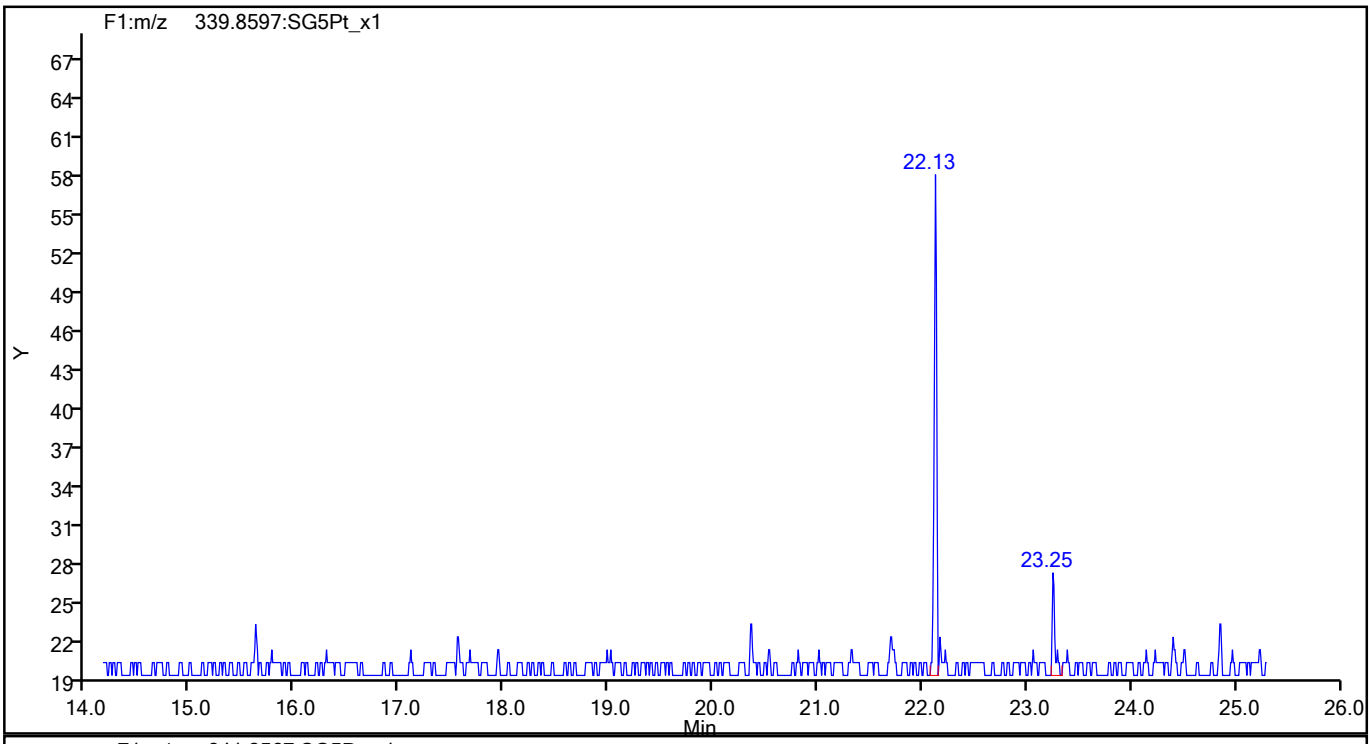

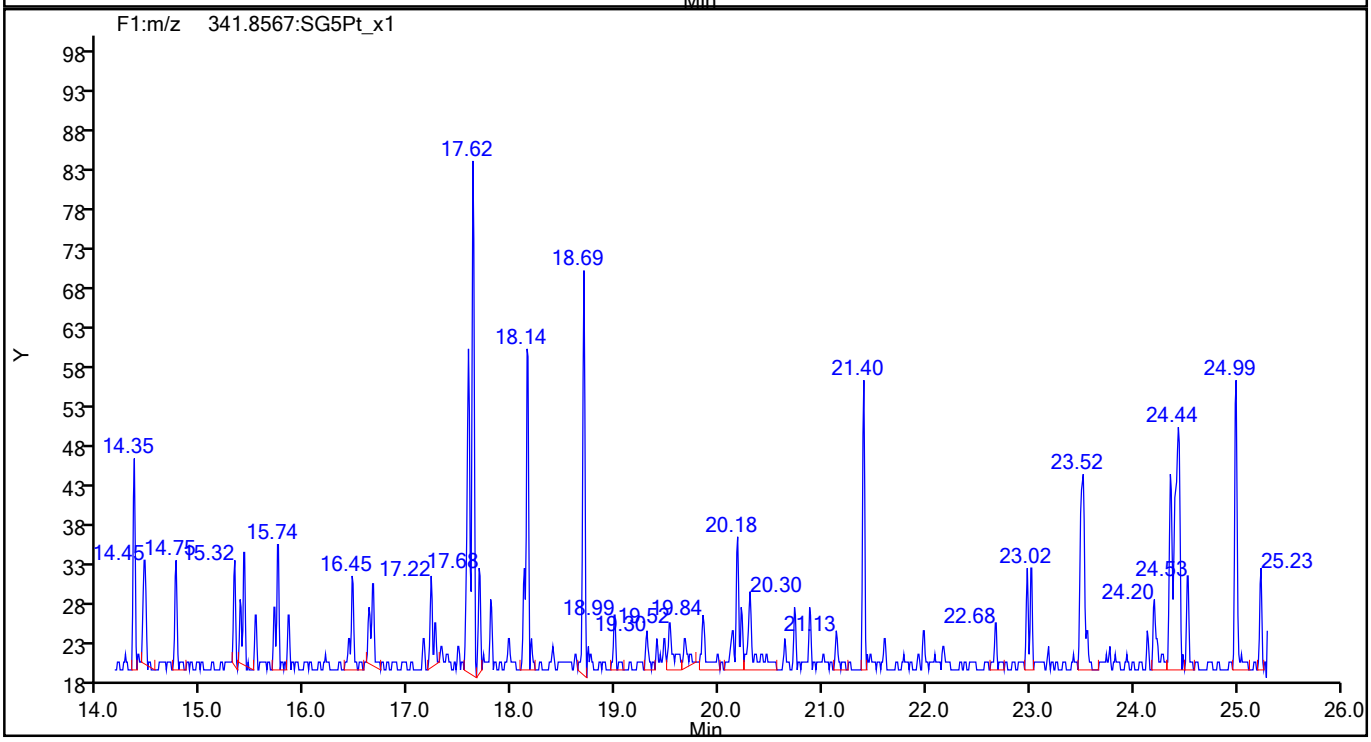

784829

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

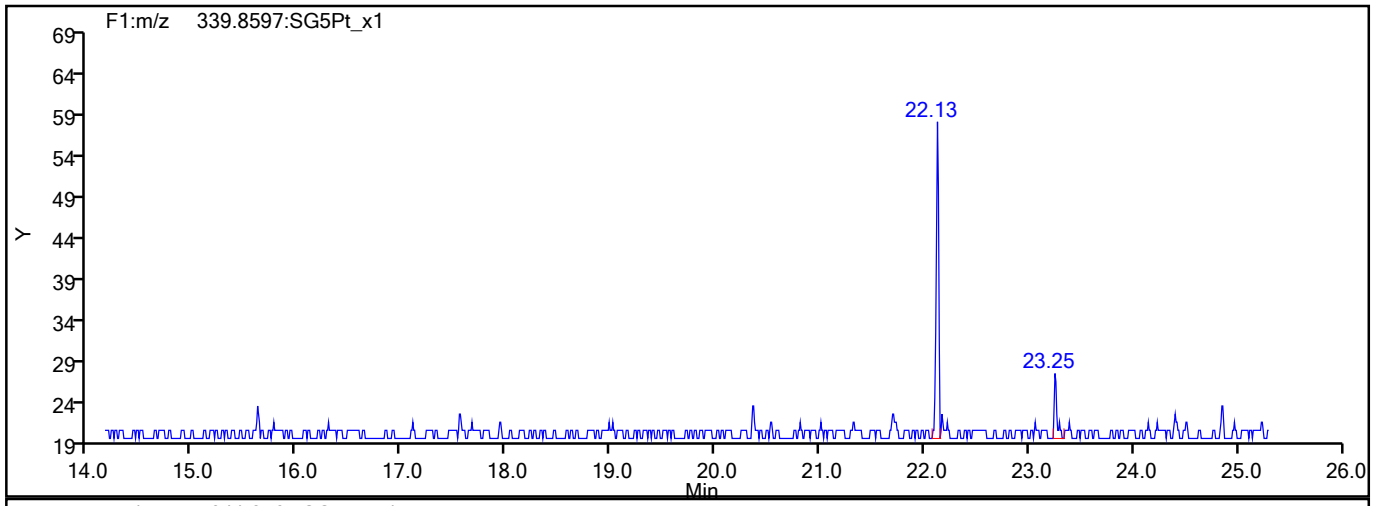

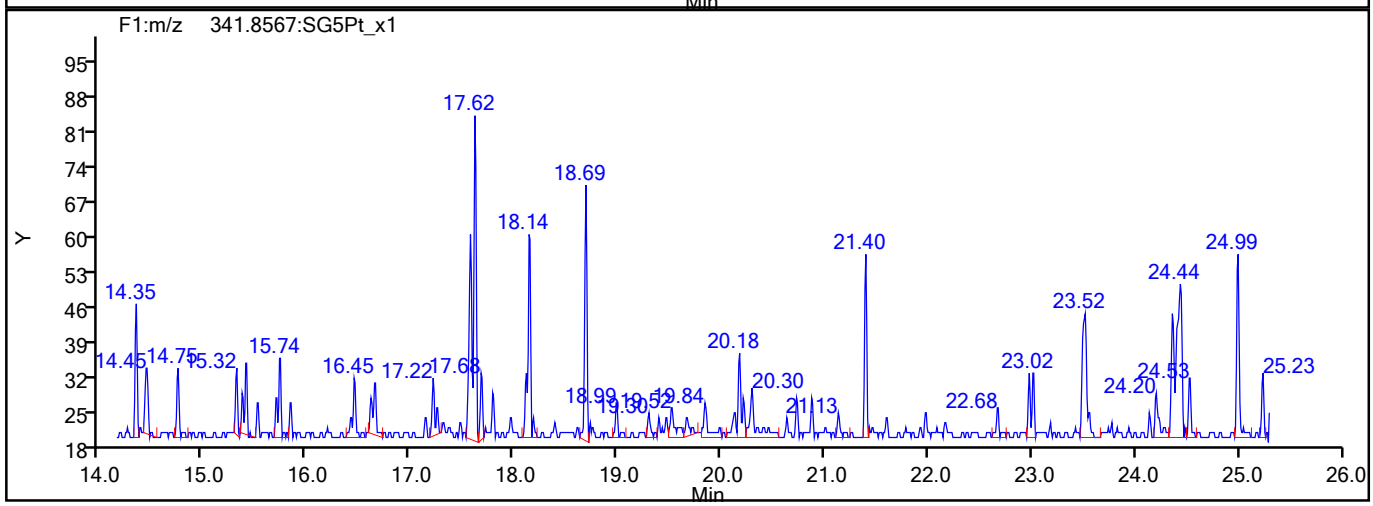

F1 PeCDFs Interference Mass

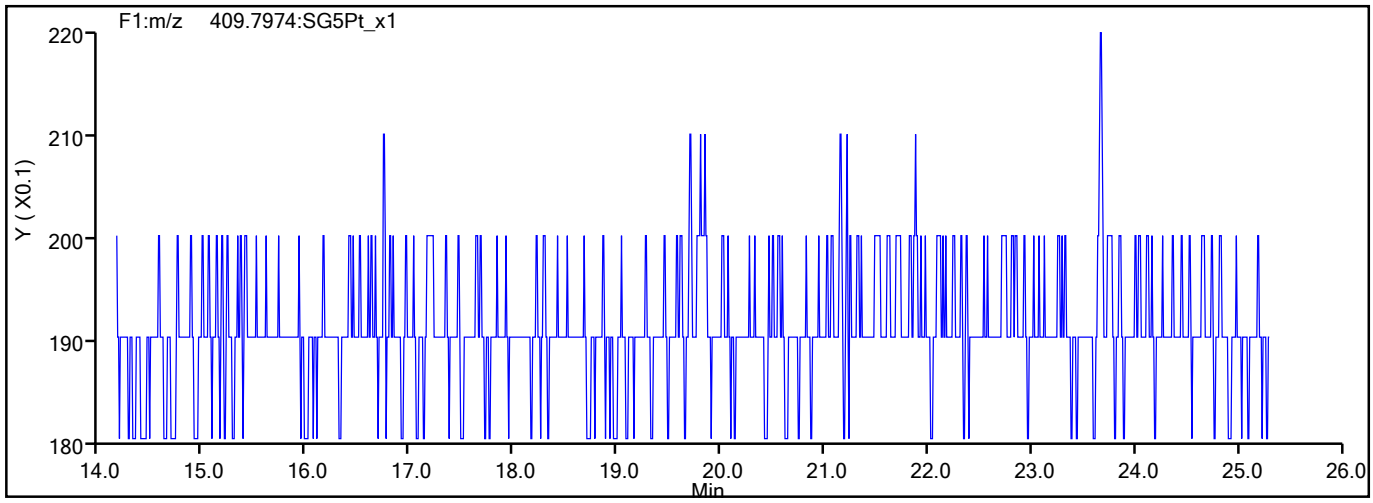

784830

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

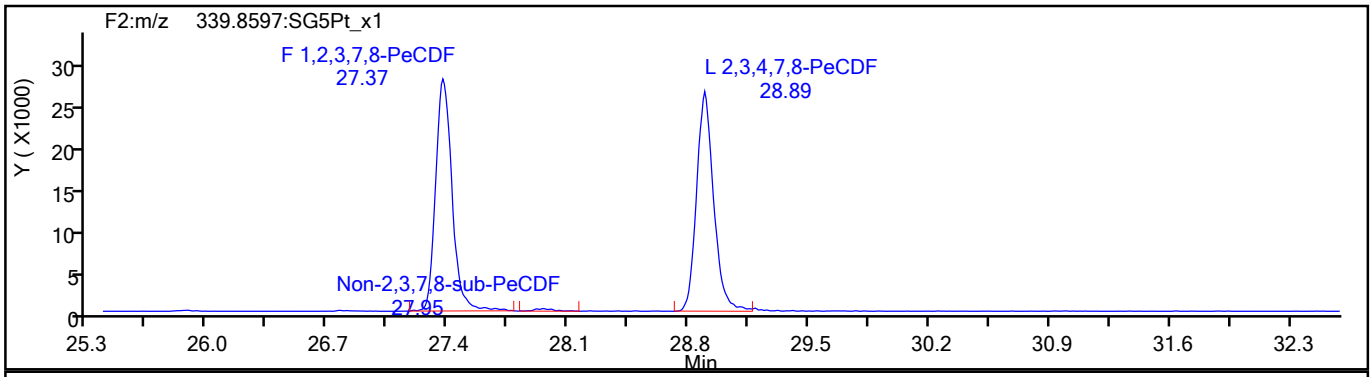

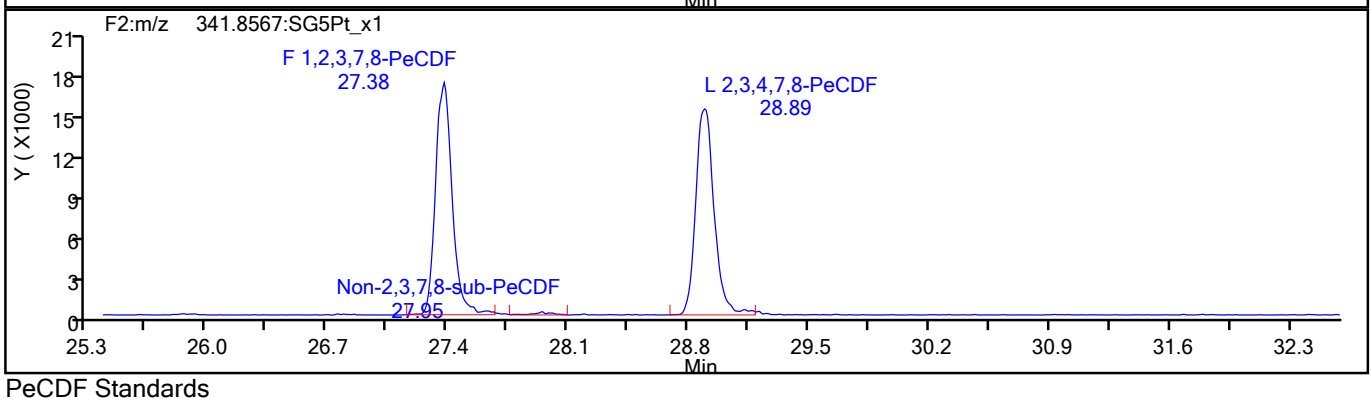

PeCDF Standards

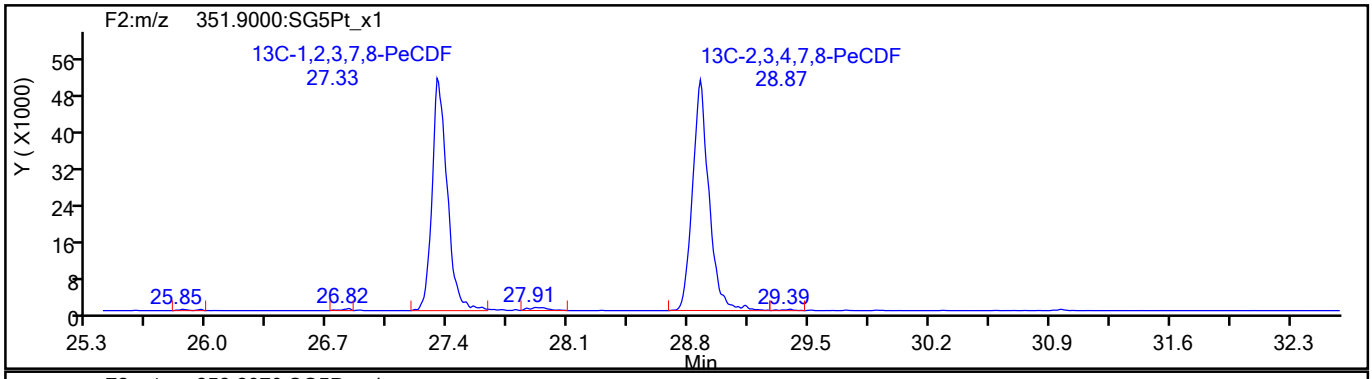

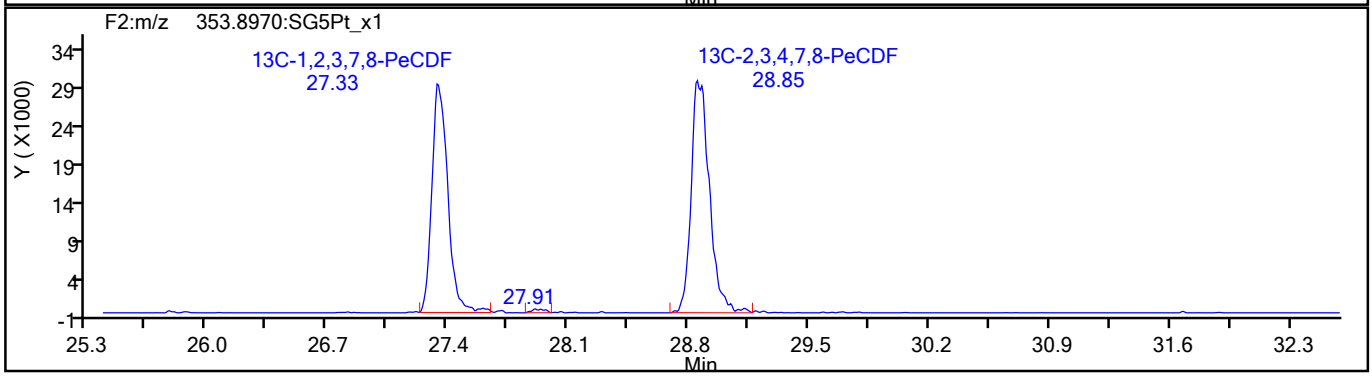

784831

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

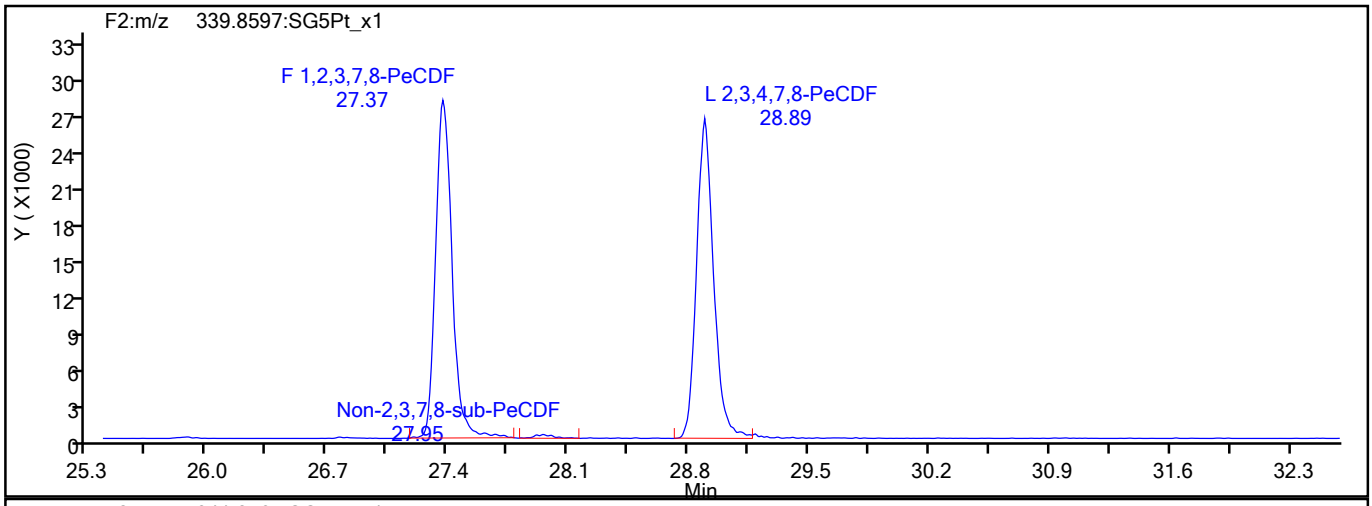

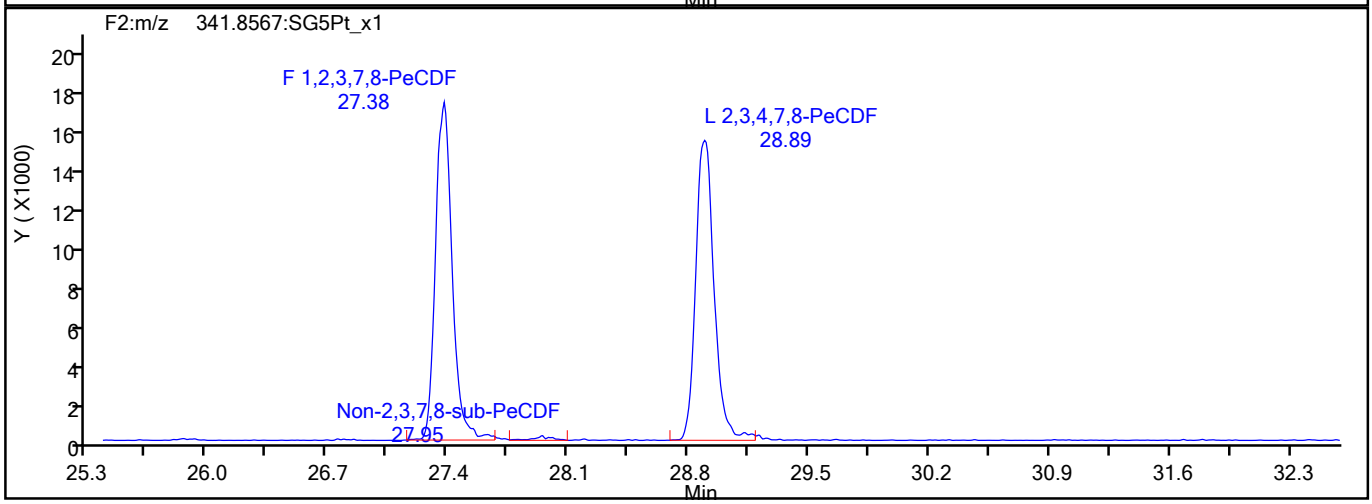

PeCDF Interference Mass

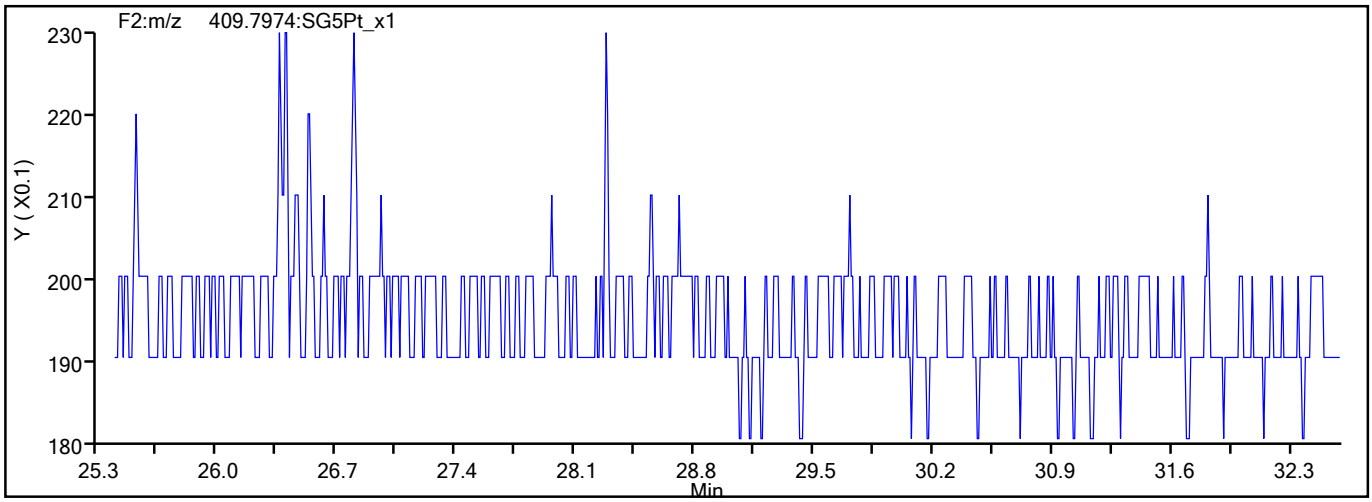

784832

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

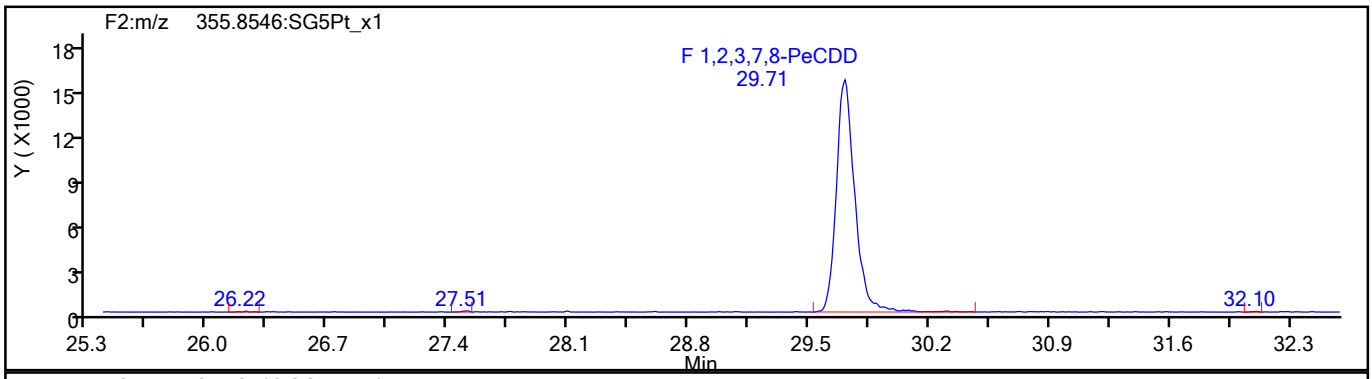

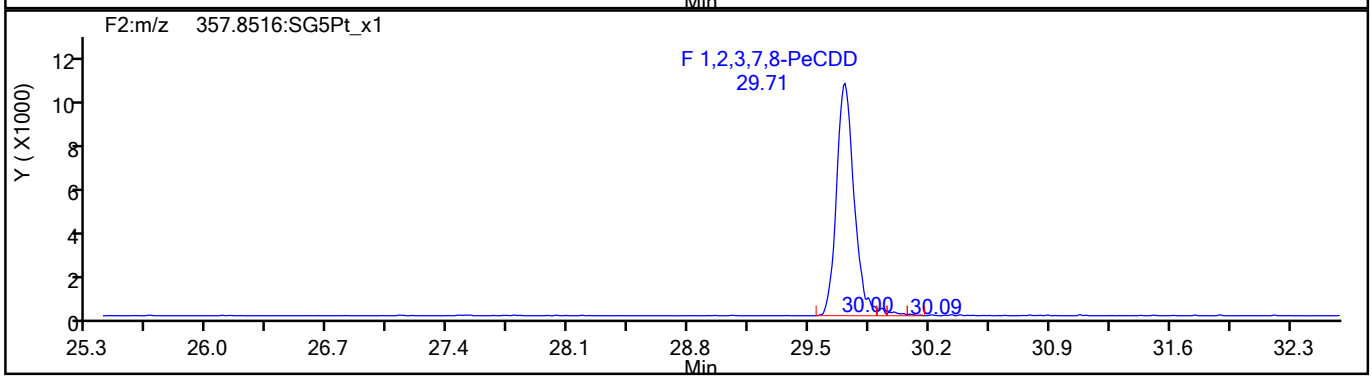

PeCDD Standards

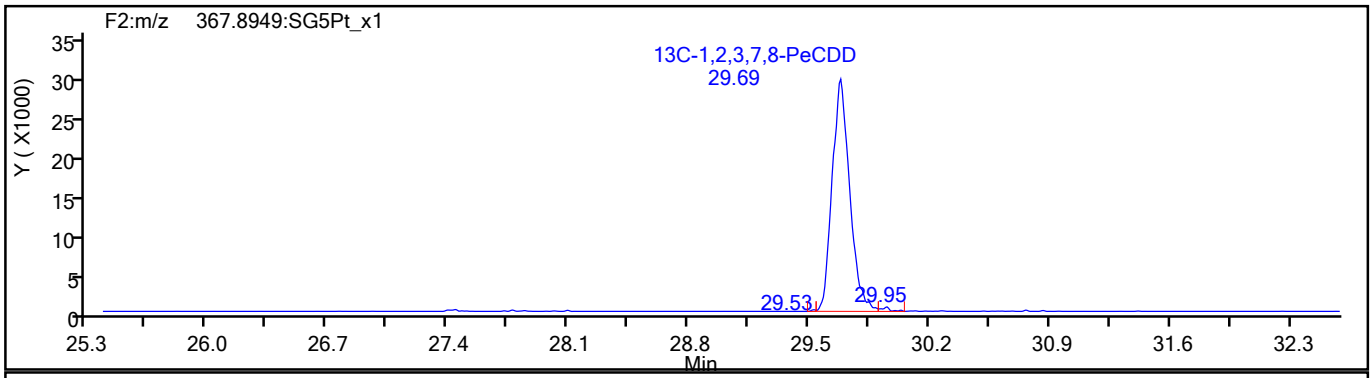

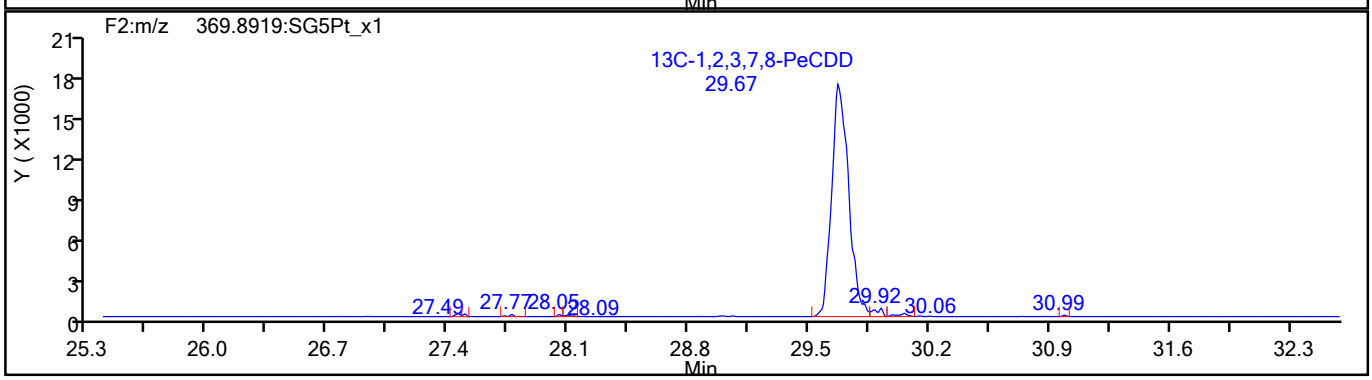

784833

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

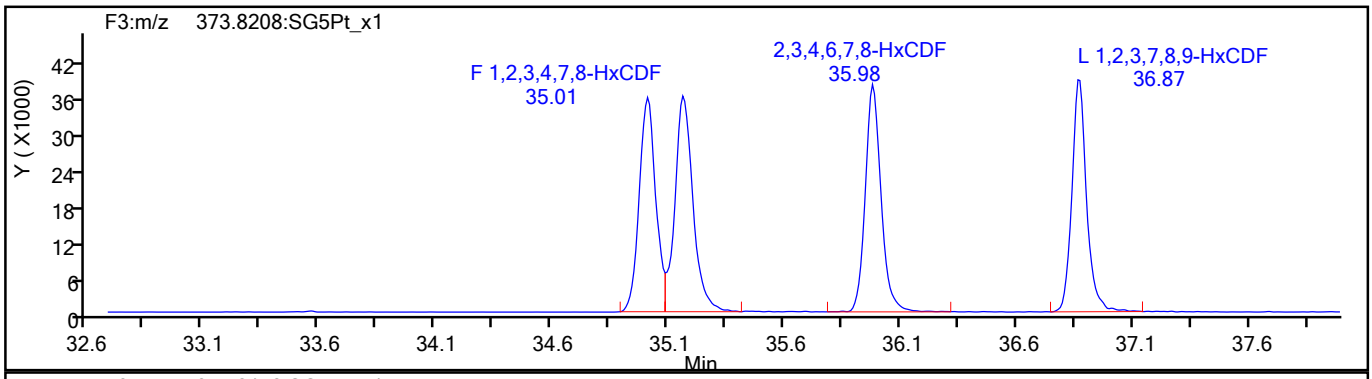

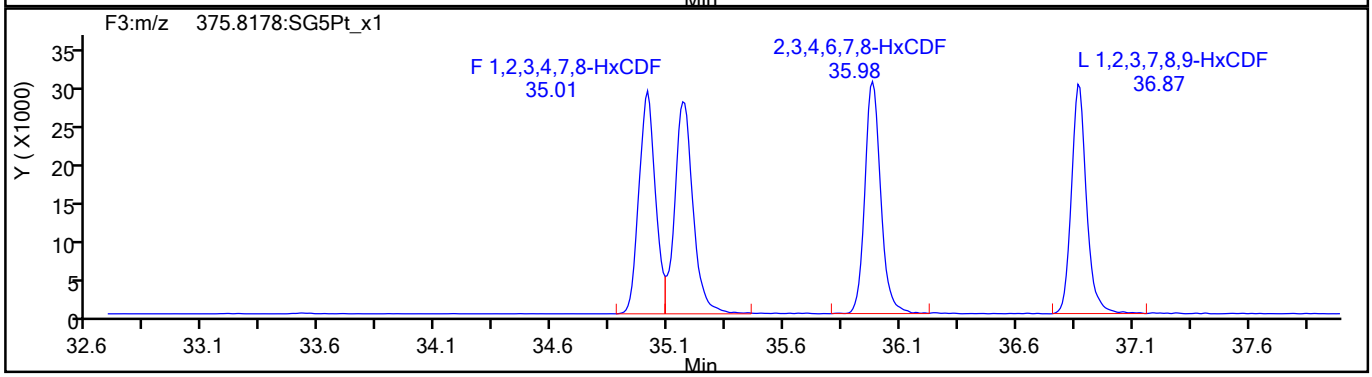

HxCDF Standards

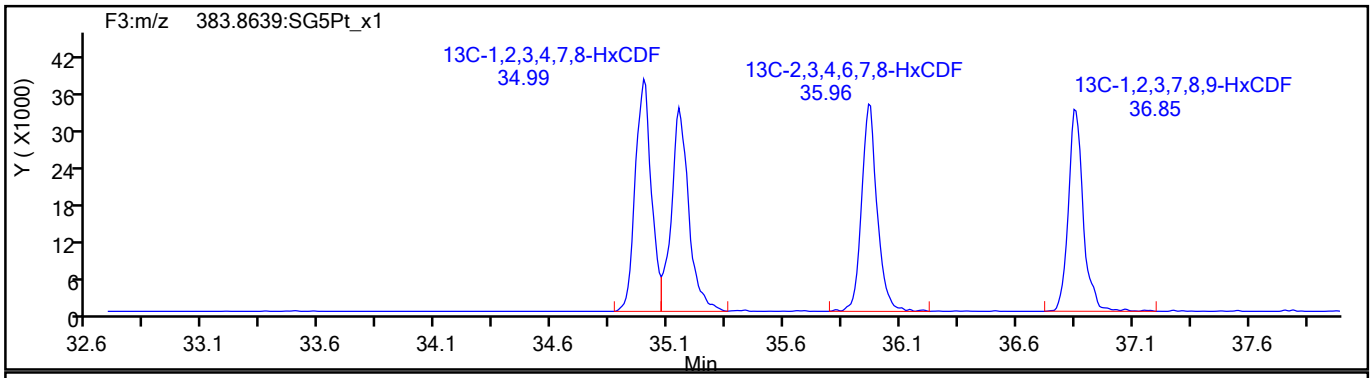

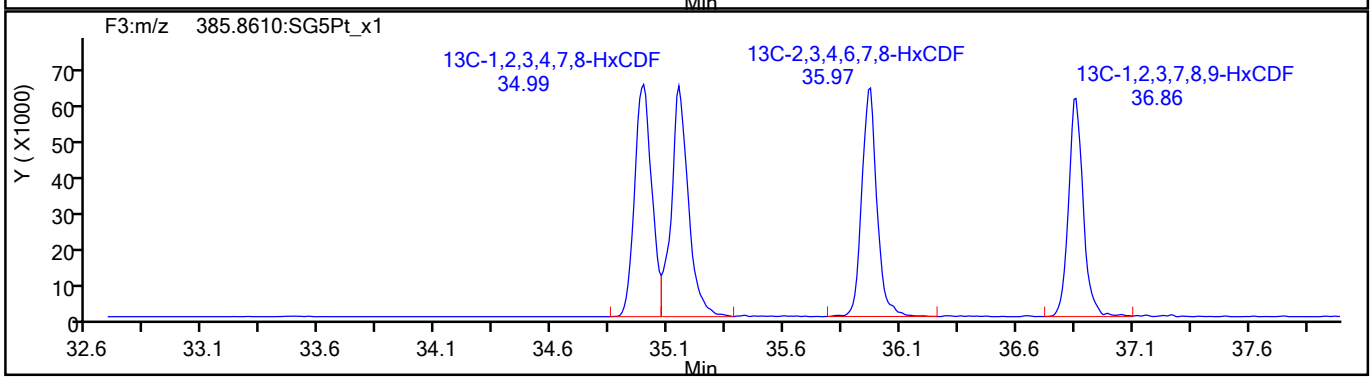

784834

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

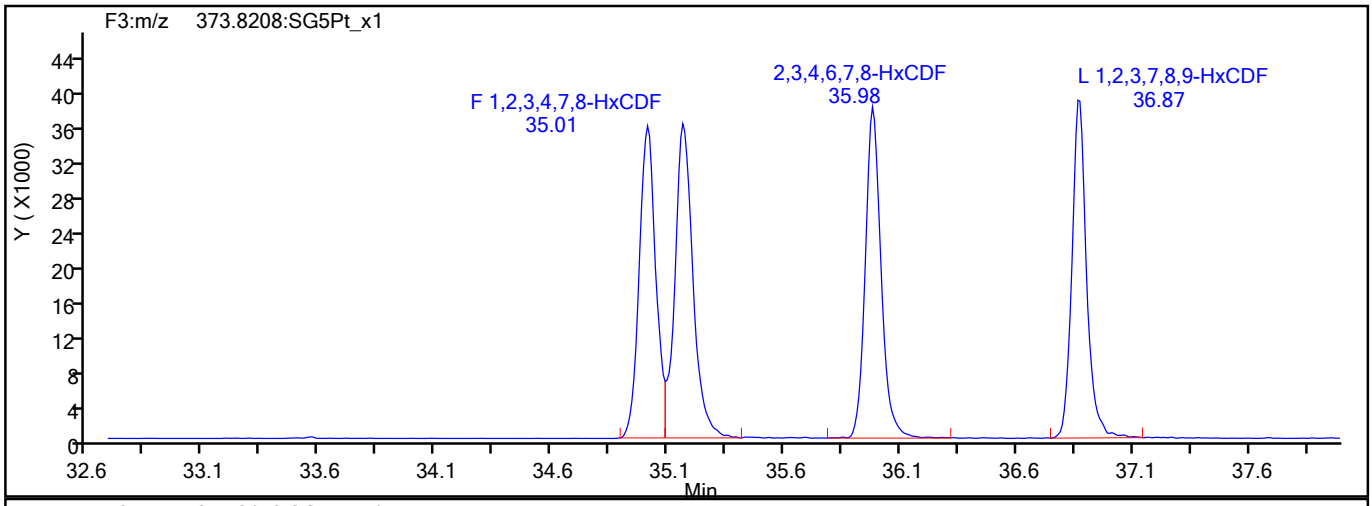

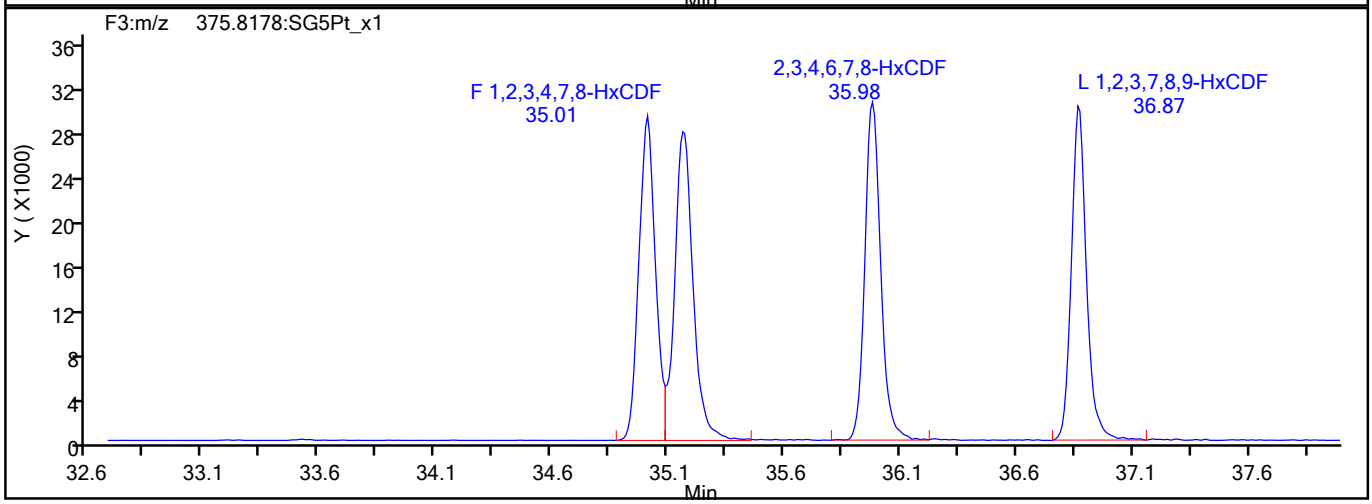

HxCDF Interference Mass

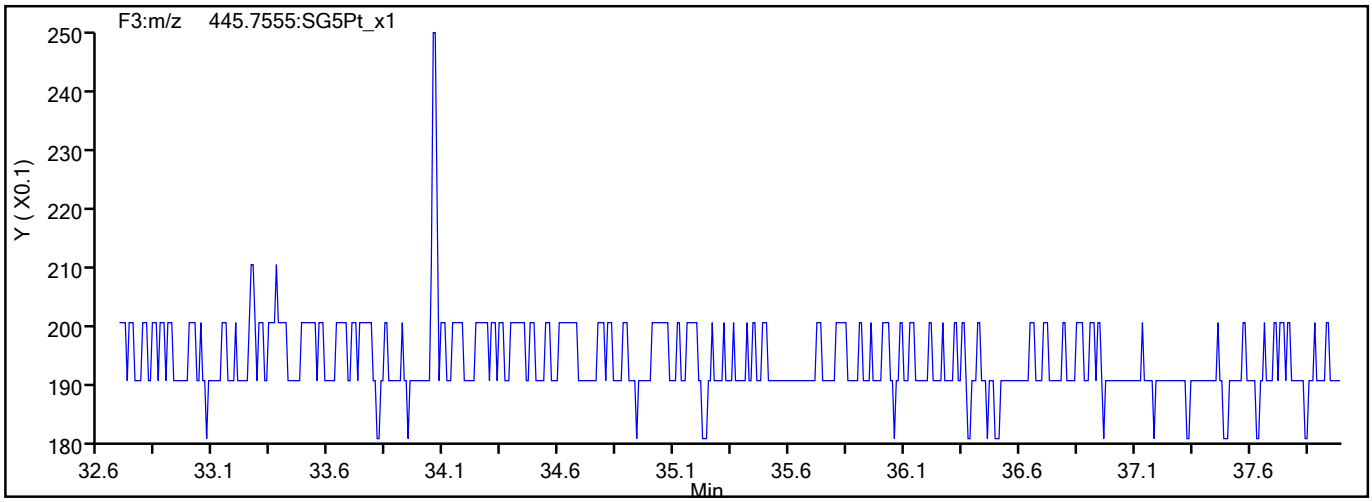

784835

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

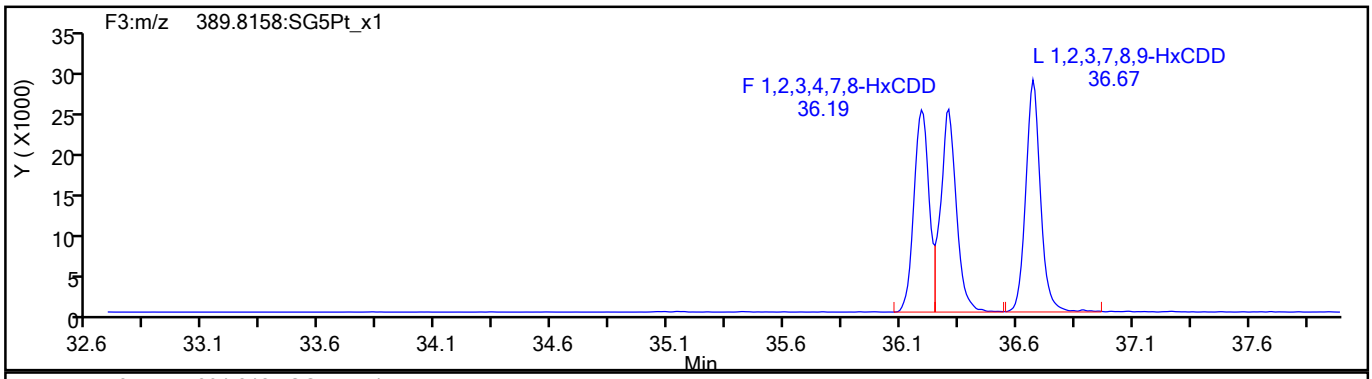

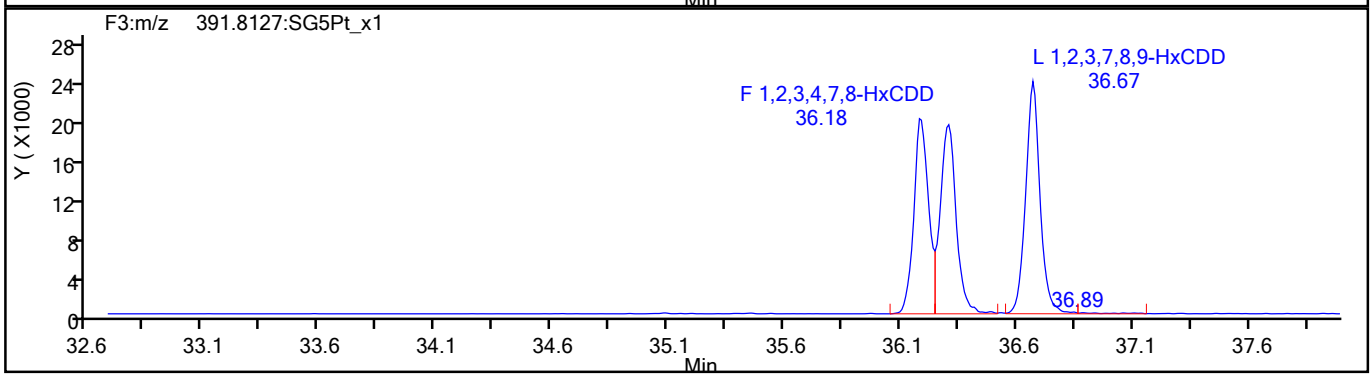

HxCDD Standards

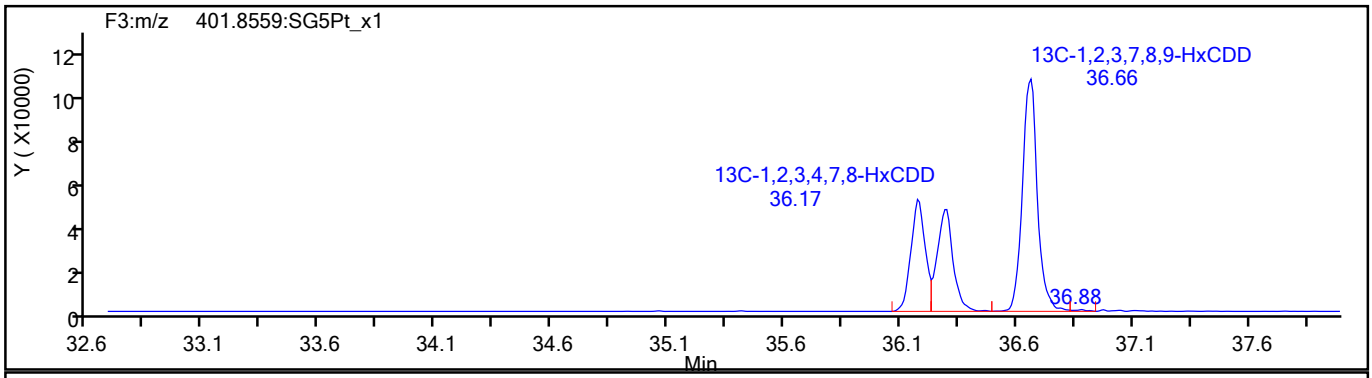

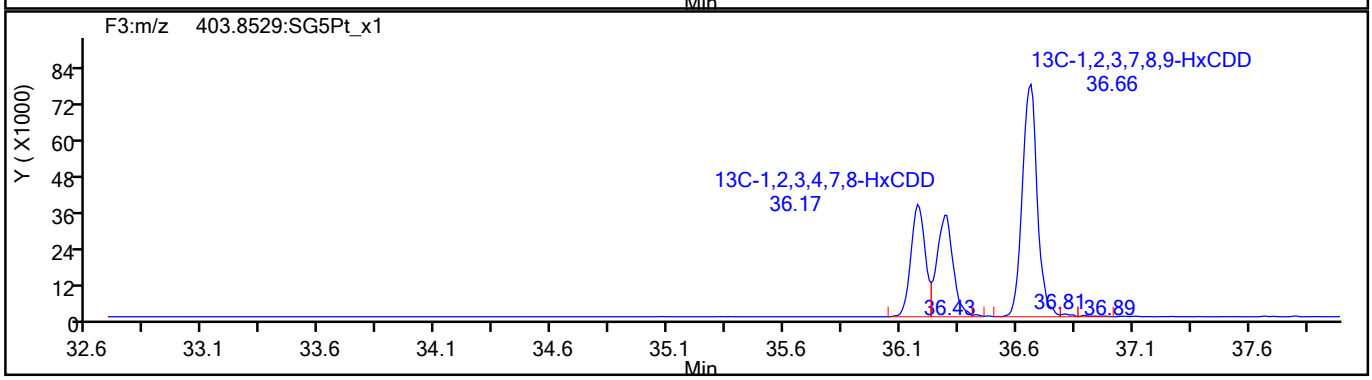

784836

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

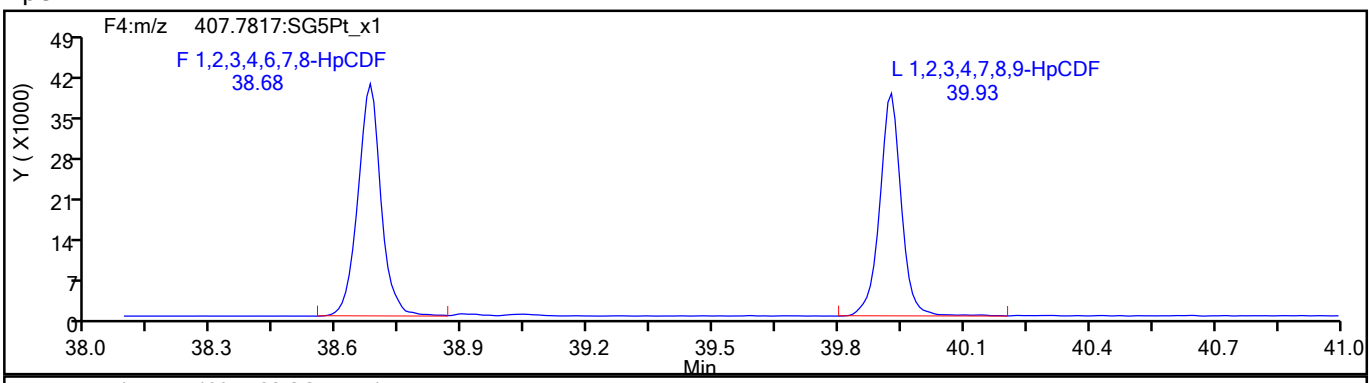

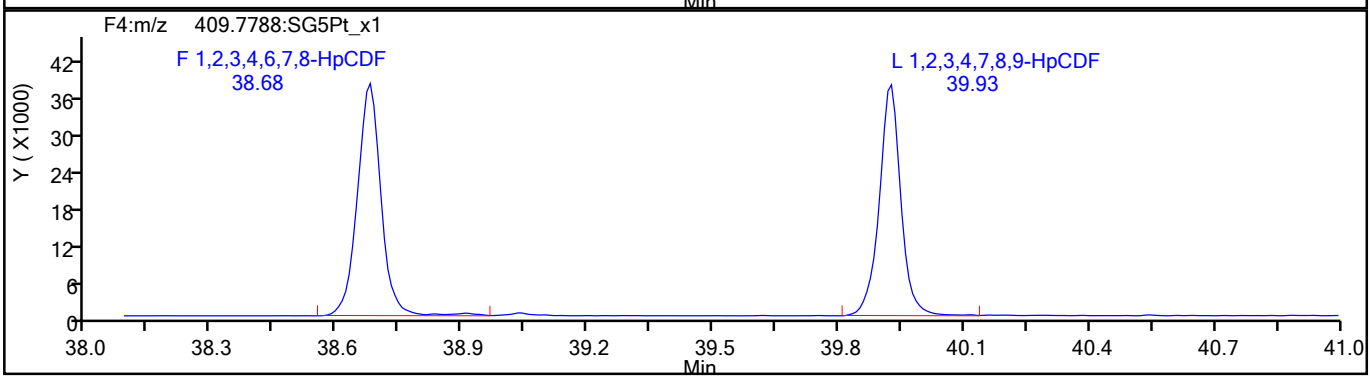

HpCDF Standards

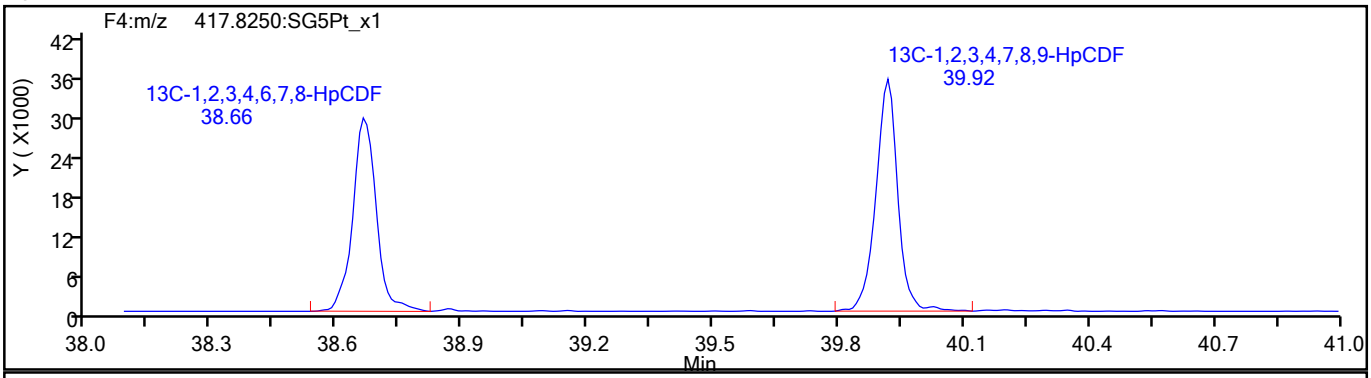

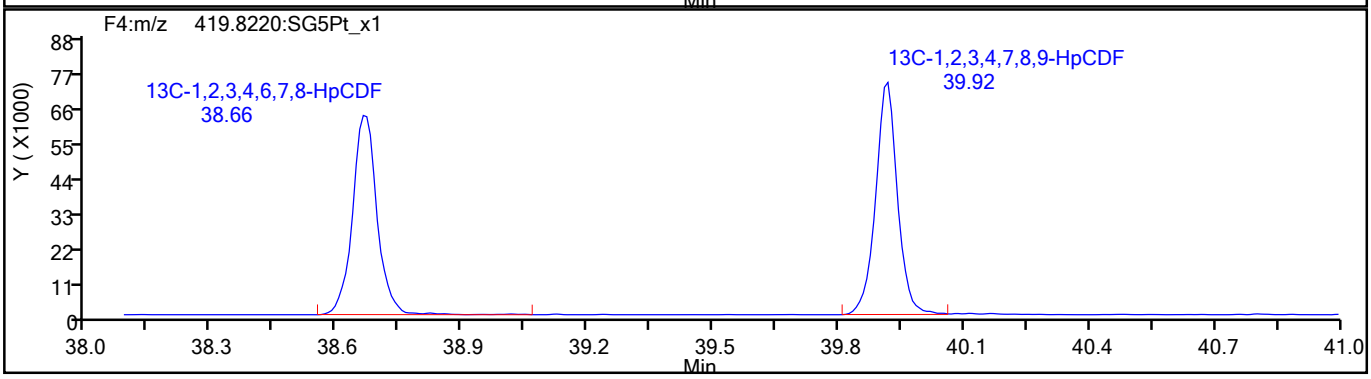

784837

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

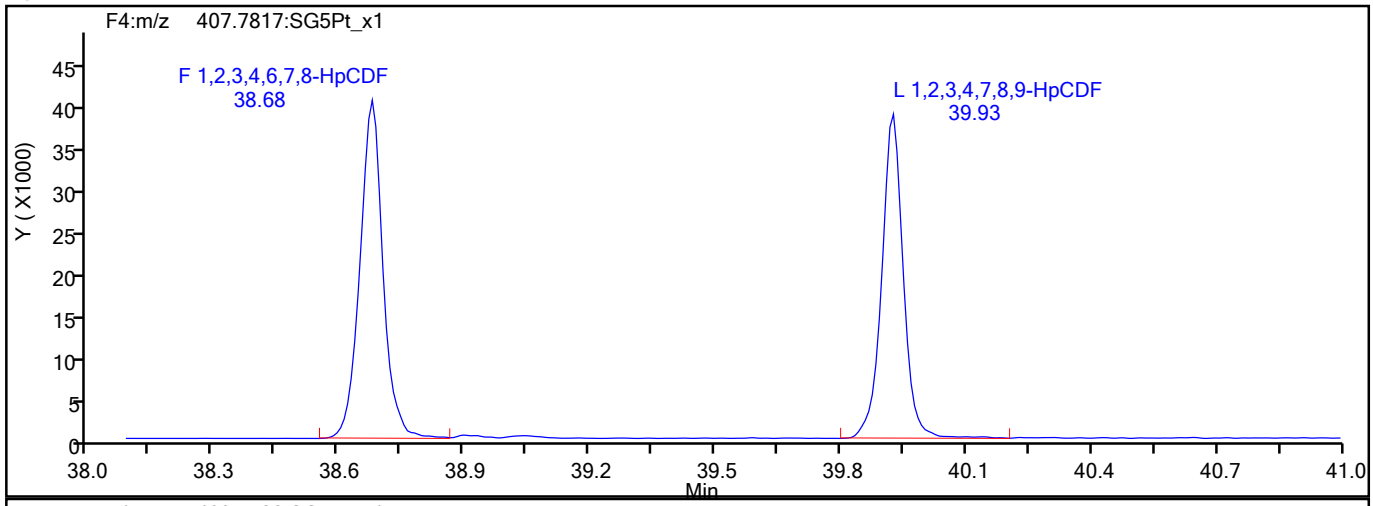

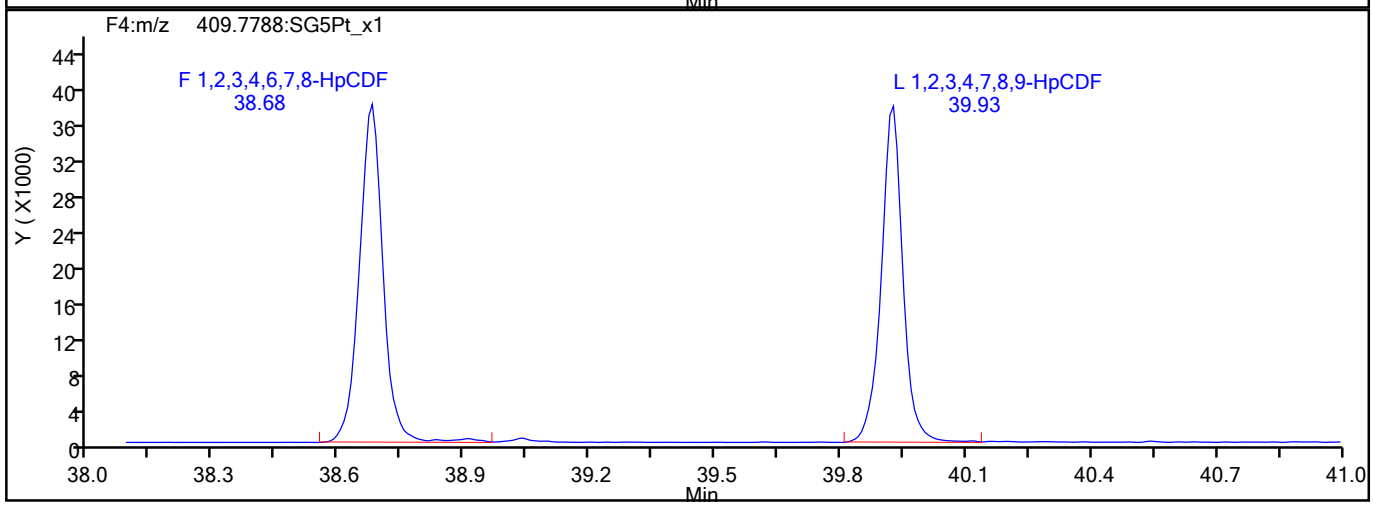

HpCDF Interference Mass

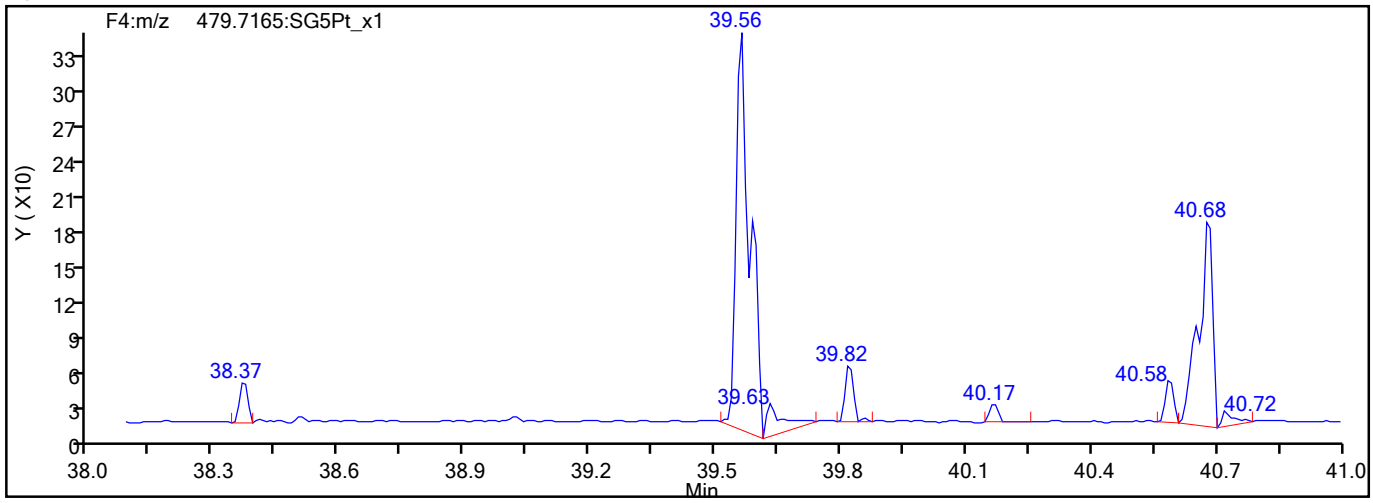

784838

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

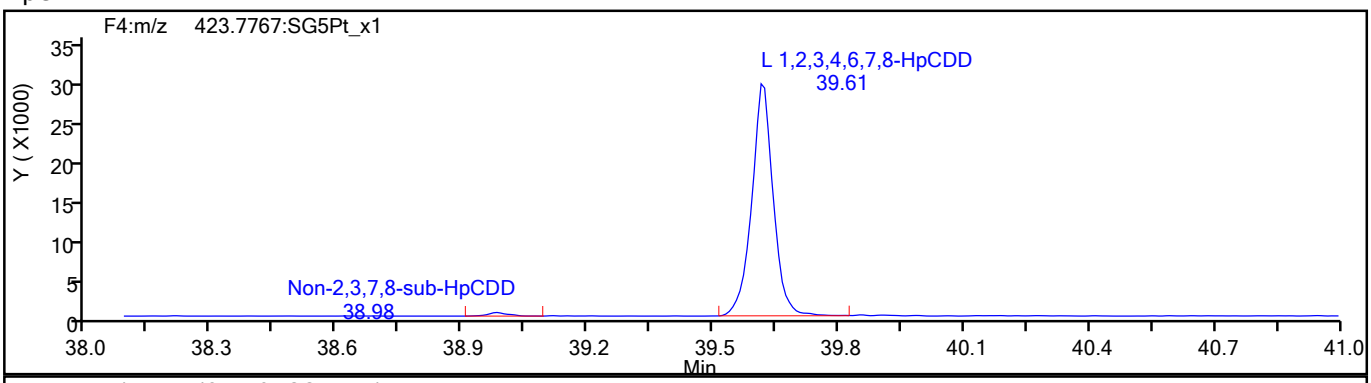

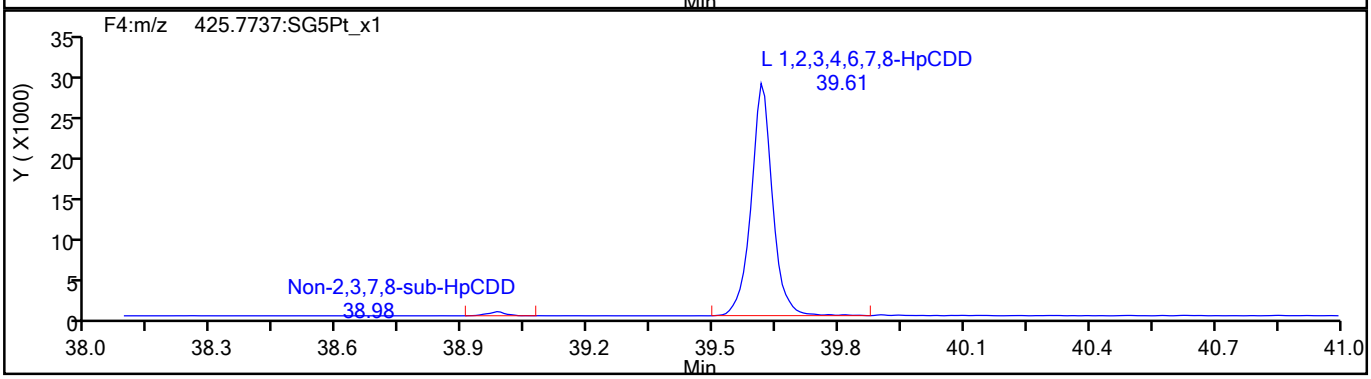

HpCDD Standards

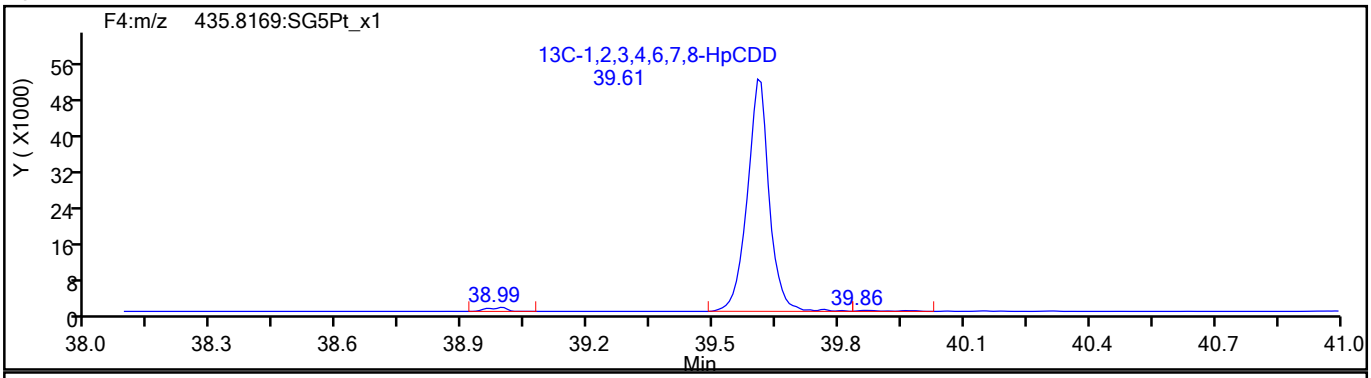

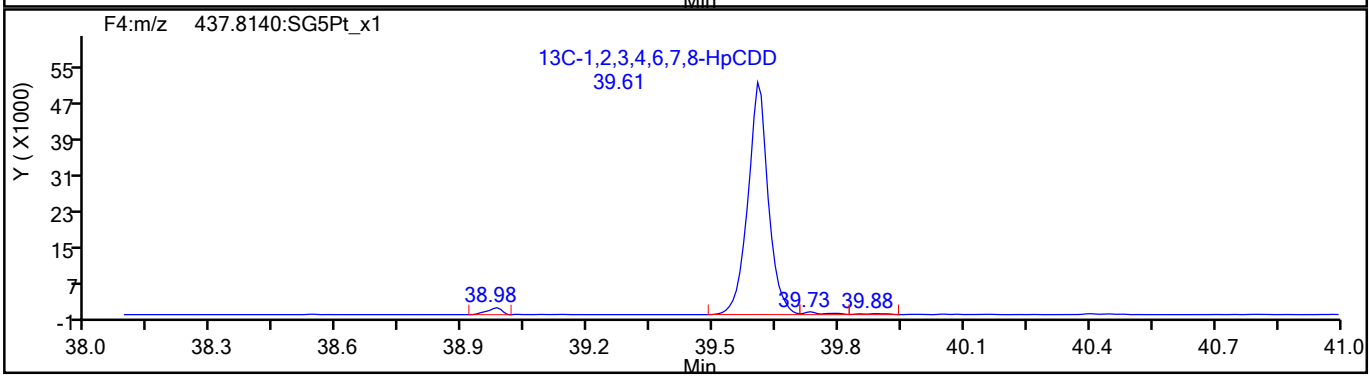

784839

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

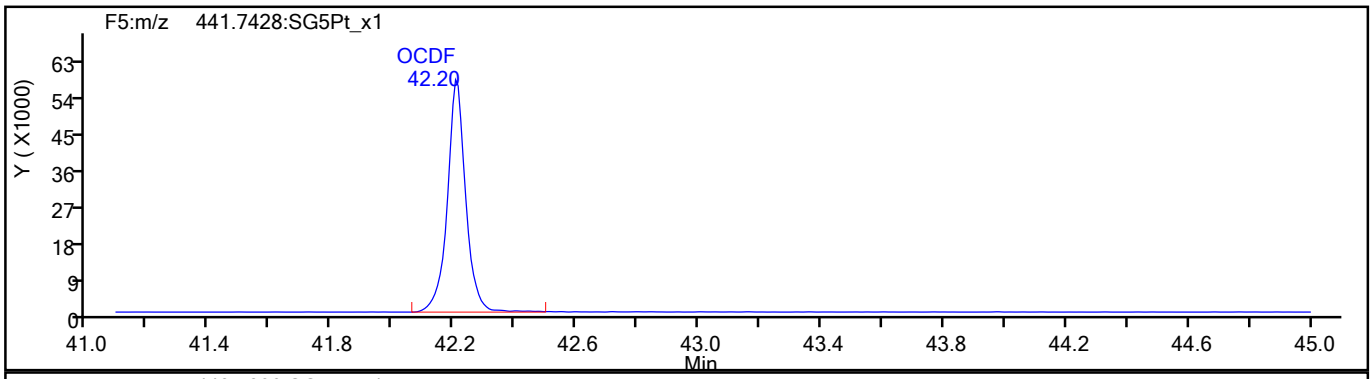

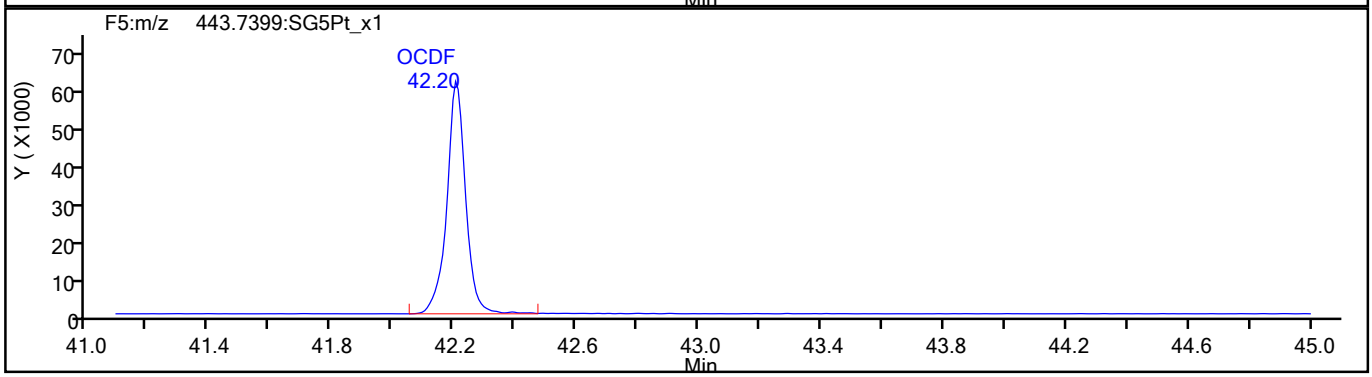

OCDF Standards

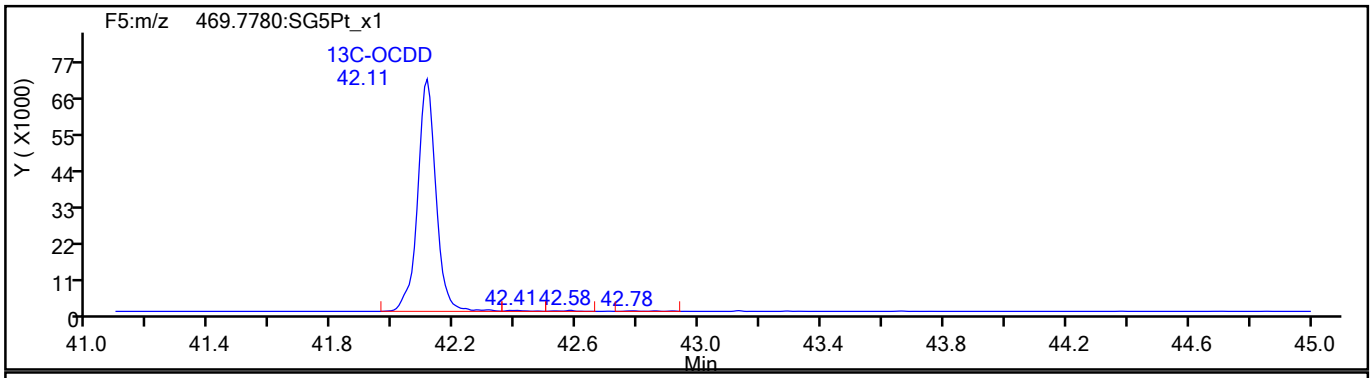

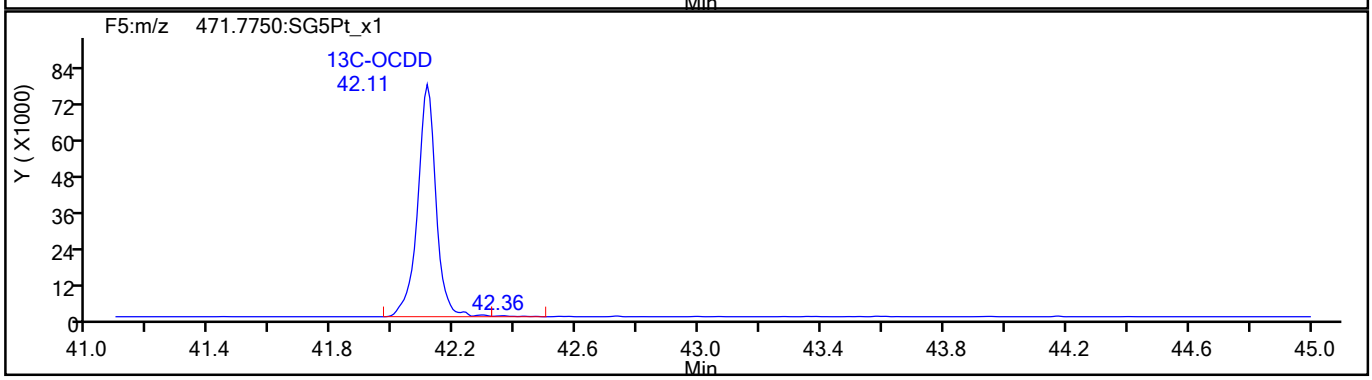

784840

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

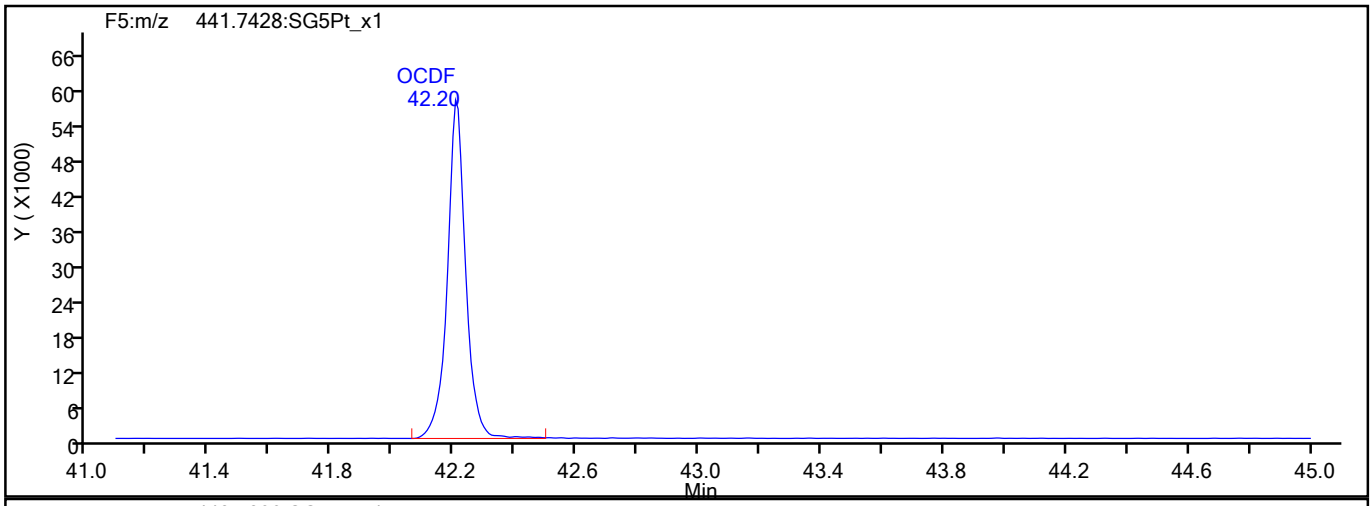

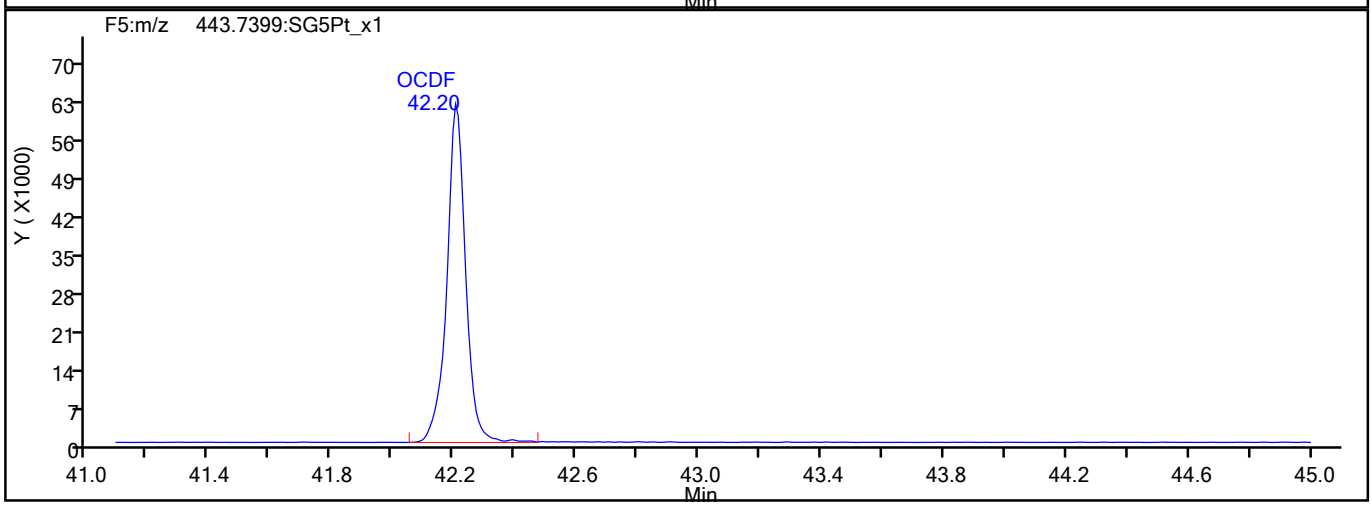

OCDF Interference Mass

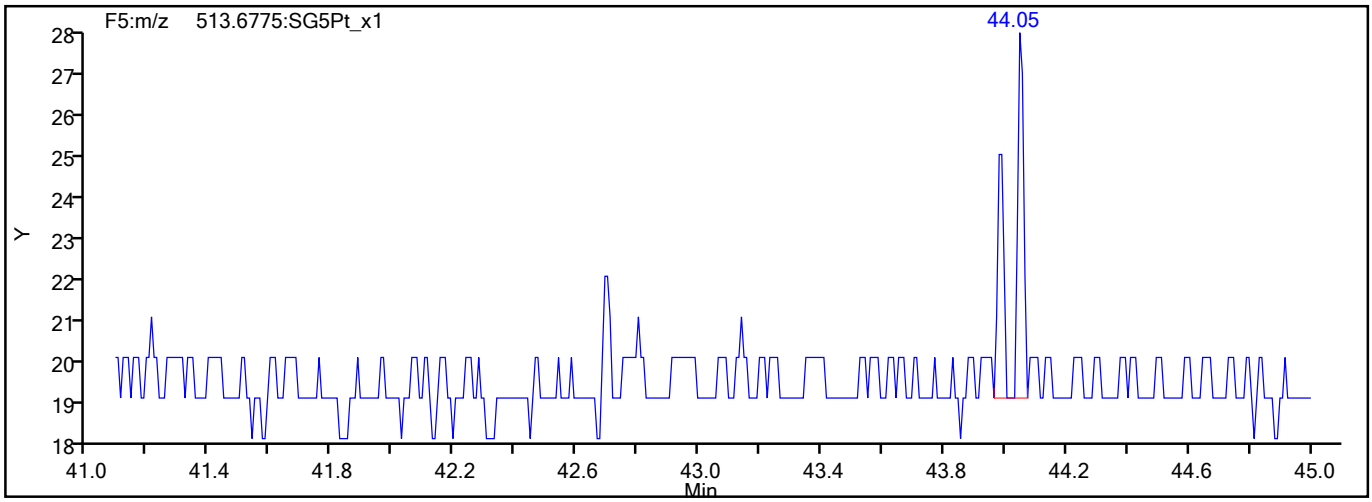

784841

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

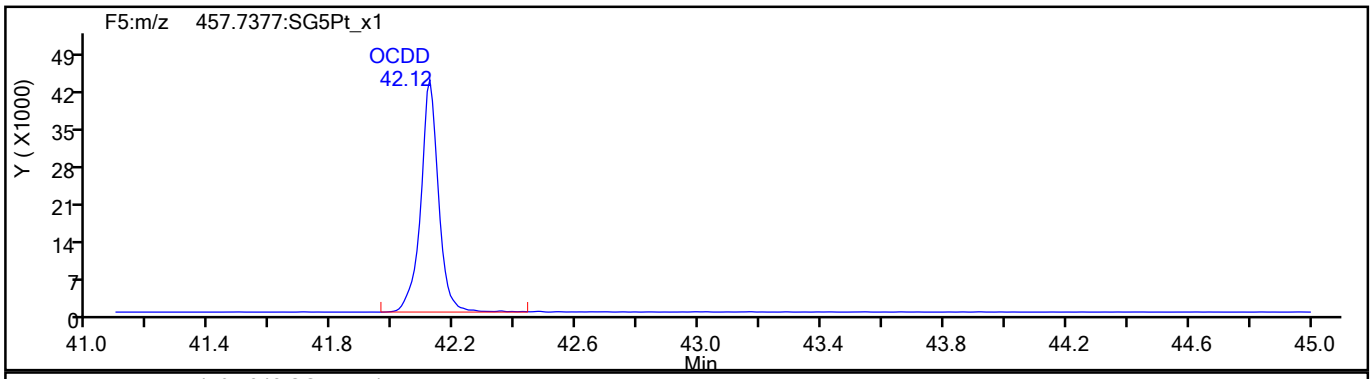

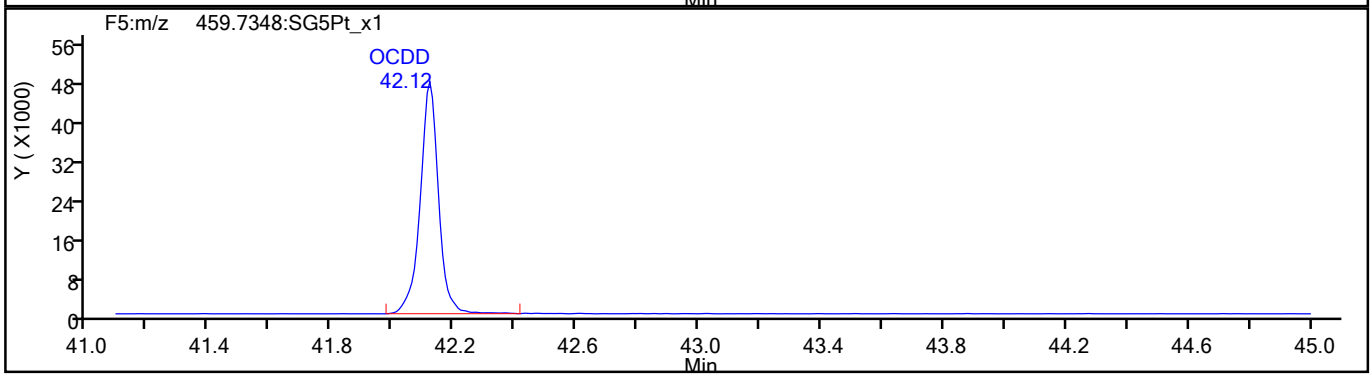

OCDD Standards

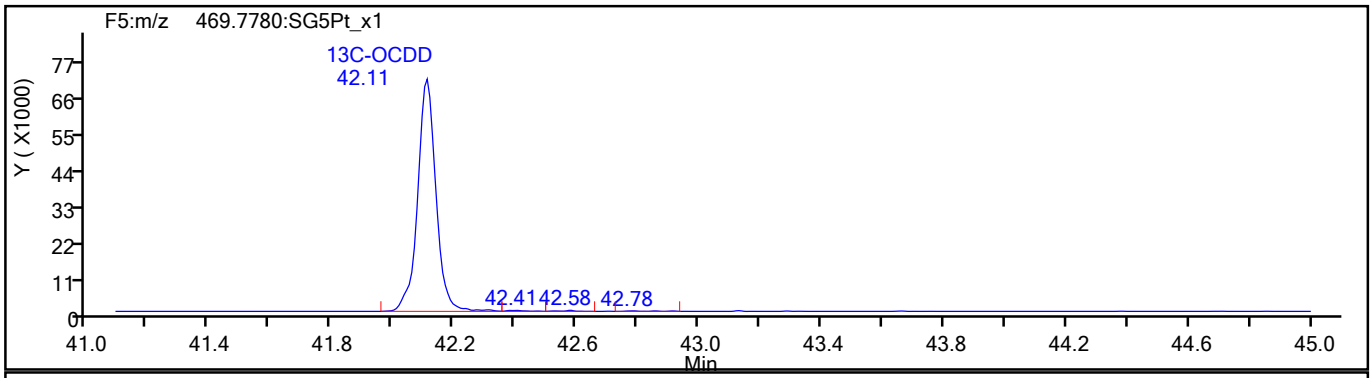

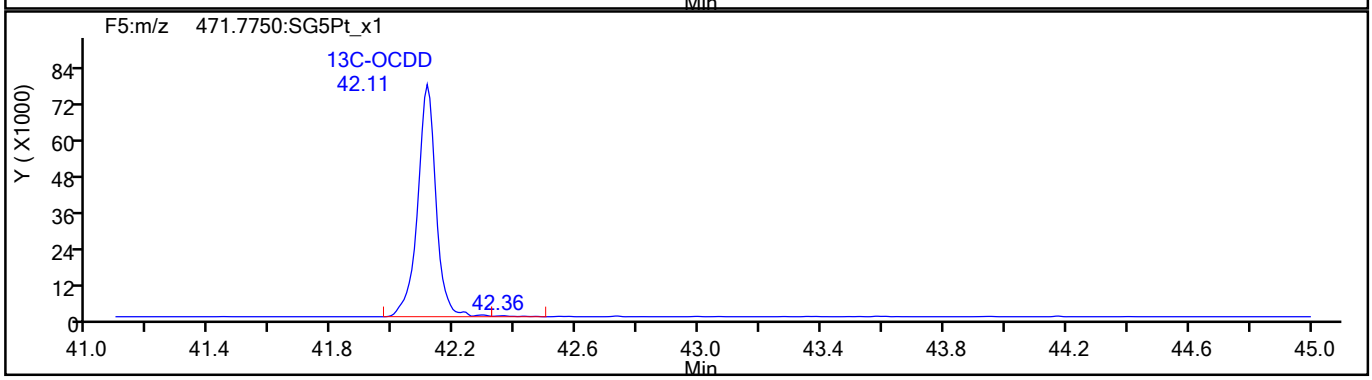

784842

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

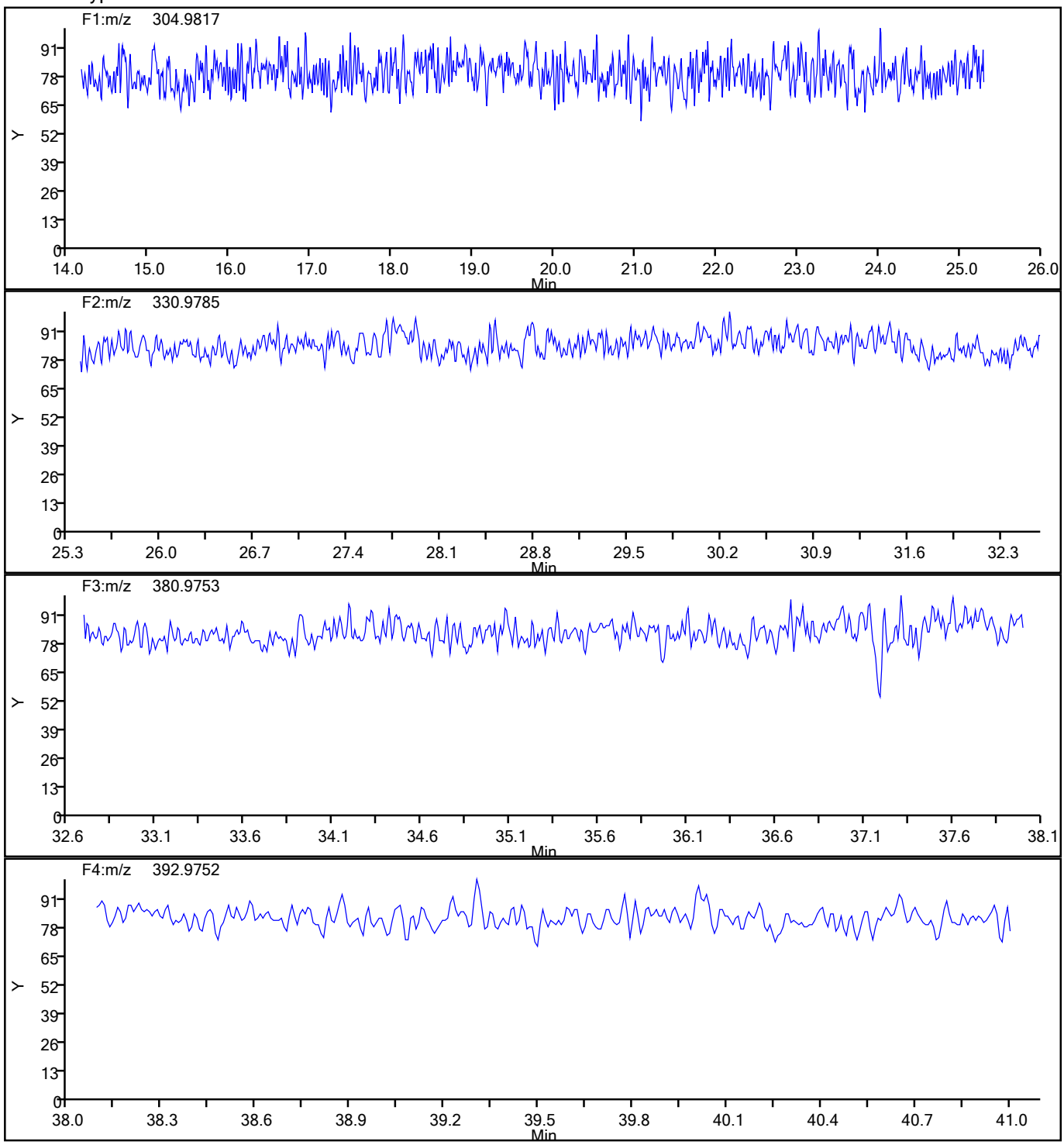

784843

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

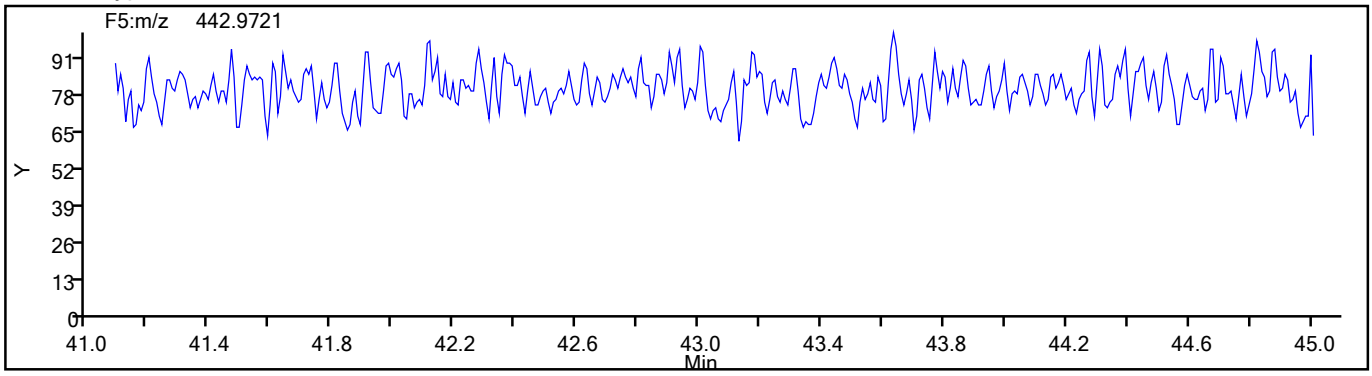

784844

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76887-A-2-B MS
Matrix: Sediment
Lab File ID: 18AU2110D5_9.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.12(g)
Date Analyzed: 08/18/2021 20:19
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	16100		47	47
40321-76-4	1,2,3,7,8-PeCDD	329		80	4.4
57117-41-6	1,2,3,7,8-PeCDF	1590		80	11
57117-31-4	2,3,4,7,8-PeCDF	1230		80	11
39227-28-6	1,2,3,4,7,8-HxCDD	161		80	1.7
57653-85-7	1,2,3,6,7,8-HxCDD	183		80	1.8
19408-74-3	1,2,3,7,8,9-HxCDD	164		80	1.6
70648-26-9	1,2,3,4,7,8-HxCDF	1950		80	13
57117-44-9	1,2,3,6,7,8-HxCDF	647		80	14
72918-21-9	1,2,3,7,8,9-HxCDF	173		80	10
60851-34-5	2,3,4,6,7,8-HxCDF	215		80	10
35822-46-9	1,2,3,4,6,7,8-HpCDD	219		80	1.4
67562-39-4	1,2,3,4,6,7,8-HpCDF	701		80	4.6
55673-89-7	1,2,3,4,7,8,9-HpCDF	325		80	5.7
3268-87-9	OCDD	1020		160	2.2
39001-02-0	OCDF	555		160	1.3
41903-57-5	Total TCDD	17800		47	47
30402-14-3	Total TCDF	121000		190	190
36088-22-9	Total PeCDD	345		80	4.4
30402-15-4	Total PeCDF	4270		80	11
34465-46-8	Total HxCDD	520		80	1.7
55684-94-1	Total HxCDF	3180		80	12
37871-00-4	Total HpCDD	267		80	1.4
38998-75-3	Total HpCDF	1140		80	5.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76887-A-2-B MS
Matrix: Sediment
Lab File ID: 18AU2110D5_9.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.12(g)
Date Analyzed: 08/18/2021 20:19
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	58		25-164
89059-46-1	13C-2,3,7,8-TCDF	57		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	63		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	59		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	65		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	64		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	59		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	65		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	57		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	57		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	59		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	60		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	57		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	64		26-138
114423-97-1	13C-OCDD	62		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	115		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MS
Inject. Date: 18-Aug-2021 20:19:26 ALS Bottle#: 10 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-a-2-b ms 10x 320-76887-a-2-b ms 10x
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 13:02:47

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.855	8086086	0.84	6.2E+05	10.0	10.0				a
D 13C-2,3,7,8-TCDF	17.341	7455573	0.80	1.6249	5.674	5.674	0.2700	0.2700	56.74	
2,3,7,8-TCDF	17.356	1652270869	0.78	1.0239	2164.4	2164.4	5.928	5.928	2.2E+005	E
A Non-2,3,7,8-sub-TCDF	17.159	1251519851	0.78	1.0239	1639.4	1639.4	5.928	1001.0	0.00	M
S Total TCDF					3803.8	3803.8	5.928	5.928		
D 13C-2,3,7,8-TCDD	18.051	4203164	0.77	0.8993	5.780	5.780	0.1533	0.1533	57.80	
2,3,7,8-TCDD	18.066	266156926	0.78	1.2541	504.9	504.9	1.482	1.482	50492	E
$ 37Cl4-2,3,7,8-TCDD	18.066	4116612		1.1071	4.598	4.598	0.0709	0.0709	115	
A Non-2,3,7,8-sub-TCDD	17.620	28198510	0.74	1.2541	53.5	53.5	1.482	48.6	0.00	a
S Total TCDD					558.4	558.4	1.482	1.482		
D 13C-1,2,3,7,8-PeCDF	22.340	5765491	1.62	1.2101	5.892	5.892	0.0644	0.0644	58.92	
1,2,3,7,8-PeCDF	22.367	30548403	1.64	1.0611	49.9	49.9	0.3573	0.3573	999	
D 13C-2,3,4,7,8-PeCDF	23.676	6465439	1.61	1.2395	6.451	6.451	0.0629	0.0629	64.51	
2,3,4,7,8-PeCDF	23.703	25502226	1.62	1.0184	38.7	38.7	0.3442	0.3442	775	
A F1 PeCDFs	20.229						0.0171	0.0171		
A Non-2,3,7,8-sub-PeCDF	23.445	28803415	1.55	1.0398	45.4	45.3	0.3503	18.3	0.00	RQ
S Total PeCDF					134.0	134.0	0.3507	0.3507		RQ
D 13C-1,2,3,7,8-PeCDD	24.385	3895421	1.55	0.7612	6.328	6.328	0.0465	0.0465	63.28	
1,2,3,7,8-PeCDD	24.412	4220994	1.63	1.0484	10.3	10.3	0.1388	0.1388	207	
A Non-2,3,7,8-sub-PeCDD	23.696	205333	1.55	1.0484	0.6630	0.5028	0.1388	0.2519	0.00	RQM
S Total PeCDD					11.0	10.8	0.1388	0.1388		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.463	5759861	0.52	1.0837	6.485	6.485	0.0423	0.0423	64.85	
1,2,3,4,7,8-HxCDF	30.490	38177175	1.21	1.0851	61.1	61.1	0.4200	0.4200	1222	
D 13C-1,2,3,6,7,8-HxCDF	30.663	5311742	0.51	1.1279	5.746	5.746	0.0407	0.0407	57.46	
1,2,3,6,7,8-HxCDF	30.676	12139819	1.23	1.1260	20.3	20.3	0.4300	0.4300	406	
D 13C-2,3,4,6,7,8-HxCDF	31.488	5171425	0.52	1.0637	5.931	5.931	0.0431	0.0431	59.31	
2,3,4,6,7,8-HxCDF	31.501	4074235	1.23	1.1675	6.748	6.748	0.3261	0.3261	135	
D 13C-1,2,3,7,8,9-HxCDF	32.300	4521502	0.51	0.9676	5.701	5.701	0.0474	0.0474	57.01	
1,2,3,7,8,9-HxCDF	32.313	2858090	1.27	1.1664	5.420	5.420	0.3247	0.3247	108	
A Non-2,3,7,8-sub-HxCDF	30.410	3616710	1.32	1.1363	6.132	6.132	0.3695	3.460	0.00	Ma

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					99.7	99.7	0.3752	0.3752		
* 13C-1,2,3,7,8,9-HxCDD	32.113	8196461	1.24	6.2E+05	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	31.674	3819248	1.21	0.7334	6.353	6.353	0.0616	0.0616	63.53	
1,2,3,4,7,8-HxCDD	31.688	2054546	1.23	1.0640	5.056	5.056	0.0533	0.0533	101	
D 13C-1,2,3,6,7,8-HxCDD	31.781	4244355	1.25	0.8802	5.883	5.883	0.0514	0.0514	58.83	
1,2,3,6,7,8-HxCDD	31.808	2430950	1.30	1.0001	5.727	5.727	0.0577	0.0577	115	
1,2,3,7,8,9-HxCDD	32.127	2352891	1.23	1.1325	5.153	5.153	0.0505	0.0505	103	
A Non-2,3,7,8-sub-HxCDD	30.816	159194	1.23	1.0655	0.3706	0.3706	0.0537	0.3706	0.00	
S Total HxCDD					16.3	16.3	0.0539	0.0539		
D 13C-1,2,3,4,6,7,8-HpCDF	33.742	3615535	0.46	0.7730	5.706	5.706	0.0758	0.0758	57.06	
1,2,3,4,6,7,8-HpCDF	33.754	11457483	1.04	1.4413	22.0	22.0	0.1435	0.1435	440	
D 13C-1,2,3,4,7,8,9-HpCDF	34.823	3668251	0.44	0.7008	6.386	6.386	0.0836	0.0836	63.86	
1,2,3,4,7,8,9-HpCDF	34.835	4924188	1.04	1.3174	10.2	10.2	0.1781	0.1781	204	
A Non-2,3,7,8-sub-HpCDF	34.283	1760784	1.04	1.3793	3.962	3.505	0.1594	3.505	0.00	RQa
S Total HpCDF					36.1	35.7	0.1608	0.1608		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.532	3197979	1.04	0.6472	6.028	6.028	0.0637	0.0637	60.28	
1,2,3,4,6,7,8-HpCDD	34.544	2404563	1.07	1.0943	6.871	6.871	0.0432	0.0432	137	
A Non-2,3,7,8-sub-HpCDD	33.504	529650	1.05	1.0943	1.513	1.513	0.0432	1.513	0.00	a
S Total HpCDD					8.385	8.385	0.0432	0.0432		
D 13C-OCDD	36.878	4533719	0.83	0.4472	12.4	12.4	0.0475	0.0475	61.85	
OCDF	36.986	5672994	0.89	1.4382	17.4	17.4	0.0402	0.0402	174	
OCDD	36.890	8054549	0.88	1.1070	32.1	32.1	0.0677	0.0677	321	
1,3,6,8-TCDF	14.892						0.0	0.0		
1,3,6,8-TCDD	15.799						0.0	0.0		
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.188						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,3,9-TCDD	18.414	25603931	0.75							
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.307	2092214	1.28							
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	32.074						0.0	0.0		U
1,2,3,4,8,9-HxCDF	28.307	2092214	1.28							a
1,2,3,4,6,7,9-HpCDF	34.046	1990122	0.82							R
1,2,3,4,6,7,9-HpCDD	33.985	529650	1.05							
1,2,3,8-TCDD	0.0						0.0	0.0		
1,3,7,9-TCDD	0.0						0.0	0.0		
1,2,3,4,7-PeCDD	0.0						0.0	0.0		
1,4,7,8-TCDD	0.0						0.0	0.0		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MS
Inject. Date: 18-Aug-2021 20:19:26 ALS Bottle#: 10 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-a-2-b ms 10x 320-76887-a-2-b ms 10x
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 13:02:47

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.855	17.809	3		3695424	873495	4751	11877	184		a
333.9339	17.855	17.809	3		4390662	997767	5566	13915	179	0.84(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.341	17.295	3	0.971	3308093	861548	10043	25107	86		
317.9389	17.341	17.295	3	0.971	4147480	1083514	22796	56990	48	0.80(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.356	17.310	3	1.001	724720534	175629776	206549	516372	850		
305.8987	17.356	17.310	3	1.001	927550335	222493313	265678	664195	837	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											M
303.9016	15.693	17.159	-88	0.905	3379063	997324	206549	516372	5		M
305.8987	15.677	17.159	-89	0.904	4050073	1256766	265678	664195	5	0.83(0.65-0.89)	M
303.9016	15.934	17.159	-73	0.919	13188414	3560855	206549	516372	17		
305.8987	15.934	17.159	-73	0.919	16915826	4637540	265678	664195	17	0.78(0.65-0.89)	
303.9016	16.222	17.159	-56	0.935	22713838	4705091	206549	516372	23		
305.8987	16.222	17.159	-56	0.935	29530405	6073778	265678	664195	23	0.77(0.65-0.89)	
303.9016	16.449	17.159	-43	0.949	21293084	5599482	206549	516372	27		
305.8987	16.449	17.159	-43	0.949	27612335	7283063	265678	664195	27	0.77(0.65-0.89)	
303.9016	16.691	17.159	-28	0.963	31345894	7899542	206549	516372	38		
305.8987	16.691	17.159	-28	0.963	40698540	10226127	265678	664195	38	0.77(0.65-0.89)	
303.9016	16.963	17.159	-12	0.978	334648927	86677903	206549	516372	420		
305.8987	16.963	17.159	-12	0.978	429490879	111827203	265678	664195	421	0.78(0.65-0.89)	
303.9016	17.190	17.159	2	0.991	11353673	2740702	206549	516372	13		
305.8987	17.190	17.159	2	0.991	14393468	3478403	265678	664195	13	0.79(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.779	17.159	37	1.025	52766281	12731429	206549	516372	62		
305.8987	17.779	17.159	37	1.025	67348262	16143007	265678	664195	61	0.78(0.65-0.89)	
303.9016	18.036	17.159	52	1.040	8819886	1889134	206549	516372	9		
305.8987	18.036	17.159	52	1.040	11362573	2450053	265678	664195	9	0.78(0.65-0.89)	
303.9016	19.170	17.159	120	1.106	48371049	11214713	206549	516372	54		
305.8987	19.170	17.159	120	1.106	62237381	14313283	265678	664195	54	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.051	18.006	3	1.011	1825645	475173	4751	11877	100		
333.9339	18.051	18.006	3	1.011	2377519	590522	5566	13915	106	0.77(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	18.066	18.021	3	1.001	116898050	30037732	39885	99712	753		
321.8936	18.066	18.021	3	1.001	149258876	38452382	39344	98360	977	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.066	18.021	3	1.012	4116612	1027047	5878	14695	175		
A Non-2,3,7,8-sub-TCDD											a
319.8965	17.961	17.620	20	0.995	1021019	305207	39885	99712	8		
321.8936	17.961	17.620	20	0.995	1573560	417982	39344	98360	11	0.65(0.65-0.89)	
319.8965	18.414	17.620	48	1.020	11012747	2621353	39885	99712	66		a
321.8936	18.414	17.620	48	1.020	14591184	3301510	39344	98360	84	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.340	22.299	2	1.251	3562089	633649	3305	8262	192		
353.8970	22.340	22.299	2	1.251	2203402	399157	2531	6327	158	1.62(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.367	22.326	2	1.001	18976432	3331999	9287	23217	359		
341.8567	22.367	22.326	2	1.001	11571971	2035613	6377	15942	319	1.64(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.676	23.635	2	1.326	3989614	690646	3305	8262	209		
353.8970	23.676	23.635	2	1.326	2475825	426641	2531	6327	169	1.61(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.703	23.649	3	1.001	15779165	2685385	9287	23217	289		
341.8567	23.703	23.649	3	1.001	9723061	1625723	6377	15942	255	1.62(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.229						299	747			
341.8567	20.229						464	1160			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.031	23.445	-145	0.941	7200431	1439508	9287	23217	155		
341.8567	21.031	23.445	-145	0.941	4462685	867989	6377	15942	136	1.61(1.32-1.78)	
339.8597	21.862	23.445	-95	0.979	729462	88154	9287	23217	9		
341.8567	21.862	23.445	-95	0.979	494779	62585	6377	15942	10	1.47(1.32-1.78)	
339.8597	22.230	23.445	-73	0.995	1429697	312119	9287	23217	34		
341.8567	22.230	23.445	-73	0.995	857712	184388	6377	15942	29	1.67(1.32-1.78)	
339.8597	22.640	23.445	-48	1.013	262100	45656	9287	23217	5		
	Empc Correction				219791	41459	9287	23217	4		
341.8567	22.640	23.445	-48	1.013	141801	26748	6377	15942	4	1.85(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	22.885	23.445	-34	1.024	4734903	864842	9287	23217	93		
341.8567	22.885	23.445	-34	1.024	3030452	549383	6377	15942	86	1.56(1.32-1.78)	
339.8597	24.031	23.445	35	1.076	2727137	403839	9287	23217	43		
341.8567	24.031	23.445	35	1.076	1681353	253911	6377	15942	40	1.62(1.32-1.78)	
339.8597	25.640	23.445	131	1.148	662845	101135	9287	23217	11		
341.8567	25.640	23.445	131	1.148	430367	61290	6377	15942	10	1.54(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.385	24.358	2	1.366	2366204	378113	1463	3657	258		
369.8919	24.399	24.358	2	1.367	1529217	230135	1187	2967	194	1.55(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.412	24.372	2	1.001	2618111	406087	2117	5292	192		
357.8516	24.426	24.372	3	1.002	1602883	251849	1424	3560	177	1.63(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	22.640	23.696	-63	0.928	60231	10648	2117	5292	5		M
357.8516	22.640	23.696	-63	0.928	42220	8247	1424	3560	6	1.43(1.32-1.78)	M
355.8546	24.917	23.696	73	1.022	127966	14303	2117	5292	7		
	Empc Correction				62536	7052	2117	5292	3		
357.8516	24.917	23.696	73	1.022	40346	4550	1424	3560	3	3.17(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.463	30.436	2	0.949	1982709	363425	1771	4427	205		
385.8610	30.463	30.436	2	0.949	3777152	698739	2275	5687	307	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.490	30.463	2	1.001	20927681	4018639	10751	26877	374		
375.8178	30.490	30.463	2	1.001	17249494	3360592	8611	21527	390	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.663	30.623	2	0.955	1791630	341134	1771	4427	193		
385.8610	30.663	30.623	2	0.955	3520112	658581	2275	5687	289	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.676	30.649	2	1.000	6705947	1290136	10751	26877	120		
375.8178	30.676	30.649	2	1.000	5433872	1059041	8611	21527	123	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.488	31.461	2	0.981	1771672	433521	1771	4427	245		
385.8610	31.488	31.461	2	0.981	3399753	837731	2275	5687	368	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.501	31.488	1	1.000	2247988	564392	10751	26877	52		
375.8178	31.501	31.488	1	1.000	1826247	453124	8611	21527	53	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.300	32.273	2	1.006	1530645	435381	1771	4427	246		
385.8610	32.300	32.273	2	1.006	2990857	842811	2275	5687	370	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.313	32.286	2	1.000	1596499	498002	10751	26877	46		
375.8178	32.313	32.286	2	1.000	1261591	390643	8611	21527	45	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	29.651	30.410	-45	0.973	590072	71476	10751	26877	7		M
375.8178	29.638	30.410	-46	0.973	440156	61531	8611	21527	7	1.34(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	31.395	30.410	59	1.031	313445	78313	10751	26877	7		a
375.8178	31.395	30.410	59	1.031	231957	58493	8611	21527	7	1.35(1.05-1.43)	
373.8208	32.393	30.410	119	1.063	1157036	325917	10751	26877	30		a
375.8178	32.393	30.410	119	1.063	884044	262593	8611	21527	30	1.31(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.113	32.100	1		4541308	1247916	2235	5587	558		
403.8529	32.113	32.100	1		3655153	956691	1751	4377	546	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.674	31.661	1	0.986	2088047	586938	2235	5587	263		
403.8529	31.674	31.661	1	0.986	1731201	493952	1751	4377	282	1.21(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.688	31.674	1	1.000	1131582	312024	1187	2967	263		
391.8127	31.688	31.674	1	1.000	922964	251454	1265	3162	199	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.781	31.767	1	0.990	2361250	592975	2235	5587	265		
403.8529	31.781	31.767	1	0.990	1883105	468451	1751	4377	268	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.808	31.781	2	1.001	1375886	337346	1187	2967	284		
391.8127	31.794	31.781	1	1.000	1055064	257242	1265	3162	203	1.30(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.127	32.113	1	1.014	1298799	347590	1187	2967	293		
391.8127	32.127	32.113	1	1.014	1054092	281172	1265	3162	222	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.929	30.816	7	0.973	87820	19232	1187	2967	16		
391.8127	30.929	30.816	7	0.973	71374	14034	1265	3162	11	1.23(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.742	33.718	1	1.051	1134377	359234	2085	5212	172		
419.8220	33.742	33.718	1	1.051	2481158	829576	3079	7697	269	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.754	33.730	1	1.000	5840862	1951512	5149	12872	379		
409.7789	33.754	33.730	1	1.000	5616621	1825959	4687	11717	390	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.823	34.811	1	1.084	1115510	315093	2085	5212	151		
419.8220	34.823	34.811	1	1.084	2552741	733179	3079	7697	238	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.835	34.811	1	1.000	2515359	721550	5149	12872	140		
409.7789	34.823	34.811	1	1.000	2408829	691922	4687	11717	148	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											RQa
407.7818	34.046	34.283	-14	1.009	897655	295797	5149	12872	57		a
409.7789	34.046	34.283	-14	1.009	1092467	298240	4687	11717	64	0.82(0.88-1.20)	
	Empc Correction				863129	284420	4687	11717	61		
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.532	34.520	1	1.075	1626758	506924	2228	5570	228		
437.8140	34.532	34.520	1	1.075	1571221	487038	1410	3525	345	1.04(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.544	34.532	1	1.000	1242797	378701	997	2492	380		
425.7737	34.544	34.532	1	1.000	1161766	349672	881	2202	397	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.985	33.504	29	0.984	270741	88583	997	2492	89		a
425.7737	33.985	33.504	29	0.984	258909	88774	881	2202	101	1.05(0.88-1.20)	
13C-OCDD											
469.7779	36.878	36.866	1	1.148	2051911	501691	1102	2755	455		
471.7750	36.878	36.866	1	1.148	2481808	639865	773	1932	828	0.83(0.76-1.02)	
OCDF											
441.7428	36.986	36.962	1	1.003	2672150	673862	573	1432	1176		
443.7399	36.974	36.962	1	1.003	3000844	776334	747	1867	1039	0.89(0.76-1.02)	
OCDD											
457.7377	36.890	36.878	1	1.000	3774236	957453	903	2257	1060		
459.7348	36.890	36.878	1	1.000	4280313	1097446	807	2017	1360	0.88(0.76-1.02)	
1,3,6,8-TCDF											
303.9016	14.892						206549	516372			
305.8987	14.892						265678	664195			
1,3,6,8-TCDD											
319.8965	15.799						39885	99712			
321.8936	15.799						39344	98360			
2,3,4,7-TCDF											
303.9016	17.537						206549	516372			
305.8987	17.537						265678	664195			
1,2,3,7-TCDD											
319.8965	18.188						39885	99712			
321.8936	18.188						39344	98360			
1,2,3,9-TCDF											
303.9016	18.414						206549	516372			
305.8987	18.414						265678	664195			
1,2,3,9-TCDD											
319.8965	18.414	18.414	0		11012747	2621353	39885	99712	66		
321.8936	18.414	18.414	0		14591184	3301510	39344	98360	84	0.75(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.382						39885	99712			
1,2,8,9-TCDF											
303.9016	19.427						206549	516372			
305.8987	19.427						265678	664195			
1,3,4,6,8-PeCDF											
339.8597	19.669						299	747			
341.8567	19.669						464	1160			
1,2,4,7,9-PeCDD											
355.8546	21.480						2117	5292			
357.8516	21.480						1424	3560			
1,2,3,8,9-PeCDD											
355.8546	25.790						2117	5292			
357.8516	25.790						1424	3560			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,8,9-PeCDF											
339.8597	26.021						9287	23217			
341.8567	26.021						6377	15942			
1,2,3,4,6,8-HxCDF											
373.8208	28.307	28.333	-2		1174068	168081	10751	26877	16		
375.8178	28.307	28.333	-2		918146	132279	8611	21527	15	1.28(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.890						1187	2967			
391.8127	29.890						1265	3162			
1,2,3,4,6,7-HxCDD											U
389.8157	32.074						1187	2967			
391.8127	32.074						1265	3162			
1,2,3,4,8,9-HxCDF											a
373.8208	28.307	32.393	-245		1174068	168081	10751	26877	16		a
375.8178	28.307	32.393	-245		918146	132279	8611	21527	15	1.28(1.05-1.43)	
1,2,3,4,6,7,9-HpCDF											R
407.7818	34.046	33.916	8		897655	295797	5149	12872	57		
409.7789	34.046	33.916	8		1092467	298240	4687	11717	64	0.82(0.88-1.20)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.985	33.985	0		270741	88583	997	2492	89		
425.7737	33.985	33.985	0		258909	88774	881	2202	101	1.05(0.88-1.20)	
1,2,3,8-TCDD											
319.8965	0.0						39885	99712			
321.8936	0.0						39344	98360			
1,3,7,9-TCDD											
319.8965	0.0						39885	99712			
321.8936	0.0						39344	98360			
1,2,3,4,7-PeCDD											
355.8546	0.0						2117	5292			
357.8516	0.0						1424	3560			
1,4,7,8-TCDD											
319.8965	0.0						39885	99712			
321.8936	0.0						39344	98360			

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-TCDF, RT: 17.159

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	7455573	1945062

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		10.000	7455573	1945062

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.693	3379063	997324	4050073	1256766	9.73	0.83	M
15.934	13188414	3560855	16915826	4637540	39.4	0.78	
16.222	22713838	4705091	29530405	6073778	68.4	0.77	
16.449	21293084	5599482	27612335	7283063	64.1	0.77	
16.691	31345894	7899542	40698540	10226127	94.4	0.77	
16.963	334648927	86677903	429490879	111827203	1001.0	0.78	
17.190	11353673	2740702	14393468	3478403	33.7	0.79	
17.779	52766281	12731429	67348262	16143007	157.3	0.78	
18.036	8819886	1889134	11362573	2450053	26.4	0.78	
19.170	48371049	11214713	62237381	14313283	144.9	0.78	
Signal Totals:	547880109	138016175	703639742	177689223			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1251519851	315705398				0.78	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1639.4 = (1251519851 * 10.000) / (7455573 * 1.024)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-TCDD, RT: 17.620

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	4203164	1065695

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		10.000	4203164	1065695

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.961	1021019	305207	1573560	417982	4.92	0.65	
18.414	11012747	2621353	14591184	3301510	48.6	0.75	a
Signal Totals:							
	12033766	2926560	16164744	3719492			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28198510	6646052				0.74	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 53.495 = (28198510 * 10.000) / (4203164 * 1.254)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-PeCDF, RT: 23.445

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	5765491	1032806
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	6465439	1117287

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		10.000	6115465	1075046

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.031	7200431	1439508	4462685	867989	18.3	1.61	
21.862	729462	88154	494779	62585	1.93	1.47	
22.230	1429697	312119	857712	184388	3.60	1.67	
22.640	262100	45656	141801	26748	0.6352	1.85	RQ
22.640	219791	41459	141801	26748	0.5687		Empc Correction
22.885	4734903	864842	3030452	549383	12.2	1.56	
24.031	2727137	403839	1681353	253911	6.93	1.62	
25.640	662845	101135	430367	61290	1.72	1.54	
Signal Totals:							
	17704266	3251056	11099149	2006294			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28845724	5261547				1.60	RQ
	28803415	5257350					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 45.364 = (28845724 * 10.000) / (6115465 * 1.040)
Empc Amount: 45.298 = (28803415 * 10.000) / (6115465 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	3895421	608248

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		10.000	3895421	608248

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.640	60231	10648	42220	8247	0.2509	1.43	M
24.917	127966	14303	40346	4550	0.4121	3.17	RQ
24.917	62536	7052	40346	4550	0.2519		Empc Correction
Signal Totals:							
	122767	17700	82566	12797			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	270763	37748				2.28	RQM
	205333	30497					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6630 = (270763 * 10.000) / (3895421 * 1.048)
Empc Amount: 0.5028 = (205333 * 10.000) / (3895421 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-HxCDF, RT: 30.410

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	5759861	1062164
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	5311742	999715
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	5171425	1271252
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	4521502	1278192

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		10.000	5191132	1152830

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.651	590072	71476	440156	61531	1.75	1.34	Ma
31.395	313445	78313	231957	58493	0.9247	1.35	a
32.393	1157036	325917	884044	262593	3.46	1.31	a
Signal Totals:							
	2060553	475706	1556157	382617			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3616710	858323				1.32	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.132 = (3616710 * 10.000) / (5191132 * 1.136)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Lims ID:	320-76887-A-2-B MS		
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Inject. Date:	18-Aug-2021 20:19:26	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	9

Non-2,3,7,8-sub-HxCDD, RT: 30.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	3819248	1080890
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	4244355	1061426
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		10.000	4031801	1071158

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.929	87820	19232	71374	14034	0.3706	1.23	
Signal Totals:							
	87820	19232	71374	14034			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	159194	33266				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.3706 = (159194 * 10.000) / (4031801 * 1.066)

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Lims ID:	320-76887-A-2-B MS		
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Inject. Date:	18-Aug-2021 20:19:26	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	9

Non-2,3,7,8-sub-HpCDF, RT: 34.283

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	3615535	1188810
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	3668251	1048272

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		10.000	3641893	1118541

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.046	897655	295797	1092467	298240	3.96	0.82	RQa
34.046	897655	295797	863129	284420	3.51		Empc Correction
Signal Totals:							
	897655	295797	863129	284420			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1990122	594037				0.82	RQa
	1760784	580217					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.962 = (1990122 * 10.000) / (3641893 * 1.379)
Empc Amount: 3.505 = (1760784 * 10.000) / (3641893 * 1.379)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 20:19:26 Dil. Factor: 10.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 9

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	3197979	993962

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		10.000	3197979	993962

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.985	270741	88583	258909	88774	1.51	1.05	a
Signal Totals:							
	270741	88583	258909	88774			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	529650	177357				1.05	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.513 = (529650 * 10.000) / (3197979 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d				
Injection Date:	18-Aug-2021 20:19:26	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	10	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.86- 19.46)

Signal: 1

Not Detected

RT: 14.86- 19.46

Processing Integration Results

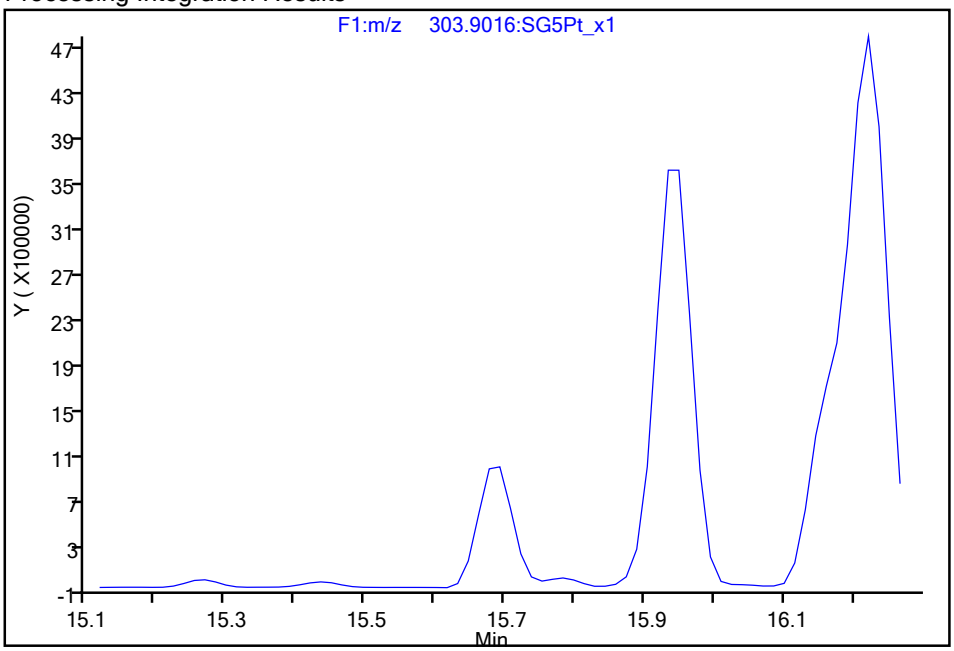

RT = 15.693 Area = 3379063 M

Manual Integration Results

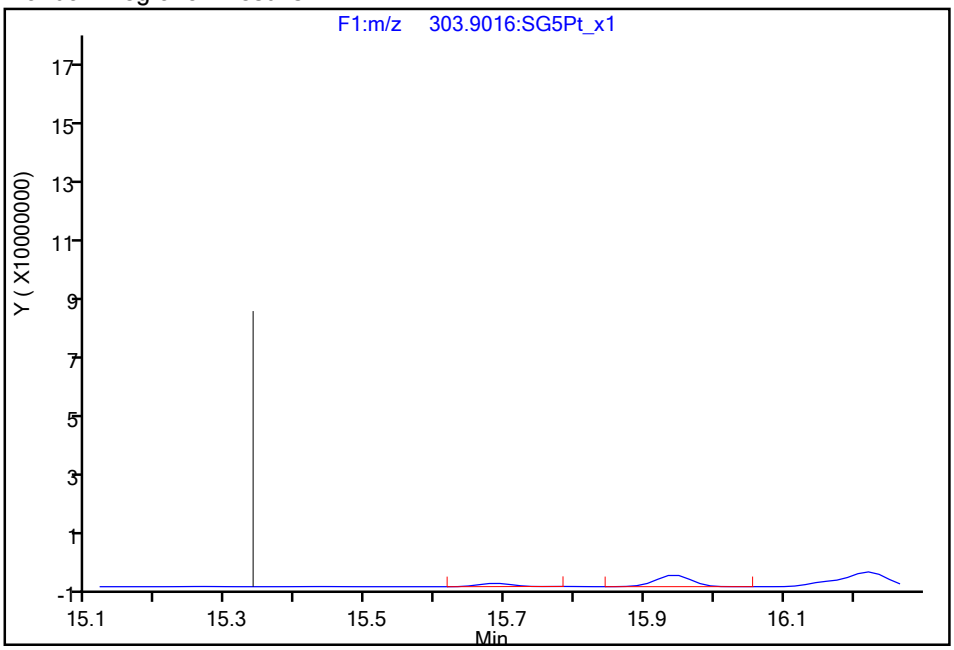

Reviewer: bennettd, 19-Aug-2021 12:58:22

Audit Action: Manually Integrated Audit Reason: Missed Peak

784865

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d				
Injection Date:	18-Aug-2021 20:19:26	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	10	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.86- 19.46)

Signal: 2

Not Detected
RT: 14.86- 19.46

Processing Integration Results

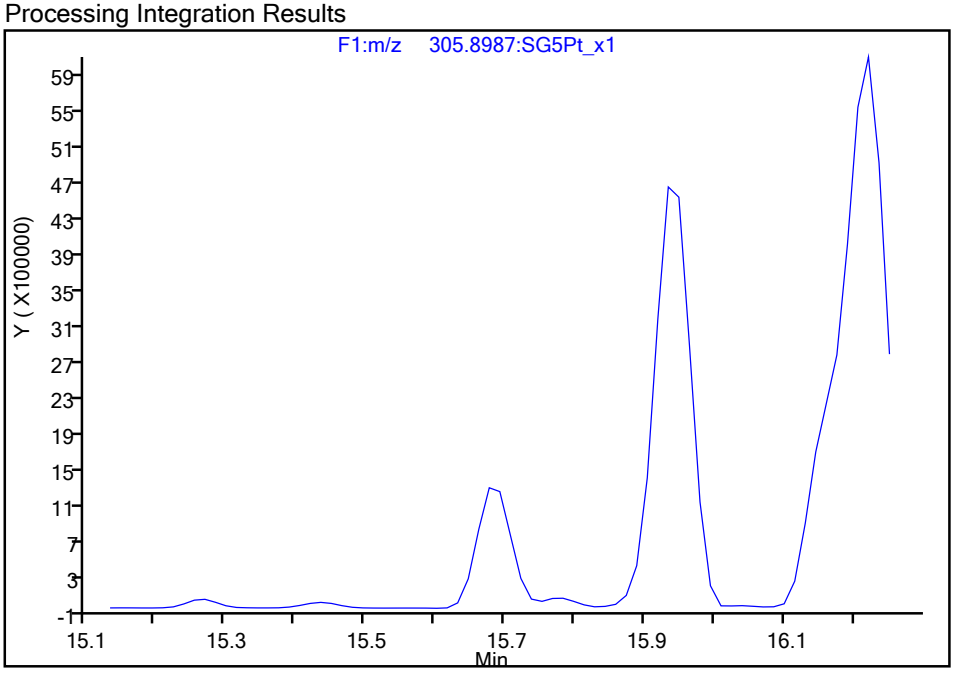

RT = 15.677 Area = 4050073 M

Manual Integration Results

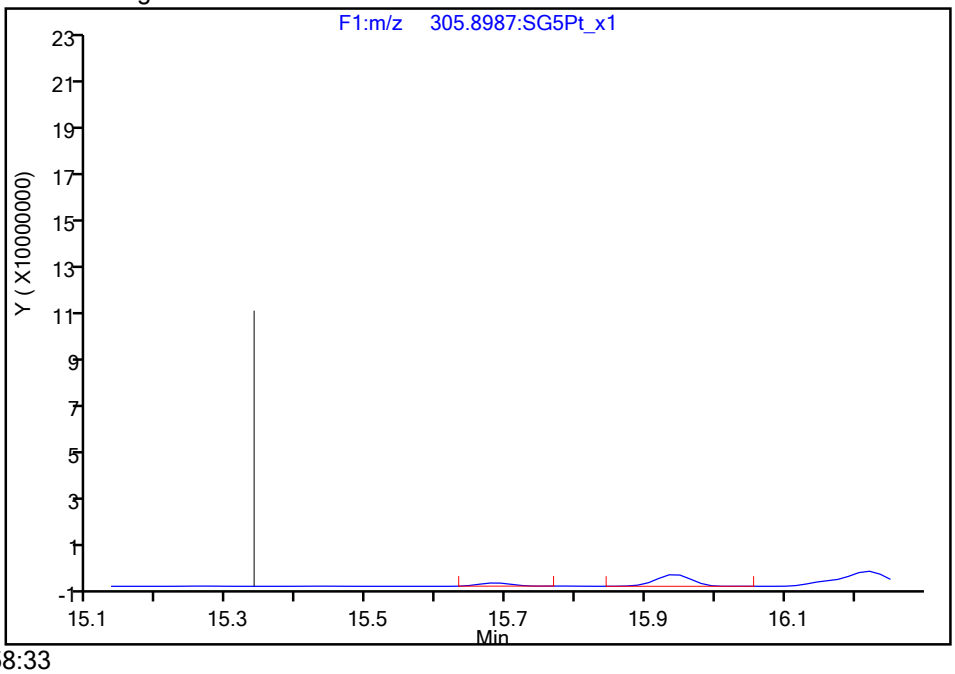

Reviewer: bennettd, 19-Aug-2021 12:58:33
Audit Action: Manually Integrated Audit Reason: Missed Peak

784866

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d				
Injection Date:	18-Aug-2021 20:19:26	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	10	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

Not Detected

RT: 21.50- 25.89

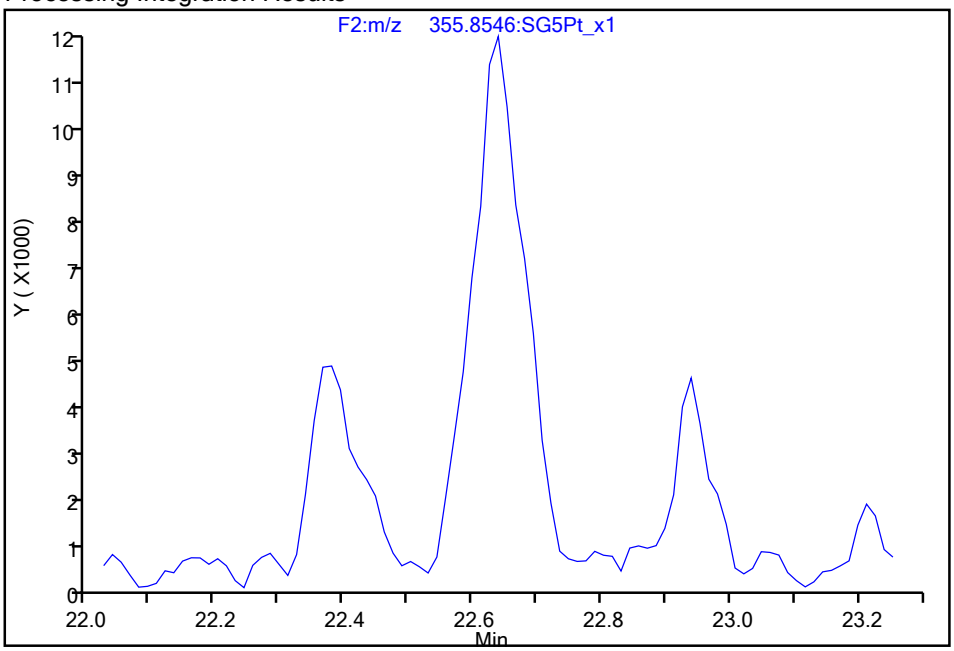

Manual Integration Results

RT = 22.640 Area = 60231 M

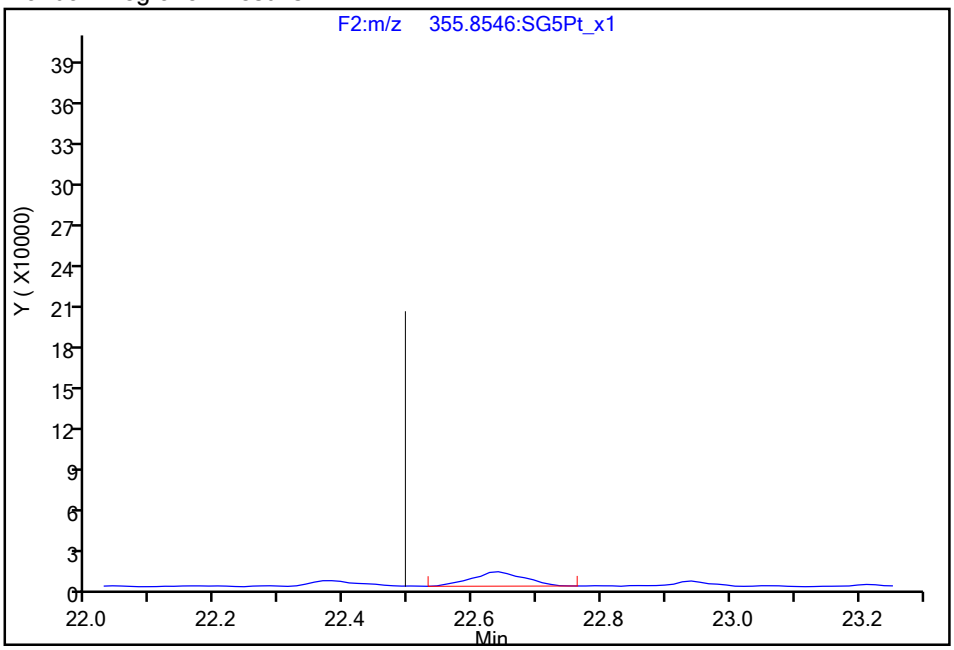

Reviewer: bennettd, 19-Aug-2021 12:59:19

Audit Action: Manually Integrated Audit Reason: Missed Peak

784867

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d				
Injection Date:	18-Aug-2021 20:19:26	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	10	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.50- 25.89)

Signal: 2

Processing Integration Results

RT = 22.640 Area = 42171

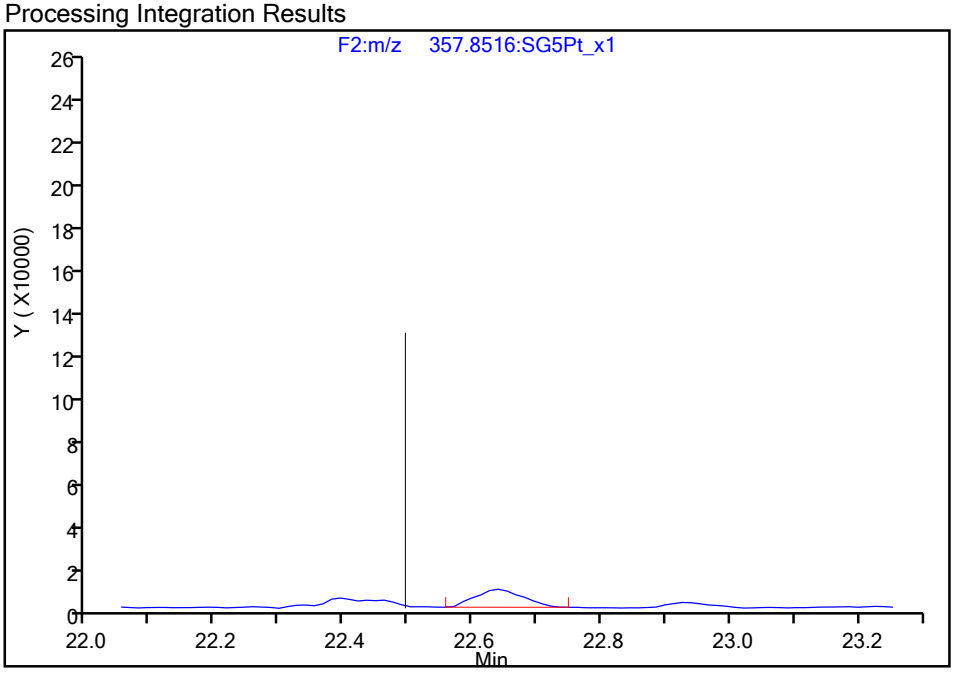

Manual Integration Results

RT = 22.640 Area = 42220 M

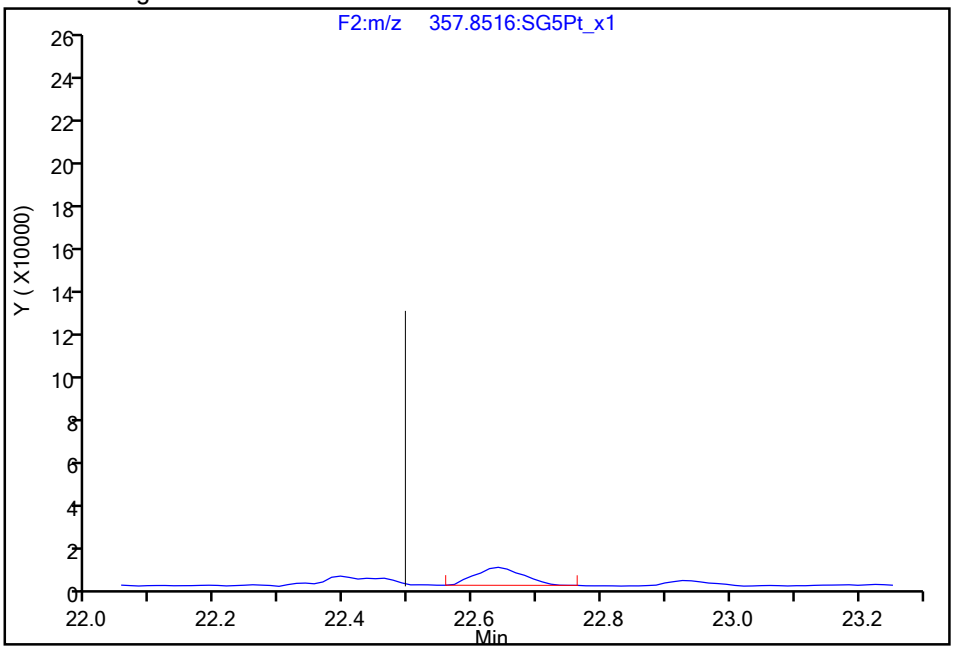

Reviewer: bennettd, 19-Aug-2021 12:59:27

Audit Action: Manually Integrated Audit Reason: Missed Peak

784868

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d				
Injection Date:	18-Aug-2021 20:19:26	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	10	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (28.40- 32.42)

Signal: 1

Processing Integration Results

RT = 29.651 Area = 466624

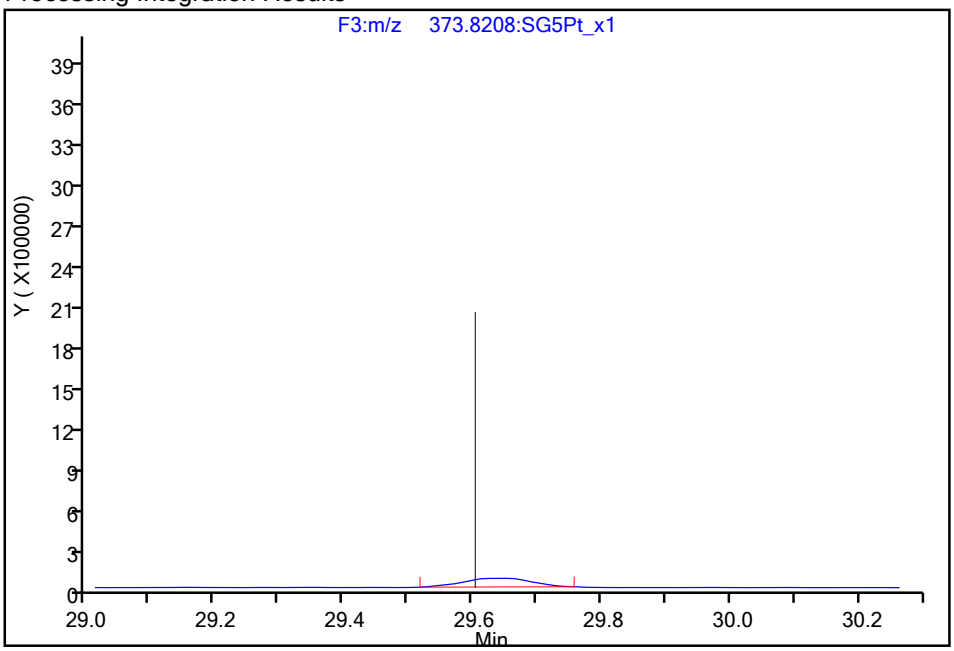

Manual Integration Results

RT = 29.651 Area = 590072 M

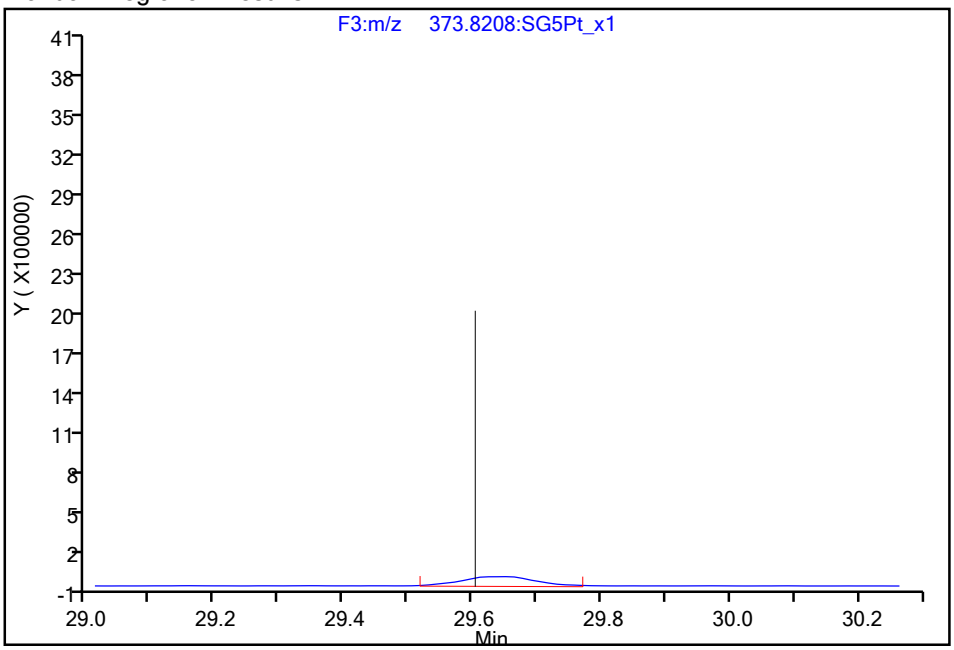

Reviewer: bennettd, 19-Aug-2021 13:01:17

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Missed Peak

784869

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

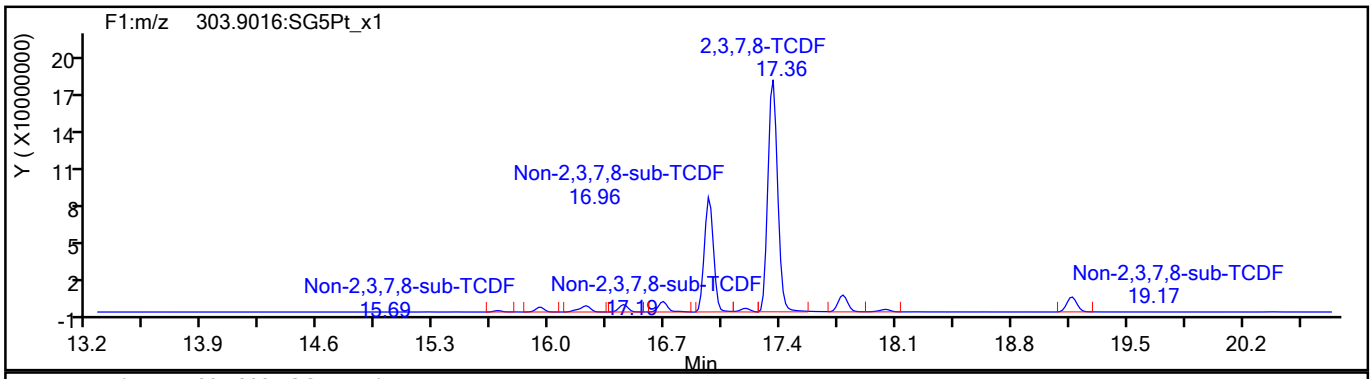

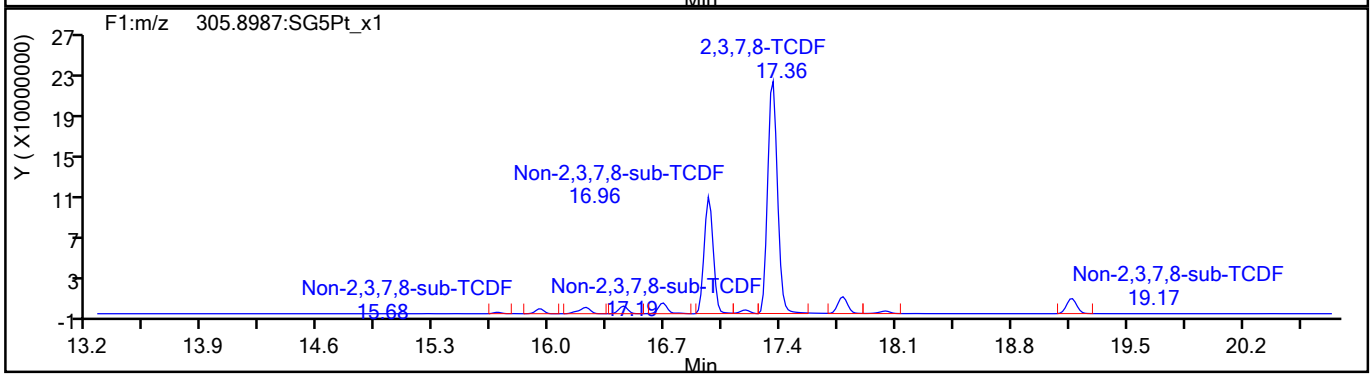

TCDF Standards

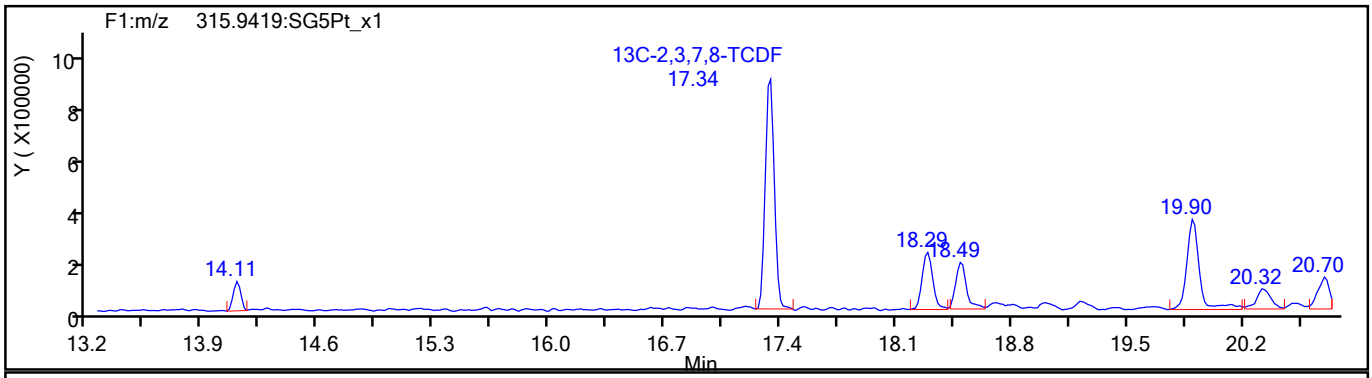

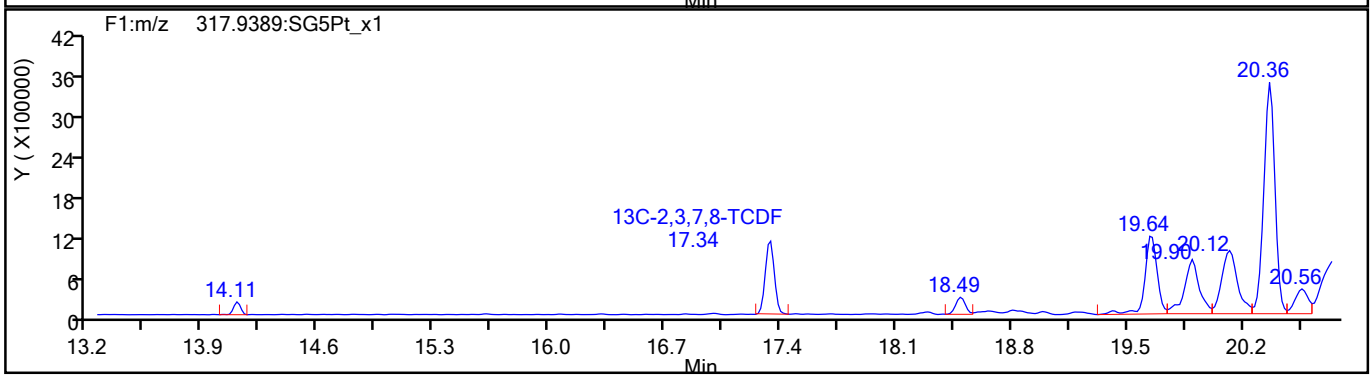

784870

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

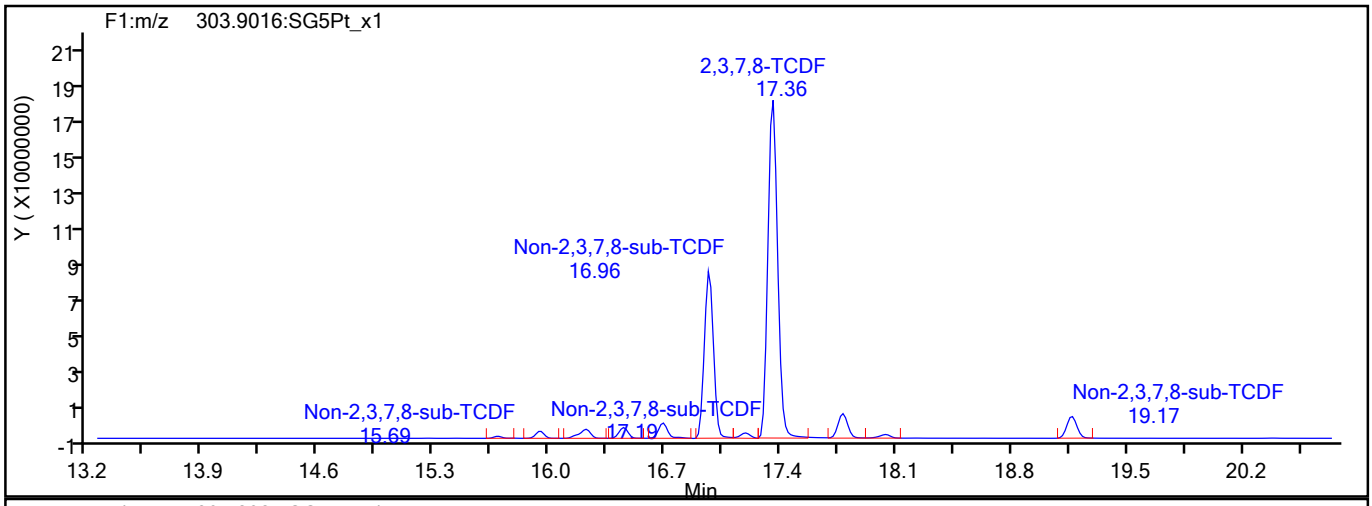

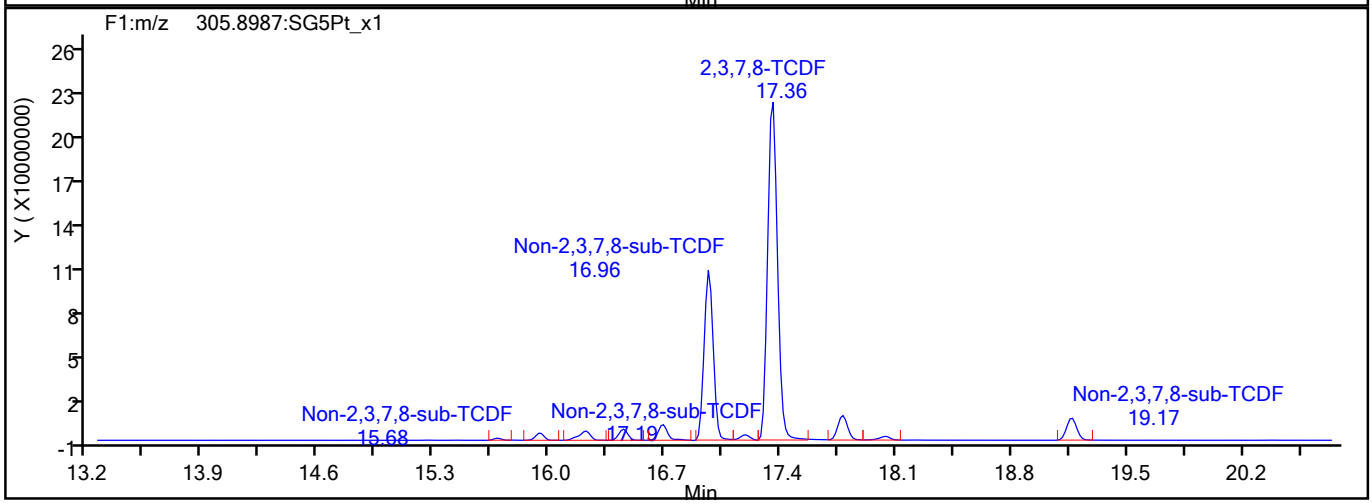

TCDF Interference Mass

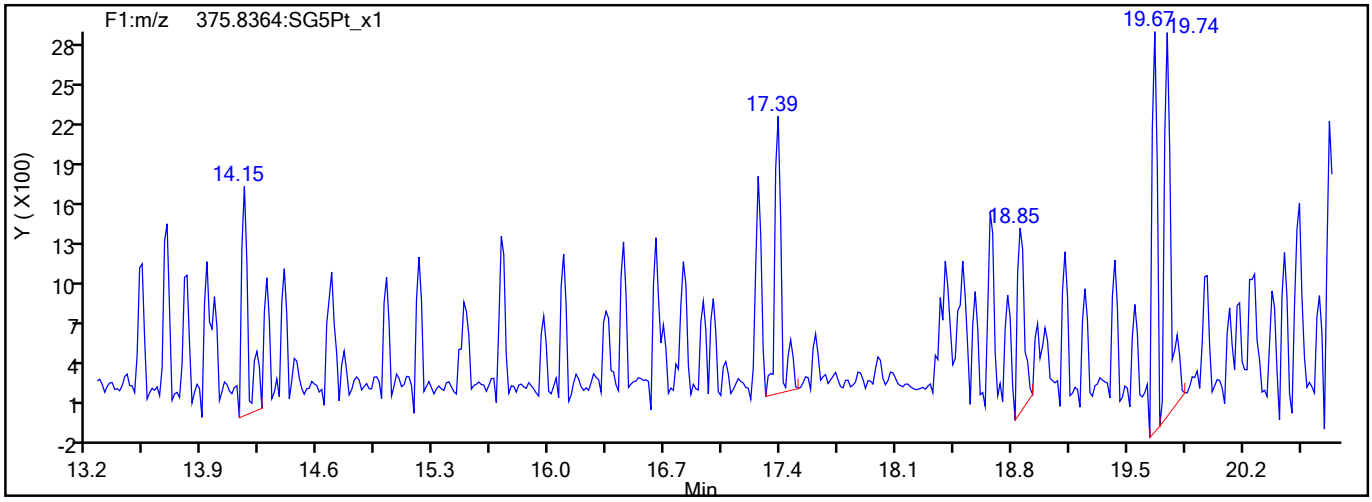

784871

Report Date: 19-Aug-2021 13:08:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

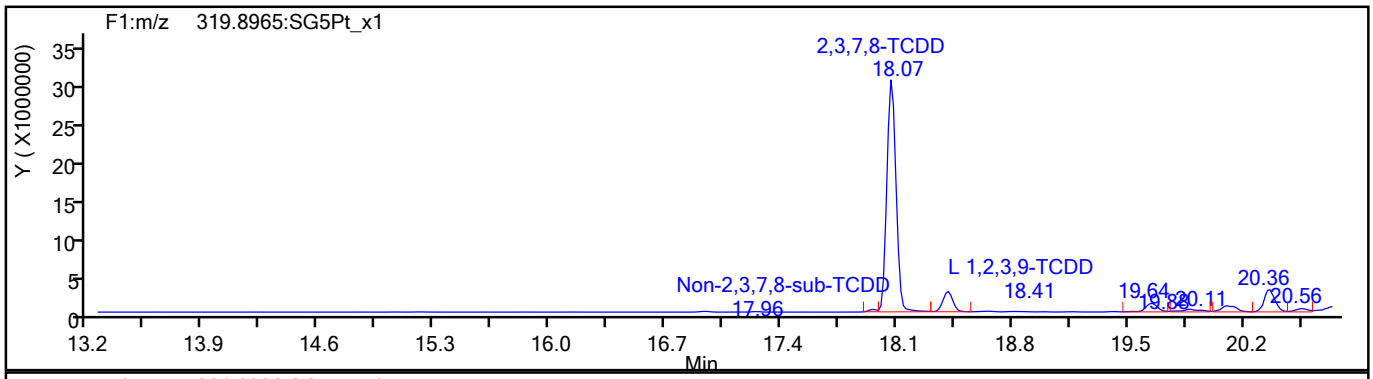

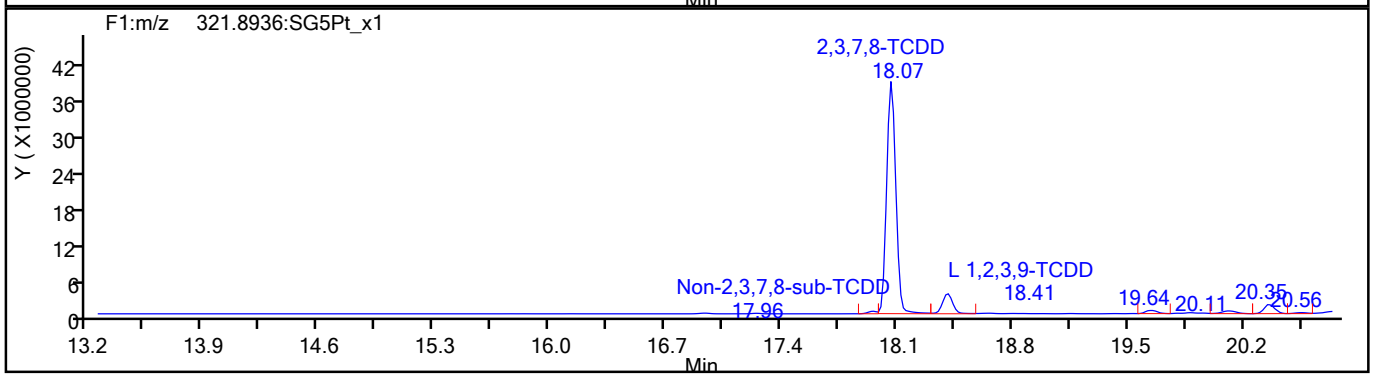

TCDD Standards

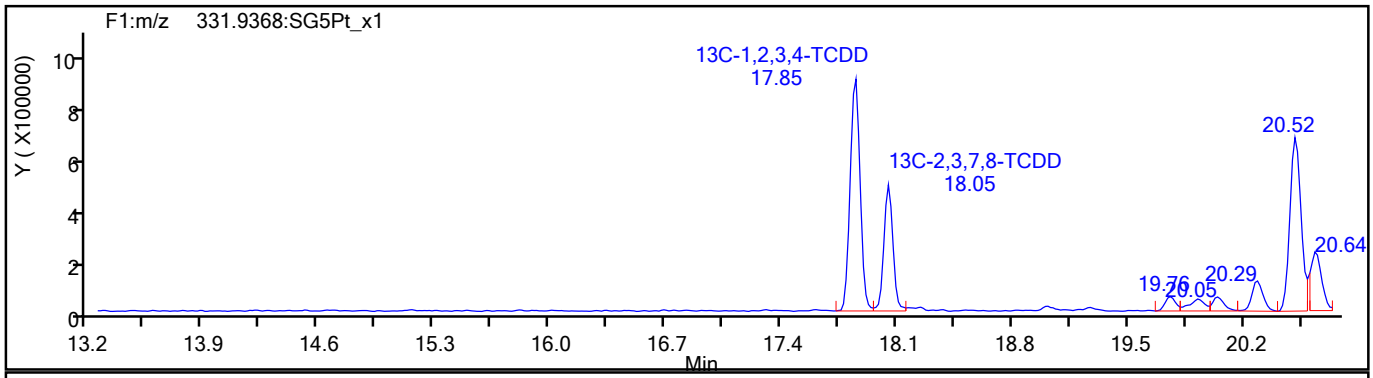

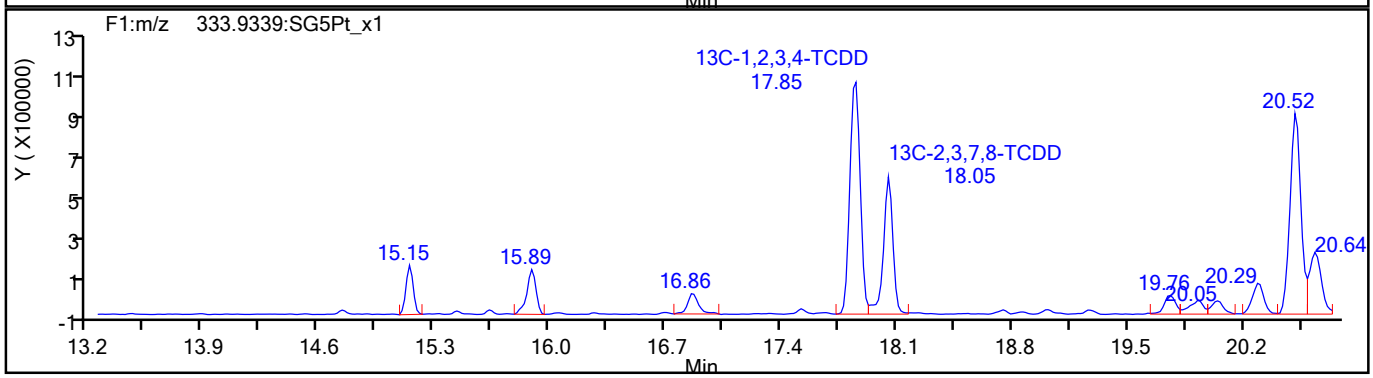

784872

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

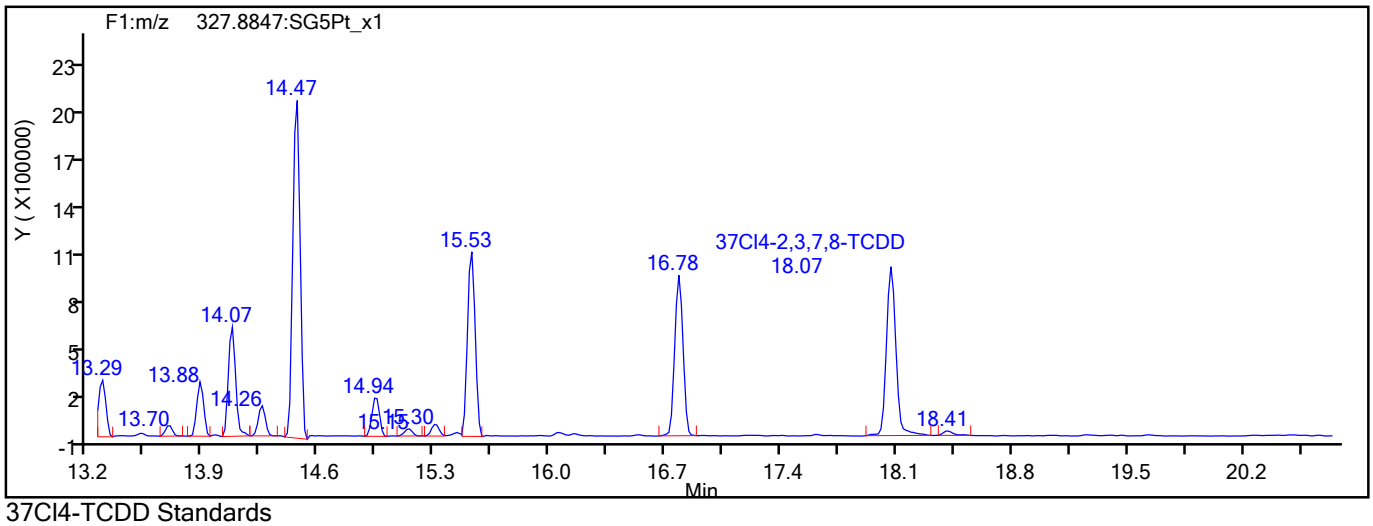

37Cl4-TCDD Standards

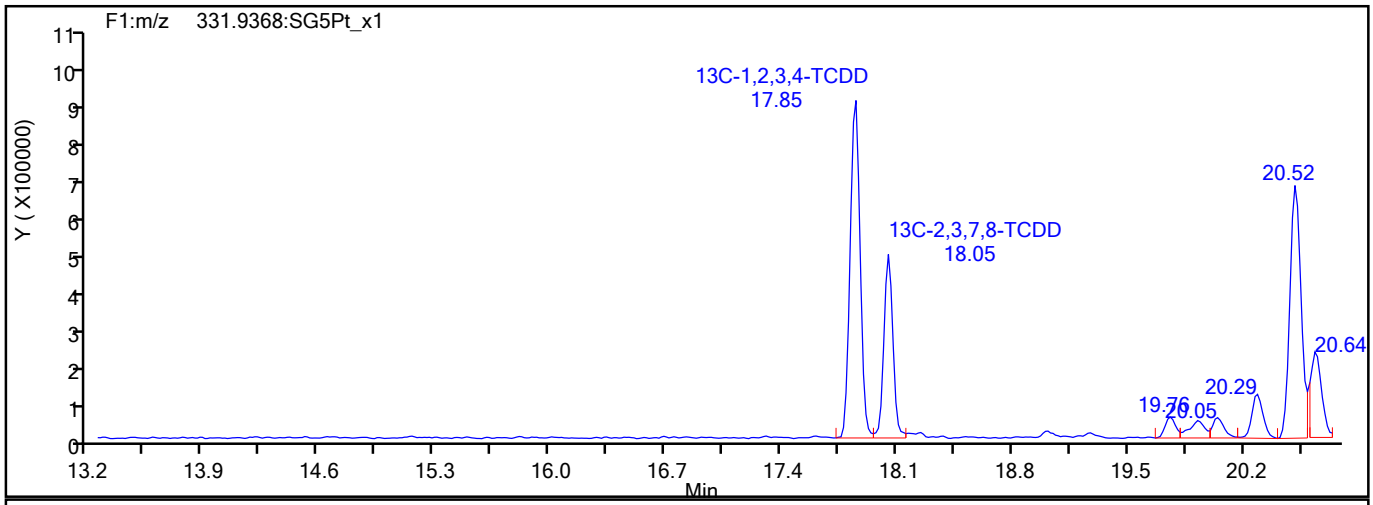

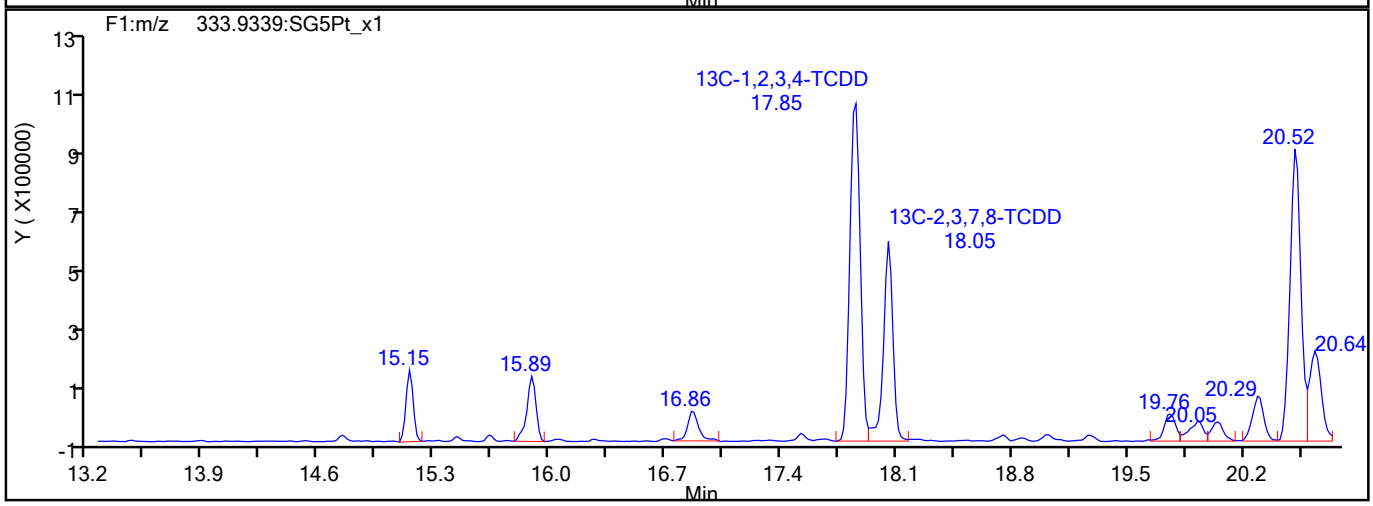

784873

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

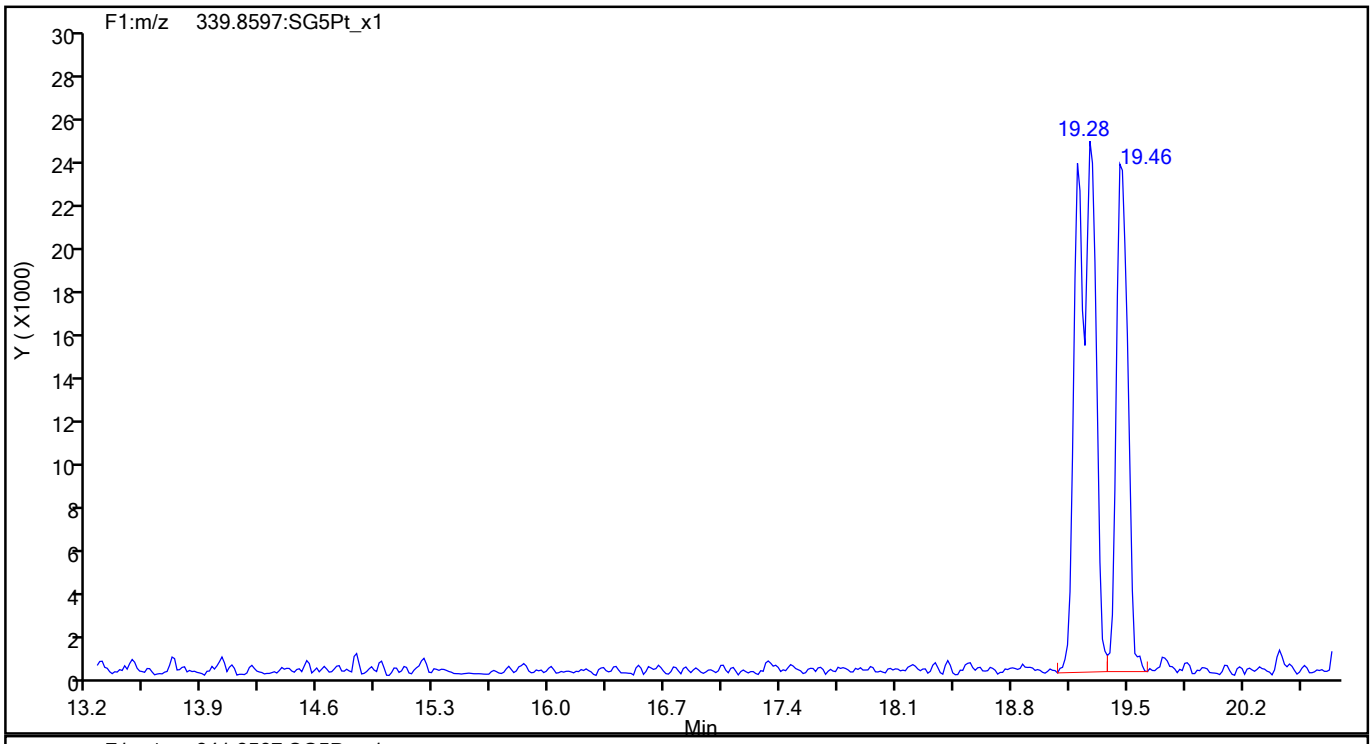

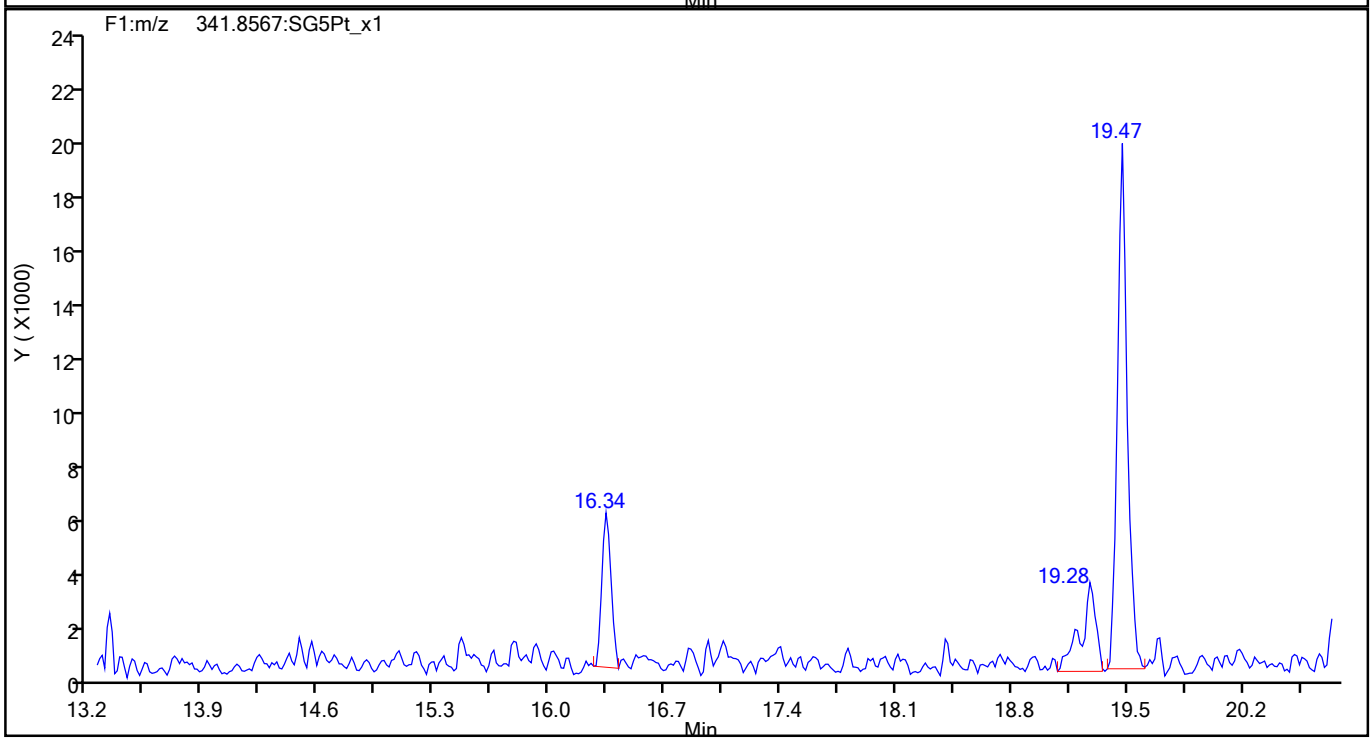

784874

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

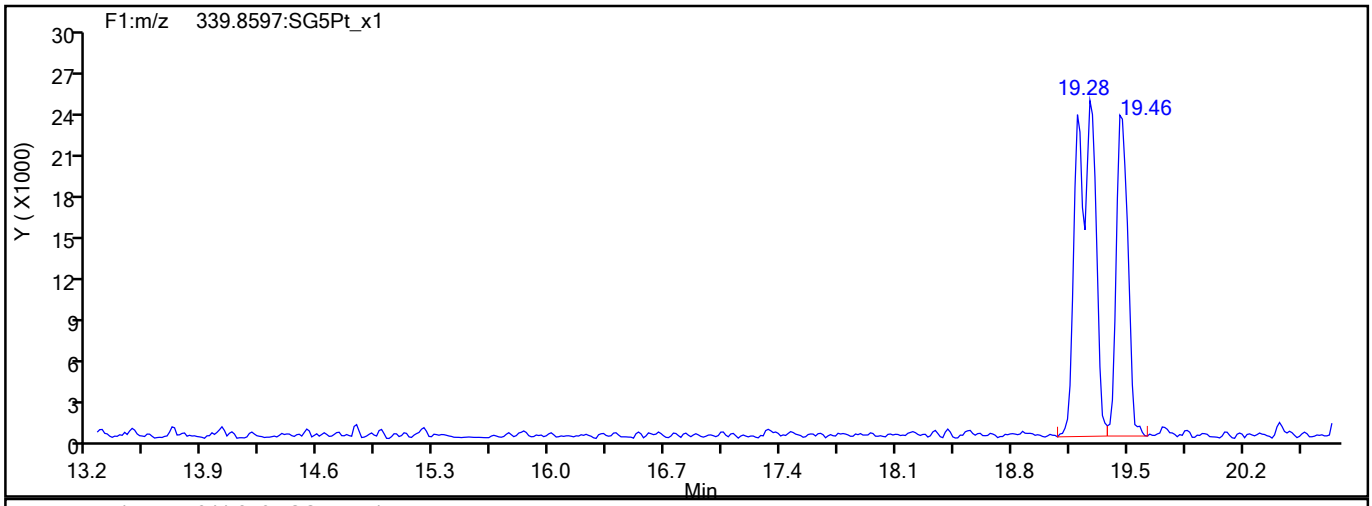

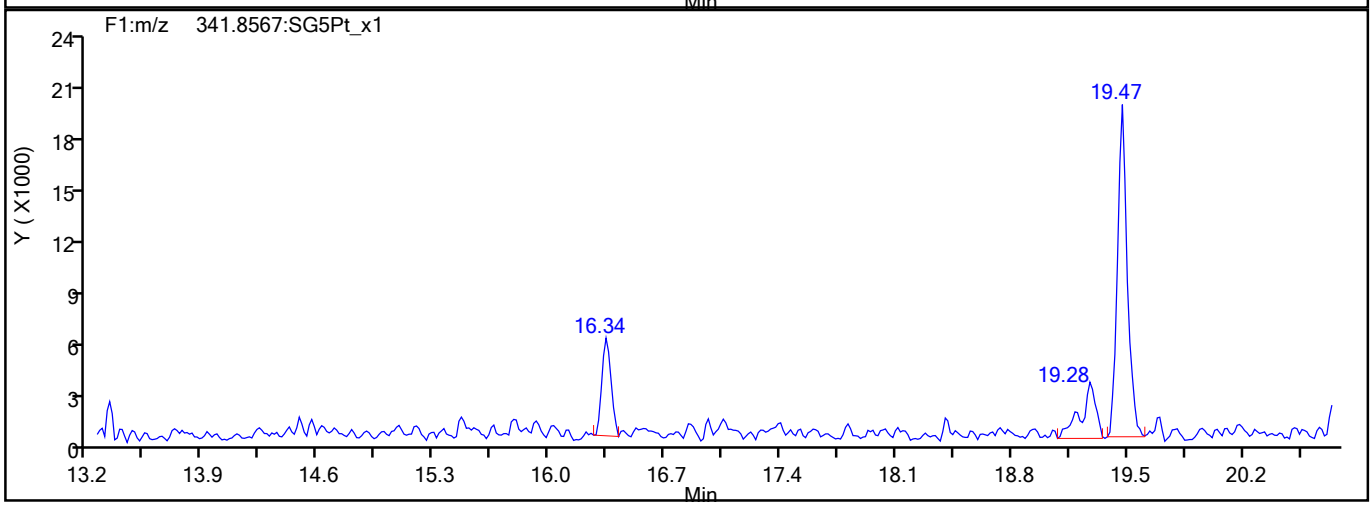

F1 PeCDFs Interference Mass

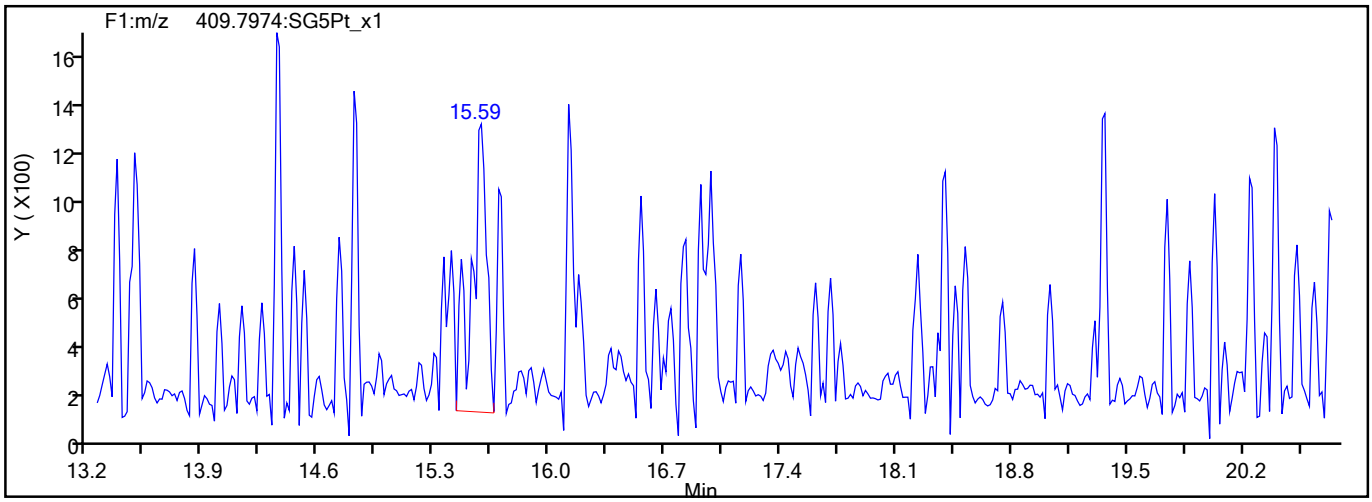

784875

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

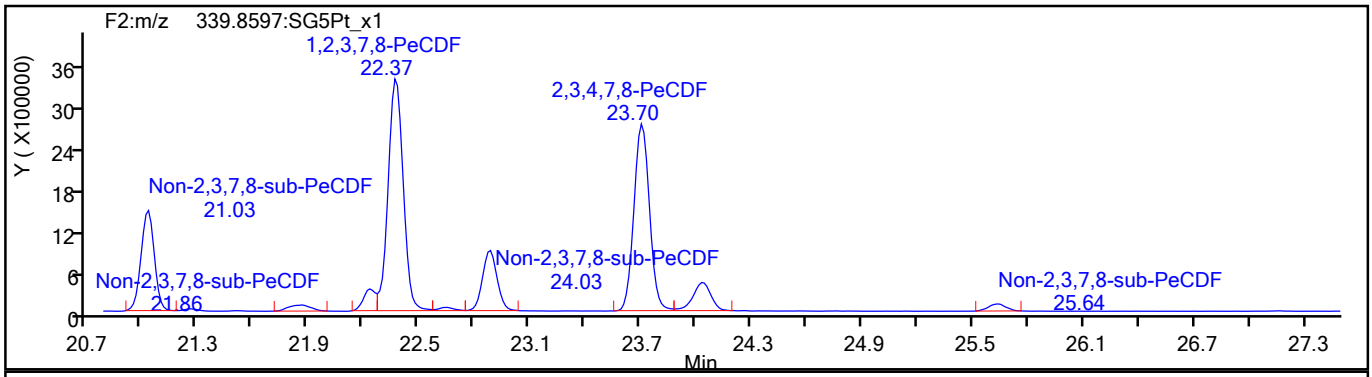

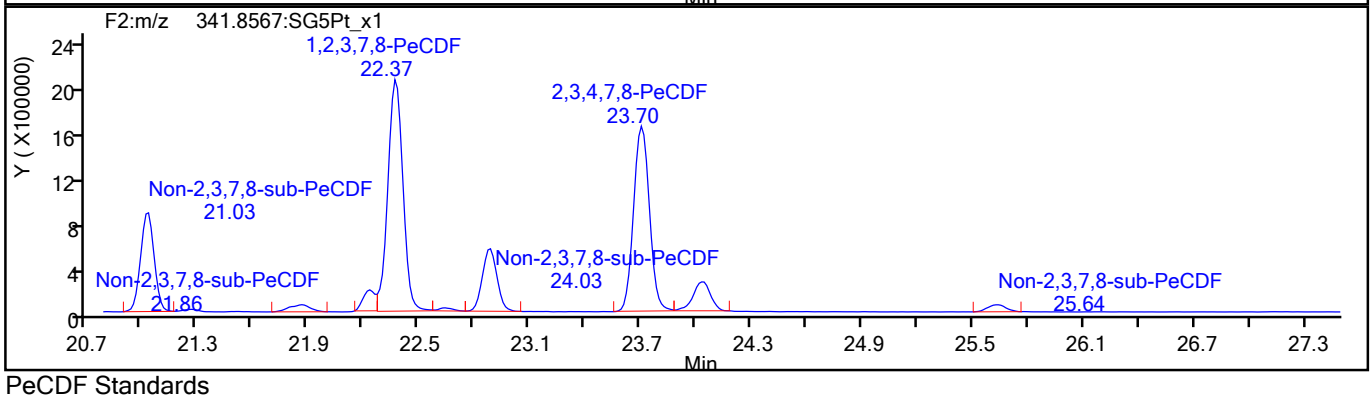

PeCDF Standards

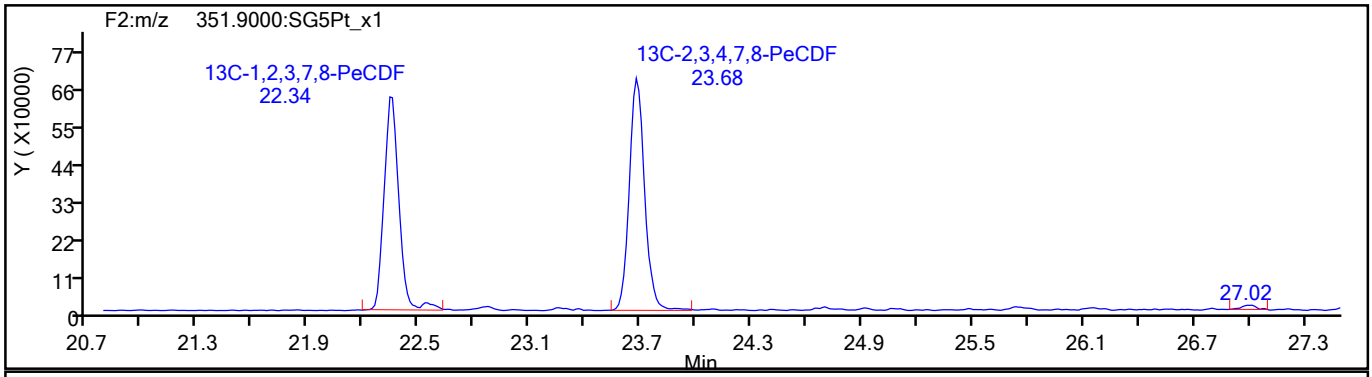

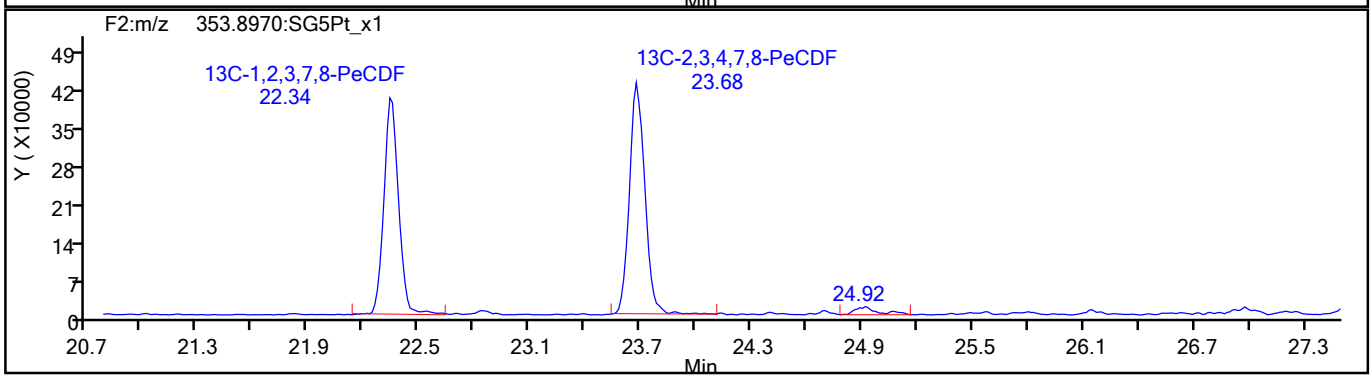

784876

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

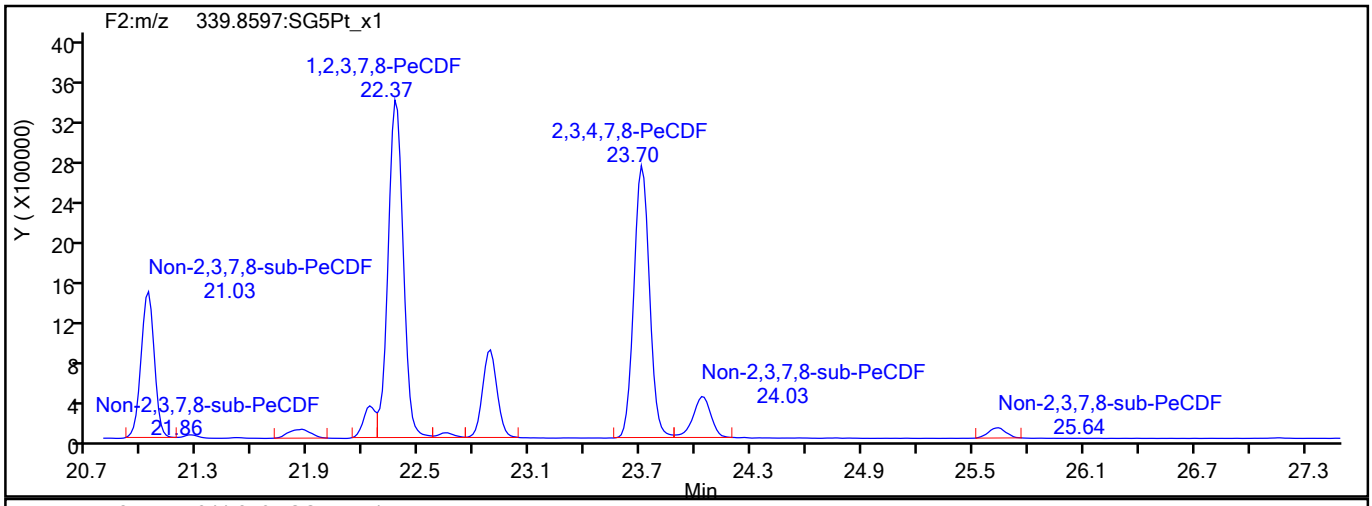

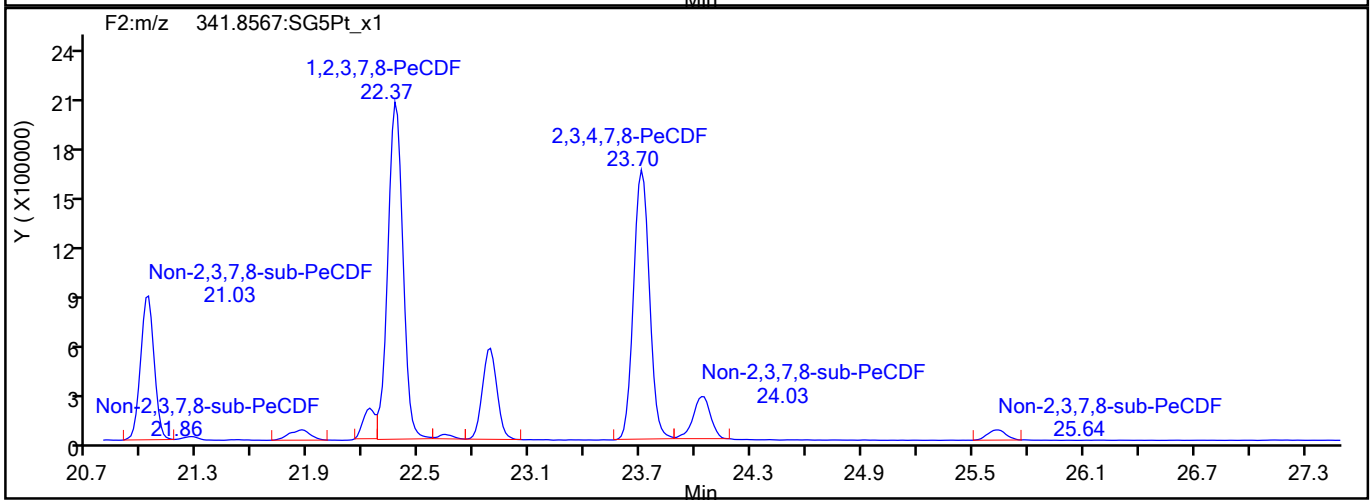

PeCDF Interference Mass

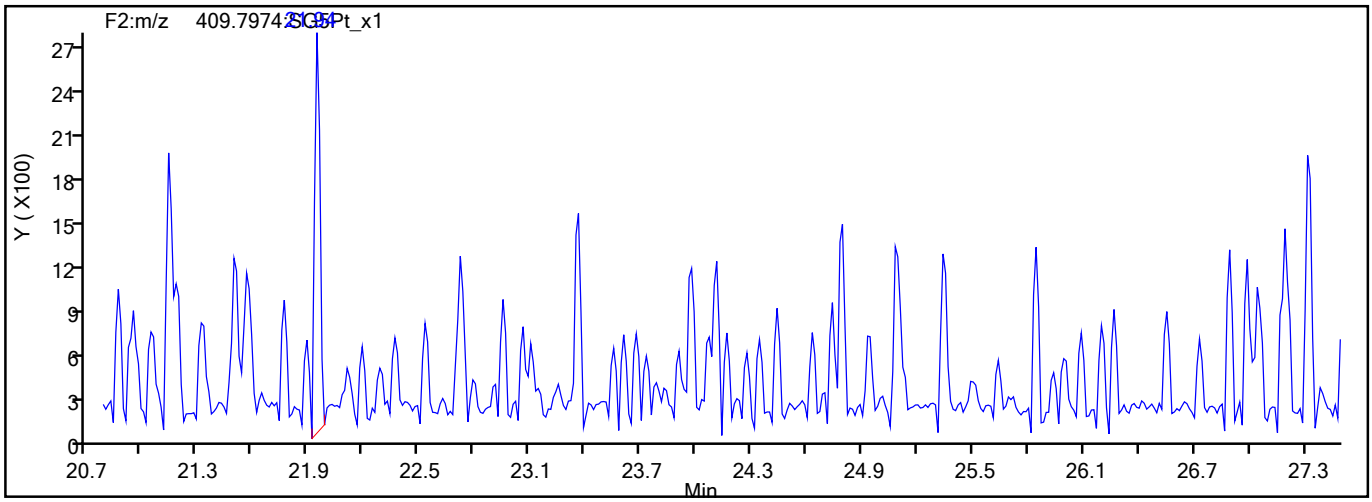

784877

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

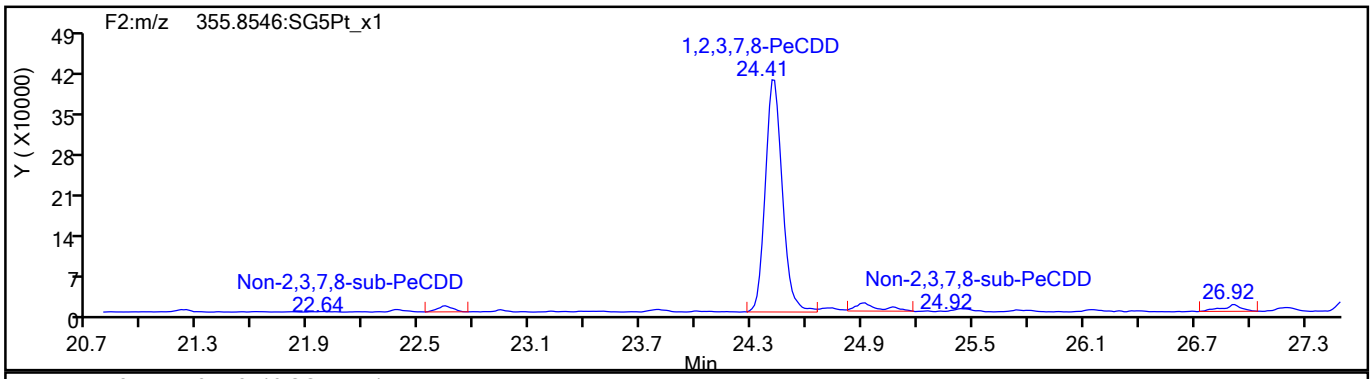

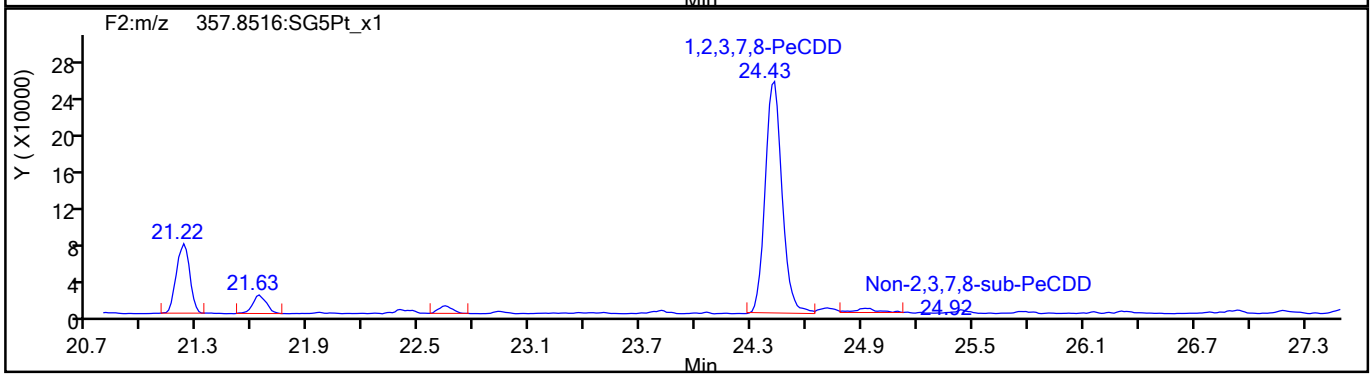

PeCDD Standards

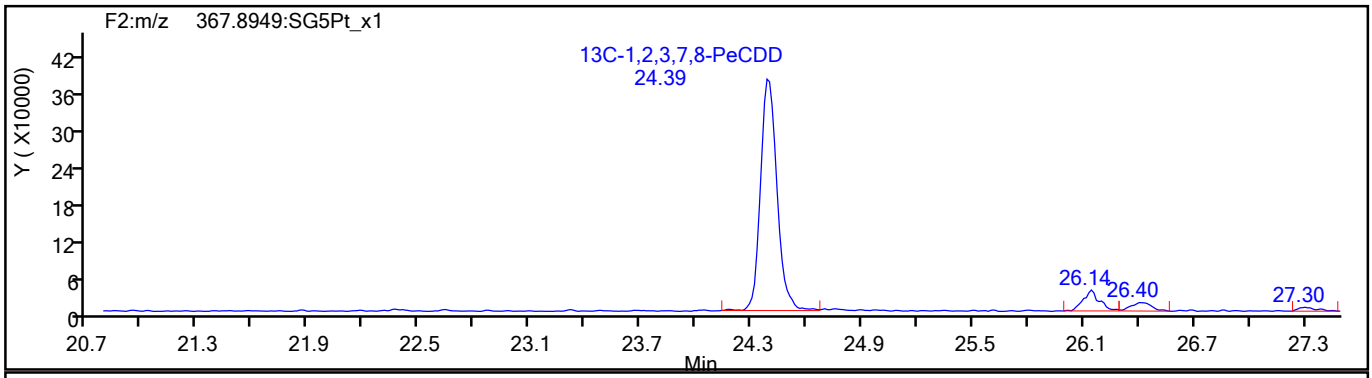

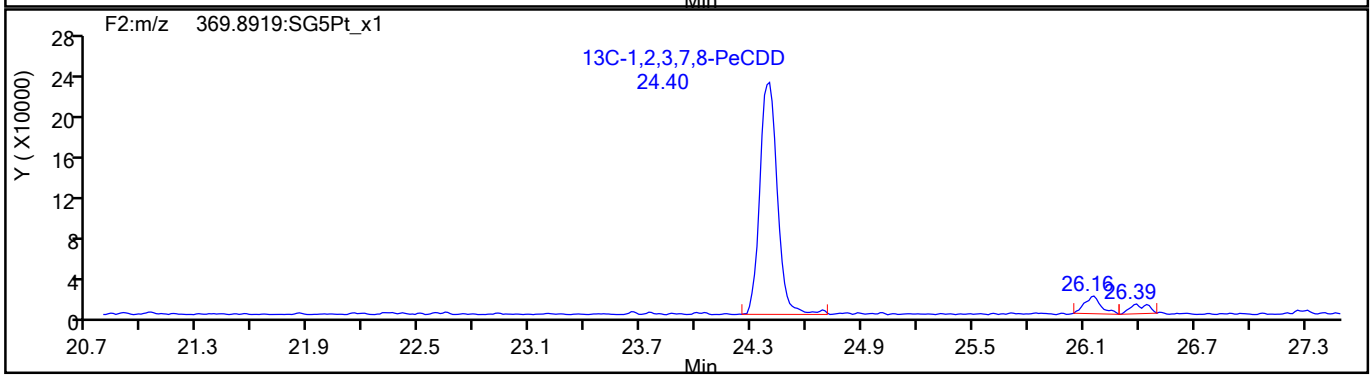

784878

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

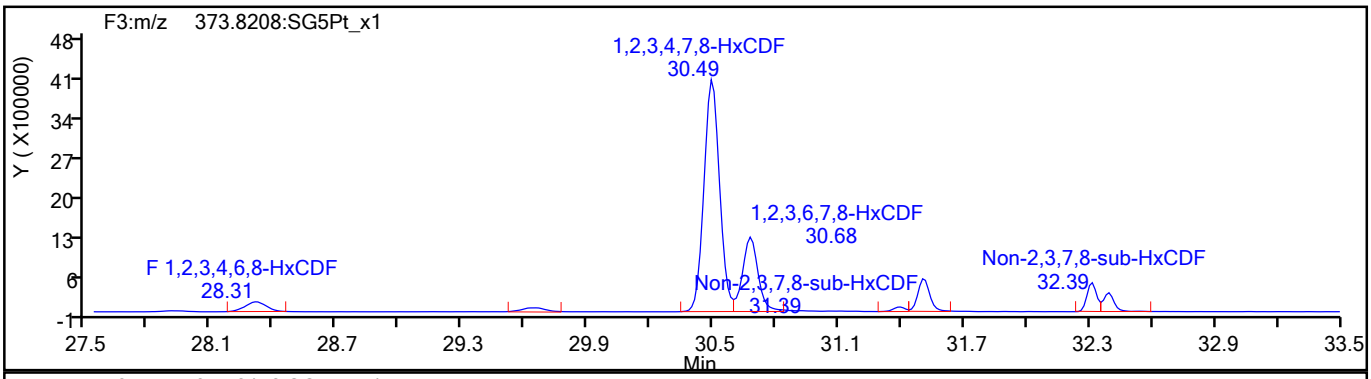

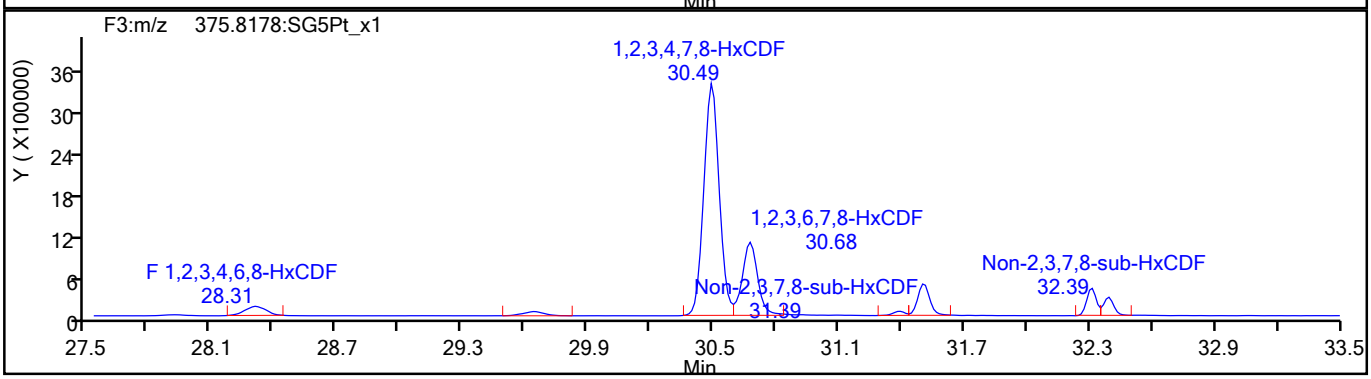

HxCDF Standards

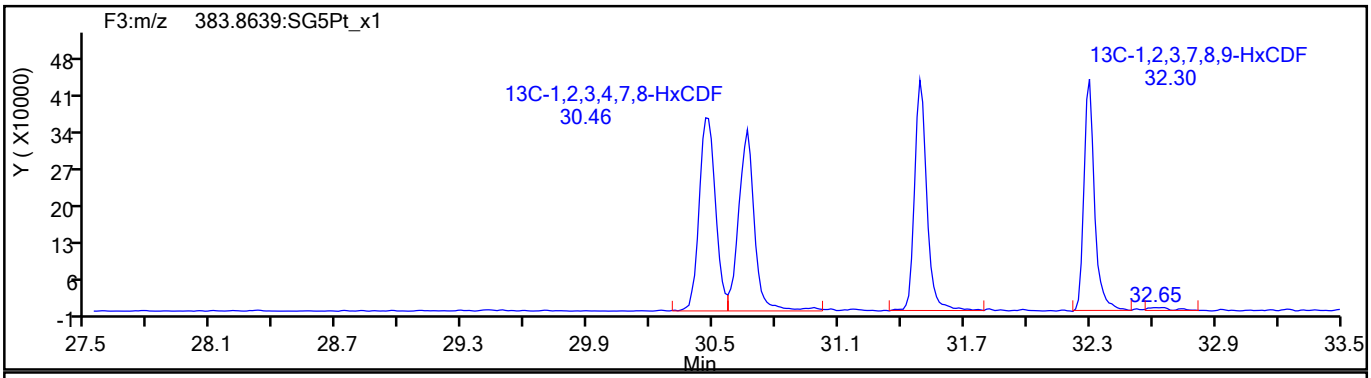

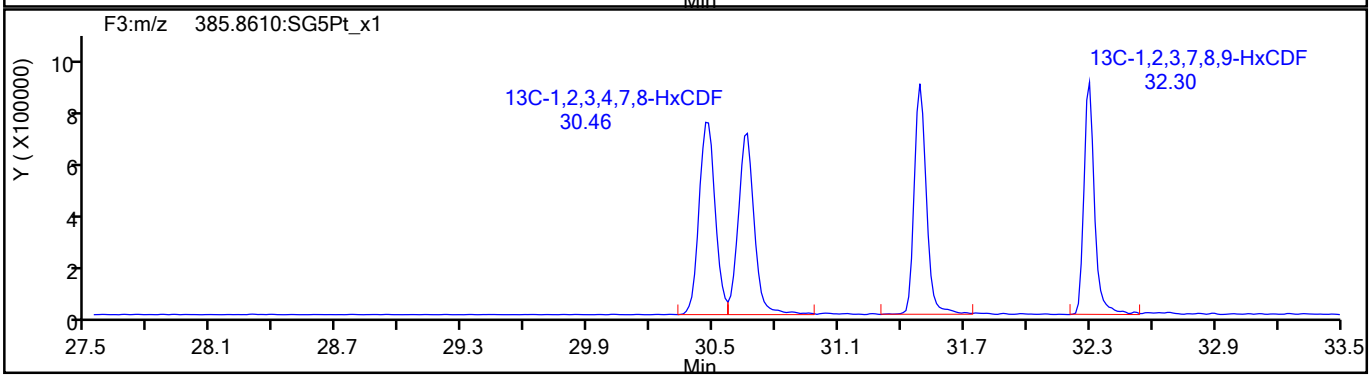

784879

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

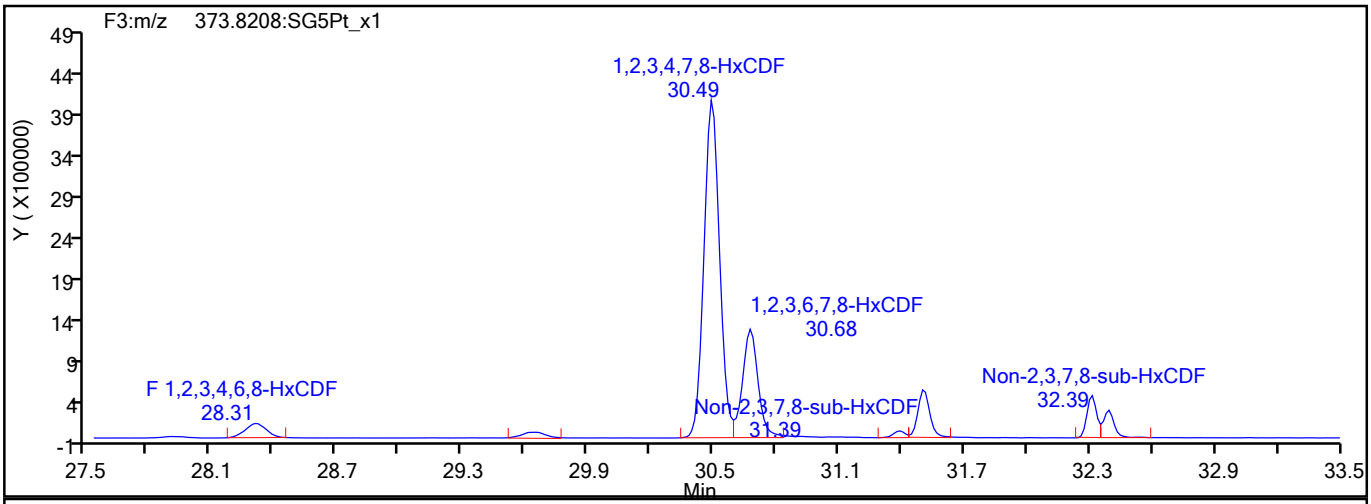

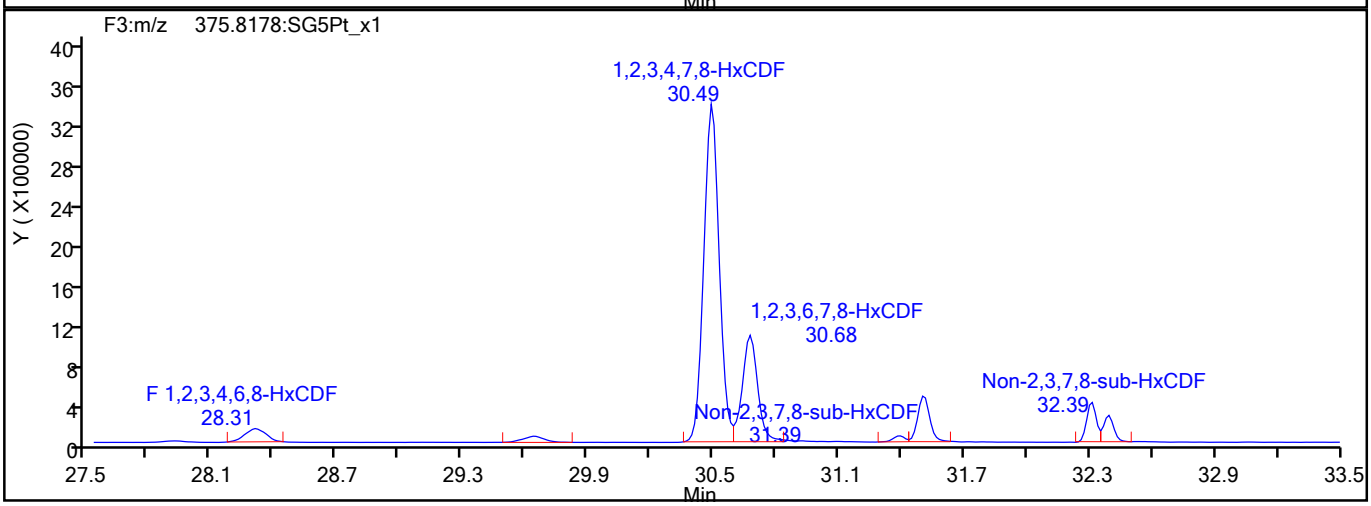

HxCDF Interference Mass

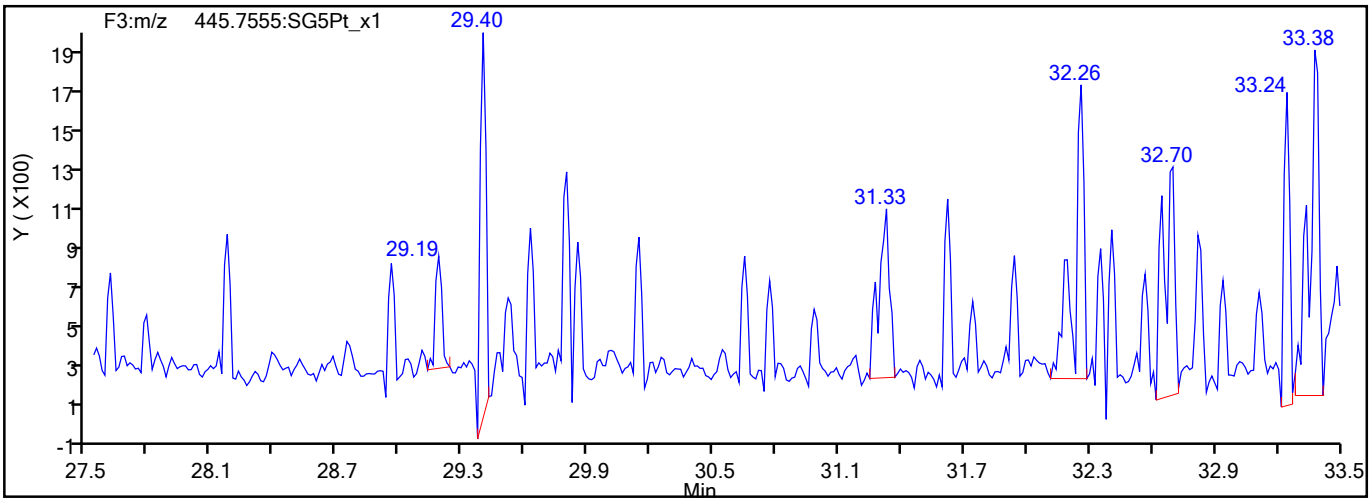

784880

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

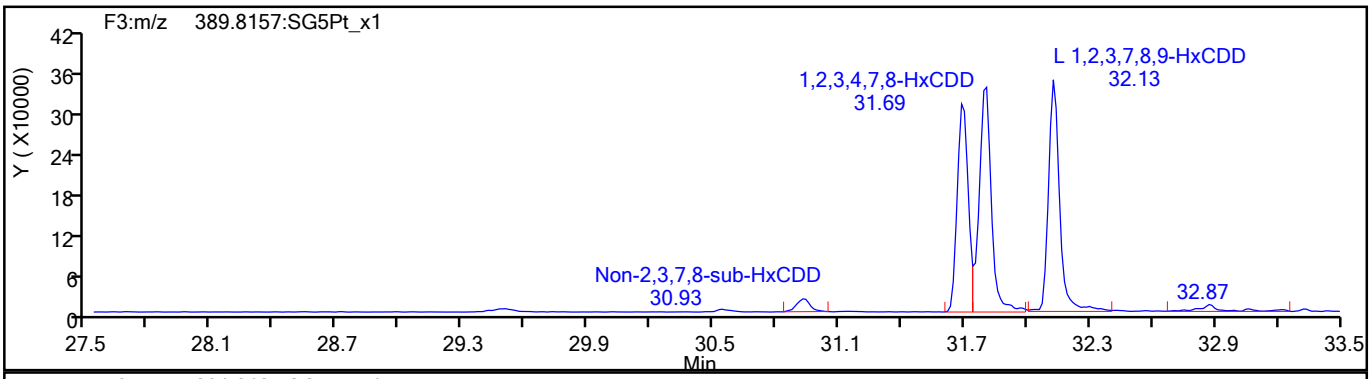

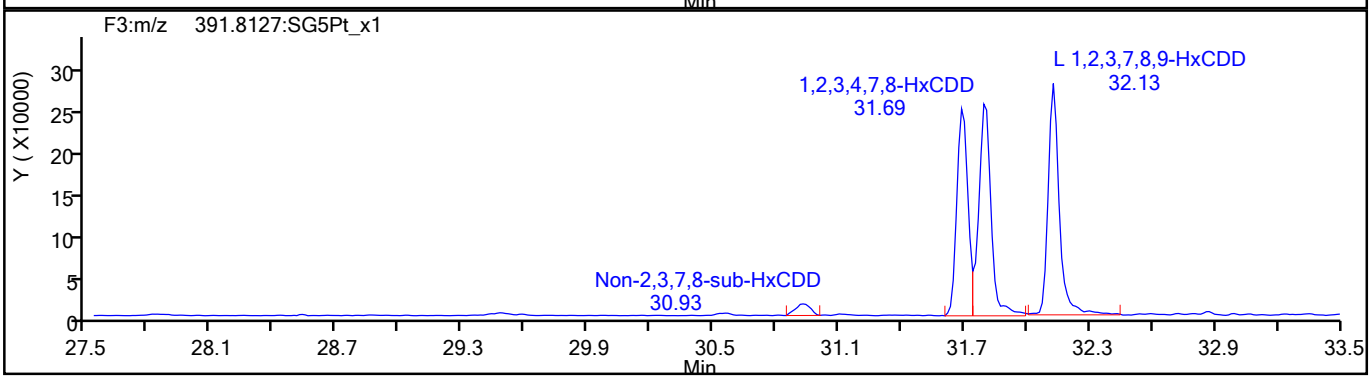

HxCDD Standards

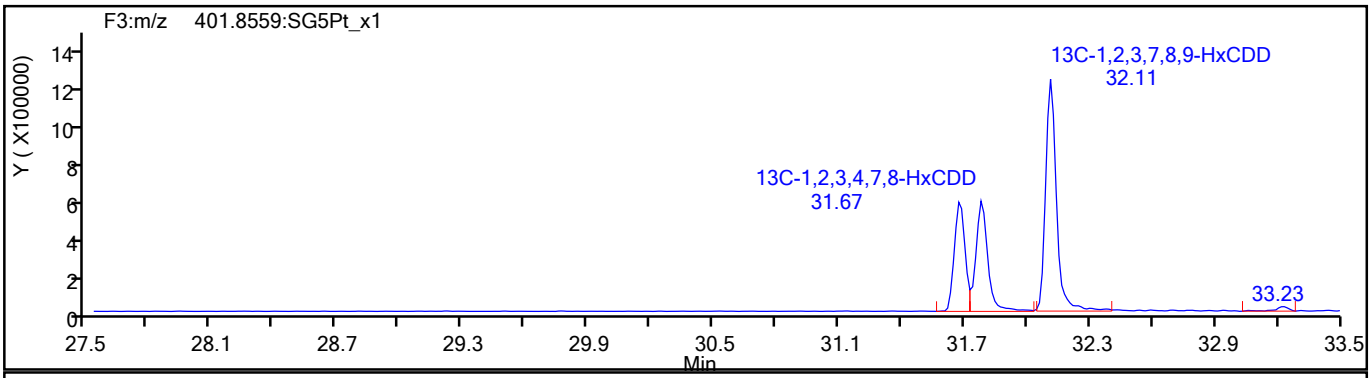

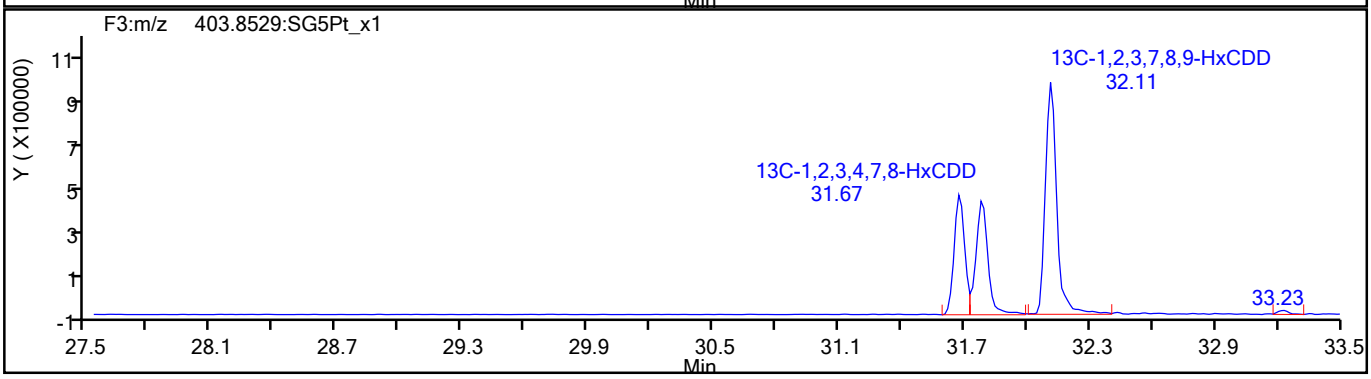

784881

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

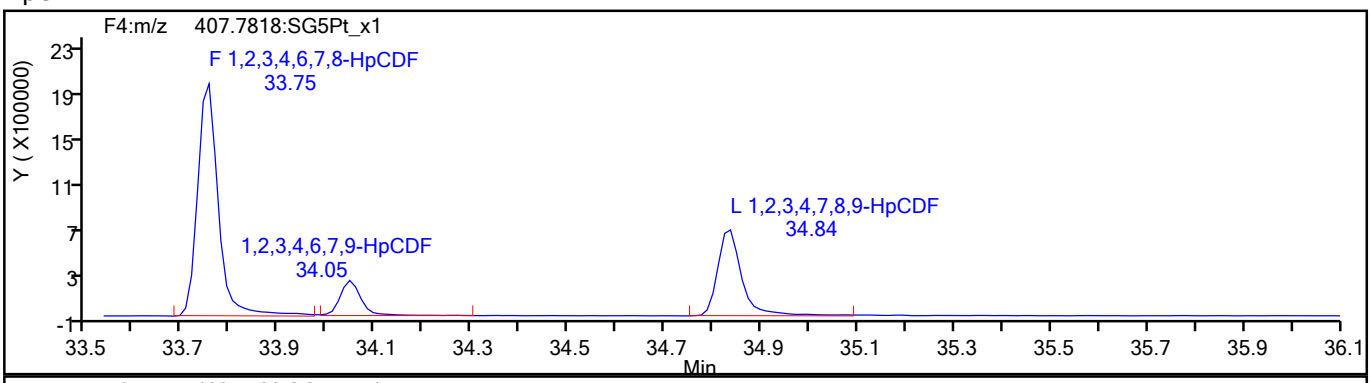

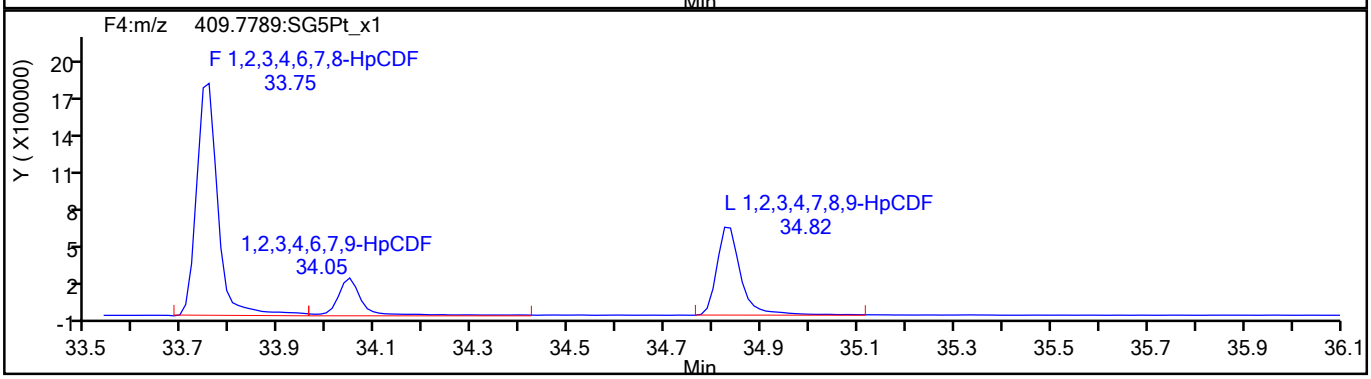

HpCDF Standards

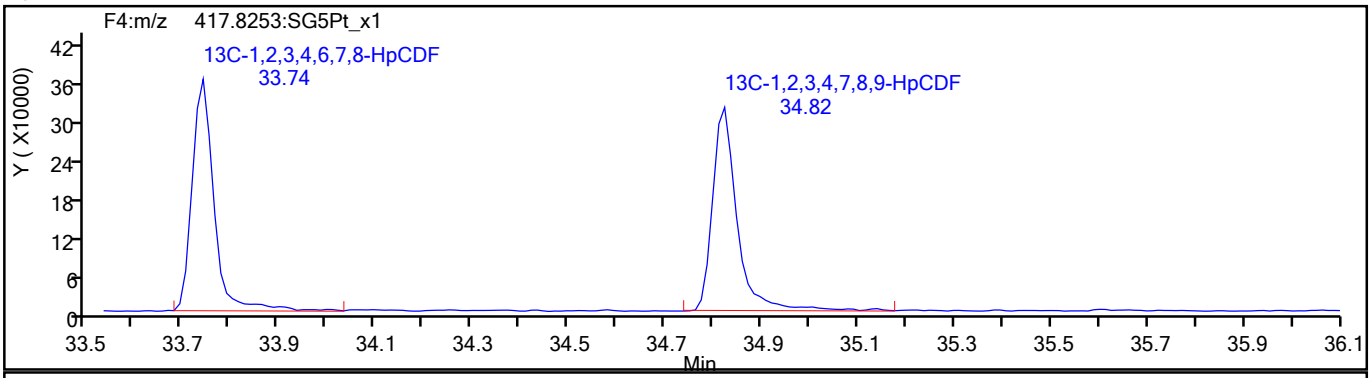

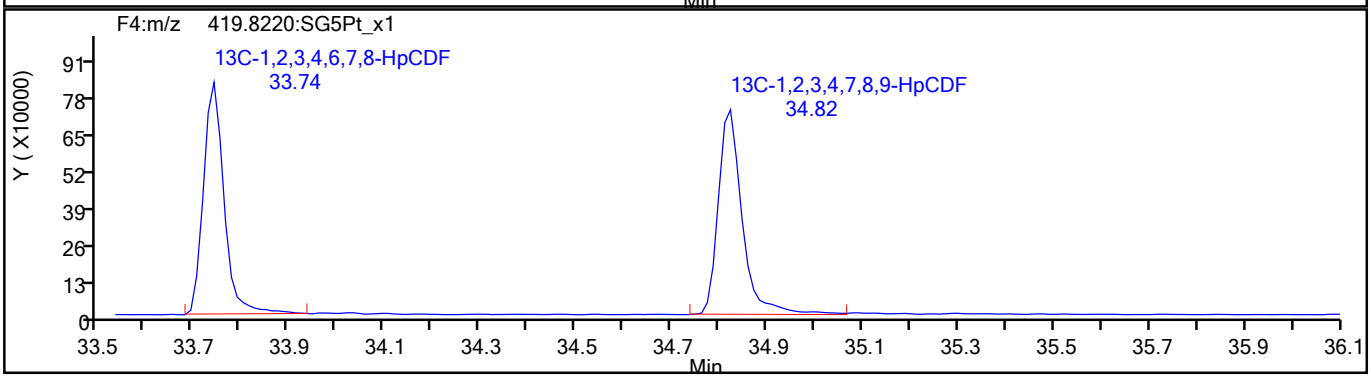

784882

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

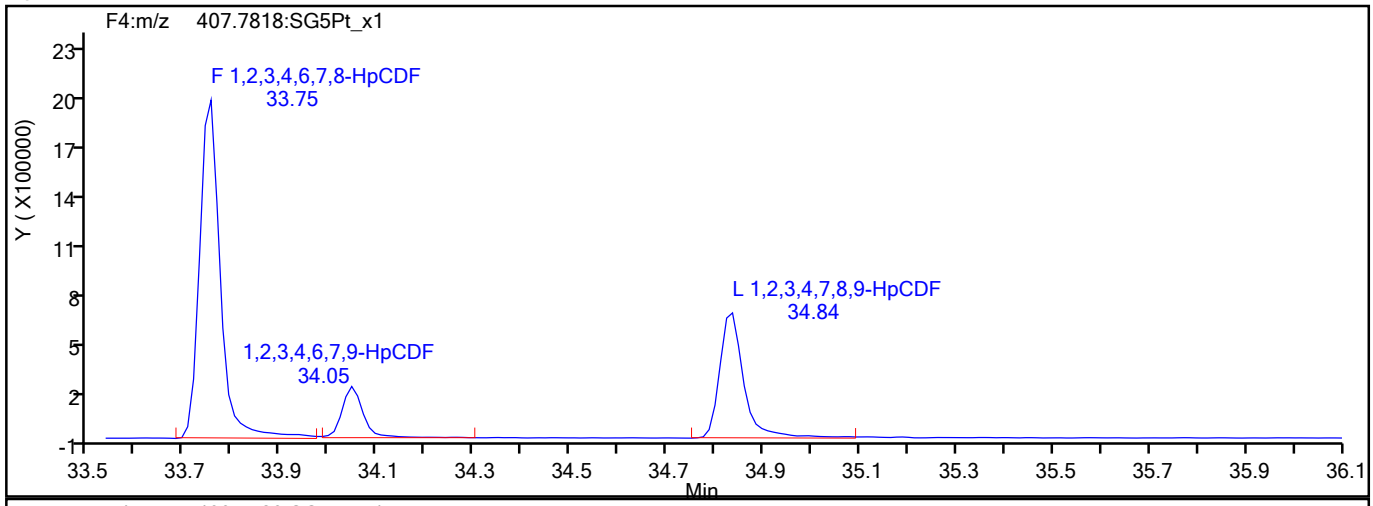

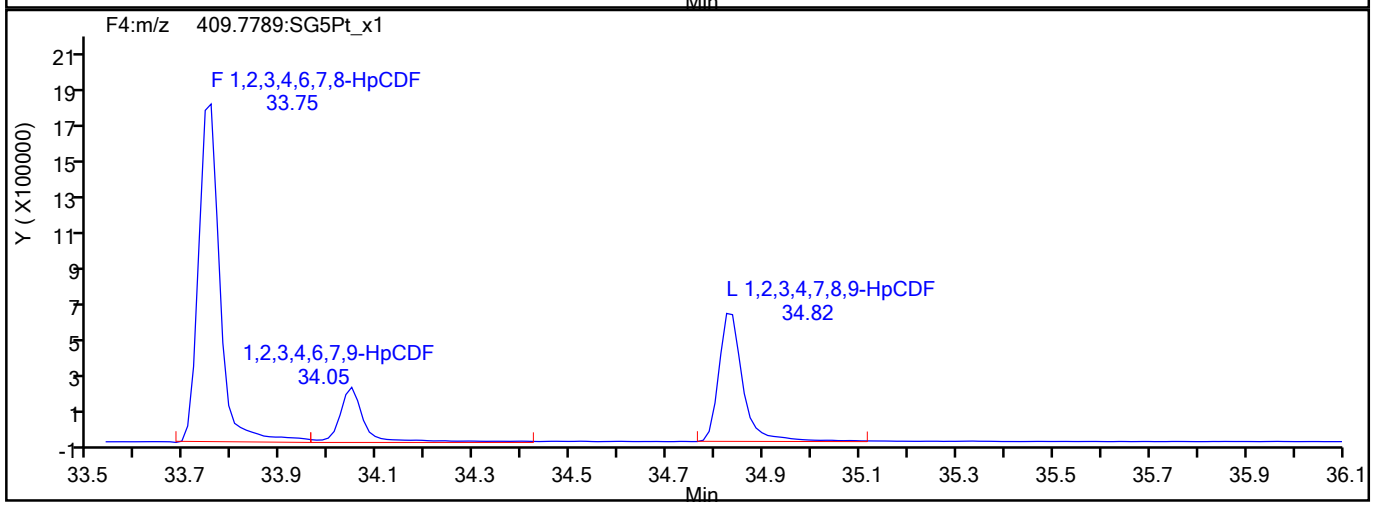

HpCDF Interference Mass

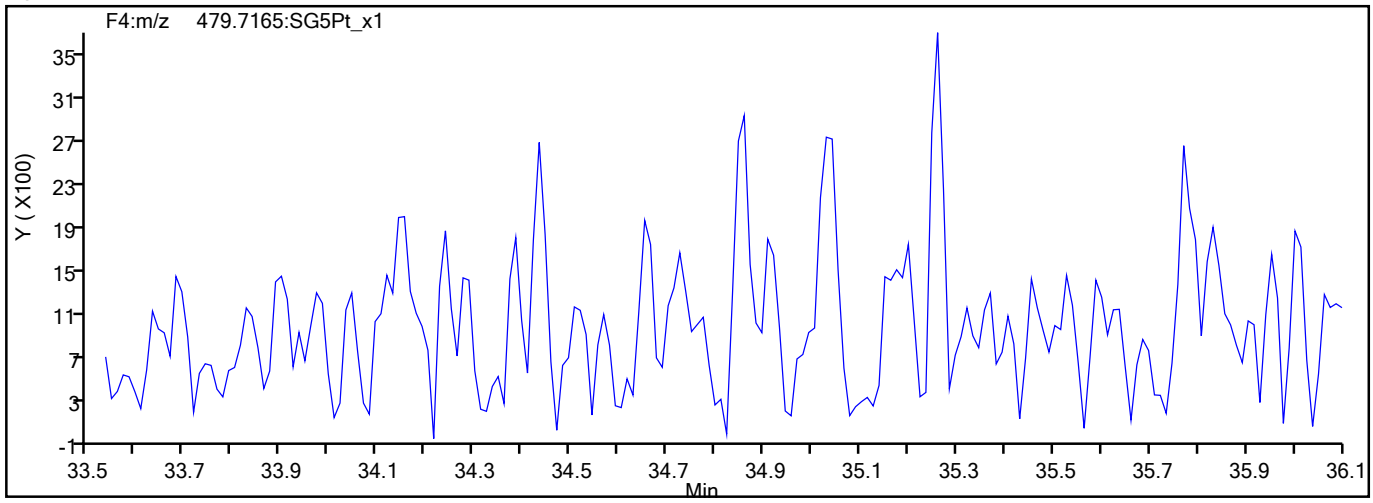

784883

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

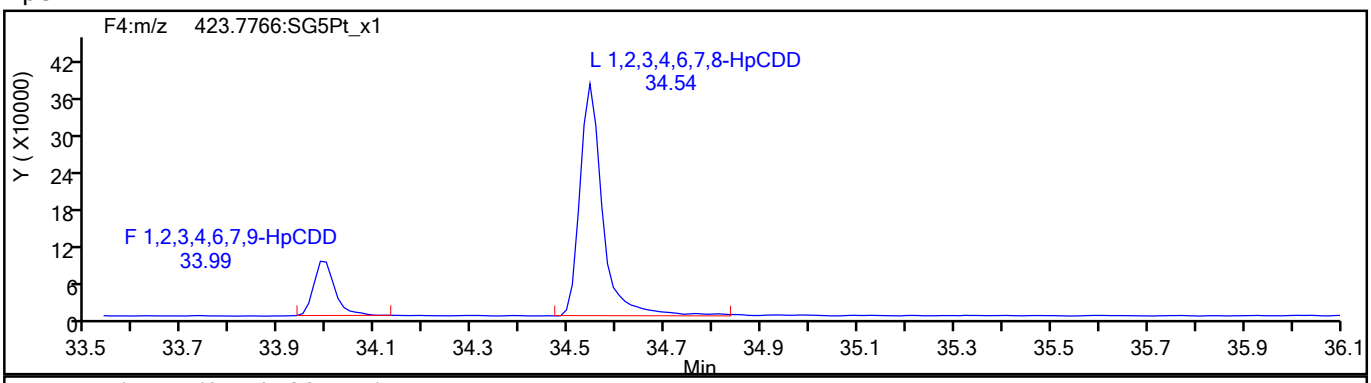

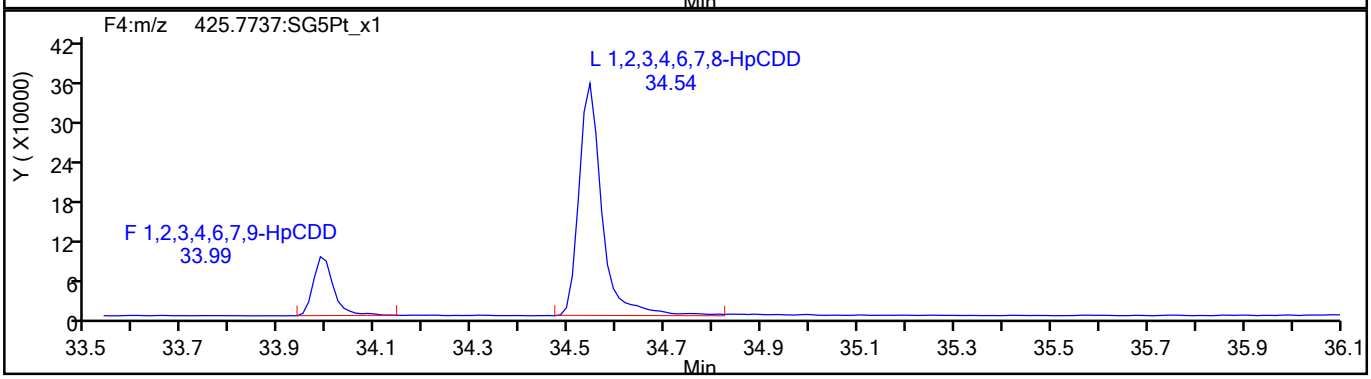

HpCDD Standards

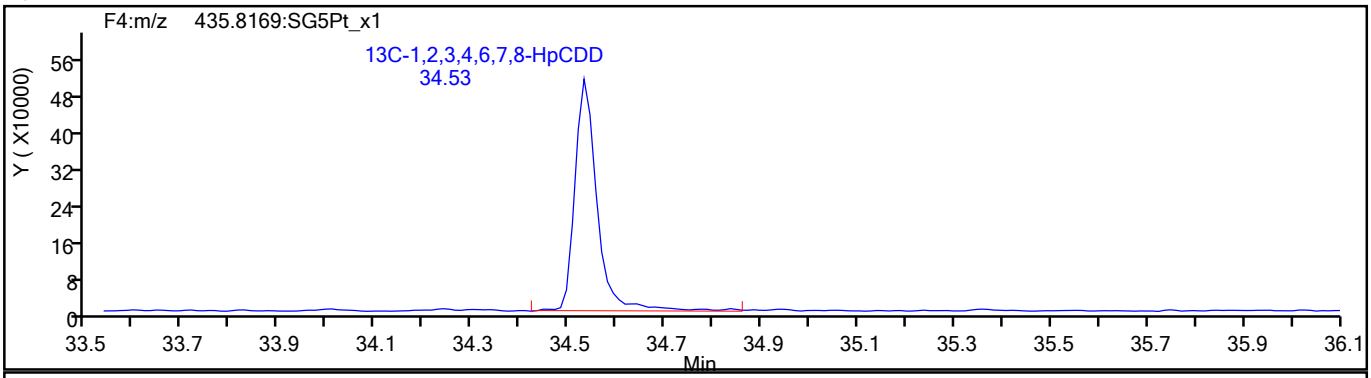

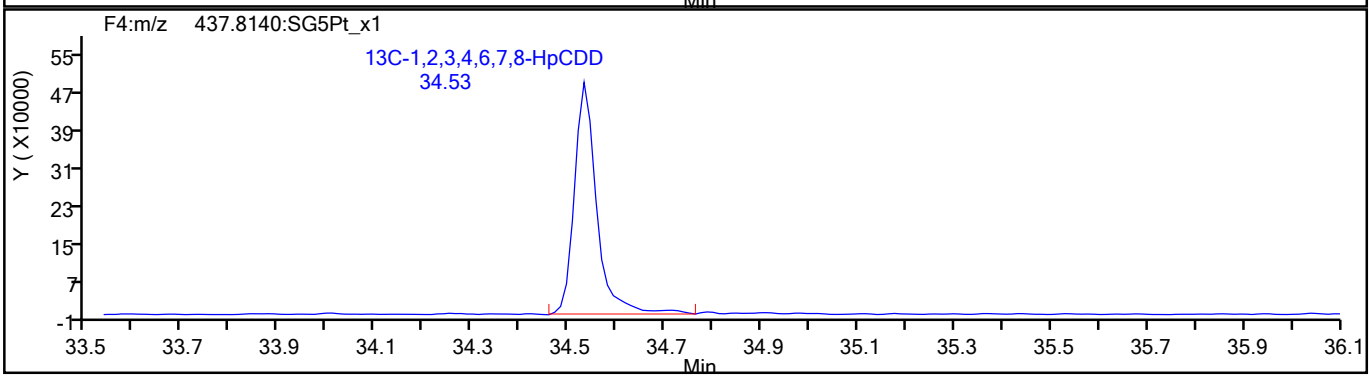

784884

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

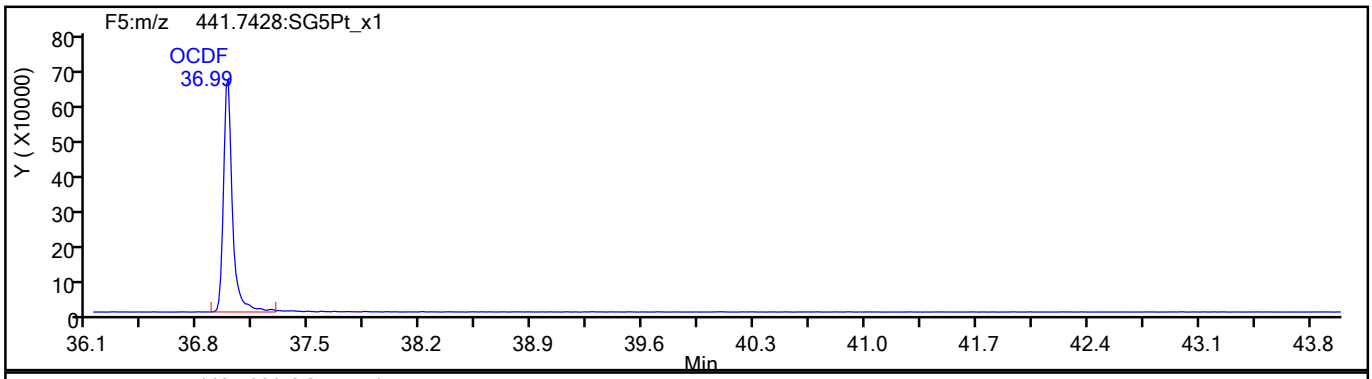

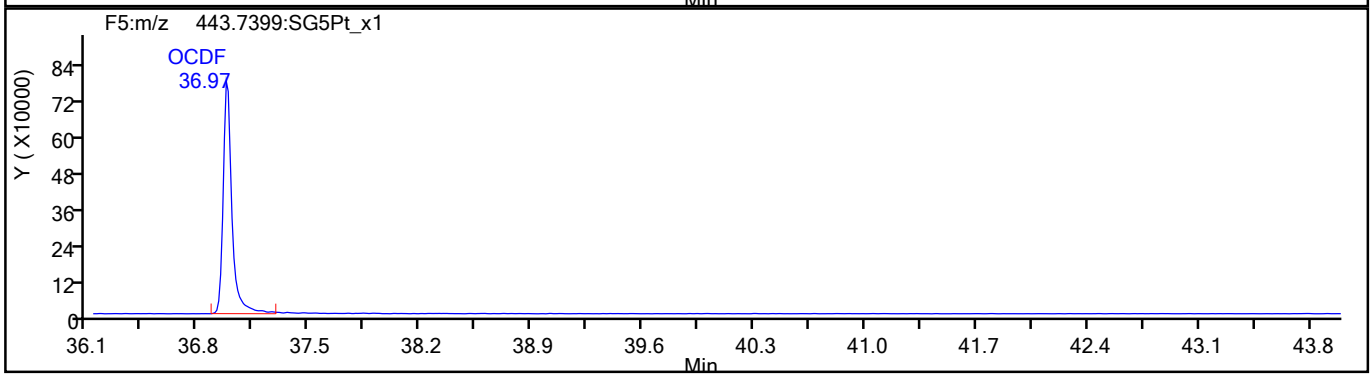

OCDF Standards

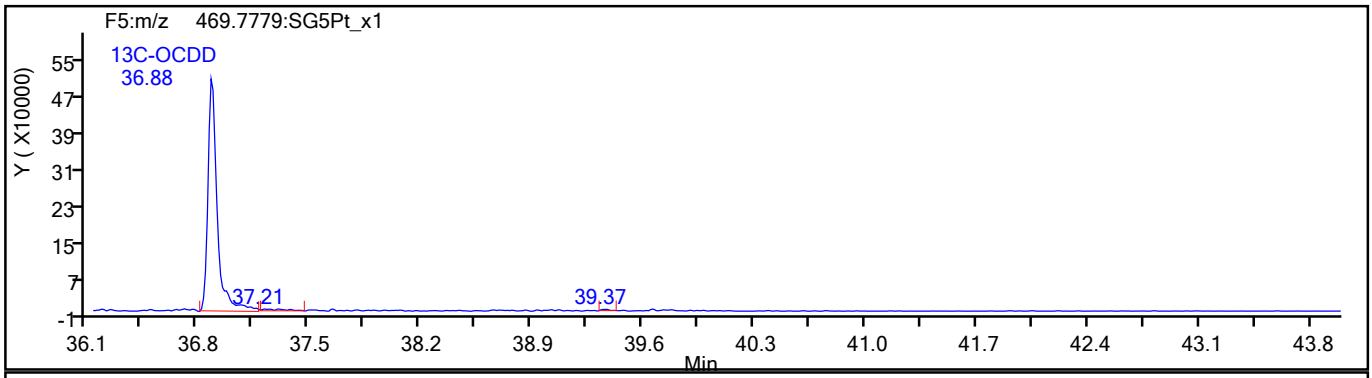

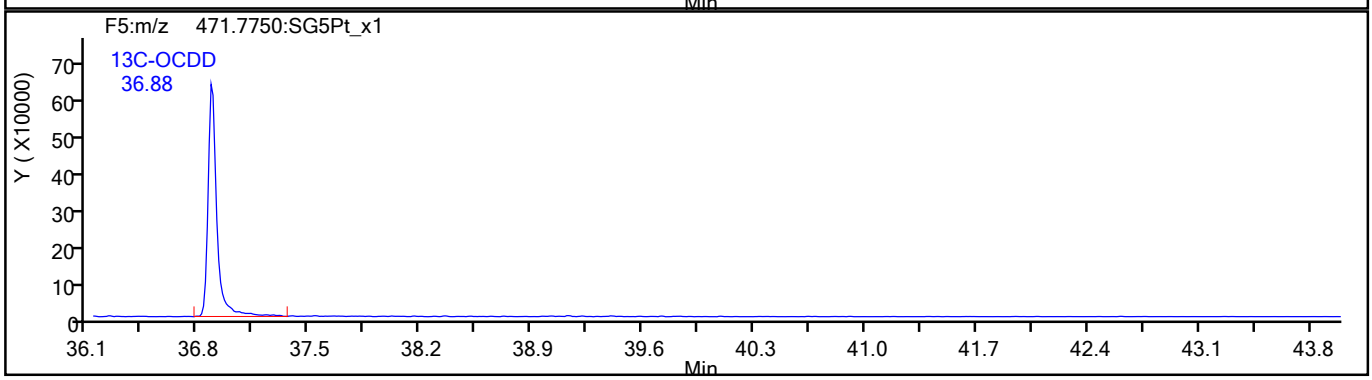

784885

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

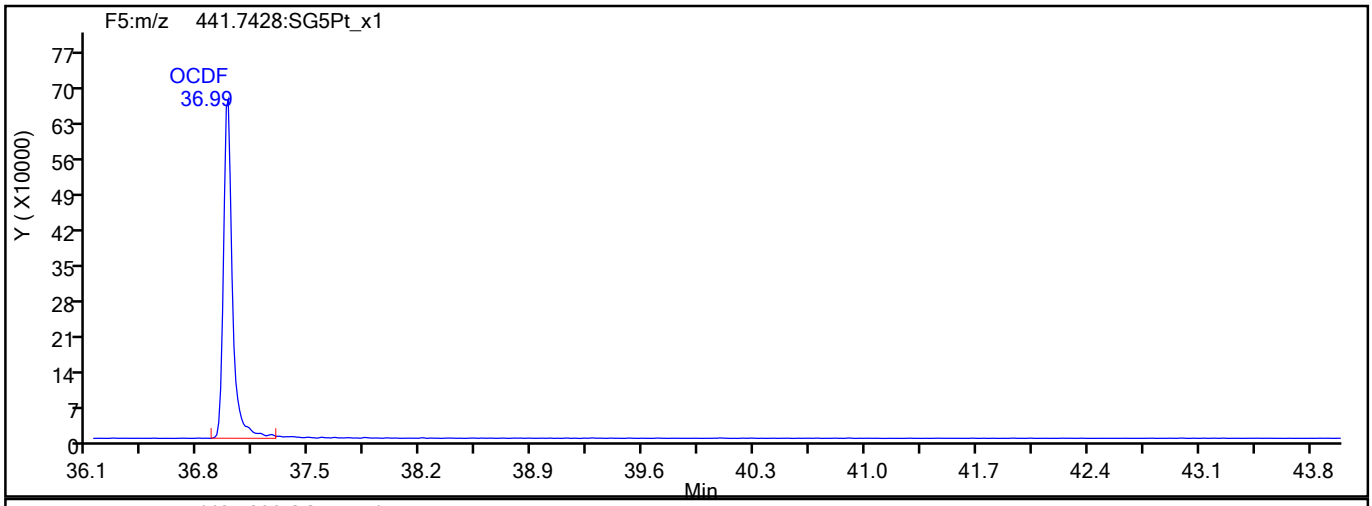

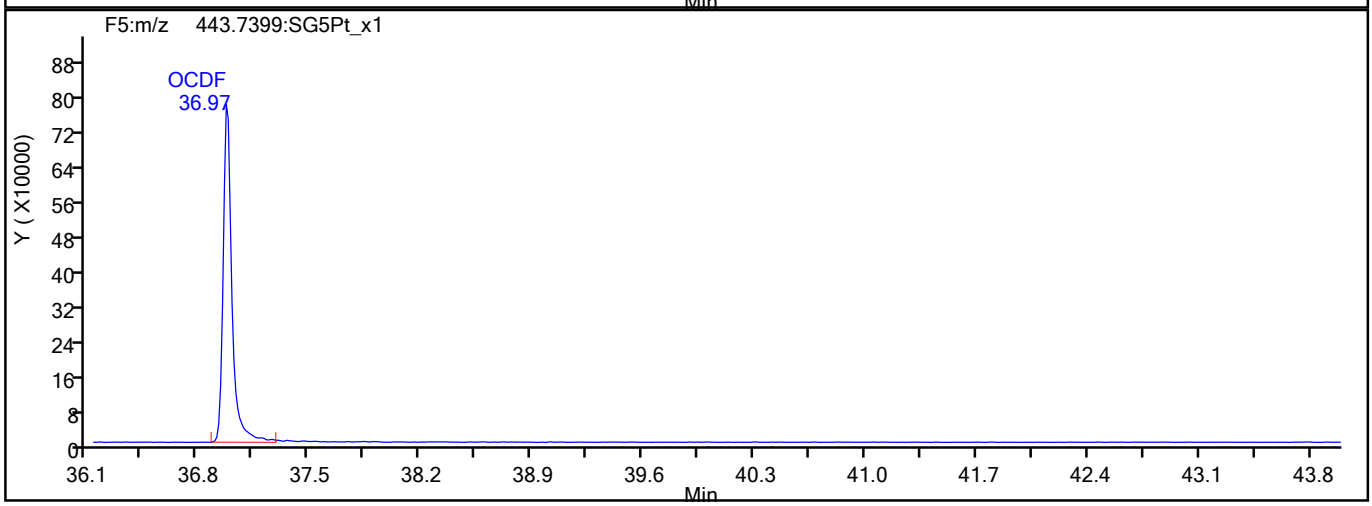

OCDF Interference Mass

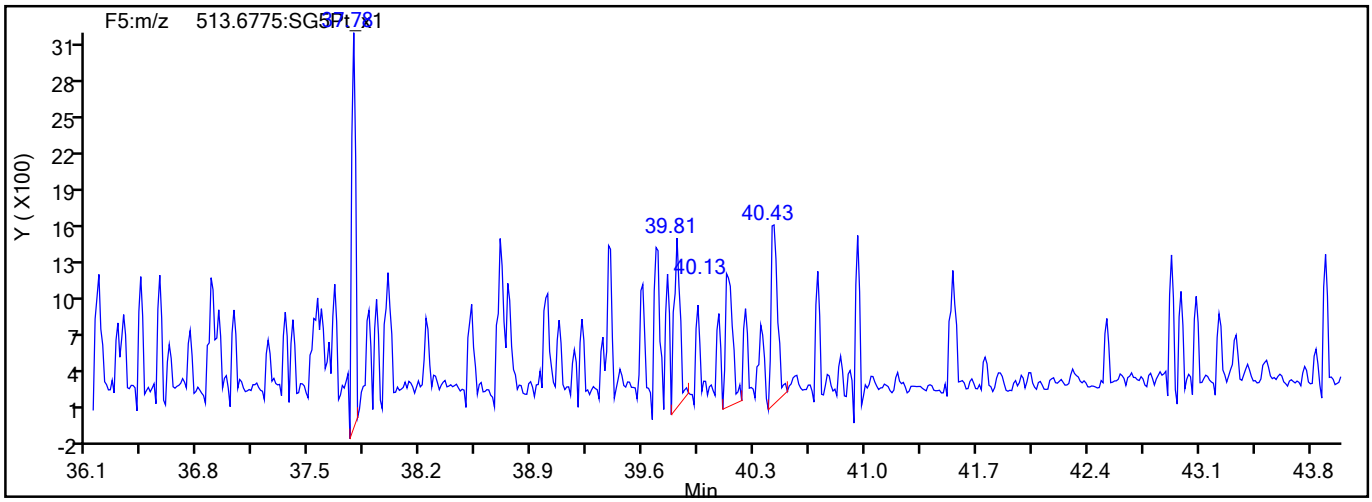

784886

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

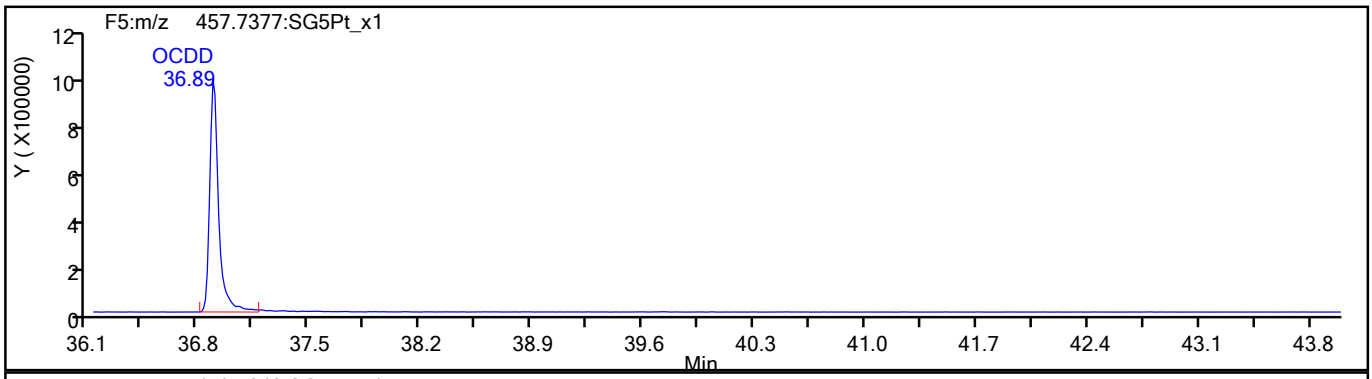

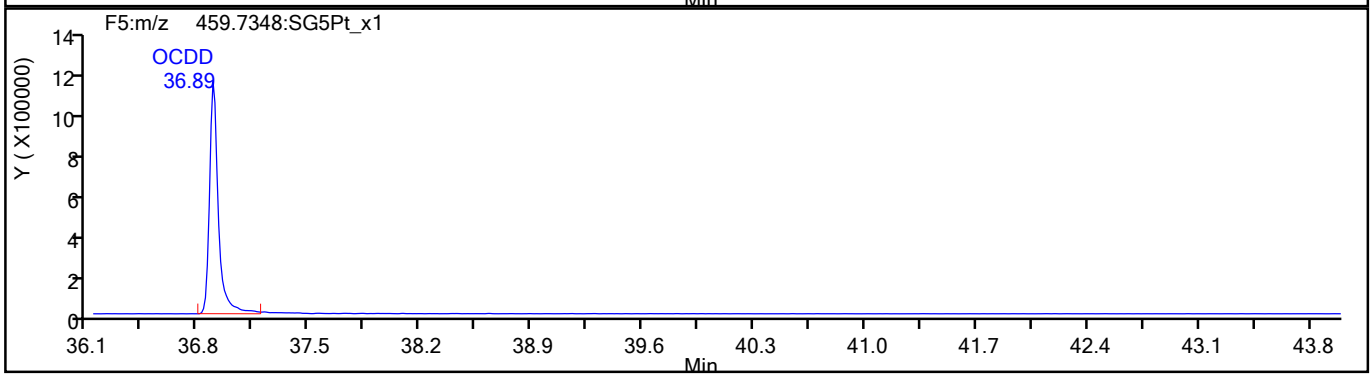

OCDD Standards

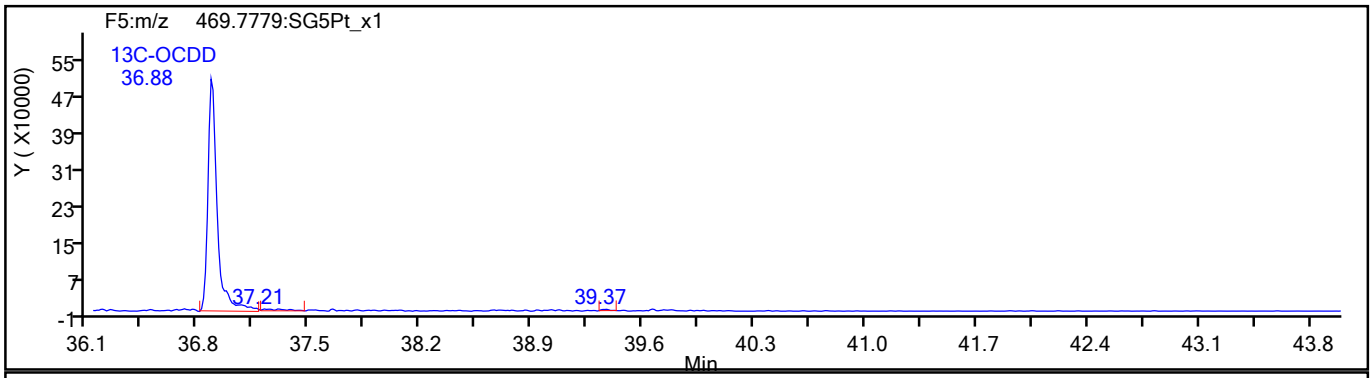

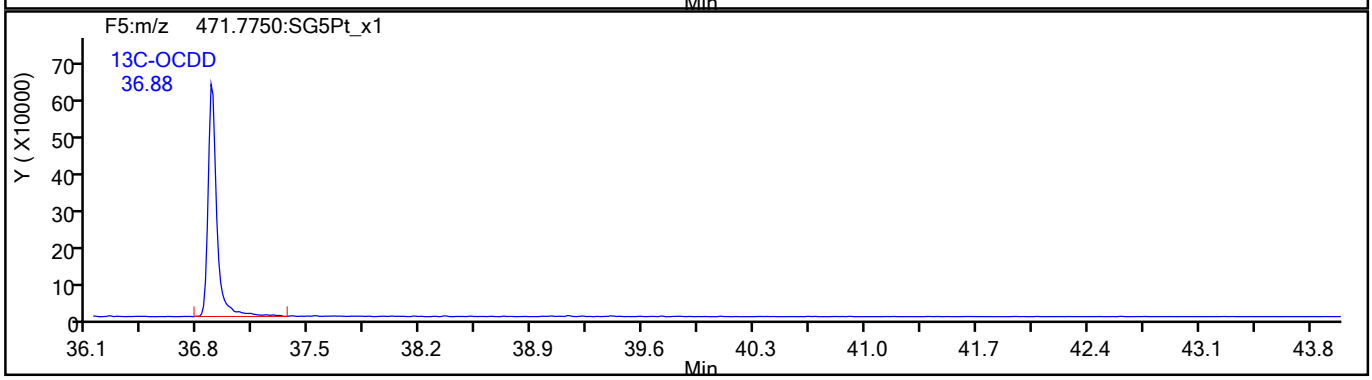

784887

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

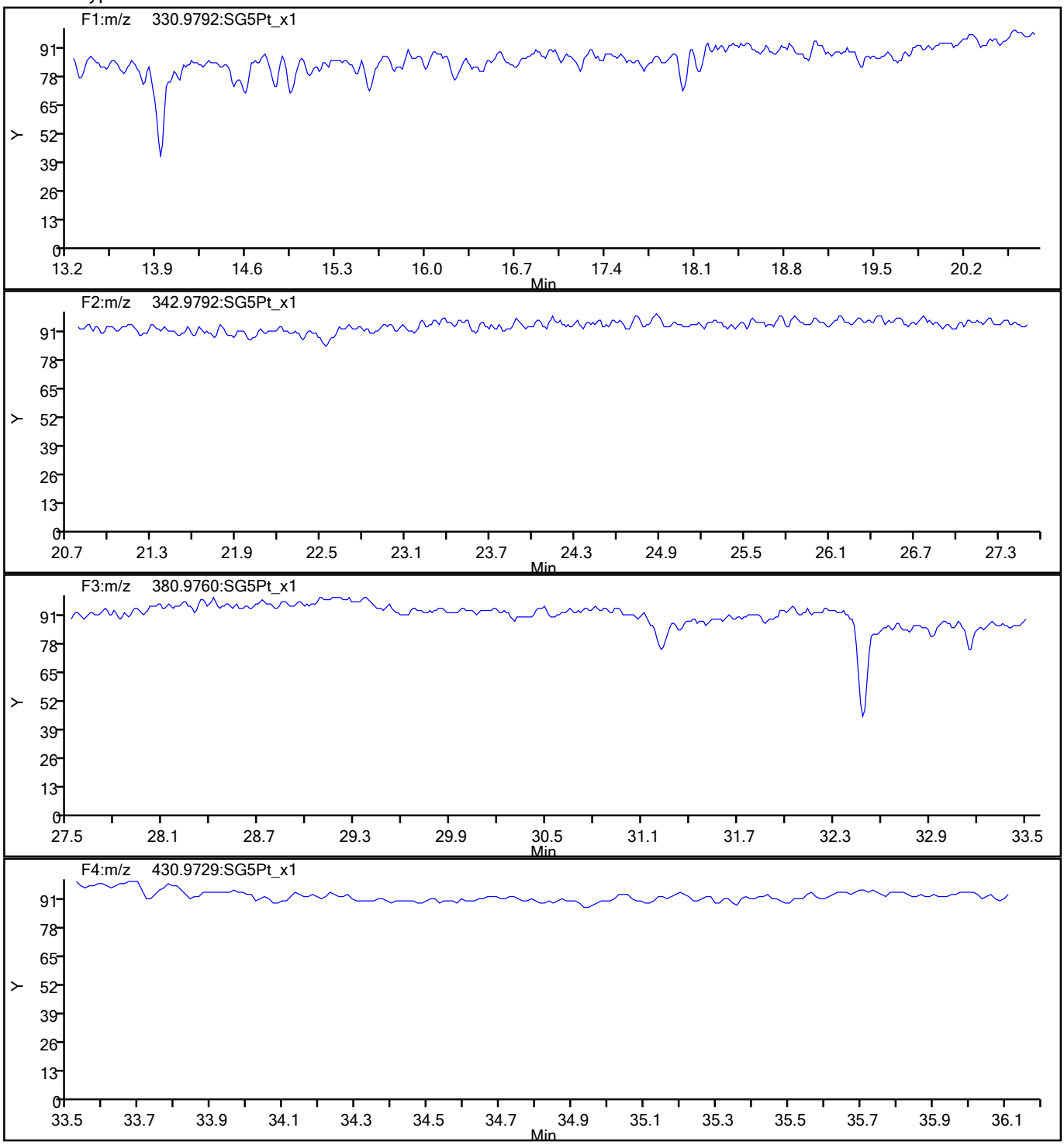

784888

Report Date: 19-Aug-2021 13:08:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_9.d		
Injection Date:	18-Aug-2021 20:19:26	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

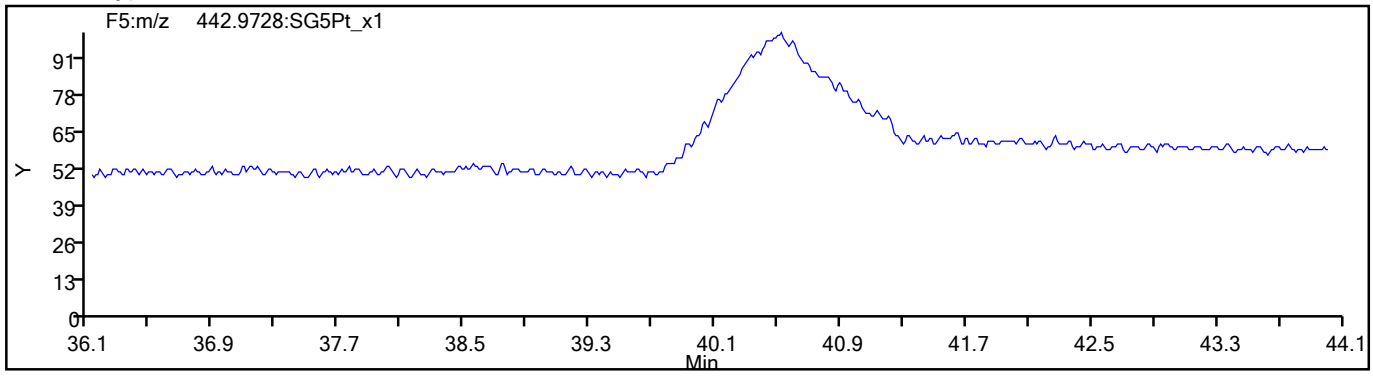

784889

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76887-A-2-B MS RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_016.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.12(g)
Date Analyzed: 08/25/2021 22:33
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	71100		66	66

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	44		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	65		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MS
Inject. Date: 25-Aug-2021 22:33:36 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-A-2-B MS X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:24:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.312	4042823	0.85	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.615	2363705	0.72	1.3327	4.387	4.387	1.547	1.547	43.87	M
2,3,7,8-TCDF	17.656	525927075	0.79	0.9978	2229.9	2229.9	2.079	2.079	2.2E+005	E
D 13C-2,3,7,8-TCDD	16.092	1828154	0.84	0.8749	5.168	5.168	9.607	9.607	51.68	nM
2,3,7,8-TCDD	16.092	84946145	0.79	1.0570	439.6	439.6	2.237	2.237	43960	Ea
$ 37Cl4-2,3,7,8-TCDD	16.078	913023		0.8648	2.611	2.611	0.3023	0.3023	65.28	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 26-Aug-2021 09:30:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d
Lims ID: 320-76887-A-2-B MS
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MS
Inject. Date: 25-Aug-2021 22:33:36 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-A-2-B MS X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:24:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.312	16.298	1		1854317	381077	137828	344570	3		M
333.9339	16.312	16.298	1		2188506	384866	119703	299257	3	0.85(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.615	17.615	0	1.080	992200	200704	28937	72342	7		M
317.9389	17.642	17.615	2	1.082	1371505	289503	34243	85607	8	0.72(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.656	17.628	2	1.002	231682445	43323024	16082	40205	2694		
305.8987	17.656	17.628	2	1.002	294244630	54591779	24586	61465	2220	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.092	16.065	2	0.987	832065	163518	137828	344570	1		M
333.9339	16.078	16.065	1	0.986	996089	224396	119703	299257	2	0.84(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.092	16.078	1	1.000	37563053	8232449	23151	57877	356		a
321.8936	16.092	16.078	1	1.000	47383092	10260153	13537	33842	758	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.078	16.078	0	0.986	913023	169884	8010	20025	21		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d				
Injection Date:	25-Aug-2021 22:33:36	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.61
Area: 688157
Amount: 6.248947
Amount Units: pg/ul

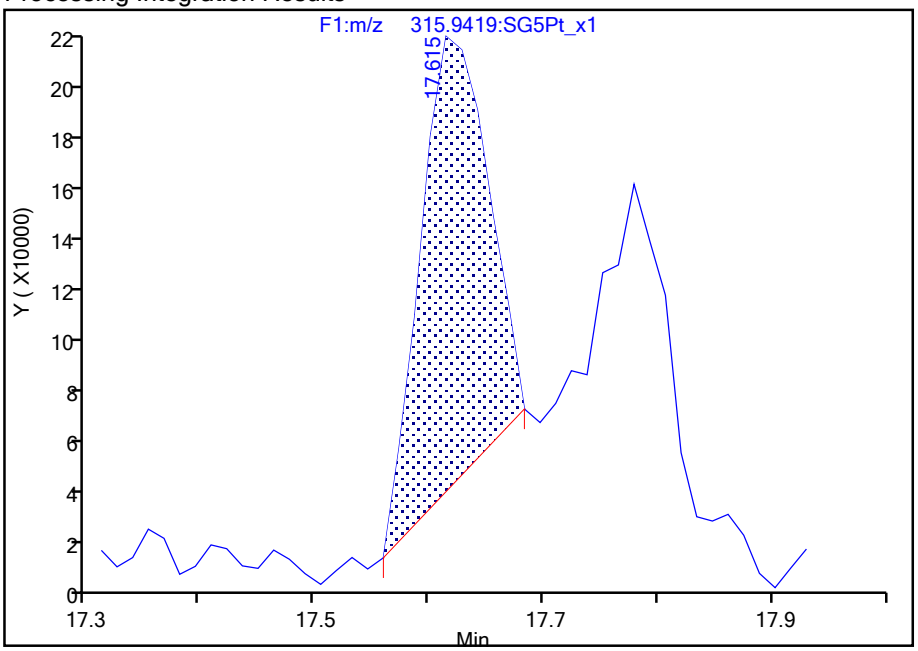

Manual Integration Results

RT: 17.61
Area: 992200
Amount: 4.387132
Amount Units: pg/ul

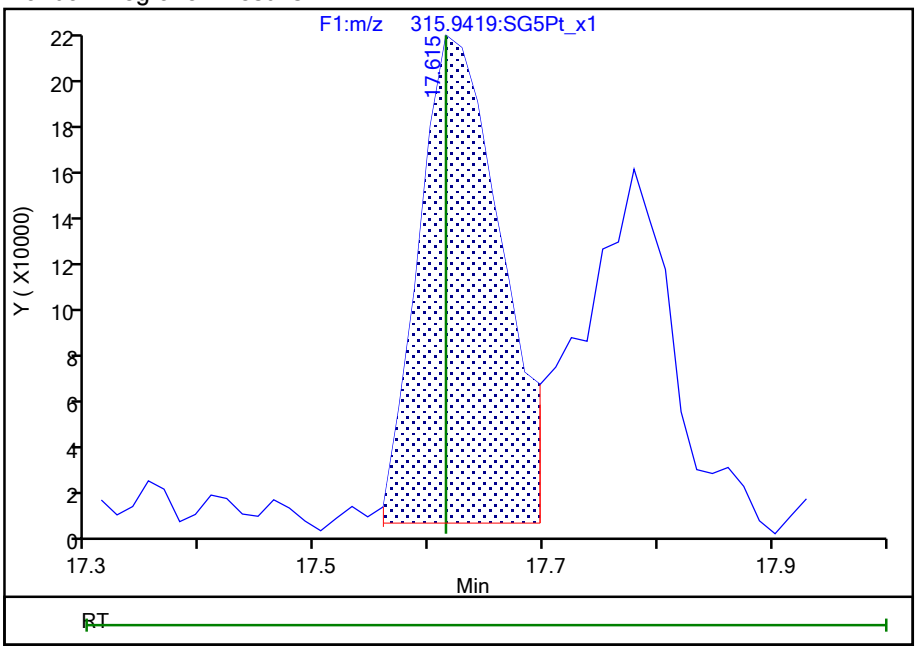

Reviewer: stephensk, 26-Aug-2021 09:23:35

Audit Action: Manually Integrated Audit Reason: Poor chromatography

784893

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d				
Injection Date:	25-Aug-2021 22:33:36	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.64
Area: 2678659
Amount: 6.248947
Amount Units: pg/ul

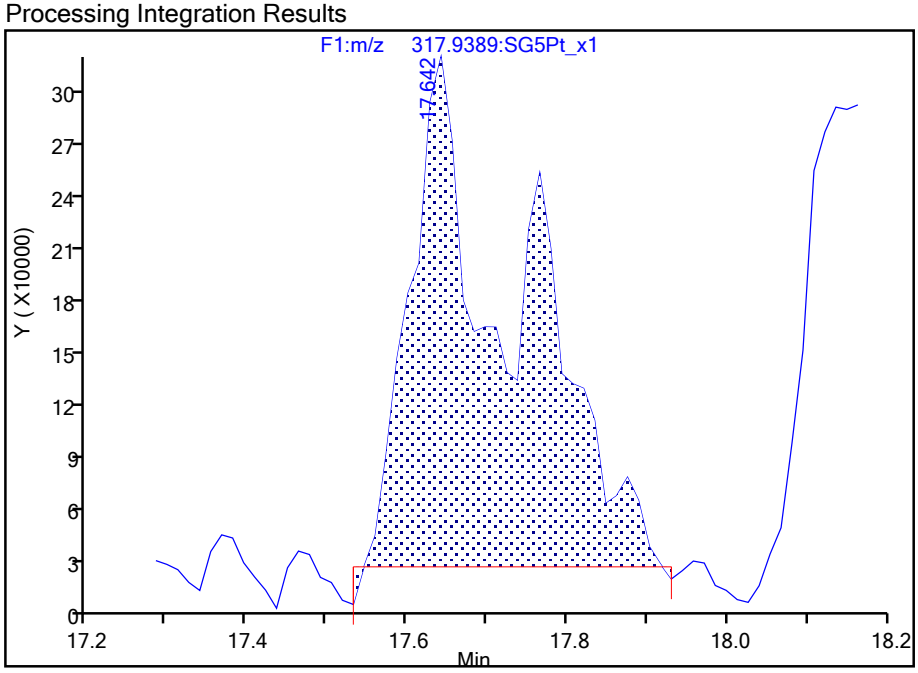

Manual Integration Results

RT: 17.64
Area: 1371505
Amount: 4.387132
Amount Units: pg/ul

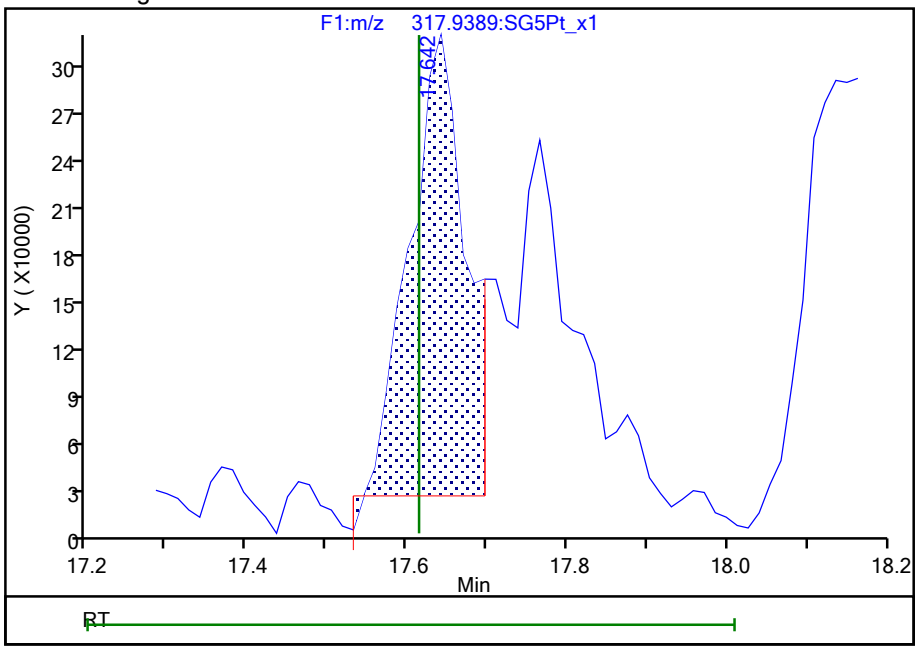

Reviewer: stephensk, 26-Aug-2021 09:23:39

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d				
Injection Date:	25-Aug-2021 22:33:36	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-B MS				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

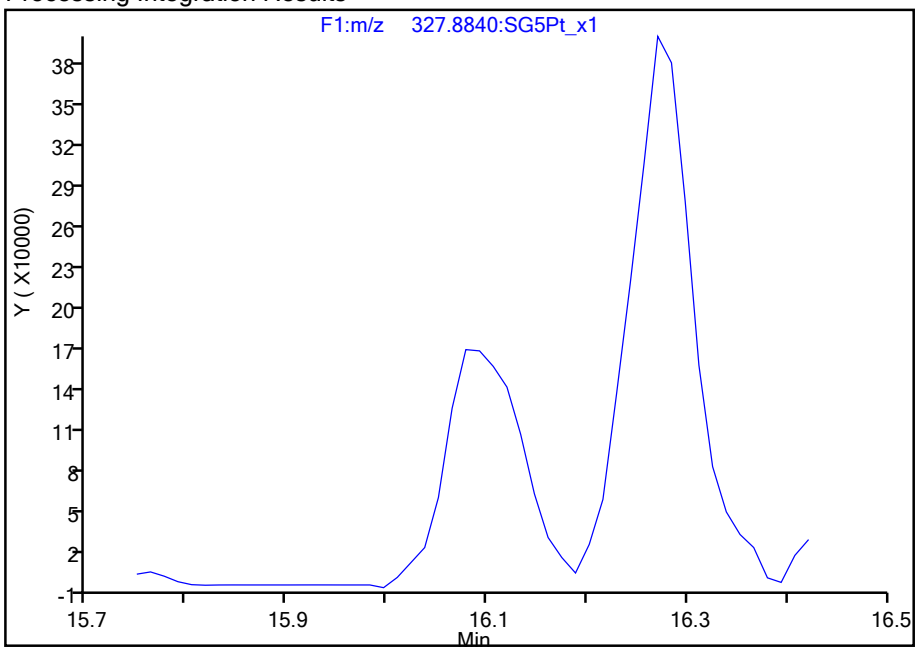

Manual Integration Results

RT: 16.08
Area: 913023
Amount: 2.611399
Amount Units: pg/ul

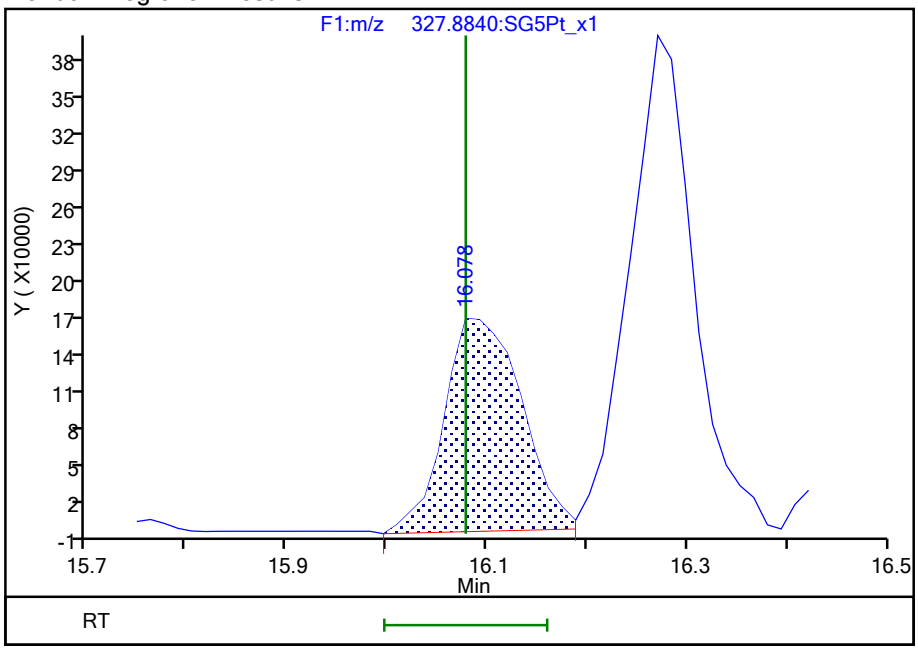

Reviewer: stephensk, 26-Aug-2021 09:24:50
Audit Action: Assigned Compound ID Audit Reason: Retention Time Shift

784895

Report Date: 26-Aug-2021 09:30:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d		
Injection Date:	25-Aug-2021 22:33:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

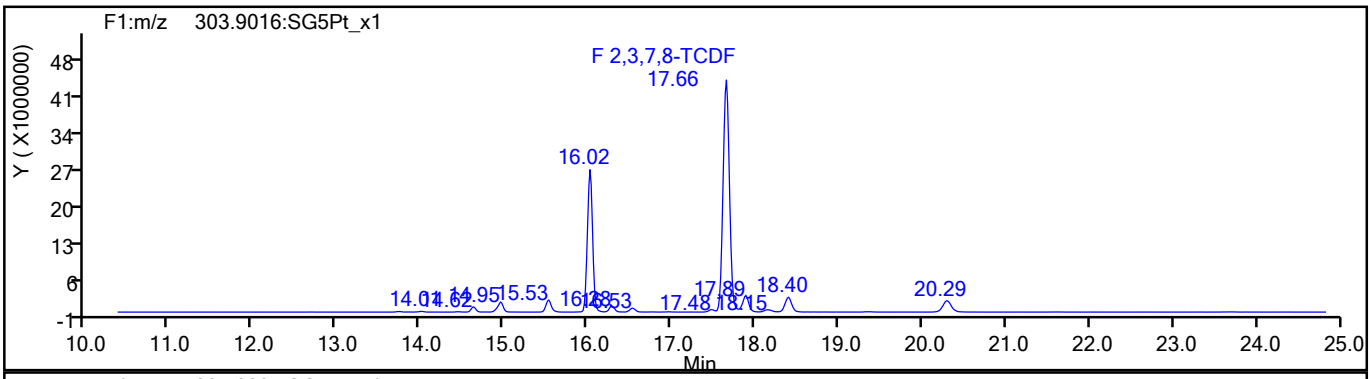

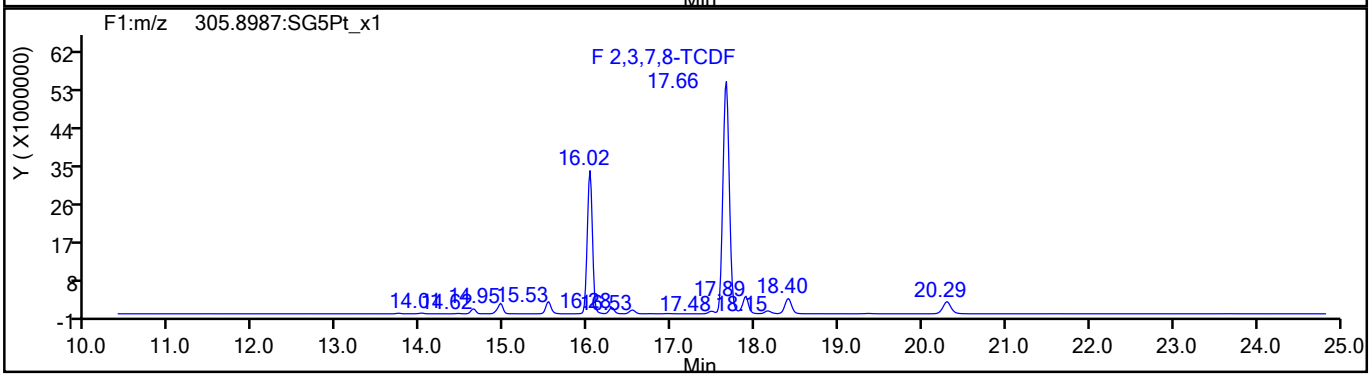

TCDF Standards

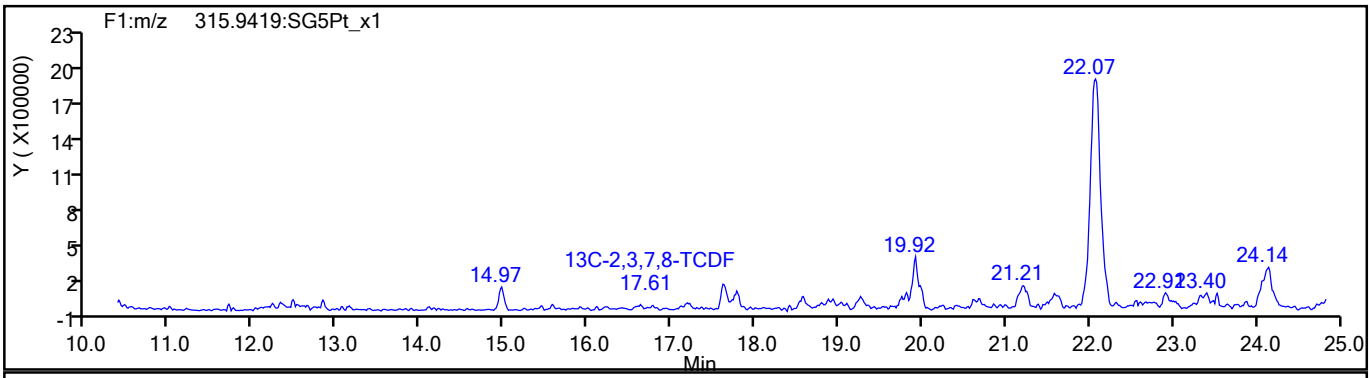

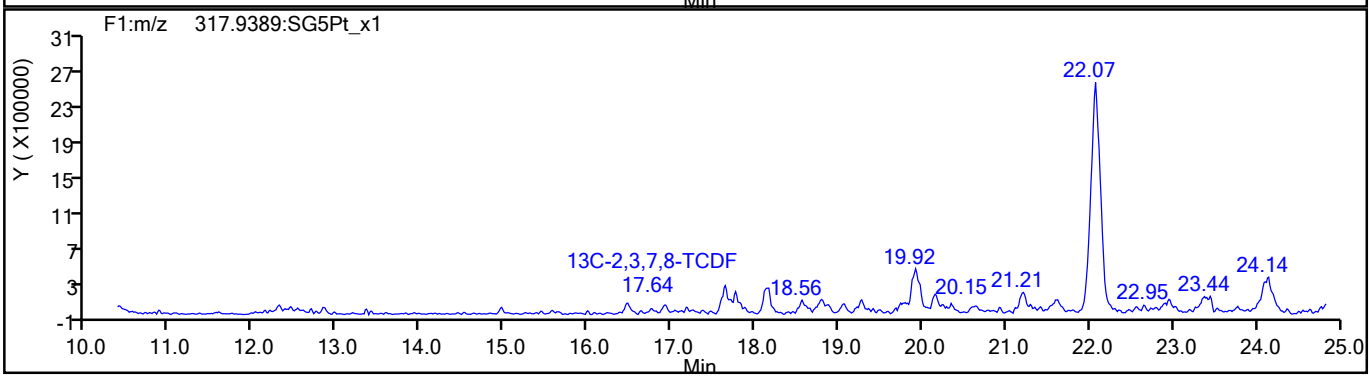

784896

Report Date: 26-Aug-2021 09:30:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d		
Injection Date:	25-Aug-2021 22:33:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

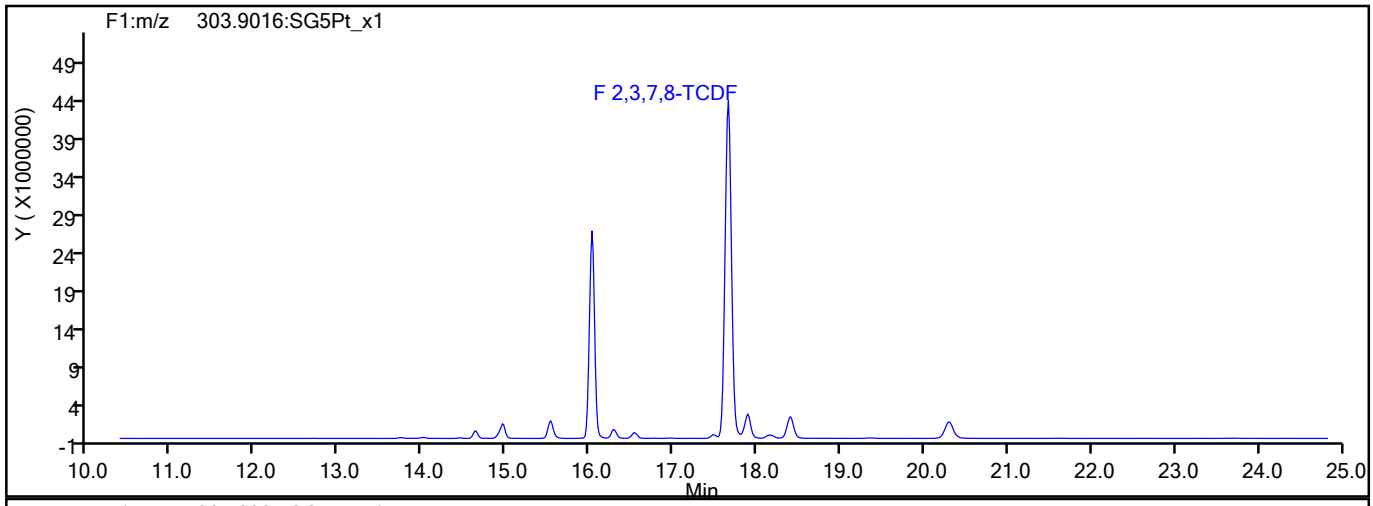

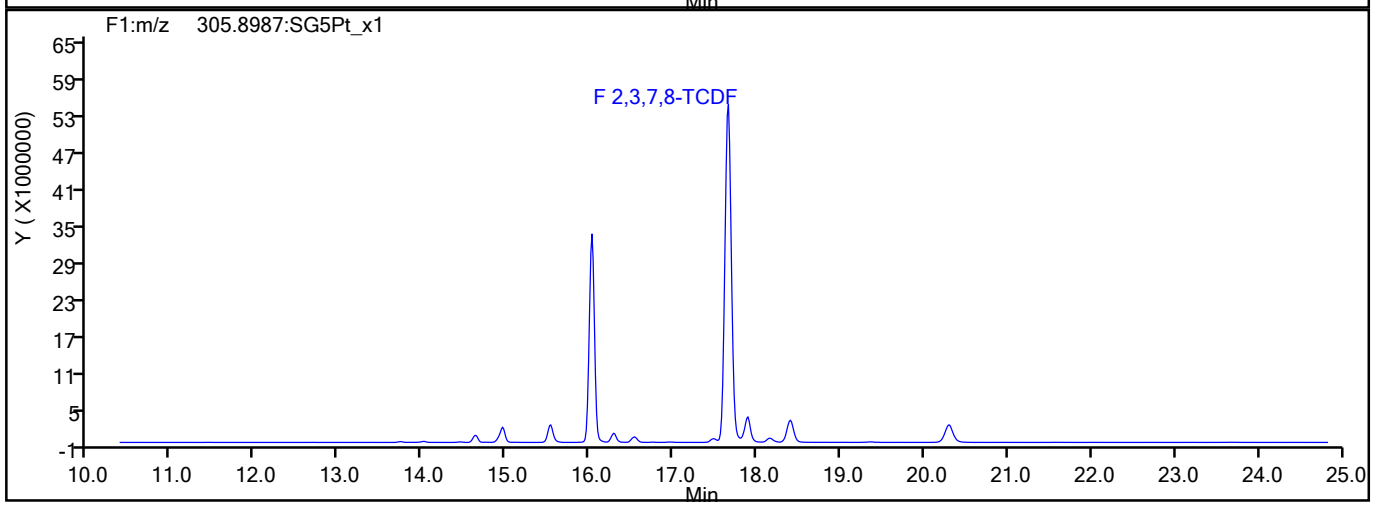

TCDF Interference Mass

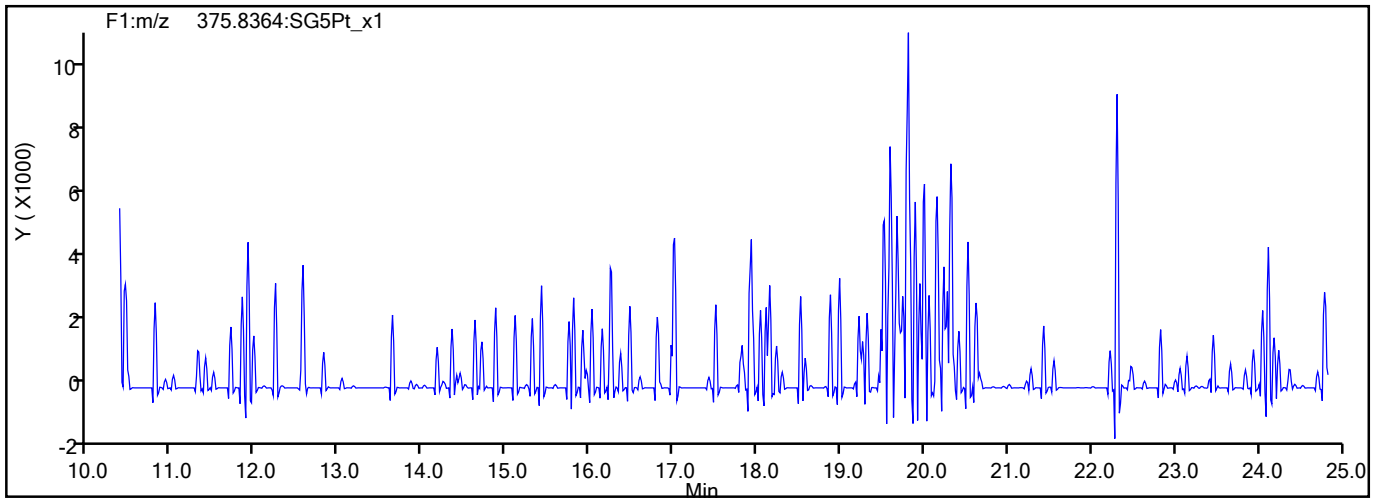

784897

Report Date: 26-Aug-2021 09:30:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d		
Injection Date:	25-Aug-2021 22:33:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

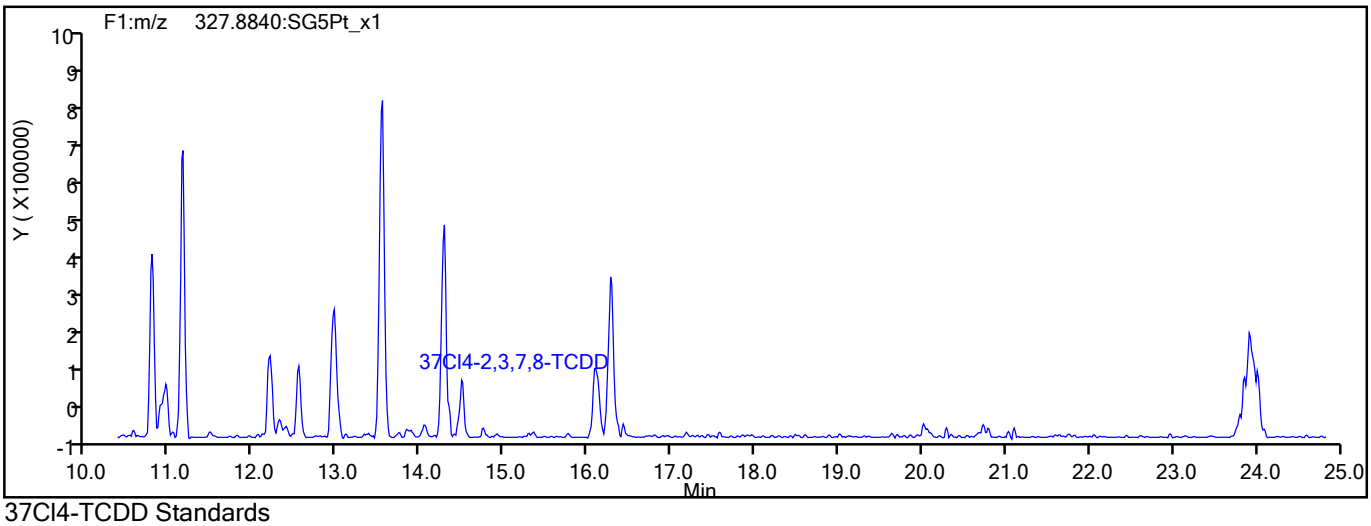

37Cl4-TCDD Standards

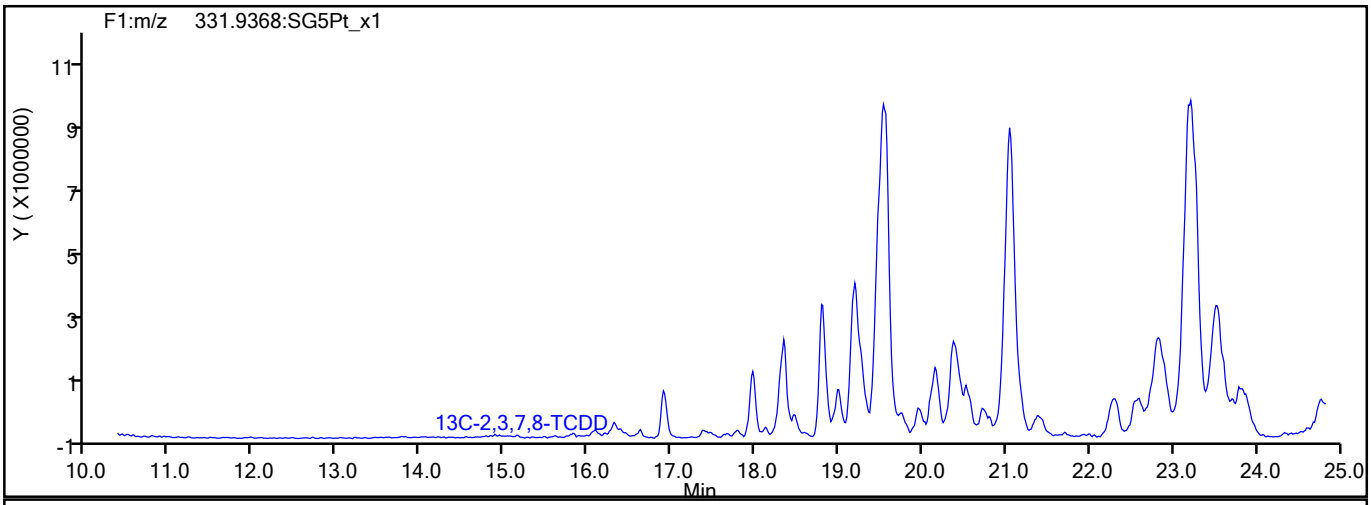

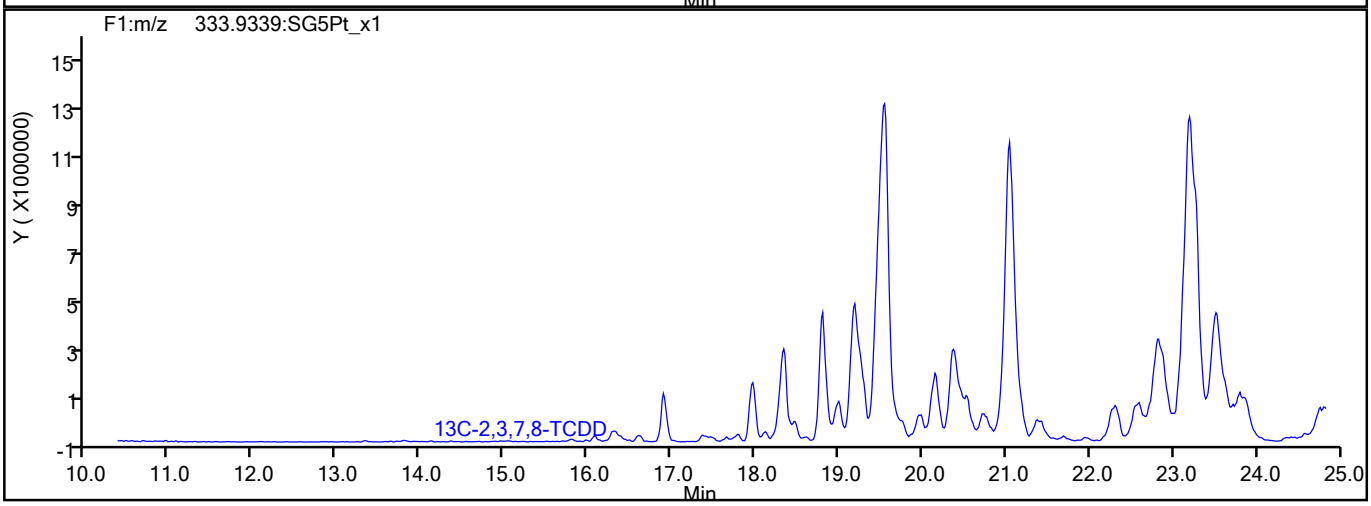

784898

Report Date: 26-Aug-2021 09:30:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_016.d		
Injection Date:	25-Aug-2021 22:33:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

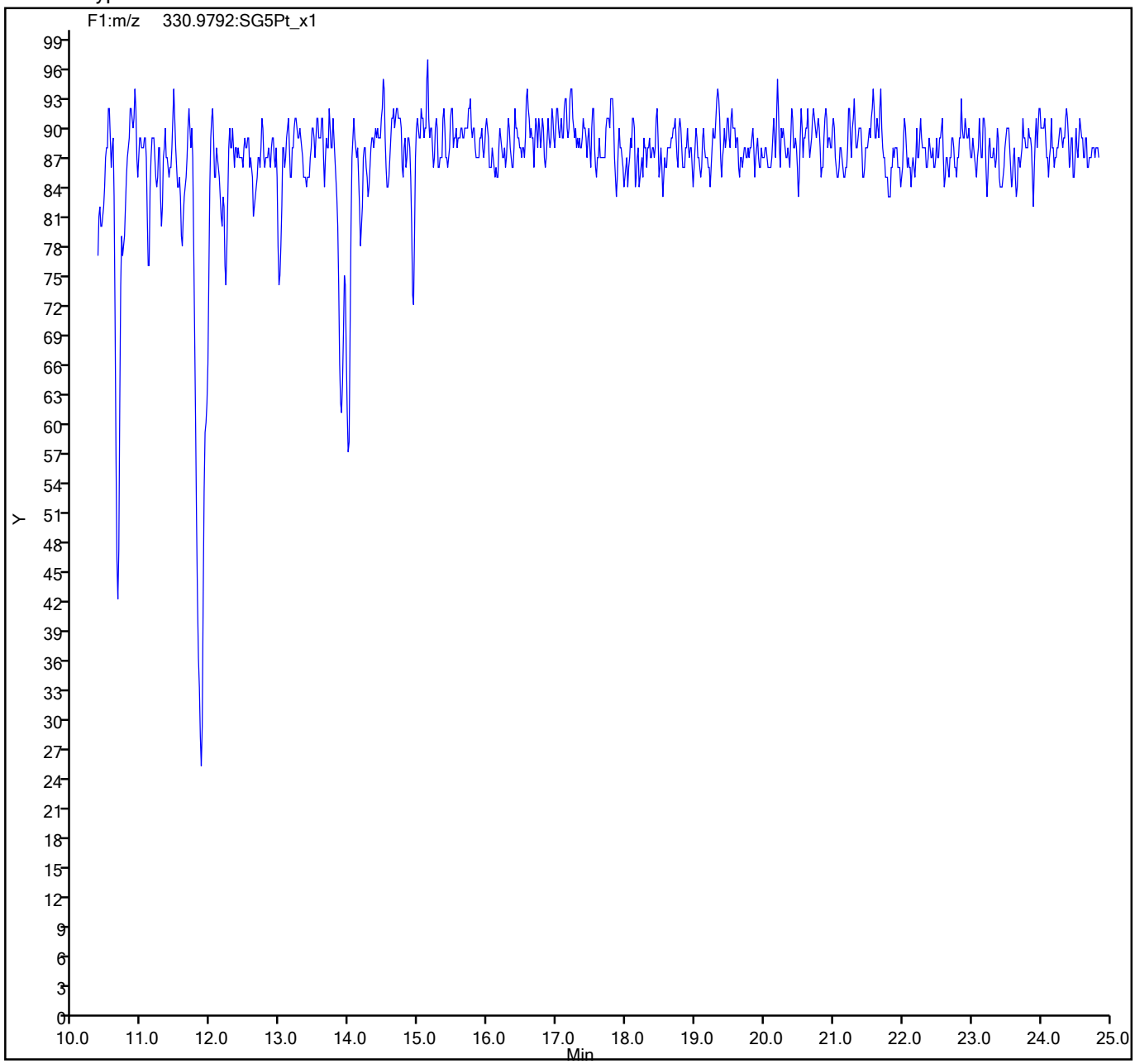

784899

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76887-A-2-C MSD
Matrix: Sediment
Lab File ID: 18AU2110D5_10.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.44(g)
Date Analyzed: 08/18/2021 21:04
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	19400		55	55
40321-76-4	1,2,3,7,8-PeCDD	366		77	3.9
57117-41-6	1,2,3,7,8-PeCDF	2150		77	13
57117-31-4	2,3,4,7,8-PeCDF	1450		77	13
39227-28-6	1,2,3,4,7,8-HxCDD	162		77	2.1
57653-85-7	1,2,3,6,7,8-HxCDD	183		77	2.2
19408-74-3	1,2,3,7,8,9-HxCDD	172		77	2.0
70648-26-9	1,2,3,4,7,8-HxCDF	2640		77	15
57117-44-9	1,2,3,6,7,8-HxCDF	831		77	16
72918-21-9	1,2,3,7,8,9-HxCDF	186		77	11
60851-34-5	2,3,4,6,7,8-HxCDF	236		77	11
35822-46-9	1,2,3,4,6,7,8-HpCDD	240		77	1.8
67562-39-4	1,2,3,4,6,7,8-HpCDF	893		77	6.4
55673-89-7	1,2,3,4,7,8,9-HpCDF	386		77	7.5
3268-87-9	OCDD	1240		150	2.0
39001-02-0	OCDF	649		150	1.3
41903-57-5	Total TCDD	21400		55	55
30402-14-3	Total TCDF	130000		160	160
36088-22-9	Total PeCDD	366		77	3.9
30402-15-4	Total PeCDF	4970		77	13
34465-46-8	Total HxCDD	529		77	2.1
55684-94-1	Total HxCDF	4150		77	13
37871-00-4	Total HpCDD	303		77	1.8
38998-75-3	Total HpCDF	1430		77	7.0

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76887-A-2-C MSD
Matrix: Sediment
Lab File ID: 18AU2110D5_10.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.44(g)
Date Analyzed: 08/18/2021 21:04
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517729
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	55		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	57		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	56		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	52		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	57		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	52		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	54		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	55		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	56		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	52		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	61		26-138
114423-97-1	13C-OCDD	57		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	112		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MSD
Inject. Date: 18-Aug-2021 21:04:23 ALS Bottle#: 11 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-a-2-c msd 10x 320-76887-a-2-c msd 10x
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 13:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.840	8075123	0.81	6.2E+05	10.0	10.0				a
D 13C-2,3,7,8-TCDF	17.326	7213618	0.74	1.6249	5.498	5.498	0.1615	0.1615	54.98	
2,3,7,8-TCDF	17.341	1846024615	0.78	1.0239	2499.3	2499.3	5.077	5.077	2.5E+005	E
A Non-2,3,7,8-sub-TCDF	17.159	1273199414	0.78	1.0239	1723.8	1723.8	5.077	1135.2	0.00	M
S Total TCDF					4223.1	4223.1	5.077	5.077		
D 13C-2,3,7,8-TCDD	18.036	3953385	0.82	0.8993	5.444	5.444	0.1285	0.1285	54.44	
2,3,7,8-TCDD	18.051	311104405	0.80	1.2541	627.5	627.5	1.793	1.793	62748	E
$ 37Cl4-2,3,7,8-TCDD	18.051	3988655		1.1071	4.461	4.461	0.0636	0.0636	112	
A Non-2,3,7,8-sub-TCDD	17.620	32512753	0.72	1.2541	65.6	65.6	1.793	59.6	0.00	a
S Total TCDD					693.1	693.1	1.793	1.793		
D 13C-1,2,3,7,8-PeCDF	22.340	5412321	1.49	1.2101	5.539	5.539	0.0484	0.0484	55.39	M
1,2,3,7,8-PeCDF	22.353	40063395	1.60	1.0611	69.8	69.8	0.4102	0.4102	1395	
D 13C-2,3,4,7,8-PeCDF	23.662	5678065	1.61	1.2395	5.673	5.673	0.0473	0.0473	56.73	
2,3,4,7,8-PeCDF	23.690	27113815	1.59	1.0184	46.9	46.9	0.4312	0.4312	938	
A F1 PeCDFs	20.229						0.0211	0.0211		
A Non-2,3,7,8-sub-PeCDF	23.445	25593749	1.58	1.0398	44.4	44.4	0.4205	16.7	0.00	
S Total PeCDF					161.0	161.0	0.4207	0.4207		
D 13C-1,2,3,7,8-PeCDD	24.385	3593553	1.66	0.7612	5.846	5.846	0.0378	0.0378	58.46	
1,2,3,7,8-PeCDD	24.399	4462359	1.63	1.0484	11.8	11.8	0.1274	0.1274	237	
A Non-2,3,7,8-sub-PeCDD	23.696						0.1274	0.1274		
S Total PeCDD					11.8	11.8	0.1274	0.1274		
D 13C-1,2,3,4,7,8-HxCDF	30.463	4931238	0.53	1.0837	5.692	5.692	0.0398	0.0398	56.92	
1,2,3,4,7,8-HxCDF	30.476	45813114	1.22	1.0851	85.6	85.6	0.4975	0.4975	1712	
D 13C-1,2,3,6,7,8-HxCDF	30.636	4722515	0.52	1.1279	5.237	5.237	0.0382	0.0382	52.37	
1,2,3,6,7,8-HxCDF	30.663	14307386	1.21	1.1260	26.9	26.9	0.5051	0.5051	538	
D 13C-2,3,4,6,7,8-HxCDF	31.474	4670285	0.53	1.0637	5.491	5.491	0.0405	0.0405	54.91	
2,3,4,6,7,8-HxCDF	31.488	4160785	1.22	1.1675	7.631	7.631	0.3696	0.3696	153	
D 13C-1,2,3,7,8,9-HxCDF	32.286	4192133	0.51	0.9676	5.419	5.419	0.0446	0.0446	54.19	
1,2,3,7,8,9-HxCDF	32.300	2946481	1.20	1.1664	6.026	6.026	0.3613	0.3613	121	
A Non-2,3,7,8-sub-HxCDF	30.410	4294831	1.22	1.1363	8.165	8.165	0.4241	5.259	0.00	a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					134.3	134.3	0.4334	0.4334		
* 13C-1,2,3,7,8,9-HxCDD	32.100	7995205	1.21	6.2E+05	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	31.661	3292128	1.21	0.7334	5.614	5.614	0.0536	0.0536	56.14	
1,2,3,4,7,8-HxCDD	31.687	1835840	1.28	1.0640	5.241	5.241	0.0691	0.0691	105	
D 13C-1,2,3,6,7,8-HxCDD	31.767	3633343	1.32	0.8802	5.163	5.163	0.0446	0.0446	51.63	
1,2,3,6,7,8-HxCDD	31.794	2155962	1.23	1.0001	5.933	5.933	0.0711	0.0711	119	
1,2,3,7,8,9-HxCDD	32.113	2189330	1.29	1.1325	5.583	5.583	0.0638	0.0638	112	
A Non-2,3,7,8-sub-HxCDD	30.816	139362	1.42	1.0655	0.3777	0.3777	0.0678	0.3777	0.00	
S Total HxCDD					17.1	17.1	0.0680	0.0680		
D 13C-1,2,3,4,6,7,8-HpCDF	33.730	3223604	0.41	0.7730	5.216	5.216	0.0836	0.0836	52.16	
1,2,3,4,6,7,8-HpCDF	33.742	13435010	1.05	1.4413	28.9	28.9	0.2079	0.2079	578	
D 13C-1,2,3,4,7,8,9-HpCDF	34.811	3397473	0.42	0.7008	6.064	6.064	0.0922	0.0922	60.64	
1,2,3,4,7,8,9-HpCDF	34.823	5590134	1.04	1.3174	12.5	12.5	0.2433	0.2433	250	
A Non-2,3,7,8-sub-HpCDF	34.283	2207806	1.16	1.3793	4.835	4.835	0.2246	4.835	0.00	a
S Total HpCDF					46.2	46.2	0.2256	0.2256		
D 13C-1,2,3,4,6,7,8-HpCDD	34.520	2875226	1.00	0.6472	5.556	5.556	0.0510	0.0510	55.56	
1,2,3,4,6,7,8-HpCDD	34.532	2440068	1.04	1.0943	7.755	7.755	0.0584	0.0584	155	
A Non-2,3,7,8-sub-HpCDD	33.504	645427	1.03	1.0943	2.051	2.051	0.0584	2.051	0.00	a
S Total HpCDD					9.807	9.807	0.0584	0.0584		
D 13C-OCDD	36.878	4109990	0.86	0.4472	11.5	11.5	0.0521	0.0521	57.48	
OCDF	36.974	6210269	0.89	1.4382	21.0	21.0	0.0424	0.0424	210	
OCDD	36.878	9112264	0.89	1.1070	40.1	40.1	0.0658	0.0658	401	
1,3,6,8-TCDF	14.892						0.0	0.0		
1,3,6,8-TCDD	15.799						0.0	0.0		
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.188						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,3,9-TCDD	18.399	29542769	0.71							
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.293	1926931	1.21							
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	32.074						0.0	0.0		U
1,2,3,4,8,9-HxCDF	32.380	2766092	1.24							
1,2,3,4,6,7,9-HpCDF	34.033	2207806	1.16							
1,2,3,4,6,7,9-HpCDD	33.985	645427	1.03							
1,2,3,8-TCDD	0.0						0.0	0.0		
1,3,7,9-TCDD	0.0						0.0	0.0		
1,2,3,4,7-PeCDD	0.0						0.0	0.0		
1,4,7,8-TCDD	0.0						0.0	0.0		

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MSD
Inject. Date: 18-Aug-2021 21:04:23 ALS Bottle#: 11 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-a-2-c msd 10x 320-76887-a-2-c msd 10x
Misc. Info.: 18AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 13:08:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1676

First Level Reviewer: bennettd Date: 19-Aug-2021 13:07:57

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.840	17.809	2		3621153	855005	4411	11027	194		a
333.9339	17.840	17.809	2		4453970	1089043	4574	11435	238	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.326	17.295	2	0.971	3071894	786359	10462	26155	75		
317.9389	17.326	17.295	2	0.971	4141724	1065447	9943	24857	107	0.74(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.341	17.310	2	1.001	808467769	200274881	169335	423337	1183		
305.8987	17.341	17.310	2	1.001	1037556846	254700800	215739	539347	1181	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											M
303.9016	15.678	17.159	-89	0.905	2037753	605807	169335	423337	4		M
305.8987	15.678	17.159	-89	0.905	2562218	753049	215739	539347	3	0.80(0.65-0.89)	M
303.9016	15.935	17.159	-73	0.920	5168296	1446630	169335	423337	9		
305.8987	15.935	17.159	-73	0.920	6620704	1866043	215739	539347	9	0.78(0.65-0.89)	
303.9016	16.207	17.159	-57	0.935	10004860	2182918	169335	423337	13		
305.8987	16.207	17.159	-57	0.935	12817790	2790002	215739	539347	13	0.78(0.65-0.89)	
303.9016	16.434	17.159	-43	0.949	15743337	4046221	169335	423337	24		
305.8987	16.434	17.159	-43	0.949	20340187	5248797	215739	539347	24	0.77(0.65-0.89)	
303.9016	16.676	17.159	-29	0.962	29176768	8091045	169335	423337	48		
305.8987	16.676	17.159	-29	0.962	37671902	10432735	215739	539347	48	0.77(0.65-0.89)	
303.9016	16.948	17.159	-13	0.978	367514633	93606725	169335	423337	553		
305.8987	16.948	17.159	-13	0.978	470923541	121445118	215739	539347	563	0.78(0.65-0.89)	
303.9016	17.174	17.159	1	0.991	7183643	1708485	169335	423337	10		
305.8987	17.174	17.159	1	0.991	9486922	2184376	215739	539347	10	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.764	17.159	36	1.025	58130366	13982438	169335	423337	83		
305.8987	17.764	17.159	36	1.025	75020223	18124581	215739	539347	84	0.77(0.65-0.89)	
303.9016	18.021	17.159	52	1.040	7173305	1437494	169335	423337	8		
305.8987	18.021	17.159	52	1.040	9634887	1872019	215739	539347	9	0.74(0.65-0.89)	
303.9016	19.155	17.159	120	1.106	55082434	12650550	169335	423337	75		
305.8987	19.155	17.159	120	1.106	70905645	16271808	215739	539347	75	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.036	18.006	2	1.011	1785085	461336	4411	11027	105		
333.9339	18.036	18.006	2	1.011	2168300	554247	4574	11435	121	0.82(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	18.051	18.021	2	1.001	137829086	35654257	42070	105175	847		
321.8936	18.051	18.021	2	1.001	173275319	45296482	49273	123182	919	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.051	18.021	2	1.012	3988655	997725	5476	13690	182		
A Non-2,3,7,8-sub-TCDD											a
319.8965	17.945	17.620	19	0.995	1312836	370413	42070	105175	9		
321.8936	17.945	17.620	19	0.995	1657148	456970	49273	123182	9	0.79(0.65-0.89)	
319.8965	18.399	17.620	47	1.020	12273808	2881943	42070	105175	69		a
321.8936	18.399	17.620	47	1.020	17268961	3794852	49273	123182	77	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											M
351.9000	22.340	22.299	2	1.252	3240967	587745	2554	6385	230		M
353.8970	22.326	22.299	2	1.251	2171354	392402	2004	5010	196	1.49(1.32-1.78)	M
1,2,3,7,8-PeCDF											
339.8597	22.353	22.326	2	1.001	24639457	4410783	9659	24147	457		
341.8567	22.353	22.326	2	1.001	15423938	2805828	7408	18520	379	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.662	23.635	2	1.326	3502286	597963	2554	6385	234		
353.8970	23.662	23.635	2	1.326	2175779	373554	2004	5010	186	1.61(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.690	23.649	2	1.001	16630443	2874829	9659	24147	298		
341.8567	23.690	23.649	2	1.001	10483372	1816462	7408	18520	245	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.229						291	727			
341.8567	20.229						564	1410			
A Non-2,3,7,8-sub-PeCDF											
339.8597	21.003	23.445	-146	0.940	5889186	1178433	9659	24147	122		
341.8567	21.003	23.445	-146	0.940	3749948	738064	7408	18520	100	1.57(1.32-1.78)	
339.8597	21.822	23.445	-97	0.977	579261	68790	9659	24147	7		
341.8567	21.849	23.445	-96	0.978	351888	41497	7408	18520	6	1.65(1.32-1.78)	
339.8597	22.217	23.445	-74	0.995	845498	201992	9659	24147	21		
341.8567	22.217	23.445	-74	0.995	569032	134674	7408	18520	18	1.49(1.32-1.78)	
339.8597	22.872	23.445	-34	1.024	4370401	779966	9659	24147	81		
341.8567	22.872	23.445	-34	1.024	2700610	481988	7408	18520	65	1.62(1.32-1.78)	
339.8597	24.017	23.445	34	1.075	3168257	495323	9659	24147	51		
341.8567	24.017	23.445	34	1.075	2017146	313977	7408	18520	42	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	25.626	23.445	131	1.147	837582	121584	9659	24147	13		
341.8567	25.612	23.445	130	1.147	514940	79822	7408	18520	11	1.63(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.385	24.358	2	1.367	2244276	351322	1358	3395	259		
369.8919	24.372	24.358	1	1.366	1349277	205819	881	2202	234	1.66(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.399	24.372	2	1.001	2767512	424871	1815	4537	234		
357.8516	24.399	24.372	2	1.001	1694847	255783	1162	2905	220	1.63(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1815	4537			
357.8516	23.696						1162	2905			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.463	30.436	2	0.949	1709972	311064	1583	3957	197		
385.8610	30.463	30.436	2	0.949	3221266	607124	2080	5200	292	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.476	30.463	1	1.000	25219897	4764389	10954	27385	435		
375.8178	30.476	30.463	1	1.000	20593217	3964508	8873	22182	447	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.636	30.623	1	0.954	1622535	302057	1583	3957	191		
385.8610	30.649	30.623	2	0.955	3099980	569409	2080	5200	274	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.663	30.649	1	1.001	7847030	1513100	10954	27385	138		
375.8178	30.663	30.649	1	1.001	6460356	1242711	8873	22182	140	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.474	31.461	1	0.981	1622698	401628	1583	3957	254		
385.8610	31.474	31.461	1	0.981	3047587	747180	2080	5200	359	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.488	31.488	0	1.000	2290753	569454	10954	27385	52		
375.8178	31.488	31.488	0	1.000	1870032	464821	8873	22182	52	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.286	32.273	1	1.006	1416931	396053	1583	3957	250		
385.8610	32.286	32.273	1	1.006	2775202	780245	2080	5200	375	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.300	32.286	1	1.000	1608402	512387	10954	27385	47		
375.8178	32.300	32.286	1	1.000	1338079	424024	8873	22182	48	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											a
373.8208	29.624	30.410	-47	0.972	471226	70921	10954	27385	6		
375.8178	29.624	30.410	-47	0.972	401376	60245	8873	22182	7	1.17(1.05-1.43)	
373.8208	31.381	30.410	58	1.030	354387	96843	10954	27385	9		
375.8178	31.381	30.410	58	1.030	301750	81147	8873	22182	9	1.17(1.05-1.43)	
373.8208	32.380	30.410	118	1.063	1530681	424023	10954	27385	39		a
375.8178	32.380	30.410	118	1.063	1235411	351768	8873	22182	40	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.100	32.100	0		4381079	1167599	1925	4812	607		
403.8529	32.100	32.100	0		3614126	955558	1411	3527	677	1.21(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.661	31.661	0	0.986	1804035	495588	1925	4812	257		
403.8529	31.661	31.661	0	0.986	1488093	378515	1411	3527	268	1.21(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.687	31.674	1	1.001	1029583	279115	1475	3687	189		
391.8127	31.674	31.674	0	1.000	806257	219436	1095	2737	200	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.767	31.767	0	0.990	2064666	496186	1925	4812	258		
403.8529	31.767	31.767	0	0.990	1568677	407943	1411	3527	289	1.32(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.794	31.781	1	1.001	1190675	301034	1475	3687	204		
391.8127	31.794	31.781	1	1.001	965287	231976	1095	2737	212	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.113	32.113	0	1.014	1233622	322430	1475	3687	219		
391.8127	32.113	32.113	0	1.014	955708	250166	1095	2737	228	1.29(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.915	30.816	6	0.973	81760	16422	1475	3687	11		
391.8127	30.915	30.816	6	0.973	57602	11750	1095	2737	11	1.42(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.730	33.718	1	1.051	929456	297162	2373	5932	125		
419.8220	33.730	33.718	1	1.051	2294148	750588	3117	7792	241	0.41(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.742	33.730	1	1.000	6884730	2274602	6932	17330	328		
409.7789	33.742	33.730	1	1.000	6550280	2175208	5627	14067	387	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.811	34.811	0	1.084	1010295	294580	2373	5932	124		
419.8220	34.811	34.811	0	1.084	2387178	684924	3117	7792	220	0.42(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.823	34.811	1	1.000	2845333	841424	6932	17330	121		
409.7789	34.823	34.811	1	1.000	2744801	789585	5627	14067	140	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											a
407.7818	34.033	34.283	-15	1.009	1185972	381541	6932	17330	55		a
409.7789	34.033	34.283	-15	1.009	1021834	348391	5627	14067	62	1.16(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.520	34.520	0	1.075	1435909	390677	1596	3990	245		
437.8140	34.520	34.520	0	1.075	1439317	433836	1207	3017	359	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.532	34.532	0	1.000	1241118	370324	1068	2670	347		
425.7737	34.532	34.532	0	1.000	1198950	357626	1038	2595	345	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.985	33.504	29	0.985	327452	103839	1068	2670	97		a
425.7737	33.973	33.504	28	0.984	317975	97052	1038	2595	93	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.878	36.866	1	1.149	1895955	463733	886	2215	523		
471.7750	36.878	36.866	1	1.149	2214035	514970	1093	2732	471	0.86(0.76-1.02)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											
441.7428	36.974	36.962	1	1.003	2915991	728743	563	1407	1294		
443.7399	36.962	36.962	0	1.002	3294278	815744	632	1580	1291	0.89(0.76-1.02)	
OCDD											
457.7377	36.878	36.878	0	1.000	4290127	1046524	632	1580	1656		
459.7348	36.878	36.878	0	1.000	4822137	1200542	793	1982	1514	0.89(0.76-1.02)	
1,3,6,8-TCDF											
303.9016	14.892						169335	423337			
305.8987	14.892						215739	539347			
1,3,6,8-TCDD											
319.8965	15.799						42070	105175			
321.8936	15.799						49273	123182			
2,3,4,7-TCDF											
303.9016	17.537						169335	423337			
305.8987	17.537						215739	539347			
1,2,3,7-TCDD											
319.8965	18.188						42070	105175			
321.8936	18.188						49273	123182			
1,2,3,9-TCDF											
303.9016	18.414						169335	423337			
305.8987	18.414						215739	539347			
1,2,3,9-TCDD											
319.8965	18.399	18.414	-1		12273808	2881943	42070	105175	69		
321.8936	18.399	18.414	-1		17268961	3794852	49273	123182	77	0.71(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	19.382						42070	105175			
1,2,8,9-TCDF											
303.9016	19.427						169335	423337			
305.8987	19.427						215739	539347			
1,3,4,6,8-PeCDF											
339.8597	19.669						291	727			
341.8567	19.669						564	1410			
1,2,4,7,9-PeCDD											
355.8546	21.480						1815	4537			
357.8516	21.480						1162	2905			
1,2,3,8,9-PeCDD											
355.8546	25.790						1815	4537			
357.8516	25.790						1162	2905			
1,2,3,8,9-PeCDF											
339.8597	26.021						9659	24147			
341.8567	26.021						7408	18520			
1,2,3,4,6,8-HxCDF											
373.8208	28.293	28.333	-2		1055970	147115	10954	27385	13		
375.8178	28.280	28.333	-3		870961	123871	8873	22182	14	1.21(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8157	29.890						1475	3687			
391.8127	29.890						1095	2737			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7-HxCDD											U
389.8157	32.074						1475	3687			
391.8127	32.074						1095	2737			
1,2,3,4,8,9-HxCDF											
373.8208	32.380	32.393	-1		1530681	424023	10954	27385	39		
375.8178	32.380	32.393	-1		1235411	351768	8873	22182	40	1.24(1.05-1.43)	
1,2,3,4,6,7,9-HpCDF											
407.7818	34.033	33.916	7		1185972	381541	6932	17330	55		
409.7789	34.033	33.916	7		1021834	348391	5627	14067	62	1.16(0.88-1.20)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.985	33.985	0		327452	103839	1068	2670	97		
425.7737	33.973	33.985	-1		317975	97052	1038	2595	93	1.03(0.88-1.20)	
1,2,3,8-TCDD											
319.8965	0.0						42070	105175			
321.8936	0.0						49273	123182			
1,3,7,9-TCDD											
319.8965	0.0						42070	105175			
321.8936	0.0						49273	123182			
1,2,3,4,7-PeCDD											
355.8546	0.0						1815	4537			
357.8516	0.0						1162	2905			
1,4,7,8-TCDD											
319.8965	0.0						42070	105175			
321.8936	0.0						49273	123182			

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 21:04:23 Dil. Factor: 10.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 10

Non-2,3,7,8-sub-TCDF, RT: 17.159

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	7213618	1851806

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		10.000	7213618	1851806

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.678	2037753	605807	2562218	753049	6.23	0.80	M
15.935	5168296	1446630	6620704	1866043	16.0	0.78	
16.207	10004860	2182918	12817790	2790002	30.9	0.78	
16.434	15743337	4046221	20340187	5248797	48.9	0.77	
16.676	29176768	8091045	37671902	10432735	90.5	0.77	
16.948	367514633	93606725	470923541	121445118	1135.2	0.78	
17.174	7183643	1708485	9486922	2184376	22.6	0.76	
17.764	58130366	13982438	75020223	18124581	180.3	0.77	
18.021	7173305	1437494	9634887	1872019	22.8	0.74	
19.155	55082434	12650550	70905645	16271808	170.6	0.78	
Signal Totals:	557215395	139758313	715984019	180988528			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1273199414	320746841				0.78	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1723.8 = (1273199414 * 10.000) / (7213618 * 1.024)

QC Flag Legend

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 21:04:23 Dil. Factor: 10.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 10

Non-2,3,7,8-sub-TCDD, RT: 17.620

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	3953385	1015583

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		10.000	3953385	1015583

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.945	1312836	370413	1657148	456970	5.99	0.79	
18.399	12273808	2881943	17268961	3794852	59.6	0.71	a
Signal Totals:							
	13586644	3252356	18926109	4251822			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	32512753	7504178				0.72	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 65.576 = (32512753 * 10.000) / (3953385 * 1.254)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 21:04:23 Dil. Factor: 10.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 10

Non-2,3,7,8-sub-PeCDF, RT: 23.445

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	5412321	980147
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	5678065	971517

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		10.000	5545193	975832

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.003	5889186	1178433	3749948	738064	16.7	1.57	
21.822	579261	68790	351888	41497	1.61	1.65	
22.217	845498	201992	569032	134674	2.45	1.49	
22.872	4370401	779966	2700610	481988	12.3	1.62	
24.017	3168257	495323	2017146	313977	8.99	1.57	
25.626	837582	121584	514940	79822	2.35	1.63	
Signal Totals:							
	15690185	2846088	9903564	1790022			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	25593749	4636110				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 44.389 = (25593749 * 10.000) / (5545193 * 1.040)

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 21:04:23 Dil. Factor: 10.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 10

Non-2,3,7,8-sub-HxCDF, RT: 30.410

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	4931238	918188
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	4722515	871466
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	4670285	1148808
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	4192133	1176298

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		10.000	4629042	1028690

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.624	471226	70921	401376	60245	1.66	1.17	
31.381	354387	96843	301750	81147	1.25	1.17	
32.380	1530681	424023	1235411	351768	5.26	1.24	a
Signal Totals:							
	2356294	591787	1938537	493160			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4294831	1084947				1.22	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 8.165 = (4294831 * 10.000) / (4629042 * 1.136)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Lims ID:	320-76887-A-2-C MSD		
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Inject. Date:	18-Aug-2021 21:04:23	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	10

Non-2,3,7,8-sub-HxCDD, RT: 30.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	3292128	874103
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	3633343	904129
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		10.000	3462735	889116

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.915	81760	16422	57602	11750	0.3777	1.42	
Signal Totals:							
	81760	16422	57602	11750			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	139362	28172				1.42	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.3777 = (139362 * 10.000) / (3462735 * 1.066)

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Lims ID:	320-76887-A-2-C MSD		
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Inject. Date:	18-Aug-2021 21:04:23	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	517729	Lims Sample ID:	10

Non-2,3,7,8-sub-HpCDF, RT: 34.283

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	3223604	1047750
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	3397473	979504

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		10.000	3310538	1013627

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.033	1185972	381541	1021834	348391	4.83	1.16	a
Signal Totals:							
	1185972	381541	1021834	348391			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2207806	729932				1.16	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.835 = (2207806 * 10.000) / (3310538 * 1.379)

QC Flag Legend

Review Flags

a - User Assigned ID

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Inject. Date: 18-Aug-2021 21:04:23 Dil. Factor: 10.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 517729 Lims Sample ID: 10

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	2875226	824513

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		10.000	2875226	824513

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.985	327452	103839	317975	97052	2.05	1.03	a
Signal Totals:							
	327452	103839	317975	97052			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	645427	200891				1.03	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.051 = (645427 * 10.000) / (2875226 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d				
Injection Date:	18-Aug-2021 21:04:23	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-C MSD				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.86- 19.46)

Signal: 1

Not Detected

RT: 14.86- 19.46

Processing Integration Results

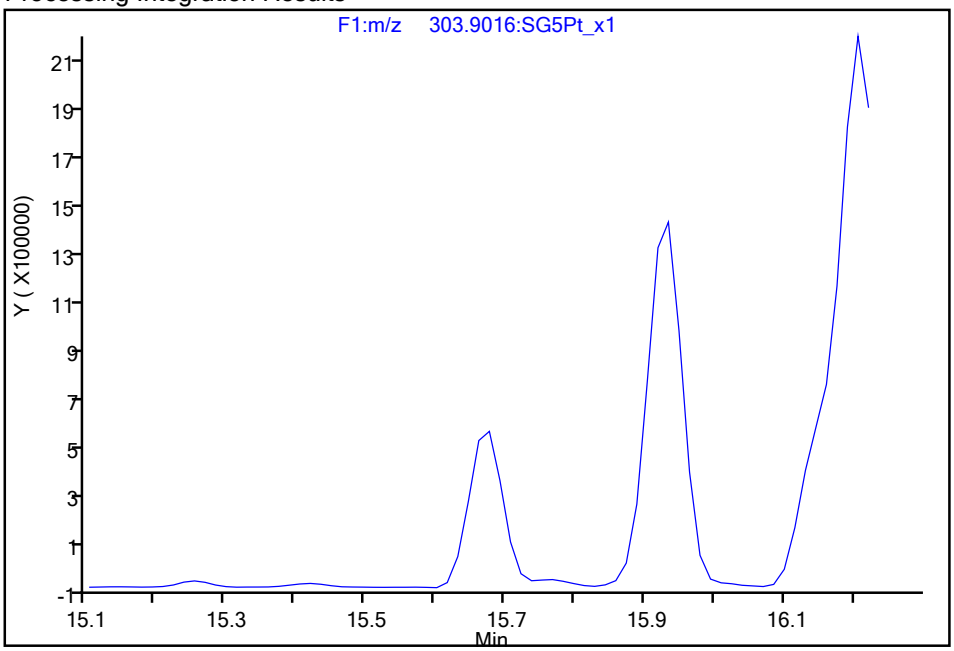

RT = 15.678 Area = 2037753 M

Manual Integration Results

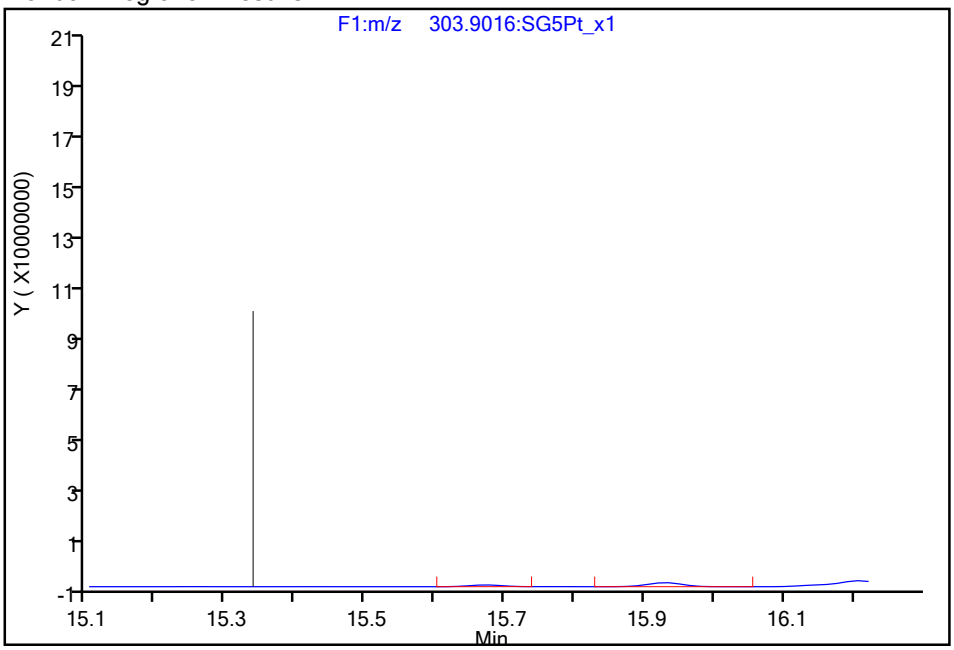

Reviewer: bennettd, 19-Aug-2021 13:03:21

Audit Action: Manually Integrated Audit Reason: Missed Peak

784918

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d				
Injection Date:	18-Aug-2021 21:04:23	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-C MSD				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.86- 19.46)

Signal: 2

Not Detected
RT: 14.86- 19.46

Processing Integration Results

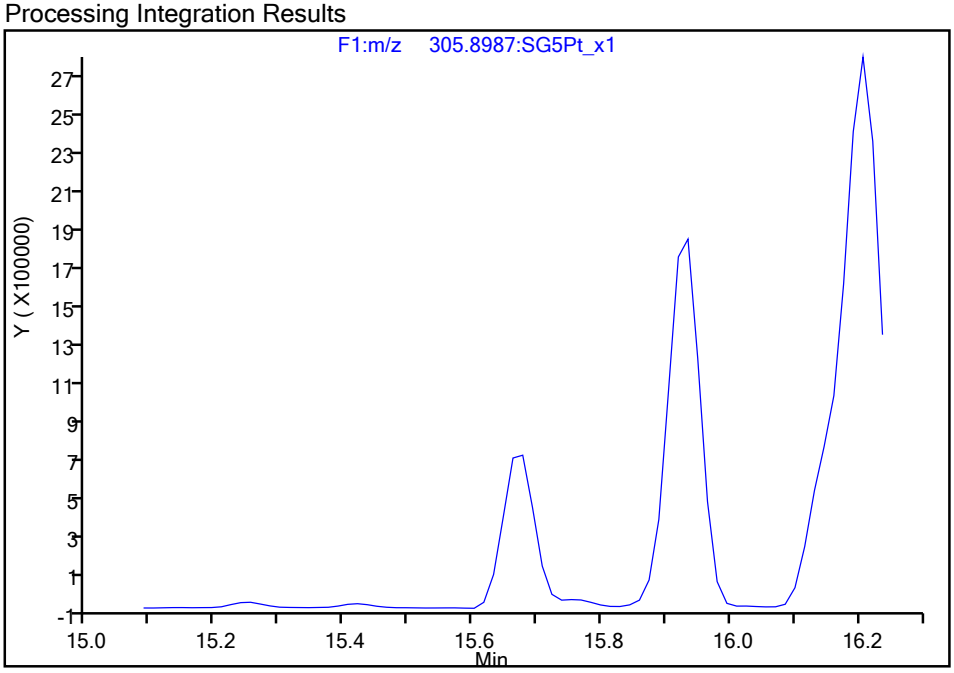

RT = 15.678 Area = 2562218 M

Manual Integration Results

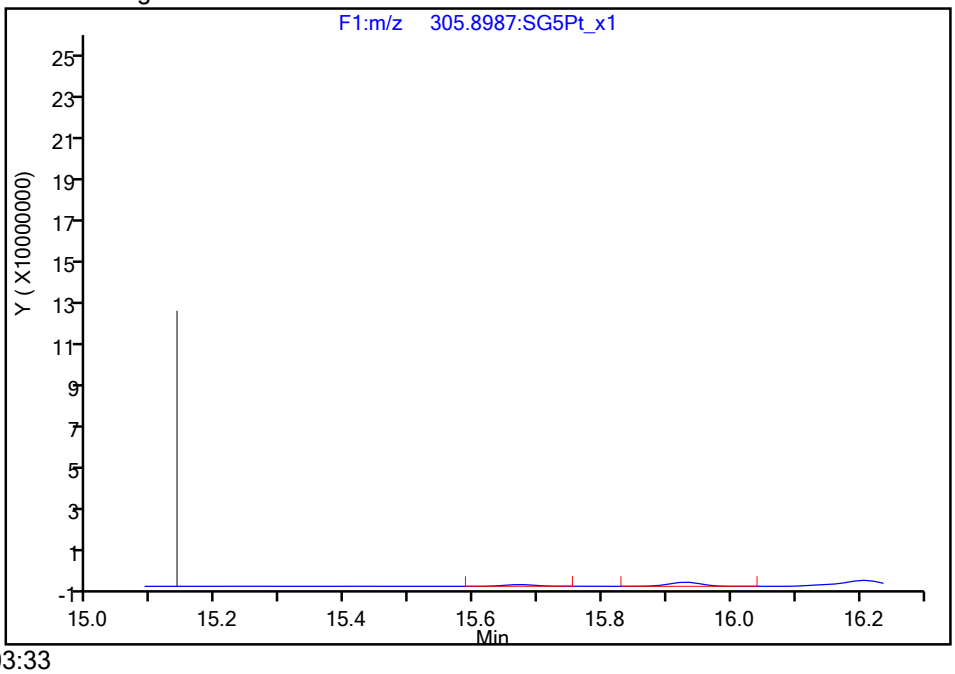

Reviewer: bennettd, 19-Aug-2021 13:03:33
Audit Action: Manually Integrated Audit Reason: Missed Peak

784919

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d				
Injection Date:	18-Aug-2021 21:04:23	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-C MSD				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-1,2,3,7,8-PeCDF, CAS: 109719-77-9

Signal: 2

Processing Integration Results

RT: 22.33
Area: 2186851
Amount: 5.669966
Amount Units: pg/ul

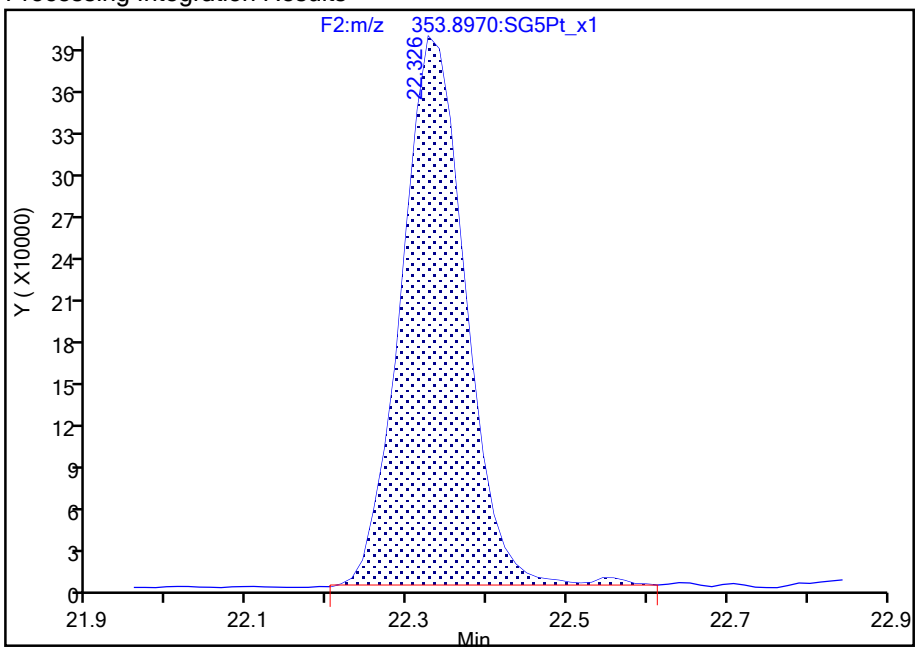

Manual Integration Results

RT: 22.33
Area: 2171354
Amount: 5.538912
Amount Units: pg/ul

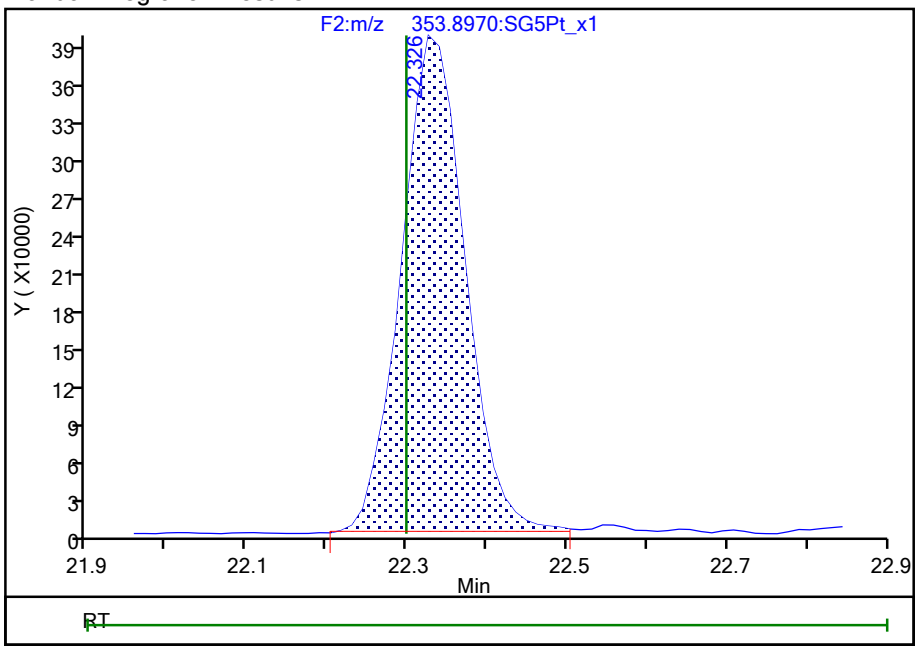

Reviewer: bennettd, 19-Aug-2021 13:06:03

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

784920

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d				
Injection Date:	18-Aug-2021 21:04:23	Instrument ID:	10D5		
Lims ID:	320-76887-A-2-C MSD				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-1,2,3,7,8-PeCDF, CAS: 109719-77-9

Signal: 1

Processing Integration Results

RT: 22.34
Area: 3353529
Amount: 5.669966
Amount Units: pg/ul

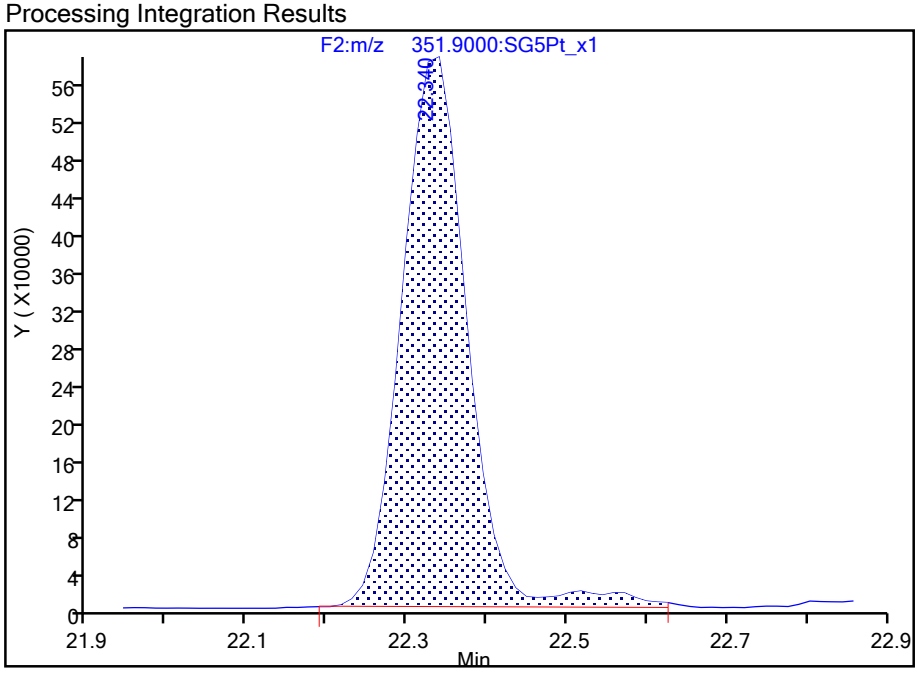

Manual Integration Results

RT: 22.34
Area: 3240967
Amount: 5.538912
Amount Units: pg/ul

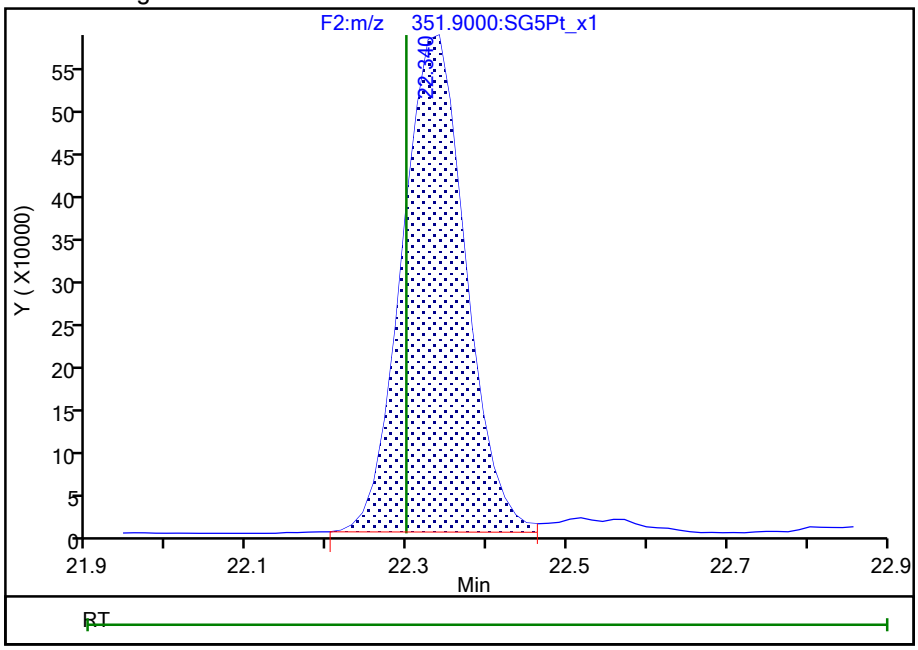

Reviewer: bennettd, 19-Aug-2021 13:06:20

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

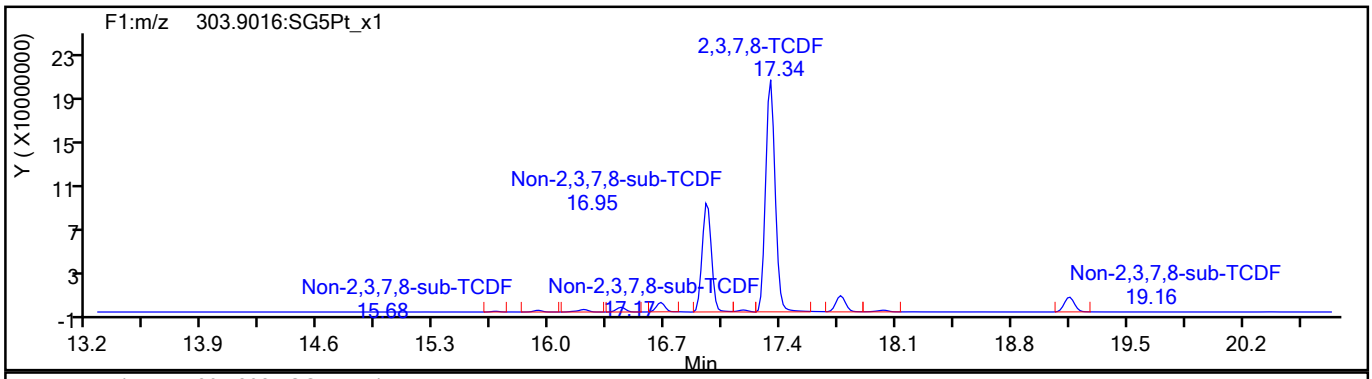

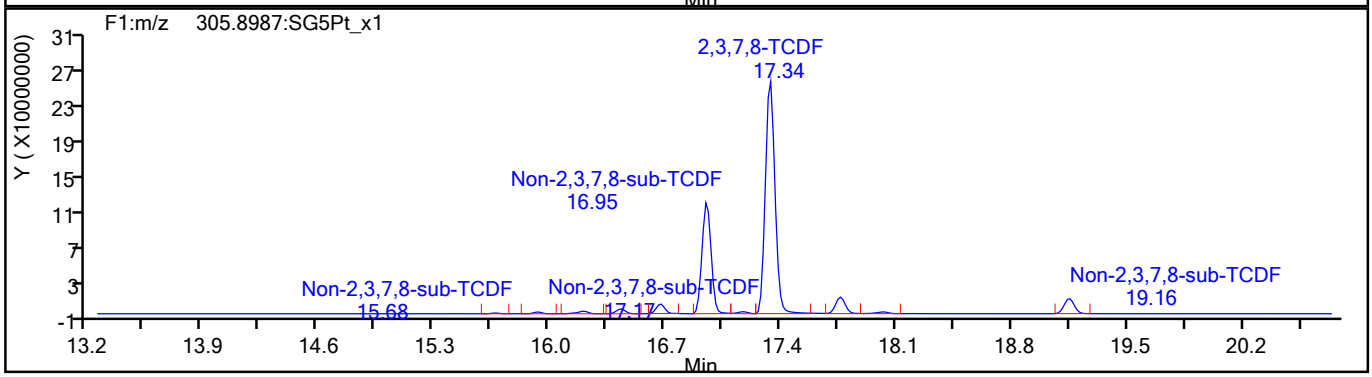

TCDF Standards

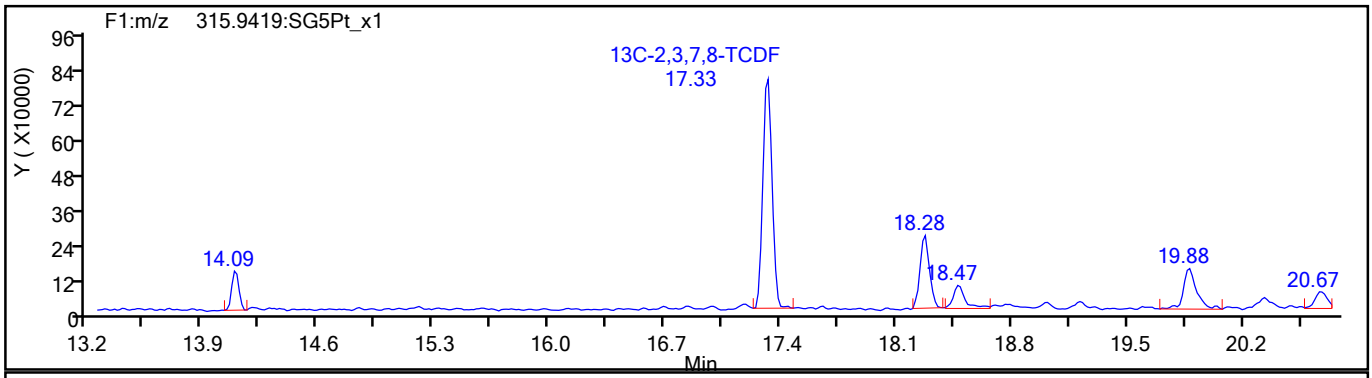

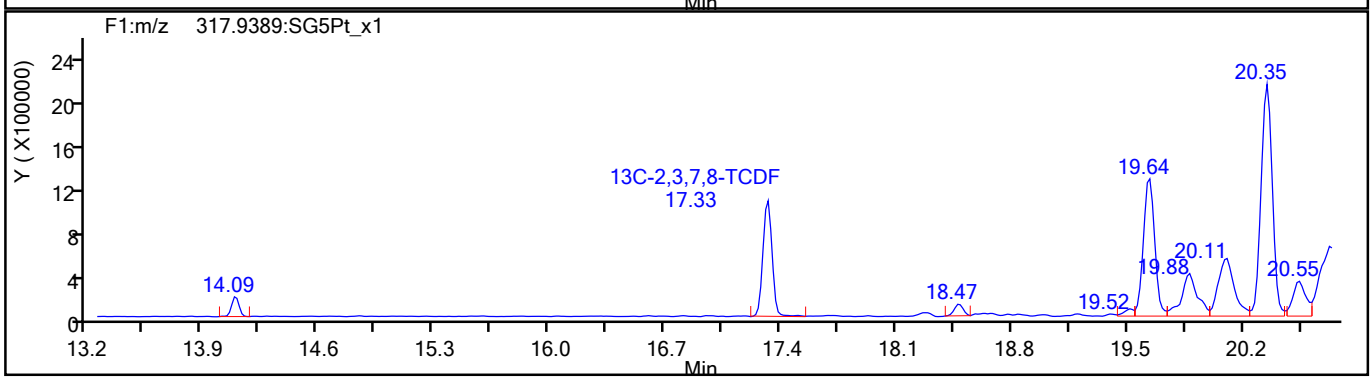

784922

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

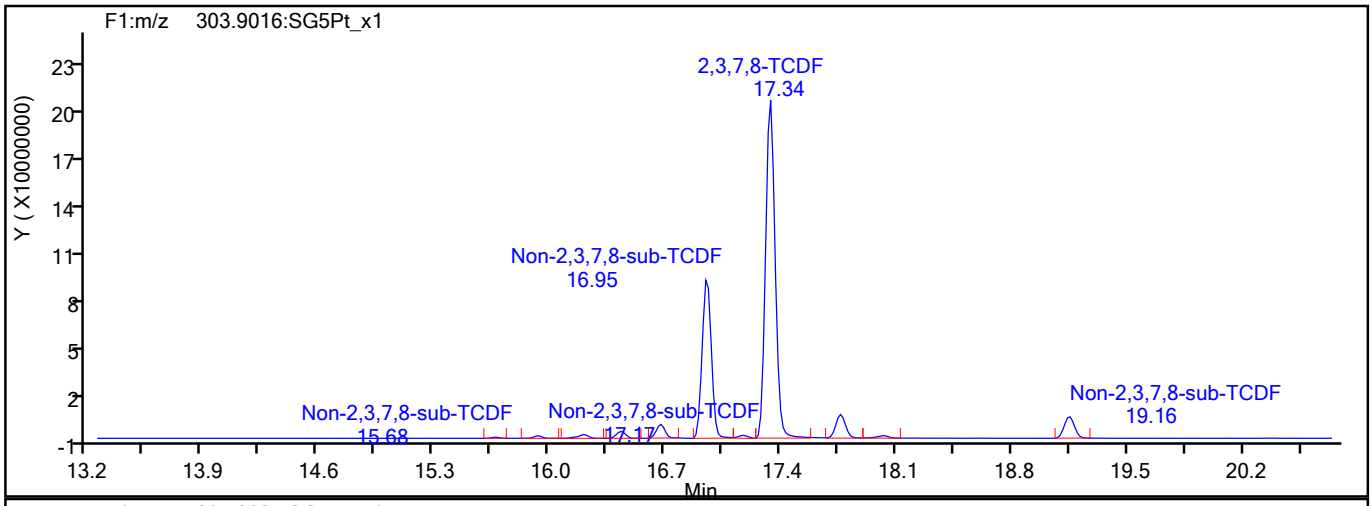

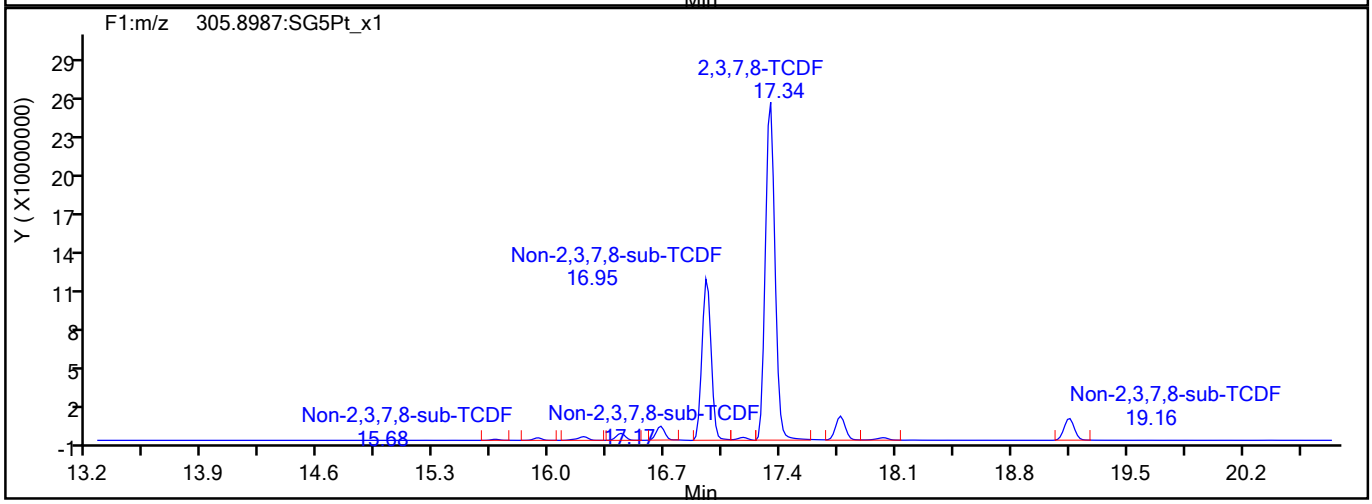

TCDF Interference Mass

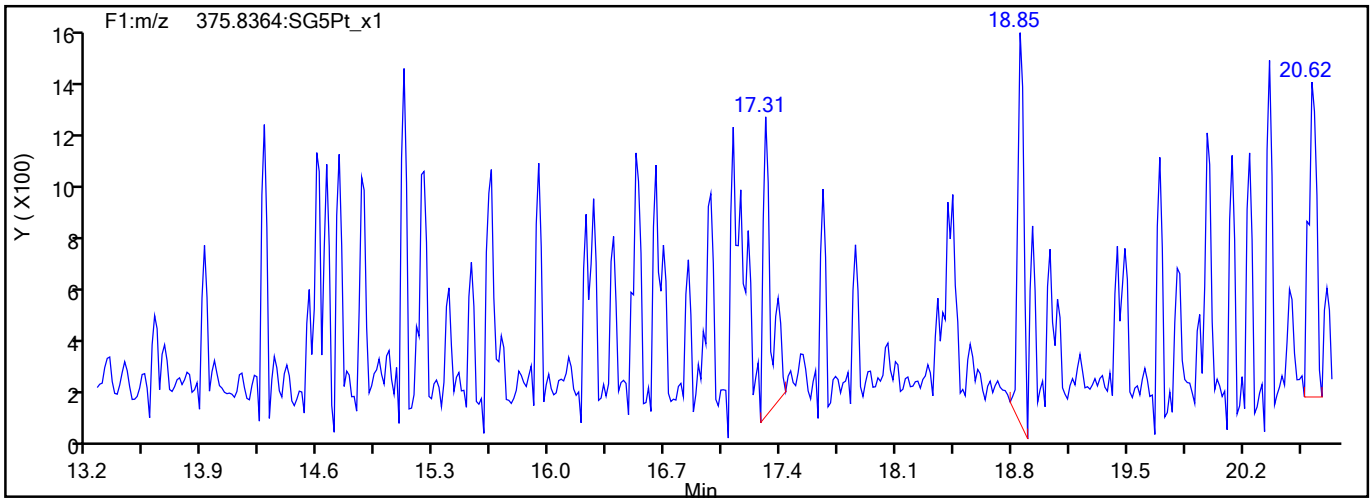

784923

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

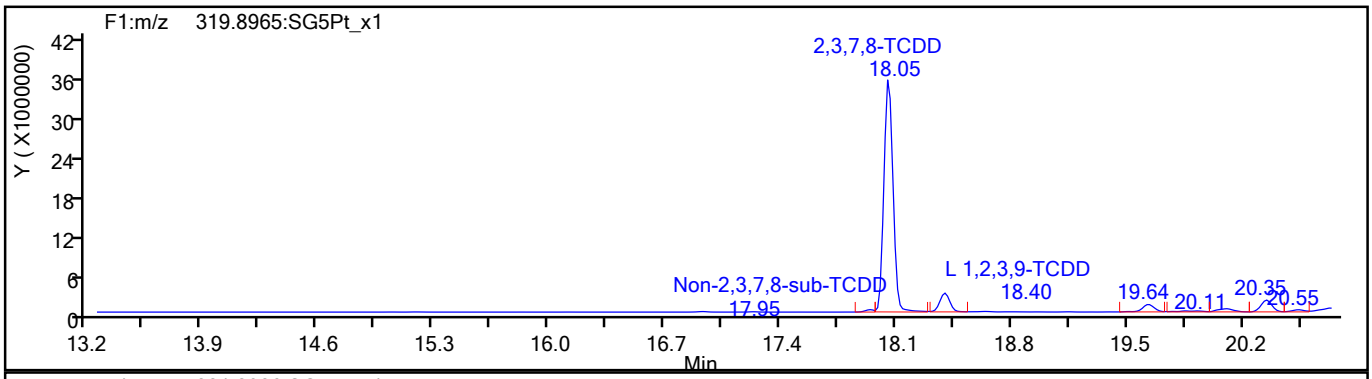

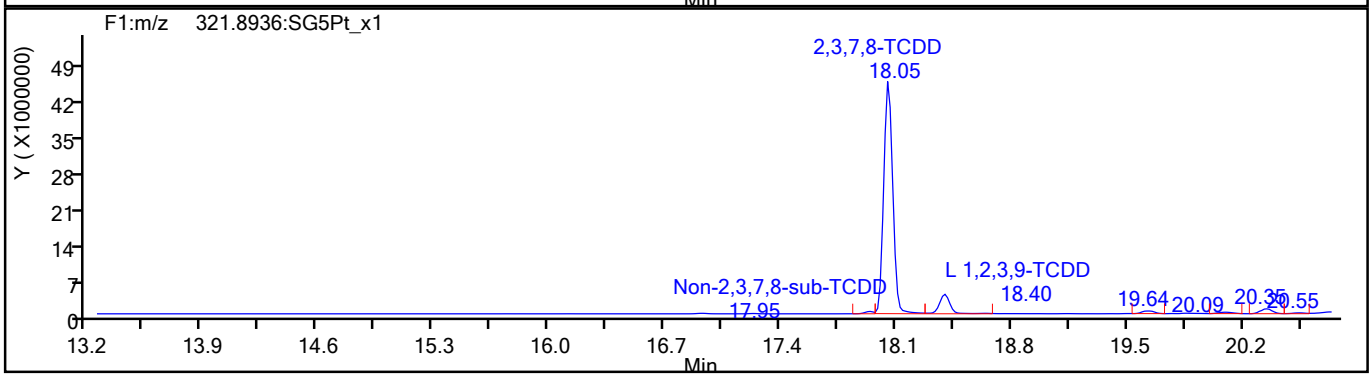

TCDD Standards

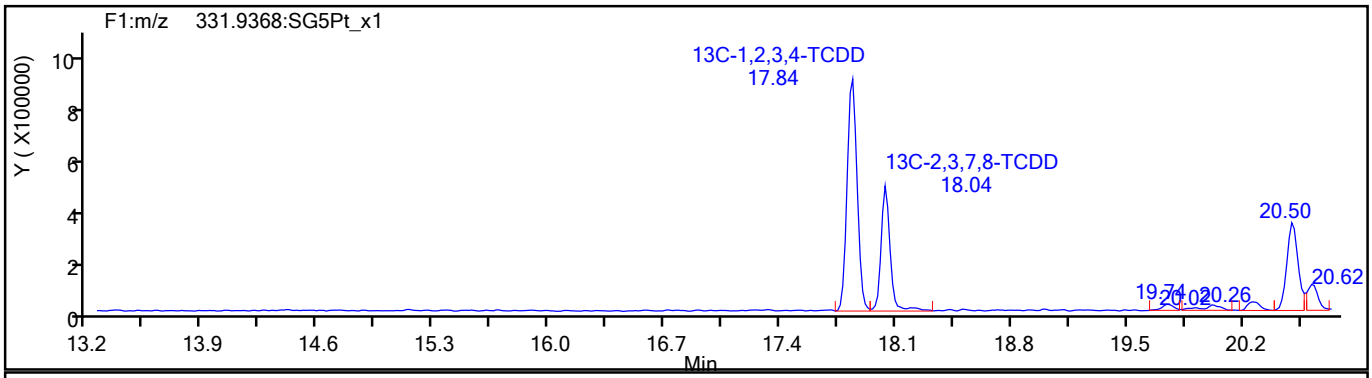

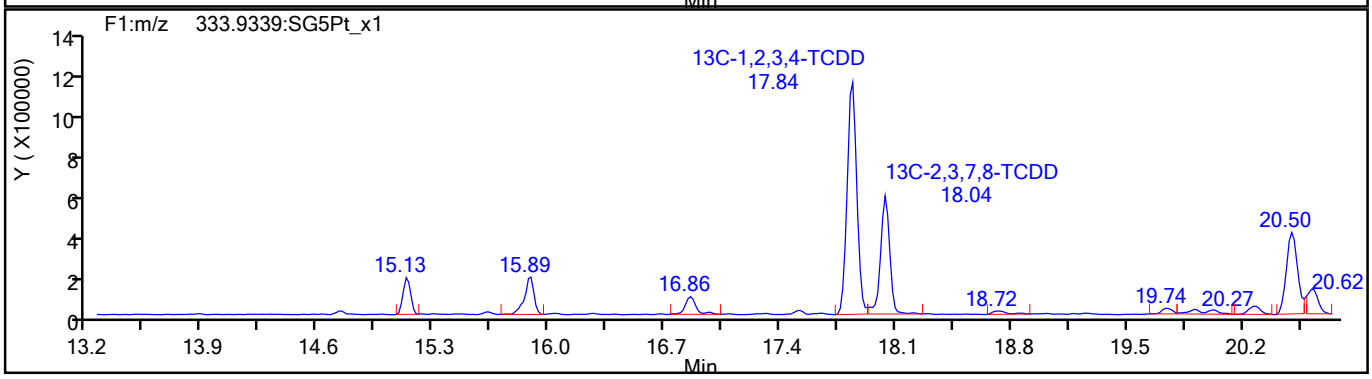

784924

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

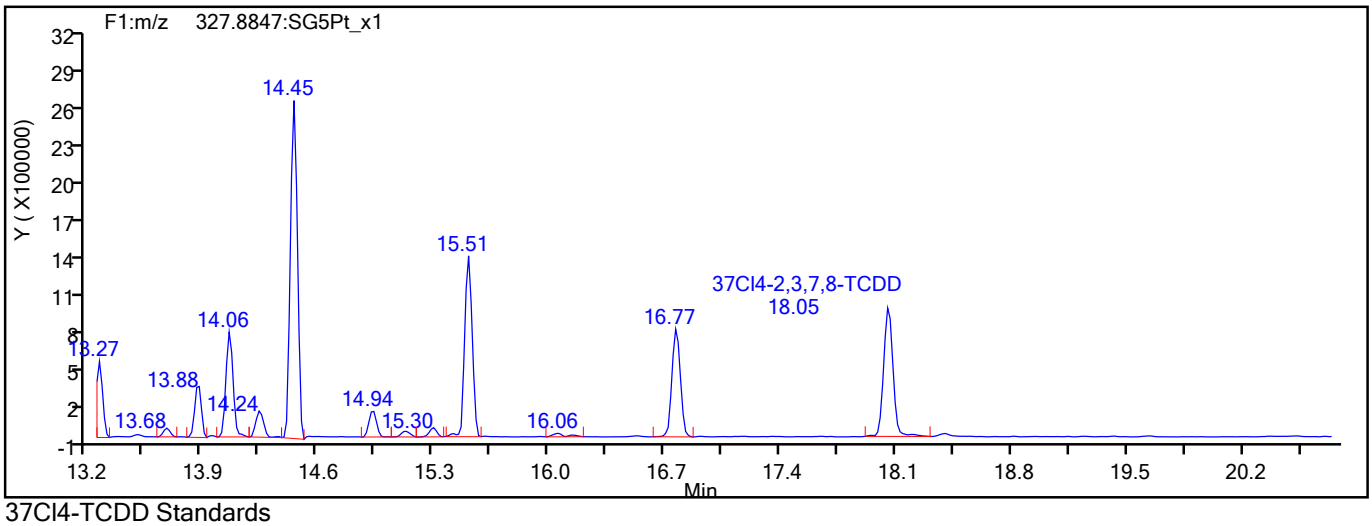

37Cl4-TCDD Standards

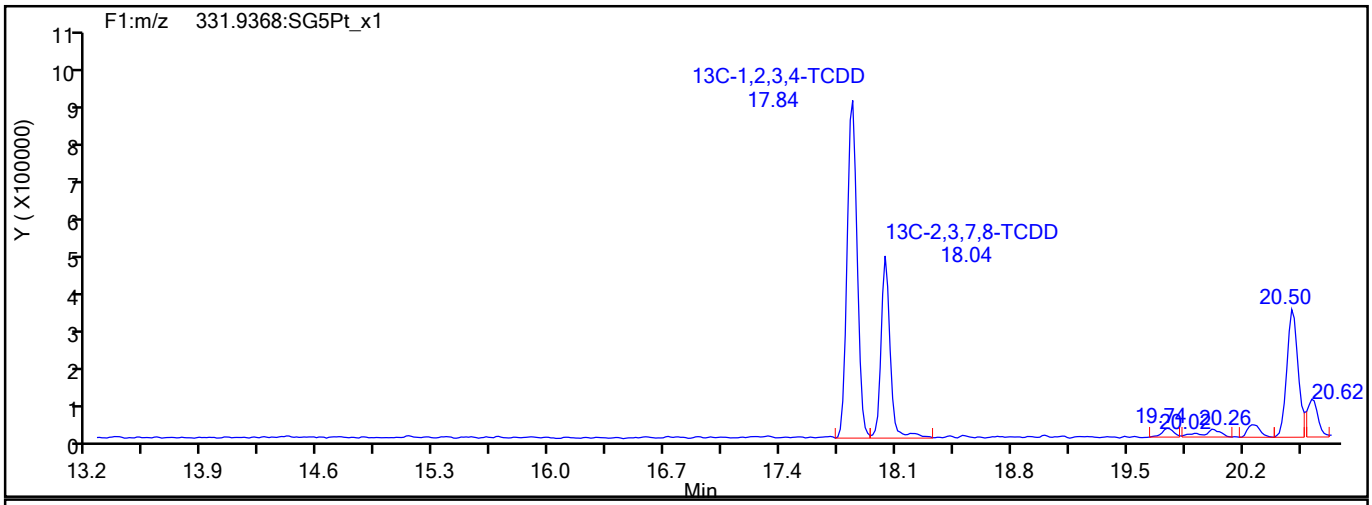

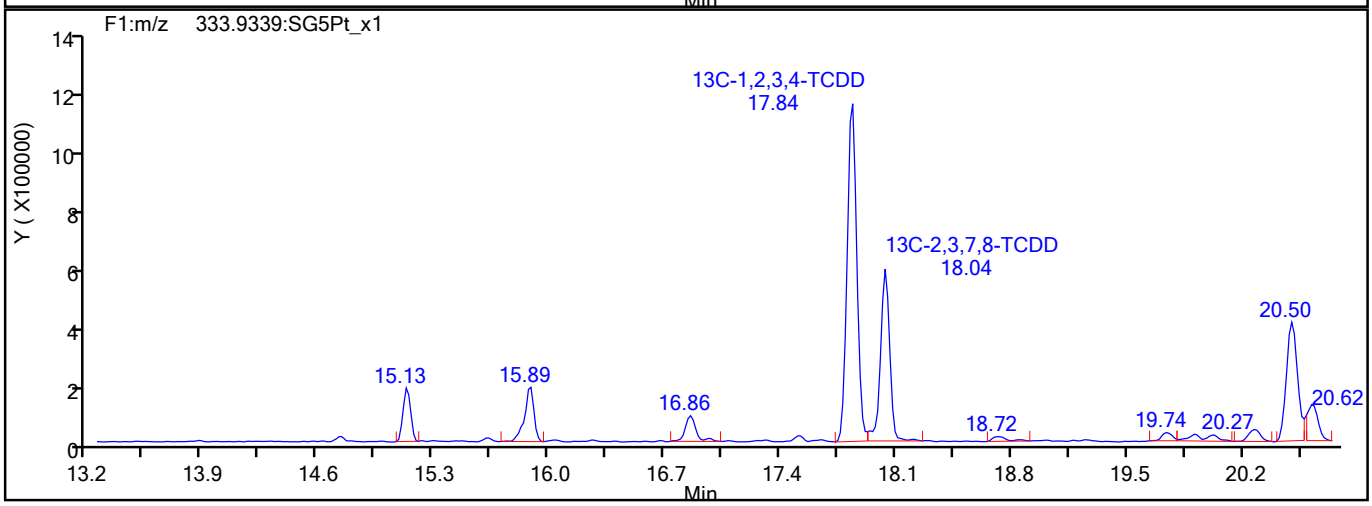

784925

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

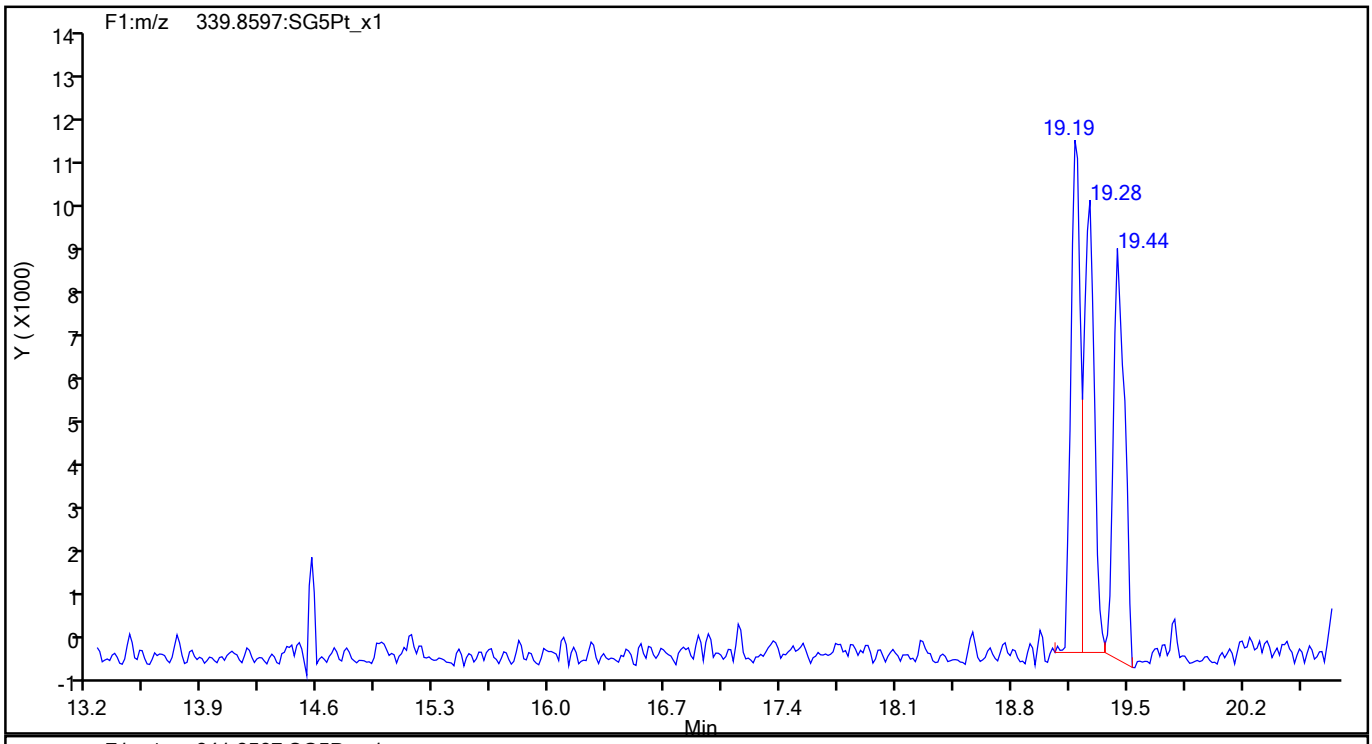

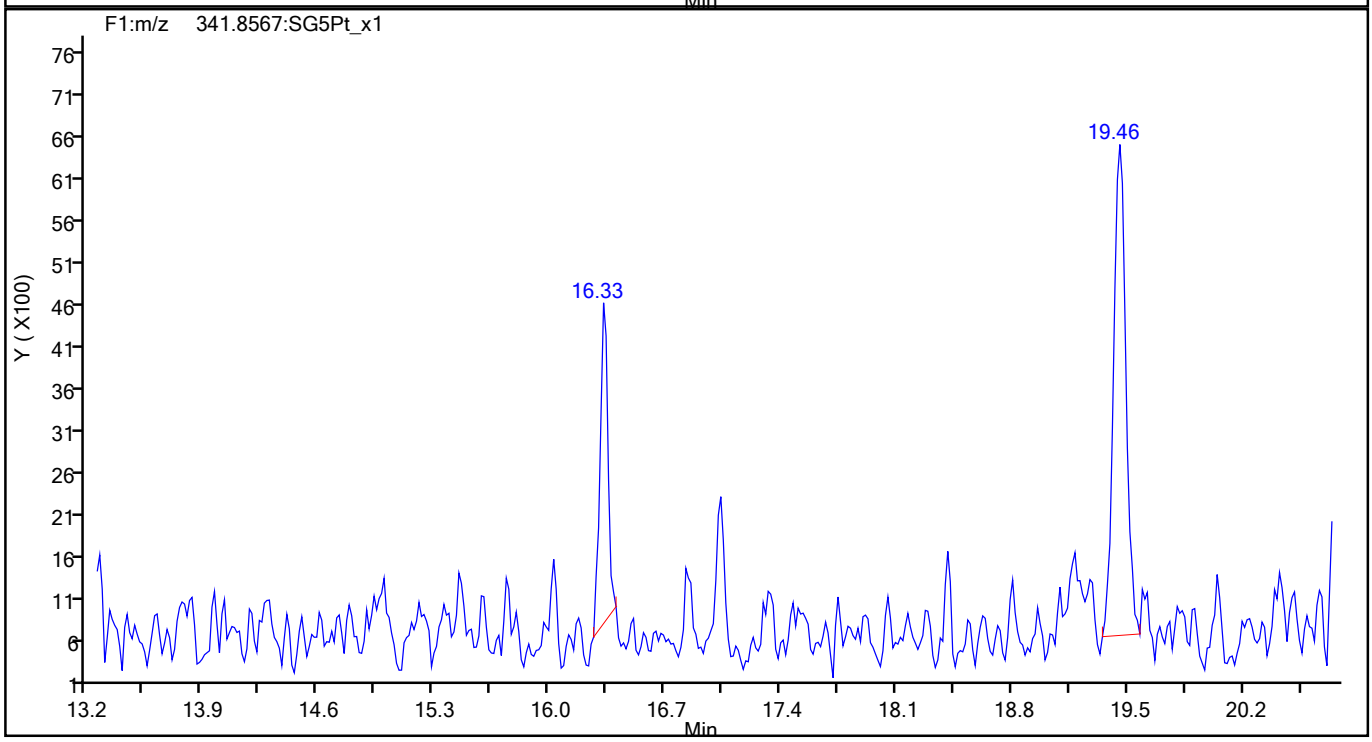

784926

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

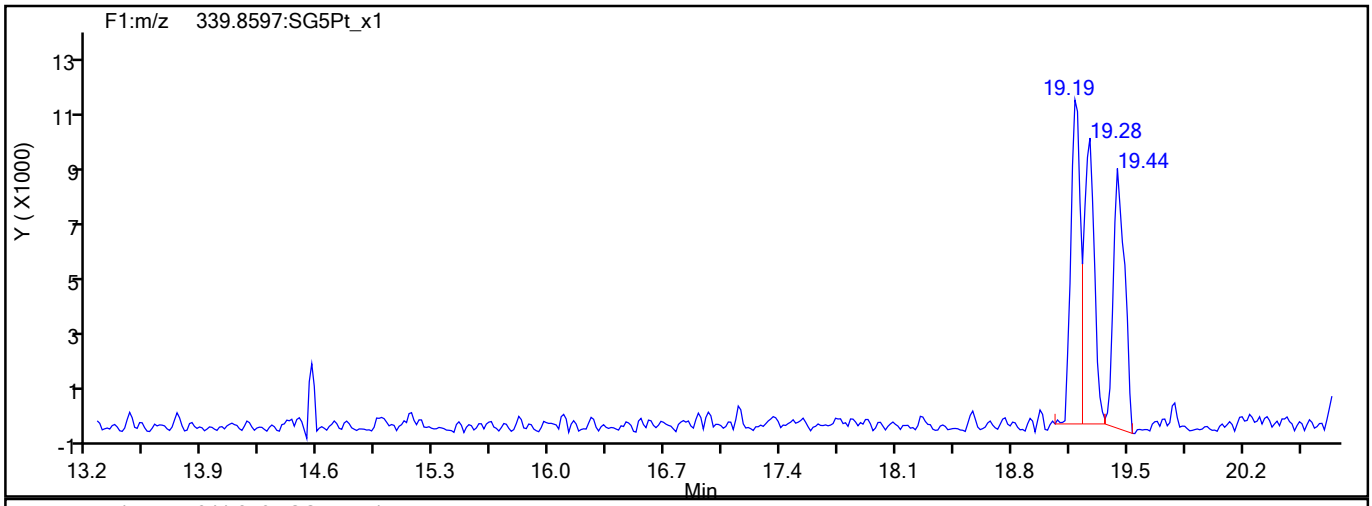

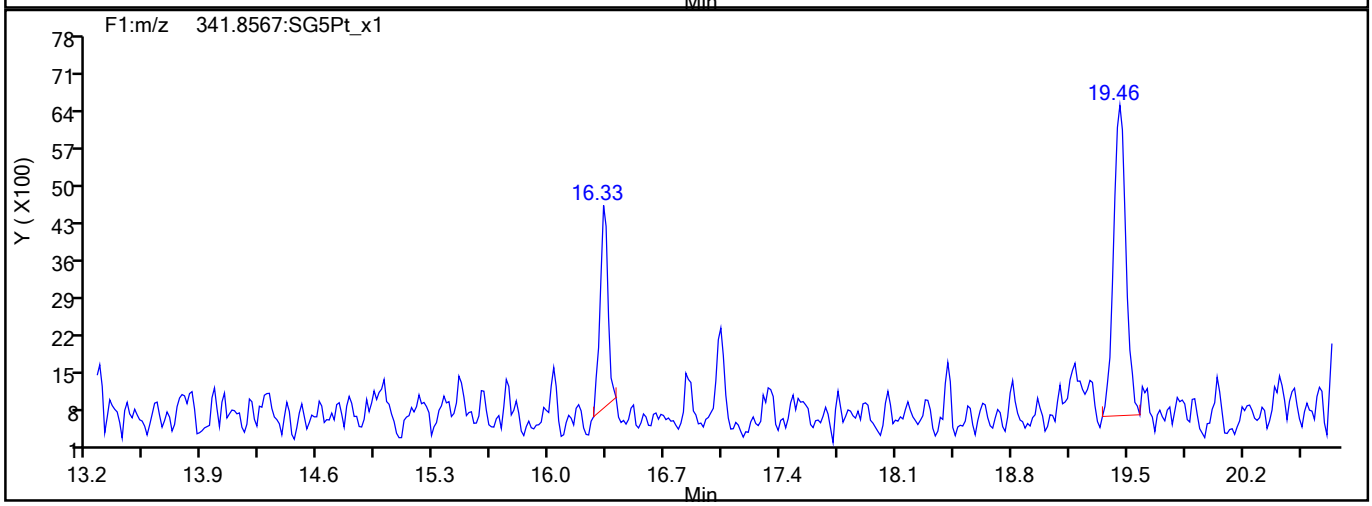

F1 PeCDFs Interference Mass

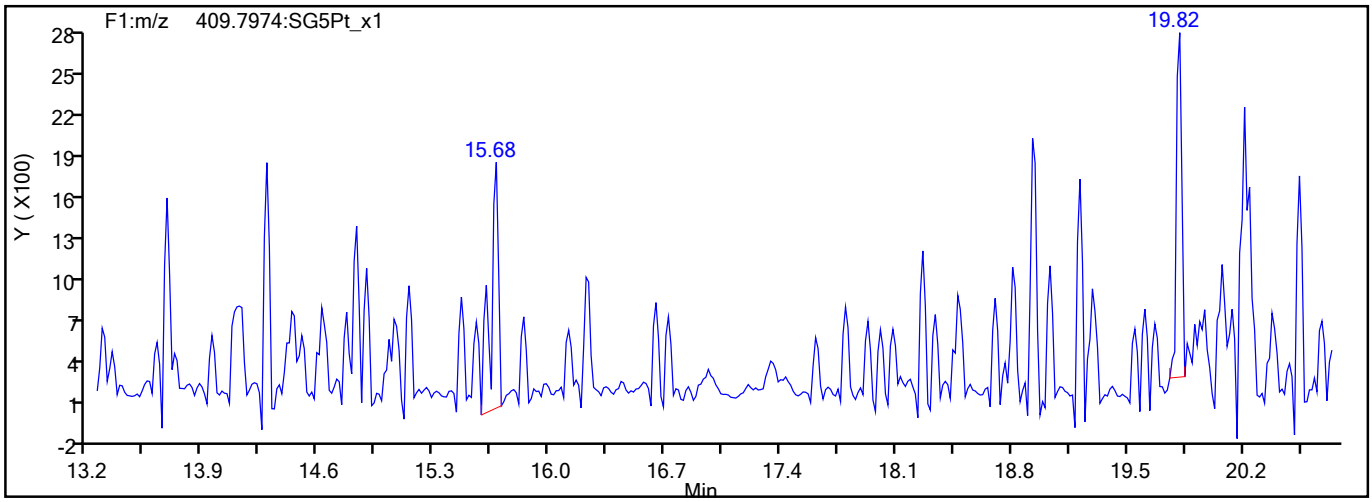

784927

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

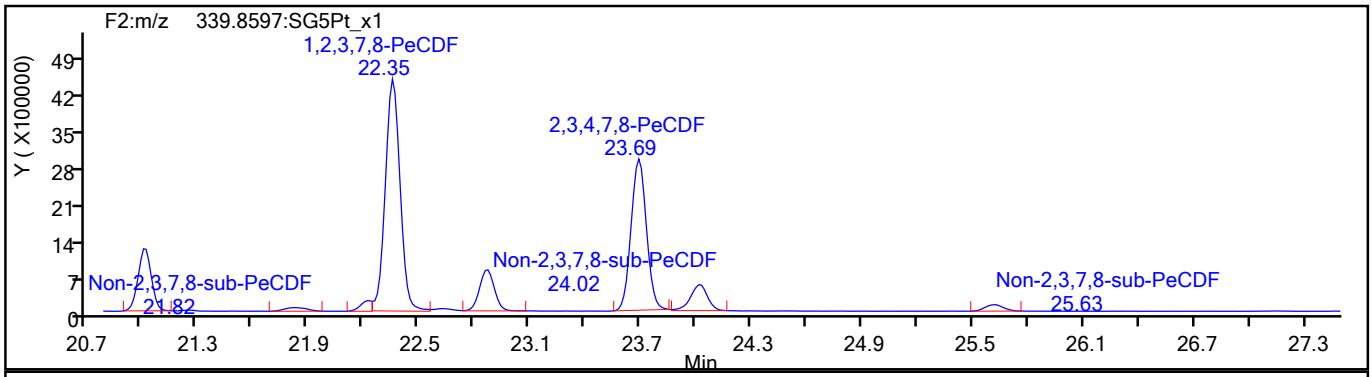

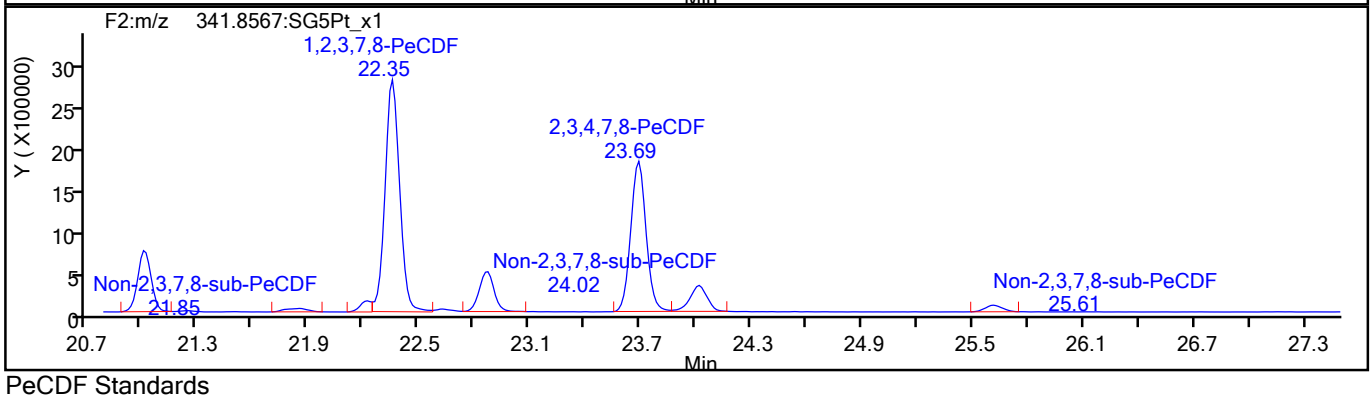

PeCDF Standards

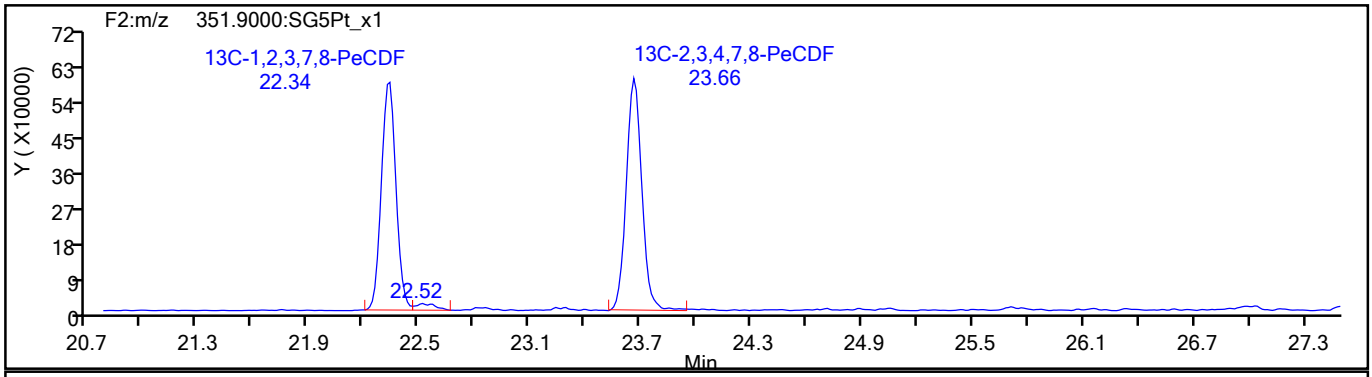

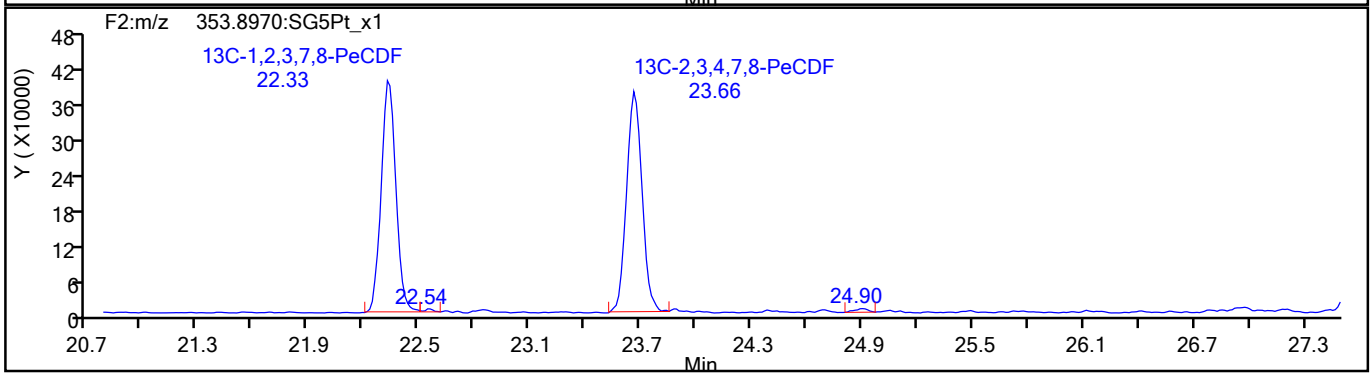

784928

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

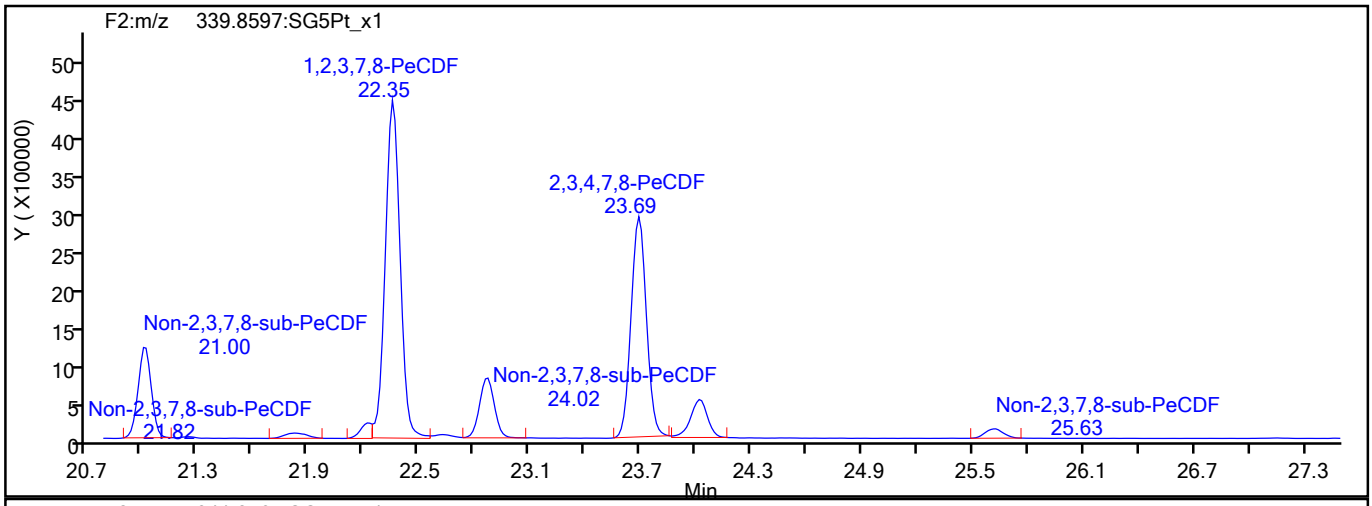

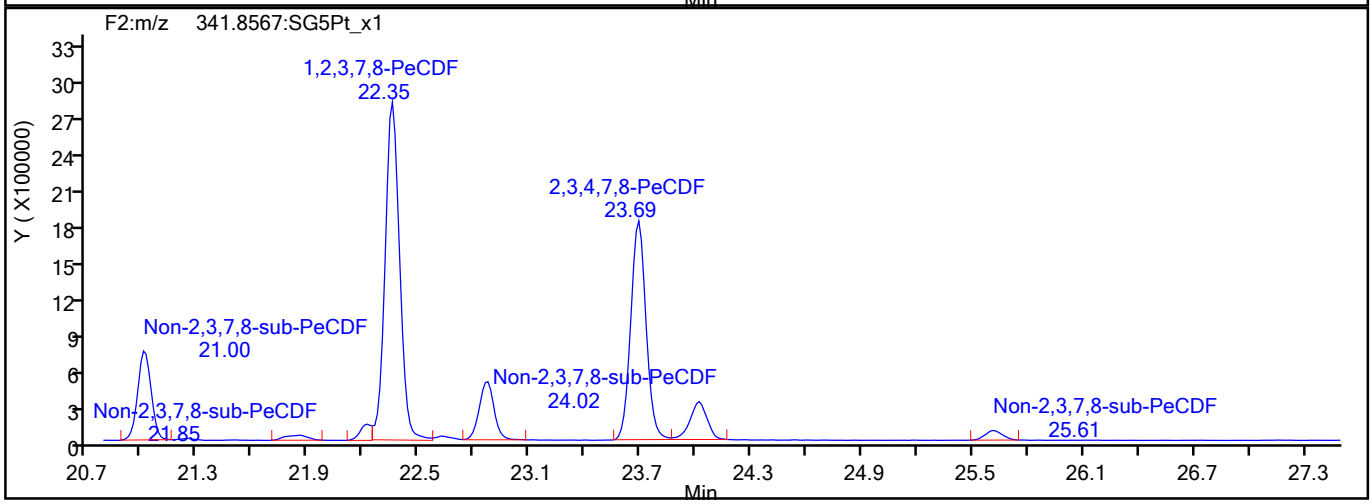

PeCDF Interference Mass

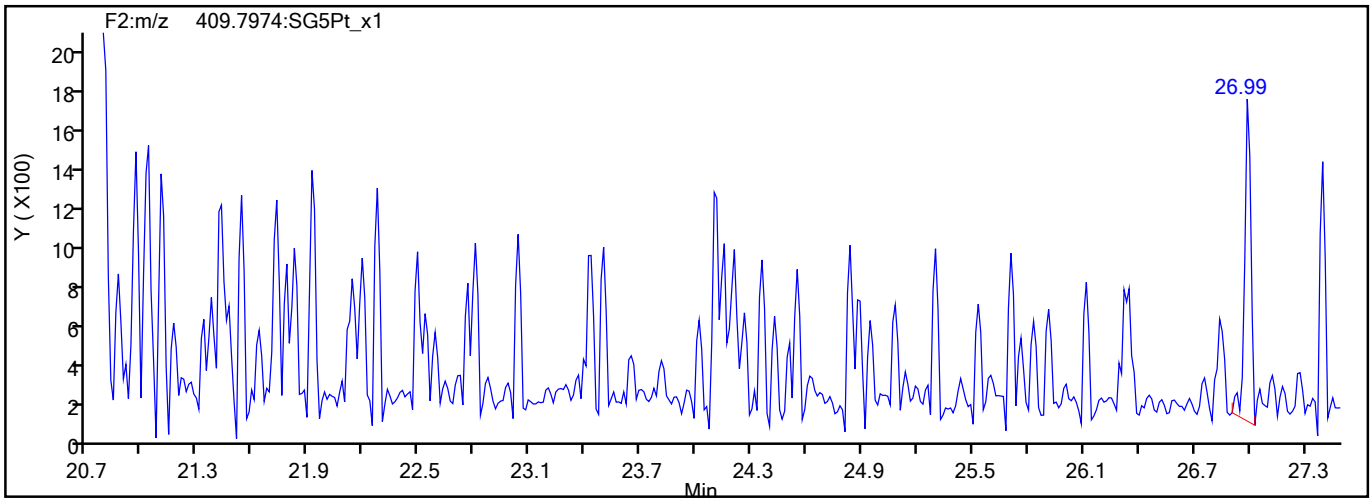

784929

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

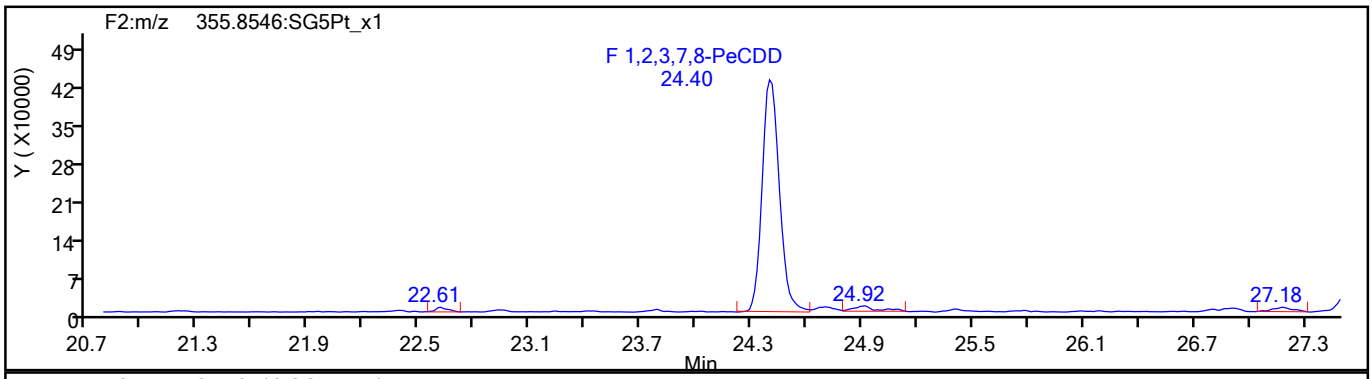

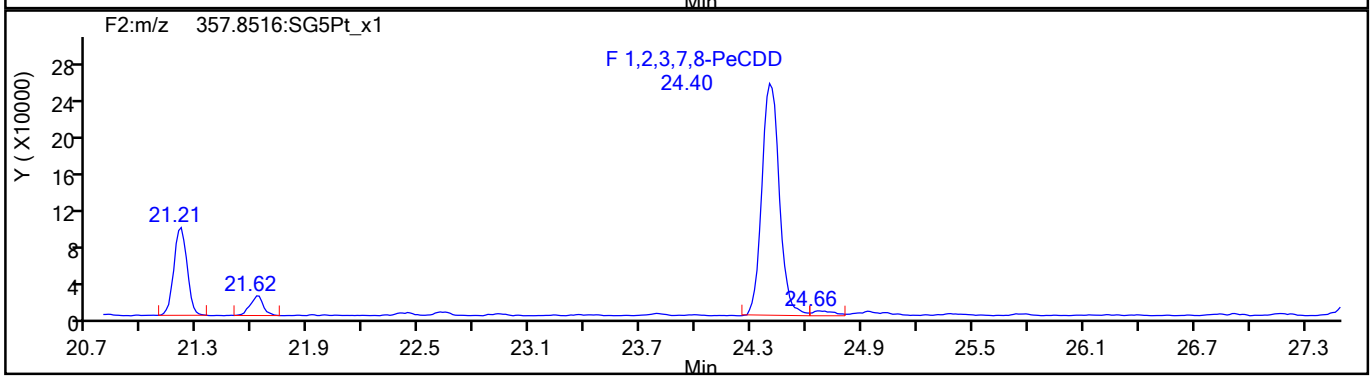

PeCDD Standards

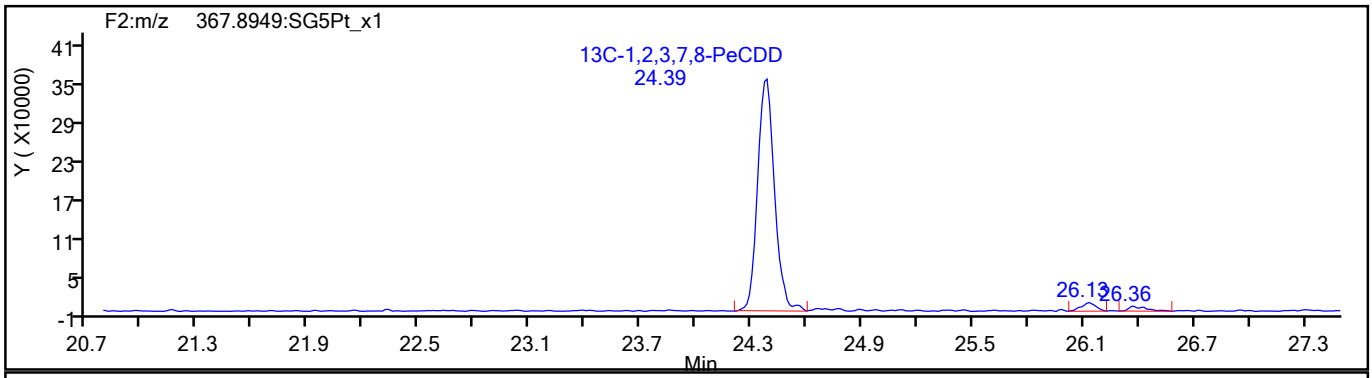

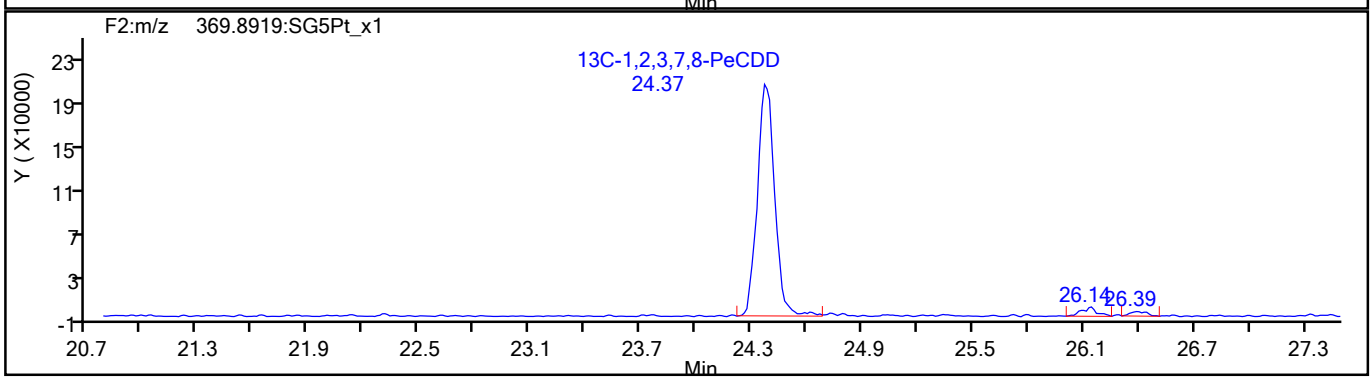

784930

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

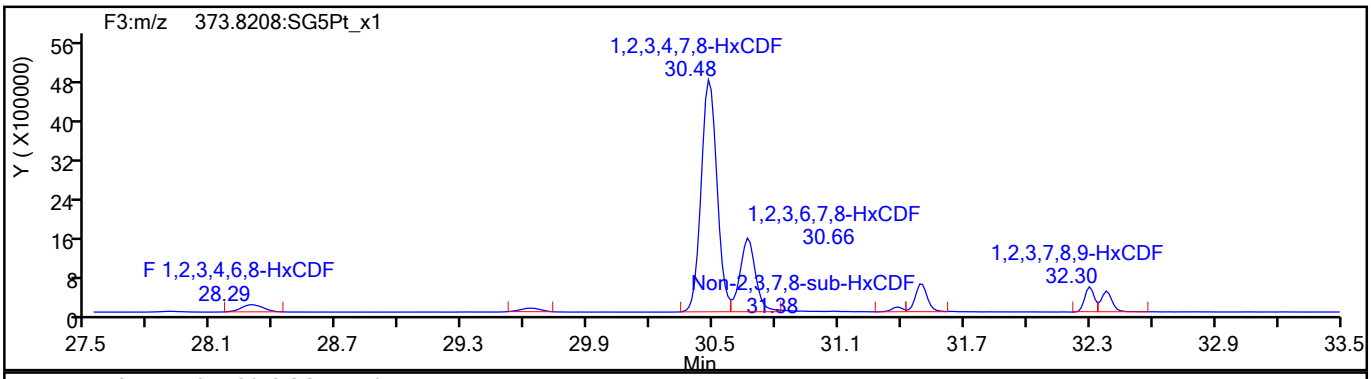

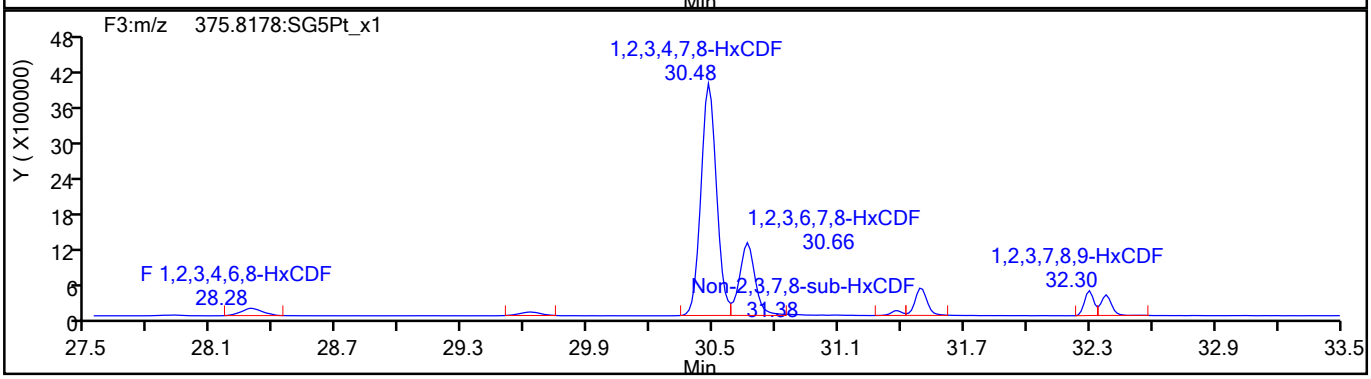

HxCDF Standards

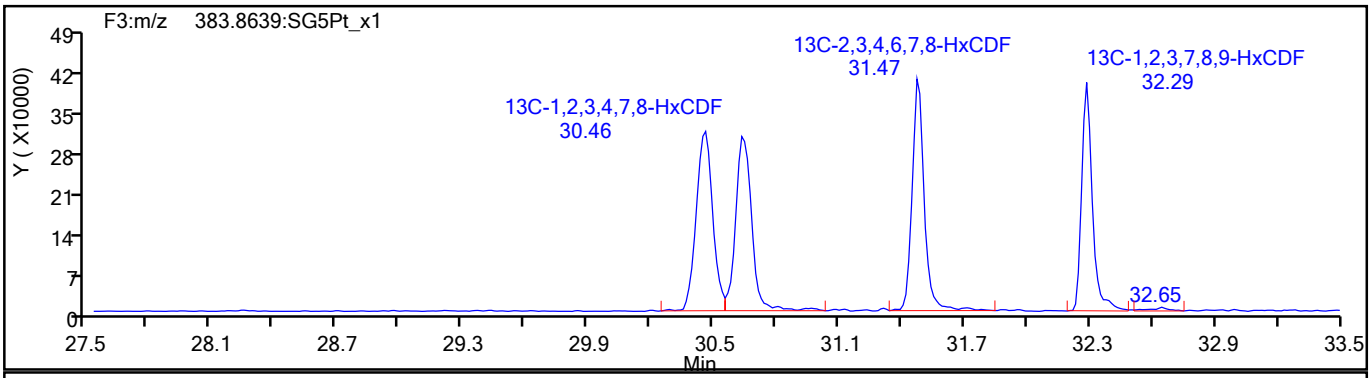

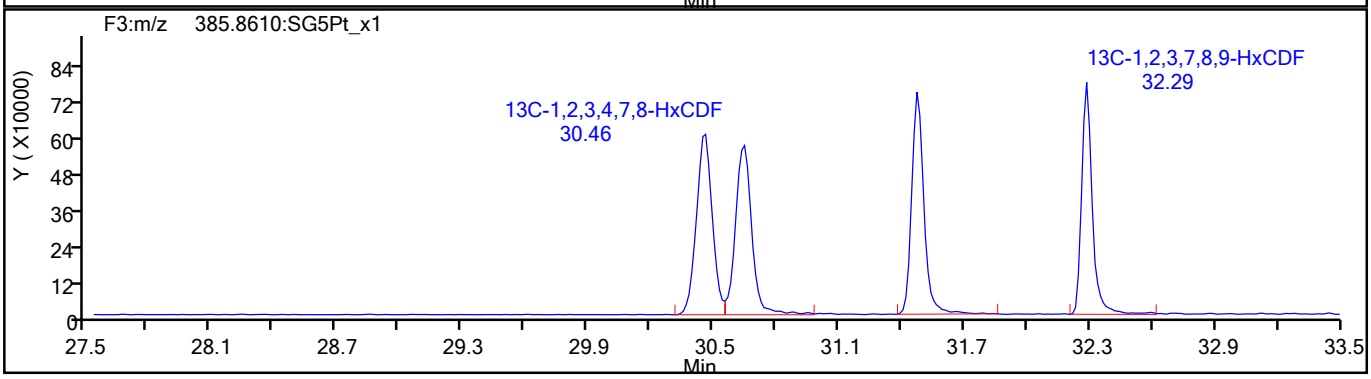

784931

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

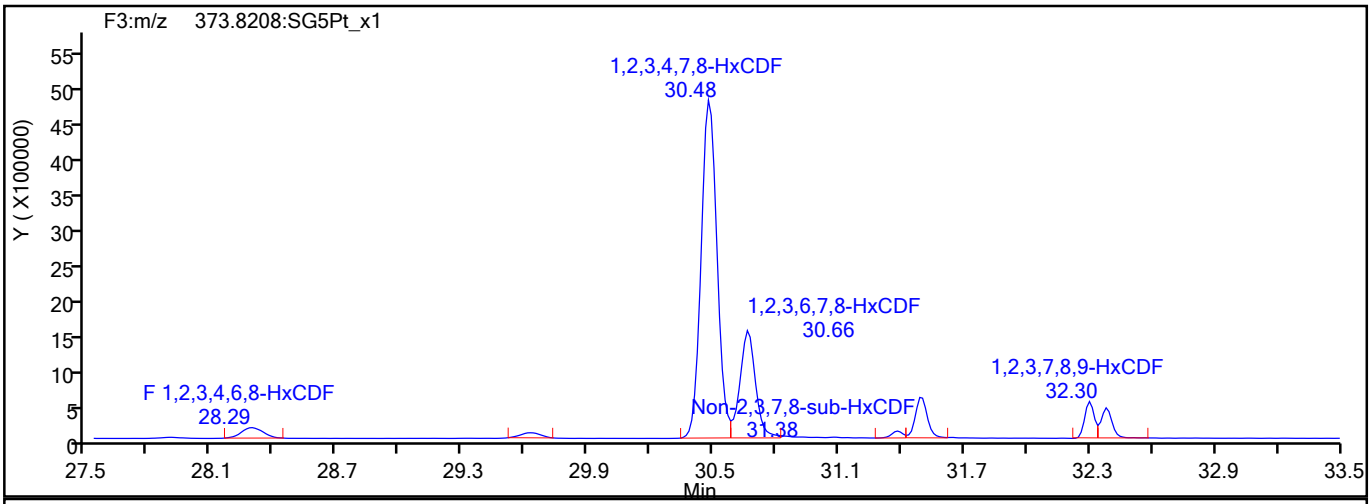

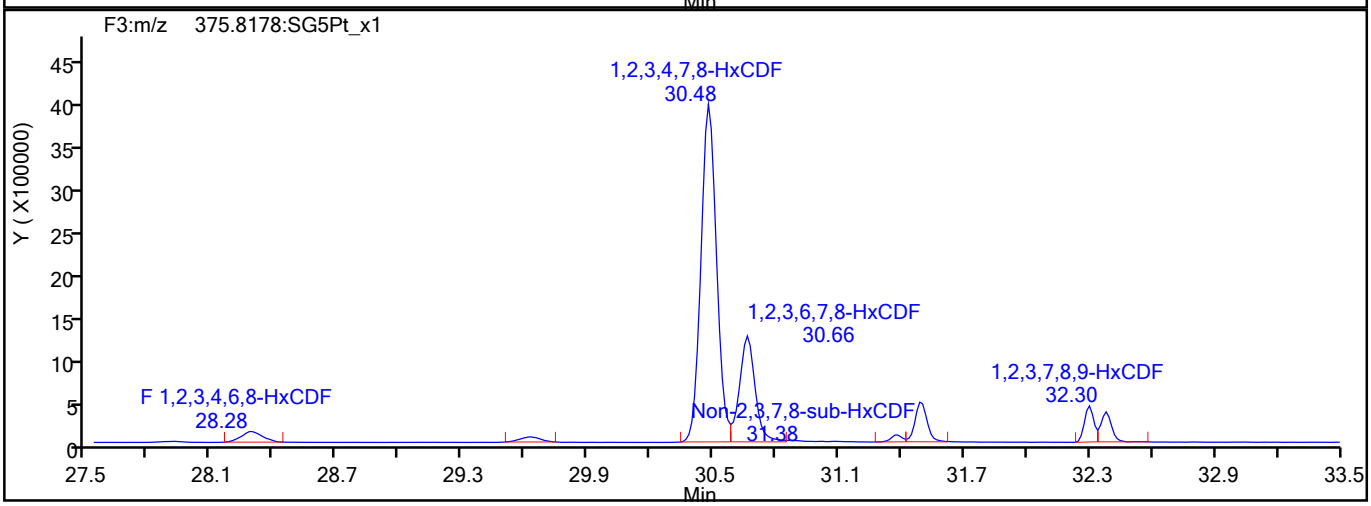

HxCDF Interference Mass

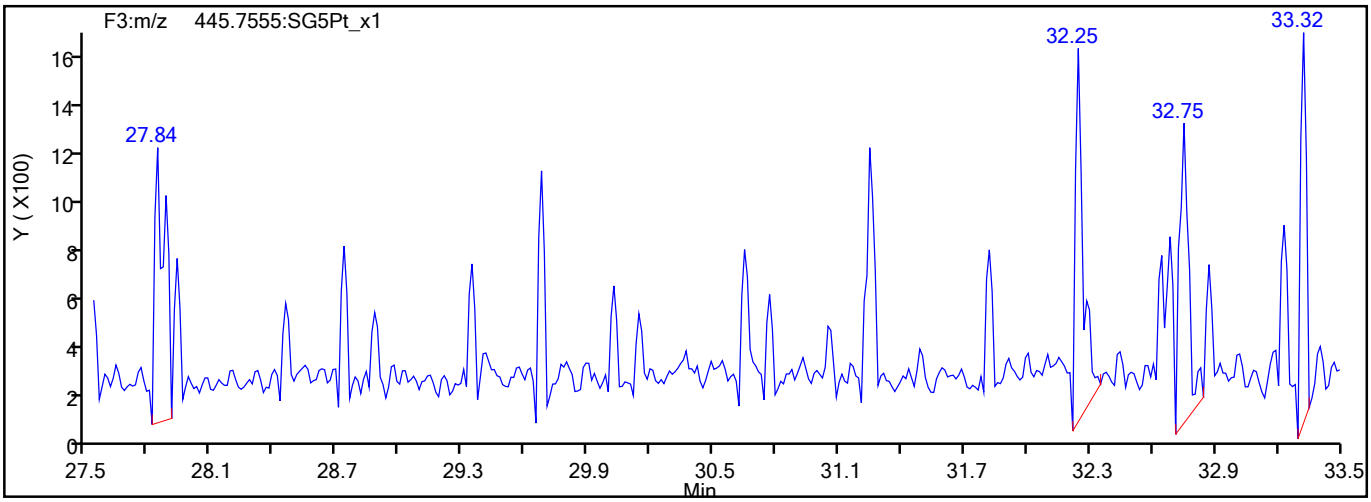

784932

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

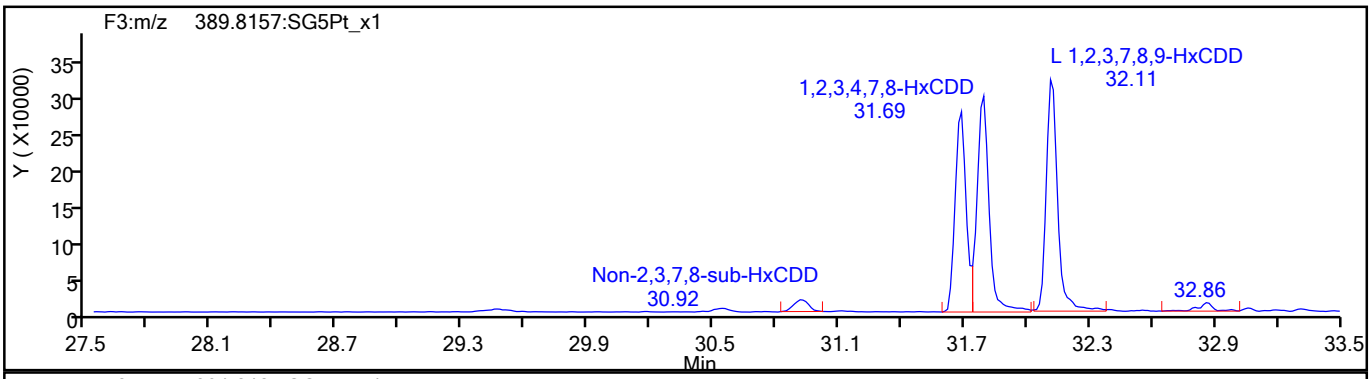

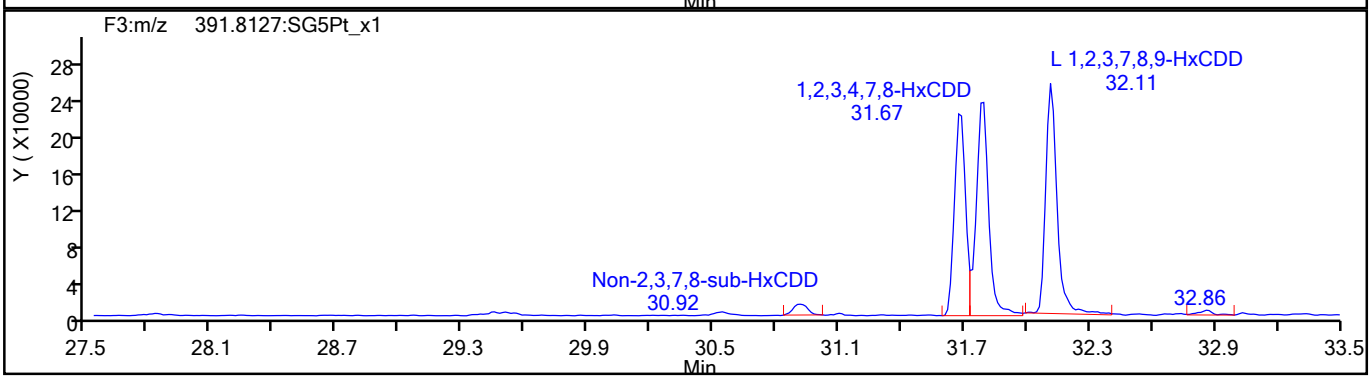

HxCDD Standards

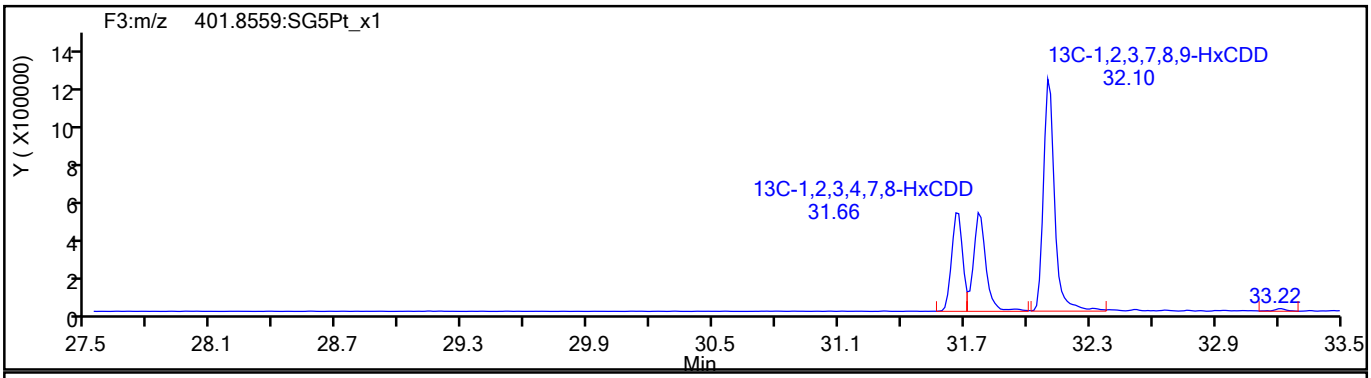

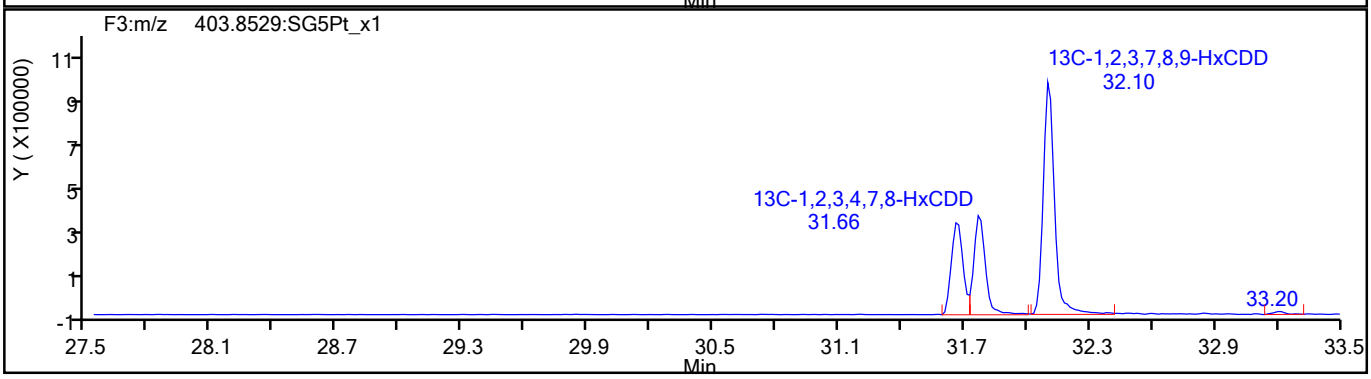

784933

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

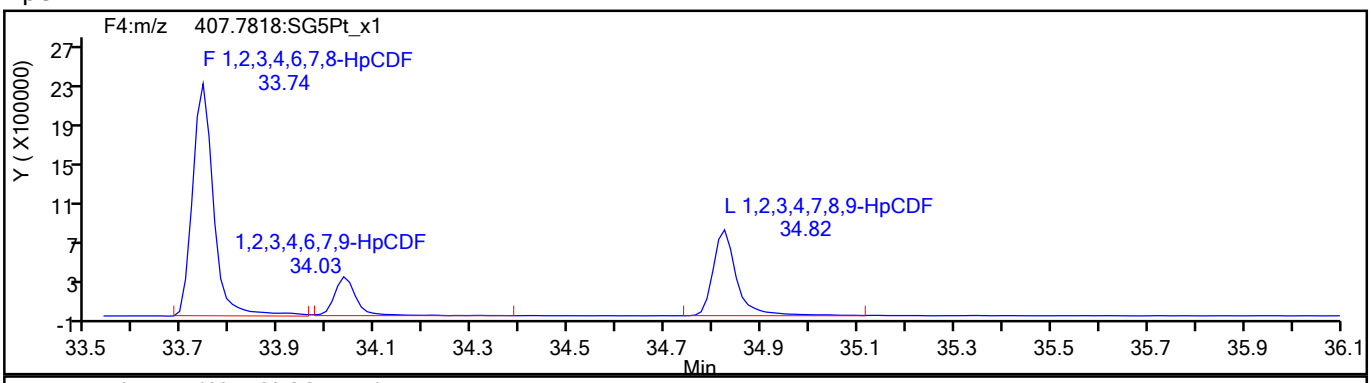

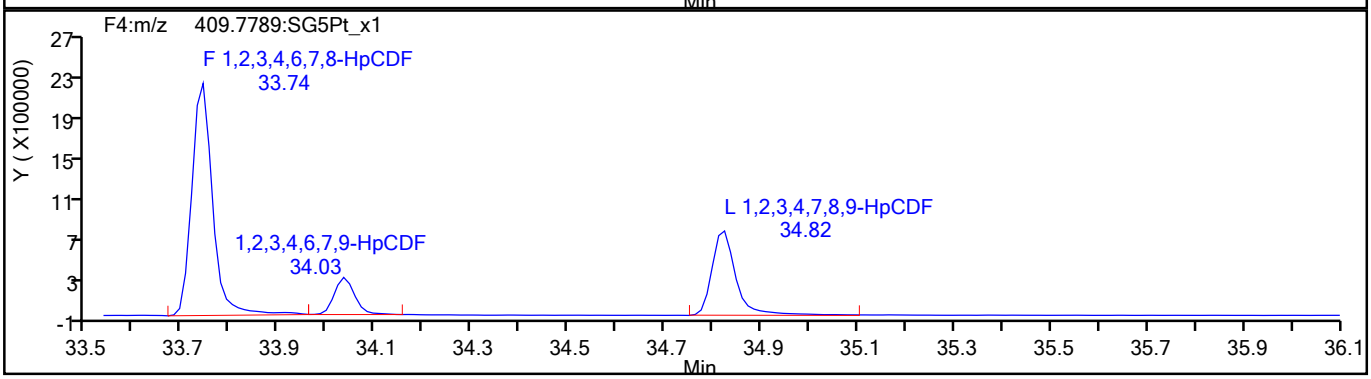

HpCDF Standards

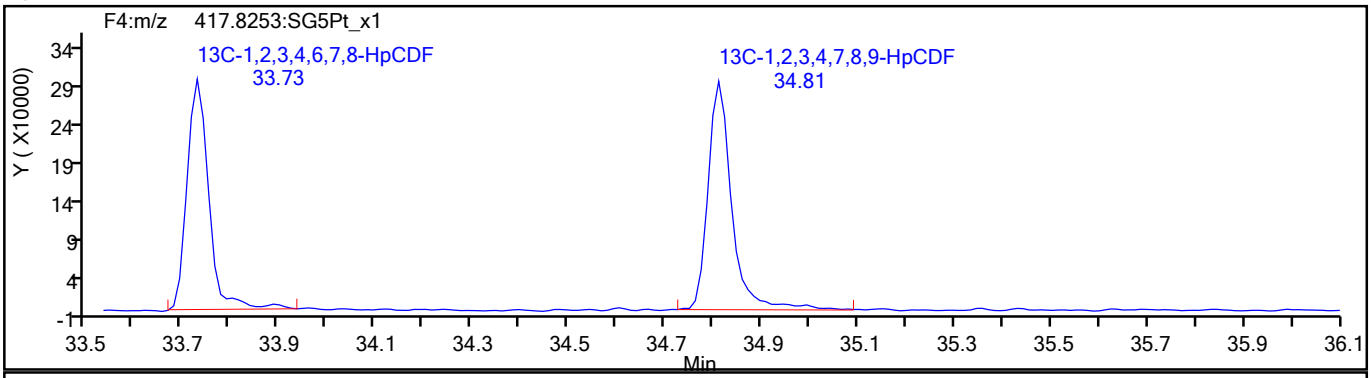

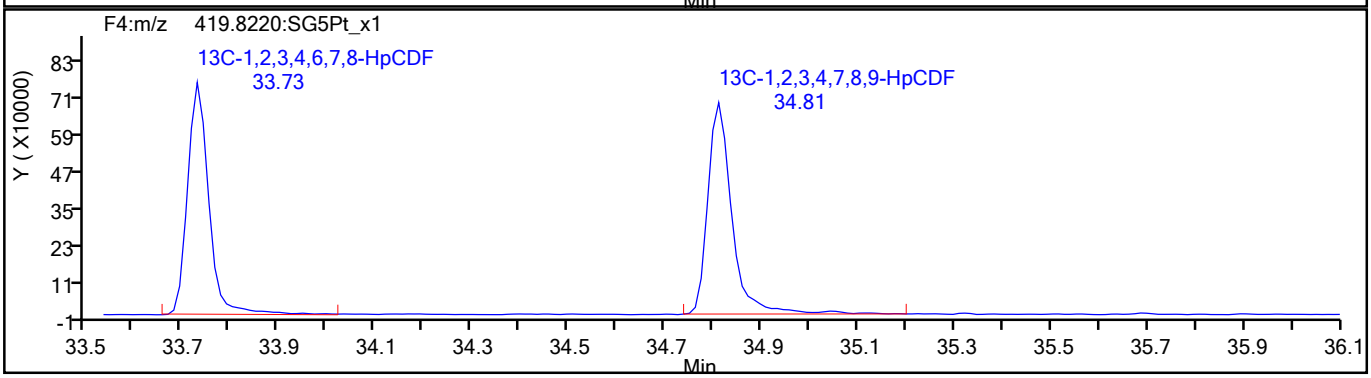

784934

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

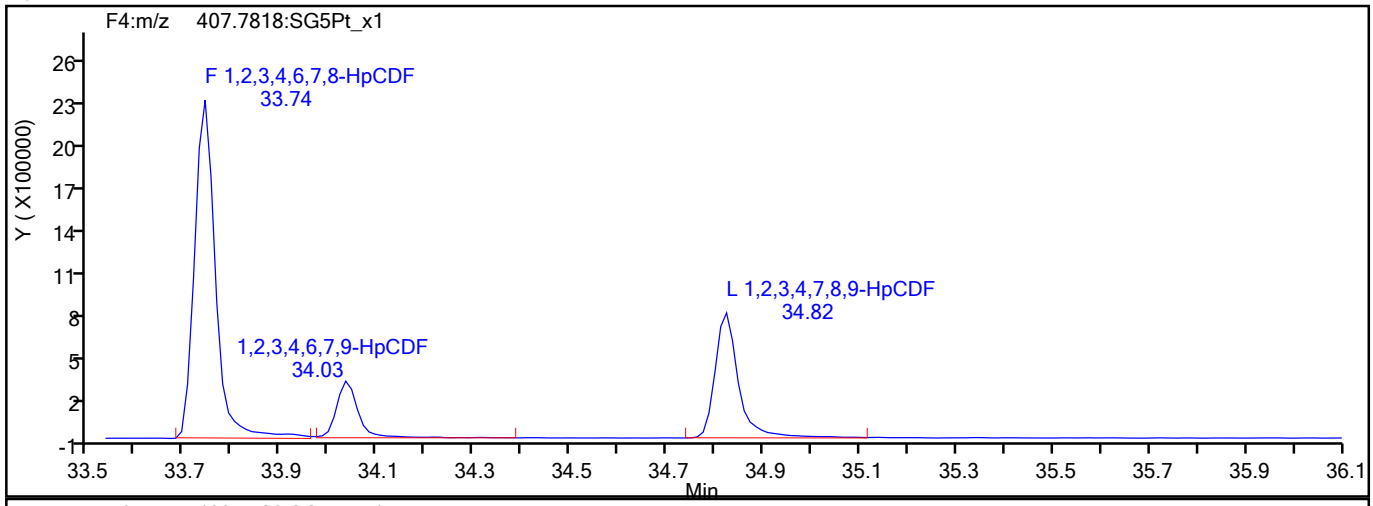

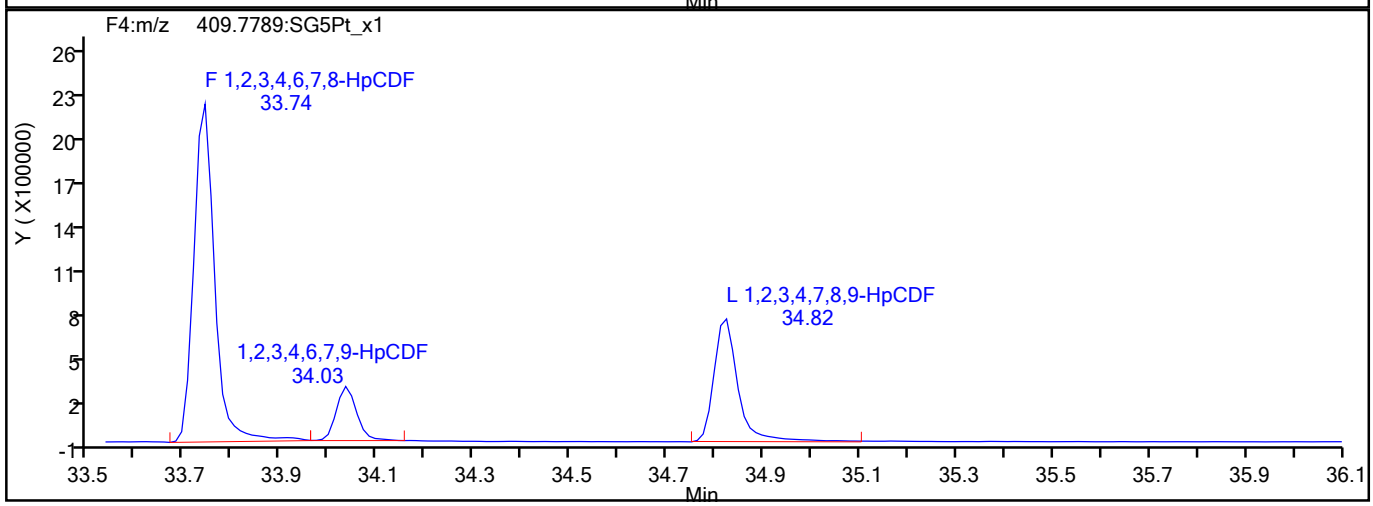

HpCDF Interference Mass

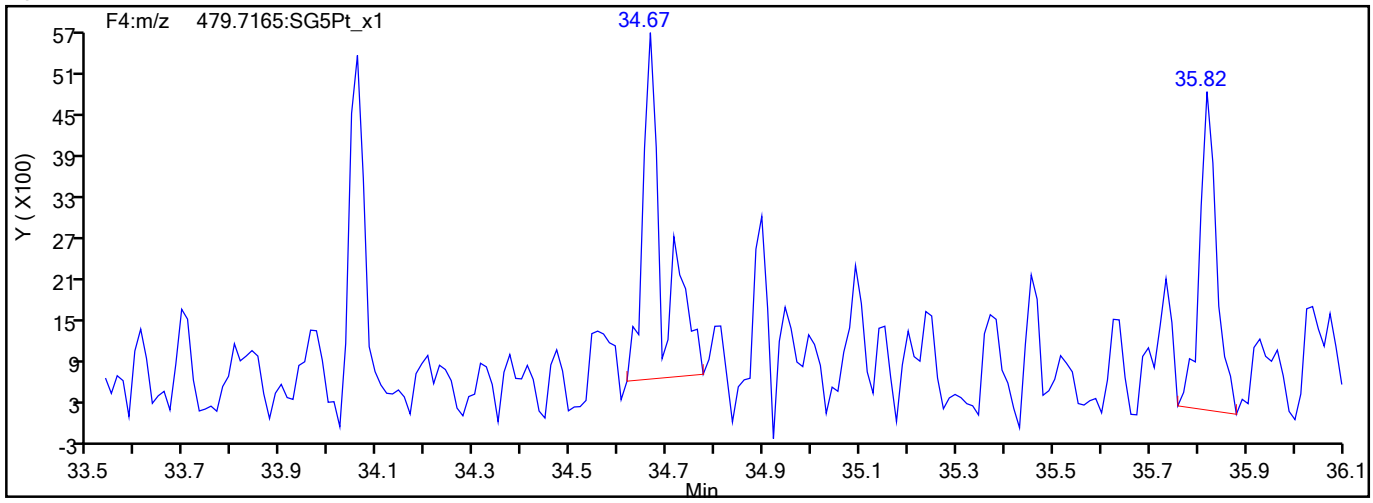

784935

Report Date: 19-Aug-2021 13:08:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

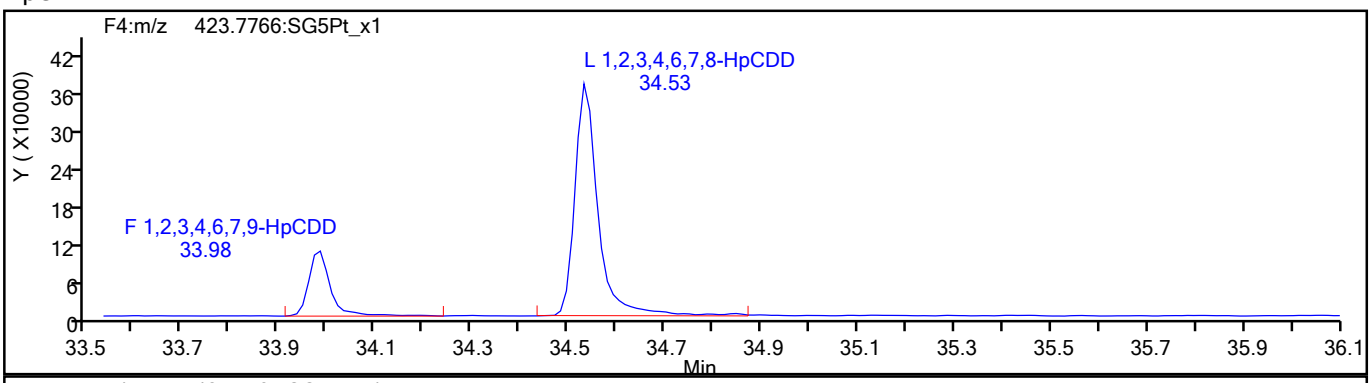

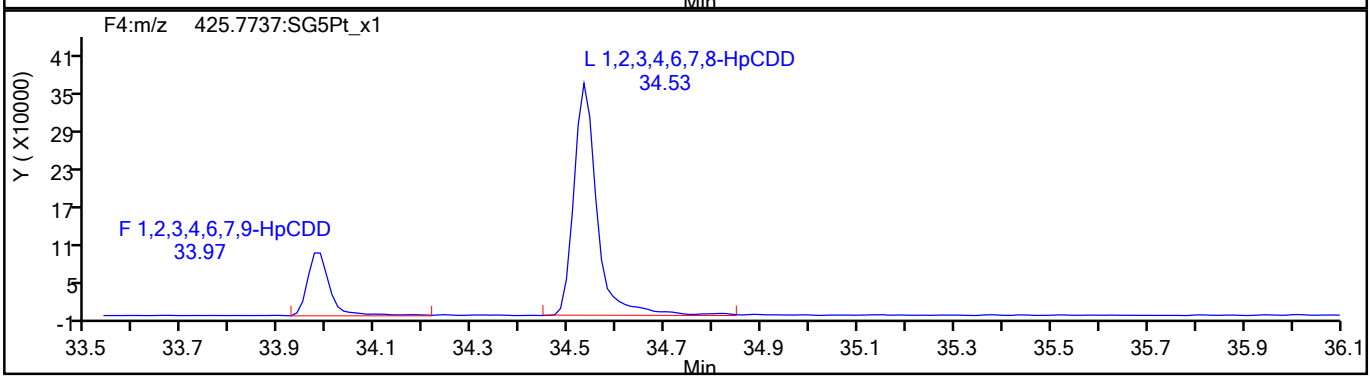

HpCDD Standards

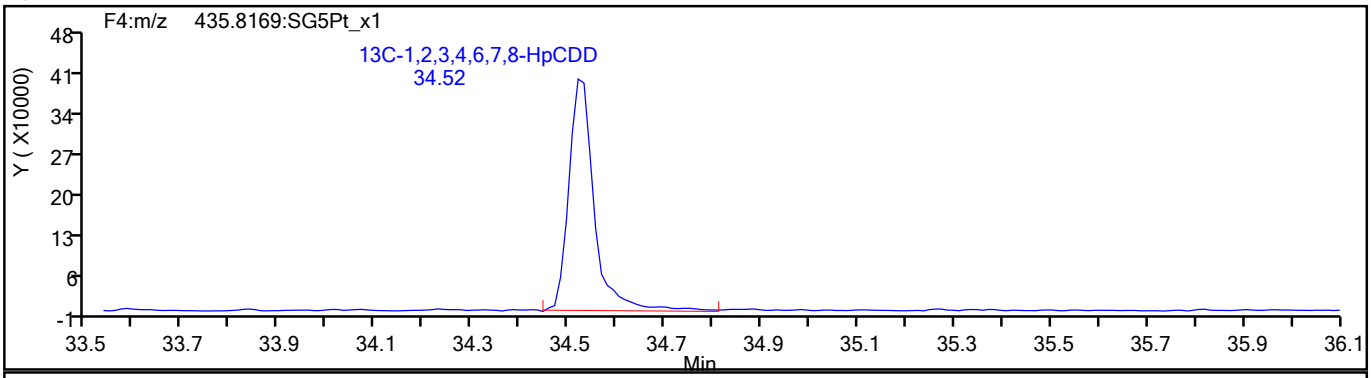

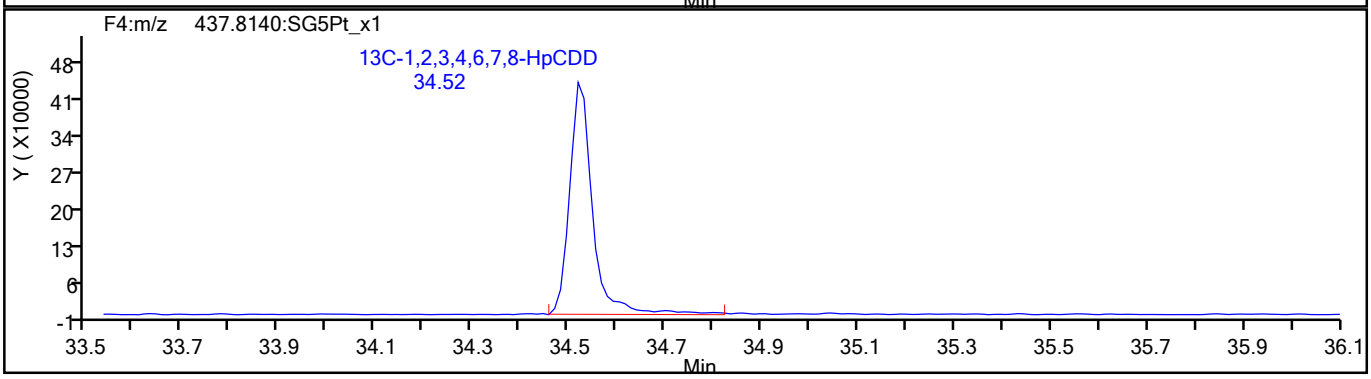

784936

Report Date: 19-Aug-2021 13:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

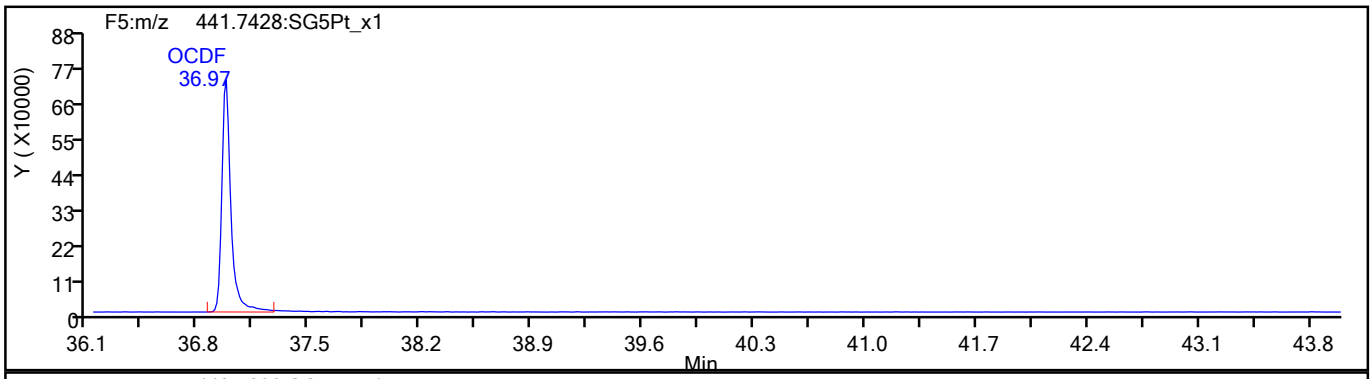

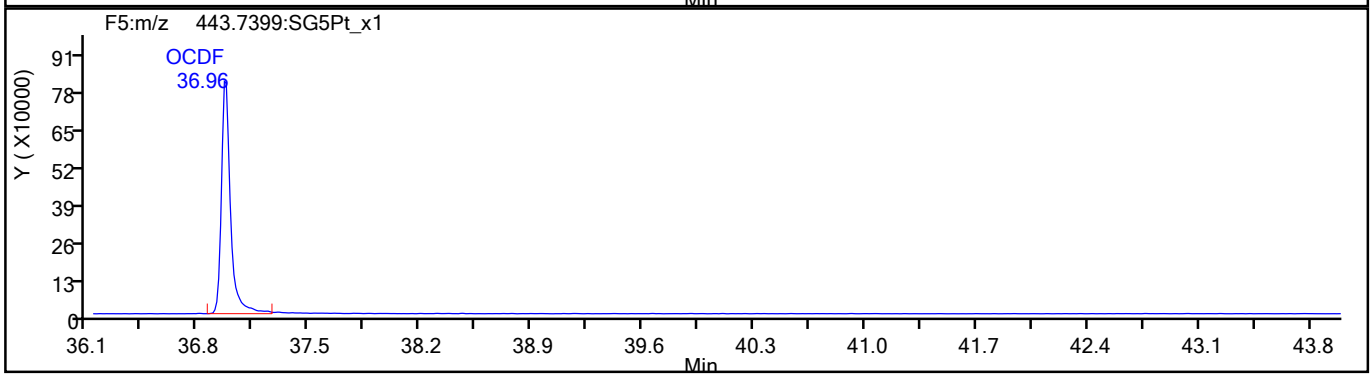

OCDF Standards

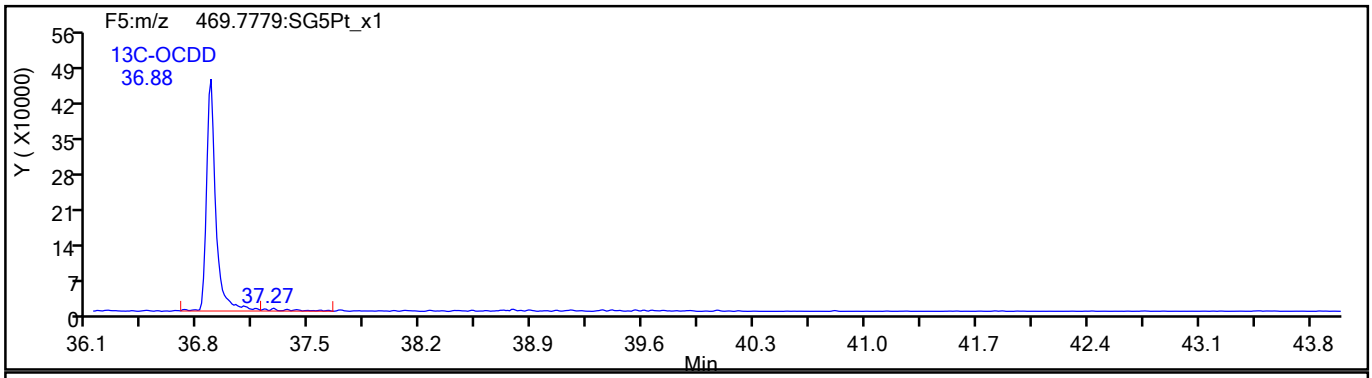

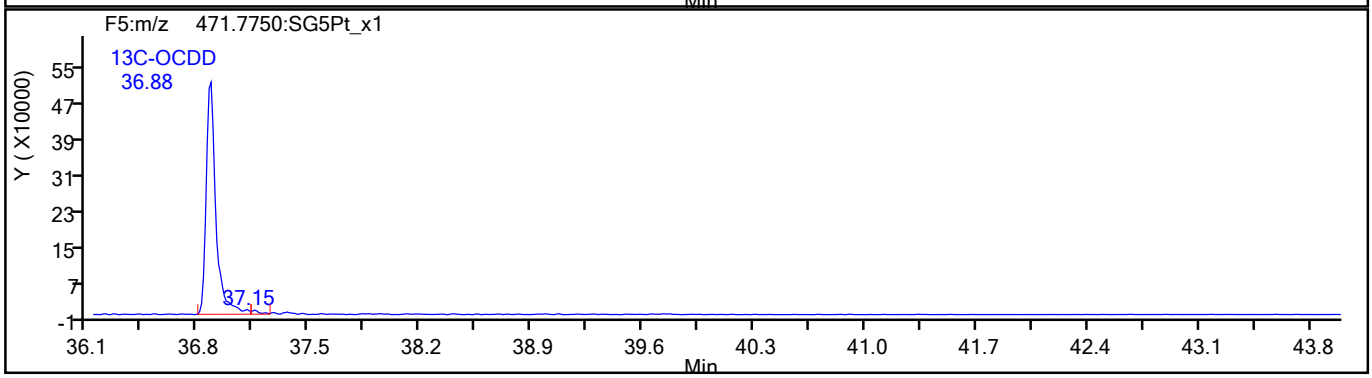

784937

Report Date: 19-Aug-2021 13:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

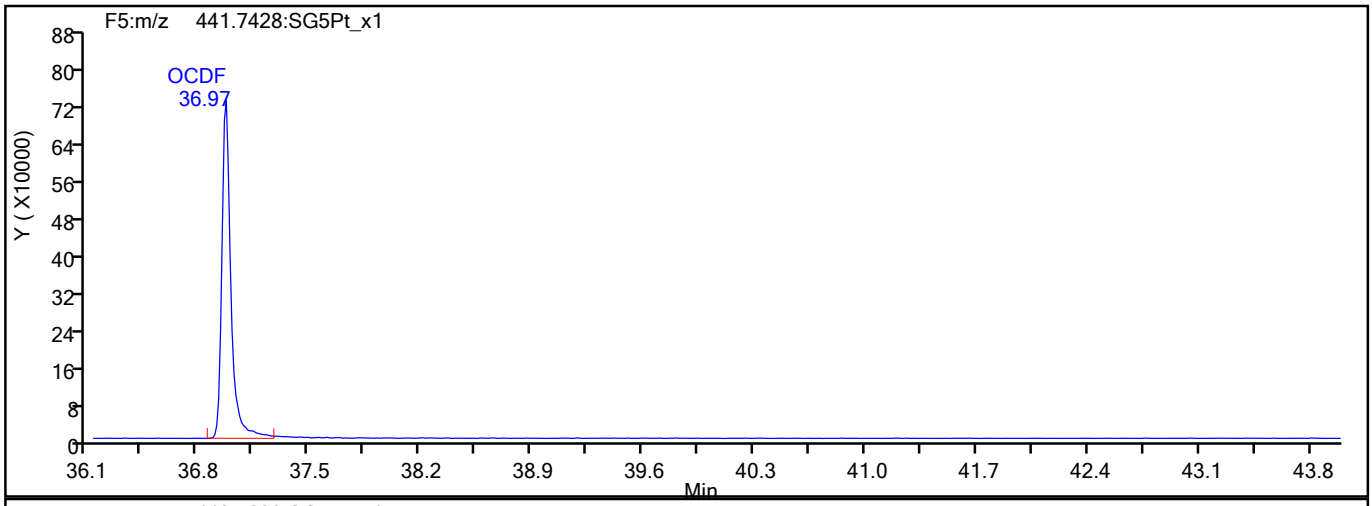

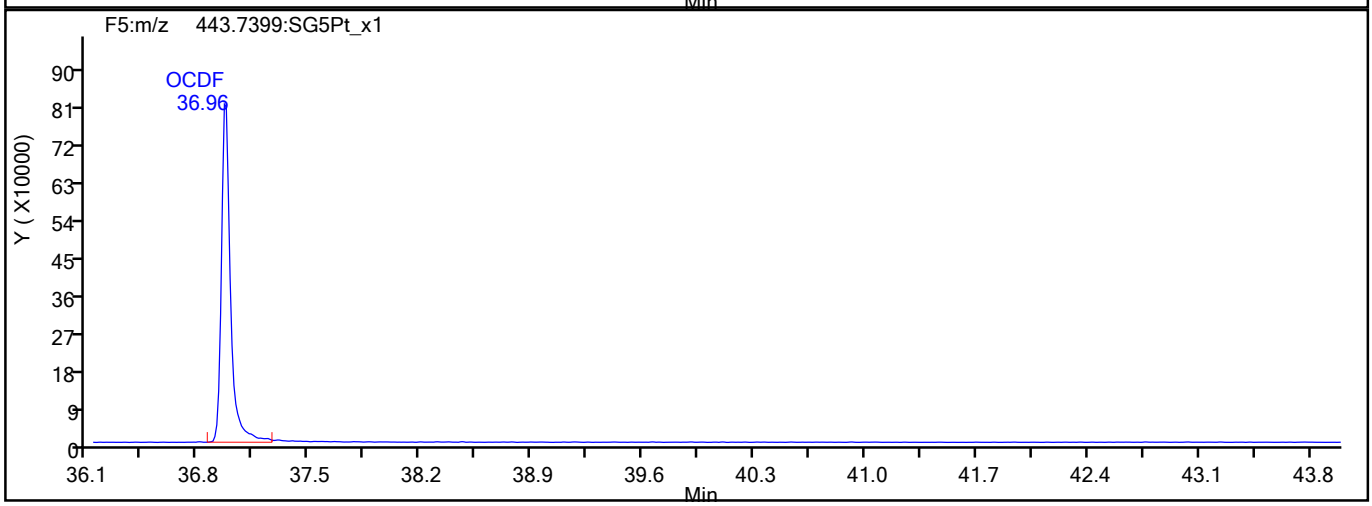

OCDF Interference Mass

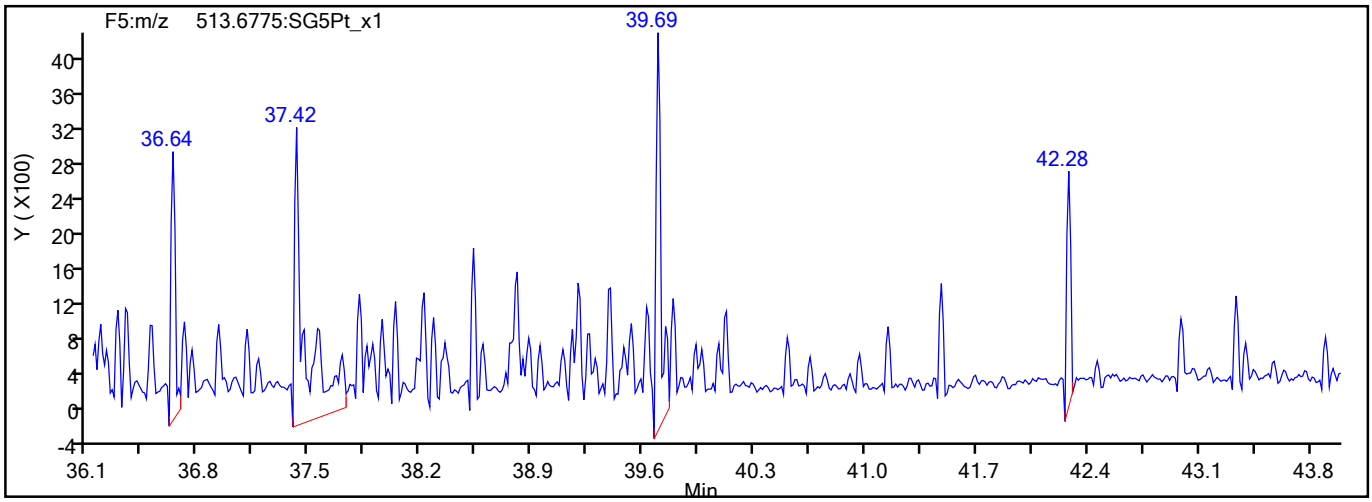

784938

Report Date: 19-Aug-2021 13:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

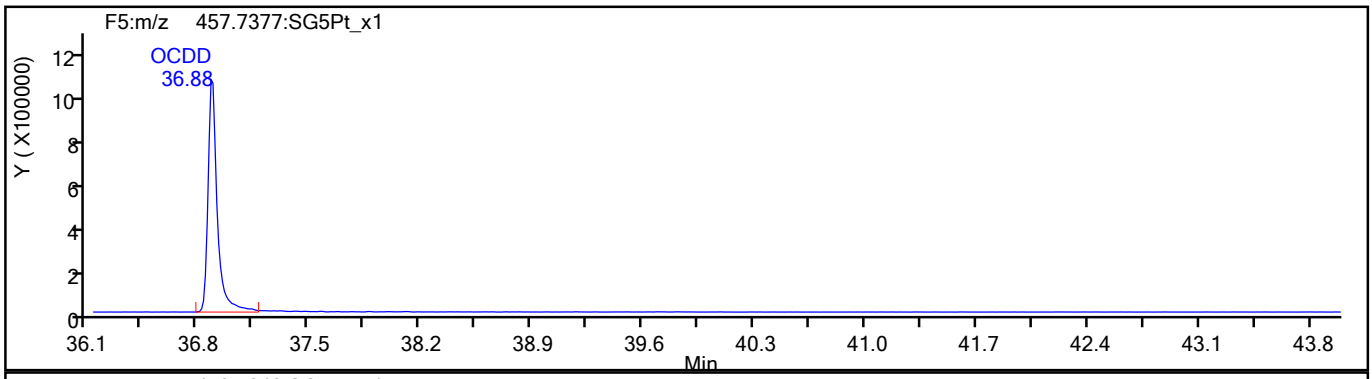

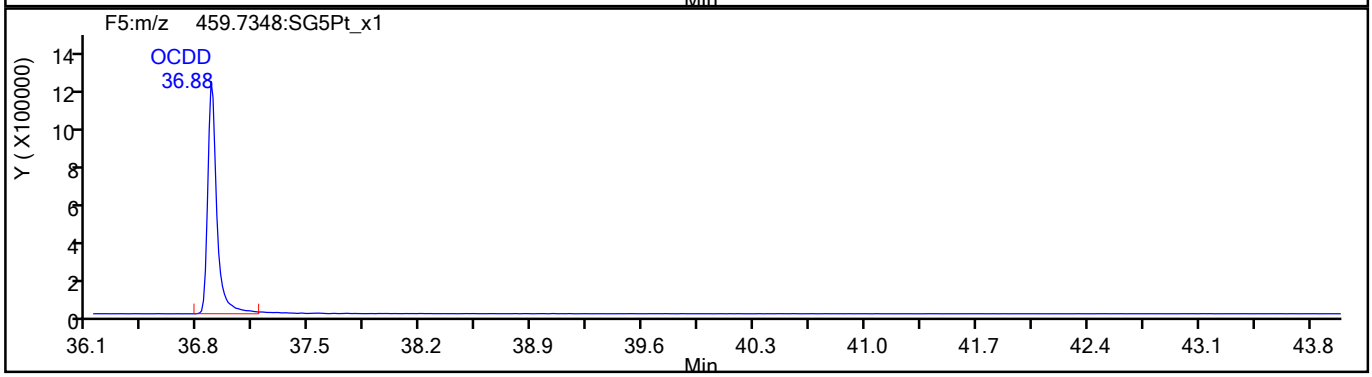

OCDD Standards

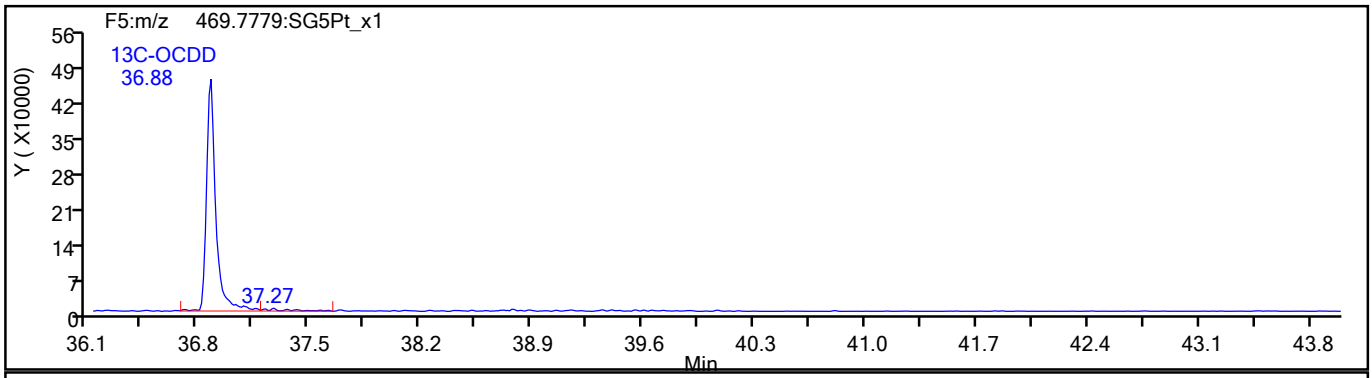

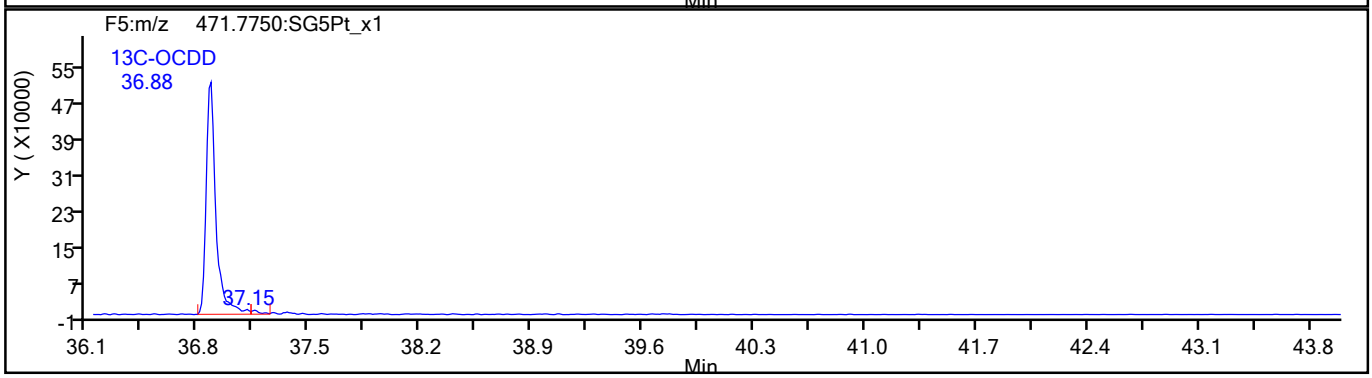

784939

Report Date: 19-Aug-2021 13:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

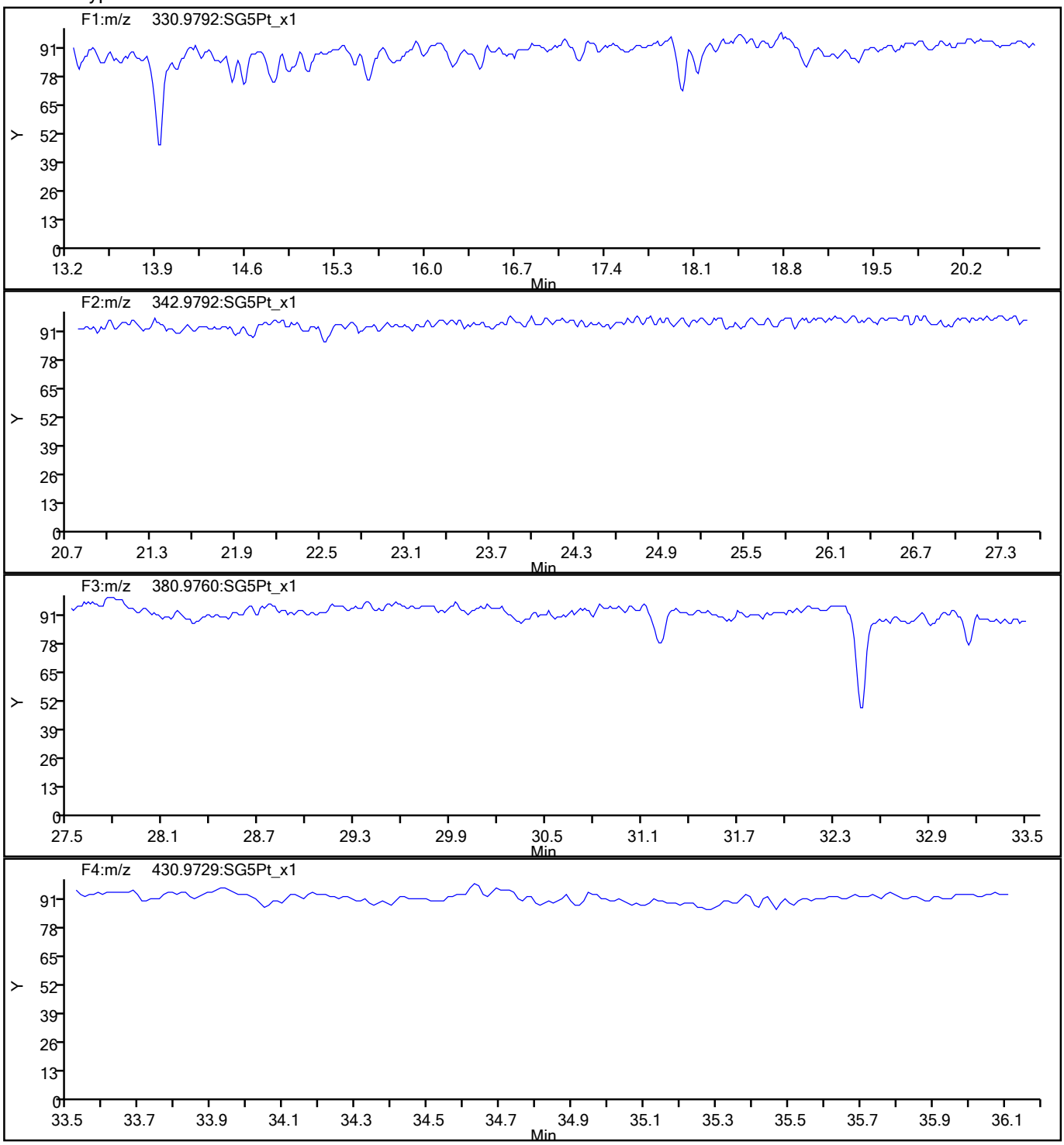

784940

Report Date: 19-Aug-2021 13:08:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210819-125276.b\18AU2110D5_10.d		
Injection Date:	18-Aug-2021 21:04:23	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	517729	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

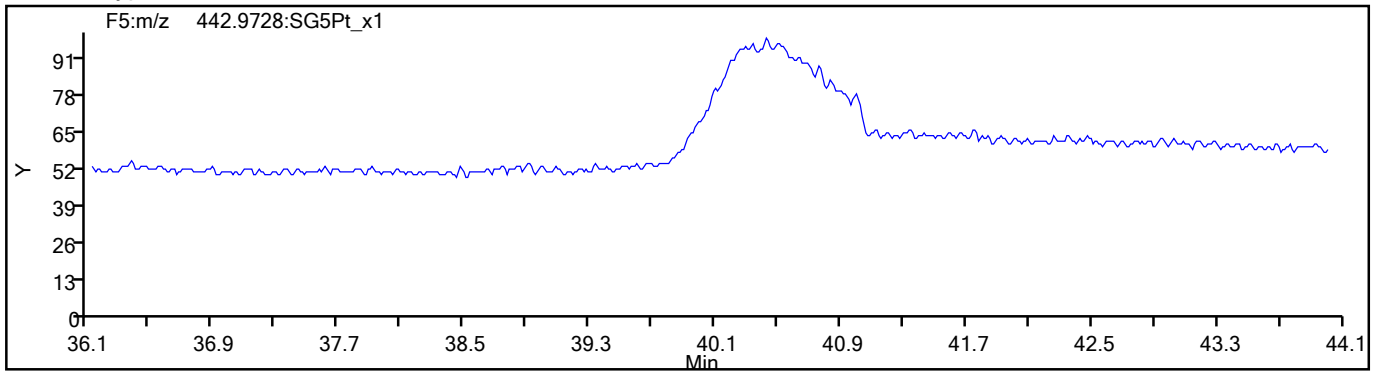

784941

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76887-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76887-A-2-C MSD RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_017.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.44(g)
Date Analyzed: 08/25/2021 23:11
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	74700		75	75

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	42		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	81		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MSD
Inject. Date: 25-Aug-2021 23:11:55 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-A-2-C MSD X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:27:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	4264796	0.89	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.615	2404028	0.66	1.3327	4.230	4.230	1.255	1.255	42.30	M
2,3,7,8-TCDF	17.642	580301413	0.78	0.9978	2419.2	2419.2	2.416	2.416	2.4E+005	E
D 13C-2,3,7,8-TCDD	16.065	1667654	0.73	0.8749	4.469	4.469	6.938	6.938	44.69	nM
2,3,7,8-TCDD	16.092	102346705	0.79	1.0570	580.6	580.6	2.249	2.249	58063	Ea
$ 37Cl4-2,3,7,8-TCDD	16.092	1196739		0.8648	3.245	3.245	0.2055	0.2055	81.12	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 26-Aug-2021 09:30:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d
Lims ID: 320-76887-A-2-C MSD
Client ID: 11215702-072721-BN-SJSB096 (2-4)
Sample Type: MSD
Inject. Date: 25-Aug-2021 23:11:55 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76887-A-2-C MSD X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:27:31

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.298	16.298	0		2006296	351276	76309	190772	5		M
333.9339	16.298	16.298	0		2258500	419822	110930	277325	4	0.89(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.615	17.615	0	1.081	951734	148233	25282	63205	6		M
317.9389	17.629	17.615	1	1.082	1452294	310216	26305	65762	12	0.66(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.642	17.628	1	1.002	254982242	46572044	22555	56387	2065		
305.8987	17.642	17.628	1	1.002	325319171	59592956	21649	54122	2753	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.065	16.065	0	0.986	701898	141362	76309	190772	2		M
333.9339	16.065	16.065	0	0.986	965756	194166	110930	277325	2	0.73(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.092	16.078	1	1.002	45294422	10202754	19629	49072	520		a
321.8936	16.092	16.078	1	1.002	57052283	12788095	12274	30685	1042	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.078	1	0.987	1196739	291502	5483	13707	53		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d				
Injection Date:	25-Aug-2021 23:11:55	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-C MSD				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.61
Area: 1095337
Amount: 5.078624
Amount Units: pg/ul

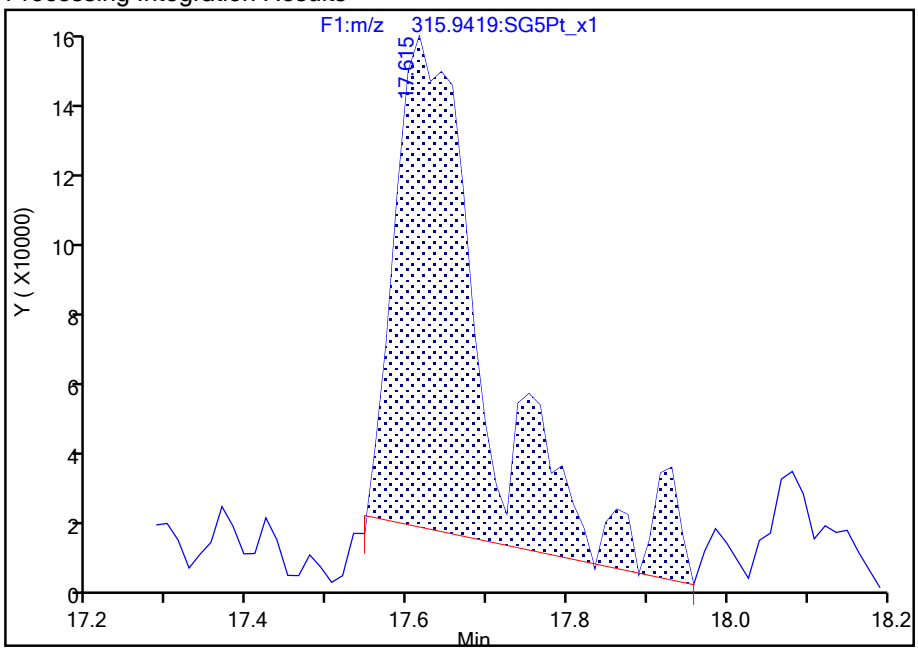

Manual Integration Results

RT: 17.61
Area: 951734
Amount: 4.229738
Amount Units: pg/ul

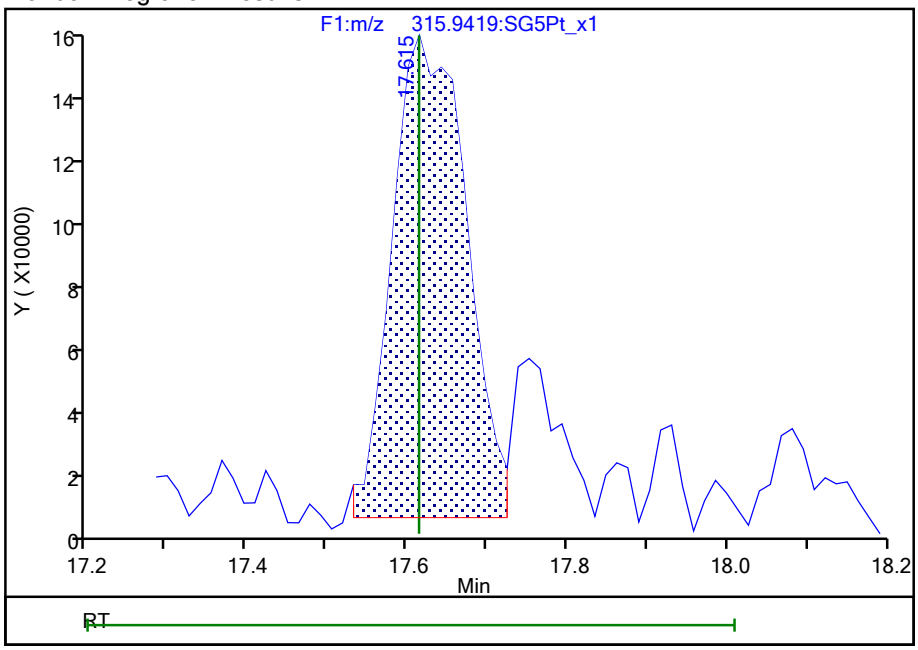

Reviewer: stephensk, 26-Aug-2021 09:26:11

Audit Action: Manually Integrated Audit Reason: Poor chromatography

784945

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d				
Injection Date:	25-Aug-2021 23:11:55	Instrument ID:	11D2		
Lims ID:	320-76887-A-2-C MSD				
Client ID:	11215702-072721-BN-SJSB096 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.63
Area: 1791167
Amount: 5.078624
Amount Units: pg/ul

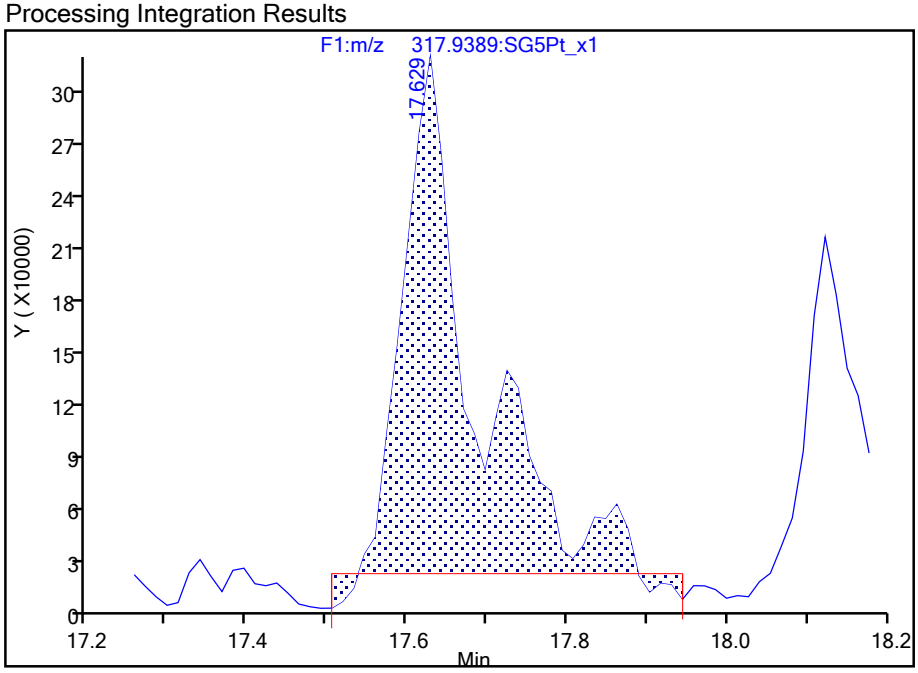

Manual Integration Results

RT: 17.63
Area: 1452294
Amount: 4.229738
Amount Units: pg/ul

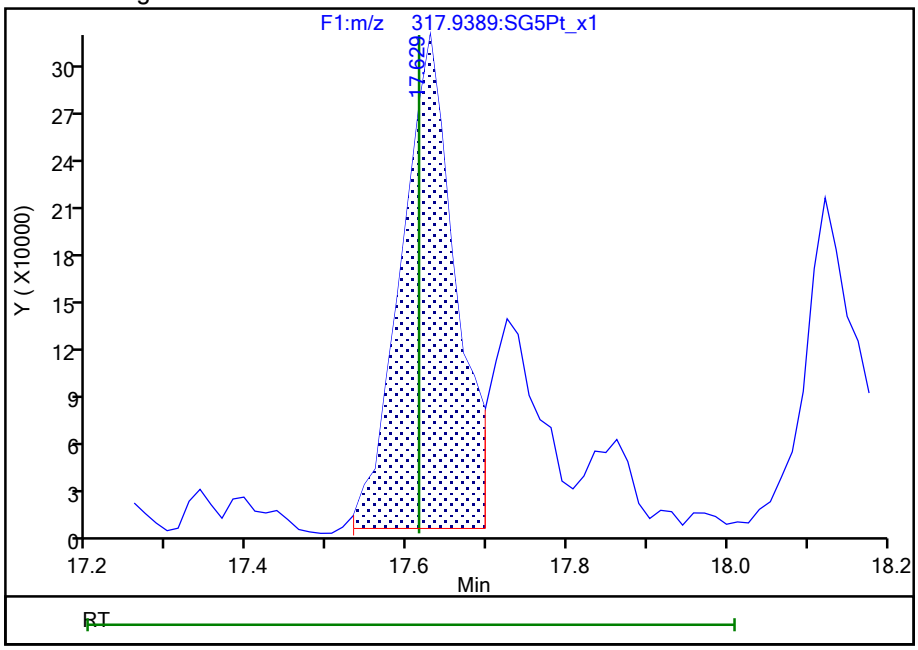

Reviewer: stephensk, 26-Aug-2021 09:26:20

Audit Action: Manually Integrated Audit Reason: Poor chromatography

784946

Report Date: 26-Aug-2021 09:30:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d		
Injection Date:	25-Aug-2021 23:11:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

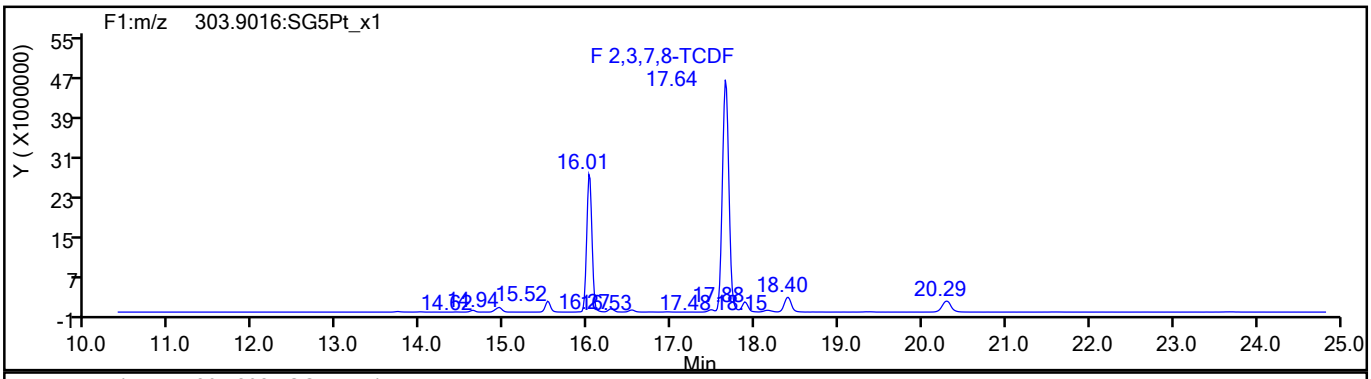

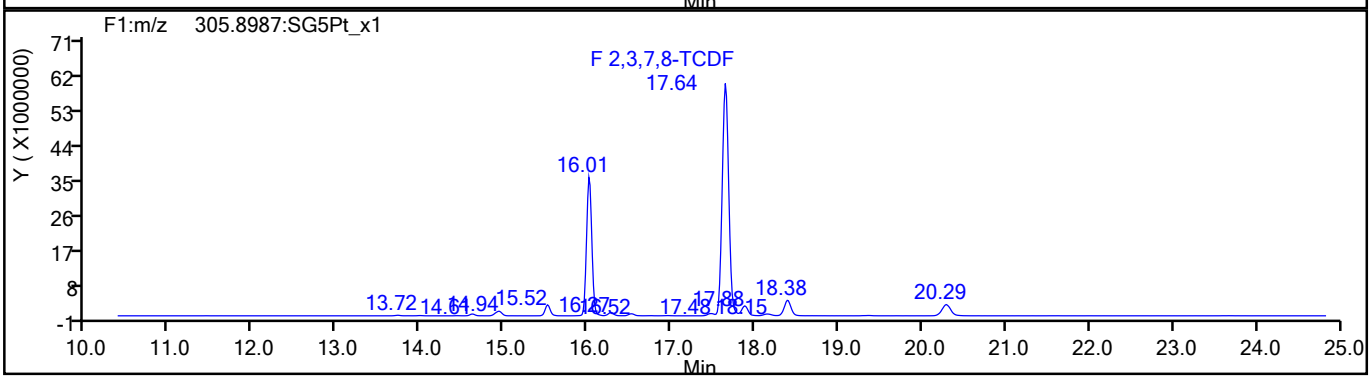

TCDF Standards

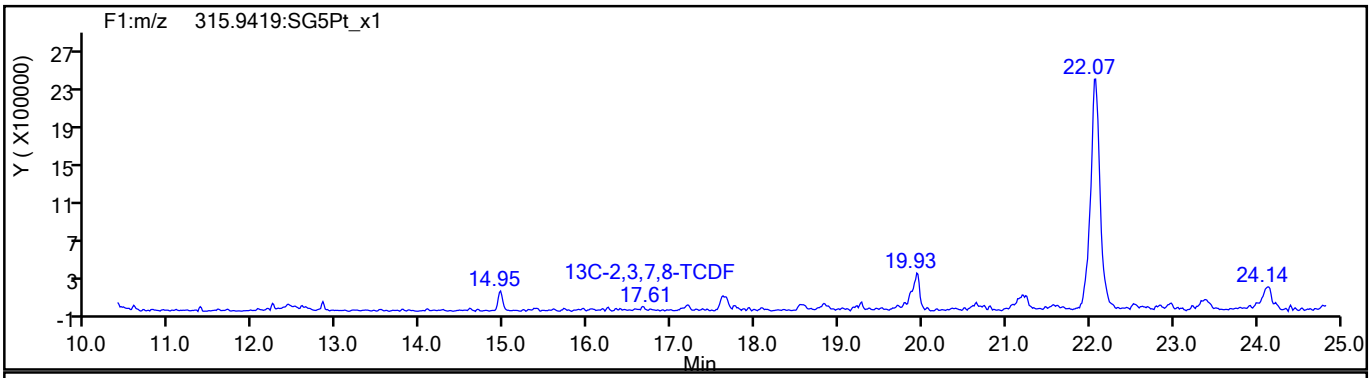

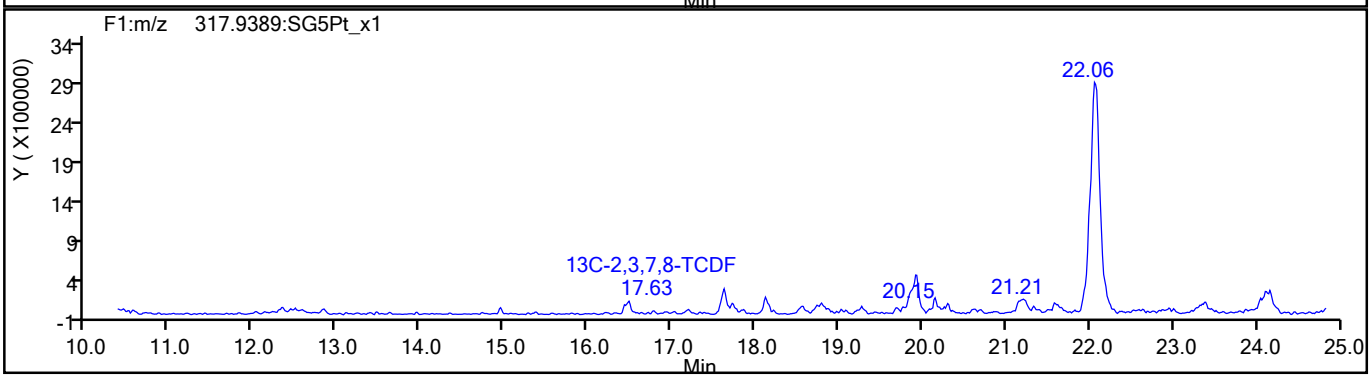

784947

Report Date: 26-Aug-2021 09:30:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d		
Injection Date:	25-Aug-2021 23:11:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

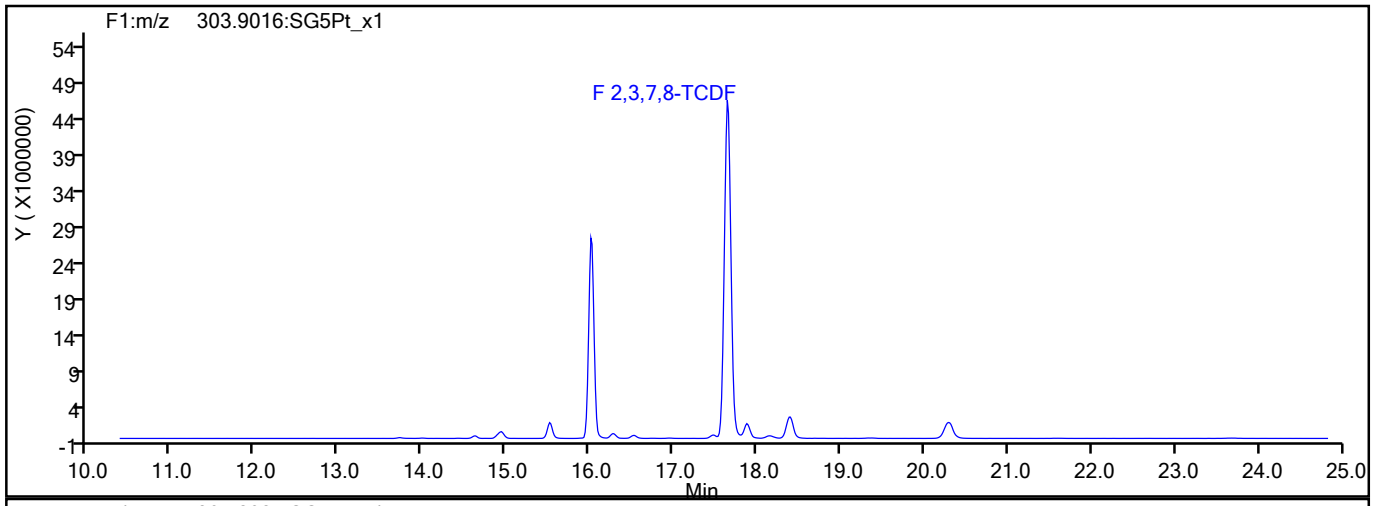

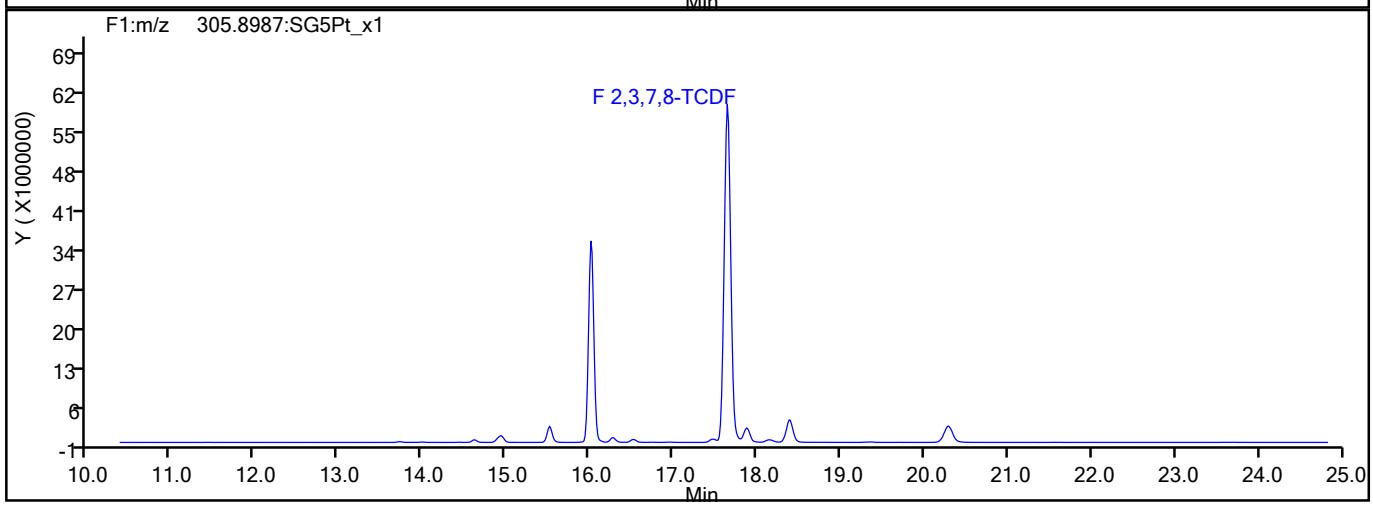

TCDF Interference Mass

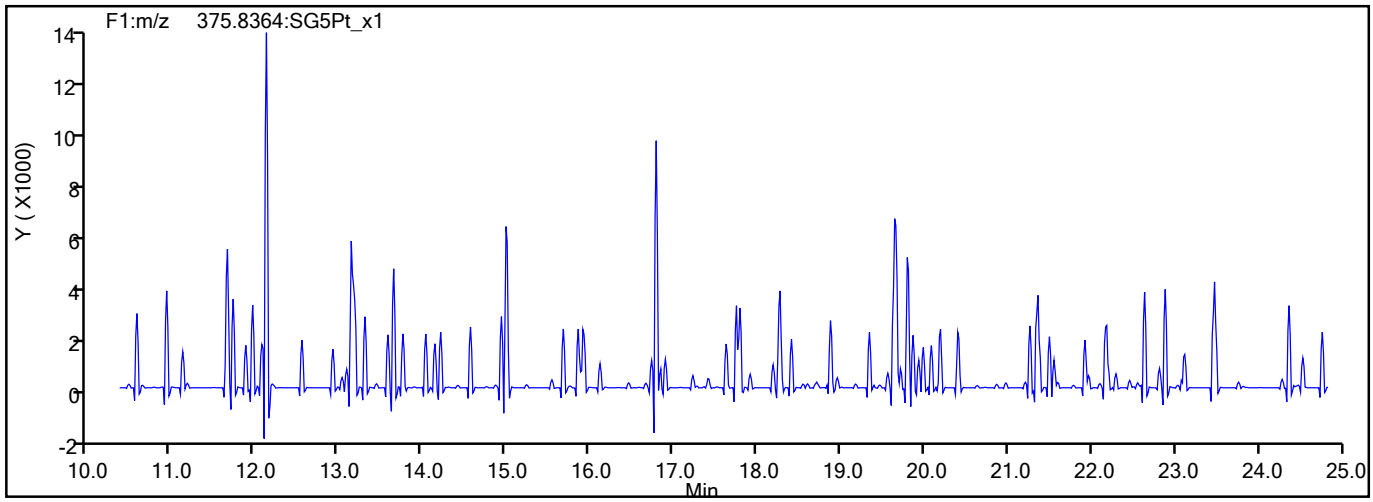

784948

Report Date: 26-Aug-2021 09:30:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d		
Injection Date:	25-Aug-2021 23:11:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

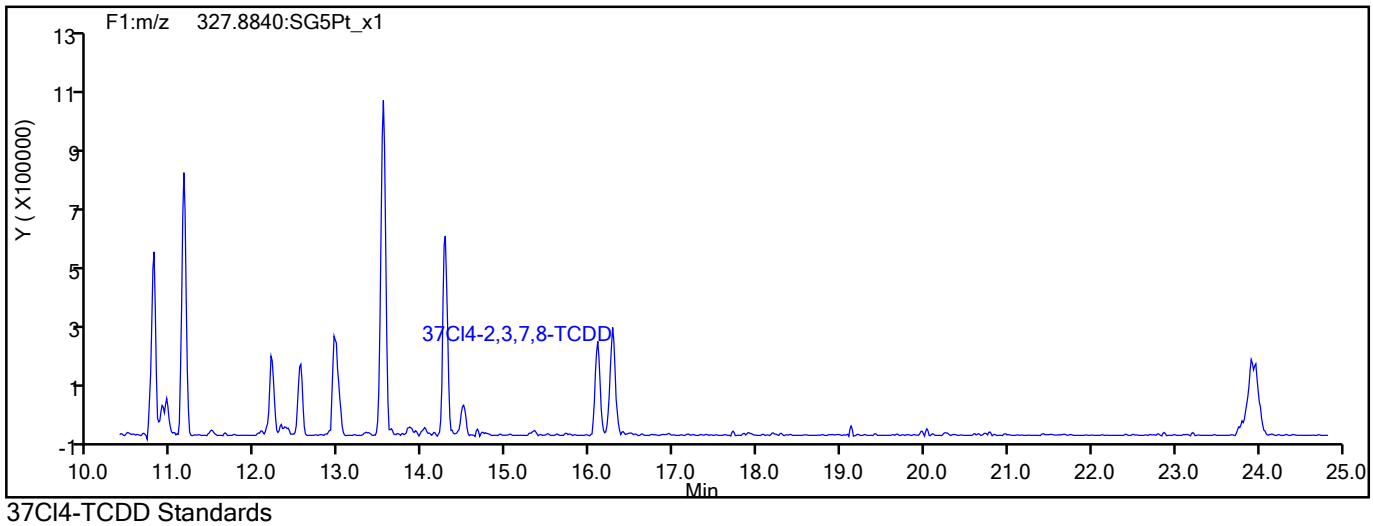

37Cl4-TCDD Standards

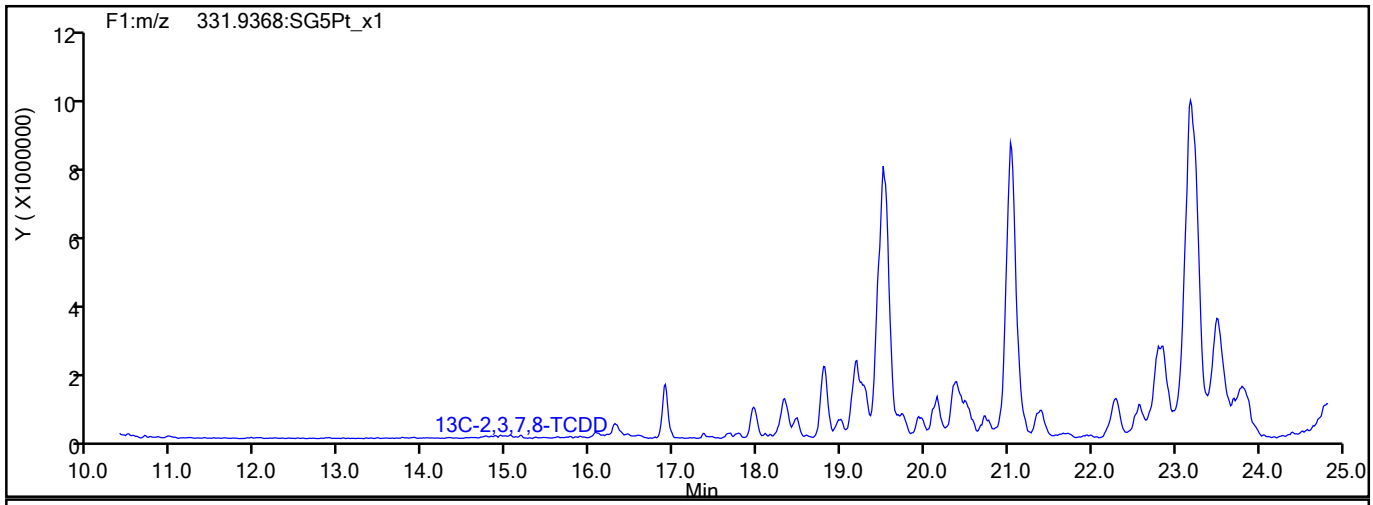

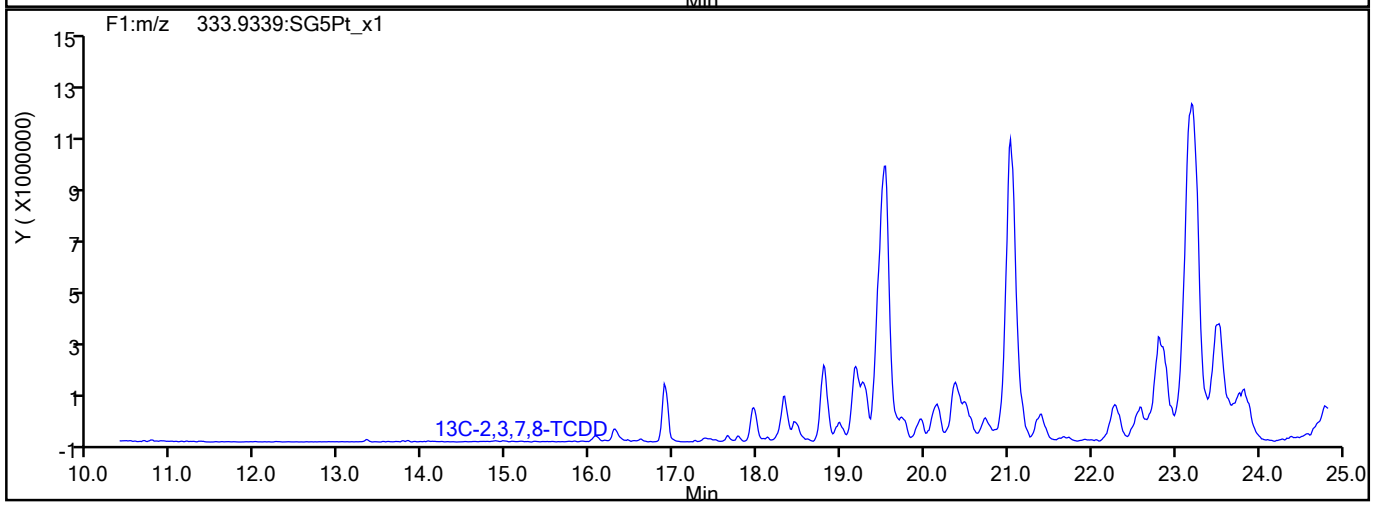

784949

Report Date: 26-Aug-2021 09:30:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_017.d		
Injection Date:	25-Aug-2021 23:11:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072721-BN-SJSB096 (2-4)		
Worklist#:	519744	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

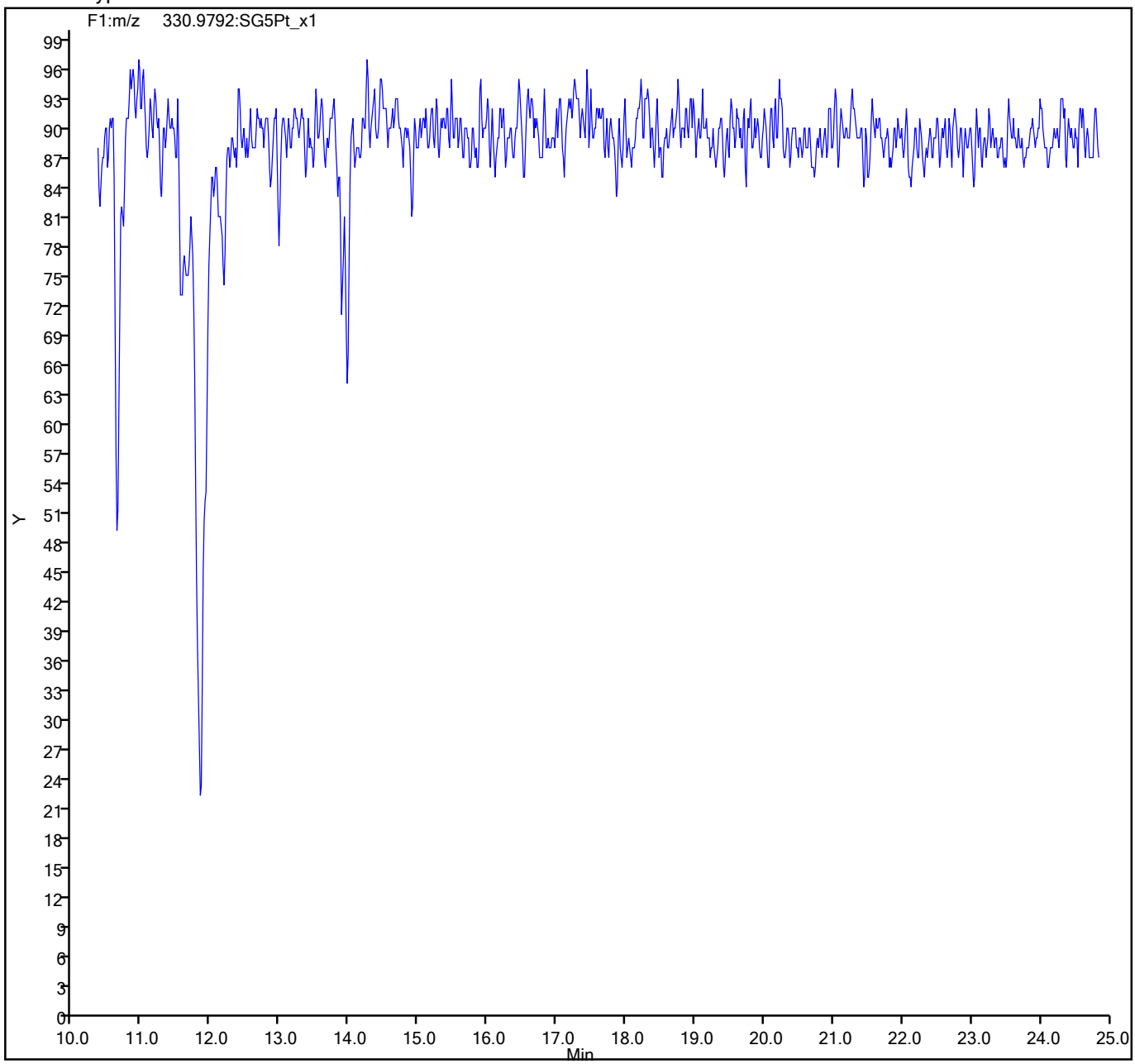

784950

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Instrument ID: DFS 1 Start Date: 06/08/2021 12:40

Analysis Batch Number: 496688 End Date: 06/08/2021 19:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-496688/1		06/08/2021 12:40	1	08jn21adfs1_2.d	DB-5 0.32(mm)
IC 320-496688/3		06/08/2021 14:18	1	08jn21adfs1_4.d	DB-5 0.32(mm)
IC 320-496688/4		06/08/2021 15:06	1	08jn21adfs1_5.d	DB-5 0.32(mm)
IC 320-496688/5		06/08/2021 15:54	1	08jn21adfs1_6.d	DB-5 0.32(mm)
IC 320-496688/6		06/08/2021 16:42	1	08jn21adfs1_7.d	DB-5 0.32(mm)
IC 320-496688/7		06/08/2021 17:30	1	08jn21adfs1_8.d	DB-5 0.32(mm)
ICV 320-496688/9		06/08/2021 19:25	1	08jn21adfs1_11.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Instrument ID: 10D5 Start Date: 07/26/2021 09:21

Analysis Batch Number: 510264 End Date: 07/26/2021 15:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-510264/1		07/26/2021 09:21	1	26JL2110D5_1.d	DB-5 0.32(mm)
IC 320-510264/3		07/26/2021 10:51	1	26JL2110D5_3.d	DB-5 0.32(mm)
IC 320-510264/4		07/26/2021 11:36	1	26JL2110D5_4.d	DB-5 0.32(mm)
IC 320-510264/5		07/26/2021 12:21	1	26JL2110D5_5.d	DB-5 0.32(mm)
IC 320-510264/6		07/26/2021 13:06	1	26JL2110D5_6.d	DB-5 0.32(mm)
IC 320-510264/7		07/26/2021 13:51	1	26JL2110D5_7.d	DB-5 0.32(mm)
ICV 320-510264/9		07/26/2021 15:31	1	26JL2110D5_9.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Instrument ID: DFS 1 Start Date: 08/17/2021 14:27

Analysis Batch Number: 517196 End Date: 08/18/2021 00:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-517196/1		08/17/2021 14:27	1	17au21dfs1_2.d	DB-5 0.32(mm)
CCV 320-517196/2		08/17/2021 15:14	1	17au21dfs1_3.d	DB-5 0.32(mm)
MB 320-513586/1-A		08/17/2021 17:01	1	17au21dfs1_5.d	DB-5 0.32(mm)
LCS 320-513586/2-A		08/17/2021 17:49	1	17au21dfs1_6.d	DB-5 0.32(mm)
ZZZZZ		08/17/2021 18:37	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 19:24	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 20:12	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 21:00	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 21:48	5		DB-5 0.32(mm)
ZZZZZ		08/17/2021 22:36	1		DB-5 0.32(mm)
ZZZZZ		08/17/2021 23:24	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 00:12	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Instrument ID: DFS 1 Start Date: 08/18/2021 13:48

Analysis Batch Number: 517461 End Date: 08/18/2021 23:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-517461/29		08/18/2021 13:48	1	17au21dfs1_32.d	DB-5 0.32(mm)
WDM 320-517461/30		08/18/2021 14:50	1	17au21dfs1_33.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 15:37	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 16:25	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 17:13	1		DB-5 0.32(mm)
320-76887-9	11215702-072721-BN-SJ SB096 (16-18)	08/18/2021 18:01	1	17au21dfs1_37.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 18:49	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 19:36	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 20:24	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 21:12	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 22:00	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 22:48	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 23:36	1		DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Instrument ID: 10D5 Start Date: 08/18/2021 14:15

Analysis Batch Number: 517729 End Date: 08/18/2021 21:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-517729/1		08/18/2021 14:15	1	18AU2110D5_1.d	DB-5 0.32(mm)
CCV 320-517729/2		08/18/2021 15:00	1	18AU2110D5_2.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 15:49	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 17:19	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 18:04	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 18:49	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 19:34	10		DB-5 0.32(mm)
320-76887-A-2-B MS		08/18/2021 20:19	10	18AU2110D5_9.d	DB-5 0.32(mm)
320-76887-A-2-C MSD		08/18/2021 21:04	10	18AU2110D5_10.d	DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/23/2021 15:34

Analysis Batch Number: 518979 End Date: 08/24/2021 02:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-518979/1		08/23/2021 15:34	1	23AU21A11D2_001.d	DB-225 0.32(mm)
CCV 320-518979/2		08/23/2021 16:12	1	23AU21A11D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/23/2021 16:51	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 17:29	1		DB-225 0.32(mm)
320-76887-9 RA	11215702-072721-BN-SJSB096 (16-18) RA	08/23/2021 18:07	1	23AU21A11D2_005.d	DB-225 0.32(mm)
ZZZZZ		08/23/2021 18:46	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 19:24	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 20:02	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 20:41	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 21:19	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 21:58	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 22:36	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 23:14	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 23:53	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 00:31	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 01:09	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 01:48	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 02:26	1		DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/25/2021 12:59

Analysis Batch Number: 519744 End Date: 08/25/2021 23:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-519744/1		08/25/2021 12:59	1	25AU21A11D2_001.d	DB-225 0.32(mm)
CCV 320-519744/2		08/25/2021 13:37	1	25AU21A11D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/25/2021 14:15	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 14:54	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 15:32	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 16:10	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 16:48	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 17:27	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 18:05	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 18:43	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 19:22	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 20:00	5		DB-225 0.32(mm)
ZZZZZ		08/25/2021 20:38	5		DB-225 0.32(mm)
ZZZZZ		08/25/2021 21:17	5		DB-225 0.32(mm)
ZZZZZ		08/25/2021 21:55	10		DB-225 0.32(mm)
320-76887-A-2-B MS RA		08/25/2021 22:33	10	25AU21A11D2_016.d	DB-225 0.32(mm)
320-76887-A-2-C MSD RA		08/25/2021 23:11	10	25AU21A11D2_017.d	DB-225 0.32(mm)
ZZZZZ		08/25/2021 23:50	10		DB-225 0.32(mm)

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76887-2

SDG No.:

Batch Number: 513586 Batch Start Date: 08/06/21 05:28 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/13/21 17:05

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-513586/1		HRMS-Sox, 1613B		10 g	20.0 uL	G-1	73	1	1 mL
LCS 320-513586/2		HRMS-Sox, 1613B		10 g	20.0 uL	G-2	7	3	1 mL
320-76887-A-2 MS		HRMS-Sox, 1613B	T	10.12 g	20.0 uL	I-2	32	3	1 mL
320-76887-A-2 MSD		HRMS-Sox, 1613B	T	10.44 g	20.0 uL	I-3	33	1	1 mL
320-76887-A-9	11215702-072721-BN-SJSB096 (16-18)	HRMS-Sox, 1613B	T	9.84 g	20.0 uL	J-4	85	3	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-513586/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-513586/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76887-A-2 MS		HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76887-A-2 MSD		HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76887-A-9	11215702-072721-BN-SJSB096 (16-18)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76887-2

SDG No.:

Batch Number: 513586 Batch Start Date: 08/06/21 05:28 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/13/21 17:05

Batch Notes	
20% DCM:Hexane ID	DH28_00193 mL
65% DCM:Hexane ID	DH6535_00546
Acid Silica Gel ID	SA5644_00732
Acid Alumina ID	Acid_Alumina_00019
Balance ID	QA-074
Batch Comment	Samples were brought up to 10.0 mL and 20.0 uL was aliquoted for screening.
C14 ID	2414812
Sulfuric Acid Lot Number	2623518
Hexane ID	Hexane_00285
IFB Clean Up	SKV 08/13/21
Na2SO4 ID	SodiumSulfate_00166
Option C Clean Up	GLB 08/13/21
Analyst ID - IDA Reagent Drop	FC 8/6/21 HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	IP 08/06/21
Analyst ID - IS Reagent Drop	SR 08/13/21 DB15270 HRDXNIS_00137 B-1/4 20.0 uL
Analyst ID - IS Reagent Drop Witness	SKV 08/13/21
Analyst ID - SU Reagent Drop	GLB 08/13/21 HD05018 HRDXNSU_00255 B-4/5 1.0 mL
Analyst ID - SU Reagent Drop Witness	FC 08/13/21
Analyst ID - TA Reagent Drop	FC 8/6/21 DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	IP 08/06/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/6/21 11:40
Soxhlet/Soxtherm Start	8/6/21 8:40
Storage Box ID	DXN -266
Toluene ID	Toluene_00110

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

784961

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-76887-2

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-072721-BN-SJSB096 (16-18)	320-76887-9

Comments:

784962

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76887-2

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76887-2

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76887-2

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/30/2021 12:30 End Date: 07/30/2021 12:30

Lab Sample Id	D/F	Type	Time	Analytes																								
				% Sol	Moist																							
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
320-76887-9	1	T	12:30	X	X																							
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
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ZZZZZZ			12:30																									

Prep Types:
T = Total/NA

FORM XIII-IN

784965

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76887-2

SDG No.:

Batch Number: 511708 Batch Start Date: 07/30/21 12:30 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/02/21 09:08

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76887-A-9	11215702-072721-BN-SJSB096 (16-18)	D 2216	T	10	1.04 g	9.03 g	6.89 g	26.7834793491865 %	73.2165206508135 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	08/02/2021 08:37
Date and Time Samples out of Desiccator	08/02/2021 09:08
Date samples were placed in the oven	07/30/2021
Oven Temp In	114 Degrees C
Time samples were place in the oven	12:30
Date samples were removed from oven	08/02/2021
Oven Temp Out	113 Degrees C
Time Samples were removed from oven	08:37
Oven ID	Soil Prep #2
Thermometer ID	151969607

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-76887-2

Batch: 511708
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76887-A-9

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	26.7834793491865	%
Percent Solids	None	1	73.2165206508135	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P
1.00	1.00	200.00	200.00	8/1/2021	DM	WT-3	P
1.00	1.00	200.00	200.00	08/02/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

784970

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

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Client Information			
Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:	Page: 1 of 2
Company: GHD Services Inc.			Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:		
City: Baton Rouge	TAT Requested (days): 15 business days		
State, Zip: LA, 70808			
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested		
Email: janie.smith@ghd.com	WO #:		
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702		
Site: San Jacinto Waste Pits	SSOW#: 11215702 - 2021 - 001		

Analysis Requested

320-76887 Chain of Custody

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072721-BN-SJSB096 (0-2)	7-27-21	1245	G	S	N	N	X	X	X		
(2-4)		1250			N	Y	X	X	X		MS/MSD
(4-6)		1255			N	N	X	X	X		
(6-8)		1300			N	N	X	X	X		
(8-10)		1305			N	N	X	X	X		
(10-12)		1310			N	N	X	X	X		
(12-14)		1315			N	N	X	X	X		
(14-16)		1320			N	N	X	X	X		
(16-18)		1325			N	N	X	X	X		Priority
(18-20)		1330			N	N	X	X	X		HOLD
(20-22)		1335			N	N	X	X	X		HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: fed ex

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Breanna North	7-27-21 1500	GHD	[illegible]	7/28/21 945	[illegible]

Custody Seals Intact: ☒ Yes ☐ No
Custody Seal No.: 1519355

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

784971

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

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Chain of Custody Record

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 2 of 2
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072721-BN-SJSB096(22-24)	7-27-21	1340	G	S	N	N	X	X	X		HOLD
11215702-072721-BN-DUP-9	7-27-21	—	G	S	N	N	X	X	X		

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by: Breanna North	Date/Time: 7-27-21 1500	Company: GHD	Received by: [signature]	Date/Time: 7/29/21 945	Company: BAV
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ✓ Yes ☐ No
Custody Seal No.: 151 9355
Cooler Temperature(s) °C and Other Remarks: 1.0

• Sample #12 no time on container label 7/29/21

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-76887-2

Login Number: 76887
List Number: 1
Creator: Gonzales, Justinn

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1519355
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Job Number: 320-76888-1

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
8/30/2021 12:53 PM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
08/30/2021

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 320-76888-1
Project/Site: SJRWP Supplemental Design Investigation

Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 7/29/2021 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8º C.

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

Method 1613B: Some of the matrix spike / matrix spike duplicate (MS/MSD) recoveries and RPDs for preparation batches 320-513586 & 3620-513879 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample was within acceptance limits.

Method 1613B: Due to the high concentration of analytes, some of the matrix spike / matrix spike duplicate (MS/MSD) recoveries and RPDs for preparation batches 320-513586 & 3620-513879 could not be evaluated for precision and accuracy. The laboratory control sample met acceptance criteria.

Method 1613B: The concentration of one or more analytes associated with the following samples exceeded the instrument calibration range: 11215702-072621-BN-SJSB094 (0-2) (320-76888-1), 11215702-072621-BN-SJSB094 (0-2) (320-76888-1[MS]), 11215702-072621-BN-SJSB094 (0-2) (320-76888-1[MSD]), 11215702-072621-BN-SJSB094 (2-4) (320-76888-2), 11215702-072621-BN-SJSB094 (4-6) (320-76888-3), 11215702-072621-BN-SJSB094 (6-8) (320-76888-4),11215702-072621-BN-SJSB094 (8-10) (320-76888-5) and 11215702-072621-BN-DUP-8 (320-76888-13). These analytes have been qualified with an 'E' flag; however, the peak(s) did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Method 1613B: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the estimated detection limit (EDL): 11215702-072621-BN-SJSB094 (0-2) (320-76888-1), 11215702-072621-BN-SJSB094 (0-2) (320-76888-1[MS]), 11215702-072621-BN-SJSB094 (0-2) (320-76888-1[MSD]), 11215702-072621-BN-SJSB094 (2-4) (320-76888-2), 11215702-072621-BN-SJSB094 (4-6) (320-76888-3), 11215702-072621-BN-SJSB094 (6-8) (320-76888-4), 11215702-072621-BN-SJSB094 (8-10) (320-76888-5), & 11215702-072621-BN-DUP-8 (320-76888-13) . The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method 1613B: The following samples were diluted to mitigate matrix interference and bring the concentration of target analytes to be under the saturation level of the instrument detector: 11215702-072621-BN-SJSB094 (0-2) (320-76888-1), 11215702-072621-BN-SJSB094 (0-2) (320-76888-1[MS]), 11215702-072621-BN-SJSB094 (0-2) (320-76888-1[MSD]), 11215702-072621-BN-SJSB094 (2-4) (320-76888-2), 11215702-072621-BN-SJSB094 (4-6) (320-76888-3), 11215702-072621-BN-SJSB094 (6-8) (320-76888-4) and 11215702-072621-BN-SJSB094 (8-10) (320-76888-5). Elevated reporting limits (RLs) are provided.

Method 1613B: Ion abundance ratios are outside criteria for the Isotope Dilution Analyte (IDA) associated with the following samples: 11215702-072621-BN-SJSB094 (0-2) (320-76888-1), 11215702-072621-BN-SJSB094 (0-2) (320-76888-1[MS]), 11215702-072621-BN-SJSB094 (0-2) (320-76888-1[MSD]), 11215702-072621-BN-SJSB094 (2-4) (320-76888-2), 11215702-072621-BN-SJSB094 (4-6) (320-76888-3) and 11215702-072621-BN-SJSB094 (6-8) (320-76888-4). The theoretical area for the IDA was used to quantitate recovery and target concentration.

Method 1613B: The method blank for preparation batch 320-513879 contained 2,3,7,8-TCDF above the reporting limit (RL). As discussed, the associated samples were not re-extracted and/or re-analyzed. Note:
Most of the associated sample results were greater than 10X the amount present in the method blank.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument DFS 1 exceeded this criteria: 11215702-072621-BN-SJSB094 (0-2) (320-76888-1), 11215702-072621-BN-SJSB094 (0-2) (320-76888-1[MS]), 11215702-072621-BN-SJSB094 (0-2) (320-76888-1[MSD]), 11215702-072621-BN-SJSB094 (2-4) (320-76888-2), 11215702-072621-BN-SJSB094 (4-6) (320-76888-3), 11215702-072621-BN-SJSB094 (6-8) (320-76888-4), 11215702-072621-BN-SJSB094 (8-10) (320-76888-5), 11215702-072621-BN-DUP-8 (320-76888-13), (CCV 320-517891/2), (CCV 320-518043/15) and (MB 320-513879/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) — Lab Sample ID: 320-76888-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	24000	E G	36	36	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	290		92	6.0	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	2200		92	18	pg/g	10	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	1600		92	18	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	3.6	J	92	1.2	pg/g	10	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	7.0	J q	92	1.4	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	5.6	J q	92	1.2	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	3200		92	12	pg/g	10	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	740		92	11	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	42	J	92	12	pg/g	10	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	100		92	12	pg/g	10	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	68	J B	92	1.0	pg/g	10	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1100	B	92	3.6	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	280		92	3.1	pg/g	10	☼	1613B	Total/NA
OCDD	720	B F1	180	2.5	pg/g	10	☼	1613B	Total/NA
OCDF	460		180	3.5	pg/g	10	☼	1613B	Total/NA
Total TCDD	26000	G	36	36	pg/g	10	☼	1613B	Total/NA
Total TCDF	210000	q G B	140	140	pg/g	10	☼	1613B	Total/NA
Total PeCDD	290	q	92	6.0	pg/g	10	☼	1613B	Total/NA
Total PeCDF	6200	q	92	18	pg/g	10	☼	1613B	Total/NA
Total HxCDD	48	J q	92	1.3	pg/g	10	☼	1613B	Total/NA
Total HxCDF	4600		92	12	pg/g	10	☼	1613B	Total/NA
Total HpCDD	130	B	92	1.0	pg/g	10	☼	1613B	Total/NA
Total HpCDF	1500	B	92	3.4	pg/g	10	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	110000	E G B	94	94	pg/g	10	☼	1613B	Total/NA

Client Sample ID: 11215702-072621-BN-SJSB094 (2-4) — Lab Sample ID: 320-76888-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	23000	G E	29	29	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	370		92	7.7	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	2700		92	12	pg/g	10	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	2000		92	12	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	3600		92	15	pg/g	10	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	960		92	14	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	57	J q	92	16	pg/g	10	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	130		92	17	pg/g	10	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	70	J B	92	1.1	pg/g	10	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1100	B	92	4.2	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	360		92	3.8	pg/g	10	☼	1613B	Total/NA
OCDD	750	B	180	2.6	pg/g	10	☼	1613B	Total/NA
OCDF	530		180	3.4	pg/g	10	☼	1613B	Total/NA
Total TCDD	26000	G q	29	29	pg/g	10	☼	1613B	Total/NA
Total TCDF	210000	G B	180	180	pg/g	10	☼	1613B	Total/NA
Total PeCDD	370		92	7.7	pg/g	10	☼	1613B	Total/NA
Total PeCDF	7500		92	12	pg/g	10	☼	1613B	Total/NA
Total HxCDD	17	J q	92	0.92	pg/g	10	☼	1613B	Total/NA
Total HxCDF	5400	q	92	16	pg/g	10	☼	1613B	Total/NA
Total HpCDD	140	q B	92	1.1	pg/g	10	☼	1613B	Total/NA
Total HpCDF	1700	B	92	4.0	pg/g	10	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	140000	E B G	100	100	pg/g	10	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (4-6) — Lab Sample ID: 320-76888-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	26000	E G	33	33	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	340		94	6.6	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	2900		94	19	pg/g	10	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	2000		94	17	pg/g	10	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	9.1	J q	94	1.7	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	7.0	J	94	1.4	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	4400		94	19	pg/g	10	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	1100		94	19	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	45	J	94	18	pg/g	10	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	140		94	20	pg/g	10	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	140	B	94	1.8	pg/g	10	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1300	B	94	5.3	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	360		94	5.3	pg/g	10	☼	1613B	Total/NA
OCDD	1700	B	190	3.5	pg/g	10	☼	1613B	Total/NA
OCDF	570		190	3.3	pg/g	10	☼	1613B	Total/NA
Total TCDD	28000	G	33	33	pg/g	10	☼	1613B	Total/NA
Total TCDF	220000	B G	170	170	pg/g	10	☼	1613B	Total/NA
Total PeCDD	340		94	6.6	pg/g	10	☼	1613B	Total/NA
Total PeCDF	7800	q	94	18	pg/g	10	☼	1613B	Total/NA
Total HxCDD	37	J q	94	1.5	pg/g	10	☼	1613B	Total/NA
Total HxCDF	6500		94	19	pg/g	10	☼	1613B	Total/NA
Total HpCDD	320	B	94	1.8	pg/g	10	☼	1613B	Total/NA
Total HpCDF	1900	B	94	5.3	pg/g	10	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	130000	E G B	110	110	pg/g	10	☼	1613B	Total/NA

Client Sample ID: 11215702-072621-BN-SJSB094 (6-8) — Lab Sample ID: 320-76888-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	10000	E	15	13	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	100	q	76	3.7	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	920		76	6.9	pg/g	10	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	700		76	7.0	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	1300		76	5.2	pg/g	10	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	330		76	6.1	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	16	J	76	6.0	pg/g	10	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	32	J	76	4.5	pg/g	10	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	42	J B	76	1.2	pg/g	10	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	290	B	76	1.9	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	110		76	2.2	pg/g	10	☼	1613B	Total/NA
OCDD	680	B	150	3.1	pg/g	10	☼	1613B	Total/NA
OCDF	180		150	2.6	pg/g	10	☼	1613B	Total/NA
Total TCDD	11000	q	15	13	pg/g	10	☼	1613B	Total/NA
Total TCDF	87000	B q G	60	60	pg/g	10	☼	1613B	Total/NA
Total PeCDD	100	q	76	3.7	pg/g	10	☼	1613B	Total/NA
Total PeCDF	2600	q	76	6.9	pg/g	10	☼	1613B	Total/NA
Total HxCDD	9.9	J	76	1.1	pg/g	10	☼	1613B	Total/NA
Total HxCDF	1900	q	76	5.5	pg/g	10	☼	1613B	Total/NA
Total HpCDD	89	B	76	1.2	pg/g	10	☼	1613B	Total/NA
Total HpCDF	480	B	76	2.1	pg/g	10	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	47000	E B G	46	46	pg/g	10	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (8-10) — Lab Sample ID: 320-76888-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	3700	E	7.3	5.4	pg/g	5	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	41		36	1.5	pg/g	5	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	320		36	4.2	pg/g	5	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	240		36	4.2	pg/g	5	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	430		36	1.7	pg/g	5	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	130		36	1.9	pg/g	5	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	5.5	J	36	1.6	pg/g	5	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	13	J q	36	1.7	pg/g	5	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	32	J B	36	0.50	pg/g	5	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	110	B	36	0.69	pg/g	5	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	39		36	0.65	pg/g	5	☼	1613B	Total/NA
OCDD	620	B	73	1.5	pg/g	5	☼	1613B	Total/NA
OCDF	56	J	73	0.97	pg/g	5	☼	1613B	Total/NA
Total TCDD	4100		7.3	5.4	pg/g	5	☼	1613B	Total/NA
Total TCDF	26000	B q G	21	21	pg/g	5	☼	1613B	Total/NA
Total PeCDD	41		36	1.5	pg/g	5	☼	1613B	Total/NA
Total PeCDF	860	q	36	4.2	pg/g	5	☼	1613B	Total/NA
Total HxCDD	16	J q	36	0.48	pg/g	5	☼	1613B	Total/NA
Total HxCDF	650	q	36	1.7	pg/g	5	☼	1613B	Total/NA
Total HpCDD	87	B	36	0.50	pg/g	5	☼	1613B	Total/NA
Total HpCDF	180	B	36	0.67	pg/g	5	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	16000	E B G	15	15	pg/g	5	☼	1613B	Total/NA

Client Sample ID: 11215702-072621-BN-SJSB094 (10-12) — Lab Sample ID: 320-76888-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	22		1.6	0.28	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	1.7	J q	7.8	0.12	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	1.3	J q	7.8	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.4	J	7.8	0.27	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	2.7	J	7.8	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.62	J q	7.8	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	36	B	7.8	0.37	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1.1	J B	7.8	0.091	pg/g	1	☼	1613B	Total/NA
OCDD	840	B	16	0.83	pg/g	1	☼	1613B	Total/NA
Total TCDD	22		1.6	0.28	pg/g	1	☼	1613B	Total/NA
Total TCDF	160	q B	1.6	0.62	pg/g	1	☼	1613B	Total/NA
Total PeCDD	5.2	J q	7.8	0.32	pg/g	1	☼	1613B	Total/NA
Total PeCDF	4.0	J q	7.8	0.12	pg/g	1	☼	1613B	Total/NA
Total HxCDD	32		7.8	0.28	pg/g	1	☼	1613B	Total/NA
Total HxCDF	3.3	J q	7.8	0.11	pg/g	1	☼	1613B	Total/NA
Total HpCDD	130	B	7.8	0.37	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1.1	J B	7.8	0.091	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	83	B	1.6	0.54	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072621-BN-SJSB094 (12-14) — Lab Sample ID: 320-76888-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8,9-HxCDD	4.8	J	7.5	0.36	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	65	B	7.5	0.44	pg/g	1	☼	1613B	Total/NA
OCDD	1400	B	15	1.2	pg/g	1	☼	1613B	Total/NA
Total TCDD	1.1	J q	1.5	0.13	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (12-14) (Continued) — Lab Sample ID: 320-76888-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total TCDF	8.1	B q	1.5	0.12	pg/g	1	☼	1613B	Total/NA
Total PeCDD	8.8		7.5	0.24	pg/g	1	☼	1613B	Total/NA
Total HxCDD	52		7.5	0.38	pg/g	1	☼	1613B	Total/NA
Total HpCDD	190	B	7.5	0.44	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	4.3	B	1.5	0.17	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072621-BN-SJSB094 (14-16) — Lab Sample ID: 320-76888-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1.3	J	1.5	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.91	J	7.7	0.30	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.6	J	7.7	0.32	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	4.4	J	7.7	0.29	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	60	B	7.7	0.42	pg/g	1	☼	1613B	Total/NA
OCDD	1300	B	15	1.1	pg/g	1	☼	1613B	Total/NA
Total TCDD	4.1	q	1.5	0.15	pg/g	1	☼	1613B	Total/NA
Total TCDF	3.0	B	1.5	0.070	pg/g	1	☼	1613B	Total/NA
Total PeCDD	8.4	q	7.7	0.23	pg/g	1	☼	1613B	Total/NA
Total HxCDD	50		7.7	0.30	pg/g	1	☼	1613B	Total/NA
Total HpCDD	190	B	7.7	0.42	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	2.2	B	1.5	0.20	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072621-BN-DUP-8 — Lab Sample ID: 320-76888-13

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	570	E	1.4	1.0	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	7.1		7.1	0.24	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	51		7.1	0.74	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	47		7.1	0.77	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	1.0	J	7.1	0.21	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.2	J q	7.1	0.23	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.7	J	7.1	0.20	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	62		7.1	0.29	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	16		7.1	0.31	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.99	J q	7.1	0.30	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	2.6	J	7.1	0.31	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	48	B	7.1	0.35	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	19		7.1	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	5.9	J	7.1	0.12	pg/g	1	☼	1613B	Total/NA
OCDD	1200	B	14	0.99	pg/g	1	☼	1613B	Total/NA
OCDF	12	J	14	0.11	pg/g	1	☼	1613B	Total/NA
Total TCDD	620		1.4	1.0	pg/g	1	☼	1613B	Total/NA
Total TCDF	4400	G	3.6	3.6	pg/g	1	☼	1613B	Total/NA
Total PeCDD	12	q	7.1	0.24	pg/g	1	☼	1613B	Total/NA
Total PeCDF	150	q	7.1	0.76	pg/g	1	☼	1613B	Total/NA
Total HxCDD	42	q	7.1	0.21	pg/g	1	☼	1613B	Total/NA
Total HxCDF	92	q	7.1	0.30	pg/g	1	☼	1613B	Total/NA
Total HpCDD	160	B	7.1	0.35	pg/g	1	☼	1613B	Total/NA
Total HpCDF	30		7.1	0.12	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	2300	E G	2.4	2.4	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)

Lab Sample ID: 320-76888-1

Date Collected: 07/26/21 14:00
Matrix: Sediment
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	46.3		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	53.7		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)

Lab Sample ID: 320-76888-1

Date Collected: 07/26/21 14:00
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 53.7

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	24000	E G	36	36	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
1,2,3,7,8-PeCDD	290		92	6.0	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
1,2,3,7,8-PeCDF	2200		92	18	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
2,3,4,7,8-PeCDF	1600		92	18	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
1,2,3,4,7,8-HxCDD	3.6	J	92	1.2	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
1,2,3,6,7,8-HxCDD	7.0	J q	92	1.4	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
1,2,3,7,8,9-HxCDD	5.6	J q	92	1.2	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
1,2,3,4,7,8-HxCDF	3200		92	12	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
1,2,3,6,7,8-HxCDF	740		92	11	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
1,2,3,7,8,9-HxCDF	42	J	92	12	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
2,3,4,6,7,8-HxCDF	100		92	12	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
1,2,3,4,6,7,8-HpCDD	68	J B	92	1.0	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
1,2,3,4,6,7,8-HpCDF	1100	B	92	3.6	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
1,2,3,4,7,8,9-HpCDF	280		92	3.1	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
OCDD	720	B F1	180	2.5	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
OCDF	460		180	3.5	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
Total TCDD	26000	G	36	36	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
Total TCDF	210000	q G B	140	140	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
Total PeCDD	290	q	92	6.0	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
Total PeCDF	6200	q	92	18	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
Total HxCDD	48	J q	92	1.3	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
Total HxCDF	4600		92	12	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
Total HpCDD	130	B	92	1.0	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10
Total HpCDF	1500	B	92	3.4	pg/g	☼	08/06/21 12:58	08/20/21 04:45	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*34*	*q*	*25 - 164*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-2,3,7,8-TCDF	*35*		*24 - 169*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-1,2,3,7,8-PeCDD	*34*		*25 - 181*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-1,2,3,7,8-PeCDF	*36*		*24 - 185*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-2,3,4,7,8-PeCDF	*42*		*21 - 178*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-1,2,3,4,7,8-HxCDD	*44*		*32 - 141*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-1,2,3,6,7,8-HxCDD	*34*		*28 - 130*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-1,2,3,4,7,8-HxCDF	*43*		*26 - 152*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-1,2,3,6,7,8-HxCDF	*41*		*26 - 123*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-1,2,3,7,8,9-HxCDF	*36*		*29 - 147*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-2,3,4,6,7,8-HxCDF	*37*		*28 - 136*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-1,2,3,4,6,7,8-HpCDD	*39*		*23 - 140*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-1,2,3,4,6,7,8-HpCDF	*34*		*28 - 143*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-1,2,3,4,7,8,9-HpCDF	*42*		*26 - 138*	*08/06/21 12:58*	*08/20/21 04:45*	*10*
13C-OCDD	*35*	*q*	*17 - 157*	*08/06/21 12:58*	*08/20/21 04:45*	*10*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)

Lab Sample ID: 320-76888-1
Date Collected: 07/26/21 14:00
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 53.7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	74		35 - 197	08/06/21 12:58	08/20/21 04:45	10

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	110000	E G B	94	94	pg/g	☼	08/06/21 12:58	08/25/21 10:50	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	34		24 - 169	08/06/21 12:58	08/25/21 10:50	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	58		35 - 197	08/06/21 12:58	08/25/21 10:50	10

Client Sample ID: 11215702-072621-BN-SJSB094 (2-4)

Lab Sample ID: 320-76888-2
Date Collected: 07/26/21 14:05
Matrix: Sediment
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	45.4		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	54.6		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072621-BN-SJSB094 (2-4)

Lab Sample ID: 320-76888-2
Date Collected: 07/26/21 14:05
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 54.6

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	23000	G E	29	29	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
1,2,3,7,8-PeCDD	370		92	7.7	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
1,2,3,7,8-PeCDF	2700		92	12	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
2,3,4,7,8-PeCDF	2000		92	12	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
1,2,3,4,7,8-HxCDD	ND		92	0.97	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
1,2,3,6,7,8-HxCDD	ND		92	0.93	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
1,2,3,7,8,9-HxCDD	ND		92	0.88	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
1,2,3,4,7,8-HxCDF	3600		92	15	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
1,2,3,6,7,8-HxCDF	960		92	14	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
1,2,3,7,8,9-HxCDF	57	J q	92	16	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
2,3,4,6,7,8-HxCDF	130		92	17	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
1,2,3,4,6,7,8-HpCDD	70	J B	92	1.1	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
1,2,3,4,6,7,8-HpCDF	1100	B	92	4.2	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
1,2,3,4,7,8,9-HpCDF	360		92	3.8	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
OCDD	750	B	180	2.6	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
OCDF	530		180	3.4	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
Total TCDD	26000	G q	29	29	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
Total TCDF	210000	G B	180	180	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
Total PeCDD	370		92	7.7	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
Total PeCDF	7500		92	12	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
Total HxCDD	17	J q	92	0.92	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
Total HxCDF	5400	q	92	16	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
Total HpCDD	140	q B	92	1.1	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10
Total HpCDF	1700	B	92	4.0	pg/g	☼	08/06/21 12:58	08/20/21 07:57	10

Client Sample ID: 11215702-072621-BN-SJSB094 (2-4) Lab Sample ID: 320-76888-2

Date Collected: 07/26/21 14:05 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 54.6**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	37		25 - 164	08/06/21 12:58	08/20/21 07:57	10
13C-2,3,7,8-TCDF	36		24 - 169	08/06/21 12:58	08/20/21 07:57	10
13C-1,2,3,7,8-PeCDD	29		25 - 181	08/06/21 12:58	08/20/21 07:57	10
13C-1,2,3,7,8-PeCDF	31		24 - 185	08/06/21 12:58	08/20/21 07:57	10
13C-2,3,4,7,8-PeCDF	36		21 - 178	08/06/21 12:58	08/20/21 07:57	10
13C-1,2,3,4,7,8-HxCDD	44		32 - 141	08/06/21 12:58	08/20/21 07:57	10
13C-1,2,3,6,7,8-HxCDD	40		28 - 130	08/06/21 12:58	08/20/21 07:57	10
13C-1,2,3,4,7,8-HxCDF	52		26 - 152	08/06/21 12:58	08/20/21 07:57	10
13C-1,2,3,6,7,8-HxCDF	42		26 - 123	08/06/21 12:58	08/20/21 07:57	10
13C-1,2,3,7,8,9-HxCDF	37		29 - 147	08/06/21 12:58	08/20/21 07:57	10
13C-2,3,4,6,7,8-HxCDF	37		28 - 136	08/06/21 12:58	08/20/21 07:57	10
13C-1,2,3,4,6,7,8-HpCDD	37	q	23 - 140	08/06/21 12:58	08/20/21 07:57	10
13C-1,2,3,4,6,7,8-HpCDF	39		28 - 143	08/06/21 12:58	08/20/21 07:57	10
13C-1,2,3,4,7,8,9-HpCDF	44		26 - 138	08/06/21 12:58	08/20/21 07:57	10
13C-OCDD	43		17 - 157	08/06/21 12:58	08/20/21 07:57	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	73		35 - 197	08/06/21 12:58	08/20/21 07:57	10

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	140000	E B G	100	100	pg/g	☼	08/06/21 12:58	08/26/21 23:35	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	25		24 - 169	08/06/21 12:58	08/26/21 23:35	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	58		35 - 197	08/06/21 12:58	08/26/21 23:35	10

Client Sample ID: 11215702-072621-BN-SJSB094 (4-6) Lab Sample ID: 320-76888-3

Date Collected: 07/26/21 14:10 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	48.8		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	51.2		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072621-BN-SJSB094 (4-6) Lab Sample ID: 320-76888-3

Date Collected: 07/26/21 14:10 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 51.2**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	26000	E G	33	33	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
1,2,3,7,8-PeCDD	340		94	6.6	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
1,2,3,7,8-PeCDF	2900		94	19	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
2,3,4,7,8-PeCDF	2000		94	17	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
1,2,3,4,7,8-HxCDD	ND		94	1.5	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
1,2,3,6,7,8-HxCDD	9.1	J q	94	1.7	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
1,2,3,7,8,9-HxCDD	7.0	J	94	1.4	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
1,2,3,4,7,8-HxCDF	4400		94	19	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
1,2,3,6,7,8-HxCDF	1100		94	19	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10

Client Sample ID: 11215702-072621-BN-SJSB094 (4-6) Lab Sample ID: 320-76888-3

Date Collected: 07/26/21 14:10 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 51.2**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	45	J	94	18	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
2,3,4,6,7,8-HxCDF	140		94	20	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
1,2,3,4,6,7,8-HpCDD	140	B	94	1.8	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
1,2,3,4,6,7,8-HpCDF	1300	B	94	5.3	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
1,2,3,4,7,8,9-HpCDF	360		94	5.3	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
OCDD	1700	B	190	3.5	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
OCDF	570		190	3.3	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
Total TCDD	28000	G	33	33	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
Total TCDF	220000	B G	170	170	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
Total PeCDD	340		94	6.6	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
Total PeCDF	7800	q	94	18	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
Total HxCDD	37	J q	94	1.5	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
Total HxCDF	6500		94	19	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
Total HpCDD	320	B	94	1.8	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10
Total HpCDF	1900	B	94	5.3	pg/g	☼	08/06/21 12:58	08/20/21 09:32	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*41*		*25 - 164*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-2,3,7,8-TCDF	*38*		*24 - 169*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-1,2,3,7,8-PeCDD	*35*		*25 - 181*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-1,2,3,7,8-PeCDF	*38*		*24 - 185*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-2,3,4,7,8-PeCDF	*41*		*21 - 178*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-1,2,3,4,7,8-HxCDD	*40*	*q*	*32 - 141*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-1,2,3,6,7,8-HxCDD	*46*		*28 - 130*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-1,2,3,4,7,8-HxCDF	*47*		*26 - 152*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-1,2,3,6,7,8-HxCDF	*40*		*26 - 123*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-1,2,3,7,8,9-HxCDF	*42*		*29 - 147*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-2,3,4,6,7,8-HxCDF	*40*		*28 - 136*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-1,2,3,4,6,7,8-HpCDD	*40*		*23 - 140*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-1,2,3,4,6,7,8-HpCDF	*46*		*28 - 143*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-1,2,3,4,7,8,9-HpCDF	*48*		*26 - 138*	*08/06/21 12:58*	*08/20/21 09:32*	*10*
13C-OCDD	*51*		*17 - 157*	*08/06/21 12:58*	*08/20/21 09:32*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*84*		*35 - 197*	*08/06/21 12:58*	*08/20/21 09:32*	*10*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	130000	E G B	110	110	pg/g	☼	08/06/21 12:58	08/27/21 00:14	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*26*		*24 - 169*	*08/06/21 12:58*	*08/27/21 00:14*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*59*		*35 - 197*	*08/06/21 12:58*	*08/27/21 00:14*	*10*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (6-8)

Lab Sample ID: 320-76888-4
Date Collected: 07/26/21 14:15
Matrix: Sediment
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	35.3		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	64.7		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072621-BN-SJSB094 (6-8)

Lab Sample ID: 320-76888-4
Date Collected: 07/26/21 14:15
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 64.7

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	10000	E	15	13	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
1,2,3,7,8-PeCDD	100	q	76	3.7	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
1,2,3,7,8-PeCDF	920		76	6.9	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
2,3,4,7,8-PeCDF	700		76	7.0	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
1,2,3,4,7,8-HxCDD	ND		76	1.2	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
1,2,3,6,7,8-HxCDD	ND		76	1.2	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
1,2,3,7,8,9-HxCDD	ND		76	1.1	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
1,2,3,4,7,8-HxCDF	1300		76	5.2	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
1,2,3,6,7,8-HxCDF	330		76	6.1	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
1,2,3,7,8,9-HxCDF	16	J	76	6.0	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
2,3,4,6,7,8-HxCDF	32	J	76	4.5	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
1,2,3,4,6,7,8-HpCDD	42	J B	76	1.2	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
1,2,3,4,6,7,8-HpCDF	290	B	76	1.9	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
1,2,3,4,7,8,9-HpCDF	110		76	2.2	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
OCDD	680	B	150	3.1	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
OCDF	180		150	2.6	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
Total TCDD	11000	q	15	13	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
Total TCDF	87000	B q G	60	60	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
Total PeCDD	100	q	76	3.7	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
Total PeCDF	2600	q	76	6.9	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
Total HxCDD	9.9	J	76	1.1	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
Total HxCDF	1900	q	76	5.5	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
Total HpCDD	89	B	76	1.2	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10
Total HpCDF	480	B	76	2.1	pg/g	☼	08/06/21 12:58	08/20/21 07:09	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*43*		*25 - 164*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-2,3,7,8-TCDF	*43*		*24 - 169*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-1,2,3,7,8-PeCDD	*40*		*25 - 181*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-1,2,3,7,8-PeCDF	*38*		*24 - 185*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-2,3,4,7,8-PeCDF	*43*		*21 - 178*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-1,2,3,4,7,8-HxCDD	*45*		*32 - 141*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-1,2,3,6,7,8-HxCDD	*41*		*28 - 130*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-1,2,3,4,7,8-HxCDF	*40*	*q*	*26 - 152*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-1,2,3,6,7,8-HxCDF	*39*		*26 - 123*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-1,2,3,7,8,9-HxCDF	*38*		*29 - 147*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-2,3,4,6,7,8-HxCDF	*43*		*28 - 136*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-1,2,3,4,6,7,8-HpCDD	*44*		*23 - 140*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-1,2,3,4,6,7,8-HpCDF	*46*		*28 - 143*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-1,2,3,4,7,8,9-HpCDF	*46*		*26 - 138*	*08/06/21 12:58*	*08/20/21 07:09*	*10*
13C-OCDD	*41*	*q*	*17 - 157*	*08/06/21 12:58*	*08/20/21 07:09*	*10*

Client Sample ID: 11215702-072621-BN-SJSB094 (6-8) Lab Sample ID: 320-76888-4

Date Collected: 07/26/21 14:15 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 64.7**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	72		35 - 197	08/06/21 12:58	08/20/21 07:09	10

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	47000	E B G	46	46	pg/g	☼	08/06/21 12:58	08/27/21 00:52	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	37		24 - 169	08/06/21 12:58	08/27/21 00:52	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	56		35 - 197	08/06/21 12:58	08/27/21 00:52	10

Client Sample ID: 11215702-072621-BN-SJSB094 (8-10) Lab Sample ID: 320-76888-5

Date Collected: 07/26/21 14:20 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	31.4		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	68.6		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072621-BN-SJSB094 (8-10) Lab Sample ID: 320-76888-5

Date Collected: 07/26/21 14:20 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 68.6**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	3700	E	7.3	5.4	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
1,2,3,7,8-PeCDD	41		36	1.5	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
1,2,3,7,8-PeCDF	320		36	4.2	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
2,3,4,7,8-PeCDF	240		36	4.2	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
1,2,3,4,7,8-HxCDD	ND		36	0.45	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
1,2,3,6,7,8-HxCDD	ND		36	0.52	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
1,2,3,7,8,9-HxCDD	ND		36	0.45	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
1,2,3,4,7,8-HxCDF	430		36	1.7	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
1,2,3,6,7,8-HxCDF	130		36	1.9	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
1,2,3,7,8,9-HxCDF	5.5	J	36	1.6	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
2,3,4,6,7,8-HxCDF	13	J q	36	1.7	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
1,2,3,4,6,7,8-HpCDD	32	J B	36	0.50	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
1,2,3,4,6,7,8-HpCDF	110	B	36	0.69	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
1,2,3,4,7,8,9-HpCDF	39		36	0.65	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
OCDD	620	B	73	1.5	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
OCDF	56	J	73	0.97	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
Total TCDD	4100		7.3	5.4	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
Total TCDF	26000	B q G	21	21	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
Total PeCDD	41		36	1.5	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
Total PeCDF	860	q	36	4.2	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
Total HxCDD	16	J q	36	0.48	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
Total HxCDF	650	q	36	1.7	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
Total HpCDD	87	B	36	0.50	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5
Total HpCDF	180	B	36	0.67	pg/g	☼	08/06/21 12:58	08/20/21 03:57	5

Client Sample ID: 11215702-072621-BN-SJSB094 (8-10) Lab Sample ID: 320-76888-5

Date Collected: 07/26/21 14:20 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 68.6**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	37		25 - 164	08/06/21 12:58	08/20/21 03:57	5
13C-2,3,7,8-TCDF	39		24 - 169	08/06/21 12:58	08/20/21 03:57	5
13C-1,2,3,7,8-PeCDD	41		25 - 181	08/06/21 12:58	08/20/21 03:57	5
13C-1,2,3,7,8-PeCDF	39		24 - 185	08/06/21 12:58	08/20/21 03:57	5
13C-2,3,4,7,8-PeCDF	44		21 - 178	08/06/21 12:58	08/20/21 03:57	5
13C-1,2,3,4,7,8-HxCDD	42		32 - 141	08/06/21 12:58	08/20/21 03:57	5
13C-1,2,3,6,7,8-HxCDD	39		28 - 130	08/06/21 12:58	08/20/21 03:57	5
13C-1,2,3,4,7,8-HxCDF	50		26 - 152	08/06/21 12:58	08/20/21 03:57	5
13C-1,2,3,6,7,8-HxCDF	41		26 - 123	08/06/21 12:58	08/20/21 03:57	5
13C-1,2,3,7,8,9-HxCDF	42		29 - 147	08/06/21 12:58	08/20/21 03:57	5
13C-2,3,4,6,7,8-HxCDF	42		28 - 136	08/06/21 12:58	08/20/21 03:57	5
13C-1,2,3,4,6,7,8-HpCDD	41		23 - 140	08/06/21 12:58	08/20/21 03:57	5
13C-1,2,3,4,6,7,8-HpCDF	40		28 - 143	08/06/21 12:58	08/20/21 03:57	5
13C-1,2,3,4,7,8,9-HpCDF	48		26 - 138	08/06/21 12:58	08/20/21 03:57	5
13C-OCDD	39		17 - 157	08/06/21 12:58	08/20/21 03:57	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	52		35 - 197	08/06/21 12:58	08/20/21 03:57	5

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	16000	E B G	15	15	pg/g	☼	08/06/21 12:58	08/26/21 22:57	5

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	40		24 - 169	08/06/21 12:58	08/26/21 22:57	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	60		35 - 197	08/06/21 12:58	08/26/21 22:57	5

Client Sample ID: 11215702-072621-BN-SJSB094 (10-12) Lab Sample ID: 320-76888-6

Date Collected: 07/26/21 14:25 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	37.1		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	62.9		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072621-BN-SJSB094 (10-12) Lab Sample ID: 320-76888-6

Date Collected: 07/26/21 14:25 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 62.9**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	22		1.6	0.28	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
1,2,3,7,8-PeCDD	ND		7.8	0.32	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
1,2,3,7,8-PeCDF	1.7	J q	7.8	0.12	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
2,3,4,7,8-PeCDF	1.3	J q	7.8	0.13	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
1,2,3,4,7,8-HxCDD	ND		7.8	0.27	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
1,2,3,6,7,8-HxCDD	ND		7.8	0.31	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
1,2,3,7,8,9-HxCDD	2.4	J	7.8	0.27	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
1,2,3,4,7,8-HxCDF	2.7	J	7.8	0.11	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
1,2,3,6,7,8-HxCDF	0.62	J q	7.8	0.11	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (10-12)

Lab Sample ID: 320-76888-6

Date Collected: 07/26/21 14:25
Date Received: 07/29/21 09:45

Matrix: Sediment
Percent Solids: 62.9

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	ND		7.8	0.12	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
2,3,4,6,7,8-HxCDF	ND		7.8	0.11	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
1,2,3,4,6,7,8-HpCDD	**36**	**B**	7.8	0.37	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
1,2,3,4,6,7,8-HpCDF	**1.1**	**J B**	7.8	0.091	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
1,2,3,4,7,8,9-HpCDF	ND		7.8	0.091	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
OCDD	**840**	**B**	16	0.83	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
OCDF	ND		16	0.17	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
Total TCDD	**22**		1.6	0.28	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
Total TCDF	**160**	**q B**	1.6	0.62	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
Total PeCDD	**5.2**	**J q**	7.8	0.32	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
Total PeCDF	**4.0**	**J q**	7.8	0.12	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
Total HxCDD	**32**		7.8	0.28	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
Total HxCDF	**3.3**	**J q**	7.8	0.11	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
Total HpCDD	**130**	**B**	7.8	0.37	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1
Total HpCDF	**1.1**	**J B**	7.8	0.091	pg/g	☼	08/06/21 12:58	08/19/21 08:42	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*36*		*25 - 164*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-2,3,7,8-TCDF	*35*		*24 - 169*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-1,2,3,7,8-PeCDD	*33*		*25 - 181*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-1,2,3,7,8-PeCDF	*32*		*24 - 185*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-2,3,4,7,8-PeCDF	*35*		*21 - 178*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-1,2,3,4,7,8-HxCDD	*43*		*32 - 141*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-1,2,3,6,7,8-HxCDD	*38*		*28 - 130*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-1,2,3,4,7,8-HxCDF	*46*		*26 - 152*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-1,2,3,6,7,8-HxCDF	*41*		*26 - 123*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-1,2,3,7,8,9-HxCDF	*34*		*29 - 147*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-2,3,4,6,7,8-HxCDF	*35*		*28 - 136*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*43*		*23 - 140*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*39*		*28 - 143*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*45*		*26 - 138*	*08/06/21 12:58*	*08/19/21 08:42*	*1*
13C-OCDD	*41*		*17 - 157*	*08/06/21 12:58*	*08/19/21 08:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*45*		*35 - 197*	*08/06/21 12:58*	*08/19/21 08:42*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**83**	**B**	1.6	0.54	pg/g	☼	08/06/21 12:58	08/26/21 22:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*37*		*24 - 169*	*08/06/21 12:58*	*08/26/21 22:18*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*52*		*35 - 197*	*08/06/21 12:58*	*08/26/21 22:18*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (12-14)

Lab Sample ID: 320-76888-7
Date Collected: 07/26/21 14:30
Matrix: Sediment
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**35.3**		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	**64.7**		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072621-BN-SJSB094 (12-14)

Lab Sample ID: 320-76888-7
Date Collected: 07/26/21 14:30
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 64.7

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.5	0.13	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
1,2,3,7,8-PeCDD	ND		7.5	0.24	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
1,2,3,7,8-PeCDF	ND		7.5	0.066	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
2,3,4,7,8-PeCDF	ND		7.5	0.068	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
1,2,3,4,7,8-HxCDD	ND		7.5	0.37	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
1,2,3,6,7,8-HxCDD	ND		7.5	0.41	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
1,2,3,7,8,9-HxCDD	**4.8**	**J**	7.5	0.36	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
1,2,3,4,7,8-HxCDF	ND		7.5	0.047	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
1,2,3,6,7,8-HxCDF	ND		7.5	0.047	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
1,2,3,7,8,9-HxCDF	ND		7.5	0.047	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
2,3,4,6,7,8-HxCDF	ND		7.5	0.048	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
1,2,3,4,6,7,8-HpCDD	**65**	**B**	7.5	0.44	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
1,2,3,4,6,7,8-HpCDF	ND		7.5	0.086	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
1,2,3,4,7,8,9-HpCDF	ND		7.5	0.080	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
OCDD	**1400**	**B**	15	1.2	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
OCDF	ND		15	0.15	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
Total TCDD	**1.1**	**J q**	1.5	0.13	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
Total TCDF	**8.1**	**B q**	1.5	0.12	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
Total PeCDD	**8.8**		7.5	0.24	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
Total PeCDF	ND		7.5	0.068	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
Total HxCDD	**52**		7.5	0.38	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
Total HxCDF	ND		7.5	0.074	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
Total HpCDD	**190**	**B**	7.5	0.44	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1
Total HpCDF	ND		7.5	0.086	pg/g	☼	08/06/21 12:58	08/19/21 09:30	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*43*		*25 - 164*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-2,3,7,8-TCDF	*40*		*24 - 169*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-1,2,3,7,8-PeCDD	*41*		*25 - 181*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-1,2,3,7,8-PeCDF	*40*		*24 - 185*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-2,3,4,7,8-PeCDF	*44*		*21 - 178*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-1,2,3,4,7,8-HxCDD	*47*		*32 - 141*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-1,2,3,6,7,8-HxCDD	*42*		*28 - 130*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-1,2,3,4,7,8-HxCDF	*54*		*26 - 152*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-1,2,3,6,7,8-HxCDF	*49*		*26 - 123*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-1,2,3,7,8,9-HxCDF	*43*		*29 - 147*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-2,3,4,6,7,8-HxCDF	*42*		*28 - 136*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*45*		*23 - 140*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*44*		*28 - 143*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*53*		*26 - 138*	*08/06/21 12:58*	*08/19/21 09:30*	*1*
13C-OCDD	*51*		*17 - 157*	*08/06/21 12:58*	*08/19/21 09:30*	*1*

Client Sample ID: 11215702-072621-BN-SJSB094 (12-14) Lab Sample ID: 320-76888-7

Date Collected: 07/26/21 14:30 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 64.7**

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*43*		*35 - 197*	*08/06/21 12:58*	*08/19/21 09:30*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**4.3**	**B**	1.5	0.17	pg/g	☼	08/06/21 12:58	08/27/21 14:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*41*		*24 - 169*	*08/06/21 12:58*	*08/27/21 14:08*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*49*		*35 - 197*	*08/06/21 12:58*	*08/27/21 14:08*	*1*

Client Sample ID: 11215702-072621-BN-SJSB094 (14-16) Lab Sample ID: 320-76888-8

Date Collected: 07/26/21 14:35 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**35.4**		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	**64.6**		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072621-BN-SJSB094 (14-16) Lab Sample ID: 320-76888-8

Date Collected: 07/26/21 14:35 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 64.6**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**1.3**	**J**	1.5	0.15	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
1,2,3,7,8-PeCDD	ND		7.7	0.23	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
1,2,3,7,8-PeCDF	ND		7.7	0.063	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
2,3,4,7,8-PeCDF	ND		7.7	0.069	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
1,2,3,4,7,8-HxCDD	**0.91**	**J**	7.7	0.30	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
1,2,3,6,7,8-HxCDD	**1.6**	**J**	7.7	0.32	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
1,2,3,7,8,9-HxCDD	**4.4**	**J**	7.7	0.29	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
1,2,3,4,7,8-HxCDF	ND		7.7	0.046	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
1,2,3,6,7,8-HxCDF	ND		7.7	0.045	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
1,2,3,7,8,9-HxCDF	ND		7.7	0.046	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
2,3,4,6,7,8-HxCDF	ND		7.7	0.046	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
1,2,3,4,6,7,8-HpCDD	**60**	**B**	7.7	0.42	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
1,2,3,4,6,7,8-HpCDF	ND		7.7	0.079	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
1,2,3,4,7,8,9-HpCDF	ND		7.7	0.077	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
OCDD	**1300**	**B**	15	1.1	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
OCDF	ND		15	0.11	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
Total TCDD	**4.1**	**q**	1.5	0.15	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
Total TCDF	**3.0**	**B**	1.5	0.070	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
Total PeCDD	**8.4**	**q**	7.7	0.23	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
Total PeCDF	ND		7.7	0.069	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
Total HxCDD	**50**		7.7	0.30	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
Total HxCDF	ND		7.7	0.11	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
Total HpCDD	**190**	**B**	7.7	0.42	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1
Total HpCDF	ND		7.7	0.23	pg/g	☼	08/06/21 12:58	08/19/21 10:18	1

Client Sample ID: 11215702-072621-BN-SJSB094 (14-16) Lab Sample ID: 320-76888-8

Date Collected: 07/26/21 14:35 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 64.6**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	39		25 - 164	08/06/21 12:58	08/19/21 10:18	1
13C-2,3,7,8-TCDF	37		24 - 169	08/06/21 12:58	08/19/21 10:18	1
13C-1,2,3,7,8-PeCDD	35		25 - 181	08/06/21 12:58	08/19/21 10:18	1
13C-1,2,3,7,8-PeCDF	36		24 - 185	08/06/21 12:58	08/19/21 10:18	1
13C-2,3,4,7,8-PeCDF	38		21 - 178	08/06/21 12:58	08/19/21 10:18	1
13C-1,2,3,4,7,8-HxCDD	44		32 - 141	08/06/21 12:58	08/19/21 10:18	1
13C-1,2,3,6,7,8-HxCDD	41		28 - 130	08/06/21 12:58	08/19/21 10:18	1
13C-1,2,3,4,7,8-HxCDF	47		26 - 152	08/06/21 12:58	08/19/21 10:18	1
13C-1,2,3,6,7,8-HxCDF	43		26 - 123	08/06/21 12:58	08/19/21 10:18	1
13C-1,2,3,7,8,9-HxCDF	37		29 - 147	08/06/21 12:58	08/19/21 10:18	1
13C-2,3,4,6,7,8-HxCDF	40		28 - 136	08/06/21 12:58	08/19/21 10:18	1
13C-1,2,3,4,6,7,8-HpCDD	43		23 - 140	08/06/21 12:58	08/19/21 10:18	1
13C-1,2,3,4,6,7,8-HpCDF	43		28 - 143	08/06/21 12:58	08/19/21 10:18	1
13C-1,2,3,4,7,8,9-HpCDF	46		26 - 138	08/06/21 12:58	08/19/21 10:18	1
13C-OCDD	47		17 - 157	08/06/21 12:58	08/19/21 10:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	45		35 - 197	08/06/21 12:58	08/19/21 10:18	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	2.2	B	1.5	0.20	pg/g	☼	08/06/21 12:58	08/27/21 14:47	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	39		24 - 169	08/06/21 12:58	08/27/21 14:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	51		35 - 197	08/06/21 12:58	08/27/21 14:47	1

Client Sample ID: 11215702-072621-BN-DUP-8 Lab Sample ID: 320-76888-13

Date Collected: 07/26/21 00:00 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	30.1		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	69.9		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072621-BN-DUP-8 Lab Sample ID: 320-76888-13

Date Collected: 07/26/21 00:00 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 69.9**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	570	E	1.4	1.0	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
1,2,3,7,8-PeCDD	7.1		7.1	0.24	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
1,2,3,7,8-PeCDF	51		7.1	0.74	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
2,3,4,7,8-PeCDF	47		7.1	0.77	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
1,2,3,4,7,8-HxCDD	1.0	J	7.1	0.21	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
1,2,3,6,7,8-HxCDD	1.2	J q	7.1	0.23	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
1,2,3,7,8,9-HxCDD	2.7	J	7.1	0.20	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
1,2,3,4,7,8-HxCDF	62		7.1	0.29	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
1,2,3,6,7,8-HxCDF	16		7.1	0.31	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-DUP-8

Date Collected: 07/26/21 00:00
Date Received: 07/29/21 09:45

Lab Sample ID: 320-76888-13

Matrix: Sediment
Percent Solids: 69.9

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	0.99	J q	7.1	0.30	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
2,3,4,6,7,8-HxCDF	2.6	J	7.1	0.31	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
1,2,3,4,6,7,8-HpCDD	48	B	7.1	0.35	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
1,2,3,4,6,7,8-HpCDF	19		7.1	0.12	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
1,2,3,4,7,8,9-HpCDF	5.9	J	7.1	0.12	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
OCDD	1200	B	14	0.99	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
OCDF	12	J	14	0.11	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
Total TCDD	620		1.4	1.0	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
Total TCDF	4400	G	3.6	3.6	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
Total PeCDD	12	q	7.1	0.24	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
Total PeCDF	150	q	7.1	0.76	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
Total HxCDD	42	q	7.1	0.21	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
Total HxCDF	92	q	7.1	0.30	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
Total HpCDD	160	B	7.1	0.35	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1
Total HpCDF	30		7.1	0.12	pg/g	☼	08/06/21 05:28	08/19/21 17:15	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*60*		*25 - 164*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-2,3,7,8-TCDF	*59*		*24 - 169*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-1,2,3,7,8-PeCDD	*60*		*25 - 181*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-1,2,3,7,8-PeCDF	*57*		*24 - 185*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-2,3,4,7,8-PeCDF	*64*		*21 - 178*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-1,2,3,4,7,8-HxCDD	*68*		*32 - 141*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-1,2,3,6,7,8-HxCDD	*62*		*28 - 130*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-1,2,3,4,7,8-HxCDF	*77*		*26 - 152*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-1,2,3,6,7,8-HxCDF	*69*		*26 - 123*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-1,2,3,7,8,9-HxCDF	*60*		*29 - 147*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-2,3,4,6,7,8-HxCDF	*61*		*28 - 136*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*64*		*23 - 140*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*64*		*28 - 143*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*71*		*26 - 138*	*08/06/21 05:28*	*08/19/21 17:15*	*1*
13C-OCDD	*62*		*17 - 157*	*08/06/21 05:28*	*08/19/21 17:15*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*72*		*35 - 197*	*08/06/21 05:28*	*08/19/21 17:15*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	2300	E G	2.4	2.4	pg/g	☼	08/06/21 05:28	08/25/21 18:43	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*65*		*24 - 169*	*08/06/21 05:28*	*08/25/21 18:43*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*77*		*35 - 197*	*08/06/21 05:28*	*08/25/21 18:43*	*1*

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) — Lab Sample ID: 320-76888-1

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	24000	E G	36	36	pg/g	1	24000	1613B
1,2,3,7,8-PeCDD	290		92	6.0	pg/g	1	290	1613B
1,2,3,7,8-PeCDF	2200		92	18	pg/g	0.03	66	1613B
2,3,4,7,8-PeCDF	1600		92	18	pg/g	0.3	480	1613B
1,2,3,4,7,8-HxCDD	3.6	J	92	1.2	pg/g	0.1	0.36	1613B
1,2,3,6,7,8-HxCDD	7.0	J q	92	1.4	pg/g	0.1	0.70	1613B
1,2,3,7,8,9-HxCDD	5.6	J q	92	1.2	pg/g	0.1	0.56	1613B
1,2,3,4,7,8-HxCDF	3200		92	12	pg/g	0.1	320	1613B
1,2,3,6,7,8-HxCDF	740		92	11	pg/g	0.1	74	1613B
1,2,3,7,8,9-HxCDF	42	J	92	12	pg/g	0.1	4.2	1613B
2,3,4,6,7,8-HxCDF	100		92	12	pg/g	0.1	10	1613B
1,2,3,4,6,7,8-HpCDD	68	J B	92	1.0	pg/g	0.01	0.68	1613B
1,2,3,4,6,7,8-HpCDF	1100	B	92	3.6	pg/g	0.01	11	1613B
1,2,3,4,7,8,9-HpCDF	280		92	3.1	pg/g	0.01	2.8	1613B
OCDD	720	B F1	180	2.5	pg/g	0.0003	0.22	1613B
OCDF	460		180	3.5	pg/g	0.0003	0.14	1613B
2,3,7,8-TCDF - RA	110000	E G B	94	94	pg/g	0.1	11000	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		36000	TEQ

Client Sample ID: 11215702-072621-BN-SJSB094 (2-4) — Lab Sample ID: 320-76888-2

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	23000	G E	29	29	pg/g	1	23000	1613B
1,2,3,7,8-PeCDD	370		92	7.7	pg/g	1	370	1613B
1,2,3,7,8-PeCDF	2700		92	12	pg/g	0.03	81	1613B
2,3,4,7,8-PeCDF	2000		92	12	pg/g	0.3	600	1613B
1,2,3,4,7,8-HxCDD	ND		92	0.97	pg/g	0.1	0.049	1613B
1,2,3,6,7,8-HxCDD	ND		92	0.93	pg/g	0.1	0.047	1613B
1,2,3,7,8,9-HxCDD	ND		92	0.88	pg/g	0.1	0.044	1613B
1,2,3,4,7,8-HxCDF	3600		92	15	pg/g	0.1	360	1613B
1,2,3,6,7,8-HxCDF	960		92	14	pg/g	0.1	96	1613B
1,2,3,7,8,9-HxCDF	57	J q	92	16	pg/g	0.1	5.7	1613B
2,3,4,6,7,8-HxCDF	130		92	17	pg/g	0.1	13	1613B
1,2,3,4,6,7,8-HpCDD	70	J B	92	1.1	pg/g	0.01	0.70	1613B
1,2,3,4,6,7,8-HpCDF	1100	B	92	4.2	pg/g	0.01	11	1613B
1,2,3,4,7,8,9-HpCDF	360		92	3.8	pg/g	0.01	3.6	1613B
OCDD	750	B	180	2.6	pg/g	0.0003	0.23	1613B
OCDF	530		180	3.4	pg/g	0.0003	0.16	1613B
2,3,7,8-TCDF - RA	140000	E B G	100	100	pg/g	0.1	14000	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (2-4) (Continued) — Lab Sample ID: 320-76888-2

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		39000	TEQ

Client Sample ID: 11215702-072621-BN-SJSB094 (4-6) — Lab Sample ID: 320-76888-3

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**26000**	**E G**	33	33	pg/g	1	**26000**	1613B
1,2,3,7,8-PeCDD	**340**		94	6.6	pg/g	1	**340**	1613B
1,2,3,7,8-PeCDF	**2900**		94	19	pg/g	0.03	**87**	1613B
2,3,4,7,8-PeCDF	**2000**		94	17	pg/g	0.3	**600**	1613B
1,2,3,4,7,8-HxCDD	ND		94	1.5	pg/g	0.1	0.075	1613B
1,2,3,6,7,8-HxCDD	**9.1**	**J q**	94	1.7	pg/g	0.1	**0.91**	1613B
1,2,3,7,8,9-HxCDD	**7.0**	**J**	94	1.4	pg/g	0.1	**0.70**	1613B
1,2,3,4,7,8-HxCDF	**4400**		94	19	pg/g	0.1	**440**	1613B
1,2,3,6,7,8-HxCDF	**1100**		94	19	pg/g	0.1	**110**	1613B
1,2,3,7,8,9-HxCDF	**45**	**J**	94	18	pg/g	0.1	**4.5**	1613B
2,3,4,6,7,8-HxCDF	**140**		94	20	pg/g	0.1	**14**	1613B
1,2,3,4,6,7,8-HpCDD	**140**	**B**	94	1.8	pg/g	0.01	**1.4**	1613B
1,2,3,4,6,7,8-HpCDF	**1300**	**B**	94	5.3	pg/g	0.01	**13**	1613B
1,2,3,4,7,8,9-HpCDF	**360**		94	5.3	pg/g	0.01	**3.6**	1613B
OCDD	**1700**	**B**	190	3.5	pg/g	0.0003	**0.51**	1613B
OCDF	**570**		190	3.3	pg/g	0.0003	**0.17**	1613B
2,3,7,8-TCDF - RA	**130000**	**E G B**	110	110	pg/g	0.1	**13000**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		41000	TEQ

Client Sample ID: 11215702-072621-BN-SJSB094 (6-8) — Lab Sample ID: 320-76888-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**10000**	**E**	15	13	pg/g	1	**10000**	1613B
1,2,3,7,8-PeCDD	**100**	**q**	76	3.7	pg/g	1	**100**	1613B
1,2,3,7,8-PeCDF	**920**		76	6.9	pg/g	0.03	**28**	1613B
2,3,4,7,8-PeCDF	**700**		76	7.0	pg/g	0.3	**210**	1613B
1,2,3,4,7,8-HxCDD	ND		76	1.2	pg/g	0.1	0.060	1613B
1,2,3,6,7,8-HxCDD	ND		76	1.2	pg/g	0.1	0.060	1613B
1,2,3,7,8,9-HxCDD	ND		76	1.1	pg/g	0.1	0.055	1613B
1,2,3,4,7,8-HxCDF	**1300**		76	5.2	pg/g	0.1	**130**	1613B
1,2,3,6,7,8-HxCDF	**330**		76	6.1	pg/g	0.1	**33**	1613B
1,2,3,7,8,9-HxCDF	**16**	**J**	76	6.0	pg/g	0.1	**1.6**	1613B
2,3,4,6,7,8-HxCDF	**32**	**J**	76	4.5	pg/g	0.1	**3.2**	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (6-8) (Continued) — Lab Sample ID: 320-76888-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDD	42	J B	76	1.2	pg/g	0.01	0.42	1613B
1,2,3,4,6,7,8-HpCDF	290	B	76	1.9	pg/g	0.01	2.9	1613B
1,2,3,4,7,8,9-HpCDF	110		76	2.2	pg/g	0.01	1.1	1613B
OCDD	680	B	150	3.1	pg/g	0.0003	0.20	1613B
OCDF	180		150	2.6	pg/g	0.0003	0.054	1613B
2,3,7,8-TCDF - RA	47000	E B G	46	46	pg/g	0.1	4700	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		15000	TEQ

Client Sample ID: 11215702-072621-BN-SJSB094 (8-10) — Lab Sample ID: 320-76888-5

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	3700	E	7.3	5.4	pg/g	1	3700	1613B
1,2,3,7,8-PeCDD	41		36	1.5	pg/g	1	41	1613B
1,2,3,7,8-PeCDF	320		36	4.2	pg/g	0.03	9.6	1613B
2,3,4,7,8-PeCDF	240		36	4.2	pg/g	0.3	72	1613B
1,2,3,4,7,8-HxCDD	ND		36	0.45	pg/g	0.1	0.023	1613B
1,2,3,6,7,8-HxCDD	ND		36	0.52	pg/g	0.1	0.026	1613B
1,2,3,7,8,9-HxCDD	ND		36	0.45	pg/g	0.1	0.023	1613B
1,2,3,4,7,8-HxCDF	430		36	1.7	pg/g	0.1	43	1613B
1,2,3,6,7,8-HxCDF	130		36	1.9	pg/g	0.1	13	1613B
1,2,3,7,8,9-HxCDF	5.5	J	36	1.6	pg/g	0.1	0.55	1613B
2,3,4,6,7,8-HxCDF	13	J q	36	1.7	pg/g	0.1	1.3	1613B
1,2,3,4,6,7,8-HpCDD	32	J B	36	0.50	pg/g	0.01	0.32	1613B
1,2,3,4,6,7,8-HpCDF	110	B	36	0.69	pg/g	0.01	1.1	1613B
1,2,3,4,7,8,9-HpCDF	39		36	0.65	pg/g	0.01	0.39	1613B
OCDD	620	B	73	1.5	pg/g	0.0003	0.19	1613B
OCDF	56	J	73	0.97	pg/g	0.0003	0.017	1613B
2,3,7,8-TCDF - RA	16000	E B G	15	15	pg/g	0.1	1600	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		5500	TEQ

Client Sample ID: 11215702-072621-BN-SJSB094 (10-12) — Lab Sample ID: 320-76888-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	22		1.6	0.28	pg/g	1	22	1613B
1,2,3,7,8-PeCDD	ND		7.8	0.32	pg/g	1	0.16	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (10-12) (Continued)

Lab Sample ID: 320-76888-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
1,2,3,7,8-PeCDF	**1.7**	**J q**	7.8	0.12	pg/g	0.03	**0.051**	1613B
2,3,4,7,8-PeCDF	**1.3**	**J q**	7.8	0.13	pg/g	0.3	**0.39**	1613B
1,2,3,4,7,8-HxCDD	ND		7.8	0.27	pg/g	0.1	0.014	1613B
1,2,3,6,7,8-HxCDD	ND		7.8	0.31	pg/g	0.1	0.016	1613B
1,2,3,7,8,9-HxCDD	**2.4**	**J**	7.8	0.27	pg/g	0.1	**0.24**	1613B
1,2,3,4,7,8-HxCDF	**2.7**	**J**	7.8	0.11	pg/g	0.1	**0.27**	1613B
1,2,3,6,7,8-HxCDF	**0.62**	**J q**	7.8	0.11	pg/g	0.1	**0.062**	1613B
1,2,3,7,8,9-HxCDF	ND		7.8	0.12	pg/g	0.1	0.0060	1613B
2,3,4,6,7,8-HxCDF	ND		7.8	0.11	pg/g	0.1	0.0055	1613B
1,2,3,4,6,7,8-HpCDD	**36**	**B**	7.8	0.37	pg/g	0.01	**0.36**	1613B
1,2,3,4,6,7,8-HpCDF	**1.1**	**J B**	7.8	0.091	pg/g	0.01	**0.011**	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.8	0.091	pg/g	0.01	0.00046	1613B
OCDD	**840**	**B**	16	0.83	pg/g	0.0003	**0.25**	1613B
OCDF	ND		16	0.17	pg/g	0.0003	0.000026	1613B
2,3,7,8-TCDF - RA	**83**	**B**	1.6	0.54	pg/g	0.1	**8.3**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
Total Dioxin/Furan TEQ					pg/g		32	TEQ

Client Sample ID: 11215702-072621-BN-SJSB094 (12-14)

Lab Sample ID: 320-76888-7

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
2,3,7,8-TCDD	ND		1.5	0.13	pg/g	1	0.065	1613B
1,2,3,7,8-PeCDD	ND		7.5	0.24	pg/g	1	0.12	1613B
1,2,3,7,8-PeCDF	ND		7.5	0.066	pg/g	0.03	0.00099	1613B
2,3,4,7,8-PeCDF	ND		7.5	0.068	pg/g	0.3	0.010	1613B
1,2,3,4,7,8-HxCDD	ND		7.5	0.37	pg/g	0.1	0.019	1613B
1,2,3,6,7,8-HxCDD	ND		7.5	0.41	pg/g	0.1	0.021	1613B
1,2,3,7,8,9-HxCDD	**4.8**	**J**	7.5	0.36	pg/g	0.1	**0.48**	1613B
1,2,3,4,7,8-HxCDF	ND		7.5	0.047	pg/g	0.1	0.0024	1613B
1,2,3,6,7,8-HxCDF	ND		7.5	0.047	pg/g	0.1	0.0024	1613B
1,2,3,7,8,9-HxCDF	ND		7.5	0.047	pg/g	0.1	0.0024	1613B
2,3,4,6,7,8-HxCDF	ND		7.5	0.048	pg/g	0.1	0.0024	1613B
1,2,3,4,6,7,8-HpCDD	**65**	**B**	7.5	0.44	pg/g	0.01	**0.65**	1613B
1,2,3,4,6,7,8-HpCDF	ND		7.5	0.086	pg/g	0.01	0.00043	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.5	0.080	pg/g	0.01	0.00040	1613B
OCDD	**1400**	**B**	15	1.2	pg/g	0.0003	**0.42**	1613B
OCDF	ND		15	0.15	pg/g	0.0003	0.000023	1613B
2,3,7,8-TCDF - RA	**4.3**	**B**	1.5	0.17	pg/g	0.1	**0.43**	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (12-14) (Continued) — Lab Sample ID: 320-76888-7

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2.2	TEQ

Client Sample ID: 11215702-072621-BN-SJSB094 (14-16) — Lab Sample ID: 320-76888-8

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**1.3**	**J**	1.5	0.15	pg/g	1	**1.3**	1613B
1,2,3,7,8-PeCDD	ND		7.7	0.23	pg/g	1	0.12	1613B
1,2,3,7,8-PeCDF	ND		7.7	0.063	pg/g	0.03	0.00095	1613B
2,3,4,7,8-PeCDF	ND		7.7	0.069	pg/g	0.3	0.010	1613B
1,2,3,4,7,8-HxCDD	**0.91**	**J**	7.7	0.30	pg/g	0.1	**0.091**	1613B
1,2,3,6,7,8-HxCDD	**1.6**	**J**	7.7	0.32	pg/g	0.1	**0.16**	1613B
1,2,3,7,8,9-HxCDD	**4.4**	**J**	7.7	0.29	pg/g	0.1	**0.44**	1613B
1,2,3,4,7,8-HxCDF	ND		7.7	0.046	pg/g	0.1	0.0023	1613B
1,2,3,6,7,8-HxCDF	ND		7.7	0.045	pg/g	0.1	0.0023	1613B
1,2,3,7,8,9-HxCDF	ND		7.7	0.046	pg/g	0.1	0.0023	1613B
2,3,4,6,7,8-HxCDF	ND		7.7	0.046	pg/g	0.1	0.0023	1613B
1,2,3,4,6,7,8-HpCDD	**60**	**B**	7.7	0.42	pg/g	0.01	**0.60**	1613B
1,2,3,4,6,7,8-HpCDF	ND		7.7	0.079	pg/g	0.01	0.00040	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.7	0.077	pg/g	0.01	0.00039	1613B
OCDD	**1300**	**B**	15	1.1	pg/g	0.0003	**0.39**	1613B
OCDF	ND		15	0.11	pg/g	0.0003	0.000017	1613B
2,3,7,8-TCDF - RA	**2.2**	**B**	1.5	0.20	pg/g	0.1	**0.22**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		3.3	TEQ

Client Sample ID: 11215702-072621-BN-DUP-8 — Lab Sample ID: 320-76888-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**570**	**E**	1.4	1.0	pg/g	1	**570**	1613B
1,2,3,7,8-PeCDD	**7.1**		7.1	0.24	pg/g	1	**7.1**	1613B
1,2,3,7,8-PeCDF	**51**		7.1	0.74	pg/g	0.03	**1.5**	1613B
2,3,4,7,8-PeCDF	**47**		7.1	0.77	pg/g	0.3	**14**	1613B
1,2,3,4,7,8-HxCDD	**1.0**	**J**	7.1	0.21	pg/g	0.1	**0.10**	1613B
1,2,3,6,7,8-HxCDD	**1.2**	**J q**	7.1	0.23	pg/g	0.1	**0.12**	1613B
1,2,3,7,8,9-HxCDD	**2.7**	**J**	7.1	0.20	pg/g	0.1	**0.27**	1613B
1,2,3,4,7,8-HxCDF	**62**		7.1	0.29	pg/g	0.1	**6.2**	1613B
1,2,3,6,7,8-HxCDF	**16**		7.1	0.31	pg/g	0.1	**1.6**	1613B
1,2,3,7,8,9-HxCDF	**0.99**	**J q**	7.1	0.30	pg/g	0.1	**0.099**	1613B
2,3,4,6,7,8-HxCDF	**2.6**	**J**	7.1	0.31	pg/g	0.1	**0.26**	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Job ID: 320-76888-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072621-BN-DUP-8 (Continued) — Lab Sample ID: 320-76888-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
1,2,3,4,6,7,8-HpCDD	48	B	7.1	0.35	pg/g	0.01	0.48	1613B
1,2,3,4,6,7,8-HpCDF	19		7.1	0.12	pg/g	0.01	0.19	1613B
1,2,3,4,7,8,9-HpCDF	5.9	J	7.1	0.12	pg/g	0.01	0.059	1613B
OCDD	1200	B	14	0.99	pg/g	0.0003	0.36	1613B
OCDF	12	J	14	0.11	pg/g	0.0003	0.0036	1613B
2,3,7,8-TCDF - RA	2300	E G	2.4	2.4	pg/g	0.1	230	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
Total Dioxin/Furan TEQ					pg/g		830	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-76888-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (35-197)							
320-76769-A-27-B MS	Matrix Spike	69							
320-76769-A-27-B MS - RA	Matrix Spike	86							
320-76769-A-27-C MSD	Matrix Spike Duplicate	77							
320-76769-A-27-C MSD - RA	Matrix Spike Duplicate	90							
320-76888-1	11215702-072621-BN-SJSB094 (0-2)	74							
320-76888-1 - RA	11215702-072621-BN-SJSB094 (0-2)	58							
320-76888-1 MS	11215702-072621-BN-SJSB094 (0-2)	90							
320-76888-1 MS - RA	11215702-072621-BN-SJSB094 (0-2)	56							
320-76888-1 MSD	11215702-072621-BN-SJSB094 (0-2)	123							
320-76888-1 MSD - RA	11215702-072621-BN-SJSB094 (0-2)	61							
320-76888-2	11215702-072621-BN-SJSB094 (2-4)	73							
320-76888-2 - RA	11215702-072621-BN-SJSB094 (2-4)	58							
320-76888-3	11215702-072621-BN-SJSB094 (4-6)	84							
320-76888-3 - RA	11215702-072621-BN-SJSB094 (4-6)	59							
320-76888-4	11215702-072621-BN-SJSB094 (6-8)	72							
320-76888-4 - RA	11215702-072621-BN-SJSB094 (6-8)	56							
320-76888-5	11215702-072621-BN-SJSB094 (8-10)	52							
320-76888-5 - RA	11215702-072621-BN-SJSB094 (8-10)	60							
320-76888-6	11215702-072621-BN-SJSB094 (10-12)	45							
320-76888-6 - RA	11215702-072621-BN-SJSB094 (10-12)	52							
320-76888-7	11215702-072621-BN-SJSB094 (12-14)	43							
320-76888-7 - RA	11215702-072621-BN-SJSB094 (12-14)	49							
320-76888-8	11215702-072621-BN-SJSB094 (14-16)	45							
320-76888-8 - RA	11215702-072621-BN-SJSB094 (14-16)	51							
320-76888-13	11215702-072621-BN-DUP-8	72							
320-76888-13 - RA	11215702-072621-BN-DUP-8	77							
MB 320-513586/1-A	Method Blank	68							
MB 320-513879/1-A	Method Blank	46							
MB 320-513879/1-A - RA	Method Blank	50							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Surrogate Summary

Client: GHD Services Inc. Job ID: 320-76888-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**37TCDD (31-191)**							
LCS 320-513586/2-A	Lab Control Sample	69							
LCS 320-513879/2-A	Lab Control Sample	47							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76888-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76769-A-27-B MS	Matrix Spike	53	56	51	53	53	58	56	65
320-76769-A-27-B MS - RA	Matrix Spike		65						
320-76769-A-27-C MSD	Matrix Spike Duplicate	60	61	61	52	60	72	63	69
320-76769-A-27-C MSD - RA	Matrix Spike Duplicate		70						
320-76888-1	11215702-072621-BN-SJSB094 (0-2)	34 q	35	34	36	42	44	34	43
320-76888-1 - RA	11215702-072621-BN-SJSB094 (0-2)		34						
320-76888-1 MS	11215702-072621-BN-SJSB094 (0-2)	44	41	39 q	38	46	41	42	51
320-76888-1 MS - RA	11215702-072621-BN-SJSB094 (0-2)		29						
320-76888-1 MSD	11215702-072621-BN-SJSB094 (0-2)	40	37	38	36	40	37	34 q	44
320-76888-1 MSD - RA	11215702-072621-BN-SJSB094 (0-2)		23 *5-						
320-76888-2	11215702-072621-BN-SJSB094 (2-4)	37	36	29	31	36	44	40	52
320-76888-2 - RA	11215702-072621-BN-SJSB094 (2-4)		25						
320-76888-3	11215702-072621-BN-SJSB094 (4-6)	41	38	35	38	41	40 q	46	47
320-76888-3 - RA	11215702-072621-BN-SJSB094 (4-6)		26						
320-76888-4	11215702-072621-BN-SJSB094 (6-8)	43	43	40	38	43	45	41	40 q
320-76888-4 - RA	11215702-072621-BN-SJSB094 (6-8)		37						
320-76888-5	11215702-072621-BN-SJSB094 (8-10)	37	39	41	39	44	42	39	50
320-76888-5 - RA	11215702-072621-BN-SJSB094 (8-10)		40						
320-76888-6	11215702-072621-BN-SJSB094 (10-12)	36	35	33	32	35	43	38	46
320-76888-6 - RA	11215702-072621-BN-SJSB094 (10-12)		37						
320-76888-7	11215702-072621-BN-SJSB094 (12-14)	43	40	41	40	44	47	42	54
320-76888-7 - RA	11215702-072621-BN-SJSB094 (12-14)		41						
320-76888-8	11215702-072621-BN-SJSB094 (14-16)	39	37	35	36	38	44	41	47
320-76888-8 - RA	11215702-072621-BN-SJSB094 (14-16)		39						
320-76888-13	11215702-072621-BN-DUP-8	60	59	60	57	64	68	62	77
320-76888-13 - RA	11215702-072621-BN-DUP-8		65						
MB 320-513586/1-A	Method Blank	59	57	58	61	65	65	60	74
MB 320-513879/1-A	Method Blank	36	36	35	36	40	40	39	47
MB 320-513879/1-A - RA	Method Blank		37						

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76769-A-27-B MS	Matrix Spike	58	53	57	61	60	65	63

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76888-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76769-A-27-B MS - RA	Matrix Spike							
320-76769-A-27-C MSD	Matrix Spike Duplicate	61	55	63	60	60	57	53
320-76769-A-27-C MSD - RA	Matrix Spike Duplicate							
320-76888-1	11215702-072621-BN-SJSB094 (0-2)	41	36	37	39	34	42	35 q
320-76888-1 - RA	11215702-072621-BN-SJSB094 (0-2)							
320-76888-1 MS	11215702-072621-BN-SJSB094 (0-2)	41	38	35	41	39	44	41
320-76888-1 MS - RA	11215702-072621-BN-SJSB094 (0-2)							
320-76888-1 MSD	11215702-072621-BN-SJSB094 (0-2)	37	35	34	38	39	44	37 q
320-76888-1 MSD - RA	11215702-072621-BN-SJSB094 (0-2)							
320-76888-2	11215702-072621-BN-SJSB094 (2-4)	42	37	37	37 q	39	44	43
320-76888-2 - RA	11215702-072621-BN-SJSB094 (2-4)							
320-76888-3	11215702-072621-BN-SJSB094 (4-6)	40	42	40	40	46	48	51
320-76888-3 - RA	11215702-072621-BN-SJSB094 (4-6)							
320-76888-4	11215702-072621-BN-SJSB094 (6-8)	39	38	43	44	46	46	41 q
320-76888-4 - RA	11215702-072621-BN-SJSB094 (6-8)							
320-76888-5	11215702-072621-BN-SJSB094 (8-10)	41	42	42	41	40	48	39
320-76888-5 - RA	11215702-072621-BN-SJSB094 (8-10)							
320-76888-6	11215702-072621-BN-SJSB094 (10-12)	41	34	35	43	39	45	41
320-76888-6 - RA	11215702-072621-BN-SJSB094 (10-12)							
320-76888-7	11215702-072621-BN-SJSB094 (12-14)	49	43	42	45	44	53	51
320-76888-7 - RA	11215702-072621-BN-SJSB094 (12-14)							
320-76888-8	11215702-072621-BN-SJSB094 (14-16)	43	37	40	43	43	46	47
320-76888-8 - RA	11215702-072621-BN-SJSB094 (14-16)							
320-76888-13	11215702-072621-BN-DUP-8	69	60	61	64	64	71	62
320-76888-13 - RA	11215702-072621-BN-DUP-8							
MB 320-513586/1-A	Method Blank	64	61	61	72	65	78	76
MB 320-513879/1-A	Method Blank	43	39	38	41	41	42	36
MB 320-513879/1-A - RA	Method Blank							

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

TCDF = 13C-2,3,7,8-TCDF

PeCDD = 13C-1,2,3,7,8-PeCDD

PeCDF = 13C-1,2,3,7,8-PeCDF

PeCF = 13C-2,3,4,7,8-PeCDF

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76888-1

Project/Site: SJRWP Supplemental Design Investigation

HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD	TCDF	PeCDD	PeCDF	PeCF	HxCDD	HxDD	HxCDF
Lab Sample ID	Client Sample ID	(20-175)	(22-152)	(21-227)	(21-192)	(13-328)	(21-193)	(25-163)	(19-202)
LCS 320-513586/2-A	Lab Control Sample	54	54	59	56	63	60	54	67
LCS 320-513879/2-A	Lab Control Sample	34	36	34	31	36	37	35	42

		Percent Isotope Dilution Recovery (Acceptance Limits)						
		HxDF	HxCF	13CHxCF	HpCDD	HpCDF	HpCDF2	OCDD
Lab Sample ID	Client Sample ID	(21-159)	(17-205)	(22-176)	(26-166)	(21-158)	(20-186)	(13-199)
LCS 320-513586/2-A	Lab Control Sample	58	53	54	67	63	72	71
LCS 320-513879/2-A	Lab Control Sample	37	32	33	36	35	40	39

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-513586/1-A
Matrix: Sediment
Analysis Batch: 517196

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513586

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.031	pg/g		08/06/21 05:28	08/17/21 17:01	1
2,3,7,8-TCDF	ND		1.0	0.011	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8-PeCDD	ND		5.0	0.041	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8-PeCDF	ND		5.0	0.026	pg/g		08/06/21 05:28	08/17/21 17:01	1
2,3,4,7,8-PeCDF	ND		5.0	0.028	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.034	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.034	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.031	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.015	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.016	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.015	pg/g		08/06/21 05:28	08/17/21 17:01	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.015	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,6,7,8-HpCDD	0.198	J q	5.0	0.021	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	0.039	pg/g		08/06/21 05:28	08/17/21 17:01	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.037	pg/g		08/06/21 05:28	08/17/21 17:01	1
OCDD	0.435	J q	10	0.035	pg/g		08/06/21 05:28	08/17/21 17:01	1
OCDF	ND		10	0.061	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total TCDD	ND		1.0	0.031	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total TCDF	ND		1.0	0.13	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total PeCDD	ND		5.0	0.16	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total PeCDF	ND		5.0	0.028	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HxCDD	ND		5.0	0.16	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HxCDF	ND		5.0	0.036	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HpCDD	0.357	J q	5.0	0.021	pg/g		08/06/21 05:28	08/17/21 17:01	1
Total HpCDF	ND		5.0	0.039	pg/g		08/06/21 05:28	08/17/21 17:01	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*59*		*25 - 164*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-2,3,7,8-TCDF	*57*		*24 - 169*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,7,8-PeCDD	*58*		*25 - 181*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,7,8-PeCDF	*61*		*24 - 185*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-2,3,4,7,8-PeCDF	*65*		*21 - 178*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,7,8-HxCDD	*65*		*32 - 141*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,6,7,8-HxCDD	*60*		*28 - 130*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,7,8-HxCDF	*74*		*26 - 152*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,6,7,8-HxCDF	*64*		*26 - 123*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,7,8,9-HxCDF	*61*		*29 - 147*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-2,3,4,6,7,8-HxCDF	*61*		*28 - 136*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*72*		*23 - 140*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*65*		*28 - 143*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*78*		*26 - 138*	*08/06/21 05:28*	*08/17/21 17:01*	*1*
13C-OCDD	*76*		*17 - 157*	*08/06/21 05:28*	*08/17/21 17:01*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*68*		*35 - 197*	*08/06/21 05:28*	*08/17/21 17:01*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-513586/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517196 **Prep Batch: 513586**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	21.3		pg/g		107	67 - 158
2,3,7,8-TCDF	20.0	21.8		pg/g		109	75 - 158
1,2,3,7,8-PeCDD	100	112		pg/g		112	70 - 142
1,2,3,7,8-PeCDF	100	114		pg/g		114	80 - 134
2,3,4,7,8-PeCDF	100	105		pg/g		105	68 - 160
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	70 - 164
1,2,3,6,7,8-HxCDD	100	111		pg/g		111	76 - 134
1,2,3,7,8,9-HxCDD	100	110		pg/g		110	64 - 162
1,2,3,4,7,8-HxCDF	100	107		pg/g		107	72 - 134
1,2,3,6,7,8-HxCDF	100	112		pg/g		112	84 - 130
1,2,3,7,8,9-HxCDF	100	116		pg/g		116	78 - 130
2,3,4,6,7,8-HxCDF	100	117		pg/g		117	70 - 156
1,2,3,4,6,7,8-HpCDD	100	108		pg/g		108	70 - 140
1,2,3,4,6,7,8-HpCDF	100	112		pg/g		112	82 - 122
1,2,3,4,7,8,9-HpCDF	100	105		pg/g		105	78 - 138
OCDD	200	228		pg/g		114	78 - 144
OCDF	200	248		pg/g		124	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*54*		*20 - 175*
13C-2,3,7,8-TCDF	*54*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*59*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*56*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*63*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*60*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*54*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*67*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*58*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*53*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*54*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*67*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*63*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*72*		*20 - 186*
13C-OCDD	*71*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*69*		*31 - 191*

Lab Sample ID: 320-76769-A-27-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517461 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	2100	E G	26.4	2320	E G 4	pg/g	☼	871	67 - 158
1,2,3,7,8-PeCDD	20		132	169		pg/g	☼	112	70 - 142
1,2,3,7,8-PeCDF	310		132	478		pg/g	☼	127	80 - 134
2,3,4,7,8-PeCDF	160		132	321		pg/g	☼	123	68 - 160
1,2,3,4,7,8-HxCDD	0.96	J	132	128		pg/g	☼	97	70 - 164

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76769-A-27-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517461 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	1.8	J	132	154		pg/g	☼	115	76 - 134
1,2,3,7,8,9-HxCDD	2.0	J	132	150		pg/g	☼	112	64 - 162
1,2,3,4,7,8-HxCDF	500	F1	132	639		pg/g	☼	104	72 - 134
1,2,3,6,7,8-HxCDF	130		132	277		pg/g	☼	112	84 - 130
1,2,3,7,8,9-HxCDF	8.1		132	158		pg/g	☼	114	78 - 130
2,3,4,6,7,8-HxCDF	16		132	172		pg/g	☼	118	70 - 156
1,2,3,4,6,7,8-HpCDD	51	B F1 F2	132	796	F1	pg/g	☼	564	70 - 140
1,2,3,4,6,7,8-HpCDF	150		132	291		pg/g	☼	110	82 - 122
1,2,3,4,7,8,9-HpCDF	46		132	179		pg/g	☼	101	78 - 138
OCDD	1200	B F2	264	12800	E 4	pg/g	☼	4403	78 - 144
OCDF	72		264	415		pg/g	☼	130	63 - 170

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*53*		*25 - 164*
13C-2,3,7,8-TCDF	*56*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*51*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*53*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*53*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*58*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*56*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*65*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*58*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*53*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*57*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*61*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*65*		*26 - 138*
13C-OCDD	*63*		*17 - 157*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*69*		*35 - 197*

Lab Sample ID: 320-76769-A-27-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517461 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	2100	E G	26.2	1820	G E 4	pg/g	☼	-1013	67 - 158	24	50
1,2,3,7,8-PeCDD	20		131	163		pg/g	☼	109	70 - 142	4	50
1,2,3,7,8-PeCDF	310		131	426		pg/g	☼	89	80 - 134	11	50
2,3,4,7,8-PeCDF	160		131	280		pg/g	☼	93	68 - 160	14	50
1,2,3,4,7,8-HxCDD	0.96	J	131	121		pg/g	☼	92	70 - 164	6	50
1,2,3,6,7,8-HxCDD	1.8	J	131	148		pg/g	☼	112	76 - 134	4	50
1,2,3,7,8,9-HxCDD	2.0	J	131	131		pg/g	☼	99	64 - 162	13	50
1,2,3,4,7,8-HxCDF	500	F1	131	581	F1	pg/g	☼	61	72 - 134	10	50
1,2,3,6,7,8-HxCDF	130		131	251		pg/g	☼	93	84 - 130	10	50
1,2,3,7,8,9-HxCDF	8.1		131	159		pg/g	☼	116	78 - 130	1	50
2,3,4,6,7,8-HxCDF	16		131	183		pg/g	☼	127	70 - 156	6	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76769-A-27-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517461 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	51	B F1 F2	131	204	F2	pg/g	☼	116	70 - 140	119	50
1,2,3,4,6,7,8-HpCDF	150		131	275		pg/g	☼	99	82 - 122	6	50
1,2,3,4,7,8,9-HpCDF	46		131	178		pg/g	☼	101	78 - 138	1	50
OCDD	1200	B F2	262	1410	4 F2	pg/g	☼	98	78 - 144	160	50
OCDF	72		262	353		pg/g	☼	108	63 - 170	16	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*60*		*25 - 164*
13C-2,3,7,8-TCDF	*61*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*61*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*52*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*60*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*72*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*63*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*69*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*61*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*55*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*63*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*60*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*57*		*26 - 138*
13C-OCDD	*53*		*17 - 157*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*77*		*35 - 197*

Lab Sample ID: MB 320-513879/1-A **Client Sample ID: Method Blank**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517891 **Prep Batch: 513879**

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.073	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8-PeCDD	ND		5.0	0.067	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8-PeCDF	ND		5.0	0.052	pg/g		08/06/21 12:58	08/19/21 16:27	1
2,3,4,7,8-PeCDF	ND		5.0	0.055	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.042	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.046	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.041	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.021	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.020	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.020	pg/g		08/06/21 12:58	08/19/21 16:27	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.022	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,6,7,8-HpCDD	0.338	J	5.0	0.032	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,6,7,8-HpCDF	0.177	J	5.0	0.038	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.041	pg/g		08/06/21 12:58	08/19/21 16:27	1
OCDD	1.21	J	10	0.029	pg/g		08/06/21 12:58	08/19/21 16:27	1
OCDF	ND		10	0.12	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total TCDD	ND		1.0	0.14	pg/g		08/06/21 12:58	08/19/21 16:27	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-513879/1-A **Client Sample ID: Method Blank**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517891 **Prep Batch: 513879**

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	4.06		1.0	0.047	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total PeCDD	ND		5.0	0.21	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total PeCDF	ND		5.0	0.055	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HxCDD	ND		5.0	0.19	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HxCDF	ND		5.0	0.040	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HpCDD	0.546	J	5.0	0.032	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HpCDF	0.177	J	5.0	0.039	pg/g		08/06/21 12:58	08/19/21 16:27	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*36*		*25 - 164*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,7,8-TCDF	*36*		*24 - 169*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8-PeCDD	*35*		*25 - 181*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8-PeCDF	*36*		*24 - 185*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,4,7,8-PeCDF	*40*		*21 - 178*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,7,8-HxCDD	*40*		*32 - 141*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,6,7,8-HxCDD	*39*		*28 - 130*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,7,8-HxCDF	*47*		*26 - 152*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,6,7,8-HxCDF	*43*		*26 - 123*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8,9-HxCDF	*39*		*29 - 147*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,4,6,7,8-HxCDF	*38*		*28 - 136*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*41*		*23 - 140*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*41*		*28 - 143*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*42*		*26 - 138*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-OCDD	*36*		*17 - 157*	*08/06/21 12:58*	*08/19/21 16:27*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*46*		*35 - 197*	*08/06/21 12:58*	*08/19/21 16:27*	*1*

Lab Sample ID: LCS 320-513879/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517462 **Prep Batch: 513879**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	22.3		pg/g		111	67 - 158
2,3,7,8-TCDF	20.0	23.1		pg/g		115	75 - 158
1,2,3,7,8-PeCDD	100	113		pg/g		113	70 - 142
1,2,3,7,8-PeCDF	100	117		pg/g		117	80 - 134
2,3,4,7,8-PeCDF	100	109		pg/g		109	68 - 160
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	70 - 164
1,2,3,6,7,8-HxCDD	100	112		pg/g		112	76 - 134
1,2,3,7,8,9-HxCDD	100	109		pg/g		109	64 - 162
1,2,3,4,7,8-HxCDF	100	114		pg/g		114	72 - 134
1,2,3,6,7,8-HxCDF	100	120		pg/g		120	84 - 130
1,2,3,7,8,9-HxCDF	100	118		pg/g		118	78 - 130
2,3,4,6,7,8-HxCDF	100	121		pg/g		121	70 - 156
1,2,3,4,6,7,8-HpCDD	100	111		pg/g		111	70 - 140
1,2,3,4,6,7,8-HpCDF	100	118		pg/g		118	82 - 122
1,2,3,4,7,8,9-HpCDF	100	108		pg/g		108	78 - 138

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-513879/2-A
Client Sample ID: Lab Control Sample
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 517462
Prep Batch: 513879

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
OCDD	200	232		pg/g		116	78 - 144
OCDF	200	243		pg/g		122	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*34*		*20 - 175*
13C-2,3,7,8-TCDF	*36*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*34*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*31*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*36*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*37*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*35*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*42*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*37*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*32*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*33*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*36*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*35*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*40*		*20 - 186*
13C-OCDD	*39*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*47*		*31 - 191*

Lab Sample ID: 320-76888-1 MS
Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 518043
Prep Batch: 513879

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	24000	E G	36.1	22000	E G 4	pg/g	☼	-4439	67 - 158
1,2,3,7,8-PeCDD	290		181	470		pg/g	☼	102	70 - 142
1,2,3,7,8-PeCDF	2200		181	2670	4	pg/g	☼	247	80 - 134
2,3,4,7,8-PeCDF	1600		181	1900	4	pg/g	☼	144	68 - 160
1,2,3,4,7,8-HxCDD	3.6	J	181	196		pg/g	☼	106	70 - 164
1,2,3,6,7,8-HxCDD	7.0	J q	181	203		pg/g	☼	108	76 - 134
1,2,3,7,8,9-HxCDD	5.6	J q	181	201		pg/g	☼	108	64 - 162
1,2,3,4,7,8-HxCDF	3200		181	3130	4	pg/g	☼	-21	72 - 134
1,2,3,6,7,8-HxCDF	740		181	1040	4	pg/g	☼	165	84 - 130
1,2,3,7,8,9-HxCDF	42	J	181	251		pg/g	☼	116	78 - 130
2,3,4,6,7,8-HxCDF	100		181	367		pg/g	☼	148	70 - 156
1,2,3,4,6,7,8-HpCDD	68	J B	181	265		pg/g	☼	109	70 - 140
1,2,3,4,6,7,8-HpCDF	1100	B	181	1100	4	pg/g	☼	14	82 - 122
1,2,3,4,7,8,9-HpCDF	280		181	495		pg/g	☼	118	78 - 138
OCDD	720	B F1	361	1050		pg/g	☼	91	78 - 144
OCDF	460		361	890		pg/g	☼	118	63 - 170

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*44*		*25 - 164*
13C-2,3,7,8-TCDF	*41*		*24 - 169*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76888-1 MS
Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 518043
Prep Batch: 513879

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-1,2,3,7,8-PeCDD	*39*	*q*	*25 - 181*
13C-1,2,3,7,8-PeCDF	*38*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*46*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*41*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*42*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*51*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*41*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*38*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*35*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*41*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*39*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*44*		*26 - 138*
13C-OCDD	*41*		*17 - 157*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*90*		*35 - 197*

Lab Sample ID: 320-76888-1 MSD
Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 518043
Prep Batch: 513879

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	24000	E G	35.9	25300	E G 4	pg/g	☼	4754	67 - 158	14	50
1,2,3,7,8-PeCDD	290		180	508		pg/g	☼	124	70 - 142	8	50
1,2,3,7,8-PeCDF	2200		180	2550	4	pg/g	☼	181	80 - 134	5	50
2,3,4,7,8-PeCDF	1600		180	2150	4	pg/g	☼	281	68 - 160	12	50
1,2,3,4,7,8-HxCDD	3.6	J	180	199		pg/g	☼	109	70 - 164	2	50
1,2,3,6,7,8-HxCDD	7.0	J q	180	202		pg/g	☼	108	76 - 134	1	50
1,2,3,7,8,9-HxCDD	5.6	J q	180	188		pg/g	☼	101	64 - 162	7	50
1,2,3,4,7,8-HxCDF	3200		180	3640	4	pg/g	☼	261	72 - 134	15	50
1,2,3,6,7,8-HxCDF	740		180	1130	4	pg/g	☼	214	84 - 130	8	50
1,2,3,7,8,9-HxCDF	42	J	180	238		pg/g	☼	110	78 - 130	5	50
2,3,4,6,7,8-HxCDF	100		180	342		pg/g	☼	134	70 - 156	7	50
1,2,3,4,6,7,8-HpCDD	68	J B	180	262		pg/g	☼	108	70 - 140	1	50
1,2,3,4,6,7,8-HpCDF	1100	B	180	1310	4	pg/g	☼	132	82 - 122	18	50
1,2,3,4,7,8,9-HpCDF	280		180	474		pg/g	☼	107	78 - 138	4	50
OCDD	720	B F1	359	921	F1	pg/g	☼	56	78 - 144	13	50
OCDF	460		359	925		pg/g	☼	128	63 - 170	4	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*40*		*25 - 164*
13C-2,3,7,8-TCDF	*37*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*38*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*36*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*40*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*37*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*34*	*q*	*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*44*		*26 - 152*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76888-1 MSD **Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 518043 **Prep Batch: 513879**

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-1,2,3,6,7,8-HxCDF	37		26 - 123
13C-1,2,3,7,8,9-HxCDF	35		29 - 147
13C-2,3,4,6,7,8-HxCDF	34		28 - 136
13C-1,2,3,4,6,7,8-HpCDD	38		23 - 140
13C-1,2,3,4,6,7,8-HpCDF	39		28 - 143
13C-1,2,3,4,7,8,9-HpCDF	44		26 - 138
13C-OCDD	37	q	17 - 157

Surrogate	MSD %Recovery	MSD Qualifier	Limits
37Cl4-2,3,7,8-TCDD	123		35 - 197

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: 320-76769-A-27-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519438 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDF - RA	7600	E G	26.4	8400	E G 4	pg/g	☼	3068	75 - 158		

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C-2,3,7,8-TCDF - RA	65		24 - 169

Surrogate	MS %Recovery	MS Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	86		35 - 197

Lab Sample ID: 320-76769-A-27-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519438 **Prep Batch: 513586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	7600	E G	26.2	6770	E G 4	pg/g	☼	-3151	75 - 158	22	50

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDF - RA	70		24 - 169

Surrogate	MSD %Recovery	MSD Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	90		35 - 197

Lab Sample ID: MB 320-513879/1-A **Client Sample ID: Method Blank**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519438 **Prep Batch: 513879**

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF - RA	2.39		1.0	0.22	pg/g		08/06/21 12:58	08/24/21 10:23	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF - RA	37		24 - 169	08/06/21 12:58	08/24/21 10:23	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA (Continued)

Lab Sample ID: MB 320-513879/1-A **Client Sample ID: Method Blank**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519438 **Prep Batch: 513879**

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD - RA	50		35 - 197	08/06/21 12:58	08/24/21 10:23	1

Lab Sample ID: 320-76888-1 MS **Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519650 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDF - RA	110000	E G B	36.1	121000	E 4 G	pg/g	☼	25826	75 - 158		

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C-2,3,7,8-TCDF - RA	29		24 - 169

Surrogate	MS %Recovery	MS Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	56		35 - 197

Lab Sample ID: 320-76888-1 MSD **Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519650 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	110000	E G B	35.9	127000	E 4 G	pg/g	☼	43390	75 - 158	5	50

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDF - RA	23	*5-	24 - 169

Surrogate	MSD %Recovery	MSD Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	61		35 - 197

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-76887-A-1 DU **Client Sample ID: Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 511708

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	51.0			50.7		%				0.6	20
Percent Solids	49.0			49.3		%				0.6	20

QC Association Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Specialty Organics

Prep Batch: 513586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-13 - RA	11215702-072621-BN-DUP-8	Total/NA	Sediment	HRMS-Sox	
320-76888-13	11215702-072621-BN-DUP-8	Total/NA	Sediment	HRMS-Sox	
MB 320-513586/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-513586/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-76769-A-27-B MS - RA	Matrix Spike	Total/NA	Sediment	HRMS-Sox	
320-76769-A-27-B MS	Matrix Spike	Total/NA	Sediment	HRMS-Sox	
320-76769-A-27-C MSD - RA	Matrix Spike Duplicate	Total/NA	Sediment	HRMS-Sox	
320-76769-A-27-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	HRMS-Sox	

Prep Batch: 513879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-1 - RA	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76888-1	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76888-2 - RA	11215702-072621-BN-SJSB094 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76888-2	11215702-072621-BN-SJSB094 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76888-3 - RA	11215702-072621-BN-SJSB094 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-76888-3	11215702-072621-BN-SJSB094 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-76888-4 - RA	11215702-072621-BN-SJSB094 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-76888-4	11215702-072621-BN-SJSB094 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-76888-5 - RA	11215702-072621-BN-SJSB094 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-76888-5	11215702-072621-BN-SJSB094 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-76888-6 - RA	11215702-072621-BN-SJSB094 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-76888-6	11215702-072621-BN-SJSB094 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-76888-7 - RA	11215702-072621-BN-SJSB094 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-76888-7	11215702-072621-BN-SJSB094 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-76888-8 - RA	11215702-072621-BN-SJSB094 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-76888-8	11215702-072621-BN-SJSB094 (14-16)	Total/NA	Sediment	HRMS-Sox	
MB 320-513879/1-A - RA	Method Blank	Total/NA	Sediment	HRMS-Sox	
MB 320-513879/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-513879/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-76888-1 MS - RA	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76888-1 MS	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76888-1 MSD - RA	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76888-1 MSD	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	HRMS-Sox	

Analysis Batch: 517196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-513586/1-A	Method Blank	Total/NA	Sediment	1613B	513586
LCS 320-513586/2-A	Lab Control Sample	Total/NA	Sediment	1613B	513586

Analysis Batch: 517461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76769-A-27-B MS	Matrix Spike	Total/NA	Sediment	1613B	513586
320-76769-A-27-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	1613B	513586

Analysis Batch: 517462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-6	11215702-072621-BN-SJSB094 (10-12)	Total/NA	Sediment	1613B	513879
320-76888-7	11215702-072621-BN-SJSB094 (12-14)	Total/NA	Sediment	1613B	513879
320-76888-8	11215702-072621-BN-SJSB094 (14-16)	Total/NA	Sediment	1613B	513879
LCS 320-513879/2-A	Lab Control Sample	Total/NA	Sediment	1613B	513879

QC Association Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Specialty Organics

Analysis Batch: 517891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-13	11215702-072621-BN-DUP-8	Total/NA	Sediment	1613B	513586
MB 320-513879/1-A	Method Blank	Total/NA	Sediment	1613B	513879

Analysis Batch: 518043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-1	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	1613B	513879
320-76888-2	11215702-072621-BN-SJSB094 (2-4)	Total/NA	Sediment	1613B	513879
320-76888-3	11215702-072621-BN-SJSB094 (4-6)	Total/NA	Sediment	1613B	513879
320-76888-4	11215702-072621-BN-SJSB094 (6-8)	Total/NA	Sediment	1613B	513879
320-76888-5	11215702-072621-BN-SJSB094 (8-10)	Total/NA	Sediment	1613B	513879
320-76888-1 MS	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	1613B	513879
320-76888-1 MSD	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	1613B	513879

Analysis Batch: 519438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-513879/1-A - RA	Method Blank	Total/NA	Sediment	1613B	513879
320-76769-A-27-B MS - RA	Matrix Spike	Total/NA	Sediment	1613B	513586
320-76769-A-27-C MSD - RA	Matrix Spike Duplicate	Total/NA	Sediment	1613B	513586

Analysis Batch: 519650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-1 - RA	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	1613B	513879
320-76888-1 MS - RA	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	1613B	513879
320-76888-1 MSD - RA	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	1613B	513879

Analysis Batch: 519744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-13 - RA	11215702-072621-BN-DUP-8	Total/NA	Sediment	1613B	513586

Analysis Batch: 520145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-2 - RA	11215702-072621-BN-SJSB094 (2-4)	Total/NA	Sediment	1613B	513879
320-76888-3 - RA	11215702-072621-BN-SJSB094 (4-6)	Total/NA	Sediment	1613B	513879
320-76888-4 - RA	11215702-072621-BN-SJSB094 (6-8)	Total/NA	Sediment	1613B	513879
320-76888-5 - RA	11215702-072621-BN-SJSB094 (8-10)	Total/NA	Sediment	1613B	513879
320-76888-6 - RA	11215702-072621-BN-SJSB094 (10-12)	Total/NA	Sediment	1613B	513879

Analysis Batch: 520438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-7 - RA	11215702-072621-BN-SJSB094 (12-14)	Total/NA	Sediment	1613B	513879
320-76888-8 - RA	11215702-072621-BN-SJSB094 (14-16)	Total/NA	Sediment	1613B	513879

General Chemistry

Analysis Batch: 511708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-1	11215702-072621-BN-SJSB094 (0-2)	Total/NA	Sediment	D 2216	
320-76888-2	11215702-072621-BN-SJSB094 (2-4)	Total/NA	Sediment	D 2216	
320-76888-3	11215702-072621-BN-SJSB094 (4-6)	Total/NA	Sediment	D 2216	
320-76888-4	11215702-072621-BN-SJSB094 (6-8)	Total/NA	Sediment	D 2216	
320-76888-5	11215702-072621-BN-SJSB094 (8-10)	Total/NA	Sediment	D 2216	

General Chemistry (Continued)

Analysis Batch: 511708 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-6	11215702-072621-BN-SJSB094 (10-12)	Total/NA	Sediment	D 2216	
320-76888-7	11215702-072621-BN-SJSB094 (12-14)	Total/NA	Sediment	D 2216	
320-76888-8	11215702-072621-BN-SJSB094 (14-16)	Total/NA	Sediment	D 2216	
320-76888-13	11215702-072621-BN-DUP-8	Total/NA	Sediment	D 2216	
320-76887-A-1 DU	Duplicate	Total/NA	Sediment	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)
Lab Sample ID: 320-76888-1
Date Collected: 07/26/21 14:00
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)
Lab Sample ID: 320-76888-1
Date Collected: 07/26/21 14:00
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 53.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	10	519650	08/25/21 10:50	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		10	518043	08/20/21 04:45	KSS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (2-4)
Lab Sample ID: 320-76888-2
Date Collected: 07/26/21 14:05
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (2-4)
Lab Sample ID: 320-76888-2
Date Collected: 07/26/21 14:05
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 54.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	10	520145	08/26/21 23:35	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		10	518043	08/20/21 07:57	KSS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (4-6)
Lab Sample ID: 320-76888-3
Date Collected: 07/26/21 14:10
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (4-6)
Lab Sample ID: 320-76888-3
Date Collected: 07/26/21 14:10
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 51.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	10	520145	08/27/21 00:14	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		10	518043	08/20/21 09:32	KSS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (6-8)
Lab Sample ID: 320-76888-4

Date Collected: 07/26/21 14:15
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (6-8)
Lab Sample ID: 320-76888-4

Date Collected: 07/26/21 14:15
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 64.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	10	520145	08/27/21 00:52	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		10	518043	08/20/21 07:09	KSS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (8-10)
Lab Sample ID: 320-76888-5

Date Collected: 07/26/21 14:20
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (8-10)
Lab Sample ID: 320-76888-5

Date Collected: 07/26/21 14:20
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 68.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	5	520145	08/26/21 22:57	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		5	518043	08/20/21 03:57	KSS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (10-12)
Lab Sample ID: 320-76888-6

Date Collected: 07/26/21 14:25
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (10-12)
Lab Sample ID: 320-76888-6

Date Collected: 07/26/21 14:25
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 62.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520145	08/26/21 22:18	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517462	08/19/21 08:42	KSS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Client Sample ID: 11215702-072621-BN-SJSB094 (12-14)
Lab Sample ID: 320-76888-7
Date Collected: 07/26/21 14:30
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (12-14)
Lab Sample ID: 320-76888-7
Date Collected: 07/26/21 14:30
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 64.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520438	08/27/21 14:08	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517462	08/19/21 09:30	KSS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (14-16)
Lab Sample ID: 320-76888-8
Date Collected: 07/26/21 14:35
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (14-16)
Lab Sample ID: 320-76888-8
Date Collected: 07/26/21 14:35
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 64.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520438	08/27/21 14:47	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517462	08/19/21 10:18	KSS	TAL SAC

Client Sample ID: 11215702-072621-BN-DUP-8
Lab Sample ID: 320-76888-13
Date Collected: 07/26/21 00:00
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072621-BN-DUP-8
Lab Sample ID: 320-76888-13
Date Collected: 07/26/21 00:00
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 69.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	519744	08/25/21 18:43	KSS	TAL SAC
Total/NA	Prep	HRMS-Sox			513586	08/06/21 05:28	FC	TAL SAC
Total/NA	Analysis	1613B		1	517891	08/19/21 17:15	KSS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Job ID: 320-76888-1
Project/Site: SJRWP Supplemental Design Investigation

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-76888-1
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDD
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDF
1613B	HRMS-Sox	Sediment	OCDD
1613B	HRMS-Sox	Sediment	OCDF
1613B	HRMS-Sox	Sediment	Total HpCDD
1613B	HRMS-Sox	Sediment	Total HpCDF
1613B	HRMS-Sox	Sediment	Total HxCDD
1613B	HRMS-Sox	Sediment	Total HxCDF
1613B	HRMS-Sox	Sediment	Total PeCDD
1613B	HRMS-Sox	Sediment	Total PeCDF
1613B	HRMS-Sox	Sediment	Total TCDD
1613B	HRMS-Sox	Sediment	Total TCDF
D 2216		Sediment	Percent Moisture
D 2216		Sediment	Percent Solids
TEQ		Sediment	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76888-1	11215702-072621-BN-SJSB094 (0-2)	Sediment	07/26/21 14:00	07/29/21 09:45
320-76888-2	11215702-072621-BN-SJSB094 (2-4)	Sediment	07/26/21 14:05	07/29/21 09:45
320-76888-3	11215702-072621-BN-SJSB094 (4-6)	Sediment	07/26/21 14:10	07/29/21 09:45
320-76888-4	11215702-072621-BN-SJSB094 (6-8)	Sediment	07/26/21 14:15	07/29/21 09:45
320-76888-5	11215702-072621-BN-SJSB094 (8-10)	Sediment	07/26/21 14:20	07/29/21 09:45
320-76888-6	11215702-072621-BN-SJSB094 (10-12)	Sediment	07/26/21 14:25	07/29/21 09:45
320-76888-7	11215702-072621-BN-SJSB094 (12-14)	Sediment	07/26/21 14:30	07/29/21 09:45
320-76888-8	11215702-072621-BN-SJSB094 (14-16)	Sediment	07/26/21 14:35	07/29/21 09:45
320-76888-13	11215702-072621-BN-DUP-8	Sediment	07/26/21 00:00	07/29/21 09:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

1613B

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 519650

Lab Sample ID: 320-76888-1 RA Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) RA

Date Analyzed: 08/25/21 10:50 Lab File ID: 25AU2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.10	Missed Peak	bennettd	08/25/21 13:12
13C-2,3,7,8-TCDF	17.66	Wrong peak	bennettd	08/25/21 13:12
2,3,7,8-TCDF	17.66	Wrong peak	bennettd	08/25/21 13:12

Lab Sample ID: 320-76888-1 MS RA Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) MS RA

Date Analyzed: 08/25/21 11:28 Lab File ID: 25AU2111D2_005.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.15	Missed Peak	bennettd	08/25/21 13:16
13C-2,3,7,8-TCDF	17.69	Wrong peak	bennettd	08/25/21 13:16
2,3,7,8-TCDF	17.70	Missed Peak	bennettd	08/25/21 13:17

Lab Sample ID: 320-76888-1 MSD RA Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) MSD RA

Date Analyzed: 08/25/21 12:07 Lab File ID: 25AU2111D2_006.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.11	Missed Peak	bennettd	08/25/21 13:21
13C-2,3,7,8-TCDF	17.66	Poor chromatography	bennettd	08/25/21 13:22
2,3,7,8-TCDF	17.67	Missed Peak	bennettd	08/25/21 13:22

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 520145

Lab Sample ID: 320-76888-5 RA Client Sample ID: 11215702-072621-BN-SJSB094 (8-10) RA

Date Analyzed: 08/26/21 22:57 Lab File ID: 26AU21A11D2_013.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.63	Baseline	bennettd	08/27/21 09:29

Lab Sample ID: 320-76888-2 RA Client Sample ID: 11215702-072621-BN-SJSB094 (2-4) RA

Date Analyzed: 08/26/21 23:35 Lab File ID: 26AU21A11D2_014.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.10	Missed Peak	bennettd	08/27/21 09:34
13C-2,3,7,8-TCDF	17.65	Wrong peak	bennettd	08/27/21 09:35
2,3,7,8-TCDF	17.66	Missed Peak	bennettd	08/27/21 09:35

Lab Sample ID: 320-76888-3 RA Client Sample ID: 11215702-072621-BN-SJSB094 (4-6) RA

Date Analyzed: 08/27/21 00:14 Lab File ID: 26AU21A11D2_015.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.11	Peak assignment corrected	krenns	08/27/21 12:28
13C-2,3,7,8-TCDF	17.66	Wrong peak	bennettd	08/27/21 09:38
2,3,7,8-TCDF	17.67	Missed Peak	bennettd	08/27/21 09:39

Lab Sample ID: 320-76888-4 RA Client Sample ID: 11215702-072621-BN-SJSB094 (6-8) RA

Date Analyzed: 08/27/21 00:52 Lab File ID: 26AU21A11D2_016.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.64	Poor chromatography	bennettd	08/27/21 09:42

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 520438

Lab Sample ID: 320-76888-7 RA Client Sample ID: 11215702-072621-BN-SJSB094 (12-14) RA

Date Analyzed: 08/27/21 14:08 Lab File ID: 27AU2111D2_009.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.64	Peak Tail	bennettd	08/27/21 15:51

Lab Sample ID: 320-76888-8 RA Client Sample ID: 11215702-072621-BN-SJSB094 (14-16) RA

Date Analyzed: 08/27/21 14:47 Lab File ID: 27AU2111D2_010.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.63	Baseline	bennettd	08/27/21 15:51

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517196

Lab Sample ID: CCV 320-517196/2 Client Sample ID:

Date Analyzed: 08/17/21 15:14 Lab File ID: 17au21dfs1_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.54	Baseline	stephensk	08/17/21 16:07
13C-1,2,3,4-TCDD	21.51	Peak assignment corrected	stephensk	08/17/21 16:07
13C-1,2,3,7,8,9-HxCDD	36.67	Baseline	stephensk	08/17/21 16:09
13C-1,2,3,4,7,8,9-HpCDF	39.92	Baseline	stephensk	08/17/21 16:09

Lab Sample ID: MB 320-513586/1-A Client Sample ID:

Date Analyzed: 08/17/21 17:01 Lab File ID: 17au21dfs1_5.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,6,7,8-HpCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,4,7,8,9-HpCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/19/21 12:06
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/19/21 12:06
2,3,7,8-TCDD		Invalid Compound ID	stephensk	08/17/21 18:31
2,3,7,8-TCDF		Invalid Compound ID	dadunj	08/19/21 12:06
OCDF		Invalid Compound ID	dadunj	08/19/21 12:07
1,2,3,4,6,7,8-HpCDD	39.61	Invalid Compound ID	dadunj	08/19/21 12:07
OCDD	42.12	Baseline	dadunj	08/19/21 12:07

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517461

Lab Sample ID: CCV 320-517461/29 Client Sample ID:

Date Analyzed: 08/18/21 13:48 Lab File ID: 17au21dfs1_32.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.52	Baseline	stephensk	08/18/21 14:38
13C-1,2,3,4-TCDD	21.44	Peak assignment corrected	stephensk	08/18/21 14:37
2,3,7,8-TCDD	21.88	Incomplete Integration	stephensk	08/18/21 14:38
13C-1,2,3,7,8,9-HxCDD	36.62	Baseline	stephensk	08/18/21 15:08
13C-1,2,3,4,7,8,9-HpCDF	39.88	Baseline	stephensk	08/18/21 14:43

Lab Sample ID: 320-76769-A-27-B MS Client Sample ID:

Date Analyzed: 08/18/21 21:12 Lab File ID: 17au21dfs1_41.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	27.31	Split Peak	dadunj	08/20/21 09:21
2,3,4,6,7,8-HxCDF	35.93	Split Peak	dadunj	08/20/21 09:22
1,2,3,7,8,9-HxCDF	36.83	Split Peak	dadunj	08/20/21 09:23

Lab Sample ID: 320-76769-A-27-C MSD Client Sample ID:

Date Analyzed: 08/18/21 22:00 Lab File ID: 17au21dfs1_42.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	27.36	Split Peak	dadunj	08/20/21 09:25
13C-2,3,4,7,8-PeCDF	28.85	Split Peak	dadunj	08/20/21 09:26
1,2,3,7,8,9-HxCDF	36.88	Split Peak	dadunj	08/20/21 09:27
13C-1,2,3,4,7,8,9-HpCDF	39.94	Baseline	dadunj	08/20/21 09:28
13C-OCDD	42.17	Peak assignment corrected	krenns	08/24/21 12:00

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517462

Lab Sample ID: CCV 320-517462/43 Client Sample ID:

Date Analyzed: 08/19/21 01:32 Lab File ID: 17au21dfs1_47.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.49	Baseline	stephensk	08/19/21 09:20
2,3,7,8-TCDD	21.84	Baseline	stephensk	08/19/21 09:21
13C-1,2,3,7,8-PeCDD	29.61	Baseline	stephensk	08/19/21 09:21

Lab Sample ID: 320-76888-6 Client Sample ID: 11215702-072621-BN-SJSB094 (10-12)

Date Analyzed: 08/19/21 08:42 Lab File ID: 17au21dfs1_56.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/20/21 10:24
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/20/21 10:24
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/20/21 10:24
OCDF		Invalid Compound ID	dadunj	08/20/21 10:25
2,3,7,8-TCDD	21.80	Baseline	dadunj	08/20/21 10:23
1,2,3,7,8-PeCDF	27.26	Split Peak	dadunj	08/20/21 10:23
2,3,4,7,8-PeCDF	28.76	Split Peak	dadunj	08/20/21 10:23
1,2,3,6,7,8-HxCDF	35.09	Split Peak	dadunj	08/20/21 10:24

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517462

Lab Sample ID: 320-76888-7 Client Sample ID: 11215702-072621-BN-SJSB094 (12-14)

Date Analyzed: 08/19/21 09:30 Lab File ID: 17au21dfs1_57.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,6,7,8-HpCDF		Invalid Compound ID	dadunj	08/20/21 10:28
1,2,3,4,7,8,9-HpCDF		Invalid Compound ID	dadunj	08/20/21 10:28
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/20/21 10:28
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/20/21 10:27
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/20/21 10:28
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/20/21 10:27
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/20/21 10:27
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/20/21 10:26
1,2,3,7,8-PeCDF		Invalid Compound ID	dadunj	08/20/21 10:26
2,3,4,7,8-PeCDF		Invalid Compound ID	dadunj	08/20/21 10:26
2,3,7,8-TCDD		Invalid Compound ID	dadunj	08/20/21 10:26
OCDF		Invalid Compound ID	dadunj	08/20/21 10:28
13C-1,2,3,4,7,8-HxCDD	36.11	Split Peak	dadunj	08/20/21 10:27
13C-1,2,3,6,7,8-HxCDD	36.23	Split Peak	dadunj	08/20/21 10:27

Lab Sample ID: 320-76888-8 Client Sample ID: 11215702-072621-BN-SJSB094 (14-16)

Date Analyzed: 08/19/21 10:18 Lab File ID: 17au21dfs1_58.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8,9-HpCDF		Invalid Compound ID	dadunj	08/20/21 10:31
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/20/21 10:30
1,2,3,7,8-PeCDF		Invalid Compound ID	dadunj	08/20/21 10:29
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/20/21 10:30
OCDF		Invalid Compound ID	dadunj	08/20/21 10:31
13C-2,3,7,8-TCDF	20.38	Incomplete Integration	stephensk	08/19/21 11:33

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517891

Lab Sample ID: WDM 320-517891/1 Client Sample ID:

Date Analyzed: 08/19/21 13:59 Lab File ID: 19au21dfs1_2.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,4,7,9-PeCDD	30.78	Peak assignment corrected	stephensk	08/19/21 15:00
1,2,3,8,9-PeCDF	30.94	Peak assignment corrected	stephensk	08/19/21 15:00

Lab Sample ID: CCV 320-517891/2 Client Sample ID:

Date Analyzed: 08/19/21 14:46 Lab File ID: 19au21dfs1_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,4-TCDD	21.35	Peak assignment corrected	stephensk	08/19/21 15:37
2,3,7,8-TCDD	21.75	Baseline	stephensk	08/19/21 15:38

Lab Sample ID: MB 320-513879/1-A Client Sample ID:

Date Analyzed: 08/19/21 16:27 Lab File ID: 19au21dfs1_5.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 08:54
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 08:54
1,2,3,7,8,9-HxCDD		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,4,7,8-PeCDF		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,7,8-TCDD		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,7,8-TCDF	20.42	Baseline	dadunj	08/23/21 08:53
1,2,3,4,6,7,8-HpCDF	38.62	Split Peak	dadunj	08/23/21 08:55
1,2,3,4,6,7,8-HpCDD	39.57	Split Peak	dadunj	08/23/21 08:55
OCDD	42.07	Baseline	dadunj	08/23/21 08:55

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517891

Lab Sample ID: 320-76888-13 Client Sample ID: 11215702-072621-BN-DUP-8

Date Analyzed: 08/19/21 17:15 Lab File ID: 19au21dfs1_6.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	27.32	Split Peak	dadunj	08/23/21 08:57
2,3,4,6,7,8-HxCDF	35.92	Split Peak	dadunj	08/23/21 09:00
1,2,3,4,7,8-HxCDD	36.14	Invalid Compound ID	dadunj	08/23/21 09:00
1,2,3,6,7,8-HxCDD	36.22	Split Peak	dadunj	08/23/21 09:00
1,2,3,7,8,9-HxCDF	36.81	Invalid Compound ID	dadunj	08/23/21 09:00
1,2,3,4,6,7,8-HpCDF	38.62	Split Peak	dadunj	08/23/21 09:00
OCDF	42.15	Split Peak	dadunj	08/23/21 09:01

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 518043

Lab Sample ID: CCV 320-518043/15 Client Sample ID:

Date Analyzed: 08/20/21 01:34 Lab File ID: 19au21dfs1_17.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,4-TCDD	21.40	Peak assignment corrected	arghestanis	08/20/21 09:08

Lab Sample ID: 320-76888-5 Client Sample ID: 11215702-072621-BN-SJSB094 (8-10)

Date Analyzed: 08/20/21 03:57 Lab File ID: 19au21dfs1_20.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:30
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:30
1,2,3,7,8-PeCDF	27.29	Split Peak	dadunj	08/23/21 09:29
13C-1,2,3,7,8-PeCDD	29.56	Baseline	dadunj	08/23/21 09:29
1,2,3,6,7,8-HxCDF	35.09	Baseline	dadunj	08/23/21 09:30
2,3,4,6,7,8-HxCDF	35.89	Split Peak	dadunj	08/23/21 09:30
13C-1,2,3,4,7,8-HxCDD	36.10	Split Peak	dadunj	08/23/21 09:30
13C-1,2,3,6,7,8-HxCDD	36.23	Split Peak	dadunj	08/23/21 09:30

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 518043

Lab Sample ID: 320-76888-1 Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)

Date Analyzed: 08/20/21 04:45 Lab File ID: 19au21dfs1_21.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	20.46	Baseline	dadunj	08/23/21 09:32
2,3,7,8-TCDD	21.84	Peak assignment corrected	krenns	08/25/21 15:21
13C-2,3,7,8-TCDD	21.87	Baseline	dadunj	08/23/21 09:32
1,2,3,7,8-PeCDF	27.30	Split Peak	dadunj	08/23/21 09:33
13C-1,2,3,7,8-PeCDD	29.56	Baseline	dadunj	08/23/21 09:33
2,3,4,6,7,8-HxCDF	35.91	Split Peak	dadunj	08/23/21 09:34
1,2,3,4,7,8-HxCDD	36.13	Split Peak	dadunj	08/23/21 09:35
1,2,3,6,7,8-HxCDD	36.26	Invalid Compound ID	dadunj	08/23/21 09:35
1,2,3,7,8,9-HxCDD	36.60	Split Peak	dadunj	08/23/21 09:35
1,2,3,7,8,9-HxCDF	36.79	Split Peak	dadunj	08/23/21 09:34
1,2,3,4,6,7,8-HpCDD	39.57	Split Peak	dadunj	08/23/21 09:36
13C-1,2,3,4,7,8,9-HpCDF	39.85	Split Peak	dadunj	08/23/21 09:35

Lab Sample ID: 320-76888-1 MS Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) MS

Date Analyzed: 08/20/21 05:33 Lab File ID: 19au21dfs1_22.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDD	21.82	Baseline	krenns	08/25/21 15:21
2,3,7,8-TCDD	21.85	Baseline	krenns	08/25/21 15:22
1,2,3,7,8-PeCDF	27.31	Split Peak	dadunj	08/23/21 09:39
13C-2,3,4,7,8-PeCDF	28.76	Baseline	dadunj	08/23/21 09:42
13C-1,2,3,7,8-PeCDD	29.57	Baseline	dadunj	08/23/21 09:42
2,3,4,6,7,8-HxCDF	35.91	Split Peak	dadunj	08/23/21 09:40
1,2,3,7,8,9-HxCDF	36.80	Split Peak	dadunj	08/23/21 09:40
13C-OCDD	42.04	Split Peak	dadunj	08/23/21 09:41

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 518043

Lab Sample ID: 320-76888-1 MSD Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) MSD

Date Analyzed: 08/20/21 06:21 Lab File ID: 19au21dfs1_23.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDD	21.84	Baseline	dadunj	08/23/21 09:45
37Cl4-2,3,7,8-TCDD	21.86	Assign Peak	dadunj	08/23/21 09:45
2,3,7,8-TCDD	21.87	Invalid Compound ID	dadunj	08/23/21 09:45
1,2,3,7,8-PeCDF	27.32	Split Peak	dadunj	08/23/21 09:46
2,3,4,6,7,8-HxCDF	35.91	Split Peak	dadunj	08/23/21 09:46
1,2,3,7,8,9-HxCDF	36.79	Split Peak	dadunj	08/23/21 09:46

Lab Sample ID: 320-76888-4 Client Sample ID: 11215702-072621-BN-SJSB094 (6-8)

Date Analyzed: 08/20/21 07:09 Lab File ID: 19au21dfs1_24.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8,9-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:51
1,2,3,7,8-PeCDF	27.28	Split Peak	dadunj	08/23/21 09:49
13C-2,3,4,7,8-PeCDF	28.77	Split Peak	dadunj	08/23/21 09:52
1,2,3,7,8-PeCDD	29.56	Baseline	dadunj	08/23/21 09:49
13C-1,2,3,7,8-PeCDD	29.59	Incomplete Integration	dadunj	08/23/21 09:52
13C-1,2,3,6,7,8-HxCDF	35.08	Split Peak	dadunj	08/23/21 09:52
2,3,4,6,7,8-HxCDF	35.90	Invalid Compound ID	dadunj	08/23/21 09:50
1,2,3,7,8,9-HxCDF	36.80	Split Peak	dadunj	08/23/21 09:50

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 518043

Lab Sample ID: 320-76888-2 Client Sample ID: 11215702-072621-BN-SJSB094 (2-4)

Date Analyzed: 08/20/21 07:57 Lab File ID: 19au21dfs1_25.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:56
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:56
2,3,7,8-TCDD	21.86	Peak assignment corrected	krenns	08/25/21 15:27
37Cl4-2,3,7,8-TCDD	21.86	Assign Peak	dadunj	08/23/21 09:53
1,2,3,7,8-PeCDF	27.31	Split Peak	dadunj	08/23/21 09:54
13C-1,2,3,7,8-PeCDD	29.59	Baseline	dadunj	08/23/21 09:55
2,3,4,6,7,8-HxCDF	35.92	Split Peak	dadunj	08/23/21 09:55
1,2,3,7,8,9-HxCDF	36.81	Split Peak	dadunj	08/23/21 09:55

Lab Sample ID: 320-76888-3 Client Sample ID: 11215702-072621-BN-SJSB094 (4-6)

Date Analyzed: 08/20/21 09:32 Lab File ID: 19au21dfs1_27.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 10:05
13C-2,3,7,8-TCDF	20.43	Missed Peak	stephensk	08/21/21 17:03
2,3,7,8-TCDD	21.85	Peak assignment corrected	dadunj	08/23/21 10:03
13C-2,3,4,7,8-PeCDF	28.78	Baseline	dadunj	08/23/21 10:03
13C-1,2,3,7,8-PeCDD	29.58	Baseline	dadunj	08/23/21 10:04
1,2,3,7,8,9-HxCDD	36.59	Split Peak	dadunj	08/23/21 10:05
13C-1,2,3,4,6,7,8-HpCDF	38.62	Invalid Compound ID	dadunj	08/23/21 10:06

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30		CIL, Lot ER09031903		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

785060

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

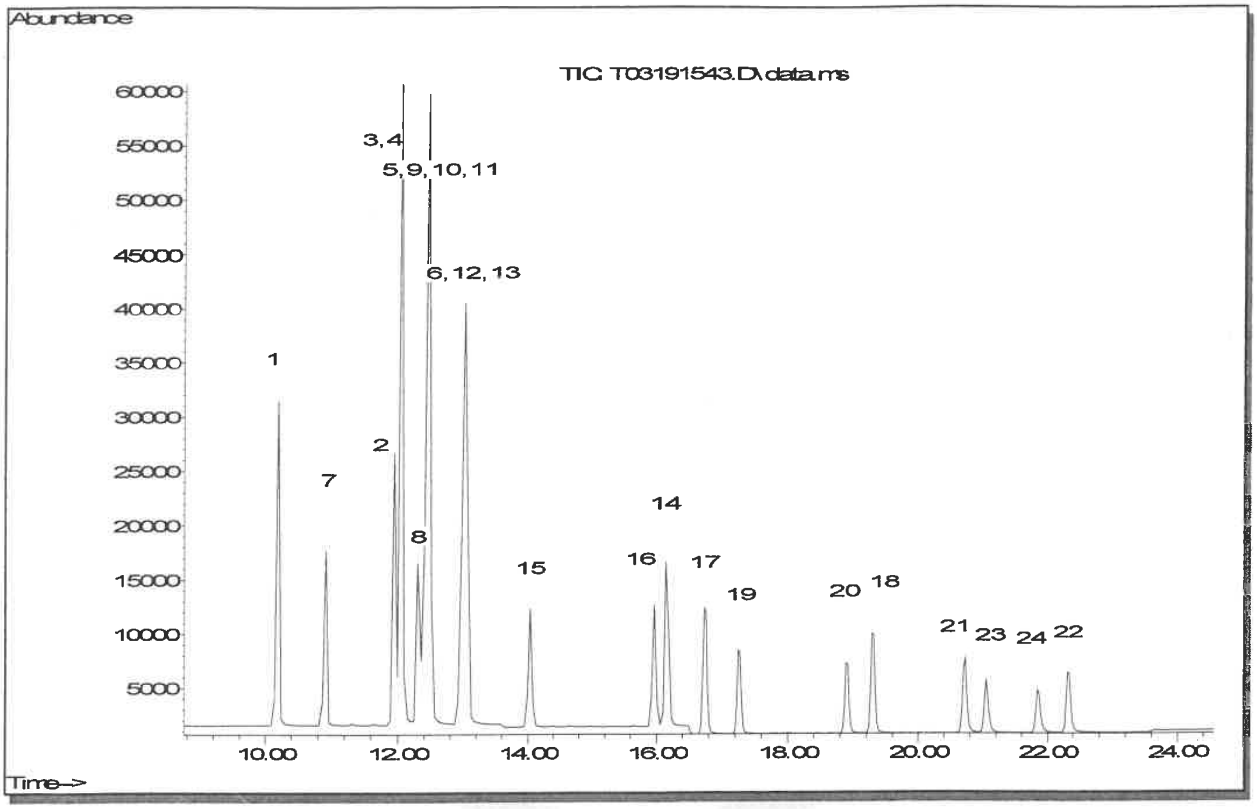

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

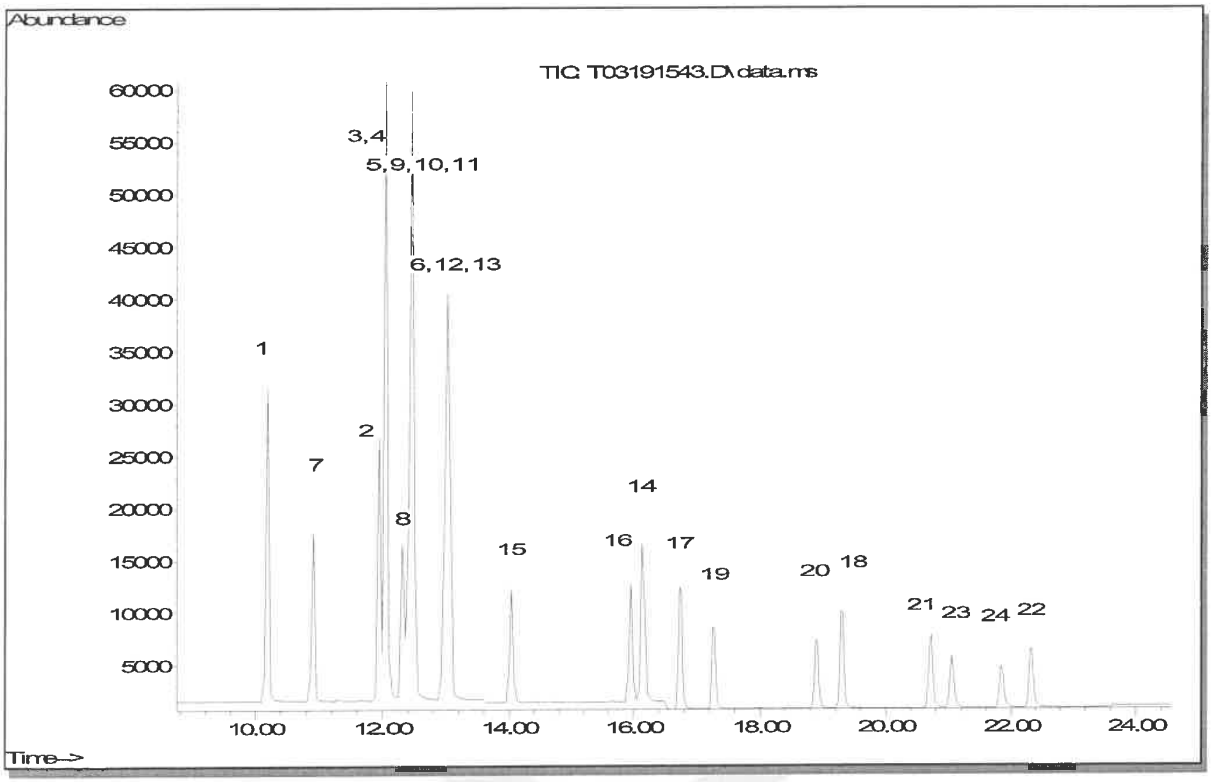

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r: 3/30/20

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

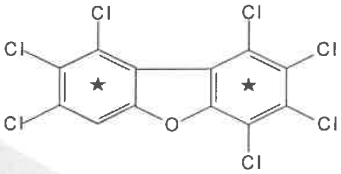

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

785074

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

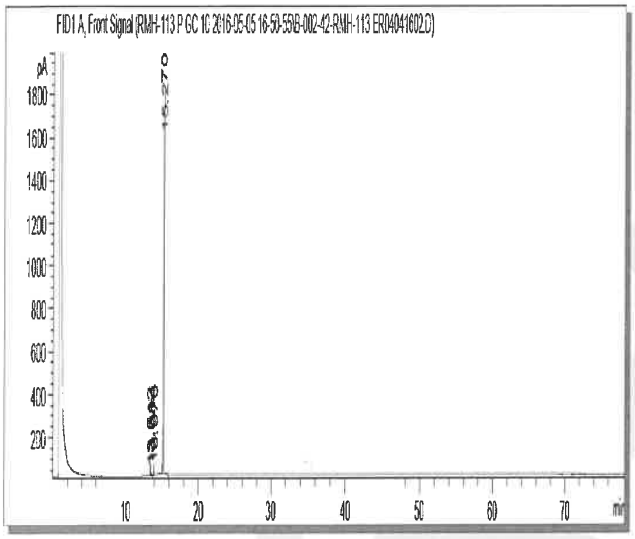

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

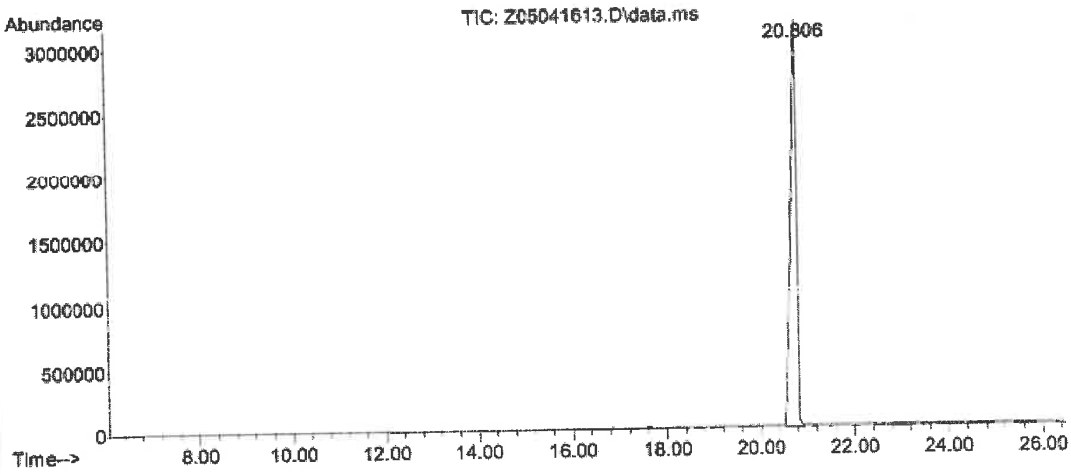

Mass Spectrum

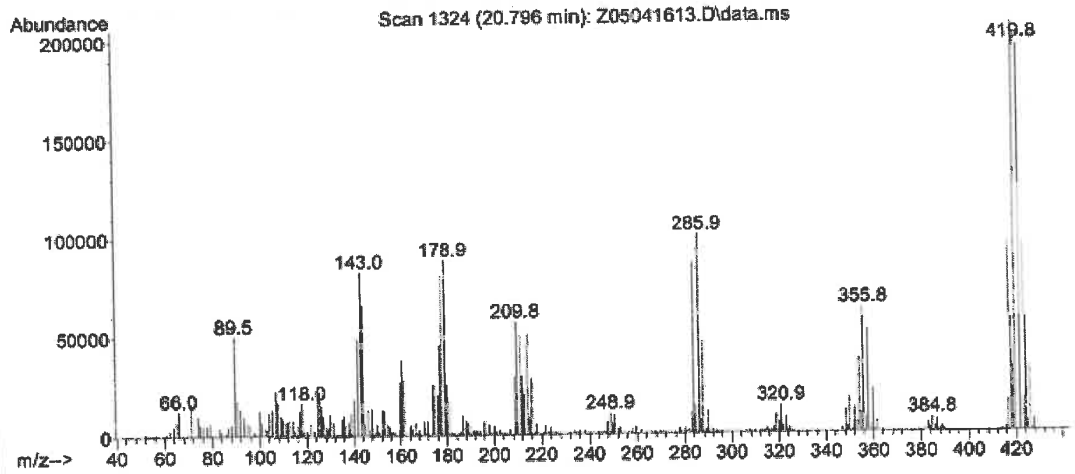

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 SAL

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

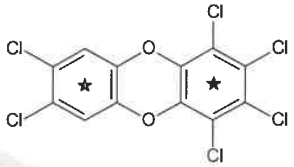

Catalog Number: ED-946
Solution Lot: ER04211601
Expiration Date: June 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

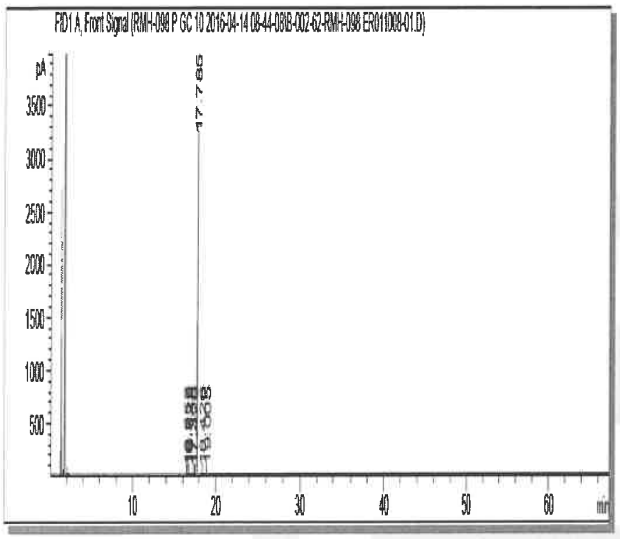

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument:	GC#10
Sample Name:	ER011008-01
Acquired:	April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

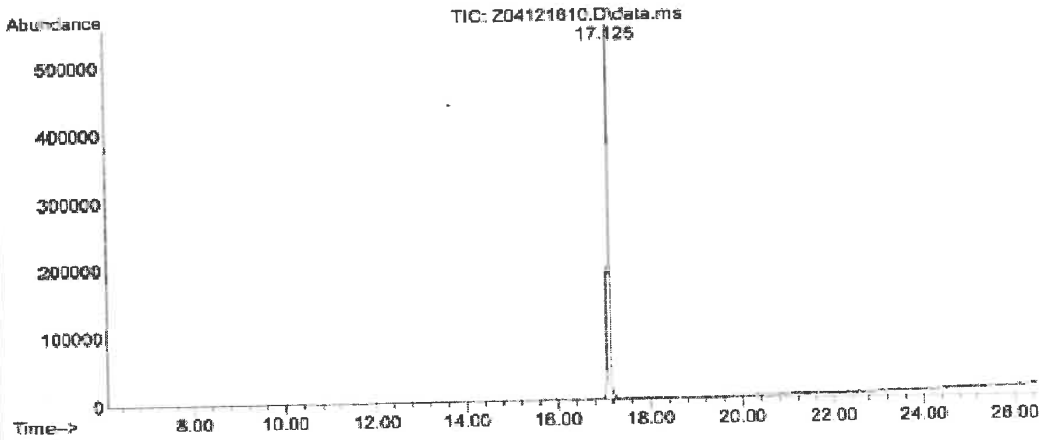

Mass Spectrum

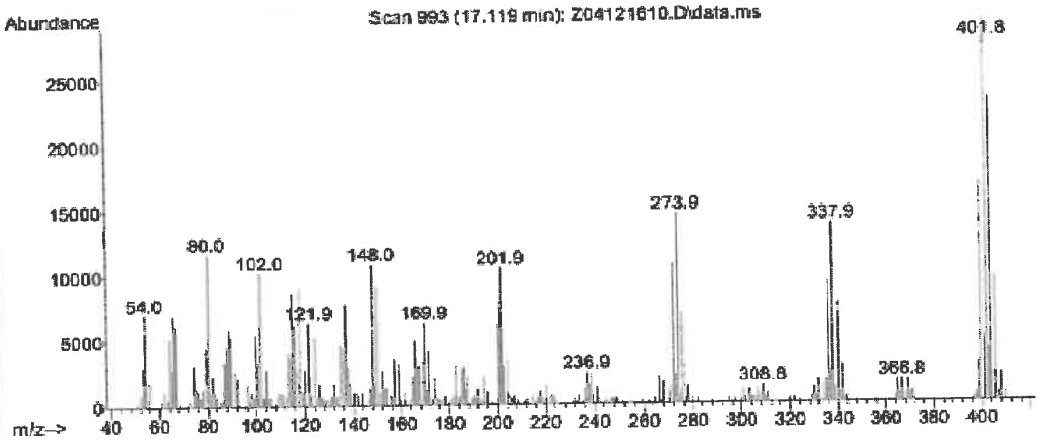

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

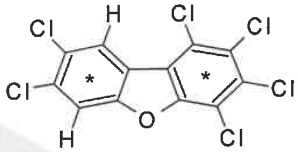

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}Cl_6H_2O$
Compound Lot:	ER11281601	**CAS Number:**	114423-98-2
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

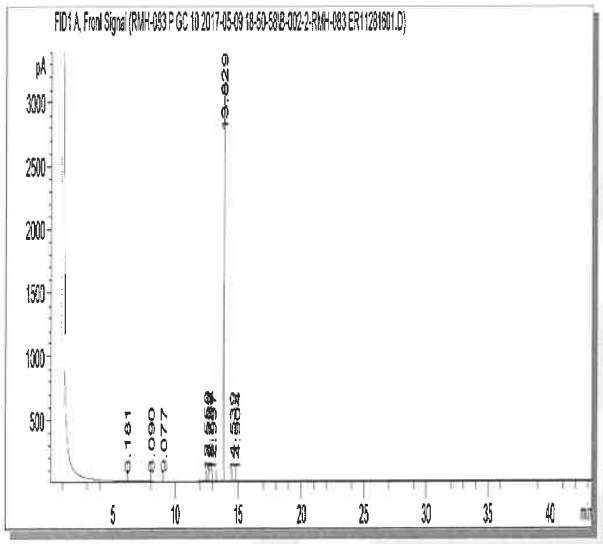

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

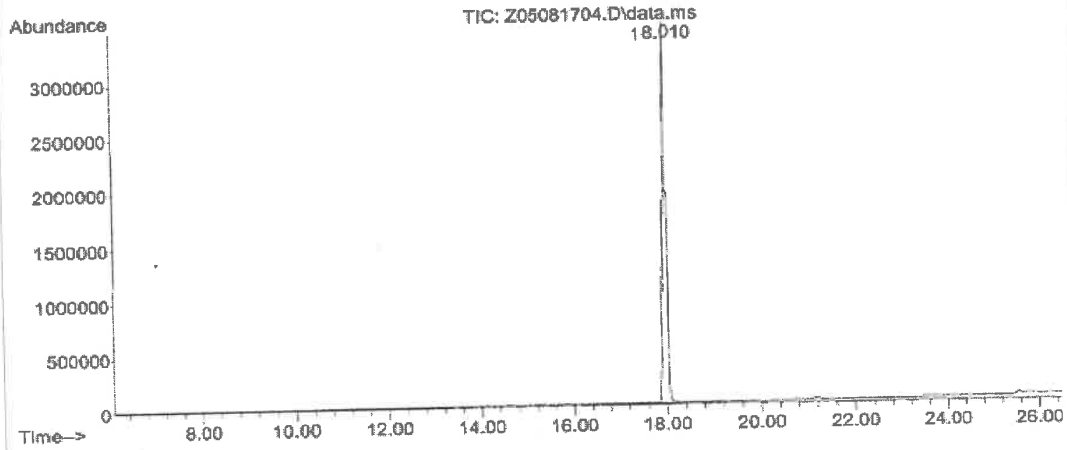

Mass Spectrum

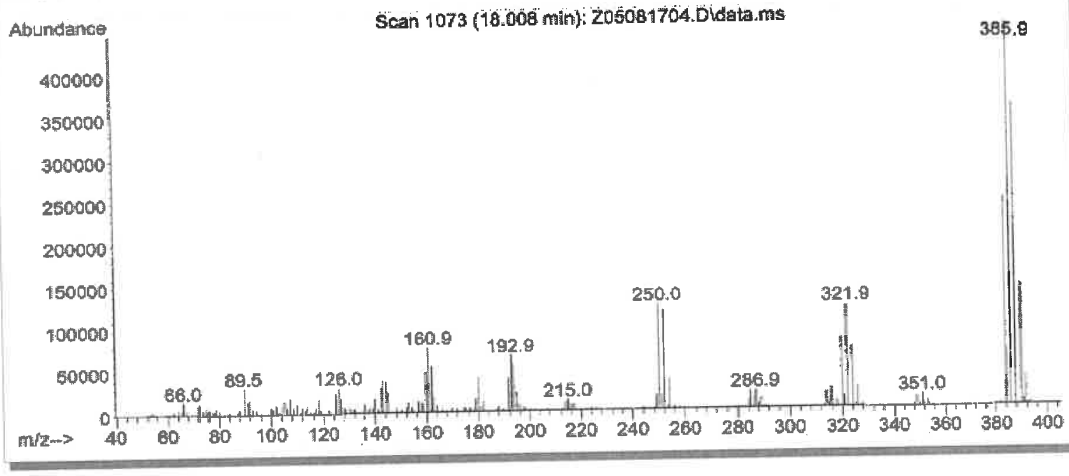

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

Cerilliant
Analytical Reference Standards
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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

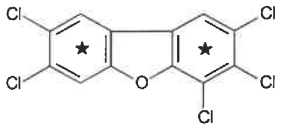

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

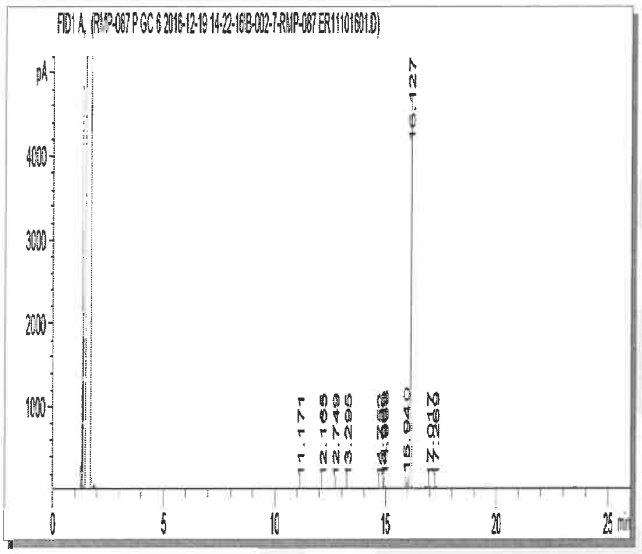

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

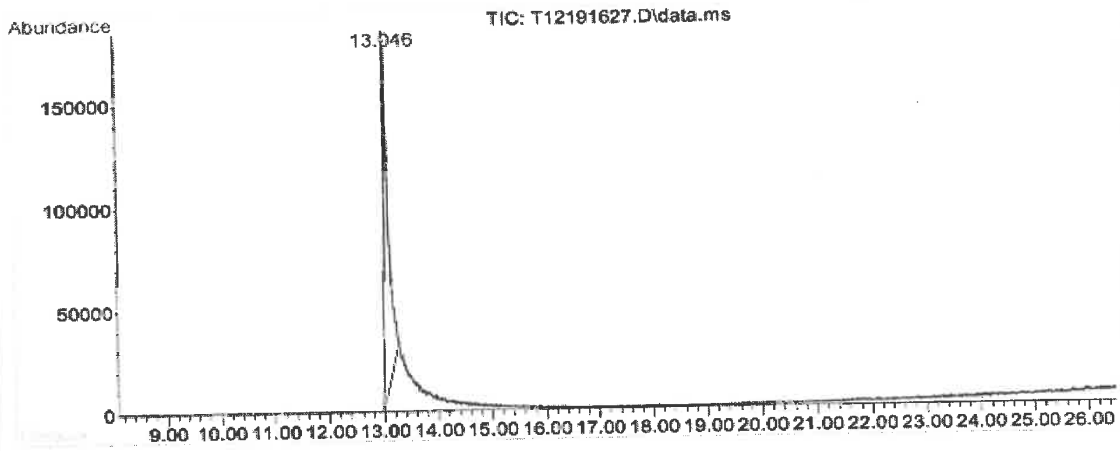

Mass Spectrum

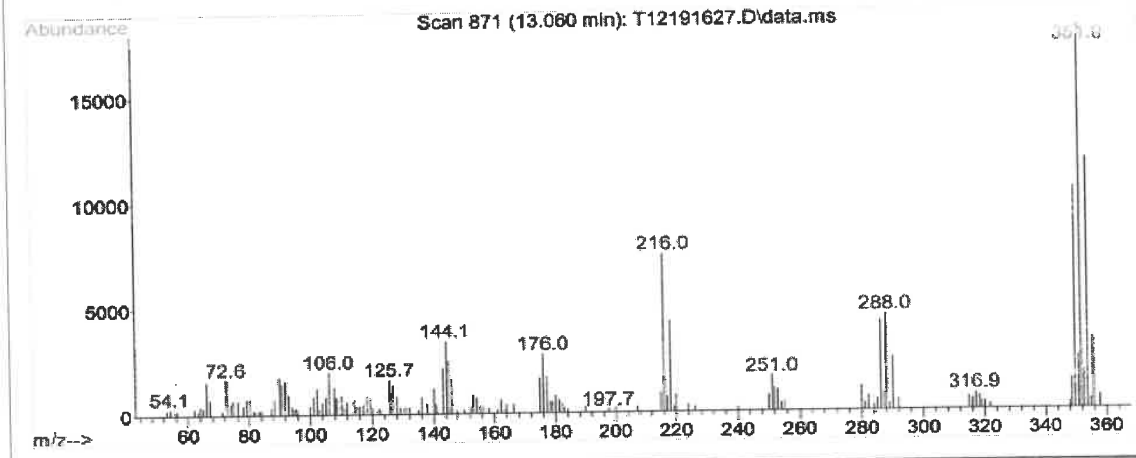

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

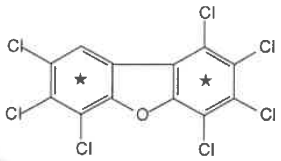

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

785096

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER020507-02

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-84-8
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

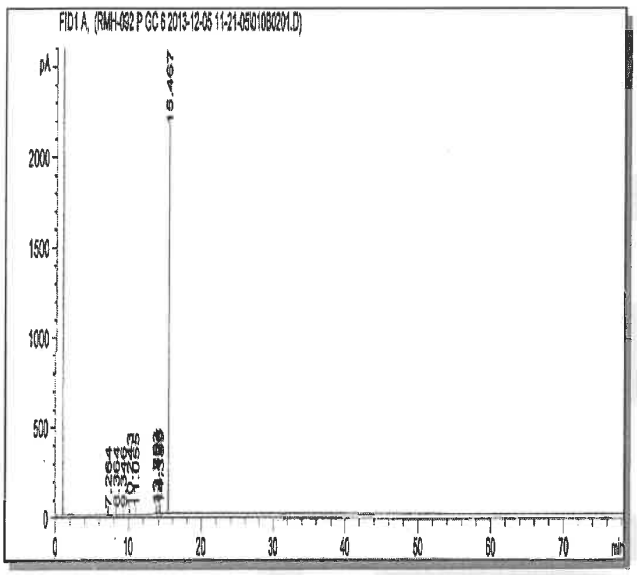

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument:	GC#6
Sample Name:	ER020507-02
Acquired:	December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

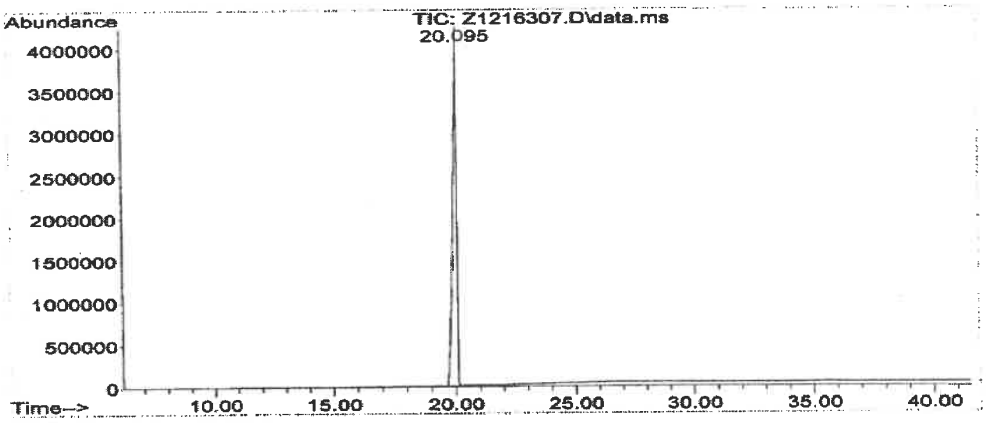

Mass Spectrum

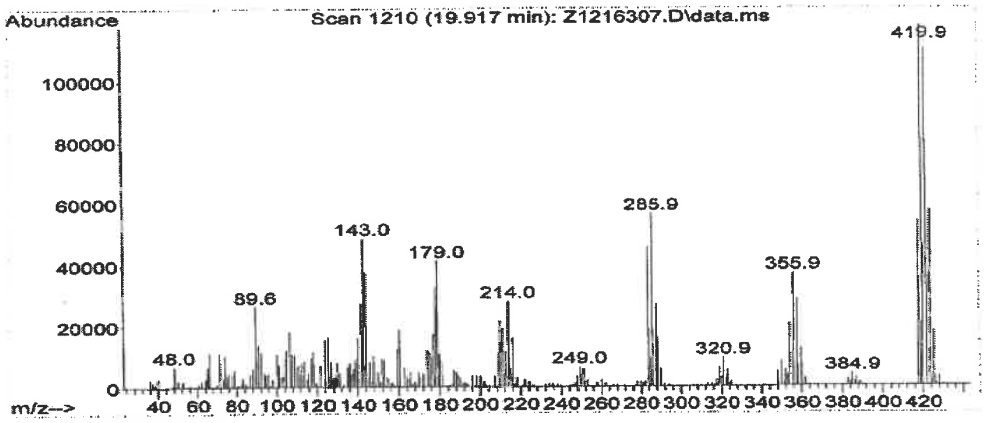

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

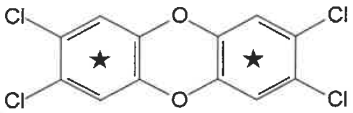

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

785103

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

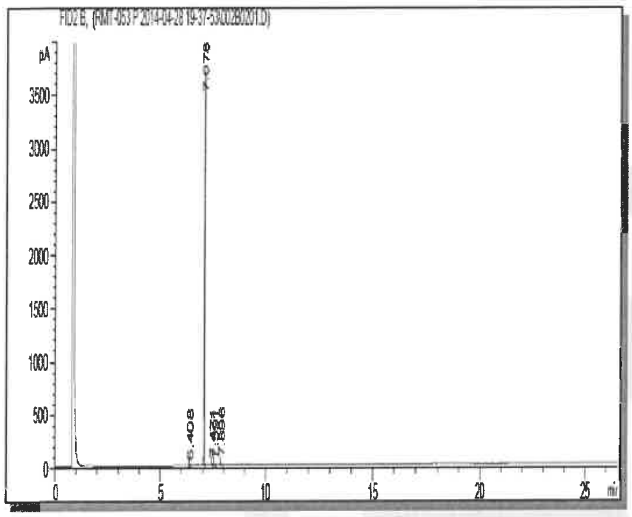

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

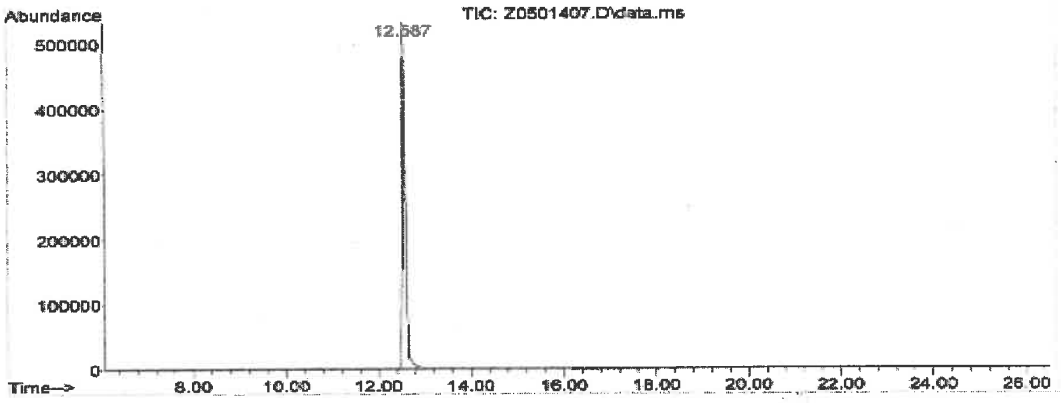

Mass Spectrum

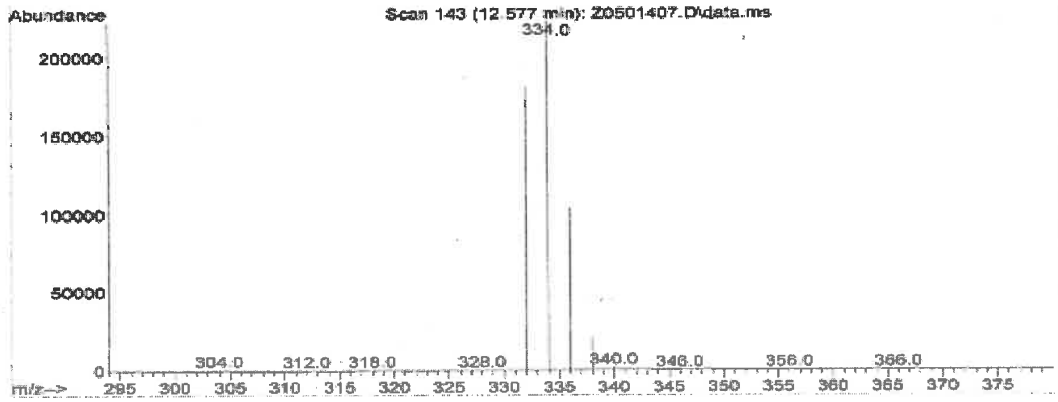

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

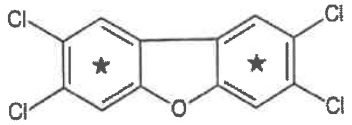

Catalog Number:	EF-904
Solution Lot:	ER09131601
Expiration Date:	September 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

785108

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

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GC/FID

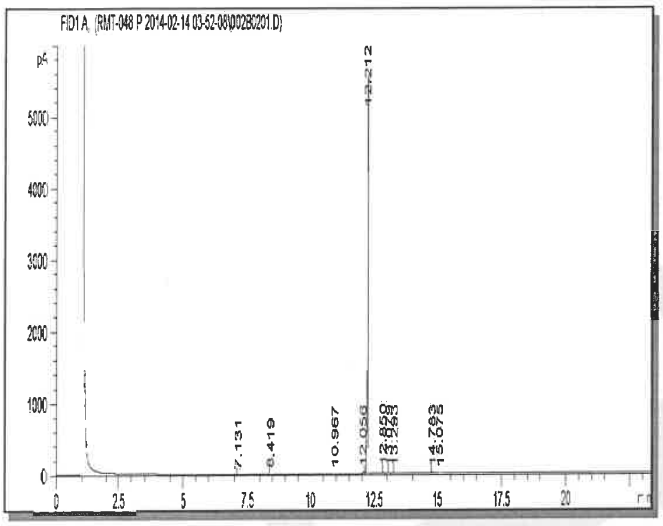

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

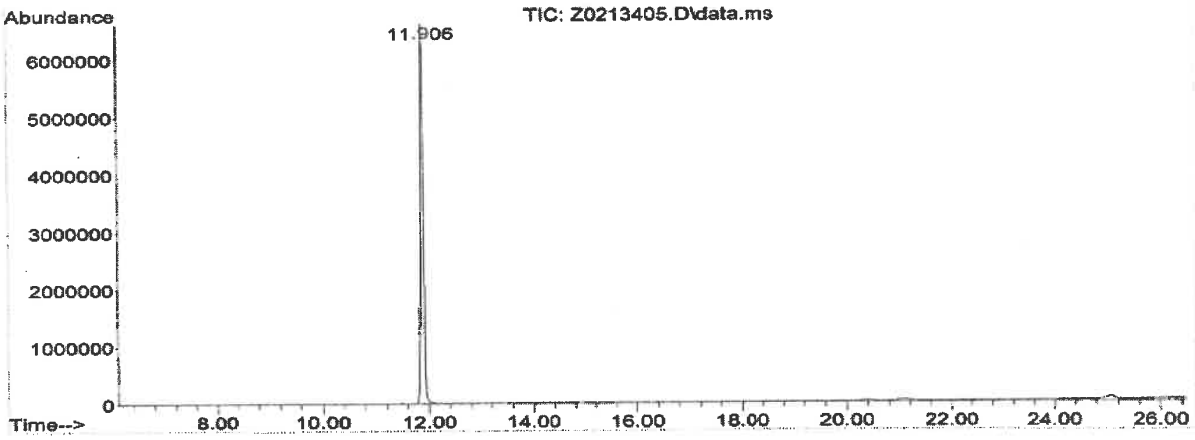

Mass Spectrum

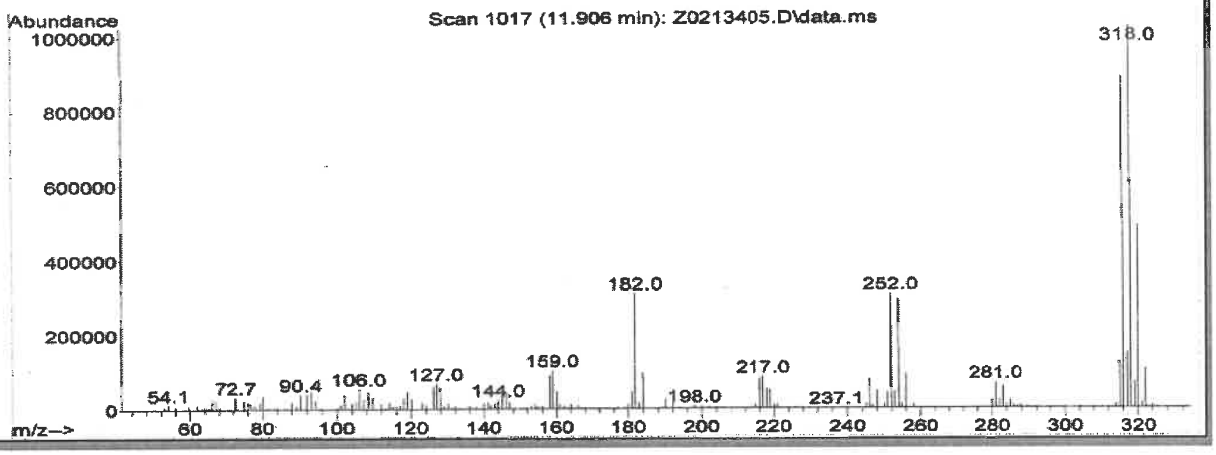

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785111

Reagent

HRDXNIDA_00443

Rec'd 10-19-20

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

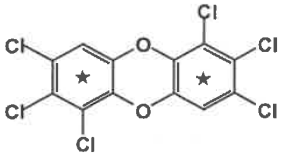

Catalog Number: ED-966
Solution Lot: ER03151801
Expiration Date: March 2028
Solvent: n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

785113

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

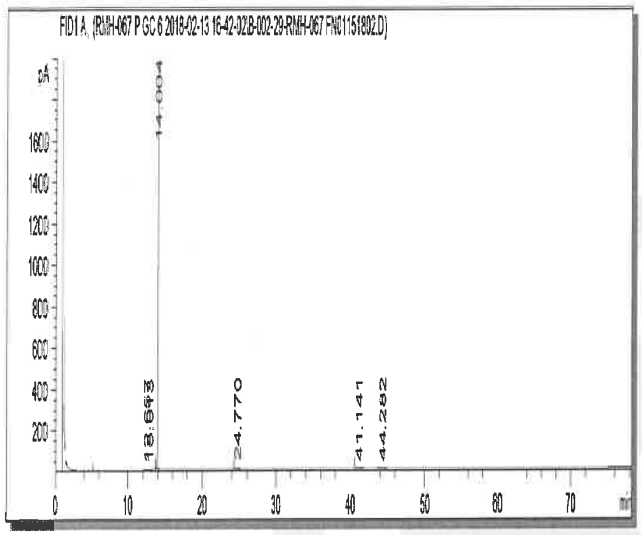

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: FN01151802
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Mar 05 10:17:33 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

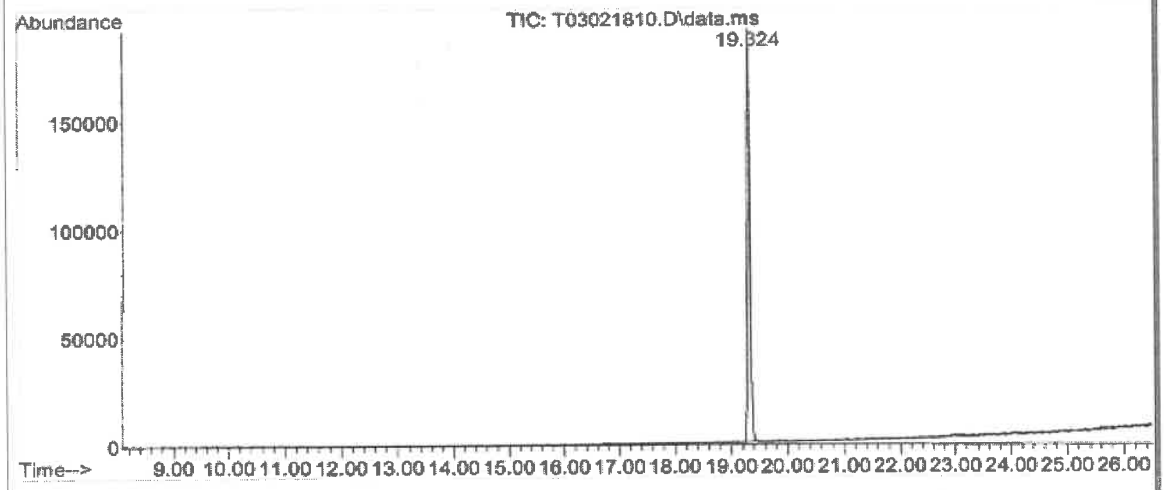

Mass Spectrum

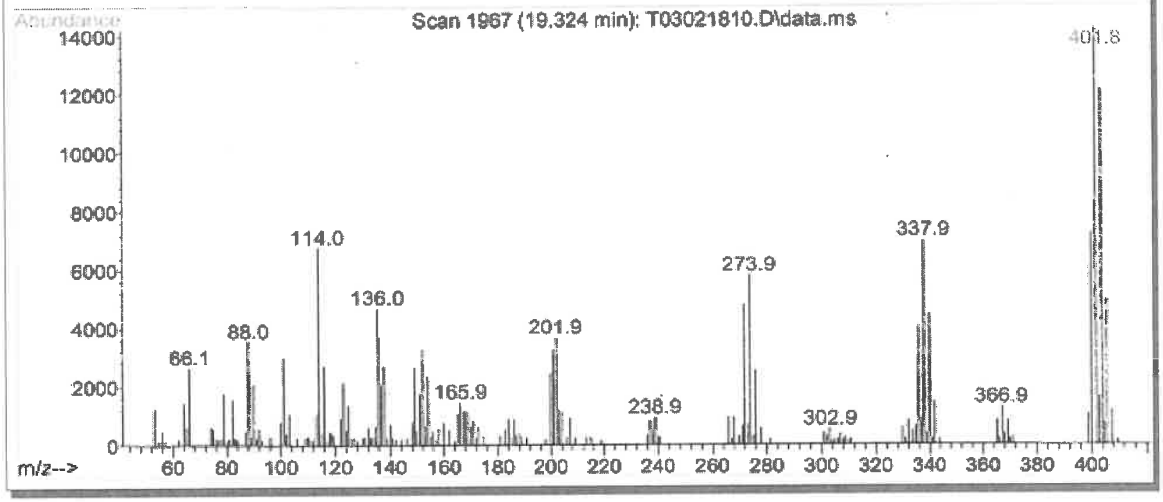

Reagent

HRDXNIDA_00457

r: 1/18/21 SHV

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

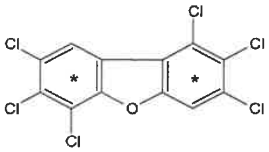

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

785118

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

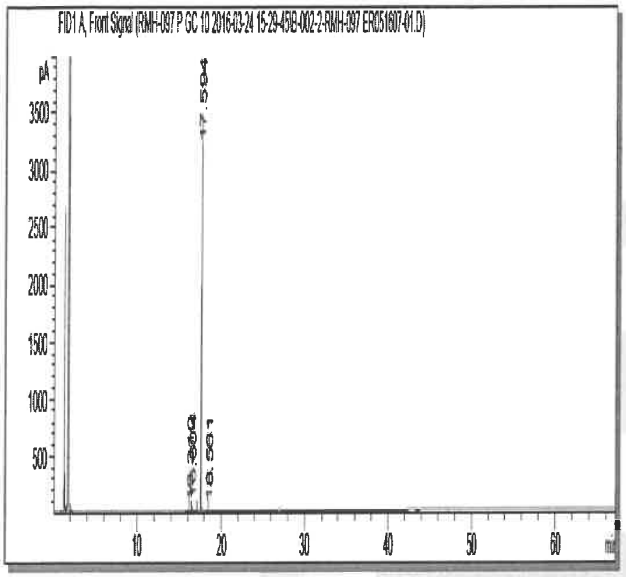

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

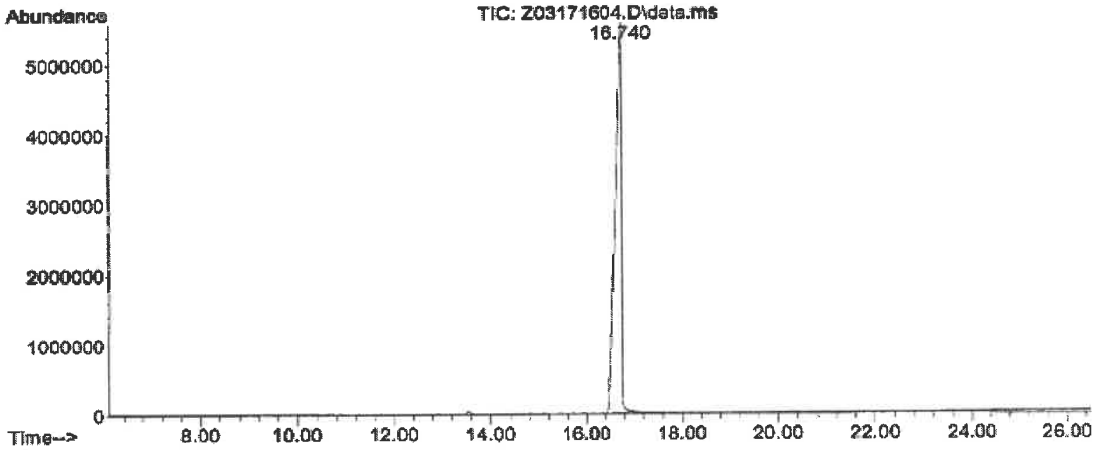

Mass Spectrum

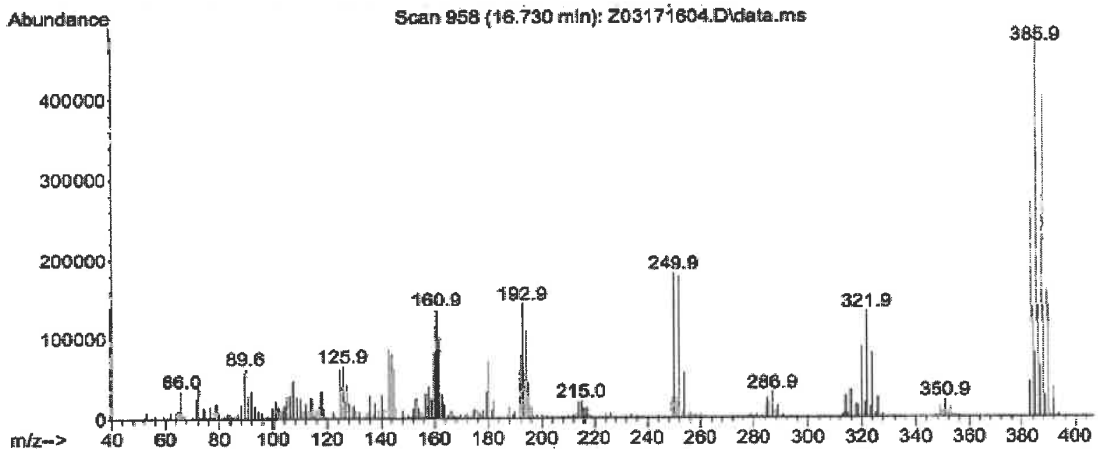

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

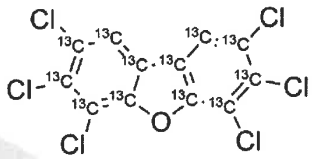

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

785125

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER09051801

Chemical Formula: $^{13}C_{12}H_2Cl_6O$
CAS Number: 116843-05-1
Molecular Weight: 386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

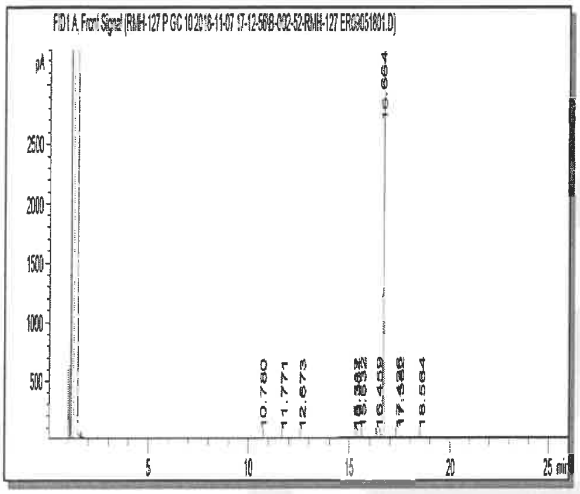

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

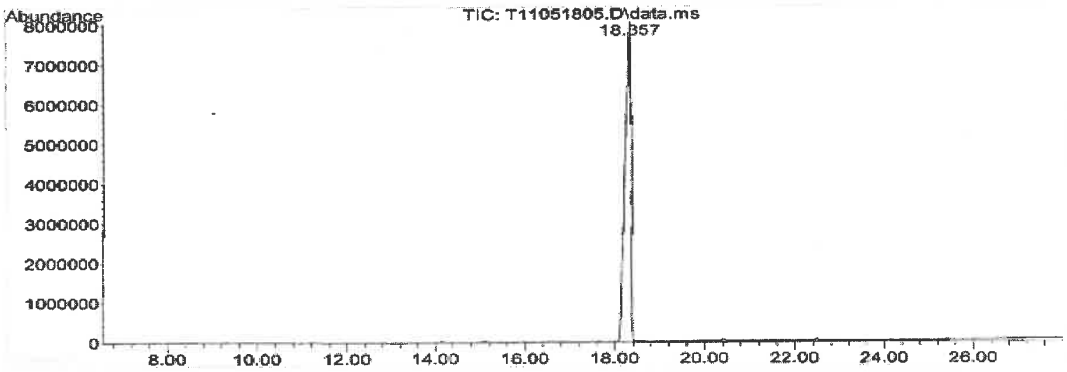

Mass Spectrum

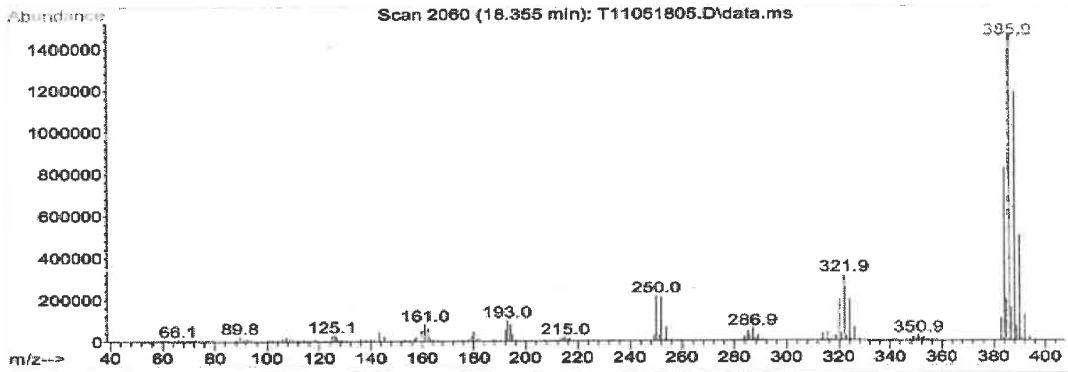

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

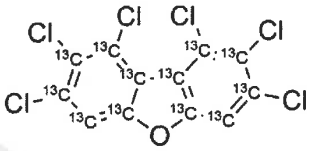

Catalog Number: EF-986
Solution Lot: ER01062016
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

785132

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

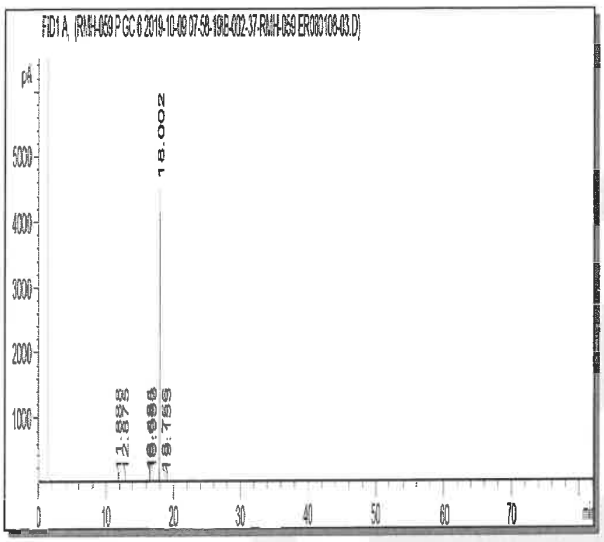

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

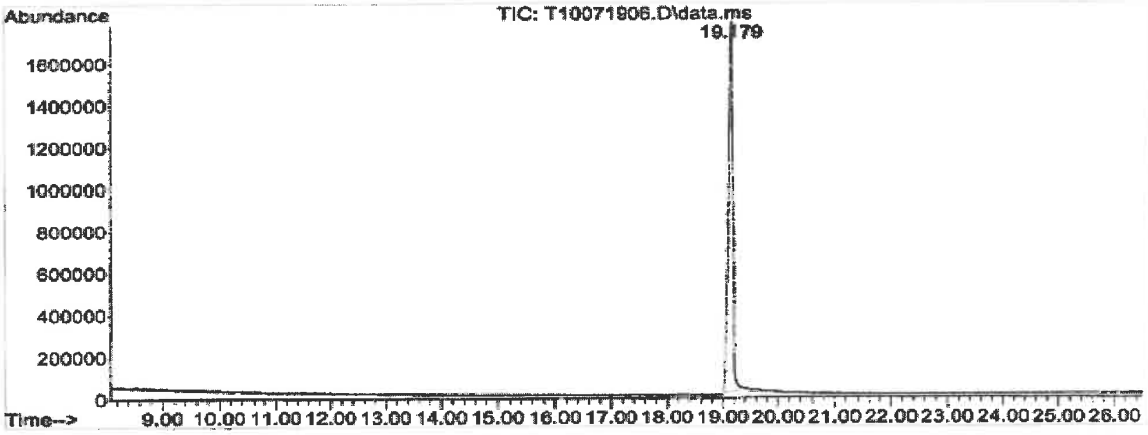

Mass Spectrum

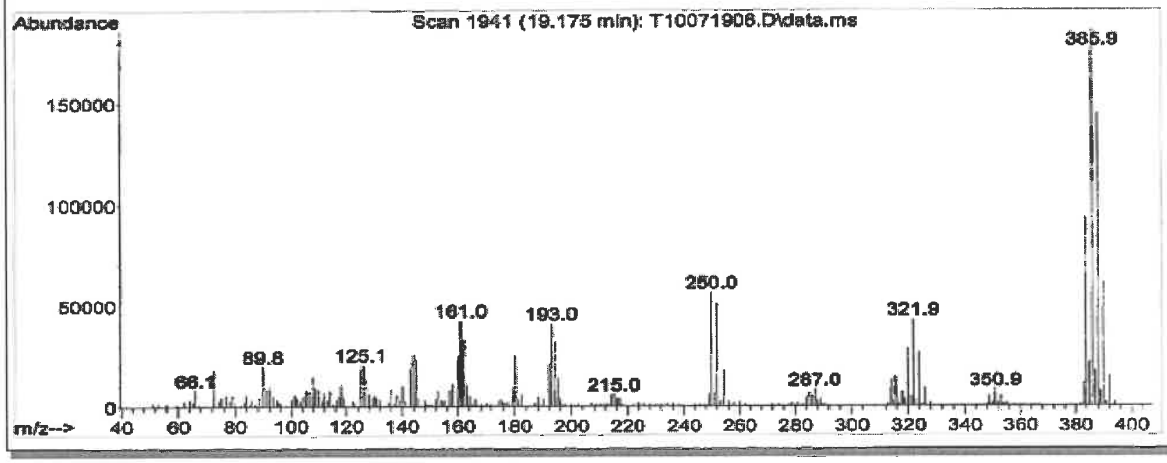

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant® Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

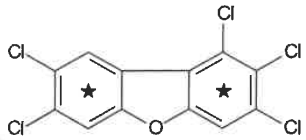

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

785139

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER090110-01

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 109719-77-9
Molecular Weight: 352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

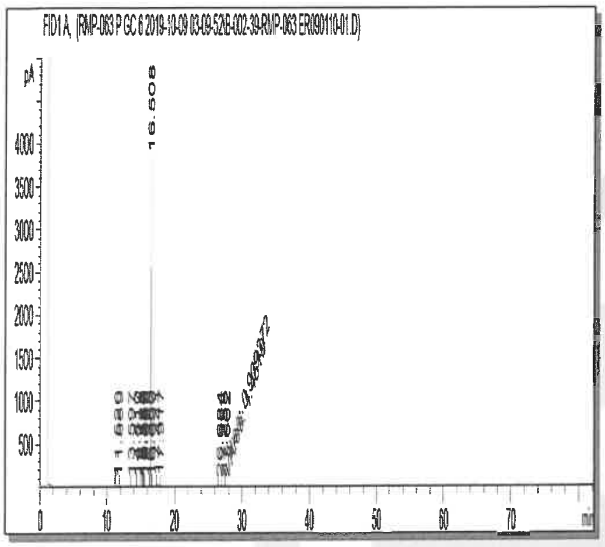

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Sample Name: ER090110-01
Acquired: October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

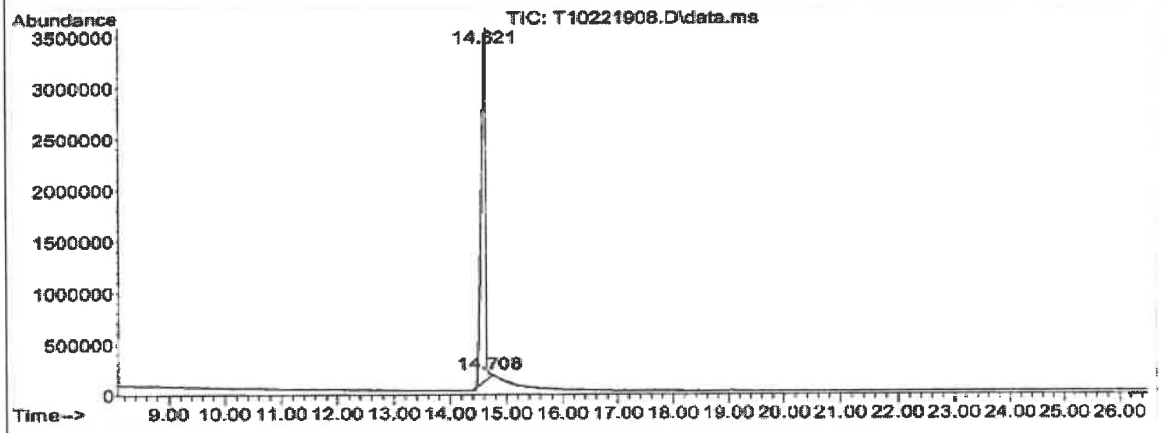

Mass Spectrum

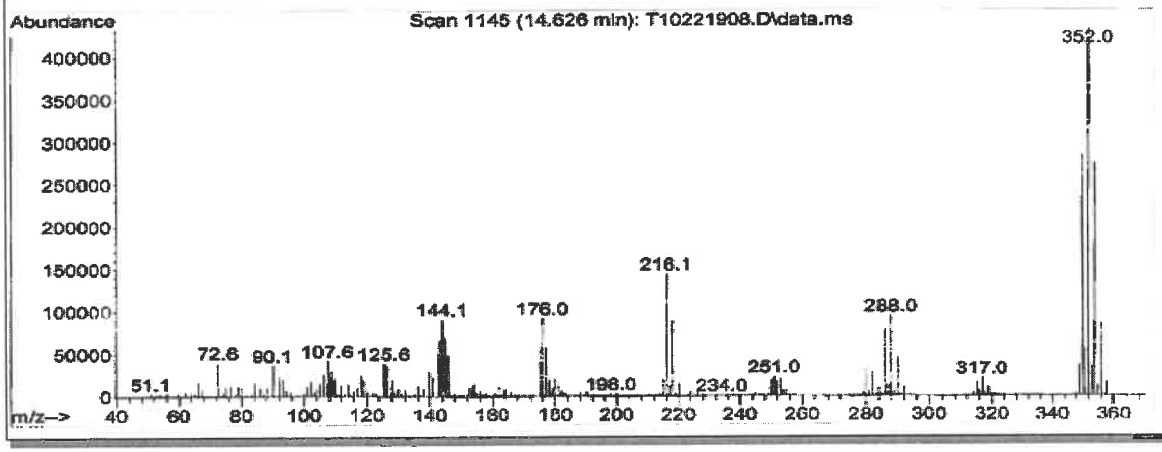

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

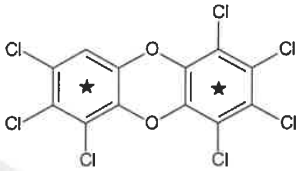

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

785146

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	0.999

Neat Material Data

Compound Name:	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}HCl_7O_2$
Compound Lot:	ER100110-01	**CAS Number:**	109719-83-7
		Molecular Weight:	437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

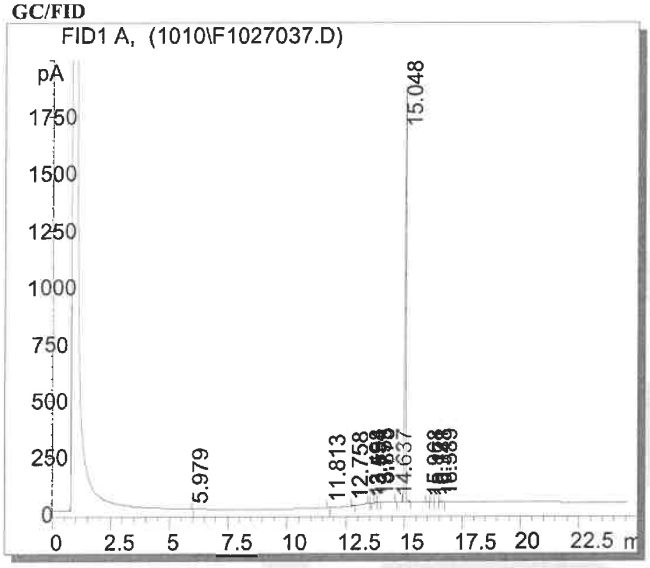

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

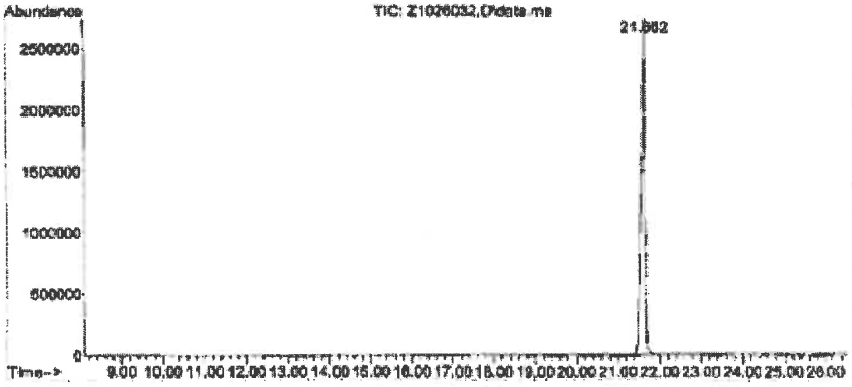

Mass Spectrum

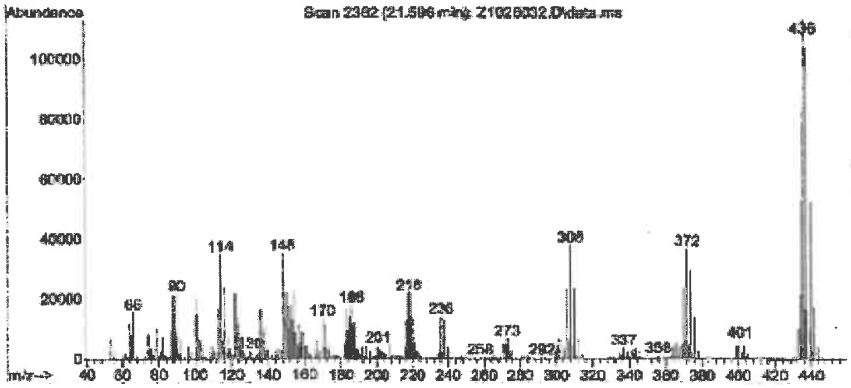

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

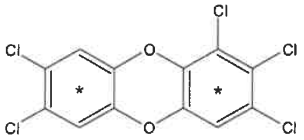

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

785151

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER06241403

Chemical Formula: $^{13}C_{12}H_3Cl_5O_2$
CAS Number: 109719-79-1
Molecular Weight: 368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

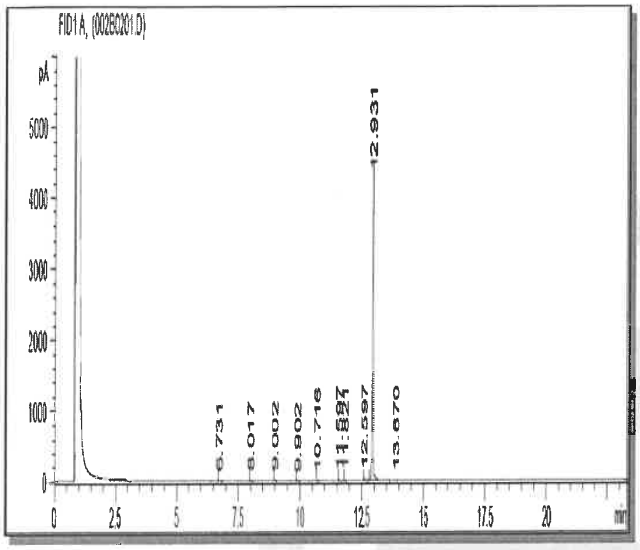

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

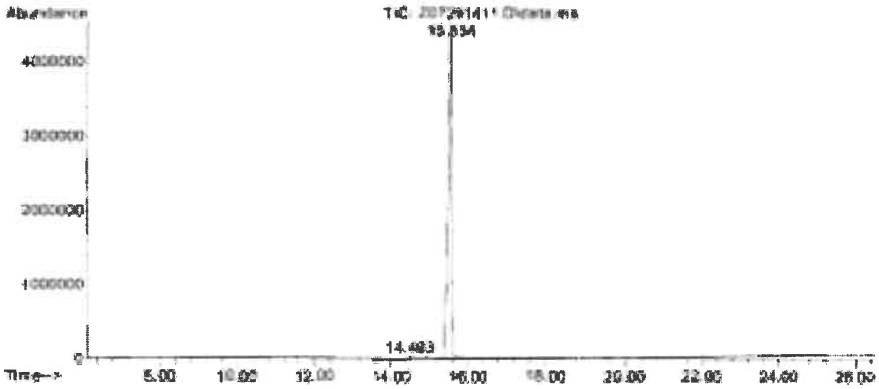

Mass Spectrum

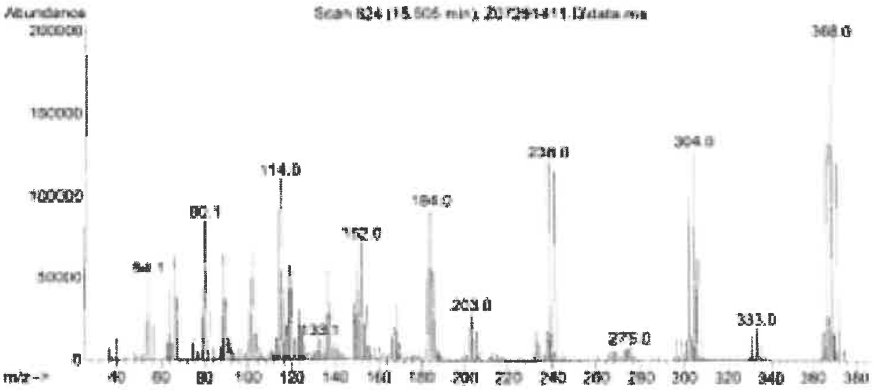

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

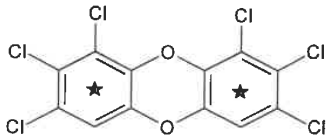

Catalog Number:	ED-996
Solution Lot:	ER08221601
Expiration Date:	September 2026
Solvent:	n-Nonane:Toluene (80:20)
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

785158

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

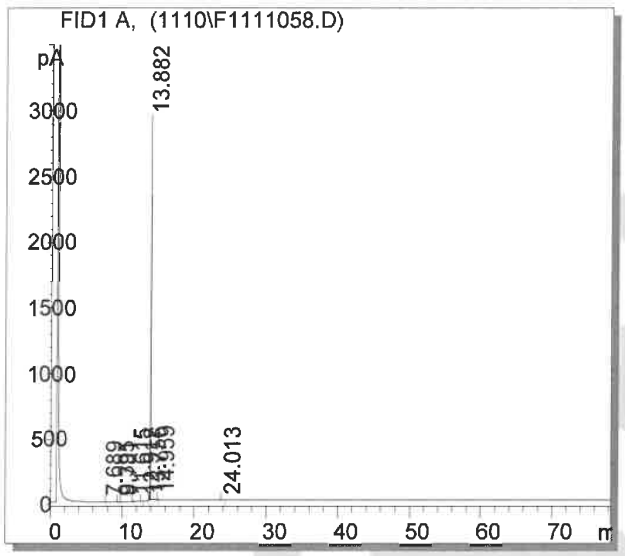

Column:	DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1110\F1111058.D
Instrument:	GC#6
Sample Name:	ER110510-01
Acquired:	November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

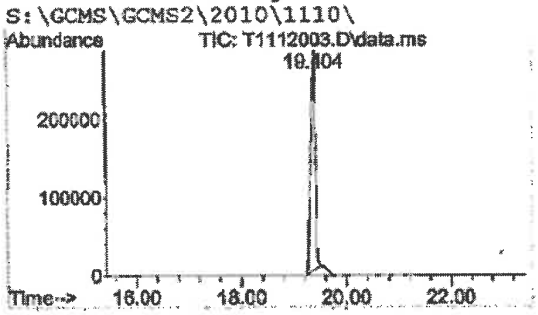

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

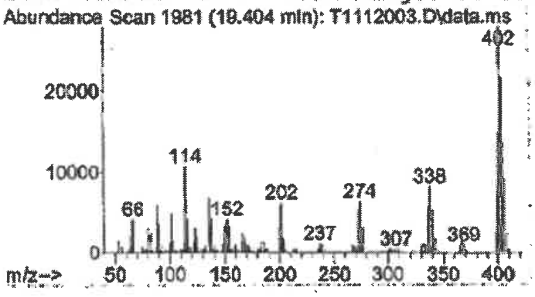

SIM Ion Chromatogram 1

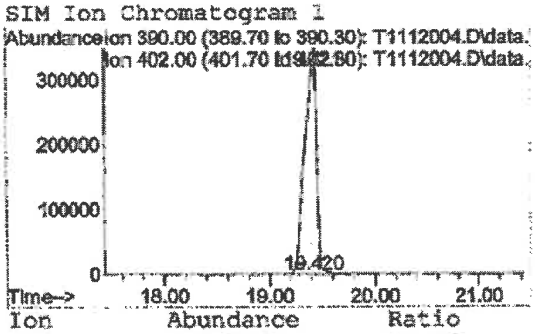

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

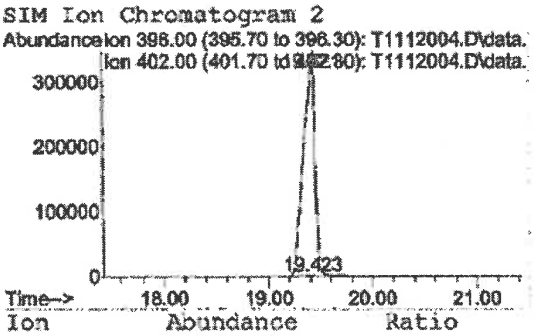

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

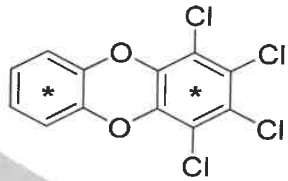

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

785165

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

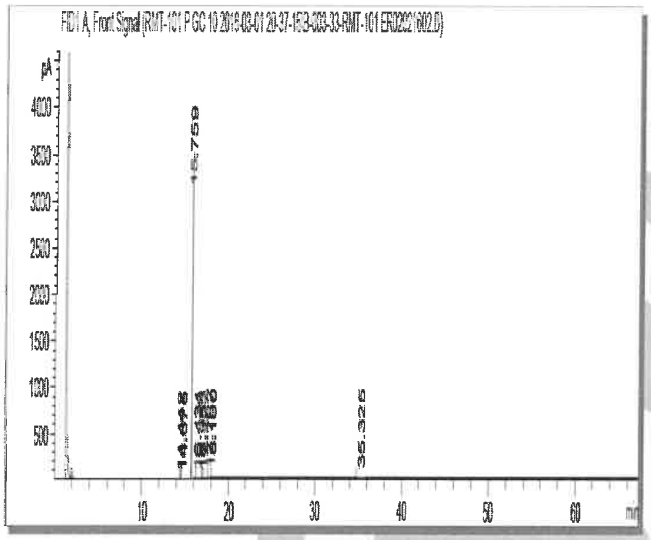

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

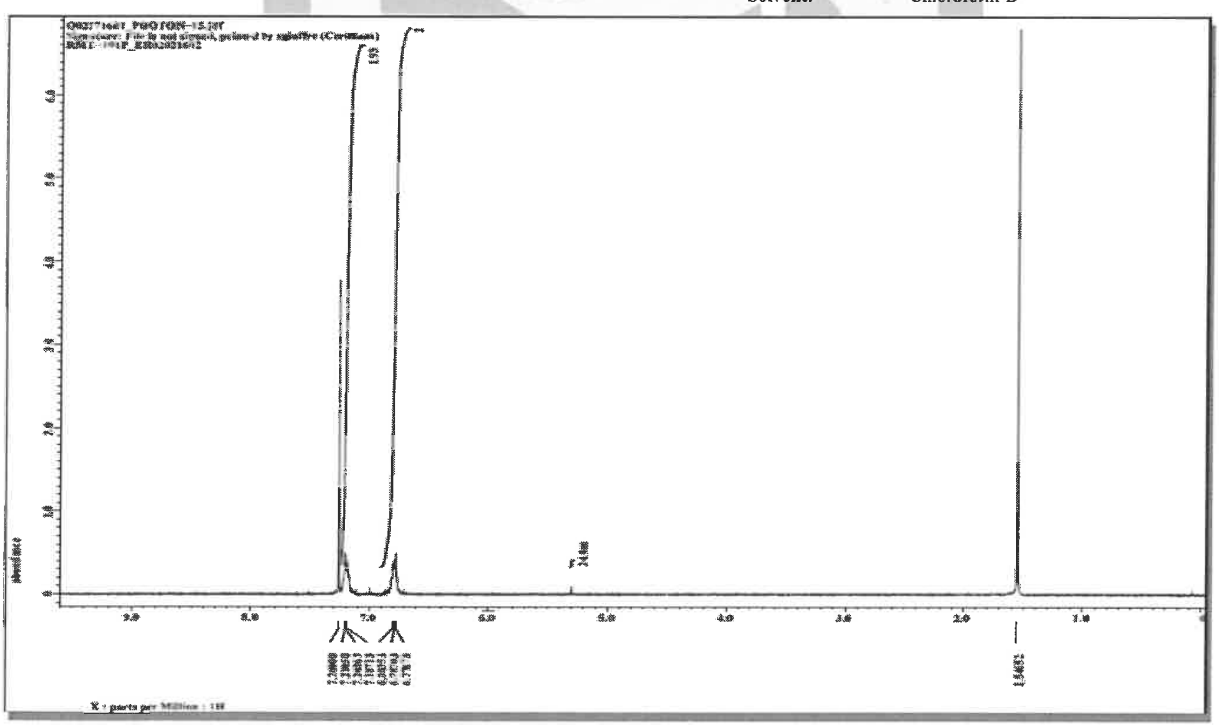

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER02021602
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Fri Feb 19 12:55:12 2016
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

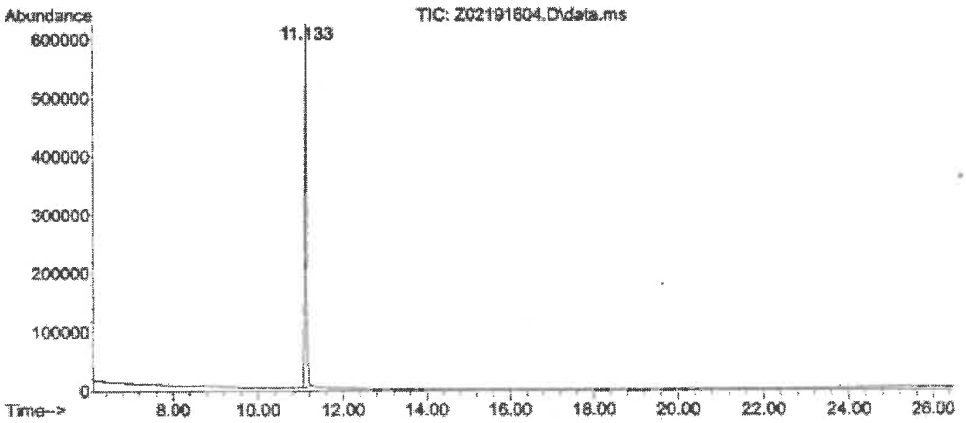

Mass Spectrum

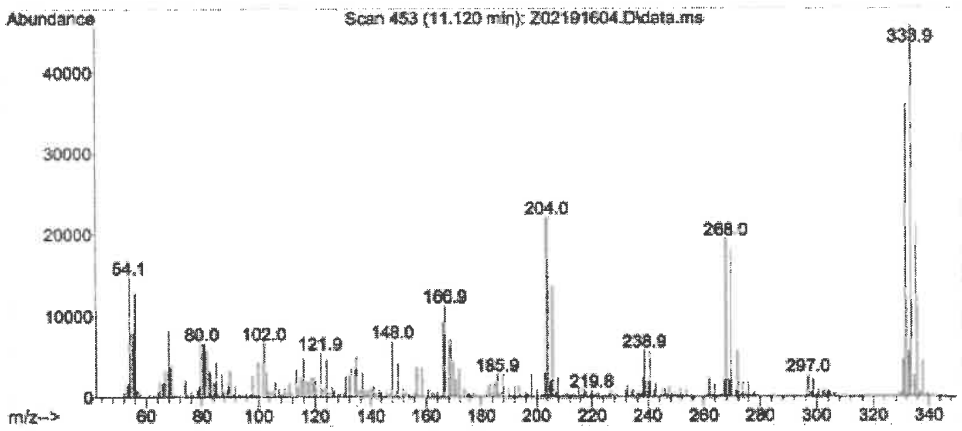

Reagent

HRDXNTA_00108

(2)

P: 4ba/19 SKJ

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

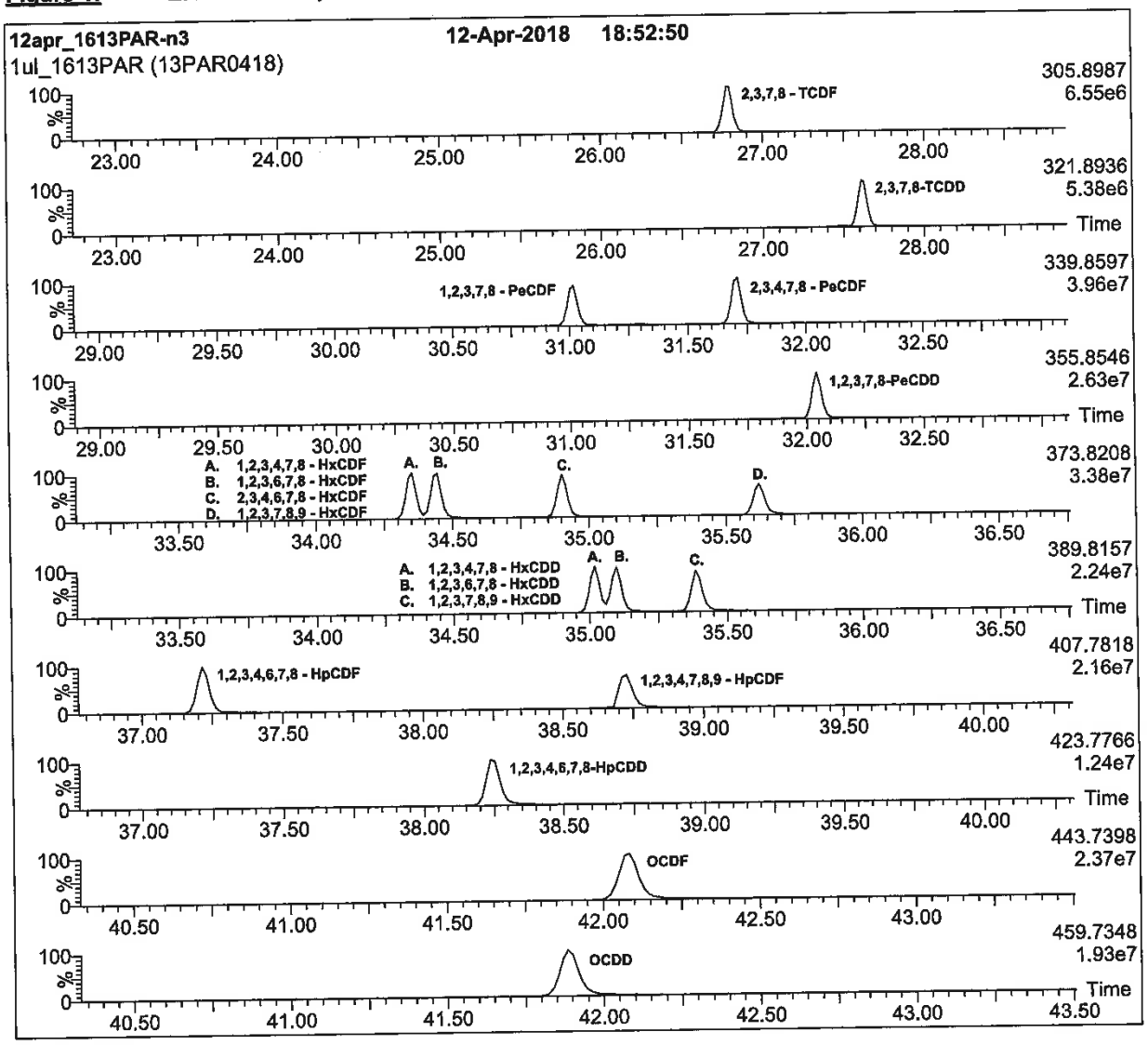

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

(3)

P: 4/3dic SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number: EDF-7999-10X
Solution Lot: ER02241602
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

785175

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/ECD
Column:	DB-5ms, 30 m x 0.25 mm ID, 0 25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min hold 3 min
Injector Temp:	Cool on-column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397 1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386 6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0 8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0 7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

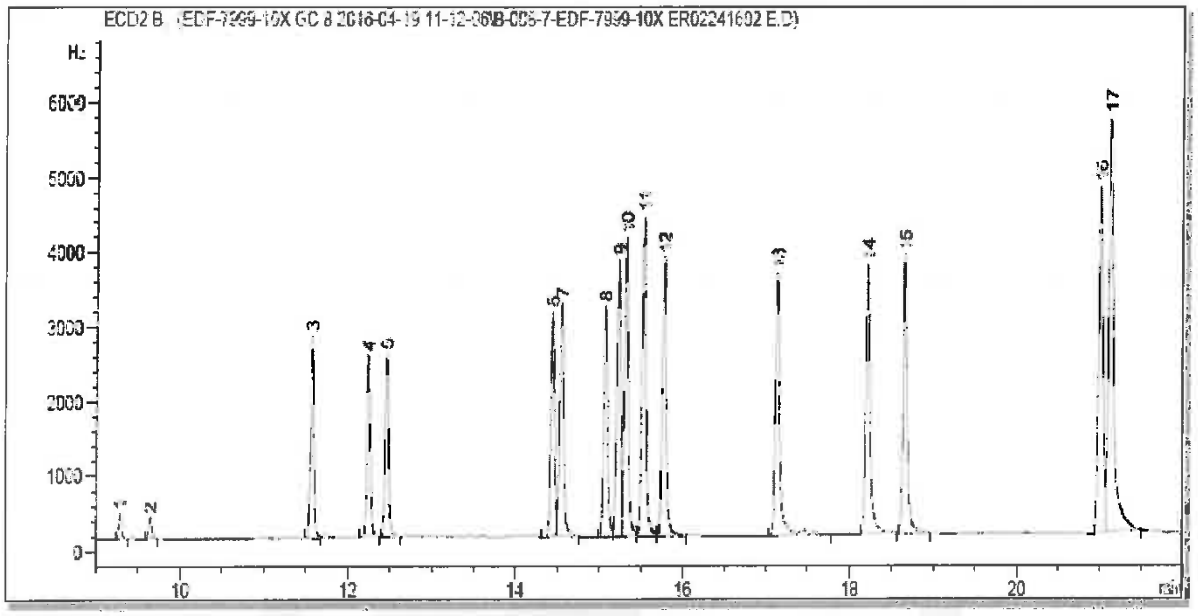

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

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Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Method 1613 PAR Stock Solution

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

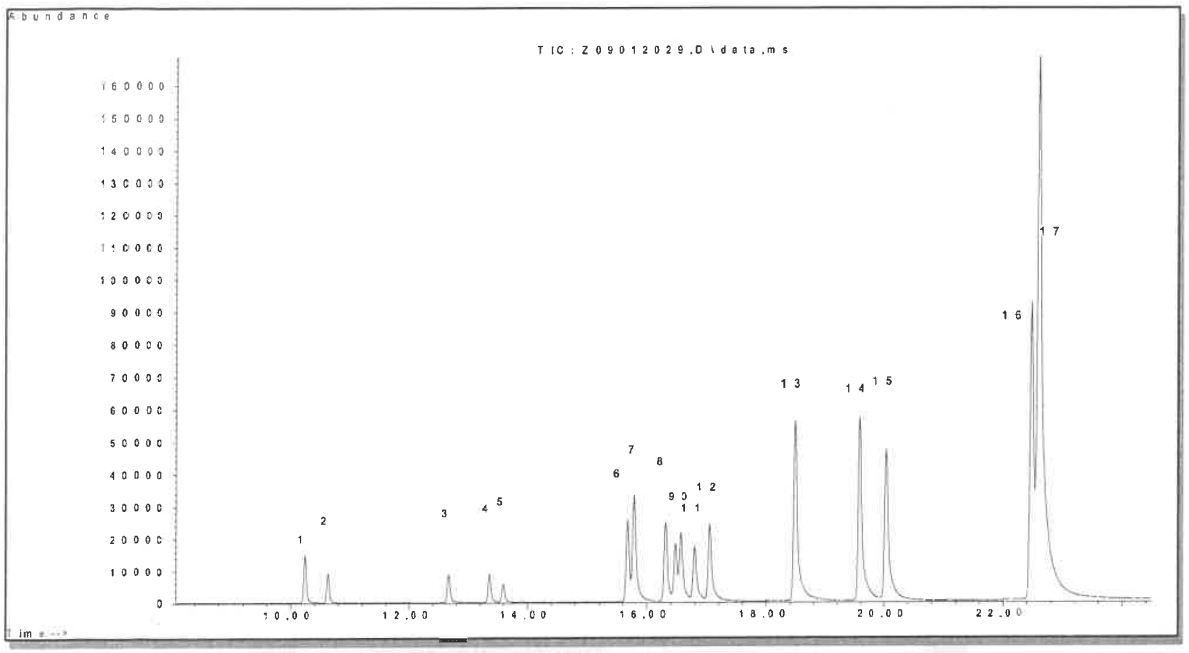

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	37TCDD #	TCDF #
11215702-072621-BN -SJSB094 (0-2) RA	320-76888-1 RA	58	34
11215702-072621-BN -SJSB094 (2-4) RA	320-76888-2 RA	58	25
11215702-072621-BN -SJSB094 (4-6) RA	320-76888-3 RA	59	26
11215702-072621-BN -SJSB094 (6-8) RA	320-76888-4 RA	56	37
11215702-072621-BN -SJSB094 (8-10) RA	320-76888-5 RA	60	40
11215702-072621-BN -SJSB094 (10-12) RA	320-76888-6 RA	52	37
11215702-072621-BN -SJSB094 (12-14) RA	320-76888-7 RA	49	41
11215702-072621-BN -SJSB094 (14-16) RA	320-76888-8 RA	51	39
	MB 320-513879/1-A RA	50	37
11215702-072621-BN -SJSB094 (0-2) MS RA	320-76888-1 MS RA	56	29
11215702-072621-BN -SJSB094 (0-2) MSD RA	320-76888-1 MSD RA	61	23 *5-

	QC LIMITS
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
TCDF = 13C-2,3,7,8-TCDF	24-169

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-513586/2-A	54	54	69	56	63	59	67	58
	LCS 320-513879/2-A	36	34	47	31	36	34	42	37

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-513586/2-A	54	60	54	53	63	67	72	71
	LCS 320-513879/2-A	33	37	35	32	35	36	40	39

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-072621-BN -DUP-8 RA	320-76888-13 RA	65	77
	320-76769-A-27-B MS RA	65	86
	320-76769-A-27-C MSD RA	70	90

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-072621-BN -SJSB094 (0-2)	320-76888-1	35	34 q	74	36	42	34	43	41
11215702-072621-BN -SJSB094 (2-4)	320-76888-2	36	37	73	31	36	29	52	42
11215702-072621-BN -SJSB094 (4-6)	320-76888-3	38	41	84	38	41	35	47	40
11215702-072621-BN -SJSB094 (6-8)	320-76888-4	43	43	72	38	43	40	40 q	39
11215702-072621-BN -SJSB094 (8-10)	320-76888-5	39	37	52	39	44	41	50	41
11215702-072621-BN -SJSB094 (10-12)	320-76888-6	35	36	45	32	35	33	46	41
11215702-072621-BN -SJSB094 (12-14)	320-76888-7	40	43	43	40	44	41	54	49
11215702-072621-BN -SJSB094 (14-16)	320-76888-8	37	39	45	36	38	35	47	43
11215702-072621-BN -DUP-8	320-76888-13	59	60	72	57	64	60	77	69
	MB 320-513586/1-A	57	59	68	61	65	58	74	64
	MB 320-513879/1-A	36	36	46	36	40	35	47	43
11215702-072621-BN -SJSB094 (0-2) MS	320-76888-1 MS	41	44	90	38	46	39 q	51	41
	320-76769-A-27-B MS	56	53	69	53	53	51	65	58
11215702-072621-BN -SJSB094 (0-2) MSD	320-76888-1 MSD	37	40	123	36	40	38	44	37
	320-76769-A-27-C MSD	61	60	77	52	60	61	69	61

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072621-BN -SJSB094 (0-2)	320-76888-1	37	44	34	36	34	39	42	35 q
11215702-072621-BN -SJSB094 (2-4)	320-76888-2	37	44	40	37	39	37 q	44	43
11215702-072621-BN -SJSB094 (4-6)	320-76888-3	40	40 q	46	42	46	40	48	51
11215702-072621-BN -SJSB094 (6-8)	320-76888-4	43	45	41	38	46	44	46	41 q
11215702-072621-BN -SJSB094 (8-10)	320-76888-5	42	42	39	42	40	41	48	39
11215702-072621-BN -SJSB094 (10-12)	320-76888-6	35	43	38	34	39	43	45	41
11215702-072621-BN -SJSB094 (12-14)	320-76888-7	42	47	42	43	44	45	53	51
11215702-072621-BN -SJSB094 (14-16)	320-76888-8	40	44	41	37	43	43	46	47
11215702-072621-BN -DUP-8	320-76888-13	61	68	62	60	64	64	71	62
	MB 320-513586/1-A	61	65	60	61	65	72	78	76
	MB 320-513879/1-A	38	40	39	39	41	41	42	36
11215702-072621-BN -SJSB094 (0-2) MS	320-76888-1 MS	35	41	42	38	39	41	44	41
	320-76769-A-27-B MS	57	58	56	53	60	61	65	63
11215702-072621-BN -SJSB094 (0-2) MSD	320-76888-1 MSD	34	37	34 q	35	39	38	44	37 q
	320-76769-A-27-C MSD	63	72	63	55	60	60	57	53

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_6.d

Lab ID: LCS 320-513586/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	21.3	107	67-158	
2,3,7,8-TCDF	20.0	21.8	109	75-158	
1,2,3,7,8-PeCDD	100	112	112	70-142	
1,2,3,7,8-PeCDF	100	114	114	80-134	
2,3,4,7,8-PeCDF	100	105	105	68-160	
1,2,3,4,7,8-HxCDD	100	101	101	70-164	
1,2,3,6,7,8-HxCDD	100	111	111	76-134	
1,2,3,7,8,9-HxCDD	100	110	110	64-162	
1,2,3,4,7,8-HxCDF	100	107	107	72-134	
1,2,3,6,7,8-HxCDF	100	112	112	84-130	
1,2,3,7,8,9-HxCDF	100	116	116	78-130	
2,3,4,6,7,8-HxCDF	100	117	117	70-156	
1,2,3,4,6,7,8-HpCDD	100	108	108	70-140	
1,2,3,4,6,7,8-HpCDF	100	112	112	82-122	
1,2,3,4,7,8,9-HpCDF	100	105	105	78-138	
OCDD	200	228	114	78-144	
OCDF	200	248	124	63-170	
13C-2,3,7,8-TCDD	200	109	54	20-175	
13C-2,3,7,8-TCDF	200	108	54	22-152	
13C-1,2,3,7,8-PeCDD	200	117	59	21-227	
13C-1,2,3,7,8-PeCDF	200	113	56	21-192	
13C-2,3,4,7,8-PeCDF	200	127	63	13-328	
13C-1,2,3,4,7,8-HxCDD	200	121	60	21-193	
13C-1,2,3,6,7,8-HxCDD	200	108	54	25-163	
13C-1,2,3,4,7,8-HxCDF	200	133	67	19-202	
13C-1,2,3,6,7,8-HxCDF	200	117	58	21-159	
13C-1,2,3,7,8,9-HxCDF	200	107	53	17-205	
13C-2,3,4,6,7,8-HxCDF	200	107	54	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	133	67	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	126	63	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	143	72	20-186	
13C-OCDD	400	283	71	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_51.d

Lab ID: LCS 320-513879/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	22.3	111	67-158	
2,3,7,8-TCDF	20.0	23.1	115	75-158	
1,2,3,7,8-PeCDD	100	113	113	70-142	
1,2,3,7,8-PeCDF	100	117	117	80-134	
2,3,4,7,8-PeCDF	100	109	109	68-160	
1,2,3,4,7,8-HxCDD	100	101	101	70-164	
1,2,3,6,7,8-HxCDD	100	112	112	76-134	
1,2,3,7,8,9-HxCDD	100	109	109	64-162	
1,2,3,4,7,8-HxCDF	100	114	114	72-134	
1,2,3,6,7,8-HxCDF	100	120	120	84-130	
1,2,3,7,8,9-HxCDF	100	118	118	78-130	
2,3,4,6,7,8-HxCDF	100	121	121	70-156	
1,2,3,4,6,7,8-HpCDD	100	111	111	70-140	
1,2,3,4,6,7,8-HpCDF	100	118	118	82-122	
1,2,3,4,7,8,9-HpCDF	100	108	108	78-138	
OCDD	200	232	116	78-144	
OCDF	200	243	122	63-170	
13C-2,3,7,8-TCDD	200	68.6	34	20-175	
13C-2,3,7,8-TCDF	200	71.2	36	22-152	
13C-1,2,3,7,8-PeCDD	200	68.3	34	21-227	
13C-1,2,3,7,8-PeCDF	200	61.5	31	21-192	
13C-2,3,4,7,8-PeCDF	200	72.0	36	13-328	
13C-1,2,3,4,7,8-HxCDD	200	73.9	37	21-193	
13C-1,2,3,6,7,8-HxCDD	200	69.3	35	25-163	
13C-1,2,3,4,7,8-HxCDF	200	83.0	42	19-202	
13C-1,2,3,6,7,8-HxCDF	200	74.3	37	21-159	
13C-1,2,3,7,8,9-HxCDF	200	65.0	32	17-205	
13C-2,3,4,6,7,8-HxCDF	200	66.5	33	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	72.5	36	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	70.5	35	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	80.3	40	20-186	
13C-OCDD	400	155	39	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 19au21dfs1_22.d

Lab ID: 320-76888-1 MS Client ID: 11215702-072621-BN-SJSB094 (0-2

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	36.1	24000	22000	-4439	67-158	E G 4
1,2,3,7,8-PeCDD	181	290	470	102	70-142	
1,2,3,7,8-PeCDF	181	2200	2670	247	80-134	4
2,3,4,7,8-PeCDF	181	1600	1900	144	68-160	4
1,2,3,4,7,8-HxCDD	181	3.6 J	196	106	70-164	
1,2,3,6,7,8-HxCDD	181	7.0 J	203	108	76-134	
1,2,3,7,8,9-HxCDD	181	5.6 J	201	108	64-162	
1,2,3,4,7,8-HxCDF	181	3200	3130	-21	72-134	4
1,2,3,6,7,8-HxCDF	181	740	1040	165	84-130	4
1,2,3,7,8,9-HxCDF	181	42 J	251	116	78-130	
2,3,4,6,7,8-HxCDF	181	100	367	148	70-156	
1,2,3,4,6,7,8-HpCDD	181	68 J	265	109	70-140	
1,2,3,4,6,7,8-HpCDF	181	1100	1100	14	82-122	4
1,2,3,4,7,8,9-HpCDF	181	280	495	118	78-138	
OCDD	361	720	1050	91	78-144	
OCDF	361	460	890	118	63-170	
13C-2,3,7,8-TCDD	361	120	160	44	25-164	
13C-2,3,7,8-TCDF	361	130	149	41	24-169	
13C-1,2,3,7,8-PeCDD	361	120	139	39	25-181	q
13C-1,2,3,7,8-PeCDF	361	130	138	38	24-185	
13C-2,3,4,7,8-PeCDF	361	150	165	46	21-178	
13C-1,2,3,4,7,8-HxCDD	361	160	146	41	32-141	
13C-1,2,3,6,7,8-HxCDD	361	130	152	42	28-130	
13C-1,2,3,4,7,8-HxCDF	361	160	184	51	26-152	
13C-1,2,3,6,7,8-HxCDF	361	150	147	41	26-123	
13C-1,2,3,7,8,9-HxCDF	361	130	136	38	29-147	
13C-2,3,4,6,7,8-HxCDF	361	140	125	35	28-136	
13C-1,2,3,4,6,7,8-HpCDD	361	140	147	41	23-140	
13C-1,2,3,4,6,7,8-HpCDF	361	120	143	39	28-143	
13C-1,2,3,4,7,8,9-HpCDF	361	150	158	44	26-138	
13C-OCDD	723	250	300	41	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2111D2_005.d

Lab ID: 320-76888-1 MS RA Client ID: 11215702-072621-BN-SJSB094 (0-2

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	36.1	110000	121000	25826	75-158	E 4 G
13C-2,3,7,8-TCDF	361	130	105	29	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_41.d

Lab ID: 320-76769-A-27-B MS Client ID:

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	26.4	2100	2320	871	67-158	E G 4
1,2,3,7,8-PeCDD	132	20	169	112	70-142	
1,2,3,7,8-PeCDF	132	310	478	127	80-134	
2,3,4,7,8-PeCDF	132	160	321	123	68-160	
1,2,3,4,7,8-HxCDD	132	0.96 J	128	97	70-164	
1,2,3,6,7,8-HxCDD	132	1.8 J	154	115	76-134	
1,2,3,7,8,9-HxCDD	132	2.0 J	150	112	64-162	
1,2,3,4,7,8-HxCDF	132	500	639	104	72-134	
1,2,3,6,7,8-HxCDF	132	130	277	112	84-130	
1,2,3,7,8,9-HxCDF	132	8.1	158	114	78-130	
2,3,4,6,7,8-HxCDF	132	16	172	118	70-156	
1,2,3,4,6,7,8-HpCDD	132	51	796	564	70-140	F1
1,2,3,4,6,7,8-HpCDF	132	150	291	110	82-122	
1,2,3,4,7,8,9-HpCDF	132	46	179	101	78-138	
OCDD	264	1200	12800	4403	78-144	E 4
OCDF	264	72	415	130	63-170	
13C-2,3,7,8-TCDD	264	130	141	53	25-164	
13C-2,3,7,8-TCDF	264	130	149	56	24-169	
13C-1,2,3,7,8-PeCDD	264	120	134	51	25-181	
13C-1,2,3,7,8-PeCDF	264	120	139	53	24-185	
13C-2,3,4,7,8-PeCDF	264	130	139	53	21-178	
13C-1,2,3,4,7,8-HxCDD	264	140	154	58	32-141	
13C-1,2,3,6,7,8-HxCDD	264	130	147	56	28-130	
13C-1,2,3,4,7,8-HxCDF	264	170	172	65	26-152	
13C-1,2,3,6,7,8-HxCDF	264	140	154	58	26-123	
13C-1,2,3,7,8,9-HxCDF	264	130	140	53	29-147	
13C-2,3,4,6,7,8-HxCDF	264	130	149	57	28-136	
13C-1,2,3,4,6,7,8-HpCDD	264	140	160	61	23-140	
13C-1,2,3,4,6,7,8-HpCDF	264	140	159	60	28-143	
13C-1,2,3,4,7,8,9-HpCDF	264	150	171	65	26-138	
13C-OCDD	528	320	332	63	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 24AU2111D2_011.d

Lab ID: 320-76769-A-27-B MS RA Client ID:

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	26.4	7600	8400	3068	75-158	E G 4
13C-2,3,7,8-TCDF	264	150	172	65	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 19au21dfs1_23.d

Lab ID: 320-76888-1 MSD Client ID: 11215702-072621-BN-SJSB094 (0-2

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	35.9	25300	4754	14	50	67-158	E G 4
1,2,3,7,8-PeCDD	180	508	124	8	50	70-142	
1,2,3,7,8-PeCDF	180	2550	181	5	50	80-134	4
2,3,4,7,8-PeCDF	180	2150	281	12	50	68-160	4
1,2,3,4,7,8-HxCDD	180	199	109	2	50	70-164	
1,2,3,6,7,8-HxCDD	180	202	108	1	50	76-134	
1,2,3,7,8,9-HxCDD	180	188	101	7	50	64-162	
1,2,3,4,7,8-HxCDF	180	3640	261	15	50	72-134	4
1,2,3,6,7,8-HxCDF	180	1130	214	8	50	84-130	4
1,2,3,7,8,9-HxCDF	180	238	110	5	50	78-130	
2,3,4,6,7,8-HxCDF	180	342	134	7	50	70-156	
1,2,3,4,6,7,8-HpCDD	180	262	108	1	50	70-140	
1,2,3,4,6,7,8-HpCDF	180	1310	132	18	50	82-122	4
1,2,3,4,7,8,9-HpCDF	180	474	107	4	50	78-138	
OCDD	359	921	56	13	50	78-144	F1
OCDF	359	925	128	4	50	63-170	
13C-2,3,7,8-TCDD	359	143	40			25-164	
13C-2,3,7,8-TCDF	359	132	37			24-169	
13C-1,2,3,7,8-PeCDD	359	135	38			25-181	
13C-1,2,3,7,8-PeCDF	359	128	36			24-185	
13C-2,3,4,7,8-PeCDF	359	143	40			21-178	
13C-1,2,3,4,7,8-HxCDD	359	133	37			32-141	
13C-1,2,3,6,7,8-HxCDD	359	122	34			28-130	q
13C-1,2,3,4,7,8-HxCDF	359	159	44			26-152	
13C-1,2,3,6,7,8-HxCDF	359	133	37			26-123	
13C-1,2,3,7,8,9-HxCDF	359	125	35			29-147	
13C-2,3,4,6,7,8-HxCDF	359	123	34			28-136	
13C-1,2,3,4,6,7,8-HpCDD	359	136	38			23-140	
13C-1,2,3,4,6,7,8-HpCDF	359	139	39			28-143	
13C-1,2,3,4,7,8,9-HpCDF	359	160	44			26-138	
13C-OCDD	719	265	37			17-157	q

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2111D2_006.d

Lab ID: 320-76888-1 MSD RA Client ID: 11215702-072621-BN-SJSB094 (0-2

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDF	35.9	127000	43390	5	50	75-158	E 4 G
13C-2,3,7,8-TCDF	359	83.3	23			24-169	*5-

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_42.d

Lab ID: 320-76769-A-27-C MSD Client ID:

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	26.2	1820	-1013	24	50	67-158	G E 4
1,2,3,7,8-PeCDD	131	163	109	4	50	70-142	
1,2,3,7,8-PeCDF	131	426	89	11	50	80-134	
2,3,4,7,8-PeCDF	131	280	93	14	50	68-160	
1,2,3,4,7,8-HxCDD	131	121	92	6	50	70-164	
1,2,3,6,7,8-HxCDD	131	148	112	4	50	76-134	
1,2,3,7,8,9-HxCDD	131	131	99	13	50	64-162	
1,2,3,4,7,8-HxCDF	131	581	61	10	50	72-134	F1
1,2,3,6,7,8-HxCDF	131	251	93	10	50	84-130	
1,2,3,7,8,9-HxCDF	131	159	116	1	50	78-130	
2,3,4,6,7,8-HxCDF	131	183	127	6	50	70-156	
1,2,3,4,6,7,8-HpCDD	131	204	116	119	50	70-140	F2
1,2,3,4,6,7,8-HpCDF	131	275	99	6	50	82-122	
1,2,3,4,7,8,9-HpCDF	131	178	101	1	50	78-138	
OCDD	262	1410	98	160	50	78-144	4 F2
OCDF	262	353	108	16	50	63-170	
13C-2,3,7,8-TCDD	262	157	60			25-164	
13C-2,3,7,8-TCDF	262	160	61			24-169	
13C-1,2,3,7,8-PeCDD	262	160	61			25-181	
13C-1,2,3,7,8-PeCDF	262	136	52			24-185	
13C-2,3,4,7,8-PeCDF	262	156	60			21-178	
13C-1,2,3,4,7,8-HxCDD	262	188	72			32-141	
13C-1,2,3,6,7,8-HxCDD	262	164	63			28-130	
13C-1,2,3,4,7,8-HxCDF	262	180	69			26-152	
13C-1,2,3,6,7,8-HxCDF	262	161	61			26-123	
13C-1,2,3,7,8,9-HxCDF	262	143	55			29-147	
13C-2,3,4,6,7,8-HxCDF	262	164	63			28-136	
13C-1,2,3,4,6,7,8-HpCDD	262	158	60			23-140	
13C-1,2,3,4,6,7,8-HpCDF	262	158	60			28-143	
13C-1,2,3,4,7,8,9-HpCDF	262	148	57			26-138	
13C-OCDD	523	275	53			17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 24AU2111D2_012.d

Lab ID: 320-76769-A-27-C MSD RA Client ID:

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDF	26.2	6770	-3151	22	50	75-158	E G 4
13C-2,3,7,8-TCDF	262	183	70			24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab File ID: 17au21dfs1_5.d Lab Sample ID: MB 320-513586/1-A

Matrix: Sediment Date Extracted: 08/06/2021 05:28

Instrument ID: DFS 1 Date Analyzed: 08/17/2021 17:01

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-513586/2-A	17au21dfs1_6.d	08/17/2021 17:49
	320-76769-A-27-B MS	17au21dfs1_41.d	08/18/2021 21:12
	320-76769-A-27-C MSD	17au21dfs1_42.d	08/18/2021 22:00
11215702-072621-BN-DUP-8	320-76888-13	19au21dfs1_6.d	08/19/2021 17:15
	320-76769-A-27-B MS RA	24AU2111D2_011.d	08/24/2021 14:51
	320-76769-A-27-C MSD RA	24AU2111D2_012.d	08/24/2021 15:30
11215702-072621-BN-DUP-8 RA	320-76888-13 RA	25AU21A11D2_010.d	08/25/2021 18:43

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab File ID: 24AU2111D2_004.d Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Date Extracted: 08/06/2021 12:58

Instrument ID: 11D2 Date Analyzed: 08/24/2021 10:23

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
11215702-072621-BN-SJSB094 (0-2) RA	320-76888-1 RA	25AU2111D2_004.d	08/25/2021 10:50
11215702-072621-BN-SJSB094 (0-2) MS RA	320-76888-1 MS RA	25AU2111D2_005.d	08/25/2021 11:28
11215702-072621-BN-SJSB094 (0-2) MSD RA	320-76888-1 MSD RA	25AU2111D2_006.d	08/25/2021 12:07
11215702-072621-BN-SJSB094 (10-12) RA	320-76888-6 RA	26AU21A11D2_012.d	08/26/2021 22:18
11215702-072621-BN-SJSB094 (8-10) RA	320-76888-5 RA	26AU21A11D2_013.d	08/26/2021 22:57
11215702-072621-BN-SJSB094 (2-4) RA	320-76888-2 RA	26AU21A11D2_014.d	08/26/2021 23:35
11215702-072621-BN-SJSB094 (4-6) RA	320-76888-3 RA	26AU21A11D2_015.d	08/27/2021 00:14
11215702-072621-BN-SJSB094 (6-8) RA	320-76888-4 RA	26AU21A11D2_016.d	08/27/2021 00:52
11215702-072621-BN-SJSB094 (12-14) RA	320-76888-7 RA	27AU2111D2_009.d	08/27/2021 14:08
11215702-072621-BN-SJSB094 (14-16) RA	320-76888-8 RA	27AU2111D2_010.d	08/27/2021 14:47

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab File ID: 19au21dfs1_5.d Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Date Extracted: 08/06/2021 12:58

Instrument ID: DFS 1 Date Analyzed: 08/19/2021 16:27

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
11215702-072621-BN-SJSB094 (10-12)	320-76888-6	17au21dfs1_56.d	08/19/2021 08:42
11215702-072621-BN-SJSB094 (12-14)	320-76888-7	17au21dfs1_57.d	08/19/2021 09:30
11215702-072621-BN-SJSB094 (14-16)	320-76888-8	17au21dfs1_58.d	08/19/2021 10:18
11215702-072621-BN-SJSB094 (8-10)	320-76888-5	19au21dfs1_20.d	08/20/2021 03:57
11215702-072621-BN-SJSB094 (0-2)	320-76888-1	19au21dfs1_21.d	08/20/2021 04:45
11215702-072621-BN-SJSB094 (0-2) MS	320-76888-1 MS	19au21dfs1_22.d	08/20/2021 05:33
11215702-072621-BN-SJSB094 (0-2) MSD	320-76888-1 MSD	19au21dfs1_23.d	08/20/2021 06:21
11215702-072621-BN-SJSB094 (6-8)	320-76888-4	19au21dfs1_24.d	08/20/2021 07:09
11215702-072621-BN-SJSB094 (2-4)	320-76888-2	19au21dfs1_25.d	08/20/2021 07:57
11215702-072621-BN-SJSB094 (4-6)	320-76888-3	19au21dfs1_27.d	08/20/2021 09:32

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)
Lab Sample ID: 320-76888-1
Matrix: Sediment
Lab File ID: 19au21dfs1_21.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.16(g)
Date Analyzed: 08/20/2021 04:45
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	24000	E G	36	36
40321-76-4	1,2,3,7,8-PeCDD	290		92	6.0
57117-41-6	1,2,3,7,8-PeCDF	2200		92	18
57117-31-4	2,3,4,7,8-PeCDF	1600		92	18
39227-28-6	1,2,3,4,7,8-HxCDD	3.6	J	92	1.2
57653-85-7	1,2,3,6,7,8-HxCDD	7.0	J q	92	1.4
19408-74-3	1,2,3,7,8,9-HxCDD	5.6	J q	92	1.2
70648-26-9	1,2,3,4,7,8-HxCDF	3200		92	12
57117-44-9	1,2,3,6,7,8-HxCDF	740		92	11
72918-21-9	1,2,3,7,8,9-HxCDF	42	J	92	12
60851-34-5	2,3,4,6,7,8-HxCDF	100		92	12
35822-46-9	1,2,3,4,6,7,8-HpCDD	68	J B	92	1.0
67562-39-4	1,2,3,4,6,7,8-HpCDF	1100	B	92	3.6
55673-89-7	1,2,3,4,7,8,9-HpCDF	280		92	3.1
3268-87-9	OCDD	720	B F1	180	2.5
39001-02-0	OCDF	460		180	3.5
41903-57-5	Total TCDD	26000	G	36	36
30402-14-3	Total TCDF	210000	q G B	140	140
36088-22-9	Total PeCDD	290	q	92	6.0
30402-15-4	Total PeCDF	6200	q	92	18
34465-46-8	Total HxCDD	48	J q	92	1.3
55684-94-1	Total HxCDF	4600		92	12
37871-00-4	Total HpCDD	130	B	92	1.0
38998-75-3	Total HpCDF	1500	B	92	3.4

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (0-2)
Lab Sample ID: 320-76888-1
Matrix: Sediment
Lab File ID: 19au21dfs1_21.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.16(g)
Date Analyzed: 08/20/2021 04:45
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	34	q	25-164
89059-46-1	13C-2,3,7,8-TCDF	35		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	34		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	36		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	42		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	44		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	34		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	43		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	41		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	36		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	37		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	39		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	34		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	42		26-138
114423-97-1	13C-OCDD	35	q	17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	74		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d
Lims ID: 320-76888-A-1-A
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: Client
Inject. Date: 20-Aug-2021 04:45:00 ALS Bottle#: 0 Worklist Smp#: 19
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:21:26 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: krenns Date: 25-Aug-2021 15:21:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.426	149674	0.78	2.1E+04	10.0	10.0				a
D 13C-2,3,7,8-TCDF	20.463	71421	0.80	1.3459	3.546	3.546	0.2385	0.2385	35.46	M
2,3,7,8-TCDF	20.472	24114287	0.75	1.0802	3125.7	3125.7	3.736	3.736		E
A Non-2,3,7,8-sub-TCDF	19.851	19068014	0.77	1.0802	2473.2	2471.6	3.736	1460.2		RQa
S Total TCDF					5598.9	5597.3	3.736	3.736		RQ
D 13C-2,3,7,8-TCDD	21.874	47073	0.77	0.9317	3.676	3.376	0.2835	0.2835	36.76	RQM
2,3,7,8-TCDD	21.839	3545992	0.80	1.0753	643.3	643.3	0.9885	0.9885		Ea
$ 37Cl4-2,3,7,8-TCDD	21.839	44685		1.0083	2.961	2.961	0.2057	0.2057	74.02	
A Non-2,3,7,8-sub-TCDD	20.684	312009	0.79	1.0753	56.6	56.6	0.9885	56.6		
S Total TCDD					699.9	699.9	0.9885	0.9885		
D 13C-1,2,3,7,8-PeCDF	27.274	61657	1.64	1.1405	3.612	3.612	0.0398	0.0398	36.12	
1,2,3,7,8-PeCDF	27.299	393908	1.59	1.0543	60.6	60.6	0.4914	0.4914		M
D 13C-2,3,4,7,8-PeCDF	28.773	71160	1.57	1.1253	4.225	4.225	0.0404	0.0404	42.25	
2,3,4,7,8-PeCDF	28.798	321687	1.57	1.0079	44.9	44.9	0.4877	0.4877		
A F1 PeCDFs	24.634						0.004392	0.4419		RQU
A Non-2,3,7,8-sub-PeCDF	28.173	430097	1.55	1.0311	63.5	62.8	0.4892	26.3		RQ
S Total PeCDF					168.9	168.3	0.4895	0.4895		RQ
D 13C-1,2,3,7,8-PeCDD	29.564	36528	1.48	0.7165	3.406	3.406	0.0207	0.0207	34.06	M
1,2,3,7,8-PeCDD	29.606	29745	1.59	1.0465	7.781	7.781	0.1640	0.1640		
A Non-2,3,7,8-sub-PeCDD	28.478	727	1.55	1.0465	9.150	0.1902	0.1640	0.1902		RQ
S Total PeCDD					16.9	7.971	0.1640	0.1640		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.920	59276	0.55	0.9648	4.298	4.298	0.0408	0.0408	42.98	
1,2,3,4,7,8-HxCDF	34.929	588762	1.27	1.1474	86.6	86.6	0.3293	0.3293		
D 13C-1,2,3,6,7,8-HxCDF	35.055	63496	0.51	1.0708	4.149	4.149	0.0368	0.0368	41.49	
1,2,3,6,7,8-HxCDF	35.089	156567	1.29	1.2178	20.2	20.2	0.3082	0.3082		
D 13C-2,3,4,6,7,8-HxCDF	35.897	54884	0.54	1.0413	3.688	3.688	0.0378	0.0378	36.88	
2,3,4,6,7,8-HxCDF	35.913	18284	1.19	1.2145	2.743	2.743	0.3393	0.3393		M
D 13C-1,2,3,7,8,9-HxCDF	36.789	50485	0.56	0.9731	3.630	3.630	0.0405	0.0405	36.30	
1,2,3,7,8,9-HxCDF	36.789	7115	1.22	1.2401	1.136	1.136	0.3177	0.3177		M
A Non-2,3,7,8-sub-HxCDF	35.009	99154	1.37	1.2049	14.4	14.4	0.3230	5.966		Ma
S Total HxCDF					125.1	125.1	0.3236	0.3236		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.587	142933	1.32	1.8E+04	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	36.107	47928	1.33	0.7587	4.420	4.420	0.0228	0.0228	44.20	
1,2,3,4,7,8-HxCDD	36.132	499	1.11	1.0608	0.0981	0.0981	0.0324	0.0324		M
D 13C-1,2,3,6,7,8-HxCDD	36.216	42187	1.06	0.8593	3.435	3.435	0.0202	0.0202	34.35	
1,2,3,6,7,8-HxCDD	36.259	795	1.24	0.9933	0.2420	0.1897	0.0381	0.0381		RQMa
1,2,3,7,8,9-HxCDD	36.604	761	1.24	1.1094	0.1712	0.1522	0.0325	0.0325		RQM
A Non-2,3,7,8-sub-HxCDD	35.375	4168	1.24	1.0545	0.9423	0.8772	0.0341	0.4712		RQ
S Total HxCDD					1.454	1.317	0.0343	0.0343		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.609	35365	0.40	0.7359	3.362	3.362	0.0278	0.0278	33.62	
1,2,3,4,6,7,8-HpCDF	38.617	149046	1.01	1.4421	29.2	29.2	0.0983	0.0983		
D 13C-1,2,3,4,7,8,9-HpCDF	39.846	41124	0.46	0.6854	4.198	4.198	0.0299	0.0299	41.98	M
1,2,3,4,7,8,9-HpCDF	39.863	41309	1.07	1.3092	7.673	7.673	0.0847	0.0847		
A Non-2,3,7,8-sub-HpCDF	39.245	26393	1.06	1.3756	5.017	5.017	0.0904	5.017		
S Total HpCDF					41.9	41.9	0.0915	0.0915		
D 13C-1,2,3,4,6,7,8-HpCDD	39.552	37913	1.18	0.6745	3.932	3.932	0.0187	0.0187	39.32	
1,2,3,4,6,7,8-HpCDD	39.569	7359	1.02	1.0503	1.848	1.848	0.0274	0.0274		M
A Non-2,3,7,8-sub-HpCDD	39.241	7268	1.07	1.0503	1.825	1.825	0.0274	1.825		M
S Total HpCDD					3.673	3.673	0.0274	0.0274		
D 13C-OCDD	42.049	53992	0.89	0.5446	7.669	6.936	0.0387	0.0387	38.35	RQ
OCDF	42.141	49790	0.89	1.3168	12.7	12.7	0.0958	0.0958		
OCDD	42.065	62261	0.84	1.0620	19.6	19.6	0.0671	0.0671		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:21:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d
Lims ID: 320-76888-A-1-A
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: Client
Inject. Date: 20-Aug-2021 04:45:00 ALS Bottle#: 0 Worklist Smp#: 19
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:21:26 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: krenns Date: 25-Aug-2021 15:21:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.426	21.395	2		65792	9813	98	245	100		a
333.9338	21.435	21.395	2		83882	10440	116	290	90	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											M
315.9419	20.463	20.365	6	0.955	31769	4969	130	325	38		
317.9389	20.463	20.365	6	0.955	39652	6867	130	325	53	0.80(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	20.472	20.408	4	1.000	10313666	1372538	831	2077	1652		
305.8987	20.472	20.408	4	1.000	13800621	1797862	1080	2700	1665	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQa
303.9016	17.498	19.851	-141	0.855	65978	9987	831	2077	12		
	Empc Correction				53799	10091	831	2077	12		
305.8987	17.498	19.851	-141	0.855	69870	13106	1080	2700	12	0.94(0.65-0.89)	
303.9016	17.945	19.851	-114	0.877	264800	40382	831	2077	49		
305.8987	17.945	19.851	-114	0.877	352879	54788	1080	2700	51	0.75(0.65-0.89)	
303.9016	18.443	19.851	-84	0.901	422760	50259	831	2077	60		
305.8987	18.443	19.851	-84	0.901	546950	65158	1080	2700	60	0.77(0.65-0.89)	
303.9016	18.864	19.851	-59	0.922	339390	45615	831	2077	55		
305.8987	18.864	19.851	-59	0.922	449403	60091	1080	2700	56	0.76(0.65-0.89)	
303.9016	19.242	19.851	-36	0.940	463115	66033	831	2077	79		
305.8987	19.242	19.851	-36	0.940	625495	91139	1080	2700	84	0.74(0.65-0.89)	
303.9016	19.741	19.851	-7	0.965	4786930	690434	831	2077	831		
305.8987	19.741	19.851	-7	0.965	6478416	923841	1080	2700	855	0.74(0.65-0.89)	
303.9016	20.145	19.851	18	0.984	184842	24132	831	2077	29		
305.8987	20.145	19.851	18	0.984	238472	32787	1080	2700	30	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.263	19.851	85	1.039	752531	99332	831	2077	120		
305.8987	21.263	19.851	85	1.039	993988	127866	1080	2700	118	0.76(0.65-0.89)	
303.9016	21.727	19.851	112	1.062	161035	18879	831	2077	23		
305.8987	21.736	19.851	113	1.062	188084	22927	1080	2700	21	0.86(0.65-0.89)	
303.9016	23.646	19.851	227	1.156	768995	135025	831	2077	162		a
305.8987	23.646	19.851	227	1.156	926260	166543	1080	2700	154	0.83(0.65-0.89)	
13C-2,3,7,8-TCDD											RQM
331.9368	21.874	21.716	9	1.021	24668	3623	98	245	37		M
	Empc Correction				20478	3128	98	245	32		
333.9338	21.813	21.716	6	1.018	26595	4063	116	290	35	0.93(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	21.839	21.733	6	0.998	1571725	208506	207	517	1007		a
321.8936	21.848	21.733	7	0.999	1974267	262447	120	300	2187	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.839	21.799	2	1.019	44685	6812	168	420	41		
A Non-2,3,7,8-sub-TCDD											
319.8965	22.484	20.684	108	1.028	137799	16835	207	517	81		
321.8936	22.493	20.684	108	1.028	174210	21763	120	300	181	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.274	27.251	1	1.273	38274	6184	20	50	309		
353.8970	27.291	27.251	2	1.274	23383	4568	17	42	269	1.64(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.299	27.276	1	1.001	241654	36402	136	340	268		M
341.8567	27.299	27.276	1	1.001	152254	22465	87	217	258	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.773	28.757	1	1.343	43464	7471	20	50	374		
353.8970	28.781	28.757	1	1.343	27696	3861	17	42	227	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.798	28.791	0	1.001	196612	28734	136	340	211		
341.8567	28.798	28.791	0	1.001	125075	18635	87	217	214	1.57(1.32-1.78)	
A F1 PeCDFs											U
339.8597	23.783	24.634	-51	0.872	2917	337	1	2	337		
	Empc Correction				168	79	1	2	0		
341.8567	23.792	24.634	-50	0.872	109	51	1	2	51	26.76(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.827	28.173	-141	0.947	110575	19007	136	340	140		
341.8567	25.827	28.173	-141	0.947	69488	12103	87	217	139	1.59(1.32-1.78)	
339.8597	26.727	28.173	-87	0.980	10396	1534	136	340	11		
341.8567	26.744	28.173	-86	0.981	7174	1117	87	217	13	1.45(1.32-1.78)	
339.8597	27.165	28.173	-60	0.996	22728	4394	136	340	32		
	Empc Correction				18378	4519	136	340	33		
341.8567	27.148	28.173	-61	0.995	11857	2916	87	217	34	1.92(1.32-1.78)	
339.8597	27.872	28.173	-18	1.022	71587	11519	136	340	85		
341.8567	27.872	28.173	-18	1.022	46404	7559	87	217	87	1.54(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	29.135	28.173	58	1.068	42257	5384	136	340	40		
341.8567	29.126	28.173	57	1.068	25828	3496	87	217	40	1.64(1.32-1.78)	
339.8597	30.826	28.173	159	1.130	10032	1387	136	340	10		
341.8567	30.818	28.173	158	1.130	6121	871	87	217	10	1.64(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											M
367.8949	29.564	29.574	-1	1.380	21821	3620	3	7	1207		M
369.8919	29.547	29.574	-2	1.379	14707	1915	9	22	213	1.48(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.606	29.616	-1	1.001	18248	2430	14	35	174		
357.8516	29.598	29.616	-1	1.001	11497	1630	24	60	68	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.071	28.478	-144	0.882	442	94	14	35	7		
357.8516	26.130	28.478	-141	0.884	34537	5911	24	60	246	0.01(1.32-1.78)	
	Empc Correction				285	60	24	60	3		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.920	34.906	1	0.954	21084	4284	23	57	186		
385.8610	34.912	34.906	0	0.954	38192	7363	27	67	273	0.55(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.929	34.922	0	1.000	329096	62044	101	252	614		
375.8178	34.920	34.922	0	1.000	259666	47430	75	187	632	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.055	35.066	-1	0.958	21500	4633	23	57	201		
385.8610	35.080	35.066	1	0.959	41996	7092	27	67	263	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.089	35.082	0	1.001	88223	15703	101	252	155		
375.8178	35.080	35.082	0	1.001	68344	12572	75	187	168	1.29(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.897	35.890	0	0.981	19285	3871	23	57	168		
385.8610	35.880	35.890	-1	0.981	35599	6806	27	67	252	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.913	35.907	0	1.000	9949	2130	101	252	21		M
375.8178	35.905	35.907	0	1.000	8335	1738	75	187	23	1.19(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.789	36.782	0	1.006	18104	4146	23	57	180		
385.8610	36.780	36.782	0	1.005	32381	7023	27	67	260	0.56(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.789	36.791	0	1.000	3913	1124	101	252	11		M
375.8178	36.806	36.791	1	1.000	3202	882	75	187	12	1.22(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	33.447	35.009	-94	0.958	23866	3550	101	252	35		
375.8178	33.430	35.009	-95	0.957	17135	2898	75	187	39	1.39(1.05-1.43)	
373.8208	34.289	35.009	-43	0.982	8474	1672	101	252	17		
375.8178	34.314	35.009	-42	0.983	6571	1095	75	187	15	1.29(1.05-1.43)	
373.8208	35.787	35.009	47	1.025	6233	1282	101	252	13		M
375.8178	35.779	35.009	46	1.025	4419	1155	75	187	15	1.41(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	36.890	35.009	113	1.056	18792	4090	101	252	40		M
375.8178	36.890	35.009	113	1.056	13664	3183	75	187	42	1.38(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.587	36.581	0		81453	17950	12	30	1496		
403.8529	36.587	36.581	0		61480	13799	10	25	1380	1.32(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.107	36.092	1	0.987	27348	6095	12	30	508		
403.8529	36.116	36.092	1	0.987	20580	4092	10	25	409	1.33(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8158	36.132	36.109	1	1.001	263	63	6	15	11		M
391.8127	36.107	36.109	0	1.000	236	60	8	20	8	1.11(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.216	36.210	0	0.990	21753	4325	12	30	360		
403.8529	36.233	36.210	1	0.990	20434	4929	10	25	493	1.06(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQMa
389.8158	36.259	36.227	2	1.001	659	118	6	15	20		M
	Empc Correction				440	71	6	15	12		
391.8127	36.233	36.227	0	1.000	355	58	8	20	7	1.86(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											RQM
389.8158	36.604	36.597	0	1.014	516	89	6	15	15		
	Empc Correction				421	85	6	15	14		
391.8127	36.570	36.597	-2	1.013	340	69	8	20	9	1.52(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	34.230	35.375	-69	0.945	564	133	6	15	22		
391.8127	34.213	35.375	-70	0.945	531	133	8	20	17	1.06(1.05-1.43)	
389.8158	34.971	35.375	-24	0.966	462	92	6	15	15		
391.8127	35.004	35.375	-22	0.967	462	114	8	20	14	1.00(1.05-1.43)	
	Empc Correction				372	74	8	20	9		
389.8158	35.333	35.375	-3	0.976	1240	246	6	15	41		
391.8127	35.299	35.375	-5	0.975	1218	231	8	20	29	1.02(1.05-1.43)	
	Empc Correction				999	198	8	20	25		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.609	38.596	1	1.055	10049	2780	16	40	174		
419.8220	38.592	38.596	0	1.055	25316	6747	10	25	675	0.40(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.617	38.618	0	1.000	75057	19155	33	82	580		
409.7788	38.609	38.618	-1	1.000	73989	19207	21	52	915	1.01(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											M
417.8250	39.846	39.850	0	1.089	13022	4041	16	40	253		M
419.8220	39.855	39.850	0	1.089	28102	8136	10	25	814	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.863	39.872	-1	1.000	21401	5985	33	82	181		
409.7788	39.863	39.872	-1	1.000	19908	5283	21	52	252	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.979	39.245	-16	1.010	13574	3534	33	82	107		
409.7788	38.979	39.245	-16	1.010	12819	3535	21	52	168	1.06(0.88-1.20)	

Report Date: 25-Aug-2021 15:21:27 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.552	39.547	0	1.081	20520	6157	11	27	560		
437.8140	39.552	39.547	0	1.081	17393	4979	5	12	996	1.18(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											M
423.7767	39.569	39.561	0	1.000	3723	1013	8	20	127		M
425.7737	39.560	39.561	0	1.000	3636	1102	5	12	220	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											M
423.7767	38.920	39.241	-19	0.984	3758	1081	8	20	135		M
425.7737	38.929	39.241	-19	0.984	3510	884	5	12	177	1.07(0.88-1.20)	
13C-OCDD											RQ
469.7780	42.049	42.036	1	1.149	25425	6488	13	32	499		
471.7750	42.049	42.036	1	1.149	34275	8105	14	35	579	0.74(0.76-1.02)	
	Empc Correction				28567	7289	14	35	521		
OCDF											
441.7428	42.141	42.137	0	1.002	23444	5746	11	27	522		
443.7399	42.141	42.137	0	1.002	26346	5807	26	65	223	0.89(0.76-1.02)	
OCDD											
457.7377	42.065	42.053	1	1.000	28378	6851	10	25	685		
459.7348	42.057	42.053	0	1.000	33883	8640	11	27	785	0.84(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:21:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Lims ID:	320-76888-A-1-A		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 04:45:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	19

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	71421	11836

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		10.000	71421	11836

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.498	65978	9987	69870	13106	17.6	0.94	RQ
17.498	53799	10091	69870	13106	16.0		Empc Correction
17.945	264800	40382	352879	54788	80.1	0.75	
18.443	422760	50259	546950	65158	125.7	0.77	
18.864	339390	45615	449403	60091	102.2	0.76	
19.242	463115	66033	625495	91139	141.1	0.74	
19.741	4786930	690434	6478416	923841	1460.2	0.74	
20.145	184842	24132	238472	32787	54.9	0.78	
21.263	752531	99332	993988	127866	226.4	0.76	
21.727	161035	18879	188084	22927	45.3	0.86	
23.646	768995	135025	926260	166543	219.7	0.83	a
Signal Totals:							
	8198197	1180182	10869817	1558246			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	19080193	2738324				0.76	RQa
	19068014	2738428					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2473.2 = (19080193 * 10.000) / (71421 * 1.080)

Empc Amount: 2471.6 = (19068014 * 10.000) / (71421 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 25-Aug-2021 15:21:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Lims ID:	320-76888-A-1-A		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 04:45:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	19

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	51263	7686

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		10.000	51263	7686

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.484	137799	16835	174210	21763	56.6	0.79	
Signal Totals:							
	137799	16835	174210	21763			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	312009	38598				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 56.600 = (312009 * 10.000) / (51263 * 1.075)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Lims ID:	320-76888-A-1-A		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 04:45:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	19

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	61657	10752
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	71160	11332

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	66408	11042

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
23.783	2917	337	109	51	0.4419	26.76	RQ
23.783	168	79	109	51			Empc Correction
24.058	1653	370	1054	438	0.3954	1.57	
24.170	82	47	29	16	0.0162	2.83	RQ
24.170	44	24	29	16			Empc Correction
24.428	50	7	188	81	0.0348	0.27	RQ
24.428	50	7	32	4			Empc Correction
25.151	92	31	69	34	0.0235	1.33	

Compound is Marked ND

Report Date: 25-Aug-2021 15:21:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Lims ID:	320-76888-A-1-A		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 04:45:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	19

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	61657	10752
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	71160	11332

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	66408	11042

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.827	110575	19007	69488	12103	26.3	1.59	
26.727	10396	1534	7174	1117	2.57	1.45	
27.165	22728	4394	11857	2916	5.05	1.92	RQ
27.165	18378	4519	11857	2916	4.42		Empc Correction
27.872	71587	11519	46404	7559	17.2	1.54	
29.135	42257	5384	25828	3496	9.94	1.64	
30.826	10032	1387	6121	871	2.36	1.64	
Signal Totals:							
	263225	43350	166872	28062			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	434447	71287				1.60	RQ
	430097	71412					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 63.450 = (434447 * 10.000) / (66408 * 1.031)
Empc Amount: 62.815 = (430097 * 10.000) / (66408 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 25-Aug-2021 15:21:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Lims ID:	320-76888-A-1-A		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 04:45:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	19

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	36528	5535

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		10.000	36528	5535

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.071	442	94	34537	5911	9.15	0.01	RQ
26.071	442	94	285	60	0.1902		Empc Correction
Signal Totals:							
	442	94	285	60			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	34979	6005				0.01	RQ
	727	154					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 9.150 = (34979 * 10.000) / (36528 * 1.046)

Empc Amount: 0.1902 = (727 * 10.000) / (36528 * 1.046)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 25-Aug-2021 15:21:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Lims ID:	320-76888-A-1-A		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 04:45:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	19

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	59276	11647
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	63496	11725
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	54884	10677
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	50485	11169

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		10.000	57035	11304

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.447	23866	3550	17135	2898	5.97	1.39	
34.289	8474	1672	6571	1095	2.19	1.29	
35.787	6233	1282	4419	1155	1.55	1.41	Ma
36.890	18792	4090	13664	3183	4.72	1.38	Ma
Signal Totals:							
	57365	10594	41789	8331			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	99154	18925				1.37	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 14.428 = (99154 * 10.000) / (57035 * 1.205)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 25-Aug-2021 15:21:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Lims ID:	320-76888-A-1-A		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 04:45:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	19

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	47928	10187
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	42187	9254
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		10.000	45057	9720

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.230	564	133	531	133	0.2305	1.06	
34.971	462	92	462	114	0.1945	1.00	RQ
34.971	462	92	372	74	0.1755		Empc Correction
35.333	1240	246	1218	231	0.5173	1.02	RQ
35.333	1240	246	999	198	0.4712		Empc Correction
Signal Totals:							
	2266	471	1902	405			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4477	949				1.02	RQ
	4168	876					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.9423 = (4477 * 10.000) / (45057 * 1.055)

Empc Amount: 0.8772 = (4168 * 10.000) / (45057 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 25-Aug-2021 15:21:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Lims ID:	320-76888-A-1-A		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 04:45:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	19

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	35365	9527
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	41124	12177

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		10.000	38244	10852

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.979	13574	3534	12819	3535	5.02	1.06	
Signal Totals:							
	13574	3534	12819	3535			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	26393	7069				1.06	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 5.017 = (26393 * 10.000) / (38244 * 1.376)

Report Date: 25-Aug-2021 15:21:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Lims ID:	320-76888-A-1-A		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 04:45:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	19

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	37913	11136

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		10.000	37913	11136

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.920	3758	1081	3510	884	1.83	1.07	M
Signal Totals:							
	3758	1081	3510	884			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7268	1965				1.07	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.825 = (7268 * 10.000) / (37913 * 1.050)

QC Flag Legend

Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 20.46
Area: 35225
Amount: 3.325753
Amount Units: pg/ul

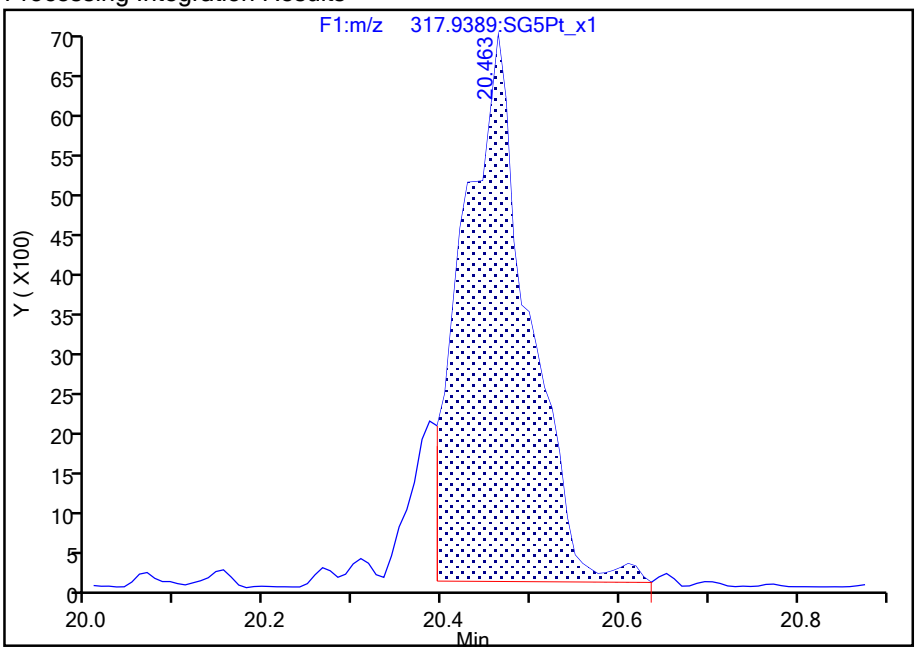

Manual Integration Results

RT: 20.46
Area: 39652
Amount: 3.545521
Amount Units: pg/ul

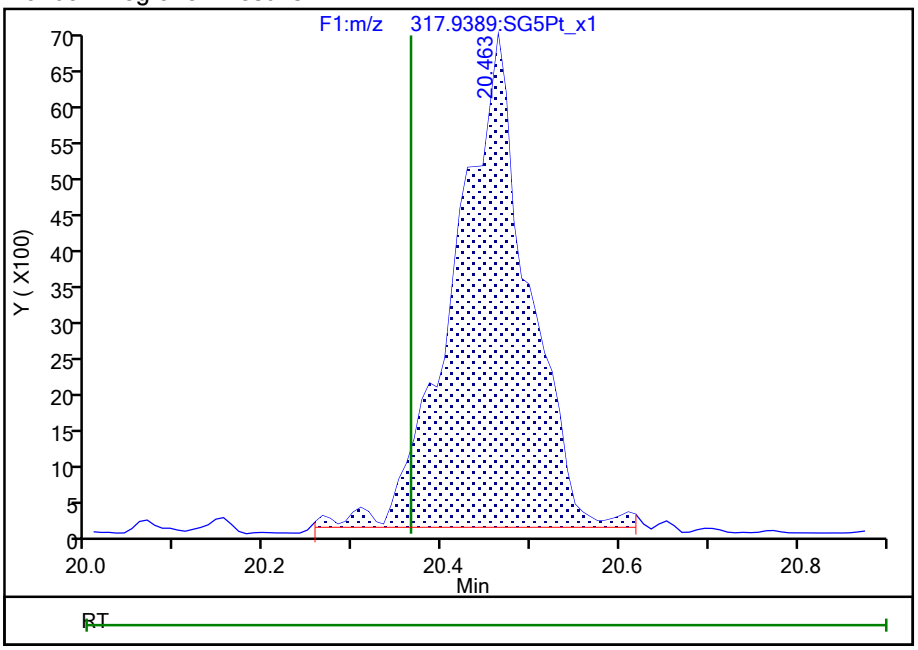

Reviewer: dadunj, 23-Aug-2021 09:32:26

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 21.80
Area: 16353
Amount: 3.079901
Amount Units: pg/ul

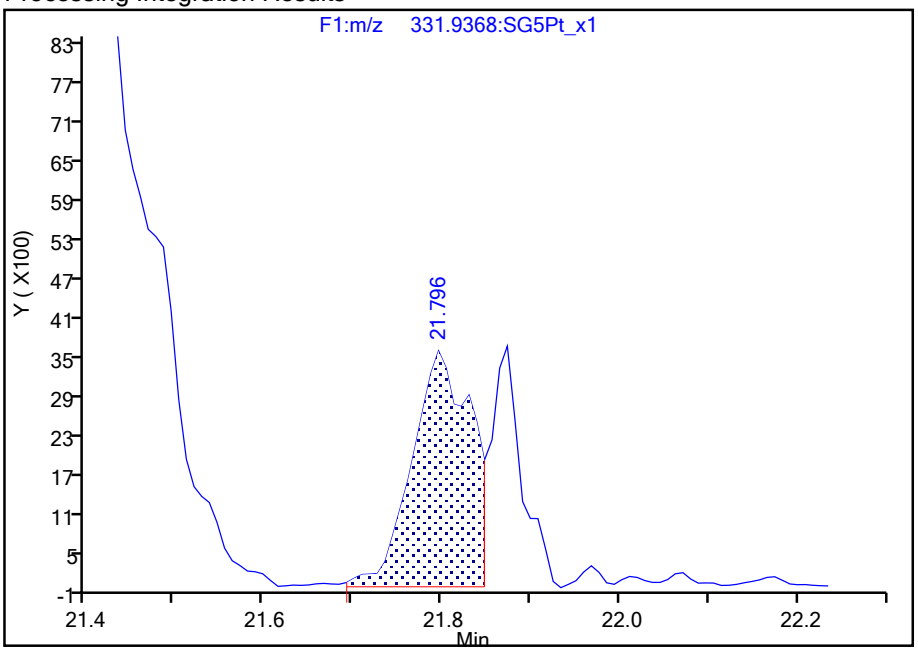

Manual Integration Results

RT: 21.87
Area: 24668
Amount: 3.676189
Amount Units: pg/ul

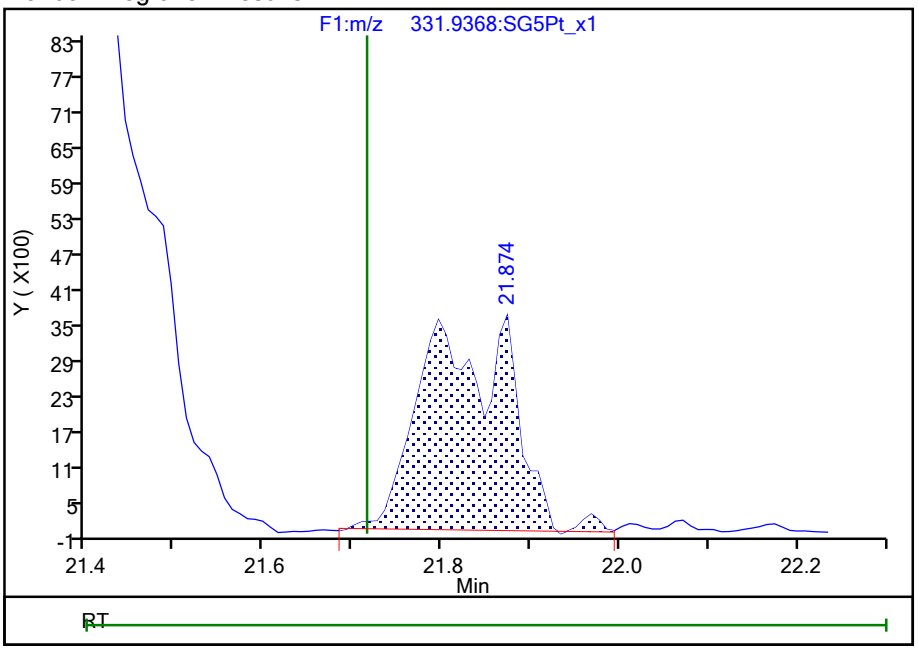

Reviewer: dadunj, 23-Aug-2021 09:32:44

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.63
Area: 627
Amount: 2.509548
Amount Units: pg/ul

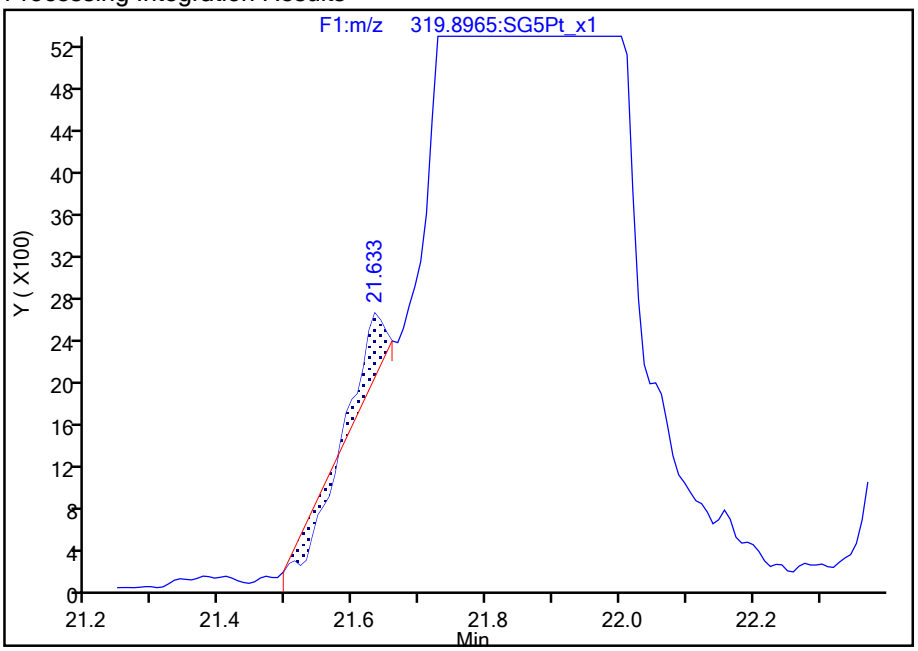

Manual Integration Results

RT: 21.84
Area: 1571725
Amount: 643.2583
Amount Units: pg/ul

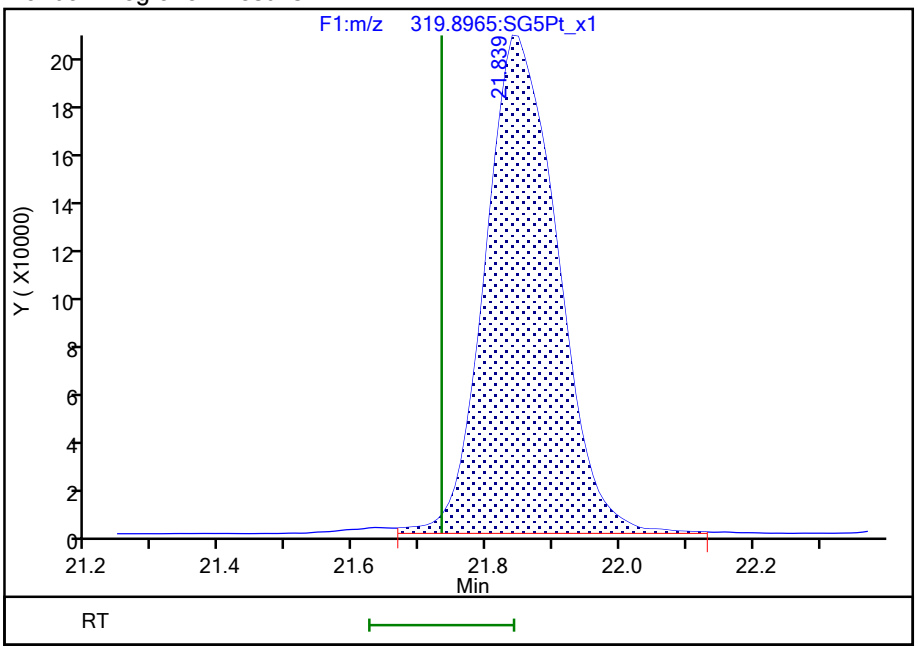

Reviewer: krenns, 25-Aug-2021 15:21:18

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.30
Area: 245584
Amount: 61.203314
Amount Units: pg/ul

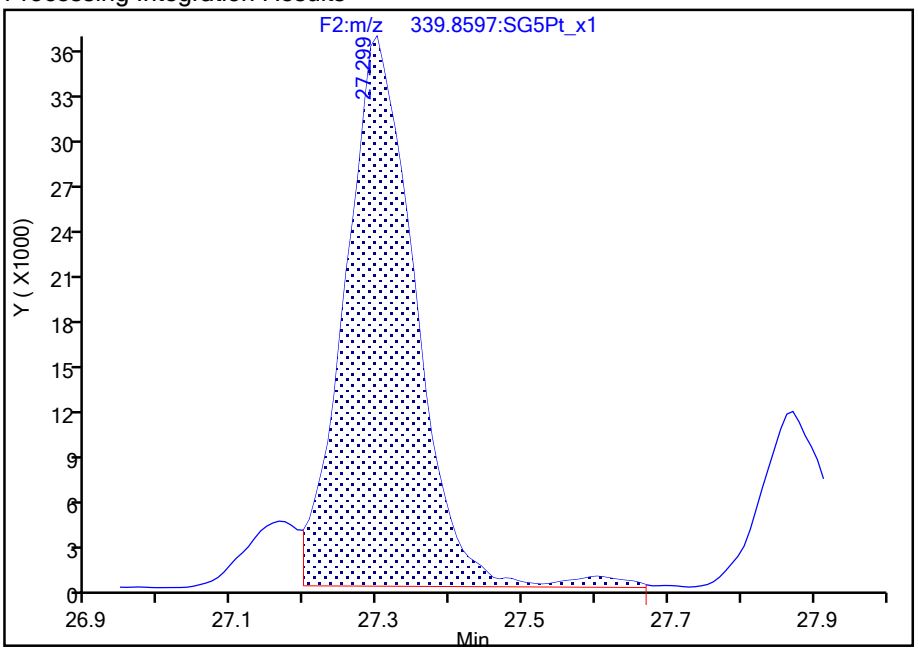

Manual Integration Results

RT: 27.30
Area: 241654
Amount: 60.598724
Amount Units: pg/ul

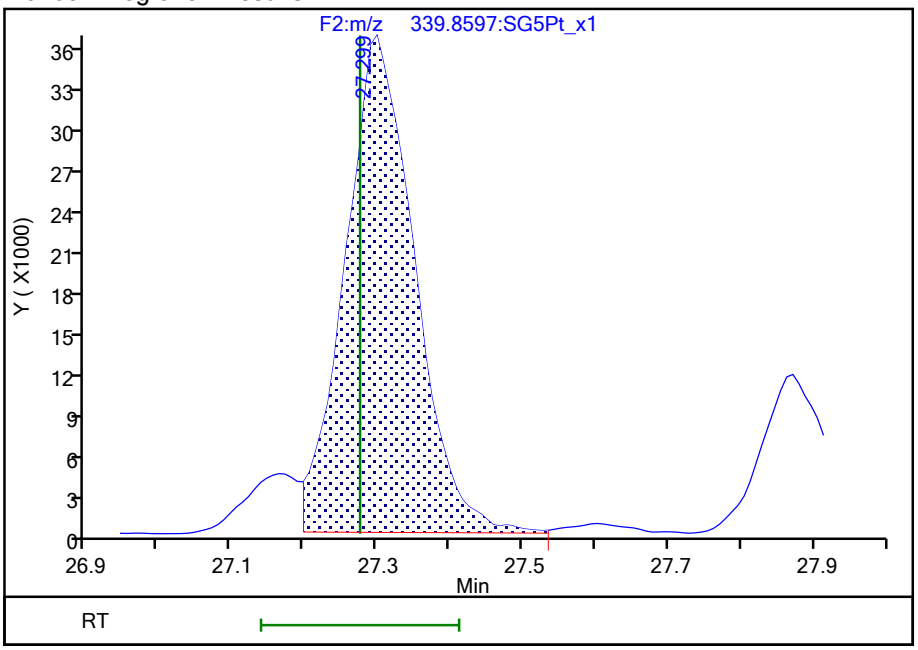

Reviewer: dadunj, 23-Aug-2021 09:33:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 1

Processing Integration Results

RT: 29.56
Area: 19407
Amount: 3.181185
Amount Units: pg/ul

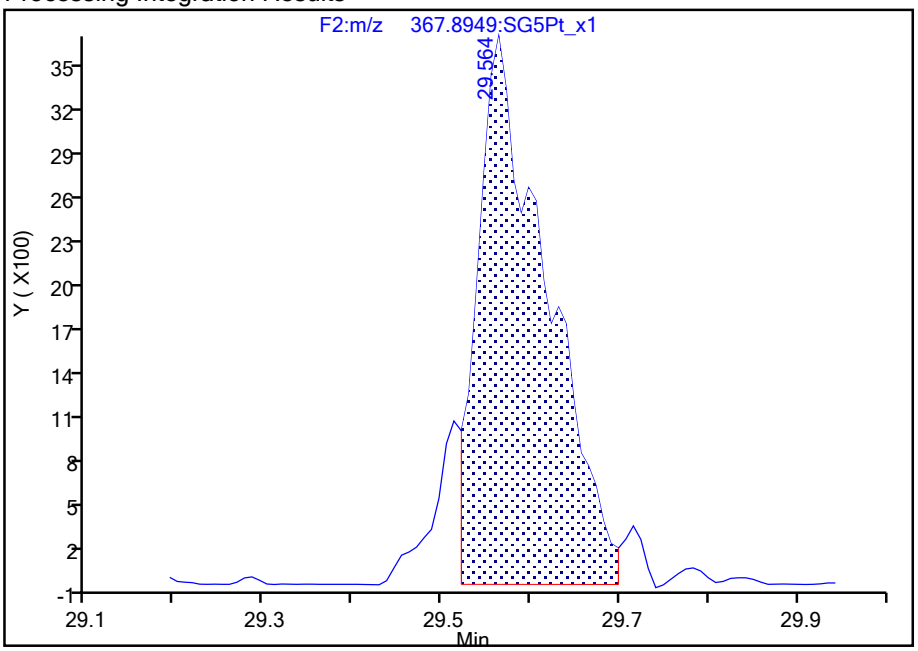

Manual Integration Results

RT: 29.56
Area: 21821
Amount: 3.406295
Amount Units: pg/ul

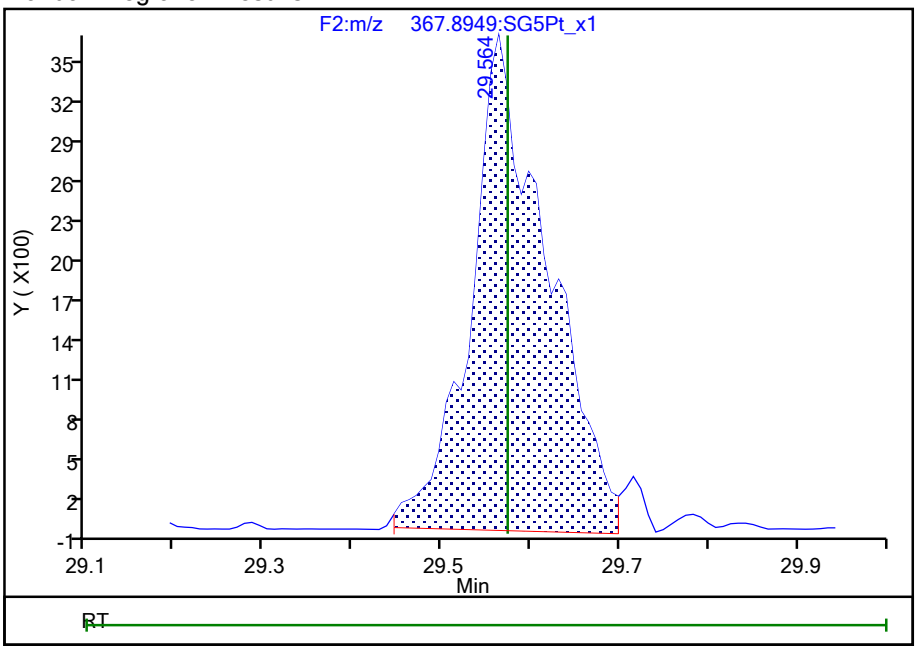

Reviewer: dadunj, 23-Aug-2021 09:33:27

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.91
Area: 16182
Amount: 3.678196
Amount Units: pg/ul

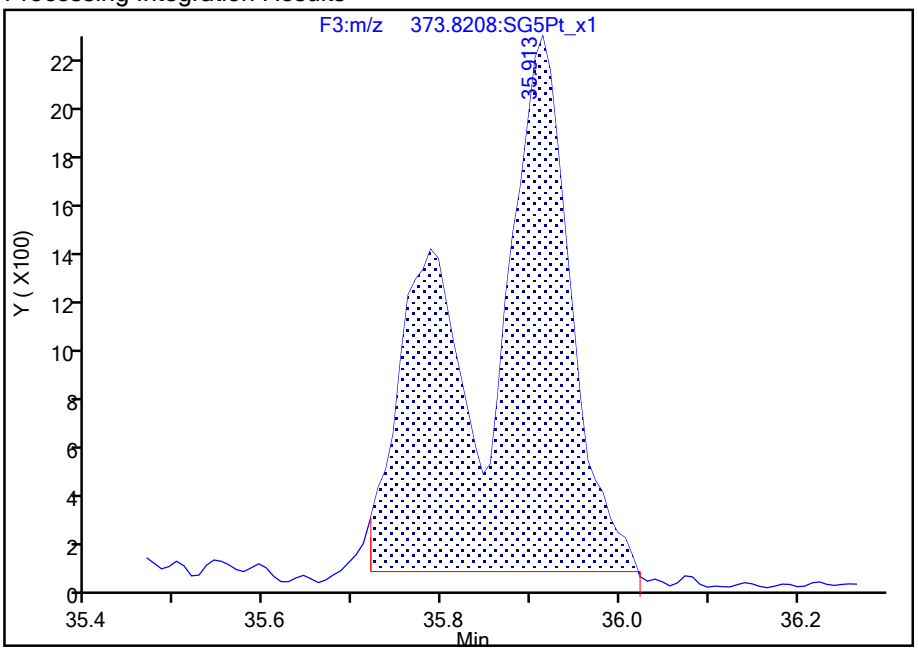

Manual Integration Results

RT: 35.91
Area: 9949
Amount: 2.743082
Amount Units: pg/ul

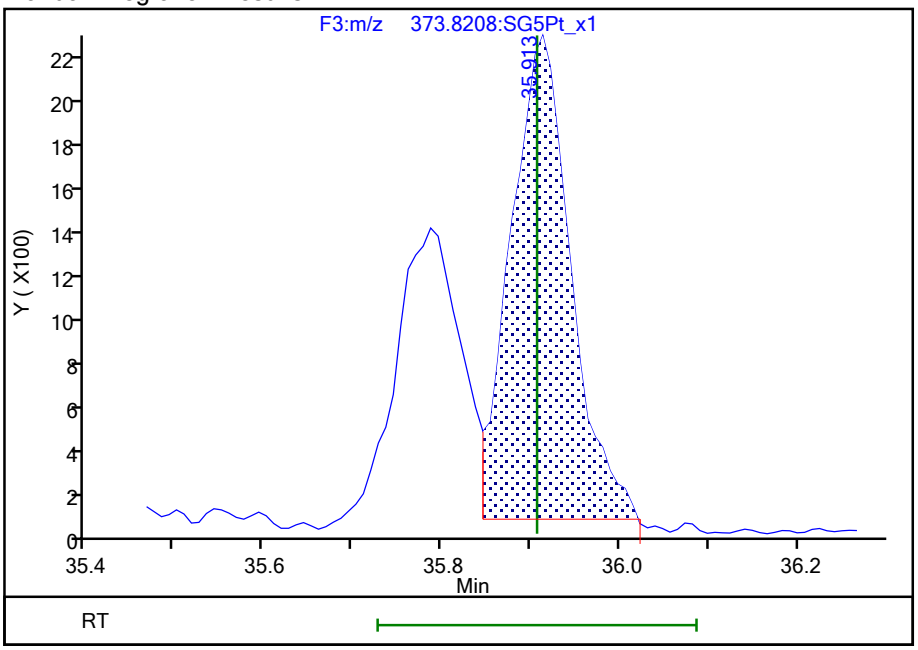

Reviewer: dadunj, 23-Aug-2021 09:34:20

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.89
Area: 22715
Amount: 6.322894
Amount Units: pg/ul

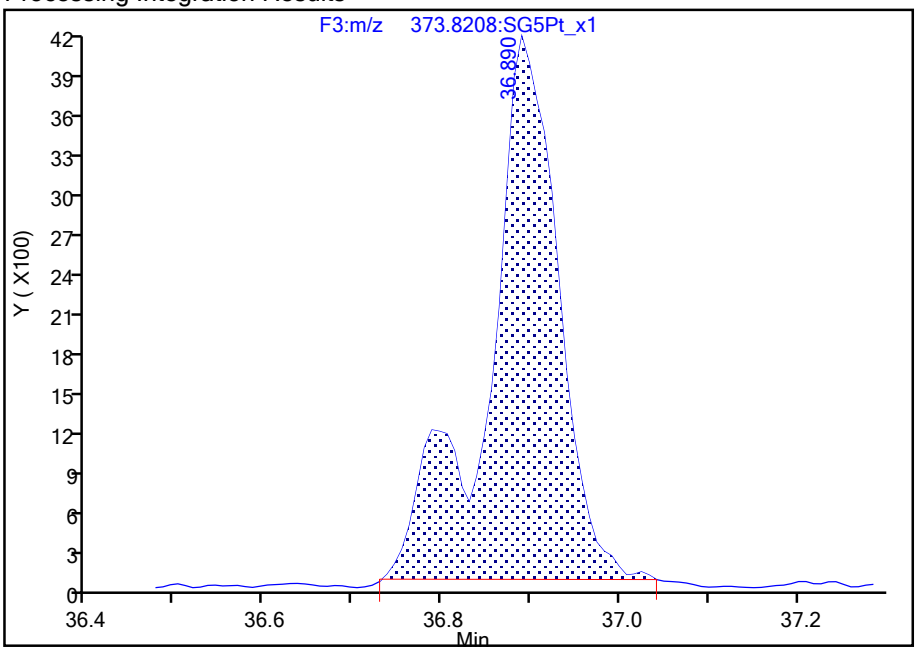

Manual Integration Results

RT: 36.79
Area: 3913
Amount: 1.136447
Amount Units: pg/ul

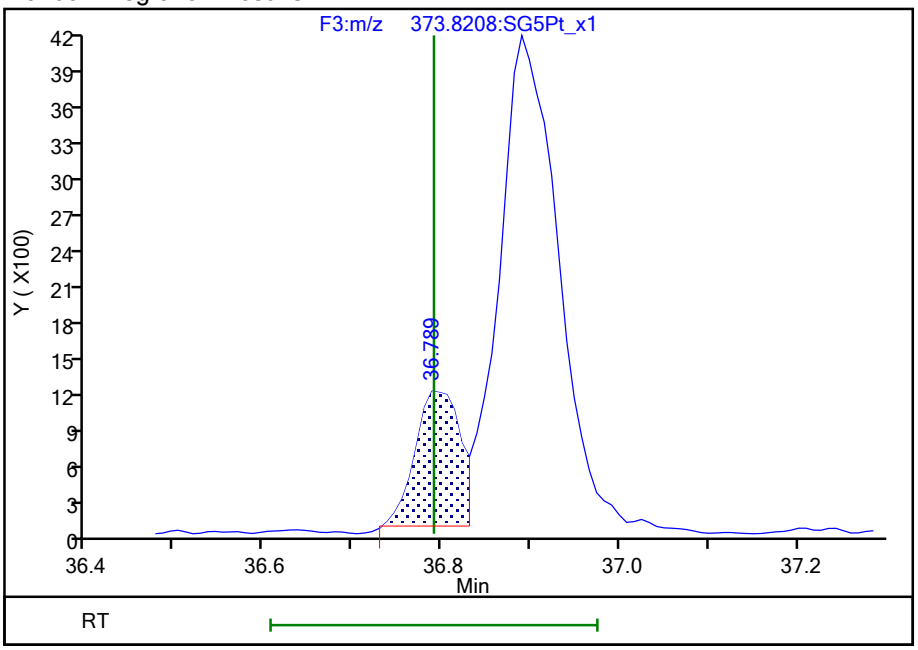

Reviewer: dadunj, 23-Aug-2021 09:34:40

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.89
Area: 16871
Amount: 6.322894
Amount Units: pg/ul

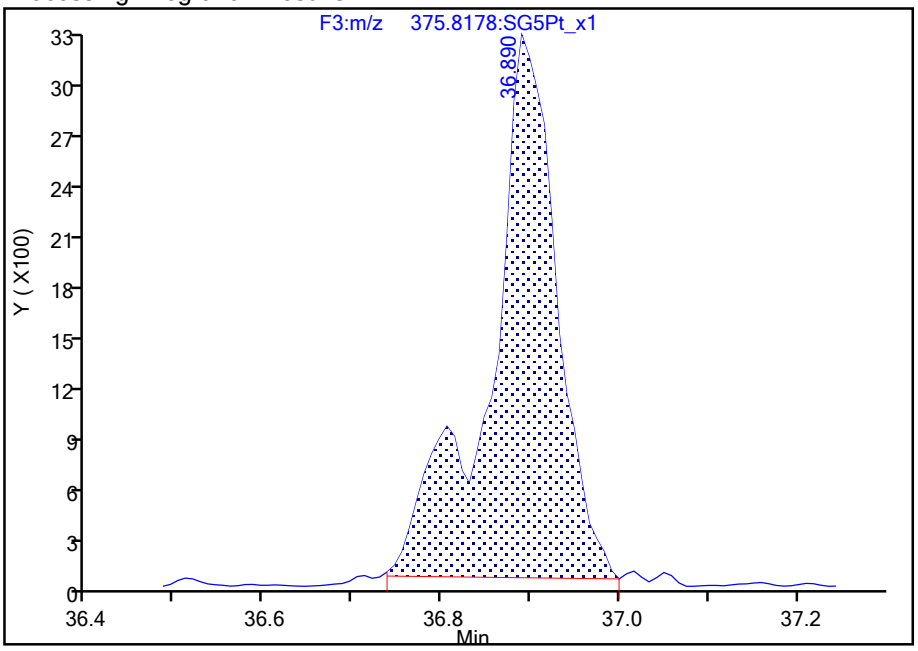

Manual Integration Results

RT: 36.81
Area: 3202
Amount: 1.136447
Amount Units: pg/ul

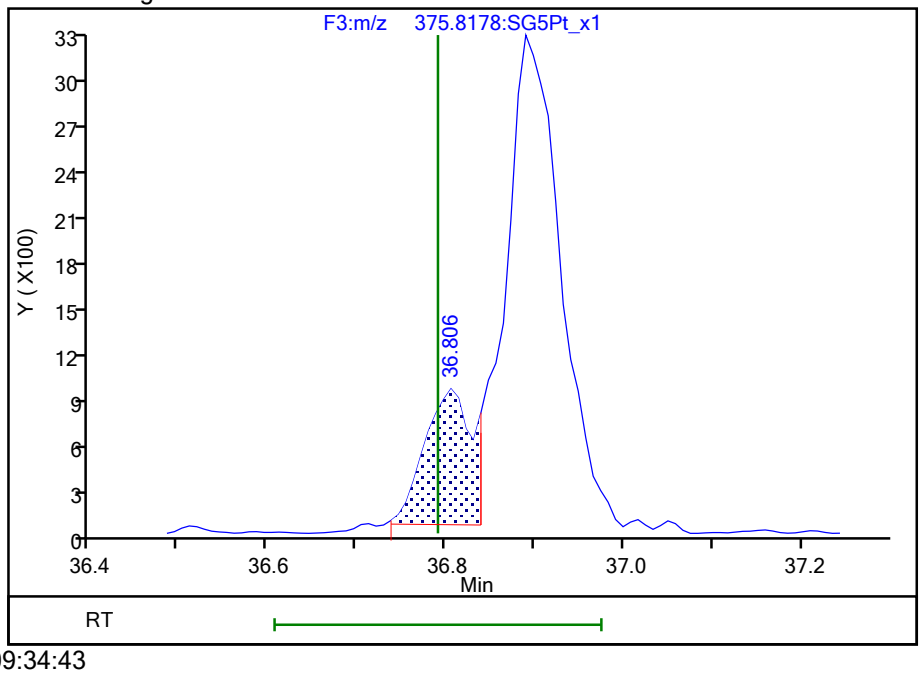

Reviewer: dadunj, 23-Aug-2021 09:34:43

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

Not Detected
RT: 33.09- 36.93

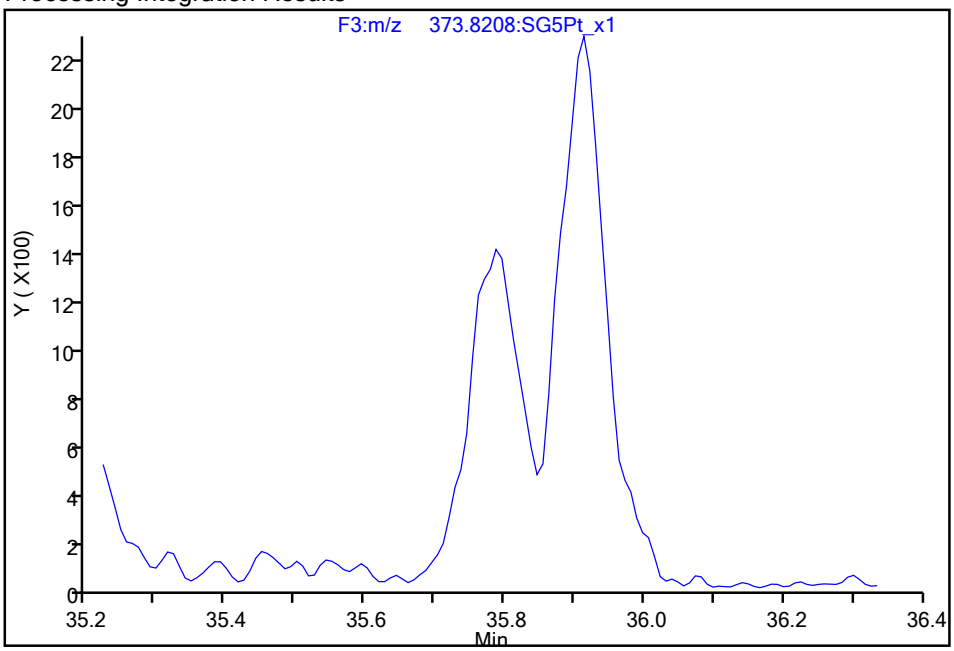

Manual Integration Results

RT = 35.787 Area = 6233 M

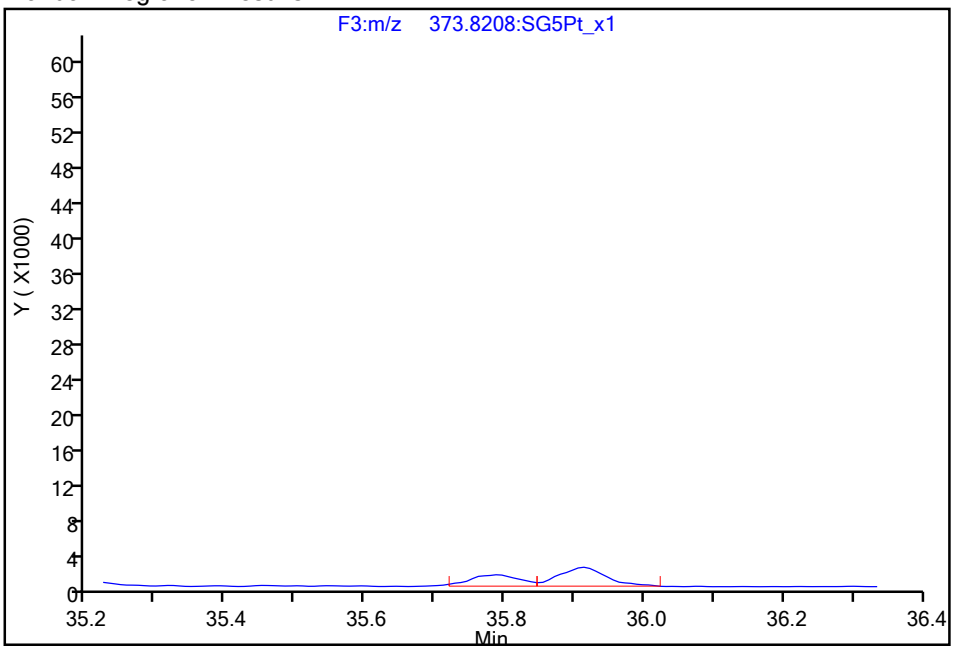

Reviewer: dadunj, 23-Aug-2021 09:34:53

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 36.890 Area = 22715

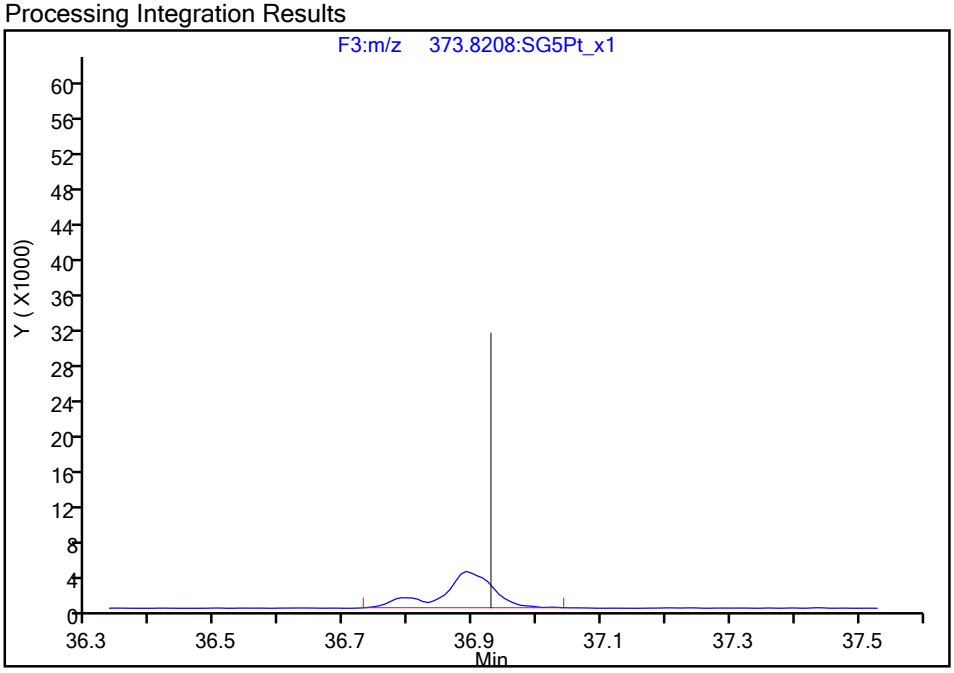

Manual Integration Results

RT = 36.890 Area = 18792 M

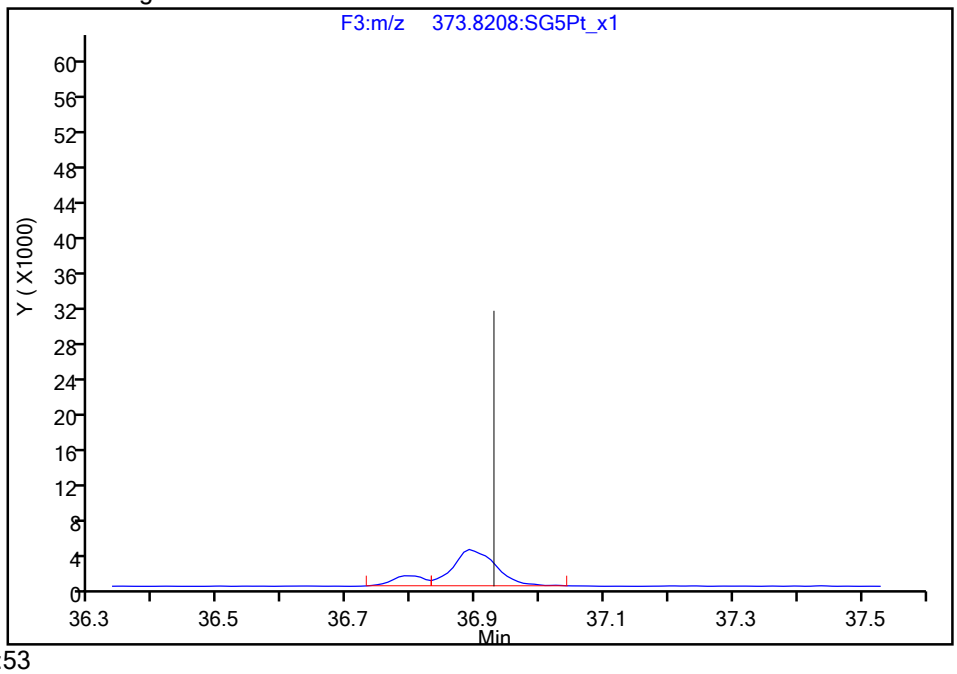

Reviewer: dadunj, 23-Aug-2021 09:34:53

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 36.26
Area: 959
Amount: 0.245075
Amount Units: pg/ul

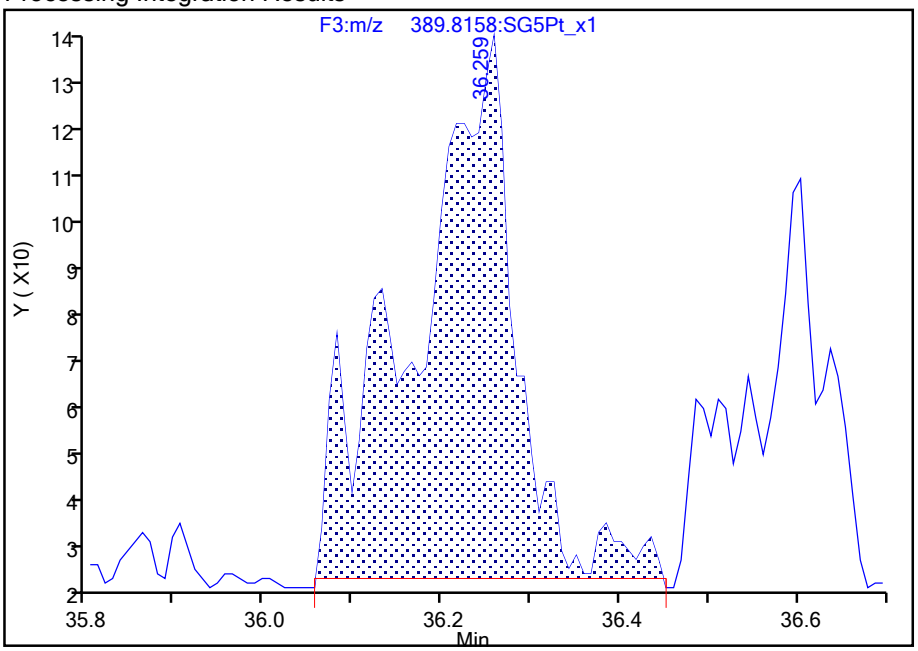

Manual Integration Results

RT: 36.13
Area: 263
Amount: 0.098148
Amount Units: pg/ul

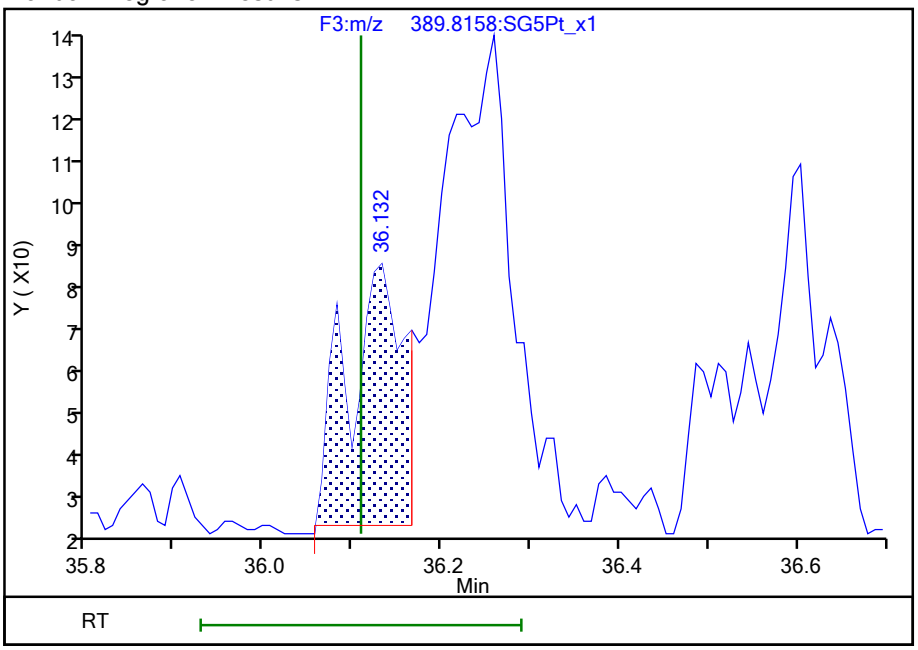

Reviewer: dadunj, 23-Aug-2021 09:35:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 36.23
Area: 287
Amount: 0.245075
Amount Units: pg/ul

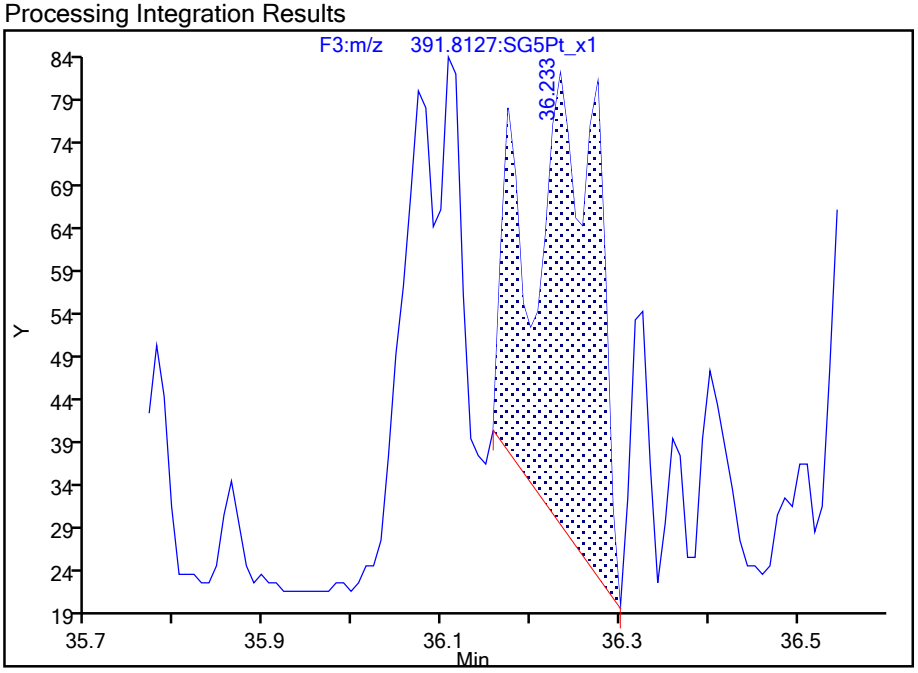

Manual Integration Results

RT: 36.11
Area: 236
Amount: 0.098148
Amount Units: pg/ul

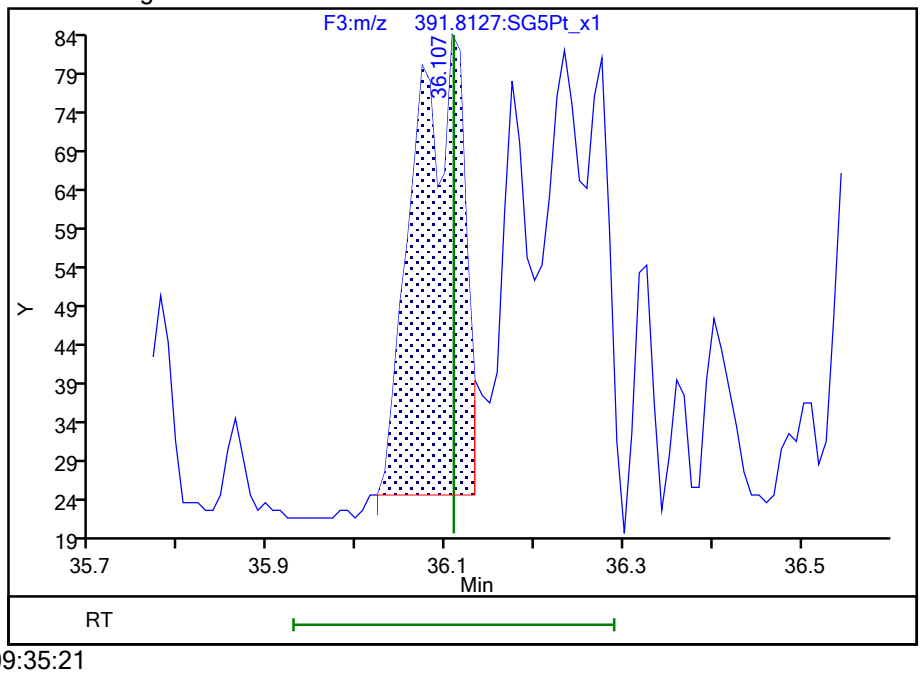

Reviewer: dadunj, 23-Aug-2021 09:35:21
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785234

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 3

Processing Integration Results

RT: 36.26
Area: 1246
Amount: 0.297331
Amount Units: pg/ul

Manual Integration Results

RT: 36.26
Area: 1014
Amount: 0.241969
Amount Units: pg/ul
Reviewer: dadunj, 23-Aug-2021 09:35:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 36.26
Area: 959
Amount: 0.297331
Amount Units: pg/ul

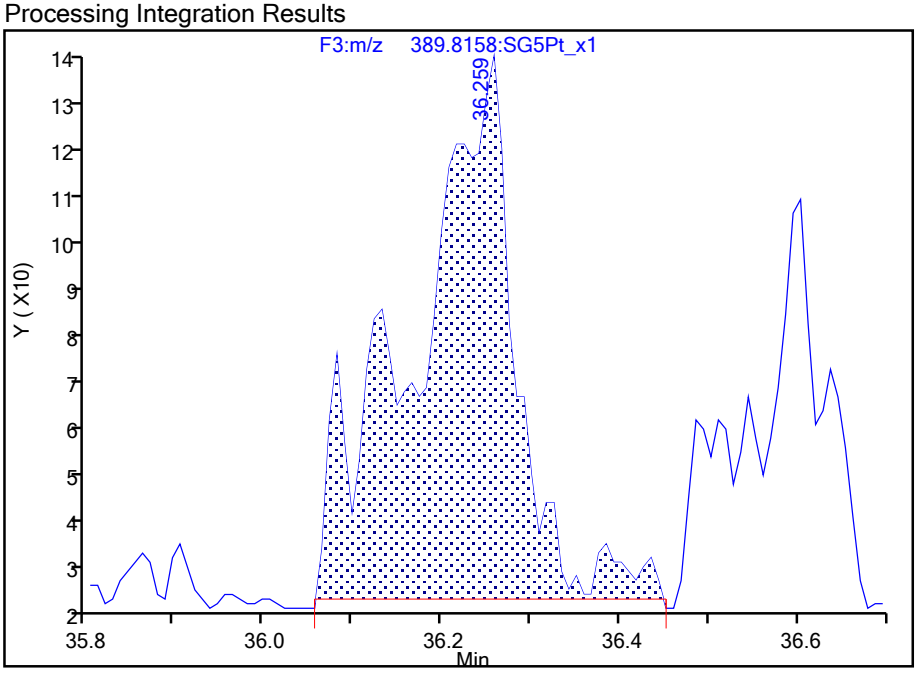

Manual Integration Results

RT: 36.26
Area: 659
Amount: 0.241969
Amount Units: pg/ul

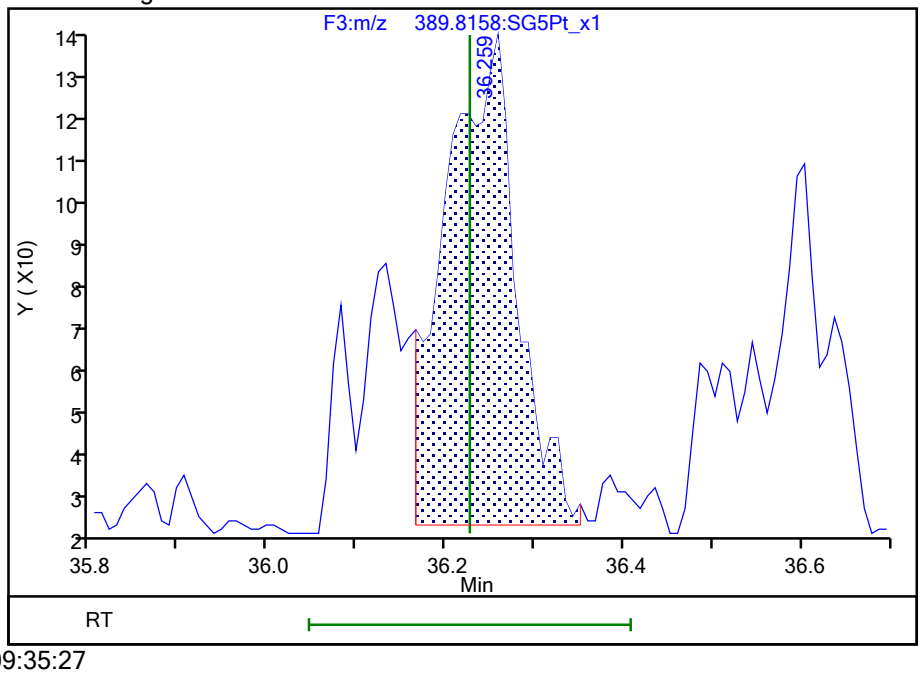

Reviewer: dadunj, 23-Aug-2021 09:35:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 36.23
Area: 287
Amount: 0.297331
Amount Units: pg/ul

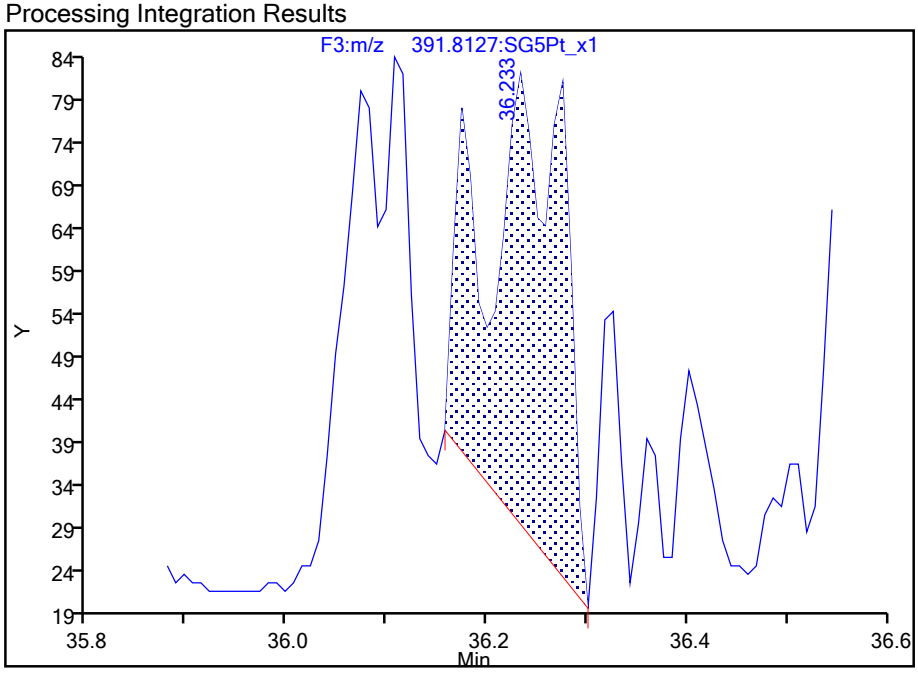

Manual Integration Results

RT: 36.23
Area: 355
Amount: 0.241969
Amount Units: pg/ul

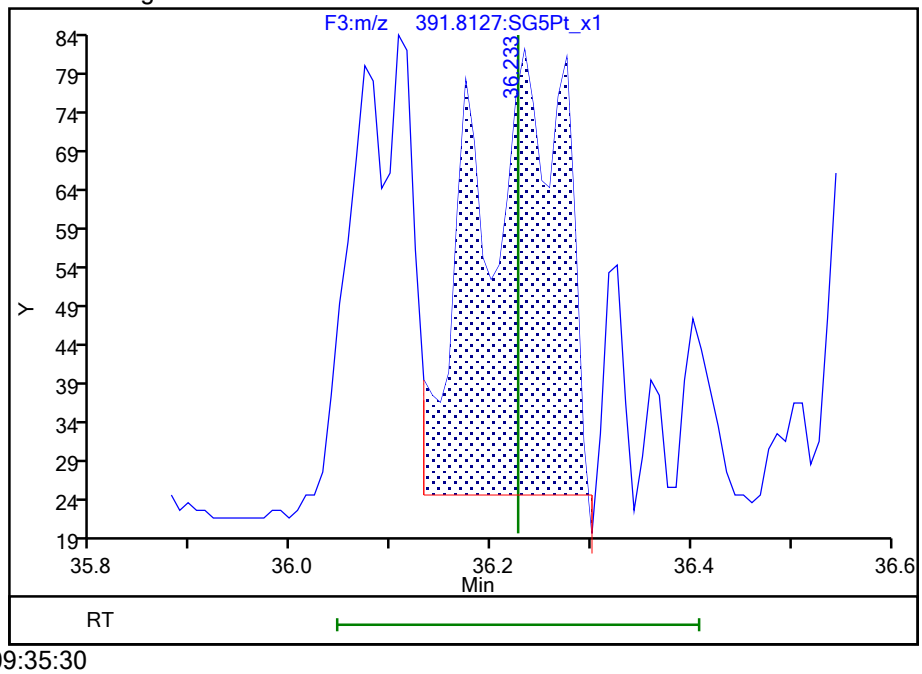

Reviewer: dadunj, 23-Aug-2021 09:35:30

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 36.57
Area: 390
Amount: 0.181246
Amount Units: pg/ul

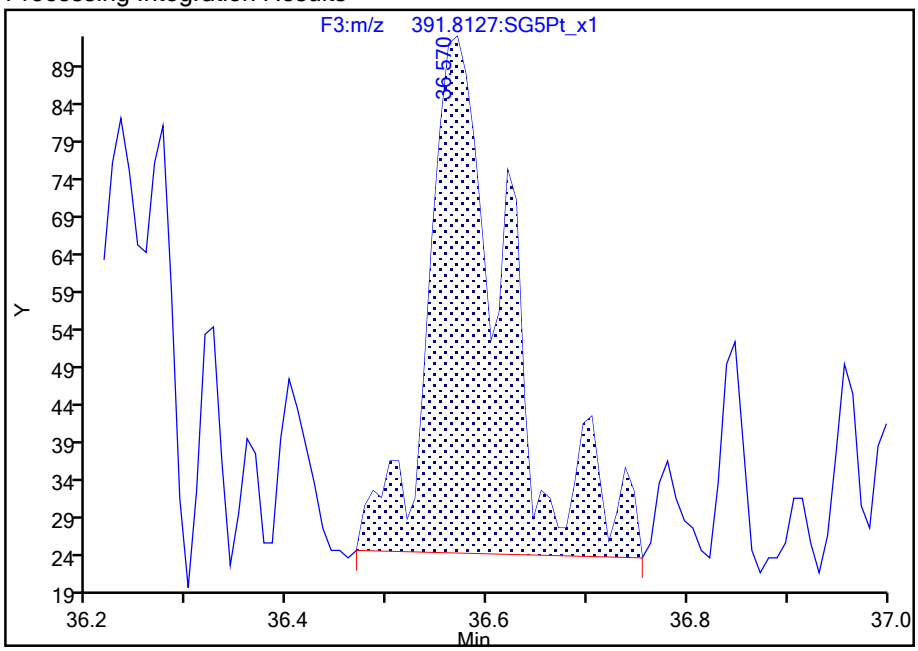

Manual Integration Results

RT: 36.57
Area: 340
Amount: 0.171244
Amount Units: pg/ul

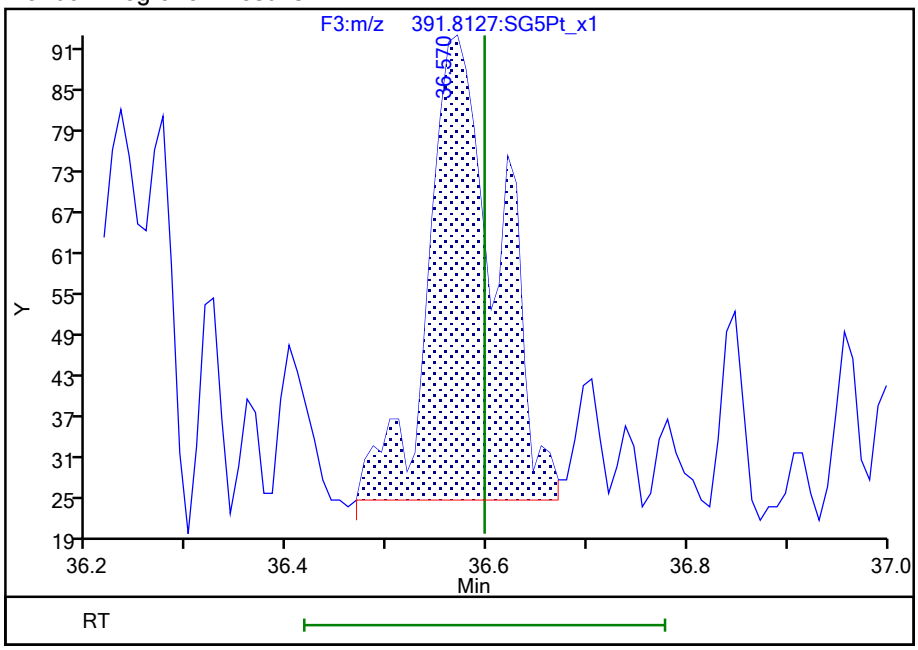

Reviewer: dadunj, 23-Aug-2021 09:35:37

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

RT: 39.85
Area: 13163
Amount: 4.212297
Amount Units: pg/ul

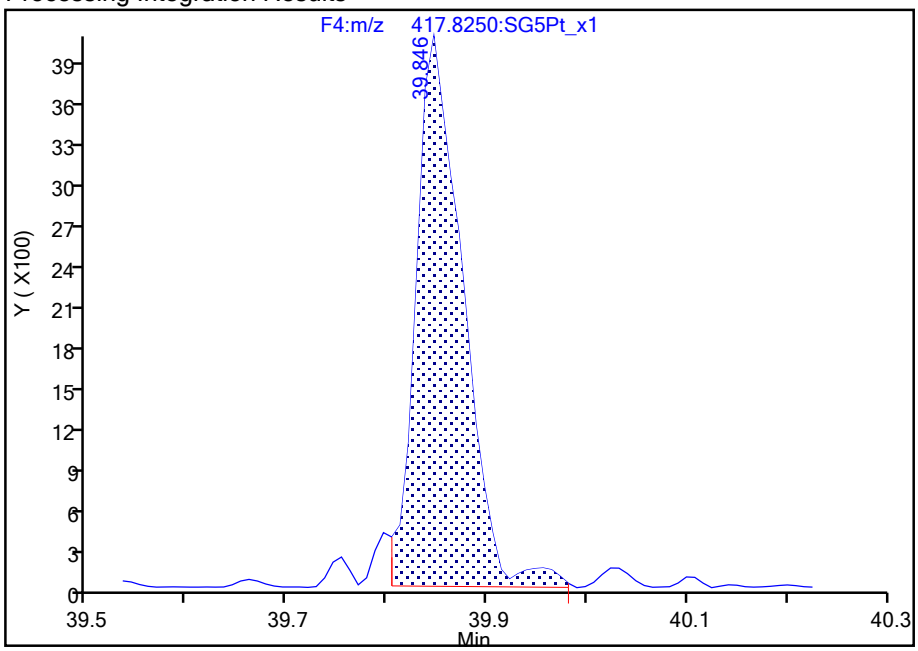

Manual Integration Results

RT: 39.85
Area: 13022
Amount: 4.197904
Amount Units: pg/ul

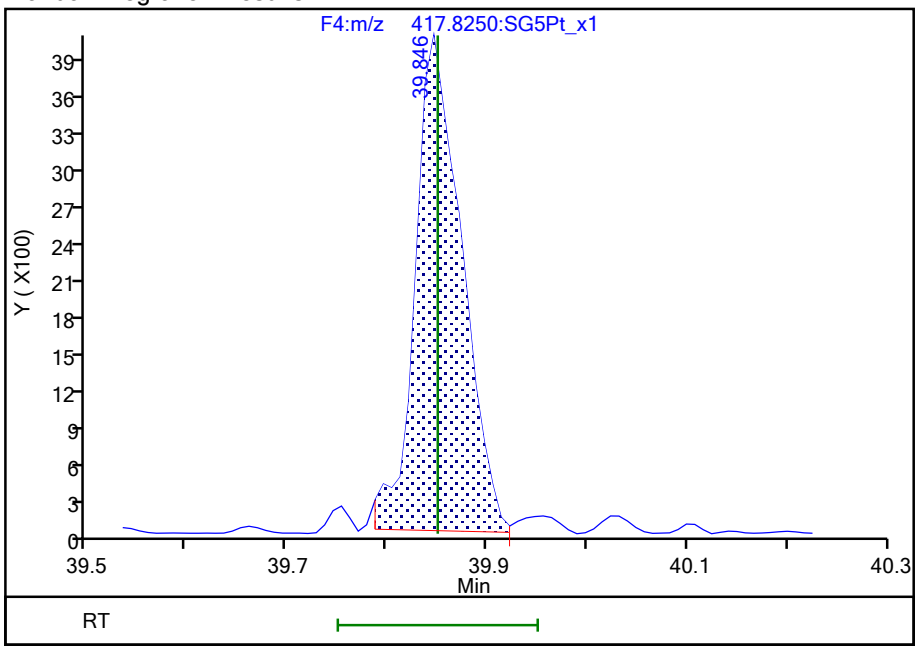

Reviewer: dadunj, 23-Aug-2021 09:35:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 39.57
Area: 3820
Amount: 1.872424
Amount Units: pg/ul

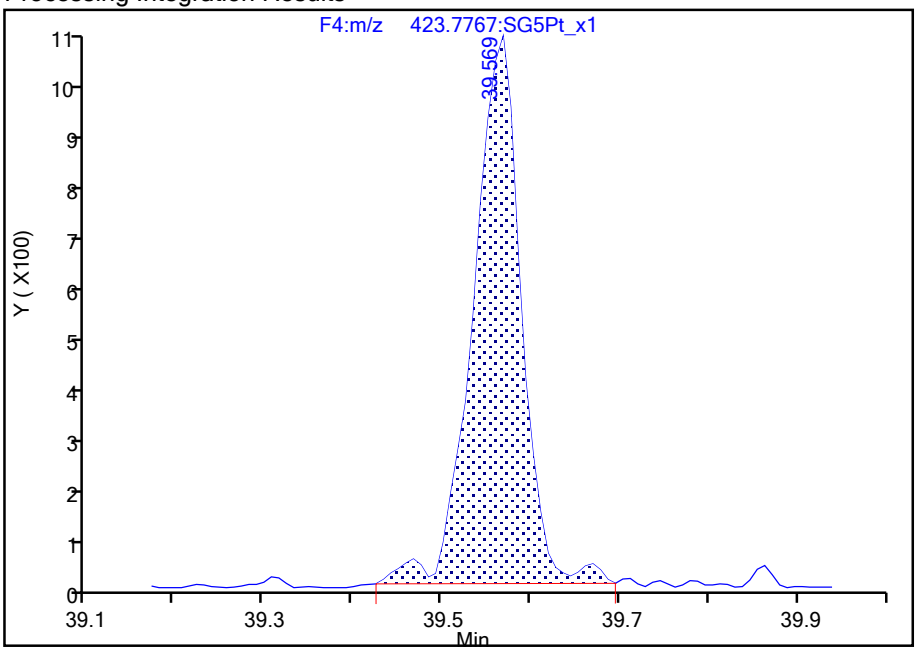

Manual Integration Results

RT: 39.57
Area: 3723
Amount: 1.848065
Amount Units: pg/ul

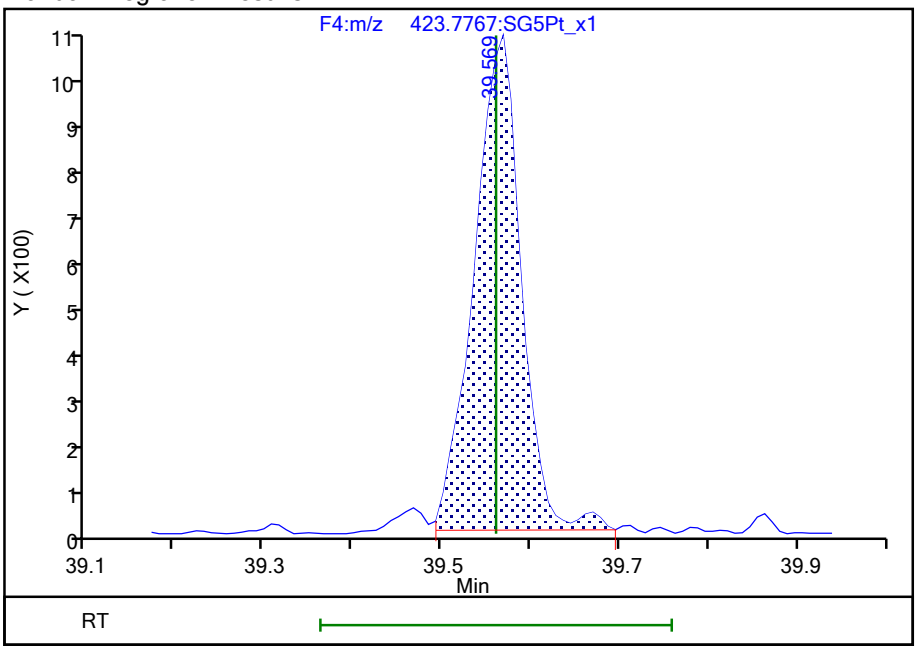

Reviewer: dadunj, 23-Aug-2021 09:36:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d				
Injection Date:	20-Aug-2021 04:45:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	19
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

Non-2,3,7,8-sub-HpCDD, Signal: 1, m/z: 423.7767, RT: (38.86- 39.62)

Signal: 1

Processing Integration Results

RT = 38.920 Area = 3835

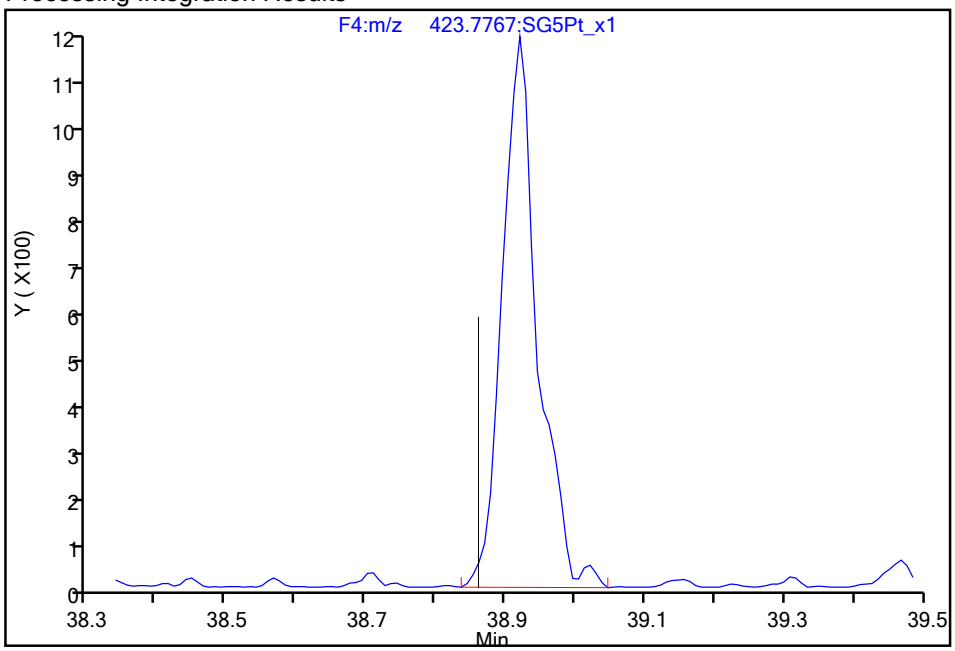

Manual Integration Results

RT = 38.920 Area = 3758 M

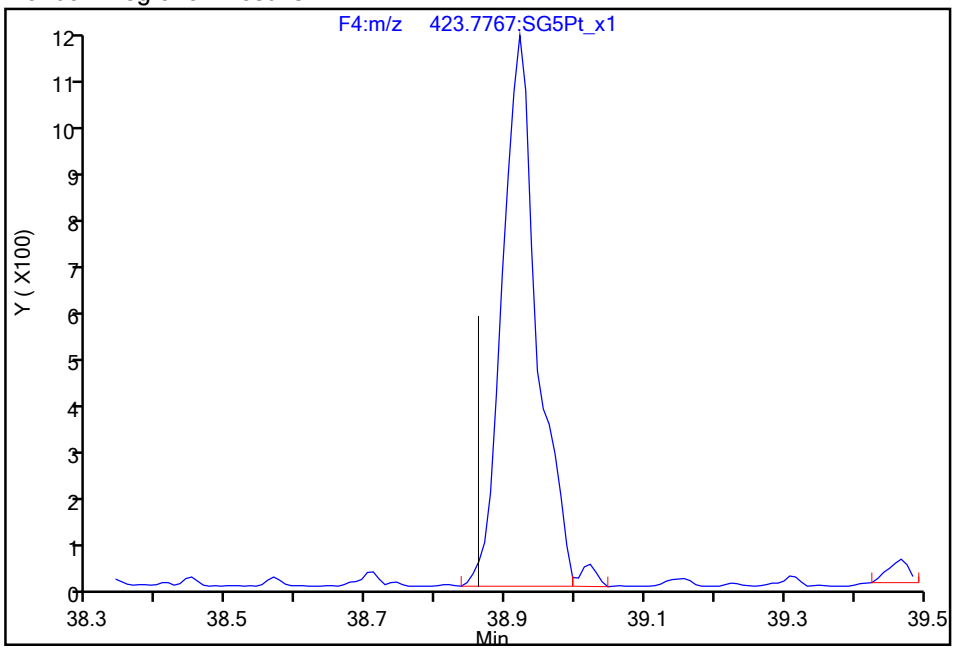

Reviewer: dadunj, 23-Aug-2021 09:36:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:21:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

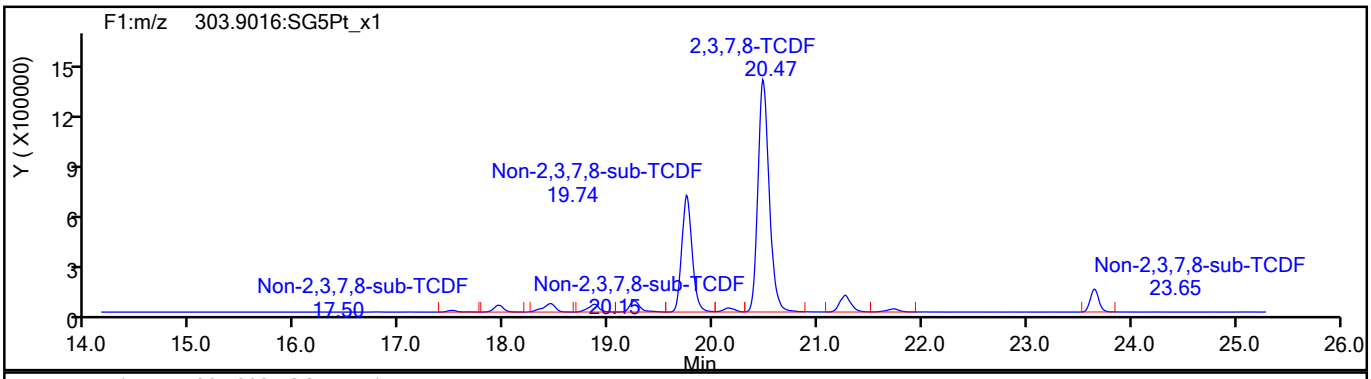

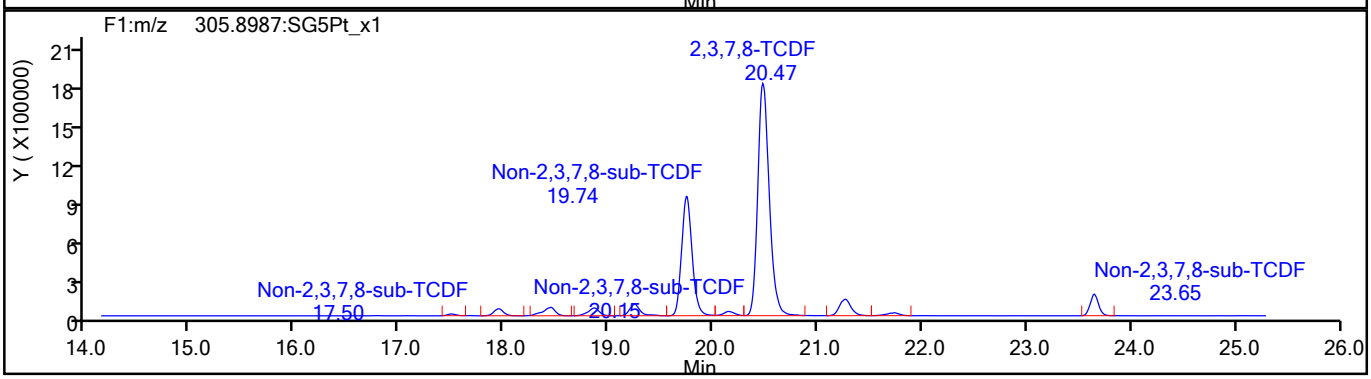

TCDF Standards

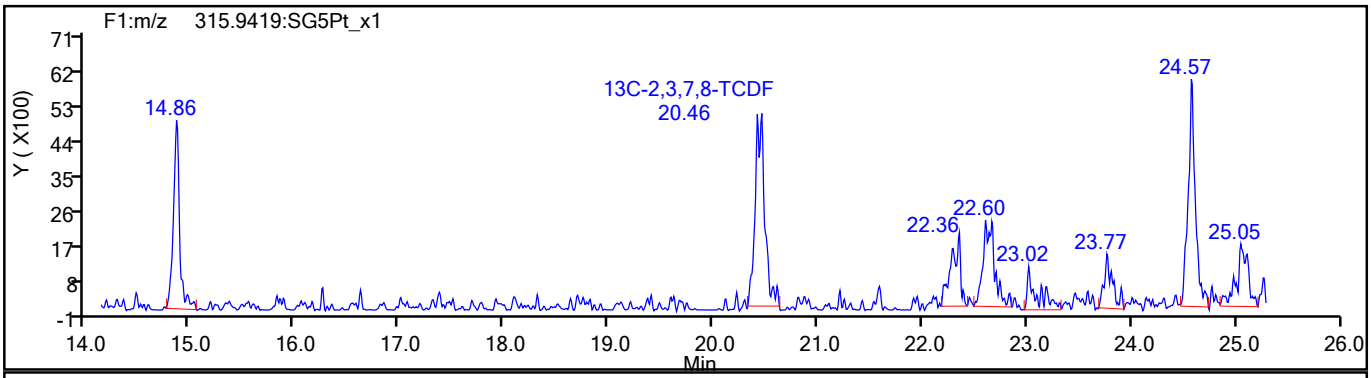

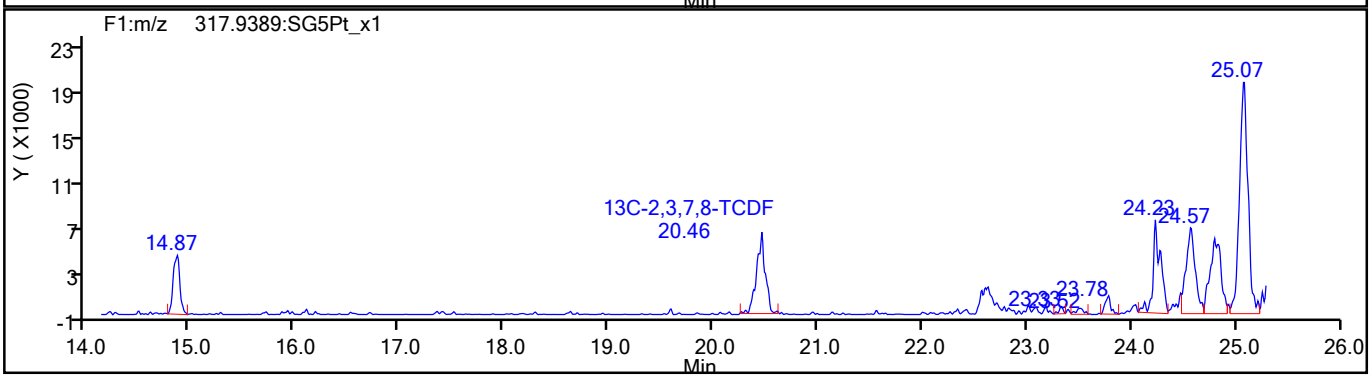

785242

Report Date: 25-Aug-2021 15:21:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

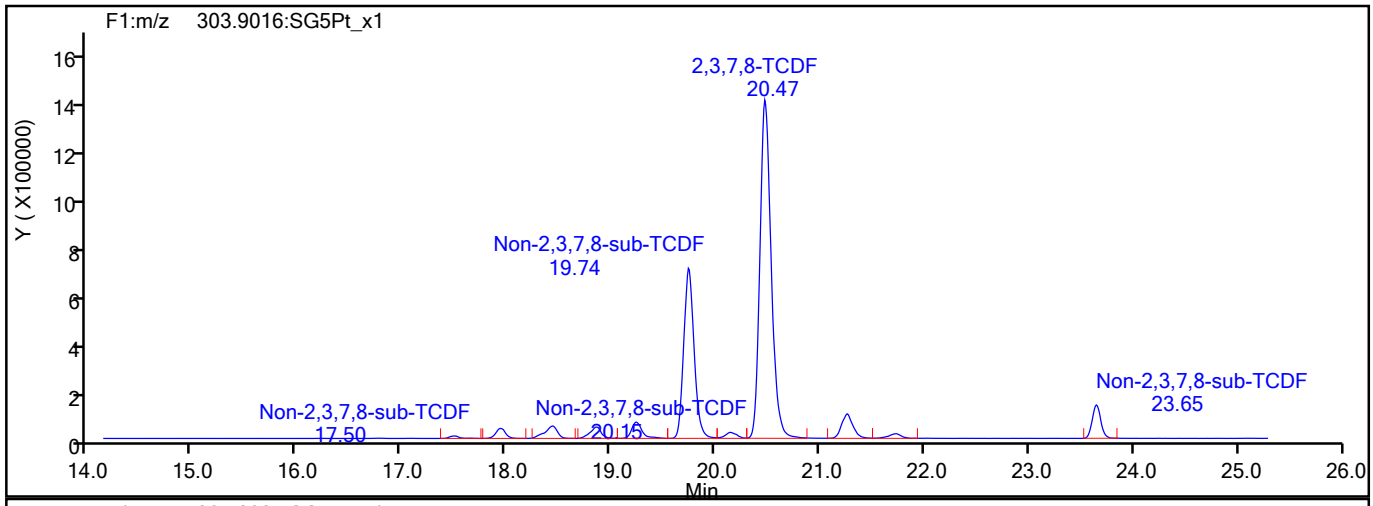

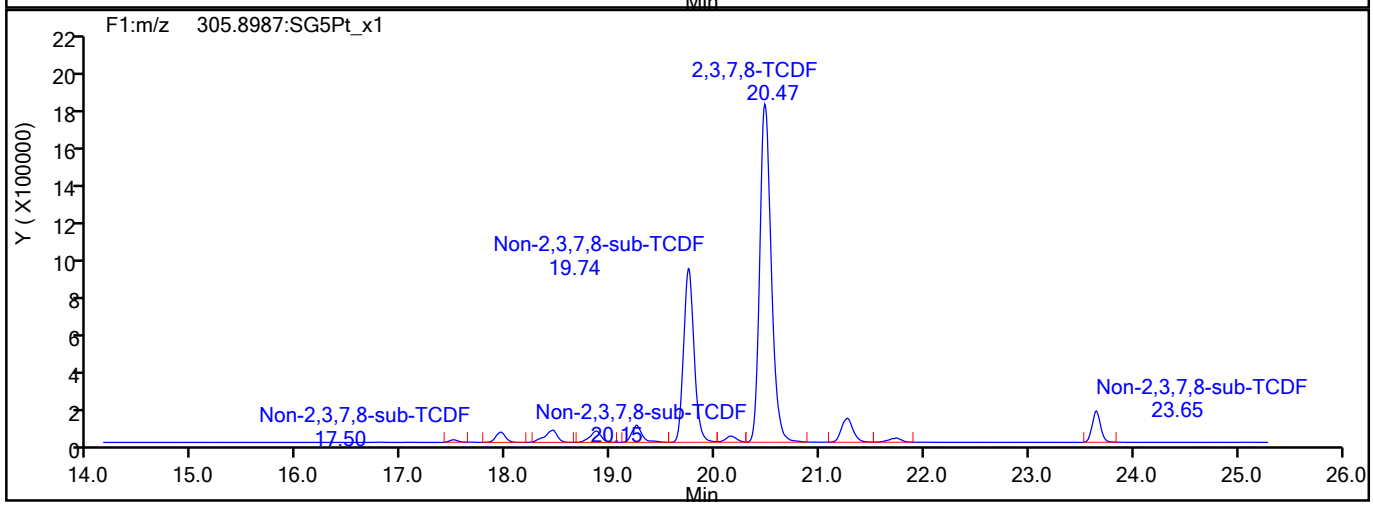

TCDF Interference Mass

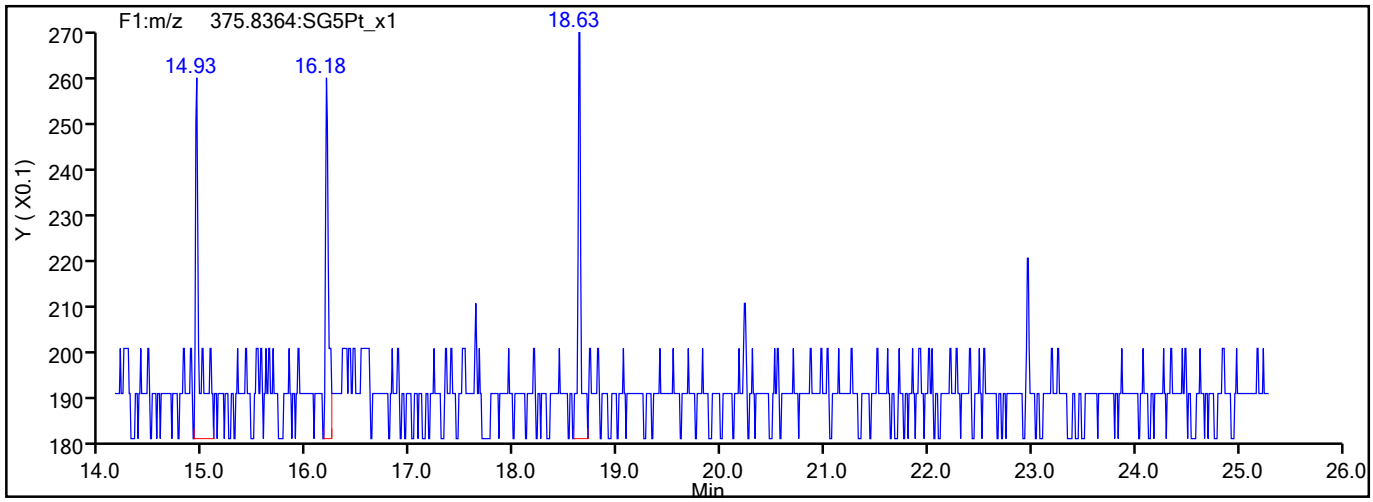

785243

Report Date: 25-Aug-2021 15:21:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

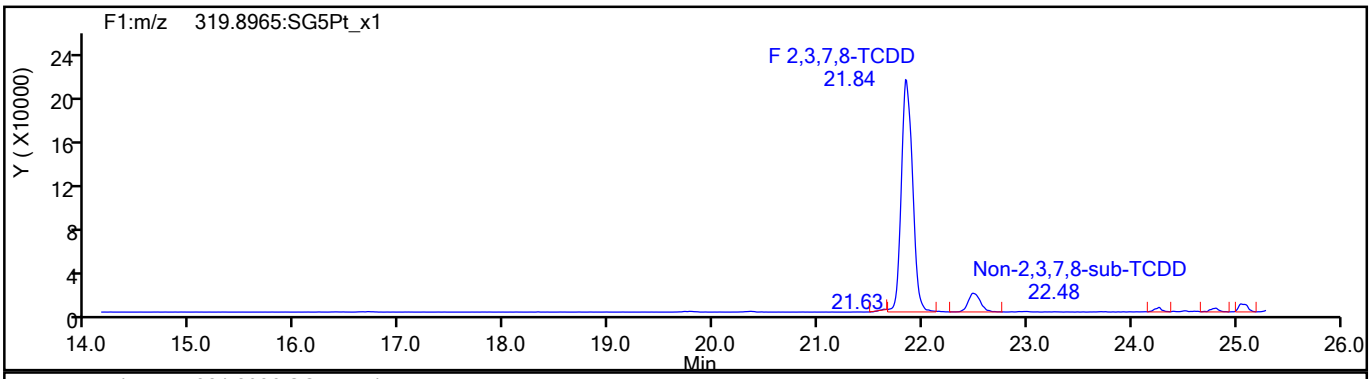

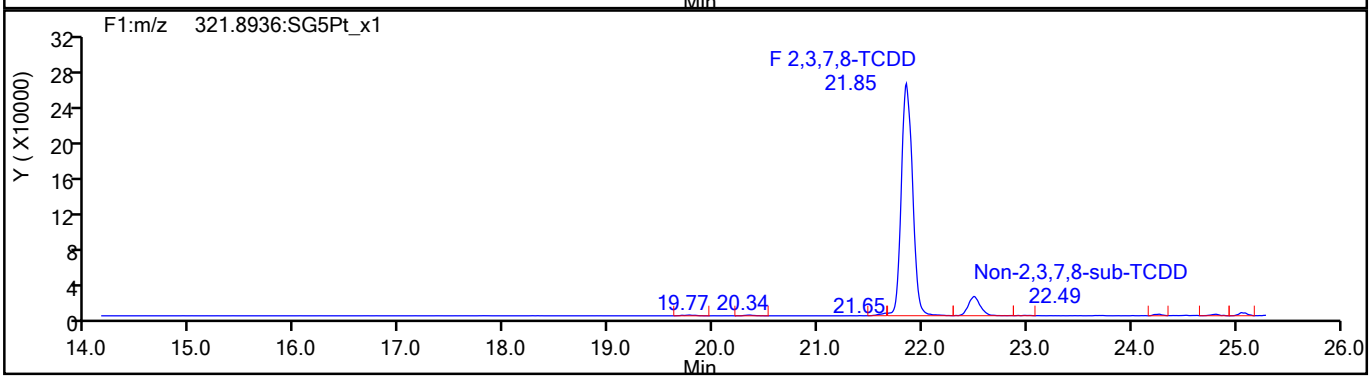

TCDD Standards

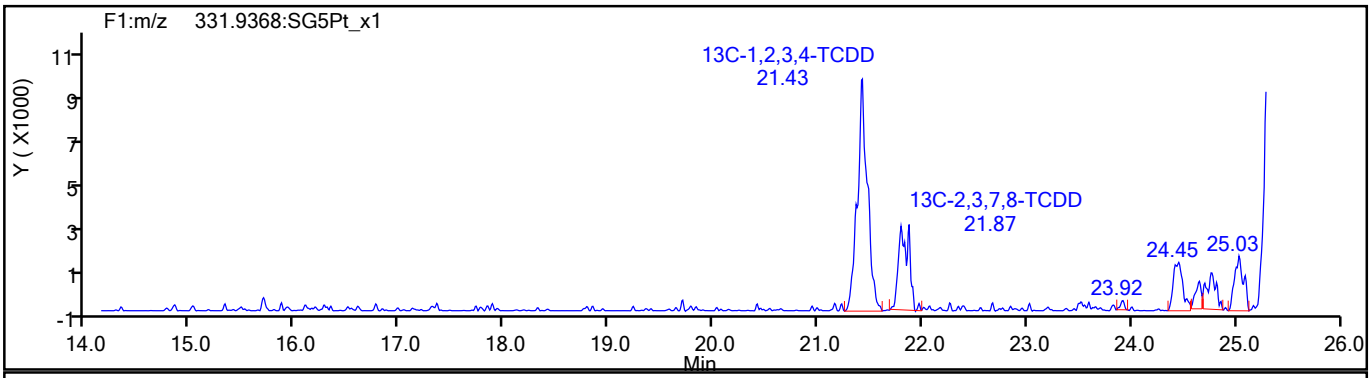

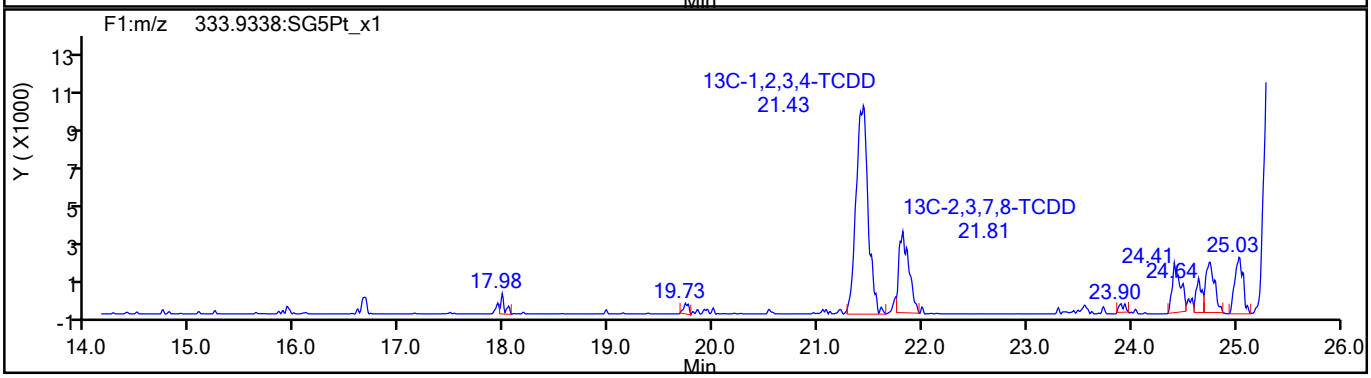

785244

Report Date: 25-Aug-2021 15:21:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

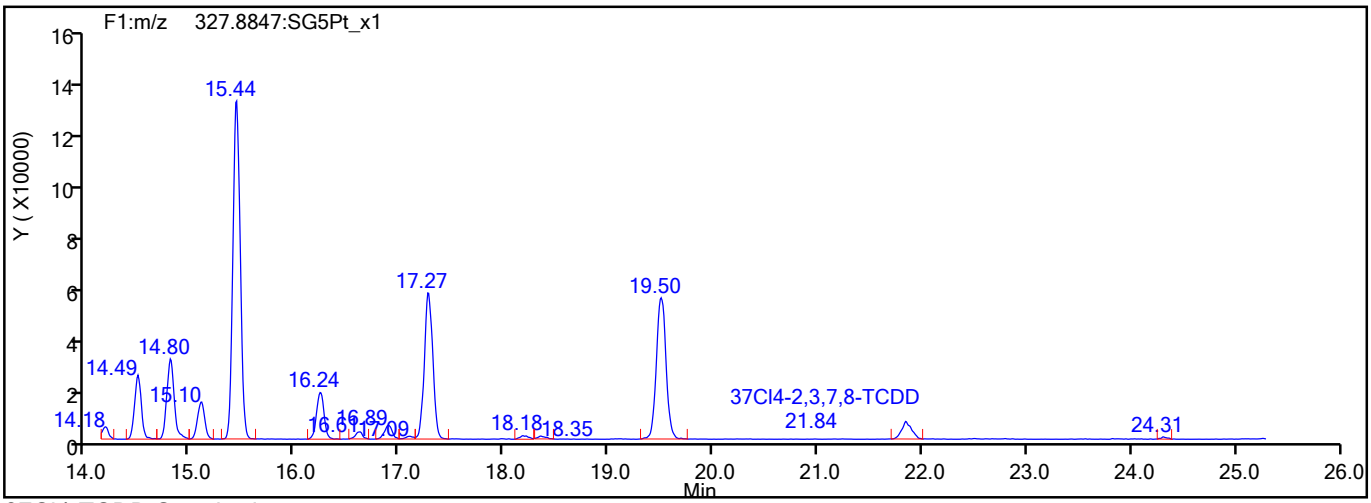

37Cl4-TCDD Standards

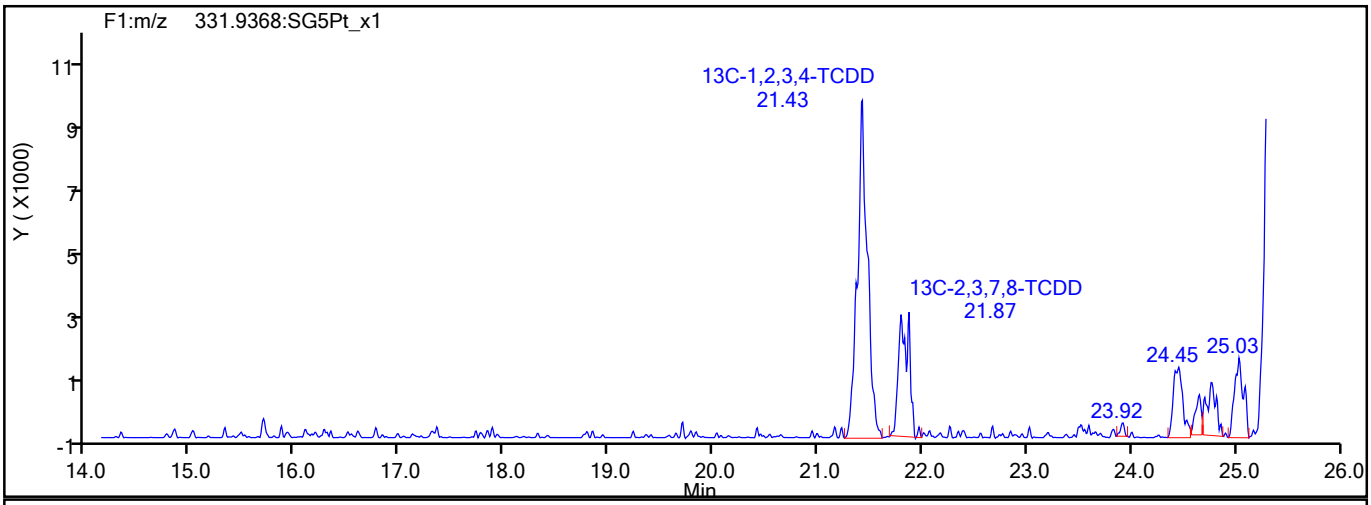

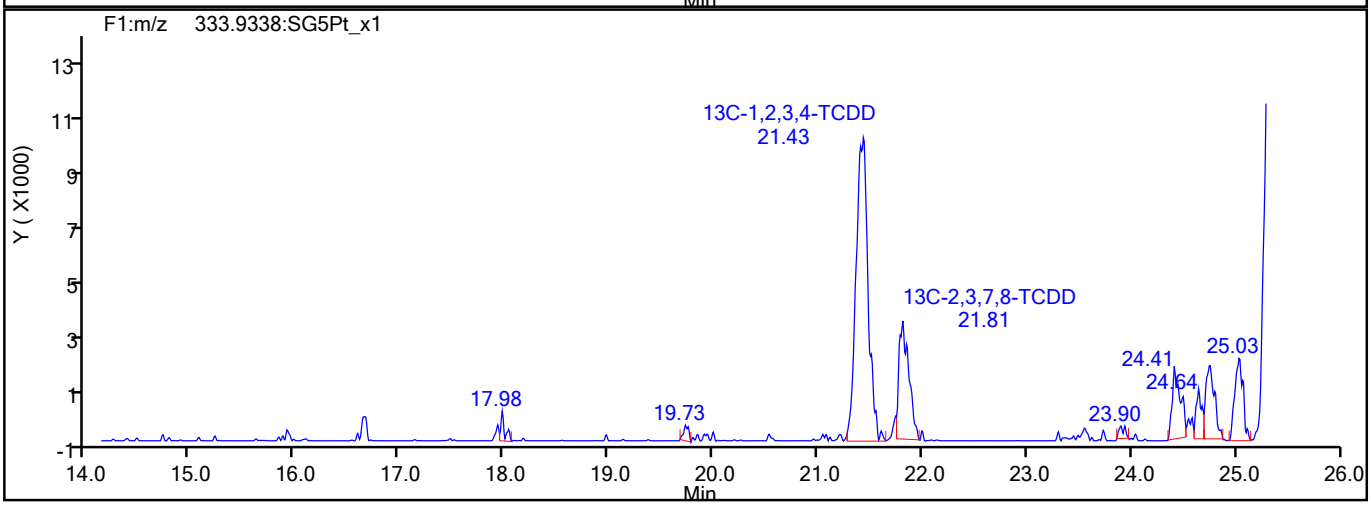

785245

Report Date: 25-Aug-2021 15:21:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

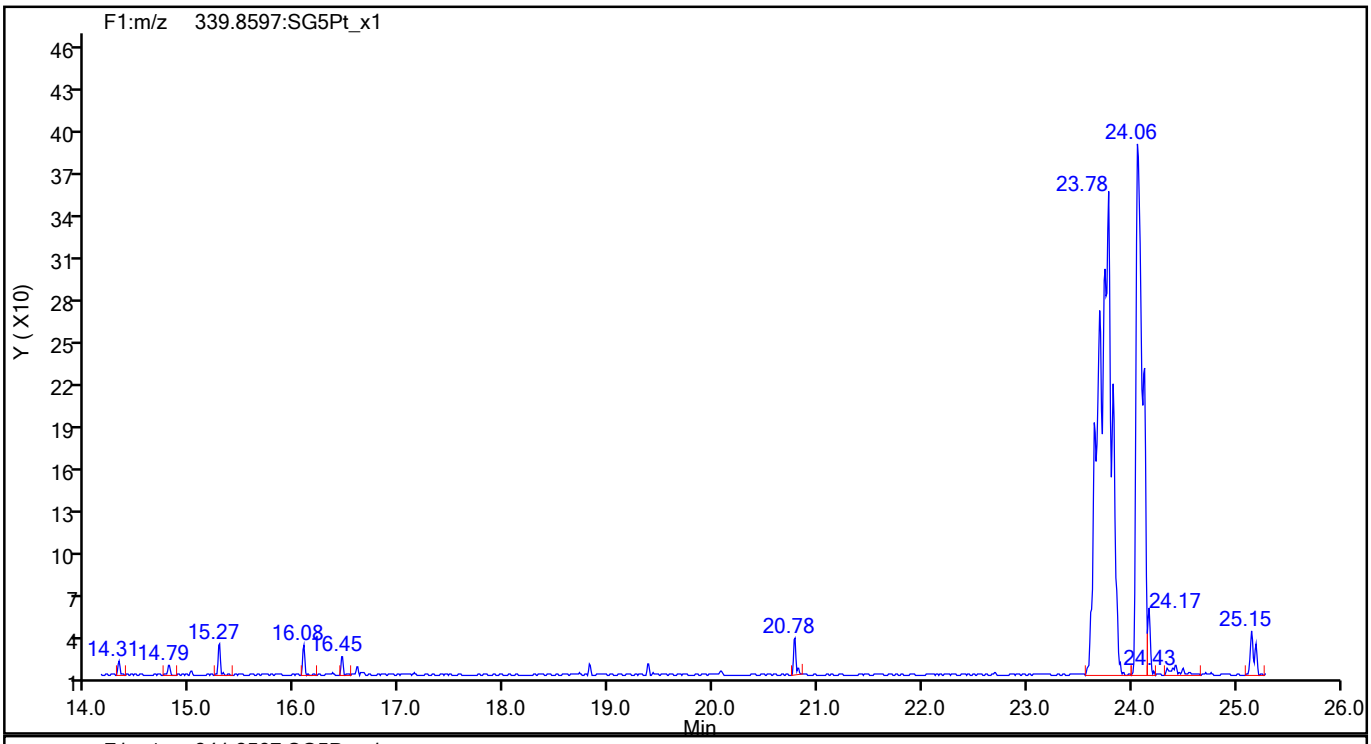

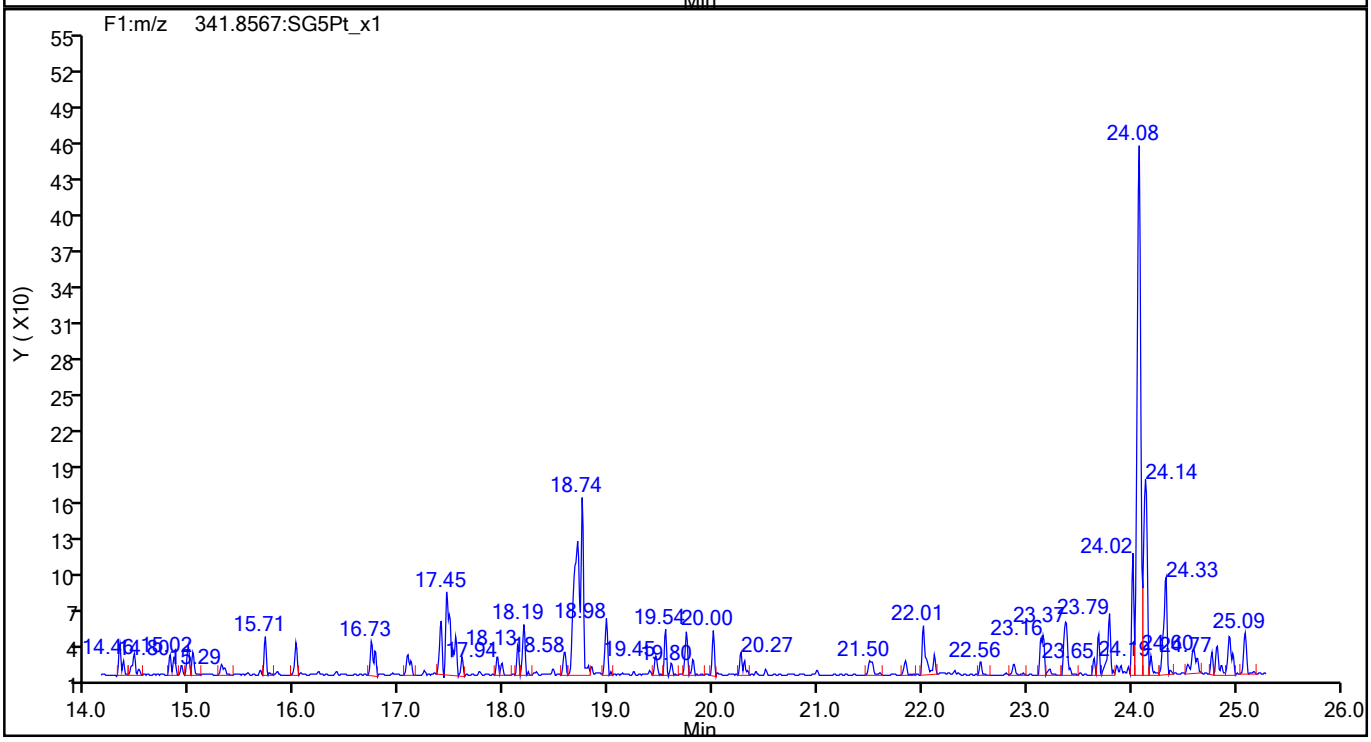

785246

Report Date: 25-Aug-2021 15:21:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

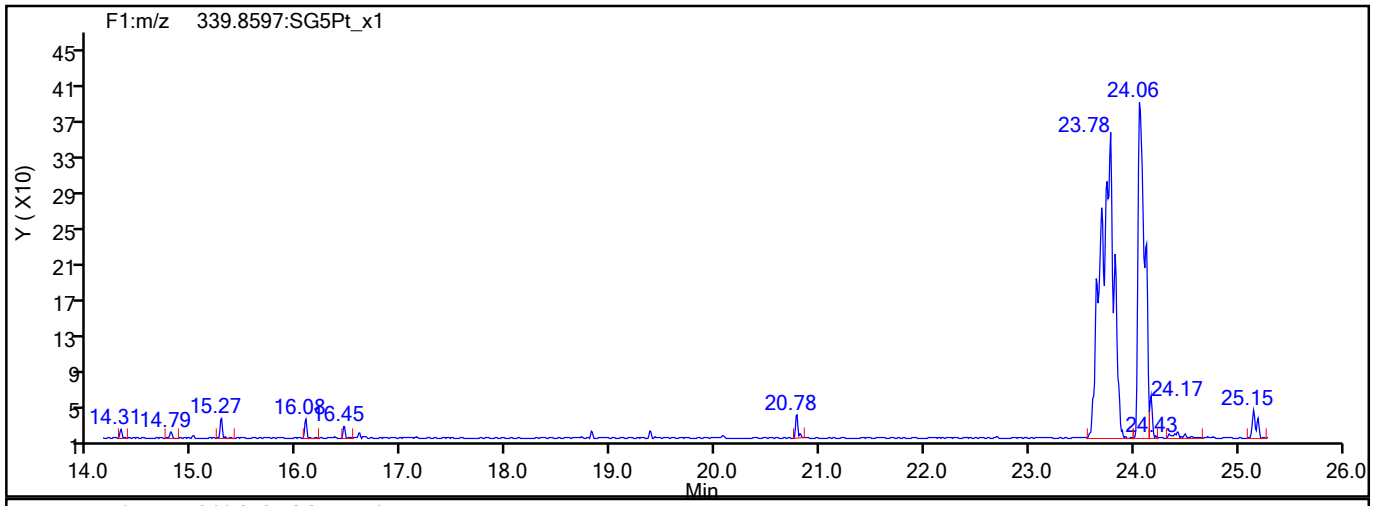

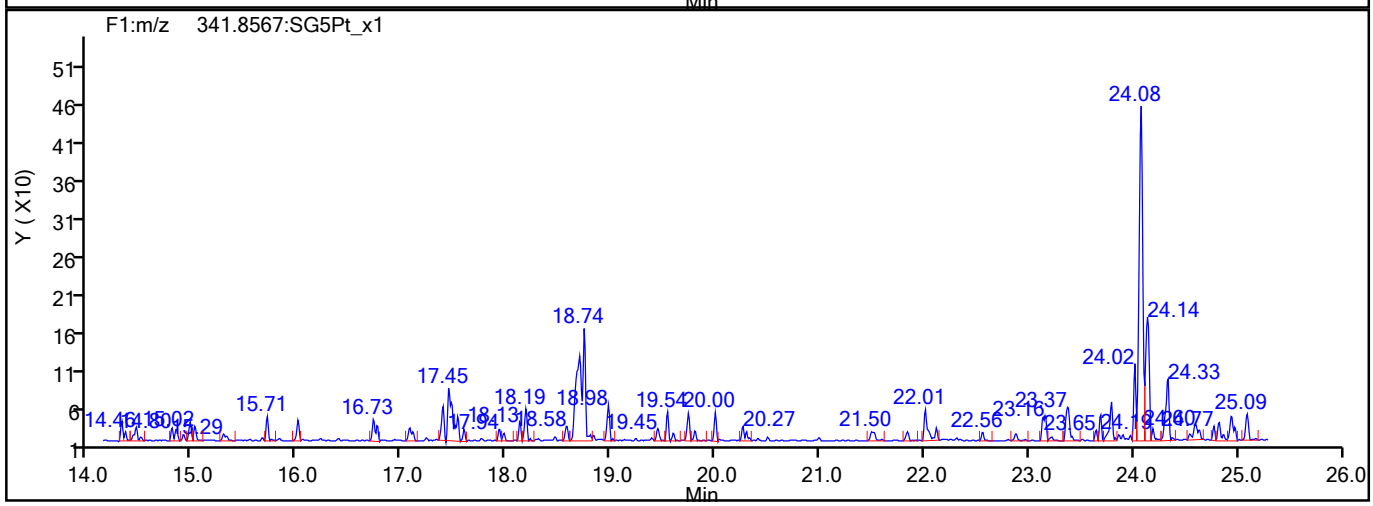

F1 PeCDFs Interference Mass

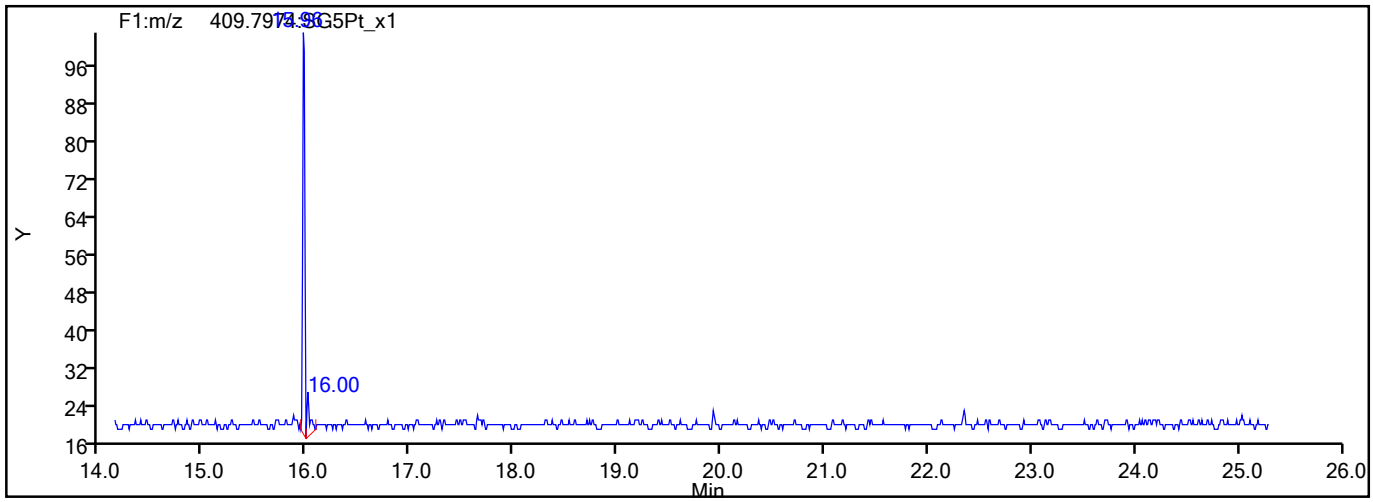

785247

Report Date: 25-Aug-2021 15:21:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

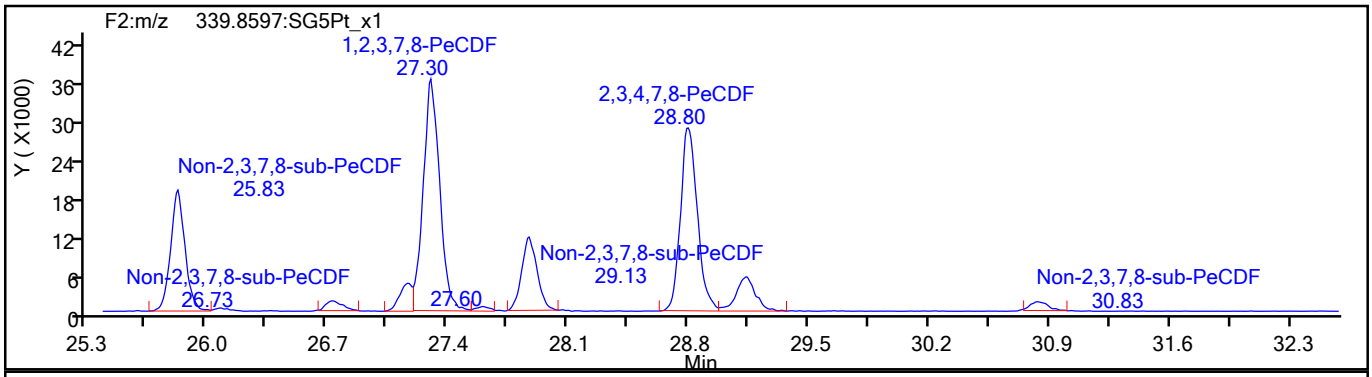

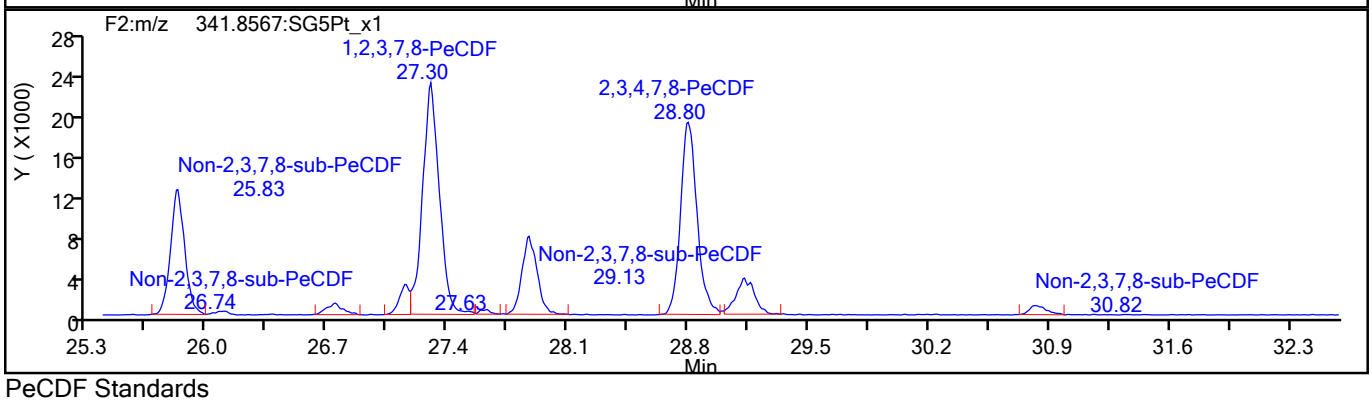

PeCDF Standards

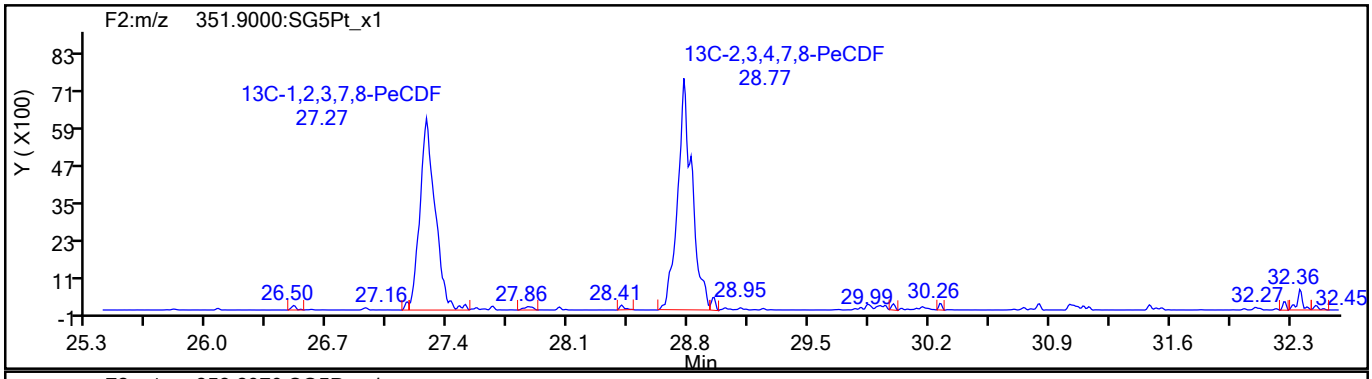

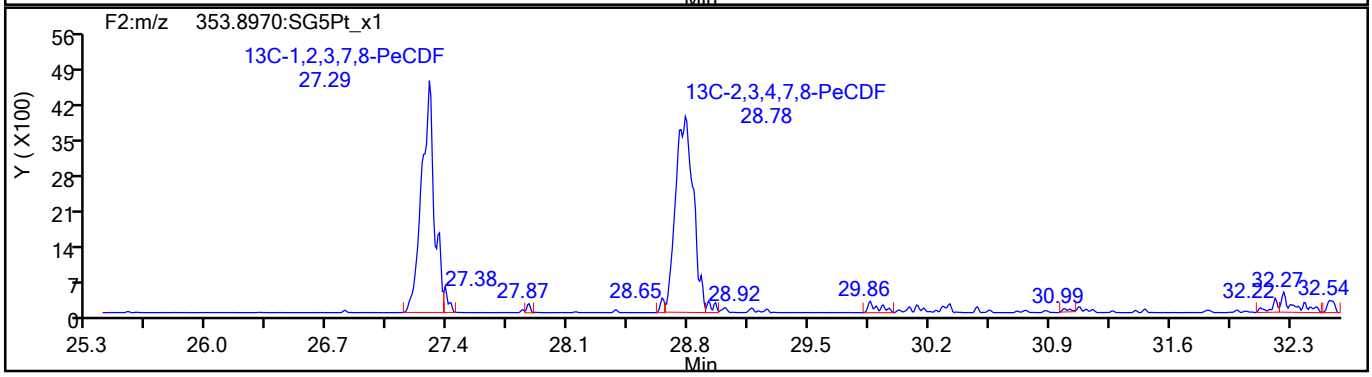

785248

Report Date: 25-Aug-2021 15:21:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

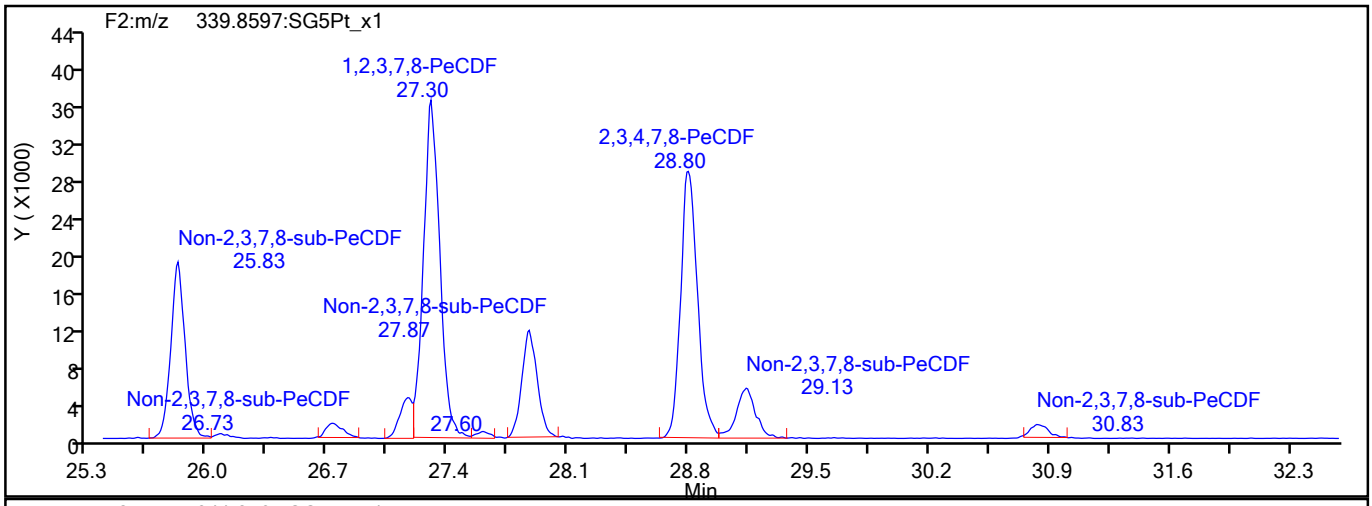

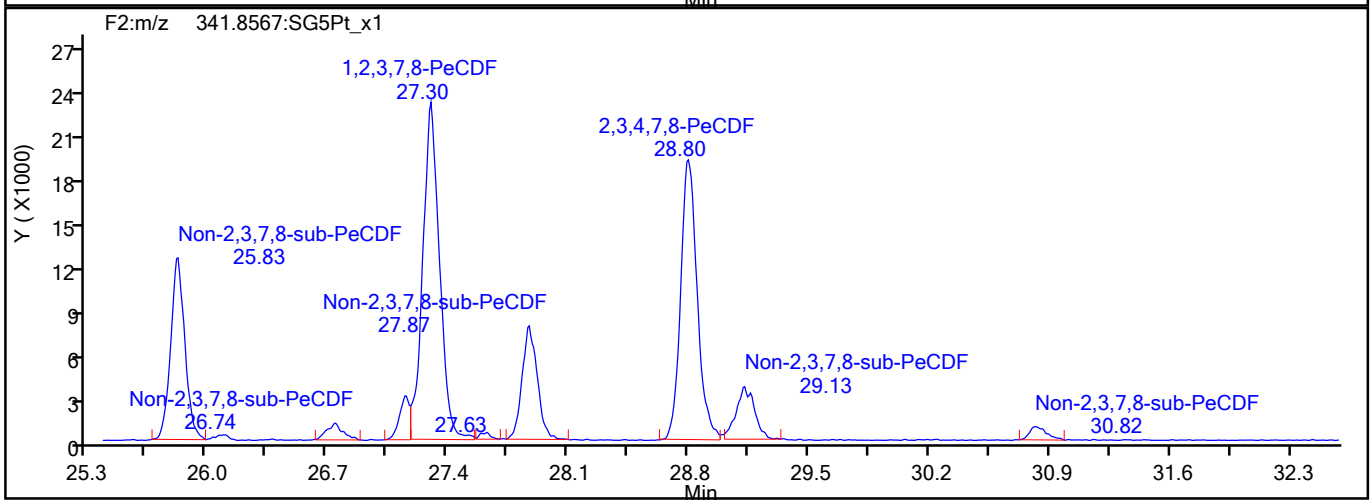

PeCDF Interference Mass

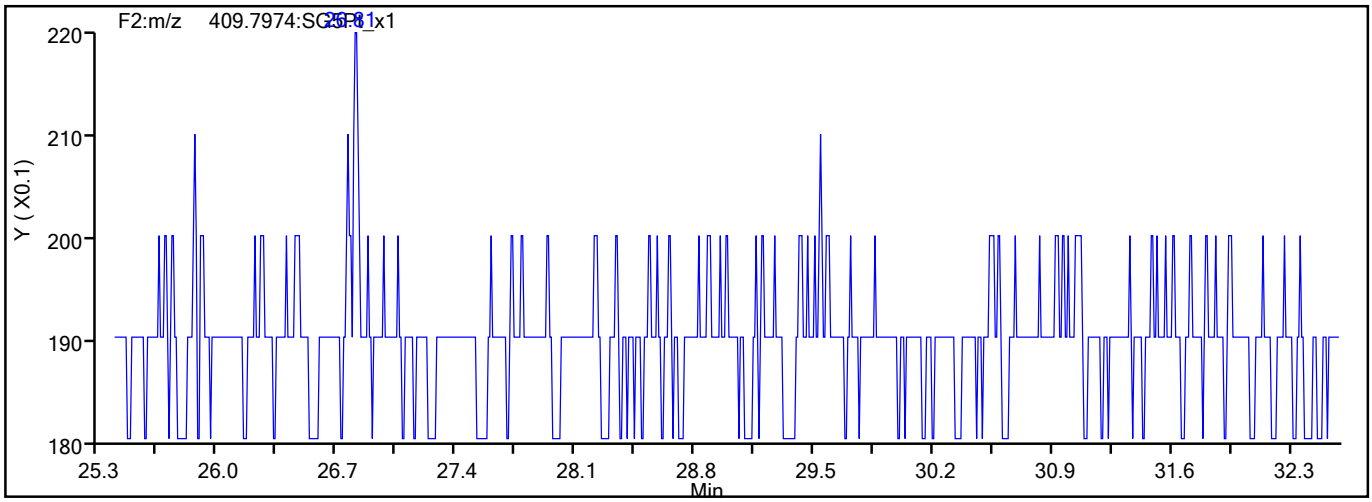

785249

Report Date: 25-Aug-2021 15:21:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

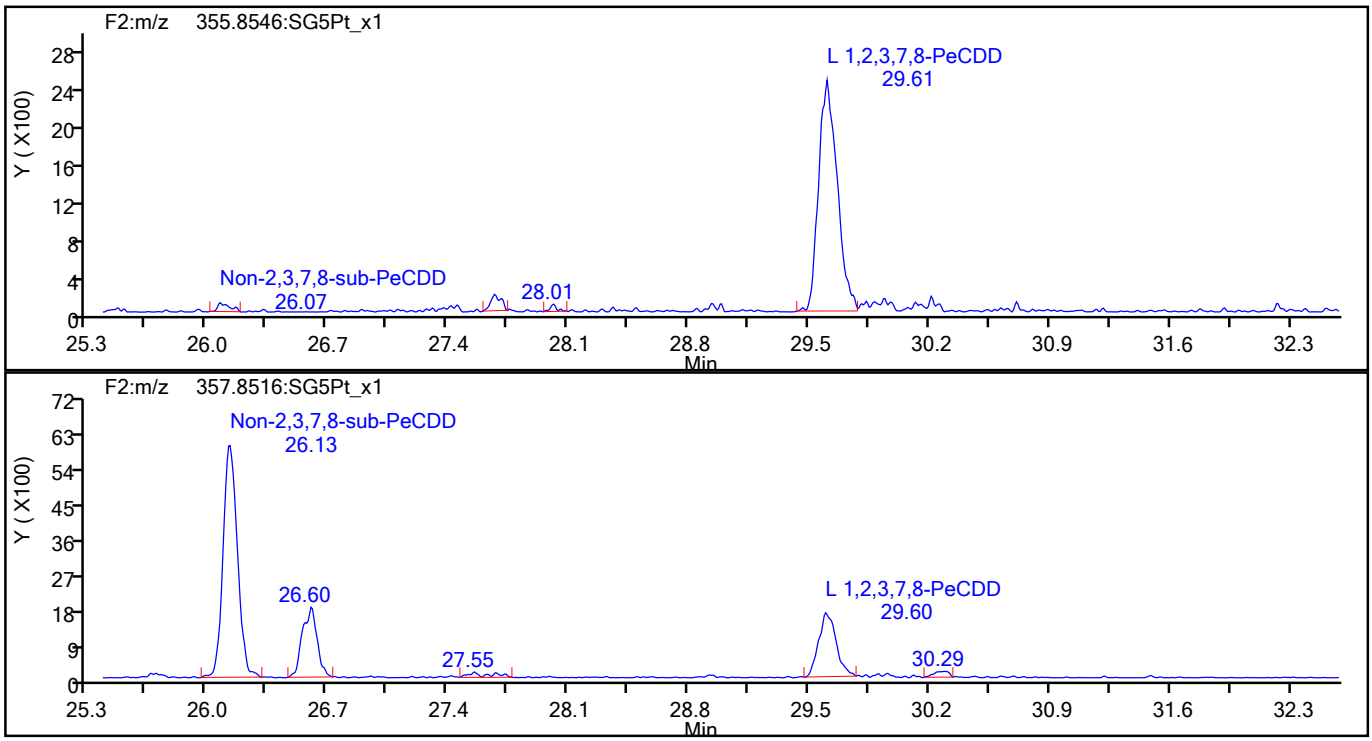

PeCDD Standards

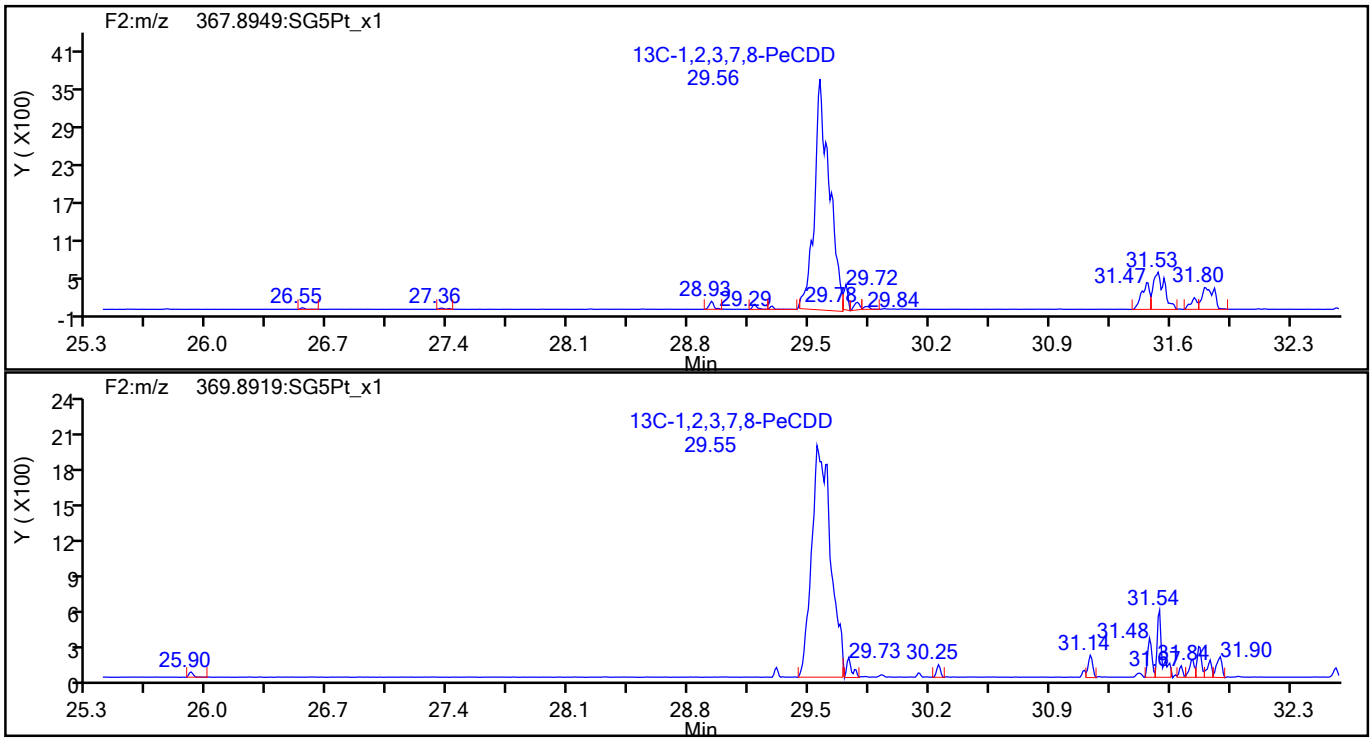

785250

Report Date: 25-Aug-2021 15:21:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

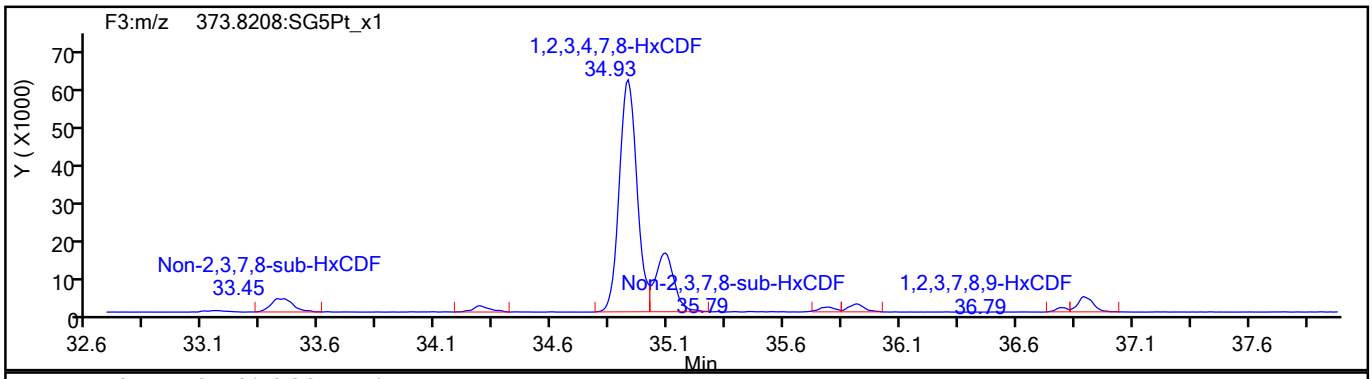

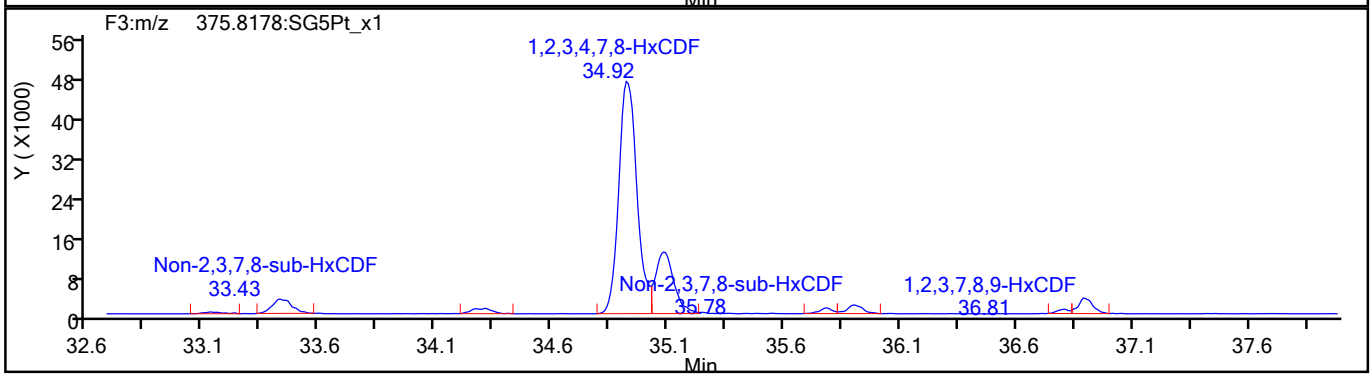

HxCDF Standards

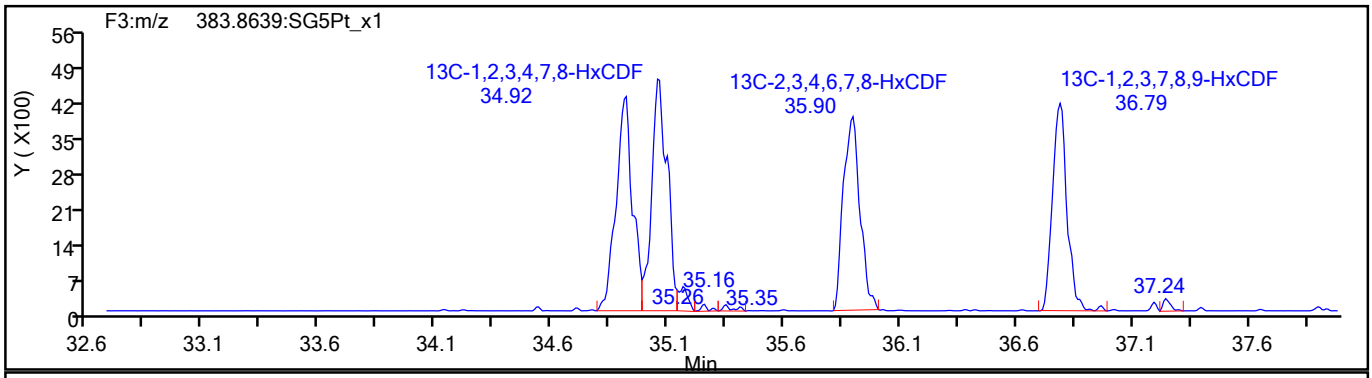

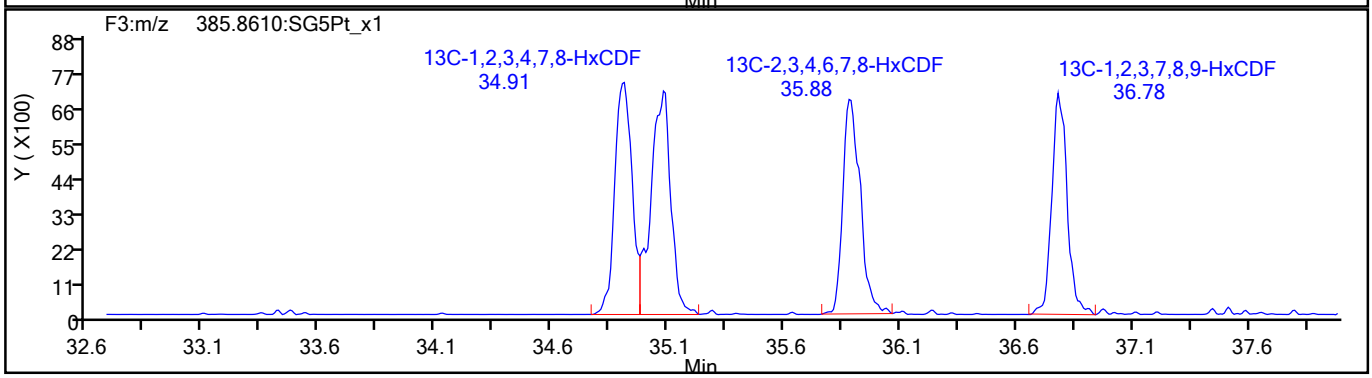

785251

Report Date: 25-Aug-2021 15:21:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

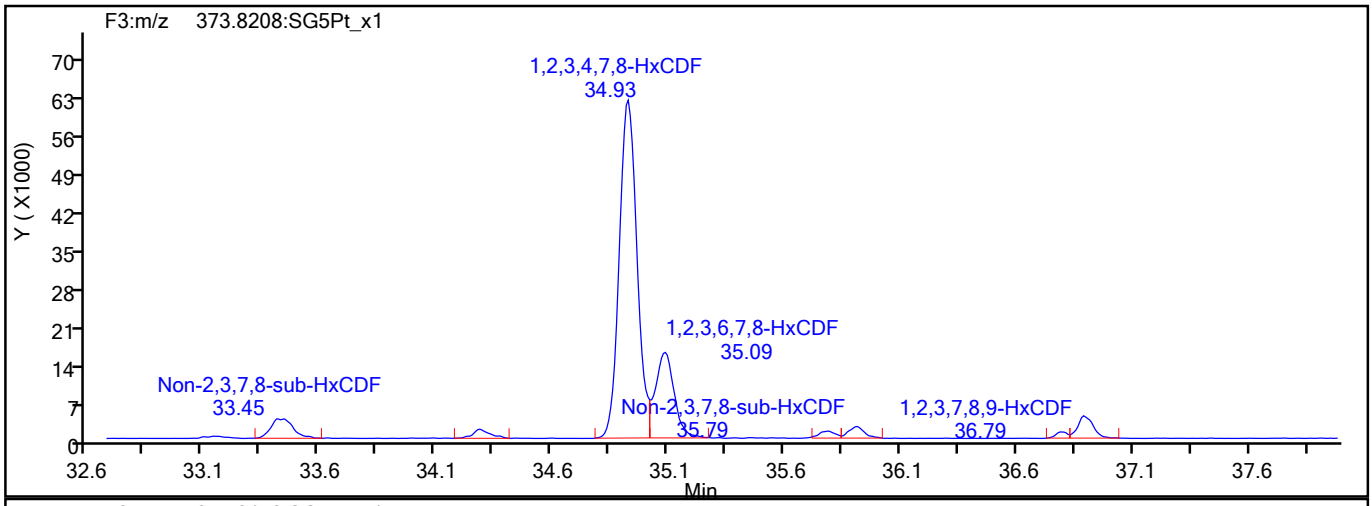

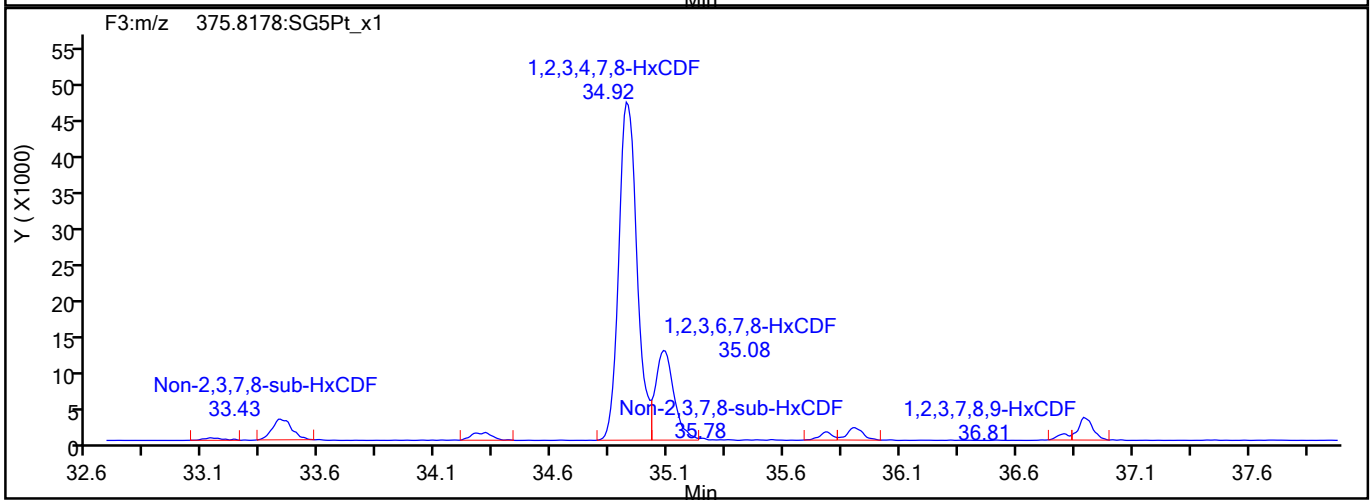

HxCDF Interference Mass

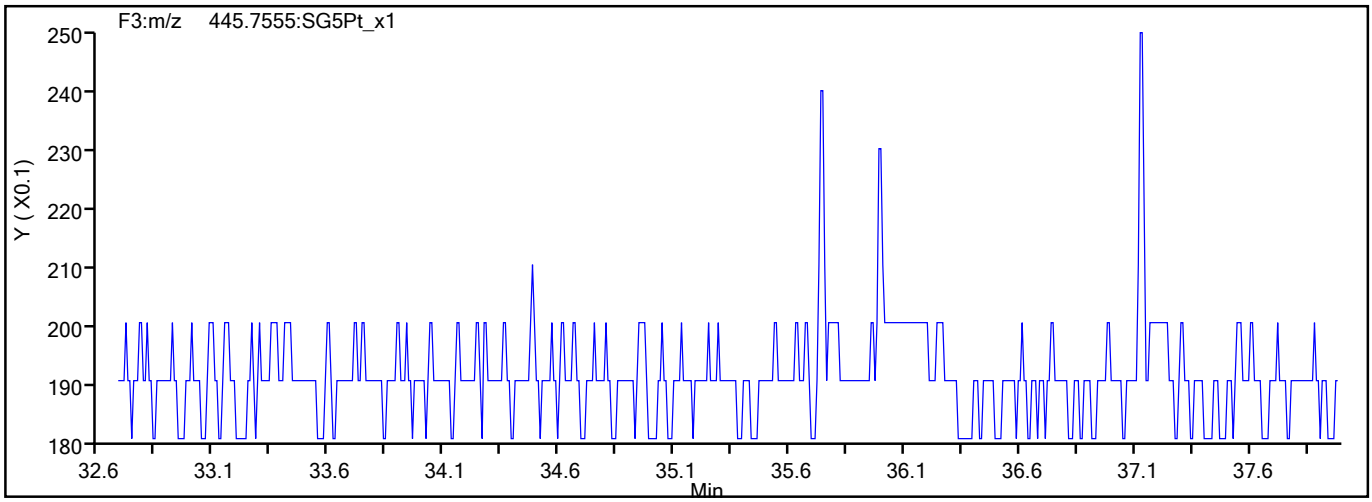

785252

Report Date: 25-Aug-2021 15:21:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

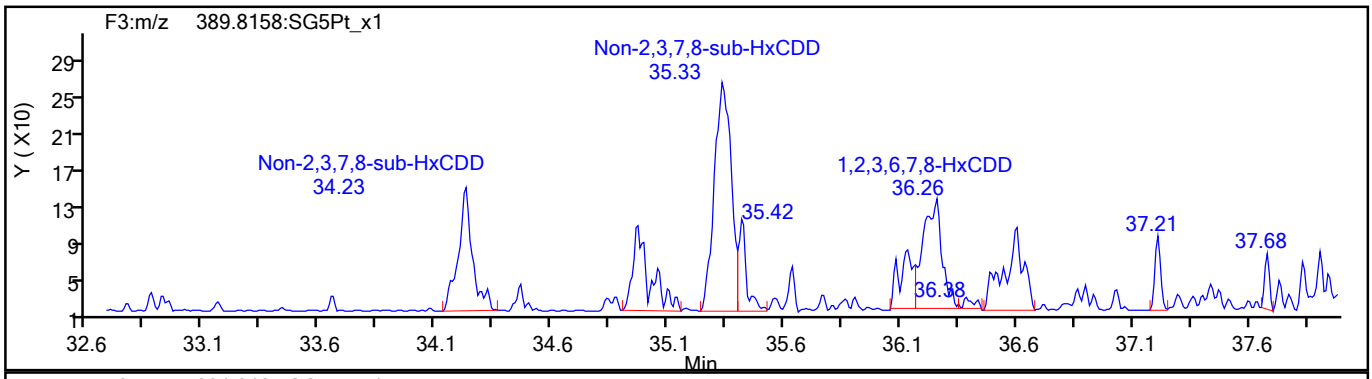

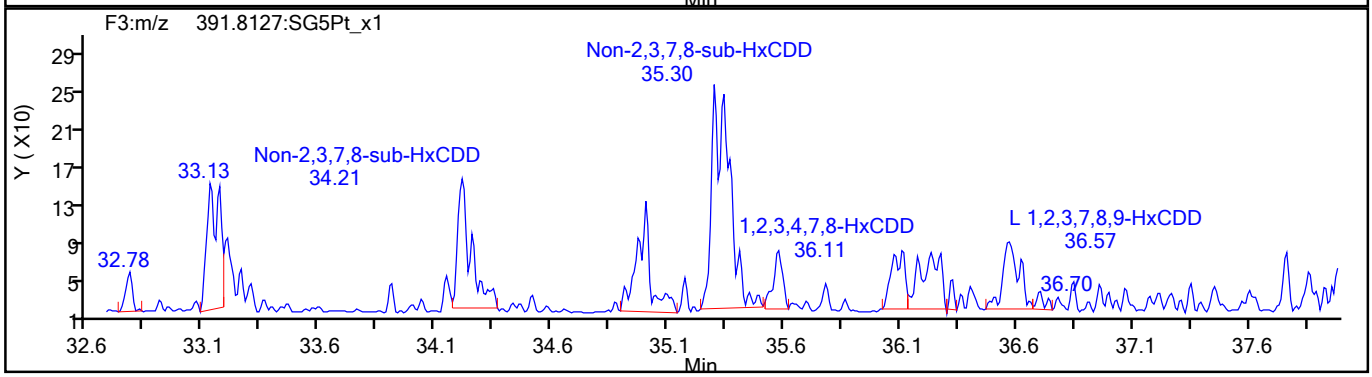

HxCDD Standards

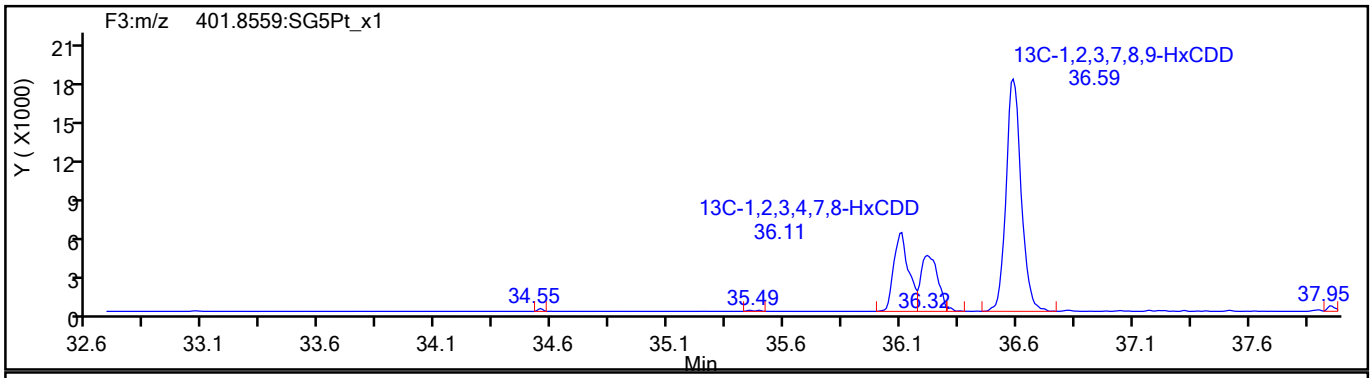

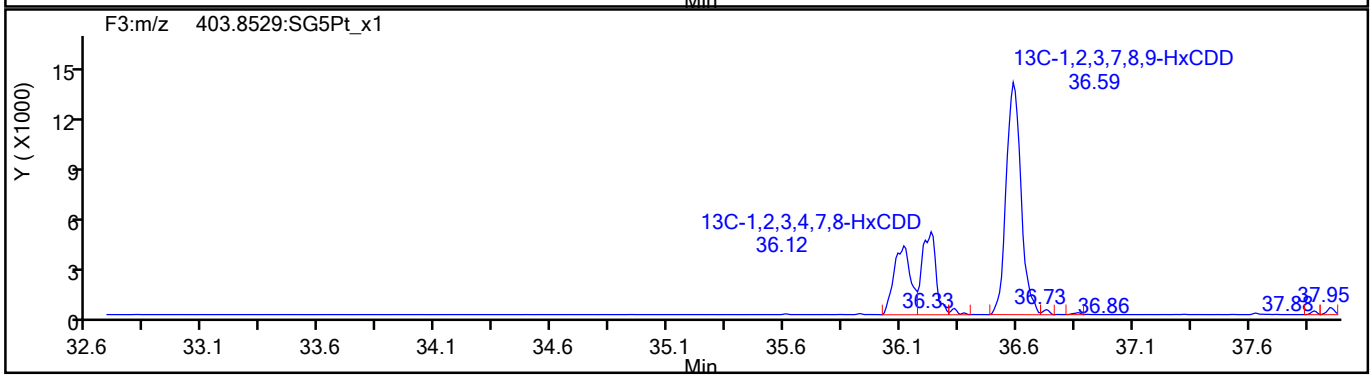

785253

Report Date: 25-Aug-2021 15:21:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

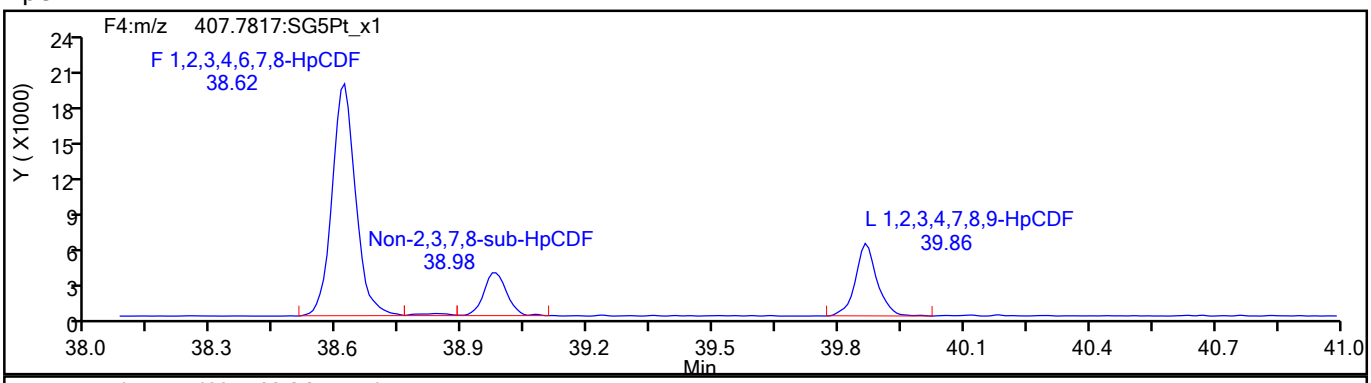

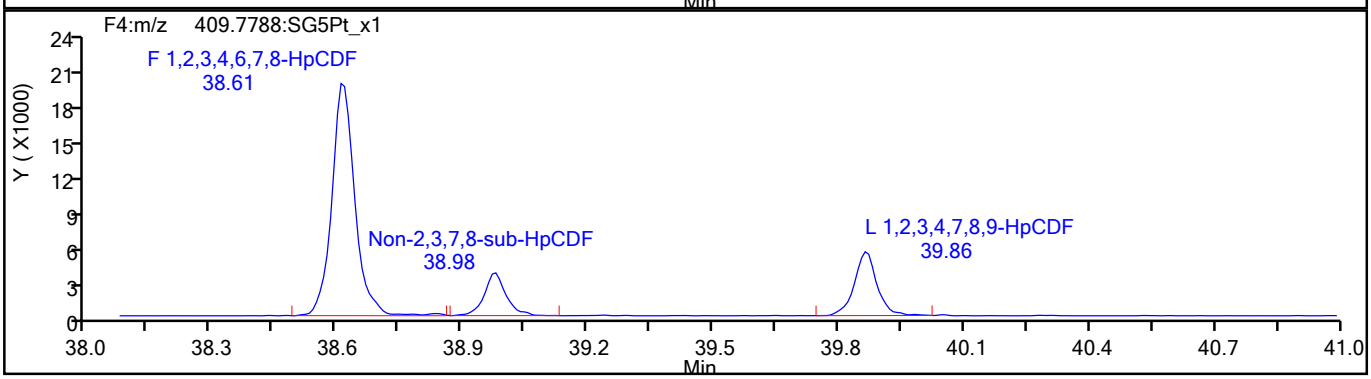

HpCDF Standards

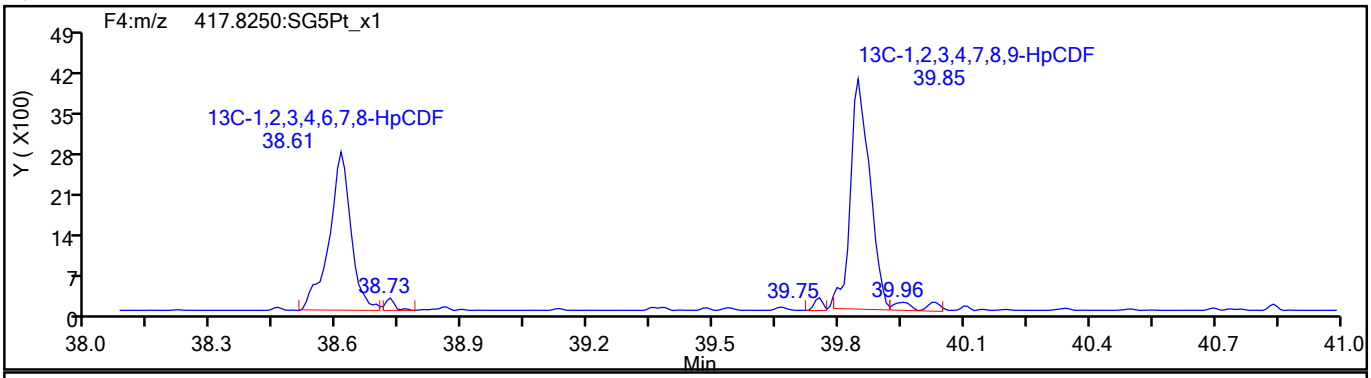

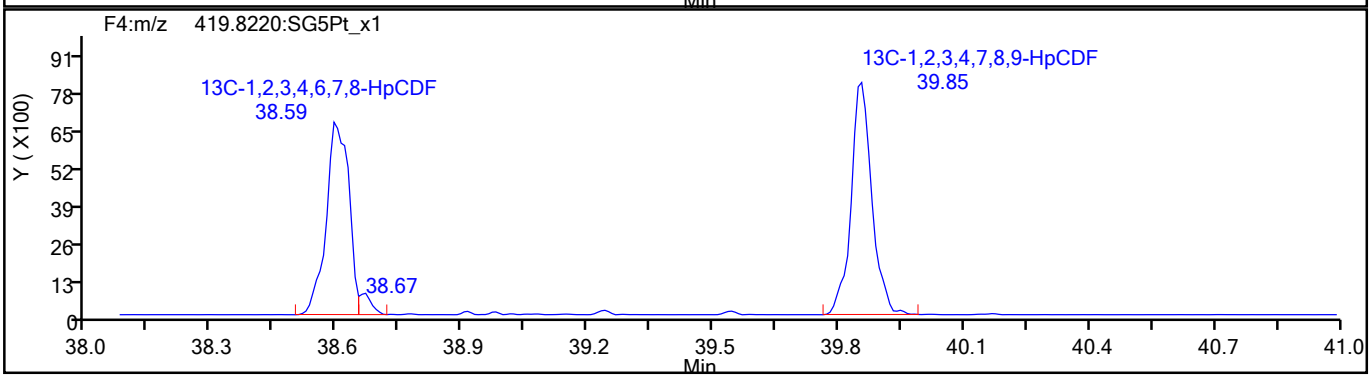

785254

Report Date: 25-Aug-2021 15:21:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

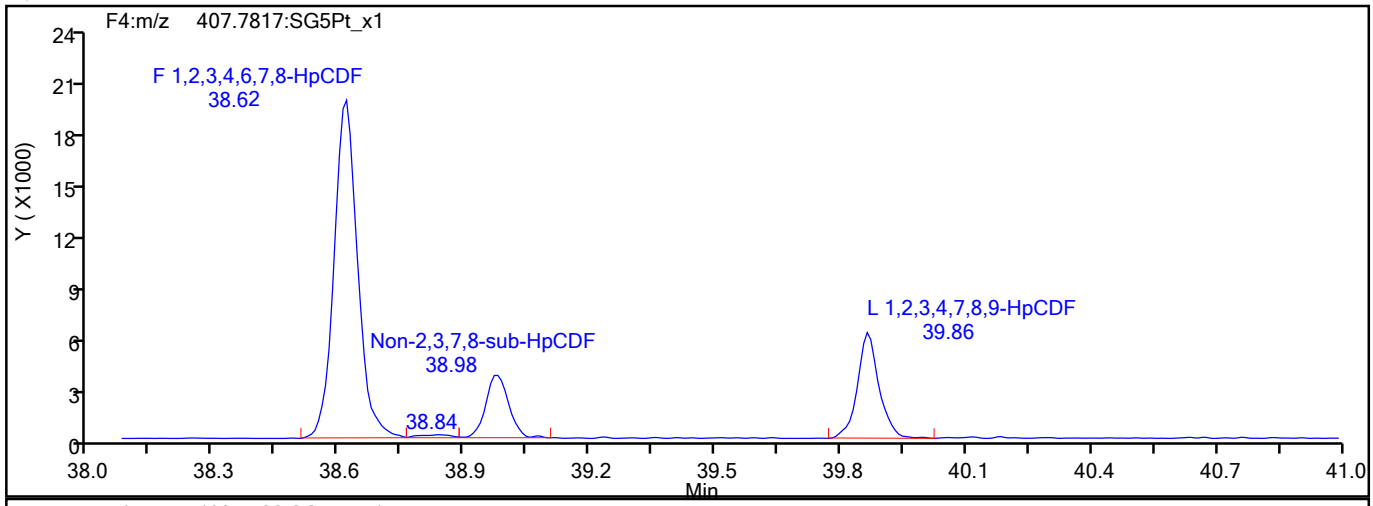

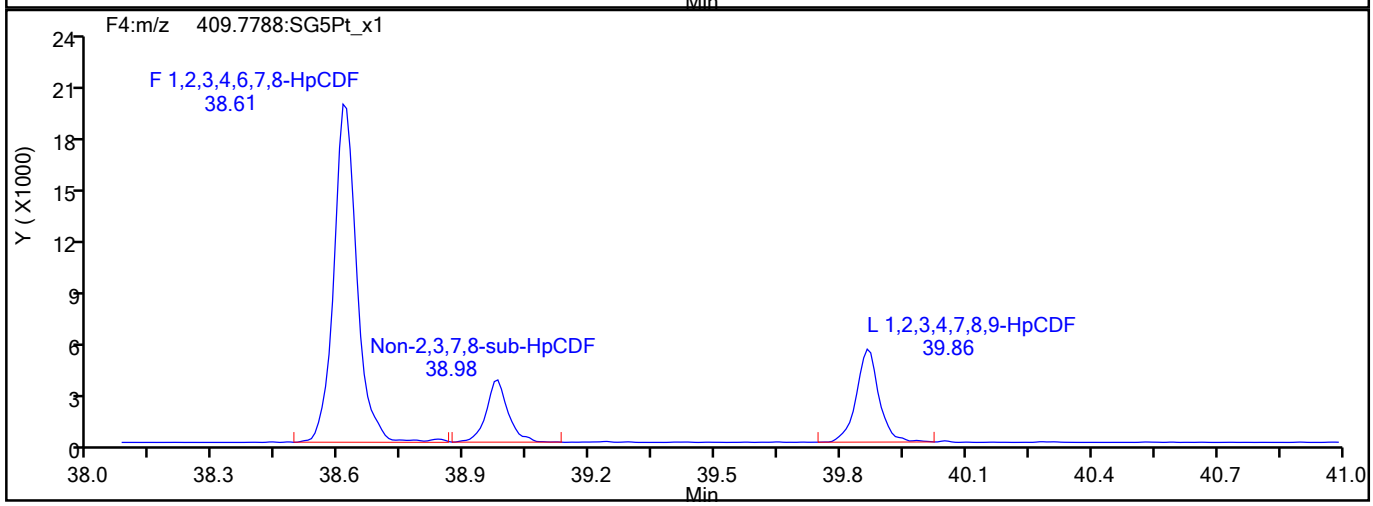

HpCDF Interference Mass

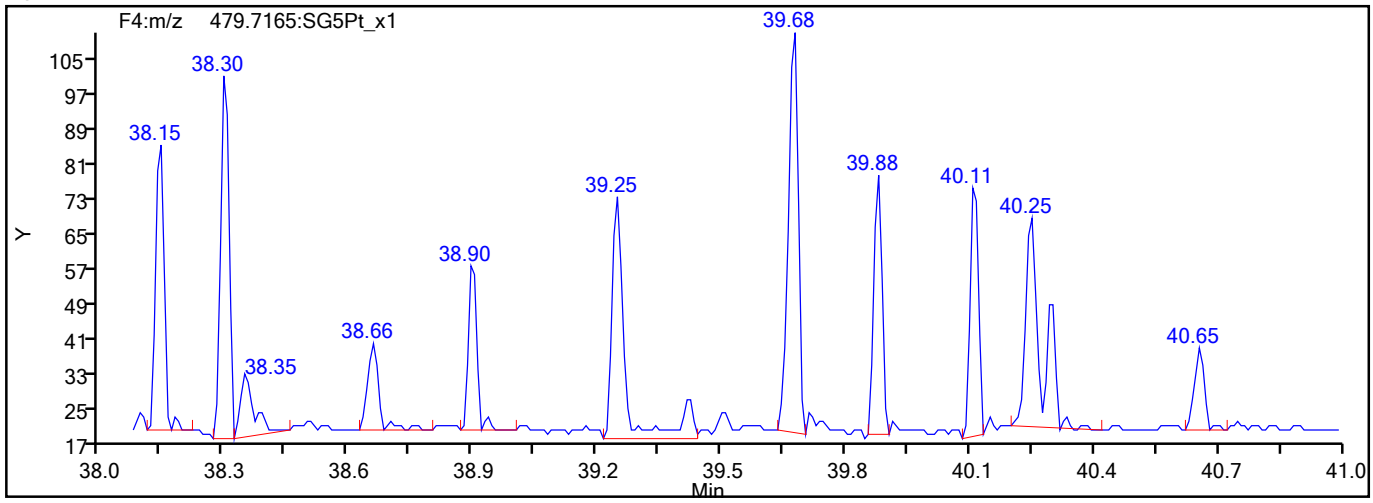

785255

Report Date: 25-Aug-2021 15:21:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

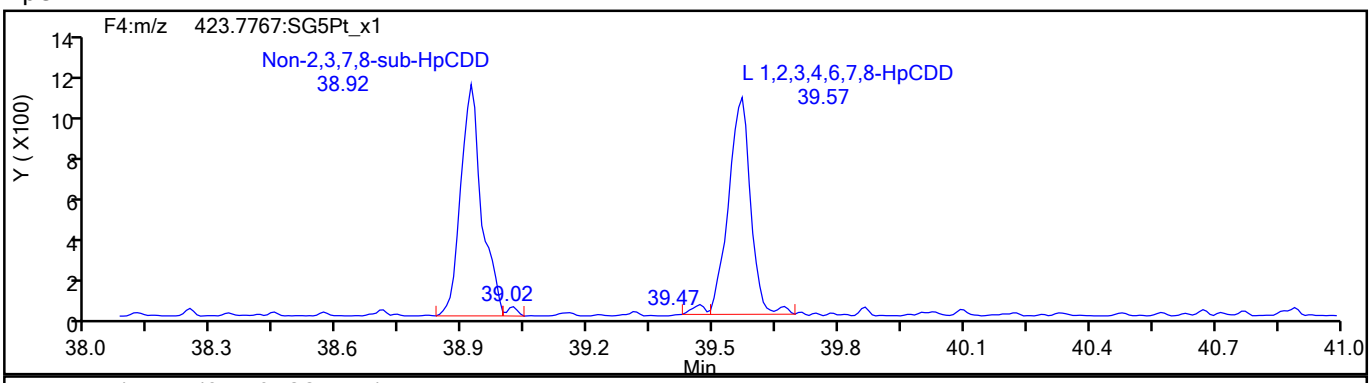

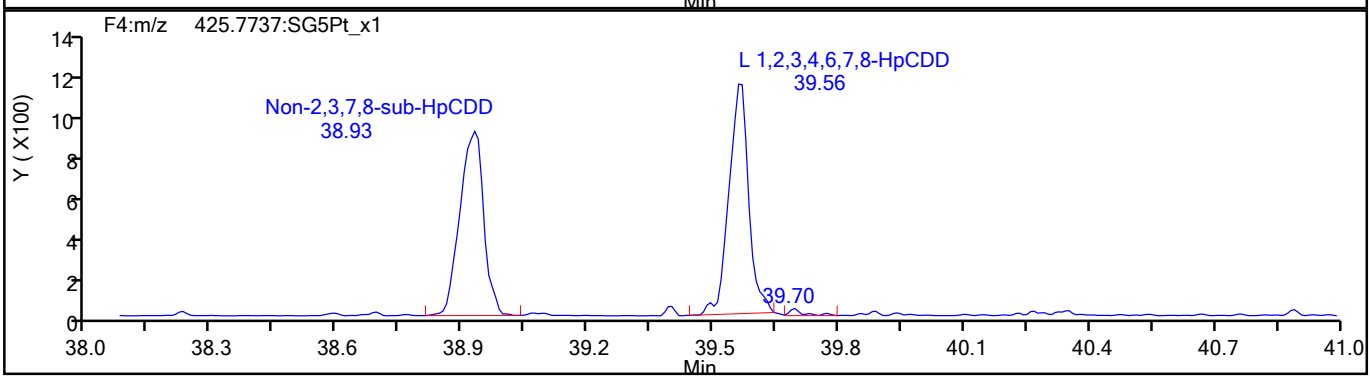

HpCDD Standards

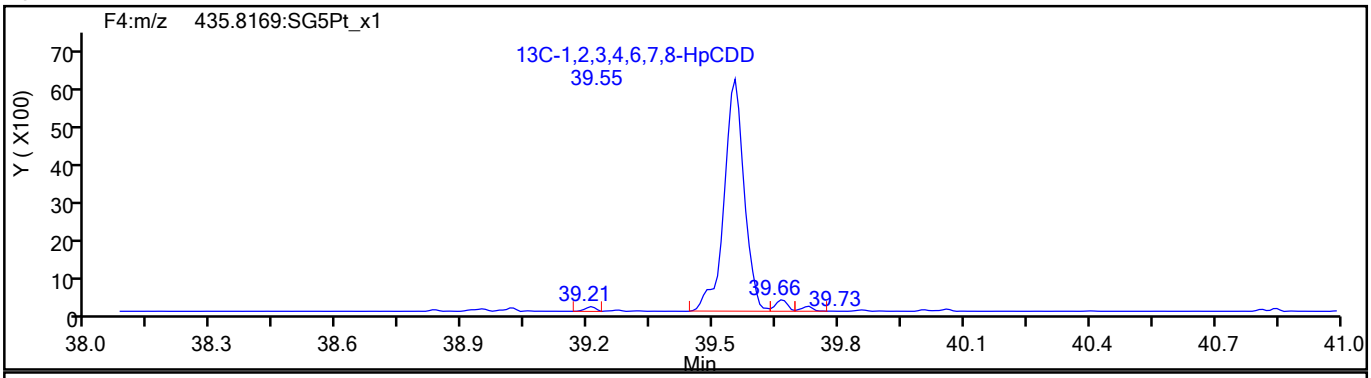

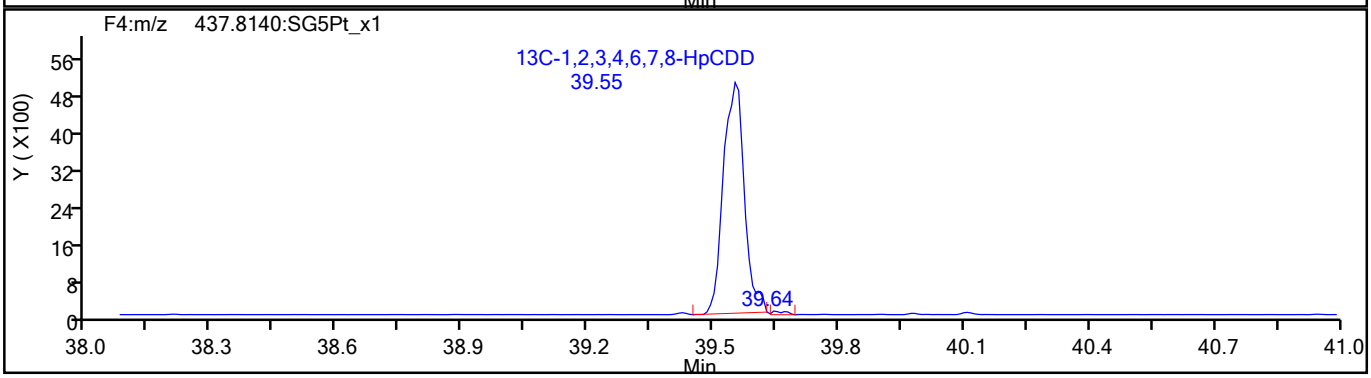

785256

Report Date: 25-Aug-2021 15:21:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

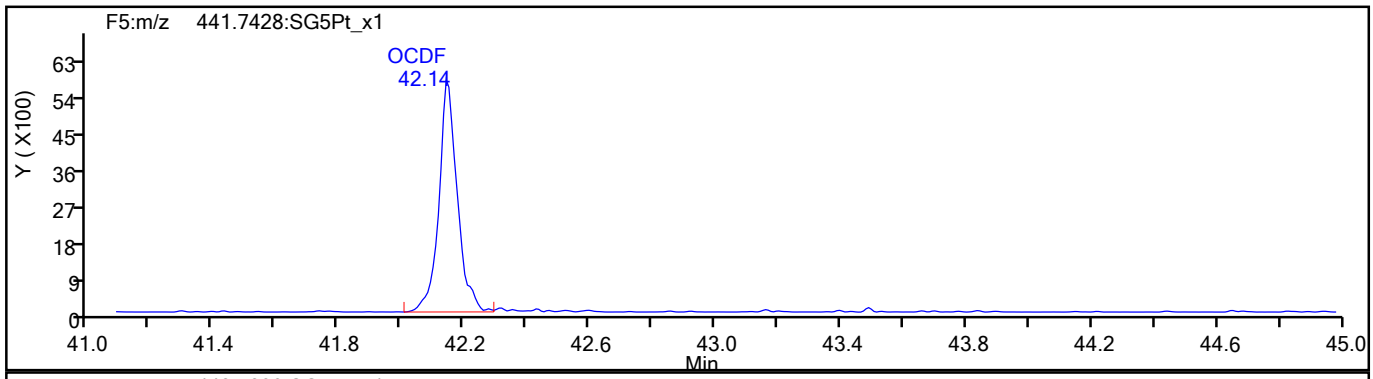

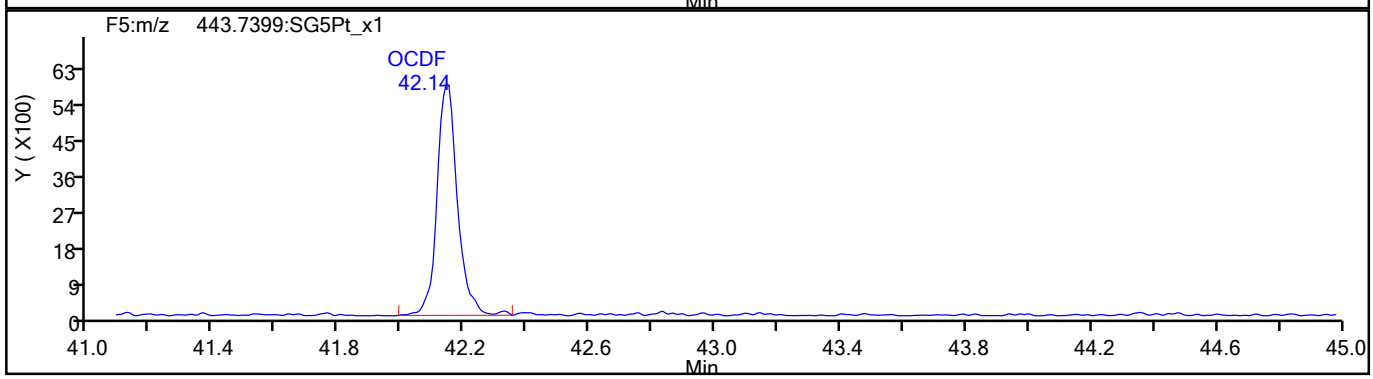

OCDF Standards

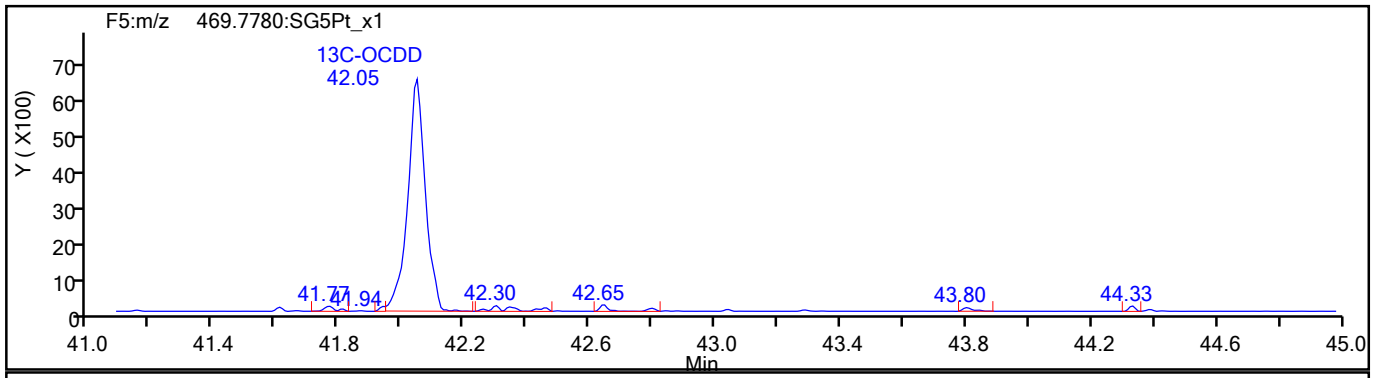

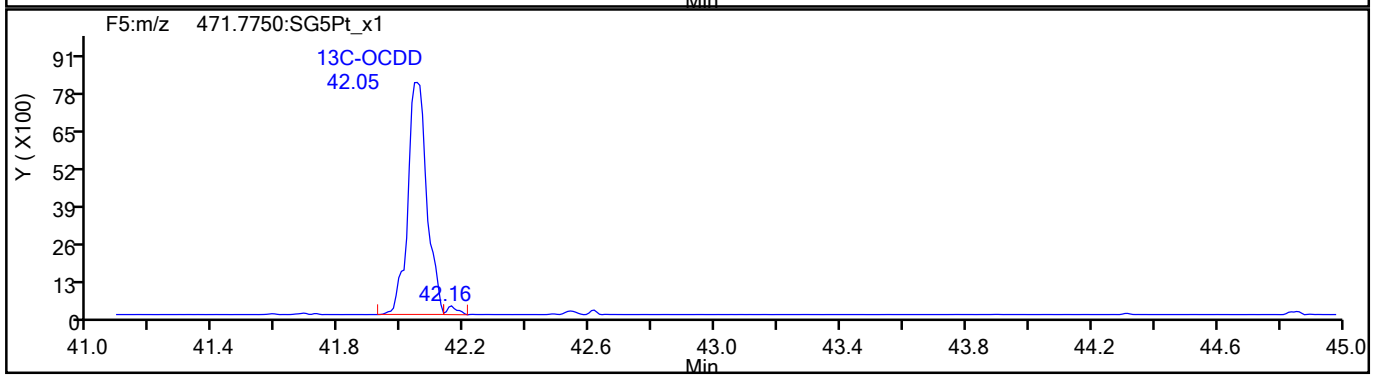

785257

Report Date: 25-Aug-2021 15:21:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

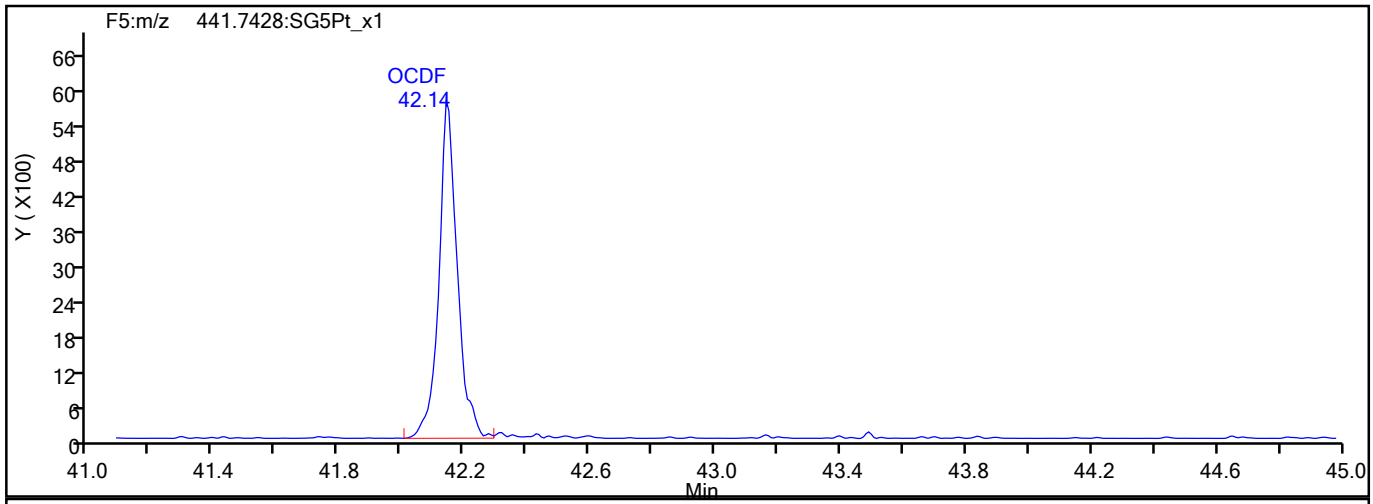

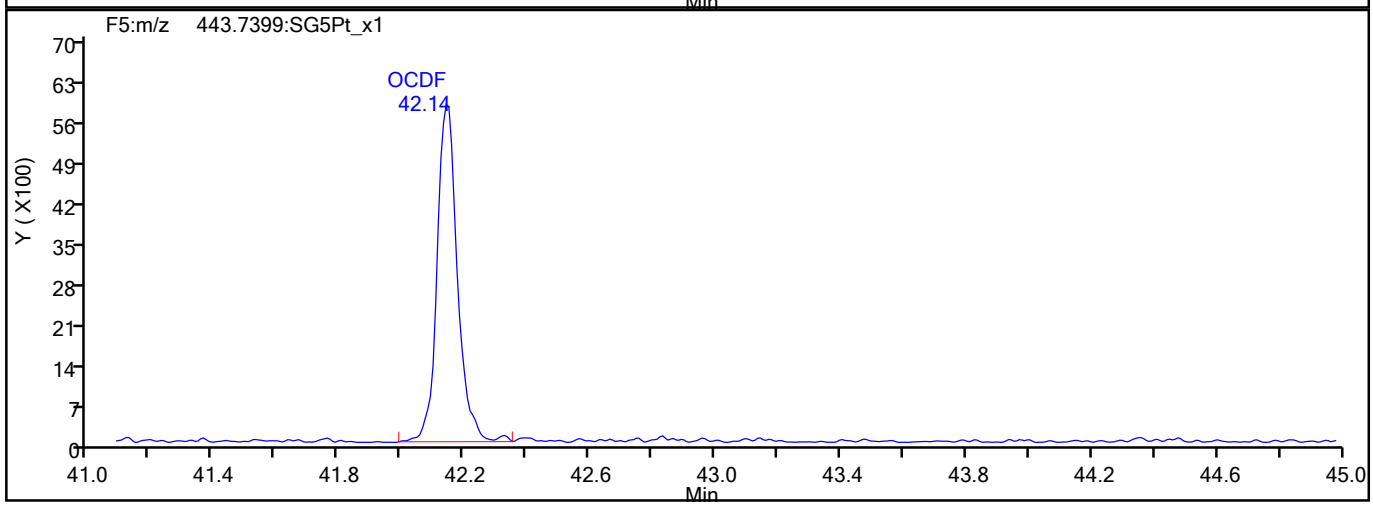

OCDF Interference Mass

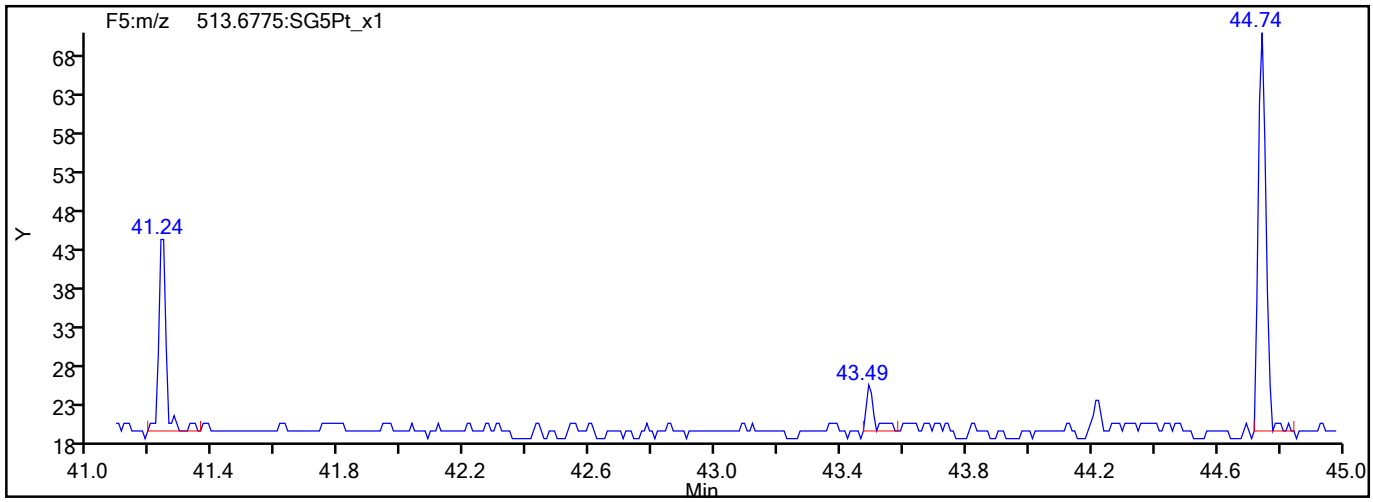

785258

Report Date: 25-Aug-2021 15:21:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
Injection Date:	20-Aug-2021 04:45:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

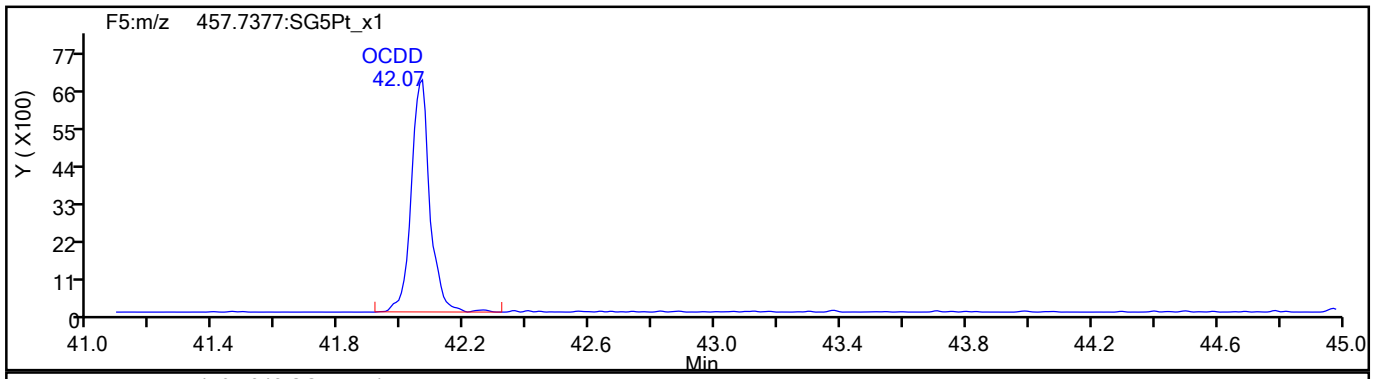

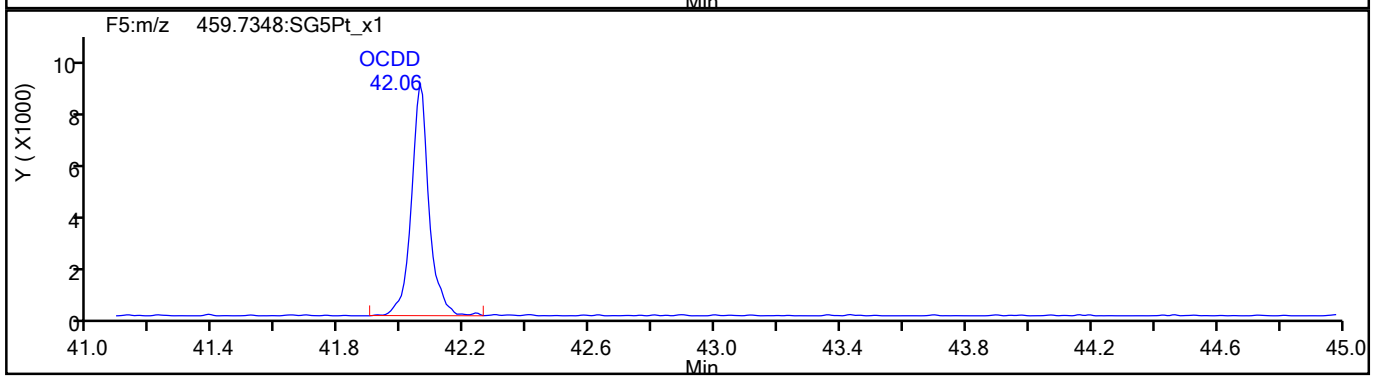

OCDD Standards

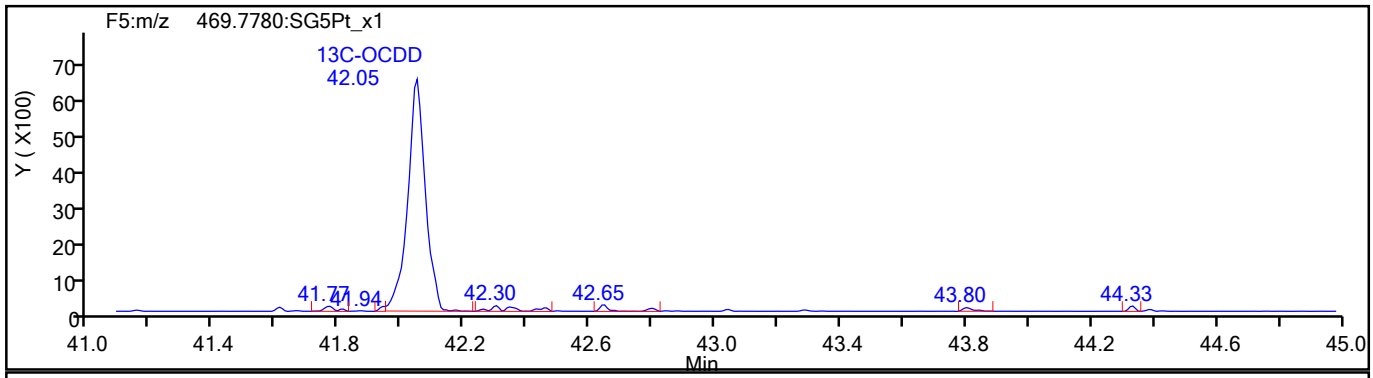

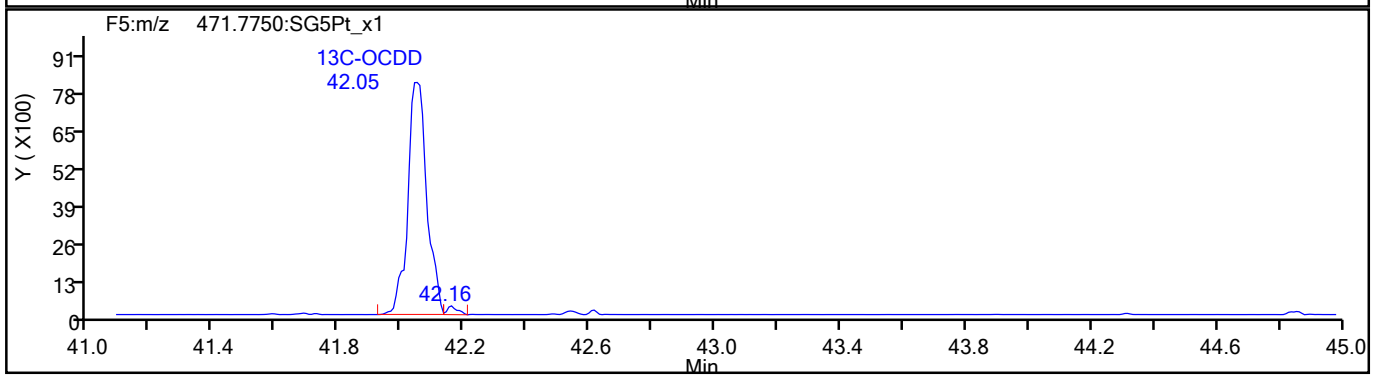

785259

Report Date: 25-Aug-2021 15:21:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	19
Column Type:	DB-5	Column Dia:	0.32 mm

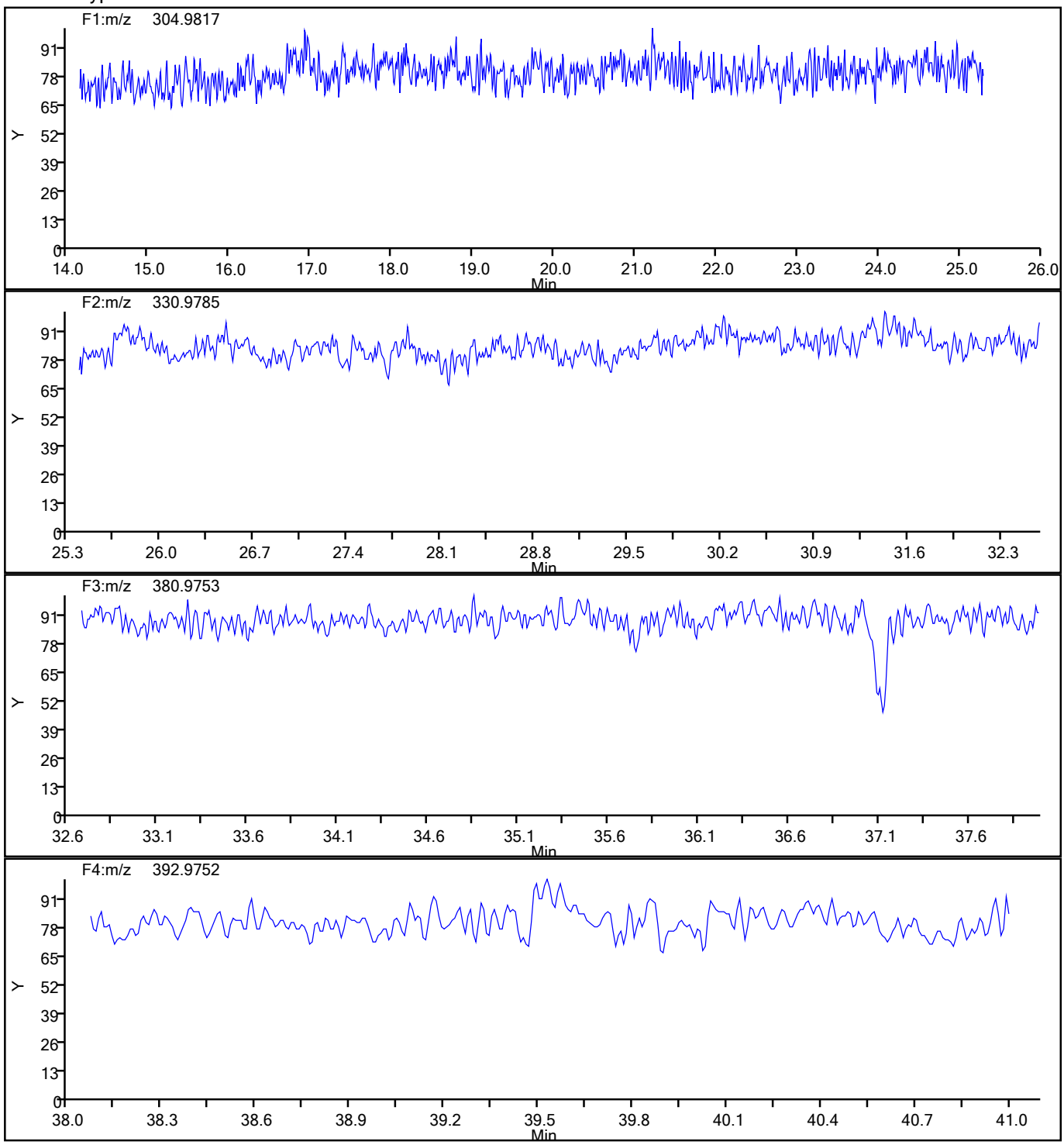

785260

Report Date: 25-Aug-2021 15:21:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_21.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

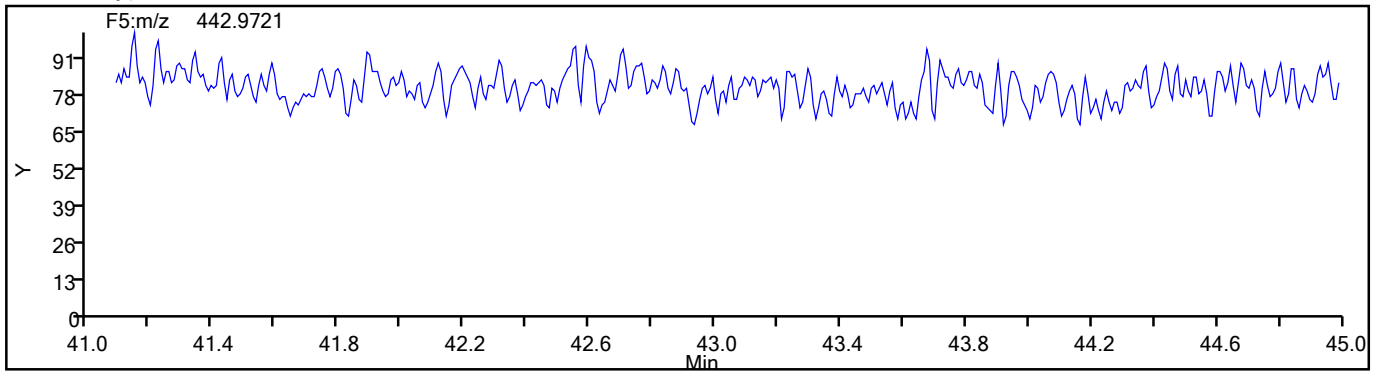

785261

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) RA
Lab Sample ID: 320-76888-1 RA
Matrix: Sediment
Lab File ID: 25AU2111D2_004.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.16(g)
Date Analyzed: 08/25/2021 10:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519650
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	110000	E G B	94	94

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	34		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	58		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_004.d
Lims ID: 320-76888-A-1-A
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: Client
Inject. Date: 25-Aug-2021 10:50:17 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-A X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:13:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.328	5878036	0.73	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.658	2679582	0.83	1.3327	3.421	3.421	0.7602	0.7602	34.21	M
2,3,7,8-TCDF	17.658	813261259	0.79	0.9978	3041.7	3041.7	2.558	2.558		Ea
D 13C-2,3,7,8-TCDD	16.081	1771525	0.85	0.8749	3.445	3.445	7.715	7.715	34.45	nM
2,3,7,8-TCDD	16.108	131449669	0.79	1.0570	702.0	702.0	2.878	2.878		Ea
$ 37Cl4-2,3,7,8-TCDD	16.095	1186505		0.8648	2.334	2.334	0.3090	0.3090	58.35	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_004.d
Lims ID: 320-76888-A-1-A
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: Client
Inject. Date: 25-Aug-2021 10:50:17 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-A X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:13:09

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.328	16.285	3		2489363	549989	110155	275387	5		M
333.9339	16.314	16.285	2		3388673	706932	229217	573042	3	0.73(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.658	17.601	3	1.081	1215118	239826	25608	64020	9		M
317.9389	17.631	17.601	2	1.080	1464464	292895	25325	63312	12	0.83(0.65-0.89)	M
2,3,7,8-TCDF											Ea
303.9016	17.658	17.629	2	1.000	359416869	65009932	25199	62997	2580		a
305.8987	17.658	17.629	2	1.000	453844390	81574474	29192	72980	2794	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.081	16.051	2	0.985	816021	178906	110155	275387	2		M
333.9339	16.095	16.051	3	0.986	955504	183842	229217	573042	1	0.85(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.108	16.079	2	1.002	57953126	12799110	26334	65835	486		a
321.8936	16.108	16.079	2	1.002	73496543	16083481	17798	44495	904	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.095	16.079	1	0.986	1186505	278230	13435	33587	21		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_004.d				
Injection Date:	25-Aug-2021 10:50:17	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 18.59
Area: 1024488
Amount: 2.831664
Amount Units: pg/ul

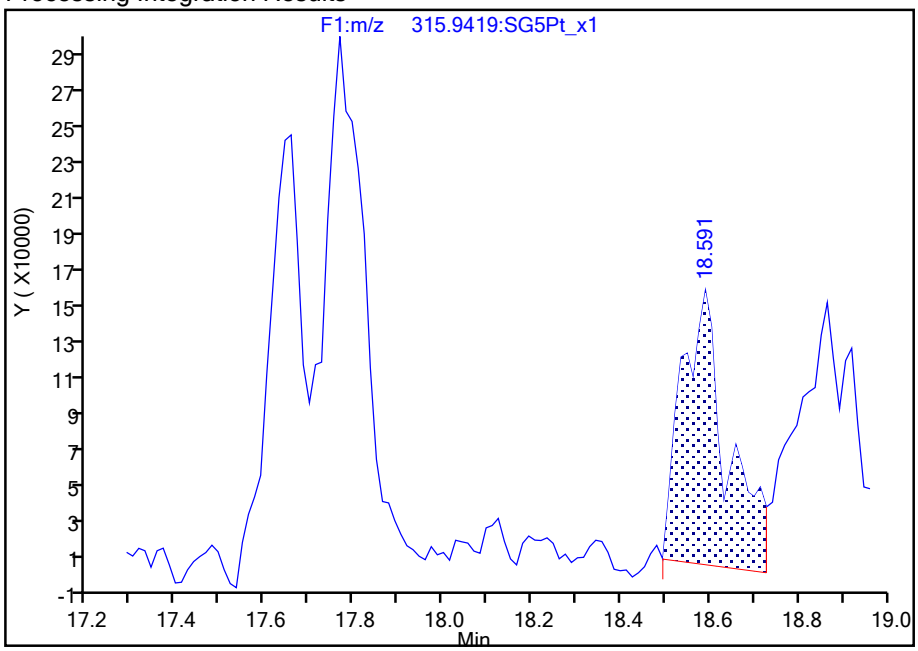

Manual Integration Results

RT: 17.66
Area: 1215118
Amount: 3.420637
Amount Units: pg/ul

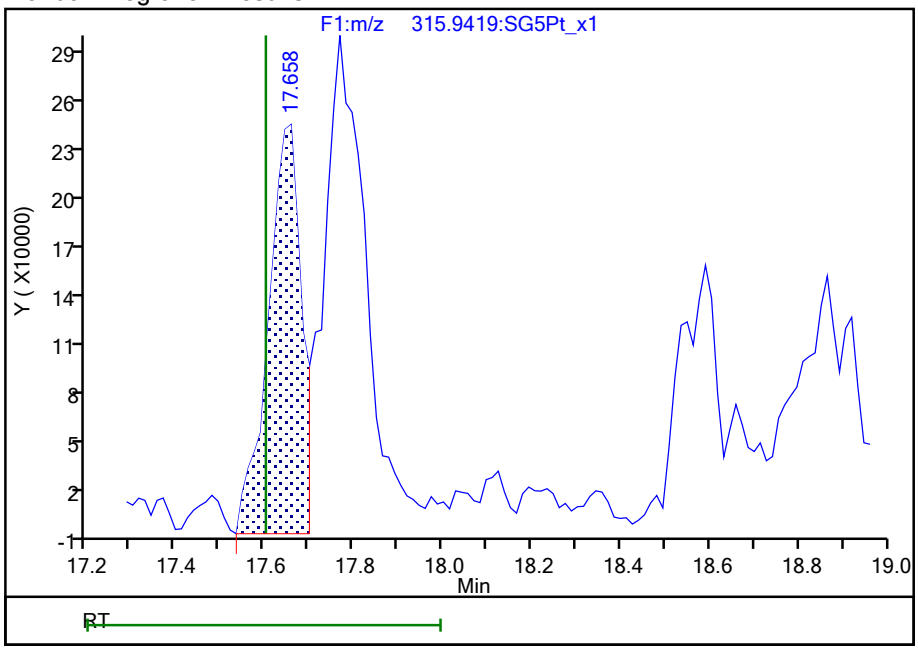

Reviewer: bennettd, 25-Aug-2021 13:12:38

Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_004.d				
Injection Date:	25-Aug-2021 10:50:17	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 18.56
Area: 1193718
Amount: 2.831664
Amount Units: pg/ul

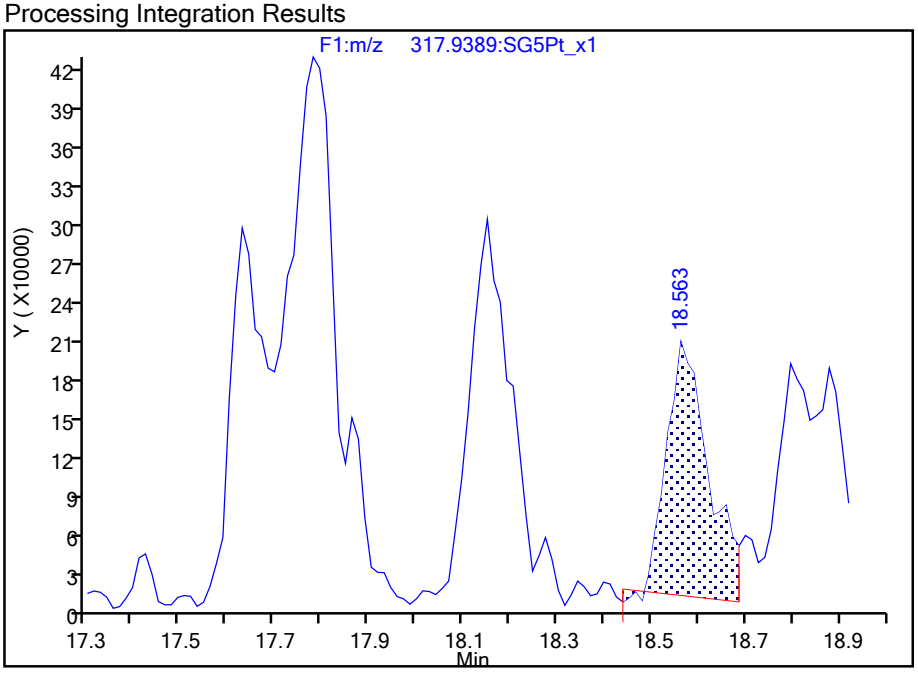

Manual Integration Results

RT: 17.63
Area: 1464464
Amount: 3.420637
Amount Units: pg/ul

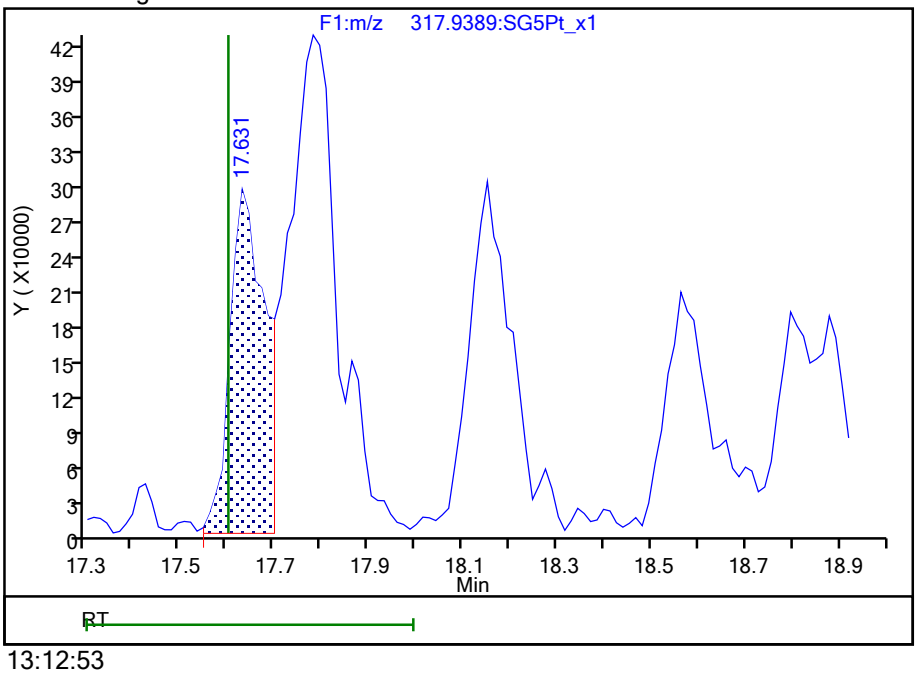

Reviewer: bennettd, 25-Aug-2021 13:12:53

Audit Action: Manually Integrated Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_004.d				
Injection Date:	25-Aug-2021 10:50:17	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Not Detected
Expected RT: 17.63

Processing Integration Results

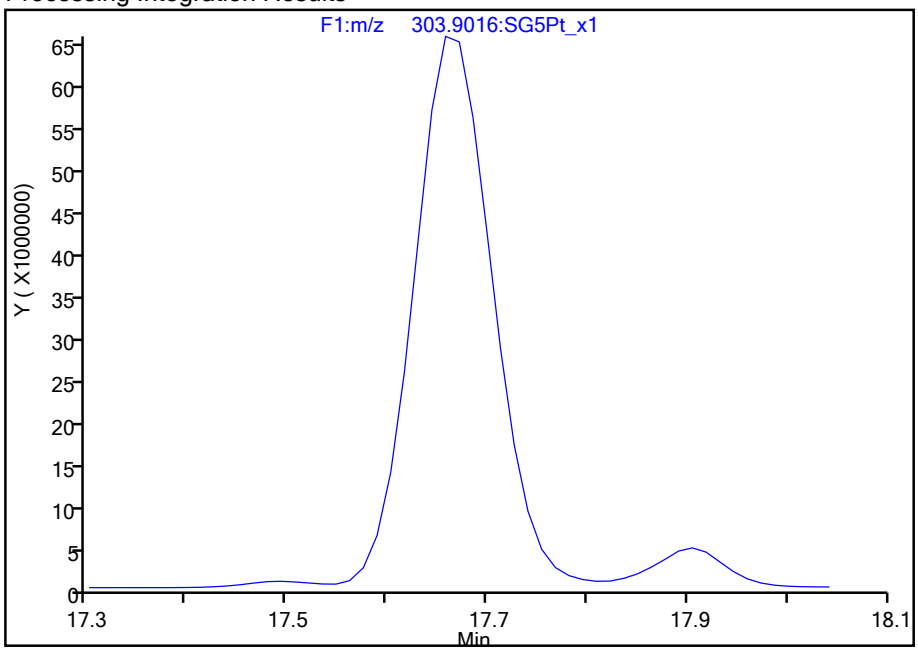

Manual Integration Results

RT: 17.66
Area: 359416869
Amount: 3041.7014
Amount Units: pg/ul

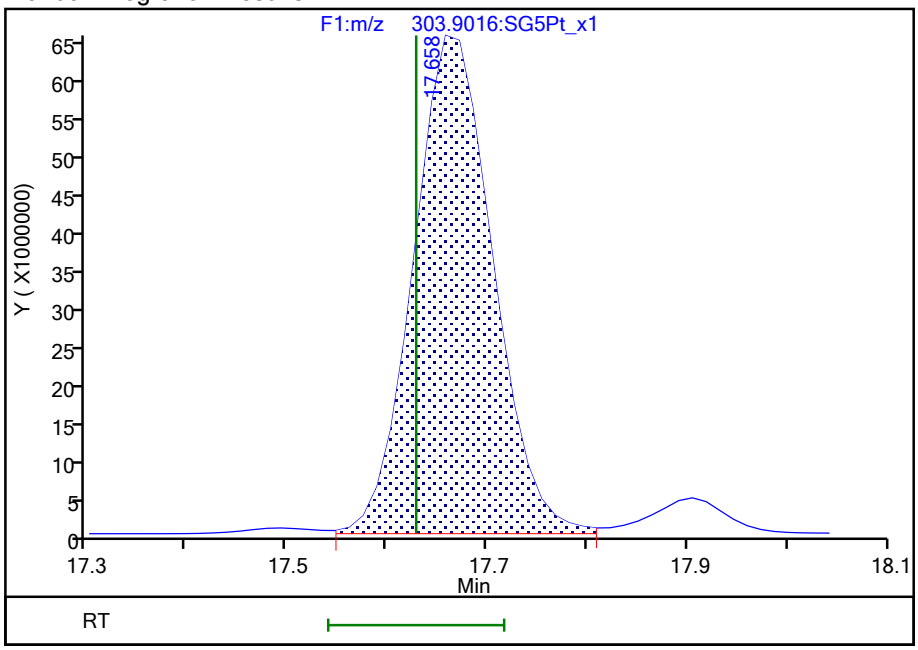

Reviewer: bennettd, 25-Aug-2021 13:12:59
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

785267

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_004.d				
Injection Date:	25-Aug-2021 10:50:17	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-A	Lab Sample ID:	320-76888-1		
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

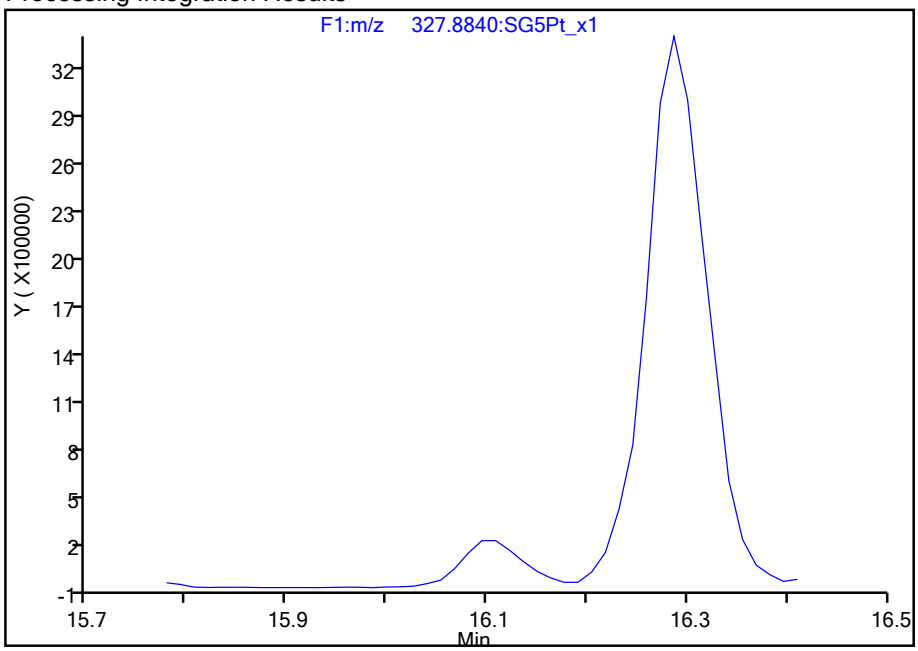

Manual Integration Results

RT: 16.09
Area: 1186505
Amount: 2.334068
Amount Units: pg/ul

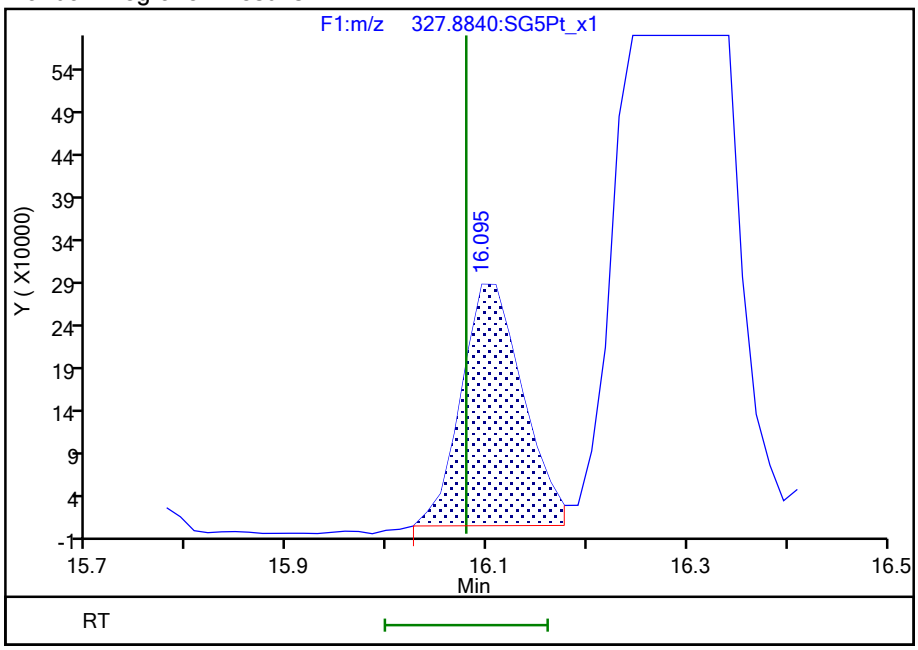

Reviewer: bennettd, 25-Aug-2021 13:12:26
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Report Date: 25-Aug-2021 13:23:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_004.d		
Injection Date:	25-Aug-2021 10:50:17	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

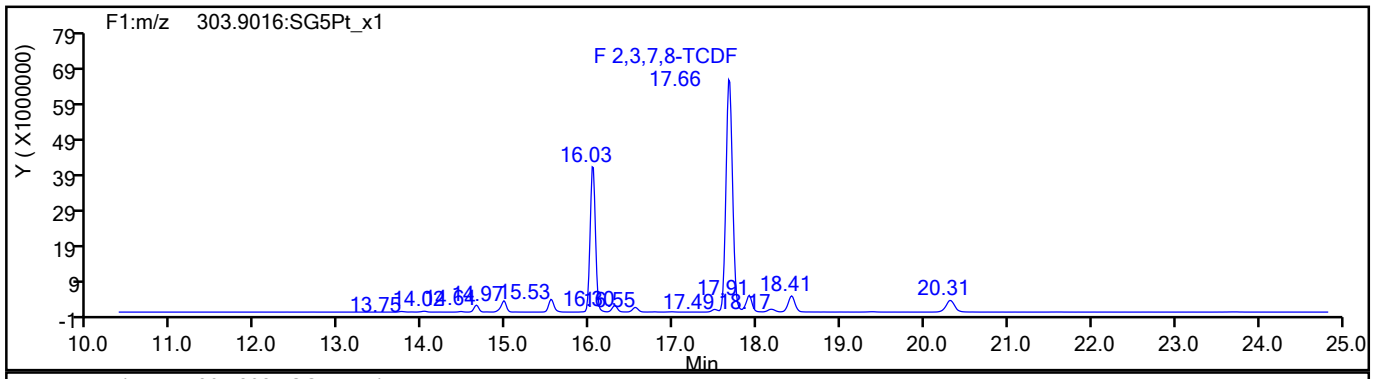

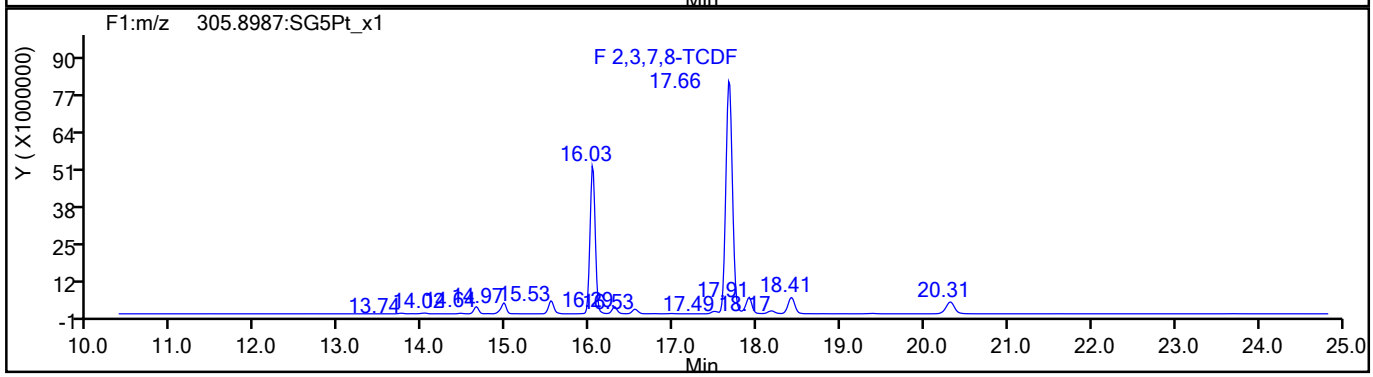

TCDF Standards

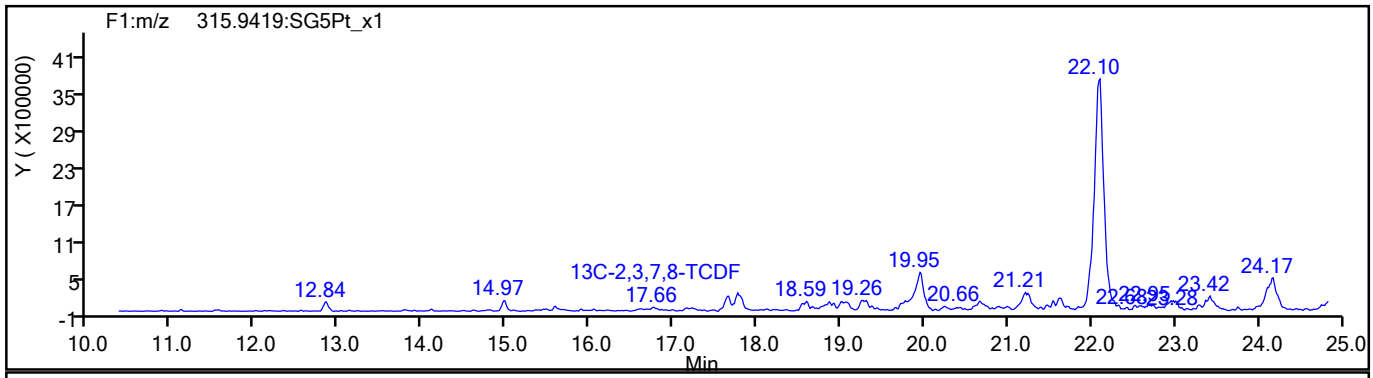

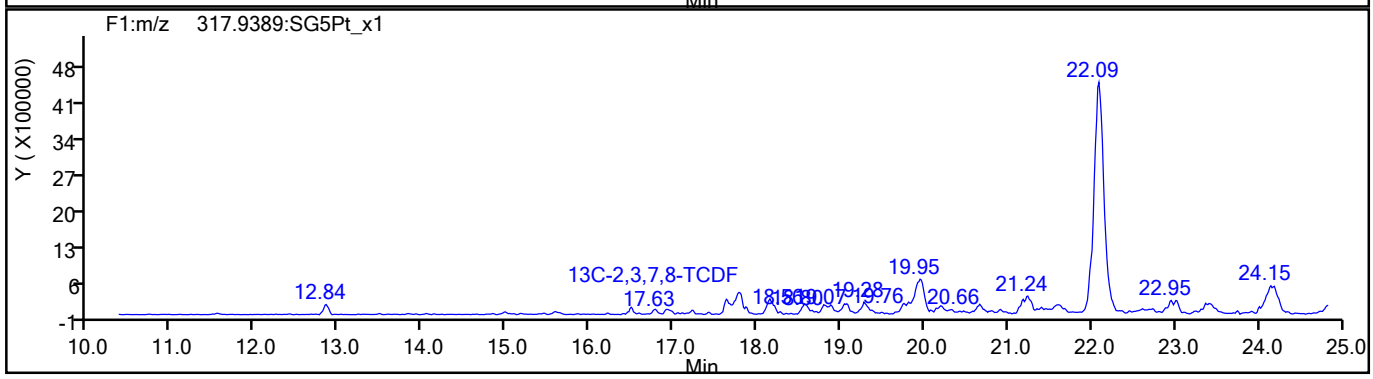

785269

Report Date: 25-Aug-2021 13:23:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_004.d		
Injection Date:	25-Aug-2021 10:50:17	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

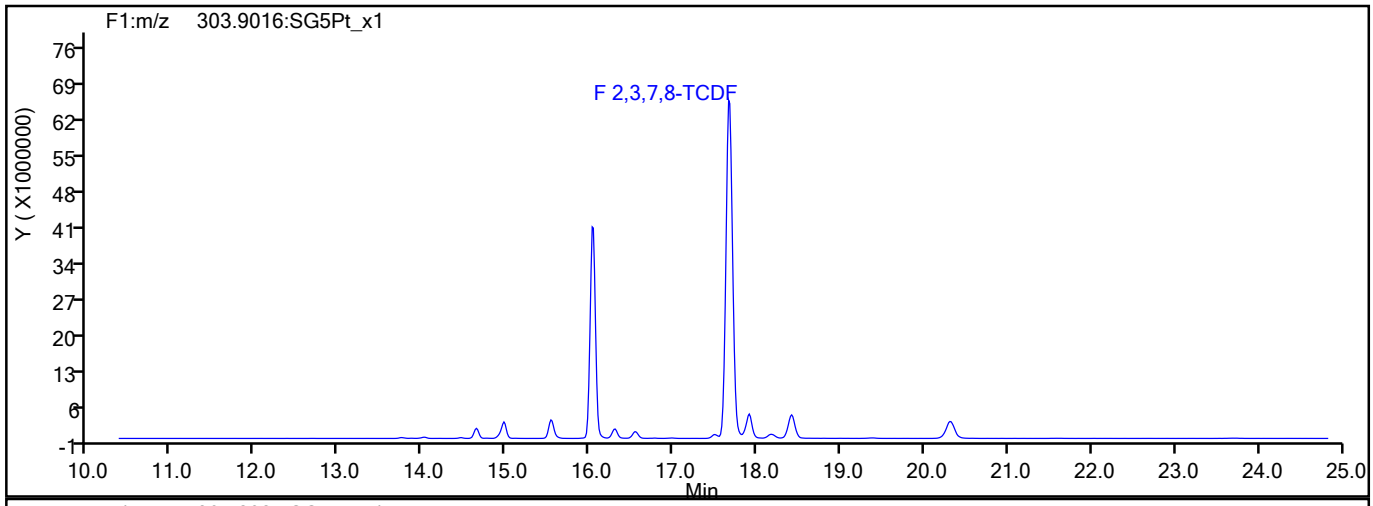

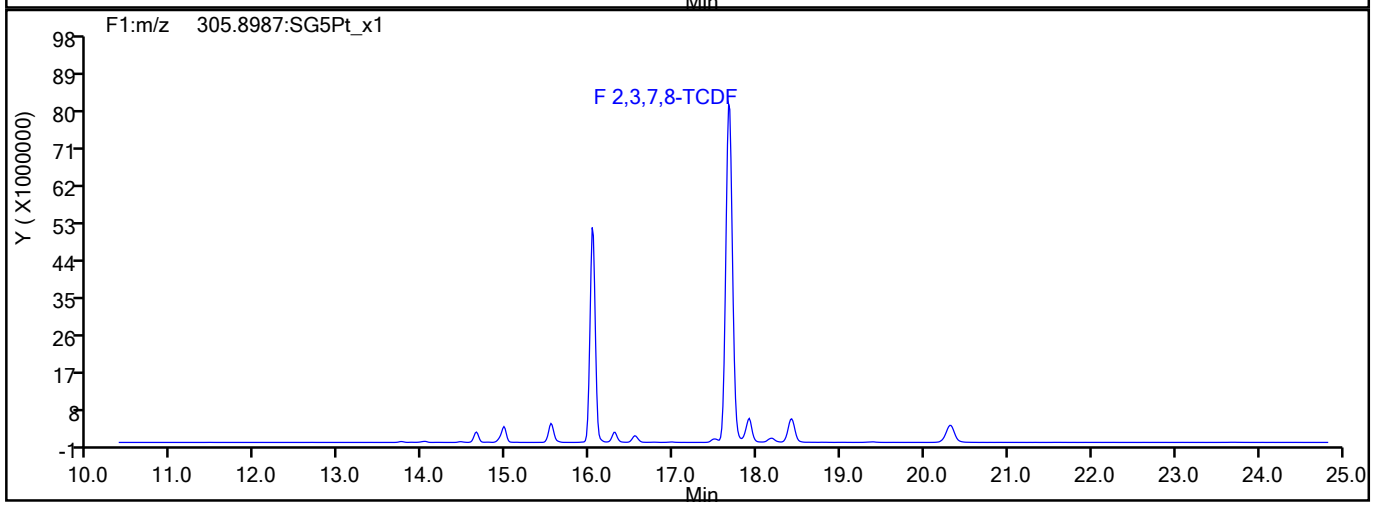

TCDF Interference Mass

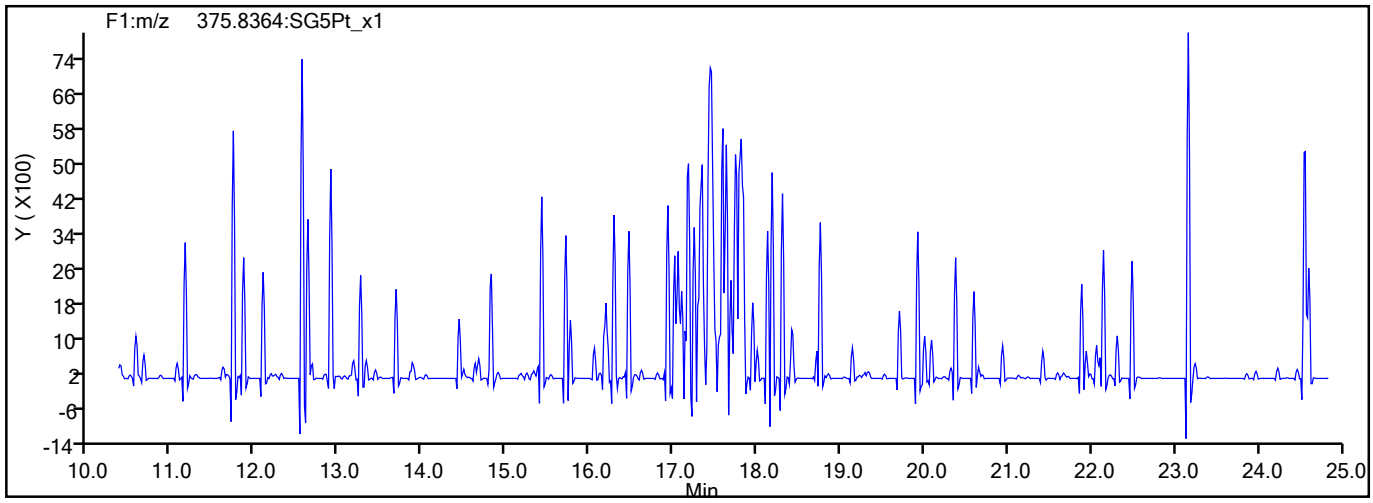

785270

Report Date: 25-Aug-2021 13:23:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_004.d		
Injection Date:	25-Aug-2021 10:50:17	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

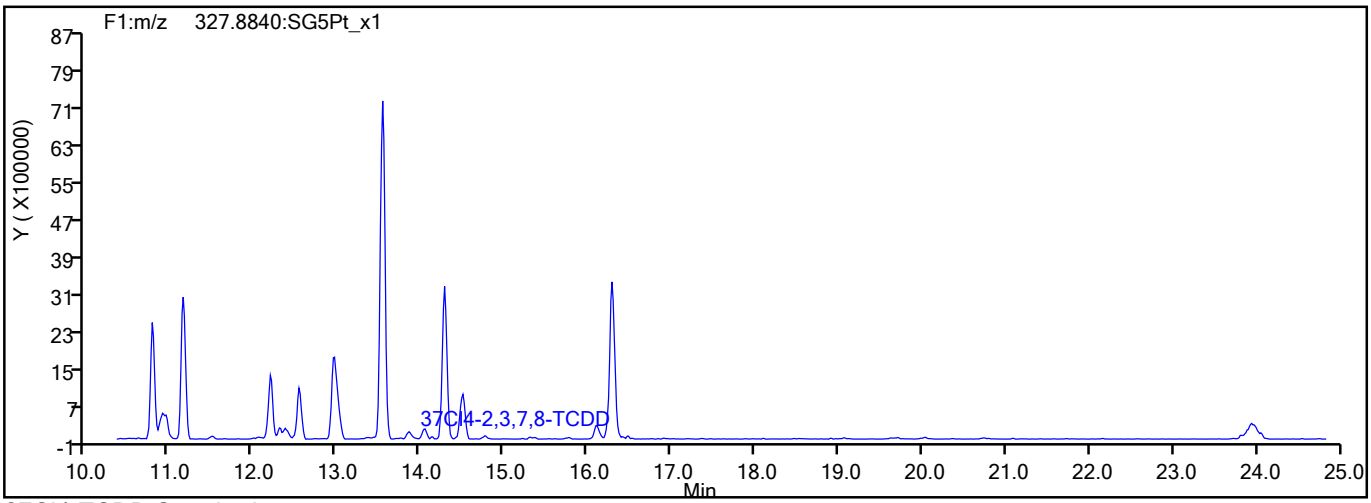

37Cl4-TCDD Standards

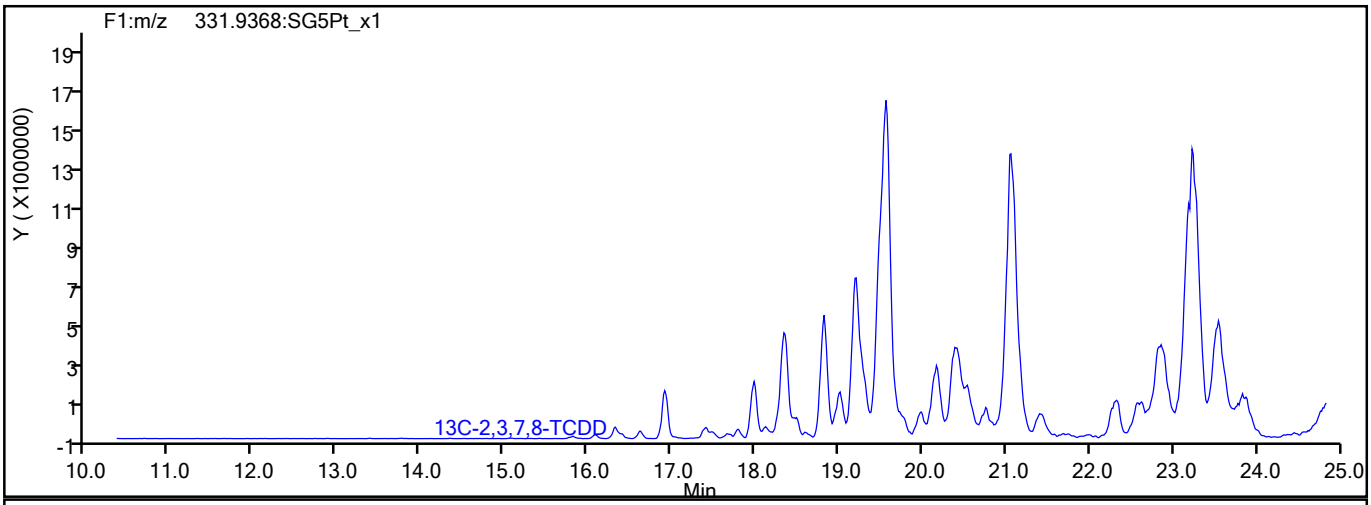

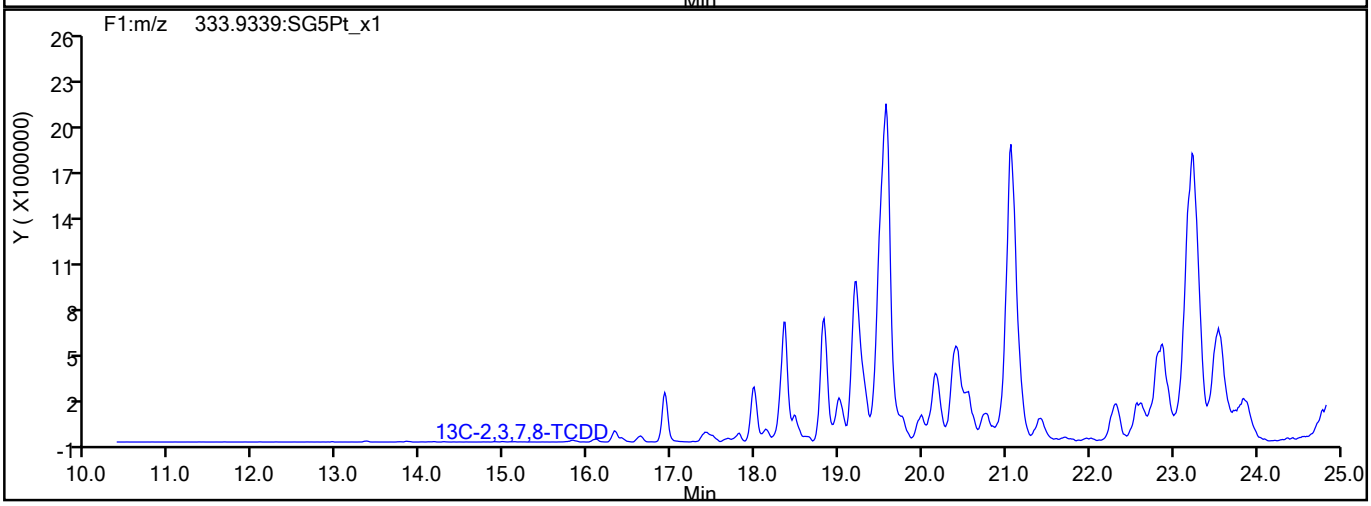

785271

Report Date: 25-Aug-2021 13:23:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_004.d		
Injection Date:	25-Aug-2021 10:50:17	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

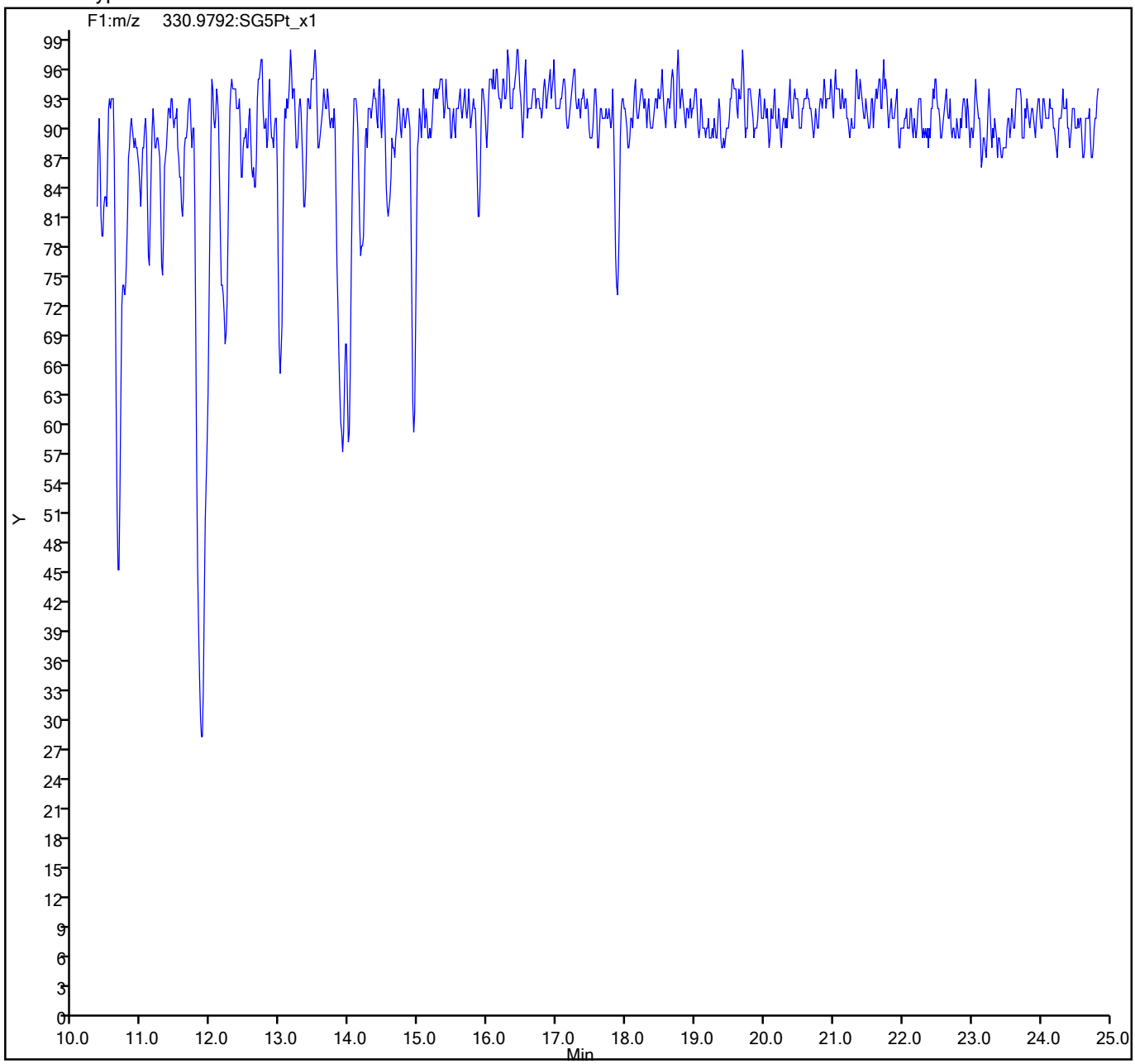

785272

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (2-4)
Lab Sample ID: 320-76888-2
Matrix: Sediment
Lab File ID: 19au21dfs1_25.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 9.99(g)
Date Analyzed: 08/20/2021 07:57
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 45.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	23000	G E	29	29
40321-76-4	1,2,3,7,8-PeCDD	370		92	7.7
57117-41-6	1,2,3,7,8-PeCDF	2700		92	12
57117-31-4	2,3,4,7,8-PeCDF	2000		92	12
39227-28-6	1,2,3,4,7,8-HxCDD	ND		92	0.97
57653-85-7	1,2,3,6,7,8-HxCDD	ND		92	0.93
19408-74-3	1,2,3,7,8,9-HxCDD	ND		92	0.88
70648-26-9	1,2,3,4,7,8-HxCDF	3600		92	15
57117-44-9	1,2,3,6,7,8-HxCDF	960		92	14
72918-21-9	1,2,3,7,8,9-HxCDF	57	J q	92	16
60851-34-5	2,3,4,6,7,8-HxCDF	130		92	17
35822-46-9	1,2,3,4,6,7,8-HpCDD	70	J B	92	1.1
67562-39-4	1,2,3,4,6,7,8-HpCDF	1100	B	92	4.2
55673-89-7	1,2,3,4,7,8,9-HpCDF	360		92	3.8
3268-87-9	OCDD	750	B	180	2.6
39001-02-0	OCDF	530		180	3.4
41903-57-5	Total TCDD	26000	G q	29	29
30402-14-3	Total TCDF	210000	G B	180	180
36088-22-9	Total PeCDD	370		92	7.7
30402-15-4	Total PeCDF	7500		92	12
34465-46-8	Total HxCDD	17	J q	92	0.92
55684-94-1	Total HxCDF	5400	q	92	16
37871-00-4	Total HpCDD	140	q B	92	1.1
38998-75-3	Total HpCDF	1700	B	92	4.0

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (2-4)
Lab Sample ID: 320-76888-2
Matrix: Sediment
Lab File ID: 19au21dfs1_25.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 9.99(g)
Date Analyzed: 08/20/2021 07:57
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 45.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	37		25-164
89059-46-1	13C-2,3,7,8-TCDF	36		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	29		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	31		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	36		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	44		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	40		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	52		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	42		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	37		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	37		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	37	q	23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	39		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	44		26-138
114423-97-1	13C-OCDD	43		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	73		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d
Lims ID: 320-76888-A-2-A
Client ID: 11215702-072621-BN-SJSB094 (2-4)
Sample Type: Client
Inject. Date: 20-Aug-2021 07:57:00 ALS Bottle#: 0 Worklist Smp#: 23
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:27:36 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: dadunj Date: 23-Aug-2021 09:57:54

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.420	150820	0.83	2.1E+04	10.0	10.0				
D 13C-2,3,7,8-TCDF	20.474	73681	0.85	1.3459	3.630	3.630	0.2532	0.2532	36.30	
2,3,7,8-TCDF	20.483	25418942	0.83	1.0802	3193.7	3193.7	4.782	4.782		E
A Non-2,3,7,8-sub-TCDF	19.851	20308654	0.83	1.0802	2551.7	2551.7	4.782	1526.5		a
S Total TCDF					5745.4	5745.4	4.782	4.782		
D 13C-2,3,7,8-TCDD	21.833	52346	0.78	0.9317	3.725	3.725	0.3640	0.3640	37.25	
2,3,7,8-TCDD	21.859	3606773	0.80	1.0753	640.7	640.7	0.8027	0.8027		Ea
$ 37Cl4-2,3,7,8-TCDD	21.859	44634		1.0083	2.935	2.935	0.2281	0.2281	73.38	M
A Non-2,3,7,8-sub-TCDD	20.684	377110	0.77	1.0753	67.5	67.0	0.8027	59.8		RQa
S Total TCDD					708.3	707.7	0.8027	0.8027		RQ
D 13C-1,2,3,7,8-PeCDF	27.290	54137	1.36	1.1405	3.147	3.147	0.0537	0.0537	31.47	
1,2,3,7,8-PeCDF	27.307	420477	1.58	1.0543	73.7	73.7	0.3164	0.3164		M
D 13C-2,3,4,7,8-PeCDF	28.772	61133	1.50	1.1253	3.602	3.602	0.0544	0.0544	36.02	
2,3,4,7,8-PeCDF	28.806	329031	1.58	1.0079	53.4	53.4	0.3274	0.3274		
A F1 PeCDFs	24.634	3479	1.37	1.0311	0.5854	0.5854	0.0104	0.5854		M
A Non-2,3,7,8-sub-PeCDF	28.173	463068	1.59	1.0311	77.9	77.9	0.3218	32.2		Ma
S Total PeCDF					205.6	205.6	0.3219	0.3219		
D 13C-1,2,3,7,8-PeCDD	29.588	30885	1.66	0.7165	2.858	2.858	0.0461	0.0461	28.58	M
1,2,3,7,8-PeCDD	29.588	32307	1.51	1.0465	10.0	10.0	0.2100	0.2100		
A Non-2,3,7,8-sub-PeCDD	28.478						0.2100	0.5510		RQU
S Total PeCDD					10.0	10.0	0.2100	0.2100		
D 13C-1,2,3,4,7,8-HxCDF	34.936	63597	0.52	0.9648	5.157	5.157	0.0264	0.0264	51.57	
1,2,3,4,7,8-HxCDF	34.936	713635	1.29	1.1474	97.8	97.8	0.4169	0.4169		
D 13C-1,2,3,6,7,8-HxCDF	35.095	57968	0.58	1.0708	4.235	4.235	0.0237	0.0237	42.35	
1,2,3,6,7,8-HxCDF	35.087	185625	1.29	1.2178	26.3	26.3	0.3913	0.3913		
D 13C-2,3,4,6,7,8-HxCDF	35.903	48626	0.47	1.0413	3.654	3.654	0.0244	0.0244	36.54	
2,3,4,6,7,8-HxCDF	35.920	20360	1.22	1.2145	3.448	3.448	0.4593	0.4593		M
D 13C-1,2,3,7,8,9-HxCDF	36.804	46423	0.56	0.9731	3.733	3.733	0.0261	0.0261	37.33	
1,2,3,7,8,9-HxCDF	36.812	8942	1.24	1.2401	1.703	1.553	0.4335	0.4335		RQM
A Non-2,3,7,8-sub-HxCDF	35.009	112107	1.24	1.2049	17.6	17.2	0.4234	6.928		RQMa
S Total HxCDF					146.9	146.3	0.4253	0.4253		RQ

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.594	127813	1.24	1.8E+04	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	36.106	42481	1.37	0.7587	4.381	4.381	0.0261	0.0261	43.81	
1,2,3,4,7,8-HxCDD	36.156						0.0265	0.0265		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.223	44000	1.29	0.8593	4.006	4.006	0.0231	0.0231	40.06	
1,2,3,6,7,8-HxCDD	36.156						0.0253	0.0253		RQU
1,2,3,7,8,9-HxCDD	36.597						0.0239	0.0239		
A Non-2,3,7,8-sub-HxCDD	35.375	2171	1.24	1.0545	0.5187	0.4761	0.0251	0.4761		RQa
S Total HxCDD					0.5187	0.4761	0.0252	0.0252		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.607	36658	0.47	0.7359	3.897	3.897	0.0278	0.0278	38.97	
1,2,3,4,6,7,8-HpCDF	38.624	163920	1.06	1.4421	31.0	31.0	0.1136	0.1136		
D 13C-1,2,3,4,7,8,9-HpCDF	39.862	38587	0.48	0.6854	4.405	4.405	0.0299	0.0299	44.05	
1,2,3,4,7,8,9-HpCDF	39.871	49391	1.10	1.3092	9.777	9.777	0.1028	0.1028		
A Non-2,3,7,8-sub-HpCDF	39.245	34134	1.06	1.3756	6.596	6.596	0.1074	6.596		
S Total HpCDF					47.4	47.4	0.1082	0.1082		
D 13C-1,2,3,4,6,7,8-HpCDD	39.550	31713	1.04	0.6745	4.100	3.678	0.0220	0.0220	41.00	RQ
1,2,3,4,6,7,8-HpCDD	39.567	7132	1.05	1.0503	1.921	1.921	0.0313	0.0313		
A Non-2,3,7,8-sub-HpCDD	39.241	6570	1.04	1.0503	1.934	1.770	0.0313	1.770		RQ
S Total HpCDD					3.855	3.691	0.0313	0.0313		RQ
D 13C-OCDD	42.056	60345	0.99	0.5446	8.669	8.669	0.0515	0.0515	43.34	
OCDF	42.157	57770	0.90	1.3168	14.5	14.5	0.0918	0.0918		
OCDD	42.064	65481	0.89	1.0620	20.4	20.4	0.0705	0.0705		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d
Lims ID: 320-76888-A-2-A
Client ID: 11215702-072621-BN-SJSB094 (2-4)
Sample Type: Client
Inject. Date: 20-Aug-2021 07:57:00 ALS Bottle#: 0 Worklist Smp#: 23
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:27:36 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: dadunj Date: 23-Aug-2021 09:57:54

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.420	21.395	1		68396	8679	130	325	67		
333.9338	21.437	21.395	3		82424	10103	125	312	81	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.474	20.365	7	0.956	33882	5577	139	347	40		
317.9389	20.440	20.365	4	0.954	39799	5664	117	292	48	0.85(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.483	20.408	4	1.000	11535913	1525935	1280	3200	1192		
305.8987	20.483	20.408	4	1.000	13883029	1879411	1043	2607	1802	0.83(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	17.500	19.851	-141	0.855	57257	10493	1280	3200	8		
305.8987	17.500	19.851	-141	0.855	72079	14097	1043	2607	14	0.79(0.65-0.89)	
303.9016	17.947	19.851	-114	0.877	279130	43145	1280	3200	34		
305.8987	17.947	19.851	-114	0.877	327955	52815	1043	2607	51	0.85(0.65-0.89)	
303.9016	18.445	19.851	-84	0.901	442779	53184	1280	3200	42		
305.8987	18.437	19.851	-85	0.900	527955	63858	1043	2607	61	0.84(0.65-0.89)	
303.9016	18.875	19.851	-58	0.922	374074	48496	1280	3200	38		
305.8987	18.875	19.851	-58	0.922	457508	61605	1043	2607	59	0.82(0.65-0.89)	
303.9016	19.262	19.851	-35	0.941	530630	77293	1280	3200	60		
305.8987	19.245	19.851	-36	0.940	653240	90763	1043	2607	87	0.81(0.65-0.89)	
303.9016	19.752	19.851	-6	0.965	5490652	759942	1280	3200	594		
305.8987	19.760	19.851	-5	0.965	6658466	932647	1043	2607	894	0.82(0.65-0.89)	
303.9016	20.156	19.851	18	0.984	186212	24763	1280	3200	19		
305.8987	20.147	19.851	18	0.984	241687	31225	1043	2607	30	0.77(0.65-0.89)	
303.9016	21.248	19.851	84	1.038	845109	109326	1280	3200	85		
305.8987	21.256	19.851	84	1.038	1029525	132918	1043	2607	127	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.721	19.851	112	1.061	160110	17394	1280	3200	14		
305.8987	21.738	19.851	113	1.062	189186	22503	1043	2607	22	0.85(0.65-0.89)	
303.9016	23.648	19.851	227	1.155	814855	150273	1280	3200	117		a
305.8987	23.648	19.851	227	1.155	970245	179085	1043	2607	172	0.84(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.833	21.716	7	1.019	22984	3702	130	325	28		
333.9338	21.799	21.716	5	1.018	29362	4025	125	312	32	0.78(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	21.859	21.733	8	1.001	1605802	208015	151	377	1378		a
321.8936	21.859	21.733	8	1.001	2000971	257223	116	290	2217	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											M
327.8847	21.859	21.799	4	1.020	44634	5845	173	432	34		M
A Non-2,3,7,8-sub-TCDD											RQa
319.8965	19.769	20.684	-55	0.905	4281	950	151	377	6		
321.8936	19.760	20.684	-55	0.905	6636	965	116	290	8	0.65(0.65-0.89)	
319.8965	21.635	20.684	57	0.991	15895	2483	151	377	16		a
	Empc Correction				12923	2522	151	377	17		
321.8936	21.652	20.684	58	0.992	16784	3276	116	290	28	0.95(0.65-0.89)	
319.8965	22.496	20.684	108	1.030	146794	18879	151	377	125		
321.8936	22.496	20.684	108	1.030	189692	24524	116	290	211	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.290	27.251	2	1.274	31153	5737	21	52	273		
353.8970	27.307	27.251	3	1.275	22984	3555	25	62	142	1.36(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.307	27.276	2	1.001	257535	38824	57	142	681		M
341.8567	27.299	27.276	1	1.000	162942	25181	67	167	376	1.58(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.772	28.757	1	1.343	36657	5897	21	52	281		
353.8970	28.797	28.757	2	1.344	24476	3498	25	62	140	1.50(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.806	28.791	1	1.001	201439	28847	57	142	506		
341.8567	28.806	28.791	1	1.001	127592	18072	67	167	270	1.58(1.32-1.78)	
A F1 PeCDFs											M
339.8597	24.104	24.634	-32	0.883	2011	405	1	2	405		M
341.8567	24.096	24.634	-32	0.883	1468	297	3	7	99	1.37(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											Ma
339.8597	25.834	28.173	-140	0.947	119160	18797	57	142	330		M
341.8567	25.825	28.173	-141	0.946	72396	12357	67	167	184	1.65(1.32-1.78)	
339.8597	26.735	28.173	-86	0.980	11712	1638	57	142	29		
341.8567	26.743	28.173	-86	0.980	7759	1072	67	167	16	1.51(1.32-1.78)	
339.8597	27.156	28.173	-61	0.995	20852	4573	57	142	80		M
341.8567	27.156	28.173	-61	0.995	13632	2914	67	167	43	1.53(1.32-1.78)	
339.8597	27.871	28.173	-18	1.021	76880	11457	57	142	201		
341.8567	27.871	28.173	-18	1.021	47571	7296	67	167	109	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	29.142	28.173	58	1.068	44996	5536	57	142	97		
341.8567	29.151	28.173	59	1.068	29508	3816	67	167	57	1.52(1.32-1.78)	
339.8597	30.842	28.173	160	1.130	10736	1577	57	142	28		
341.8567	30.834	28.173	159	1.130	7866	1104	67	167	16	1.36(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											M
367.8949	29.588	29.574	1	1.381	19284	3165	19	47	167		
369.8919	29.588	29.574	1	1.381	11601	1703	6	15	284	1.66(1.32-1.78)	M
1,2,3,7,8-PeCDD											
355.8546	29.588	29.616	-2	1.000	19416	2600	21	52	124		
357.8516	29.597	29.616	-1	1.000	12891	1964	22	55	89	1.51(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	27.678	28.478	-48	0.935	819	168	21	52	8		
357.8516	27.712	28.478	-46	0.937	962	101	22	55	5	0.85(1.32-1.78)	
	Empc Correction				528	108	22	55	0		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.936	34.906	2	0.955	21826	4246	11	27	386		
385.8610	34.910	34.906	0	0.954	41771	7566	20	50	378	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.936	34.922	1	1.000	401930	72987	117	292	624		
375.8178	34.936	34.922	1	1.000	311705	55210	109	272	507	1.29(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.095	35.066	2	0.959	21379	4198	11	27	382		
385.8610	35.087	35.066	1	0.959	36589	7658	20	50	383	0.58(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.087	35.082	0	1.000	104499	19734	117	292	169		
375.8178	35.087	35.082	0	1.000	81126	15142	109	272	139	1.29(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.903	35.890	1	0.981	15555	3736	11	27	340		
385.8610	35.887	35.890	0	0.981	33071	6392	20	50	320	0.47(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.920	35.907	1	1.000	11191	2365	117	292	20		M
375.8178	35.920	35.907	1	1.000	9169	1883	109	272	17	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.804	36.782	1	1.006	16592	4068	11	27	370		
385.8610	36.787	36.782	0	1.005	29831	6441	20	50	322	0.56(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	36.812	36.791	1	1.000	5815	1425	117	292	12		M
	Empc Correction				4950	1151	117	292	10		
375.8178	36.787	36.791	0	1.000	3992	929	109	272	9	1.46(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.446	35.009	-94	0.957	25742	4230	117	292	36		
375.8178	33.446	35.009	-94	0.957	19465	3091	109	272	28	1.32(1.05-1.43)	
373.8208	34.288	35.009	-43	0.981	11754	2022	117	292	17		
	Empc Correction				8765	1592	117	292	14		
375.8178	34.288	35.009	-43	0.981	7069	1284	109	272	12	1.66(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	35.777	35.009	46	1.024	6341	1520	117	292	13		M
375.8178	35.786	35.009	47	1.024	5129	1117	109	272	10	1.24(1.05-1.43)	
373.8208	36.905	35.009	114	1.056	21853	5390	117	292	46		M
375.8178	36.905	35.009	114	1.056	17743	4080	109	272	37	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.594	36.581	1		70646	16710	15	37	1114		
403.8529	36.594	36.581	1		57167	13576	9	22	1508	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.106	36.092	1	0.987	24536	5885	15	37	392		
403.8529	36.106	36.092	1	0.987	17945	3726	9	22	414	1.37(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.109						4	10			
391.8127	36.109						7	17			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.223	36.210	1	0.990	24750	5575	15	37	372		
403.8529	36.223	36.210	1	0.990	19250	5177	9	22	575	1.29(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8158	36.227						4	10			
391.8127	36.227						7	17			
1,2,3,7,8,9-HxCDD											
389.8158	36.597						4	10			
391.8127	36.597						7	17			
A Non-2,3,7,8-sub-HxCDD											RQa
389.8158	35.357	35.375	-1	0.976	1202	280	4	10	70		a
391.8127	35.331	35.375	-3	0.975	1163	188	7	17	27	1.03(1.05-1.43)	
	Empc Correction				969	225	7	17	32		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.607	38.596	1	1.055	11739	3248	12	30	271		
419.8220	38.607	38.596	1	1.055	24919	5298	13	32	408	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.624	38.618	0	1.000	84286	21743	35	87	621		
409.7788	38.624	38.618	0	1.000	79634	20517	21	52	977	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.862	39.850	1	1.089	12551	3240	12	30	270		
419.8220	39.871	39.850	1	1.090	26036	7163	13	32	551	0.48(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.871	39.872	0	1.000	25863	6840	35	87	195		
409.7788	39.871	39.872	0	1.000	23528	6812	21	52	324	1.10(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.986	39.245	-16	1.010	17535	4516	35	87	129		
409.7788	38.986	39.245	-16	1.010	16599	4593	21	52	219	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											RQ
435.8169	39.550	39.547	0	1.081	19802	5529	15	37	369		
	Empc Correction				16167	4374	15	37	292		
437.8140	39.550	39.547	0	1.081	15546	4206	3	7	1402	1.27(0.88-1.20)	

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.567	39.561	0	1.000	3648	1015	9	22	113		
425.7737	39.567	39.561	0	1.000	3484	1095	4	10	274	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.927	39.241	-19	0.984	3959	1044	9	22	116		
	Empc Correction				3349	905	9	22	101		
425.7737	38.936	39.241	-18	0.984	3221	871	4	10	218	1.23(0.88-1.20)	
13C-OCDD											
469.7780	42.056	42.036	1	1.149	29960	6761	20	50	338		
471.7750	42.056	42.036	1	1.149	30385	8467	14	35	605	0.99(0.76-1.02)	
OCDF											
441.7428	42.157	42.137	1	1.002	27347	6254	11	27	569		
443.7399	42.149	42.137	1	1.002	30423	6917	26	65	266	0.90(0.76-1.02)	
OCDD											
457.7377	42.064	42.053	1	1.000	30814	7404	9	22	823		
459.7348	42.064	42.053	1	1.000	34667	8142	14	35	582	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:27:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Lims ID:	320-76888-A-2-A		
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Inject. Date:	20-Aug-2021 07:57:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	23

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	73681	11241

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		10.000	73681	11241

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.500	57257	10493	72079	14097	16.3	0.79	
17.947	279130	43145	327955	52815	76.3	0.85	
18.445	442779	53184	527955	63858	122.0	0.84	
18.875	374074	48496	457508	61605	104.5	0.82	
19.262	530630	77293	653240	90763	148.7	0.81	
19.752	5490652	759942	6658466	932647	1526.5	0.82	
20.156	186212	24763	241687	31225	53.8	0.77	
21.248	845109	109326	1029525	132918	235.5	0.82	
21.721	160110	17394	189186	22503	43.9	0.85	
23.648	814855	150273	970245	179085	224.3	0.84	a
Signal Totals:							
	9180808	1294309	11127846	1581516			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	20308654	2875825				0.83	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2551.7 = (20308654 * 10.000) / (73681 * 1.080)

QC Flag Legend

Review Flags

a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Lims ID:	320-76888-A-2-A		
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Inject. Date:	20-Aug-2021 07:57:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	23

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	52346	7727

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		10.000	52346	7727

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.769	4281	950	6636	965	1.94	0.65	
21.635	15895	2483	16784	3276	5.81	0.95	RQa
21.635	12923	2522	16784	3276	5.28		Empc Correction
22.496	146794	18879	189692	24524	59.8	0.77	
Signal Totals:							
	163998	22351	213112	28765			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	380082	51077				0.78	RQa
	377110	51116					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 67.522 = (380082 * 10.000) / (52346 * 1.075)
Empc Amount: 66.994 = (377110 * 10.000) / (52346 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Lims ID:	320-76888-A-2-A		
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Inject. Date:	20-Aug-2021 07:57:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	23

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	54137	9292
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	61133	9395

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	57635	9343

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.104	2011	405	1468	297	0.5854	1.37	M
Signal Totals:							
	2011	405	1468	297			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3479	702				1.37	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5854 = (3479 * 10.000) / (57635 * 1.031)

QC Flag Legend

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Lims ID:	320-76888-A-2-A		
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Inject. Date:	20-Aug-2021 07:57:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	23

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	54137	9292
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	61133	9395

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	57635	9343

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.834	119160	18797	72396	12357	32.2	1.65	Ma
26.735	11712	1638	7759	1072	3.28	1.51	
27.156	20852	4573	13632	2914	5.80	1.53	M
27.871	76880	11457	47571	7296	20.9	1.62	
29.142	44996	5536	29508	3816	12.5	1.52	
30.842	10736	1577	7866	1104	3.13	1.36	
Signal Totals:							
	284336	43578	178732	28559			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	463068	72137				1.59	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 77.924 = (463068 * 10.000) / (57635 * 1.031)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Lims ID:	320-76888-A-2-A		
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Inject. Date:	20-Aug-2021 07:57:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	23

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	30885	4868

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		10.000	30885	4868

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
27.678	819	168	962	101	0.5510	0.85	RQ
27.678	819	168	528	108			Empc Correction

Compound is Marked ND

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Lims ID:	320-76888-A-2-A		
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Inject. Date:	20-Aug-2021 07:57:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	23

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	63597	11812
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	57968	11856
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	48626	10128
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	46423	10509

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		10.000	54153	11076

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.446	25742	4230	19465	3091	6.93	1.32	
34.288	11754	2022	7069	1284	2.88	1.66	RQ
34.288	8765	1592	7069	1284	2.43		Empc Correction
35.777	6341	1520	5129	1117	1.76	1.24	Ma
36.905	21853	5390	17743	4080	6.07	1.23	Ma
Signal Totals:							
	62701	12732	49406	9572			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	115096	22734				1.33	RQMa
	112107	22304					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 17.639 = (115096 * 10.000) / (54153 * 1.205)

Empc Amount: 17.181 = (112107 * 10.000) / (54153 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:27:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Lims ID:	320-76888-A-2-A		
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Inject. Date:	20-Aug-2021 07:57:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	23

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	42481	9611
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	44000	10752
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		10.000	43240	10181

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.357	1202	280	1163	188	0.5187	1.03	RQa
35.357	1202	280	969	225	0.4761		Empc Correction
Signal Totals:							
	1202	280	969	225			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2365	468				1.03	RQa
	2171	505					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5187 = (2365 * 10.000) / (43240 * 1.055)

Empc Amount: 0.4761 = (2171 * 10.000) / (43240 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Report Date: 25-Aug-2021 15:27:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Lims ID:	320-76888-A-2-A		
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Inject. Date:	20-Aug-2021 07:57:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	23

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	36658	8546
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	38587	10403

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		10.000	37622	9474

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.986	17535	4516	16599	4593	6.60	1.06	
Signal Totals:							
	17535	4516	16599	4593			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	34134	9109				1.06	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 6.596 = (34134 * 10.000) / (37622 * 1.376)

Report Date: 25-Aug-2021 15:27:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Lims ID:	320-76888-A-2-A		
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Inject. Date:	20-Aug-2021 07:57:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	23

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	35348	9735

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		10.000	35348	9735

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.927	3959	1044	3221	871	1.93	1.23	RQ
38.927	3349	905	3221	871	1.77		Empc Correction
Signal Totals:							
	3349	905	3221	871			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7180	1915				1.23	RQ
	6570	1776					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.934 = (7180 * 10.000) / (35348 * 1.050)
Empc Amount: 1.770 = (6570 * 10.000) / (35348 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.64
Area: 15895
Amount: 5.805464
Amount Units: pg/ul

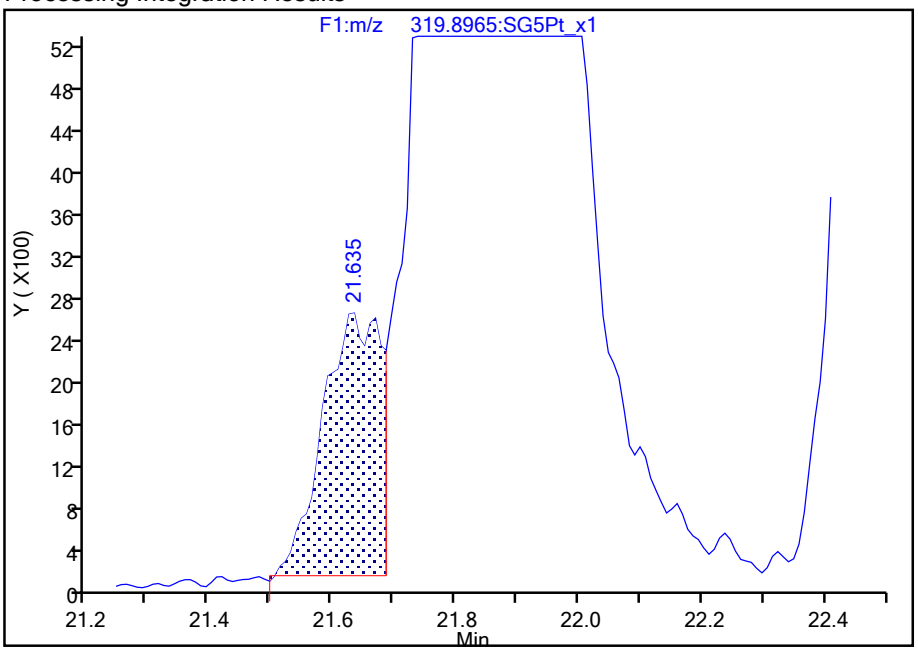

Manual Integration Results

RT: 21.86
Area: 1605802
Amount: 640.7476
Amount Units: pg/ul

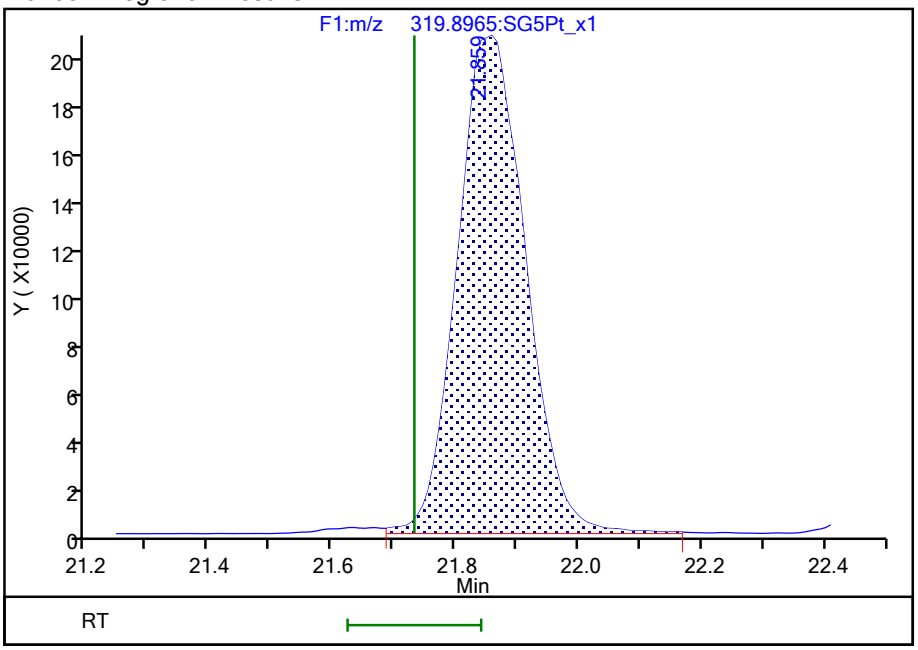

Reviewer: krenns, 25-Aug-2021 15:27:12

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.80

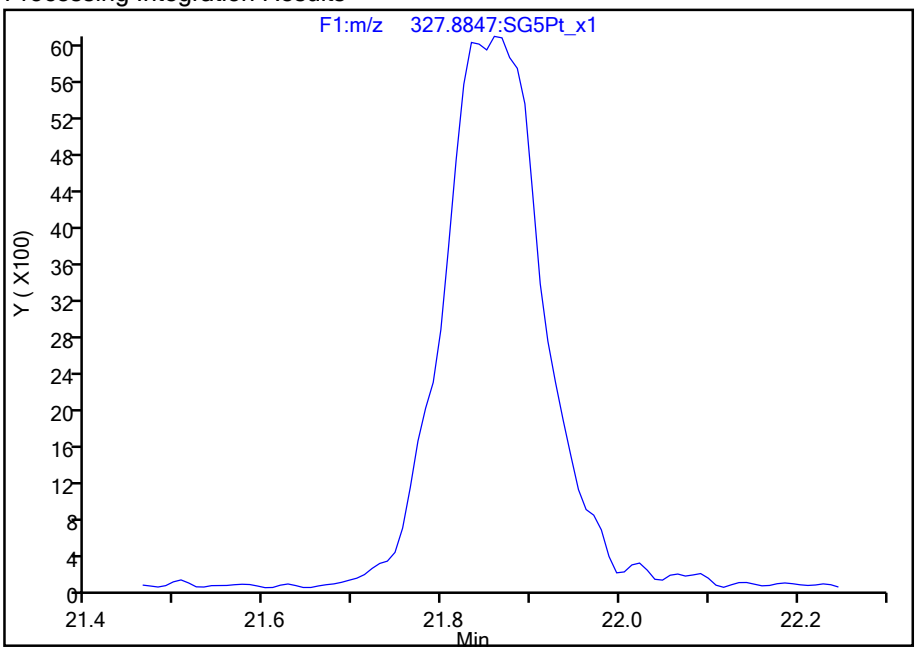

Manual Integration Results

RT: 21.86
Area: 44634
Amount: 2.935076
Amount Units: pg/ul

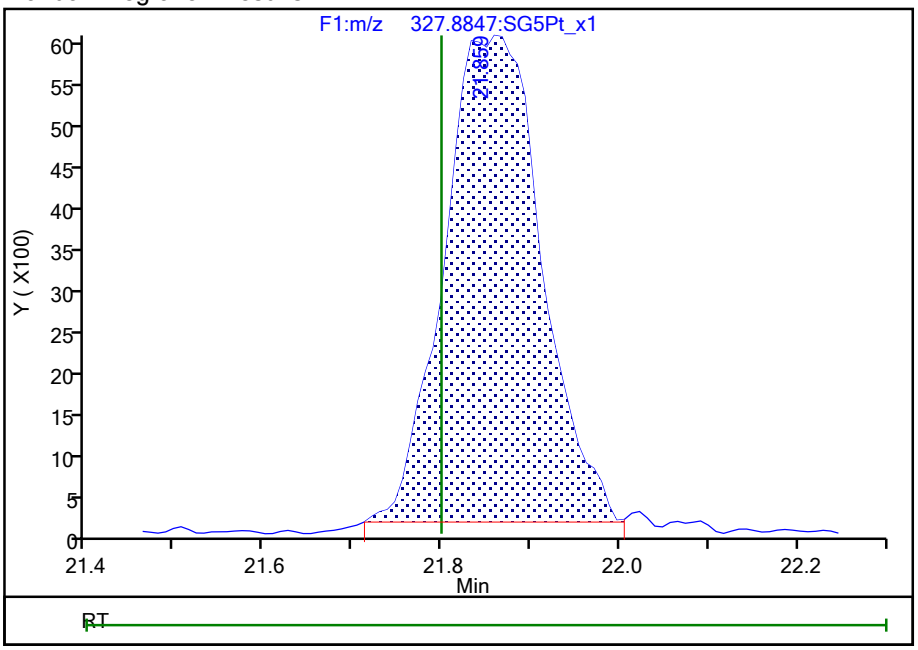

Reviewer: dadunj, 23-Aug-2021 09:53:51
Audit Action: Manually Integrated Audit Reason: Assign Peak

785293

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.31
Area: 278373
Amount: 77.786923
Amount Units: pg/ul

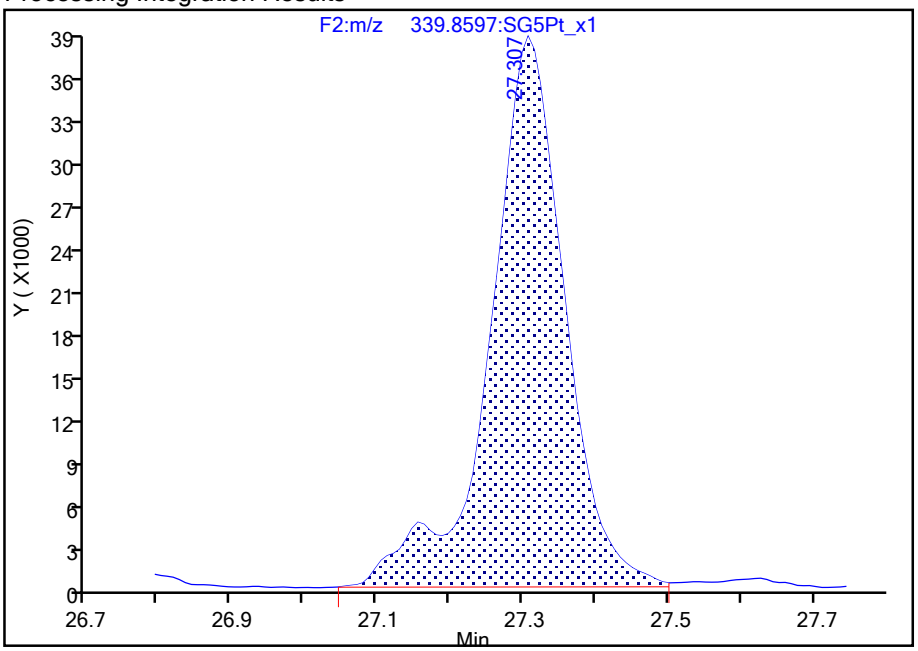

Manual Integration Results

RT: 27.31
Area: 257535
Amount: 73.671435
Amount Units: pg/ul

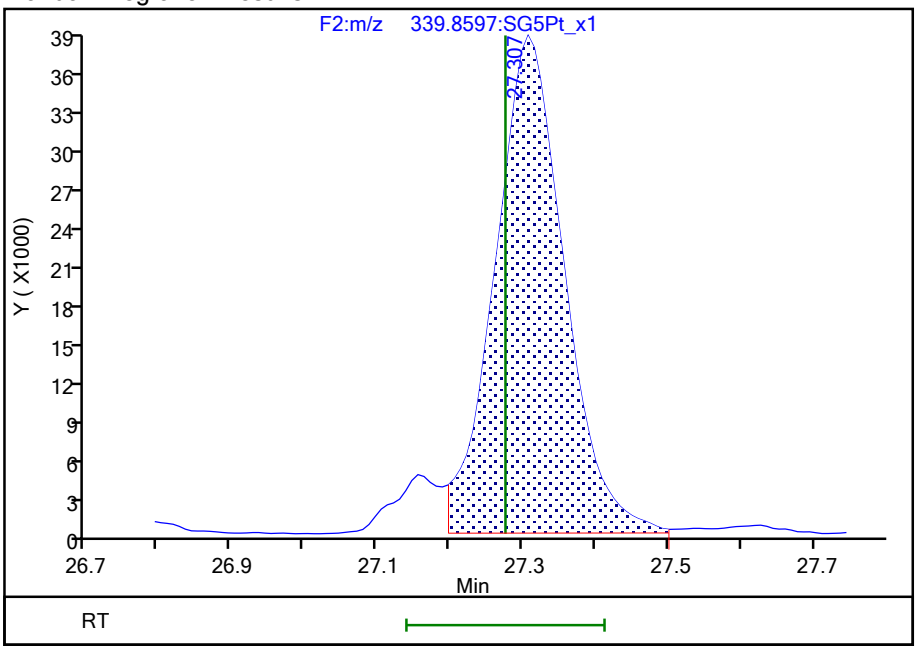

Reviewer: dadunj, 23-Aug-2021 09:54:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.30
Area: 165593
Amount: 77.786923
Amount Units: pg/ul

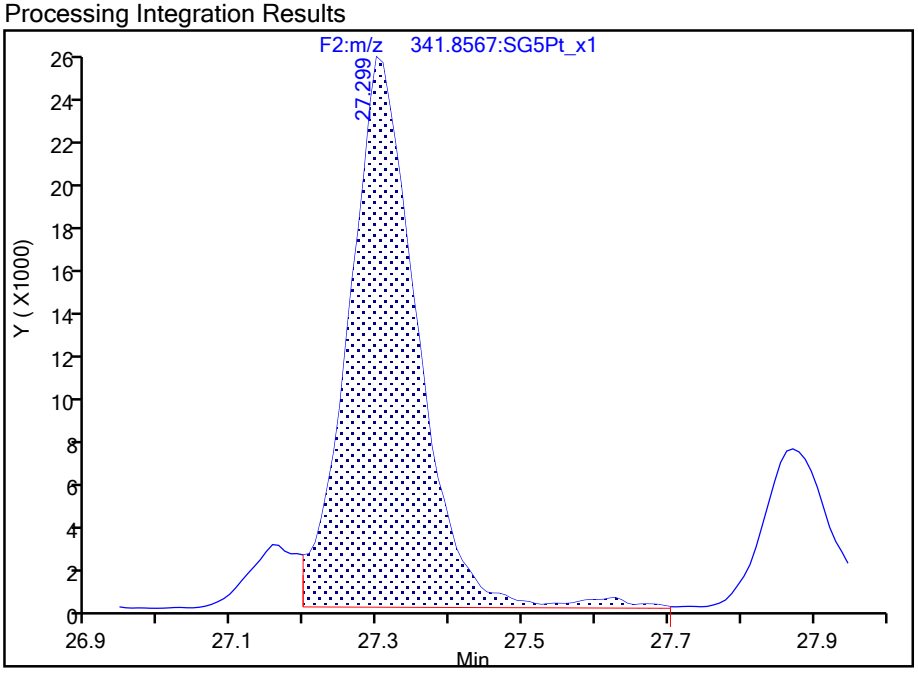

Manual Integration Results

RT: 27.30
Area: 162942
Amount: 73.671435
Amount Units: pg/ul

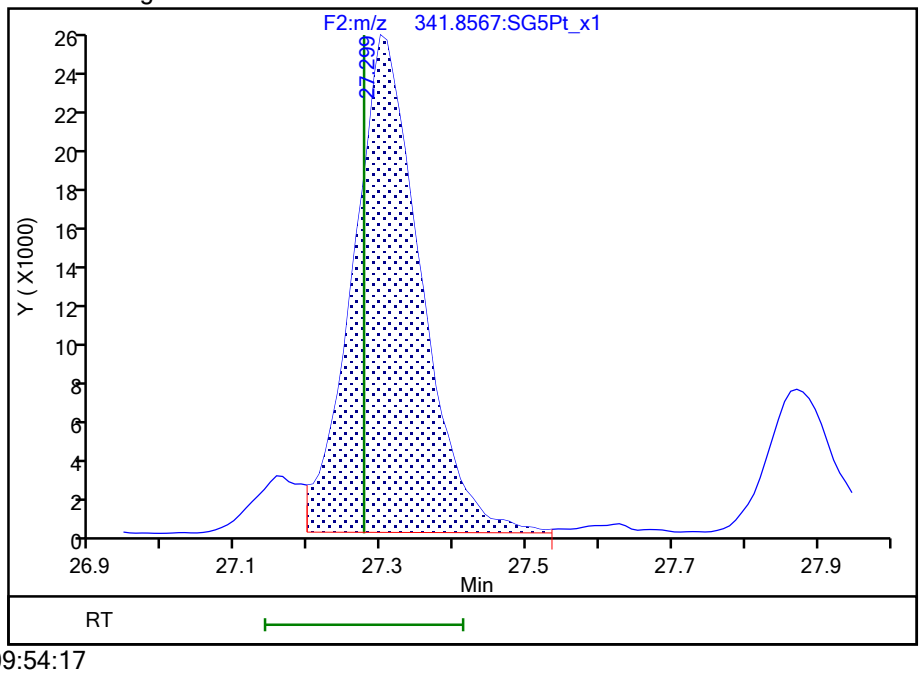

Reviewer: dadunj, 23-Aug-2021 09:54:17
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785295

Report Date: 25-Aug-2021 15:27:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

F1 PeCDFs, Signal: 1, m/z: 339.8597, RT: (23.97- 25.29)

Signal: 1

Processing Integration Results

RT = 24.104 Area = 1537

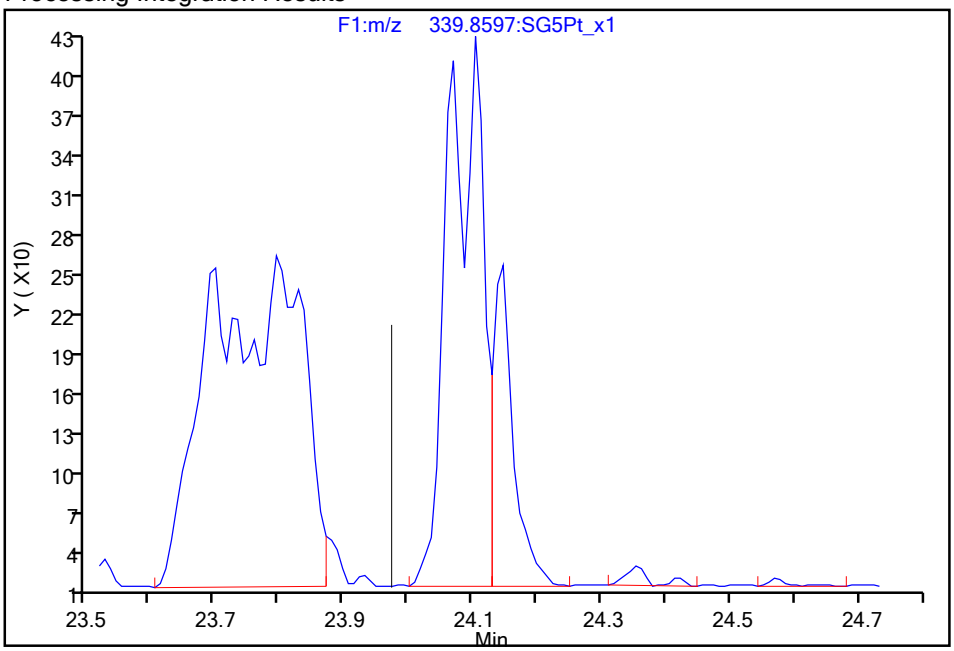

Manual Integration Results

RT = 24.104 Area = 2011 M

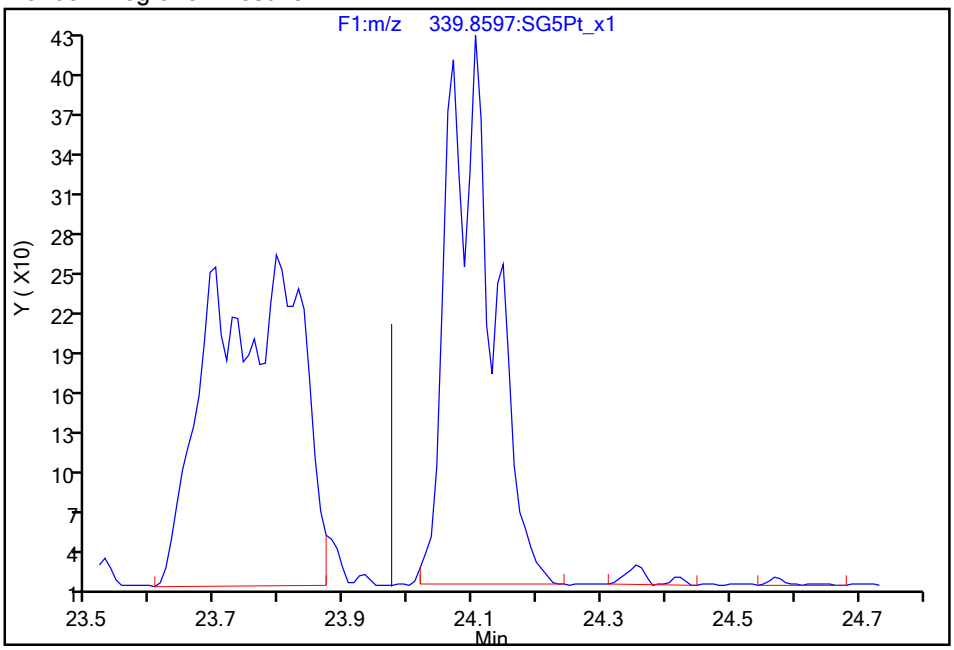

Reviewer: dadunj, 23-Aug-2021 09:54:28

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Processing Integration Results

RT = 25.834 Area = 119298

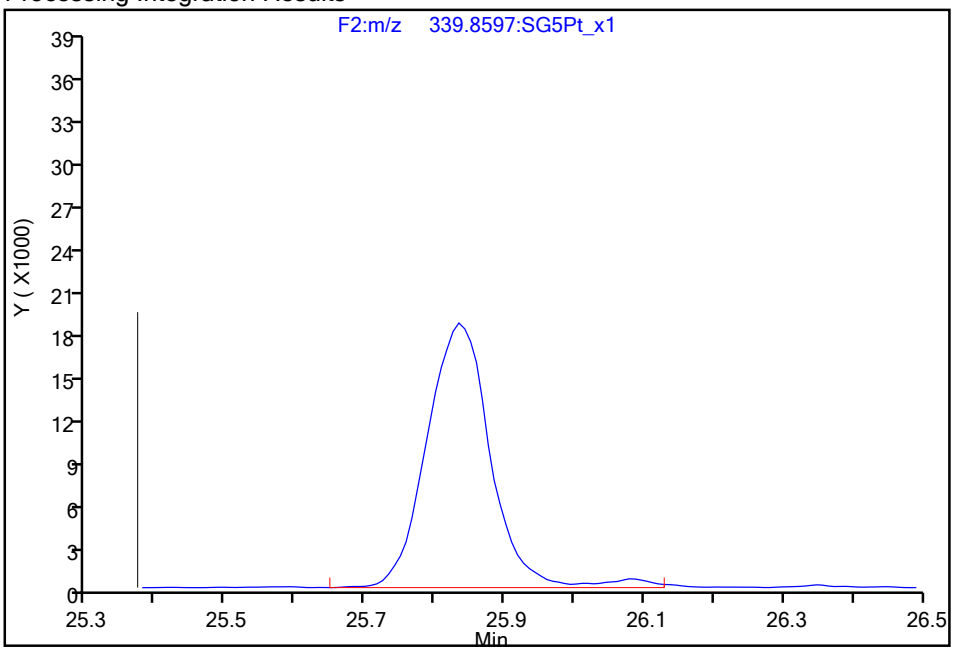

Manual Integration Results

RT = 25.834 Area = 119160 M

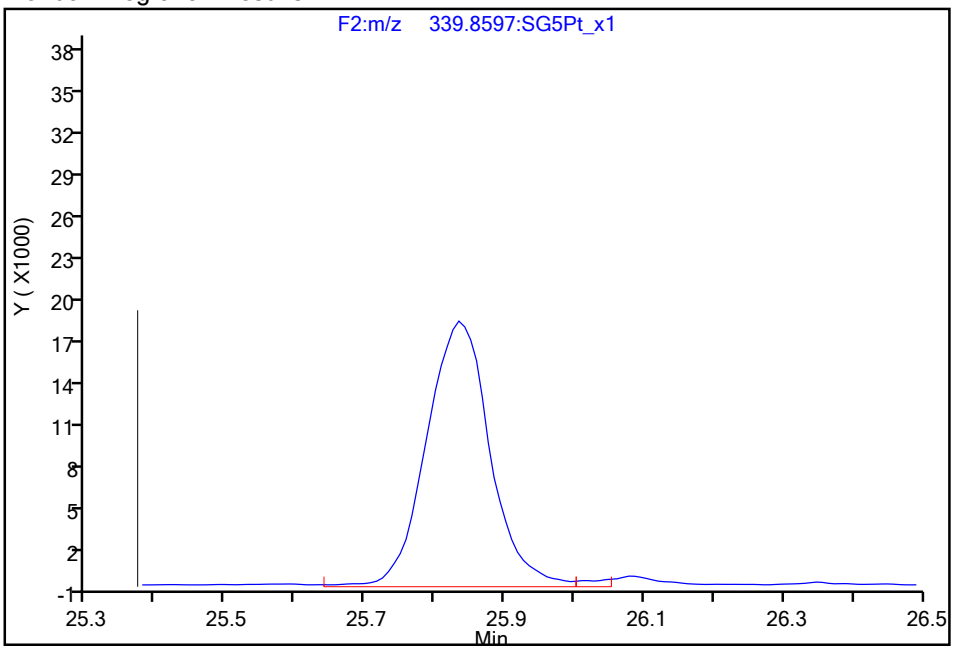

Reviewer: dadunj, 23-Aug-2021 09:55:06

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Not Detected
RT: 25.37- 30.97

Processing Integration Results

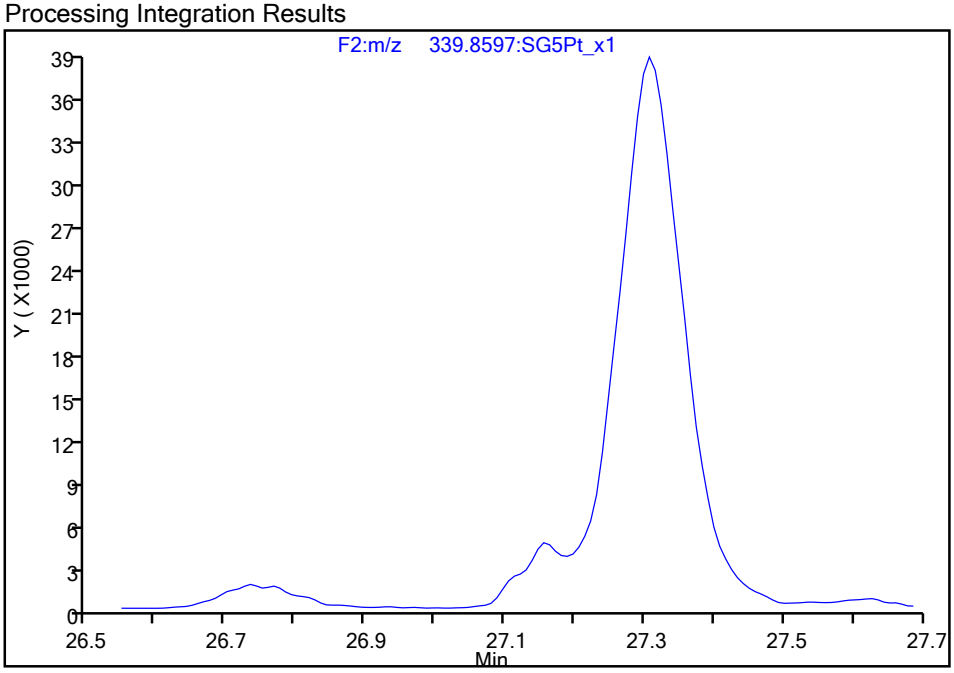

RT = 27.156 Area = 20852 M

Manual Integration Results

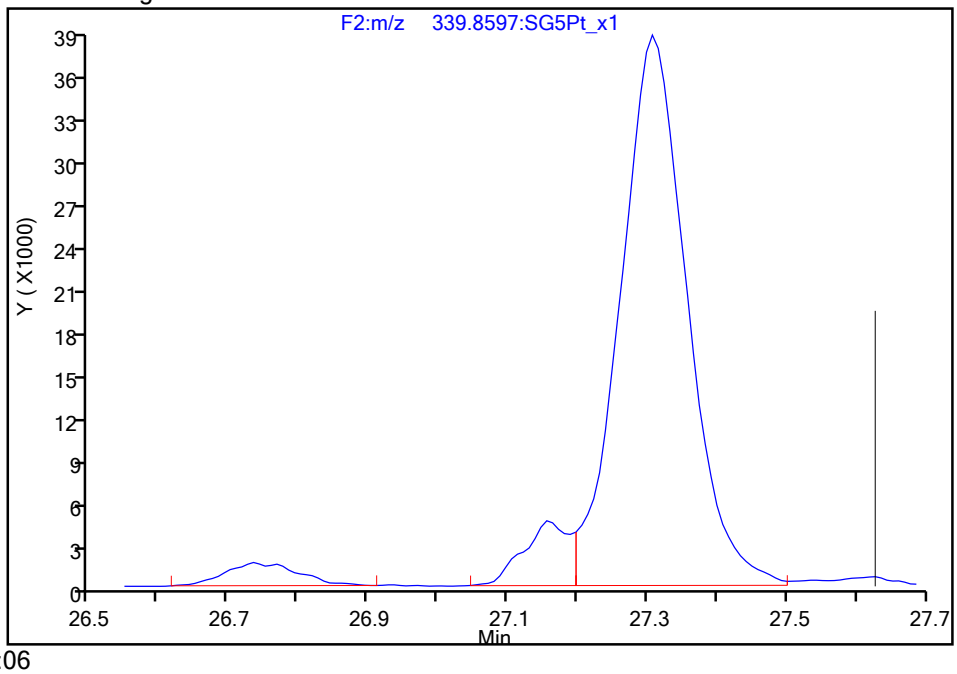

Reviewer: dadunj, 23-Aug-2021 09:55:06
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

785298

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 2

Processing Integration Results

RT: 29.59
Area: 8200
Amount: 2.543453
Amount Units: pg/ul

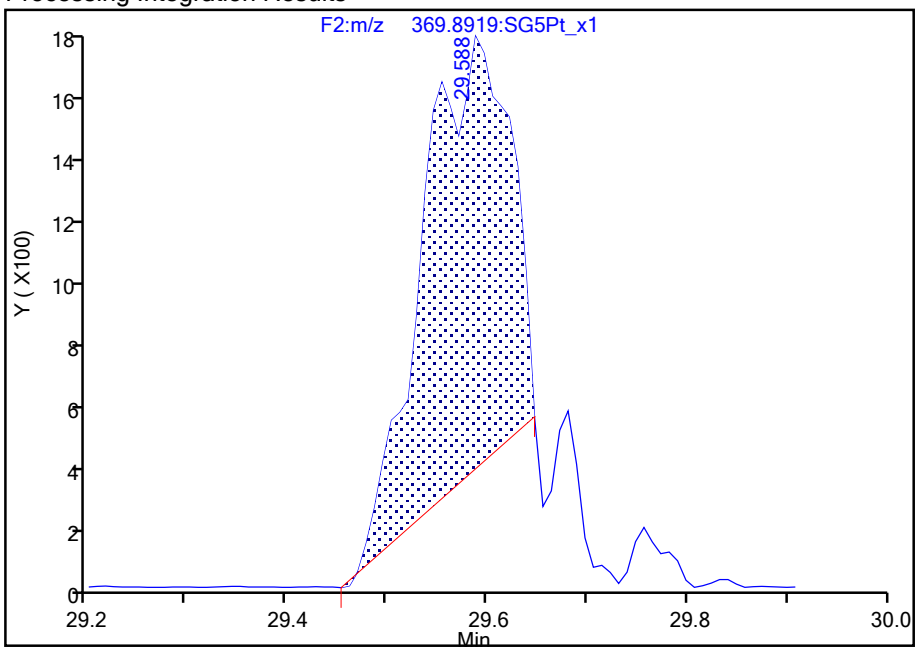

Manual Integration Results

RT: 29.59
Area: 11601
Amount: 2.858192
Amount Units: pg/ul

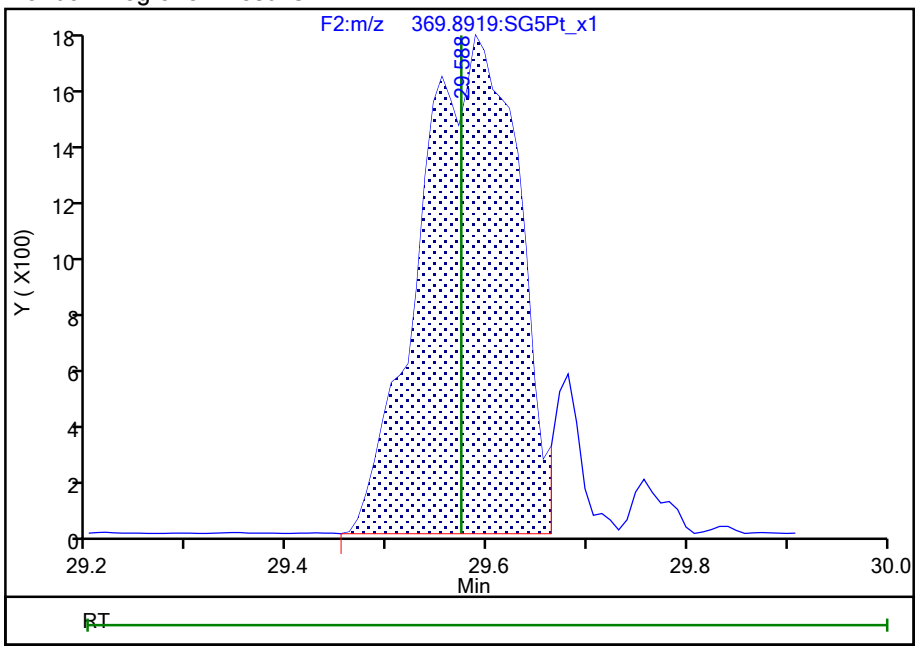

Reviewer: dadunj, 23-Aug-2021 09:55:31

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.92
Area: 17532
Amount: 4.521394
Amount Units: pg/ul

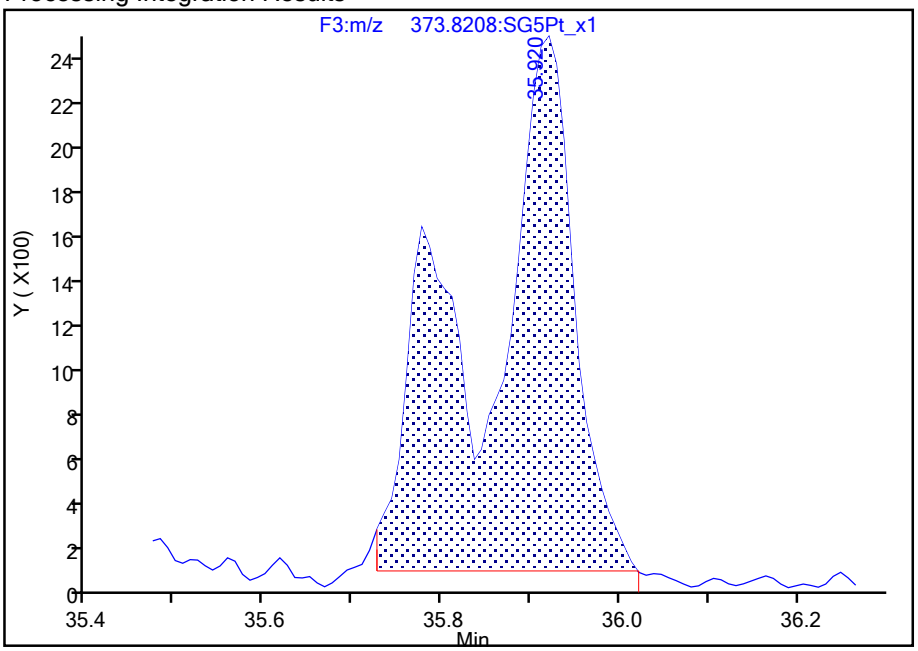

Manual Integration Results

RT: 35.92
Area: 11191
Amount: 3.447645
Amount Units: pg/ul

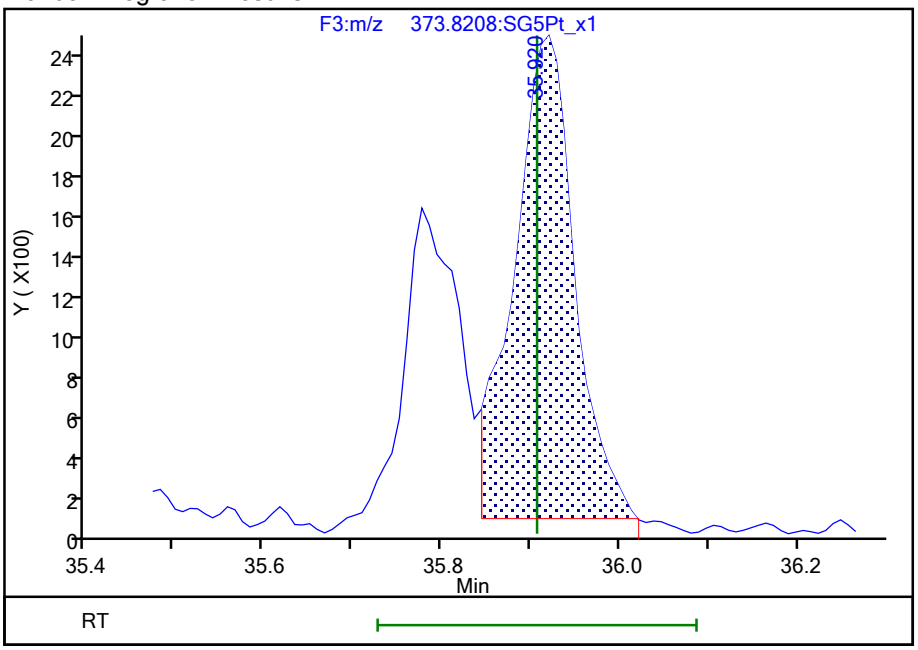

Reviewer: dadunj, 23-Aug-2021 09:55:50

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.91
Area: 27674
Amount: 8.583284
Amount Units: pg/ul

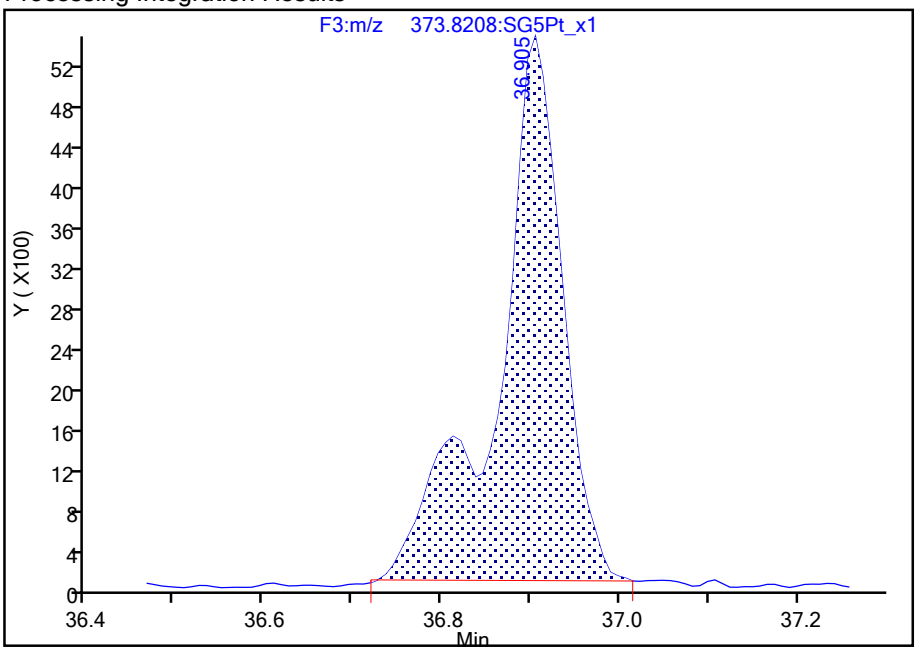

Manual Integration Results

RT: 36.81
Area: 5815
Amount: 1.703490
Amount Units: pg/ul

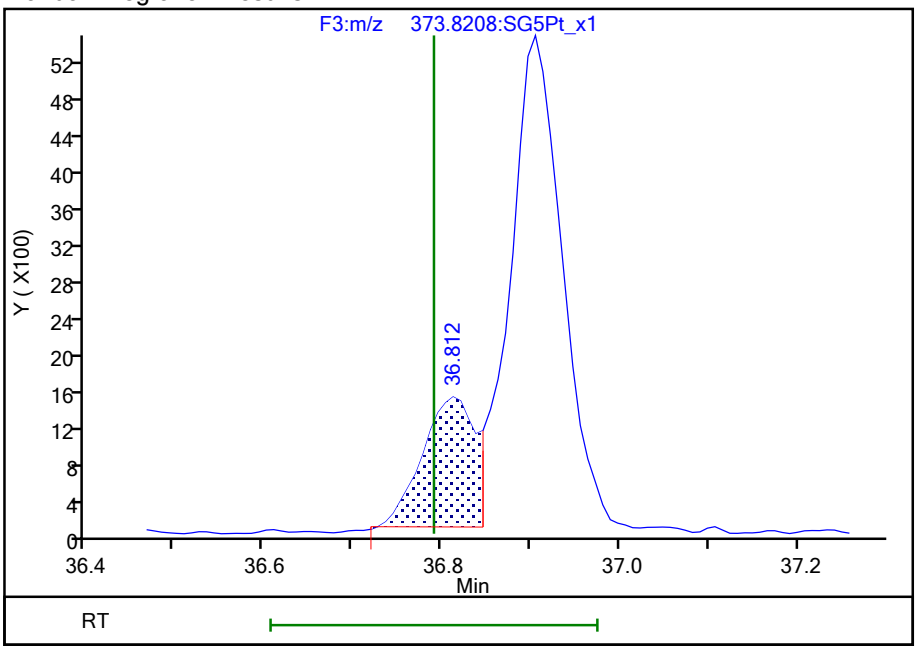

Reviewer: dadunj, 23-Aug-2021 09:55:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.91
Area: 21740
Amount: 8.583284
Amount Units: pg/ul

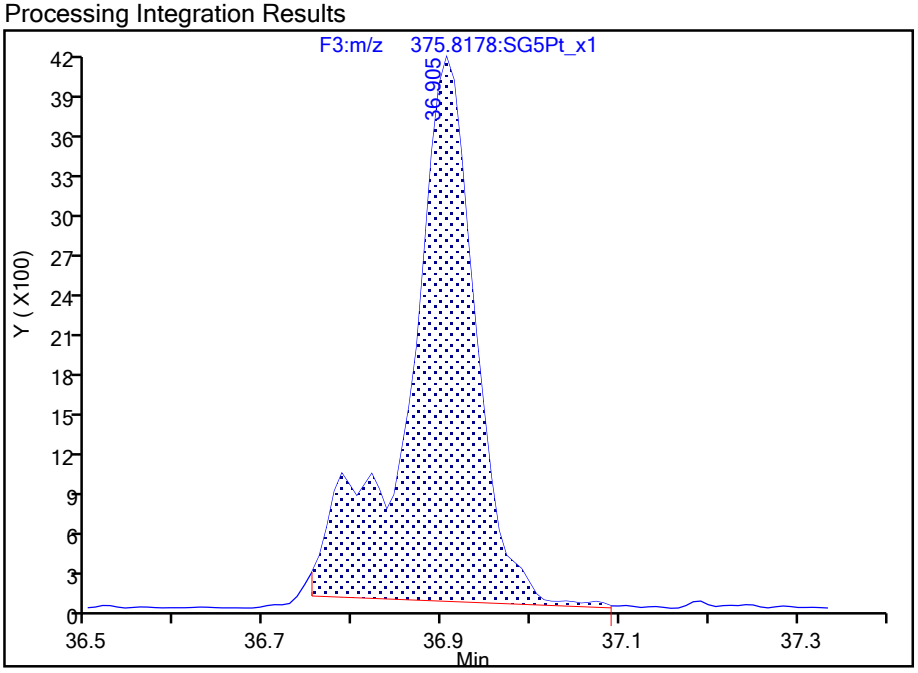

Manual Integration Results

RT: 36.79
Area: 3992
Amount: 1.703490
Amount Units: pg/ul

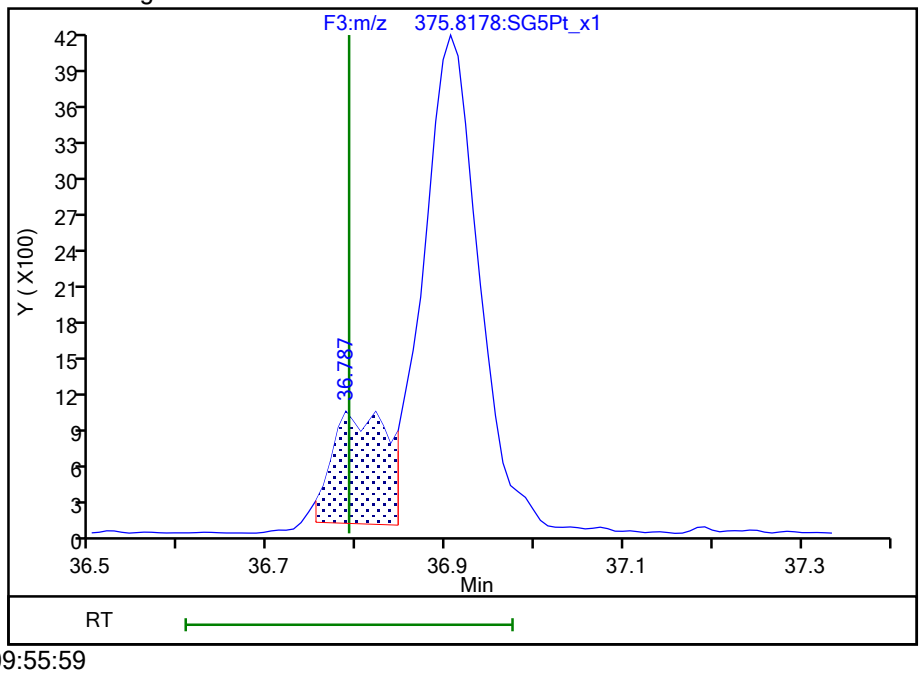

Reviewer: dadunj, 23-Aug-2021 09:55:59

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785302

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

Not Detected
RT: 33.09- 36.93

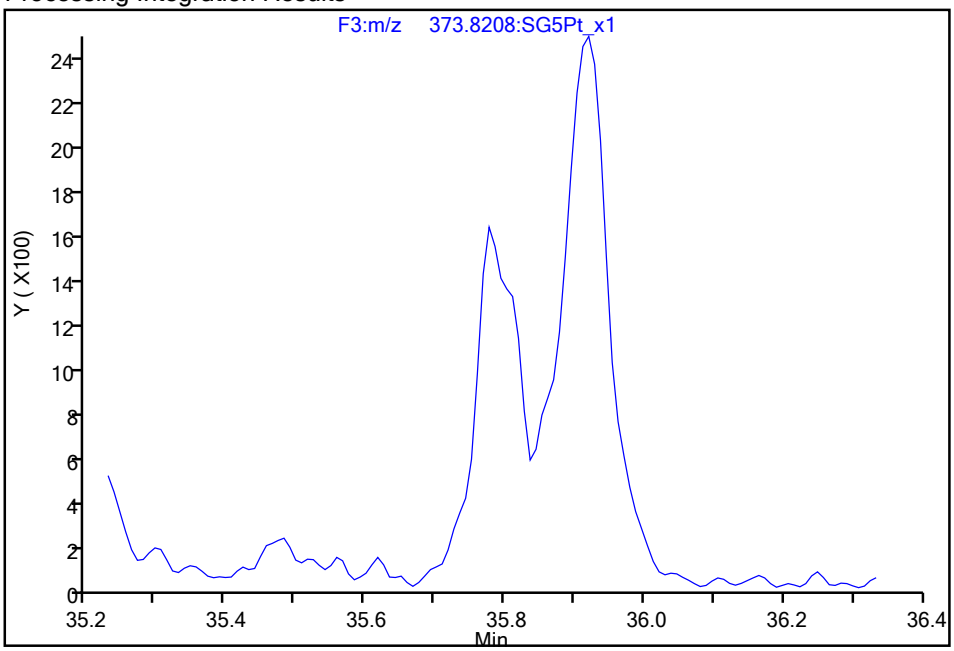

Manual Integration Results

RT = 35.777 Area = 6341 M

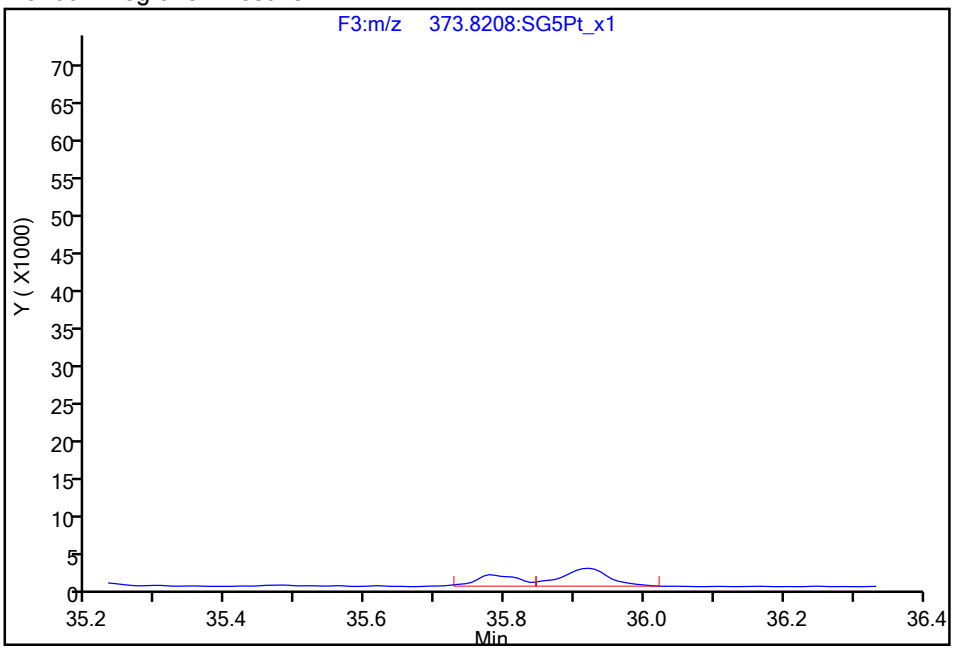

Reviewer: dadunj, 23-Aug-2021 09:56:10

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d				
Injection Date:	20-Aug-2021 07:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	23
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 36.905 Area = 27674

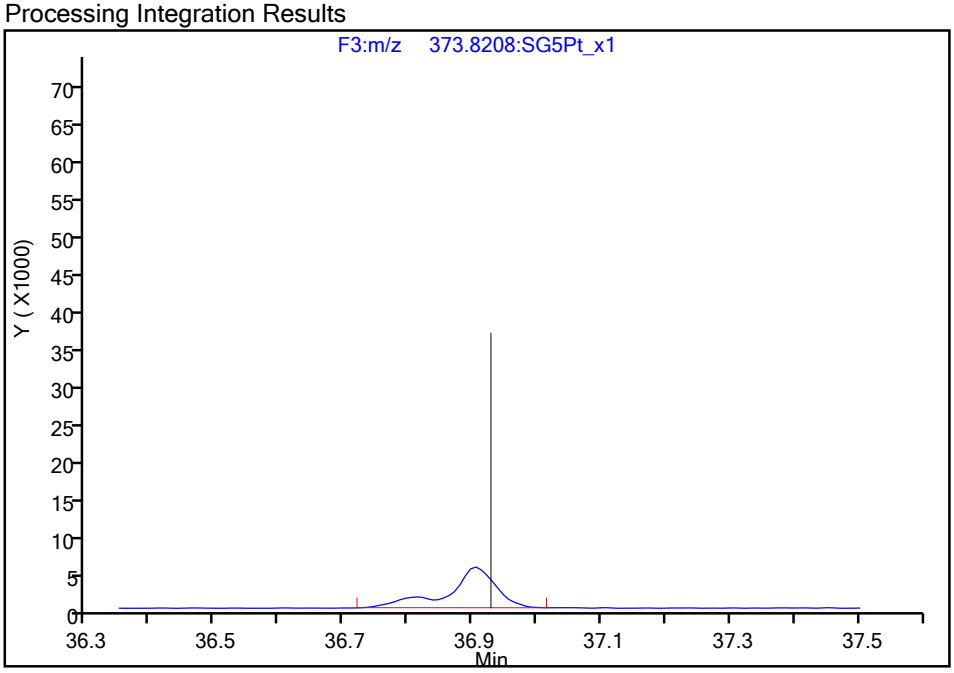

Manual Integration Results

RT = 36.905 Area = 21853 M

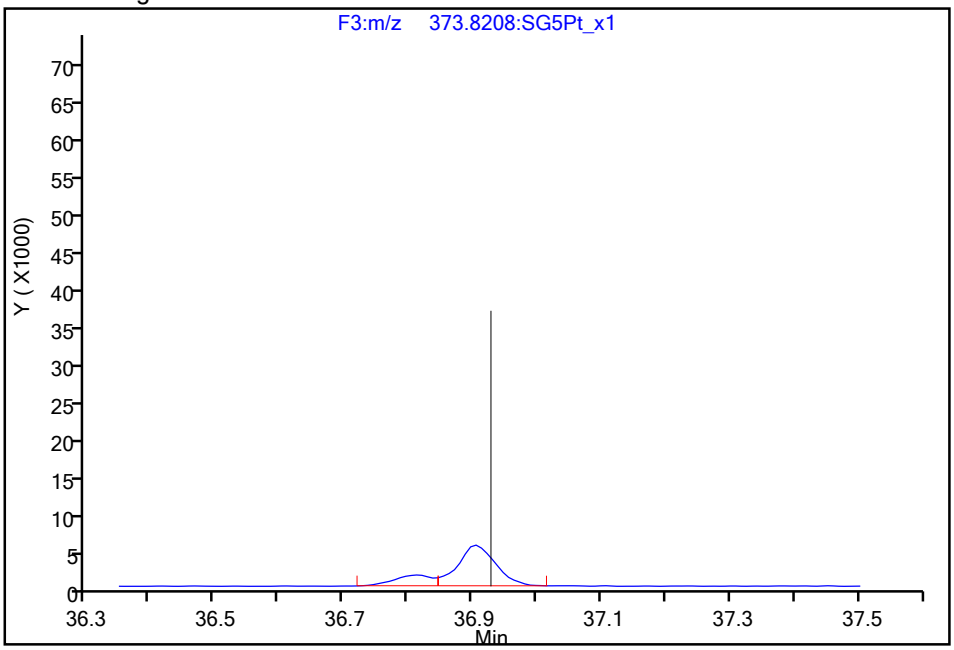

Reviewer: dadunj, 23-Aug-2021 09:56:10

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

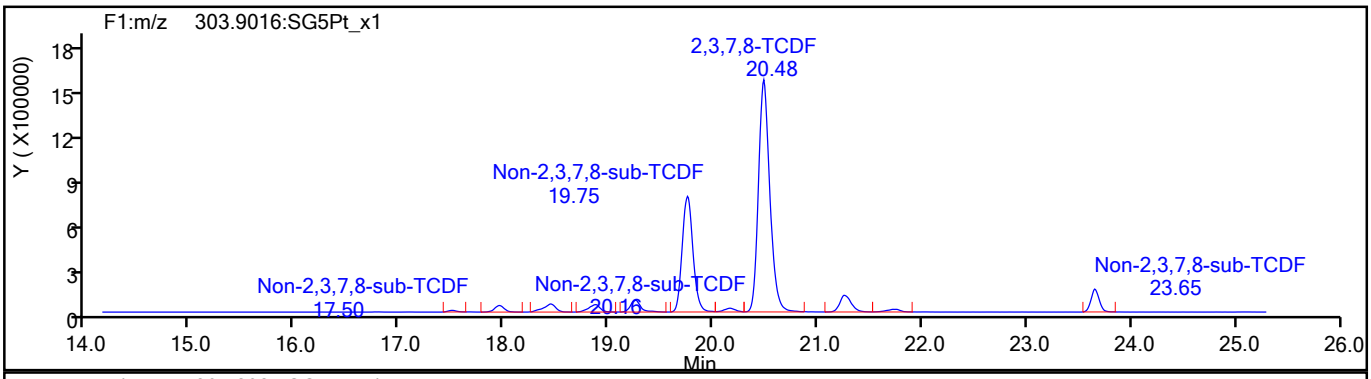

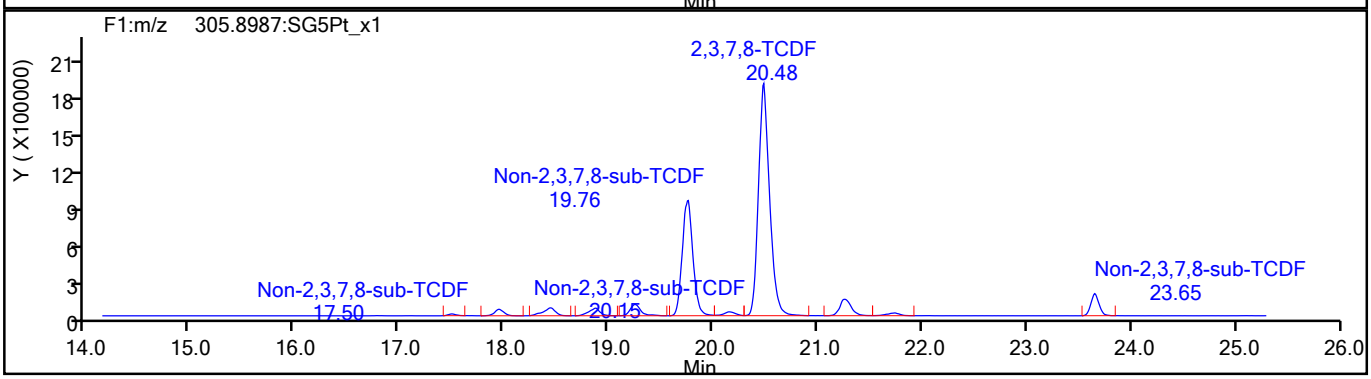

TCDF Standards

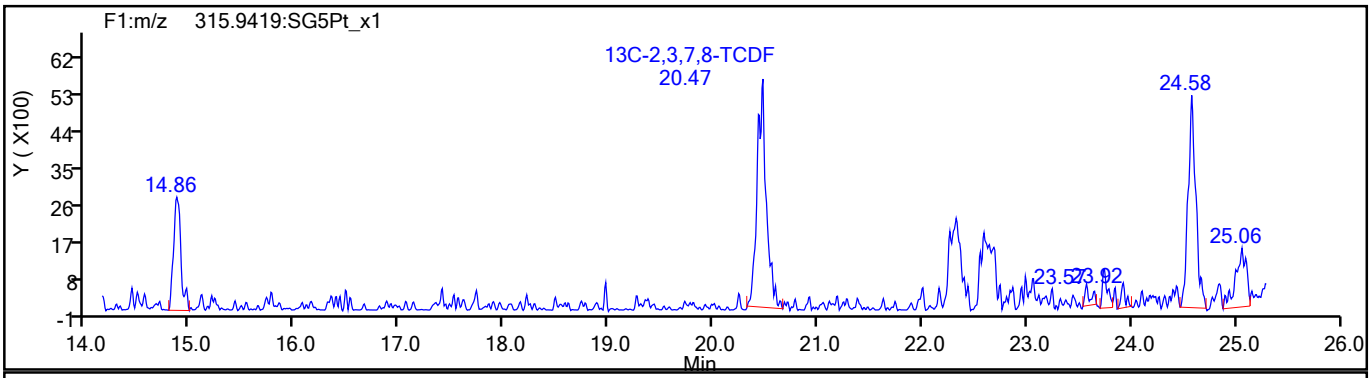

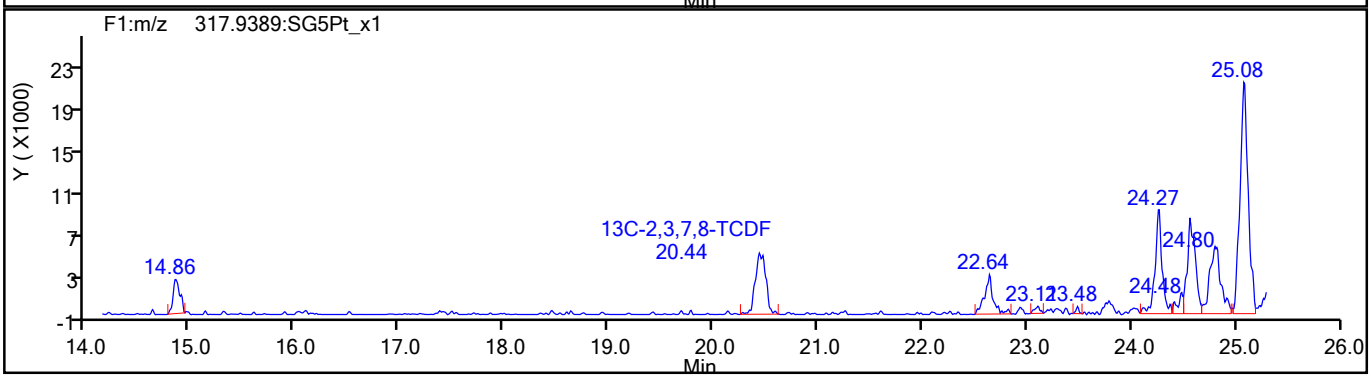

785305

Report Date: 25-Aug-2021 15:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

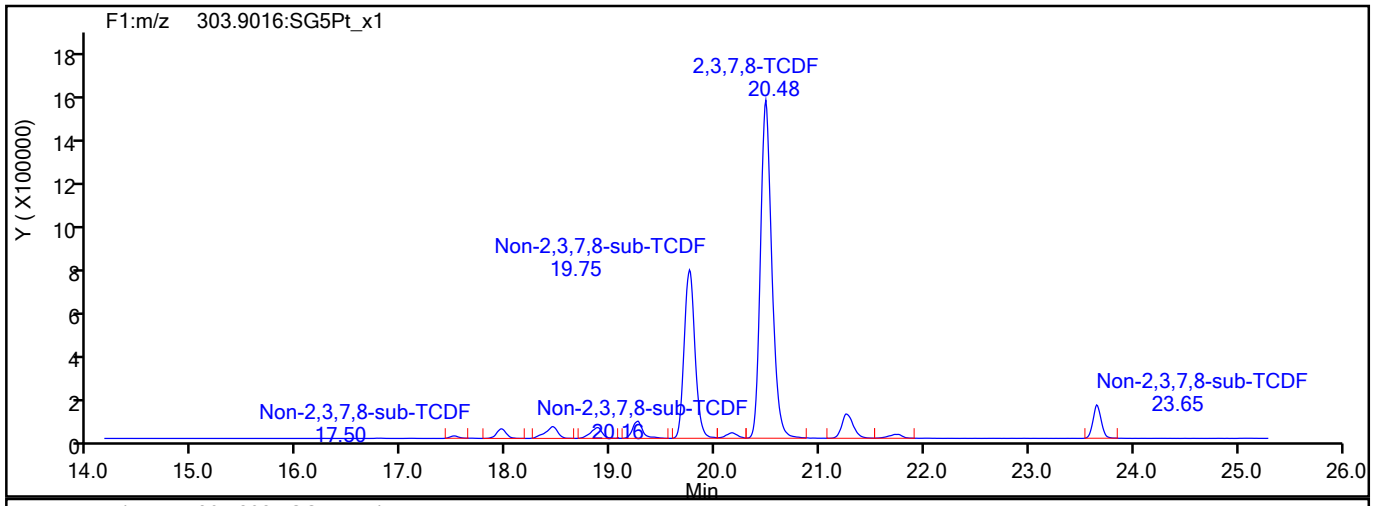

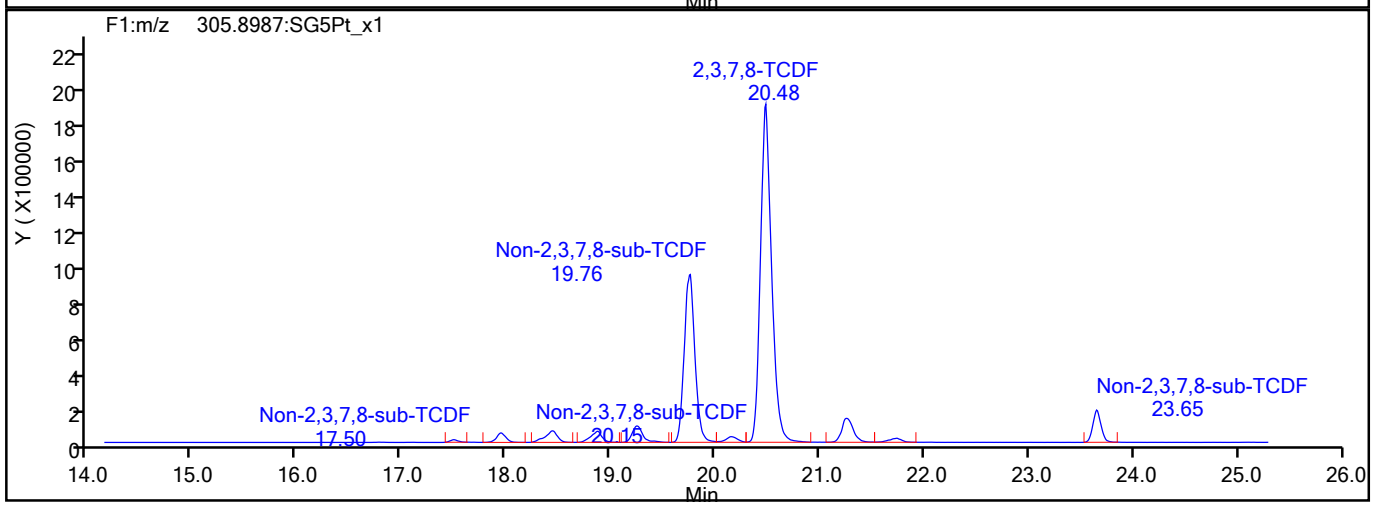

TCDF Interference Mass

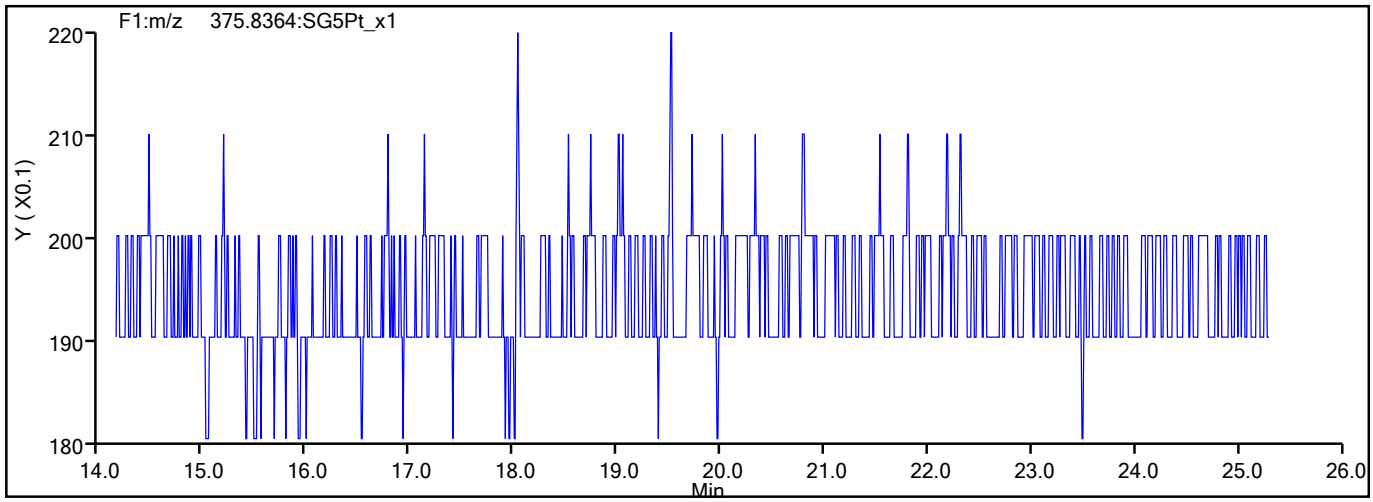

785306

Report Date: 25-Aug-2021 15:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

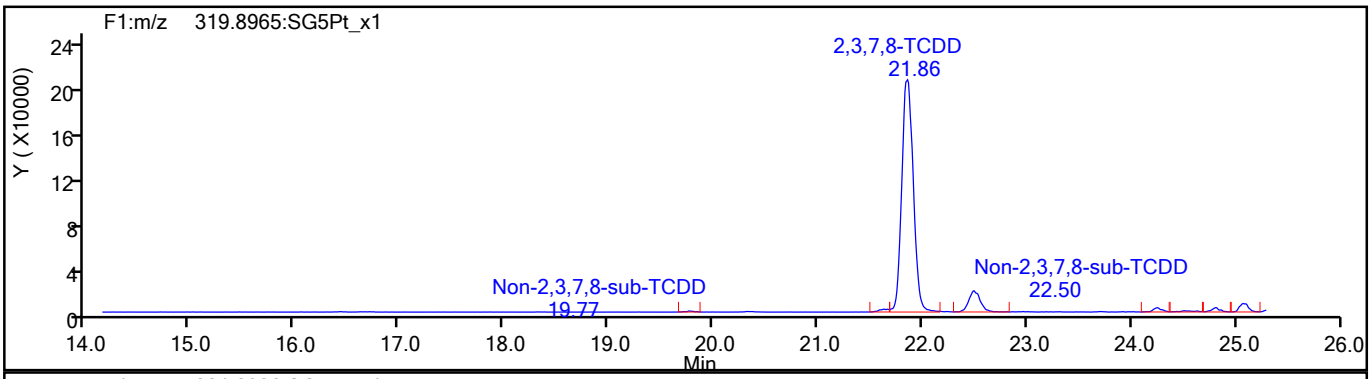

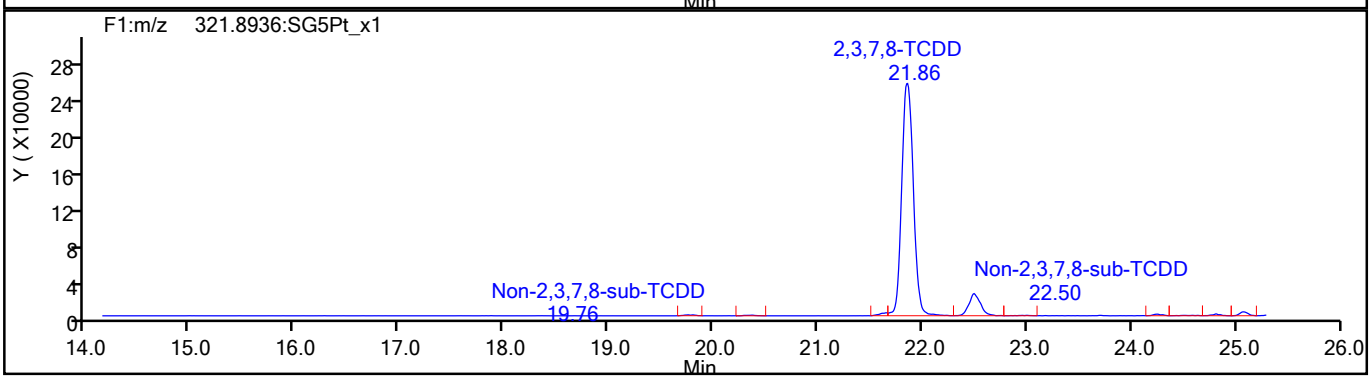

TCDD Standards

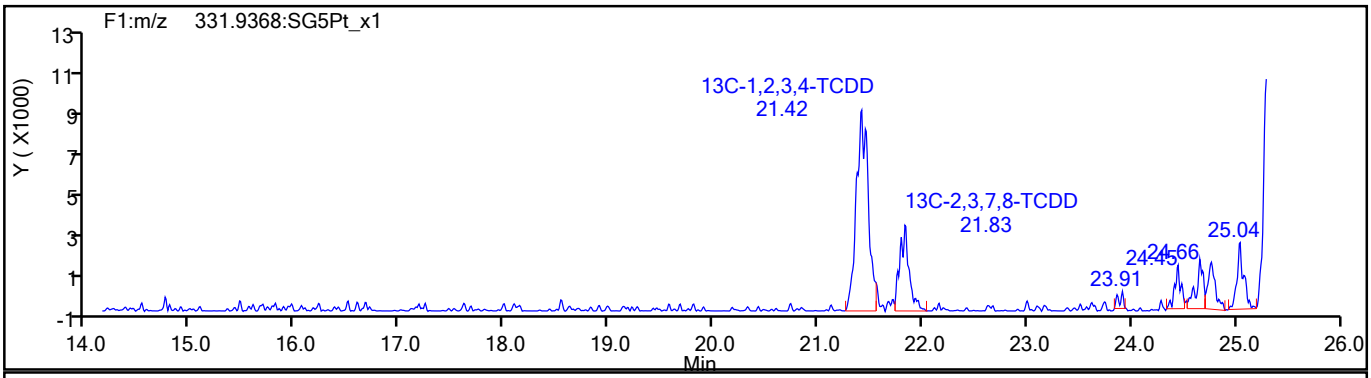

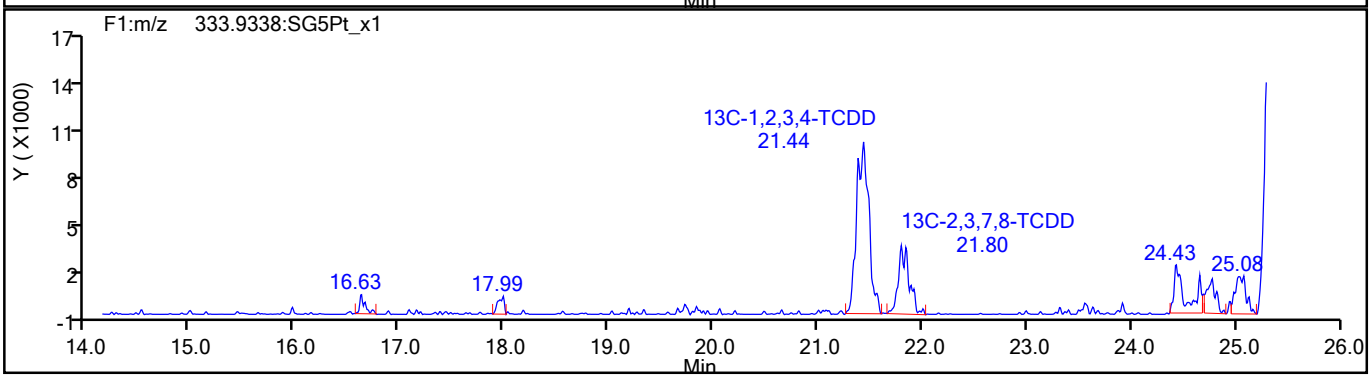

785307

Report Date: 25-Aug-2021 15:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

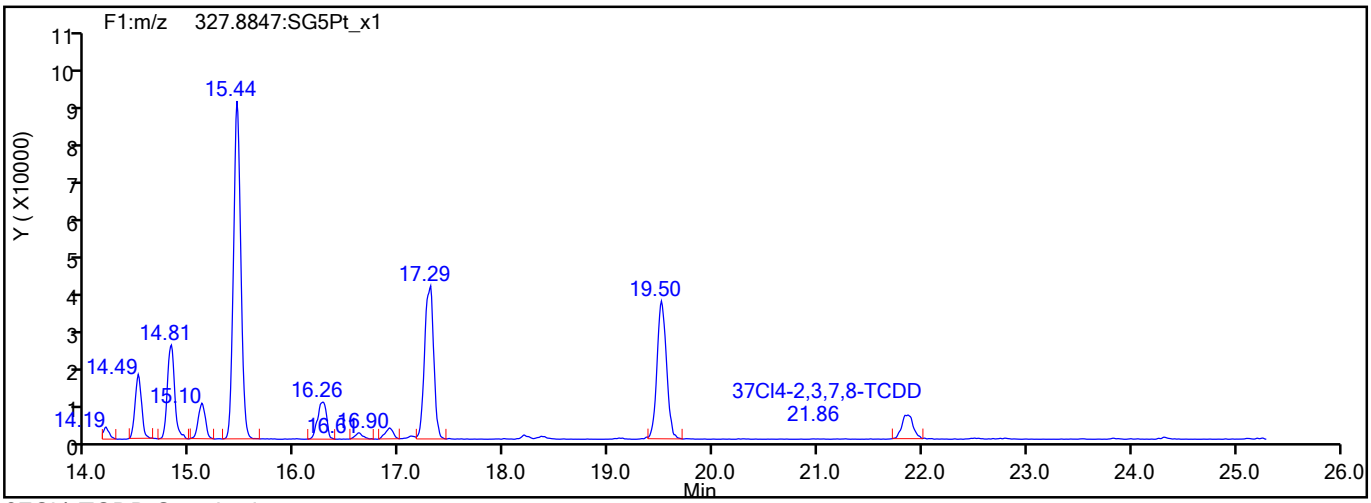

37Cl4-TCDD Standards

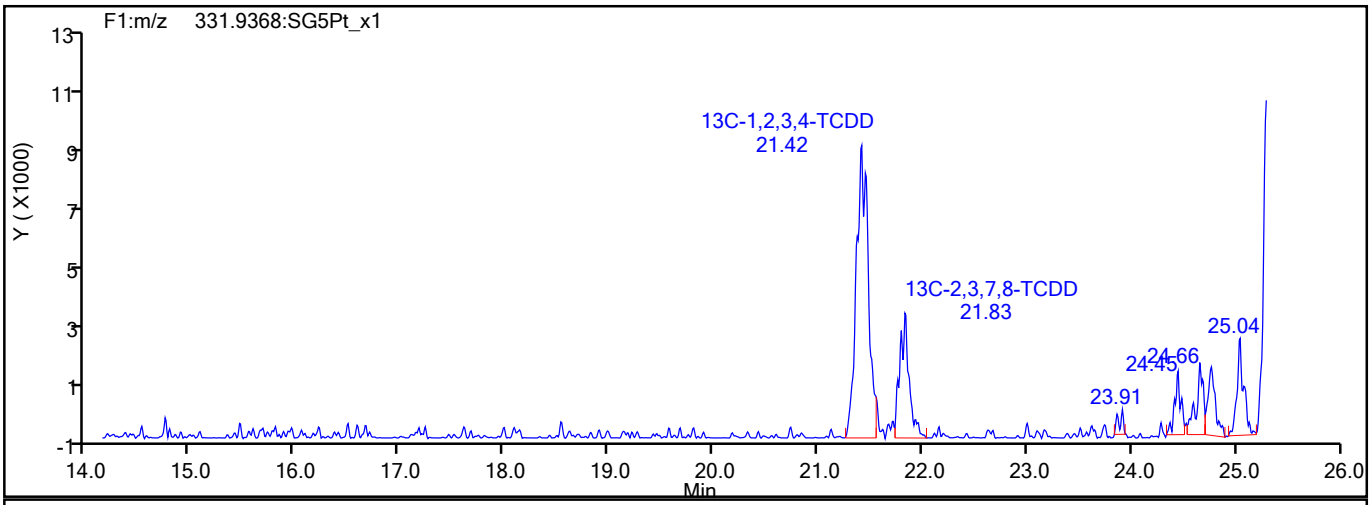

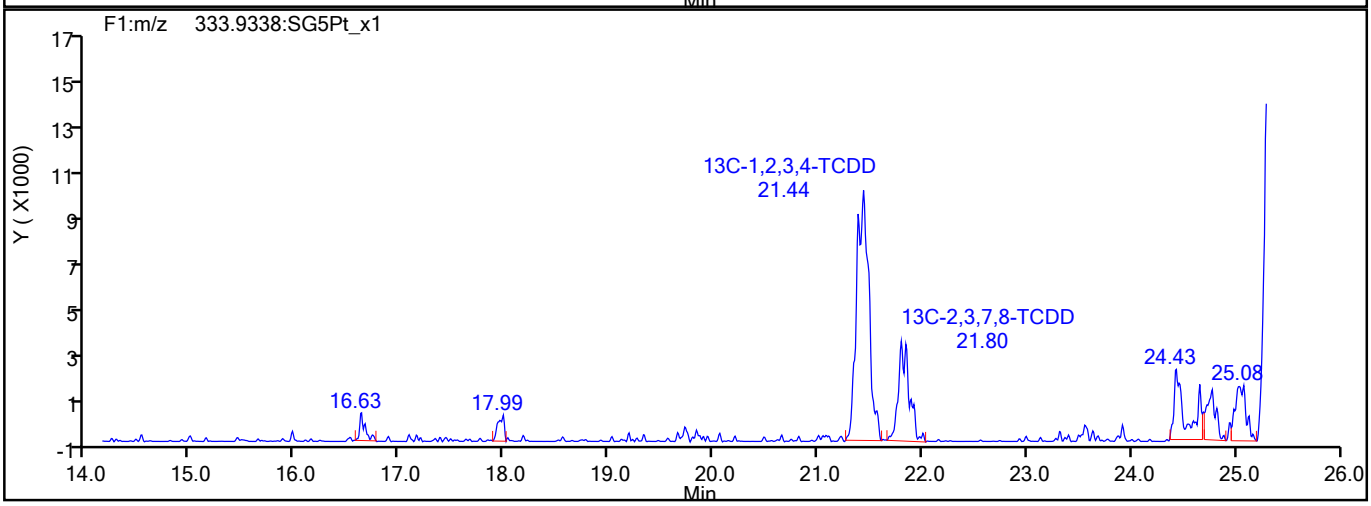

785308

Report Date: 25-Aug-2021 15:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

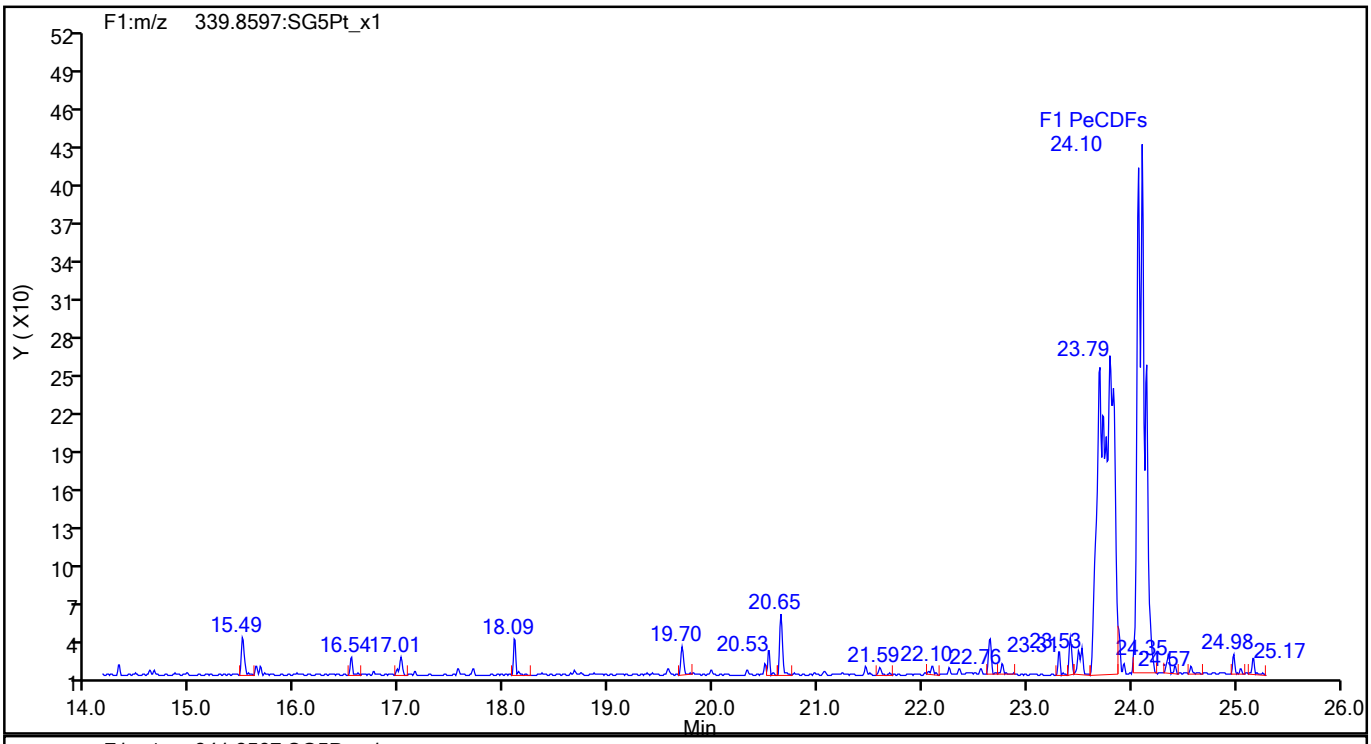

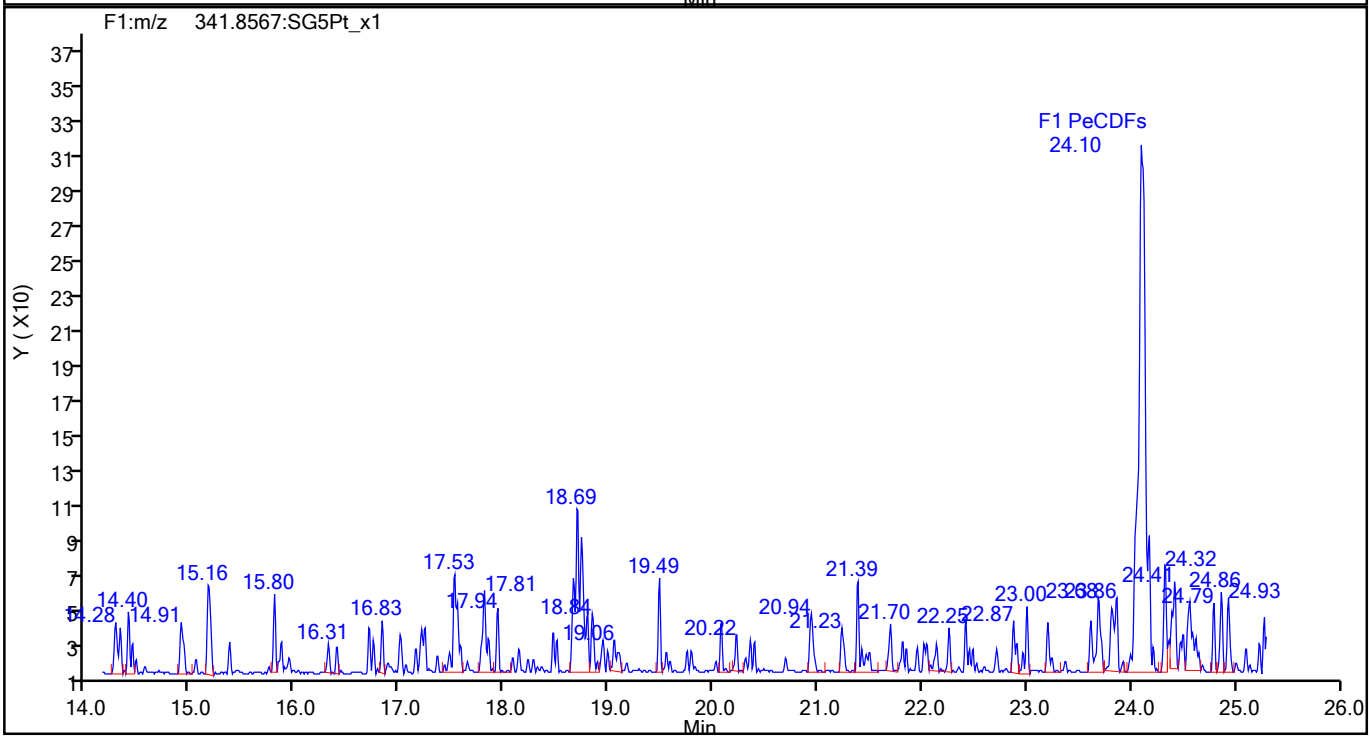

785309

Report Date: 25-Aug-2021 15:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

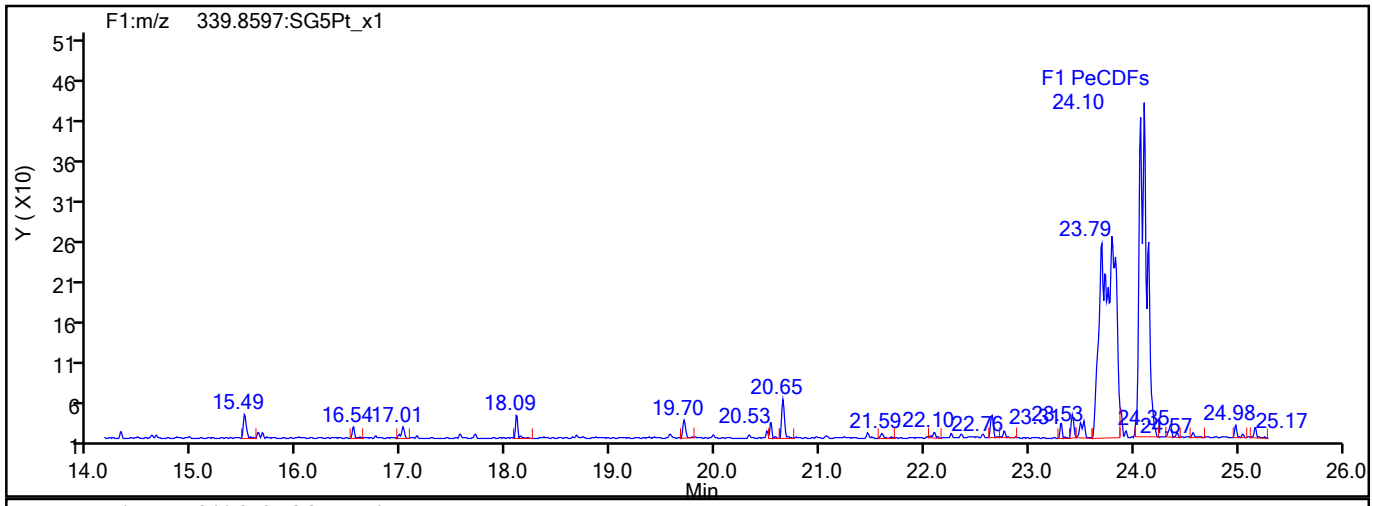

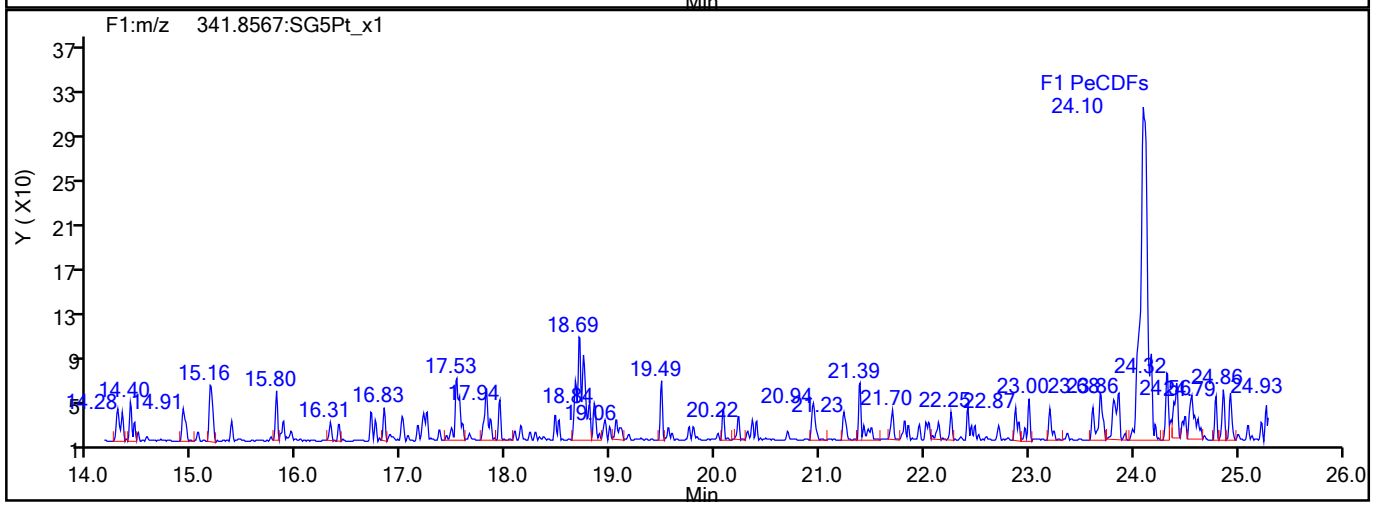

F1 PeCDFs Interference Mass

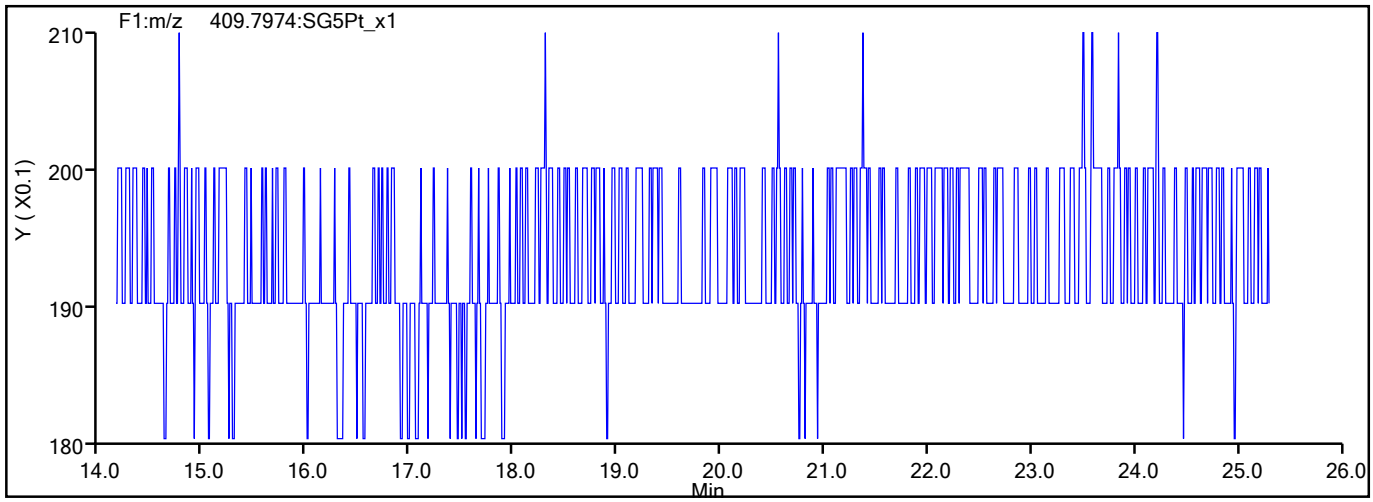

785310

Report Date: 25-Aug-2021 15:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

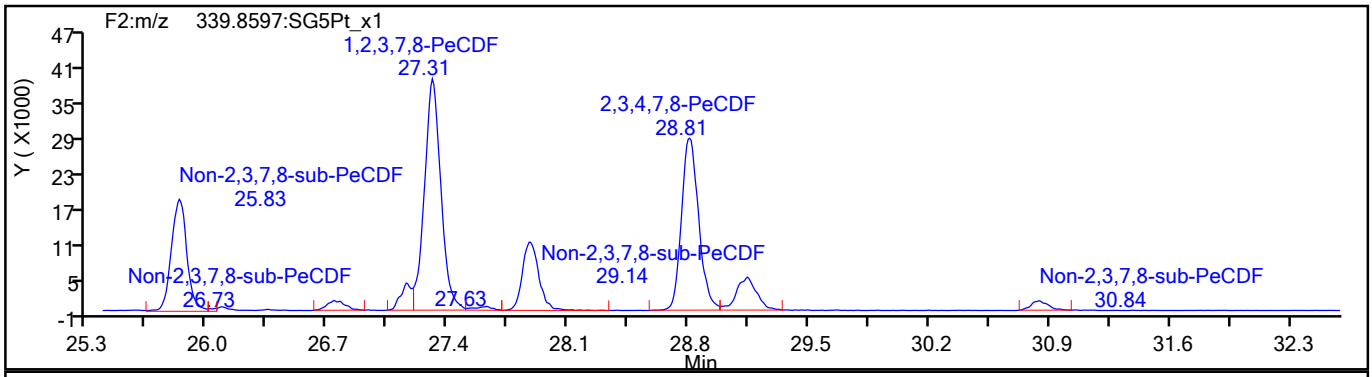

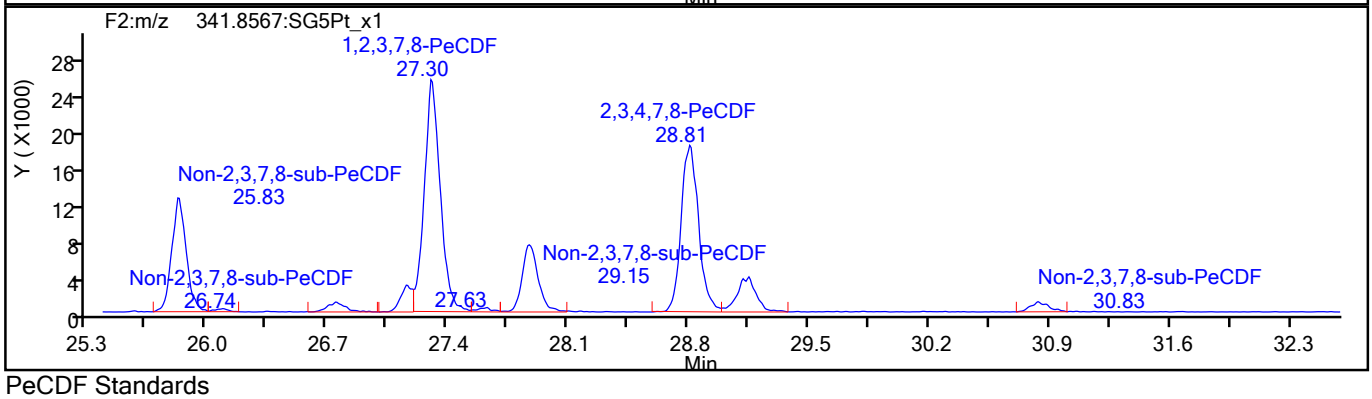

PeCDF Standards

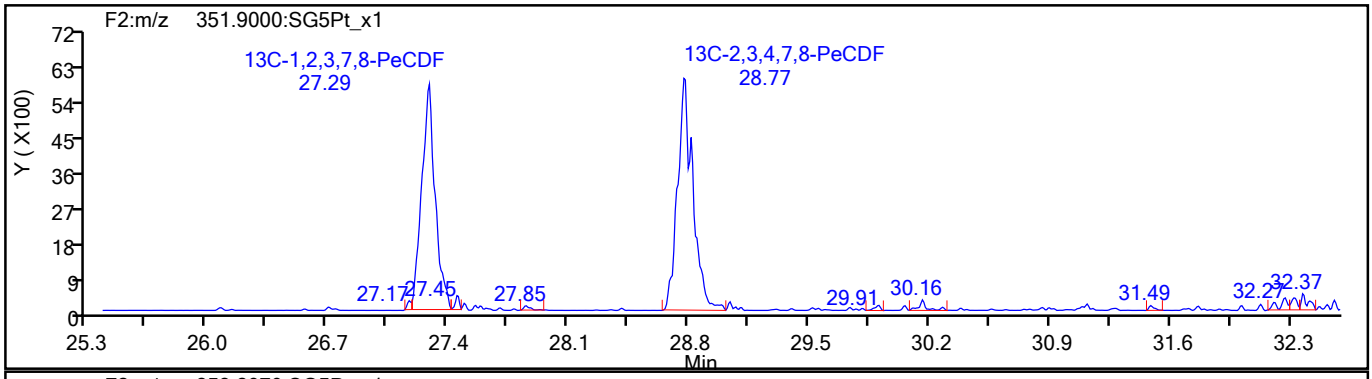

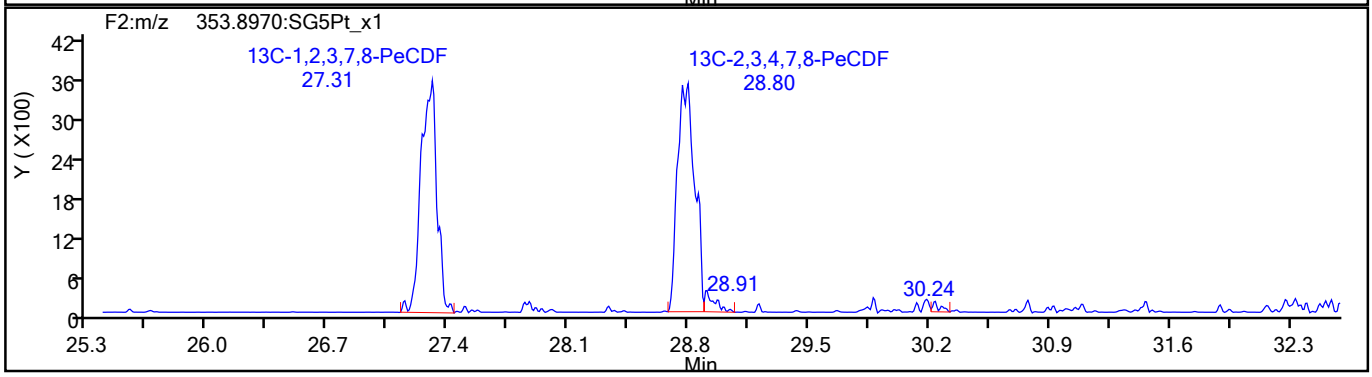

785311

Report Date: 25-Aug-2021 15:27:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

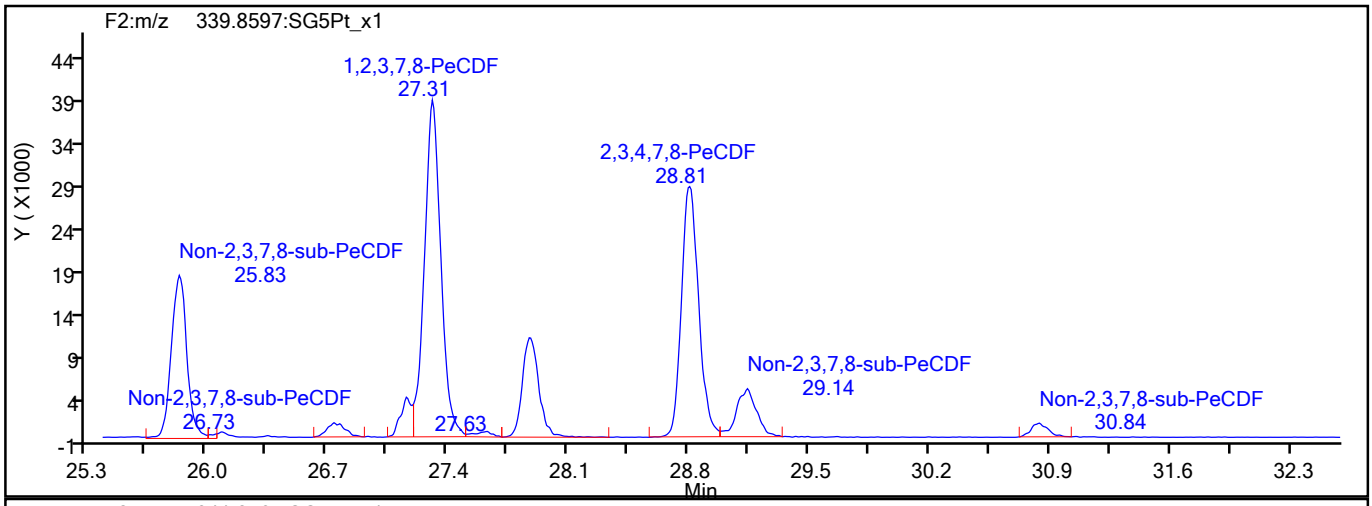

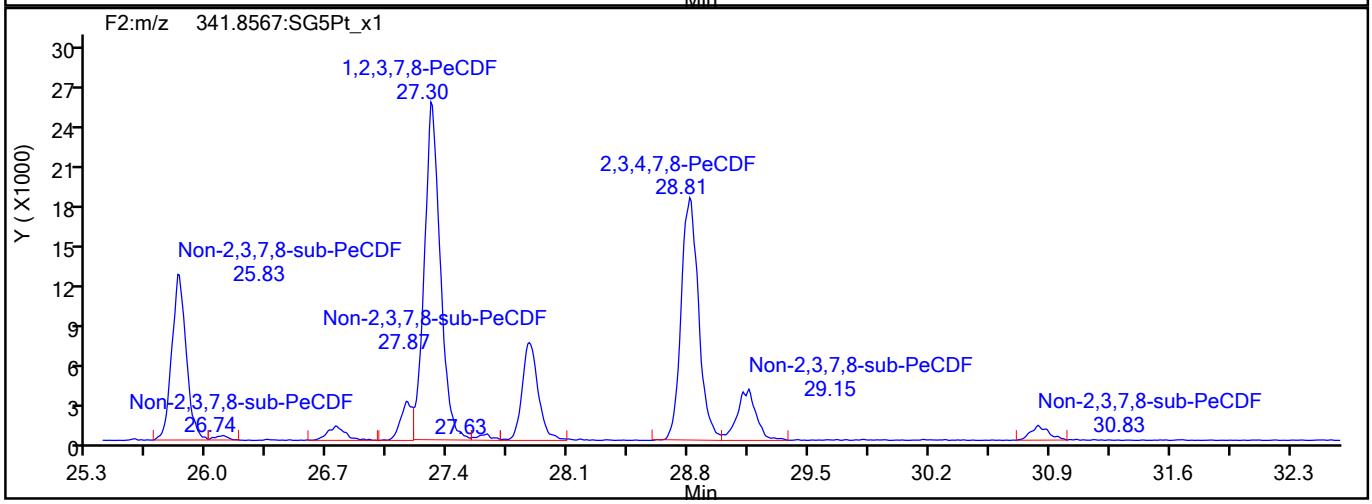

PeCDF Interference Mass

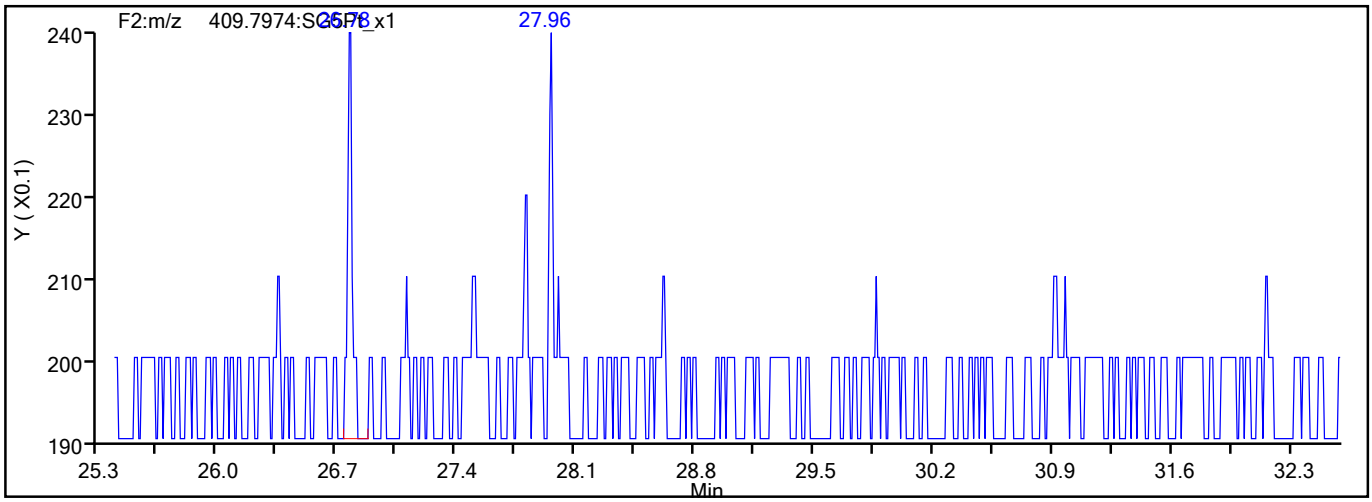

785312

Report Date: 25-Aug-2021 15:27:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

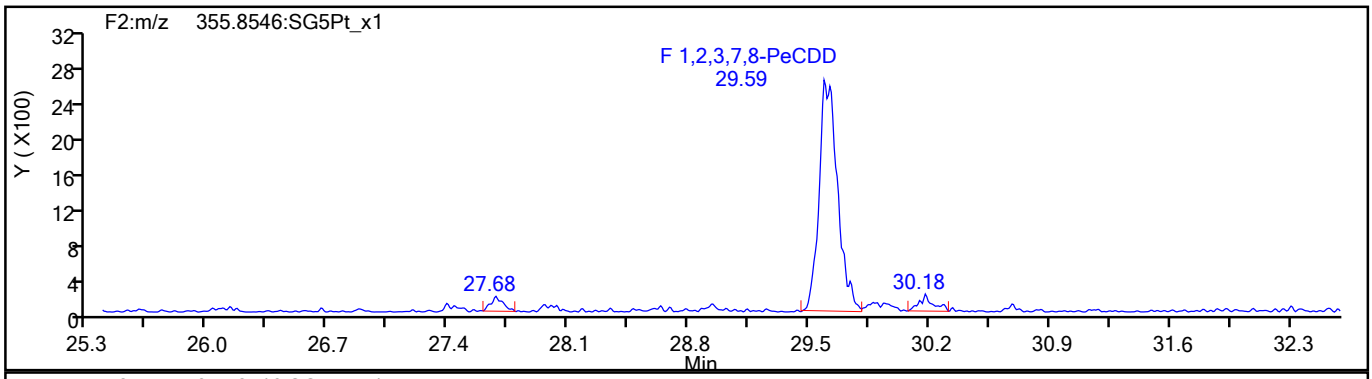

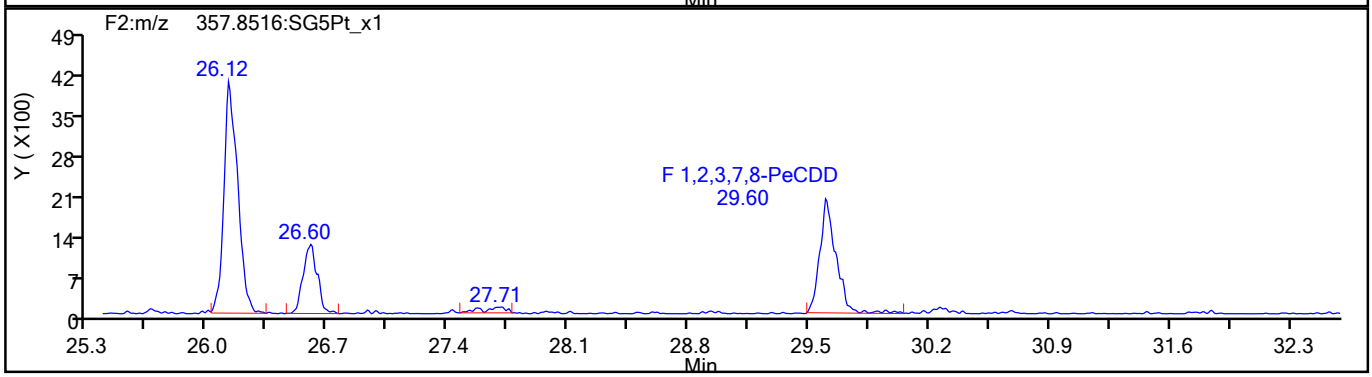

PeCDD Standards

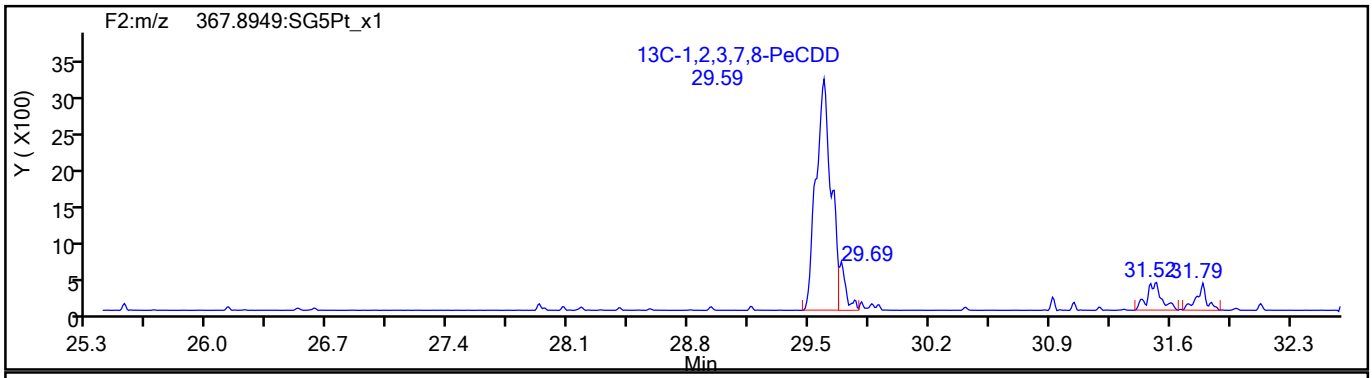

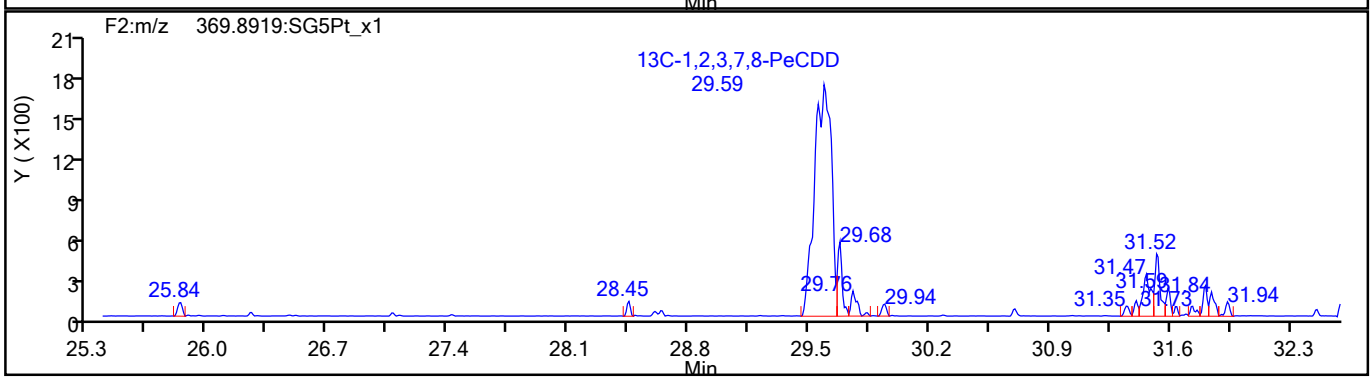

785313

Report Date: 25-Aug-2021 15:27:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

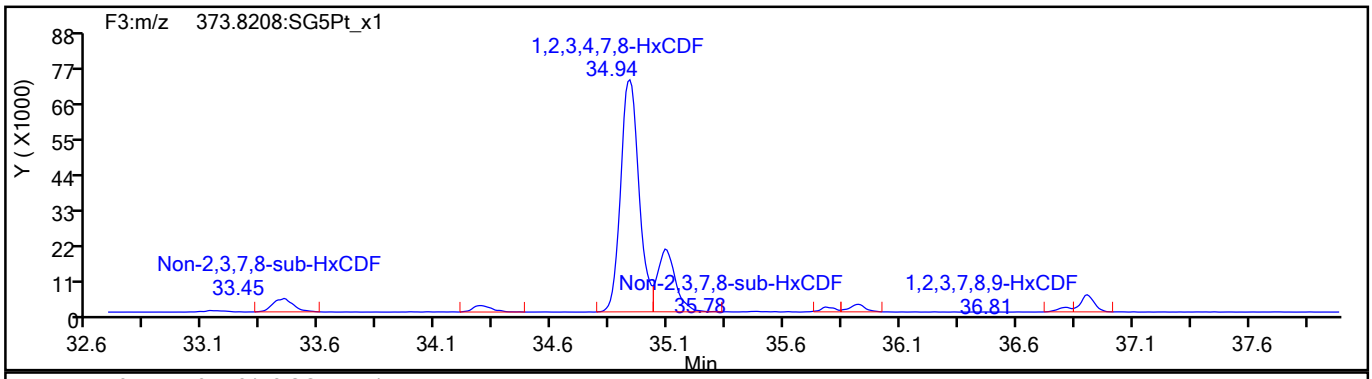

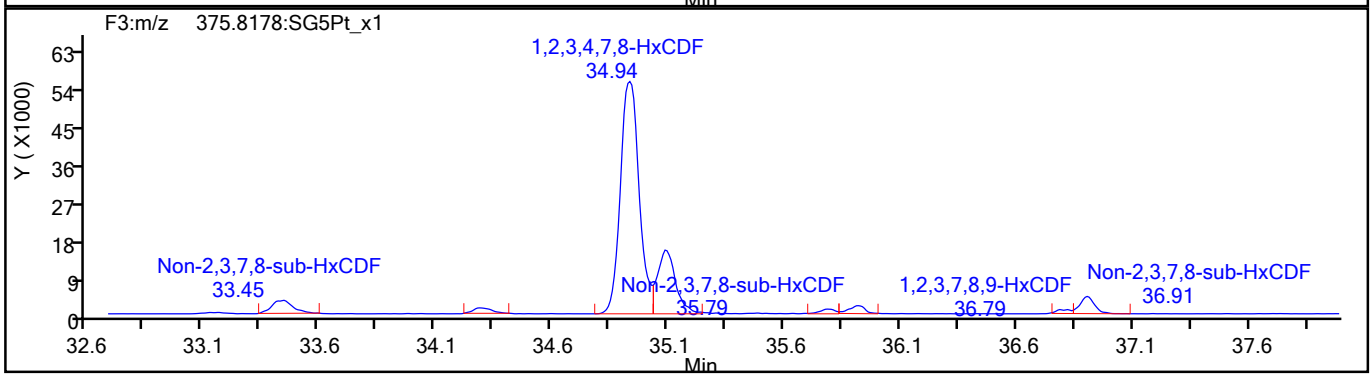

HxCDF Standards

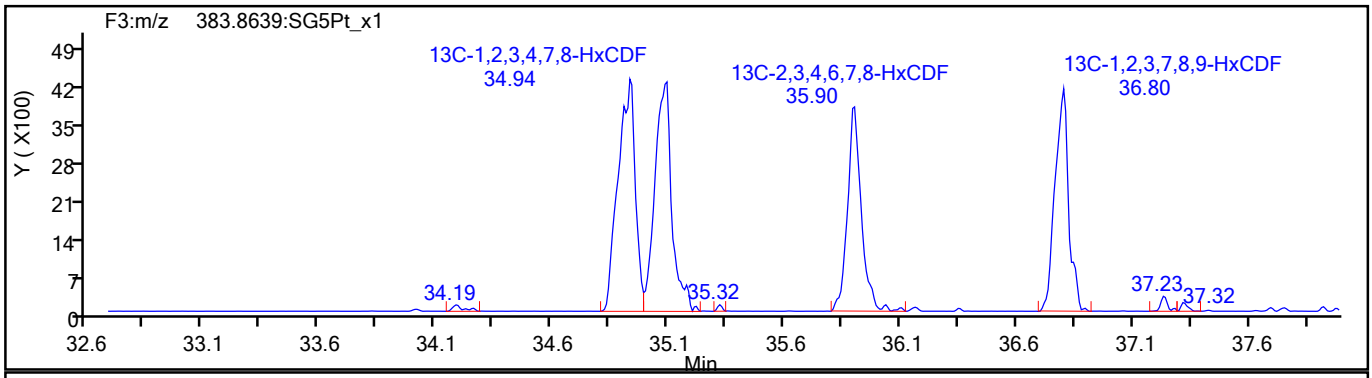

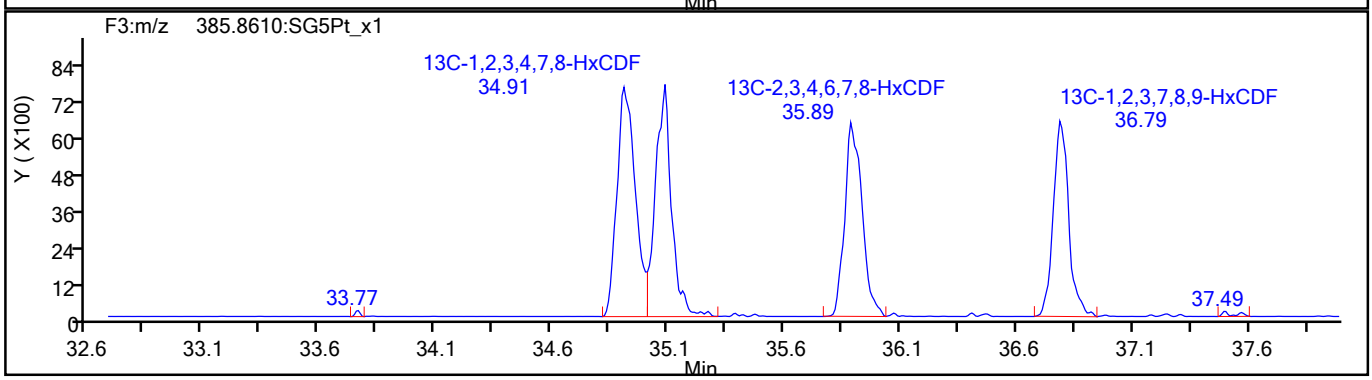

785314

Report Date: 25-Aug-2021 15:27:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

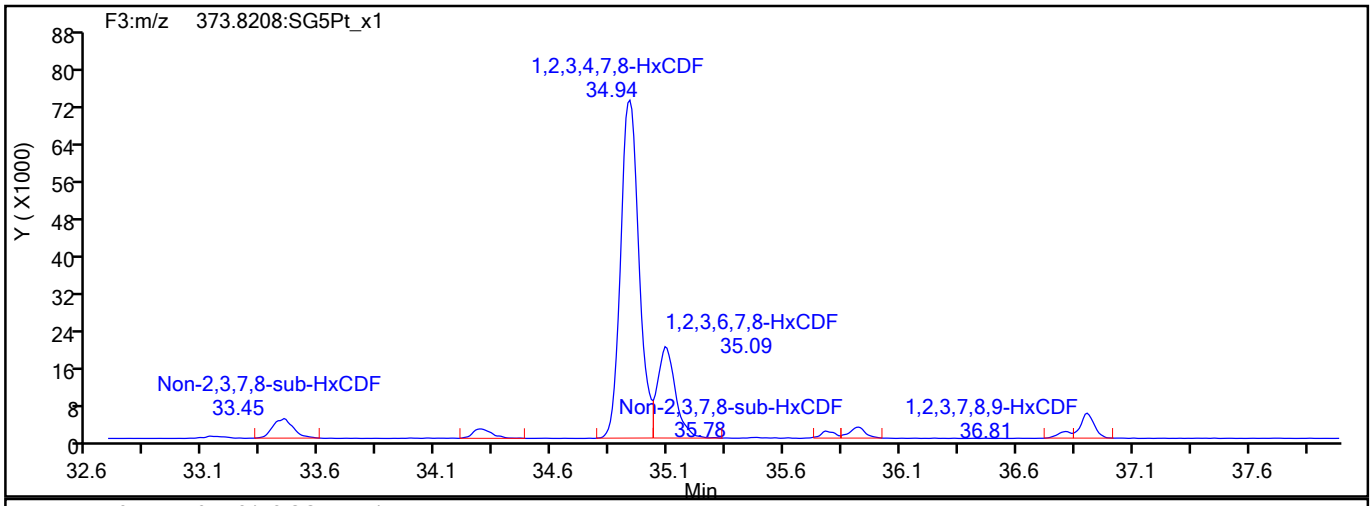

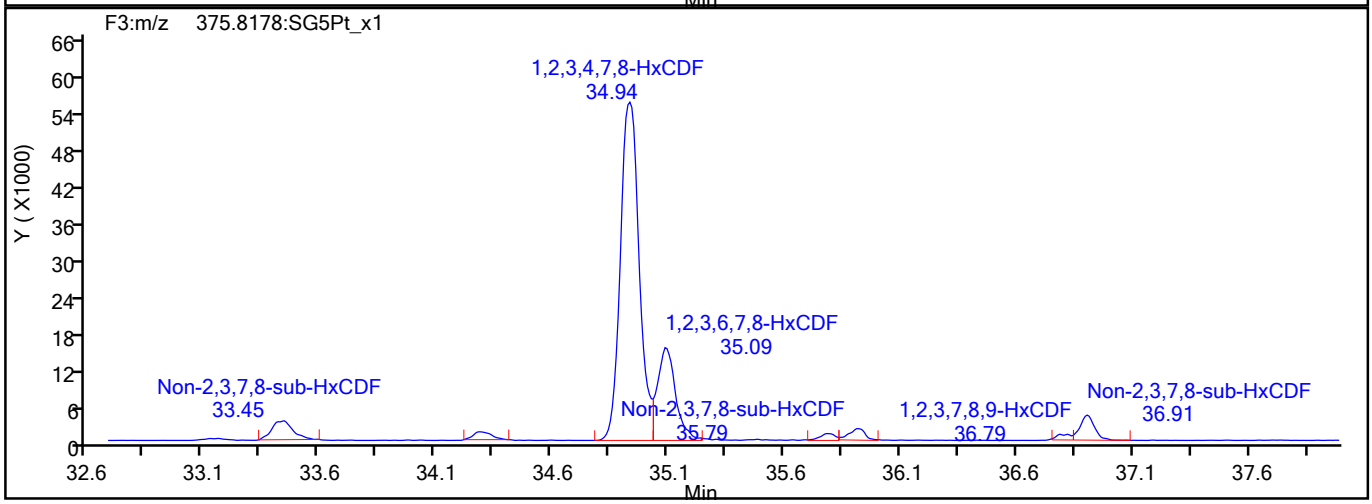

HxCDF Interference Mass

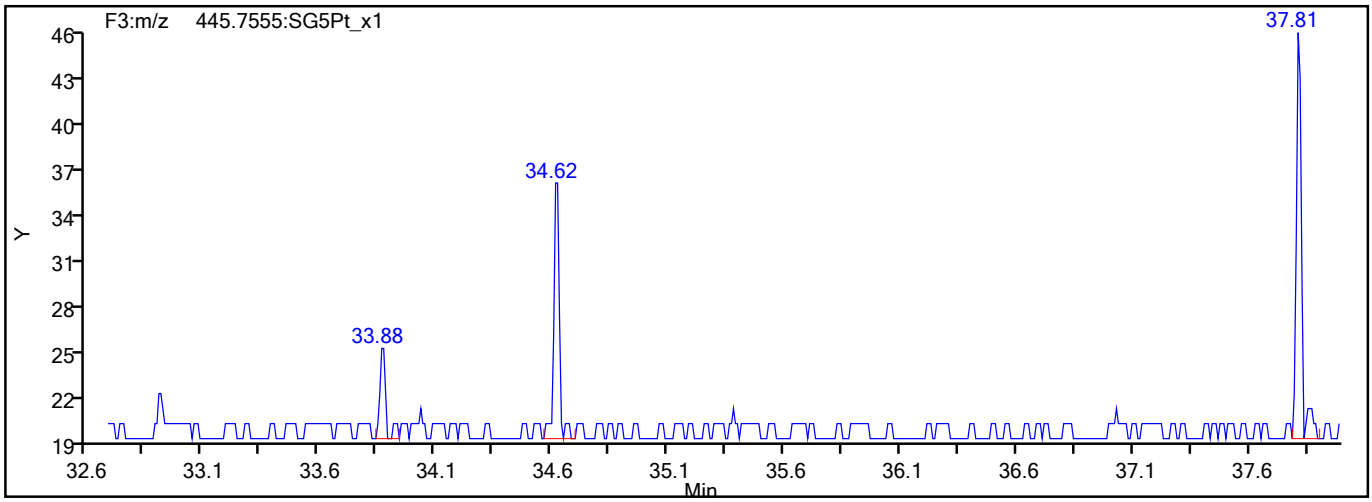

785315

Report Date: 25-Aug-2021 15:27:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

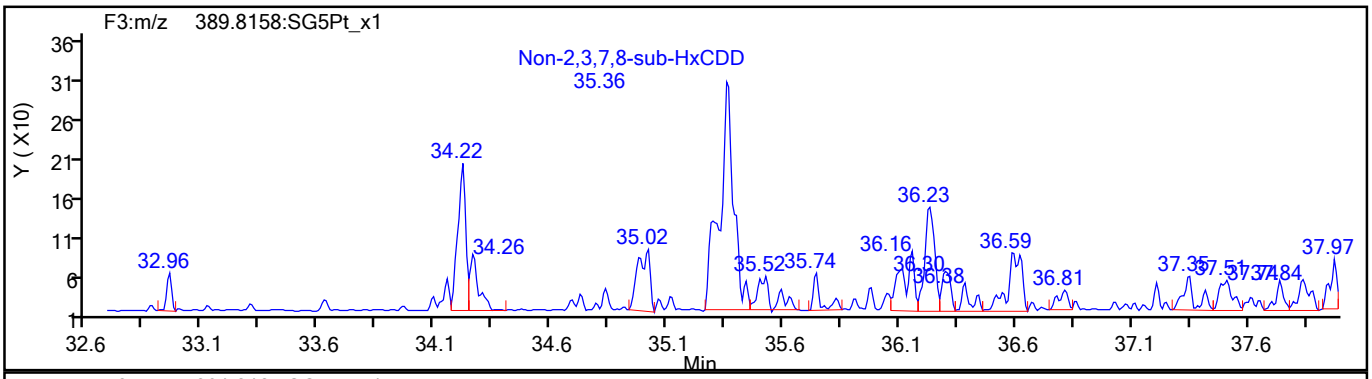

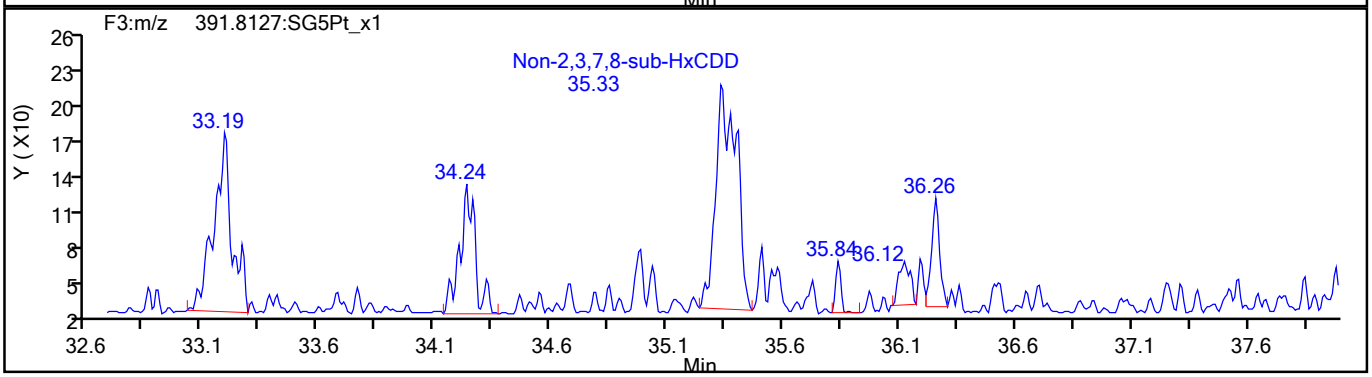

HxCDD Standards

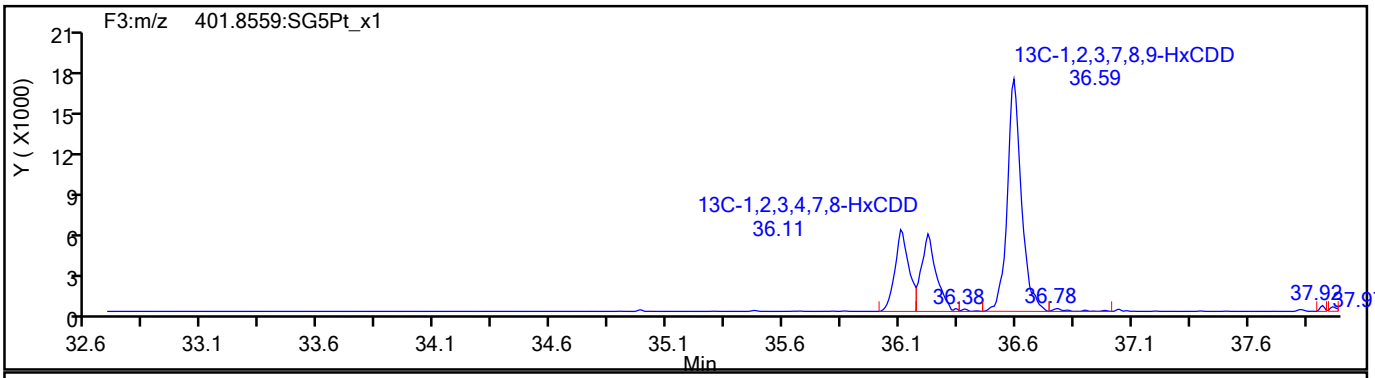

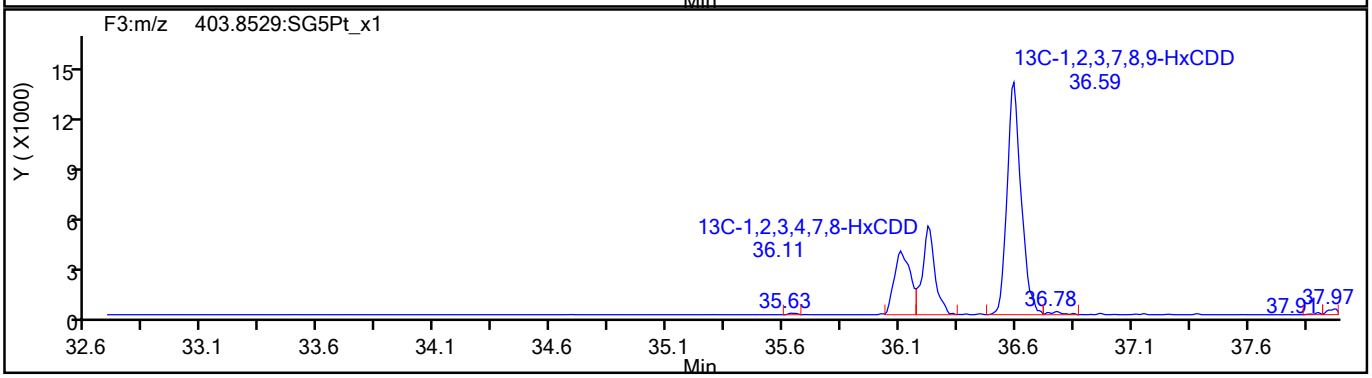

785316

Report Date: 25-Aug-2021 15:27:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

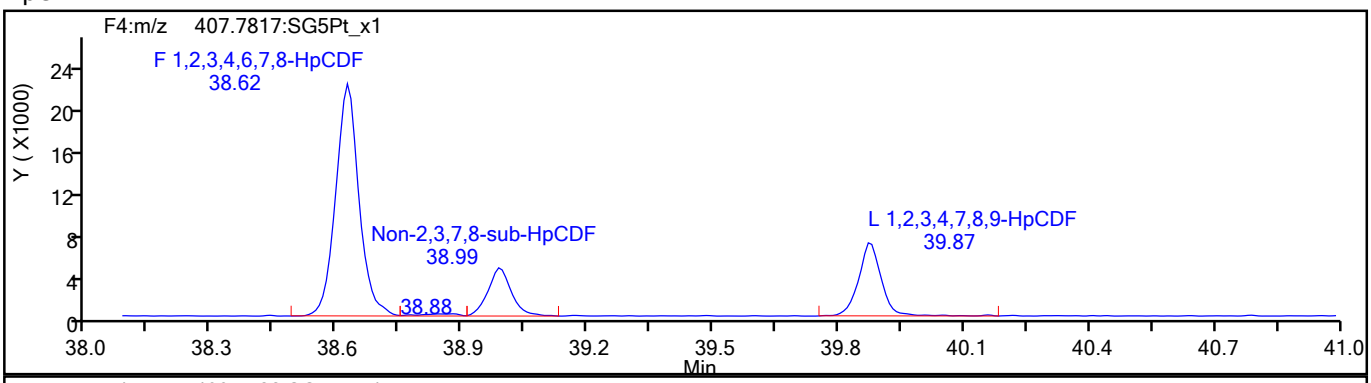

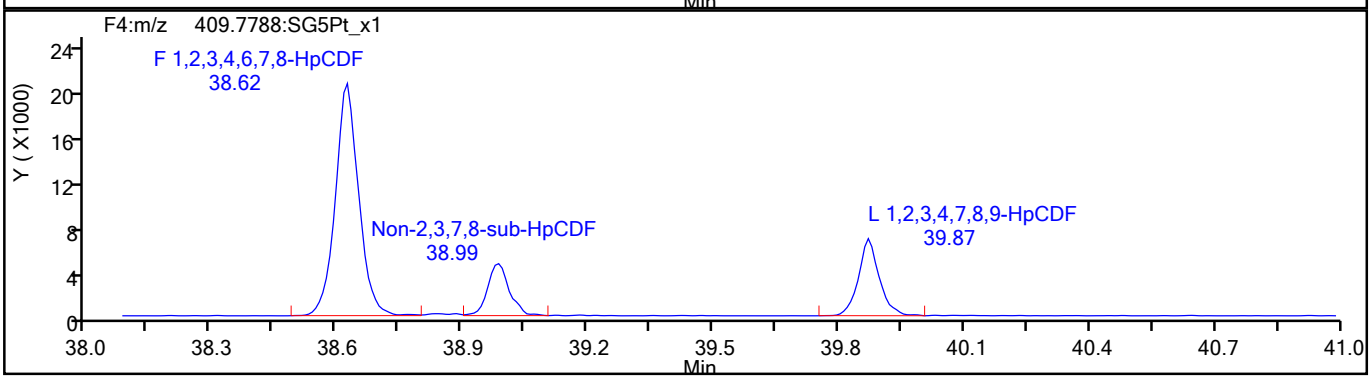

HpCDF Standards

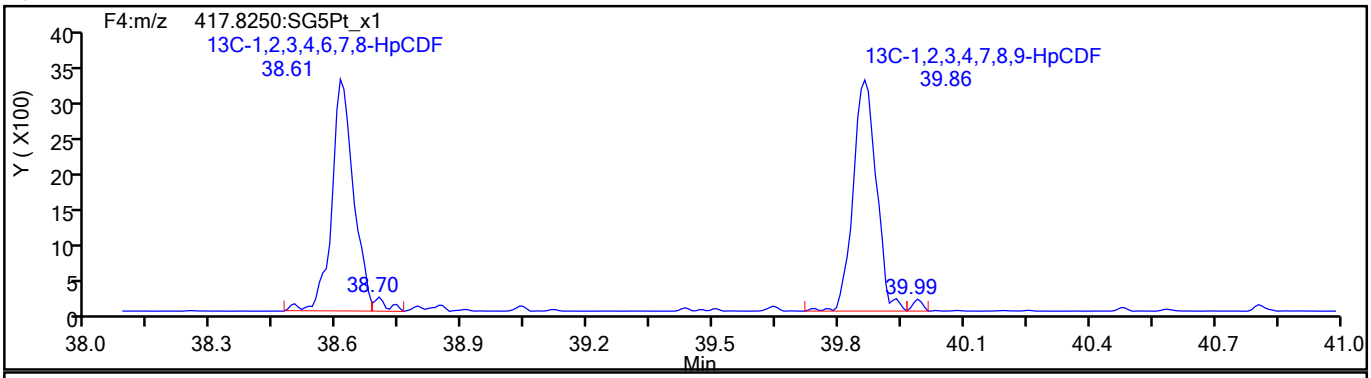

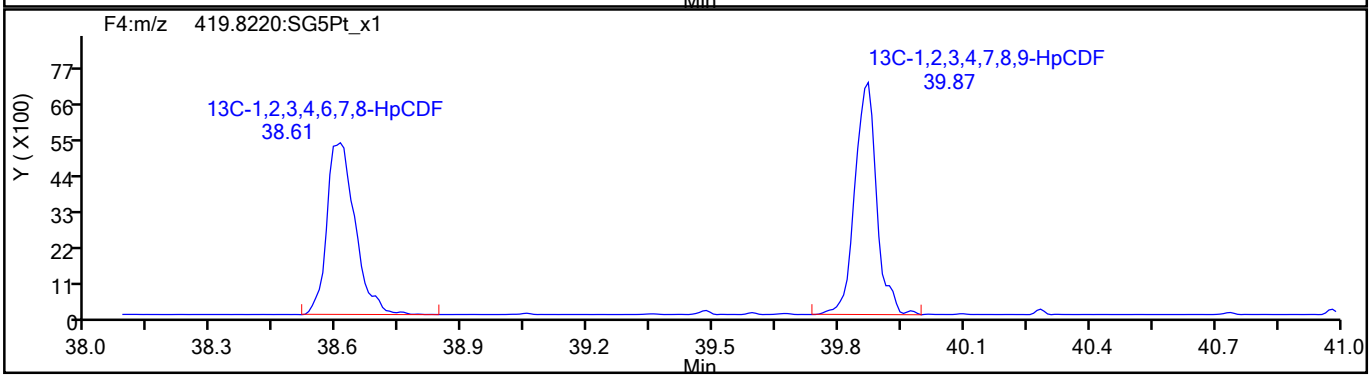

785317

Report Date: 25-Aug-2021 15:27:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

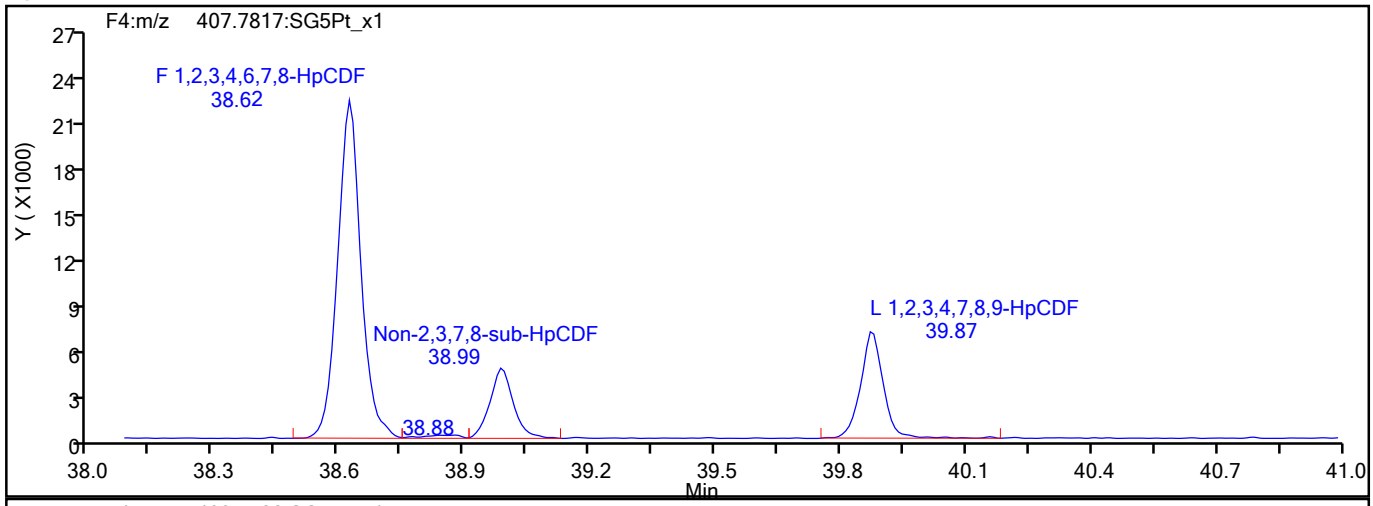

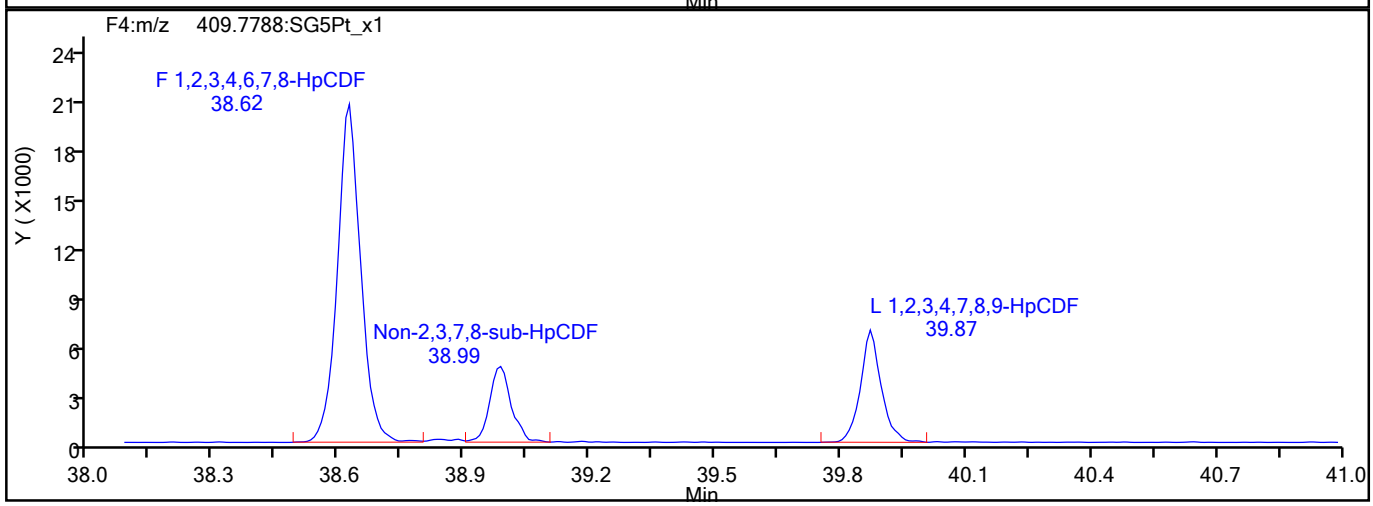

HpCDF Interference Mass

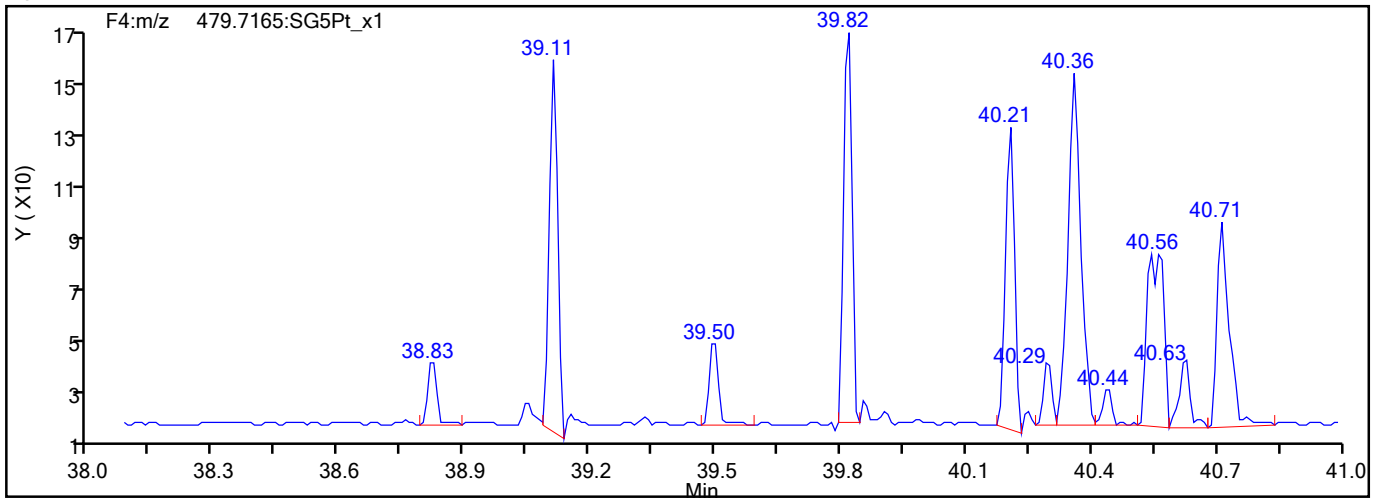

785318

Report Date: 25-Aug-2021 15:27:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

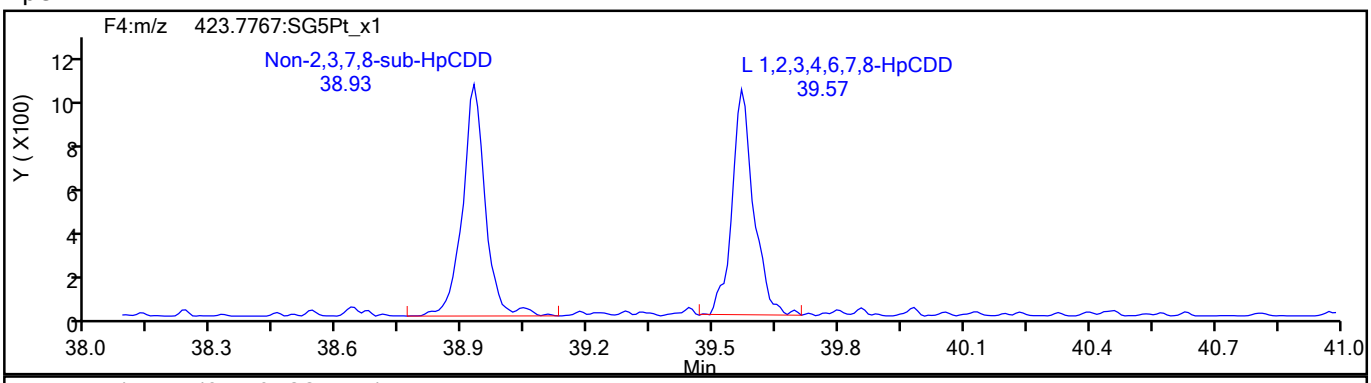

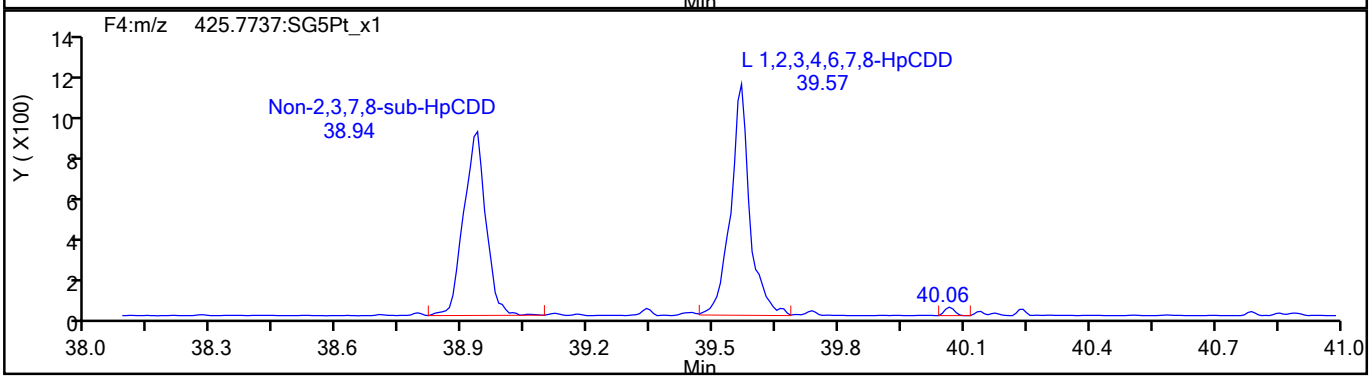

HpCDD Standards

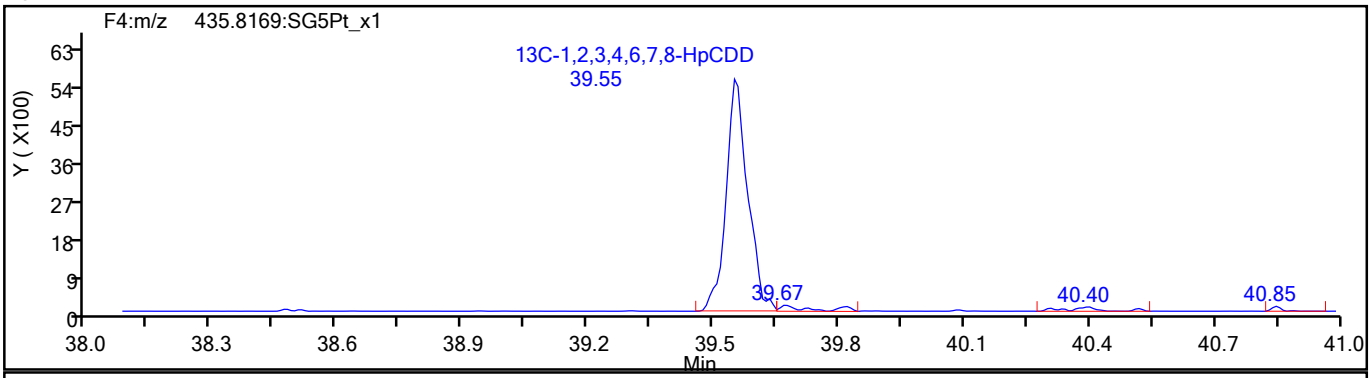

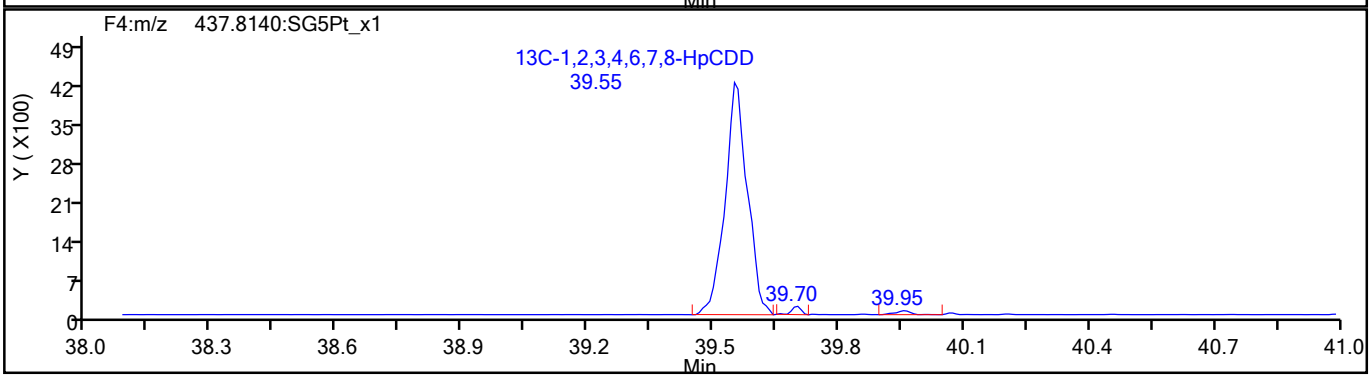

785319

Report Date: 25-Aug-2021 15:27:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

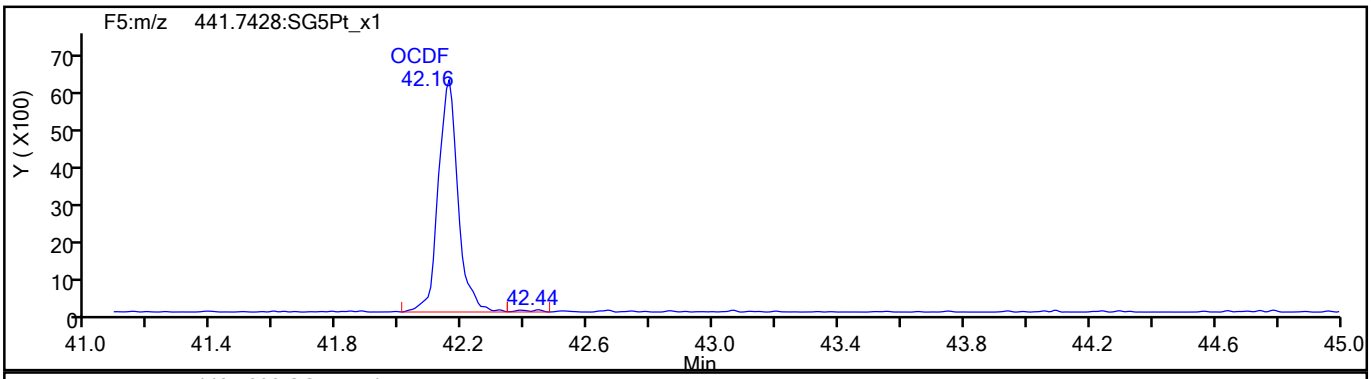

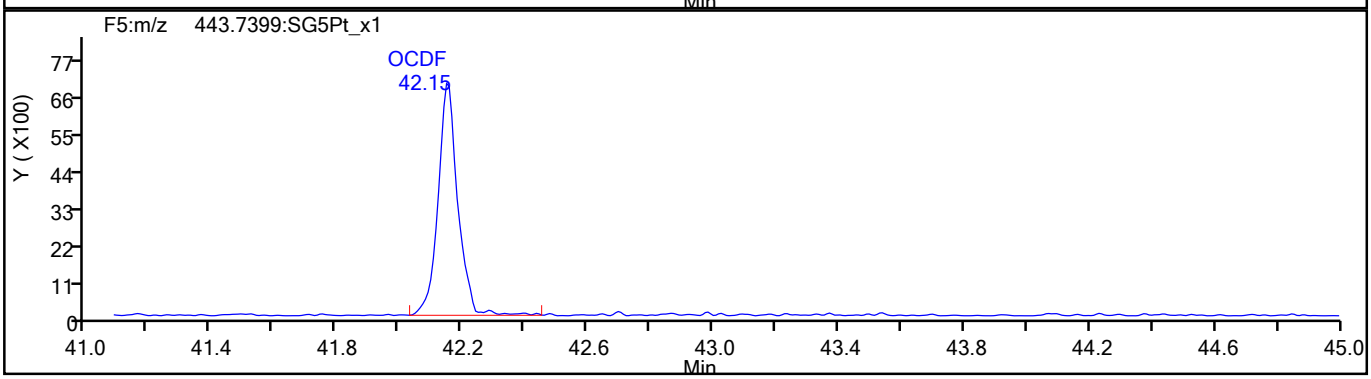

OCDF Standards

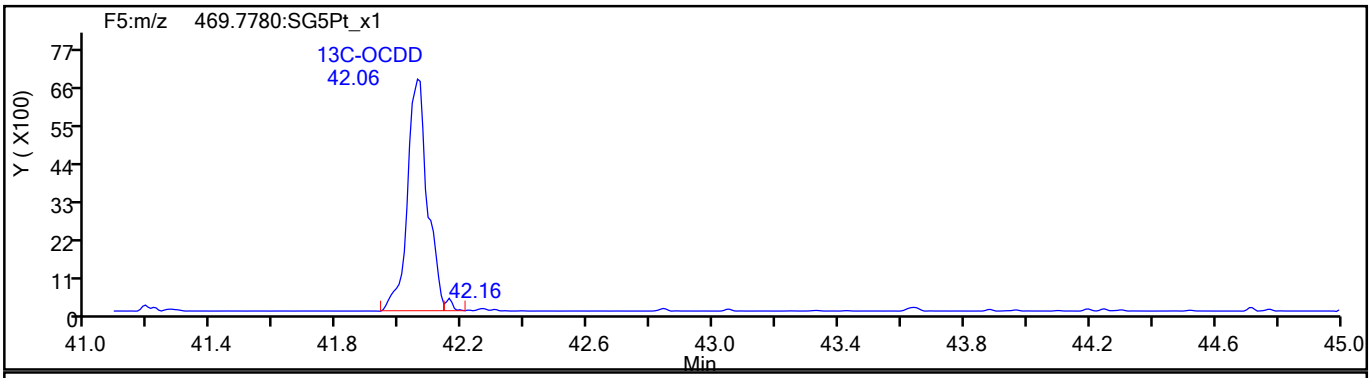

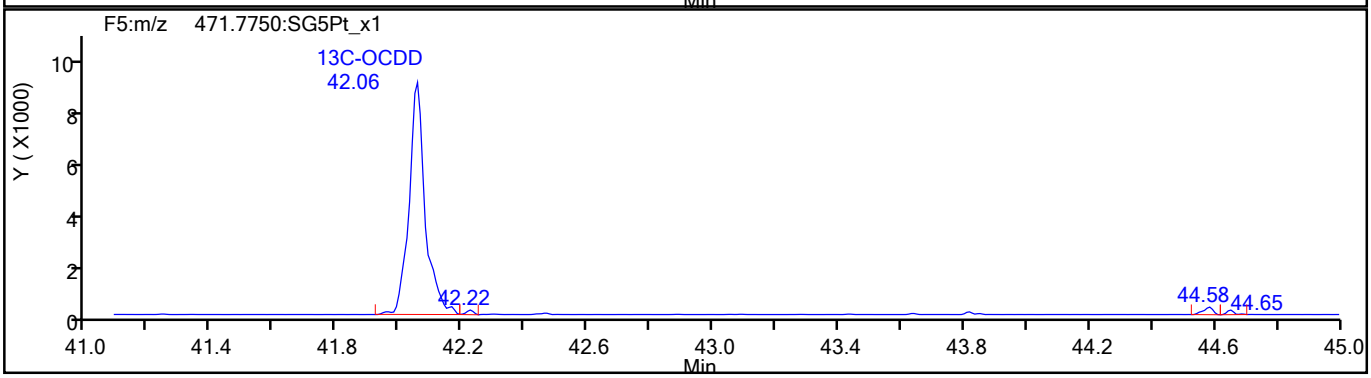

785320

Report Date: 25-Aug-2021 15:27:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

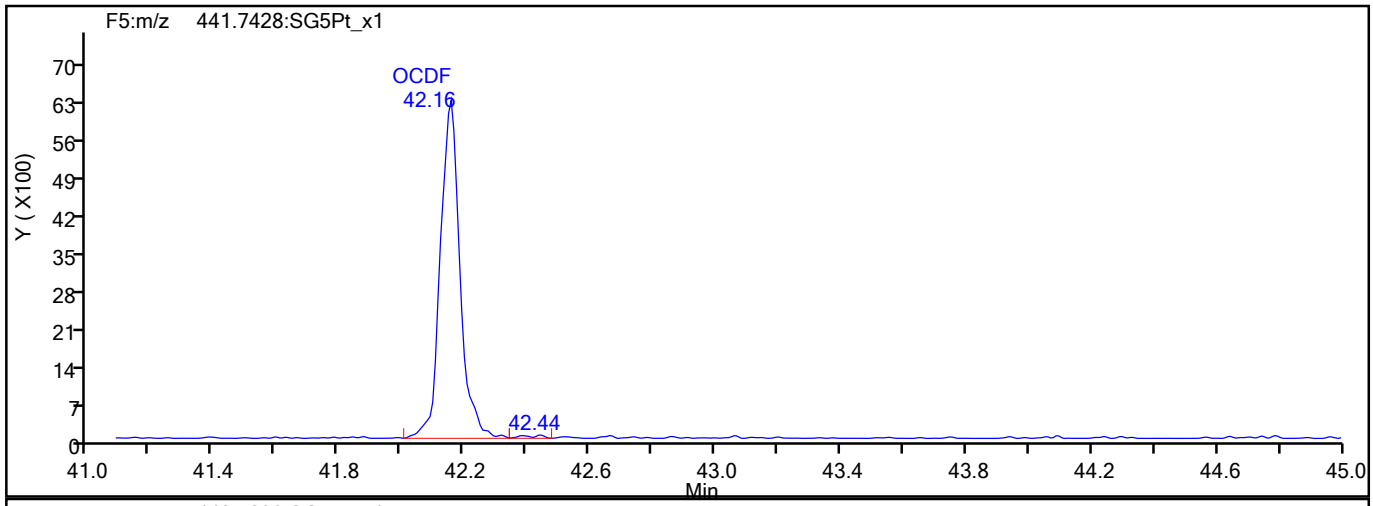

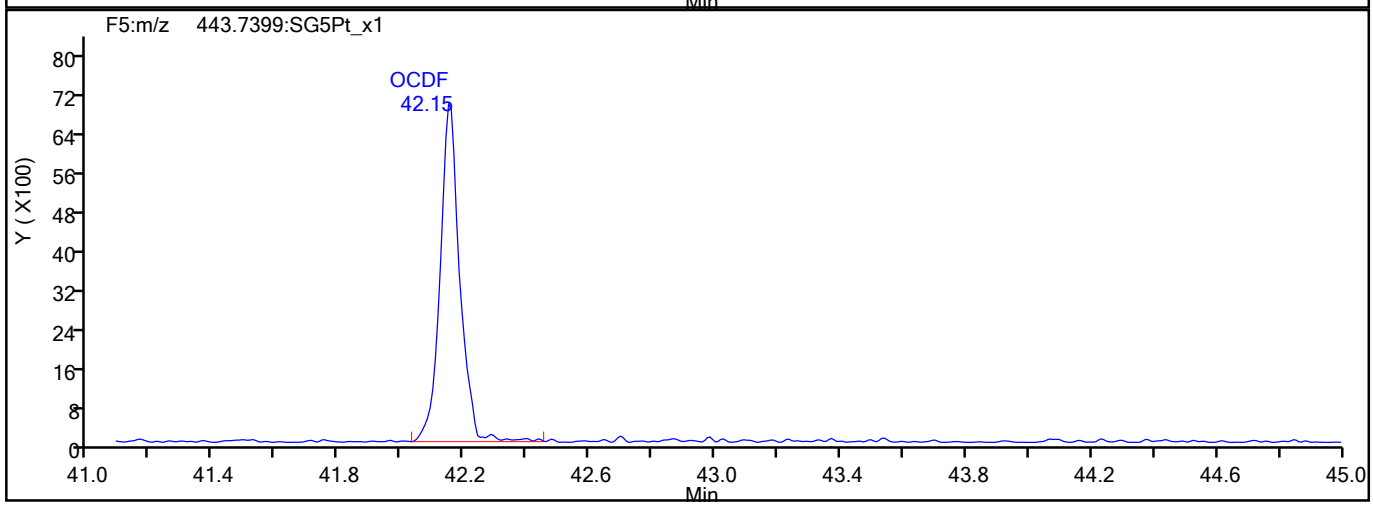

OCDF Interference Mass

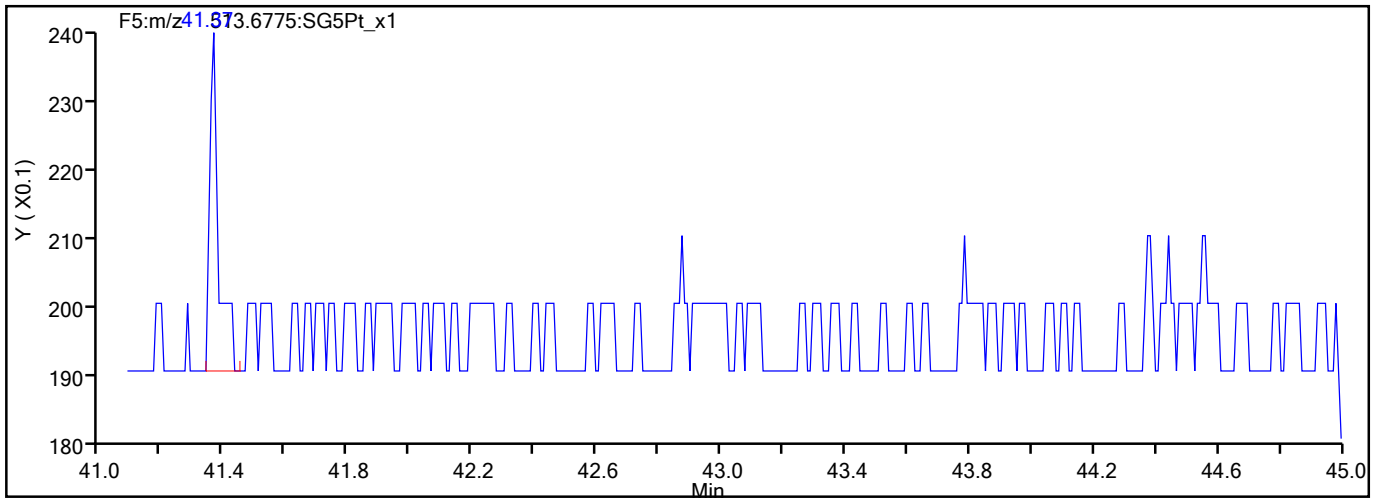

785321

Report Date: 25-Aug-2021 15:27:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

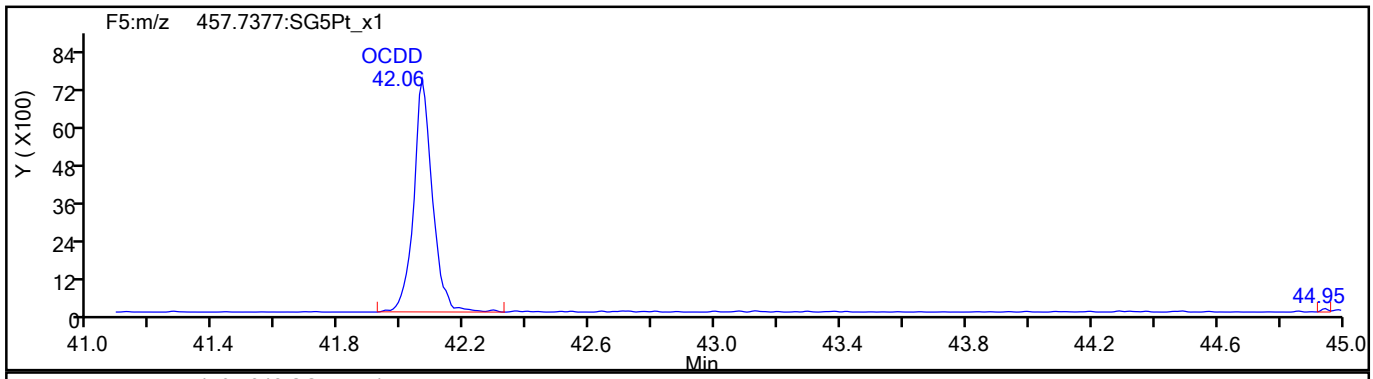

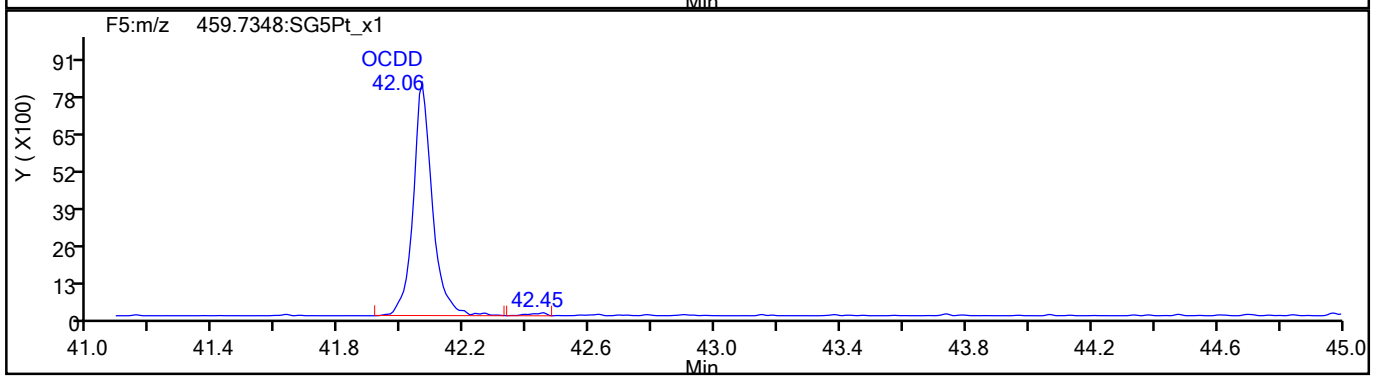

OCDD Standards

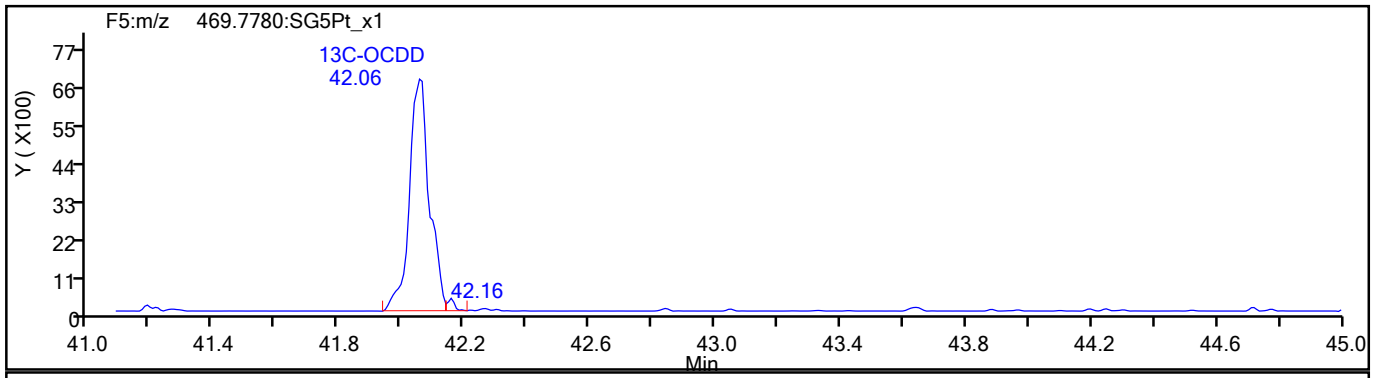

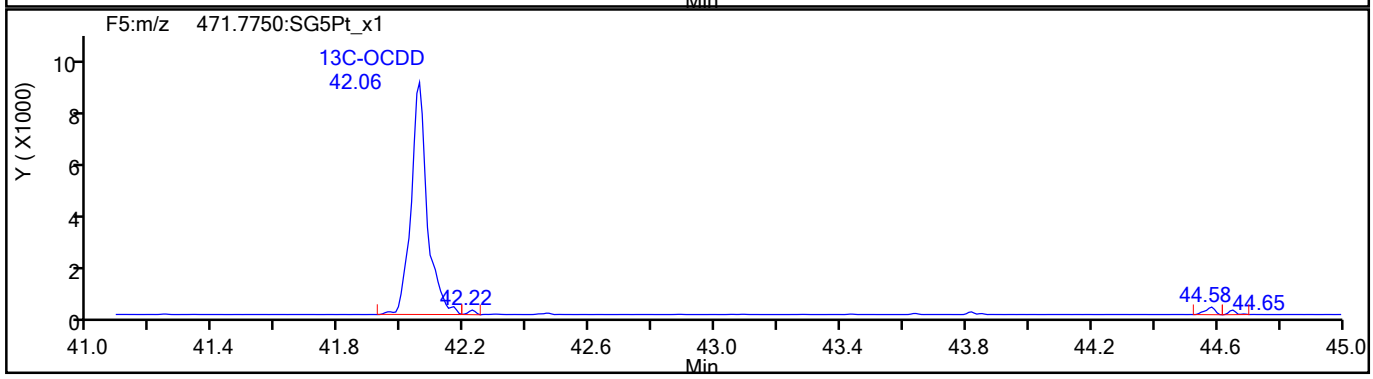

785322

Report Date: 25-Aug-2021 15:27:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

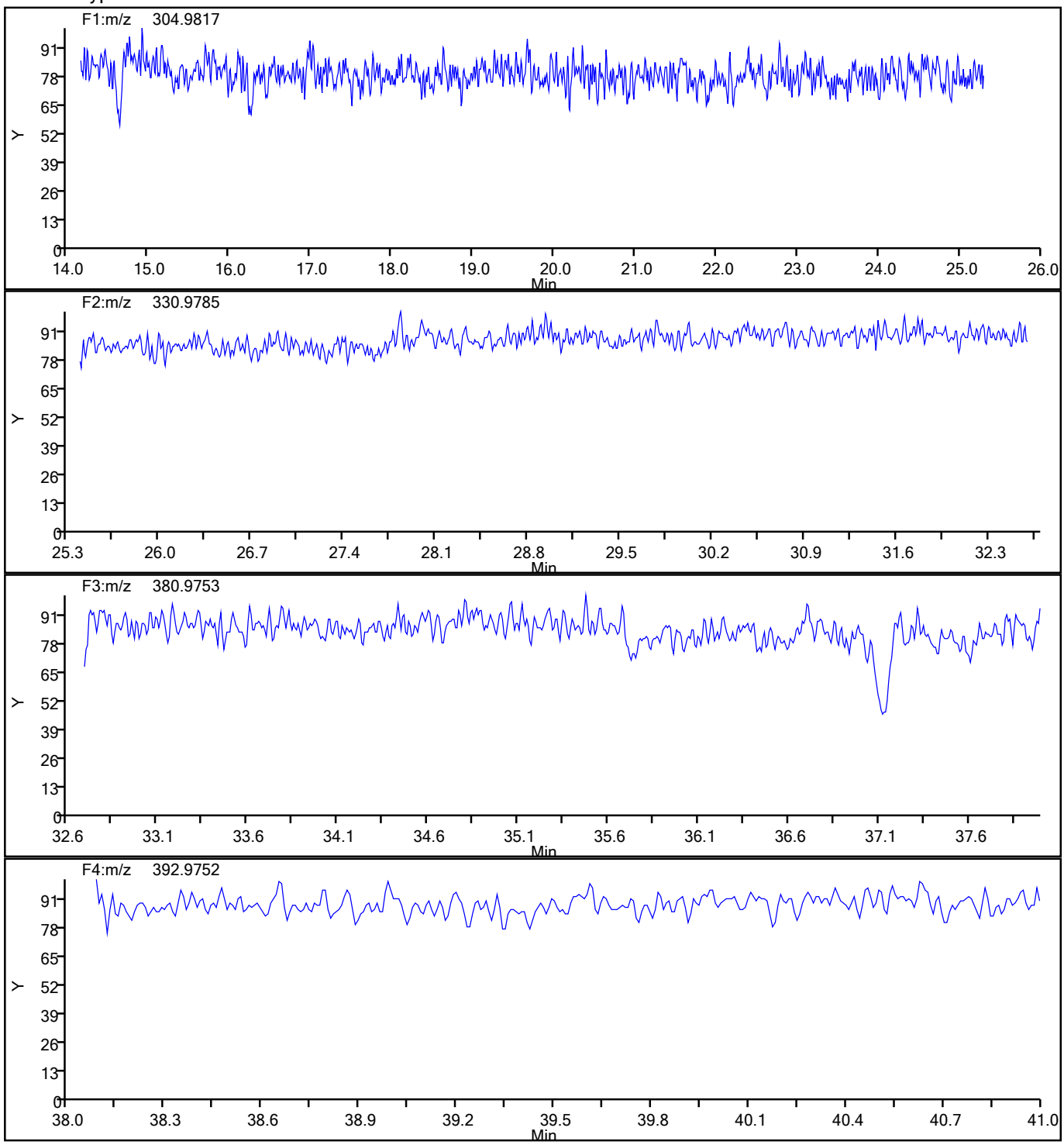

785323

Report Date: 25-Aug-2021 15:27:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_25.d		
Injection Date:	20-Aug-2021 07:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	518043	Sample Line#:	23
Column Type:	DB-5	Column Dia:	0.32 mm

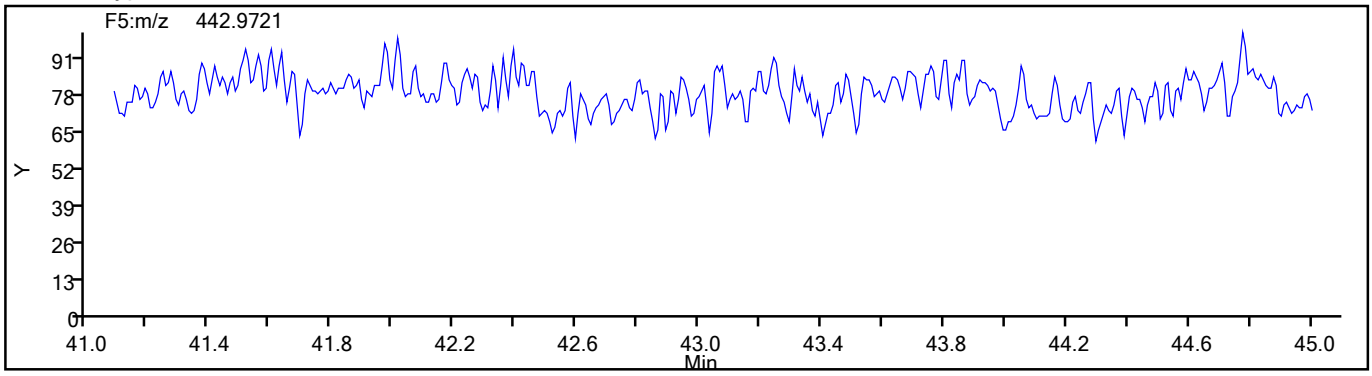

785324

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (2-4) RA
Lab Sample ID: 320-76888-2 RA
Matrix: Sediment
Lab File ID: 26AU21A11D2_014.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 9.99(g)
Date Analyzed: 08/26/2021 23:35
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 45.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520145
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	140000	E B G	100	100

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	25		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	58		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_014.d
Lims ID: 320-76888-A-2-A
Client ID: 11215702-072621-BN-SJSB094 (2-4)
Sample Type: Client
Inject. Date: 26-Aug-2021 23:35:41 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-2-A 10X
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 09:35:29

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.314	8408877	0.87	7.2E+05	10.0	10.0				nM
D 13C-2,3,7,8-TCDF	17.645	2779756	0.80	1.3327	2.481	2.481	0.8951	0.8951	24.81	M
2,3,7,8-TCDF	17.658	1078821439	0.78	0.9978	3889.5	3889.5	2.832	2.832		Ea
D 13C-2,3,7,8-TCDD	16.095	2476881	0.87	0.8749	3.367	3.367	9.042	9.042	33.67	nM
2,3,7,8-TCDD	16.108	181660344	0.80	1.0570	693.9	693.9	3.937	3.937		Ea
$ 37Cl4-2,3,7,8-TCDD	16.095	1689834		0.8648	2.324	2.324	0.1722	0.1722	58.09	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 27-Aug-2021 09:43:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_014.d
Lims ID: 320-76888-A-2-A
Client ID: 11215702-072621-BN-SJSB094 (2-4)
Sample Type: Client
Inject. Date: 26-Aug-2021 23:35:41 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-2-A 10X
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 09:35:29

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											nM
331.9368	16.314	16.288	2		3911217	738833	310066	775165	2		M
333.9339	16.314	16.288	2		4497660	987575	236241	590602	4	0.87(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.645	17.619	2	1.082	1233535	301039	37700	94250	8		M
317.9389	17.645	17.619	2	1.082	1546221	296967	44674	111685	7	0.80(0.65-0.89)	M
2,3,7,8-TCDF											Ea
303.9016	17.658	17.632	2	1.001	471308213	85083198	30486	76215	2791		a
305.8987	17.658	17.632	2	1.001	607513226	110759925	37111	92777	2985	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.095	16.069	2	0.987	1153892	234162	310066	775165	1		M
333.9339	16.081	16.069	1	0.986	1322989	284279	236241	590602	1	0.87(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.108	16.082	2	1.001	80900780	18383512	54289	135722	339		a
321.8936	16.108	16.082	2	1.001	100759564	22758811	31998	79995	711	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.095	16.082	1	0.987	1689834	391076	10284	25710	38		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_014.d				
Injection Date:	26-Aug-2021 23:35:41	Instrument ID:	11D2		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.78
Area: 1569282
Amount: 5.926546
Amount Units: pg/ul

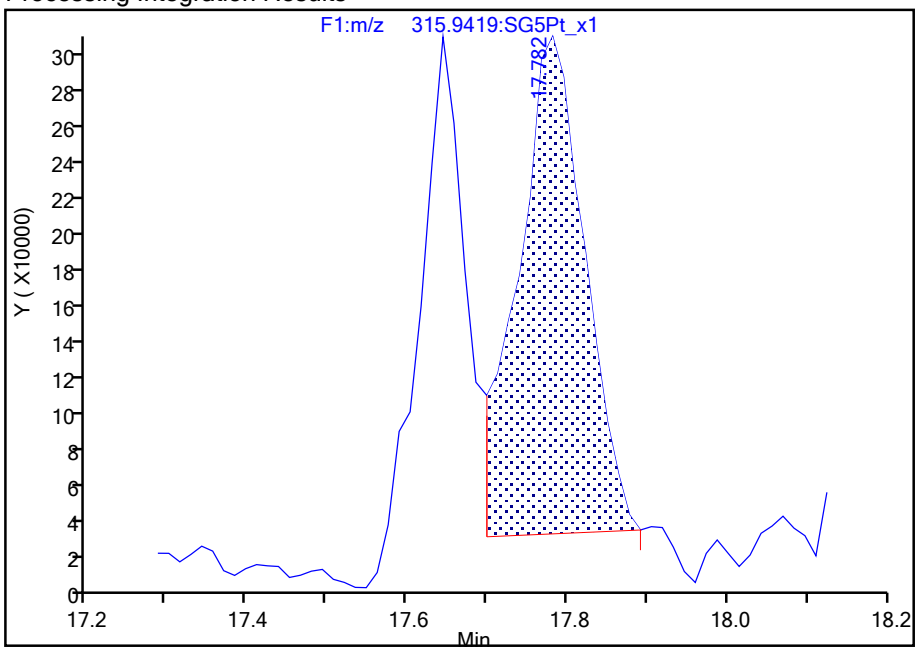

Manual Integration Results

RT: 17.64
Area: 1233535
Amount: 2.480509
Amount Units: pg/ul

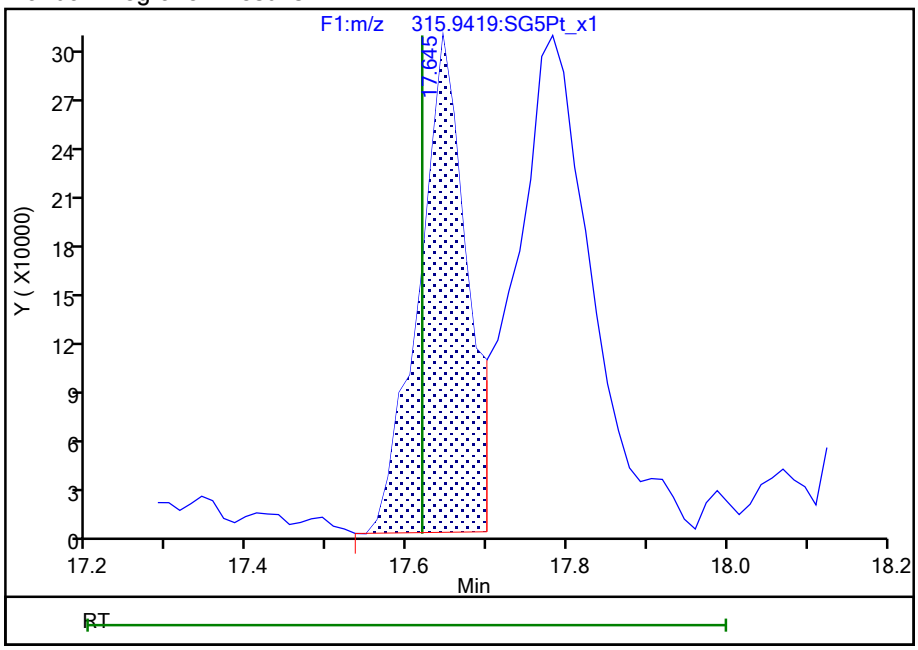

Reviewer: bennettd, 27-Aug-2021 09:35:01

Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_014.d				
Injection Date:	26-Aug-2021 23:35:41	Instrument ID:	11D2		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.78
Area: 5072238
Amount: 5.926546
Amount Units: pg/ul

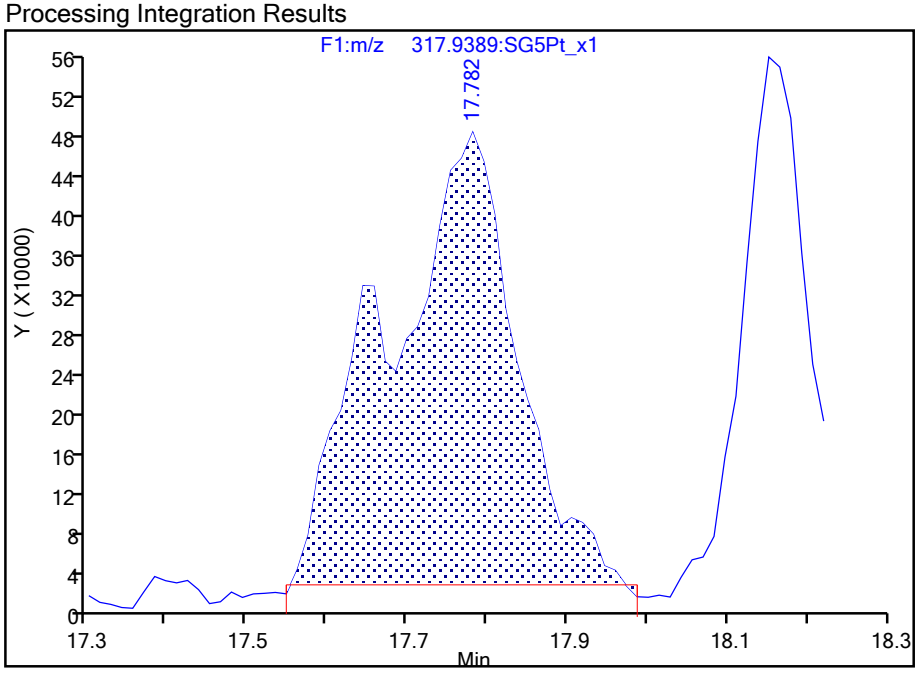

Manual Integration Results

RT: 17.64
Area: 1546221
Amount: 2.480509
Amount Units: pg/ul

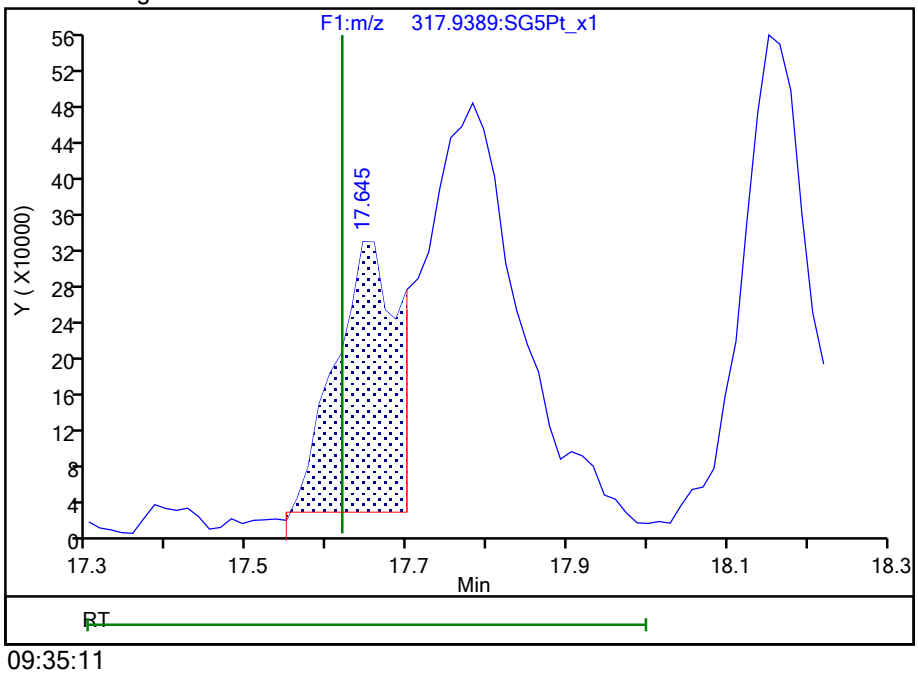

Reviewer: bennettd, 27-Aug-2021 09:35:11
Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

785329

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_014.d				
Injection Date:	26-Aug-2021 23:35:41	Instrument ID:	11D2		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Not Detected
Expected RT: 17.63

Processing Integration Results

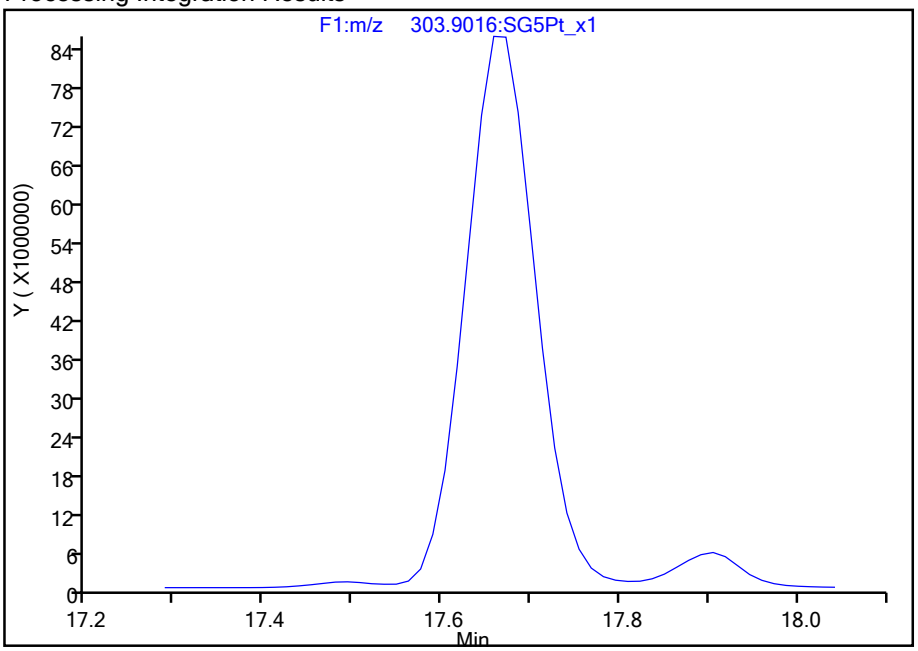

RT: 17.66
Area: 471308213
Amount: 3889.5239
Amount Units: pg/ul

Manual Integration Results

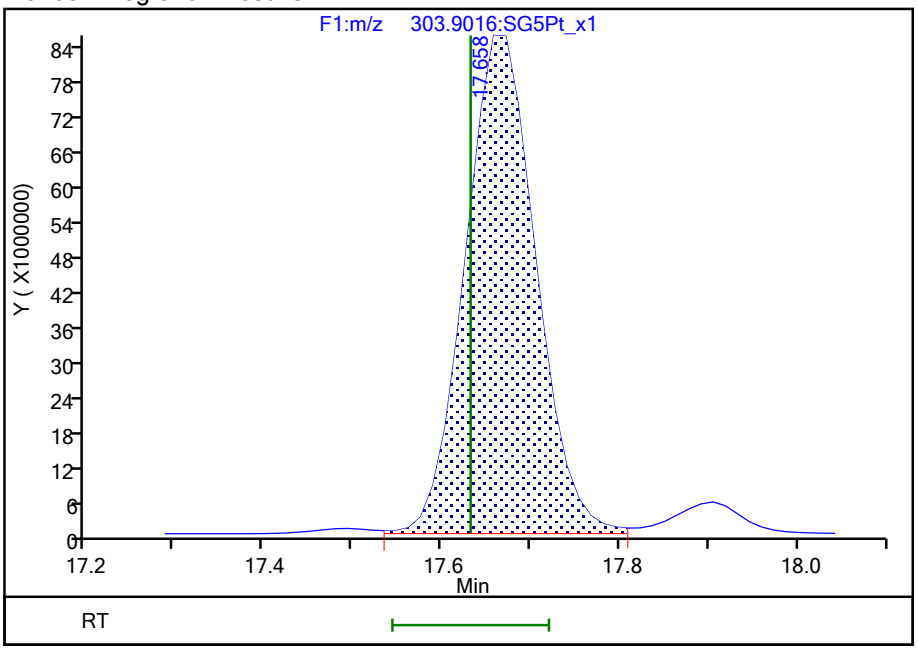

Reviewer: bennettd, 27-Aug-2021 09:35:21
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_014.d				
Injection Date:	26-Aug-2021 23:35:41	Instrument ID:	11D2		
Lims ID:	320-76888-A-2-A	Lab Sample ID:	320-76888-2		
Client ID:	11215702-072621-BN-SJSB094 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

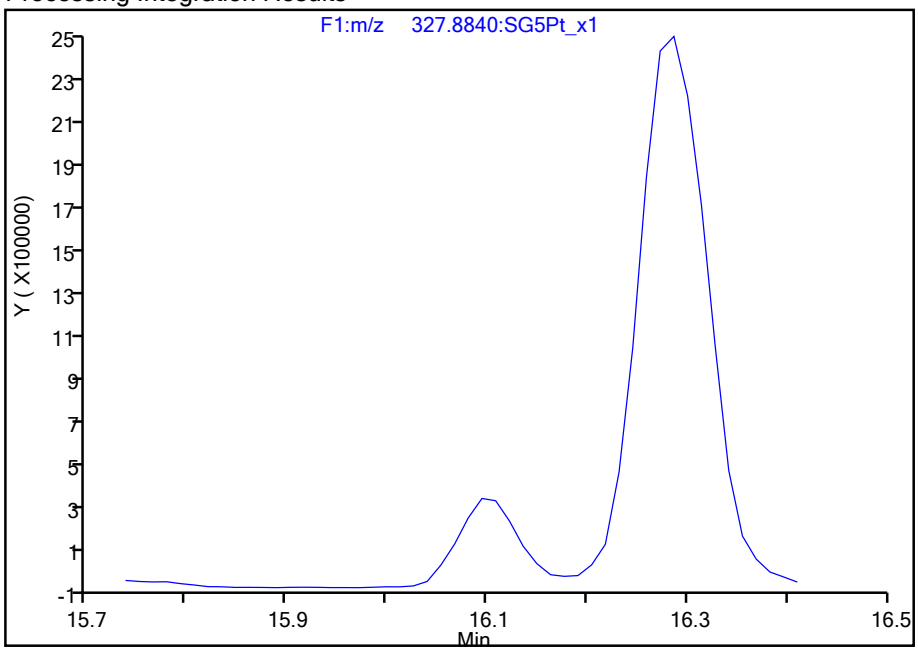

Manual Integration Results

RT: 16.09
Area: 1689834
Amount: 2.323712
Amount Units: pg/ul

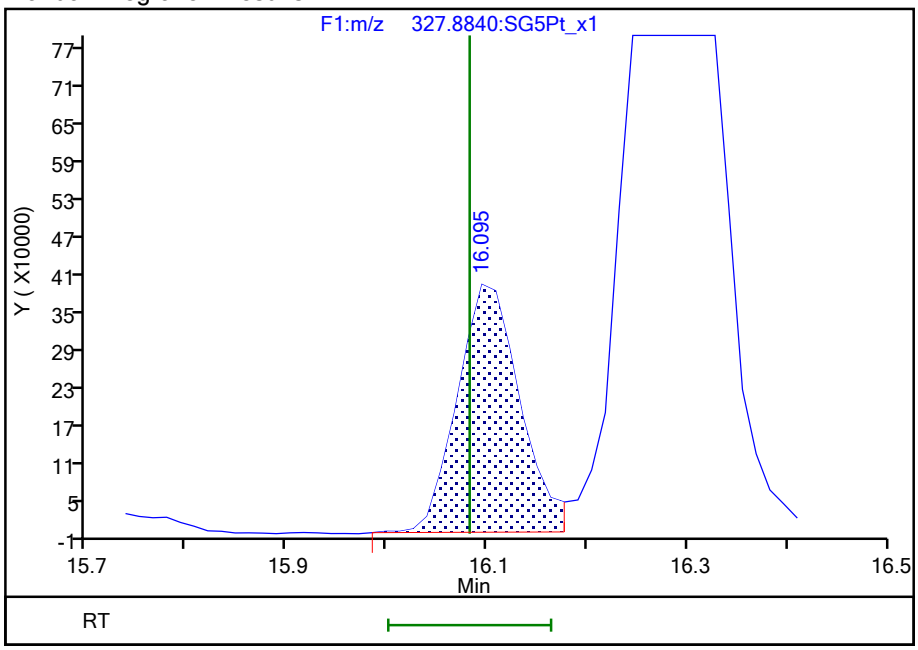

Reviewer: bennettd, 27-Aug-2021 09:34:29
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Report Date: 27-Aug-2021 09:43:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_014.d		
Injection Date:	26-Aug-2021 23:35:41	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	520145	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

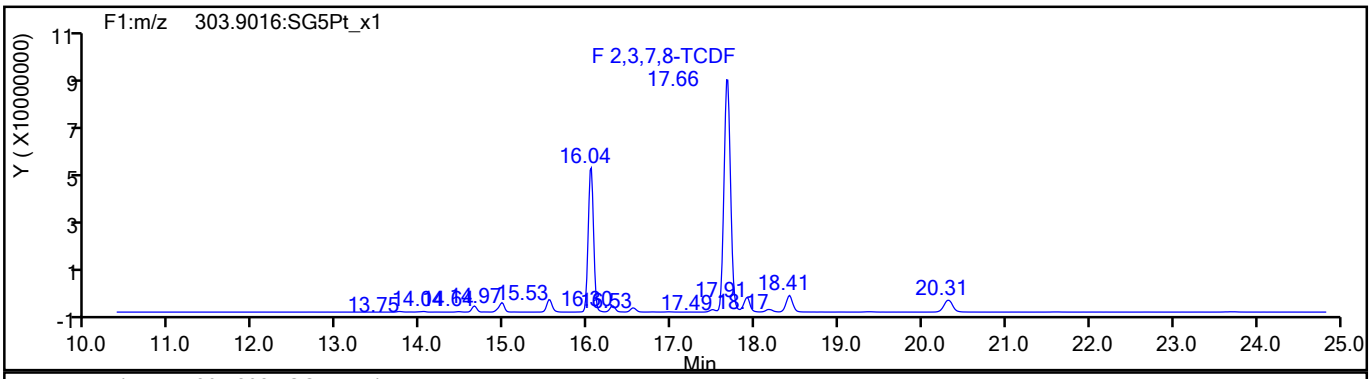

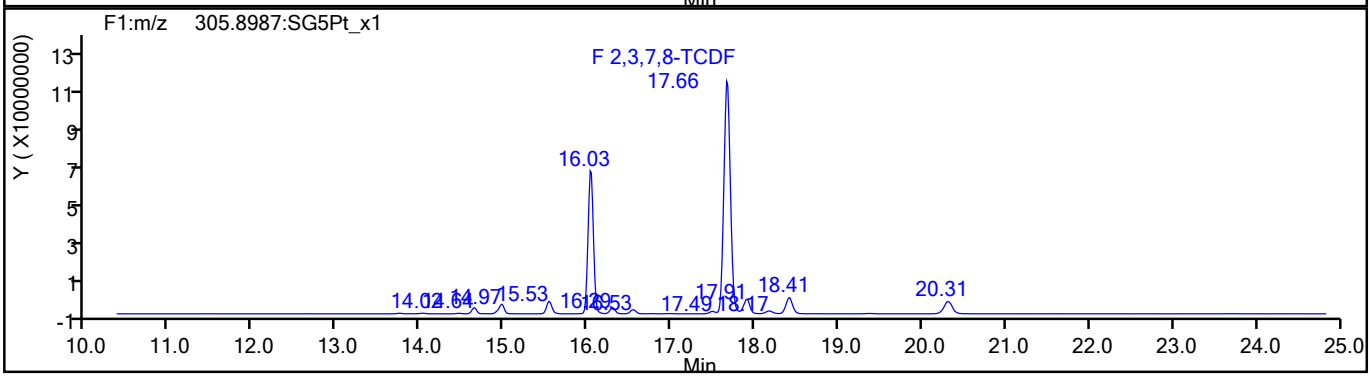

TCDF Standards

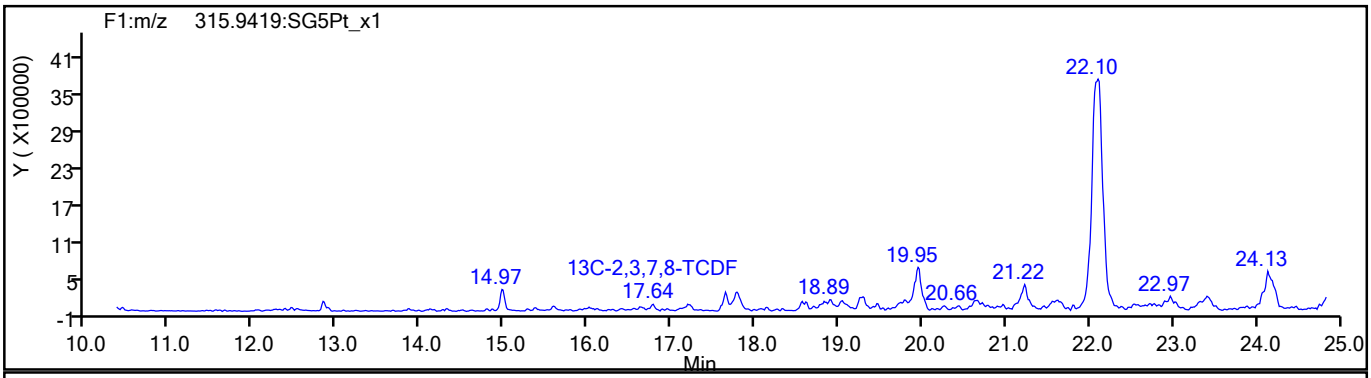

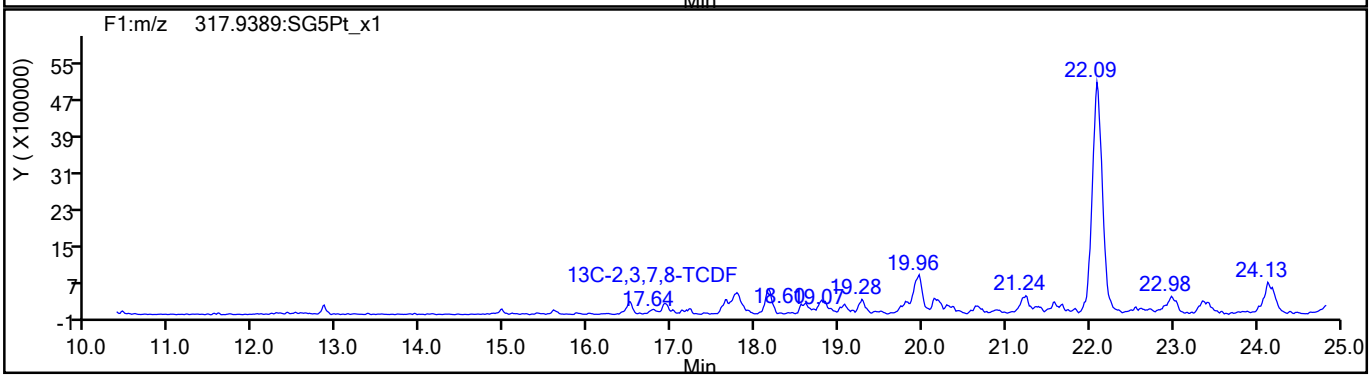

785332

Report Date: 27-Aug-2021 09:43:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_014.d		
Injection Date:	26-Aug-2021 23:35:41	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	520145	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

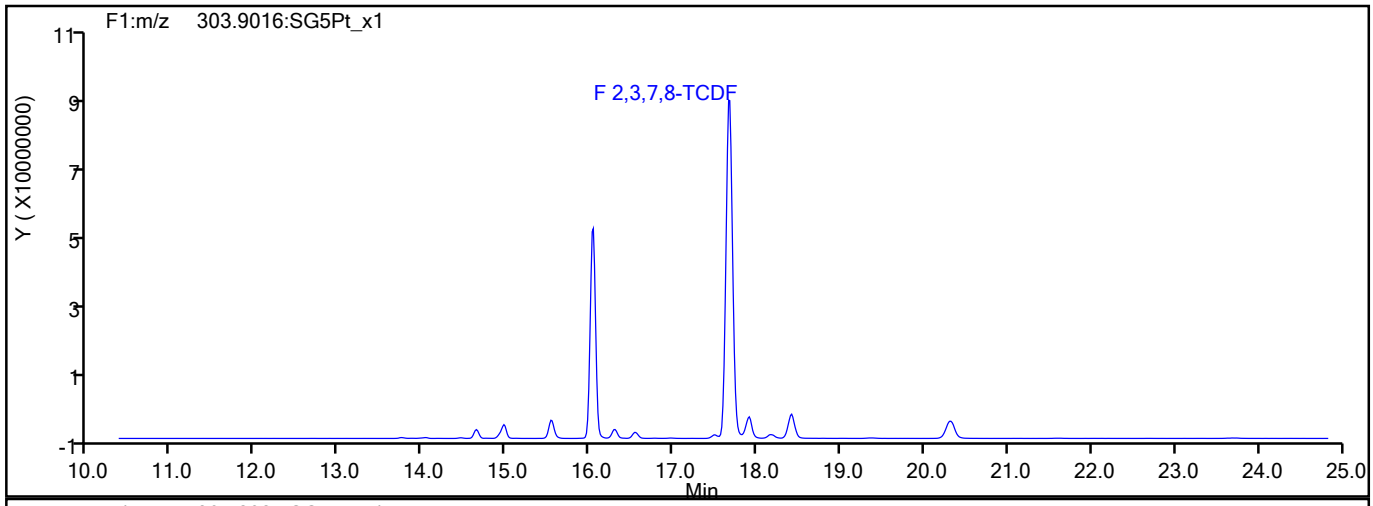

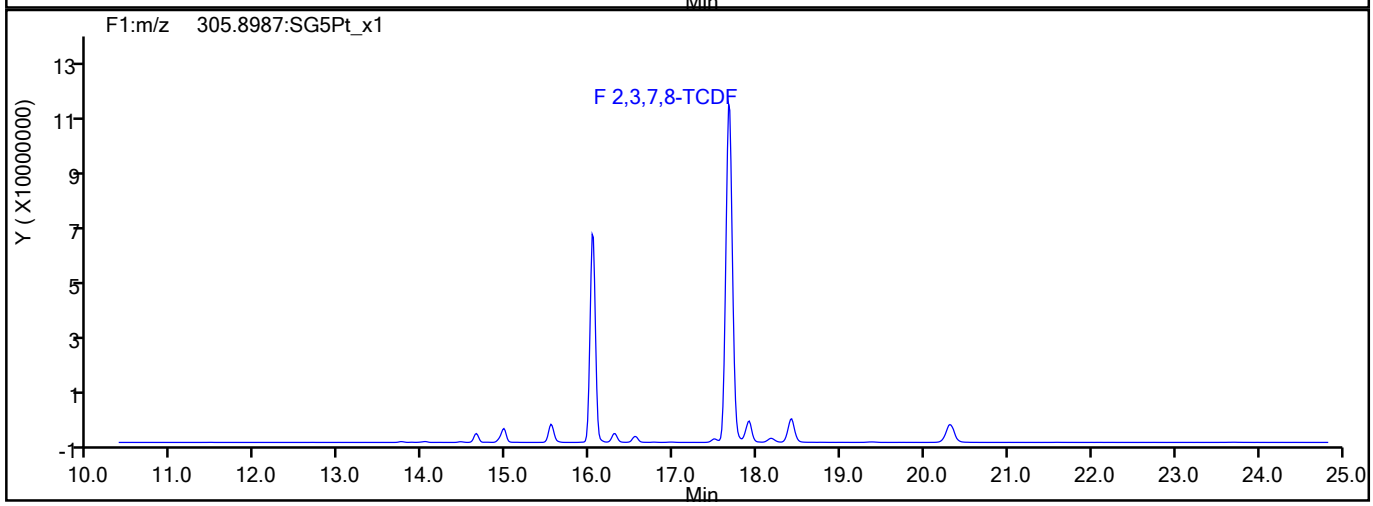

TCDF Interference Mass

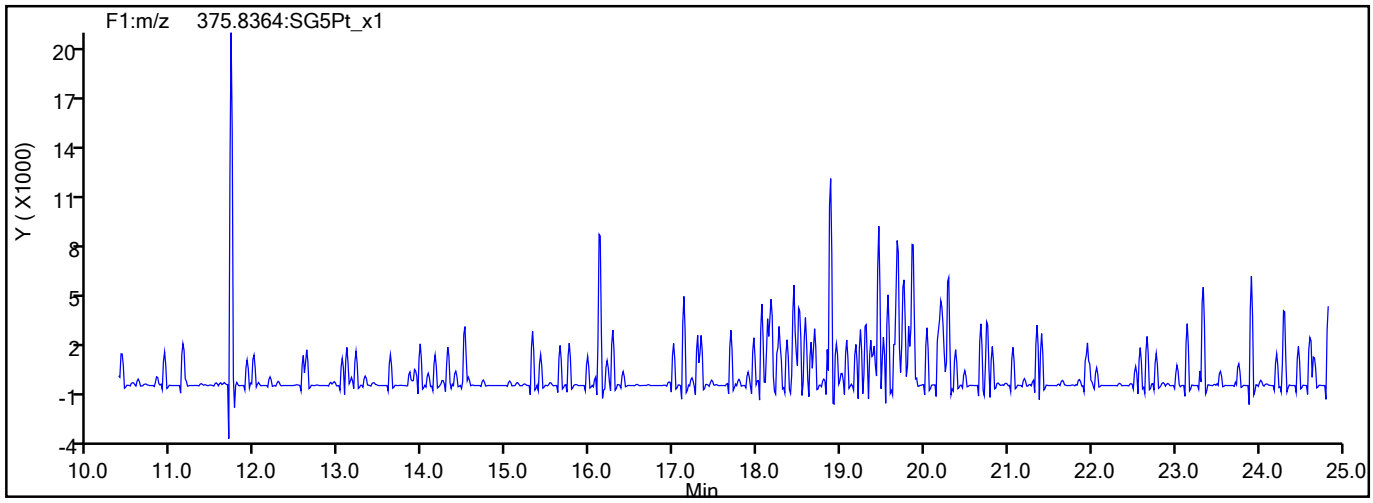

785333

Report Date: 27-Aug-2021 09:43:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_014.d		
Injection Date:	26-Aug-2021 23:35:41	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	520145	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

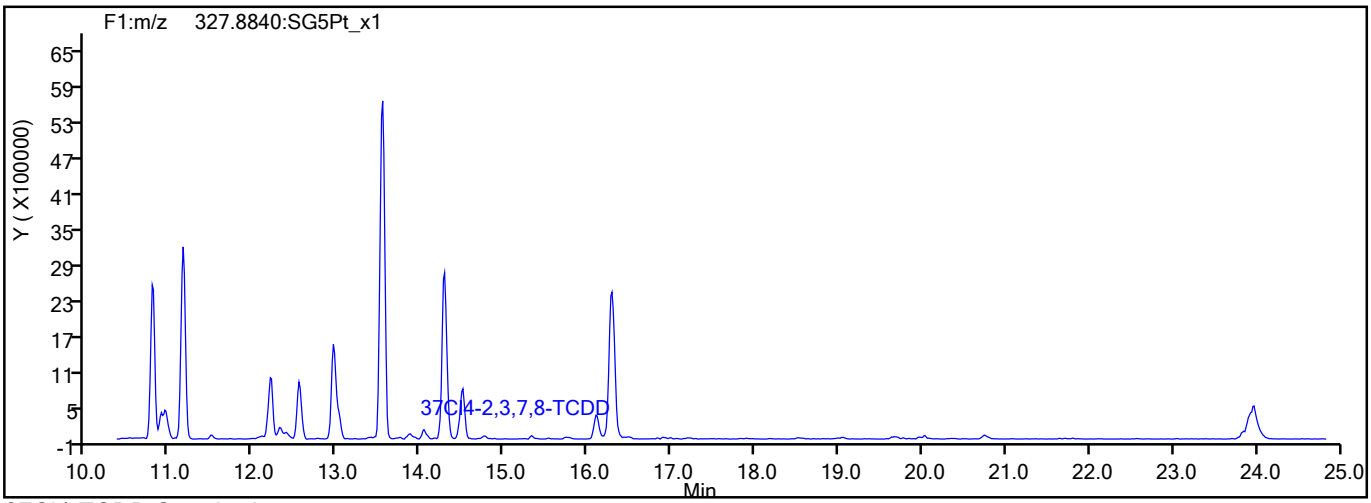

37Cl4-TCDD Standards

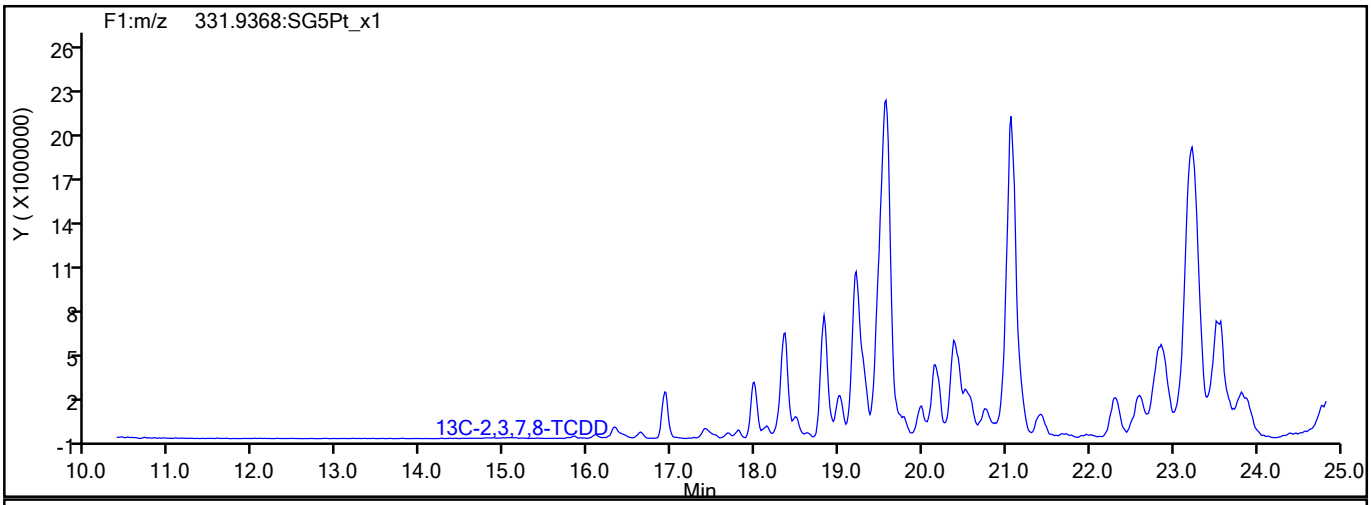

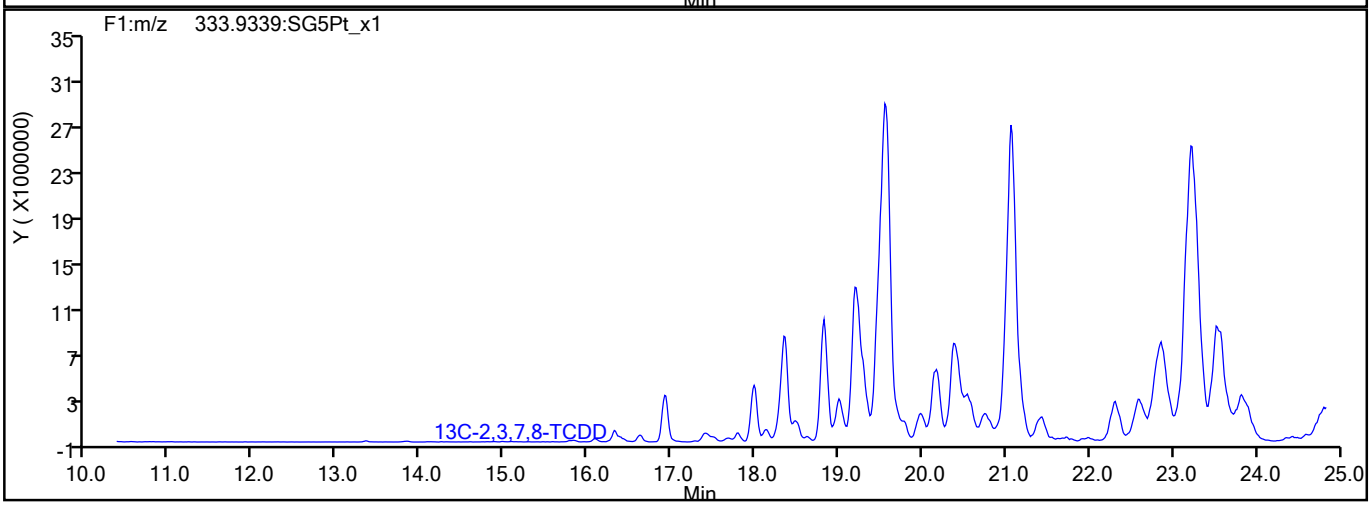

785334

Report Date: 27-Aug-2021 09:43:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_014.d		
Injection Date:	26-Aug-2021 23:35:41	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (2-4)		
Worklist#:	520145	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

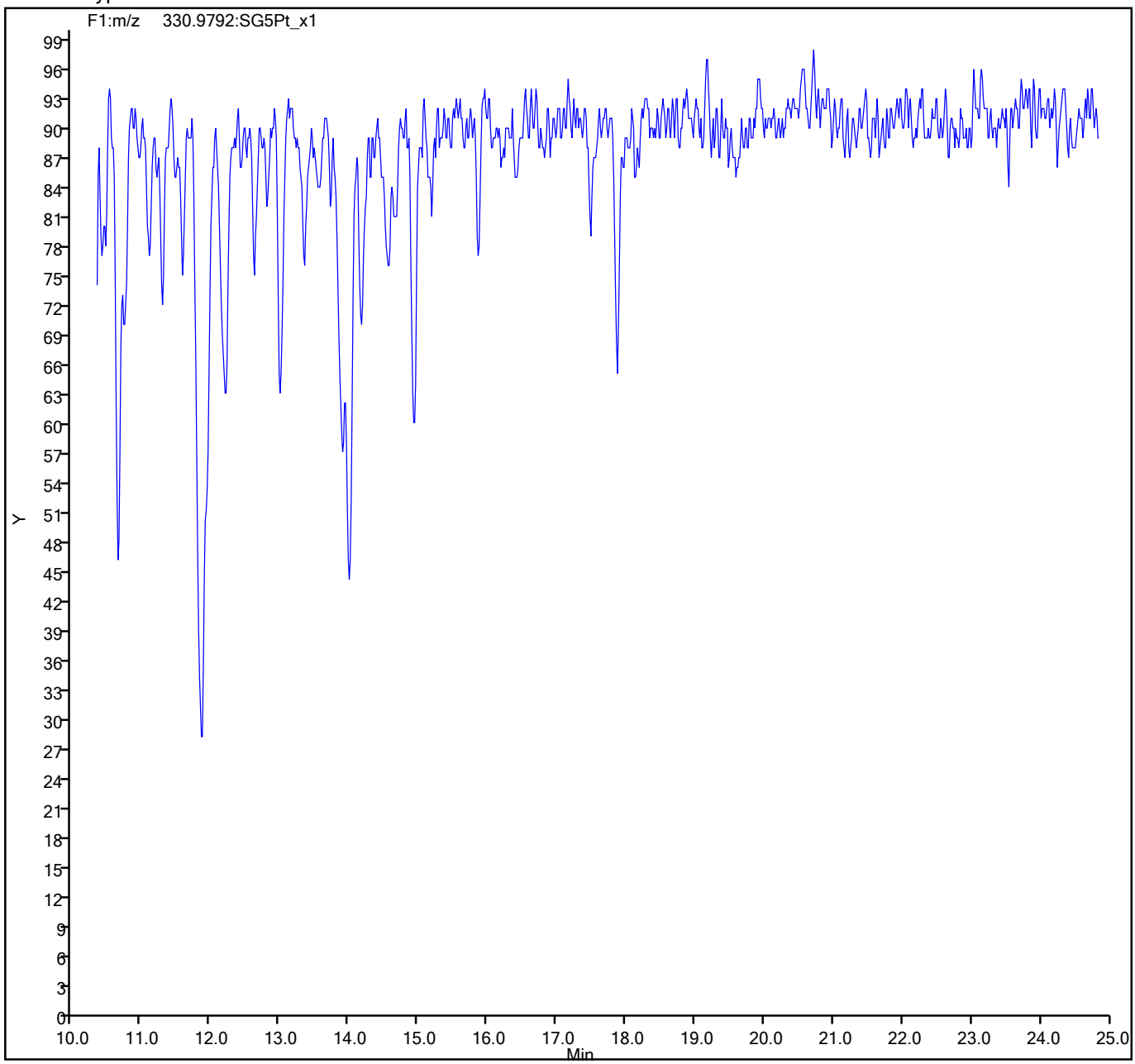

785335

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (4-6)
Lab Sample ID: 320-76888-3
Matrix: Sediment
Lab File ID: 19au21dfs1_27.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.42(g)
Date Analyzed: 08/20/2021 09:32
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 48.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	26000	E G	33	33
40321-76-4	1,2,3,7,8-PeCDD	340		94	6.6
57117-41-6	1,2,3,7,8-PeCDF	2900		94	19
57117-31-4	2,3,4,7,8-PeCDF	2000		94	17
39227-28-6	1,2,3,4,7,8-HxCDD	ND		94	1.5
57653-85-7	1,2,3,6,7,8-HxCDD	9.1	J q	94	1.7
19408-74-3	1,2,3,7,8,9-HxCDD	7.0	J	94	1.4
70648-26-9	1,2,3,4,7,8-HxCDF	4400		94	19
57117-44-9	1,2,3,6,7,8-HxCDF	1100		94	19
72918-21-9	1,2,3,7,8,9-HxCDF	45	J	94	18
60851-34-5	2,3,4,6,7,8-HxCDF	140		94	20
35822-46-9	1,2,3,4,6,7,8-HpCDD	140	B	94	1.8
67562-39-4	1,2,3,4,6,7,8-HpCDF	1300	B	94	5.3
55673-89-7	1,2,3,4,7,8,9-HpCDF	360		94	5.3
3268-87-9	OCDD	1700	B	190	3.5
39001-02-0	OCDF	570		190	3.3
41903-57-5	Total TCDD	28000	G	33	33
30402-14-3	Total TCDF	220000	B G	170	170
36088-22-9	Total PeCDD	340		94	6.6
30402-15-4	Total PeCDF	7800	q	94	18
34465-46-8	Total HxCDD	37	J q	94	1.5
55684-94-1	Total HxCDF	6500		94	19
37871-00-4	Total HpCDD	320	B	94	1.8
38998-75-3	Total HpCDF	1900	B	94	5.3

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (4-6)
Lab Sample ID: 320-76888-3
Matrix: Sediment
Lab File ID: 19au21dfs1_27.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.42(g)
Date Analyzed: 08/20/2021 09:32
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 48.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	41		25-164
89059-46-1	13C-2,3,7,8-TCDF	38		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	35		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	38		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	41		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	40	q	32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	46		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	47		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	40		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	42		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	40		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	40		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	46		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	48		26-138
114423-97-1	13C-OCDD	51		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	84		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d
Lims ID: 320-76888-A-3-A
Client ID: 11215702-072621-BN-SJSB094 (4-6)
Sample Type: Client
Inject. Date: 20-Aug-2021 09:32:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-3-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:13:21 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 17:05:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.392	123576	0.83	2.1E+04	10.0	10.0				
D 13C-2,3,7,8-TCDF	20.429	62991	0.78	1.3459	3.787	3.787	0.4136	0.4136	37.87	Ma
2,3,7,8-TCDF	20.480	22952937	0.85	1.0802	3373.3	3373.3	4.553	4.553		E
A Non-2,3,7,8-sub-TCDF	19.851	17412122	0.86	1.0802	2559.0	2559.0	4.553	1507.8		a
S Total TCDF					5932.3	5932.3	4.553	4.553		
D 13C-2,3,7,8-TCDD	21.822	47730	0.85	0.9317	4.146	4.146	0.3915	0.3915	41.46	
2,3,7,8-TCDD	21.848	3543988	0.80	1.0753	690.5	690.5	0.8693	0.8693		Ea
$ 37Cl4-2,3,7,8-TCDD	21.848	41686		1.0083	3.346	3.346	0.2087	0.2087	83.64	
A Non-2,3,7,8-sub-TCDD	20.684	345714	0.80	1.0753	67.4	67.4	0.8693	65.3		
S Total TCDD					757.8	757.8	0.8693	0.8693		
D 13C-1,2,3,7,8-PeCDF	27.305	53477	1.57	1.1405	3.794	3.794	0.0493	0.0493	37.94	
1,2,3,7,8-PeCDF	27.305	441291	1.60	1.0543	78.3	78.3	0.5089	0.5089		
D 13C-2,3,4,7,8-PeCDF	28.778	56901	1.37	1.1253	4.092	4.092	0.0500	0.0500	40.92	M
2,3,4,7,8-PeCDF	28.804	303498	1.54	1.0079	52.9	52.9	0.4414	0.4414		
A F1 PeCDFs	24.634	3597	1.55	1.0311	0.6834	0.6321	0.0119	0.6321		RQa
A Non-2,3,7,8-sub-PeCDF	28.173	429206	1.55	1.0311	76.0	75.4	0.4717	33.6		RQ
S Total PeCDF					207.9	207.3	0.4751	0.4751		RQ
D 13C-1,2,3,7,8-PeCDD	29.578	31228	1.69	0.7165	3.527	3.527	0.0191	0.0191	35.27	M
1,2,3,7,8-PeCDD	29.637	29592	1.49	1.0465	9.055	9.055	0.1757	0.1757		
A Non-2,3,7,8-sub-PeCDD	28.478						0.1757	0.2445		RQU
S Total PeCDD					9.055	9.055	0.1757	0.1757		
D 13C-1,2,3,4,7,8-HxCDF	34.927	47056	0.53	0.9648	4.713	4.713	0.0264	0.0264	47.13	
1,2,3,4,7,8-HxCDF	34.927	629232	1.31	1.1474	116.5	116.5	0.5017	0.5017		
D 13C-1,2,3,6,7,8-HxCDF	35.070	44051	0.46	1.0708	3.975	3.975	0.0238	0.0238	39.75	
1,2,3,6,7,8-HxCDF	35.087	161076	1.32	1.2178	30.0	30.0	0.5169	0.5169		
D 13C-2,3,4,6,7,8-HxCDF	35.895	43158	0.55	1.0413	4.005	4.005	0.0245	0.0245	40.05	
2,3,4,6,7,8-HxCDF	35.912	19561	1.35	1.2145	3.732	3.732	0.5459	0.5459		
D 13C-1,2,3,7,8,9-HxCDF	36.804	42362	0.54	0.9731	4.207	4.207	0.0262	0.0262	42.07	
1,2,3,7,8,9-HxCDF	36.796	6360	1.37	1.2401	1.211	1.211	0.4841	0.4841		
A Non-2,3,7,8-sub-HxCDF	35.009	110742	1.35	1.2049	20.8	20.8	0.5108	8.101		
S Total HxCDF					172.3	172.3	0.5122	0.5122		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.594	103486	1.19	1.8E+04	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	36.097	31716	1.24	0.7587	4.469	4.040	0.0392	0.0392	44.69	RQ
1,2,3,4,7,8-HxCDD	36.249						0.0387	0.0387		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.232	40493	1.16	0.8593	4.554	4.554	0.0346	0.0346	45.54	
1,2,3,6,7,8-HxCDD	36.249	973	1.24	0.9933	0.2998	0.2419	0.0451	0.0451		RQ
1,2,3,7,8,9-HxCDD	36.586	787	1.24	1.1094	0.1877	0.1877	0.0386	0.0386		M
A Non-2,3,7,8-sub-HxCDD	35.375	2228	1.24	1.0545	0.6321	0.5591	0.0407	0.5591		RQM
S Total HxCDD					1.120	0.9887	0.0408	0.0408		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.618	34966	0.40	0.7359	4.591	4.591	0.0548	0.0548	45.91	Ma
1,2,3,4,6,7,8-HpCDF	38.626	175430	1.06	1.4421	34.8	34.8	0.1427	0.1427		
D 13C-1,2,3,4,7,8,9-HpCDF	39.855	34259	0.41	0.6854	4.830	4.830	0.0589	0.0589	48.30	
1,2,3,4,7,8,9-HpCDF	39.872	43538	1.03	1.3092	9.707	9.707	0.1406	0.1406		
A Non-2,3,7,8-sub-HpCDF	39.245	34880	1.08	1.3756	7.326	7.326	0.1413	7.326		
S Total HpCDF					51.8	51.8	0.1417	0.1417		
D 13C-1,2,3,4,6,7,8-HpCDD	39.552	27962	1.02	0.6745	4.006	4.006	0.0170	0.0170	40.06	
1,2,3,4,6,7,8-HpCDD	39.560	10968	0.95	1.0503	3.735	3.735	0.0493	0.0493		
A Non-2,3,7,8-sub-HpCDD	39.241	13857	1.11	1.0503	4.718	4.718	0.0493	4.718		
S Total HpCDD					8.453	8.453	0.0493	0.0493		
D 13C-OCDD	42.057	57605	0.89	0.5446	10.2	10.2	0.0367	0.0367	51.10	
OCDF	42.150	57991	0.97	1.3168	15.3	15.3	0.0869	0.0869		
OCDD	42.066	136519	0.83	1.0620	44.6	44.6	0.0946	0.0946		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d
Lims ID: 320-76888-A-3-A
Client ID: 11215702-072621-BN-SJSB094 (4-6)
Sample Type: Client
Inject. Date: 20-Aug-2021 09:32:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-3-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:13:21 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 17:05:19

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.392	21.395	0		56012	6903	123	307	56		
333.9338	21.418	21.395	1		67564	7683	90	225	85	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											Ma
315.9419	20.429	20.365	4	0.955	27607	3645	153	382	24		M
317.9389	20.463	20.365	6	0.957	35384	5032	172	430	29	0.78(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.480	20.408	4	1.003	10536484	1452720	792	1980	1834		
305.8987	20.480	20.408	4	1.003	12416453	1723570	915	2287	1884	0.85(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	17.481	19.851	-142	0.856	54844	9798	792	1980	12		
305.8987	17.499	19.851	-141	0.857	83586	12516	915	2287	14	0.66(0.65-0.89)	
303.9016	17.945	19.851	-114	0.878	292386	46082	792	1980	58		
305.8987	17.945	19.851	-114	0.878	344059	55880	915	2287	61	0.85(0.65-0.89)	
303.9016	18.426	19.851	-85	0.902	425798	48359	792	1980	61		
305.8987	18.435	19.851	-85	0.902	489156	55385	915	2287	61	0.87(0.65-0.89)	
303.9016	18.873	19.851	-59	0.924	330570	43661	792	1980	55		
305.8987	18.873	19.851	-59	0.924	387749	51344	915	2287	56	0.85(0.65-0.89)	
303.9016	19.243	19.851	-36	0.942	467960	66726	792	1980	84		
305.8987	19.243	19.851	-36	0.942	549848	81268	915	2287	89	0.85(0.65-0.89)	
303.9016	19.741	19.851	-7	0.966	4741147	663046	792	1980	837		
305.8987	19.741	19.851	-7	0.966	5518119	782685	915	2287	855	0.86(0.65-0.89)	
303.9016	20.145	19.851	18	0.986	182783	24887	792	1980	31		
305.8987	20.145	19.851	18	0.986	206436	28728	915	2287	31	0.89(0.65-0.89)	
303.9016	21.263	19.851	85	1.041	728540	100562	792	1980	127		
305.8987	21.263	19.851	85	1.041	846737	114672	915	2287	125	0.86(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.753	19.851	114	1.065	124500	13516	792	1980	17		
305.8987	21.727	19.851	112	1.064	143066	16305	915	2287	18	0.87(0.65-0.89)	
303.9016	23.646	19.851	227	1.157	688217	124373	792	1980	157		a
305.8987	23.646	19.851	227	1.157	806621	142194	915	2287	155	0.85(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.822	21.716	6	1.020	21940	3258	123	307	26		
333.9338	21.813	21.716	6	1.020	25790	3717	90	225	41	0.85(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	21.848	21.733	7	1.001	1577266	212031	125	312	1696		a
321.8936	21.848	21.733	7	1.001	1966722	264529	136	340	1945	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.848	21.799	3	1.021	41686	5842	123	307	47		
A Non-2,3,7,8-sub-TCDD											
319.8965	19.775	20.684	-54	0.906	4533	834	125	312	7		
321.8936	19.775	20.684	-54	0.906	6202	1009	136	340	7	0.73(0.65-0.89)	
319.8965	22.484	20.684	108	1.030	149195	18460	125	312	148		
321.8936	22.493	20.684	108	1.031	185784	23333	136	340	172	0.80(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.305	27.251	3	1.276	32680	4409	25	62	176		
353.8970	27.288	27.251	2	1.276	20797	2953	8	20	369	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.305	27.276	2	1.000	271554	39309	90	225	437		
341.8567	27.305	27.276	2	1.000	169737	25013	68	170	368	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											M
351.9000	28.778	28.757	1	1.345	32926	4811	25	62	192		
353.8970	28.787	28.757	2	1.346	23975	4069	8	20	509	1.37(1.32-1.78)	M
2,3,4,7,8-PeCDF											
339.8597	28.804	28.791	1	1.001	183991	27944	90	225	310		
341.8567	28.795	28.791	0	1.001	119507	18348	68	170	270	1.54(1.32-1.78)	
A F1 PeCDFs											RQa
339.8597	24.084	24.634	-33	0.882	2187	567	1	2	567		a
341.8567	24.101	24.634	-32	0.883	1702	503	3	7	168	1.28(1.32-1.78)	
	Empc Correction				1410	365	3	7	122		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.824	28.173	-141	0.946	118624	19709	90	225	219		
341.8567	25.824	28.173	-141	0.946	72799	11822	68	170	174	1.63(1.32-1.78)	
339.8597	26.725	28.173	-87	0.979	10759	1421	90	225	16		
	Empc Correction				8918	1229	90	225	14		
341.8567	26.716	28.173	-87	0.978	5754	793	68	170	12	1.87(1.32-1.78)	
339.8597	27.162	28.173	-61	0.995	16931	3921	90	225	44		
341.8567	27.162	28.173	-61	0.995	11897	2827	68	170	42	1.42(1.32-1.78)	
339.8597	27.878	28.173	-18	1.021	69827	11350	90	225	126		
341.8567	27.878	28.173	-18	1.021	43457	6331	68	170	93	1.61(1.32-1.78)	
339.8597	29.132	28.173	57	1.067	40769	5736	90	225	64		
341.8567	29.132	28.173	57	1.067	25685	3388	68	170	50	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	30.849	28.173	160	1.130	10333	1386	90	225	15		
	Empc Correction				8841	1184	90	225	13		
341.8567	30.832	28.173	159	1.129	5704	764	68	170	11	1.81(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											M
367.8949	29.578	29.574	0	1.383	19599	2908	3	7	969		M
369.8919	29.587	29.574	1	1.383	11629	1714	5	12	343	1.69(1.32-1.78)	M
1,2,3,7,8-PeCDD											
355.8546	29.637	29.616	1	1.002	17686	2395	16	40	150		
357.8516	29.620	29.616	0	1.001	11906	1796	18	45	100	1.49(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.478	28.478	0	0.963	584	102	16	40			
	Empc Correction				333	134	16	40	0		
357.8516	28.478	28.478	0	0.963	215	87	18	45		2.72(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.927	34.906	1	0.954	16249	3639	10	25	364		
385.8610	34.910	34.906	0	0.954	30807	6436	14	35	460	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.927	34.922	0	1.000	357083	68060	132	330	516		
375.8178	34.927	34.922	0	1.000	272149	53428	100	250	534	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.070	35.066	0	0.958	13944	2915	10	25	292		
385.8610	35.070	35.066	0	0.958	30107	6299	14	35	450	0.46(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.087	35.082	0	1.000	91635	17175	132	330	130		
375.8178	35.087	35.082	0	1.000	69441	12506	100	250	125	1.32(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.895	35.890	0	0.981	15298	3219	10	25	322		
385.8610	35.895	35.890	0	0.981	27860	5529	14	35	395	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.912	35.907	0	1.000	11246	2674	132	330	20		
375.8178	35.912	35.907	0	1.000	8315	1912	100	250	19	1.35(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.804	36.782	1	1.006	14913	3017	10	25	302		
385.8610	36.779	36.782	0	1.005	27449	6645	14	35	475	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.796	36.791	0	1.000	3682	1105	132	330	8		
375.8178	36.796	36.791	0	1.000	2678	847	100	250	8	1.37(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	33.437	35.009	-94	0.957	25363	4296	132	330	33		
375.8178	33.445	35.009	-94	0.958	17740	3137	100	250	31	1.43(1.05-1.43)	
373.8208	34.304	35.009	-42	0.982	10279	1919	132	330	15		
375.8178	34.287	35.009	-43	0.982	7714	1325	100	250	13	1.33(1.05-1.43)	
373.8208	35.786	35.009	47	1.025	6086	1311	132	330	10		
375.8178	35.786	35.009	47	1.025	5077	919	100	250	9	1.20(1.05-1.43)	
373.8208	36.897	35.009	113	1.056	21987	4898	132	330	37		
375.8178	36.897	35.009	113	1.056	16496	3632	100	250	36	1.33(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.594	36.581	1		56286	11877	11	27	1080		
403.8529	36.594	36.581	1		47200	11662	17	42	686	1.19(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											RQ
401.8559	36.097	36.092	0	0.986	20928	5099	11	27	464		
	Empc Correction				17557	4849	11	27	441		
403.8529	36.106	36.092	1	0.987	14159	3911	17	42	230	1.48(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.109						6	15			
391.8127	36.109						9	22			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.232	36.210	1	0.990	21756	4119	11	27	374		
403.8529	36.224	36.210	1	0.990	18737	4134	17	42	243	1.16(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQ
389.8158	36.249	36.227	1	1.000	539	146	6	15	24		
391.8127	36.224	36.227	0	1.000	667	179	9	22	20	0.81(1.05-1.43)	
	Empc Correction				434	117	9	22	13		
1,2,3,7,8,9-HxCDD											M
389.8158	36.586	36.597	-1	1.014	436	98	6	15	16		M
391.8127	36.611	36.597	1	1.014	351	111	9	22	12	1.24(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQM
389.8158	35.348	35.375	-2	0.976	1524	281	6	15	47		M
	Empc Correction				1233	241	6	15	40		
391.8127	35.348	35.375	-2	0.976	995	195	9	22	22	1.53(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											Ma
417.8250	38.618	38.596	1	1.055	9977	2360	28	70	84		M
419.8220	38.609	38.596	1	1.055	24989	5899	10	25	590	0.40(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.626	38.618	0	1.000	90191	22469	40	100	562		
409.7788	38.618	38.618	0	1.000	85239	21444	28	70	766	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.855	39.850	0	1.089	9947	2446	28	70	87		
419.8220	39.864	39.850	1	1.089	24312	6791	10	25	679	0.41(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872	39.872	0	1.000	22094	6143	40	100	154		
409.7788	39.872	39.872	0	1.000	21444	5721	28	70	204	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.988	39.245	-15	1.010	18131	4808	40	100	120		
409.7788	38.980	39.245	-16	1.009	16749	4285	28	70	153	1.08(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.552	39.547	0	1.081	14111	4349	7	17	621		
437.8140	39.544	39.547	0	1.081	13851	3377	4	10	844	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.560	39.561	0	1.000	5344	1462	9	22	162		
425.7737	39.569	39.561	0	1.000	5624	1604	7	17	229	0.95(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.929	39.241	-19	0.984	7275	1988	9	22	221		
425.7737	38.929	39.241	-19	0.984	6582	1716	7	17	245	1.11(0.88-1.20)	
13C-OCDD											
469.7780	42.057	42.036	1	1.149	27083	6388	9	22	710		
471.7750	42.049	42.036	1	1.149	30522	7944	10	25	794	0.89(0.76-1.02)	
OCDF											
441.7428	42.150	42.137	1	1.002	28543	6177	13	32	475		
443.7399	42.150	42.137	1	1.002	29448	6451	20	50	323	0.97(0.76-1.02)	
OCDD											
457.7377	42.066	42.053	1	1.000	61976	14096	13	32	1084		
459.7348	42.057	42.053	0	1.000	74543	16836	16	40	1052	0.83(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d
Lims ID: 320-76888-A-3-A
Client ID: 11215702-072621-BN-SJSB094 (4-6)
Inject. Date: 20-Aug-2021 09:32:00 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 25

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	62991	8677

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		10.000	62991	8677

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.481	54844	9798	83586	12516	20.3	0.66	
17.945	292386	46082	344059	55880	93.5	0.85	
18.426	425798	48359	489156	55385	134.5	0.87	
18.873	330570	43661	387749	51344	105.6	0.85	
19.243	467960	66726	549848	81268	149.6	0.85	
19.741	4741147	663046	5518119	782685	1507.8	0.86	
20.145	182783	24887	206436	28728	57.2	0.89	
21.263	728540	100562	846737	114672	231.5	0.86	
21.753	124500	13516	143066	16305	39.3	0.87	
23.646	688217	124373	806621	142194	219.7	0.85	a
Signal Totals:	8036745	1141010	9375377	1340977			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	17412122	2481987				0.86	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2559.0 = (17412122 * 10.000) / (62991 * 1.080)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 25-Aug-2021 15:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Lims ID:	320-76888-A-3-A		
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Inject. Date:	20-Aug-2021 09:32:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	25

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	47730	6975

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		10.000	47730	6975

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.775	4533	834	6202	1009	2.09	0.73	
22.484	149195	18460	185784	23333	65.3	0.80	
Signal Totals:							
	153728	19294	191986	24342			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	345714	43636				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 67.356 = (345714 * 10.000) / (47730 * 1.075)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d
Lims ID: 320-76888-A-3-A
Client ID: 11215702-072621-BN-SJSB094 (4-6)
Inject. Date: 20-Aug-2021 09:32:00 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 25

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	53477	7362
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	56901	8880

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	55189	8121

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.084	2187	567	1702	503	0.6834	1.28	RQa
24.084	2187	567	1410	365	0.6321		Empc Correction
Signal Totals:							
	2187	567	1410	365			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3889	1070				1.28	RQa
	3597	932					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6834 = (3889 * 10.000) / (55189 * 1.031)
Empc Amount: 0.6321 = (3597 * 10.000) / (55189 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 25-Aug-2021 15:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Lims ID:	320-76888-A-3-A		
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Inject. Date:	20-Aug-2021 09:32:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	25

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	53477	7362
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	56901	8880

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	55189	8121

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.824	118624	19709	72799	11822	33.6	1.63	
26.725	10759	1421	5754	793	2.90	1.87	RQ
26.725	8918	1229	5754	793	2.58		Empc Correction
27.162	16931	3921	11897	2827	5.07	1.42	
27.878	69827	11350	43457	6331	19.9	1.61	
29.132	40769	5736	25685	3388	11.7	1.59	
30.849	10333	1386	5704	764	2.82	1.81	RQ
30.849	8841	1184	5704	764	2.56		Empc Correction
Signal Totals:							
	263910	43129	165296	25925			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	432539	69448				1.62	RQ
	429206	69054					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 76.013 = (432539 * 10.000) / (55189 * 1.031)

Empc Amount: 75.427 = (429206 * 10.000) / (55189 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 25-Aug-2021 15:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Lims ID:	320-76888-A-3-A		
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Inject. Date:	20-Aug-2021 09:32:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	25

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	31228	4622

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		10.000	31228	4622

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
29.881	584	102	215	87	0.2445	2.72	RQ
29.881	333	134	215	87			Empc Correction

Compound is Marked ND

Report Date: 25-Aug-2021 15:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Lims ID:	320-76888-A-3-A		
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Inject. Date:	20-Aug-2021 09:32:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	25

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	47056	10075
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	44051	9214
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	43158	8748
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	42362	9662

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		10.000	44156	9424

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.437	25363	4296	17740	3137	8.10	1.43	
34.304	10279	1919	7714	1325	3.38	1.33	
35.786	6086	1311	5077	919	2.10	1.20	
36.897	21987	4898	16496	3632	7.23	1.33	
Signal Totals:							
	63715	12424	47027	9013			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	110742	21437				1.35	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 20.814 = (110742 * 10.000) / (44156 * 1.205)

Report Date: 25-Aug-2021 15:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Lims ID:	320-76888-A-3-A		
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Inject. Date:	20-Aug-2021 09:32:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	25

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	35087	9010
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	40493	8253
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		10.000	37790	8631

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.348	1524	281	995	195	0.6321	1.53	RQM
35.348	1233	241	995	195	0.5591		Empc Correction
Signal Totals:							
	1233	241	995	195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2519	476				1.53	RQM
	2228	436					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.6321 = (2519 * 10.000) / (37790 * 1.055)

Empc Amount: 0.5591 = (2228 * 10.000) / (37790 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

Report Date: 25-Aug-2021 15:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Lims ID:	320-76888-A-3-A		
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Inject. Date:	20-Aug-2021 09:32:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	25

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	34966	8259
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	34259	9237

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		10.000	34612	8748

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.988	18131	4808	16749	4285	7.33	1.08	
Signal Totals:							
	18131	4808	16749	4285			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	34880	9093				1.08	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 7.326 = (34880 * 10.000) / (34612 * 1.376)

Report Date: 25-Aug-2021 15:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Lims ID:	320-76888-A-3-A		
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Inject. Date:	20-Aug-2021 09:32:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	25

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	27962	7726

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		10.000	27962	7726

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.929	7275	1988	6582	1716	4.72	1.11	
Signal Totals:							
	7275	1988	6582	1716			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13857	3704				1.11	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.718 = (13857 * 10.000) / (27962 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d				
Injection Date:	20-Aug-2021 09:32:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 20.37

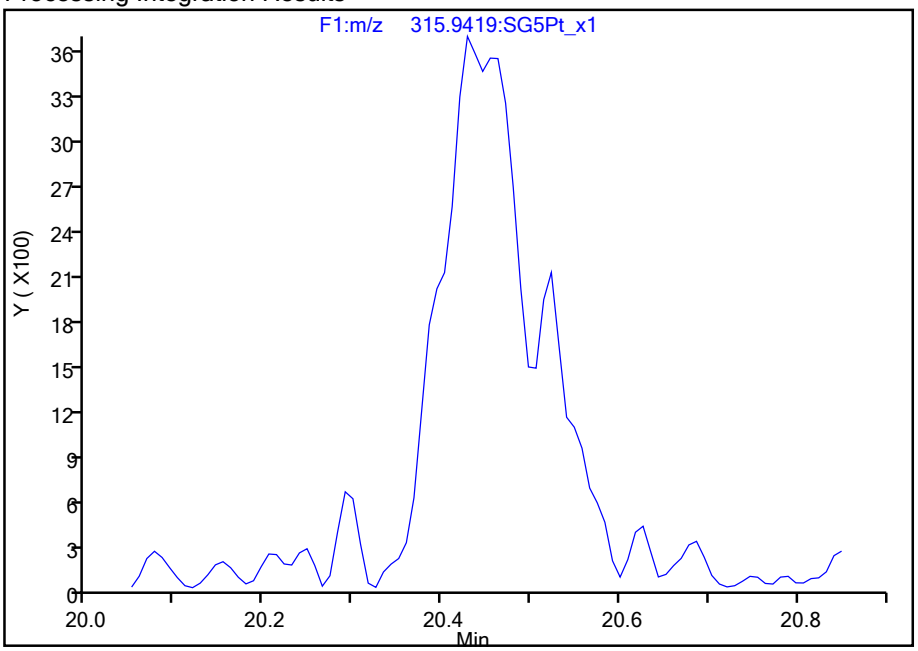

Manual Integration Results

RT: 20.43
Area: 27607
Amount: 3.787432
Amount Units: pg/ul

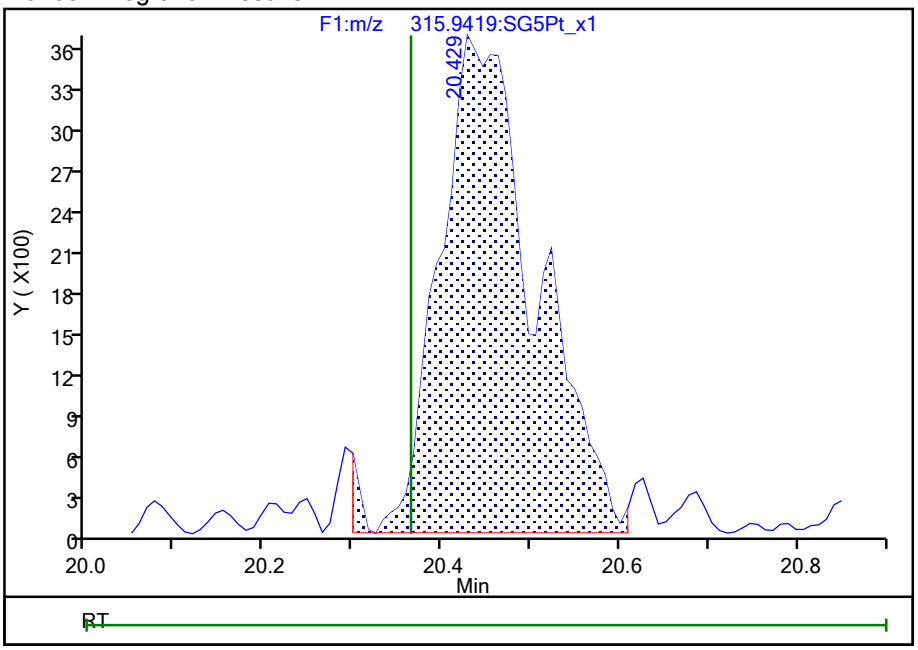

Reviewer: stephensk, 21-Aug-2021 17:03:40

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d				
Injection Date:	20-Aug-2021 09:32:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.73

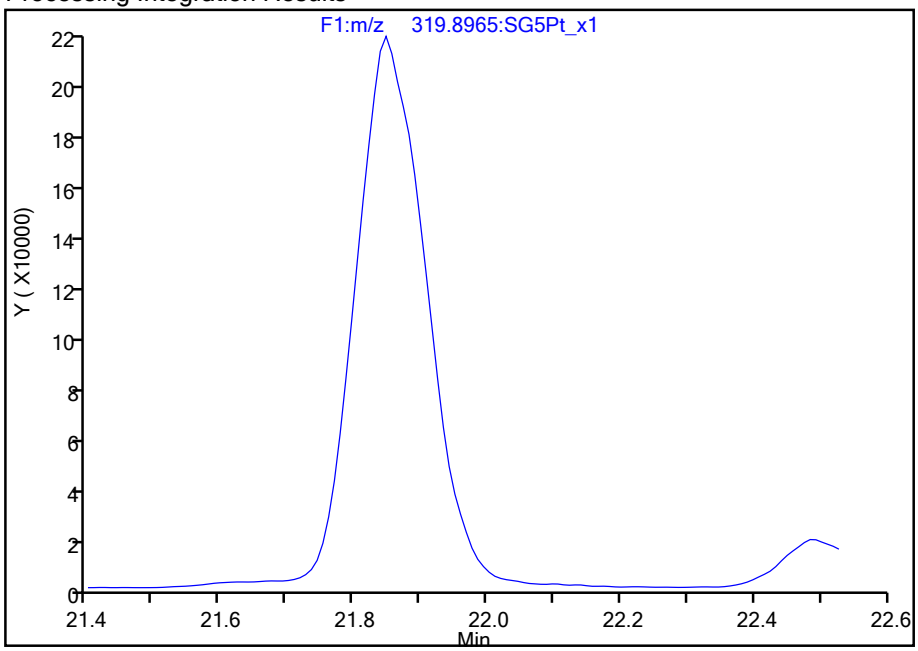

Manual Integration Results

RT: 21.85
Area: 1577266
Amount: 690.4822
Amount Units: pg/ul

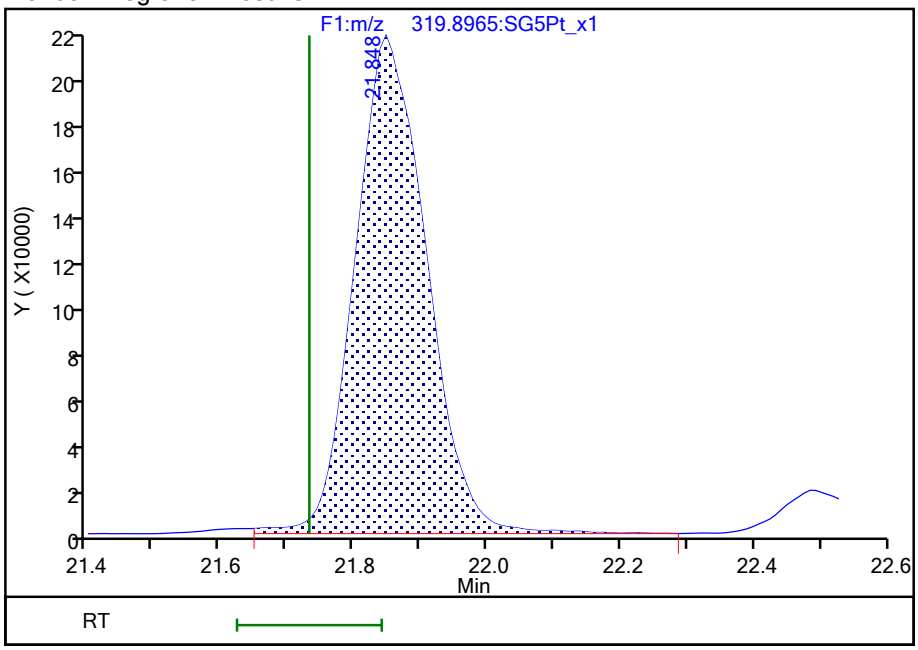

Reviewer: dadunj, 23-Aug-2021 10:03:27
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d				
Injection Date:	20-Aug-2021 09:32:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 2

Processing Integration Results

RT: 28.79
Area: 21515
Amount: 3.914838
Amount Units: pg/ul

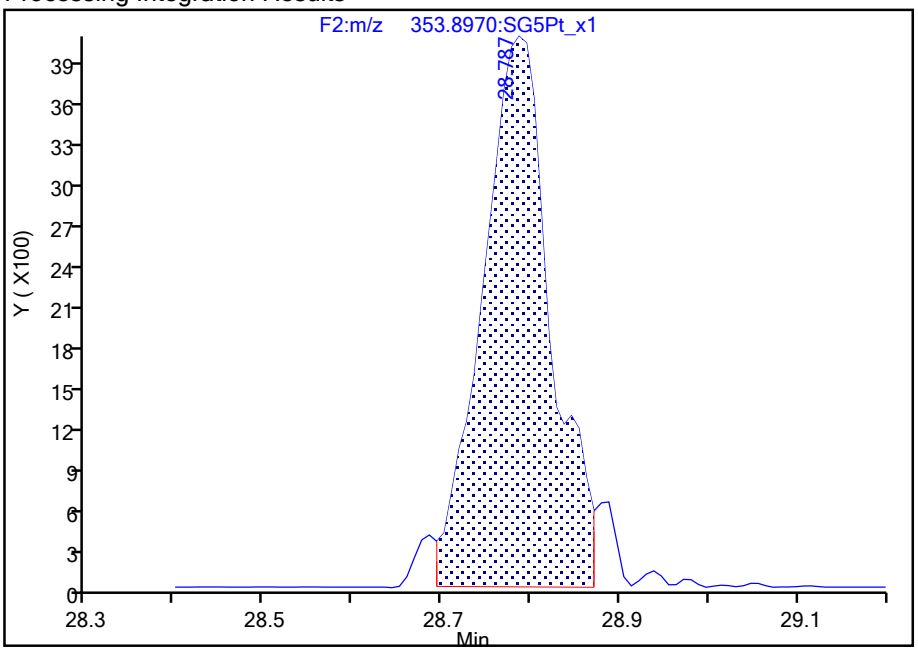

Manual Integration Results

RT: 28.79
Area: 23975
Amount: 4.091736
Amount Units: pg/ul

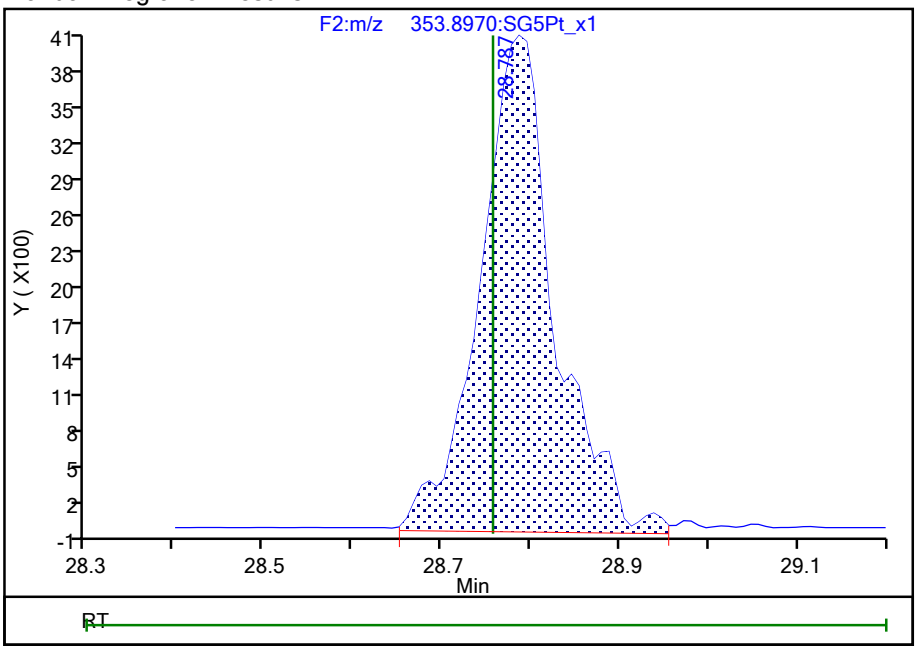

Reviewer: dadunj, 23-Aug-2021 10:03:59

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d				
Injection Date:	20-Aug-2021 09:32:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 2

Processing Integration Results

RT: 29.59
Area: 9420
Amount: 2.797432
Amount Units: pg/ul

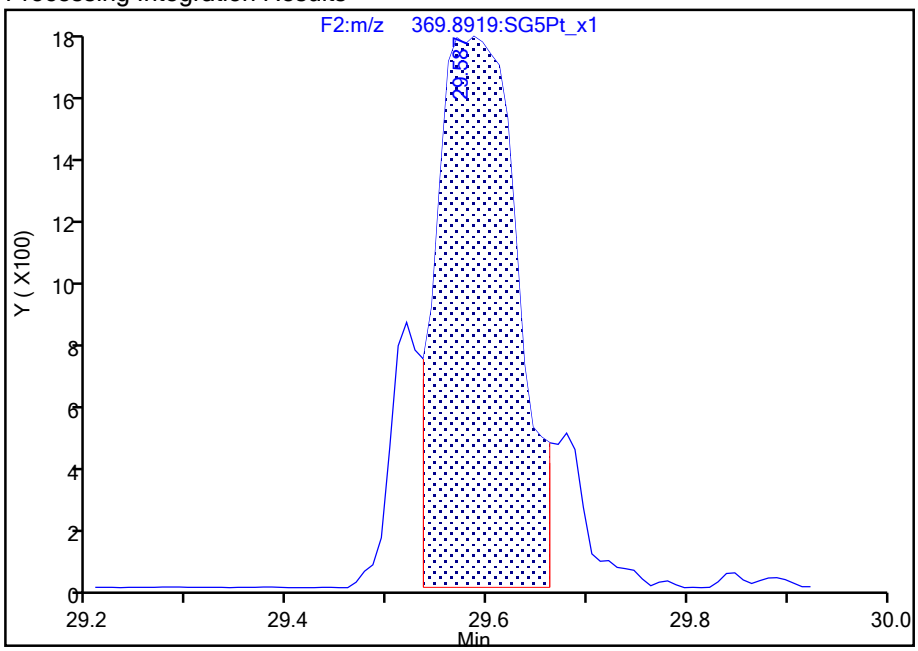

Manual Integration Results

RT: 29.59
Area: 11629
Amount: 3.527059
Amount Units: pg/ul

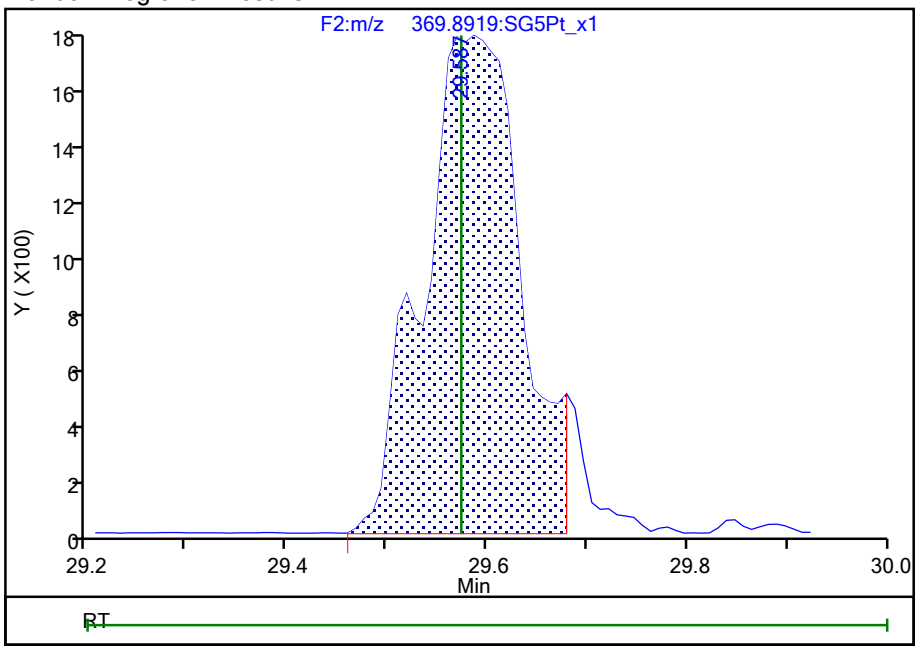

Reviewer: dadunj, 23-Aug-2021 10:04:25

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d				
Injection Date:	20-Aug-2021 09:32:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 1

Processing Integration Results

RT: 29.58
Area: 15348
Amount: 2.797432
Amount Units: pg/ul

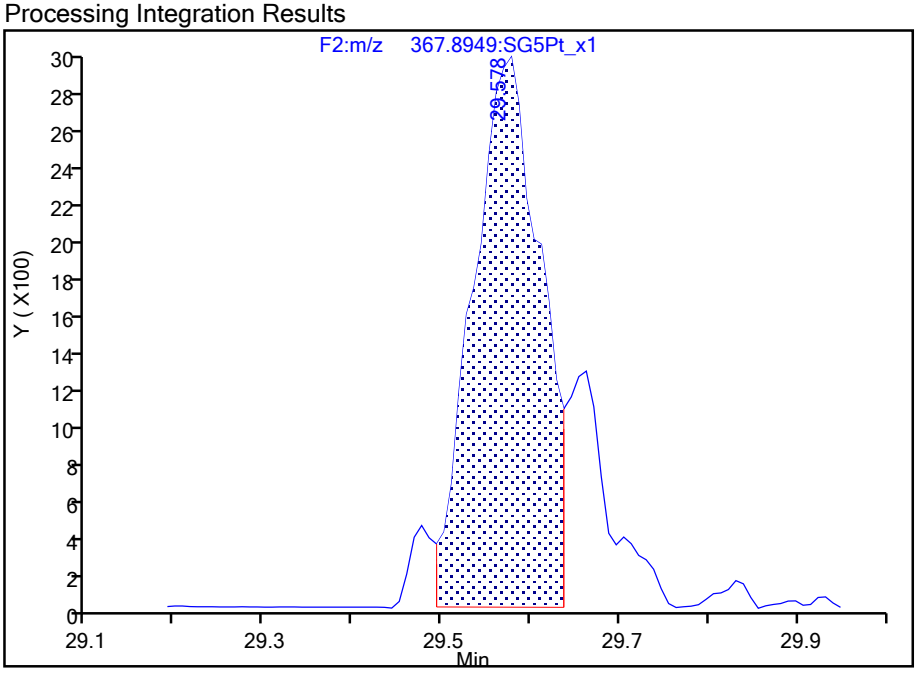

Manual Integration Results

RT: 29.58
Area: 19599
Amount: 3.527059
Amount Units: pg/ul

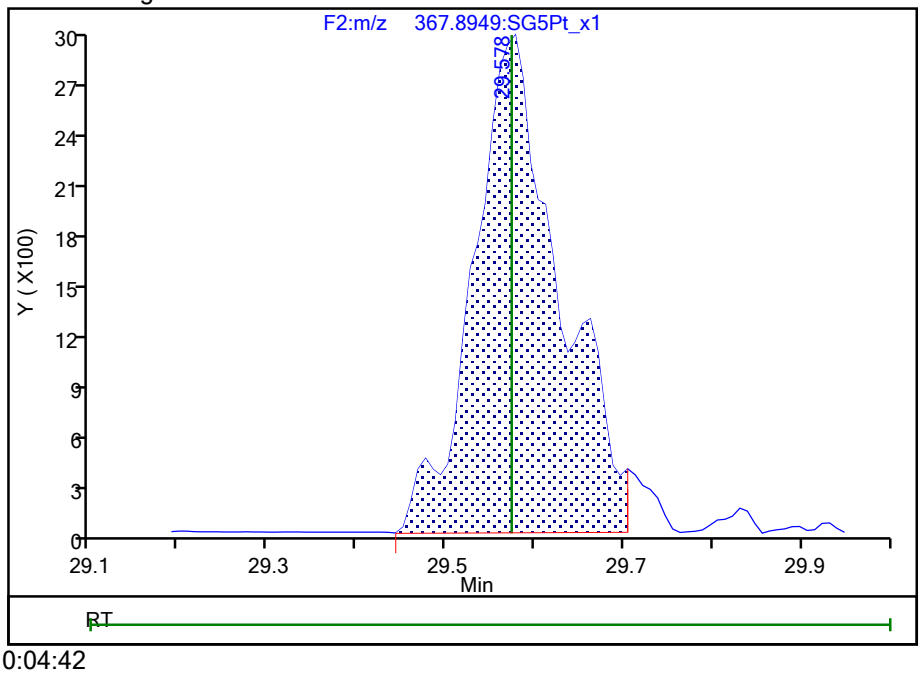

Reviewer: dadunj, 23-Aug-2021 10:04:42

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d				
Injection Date:	20-Aug-2021 09:32:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 36.61
Area: 443
Amount: 0.237090
Amount Units: pg/ul

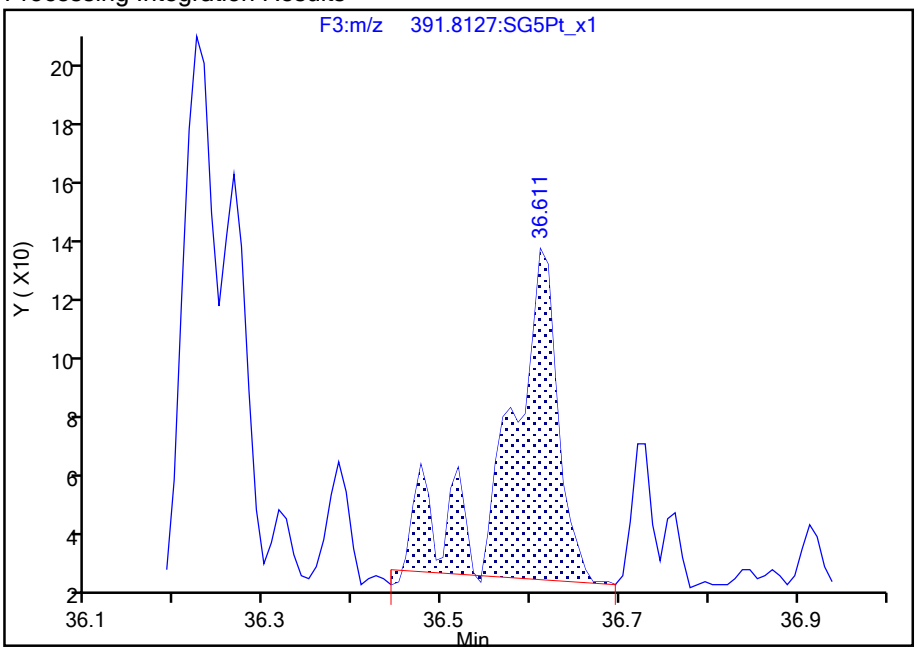

Manual Integration Results

RT: 36.61
Area: 351
Amount: 0.187716
Amount Units: pg/ul

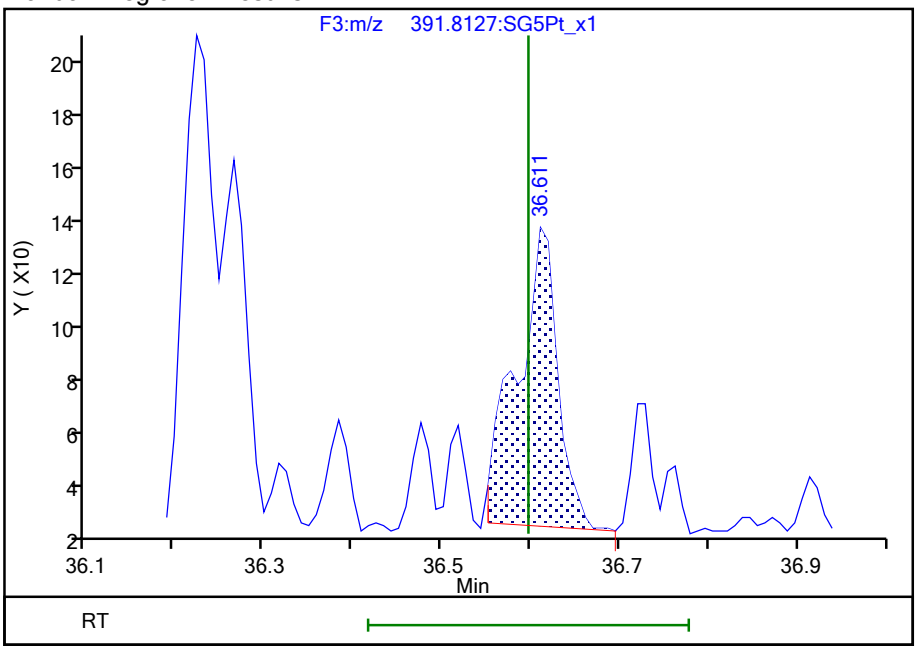

Reviewer: dadunj, 23-Aug-2021 10:05:25

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785360

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d				
Injection Date:	20-Aug-2021 09:32:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 36.59
Area: 551
Amount: 0.237090
Amount Units: pg/ul

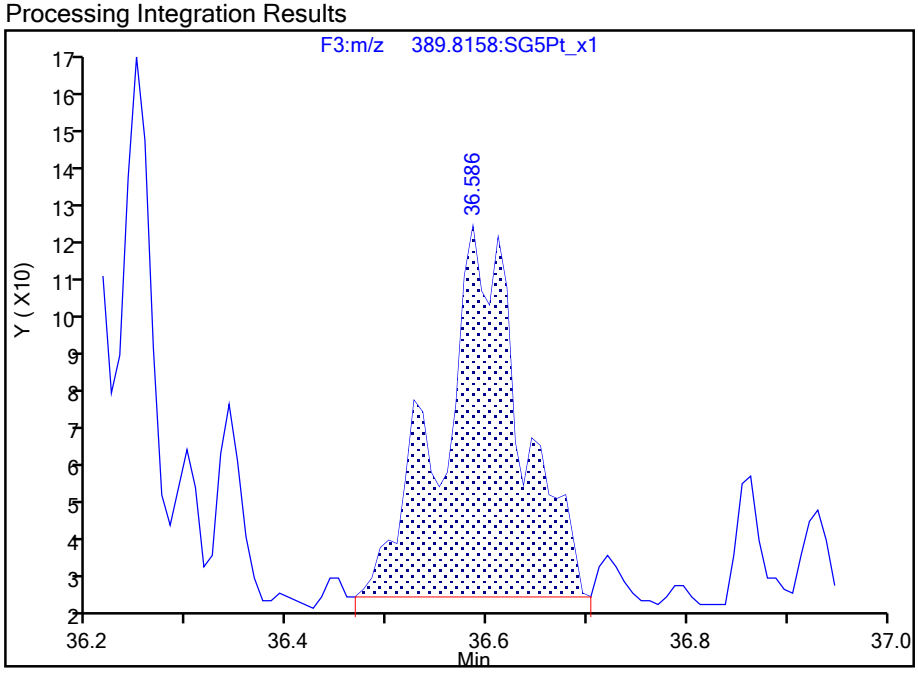

Manual Integration Results

RT: 36.59
Area: 436
Amount: 0.187716
Amount Units: pg/ul

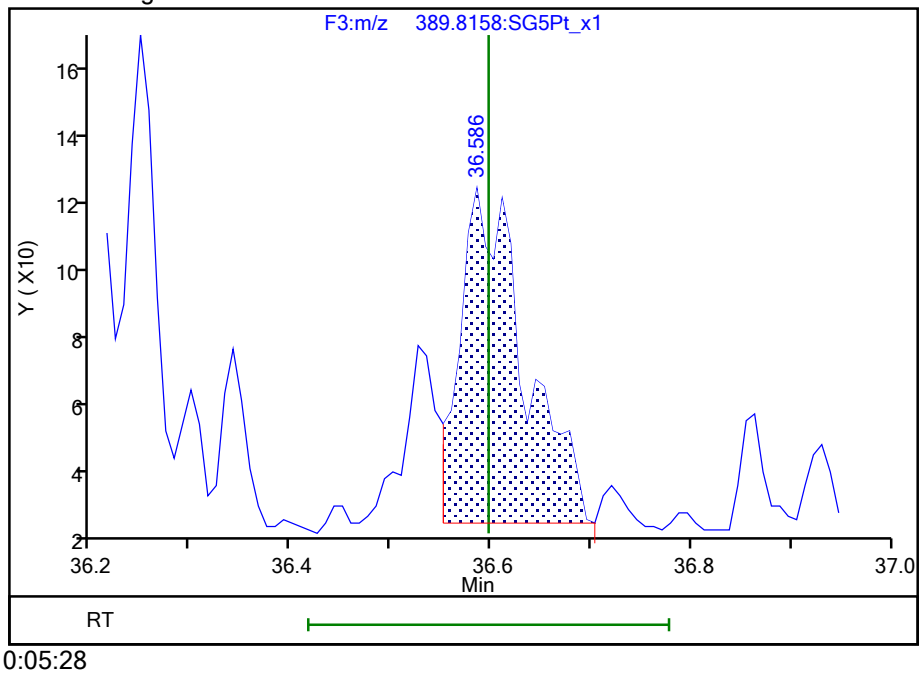

Reviewer: dadunj, 23-Aug-2021 10:05:28
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785361

Report Date: 25-Aug-2021 15:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d				
Injection Date:	20-Aug-2021 09:32:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.18- 36.57)

Signal: 1

Processing Integration Results

RT = 35.348 Area = 1773

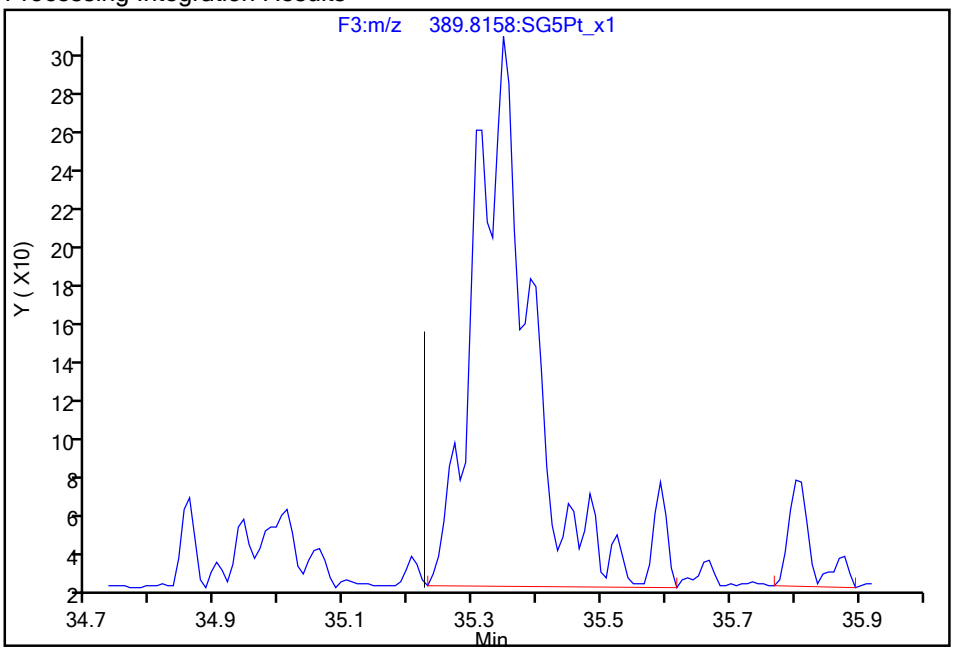

Manual Integration Results

RT = 35.348 Area = 1524 M

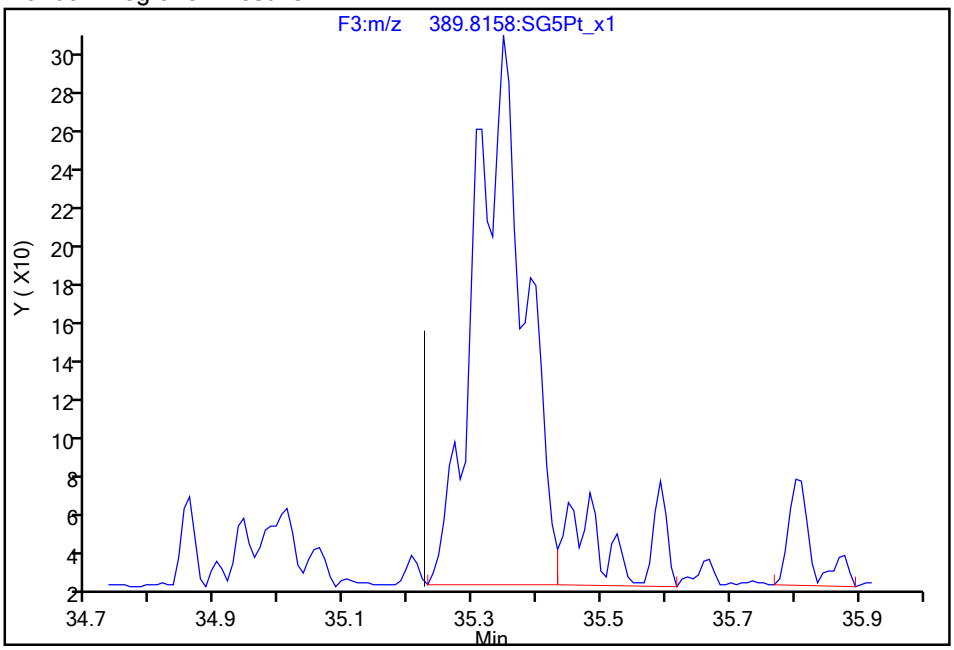

Reviewer: dadunj, 23-Aug-2021 10:05:32

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785362

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d				
Injection Date:	20-Aug-2021 09:32:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,6,7,8-HpCDF, CAS: 109719-84-8

Signal: 2

Processing Integration Results

RT: 38.61
Area: 24989
Amount: 4.554872
Amount Units: pg/ul

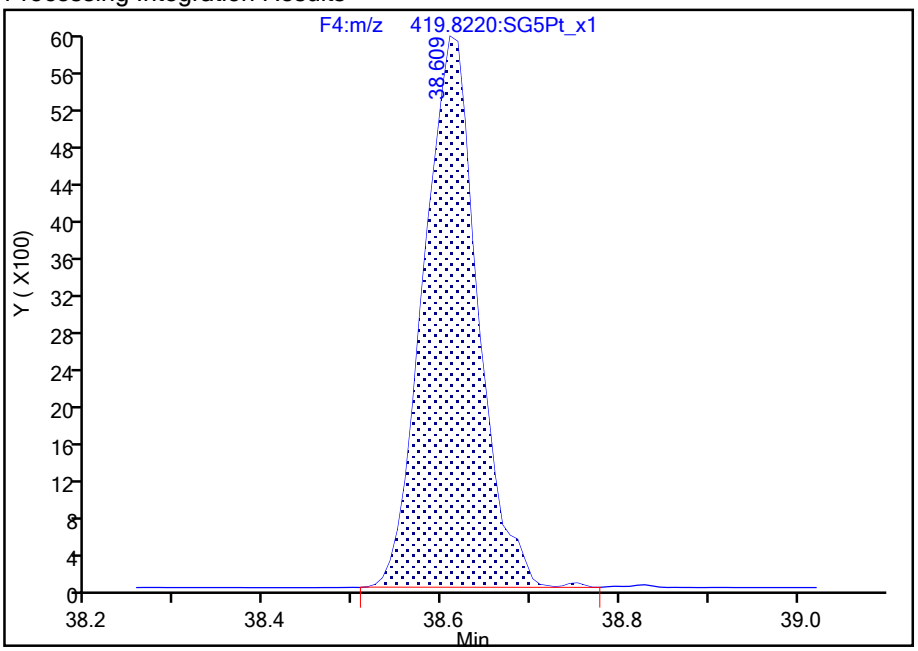

Manual Integration Results

RT: 38.61
Area: 24989
Amount: 4.591111
Amount Units: pg/ul

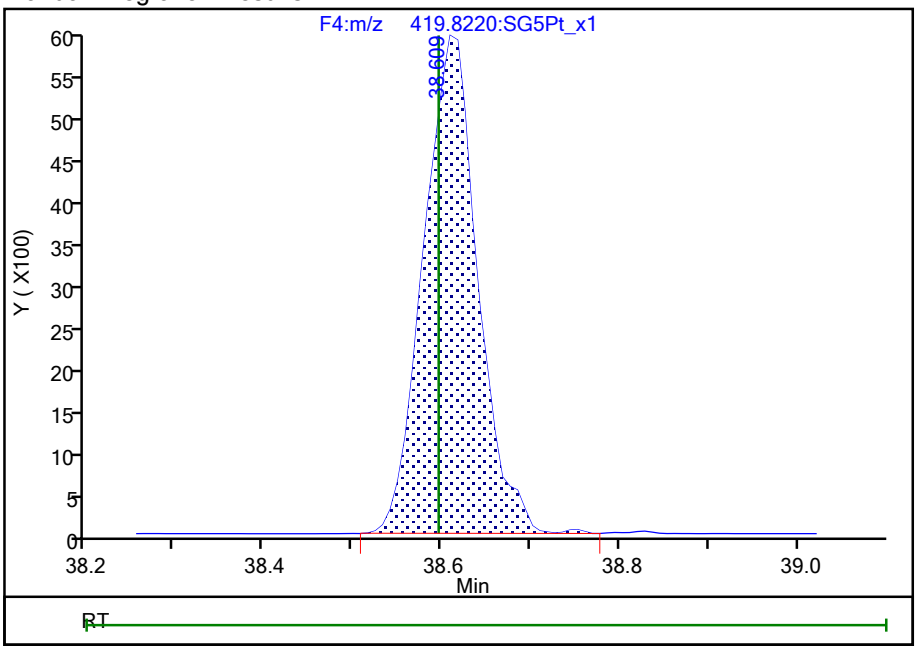

Reviewer: dadunj, 23-Aug-2021 10:06:43

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d				
Injection Date:	20-Aug-2021 09:32:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,6,7,8-HpCDF, CAS: 109719-84-8

Signal: 3

Processing Integration Results

RT: 38.62
Area: 34690
Amount: 4.554872
Amount Units: pg/ul

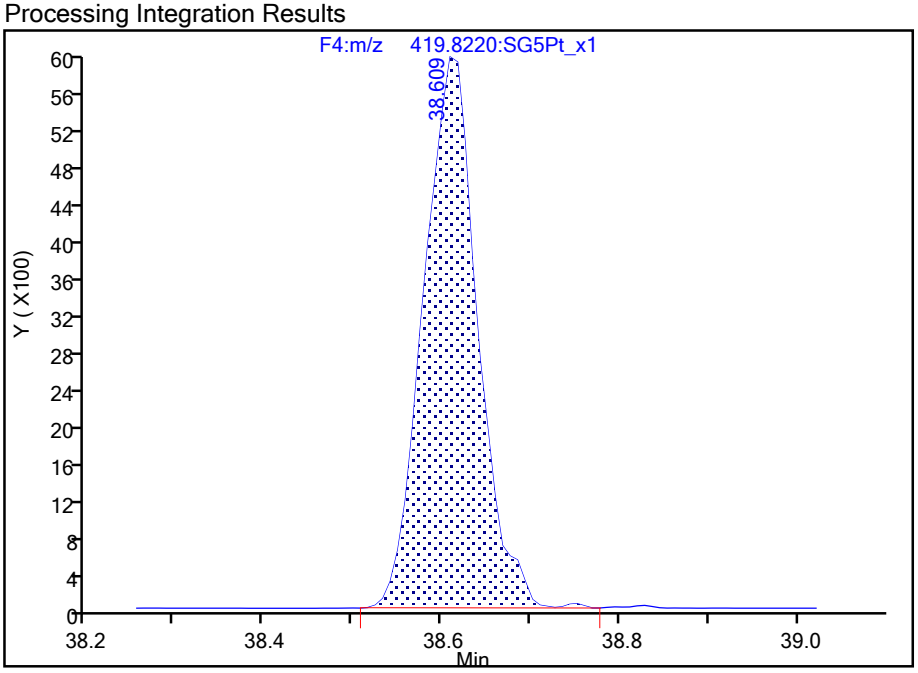

Manual Integration Results

RT: 38.62
Area: 34966
Amount: 4.591111
Amount Units: pg/ul
Reviewer: dadunj, 23-Aug-2021 10:06:43
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d				
Injection Date:	20-Aug-2021 09:32:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	25
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,6,7,8-HpCDF, CAS: 109719-84-8

Signal: 1

Processing Integration Results

RT: 38.62
Area: 9701
Amount: 4.554872
Amount Units: pg/ul

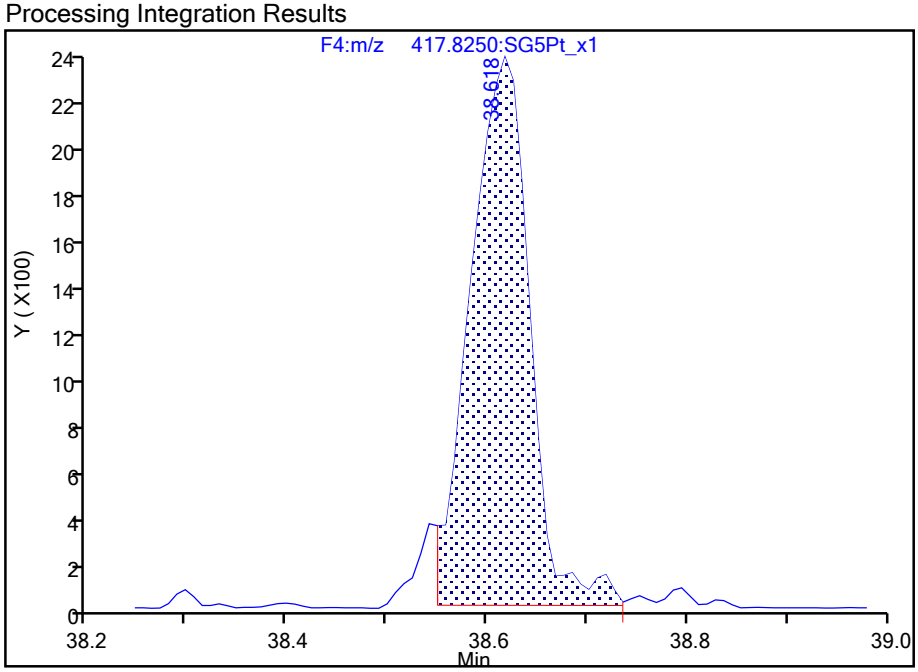

Manual Integration Results

RT: 38.62
Area: 9977
Amount: 4.591111
Amount Units: pg/ul

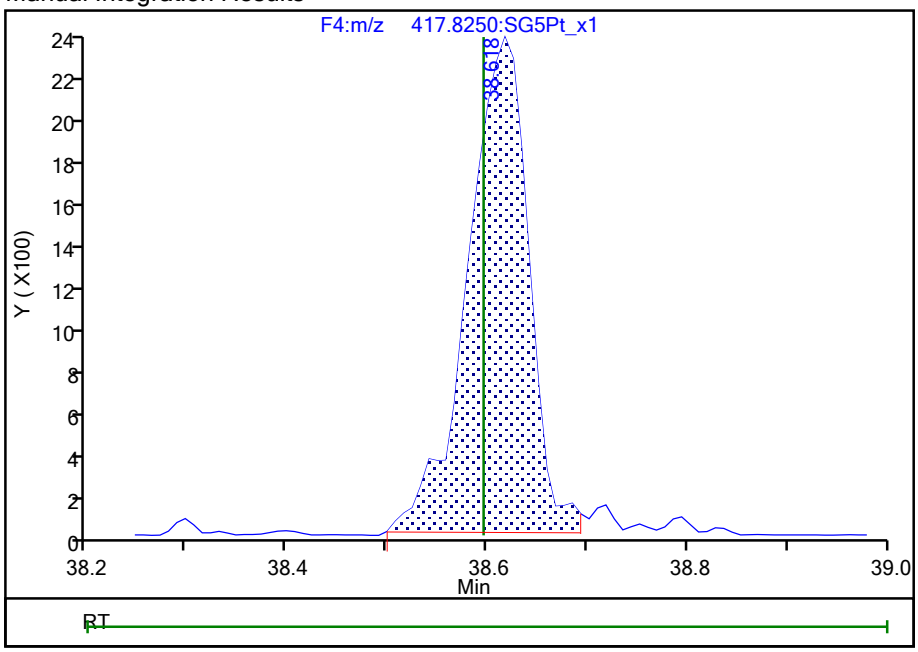

Reviewer: dadunj, 23-Aug-2021 10:06:44

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

785365

Report Date: 25-Aug-2021 15:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

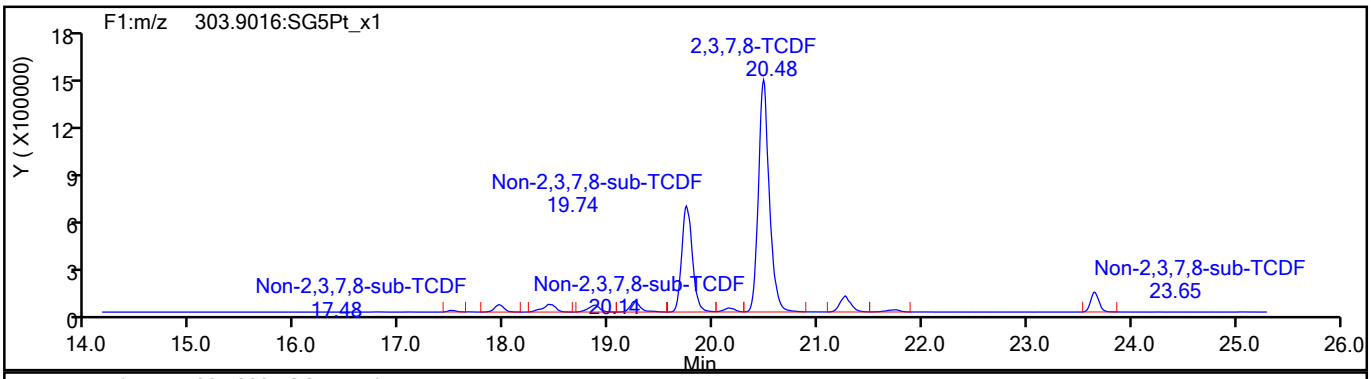

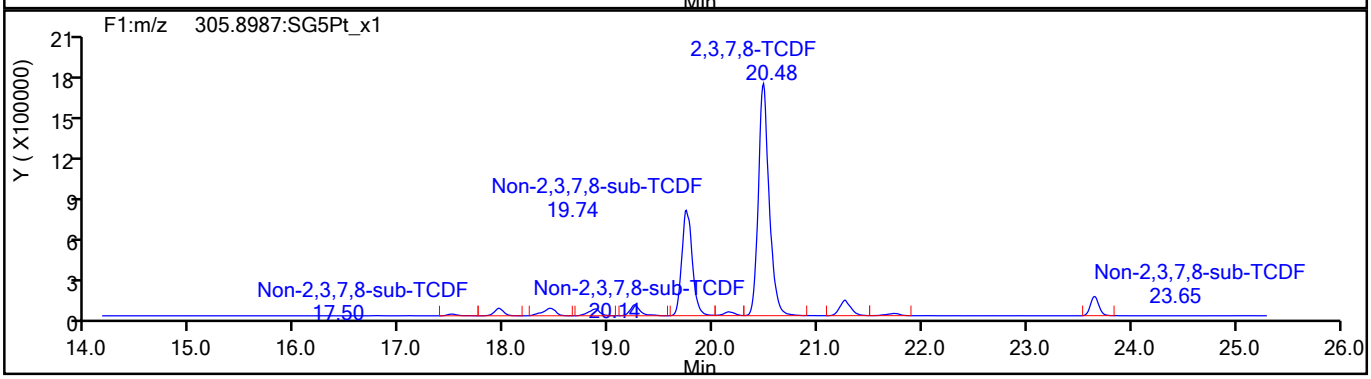

TCDF Standards

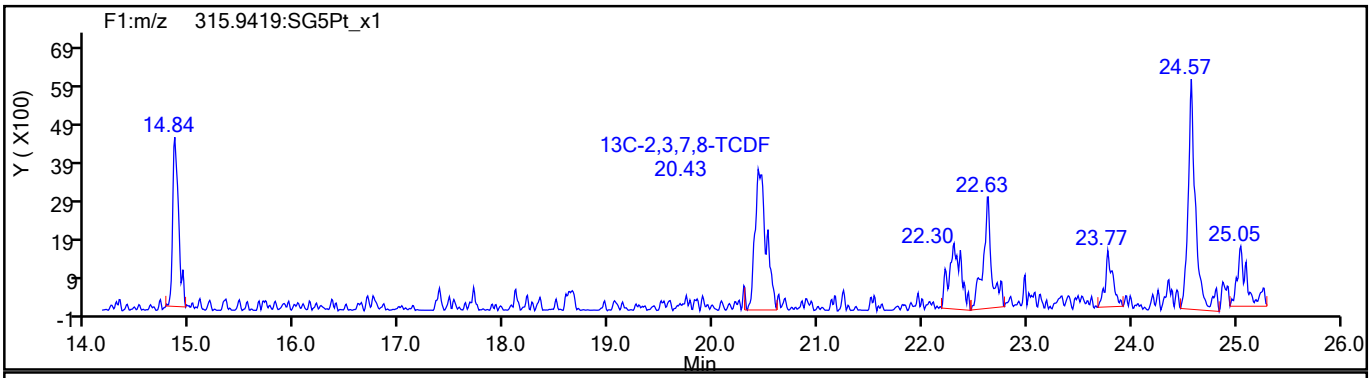

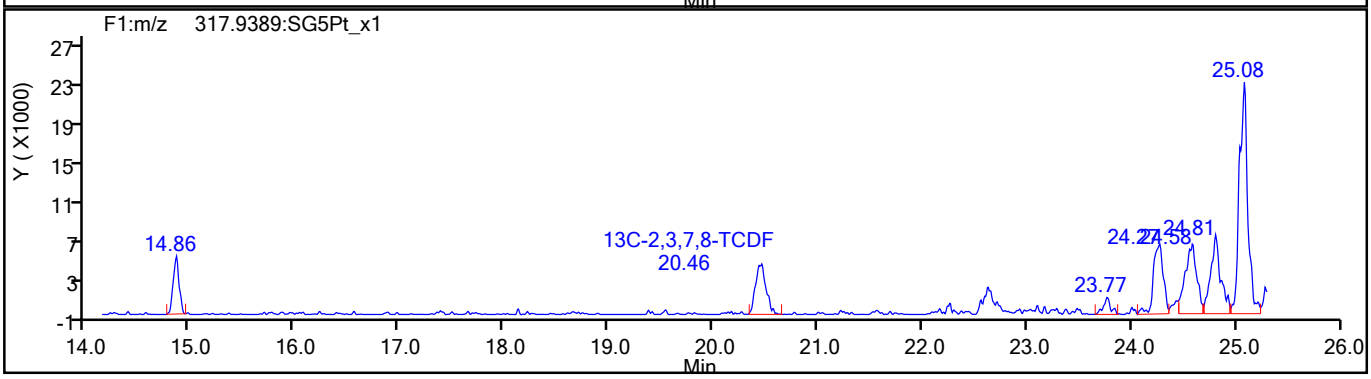

785366

Report Date: 25-Aug-2021 15:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

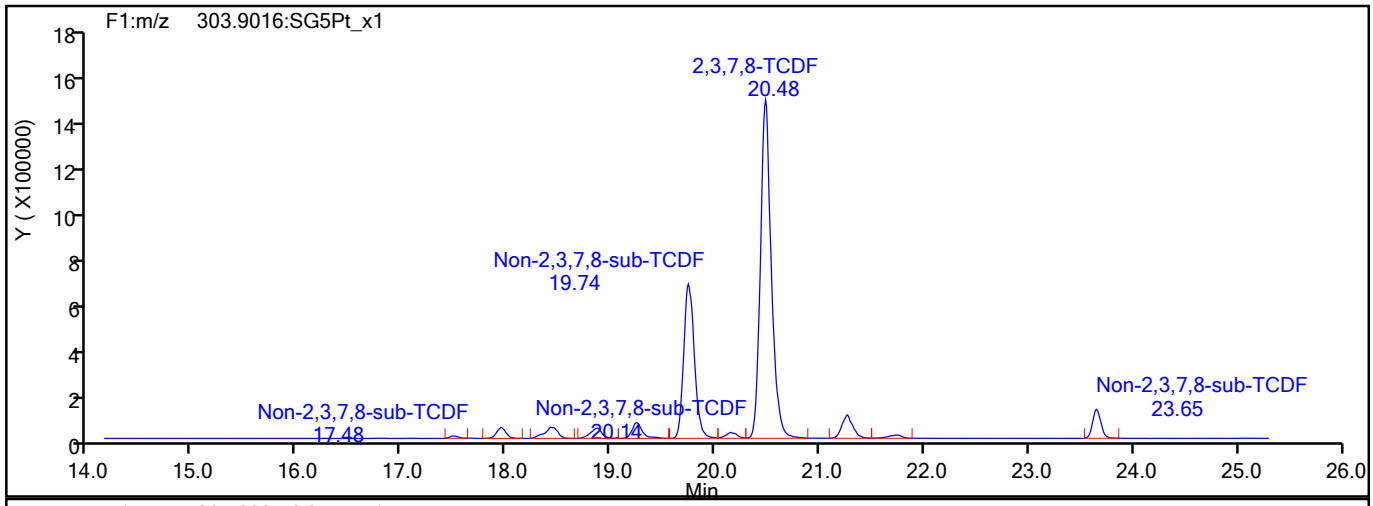

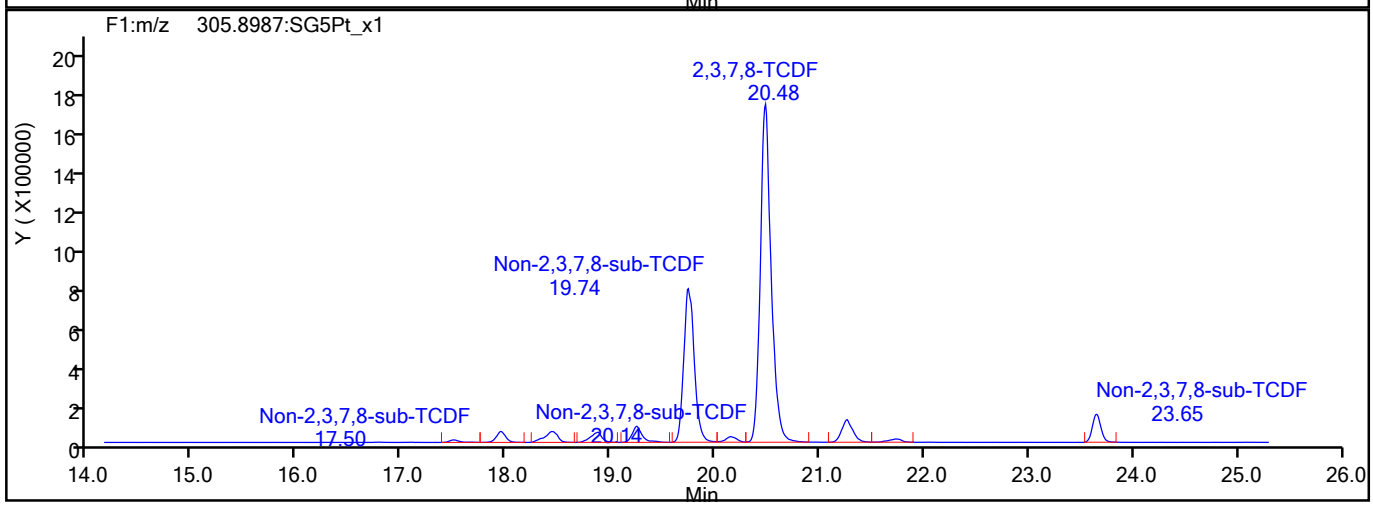

TCDF Interference Mass

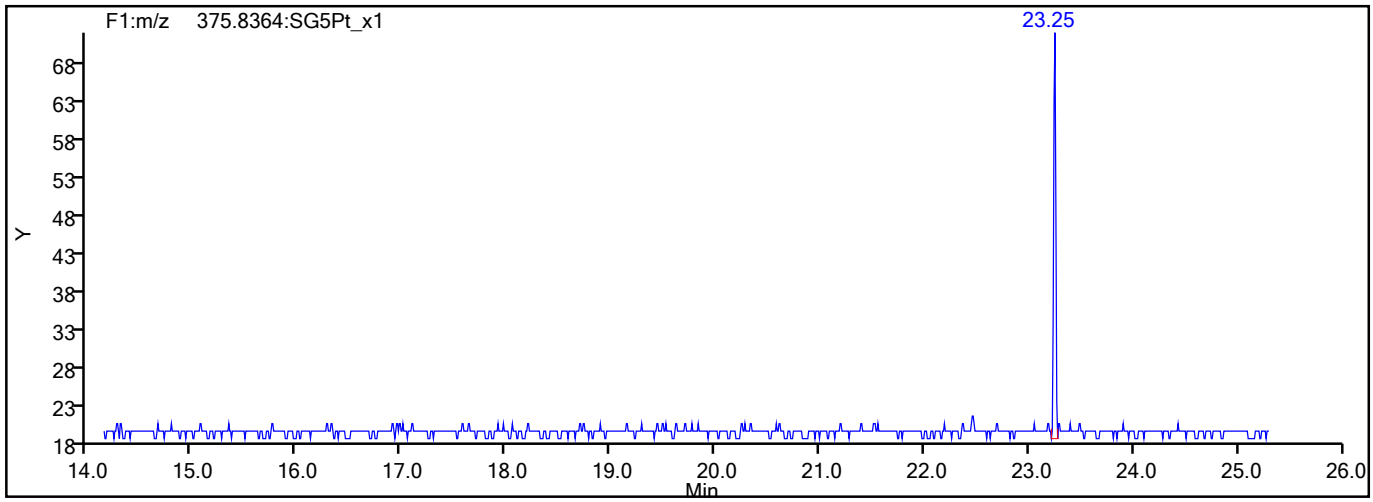

785367

Report Date: 25-Aug-2021 15:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

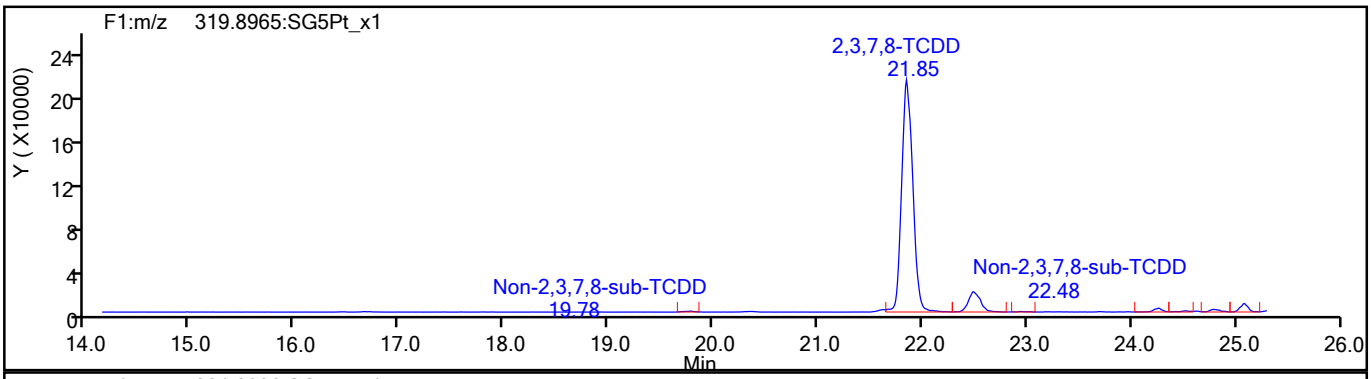

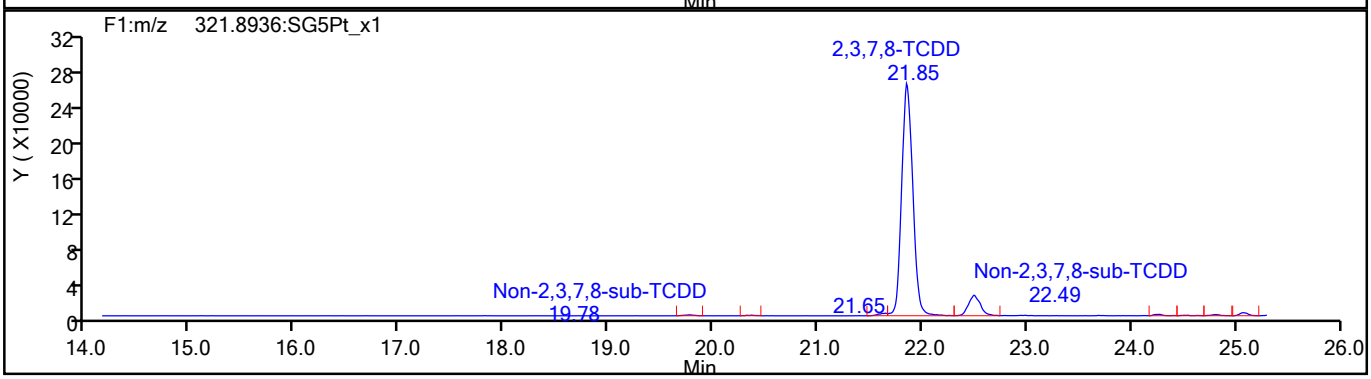

TCDD Standards

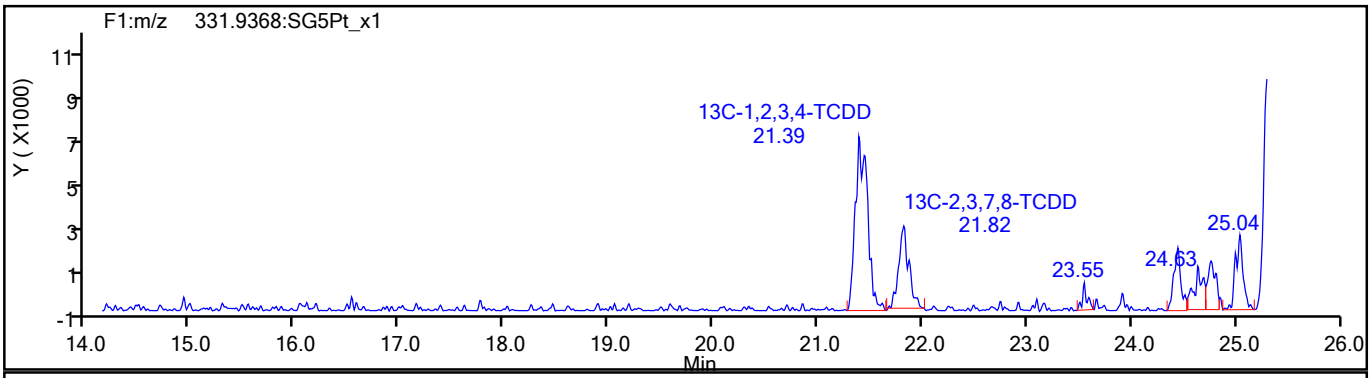

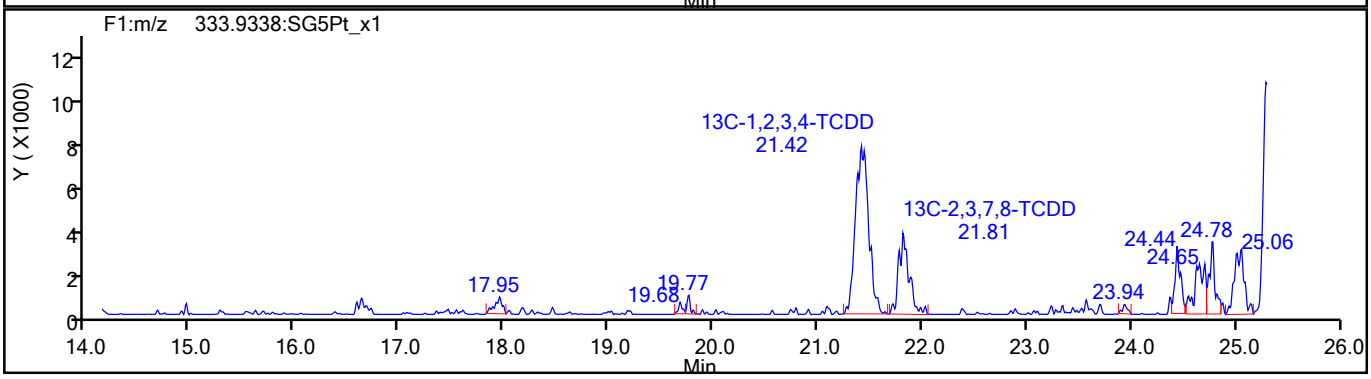

785368

Report Date: 25-Aug-2021 15:13:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

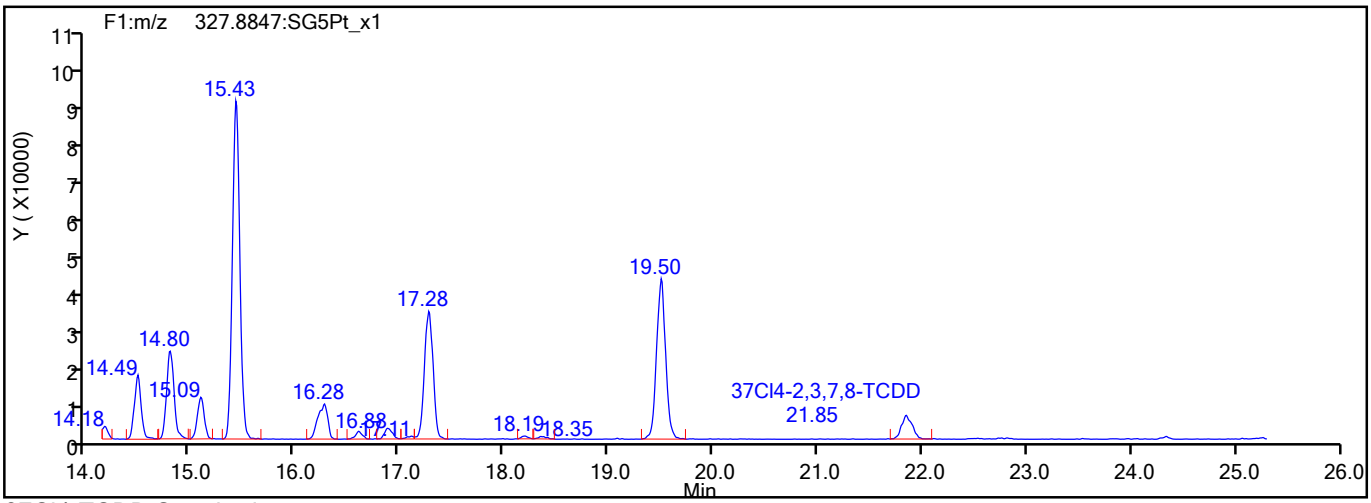

37Cl4-TCDD Standards

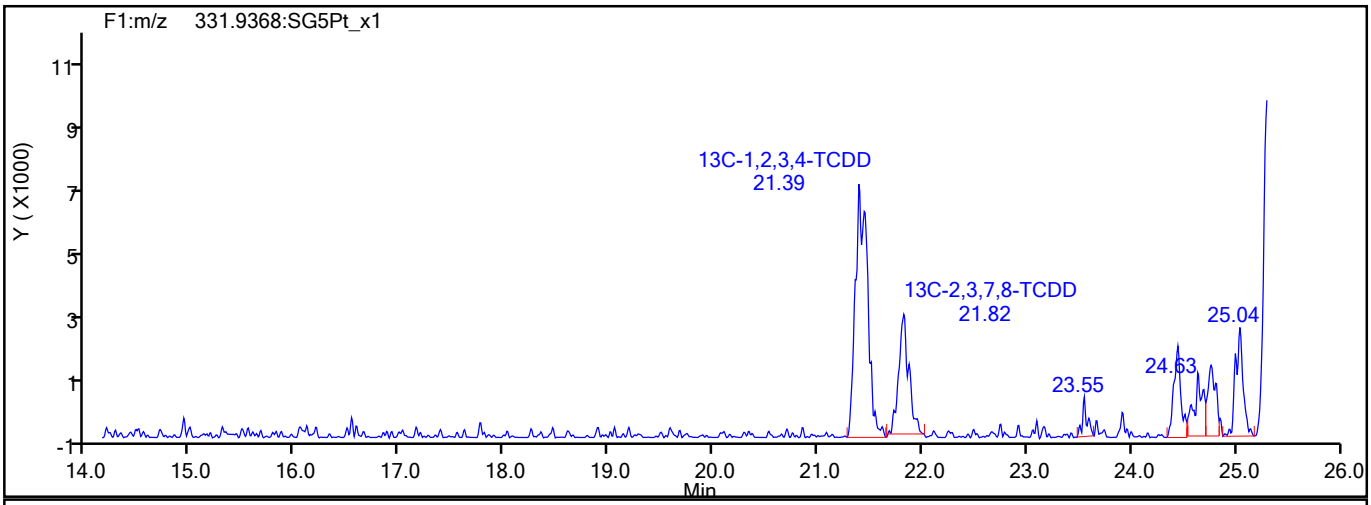

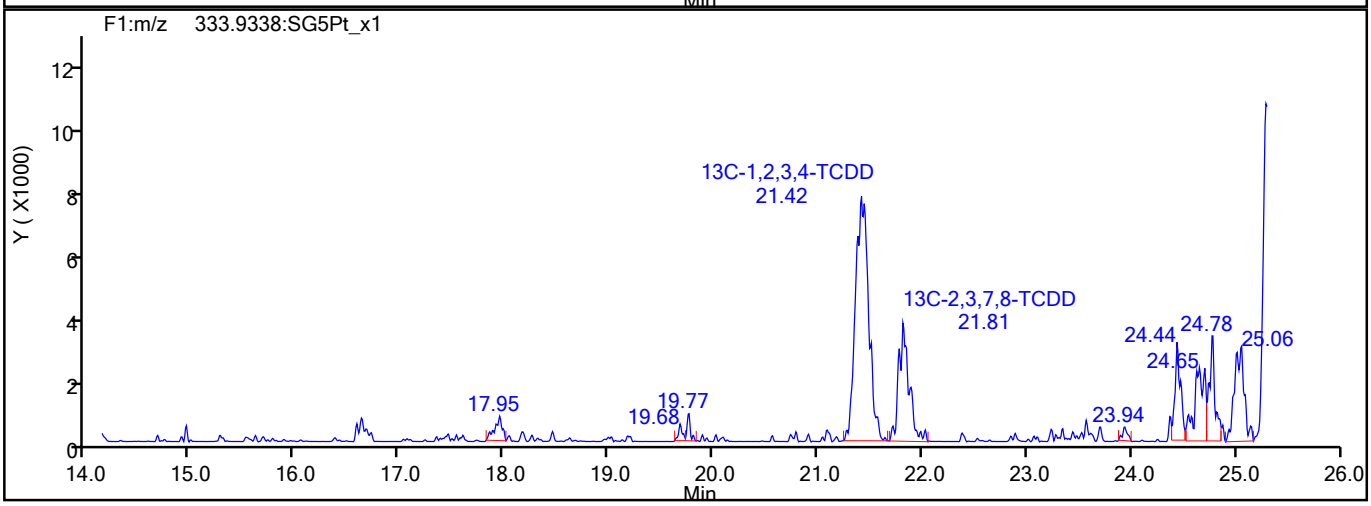

785369

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

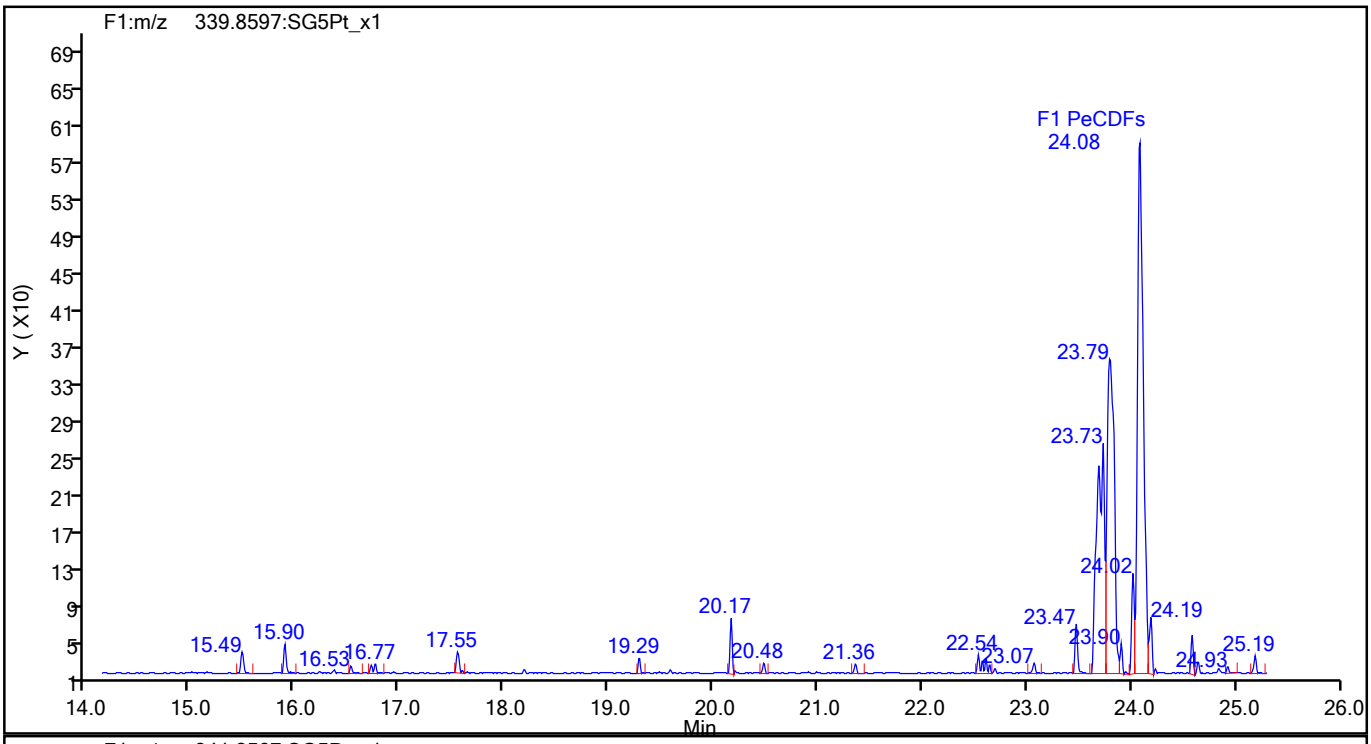

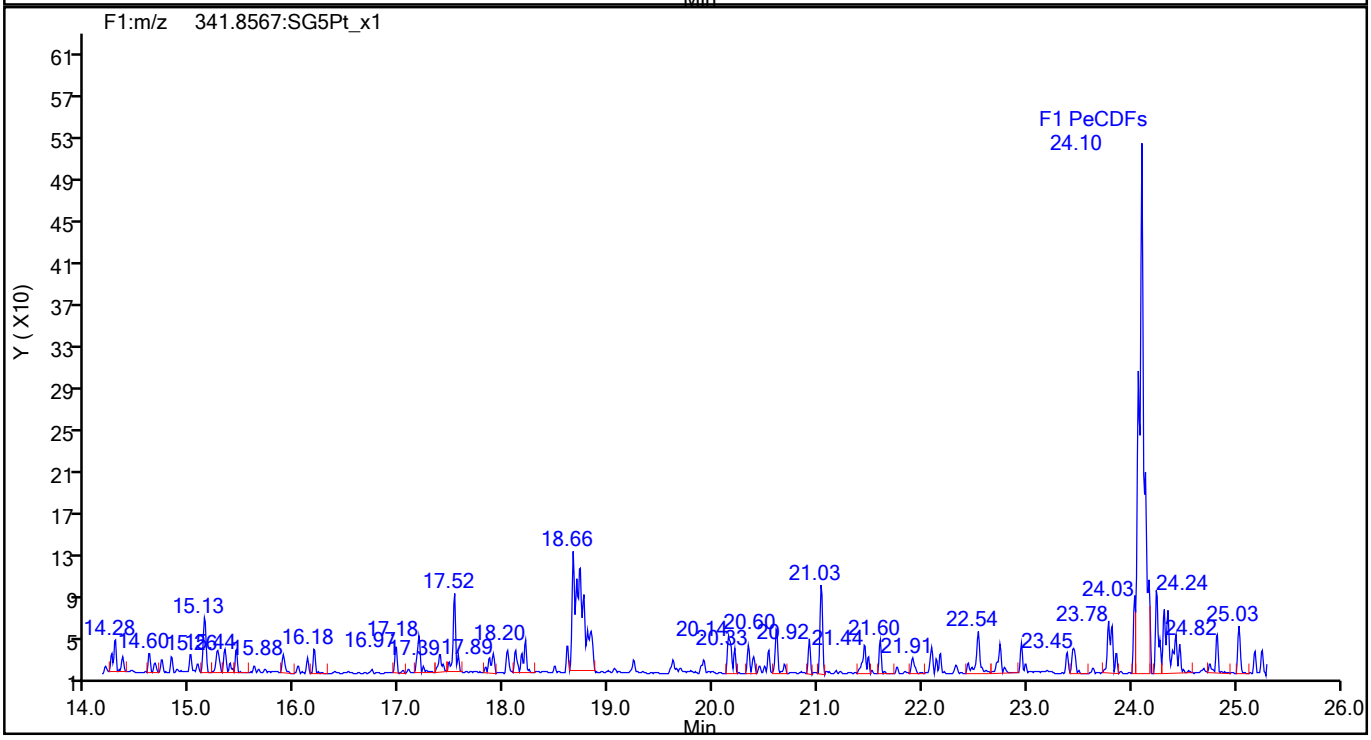

785370

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

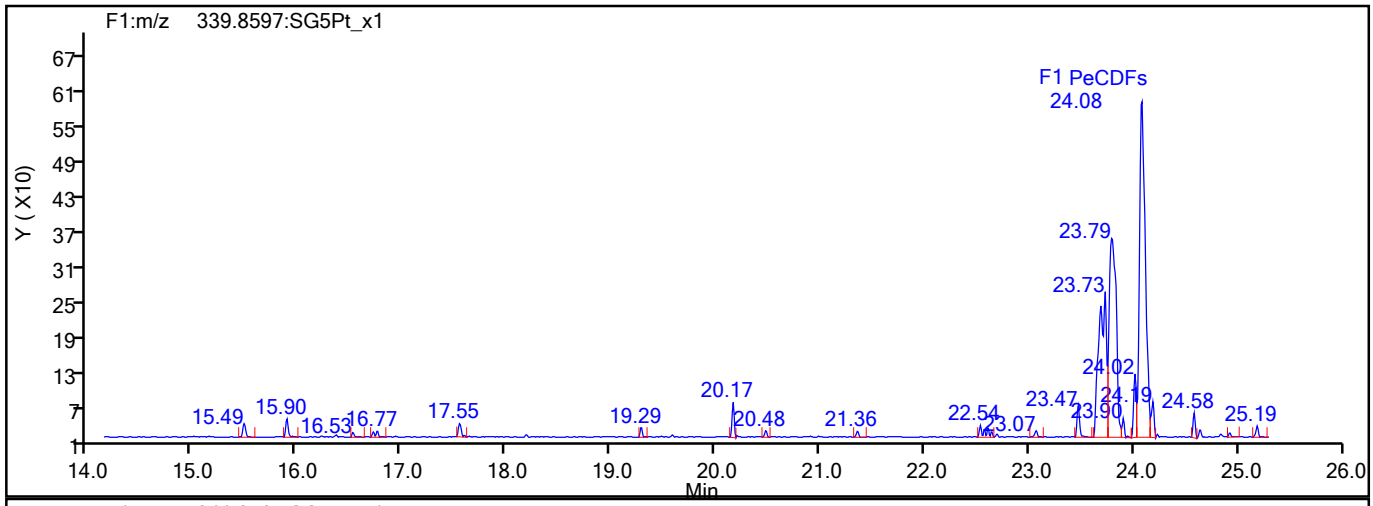

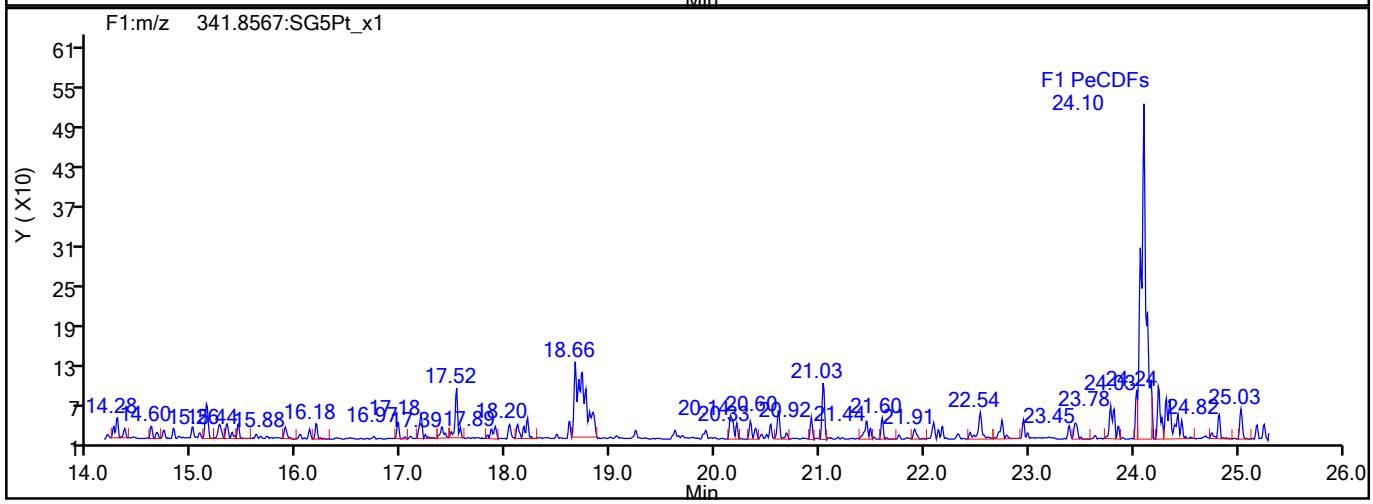

F1 PeCDFs Interference Mass

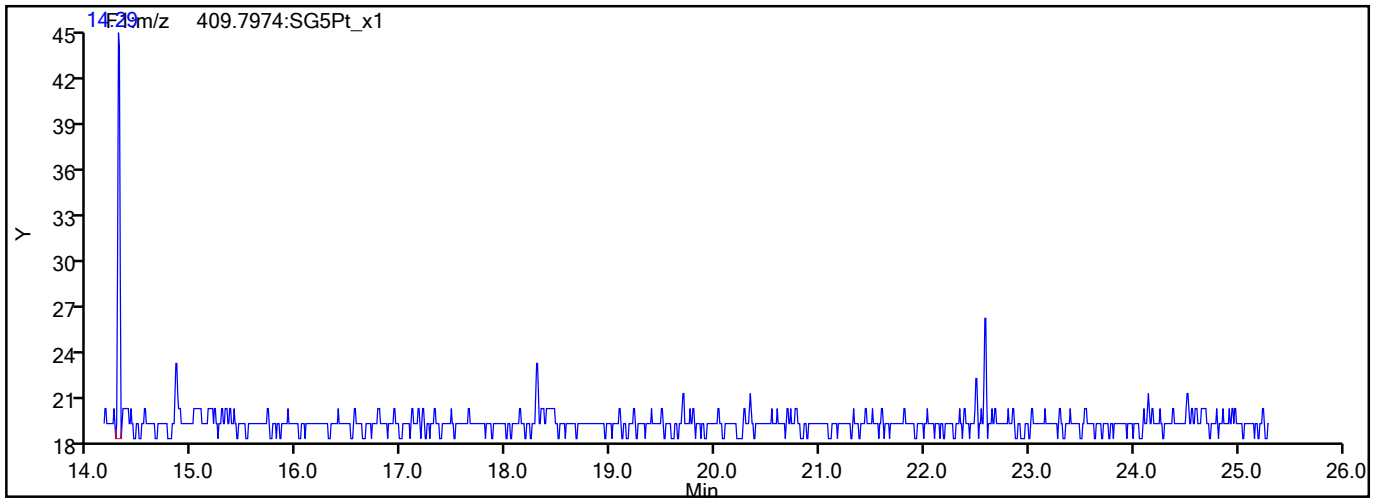

785371

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
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PeCDF

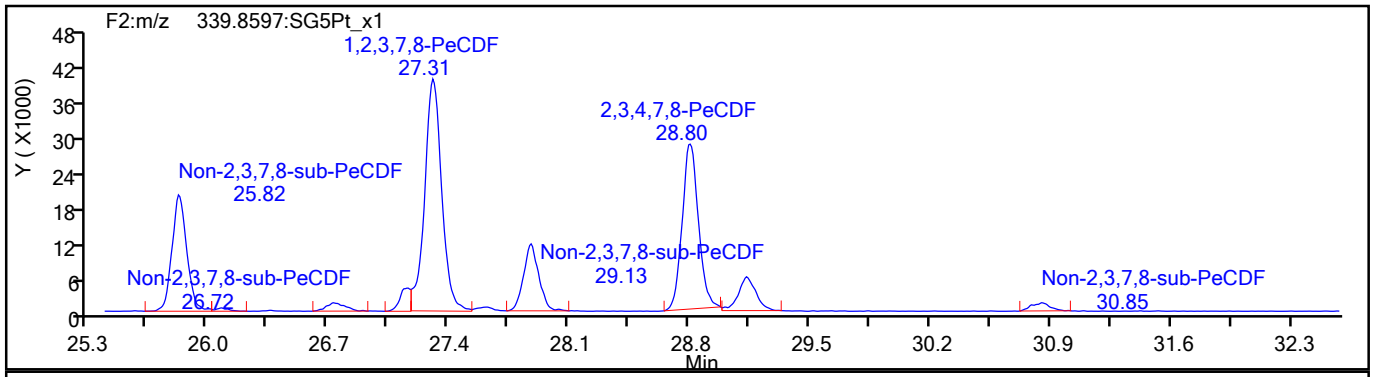

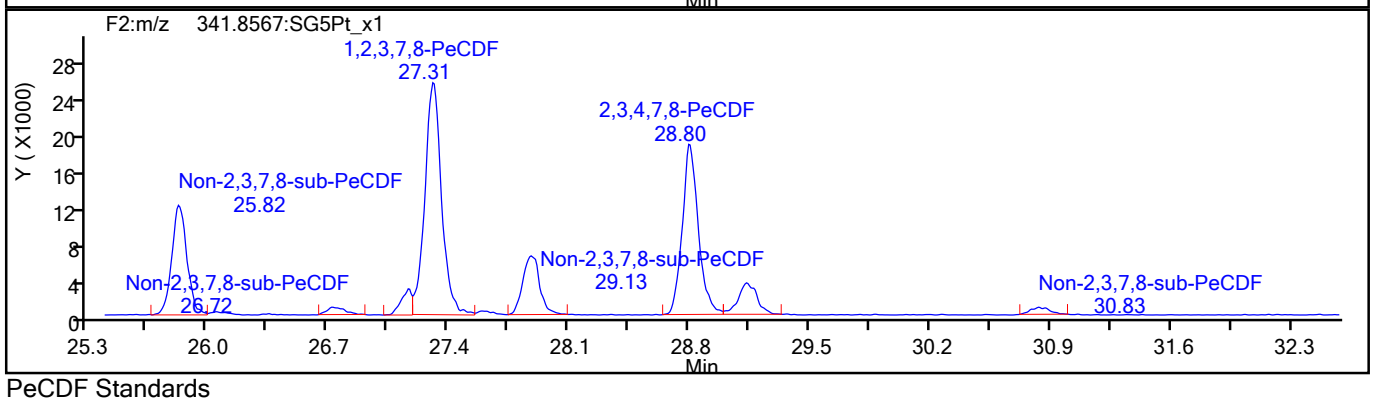

PeCDF Standards

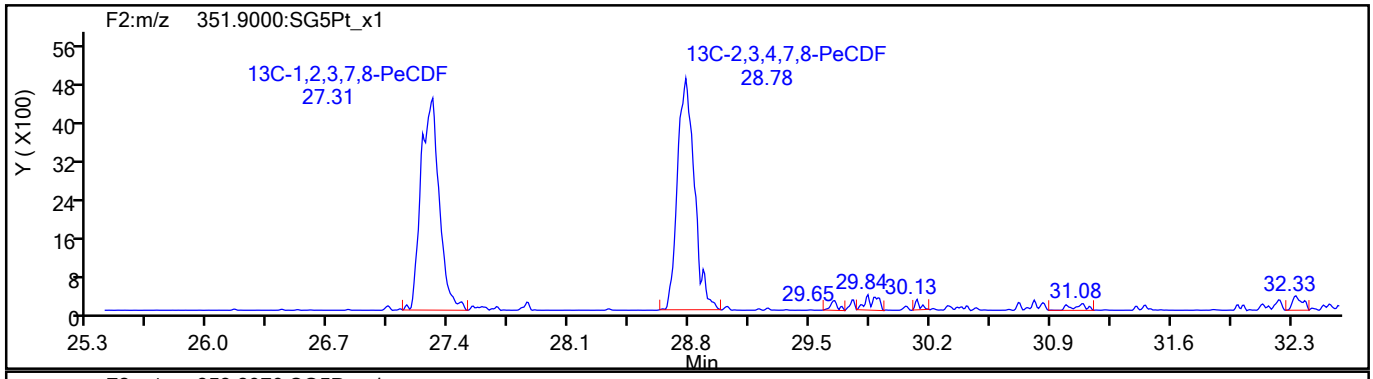

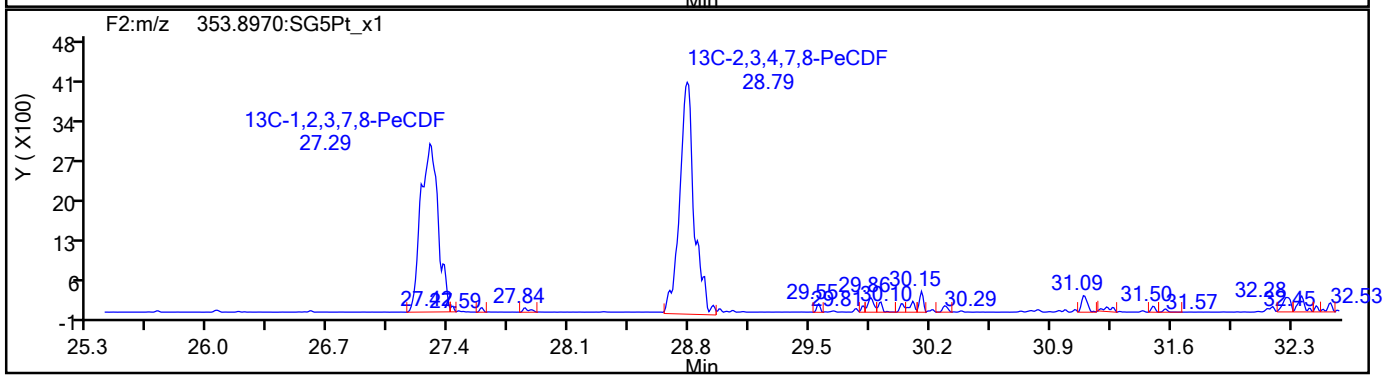

785372

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
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PeCDF

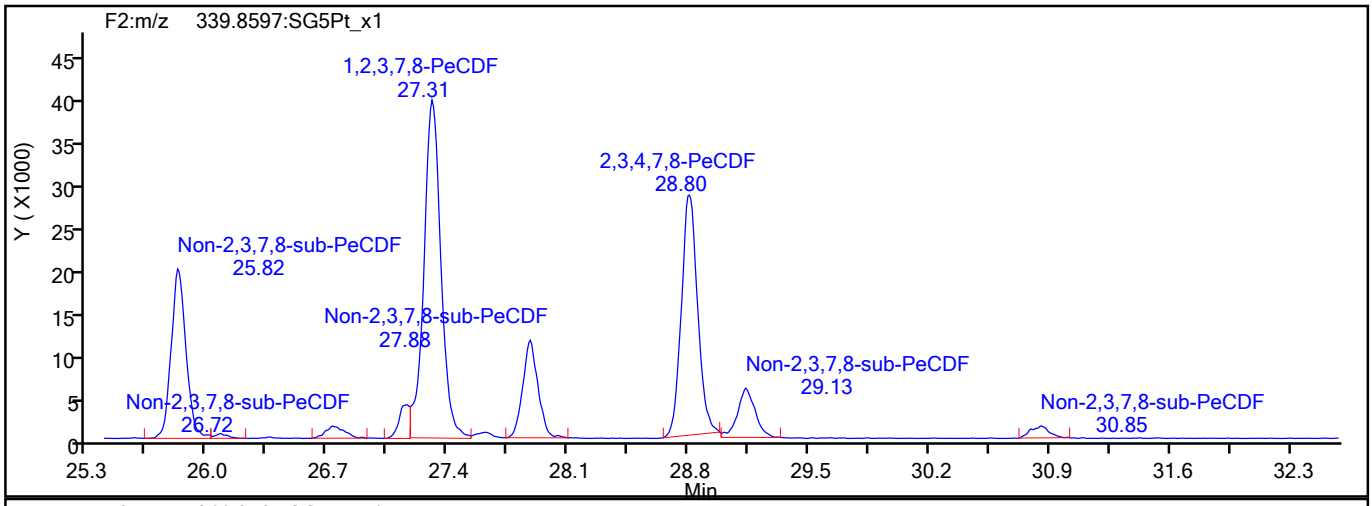

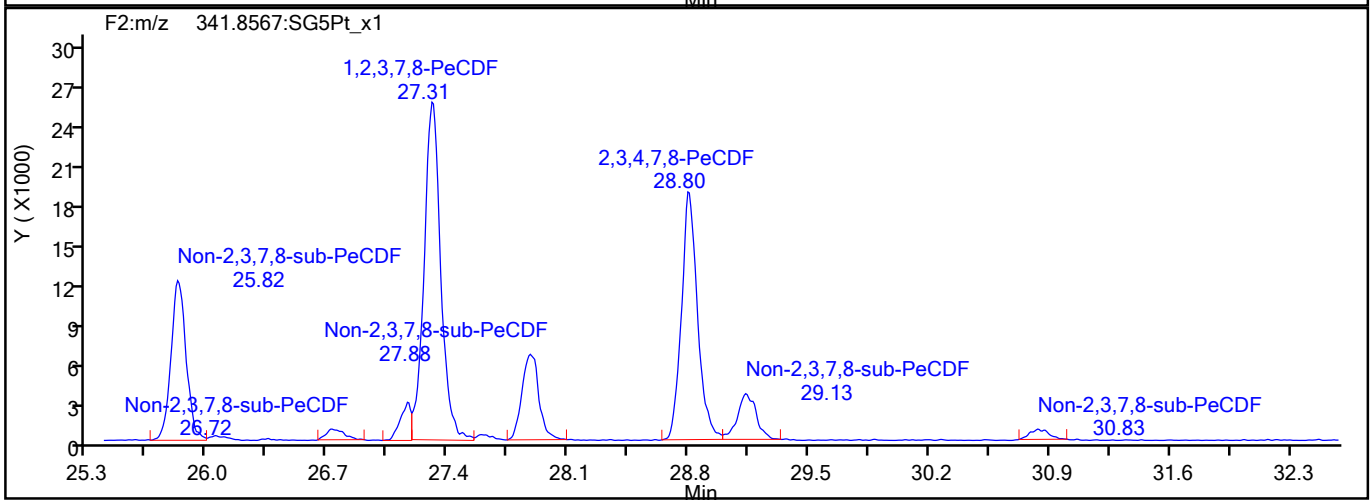

PeCDF Interference Mass

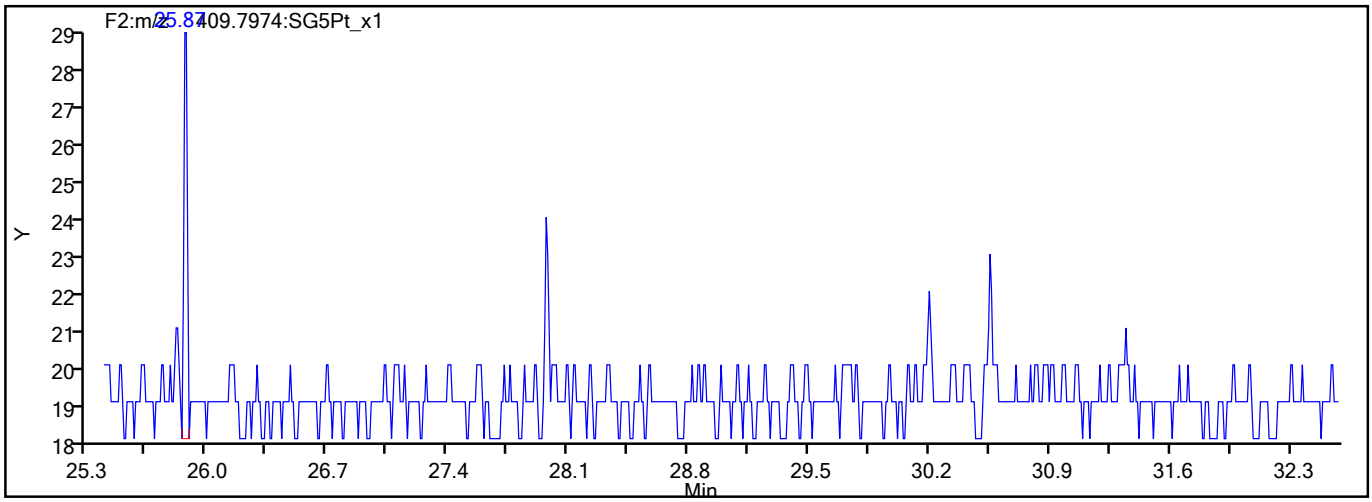

785373

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

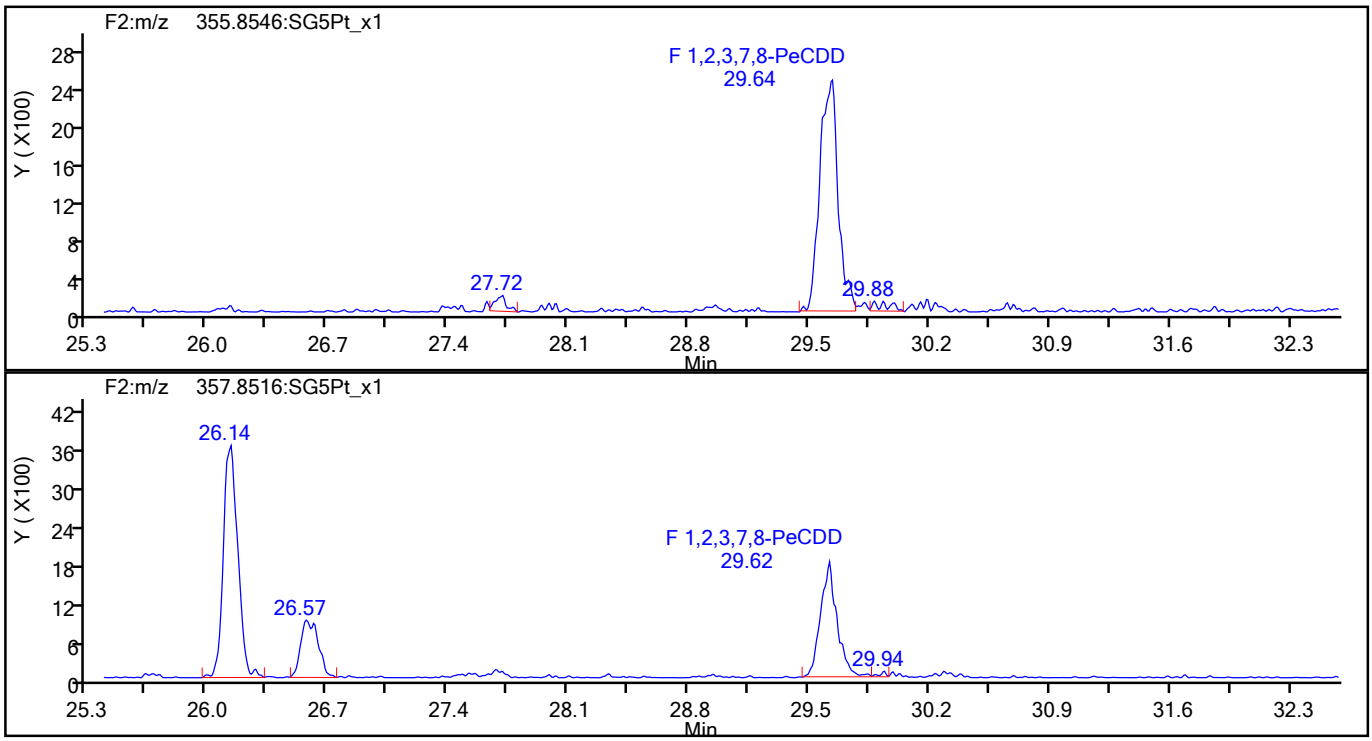

PeCDD Standards

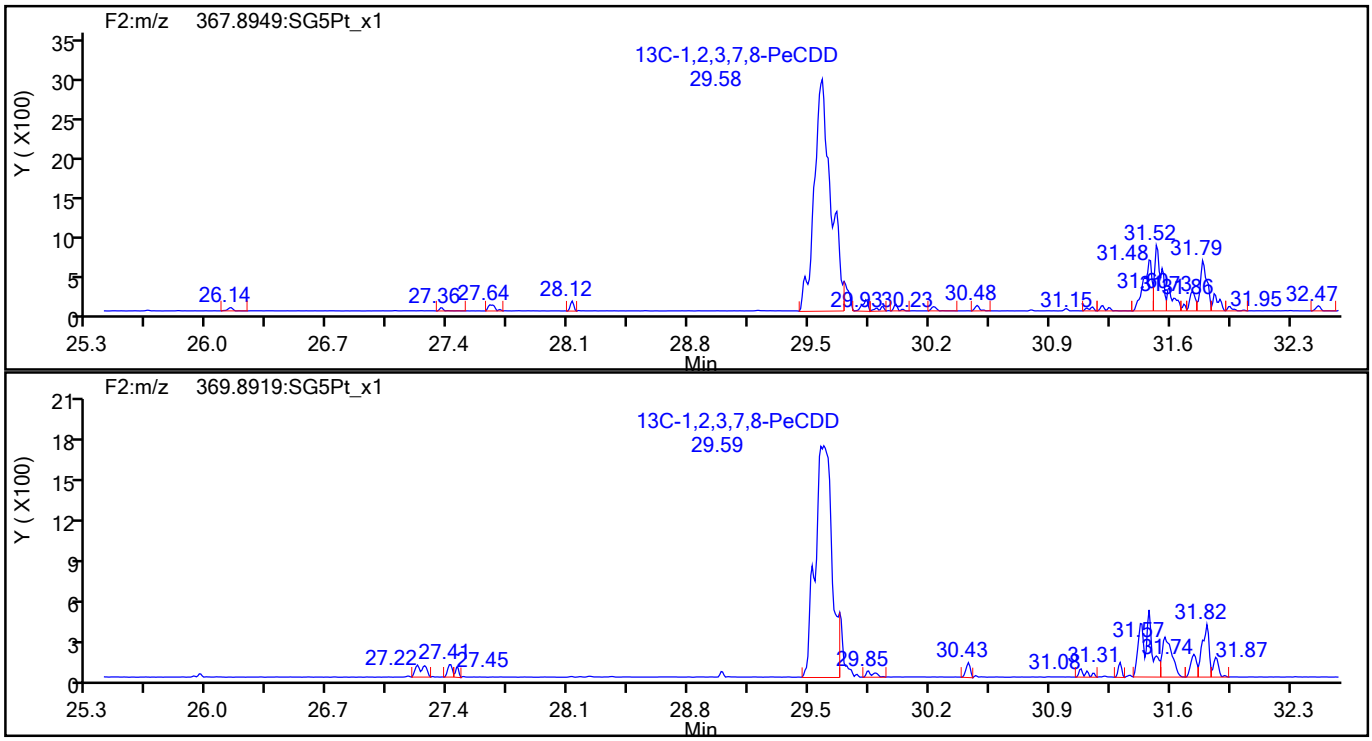

785374

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

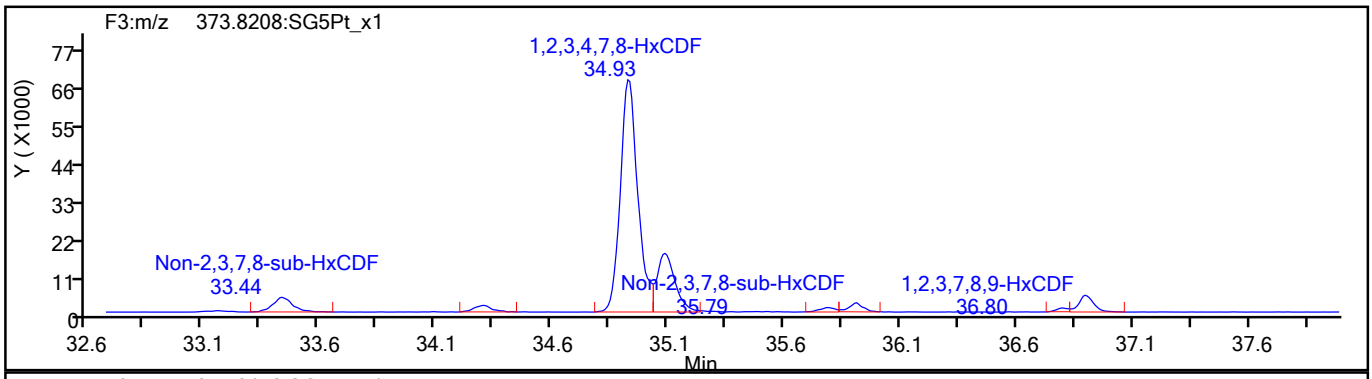

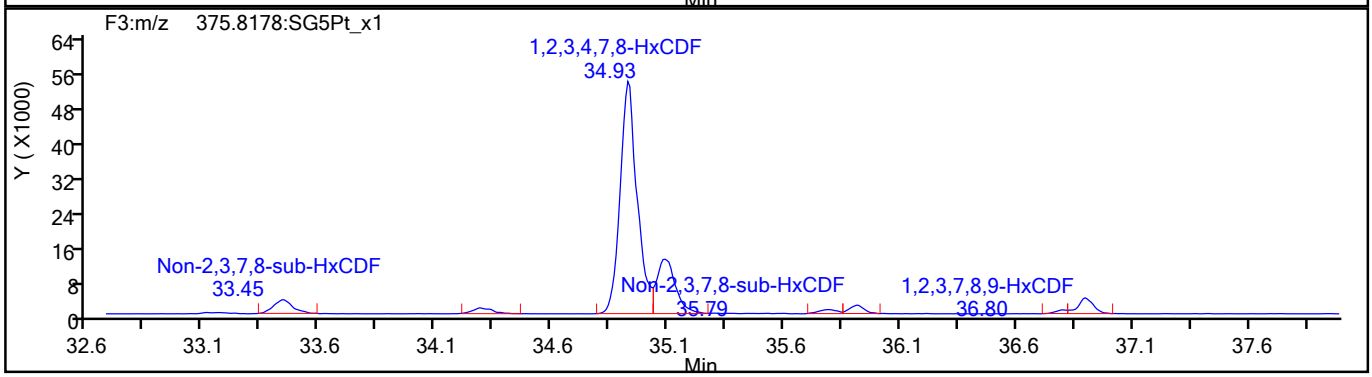

HxCDF Standards

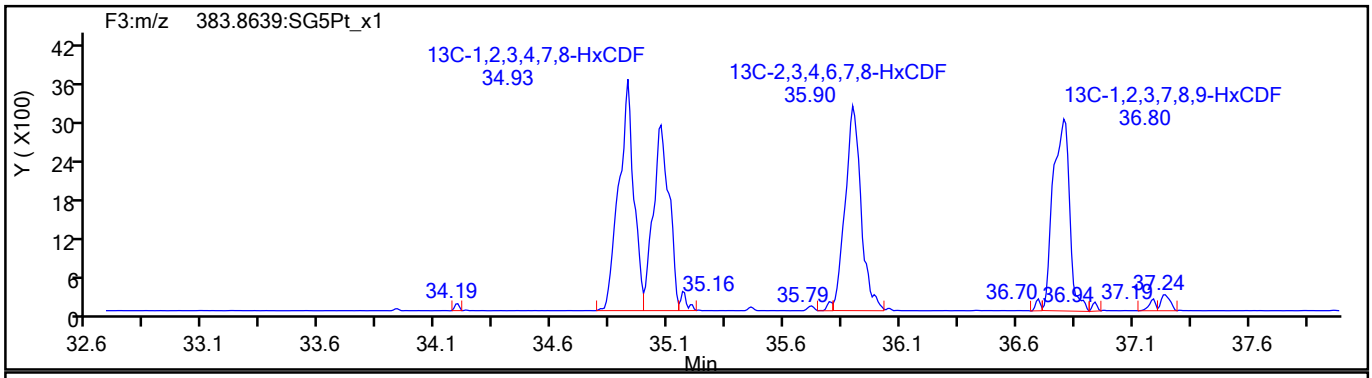

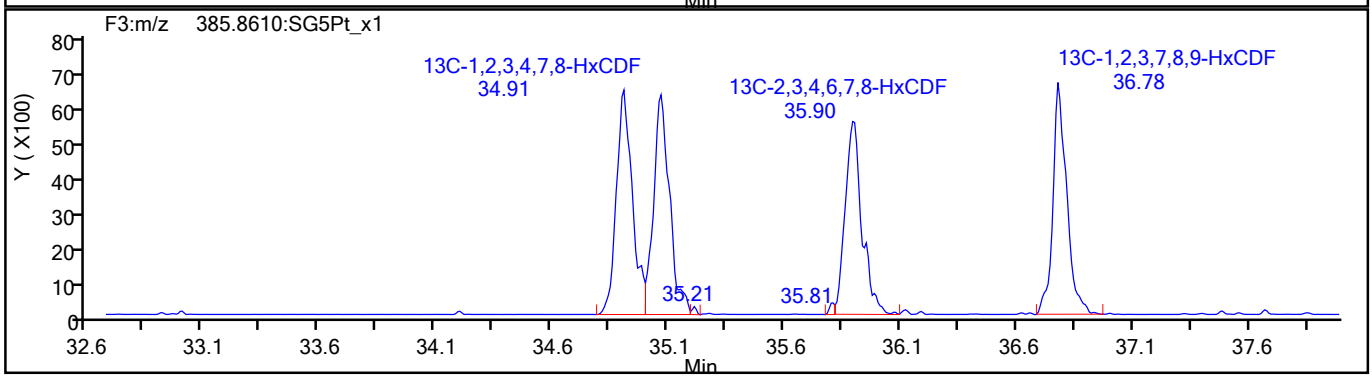

785375

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

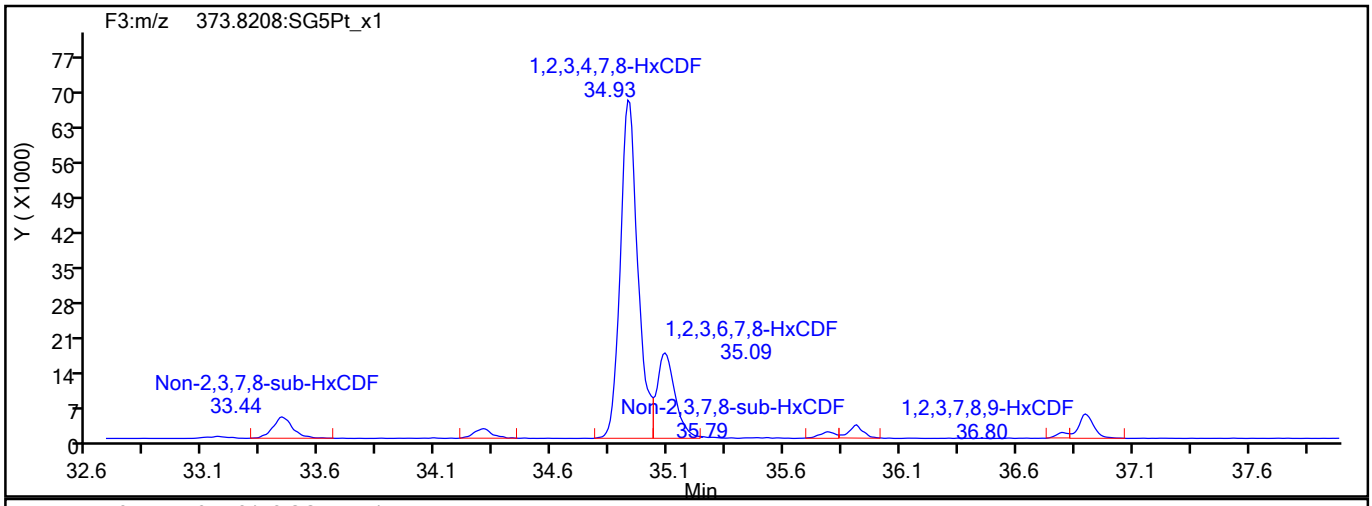

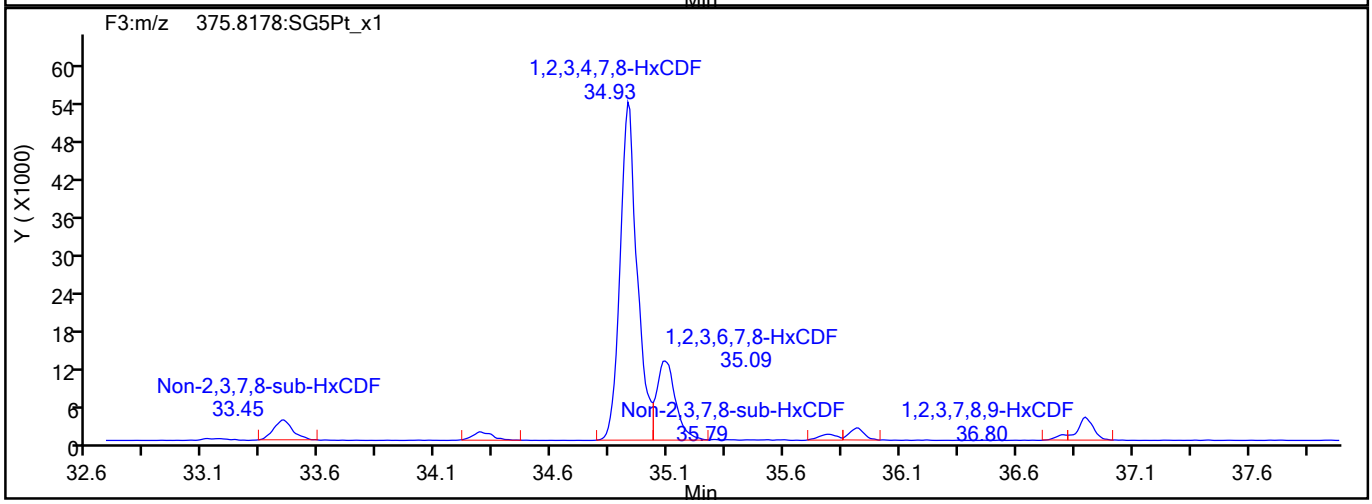

HxCDF Interference Mass

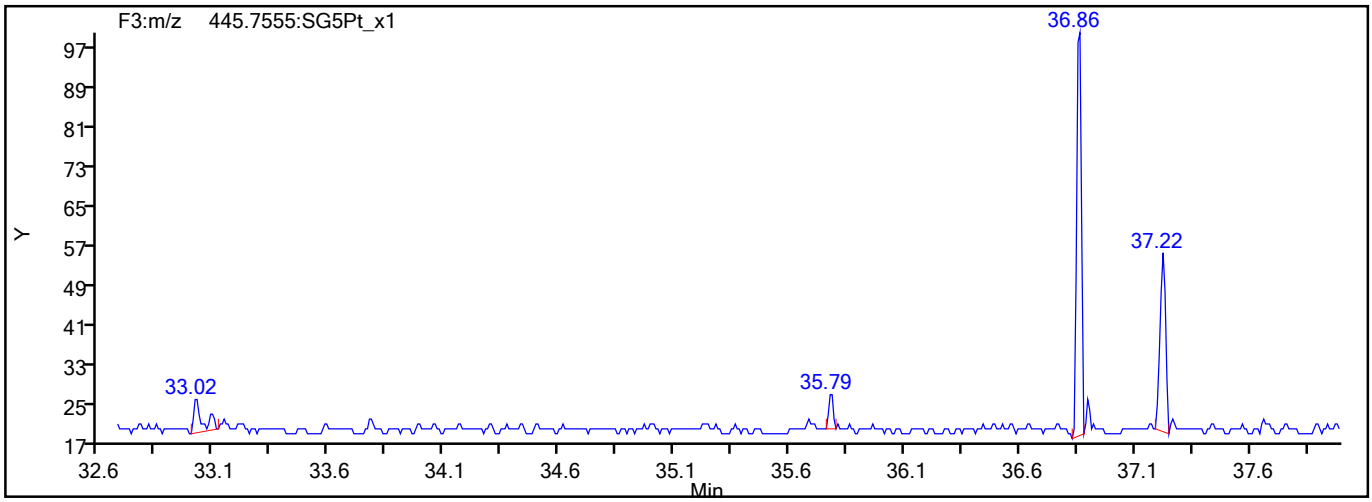

785376

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
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HxCDD

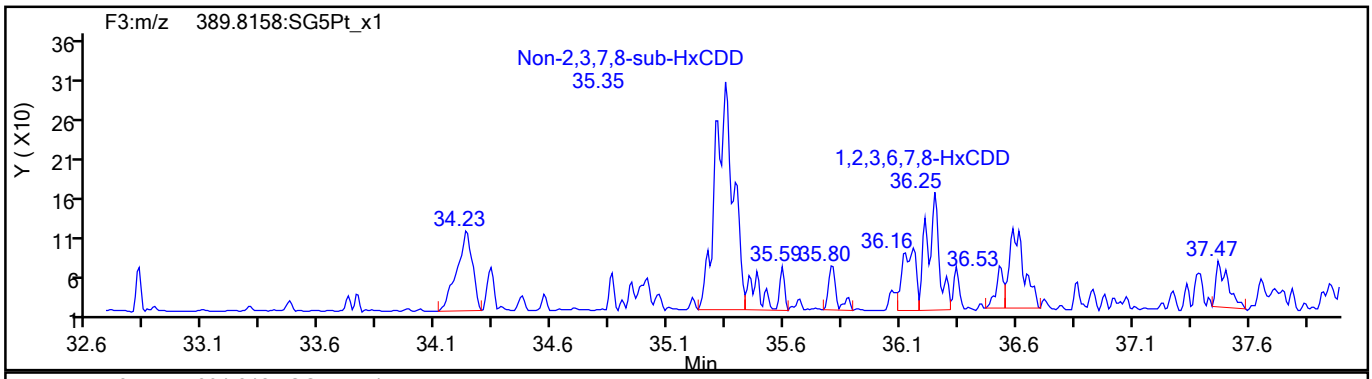

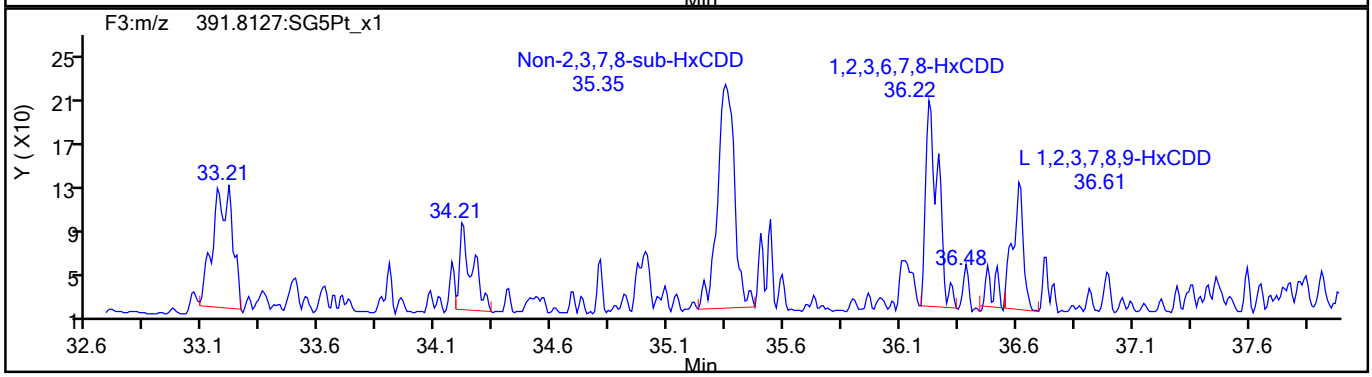

HxCDD Standards

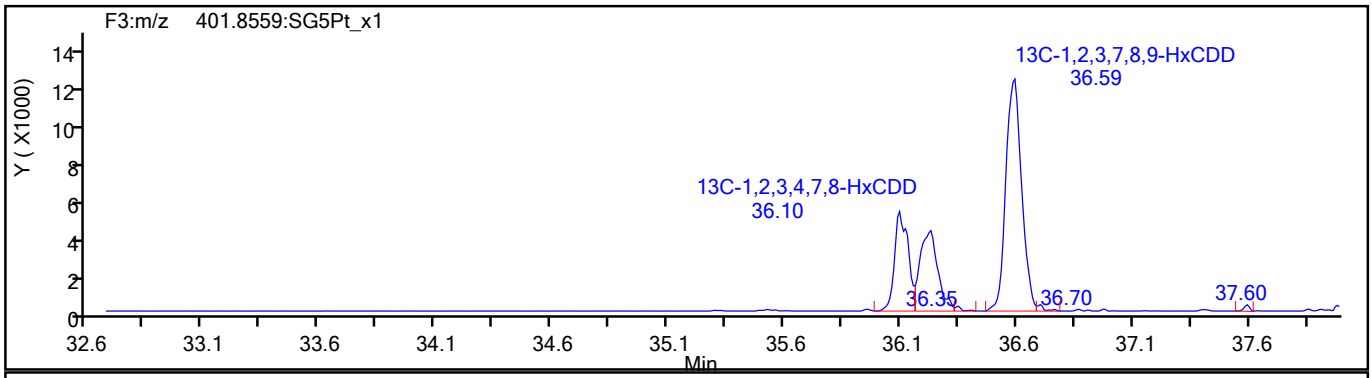

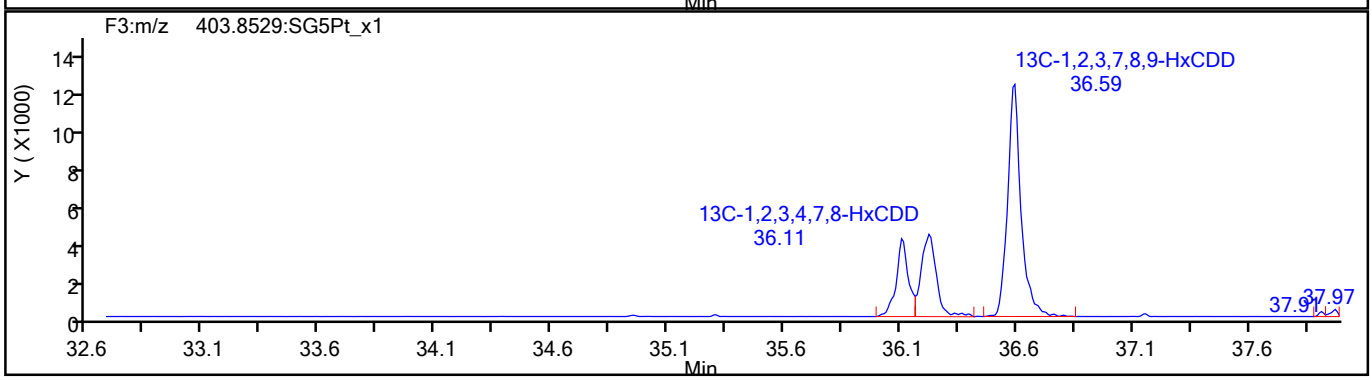

785377

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

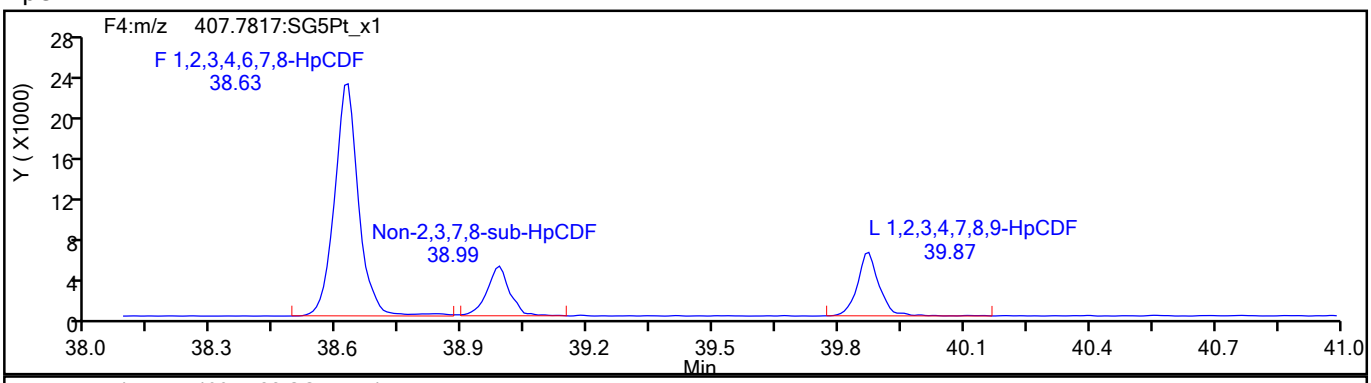

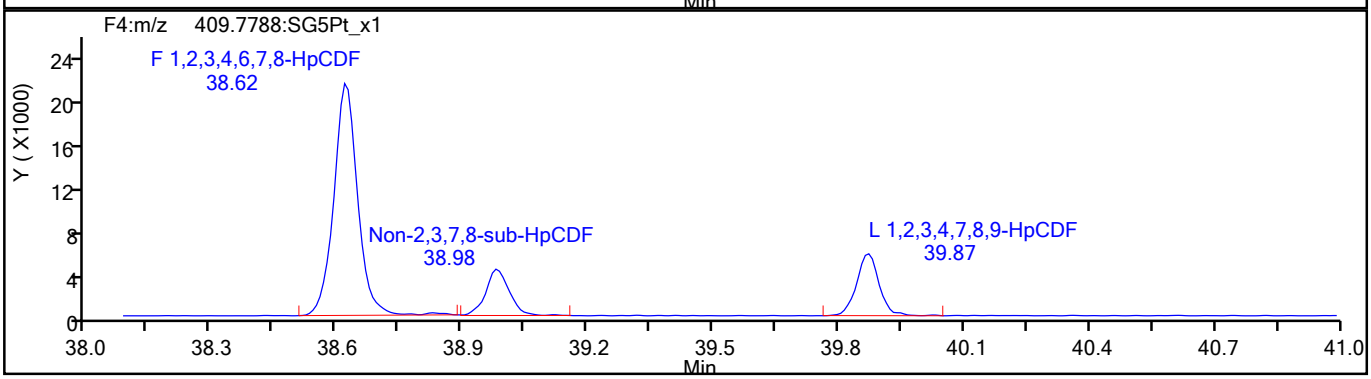

HpCDF Standards

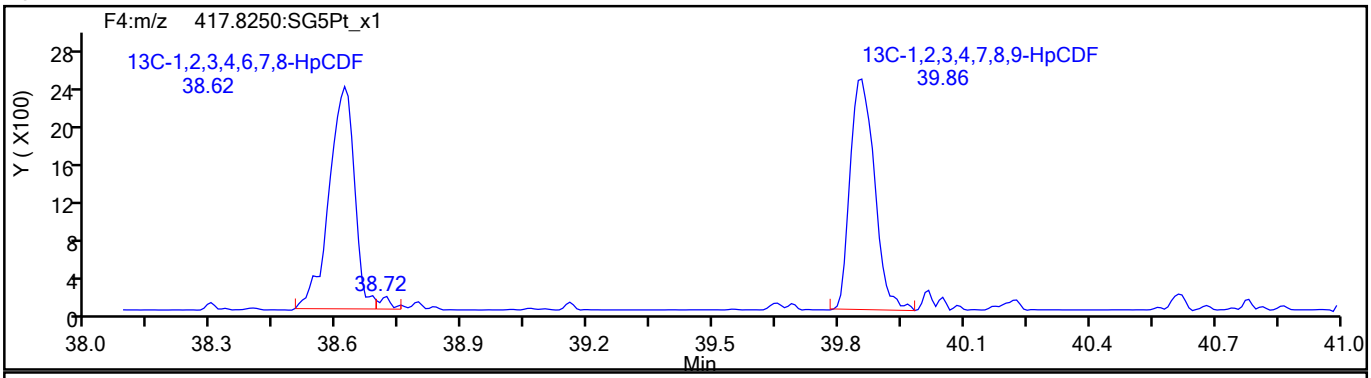

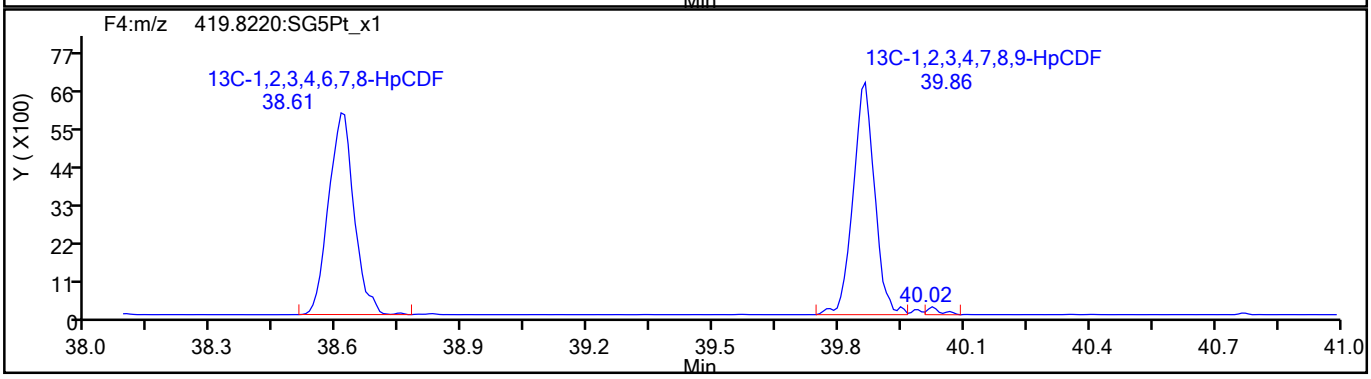

785378

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
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HpCDF

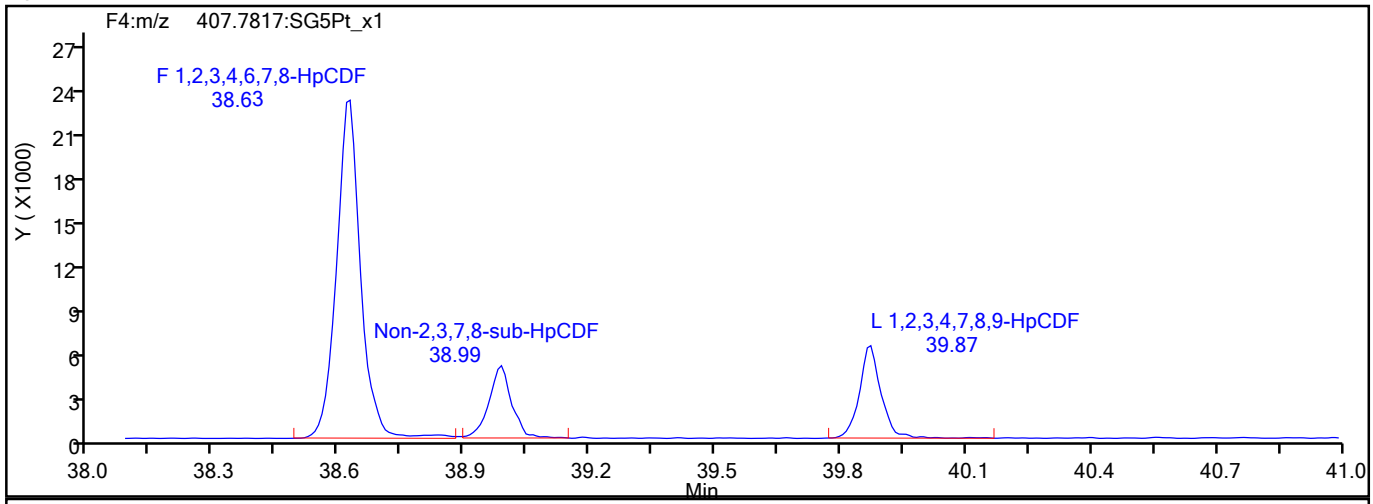

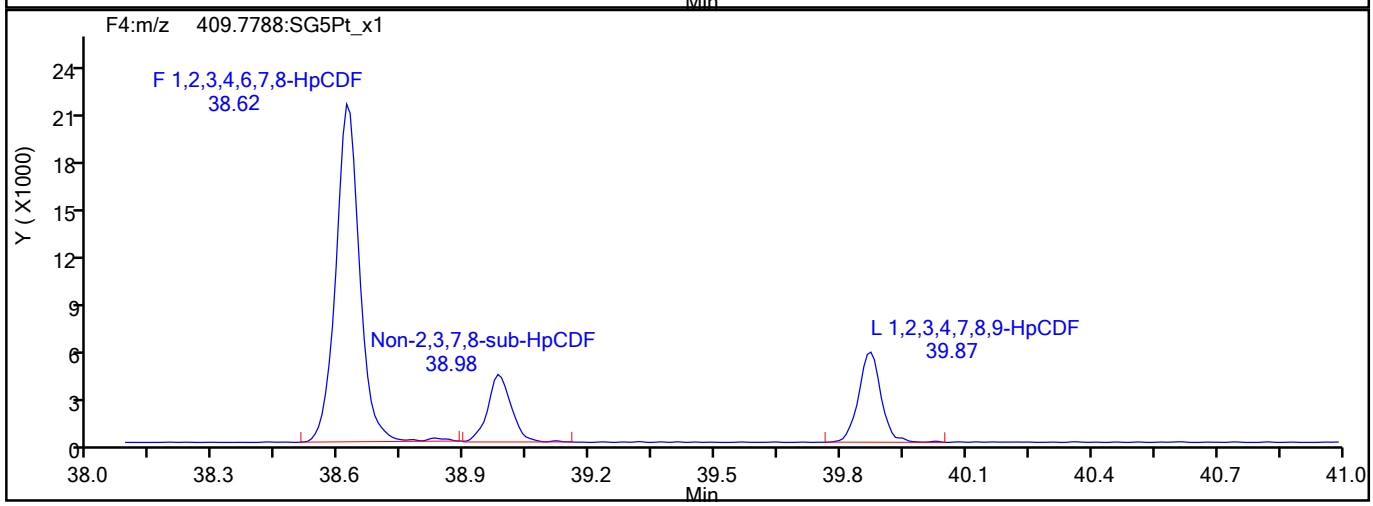

HpCDF Interference Mass

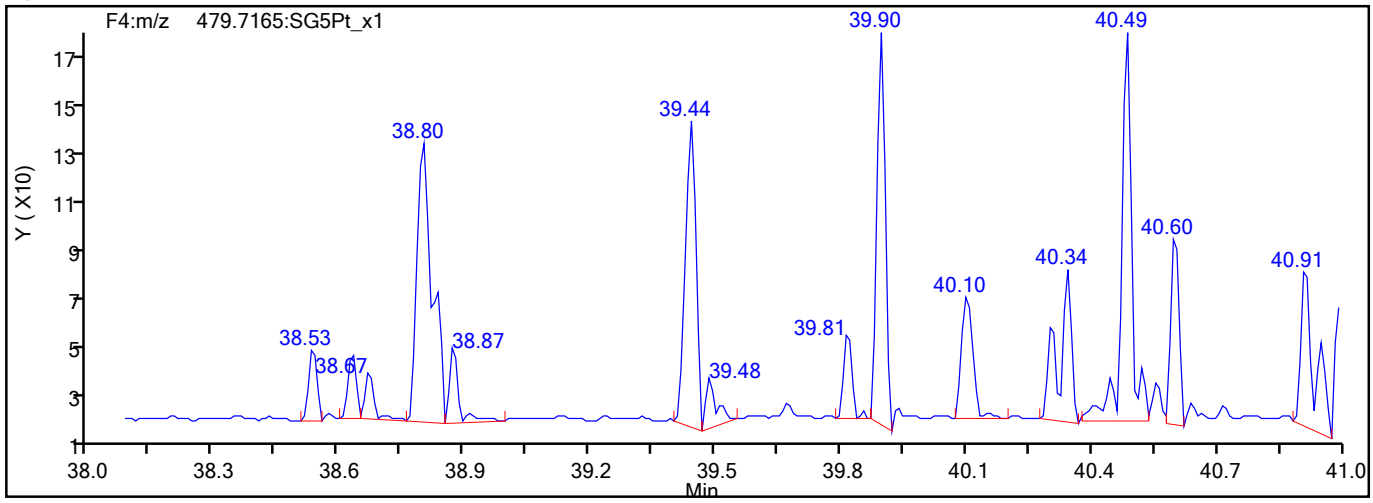

785379

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

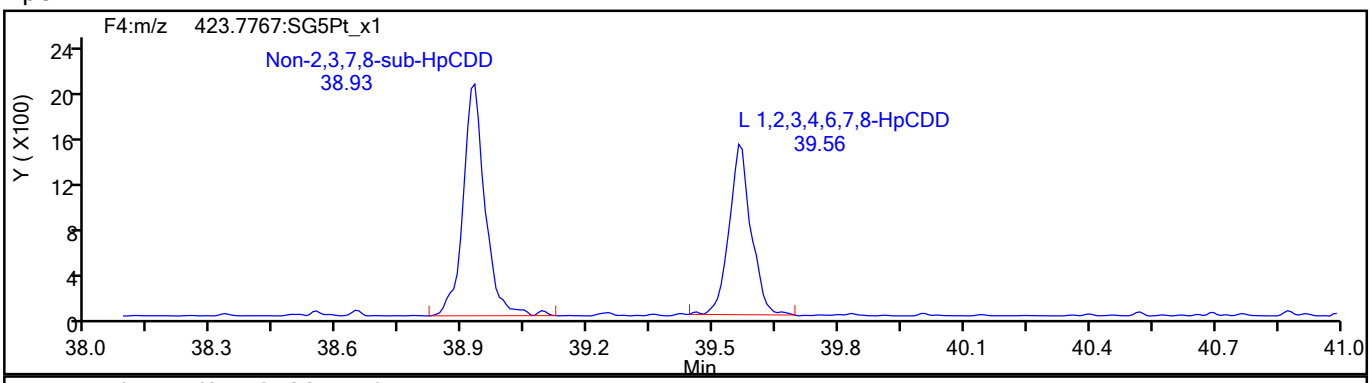

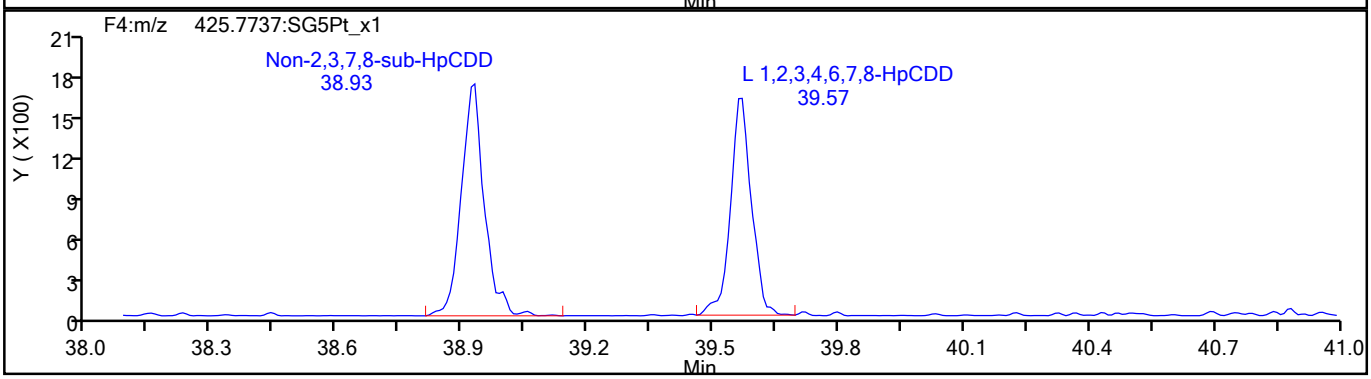

HpCDD Standards

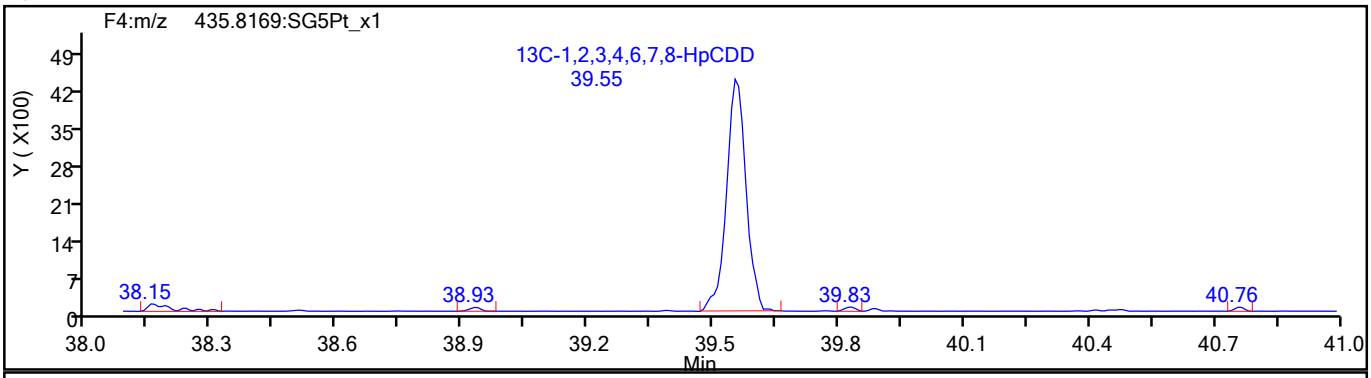

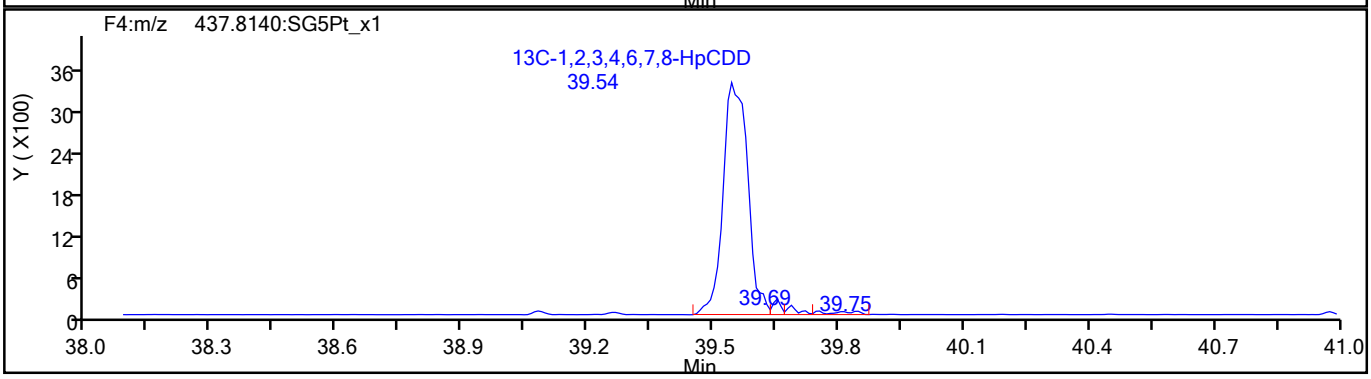

785380

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

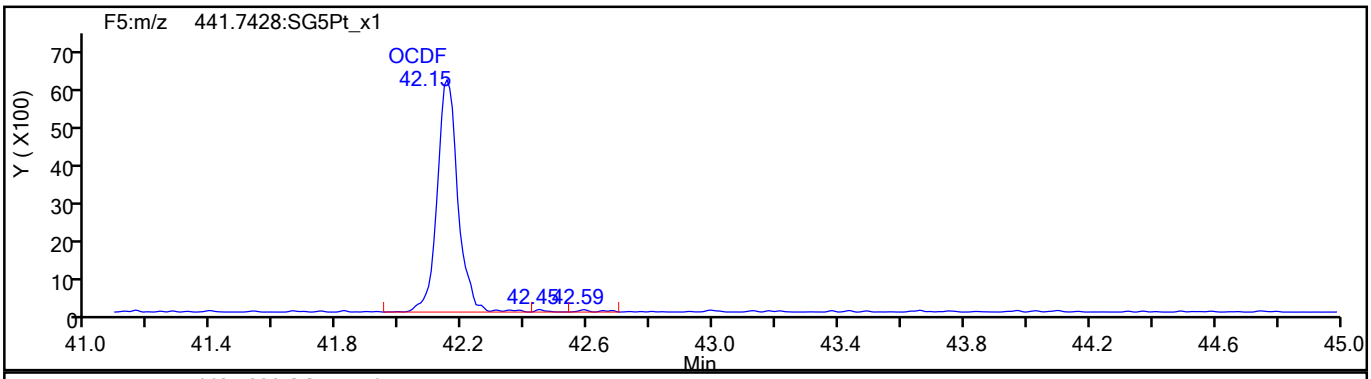

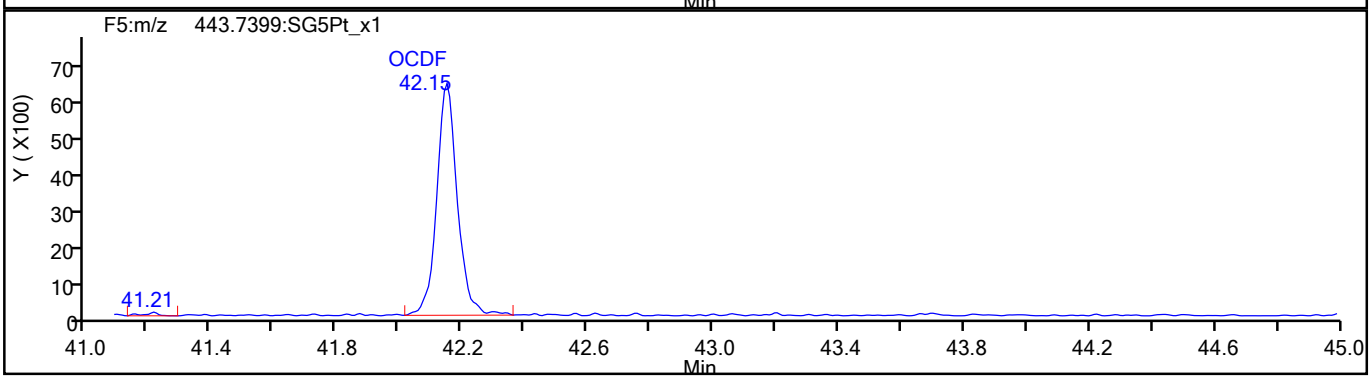

OCDF Standards

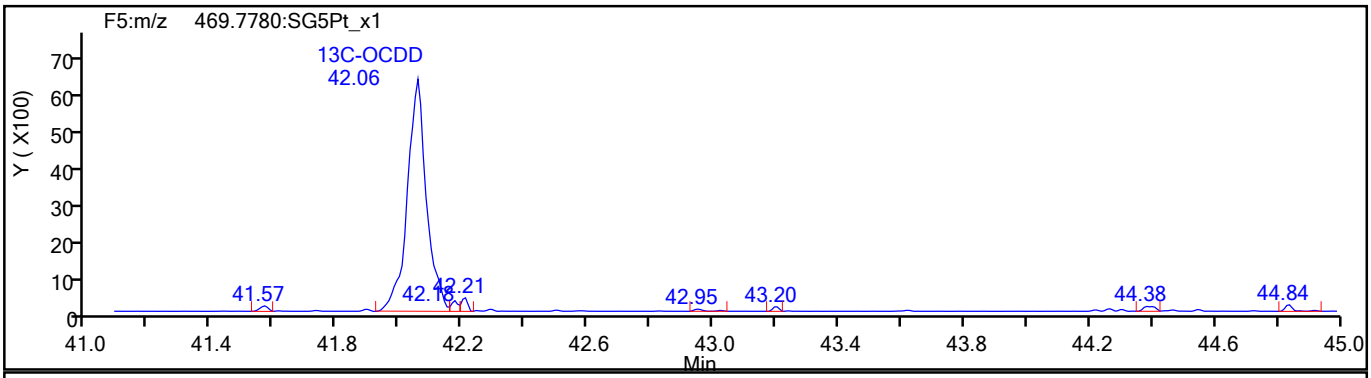

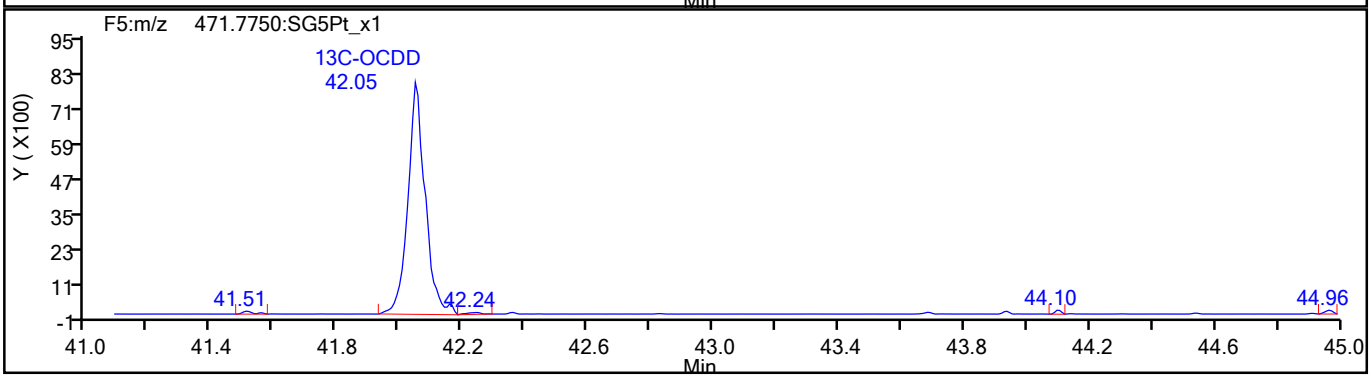

785381

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

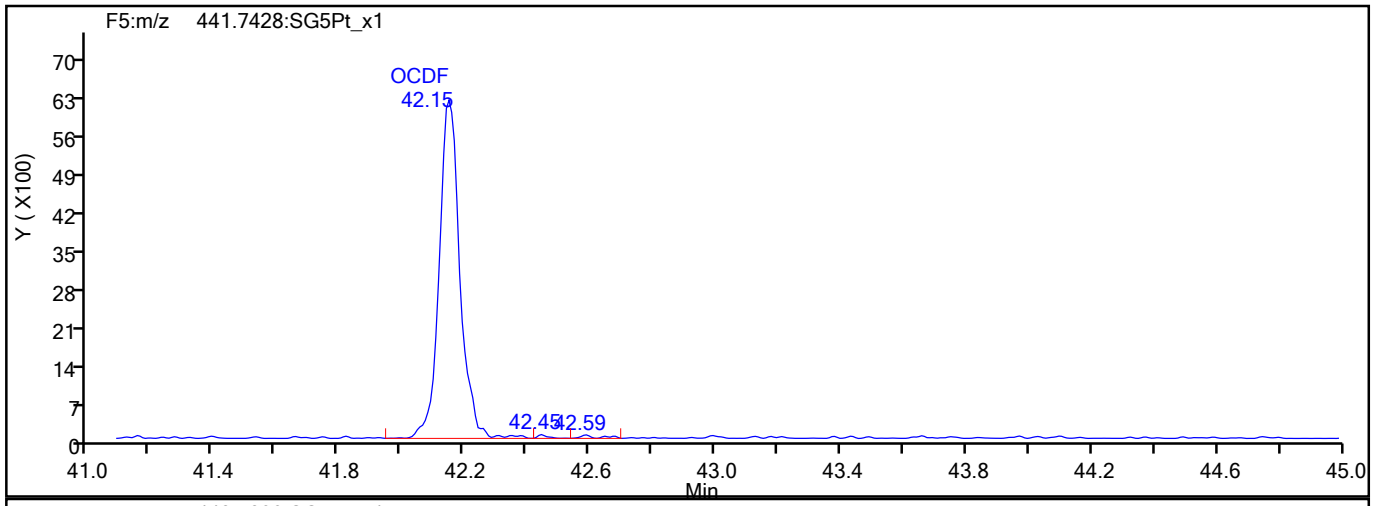

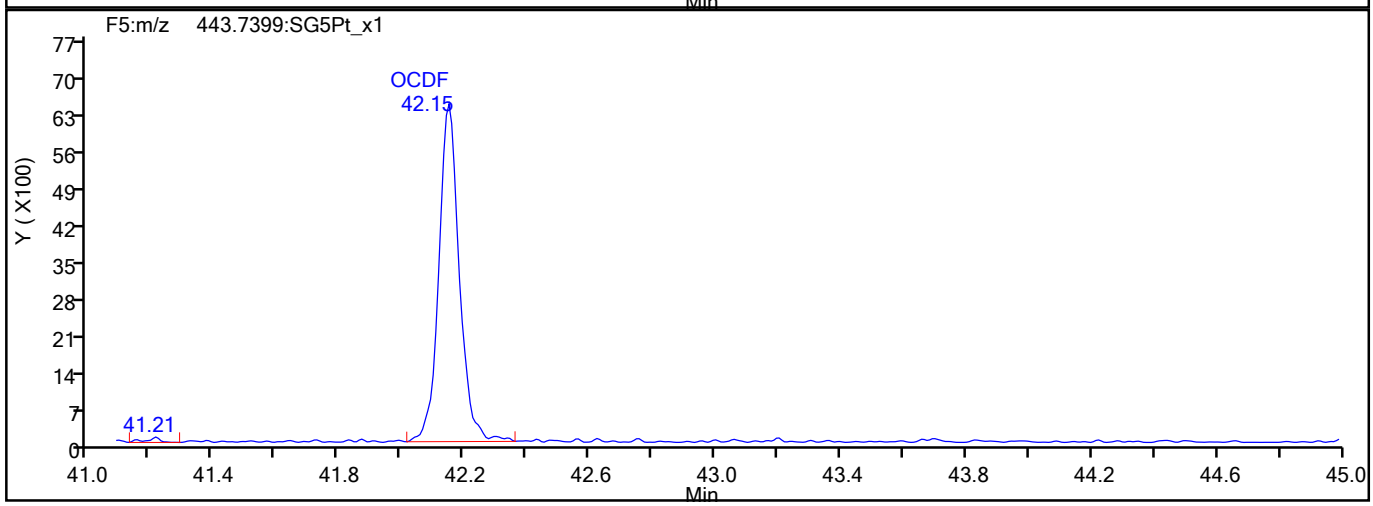

OCDF Interference Mass

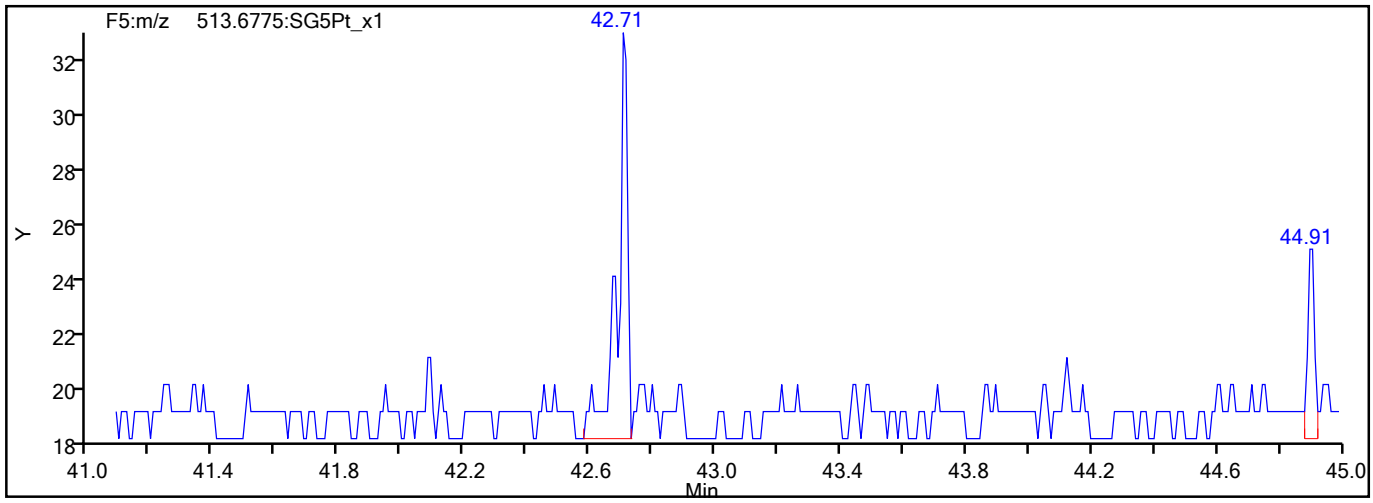

785382

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

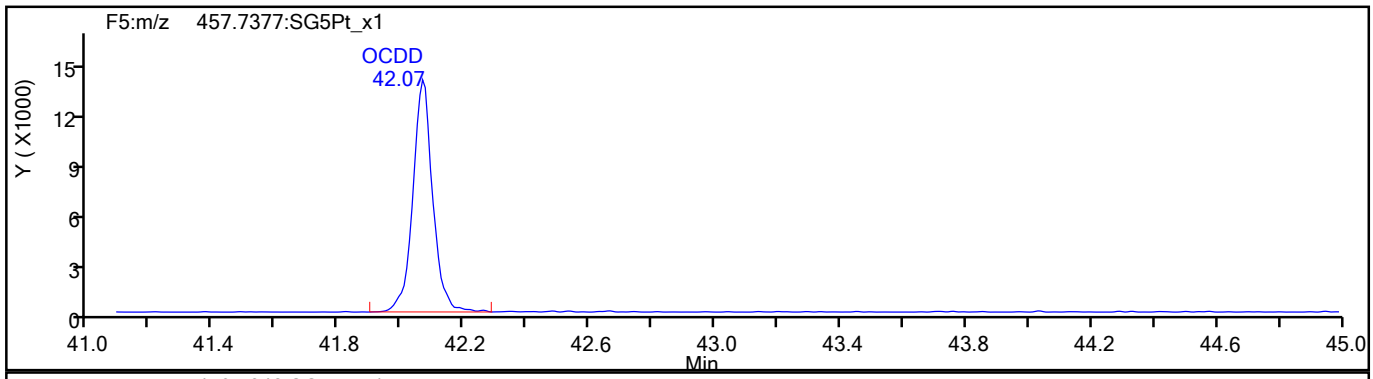

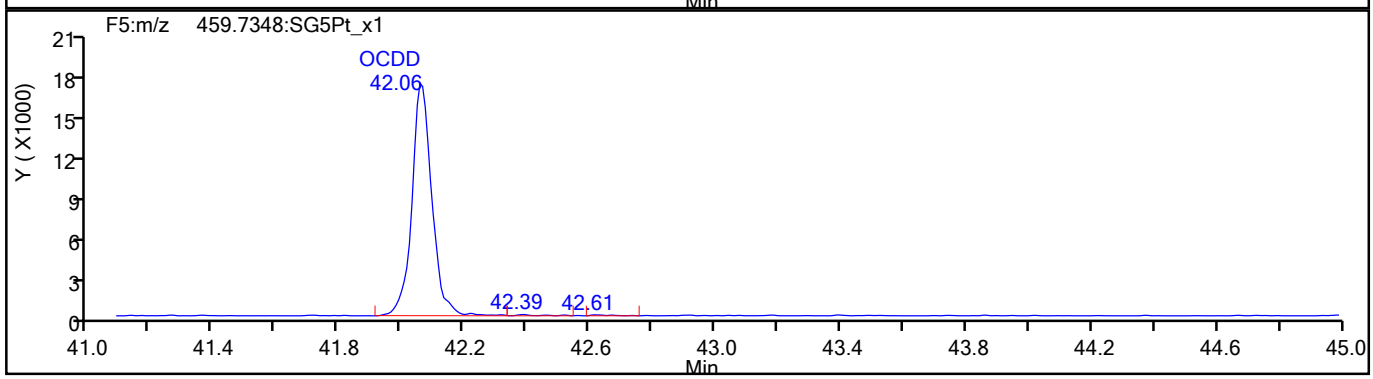

OCDD Standards

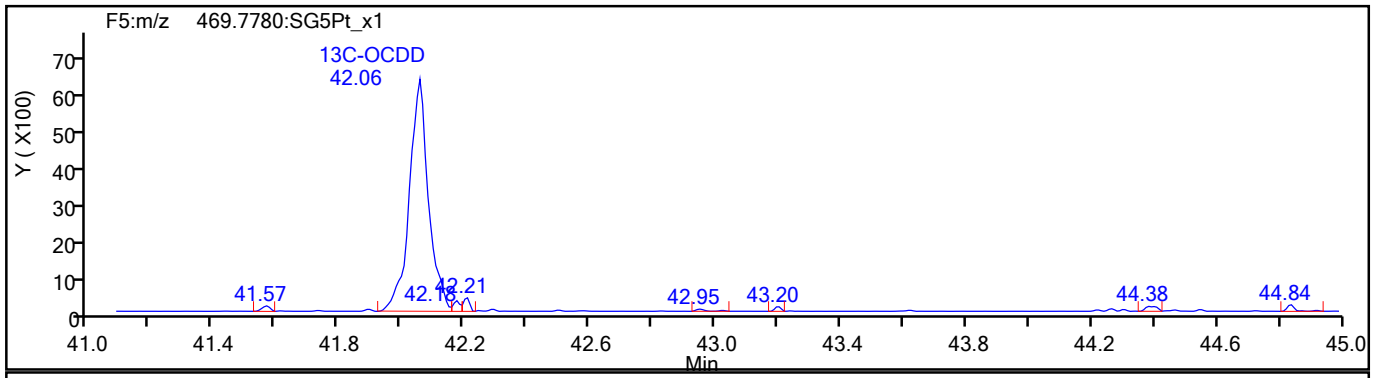

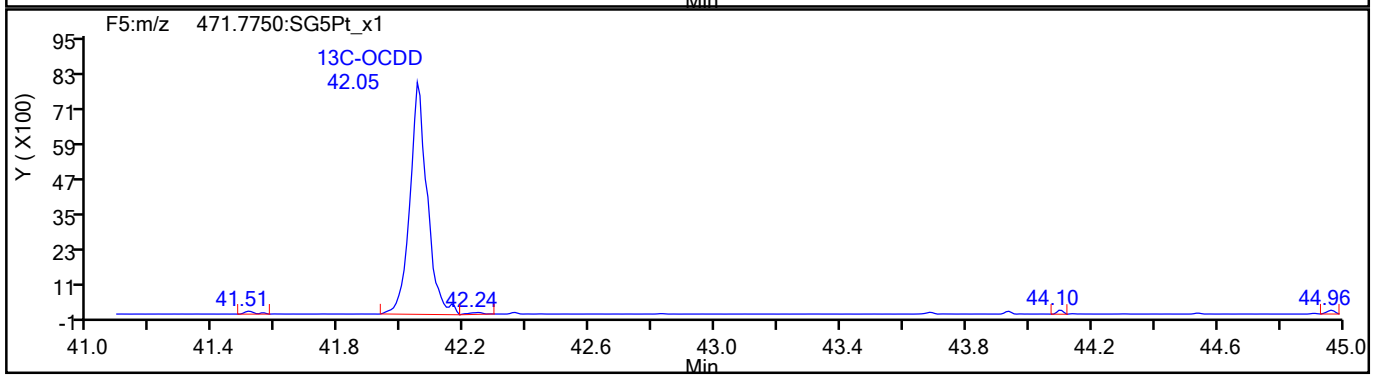

785383

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

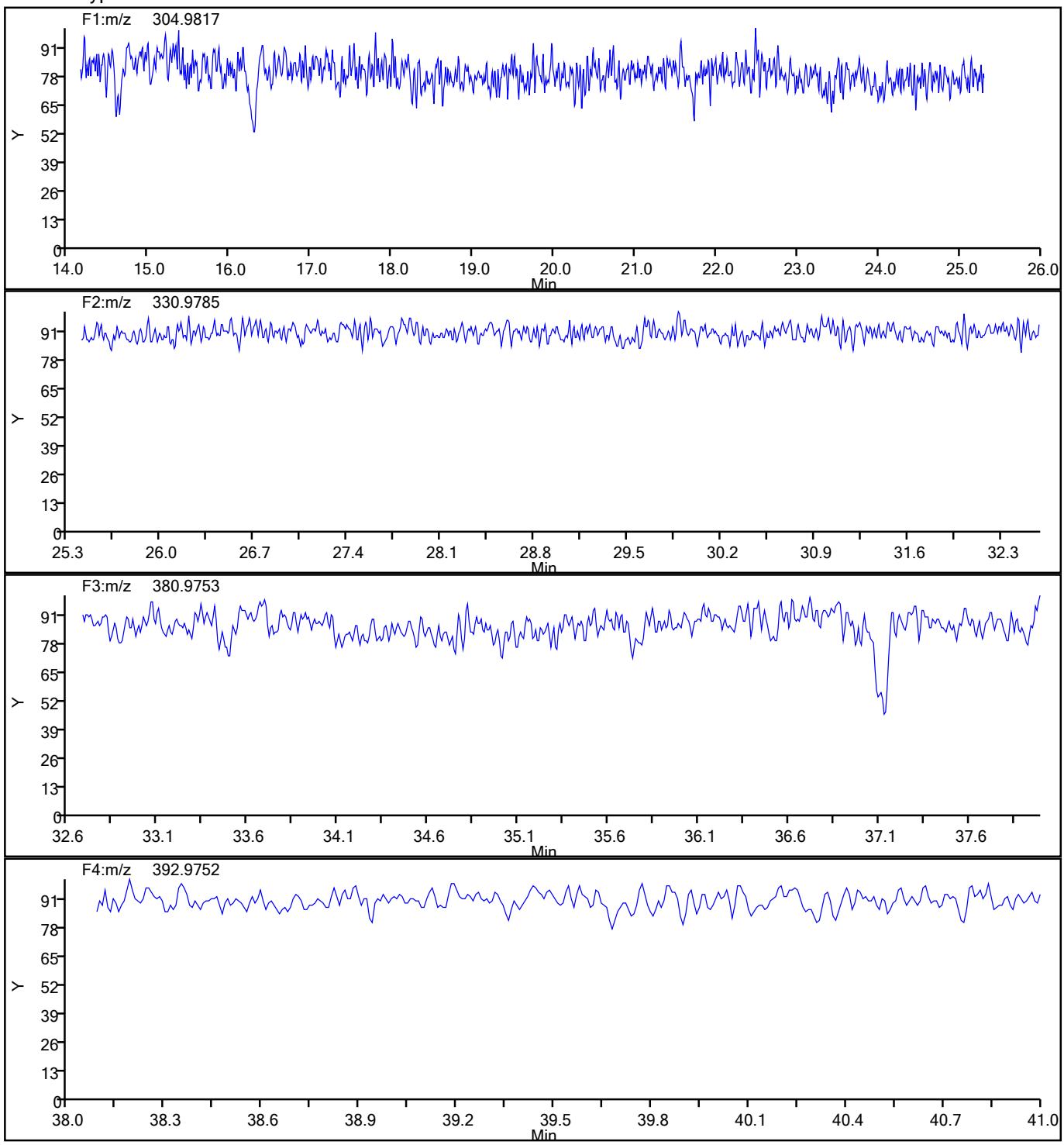

785384

Report Date: 25-Aug-2021 15:13:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_27.d		
Injection Date:	20-Aug-2021 09:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	518043	Sample Line#:	25
Column Type:	DB-5	Column Dia:	0.32 mm

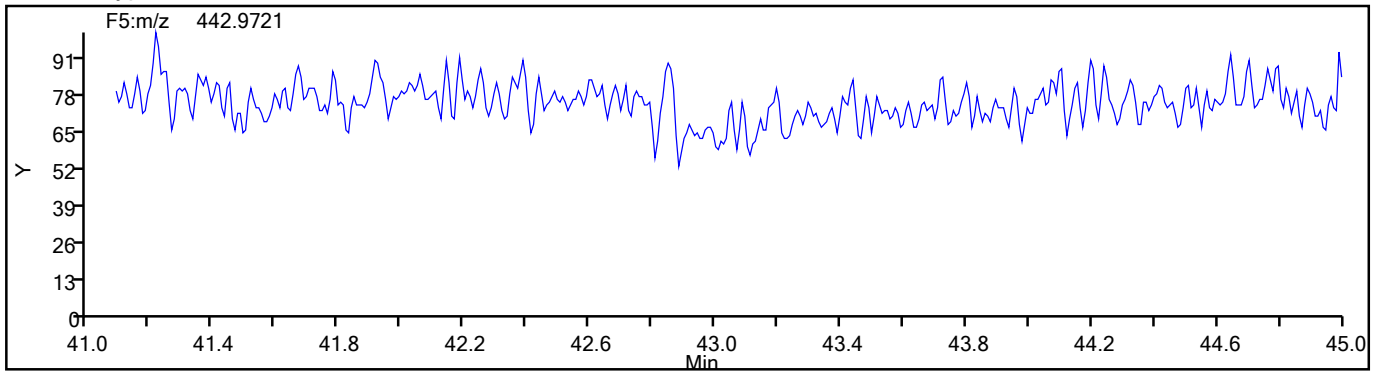

785385

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (4-6) RA
Lab Sample ID: 320-76888-3 RA
Matrix: Sediment
Lab File ID: 26AU21A11D2_015.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.42(g)
Date Analyzed: 08/27/2021 00:14
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 48.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520145
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	130000	E G B	110	110

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	26		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	59		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_015.d
Lims ID: 320-76888-A-3-A
Client ID: 11215702-072621-BN-SJSB094 (4-6)
Sample Type: Client
Inject. Date: 27-Aug-2021 00:14:03 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-3-A 10X
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 12:28:49 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1649

First Level Reviewer: krenns Date: 27-Aug-2021 12:28:49

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	9959537	0.86	7.2E+05	10.0	10.0				nM
D 13C-2,3,7,8-TCDF	17.659	3474118	0.69	1.3327	2.617	2.617	1.166	1.166	26.17	M
2,3,7,8-TCDF	17.673	1156896122	0.78	0.9978	3337.4	3337.4	3.029	3.029		Ea
D 13C-2,3,7,8-TCDD	16.096	2778152	0.85	0.8749	3.188	3.188	11.9	11.9	31.88	nM
2,3,7,8-TCDD	16.109	224709088	0.78	1.0570	765.2	765.2	4.140	4.140		Ea
$ 37Cl4-2,3,7,8-TCDD	16.109	2030860		0.8648	2.358	2.358	0.2769	0.2769	58.95	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_015.d
Lims ID: 320-76888-A-3-A
Client ID: 11215702-072621-BN-SJSB094 (4-6)
Sample Type: Client
Inject. Date: 27-Aug-2021 00:14:03 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-3-A 10X
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 12:28:49 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1649

First Level Reviewer: krenns Date: 27-Aug-2021 12:28:49

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											nM
331.9368	16.329	16.285	3		4595754	858122	471843	1179607	2		M
333.9339	16.329	16.285	3		5363783	1058035	323635	809087	3	0.86(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.659	17.615	3	1.081	1412639	277364	56298	140745	5		M
317.9389	17.646	17.615	2	1.081	2061479	351460	62829	157072	6	0.69(0.65-0.89)	M
2,3,7,8-TCDF											Ea
303.9016	17.673	17.629	3	1.001	508027138	91151672	34695	86737	2627		a
305.8987	17.673	17.629	3	1.001	648868984	116083057	41328	103320	2809	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.096	16.065	2	0.986	1278556	286666	471843	1179607	1		M
333.9339	16.082	16.065	1	0.985	1499596	301225	323635	809087	1	0.85(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.109	16.079	2	1.001	98729650	21873539	62184	155460	352		a
321.8936	16.109	16.079	2	1.001	125979438	27933259	40725	101812	686	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.109	16.109	2	0.987	2030860	417636	18352	45880	23		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_015.d				
Injection Date:	27-Aug-2021 00:14:03	Instrument ID:	11D2		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.80
Area: 2311808
Amount: 4.193515
Amount Units: pg/ul

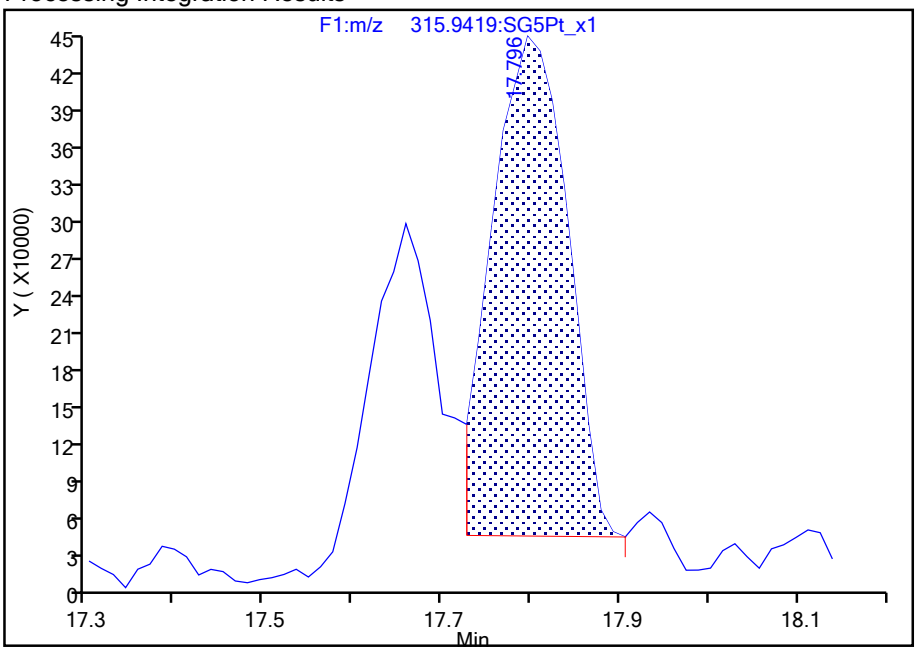

Manual Integration Results

RT: 17.66
Area: 1412639
Amount: 2.617445
Amount Units: pg/ul

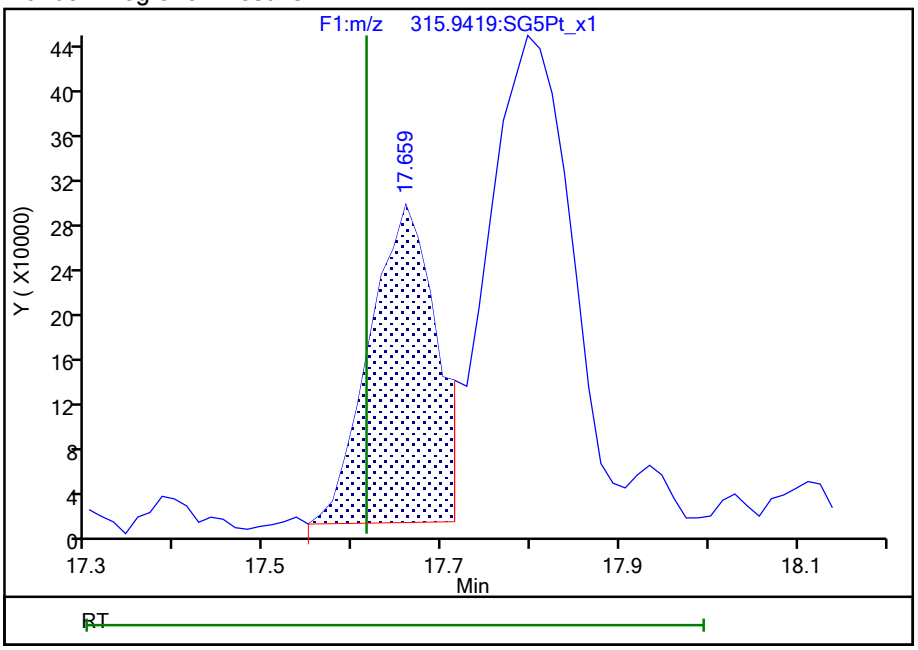

Reviewer: bennettd, 27-Aug-2021 09:38:53

Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_015.d				
Injection Date:	27-Aug-2021 00:14:03	Instrument ID:	11D2		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.78
Area: 3254218
Amount: 4.193515
Amount Units: pg/ul

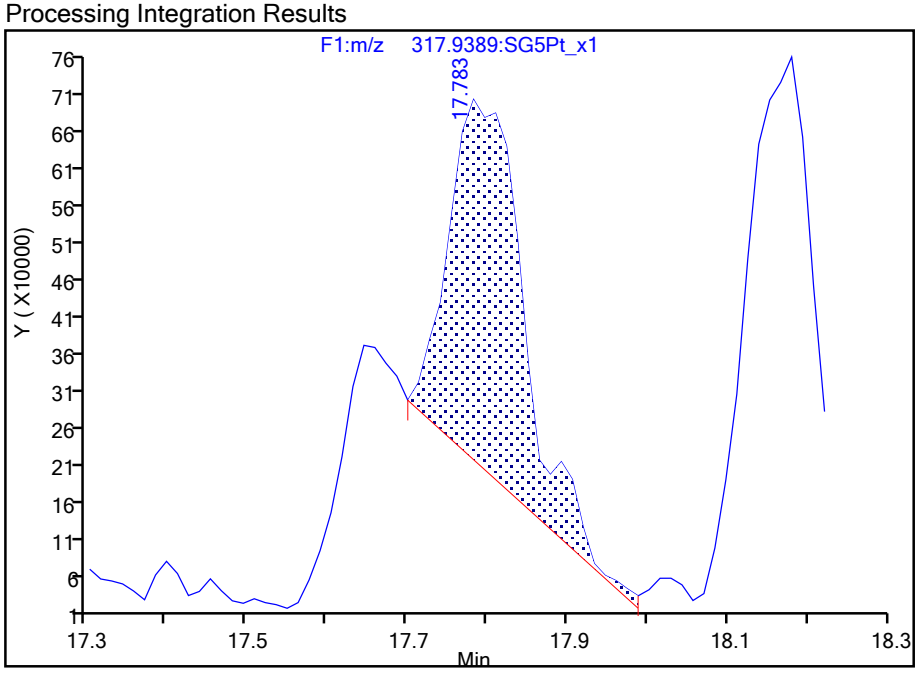

Manual Integration Results

RT: 17.65
Area: 2061479
Amount: 2.617445
Amount Units: pg/ul

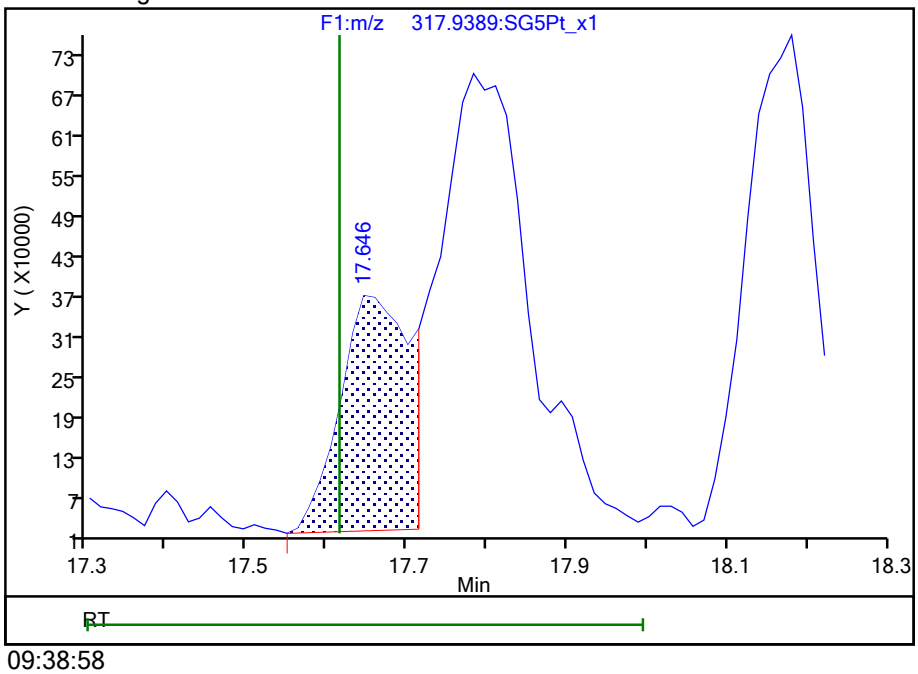

Reviewer: bennettd, 27-Aug-2021 09:38:58

Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_015.d				
Injection Date:	27-Aug-2021 00:14:03	Instrument ID:	11D2		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.63

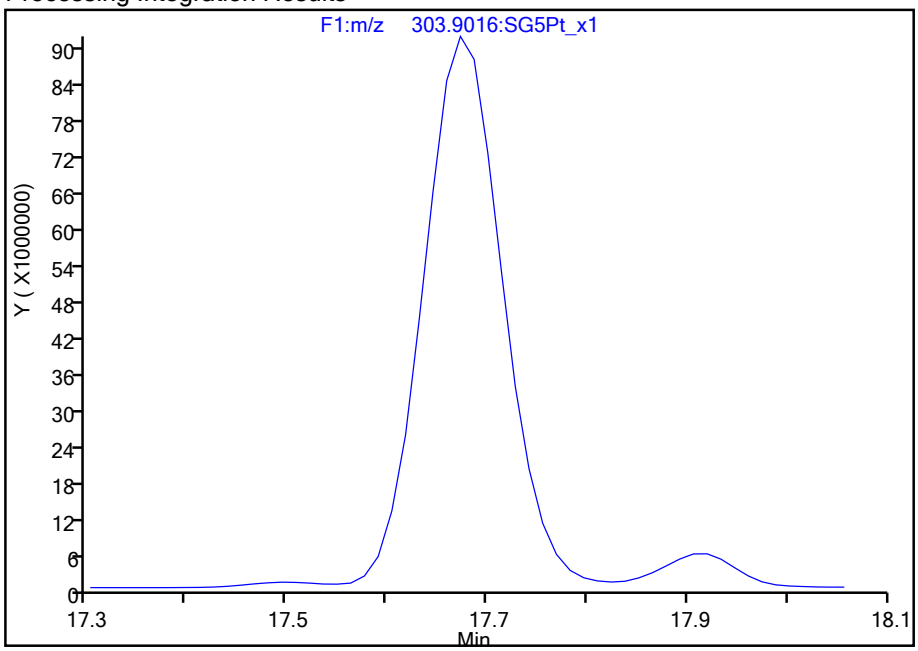

Manual Integration Results

RT: 17.67
Area: 508027138
Amount: 3337.3623
Amount Units: pg/ul

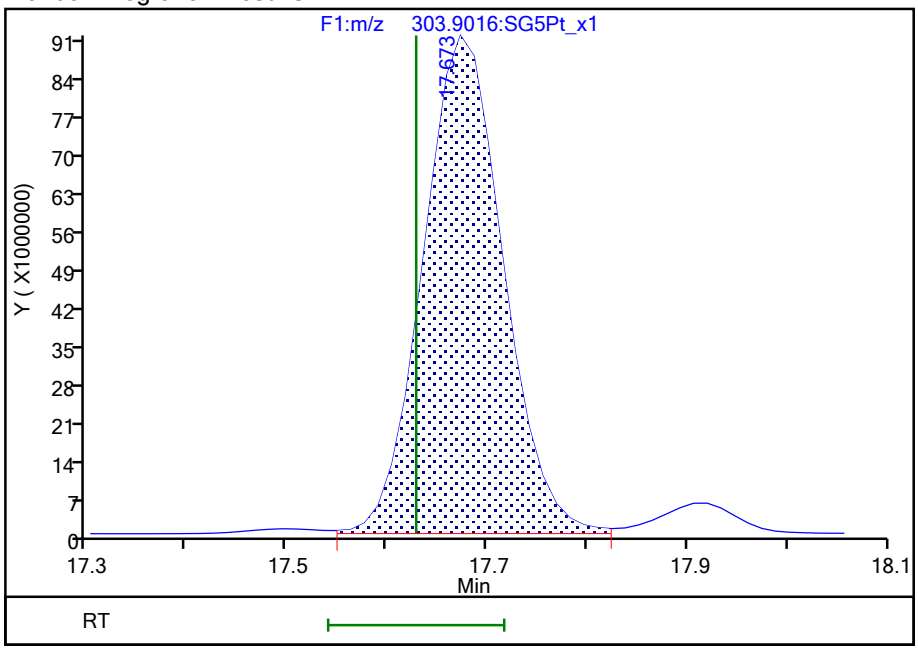

Reviewer: bennettd, 27-Aug-2021 09:39:08
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_015.d				
Injection Date:	27-Aug-2021 00:14:03	Instrument ID:	11D2		
Lims ID:	320-76888-A-3-A	Lab Sample ID:	320-76888-3		
Client ID:	11215702-072621-BN-SJSB094 (4-6)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

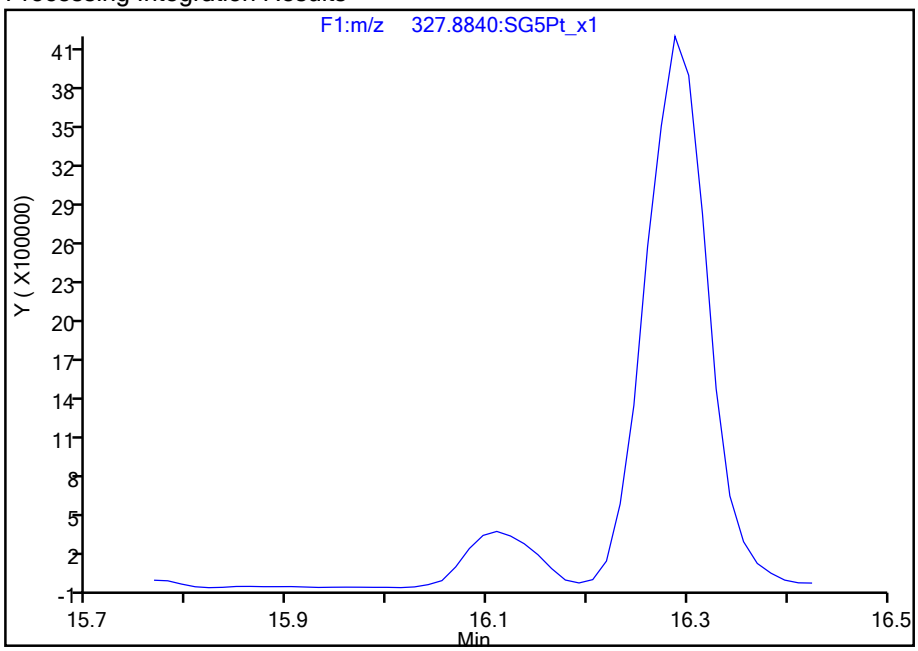

Manual Integration Results

RT: 16.11
Area: 2030860
Amount: 2.357855
Amount Units: pg/ul

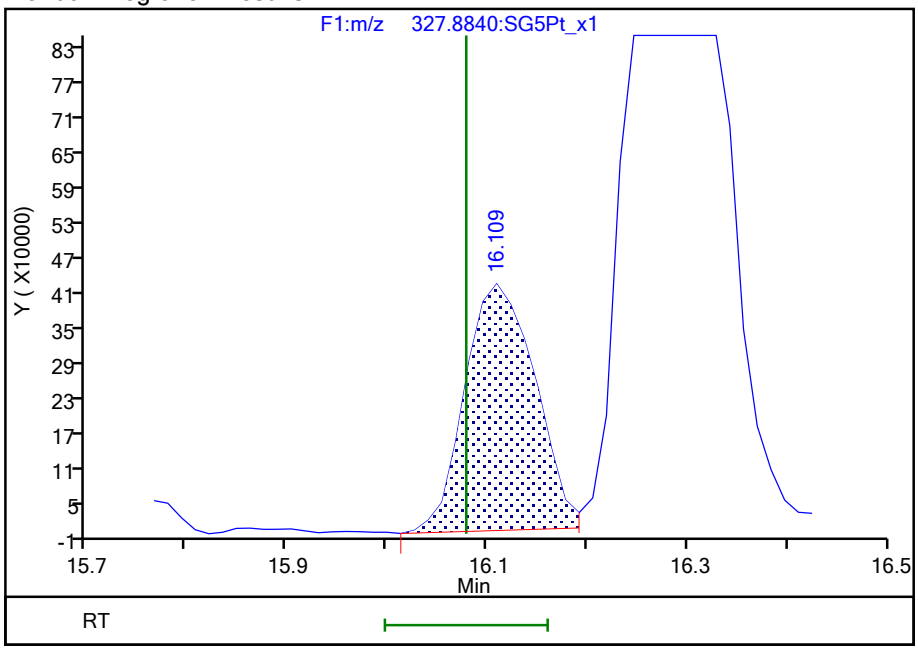

Reviewer: krenns, 27-Aug-2021 12:28:28

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 27-Aug-2021 12:28:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_015.d		
Injection Date:	27-Aug-2021 00:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	520145	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

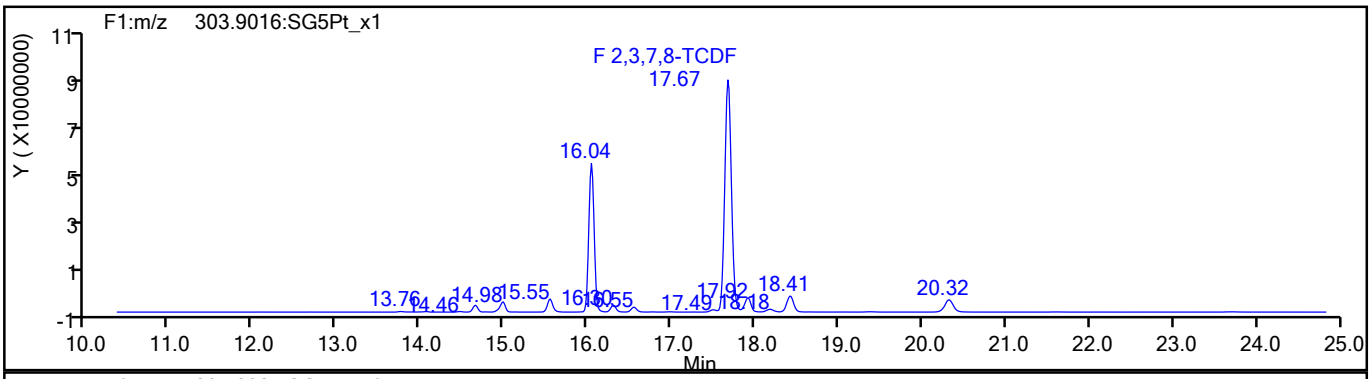

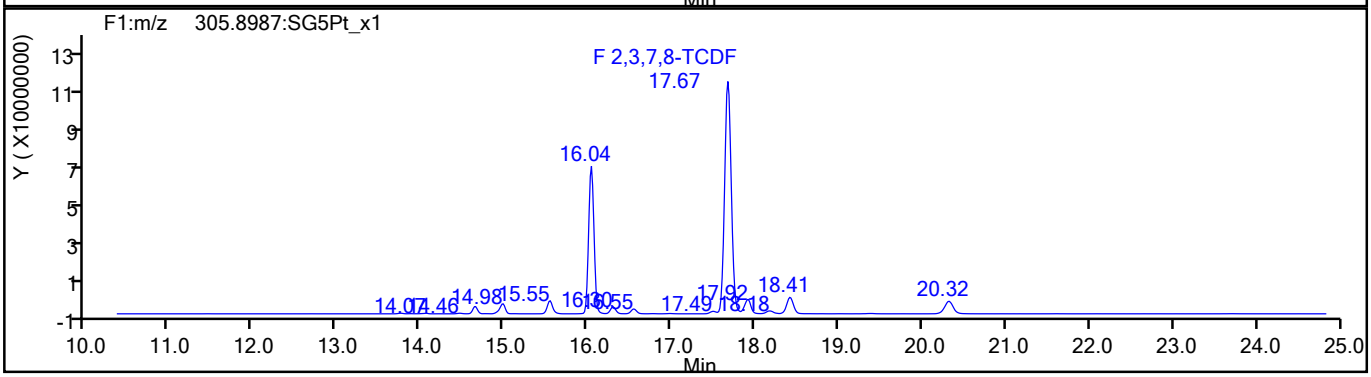

TCDF Standards

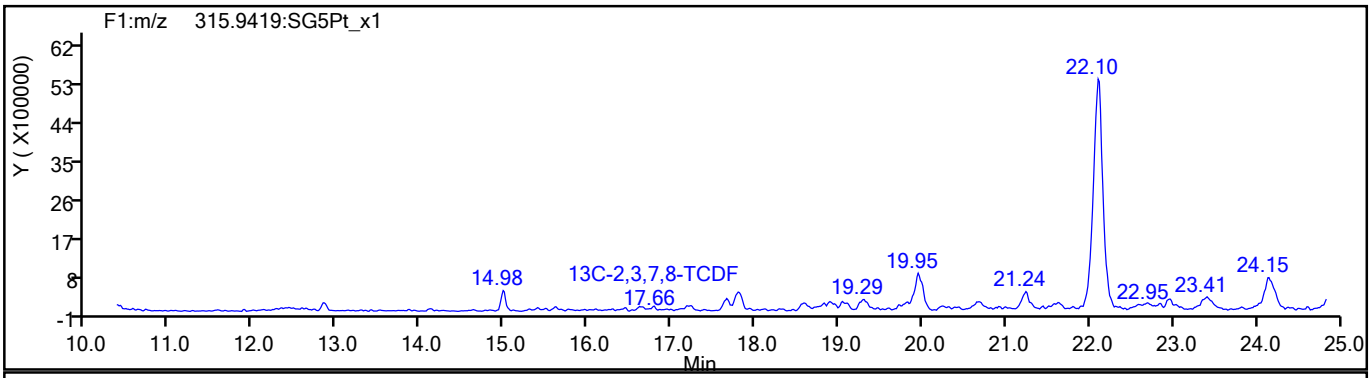

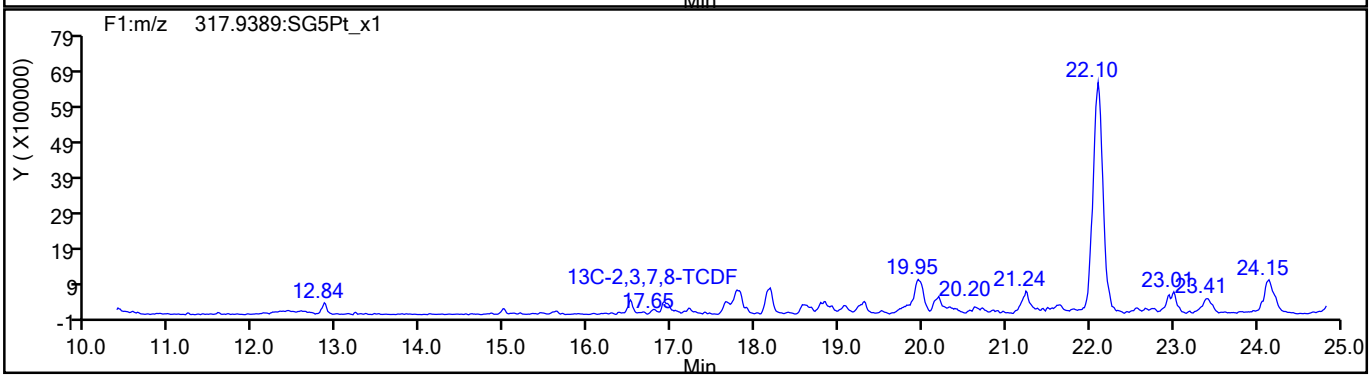

785393

Report Date: 27-Aug-2021 12:28:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_015.d		
Injection Date:	27-Aug-2021 00:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	520145	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

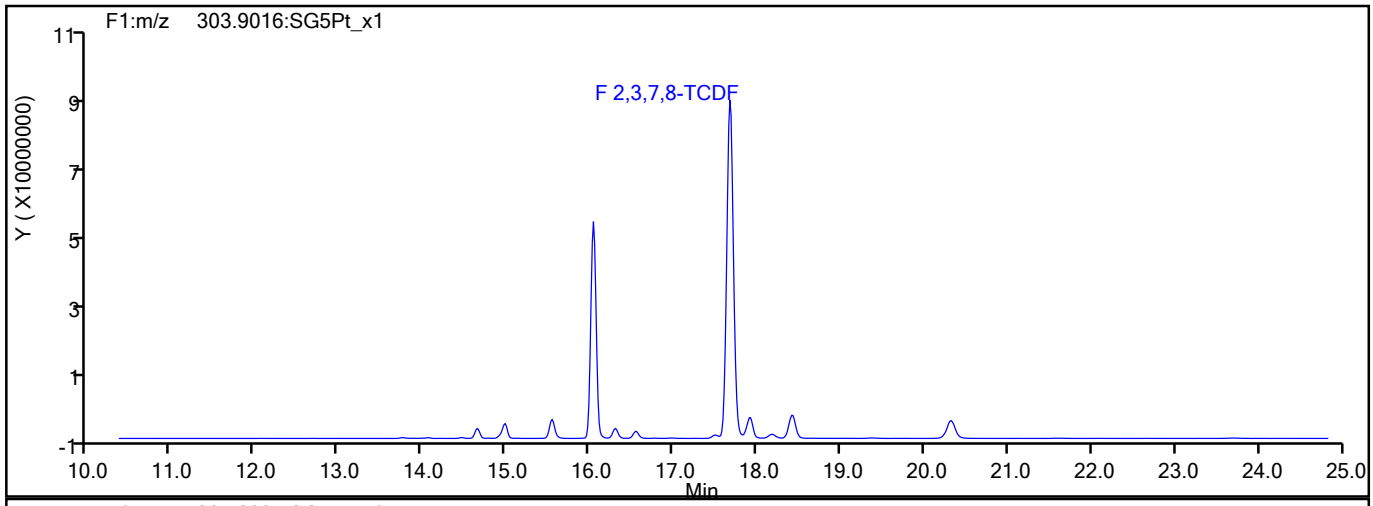

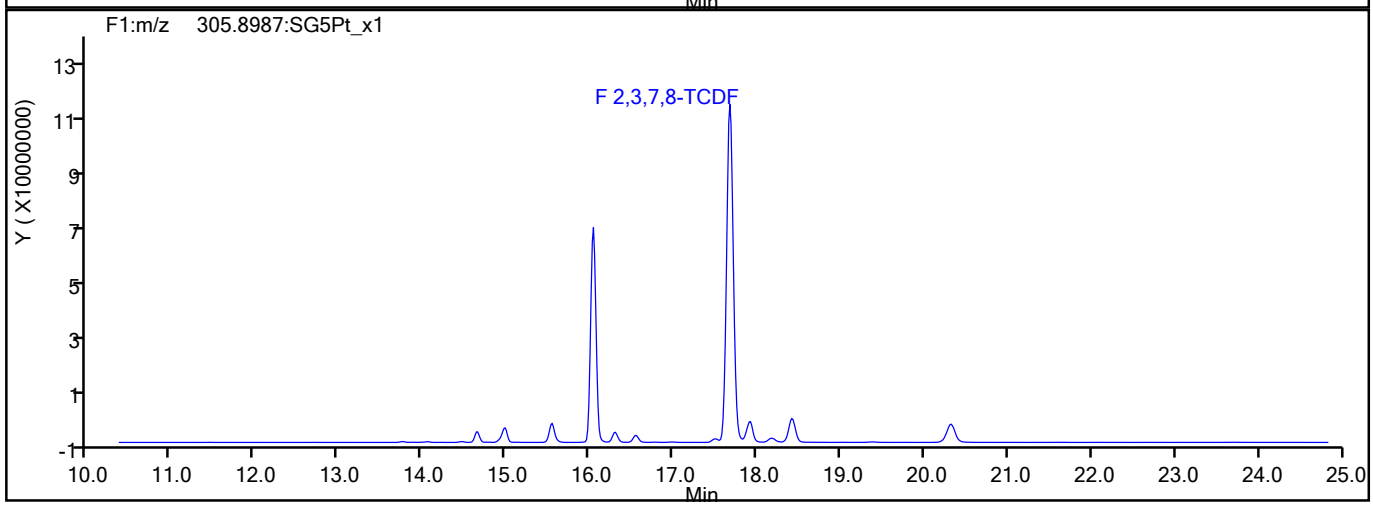

TCDF Interference Mass

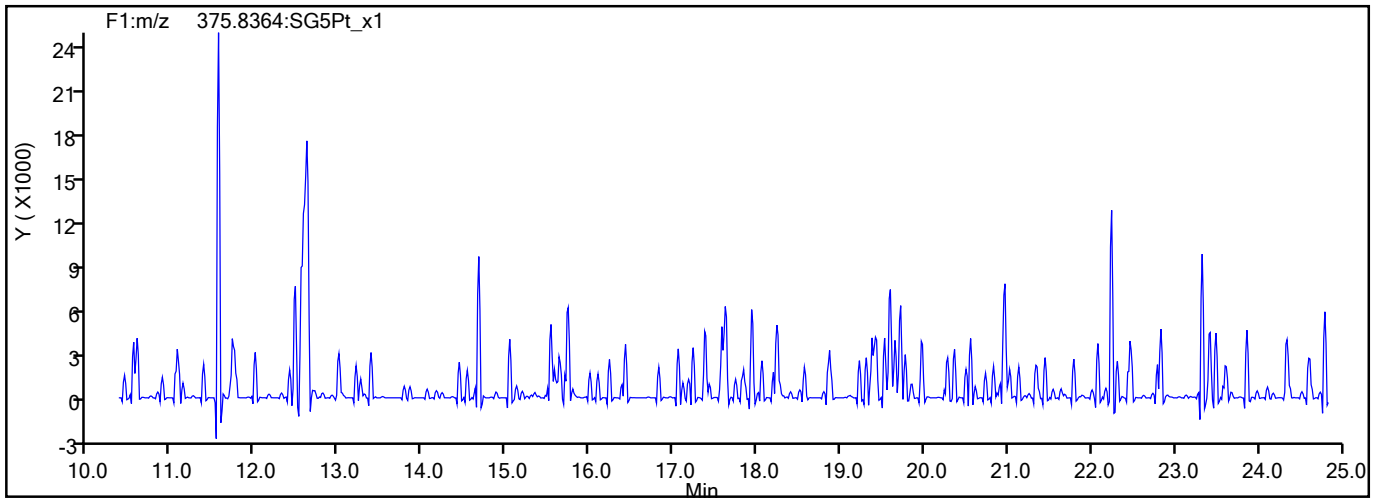

785394

Report Date: 27-Aug-2021 12:28:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_015.d		
Injection Date:	27-Aug-2021 00:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	520145	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

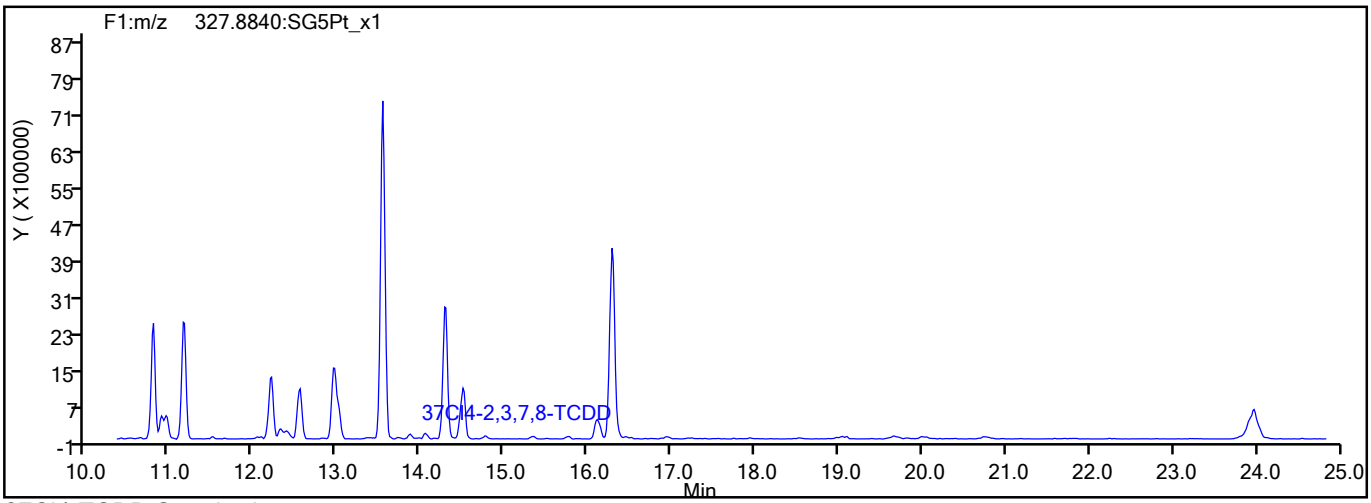

37Cl4-TCDD Standards

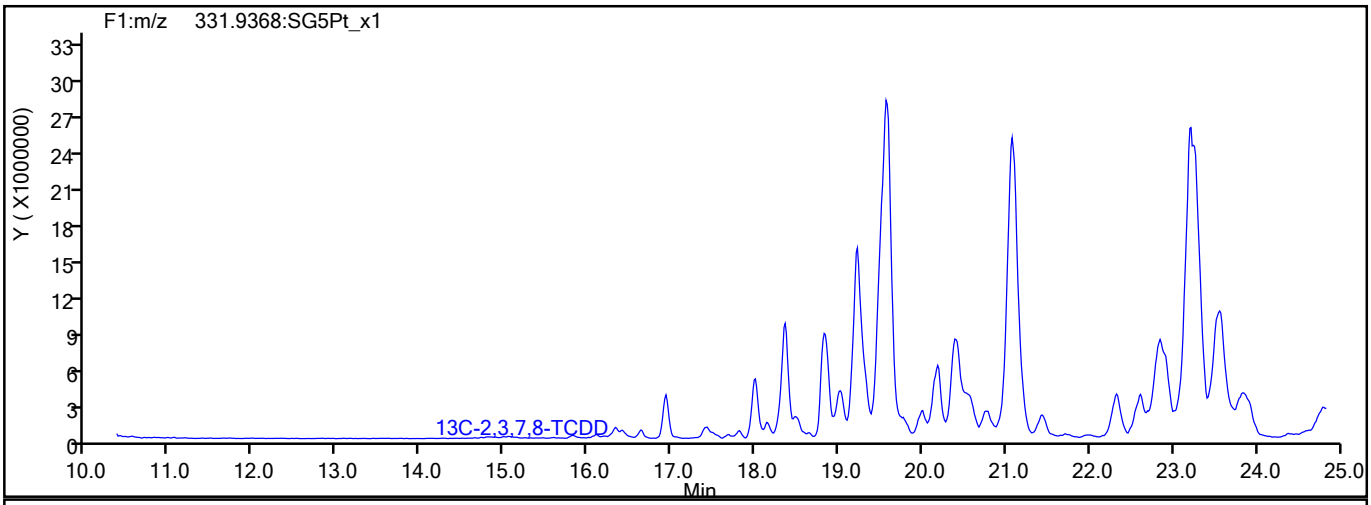

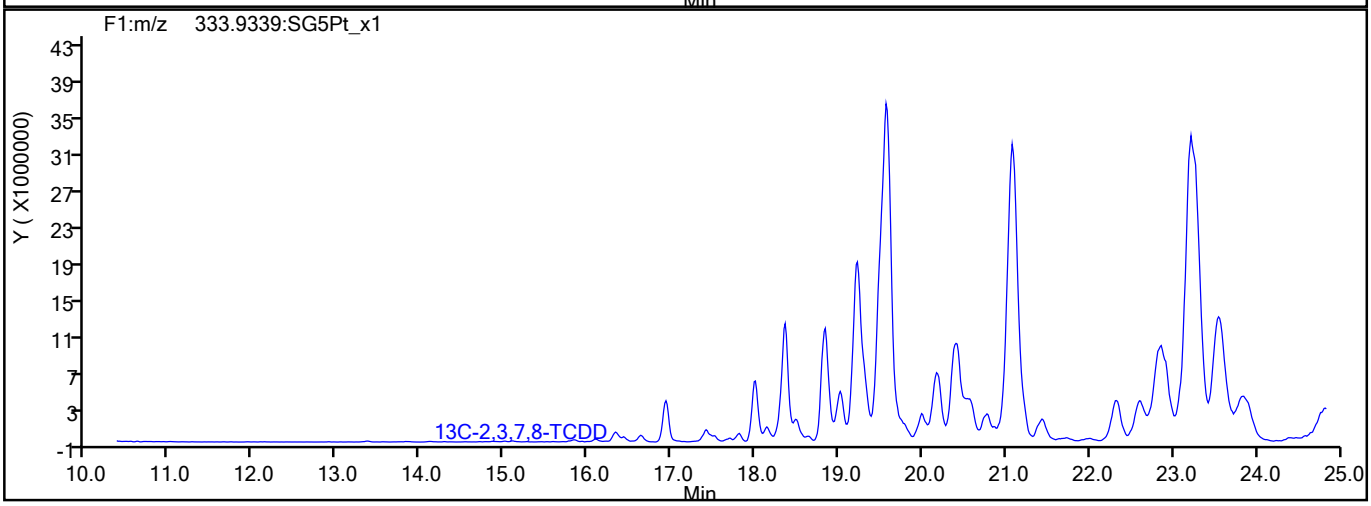

785395

Report Date: 27-Aug-2021 12:28:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_015.d		
Injection Date:	27-Aug-2021 00:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (4-6)		
Worklist#:	520145	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

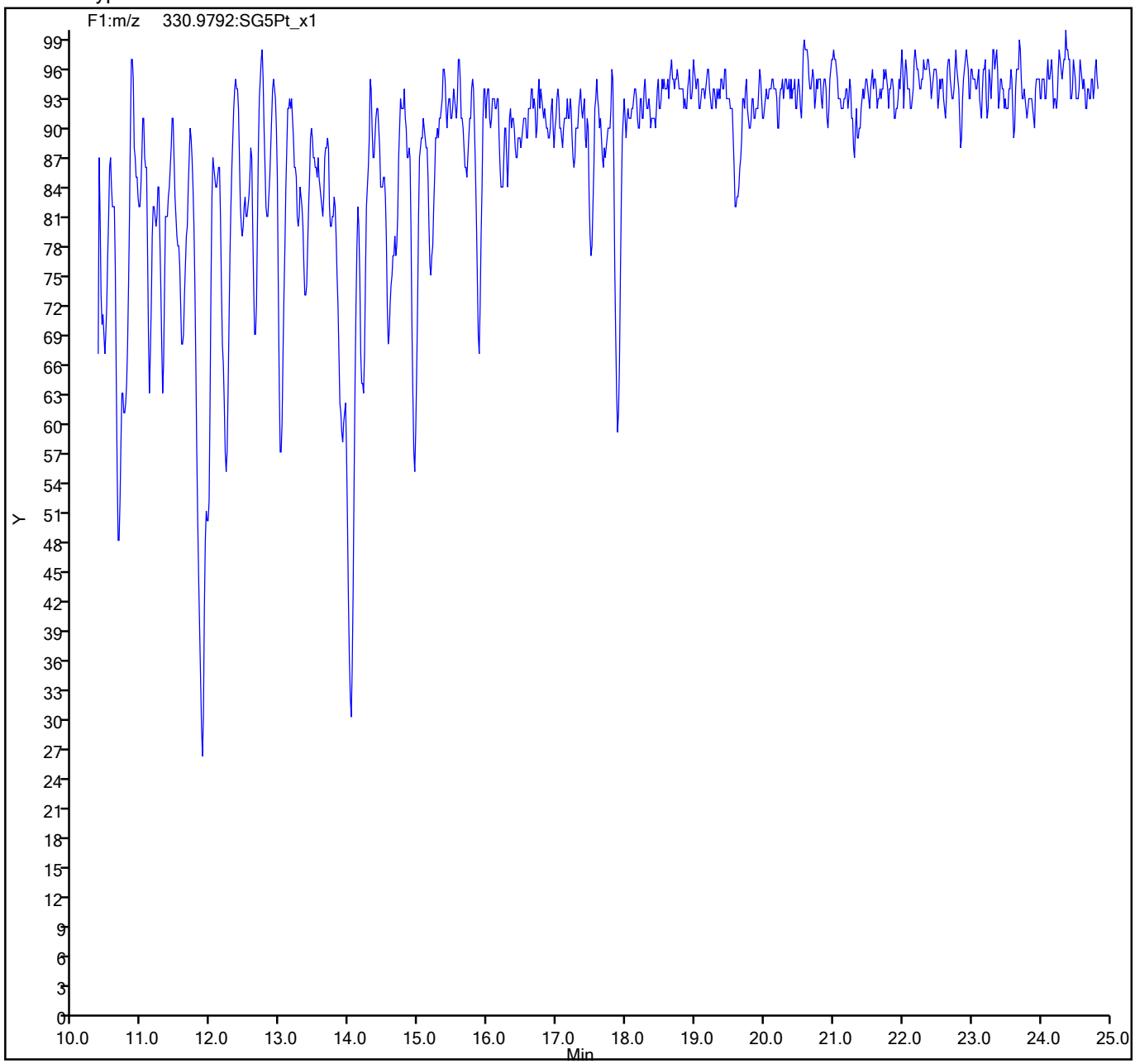

785396

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (6-8)
Lab Sample ID: 320-76888-4
Matrix: Sediment
Lab File ID: 19au21dfs1_24.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.14(g)
Date Analyzed: 08/20/2021 07:09
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 35.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	10000	E	15	13
40321-76-4	1,2,3,7,8-PeCDD	100	q	76	3.7
57117-41-6	1,2,3,7,8-PeCDF	920		76	6.9
57117-31-4	2,3,4,7,8-PeCDF	700		76	7.0
39227-28-6	1,2,3,4,7,8-HxCDD	ND		76	1.2
57653-85-7	1,2,3,6,7,8-HxCDD	ND		76	1.2
19408-74-3	1,2,3,7,8,9-HxCDD	ND		76	1.1
70648-26-9	1,2,3,4,7,8-HxCDF	1300		76	5.2
57117-44-9	1,2,3,6,7,8-HxCDF	330		76	6.1
72918-21-9	1,2,3,7,8,9-HxCDF	16	J	76	6.0
60851-34-5	2,3,4,6,7,8-HxCDF	32	J	76	4.5
35822-46-9	1,2,3,4,6,7,8-HpCDD	42	J B	76	1.2
67562-39-4	1,2,3,4,6,7,8-HpCDF	290	B	76	1.9
55673-89-7	1,2,3,4,7,8,9-HpCDF	110		76	2.2
3268-87-9	OCDD	680	B	150	3.1
39001-02-0	OCDF	180		150	2.6
41903-57-5	Total TCDD	11000	q	15	13
30402-14-3	Total TCDF	87000	B q G	60	60
36088-22-9	Total PeCDD	100	q	76	3.7
30402-15-4	Total PeCDF	2600	q	76	6.9
34465-46-8	Total HxCDD	9.9	J	76	1.1
55684-94-1	Total HxCDF	1900	q	76	5.5
37871-00-4	Total HpCDD	89	B	76	1.2
38998-75-3	Total HpCDF	480	B	76	2.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (6-8)
Lab Sample ID: 320-76888-4
Matrix: Sediment
Lab File ID: 19au21dfs1_24.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.14(g)
Date Analyzed: 08/20/2021 07:09
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 35.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	43		25-164
89059-46-1	13C-2,3,7,8-TCDF	43		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	40		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	38		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	43		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	45		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	41		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	40	q	26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	39		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	38		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	43		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	44		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	46		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	46		26-138
114423-97-1	13C-OCDD	41	q	17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d
Lims ID: 320-76888-A-4-A
Client ID: 11215702-072621-BN-SJSB094 (6-8)
Sample Type: Client
Inject. Date: 20-Aug-2021 07:09:00 ALS Bottle#: 0 Worklist Smp#: 22
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-4-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:08:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: dadunj Date: 23-Aug-2021 09:53:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.379	132490	0.78	2.1E+04	10.0	10.0				
D 13C-2,3,7,8-TCDF	20.417	77402	0.88	1.3459	4.341	4.341	0.2057	0.2057	43.41	
2,3,7,8-TCDF	20.443	13483015	0.82	1.0802	1612.6	1612.6	1.981	1.981		E
A Non-2,3,7,8-sub-TCDF	19.851	10275821	0.77	1.0802	1230.3	1229.0	1.981	738.7		RQMa
S Total TCDF					2843.0	2841.7	1.981	1.981		RQ
D 13C-2,3,7,8-TCDD	21.809	53581	0.71	0.9317	4.341	4.341	0.3203	0.3203	43.41	
2,3,7,8-TCDD	21.801	1982099	0.79	1.0753	344.0	344.0	0.4191	0.4191		E
$ 37Cl4-2,3,7,8-TCDD	21.801	38667		1.0083	2.894	2.894	0.0507	0.0507	72.36	
A Non-2,3,7,8-sub-TCDD	20.684	180573	0.77	1.0753	31.4	31.3	0.4191	30.7		RQ
S Total TCDD					375.5	375.3	0.4191	0.4191		RQ
D 13C-1,2,3,7,8-PeCDF	27.254	56854	1.51	1.1405	3.763	3.763	0.0324	0.0324	37.63	
1,2,3,7,8-PeCDF	27.280	181488	1.58	1.0543	30.3	30.3	0.2266	0.2266		M
D 13C-2,3,4,7,8-PeCDF	28.770	64171	1.64	1.1253	4.304	4.304	0.0328	0.0328	43.04	M
2,3,4,7,8-PeCDF	28.779	148056	1.61	1.0079	22.9	22.9	0.2291	0.2291		
A F1 PeCDFs	24.634	932	1.55	1.0311	0.1769	0.1494	0.006589	0.1494		RQa
A Non-2,3,7,8-sub-PeCDF	28.173	193884	1.55	1.0311	31.4	31.1	0.2278	13.3		RQMa
S Total PeCDF					84.7	84.4	0.2279	0.2279		RQ
D 13C-1,2,3,7,8-PeCDD	29.586	37931	1.78	0.7165	3.996	3.996	0.0175	0.0175	39.96	M
1,2,3,7,8-PeCDD	29.561	13446	1.55	1.0465	3.727	3.387	0.1218	0.1218		RQM
A Non-2,3,7,8-sub-PeCDD	28.478						0.1218	0.1358		RQU
S Total PeCDD					3.727	3.387	0.1218	0.1218		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.910	48905	0.51	0.9648	4.364	4.040	0.0345	0.0345	43.64	RQ
1,2,3,4,7,8-HxCDF	34.919	261949	1.26	1.1474	43.2	43.2	0.1721	0.1721		
D 13C-1,2,3,6,7,8-HxCDF	35.079	52972	0.58	1.0708	3.943	3.943	0.0311	0.0311	39.43	M
1,2,3,6,7,8-HxCDF	35.087	69142	1.22	1.2178	10.7	10.7	0.1995	0.1995		
D 13C-2,3,4,6,7,8-HxCDF	35.887	56304	0.54	1.0413	4.309	4.309	0.0319	0.0319	43.09	
2,3,4,6,7,8-HxCDF	35.904	7206	1.28	1.2145	1.054	1.054	0.1486	0.1486		Ma
D 13C-1,2,3,7,8,9-HxCDF	36.788	45830	0.52	0.9731	3.754	3.754	0.0342	0.0342	37.54	
1,2,3,7,8,9-HxCDF	36.796	3025	1.20	1.2401	0.5322	0.5322	0.1964	0.1964		M
A Non-2,3,7,8-sub-HxCDF	35.009	44562	1.24	1.2049	7.320	7.114	0.1763	2.801		RQMa
S Total HxCDF					62.8	62.6	0.1791	0.1791		RQ

785399

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.594	125472	1.28	1.8E+04	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	36.115	42434	1.41	0.7587	4.458	4.458	0.0403	0.0403	44.58	
1,2,3,4,7,8-HxCDD	36.109						0.0382	0.0382		
D 13C-1,2,3,6,7,8-HxCDD	36.216	43766	1.30	0.8593	4.059	4.059	0.0356	0.0356	40.59	
1,2,3,6,7,8-HxCDD	36.227						0.0379	0.0379		
1,2,3,7,8,9-HxCDD	36.611						0.0352	0.0352		RQU
A Non-2,3,7,8-sub-HxCDD	35.375	1478	1.30	1.0545	0.3252	0.3252	0.0370	0.3252		
S Total HxCDD					0.3252	0.3252	0.0371	0.0371		
D 13C-1,2,3,4,6,7,8-HpCDF	38.602	42076	0.50	0.7359	4.557	4.557	0.0649	0.0649	45.57	
1,2,3,4,6,7,8-HpCDF	38.619	57596	1.02	1.4421	9.492	9.492	0.0621	0.0621		
D 13C-1,2,3,4,7,8,9-HpCDF	39.856	39948	0.45	0.6854	4.645	4.645	0.0697	0.0697	46.45	
1,2,3,4,7,8,9-HpCDF	39.865	18941	1.12	1.3092	3.622	3.622	0.0726	0.0726		
A Non-2,3,7,8-sub-HpCDF	39.245	14478	1.17	1.3756	2.566	2.566	0.0670	2.566		
S Total HpCDF					15.7	15.7	0.0673	0.0673		
D 13C-1,2,3,4,6,7,8-HpCDD	39.553	37464	0.95	0.6745	4.427	4.427	0.0963	0.0963	44.27	
1,2,3,4,6,7,8-HpCDD	39.570	5460	0.95	1.0503	1.388	1.388	0.0401	0.0401		
A Non-2,3,7,8-sub-HpCDD	39.241	6038	1.05	1.0503	1.534	1.534	0.0401	1.534		M
S Total HpCDD					2.922	2.922	0.0401	0.0401		
D 13C-OCDD	42.057	55384	0.89	0.5446	8.815	8.105	0.1088	0.1088	44.08	RQ
OCDF	42.150	22856	0.98	1.3168	5.763	5.763	0.0840	0.0840		
OCDD	42.057	71011	0.93	1.0620	22.2	22.2	0.1016	0.1016		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:08:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d
Lims ID: 320-76888-A-4-A
Client ID: 11215702-072621-BN-SJSB094 (6-8)
Sample Type: Client
Inject. Date: 20-Aug-2021 07:09:00 ALS Bottle#: 0 Worklist Smp#: 22
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-4-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:08:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: dadunj Date: 23-Aug-2021 09:53:18

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.379	21.395	-1		57933	7878	108	270	73		
333.9338	21.388	21.395	0		74557	9716	102	255	95	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.417	20.365	3	0.955	36140	7061	100	250	71		
317.9389	20.434	20.365	4	0.956	41262	5637	95	237	59	0.88(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.443	20.408	2	1.001	6073613	813054	498	1245	1633		
305.8987	20.443	20.408	2	1.001	7409402	962161	589	1472	1634	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	17.461	19.851	-143	0.855	36428	5939	498	1245	12		
	Empc Correction				25553	5182	498	1245	10		
305.8987	17.469	19.851	-143	0.856	33186	6731	589	1472	11	1.10(0.65-0.89)	
303.9016	17.916	19.851	-116	0.878	122622	19635	498	1245	39		M
305.8987	17.916	19.851	-116	0.878	156369	25270	589	1472	43	0.78(0.65-0.89)	
303.9016	18.415	19.851	-86	0.902	216403	26988	498	1245	54		
305.8987	18.415	19.851	-86	0.902	274231	34115	589	1472	58	0.79(0.65-0.89)	
303.9016	18.836	19.851	-61	0.923	189131	25169	498	1245	51		
305.8987	18.836	19.851	-61	0.923	236681	30217	589	1472	51	0.80(0.65-0.89)	
303.9016	19.222	19.851	-38	0.941	265388	38578	498	1245	77		
305.8987	19.222	19.851	-38	0.941	344670	50951	589	1472	87	0.77(0.65-0.89)	
303.9016	19.712	19.851	-8	0.965	2783981	391110	498	1245	785		
305.8987	19.721	19.851	-8	0.966	3392559	479964	589	1472	815	0.82(0.65-0.89)	
303.9016	20.125	19.851	16	0.986	100052	14145	498	1245	28		
305.8987	20.116	19.851	16	0.985	120869	16065	589	1472	27	0.83(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.233	19.851	83	1.040	398936	51885	498	1245	104		
305.8987	21.233	19.851	83	1.040	507575	64322	589	1472	109	0.79(0.65-0.89)	
303.9016	21.689	19.851	110	1.062	81986	10227	498	1245	21		
305.8987	21.672	19.851	109	1.061	100171	12984	589	1472	22	0.82(0.65-0.89)	
303.9016	23.622	19.851	226	1.157	412340	70077	498	1245	141		a
305.8987	23.622	19.851	226	1.157	513118	88896	589	1472	151	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.809	21.716	6	1.020	22232	2891	108	270	27		
333.9338	21.792	21.716	5	1.019	31349	4698	102	255	46	0.71(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	21.801	21.733	4	1.000	877768	115402	89	222	1297		
321.8936	21.809	21.733	5	1.000	1104331	141887	48	120	2956	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.801	21.799	0	1.020	38667	5409	36	90	150		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	20.314	20.684	-22	0.931	1692	369	89	222	4		
321.8936	20.322	20.684	-22	0.932	2814	529	48	120	11	0.60(0.65-0.89)	
	Empc Correction				2197	479	48	120	10		
319.8965	22.471	20.684	107	1.030	78102	9886	89	222	111		
321.8936	22.454	20.684	106	1.030	98582	12578	48	120	262	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.254	27.251	0	1.275	34235	6586	17	42	387		
353.8970	27.238	27.251	-1	1.274	22619	3542	9	22	394	1.51(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.280	27.276	0	1.001	111042	16263	34	85	478		M
341.8567	27.271	27.276	0	1.001	70446	10668	63	157	169	1.58(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											M
351.9000	28.770	28.757	1	1.346	39819	6724	17	42	396		M
353.8970	28.770	28.757	1	1.346	24352	3756	9	22	417	1.64(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.779	28.791	-1	1.000	91337	12905	34	85	380		
341.8567	28.779	28.791	-1	1.000	56719	8301	63	157	132	1.61(1.32-1.78)	
A F1 PeCDFs											RQa
339.8597	24.078	24.634	-33	0.883	567	169	1	2	169		a
341.8567	24.087	24.634	-33	0.884	537	111	2	5	56	1.06(1.32-1.78)	
	Empc Correction				365	109	2	5	55		
A Non-2,3,7,8-sub-PeCDF											RQMa
339.8597	25.806	28.173	-142	0.947	52149	8369	34	85	246		
341.8567	25.798	28.173	-142	0.947	30975	5352	63	157	85	1.68(1.32-1.78)	
339.8597	26.707	28.173	-88	0.980	6206	854	34	85	25		
341.8567	26.733	28.173	-86	0.981	3862	560	63	157	9	1.61(1.32-1.78)	
339.8597	27.170	28.173	-60	0.997	9054	1963	34	85	58		M
341.8567	27.162	28.173	-61	0.997	7670	1323	63	157	21	1.18(1.32-1.78)	
	Empc Correction				5841	1266	63	157	20		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	27.844	28.173	-20	1.022	32819	5257	34	85	155		
341.8567	27.844	28.173	-20	1.022	20271	3164	63	157	50	1.62(1.32-1.78)	
339.8597	29.107	28.173	56	1.068	19678	2818	34	85	83		
341.8567	29.098	28.173	55	1.068	13029	1687	63	157	27	1.51(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											M
367.8949	29.586	29.574	1	1.384	24283	3262	5	12	652		
369.8919	29.561	29.574	-1	1.383	13648	2389	4	10	597	1.78(1.32-1.78)	M
1,2,3,7,8-PeCDD											RQM
355.8546	29.561	29.616	-3	0.999	9520	1296	23	57	56		
	Empc Correction				8173	1115	23	57	48		
357.8516	29.603	29.616	-1	1.001	5273	720	6	15	120	1.81(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.478	28.478	0	0.963	276	95	23	57			
	Empc Correction				173	66	23	57	0		
357.8516	28.478	28.478	0	0.963	112	43	6	15		2.46(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											RQ
383.8639	34.910	34.906	0	0.954	20438	4497	14	35	321		
	Empc Correction				16517	3647	14	35	261		
385.8610	34.910	34.906	0	0.954	32388	7152	21	52	341	0.63(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.919	34.922	0	1.000	146194	27460	50	125	549		
375.8178	34.919	34.922	0	1.000	115755	22069	42	105	525	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											M
383.8639	35.079	35.066	1	0.959	19445	3538	14	35	253		
385.8610	35.070	35.066	0	0.958	33527	5930	21	52	282	0.58(0.43-0.59)	M
1,2,3,6,7,8-HxCDF											
373.8208	35.087	35.082	0	1.000	37966	7049	50	125	141		
375.8178	35.079	35.082	0	1.000	31176	5265	42	105	125	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.887	35.890	0	0.981	19770	4349	14	35	311		
385.8610	35.887	35.890	0	0.981	36534	8395	21	52	400	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											Ma
373.8208	35.904	35.907	0	1.000	4046	827	50	125	17		M
375.8178	35.879	35.907	-2	1.000	3160	584	42	105	14	1.28(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.788	36.782	0	1.005	15663	2954	14	35	211		
385.8610	36.788	36.782	0	1.005	30167	6488	21	52	309	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.796	36.791	0	1.000	1648	540	50	125	11		M
375.8178	36.779	36.791	-1	1.000	1377	419	42	105	10	1.20(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.428	35.009	-95	0.958	9996	1561	50	125	31		
375.8178	33.428	35.009	-95	0.958	7551	1283	42	105	31	1.32(1.05-1.43)	
373.8208	34.304	35.009	-42	0.983	4231	724	50	125	14		
375.8178	34.287	35.009	-43	0.982	3507	608	42	105	14	1.21(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	35.803	35.009	48	1.026	2760	576	50	125	12		M
375.8178	35.761	35.009	45	1.024	2083	368	42	105	9	1.33(1.05-1.43)	
373.8208	36.889	35.009	113	1.057	9276	1937	50	125	39		M
	Empc Correction				7990	1744	50	125	35		
375.8178	36.906	35.009	114	1.057	6444	1407	42	105	34	1.44(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.594	36.581	1		70471	15137	28	70	541		
403.8529	36.594	36.581	1		55001	11029	4	10	2757	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.115	36.092	1	0.987	24811	5236	28	70	187		
403.8529	36.089	36.092	0	0.986	17623	3410	4	10	853	1.41(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.109						8	20			
391.8127	36.109						6	15			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.216	36.210	0	0.990	24738	5402	28	70	193		
403.8529	36.232	36.210	1	0.990	19028	3885	4	10	971	1.30(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.227						8	20			
391.8127	36.227						6	15			
1,2,3,7,8,9-HxCDD											RQU
389.8158	36.597						8	20			
391.8127	36.597						6	15			
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.340	35.375	-2	0.976	835	232	8	20	29		
391.8127	35.348	35.375	-2	0.976	643	158	6	15	26	1.30(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.602	38.596	0	1.055	13943	3998	26	65	154		
419.8220	38.611	38.596	1	1.055	28133	6839	24	60	285	0.50(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.619	38.618	0	1.000	29052	7651	26	65	294		
409.7788	38.619	38.618	0	1.000	28544	7354	13	32	566	1.02(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.856	39.850	0	1.089	12383	2875	26	65	111		
419.8220	39.856	39.850	0	1.089	27565	7327	24	60	305	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.865	39.872	0	1.000	10003	2481	26	65	95		
409.7788	39.873	39.872	0	1.000	8938	2335	13	32	180	1.12(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.981	39.245	-16	1.010	7819	2055	26	65	79		
409.7788	38.981	39.245	-16	1.010	6659	1722	13	32	132	1.17(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.553	39.547	0	1.081	18207	5338	53	132	101		
437.8140	39.553	39.547	0	1.081	19257	5341	15	37	356	0.95(0.88-1.20)	

Report Date: 25-Aug-2021 15:08:10 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.570	39.561	1	1.000	2664	781	12	30	65		
425.7737	39.562	39.561	0	1.000	2796	797	6	15	133	0.95(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											M
423.7767	38.922	39.241	-19	0.984	3099	873	12	30	73		
425.7737	38.914	39.241	-20	0.984	2939	847	6	15	141	1.05(0.88-1.20)	M
13C-OCDD											RQ
469.7780	42.057	42.036	1	1.149	30935	7536	50	125	151		
	Empc Correction				26080	6496	50	125	130		
471.7750	42.049	42.036	1	1.149	29304	7299	12	30	608	1.06(0.76-1.02)	
OCDF											
441.7428	42.150	42.137	1	1.002	11291	2565	9	22	285		
443.7399	42.150	42.137	1	1.002	11565	2623	24	60	109	0.98(0.76-1.02)	
OCDD											
457.7377	42.057	42.053	0	1.000	34295	7635	17	42	449		
459.7348	42.057	42.053	0	1.000	36716	8609	15	37	574	0.93(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:08:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Lims ID:	320-76888-A-4-A		
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Inject. Date:	20-Aug-2021 07:09:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	22

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	77402	12698

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		10.000	77402	12698

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.461	36428	5939	33186	6731	8.33	1.10	RQ
17.461	25553	5182	33186	6731	7.03		Empc Correction
17.916	122622	19635	156369	25270	33.4	0.78	M
18.415	216403	26988	274231	34115	58.7	0.79	
18.836	189131	25169	236681	30217	50.9	0.80	
19.222	265388	38578	344670	50951	73.0	0.77	
19.712	2783981	391110	3392559	479964	738.7	0.82	
20.125	100052	14145	120869	16065	26.4	0.83	
21.233	398936	51885	507575	64322	108.4	0.79	
21.689	81986	10227	100171	12984	21.8	0.82	
23.622	412340	70077	513118	88896	110.7	0.80	a
Signal Totals:							
	4596392	652996	5679429	809515			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10286696	1463268				0.81	RQMa
	10275821	1462511					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1230.3 = (10286696 * 10.000) / (77402 * 1.080)

Empc Amount: 1229.0 = (10275821 * 10.000) / (77402 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:08:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Lims ID:	320-76888-A-4-A		
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Inject. Date:	20-Aug-2021 07:09:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	22

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	53581	7589

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		10.000	53581	7589

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
20.314	1692	369	2814	529	0.7820	0.60	RQ
20.314	1692	369	2197	479	0.6750		Empc Correction
22.471	78102	9886	98582	12578	30.7	0.79	
Signal Totals:							
	79794	10255	100779	13057			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	181190	23362				0.79	RQ
	180573	23312					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 31.447 = (181190 * 10.000) / (53581 * 1.075)

Empc Amount: 31.340 = (180573 * 10.000) / (53581 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Lims ID:	320-76888-A-4-A		
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Inject. Date:	20-Aug-2021 07:09:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	22

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	56854	10128
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	64171	10480

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	60512	10304

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.078	567	169	537	111	0.1769	1.06	RQa
24.078	567	169	365	109	0.1494		Empc Correction
Signal Totals:	567	169	365	109			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1104	280				1.06	RQa
	932	278					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1769 = (1104 * 10.000) / (60512 * 1.031)
Empc Amount: 0.1494 = (932 * 10.000) / (60512 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Lims ID:	320-76888-A-4-A		
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Inject. Date:	20-Aug-2021 07:09:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	22

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	56854	10128
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	64171	10480

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	60512	10304

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.806	52149	8369	30975	5352	13.3	1.68	
26.707	6206	854	3862	560	1.61	1.61	
27.170	9054	1963	7670	1323	2.68	1.18	RQMa
27.170	9054	1963	5841	1266	2.39		Empc Correction
27.844	32819	5257	20271	3164	8.51	1.62	
29.107	19678	2818	13029	1687	5.24	1.51	
Signal Totals:							
	119906	19261	73978	12029			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	195713	31347				1.58	RQMa
	193884	31290					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 31.368 = (195713 * 10.000) / (60512 * 1.031)
Empc Amount: 31.075 = (193884 * 10.000) / (60512 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:08:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Lims ID:	320-76888-A-4-A		
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Inject. Date:	20-Aug-2021 07:09:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	22

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	37931	5651

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		10.000	37931	5651

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
28.913	276	95	112	43	0.1358	2.46	RQ
28.913	173	66	112	43			Empc Correction

Compound is Marked ND

Report Date: 25-Aug-2021 15:08:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Lims ID:	320-76888-A-4-A		
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Inject. Date:	20-Aug-2021 07:09:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	22

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	52826	11649
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	52972	9468
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	56304	12744
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	45830	9442

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		10.000	51983	10825

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.428	9996	1561	7551	1283	2.80	1.32	
34.304	4231	724	3507	608	1.24	1.21	
35.803	2760	576	2083	368	0.7732	1.33	Ma
36.889	9276	1937	6444	1407	2.51	1.44	RQMa
36.889	7990	1744	6444	1407	2.30		Empc Correction
Signal Totals:							
	24977	4605	19585	3666			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	45848	8464				1.34	RQMa
	44562	8271					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 7.320 = (45848 * 10.000) / (51983 * 1.205)

Empc Amount: 7.114 = (44562 * 10.000) / (51983 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:08:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Lims ID:	320-76888-A-4-A		
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Inject. Date:	20-Aug-2021 07:09:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	22

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	42434	8646
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	43766	9287
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		10.000	43100	8966

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.340	835	232	643	158	0.3252	1.30	
Signal Totals:							
	835	232	643	158			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1478	390				1.30	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.3252 = (1478 * 10.000) / (43100 * 1.055)

Report Date: 25-Aug-2021 15:08:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Lims ID:	320-76888-A-4-A		
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Inject. Date:	20-Aug-2021 07:09:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	22

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	42076	10837
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	39948	10202

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		10.000	41012	10519

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.981	7819	2055	6659	1722	2.57	1.17	
Signal Totals:							
	7819	2055	6659	1722			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	14478	3777				1.17	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.566 = (14478 * 10.000) / (41012 * 1.376)

Report Date: 25-Aug-2021 15:08:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Lims ID:	320-76888-A-4-A		
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Inject. Date:	20-Aug-2021 07:09:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	22

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	37464	10679

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		10.000	37464	10679

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.922	3099	873	2939	847	1.53	1.05	M
Signal Totals:							
	3099	873	2939	847			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6038	1720				1.05	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.534 = (6038 * 10.000) / (37464 * 1.050)

QC Flag Legend

Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 17.907 Area = 59205

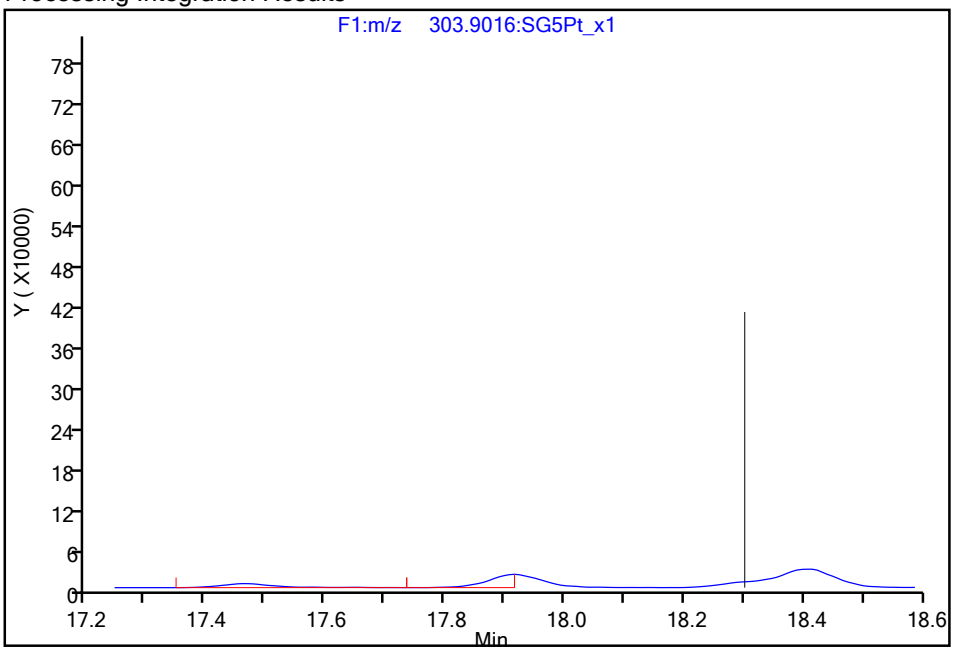

Manual Integration Results

RT = 17.916 Area = 122622 M

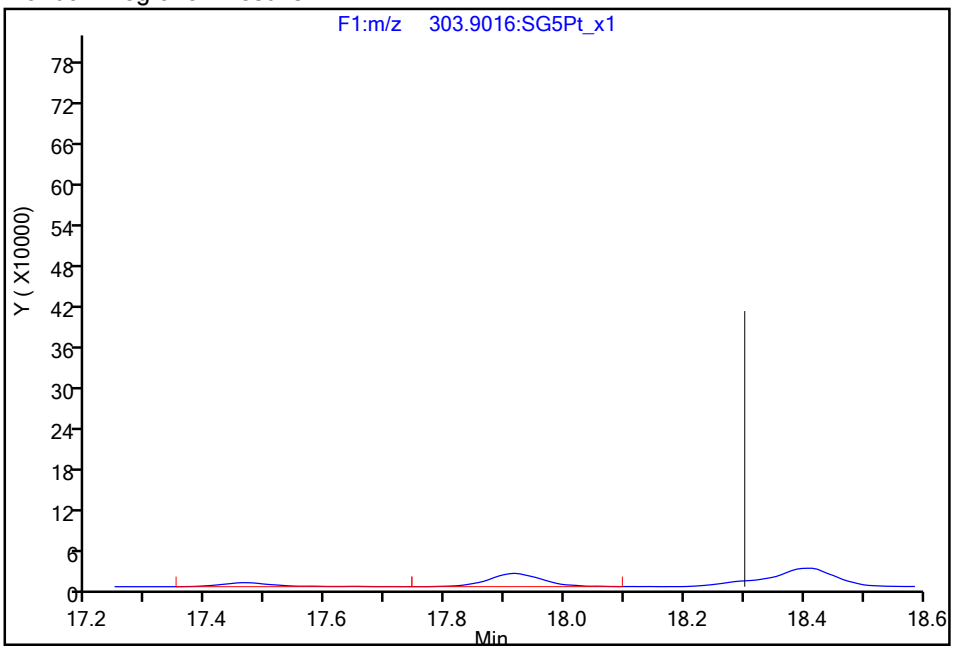

Reviewer: krenns, 25-Aug-2021 15:07:28

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.28
Area: 120111
Amount: 33.071587
Amount Units: pg/ul

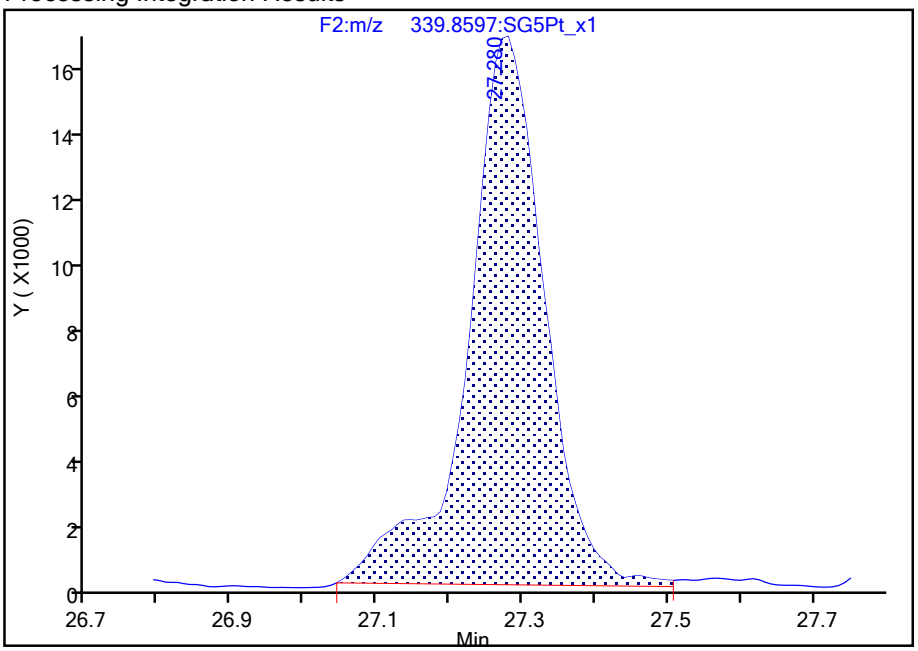

Manual Integration Results

RT: 27.28
Area: 111042
Amount: 30.278751
Amount Units: pg/ul

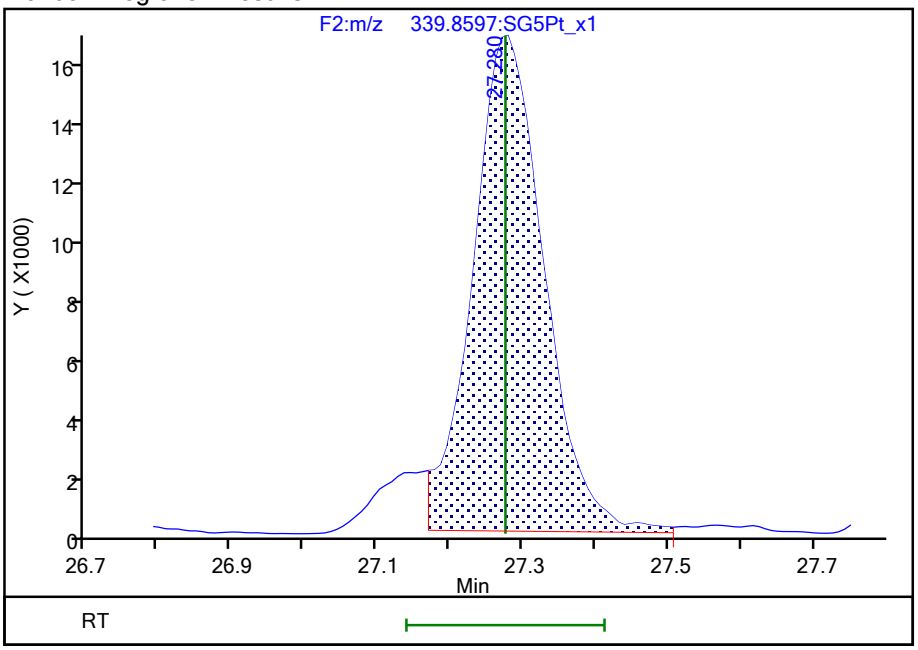

Reviewer: dadunj, 23-Aug-2021 09:49:17

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.27
Area: 78117
Amount: 33.071587
Amount Units: pg/ul

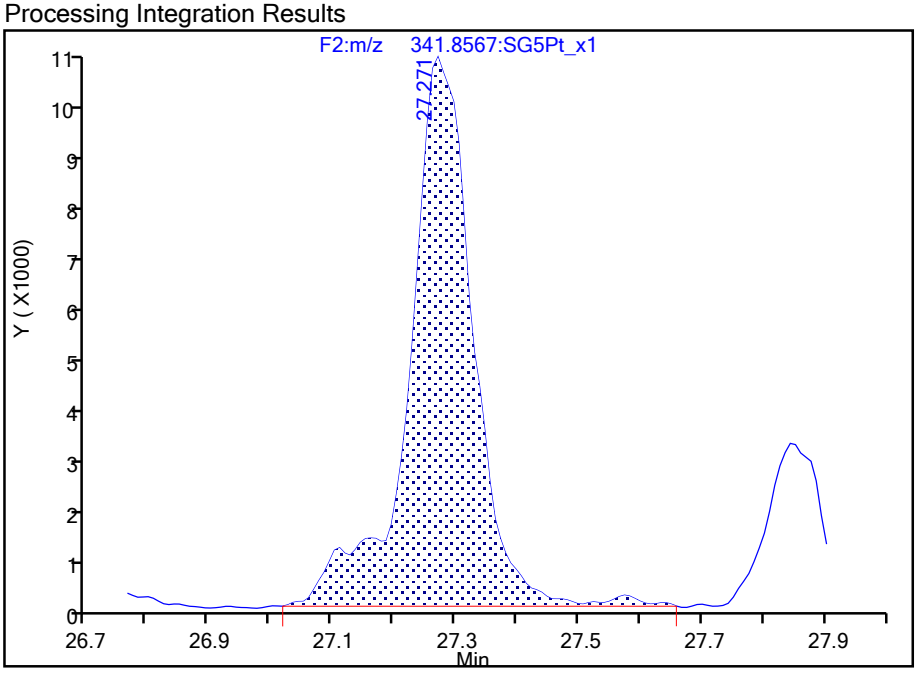

Manual Integration Results

RT: 27.27
Area: 70446
Amount: 30.278751
Amount Units: pg/ul

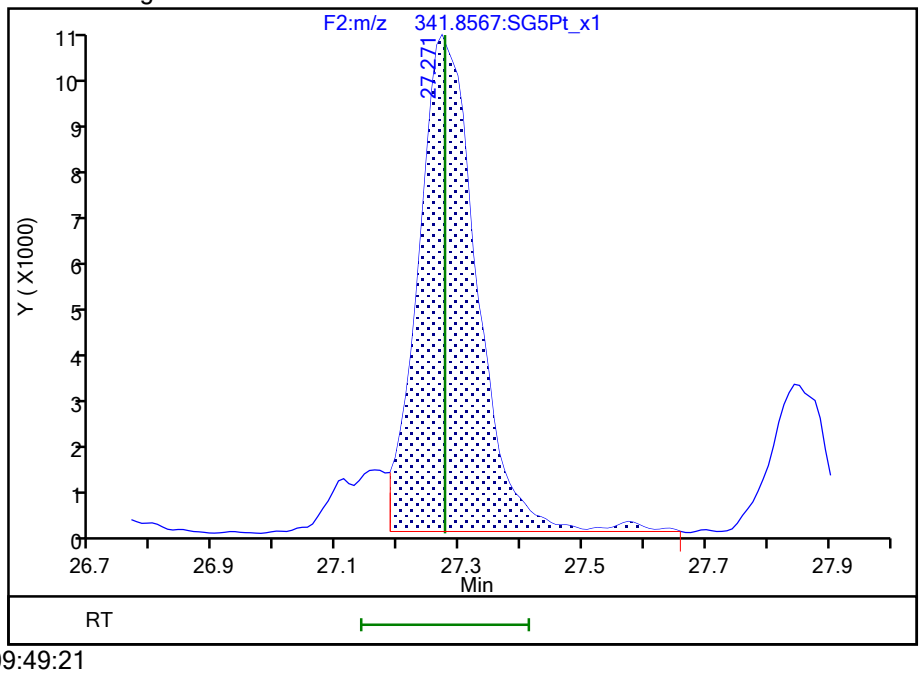

Reviewer: dadunj, 23-Aug-2021 09:49:21
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785420

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 1

Processing Integration Results

RT: 28.77
Area: 40847
Amount: 4.373001
Amount Units: pg/ul

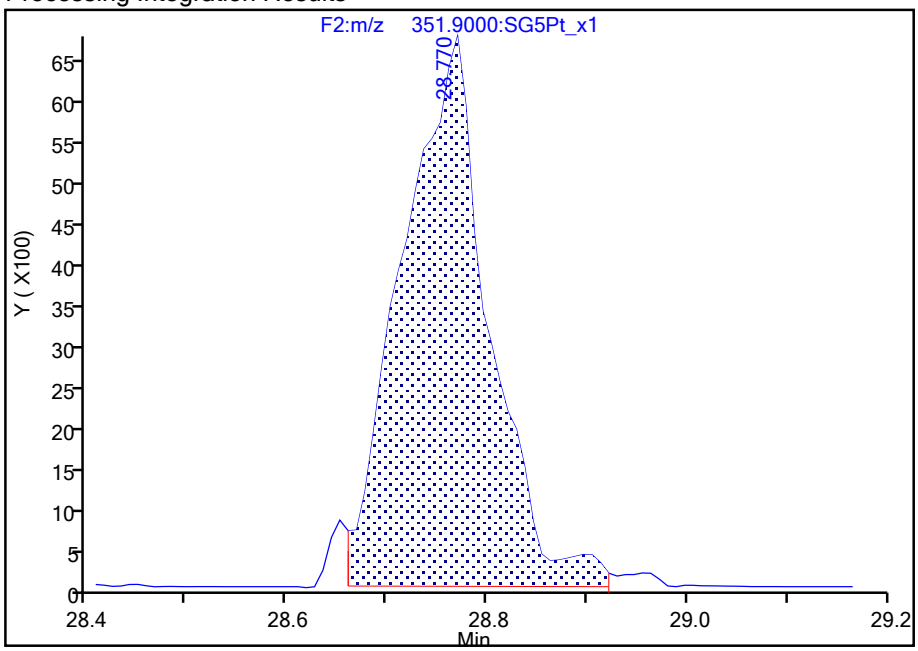

Manual Integration Results

RT: 28.77
Area: 39819
Amount: 4.304052
Amount Units: pg/ul

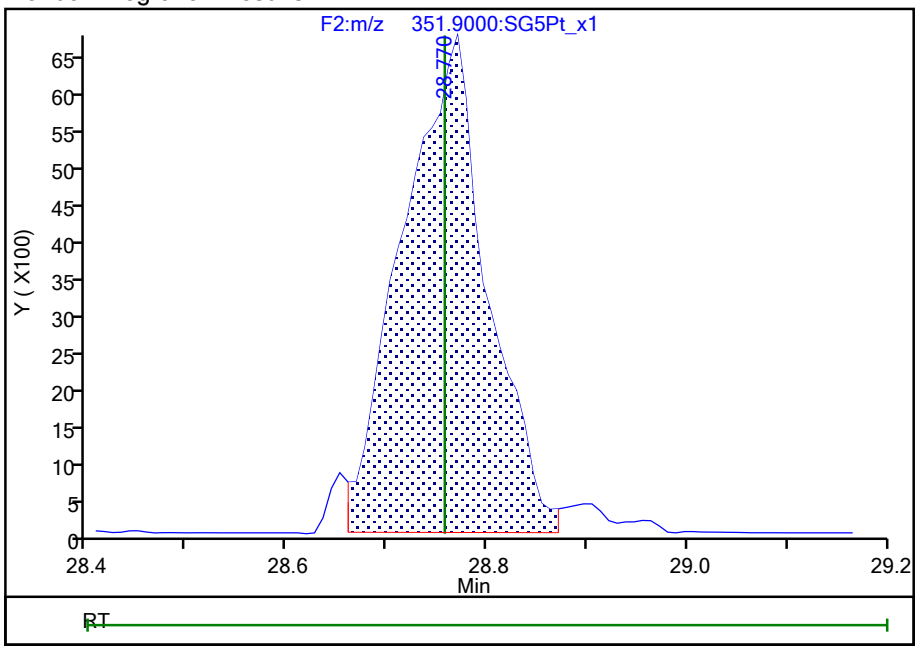

Reviewer: dadunj, 23-Aug-2021 09:52:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:08:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Processing Integration Results

Not Detected

RT: 25.37- 30.97

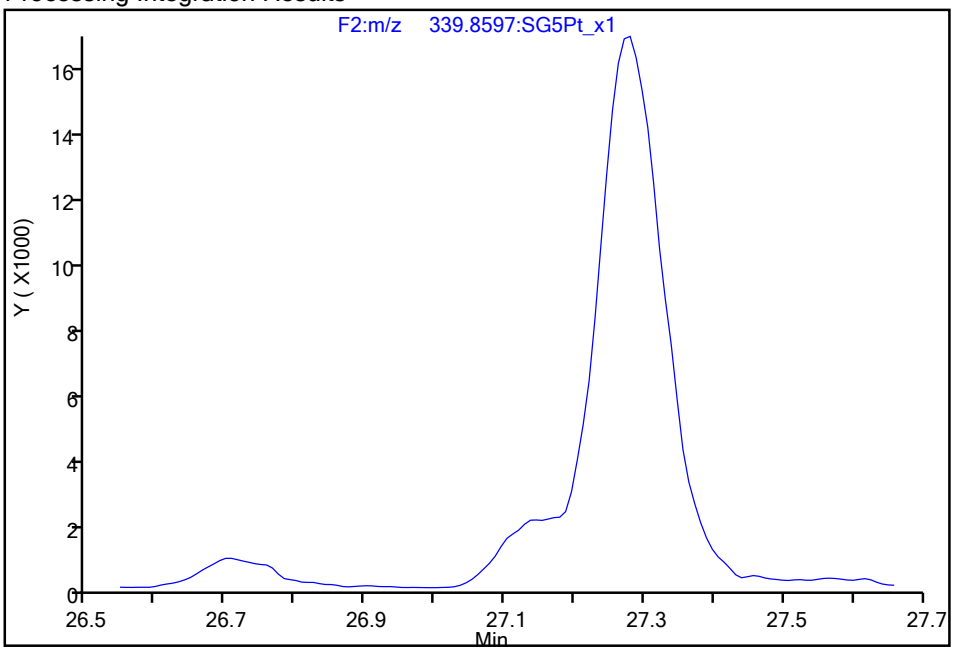

Manual Integration Results

RT = 27.170 Area = 9054 M

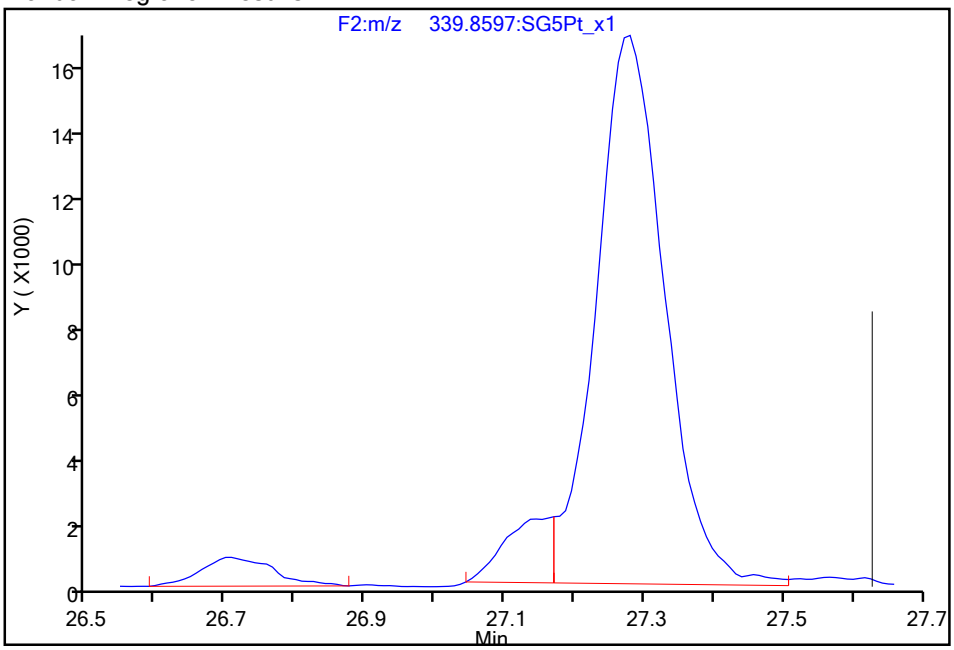

Reviewer: dadunj, 23-Aug-2021 09:52:35

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 2

Processing Integration Results

RT: 29.60
Area: 3017
Amount: 2.875956
Amount Units: pg/ul

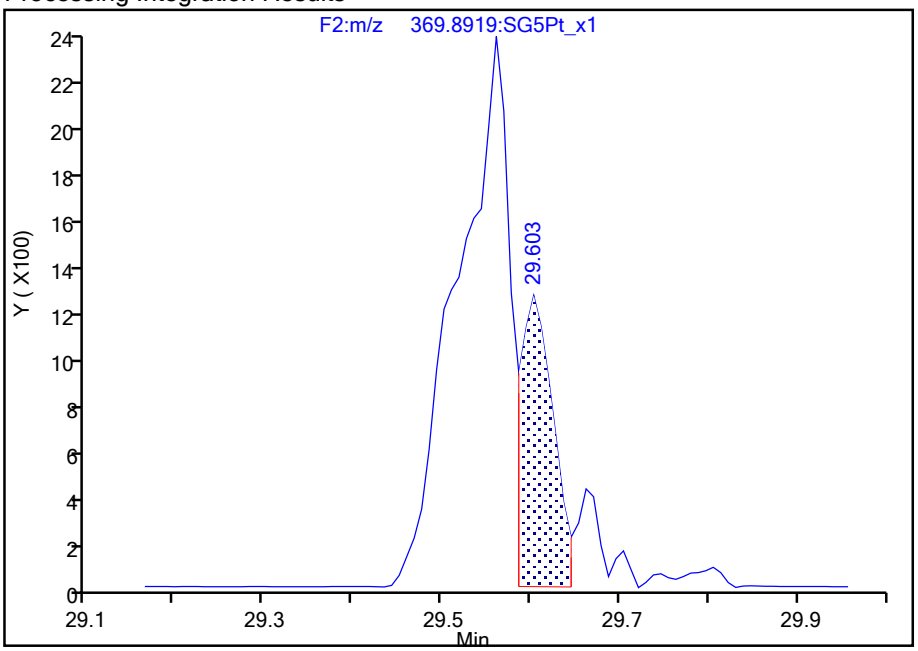

Manual Integration Results

RT: 29.56
Area: 13648
Amount: 3.995893
Amount Units: pg/ul

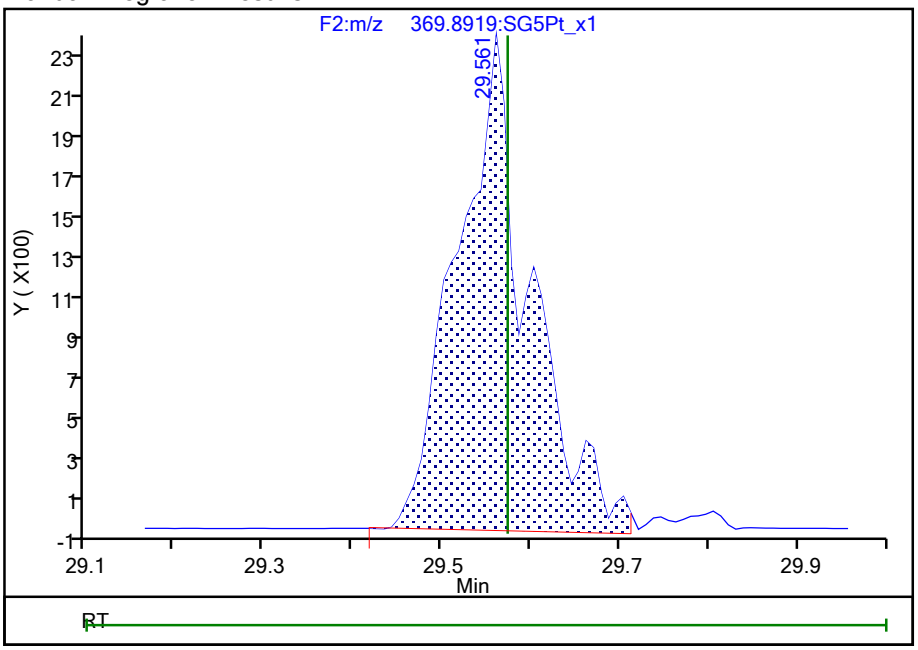

Reviewer: dadunj, 23-Aug-2021 09:52:02

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 2

Processing Integration Results

RT: 29.60
Area: 4768
Amount: 5.001160
Amount Units: pg/ul

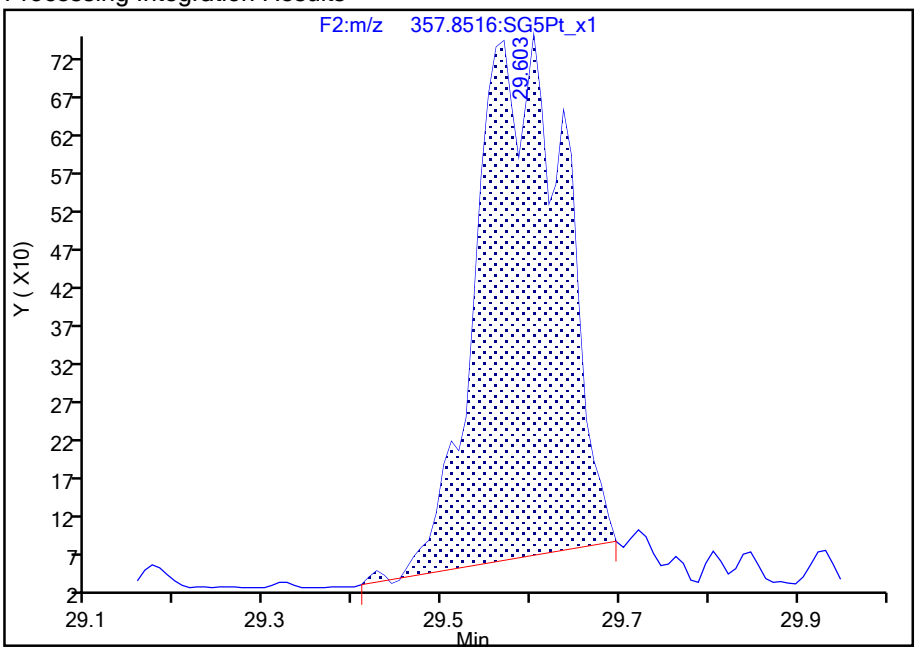

Manual Integration Results

RT: 29.60
Area: 5273
Amount: 3.726695
Amount Units: pg/ul

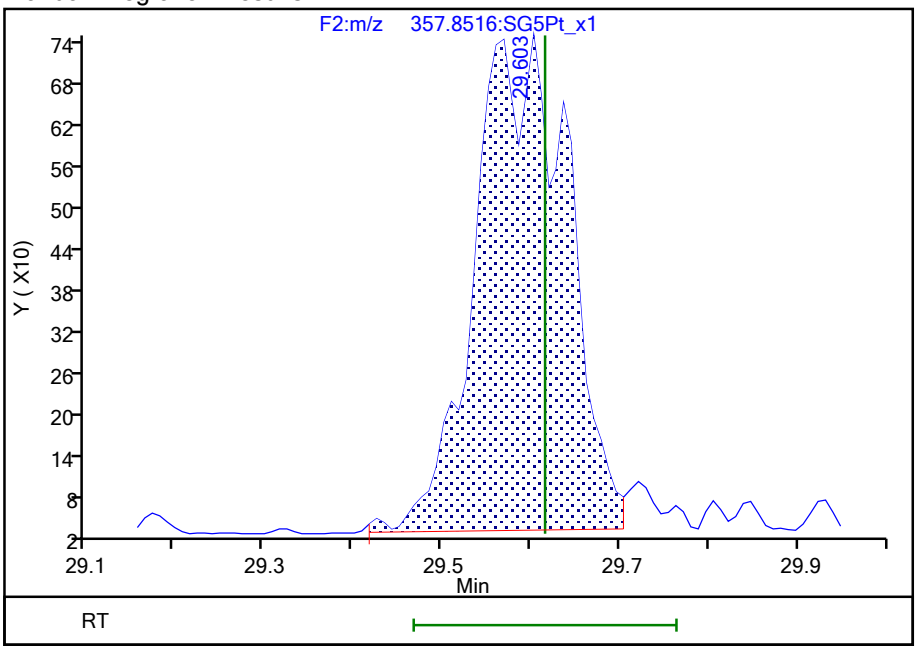

Reviewer: dadunj, 23-Aug-2021 09:49:47

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,6,7,8-HxCDF, CAS: 116843-03-9

Signal: 2

Processing Integration Results

RT: 35.07
Area: 34303
Amount: 4.000396
Amount Units: pg/ul

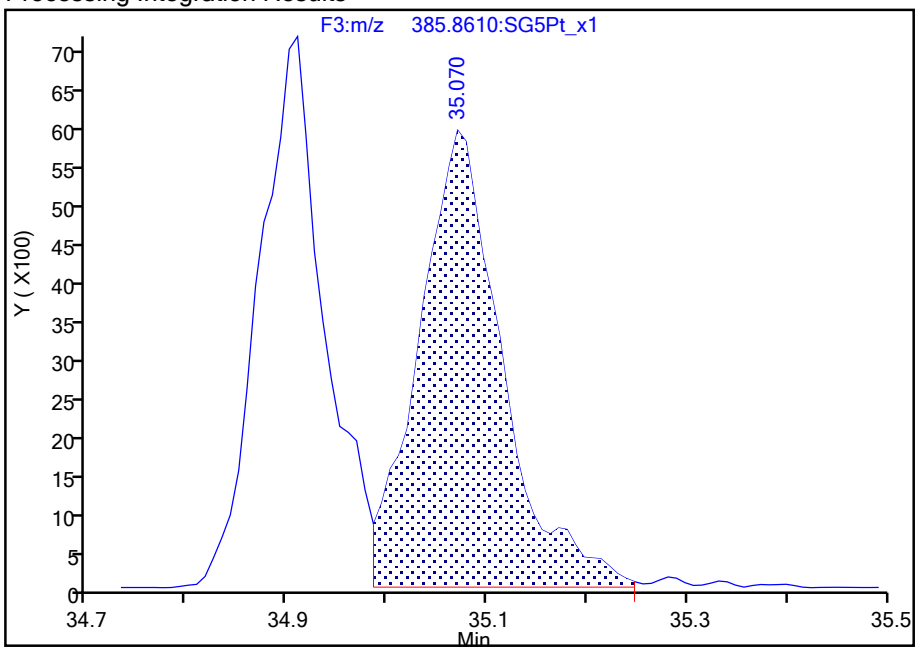

Manual Integration Results

RT: 35.07
Area: 33527
Amount: 3.942639
Amount Units: pg/ul

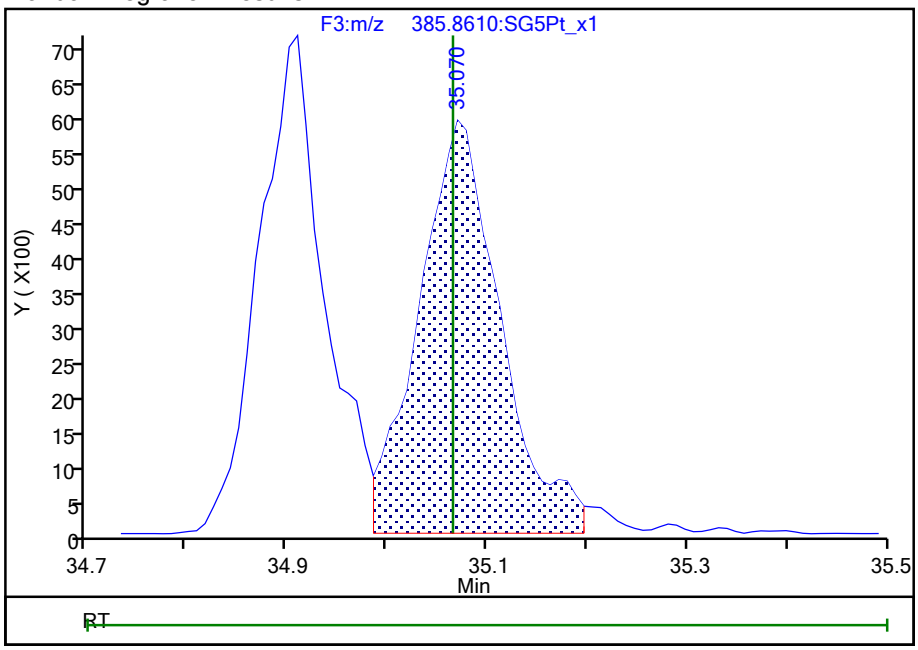

Reviewer: dadunj, 23-Aug-2021 09:52:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 35.88
Area: 3160
Amount: 1.457454
Amount Units: pg/ul

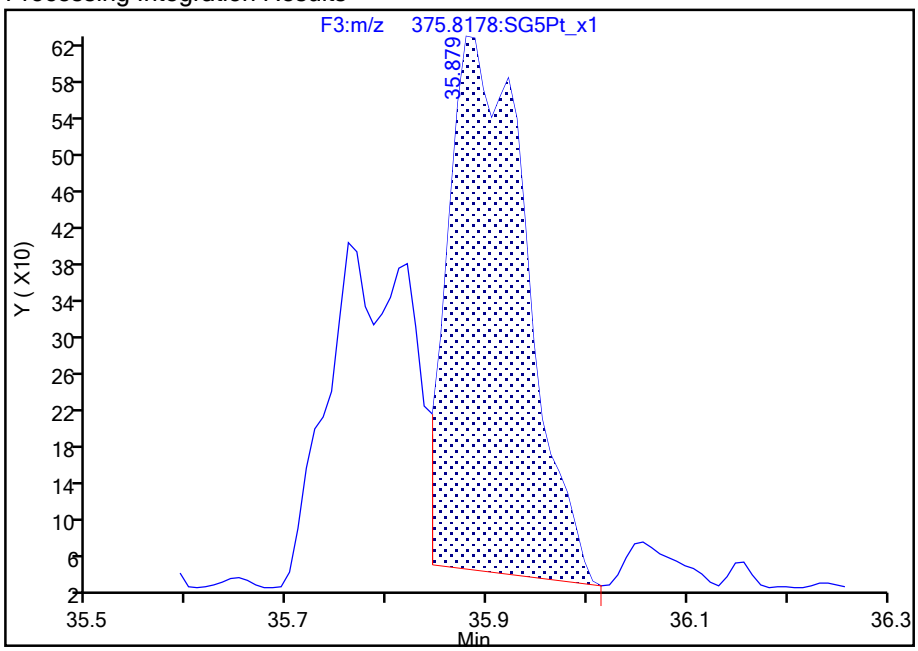

Manual Integration Results

RT: 35.88
Area: 3160
Amount: 1.053825
Amount Units: pg/ul

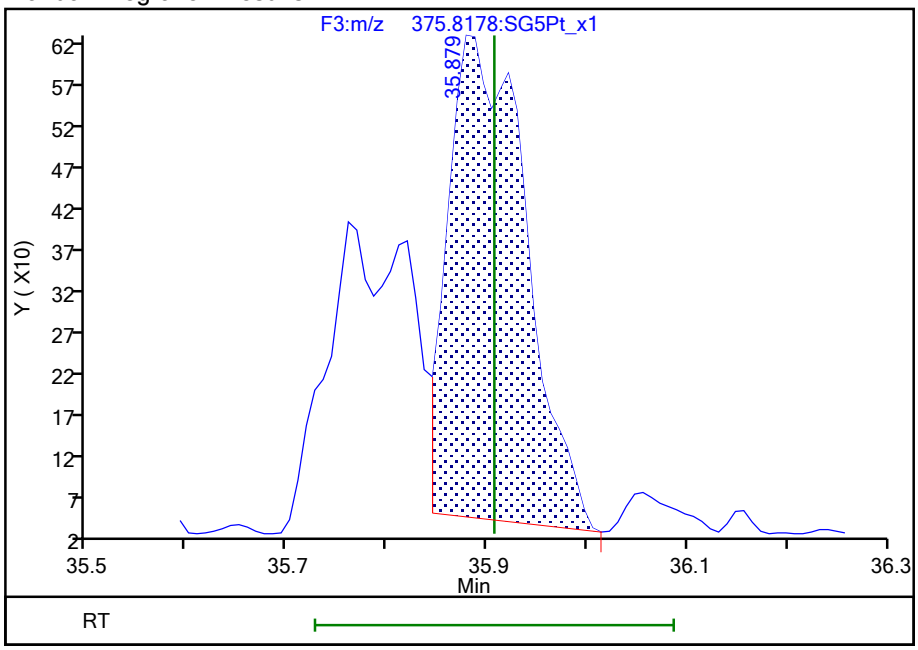

Reviewer: dadunj, 23-Aug-2021 09:50:02

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 3

Processing Integration Results

RT: 35.90
Area: 9966
Amount: 1.457454
Amount Units: pg/ul

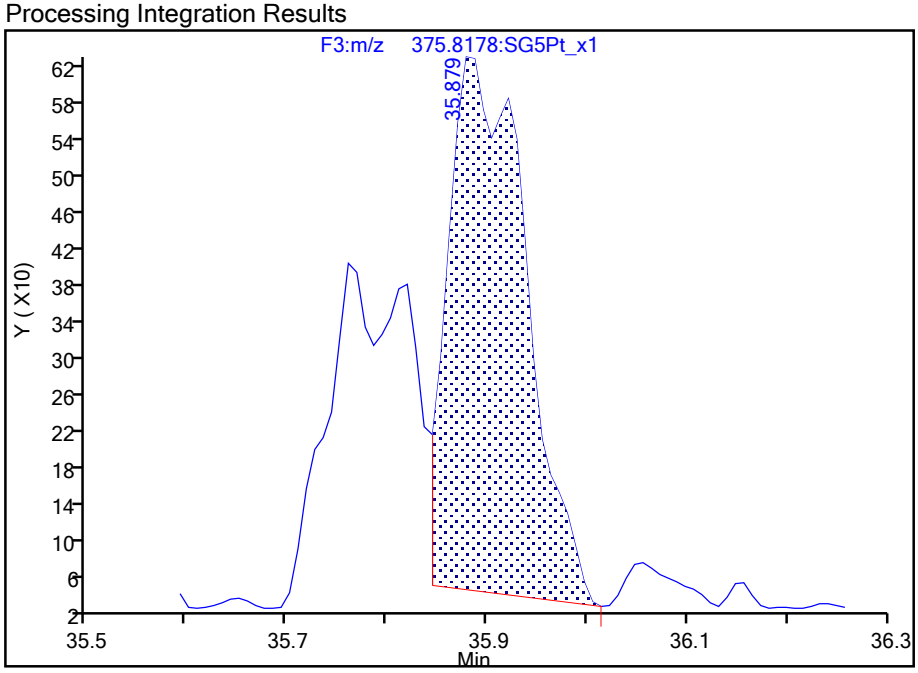

Manual Integration Results

RT: 35.90
Area: 7206
Amount: 1.053825
Amount Units: pg/ul
Reviewer: dadunj, 23-Aug-2021 09:50:02
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.90
Area: 6806
Amount: 1.457454
Amount Units: pg/ul

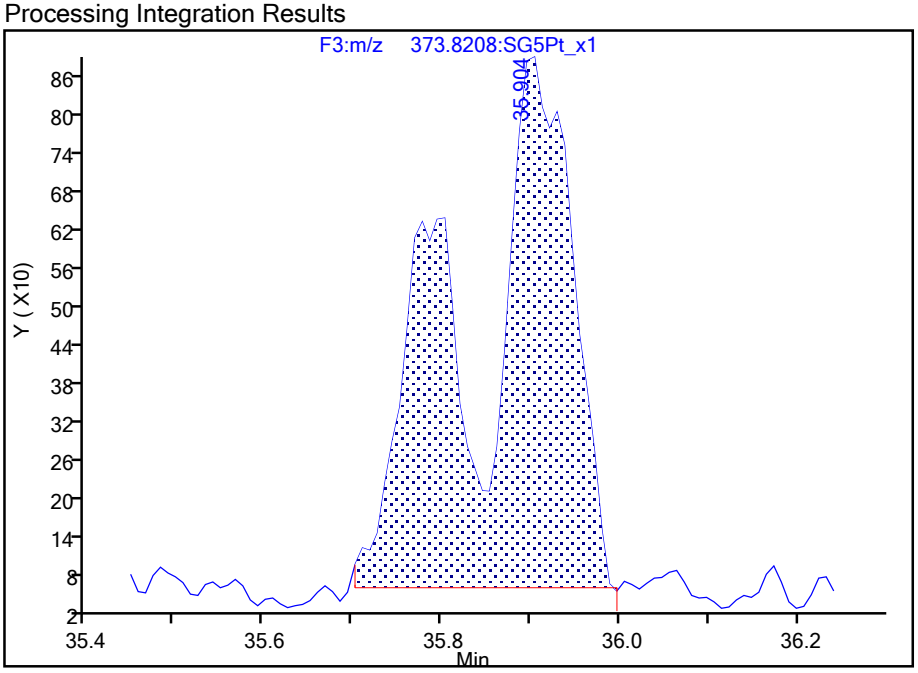

Manual Integration Results

RT: 35.90
Area: 4046
Amount: 1.053825
Amount Units: pg/ul

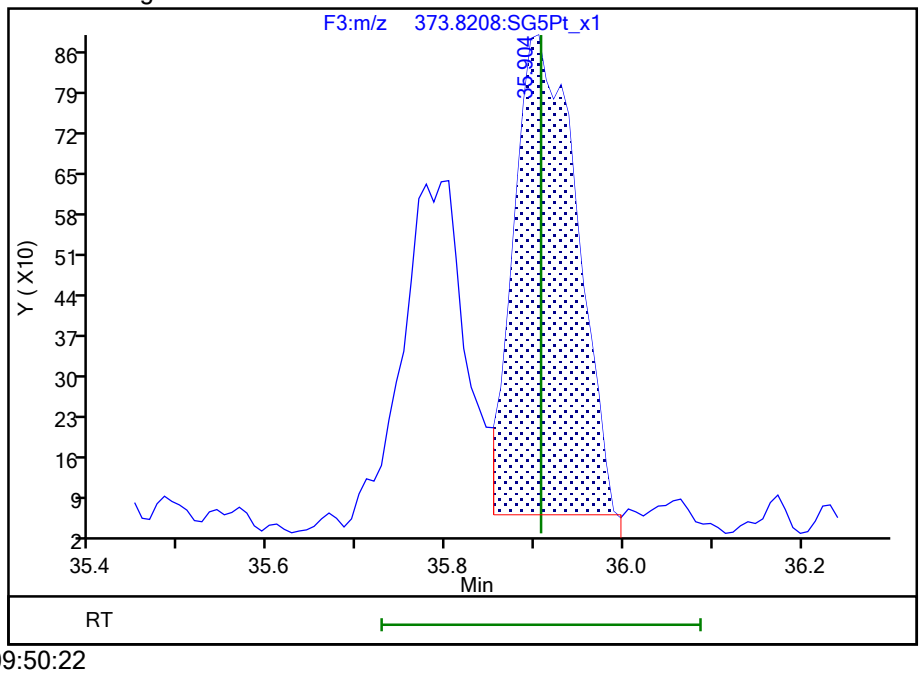

Reviewer: dadunj, 23-Aug-2021 09:50:22

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

785428

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.89
Area: 10931
Amount: 3.300627
Amount Units: pg/ul

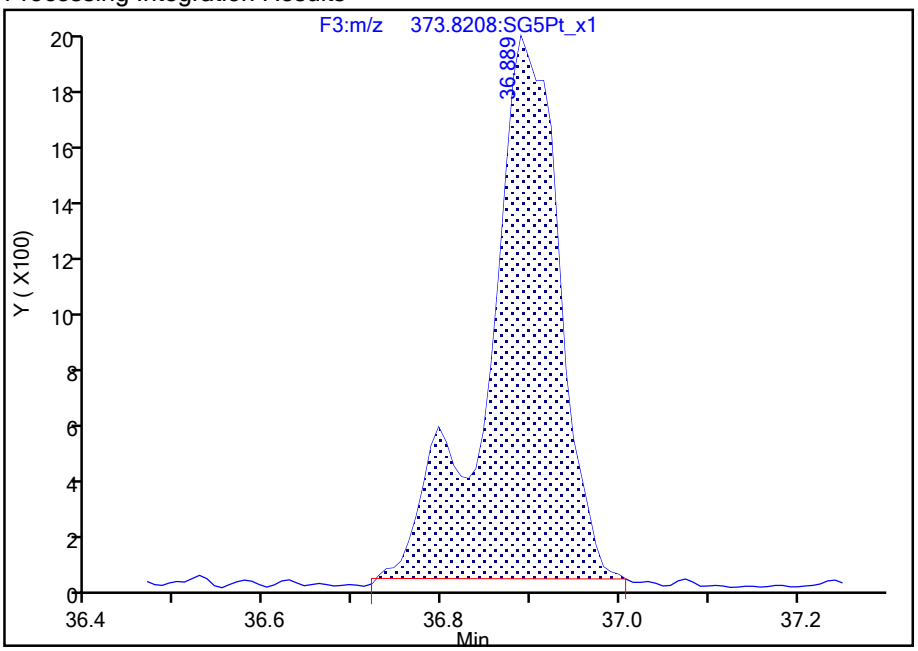

Manual Integration Results

RT: 36.80
Area: 1648
Amount: 0.532246
Amount Units: pg/ul

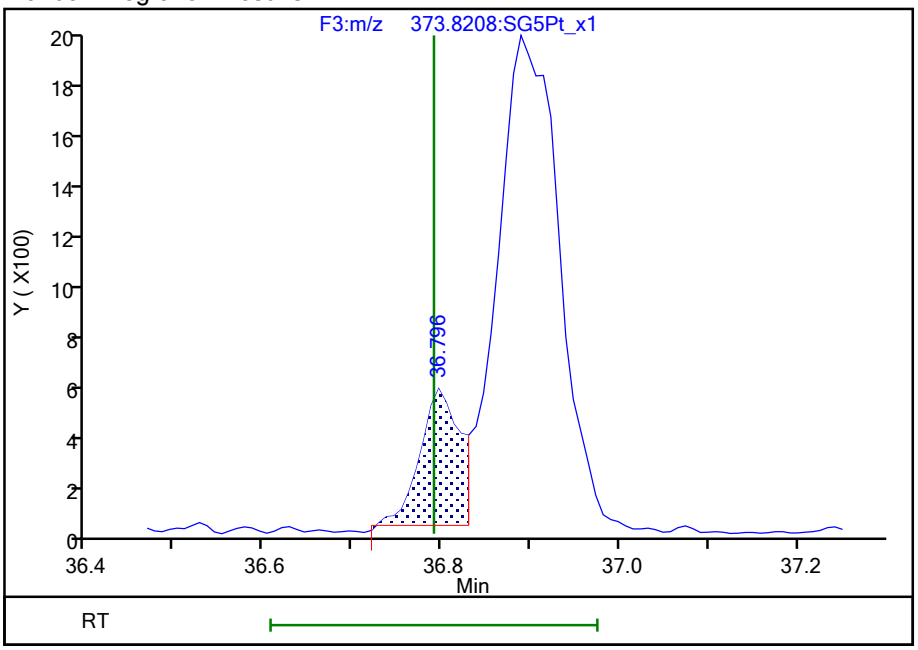

Reviewer: dadunj, 23-Aug-2021 09:50:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.91
Area: 7828
Amount: 3.300627
Amount Units: pg/ul

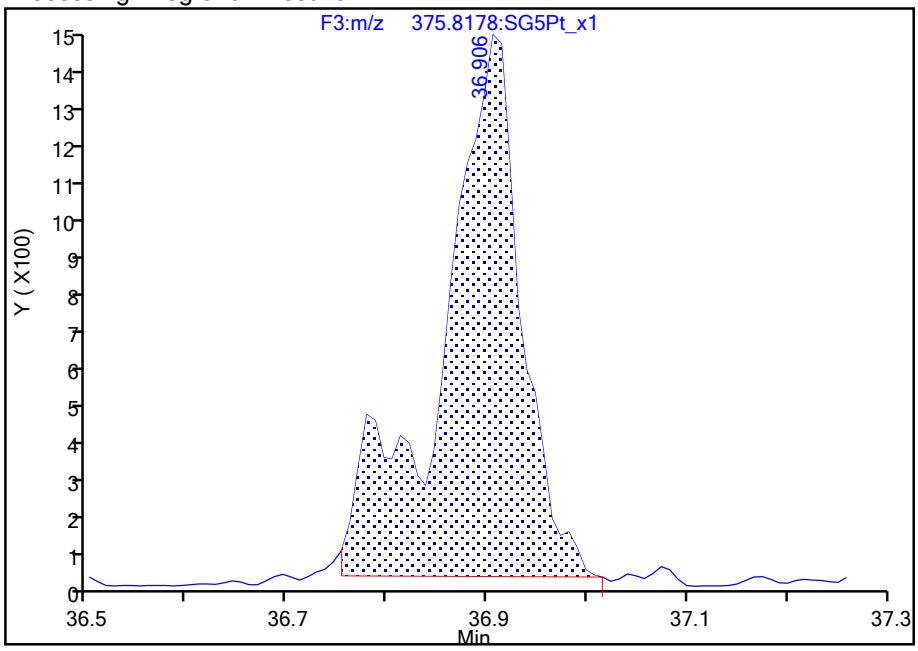

Manual Integration Results

RT: 36.78
Area: 1377
Amount: 0.532246
Amount Units: pg/ul

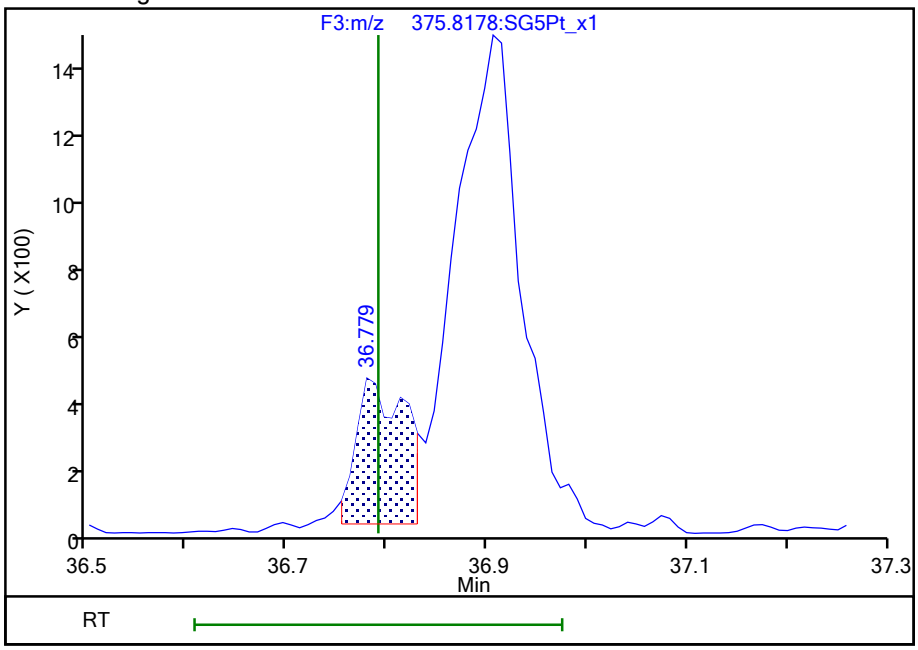

Reviewer: dadunj, 23-Aug-2021 09:50:32
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785430

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

Not Detected
RT: 33.09- 36.93

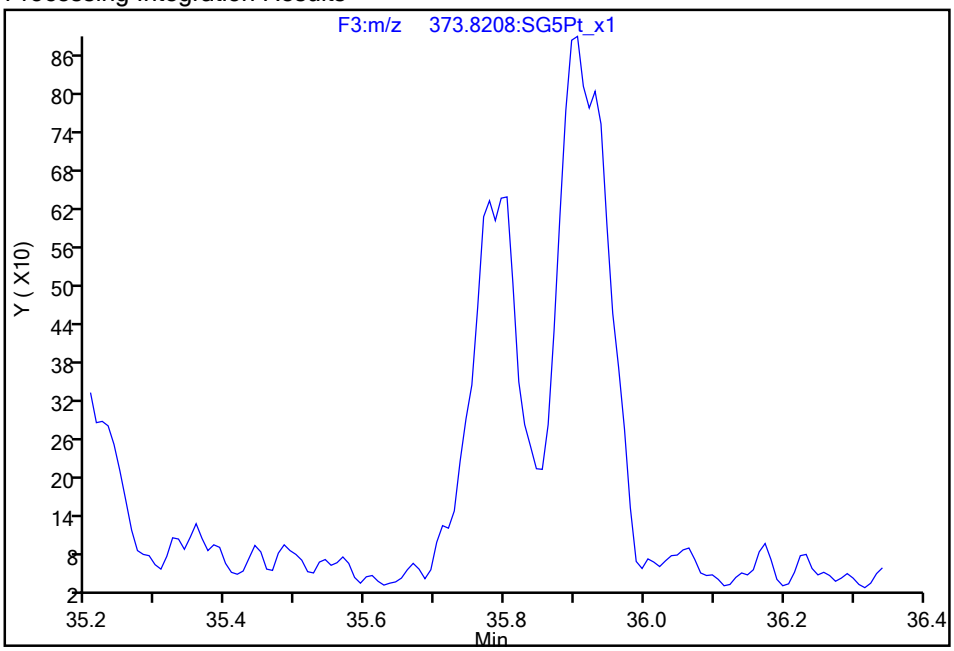

Manual Integration Results

RT = 35.803 Area = 2760 M

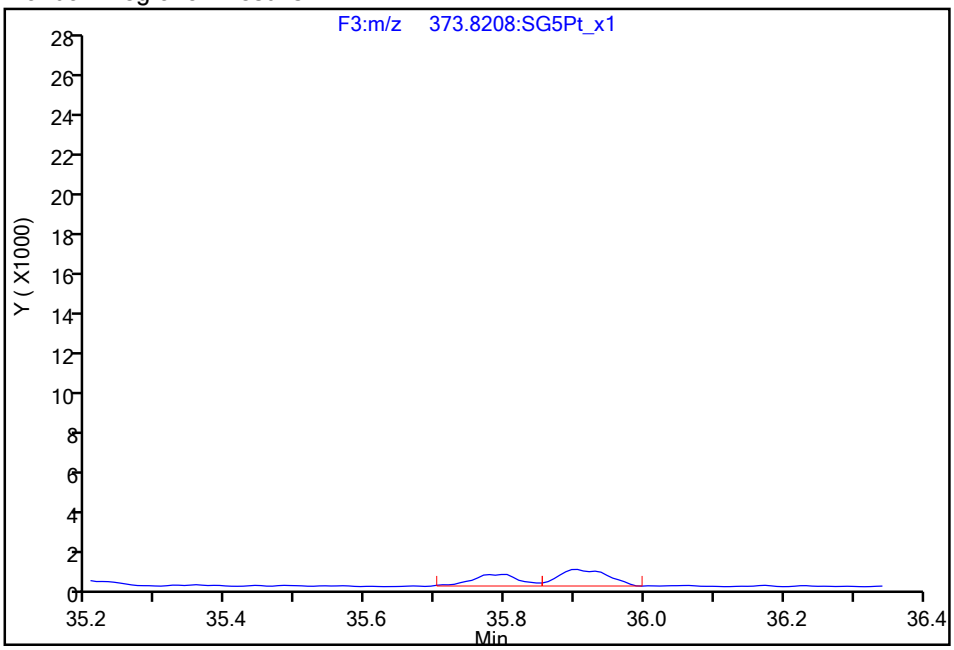

Reviewer: dadunj, 23-Aug-2021 09:50:43

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 36.889 Area = 10931

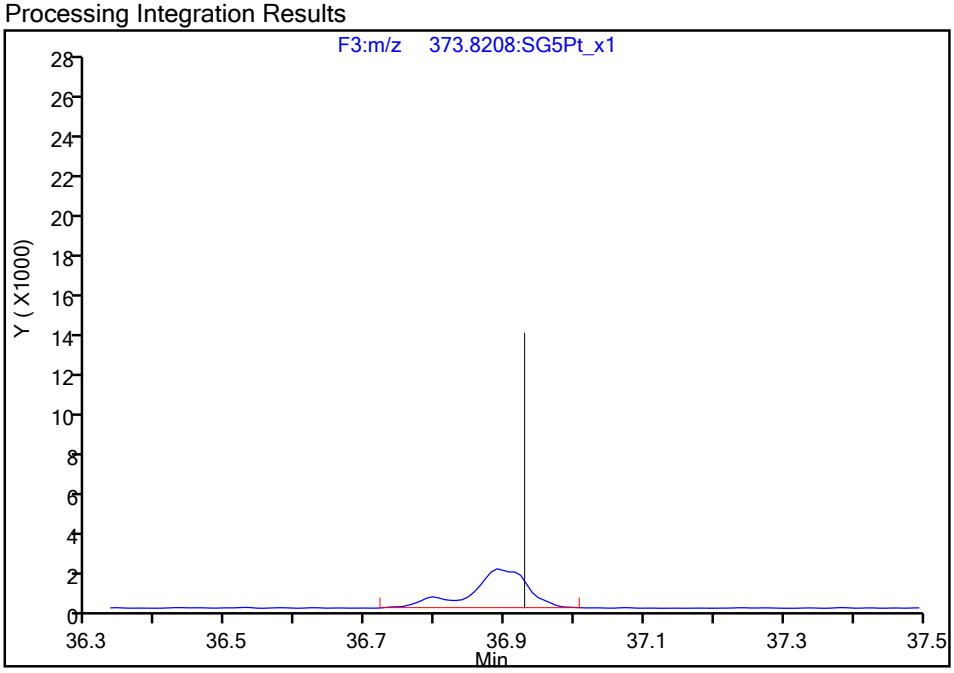

Manual Integration Results

RT = 36.889 Area = 9276 M

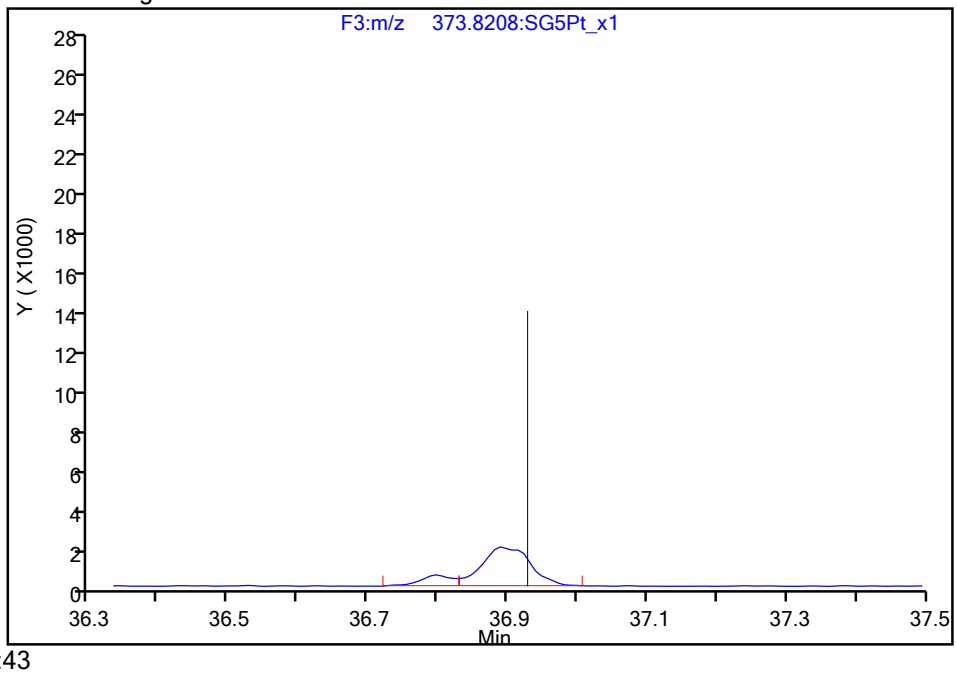

Reviewer: dadunj, 23-Aug-2021 09:50:43

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:08:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d				
Injection Date:	20-Aug-2021 07:09:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

Non-2,3,7,8-sub-HpCDD, Signal: 2, m/z: 425.7737, RT: (38.86- 39.62)

Signal: 2

Processing Integration Results

RT = 38.914 Area = 3062

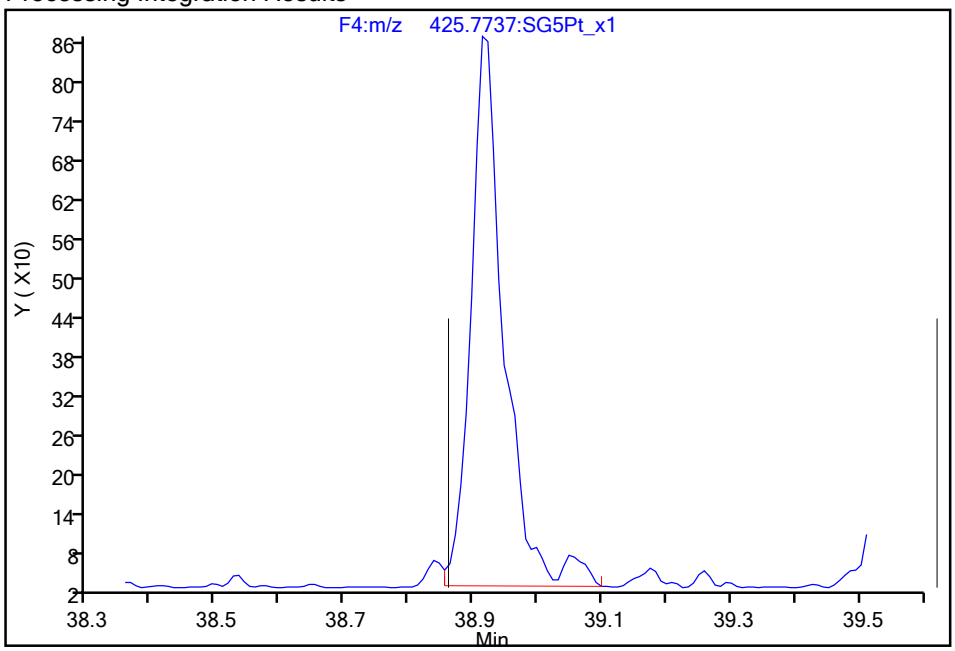

Manual Integration Results

RT = 38.914 Area = 2939 M

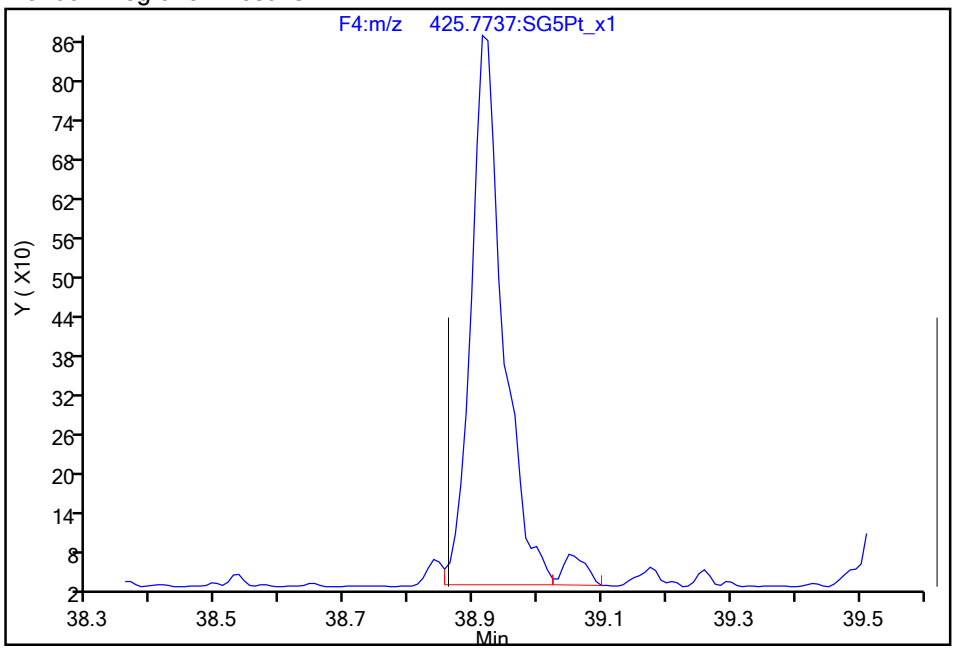

Reviewer: dadunj, 23-Aug-2021 09:51:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785433

Report Date: 25-Aug-2021 15:08:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

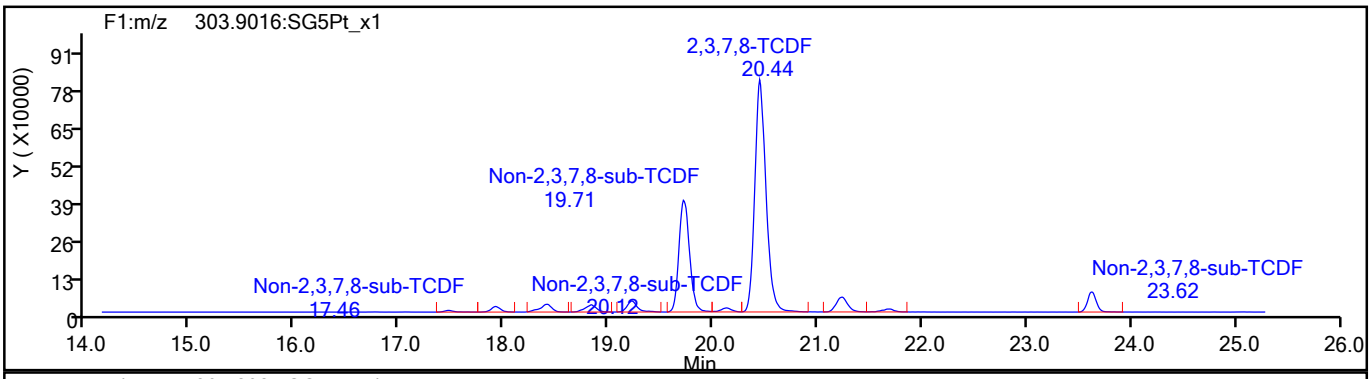

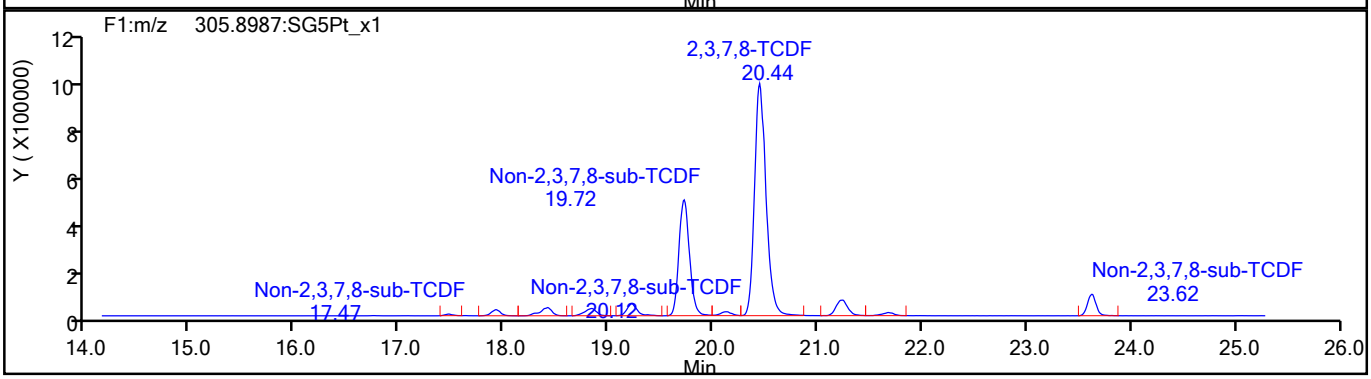

TCDF Standards

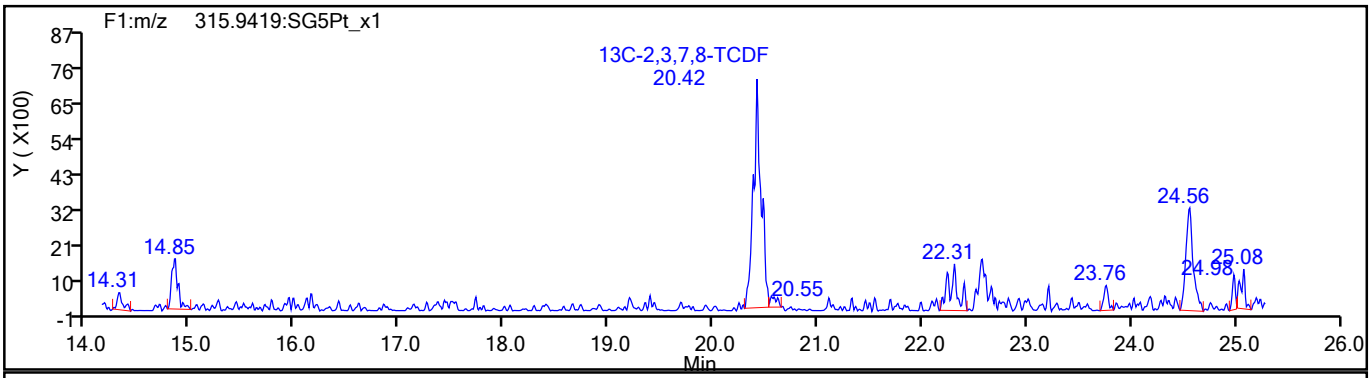

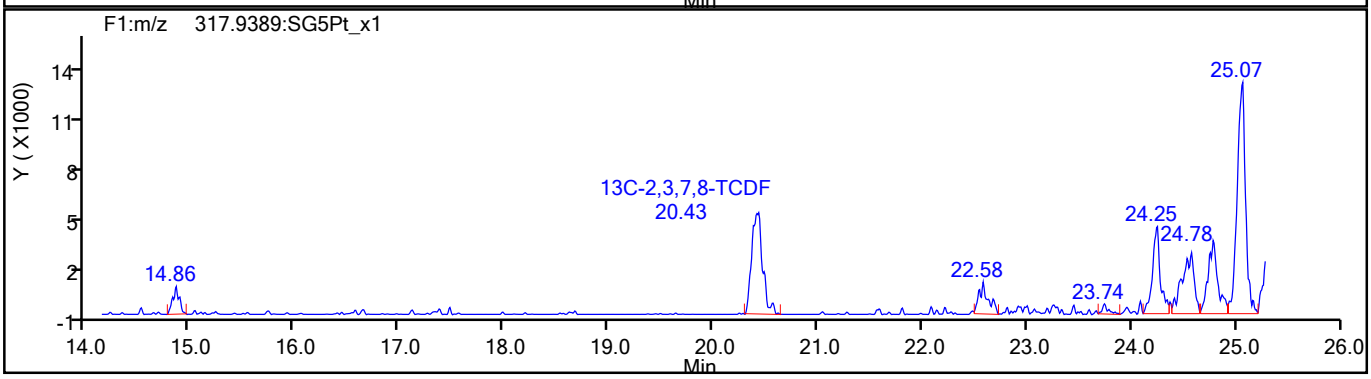

785434

Report Date: 25-Aug-2021 15:08:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

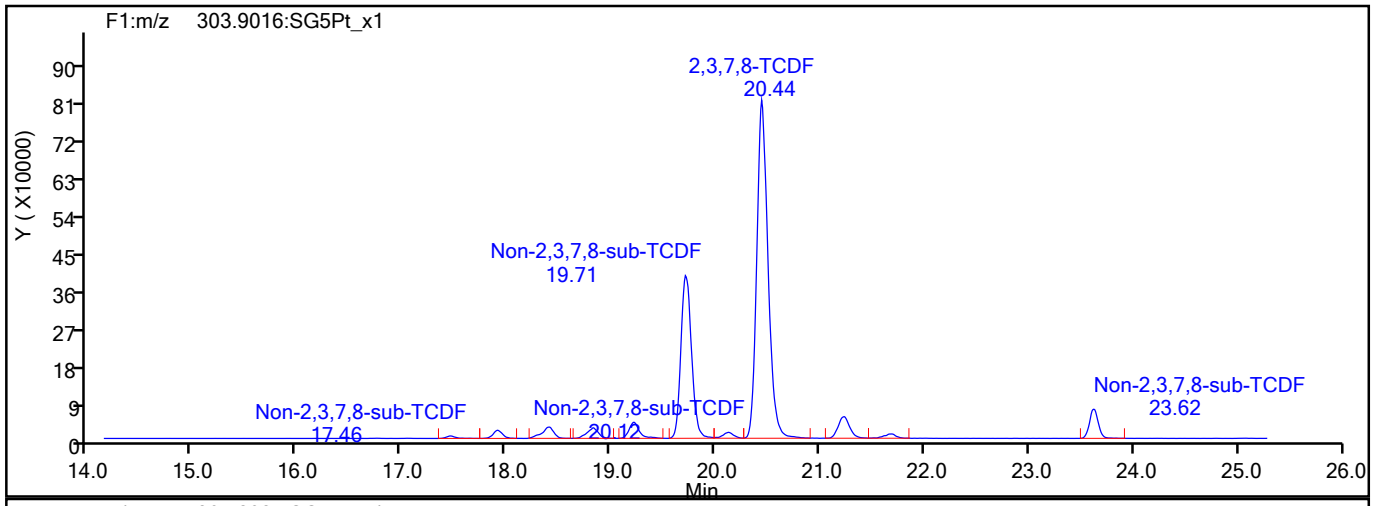

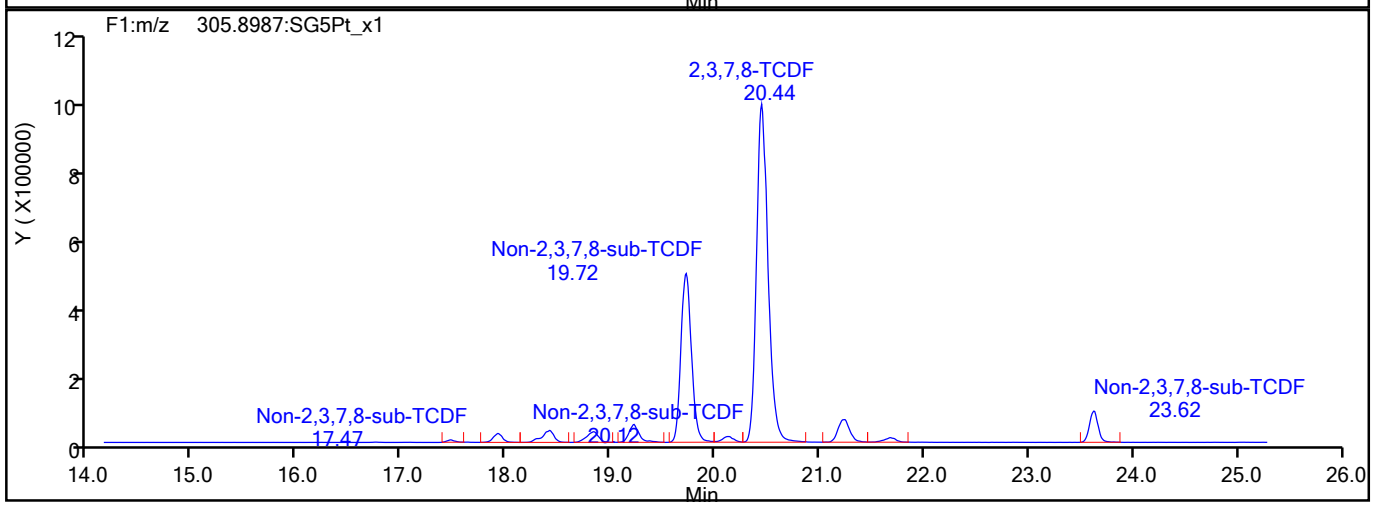

TCDF Interference Mass

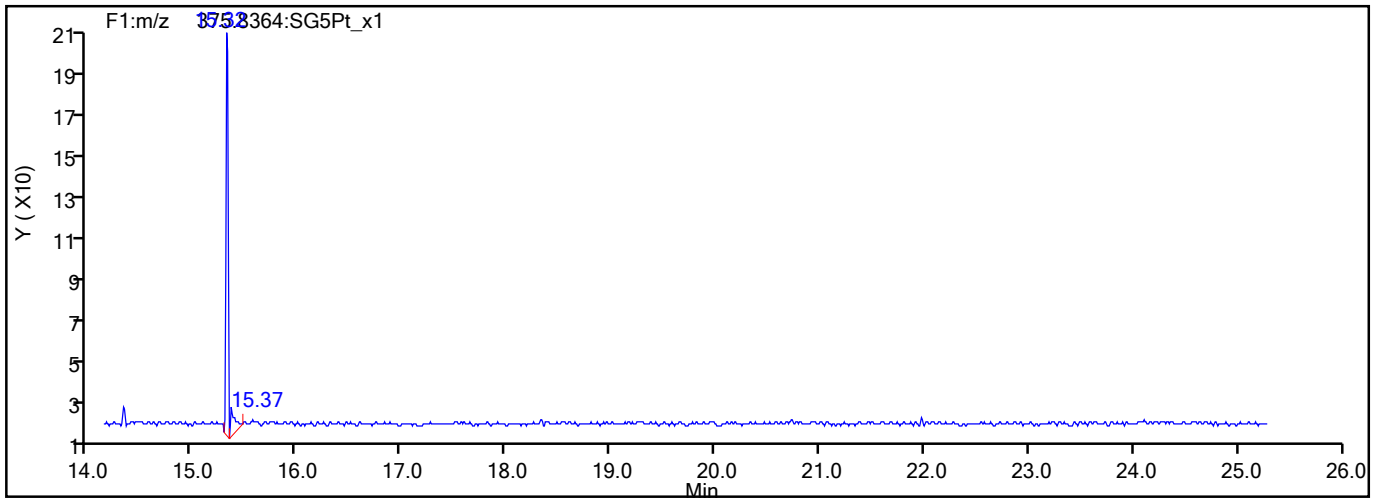

785435

Report Date: 25-Aug-2021 15:08:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

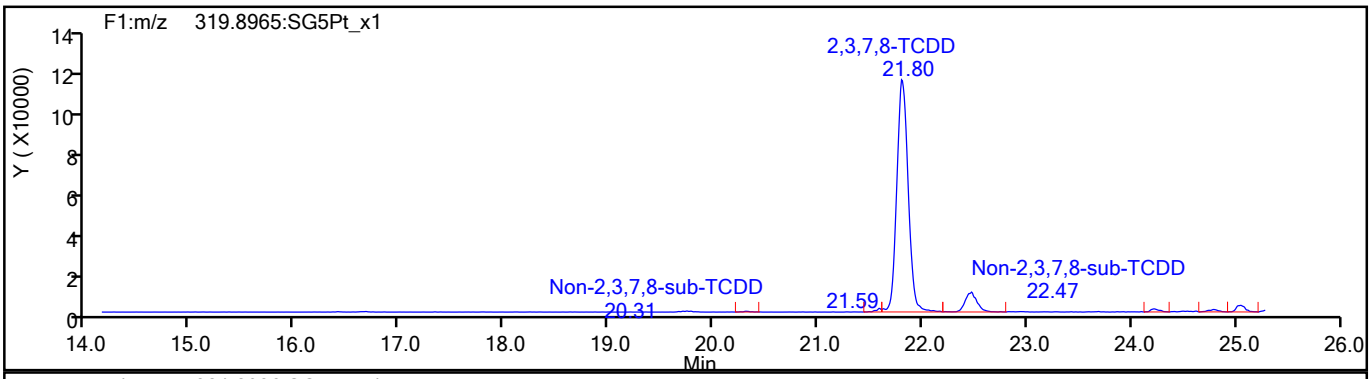

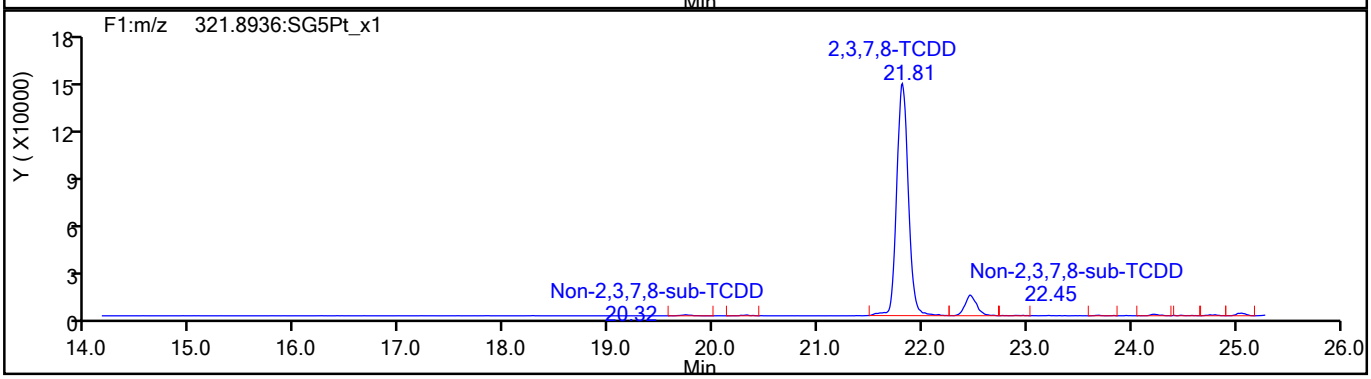

TCDD Standards

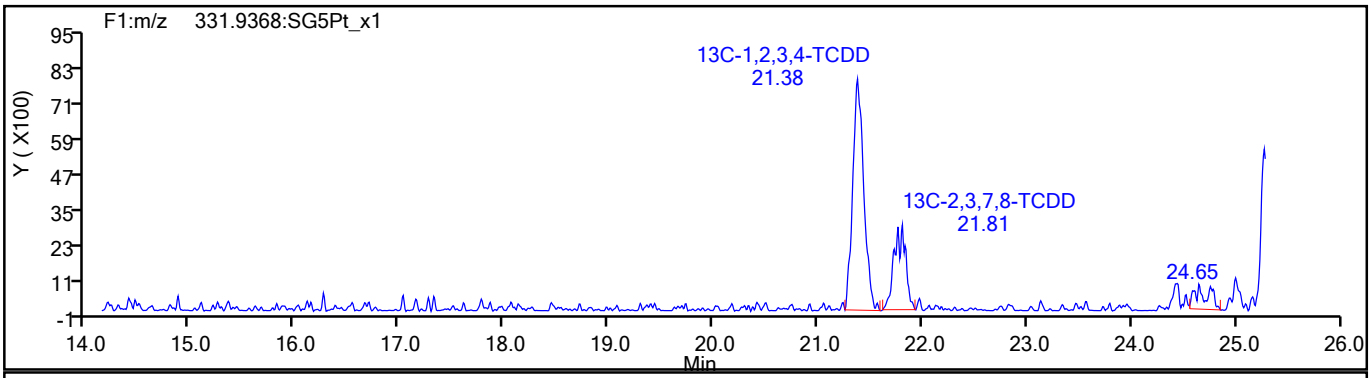

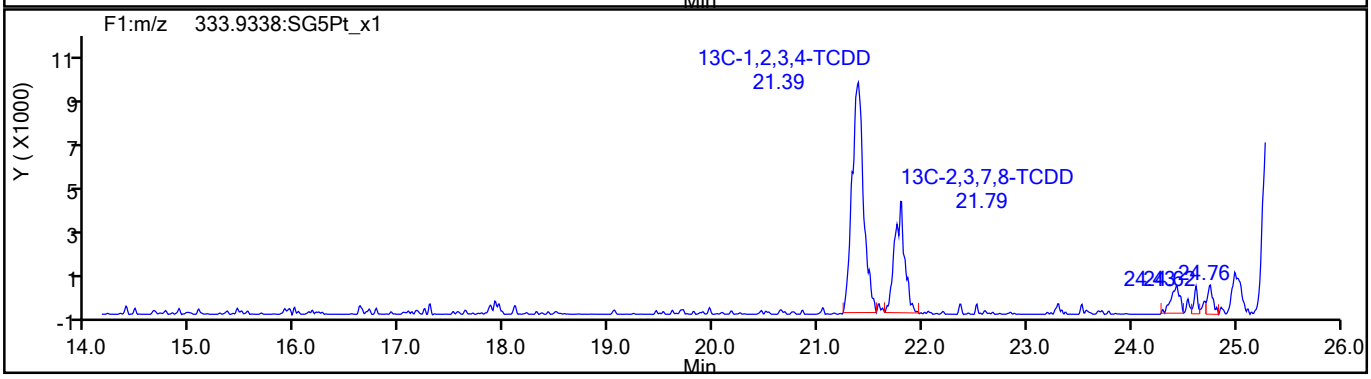

785436

Report Date: 25-Aug-2021 15:08:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

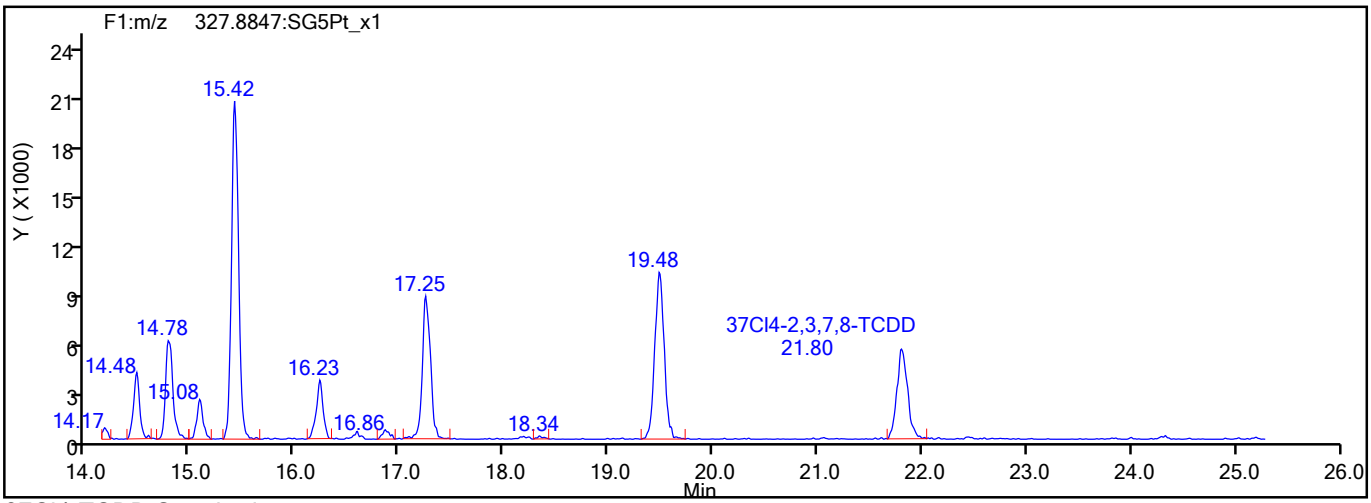

37Cl4-TCDD Standards

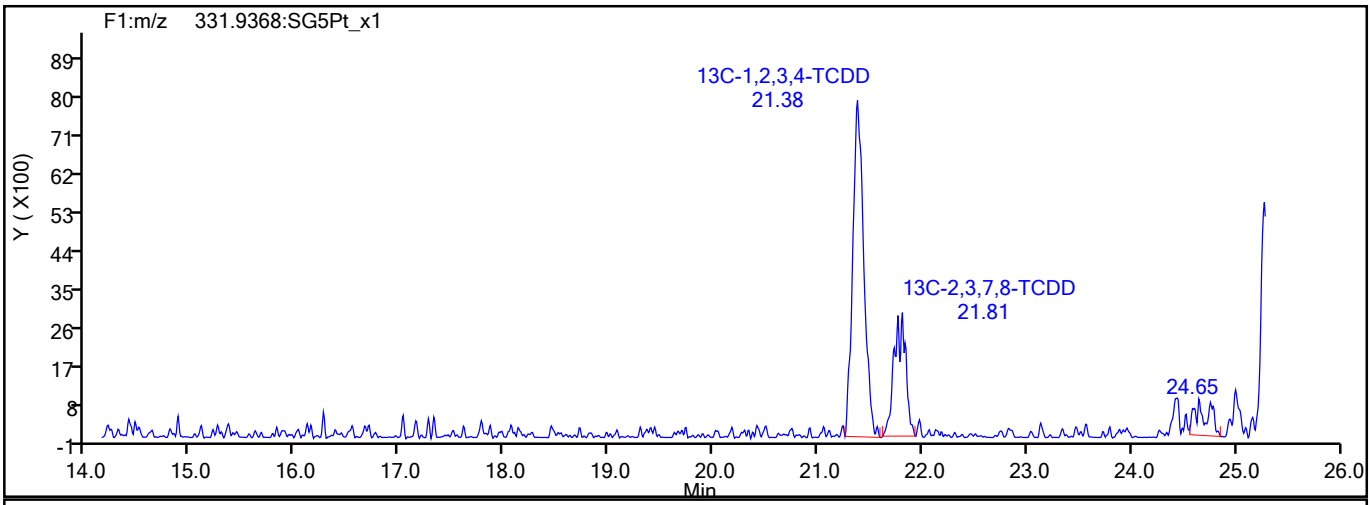

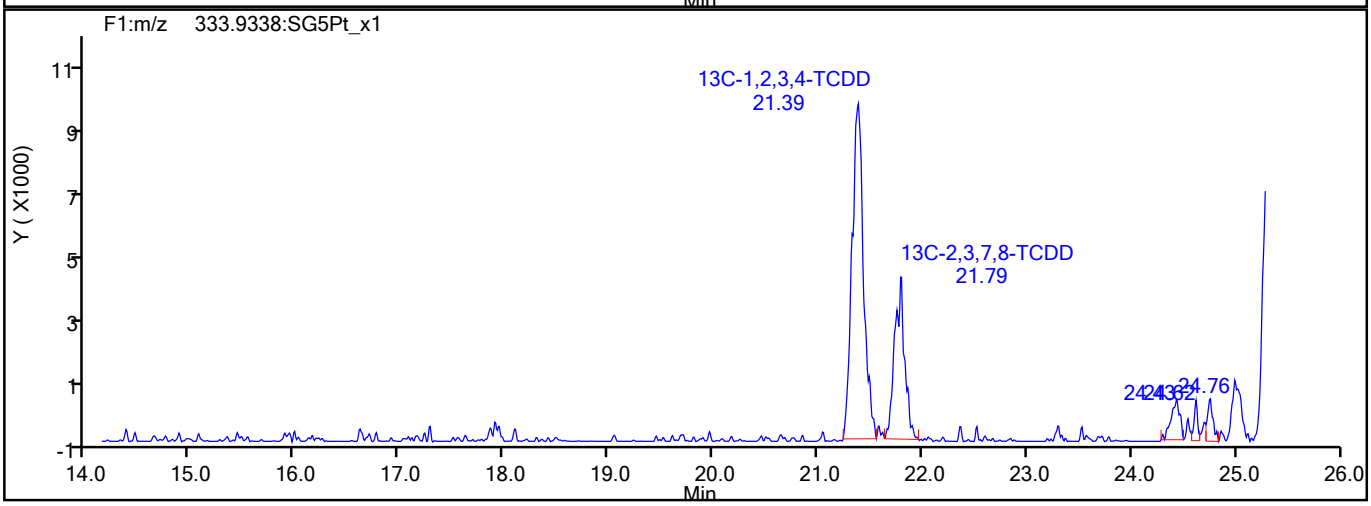

785437

Report Date: 25-Aug-2021 15:08:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

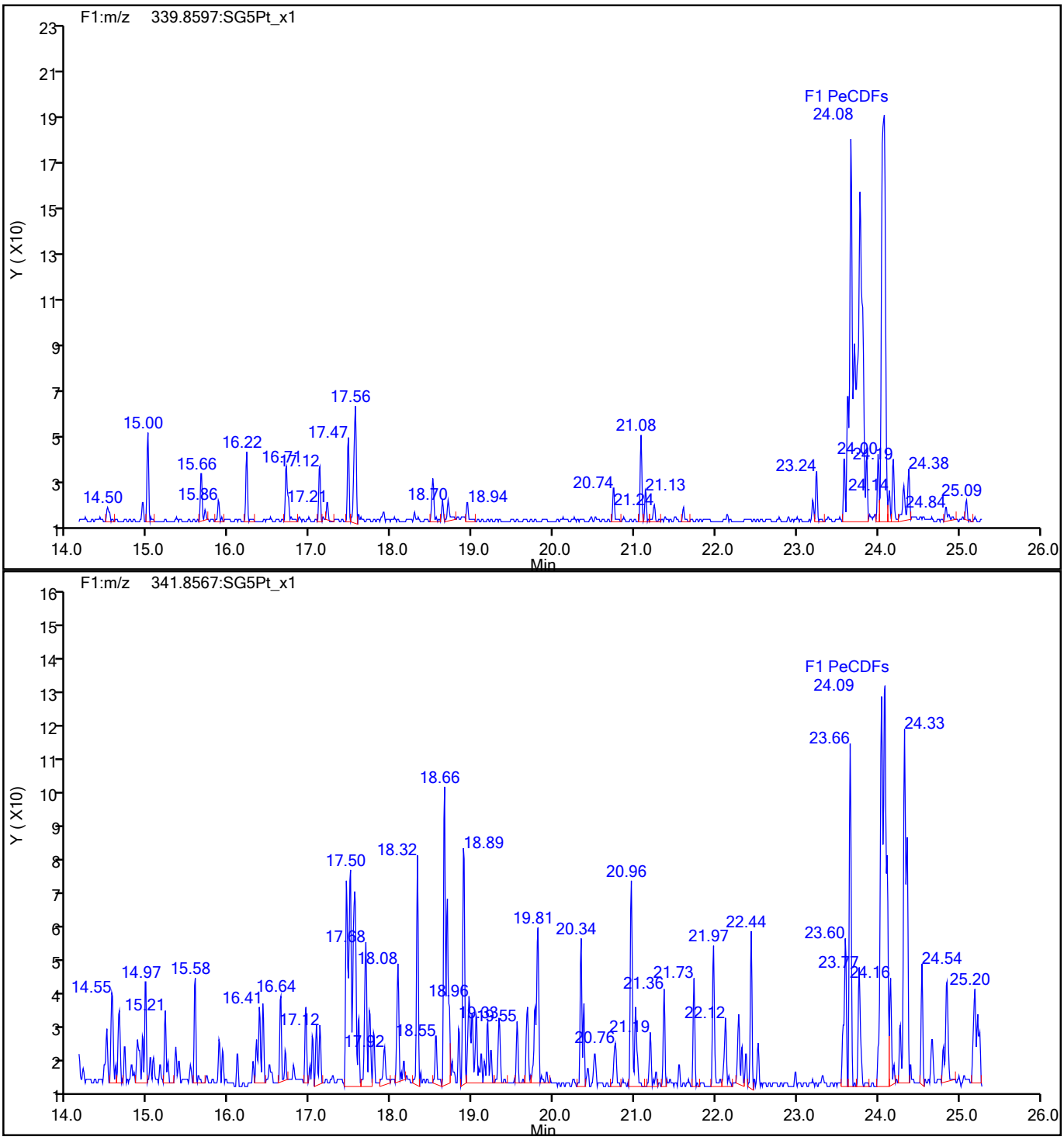

785438

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

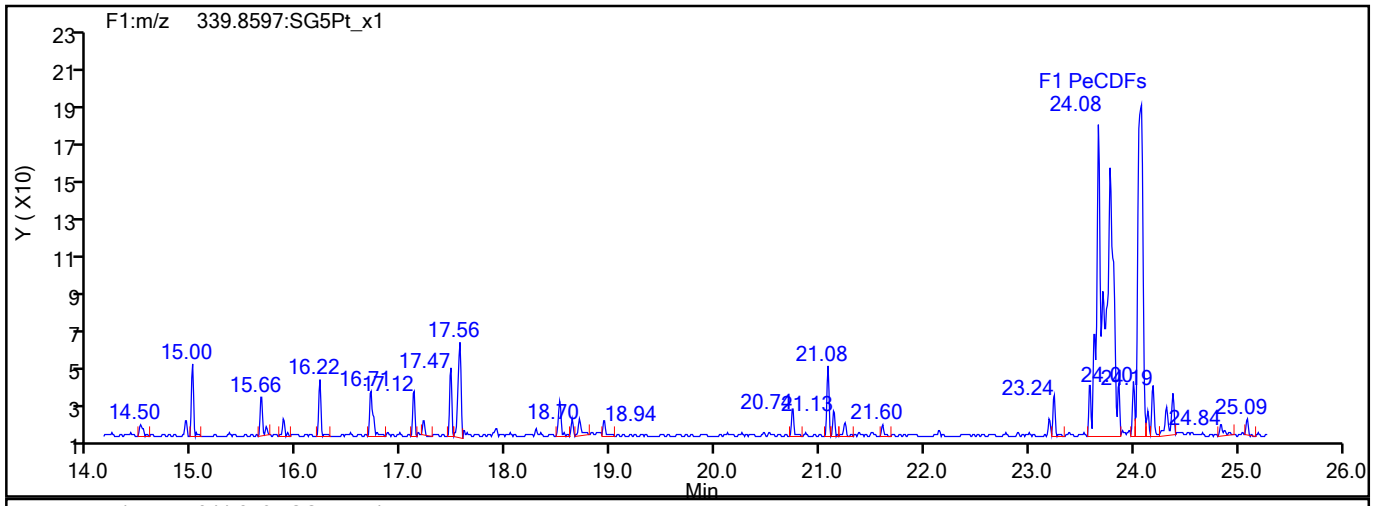

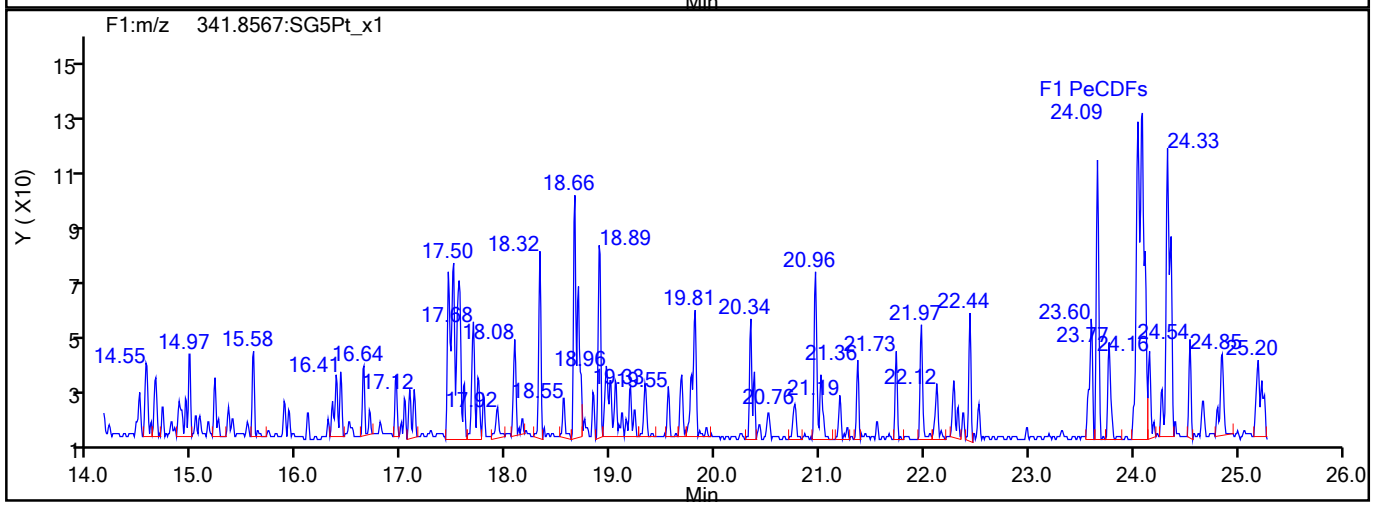

F1 PeCDFs Interference Mass

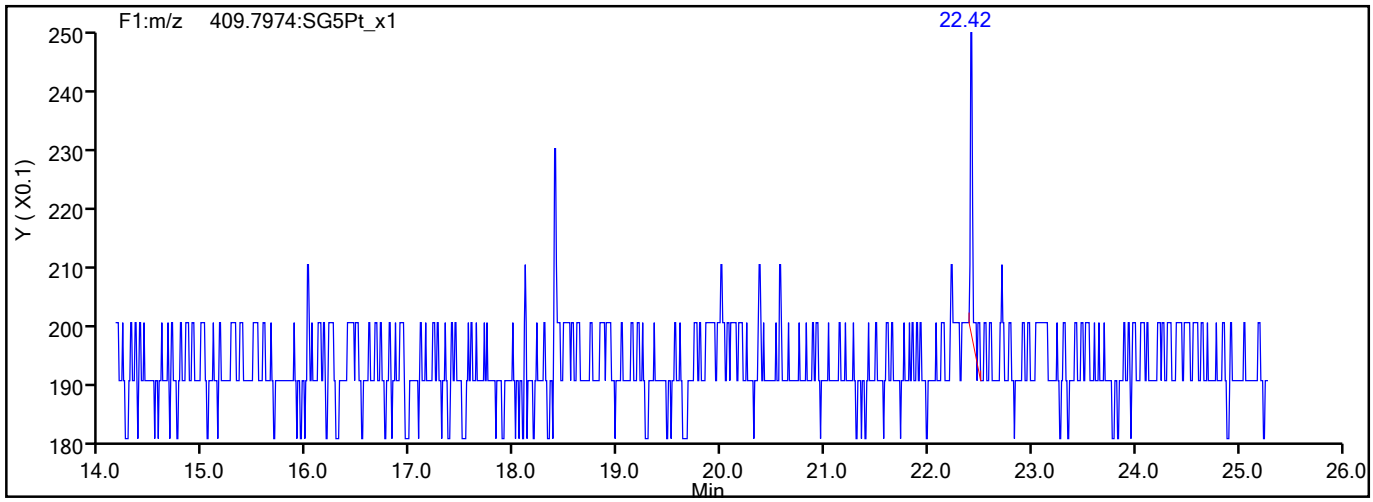

785439

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

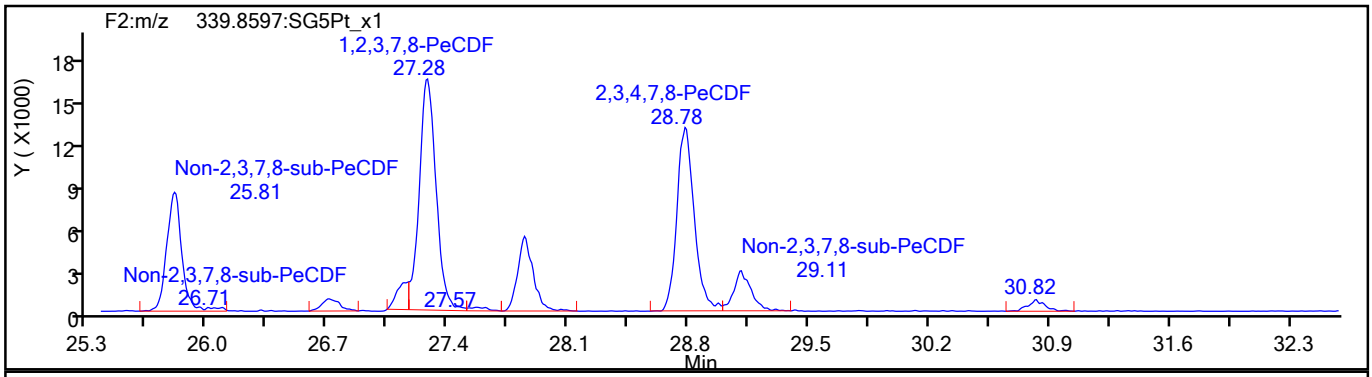

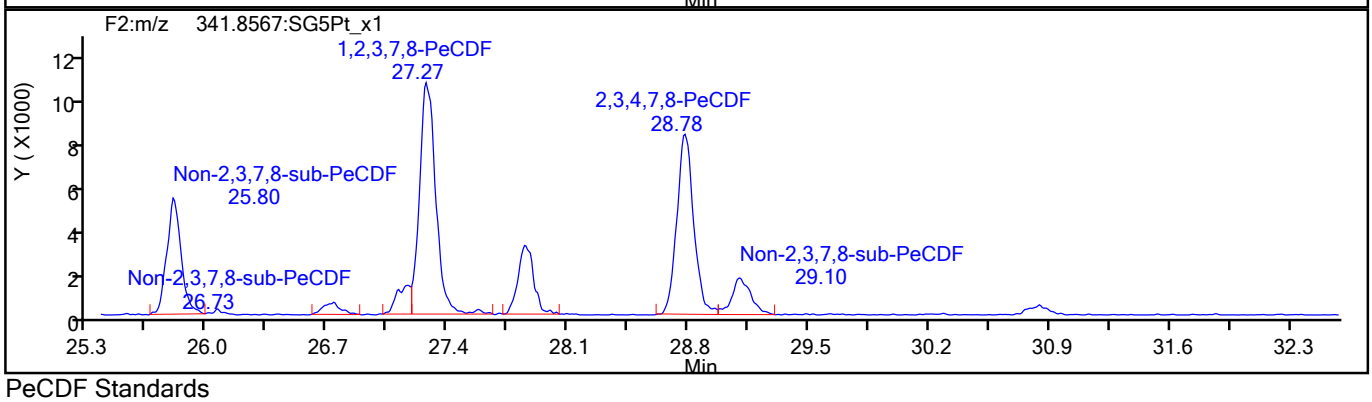

PeCDF Standards

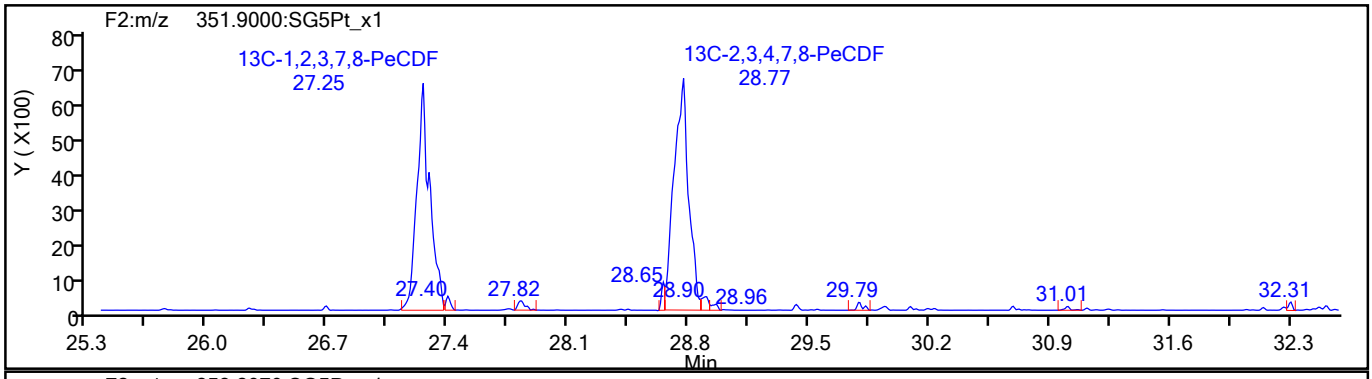

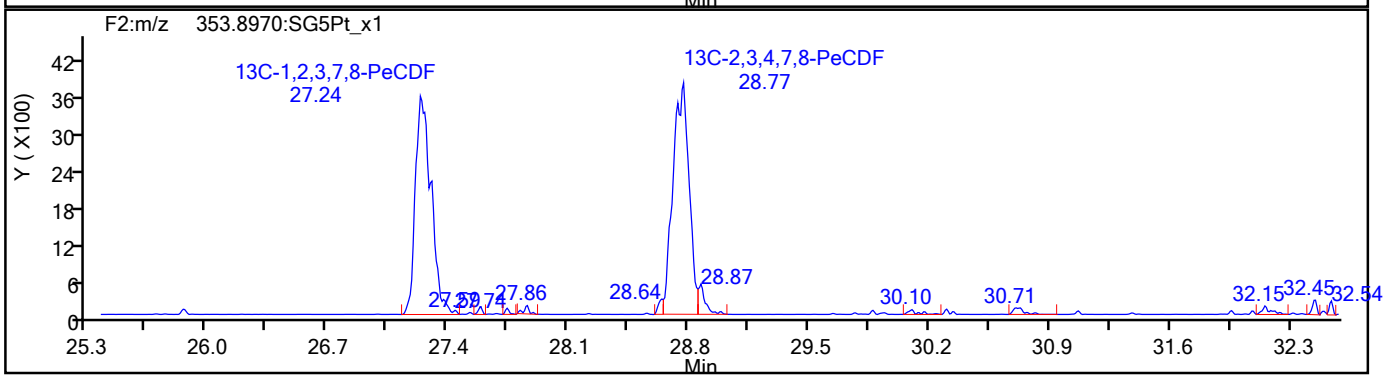

785440

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
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PeCDF

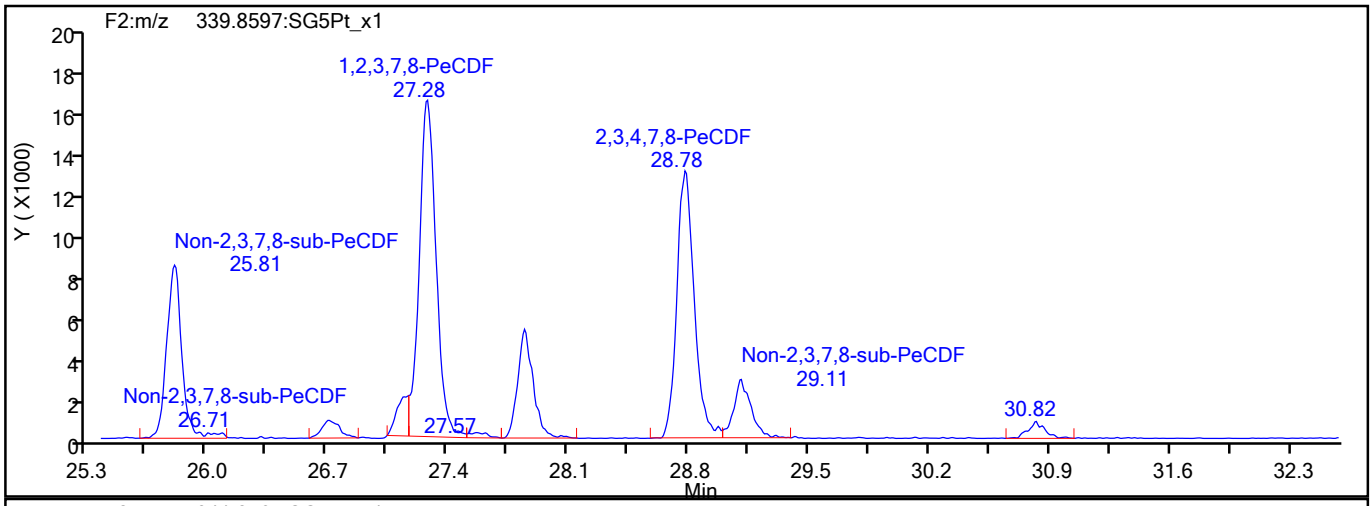

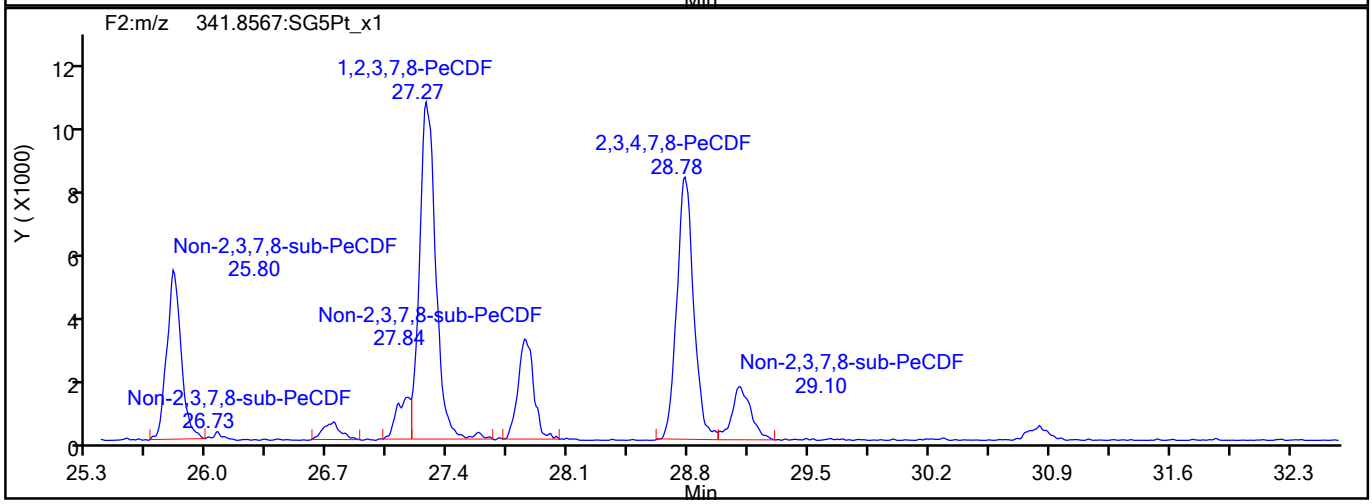

PeCDF Interference Mass

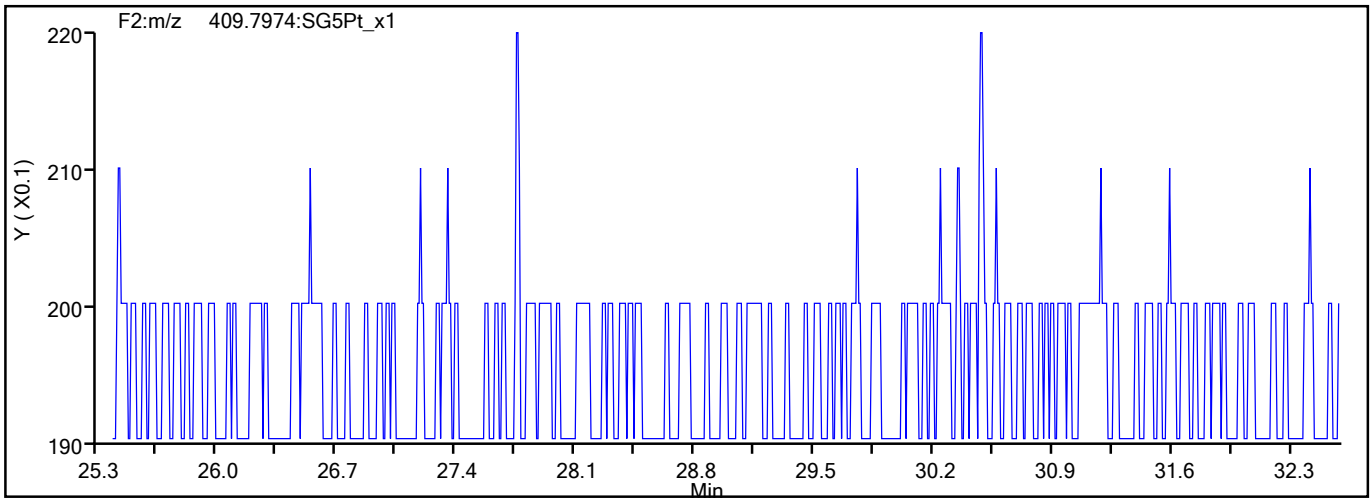

785441

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

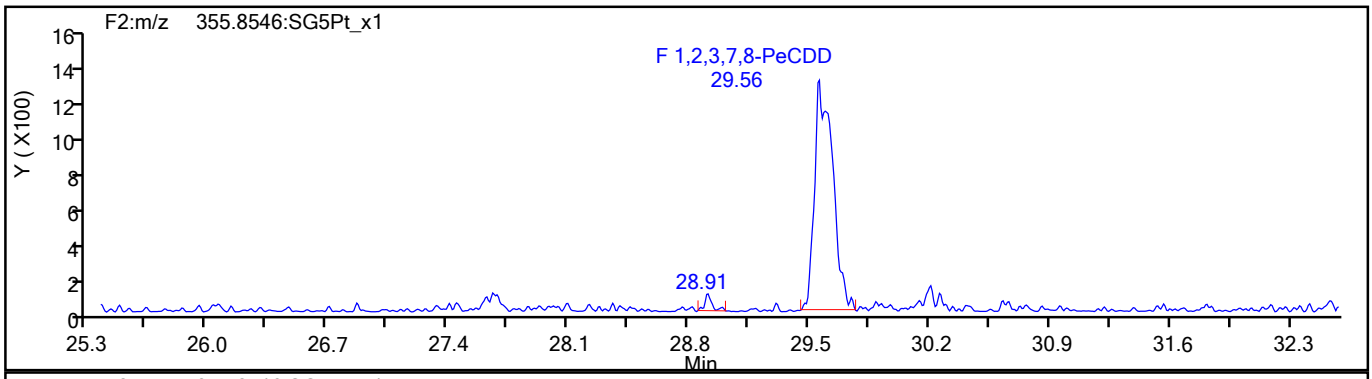

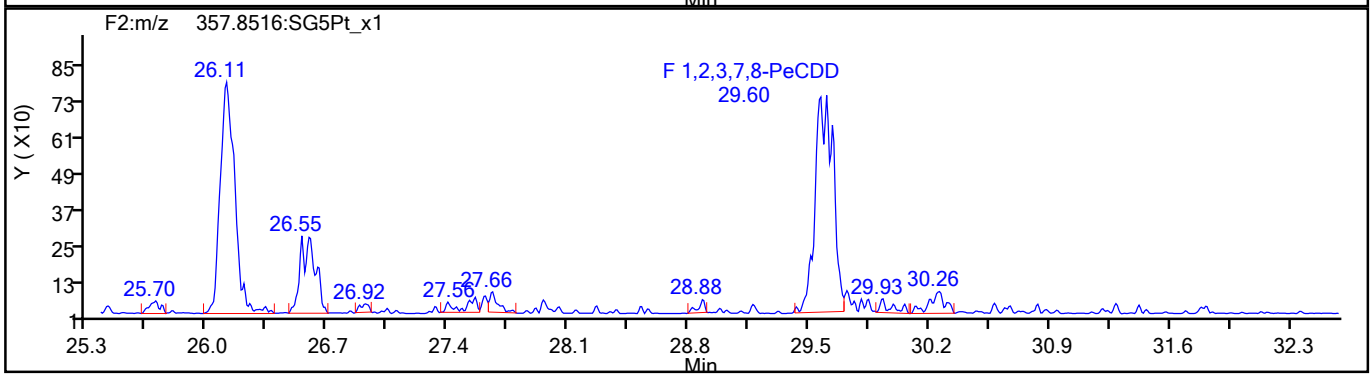

PeCDD Standards

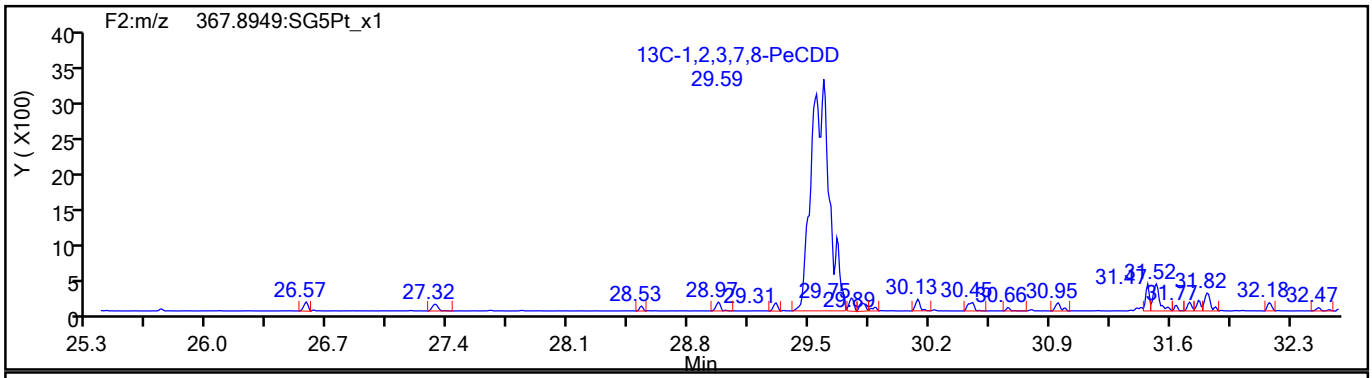

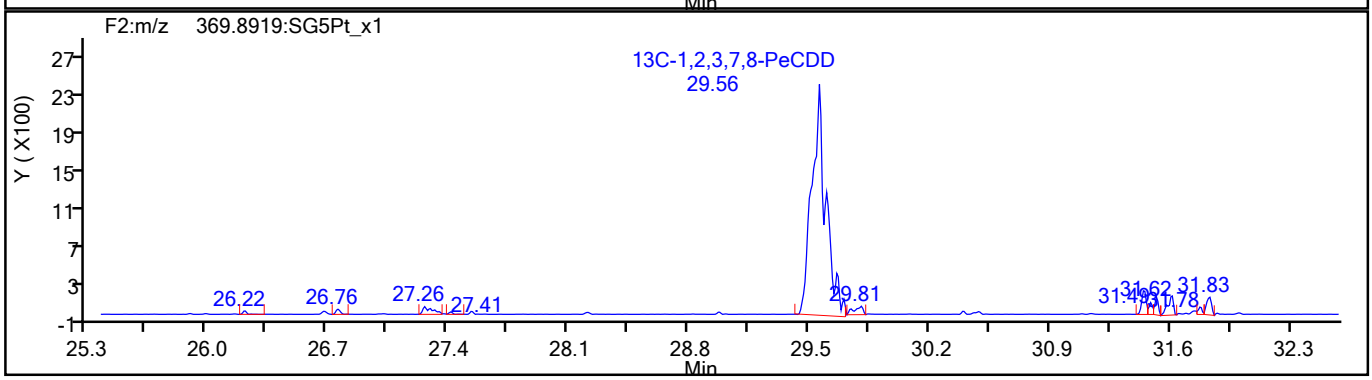

785442

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

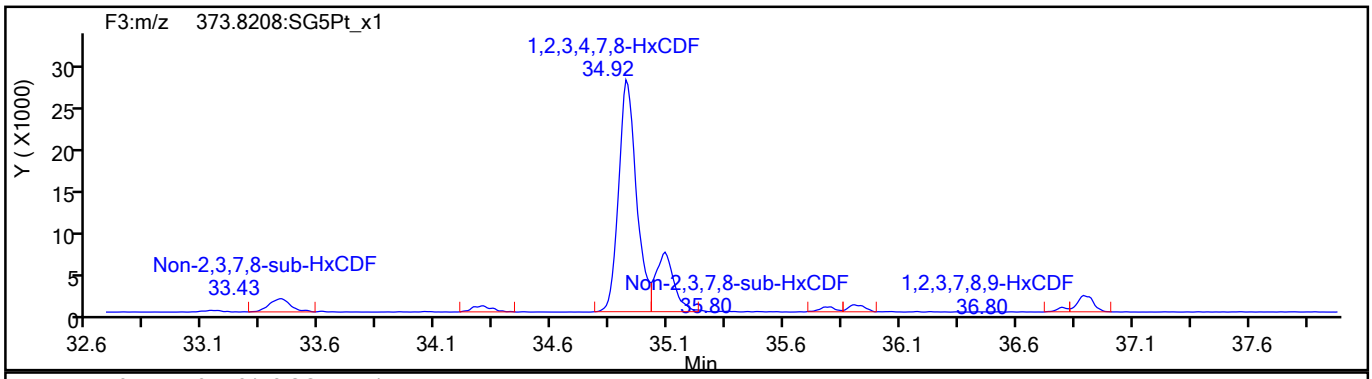

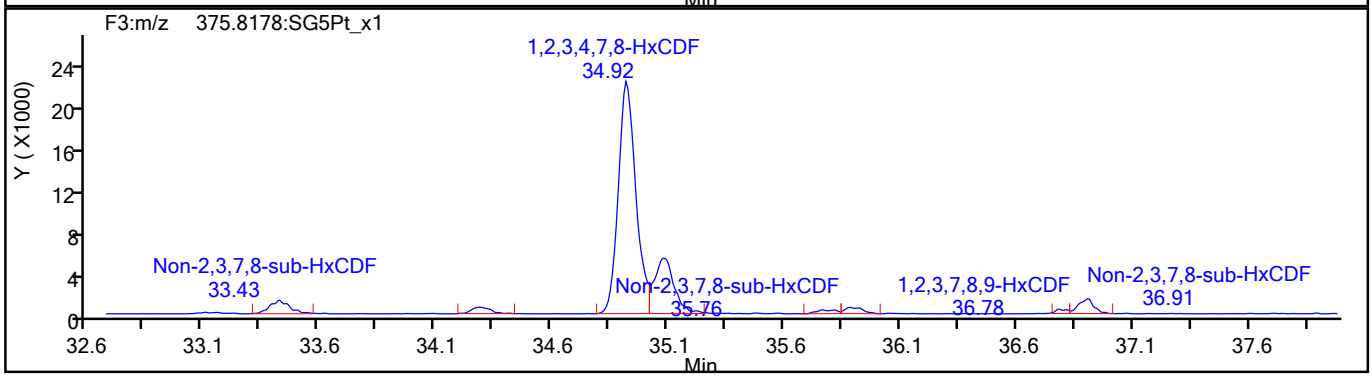

HxCDF Standards

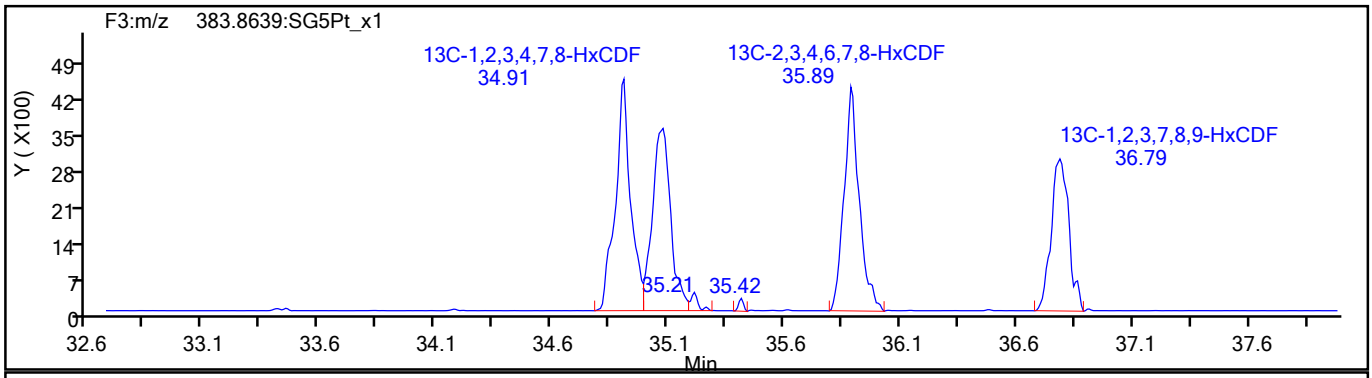

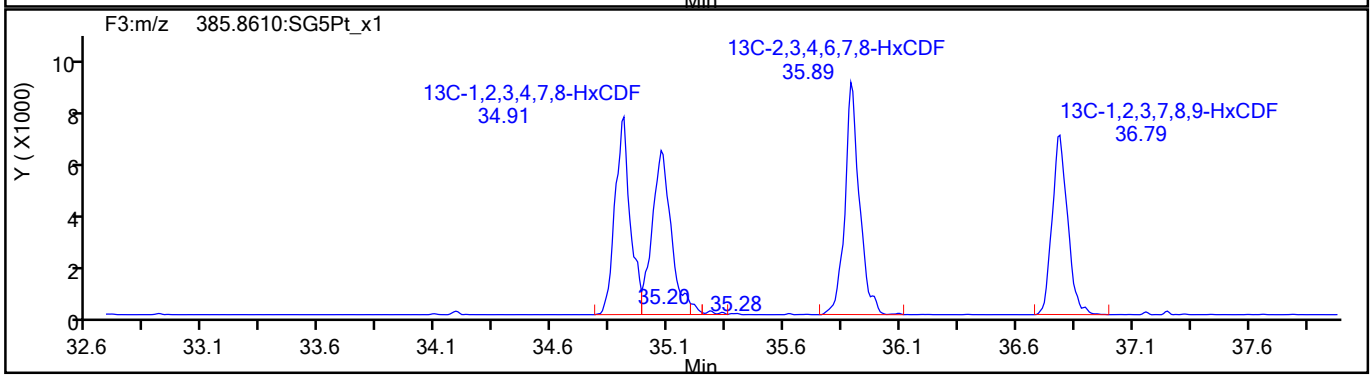

785443

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

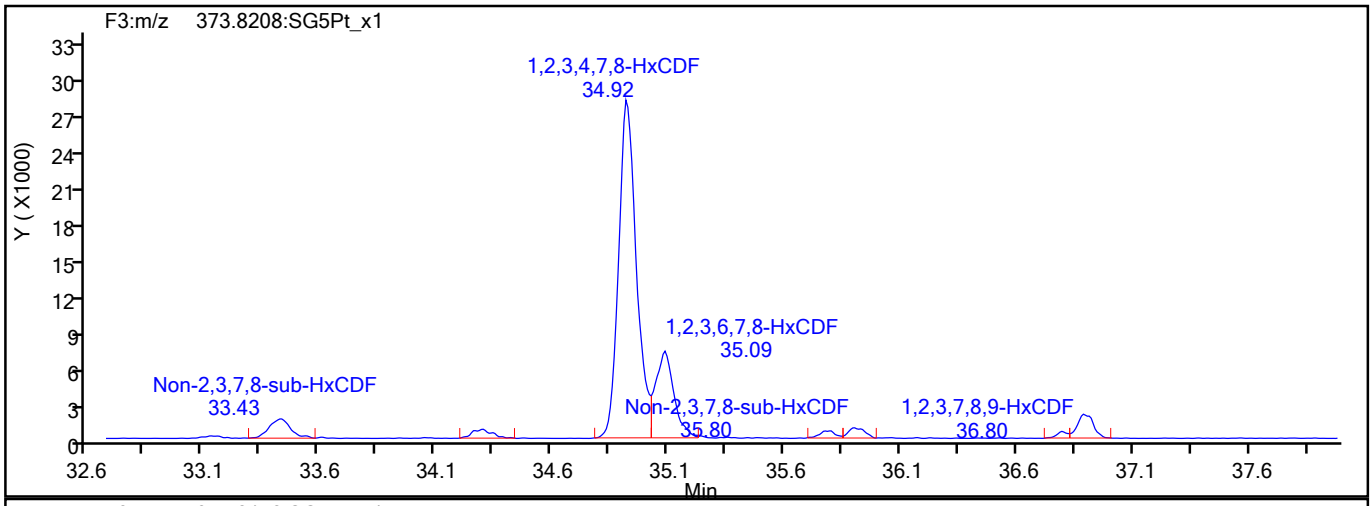

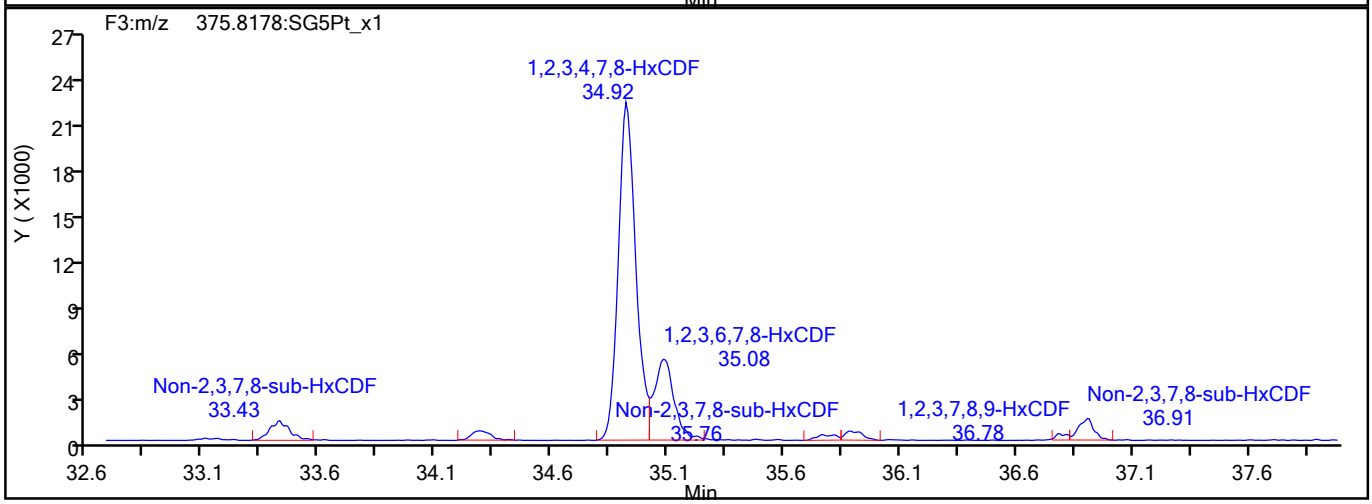

HxCDF Interference Mass

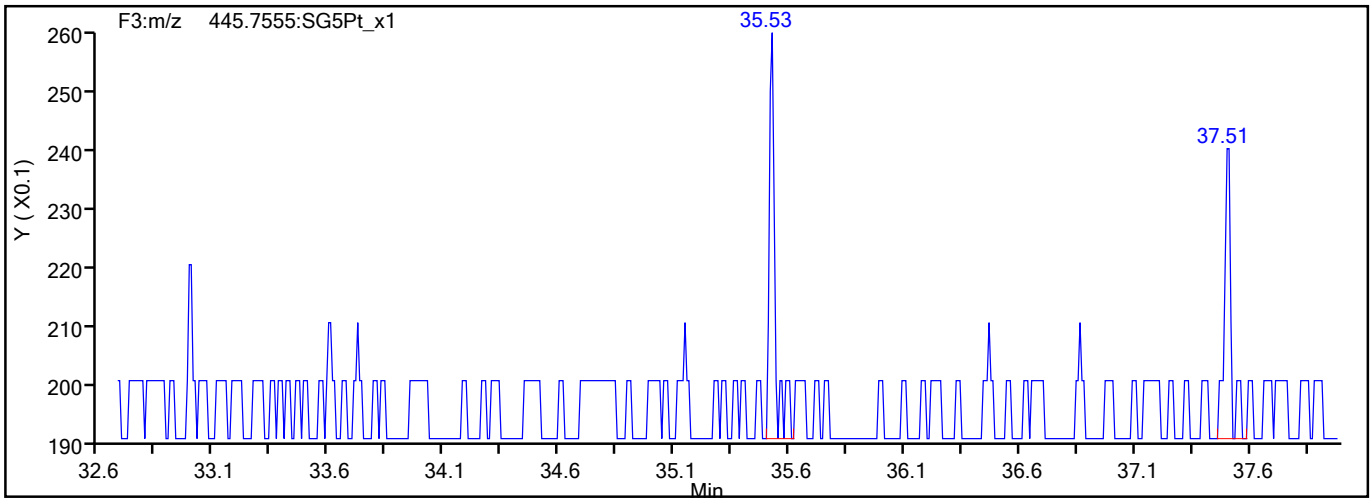

785444

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

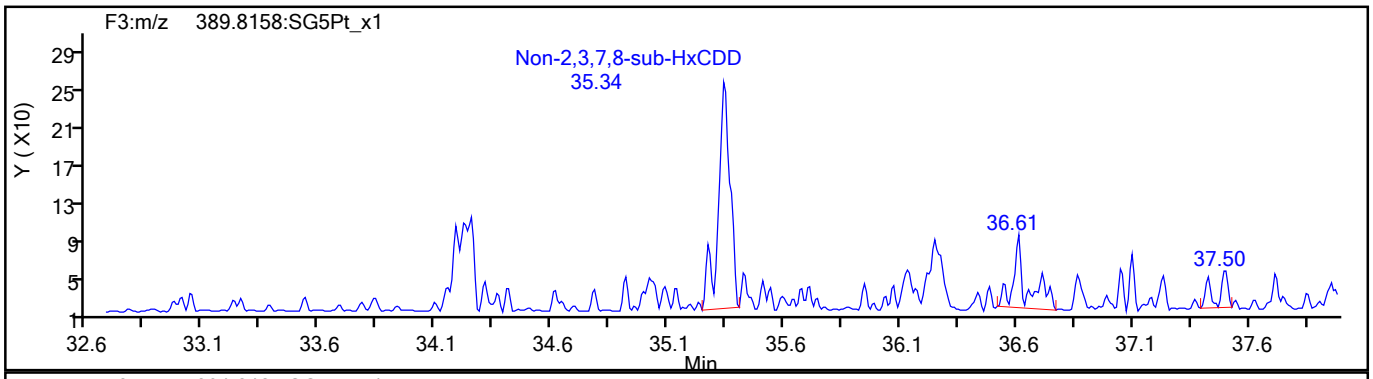

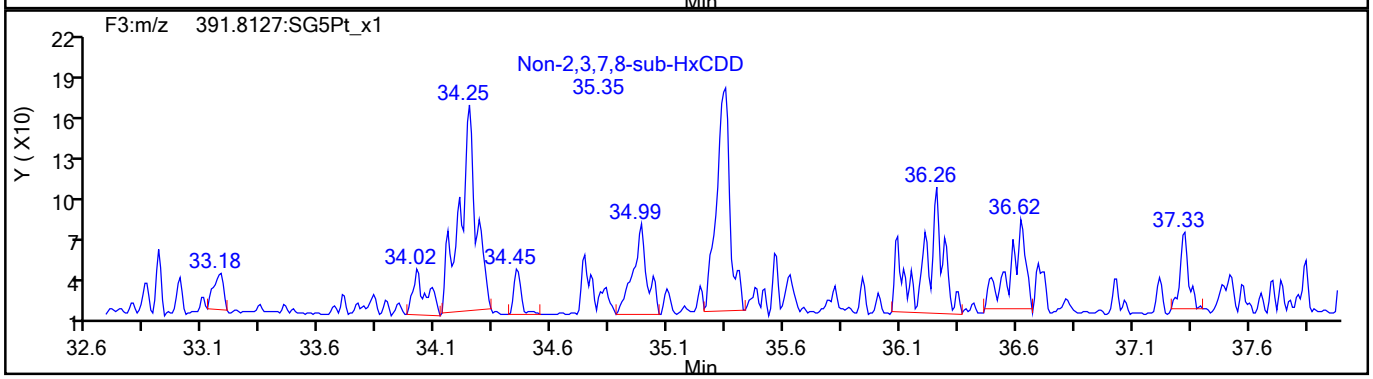

HxCDD Standards

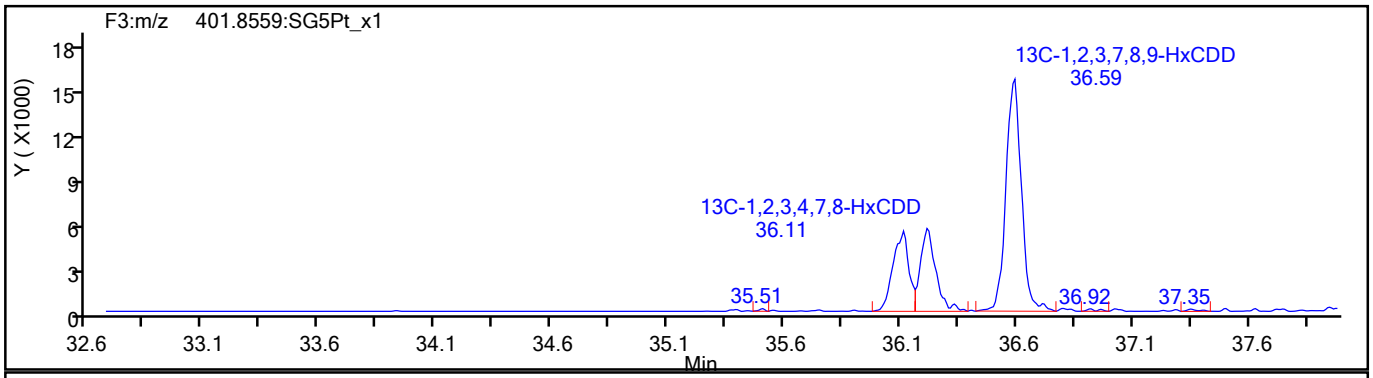

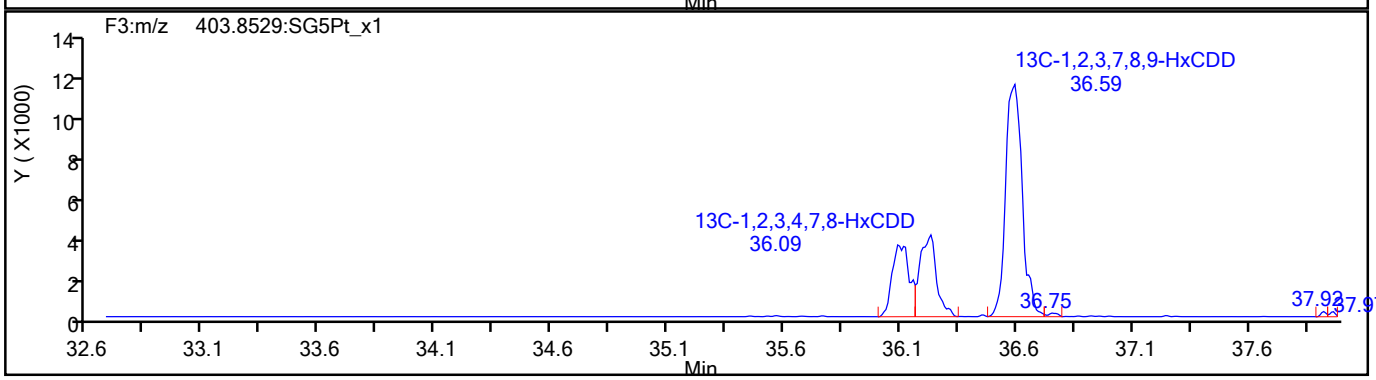

785445

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

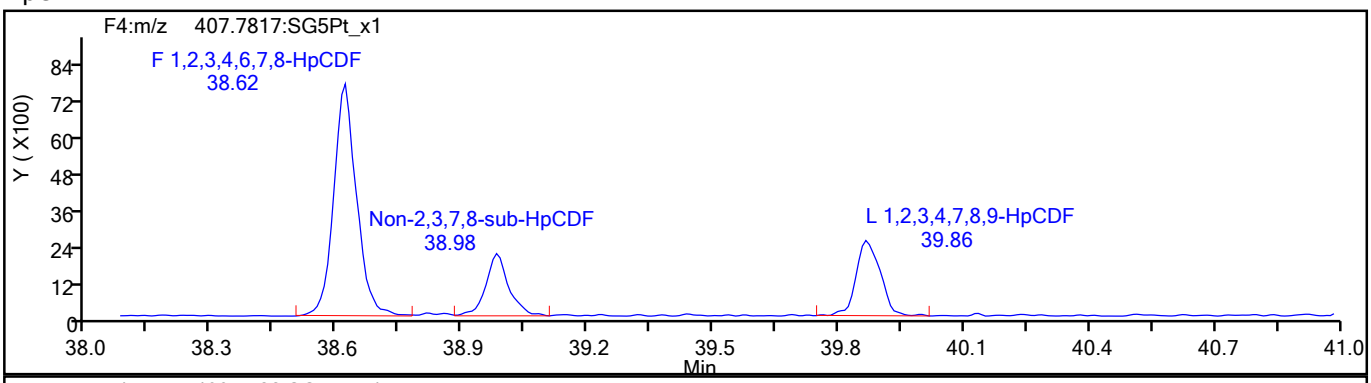

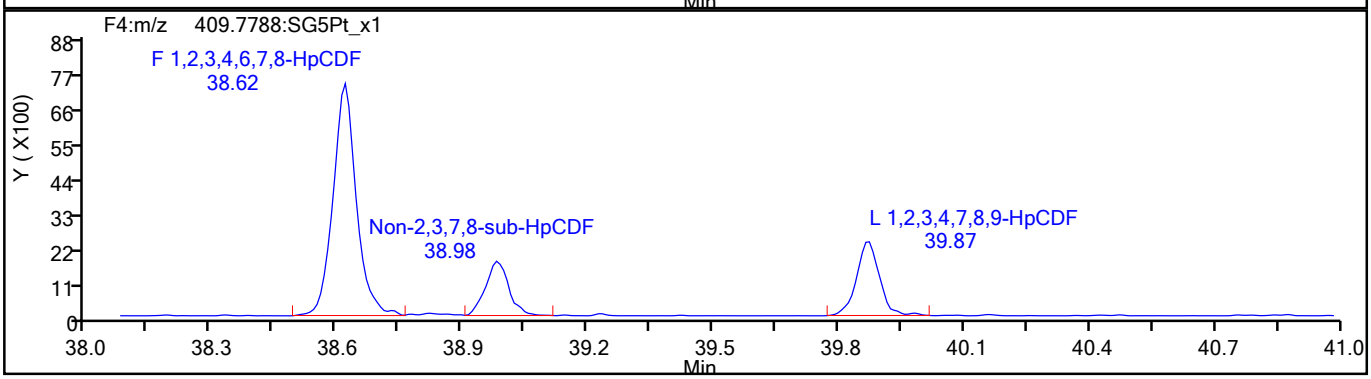

HpCDF Standards

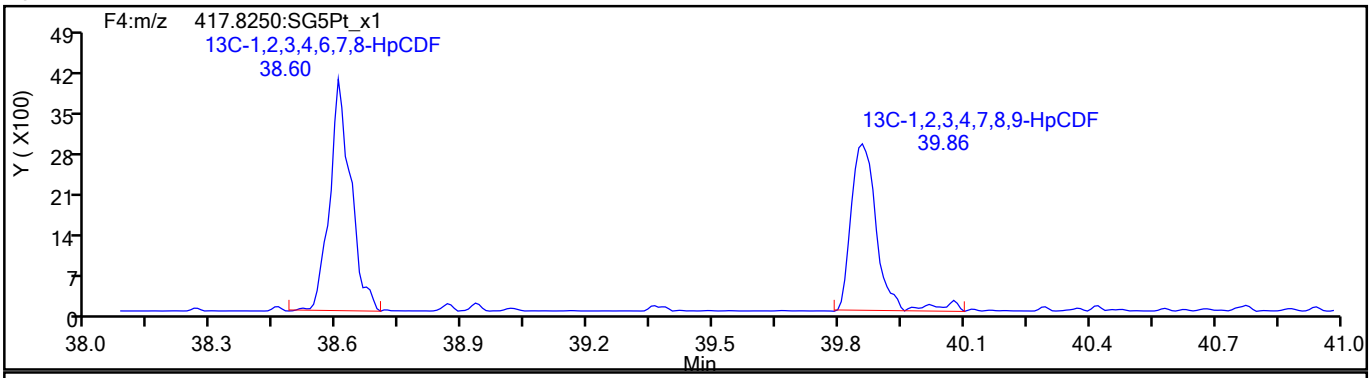

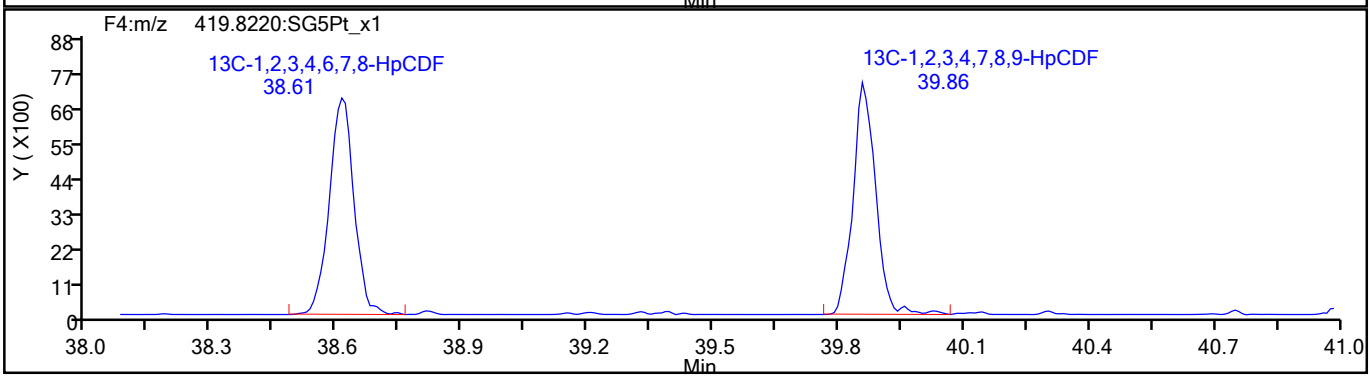

785446

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

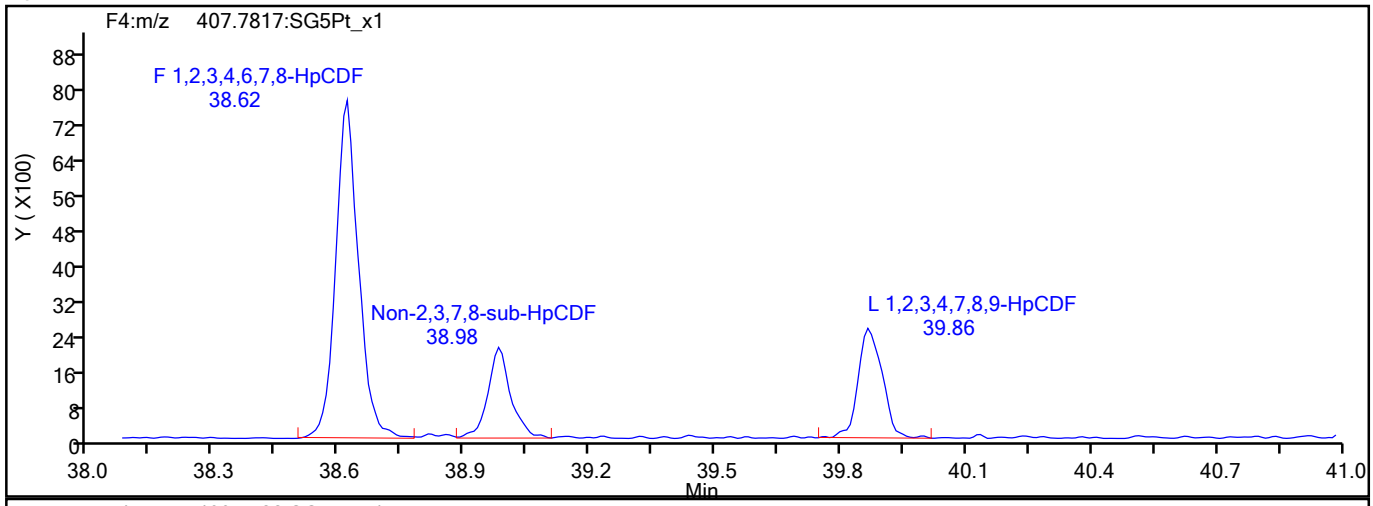

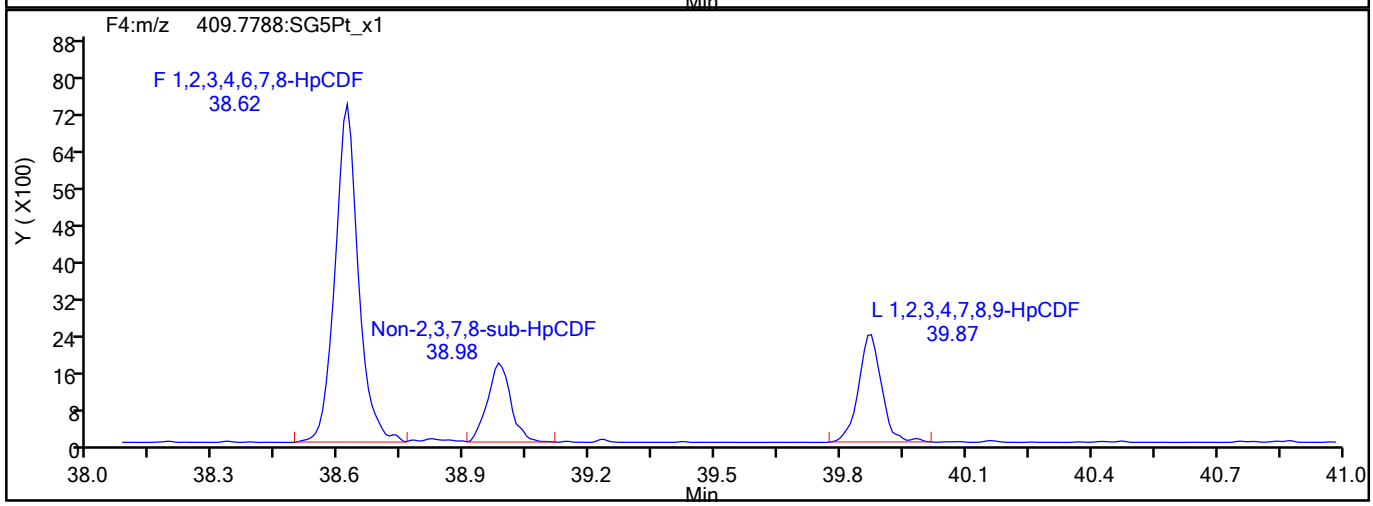

HpCDF Interference Mass

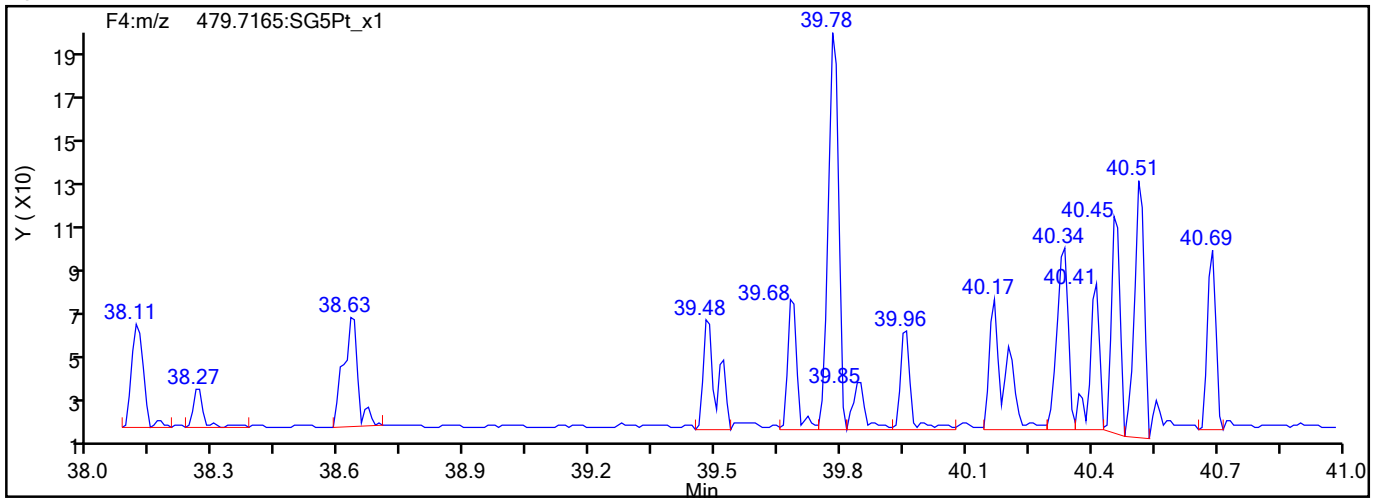

785447

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

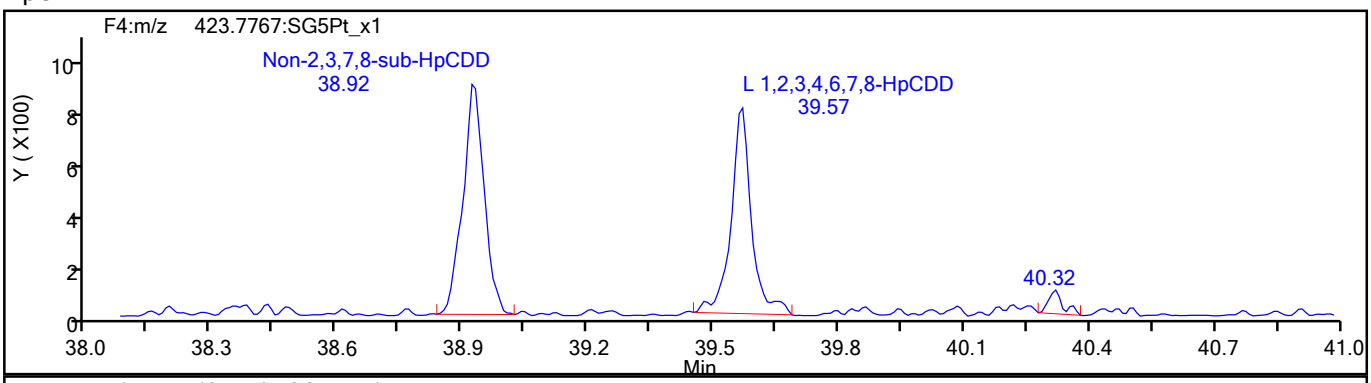

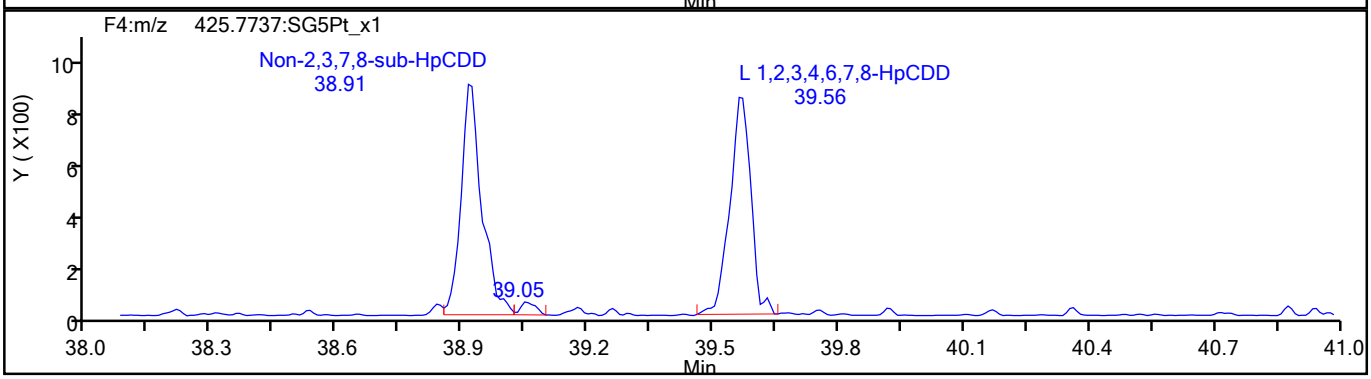

HpCDD Standards

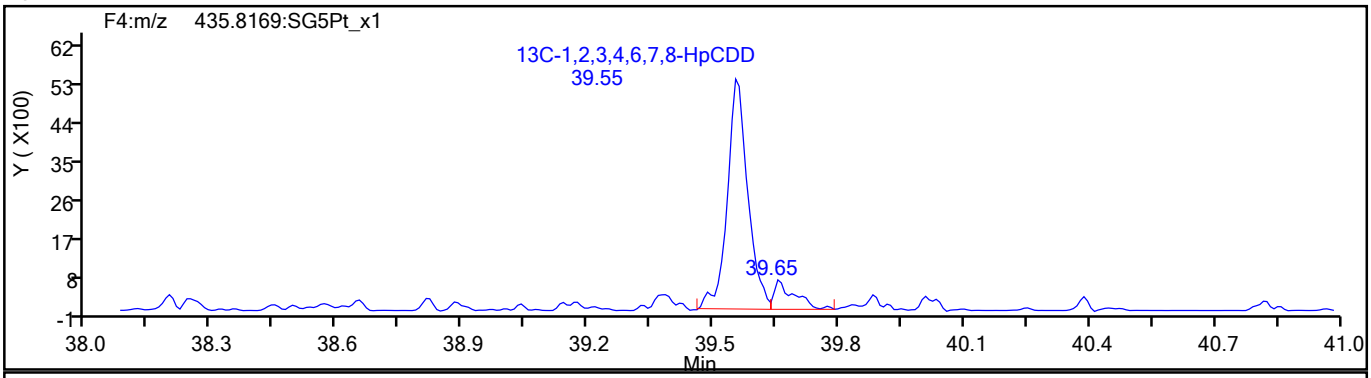

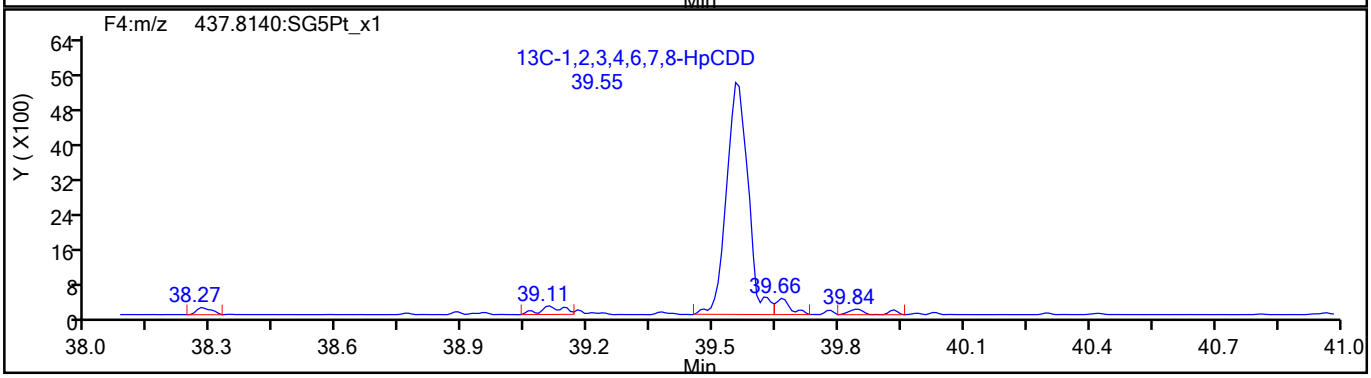

785448

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

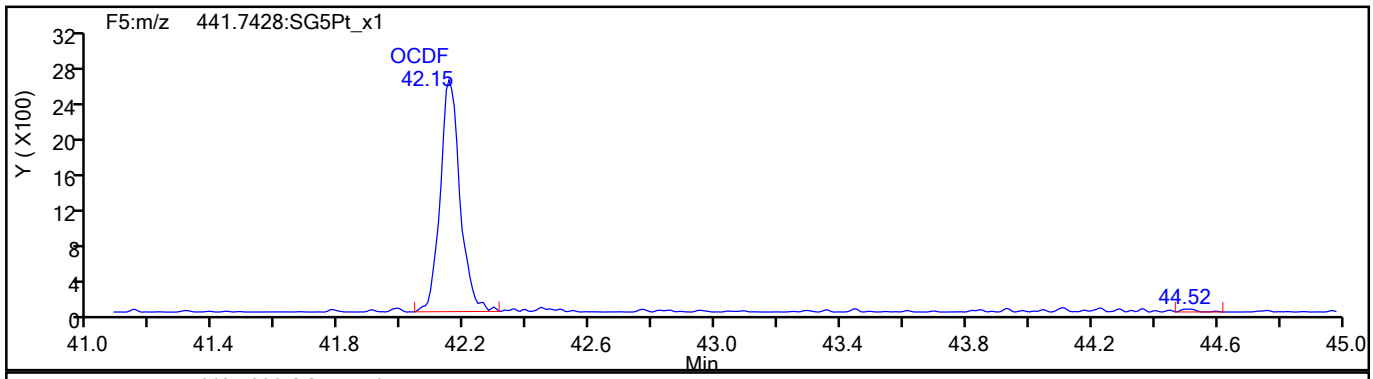

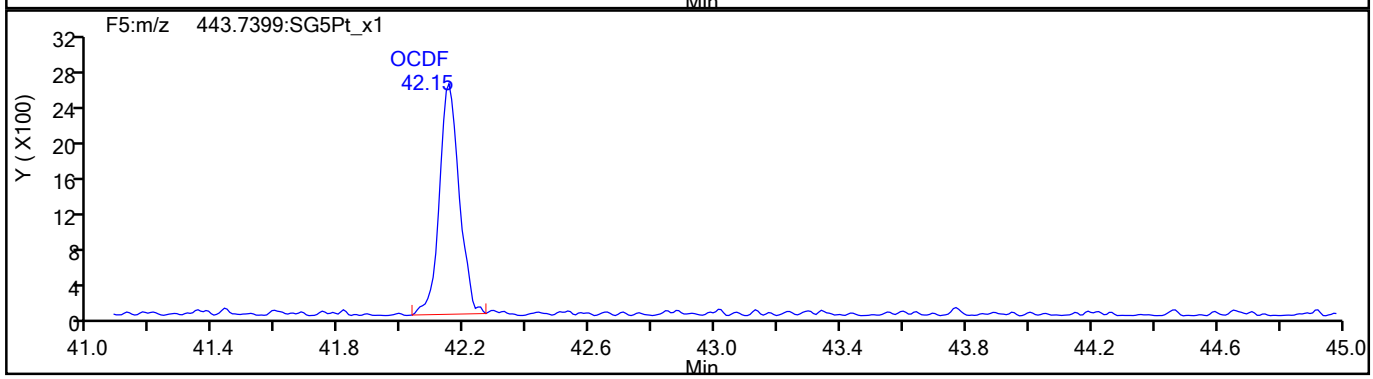

OCDF Standards

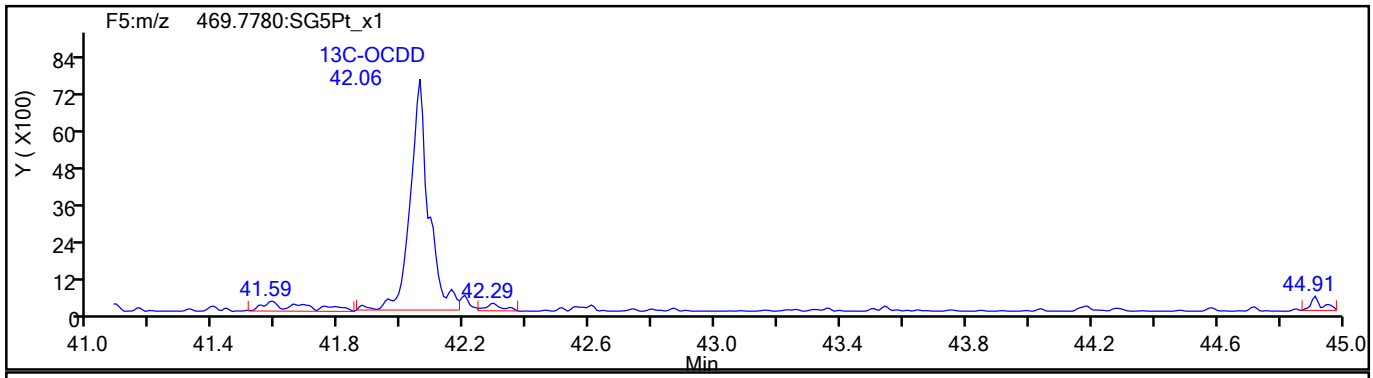

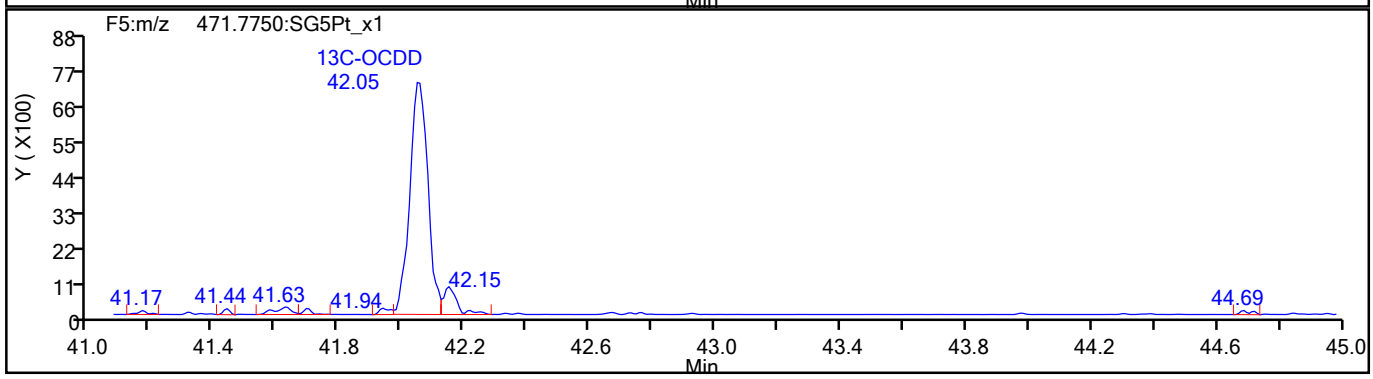

785449

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

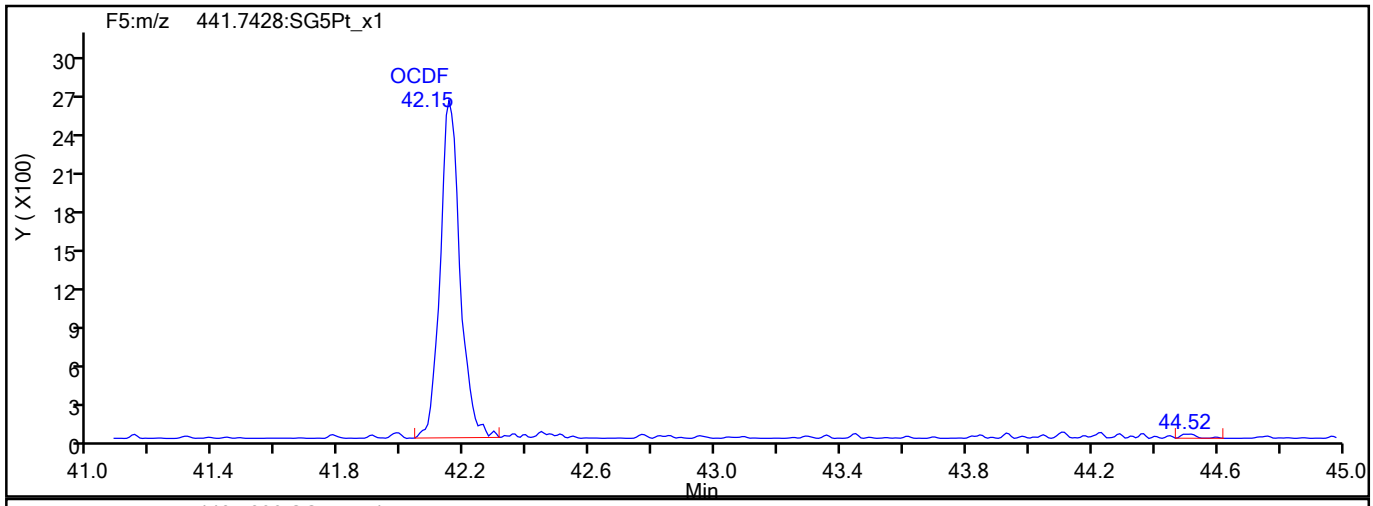

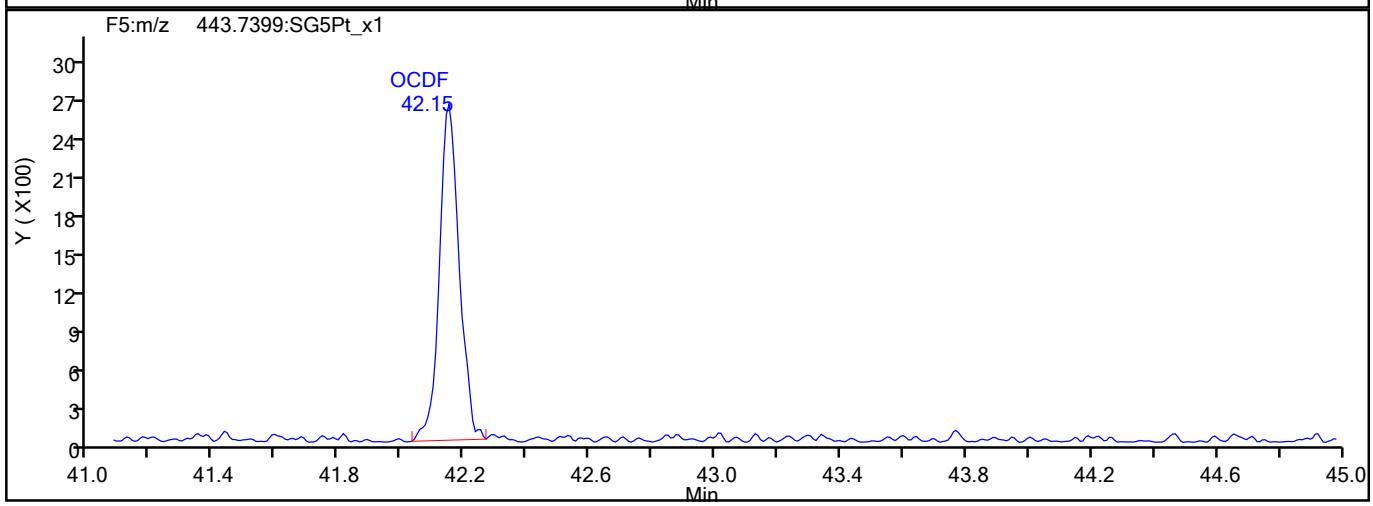

OCDF Interference Mass

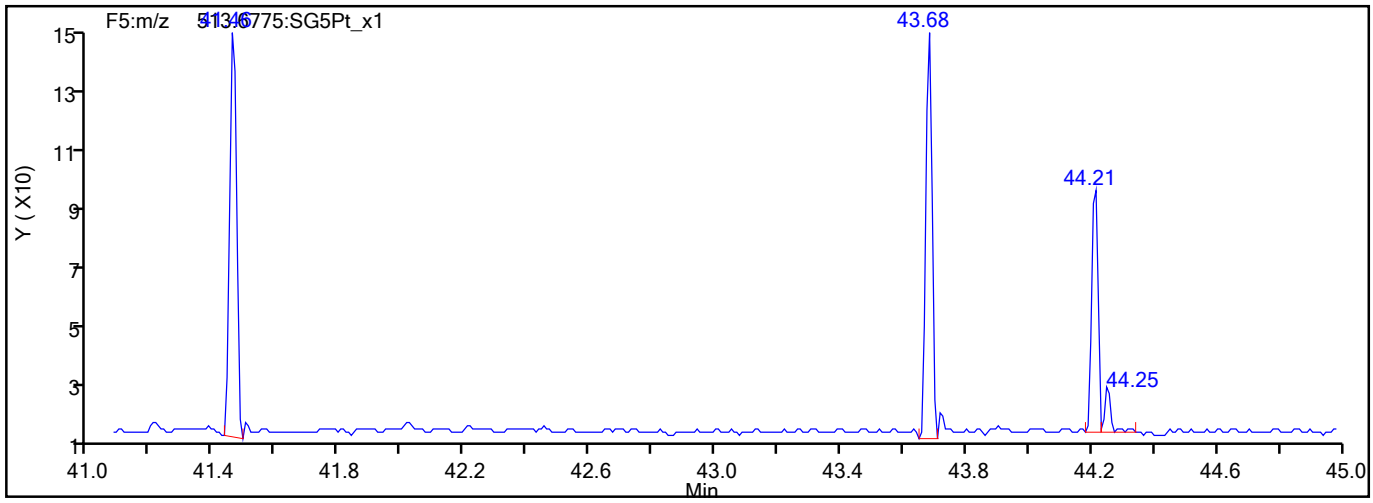

785450

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

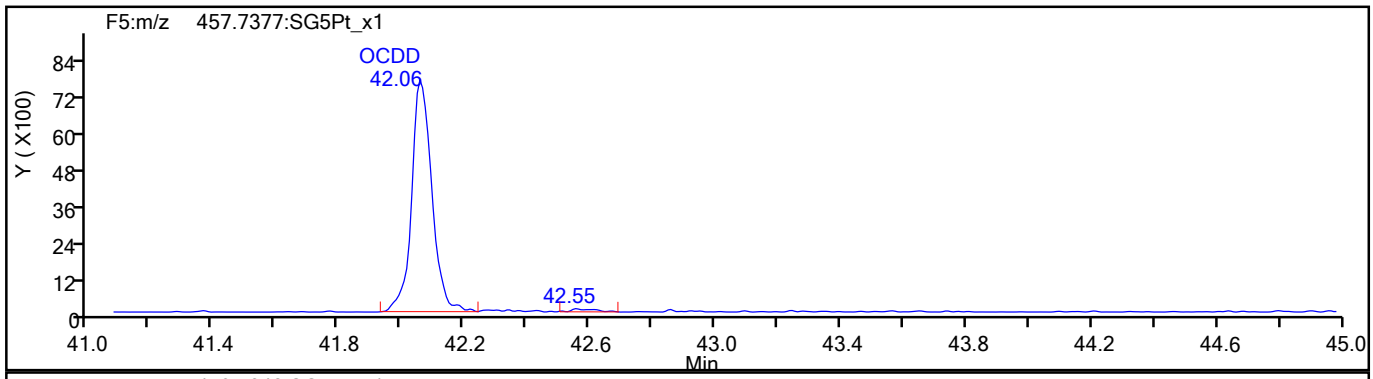

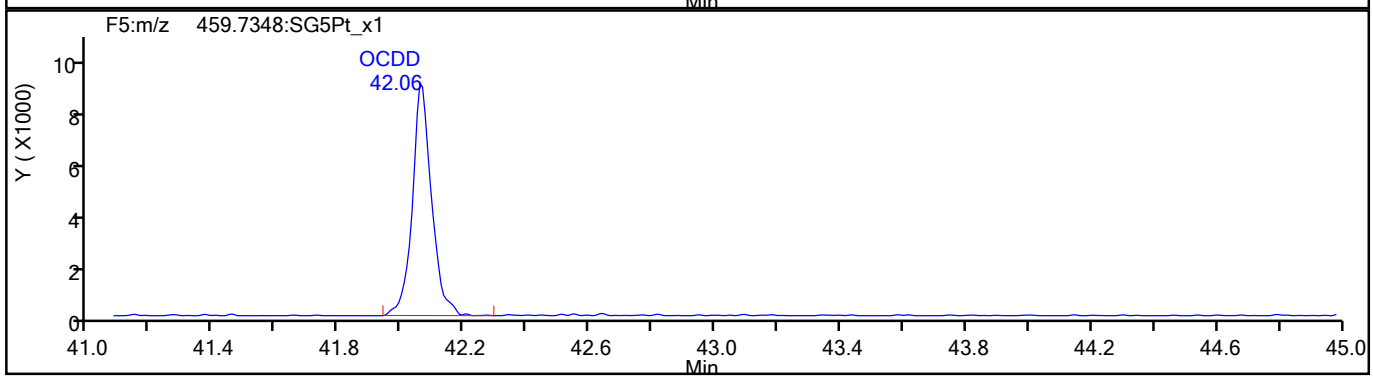

OCDD Standards

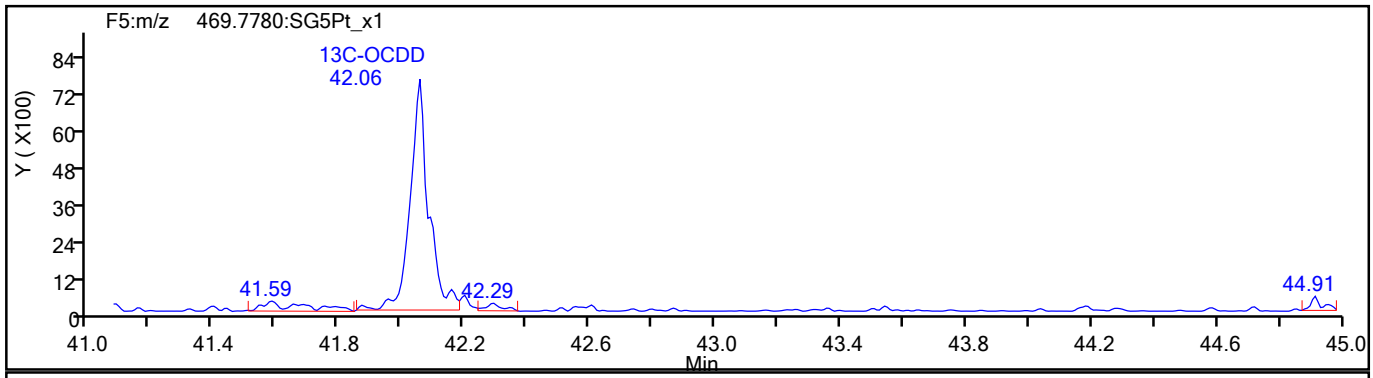

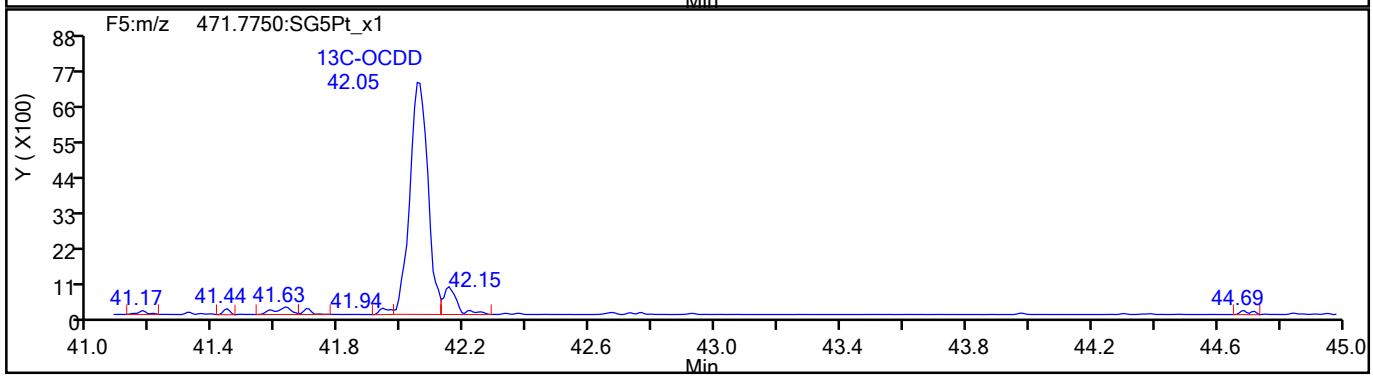

785451

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

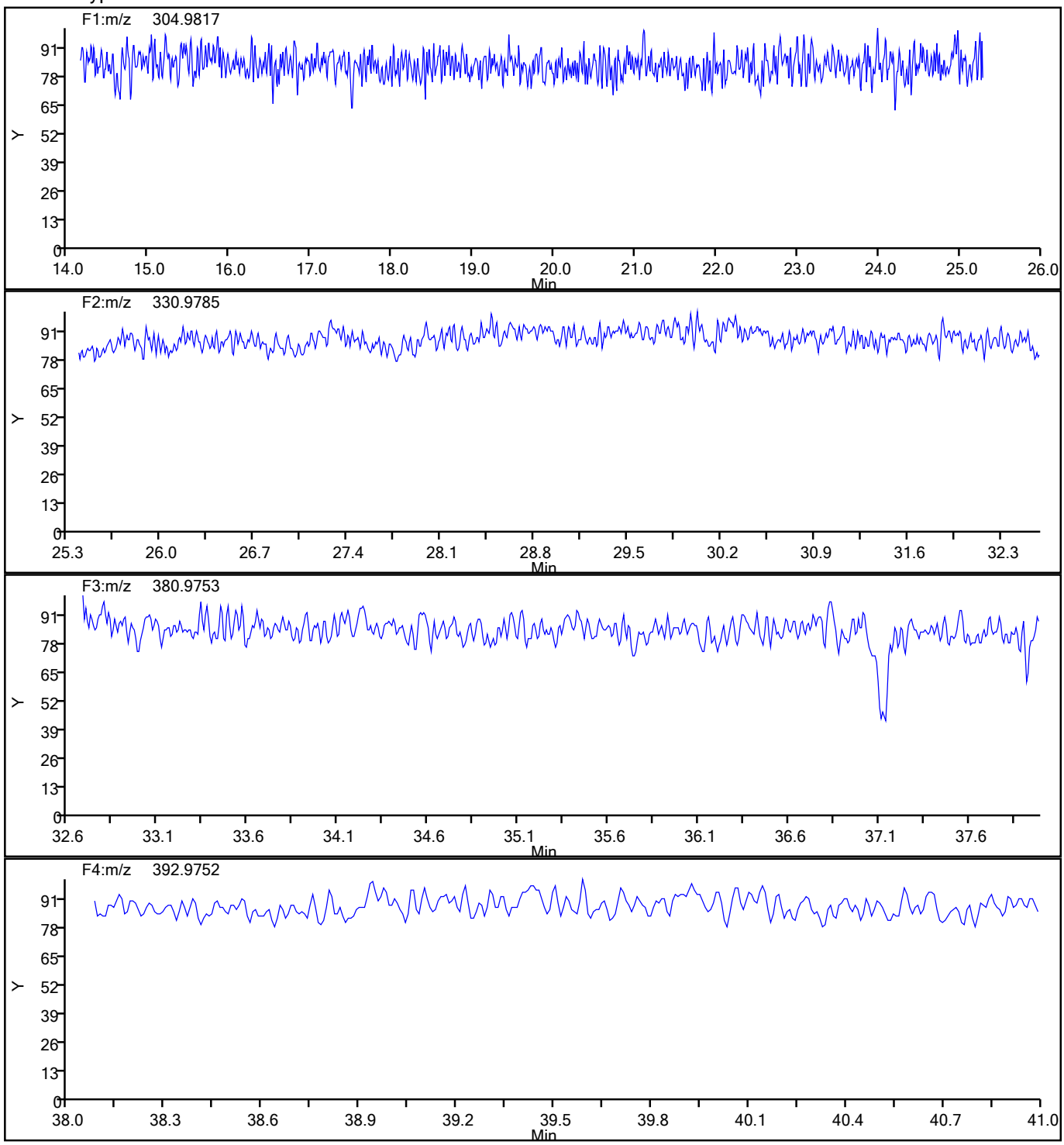

785452

Report Date: 25-Aug-2021 15:08:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_24.d		
Injection Date:	20-Aug-2021 07:09:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	518043	Sample Line#:	22
Column Type:	DB-5	Column Dia:	0.32 mm

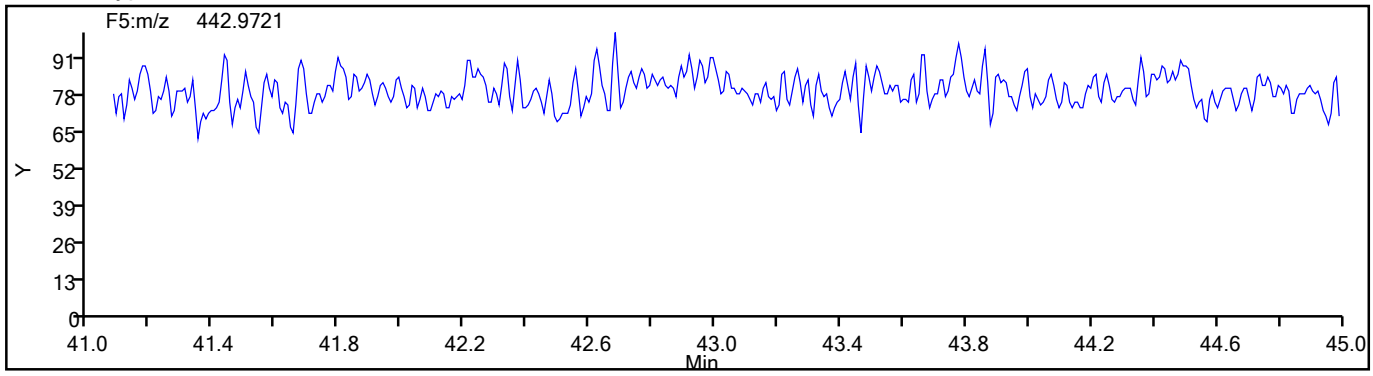

785453

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (6-8) RA
Lab Sample ID: 320-76888-4 RA
Matrix: Sediment
Lab File ID: 26AU21A11D2_016.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.14(g)
Date Analyzed: 08/27/2021 00:52
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 35.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520145
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	47000	E B G	46	46

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	37		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	56		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_016.d
Lims ID: 320-76888-A-4-A
Client ID: 11215702-072621-BN-SJSB094 (6-8)
Sample Type: Client
Inject. Date: 27-Aug-2021 00:52:25 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-4-A 10X
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 09:43:01

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.314	7968286	0.79	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.644	3971709	0.77	1.3327	3.740	3.740	0.9241	0.9241	37.40	M
2,3,7,8-TCDF	17.658	607037510	0.78	0.9978	1531.8	1531.8	1.525	1.525		E
D 13C-2,3,7,8-TCDD	16.081	2825977	0.85	0.8749	4.054	4.054	5.029	5.029	40.54	nM
2,3,7,8-TCDD	16.094	109179676	0.78	1.0570	365.5	365.5	1.895	1.895		Ea
$ 37Cl4-2,3,7,8-TCDD	16.094	1543230		0.8648	2.239	2.239	0.1477	0.1477	55.99	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_016.d
Lims ID: 320-76888-A-4-A
Client ID: 11215702-072621-BN-SJSB094 (6-8)
Sample Type: Client
Inject. Date: 27-Aug-2021 00:52:25 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-4-A 10X
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 09:43:01

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.314	16.288	2		3510910	750026	175061	437652	4		M
333.9339	16.314	16.288	2		4457376	951580	124412	311030	8	0.79(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.644	17.619	2	1.082	1731693	319549	40459	101147	8		M
317.9389	17.658	17.619	2	1.082	2240016	362398	43363	108407	8	0.77(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.658	17.632	2	1.001	265869414	50706434	19172	47930	2645		
305.8987	17.658	17.632	2	1.001	341168096	63801392	22330	55825	2857	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.081	16.069	1	0.986	1294359	227375	175061	437652	1		M
333.9339	16.081	16.069	1	0.986	1531618	350746	124412	311030	3	0.85(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.094	16.082	1	1.001	47830194	10813019	25988	64970	416		a
321.8936	16.094	16.082	1	1.001	61349482	13875160	20320	50800	683	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.094	16.082	1	0.987	1543230	373684	8697	21742	43		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_016.d				
Injection Date:	27-Aug-2021 00:52:25	Instrument ID:	11D2		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.64
Area: 2601790
Amount: 6.255419
Amount Units: pg/ul

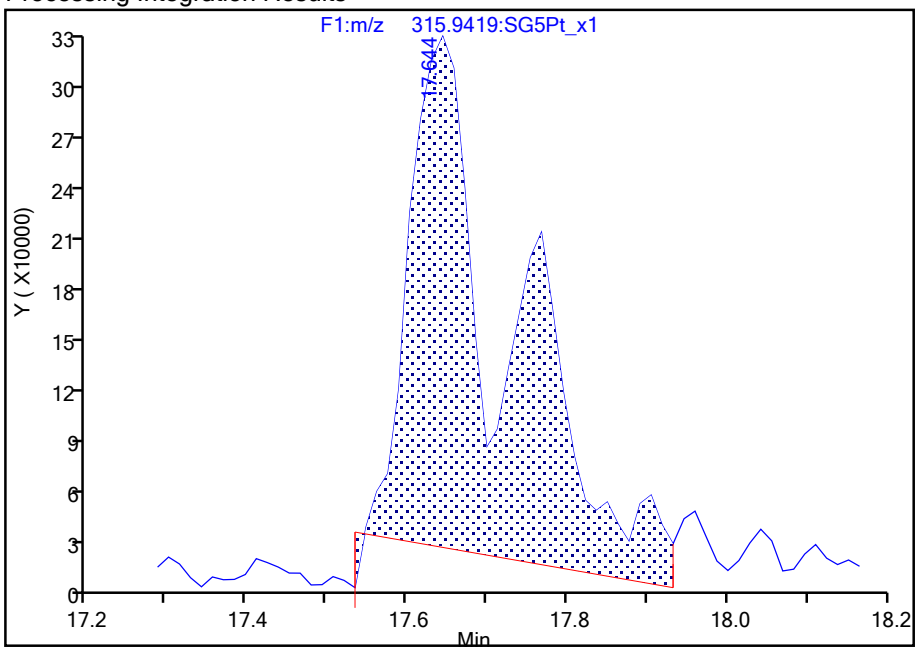

Manual Integration Results

RT: 17.64
Area: 1731693
Amount: 3.740113
Amount Units: pg/ul

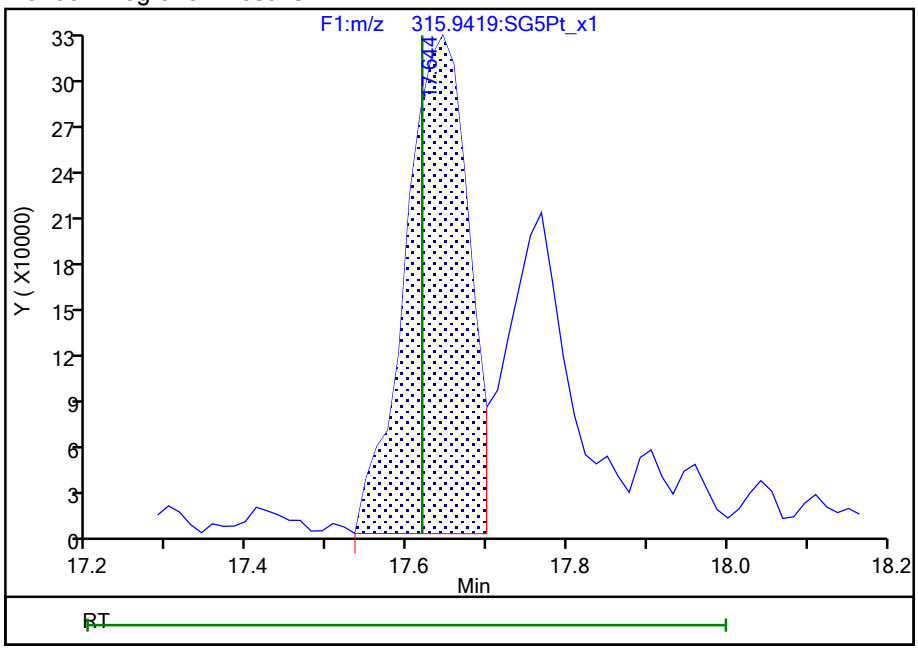

Reviewer: bennettd, 27-Aug-2021 09:42:32

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_016.d				
Injection Date:	27-Aug-2021 00:52:25	Instrument ID:	11D2		
Lims ID:	320-76888-A-4-A	Lab Sample ID:	320-76888-4		
Client ID:	11215702-072621-BN-SJSB094 (6-8)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.66
Area: 4040979
Amount: 6.255419
Amount Units: pg/ul

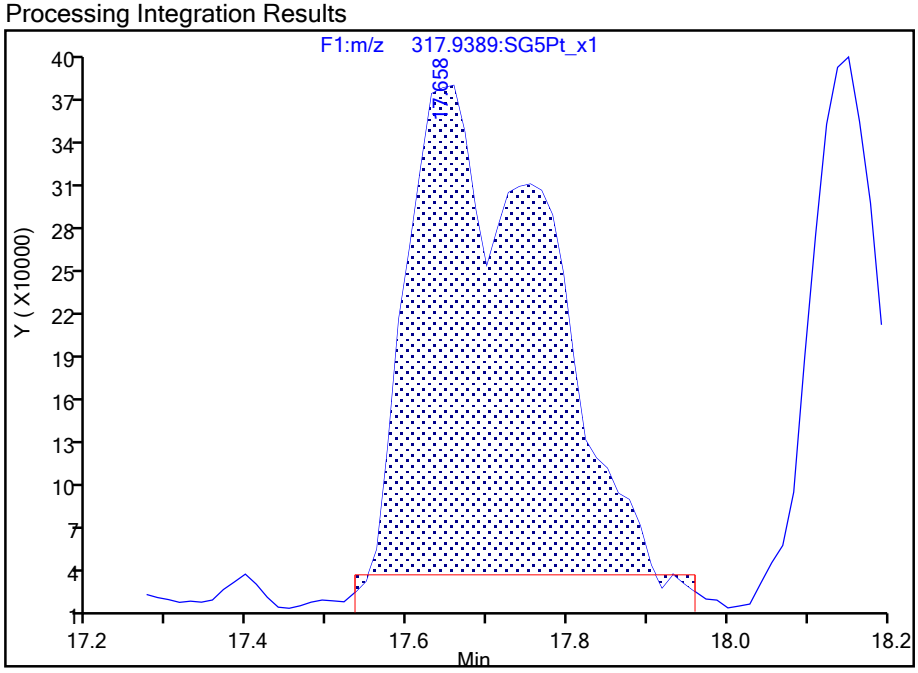

Manual Integration Results

RT: 17.66
Area: 2240016
Amount: 3.740113
Amount Units: pg/ul

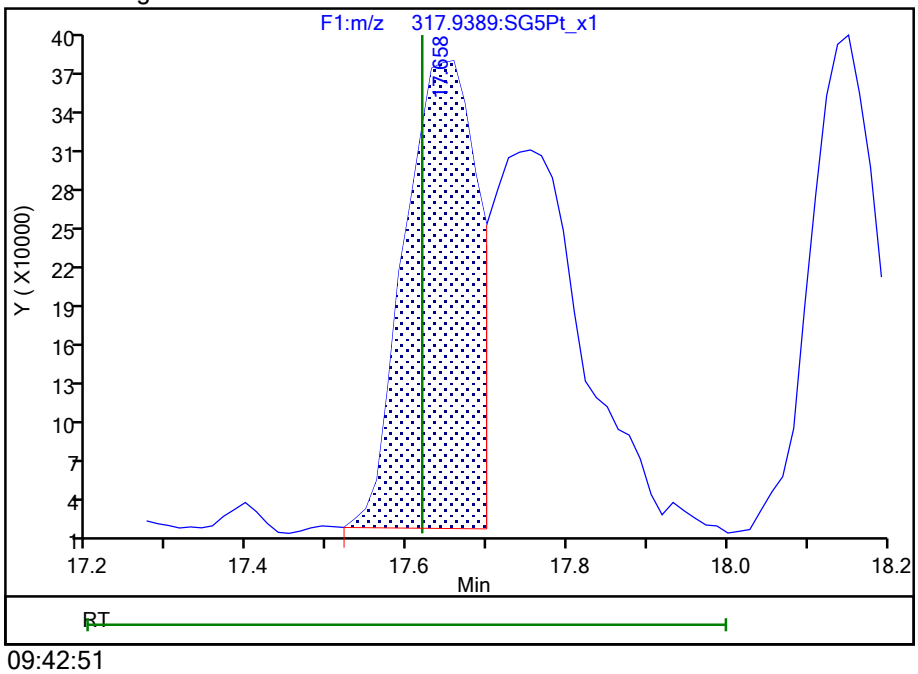

Reviewer: bennettd, 27-Aug-2021 09:42:51

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Report Date: 27-Aug-2021 09:43:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_016.d		
Injection Date:	27-Aug-2021 00:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	520145	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

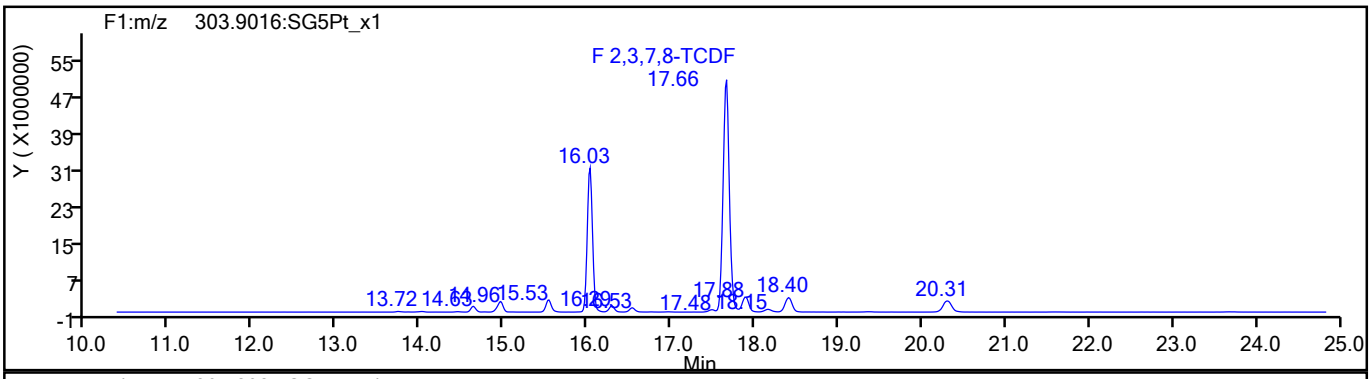

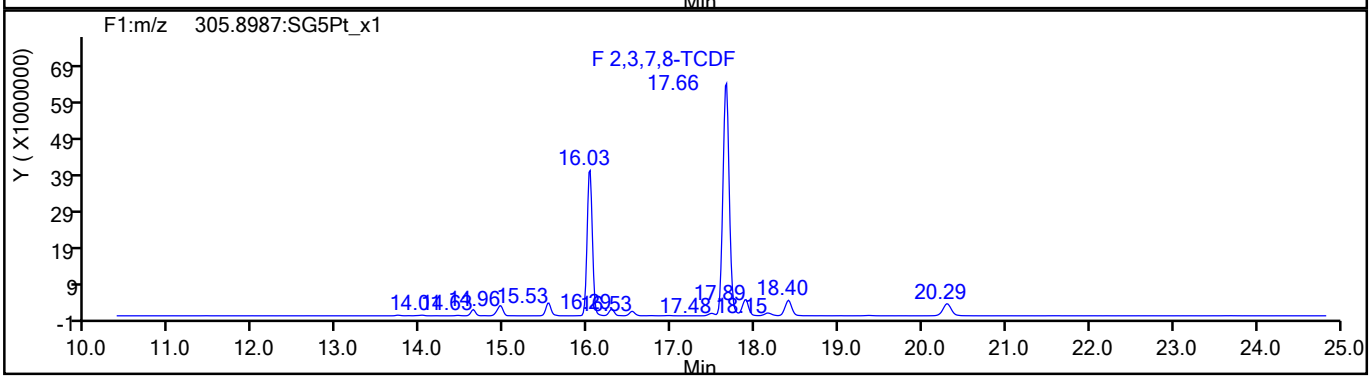

TCDF Standards

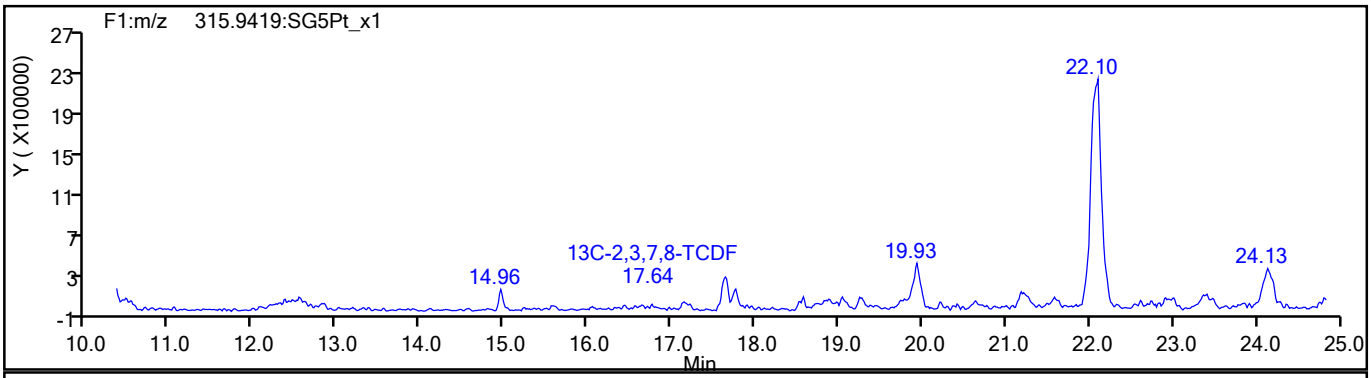

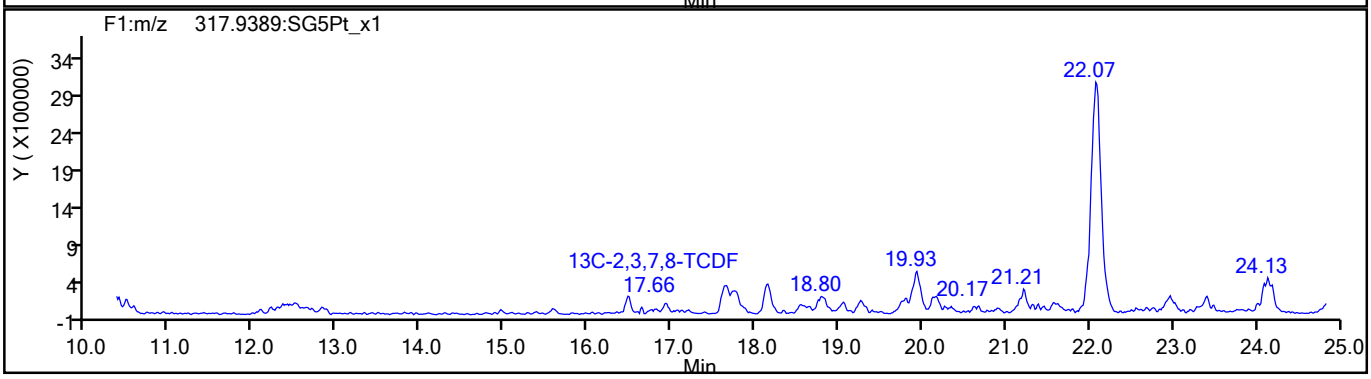

785459

Report Date: 27-Aug-2021 09:43:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_016.d		
Injection Date:	27-Aug-2021 00:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	520145	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

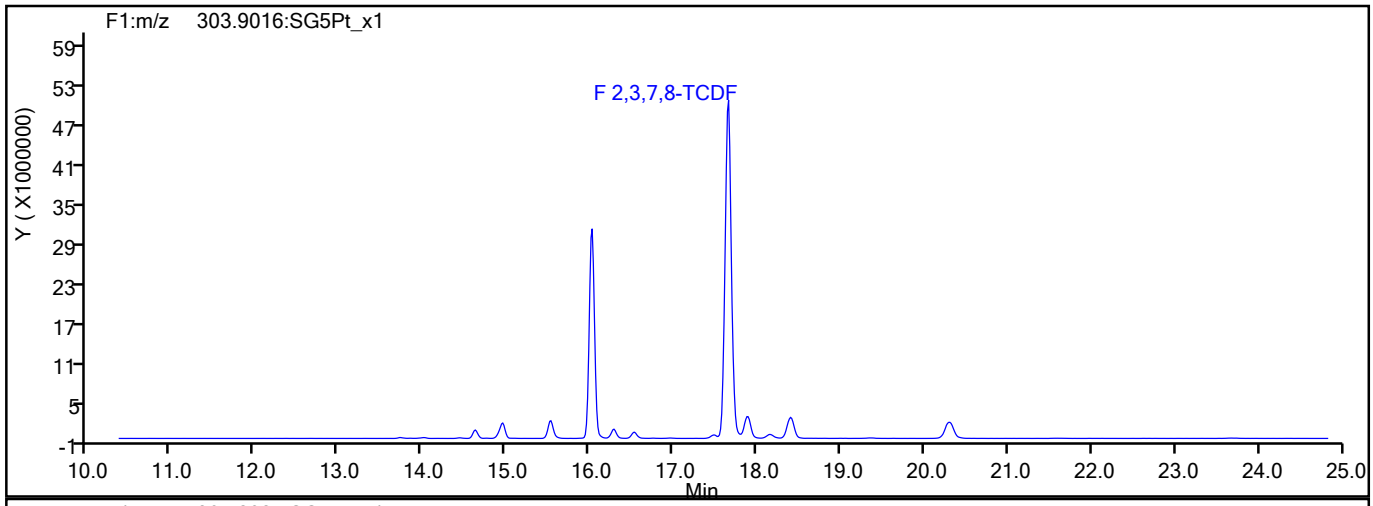

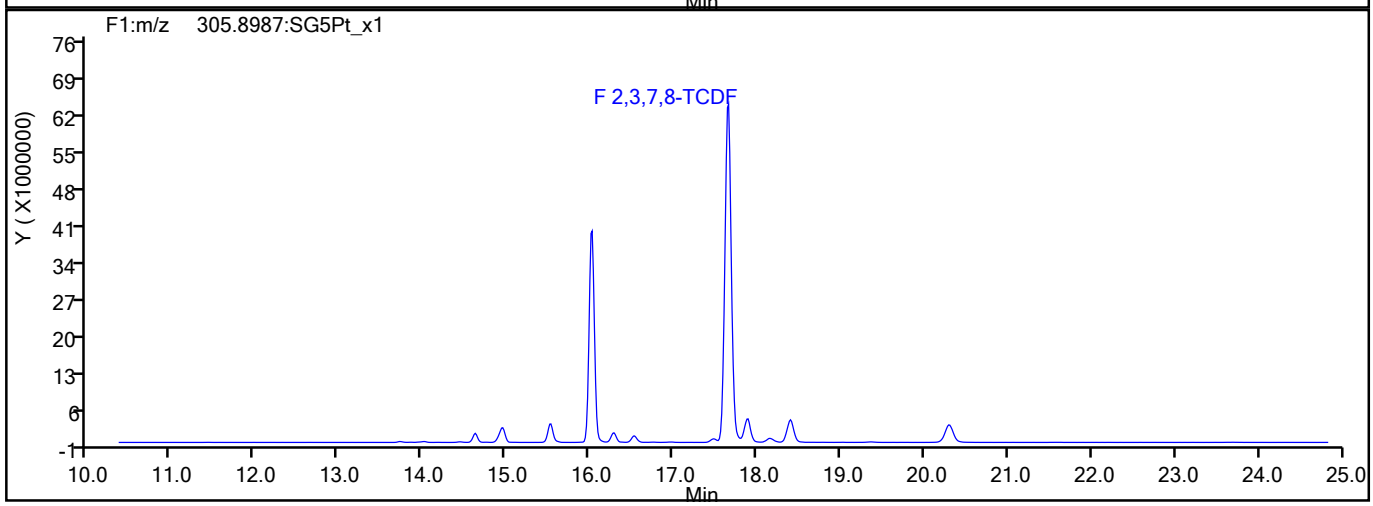

TCDF Interference Mass

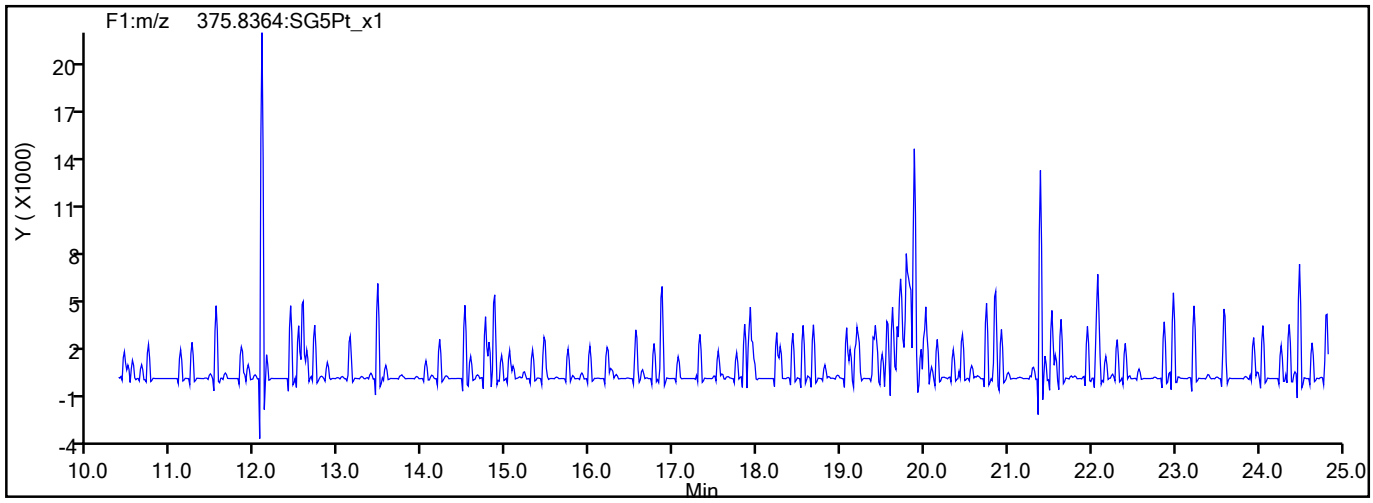

785460

Report Date: 27-Aug-2021 09:43:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_016.d		
Injection Date:	27-Aug-2021 00:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	520145	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

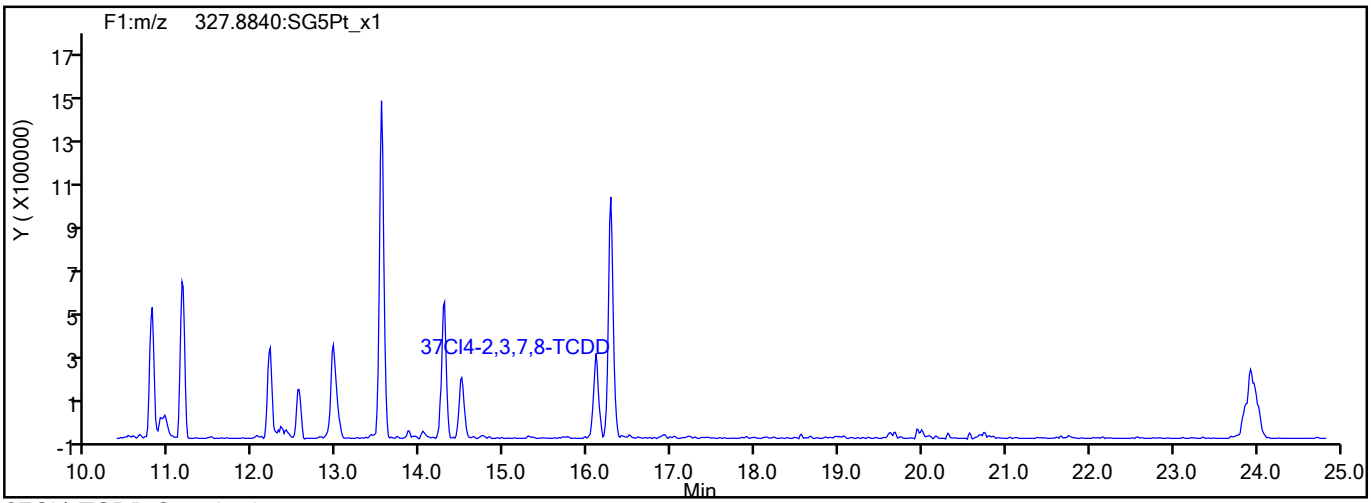

37Cl4-TCDD Standards

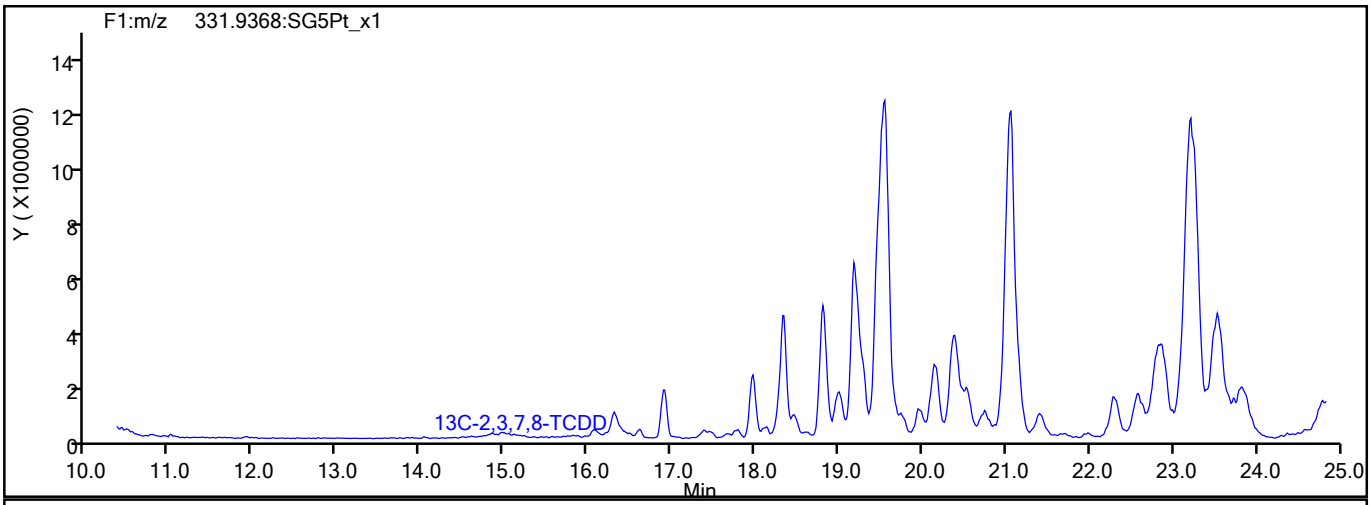

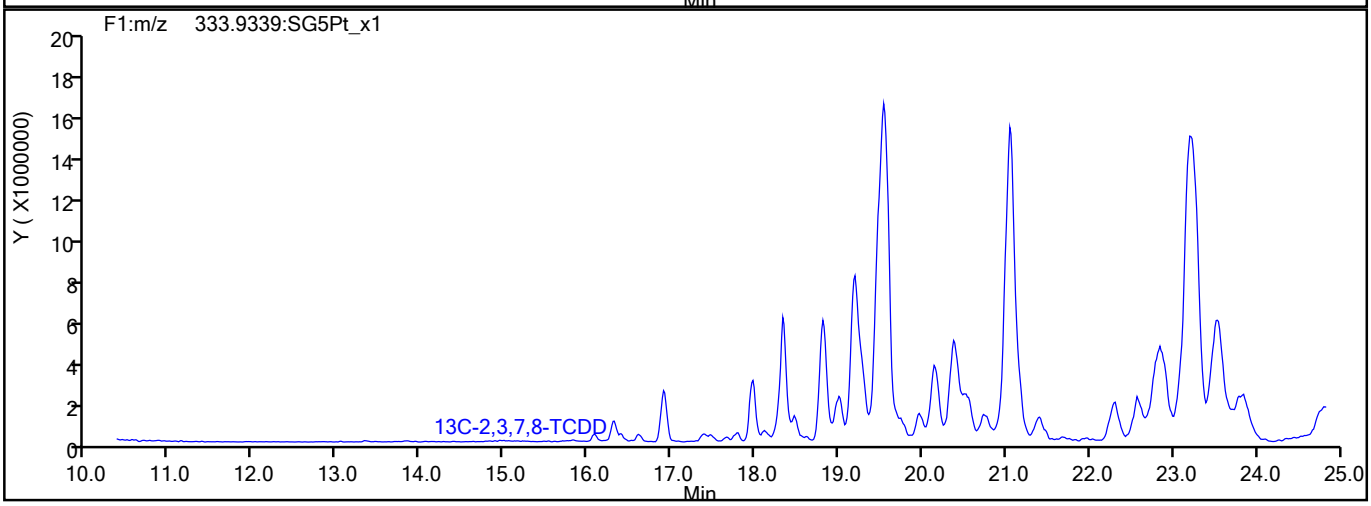

785461

Report Date: 27-Aug-2021 09:43:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_016.d		
Injection Date:	27-Aug-2021 00:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (6-8)		
Worklist#:	520145	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

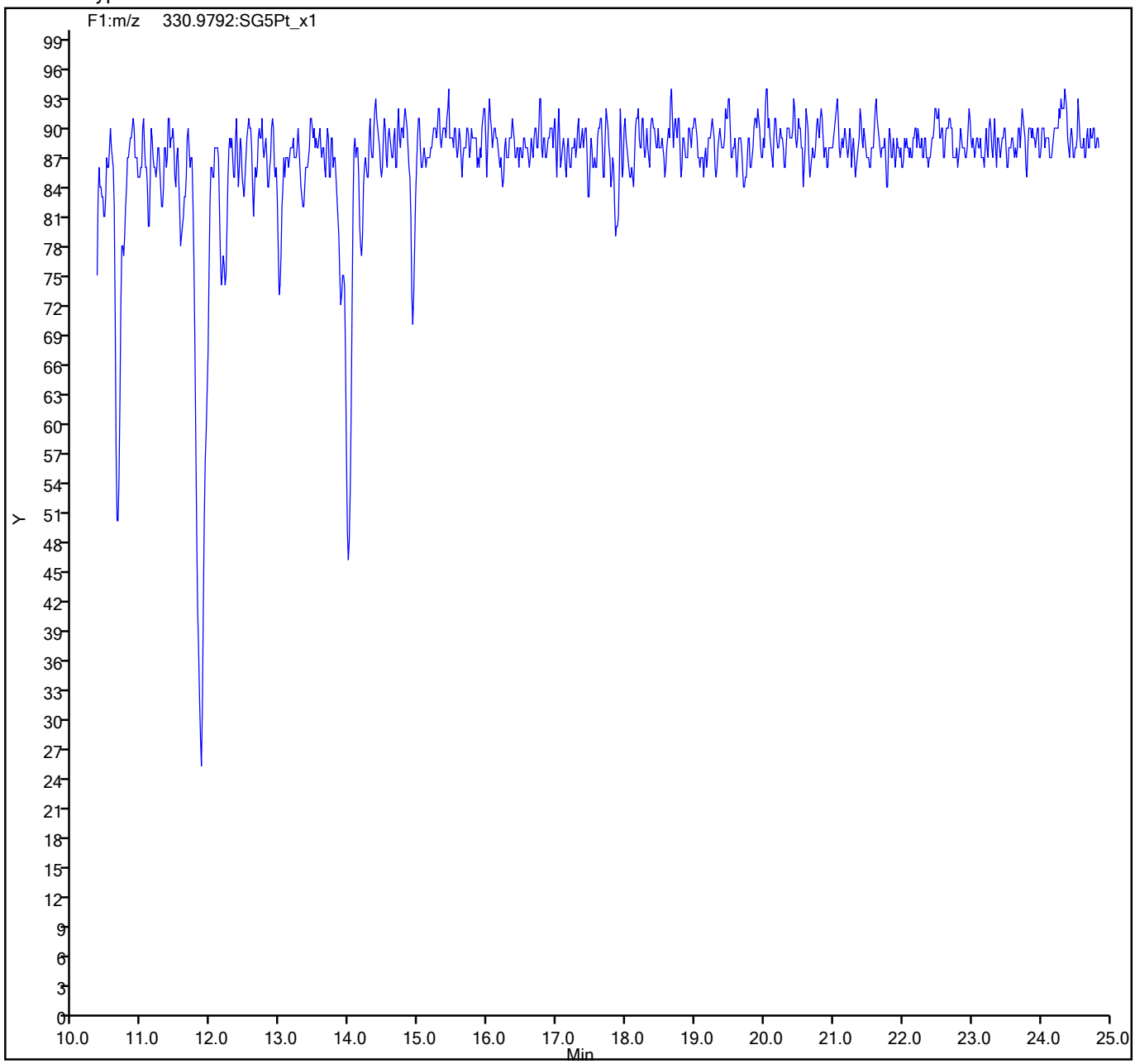

785462

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (8-10)
Lab Sample ID: 320-76888-5
Matrix: Sediment
Lab File ID: 19au21dfs1_20.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 9.99(g)
Date Analyzed: 08/20/2021 03:57
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 31.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	3700	E	7.3	5.4
40321-76-4	1,2,3,7,8-PeCDD	41		36	1.5
57117-41-6	1,2,3,7,8-PeCDF	320		36	4.2
57117-31-4	2,3,4,7,8-PeCDF	240		36	4.2
39227-28-6	1,2,3,4,7,8-HxCDD	ND		36	0.45
57653-85-7	1,2,3,6,7,8-HxCDD	ND		36	0.52
19408-74-3	1,2,3,7,8,9-HxCDD	ND		36	0.45
70648-26-9	1,2,3,4,7,8-HxCDF	430		36	1.7
57117-44-9	1,2,3,6,7,8-HxCDF	130		36	1.9
72918-21-9	1,2,3,7,8,9-HxCDF	5.5	J	36	1.6
60851-34-5	2,3,4,6,7,8-HxCDF	13	J q	36	1.7
35822-46-9	1,2,3,4,6,7,8-HpCDD	32	J B	36	0.50
67562-39-4	1,2,3,4,6,7,8-HpCDF	110	B	36	0.69
55673-89-7	1,2,3,4,7,8,9-HpCDF	39		36	0.65
3268-87-9	OCDD	620	B	73	1.5
39001-02-0	OCDF	56	J	73	0.97
41903-57-5	Total TCDD	4100		7.3	5.4
30402-14-3	Total TCDF	26000	B q G	21	21
36088-22-9	Total PeCDD	41		36	1.5
30402-15-4	Total PeCDF	860	q	36	4.2
34465-46-8	Total HxCDD	16	J q	36	0.48
55684-94-1	Total HxCDF	650	q	36	1.7
37871-00-4	Total HpCDD	87	B	36	0.50
38998-75-3	Total HpCDF	180	B	36	0.67

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (8-10)
Lab Sample ID: 320-76888-5
Matrix: Sediment
Lab File ID: 19au21dfs1_20.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 9.99(g)
Date Analyzed: 08/20/2021 03:57
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 31.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	37		25-164
89059-46-1	13C-2,3,7,8-TCDF	39		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	41		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	39		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	44		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	42		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	39		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	50		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	41		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	42		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	42		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	41		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	40		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	48		26-138
114423-97-1	13C-OCDD	39		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	52		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d
Lims ID: 320-76888-A-5-A
Client ID: 11215702-072621-BN-SJSB094 (8-10)
Sample Type: Client
Inject. Date: 20-Aug-2021 03:57:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76888-a-5-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:03:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: krenns Date: 25-Aug-2021 15:03:54

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.406	258152	0.84	2.1E+04	20.0	20.0				
D 13C-2,3,7,8-TCDF	20.417	135944	0.77	1.3459	7.826	7.826	0.1801	0.1801	39.13	
2,3,7,8-TCDF	20.442	7310954	0.68	1.0802	995.7	995.7	1.458	1.458		E
A Non-2,3,7,8-sub-TCDF	19.851	5838517	0.77	1.0802	796.3	795.2	1.458	464.6		RQMa
S Total TCDF					1792.0	1790.9	1.458	1.458		RQ
D 13C-2,3,7,8-TCDD	21.776	88387	0.80	0.9317	7.350	7.350	0.2031	0.2031	36.75	
2,3,7,8-TCDD	21.793	1211946	0.81	1.0753	255.0	255.0	0.3733	0.3733		E
$ 37Cl4-2,3,7,8-TCDD	21.802	53852		1.0083	4.138	4.138	0.1009	0.1009	51.72	
A Non-2,3,7,8-sub-TCDD	20.684	122995	0.78	1.0753	25.9	25.9	0.3733	23.1		
S Total TCDD					280.9	280.9	0.3733	0.3733		
D 13C-1,2,3,7,8-PeCDF	27.242	114303	1.64	1.1405	7.765	7.765	0.0907	0.0907	38.82	
1,2,3,7,8-PeCDF	27.285	131061	1.55	1.0543	21.8	21.8	0.2869	0.2869		M
D 13C-2,3,4,7,8-PeCDF	28.749	128557	1.61	1.1253	8.851	8.851	0.0920	0.0920	44.25	
2,3,4,7,8-PeCDF	28.783	105088	1.49	1.0079	16.2	16.2	0.2878	0.2878		
A F1 PeCDFs	24.634						0.007587	0.1522		RQU
A Non-2,3,7,8-sub-PeCDF	28.173	131327	1.55	1.0311	21.2	21.0	0.2872	9.471		RQMa
S Total PeCDF					59.1	59.0	0.2874	0.2874		RQ
D 13C-1,2,3,7,8-PeCDD	29.557	75209	1.65	0.7165	8.133	8.133	0.0289	0.0289	40.66	M
1,2,3,7,8-PeCDD	29.599	11103	1.57	1.0465	2.821	2.821	0.1047	0.1047		
A Non-2,3,7,8-sub-PeCDD	28.478						0.1047	0.9471		RQU
S Total PeCDD					2.821	2.821	0.1047	0.1047		
D 13C-1,2,3,4,7,8-HxCDF	34.906	123864	0.55	0.9648	10.1	10.1	0.0436	0.0436	50.32	
1,2,3,4,7,8-HxCDF	34.923	208176	1.22	1.1474	29.3	29.3	0.1186	0.1186		
D 13C-1,2,3,6,7,8-HxCDF	35.074	111806	0.54	1.0708	8.184	8.184	0.0393	0.0393	40.92	
1,2,3,6,7,8-HxCDF	35.091	58485	1.17	1.2178	8.591	8.591	0.1276	0.1276		M
D 13C-2,3,4,6,7,8-HxCDF	35.891	111772	0.51	1.0413	8.414	8.414	0.0404	0.0404	42.07	
2,3,4,6,7,8-HxCDF	35.891	6146	1.24	1.2145	0.999	0.9055	0.1196	0.1196		RQM
D 13C-1,2,3,7,8,9-HxCDF	36.791	103996	0.48	0.9731	8.377	8.377	0.0432	0.0432	41.89	
1,2,3,7,8,9-HxCDF	36.783	2436	1.19	1.2401	0.3778	0.3778	0.1113	0.1113		
A Non-2,3,7,8-sub-HxCDF	35.009	34839	1.24	1.2049	5.453	5.124	0.1189	2.069		RQMa
S Total HxCDF					44.7	44.3	0.1193	0.1193		RQ

785465

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.589	255148	1.27	1.8E+04	20.0	20.0				
D 13C-1,2,3,4,7,8-HxCDD	36.101	81263	1.21	0.7587	8.396	8.396	0.0485	0.0485	41.98	M
1,2,3,4,7,8-HxCDD	36.245						0.0311	0.0311		U
D 13C-1,2,3,6,7,8-HxCDD	36.228	85588	1.42	0.8593	7.808	7.808	0.0428	0.0428	39.04	Ma
1,2,3,6,7,8-HxCDD	36.245						0.0359	0.0359		U
1,2,3,7,8,9-HxCDD	36.597						0.0309	0.0309		
A Non-2,3,7,8-sub-HxCDD	35.375	4675	1.24	1.0545	1.135	1.063	0.0325	0.7325		RQM
S Total HxCDD					1.135	1.063	0.0326	0.0326		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.603	75124	0.48	0.7359	8.001	8.001	0.0510	0.0510	40.01	
1,2,3,4,6,7,8-HpCDF	38.611	42389	0.98	1.4421	7.826	7.826	0.0472	0.0472		
D 13C-1,2,3,4,7,8,9-HpCDF	39.857	84678	0.46	0.6854	9.685	9.685	0.0547	0.0547	48.42	
1,2,3,4,7,8,9-HpCDF	39.865	14723	1.11	1.3092	2.656	2.656	0.0448	0.0448		
A Non-2,3,7,8-sub-HpCDF	39.245	10994	0.92	1.3756	2.000	2.000	0.0458	2.000		
S Total HpCDF					12.5	12.5	0.0460	0.0460		
D 13C-1,2,3,4,6,7,8-HpCDD	39.554	69918	1.06	0.6745	8.125	8.125	0.0114	0.0114	40.63	
1,2,3,4,6,7,8-HpCDD	39.562	7995	1.12	1.0503	2.177	2.177	0.0343	0.0343		
A Non-2,3,7,8-sub-HpCDD	39.241	14026	0.93	1.0503	3.820	3.820	0.0343	3.820		M
S Total HpCDD					5.997	5.997	0.0343	0.0343		
D 13C-OCDD	42.058	108106	0.84	0.5446	15.6	15.6	0.0354	0.0354	38.90	
OCDF	42.143	13717	0.91	1.3168	3.854	3.854	0.0662	0.0662		
OCDD	42.058	121498	0.90	1.0620	42.3	42.3	0.1044	0.1044		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d
Lims ID: 320-76888-A-5-A
Client ID: 11215702-072621-BN-SJSB094 (8-10)
Sample Type: Client
Inject. Date: 20-Aug-2021 03:57:00 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76888-a-5-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:03:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: krenns Date: 25-Aug-2021 15:03:54

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.406	21.395	1		118052	16273	57	142	285		
333.9338	21.397	21.395	0		140100	17552	71	177	247	0.84(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.417	20.365	3	0.954	59280	8842	103	257	86		
317.9389	20.408	20.365	3	0.953	76664	12298	61	152	202	0.77(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.442	20.408	2	1.001	2970258	369947	279	697	1326		
305.8987	20.442	20.408	2	1.001	4340696	557898	387	967	1442	0.68(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	17.469	19.851	-143	0.856	17165	3142	279	697	11		
305.8987	17.469	19.851	-143	0.856	30082	4452	387	967	12	0.57(0.65-0.89)	
	Empc Correction				22292	4080	387	967	11		
303.9016	17.915	19.851	-116	0.877	89640	13971	279	697	50		
305.8987	17.907	19.851	-116	0.877	131701	19958	387	967	52	0.68(0.65-0.89)	
303.9016	18.388	19.851	-88	0.901	131285	15959	279	697	57		M
305.8987	18.388	19.851	-88	0.901	188808	22918	387	967	59	0.70(0.65-0.89)	
303.9016	18.818	19.851	-62	0.922	98101	13137	279	697	47		M
305.8987	18.818	19.851	-62	0.922	143258	19415	387	967	50	0.68(0.65-0.89)	
303.9016	19.213	19.851	-38	0.941	128598	17769	279	697	64		
305.8987	19.213	19.851	-38	0.941	183638	26494	387	967	68	0.70(0.65-0.89)	
303.9016	19.729	19.851	-7	0.966	1412530	195783	279	697	702		
305.8987	19.720	19.851	-8	0.966	1998377	285936	387	967	739	0.71(0.65-0.89)	
303.9016	20.107	19.851	15	0.985	54518	7324	279	697	26		
305.8987	20.107	19.851	15	0.985	80002	10825	387	967	28	0.68(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.225	19.851	82	1.040	216439	28710	279	697	103		
305.8987	21.225	19.851	82	1.040	308774	40046	387	967	103	0.70(0.65-0.89)	
303.9016	21.664	19.851	109	1.061	45370	6011	279	697	22		
305.8987	21.664	19.851	109	1.061	65394	8651	387	967	22	0.69(0.65-0.89)	
303.9016	23.617	19.851	226	1.157	219989	38978	279	697	140		a
305.8987	23.617	19.851	226	1.157	302638	52901	387	967	137	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.776	21.716	4	1.017	39196	6040	57	142	106		
333.9338	21.793	21.716	5	1.018	49191	7012	71	177	99	0.80(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	21.793	21.733	4	1.001	540744	69631	64	160	1088		
321.8936	21.793	21.733	4	1.001	671202	85778	41	102	2092	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.802	21.799	0	1.018	53852	7334	69	172	106		
A Non-2,3,7,8-sub-TCDD											
319.8965	21.630	20.684	57	0.993	5793	1020	64	160	16		
321.8936	21.586	20.684	54	0.991	7260	1136	41	102	28	0.80(0.65-0.89)	
319.8965	22.464	20.684	107	1.032	48221	6199	64	160	97		
321.8936	22.473	20.684	107	1.032	61721	7264	41	102	177	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.242	27.251	-1	1.273	71006	10830	43	107	252		
353.8970	27.259	27.251	1	1.273	43297	6693	27	67	248	1.64(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.285	27.276	1	1.002	79644	11750	45	112	261		M
341.8567	27.293	27.276	1	1.002	51417	7312	61	152	120	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.749	28.757	0	1.343	79372	11730	43	107	273		
353.8970	28.732	28.757	-1	1.342	49185	6539	27	67	242	1.61(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.783	28.791	0	1.001	62959	9169	45	112	204		
341.8567	28.783	28.791	0	1.001	42129	6100	61	152	100	1.49(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.039	24.634	-36	0.882	717	148	1	2	148		
	Empc Correction				365	145	1	2	0		
341.8567	24.030	24.634	-36	0.882	236	94	2	5	47	3.04(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQMa
339.8597	25.795	28.173	-142	0.947	36050	5932	45	112	132		
341.8567	25.795	28.173	-142	0.947	23242	3969	61	152	65	1.55(1.32-1.78)	
339.8597	27.141	28.173	-62	0.996	5204	1322	45	112	29		M
341.8567	27.141	28.173	-62	0.996	4542	992	61	152	16	1.15(1.32-1.78)	
	Empc Correction				3357	852	61	152	14		
339.8597	27.857	28.173	-19	1.023	24211	4070	45	112	90		
341.8567	27.849	28.173	-19	1.022	15149	2574	61	152	42	1.60(1.32-1.78)	
339.8597	29.111	28.173	56	1.069	14149	1940	45	112	43		
341.8567	29.119	28.173	57	1.069	9965	1424	61	152	23	1.42(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											M
367.8949	29.557	29.574	-1	1.381	46858	6597	3	7	2199		M
369.8919	29.557	29.574	-1	1.381	28351	4354	11	27	396	1.65(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.599	29.616	-1	1.001	6791	952	11	27	87		
357.8516	29.599	29.616	-1	1.001	4312	544	13	32	42	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.603	28.478	-112	0.900	108	58	11	27	5		
357.8516	26.603	28.478	-112	0.900	3619	657	13	32	51	0.03(1.32-1.78)	
	Empc Correction				69	37	13	32	0		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.906	34.906	0	0.954	44194	9337	9	22	1037		
385.8610	34.906	34.906	0	0.954	79670	14914	39	97	382	0.55(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.923	34.922	0	1.000	114400	20922	24	60	872		
375.8178	34.923	34.922	0	1.000	93776	17178	42	105	409	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.074	35.066	1	0.959	39163	7660	9	22	851		
385.8610	35.074	35.066	1	0.959	72643	13580	39	97	348	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											M
373.8208	35.091	35.082	1	1.000	31481	5364	24	60	224		M
375.8178	35.091	35.082	1	1.000	27004	4585	42	105	109	1.17(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.891	35.890	0	0.981	37923	8014	9	22	890		
385.8610	35.891	35.890	0	0.981	73849	14696	39	97	377	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQM
373.8208	35.891	35.907	-1	1.000	4039	781	24	60	33		
	Empc Correction				3402	807	24	60	34		
375.8178	35.916	35.907	1	1.001	2744	651	42	105	16	1.47(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.791	36.782	1	1.006	33689	8024	9	22	892		
385.8610	36.791	36.782	1	1.006	70307	15884	39	97	407	0.48(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.783	36.791	0	1.000	1324	460	24	60	19		
375.8178	36.800	36.791	1	1.000	1112	477	42	105	11	1.19(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.433	35.009	-94	0.958	7502	1255	24	60	52		
375.8178	33.416	35.009	-95	0.957	6563	1090	42	105	26	1.14(1.05-1.43)	
373.8208	34.283	35.009	-43	0.982	3407	677	24	60	28		
	Empc Correction				2785	438	24	60	18		
375.8178	34.308	35.009	-42	0.983	2246	354	42	105	8	1.52(1.05-1.43)	
373.8208	35.781	35.009	46	1.025	2420	585	24	60	24		M
375.8178	35.773	35.009	46	1.025	1723	375	42	105	9	1.40(1.05-1.43)	
373.8208	36.892	35.009	113	1.057	8040	1972	24	60	82		
	Empc Correction				6421	1504	24	60	63		
375.8178	36.901	35.009	113	1.057	5179	1213	42	105	29	1.55(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.589	36.581	1		142982	31301	24	60	1304		
403.8529	36.589	36.581	1		112166	25748	18	45	1430	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											M
401.8559	36.101	36.092	1	0.987	44517	11308	24	60	471		
403.8529	36.093	36.092	0	0.986	36746	8090	18	45	449	1.21(1.05-1.43)	M
1,2,3,4,7,8-HxCDD											U
389.8158	36.109						7	17			
391.8127	36.109						6	15			
13C-1,2,3,6,7,8-HxCDD											Ma
401.8559	36.228	36.210	1	0.990	50270	10920	24	60	455		M
403.8529	36.219	36.210	1	0.990	35318	7009	18	45	389	1.42(1.05-1.43)	
1,2,3,6,7,8-HxCDD											U
389.8158	36.227						7	17			
391.8127	36.227						6	15			
1,2,3,7,8,9-HxCDD											
389.8158	36.597						7	17			
391.8127	36.597						6	15			
A Non-2,3,7,8-sub-HxCDD											RQM
389.8158	34.216	35.375	-69	0.944	1766	364	7	17	52		M
391.8127	34.199	35.375	-70	0.944	1456	364	6	15	61	1.21(1.05-1.43)	
389.8158	35.343	35.375	-2	0.976	1121	286	7	17	41		
	Empc Correction				804	223	7	17	32		
391.8127	35.343	35.375	-2	0.976	649	180	6	15	30	1.73(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.603	38.596	0	1.055	24442	7399	23	57	322		
419.8220	38.594	38.596	0	1.055	50682	13154	20	50	658	0.48(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.611	38.618	0	1.000	21011	5285	19	47	278		
409.7788	38.611	38.618	0	1.000	21378	5414	9	22	602	0.98(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.857	39.850	0	1.089	26639	7674	23	57	334		
419.8220	39.865	39.850	1	1.090	58039	16176	20	50	809	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.865	39.872	0	1.000	7734	2107	19	47	111		
409.7788	39.865	39.872	0	1.000	6989	1966	9	22	218	1.11(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.982	39.245	-16	1.010	5272	1408	19	47	74		
409.7788	38.982	39.245	-16	1.010	5722	1768	9	22	196	0.92(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.554	39.547	0	1.081	35944	9225	6	15	1538		
437.8140	39.545	39.547	0	1.081	33974	8542	3	7	2847	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.562	39.561	0	1.000	4221	1316	8	20	165		
425.7737	39.562	39.561	0	1.000	3774	1211	5	12	242	1.12(0.88-1.20)	

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											M
423.7767	38.923	39.241	-19	0.984	6764	2010	8	20	251		M
425.7737	38.914	39.241	-20	0.984	7262	1880	5	12	376	0.93(0.88-1.20)	
13C-OCDD											
469.7780	42.058	42.036	1	1.149	49417	12292	16	40	768		
471.7750	42.050	42.036	1	1.149	58689	12951	6	15	2159	0.84(0.76-1.02)	
OCDF											
441.7428	42.143	42.137	0	1.002	6526	1580	4	10	395		
443.7399	42.143	42.137	0	1.002	7191	1634	18	45	91	0.91(0.76-1.02)	
OCDD											
457.7377	42.058	42.053	0	1.000	57410	13753	17	42	809		
459.7348	42.058	42.053	0	1.000	64088	14927	11	27	1357	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Lims ID:	320-76888-A-5-A		
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Inject. Date:	20-Aug-2021 03:57:00	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	18

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	135944	21140

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		20.000	135944	21140

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.469	17165	3142	30082	4452	6.43	0.57	RQ
17.469	17165	3142	22292	4080	5.37		Empc Correction
17.915	89640	13971	131701	19958	30.1	0.68	
18.388	131285	15959	188808	22918	43.6	0.70	Ma
18.818	98101	13137	143258	19415	32.9	0.68	M
19.213	128598	17769	183638	26494	42.5	0.70	
19.729	1412530	195783	1998377	285936	464.6	0.71	
20.107	54518	7324	80002	10825	18.3	0.68	
21.225	216439	28710	308774	40046	71.5	0.70	
21.664	45370	6011	65394	8651	15.1	0.69	
23.617	219989	38978	302638	52901	71.2	0.73	a
Signal Totals:							
	2413635	340784	3424882	491224			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5846307	832380				0.70	RQMa
	5838517	832008					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 796.251 = (5846307 * 20.000) / (135944 * 1.080)

Empc Amount: 795.191 = (5838517 * 20.000) / (135944 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Lims ID:	320-76888-A-5-A		
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Inject. Date:	20-Aug-2021 03:57:00	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	18

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	88387	13052

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		20.000	88387	13052

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.630	5793	1020	7260	1136	2.75	0.80	
22.464	48221	6199	61721	7264	23.1	0.78	
Signal Totals:							
	54014	7219	68981	8400			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	122995	15619				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 25.881 = (122995 * 20.000) / (88387 * 1.075)

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Lims ID:	320-76888-A-5-A		
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Inject. Date:	20-Aug-2021 03:57:00	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	18

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	114303	17523
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	128557	18269

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		20.000	121430	17896

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.039	717	148	236	94	0.1522	3.04	RQ
24.039	365	145	236	94			Empc Correction
24.426	28	13	103	39	0.0209	0.27	RQ
24.426	28	13	18	8			Empc Correction
25.130	12	7	60	30	0.0115	0.20	RQ
25.130	12	7	7	4			Empc Correction

Compound is Marked ND

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Lims ID:	320-76888-A-5-A		
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Inject. Date:	20-Aug-2021 03:57:00	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	18

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	114303	17523
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	128557	18269

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		20.000	121430	17896

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.795	36050	5932	23242	3969	9.47	1.55	
27.141	5204	1322	4542	992	1.56	1.15	RQMa
27.141	5204	1322	3357	852	1.37		Empc Correction
27.857	24211	4070	15149	2574	6.29	1.60	
29.111	14149	1940	9965	1424	3.85	1.42	
Signal Totals:							
	79614	13264	51713	8819			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	132512	22223				1.51	RQMa
	131327	22083					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 21.168 = (132512 * 20.000) / (121430 * 1.031)

Empc Amount: 20.978 = (131327 * 20.000) / (121430 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Lims ID:	320-76888-A-5-A		
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Inject. Date:	20-Aug-2021 03:57:00	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	18

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	75209	10951

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		20.000	75209	10951

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.603	108	58	3619	657	0.9471	0.03	RQ
26.603	108	58	69	37			Empc Correction
30.239	448	141	352	72	0.2033	1.27	RQ
30.239	448	141	289	90			Empc Correction

Compound is Marked ND

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Lims ID:	320-76888-A-5-A		
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Inject. Date:	20-Aug-2021 03:57:00	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	18

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	123864	24251
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	111806	21240
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	111772	22710
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	103996	23908

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		20.000	112859	23027

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.433	7502	1255	6563	1090	2.07	1.14	
34.283	3407	677	2246	354	0.8314	1.52	RQ
34.283	2785	438	2246	354	0.7399		Empc Correction
35.781	2420	585	1723	375	0.6093	1.40	Ma
36.892	8040	1972	5179	1213	1.94	1.55	RQ
36.892	6421	1504	5179	1213	1.71		Empc Correction
Signal Totals:							
	19128	3782	15711	3032			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	37080	7521				1.36	RQMa
	34839	6814					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 5.453 = (37080 * 20.000) / (112859 * 1.205)
Empc Amount: 5.124 = (34839 * 20.000) / (112859 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Lims ID:	320-76888-A-5-A		
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Inject. Date:	20-Aug-2021 03:57:00	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	18

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	81263	19398
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	85588	17929
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		20.000	83425	18663

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.216	1766	364	1456	364	0.7325	1.21	M
35.343	1121	286	649	180	0.4024	1.73	RQ
35.343	804	223	649	180	0.3303		Empc Correction
Signal Totals:							
	2570	587	2105	544			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4992	1194				1.37	RQM
	4675	1131					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.135 = (4992 * 20.000) / (83425 * 1.055)
Empc Amount: 1.063 = (4675 * 20.000) / (83425 * 1.055)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Lims ID:	320-76888-A-5-A		
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Inject. Date:	20-Aug-2021 03:57:00	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	18

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	75124	20553
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	84678	23850

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		20.000	79901	22201

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.982	5272	1408	5722	1768	2.00	0.92	
Signal Totals:							
	5272	1408	5722	1768			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10994	3176				0.92	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.000 = (10994 * 20.000) / (79901 * 1.376)

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Lims ID:	320-76888-A-5-A		
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Inject. Date:	20-Aug-2021 03:57:00	Dil. Factor:	5.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	18

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	69918	17767

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		20.000	69918	17767

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.923	6764	2010	7262	1880	3.82	0.93	M
Signal Totals:							
	6764	2010	7262	1880			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	14026	3890				0.93	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.820 = (14026 * 20.000) / (69918 * 1.050)

QC Flag Legend

Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 18.388 Area = 133695

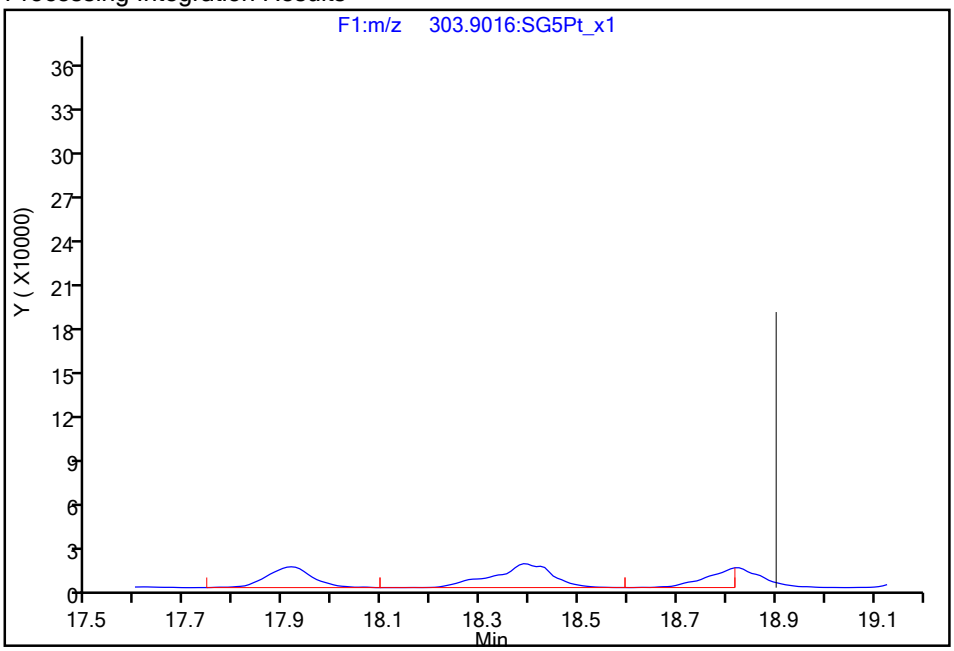

Manual Integration Results

RT = 18.388 Area = 131285 M

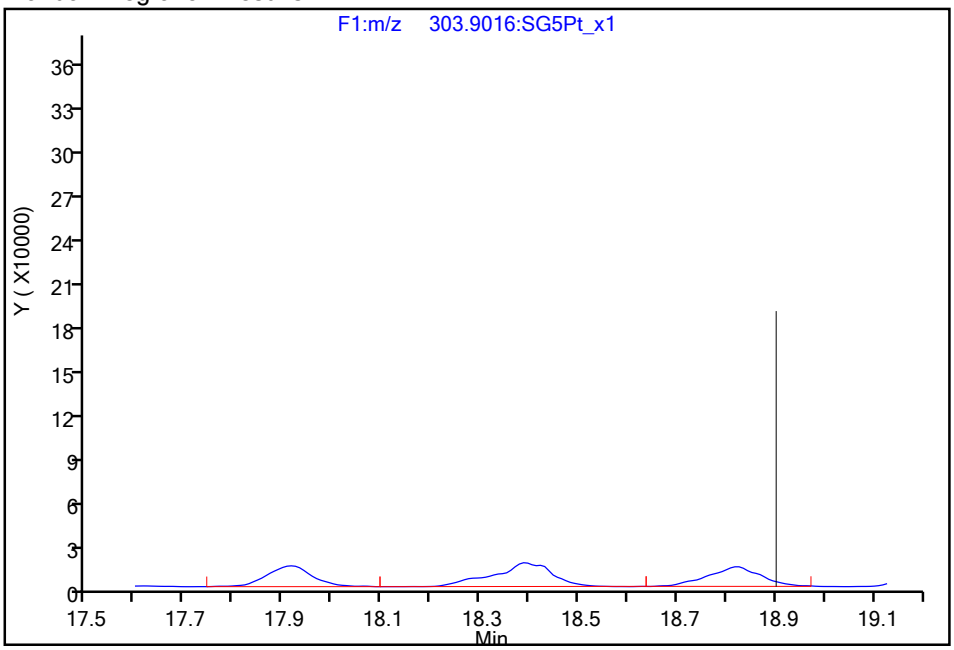

Reviewer: krenns, 25-Aug-2021 15:02:38

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 18.809 Area = 51548

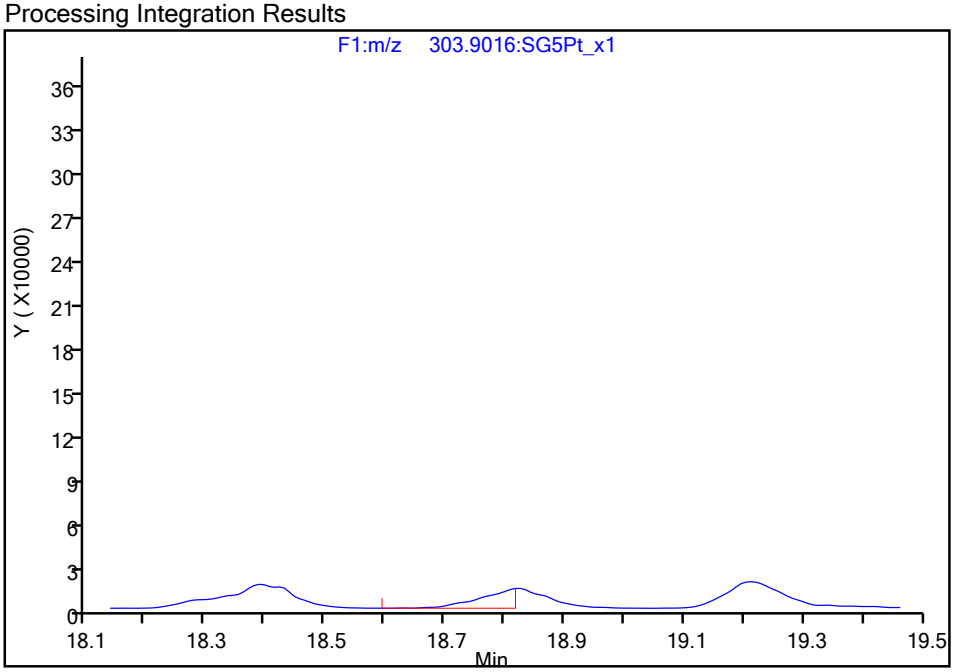

Manual Integration Results

RT = 18.818 Area = 98101 M

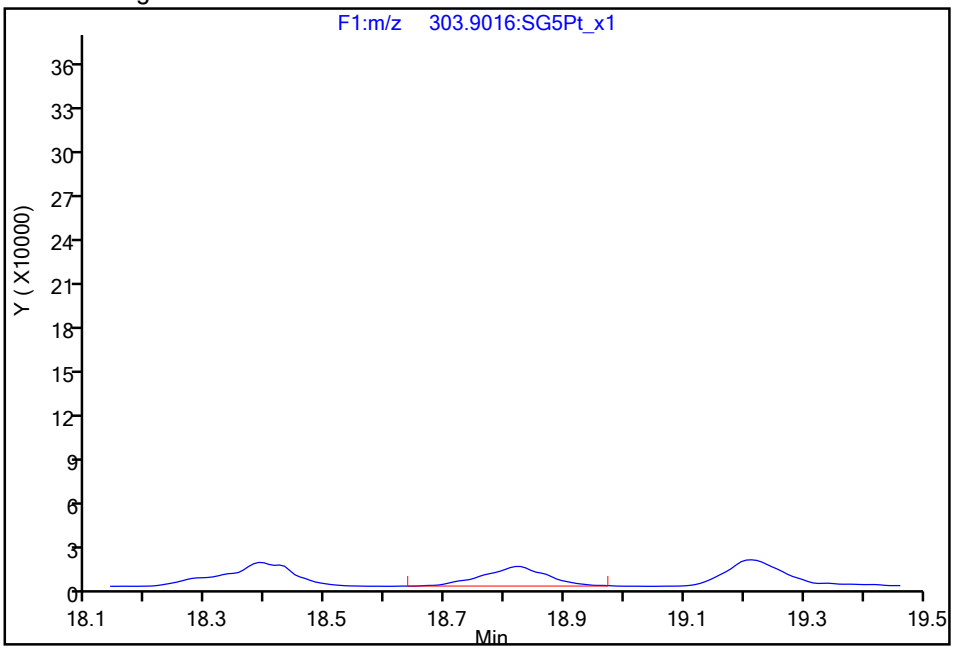

Reviewer: krenns, 25-Aug-2021 15:02:38

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.28
Area: 84865
Amount: 22.618403
Amount Units: pg/ul

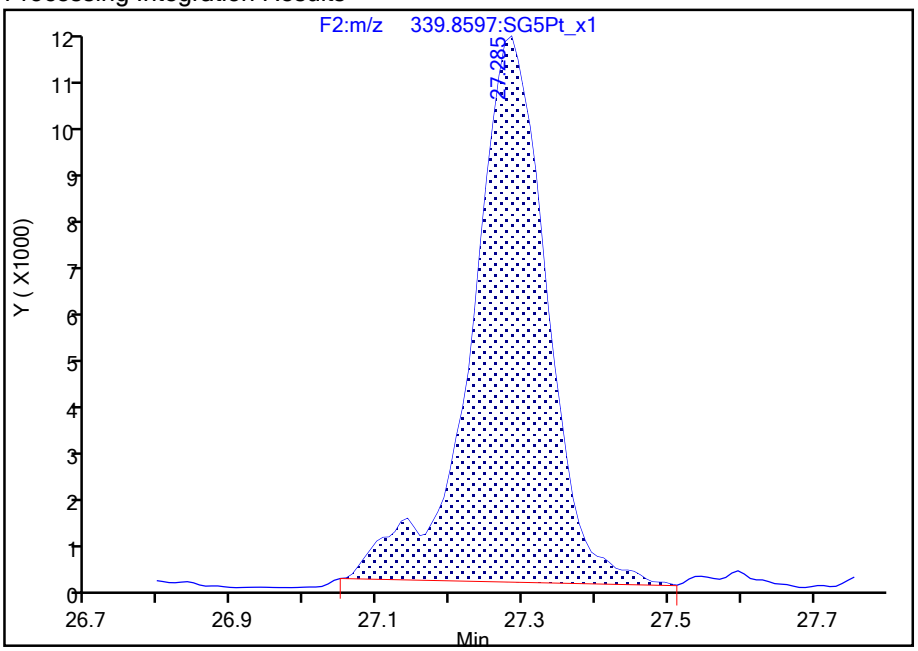

Manual Integration Results

RT: 27.28
Area: 79644
Amount: 21.751886
Amount Units: pg/ul

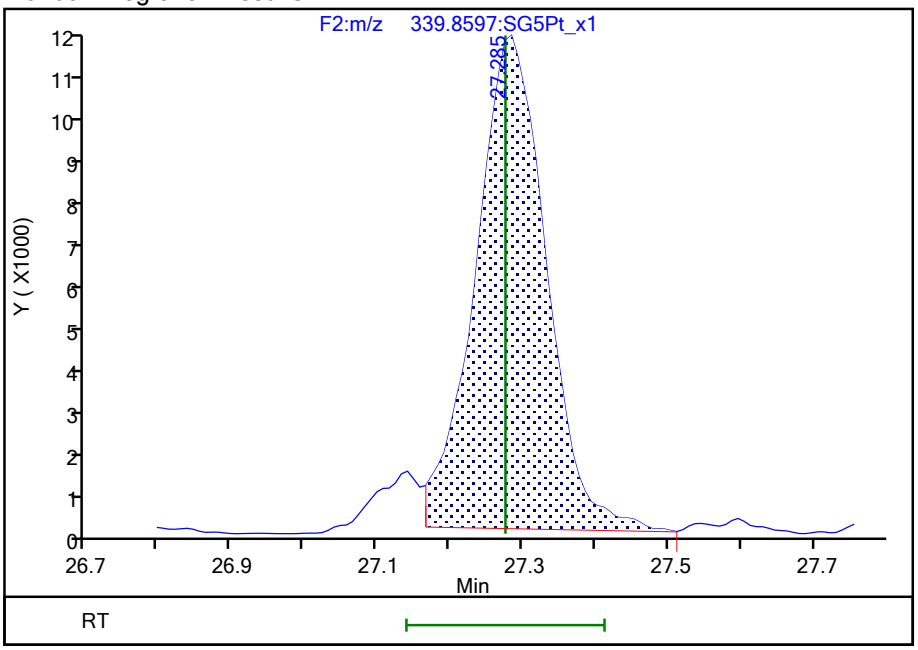

Reviewer: dadunj, 23-Aug-2021 09:29:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Processing Integration Results

Not Detected

RT: 25.37- 30.97

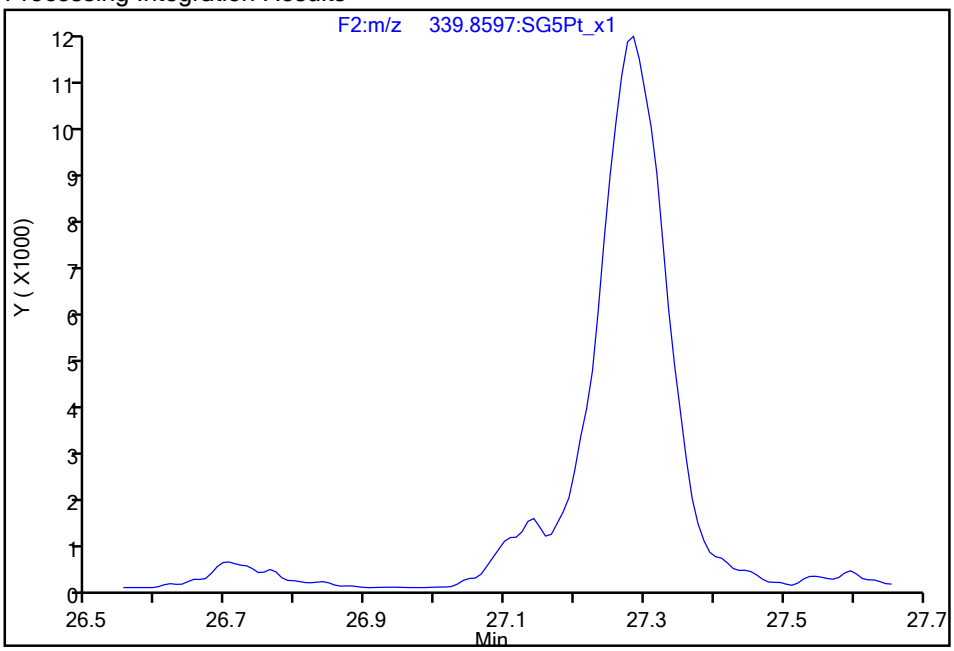

Manual Integration Results

RT = 27.141 Area = 5204 M

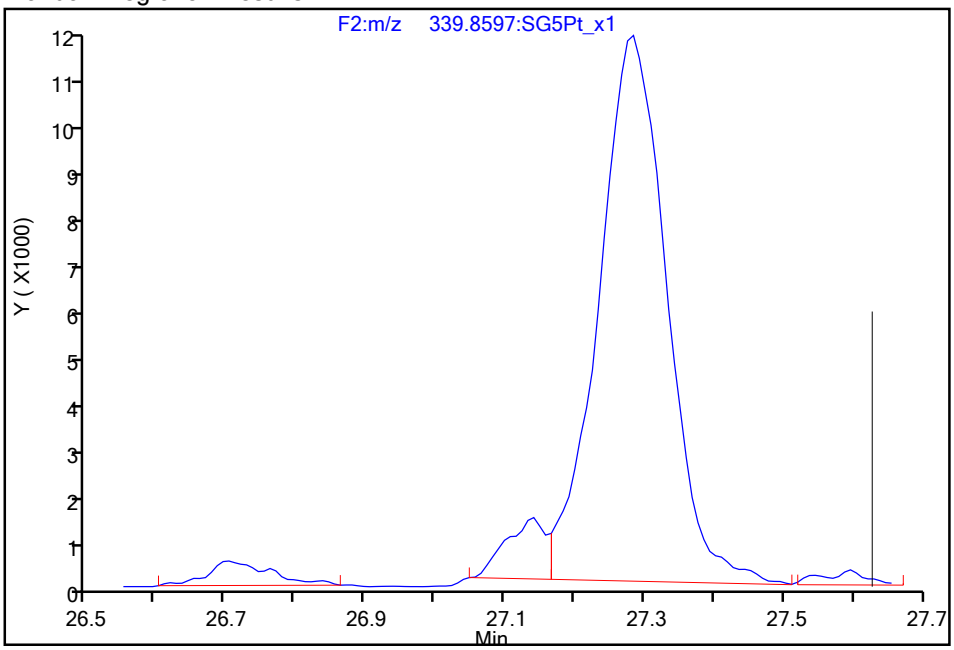

Reviewer: dadunj, 23-Aug-2021 09:29:21

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 1

Processing Integration Results

RT: 29.56
Area: 42692
Amount: 7.682074
Amount Units: pg/ul

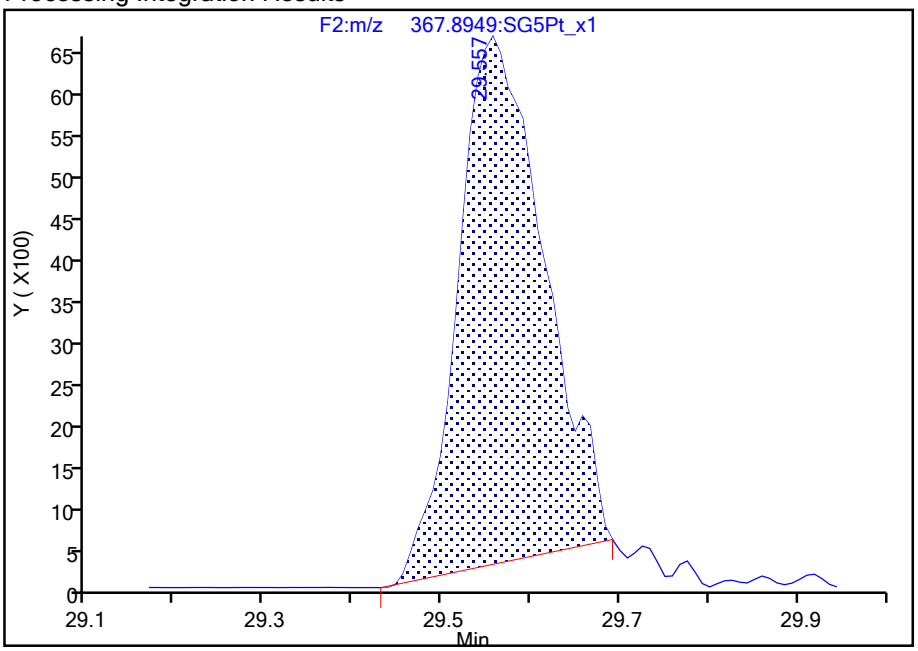

Manual Integration Results

RT: 29.56
Area: 46858
Amount: 8.132555
Amount Units: pg/ul

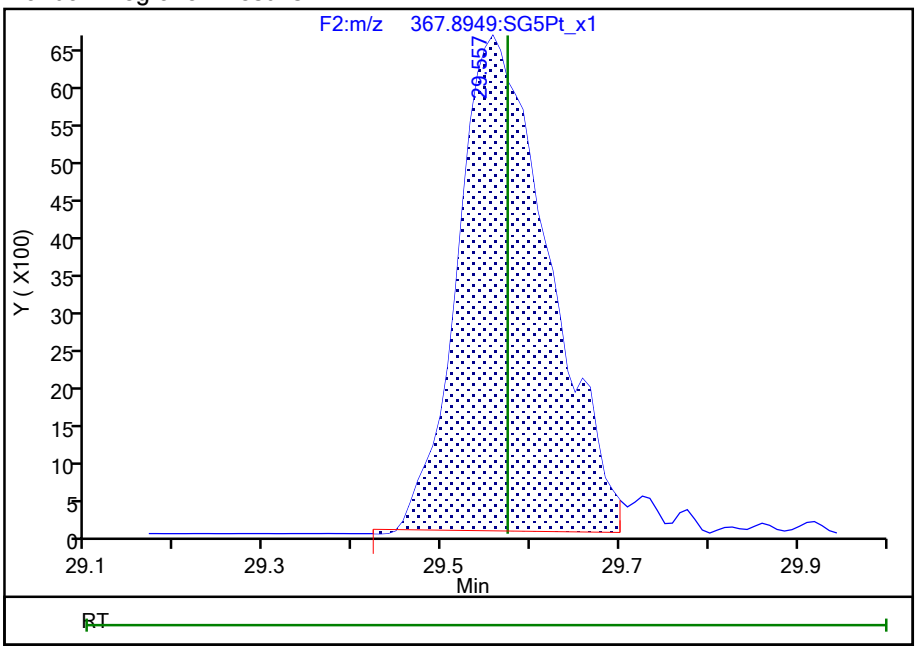

Reviewer: dadunj, 23-Aug-2021 09:29:38

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 35.09
Area: 26908
Amount: 7.919108
Amount Units: pg/ul

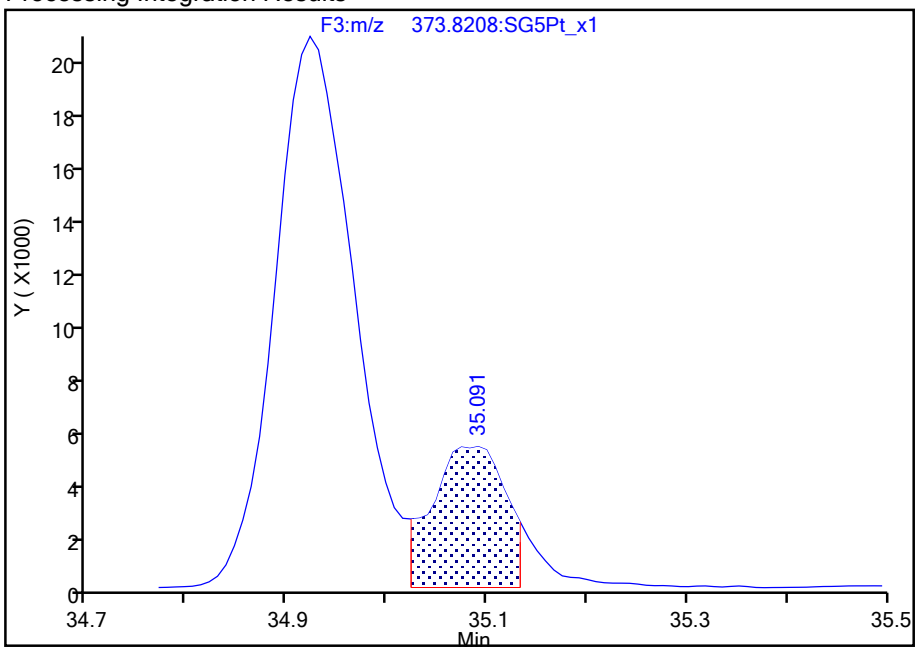

Manual Integration Results

RT: 35.09
Area: 31481
Amount: 8.590834
Amount Units: pg/ul

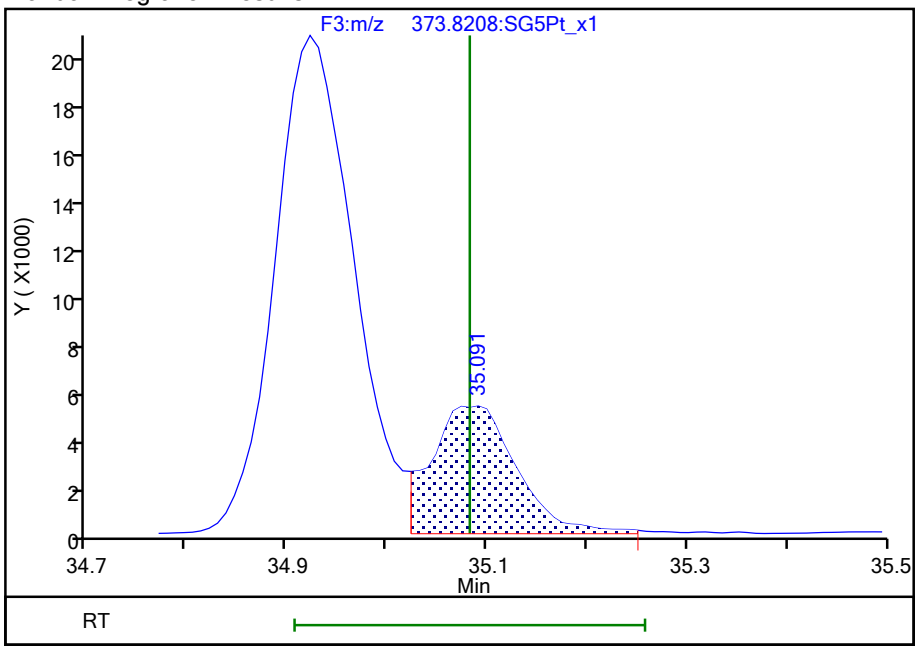

Reviewer: dadunj, 23-Aug-2021 09:30:08

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 35.92
Area: 4543
Amount: 1.264442
Amount Units: pg/ul

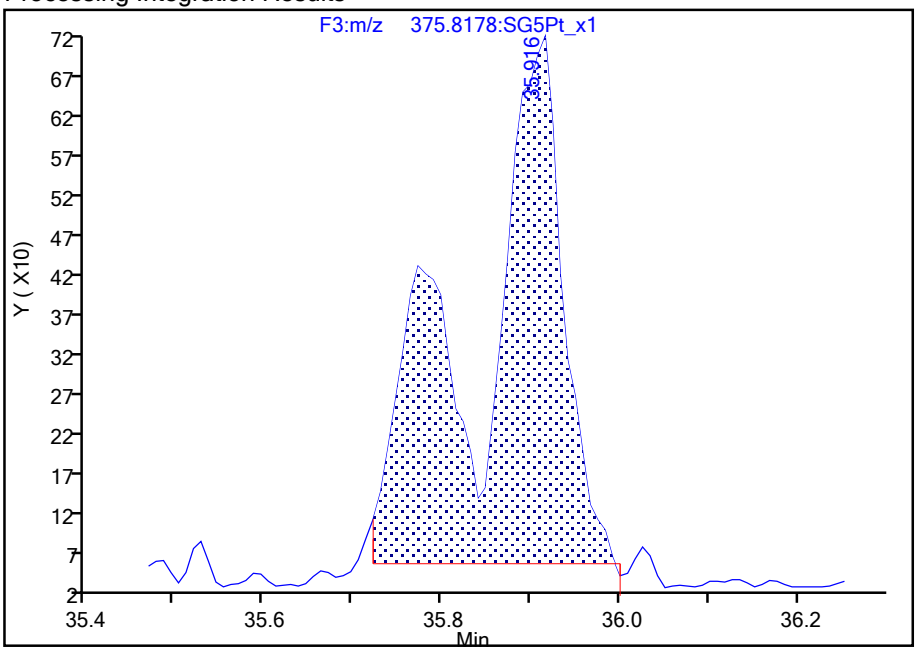

Manual Integration Results

RT: 35.92
Area: 2744
Amount: 0.999383
Amount Units: pg/ul

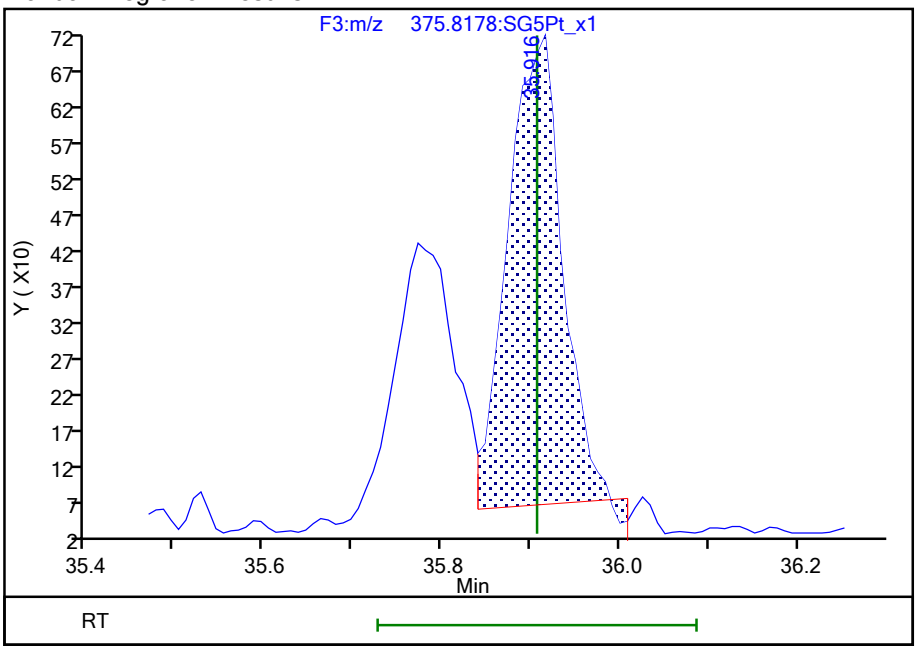

Reviewer: dadunj, 23-Aug-2021 09:30:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 35.781 Area = 2420

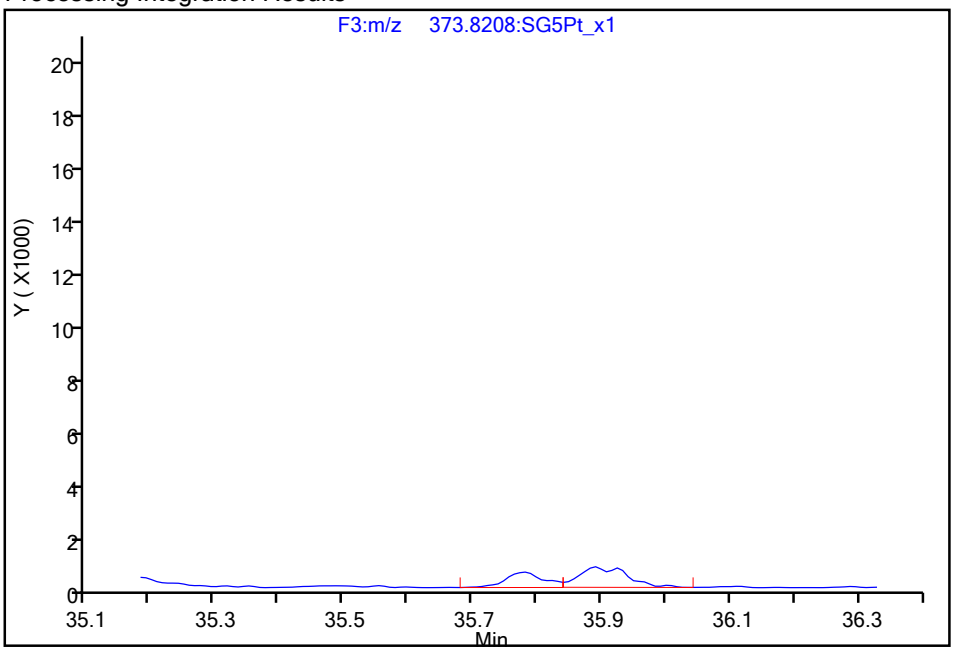

Manual Integration Results

RT = 35.781 Area = 2420

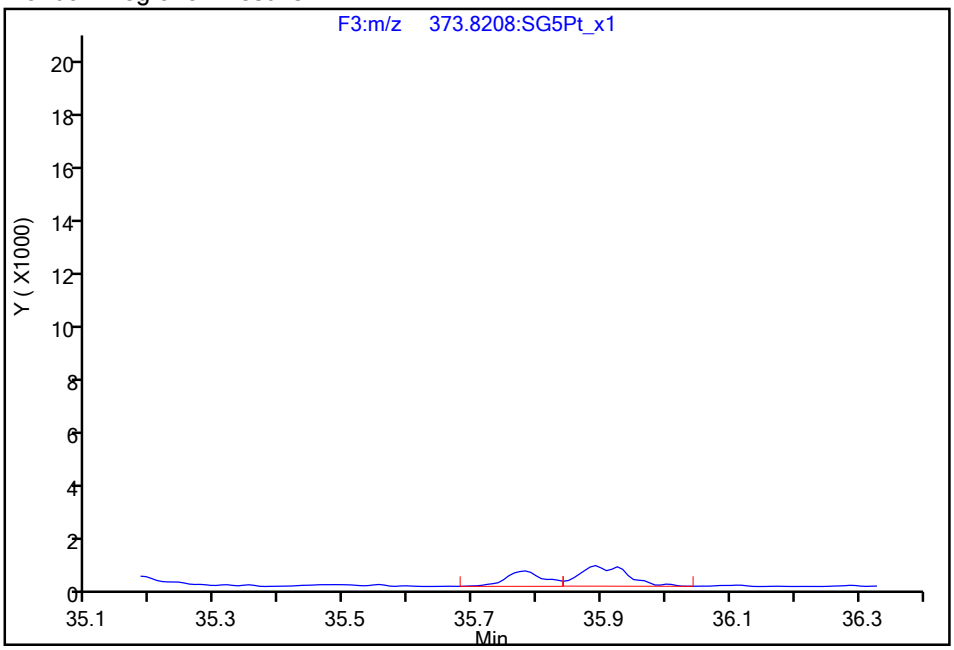

Reviewer: dadunj, 23-Aug-2021 09:30:39

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 2

Processing Integration Results

RT: 36.09
Area: 72069
Amount: 12.045482
Amount Units: pg/ul

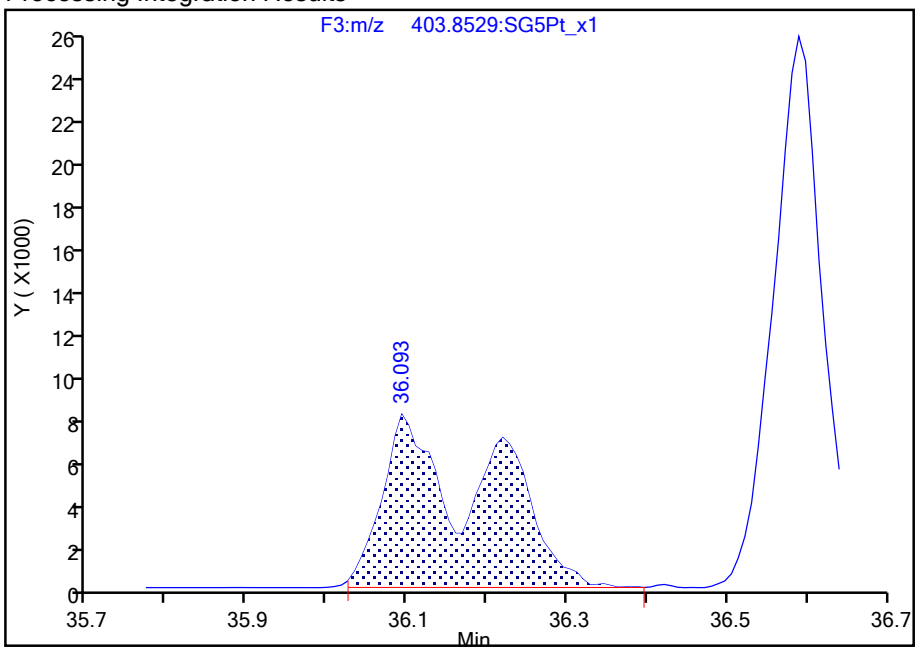

Manual Integration Results

RT: 36.09
Area: 36746
Amount: 8.395965
Amount Units: pg/ul

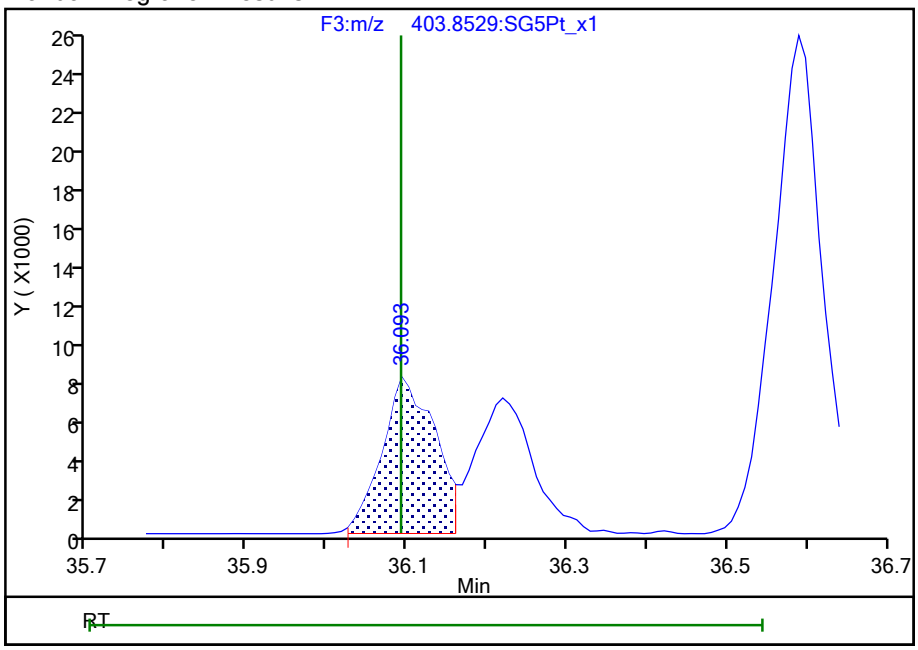

Reviewer: dadunj, 23-Aug-2021 09:30:49

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,6,7,8-HxCDD, CAS: 109719-81-5

Signal: 2

Processing Integration Results

RT: 36.09
Area: 72069
Amount: 10.635496
Amount Units: pg/ul

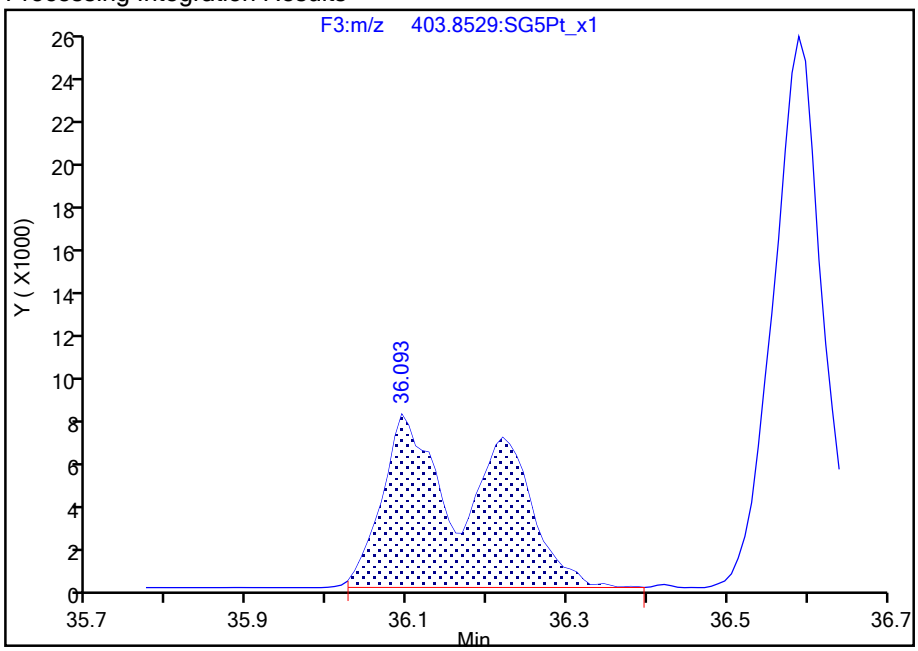

Manual Integration Results

RT: 36.22
Area: 35318
Amount: 7.807720
Amount Units: pg/ul

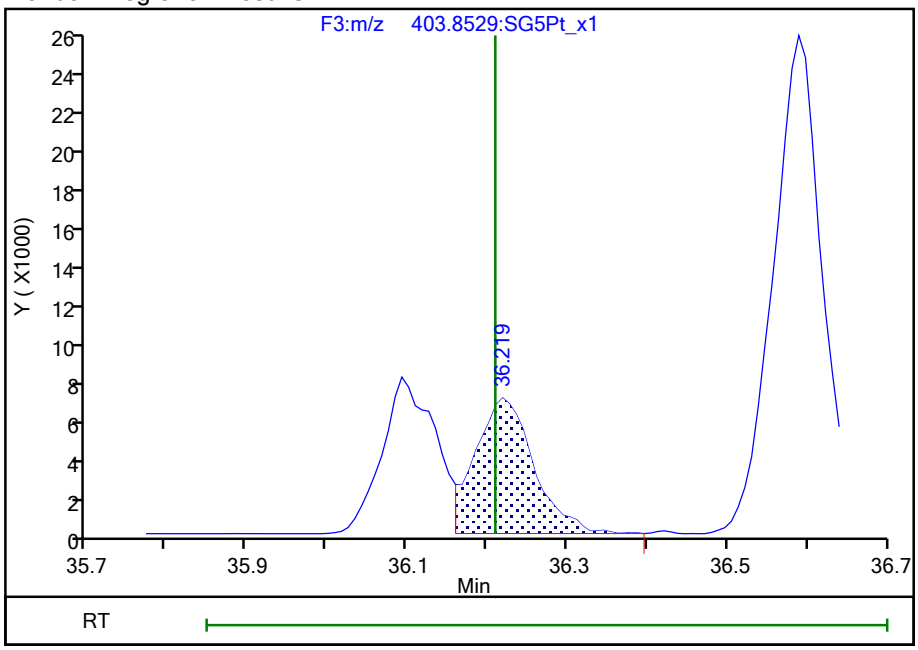

Reviewer: dadunj, 23-Aug-2021 09:30:49

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,6,7,8-HxCDD, CAS: 109719-81-5

Signal: 1

Processing Integration Results

RT: 36.10
Area: 44517
Amount: 10.635496
Amount Units: pg/ul

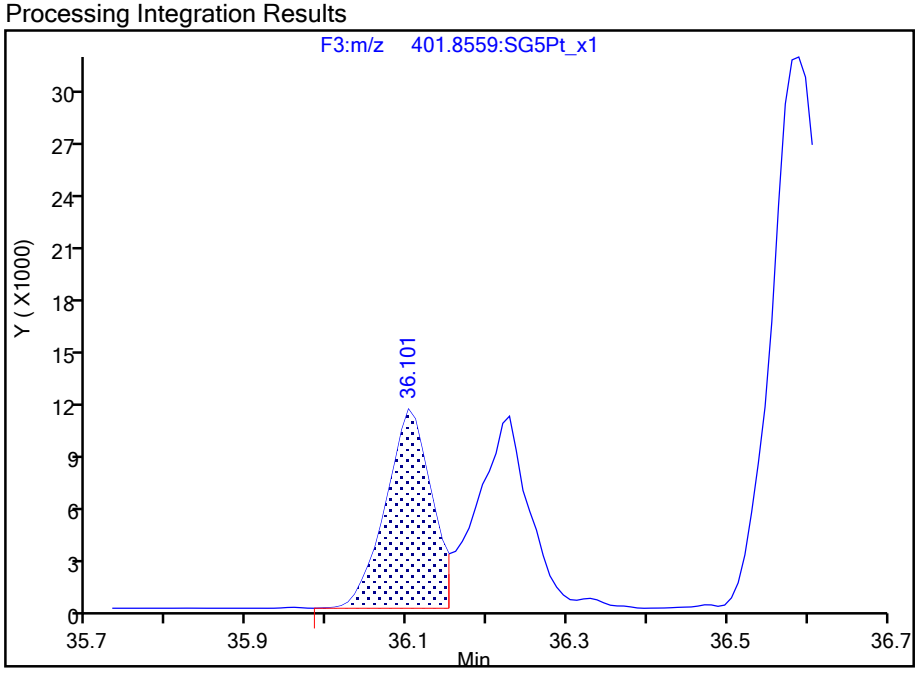

Manual Integration Results

RT: 36.23
Area: 50270
Amount: 7.807720
Amount Units: pg/ul

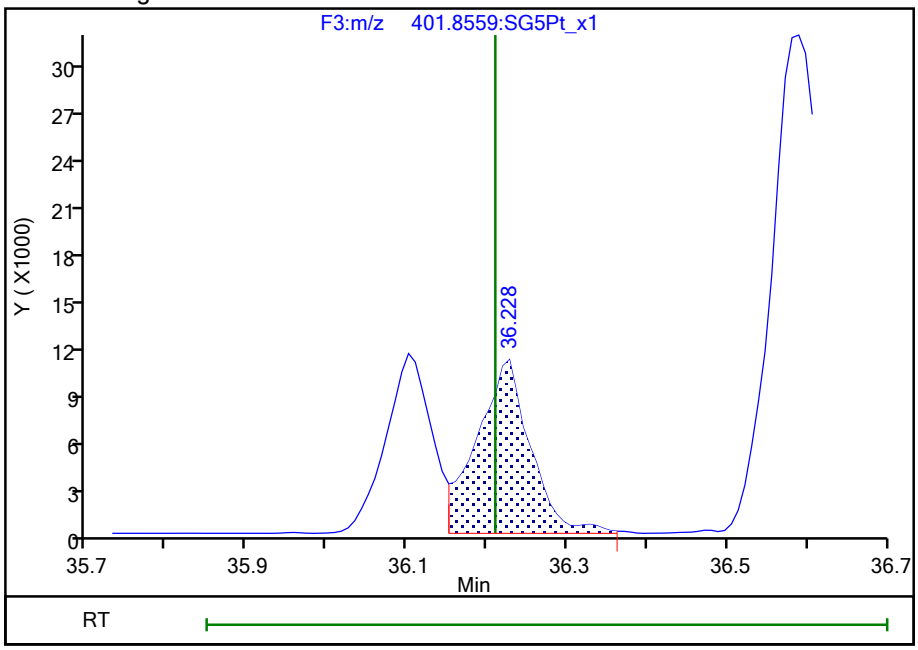

Reviewer: dadunj, 23-Aug-2021 09:30:55

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

785495

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.18- 36.57)

Signal: 1

Processing Integration Results

RT = 34.216 Area = 1945

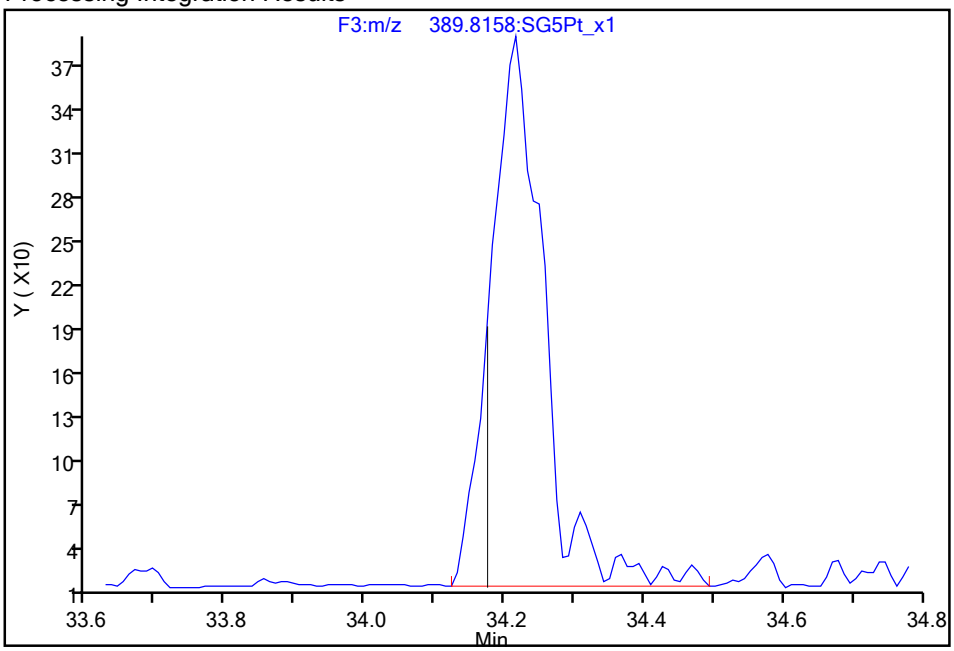

Manual Integration Results

RT = 34.216 Area = 1766 M

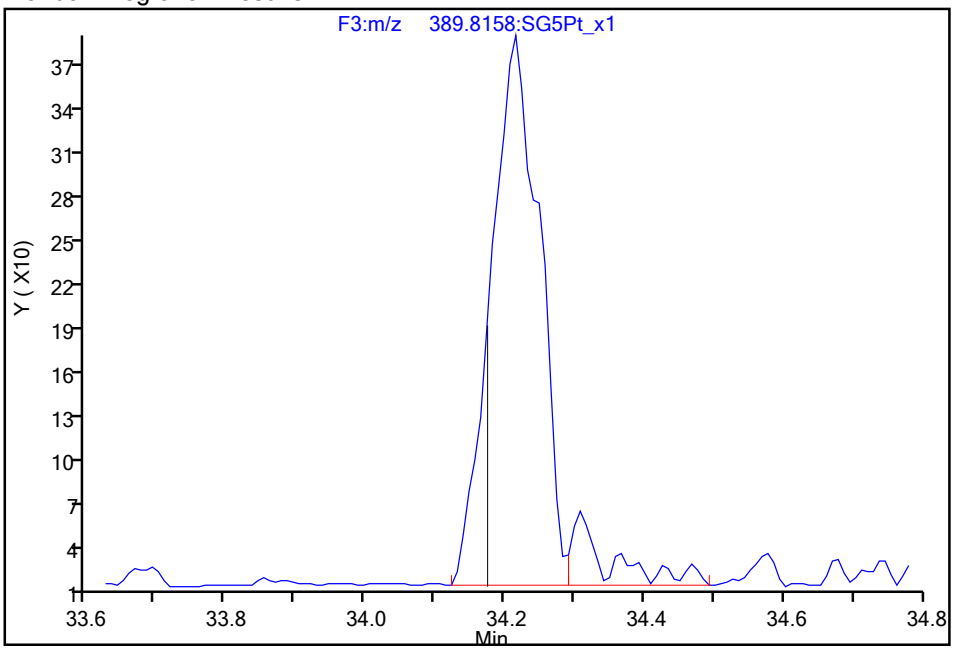

Reviewer: dadunj, 23-Aug-2021 09:31:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d				
Injection Date:	20-Aug-2021 03:57:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

Non-2,3,7,8-sub-HpCDD, Signal: 1, m/z: 423.7767, RT: (38.86- 39.62)

Signal: 1

Processing Integration Results

RT = 38.923 Area = 6925

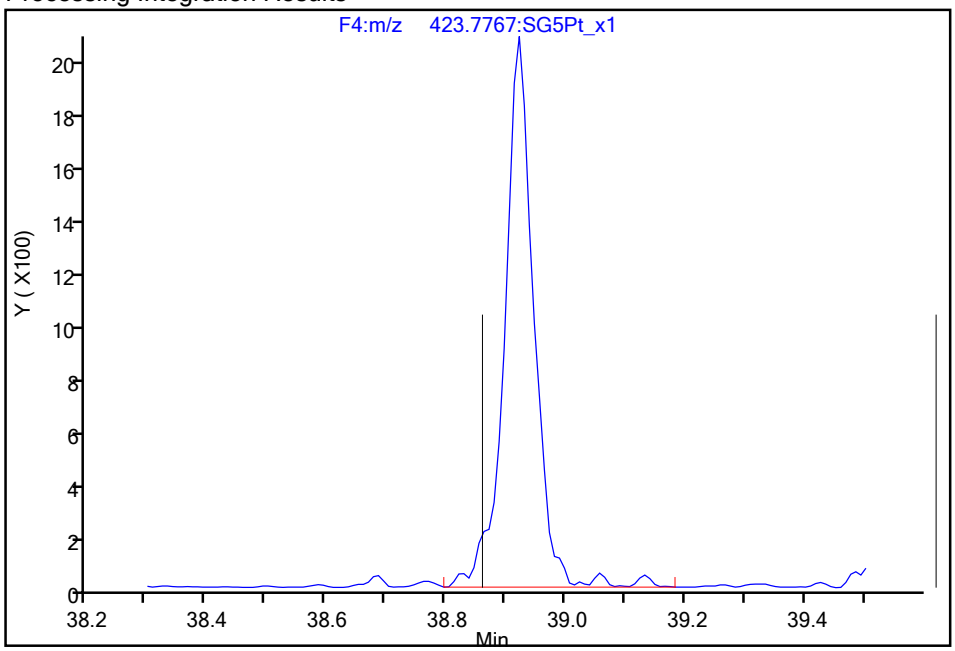

Manual Integration Results

RT = 38.923 Area = 6764 M

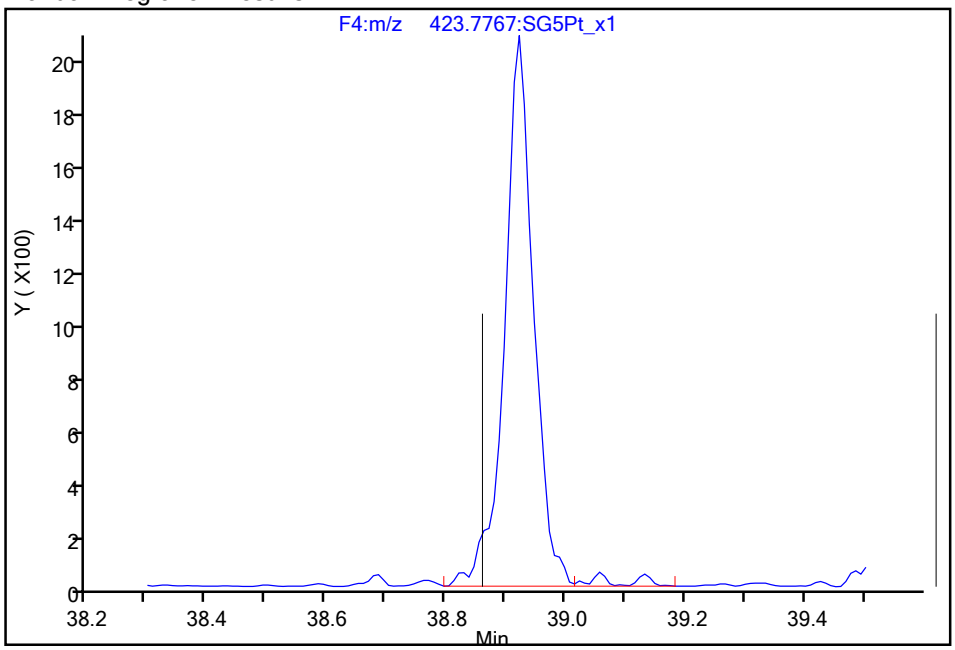

Reviewer: dadunj, 23-Aug-2021 09:31:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

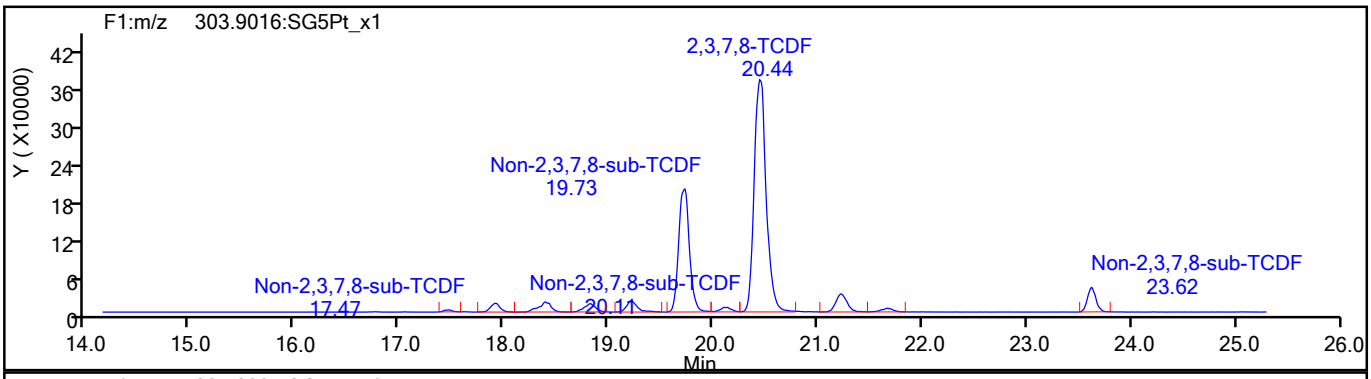

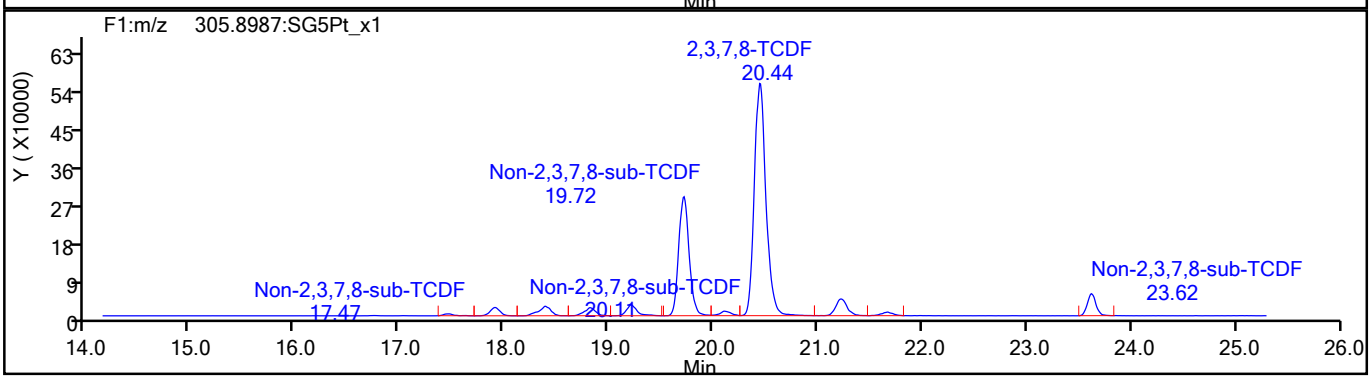

TCDF Standards

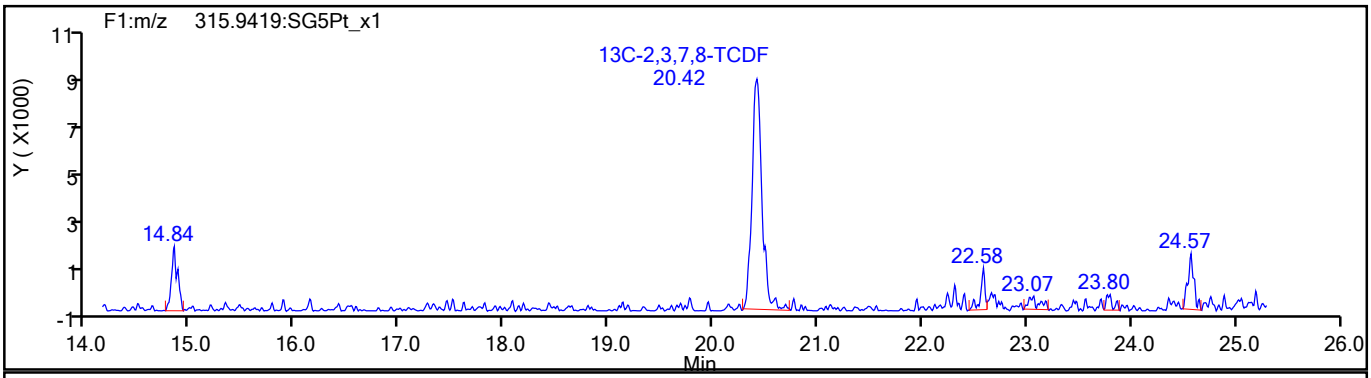

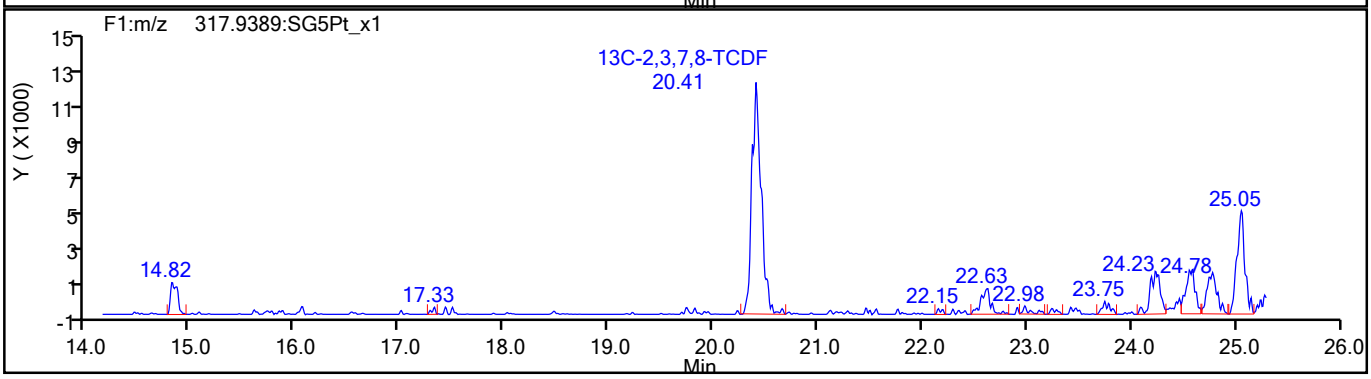

785498

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

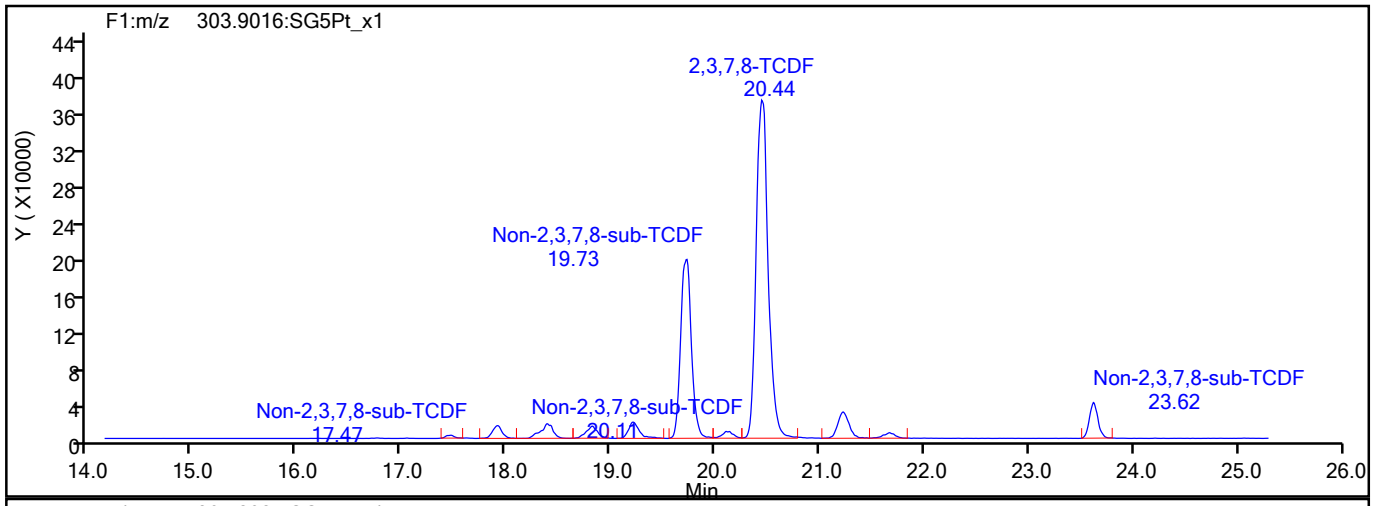

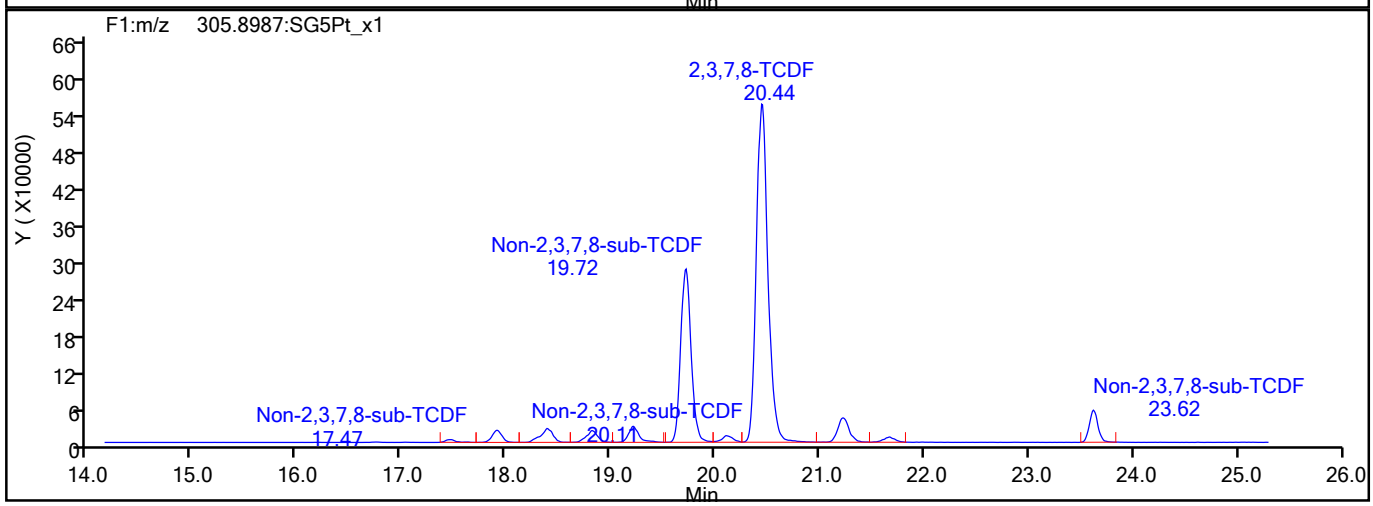

TCDF Interference Mass

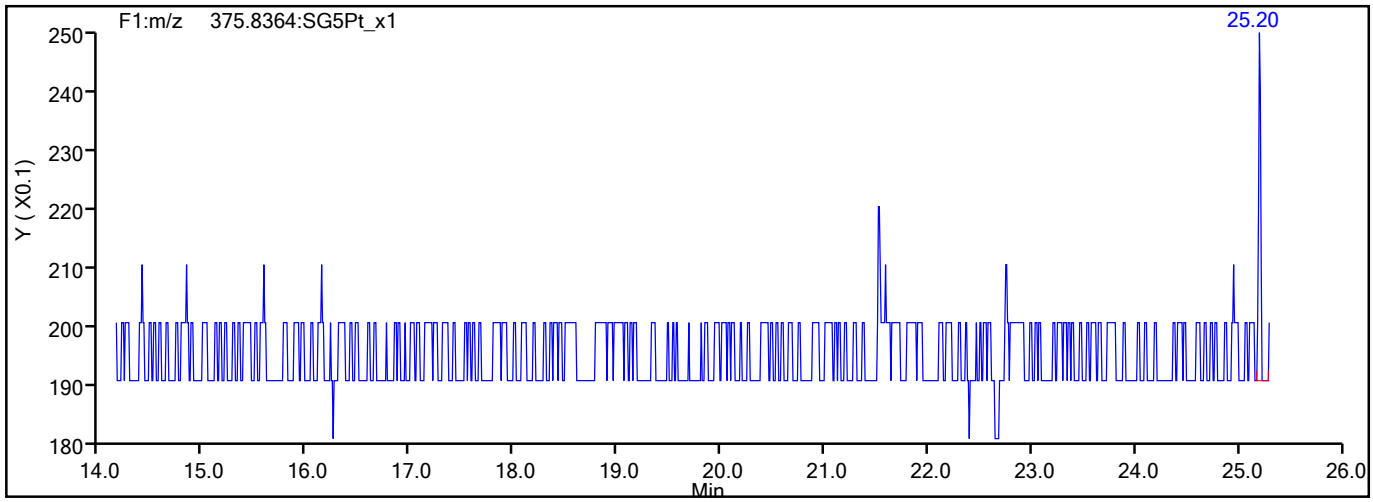

785499

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

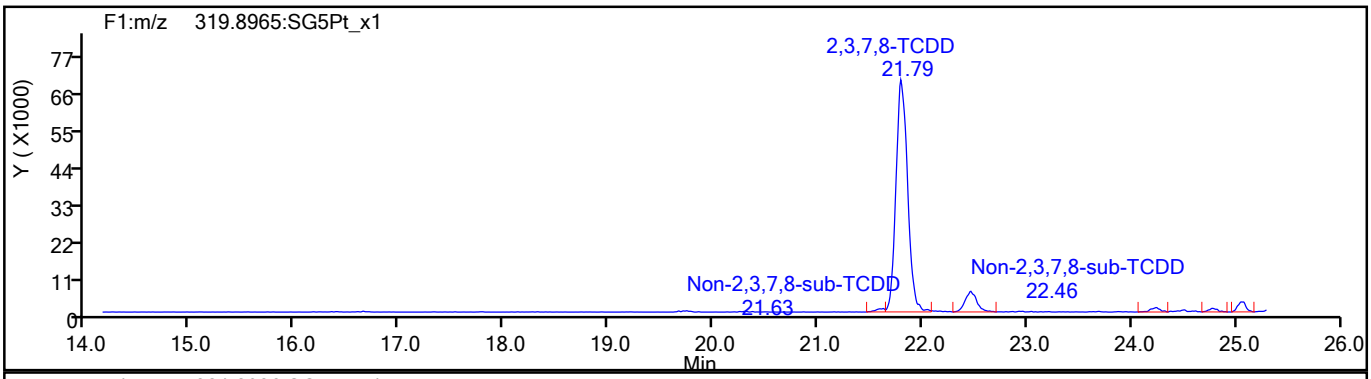

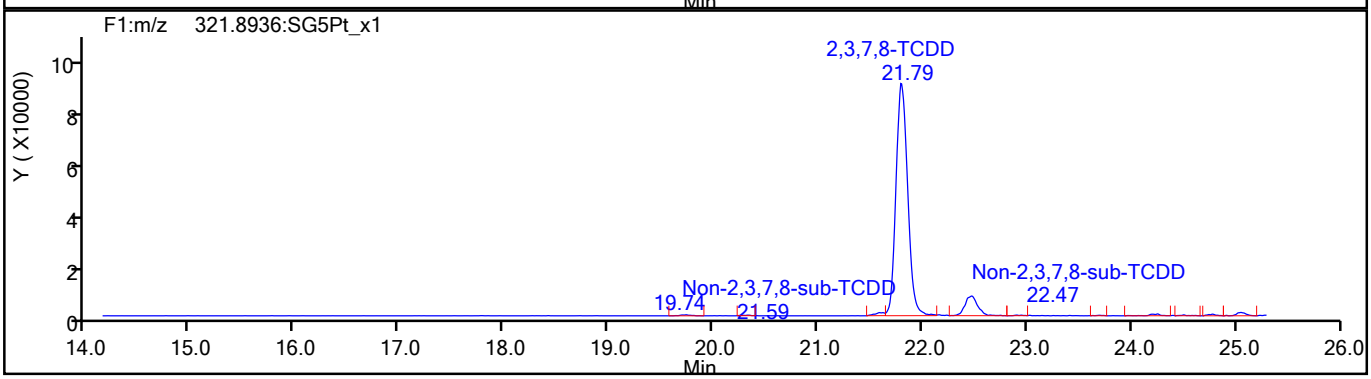

TCDD Standards

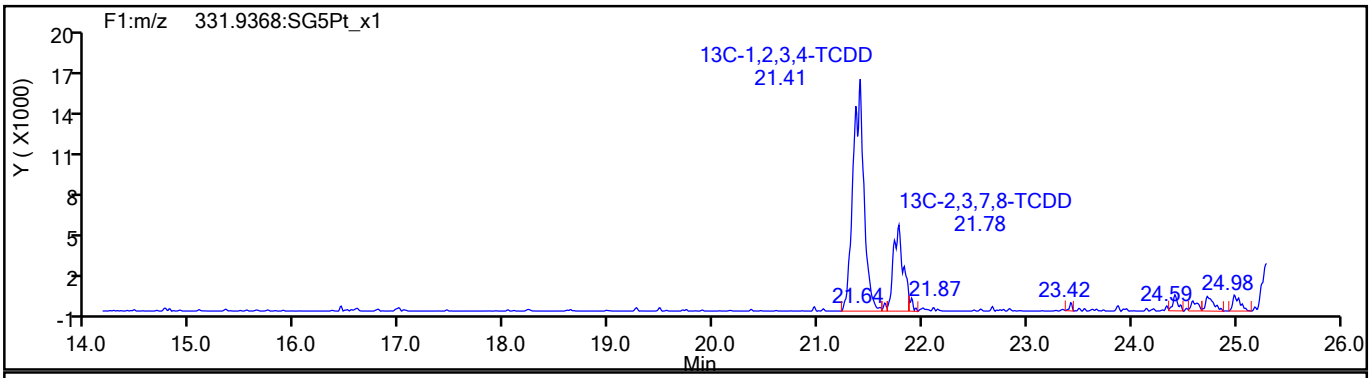

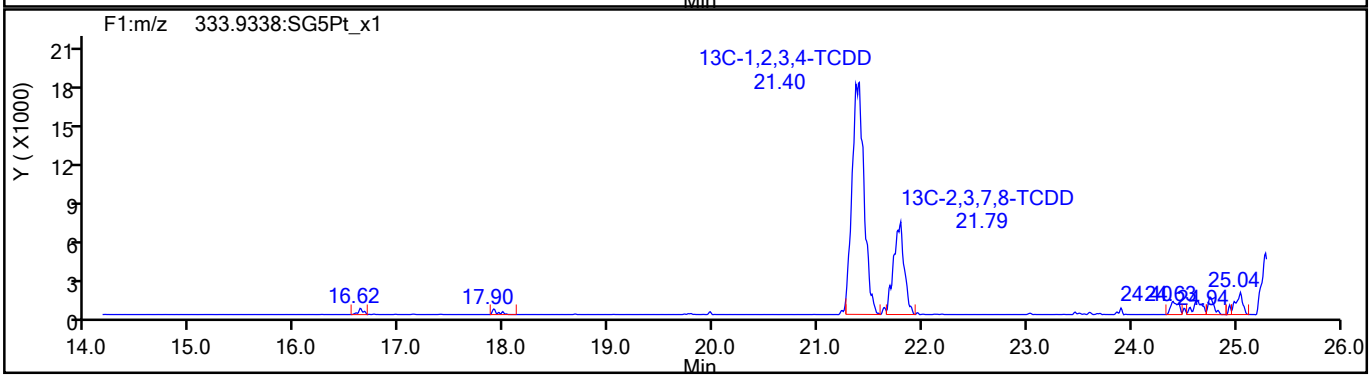

785500

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

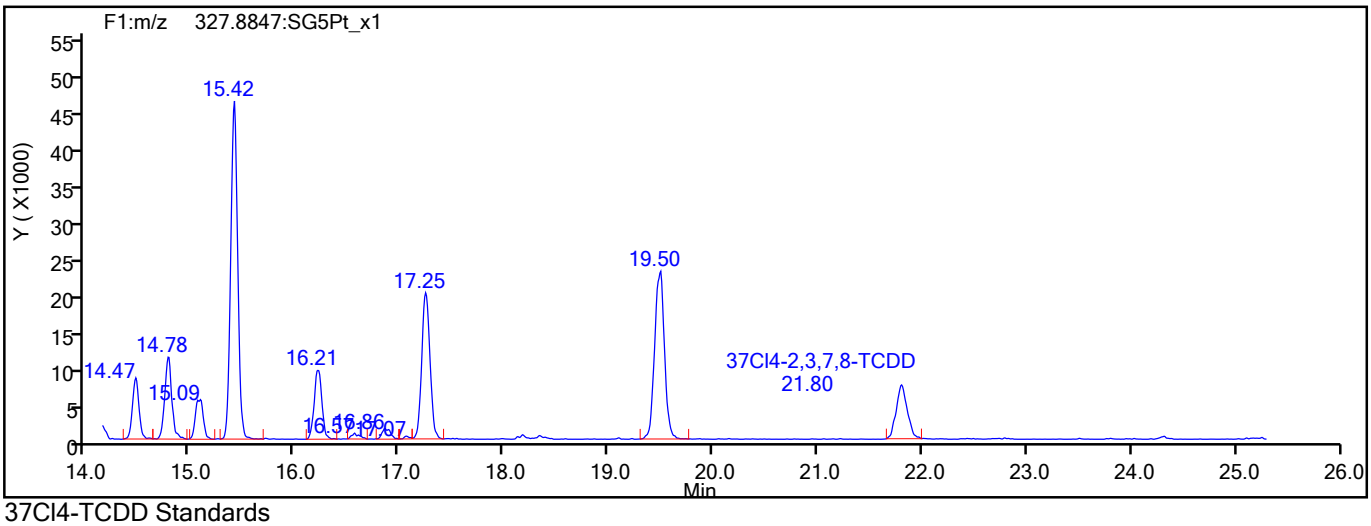

37Cl4-TCDD Standards

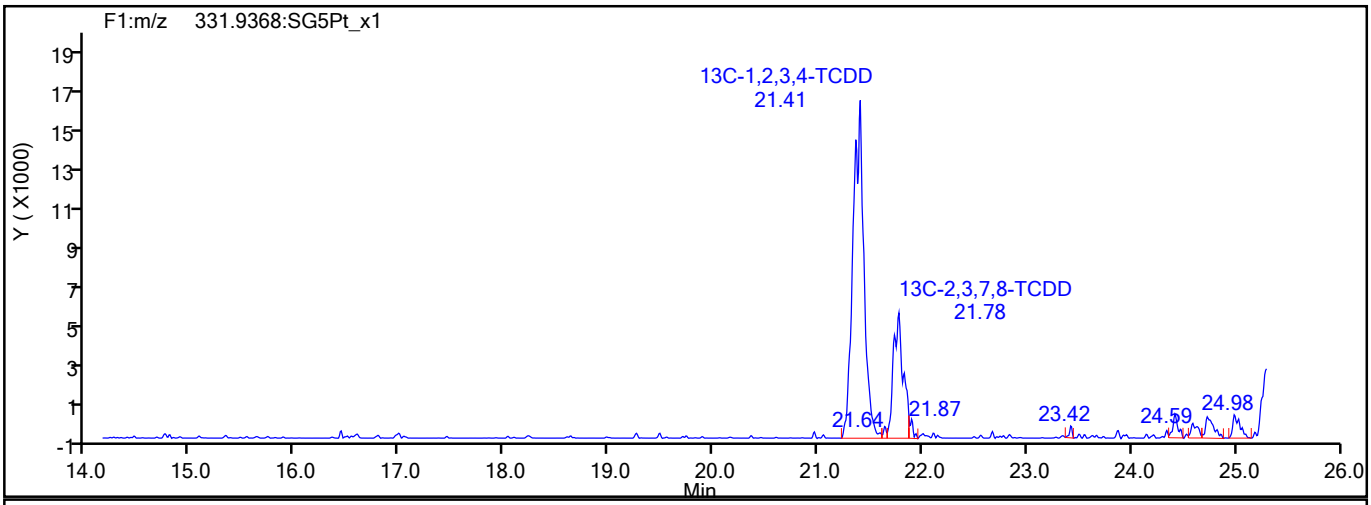

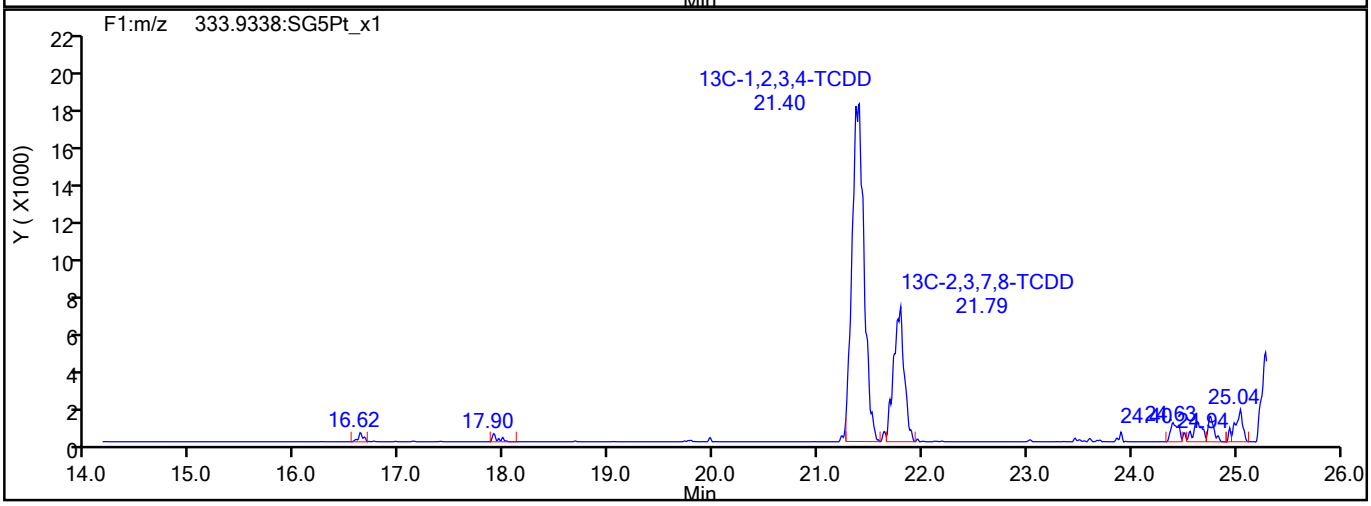

785501

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

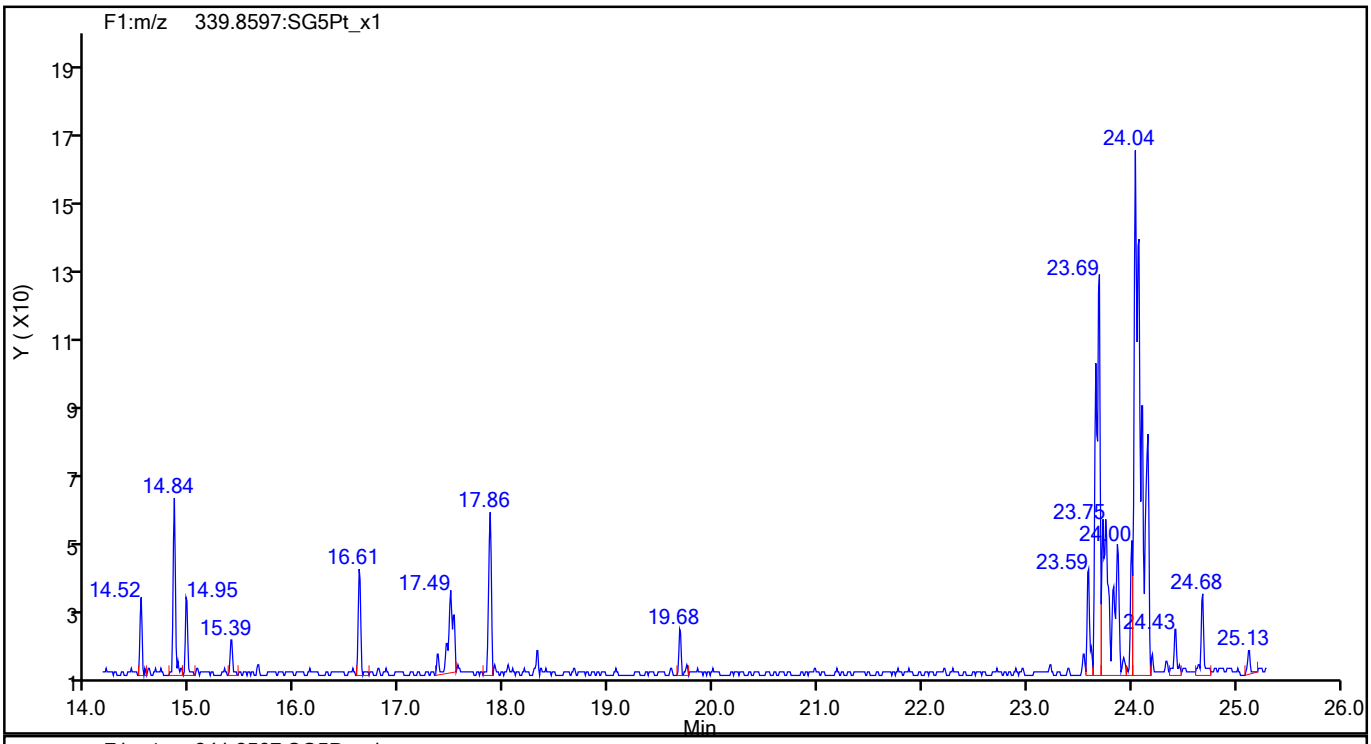

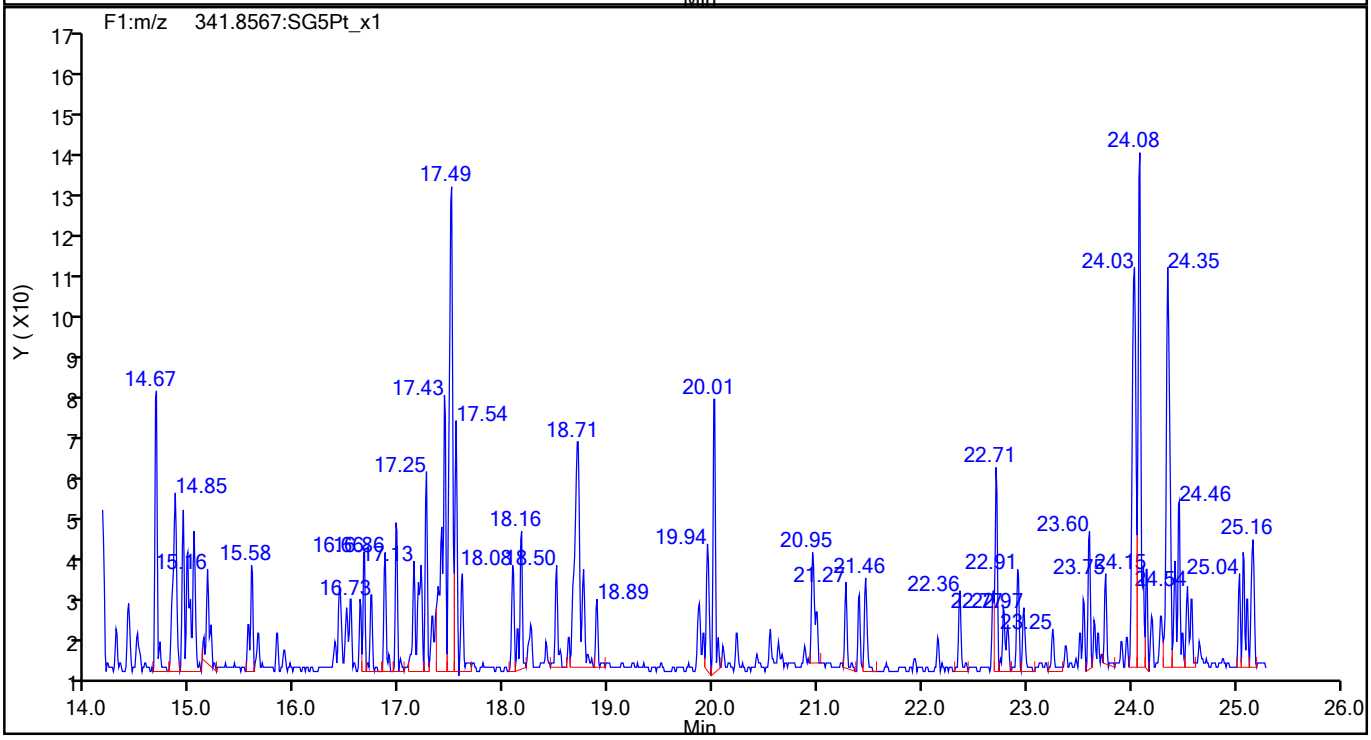

785502

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

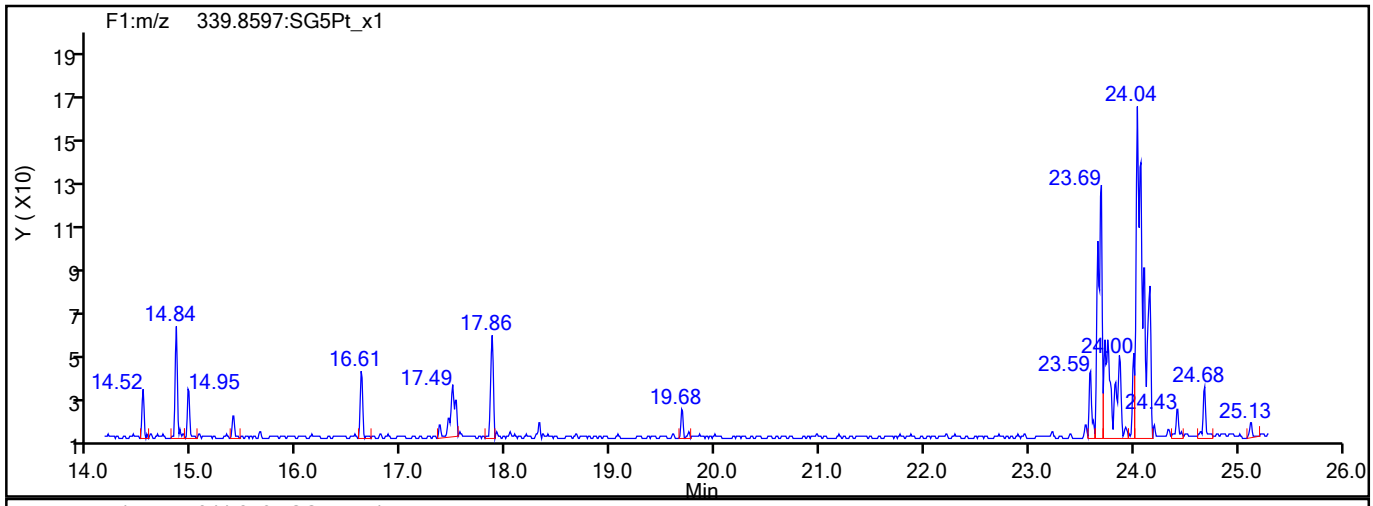

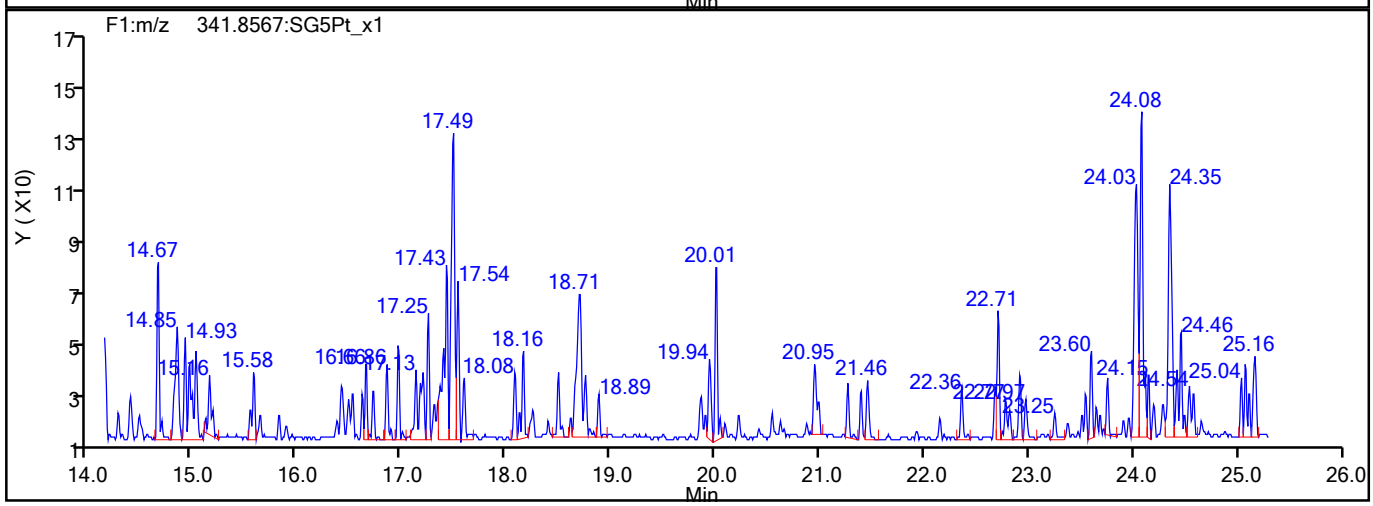

F1 PeCDFs Interference Mass

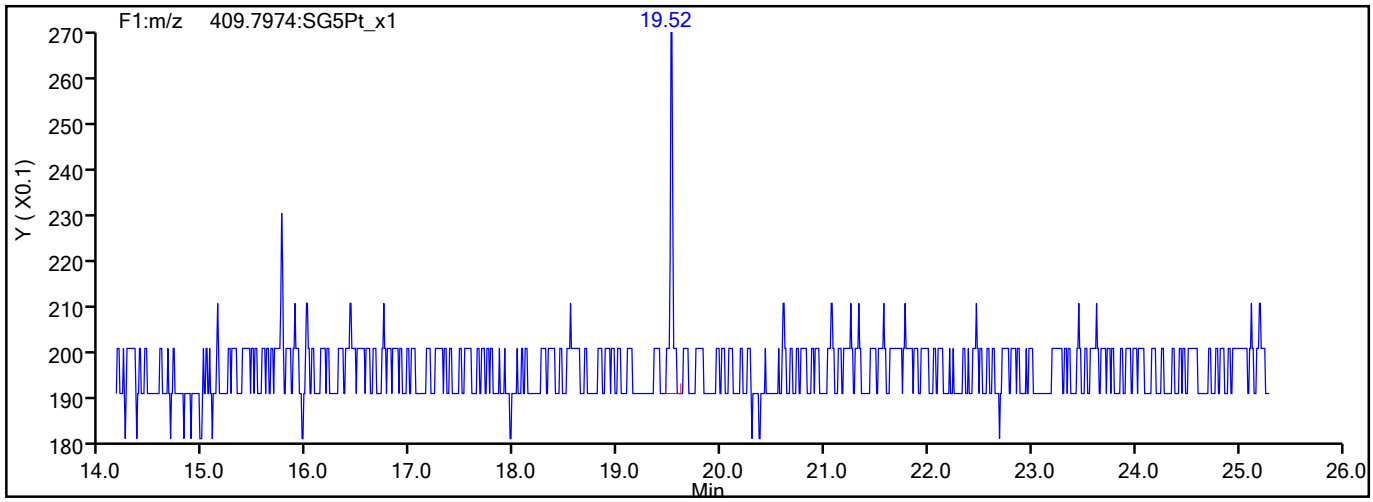

785503

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

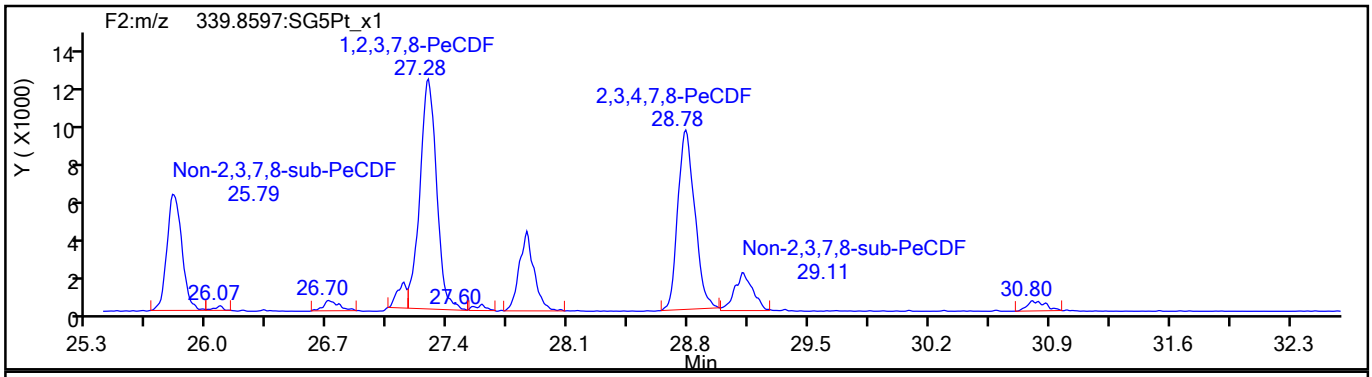

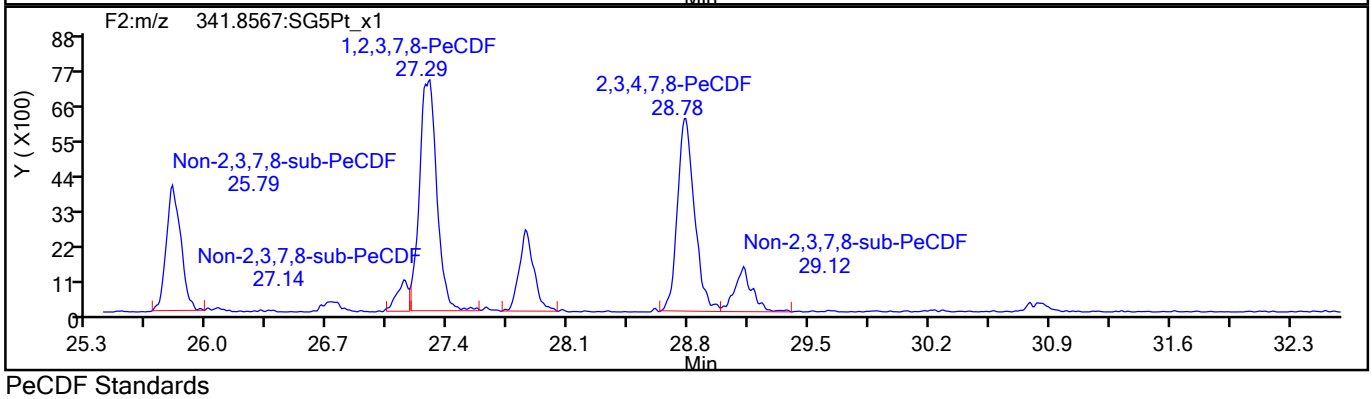

PeCDF Standards

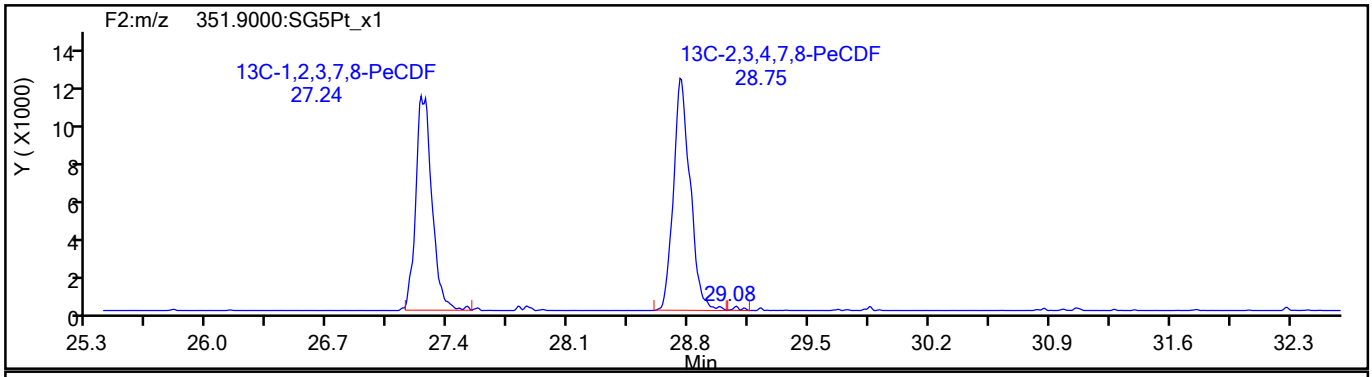

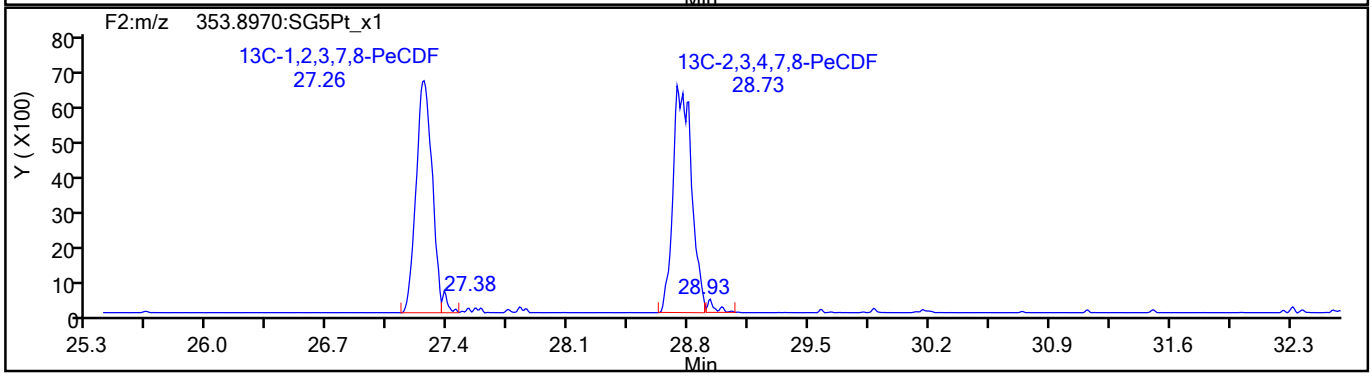

785504

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
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PeCDF

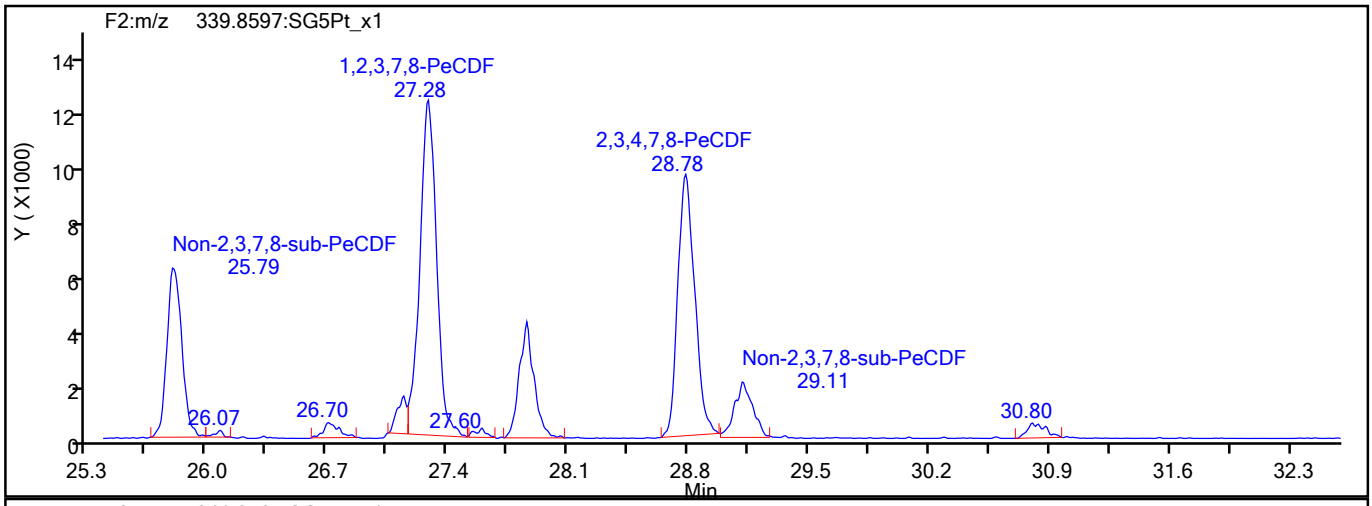

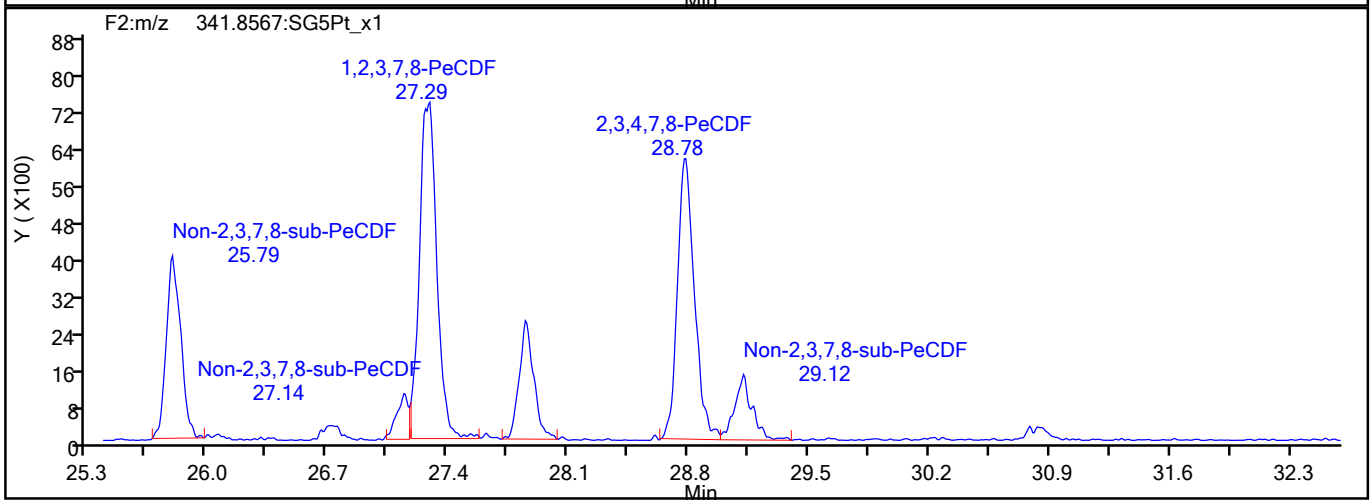

PeCDF Interference Mass

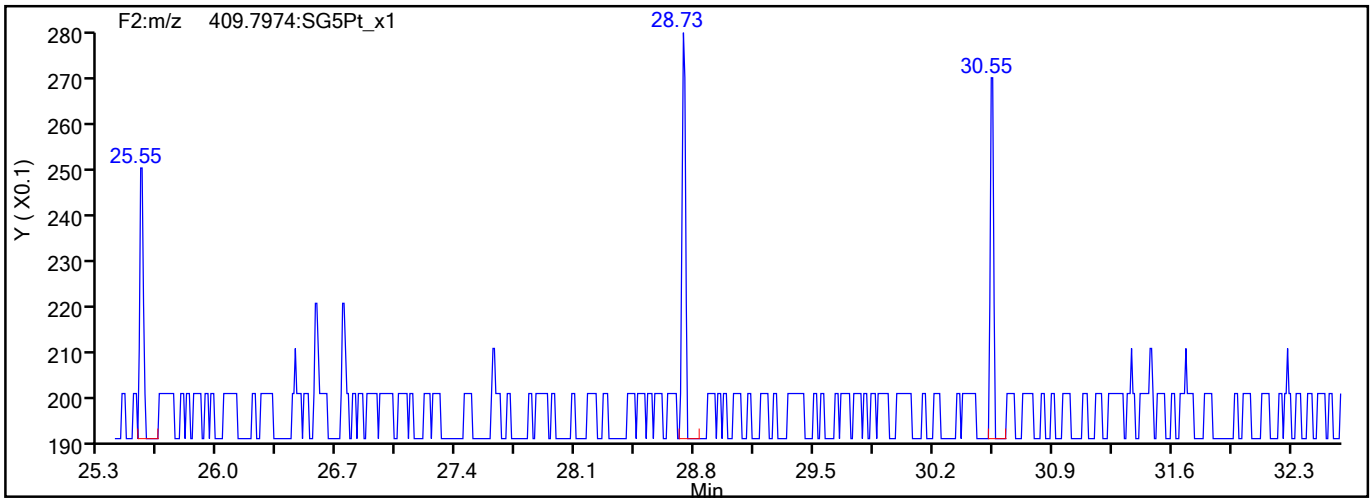

785505

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

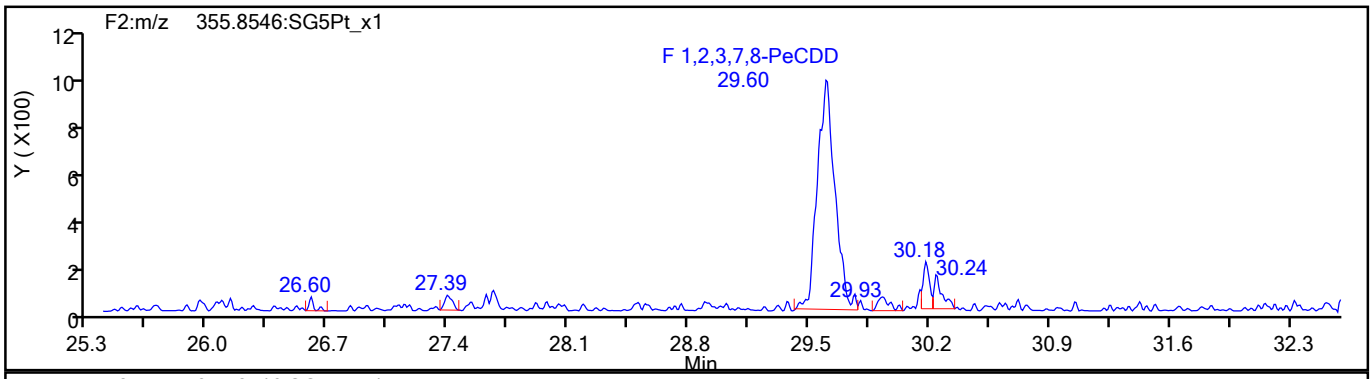

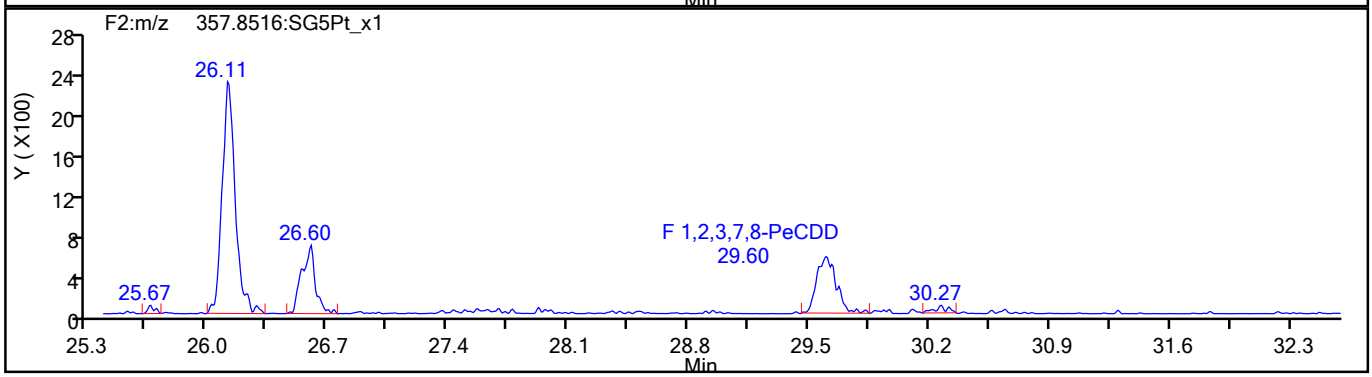

PeCDD Standards

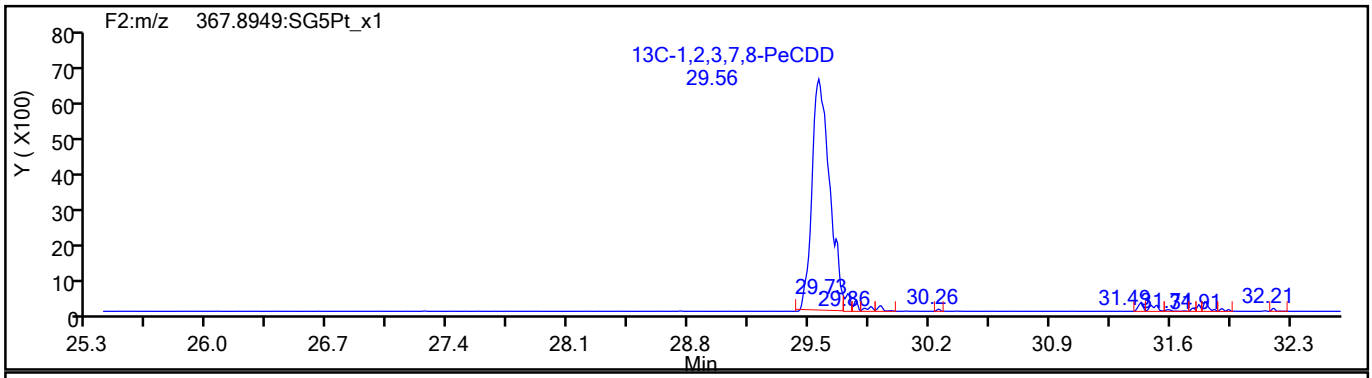

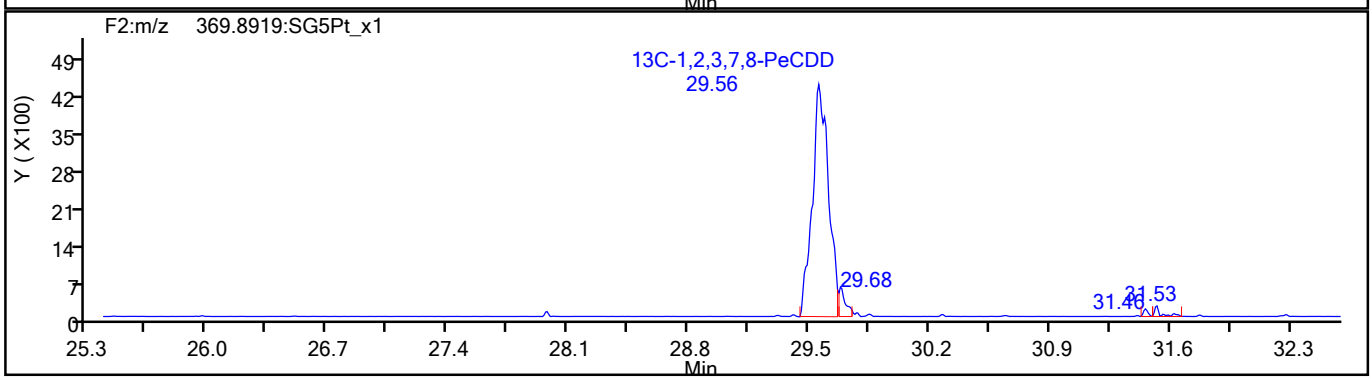

785506

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

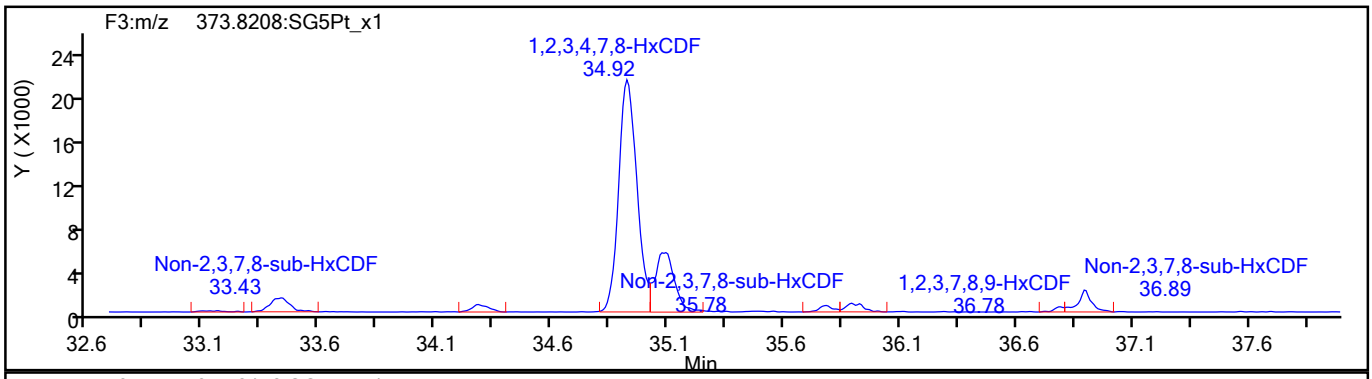

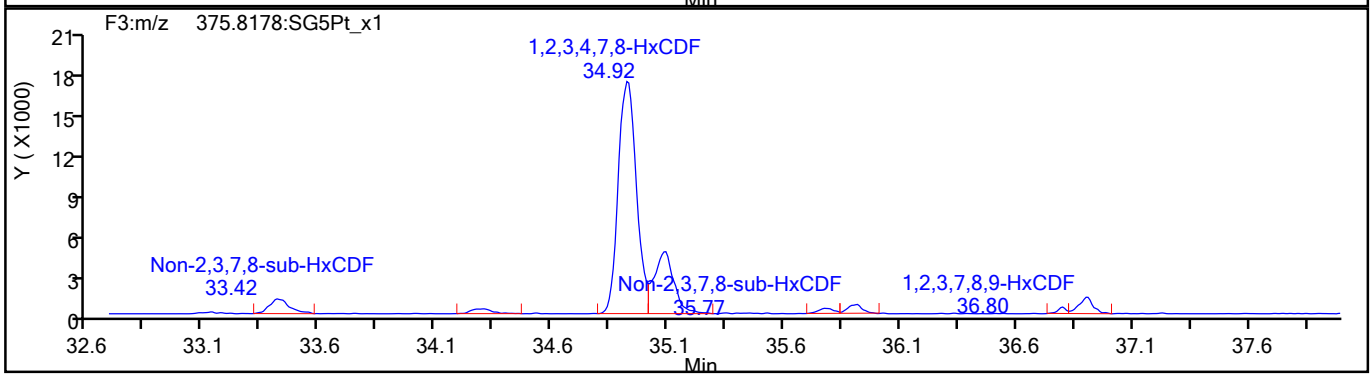

HxCDF Standards

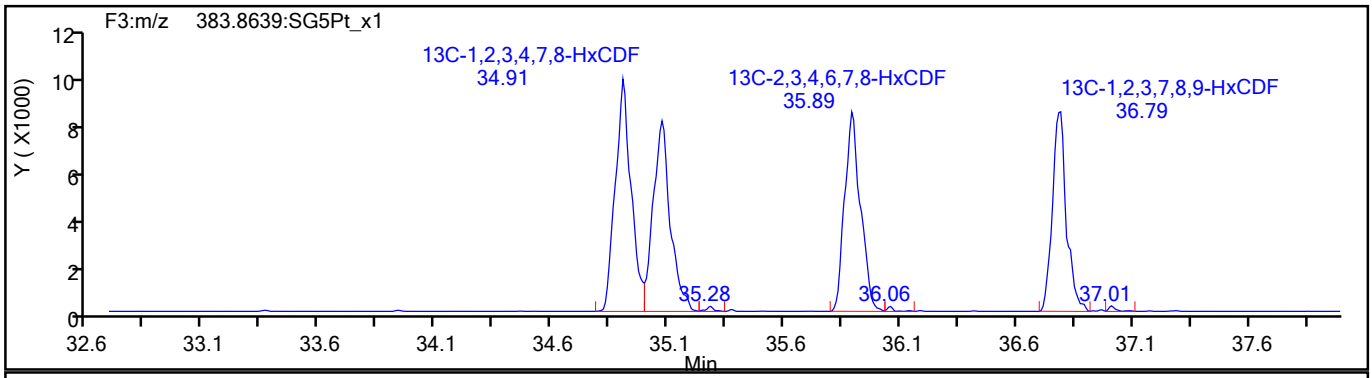

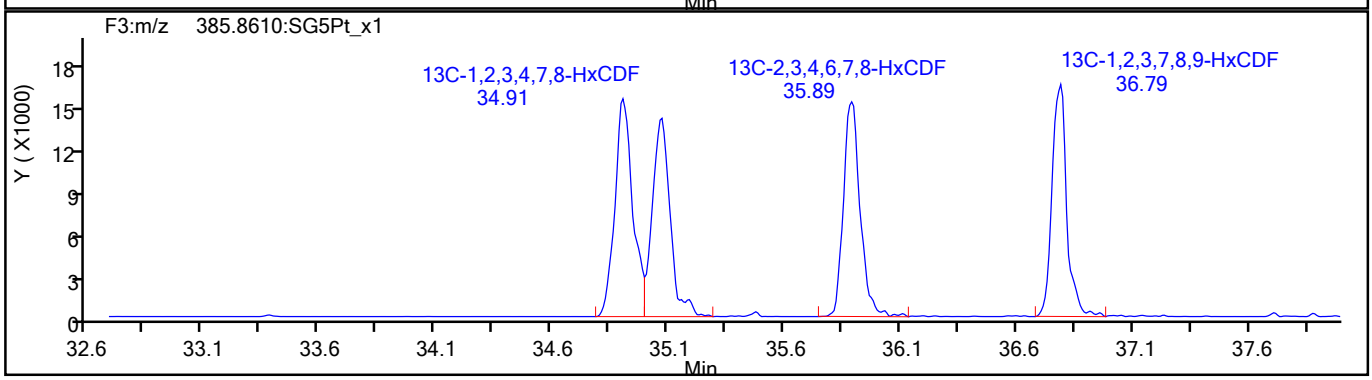

785507

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
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HxCDF

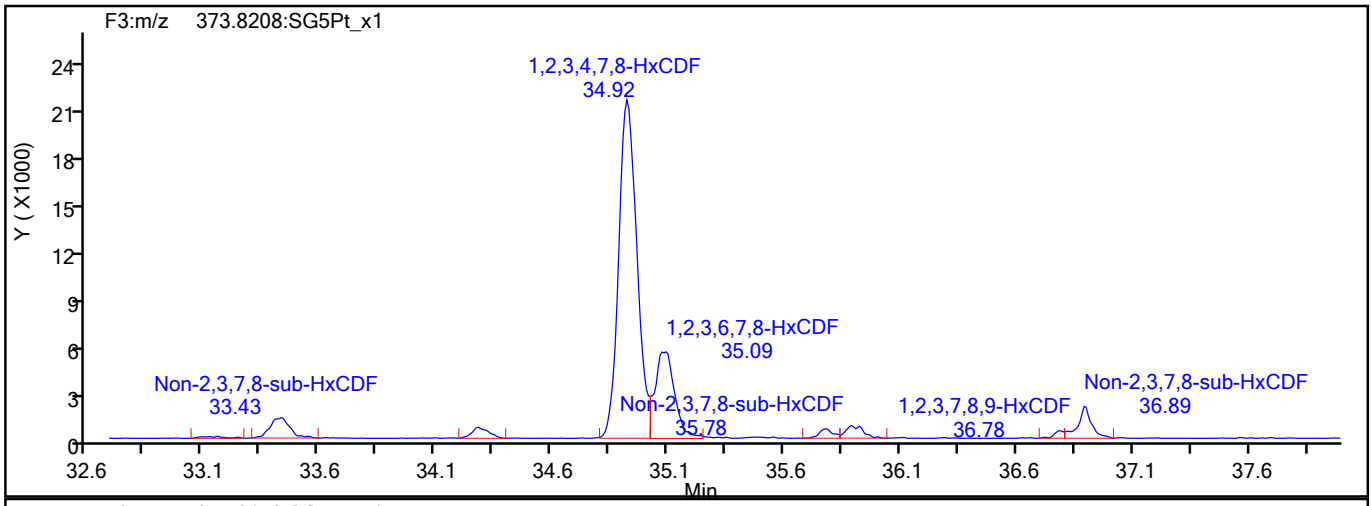

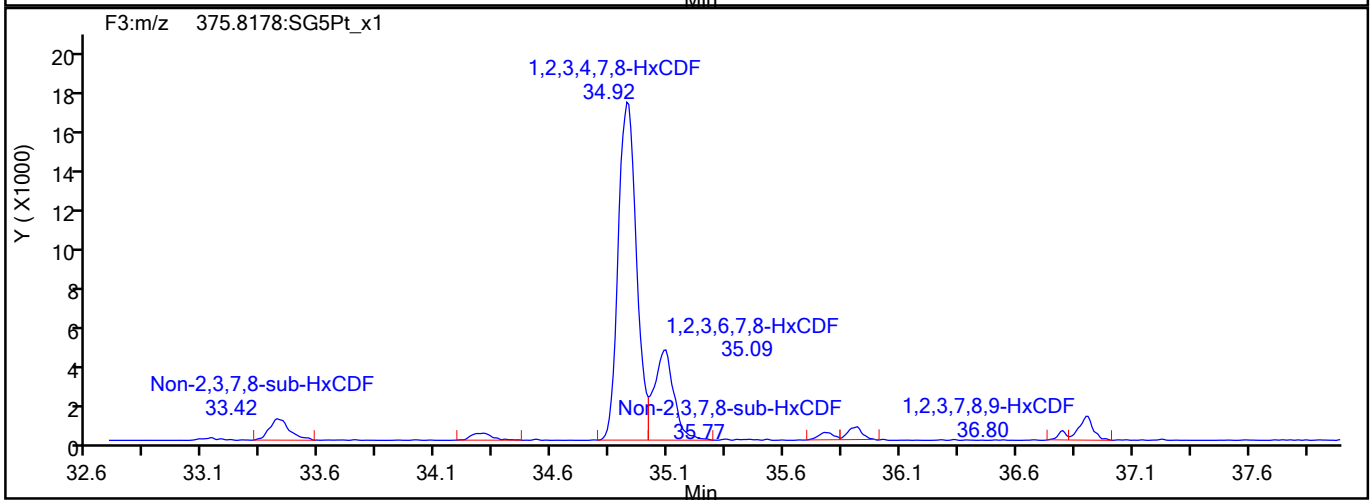

HxCDF Interference Mass

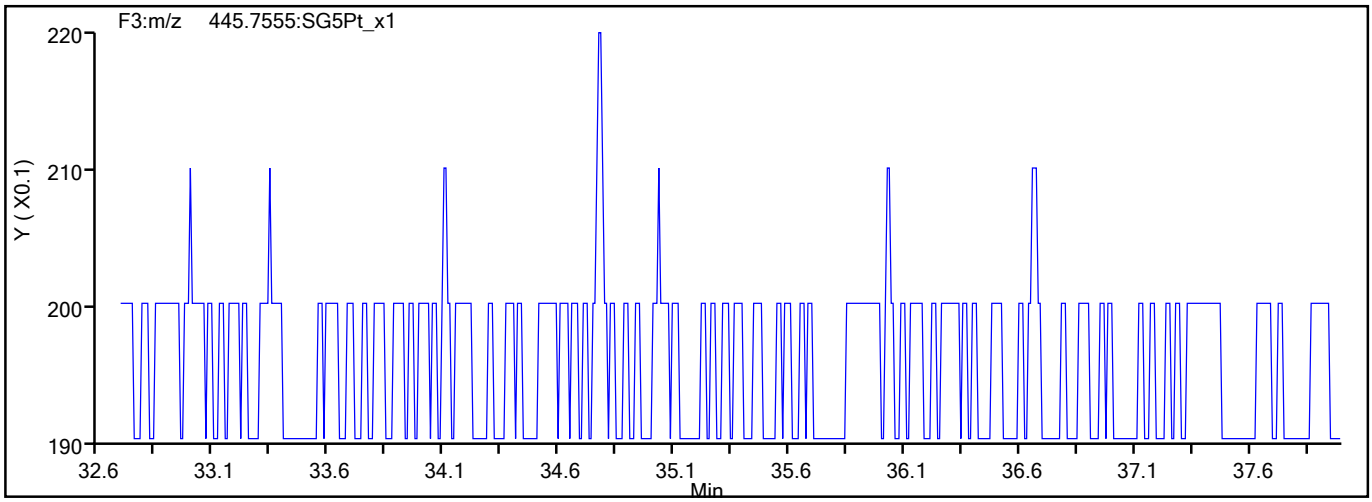

785508

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

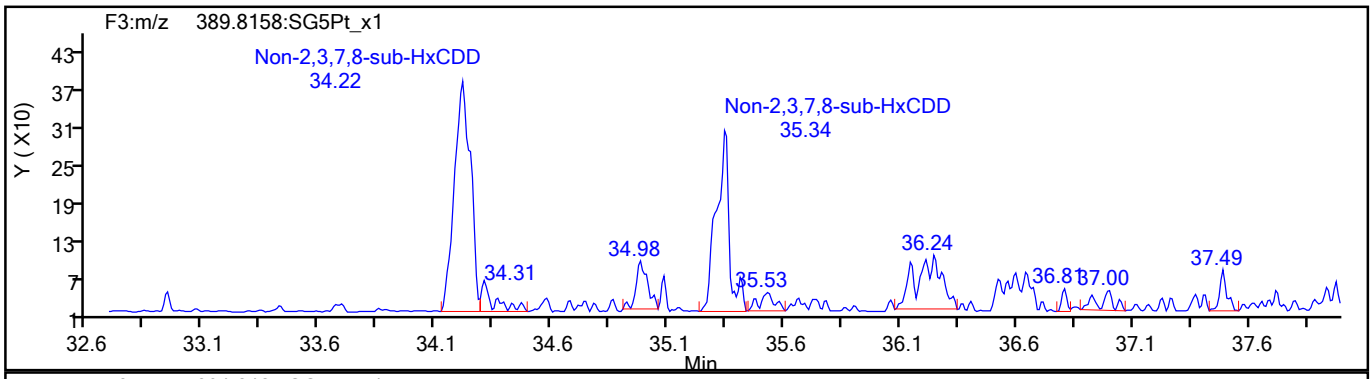

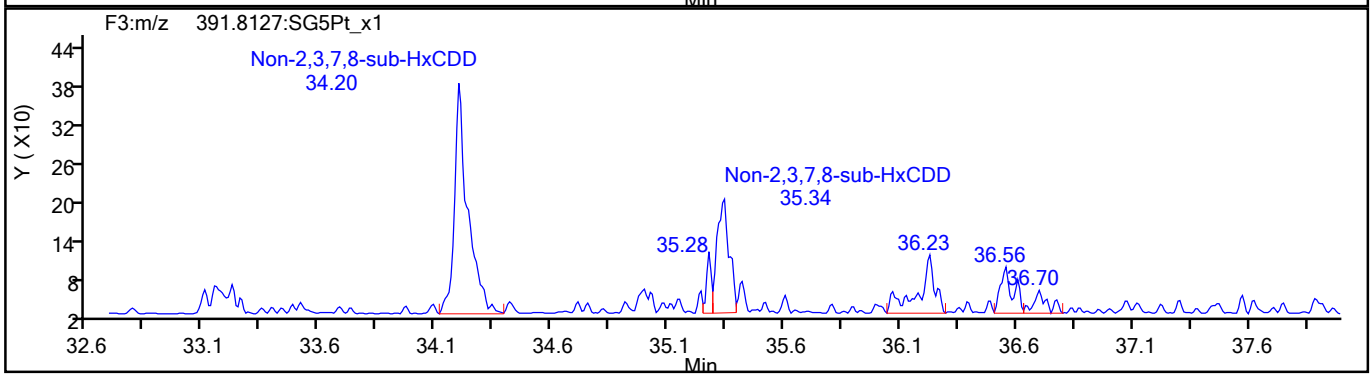

HxCDD Standards

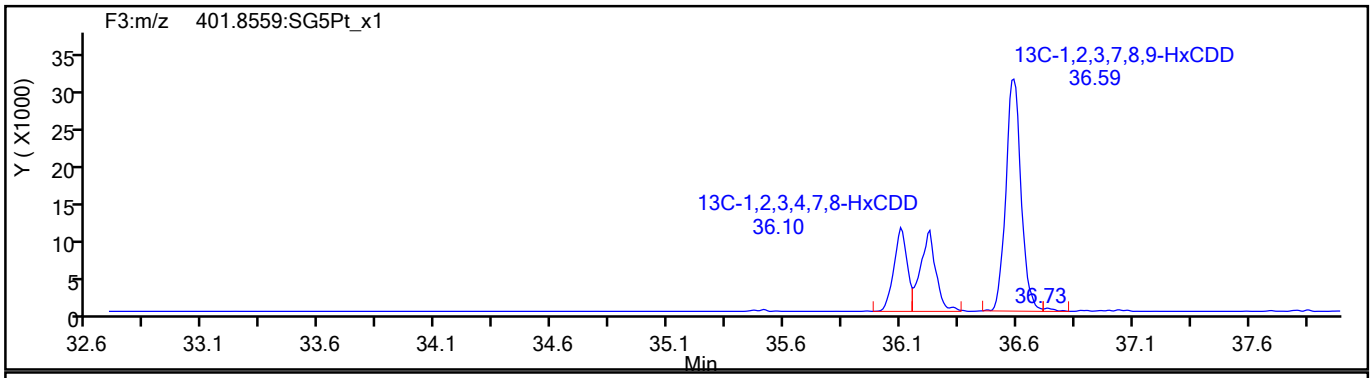

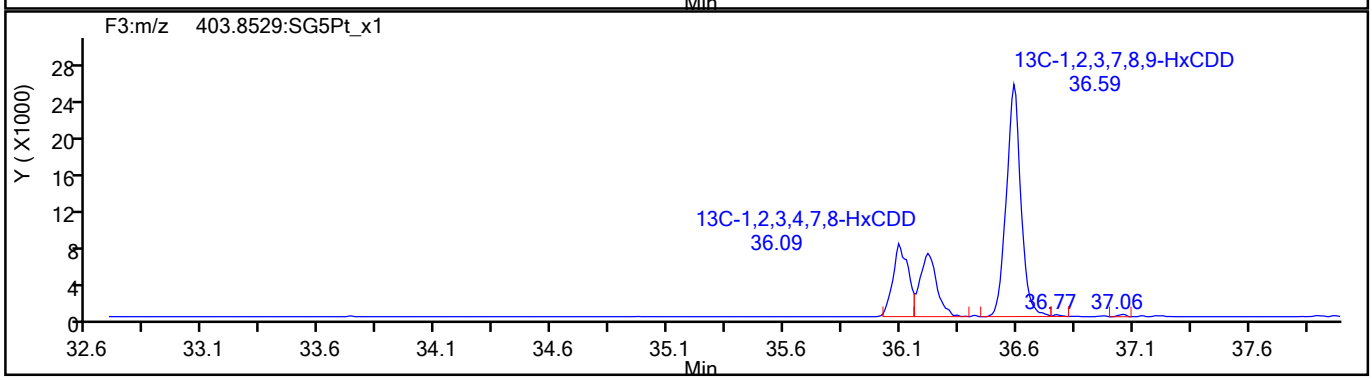

785509

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

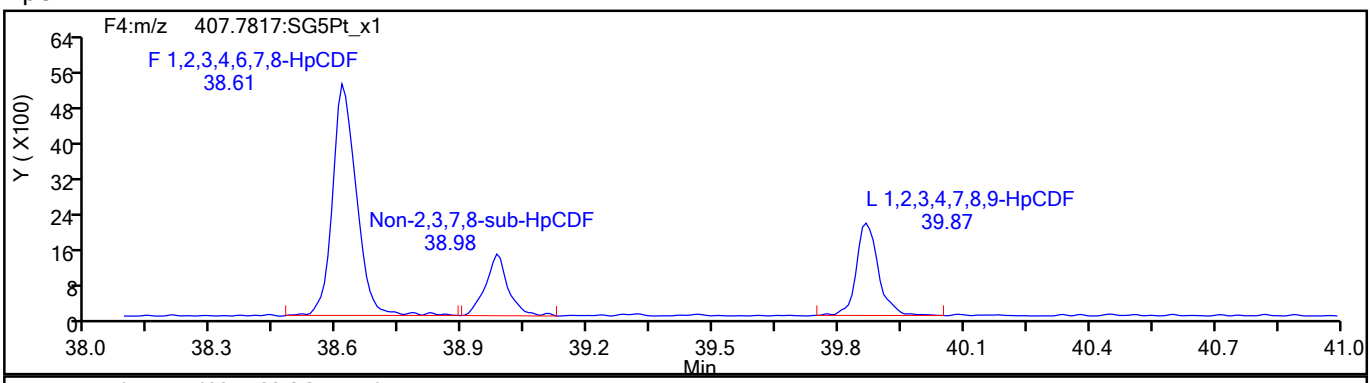

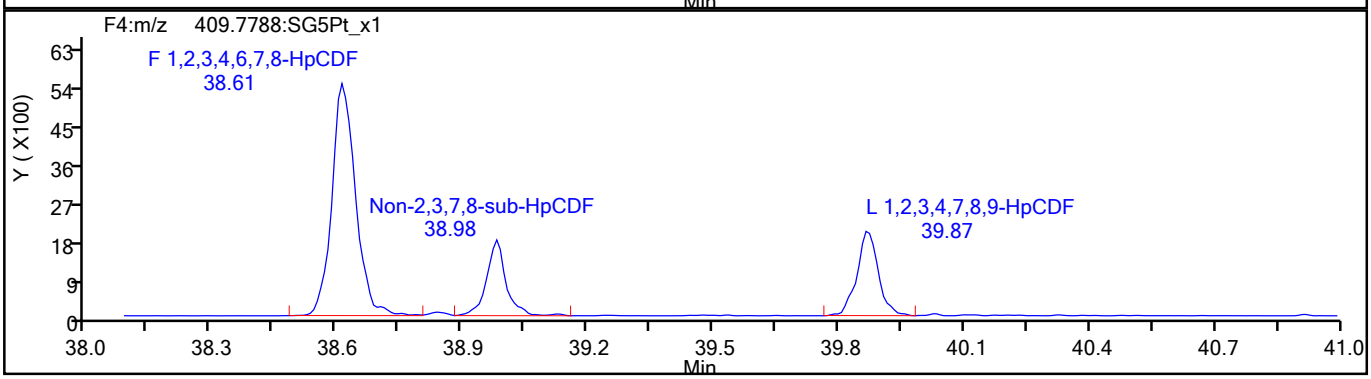

HpCDF Standards

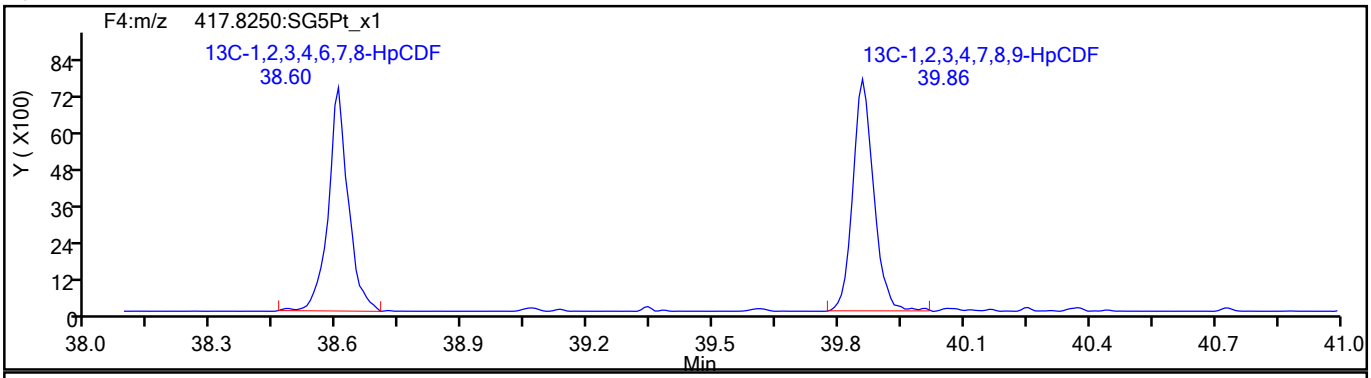

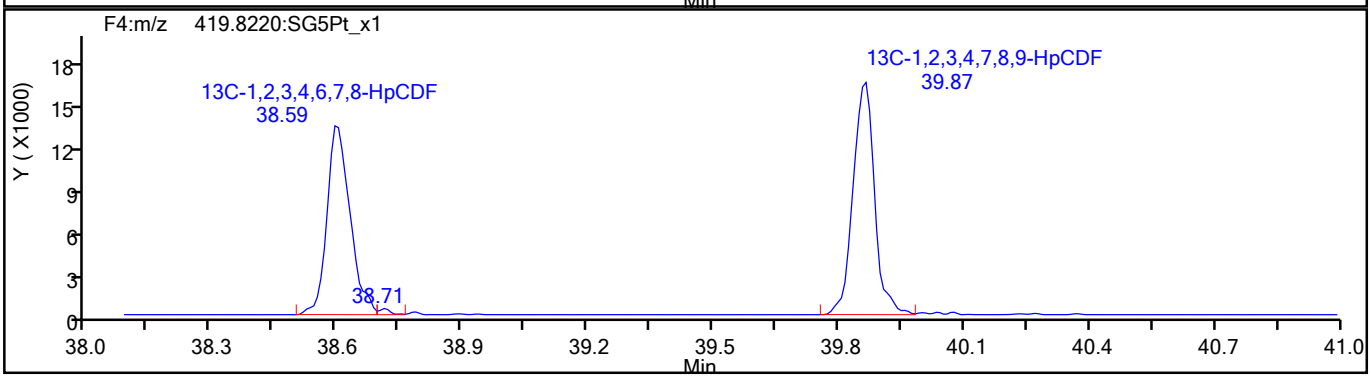

785510

Report Date: 25-Aug-2021 15:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

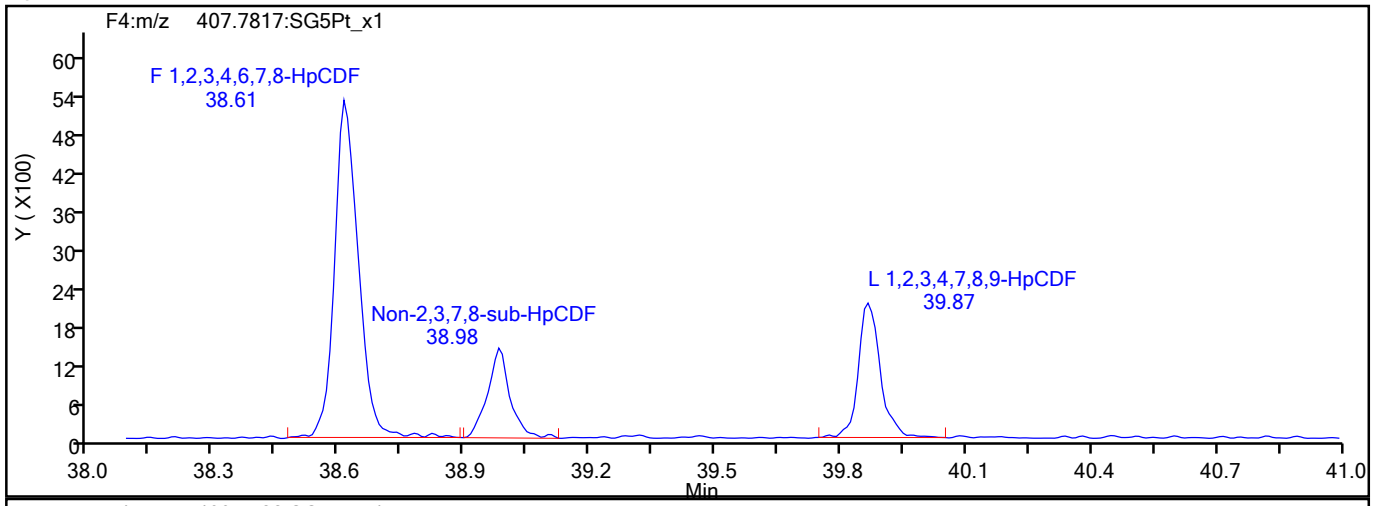

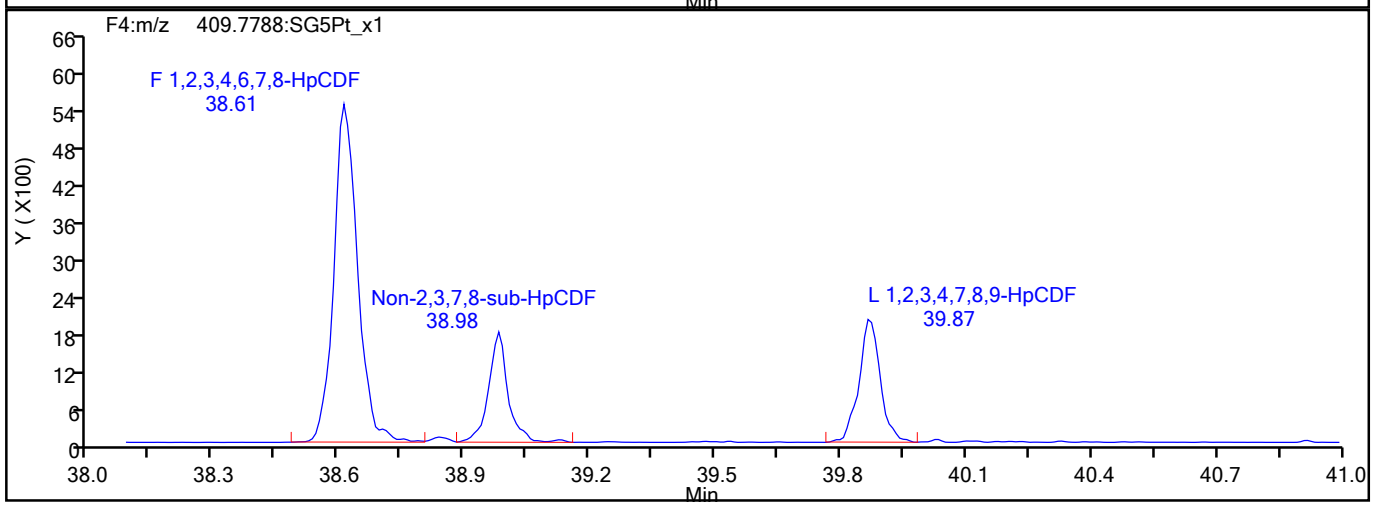

HpCDF Interference Mass

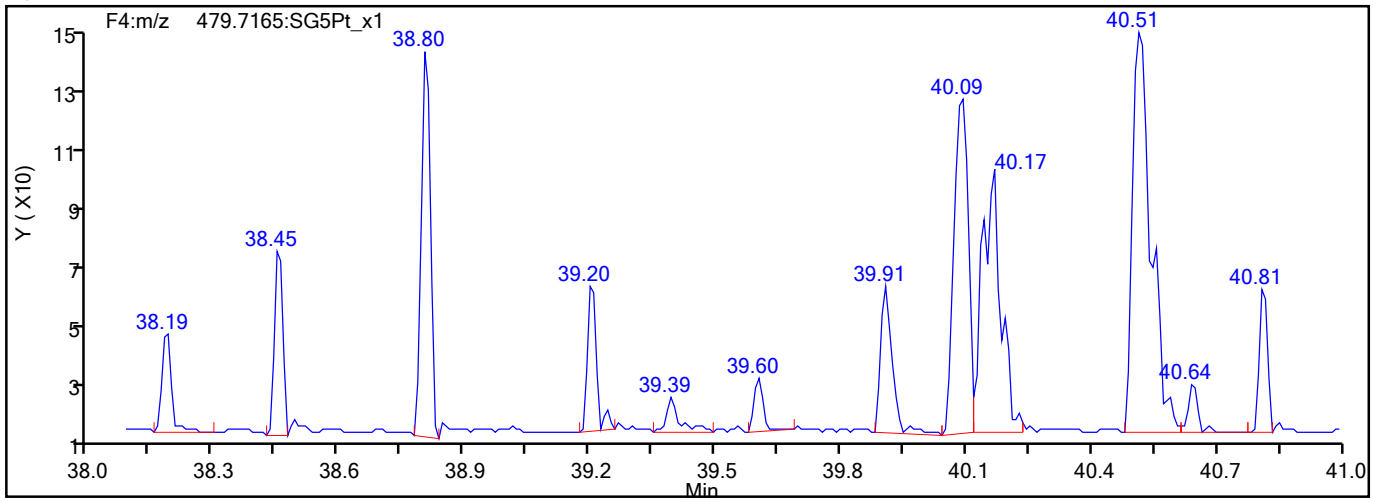

785511

Report Date: 25-Aug-2021 15:03:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

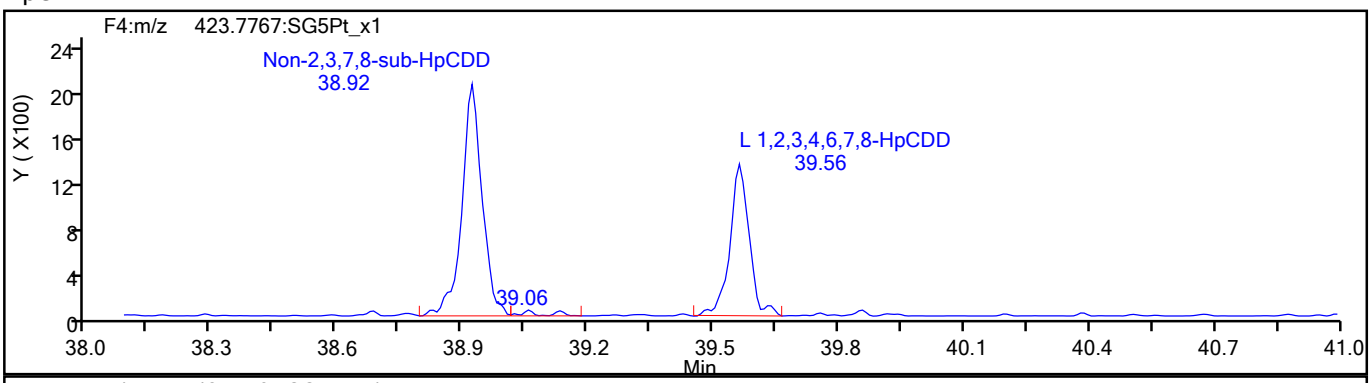

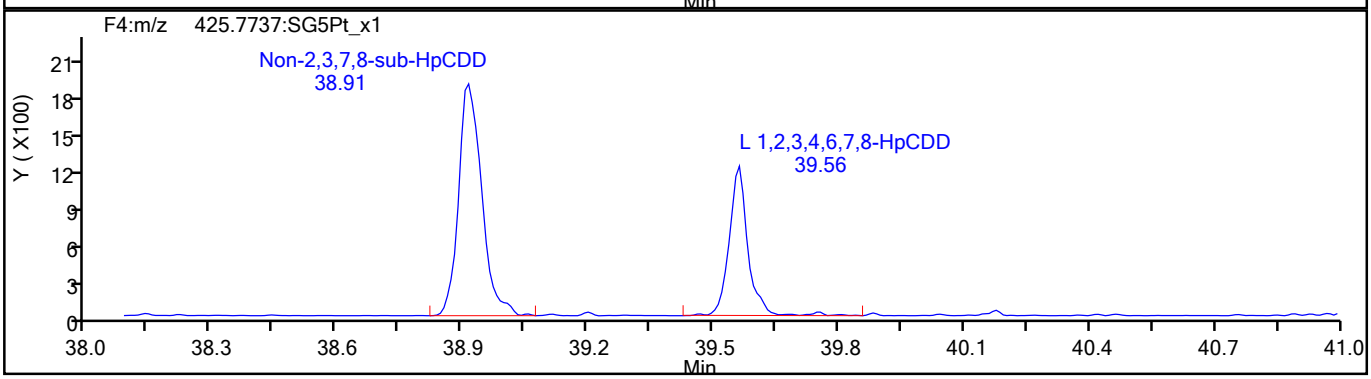

HpCDD Standards

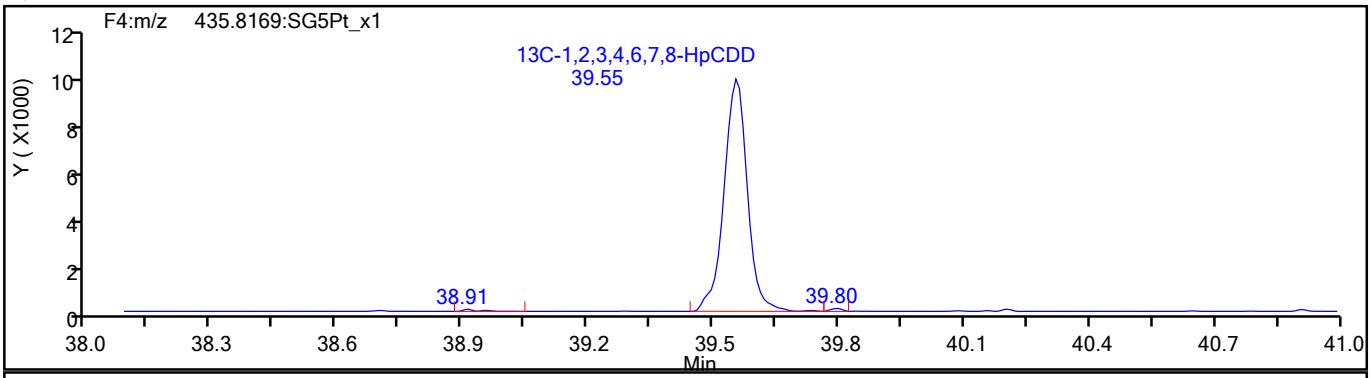

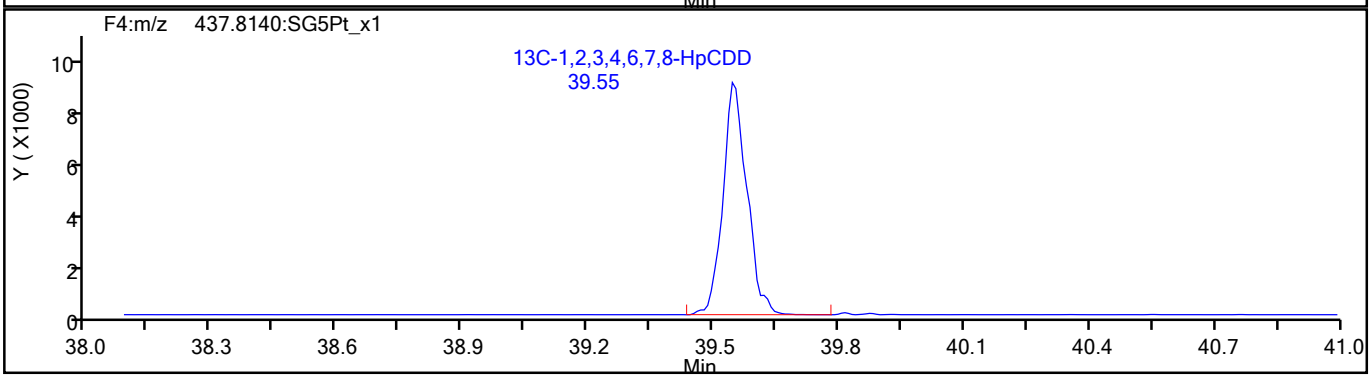

785512

Report Date: 25-Aug-2021 15:03:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

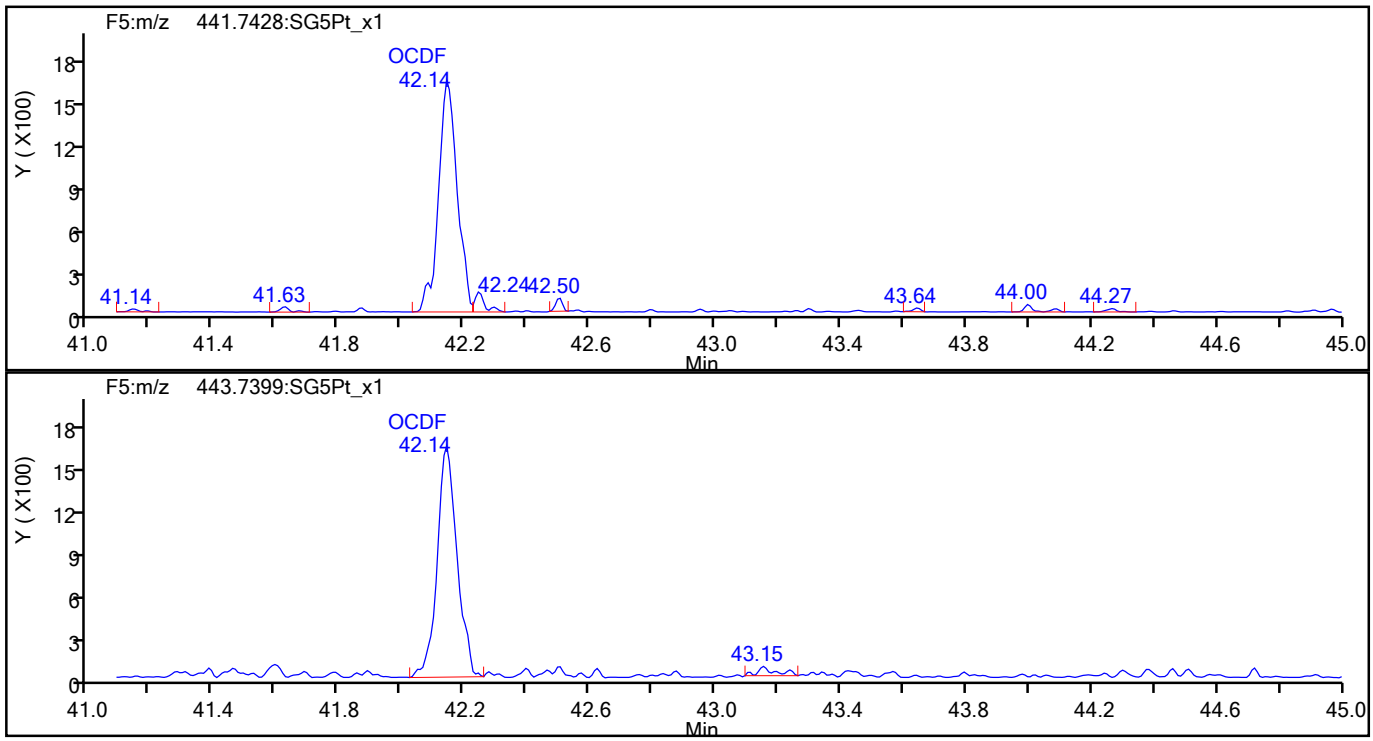

OCDF Standards

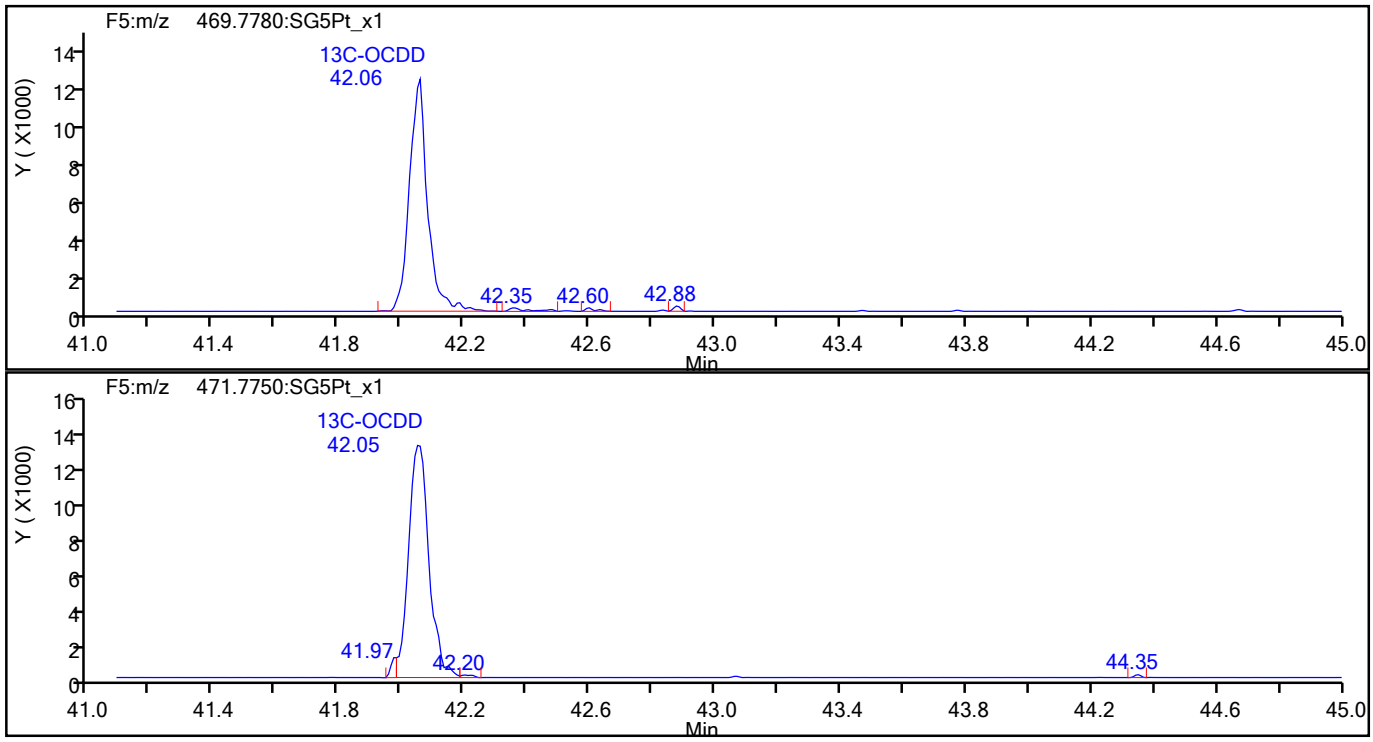

785513

Report Date: 25-Aug-2021 15:03:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

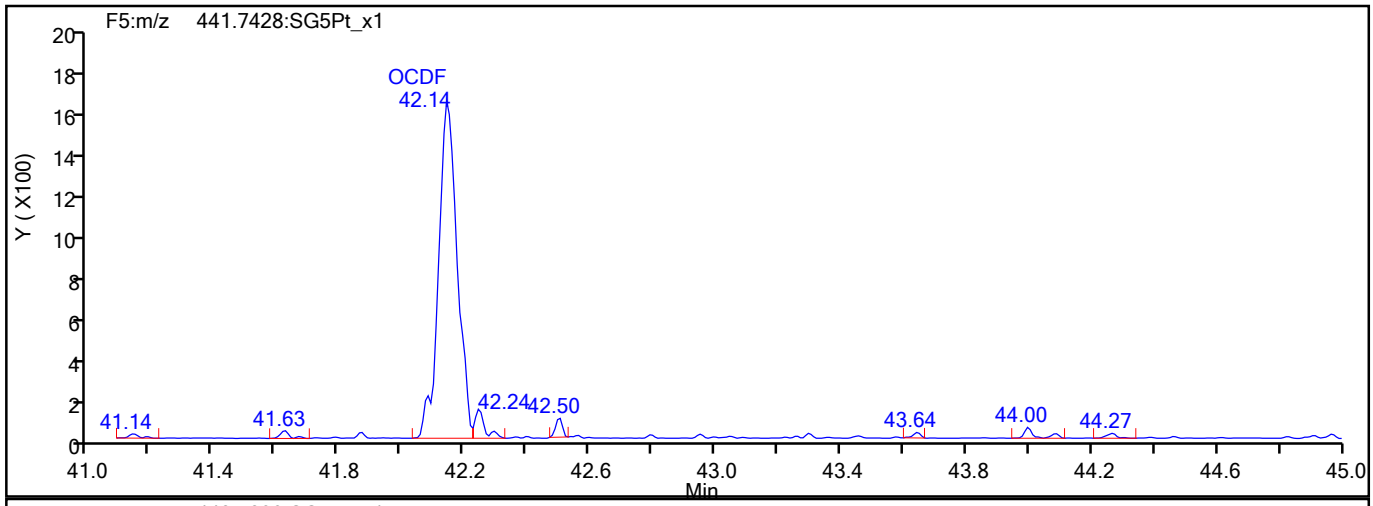

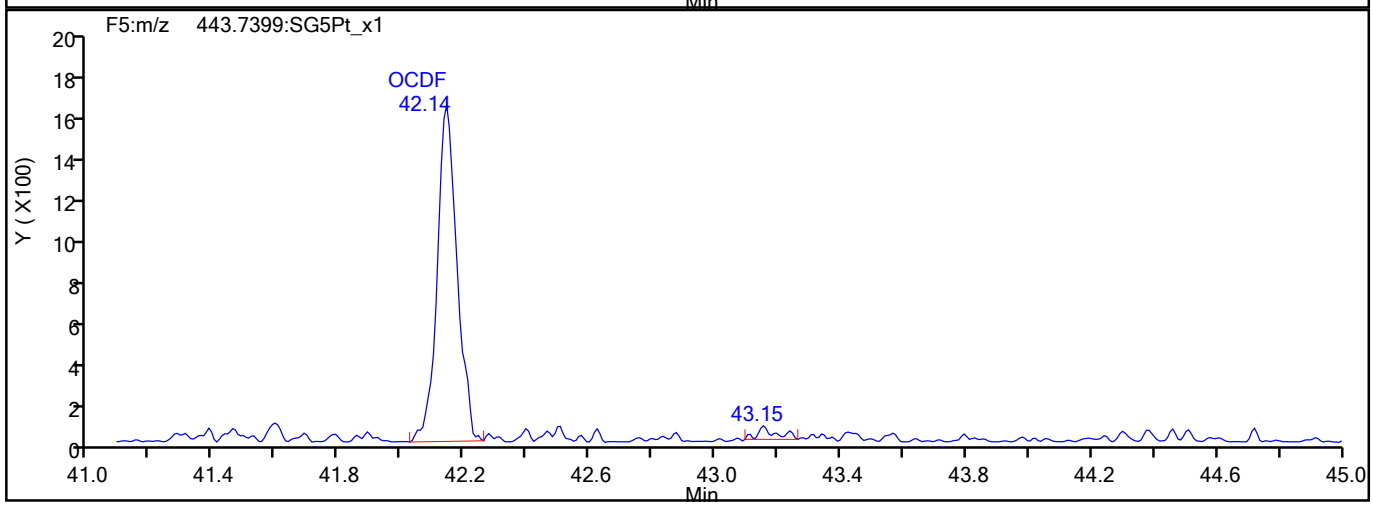

OCDF Interference Mass

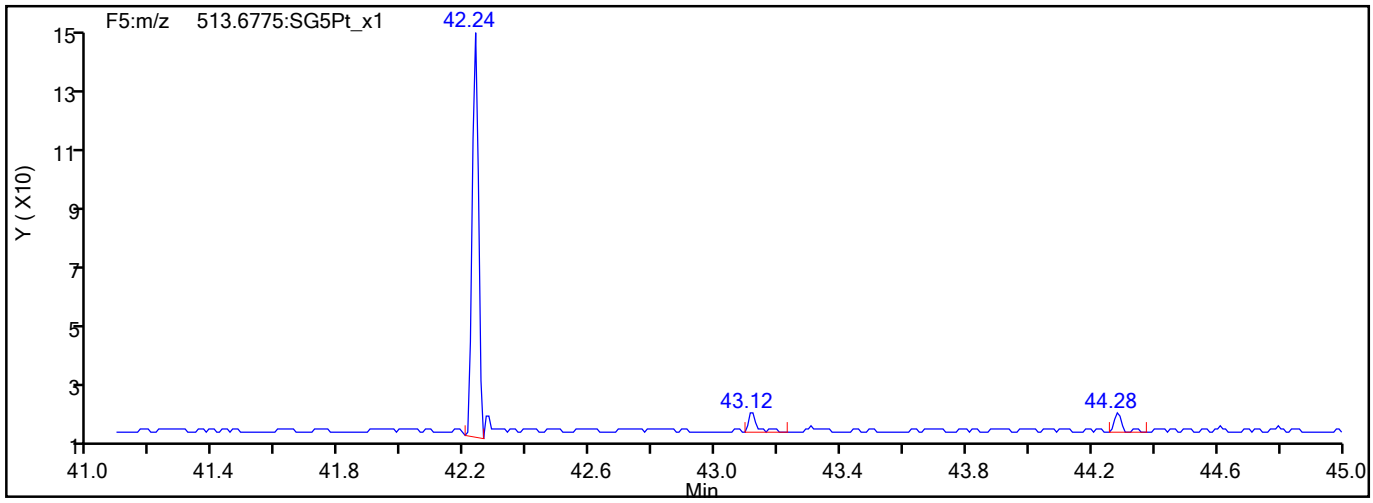

785514

Report Date: 25-Aug-2021 15:03:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

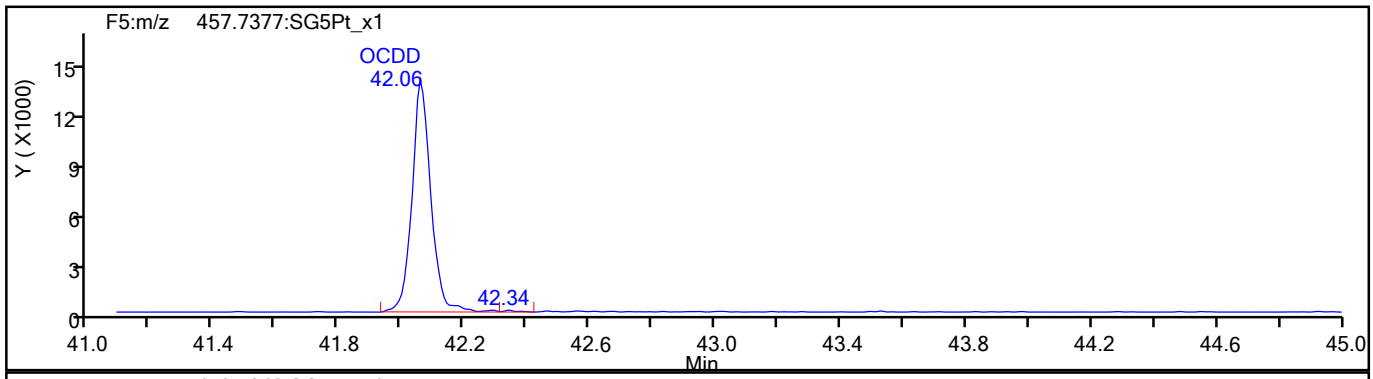

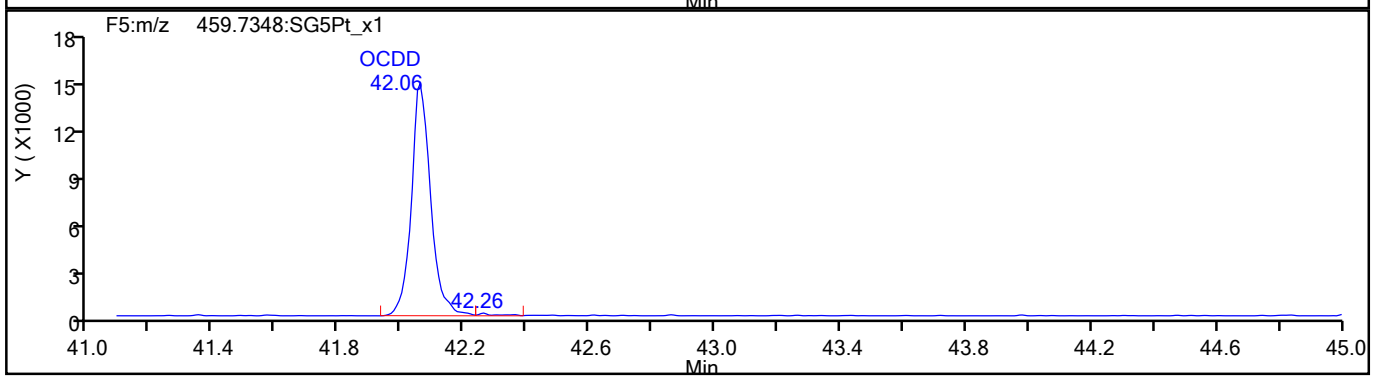

OCDD Standards

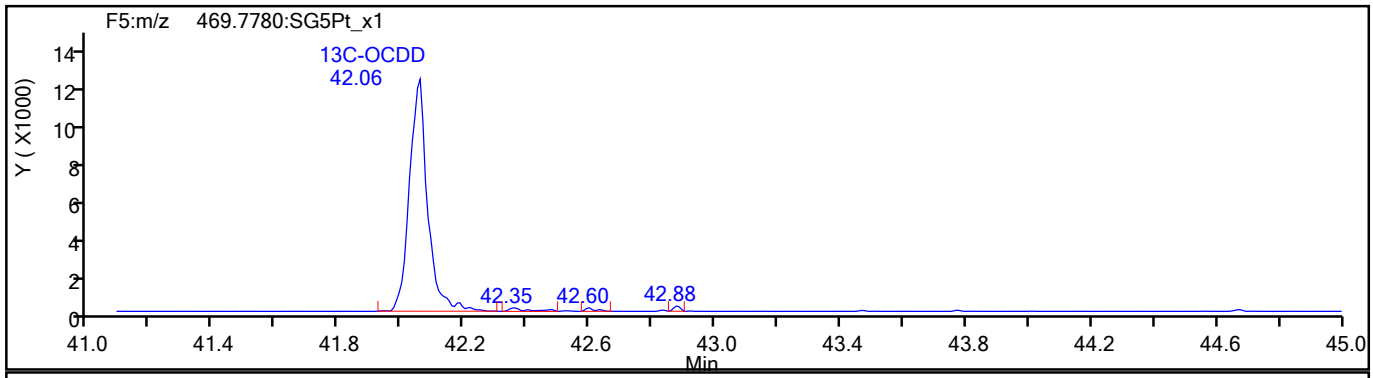

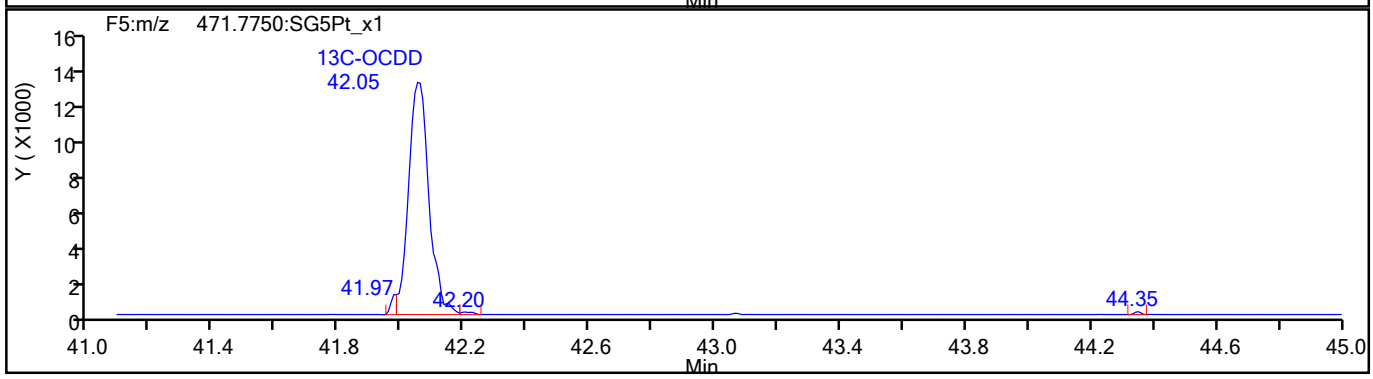

785515

Report Date: 25-Aug-2021 15:03:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

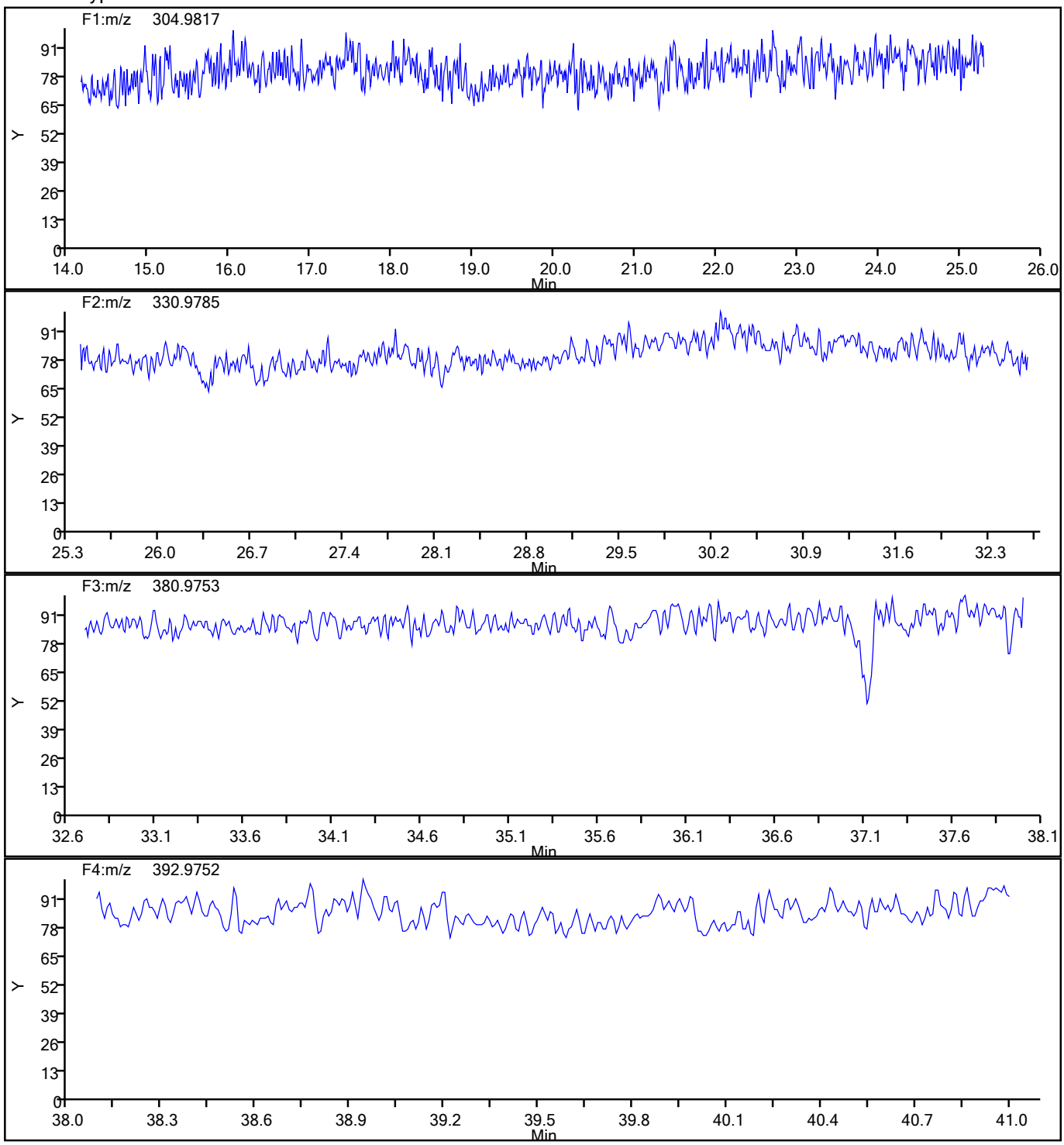

785516

Report Date: 25-Aug-2021 15:03:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_20.d		
Injection Date:	20-Aug-2021 03:57:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	518043	Sample Line#:	18
Column Type:	DB-5	Column Dia:	0.32 mm

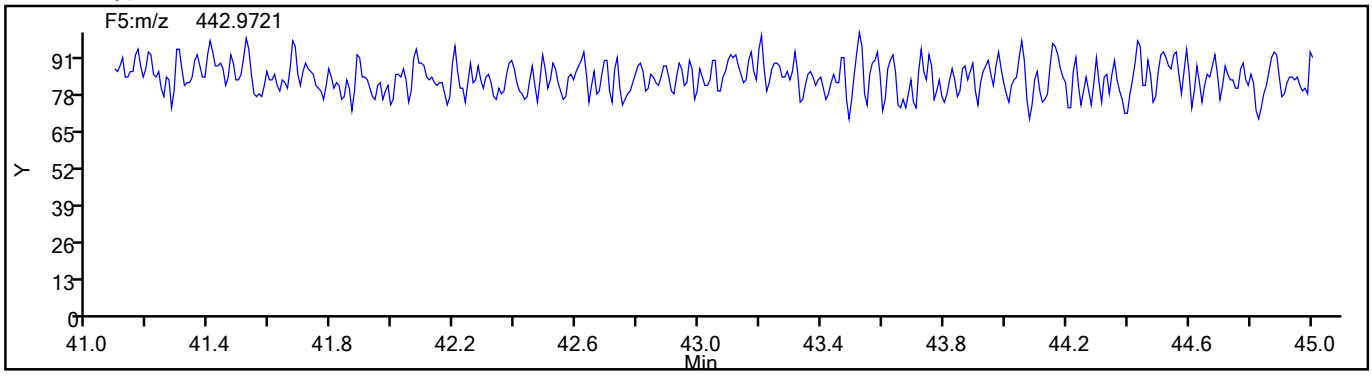

785517

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (8-10) RA
Lab Sample ID: 320-76888-5 RA
Matrix: Sediment
Lab File ID: 26AU21A11D2_013.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 9.99(g)
Date Analyzed: 08/26/2021 22:57
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 5
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 31.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520145
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	16000	E B G	15	15

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	40		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	60		35-197

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_013.d
Lims ID: 320-76888-A-5-A
Client ID: 11215702-072621-BN-SJSB094 (8-10)
Sample Type: Client
Inject. Date: 26-Aug-2021 22:57:18 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76888-A-5-A 5X
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 09:29:53

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.311	13389411	0.79	7.2E+05	20.0	20.0				Ma
D 13C-2,3,7,8-TCDF	17.627	7185507	0.83	1.3327	8.054	8.054	0.5104	0.5104	40.27	M
2,3,7,8-TCDF	17.655	389449183	0.78	0.9978	1086.4	1086.4	1.026	1.026		E
D 13C-2,3,7,8-TCDD	16.064	4458509	0.81	0.8749	7.612	7.612	5.486	5.486	38.06	Ma
2,3,7,8-TCDD	16.091	67370171	0.78	1.0570	285.9	285.9	1.678	1.678		Ea
$ 37Cl4-2,3,7,8-TCDD	16.091	2800034		0.8648	4.836	4.836	0.2791	0.2791	60.45	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_013.d
Lims ID: 320-76888-A-5-A
Client ID: 11215702-072621-BN-SJSB094 (8-10)
Sample Type: Client
Inject. Date: 26-Aug-2021 22:57:18 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 5.0000
Sample Info: 320-76888-A-5-A 5X
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 09:29:53

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											Ma
331.9368	16.311	16.288	1		5894567	1328085	106455	266137	12		M
333.9339	16.311	16.288	1		7494844	1637470	178228	445570	9	0.79(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.627	17.619	1	1.081	3248623	635077	18763	46907	34		M
317.9389	17.627	17.619	1	1.081	3936884	756123	21577	53942	35	0.83(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.655	17.632	1	1.002	170109208	32231709	12748	31870	2528		
305.8987	17.655	17.632	1	1.002	219339975	41140114	15725	39312	2616	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											Ma
331.9368	16.064	16.069	0	0.985	1991243	423907	106455	266137	4		M
333.9339	16.077	16.069	1	0.986	2467266	573621	178228	445570	3	0.81(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.091	16.082	1	1.002	29480738	6565044	21272	53180	309		a
321.8936	16.091	16.082	1	1.002	37889433	8464970	14115	35287	600	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.091	16.082	1	0.987	2800034	655493	14314	35785	46		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated
a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_013.d				
Injection Date:	26-Aug-2021 22:57:18	Instrument ID:	11D2		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.63
Area: 3178935
Amount: 7.764396
Amount Units: pg/ul

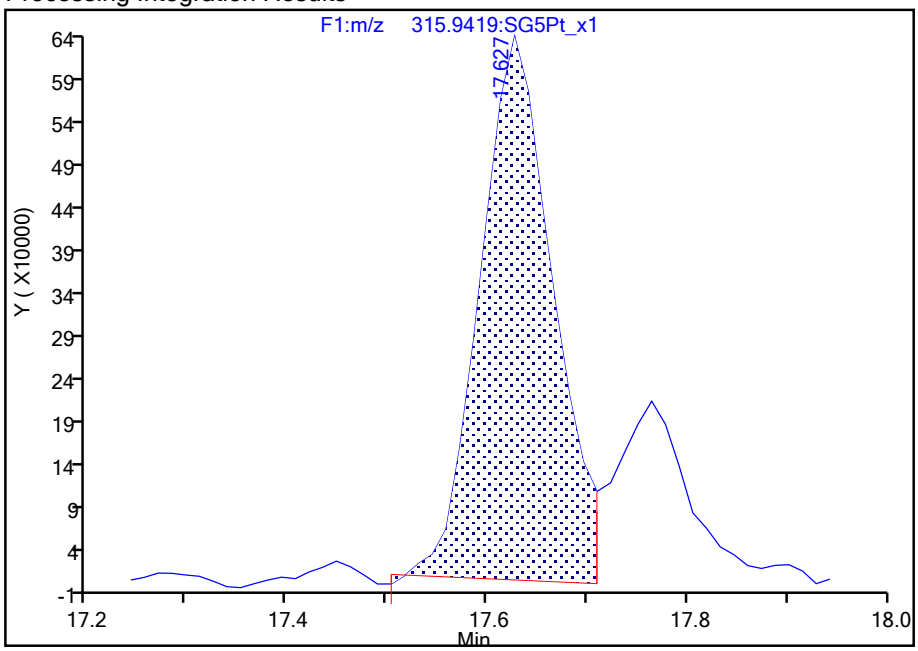

Manual Integration Results

RT: 17.63
Area: 3248623
Amount: 8.053749
Amount Units: pg/ul

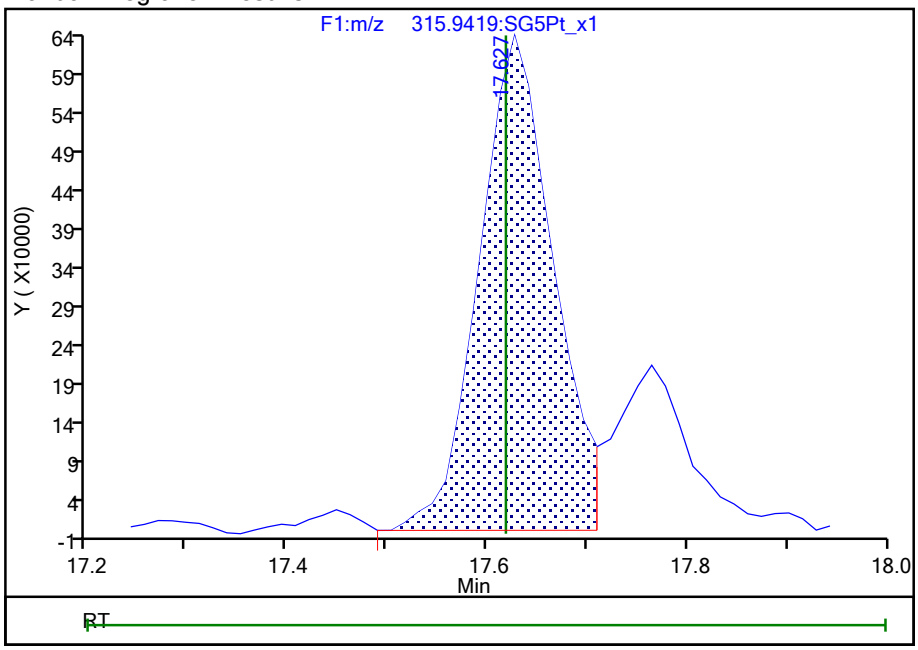

Reviewer: bennettd, 27-Aug-2021 09:29:23

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_013.d				
Injection Date:	26-Aug-2021 22:57:18	Instrument ID:	11D2		
Lims ID:	320-76888-A-5-A	Lab Sample ID:	320-76888-5		
Client ID:	11215702-072621-BN-SJSB094 (8-10)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	5.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.63
Area: 3748413
Amount: 7.764396
Amount Units: pg/ul

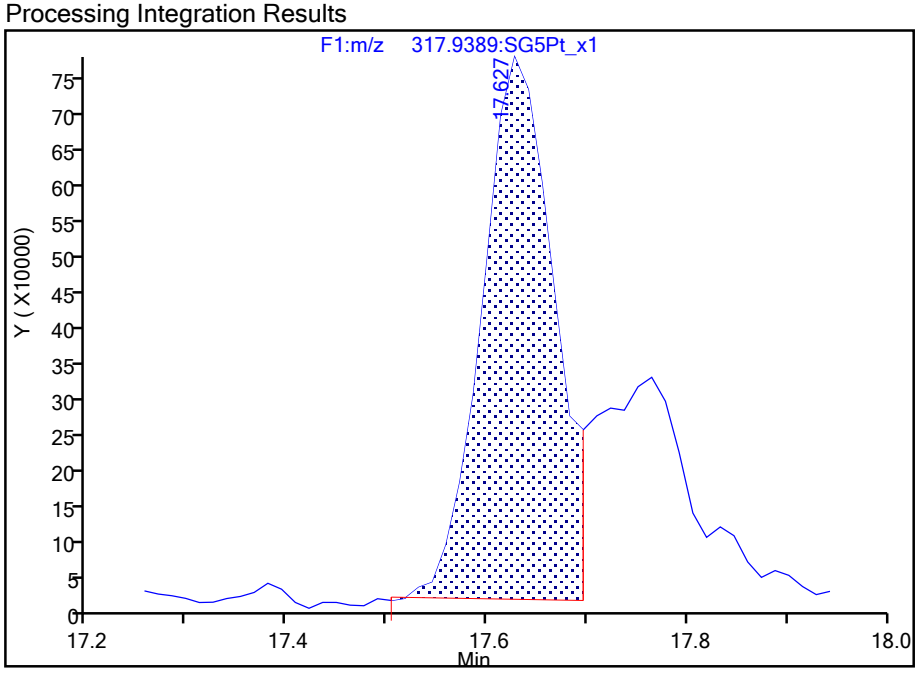

Manual Integration Results

RT: 17.63
Area: 3936884
Amount: 8.053749
Amount Units: pg/ul

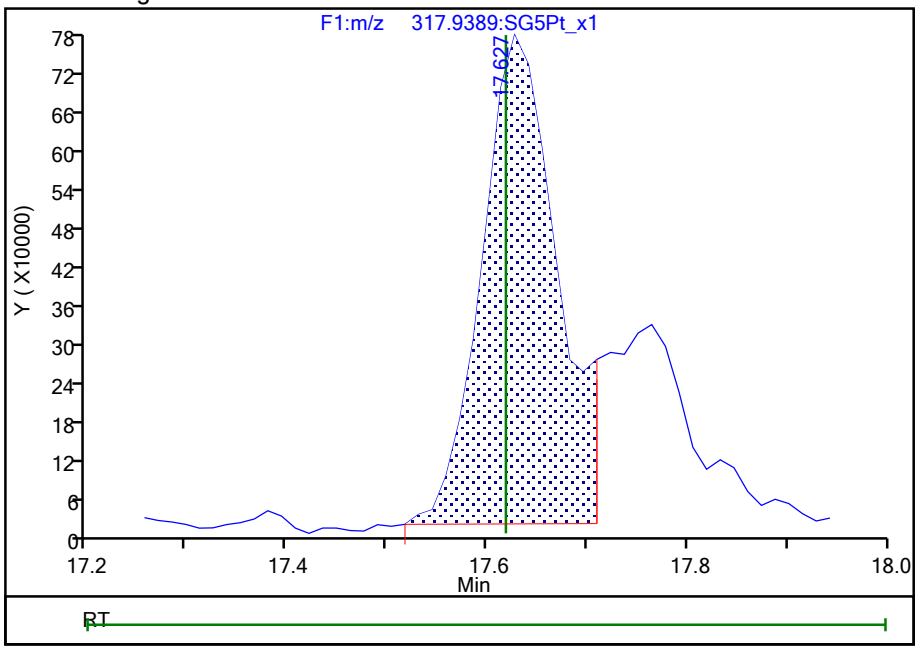

Reviewer: bennettd, 27-Aug-2021 09:29:41
Audit Action: Split an Integrated Peak Audit Reason: Baseline

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_013.d		
Injection Date:	26-Aug-2021 22:57:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	520145	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

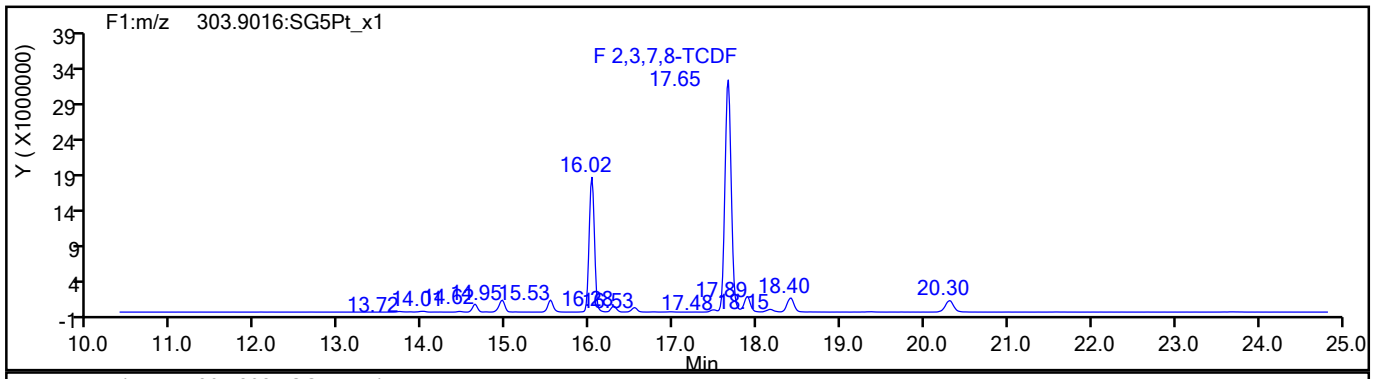

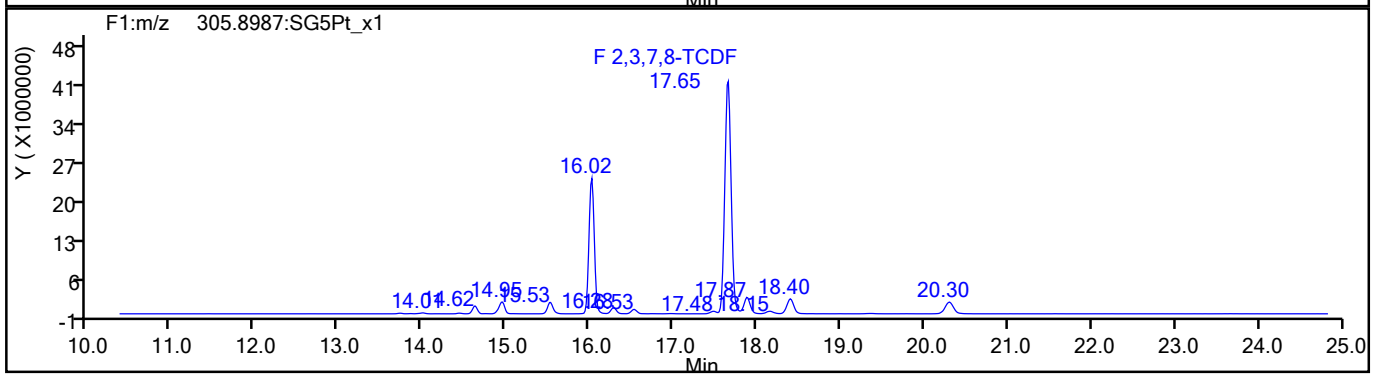

TCDF Standards

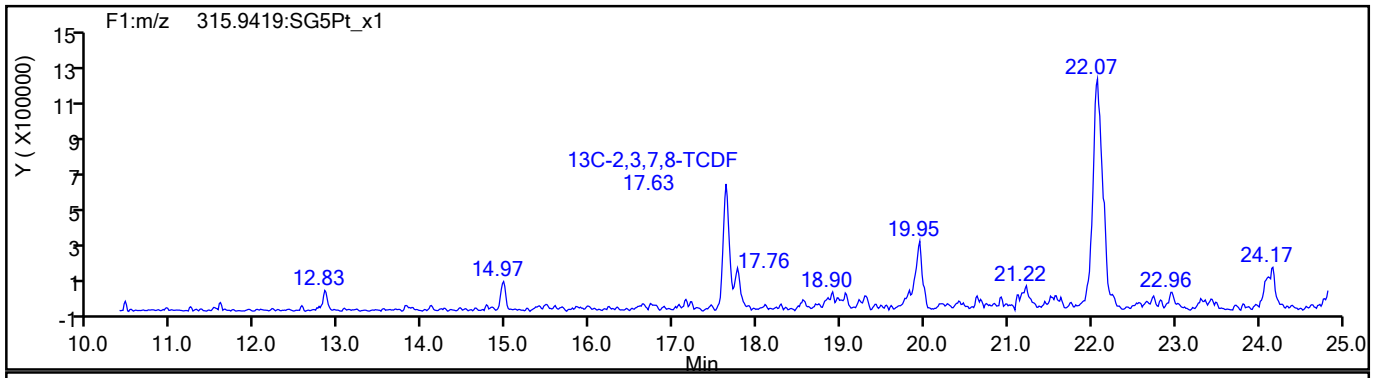

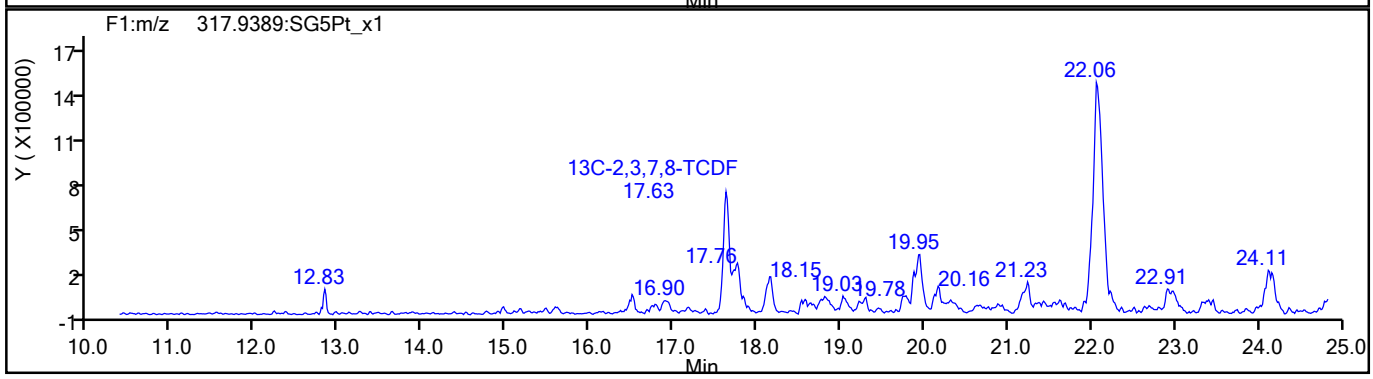

785523

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_013.d		
Injection Date:	26-Aug-2021 22:57:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	520145	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

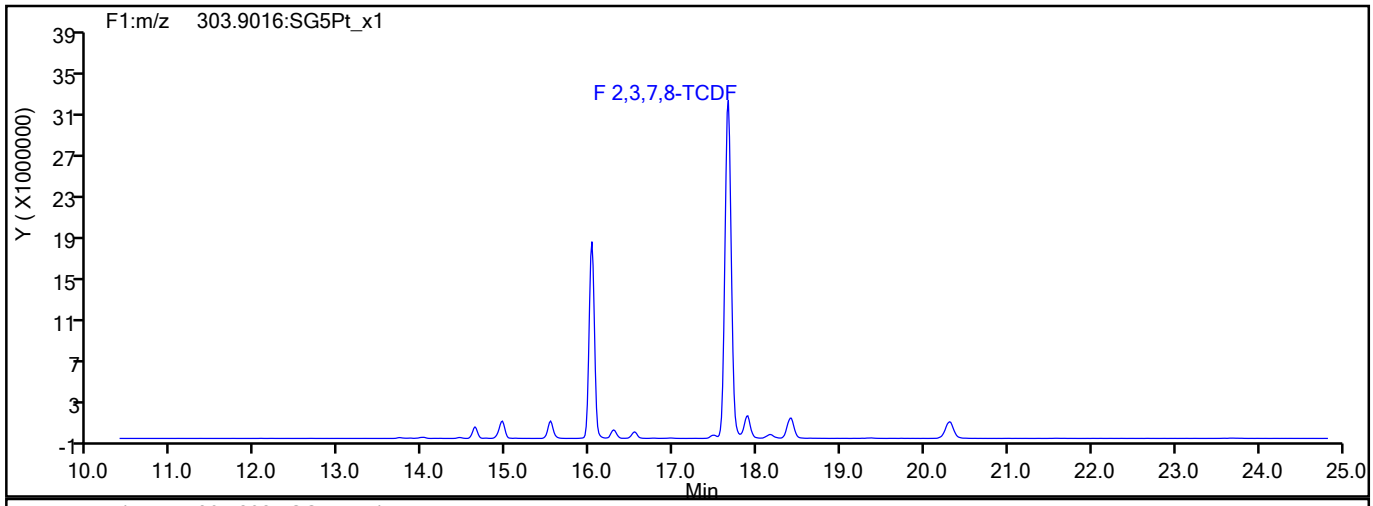

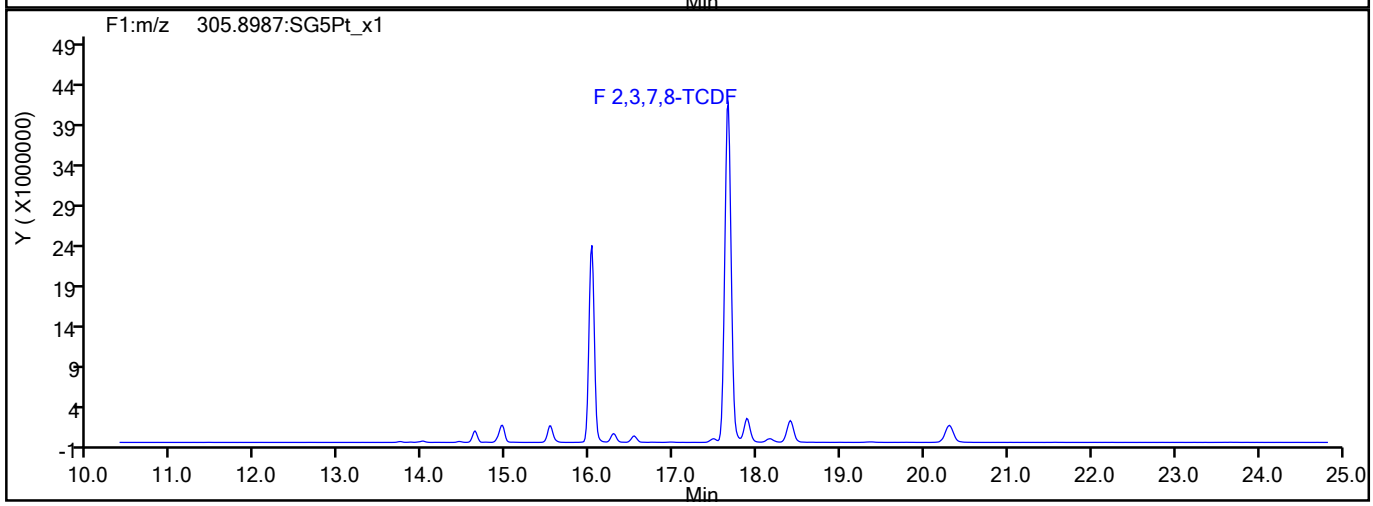

TCDF Interference Mass

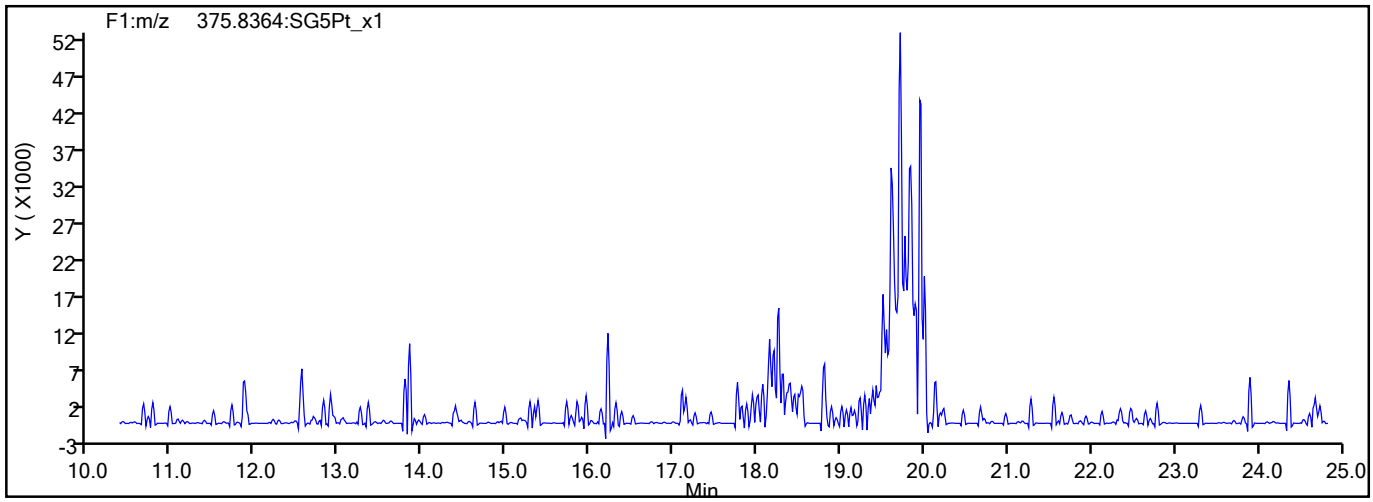

785524

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_013.d		
Injection Date:	26-Aug-2021 22:57:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	520145	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

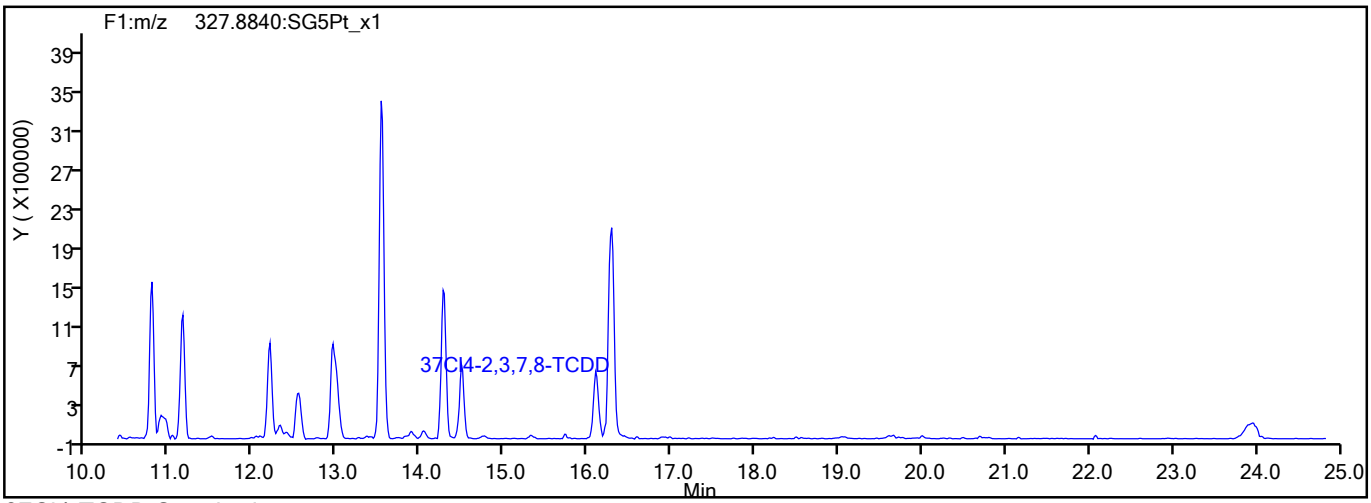

37Cl4-TCDD Standards

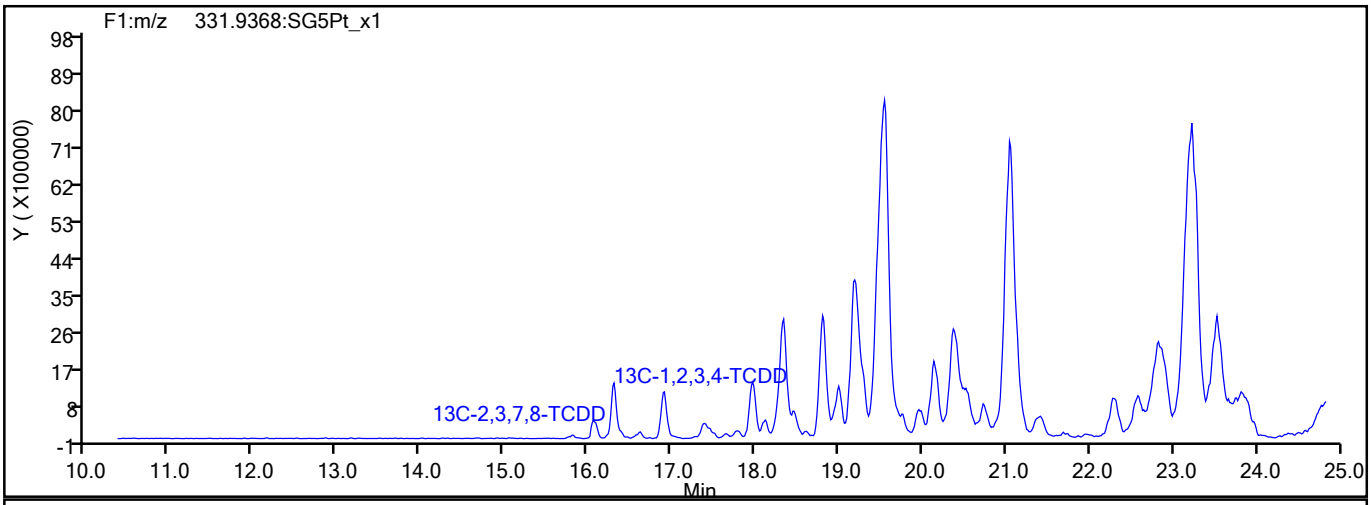

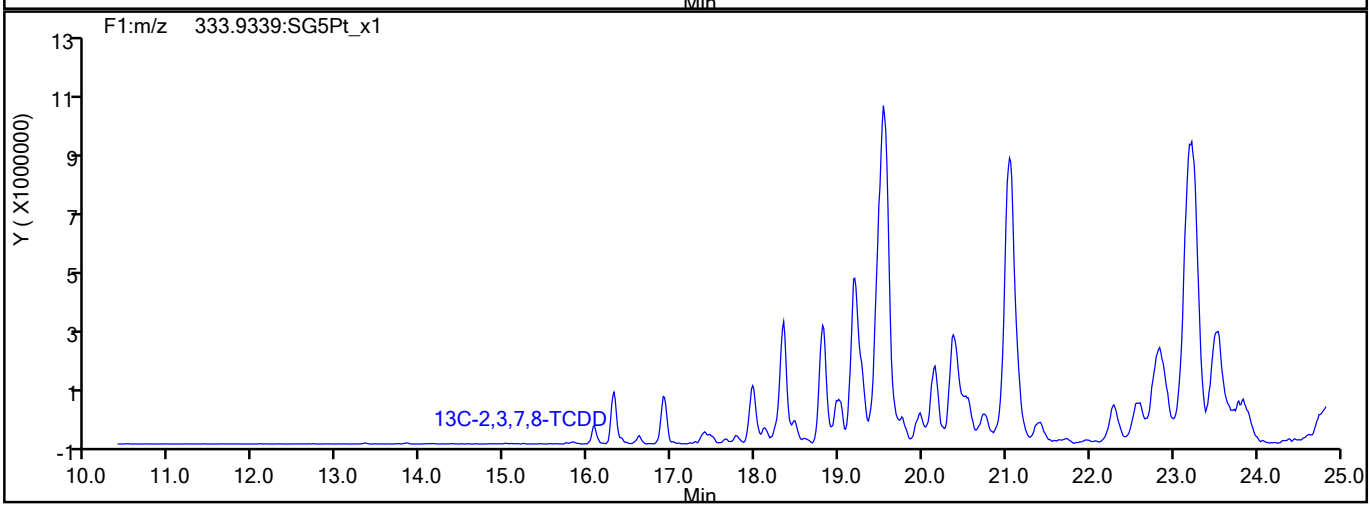

785525

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_013.d		
Injection Date:	26-Aug-2021 22:57:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (8-10)		
Worklist#:	520145	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

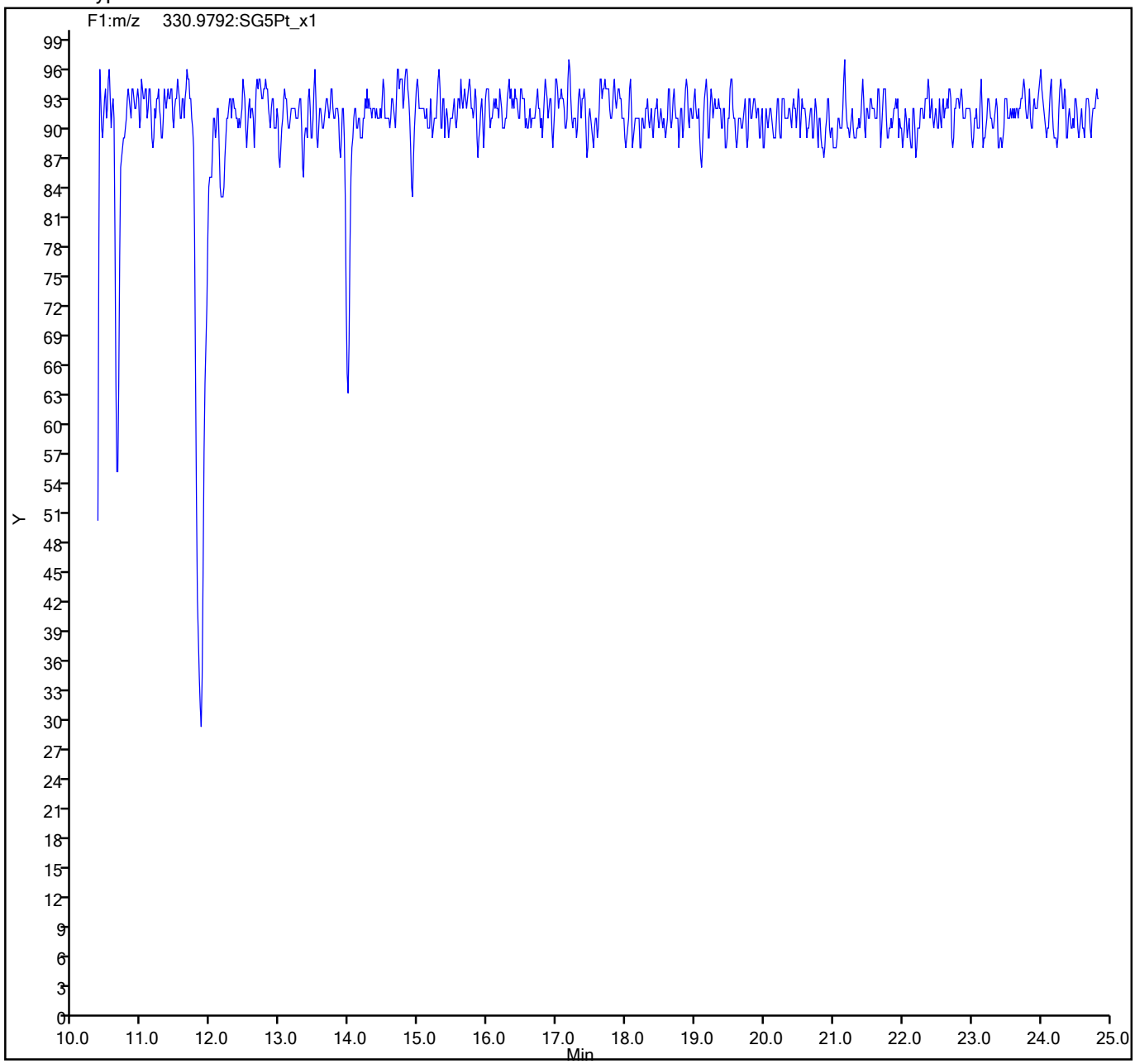

785526

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (10-12)
Lab Sample ID: 320-76888-6
Matrix: Sediment
Lab File ID: 17au21dfs1_56.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.20(g)
Date Analyzed: 08/19/2021 08:42
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 37.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	22		1.6	0.28
40321-76-4	1,2,3,7,8-PeCDD	ND		7.8	0.32
57117-41-6	1,2,3,7,8-PeCDF	1.7	J q	7.8	0.12
57117-31-4	2,3,4,7,8-PeCDF	1.3	J q	7.8	0.13
39227-28-6	1,2,3,4,7,8-HxCDD	ND		7.8	0.27
57653-85-7	1,2,3,6,7,8-HxCDD	ND		7.8	0.31
19408-74-3	1,2,3,7,8,9-HxCDD	2.4	J	7.8	0.27
70648-26-9	1,2,3,4,7,8-HxCDF	2.7	J	7.8	0.11
57117-44-9	1,2,3,6,7,8-HxCDF	0.62	J q	7.8	0.11
72918-21-9	1,2,3,7,8,9-HxCDF	ND		7.8	0.12
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.8	0.11
35822-46-9	1,2,3,4,6,7,8-HpCDD	36	B	7.8	0.37
67562-39-4	1,2,3,4,6,7,8-HpCDF	1.1	J B	7.8	0.091
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.8	0.091
3268-87-9	OCDD	840	B	16	0.83
39001-02-0	OCDF	ND		16	0.17
41903-57-5	Total TCDD	22		1.6	0.28
30402-14-3	Total TCDF	160	q B	1.6	0.62
36088-22-9	Total PeCDD	5.2	J q	7.8	0.32
30402-15-4	Total PeCDF	4.0	J q	7.8	0.12
34465-46-8	Total HxCDD	32		7.8	0.28
55684-94-1	Total HxCDF	3.3	J q	7.8	0.11
37871-00-4	Total HpCDD	130	B	7.8	0.37
38998-75-3	Total HpCDF	1.1	J B	7.8	0.091

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (10-12)
Lab Sample ID: 320-76888-6
Matrix: Sediment
Lab File ID: 17au21dfs1_56.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.20(g)
Date Analyzed: 08/19/2021 08:42
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 37.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	36		25-164
89059-46-1	13C-2,3,7,8-TCDF	35		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	33		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	32		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	35		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	43		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	38		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	46		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	41		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	34		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	35		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	43		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	39		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	45		26-138
114423-97-1	13C-OCDD	41		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	45		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d
Lims ID: 320-76888-A-6-A
Client ID: 11215702-072621-BN-SJSB094 (10-12)
Sample Type: Client
Inject. Date: 19-Aug-2021 08:42:00 ALS Bottle#: 0 Worklist Smp#: 52
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-a-6-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 10:26:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1656

First Level Reviewer: stephensk Date: 19-Aug-2021 11:32:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.350	1390511	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.405	658701	0.82	1.3459	35.2	35.2	0.1259	0.1259	35.20	
2,3,7,8-TCDF	20.431	219799	0.82	1.0802	30.9	30.9	0.1999	0.1999		
A Non-2,3,7,8-sub-TCDF	19.878	152781	0.77	1.0802	21.7	21.5	0.1999	14.2		RQ
S Total TCDF					52.6	52.4	0.1999	0.1999		RQ
D 13C-2,3,7,8-TCDD	21.745	463432	0.79	0.9317	35.8	35.8	0.1613	0.1613	35.77	
2,3,7,8-TCDD	21.797	34676	0.79	1.0753	6.958	6.958	0.0909	0.0909		M
$ 37Cl4-2,3,7,8-TCDD	21.771	251171		1.0083	17.9	17.9	0.0257	0.0257	44.79	
A Non-2,3,7,8-sub-TCDD	20.707						0.0909	0.5747		RQU
S Total TCDD					6.958	6.958	0.0909	0.0909		
D 13C-1,2,3,7,8-PeCDF	27.228	502787	1.56	1.1405	31.7	31.7	0.1440	0.1440	31.70	
1,2,3,7,8-PeCDF	27.262	2850	1.55	1.0543	0.6126	0.5377	0.0384	0.0384		RQM
D 13C-2,3,4,7,8-PeCDF	28.752	550143	1.62	1.1253	35.2	35.2	0.1460	0.1460	35.16	
2,3,4,7,8-PeCDF	28.761	2291	1.55	1.0079	0.4696	0.4132	0.0406	0.0406		RQM
A F1 PeCDFs	24.648						0.009207	0.009207		
A Non-2,3,7,8-sub-PeCDF	28.125	1839	1.55	1.0311	0.3764	0.3388	0.0395	0.3388		RQa
S Total PeCDF					1.459	1.290	0.0395	0.0395		RQ
D 13C-1,2,3,7,8-PeCDD	29.535	325461	1.54	0.7165	32.7	32.7	0.2655	0.2655	32.67	
1,2,3,7,8-PeCDD	29.569						0.1038	0.1038		U
A Non-2,3,7,8-sub-PeCDD	28.489	5654	1.55	1.0465	1.847	1.660	0.1038	0.6324		RQ
S Total PeCDD					1.847	1.660	0.1038	0.1038		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.908	497449	0.57	0.9648	45.6	45.6	0.1202	0.1202	45.55	
1,2,3,4,7,8-HxCDF	34.942	4969	1.40	1.1474	0.8706	0.8706	0.0339	0.0339		
D 13C-1,2,3,6,7,8-HxCDF	35.068	491875	0.52	1.0708	40.6	40.6	0.1083	0.1083	40.58	
1,2,3,6,7,8-HxCDF	35.085	1186	1.24	1.2178	0.2317	0.1980	0.0357	0.0357		RQM
D 13C-2,3,4,6,7,8-HxCDF	35.893	414045	0.52	1.0413	35.1	35.1	0.1114	0.1114	35.13	
2,3,4,6,7,8-HxCDF	35.936						0.0366	0.0366		
D 13C-1,2,3,7,8,9-HxCDF	36.786	372341	0.55	0.9731	33.8	33.8	0.1192	0.1192	33.81	
1,2,3,7,8,9-HxCDF	36.828						0.0371	0.0371		
A Non-2,3,7,8-sub-HxCDF	35.028						0.0357	0.0357		U
S Total HxCDF					1.102	1.069	0.0358	0.0358		RQ

785529

Report Date: 20-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.592	1131850	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.104	365398	1.20	0.7587	42.6	42.6	0.1707	0.1707	42.55	
1,2,3,4,7,8-HxCDD	36.104						0.0878	0.0878		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.213	367778	1.34	0.8593	37.8	37.8	0.1507	0.1507	37.82	
1,2,3,6,7,8-HxCDD	36.104						0.0994	0.0994		RQU
1,2,3,7,8,9-HxCDD	36.600	3193	1.40	1.1094	0.7851	0.7851	0.0864	0.0864		
A Non-2,3,7,8-sub-HxCDD	35.394	36385	1.27	1.0545	9.412	9.412	0.0909	7.204		M
S Total HxCDD					10.2	10.2	0.0912	0.0912		
D 13C-1,2,3,4,6,7,8-HpCDF	38.615	325071	0.45	0.7359	39.0	39.0	0.1576	0.1576	39.02	
1,2,3,4,6,7,8-HpCDF	38.623	1621	1.01	1.4421	0.3458	0.3458	0.0291	0.0291		
D 13C-1,2,3,4,7,8,9-HpCDF	39.869	348970	0.46	0.6854	45.0	45.0	0.1692	0.1692	44.99	
1,2,3,4,7,8,9-HpCDF	39.885						0.0290	0.0290		
A Non-2,3,7,8-sub-HpCDF	39.258						0.0290	0.0290		
S Total HpCDF					0.3458	0.3458	0.0291	0.0291		
D 13C-1,2,3,4,6,7,8-HpCDD	39.566	327829	1.01	0.6745	42.9	42.9	0.1097	0.1097	42.94	
1,2,3,4,6,7,8-HpCDD	39.574	39263	1.05	1.0503	11.4	11.4	0.1171	0.1171		
A Non-2,3,7,8-sub-HpCDD	39.258	101171	0.97	1.0503	29.4	29.4	0.1171	29.4		
S Total HpCDD					40.8	40.8	0.1171	0.1171		
D 13C-OCDD	42.061	501692	0.91	0.5446	81.4	81.4	0.1034	0.1034	40.69	
OCDF	42.078						0.0534	0.0534		RQU
OCDD	42.070	714781	0.88	1.0620	268.3	268.3	0.2648	0.2648		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d
Lims ID: 320-76888-A-6-A
Client ID: 11215702-072621-BN-SJSB094 (10-12)
Sample Type: Client
Inject. Date: 19-Aug-2021 08:42:00 ALS Bottle#: 0 Worklist Smp#: 52
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-a-6-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 10:26:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1656

First Level Reviewer: stephensk Date: 19-Aug-2021 11:32:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.350	21.427	-5		617525	87803	75	187	1171		a
333.9338	21.376	21.427	-3		772986	105156	41	102	2565	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.405	20.401	0	0.956	296788	41942	93	232	451		
317.9389	20.388	20.401	-1	0.955	361913	51619	38	95	1358	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.431	20.436	0	1.001	98862	13840	38	95	364		
305.8987	20.431	20.436	0	1.001	120937	15902	43	107	370	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	17.905	19.878	-118	0.877	2633	551	38	95	15		
	Empc Correction				2238	377	38	95	10		
305.8987	17.897	19.878	-119	0.877	2907	490	43	107	11	0.91(0.65-0.89)	
303.9016	18.378	19.878	-90	0.901	3443	660	38	95	17		
305.8987	18.369	19.878	-90	0.900	4367	645	43	107	15	0.79(0.65-0.89)	
303.9016	19.203	19.878	-40	0.941	3795	540	38	95	14		
305.8987	19.203	19.878	-40	0.941	5656	923	43	107	21	0.67(0.65-0.89)	
303.9016	19.709	19.878	-10	0.966	46581	6633	38	95	175		
305.8987	19.701	19.878	-11	0.965	54424	7953	43	107	185	0.86(0.65-0.89)	
303.9016	21.196	19.878	79	1.039	6857	949	38	95	25		
	Empc Correction				5794	974	38	95	26		
305.8987	21.230	19.878	81	1.040	7525	1265	43	107	29	0.91(0.65-0.89)	
303.9016	23.594	19.878	222	1.156	6646	1159	38	95	31		
305.8987	23.585	19.878	222	1.156	9405	1387	43	107	32	0.71(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.745	21.743	0	1.019	204288	25967	75	187	346		
333.9338	21.745	21.743	0	1.019	259144	32332	41	102	789	0.79(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											M
319.8965	21.797	21.777	1	1.002	15280	1926	15	37	128		M
321.8936	21.771	21.777	0	1.001	19396	2464	8	20	308	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.771	21.849	-5	1.020	251171	32196	20	50	1610		
A Non-2,3,7,8-sub-TCDD											U
319.8965	17.785	20.707	-175	0.818	419	155	15	37	10		
	Empc Correction				348	73	15	37	5		
321.8936	17.785	20.707	-175	0.818	452	95	8	20	12	0.93(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.228	27.288	-4	1.275	306683	44537	93	232	479		
353.8970	27.228	27.288	-4	1.275	196104	29554	34	85	869	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											RQM
339.8597	27.262	27.313	-3	1.001	2129	407	4	10	102		M
	Empc Correction				1732	356	4	10	89		
341.8567	27.262	27.313	-3	1.001	1118	230	8	20	29	1.90(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.752	28.795	-3	1.347	340086	46089	93	232	496		
353.8970	28.752	28.795	-3	1.347	210057	27290	34	85	803	1.62(1.32-1.78)	
2,3,4,7,8-PeCDF											RQM
339.8597	28.761	28.820	-4	1.000	1393	257	4	10	64		M
341.8567	28.761	28.820	-4	1.000	1211	222	8	20	28	1.15(1.32-1.78)	
	Empc Correction				898	165	8	20	21		
A F1 PeCDFs											
339.8597	24.648						1	2			
341.8567	24.648						2	5			
A Non-2,3,7,8-sub-PeCDF											RQa
339.8597	25.796	28.125	-139	0.947	1118	188	4	10	47		a
341.8567	25.788	28.125	-140	0.947	925	170	8	20	21	1.21(1.32-1.78)	
	Empc Correction				721	121	8	20	15		
13C-1,2,3,7,8-PeCDD											
367.8949	29.535	29.612	-5	1.383	197399	25075	134	335	187		
369.8919	29.552	29.612	-4	1.384	128062	16337	13	32	1257	1.54(1.32-1.78)	
1,2,3,7,8-PeCDD											U
355.8546	29.637						11	27			
357.8516	29.637						7	17			
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.091	28.489	-144	0.883	1179	167	11	27	15		
357.8516	26.041	28.489	-147	0.882	1054	163	7	17	23	1.12(1.32-1.78)	
	Empc Correction				760	107	7	17	15		
355.8546	26.866	28.489	-97	0.910	1535	298	11	27	27		
	Empc Correction				1309	302	11	27	27		
357.8516	26.891	28.489	-96	0.910	845	195	7	17	28	1.82(1.32-1.78)	
355.8546	26.950	28.489	-92	0.912	157	75	11	27	7		
357.8516	26.933	28.489	-93	0.912	105	76	7	17	11	1.50(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
355.8546	28.449	28.489	-2	0.963	790	121	11	27	11		
357.8516	28.474	28.489	-1	0.964	625	93	7	17	13	1.26(1.32-1.78)	
	Empc Correction				509	78	7	17	11		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.908	34.942	-2	0.954	180740	35733	42	105	851		
385.8610	34.917	34.942	-2	0.954	316709	59401	71	177	837	0.57(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.942	34.959	-1	1.001	2898	559	10	25	56		
375.8178	34.925	34.959	-2	1.000	2071	392	5	12	78	1.40(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.068	35.111	-3	0.958	169081	29206	42	105	695		
385.8610	35.076	35.111	-2	0.959	322794	55892	71	177	787	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQM
373.8208	35.085	35.119	-2	1.000	657	189	10	25	19		M
375.8178	35.076	35.119	-3	1.000	731	227	5	12	45	0.90(1.05-1.43)	
	Empc Correction				529	152	5	12	30		
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.893	35.919	-2	0.981	141292	28192	42	105	671		
385.8610	35.893	35.919	-2	0.981	272753	54950	71	177	774	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.936						10	25			
375.8178	35.936						5	12			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.786	36.811	-2	1.005	131937	29833	42	105	710		
385.8610	36.786	36.811	-2	1.005	240404	50552	71	177	712	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.828						10	25			
375.8178	36.828						5	12			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	35.028						10	25			
375.8178	35.028						5	12			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.592	36.609	-1		632413	134935	72	180	1874		
403.8529	36.592	36.609	-1		499437	108260	54	135	2005	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.104	36.129	-2	0.987	199111	43012	72	180	597		
403.8529	36.104	36.129	-2	0.987	166287	34316	54	135	635	1.20(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.146						15	37			
391.8127	36.146						14	35			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.213	36.247	-2	0.990	210734	41162	72	180	572		
403.8529	36.230	36.247	-1	0.990	157044	31787	54	135	589	1.34(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8158	36.264						15	37			
391.8127	36.264						14	35			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDD											
389.8158	36.600	36.626	-2	1.014	1860	337	15	37	22		
391.8127	36.584	36.626	-3	1.013	1333	287	14	35	21	1.40(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											M
389.8158	34.218	35.394	-70	0.945	15616	2731	15	37	182		M
391.8127	34.218	35.394	-70	0.945	12233	2369	14	35	169	1.28(1.05-1.43)	
389.8158	35.346	35.394	-3	0.976	4771	852	15	37	57		M
391.8127	35.321	35.394	-4	0.975	3765	652	14	35	47	1.27(1.05-1.43)	M
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.615	38.626	-1	1.055	101003	26373	49	122	538		
419.8220	38.615	38.626	-1	1.055	224068	56949	64	160	890	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.623	38.630	0	1.000	816	232	11	27	21		
409.7788	38.615	38.630	-1	1.000	805	231	3	7	77	1.01(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.869	39.880	-1	1.090	109695	28014	49	122	572		
419.8220	39.869	39.880	-1	1.090	239275	64125	64	160	1002	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885						11	27			
409.7788	39.885						3	7			
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						11	27			
409.7788	39.258						3	7			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.566	39.569	0	1.081	164977	45061	58	145	777		
437.8140	39.566	39.569	0	1.081	162852	44342	14	35	3167	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.574	39.582	0	1.000	20108	5819	24	60	242		
425.7737	39.574	39.582	0	1.000	19155	5120	20	50	256	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.934	39.258	-19	0.984	49758	13195	24	60	550		
425.7737	38.934	39.258	-19	0.984	51413	13777	20	50	689	0.97(0.88-1.20)	
13C-OCDD											
469.7780	42.061	42.072	-1	1.149	238647	53615	20	50	2681		
471.7750	42.061	42.072	-1	1.149	263045	60197	35	87	1720	0.91(0.76-1.02)	
OCDF											RQU
441.7428	42.165						3	7			
443.7399	42.165						13	32			
OCDD											
457.7377	42.070	42.081	-1	1.000	335452	76532	31	77	2469		
459.7348	42.070	42.081	-1	1.000	379329	85435	33	82	2589	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 20-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Lims ID:	320-76888-A-6-A		
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Inject. Date:	19-Aug-2021 08:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	52

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	658701	93561

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	658701	93561

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.905	2633	551	2907	490	0.7786	0.91	RQ
17.905	2238	377	2907	490	0.7231		Empc Correction
18.378	3443	660	4367	645	1.10	0.79	
19.203	3795	540	5656	923	1.33	0.67	
19.709	46581	6633	54424	7953	14.2	0.86	
21.196	6857	949	7525	1265	2.02	0.91	RQ
21.196	5794	974	7525	1265	1.87		Empc Correction
23.594	6646	1159	9405	1387	2.26	0.71	
Signal Totals:							
	68497	10343	84284	12663			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	154239	23155				0.83	RQ
	152781	23006					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 21.677 = (154239 * 100.000) / (658701 * 1.080)

Empc Amount: 21.472 = (152781 * 100.000) / (658701 * 1.080)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Lims ID:	320-76888-A-6-A		
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Inject. Date:	19-Aug-2021 08:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	52

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	463432	58299

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	463432	58299

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.785	419	155	452	95	0.1748	0.93	RQ
17.785	348	73	452	95	0.1605		Empc Correction
18.240	720	160	967	230	0.3385	0.74	
18.679	368	79	338	113	0.1417	1.09	RQ
18.679	260	87	338	113	0.1200		Empc Correction
19.666	715	216	828	176	0.3096	0.86	
21.539	1262	237	1602	252	0.5747	0.79	

Compound is Marked ND

Report Date: 20-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Lims ID:	320-76888-A-6-A		
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Inject. Date:	19-Aug-2021 08:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	52

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	502787	74091
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	550143	73379

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	526465	73735

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.796	1118	188	925	170	0.3764	1.21	RQa
25.796	1118	188	721	121	0.3388		Empc Correction
Signal Totals:							
	1118	188	721	121			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2043	358				1.21	RQa
	1839	309					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3764 = (2043 * 100.000) / (526465 * 1.031)
Empc Amount: 0.3388 = (1839 * 100.000) / (526465 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 20-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Lims ID:	320-76888-A-6-A		
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Inject. Date:	19-Aug-2021 08:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	52

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	325461	41412

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	325461	41412

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.091	1179	167	1054	163	0.6556	1.12	RQ
26.091	1179	167	760	107	0.5693		Empc Correction
26.866	1535	298	845	195	0.6988	1.82	RQ
26.866	1309	302	845	195	0.6324		Empc Correction
26.950	157	75	105	76	0.0769	1.50	
28.449	790	121	625	93	0.4155	1.26	RQ
28.449	790	121	509	78	0.3814		Empc Correction
Signal Totals:							
	3435	665	2219	456			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6290	1188				1.39	RQ
	5654	1121					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.847 = (6290 * 100.000) / (325461 * 1.046)

Empc Amount: 1.660 = (5654 * 100.000) / (325461 * 1.046)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Lims ID:	320-76888-A-6-A		
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Inject. Date:	19-Aug-2021 08:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	52

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	497449	95134
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	491875	85098
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	414045	83142
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	372341	80385

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	443927	85939

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 20-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Lims ID:	320-76888-A-6-A		
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Inject. Date:	19-Aug-2021 08:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	52

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	365398	77328
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	367778	72949
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	366588	75138

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.218	15616	2731	12233	2369	7.20	1.28	M
35.346	4771	852	3765	652	2.21	1.27	M
Signal Totals:							
	20387	3583	15998	3021			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	36385	6604				1.27	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 9.412 = (36385 * 100.000) / (366588 * 1.055)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 20-Aug-2021 10:26:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Lims ID:	320-76888-A-6-A		
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Inject. Date:	19-Aug-2021 08:42:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	52

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	327829	89403

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	327829	89403

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.934	49758	13195	51413	13777	29.4	0.97	
Signal Totals:							
	49758	13195	51413	13777			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	101171	26972				0.97	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 29.383 = (101171 * 100.000) / (327829 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d				
Injection Date:	19-Aug-2021 08:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-6-A	Lab Sample ID:	320-76888-6		
Client ID:	11215702-072621-BN-SJSB094 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.80
Area: 15287
Amount: 6.959569
Amount Units: pg/ul

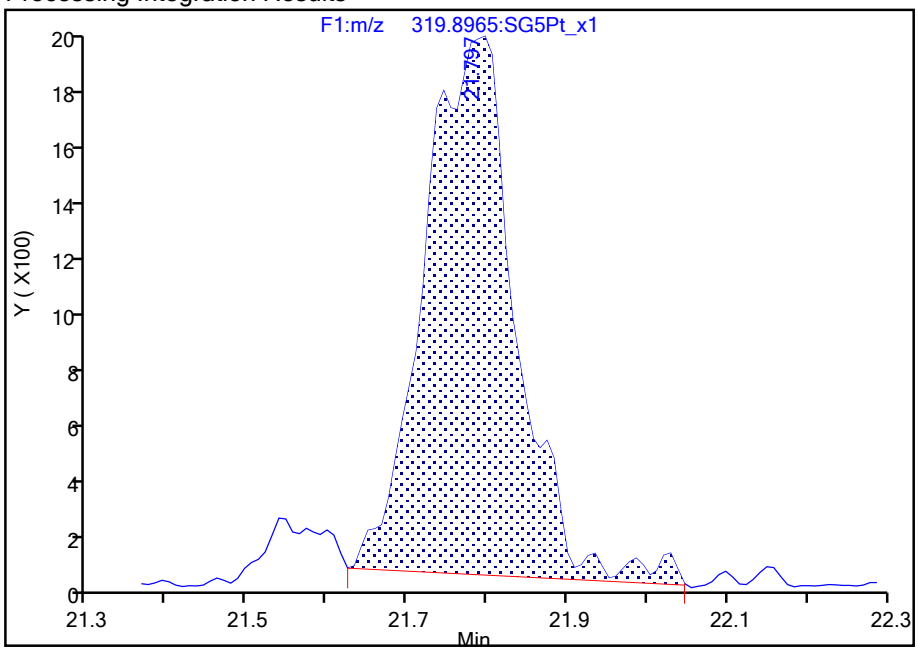

Manual Integration Results

RT: 21.80
Area: 15280
Amount: 6.958164
Amount Units: pg/ul

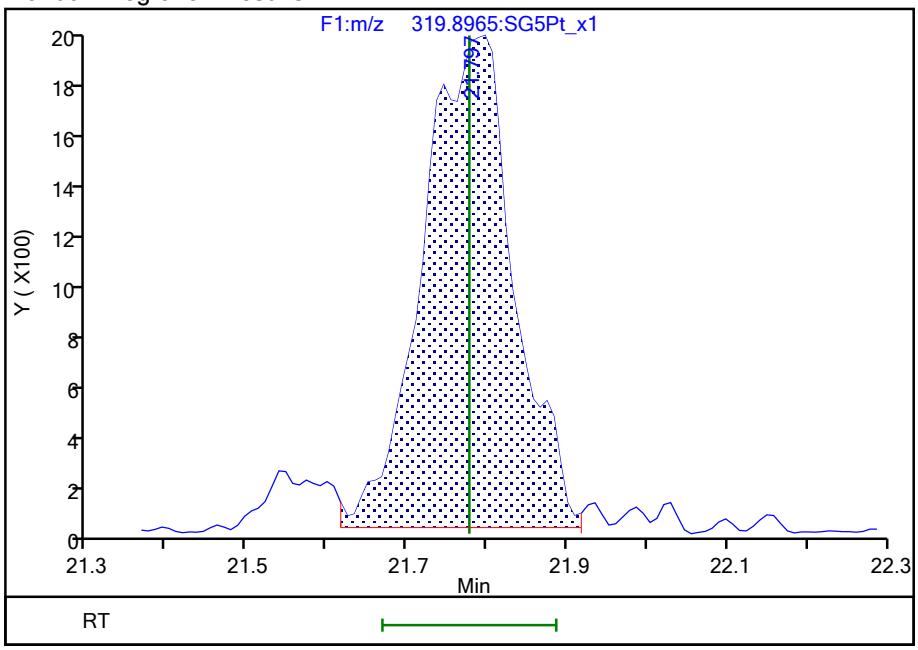

Reviewer: dadunj, 20-Aug-2021 10:23:27

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d				
Injection Date:	19-Aug-2021 08:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-6-A	Lab Sample ID:	320-76888-6		
Client ID:	11215702-072621-BN-SJSB094 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.26
Area: 1227
Amount: 0.661611
Amount Units: pg/ul

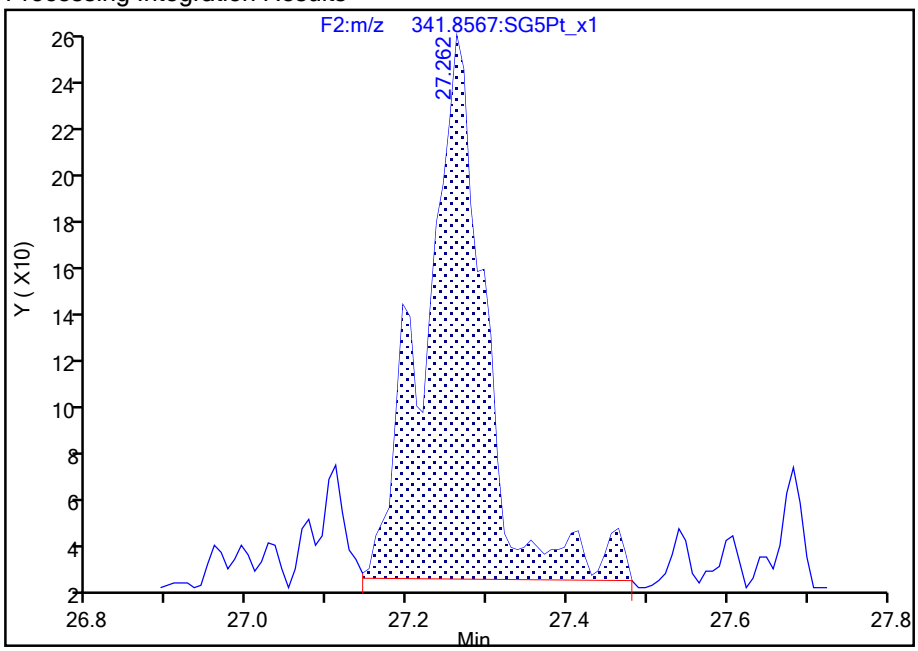

Manual Integration Results

RT: 27.26
Area: 1118
Amount: 0.612561
Amount Units: pg/ul

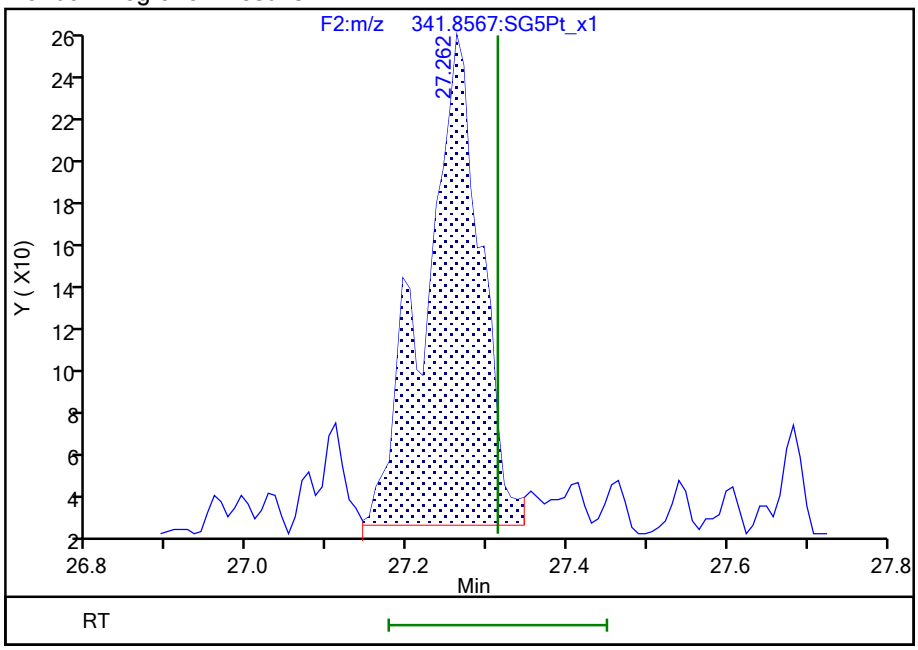

Reviewer: dadunj, 20-Aug-2021 10:23:45

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d				
Injection Date:	19-Aug-2021 08:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-6-A	Lab Sample ID:	320-76888-6		
Client ID:	11215702-072621-BN-SJSB094 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.26
Area: 2280
Amount: 0.661611
Amount Units: pg/ul

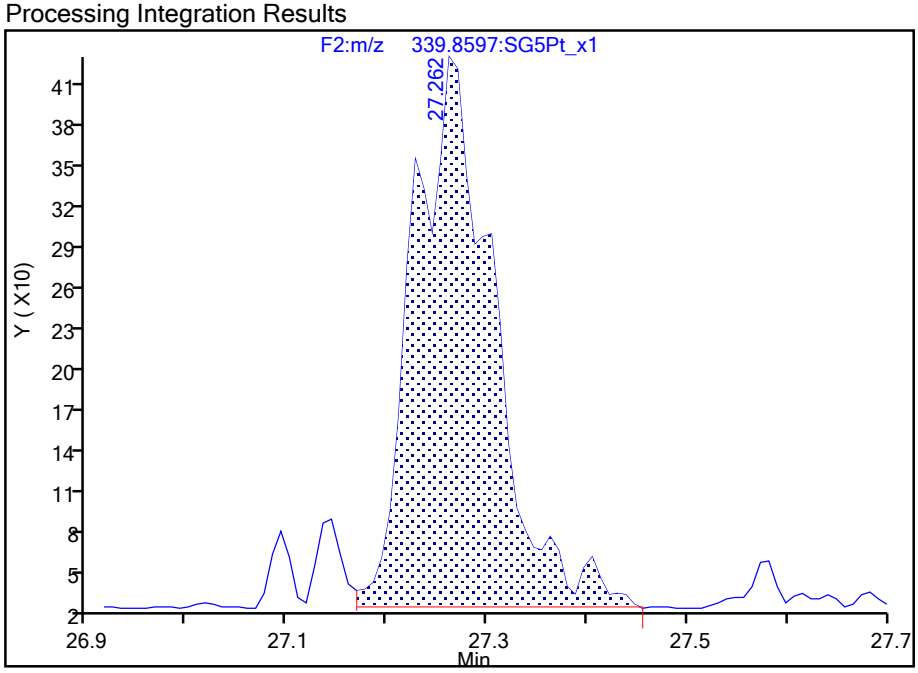

Manual Integration Results

RT: 27.26
Area: 2129
Amount: 0.612561
Amount Units: pg/ul

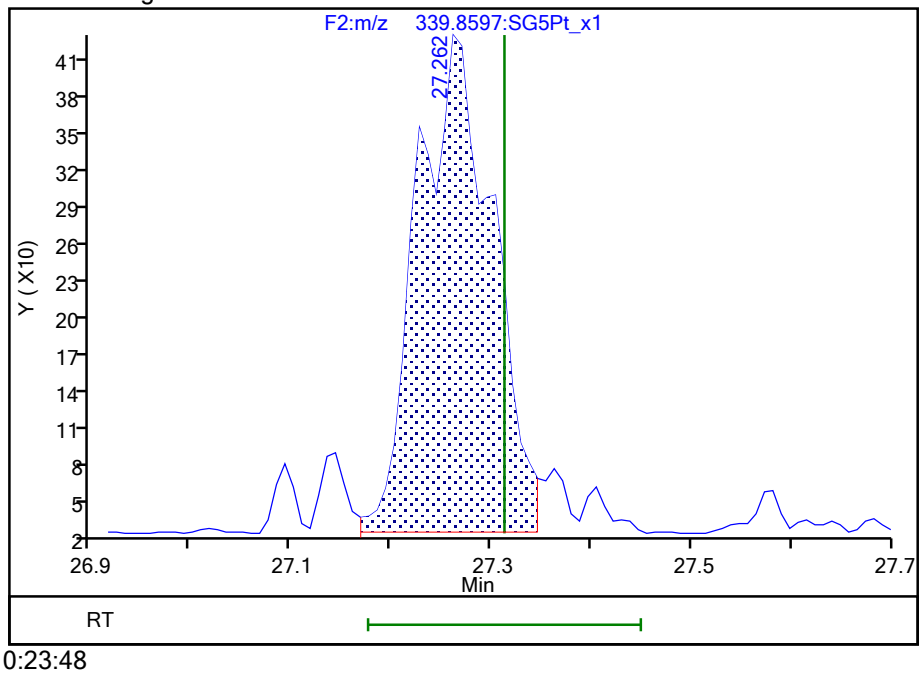

Reviewer: dadunj, 20-Aug-2021 10:23:48

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785545

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d				
Injection Date:	19-Aug-2021 08:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-6-A	Lab Sample ID:	320-76888-6		
Client ID:	11215702-072621-BN-SJSB094 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 28.76
Area: 786
Amount: 0.360166
Amount Units: pg/ul

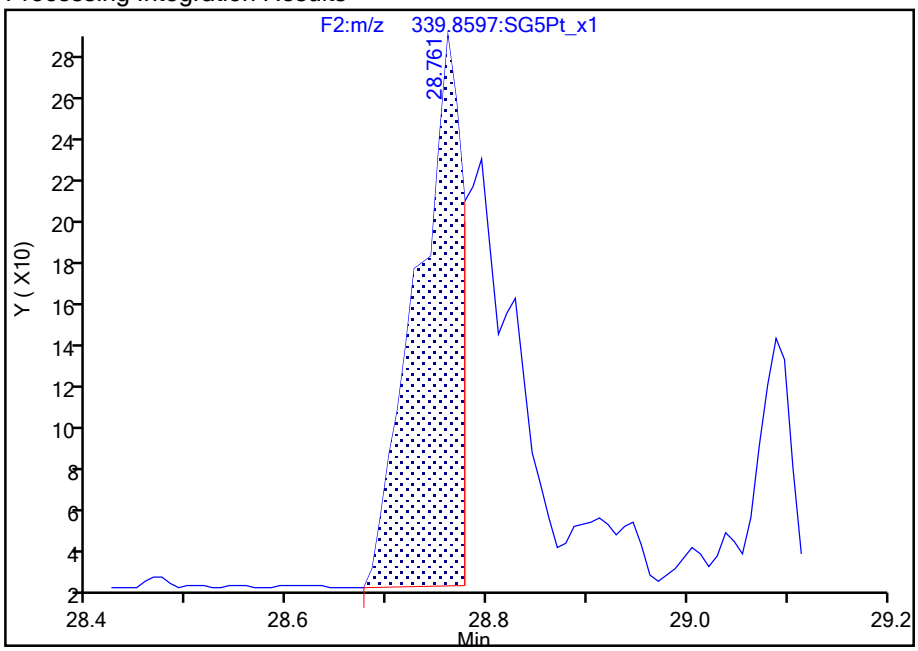

Manual Integration Results

RT: 28.76
Area: 1393
Amount: 0.469640
Amount Units: pg/ul

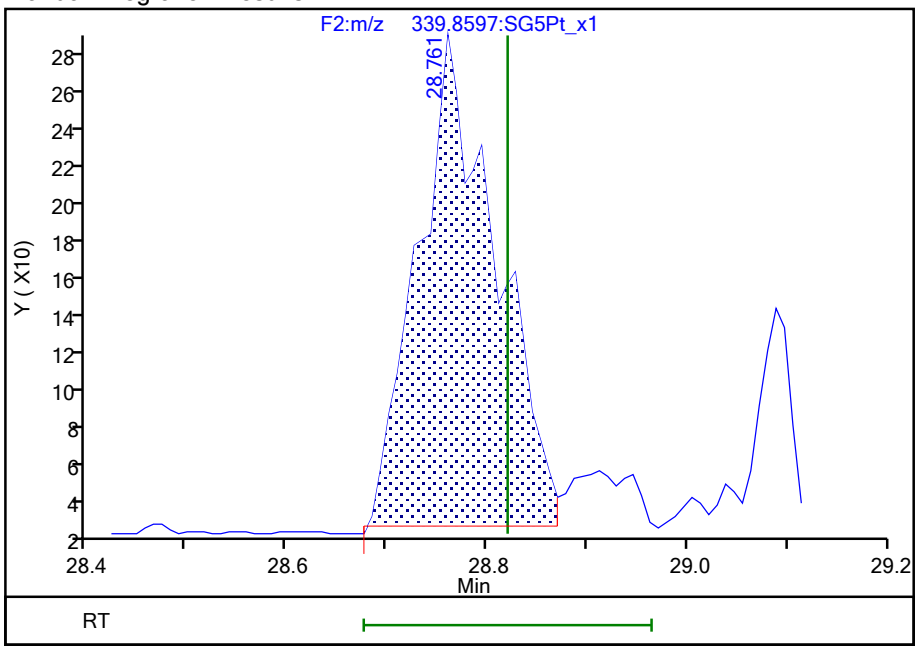

Reviewer: dadunj, 20-Aug-2021 10:23:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d				
Injection Date:	19-Aug-2021 08:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-6-A	Lab Sample ID:	320-76888-6		
Client ID:	11215702-072621-BN-SJSB094 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 35.08
Area: 827
Amount: 0.260099
Amount Units: pg/ul

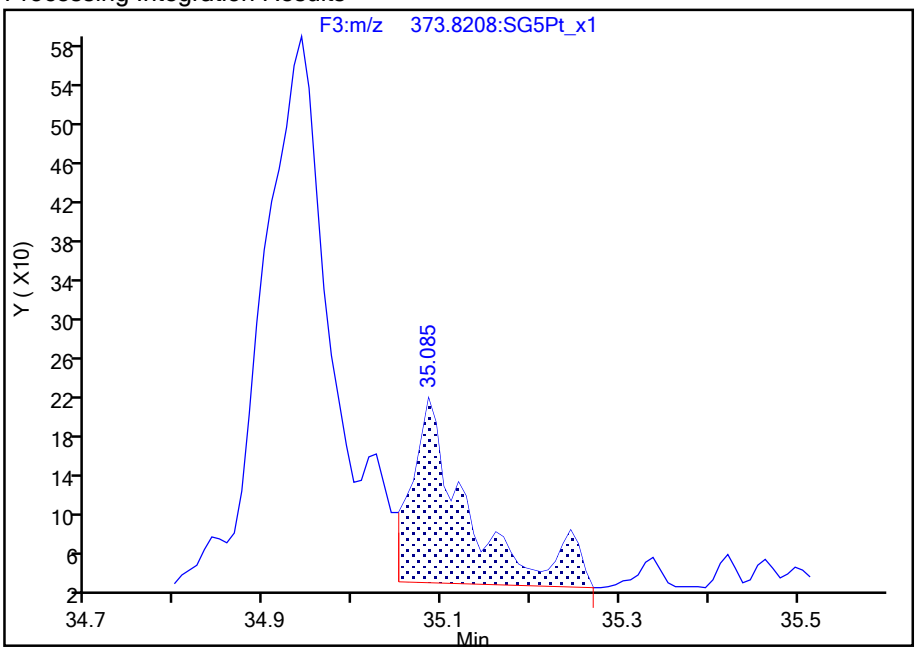

Manual Integration Results

RT: 35.08
Area: 657
Amount: 0.231718
Amount Units: pg/ul

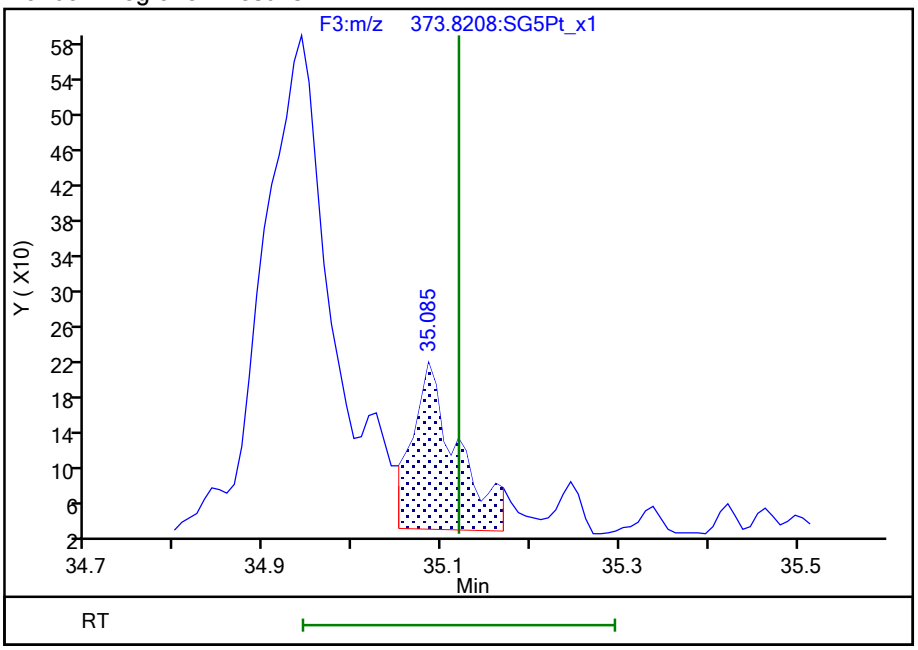

Reviewer: dadunj, 20-Aug-2021 10:24:31

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785547

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d				
Injection Date:	19-Aug-2021 08:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-6-A	Lab Sample ID:	320-76888-6		
Client ID:	11215702-072621-BN-SJSB094 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.19- 36.59)

Signal: 1

Processing Integration Results

RT = 34.218 Area = 16309

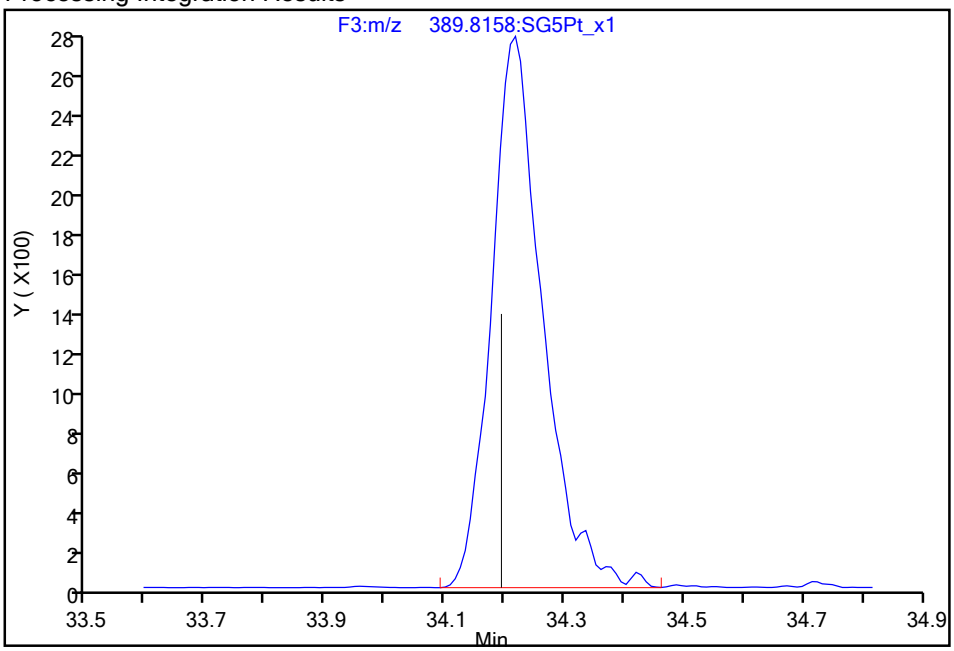

Manual Integration Results

RT = 34.218 Area = 15616 M

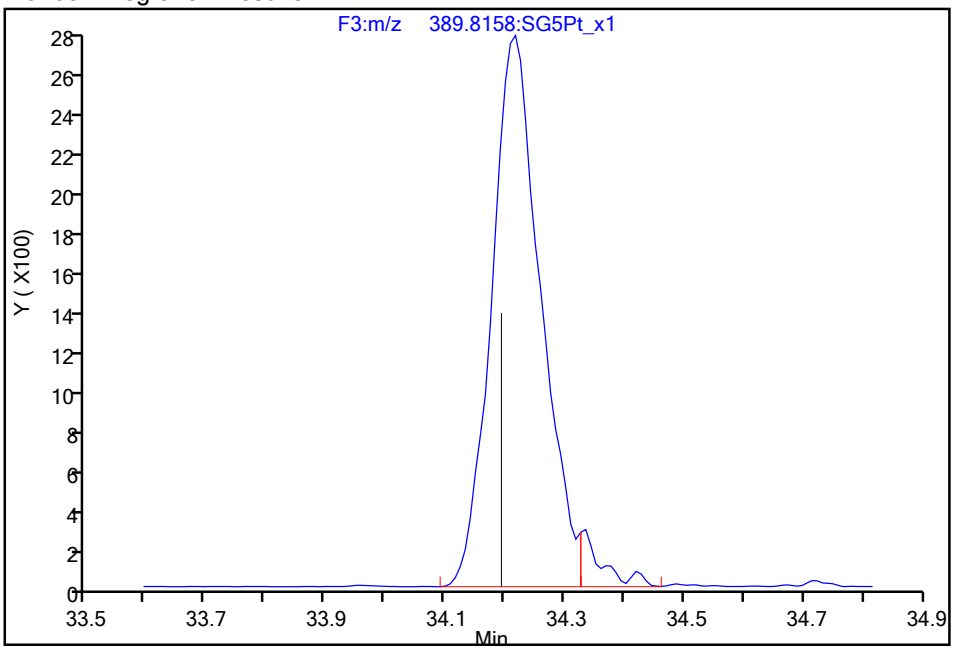

Reviewer: dadunj, 20-Aug-2021 10:24:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d				
Injection Date:	19-Aug-2021 08:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-6-A	Lab Sample ID:	320-76888-6		
Client ID:	11215702-072621-BN-SJSB094 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.19- 36.59)

Signal: 1

Processing Integration Results

RT = 35.346 Area = 5314

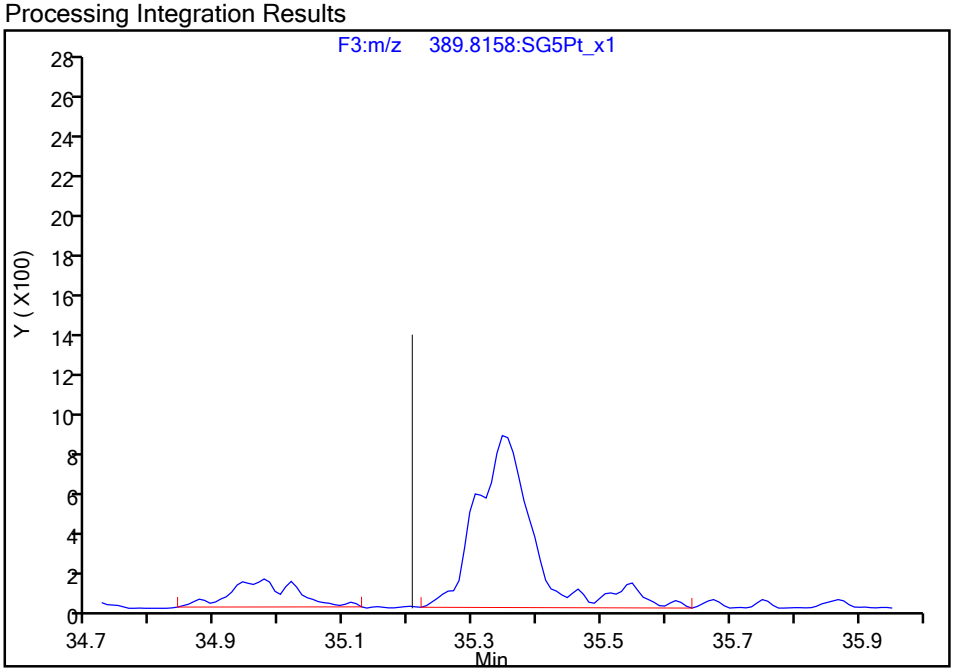

Manual Integration Results

RT = 35.346 Area = 4771 M

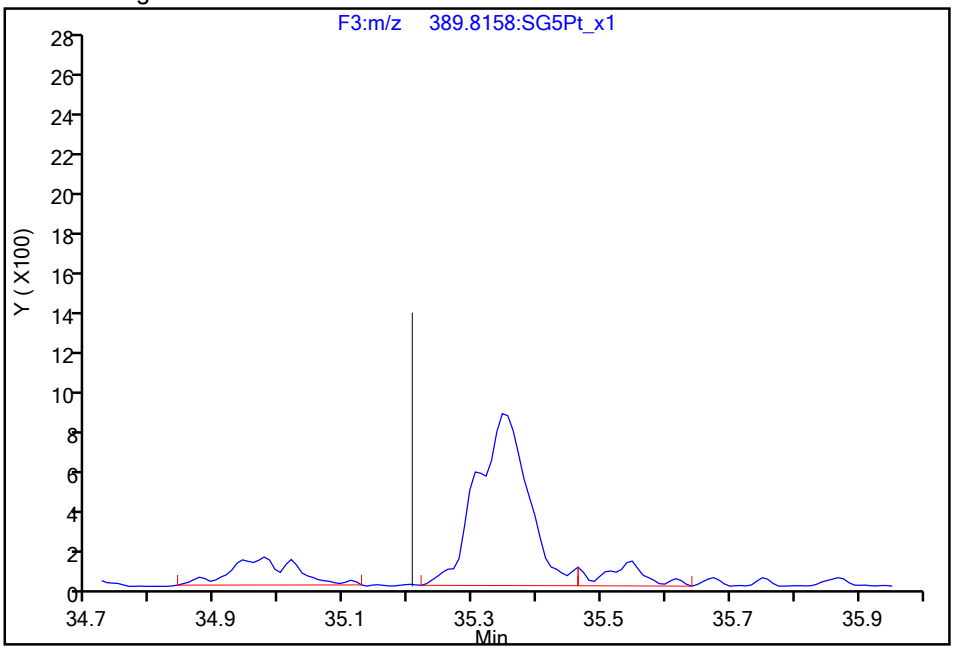

Reviewer: dadunj, 20-Aug-2021 10:24:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d				
Injection Date:	19-Aug-2021 08:42:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-6-A	Lab Sample ID:	320-76888-6		
Client ID:	11215702-072621-BN-SJSB094 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (34.19- 36.59)

Signal: 2

Processing Integration Results

RT = 35.321 Area = 4412

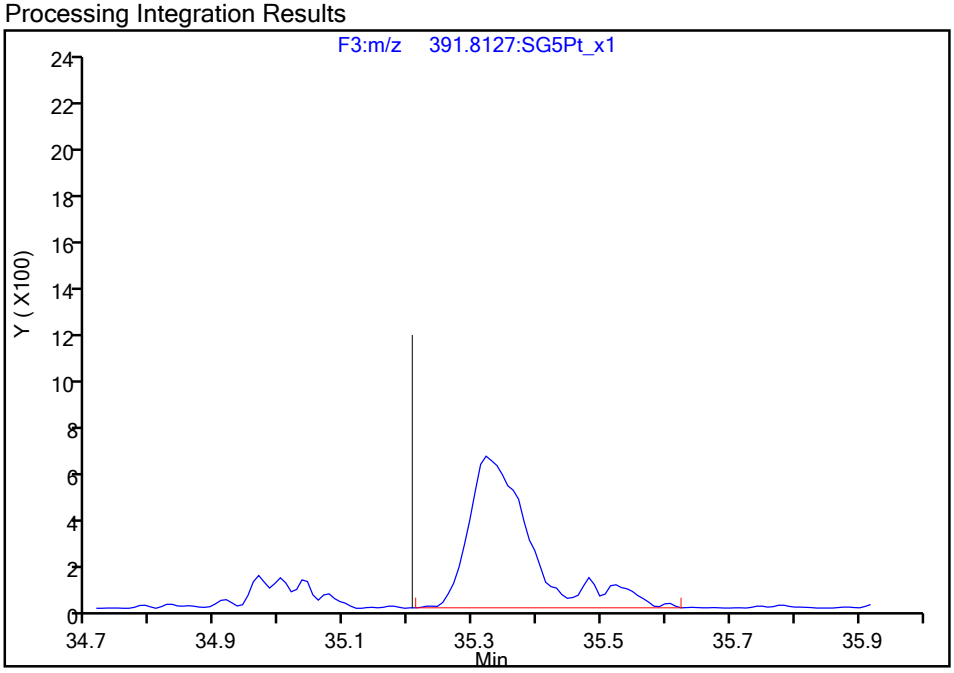

Manual Integration Results

RT = 35.321 Area = 3765 M

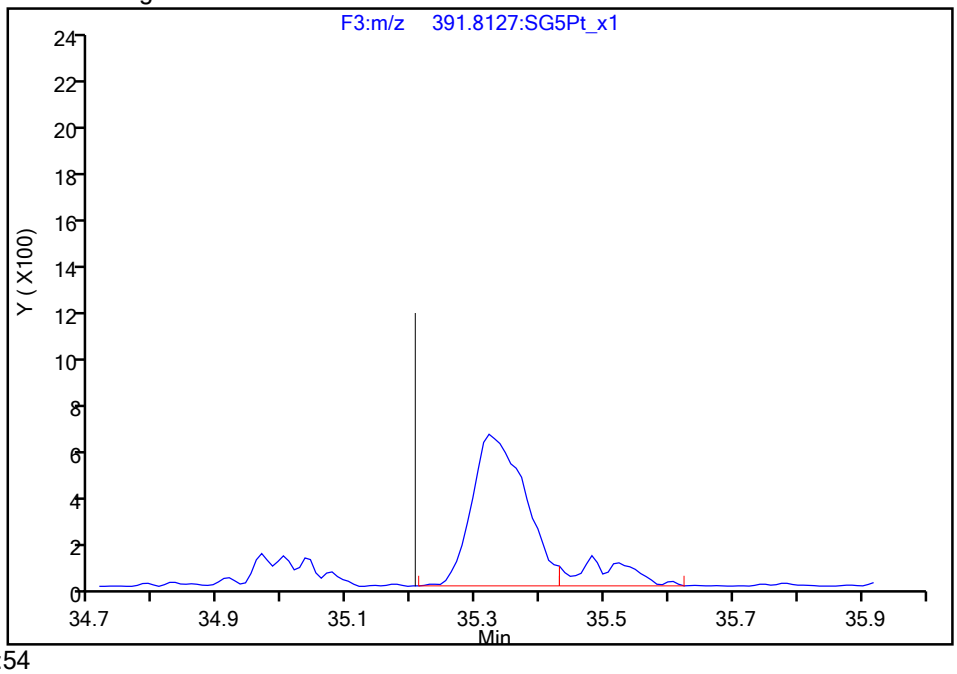

Reviewer: dadunj, 20-Aug-2021 10:24:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785550

Report Date: 20-Aug-2021 10:26:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

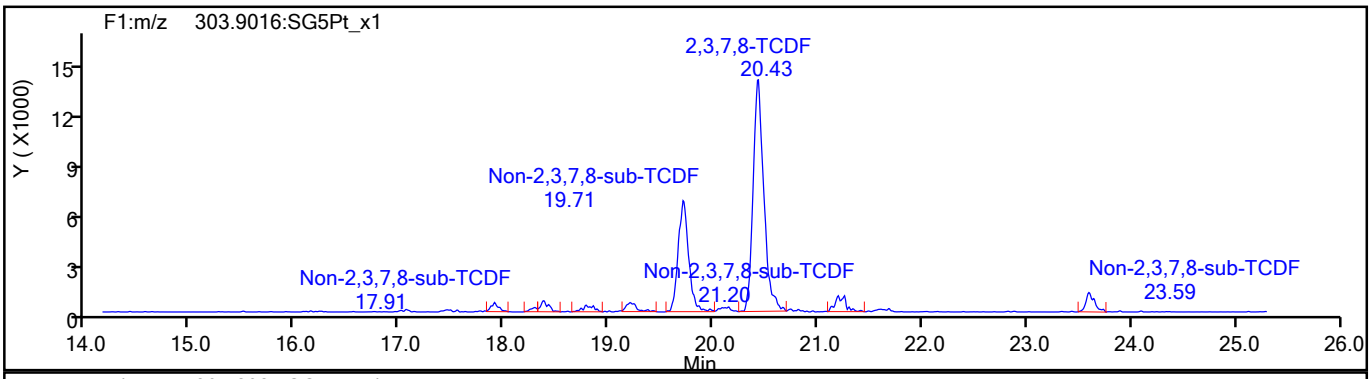

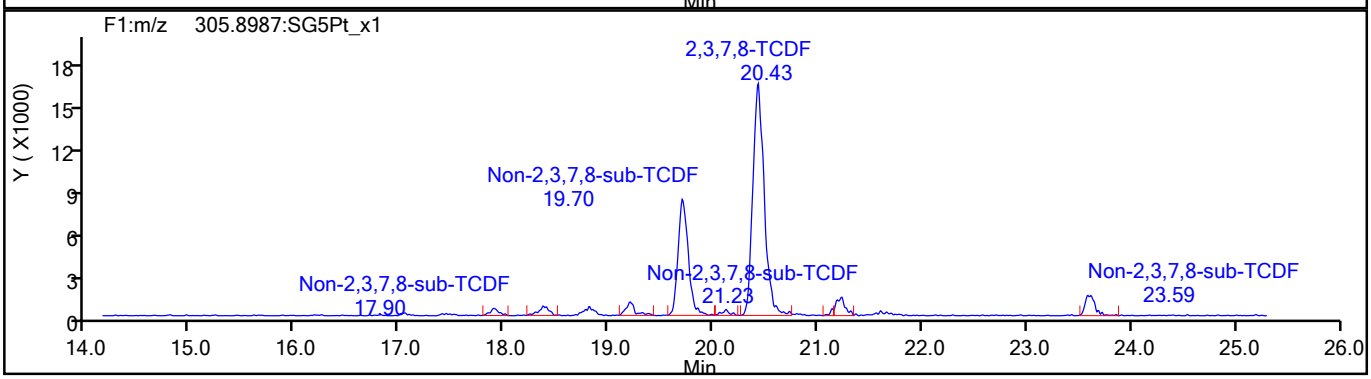

TCDF Standards

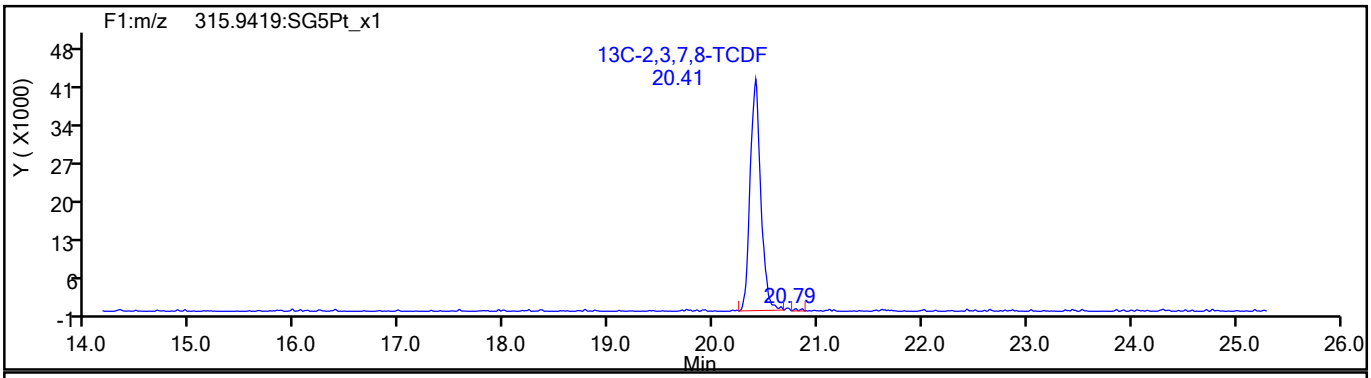

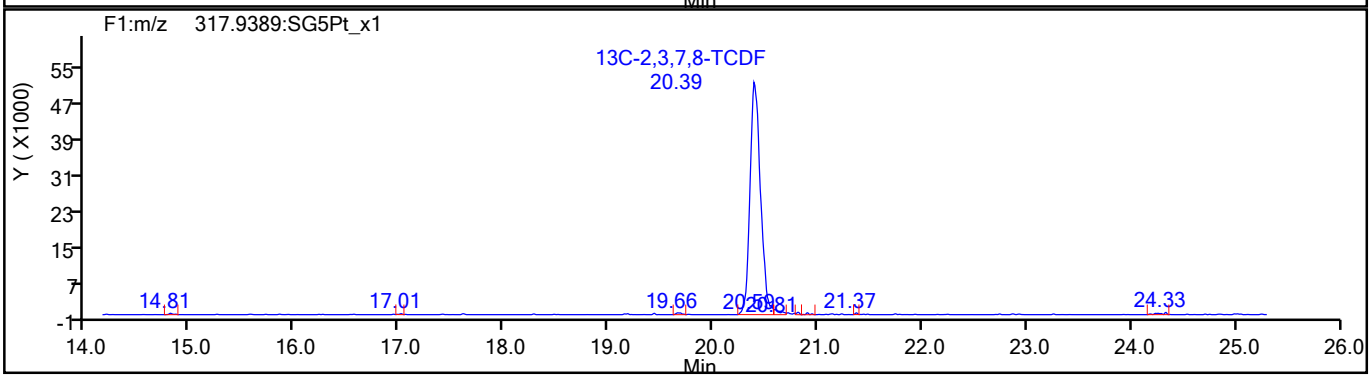

785551

Report Date: 20-Aug-2021 10:26:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

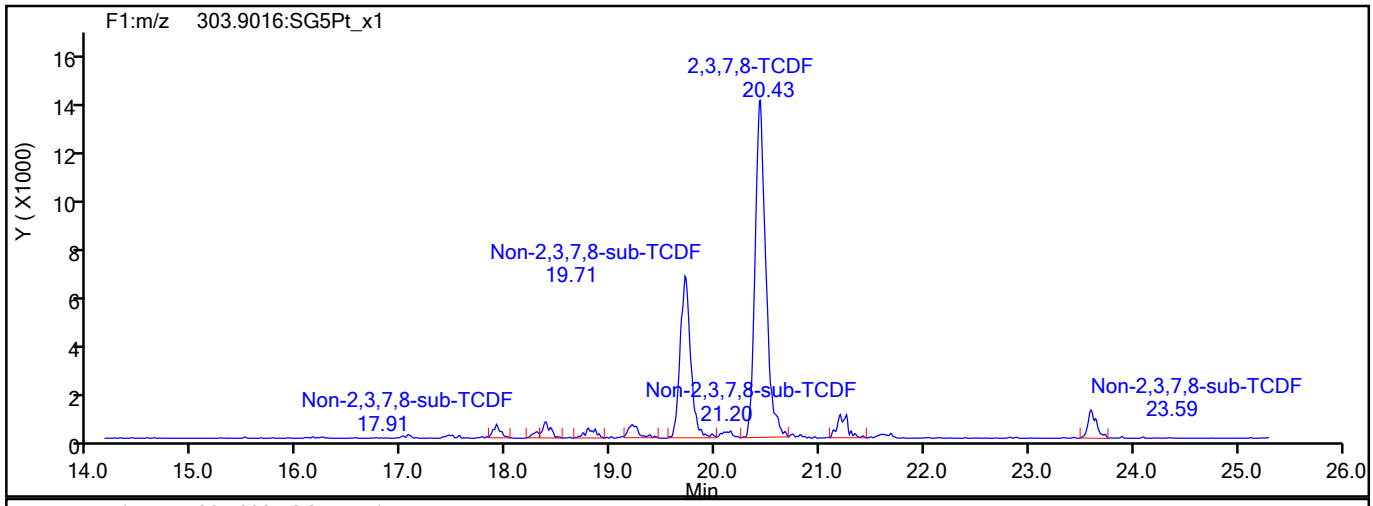

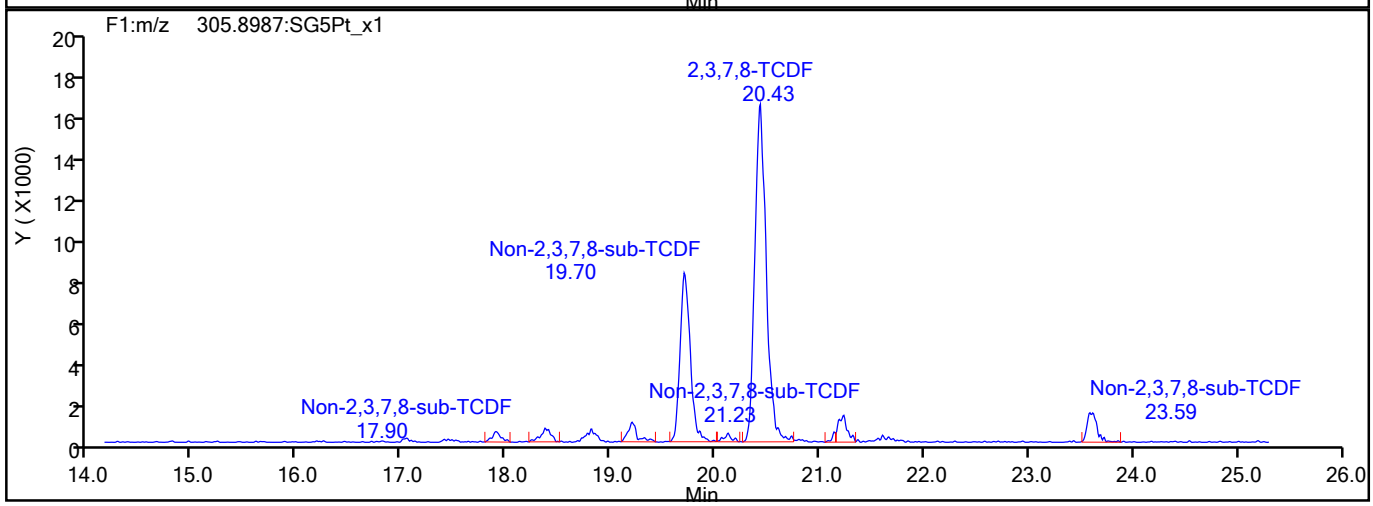

TCDF Interference Mass

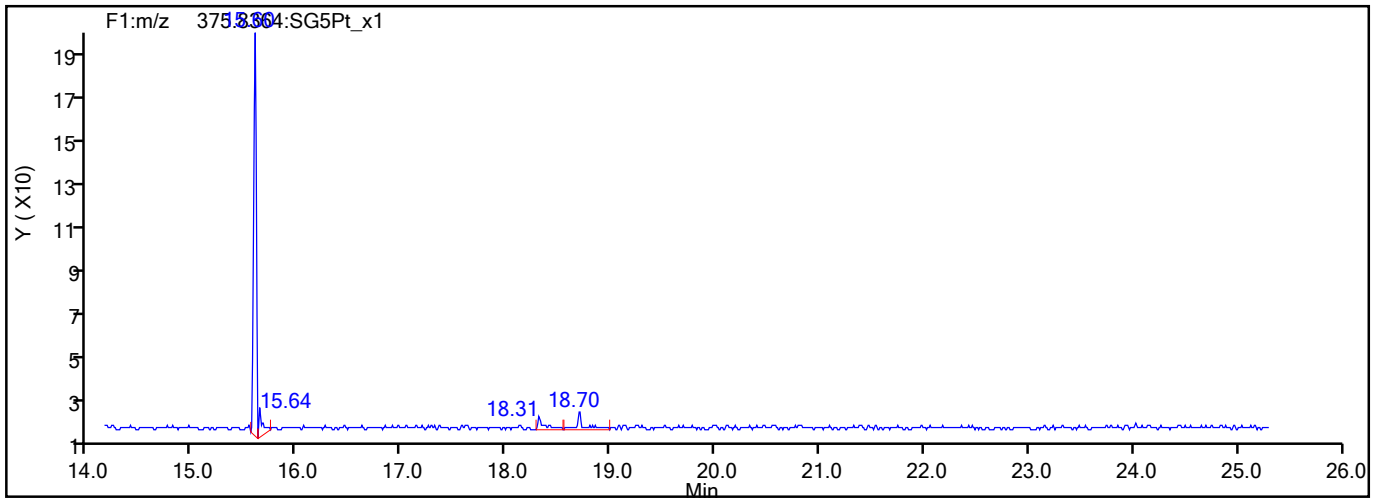

785552

Report Date: 20-Aug-2021 10:26:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

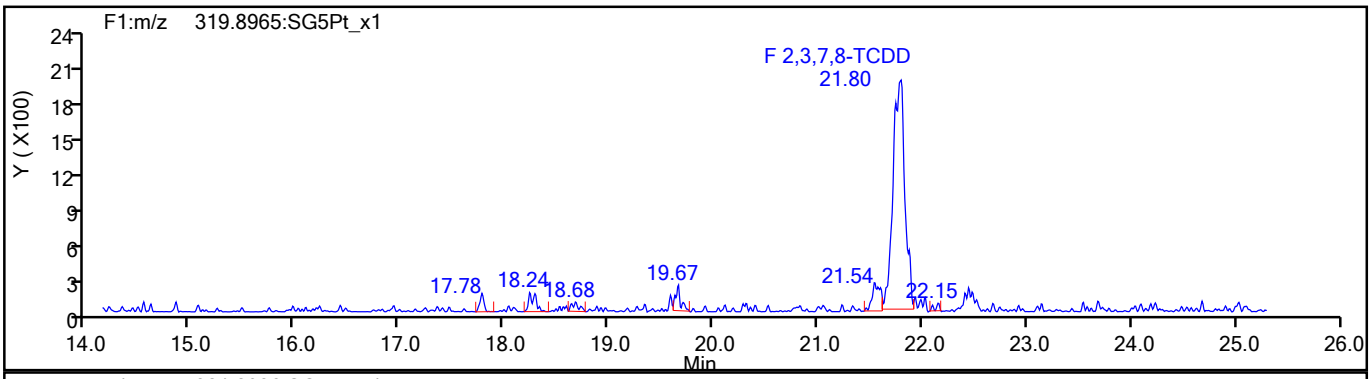

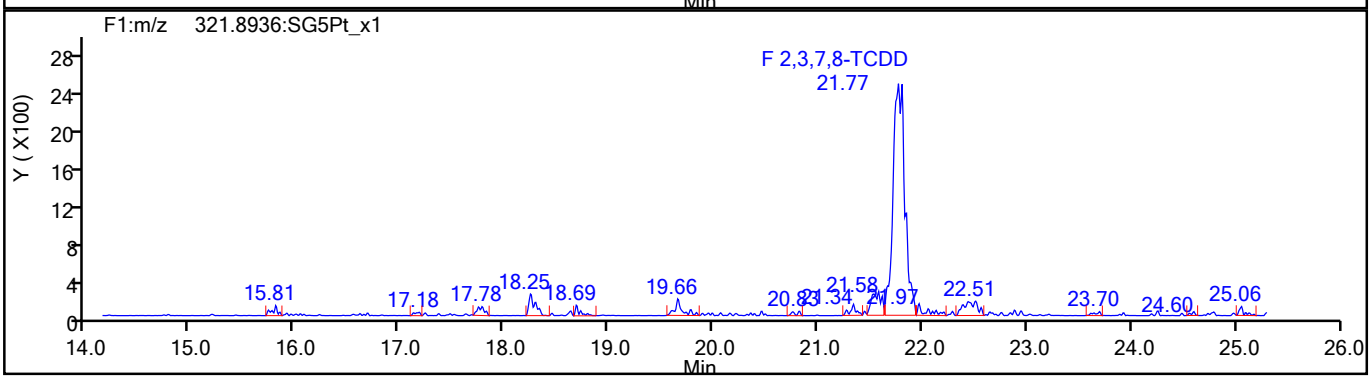

TCDD Standards

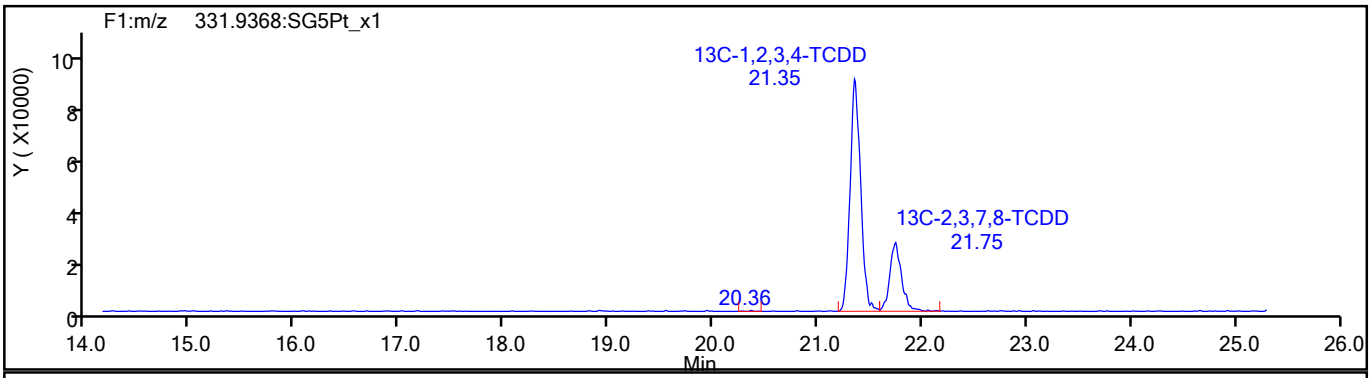

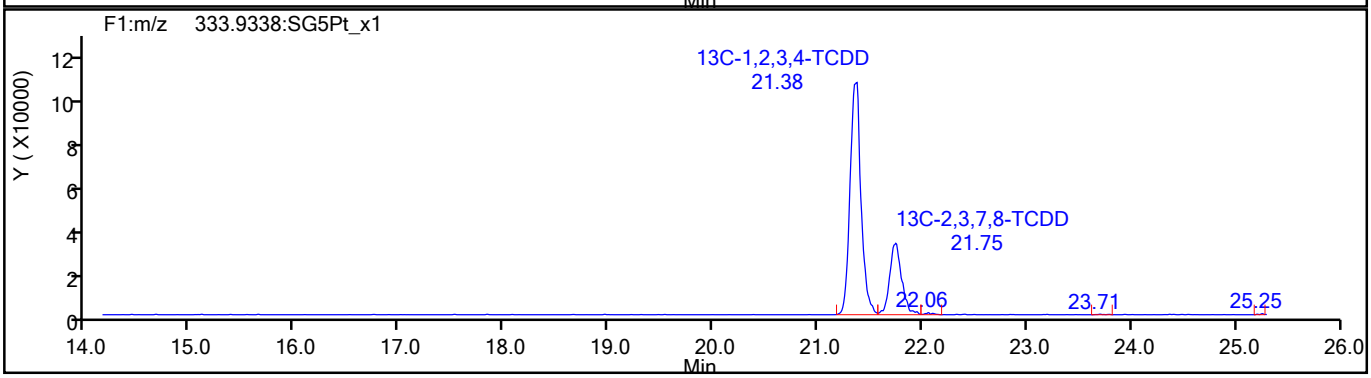

785553

Report Date: 20-Aug-2021 10:26:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

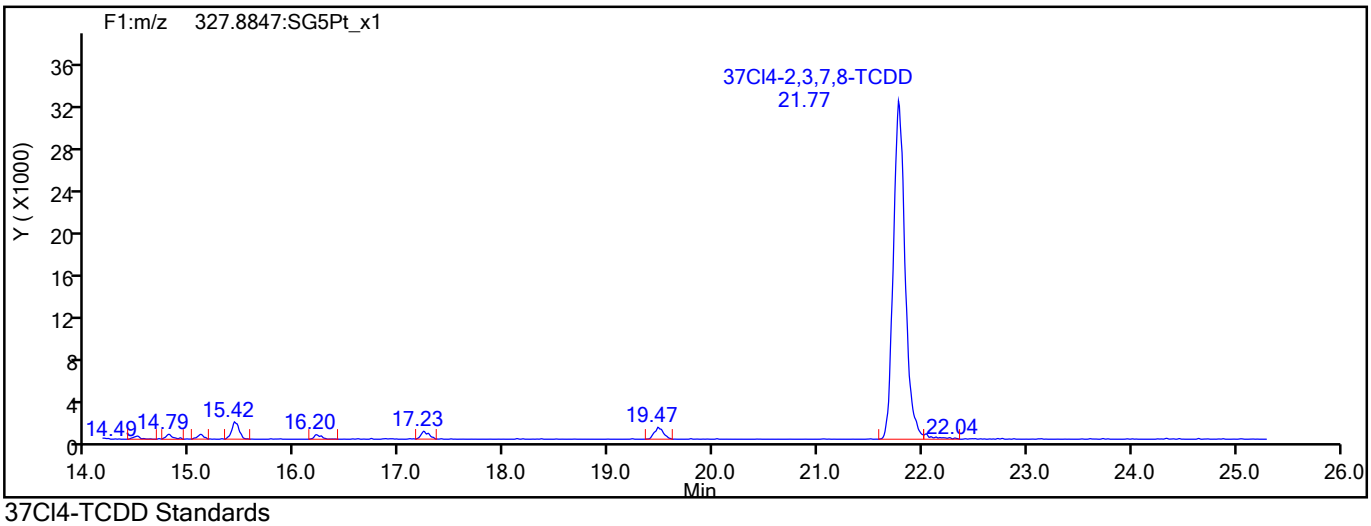

37Cl4-TCDD Standards

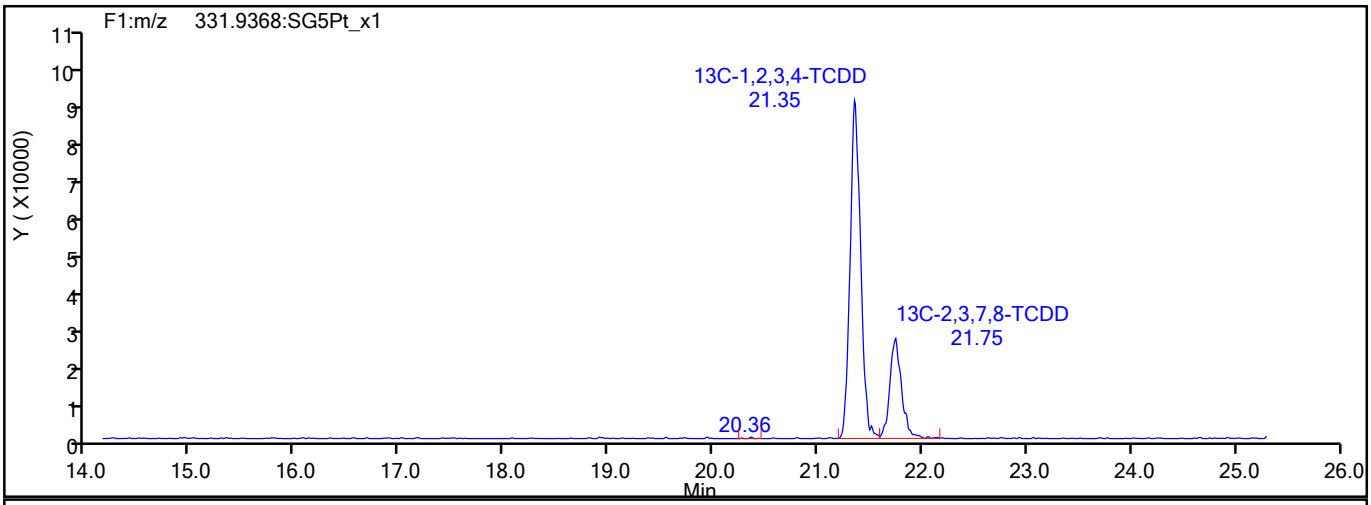

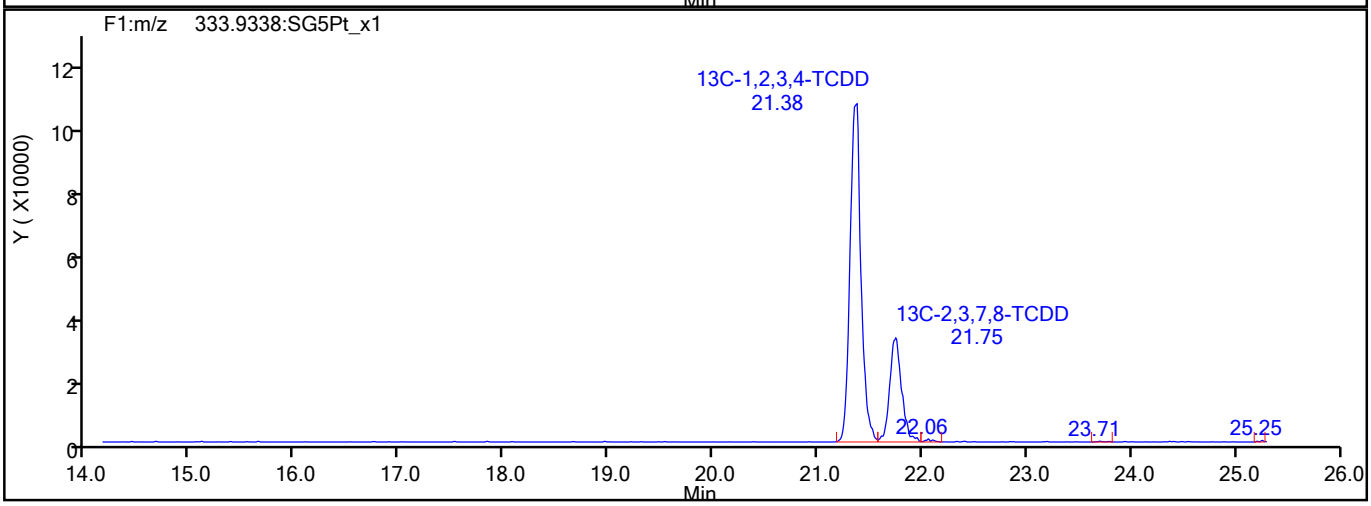

785554

Report Date: 20-Aug-2021 10:26:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

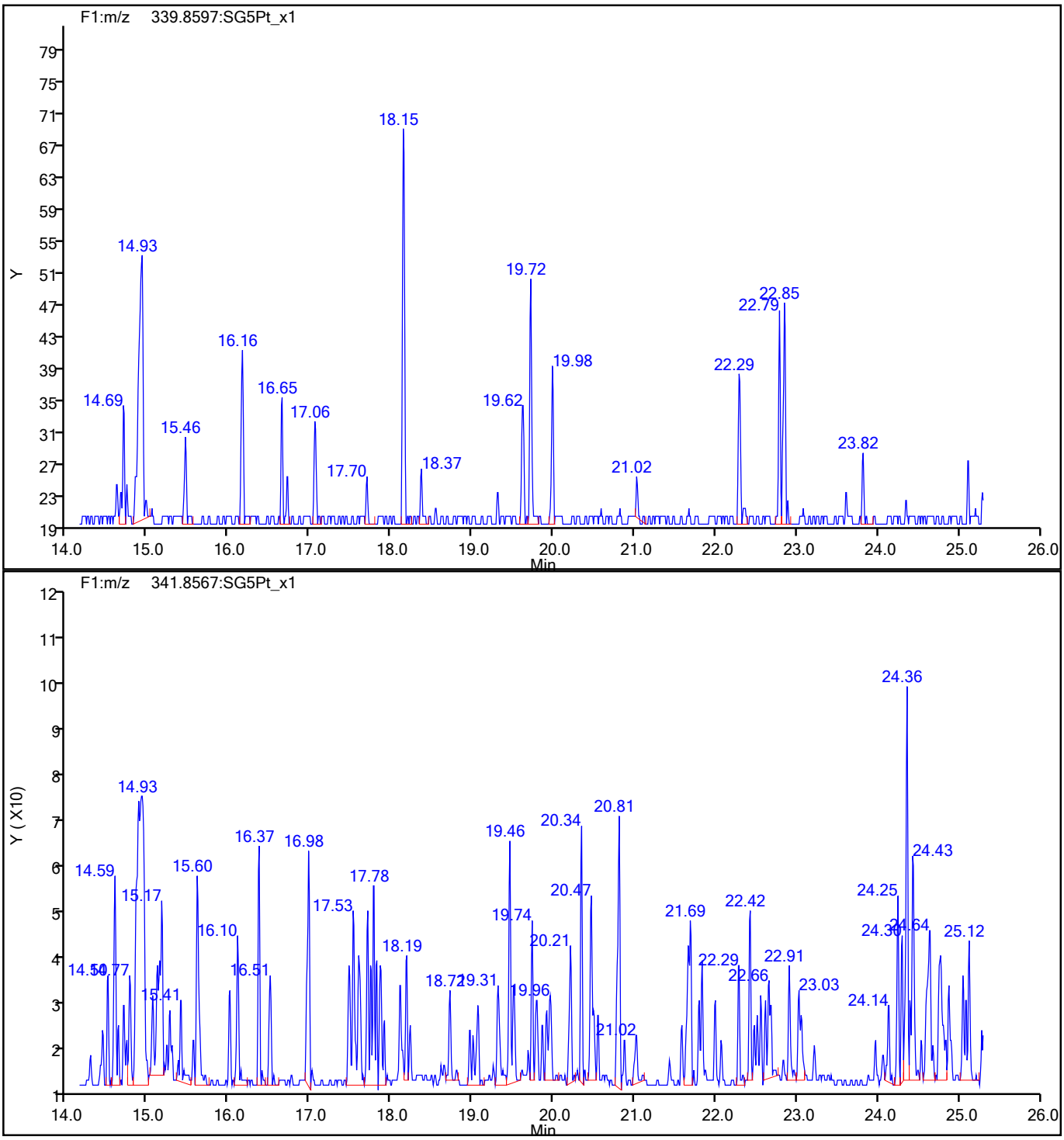

785555

Report Date: 20-Aug-2021 10:26:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

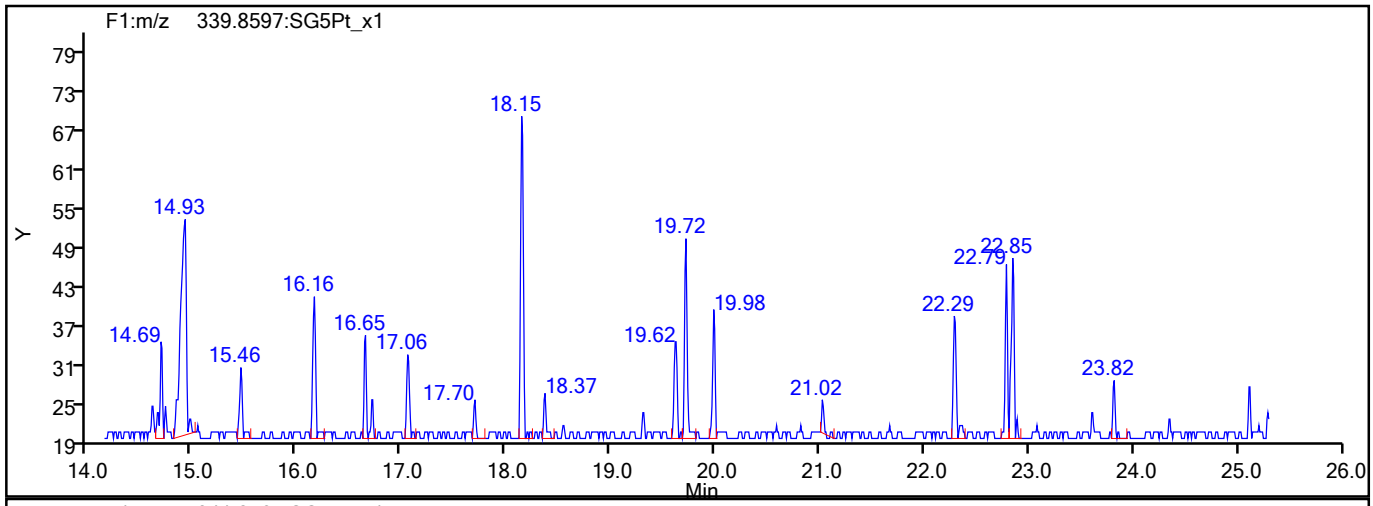

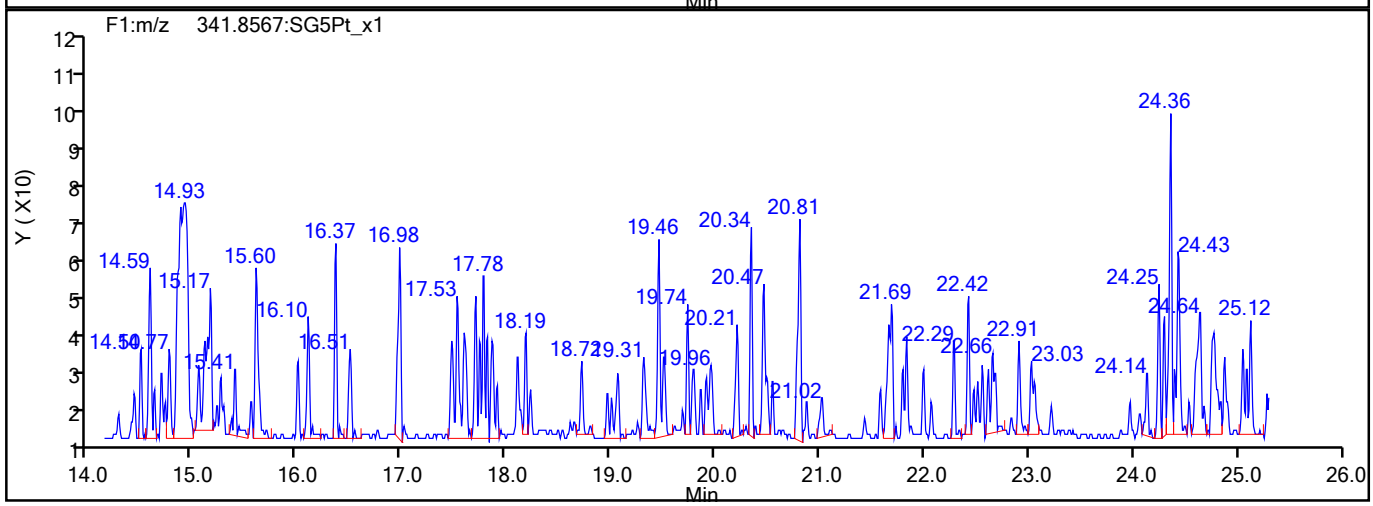

F1 PeCDFs Interference Mass

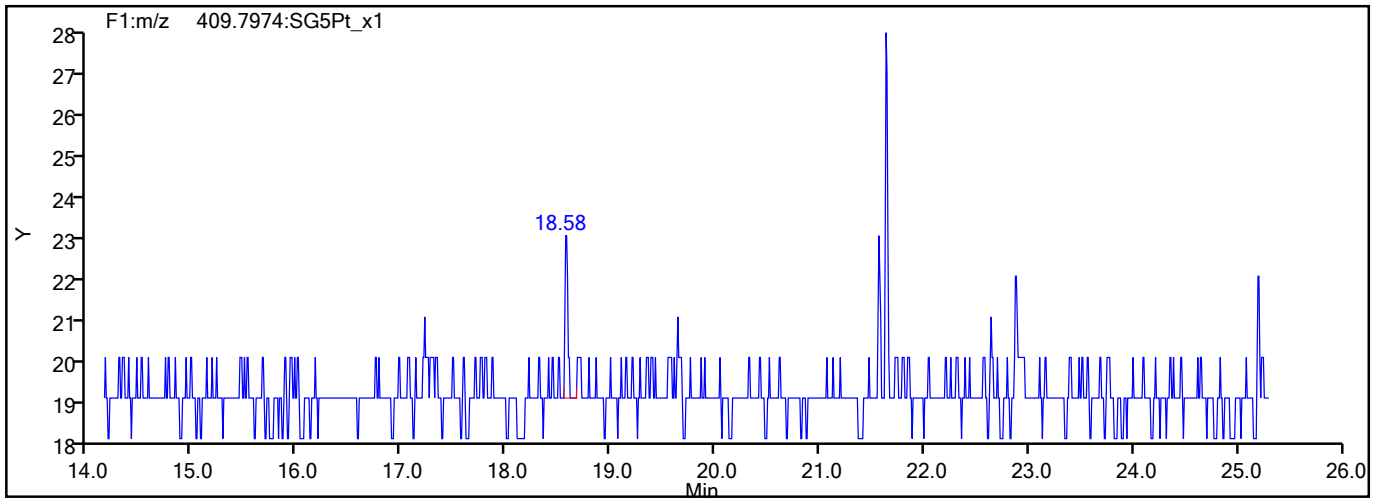

785556

Report Date: 20-Aug-2021 10:26:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

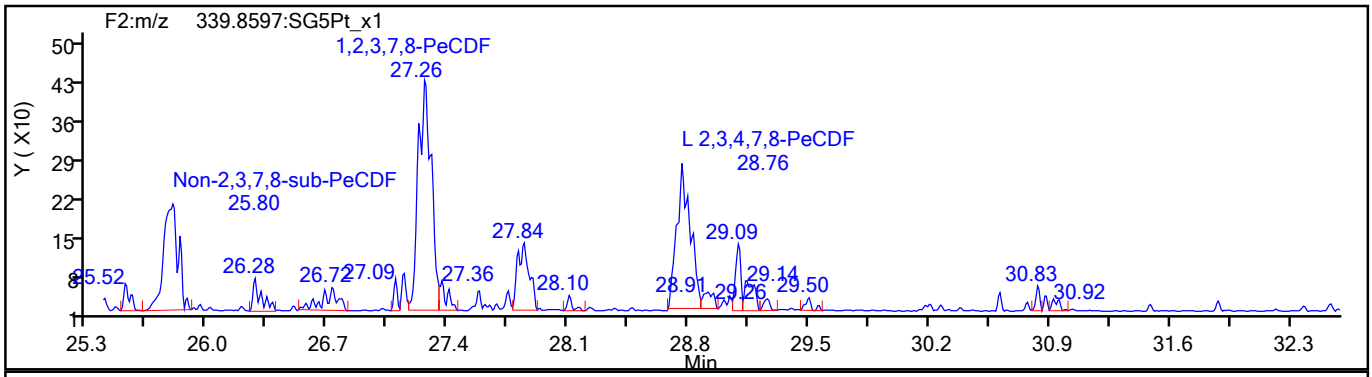

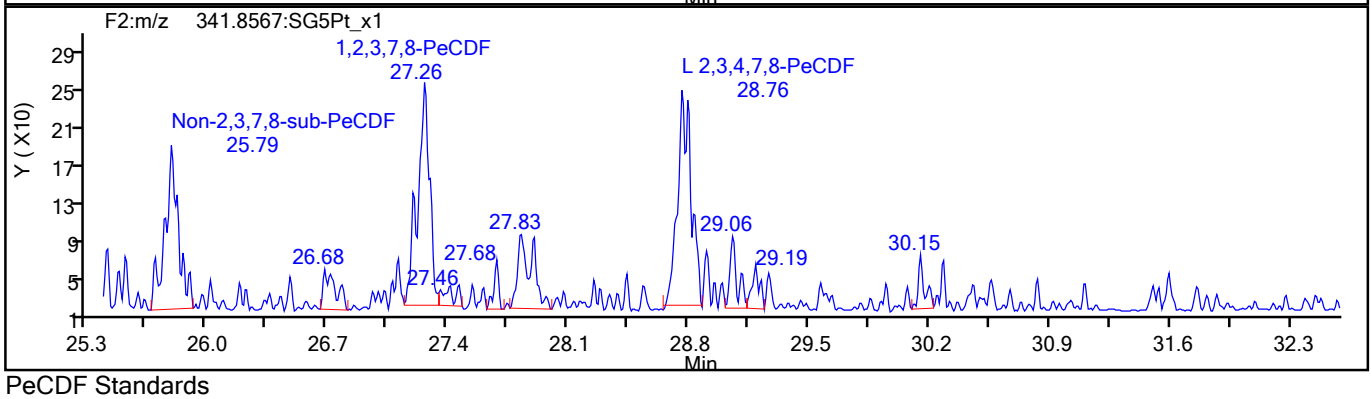

PeCDF Standards

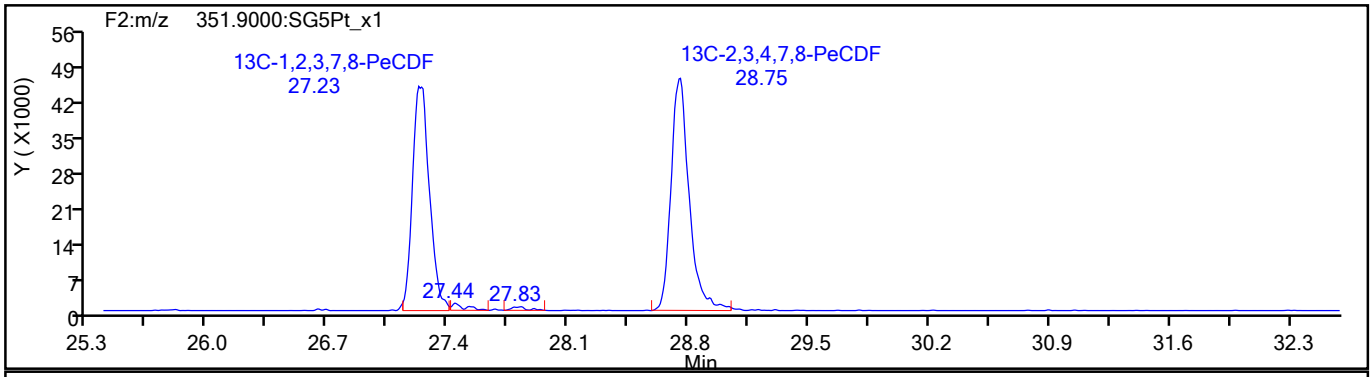

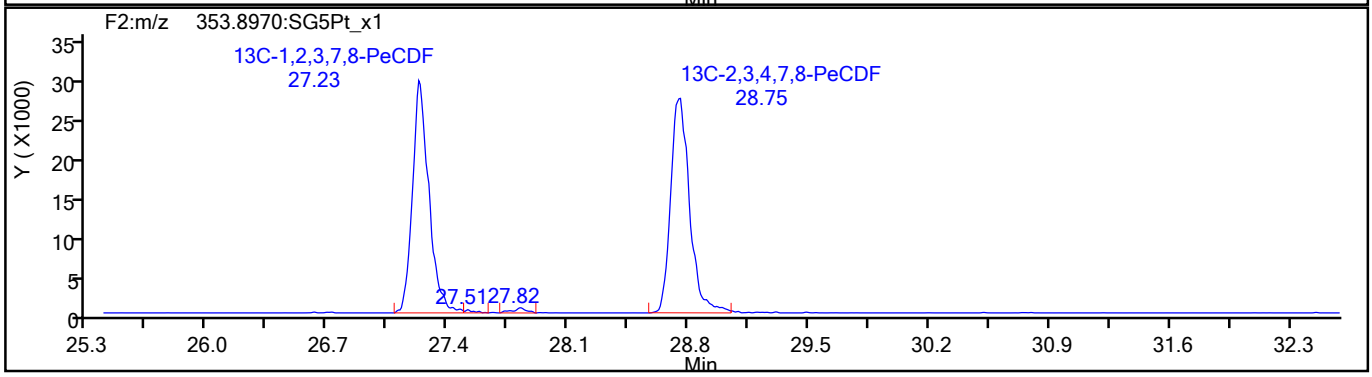

785557

Report Date: 20-Aug-2021 10:26:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

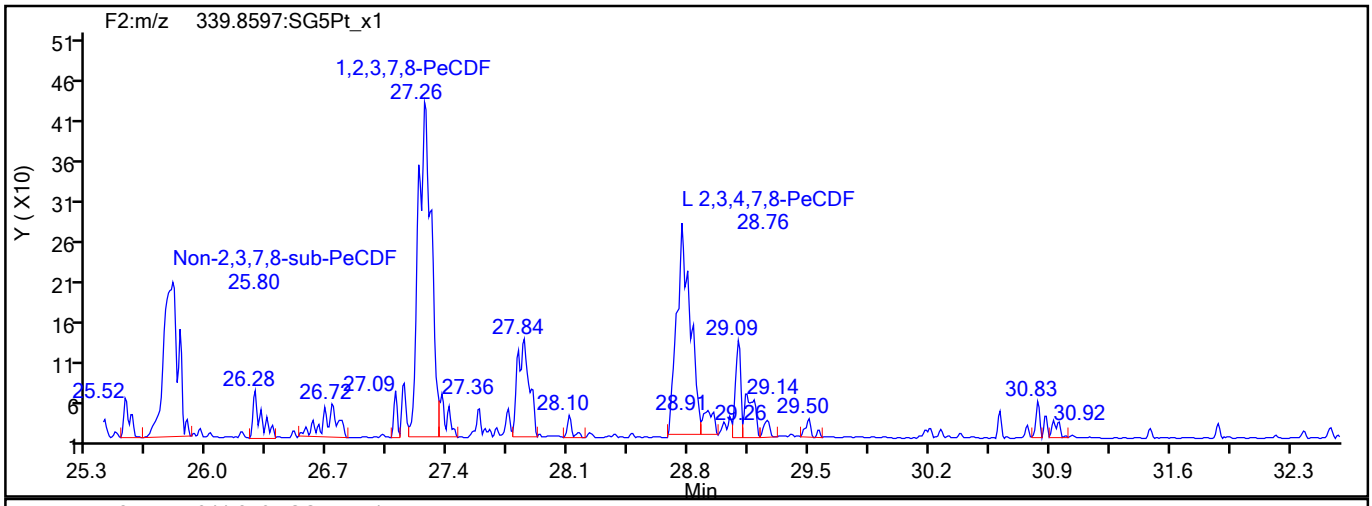

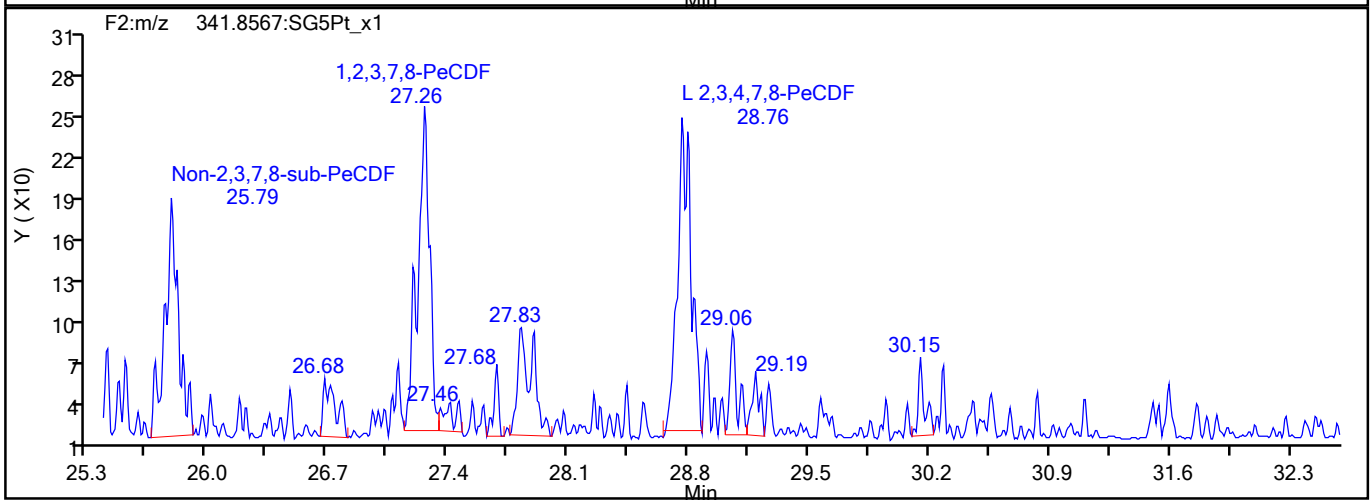

PeCDF Interference Mass

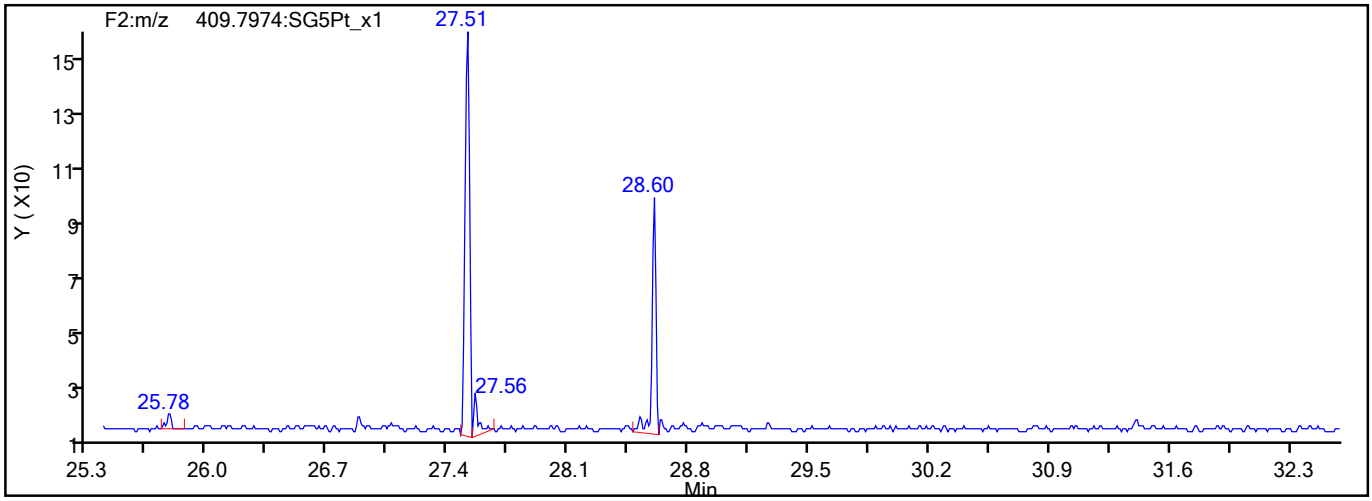

785558

Report Date: 20-Aug-2021 10:26:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

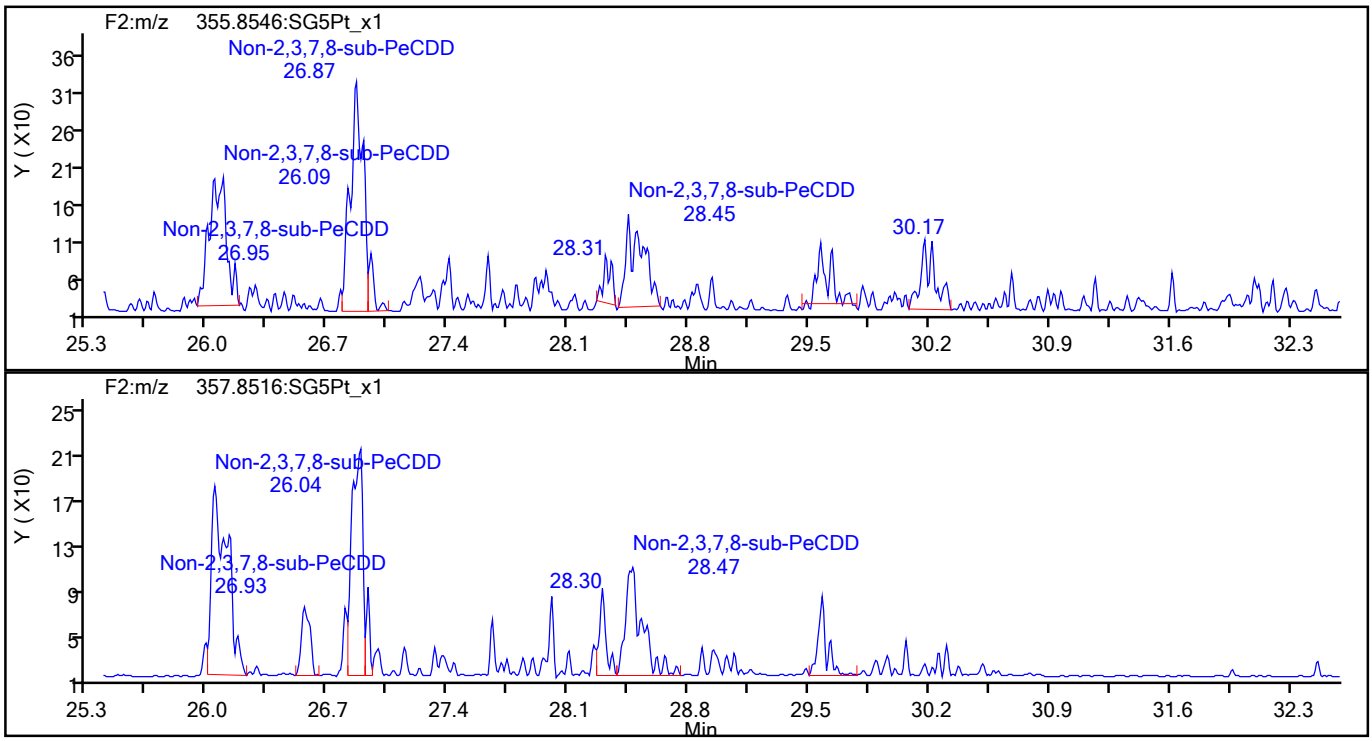

PeCDD Standards

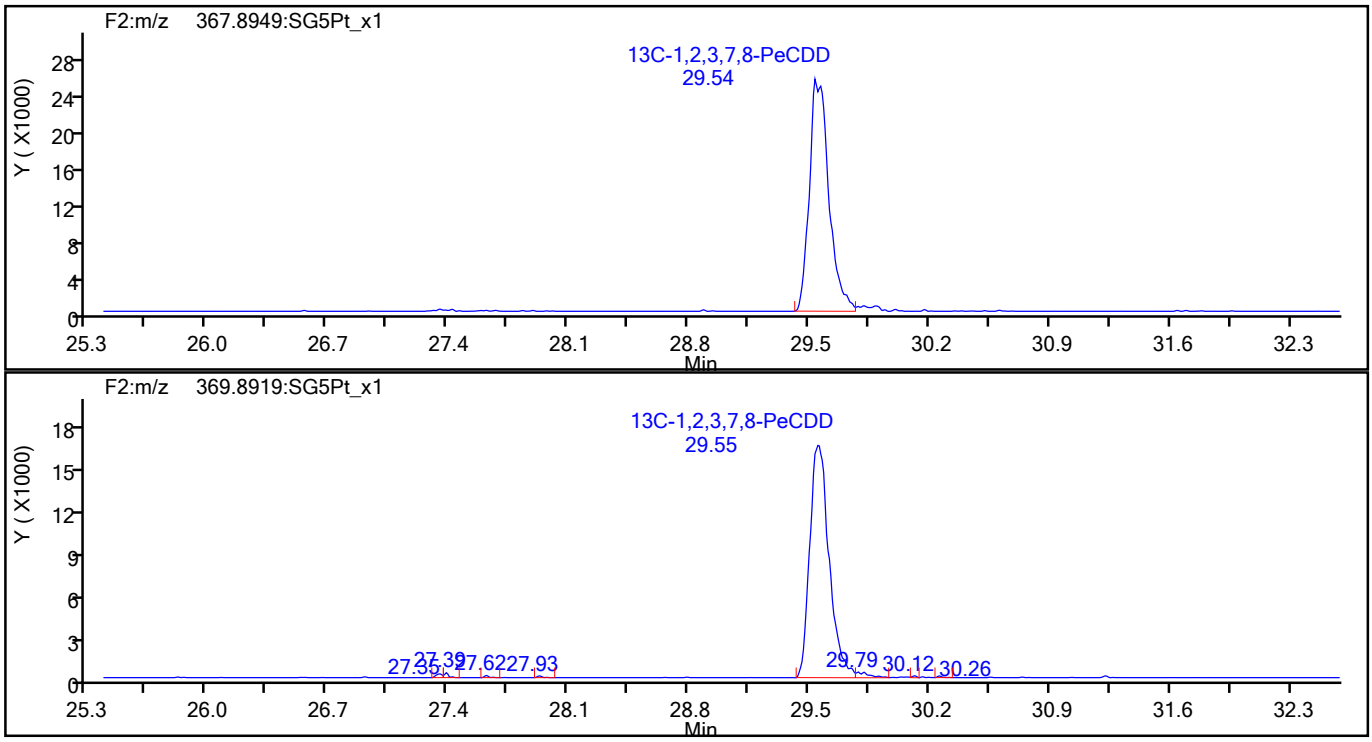

785559

Report Date: 20-Aug-2021 10:26:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

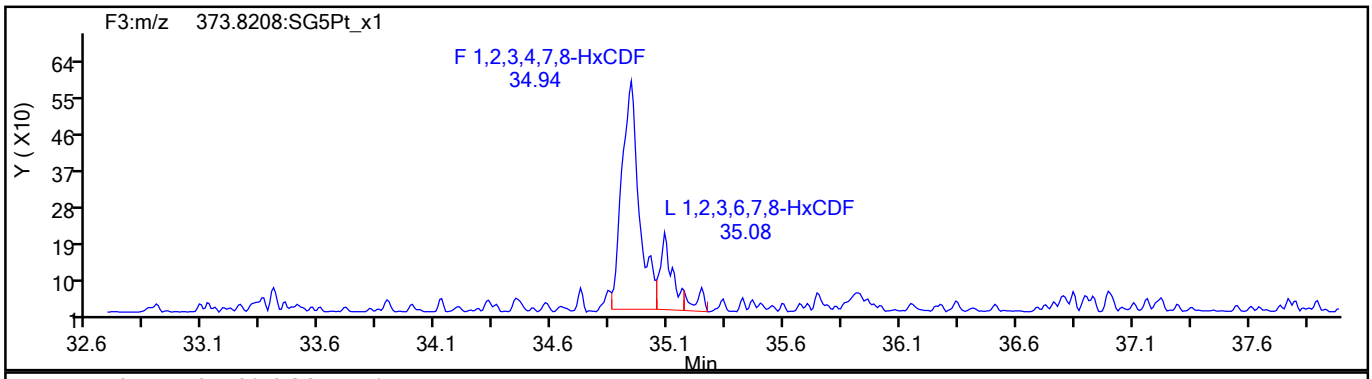

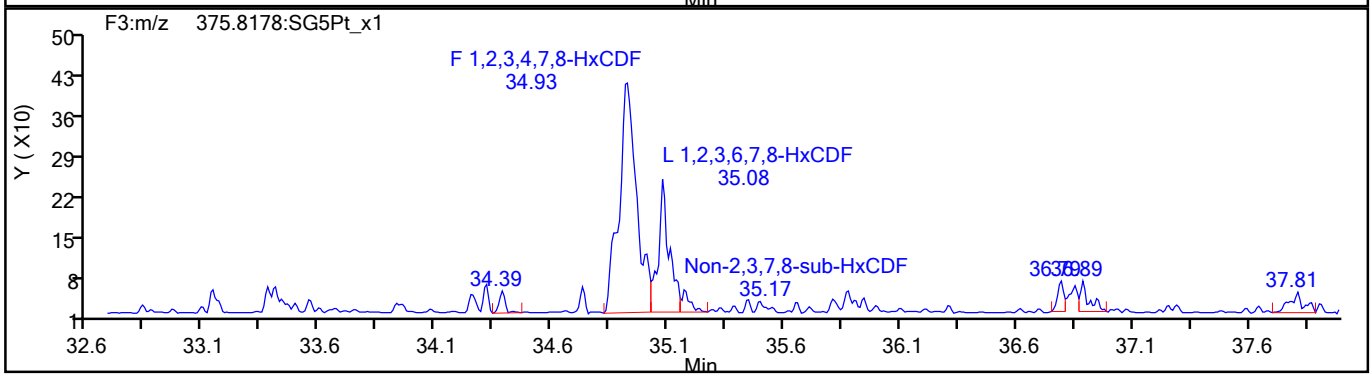

HxCDF Standards

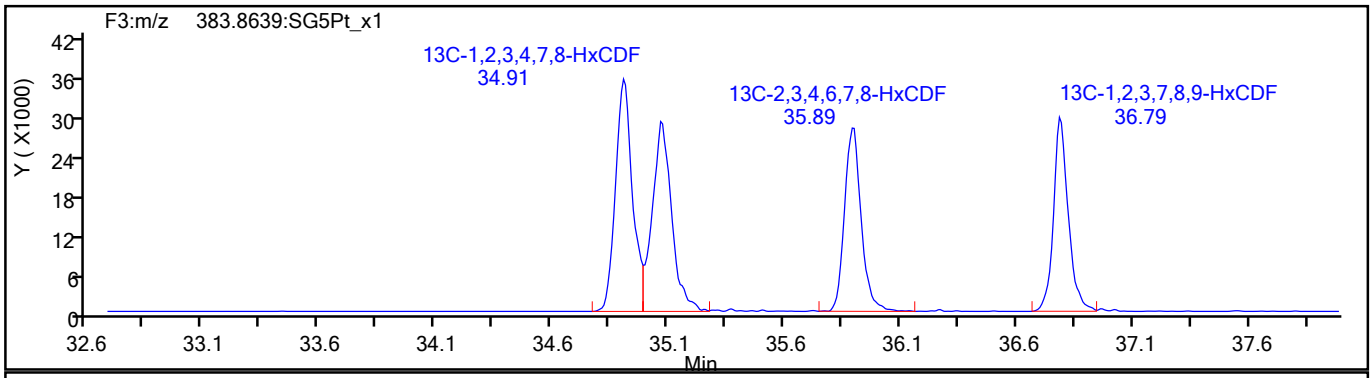

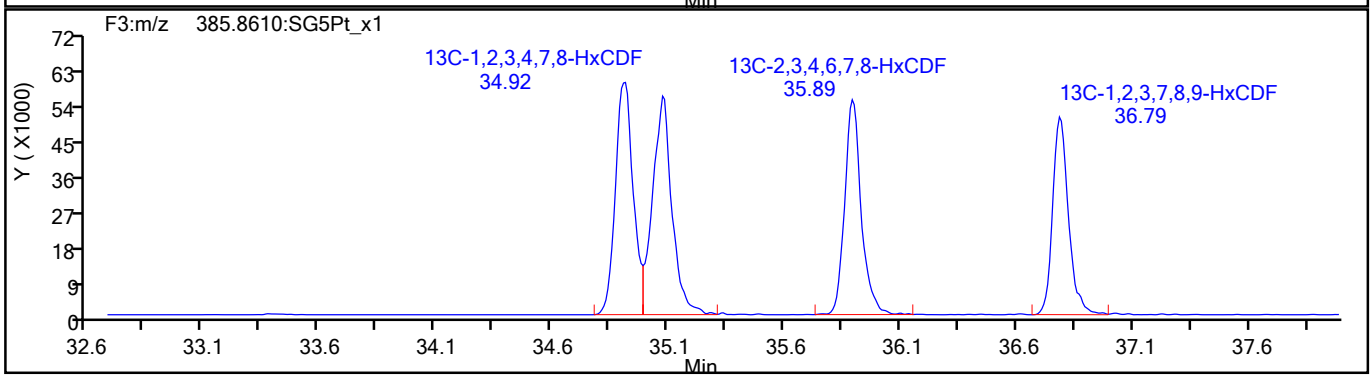

785560

Report Date: 20-Aug-2021 10:26:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

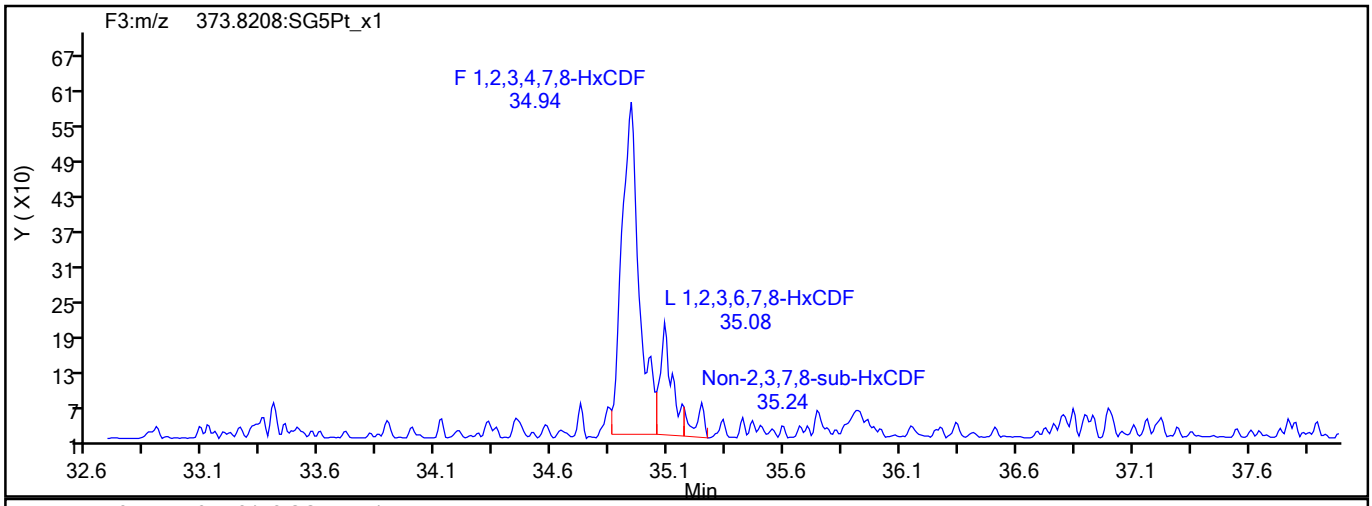

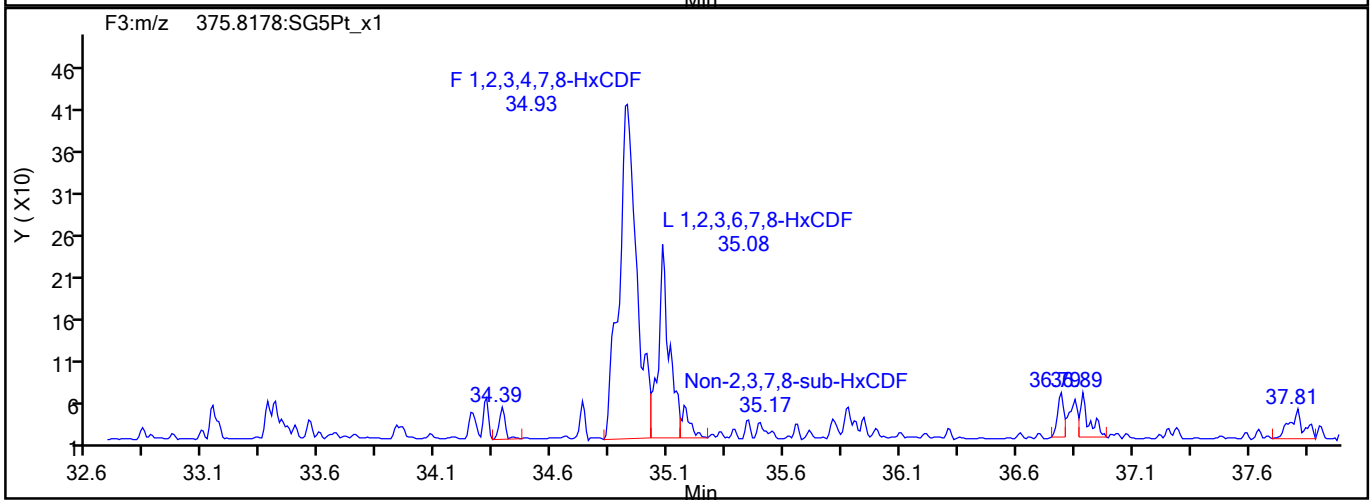

HxCDF Interference Mass

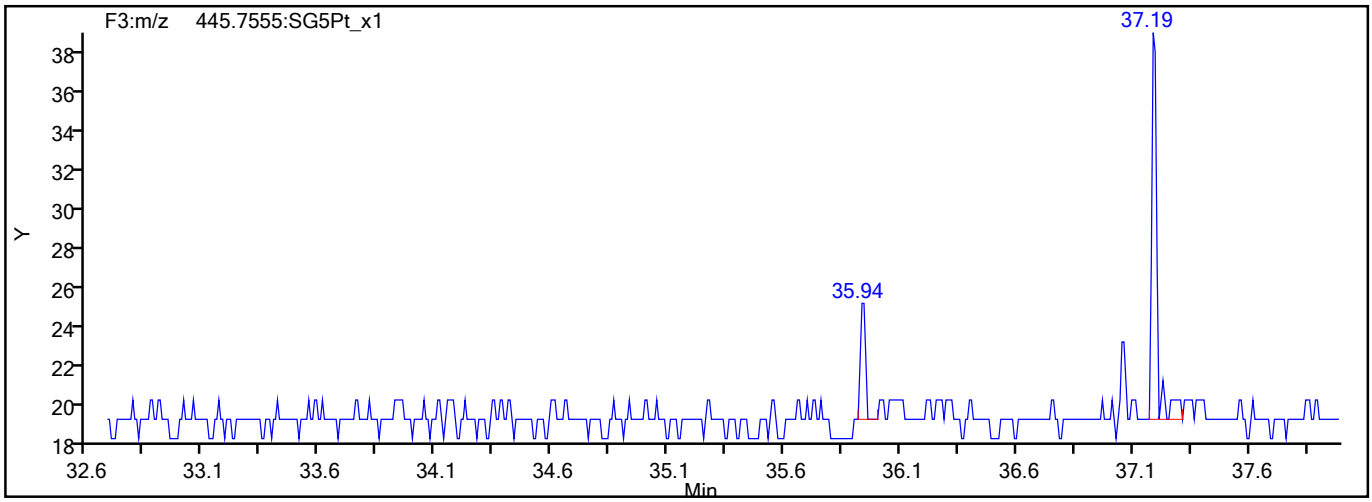

785561

Report Date: 20-Aug-2021 10:26:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

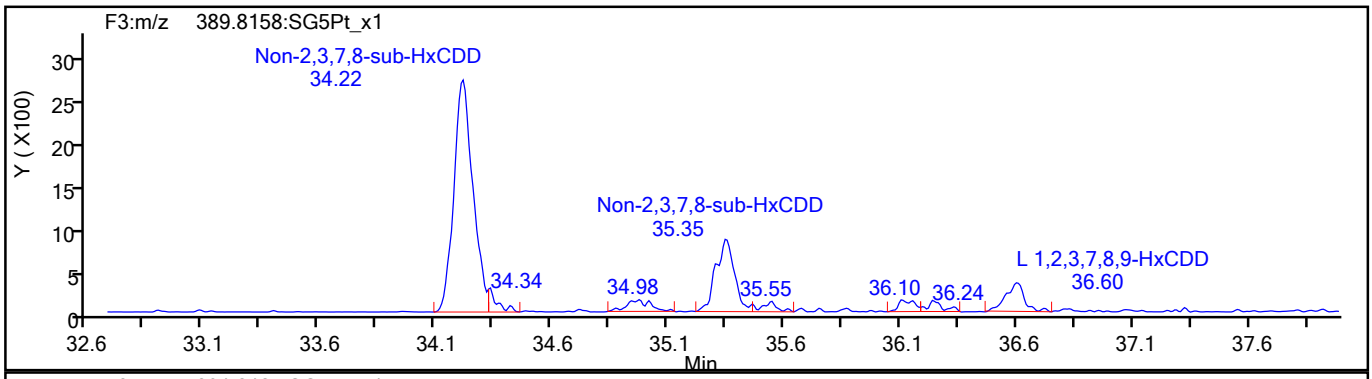

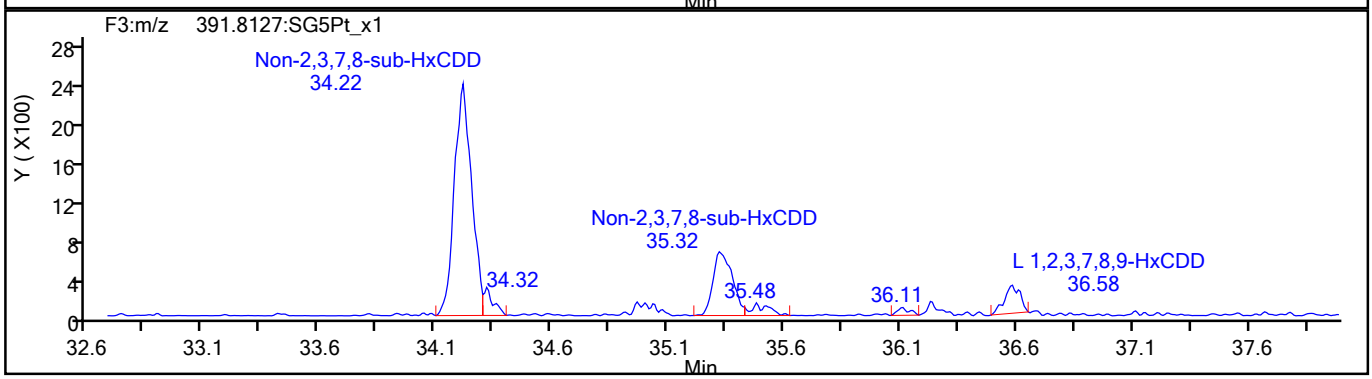

HxCDD Standards

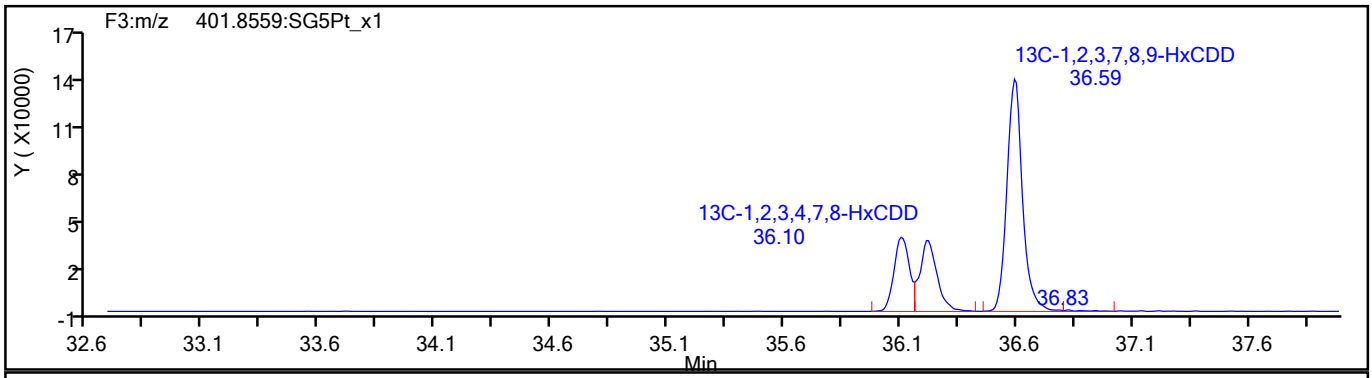

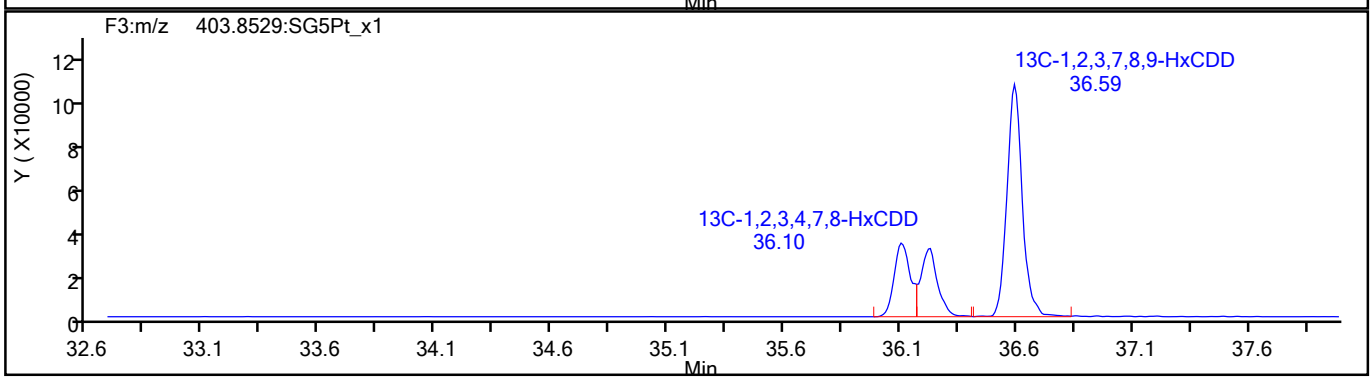

785562

Report Date: 20-Aug-2021 10:26:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

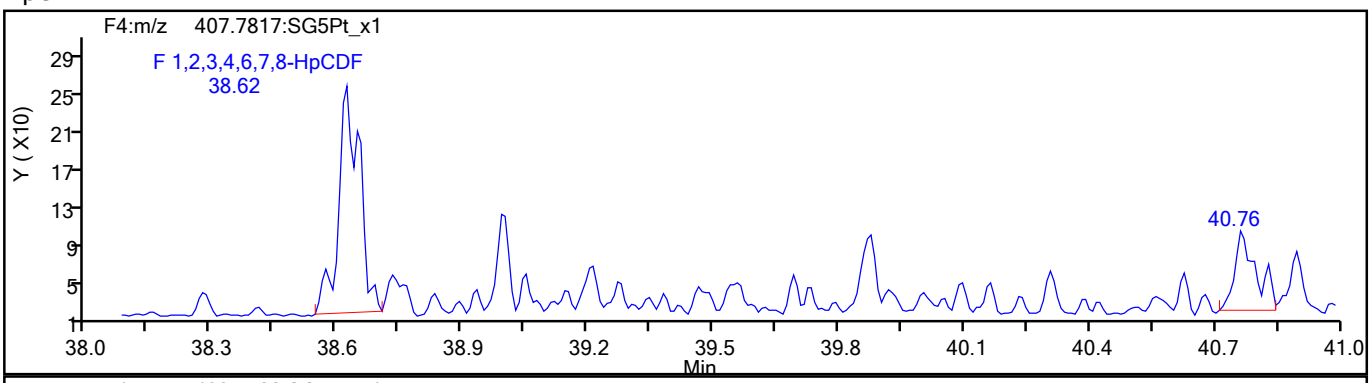

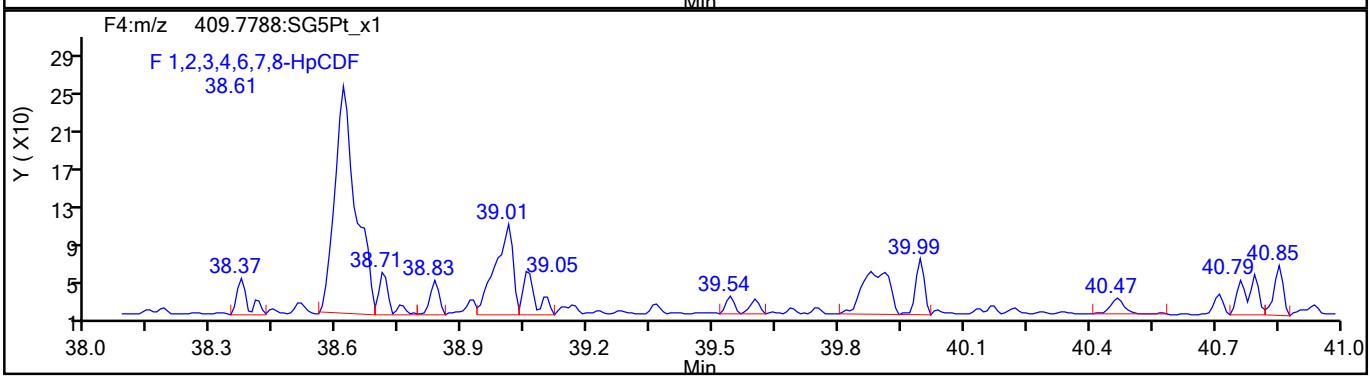

HpCDF Standards

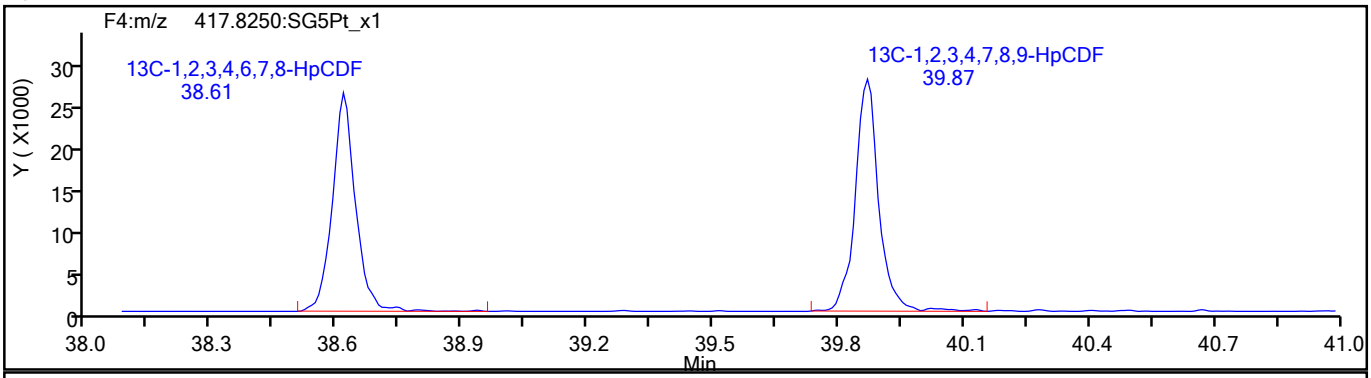

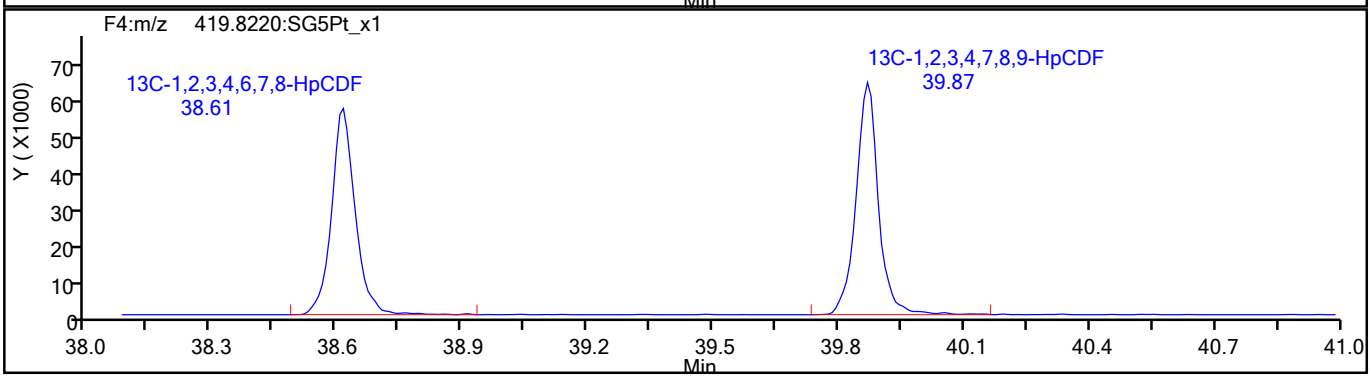

785563

Report Date: 20-Aug-2021 10:26:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

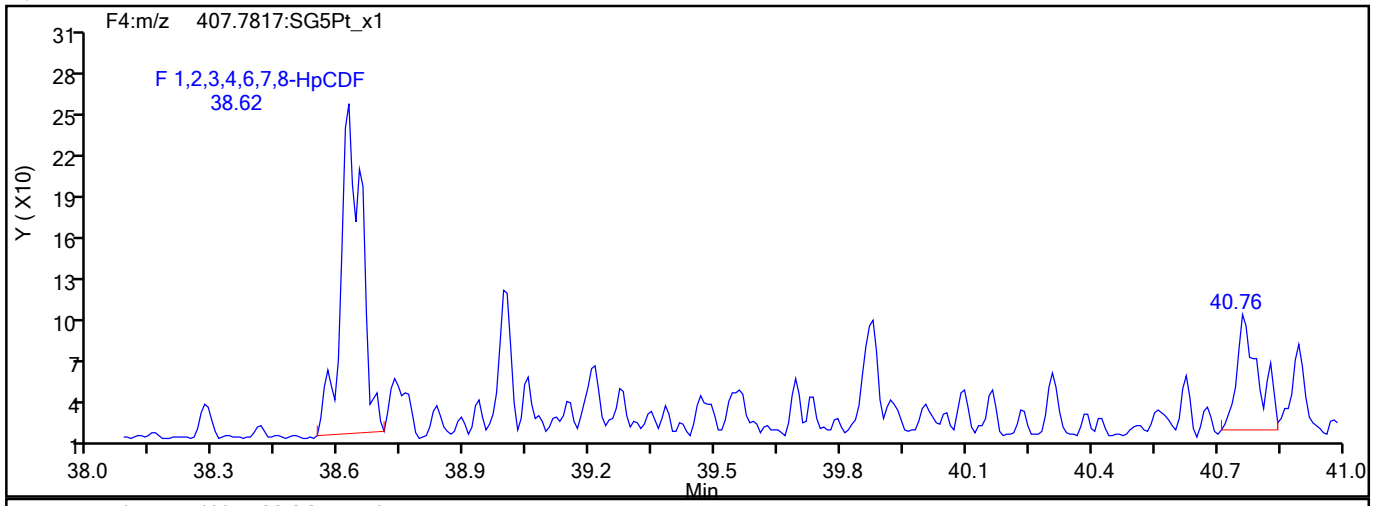

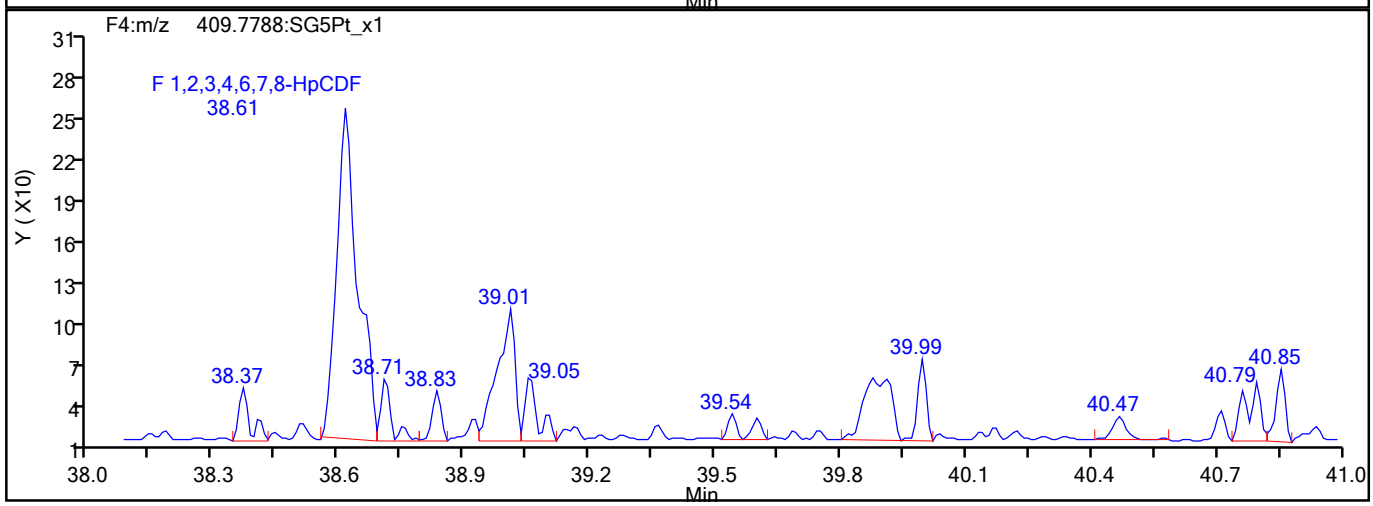

HpCDF Interference Mass

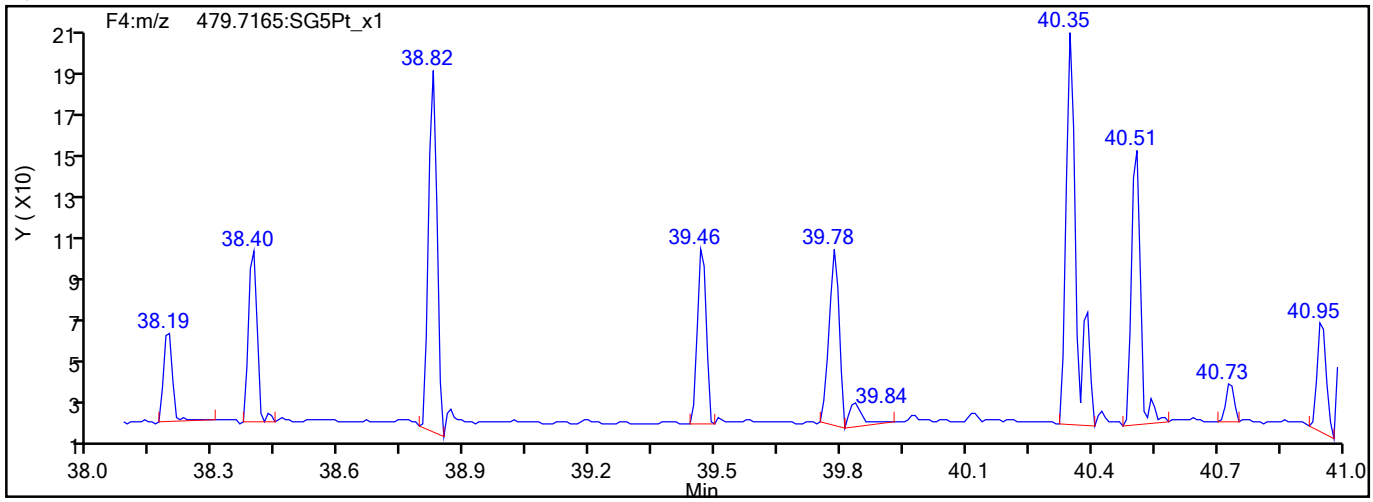

785564

Report Date: 20-Aug-2021 10:26:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

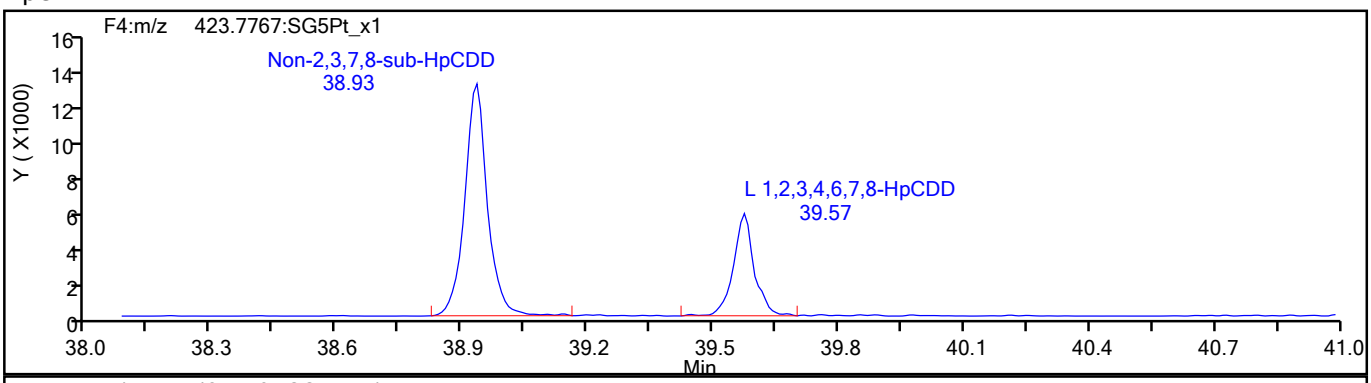

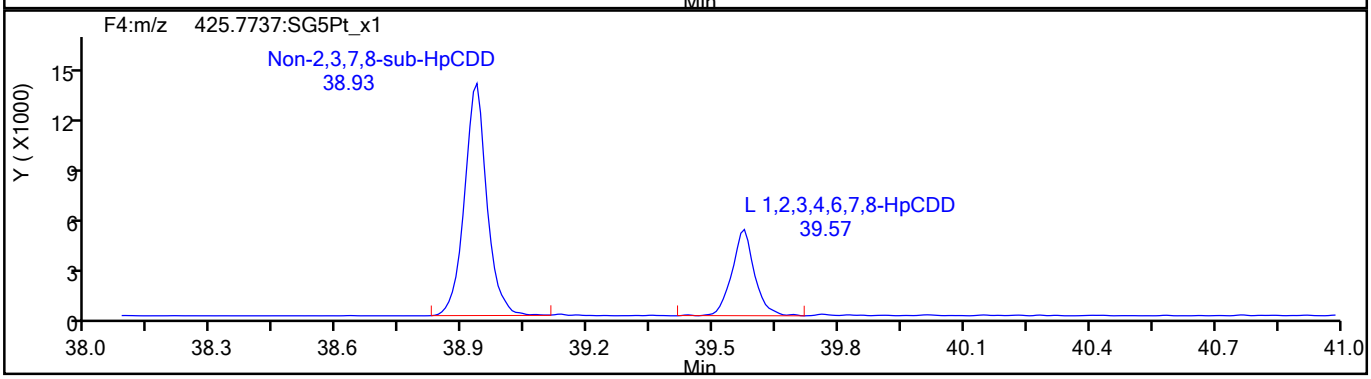

HpCDD Standards

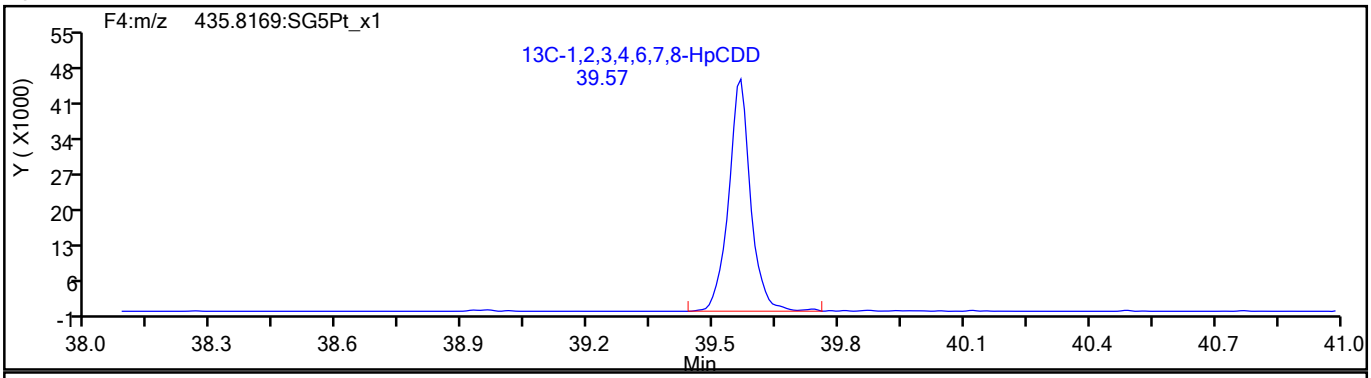

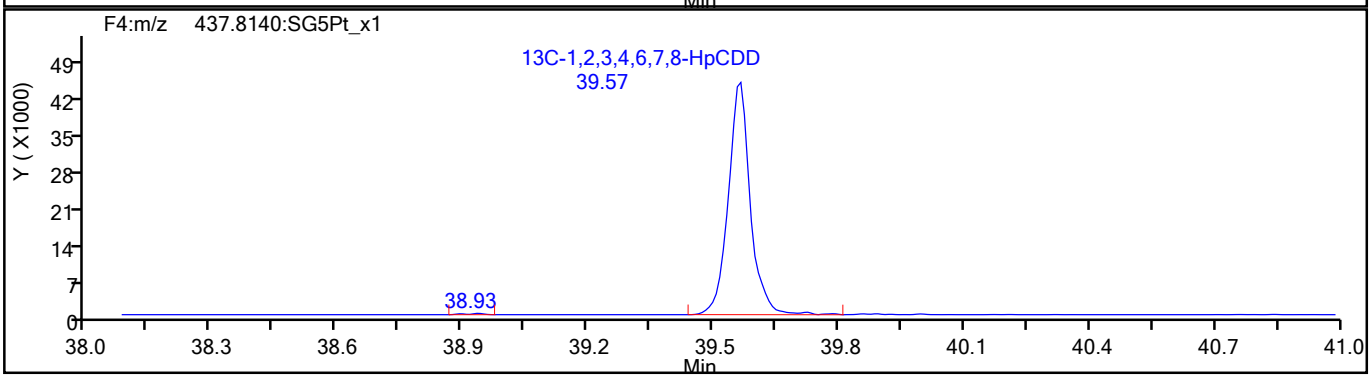

785565

Report Date: 20-Aug-2021 10:26:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

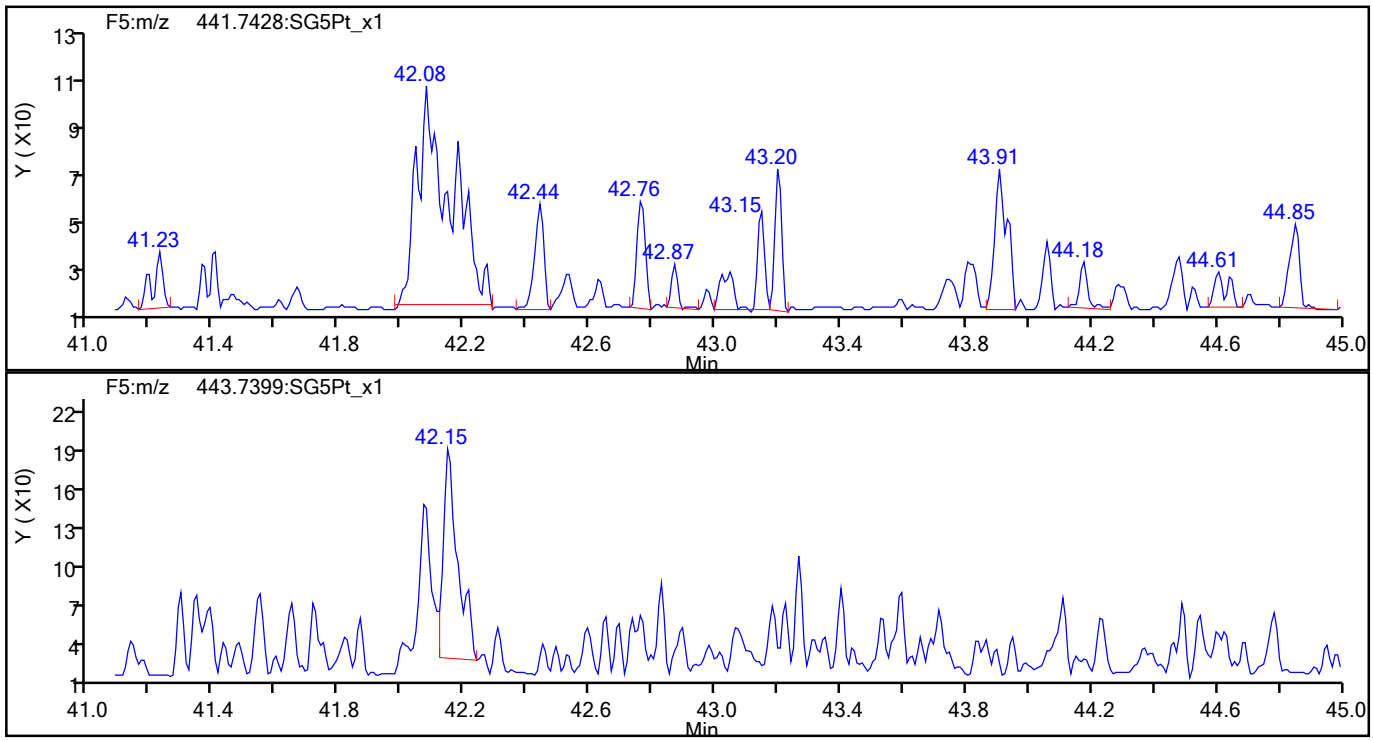

OCDF Standards

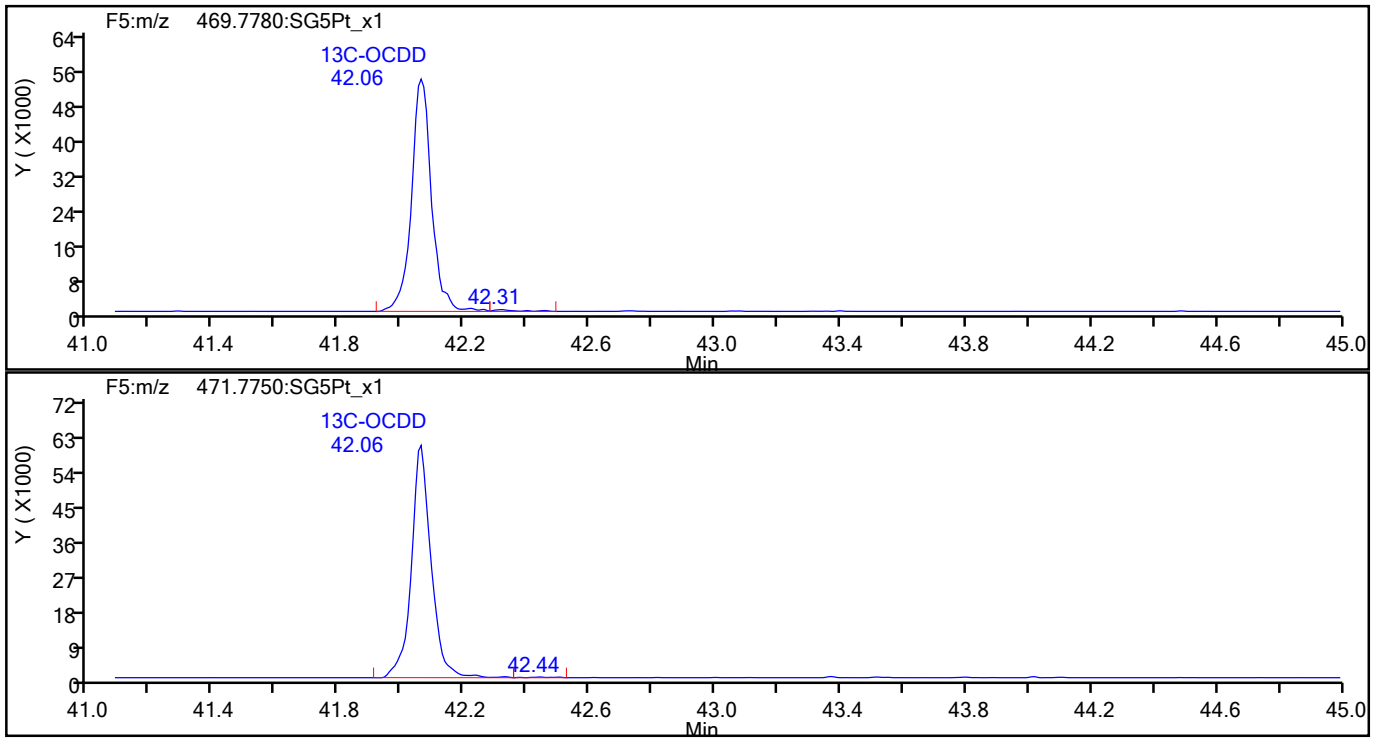

785566

Report Date: 20-Aug-2021 10:26:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

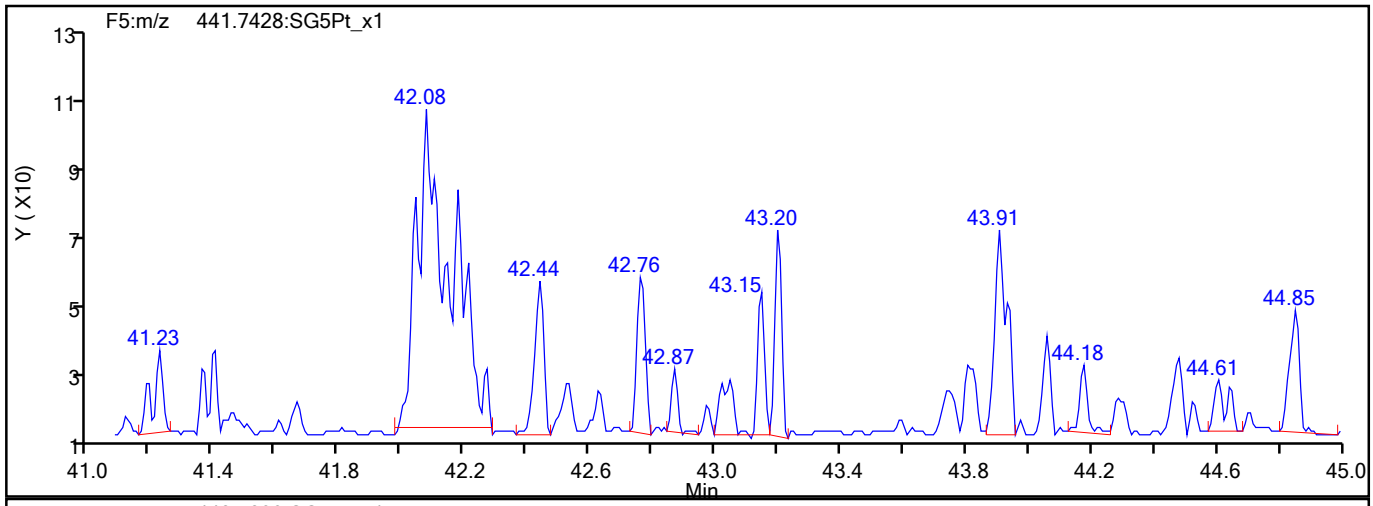

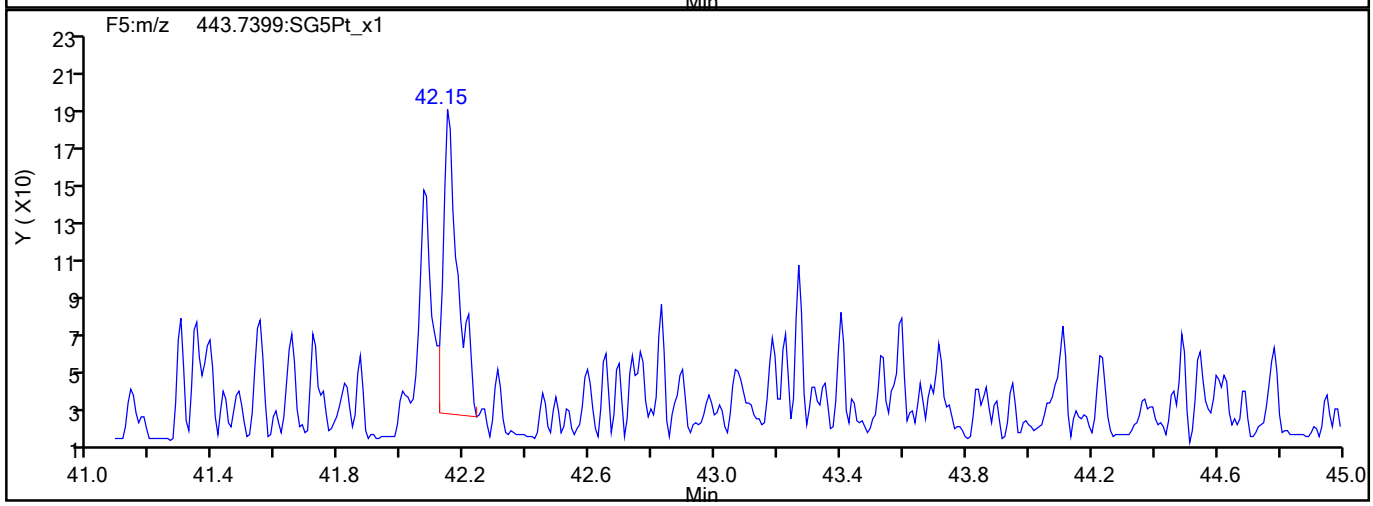

OCDF Interference Mass

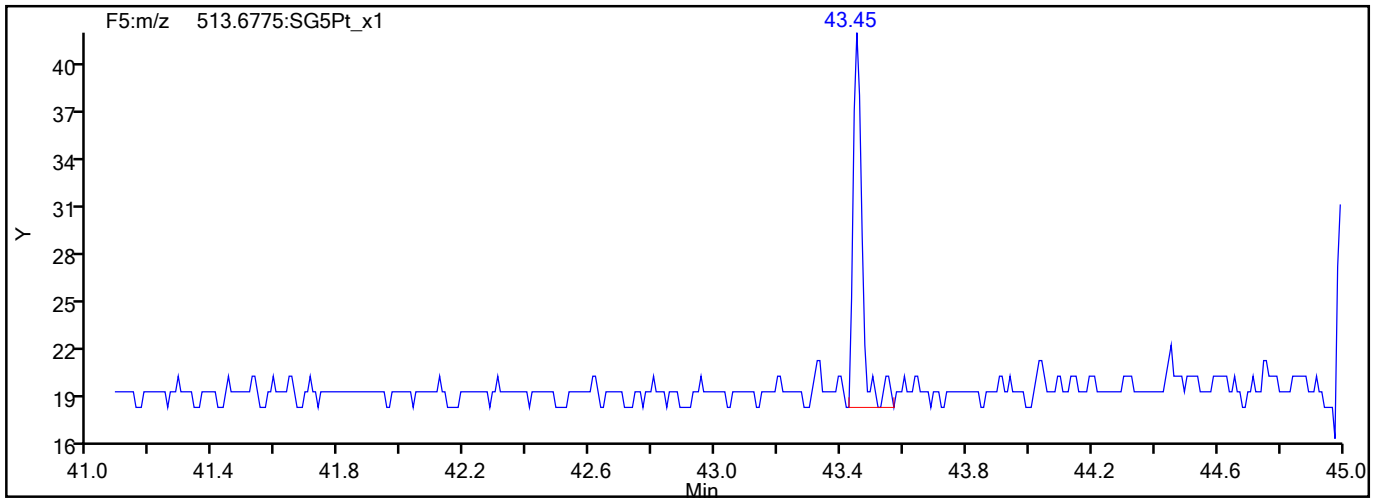

785567

Report Date: 20-Aug-2021 10:26:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

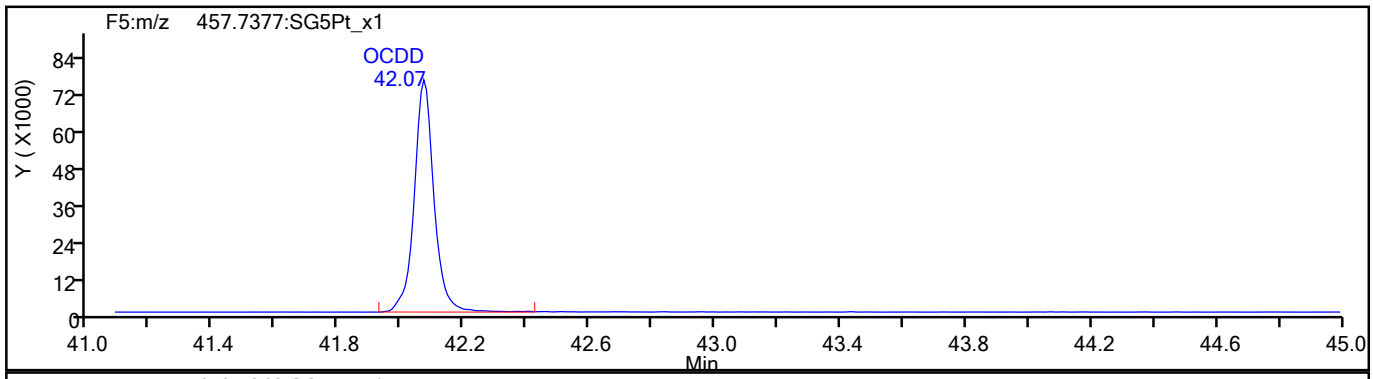

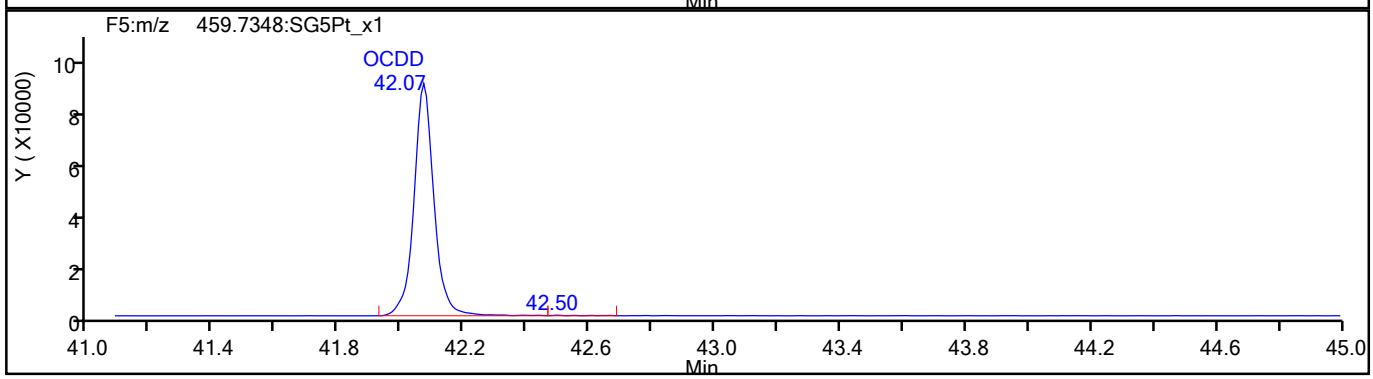

OCDD Standards

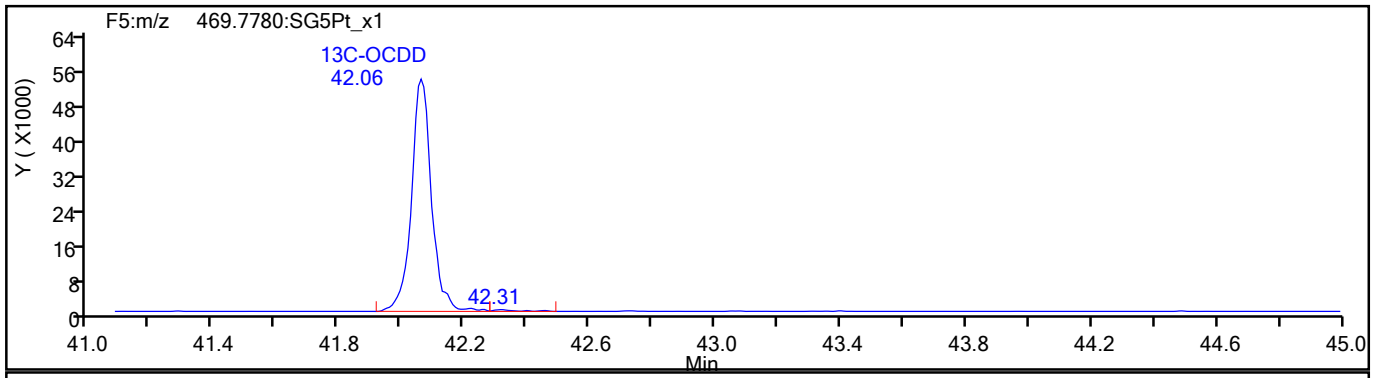

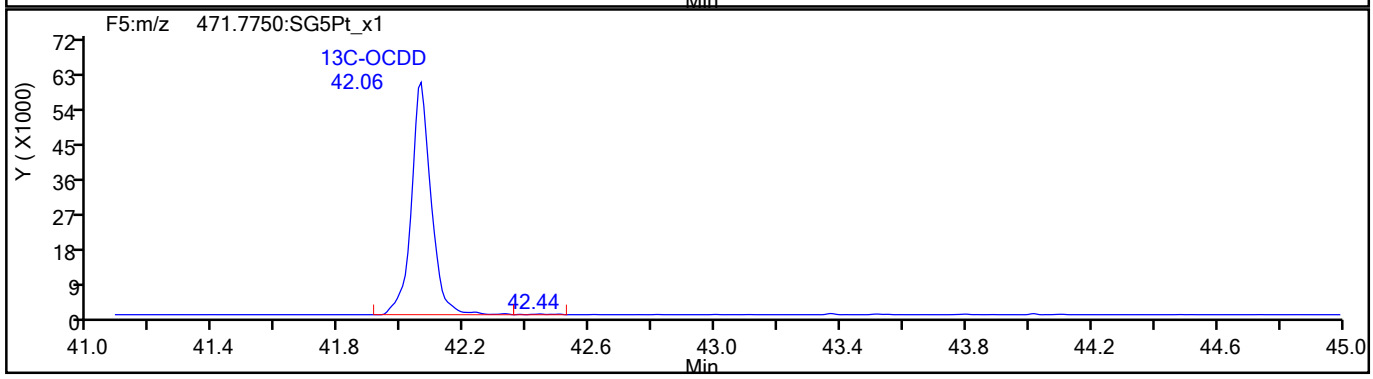

785568

Report Date: 20-Aug-2021 10:26:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

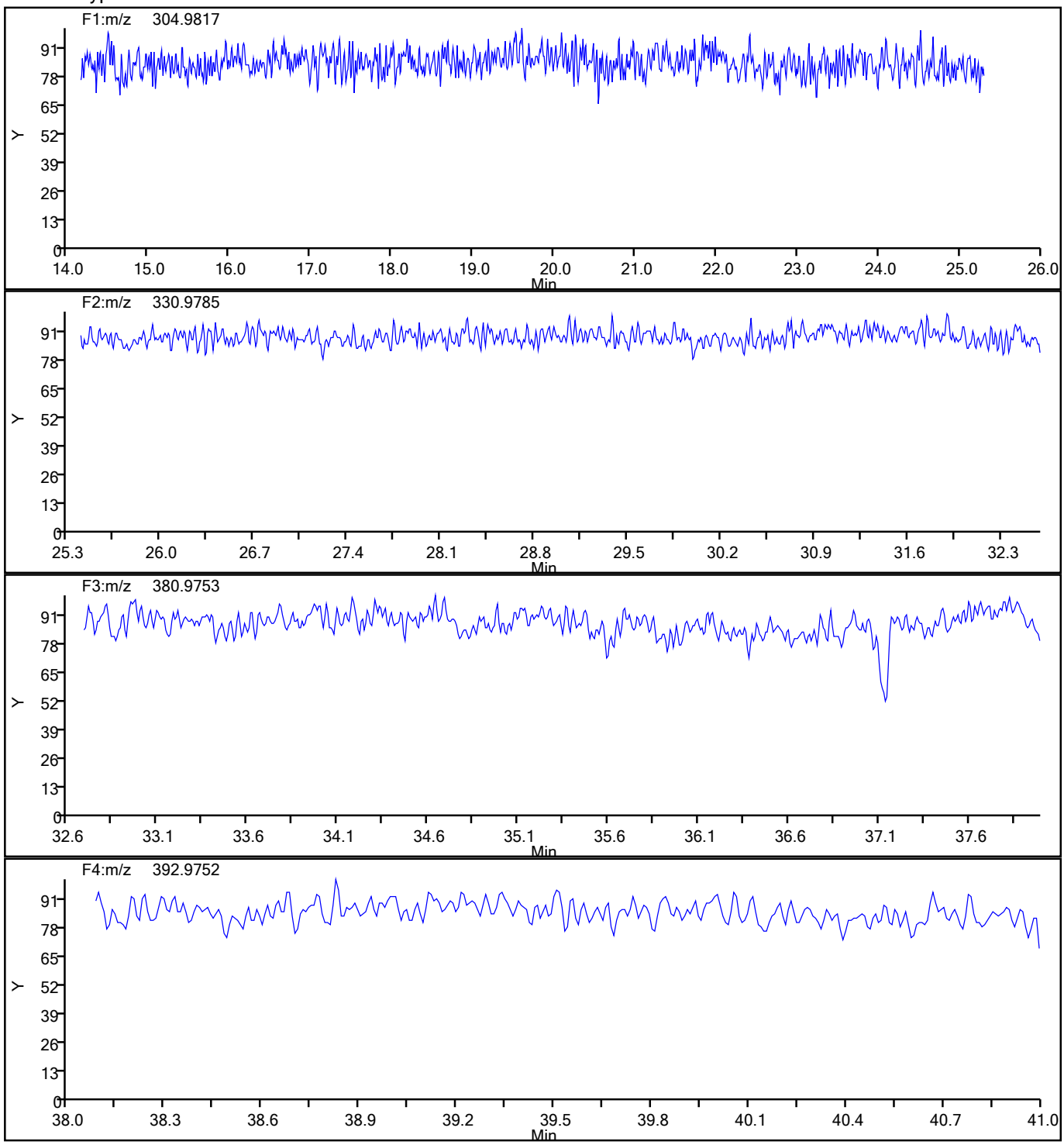

785569

Report Date: 20-Aug-2021 10:26:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_56.d		
Injection Date:	19-Aug-2021 08:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	517462	Sample Line#:	52
Column Type:	DB-5	Column Dia:	0.32 mm

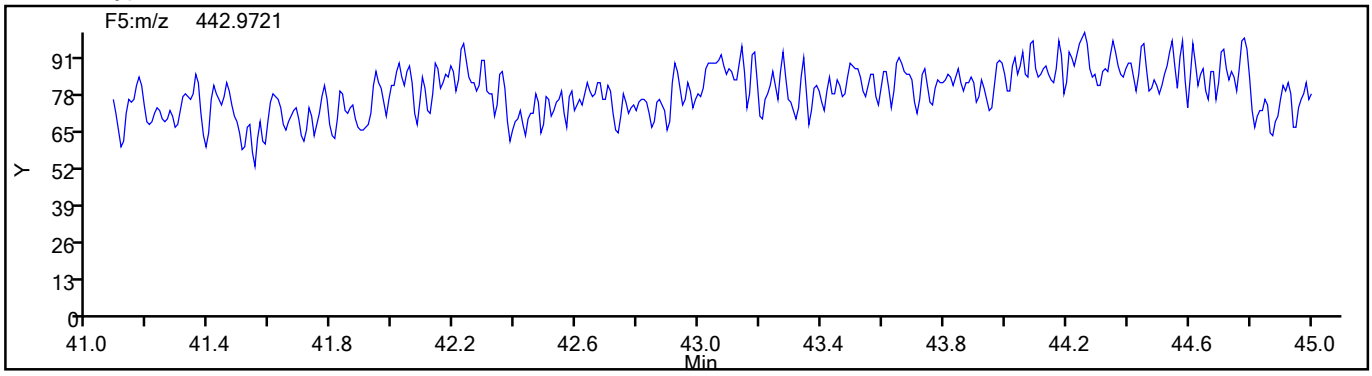

785570

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (10-12) RA
Lab Sample ID: 320-76888-6 RA
Matrix: Sediment
Lab File ID: 26AU21A11D2_012.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.20(g)
Date Analyzed: 08/26/2021 22:18
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 37.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520145
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	83	B	1.6	0.54

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	37		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	52		35-197

Report Date: 27-Aug-2021 09:43:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_012.d				
Lims ID:	320-76888-A-6-A				
Client ID:	11215702-072621-BN-SJSB094 (10-12)				
Sample Type:	Client				
Inject. Date:	26-Aug-2021 22:18:56	ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-76888-A-6-A				
Misc. Info.:	DB225RES				
Operator ID:		Instrument ID:	11D2		
Method:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m				
Limit Group:	HR - 1613B - ICAL				
Last Update:	27-Aug-2021 09:43:11	Calib Date:	14-Jul-2021 14:47:36		
Integrator:	Picker				
Quant Method:	Isotopic Dilution	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d				
Column 1 :	DB-225 (0.32 mm)		Det: F1:HRSIR		
Process Host:	CTX1681				

First Level Reviewer: bennettd Date: 27-Aug-2021 09:26:22

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.297	68447931	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.614	33739144	0.79	1.3327	37.0	37.0	0.2128	0.2128	36.99	
2,3,7,8-TCDF	17.642	8905391	0.73	0.9978	26.5	26.5	0.1718	0.1718		
D 13C-2,3,7,8-TCDD	16.064	21894957	0.77	0.8749	36.6	36.6	0.6134	0.6134	36.56	
2,3,7,8-TCDD	16.078	1654703	0.78	1.0570	7.150	7.150	0.2215	0.2215		
$ 37Cl4-2,3,7,8-TCDD	16.078	12395142		0.8648	20.9	20.9	0.0718	0.0718	52.35	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags

785572

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_012.d
Lims ID: 320-76888-A-6-A
Client ID: 11215702-072621-BN-SJSB094 (10-12)
Sample Type: Client
Inject. Date: 26-Aug-2021 22:18:56 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-A-6-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 09:26:22

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.297	16.288	1		29334892	6415766	15067	37667	426		
333.9339	16.297	16.288	1		39113039	8389232	16717	41792	502	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.614	17.619	0	1.081	14850547	2831765	7820	19550	362		
317.9389	17.614	17.619	0	1.081	18888597	3601326	8974	22435	401	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.642	17.632	1	1.002	3765219	639103	2181	5452	293		
305.8987	17.628	17.632	0	1.001	5140172	941044	2230	5575	422	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.069	0	0.986	9554726	2101000	15067	37667	139		
333.9339	16.064	16.069	0	0.986	12340231	2863948	16717	41792	171	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.078	16.082	0	1.001	725629	166269	2416	6040	69		
321.8936	16.078	16.082	0	1.001	929074	198858	2234	5585	89	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.082	0	0.987	12395142	2827486	3676	9190	769		

QC Flag Legend

Processing Flags

Report Date: 27-Aug-2021 09:43:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_012.d		
Injection Date:	26-Aug-2021 22:18:56	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	520145	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

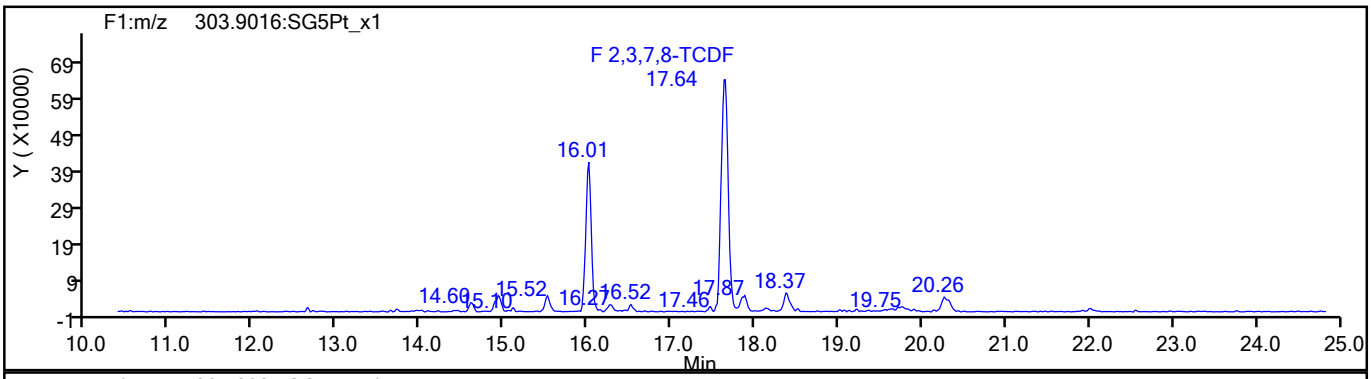

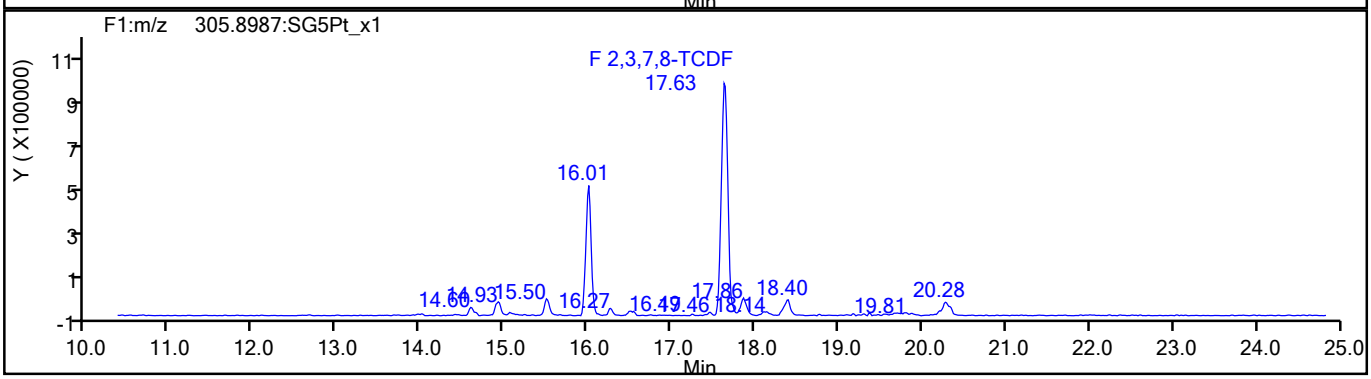

TCDF Standards

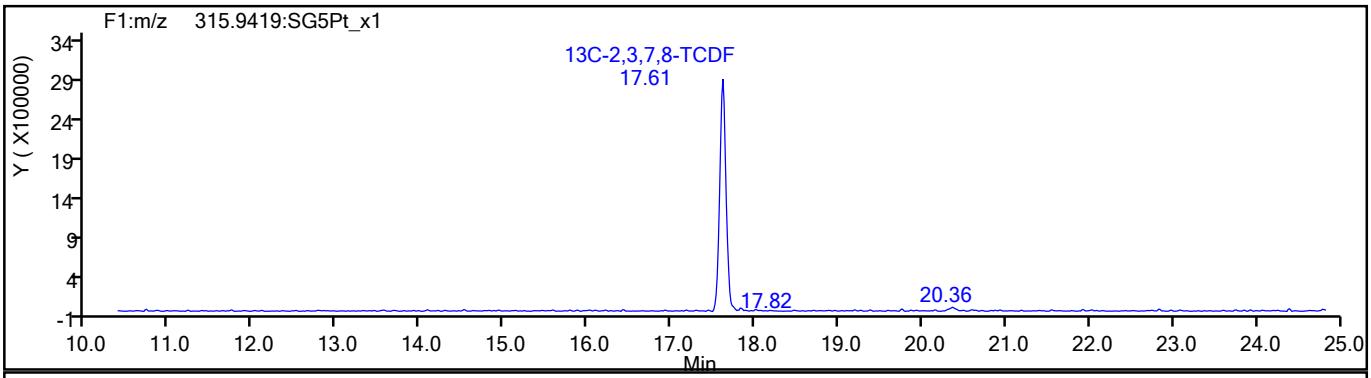

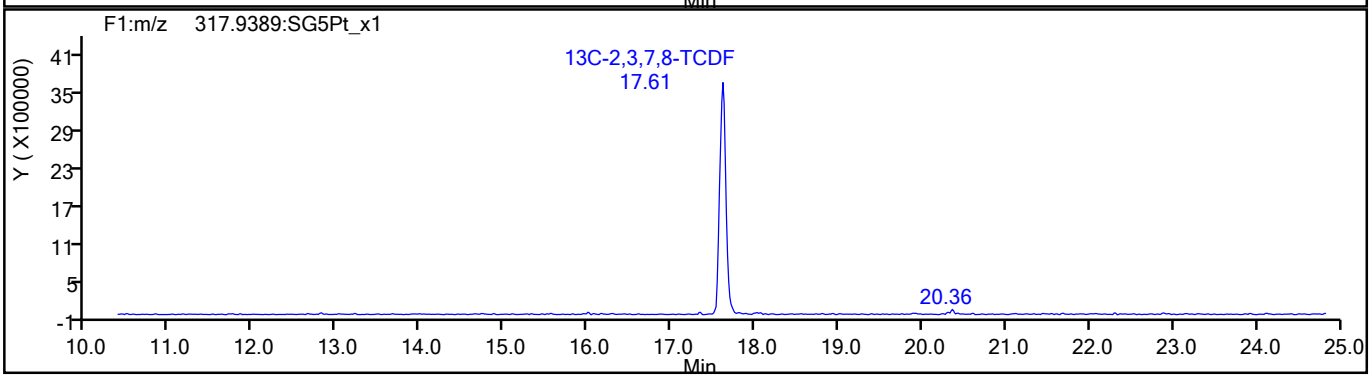

785574

Report Date: 27-Aug-2021 09:43:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_012.d		
Injection Date:	26-Aug-2021 22:18:56	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	520145	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

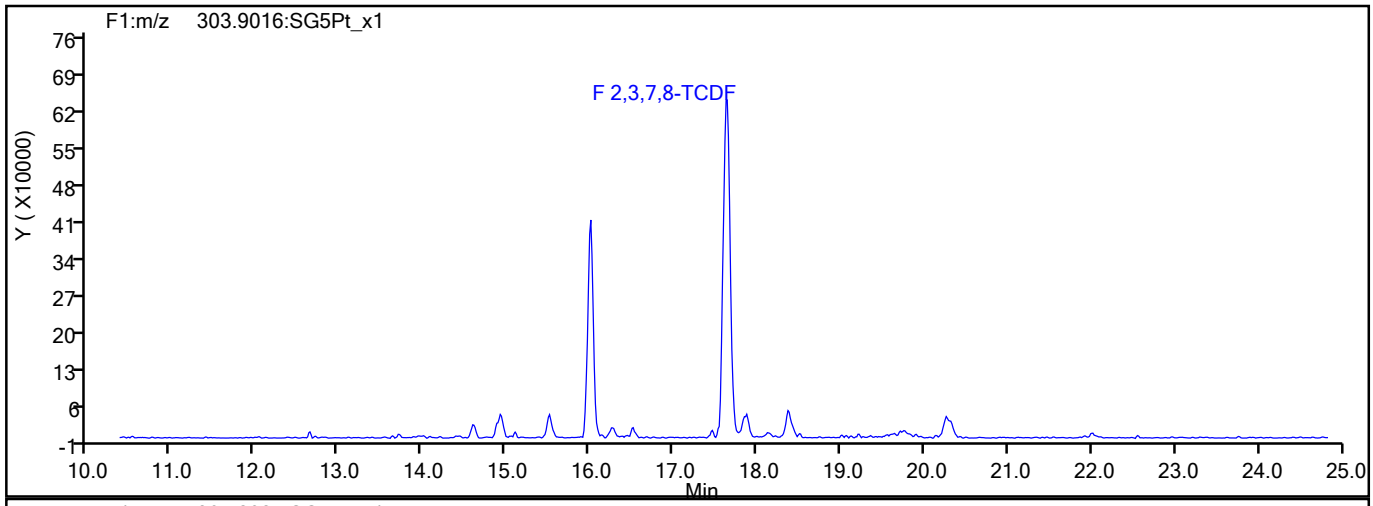

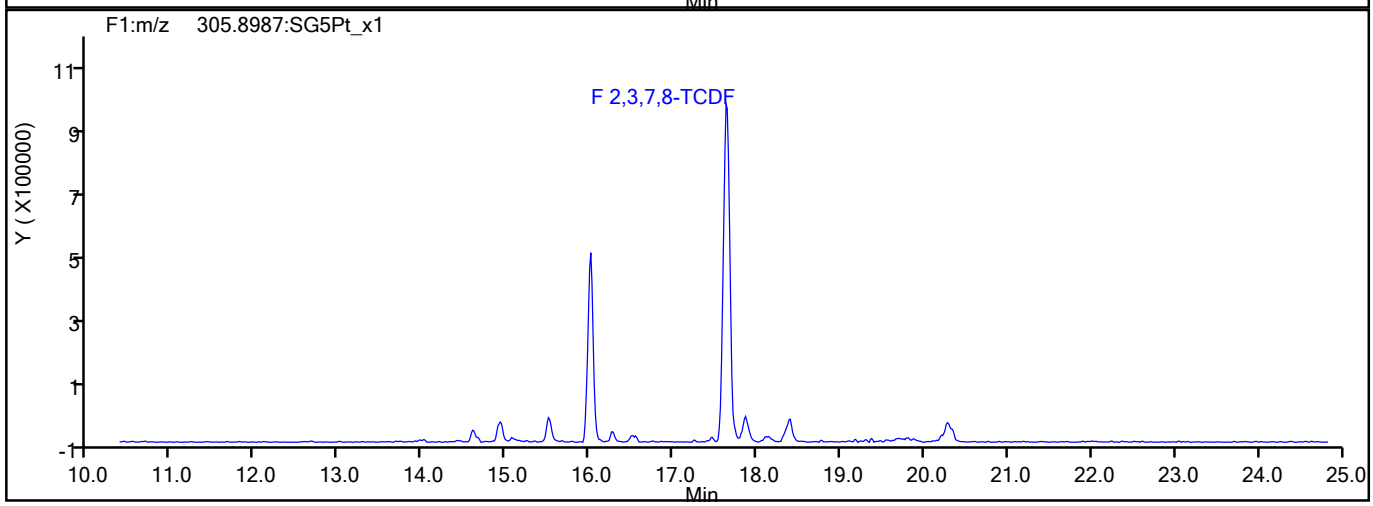

TCDF Interference Mass

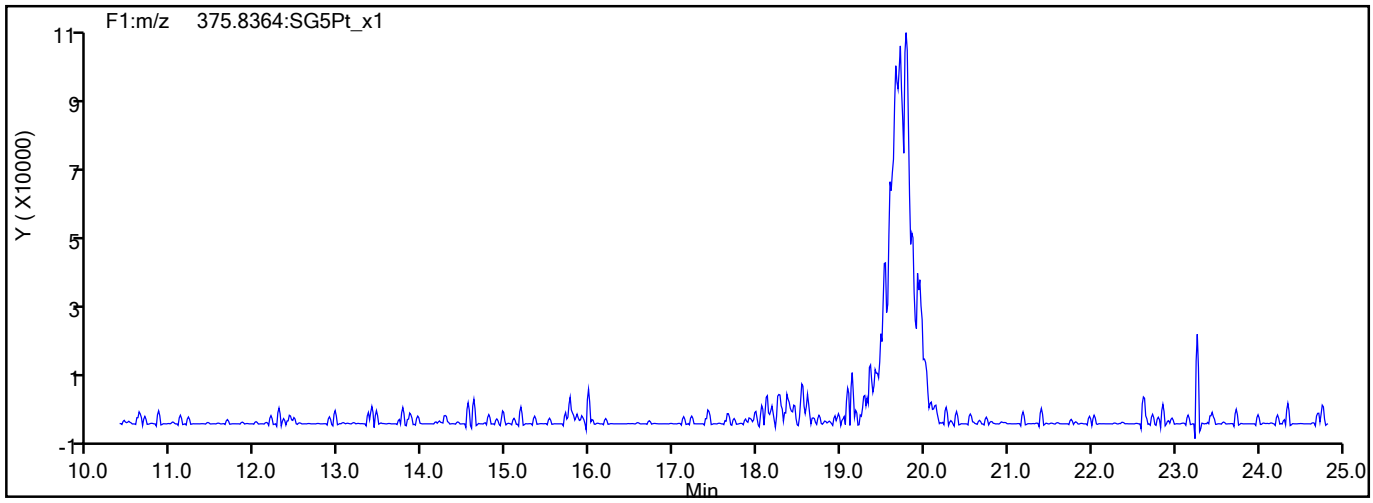

785575

Report Date: 27-Aug-2021 09:43:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_012.d		
Injection Date:	26-Aug-2021 22:18:56	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	520145	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

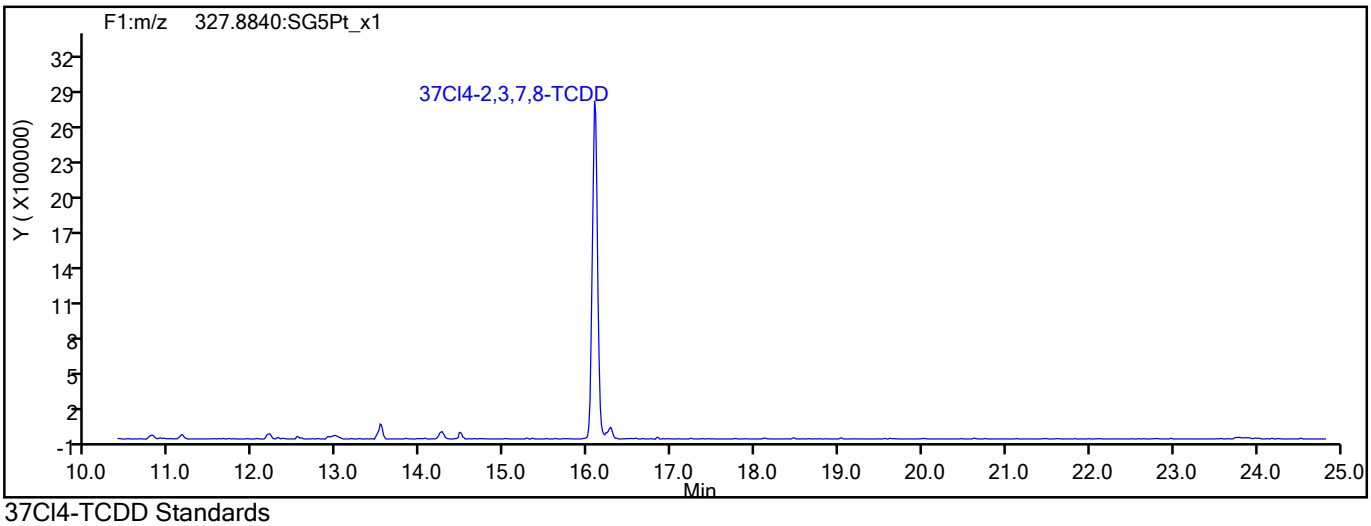

37Cl4-TCDD Standards

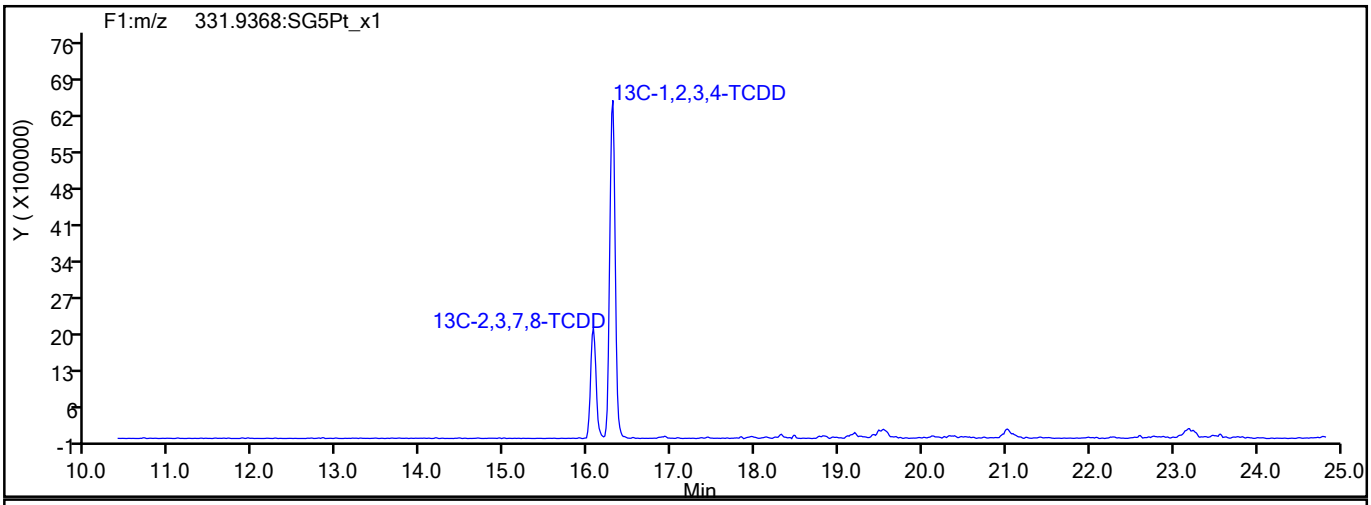

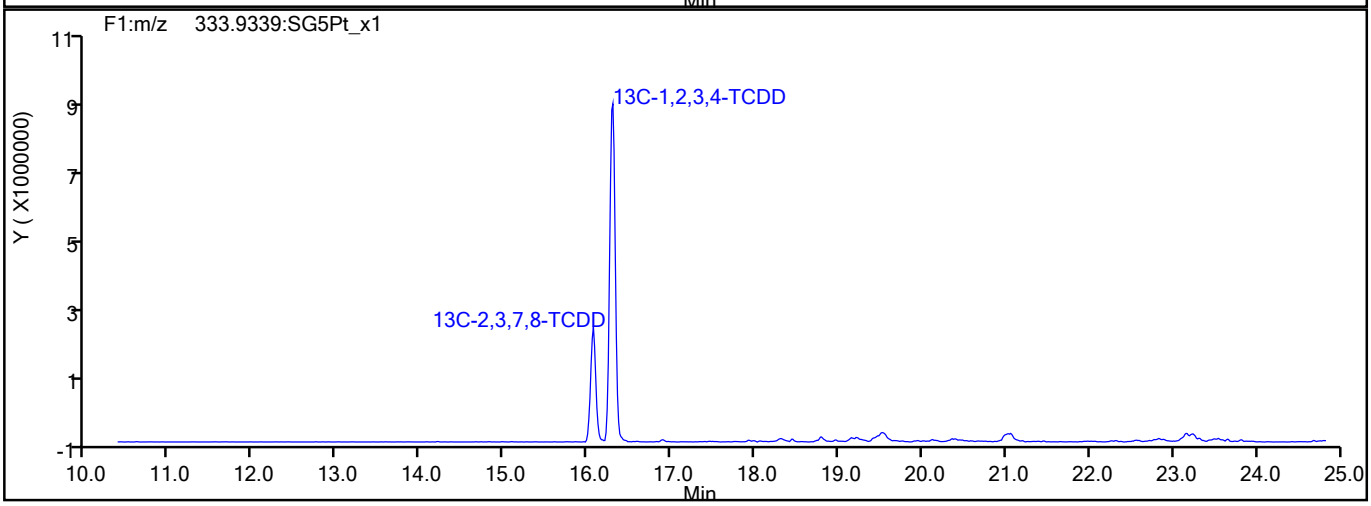

785576

Report Date: 27-Aug-2021 09:43:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_012.d		
Injection Date:	26-Aug-2021 22:18:56	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (10-12)		
Worklist#:	520145	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

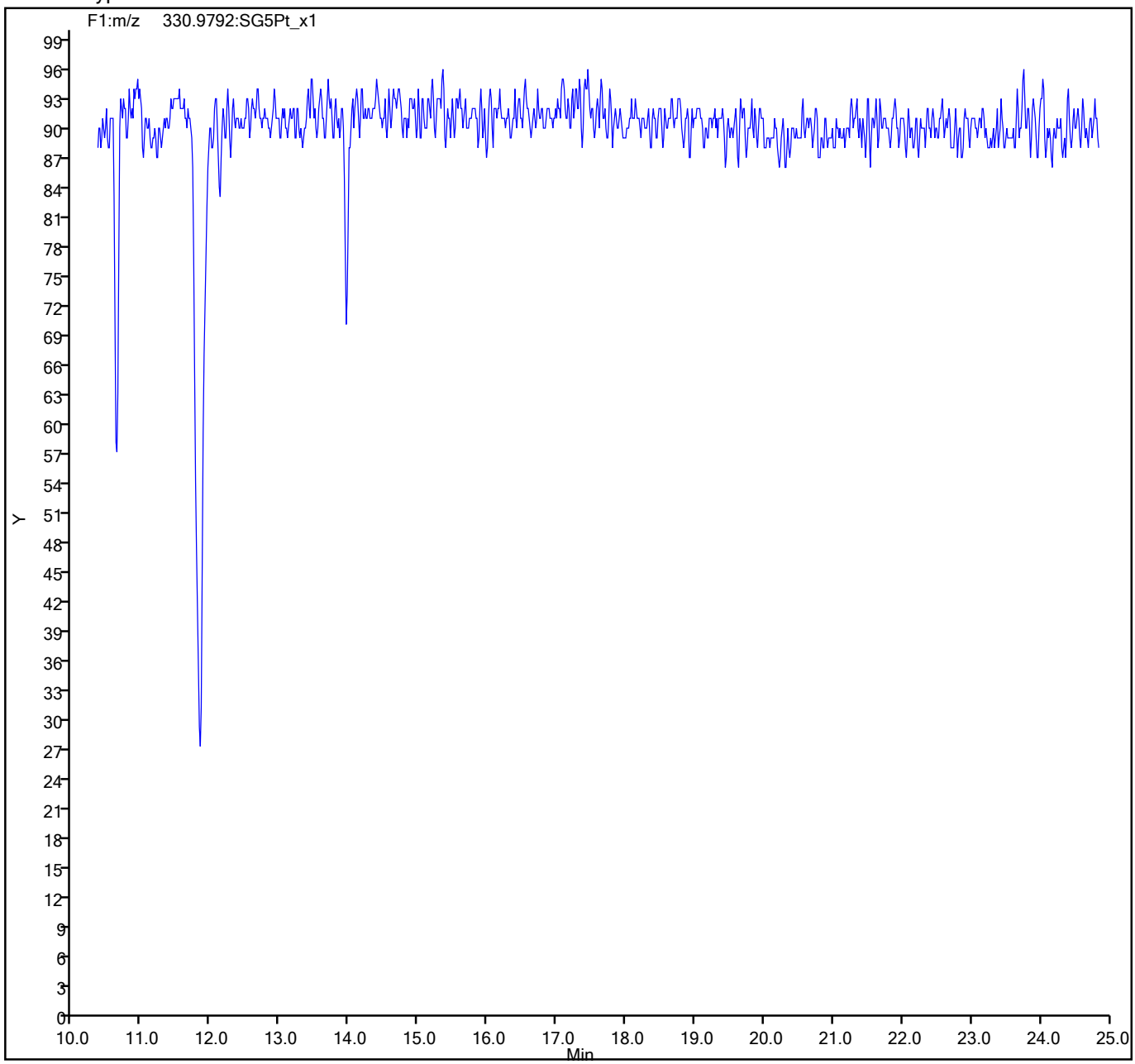

785577

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (12-14)
Lab Sample ID: 320-76888-7
Matrix: Sediment
Lab File ID: 17au21dfs1_57.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:30
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.34(g)
Date Analyzed: 08/19/2021 09:30
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 35.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.5	0.13
40321-76-4	1,2,3,7,8-PeCDD	ND		7.5	0.24
57117-41-6	1,2,3,7,8-PeCDF	ND		7.5	0.066
57117-31-4	2,3,4,7,8-PeCDF	ND		7.5	0.068
39227-28-6	1,2,3,4,7,8-HxCDD	ND		7.5	0.37
57653-85-7	1,2,3,6,7,8-HxCDD	ND		7.5	0.41
19408-74-3	1,2,3,7,8,9-HxCDD	4.8	J	7.5	0.36
70648-26-9	1,2,3,4,7,8-HxCDF	ND		7.5	0.047
57117-44-9	1,2,3,6,7,8-HxCDF	ND		7.5	0.047
72918-21-9	1,2,3,7,8,9-HxCDF	ND		7.5	0.047
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.5	0.048
35822-46-9	1,2,3,4,6,7,8-HpCDD	65	B	7.5	0.44
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		7.5	0.086
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.5	0.080
3268-87-9	OCDD	1400	B	15	1.2
39001-02-0	OCDF	ND		15	0.15
41903-57-5	Total TCDD	1.1	J q	1.5	0.13
30402-14-3	Total TCDF	8.1	B q	1.5	0.12
36088-22-9	Total PeCDD	8.8		7.5	0.24
30402-15-4	Total PeCDF	ND		7.5	0.068
34465-46-8	Total HxCDD	52		7.5	0.38
55684-94-1	Total HxCDF	ND		7.5	0.074
37871-00-4	Total HpCDD	190	B	7.5	0.44
38998-75-3	Total HpCDF	ND		7.5	0.086

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (12-14)
Lab Sample ID: 320-76888-7
Matrix: Sediment
Lab File ID: 17au21dfs1_57.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:30
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.34(g)
Date Analyzed: 08/19/2021 09:30
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 35.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	43		25-164
89059-46-1	13C-2,3,7,8-TCDF	40		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	41		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	40		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	44		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	47		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	42		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	54		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	49		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	43		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	42		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	45		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	44		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	53		26-138
114423-97-1	13C-OCDD	51		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	43		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d
Lims ID: 320-76888-A-7-A
Client ID: 11215702-072621-BN-SJSB094 (12-14)
Sample Type: Client
Inject. Date: 19-Aug-2021 09:30:00 ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-a-7-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 10:29:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1656

First Level Reviewer: stephensk Date: 19-Aug-2021 11:32:47

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.354	1397166	0.79	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.392	751599	0.81	1.3459	40.0	40.0	0.1922	0.1922	39.97	
2,3,7,8-TCDF	20.427	15845	0.87	1.0802	1.952	1.952	0.0385	0.0385		
A Non-2,3,7,8-sub-TCDF	19.878	6232	0.77	1.0802	0.8645	0.7676	0.0385	0.7676		RQa
S Total TCDF					2.816	2.719	0.0385	0.0385		RQ
D 13C-2,3,7,8-TCDD	21.741	554788	0.84	0.9317	42.6	42.6	0.1327	0.1327	42.62	
2,3,7,8-TCDD	21.672						0.0444	0.0444		U
$ 37Cl4-2,3,7,8-TCDD	21.775	243821		1.0083	17.3	17.3	0.0102	0.0102	43.27	
A Non-2,3,7,8-sub-TCDD	20.707	2212	0.77	1.0753	0.4313	0.3708	0.0444	0.3708		RQa
S Total TCDD					0.4313	0.3708	0.0444	0.0444		RQ
D 13C-1,2,3,7,8-PeCDF	27.247	640831	1.56	1.1405	40.2	40.2	0.1229	0.1229	40.22	
1,2,3,7,8-PeCDF	27.272						0.0220	0.0220		RQU
D 13C-2,3,4,7,8-PeCDF	28.737	687547	1.63	1.1253	43.7	43.7	0.1245	0.1245	43.73	
2,3,4,7,8-PeCDF	28.763						0.0228	0.0228		RQU
A F1 PeCDFs	24.648						0.007121	0.007121		
A Non-2,3,7,8-sub-PeCDF	28.125						0.0224	0.0224		RQU
S Total PeCDF							0.0228	0.0228		
D 13C-1,2,3,7,8-PeCDD	29.554	412497	1.56	0.7165	41.2	41.2	0.0575	0.0575	41.21	
1,2,3,7,8-PeCDD	29.638						0.0808	0.0808		U
A Non-2,3,7,8-sub-PeCDD	28.489	12690	1.42	1.0465	2.940	2.940	0.0808	1.329		
S Total PeCDD					2.940	2.940	0.0808	0.0808		
D 13C-1,2,3,4,7,8-HxCDF	34.927	613380	0.53	0.9648	53.7	53.7	0.1860	0.1860	53.69	
1,2,3,4,7,8-HxCDF	35.002						0.0157	0.0157		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.087	626366	0.53	1.0708	49.4	49.4	0.1676	0.1676	49.40	
1,2,3,6,7,8-HxCDF	35.002						0.0159	0.0159		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.895	513220	0.54	1.0413	41.6	41.6	0.1723	0.1723	41.63	
2,3,4,6,7,8-HxCDF	35.936						0.0160	0.0160		
D 13C-1,2,3,7,8,9-HxCDF	36.795	489806	0.54	0.9731	42.5	42.5	0.1844	0.1844	42.51	
1,2,3,7,8,9-HxCDF	36.820						0.0157	0.0157		RQU
A Non-2,3,7,8-sub-HxCDF	35.028						0.0158	0.0247		RQU
S Total HxCDF							0.0247	0.0247		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.593	1184009	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.113	418053	1.24	0.7587	46.5	46.5	0.1343	0.1343	46.54	M
1,2,3,4,7,8-HxCDD	36.256						0.1232	0.1232		U
D 13C-1,2,3,6,7,8-HxCDD	36.231	426904	1.23	0.8593	42.0	42.0	0.1186	0.1186	41.96	Ma
1,2,3,6,7,8-HxCDD	36.256						0.1373	0.1373		U
1,2,3,7,8,9-HxCDD	36.601	7589	1.23	1.1094	1.619	1.619	0.1204	0.1204		
A Non-2,3,7,8-sub-HxCDD	35.394	70280	1.22	1.0545	15.8	15.8	0.1266	11.5		M
S Total HxCDD					17.4	17.4	0.1270	0.1270		
D 13C-1,2,3,4,6,7,8-HpCDF	38.617	387515	0.45	0.7359	44.5	44.5	0.1489	0.1489	44.47	
1,2,3,4,6,7,8-HpCDF	38.617						0.0287	0.0287		RQU
D 13C-1,2,3,4,7,8,9-HpCDF	39.863	428411	0.46	0.6854	52.8	52.8	0.1599	0.1599	52.79	
1,2,3,4,7,8,9-HpCDF	39.939						0.0268	0.0268		RQU
A Non-2,3,7,8-sub-HpCDF	39.258						0.0276	0.0276		U
S Total HpCDF							0.0287	0.0287		
D 13C-1,2,3,4,6,7,8-HpCDD	39.568	362564	1.07	0.6745	45.4	45.4	0.0707	0.0707	45.40	
1,2,3,4,6,7,8-HpCDD	39.577	82799	1.05	1.0503	21.7	21.7	0.1472	0.1472		
A Non-2,3,7,8-sub-HpCDD	39.258	165056	1.03	1.0503	43.3	43.3	0.1472	43.3		
S Total HpCDD					65.1	65.1	0.1472	0.1472		
D 13C-OCDD	42.064	655046	0.91	0.5446	101.6	101.6	0.1381	0.1381	50.79	
OCDF	42.089						0.0507	0.0507		U
OCDD	42.073	1677230	0.89	1.0620	482.2	482.2	0.4011	0.4011		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d
Lims ID: 320-76888-A-7-A
Client ID: 11215702-072621-BN-SJSB094 (12-14)
Sample Type: Client
Inject. Date: 19-Aug-2021 09:30:00 ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-a-7-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 10:29:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1656

First Level Reviewer: stephensk Date: 19-Aug-2021 11:32:47

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.354	21.427	-4		617418	86913	65	162	1337		a
333.9338	21.371	21.427	-3		779748	107159	31	77	3457	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.392	20.401	-1	0.955	337302	42995	166	415	259		
317.9389	20.410	20.401	0	0.956	414297	58077	35	87	1659	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.427	20.436	-1	1.002	7357	1306	5	12	261		
305.8987	20.435	20.436	0	1.002	8488	1009	12	30	84	0.87(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQa
303.9016	19.696	19.878	-11	0.966	3498	587	5	12	117		a
	Empc Correction				2711	387	5	12	77		
305.8987	19.662	19.878	-13	0.964	3521	503	12	30	42	0.99(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.741	21.743	0	1.018	254016	32763	65	162	504		
333.9338	21.741	21.743	0	1.018	300772	40475	31	77	1306	0.84(0.65-0.89)	
2,3,7,8-TCDD											U
319.8965	21.777						10	25			
321.8936	21.777						4	10			
37Cl4-2,3,7,8-TCDD											
327.8847	21.775	21.849	-4	1.020	243821	30595	8	20	3824		
A Non-2,3,7,8-sub-TCDD											RQa
319.8965	19.662	20.707	-63	0.904	1323	243	10	25	24		a
	Empc Correction				962	204	10	25	20		
321.8936	19.679	20.707	-62	0.905	1250	266	4	10	67	1.06(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	27.247	27.288	-2	1.276	390546	59366	62	155	958		
353.8970	27.247	27.288	-2	1.276	250285	35559	47	117	757	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											RQU
339.8597	27.313						2	5			
341.8567	27.313						7	17			
13C-2,3,4,7,8-PeCDF											
351.9000	28.737	28.795	-3	1.346	425720	58196	62	155	939		
353.8970	28.746	28.795	-3	1.346	261827	37571	47	117	799	1.63(1.32-1.78)	
2,3,4,7,8-PeCDF											RQU
339.8597	28.820						2	5			
341.8567	28.820						7	17			
A F1 PeCDFs											
339.8597	24.648						1	2			
341.8567	24.648						2	5			
A Non-2,3,7,8-sub-PeCDF											U
339.8597	27.003	28.125	-67	0.991	26	16	2	5	8		
341.8567	27.011	28.125	-67	0.991	153	36	7	17	5	0.17(1.32-1.78)	
	Empc Correction				16	10	7	17	1		
13C-1,2,3,7,8-PeCDD											
367.8949	29.554	29.612	-3	1.384	251217	33283	24	60	1387		
369.8919	29.546	29.612	-4	1.384	161280	19968	8	20	2496	1.56(1.32-1.78)	
1,2,3,7,8-PeCDD											U
355.8546	29.637						14	35			
357.8516	29.637						4	10			
A Non-2,3,7,8-sub-PeCDD											
355.8546	26.085	28.489	-144	0.883	1638	259	14	35	19		
357.8516	26.060	28.489	-145	0.882	1157	193	4	10	48	1.42(1.32-1.78)	
355.8546	26.860	28.489	-98	0.909	3327	475	14	35	34		
357.8516	26.868	28.489	-97	0.909	2408	423	4	10	106	1.38(1.32-1.78)	
355.8546	28.493	28.489	0	0.964	2485	339	14	35	24		
357.8516	28.468	28.489	-1	0.963	1675	184	4	10	46	1.48(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.927	34.942	-1	0.954	213145	39651	57	142	696		
385.8610	34.910	34.942	-2	0.954	400235	71075	131	327	543	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	34.959						6	15			
375.8178	34.959						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.087	35.111	-1	0.959	217625	37819	57	142	663		
385.8610	35.078	35.111	-2	0.959	408741	65691	131	327	501	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.119						6	15			
375.8178	35.119						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.895	35.919	-1	0.981	180701	36182	57	142	635		
385.8610	35.895	35.919	-1	0.981	332519	66845	131	327	510	0.54(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	35.936						6	15			
375.8178	35.936						2	5			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.795	36.811	-1	1.006	171492	36677	57	142	643		
385.8610	36.795	36.811	-1	1.006	318314	66359	131	327	507	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQU
373.8208	36.828						6	15			
375.8178	36.828						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.133	35.028	-113	0.949	93	31	6	15	5		
375.8178	33.133	35.028	-113	0.949	109	38	2	5	19	0.85(1.05-1.43)	
	Empc Correction				74	24	2	5	12		
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.593	36.609	-1		660772	145233	52	130	2793		
403.8529	36.593	36.609	-1		523237	116716	55	137	2122	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											M
401.8559	36.113	36.129	-1	0.987	231455	49277	52	130	948		M
403.8529	36.113	36.129	-1	0.987	186598	42510	55	137	773	1.24(1.05-1.43)	M
1,2,3,4,7,8-HxCDD											U
389.8158	36.146						29	72			
391.8127	36.146						19	47			
13C-1,2,3,6,7,8-HxCDD											Ma
401.8559	36.231	36.247	-1	0.990	235053	48422	52	130	931		M
403.8529	36.223	36.247	-1	0.990	191851	39532	55	137	719	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											U
389.8158	36.264						29	72			
391.8127	36.264						19	47			
1,2,3,7,8,9-HxCDD											
389.8158	36.601	36.626	-1	1.014	4182	780	29	72	27		
391.8127	36.610	36.626	-1	1.014	3407	555	19	47	29	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											M
389.8158	34.228	35.394	-70	0.945	28214	4612	29	72	159		
391.8127	34.219	35.394	-70	0.944	23133	3776	19	47	199	1.22(1.05-1.43)	
389.8158	35.347	35.394	-3	0.976	10380	1659	29	72	57		M
391.8127	35.356	35.394	-2	0.976	8553	1629	19	47	86	1.21(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.617	38.626	-1	1.055	119468	29961	33	82	908		
419.8220	38.617	38.626	-1	1.055	268047	66559	82	205	812	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQU
407.7817	38.630						14	35			
409.7788	38.630						2	5			
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.863	39.880	-1	1.089	135563	35732	33	82	1083		
419.8220	39.871	39.880	-1	1.090	292848	78208	82	205	954	0.46(0.37-0.51)	

Report Date: 20-Aug-2021 10:29:17 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8,9-HpCDF											RQU
407.7817	39.885						14	35			
409.7788	39.885						2	5			
A Non-2,3,7,8-sub-HpCDF											U
407.7817	39.258						14	35			
409.7788	39.258						2	5			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.568	39.569	0	1.081	187390	48462	24	60	2019		
437.8140	39.568	39.569	0	1.081	175174	46632	26	65	1794	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.577	39.582	0	1.000	42315	11086	31	77	358		
425.7737	39.577	39.582	0	1.000	40484	10528	28	70	376	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.937	39.258	-19	0.984	83777	21416	31	77	691		
425.7737	38.937	39.258	-19	0.984	81279	20522	28	70	733	1.03(0.88-1.20)	
13C-OCDD											
469.7780	42.064	42.072	0	1.150	312591	73669	34	85	2167		
471.7750	42.064	42.072	0	1.150	342455	82200	45	112	1827	0.91(0.76-1.02)	
OCDF											U
441.7428	42.165						4	10			
443.7399	42.165						17	42			
OCDD											
457.7377	42.073	42.081	0	1.000	790617	184938	66	165	2802		
459.7348	42.073	42.081	0	1.000	886613	209988	67	167	3134	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Lims ID:	320-76888-A-7-A		
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Inject. Date:	19-Aug-2021 09:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	53

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	751599	101072

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	751599	101072

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.696	3498	587	3521	503	0.8645	0.99	RQa
19.696	2711	387	3521	503	0.7676		Empc Correction
Signal Totals:							
	2711	387	3521	503			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7019	1090				0.99	RQa
	6232	890					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.8645 = (7019 * 100.000) / (751599 * 1.080)

Empc Amount: 0.7676 = (6232 * 100.000) / (751599 * 1.080)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Lims ID:	320-76888-A-7-A		
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Inject. Date:	19-Aug-2021 09:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	53

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	554788	73238

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	554788	73238

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.662	1323	243	1250	266	0.4313	1.06	RQa
19.662	962	204	1250	266	0.3708		Empc Correction
Signal Totals:							
	962	204	1250	266			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2573	509				1.06	RQa
	2212	470					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4313 = (2573 * 100.000) / (554788 * 1.075)
Empc Amount: 0.3708 = (2212 * 100.000) / (554788 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Lims ID:	320-76888-A-7-A		
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Inject. Date:	19-Aug-2021 09:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	53

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	640831	94925
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	687547	95767

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	664189	95346

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.003	26	16	153	36	0.0261	0.17	RQ
27.003	26	16	16	10	0.006133		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Lims ID:	320-76888-A-7-A		
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Inject. Date:	19-Aug-2021 09:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	53

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	412497	53251

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	412497	53251

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.085	1638	259	1157	193	0.6475	1.42	
26.860	3327	475	2408	423	1.33	1.38	
28.493	2485	339	1675	184	0.9637	1.48	
Signal Totals:							
	7450	1073	5240	800			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12690	1873				1.42	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.940 = (12690 * 100.000) / (412497 * 1.046)

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Lims ID:	320-76888-A-7-A		
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Inject. Date:	19-Aug-2021 09:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	53

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	613380	110726
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	626366	103510
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	513220	103027
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	489806	103036

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	560693	105074

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.133	93	31	109	38	0.0299	0.85	RQ
33.133	93	31	74	24	0.0247		Empc Correction
33.916	93	42	39	28	0.0195	2.38	RQ
33.916	48	34	39	28	0.0129		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Lims ID:	320-76888-A-7-A		
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Inject. Date:	19-Aug-2021 09:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	53

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	418053	91787
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	426904	87954
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	422478	89870

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.228	28214	4612	23133	3776	11.5	1.22	
35.347	10380	1659	8553	1629	4.25	1.21	M
Signal Totals:							
	38594	6271	31686	5405			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	70280	11676				1.22	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 15.775 = (70280 * 100.000) / (422478 * 1.055)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Lims ID:	320-76888-A-7-A		
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Inject. Date:	19-Aug-2021 09:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	53

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	387515	96520
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	428411	113940

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	407963	105230

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Lims ID:	320-76888-A-7-A		
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Inject. Date:	19-Aug-2021 09:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	53

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	362564	95094

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	362564	95094

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.937	83777	21416	81279	20522	43.3	1.03	
Signal Totals:							
	83777	21416	81279	20522			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	165056	41938				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 43.344 = (165056 * 100.000) / (362564 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d				
Injection Date:	19-Aug-2021 09:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-7-A	Lab Sample ID:	320-76888-7		
Client ID:	11215702-072621-BN-SJSB094 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	53
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

RT: 36.11
Area: 466503
Amount: 94.062602
Amount Units: pg/ul

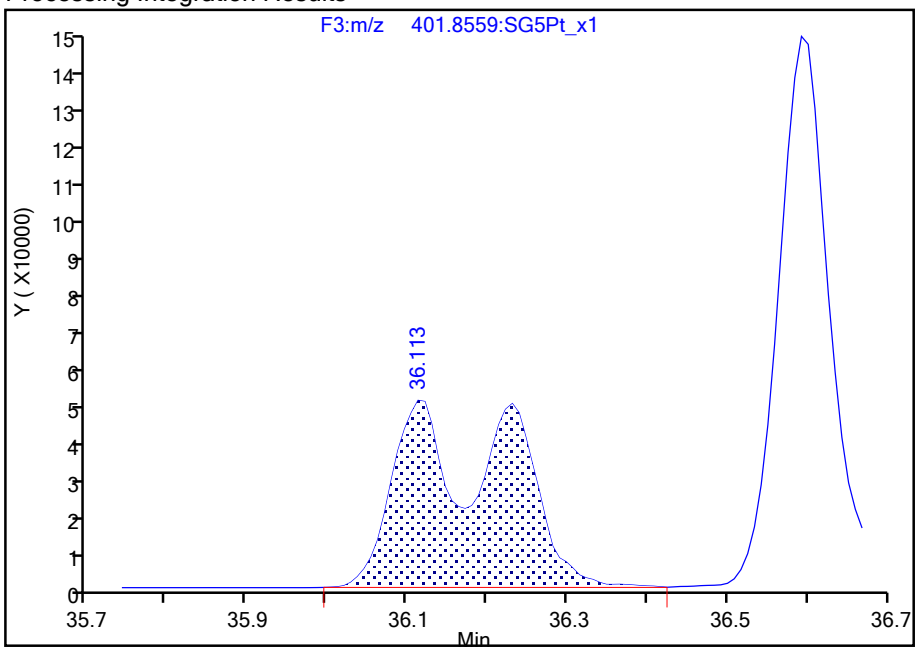

Manual Integration Results

RT: 36.11
Area: 231455
Amount: 46.538919
Amount Units: pg/ul

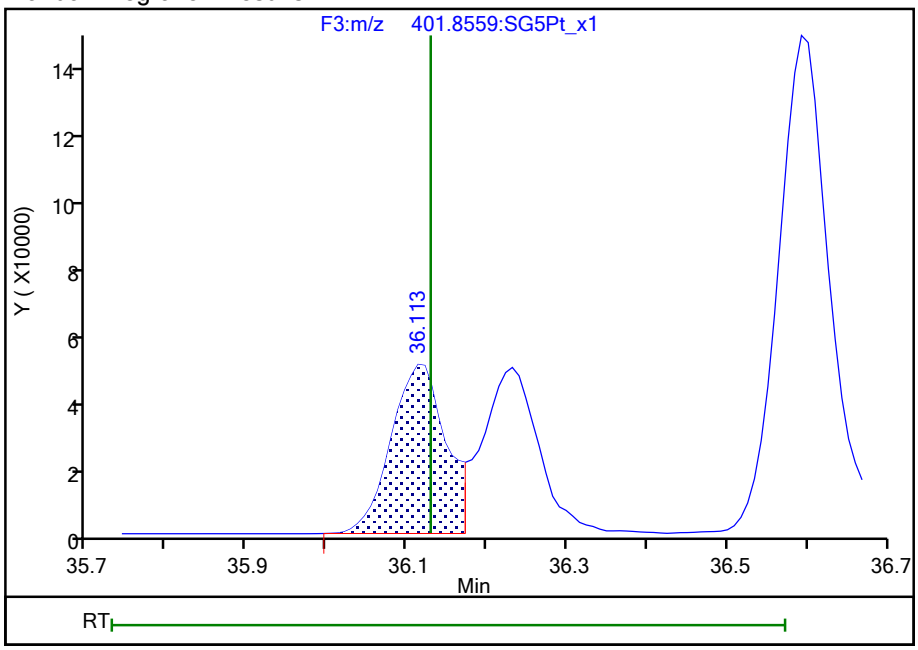

Reviewer: dadunj, 20-Aug-2021 10:27:55

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d				
Injection Date:	19-Aug-2021 09:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-7-A	Lab Sample ID:	320-76888-7		
Client ID:	11215702-072621-BN-SJSB094 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	53
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 2

Processing Integration Results

RT: 36.11
Area: 378449
Amount: 94.062602
Amount Units: pg/ul

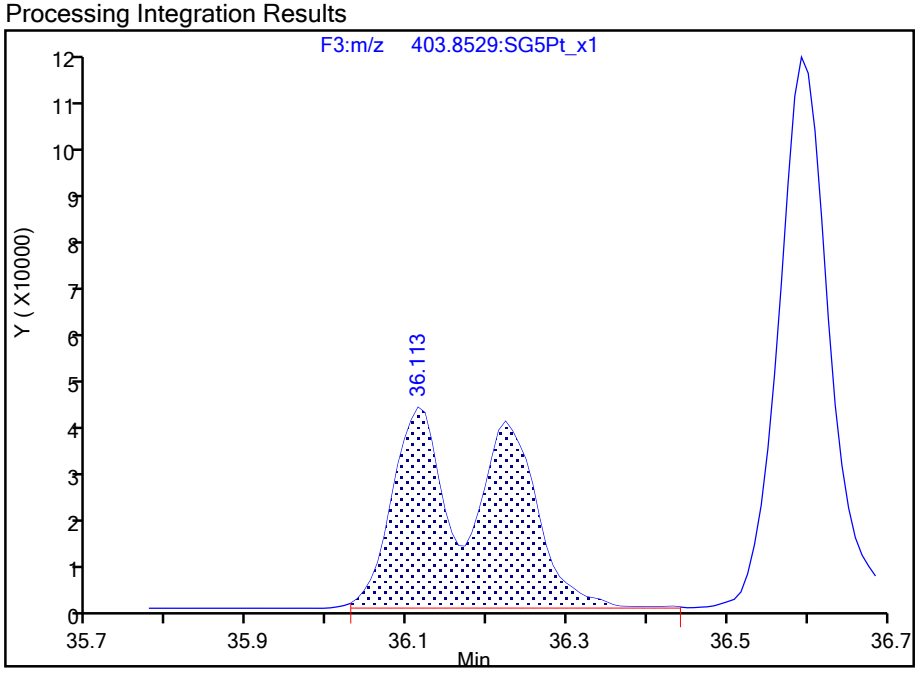

Manual Integration Results

RT: 36.11
Area: 186598
Amount: 46.538919
Amount Units: pg/ul

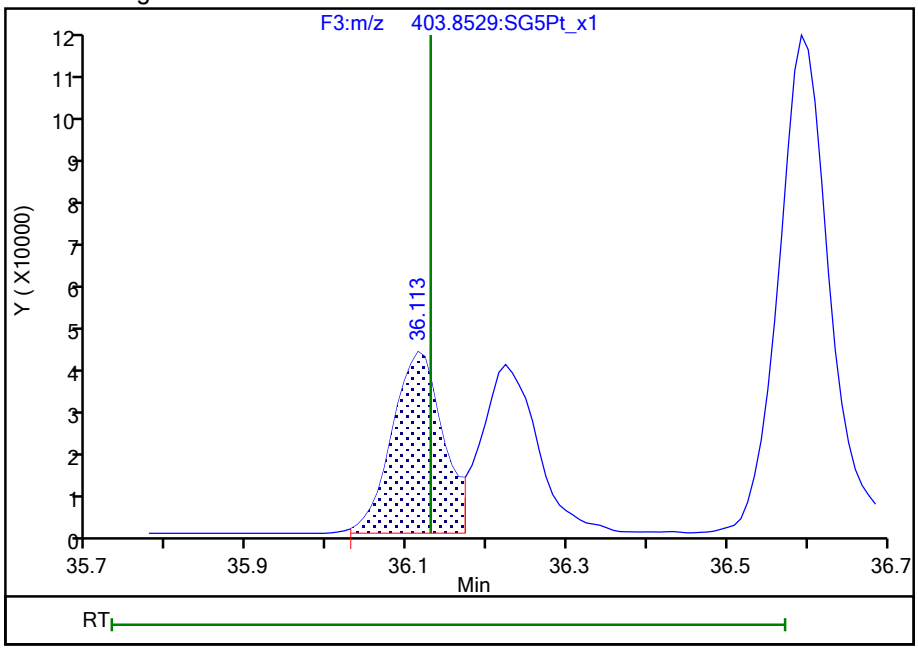

Reviewer: dadunj, 20-Aug-2021 10:27:59

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785595

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d				
Injection Date:	19-Aug-2021 09:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-7-A	Lab Sample ID:	320-76888-7		
Client ID:	11215702-072621-BN-SJSB094 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	53
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,6,7,8-HxCDD, CAS: 109719-81-5

Signal: 2

Processing Integration Results

RT: 36.11
Area: 378449
Amount: 83.052091
Amount Units: pg/ul

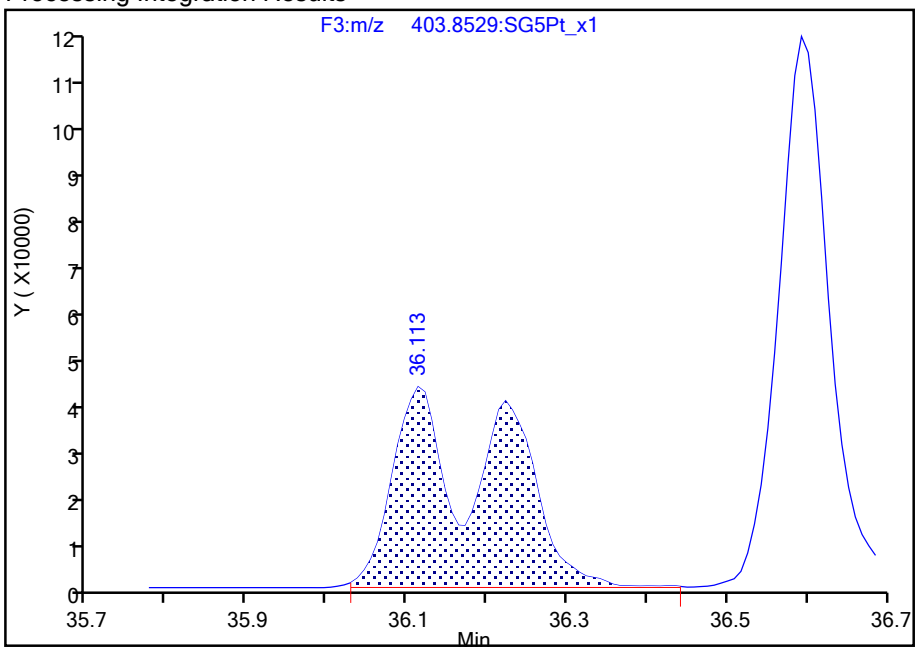

Manual Integration Results

RT: 36.22
Area: 191851
Amount: 41.961283
Amount Units: pg/ul

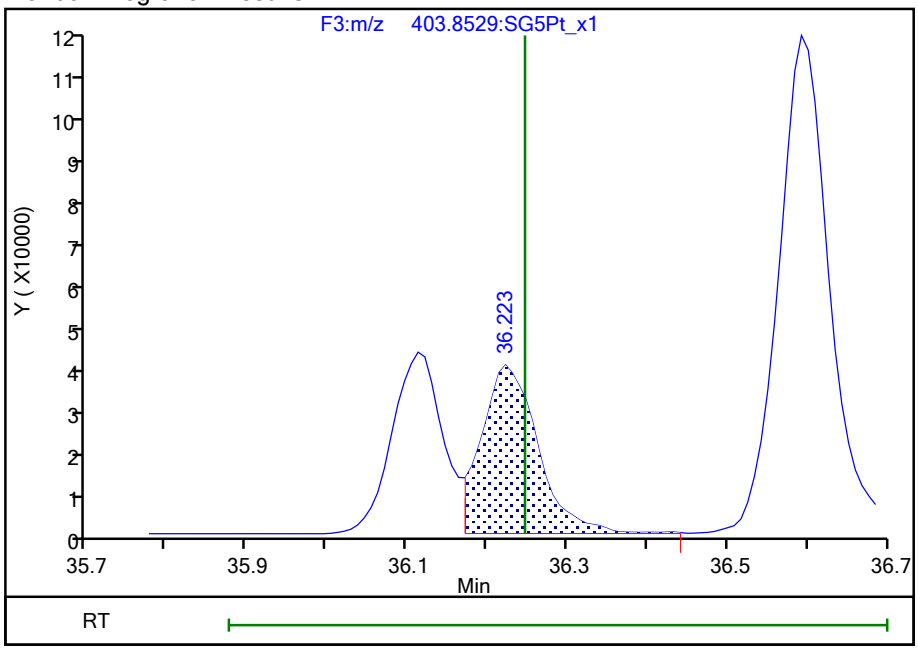

Reviewer: dadunj, 20-Aug-2021 10:27:59

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d				
Injection Date:	19-Aug-2021 09:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-7-A	Lab Sample ID:	320-76888-7		
Client ID:	11215702-072621-BN-SJSB094 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	53
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,6,7,8-HxCDD, CAS: 109719-81-5

Signal: 1

Processing Integration Results

RT: 36.11
Area: 466503
Amount: 83.052091
Amount Units: pg/ul

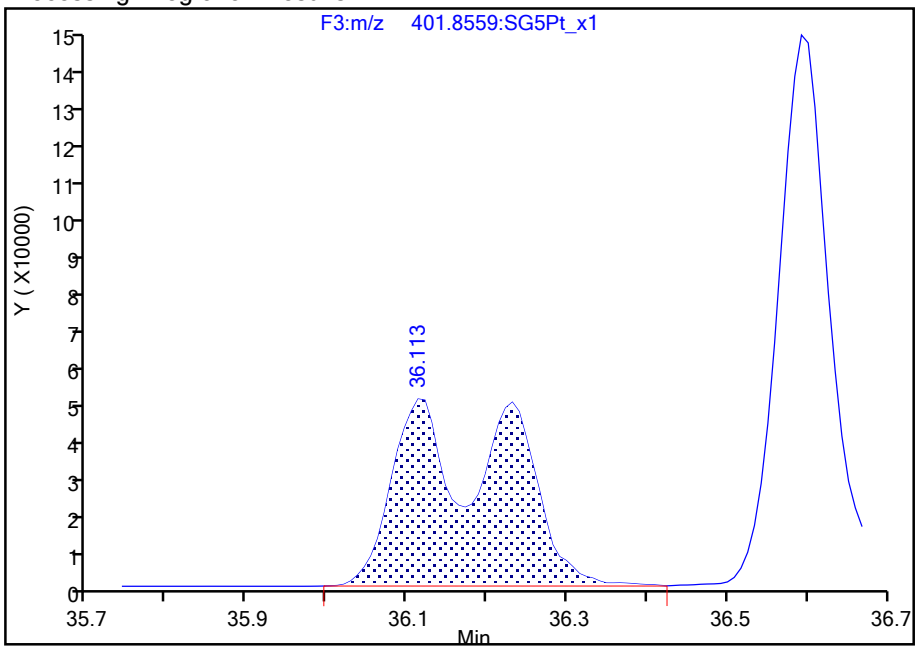

Manual Integration Results

RT: 36.23
Area: 235053
Amount: 41.961283
Amount Units: pg/ul

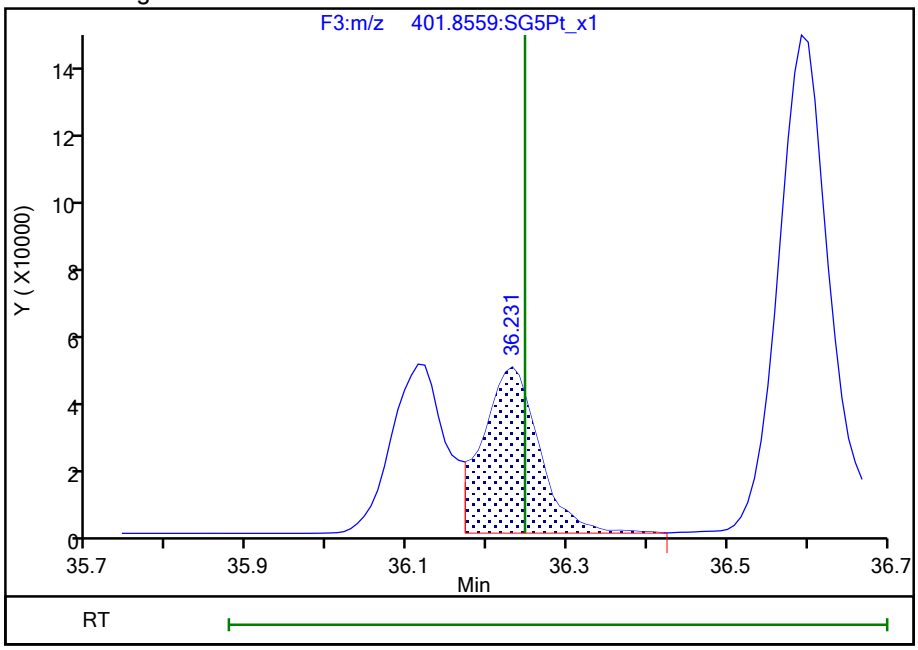

Reviewer: dadunj, 20-Aug-2021 10:28:06

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

785597

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d				
Injection Date:	19-Aug-2021 09:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-7-A	Lab Sample ID:	320-76888-7		
Client ID:	11215702-072621-BN-SJSB094 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	53
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.19- 36.59)

Signal: 1

Processing Integration Results

RT = 35.347 Area = 11221

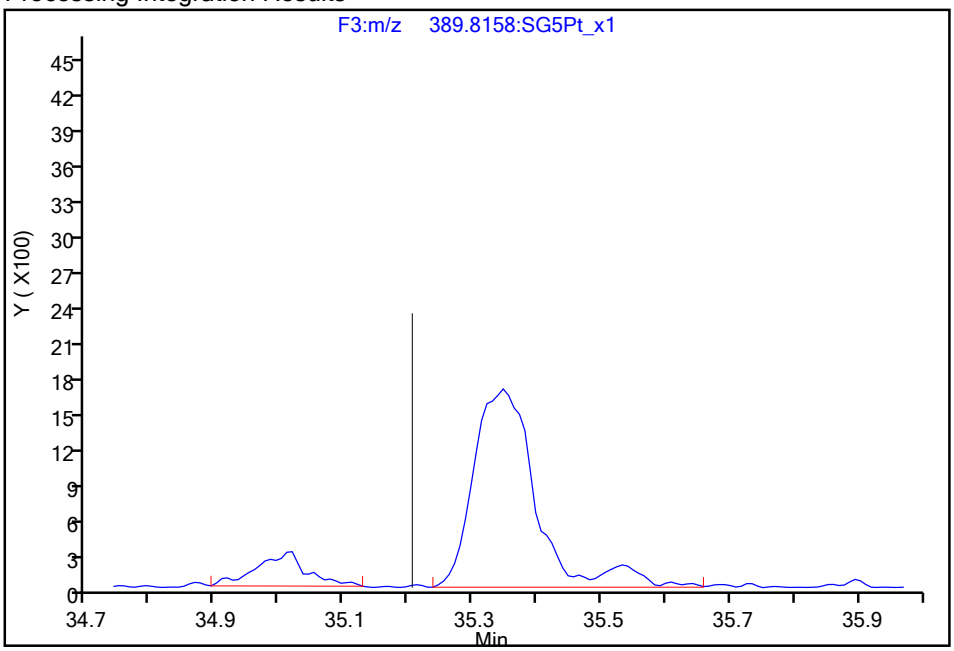

Manual Integration Results

RT = 35.347 Area = 10380 M

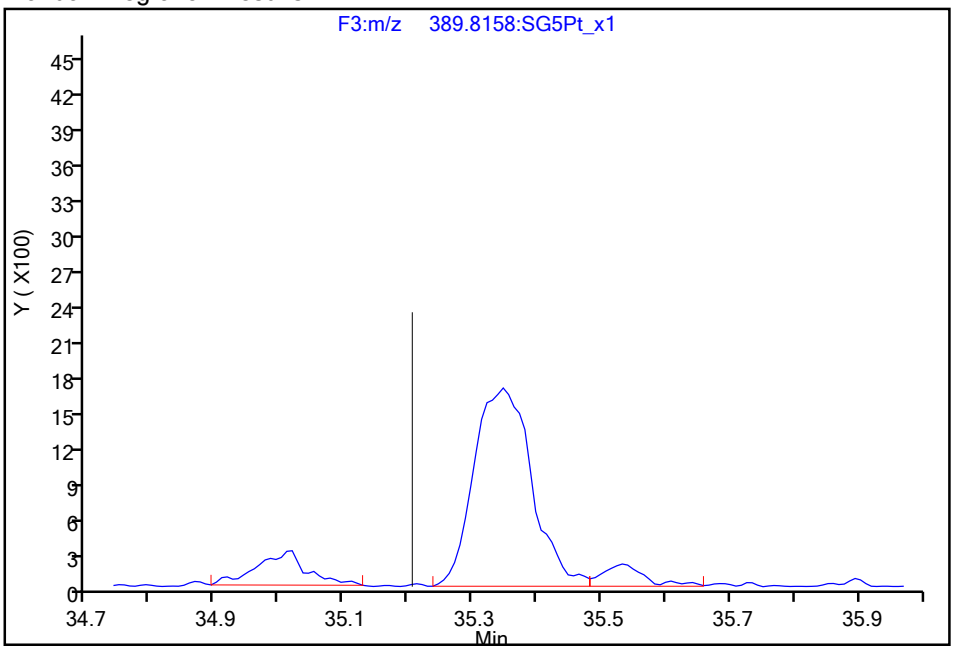

Reviewer: dadunj, 20-Aug-2021 10:28:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

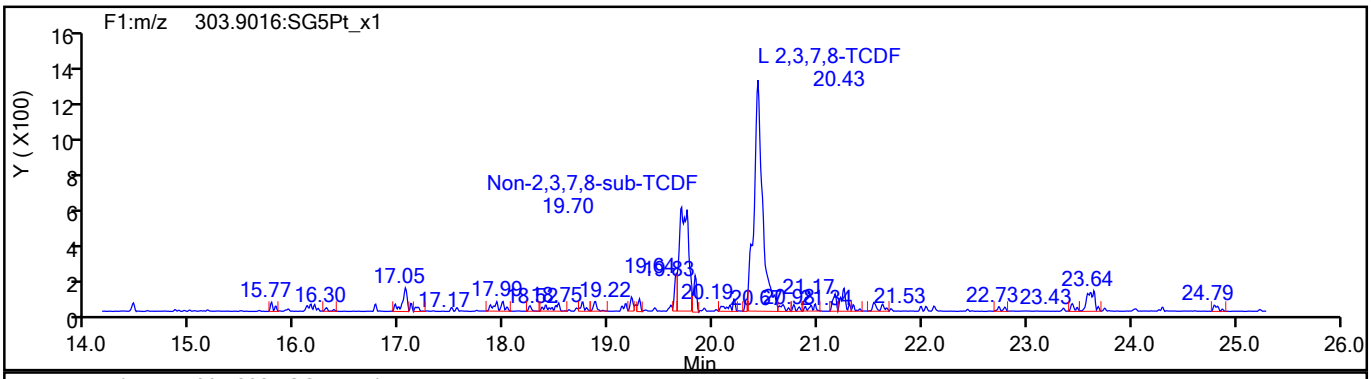

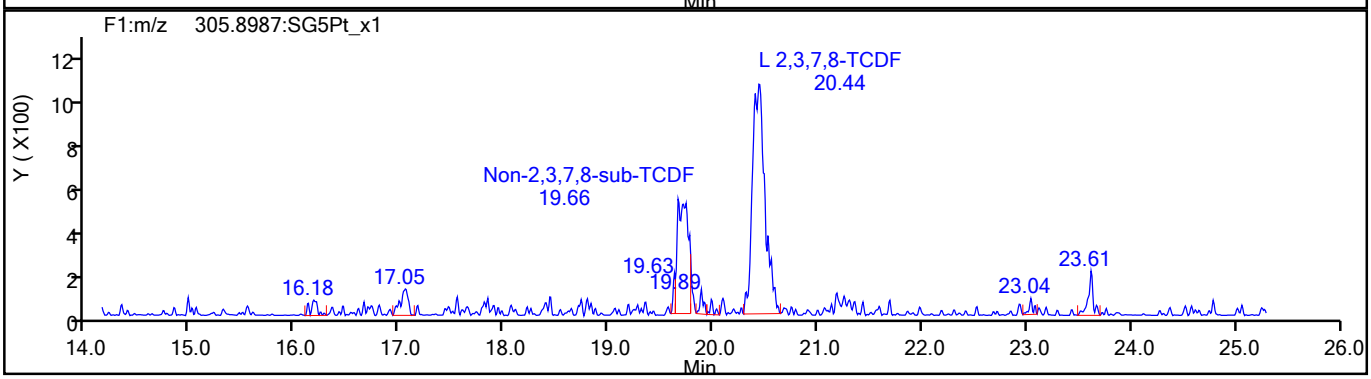

TCDF Standards

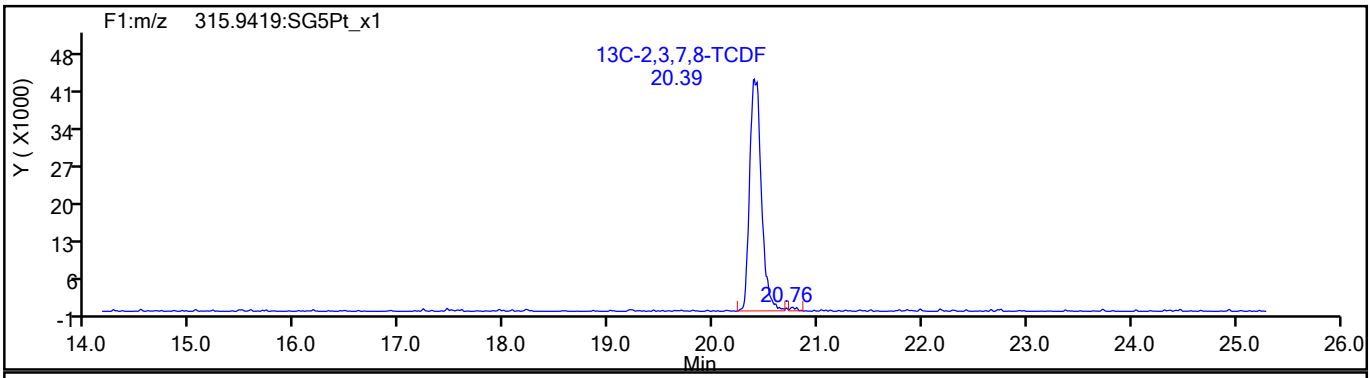

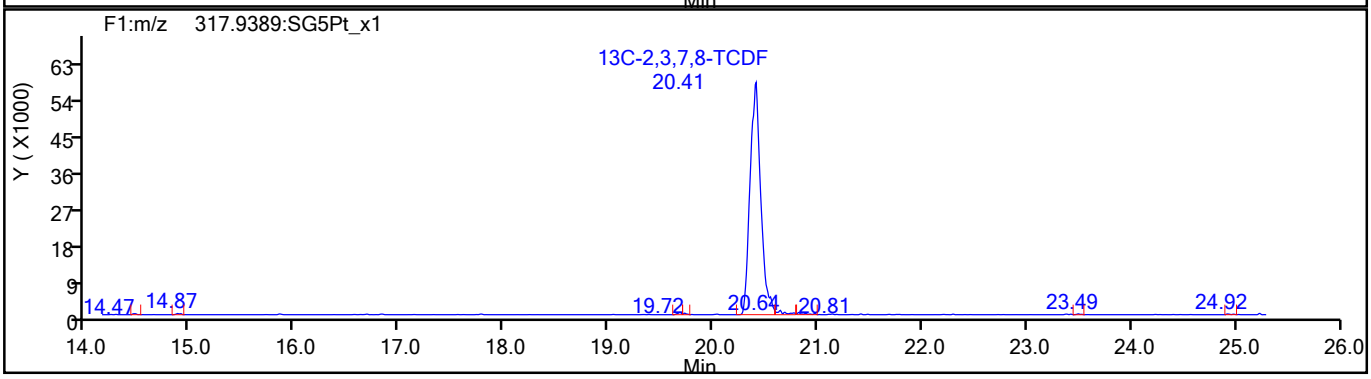

785599

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

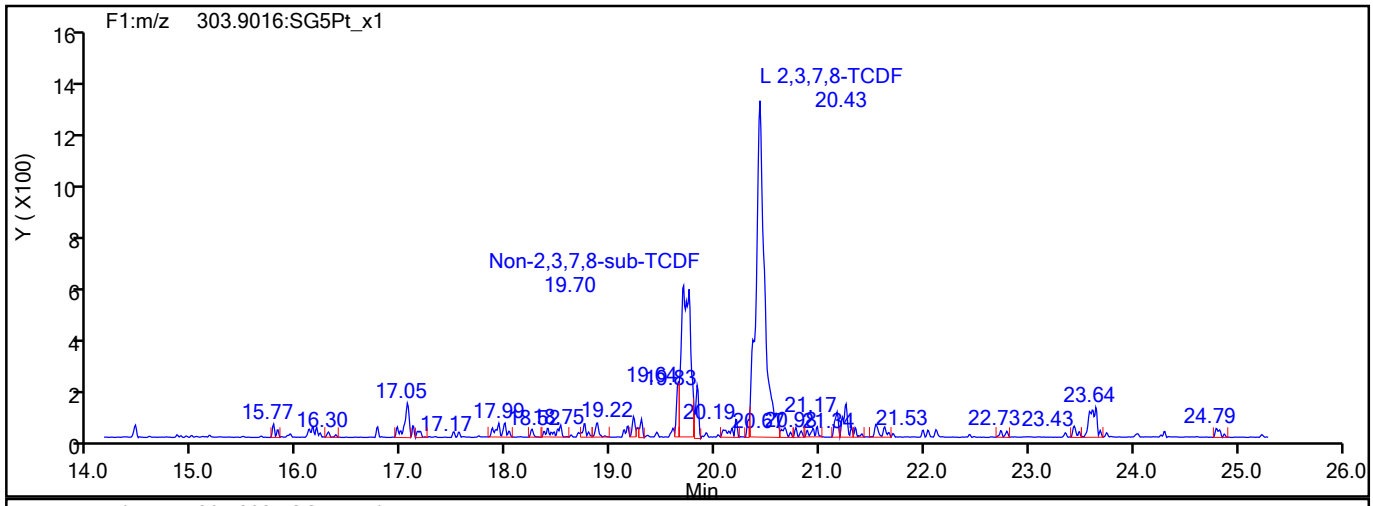

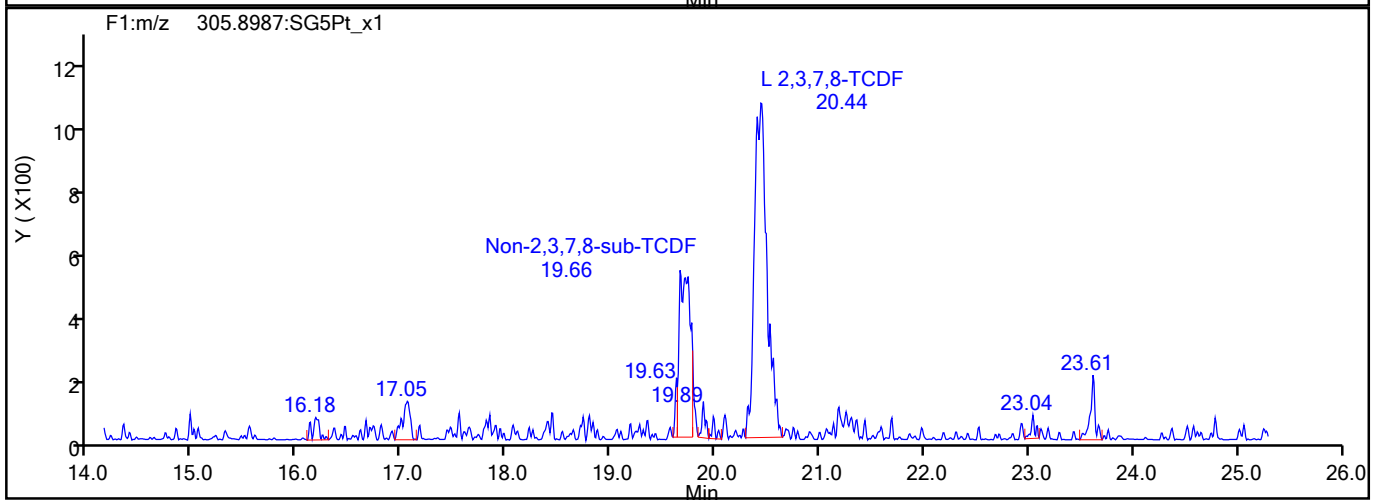

TCDF Interference Mass

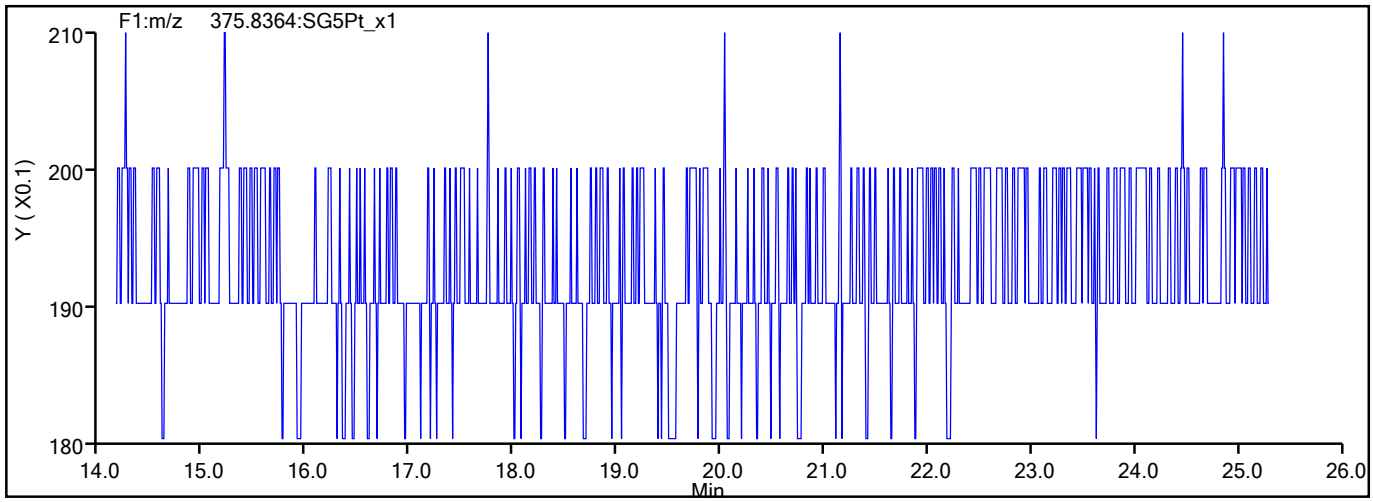

785600

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

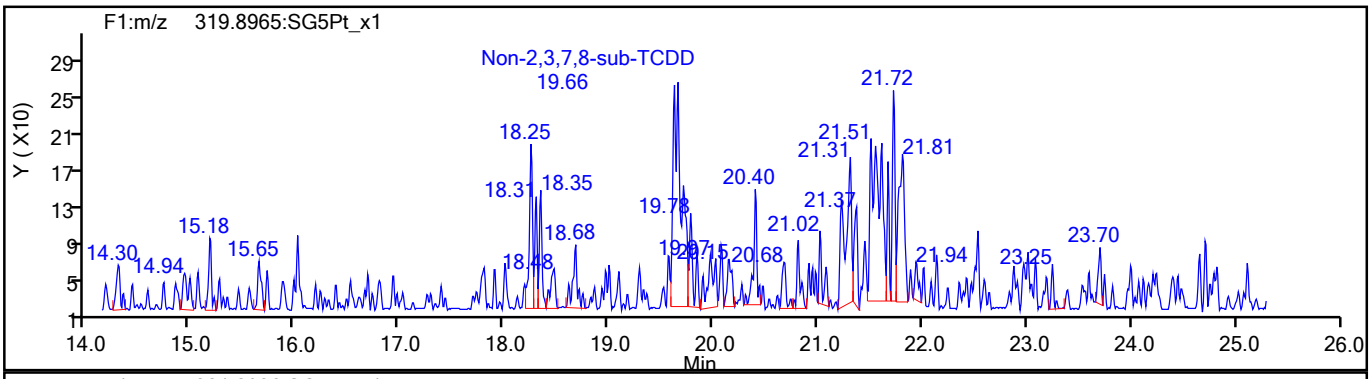

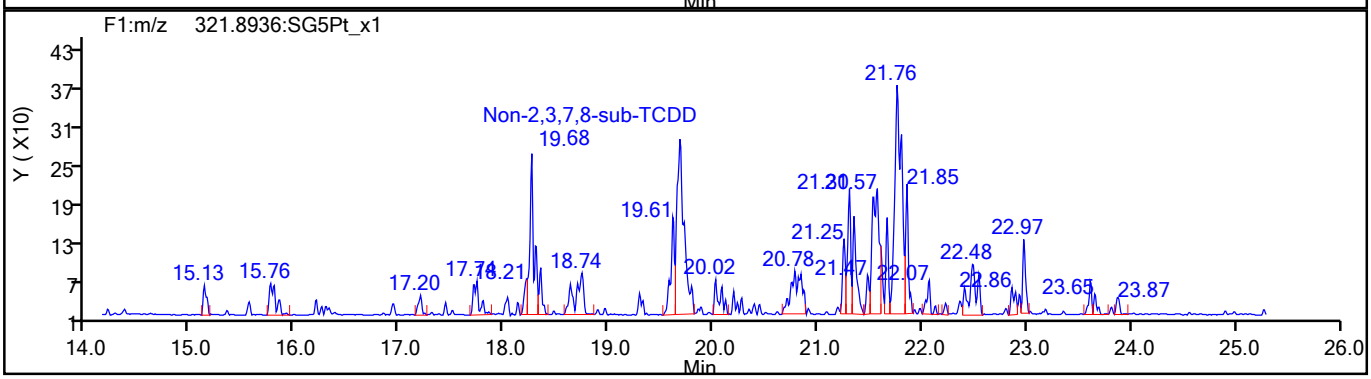

TCDD Standards

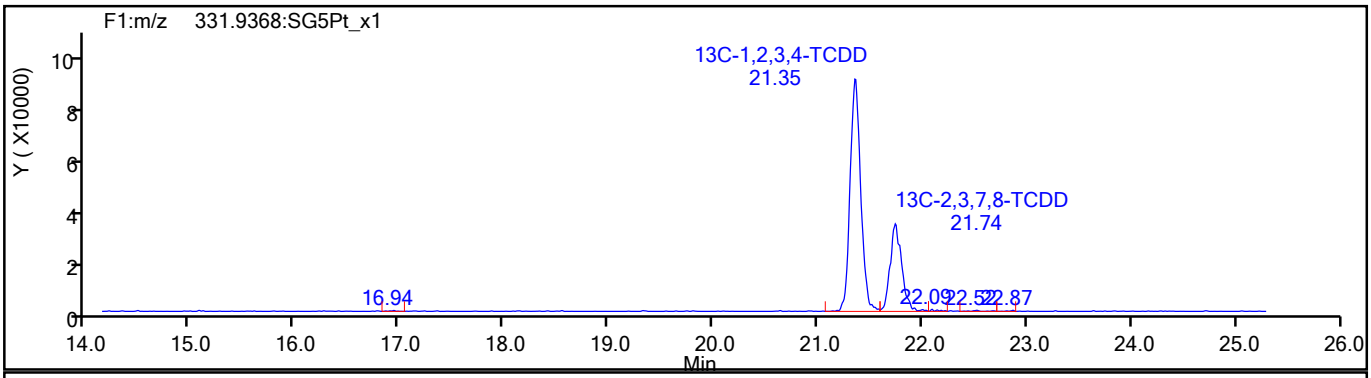

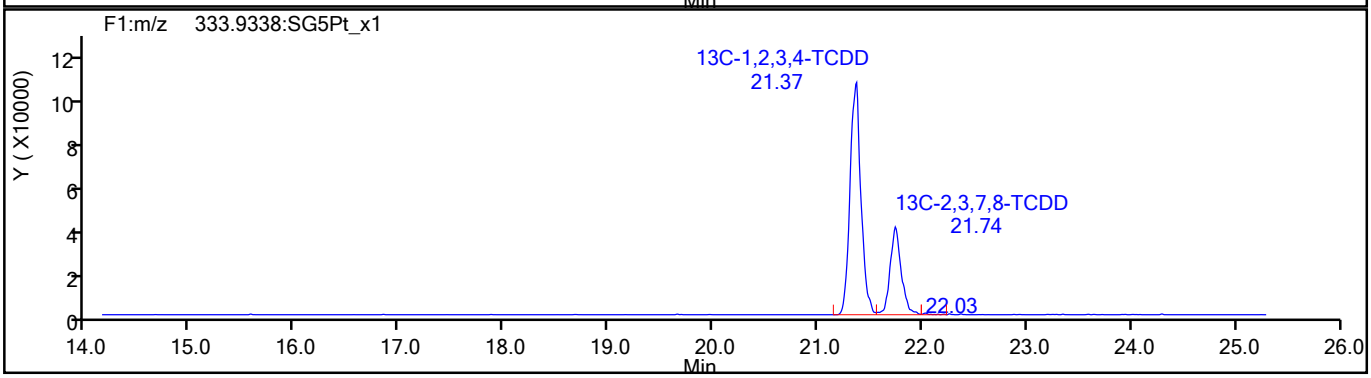

785601

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

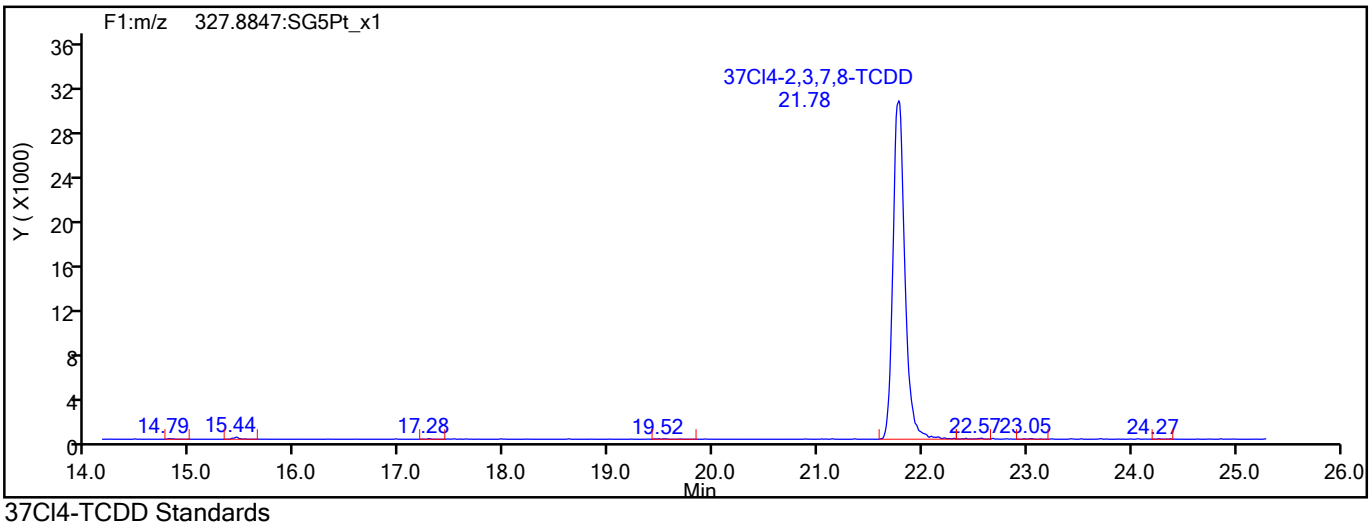

37Cl4-TCDD Standards

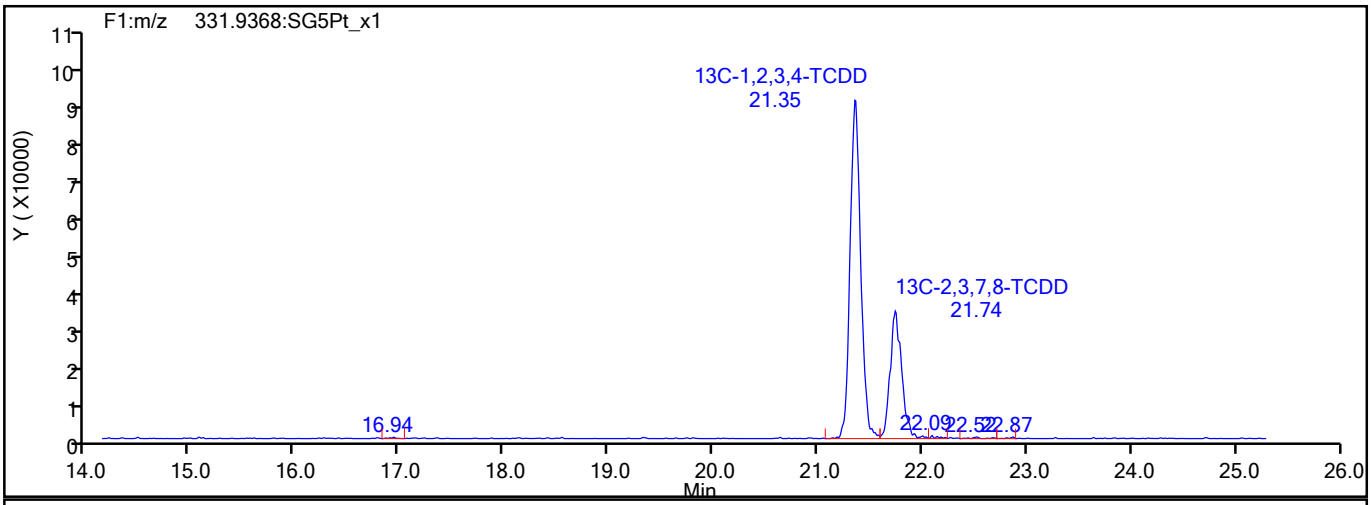

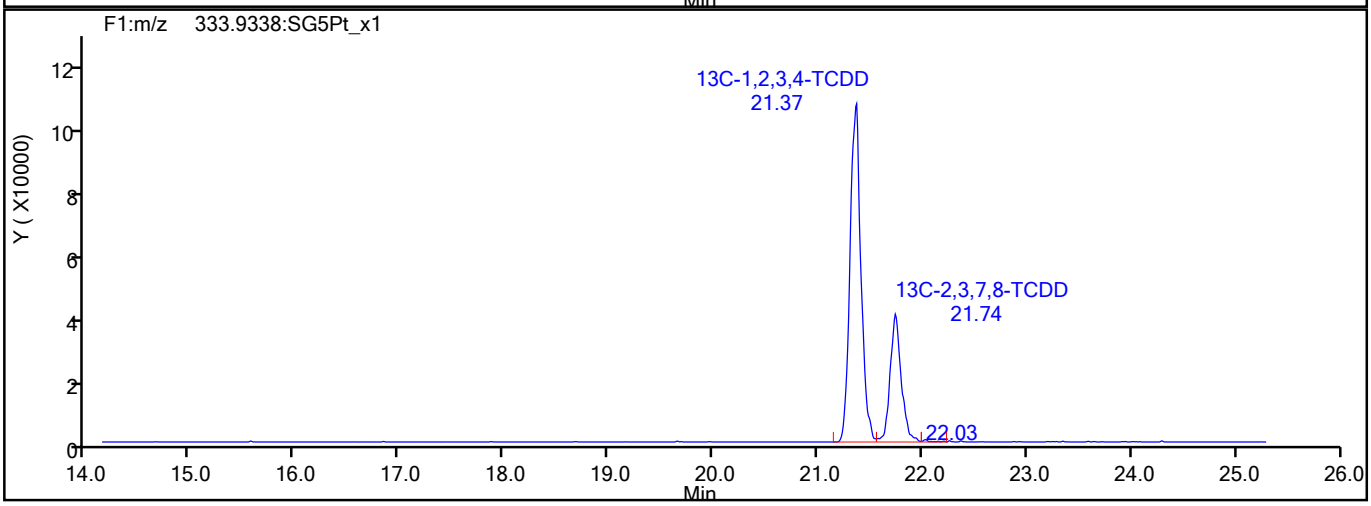

785602

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

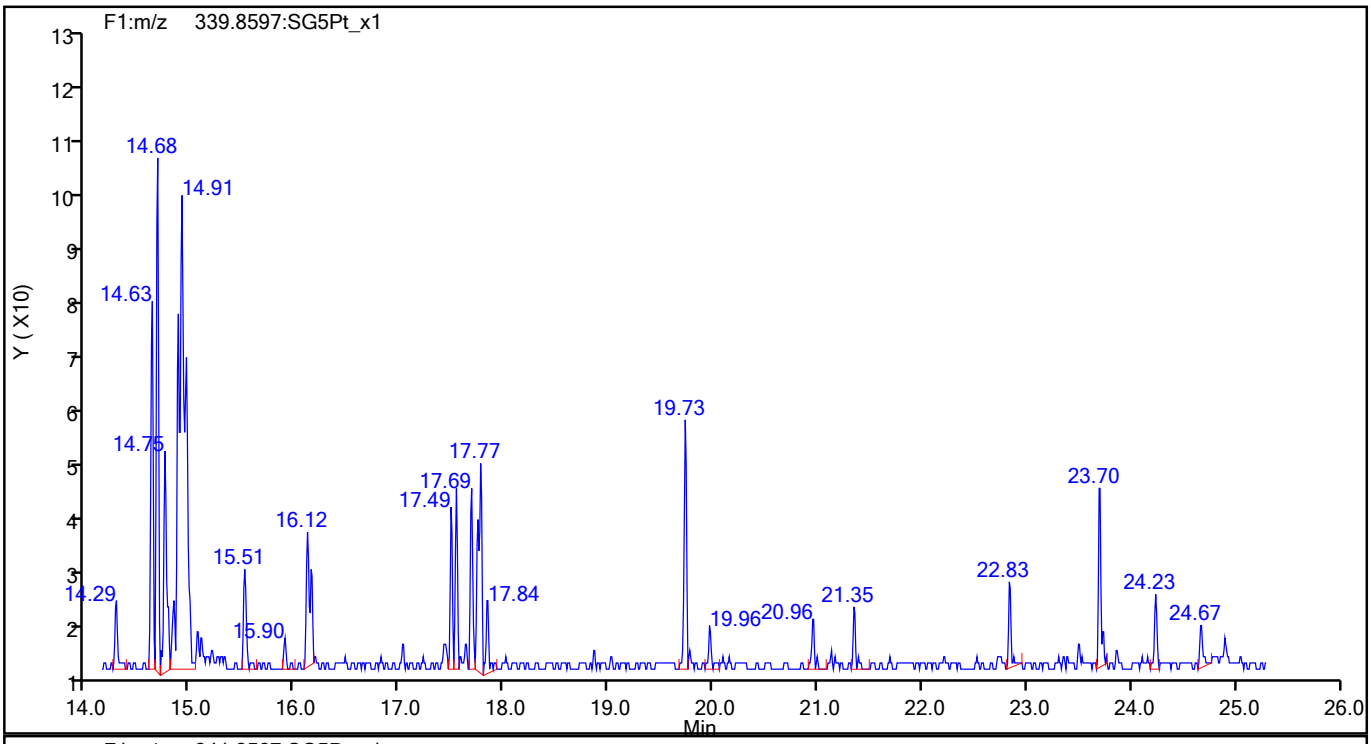

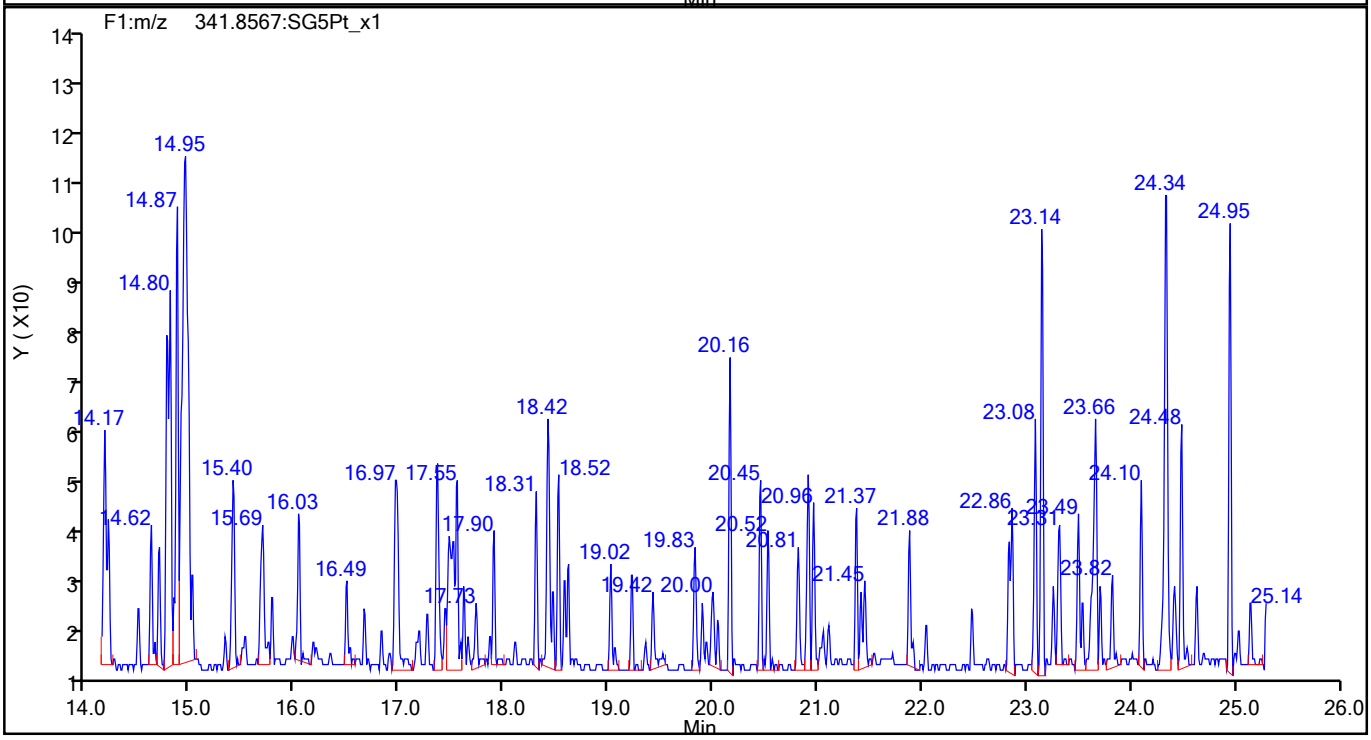

785603

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

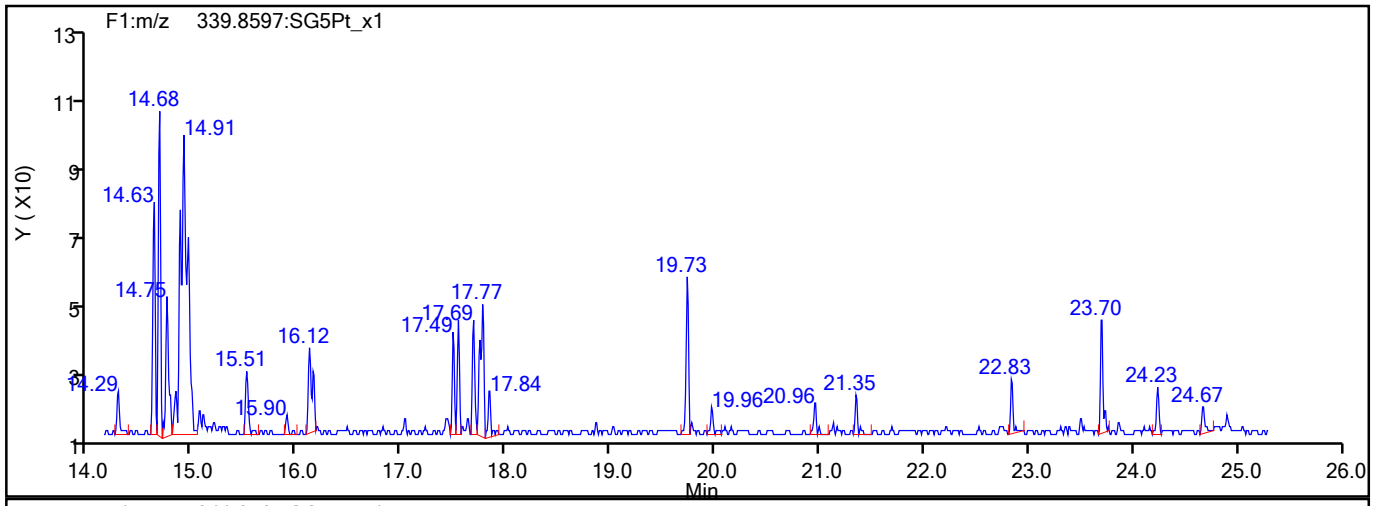

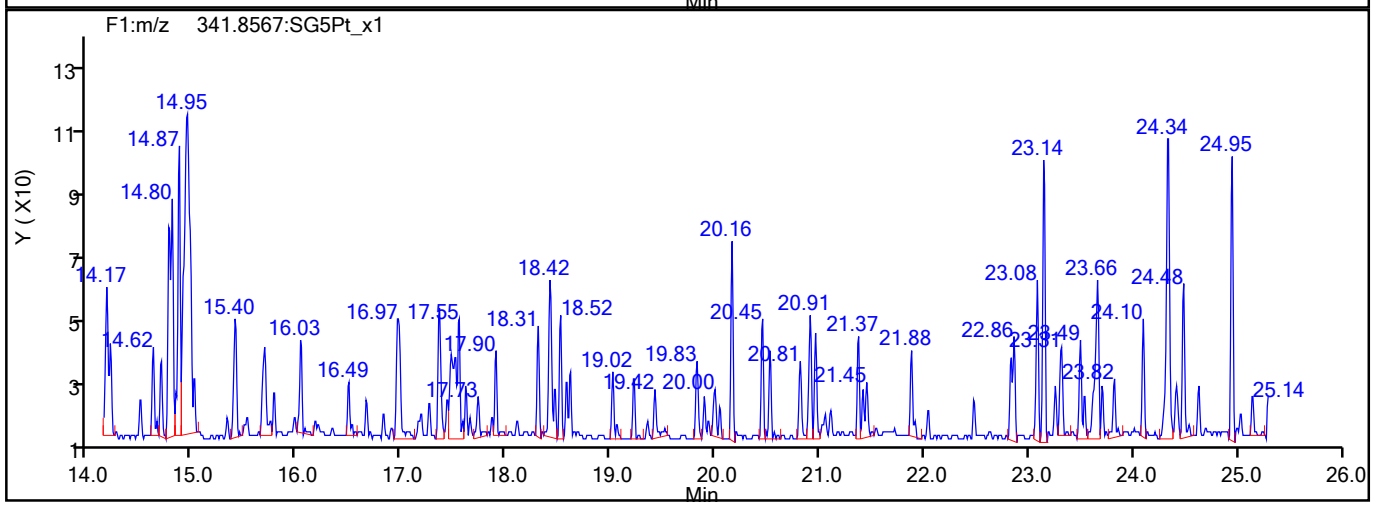

F1 PeCDFs Interference Mass

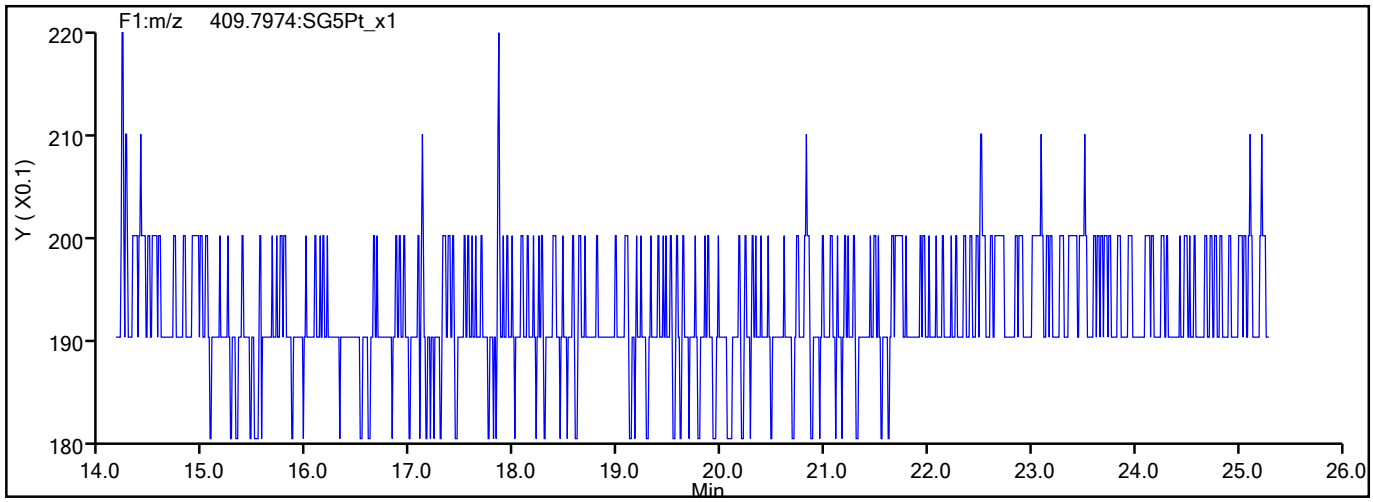

785604

Report Date: 20-Aug-2021 10:29:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

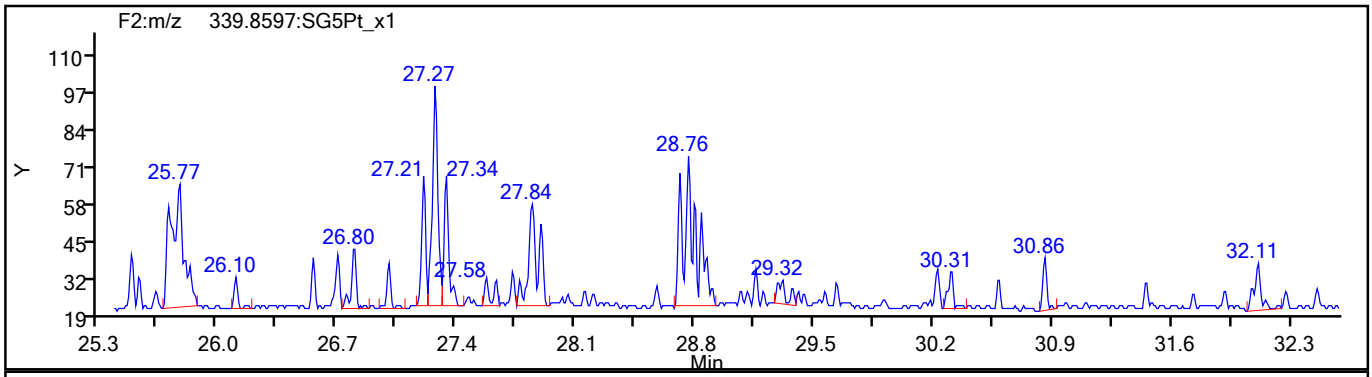

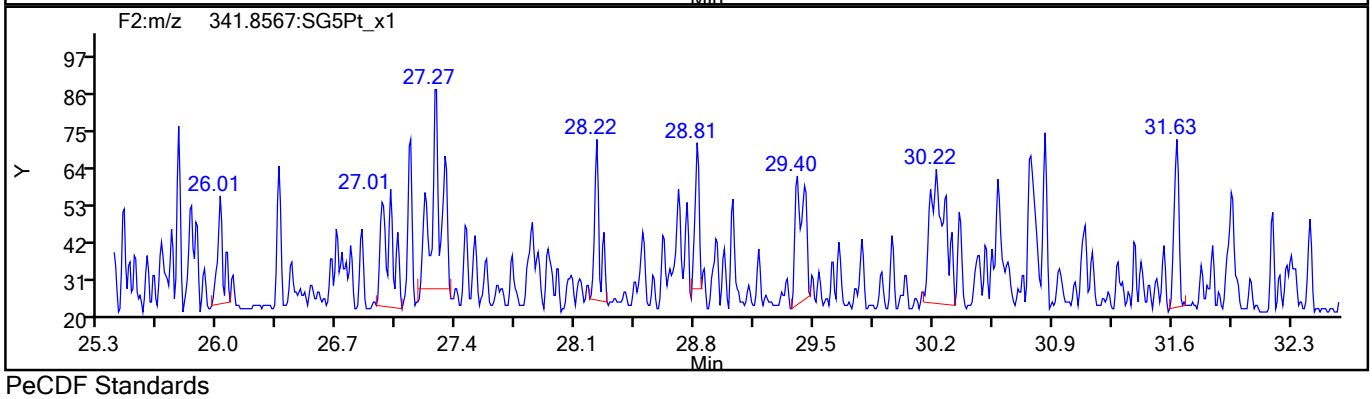

PeCDF Standards

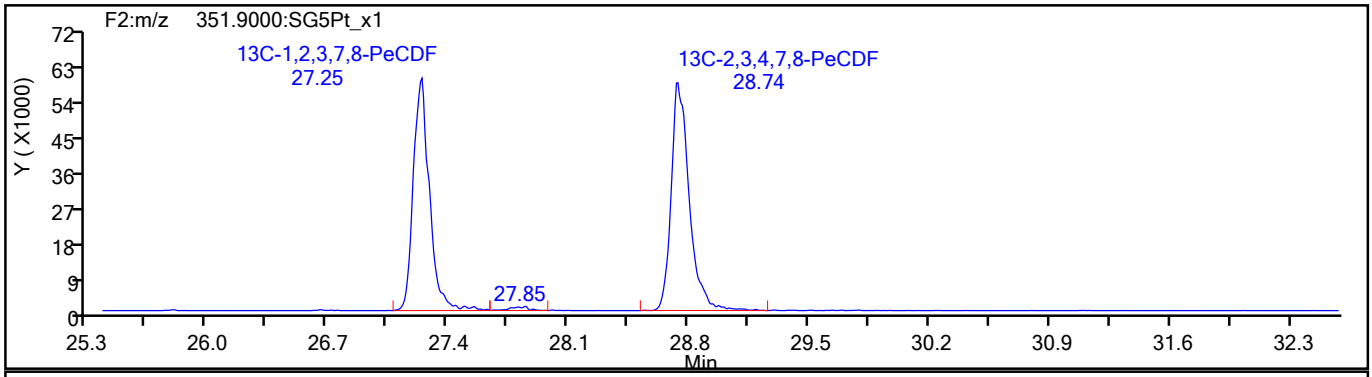

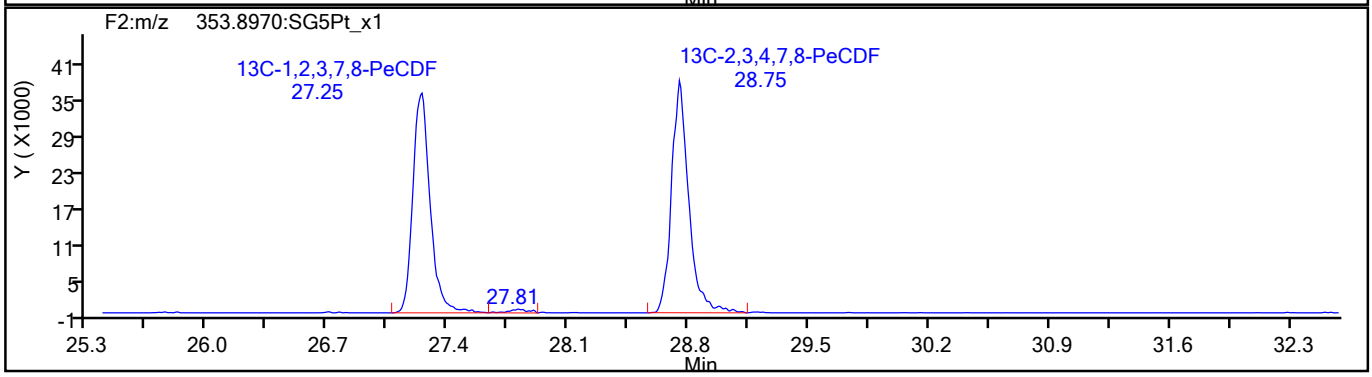

785605

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

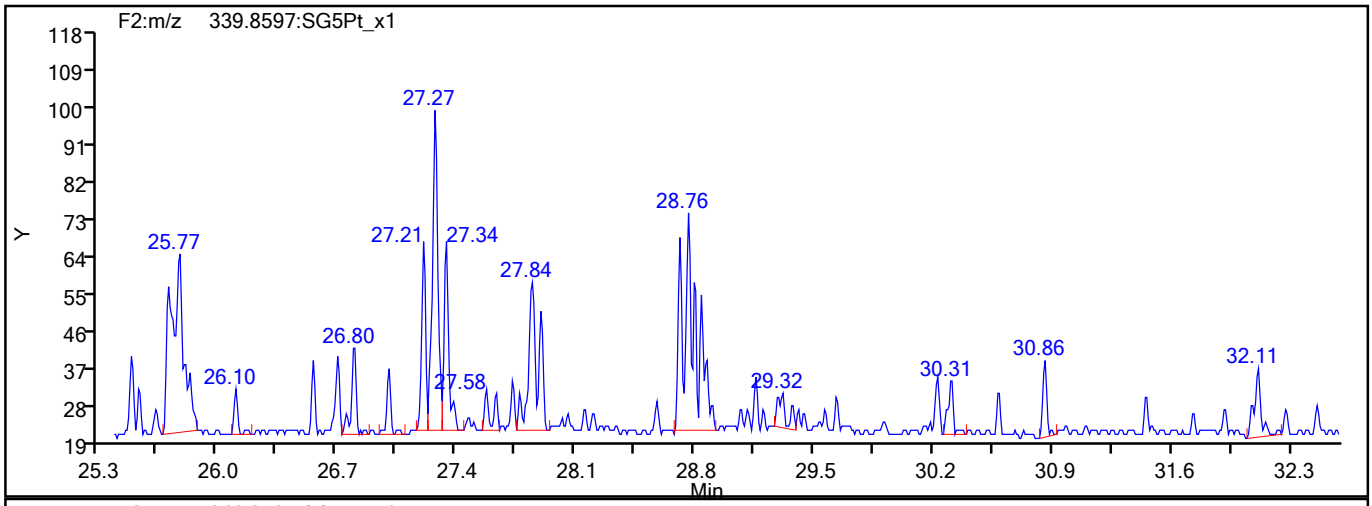

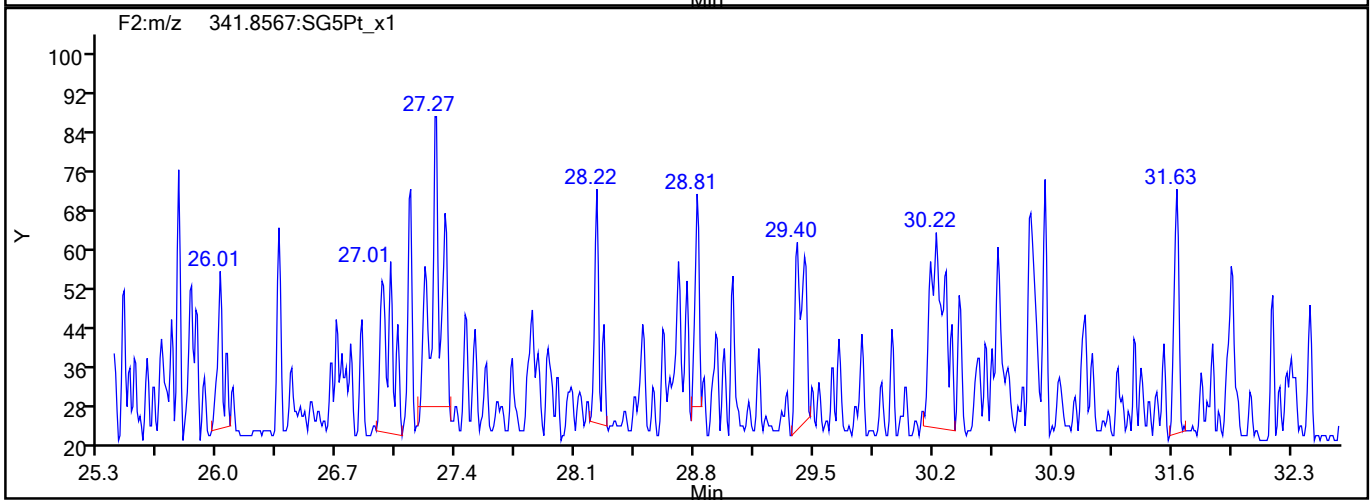

PeCDF Interference Mass

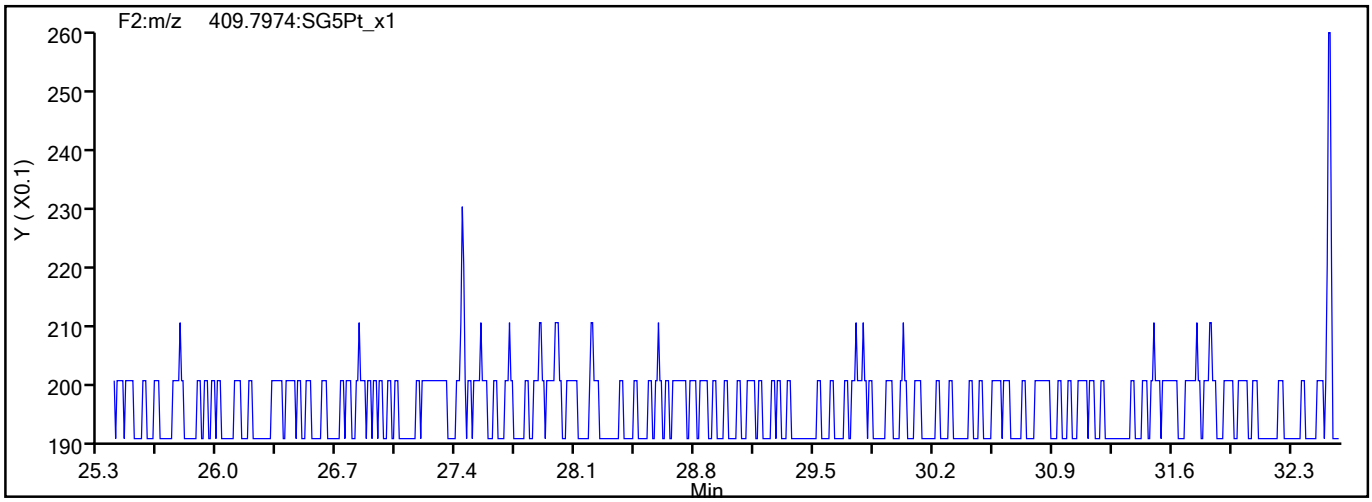

785606

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

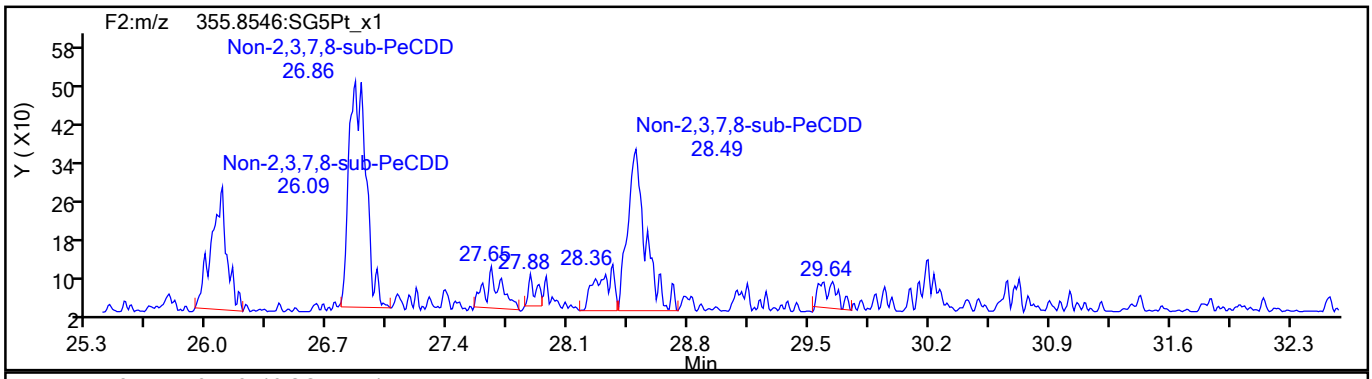

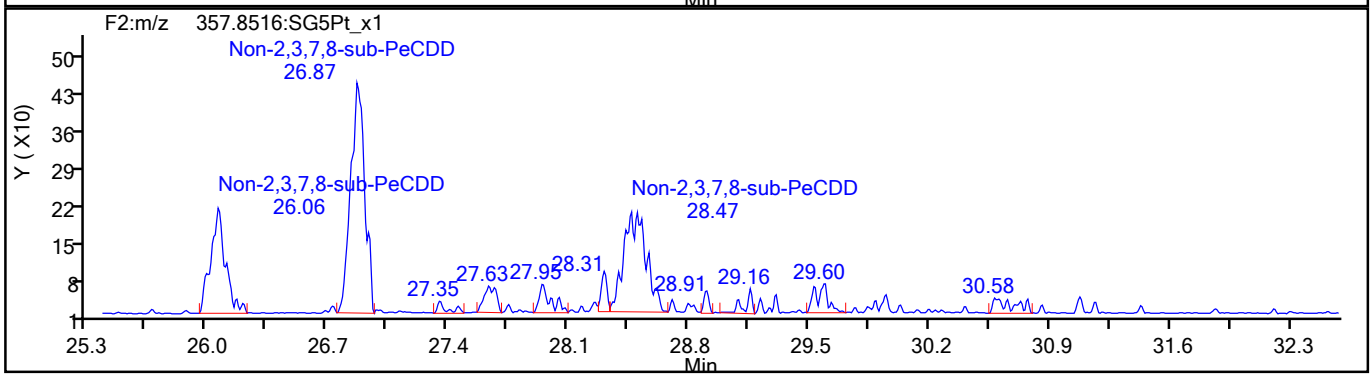

PeCDD Standards

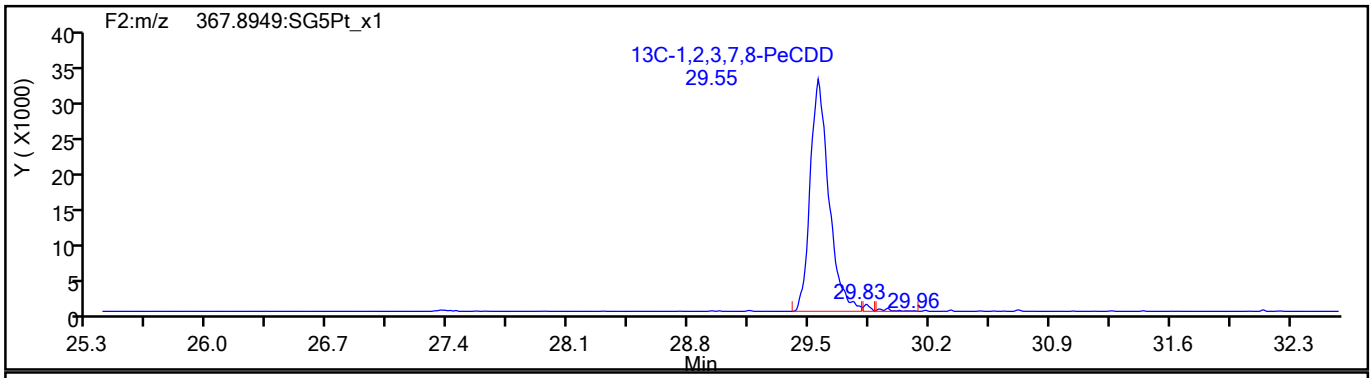

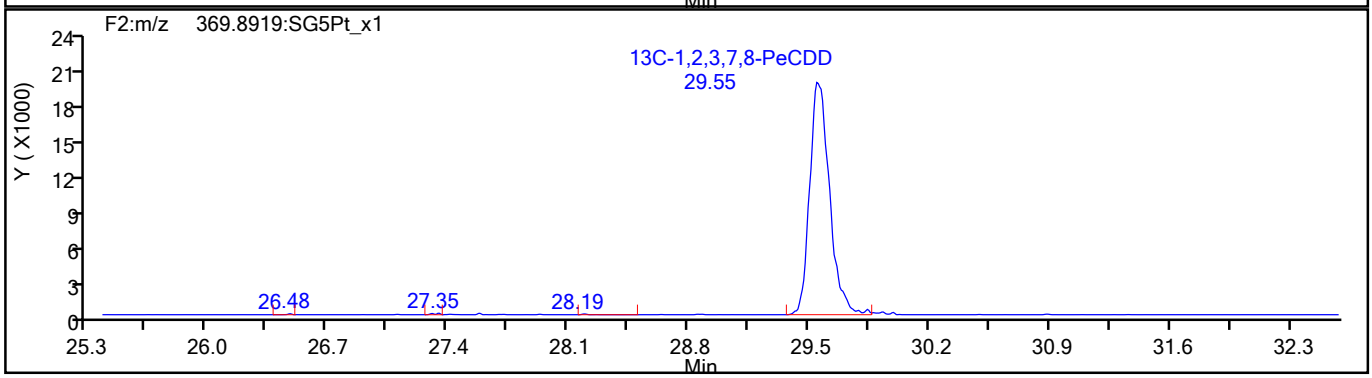

785607

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

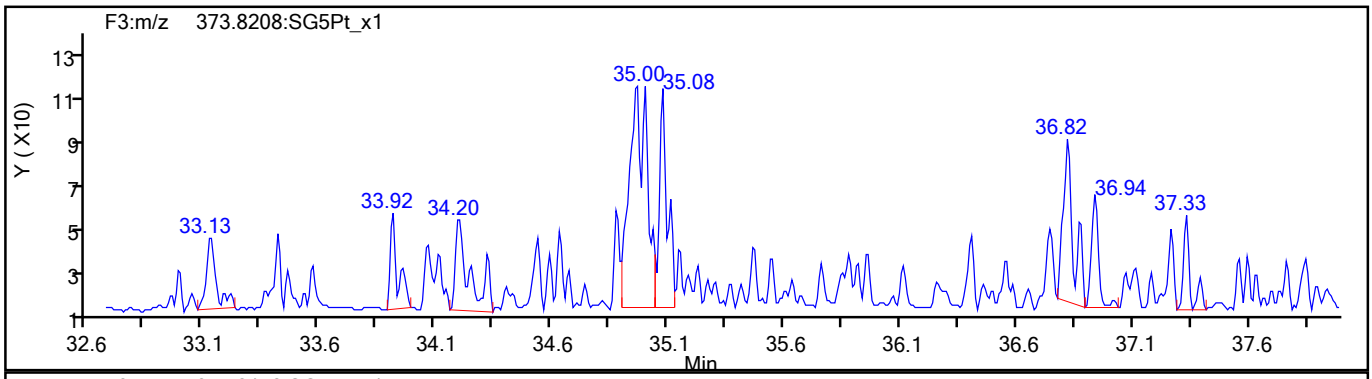

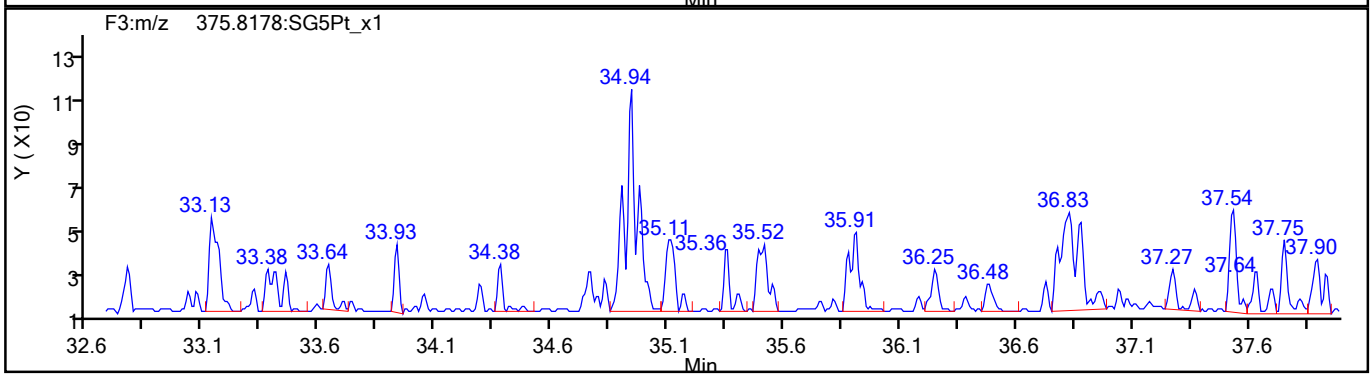

HxCDF Standards

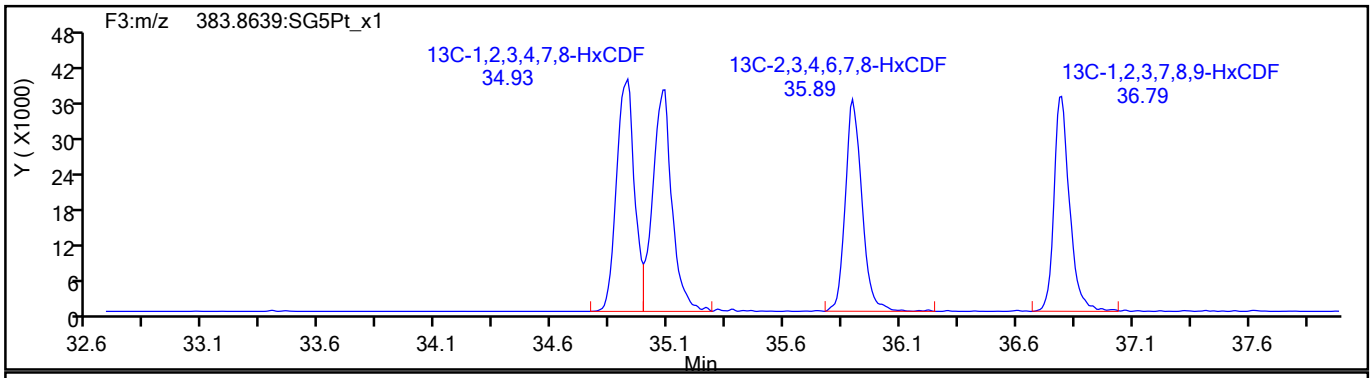

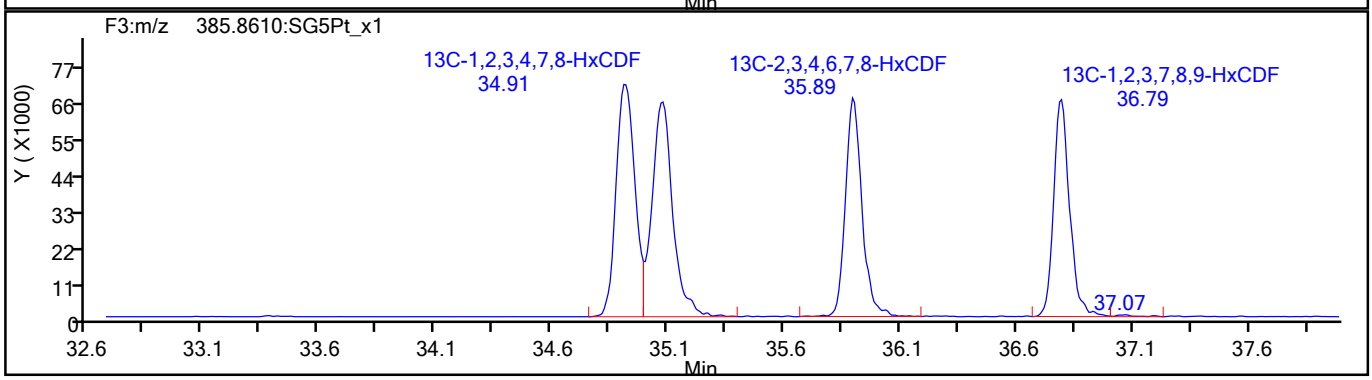

785608

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

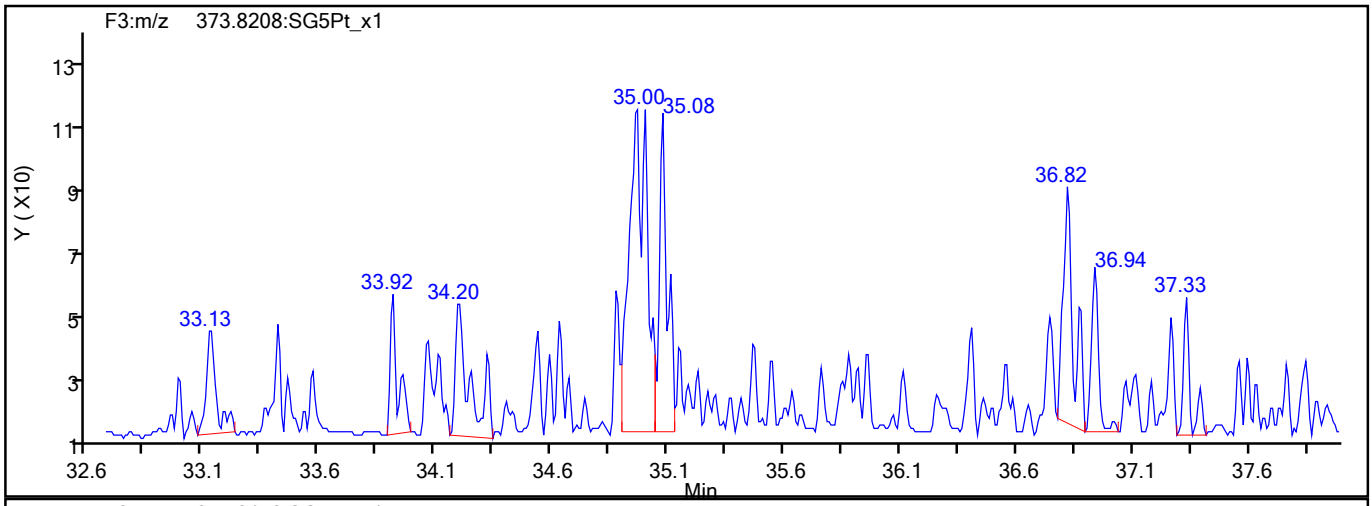

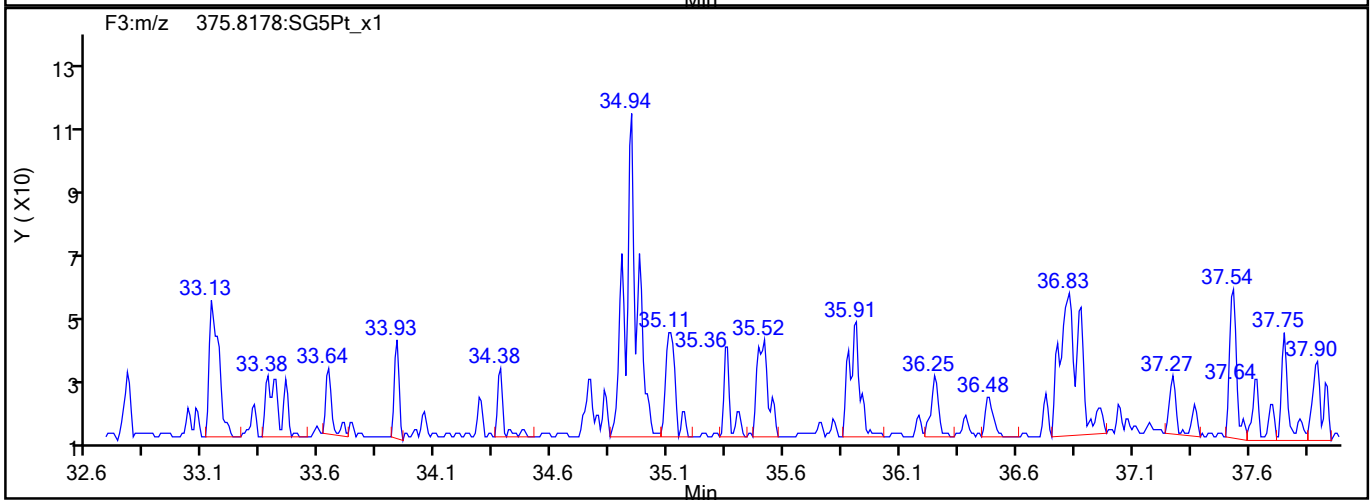

HxCDF Interference Mass

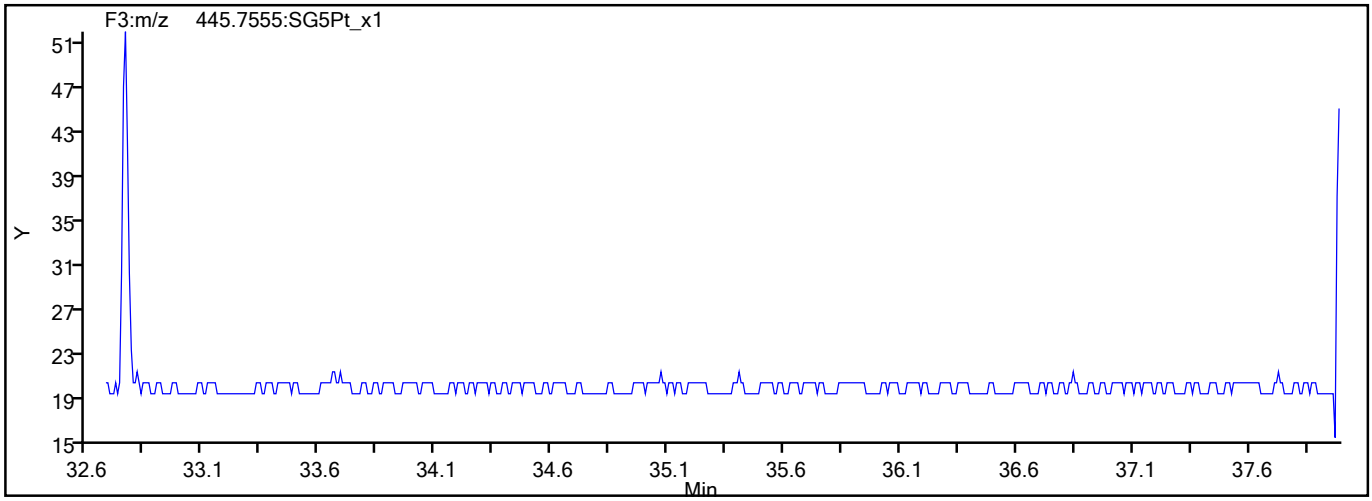

785609

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

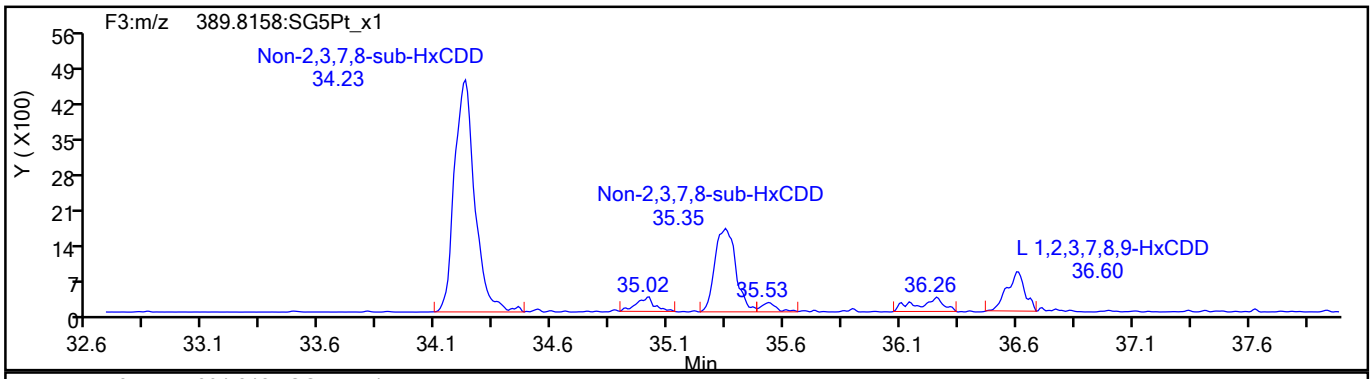

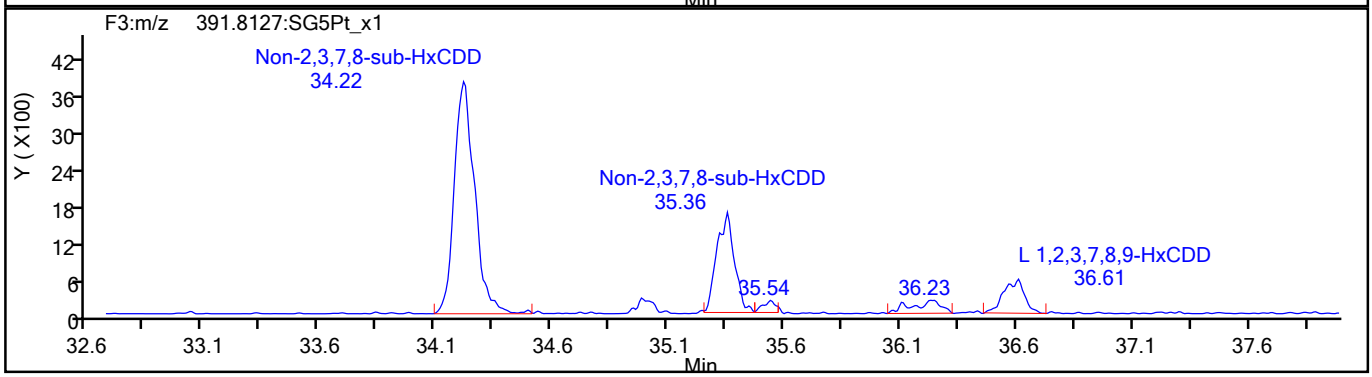

HxCDD Standards

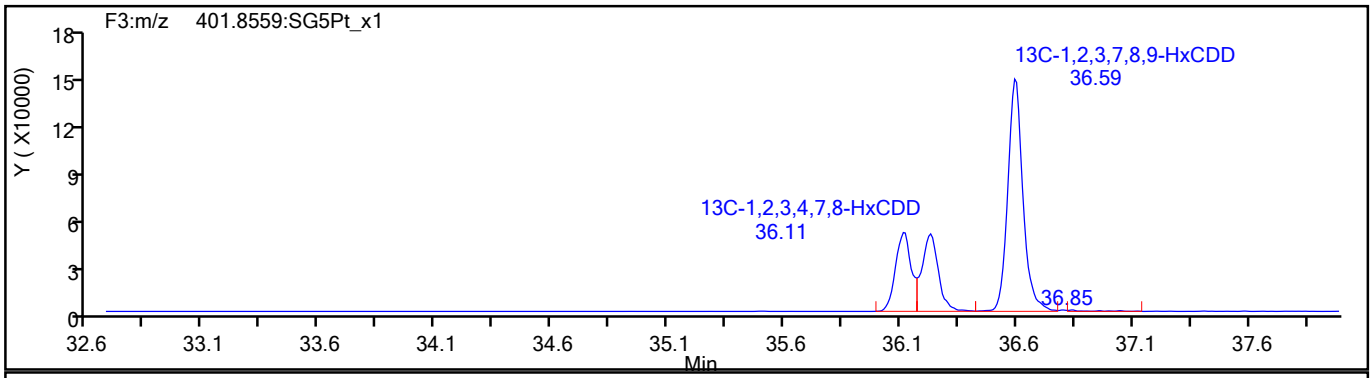

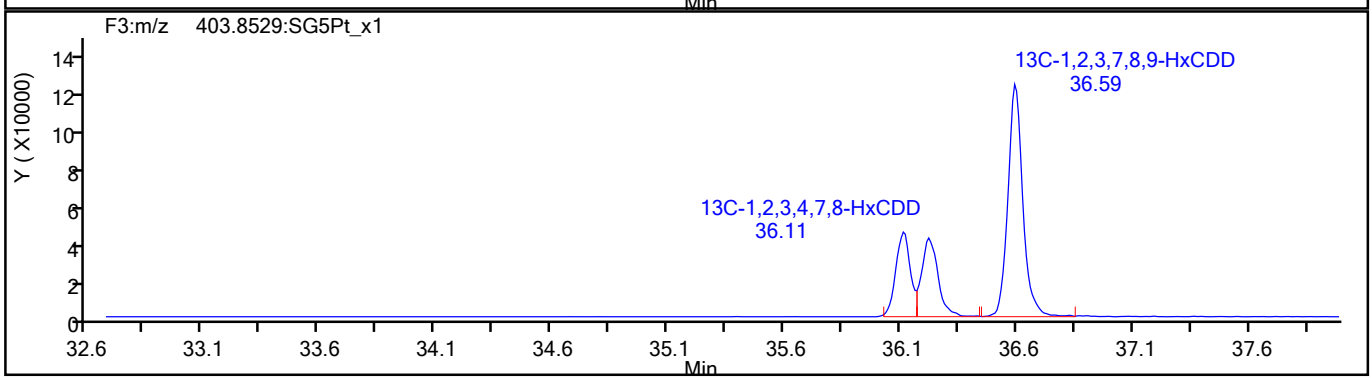

785610

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

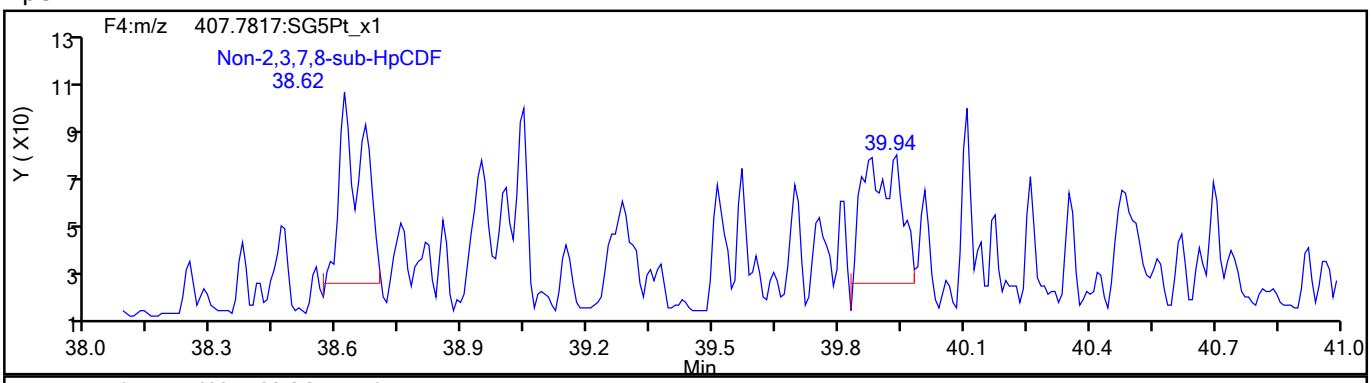

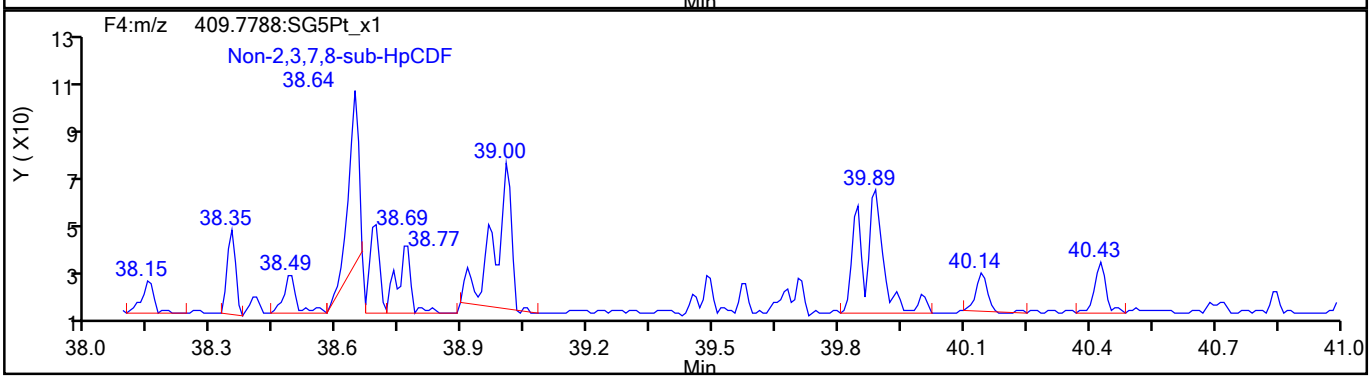

HpCDF Standards

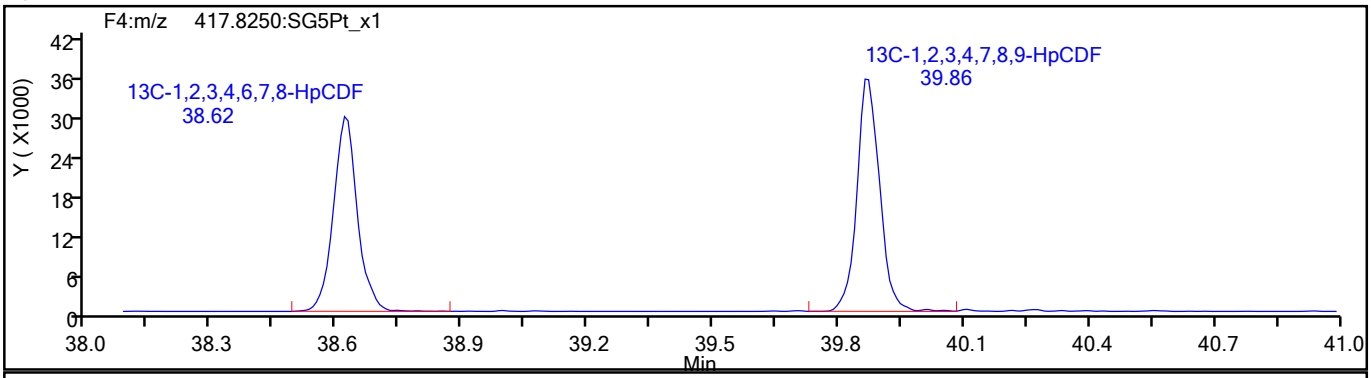

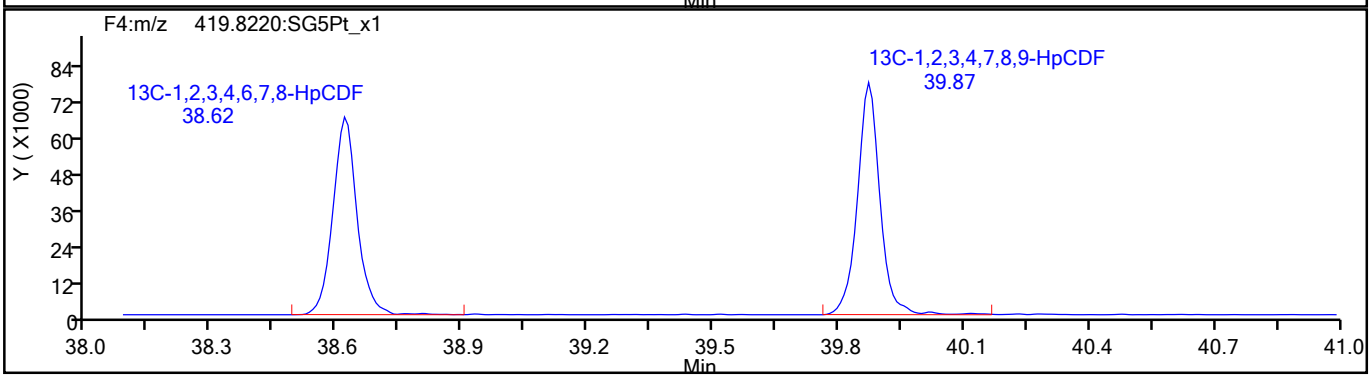

785611

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

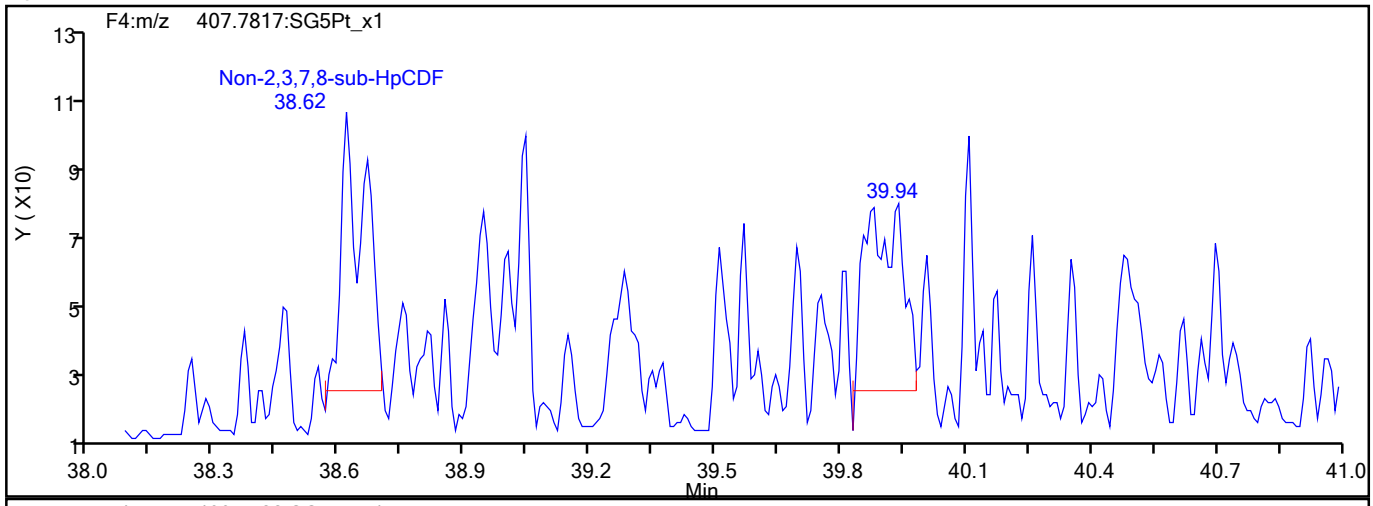

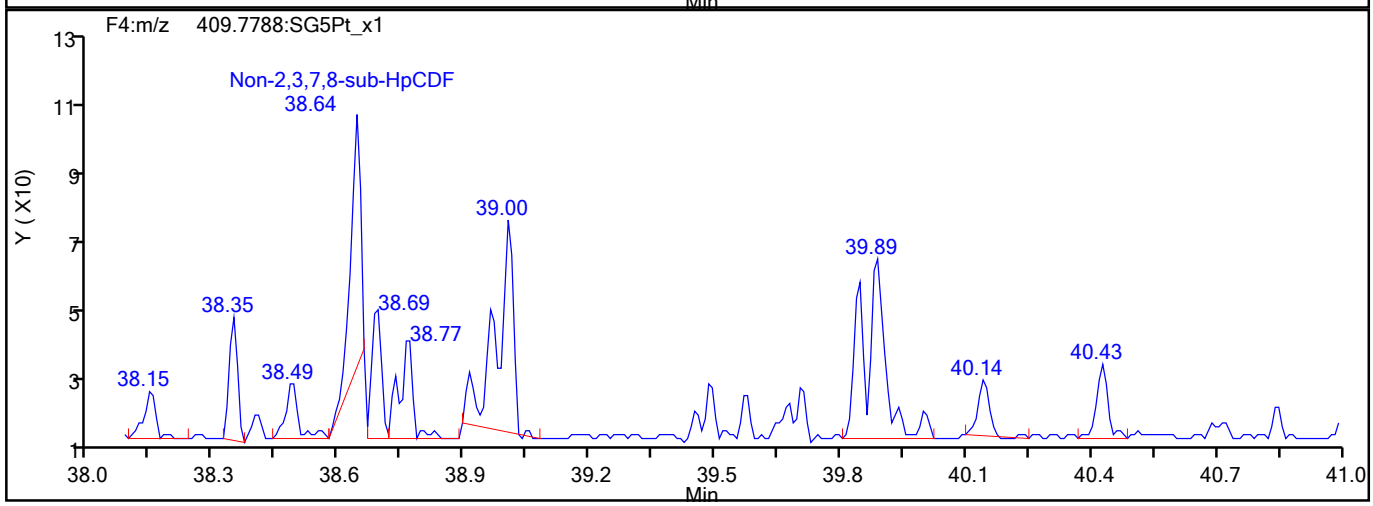

HpCDF Interference Mass

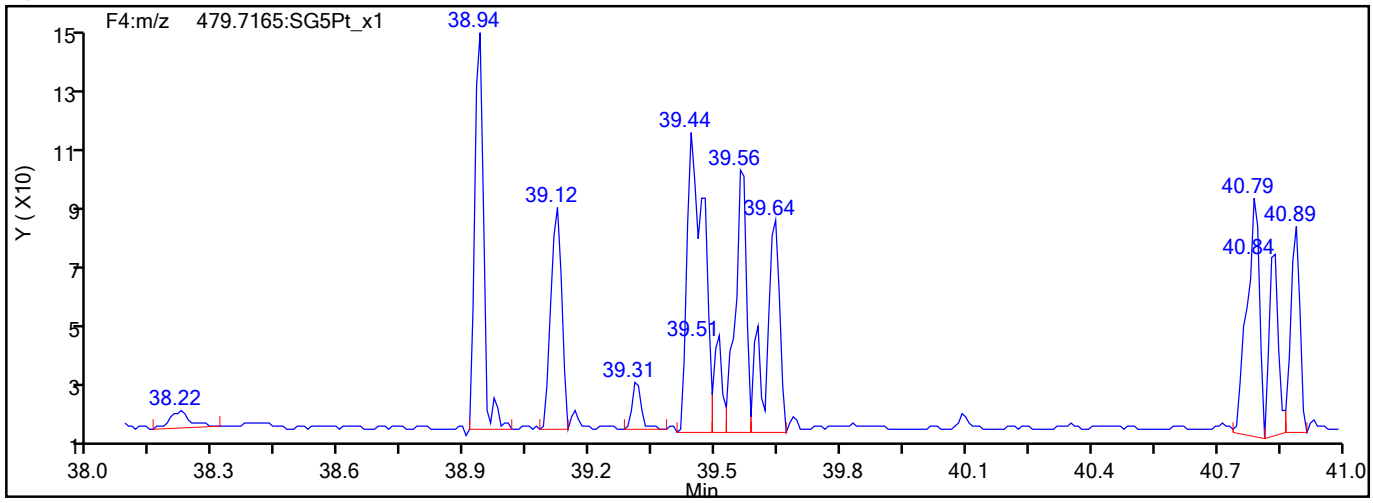

785612

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

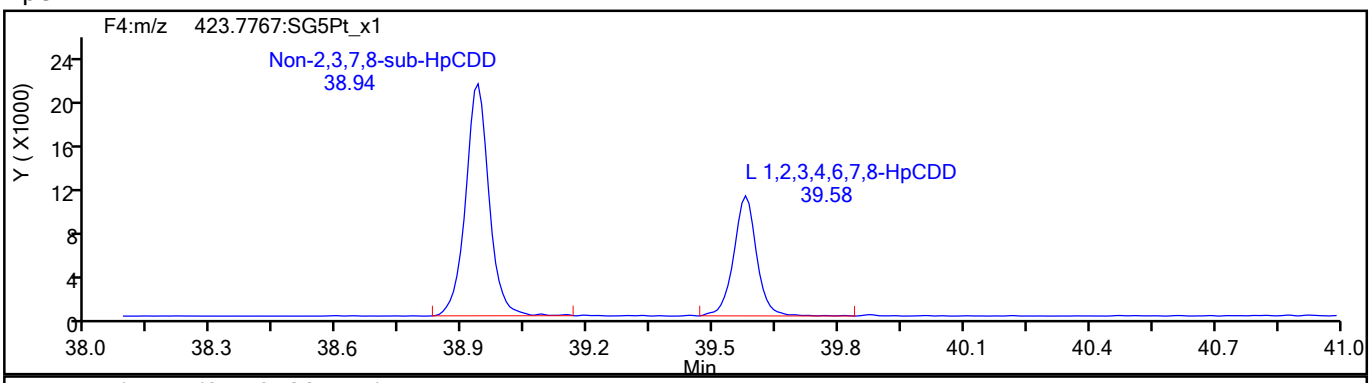

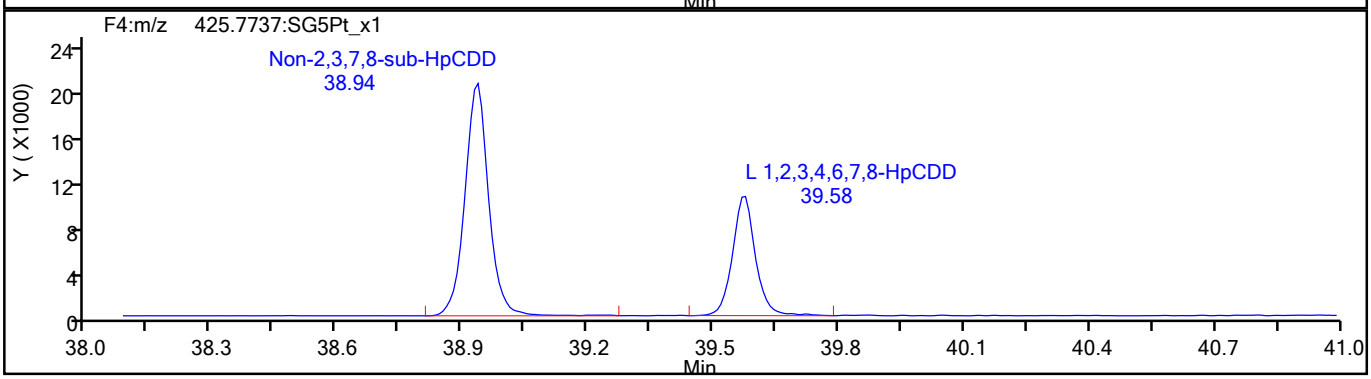

HpCDD Standards

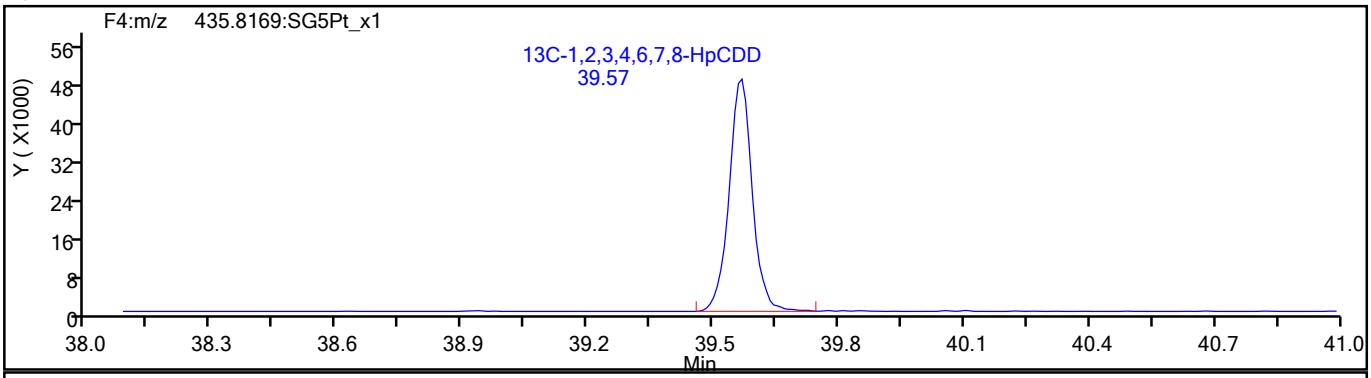

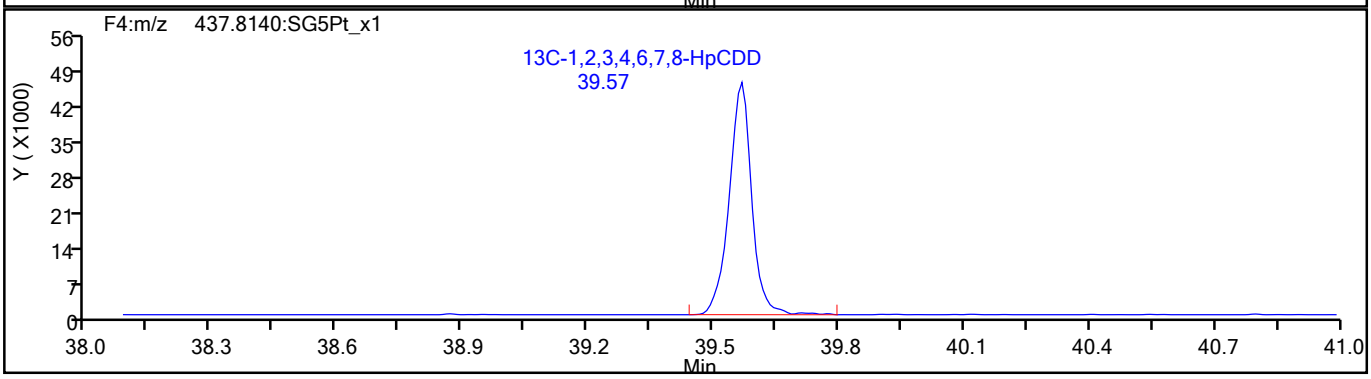

785613

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

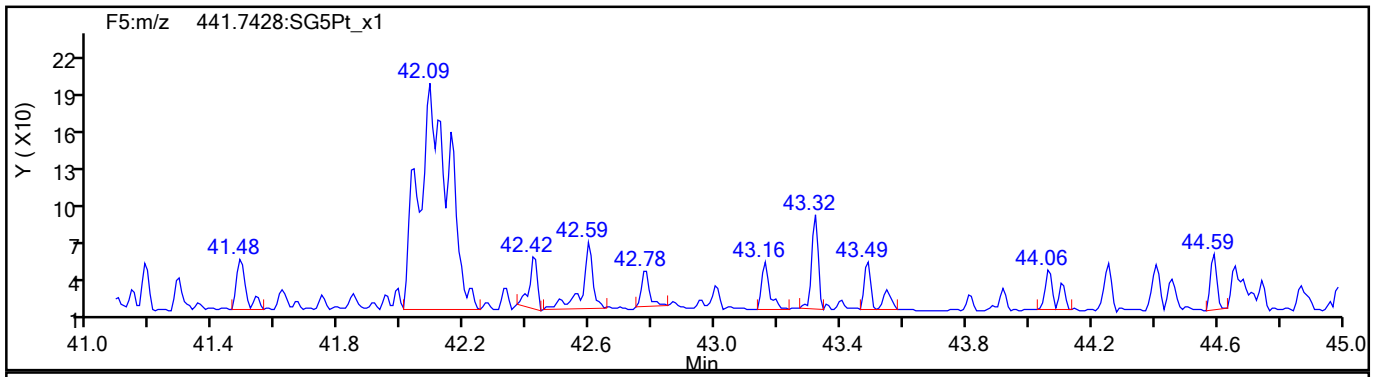

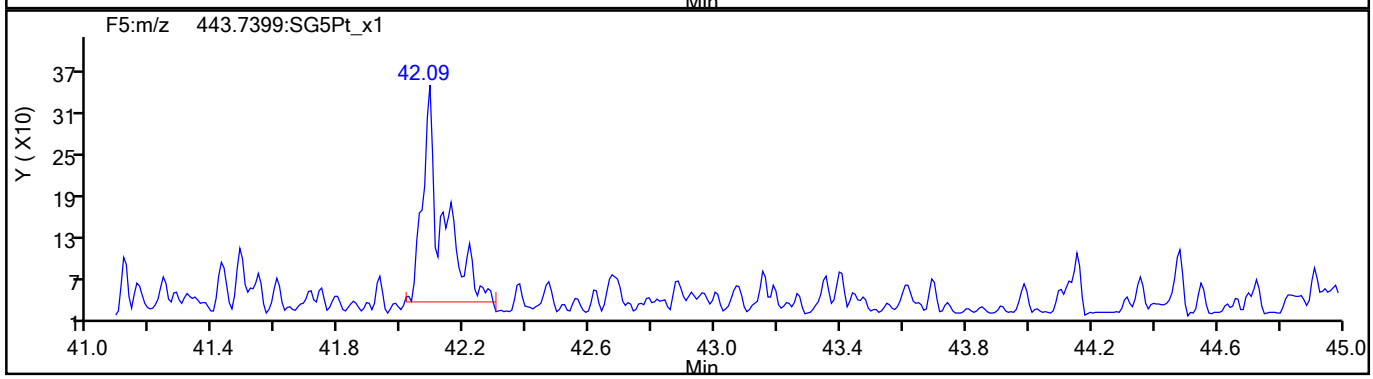

OCDF Standards

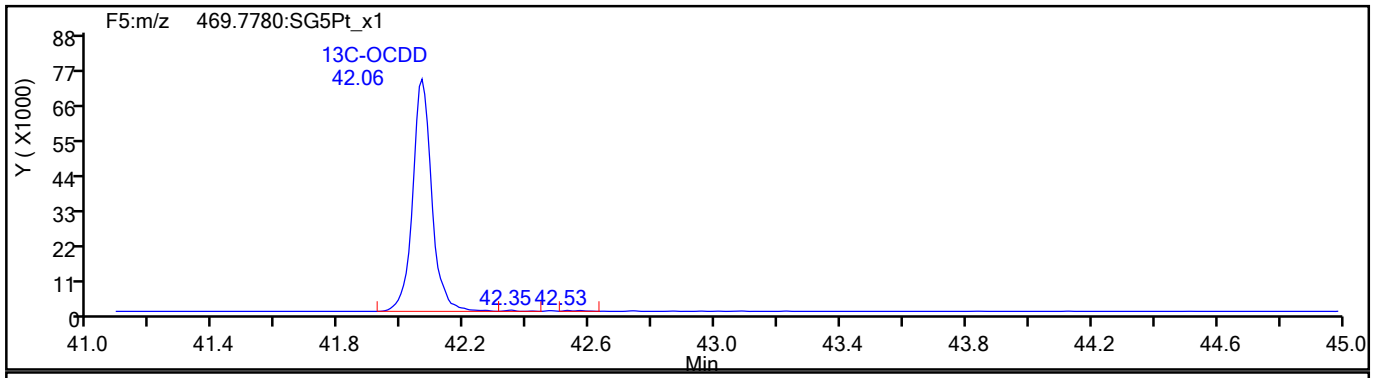

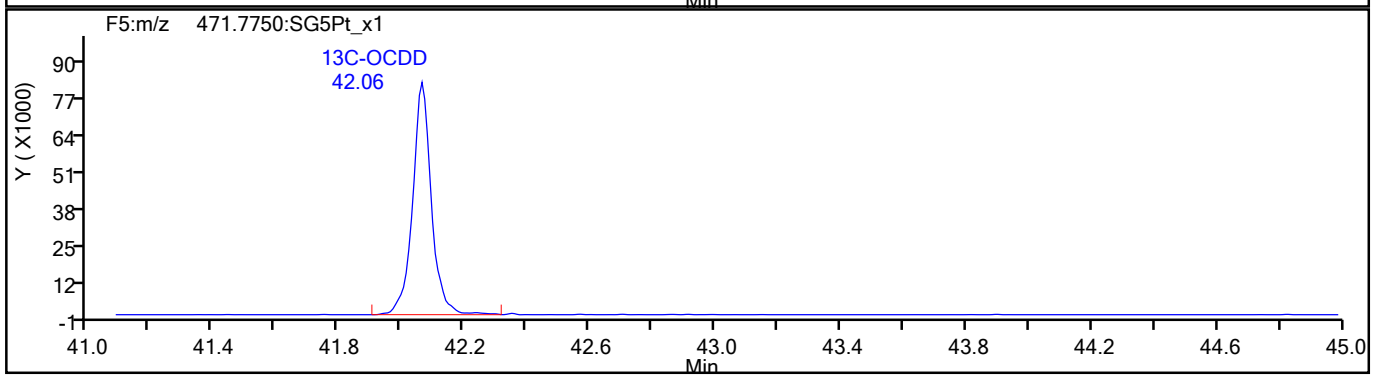

785614

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

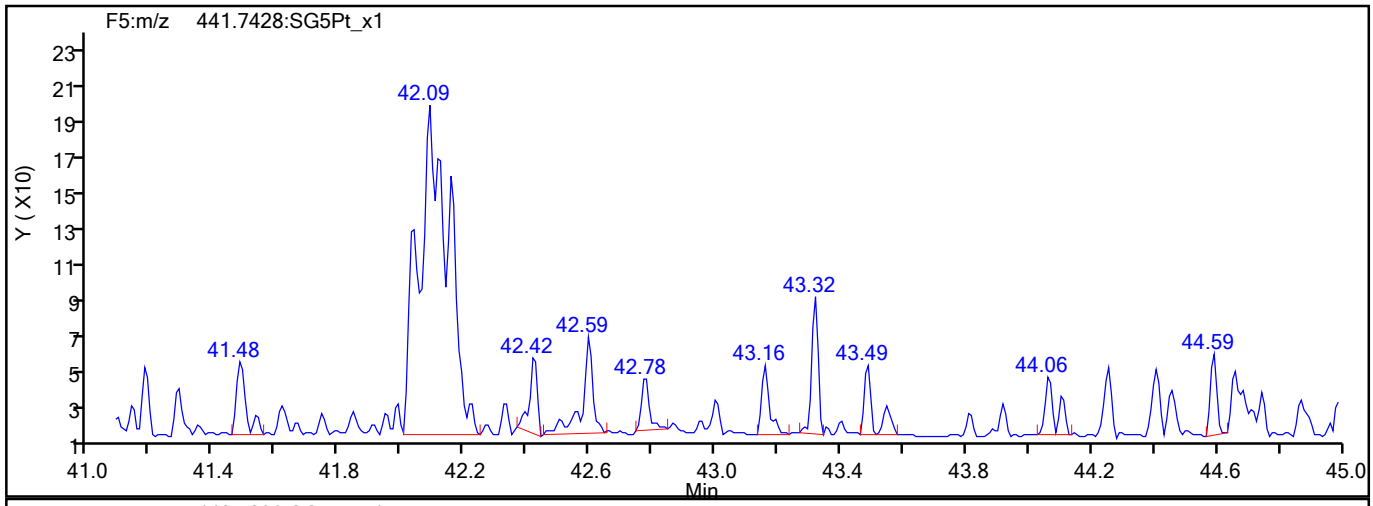

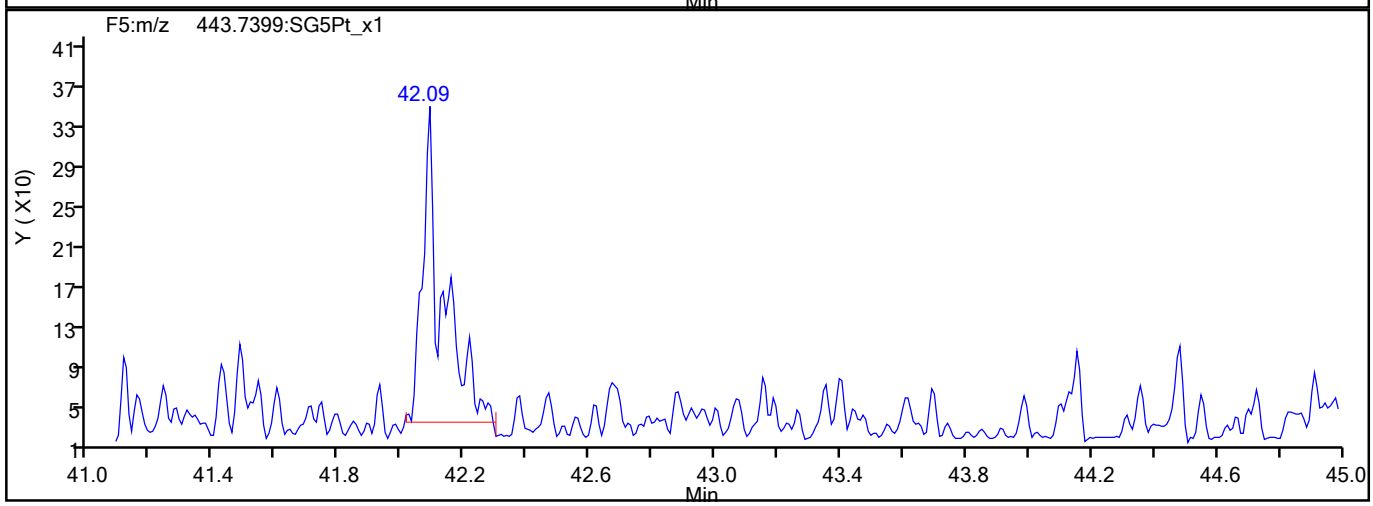

OCDF Interference Mass

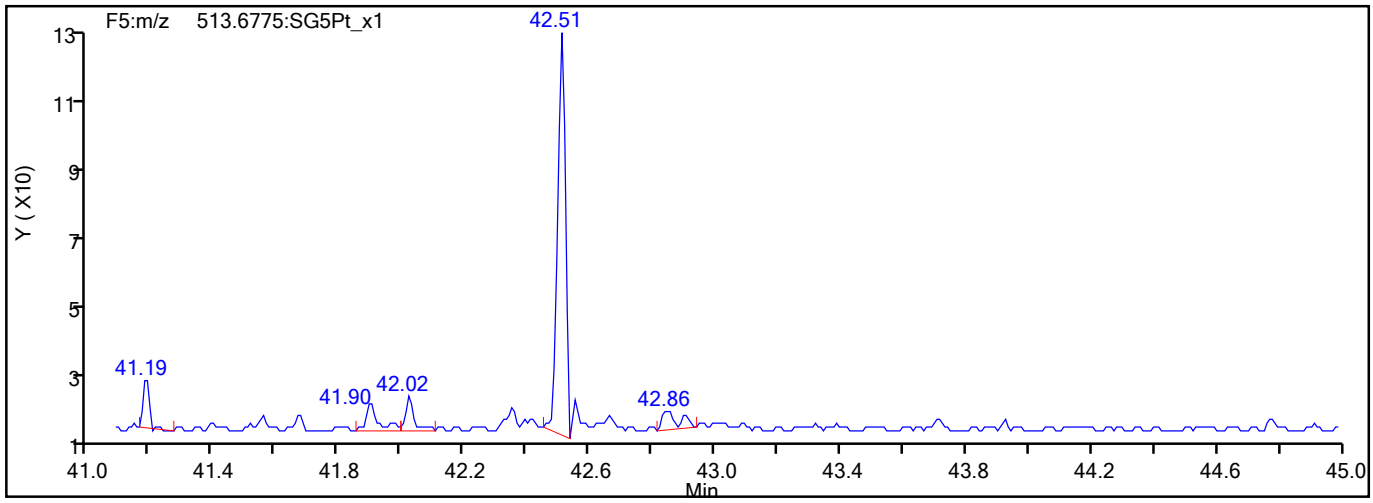

785615

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

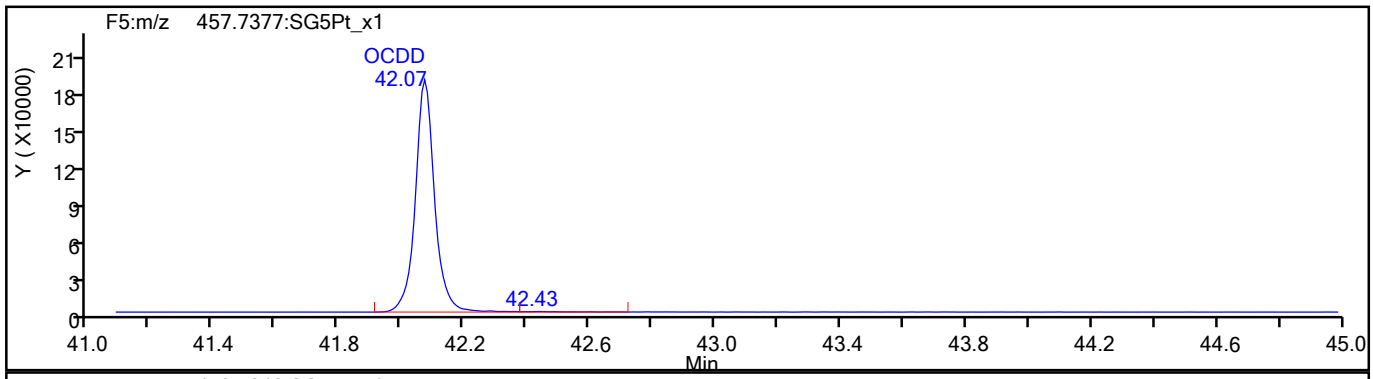

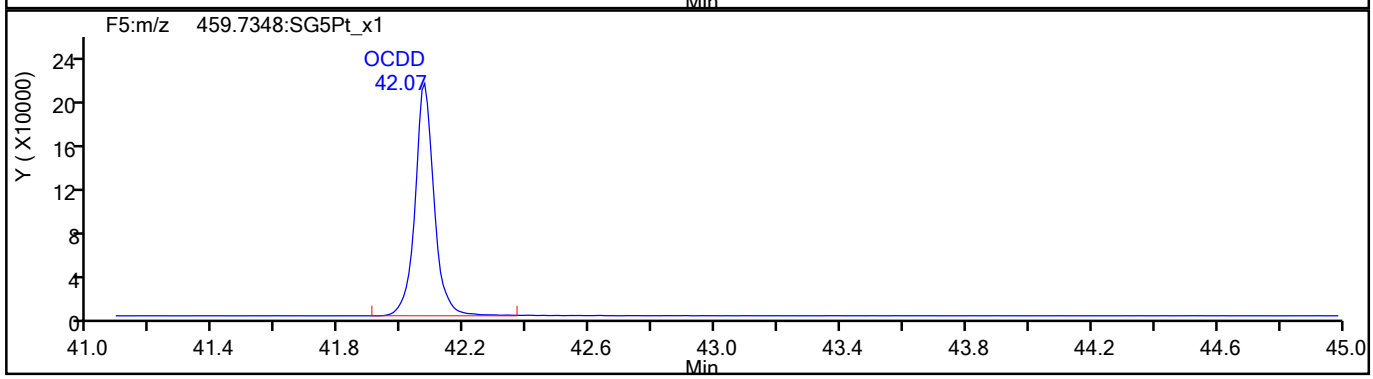

OCDD Standards

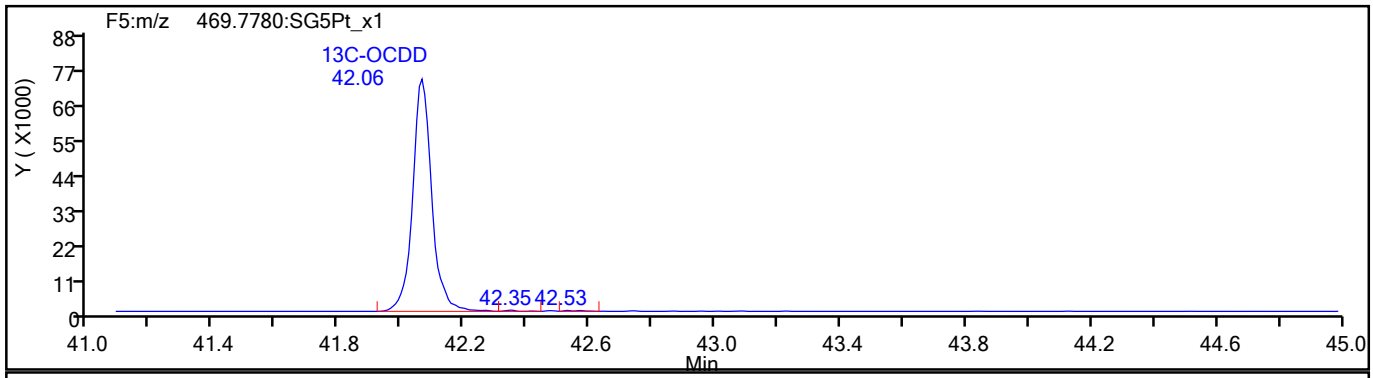

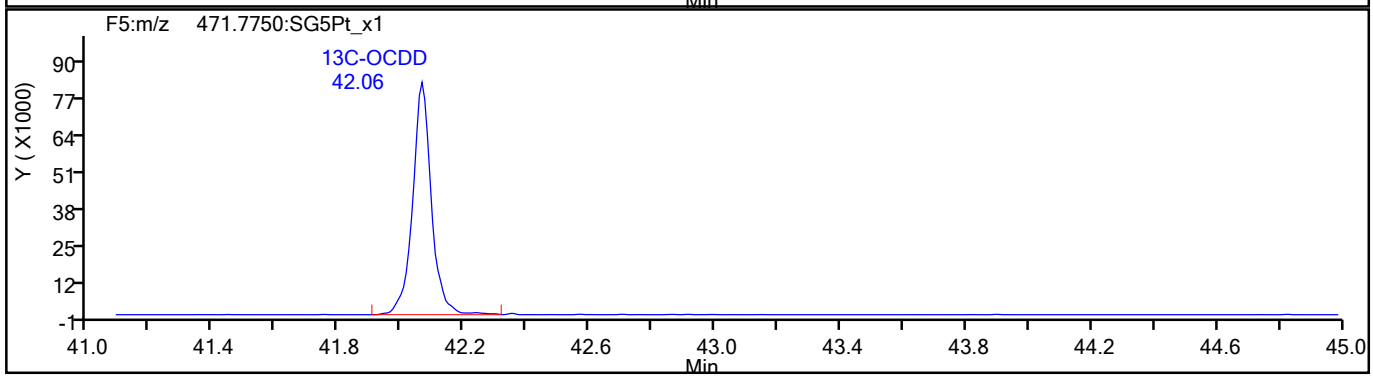

785616

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

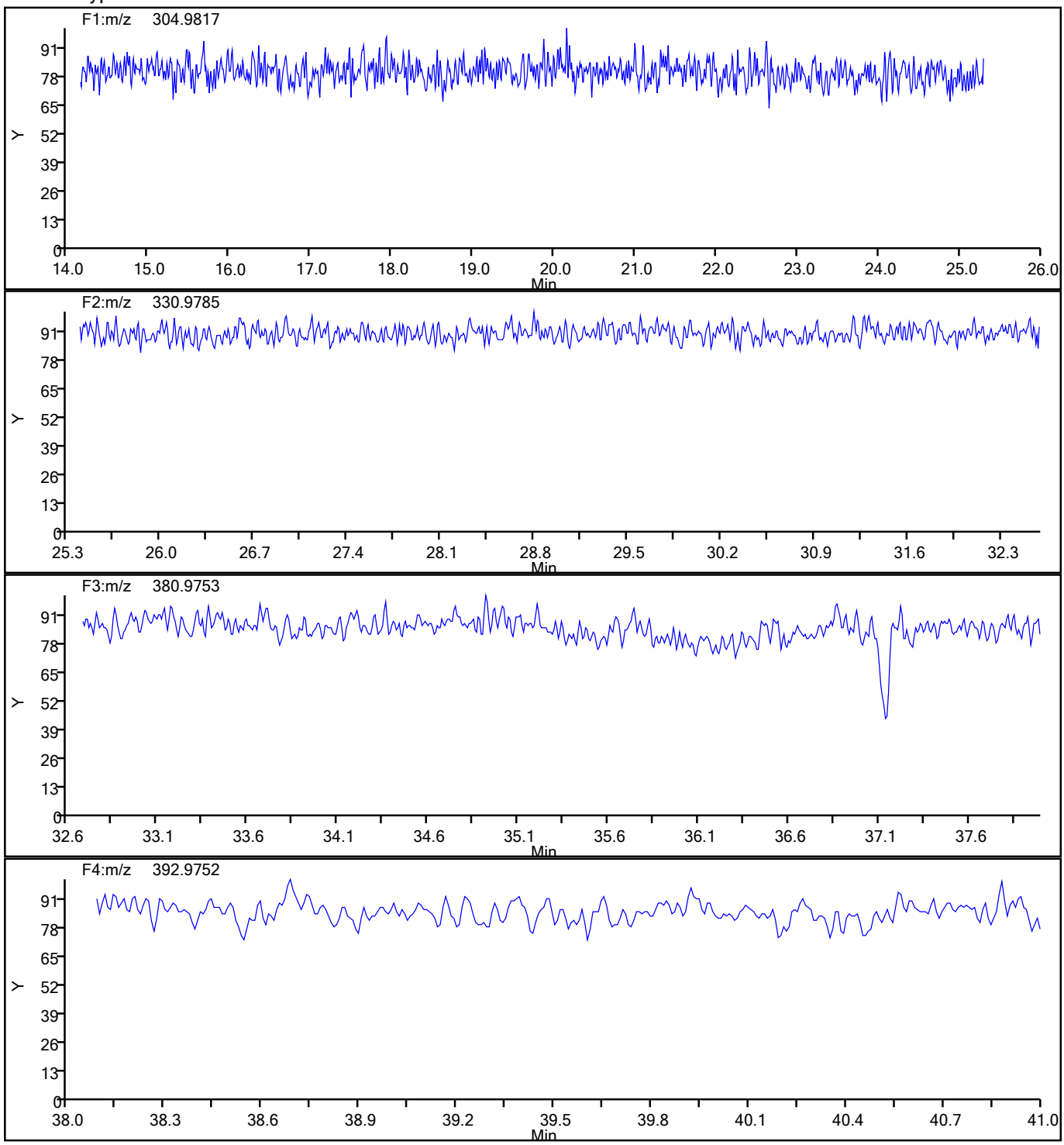

785617

Report Date: 20-Aug-2021 10:29:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_57.d		
Injection Date:	19-Aug-2021 09:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	517462	Sample Line#:	53
Column Type:	DB-5	Column Dia:	0.32 mm

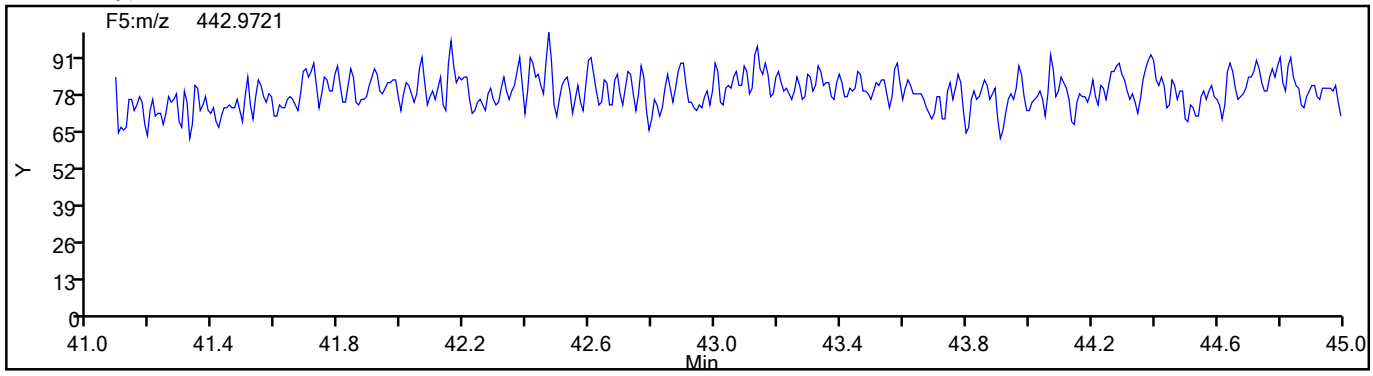

785618

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (12-14) RA
Lab Sample ID: 320-76888-7 RA
Matrix: Sediment
Lab File ID: 27AU2111D2_009.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:30
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.34(g)
Date Analyzed: 08/27/2021 14:08
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 35.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	4.3	B	1.5	0.17

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	41		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	49		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_009.d
Lims ID: 320-76888-A-7-A
Client ID: 11215702-072621-BN-SJSB094 (12-14)
Sample Type: Client
Inject. Date: 27-Aug-2021 14:08:48 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-A-7-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:50:55

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.300	72045362	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.617	39616337	0.78	1.3327	41.3	41.3	0.1855	0.1855	41.26	
2,3,7,8-TCDF	17.644	564502	0.77	0.9978	1.428	1.428	0.0579	0.0579		M
D 13C-2,3,7,8-TCDD	16.067	26463290	0.80	0.8749	42.0	42.0	0.2520	0.2520	41.98	
2,3,7,8-TCDD	16.080	139208	0.68	1.0570	0.4977	0.4977	0.0936	0.0936		
$ 37Cl4-2,3,7,8-TCDD	16.080	12297578		0.8648	19.7	19.7	0.0513	0.0513	49.34	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Report Date: 27-Aug-2021 15:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_009.d
Lims ID: 320-76888-A-7-A
Client ID: 11215702-072621-BN-SJSB094 (12-14)
Sample Type: Client
Inject. Date: 27-Aug-2021 14:08:48 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-A-7-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:50:55

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.300	16.284	1		31647823	6588483	7214	18035	913		
333.9339	16.286	16.284	0		40397539	8766037	6327	15817	1385	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.617	17.614	0	1.081	17353804	3309091	6939	17347	477		
317.9389	17.617	17.614	0	1.081	22262533	4154191	8241	20602	504	0.78(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.644	17.628	1	1.002	245510	43212	674	1685	64		M
305.8987	17.630	17.628	0	1.001	318992	56705	1052	2630	54	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.064	0	0.986	11738931	2658535	7214	18035	369		
333.9339	16.067	16.064	0	0.986	14724359	3416582	6327	15817	540	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.080	16.078	0	1.001	56106	14884	1114	2785	13		
321.8936	16.080	16.078	0	1.001	83102	18542	1290	3225	14	0.68(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.078	0	0.987	12297578	2646492	2725	6812	971		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_009.d				
Injection Date:	27-Aug-2021 14:08:48	Instrument ID:	11D2		
Lims ID:	320-76888-A-7-A	Lab Sample ID:	320-76888-7		
Client ID:	11215702-072621-BN-SJSB094 (12-14)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.64
Area: 260983
Amount: 1.467197
Amount Units: pg/ul

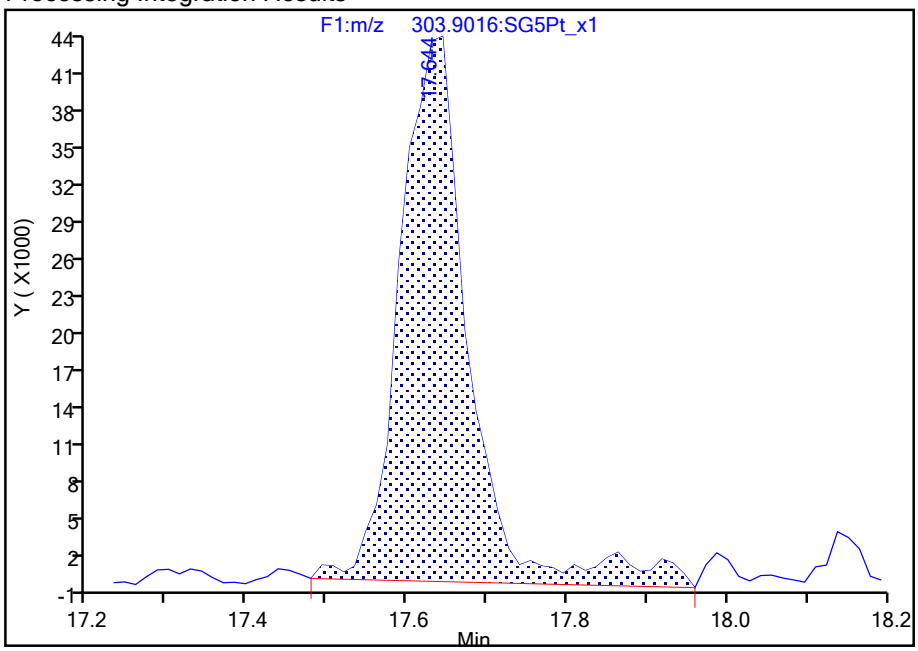

Manual Integration Results

RT: 17.64
Area: 245510
Amount: 1.428054
Amount Units: pg/ul

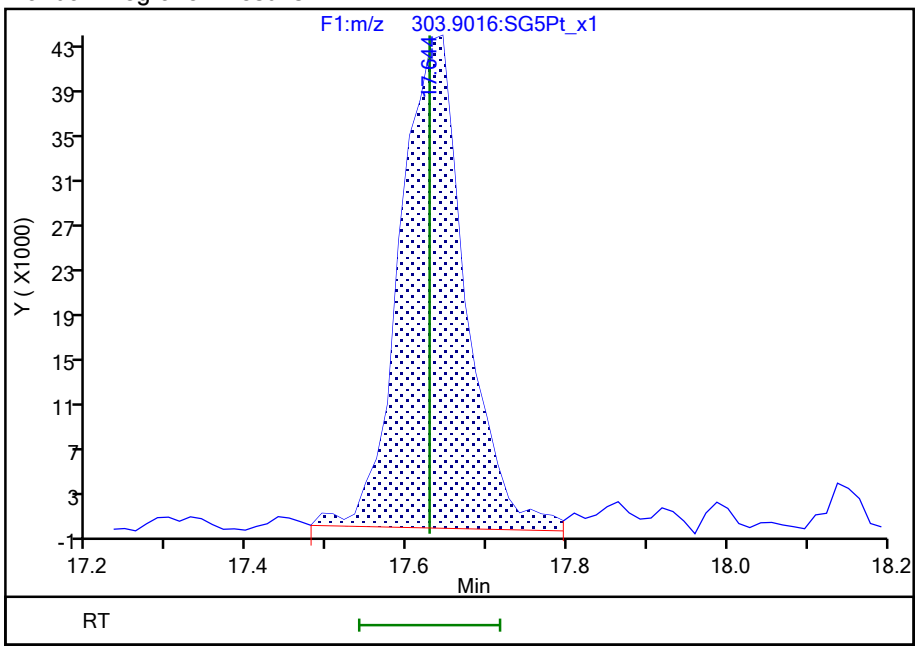

Reviewer: bennettd, 27-Aug-2021 15:51:25

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 27-Aug-2021 15:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_009.d		
Injection Date:	27-Aug-2021 14:08:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	520438	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

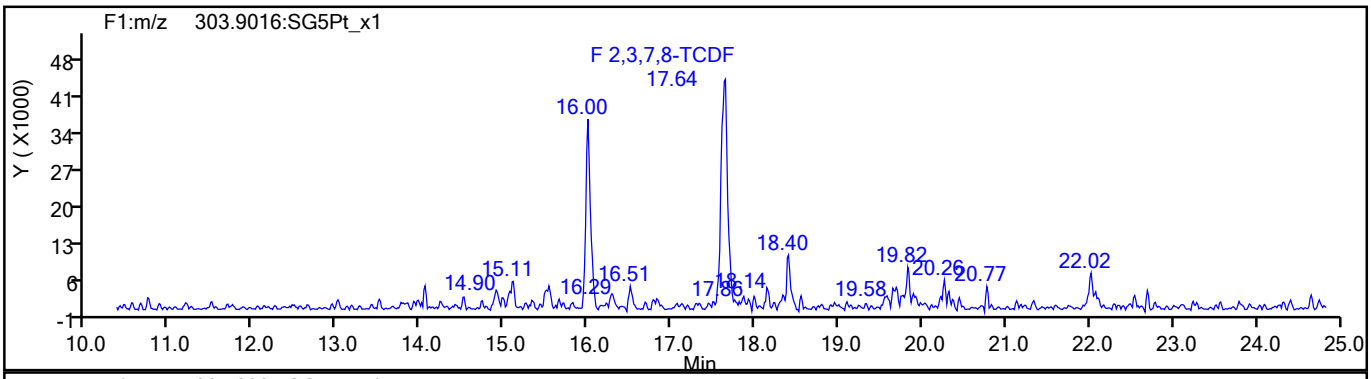

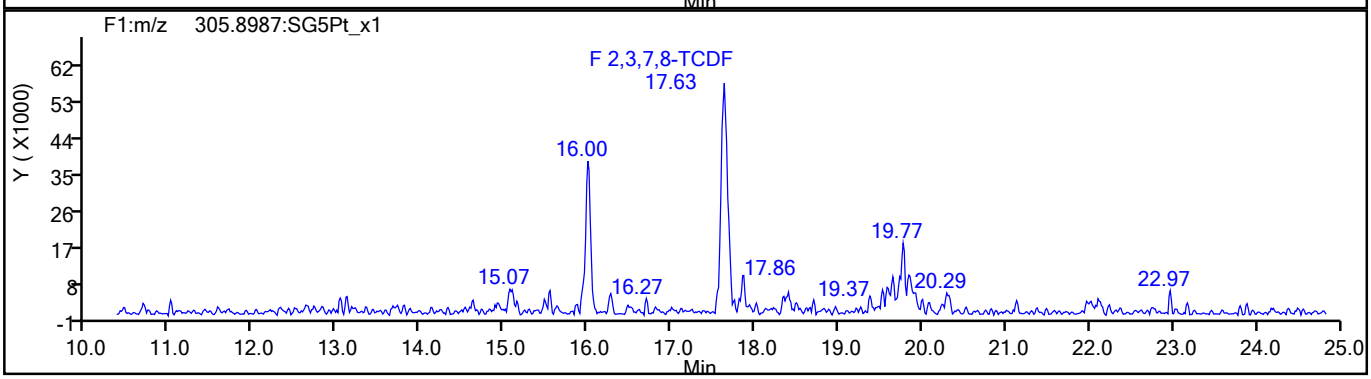

TCDF Standards

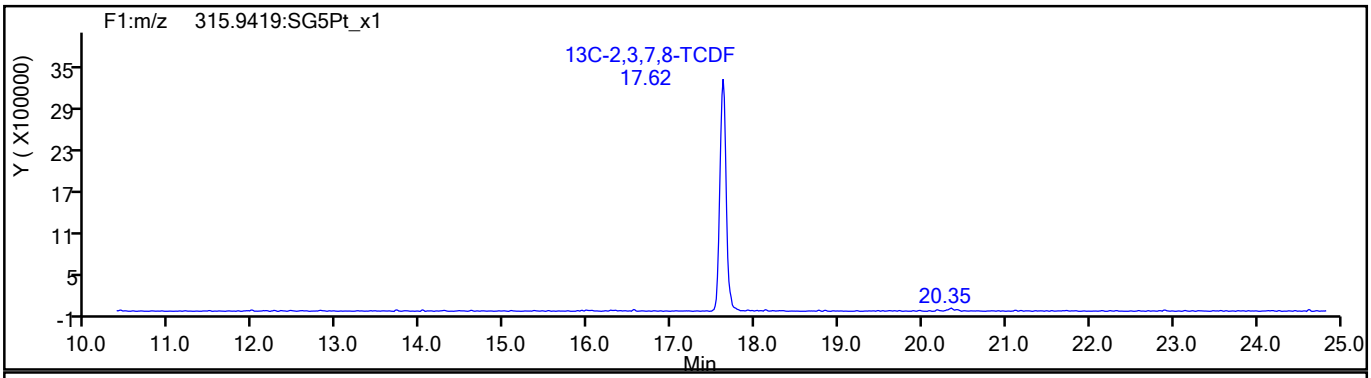

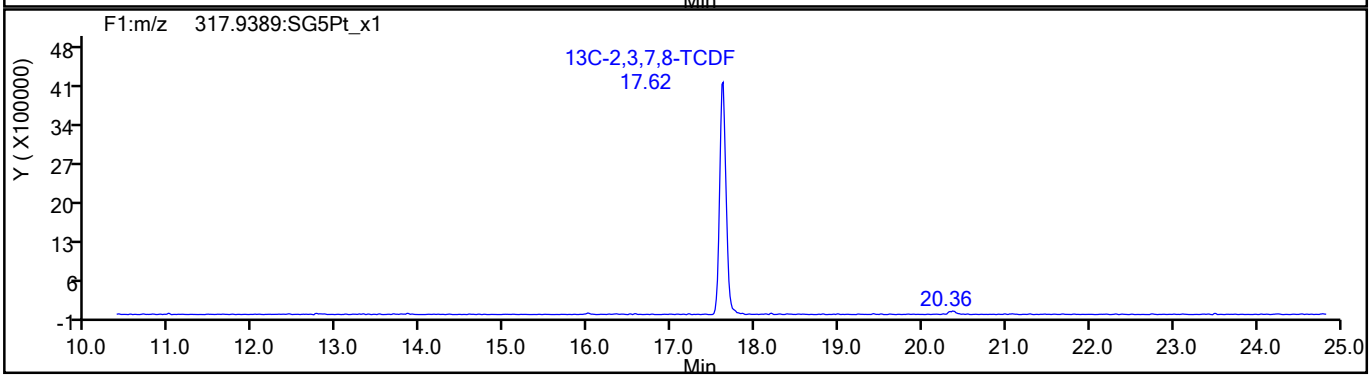

785623

Report Date: 27-Aug-2021 15:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_009.d		
Injection Date:	27-Aug-2021 14:08:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	520438	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

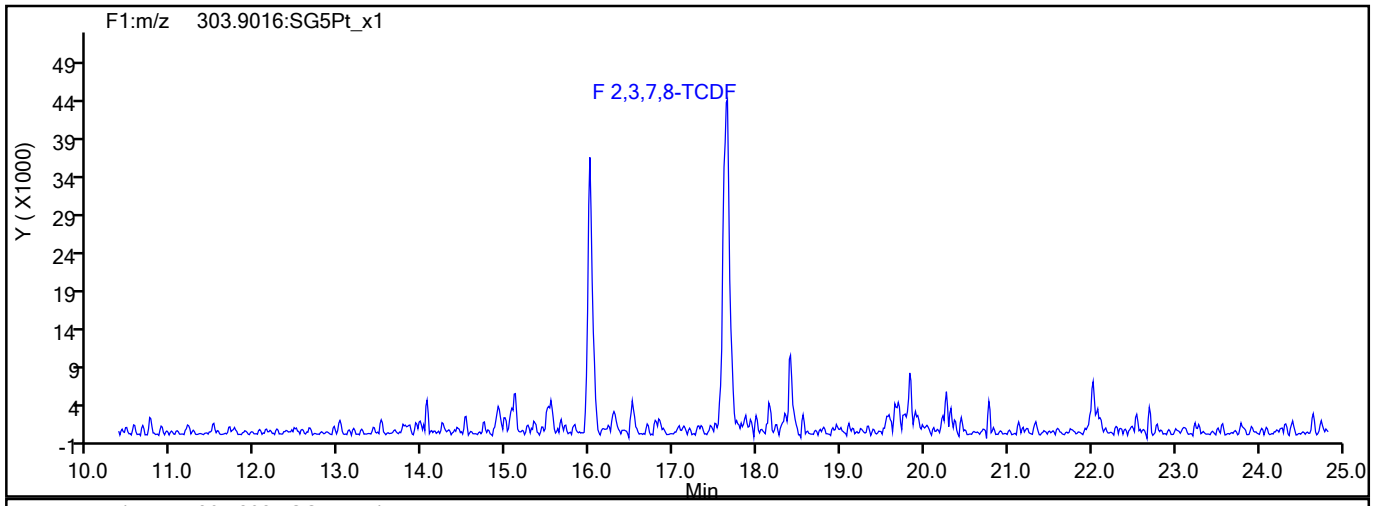

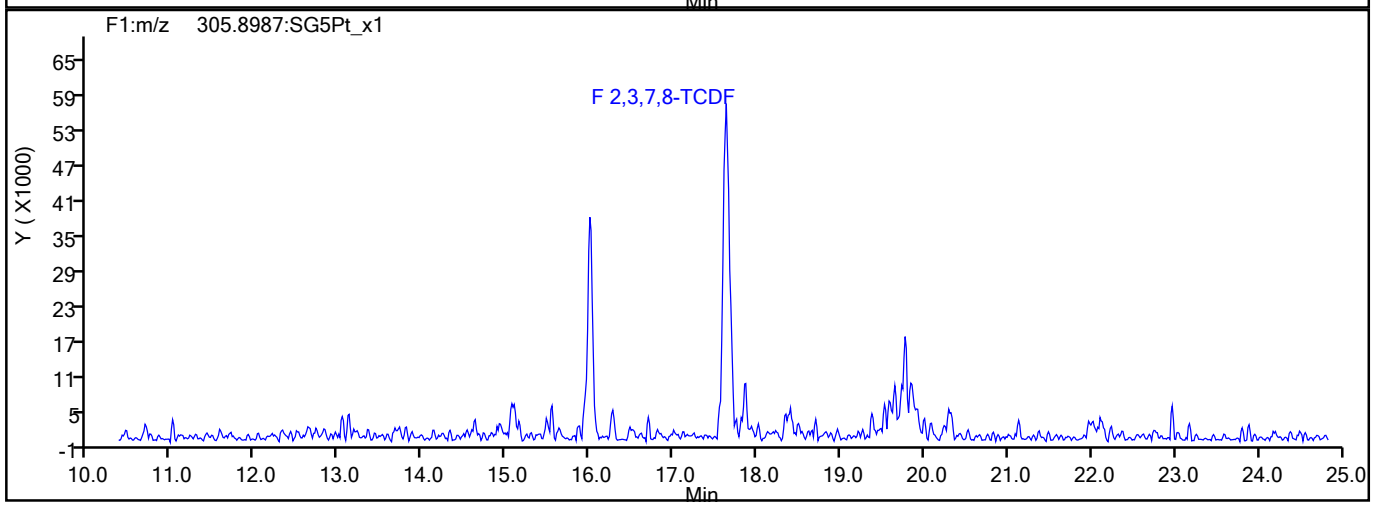

TCDF Interference Mass

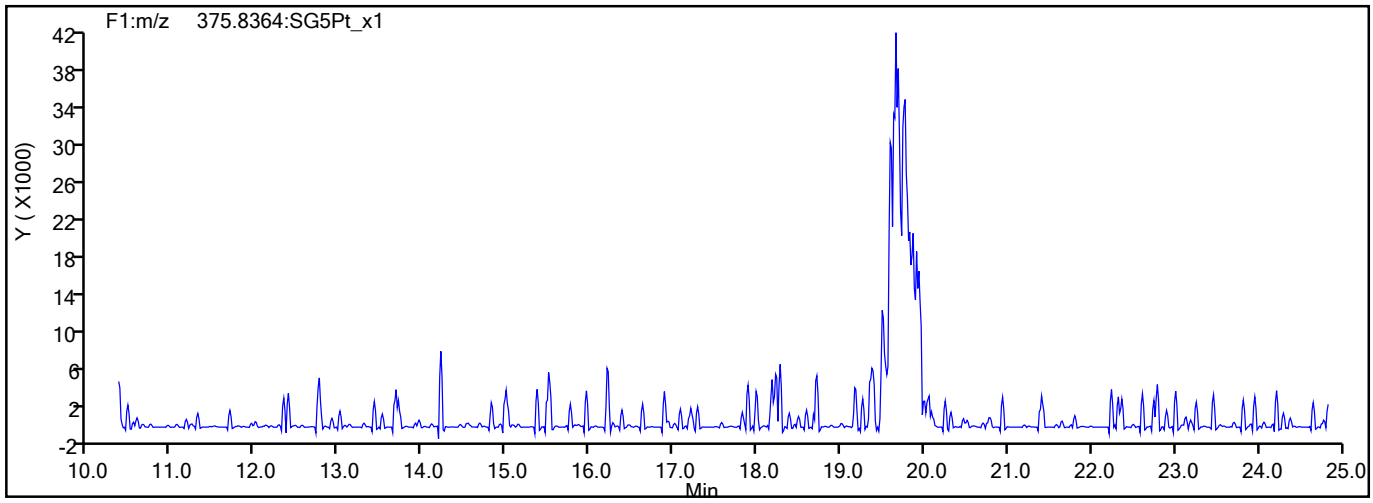

785624

Report Date: 27-Aug-2021 15:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_009.d		
Injection Date:	27-Aug-2021 14:08:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	520438	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

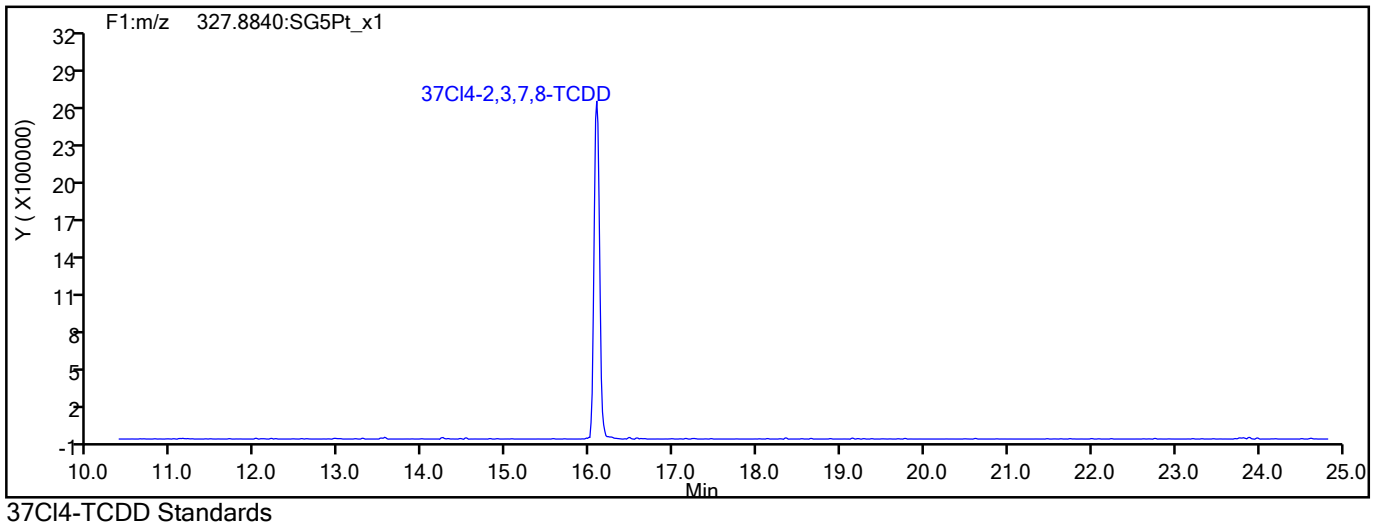

37Cl4-TCDD Standards

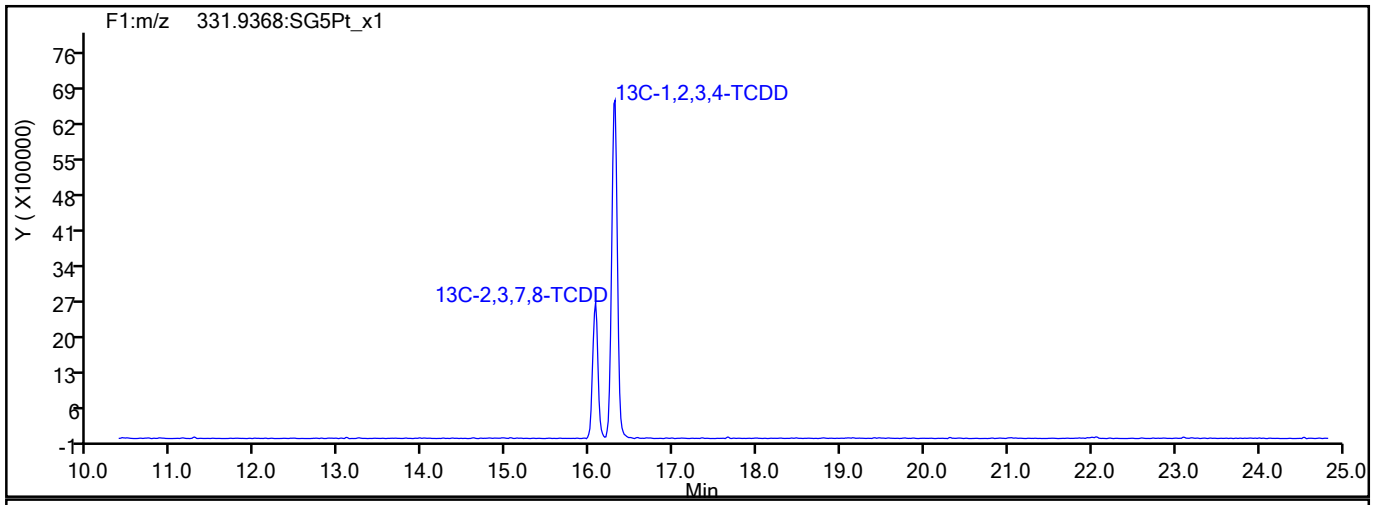

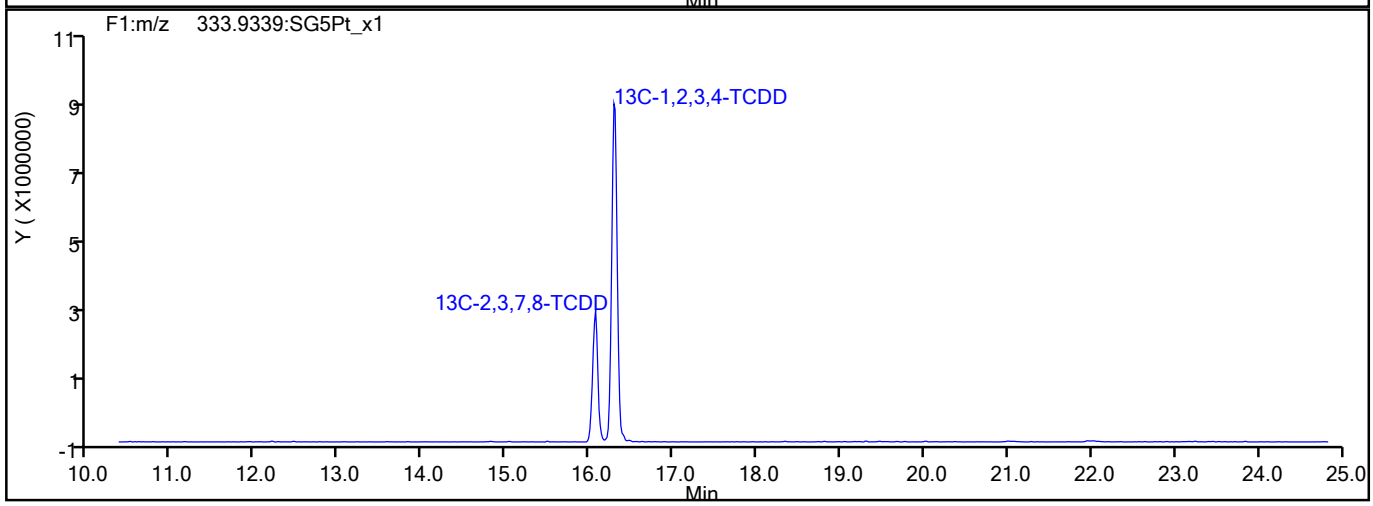

785625

Report Date: 27-Aug-2021 15:52:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_009.d		
Injection Date:	27-Aug-2021 14:08:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (12-14)		
Worklist#:	520438	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

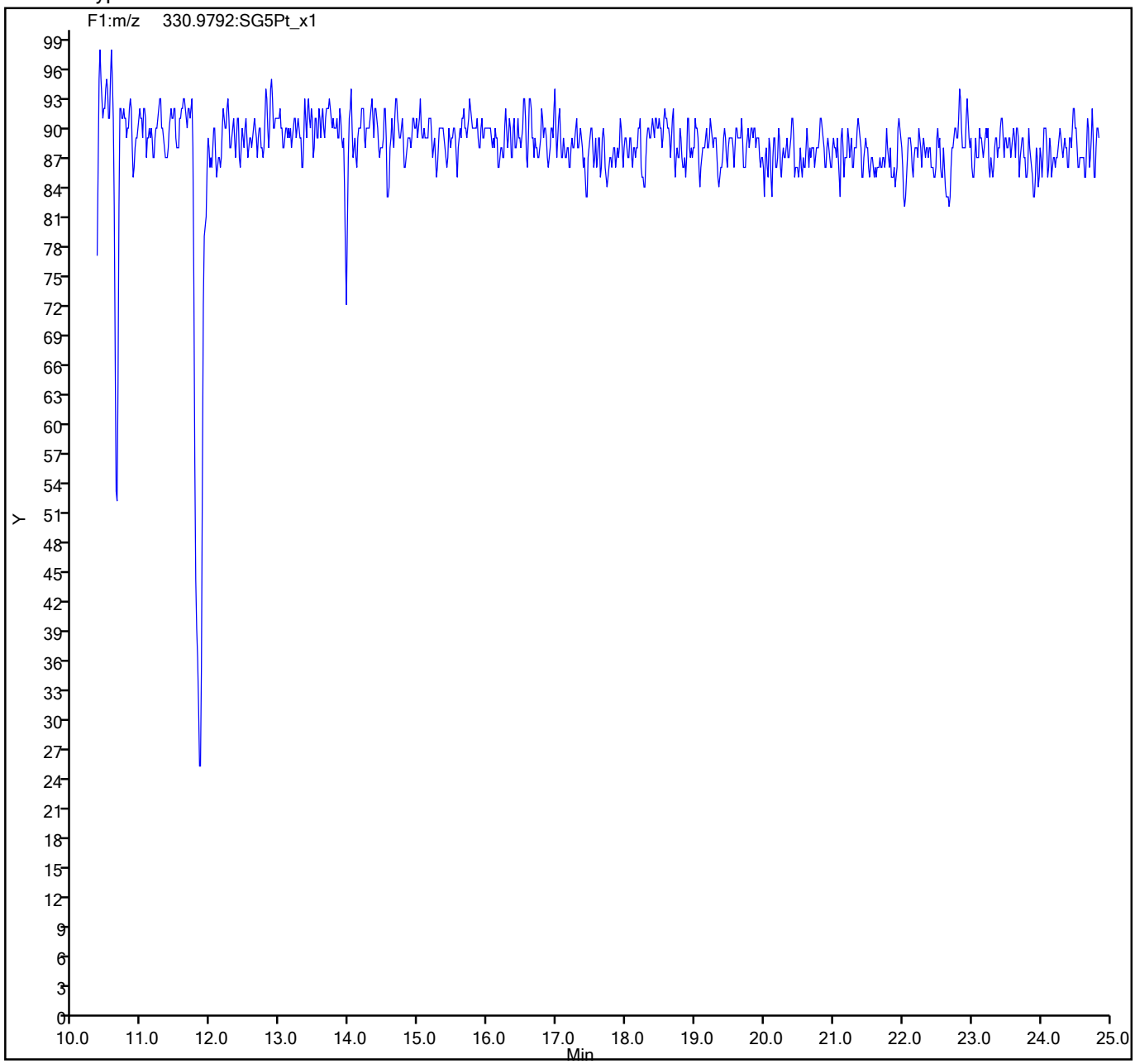

785626

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (14-16)
Lab Sample ID: 320-76888-8
Matrix: Sediment
Lab File ID: 17au21dfs1_58.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:35
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.06(g)
Date Analyzed: 08/19/2021 10:18
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 35.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	1.3	J	1.5	0.15
40321-76-4	1,2,3,7,8-PeCDD	ND		7.7	0.23
57117-41-6	1,2,3,7,8-PeCDF	ND		7.7	0.063
57117-31-4	2,3,4,7,8-PeCDF	ND		7.7	0.069
39227-28-6	1,2,3,4,7,8-HxCDD	0.91	J	7.7	0.30
57653-85-7	1,2,3,6,7,8-HxCDD	1.6	J	7.7	0.32
19408-74-3	1,2,3,7,8,9-HxCDD	4.4	J	7.7	0.29
70648-26-9	1,2,3,4,7,8-HxCDF	ND		7.7	0.046
57117-44-9	1,2,3,6,7,8-HxCDF	ND		7.7	0.045
72918-21-9	1,2,3,7,8,9-HxCDF	ND		7.7	0.046
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.7	0.046
35822-46-9	1,2,3,4,6,7,8-HpCDD	60	B	7.7	0.42
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		7.7	0.079
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.7	0.077
3268-87-9	OCDD	1300	B	15	1.1
39001-02-0	OCDF	ND		15	0.11
41903-57-5	Total TCDD	4.1	q	1.5	0.15
30402-14-3	Total TCDF	3.0	B	1.5	0.070
36088-22-9	Total PeCDD	8.4	q	7.7	0.23
30402-15-4	Total PeCDF	ND		7.7	0.069
34465-46-8	Total HxCDD	50		7.7	0.30
55684-94-1	Total HxCDF	ND		7.7	0.11
37871-00-4	Total HpCDD	190	B	7.7	0.42
38998-75-3	Total HpCDF	ND		7.7	0.23

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (14-16)
Lab Sample ID: 320-76888-8
Matrix: Sediment
Lab File ID: 17au21dfs1_58.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:35
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.06(g)
Date Analyzed: 08/19/2021 10:18
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 35.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	39		25-164
89059-46-1	13C-2,3,7,8-TCDF	37		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	35		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	36		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	38		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	44		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	41		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	47		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	43		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	37		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	40		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	43		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	43		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	46		26-138
114423-97-1	13C-OCDD	47		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	45		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d
Lims ID: 320-76888-A-8-A
Client ID: 11215702-072621-BN-SJSB094 (14-16)
Sample Type: Client
Inject. Date: 19-Aug-2021 10:18:00 ALS Bottle#: 0 Worklist Smp#: 54
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-a-8-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 10:32:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1656

First Level Reviewer: stephensk Date: 19-Aug-2021 11:36:55

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.344	1279780	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.380	635859	0.81	1.3459	36.9	36.9	0.1291	0.1291	36.92	M
2,3,7,8-TCDF	20.415	6601	0.75	1.0802	0.9611	0.9611	0.0227	0.0227		
A Non-2,3,7,8-sub-TCDF	19.878						0.0227	0.3724		RQU
S Total TCDF					0.9611	0.9611	0.0227	0.0227		
D 13C-2,3,7,8-TCDD	21.731	464213	0.80	0.9317	38.9	38.9	0.2035	0.2035	38.93	
2,3,7,8-TCDD	21.757	2052	0.81	1.0753	0.4111	0.4111	0.0474	0.0474		
$ 37Cl4-2,3,7,8-TCDD	21.766	230997		1.0083	17.9	17.9	0.0208	0.0208	44.75	
A Non-2,3,7,8-sub-TCDD	20.707	4629	0.77	1.0753	0.9794	0.9273	0.0474	0.5321		RQa
S Total TCDD					1.390	1.338	0.0474	0.0474		RQ
D 13C-1,2,3,7,8-PeCDF	27.250	518429	1.62	1.1405	35.5	35.5	0.1216	0.1216	35.52	
1,2,3,7,8-PeCDF	27.258						0.0206	0.0206		RQU
D 13C-2,3,4,7,8-PeCDF	28.748	544278	1.60	1.1253	37.8	37.8	0.1232	0.1232	37.79	
2,3,4,7,8-PeCDF	28.820						0.0226	0.0226		
A F1 PeCDFs	24.648						0.008871	0.008871		RQU
A Non-2,3,7,8-sub-PeCDF	28.125						0.0215	0.0215		RQU
S Total PeCDF							0.0226	0.0226		
D 13C-1,2,3,7,8-PeCDD	29.556	323109	1.68	0.7165	35.2	35.2	0.0687	0.0687	35.24	
1,2,3,7,8-PeCDD	29.637						0.0753	0.0753		
A Non-2,3,7,8-sub-PeCDD	28.489	9211	1.55	1.0465	2.973	2.724	0.0753	1.429		RQMa
S Total PeCDD					2.973	2.724	0.0753	0.0753		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.905	509387	0.49	0.9648	47.4	47.4	0.1458	0.1458	47.38	
1,2,3,4,7,8-HxCDF	34.938						0.0150	0.0150		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.065	507727	0.52	1.0708	42.6	42.6	0.1314	0.1314	42.55	
1,2,3,6,7,8-HxCDF	35.119						0.0148	0.0148		
D 13C-2,3,4,6,7,8-HxCDF	35.890	460463	0.54	1.0413	39.7	39.7	0.1351	0.1351	39.68	
2,3,4,6,7,8-HxCDF	35.898						0.0150	0.0150		RQU
D 13C-1,2,3,7,8,9-HxCDF	36.782	404419	0.56	0.9731	37.3	37.3	0.1445	0.1445	37.30	
1,2,3,7,8,9-HxCDF	36.828						0.0149	0.0149		
A Non-2,3,7,8-sub-HxCDF	35.028						0.0149	0.0347		RQU
S Total HxCDF							0.0347	0.0347		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.580	1114337	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.100	370319	1.24	0.7587	43.8	43.8	0.1583	0.1583	43.80	
1,2,3,4,7,8-HxCDD	36.100	1163	1.32	1.0608	0.2961	0.2961	0.0963	0.0963		
D 13C-1,2,3,6,7,8-HxCDD	36.209	394188	1.20	0.8593	41.2	41.2	0.1398	0.1398	41.17	
1,2,3,6,7,8-HxCDD	36.243	2081	1.17	0.9933	0.5315	0.5315	0.1041	0.1041		
1,2,3,7,8,9-HxCDD	36.605	6061	1.12	1.1094	1.429	1.429	0.0926	0.0926		
A Non-2,3,7,8-sub-HxCDD	35.394	55923	1.21	1.0545	13.9	13.9	0.0975	10.2		
S Total HxCDD					16.1	16.1	0.0977	0.0977		
D 13C-1,2,3,4,6,7,8-HpCDF	38.606	351566	0.47	0.7359	42.9	42.9	0.1816	0.1816	42.87	
1,2,3,4,6,7,8-HpCDF	38.630						0.0256	0.0256		
D 13C-1,2,3,4,7,8,9-HpCDF	39.860	350016	0.44	0.6854	45.8	45.8	0.1950	0.1950	45.83	
1,2,3,4,7,8,9-HpCDF	39.868						0.0250	0.0250		U
A Non-2,3,7,8-sub-HpCDF	39.258						0.0252	0.0752		RQU
S Total HpCDF							0.0752	0.0752		
D 13C-1,2,3,4,6,7,8-HpCDD	39.548	321145	1.06	0.6745	42.7	42.7	0.0762	0.0762	42.73	
1,2,3,4,6,7,8-HpCDD	39.565	65216	1.05	1.0503	19.3	19.3	0.1352	0.1352		
A Non-2,3,7,8-sub-HpCDD	39.258	143060	1.04	1.0503	42.4	42.4	0.1352	42.4		
S Total HpCDD					61.7	61.7	0.1352	0.1352		
D 13C-OCDD	42.043	570493	0.92	0.5446	94.0	94.0	0.1661	0.1661	47.00	
OCDF	42.027						0.0346	0.0346		RQMU
OCDD	42.060	1276714	0.91	1.0620	421.5	421.5	0.3644	0.3644		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d
Lims ID: 320-76888-A-8-A
Client ID: 11215702-072621-BN-SJSB094 (14-16)
Sample Type: Client
Inject. Date: 19-Aug-2021 10:18:00 ALS Bottle#: 0 Worklist Smp#: 54
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-a-8-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 10:32:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1656

First Level Reviewer: stephensk Date: 19-Aug-2021 11:36:55

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.344	21.427	-5		570146	78291	106	265	739		a
333.9338	21.344	21.427	-5		709634	98376	28	70	3513	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											M
315.9419	20.380	20.401	-1	0.955	285096	37331	91	227	410		
317.9389	20.398	20.401	0	0.956	350763	52256	32	80	1633	0.81(0.65-0.89)	M
2,3,7,8-TCDF											
303.9016	20.415	20.436	-1	1.002	2835	446	2	5	223		
305.8987	20.406	20.436	-2	1.001	3766	773	7	17	110	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											U
303.9016	16.984	19.878	-173	0.833	124	60	2	5	30		
305.8987	16.993	19.878	-173	0.834	459	109	7	17	16	0.27(0.65-0.89)	
	Empc Correction				161	77	7	17	11		
13C-2,3,7,8-TCDD											
331.9368	21.731	21.743	-1	1.018	205632	27062	106	265	255		
333.9338	21.740	21.743	0	1.019	258581	31820	28	70	1136	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.757	21.777	-1	1.001	916	178	9	22	20		
321.8936	21.748	21.777	-2	1.001	1136	174	3	7	58	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.766	21.849	-5	1.020	230997	29158	15	37	1944		
A Non-2,3,7,8-sub-TCDD											RQa
319.8965	19.684	20.707	-61	0.906	1118	169	9	22	19		a
	Empc Correction				858	139	9	22	15		
321.8936	19.649	20.707	-63	0.904	1115	181	3	7	60	1.00(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	21.533	20.707	49	0.991	1103	185	9	22	21		a
321.8936	21.542	20.707	50	0.991	1553	226	3	7	75	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.250	27.288	-2	1.277	320926	48119	66	165	729		
353.8970	27.241	27.288	-3	1.276	197503	30179	32	80	943	1.62(1.32-1.78)	
1,2,3,7,8-PeCDF											RQU
339.8597	27.313						1	2			
341.8567	27.313						6	15			
13C-2,3,4,7,8-PeCDF											
351.9000	28.748	28.795	-3	1.347	334613	48458	66	165	734		
353.8970	28.757	28.795	-2	1.347	209665	26313	32	80	822	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.820						1	2			
341.8567	28.820						6	15			
A F1 PeCDFs											U
339.8597	24.201	24.648	-27	0.888	10	6	1	2	6		
341.8567	24.158	24.648	-29	0.887	57	22	2	5	11	0.18(1.32-1.78)	
	Empc Correction				6	3	2	5	2		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	25.701	28.125	-145	0.943	33	13	1	2	13		
341.8567	25.659	28.125	-148	0.942	84	60	6	15	10	0.39(1.32-1.78)	
	Empc Correction				21	8	6	15	1		
13C-1,2,3,7,8-PeCDD											
367.8949	29.556	29.612	-3	1.385	202422	27602	29	72	952		
369.8919	29.564	29.612	-3	1.385	120687	16789	6	15	2798	1.68(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.637						11	27			
357.8516	29.637						3	7			
A Non-2,3,7,8-sub-PeCDD											RQMa
355.8546	26.063	28.489	-145	0.882	1507	290	11	27	26		M
	Empc Correction				1026	252	11	27	23		
357.8516	26.063	28.489	-145	0.882	662	163	3	7	54	2.28(1.32-1.78)	
355.8546	26.862	28.489	-97	0.909	3029	467	11	27	42		M
357.8516	26.871	28.489	-97	0.909	1802	366	3	7	122	1.68(1.32-1.78)	
355.8546	28.496	28.489	0	0.964	1998	360	11	27	33		M
	Empc Correction				1636	278	11	27	25		
357.8516	28.479	28.489	-1	0.964	1056	180	3	7	60	1.89(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.905	34.942	-2	0.954	168172	31974	32	80	999		
385.8610	34.905	34.942	-2	0.954	341215	67076	105	262	639	0.49(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	34.959						4	10			
375.8178	34.959						3	7			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.065	35.111	-3	0.959	173530	33907	32	80	1060		
385.8610	35.065	35.111	-3	0.959	334197	60719	105	262	578	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDF											
373.8208	35.119						4	10			
375.8178	35.119						3	7			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.890	35.919	-2	0.981	161527	32234	32	80	1007		
385.8610	35.890	35.919	-2	0.981	298936	61391	105	262	585	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQU
373.8208	35.936						4	10			
375.8178	35.936						3	7			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.782	36.811	-2	1.006	144823	30257	32	80	946		
385.8610	36.782	36.811	-2	1.006	259596	61618	105	262	587	0.56(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.828						4	10			
375.8178	36.828						3	7			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.407	35.028	-97	0.957	187	33	4	10	8		
	Empc Correction				109	24	4	10	6		
375.8178	33.508	35.028	-91	0.960	88	20	3	7	7	2.13(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.580	36.609	-2		622856	136159	61	152	2232		
403.8529	36.588	36.609	-1		491481	106991	56	140	1911	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.100	36.129	-2	0.987	204683	48772	61	152	800		
403.8529	36.100	36.129	-2	0.987	165636	39364	56	140	703	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.100	36.146	-3	1.000	661	128	18	45	7		
391.8127	36.108	36.146	-2	1.000	502	124	18	45	7	1.32(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.209	36.247	-2	0.990	215056	46226	61	152	758		
403.8529	36.218	36.247	-2	0.990	179132	40775	56	140	728	1.20(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.243	36.264	-1	1.001	1122	350	18	45	19		
391.8127	36.243	36.264	-1	1.001	959	229	18	45	13	1.17(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.605	36.626	-1	1.014	3198	496	18	45	28		
391.8127	36.588	36.626	-2	1.014	2863	463	18	45	26	1.12(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.206	35.394	-71	0.945	22703	3838	18	45	213		
391.8127	34.223	35.394	-70	0.945	18397	2983	18	45	166	1.23(1.05-1.43)	
389.8158	35.317	35.394	-5	0.975	7933	1450	18	45	81		
391.8127	35.334	35.394	-4	0.976	6890	1381	18	45	77	1.15(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.606	38.626	-1	1.055	112323	28816	47	117	613		
419.8220	38.606	38.626	-1	1.055	239243	57811	83	207	697	0.47(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											
407.7817	38.630						11	27			
409.7788	38.630						2	5			
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.860	39.880	-1	1.090	107020	29580	47	117	629		
419.8220	39.860	39.880	-1	1.090	242996	68168	83	207	821	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											U
407.7817	39.885						11	27			
409.7788	39.885						2	5			
A Non-2,3,7,8-sub-HpCDF											U
407.7817	38.942	39.258	-19	1.009	222	69	11	27	6		
	Empc Correction				185	66	11	27	6		
409.7788	38.968	39.258	-17	1.009	178	64	2	5	32	1.25(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.548	39.569	-1	1.081	165292	45157	26	65	1737		
437.8140	39.548	39.569	-1	1.081	155853	42864	24	60	1786	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.565	39.582	-1	1.000	33327	8876	28	70	317		
425.7737	39.565	39.582	-1	1.000	31889	8268	22	55	376	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.925	39.258	-20	0.984	72923	19248	28	70	687		
425.7737	38.925	39.258	-20	0.984	70137	18711	22	55	851	1.04(0.88-1.20)	
13C-OCDD											
469.7780	42.043	42.072	-2	1.149	274065	67862	39	97	1740		
471.7750	42.052	42.072	-1	1.150	296428	72706	49	122	1484	0.92(0.76-1.02)	
OCDF											RQMU
441.7428	42.165						2	5			
443.7399	42.165						11	27			
OCDD											
457.7377	42.060	42.081	-1	1.000	606541	147031	50	125	2941		
459.7348	42.060	42.081	-1	1.000	670173	161588	59	147	2739	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 10:32:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Lims ID:	320-76888-A-8-A		
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Inject. Date:	19-Aug-2021 10:18:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	54

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	635859	89587

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	635859	89587

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.984	124	60	459	109	0.0849	0.27	RQ
16.984	124	60	161	77	0.0415		Empc Correction
17.792	148	61	158	106	0.0446	0.94	RQ
17.792	121	81	158	106	0.0406		Empc Correction
18.772	30	20	532	114	0.0818	0.06	RQ
18.772	30	20	38	25	0.0099		Empc Correction
19.185	215	78	375	82	0.0859	0.57	RQ
19.185	215	78	279	101	0.0719		Empc Correction
19.641	516	196	549	232	0.1551	0.94	RQ
19.641	422	178	549	232	0.1414		Empc Correction
19.718	1113	377	1890	325	0.4372	0.59	RQ
19.718	1113	377	1445	489	0.3724		Empc Correction
20.510	428	183	774	334	0.1750	0.55	RQ
20.510	428	183	555	237	0.1431		Empc Correction
20.785	106	43	221	85	0.0476	0.48	RQ
20.785	106	43	137	55	0.0354		Empc Correction
21.172	227	73	165	91	0.0571	1.38	RQ
21.172	127	70	165	91	0.0425		Empc Correction
21.542	112	30	162	58	0.0399	0.69	
23.598	223	68	123	86	0.0504	1.81	RQ
23.598	94	66	123	86	0.0316		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 10:32:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Lims ID:	320-76888-A-8-A		
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Inject. Date:	19-Aug-2021 10:18:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	54

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	464213	58882

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	464213	58882

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.684	1118	169	1115	181	0.4473	1.00	RQa
19.684	858	139	1115	181	0.3952		Empc Correction
21.533	1103	185	1553	226	0.5321	0.71	a
Signal Totals:							
	1961	324	2668	407			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4889	761				0.83	RQa
	4629	731					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.9794 = (4889 * 100.000) / (464213 * 1.075)

Empc Amount: 0.9273 = (4629 * 100.000) / (464213 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Report Date: 20-Aug-2021 10:32:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Lims ID:	320-76888-A-8-A		
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Inject. Date:	19-Aug-2021 10:18:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	54

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	518429	78298
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	544278	74771

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	531353	76534

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.201	10	6	57	22	0.0122	0.18	RQ
24.201	10	6	6	3	0.002920		Empc Correction
24.382	13	6	167	68	0.0329	0.08	RQ
24.382	13	6	8	3	0.003833		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Lims ID:	320-76888-A-8-A		
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Inject. Date:	19-Aug-2021 10:18:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	54

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	518429	78298
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	544278	74771

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	531353	76534

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.701	33	13	84	60	0.0214	0.39	RQ
25.701	33	13	21	8	0.009857		Empc Correction
29.085	31	16	272	59	0.0553	0.11	RQ
29.085	31	16	20	10	0.009309		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 10:32:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Lims ID:	320-76888-A-8-A		
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Inject. Date:	19-Aug-2021 10:18:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	54

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	323109	44391

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	323109	44391

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.063	1507	290	662	163	0.6415	2.28	RQM
26.063	1026	252	662	163	0.4992		Empc Correction
26.862	3029	467	1802	366	1.43	1.68	Ma
28.496	1998	360	1056	180	0.9032	1.89	RQM
28.496	1636	278	1056	180	0.7961		Empc Correction
Signal Totals:							
	5691	997	3520	709			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10054	1826				1.86	RQMa
	9211	1706					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.973 = (10054 * 100.000) / (323109 * 1.046)

Empc Amount: 2.724 = (9211 * 100.000) / (323109 * 1.046)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 20-Aug-2021 10:32:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Lims ID:	320-76888-A-8-A		
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Inject. Date:	19-Aug-2021 10:18:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	54

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	509387	99050
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	507727	94626
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	460463	93625
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	404419	91875

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	470499	94794

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.407	187	33	88	20	0.0485	2.13	RQ
33.407	109	24	88	20	0.0347		Empc Correction
36.790	427	139	22	0	0.0792	19.41	RnQ
36.790	27	0	22	0	0.008643		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 10:32:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Lims ID:	320-76888-A-8-A		
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Inject. Date:	19-Aug-2021 10:18:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	54

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	370319	88136
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	394188	87001
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	382253	87568

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.206	22703	3838	18397	2983	10.2	1.23	
35.317	7933	1450	6890	1381	3.68	1.15	
Signal Totals:							
	30636	5288	25287	4364			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	55923	9652				1.21	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.873 = (55923 * 100.000) / (382253 * 1.055)

Report Date: 20-Aug-2021 10:32:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Lims ID:	320-76888-A-8-A		
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Inject. Date:	19-Aug-2021 10:18:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	54

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	351566	86627
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	350016	97748

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	350791	92187

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.942	222	69	178	64	0.0829	1.25	RQ
38.942	185	66	178	64	0.0752		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 10:32:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Lims ID:	320-76888-A-8-A		
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Inject. Date:	19-Aug-2021 10:18:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	54

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	321145	88021

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	321145	88021

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.925	72923	19248	70137	18711	42.4	1.04	
Signal Totals:							
	72923	19248	70137	18711			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	143060	37959				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 42.413 = (143060 * 100.000) / (321145 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d				
Injection Date:	19-Aug-2021 10:18:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-8-A	Lab Sample ID:	320-76888-8		
Client ID:	11215702-072621-BN-SJSB094 (14-16)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	54
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 20.40
Area: 332291
Amount: 35.844509
Amount Units: pg/ul

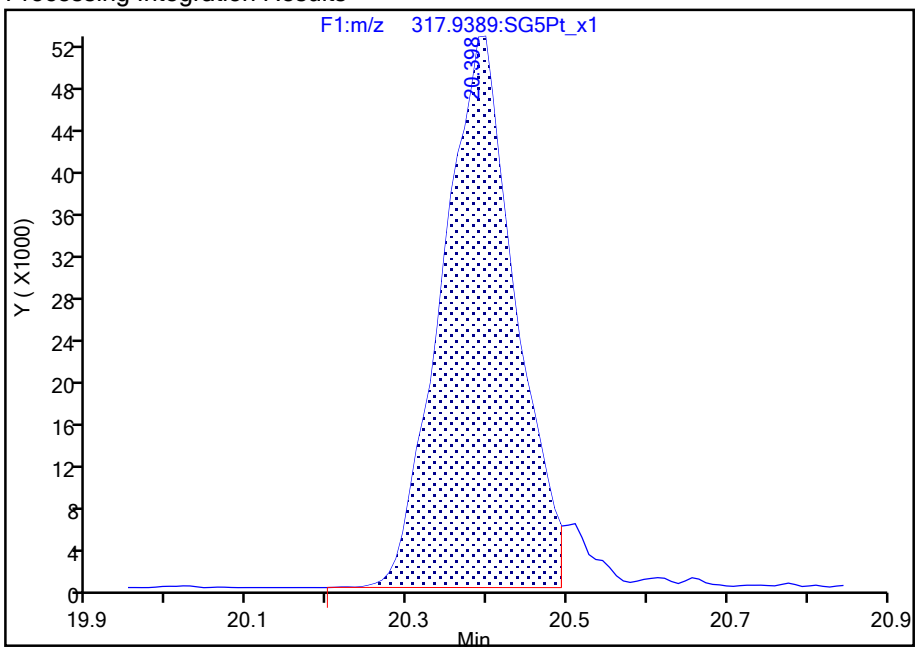

Manual Integration Results

RT: 20.40
Area: 350763
Amount: 36.916964
Amount Units: pg/ul

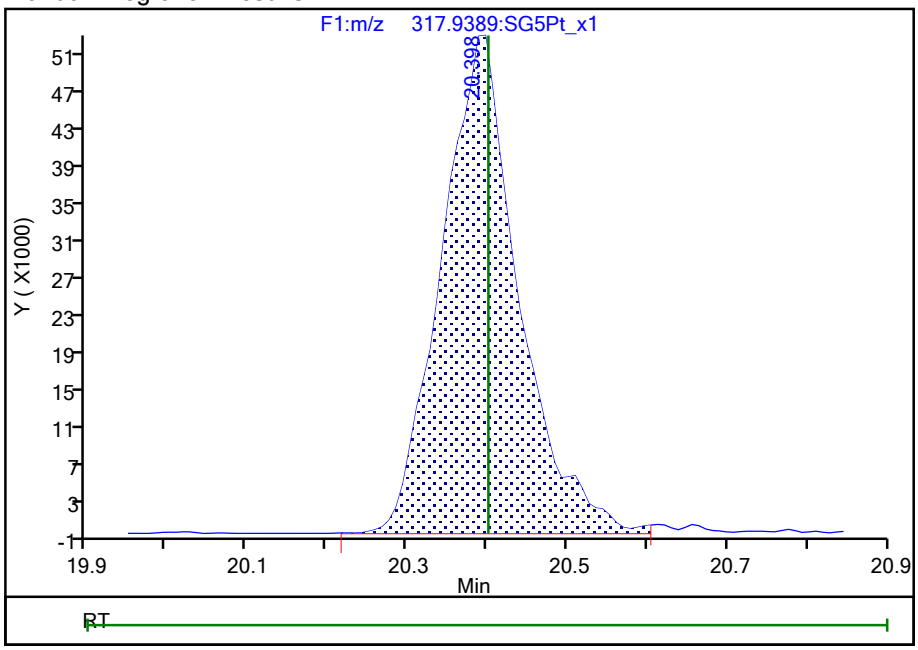

Reviewer: stephensk, 19-Aug-2021 11:33:17

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d				
Injection Date:	19-Aug-2021 10:18:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-8-A	Lab Sample ID:	320-76888-8		
Client ID:	11215702-072621-BN-SJSB094 (14-16)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	54
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (25.88- 31.10)

Signal: 1

Processing Integration Results

RT = 26.063 Area = 1507

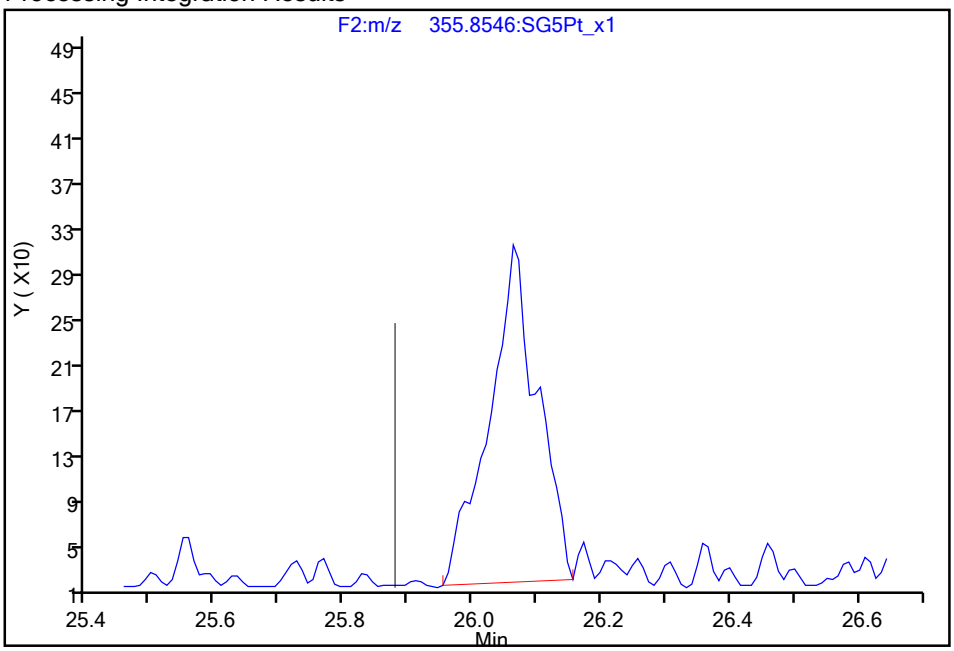

Manual Integration Results

RT = 26.063 Area = 1507

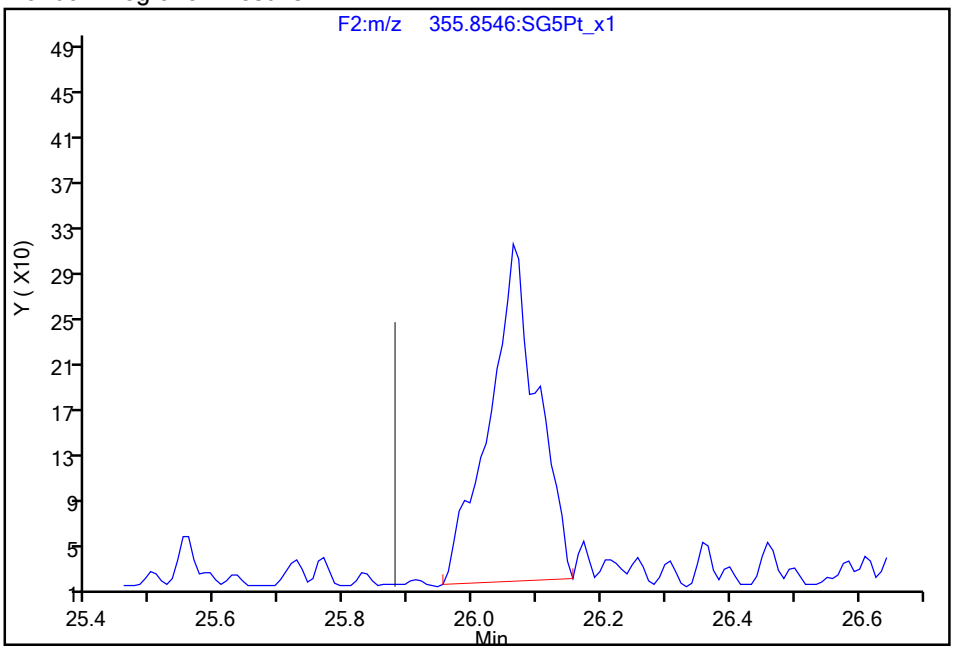

Reviewer: dadunj, 20-Aug-2021 10:30:47

Audit Action: Split an Integrated Peak Audit Reason: Other

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d				
Injection Date:	19-Aug-2021 10:18:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-8-A	Lab Sample ID:	320-76888-8		
Client ID:	11215702-072621-BN-SJSB094 (14-16)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	54
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (25.88- 31.10)

Signal: 1

Processing Integration Results

RT = 26.862 Area = 3029

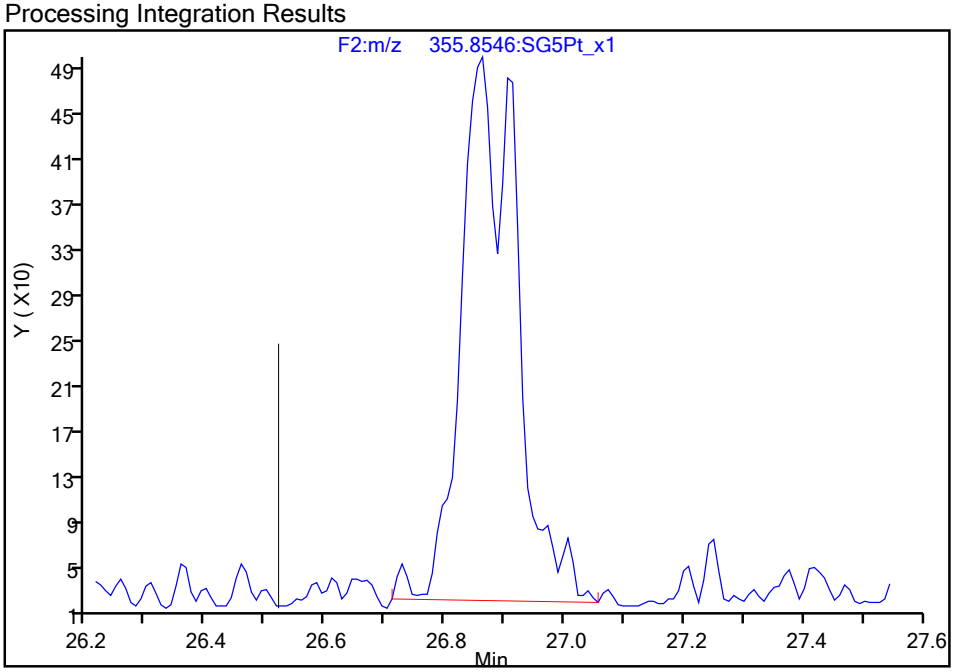

Manual Integration Results

RT = 26.862 Area = 3029

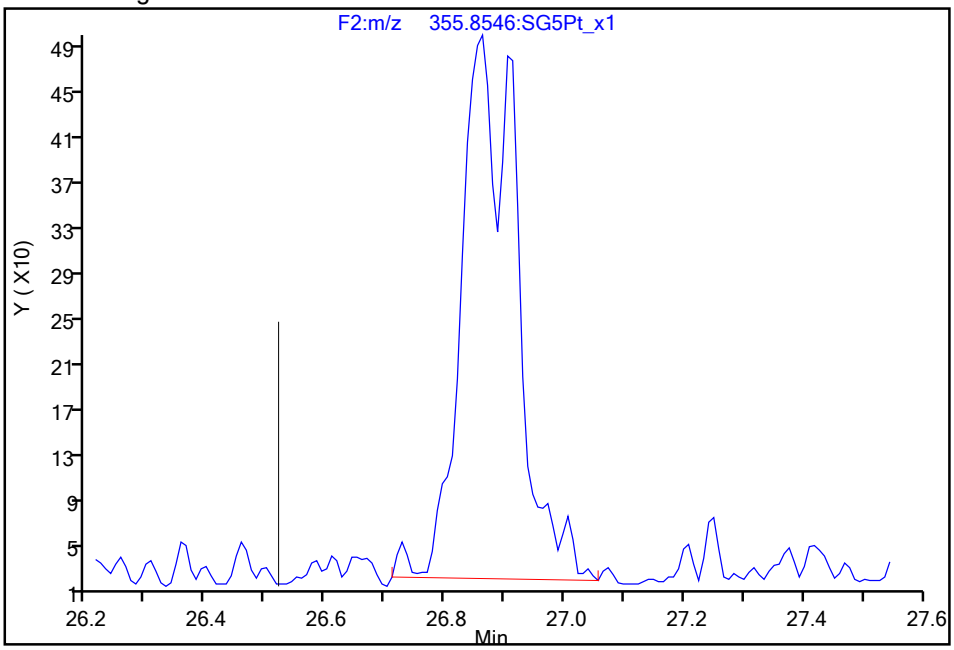

Reviewer: dadunj, 20-Aug-2021 10:30:47

Audit Action: Split an Integrated Peak Audit Reason: Other

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d				
Injection Date:	19-Aug-2021 10:18:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-8-A	Lab Sample ID:	320-76888-8		
Client ID:	11215702-072621-BN-SJSB094 (14-16)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	54
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (25.88- 31.10)

Signal: 1

Processing Integration Results

RT = 28.496 Area = 2252

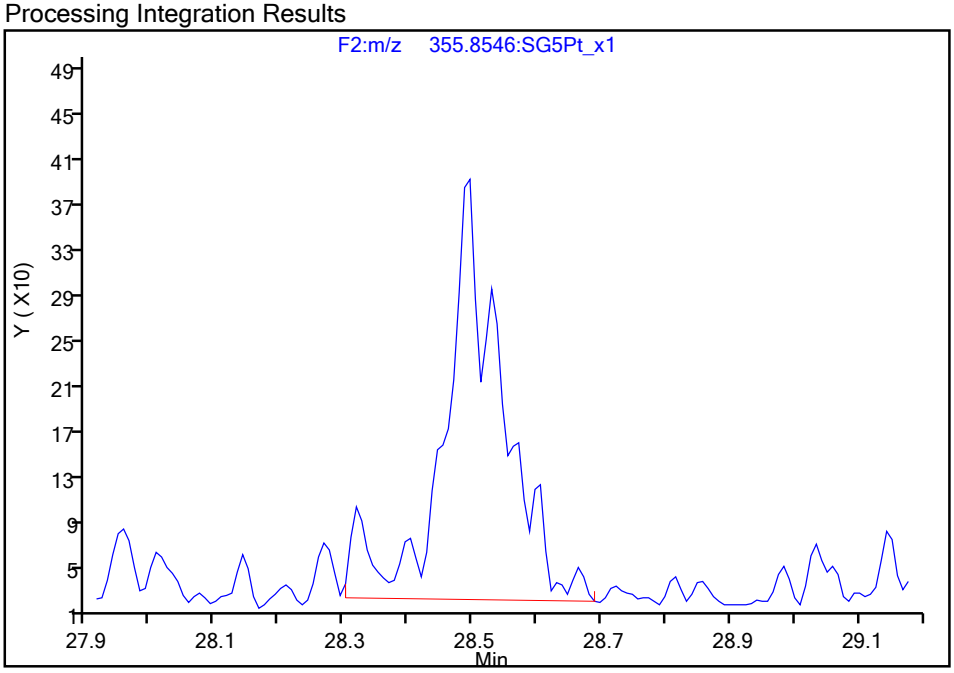

Manual Integration Results

RT = 28.496 Area = 1998 M

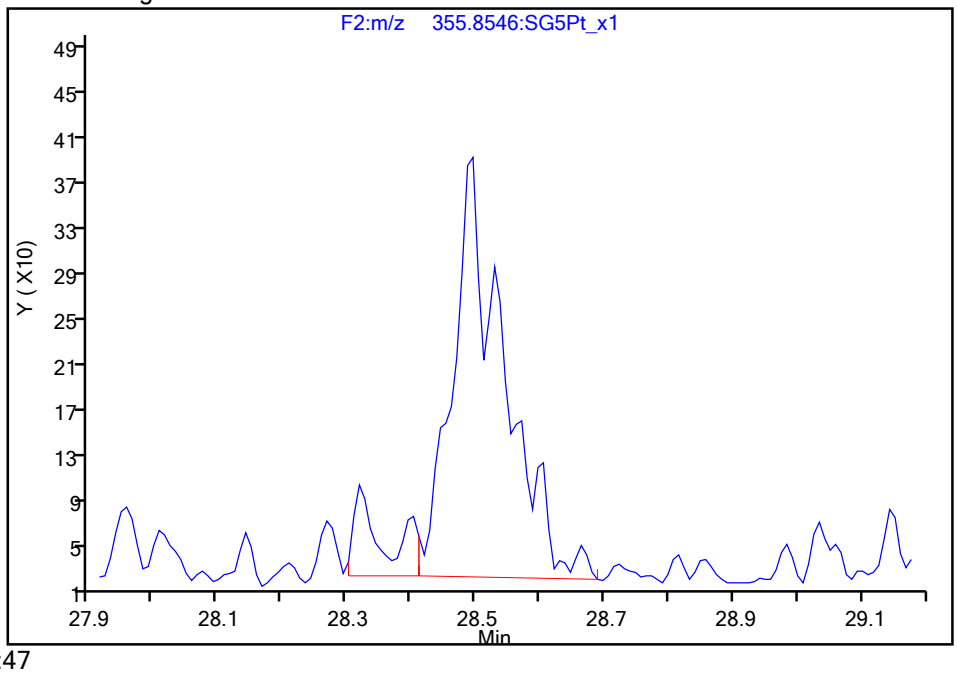

Reviewer: dadunj, 20-Aug-2021 10:30:47

Audit Action: Split an Integrated Peak Audit Reason: Other

Report Date: 20-Aug-2021 10:32:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Injection Date:	19-Aug-2021 10:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

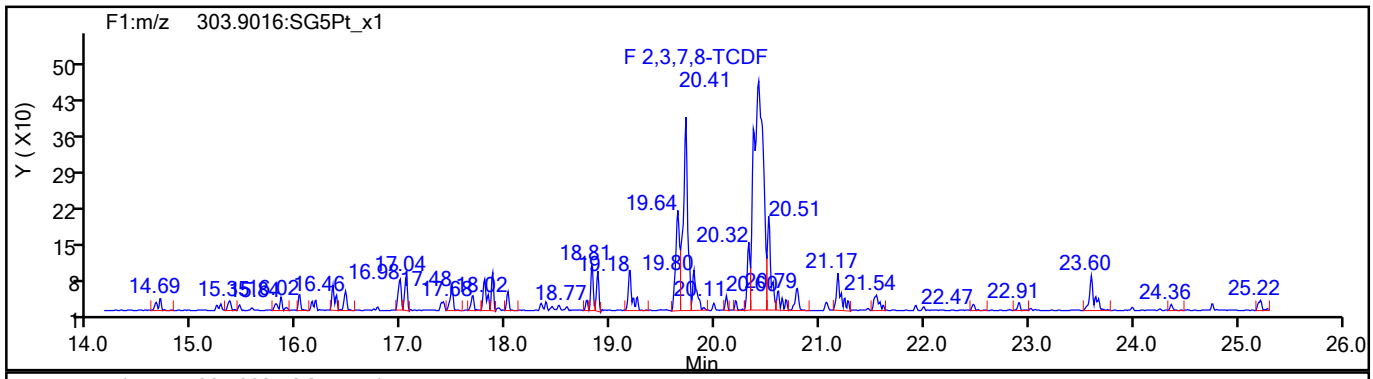

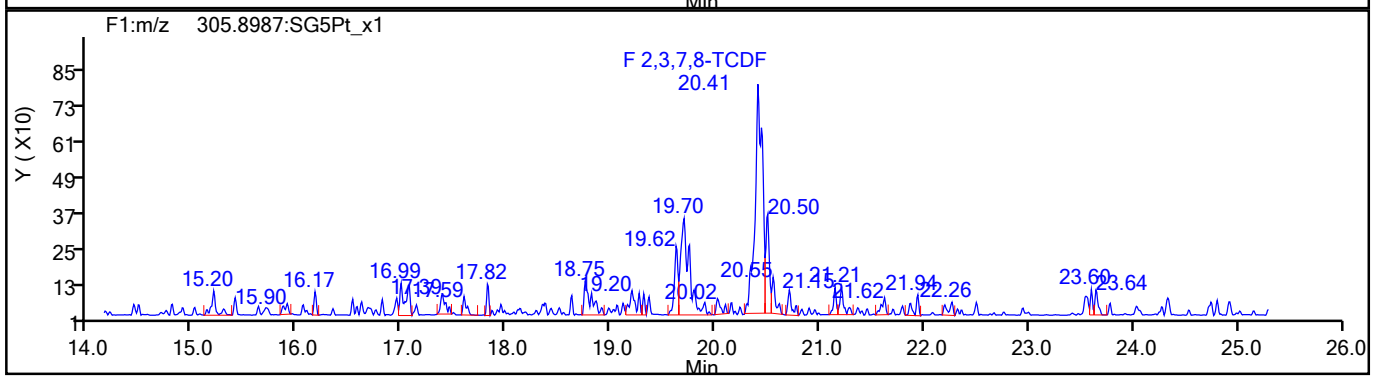

TCDF Standards

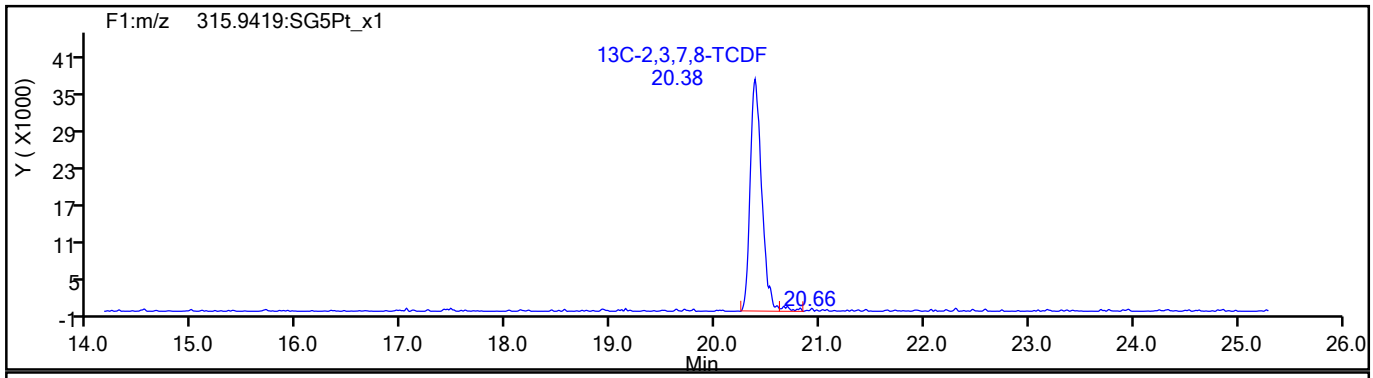

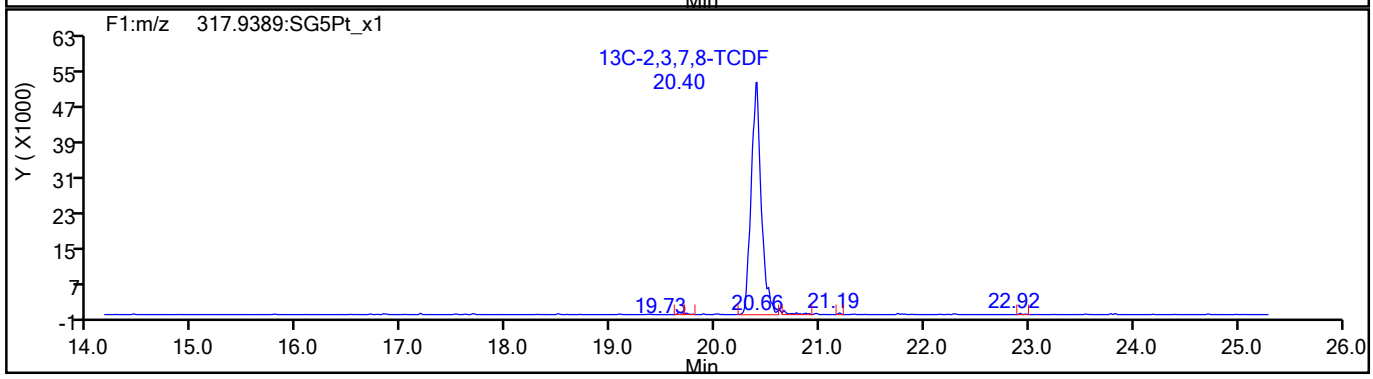

785649

Report Date: 20-Aug-2021 10:32:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Injection Date:	19-Aug-2021 10:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

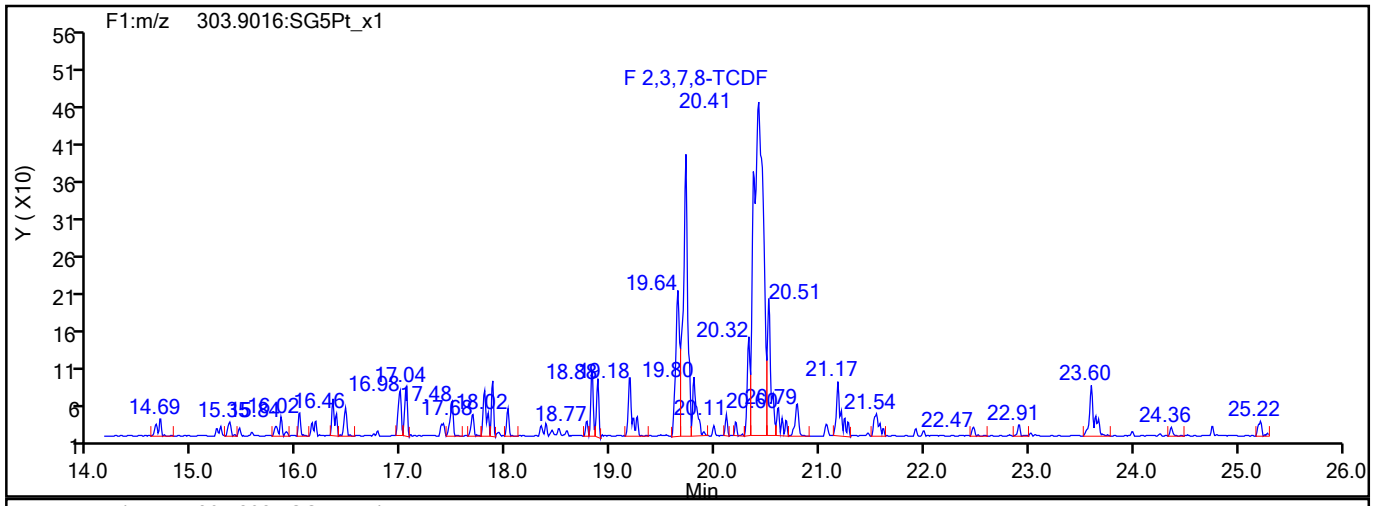

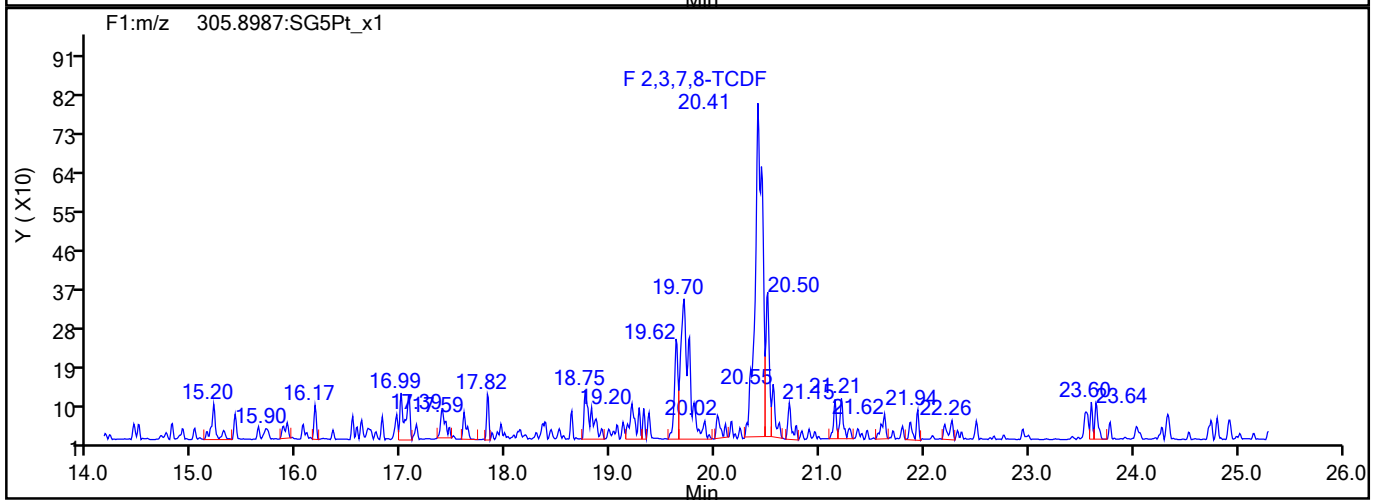

TCDF Interference Mass

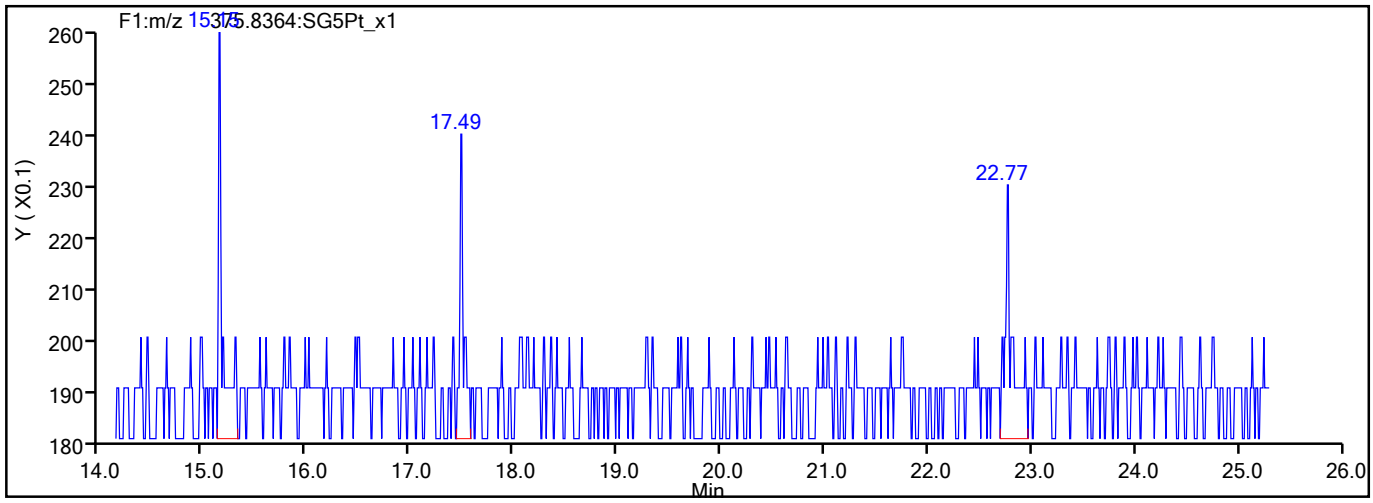

785650

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Injection Date:	19-Aug-2021 10:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

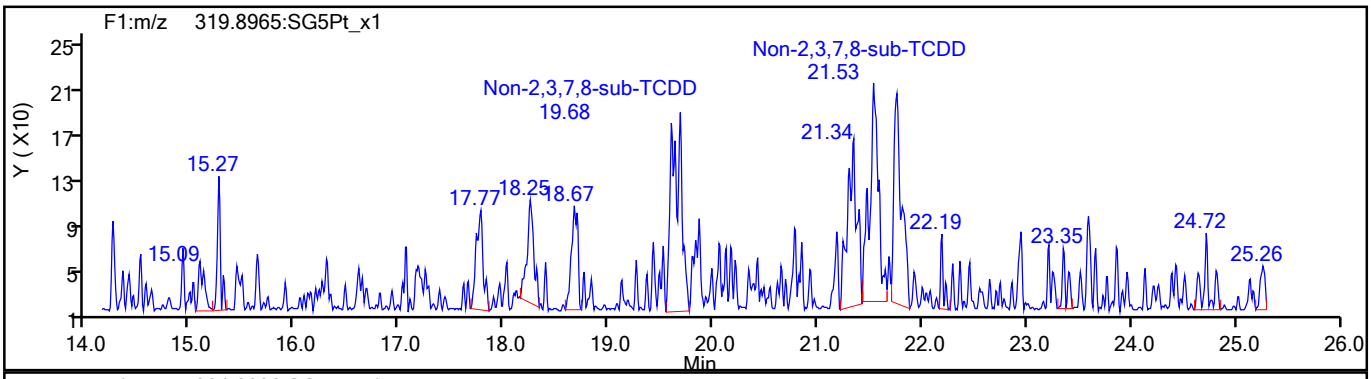

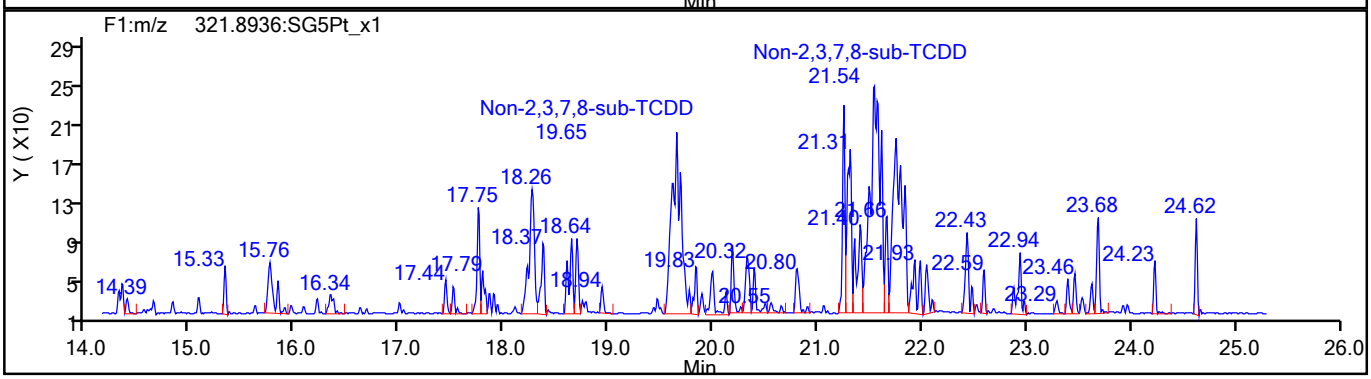

TCDD Standards

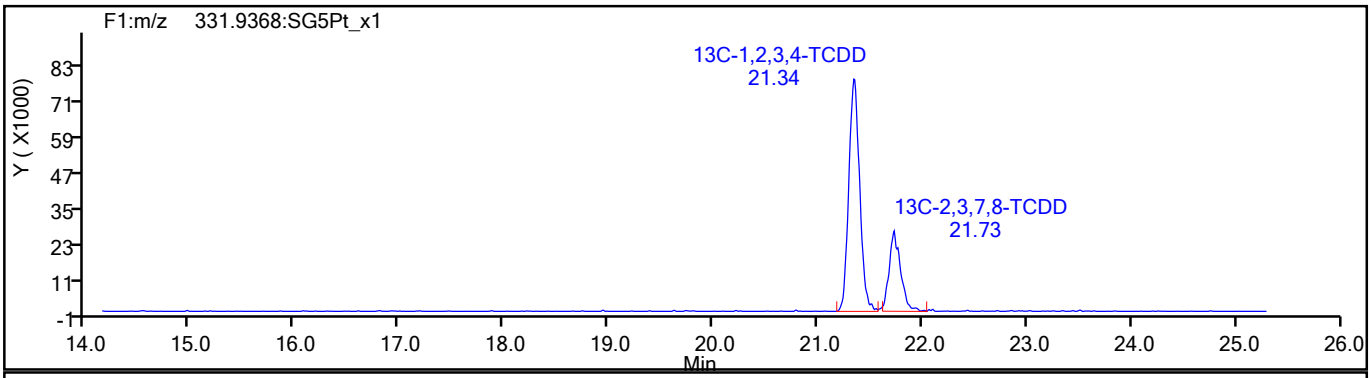

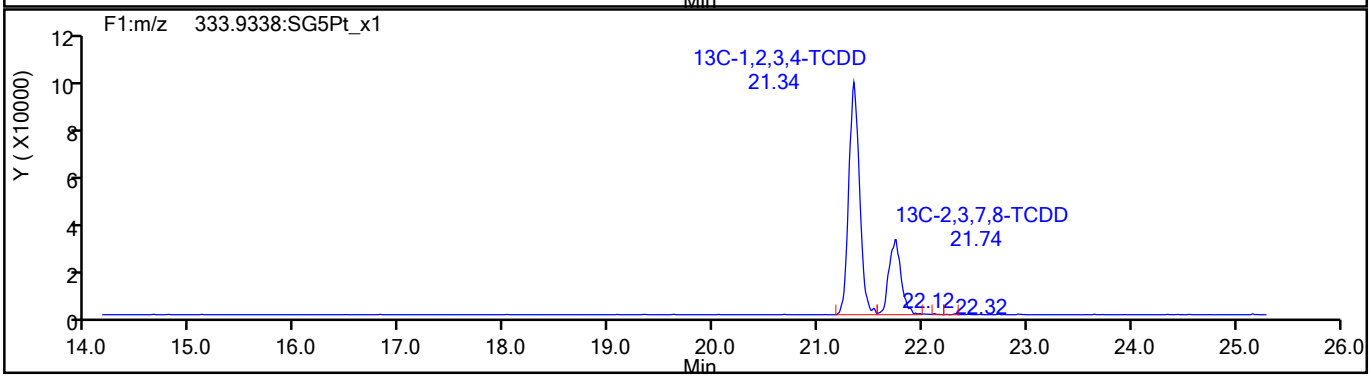

785651

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Injection Date:	19-Aug-2021 10:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

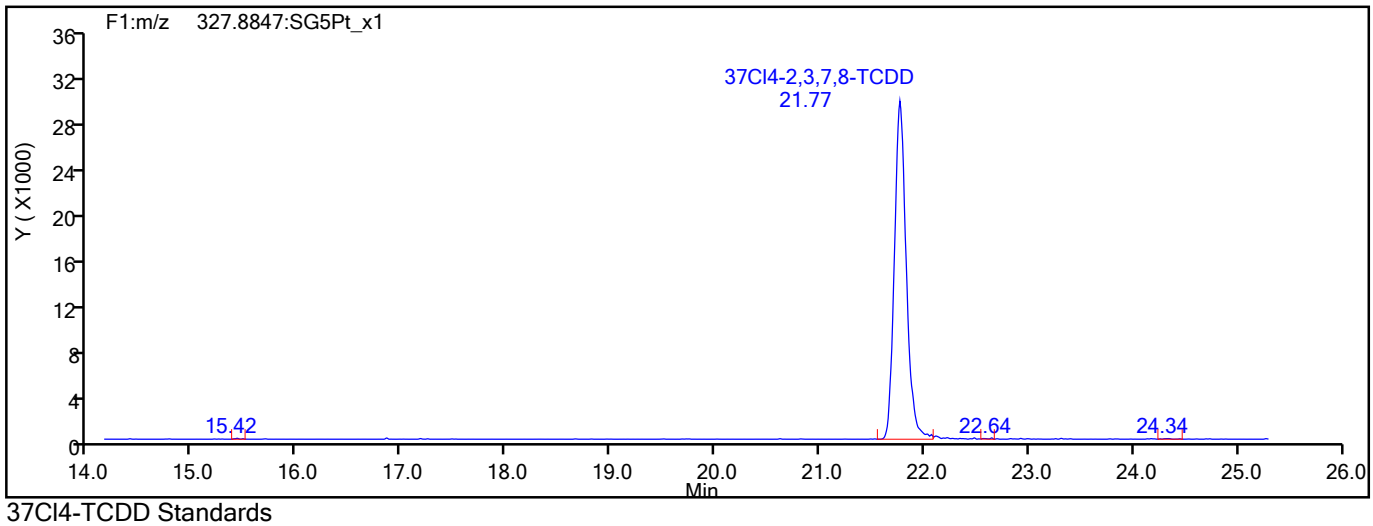

37Cl4-TCDD Standards

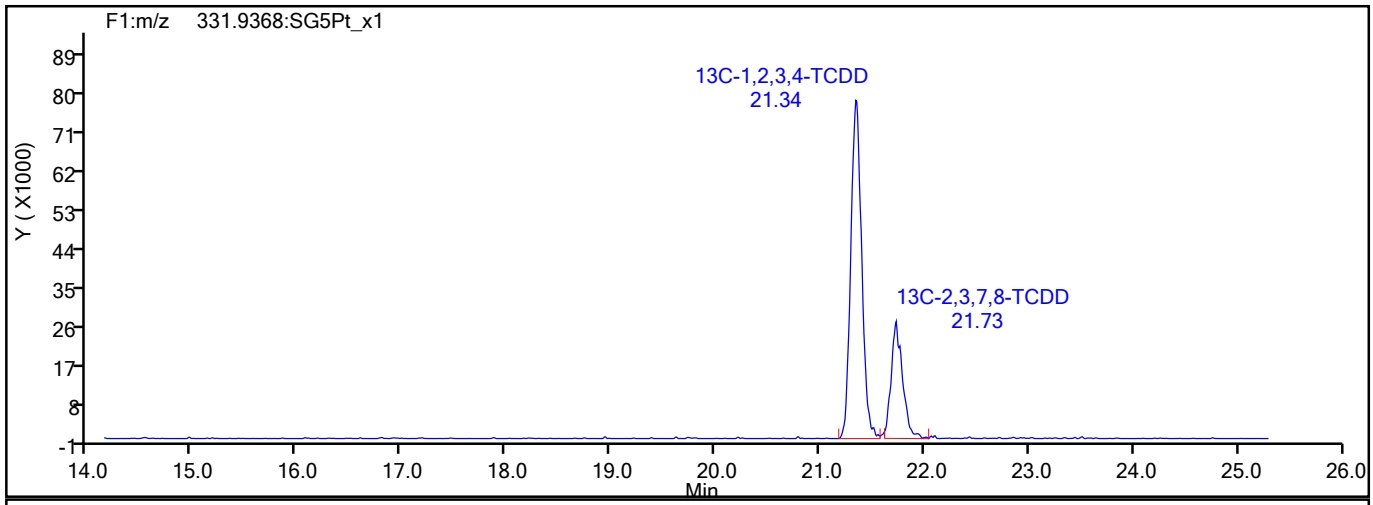

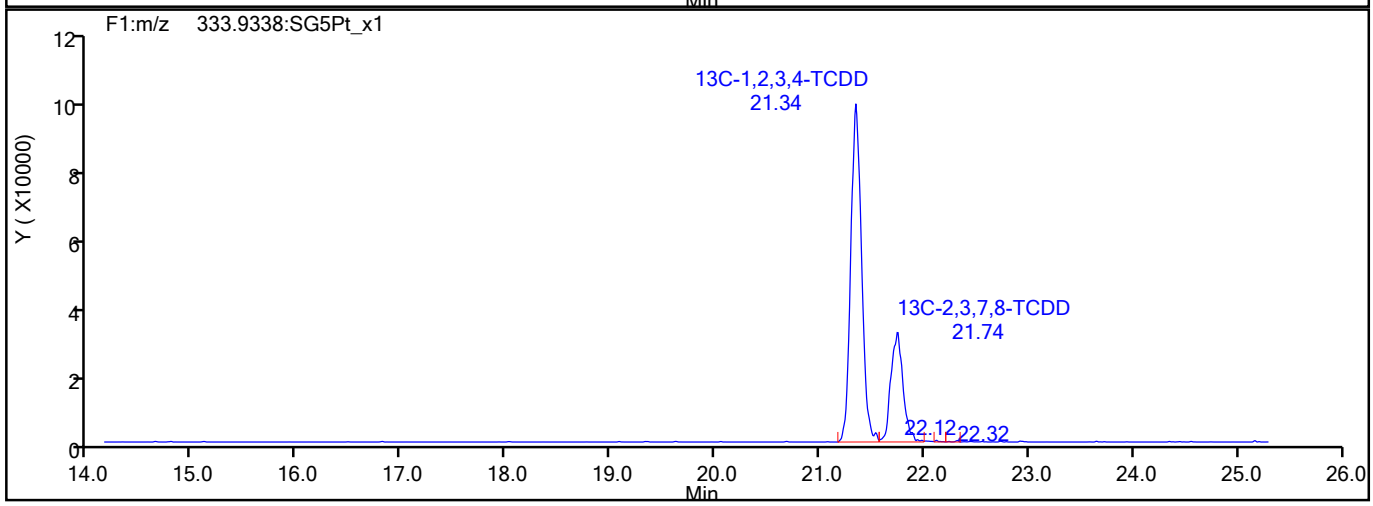

785652

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

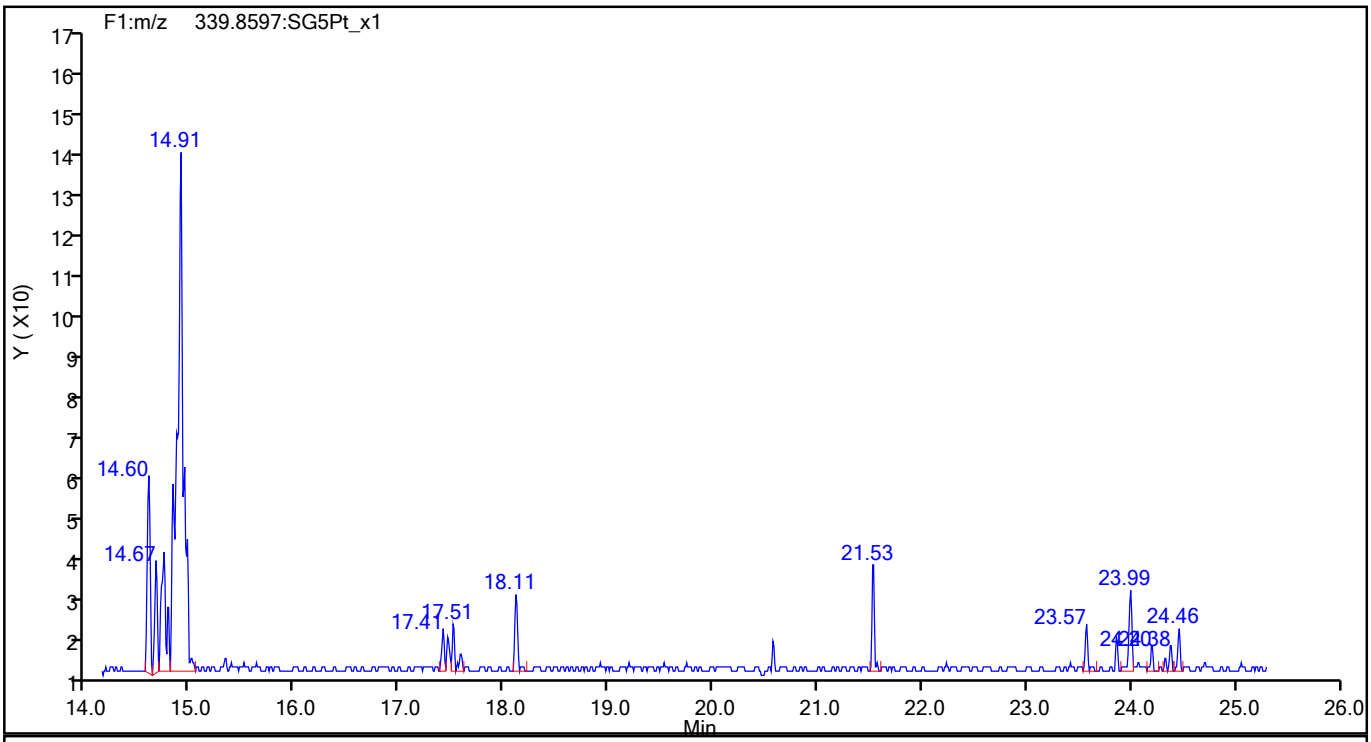

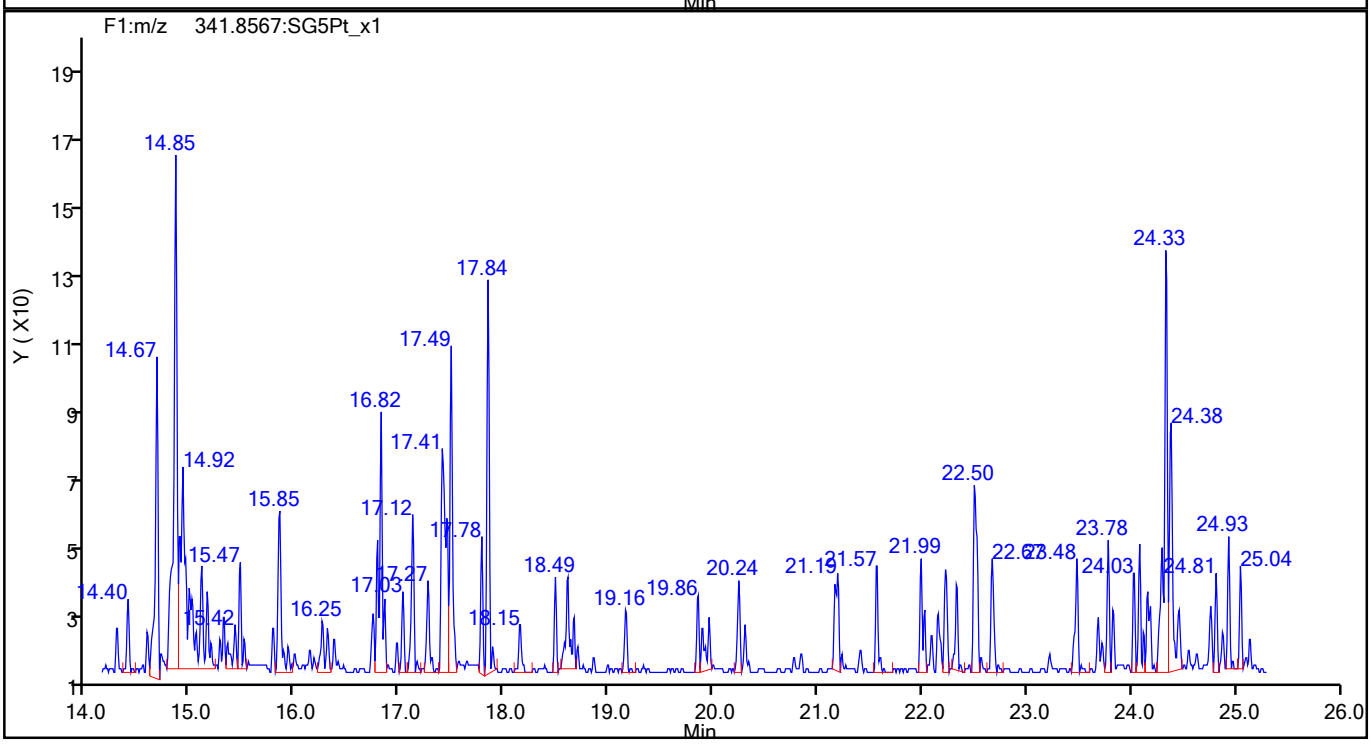

785653

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

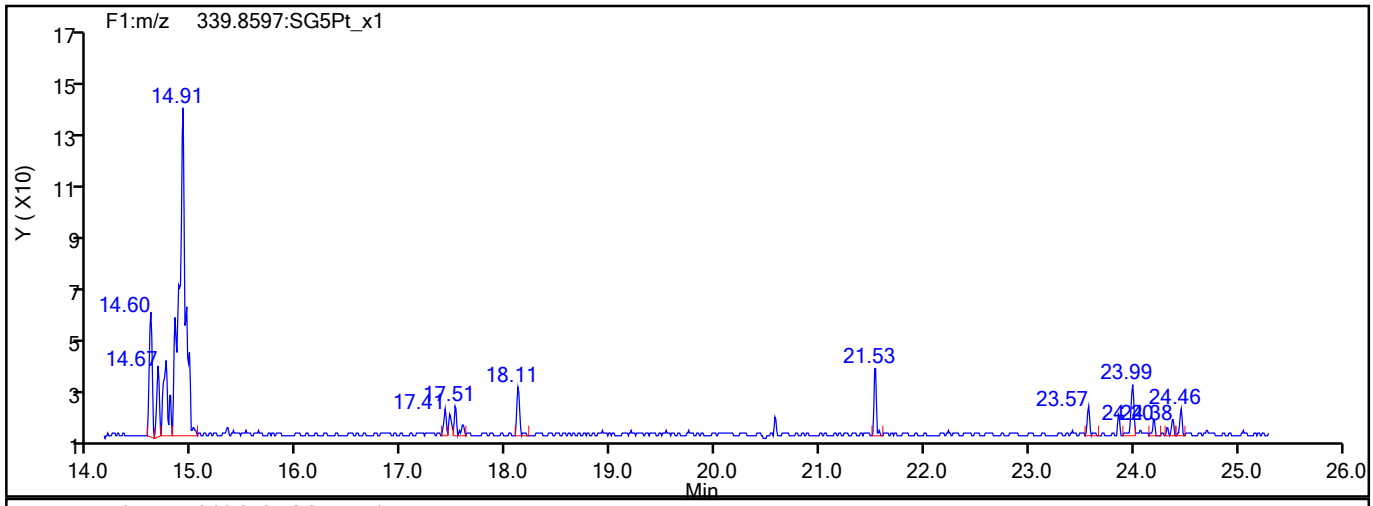

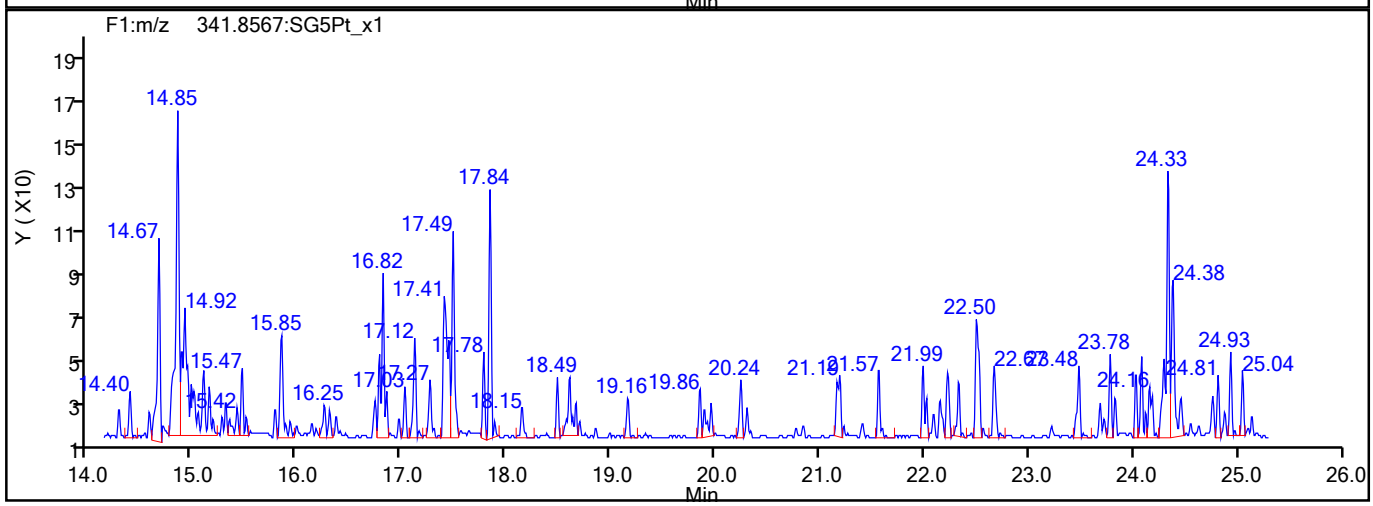

F1 PeCDFs Interference Mass

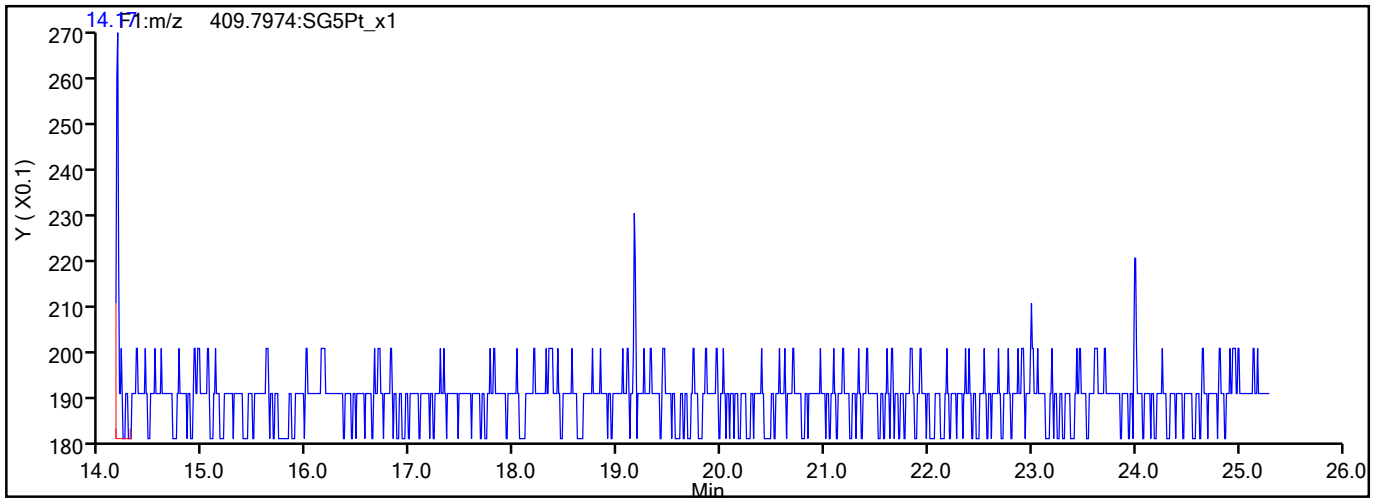

785654

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
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PeCDF

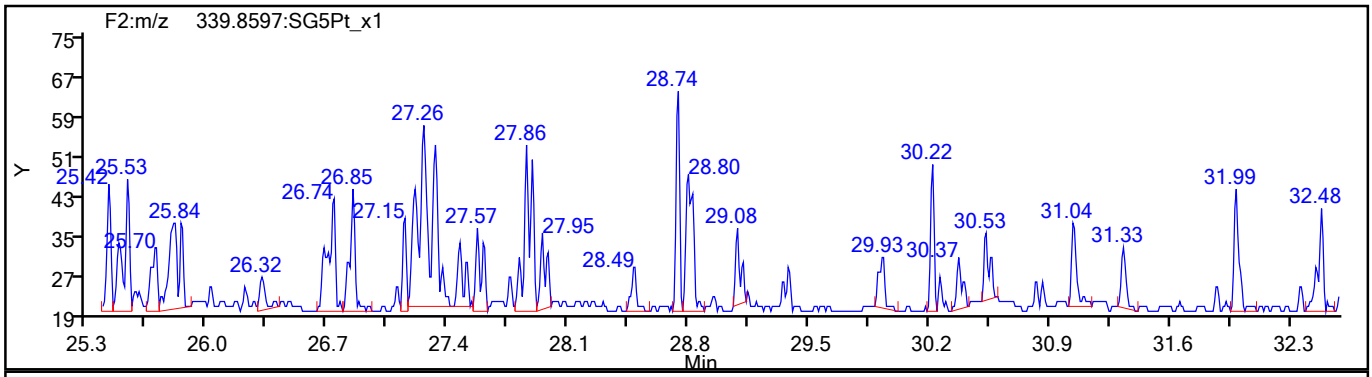

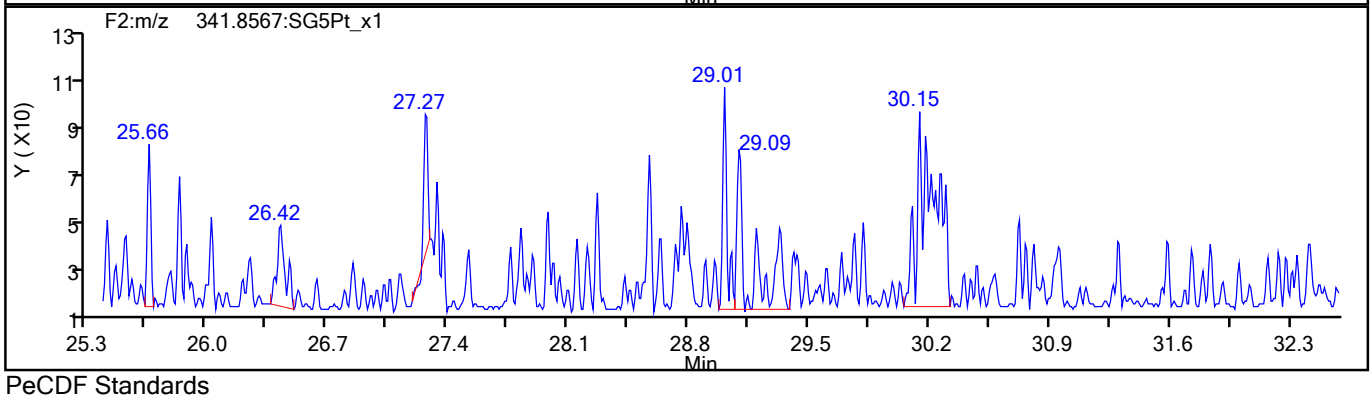

PeCDF Standards

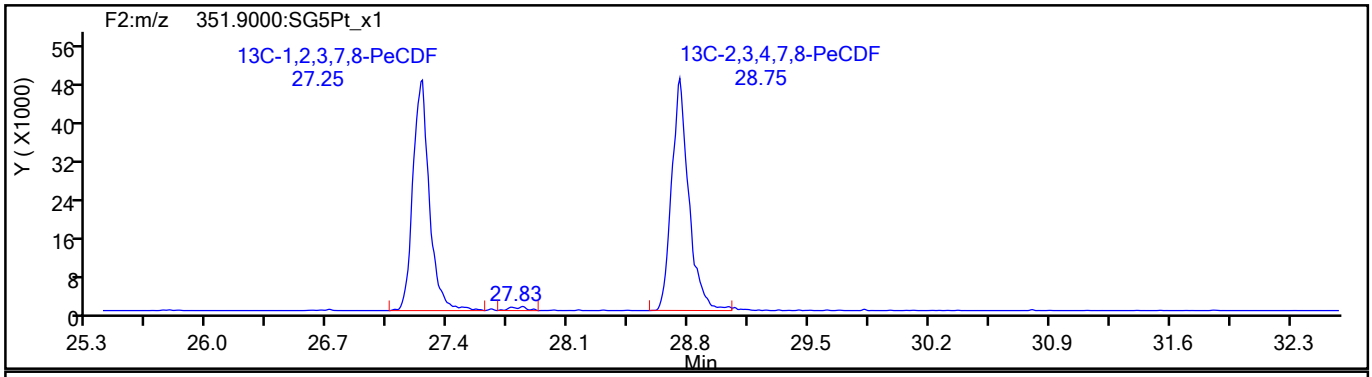

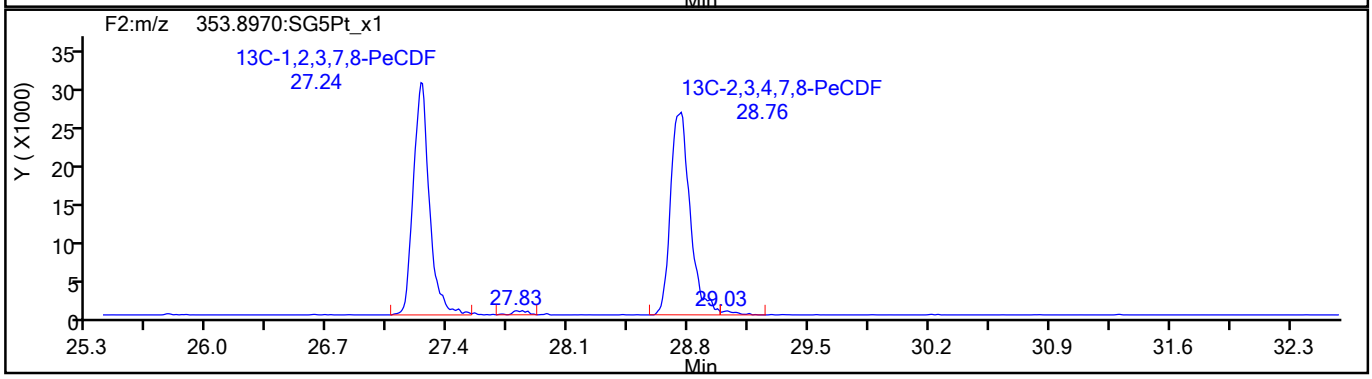

785655

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

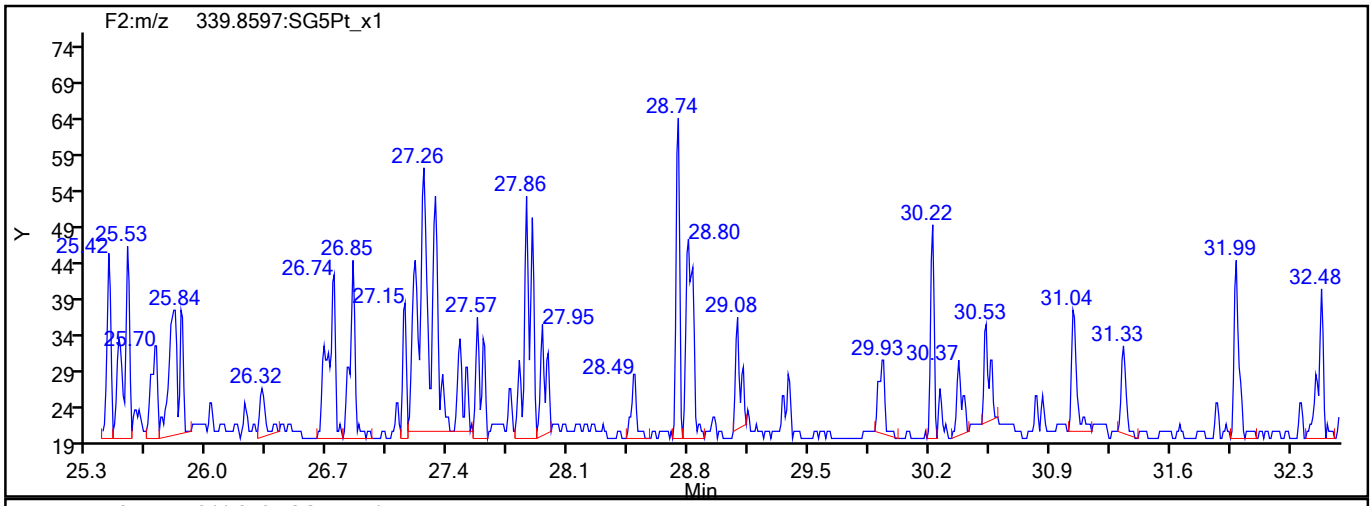

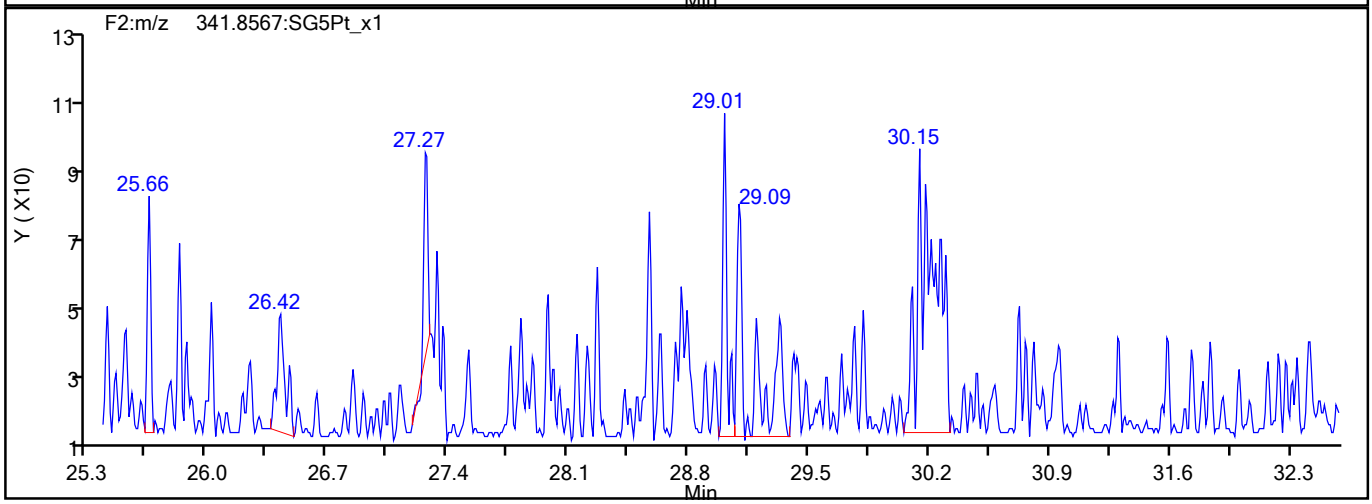

PeCDF Interference Mass

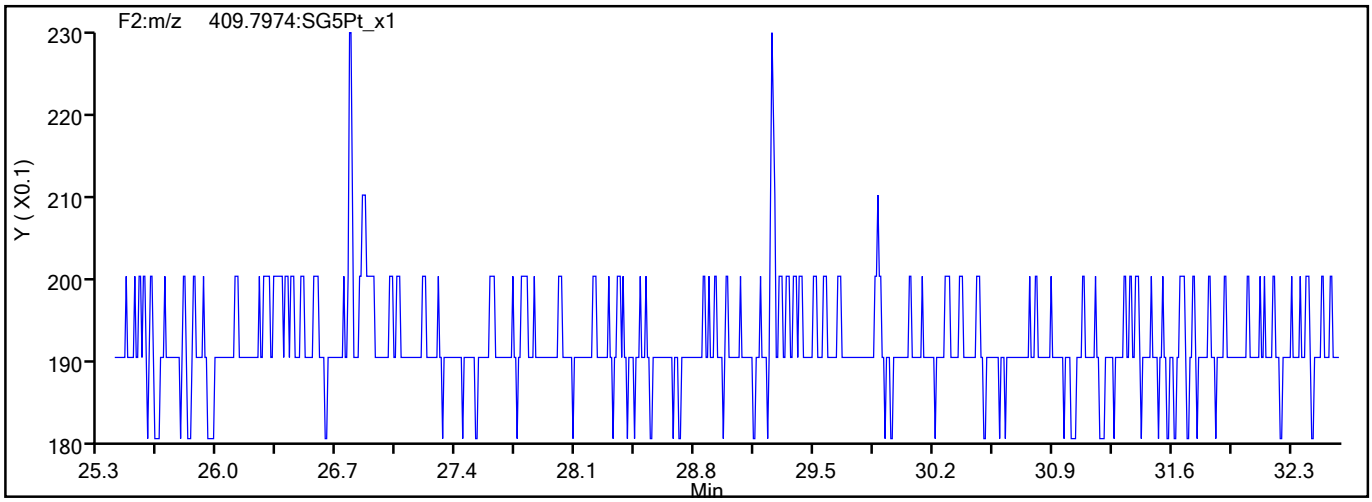

785656

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

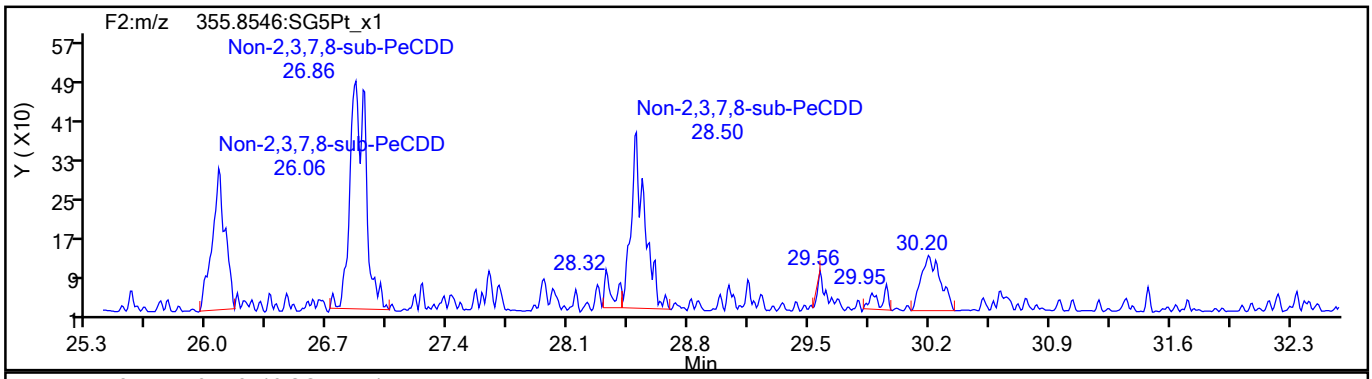

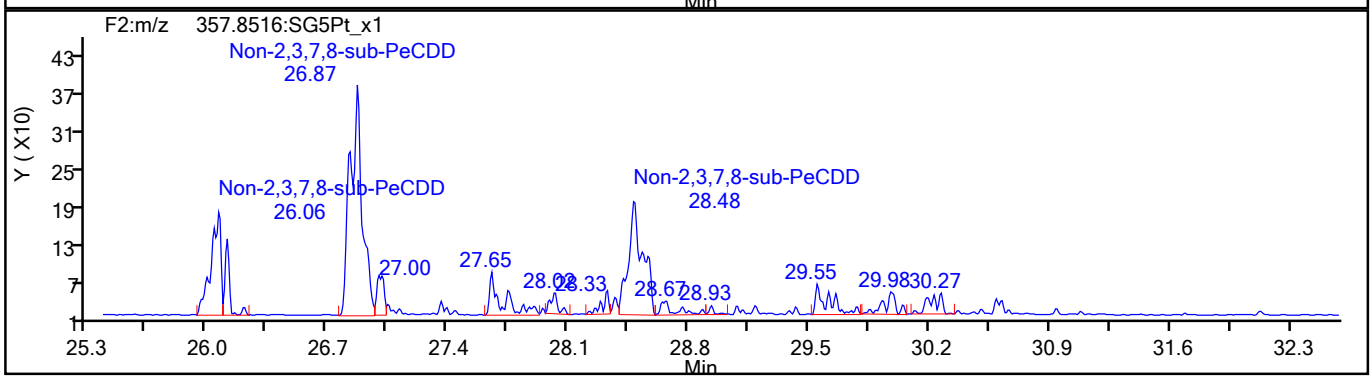

PeCDD Standards

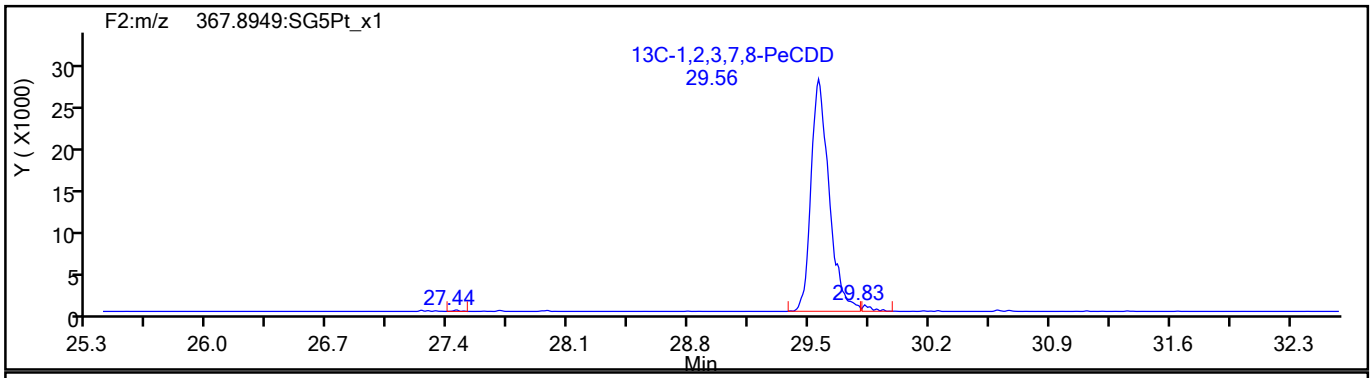

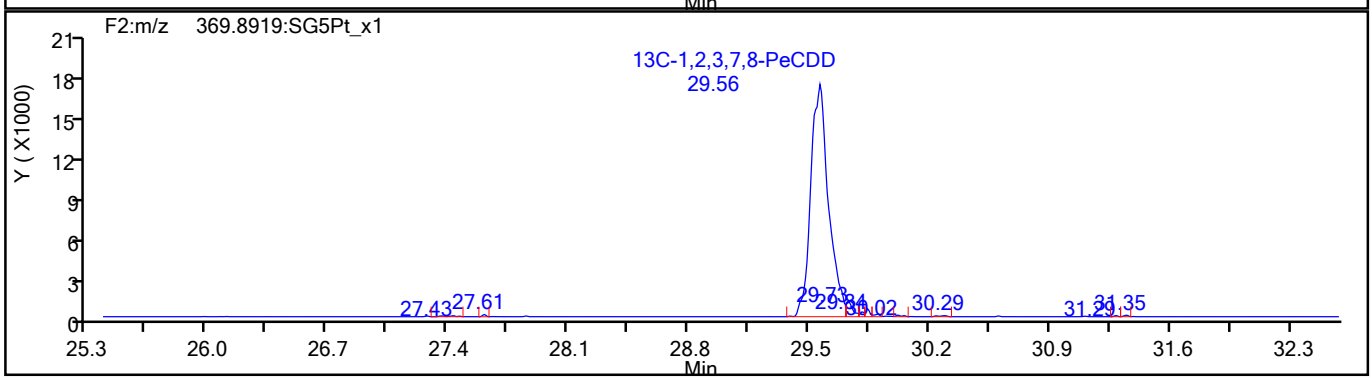

785657

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

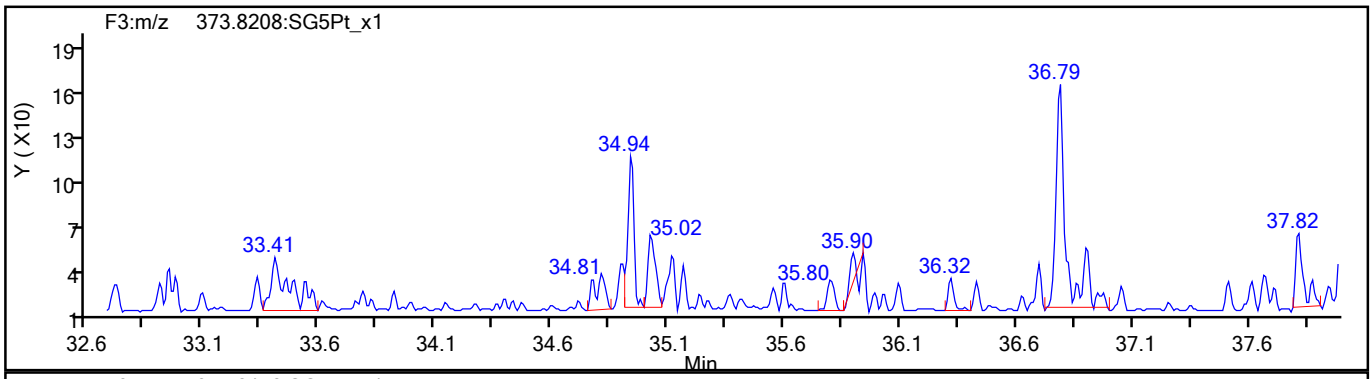

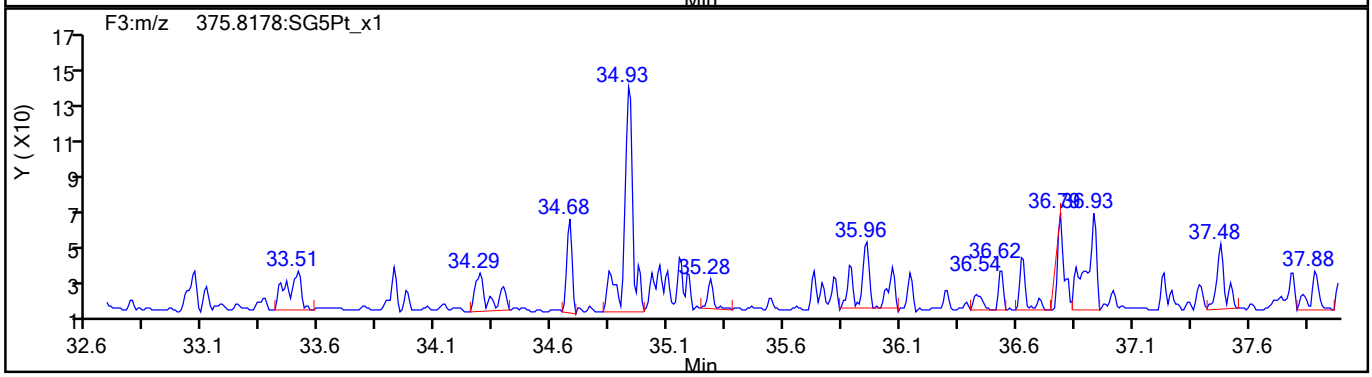

HxCDF Standards

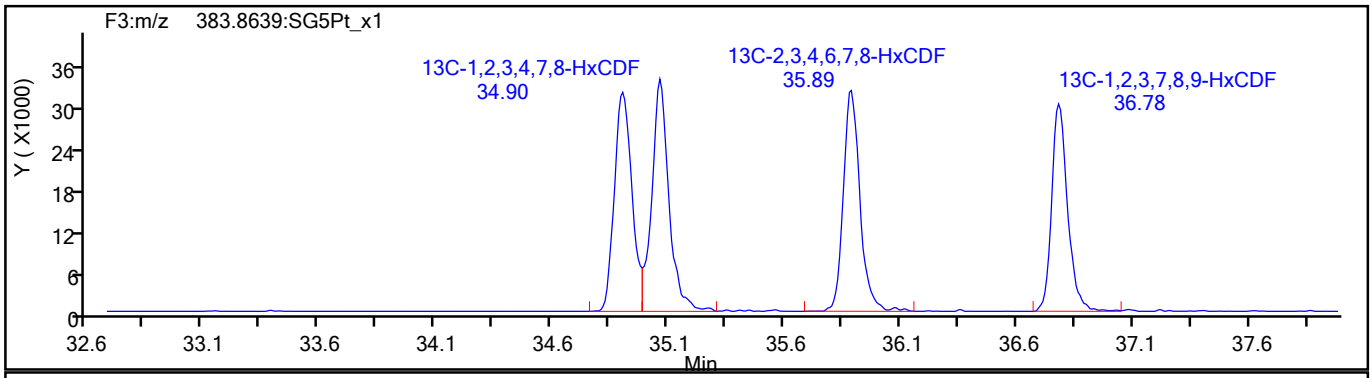

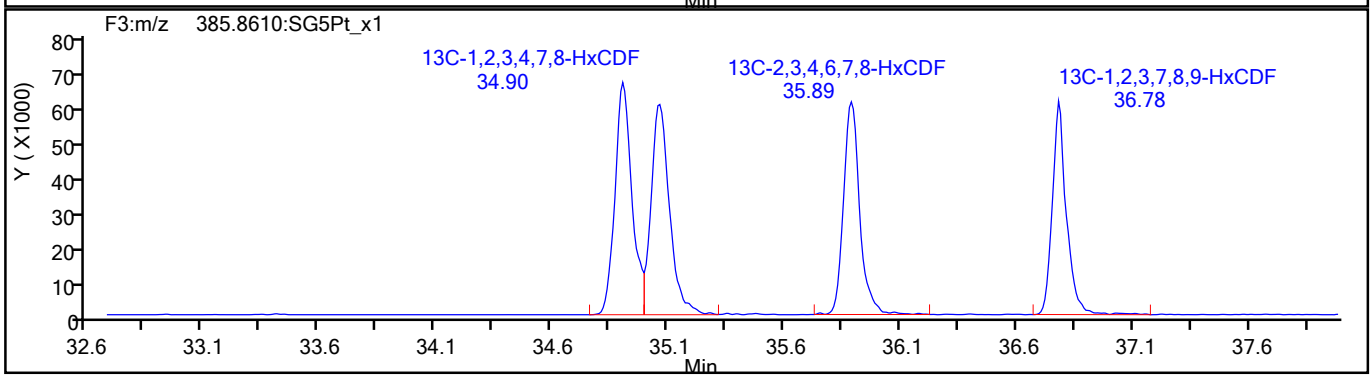

785658

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

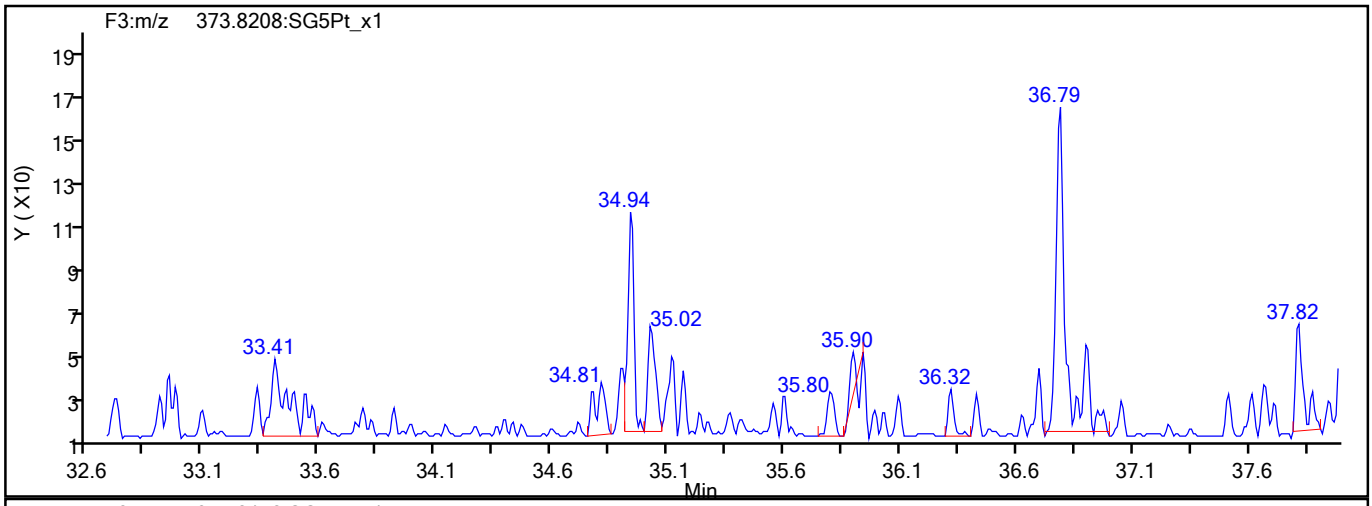

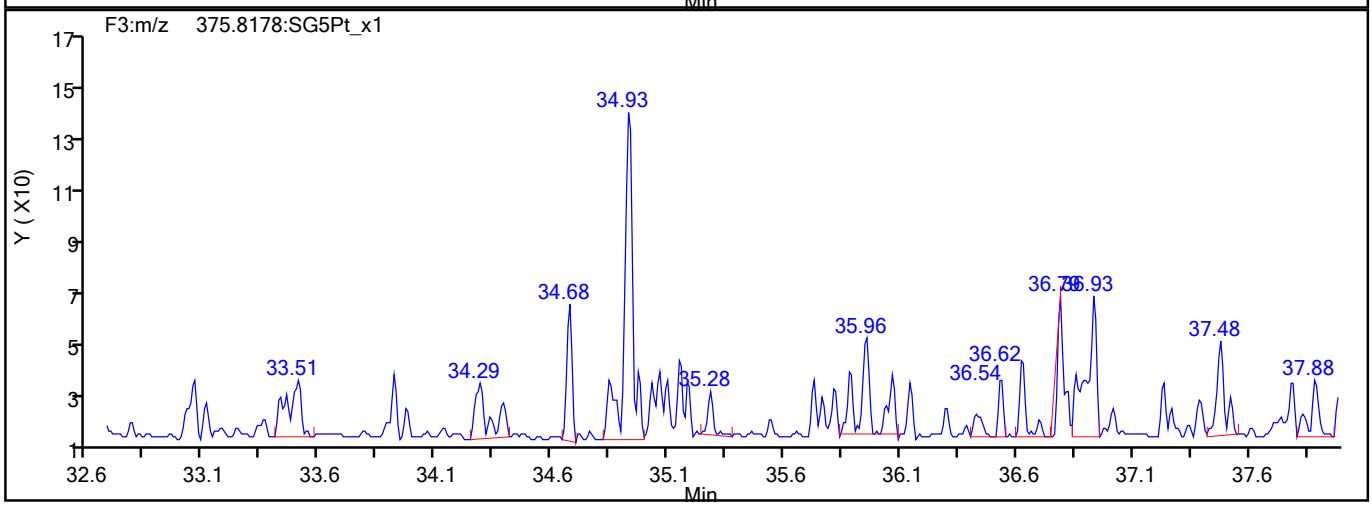

HxCDF Interference Mass

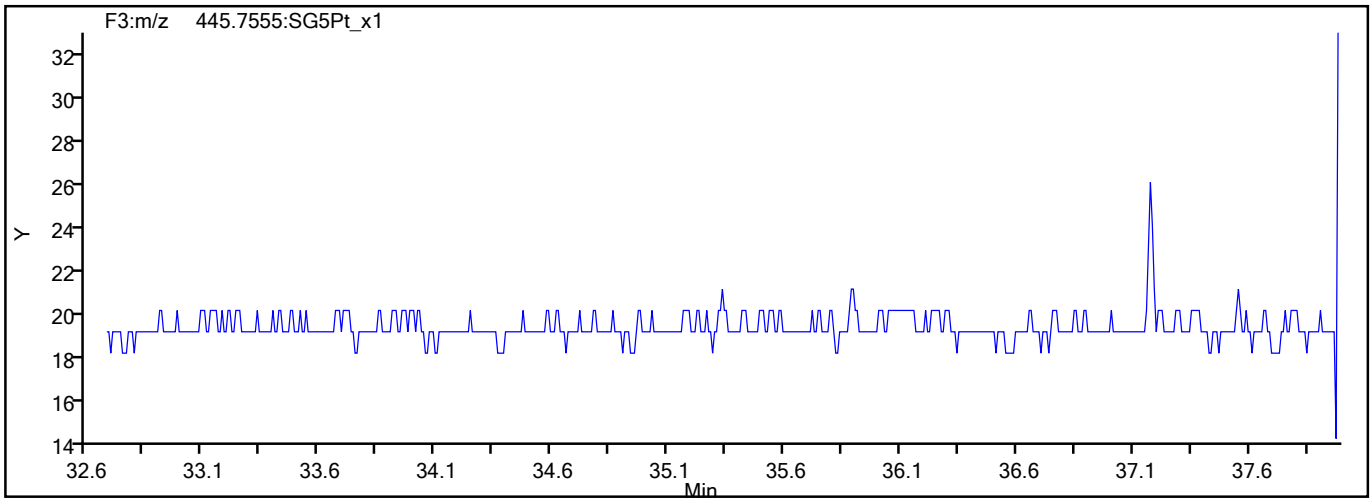

785659

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

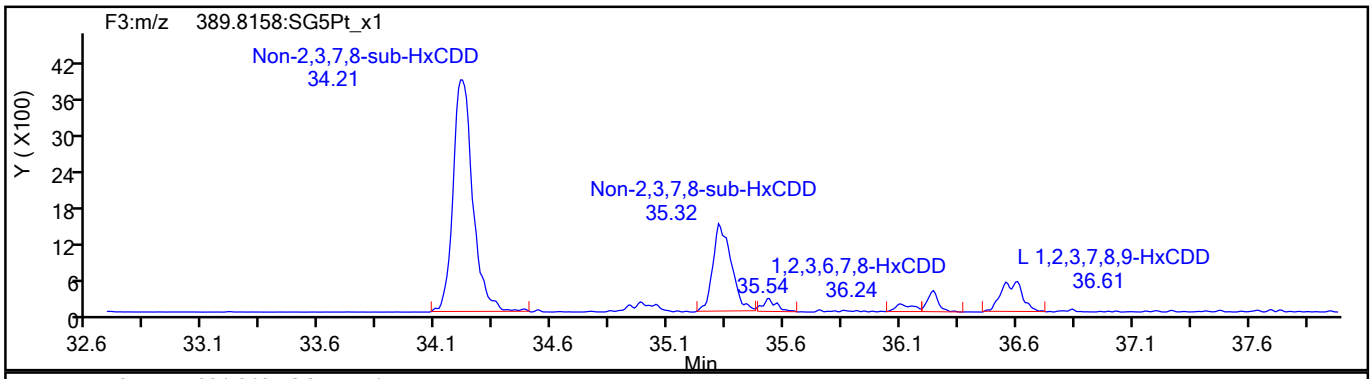

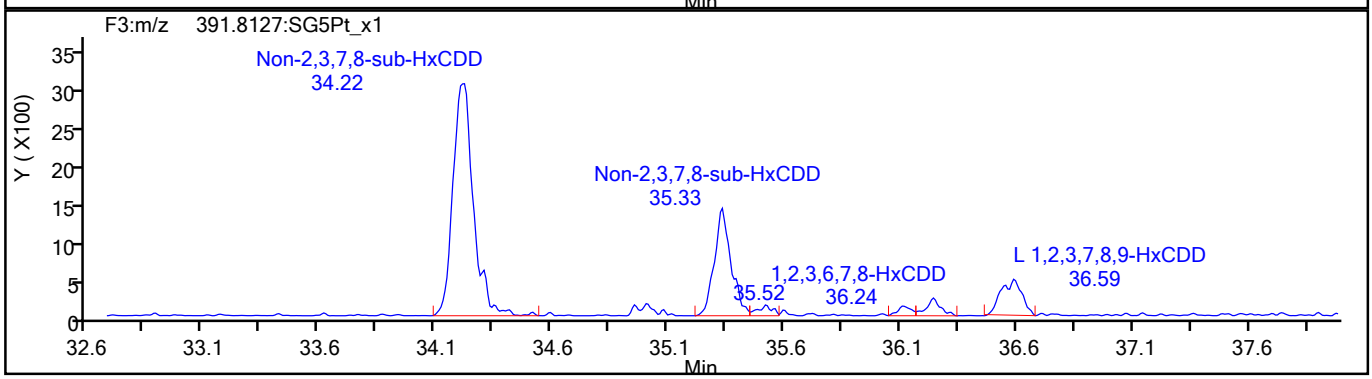

HxCDD Standards

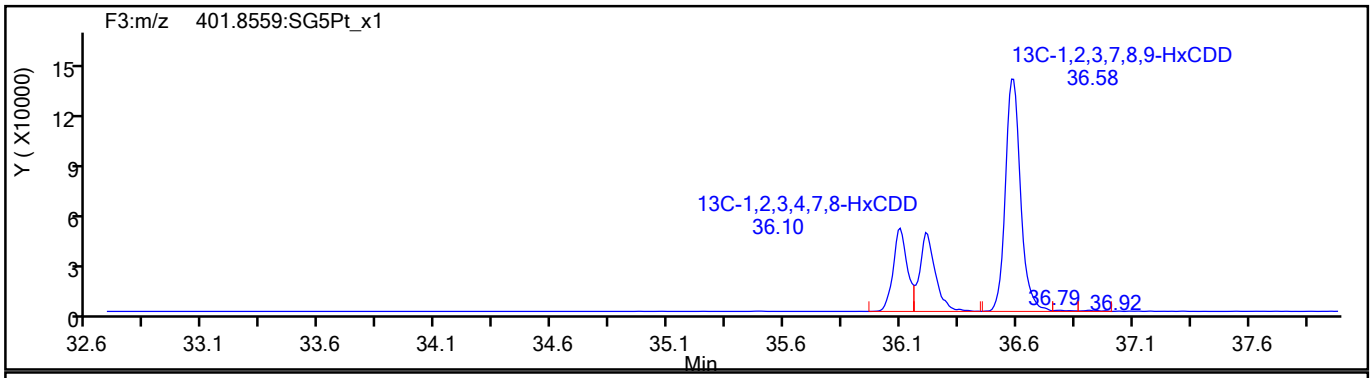

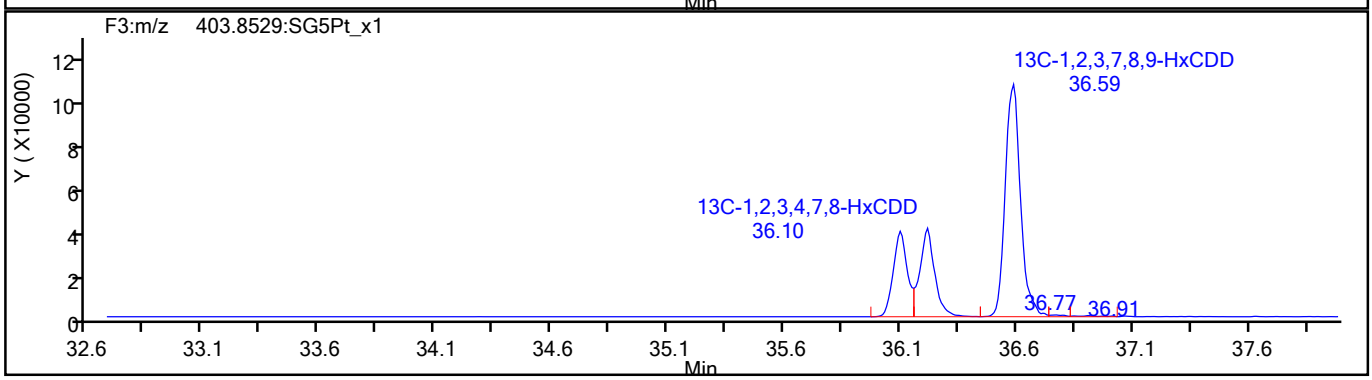

785660

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

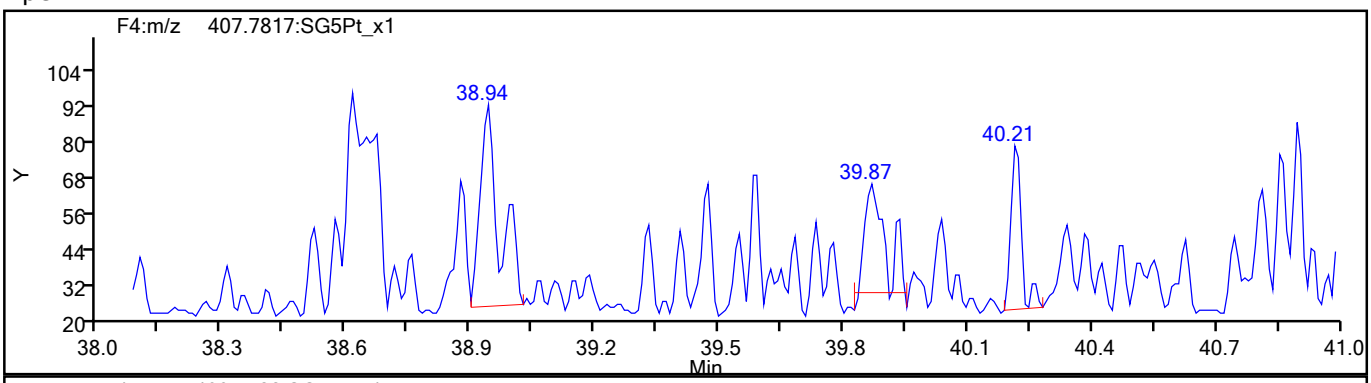

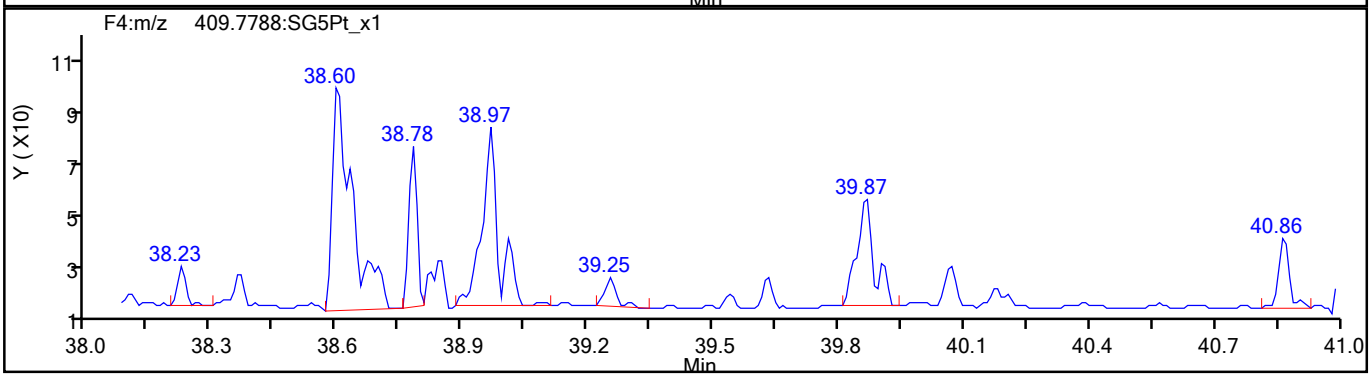

HpCDF Standards

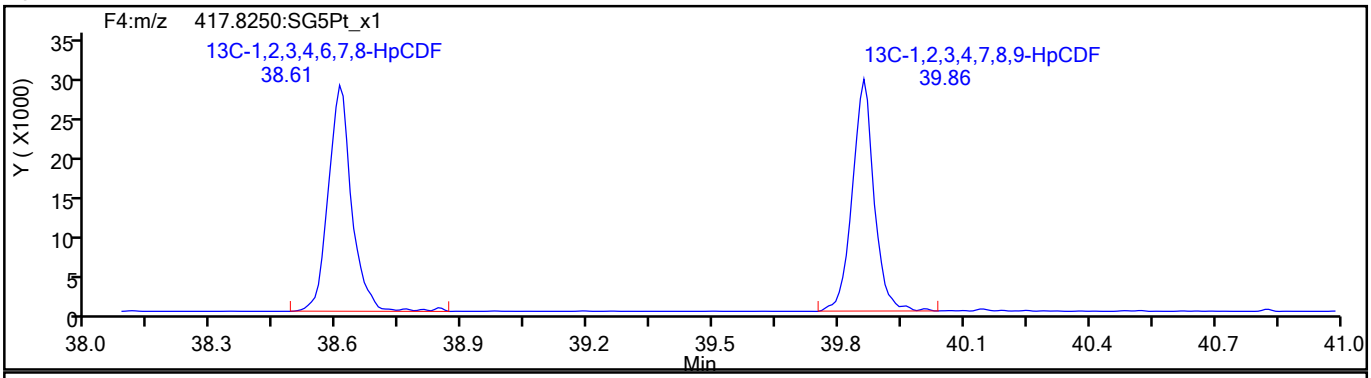

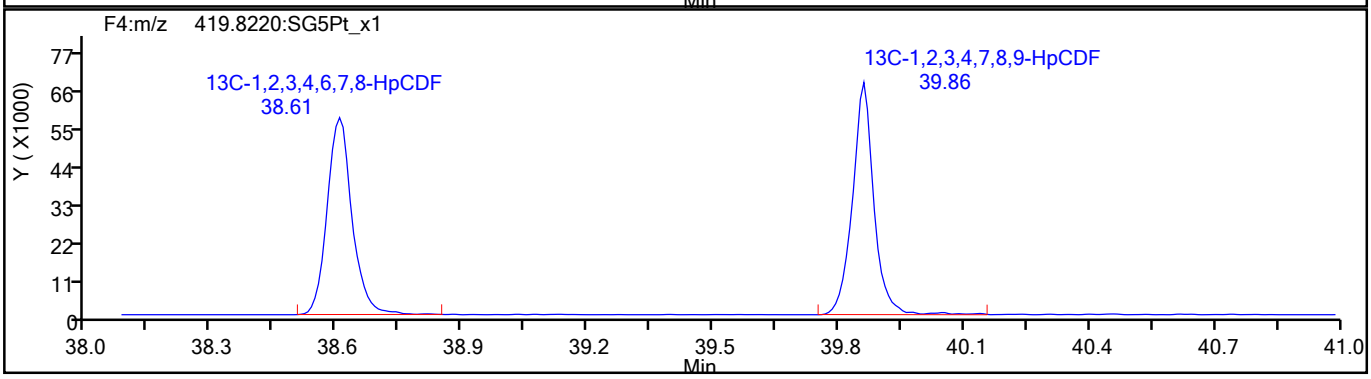

785661

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

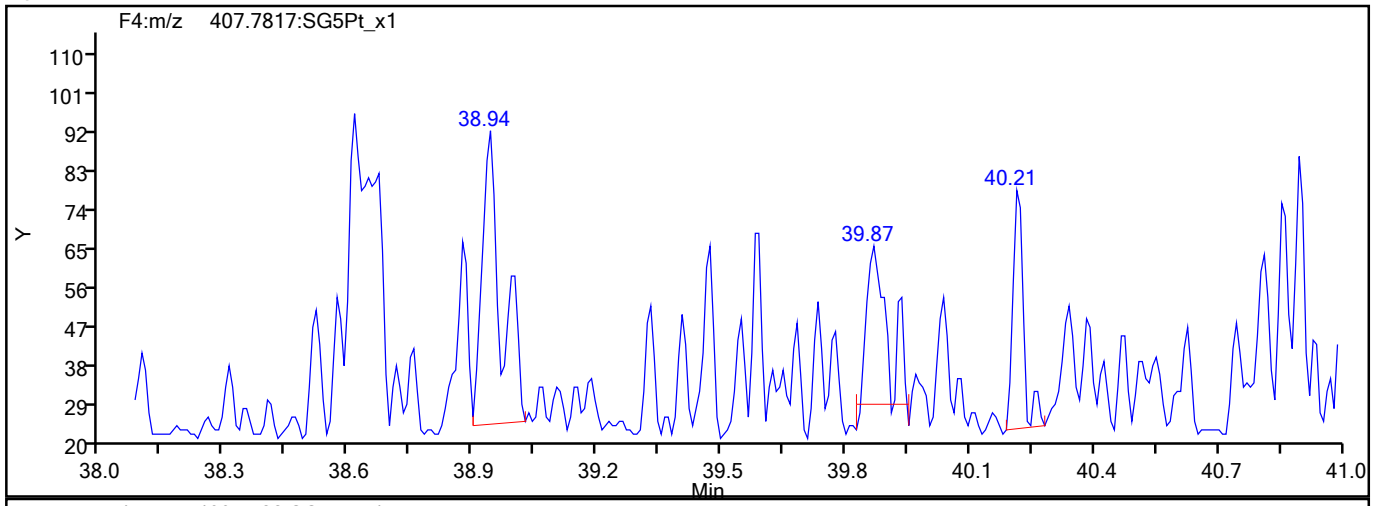

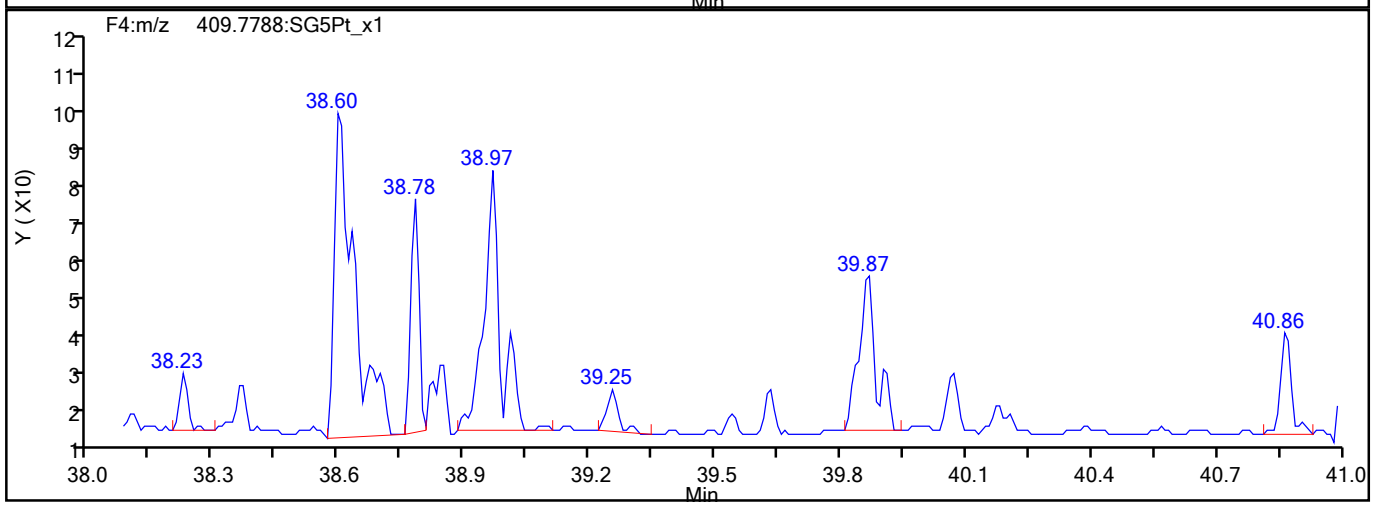

HpCDF Interference Mass

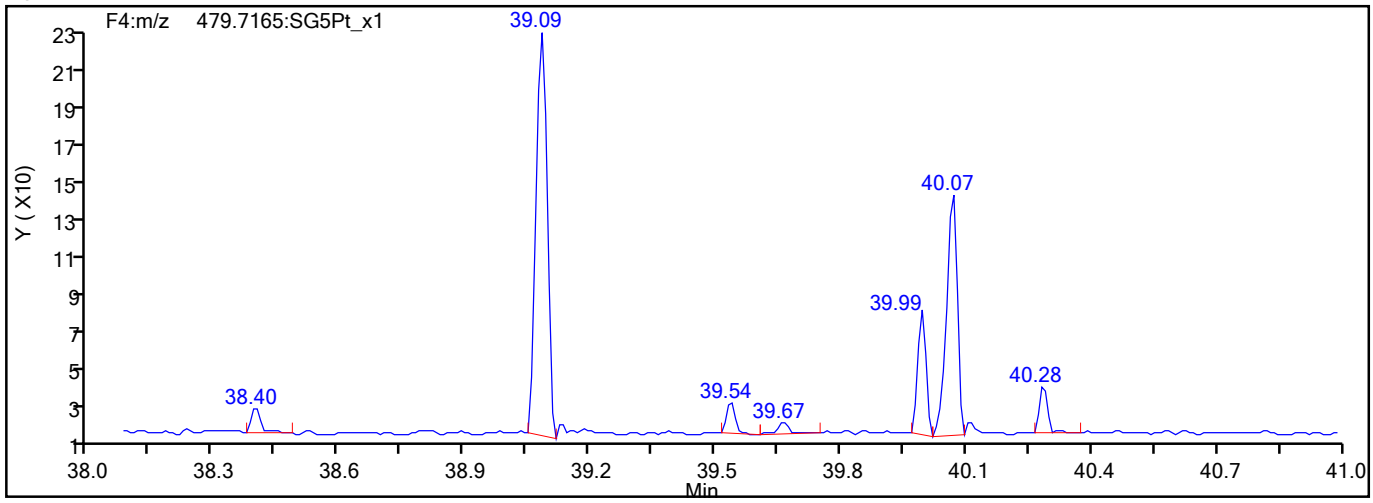

785662

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Injection Date:	19-Aug-2021 10:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

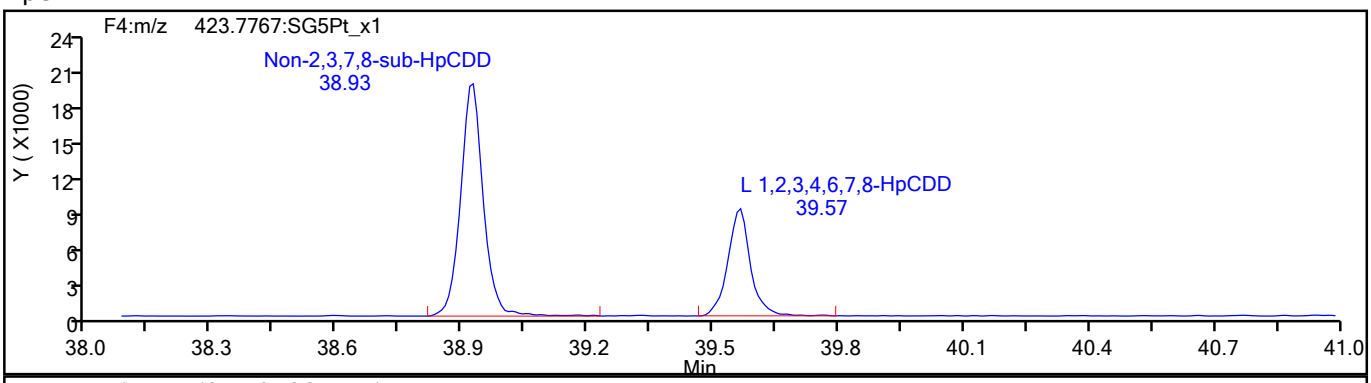

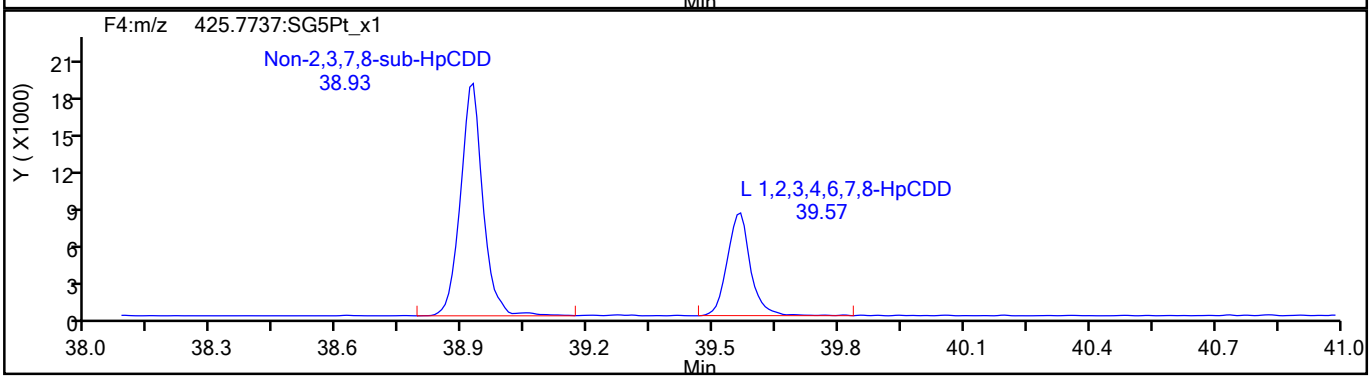

HpCDD Standards

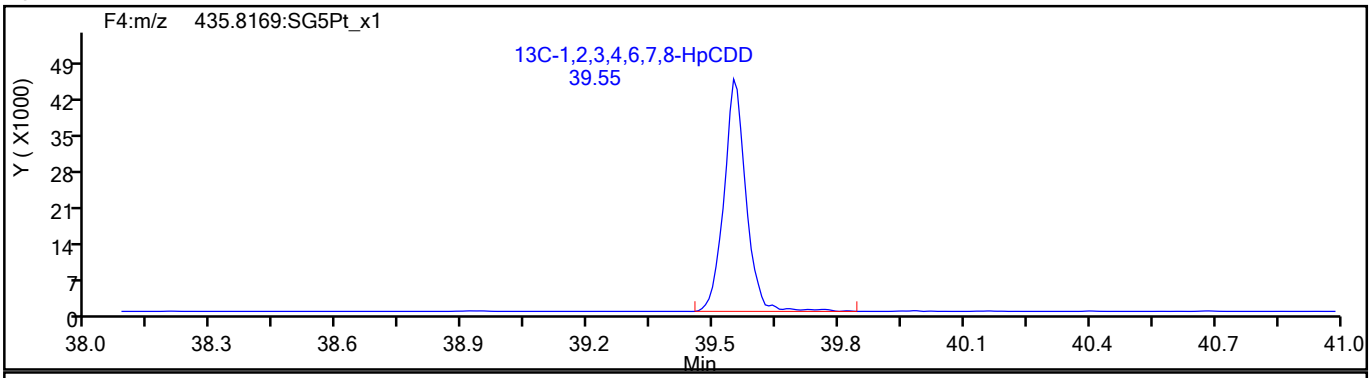

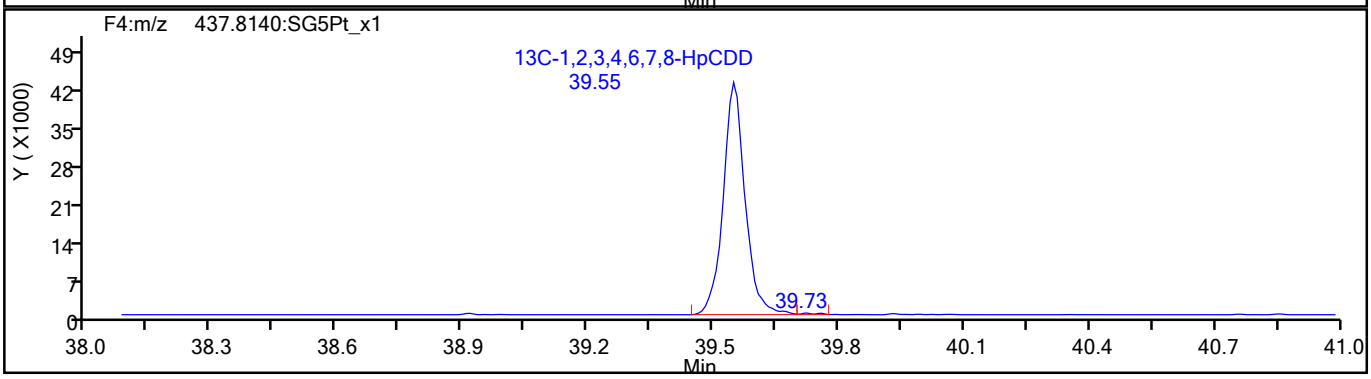

785663

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Injection Date:	19-Aug-2021 10:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

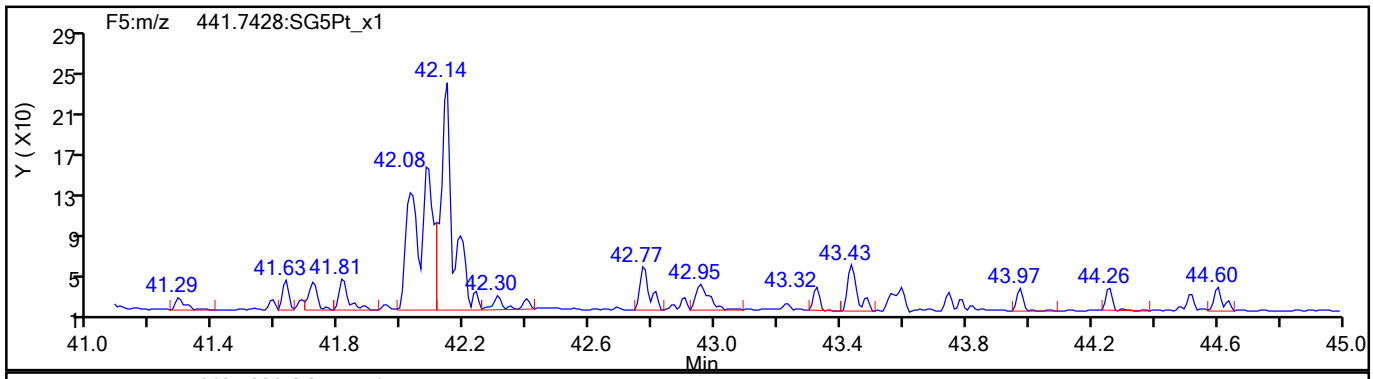

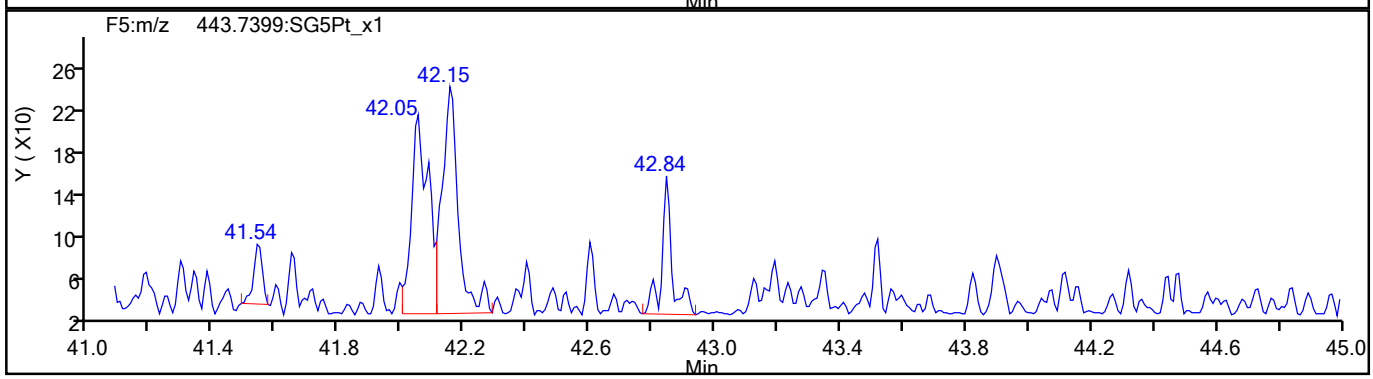

OCDF Standards

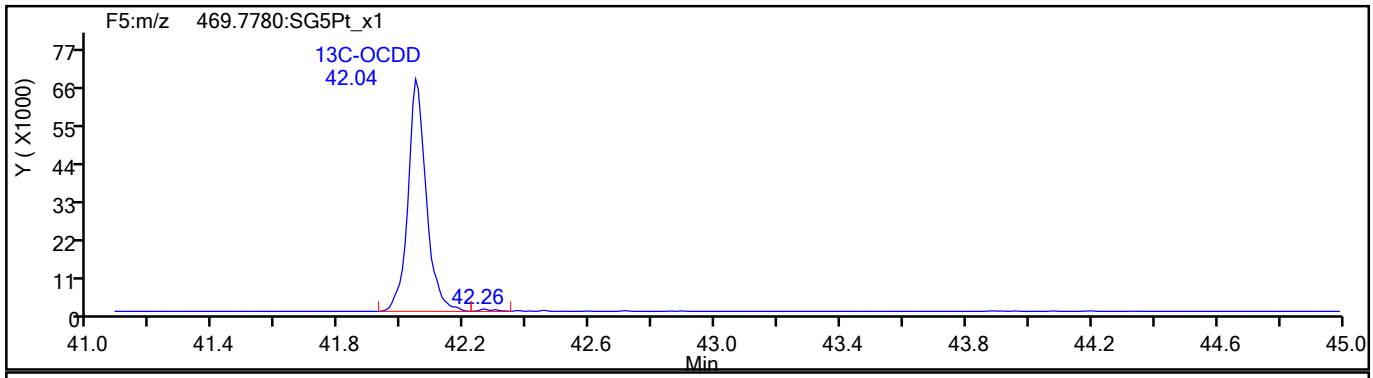

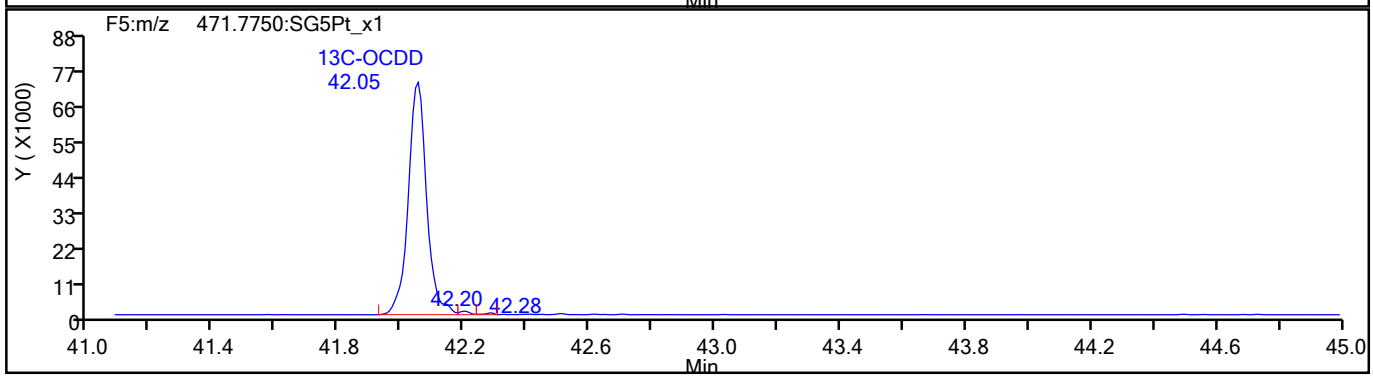

785664

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Injection Date:	19-Aug-2021 10:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

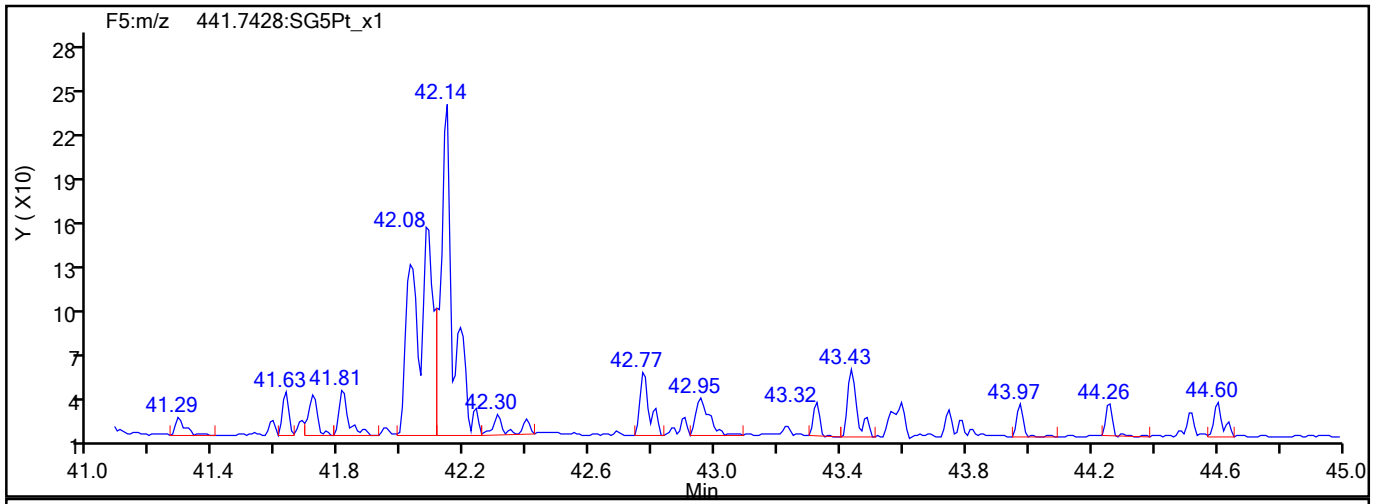

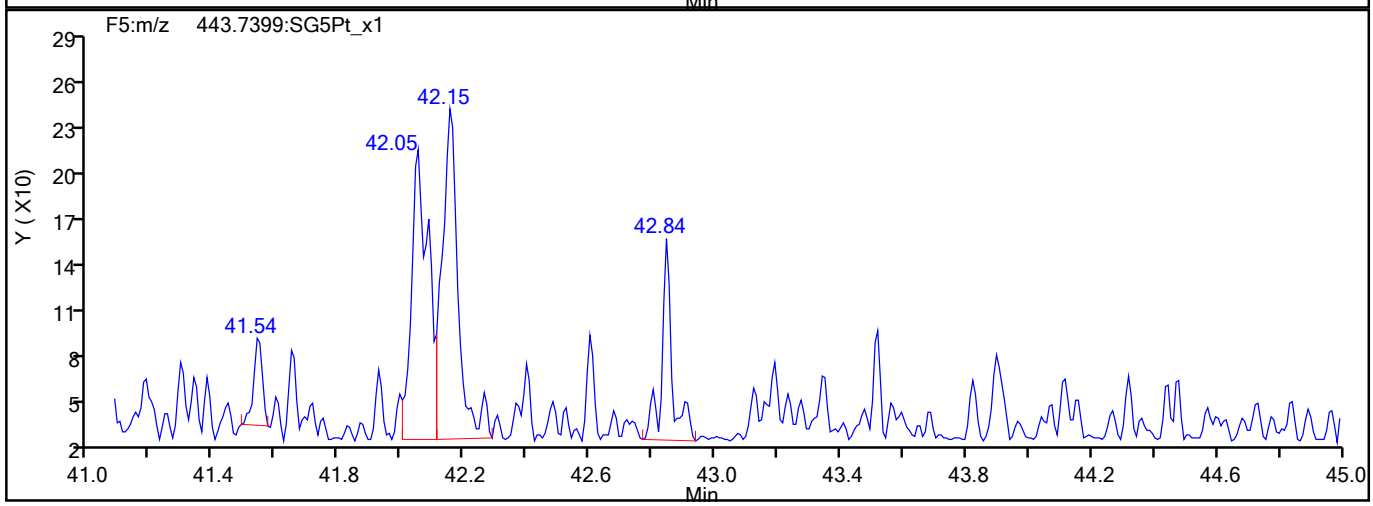

OCDF Interference Mass

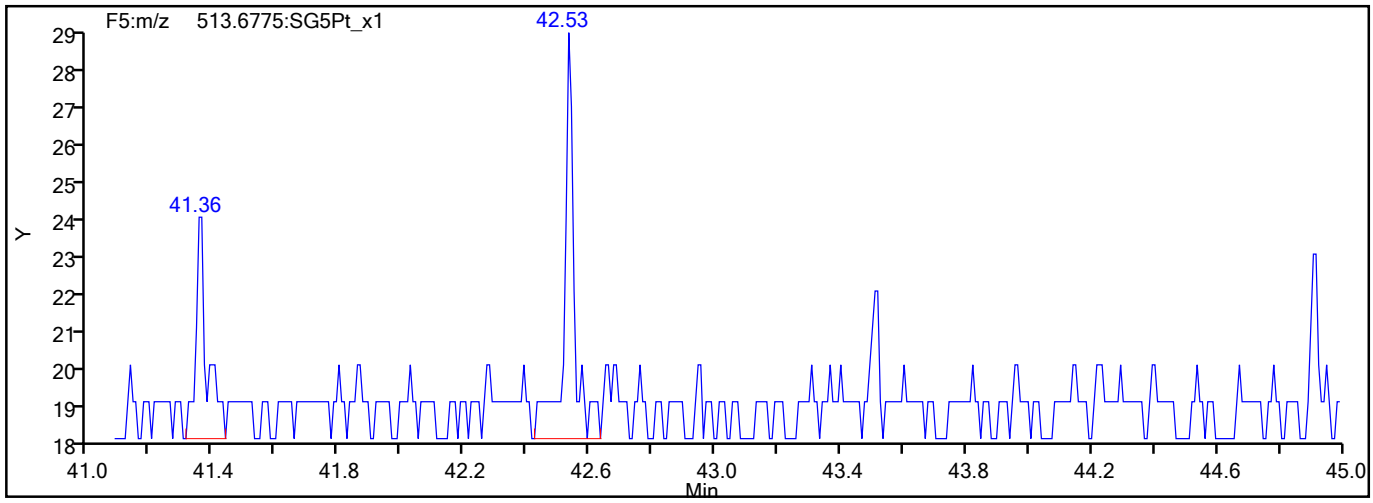

785665

Report Date: 20-Aug-2021 10:32:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Injection Date:	19-Aug-2021 10:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

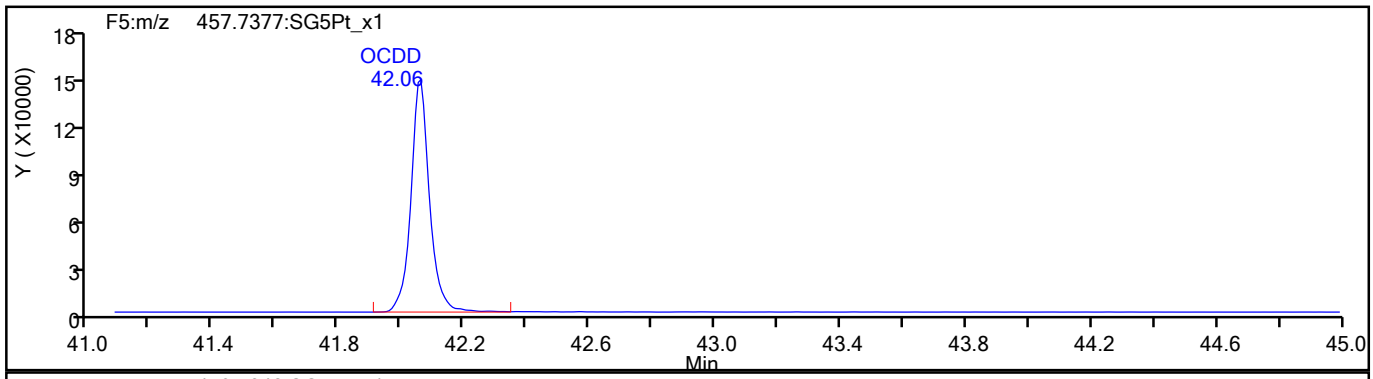

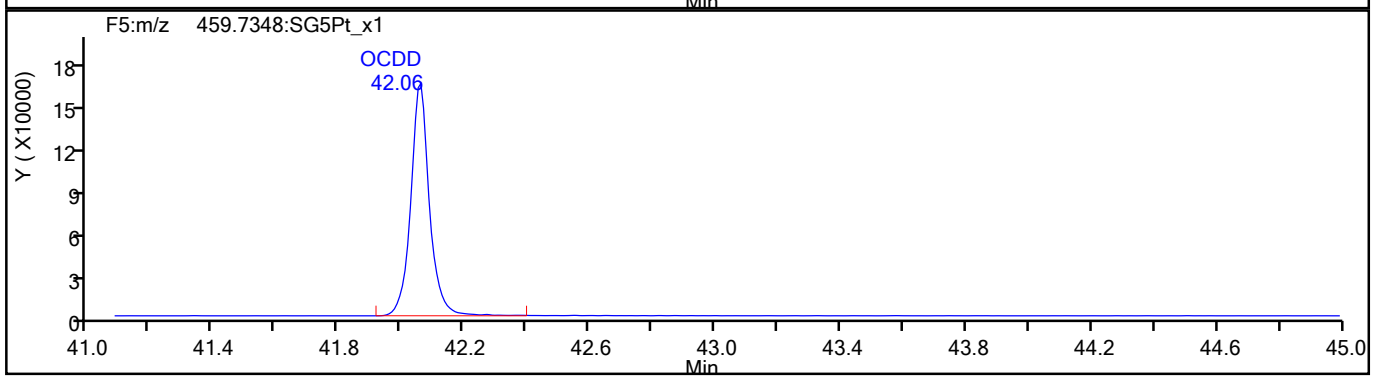

OCDD Standards

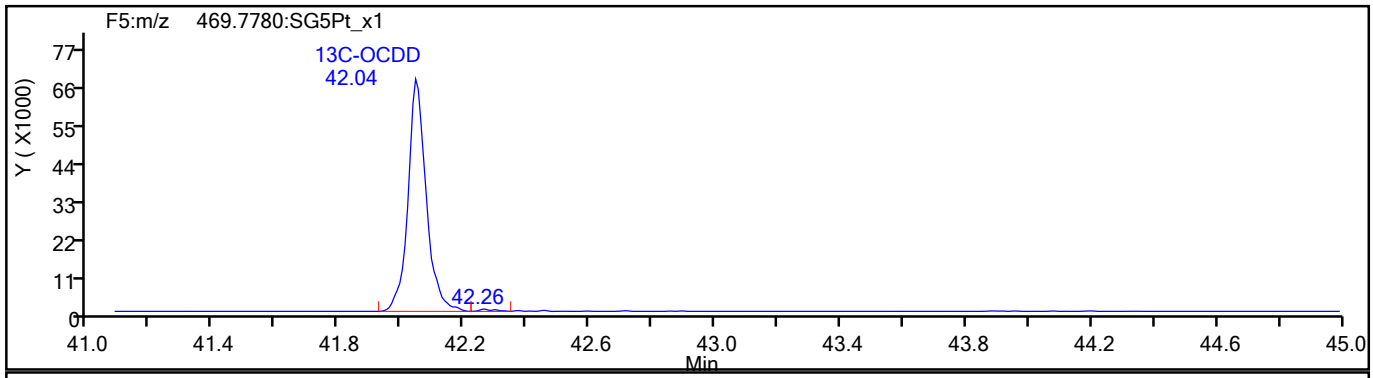

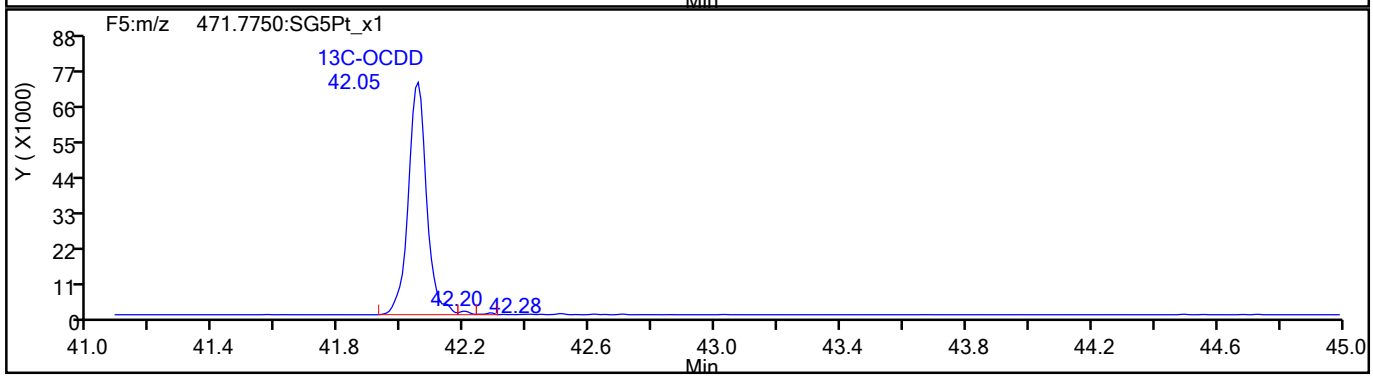

785666

Report Date: 20-Aug-2021 10:32:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Injection Date:	19-Aug-2021 10:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

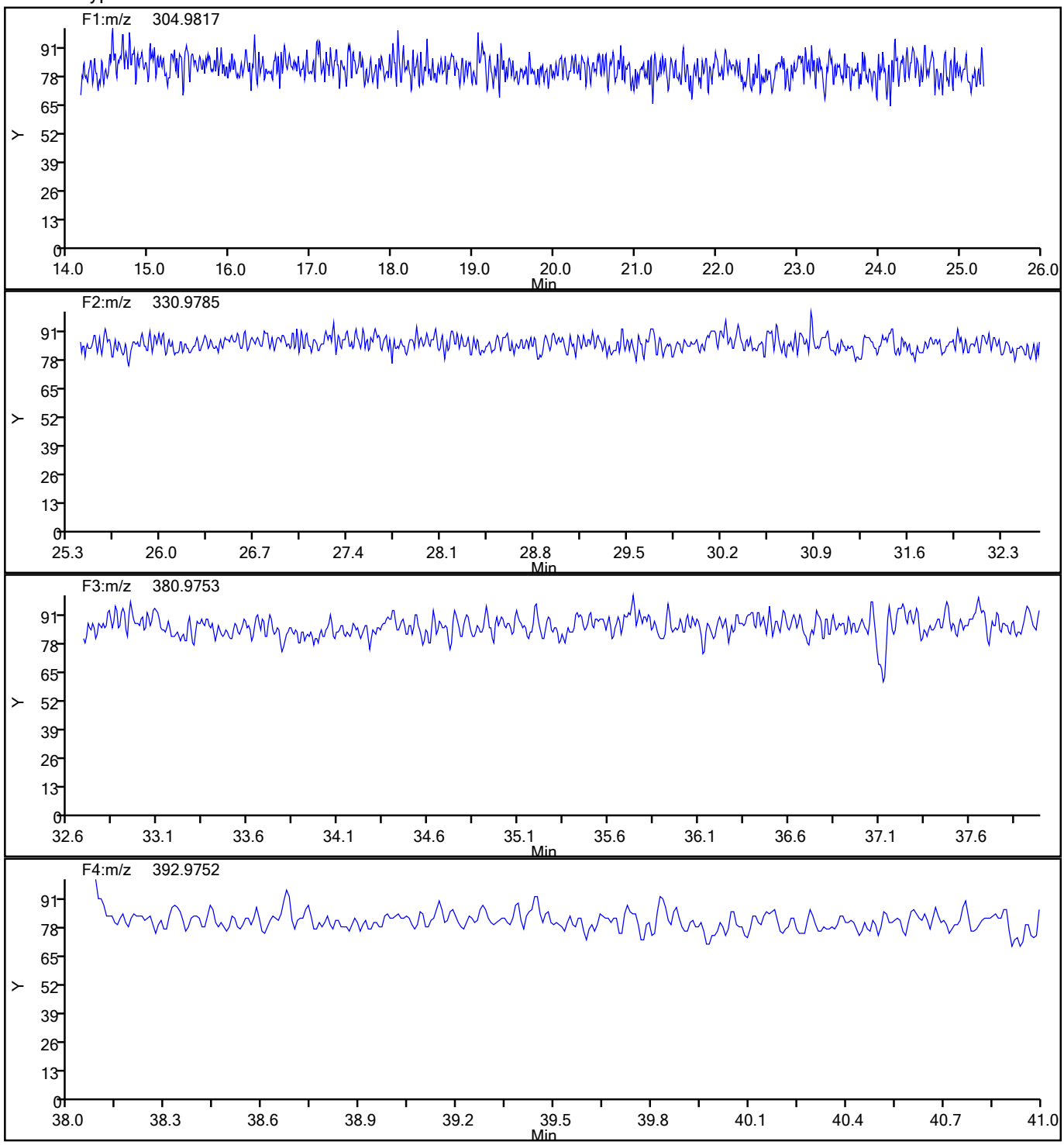

785667

Report Date: 20-Aug-2021 10:32:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_58.d		
Injection Date:	19-Aug-2021 10:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	517462	Sample Line#:	54
Column Type:	DB-5	Column Dia:	0.32 mm

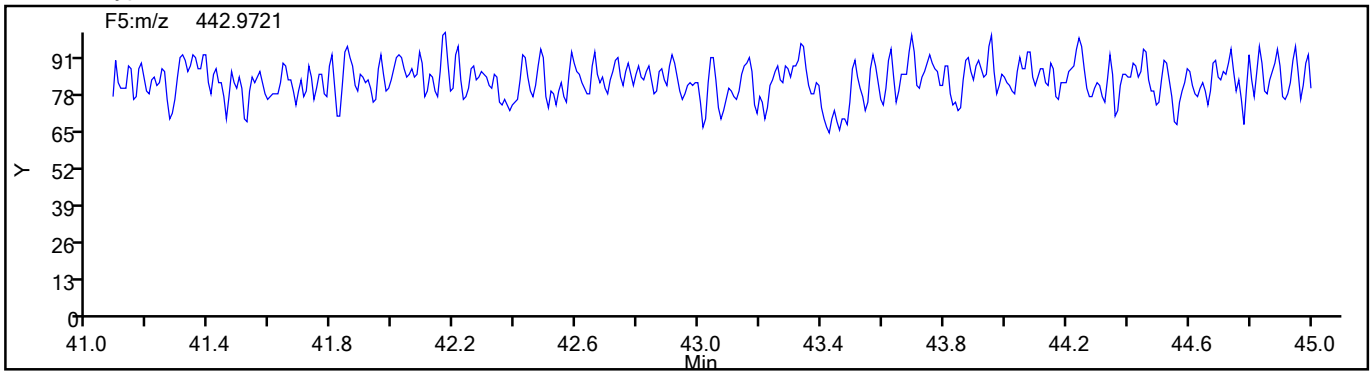

785668

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (14-16) RA
Lab Sample ID: 320-76888-8 RA
Matrix: Sediment
Lab File ID: 27AU2111D2_010.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:35
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.06(g)
Date Analyzed: 08/27/2021 14:47
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 35.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	2.2	B	1.5	0.20

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	39		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	51		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_010.d
Lims ID: 320-76888-A-8-A
Client ID: 11215702-072621-BN-SJSB094 (14-16)
Sample Type: Client
Inject. Date: 27-Aug-2021 14:47:06 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-A-8-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:52:22

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.286	64568984	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.616	33500562	0.78	1.3327	38.9	38.9	0.1635	0.1635	38.93	
2,3,7,8-TCDF	17.630	242637	0.87	0.9978	0.7259	0.7259	0.0654	0.0654		M
D 13C-2,3,7,8-TCDD	16.053	22085714	0.78	0.8749	39.1	39.1	0.1857	0.1857	39.09	
2,3,7,8-TCDD	16.080	102843	0.67	1.0570	0.4405	0.4405	0.1066	0.1066		
$ 37Cl4-2,3,7,8-TCDD	16.080	11325411		0.8648	20.3	20.3	0.0658	0.0658	50.70	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_010.d
Lims ID: 320-76888-A-8-A
Client ID: 11215702-072621-BN-SJSB094 (14-16)
Sample Type: Client
Inject. Date: 27-Aug-2021 14:47:06 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-A-8-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:52:22

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.286	16.284	0		27843842	6266431	5957	14892	1052		
333.9339	16.286	16.284	0		36725142	7971645	3294	8235	2420	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.616	17.614	0	1.082	14693837	2653579	5954	14885	446		
317.9389	17.616	17.614	0	1.082	18806725	3462220	6459	16147	536	0.78(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.630	17.628	0	1.001	112781	23344	726	1815	32		M
305.8987	17.630	17.628	0	1.001	129856	25658	871	2177	29	0.87(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.053	16.064	-1	0.986	9710131	2151094	5957	14892	361		
333.9339	16.066	16.064	0	0.987	12375583	2800401	3294	8235	850	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.080	16.078	0	1.002	41294	11502	942	2355	12		
321.8936	16.080	16.078	0	1.002	61549	14546	1289	3222	11	0.67(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.078	0	0.987	11325411	2733182	3242	8105	843		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_010.d				
Injection Date:	27-Aug-2021 14:47:06	Instrument ID:	11D2		
Lims ID:	320-76888-A-8-A	Lab Sample ID:	320-76888-8		
Client ID:	11215702-072621-BN-SJSB094 (14-16)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.63
Area: 109437
Amount: 0.709763
Amount Units: pg/ul

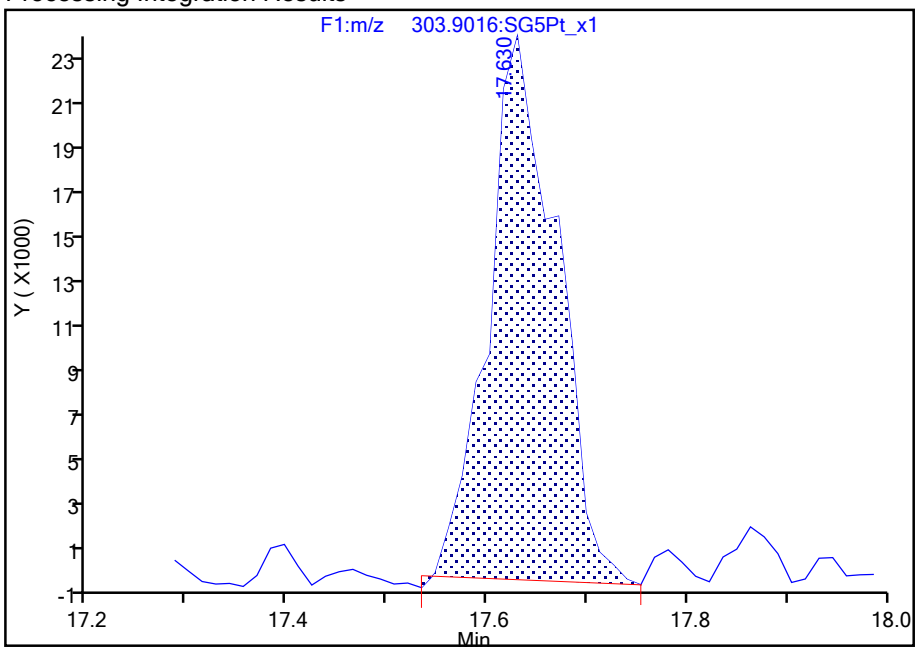

Manual Integration Results

RT: 17.63
Area: 112781
Amount: 0.725869
Amount Units: pg/ul

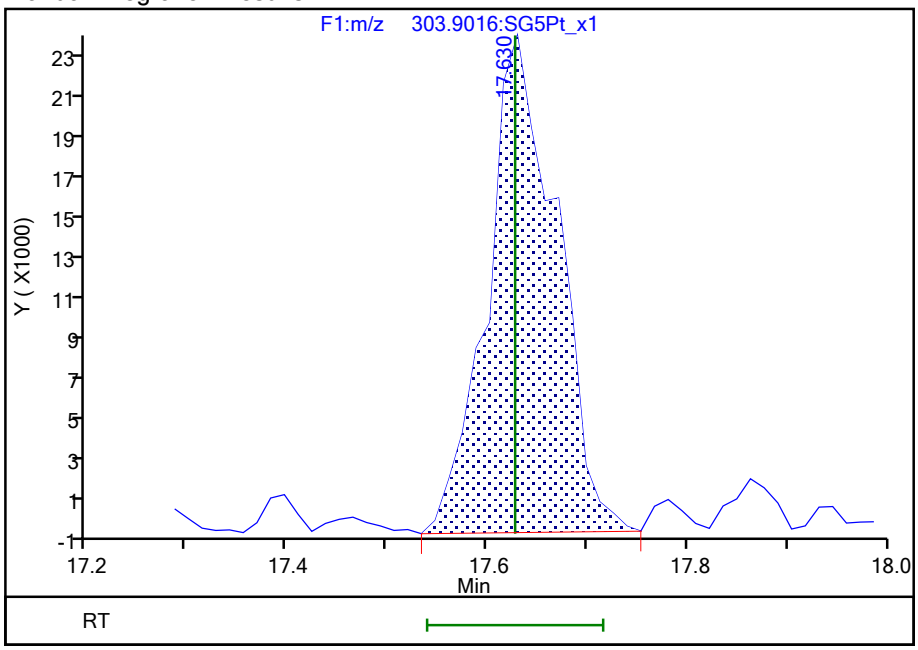

Reviewer: bennettd, 27-Aug-2021 15:51:52

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_010.d				
Injection Date:	27-Aug-2021 14:47:06	Instrument ID:	11D2		
Lims ID:	320-76888-A-8-A	Lab Sample ID:	320-76888-8		
Client ID:	11215702-072621-BN-SJSB094 (14-16)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.63
Area: 127816
Amount: 0.709763
Amount Units: pg/ul

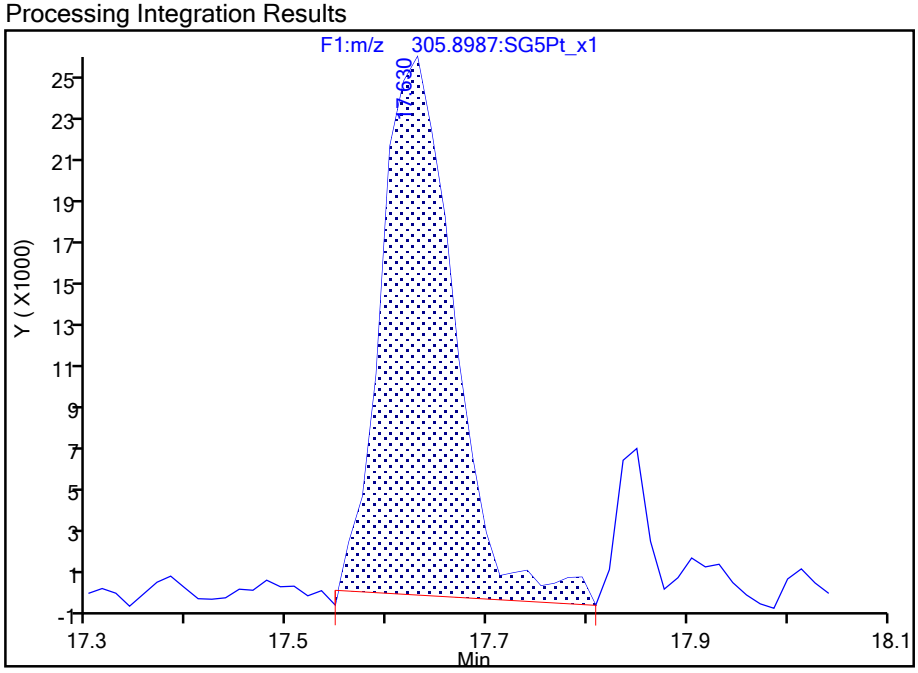

Manual Integration Results

RT: 17.63
Area: 129856
Amount: 0.725869
Amount Units: pg/ul

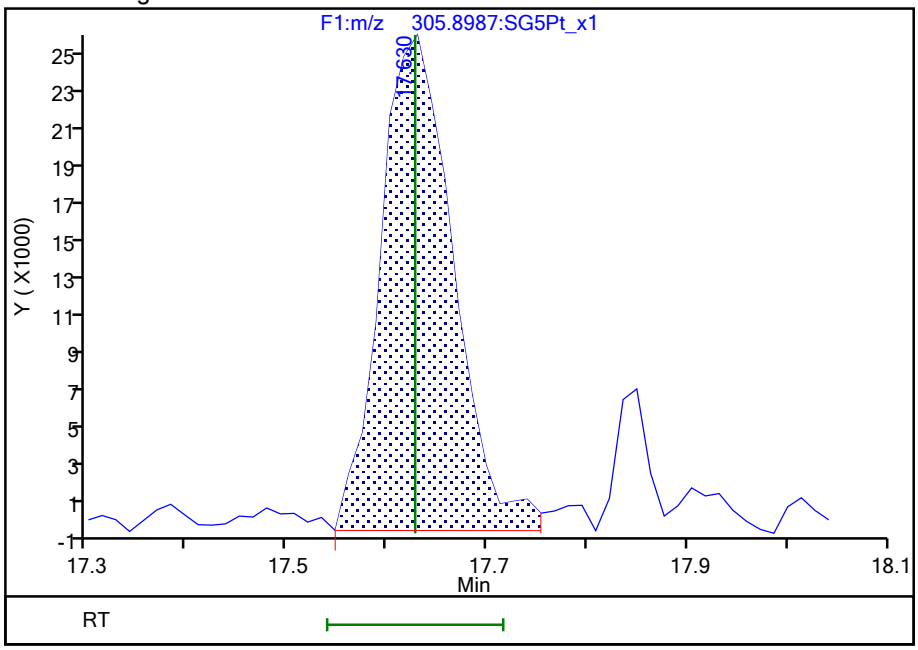

Reviewer: bennettd, 27-Aug-2021 15:52:03

Audit Action: Split an Integrated Peak Audit Reason: Baseline

785673

Report Date: 27-Aug-2021 15:52:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_010.d		
Injection Date:	27-Aug-2021 14:47:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	520438	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

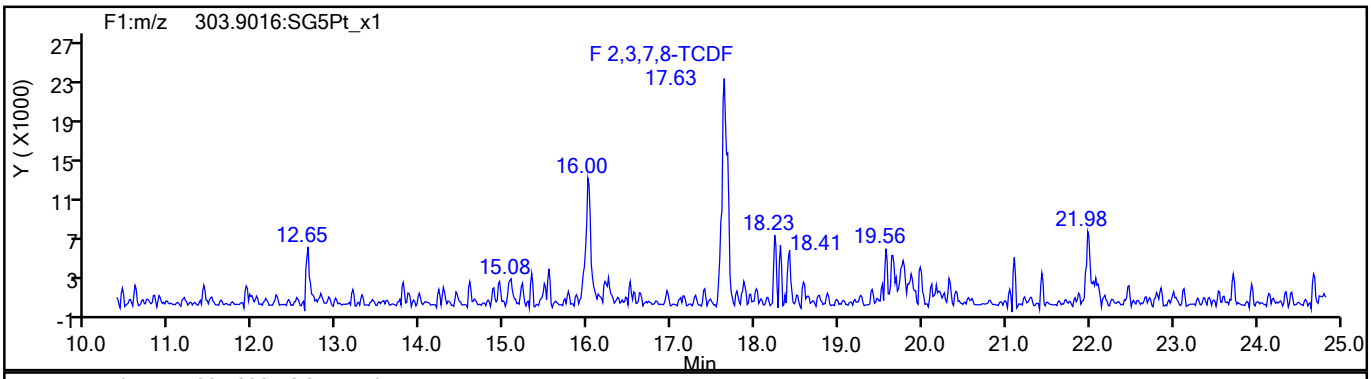

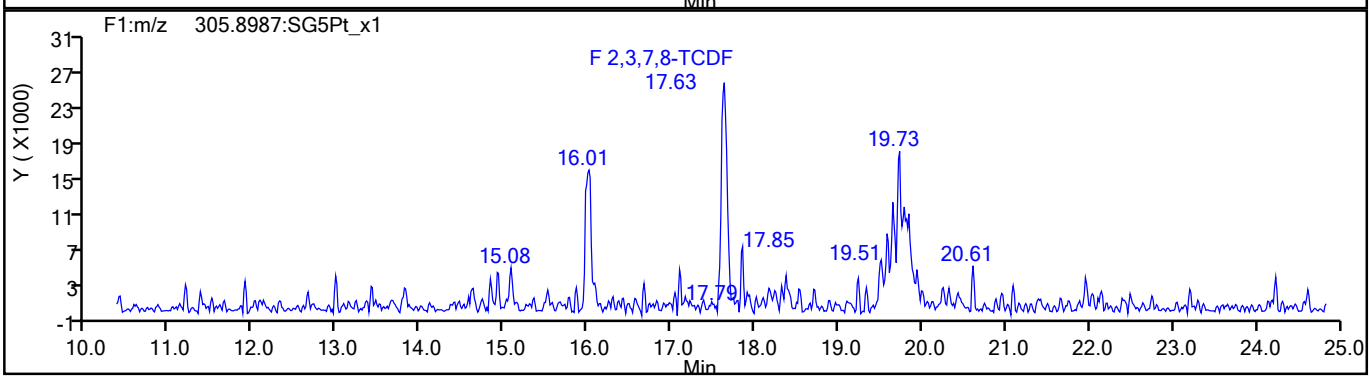

TCDF Standards

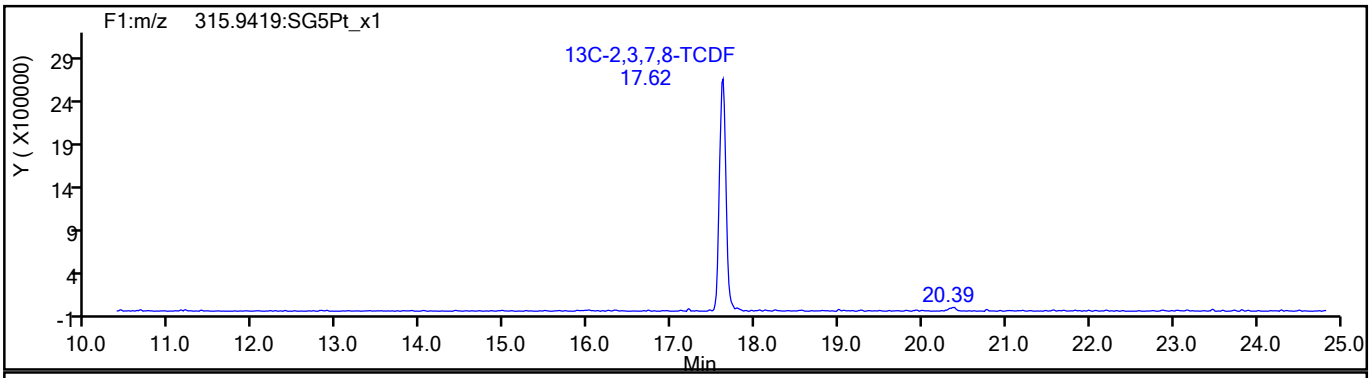

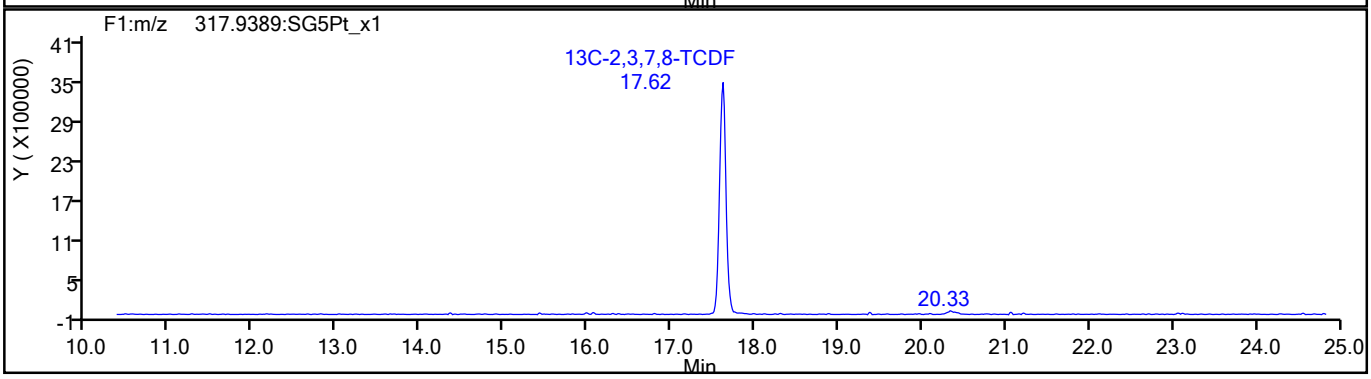

785674

Report Date: 27-Aug-2021 15:52:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_010.d		
Injection Date:	27-Aug-2021 14:47:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	520438	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

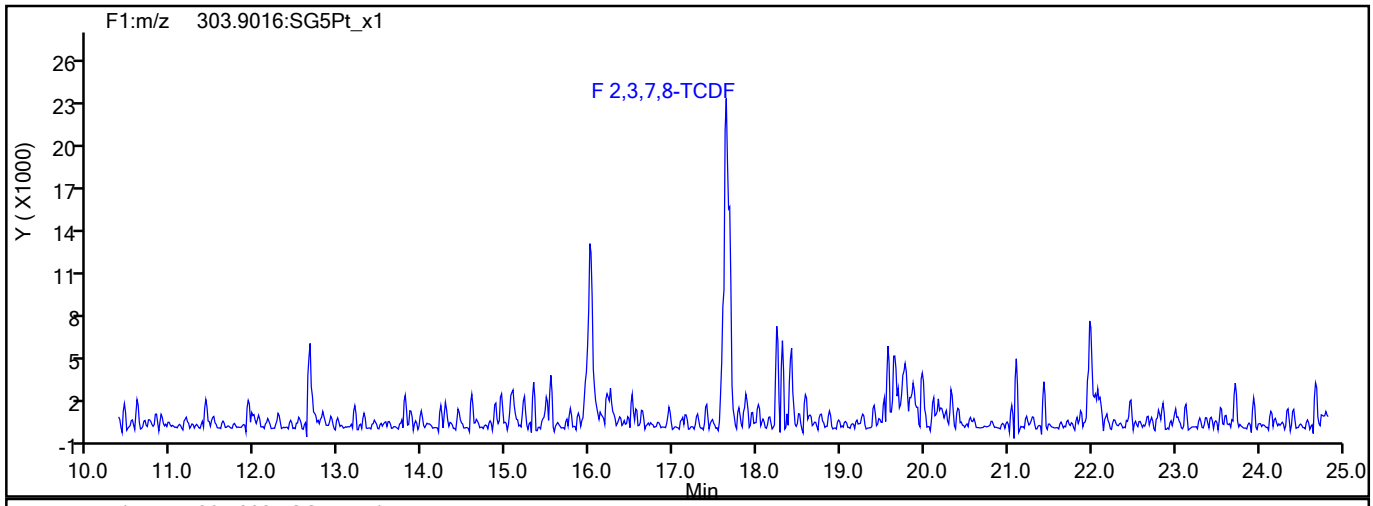

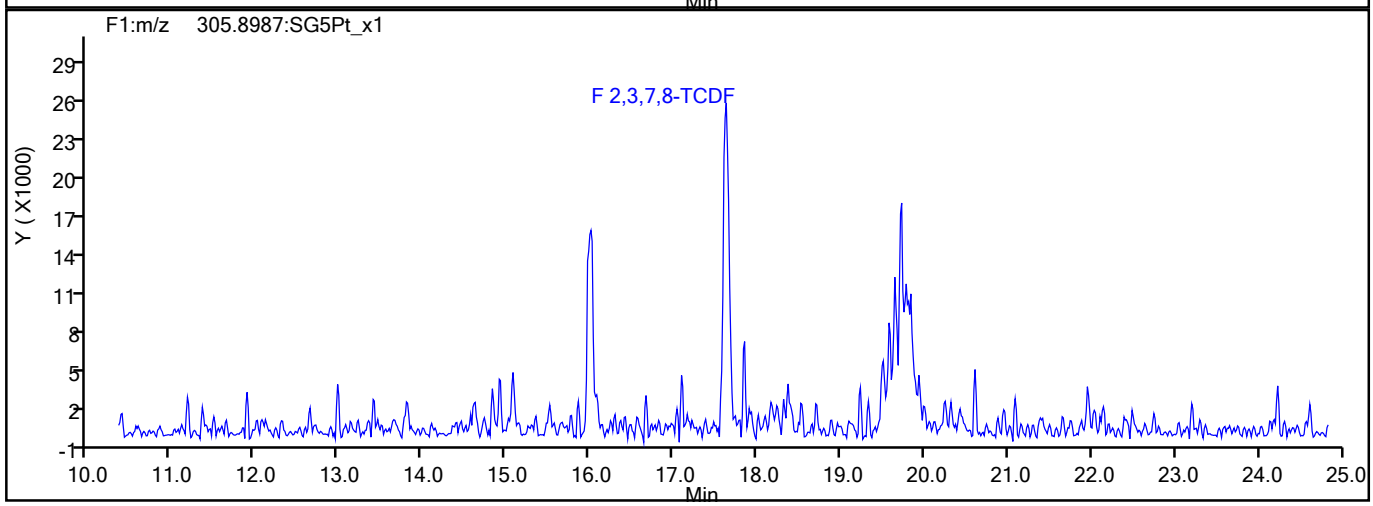

TCDF Interference Mass

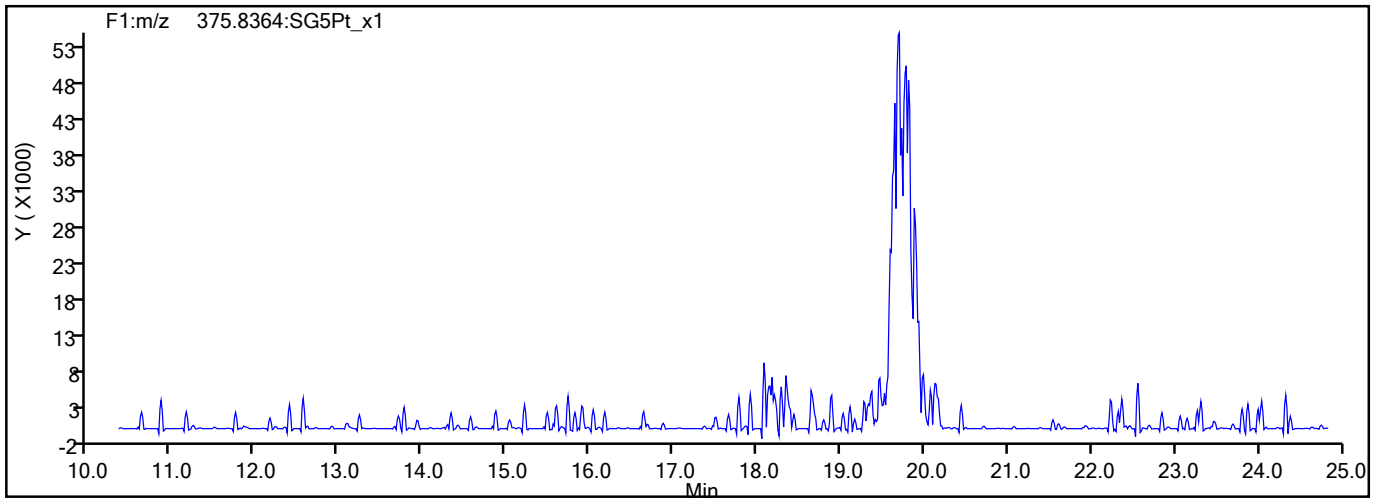

785675

Report Date: 27-Aug-2021 15:52:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_010.d		
Injection Date:	27-Aug-2021 14:47:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	520438	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

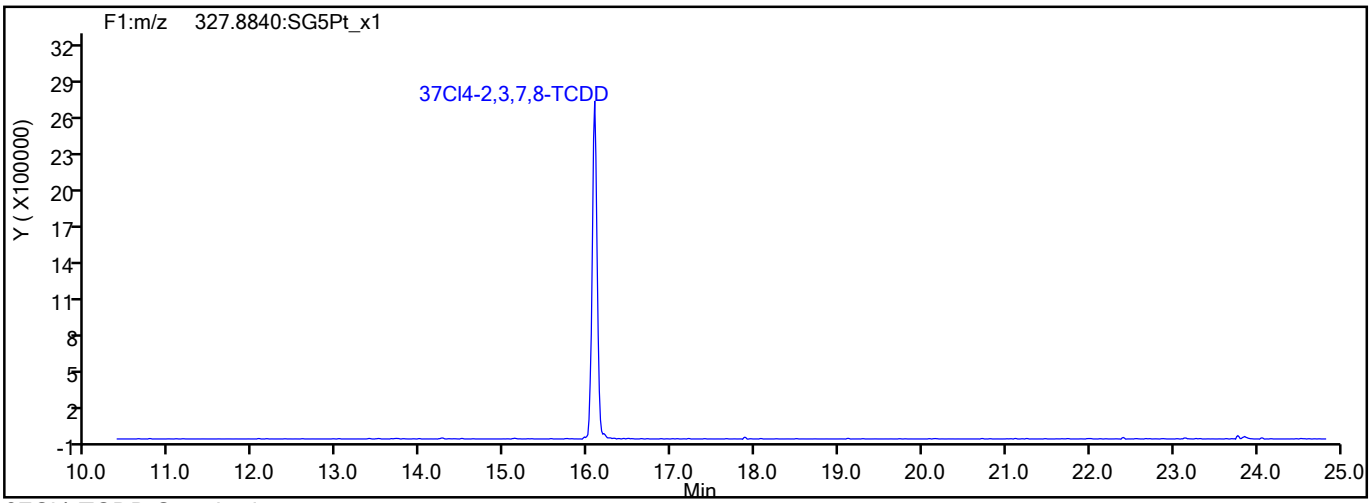

37Cl4-TCDD Standards

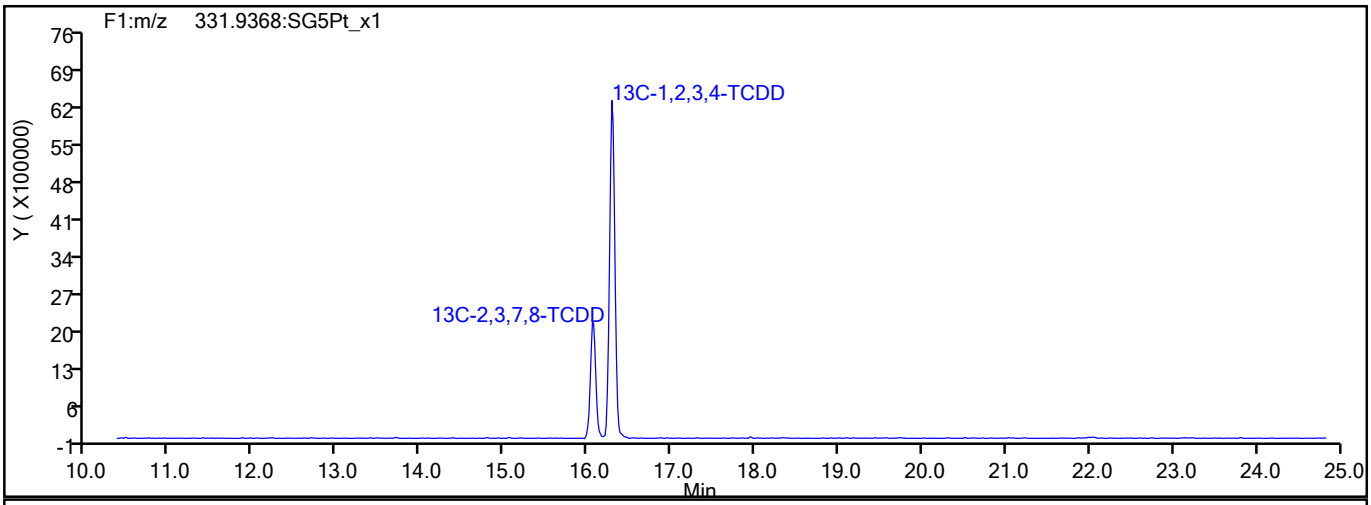

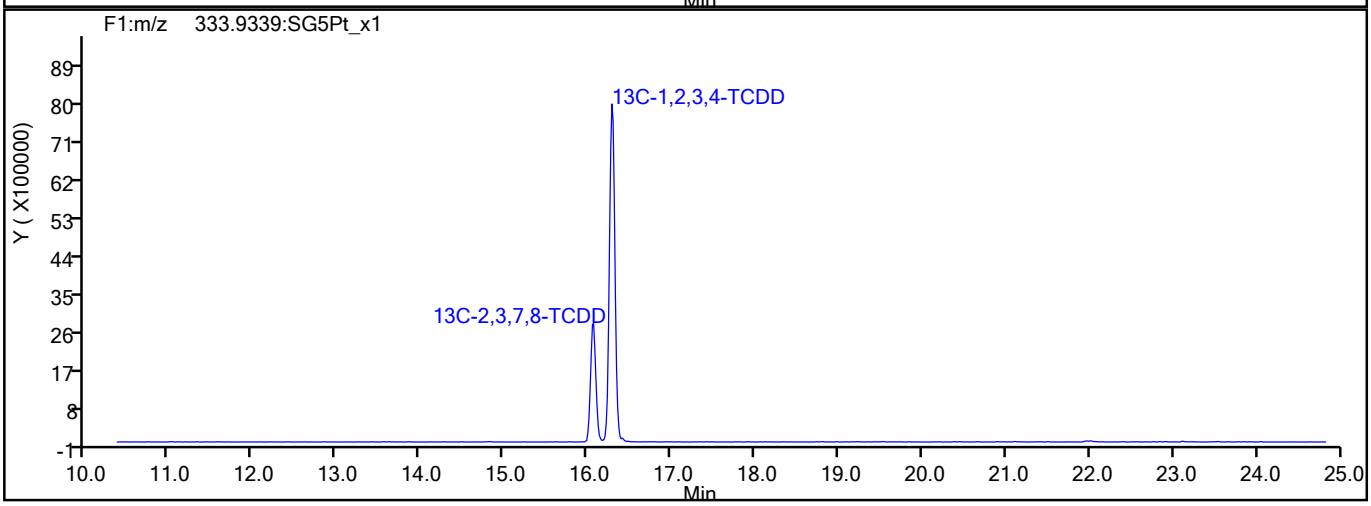

785676

Report Date: 27-Aug-2021 15:52:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_010.d		
Injection Date:	27-Aug-2021 14:47:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (14-16)		
Worklist#:	520438	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

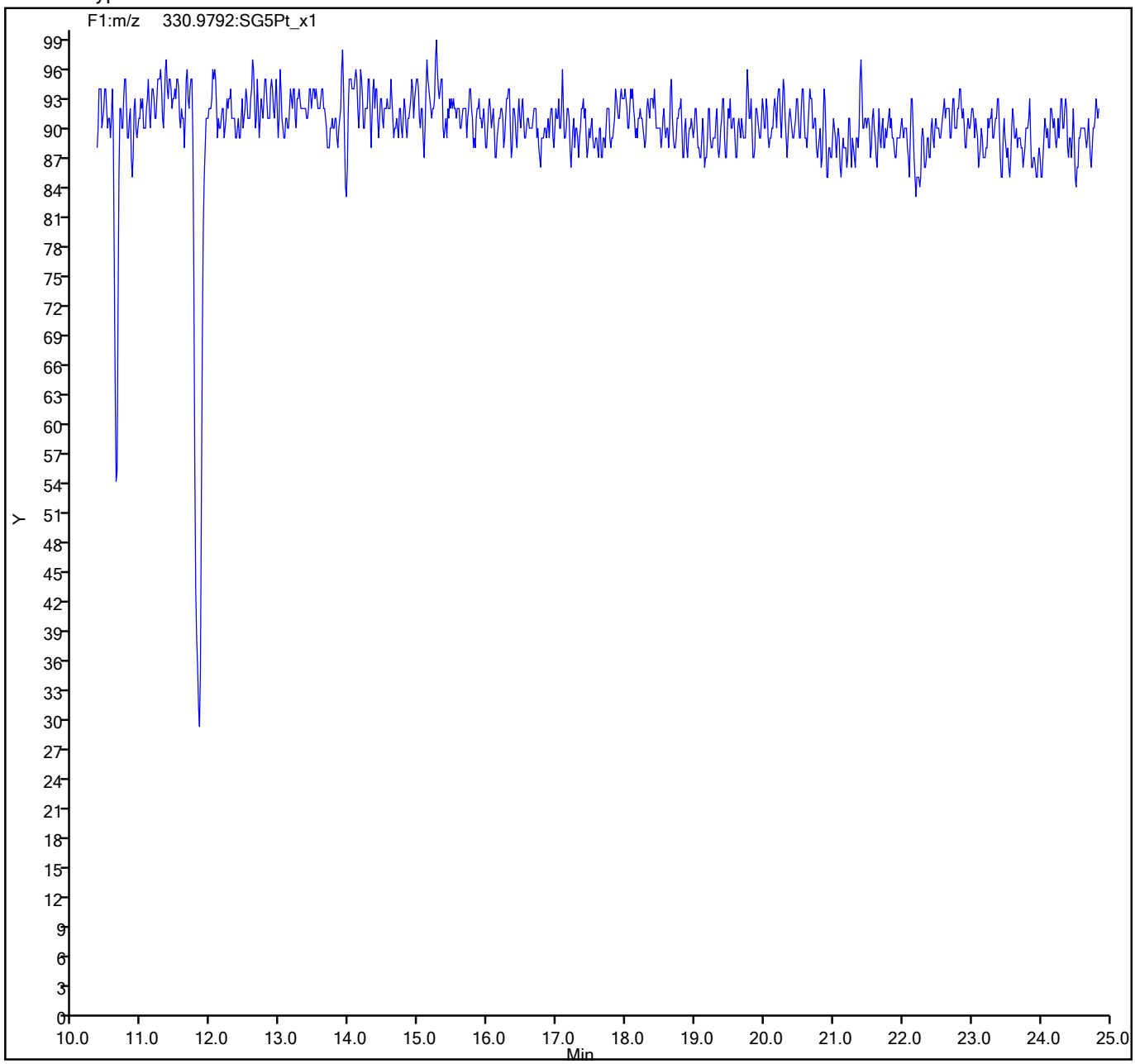

785677

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Client Sample ID: 11215702-072621-BN-DUP-8 Lab Sample ID: 320-76888-13

Matrix: Sediment Lab File ID: 19au21dfs1_6.d

Analysis Method: 1613B Date Collected: 07/26/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10.13(g) Date Analyzed: 08/19/2021 17:15

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 30.1 GPC Cleanup:(Y/N) N

Analysis Batch No.: 517891 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	570	E	1.4	1.0
40321-76-4	1,2,3,7,8-PeCDD	7.1		7.1	0.24
57117-41-6	1,2,3,7,8-PeCDF	51		7.1	0.74
57117-31-4	2,3,4,7,8-PeCDF	47		7.1	0.77
39227-28-6	1,2,3,4,7,8-HxCDD	1.0	J	7.1	0.21
57653-85-7	1,2,3,6,7,8-HxCDD	1.2	J q	7.1	0.23
19408-74-3	1,2,3,7,8,9-HxCDD	2.7	J	7.1	0.20
70648-26-9	1,2,3,4,7,8-HxCDF	62		7.1	0.29
57117-44-9	1,2,3,6,7,8-HxCDF	16		7.1	0.31
72918-21-9	1,2,3,7,8,9-HxCDF	0.99	J q	7.1	0.30
60851-34-5	2,3,4,6,7,8-HxCDF	2.6	J	7.1	0.31
35822-46-9	1,2,3,4,6,7,8-HpCDD	48	B	7.1	0.35
67562-39-4	1,2,3,4,6,7,8-HpCDF	19		7.1	0.12
55673-89-7	1,2,3,4,7,8,9-HpCDF	5.9	J	7.1	0.12
3268-87-9	OCDD	1200	B	14	0.99
39001-02-0	OCDF	12	J	14	0.11
41903-57-5	Total TCDD	620		1.4	1.0
30402-14-3	Total TCDF	4400	G	3.6	3.6
36088-22-9	Total PeCDD	12	q	7.1	0.24
30402-15-4	Total PeCDF	150	q	7.1	0.76
34465-46-8	Total HxCDD	42	q	7.1	0.21
55684-94-1	Total HxCDF	92	q	7.1	0.30
37871-00-4	Total HpCDD	160	B	7.1	0.35
38998-75-3	Total HpCDF	30		7.1	0.12

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Client Sample ID: 11215702-072621-BN-DUP-8 Lab Sample ID: 320-76888-13

Matrix: Sediment Lab File ID: 19au21dfs1_6.d

Analysis Method: 1613B Date Collected: 07/26/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10.13(g) Date Analyzed: 08/19/2021 17:15

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 30.1 GPC Cleanup:(Y/N) N

Analysis Batch No.: 517891 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	60		25-164
89059-46-1	13C-2,3,7,8-TCDF	59		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	60		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	57		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	64		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	68		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	62		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	77		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	69		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	60		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	61		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	64		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	64		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	71		26-138
114423-97-1	13C-OCDD	62		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d
Lims ID: 320-76888-A-13-A
Client ID: 11215702-072621-BN-DUP-8
Sample Type: Client
Inject. Date: 19-Aug-2021 17:15:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-a-13-a RI
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:01:56 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 16:44:16

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.397	1281490	0.85	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.418	1025275	0.79	1.3459	59.4	59.4	0.2749	0.2749	59.45	
2,3,7,8-TCDF	20.452	9751037	0.76	1.0802	880.5	880.5	1.279	1.279		E
A Non-2,3,7,8-sub-TCDF	19.851	7422660	0.79	1.0802	670.2	670.2	1.279	394.8		
S Total TCDF					1550.7	1550.7	1.279	1.279		
D 13C-2,3,7,8-TCDD	21.792	711465	0.83	0.9317	59.6	59.6	0.3542	0.3542	59.59	
2,3,7,8-TCDD	21.817	1539632	0.78	1.0753	201.2	201.2	0.3557	0.3557		E
$ 37Cl4-2,3,7,8-TCDD	21.817	370884		1.0083	28.7	28.7	0.1079	0.1079	71.76	
A Non-2,3,7,8-sub-TCDD	20.684	140715	0.79	1.0753	18.4	18.4	0.3557	16.1		
S Total TCDD					219.6	219.6	0.3557	0.3557		
D 13C-1,2,3,7,8-PeCDF	27.294	836631	1.55	1.1405	57.2	57.2	0.2129	0.2129	57.24	
1,2,3,7,8-PeCDF	27.319	159070	1.59	1.0543	18.0	18.0	0.2628	0.2628		M
D 13C-2,3,4,7,8-PeCDF	28.793	918259	1.58	1.1253	63.7	63.7	0.2157	0.2157	63.68	
2,3,4,7,8-PeCDF	28.819	154339	1.59	1.0079	16.7	16.7	0.2725	0.2725		
A F1 PeCDFs	24.634						0.007822	0.1581		RQUa
A Non-2,3,7,8-sub-PeCDF	28.173	165578	1.55	1.0311	18.8	18.3	0.2675	8.824		RQMa
S Total PeCDF					53.5	53.0	0.2676	0.2676		RQ
D 13C-1,2,3,7,8-PeCDD	29.618	549025	1.55	0.7165	59.8	59.8	0.1604	0.1604	59.80	
1,2,3,7,8-PeCDD	29.652	14371	1.45	1.0465	2.501	2.501	0.0866	0.0866		
A Non-2,3,7,8-sub-PeCDD	28.478	10253	1.55	1.0465	3.697	1.785	0.0866	1.038		RQ
S Total PeCDD					6.199	4.286	0.0866	0.0866		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.928	857651	0.52	0.9648	77.1	77.1	0.2555	0.2555	77.10	
1,2,3,4,7,8-HxCDF	34.953	217467	1.27	1.1474	22.1	22.1	0.1029	0.1029		
D 13C-1,2,3,6,7,8-HxCDF	35.088	846371	0.55	1.0708	68.6	68.6	0.2302	0.2302	68.55	
1,2,3,6,7,8-HxCDF	35.097	57418	1.30	1.2178	5.571	5.571	0.1108	0.1108		
D 13C-2,3,4,6,7,8-HxCDF	35.905	728881	0.55	1.0413	60.7	60.7	0.2367	0.2367	60.71	
2,3,4,6,7,8-HxCDF	35.921	8036	1.39	1.2145	0.9078	0.9078	0.1107	0.1107		M
D 13C-1,2,3,7,8,9-HxCDF	36.797	675465	0.53	0.9731	60.2	60.2	0.2533	0.2533	60.20	
1,2,3,7,8,9-HxCDF	36.806	2933	1.24	1.2401	0.4120	0.3501	0.1075	0.1075		RQMa
A Non-2,3,7,8-sub-HxCDF	35.009	32682	1.24	1.2049	3.613	3.490	0.1077	1.457		RQMa
S Total HxCDF					32.6	32.4	0.1080	0.1080		RQ

Report Date: 23-Aug-2021 09:01:57 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.595	1152986	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.115	592281	1.23	0.7587	67.7	67.7	0.2082	0.2082	67.71	
1,2,3,4,7,8-HxCDD	36.140	2228	1.31	1.0608	0.3546	0.3546	0.0738	0.0738		Ma
D 13C-1,2,3,6,7,8-HxCDD	36.233	613431	1.30	0.8593	61.9	61.9	0.1839	0.1839	61.92	
1,2,3,6,7,8-HxCDD	36.224	2651	1.24	0.9933	0.4758	0.4351	0.0822	0.0822		RQM
1,2,3,7,8,9-HxCDD	36.612	6389	1.36	1.1094	0.9553	0.9553	0.0720	0.0720		
A Non-2,3,7,8-sub-HxCDD	35.375	83738	1.25	1.0545	13.2	13.2	0.0758	10.1		
S Total HxCDD					15.0	14.9	0.0760	0.0760		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.613	544789	0.47	0.7359	64.2	64.2	0.2110	0.2110	64.20	
1,2,3,4,6,7,8-HpCDF	38.621	53810	1.09	1.4421	6.849	6.849	0.0413	0.0413		M
D 13C-1,2,3,4,7,8,9-HpCDF	39.859	557609	0.46	0.6854	70.6	70.6	0.2265	0.2265	70.56	
1,2,3,4,7,8,9-HpCDF	39.859	15227	1.07	1.3092	2.086	2.086	0.0407	0.0407		
A Non-2,3,7,8-sub-HpCDF	39.245	11565	0.97	1.3756	1.525	1.525	0.0409	1.525		
S Total HpCDF					10.5	10.5	0.0410	0.0410		
D 13C-1,2,3,4,6,7,8-HpCDD	39.548	496782	1.11	0.6745	63.9	63.9	0.1278	0.1278	63.88	
1,2,3,4,6,7,8-HpCDD	39.565	87772	1.01	1.0503	16.8	16.8	0.1231	0.1231		
A Non-2,3,7,8-sub-HpCDD	39.241	204798	1.06	1.0503	39.3	39.3	0.1231	39.3		
S Total HpCDD					56.1	56.1	0.1231	0.1231		
D 13C-OCDD	42.053	780419	0.89	0.5446	124.3	124.3	0.1319	0.1319	62.14	
OCDF	42.145	22324	0.90	1.3168	4.345	4.345	0.0391	0.0391		M
OCDD	42.061	1778020	0.89	1.0620	429.1	429.1	0.3506	0.3506		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d
Lims ID: 320-76888-A-13-A
Client ID: 11215702-072621-BN-DUP-8
Sample Type: Client
Inject. Date: 19-Aug-2021 17:15:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-a-13-a RI
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:01:56 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 16:44:16

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.397	21.395	0		589950	77292	114	285	678		a
333.9338	21.379	21.395	-1		691540	85417	101	252	846	0.85(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.418	20.365	3	0.954	453533	64145	127	317	505		
317.9389	20.418	20.365	3	0.954	571742	83288	114	285	731	0.79(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.452	20.408	3	1.002	4205975	553803	276	690	2007		
305.8987	20.444	20.408	2	1.001	5545062	711828	539	1347	1321	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.437	19.851	-145	0.854	22868	4560	276	690	17		
305.8987	17.446	19.851	-144	0.854	30488	5011	539	1347	9	0.75(0.65-0.89)	
303.9016	17.901	19.851	-117	0.877	109338	17253	276	690	63		
305.8987	17.901	19.851	-117	0.877	140434	22049	539	1347	41	0.78(0.65-0.89)	
303.9016	18.399	19.851	-87	0.901	163988	20614	276	690	75		
305.8987	18.391	19.851	-87	0.901	212579	26826	539	1347	50	0.77(0.65-0.89)	
303.9016	18.829	19.851	-61	0.922	144028	18518	276	690	67		
305.8987	18.820	19.851	-62	0.922	181844	24563	539	1347	46	0.79(0.65-0.89)	
303.9016	19.207	19.851	-39	0.941	188265	25731	276	690	93		
305.8987	19.207	19.851	-39	0.941	237051	32265	539	1347	60	0.79(0.65-0.89)	
303.9016	19.714	19.851	-8	0.966	1915047	277892	276	690	1007		
305.8987	19.714	19.851	-8	0.966	2457332	355567	539	1347	660	0.78(0.65-0.89)	
303.9016	20.117	19.851	16	0.985	84263	10785	276	690	39		
305.8987	20.126	19.851	16	0.986	102187	13592	539	1347	25	0.82(0.65-0.89)	
303.9016	21.242	19.851	83	1.040	295273	38310	276	690	139		
305.8987	21.225	19.851	82	1.040	360418	46876	539	1347	87	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.654	19.851	108	1.061	60457	6989	276	690	25		
305.8987	21.671	19.851	109	1.061	70016	8608	539	1347	16	0.86(0.65-0.89)	
303.9016	23.638	19.851	227	1.158	285265	48916	276	690	177		
305.8987	23.638	19.851	227	1.158	361519	60544	539	1347	112	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.792	21.716	5	1.018	323001	43648	114	285	383		
333.9338	21.783	21.716	4	1.018	388464	53603	101	252	531	0.83(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	21.817	21.733	5	1.001	677021	88805	85	212	1045		
321.8936	21.817	21.733	5	1.001	862611	111616	64	160	1744	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.817	21.799	1	1.020	370884	47690	71	177	672		
A Non-2,3,7,8-sub-TCDD											
319.8965	21.637	20.684	57	0.993	7388	1323	85	212	16		
321.8936	21.628	20.684	57	0.993	9791	1869	64	160	29	0.75(0.65-0.89)	
319.8965	22.513	20.684	109	1.033	54761	6701	85	212	79		
321.8936	22.478	20.684	107	1.032	68775	8584	64	160	134	0.80(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.294	27.251	3	1.276	508442	76605	76	190	1008		
353.8970	27.302	27.251	3	1.276	328189	46857	82	205	571	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.319	27.276	3	1.001	97578	14043	81	202	173		M
341.8567	27.311	27.276	2	1.001	61492	9172	56	140	164	1.59(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.793	28.757	2	1.346	562720	77758	76	190	1023		
353.8970	28.810	28.757	3	1.346	355539	46780	82	205	570	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.819	28.791	2	1.001	94706	12860	81	202	159		
341.8567	28.819	28.791	2	1.001	59633	8575	56	140	153	1.59(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.084	24.634	-33	0.882	1288	300	1	2	300		
	Empc Correction				869	288	1	2	288		
341.8567	24.058	24.634	-34	0.881	561	186	3	7	62	2.30(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQMa
339.8597	25.821	28.173	-141	0.946	48456	7613	81	202	94		M
341.8567	25.829	28.173	-140	0.946	31379	4904	56	140	88	1.54(1.32-1.78)	
339.8597	27.176	28.173	-60	0.996	8559	2031	81	202	25		M
341.8567	27.151	28.173	-61	0.995	5368	1107	56	140	20	1.59(1.32-1.78)	
339.8597	27.909	28.173	-16	1.023	30359	4498	81	202	56		
341.8567	27.892	28.173	-17	1.022	18423	2828	56	140	51	1.65(1.32-1.78)	
339.8597	29.164	28.173	59	1.068	18811	2298	81	202	28		
	Empc Correction				14001	2089	81	202	26		
341.8567	29.147	28.173	58	1.068	9033	1348	56	140	24	2.08(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.618	29.574	3	1.384	334047	44172	46	115	960		
369.8919	29.618	29.574	3	1.384	214978	29720	29	72	1025	1.55(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											
355.8546	29.652	29.616	2	1.001	8495	1138	14	35	81		
357.8516	29.652	29.616	2	1.001	5876	862	13	32	66	1.45(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.124	28.478	-141	0.882	2609	432	14	35	31		
357.8516	26.141	28.478	-140	0.883	12058	1816	13	32	140	0.22(1.32-1.78)	
	Empc Correction				1683	278	13	32	21		
355.8546	26.932	28.478	-93	0.909	4238	703	14	35	50		
	Empc Correction				3623	534	14	35	38		
357.8516	26.915	28.478	-94	0.909	2338	345	13	32	27	1.81(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.928	34.906	1	0.954	293779	61056	98	245	623		
385.8610	34.928	34.906	1	0.954	563872	112506	156	390	721	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.953	34.922	2	1.001	121812	21978	38	95	578		
375.8178	34.945	34.922	1	1.000	95655	18360	44	110	417	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.088	35.066	1	0.959	300582	55014	98	245	561		
385.8610	35.088	35.066	1	0.959	545789	96902	156	390	621	0.55(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.097	35.082	1	1.000	32487	6100	38	95	161		
375.8178	35.097	35.082	1	1.000	24931	4379	44	110	100	1.30(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.905	35.890	1	0.981	257121	53258	98	245	543		
385.8610	35.905	35.890	1	0.981	471760	99211	156	390	636	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.921	35.907	1	1.000	4672	1115	38	95	29		
375.8178	35.913	35.907	0	1.000	3364	840	44	110	19	1.39(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.797	36.782	1	1.006	233977	50804	98	245	518		
385.8610	36.797	36.782	1	1.006	441488	102954	156	390	660	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQMa
373.8208	36.806	36.791	1	1.000	1624	409	38	95	11		M
375.8178	36.806	36.791	1	1.000	1827	459	44	110	10	0.89(1.05-1.43)	
	Empc Correction				1309	329	44	110	7		
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.471	35.009	-92	0.958	7125	1063	38	95	28		
375.8178	33.438	35.009	-94	0.957	6516	1060	44	110	24	1.09(1.05-1.43)	
373.8208	34.313	35.009	-42	0.982	3392	598	38	95	16		
	Empc Correction				2824	535	38	95	14		
375.8178	34.313	35.009	-42	0.982	2278	432	44	110	10	1.49(1.05-1.43)	
373.8208	35.804	35.009	48	1.025	2251	498	38	95	13		M
	Empc Correction				1667	420	38	95	11		
375.8178	35.804	35.009	48	1.025	1345	339	44	110	8	1.67(1.05-1.43)	
373.8208	36.915	35.009	114	1.057	6264	1381	38	95	36		M
375.8178	36.906	35.009	114	1.057	4663	1122	44	110	26	1.34(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.595	36.581	1		637717	143294	88	220	1628		
403.8529	36.595	36.581	1		515269	114321	75	187	1524	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.115	36.092	1	0.987	326727	74887	88	220	851		
403.8529	36.115	36.092	1	0.987	265554	59322	75	187	791	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											Ma
389.8158	36.140	36.109	2	1.001	1265	243	23	57	11		M
391.8127	36.166	36.109	3	1.001	963	181	19	47	10	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.233	36.210	1	0.990	347063	71665	88	220	814		
403.8529	36.233	36.210	1	0.990	266368	56871	75	187	758	1.30(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQM
389.8158	36.224	36.227	0	1.000	1468	303	23	57	13		M
391.8127	36.224	36.227	0	1.000	1431	315	19	47	17	1.03(1.05-1.43)	
	Empc Correction				1183	244	19	47	13		
1,2,3,7,8,9-HxCDD											
389.8158	36.612	36.597	1	1.014	3682	674	23	57	29		
391.8127	36.612	36.597	1	1.014	2707	502	19	47	26	1.36(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.237	35.375	-68	0.945	36181	6364	23	57	277		
391.8127	34.237	35.375	-68	0.945	28179	4558	19	47	240	1.28(1.05-1.43)	
389.8158	35.358	35.375	-1	0.976	10412	1912	23	57	83		
391.8127	35.358	35.375	-1	0.976	8966	1672	19	47	88	1.16(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.613	38.596	1	1.055	174291	41825	57	142	734		
419.8220	38.613	38.596	1	1.055	370498	92378	103	257	897	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7817	38.621	38.618	0	1.000	28077	7111	21	52	339		M
409.7788	38.613	38.618	0	1.000	25733	6487	11	27	590	1.09(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.859	39.850	1	1.089	176147	48680	57	142	854		
419.8220	39.851	39.850	0	1.089	381462	101289	103	257	983	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.859	39.872	-1	1.000	7855	2117	21	52	101		
409.7788	39.868	39.872	0	1.000	7372	2053	11	27	187	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.983	39.245	-16	1.010	5690	1539	21	52	73		
409.7788	38.992	39.245	-15	1.010	5875	1355	11	27	123	0.97(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.548	39.547	0	1.081	261614	71766	40	100	1794		
437.8140	39.548	39.547	0	1.081	235168	63570	49	122	1297	1.11(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.565	39.561	0	1.000	44072	12432	39	97	319		
425.7737	39.565	39.561	0	1.000	43700	11892	31	77	384	1.01(0.88-1.20)	

Report Date: 23-Aug-2021 09:01:57 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.925	39.241	-19	0.984	105331	28318	39	97	726		
425.7737	38.925	39.241	-19	0.984	99467	27033	31	77	872	1.06(0.88-1.20)	
13C-OCDD											
469.7780	42.053	42.036	1	1.149	367383	89052	32	80	2783		
471.7750	42.053	42.036	1	1.149	413036	93568	42	105	2228	0.89(0.76-1.02)	
OCDF											M
441.7428	42.145	42.137	1	1.002	10591	2201	5	12	440		
443.7399	42.145	42.137	1	1.002	11733	2642	14	35	189	0.90(0.76-1.02)	M
OCDD											
457.7377	42.061	42.053	0	1.000	839469	192297	61	152	3152		
459.7348	42.061	42.053	0	1.000	938551	215688	75	187	2876	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 23-Aug-2021 09:01:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Lims ID:	320-76888-A-13-A		
Client ID:	11215702-072621-BN-DUP-8		
Inject. Date:	19-Aug-2021 17:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	5

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1025275	147433

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1025275	147433

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.437	22868	4560	30488	5011	4.82	0.75	
17.901	109338	17253	140434	22049	22.6	0.78	
18.399	163988	20614	212579	26826	34.0	0.77	
18.829	144028	18518	181844	24563	29.4	0.79	
19.207	188265	25731	237051	32265	38.4	0.79	
19.714	1915047	277892	2457332	355567	394.8	0.78	
20.117	84263	10785	102187	13592	16.8	0.82	
21.242	295273	38310	360418	46876	59.2	0.82	
21.654	60457	6989	70016	8608	11.8	0.86	
23.638	285265	48916	361519	60544	58.4	0.79	
Signal Totals:							
	3268792	469568	4153868	595901			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7422660	1065469				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 670.221 = (7422660 * 100.000) / (1025275 * 1.080)

Report Date: 23-Aug-2021 09:01:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Lims ID:	320-76888-A-13-A		
Client ID:	11215702-072621-BN-DUP-8		
Inject. Date:	19-Aug-2021 17:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	5

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	711465	97251

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	711465	97251

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.637	7388	1323	9791	1869	2.25	0.75	
22.513	54761	6701	68775	8584	16.1	0.80	
Signal Totals:							
	62149	8024	78566	10453			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	140715	18477				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 18.392 = (140715 * 100.000) / (711465 * 1.075)

Report Date: 23-Aug-2021 09:01:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Lims ID:	320-76888-A-13-A		
Client ID:	11215702-072621-BN-DUP-8		
Inject. Date:	19-Aug-2021 17:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	5

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	836631	123462
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	918259	124538

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	877445	124000

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.084	1288	300	561	186	0.2044	2.30	RQ
24.084	869	288	561	186	0.1581		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Lims ID:	320-76888-A-13-A		
Client ID:	11215702-072621-BN-DUP-8		
Inject. Date:	19-Aug-2021 17:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	5

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	836631	123462
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	918259	124538

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	877445	124000

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.821	48456	7613	31379	4904	8.82	1.54	M
27.176	8559	2031	5368	1107	1.54	1.59	Ma
27.909	30359	4498	18423	2828	5.39	1.65	
29.164	18811	2298	9033	1348	3.08	2.08	RQ
29.164	14001	2089	9033	1348	2.55		Empc Correction
Signal Totals:							
	101375	16231	64203	10187			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	170388	26627				1.65	RQMa
	165578	26418					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 18.834 = (170388 * 100.000) / (877445 * 1.031)

Empc Amount: 18.302 = (165578 * 100.000) / (877445 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 23-Aug-2021 09:01:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Lims ID:	320-76888-A-13-A		
Client ID:	11215702-072621-BN-DUP-8		
Inject. Date:	19-Aug-2021 17:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	5

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	549025	73892

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	549025	73892

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.124	2609	432	12058	1816	2.55	0.22	RQ
26.124	2609	432	1683	278	0.7470		Empc Correction
26.932	4238	703	2338	345	1.14	1.81	RQ
26.932	3623	534	2338	345	1.04		Empc Correction
Signal Totals:							
	6232	966	4021	623			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	21243	3296				0.48	RQ
	10253	1589					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.697 = (21243 * 100.000) / (549025 * 1.046)
Empc Amount: 1.785 = (10253 * 100.000) / (549025 * 1.046)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 23-Aug-2021 09:01:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Lims ID:	320-76888-A-13-A		
Client ID:	11215702-072621-BN-DUP-8		
Inject. Date:	19-Aug-2021 17:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	5

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	857651	173562
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	846371	151916
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	728881	152469
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	675465	153758

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	777092	157926

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.471	7125	1063	6516	1060	1.46	1.09	
34.313	3392	598	2278	432	0.6055	1.49	RQ
34.313	2824	535	2278	432	0.5449		Empc Correction
35.804	2251	498	1345	339	0.3840	1.67	RQMa
35.804	1667	420	1345	339	0.3217		Empc Correction
36.915	6264	1381	4663	1122	1.17	1.34	Ma
Signal Totals:							
	17880	3399	14802	2953			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	33834	6493				1.29	RQMa
	32682	6352					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.613 = (33834 * 100.000) / (777092 * 1.205)

Empc Amount: 3.490 = (32682 * 100.000) / (777092 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 23-Aug-2021 09:01:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Lims ID:	320-76888-A-13-A		
Client ID:	11215702-072621-BN-DUP-8		
Inject. Date:	19-Aug-2021 17:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	5

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	592281	134209
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	613431	128536
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	602856	131372

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.237	36181	6364	28179	4558	10.1	1.28	
35.358	10412	1912	8966	1672	3.05	1.16	
Signal Totals:							
	46593	8276	37145	6230			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	83738	14506				1.25	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.172 = (83738 * 100.000) / (602856 * 1.055)

Report Date: 23-Aug-2021 09:01:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Lims ID:	320-76888-A-13-A		
Client ID:	11215702-072621-BN-DUP-8		
Inject. Date:	19-Aug-2021 17:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	5

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	544789	134203
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	557609	149969

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	551199	142086

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.983	5690	1539	5875	1355	1.53	0.97	
Signal Totals:							
	5690	1539	5875	1355			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11565	2894				0.97	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.525 = (11565 * 100.000) / (551199 * 1.376)

Report Date: 23-Aug-2021 09:01:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Lims ID:	320-76888-A-13-A		
Client ID:	11215702-072621-BN-DUP-8		
Inject. Date:	19-Aug-2021 17:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	5

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	496782	135336

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	496782	135336

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.925	105331	28318	99467	27033	39.3	1.06	
Signal Totals:							
	105331	28318	99467	27033			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	204798	55351				1.06	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 39.251 = (204798 * 100.000) / (496782 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.32
Area: 98145
Amount: 18.394632
Amount Units: pg/ul

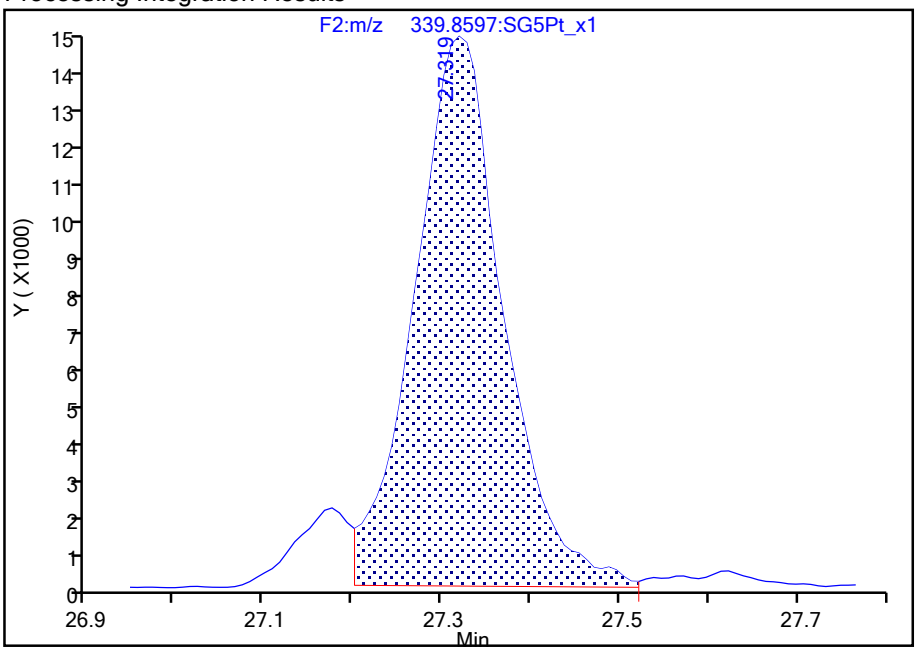

Manual Integration Results

RT: 27.32
Area: 97578
Amount: 18.034554
Amount Units: pg/ul

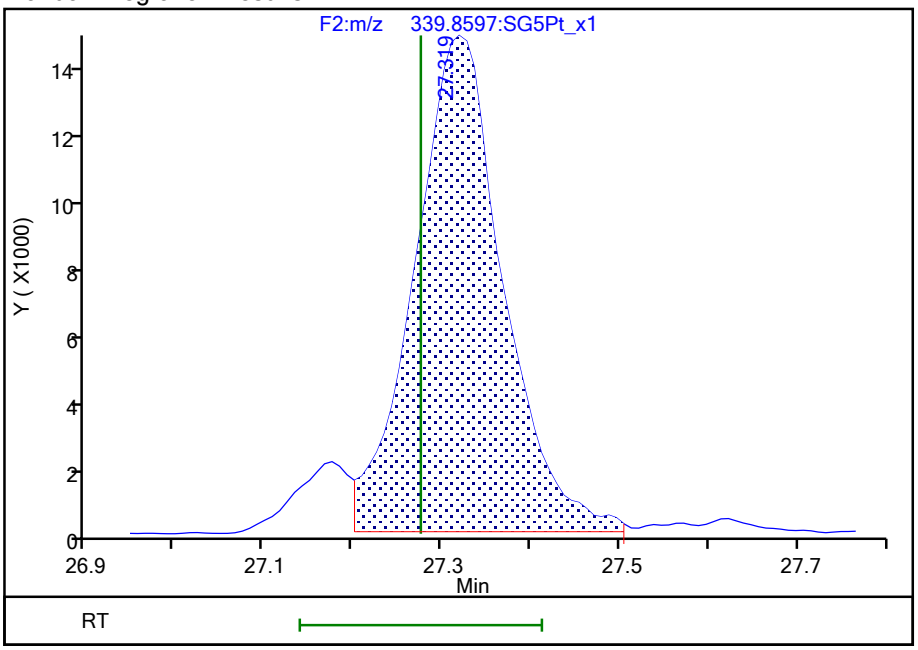

Reviewer: dadunj, 23-Aug-2021 08:57:09

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.31
Area: 64101
Amount: 18.394632
Amount Units: pg/ul

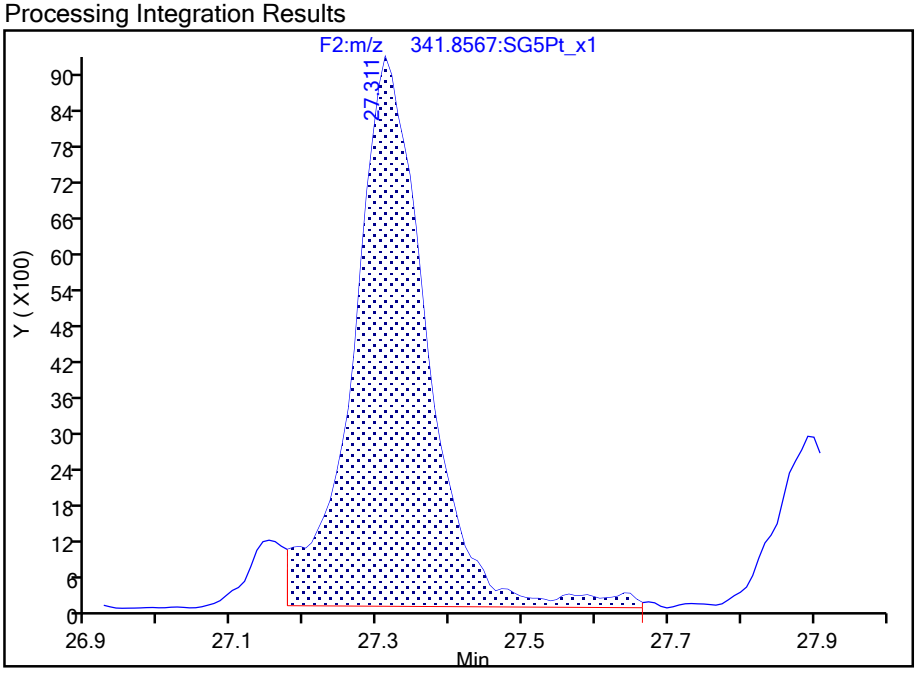

Manual Integration Results

RT: 27.31
Area: 61492
Amount: 18.034554
Amount Units: pg/ul

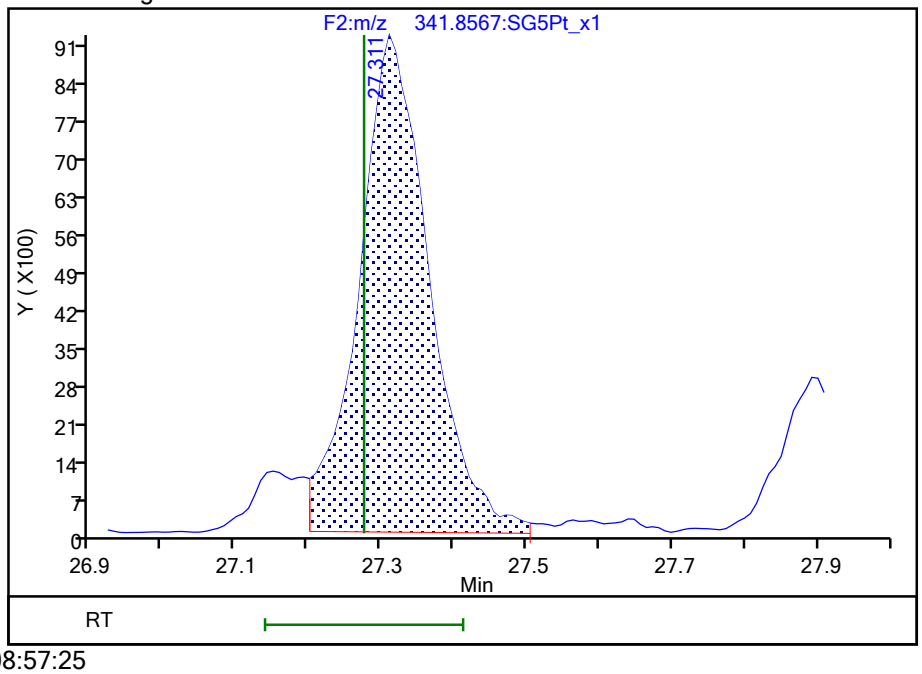

Reviewer: dadunj, 23-Aug-2021 08:57:25

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 23-Aug-2021 09:01:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Processing Integration Results

RT = 25.821 Area = 49819

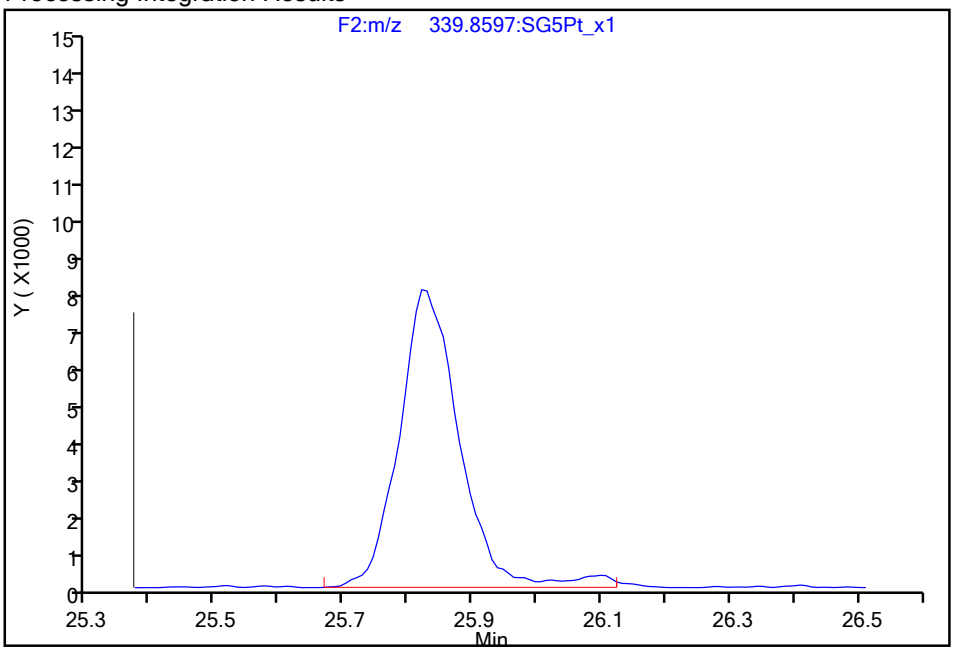

Manual Integration Results

RT = 25.821 Area = 48456 M

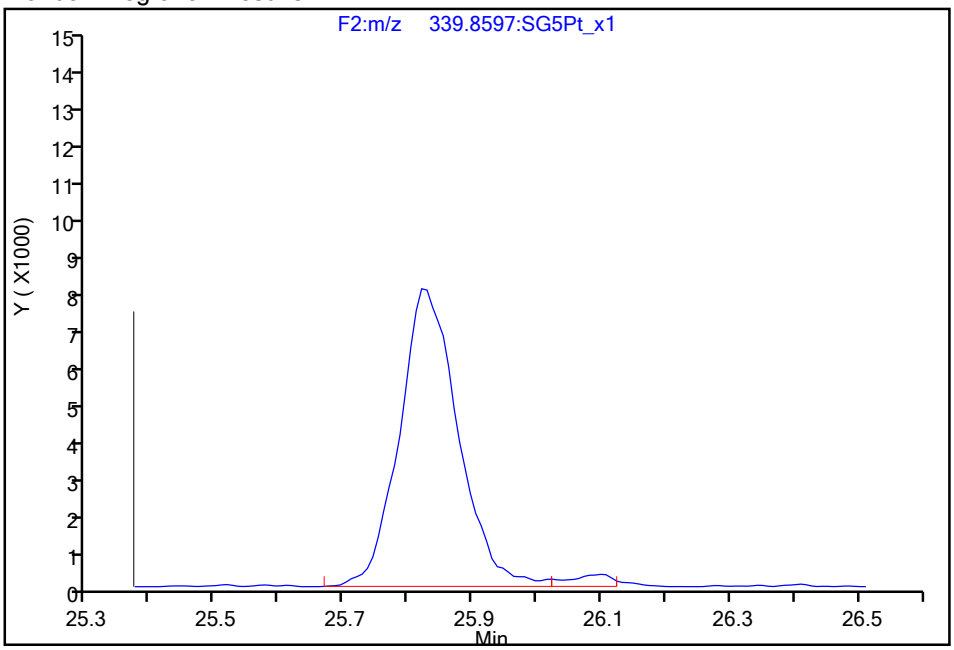

Reviewer: dadunj, 23-Aug-2021 08:58:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Processing Integration Results

RT = 27.176 Area = 8559

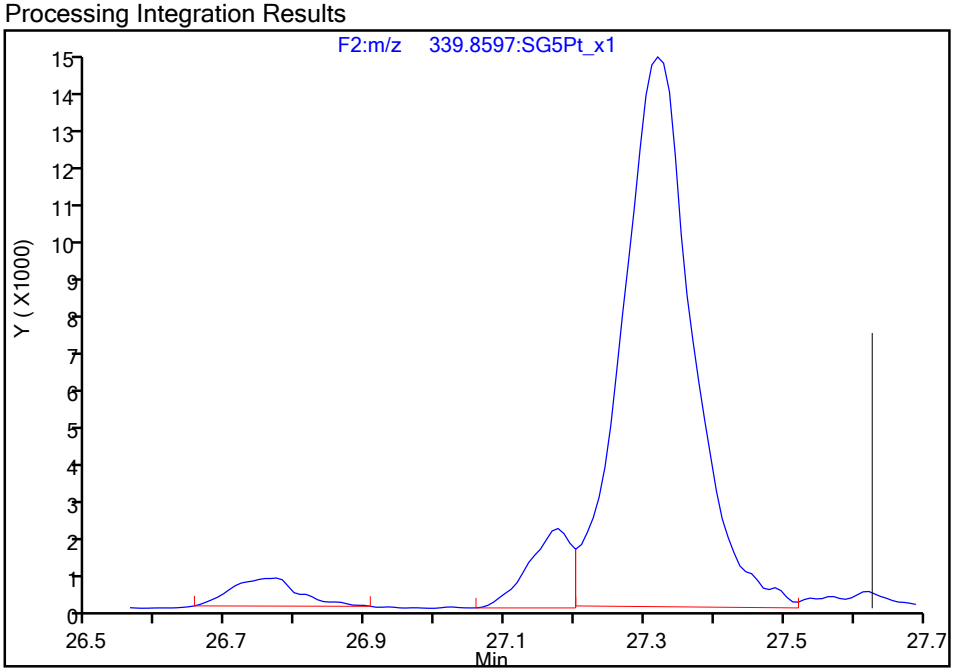

Manual Integration Results

RT = 27.176 Area = 8559

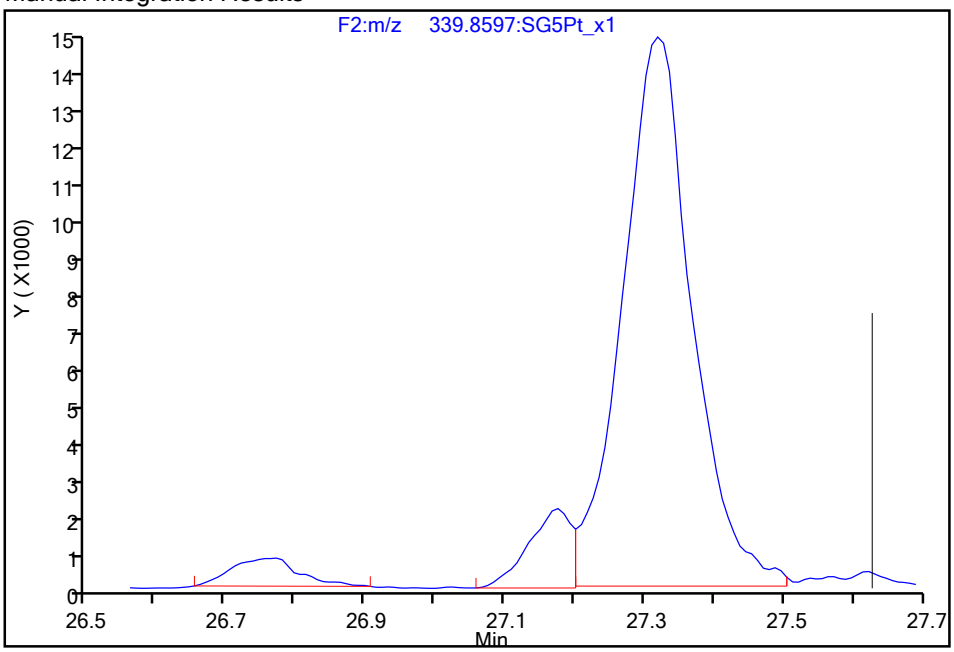

Reviewer: dadunj, 23-Aug-2021 08:58:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 35.91
Area: 4710
Amount: 1.059869
Amount Units: pg/ul

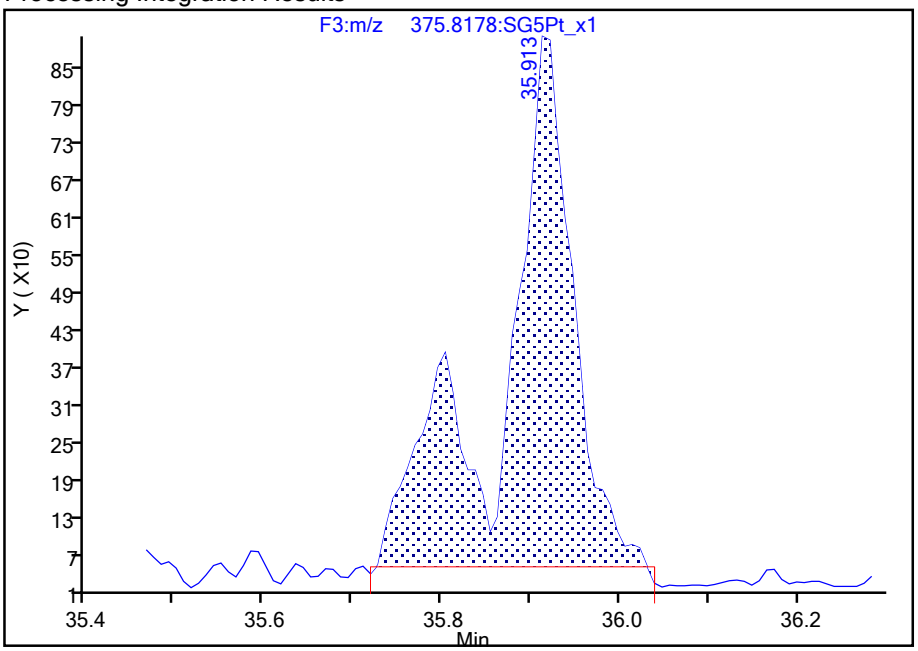

Manual Integration Results

RT: 35.91
Area: 3364
Amount: 0.907813
Amount Units: pg/ul

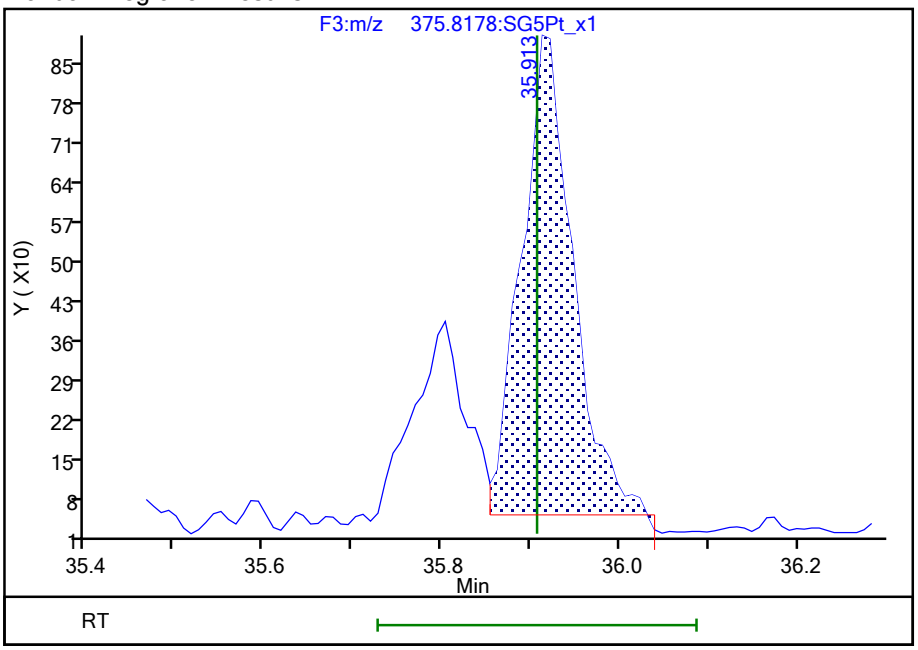

Reviewer: dadunj, 23-Aug-2021 09:00:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.91
Area: 6490
Amount: 1.522580
Amount Units: pg/ul

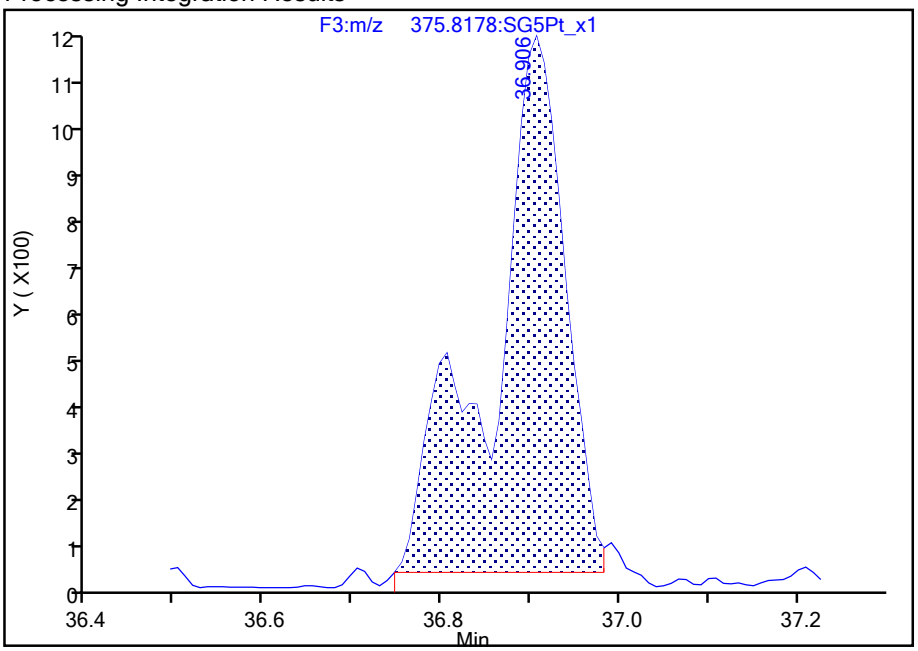

Manual Integration Results

RT: 36.81
Area: 1827
Amount: 0.411983
Amount Units: pg/ul

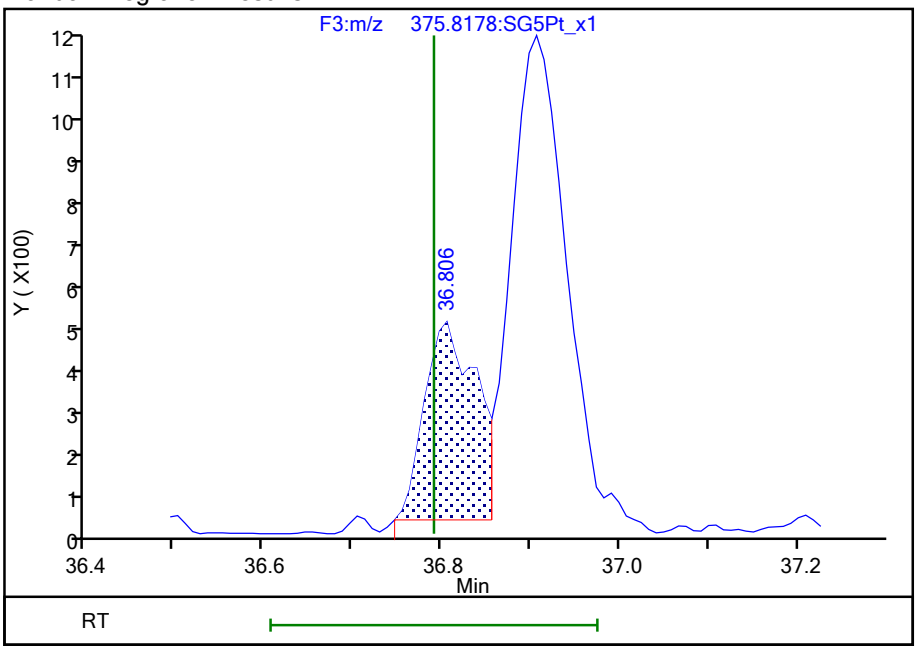

Reviewer: dadunj, 23-Aug-2021 09:00:13

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 3

RT: 36.91
Area: 12754
Amount: 1.522580
Amount Units: pg/ul

Processing Integration Results

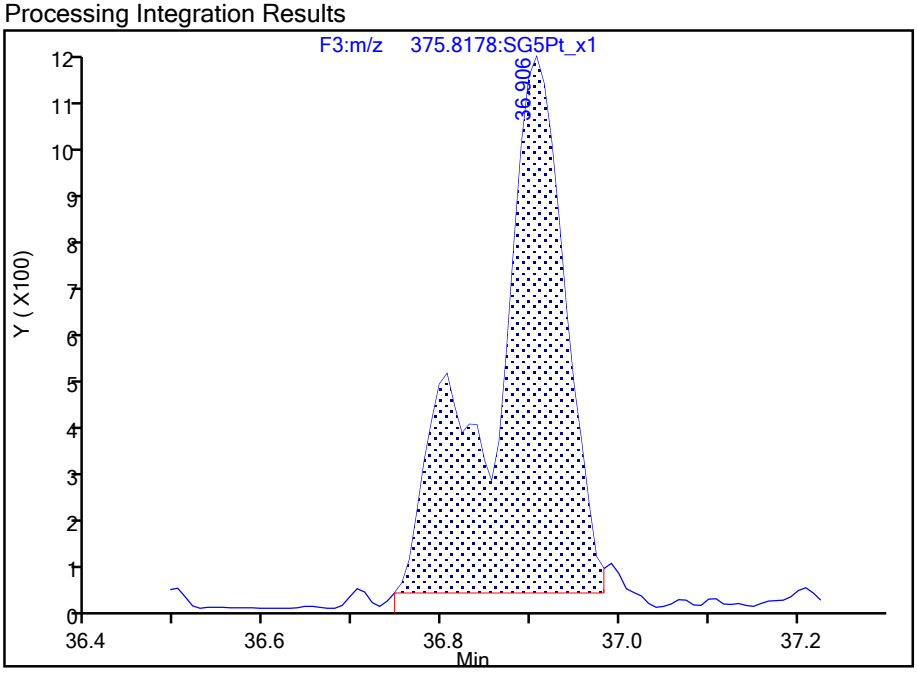

Manual Integration Results

RT: 36.81
Area: 3451
Amount: 0.411983
Amount Units: pg/ul
Reviewer: dadunj, 23-Aug-2021 09:00:13
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.91
Area: 6264
Amount: 1.522580
Amount Units: pg/ul

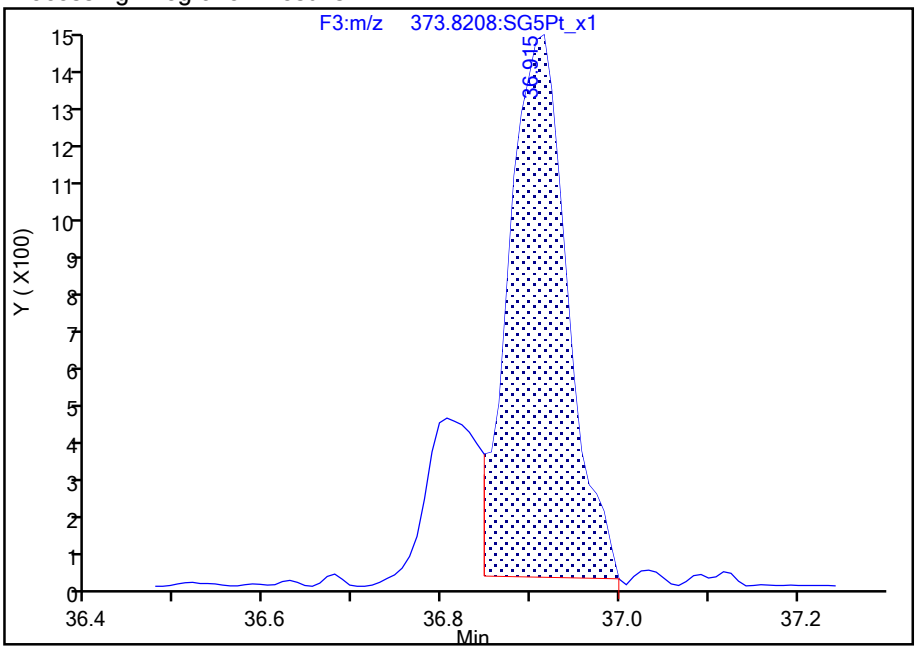

Manual Integration Results

RT: 36.81
Area: 1624
Amount: 0.411983
Amount Units: pg/ul

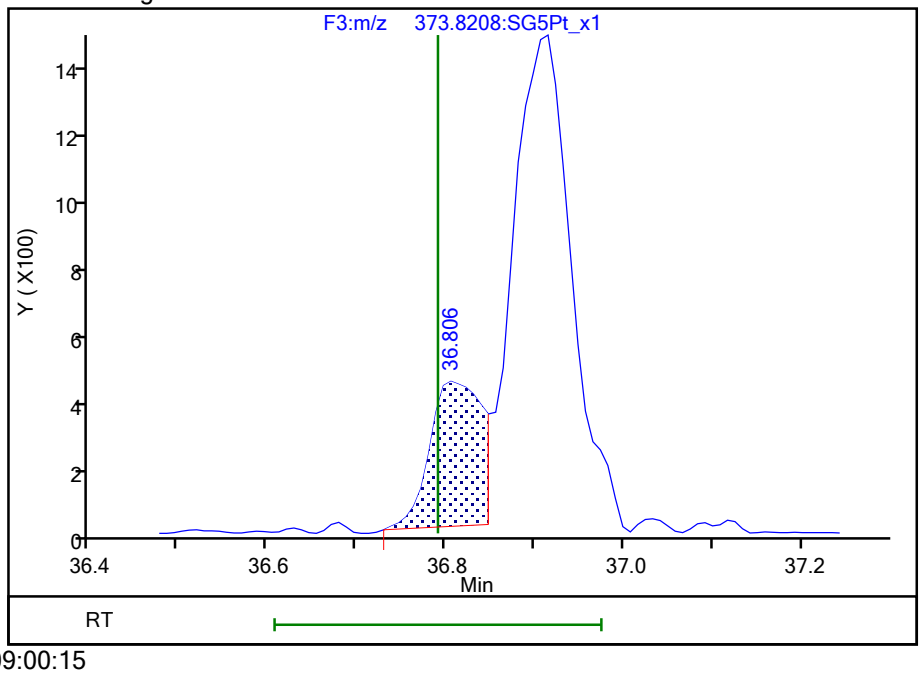

Reviewer: dadunj, 23-Aug-2021 09:00:15
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 35.804 Area = 2251

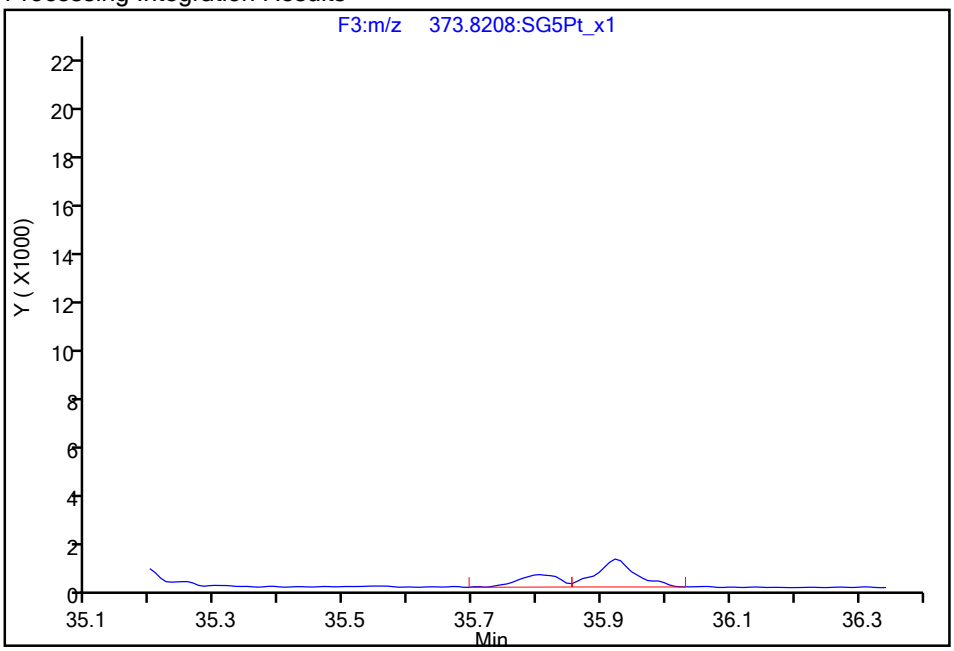

Manual Integration Results

RT = 35.804 Area = 2251

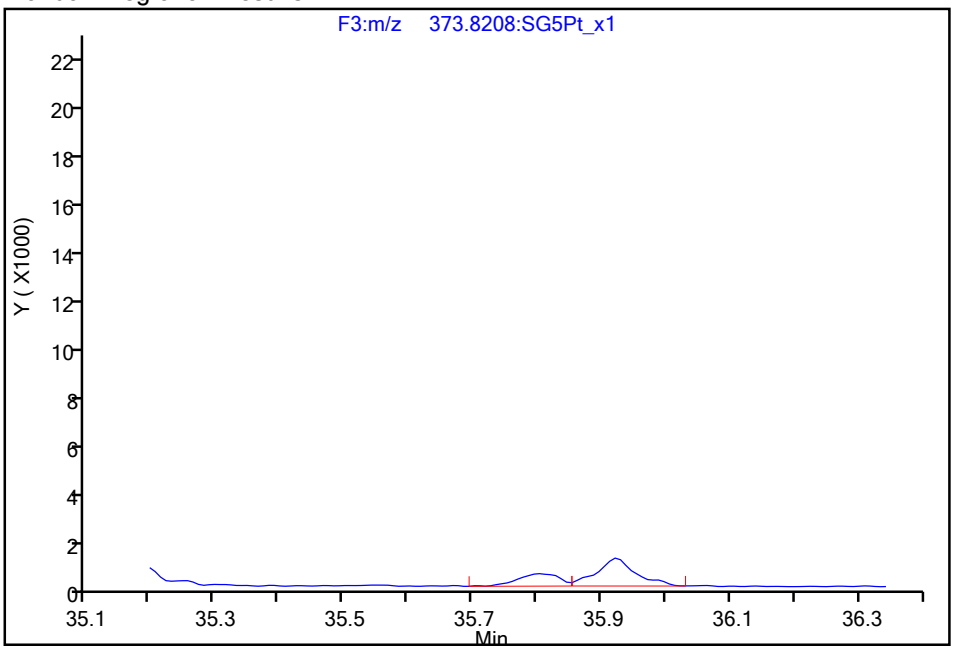

Reviewer: dadunj, 23-Aug-2021 09:00:24

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 36.915 Area = 6264

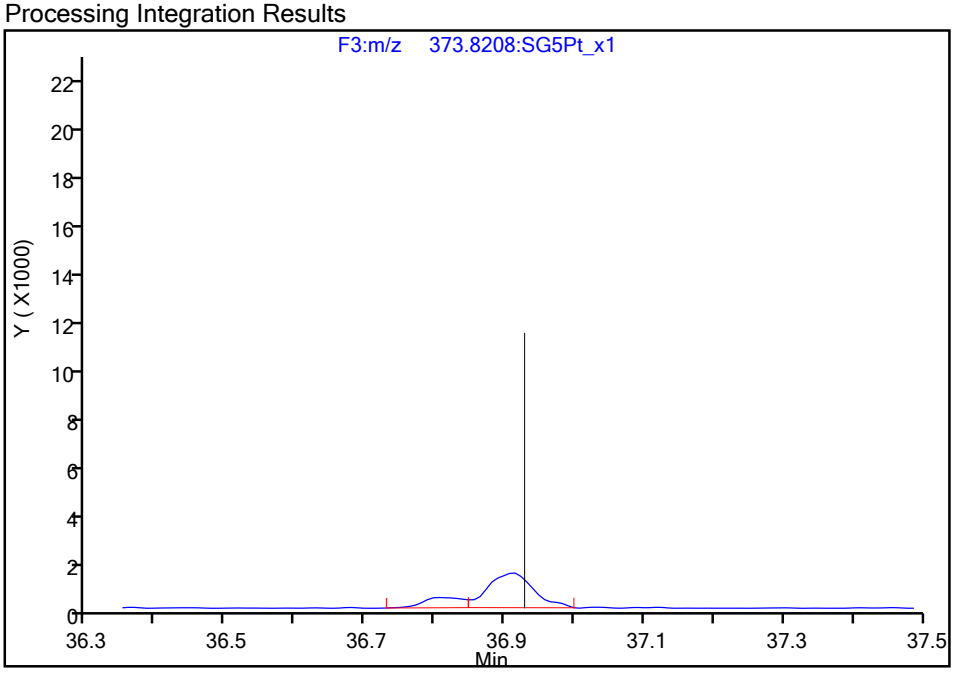

Manual Integration Results

RT = 36.915 Area = 6264

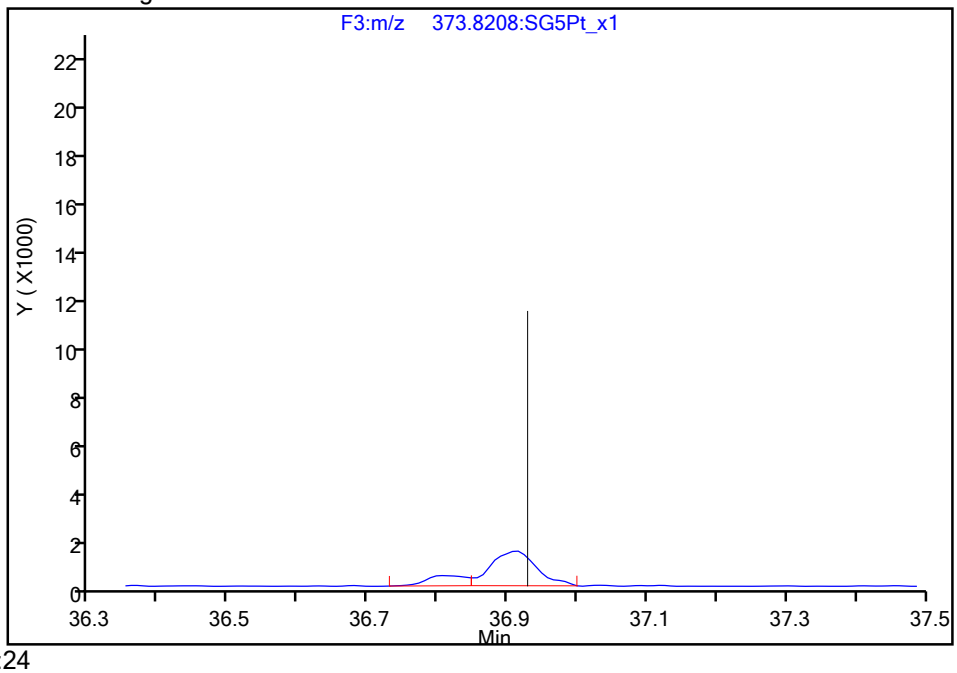

Reviewer: dadunj, 23-Aug-2021 09:00:24

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 36.22
Area: 1431
Amount: 0.661483
Amount Units: pg/ul

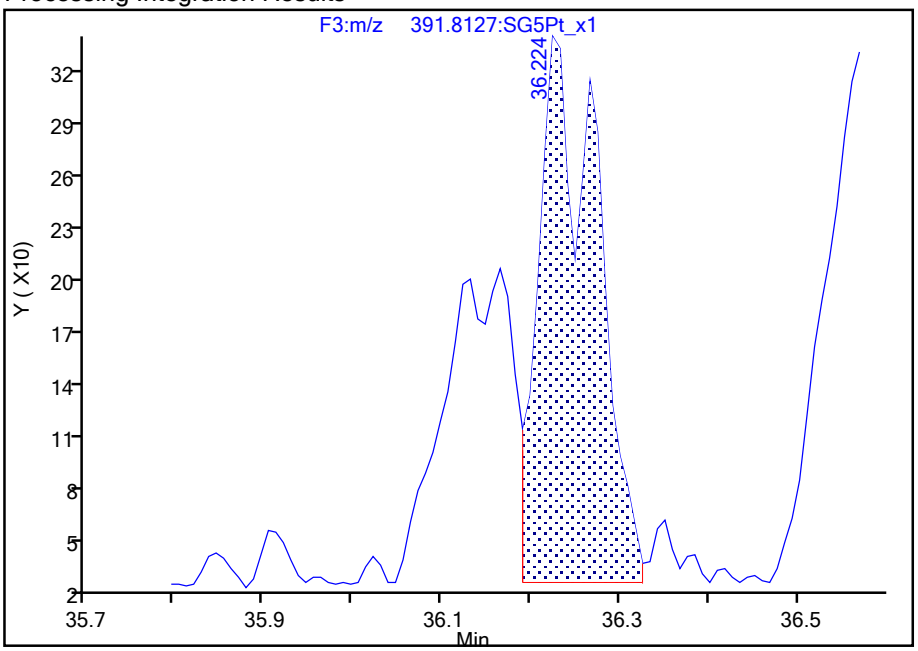

Manual Integration Results

RT: 36.17
Area: 963
Amount: 0.354616
Amount Units: pg/ul

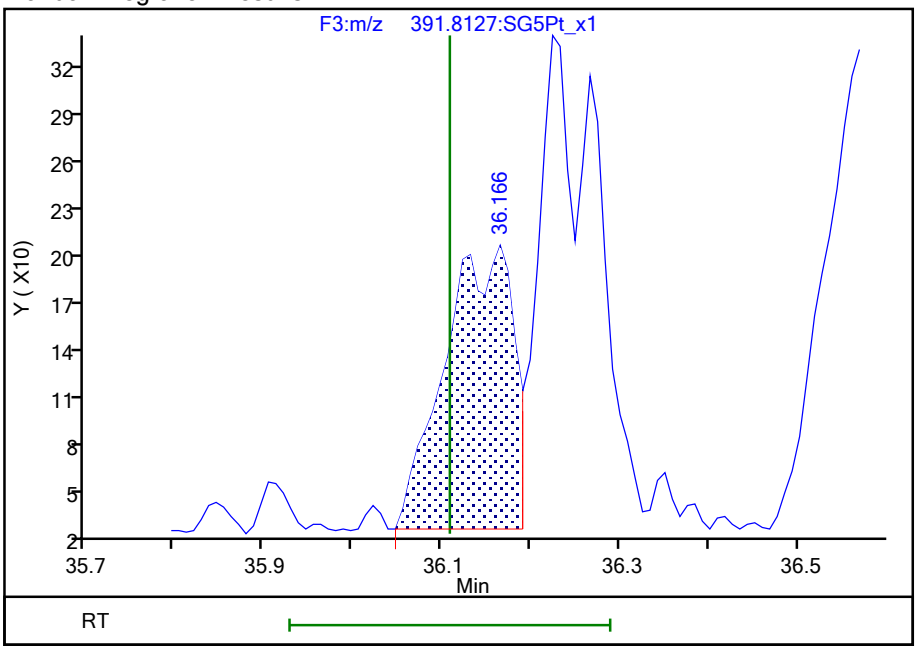

Reviewer: dadunj, 23-Aug-2021 09:00:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

Processing Integration Results

RT: 36.22
Area: 4156
Amount: 0.661483
Amount Units: pg/ul

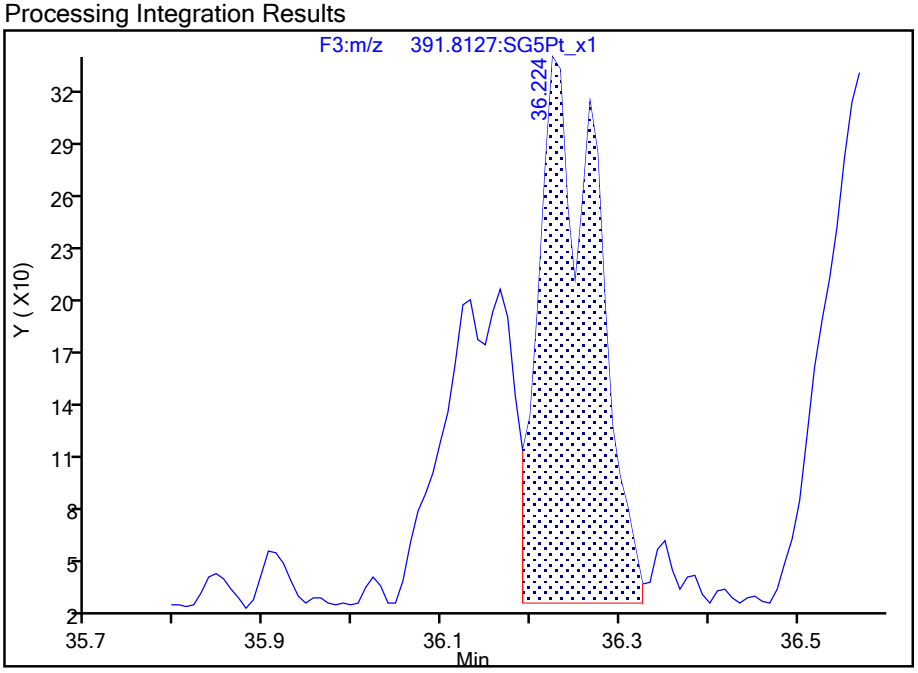

Manual Integration Results

RT: 36.14
Area: 2228
Amount: 0.354616
Amount Units: pg/ul
Reviewer: dadunj, 23-Aug-2021 09:00:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 36.22
Area: 2725
Amount: 0.661483
Amount Units: pg/ul

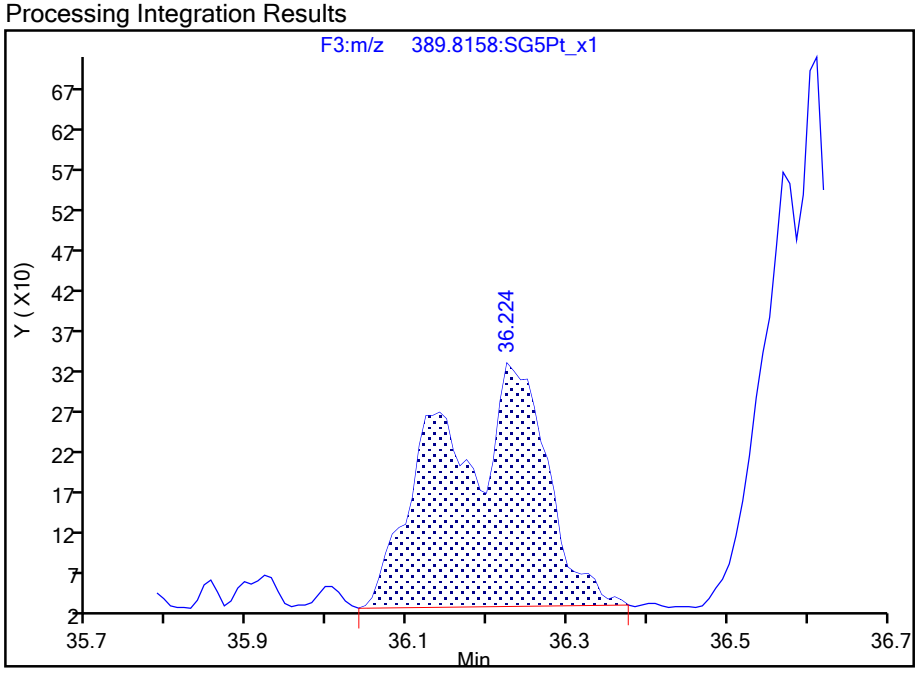

Manual Integration Results

RT: 36.14
Area: 1265
Amount: 0.354616
Amount Units: pg/ul

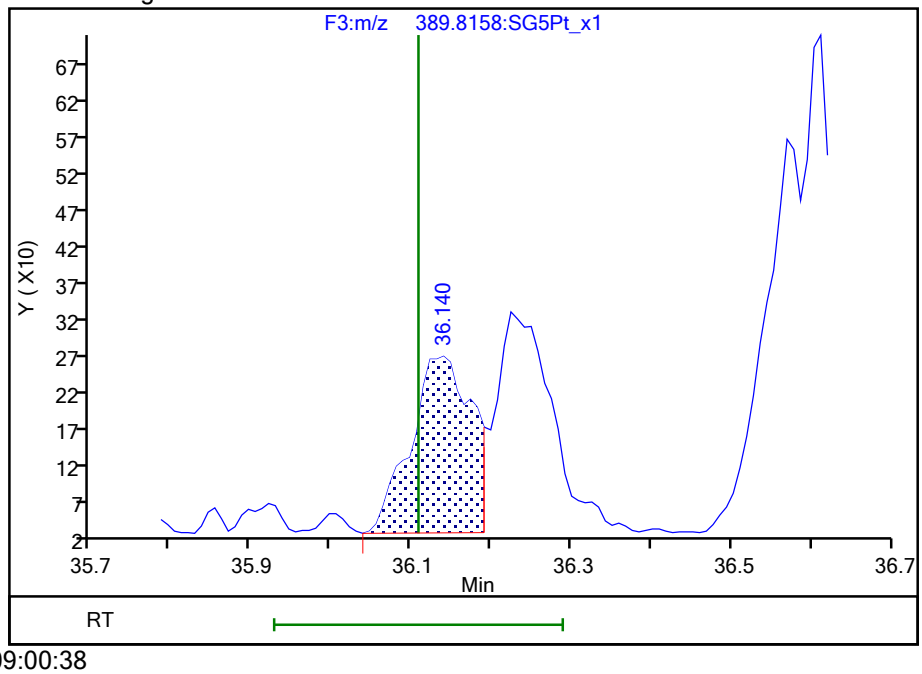

Reviewer: dadunj, 23-Aug-2021 09:00:38

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 36.22
Area: 2725
Amount: 0.682042
Amount Units: pg/ul

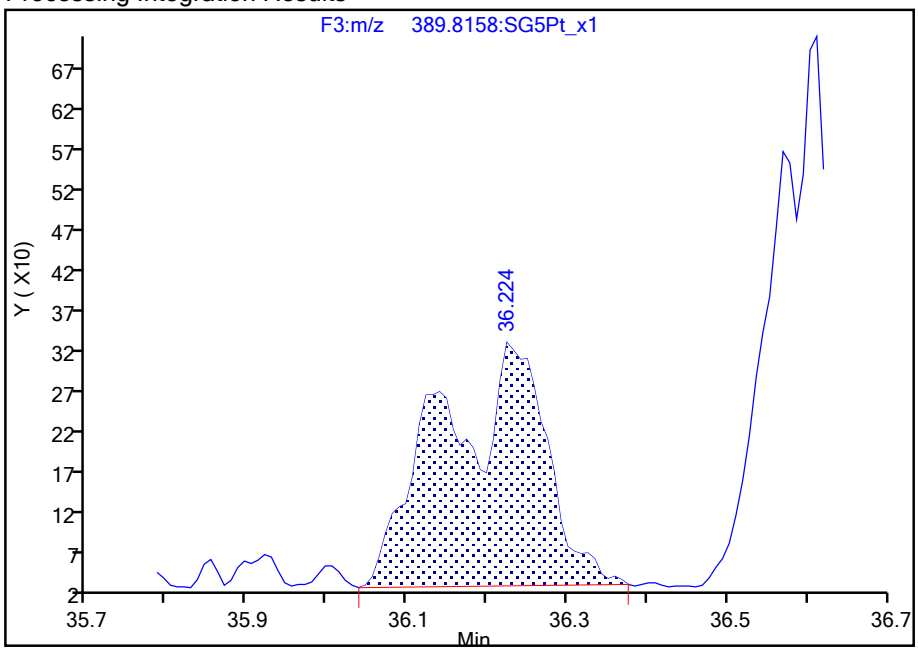

Manual Integration Results

RT: 36.22
Area: 1468
Amount: 0.475755
Amount Units: pg/ul

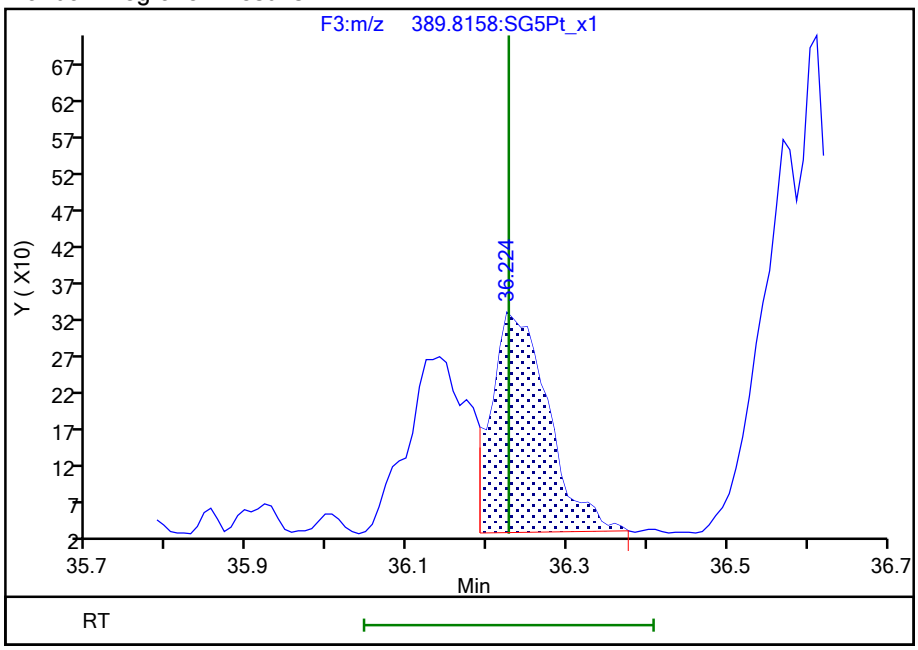

Reviewer: dadunj, 23-Aug-2021 09:00:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 38.62
Area: 28753
Amount: 6.968350
Amount Units: pg/ul

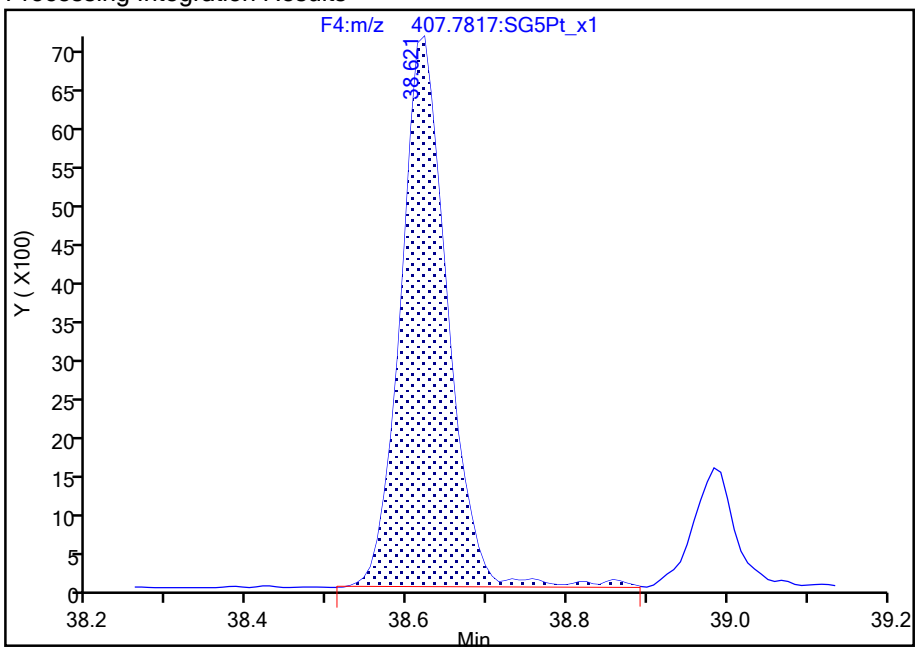

Manual Integration Results

RT: 38.62
Area: 28077
Amount: 6.849336
Amount Units: pg/ul

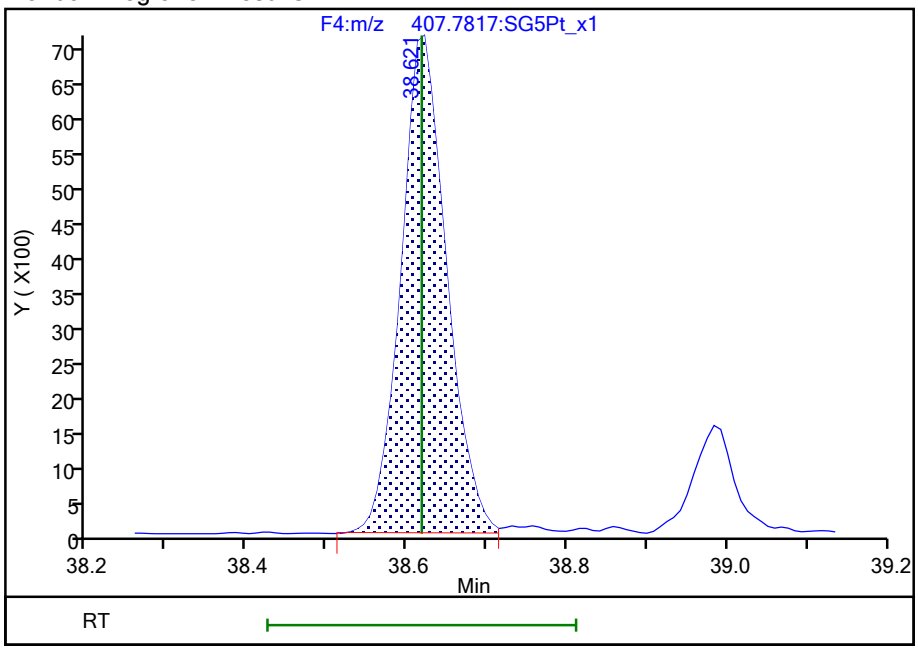

Reviewer: dadunj, 23-Aug-2021 09:00:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.61
Area: 25992
Amount: 6.968350
Amount Units: pg/ul

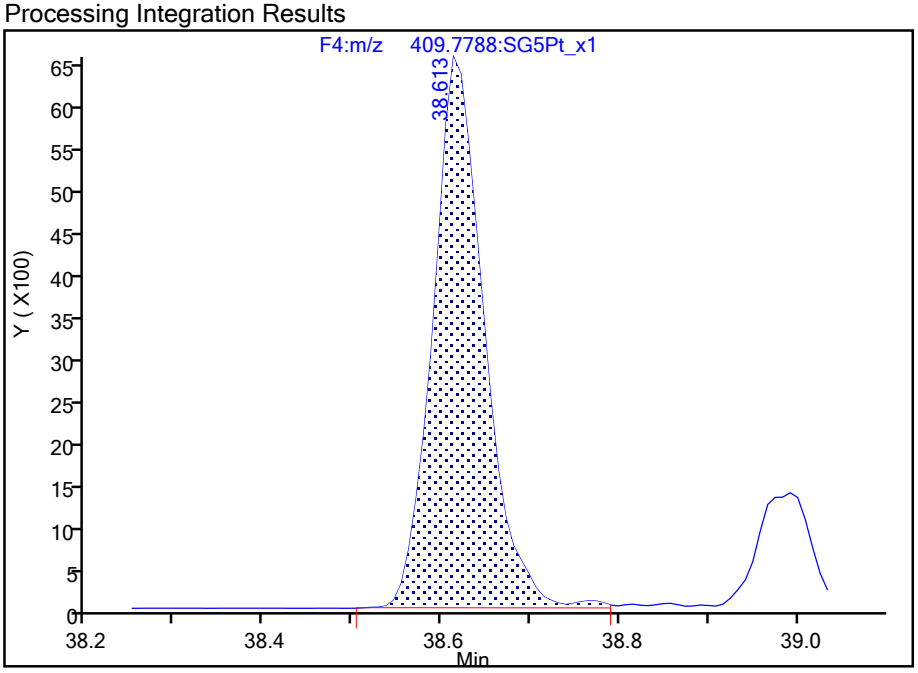

Manual Integration Results

RT: 38.61
Area: 25733
Amount: 6.849336
Amount Units: pg/ul

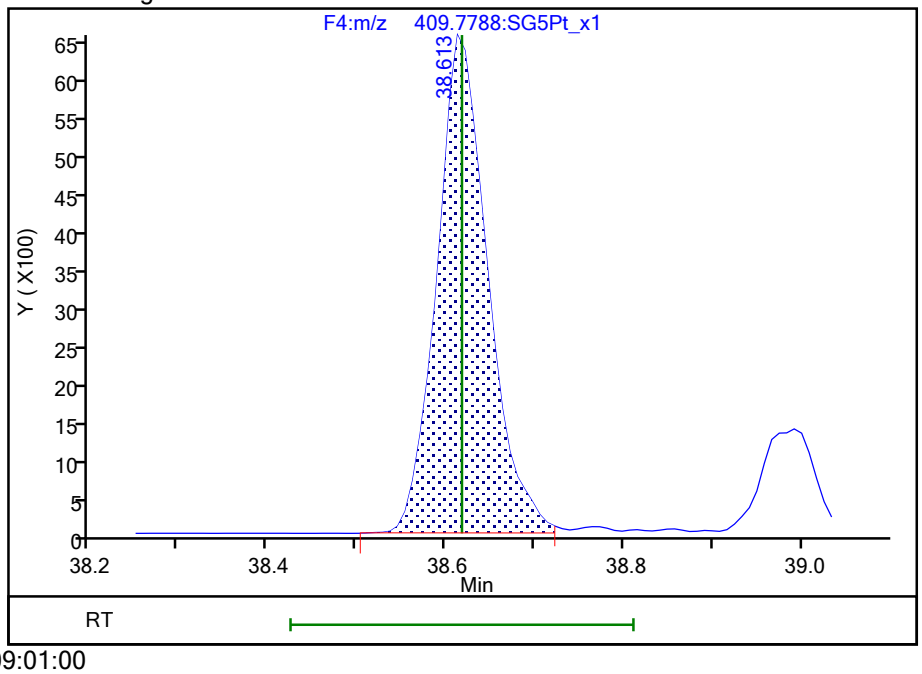

Reviewer: dadunj, 23-Aug-2021 09:01:00
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

785713

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d				
Injection Date:	19-Aug-2021 17:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-13-A	Lab Sample ID:	320-76888-13		
Client ID:	11215702-072621-BN-DUP-8				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 42.15
Area: 11876
Amount: 4.372488
Amount Units: pg/ul

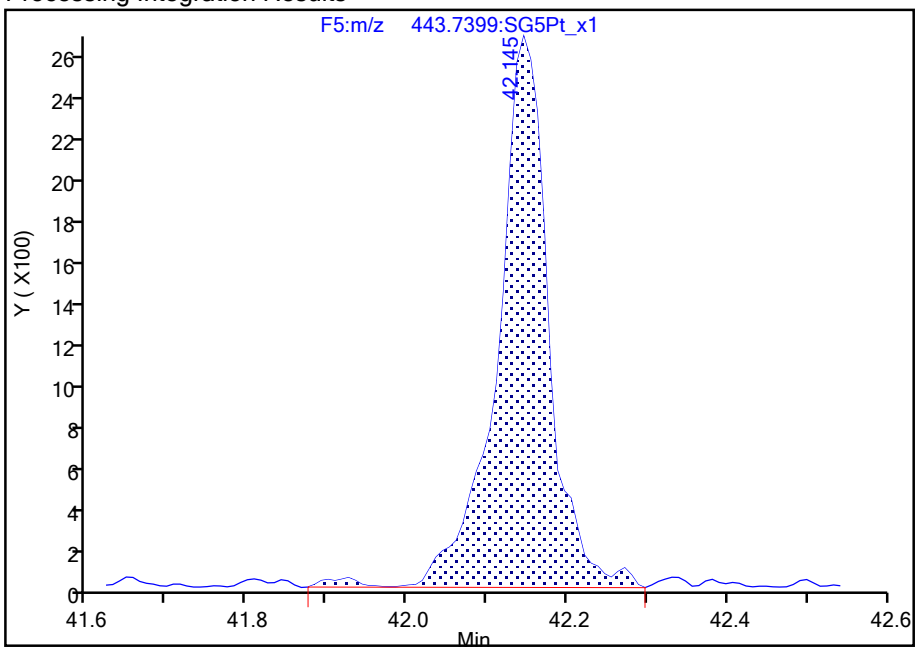

Manual Integration Results

RT: 42.15
Area: 11733
Amount: 4.344658
Amount Units: pg/ul

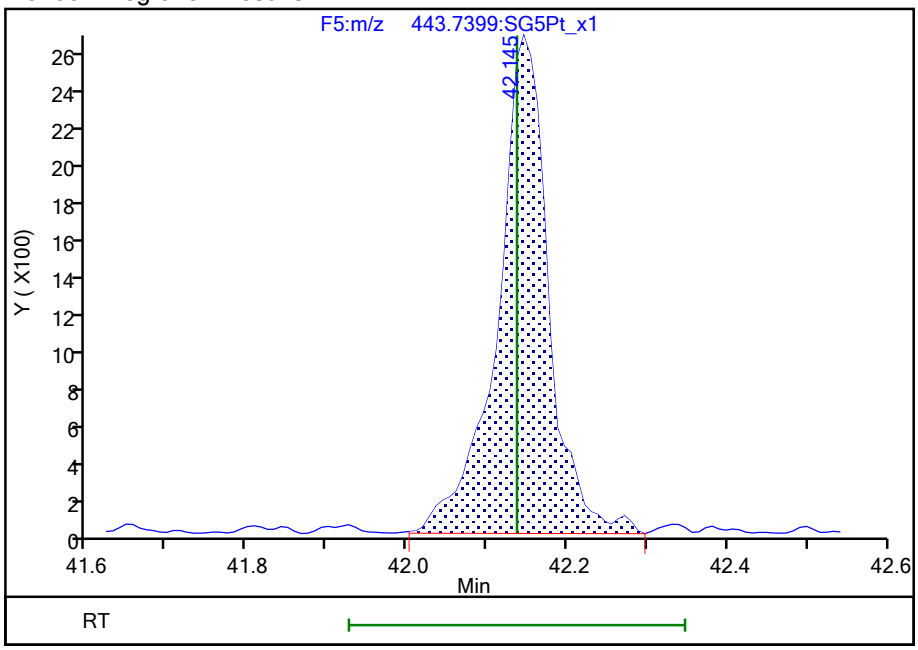

Reviewer: dadunj, 23-Aug-2021 09:01:17

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 23-Aug-2021 09:01:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

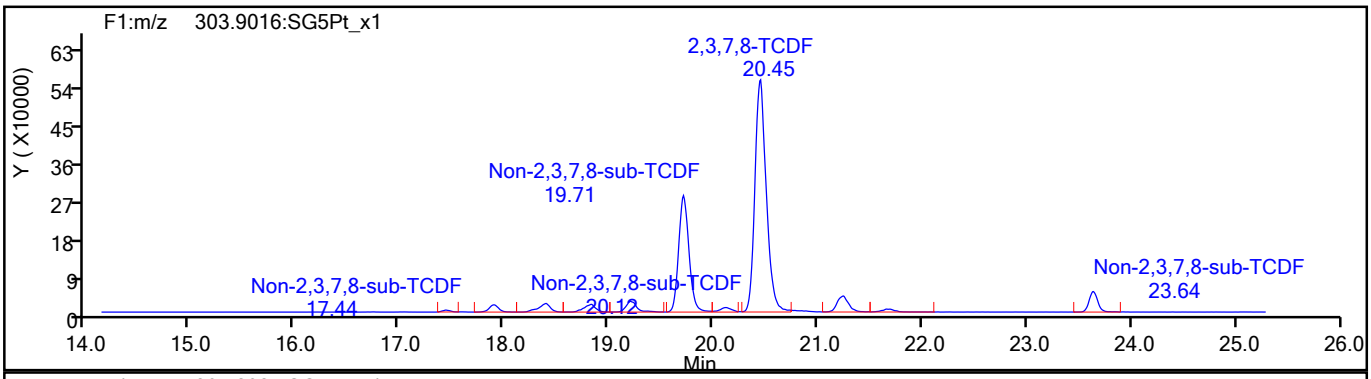

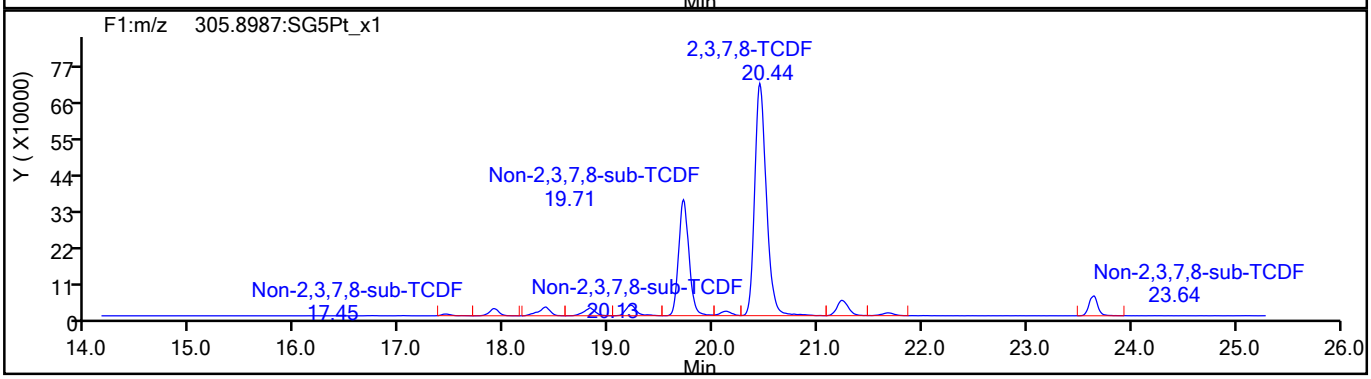

TCDF Standards

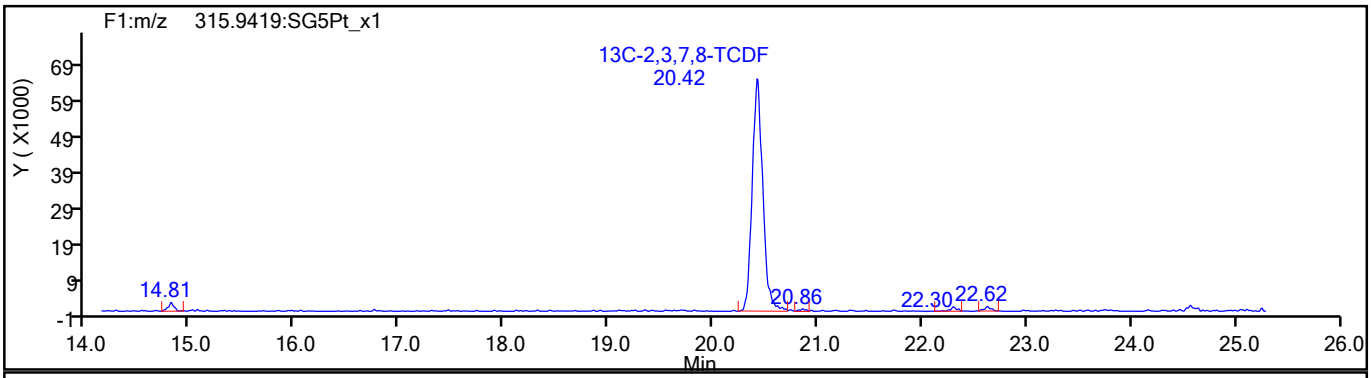

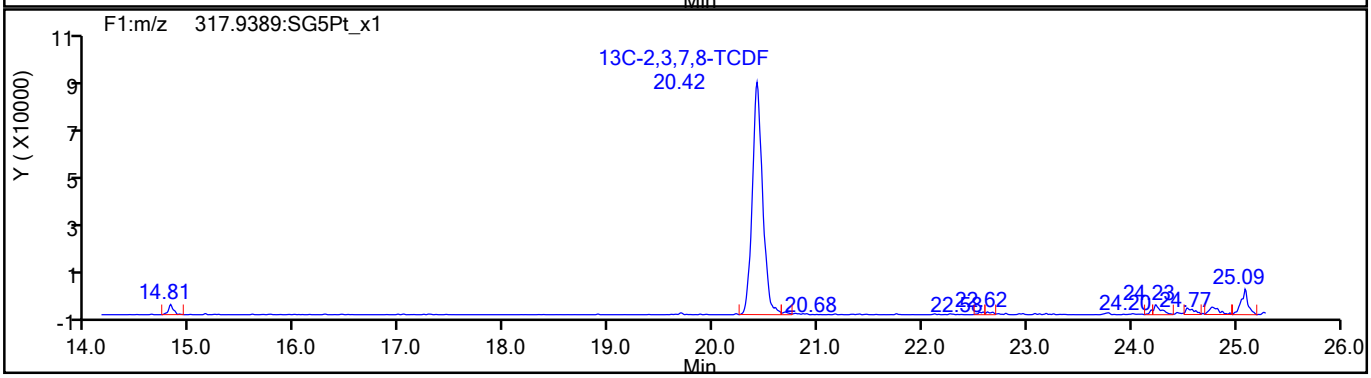

785715

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

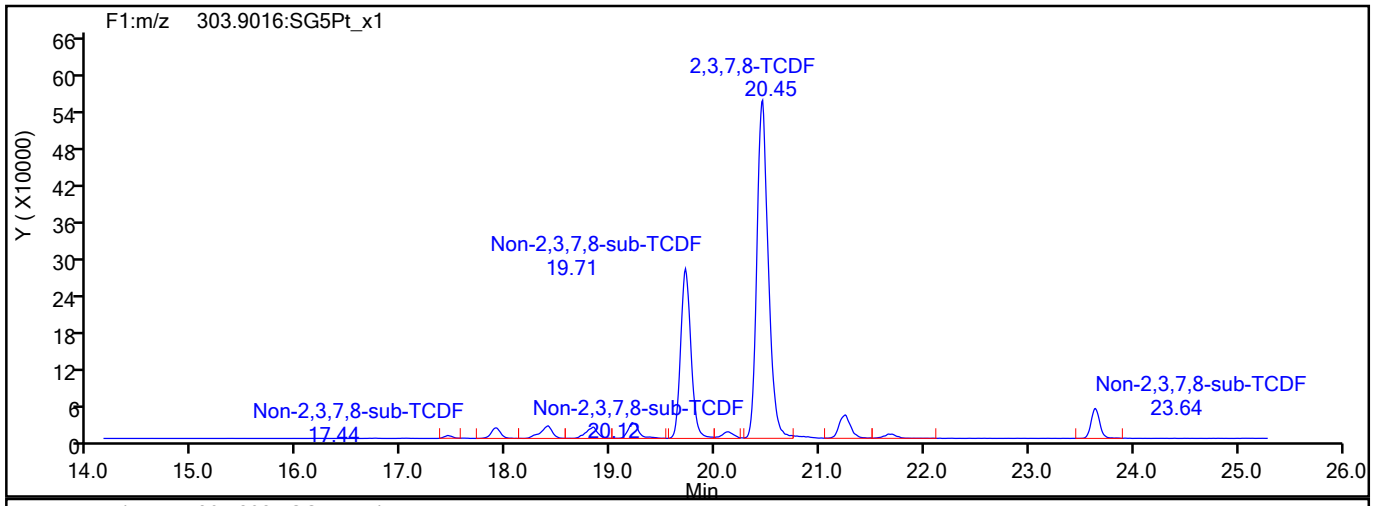

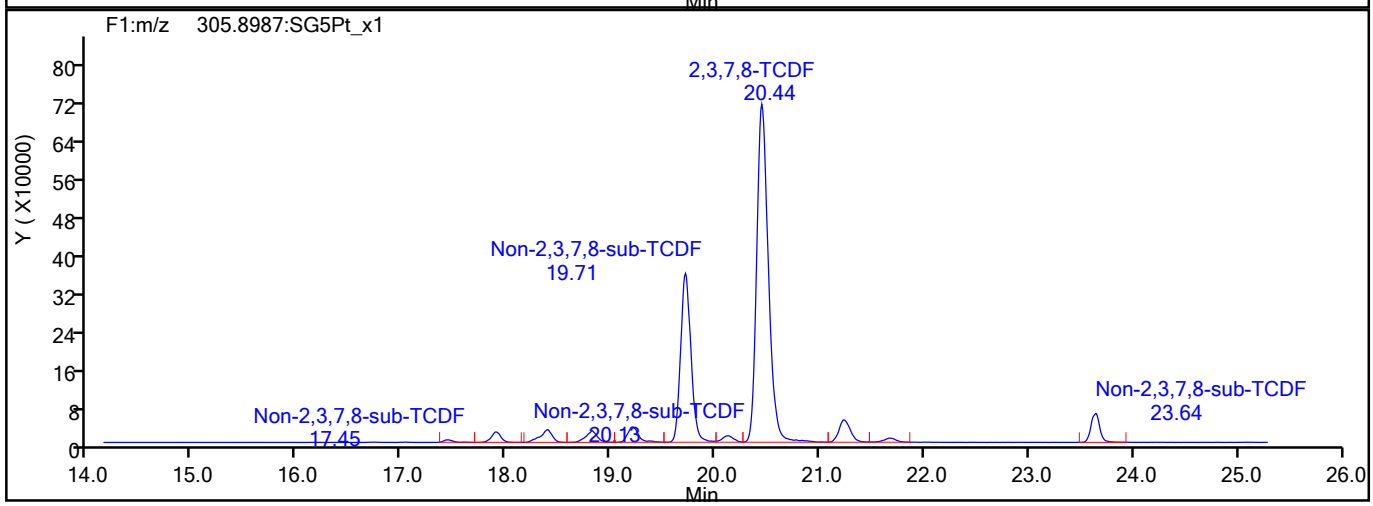

TCDF Interference Mass

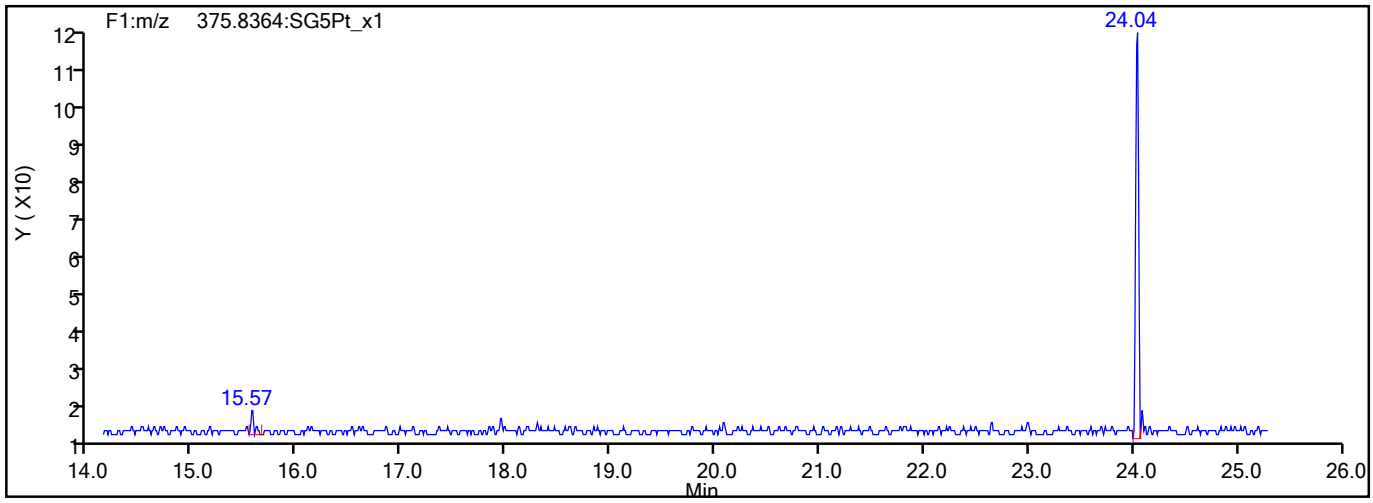

785716

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

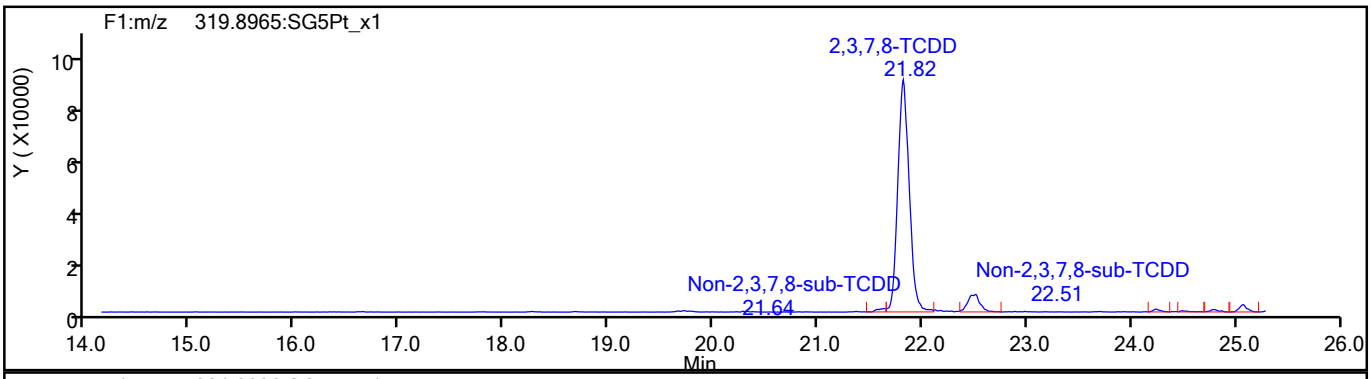

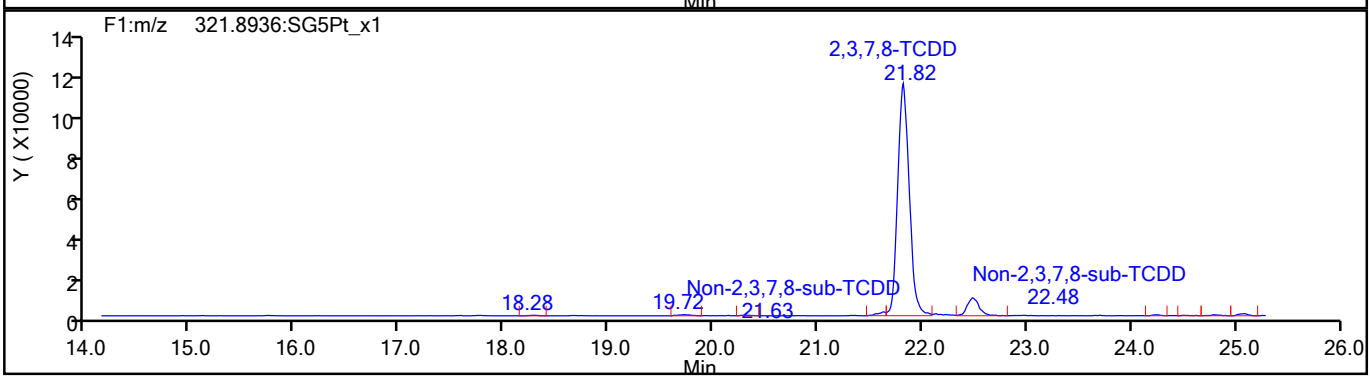

TCDD Standards

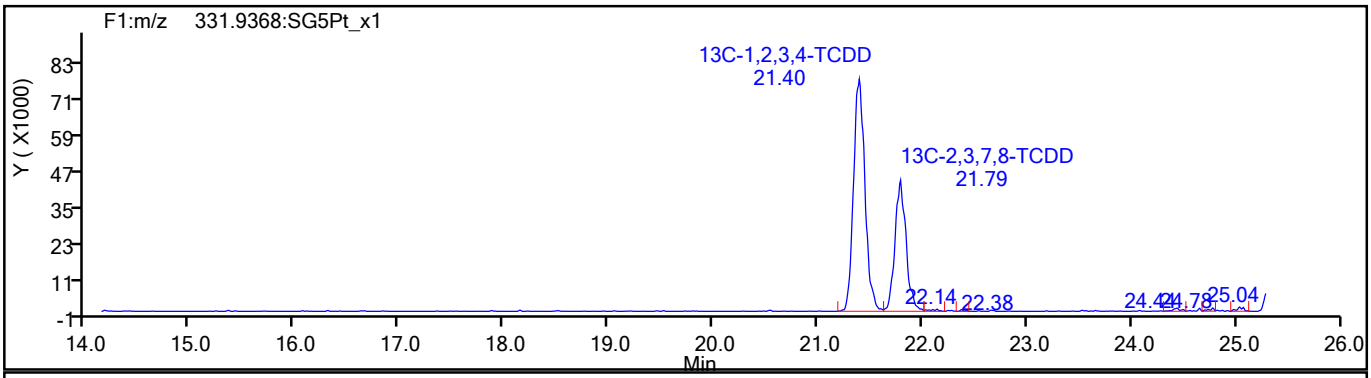

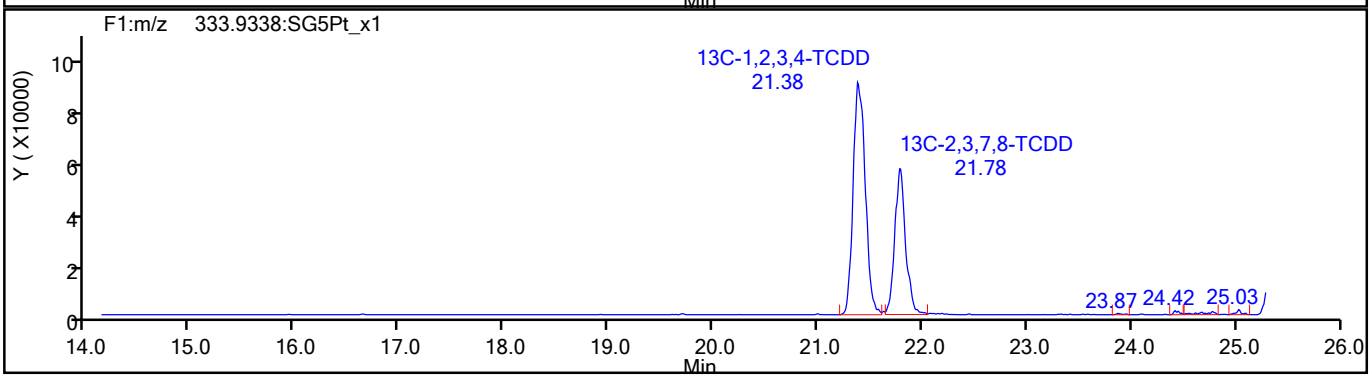

785717

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

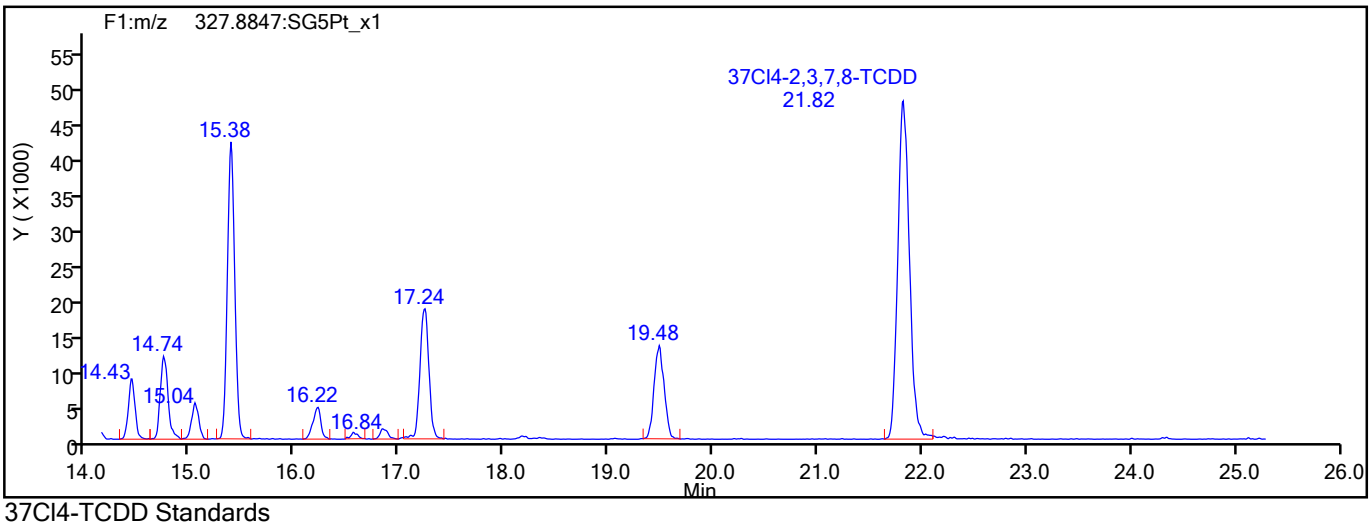

37Cl4-TCDD Standards

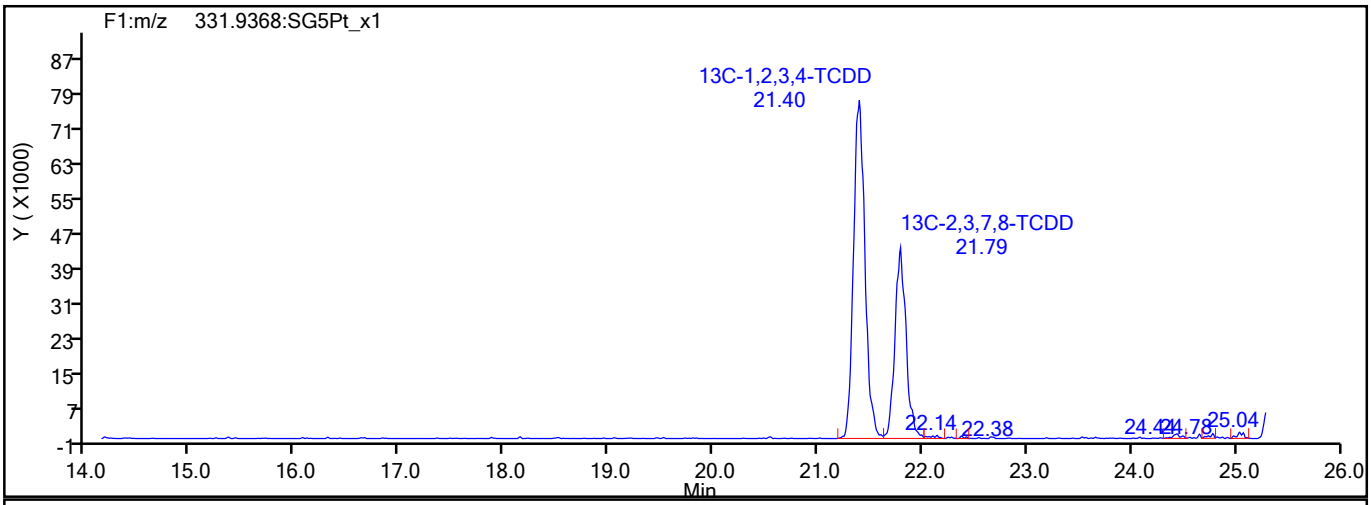

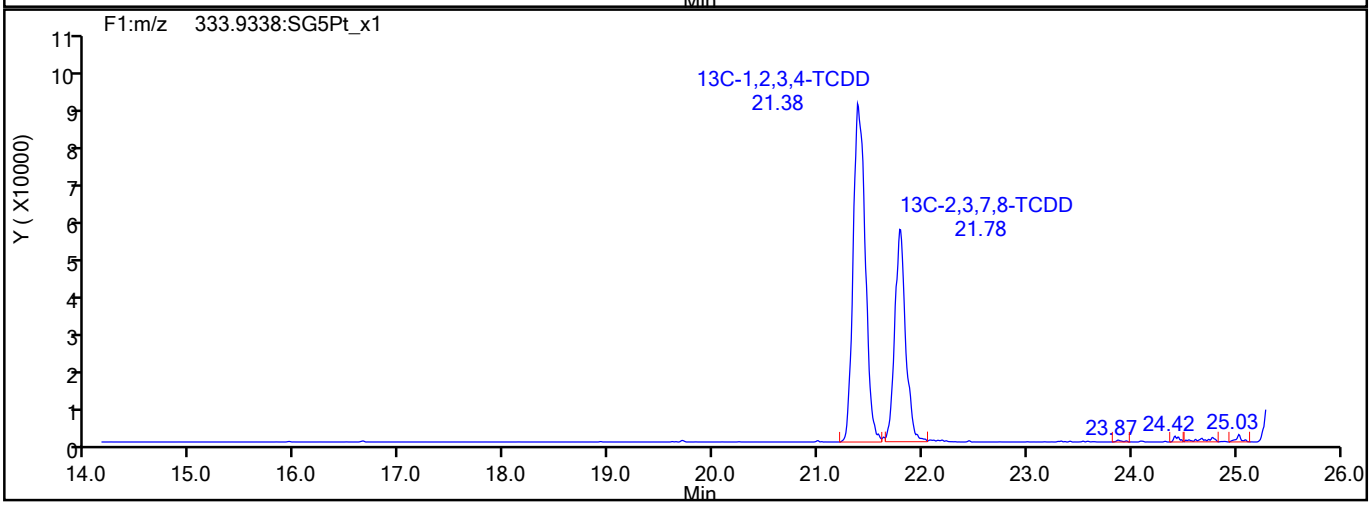

785718

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

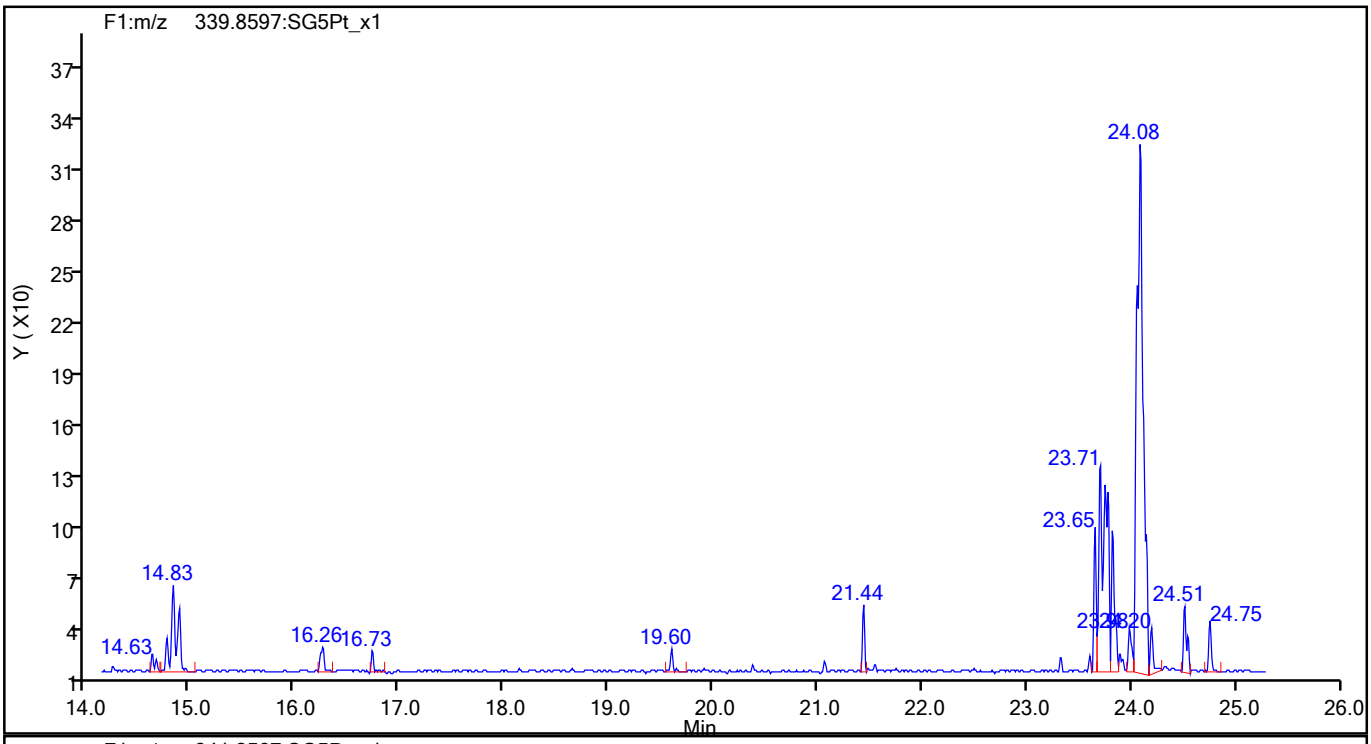

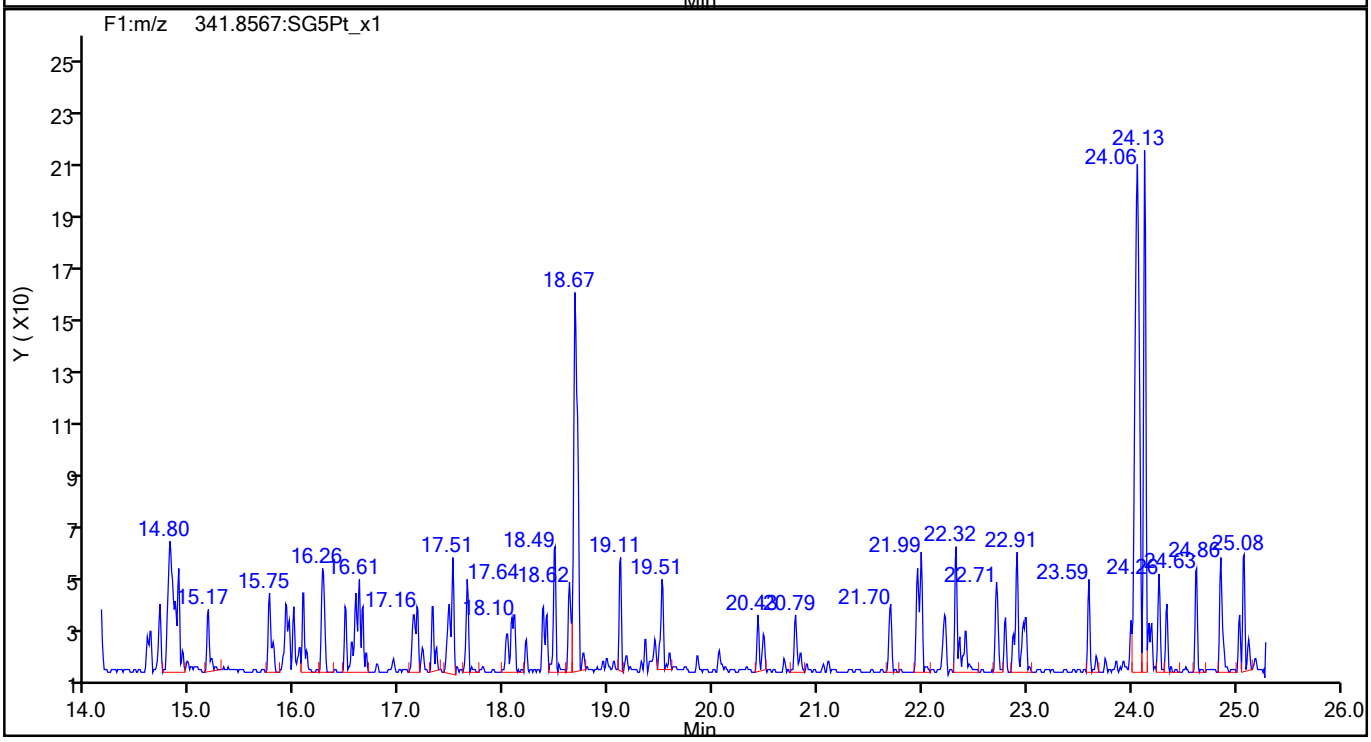

785719

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

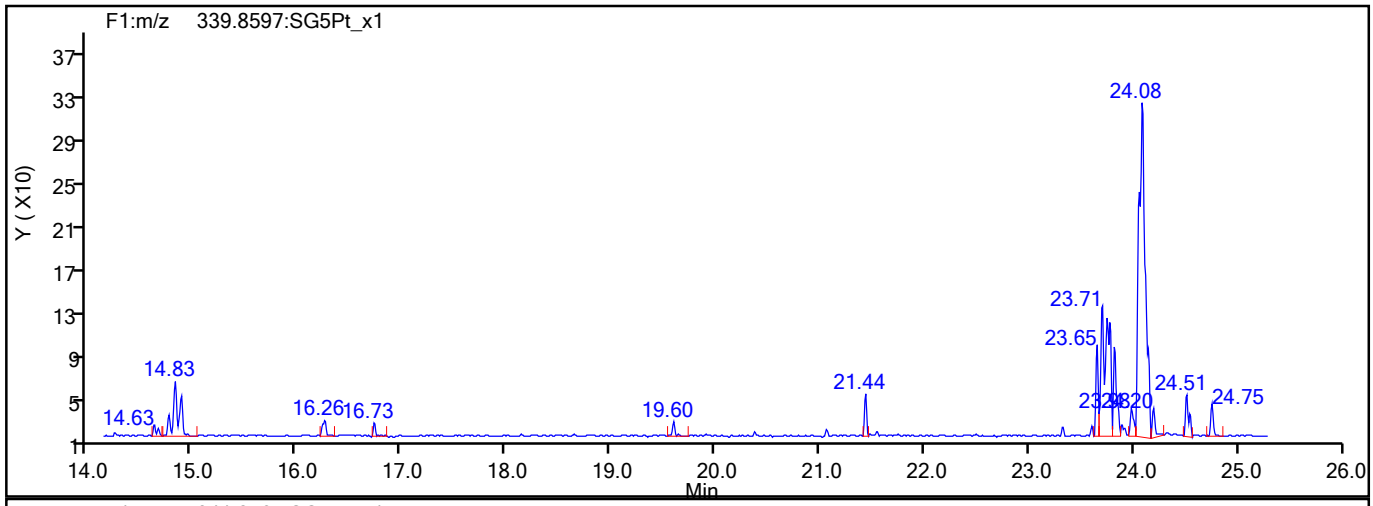

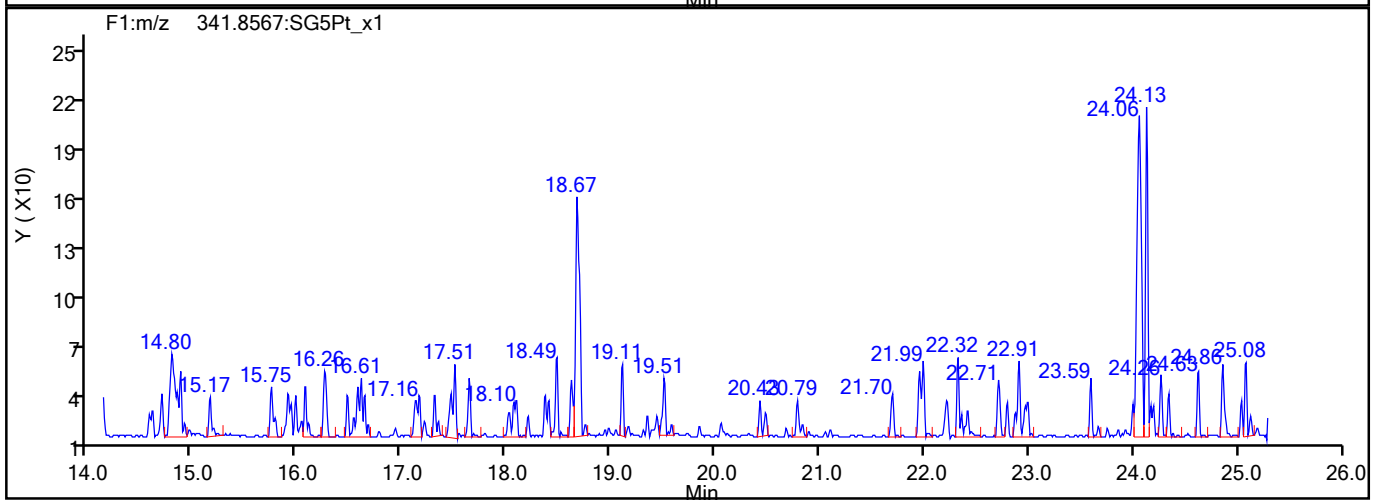

F1 PeCDFs Interference Mass

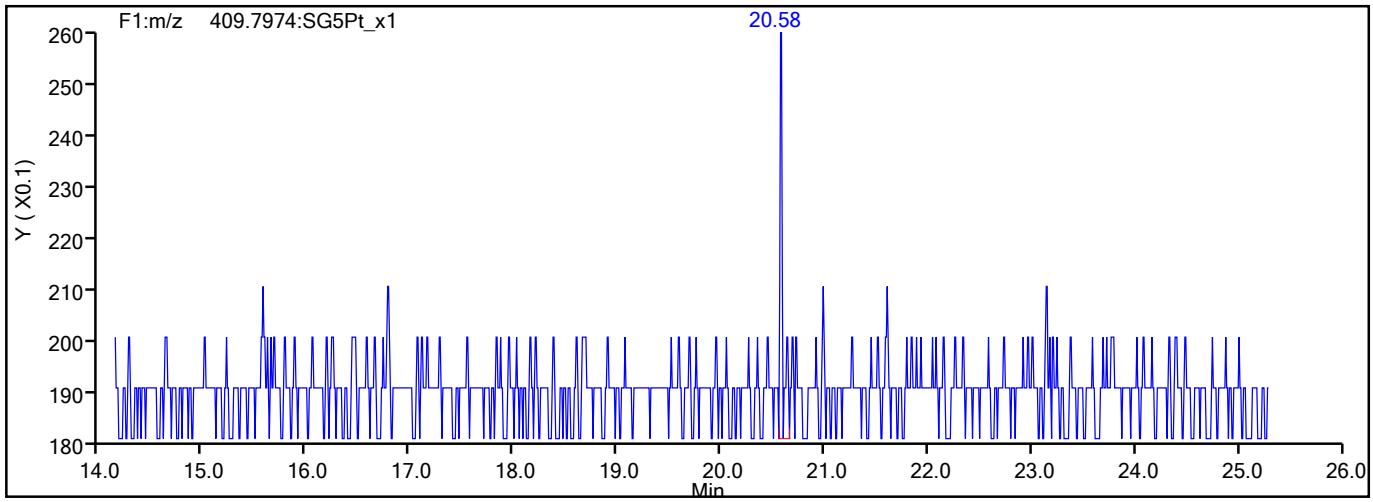

785720

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

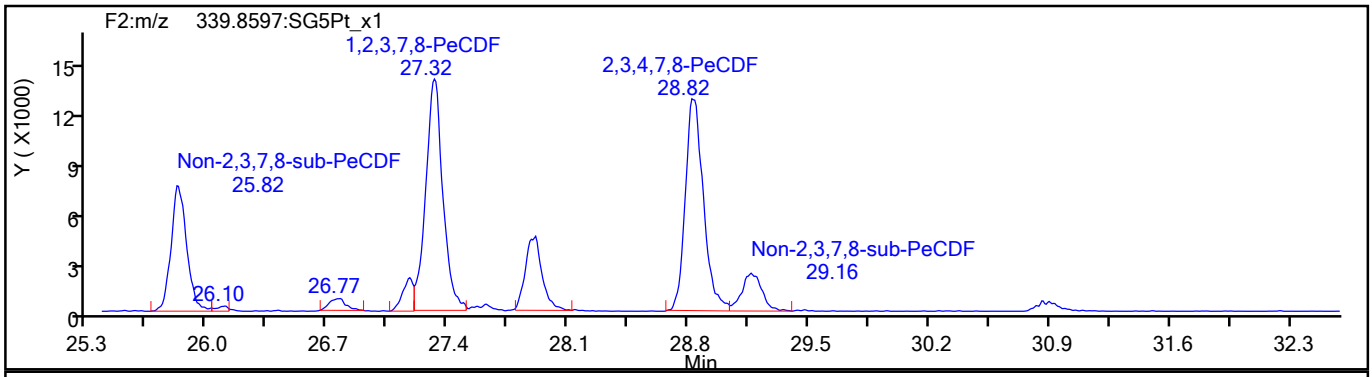

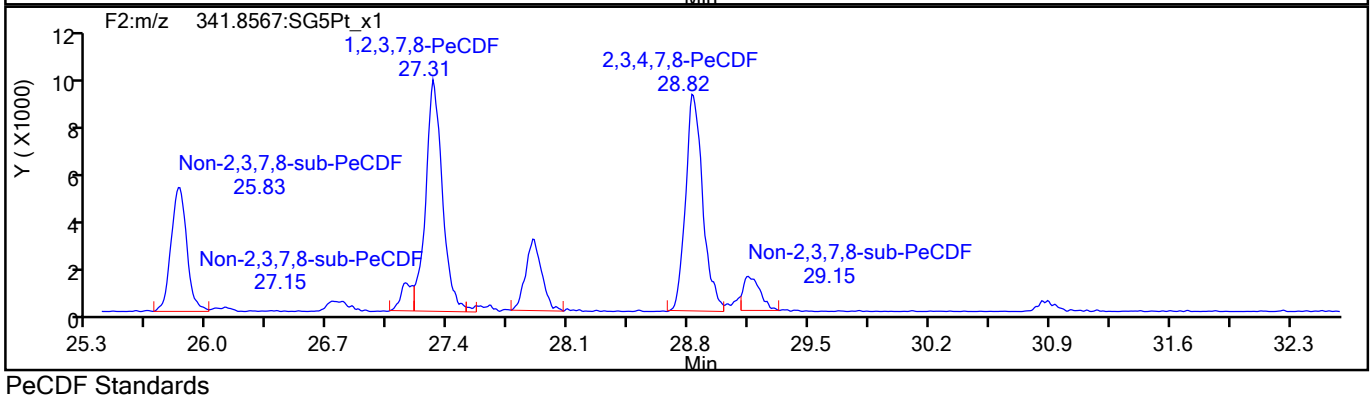

PeCDF Standards

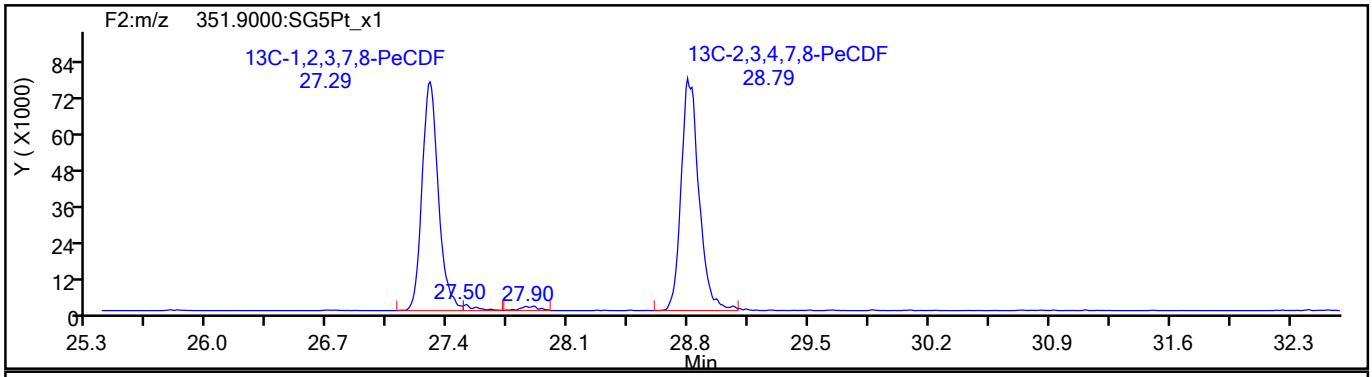

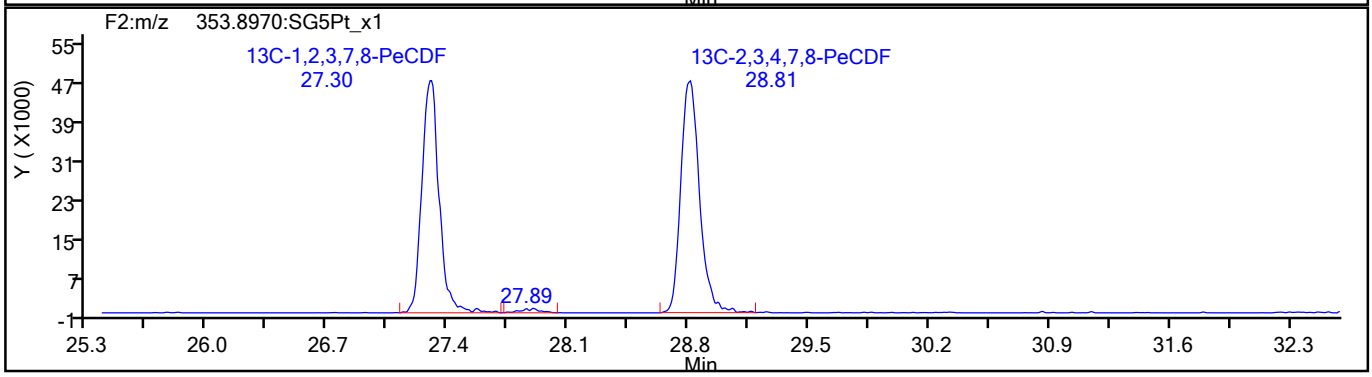

785721

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

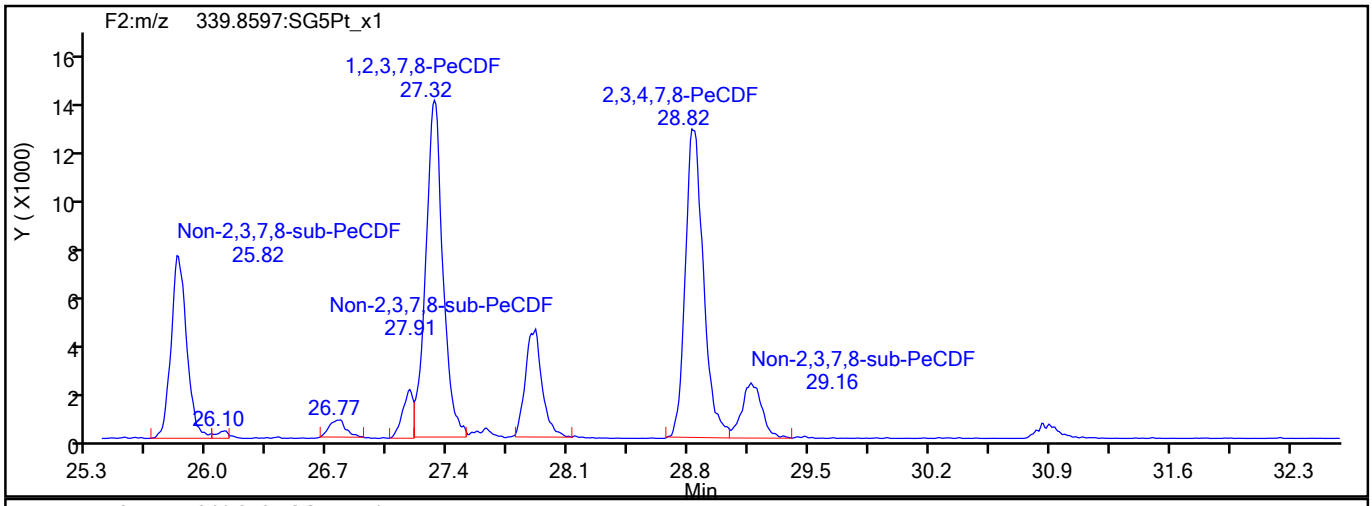

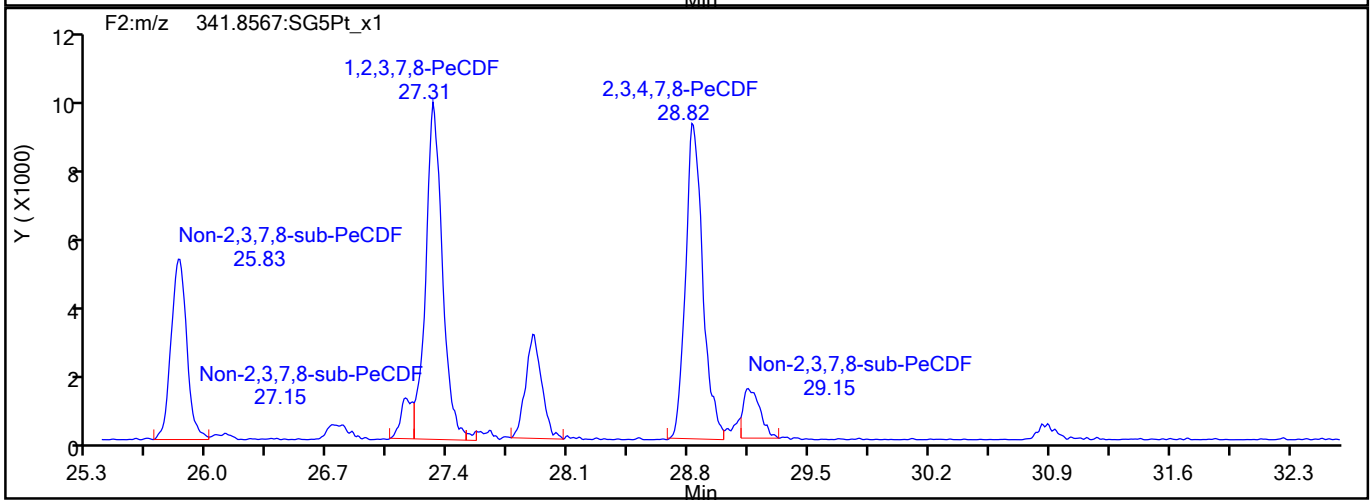

PeCDF Interference Mass

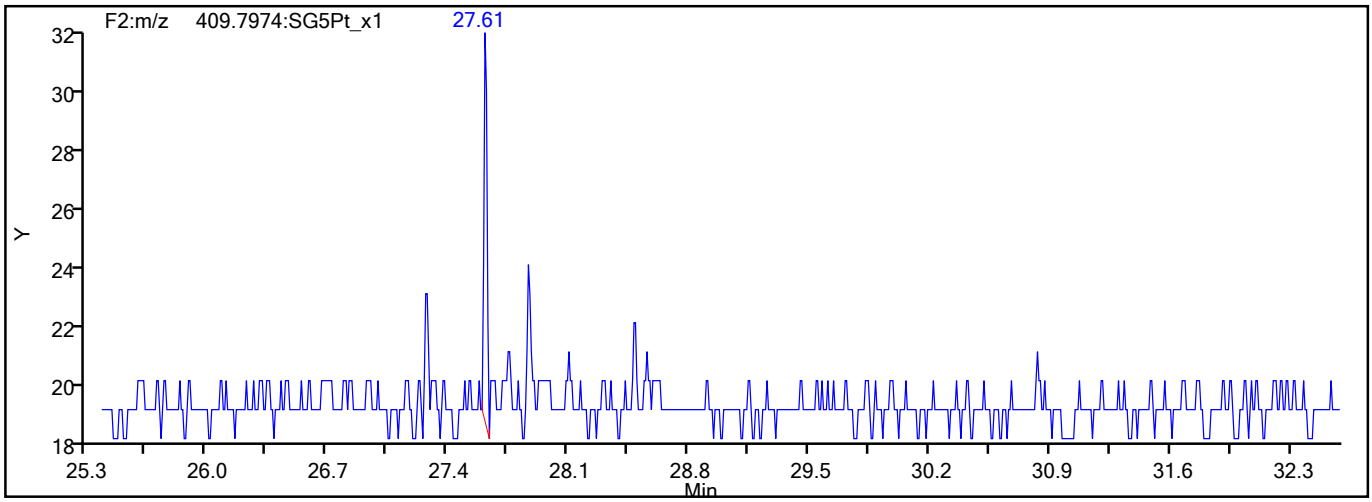

785722

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

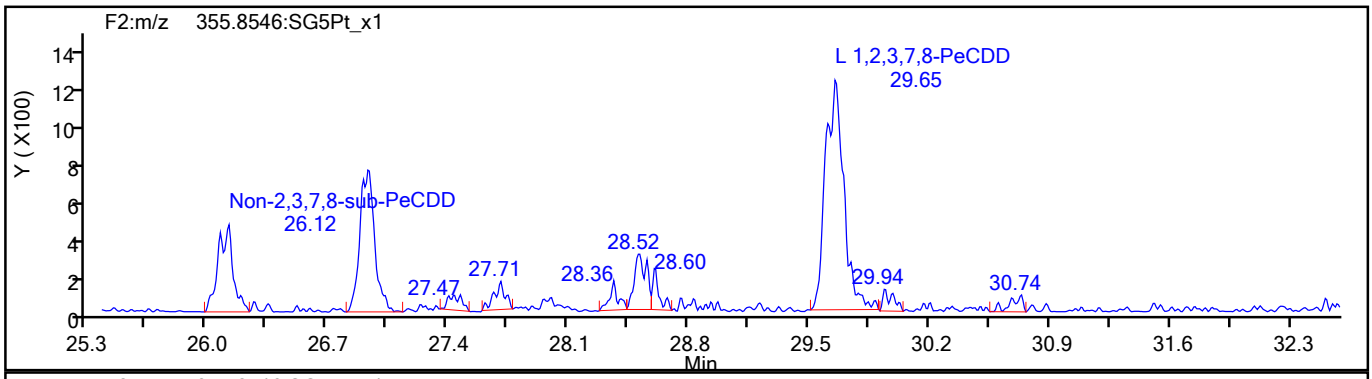

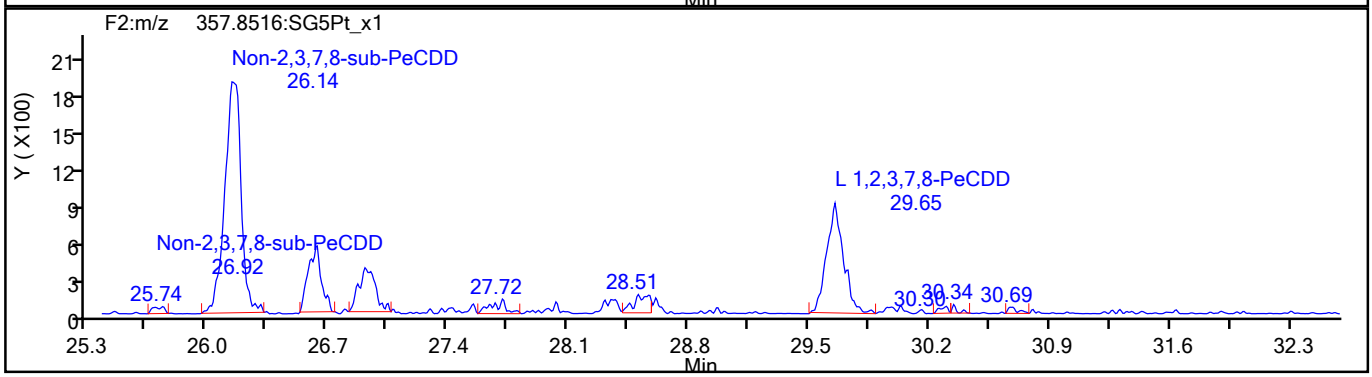

PeCDD Standards

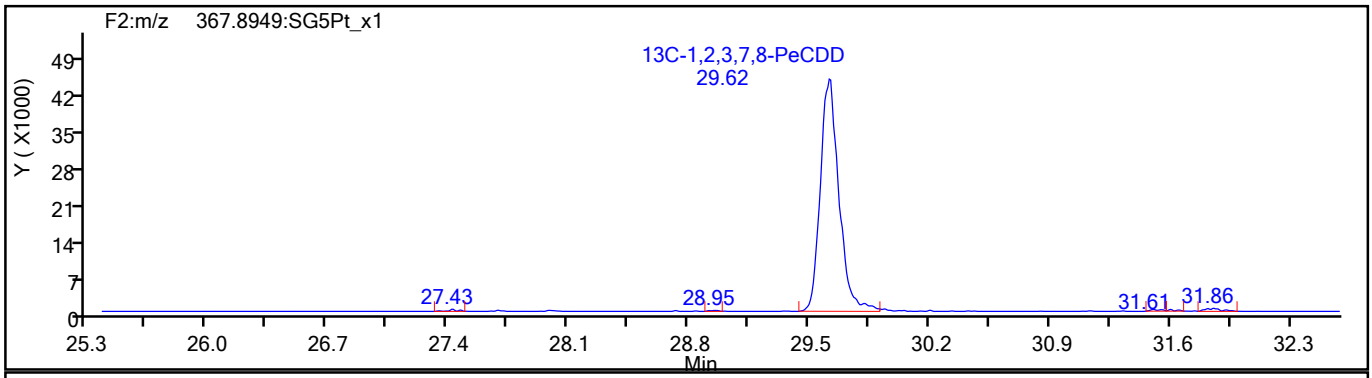

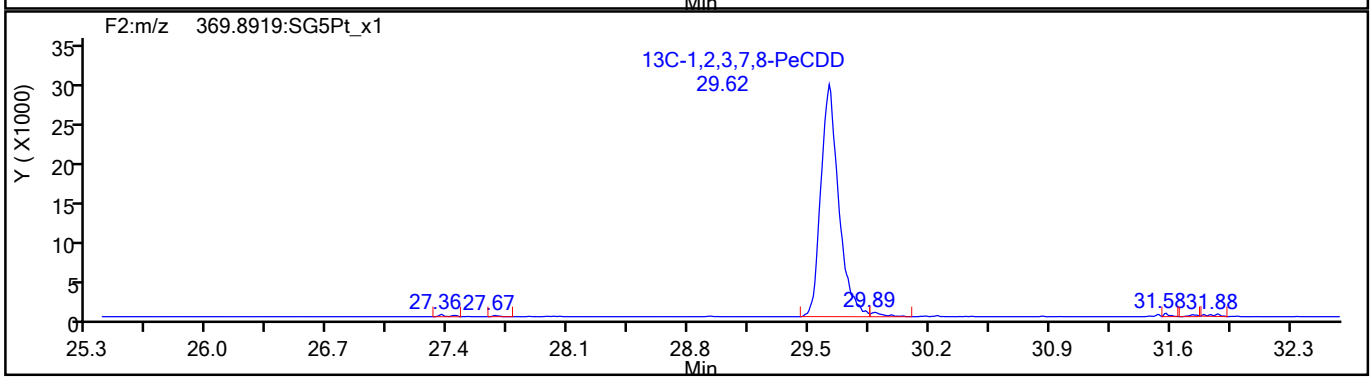

785723

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

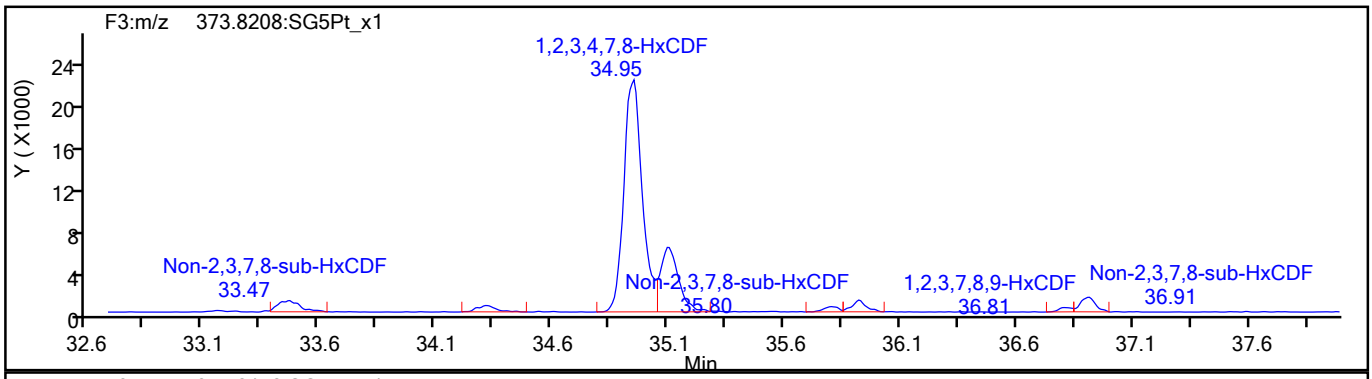

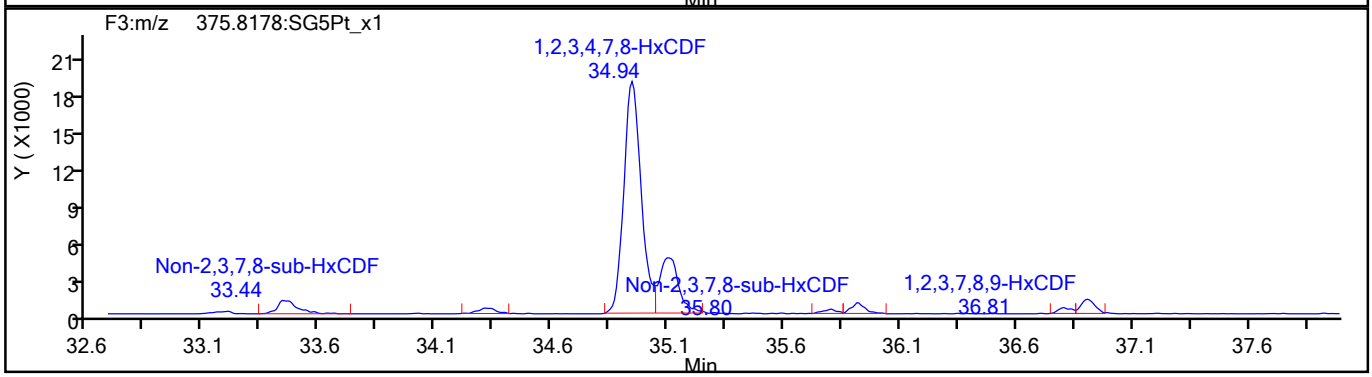

HxCDF Standards

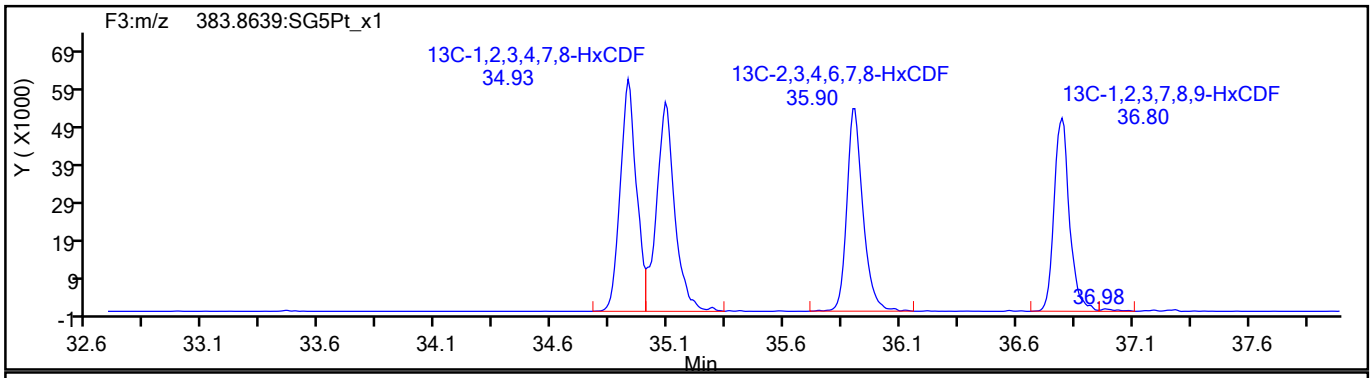

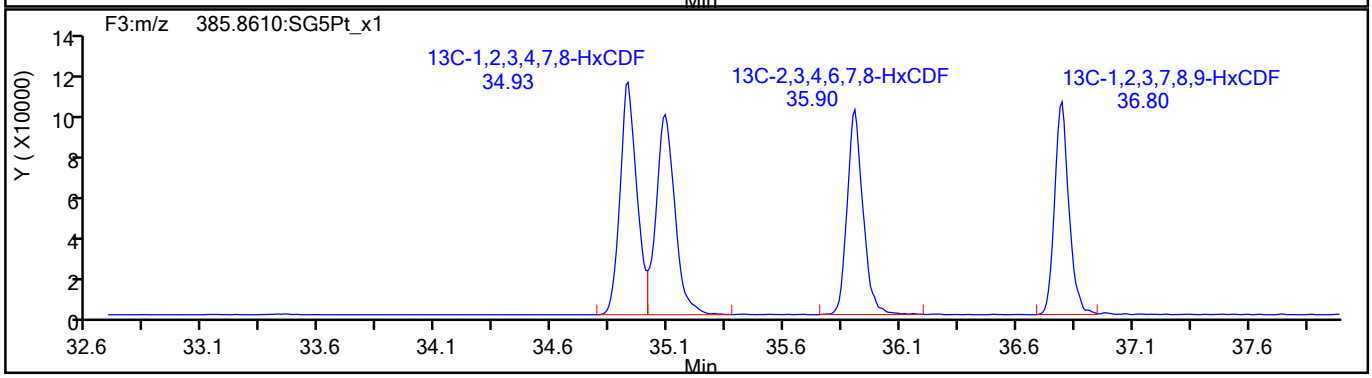

785724

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

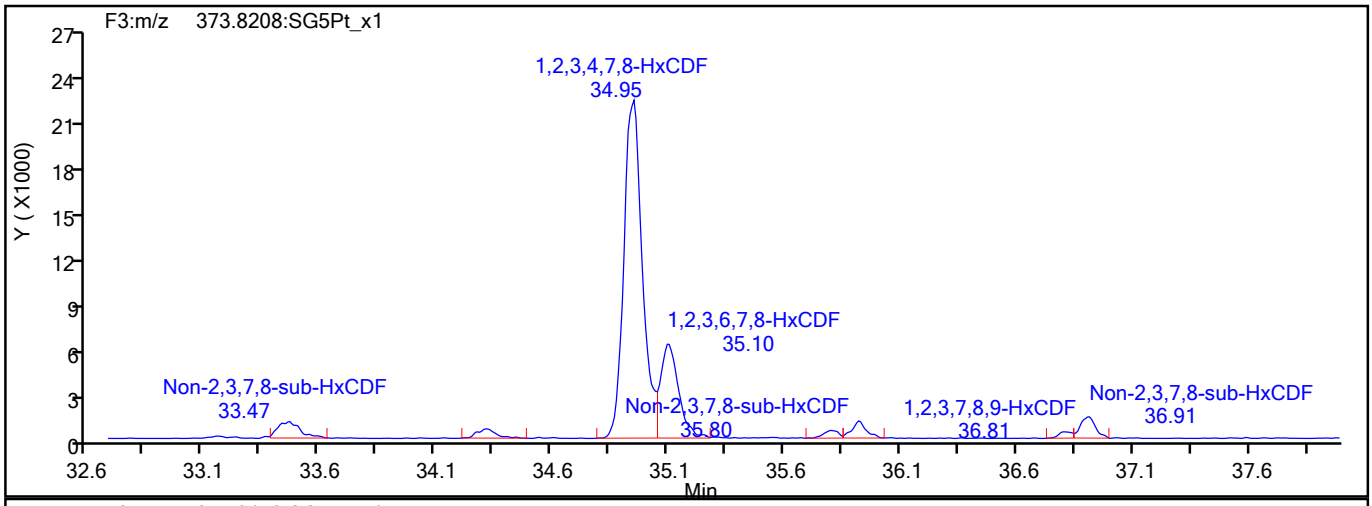

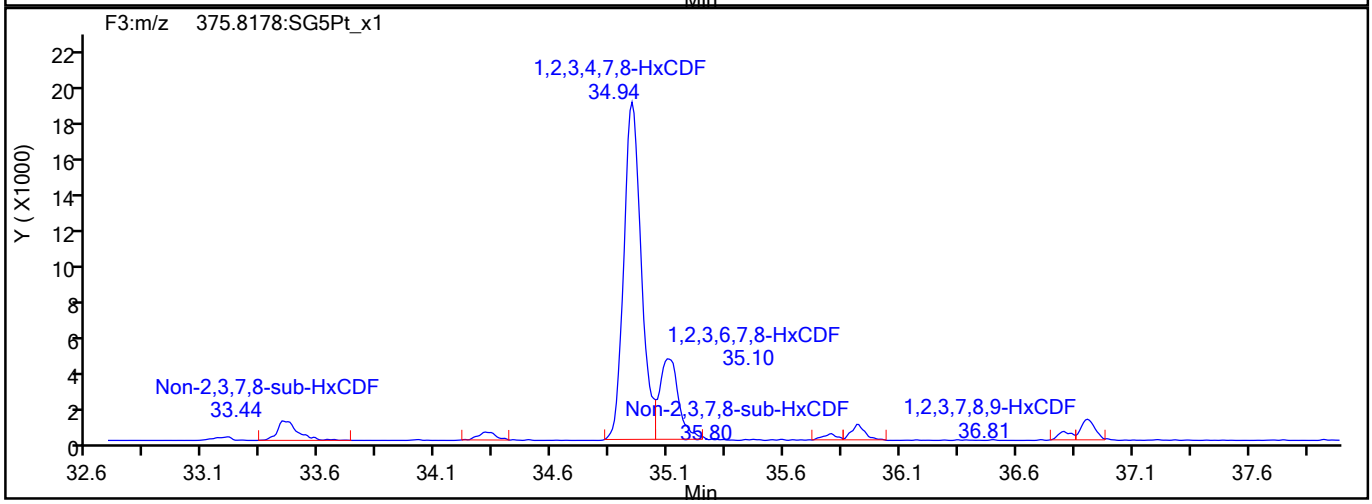

HxCDF Interference Mass

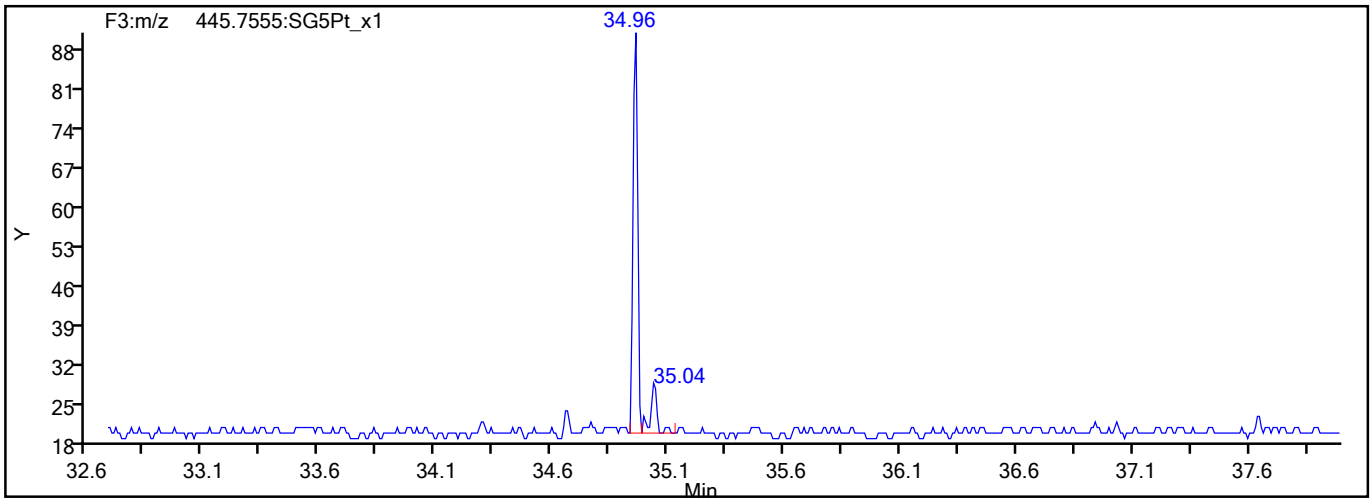

785725

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

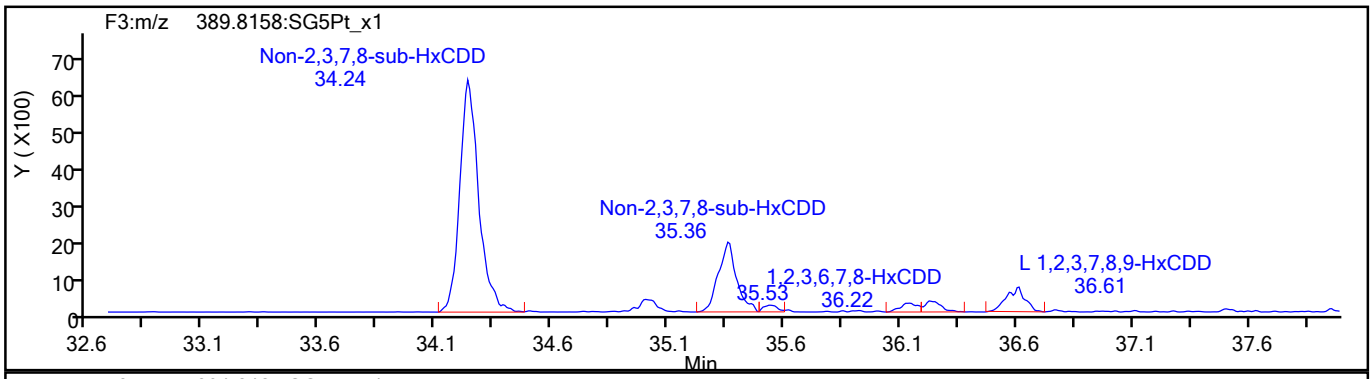

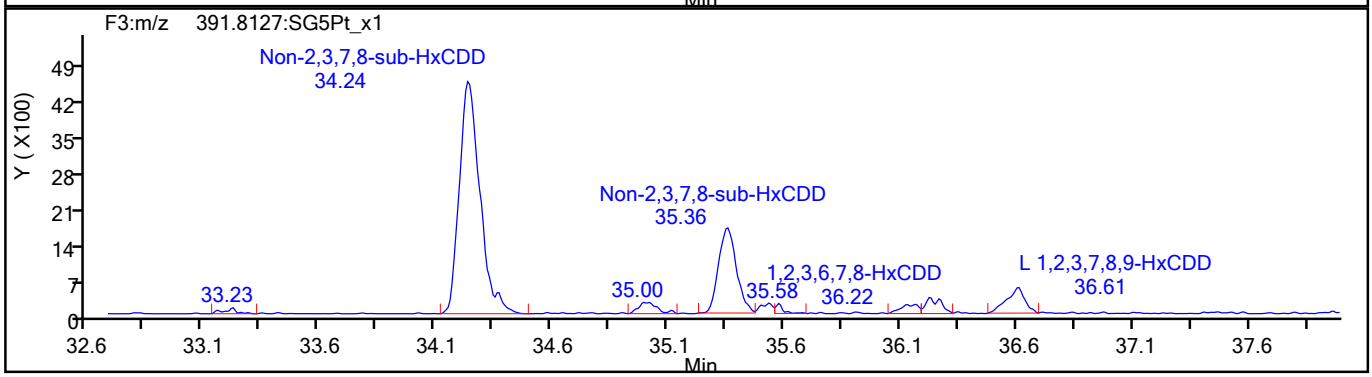

HxCDD Standards

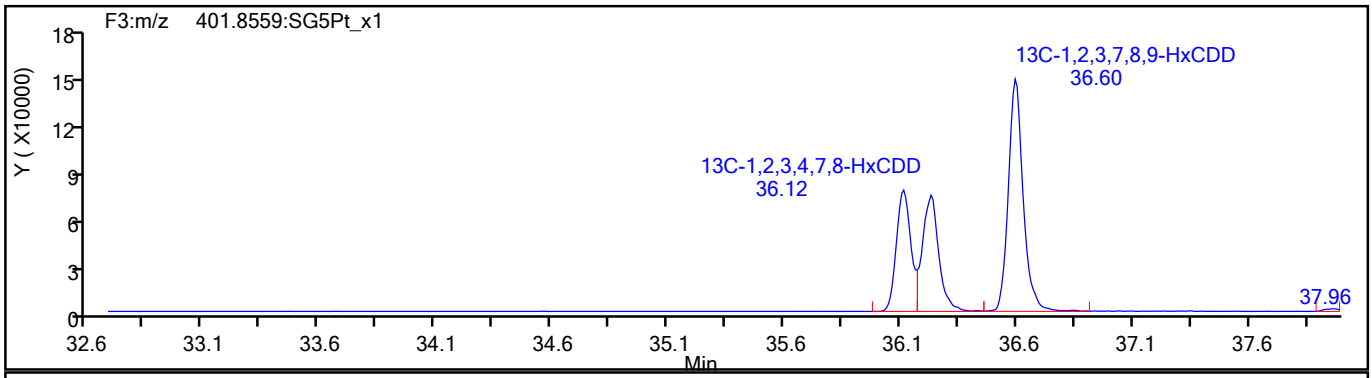

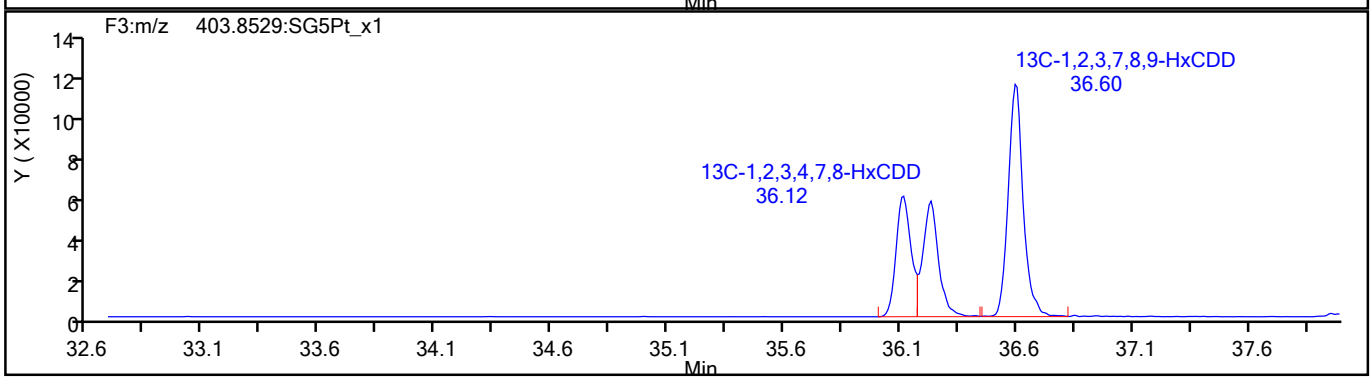

785726

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

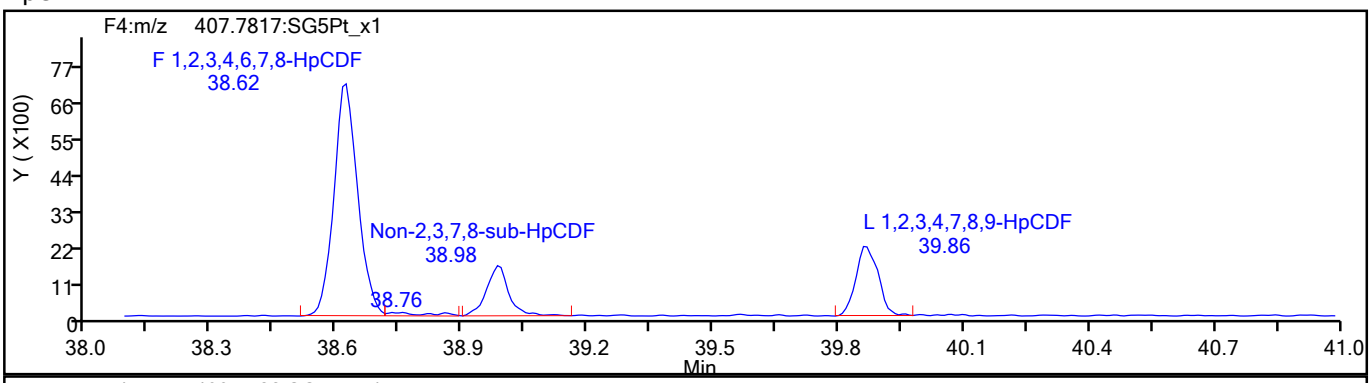

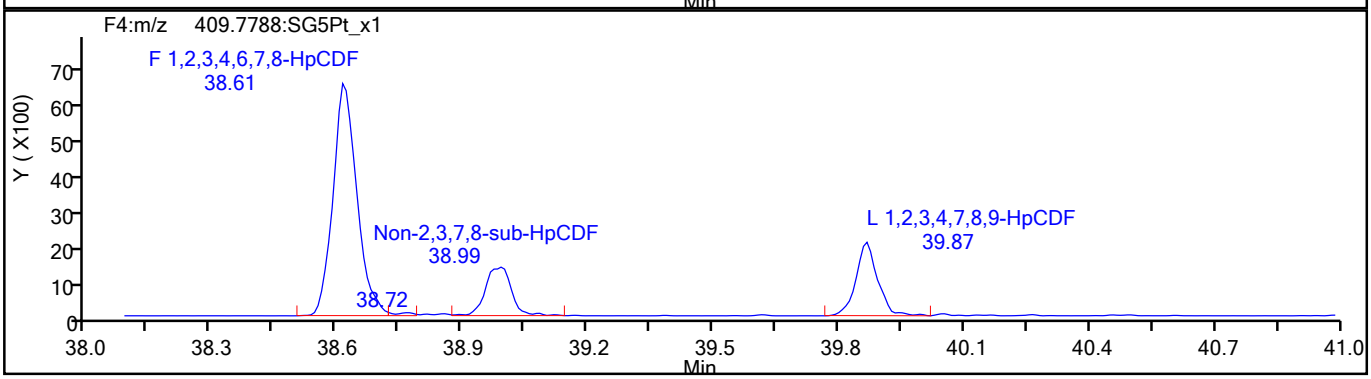

HpCDF Standards

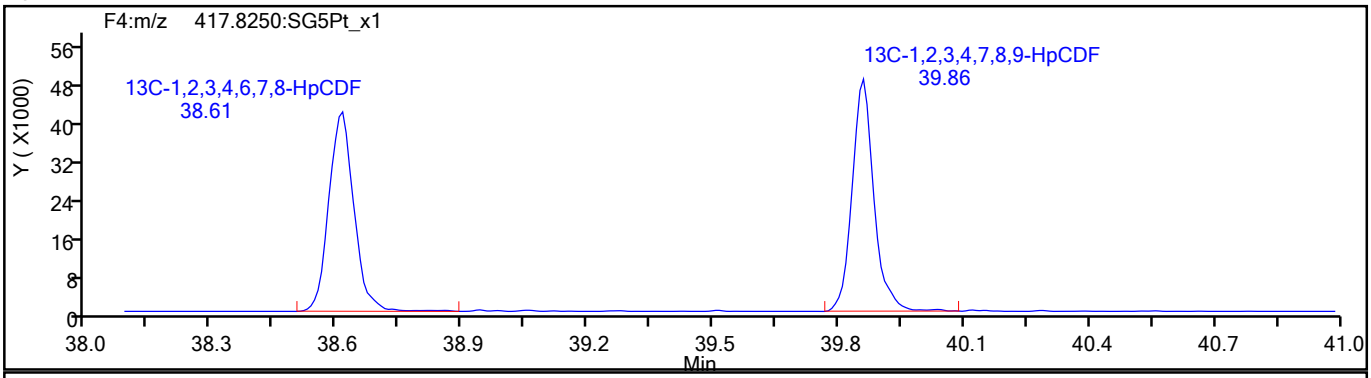

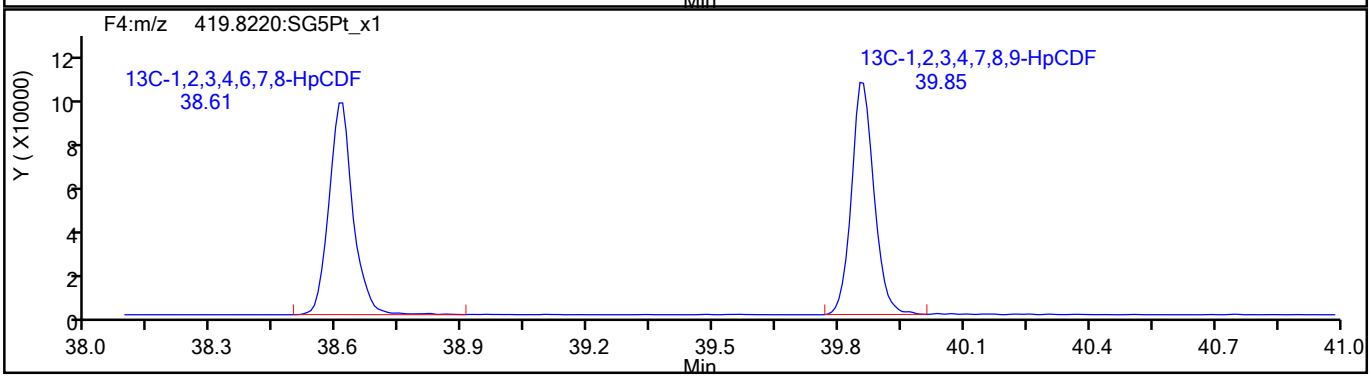

785727

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

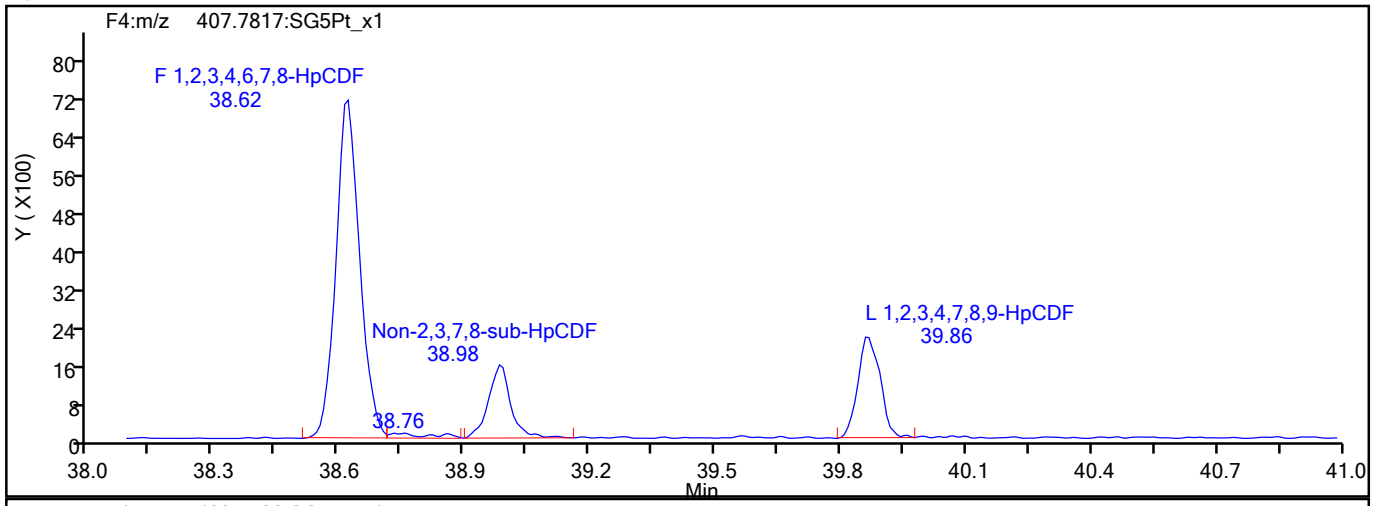

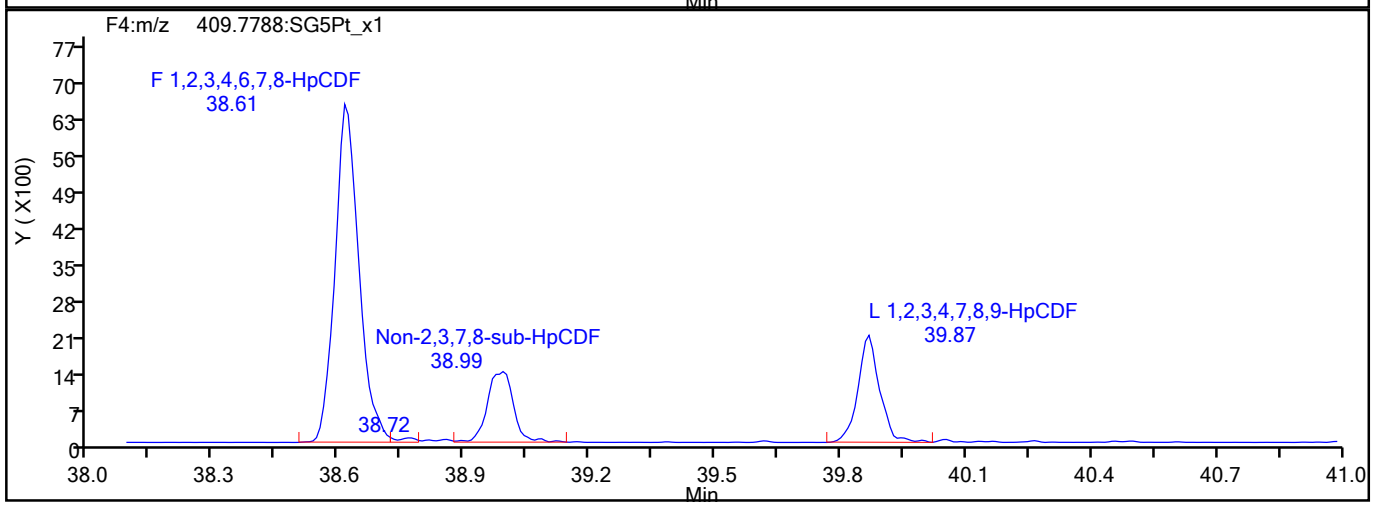

HpCDF Interference Mass

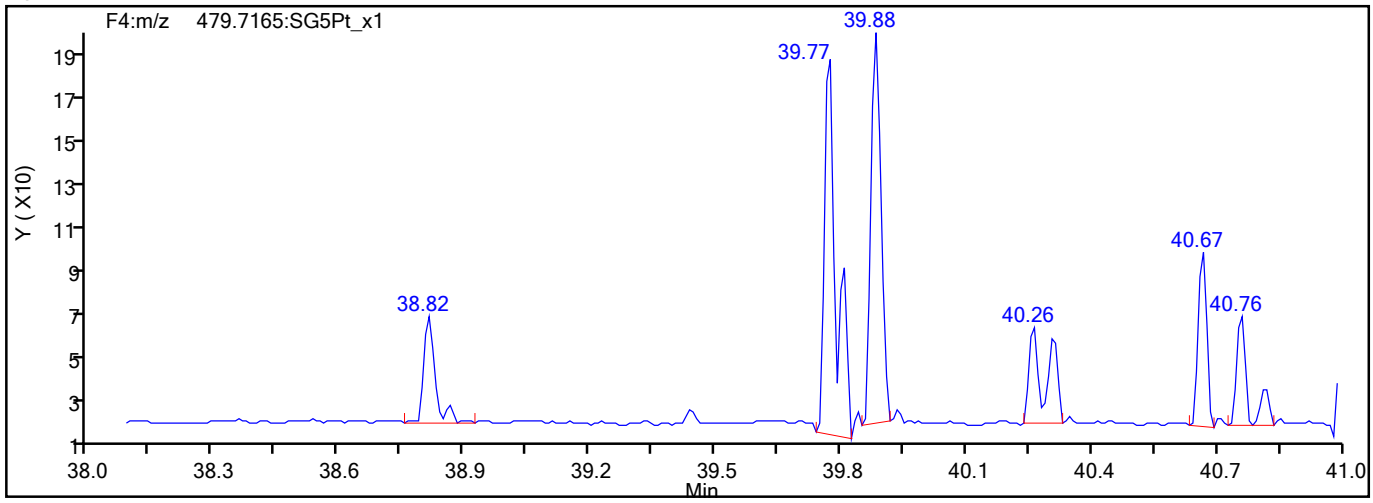

785728

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

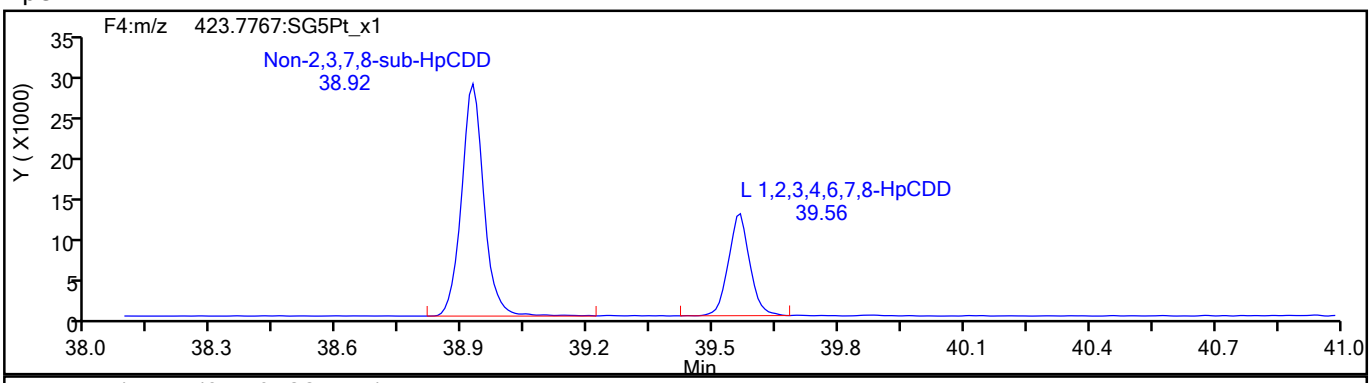

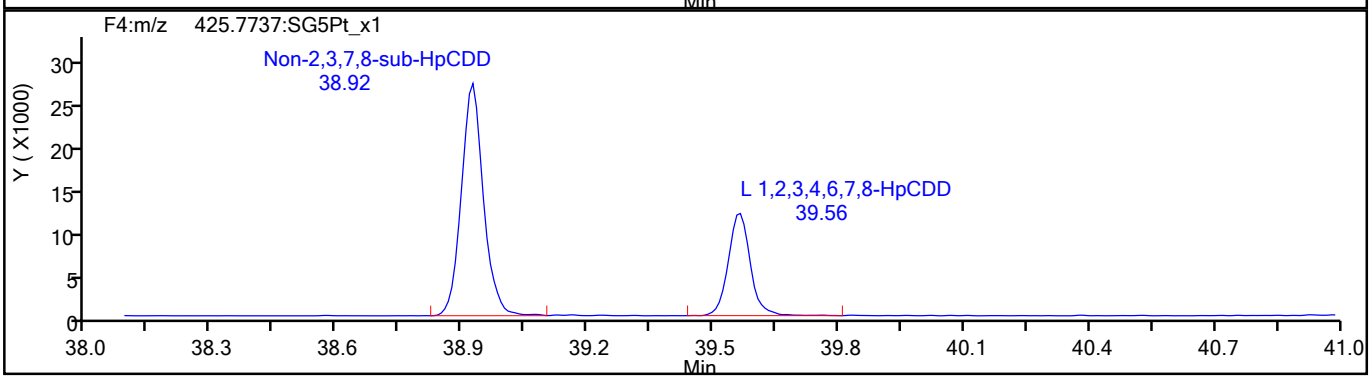

HpCDD Standards

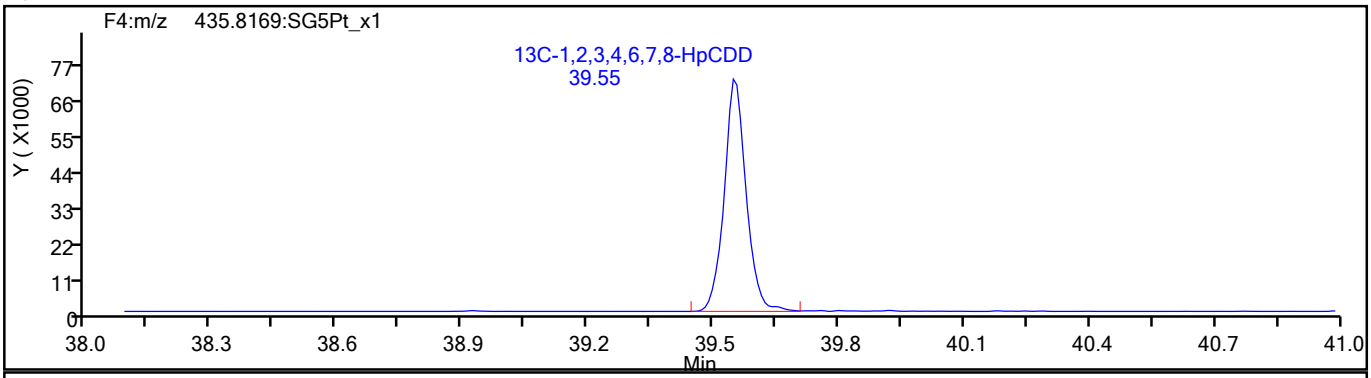

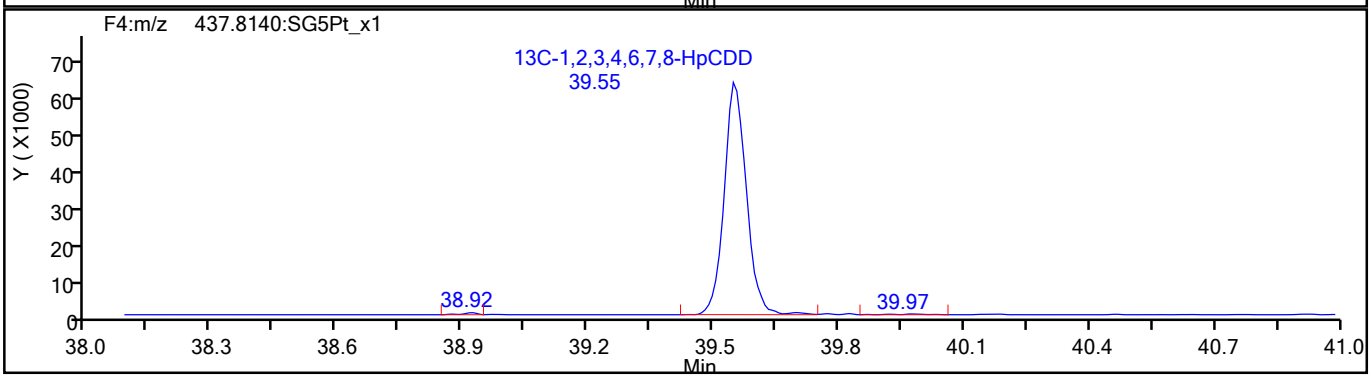

785729

Report Date: 23-Aug-2021 09:01:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

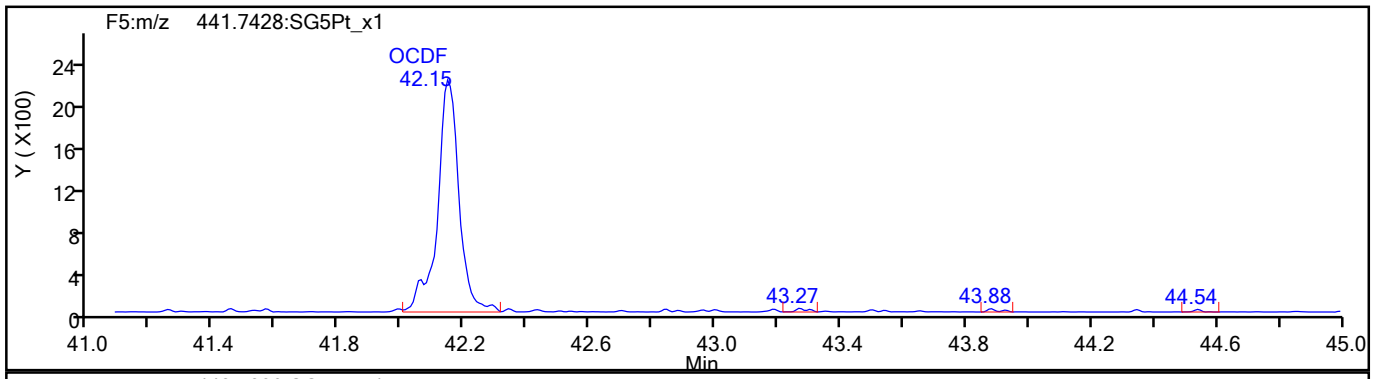

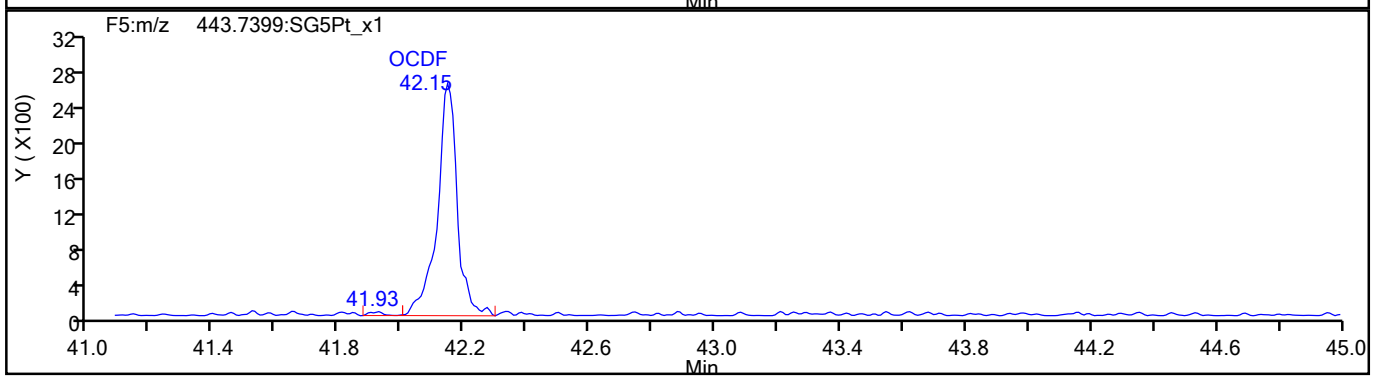

OCDF Standards

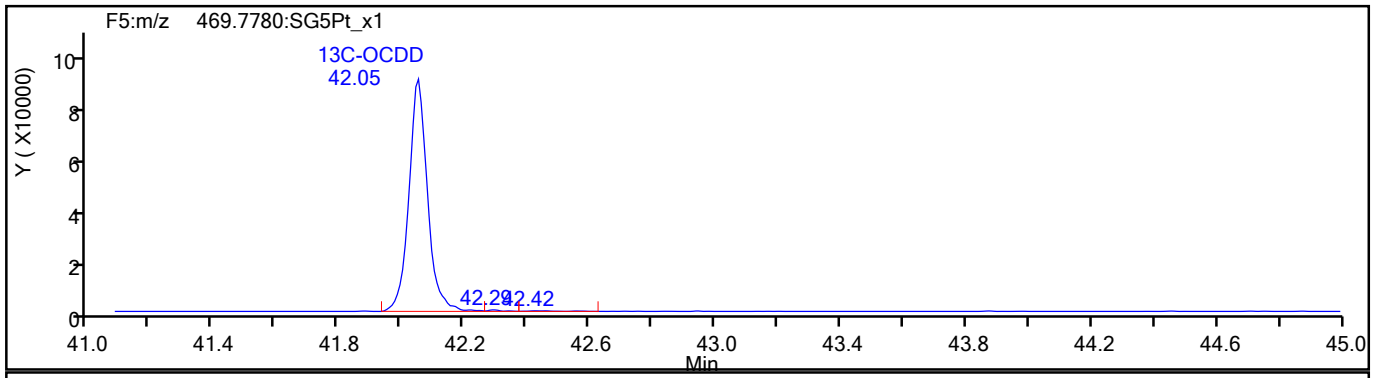

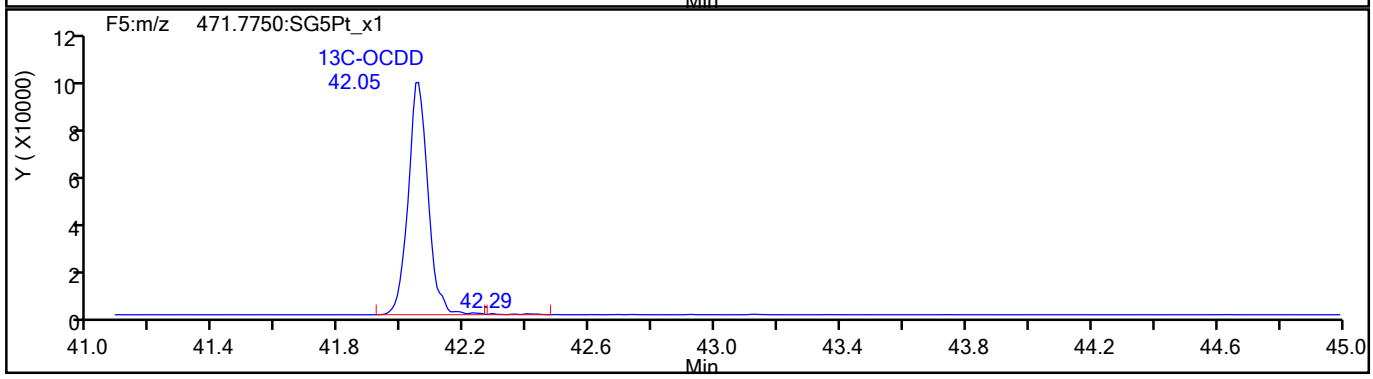

785730

Report Date: 23-Aug-2021 09:01:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

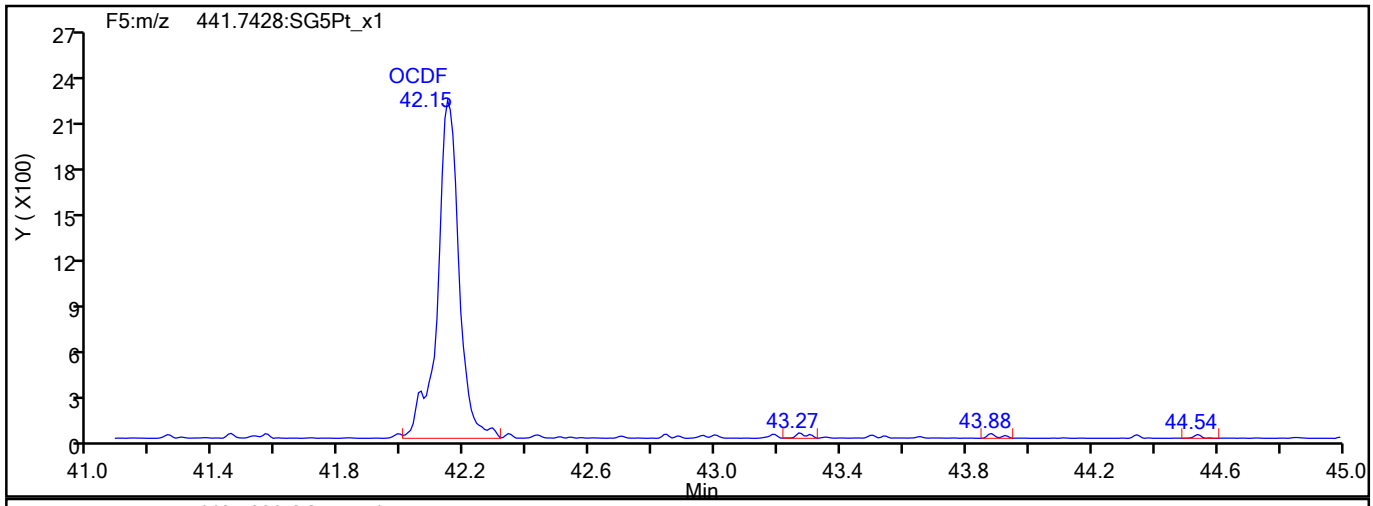

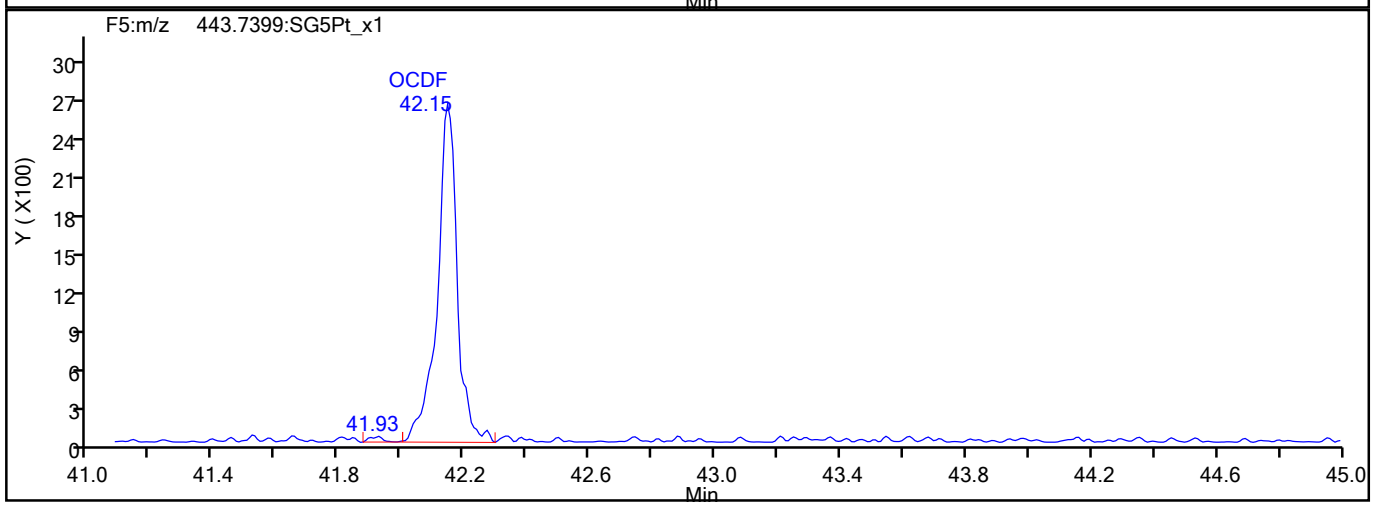

OCDF Interference Mass

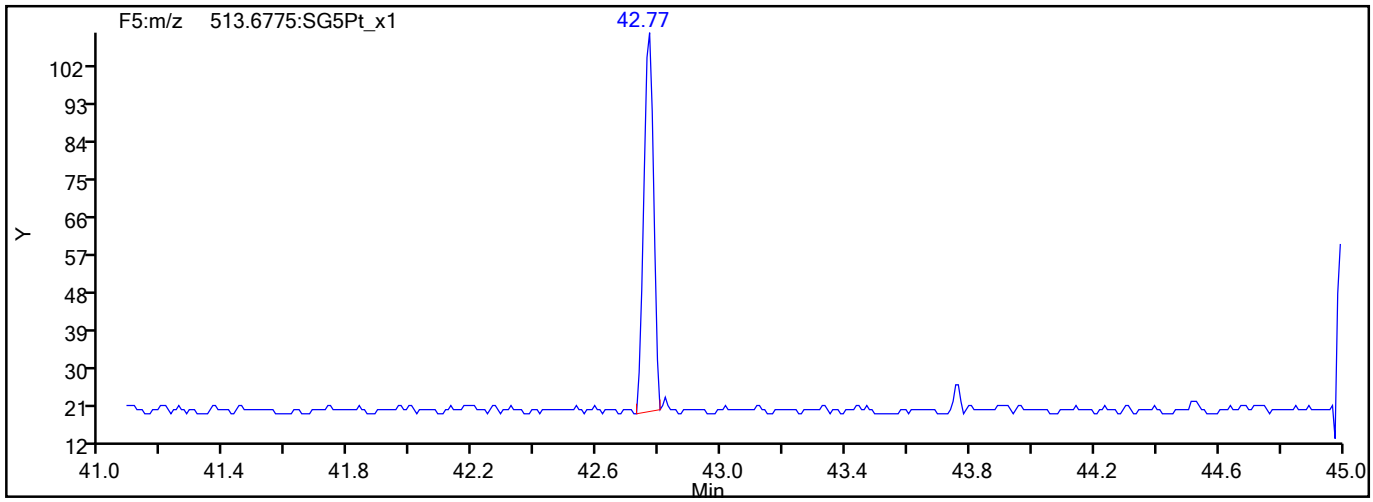

785731

Report Date: 23-Aug-2021 09:01:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

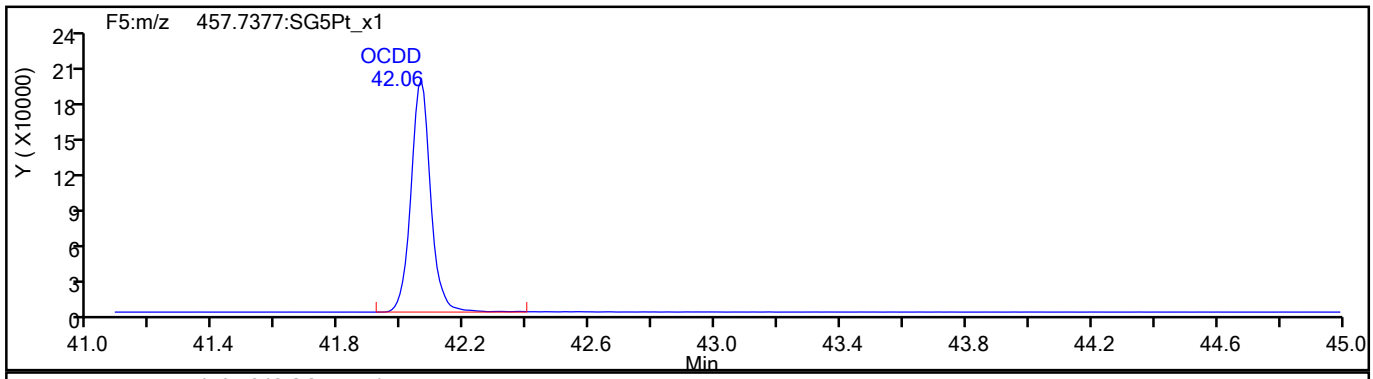

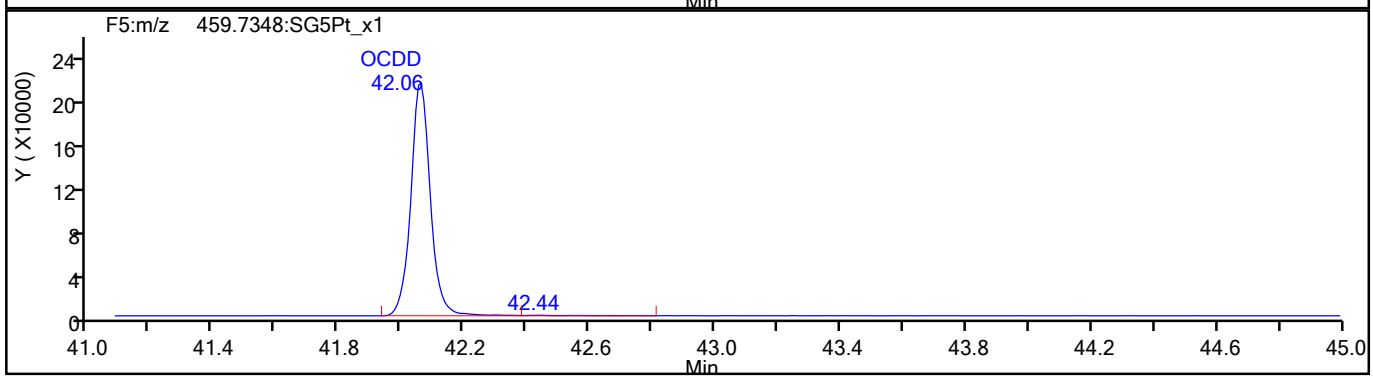

OCDD Standards

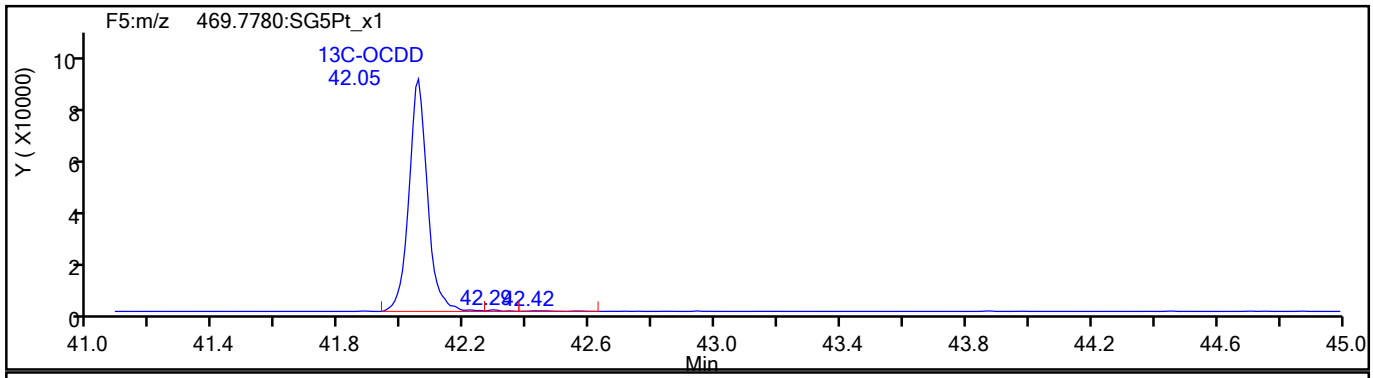

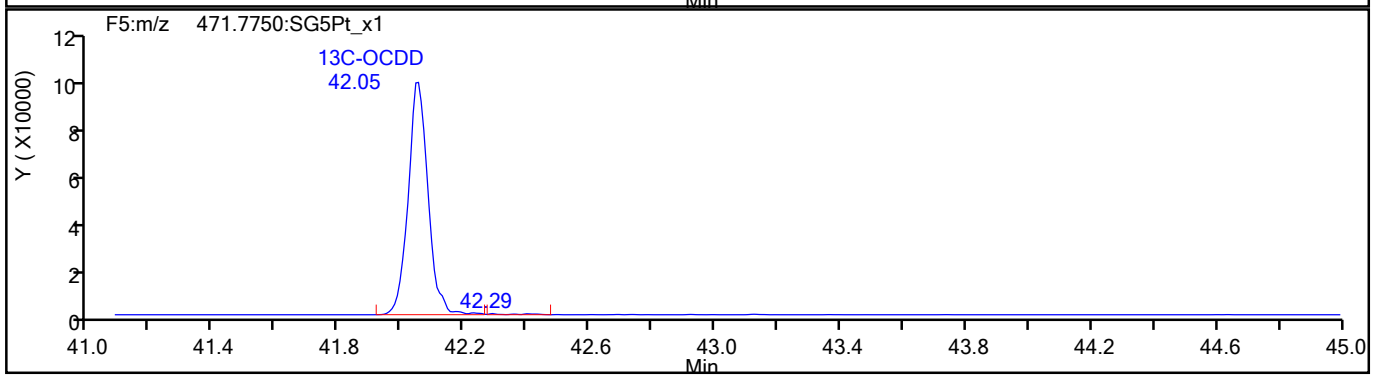

785732

Report Date: 23-Aug-2021 09:01:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

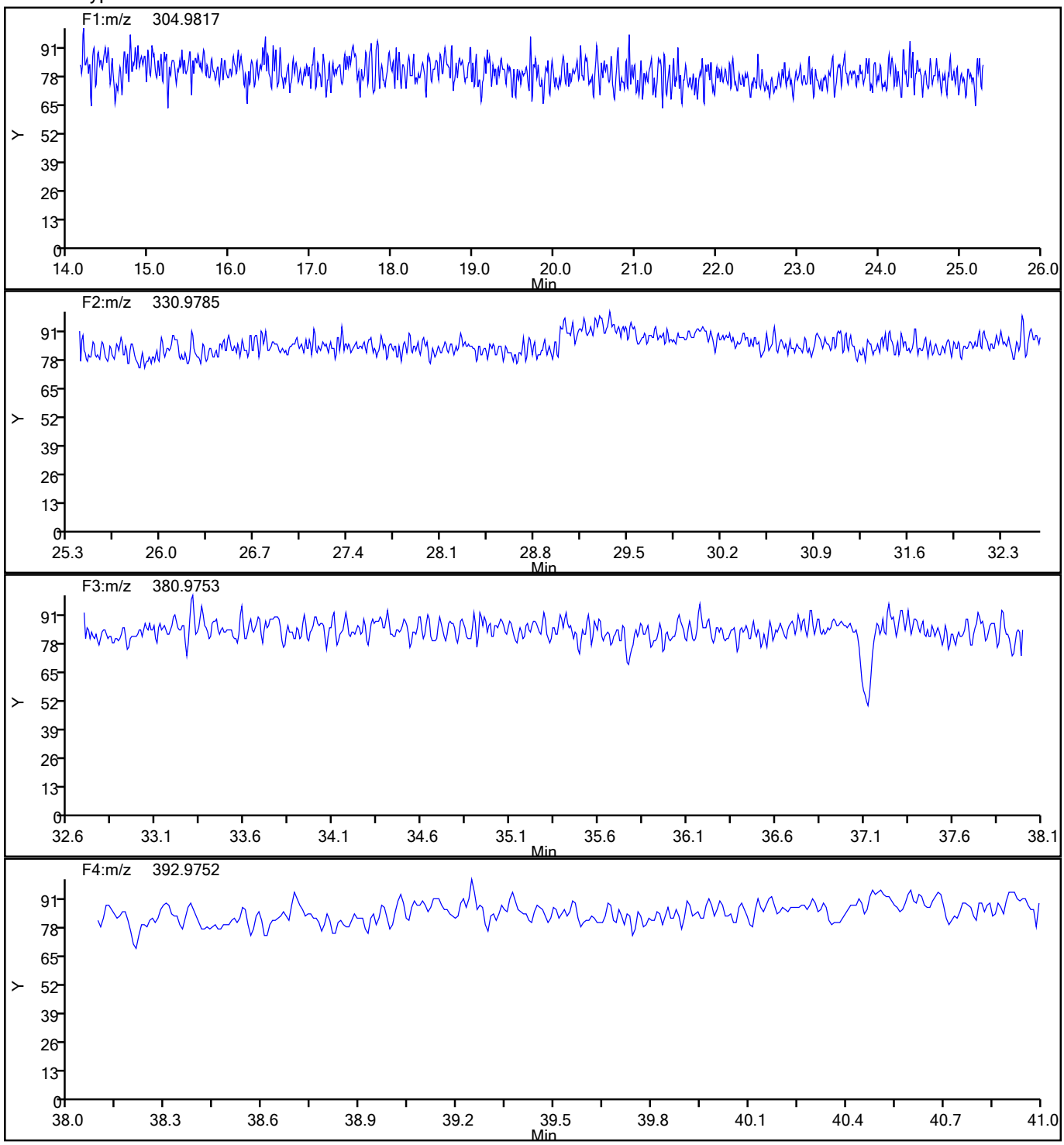

785733

Report Date: 23-Aug-2021 09:01:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_6.d		
Injection Date:	19-Aug-2021 17:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	517891	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

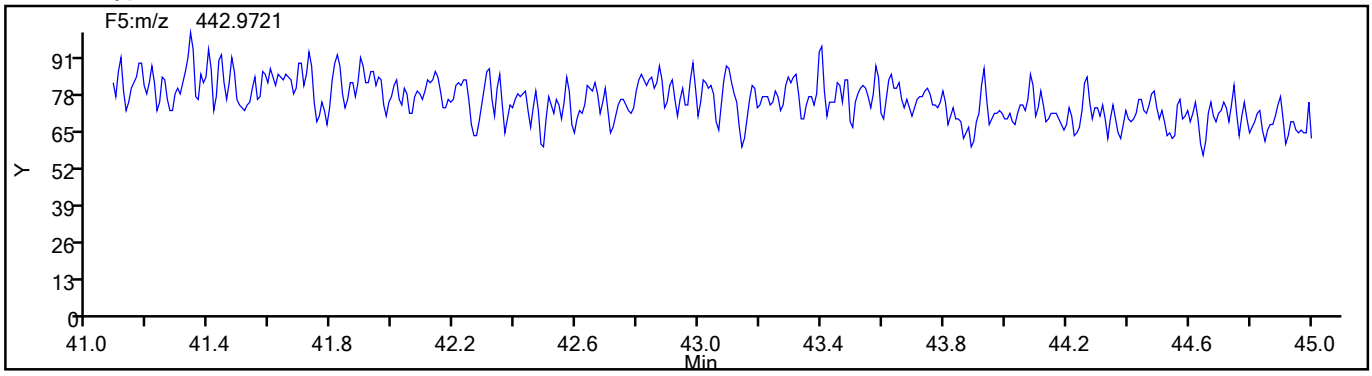

785734

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-DUP-8 RA
Lab Sample ID: 320-76888-13 RA
Matrix: Sediment
Lab File ID: 25AU21A11D2_010.d
Analysis Method: 1613B
Date Collected: 07/26/2021 00:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.13(g)
Date Analyzed: 08/25/2021 18:43
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519744
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	2300	E G	2.4	2.4

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	65		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	77		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_010.d
Lims ID: 320-76888-A-13-A
Client ID: 11215702-072621-BN-DUP-8
Sample Type: Client
Inject. Date: 25-Aug-2021 18:43:49 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-A-13-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:07:07

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.285	49478826	0.73	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.588	42708164	0.76	1.3327	64.8	64.8	0.7354	0.7354	64.77	
2,3,7,8-TCDF	17.616	351406184	0.78	0.9978	824.6	824.6	0.8366	0.8366		E
D 13C-2,3,7,8-TCDD	16.052	25131933	0.75	0.8749	58.1	58.1	6.970	6.970	58.05	
2,3,7,8-TCDD	16.066	62044165	0.78	1.0570	233.6	233.6	1.461	1.461		E
$ 37Cl4-2,3,7,8-TCDD	16.066	13246568		0.8648	31.0	31.0	0.2205	0.2205	77.39	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Report Date: 26-Aug-2021 09:30:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_010.d
Lims ID: 320-76888-A-13-A
Client ID: 11215702-072621-BN-DUP-8
Sample Type: Client
Inject. Date: 25-Aug-2021 18:43:49 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-A-13-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 09:07:07

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.285	16.298	-1		20819137	4798696	117416	293540	41		
333.9339	16.285	16.298	-1		28659689	6268243	152534	381335	41	0.73(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.588	17.615	-2	1.080	18448602	3308363	21393	53482	155		
317.9389	17.602	17.615	-1	1.081	24259562	4326888	21993	54982	197	0.76(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.616	17.628	-1	1.002	154391476	29298442	11540	28850	2539		
305.8987	17.616	17.628	-1	1.002	197014708	37595839	13956	34890	2694	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.052	16.065	-1	0.986	10772110	2570056	117416	293540	22		
333.9339	16.052	16.065	-1	0.986	14359823	3314999	152534	381335	22	0.75(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	16.066	16.078	-1	1.001	27243782	6249262	22589	56472	277		
321.8936	16.066	16.078	-1	1.001	34800383	7901186	13754	34385	574	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.066	16.078	-1	0.987	13246568	3135358	8440	21100	371		

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 26-Aug-2021 09:30:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_010.d		
Injection Date:	25-Aug-2021 18:43:49	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	519744	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

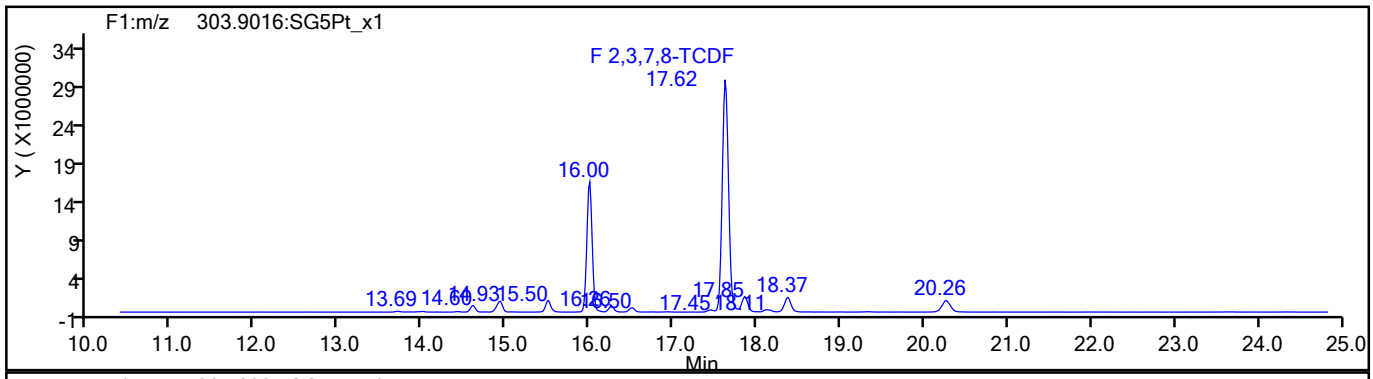

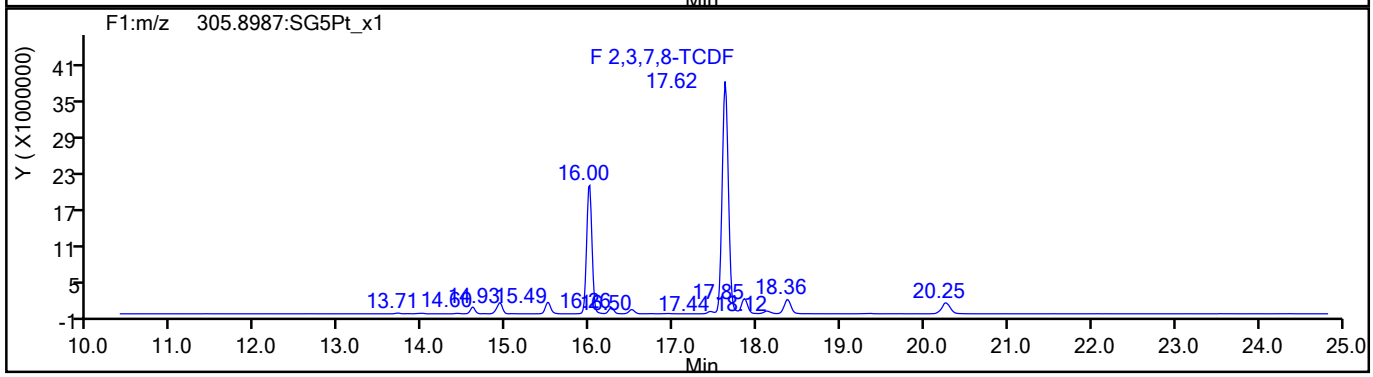

TCDF Standards

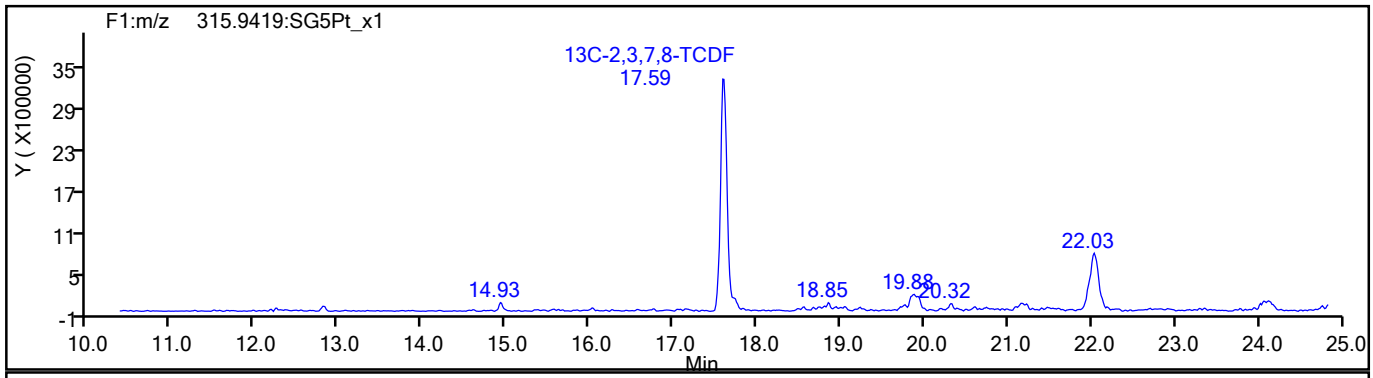

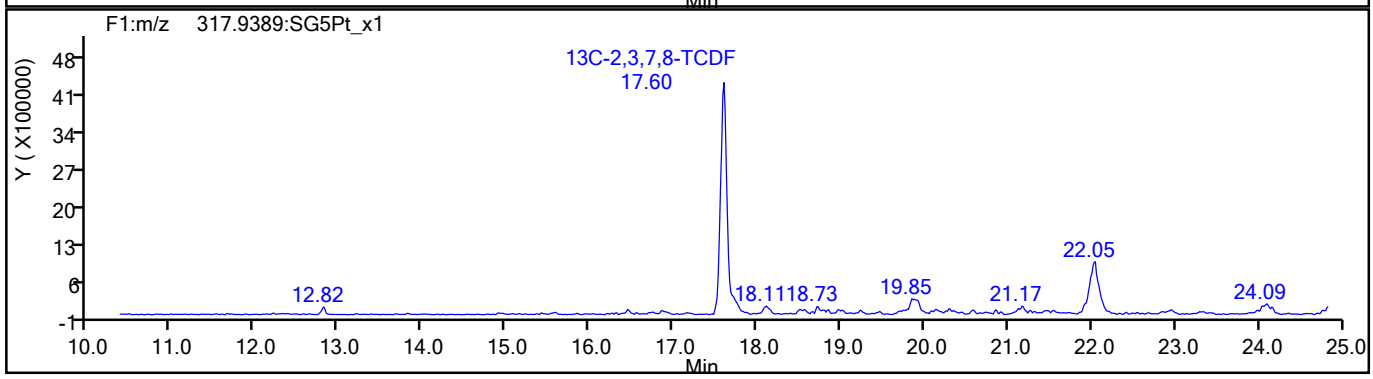

785738

Report Date: 26-Aug-2021 09:30:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_010.d		
Injection Date:	25-Aug-2021 18:43:49	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	519744	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

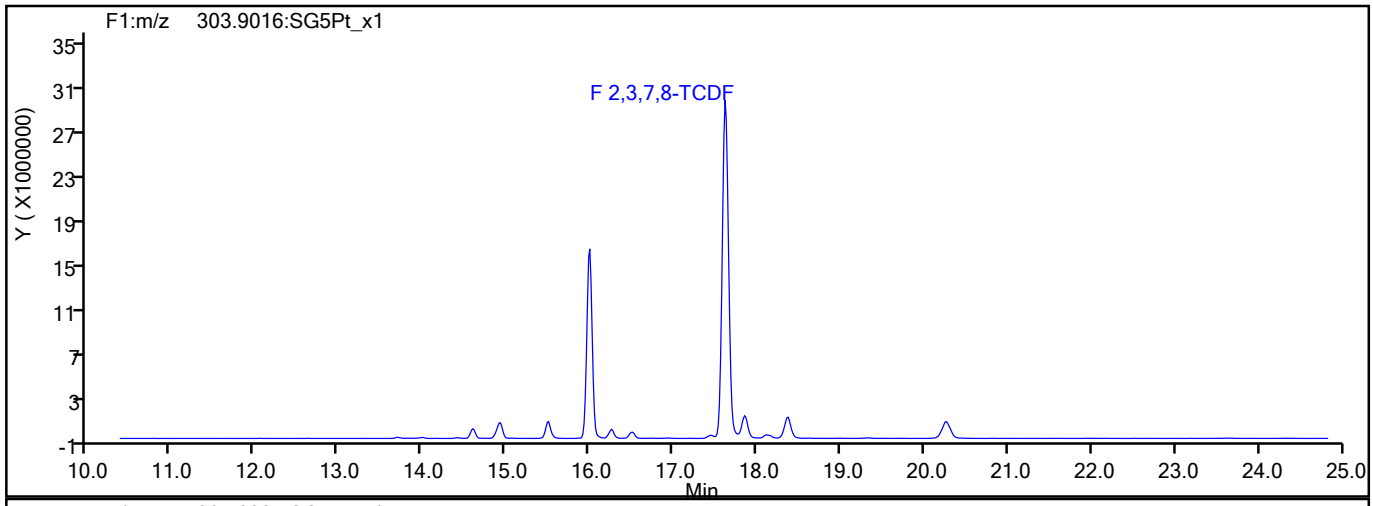

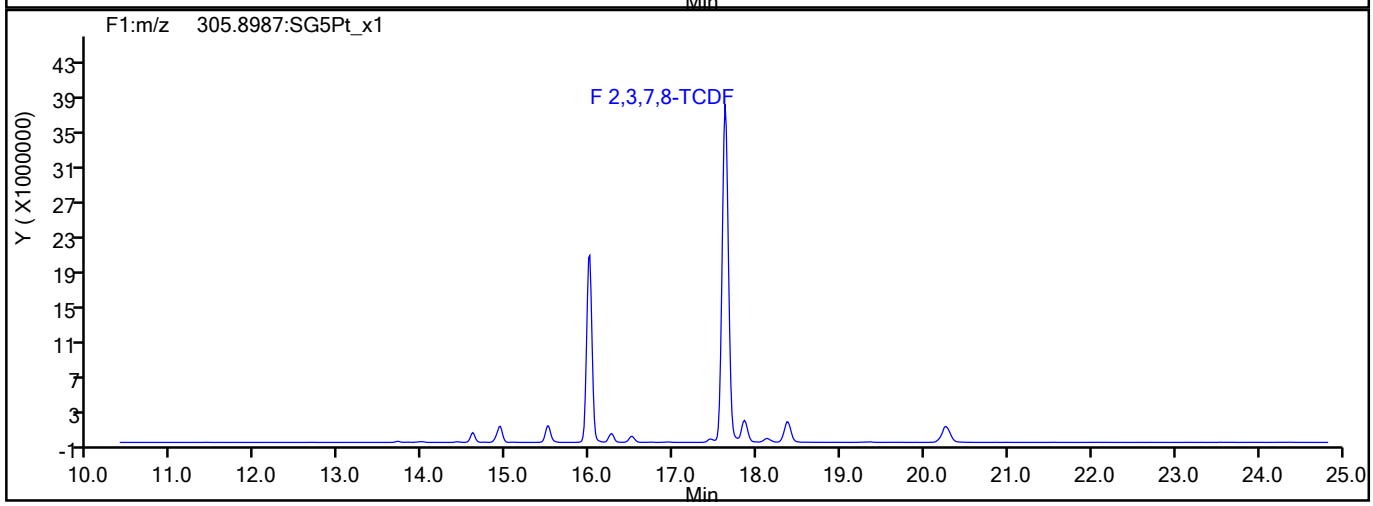

TCDF Interference Mass

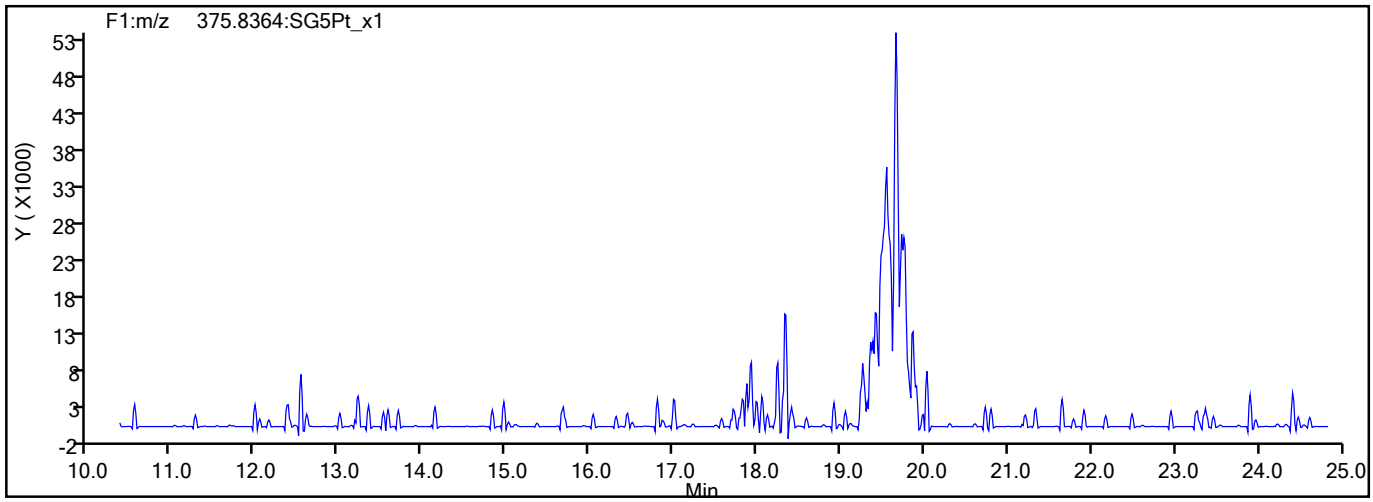

785739

Report Date: 26-Aug-2021 09:30:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_010.d		
Injection Date:	25-Aug-2021 18:43:49	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	519744	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

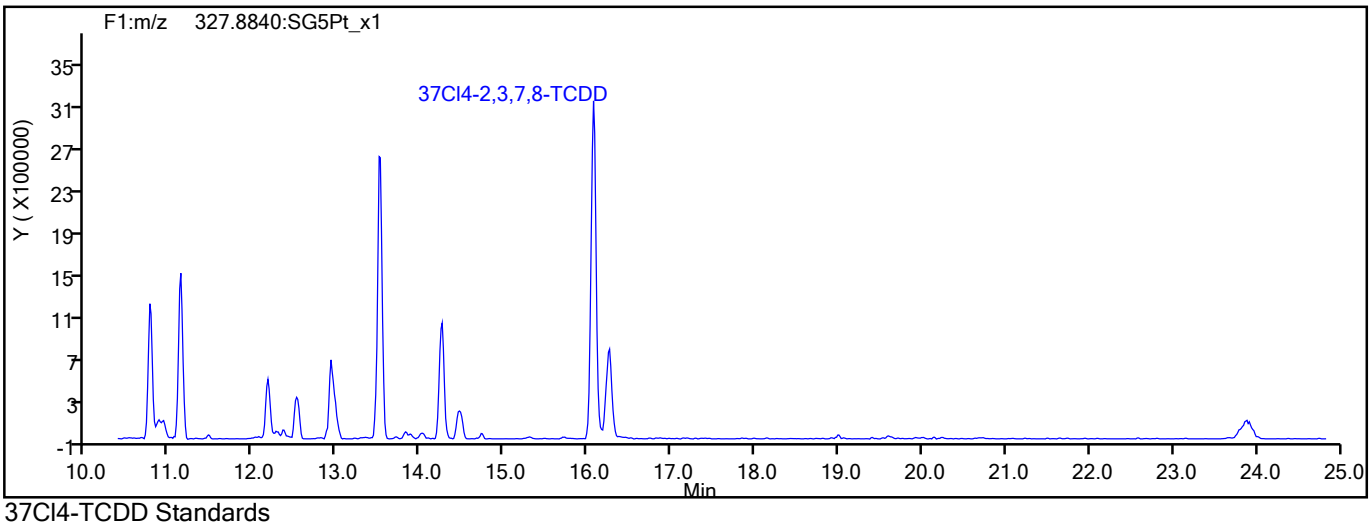

37Cl4-TCDD Standards

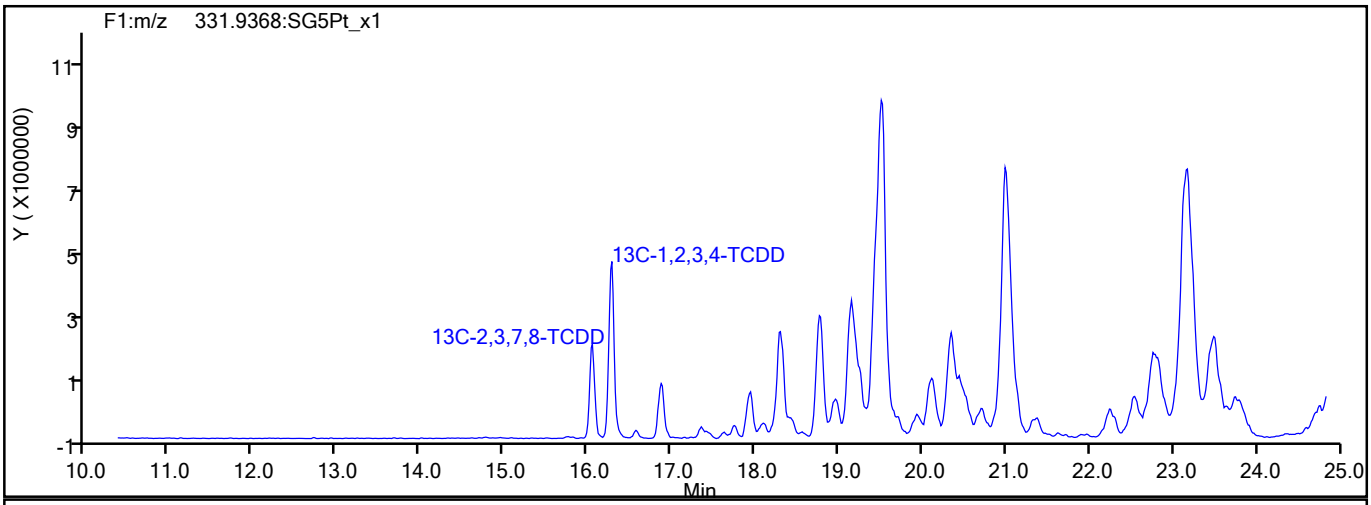

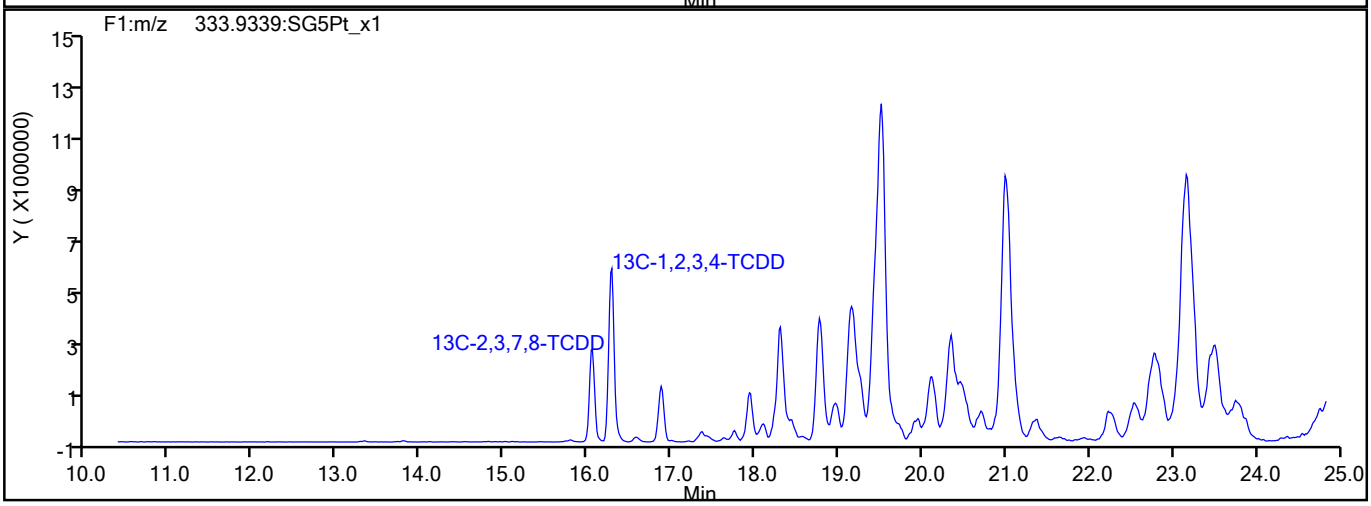

785740

Report Date: 26-Aug-2021 09:30:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_010.d		
Injection Date:	25-Aug-2021 18:43:49	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-DUP-8		
Worklist#:	519744	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

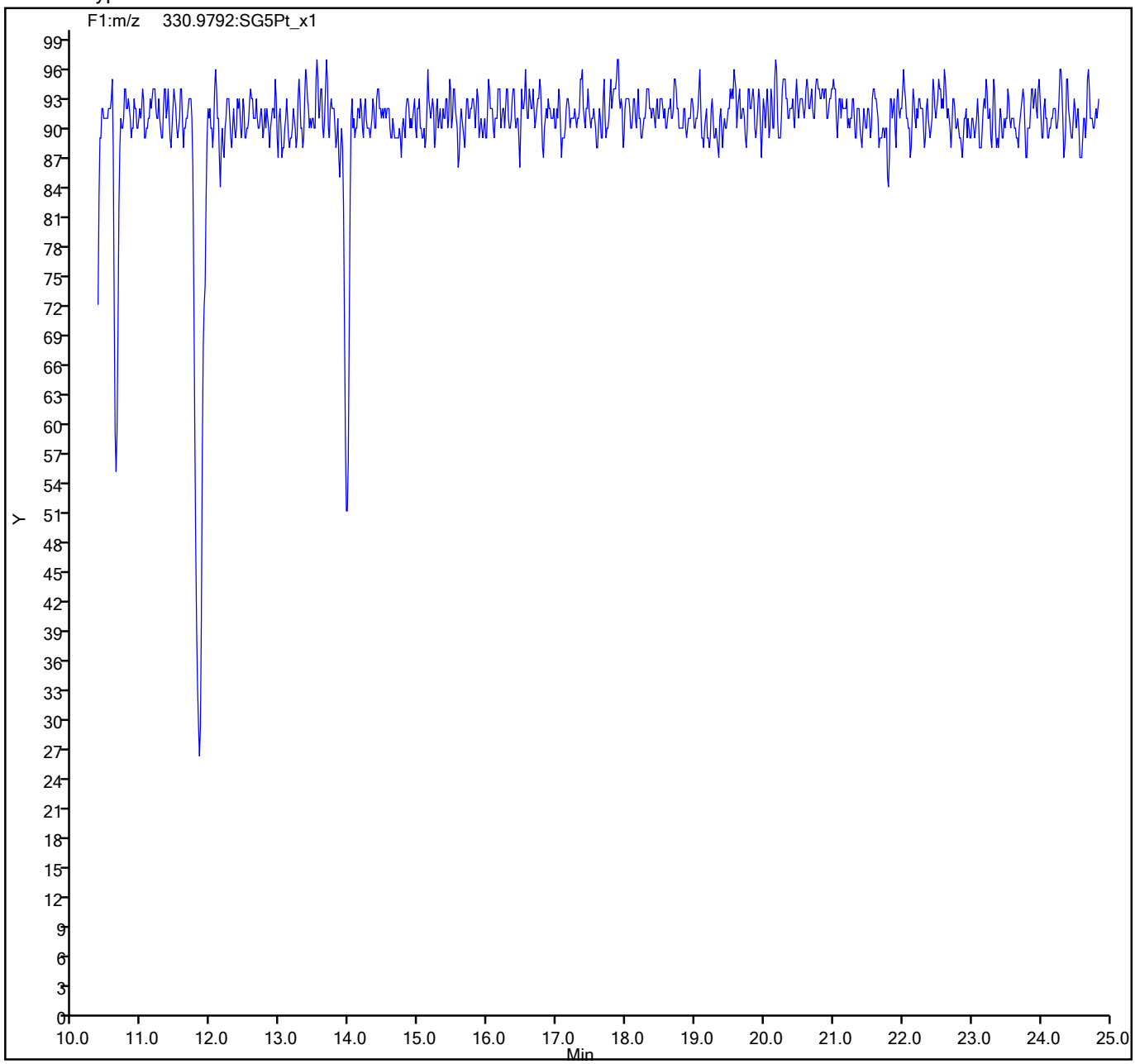

785741

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

785744

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

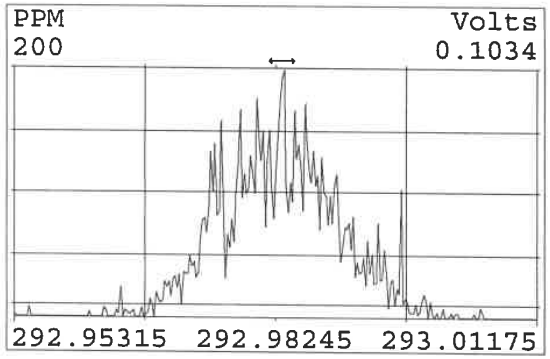

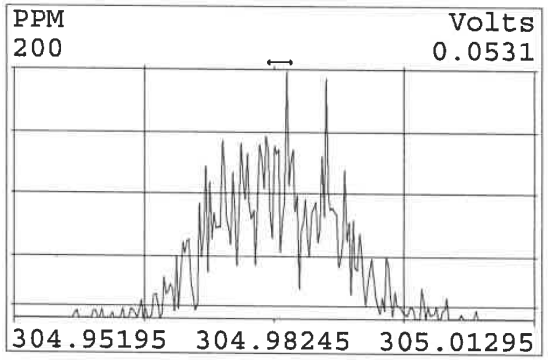

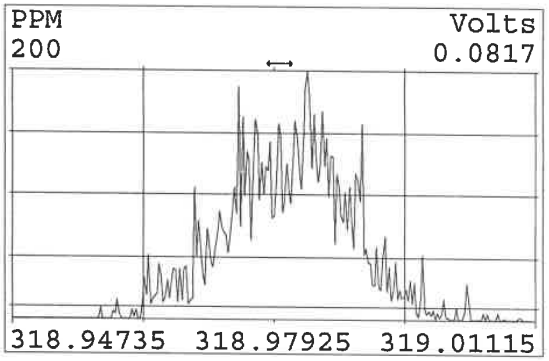

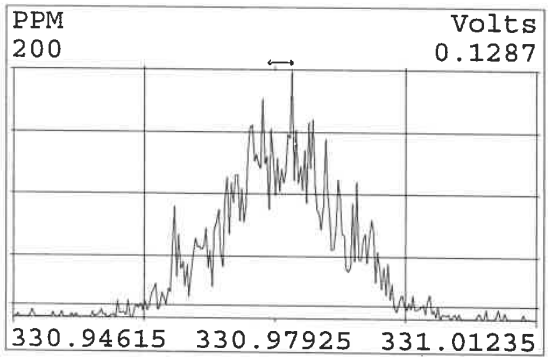

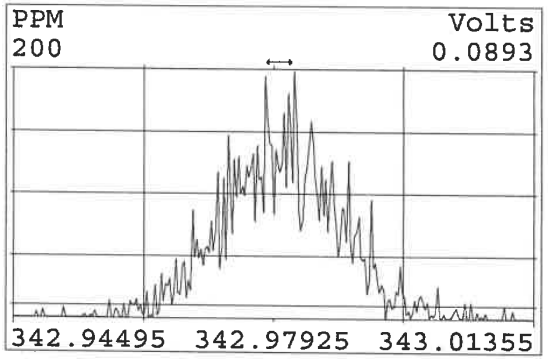

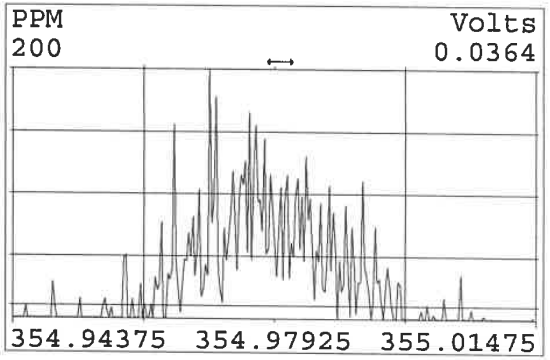

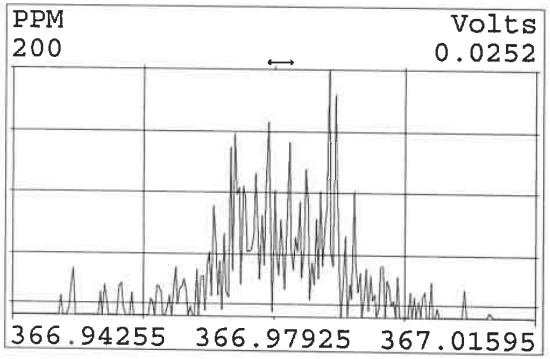

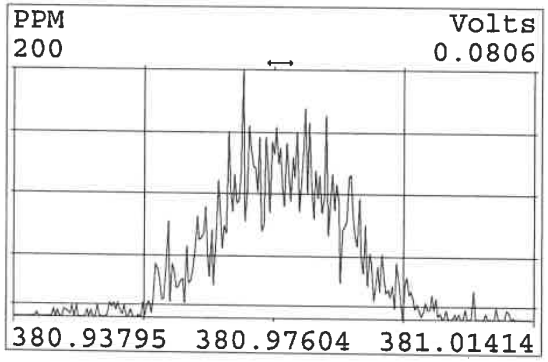

785745

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

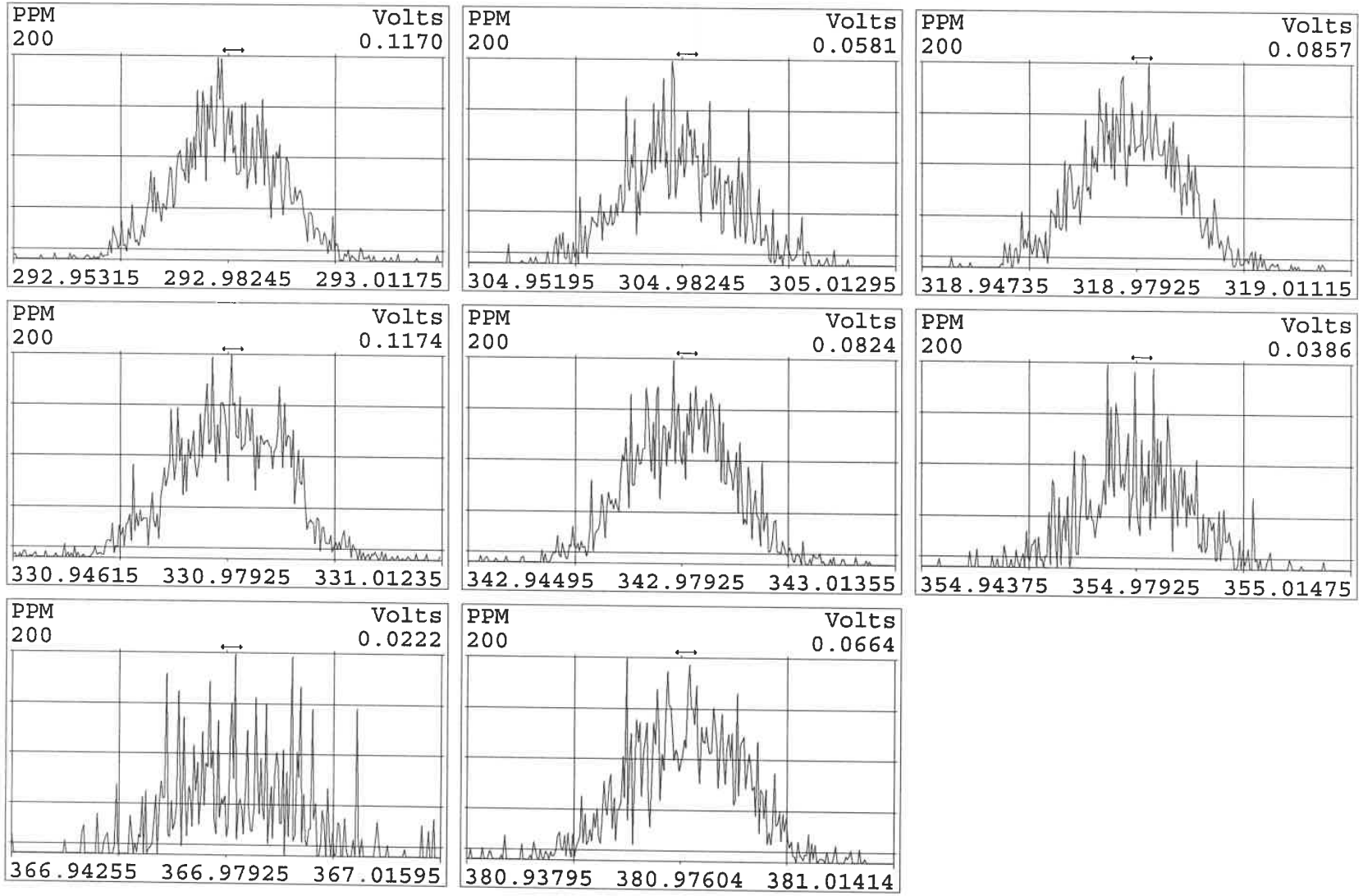

785746

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

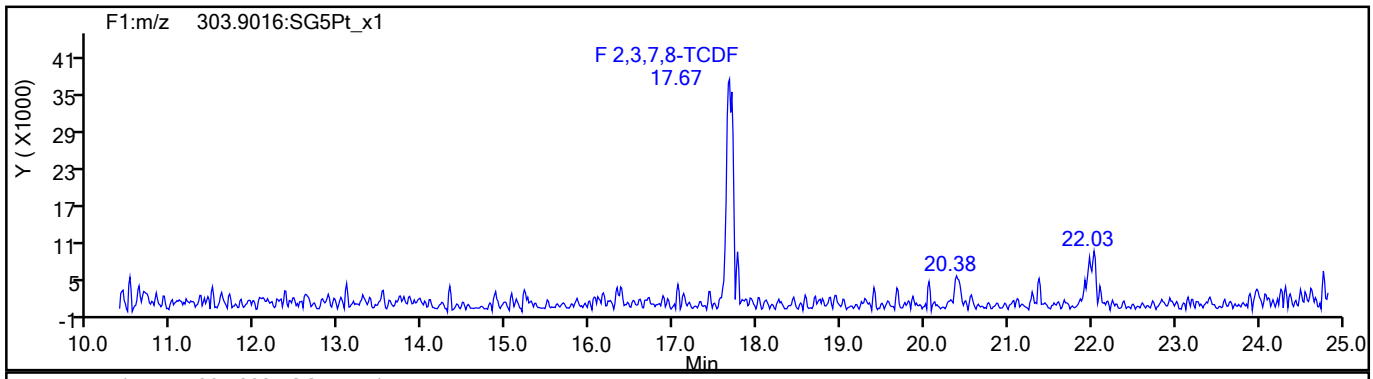

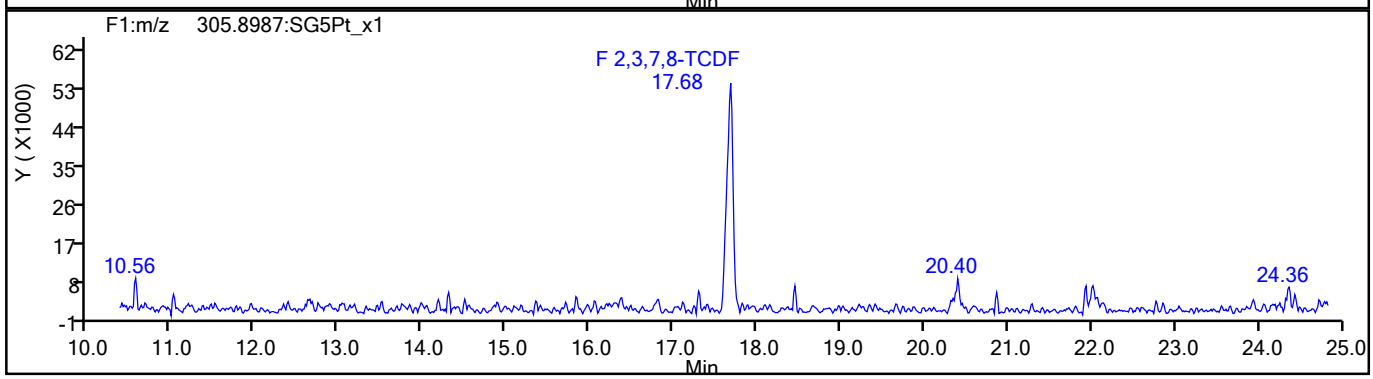

TCDF Standards

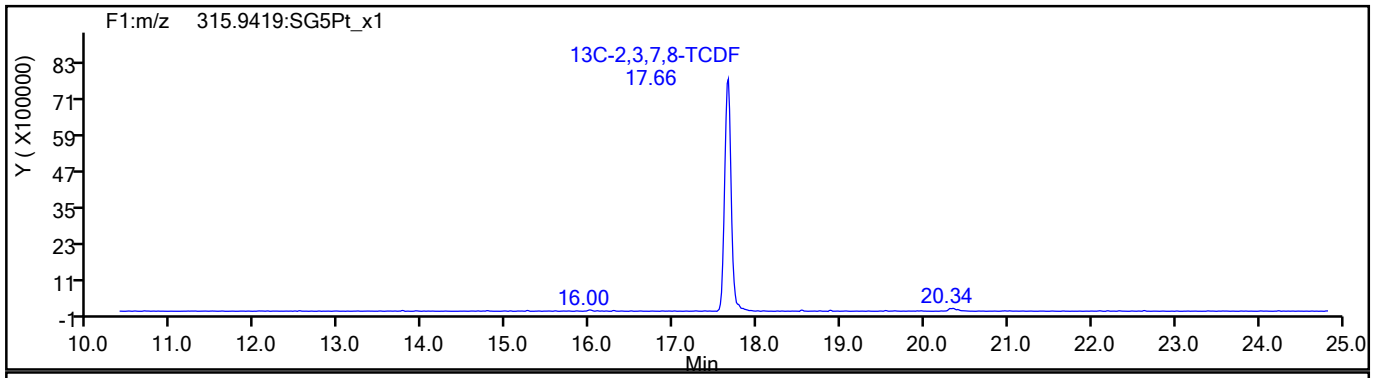

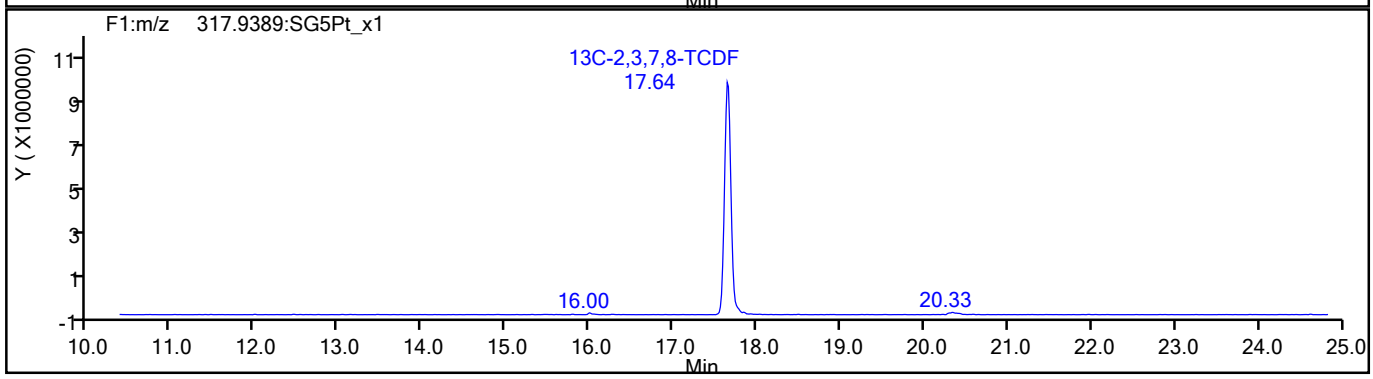

785749

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

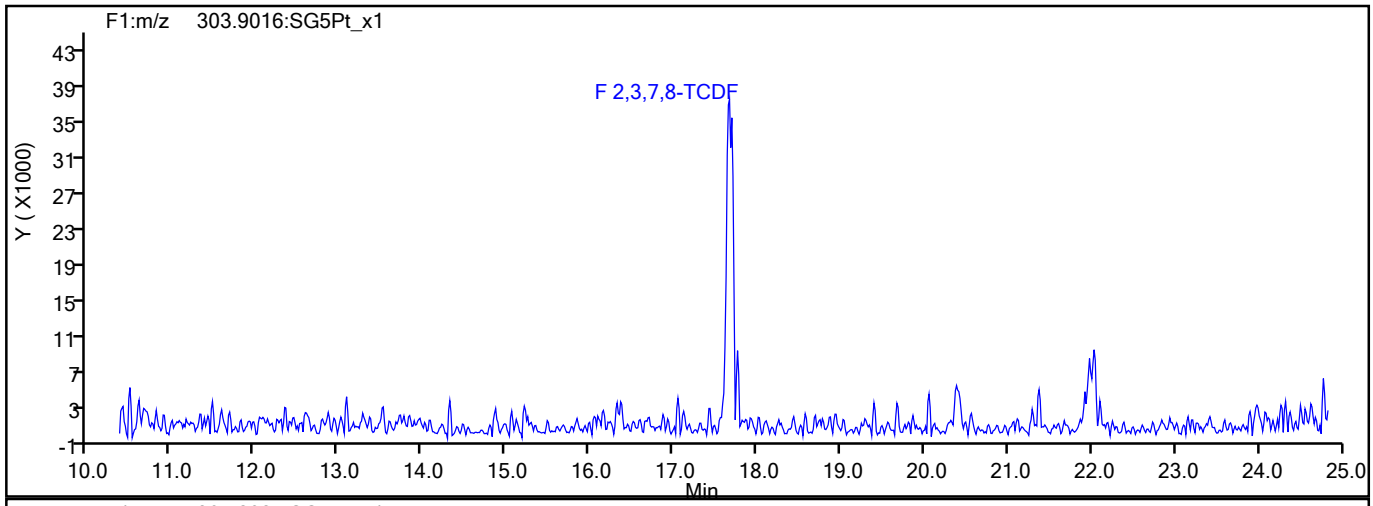

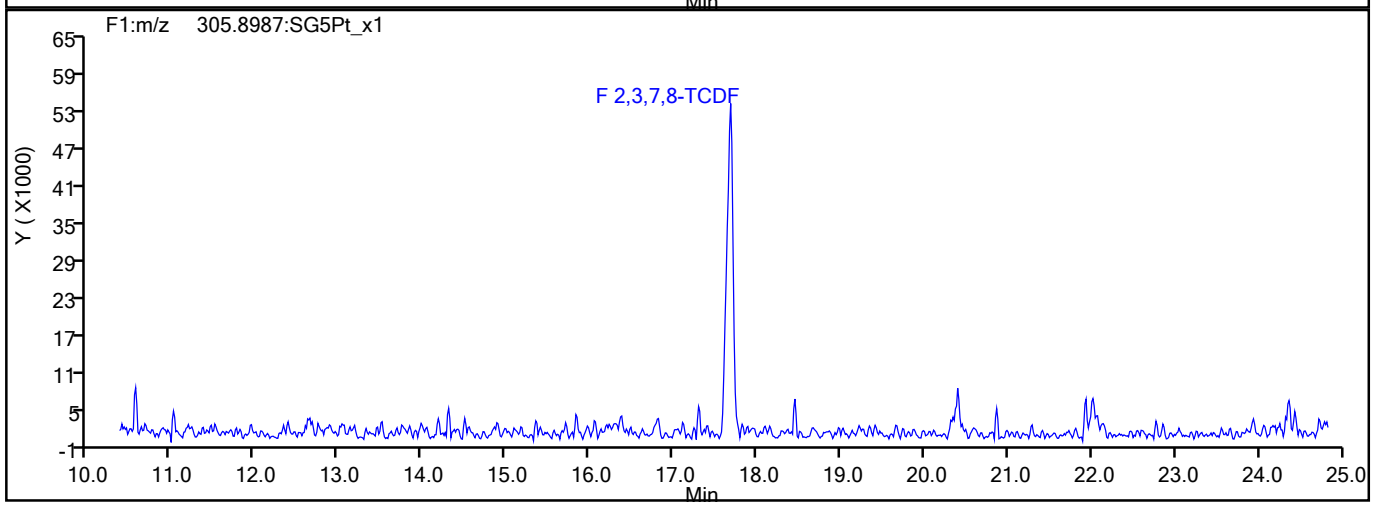

TCDF Interference Mass

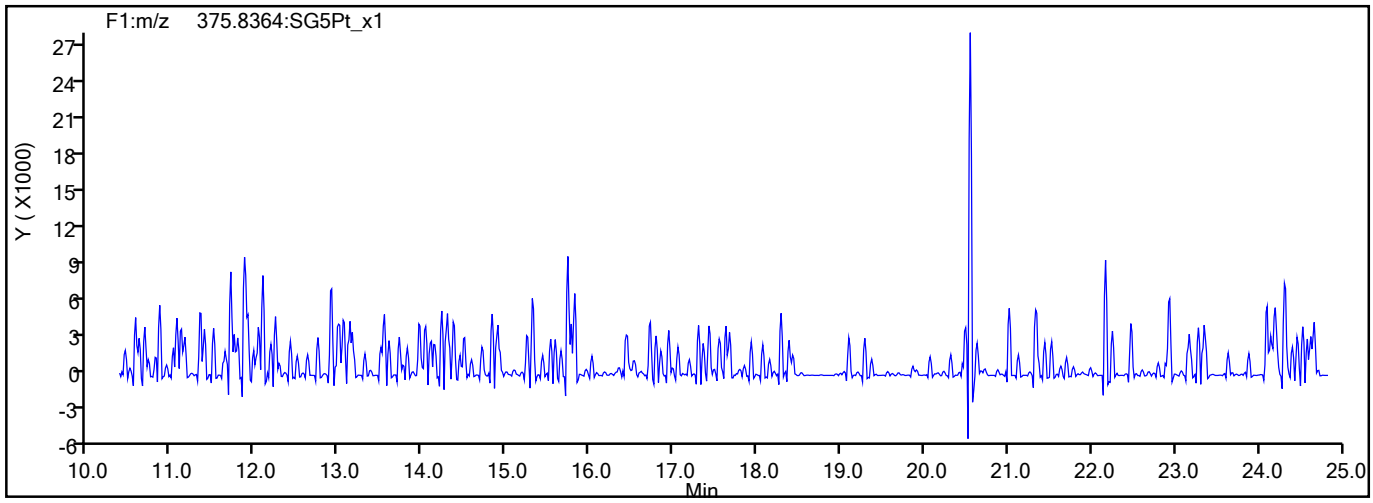

785750

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

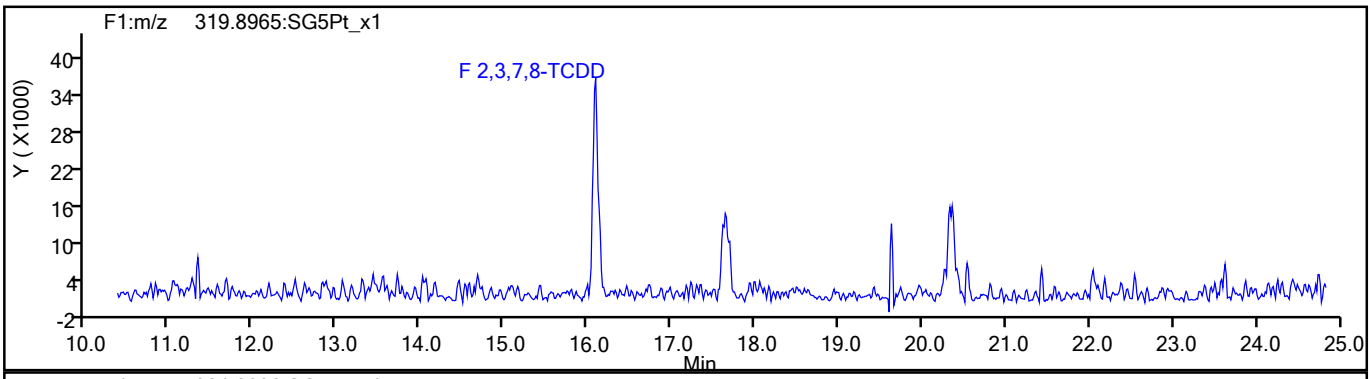

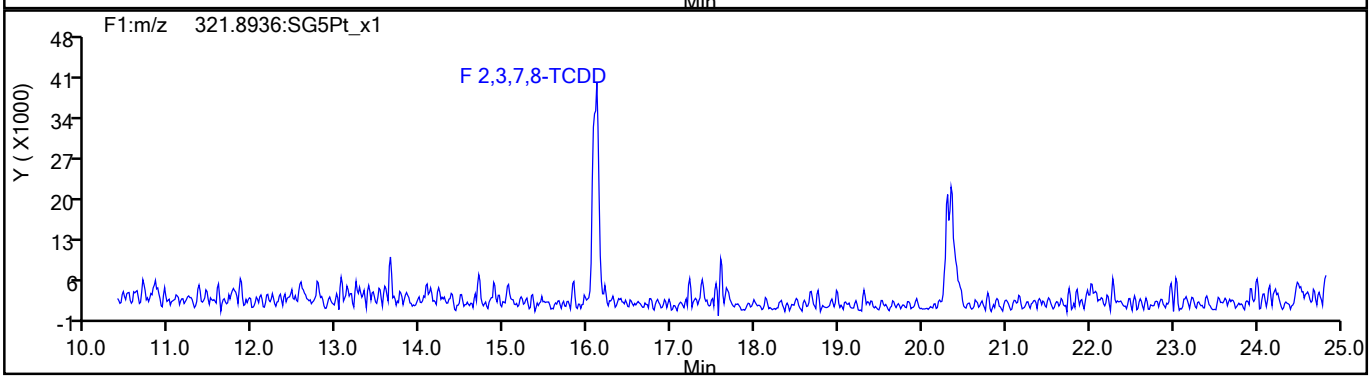

TCDD Standards

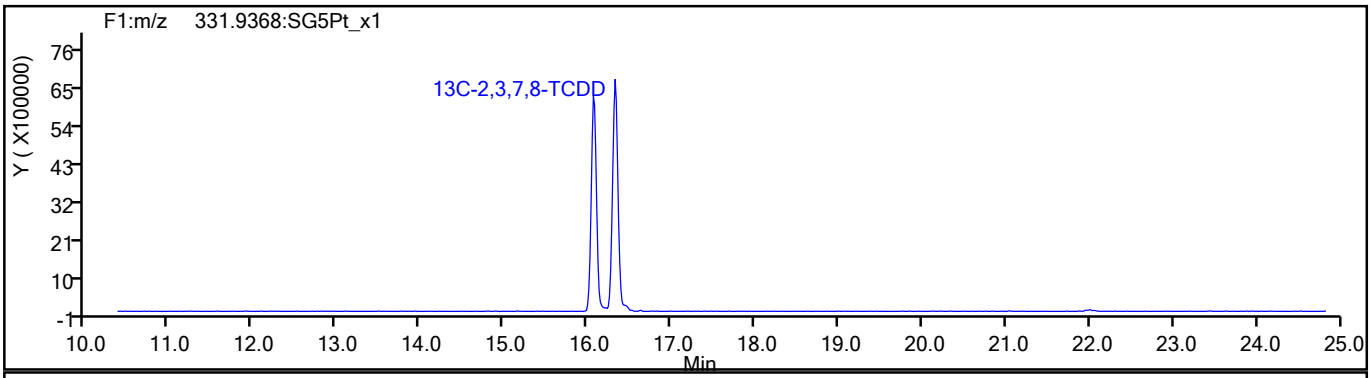

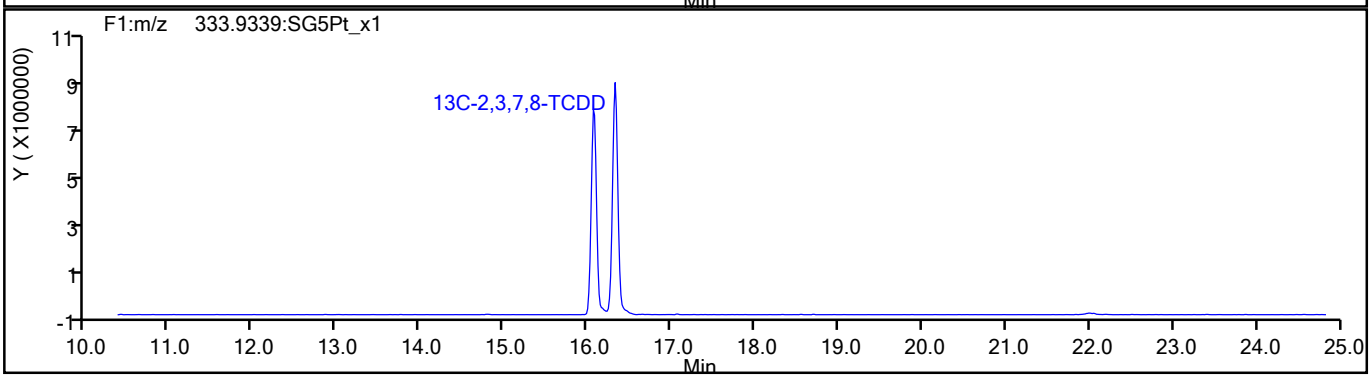

785751

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

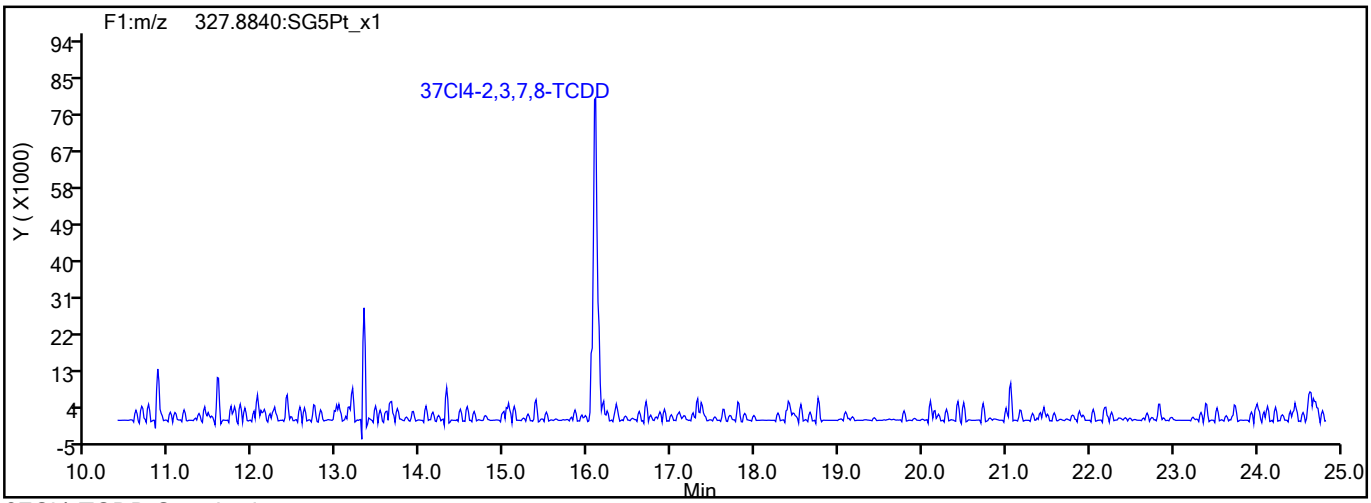

37Cl4-TCDD Standards

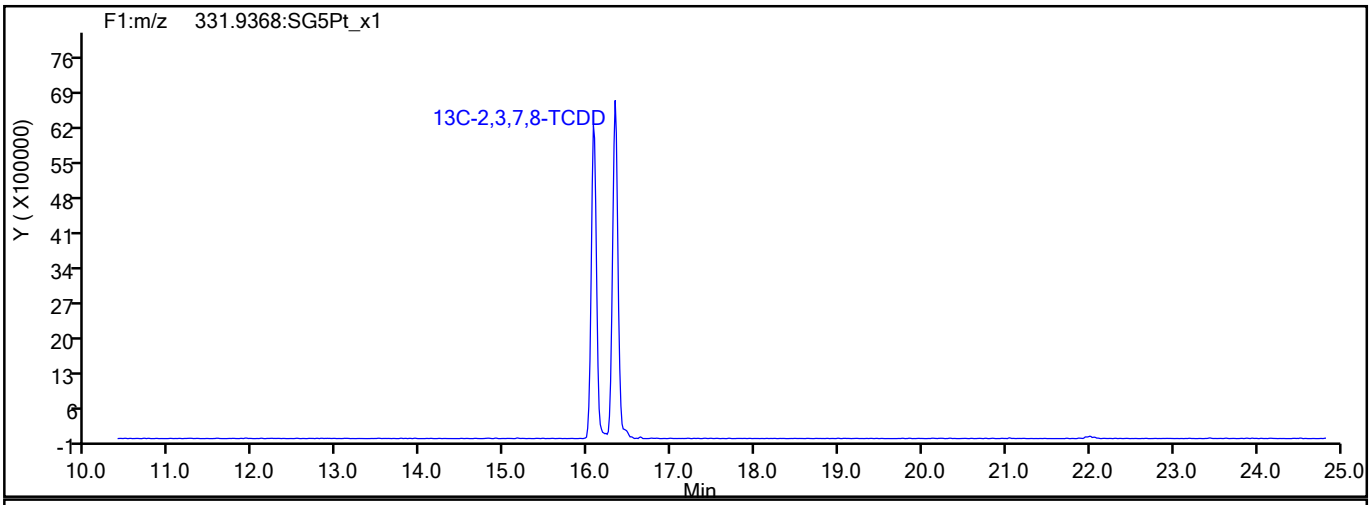

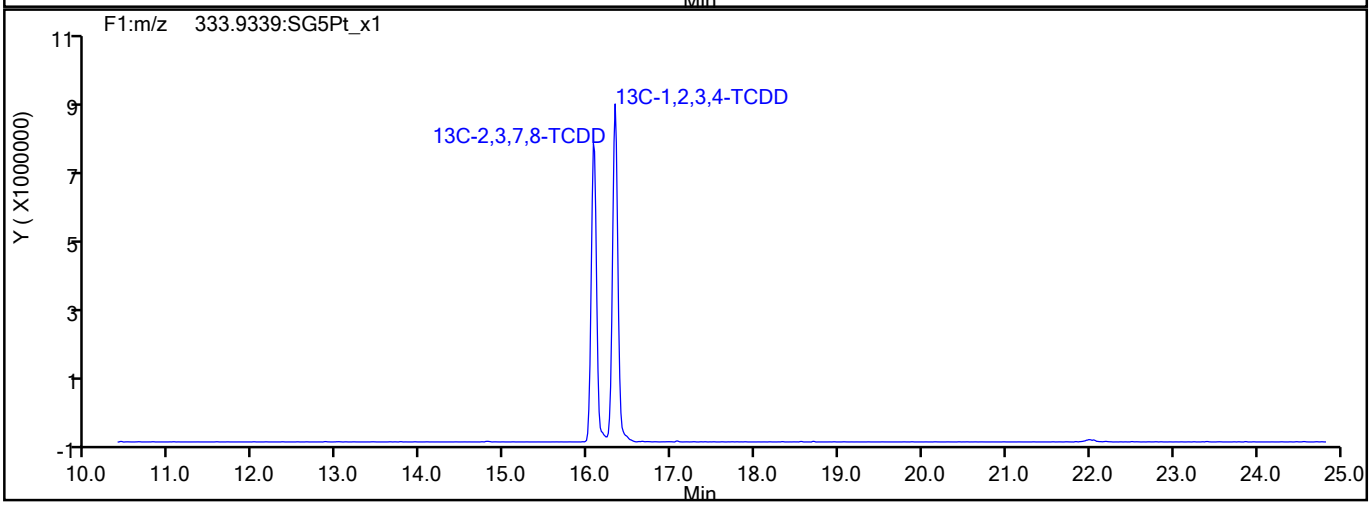

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

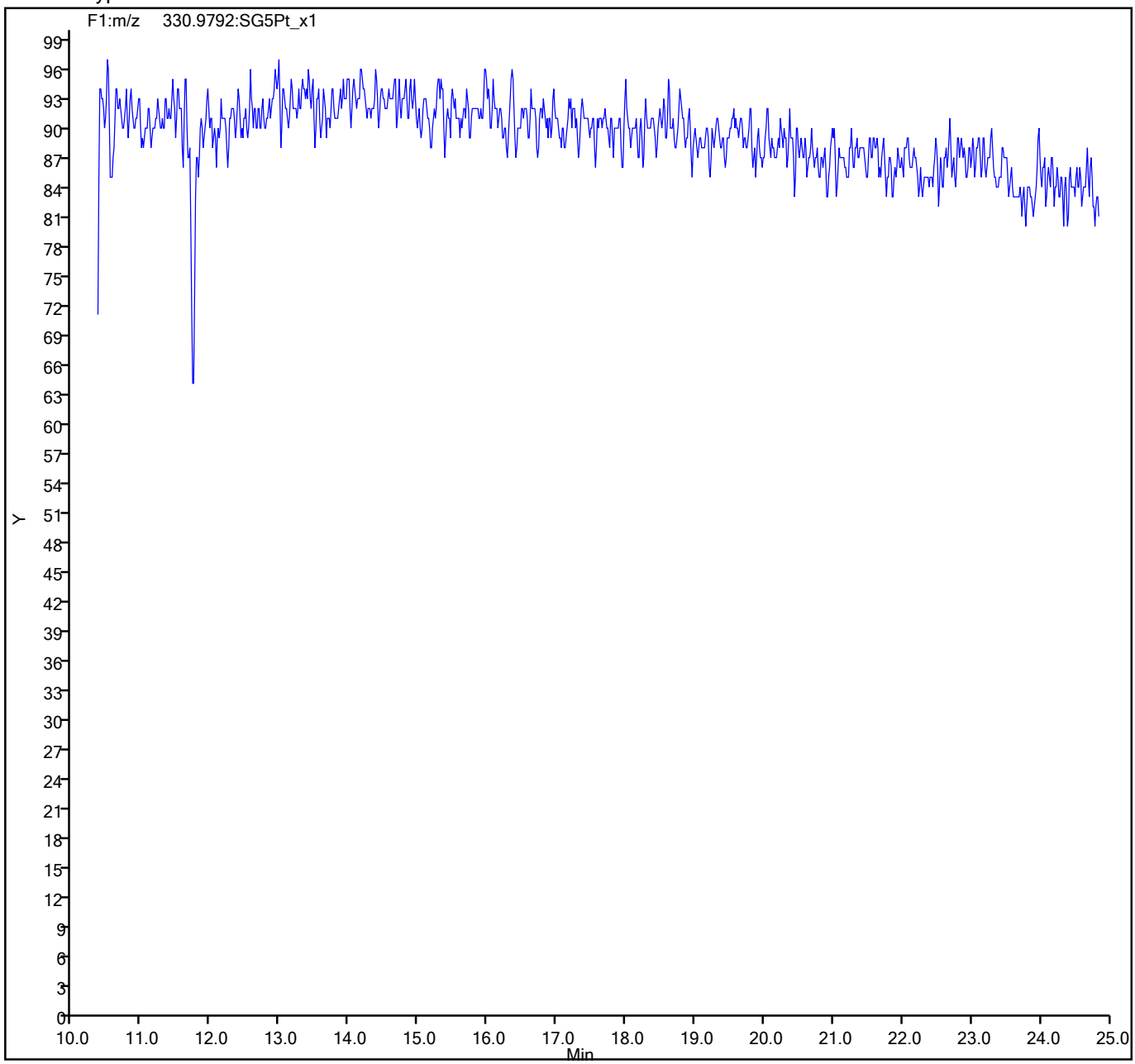

785753

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags
Review Flags
M - Manually Integrated

Reagents:
HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

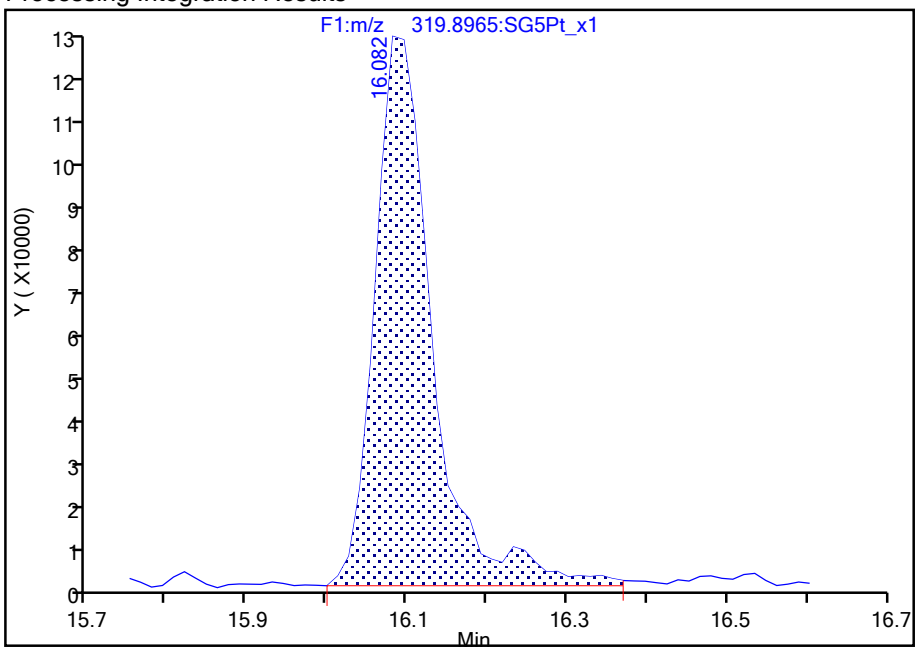

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

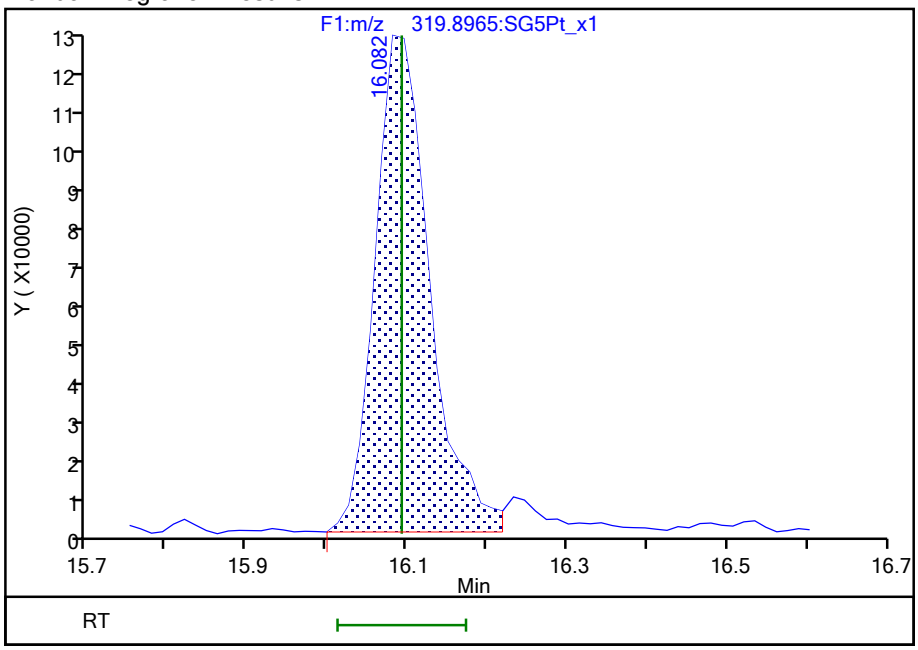

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

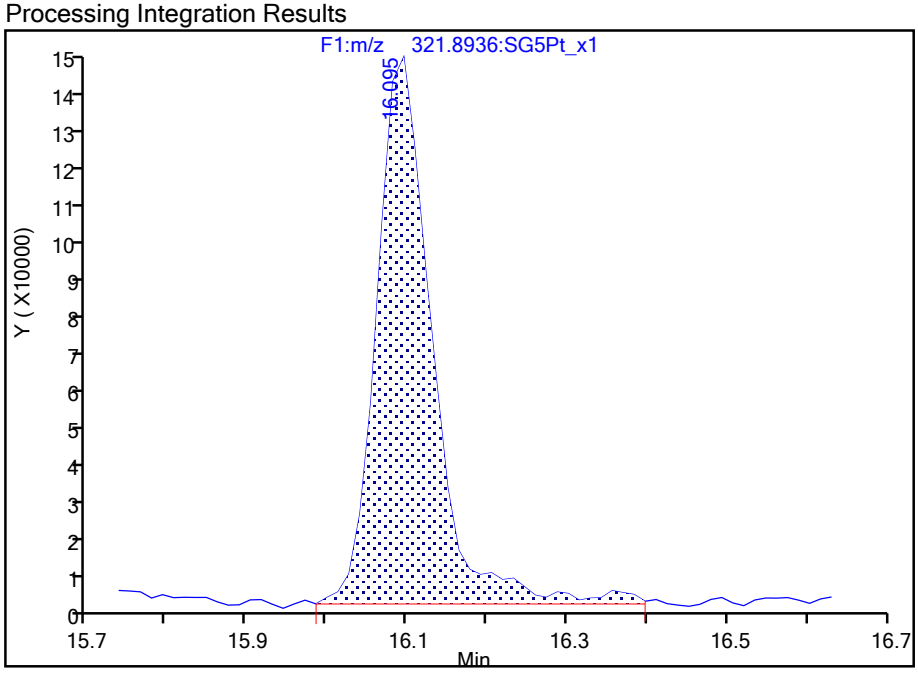

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

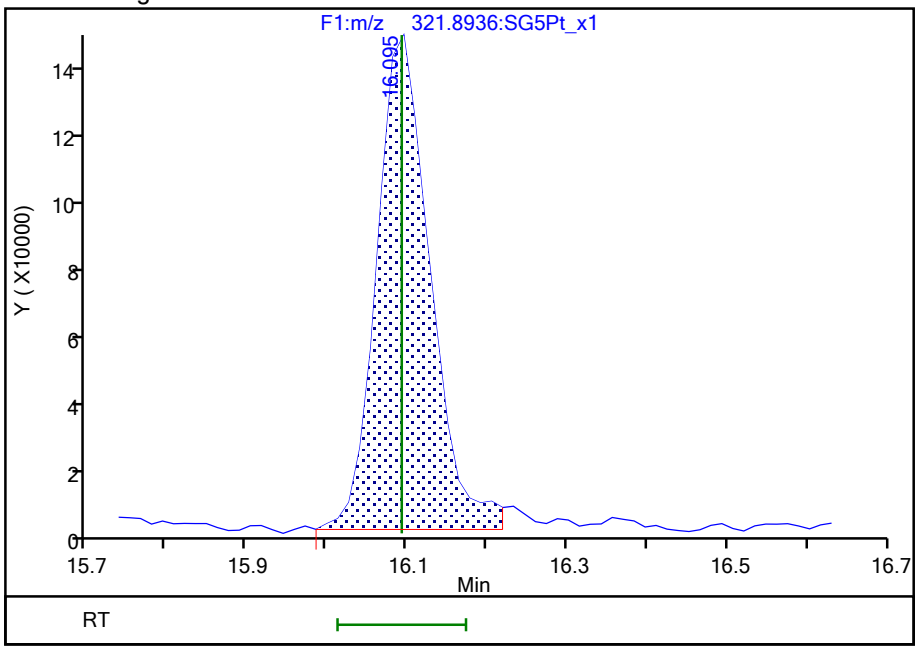

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

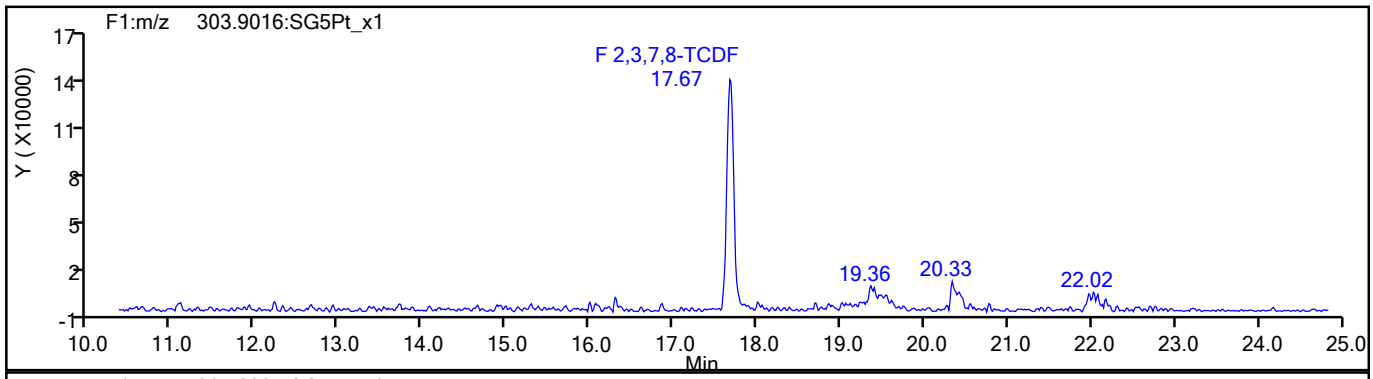

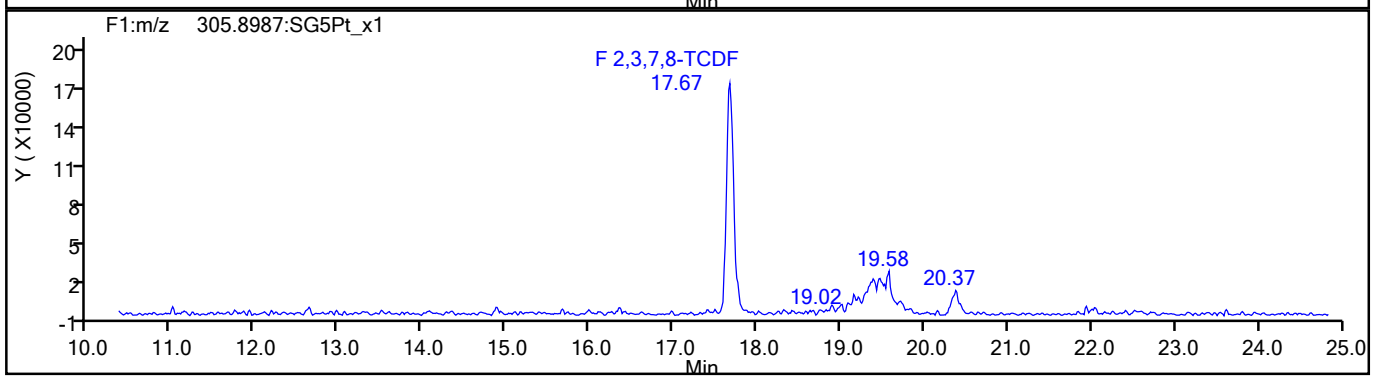

TCDF Standards

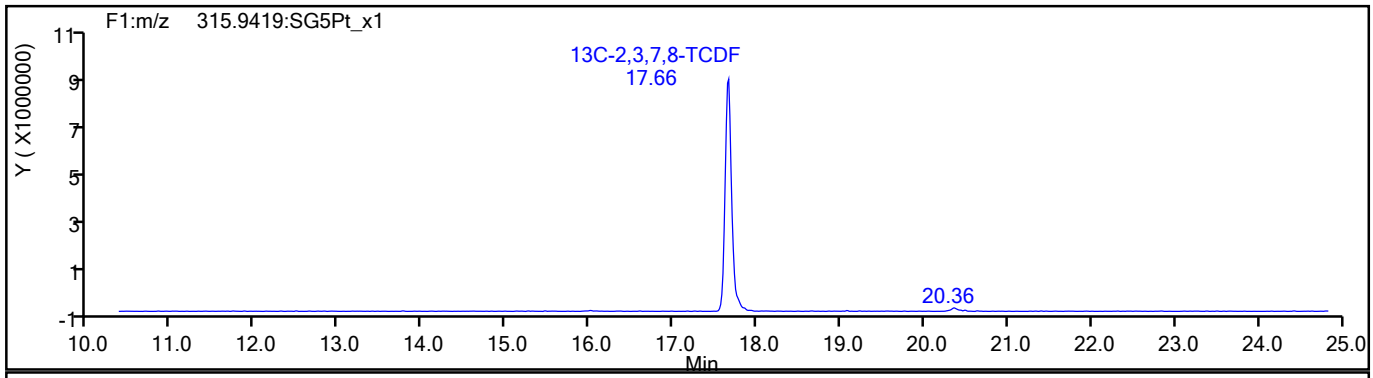

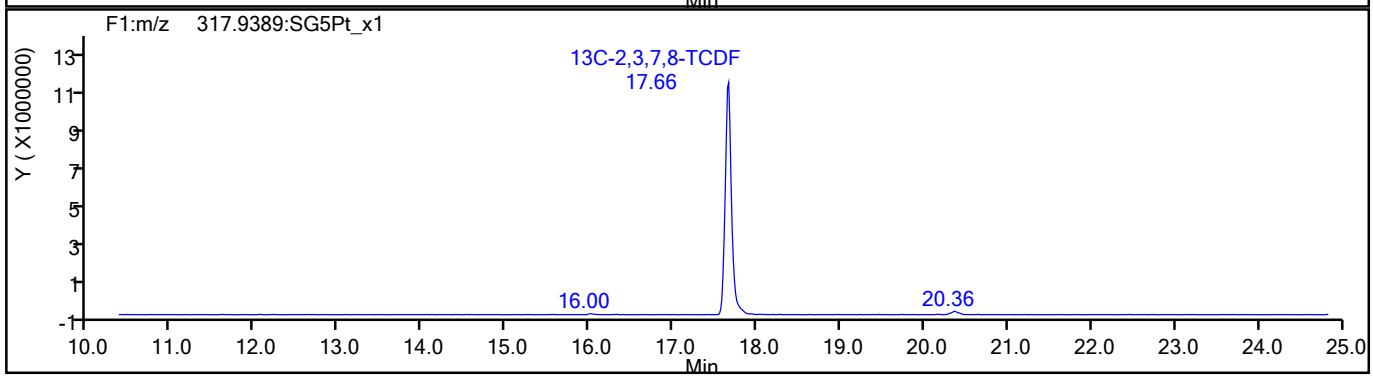

785758

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

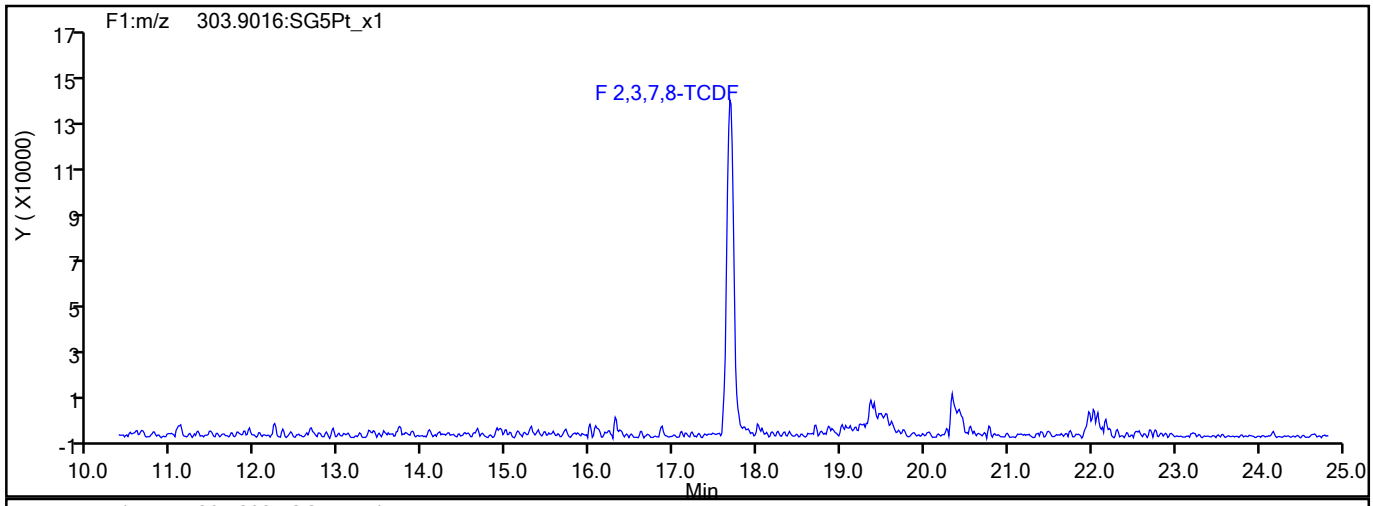

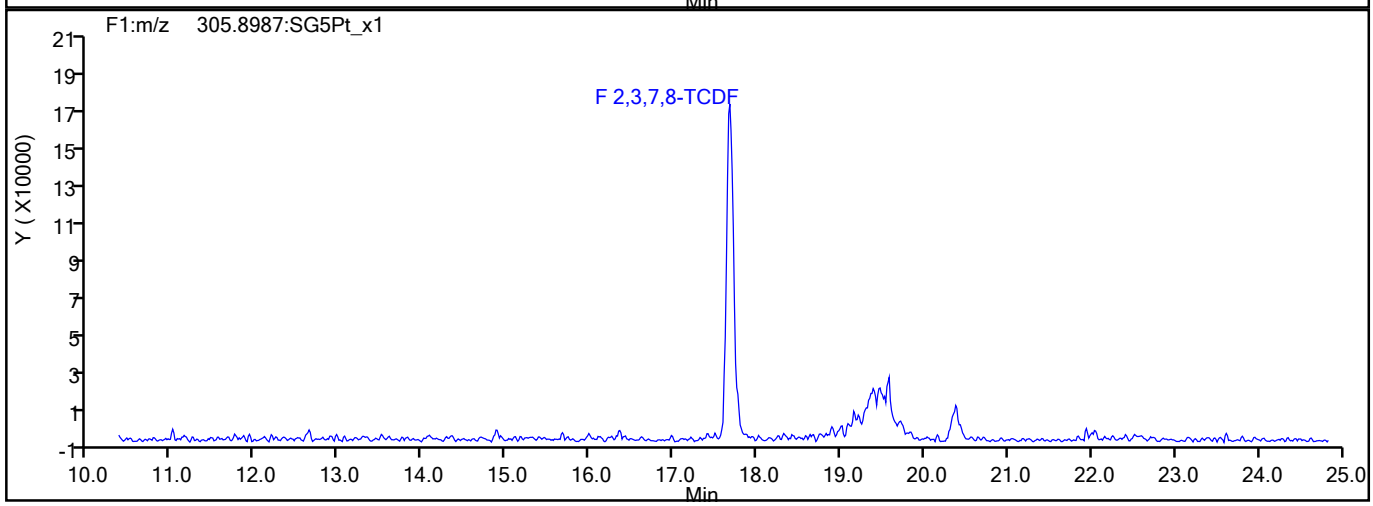

TCDF Interference Mass

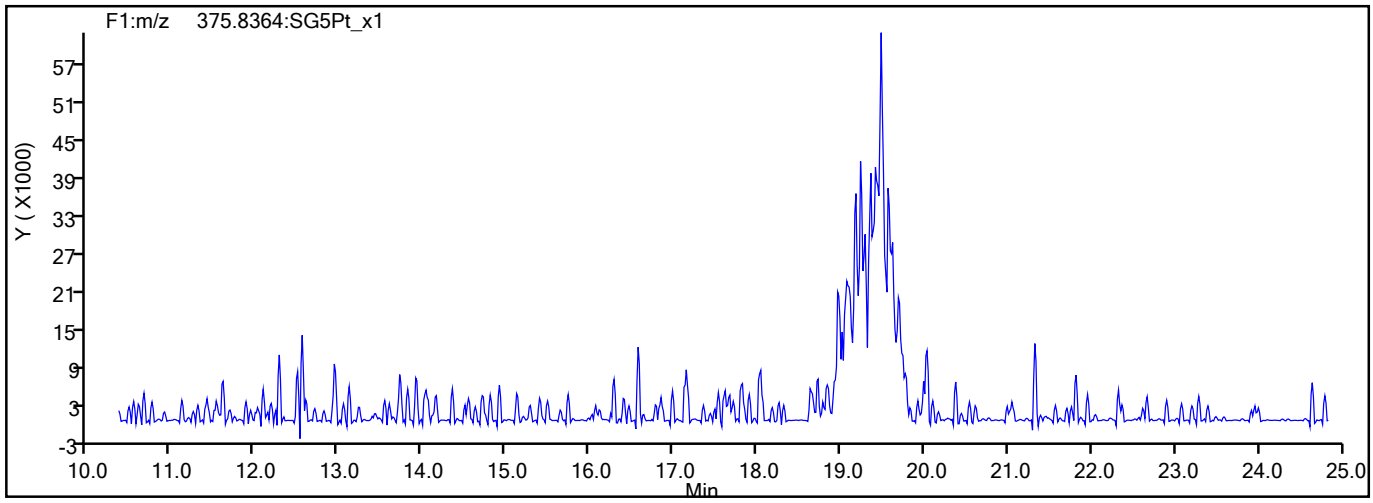

785759

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

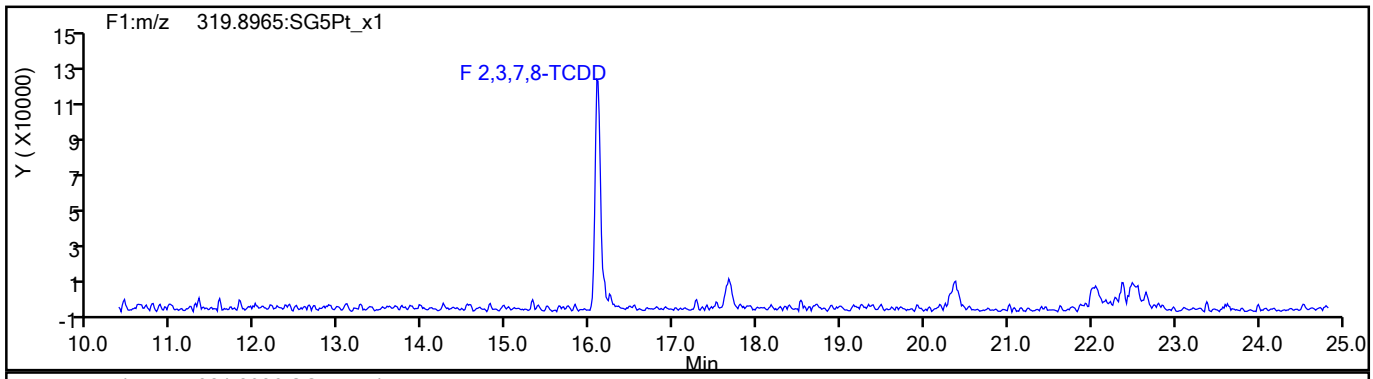

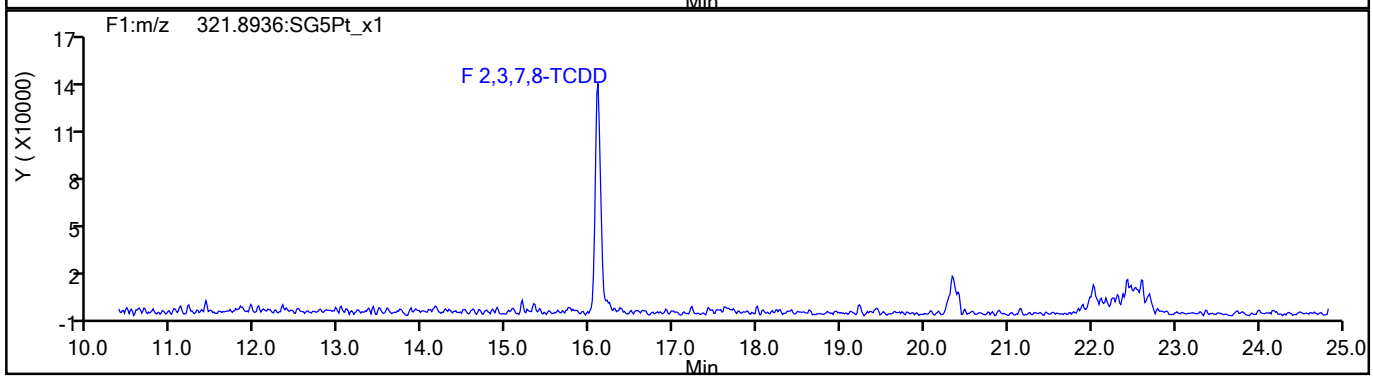

TCDD Standards

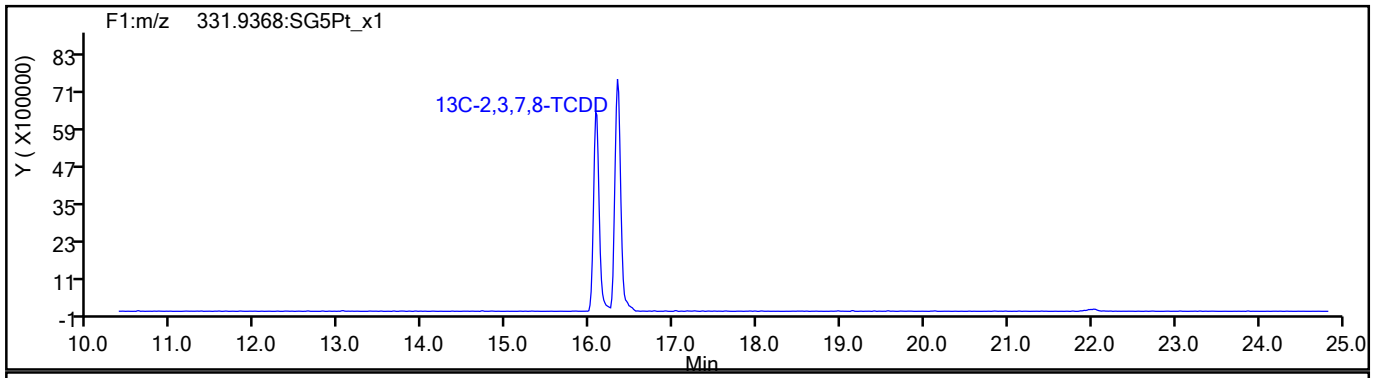

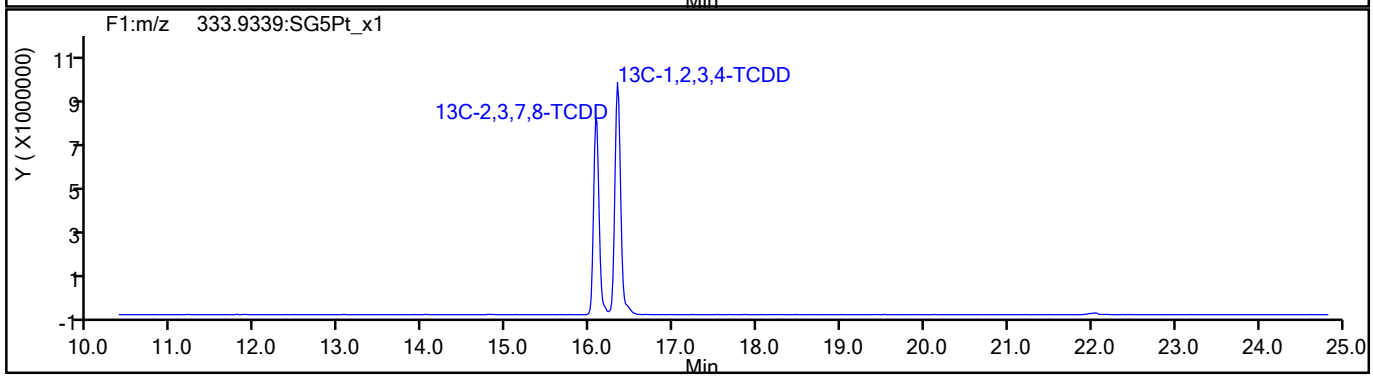

785760

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

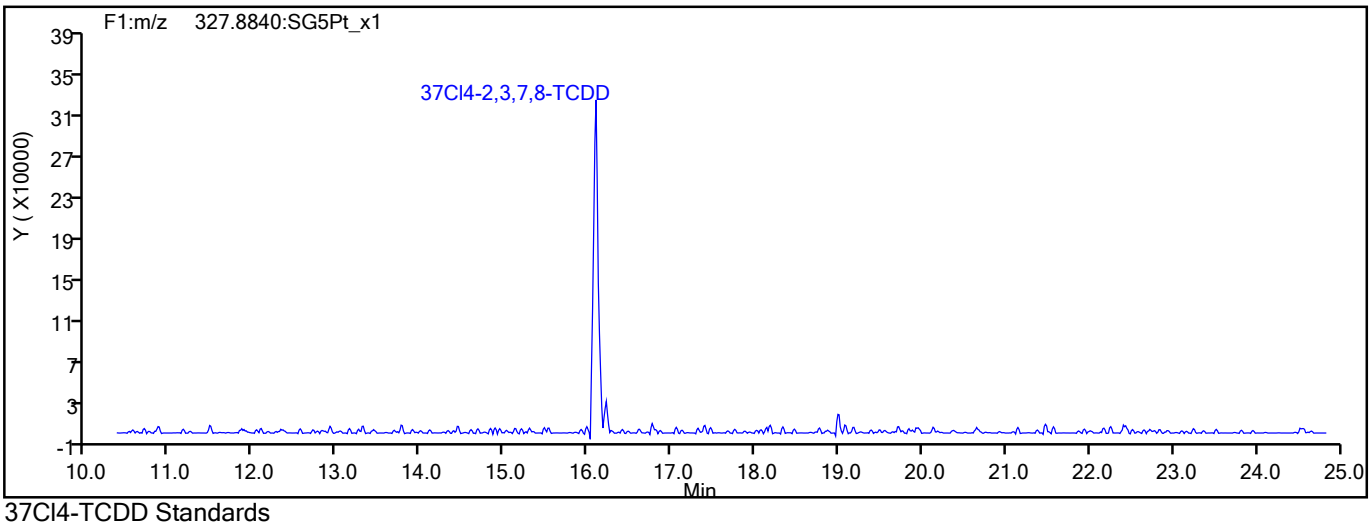

37Cl4-TCDD Standards

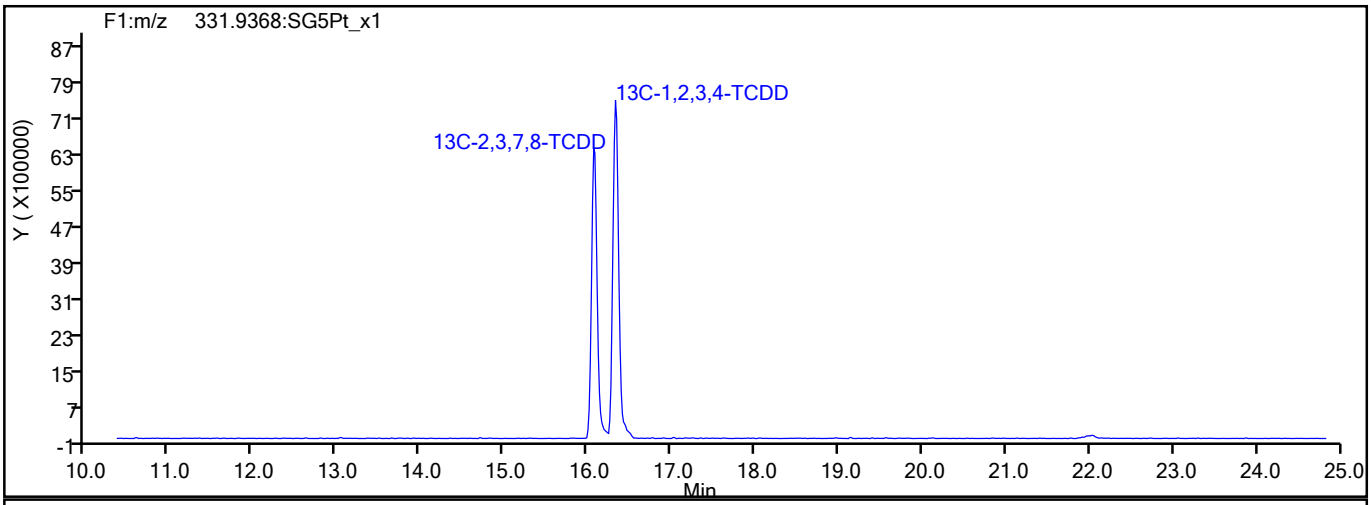

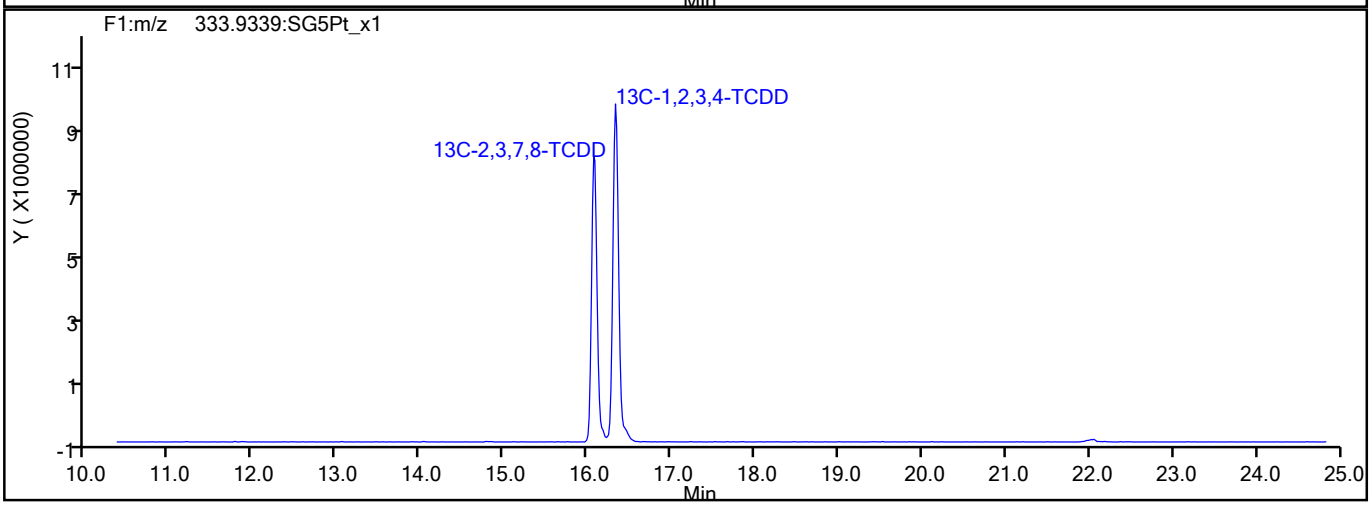

785761

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

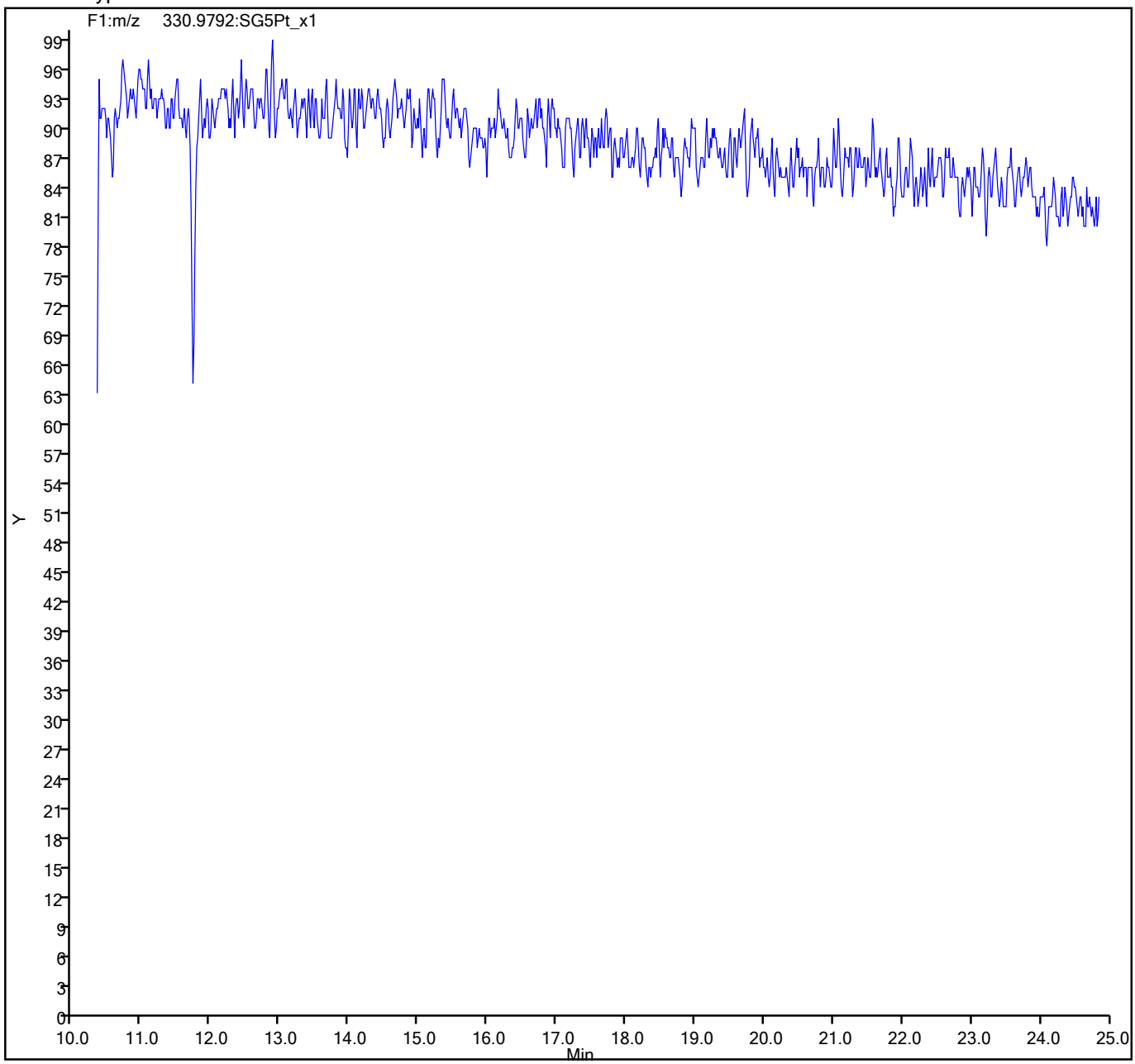

785762

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

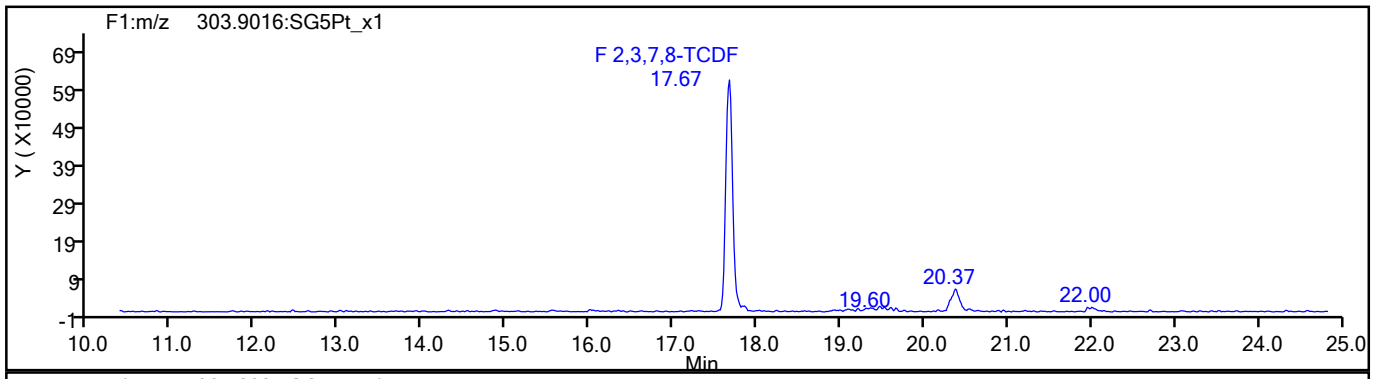

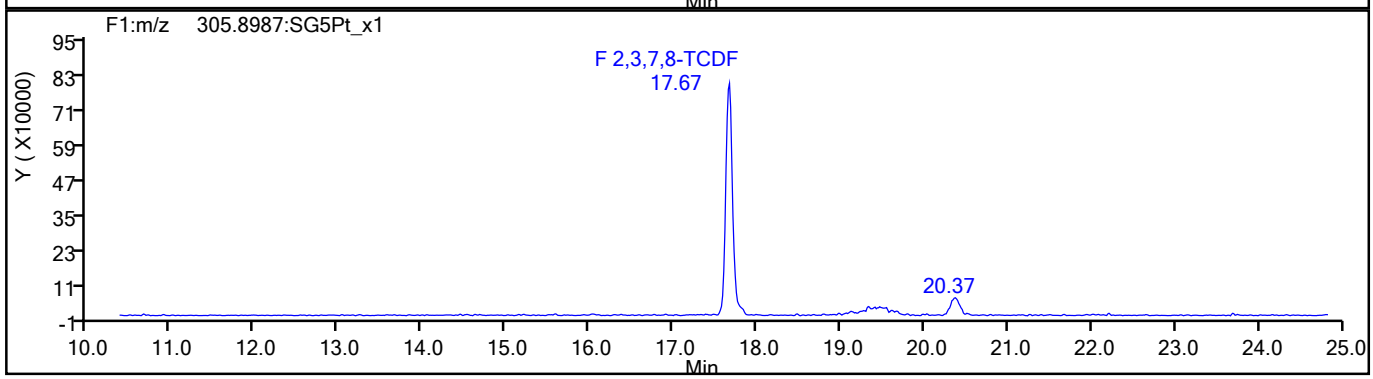

TCDF Standards

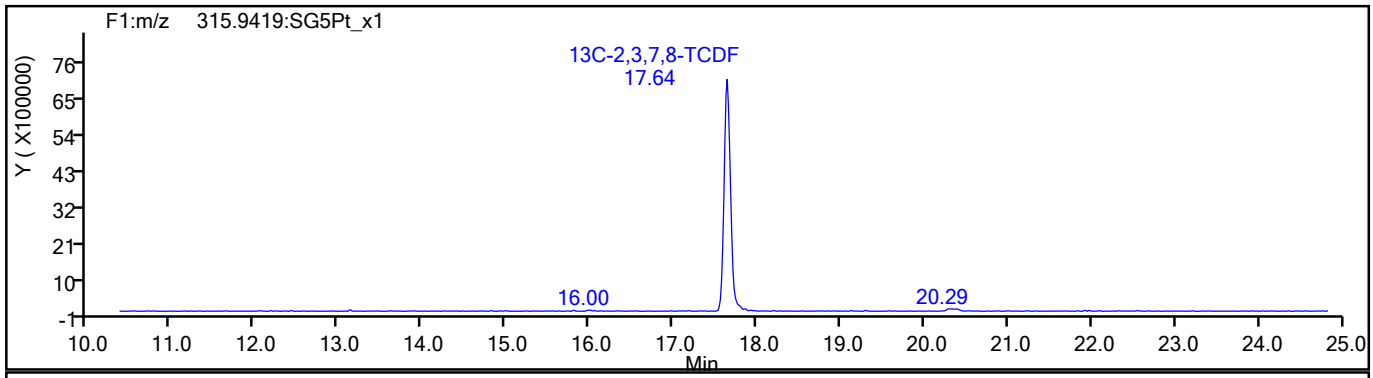

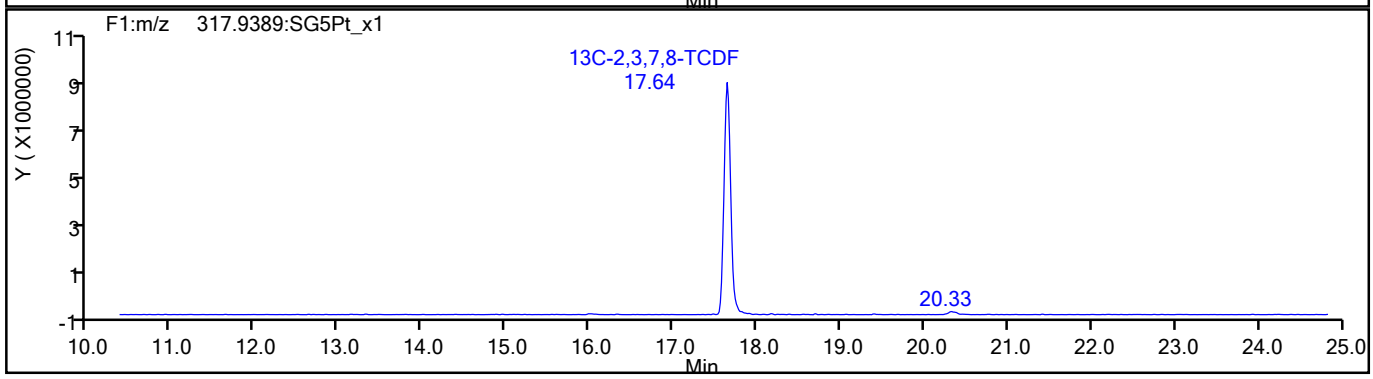

785765

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

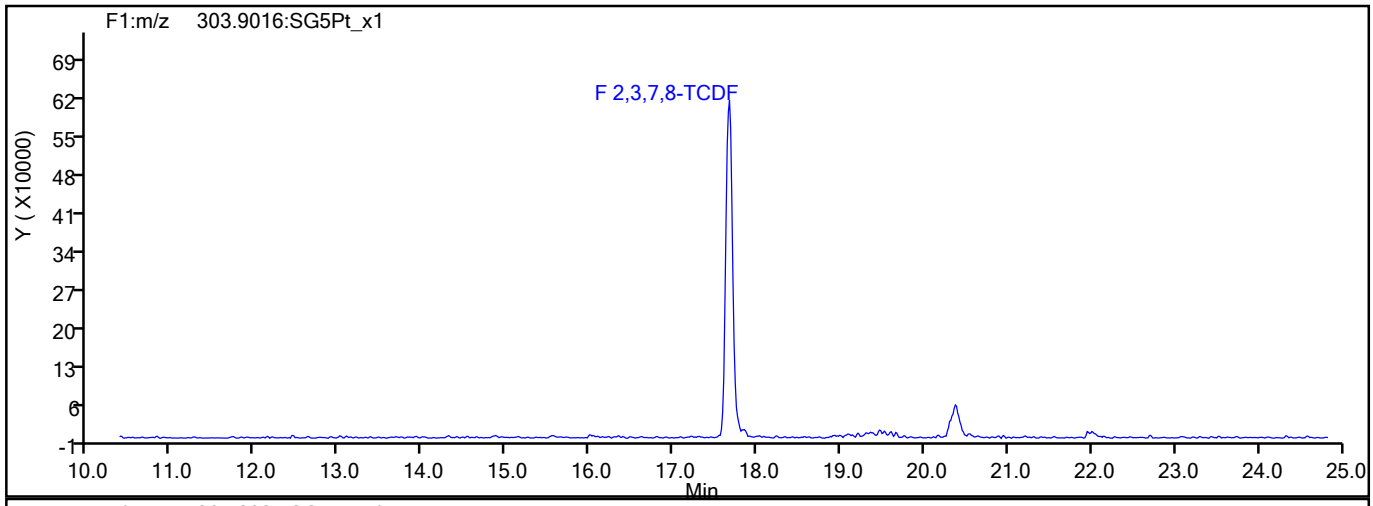

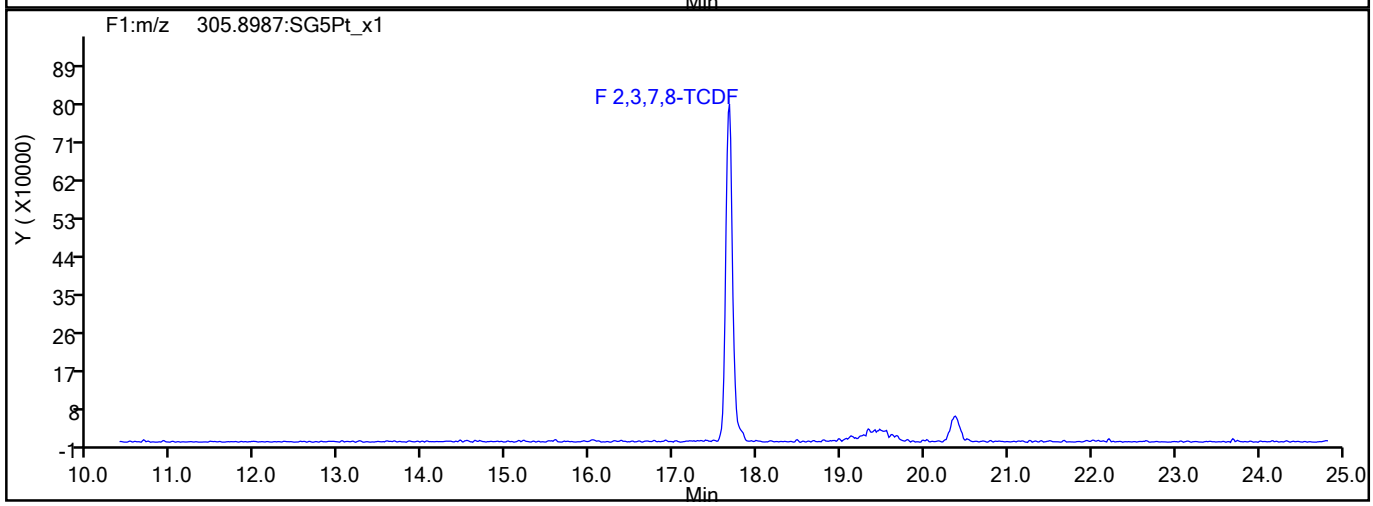

TCDF Interference Mass

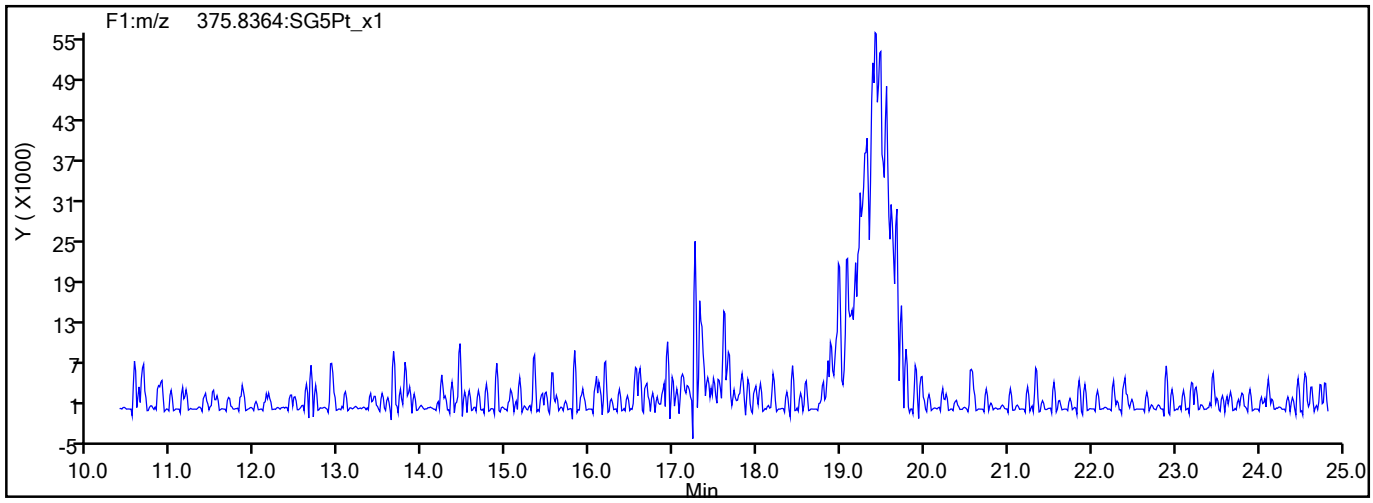

785766

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

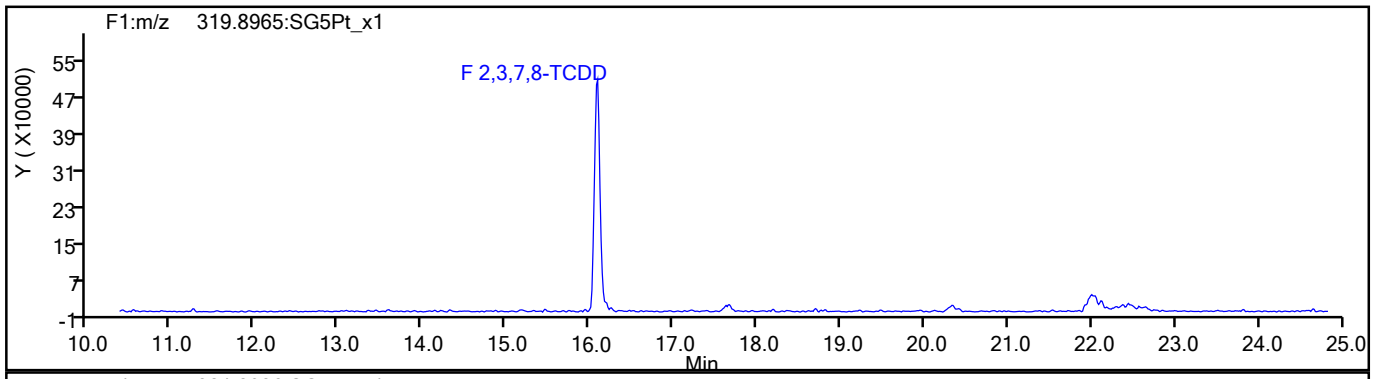

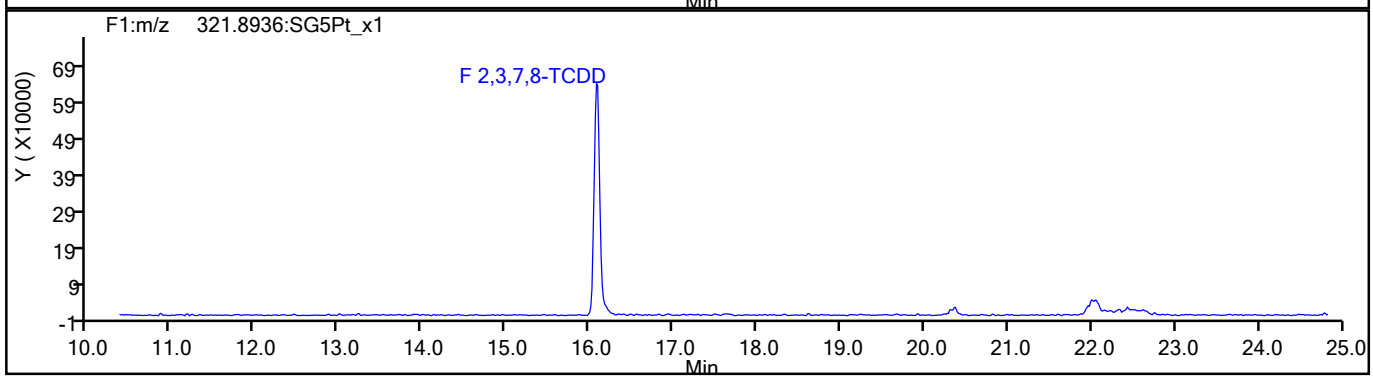

TCDD Standards

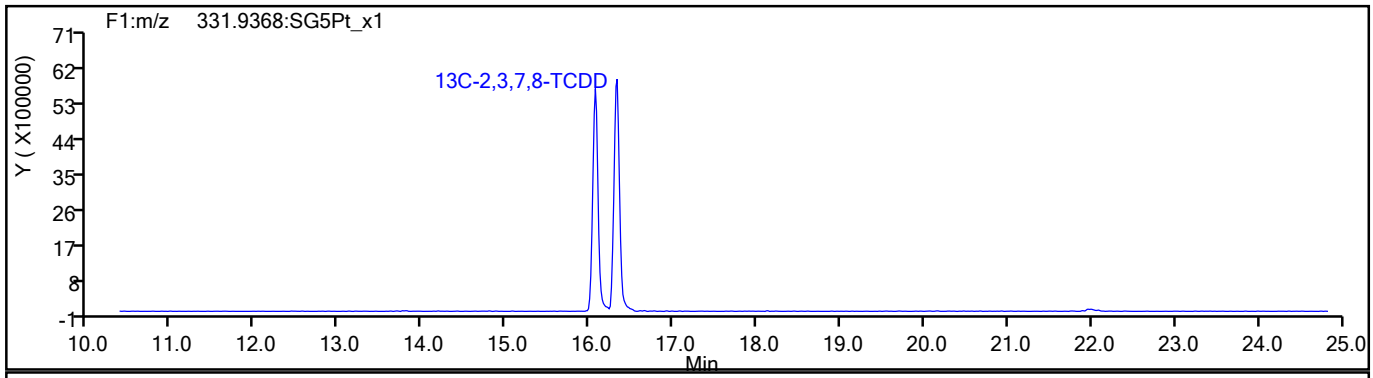

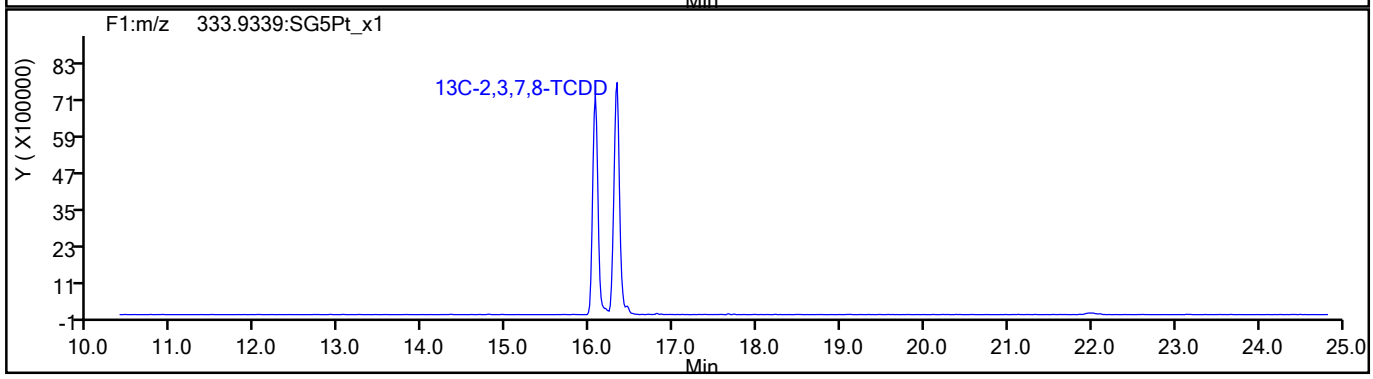

785767

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

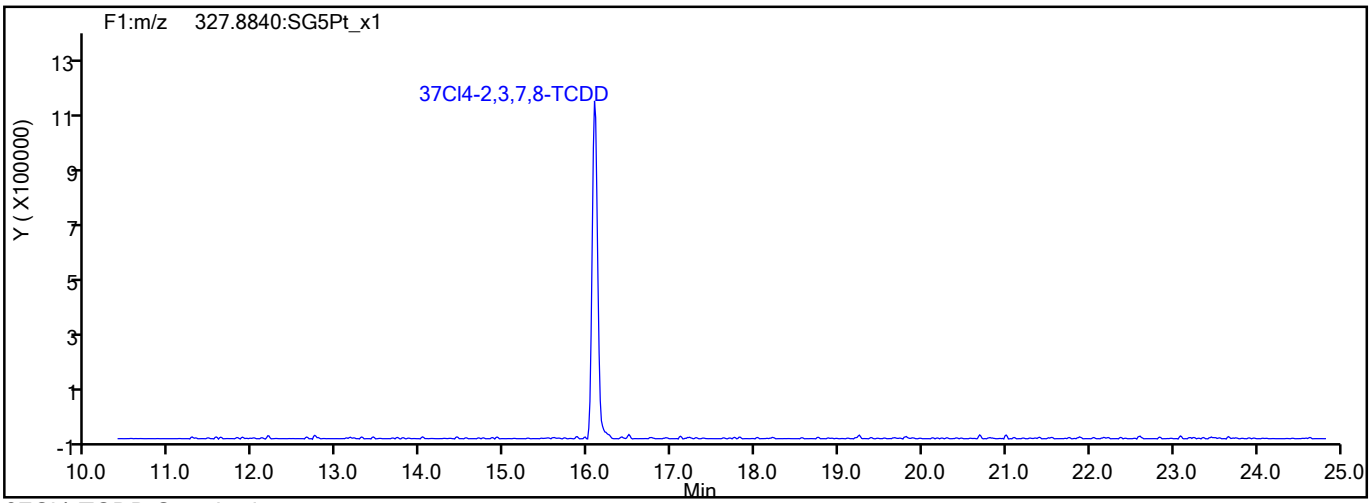

37Cl4-TCDD Standards

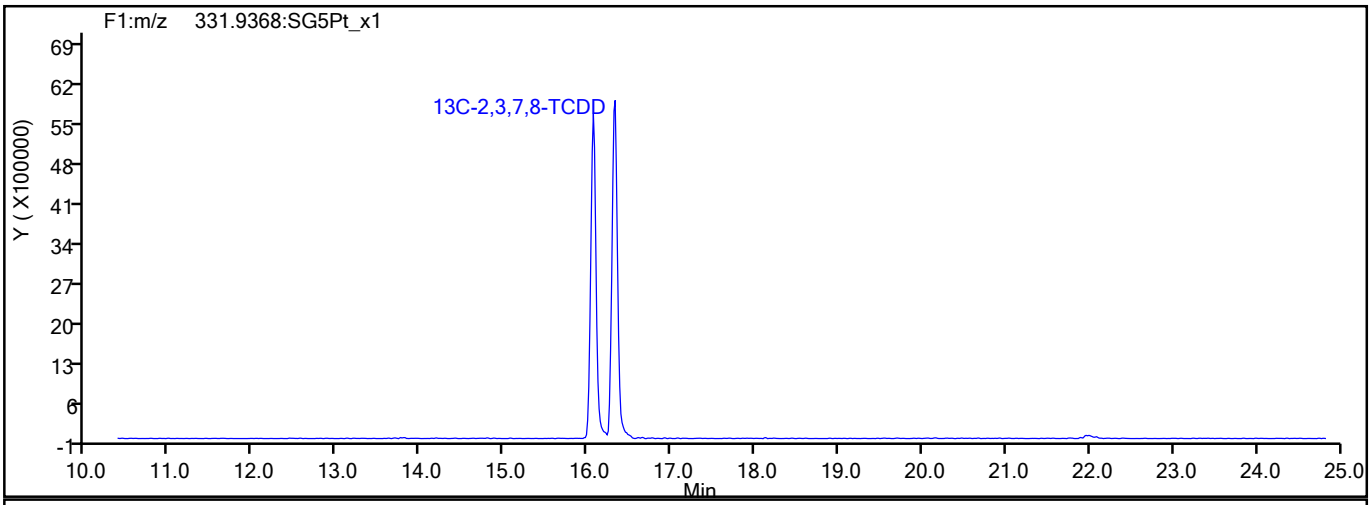

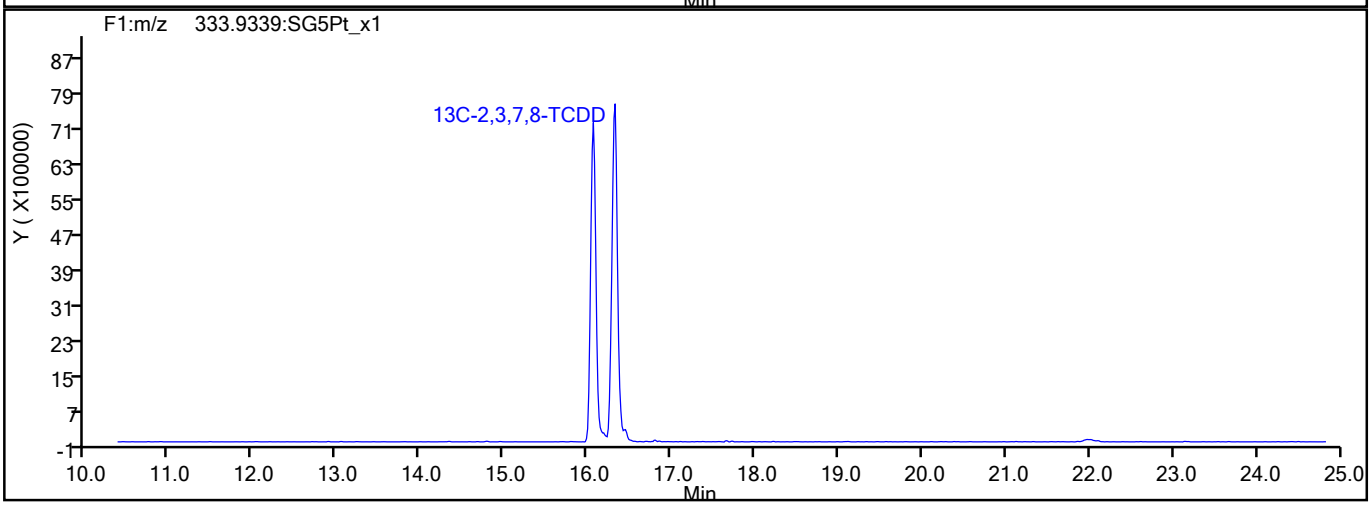

785768

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

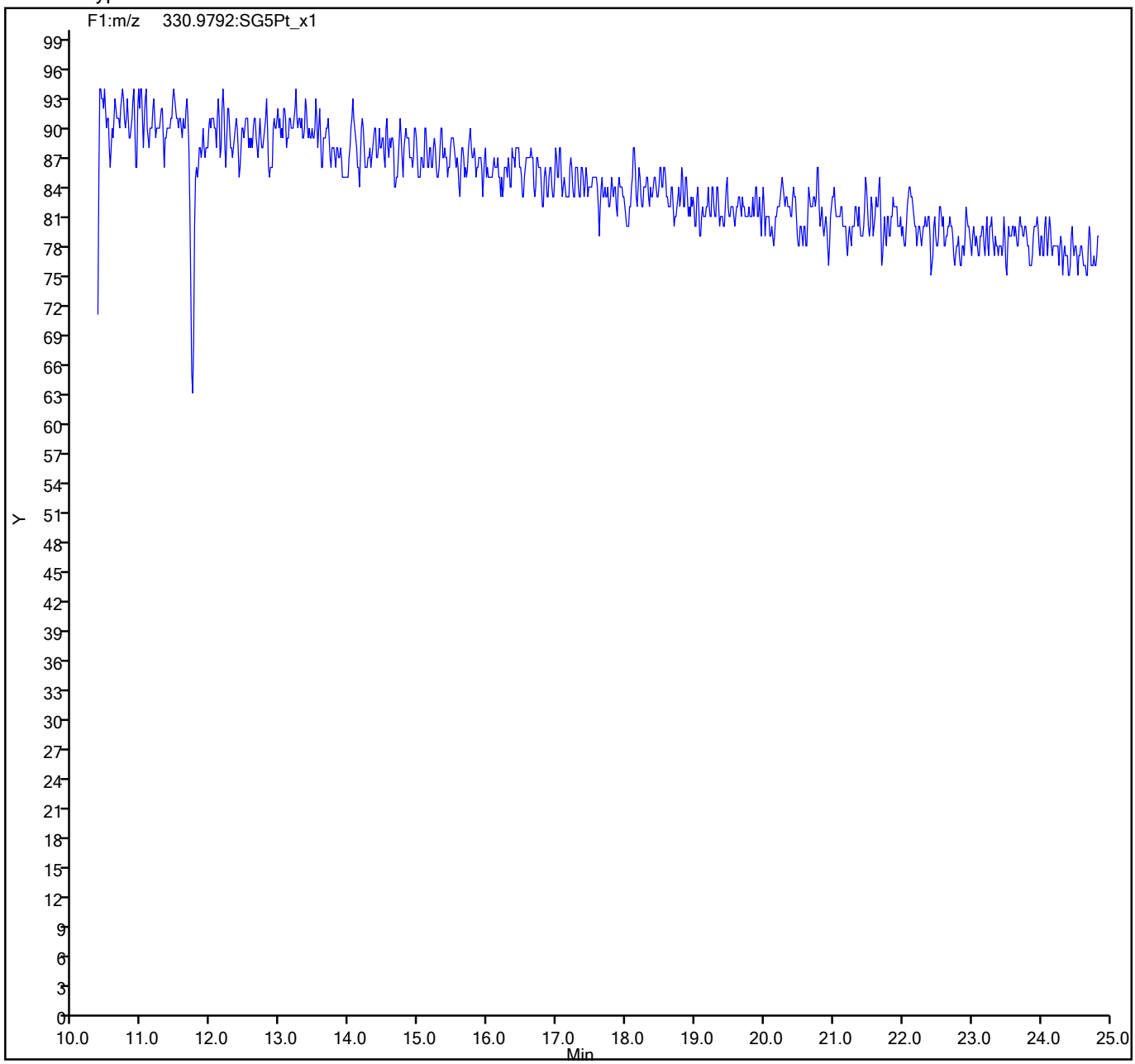

785769

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

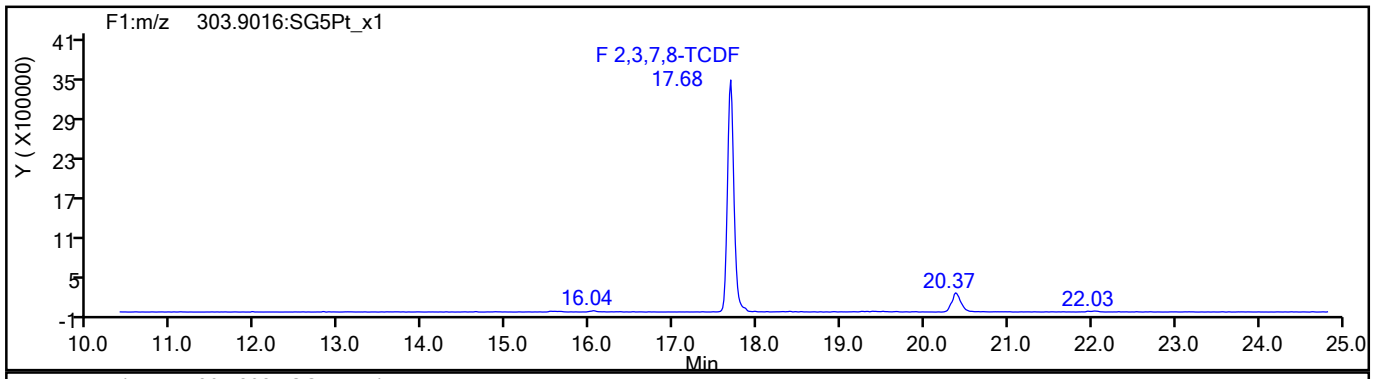

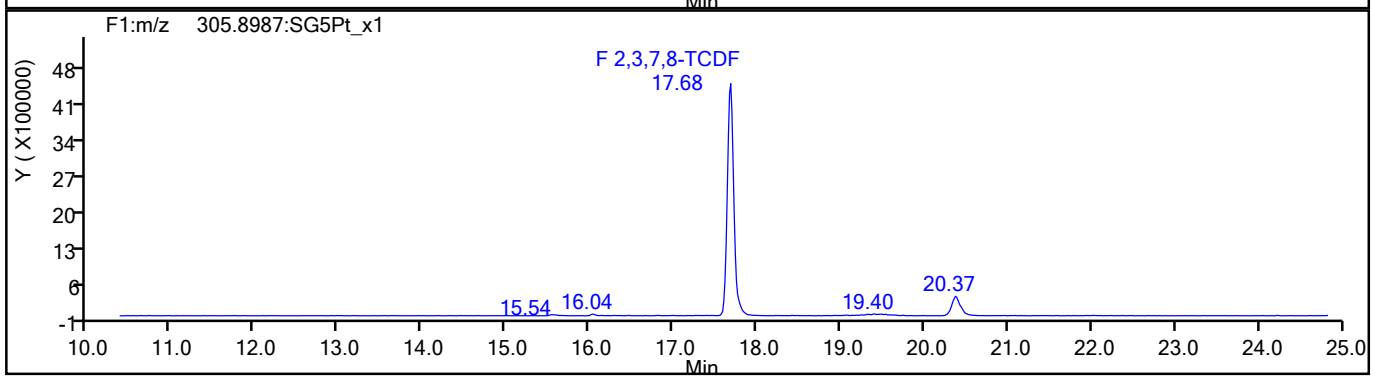

TCDF Standards

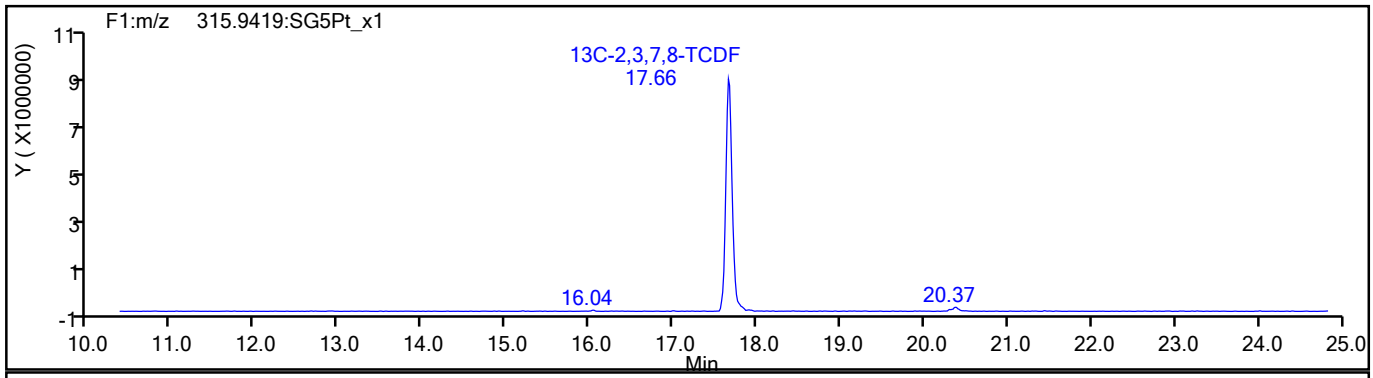

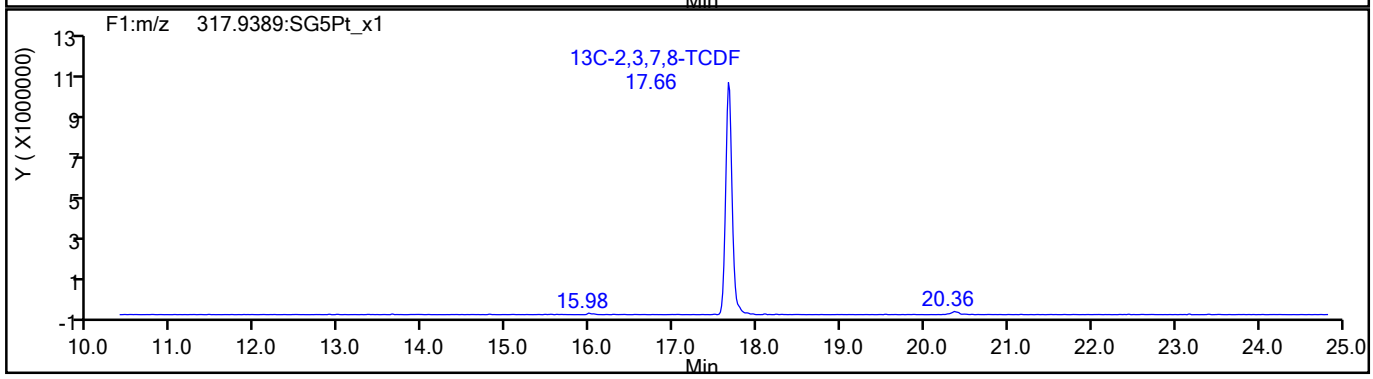

785772

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

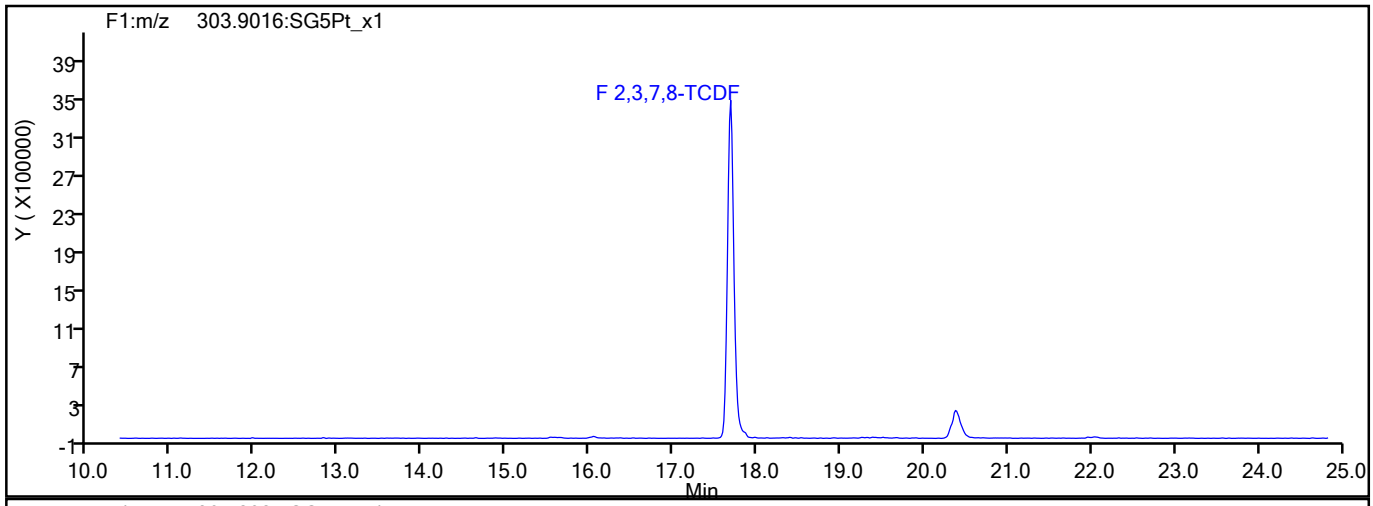

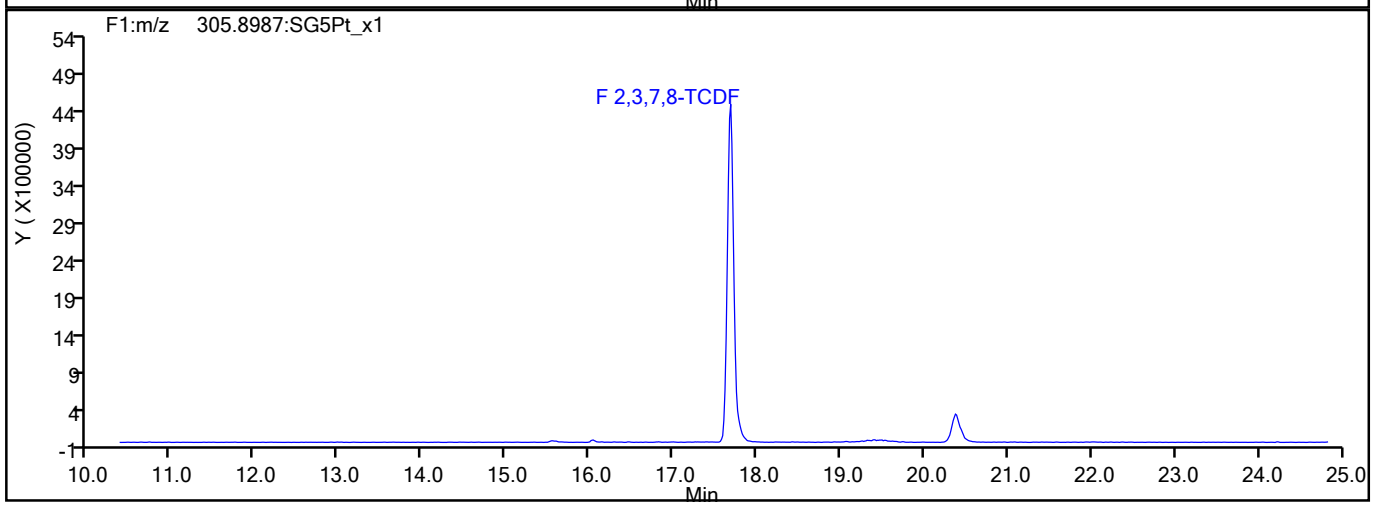

TCDF Interference Mass

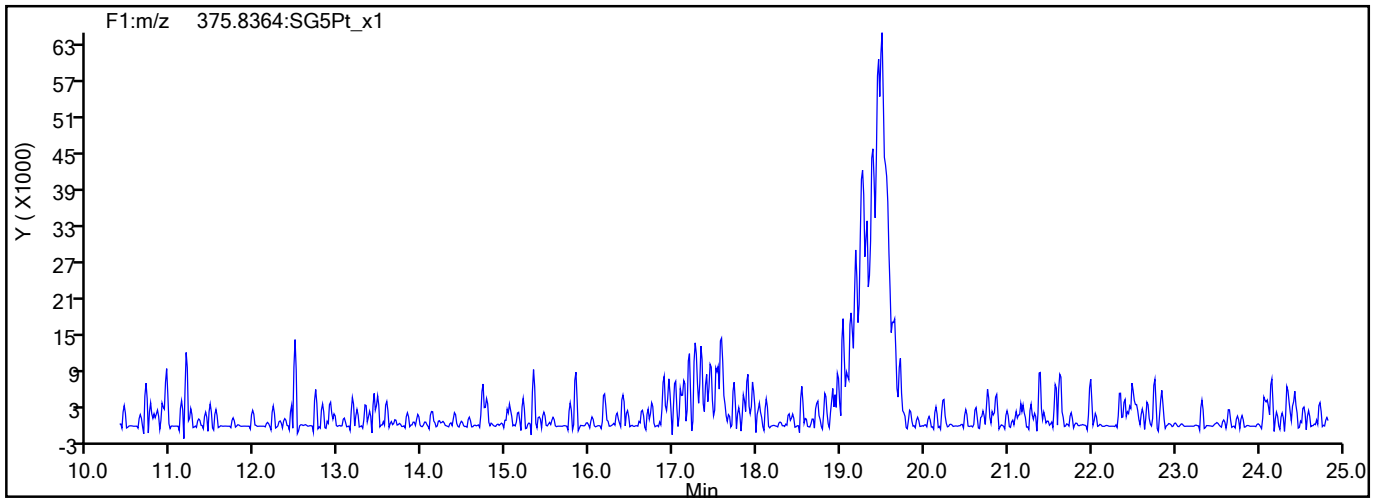

785773

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

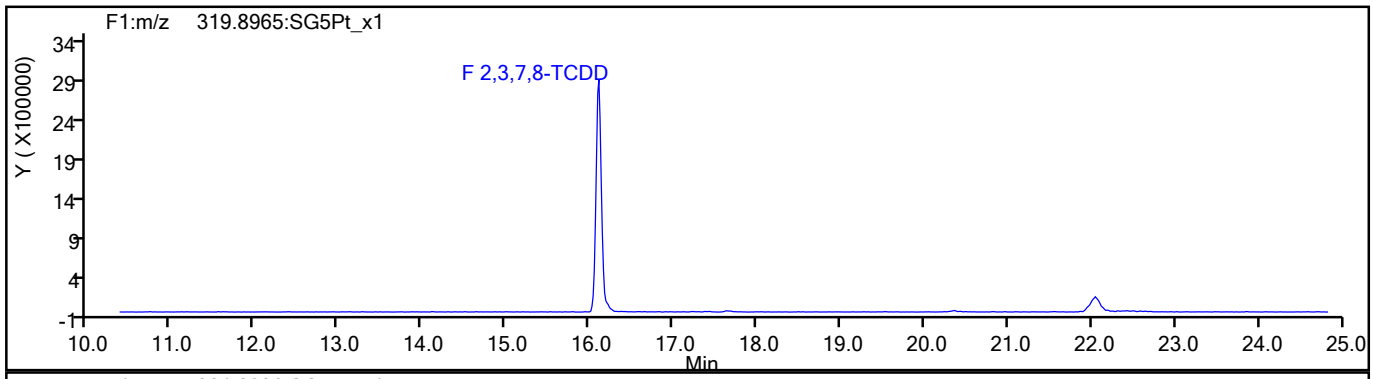

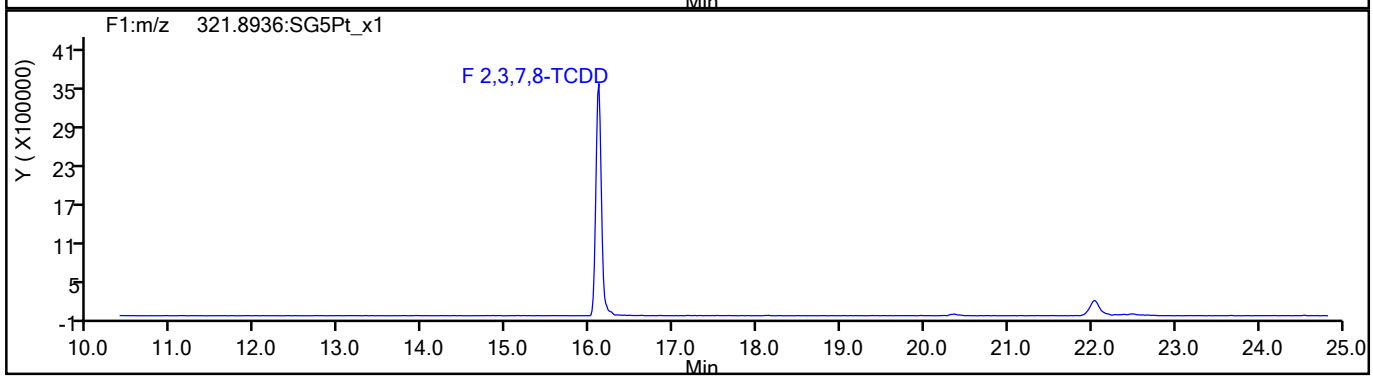

TCDD Standards

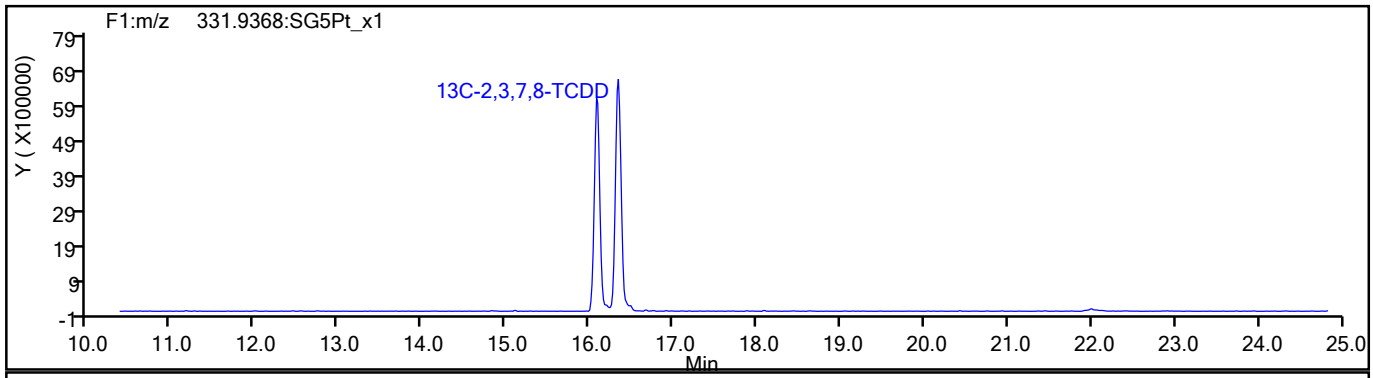

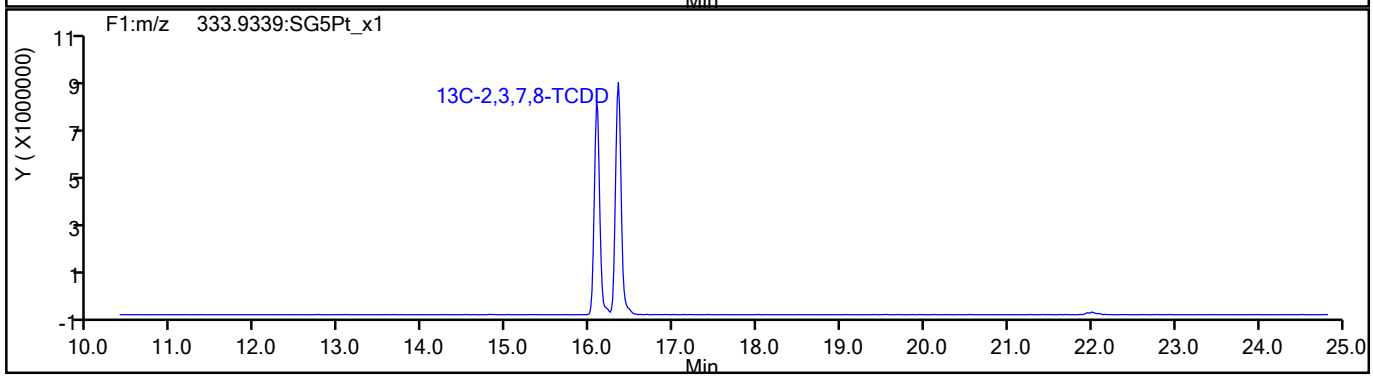

785774

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

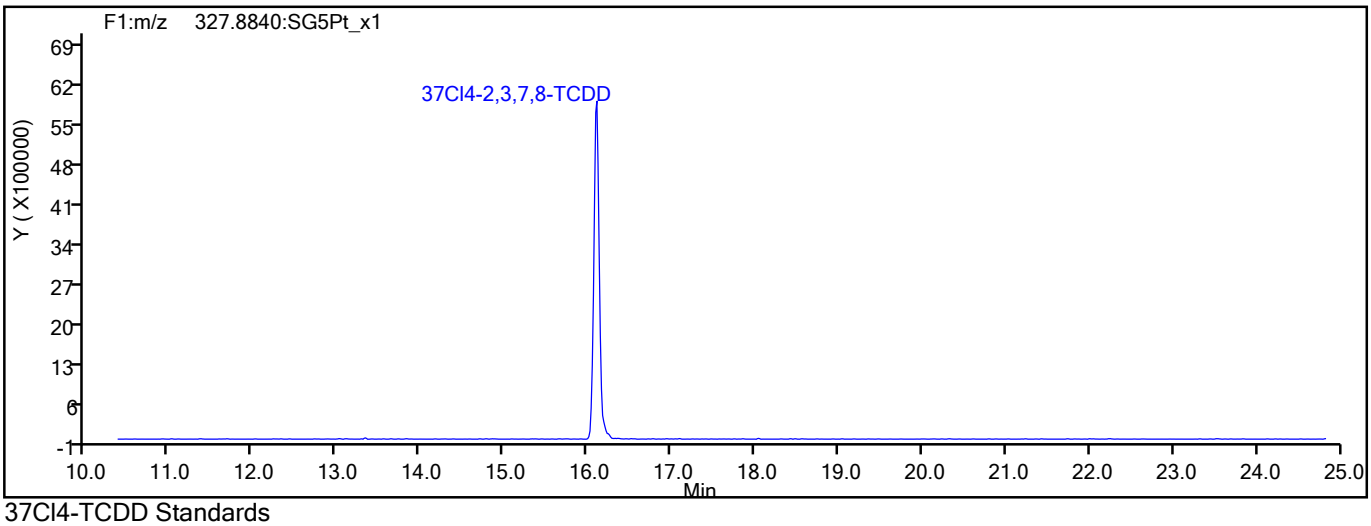

37Cl4-TCDD Standards

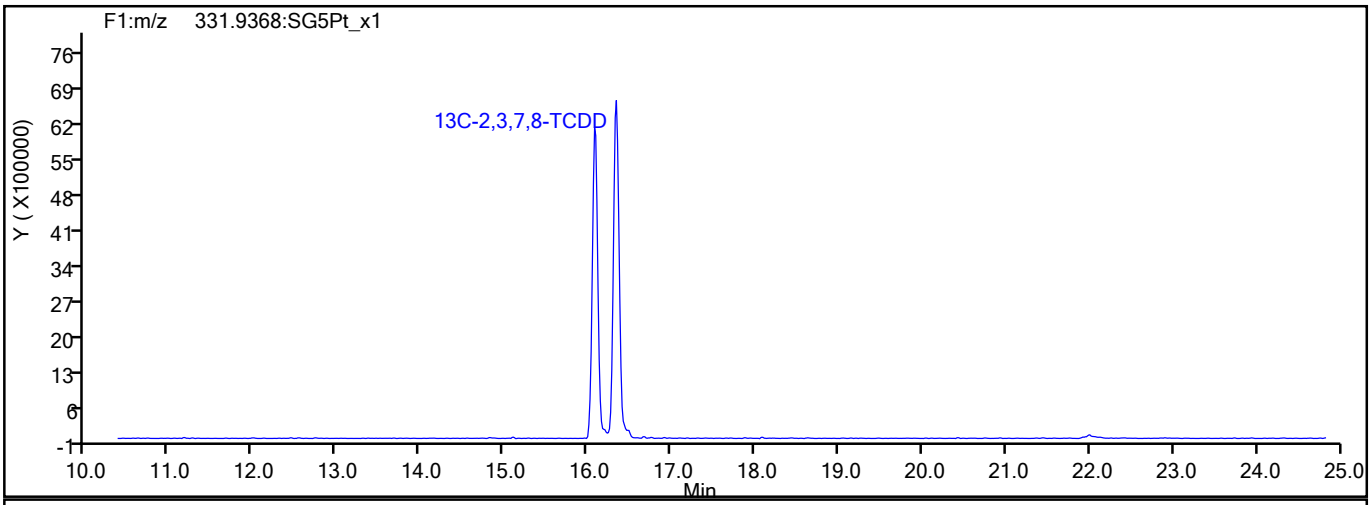

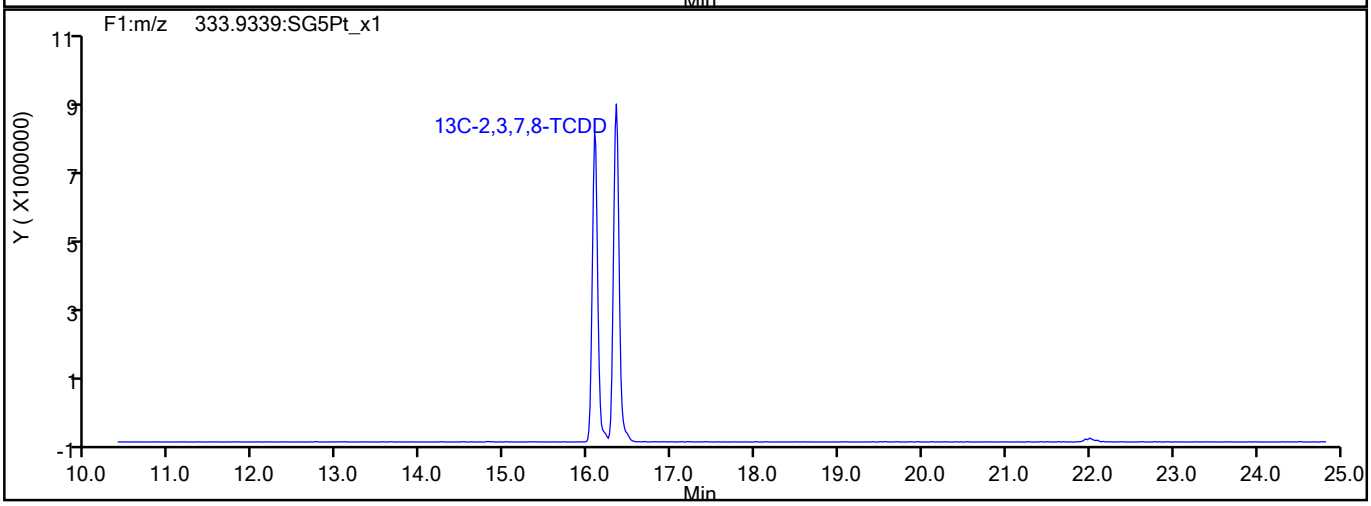

785775

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

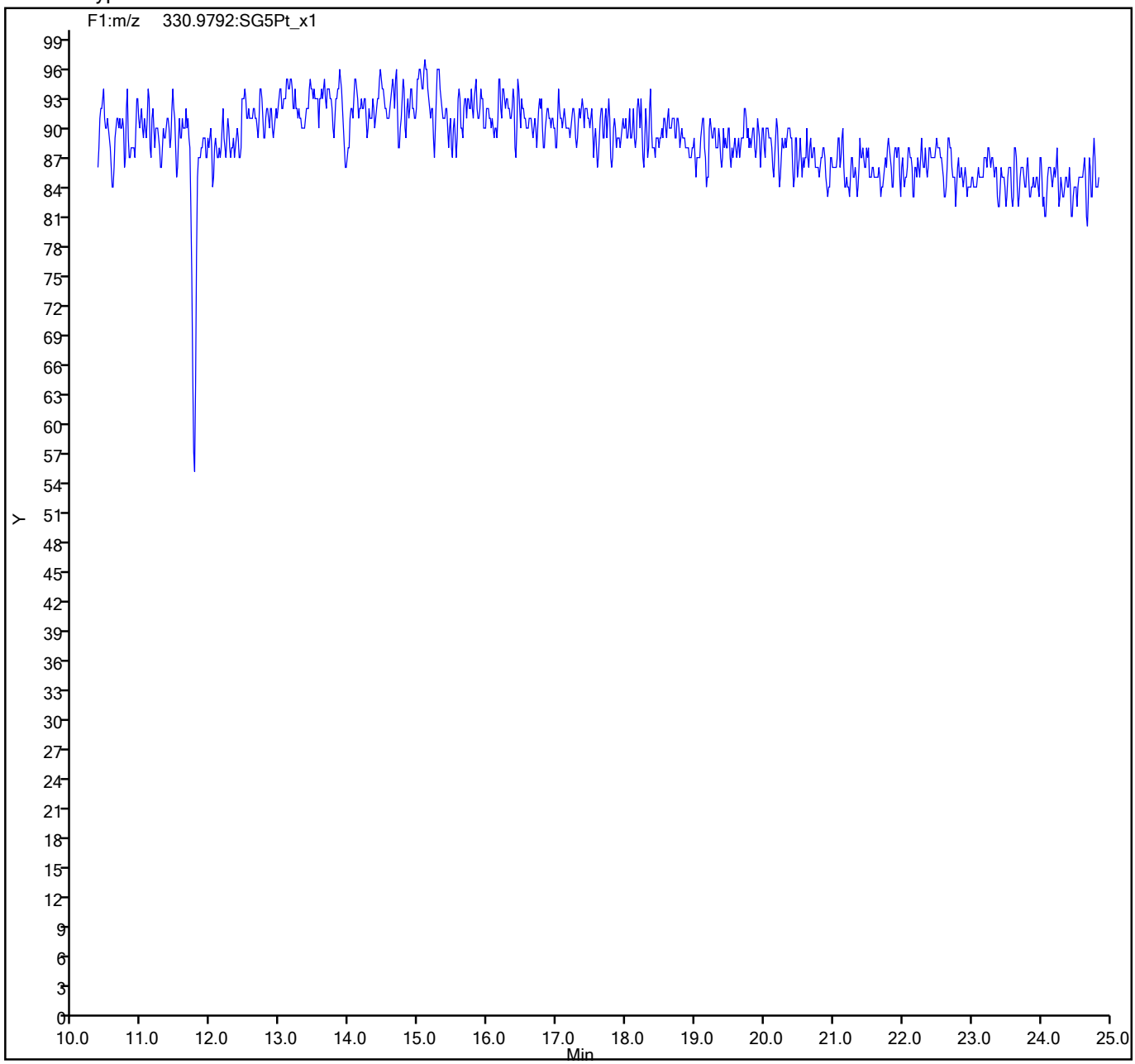

785776

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

785777

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

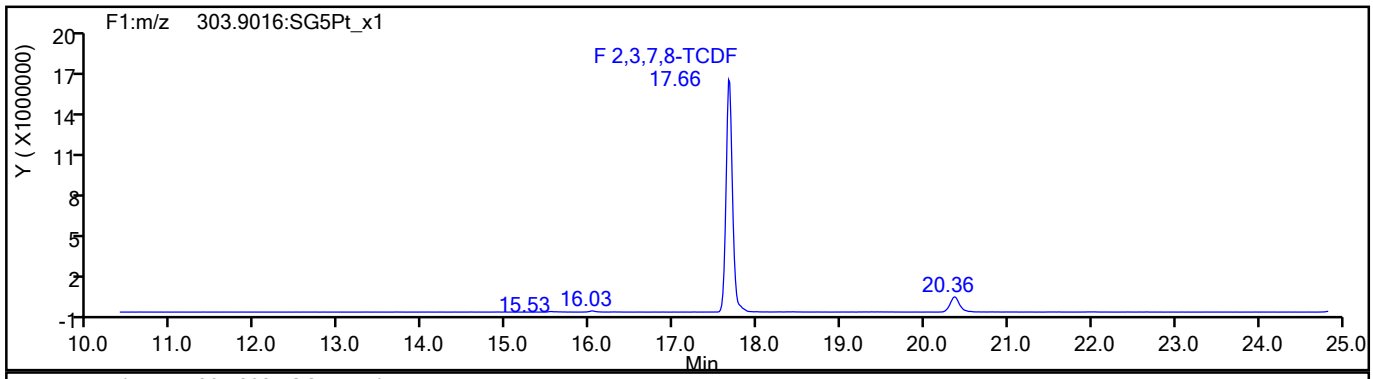

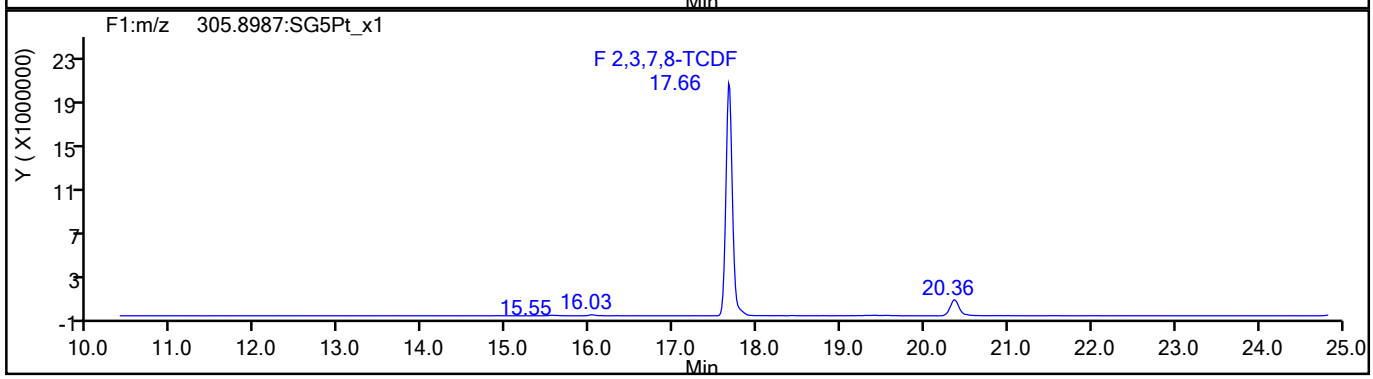

TCDF Standards

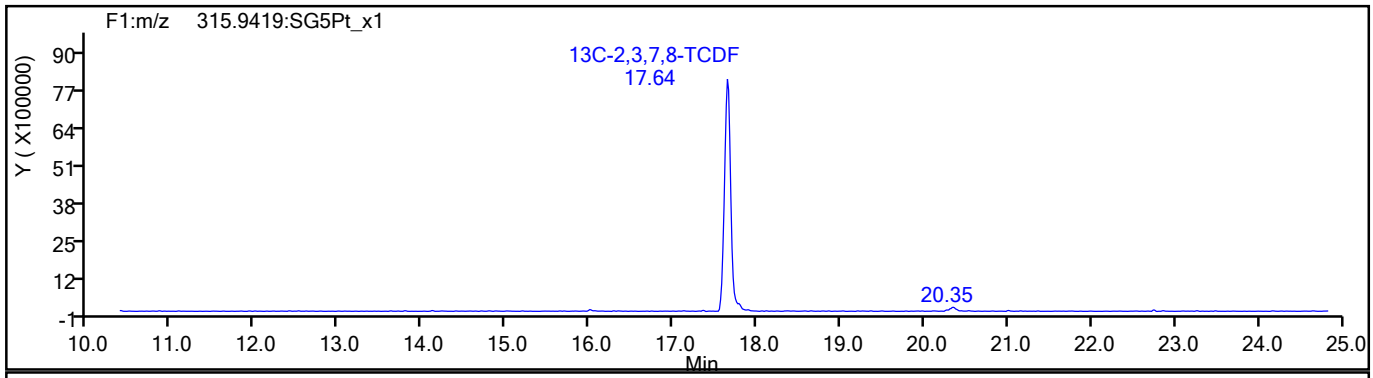

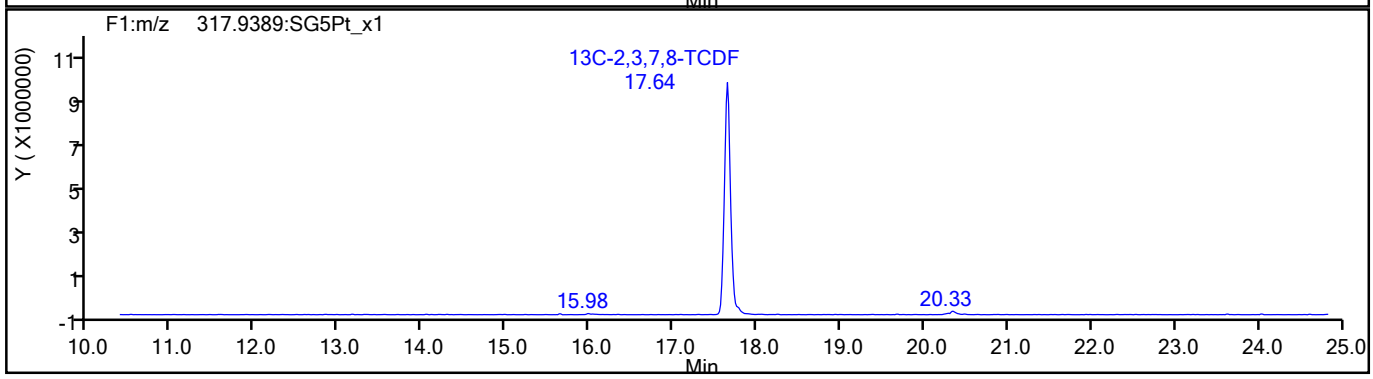

785779

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

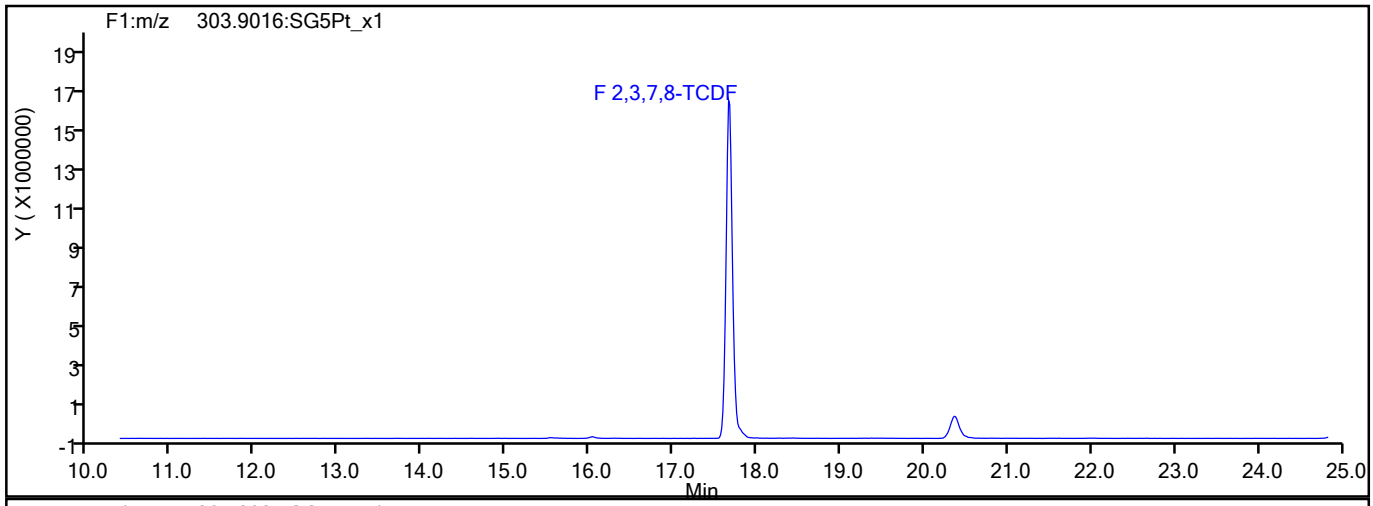

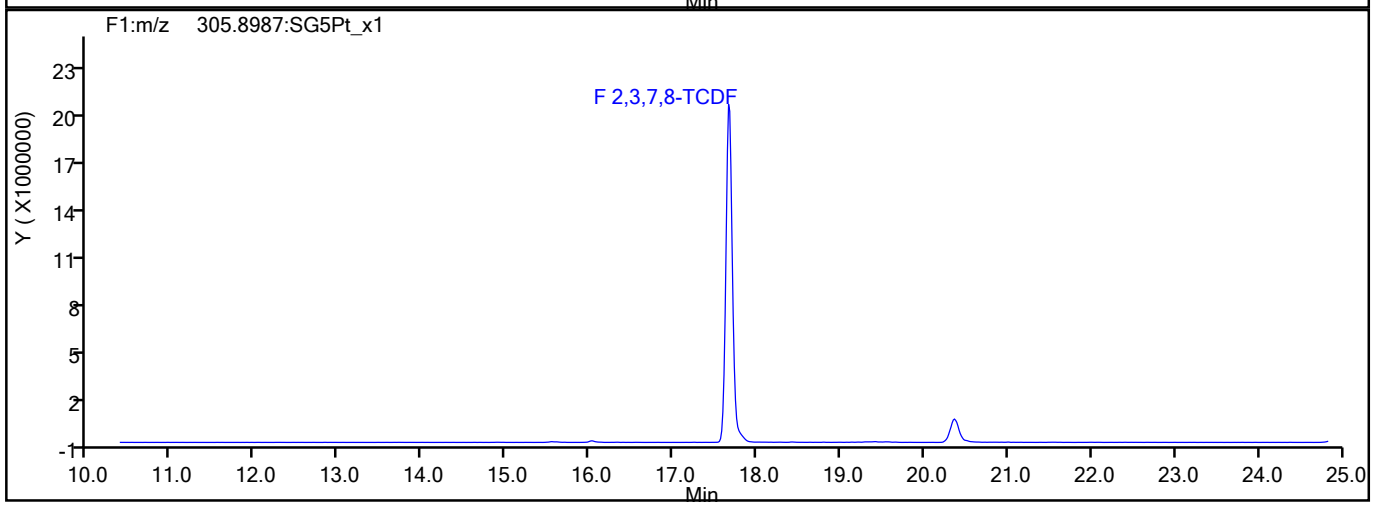

TCDF Interference Mass

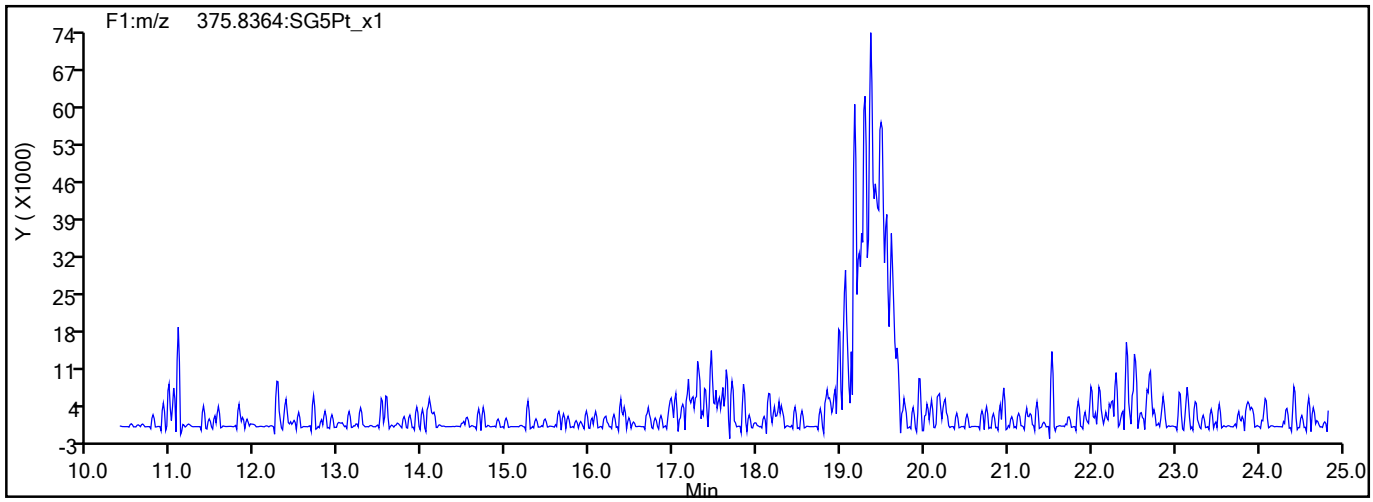

785780

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

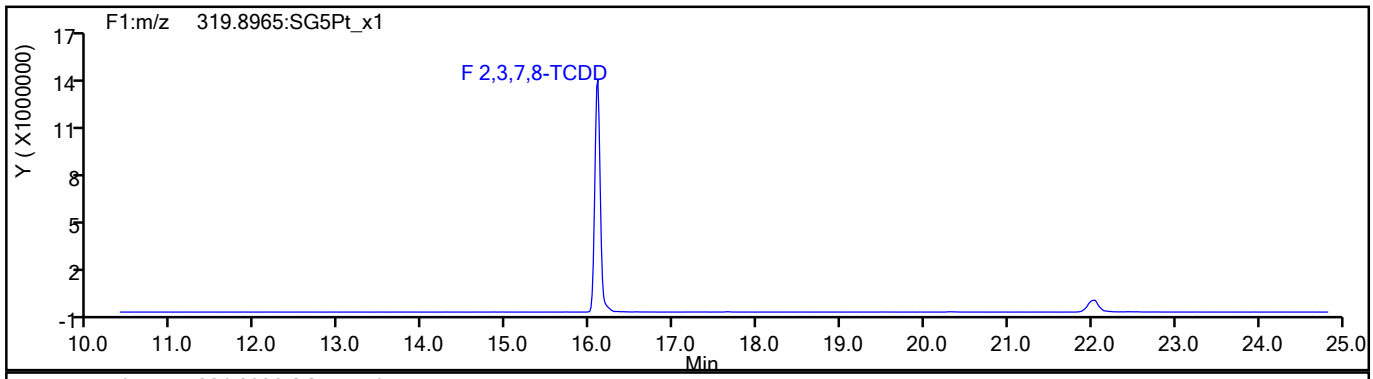

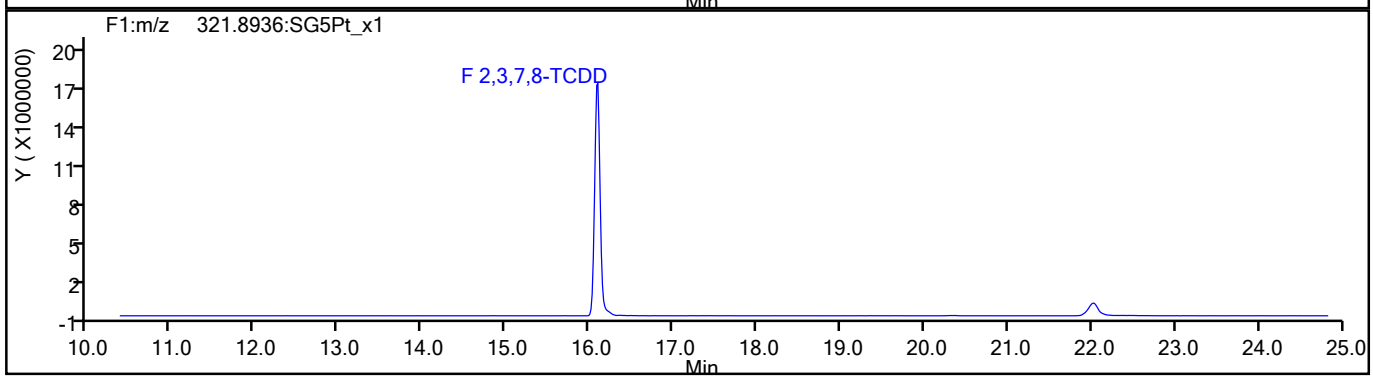

TCDD Standards

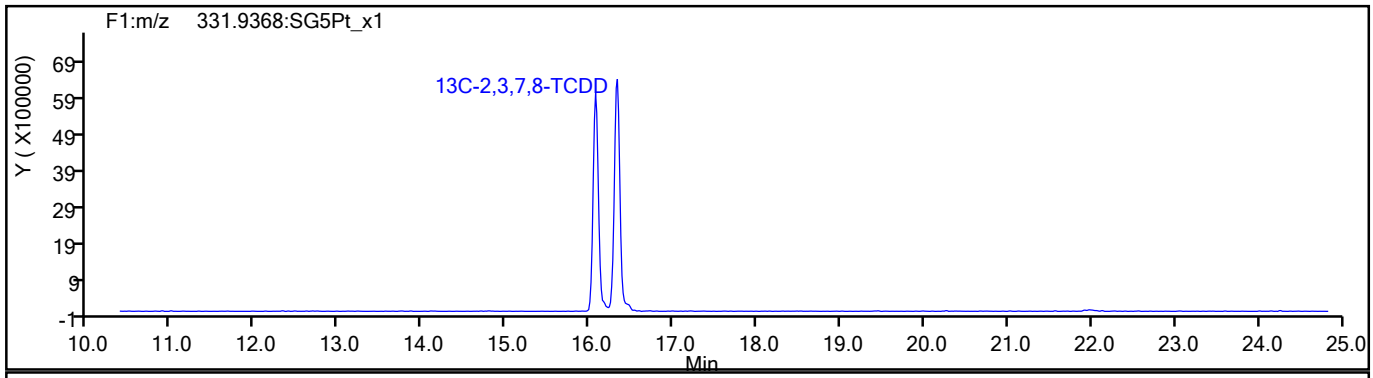

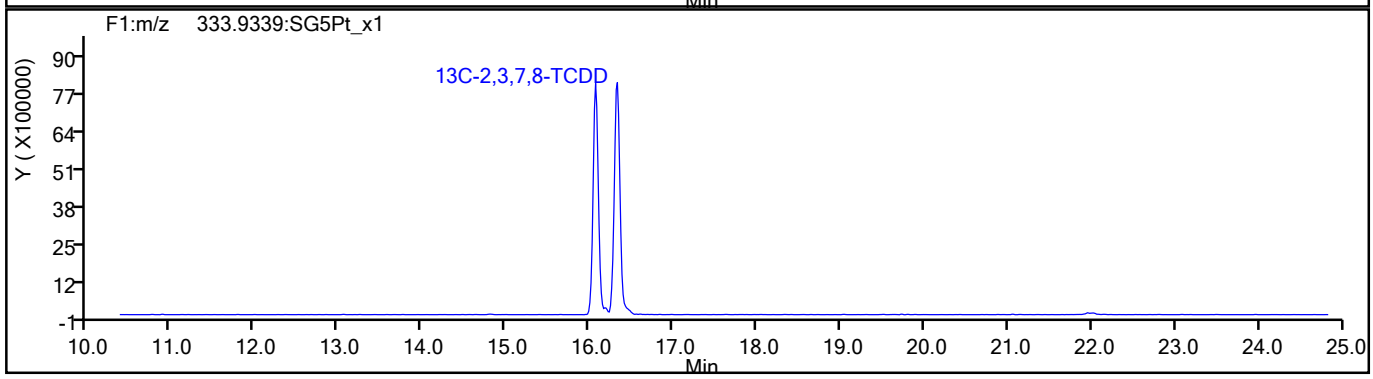

785781

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

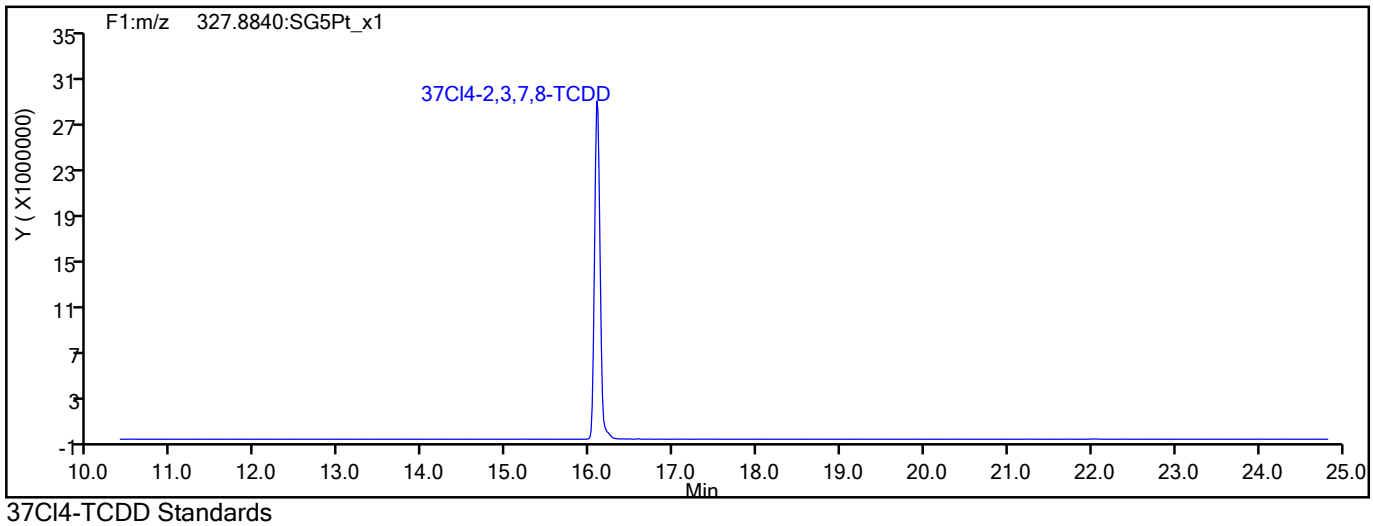

37Cl4-TCDD Standards

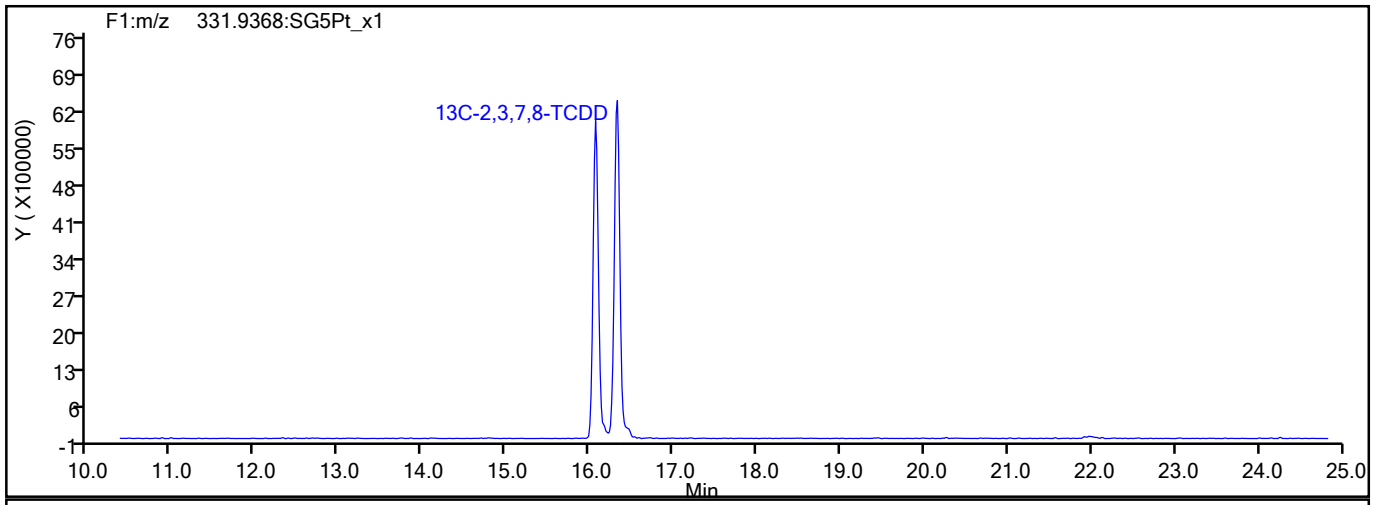

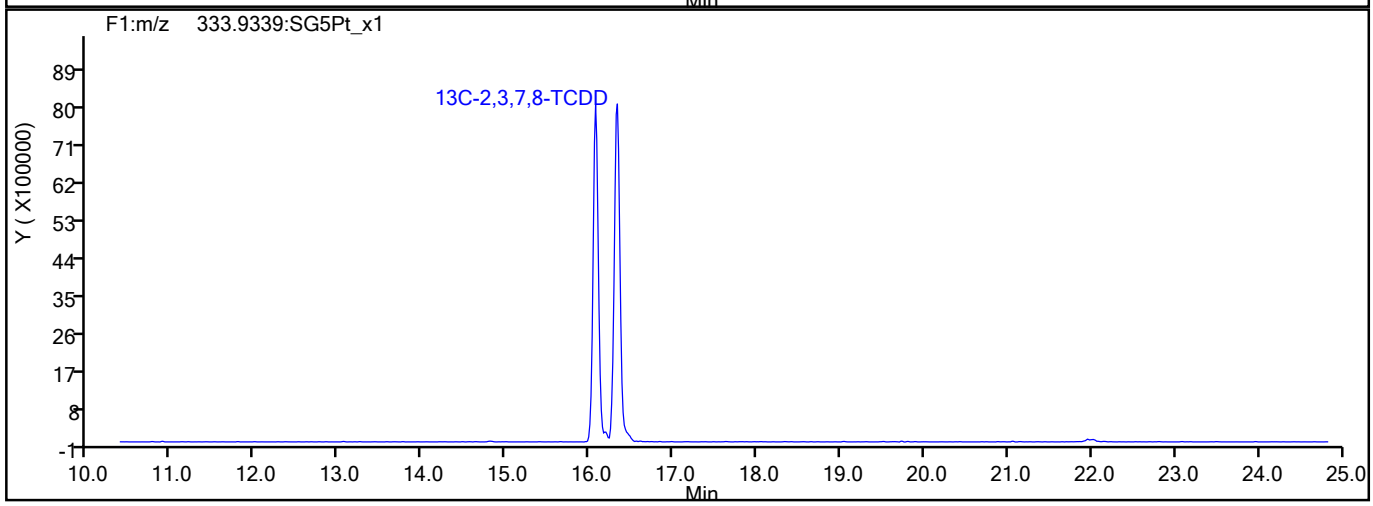

785782

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

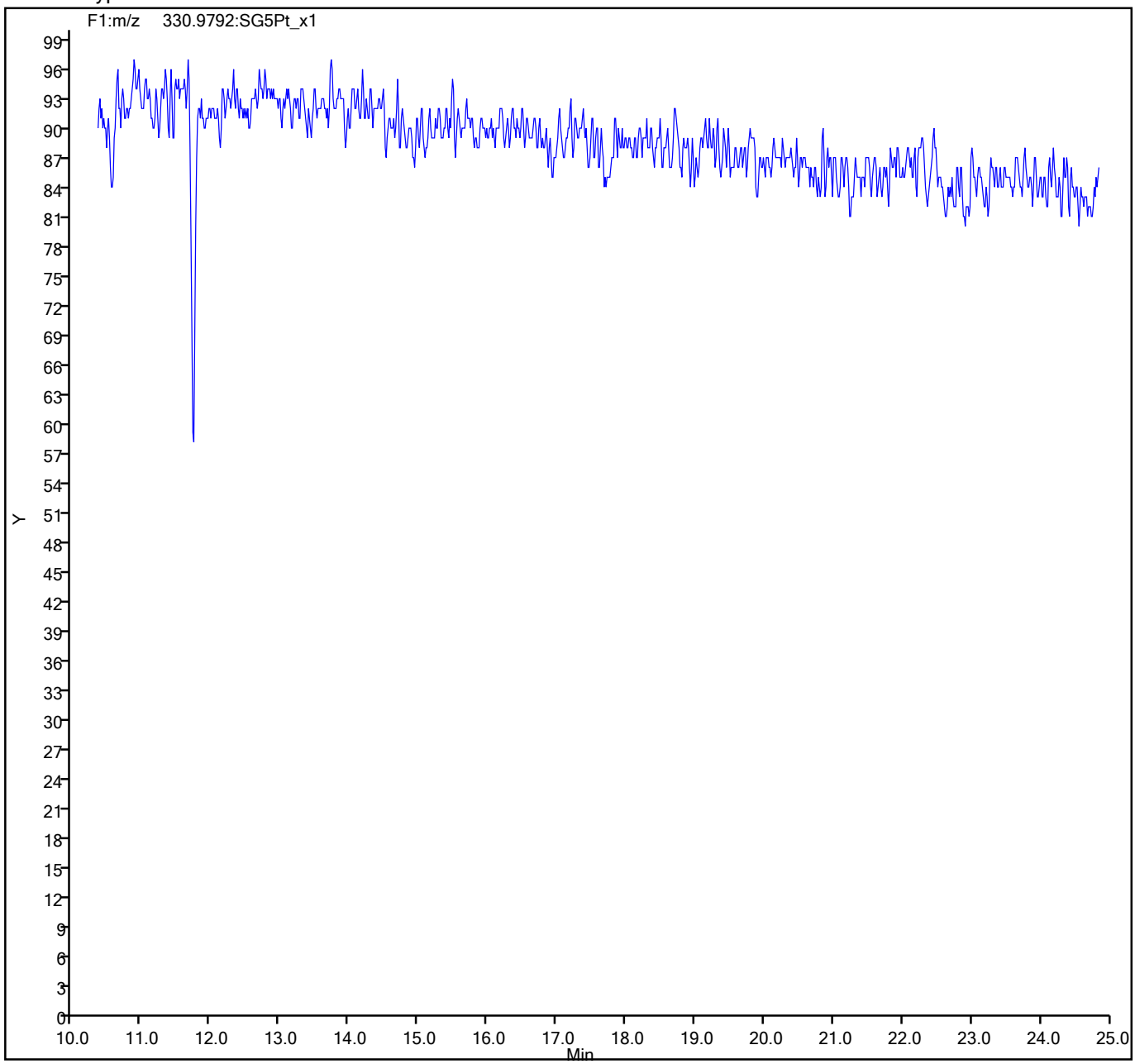

785783

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

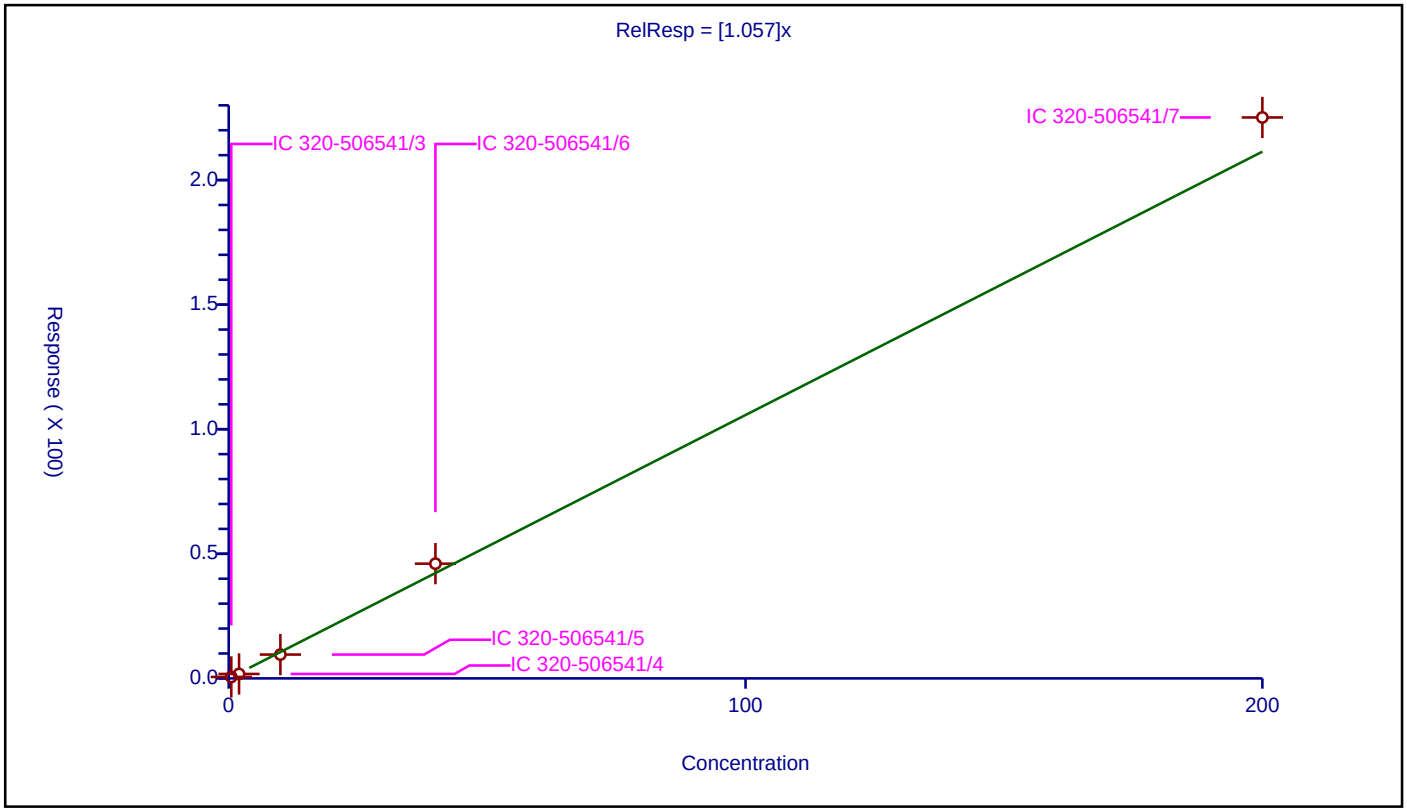

785784

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

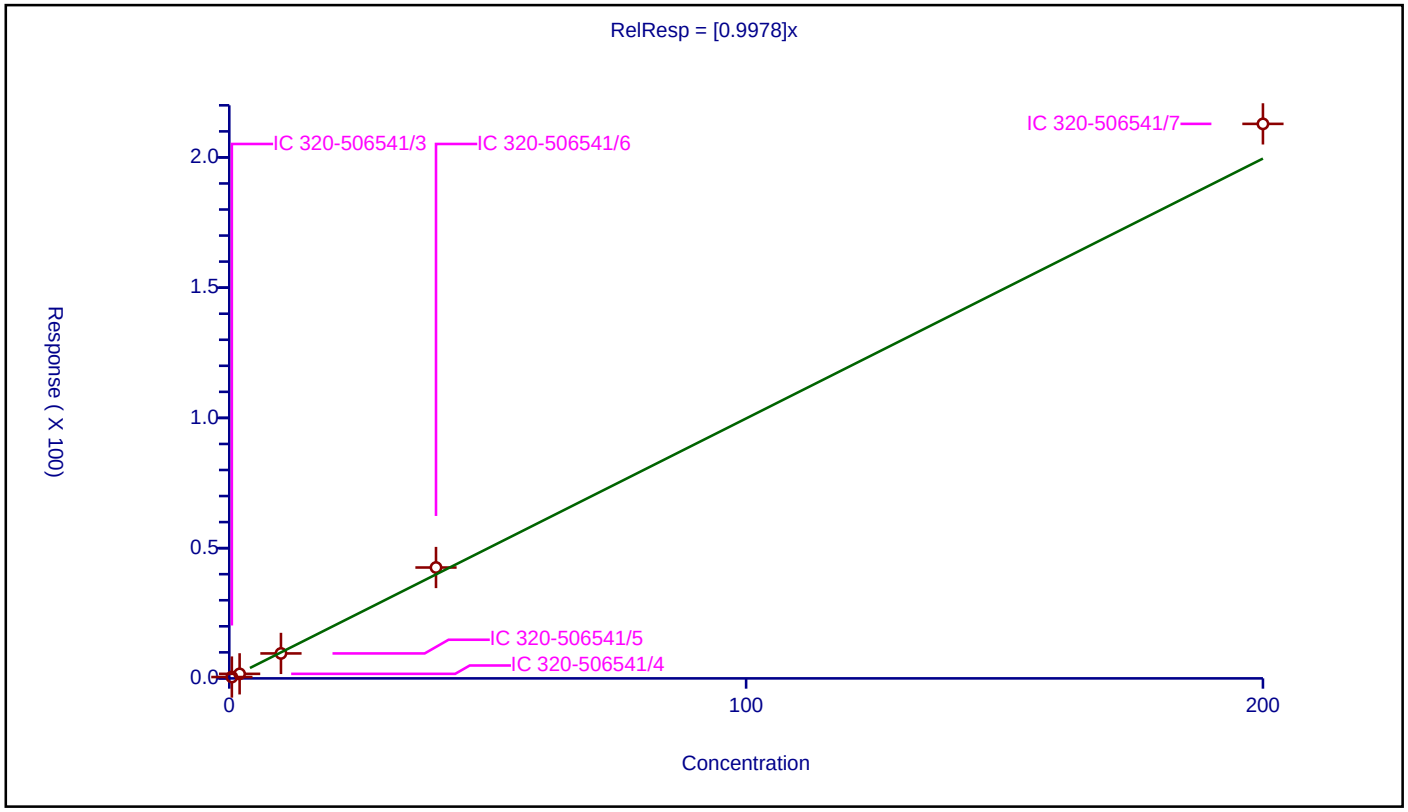

785785

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

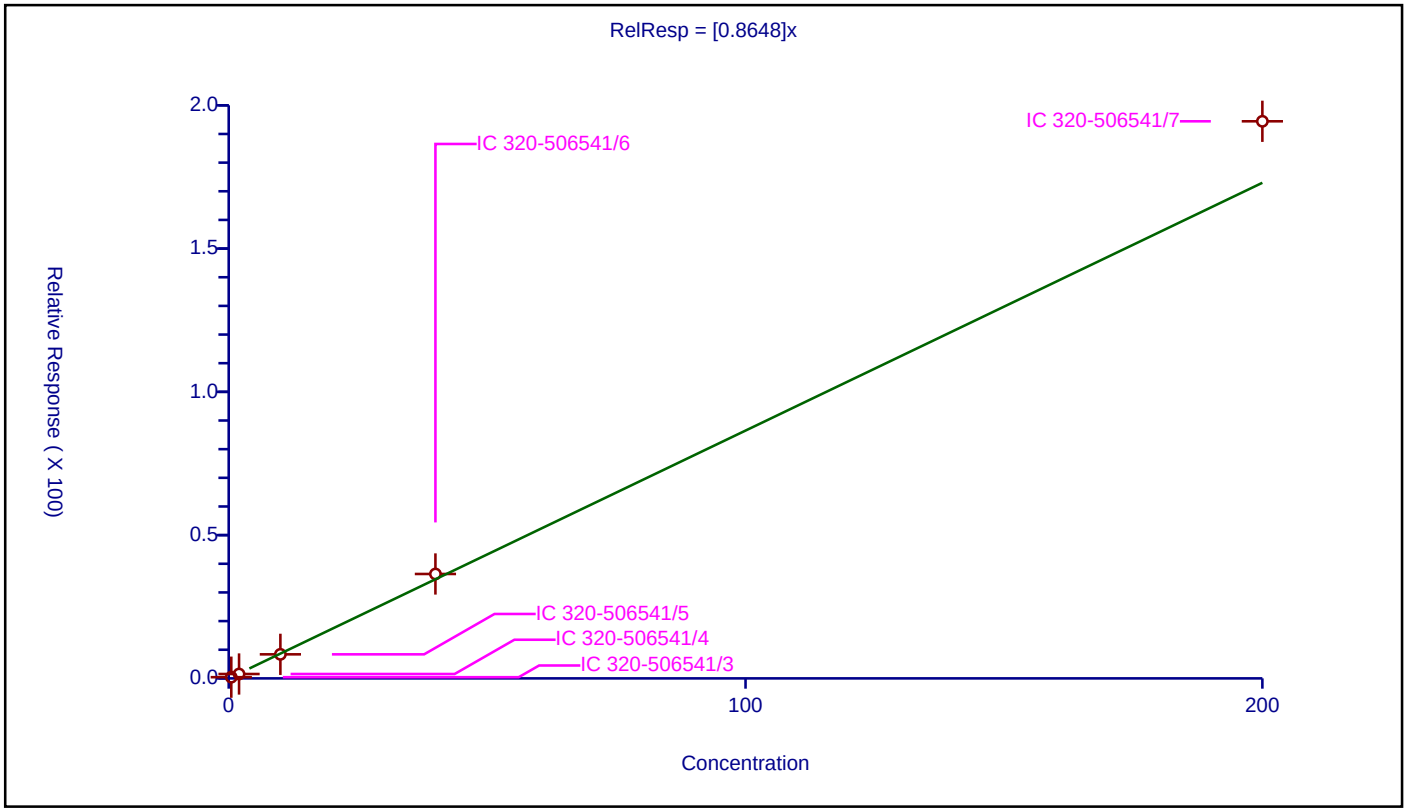

785786

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.2335	0.9635	1.0464	1.1217	1.0358	AveID		1.0802				9.5		20.0			
2,3,7,8-TCDD	1.1335	0.9559	1.0998	1.1237	1.0638	AveID		1.0753				6.7		20.0			
1,2,3,7,8-PeCDF	1.1920	0.9412	1.0373	1.0897	1.0112	AveID		1.0543				8.9		20.0			
2,3,4,7,8-PeCDF	1.1233	0.8984	0.9921	1.0636	0.9619	AveID		1.0079				8.7		20.0			
1,2,3,7,8-PeCDD	1.0719	0.9520	1.0685	1.1015	1.0385	AveID		1.0465				5.5		20.0			
1,2,3,4,7,8-HxCDF	1.2226	1.0072	1.1873	1.2073	1.1126	AveID		1.1474				7.8		20.0			
1,2,3,6,7,8-HxCDF	1.3374	1.0951	1.2359	1.2506	1.1700	AveID		1.2178				7.5		20.0			
2,3,4,6,7,8-HxCDF	1.3135	1.1007	1.2368	1.2623	1.1590	AveID		1.2145				7.0		20.0			
1,2,3,4,7,8-HxCDD	1.1235	0.9702	1.0749	1.1249	1.0104	AveID		1.0608				6.5		20.0			
1,2,3,6,7,8-HxCDD	1.0557	0.8863	1.0416	1.0264	0.9567	AveID		0.9933				7.1		20.0			
1,2,3,7,8,9-HxCDD	1.3093	0.9566	1.1202	1.1079	1.0532	AveID		1.1094				11.6		20.0			
1,2,3,7,8,9-HxCDF	1.3581	1.1239	1.2532	1.2757	1.1897	AveID		1.2401				7.1		20.0			
1,2,3,4,6,7,8-HpCDF	1.5412	1.2896	1.4855	1.5240	1.3700	AveID		1.4421				7.5		20.0			
1,2,3,4,6,7,8-HpCDD	1.1377	0.9531	1.0459	1.0970	1.0178	AveID		1.0503				6.8		20.0			
1,2,3,4,7,8,9-HpCDF	1.4057	1.1770	1.3459	1.3937	1.2235	AveID		1.3092				7.9		20.0			
OCDD	1.1328	0.9954	1.0870	1.1027	0.9920	AveID		1.0620				6.1		20.0			
OCDF	1.3392	1.1863	1.3349	1.3964	1.3271	AveID		1.3168				5.9		20.0			
13C-2,3,7,8-TCDF	1.3569	1.2925	1.2977	1.3484	1.4339	Ave		1.3459				4.2		35.0			
13C-2,3,7,8-TCDD	0.9164	0.8941	0.9478	0.9250	0.9750	Ave		0.9317				3.3		35.0			
13C-1,2,3,7,8-PeCDF	1.0773	1.0923	1.1314	1.1553	1.2461	Ave		1.1405				5.8		35.0			
13C-2,3,4,7,8-PeCDF	1.1109	1.0890	1.0480	1.1277	1.2510	Ave		1.1253				6.8		35.0			
13C-1,2,3,7,8-PeCDD	0.6866	0.6668	0.7308	0.7224	0.7758	Ave		0.7165				5.9		35.0			
13C-1,2,3,4,7,8-HxCDF	0.8656	0.8706	1.1172	0.9651	1.0057	Ave		0.9648				10.8		35.0			
13C-1,2,3,6,7,8-HxCDF	0.9280	0.9536	1.2227	1.0830	1.1668	Ave		1.0708				12.0		35.0			
13C-2,3,4,6,7,8-HxCDF	0.8692	0.9805	1.1292	1.1087	1.1190	Ave		1.0413				10.9		35.0			
13C-1,2,3,4,7,8-HxCDD	0.6435	0.7681	0.8180	0.7773	0.7866	Ave		0.7587				8.8		35.0			
13C-1,2,3,6,7,8-HxCDD	0.7368	0.8783	0.8857	0.9060	0.8896	Ave		0.8593				8.1		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9679	0.9781	1.0054	0.9456	0.9684	Ave		0.9731				2.2		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.7002	0.7170	0.7171	0.7555	0.7898	Ave		0.7359				4.9		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6351	0.6548	0.6640	0.7261	0.6926	Ave		0.6745				5.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6394	0.6623	0.6557	0.7259	0.7437	Ave		0.6854				6.8		35.0			
13C-OCDD	0.5202	0.5165	0.5084	0.5910	0.5871	Ave		0.5446				7.5		35.0			
37Cl4-2,3,7,8-TCDD	0.9654	0.9590	1.0722	1.0074	1.0375	Ave		1.0083				4.8					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	19533	50956	258022	1274052	6137031	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	12122	34971	198062	875630	4286034	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	74934	210335	1114982	5302236	26032333	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	72817	200175	987812	5051373	24861382	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	42943	129872	741897	3351337	16645947	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	46374	155611	1093397	4293581	21902419	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	54388	185321	1245549	4991420	26721257	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	50026	191527	1151149	5157631	25388405	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	31680	132244	724729	3222329	15558498	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	34082	138142	760446	3426727	16661405	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	39595	139741	786511	3436144	17279185	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	57602	195077	1038574	4445357	22553786	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	47287	164108	878086	4243438	21181967	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	31661	110761	572466	2935203	13800004	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	39382	138335	727362	3728415	17812004	2.50	10.0	50.0	200	1000
OCDD		AveID	51642	182470	910980	4803166	22803823	5.00	20.0	100	400	2000
OCDF		AveID	61051	217473	1118740	6082696	30505464	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	3167014	2644389	2465726	2839435	2962515	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	2138853	1829253	1800864	1948011	2014532	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	2514489	2234847	2149791	2432949	2574521	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	2592947	2228025	1991303	2374722	2584740	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	1602476	1364144	1388641	1521254	1602880	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	1517222	1545033	1841825	1778238	1968615	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	1626653	1692336	2015594	1995567	2283961	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	1523436	1740015	1861559	2042874	2190509	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	1127895	1363103	1348471	1432215	1539784	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	1291365	1558668	1460100	1669337	1741498	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	1696557	1735785	1657413	1742331	1895740	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	1227279	1272526	1182209	1392194	1546113	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	1113145	1162117	1094713	1337869	1355803	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	1120663	1175351	1080883	1337573	1455766	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	1823492	1833139	1676139	2177938	2298668	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	11266	39241	203726	848616	4287059	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	08JN21ADFS1_1	Resolution Check	RC 060821A	46			GRB	1.000	
2	08JN21ADFS1_2	WDM HRDXNCP_00042	WDM 060821A	1	Dioxin		GRB	1.000	
3	08JN21ADFS1_3	SB Solvent Blank C-14	SB 060821	3			GRB	1.000	
4	08JN21ADFS1_4	CS-2 HRDXNL2_00032	IC 060821	4	Dioxin		GRB	1.000	
5	08JN21ADFS1_5	CS-3 HRDXNL3_00029	IC 060821A	5	Dioxin		GRB	1.000	
6	08JN21ADFS1_6	CS-4 HRDXNL4_00099	IC 060821B	2	Dioxin		GRB	1.000	
7	08JN21ADFS1_7	CS-5 HRDXNL5_00032	IC 060821C	6	Dioxin		GRB	1.000	
8	08JN21ADFS1_8	CS-6 HRDXNL6_00028	IC 060821D	7	Dioxin		GRB	1.000	
9	08JN21ADFS1_9	Resolution Check	RC 060821B	46			GRB	1.000	
10	08JN21ADFS1_10	SB Solvent Blank C-14	SB 060821A	3			GRB	1.000	
11	08JN21ADFS1_11	ICV HRDXNIC_00047	ICV 060821	8	Dioxin		GRB	1.000	
12	08JN21ADFS1_12	Resolution Check	RC 060821C	46			GRB	1.000	
13	08JN21ADFS1_13	CCV CS-4 HRDXNL4_00099	CCV 060821A	2	Dioxin		GRB	1.000	
14	08JN21ADFS1_14	WDM HRDXNCP_00042	WDM 060821B	1	Dioxin		GRB	1.000	
15	08JN21ADFS1_15	mb 320-482224/1-a RI	mb 320-482224/1-a	10	8290/Solid	100	GRB	20.000	g
16	08JN21ADFS1_16	320-72057-a-23-a mdlv RI (7)	320-72057-a-23-a mdlv	11	8290/Solid		GRB	20.000	g
17	08JN21ADFS1_17	320-72057-a-24-a mdlv RI (8)	320-72057-a-24-a mdlv	12	8290/Solid		GRB	20.000	g
18	08JN21ADFS1_18	320-72057-a-25-a mdlv RI (9)	320-72057-a-25-a mdlv	13	8290/Solid		GRB	20.000	g
19	08JN21ADFS1_19	320-72057-a-26-a loqv RI (10)	320-72057-a-26-a loqv	14	8290/Solid		GRB	20.000	g
20	08JN21ADFS1_20	320-74542-b-3-a	320-74542-b-3-a	15	8290A/Solid	D245	GRB	10.000	g
21	08JN21ADFS1_21	320-74542-b-2-a	320-74542-b-2-a	16	8290A/Solid		GRB	10.000	g
22	08JN21ADFS1_22	320-74542-b-1-a	320-74542-b-1-a	17	8290A/Solid		GRB	10.000	g
23	08JN21ADFS1_23	lcs 320-496101/2-a	lcs 320-496101/2-a	18	8290A/Solid		GRB	10.000	g
24	08JN21ADFS1_24	lcsd 320-496101/3-a	lcsd 320-496101/3-a	19	8290A/Solid		GRB	10.000	g
25	08JN21ADFS1_25	mb 320-496101/1-a	mb 320-496101/1-a	20	8290A/Solid		GRB	10.000	
26	08JN21ADFS1_26	Resolution Check	RC 060821D	46			GRB	1.000	
27	08JN21ADFS1_27	CCV CS-4 HRDXNL4_00099	CCV 060821B	2	Dioxin		GRB	1.000	
28	08JN21ADFS1_28	Resolution Check	RC 060821E	46			GRB	1.000	
29	08JN21ADFS1_29	WDM HRDXNCP_00042	WDM 060821C	1	Dioxin		GRB	1.000	
30	08JN21ADFS1_30	SB Solvent Blank C-14	SB 060821B	3			GRB	1.000	
31	08JN21ADFS1_31	320-74542-b-4-a	320-74542-b-4-a	21	8290A/Solid	D245	GRB	10.000	g
32	08JN21ADFS1_32	320-74542-b-5-a	320-74542-b-5-a	22	8290A/Solid		GRB	10.000	g
33	08JN21ADFS1_33	320-74542-b-6-a	320-74542-b-6-a	23	8290A/Solid		GRB	10.000	g
34	08JN21ADFS1_34	320-74542-b-7-a	320-74542-b-7-a	24	8290A/Solid		GRB	10.000	g
35	08JN21ADFS1_35	320-74542-b-8-a	320-74542-b-8-a	25	8290A/Solid		GRB	10.000	g
36	08JN21ADFS1_36	320-74542-b-9-a	320-74542-b-9-a	26	8290A/Solid		GRB	10.000	g
37	08JN21ADFS1_37	SB Solvent Blank C-14	SB 060821C	3			GRB	1.000	
38	08JN21ADFS1_38	Resolution Check	RC 060821F	46			GRB	1.000	
39	08JN21ADFS1_39	CCV CS-4 HRDXNL4_00099	CCV 060821C	2	Dioxin		GRB	1.000	
40	08JN21ADFS1_40	Resolution Check	RC 060821G	46			GRB	1.000	

LOG FILE ✓'d
06/09/21
GRB

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 12:20
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10809 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10359 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10673 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10724 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10609 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10694 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10161 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10386 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10328 [5%height]

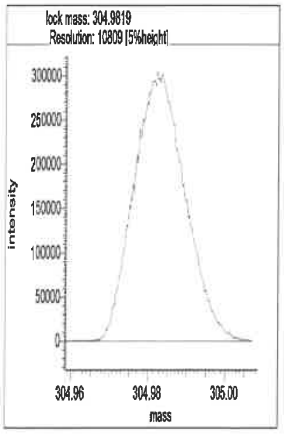

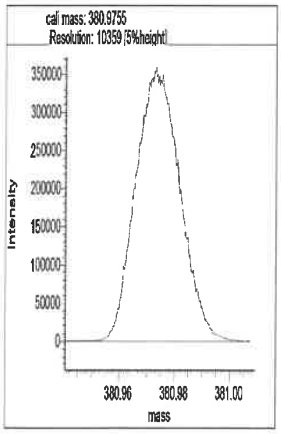

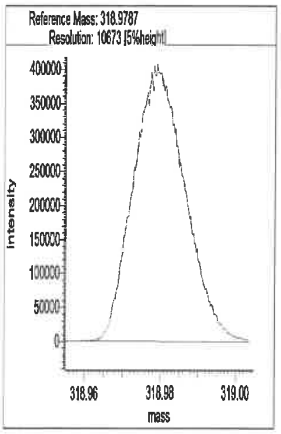

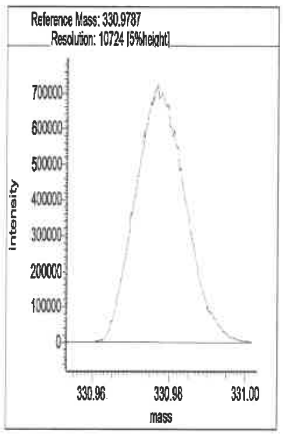

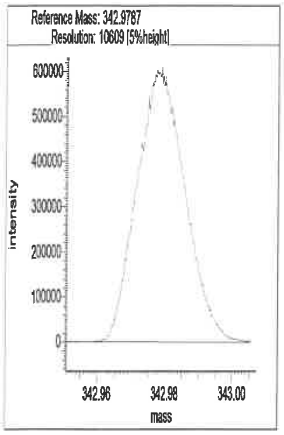

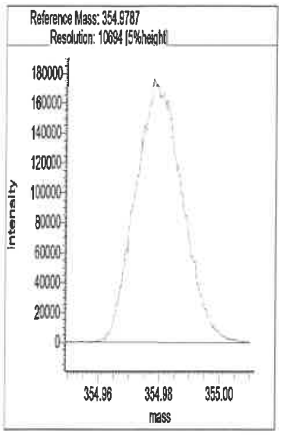

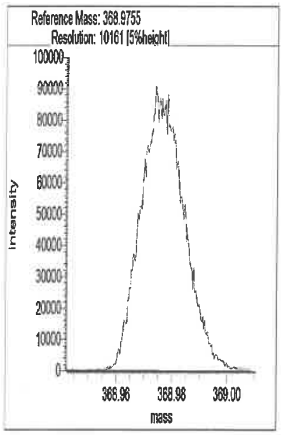

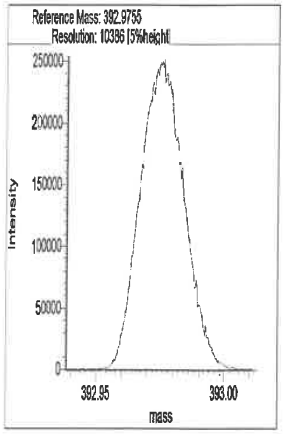

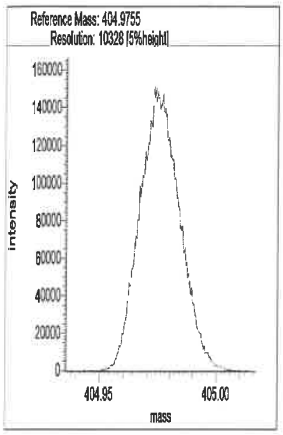

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10749 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10650 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10687 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10661 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10183 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10343 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10397 [5%height]

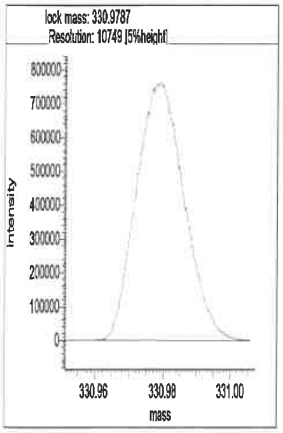

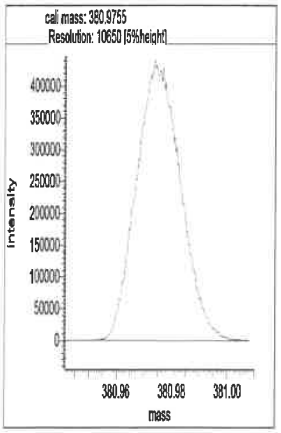

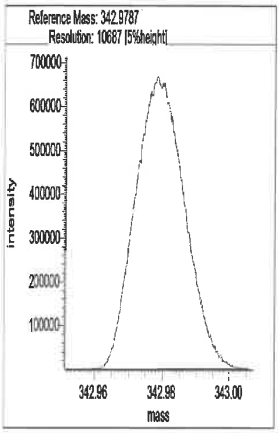

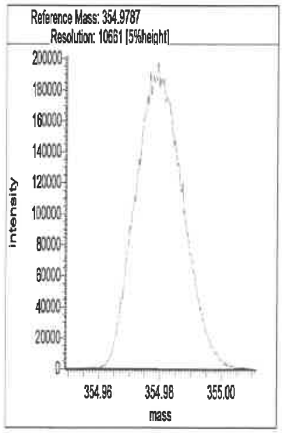

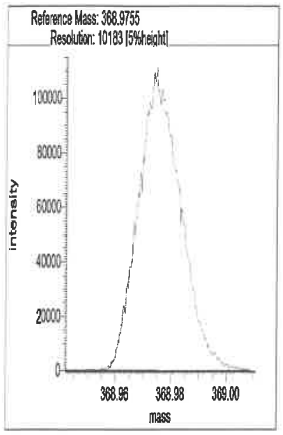

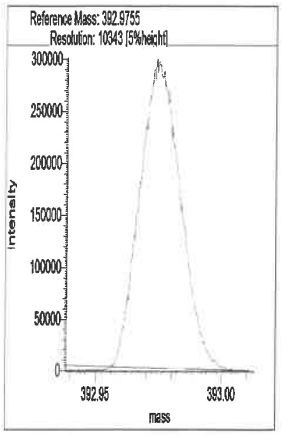

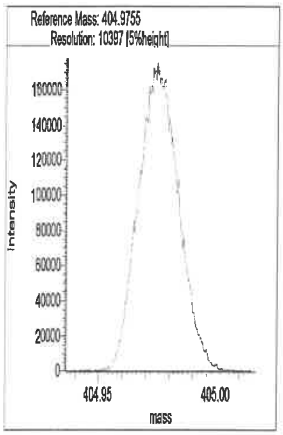

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10665 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10632 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10792 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10868 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10680 [5%height]

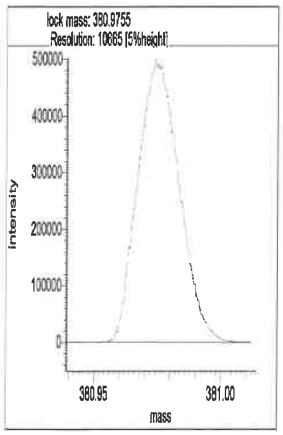

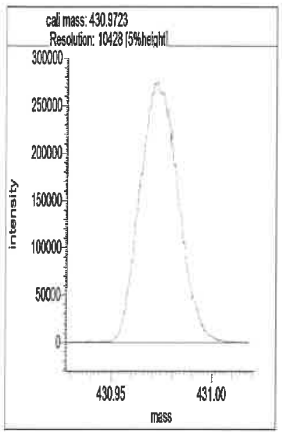

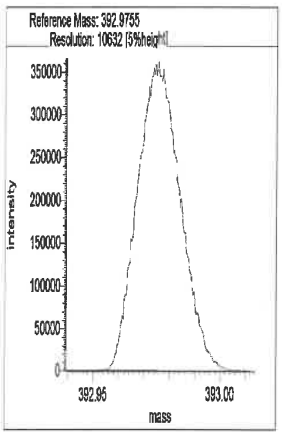

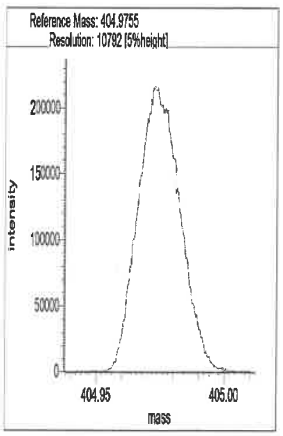

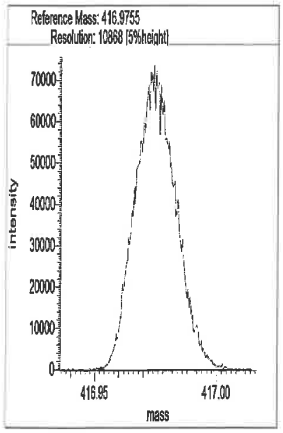

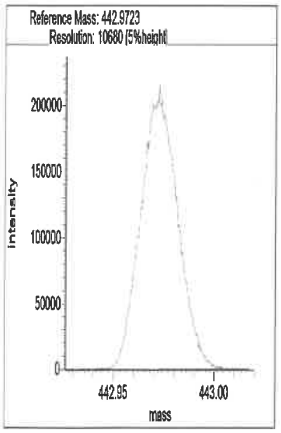

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10780 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10428 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10519 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10746 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10596 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10599 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10334 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10486 [5%height]

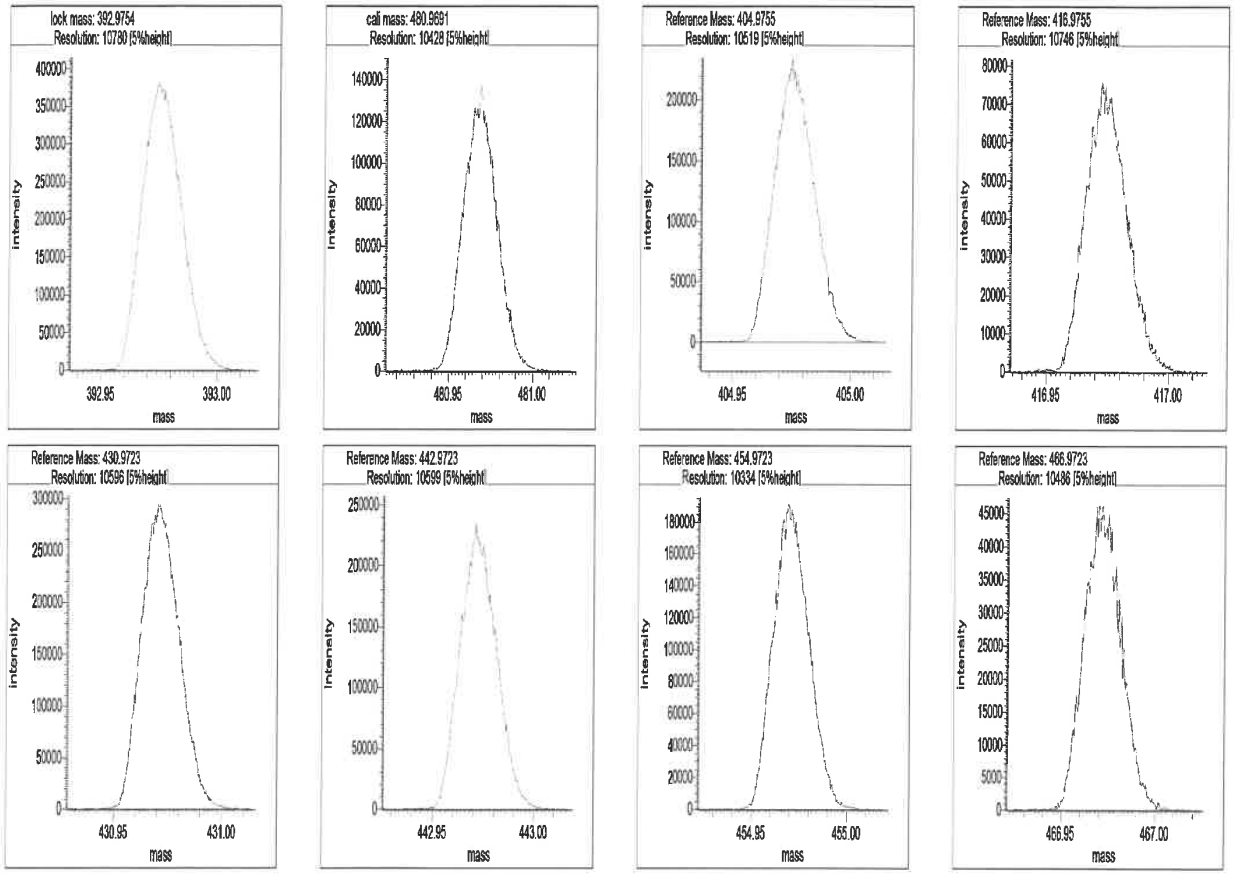

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10812 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10576 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10586 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10905 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10543 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10541 [5%height]

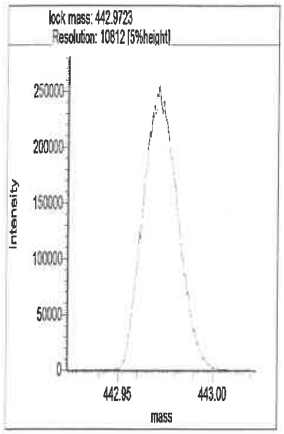
lock mass: 442.9723
Resolution: 10812 [5%height]
Intensity
mass

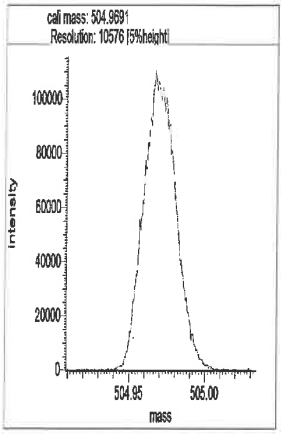
cali mass: 504.9691
Resolution: 10576 [5%height]
Intensity
mass

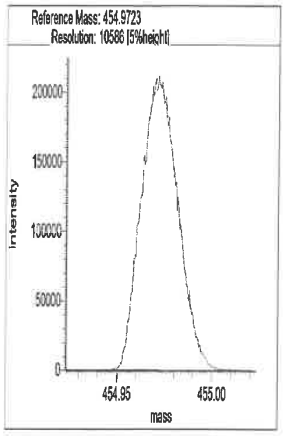
Reference Mass: 454.9723
Resolution: 10566 [5%height]
Intensity
mass

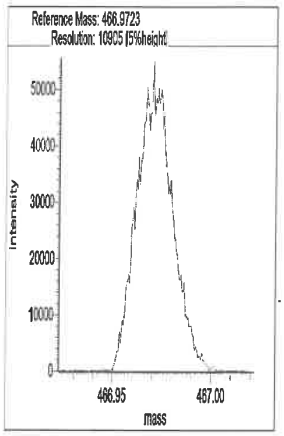
Reference Mass: 466.9723
Resolution: 10905 [5%height]
Intensity
mass

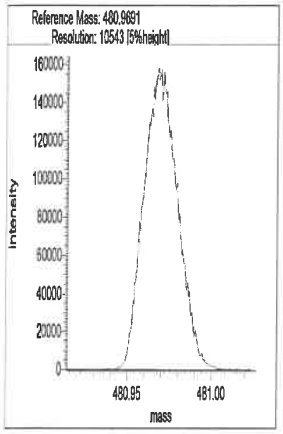
Reference Mass: 480.9691
Resolution: 10543 [5%height]
Intensity
mass

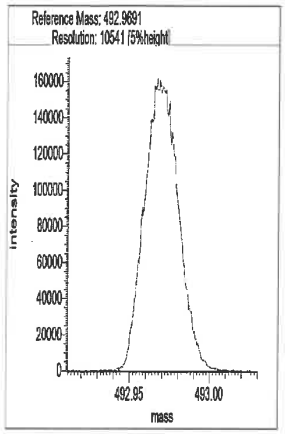
Reference Mass: 492.9691
Resolution: 10541 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 18:18
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11138 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10557 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10815 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11047 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10923 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10964 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10533 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10381 [5%height]

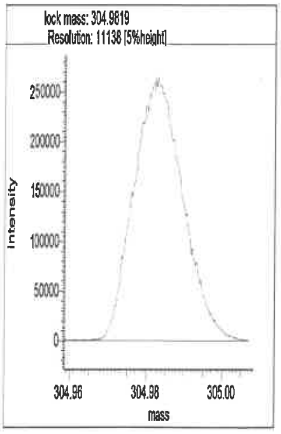

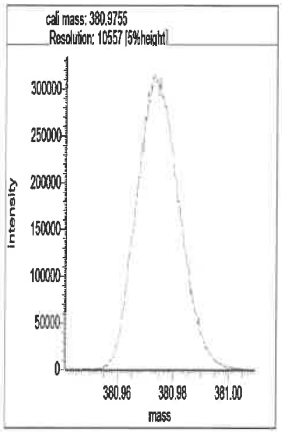

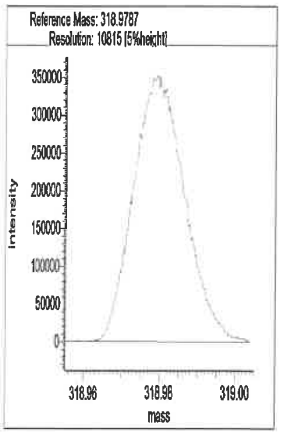

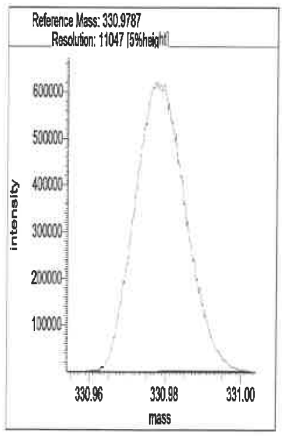

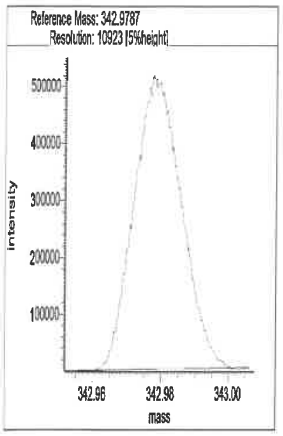

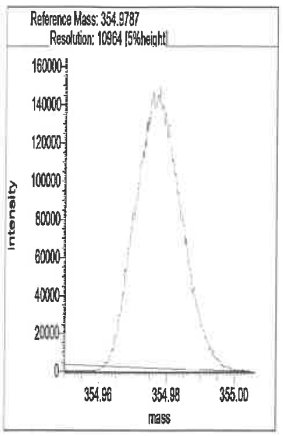

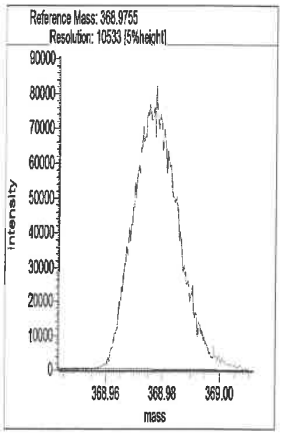

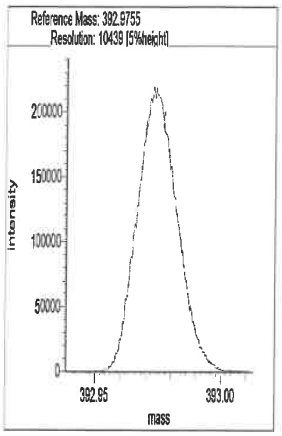

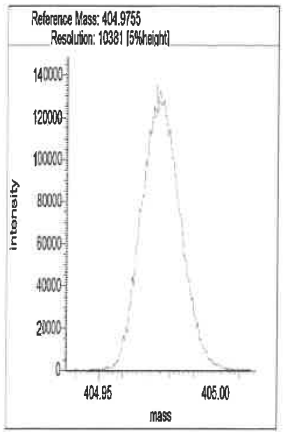

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10931 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10771 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11049 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10941 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10429 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10942 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10794 [5%height]

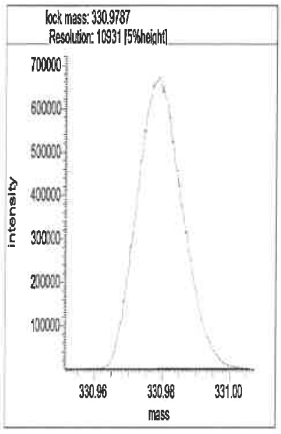

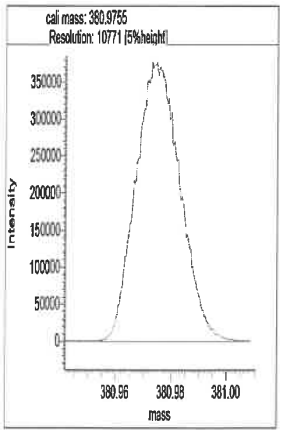

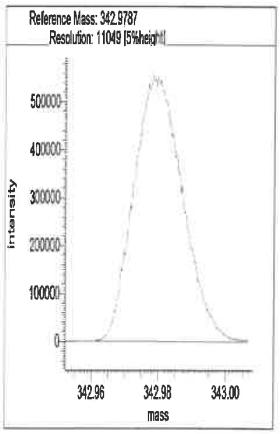

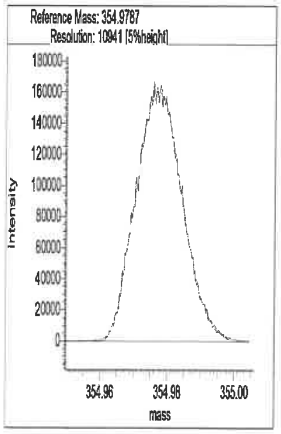

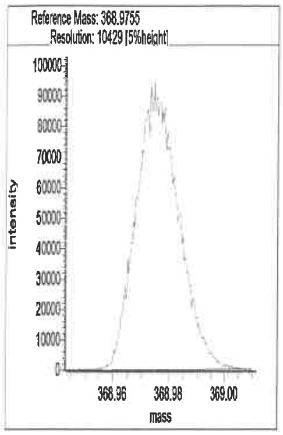

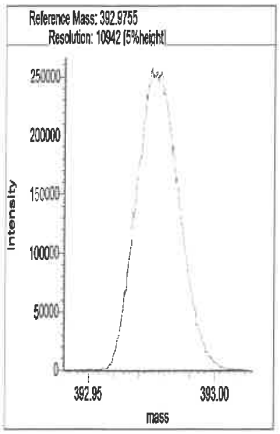

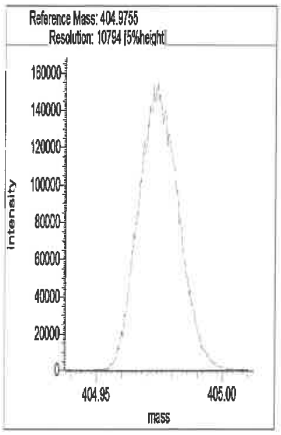

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10885 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10505 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10981 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10838 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11244 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10864 [5%height]

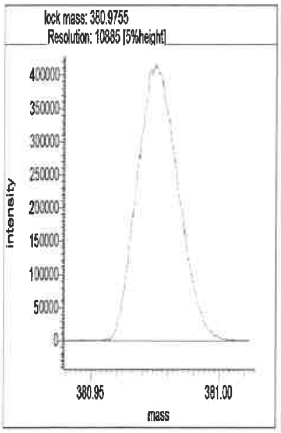

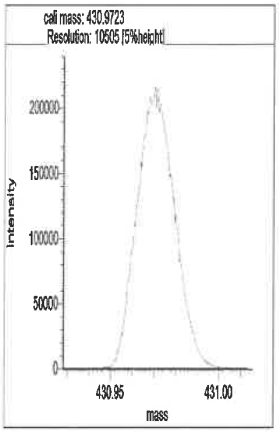

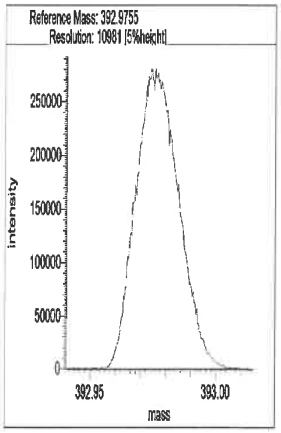

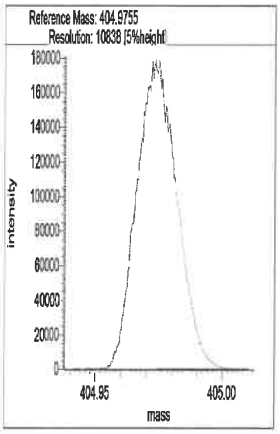

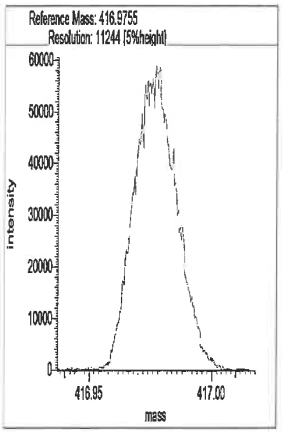

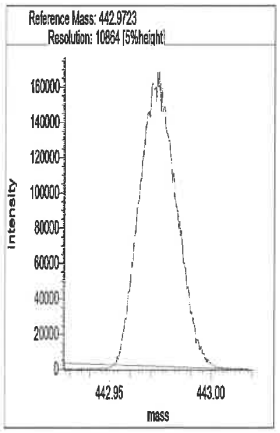

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10912 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10920 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10645 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11021 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10722 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10705 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10886 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11473 [5%height]

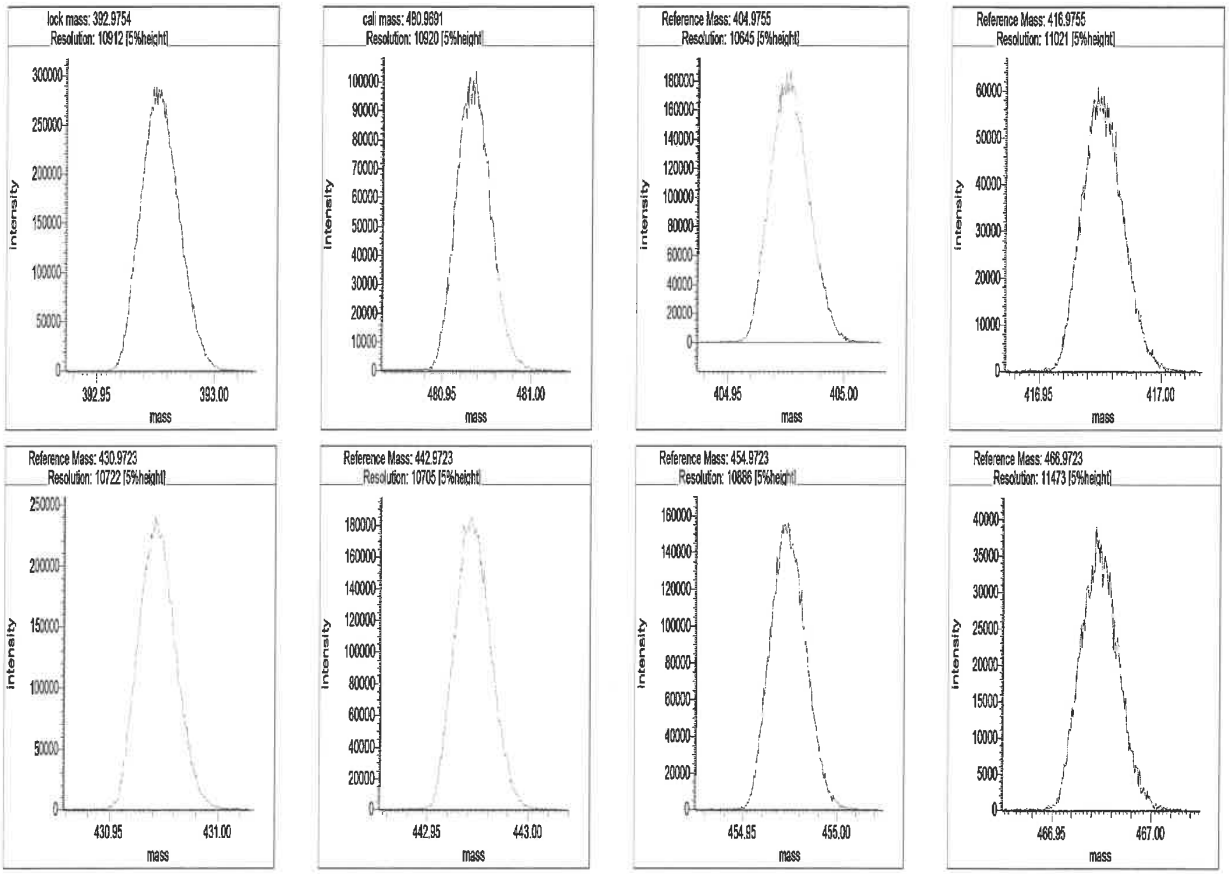

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11094 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10852 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11104 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11145 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10592 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10719 [5%height]

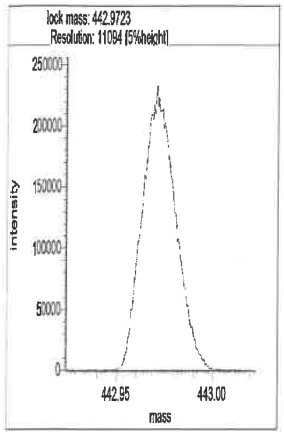
lock mass: 442.9723
Resolution: 11094 [5%height]
Intensity
mass

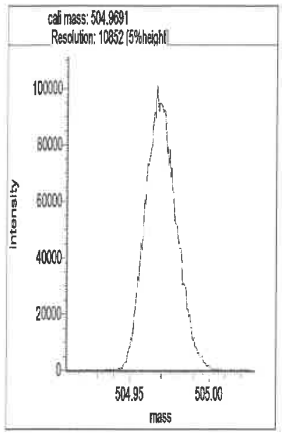
cali mass: 504.9691
Resolution: 10852 [5%height]
Intensity
mass

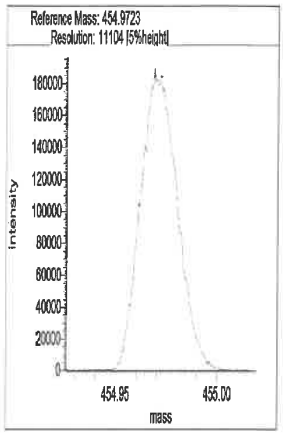
Reference Mass: 454.9723
Resolution: 11104 [5%height]
Intensity
mass

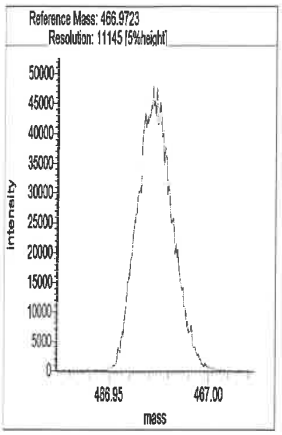
Reference Mass: 466.9723
Resolution: 11145 [5%height]
Intensity
mass

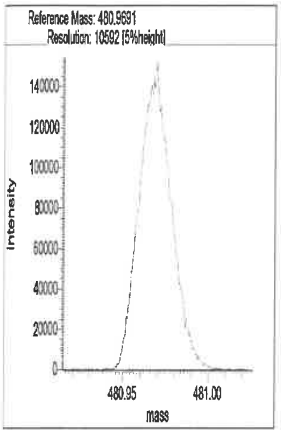
Reference Mass: 480.9691
Resolution: 10592 [5%height]
Intensity
mass

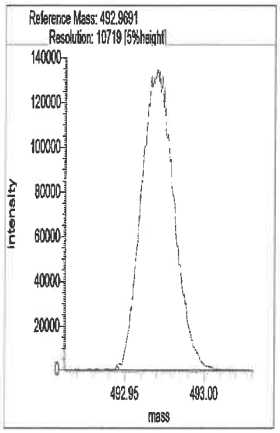
Reference Mass: 492.9691
Resolution: 10719 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 20:13
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11228 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10780 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10868 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10774 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10877 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10591 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10487 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10710 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10243 [5%height]

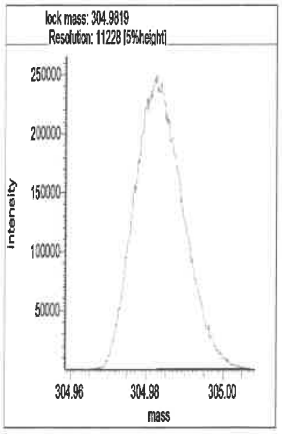

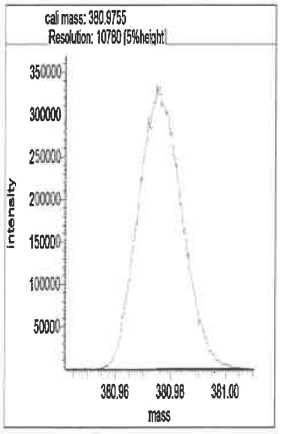

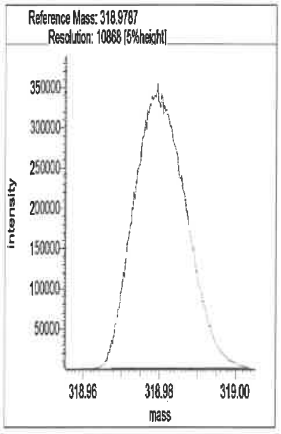

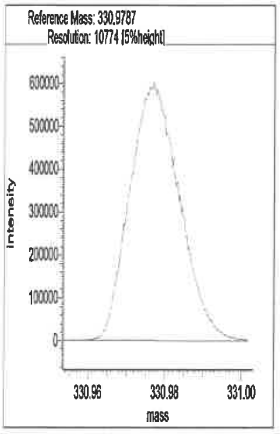

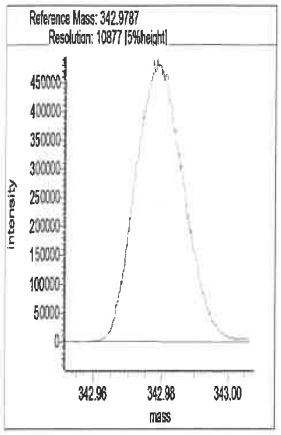

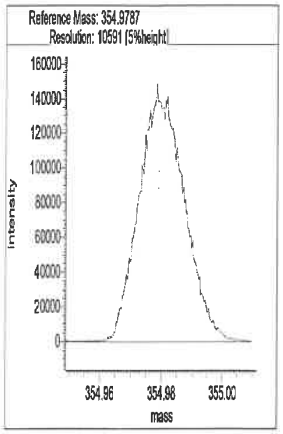

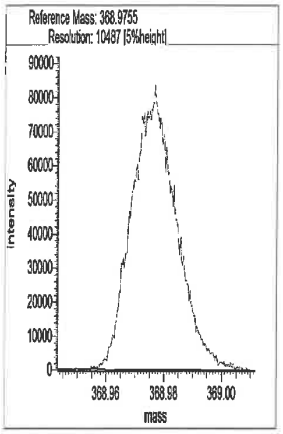

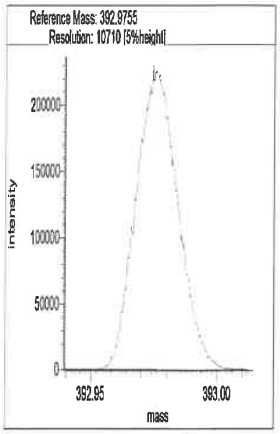

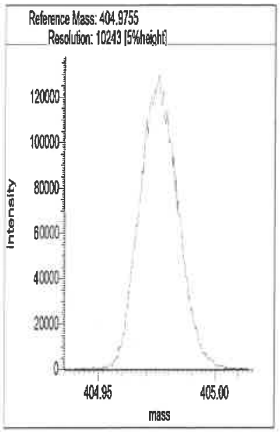

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10867 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10936 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10948 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10910 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10174 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10675 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10514 [5%height]

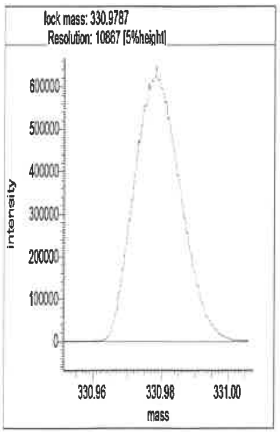

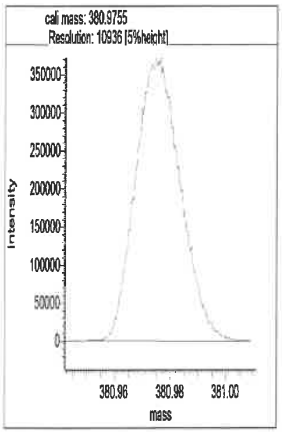

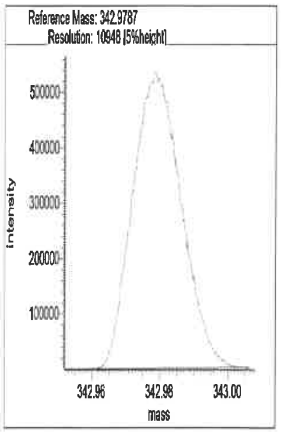

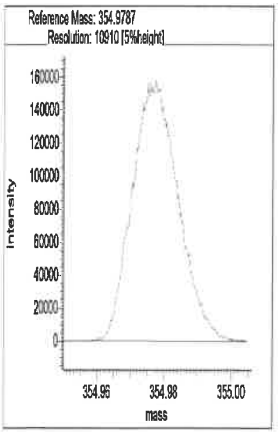

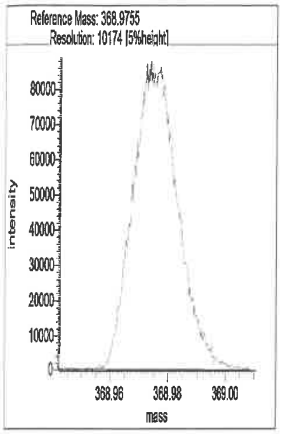

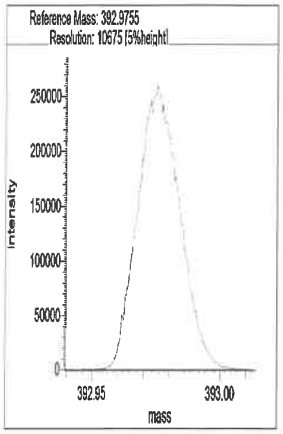

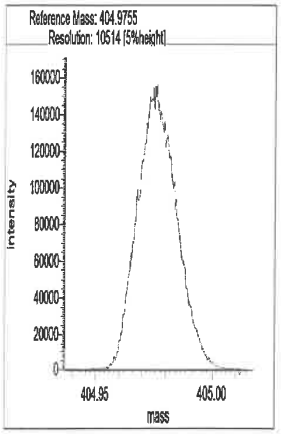

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10898 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10782 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11034 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11134 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10786 [5%height]

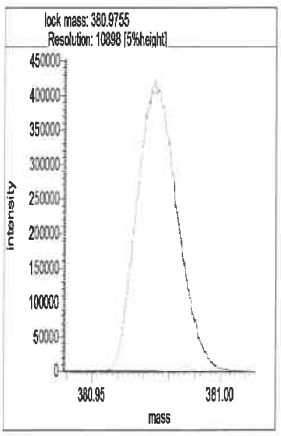

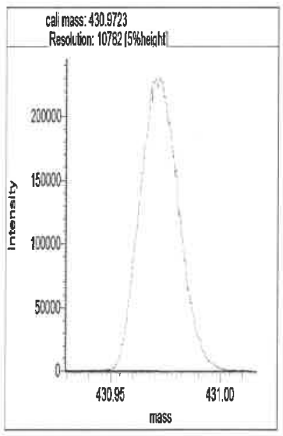

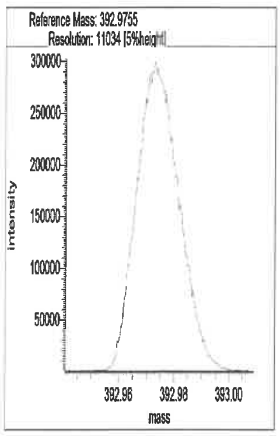

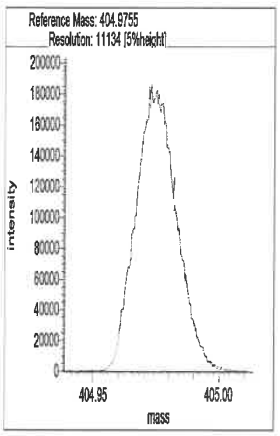

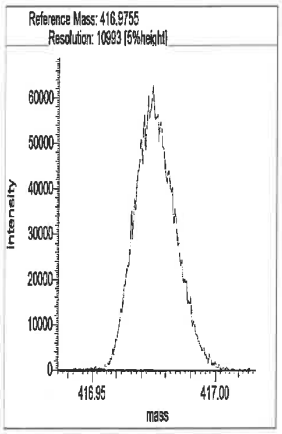

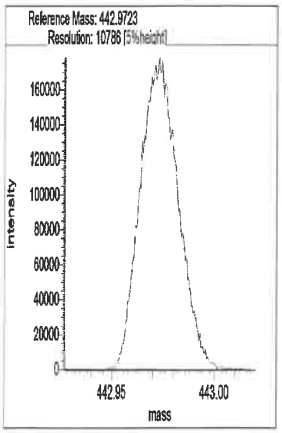

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11155 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10418 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10767 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10954 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10613 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11028 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10950 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10877 [5%height]

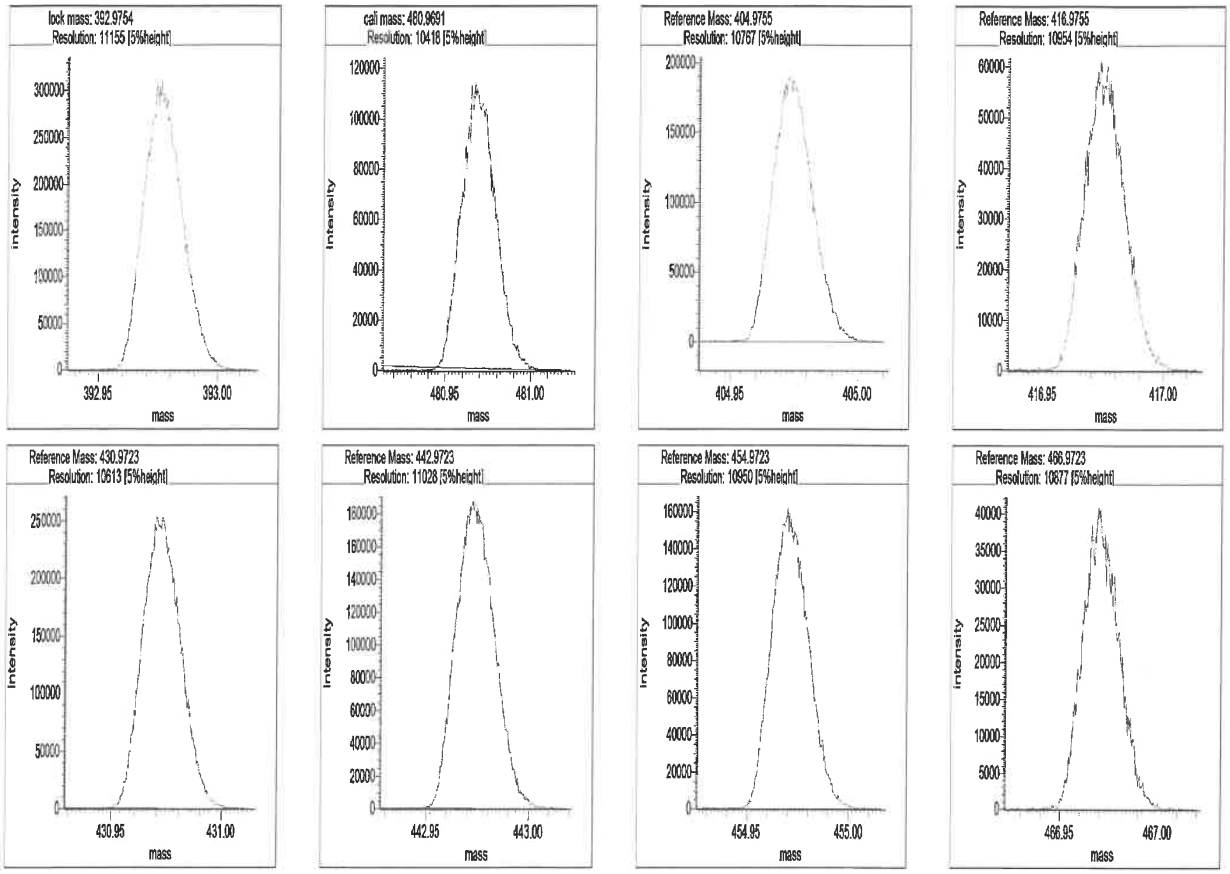

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10985 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10829 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11149 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11382 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11128 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11097 [5%height]

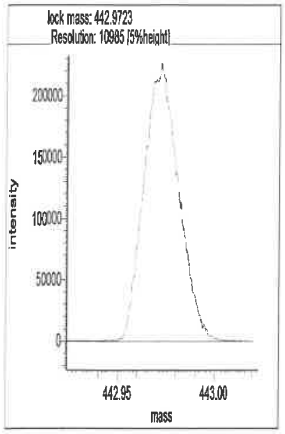
lock mass: 442.9723
Resolution: 10985 [5%height]
intensity
mass

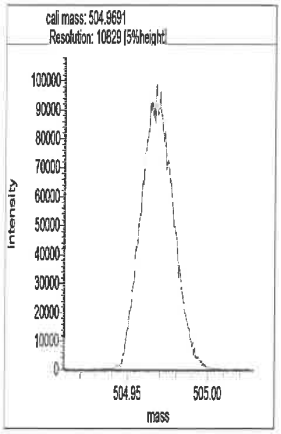
cali mass: 504.9691
Resolution: 10629 [5%height]
intensity
mass

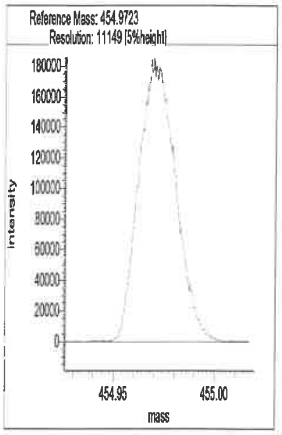
Reference Mass: 454.9723
Resolution: 11149 [5%height]
intensity
mass

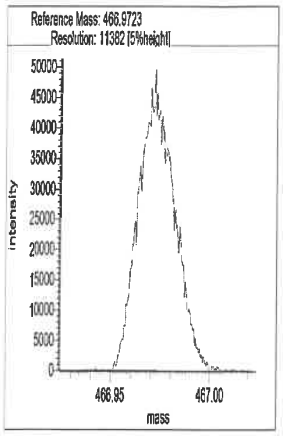
Reference Mass: 466.9723
Resolution: 11382 [5%height]
intensity
mass

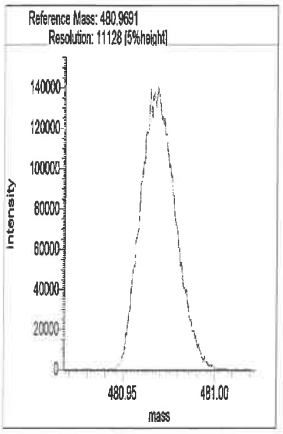
Reference Mass: 480.9691
Resolution: 11128 [5%height]
intensity
mass

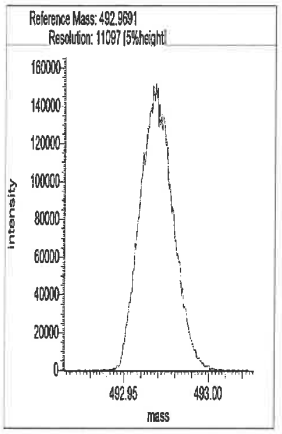
Reference Mass: 492.9691
Resolution: 11097 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.564	2334037	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.628	3167014	0.81	1.3459	100.8	100.8	0.1546	0.1546	101	
2,3,7,8-TCDF	19.662	19533	0.82	1.0802	0.5710	0.5710	0.007637	0.007637	114	
S Total TCDF					0.5710	0.5710	0.007637	0.007637		
D 13C-2,3,7,8-TCDD	20.933	2138853	0.81	0.9317	98.4	98.4	0.1772	0.1772	98.36	
$ 37Cl4-2,3,7,8-TCDD	20.941	11266		1.0083	0.4787	0.4787	0.005933	0.005933	95.74	
2,3,7,8-TCDD	20.967	12122	0.71	1.0753	0.5270	0.5270	0.0223	0.0223	105	
S Total TCDD					0.5270	0.5270	0.0223	0.0223		
D 13C-1,2,3,7,8-PeCDF	26.587	2514489	1.59	1.1405	94.5	94.5	0.3469	0.3469	94.46	
1,2,3,7,8-PeCDF	26.613	74934	1.71	1.0543	2.827	2.827	0.0199	0.0199	113	
D 13C-2,3,4,7,8-PeCDF	28.046	2592947	1.57	1.1253	98.7	98.7	0.3516	0.3516	98.72	
2,3,4,7,8-PeCDF	28.071	72817	1.61	1.0079	2.786	2.786	0.0219	0.0219	111	
S Total PeCDF					5.613	5.613	0.0209	0.0209		
D 13C-1,2,3,7,8-PeCDD	28.830	1602476	1.59	0.7165	95.8	95.8	0.1271	0.1271	95.83	
1,2,3,7,8-PeCDD	28.855	42943	1.72	1.0465	2.561	2.561	0.0215	0.0215	102	
S Total PeCDD					2.561	2.561	0.0215	0.0215		
D 13C-1,2,3,4,7,8-HxCDF	34.406	1517222	0.52	0.9648	89.7	89.7	0.3358	0.3358	89.72	
1,2,3,4,7,8-HxCDF	34.431	46374	1.30	1.1474	2.664	2.664	0.0219	0.0219	107	
D 13C-1,2,3,6,7,8-HxCDF	34.583	1626653	0.54	1.0708	86.7	86.7	0.3026	0.3026	86.67	
1,2,3,6,7,8-HxCDF	34.608	54388	1.19	1.2178	2.746	2.746	0.0201	0.0201	110	
D 13C-2,3,4,6,7,8-HxCDF	35.468	1523436	0.53	1.0413	83.5	83.5	0.3112	0.3112	83.47	
2,3,4,6,7,8-HxCDF	35.485	50026	1.25	1.2145	2.704	2.704	0.0183	0.0183	108	
D 13C-1,2,3,7,8,9-HxCDF	36.404	1696557	0.52	0.9731	99.5	99.5	0.3330	0.3330	99.47	
1,2,3,7,8,9-HxCDF	36.421	57602	1.21	1.2401	2.738	2.738	0.0145	0.0145	110	
S Total HxCDF					10.9	10.9	0.0187	0.0187		
* 13C-1,2,3,7,8,9-HxCDD	36.210	1752780	1.29	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.695	1127895	1.27	0.7587	84.8	84.8	0.2005	0.2005	84.82	
1,2,3,4,7,8-HxCDD	35.712	31680	1.20	1.0608	2.648	2.648	0.0198	0.0198	106	
D 13C-1,2,3,6,7,8-HxCDD	35.822	1291365	1.29	0.8593	85.7	85.7	0.1770	0.1770	85.74	
1,2,3,6,7,8-HxCDD	35.839	34082	1.16	0.9933	2.657	2.657	0.0196	0.0196	106	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.227	39595	1.15	1.1094	2.950	2.950	0.0182	0.0182	118	
S Total HxCDD					8.255	8.255	0.0192	0.0192		
D 13C-1,2,3,4,6,7,8-HpCDF	38.321	1227279	0.46	0.7359	95.1	95.1	0.3550	0.3550	95.14	
1,2,3,4,6,7,8-HpCDF	38.329	47287	1.05	1.4421	2.672	2.672	0.0138	0.0138	107	
D 13C-1,2,3,4,7,8,9-HpCDF	39.611	1120663	0.46	0.6854	93.3	93.3	0.3812	0.3812	93.29	
1,2,3,4,7,8,9-HpCDF	39.619	39382	1.04	1.3092	2.684	2.684	0.0149	0.0149	107	
S Total HpCDF					5.356	5.356	0.0144	0.0144		
D 13C-1,2,3,4,6,7,8-HpCDD	39.307	1113145	1.06	0.6745	94.2	94.2	0.2577	0.2577	94.15	
1,2,3,4,6,7,8-HpCDD	39.316	31661	0.99	1.0503	2.708	2.708	0.0190	0.0190	108	
S Total HpCDD					2.708	2.708	0.0190	0.0190		
D 13C-OCDD	41.797	1823492	0.90	0.5446	191.0	191.0	0.3325	0.3325	95.51	
OCDF	41.890	61051	0.95	1.3168	5.085	5.085	0.0322	0.0322	102	
OCDD	41.805	51642	0.88	1.0620	5.333	5.333	0.0182	0.0182	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.564	20.547	1		1041449	163457	148	370	1104		
333.9338	20.564	20.547	1		1292588	204311	95	237	2151	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.628	19.616	1	0.954	1415927	226149	197	492	1148		
317.9389	19.628	19.616	1	0.954	1751087	282985	109	272	2596	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.662	19.646	1	1.002	8785	1472	3	7	491		
305.8987	19.662	19.646	1	1.002	10748	1598	14	35	114	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.933	20.910	1	1.018	956834	140160	148	370	947		
333.9338	20.924	20.910	1	1.018	1182019	172842	95	237	1819	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.941	20.935	0	1.018	11266	1696	9	22	188		
2,3,7,8-TCDD											
319.8965	20.967	20.939	2	1.002	5046	703	25	62	28		
321.8936	20.950	20.939	1	1.001	7076	1165	5	12	233	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.587	26.560	2	1.293	1544614	271650	354	885	767		
353.8970	26.587	26.560	2	1.293	969875	166951	228	570	732	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.613	26.584	2	1.001	47325	8180	13	32	629		
341.8567	26.596	26.584	1	1.000	27609	5058	24	60	211	1.71(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.046	28.014	2	1.364	1584958	253357	354	885	716		
353.8970	28.037	28.014	1	1.363	1007989	162868	228	570	714	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.071	28.039	2	1.001	44929	7445	13	32	573		
341.8567	28.063	28.039	1	1.001	27888	4385	24	60	183	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.830	28.801	2	1.402	983567	149258	81	202	1843		
369.8919	28.830	28.801	2	1.402	618909	95647	53	132	1805	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.855	28.828	2	1.001	27146	4327	17	42	255		
357.8516	28.863	28.828	2	1.001	15797	2500	5	12	500	1.72(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.406	34.384	1	0.950	521957	103110	186	465	554		
385.8610	34.406	34.384	1	0.950	995265	195967	351	877	558	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.431	34.405	2	1.001	26220	5205	19	47	274		
375.8178	34.431	34.405	2	1.001	20154	4061	11	27	369	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.583	34.562	1	0.955	567371	107545	186	465	578		
385.8610	34.583	34.562	1	0.955	1059282	198264	351	877	565	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.608	34.582	2	1.001	29510	5690	19	47	299		
375.8178	34.600	34.582	1	1.000	24878	4701	11	27	427	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.468	35.444	1	0.980	527302	117266	186	465	630		
385.8610	35.468	35.444	1	0.980	996134	220962	351	877	630	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.485	35.461	1	1.000	27767	6035	19	47	318		
375.8178	35.476	35.461	1	1.000	22259	4941	11	27	449	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.404	36.388	1	1.005	582391	143633	186	465	772		
385.8610	36.404	36.388	1	1.005	1114166	273141	351	877	778	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.421	36.402	1	1.000	31508	7777	19	47	409		
375.8178	36.421	36.402	1	1.000	26094	6045	11	27	550	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.210	36.192	1		987922	232825	142	355	1640		
403.8529	36.210	36.192	1		764858	181339	110	275	1649	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.695	35.680	1	0.986	630506	153231	142	355	1079		
403.8529	35.695	35.680	1	0.986	497389	118761	110	275	1080	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.712	35.695	1	1.000	17291	4375	12	30	365		
391.8127	35.712	35.695	1	1.000	14389	3541	11	27	322	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.822	35.805	1	0.989	727495	166749	142	355	1174		
403.8529	35.822	35.805	1	0.989	563870	125792	110	275	1144	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.839	35.820	1	1.000	18295	4156	12	30	346		
391.8127	35.830	35.820	1	1.000	15787	3353	11	27	305	1.16(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.227	36.208	1	1.015	21159	5138	12	30	428		
391.8127	36.218	36.208	1	1.015	18436	4550	11	27	414	1.15(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.321	38.305	1	1.058	389255	110351	150	375	736		
419.8220	38.321	38.305	1	1.058	838024	240182	283	707	849	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.329	38.317	1	1.000	24164	7010	18	45	389		
409.7788	38.329	38.317	1	1.000	23123	6463	10	25	646	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.611	39.600	1	1.094	351407	112029	150	375	747		
419.8220	39.611	39.600	1	1.094	769256	246420	283	707	871	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.619	39.608	1	1.000	20064	6267	18	45	348		
409.7788	39.628	39.608	1	1.000	19318	5891	10	25	589	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.307	39.293	1	1.086	574080	172930	147	367	1176		
437.8140	39.307	39.293	1	1.086	539065	163690	141	352	1161	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.316	39.301	1	1.000	15770	4799	17	42	282		
425.7737	39.316	39.301	1	1.000	15891	4656	10	25	466	0.99(0.88-1.20)	
13C-OCDD											
469.7780	41.797	41.785	1	1.154	864827	245324	148	370	1658		
471.7750	41.797	41.785	1	1.154	958665	273299	152	380	1798	0.90(0.76-1.02)	
OCDF											
441.7428	41.890	41.875	1	1.002	29681	8172	14	35	584		
443.7399	41.881	41.875	0	1.002	31370	8963	30	75	299	0.95(0.76-1.02)	
OCDD											
457.7377	41.805	41.794	1	1.000	24122	6775	8	20	847		
459.7348	41.805	41.794	1	1.000	27520	7850	12	30	654	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

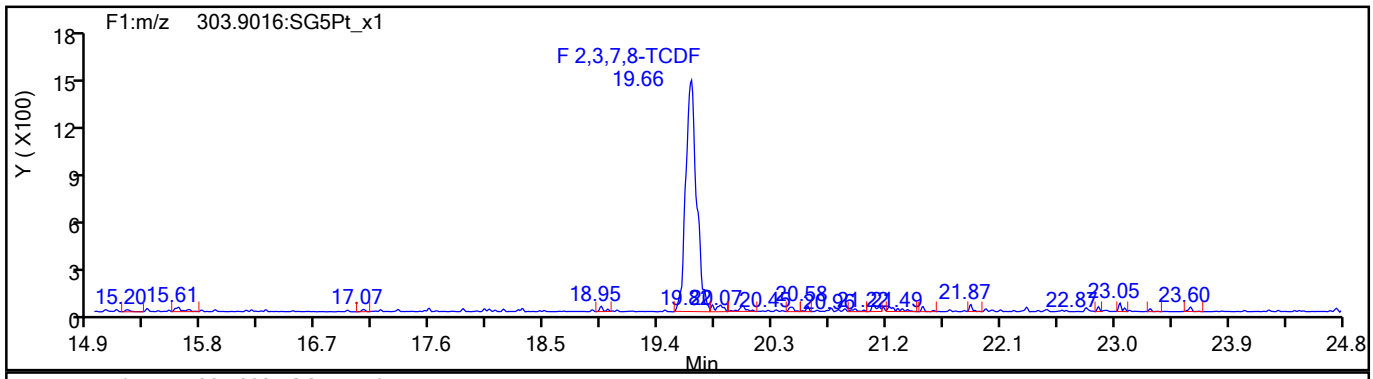

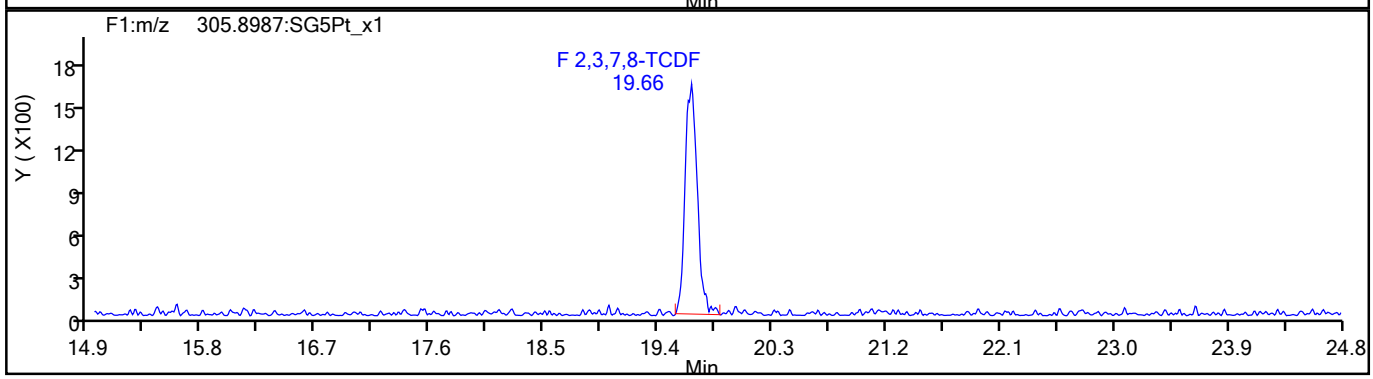

TCDF Standards

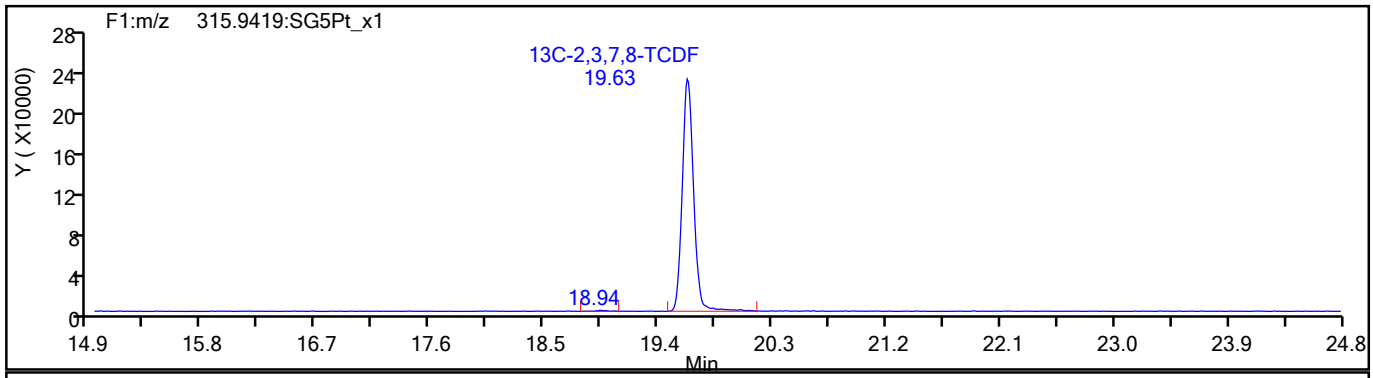

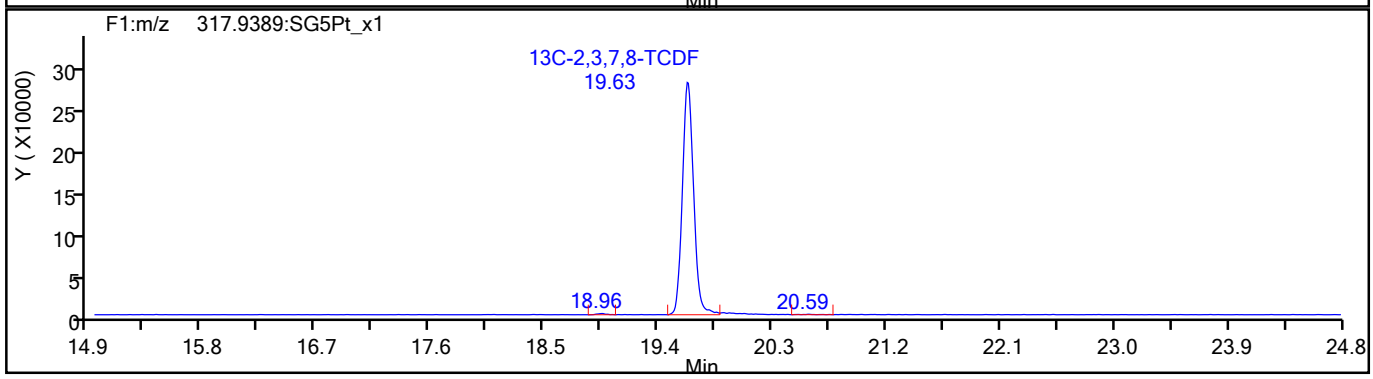

785813

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

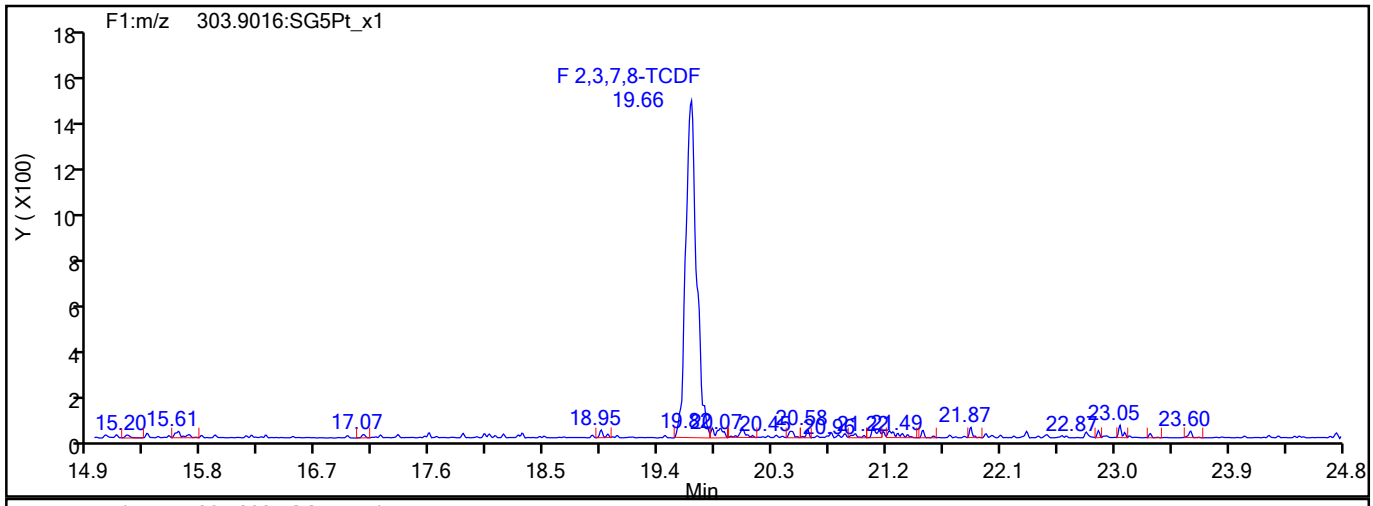

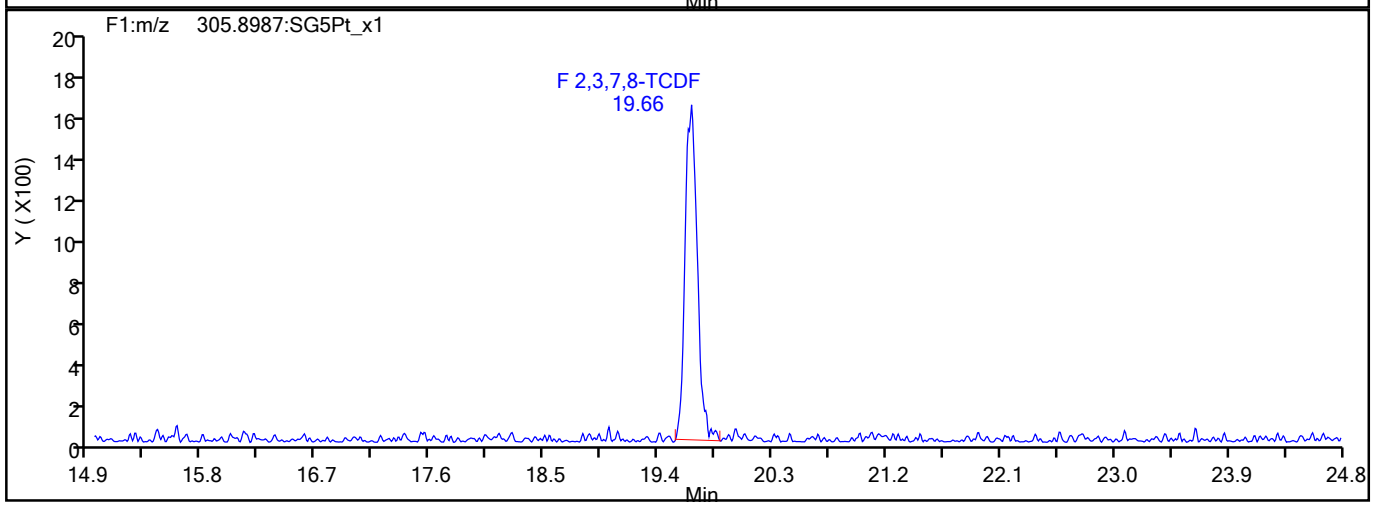

TCDF Interference Mass

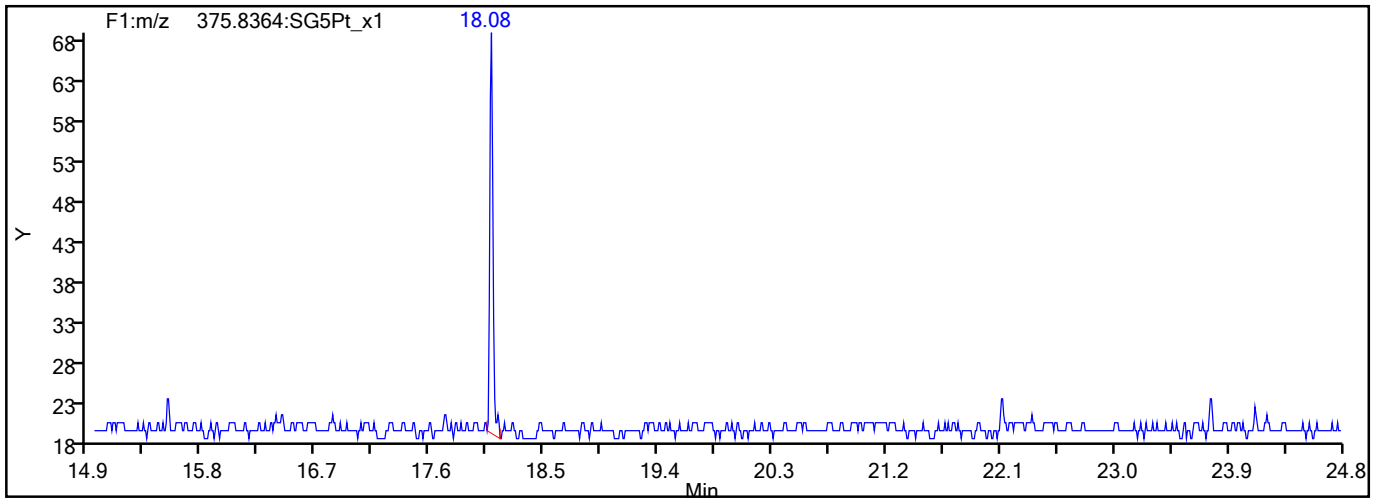

785814

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

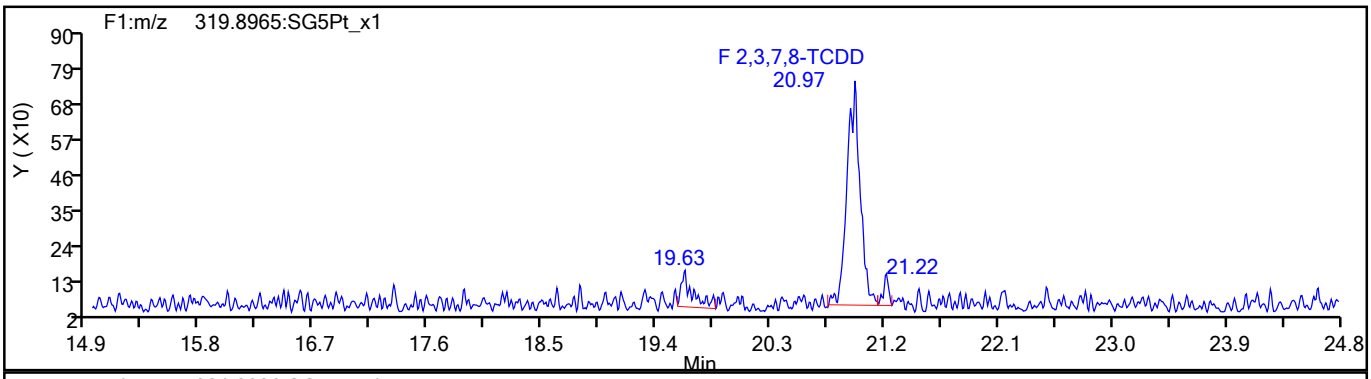

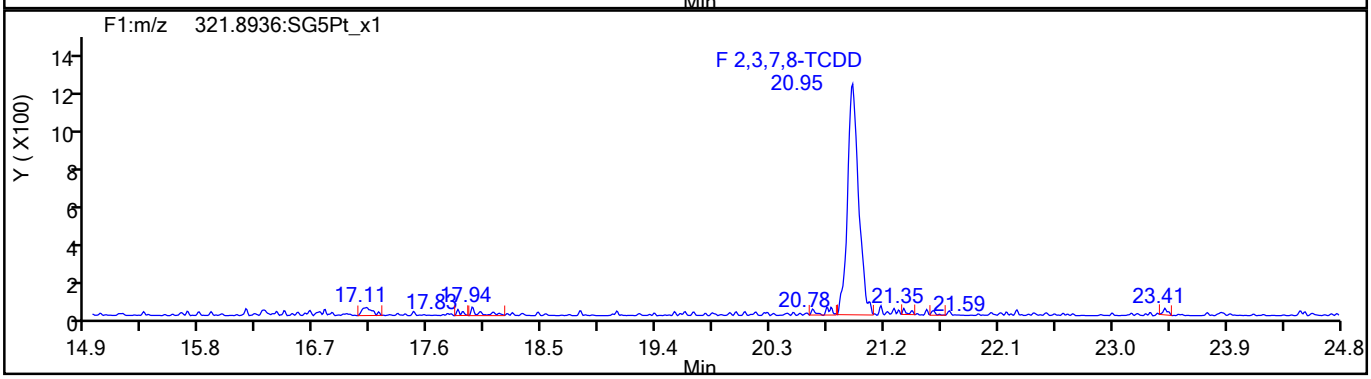

TCDD Standards

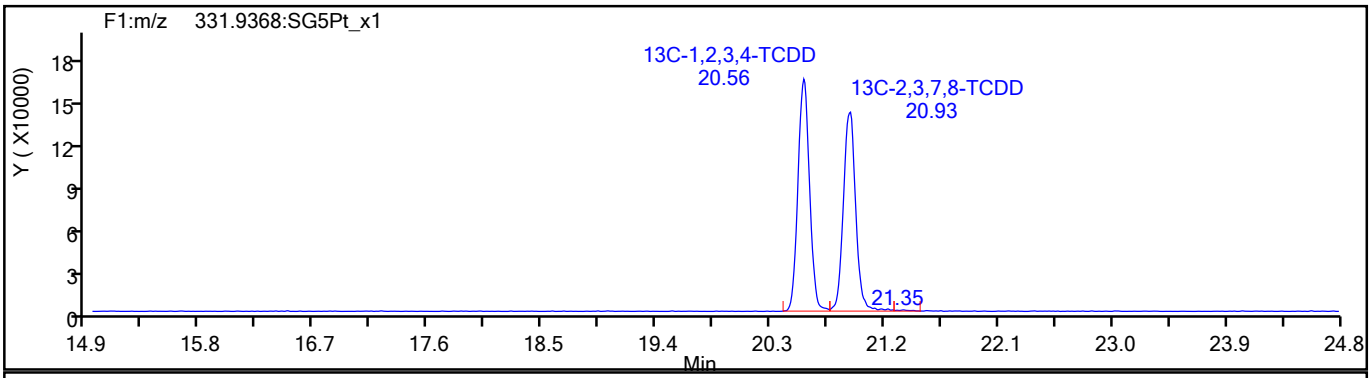

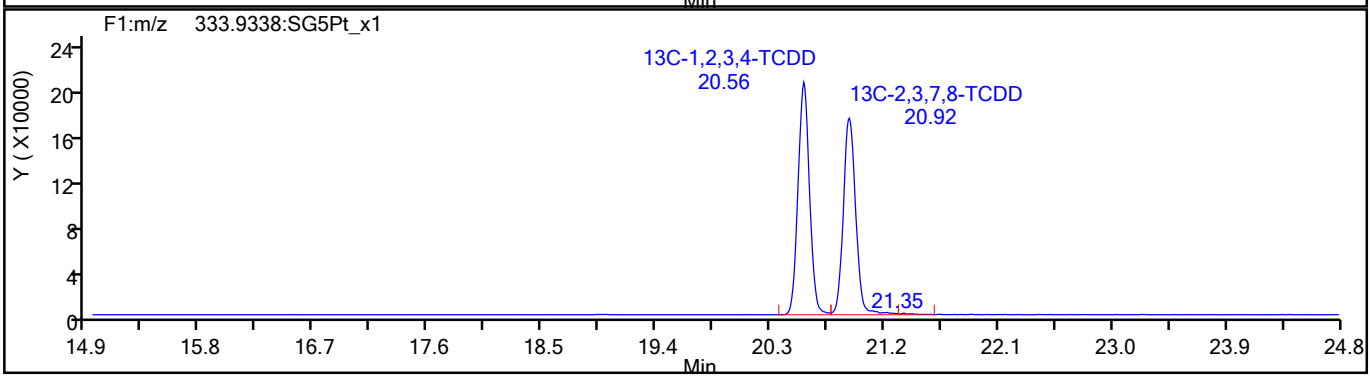

785815

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

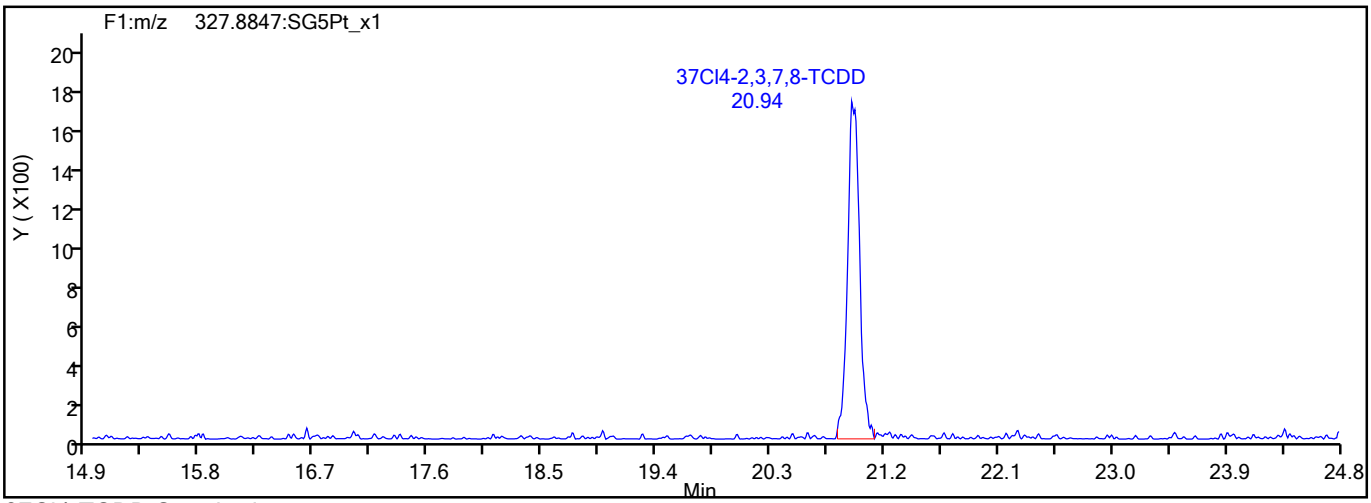

37Cl4-TCDD Standards

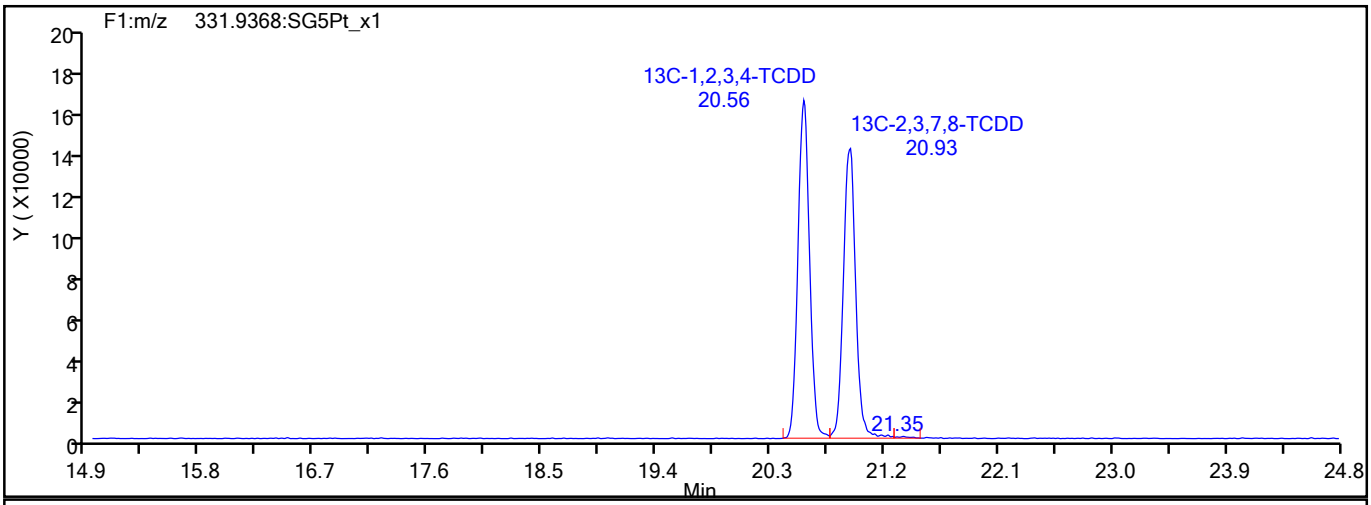

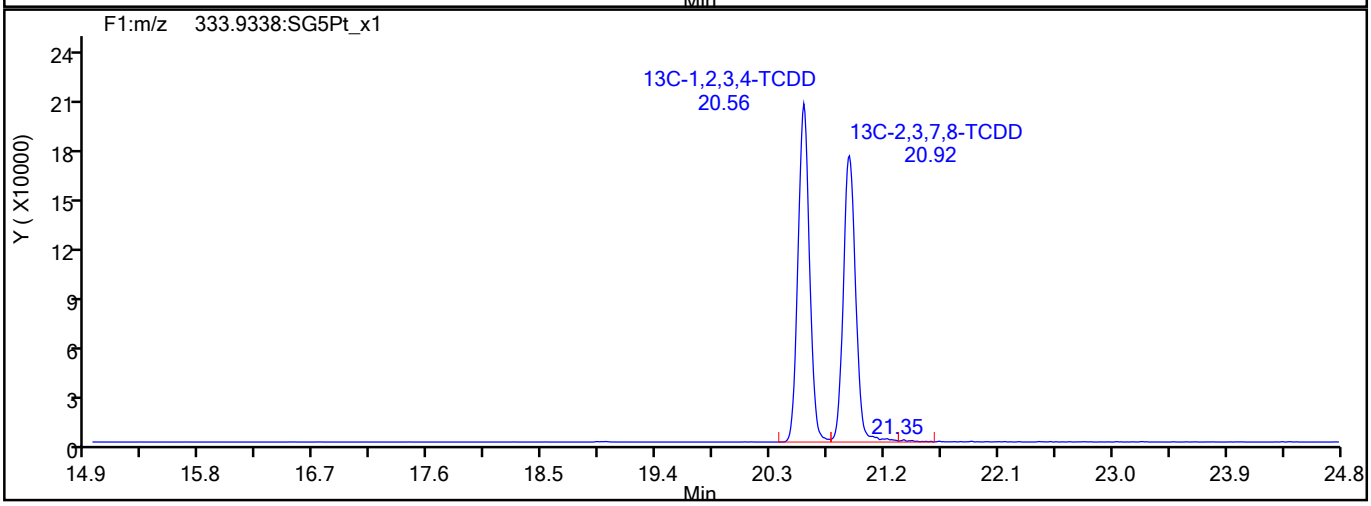

785816

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

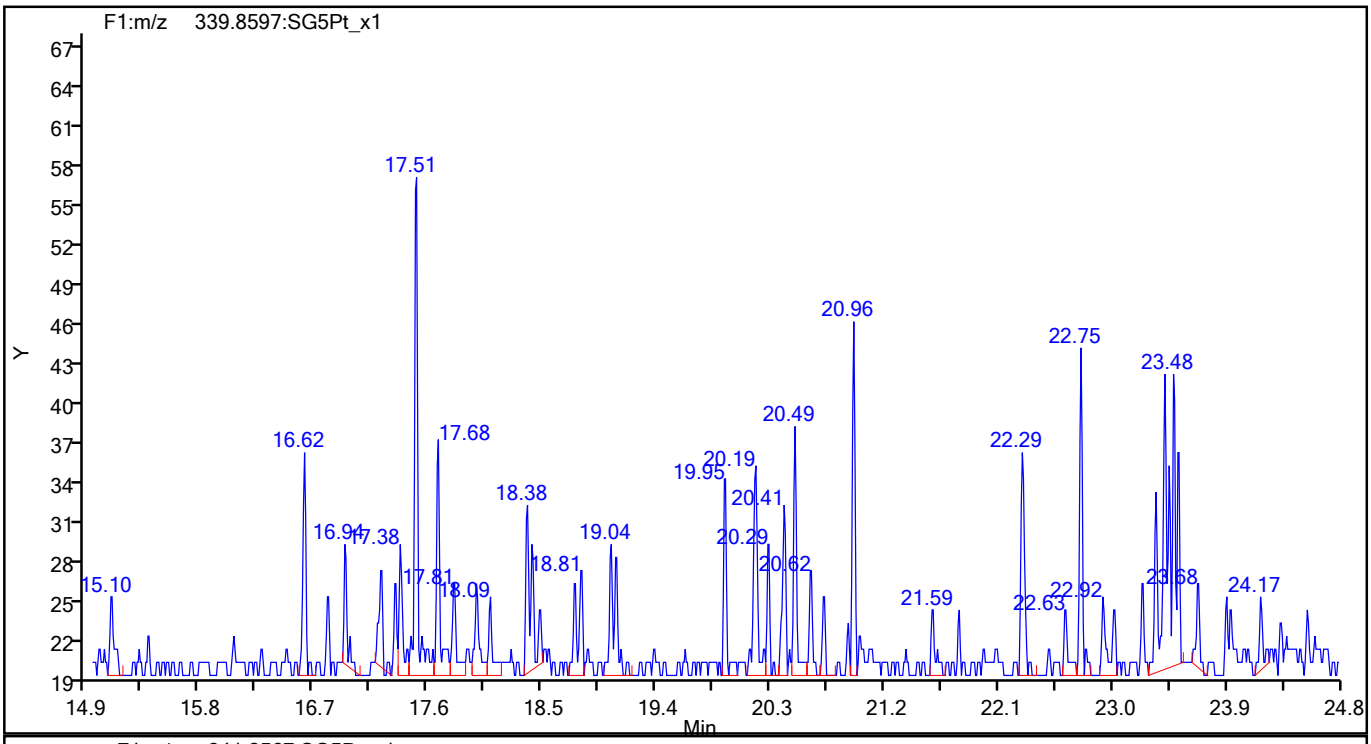

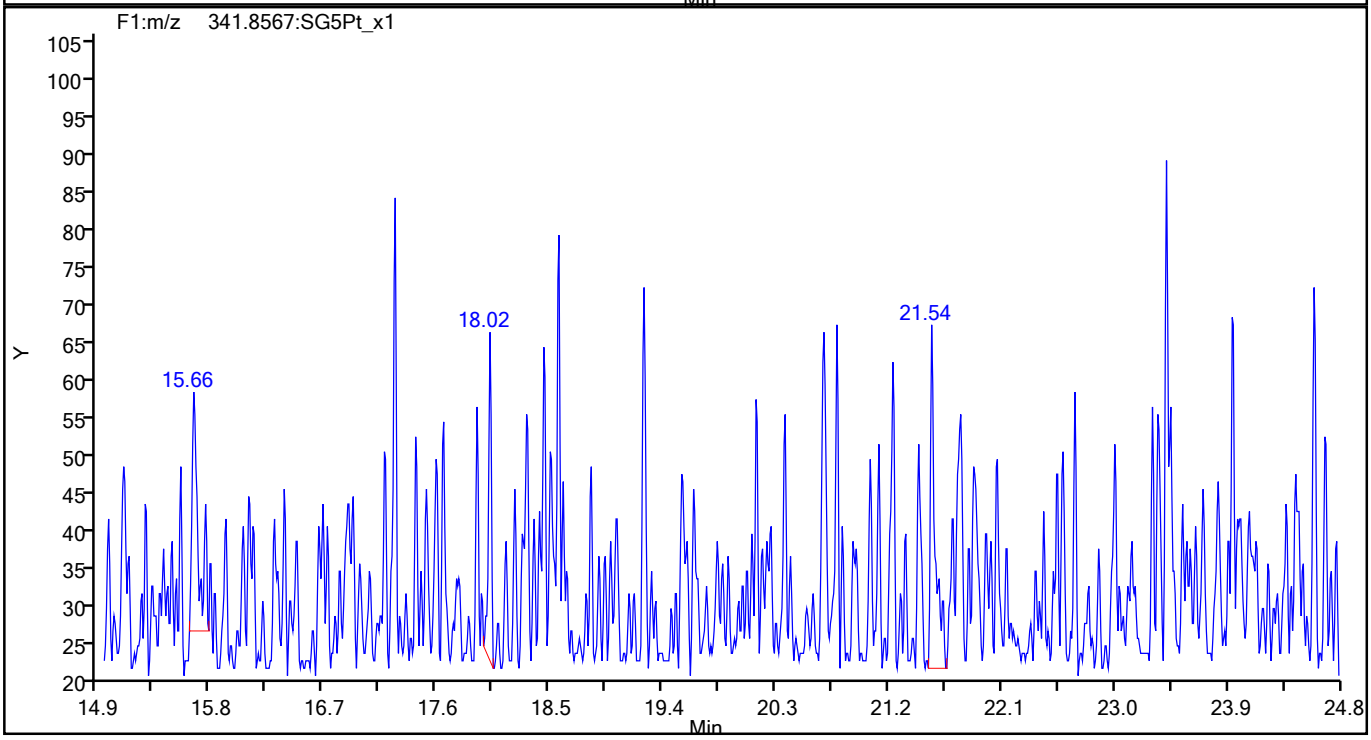

785817

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

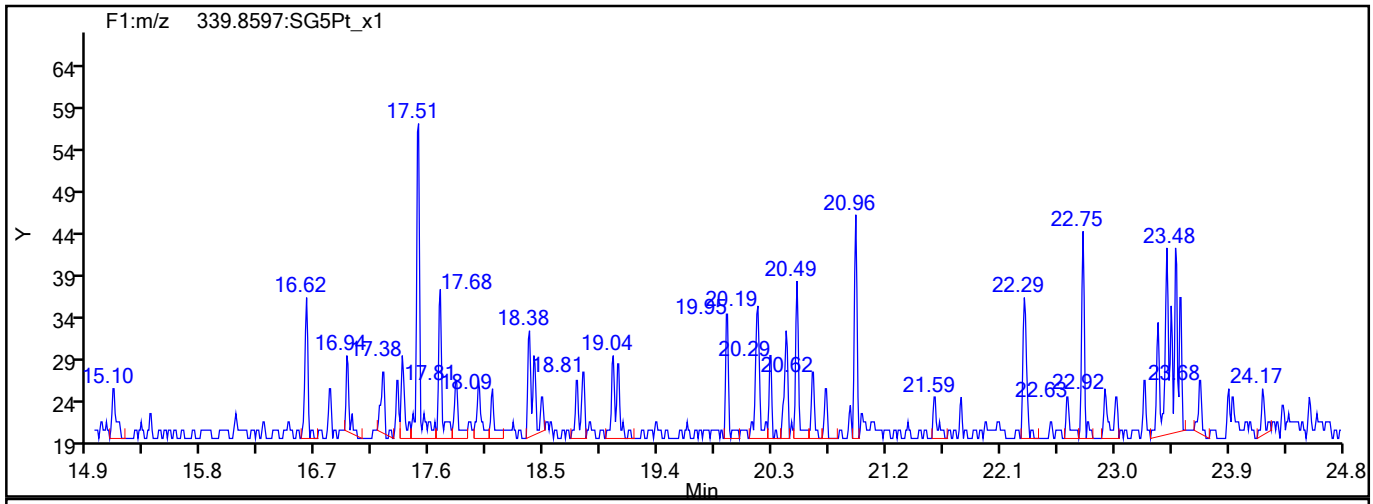

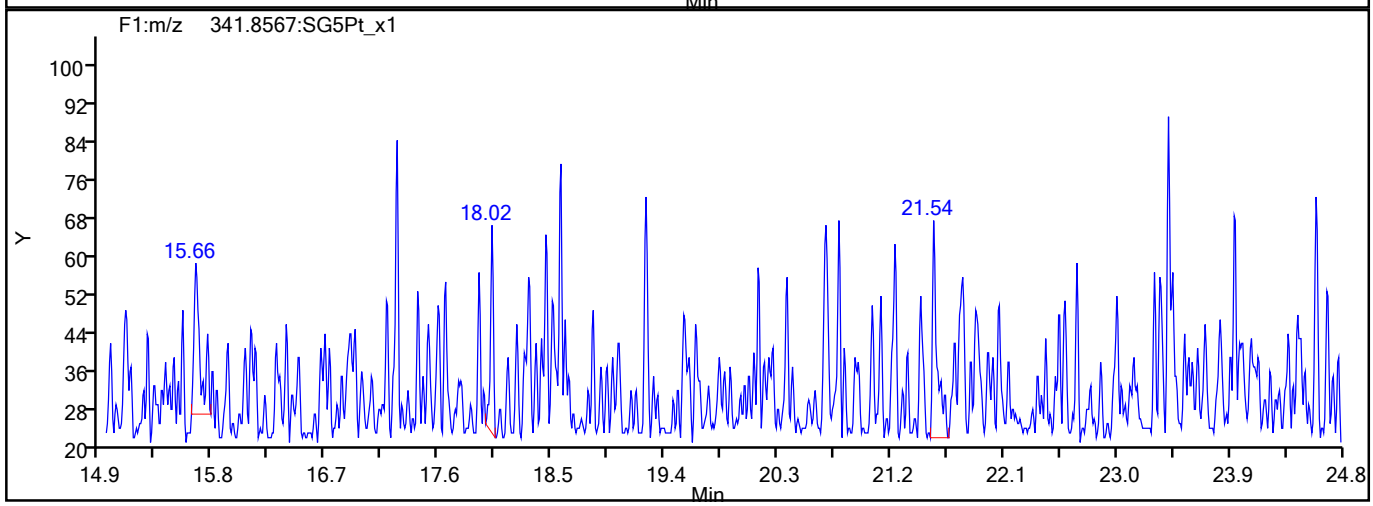

F1 PeCDFs Interference Mass

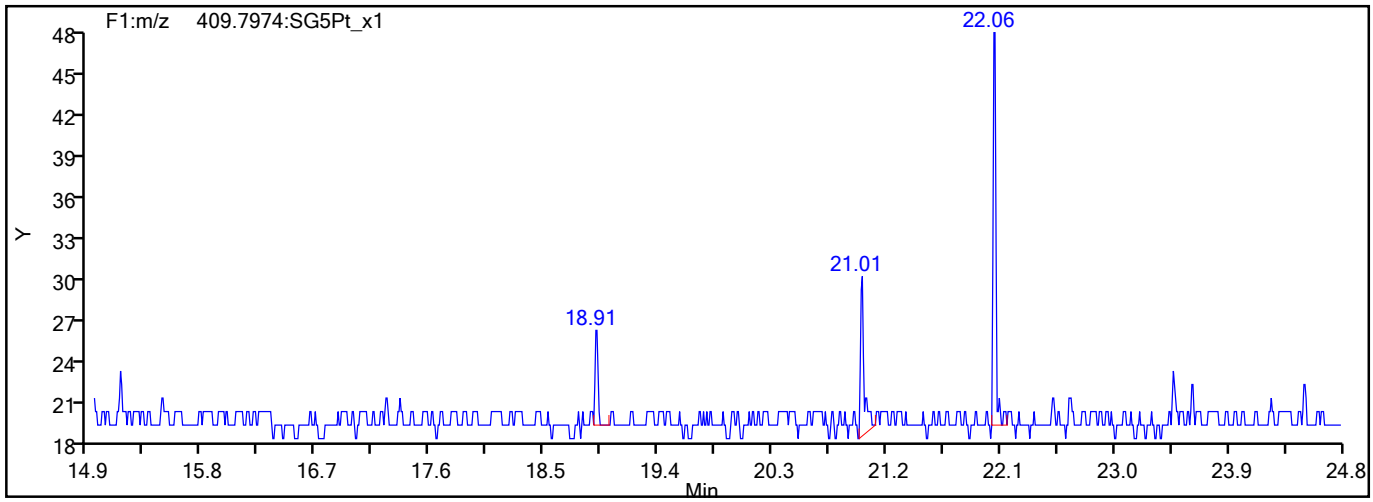

785818

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

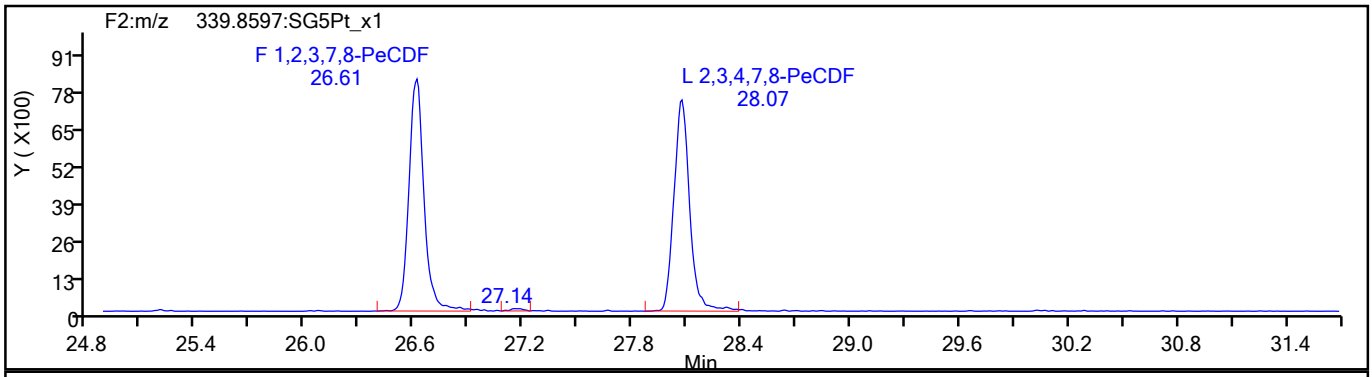

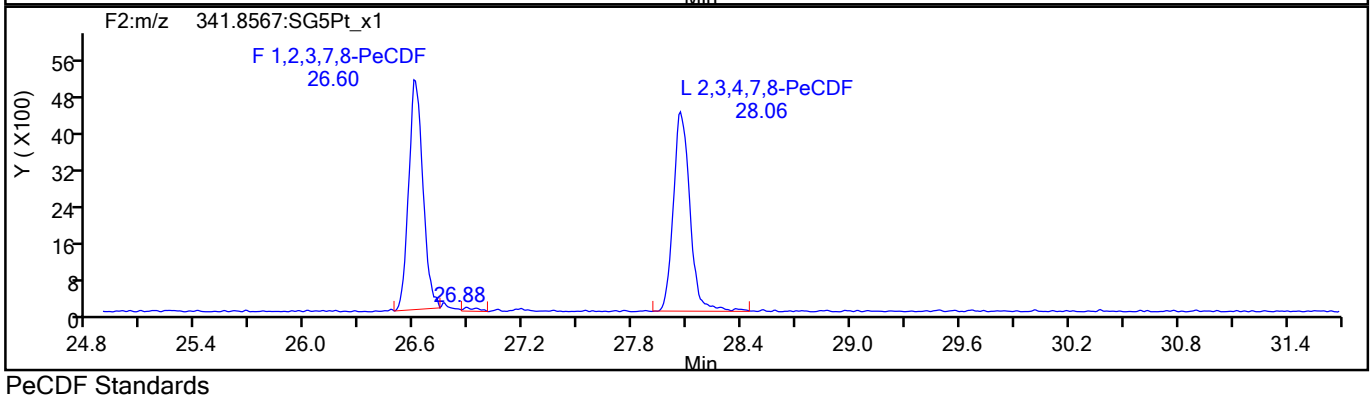

PeCDF Standards

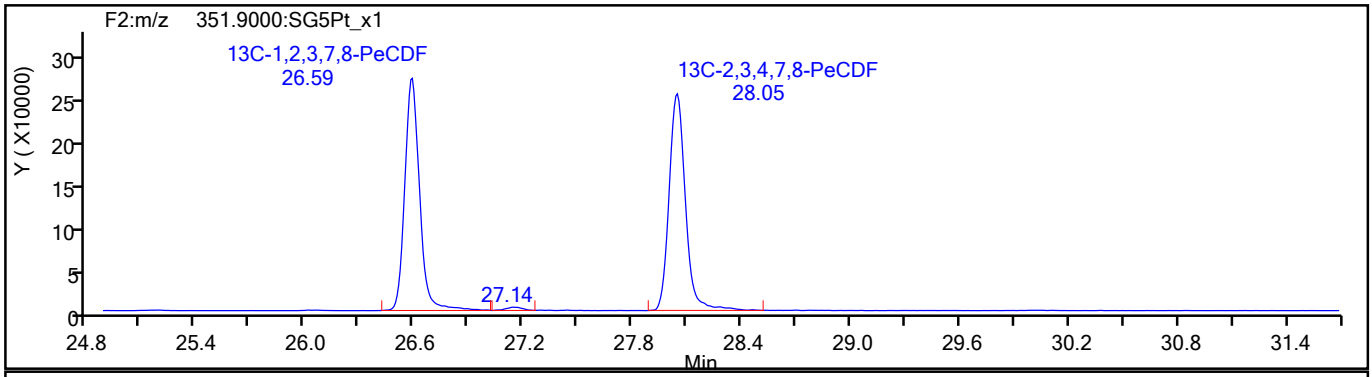

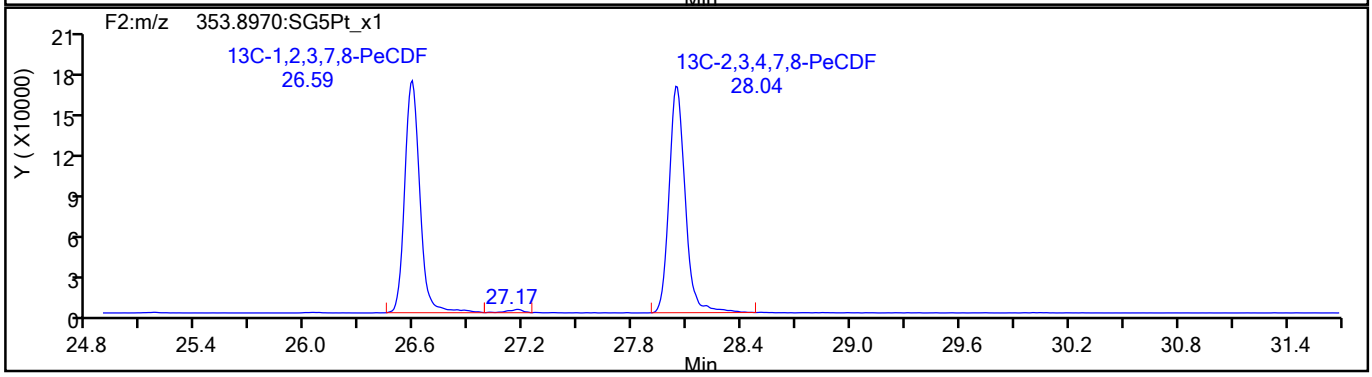

785819

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

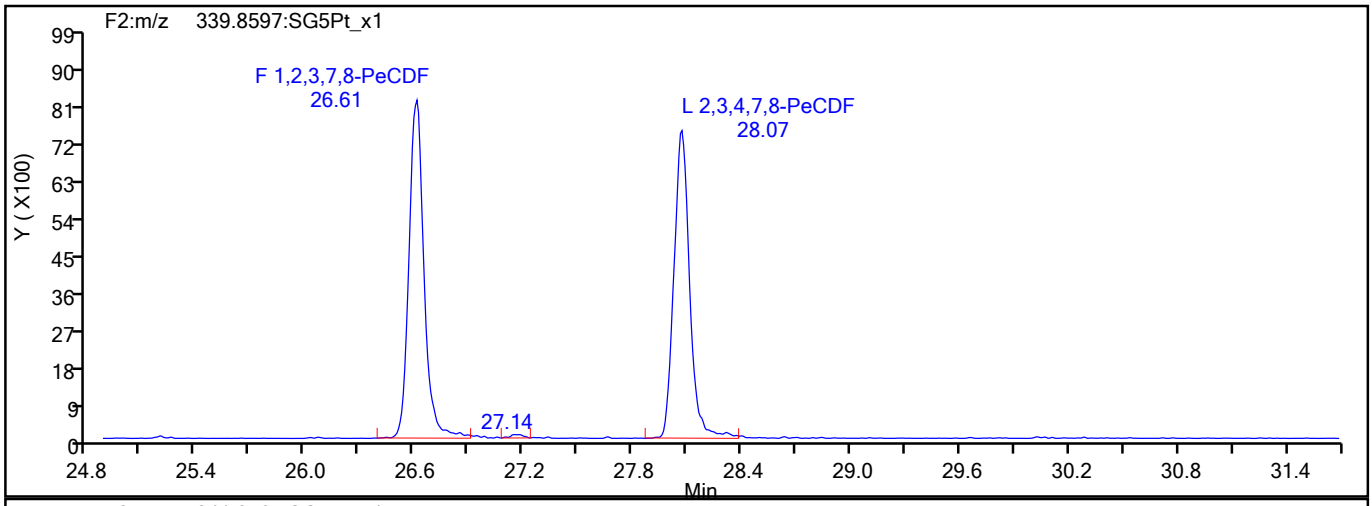

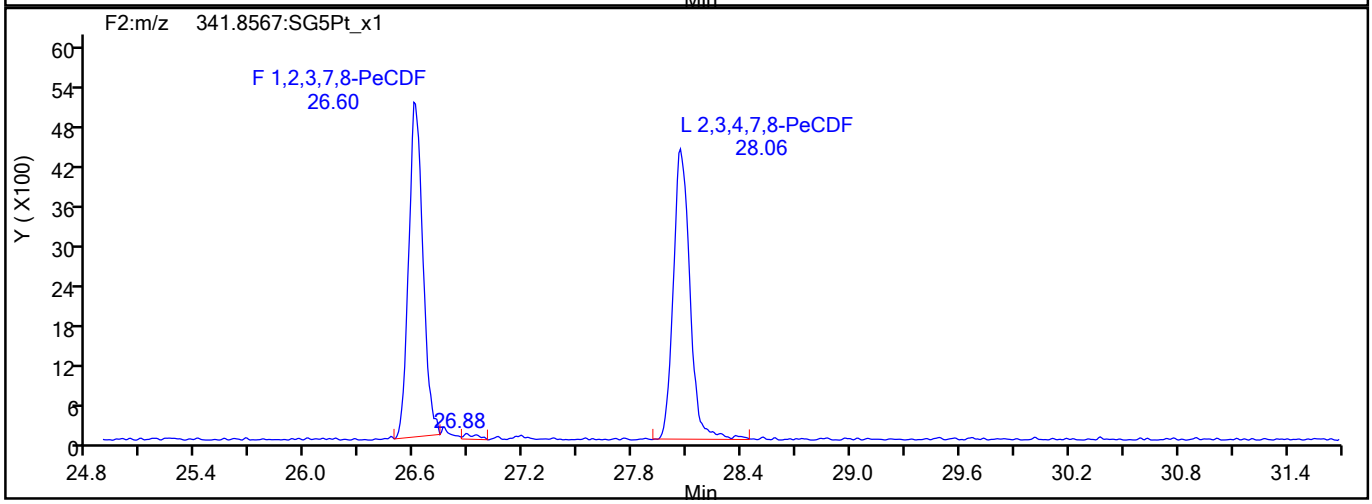

PeCDF Interference Mass

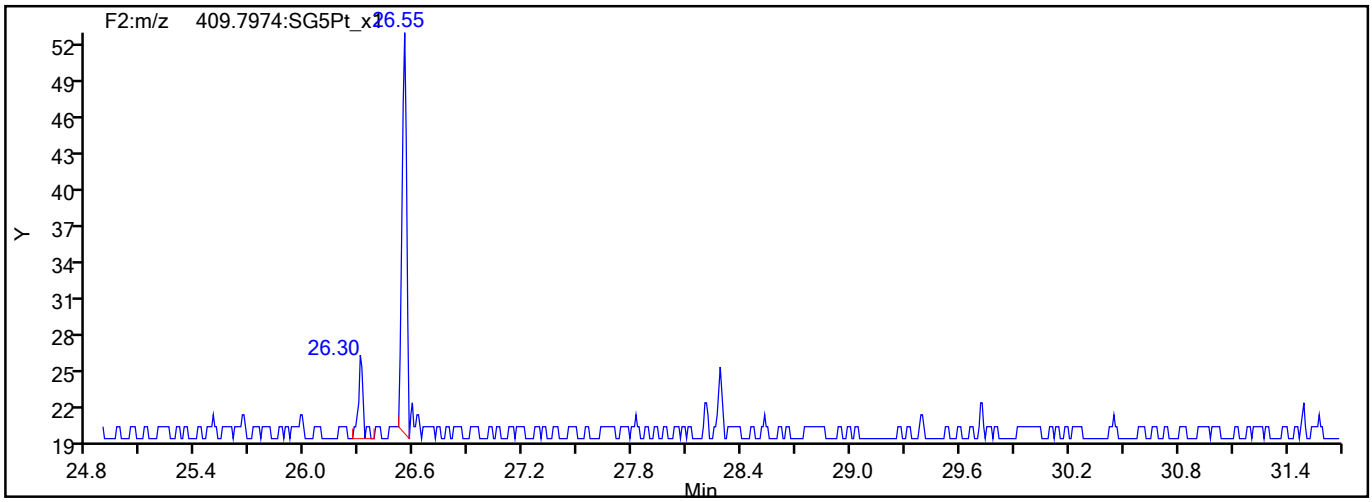

785820

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

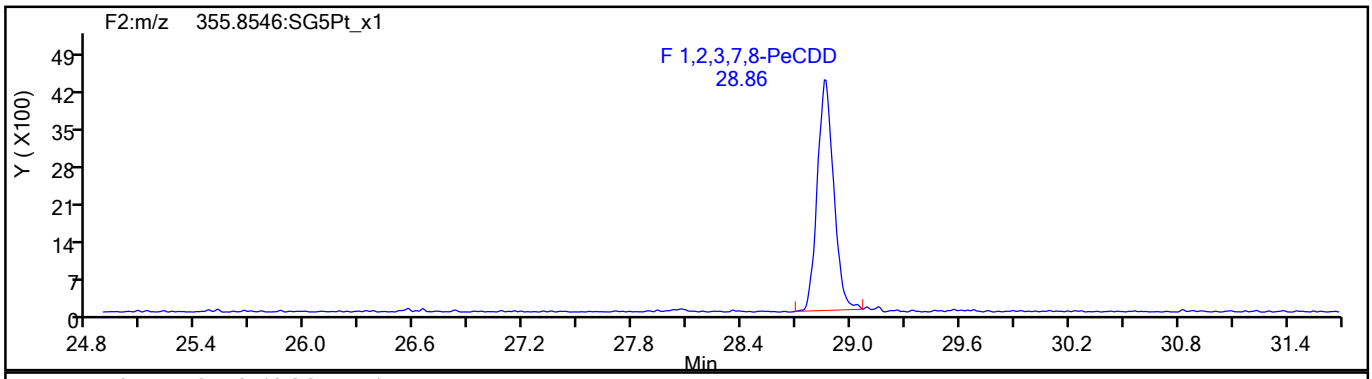

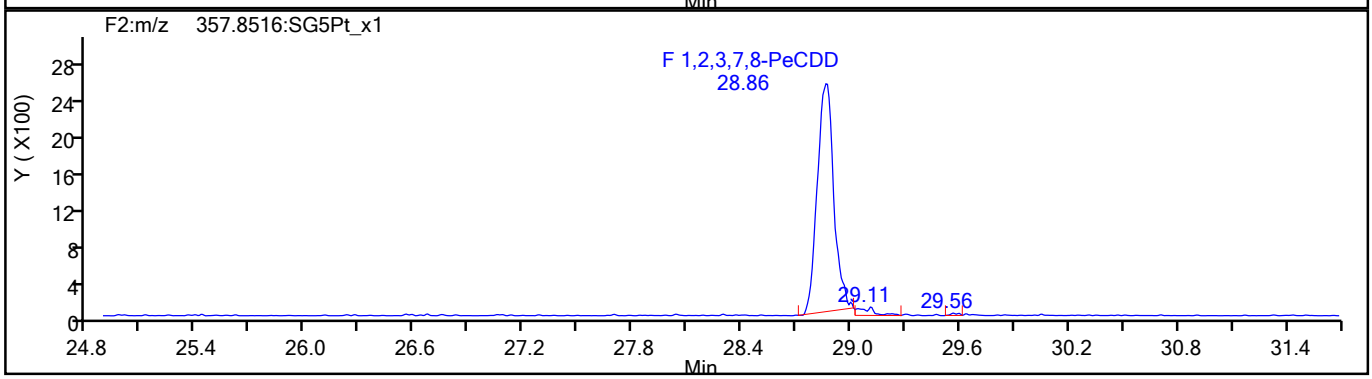

PeCDD Standards

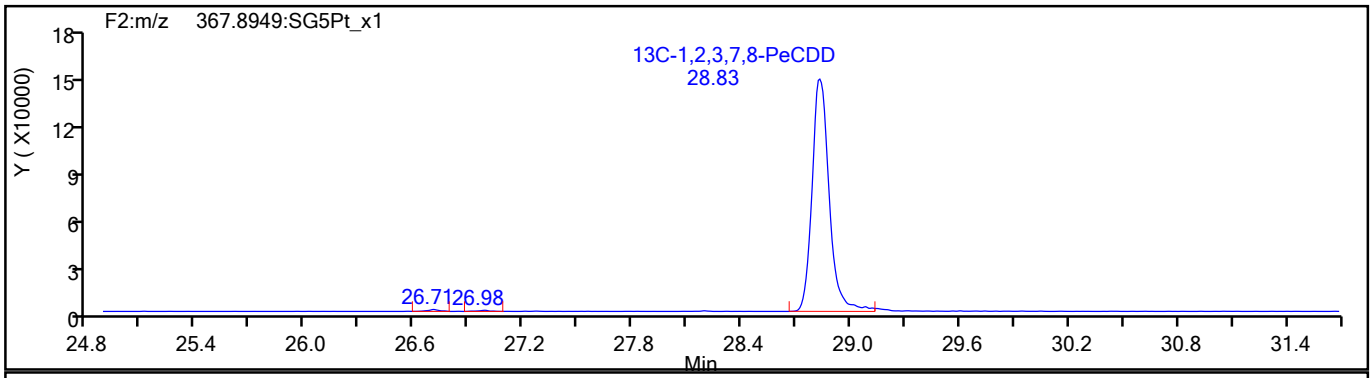

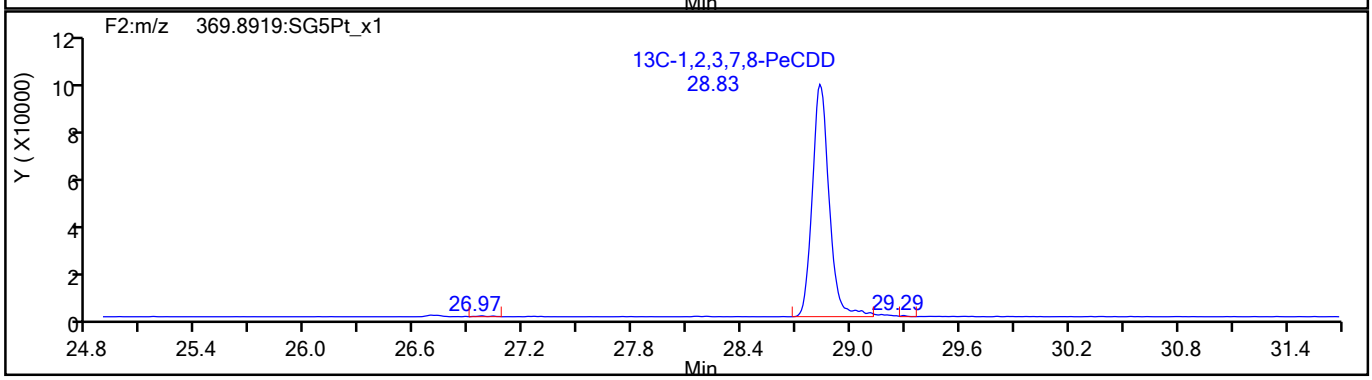

785821

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

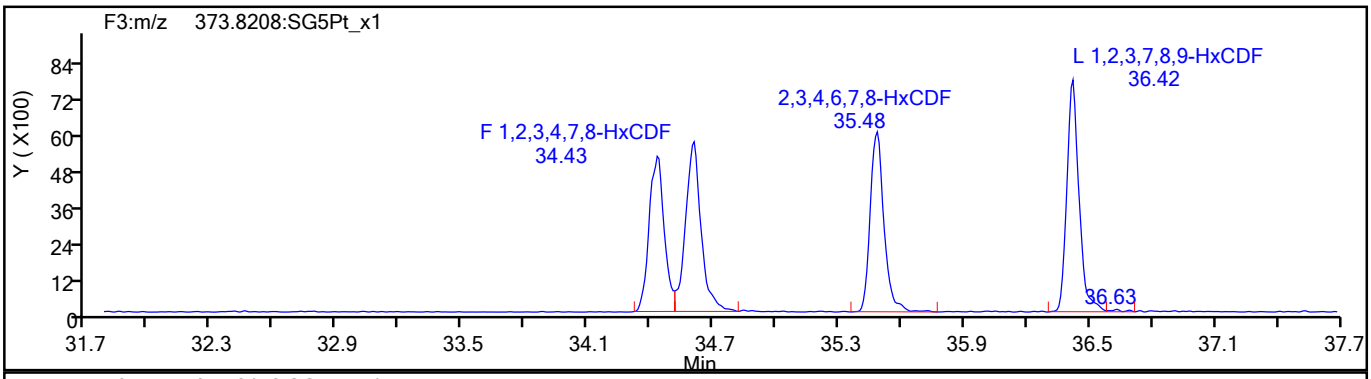

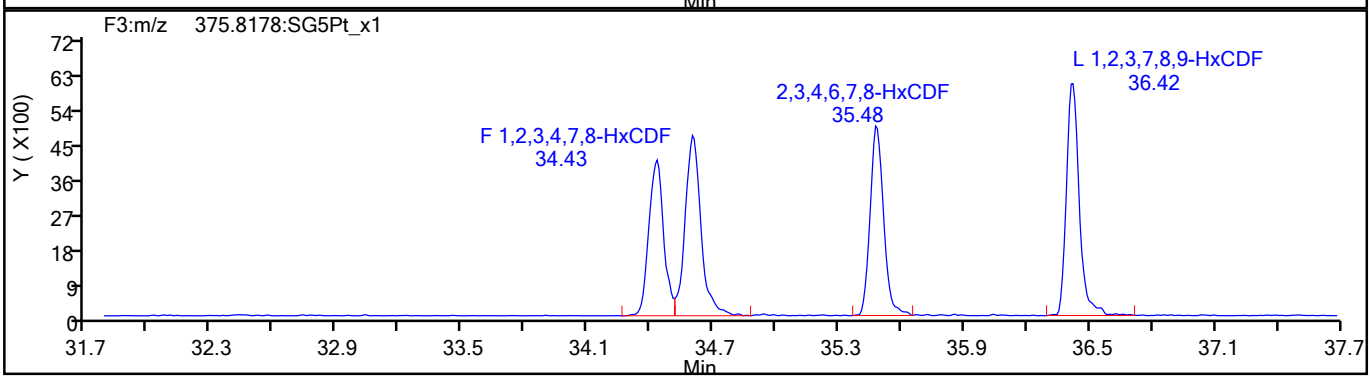

HxCDF Standards

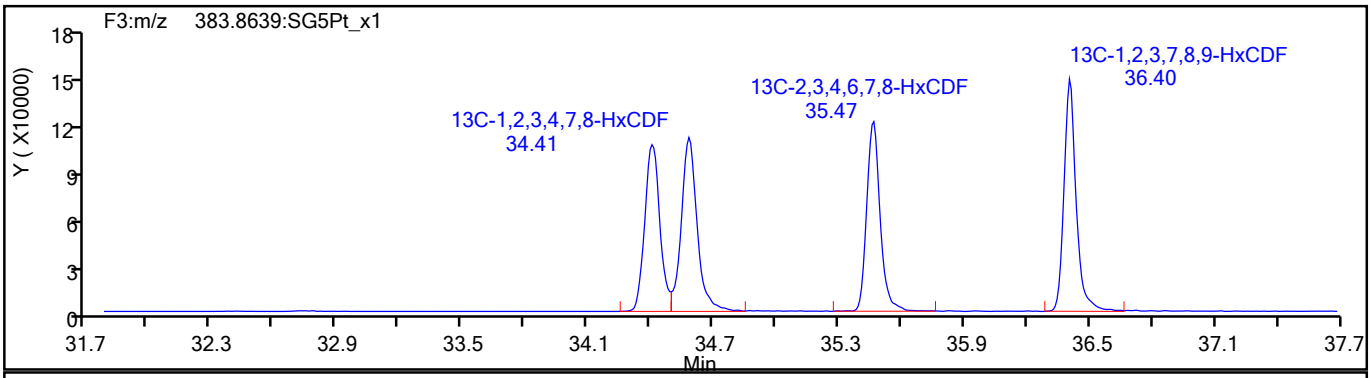

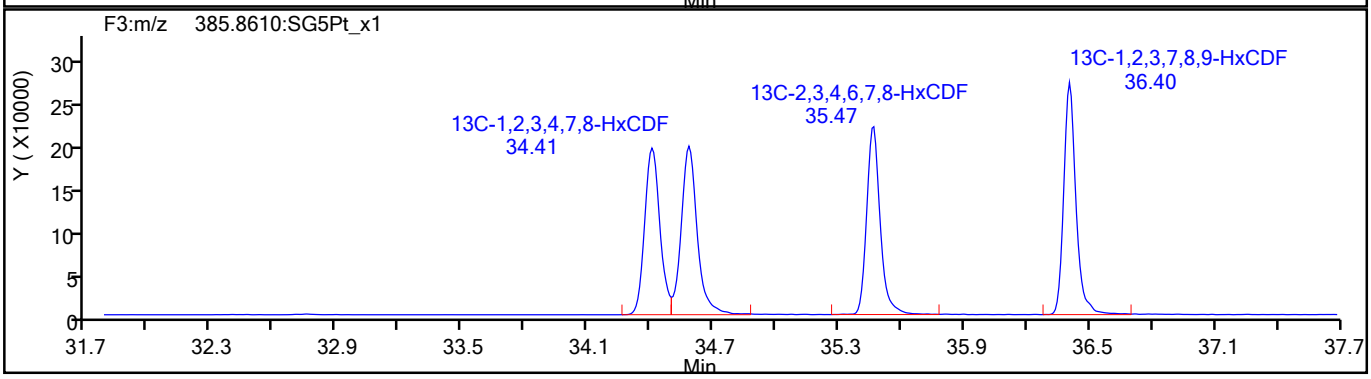

785822

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

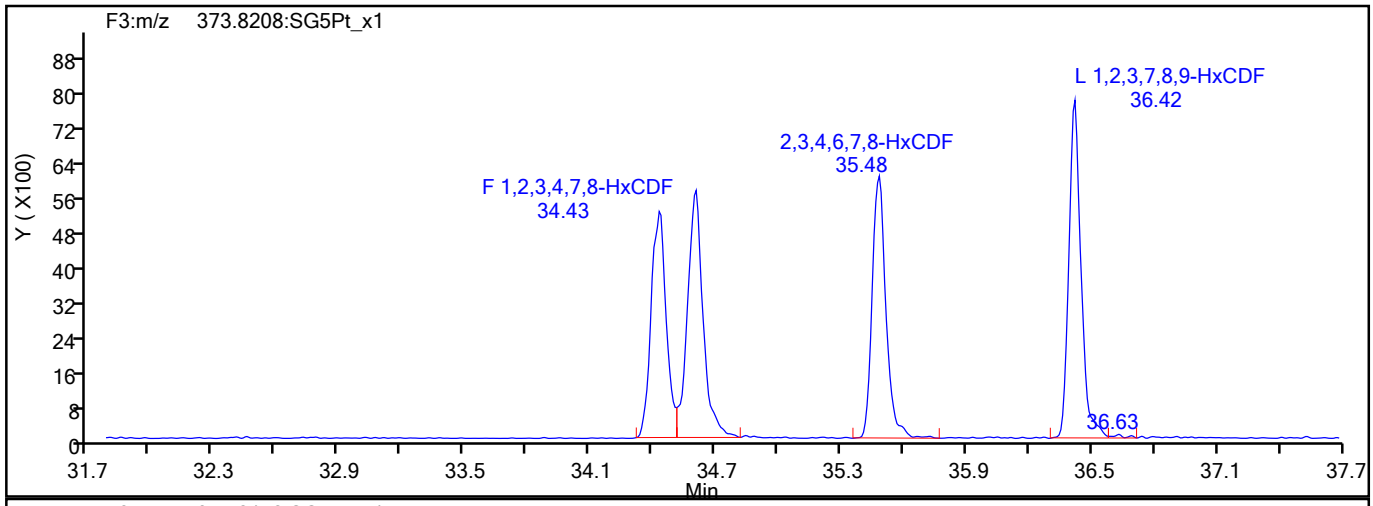

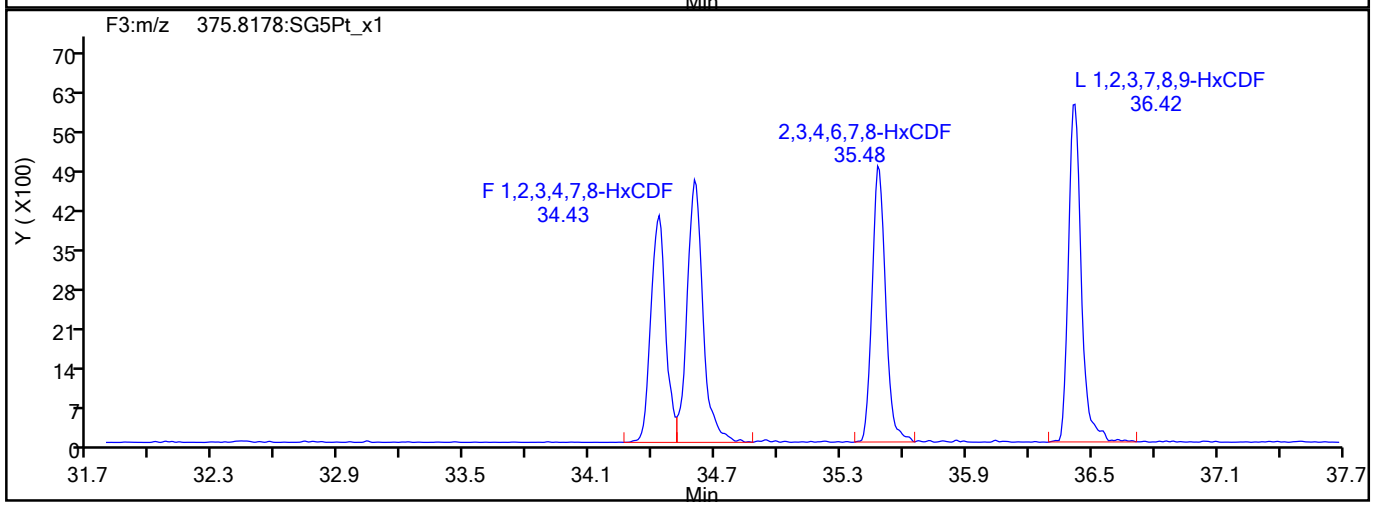

HxCDF Interference Mass

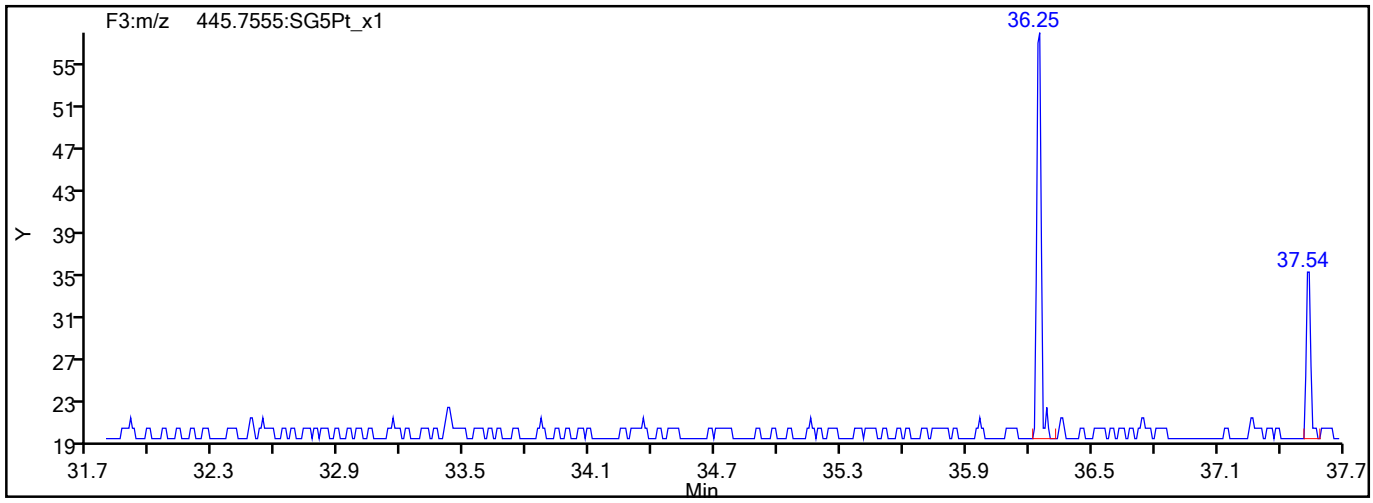

785823

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

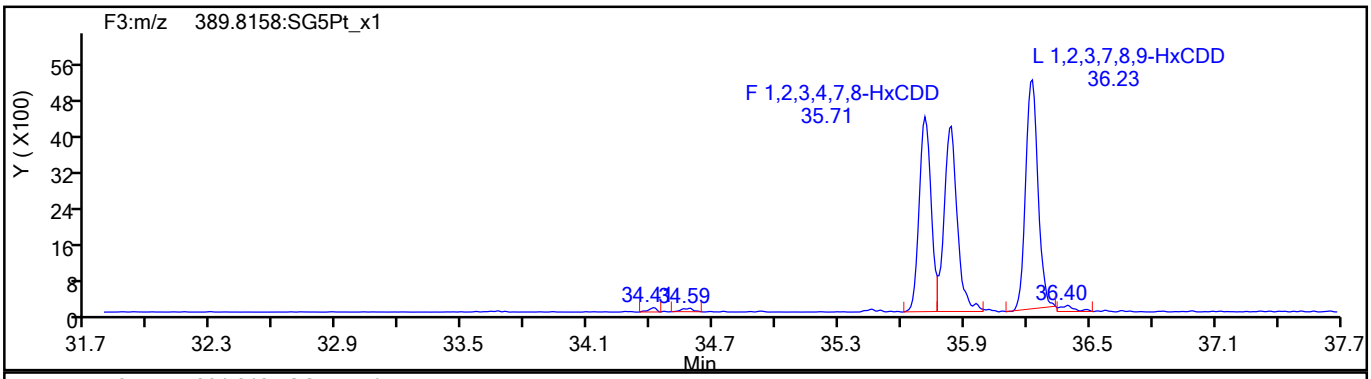

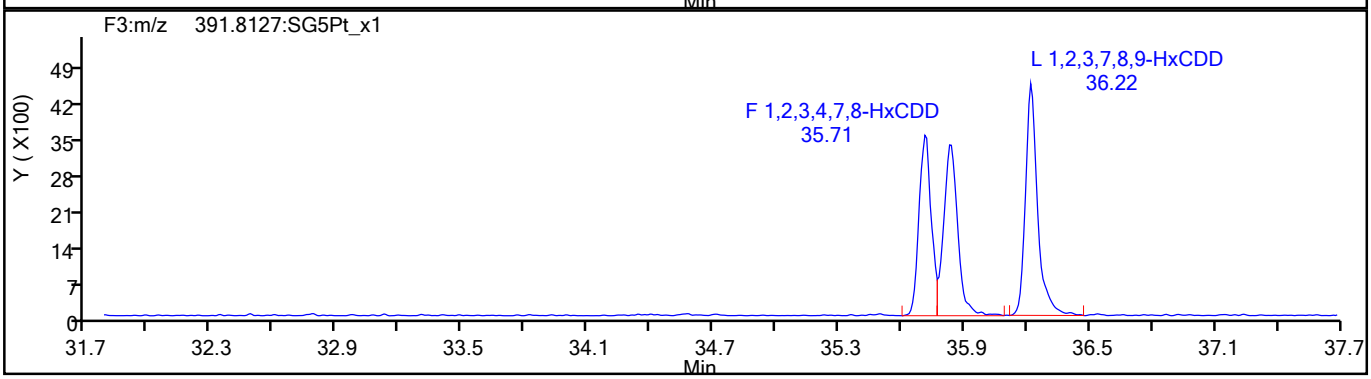

HxCDD Standards

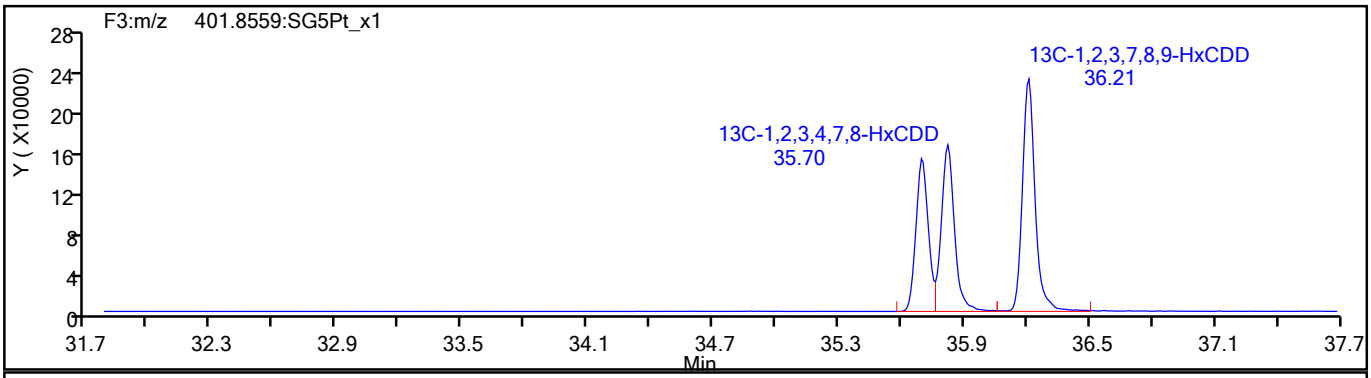

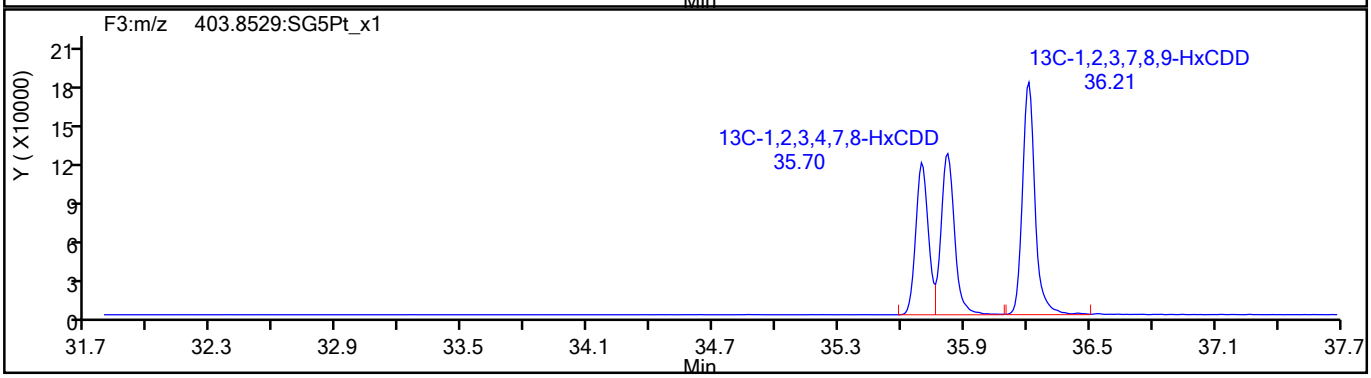

785824

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

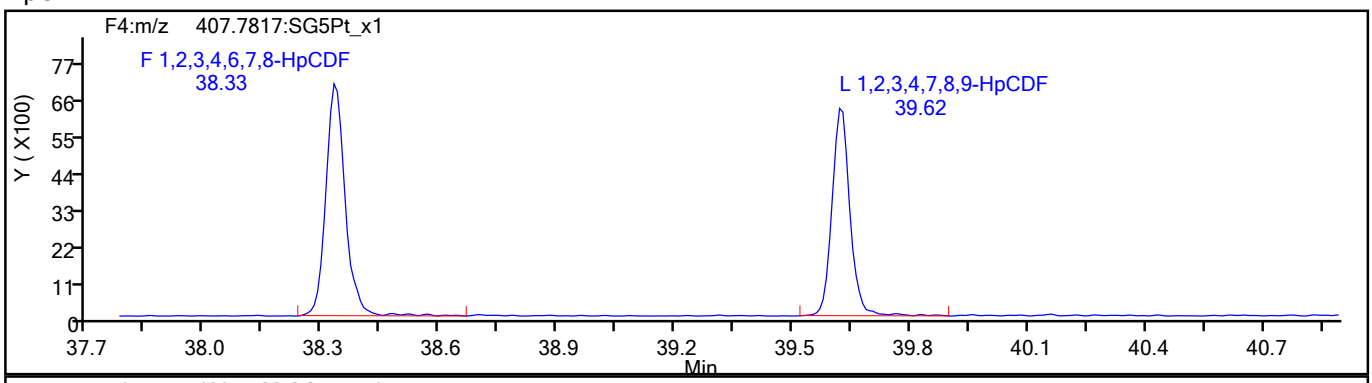

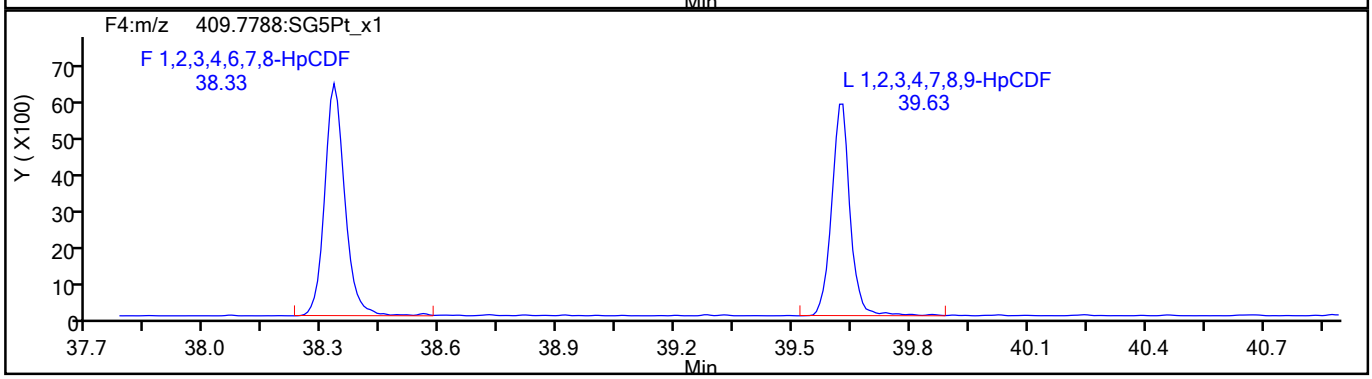

HpCDF Standards

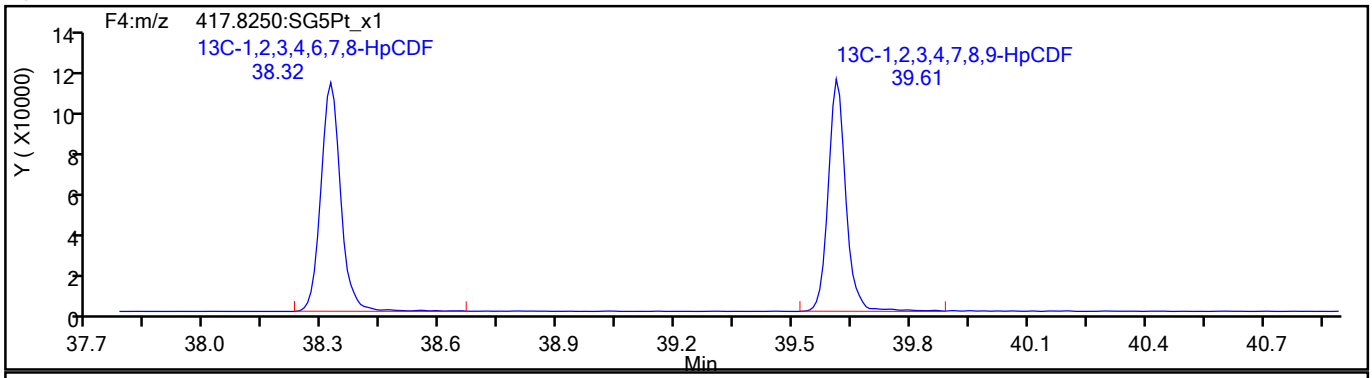

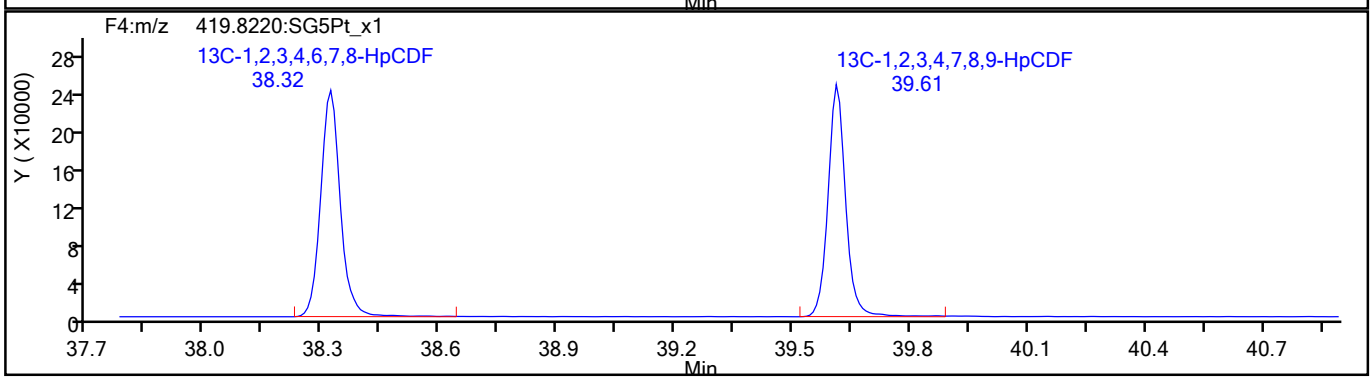

785825

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

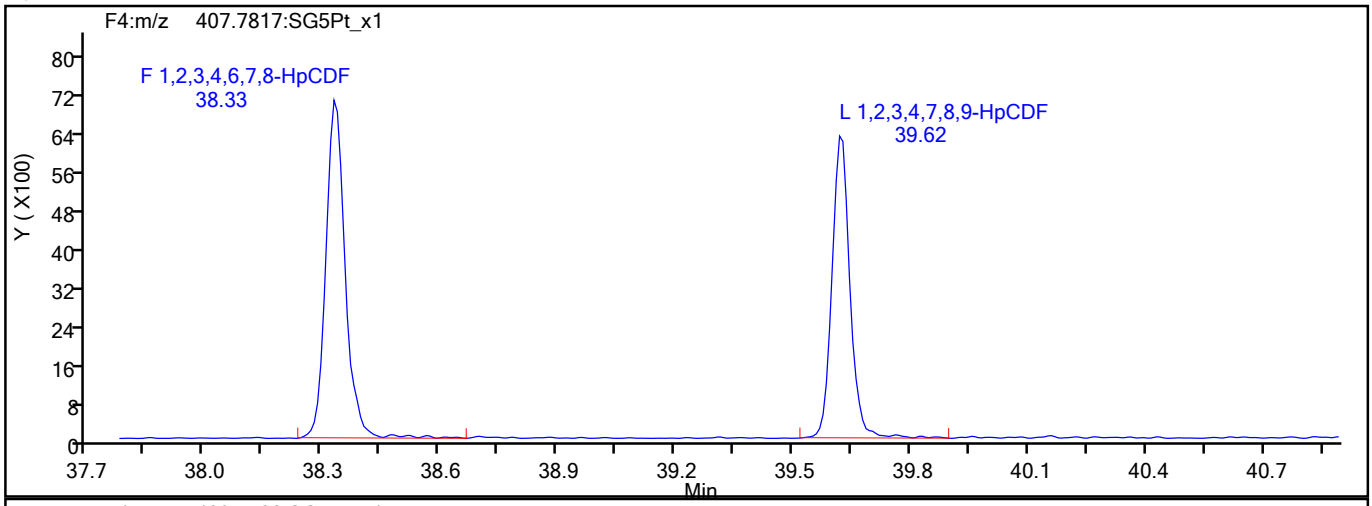

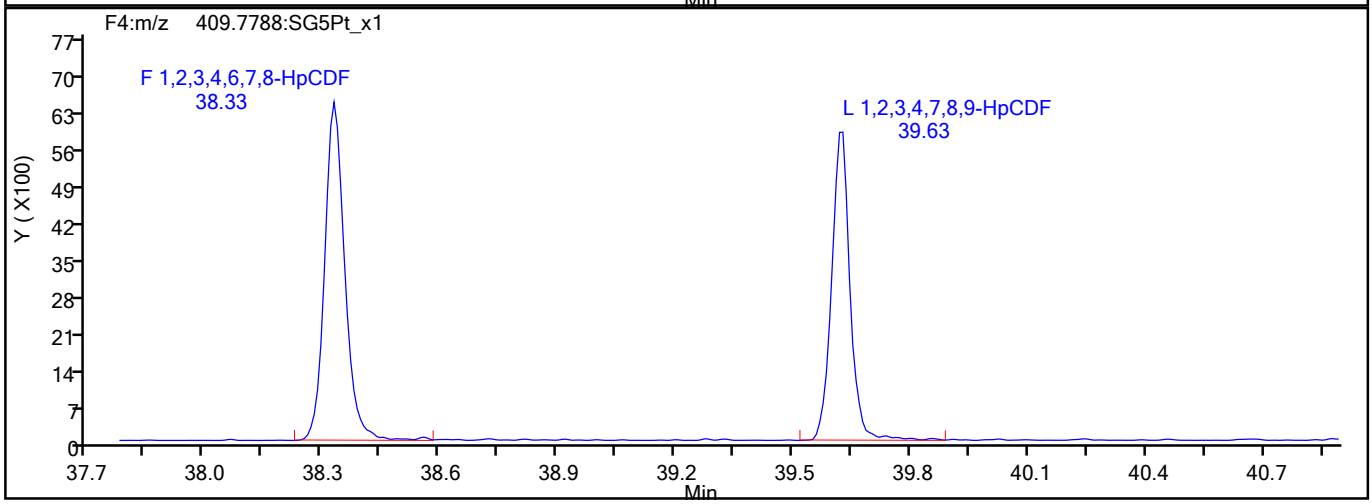

HpCDF Interference Mass

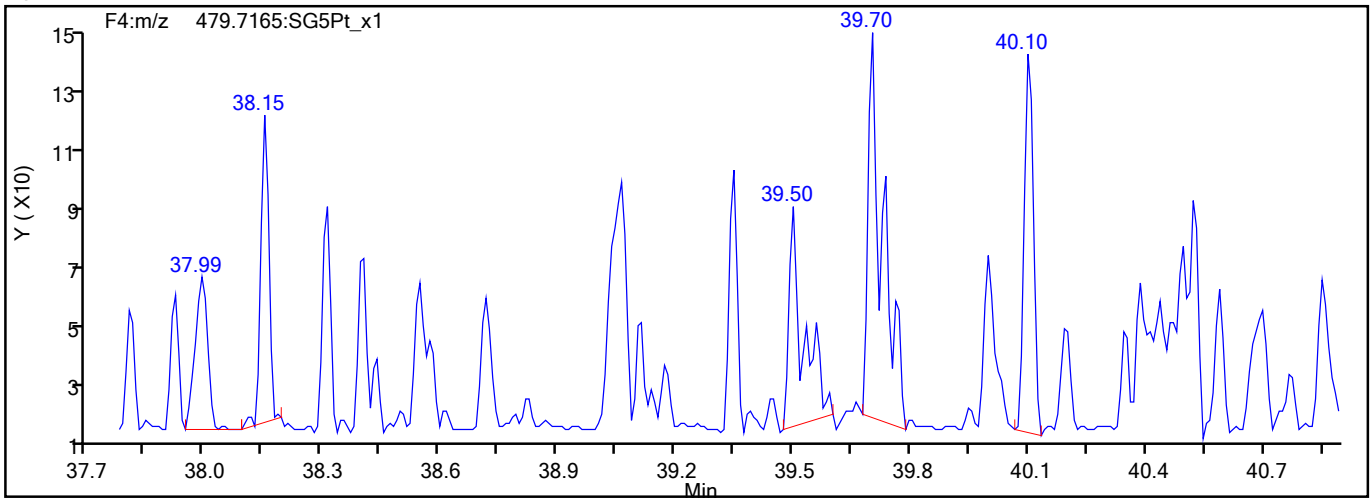

785826

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

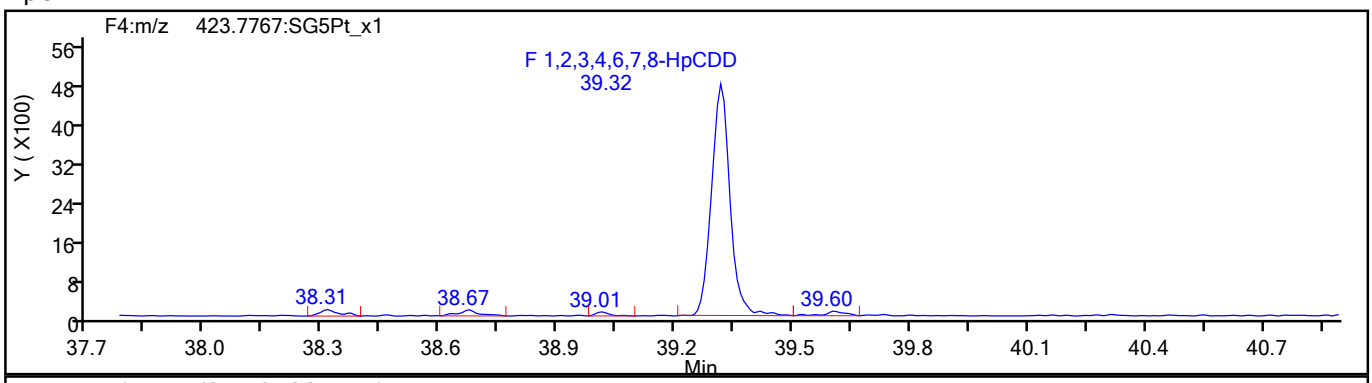

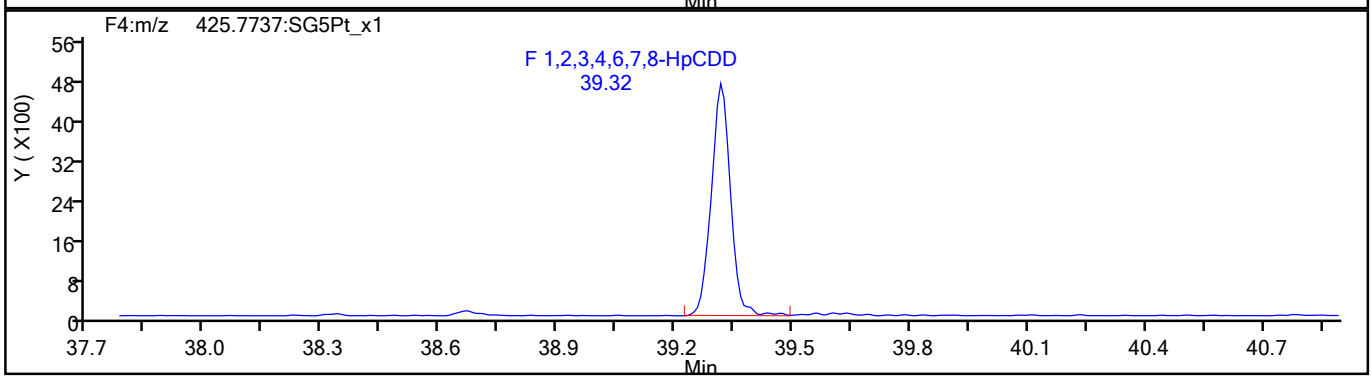

HpCDD Standards

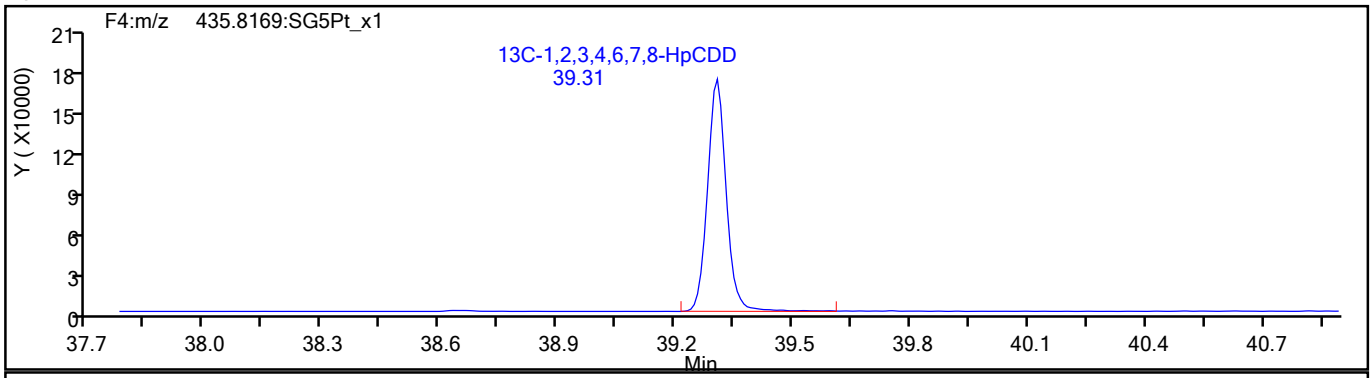

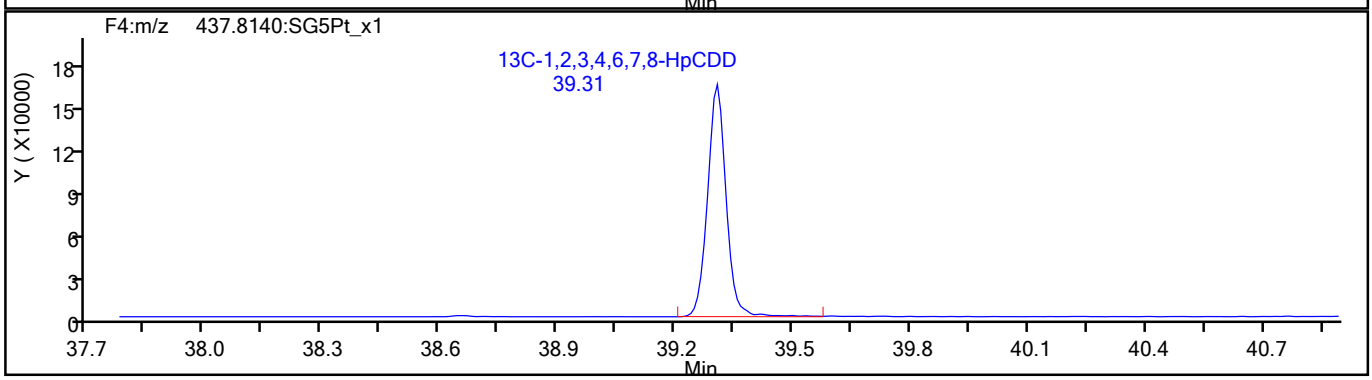

785827

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

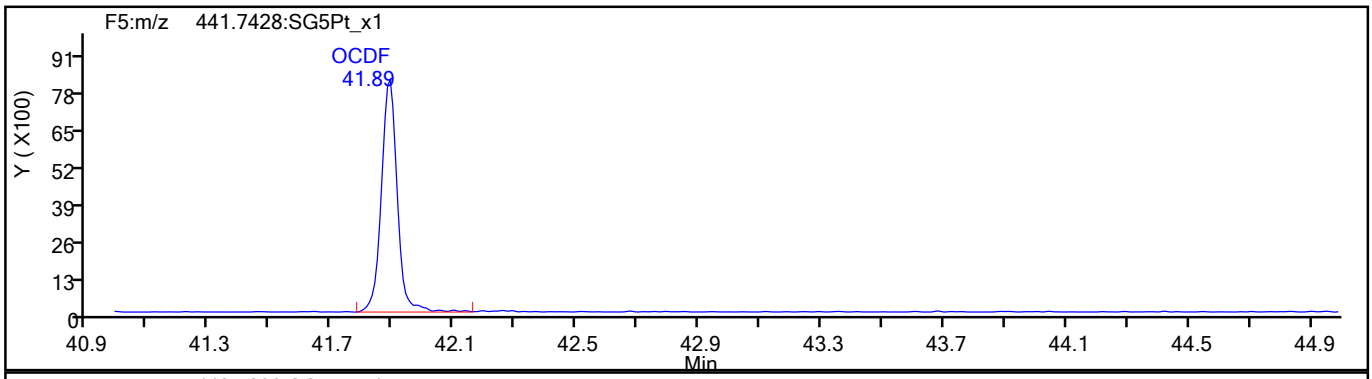

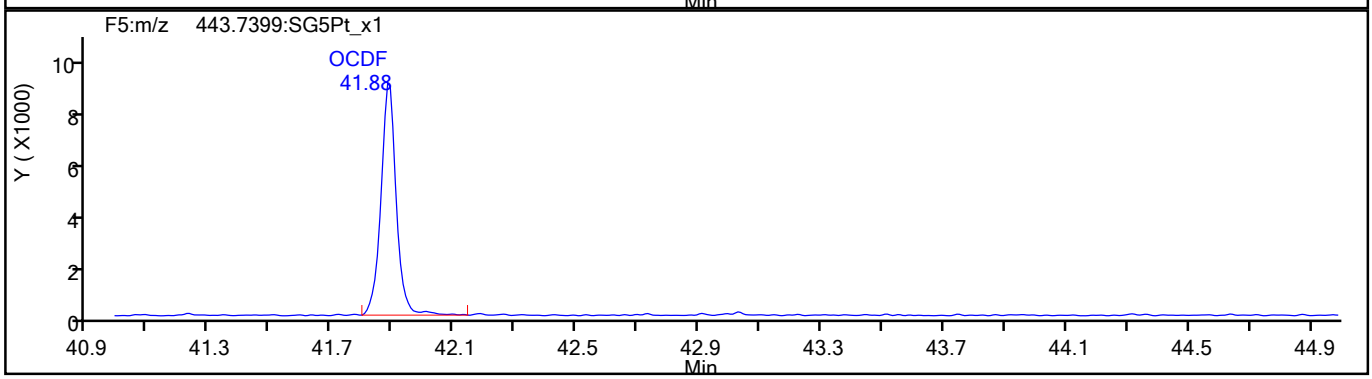

OCDF Standards

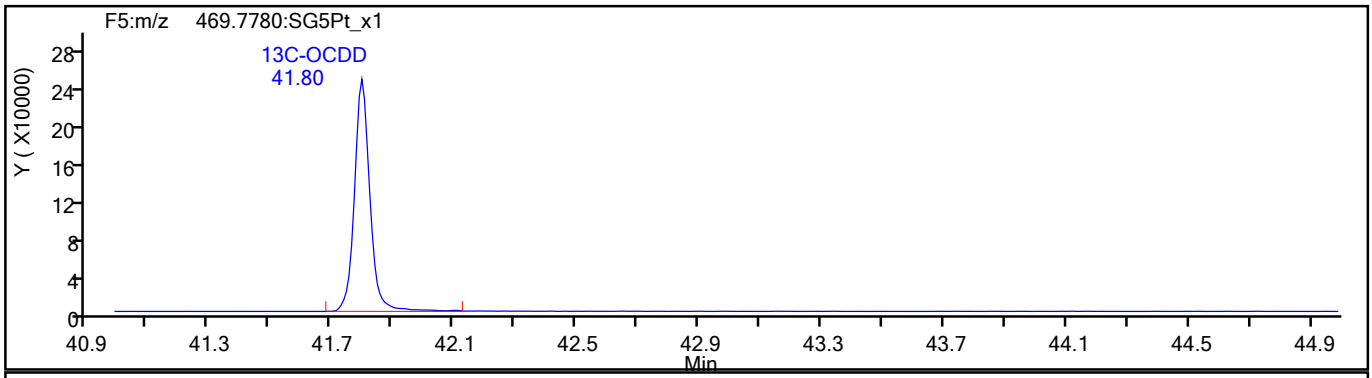

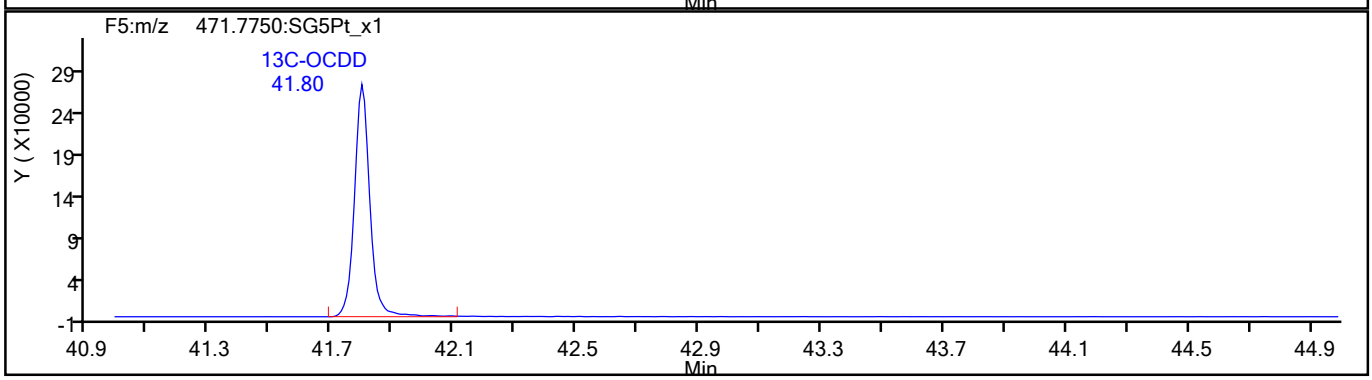

785828

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

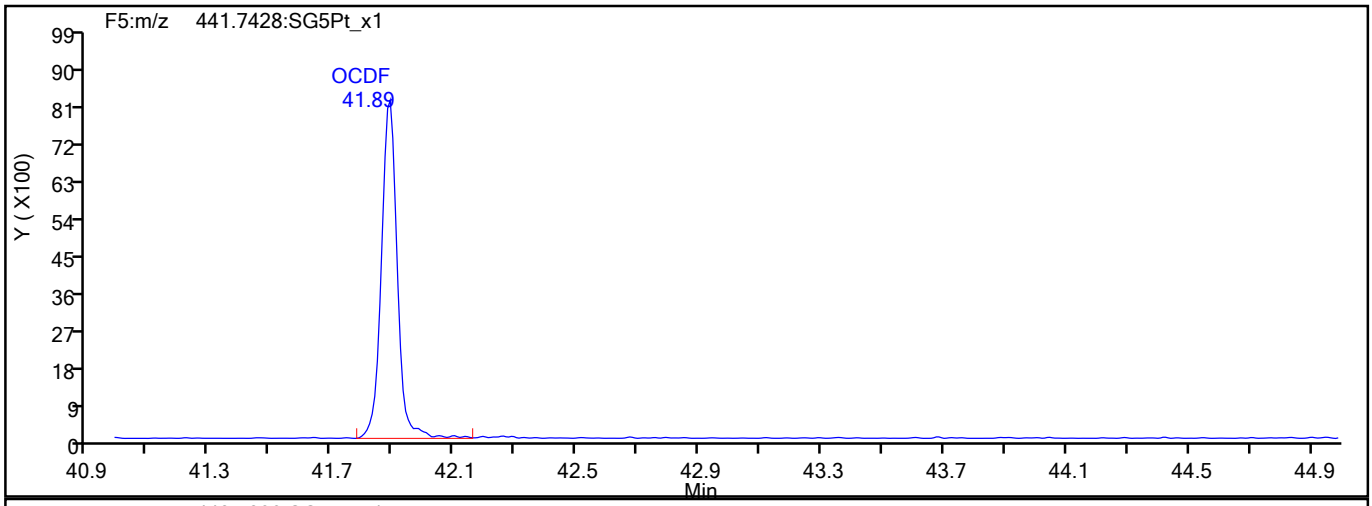

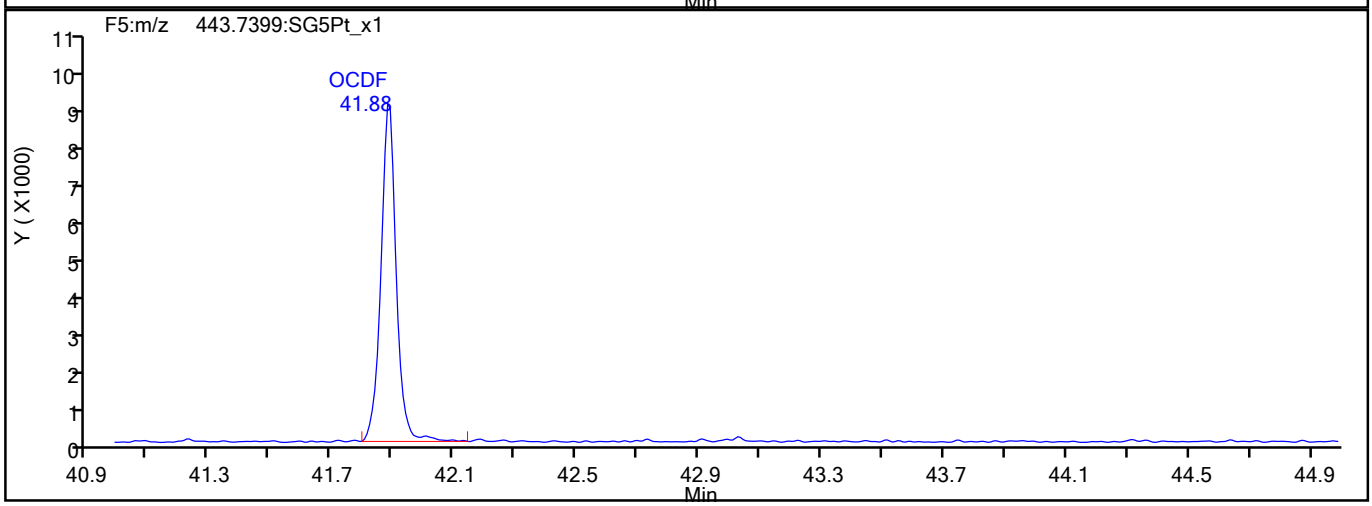

OCDF Interference Mass

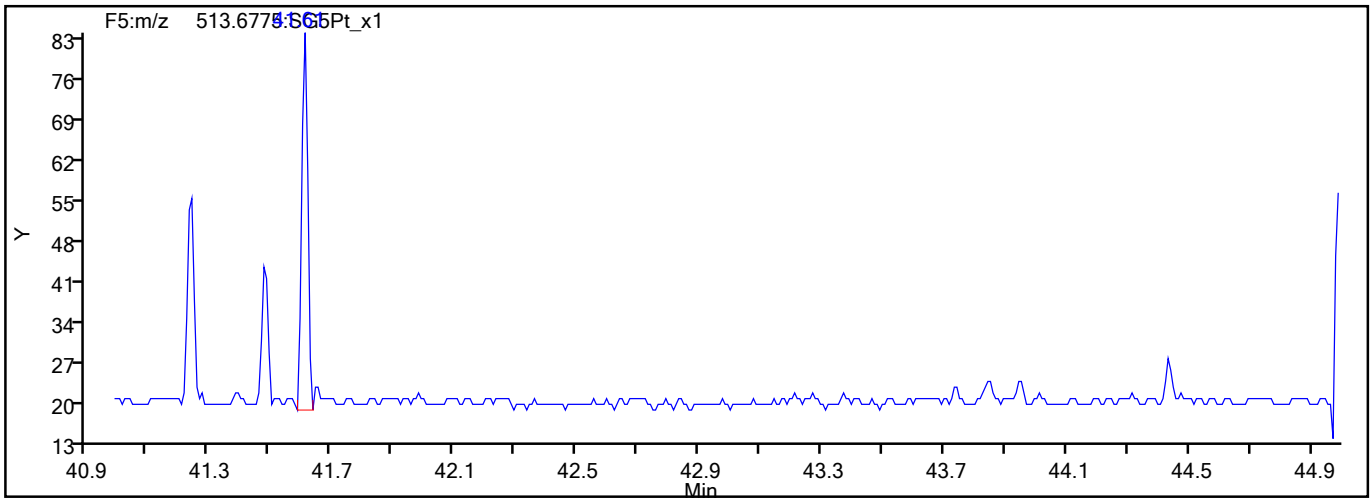

785829

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

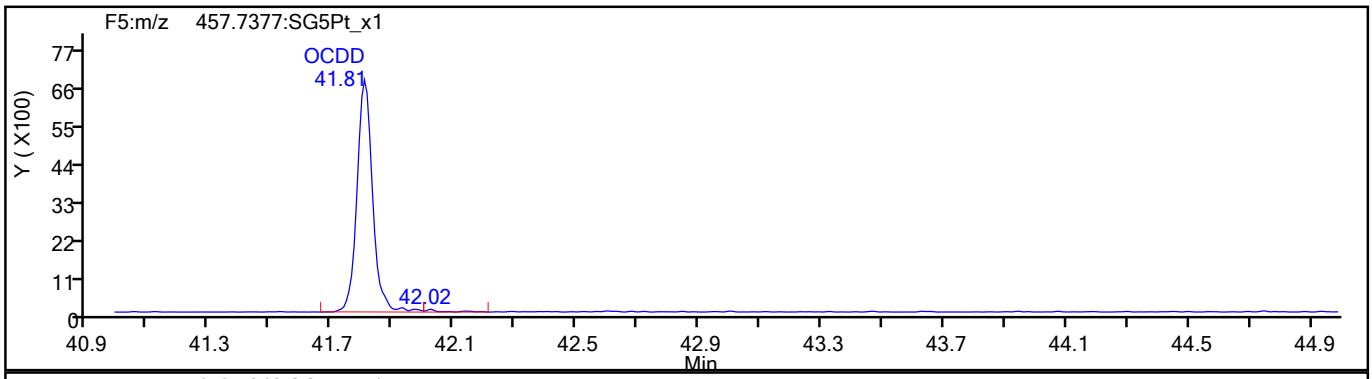

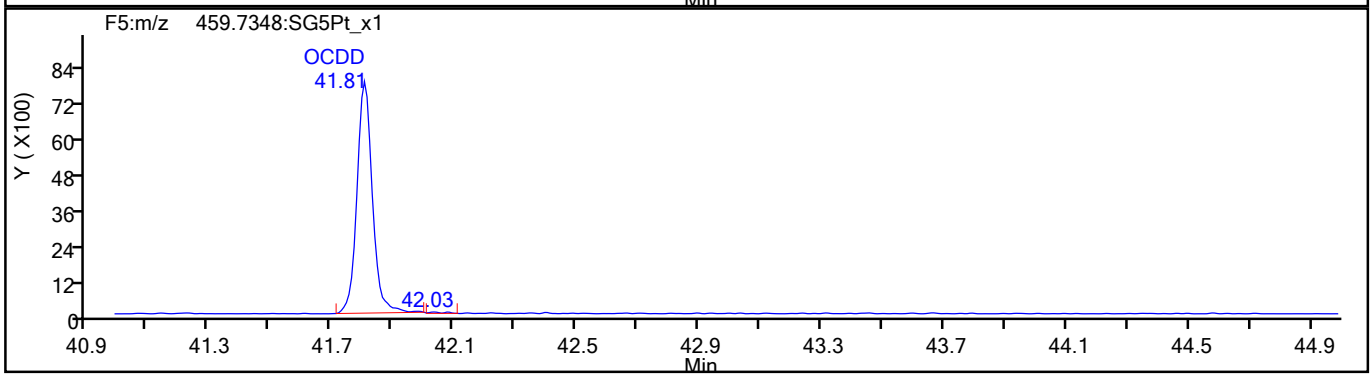

OCDD Standards

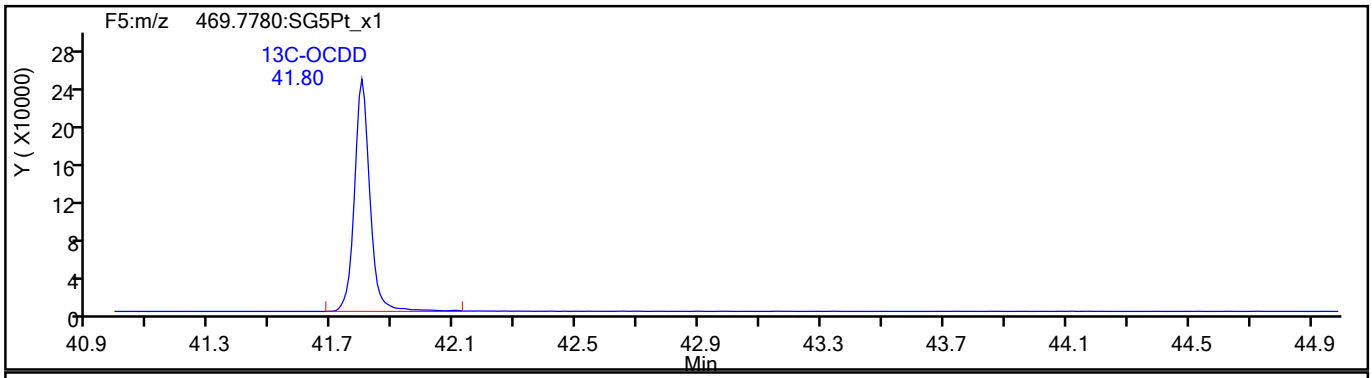

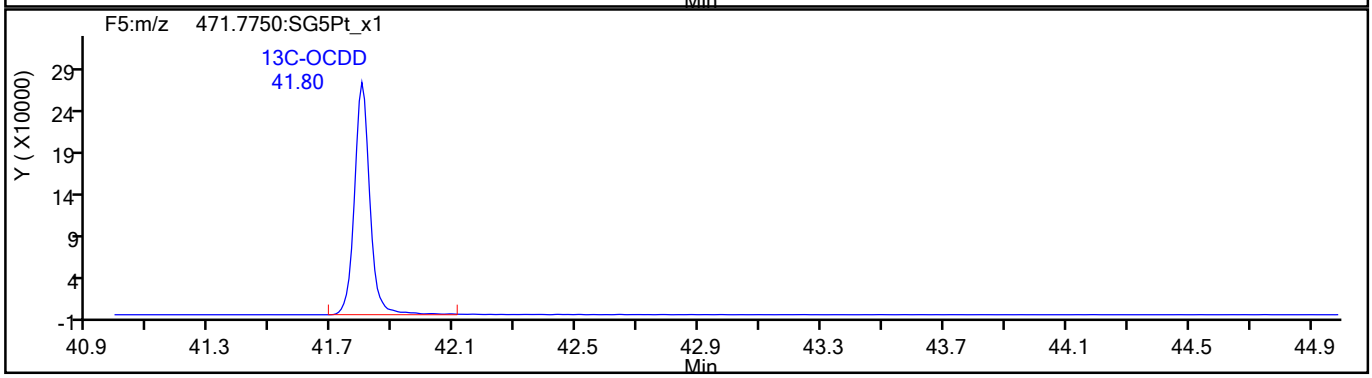

785830

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

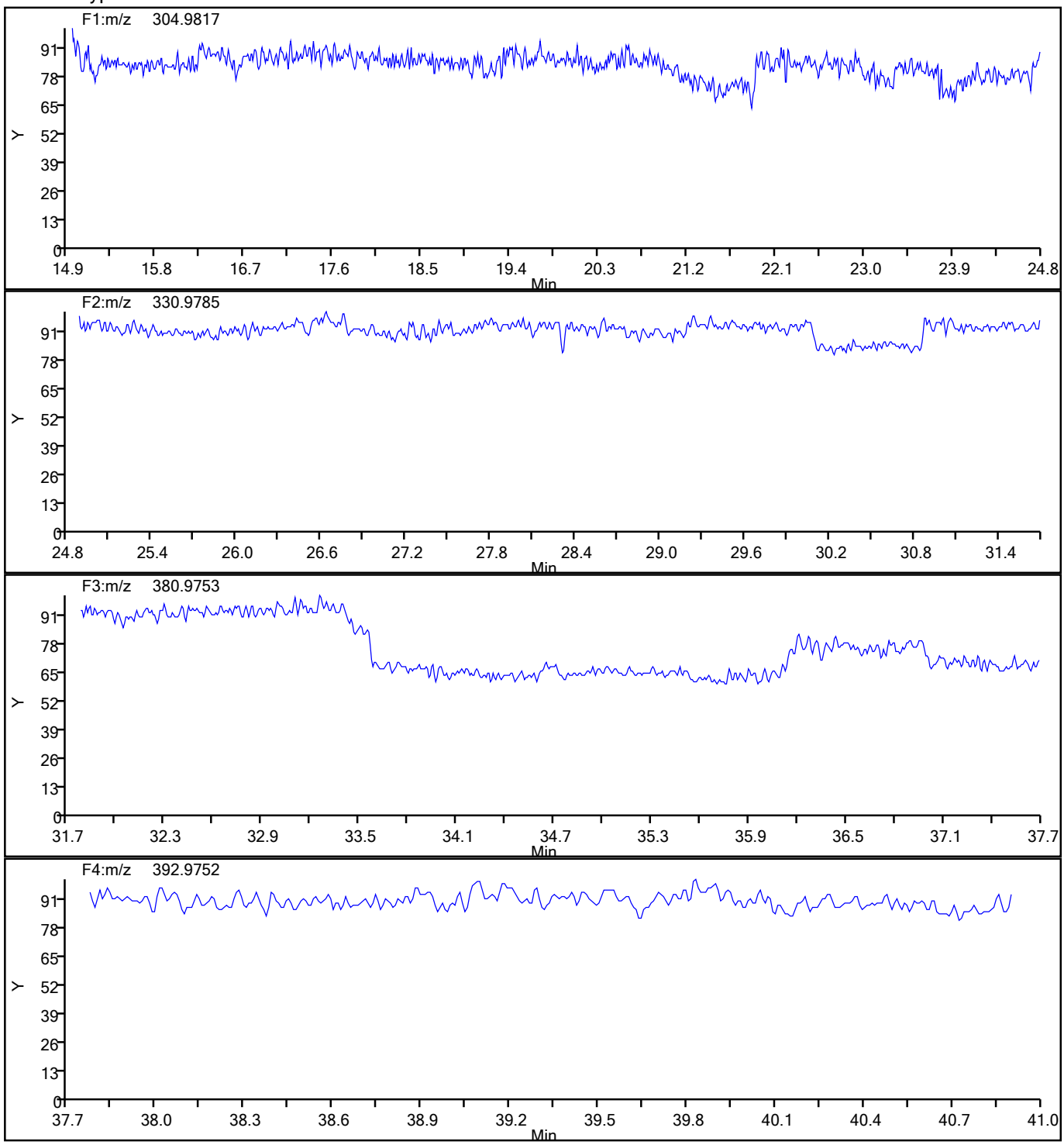

785831

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

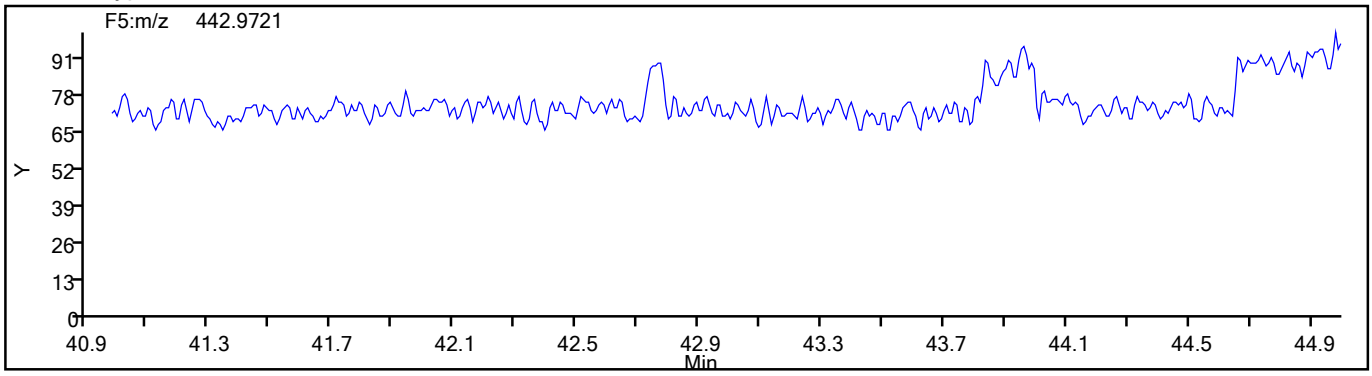

785832

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.534	2045939	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.606	2644389	0.79	1.3459	96.0	96.0	0.2067	0.2067	96.04	
2,3,7,8-TCDF	19.641	50956	0.80	1.0802	1.784	1.784	0.0111	0.0111	89.19	
S Total TCDF					1.784	1.784	0.0111	0.0111		
D 13C-2,3,7,8-TCDD	20.886	1829253	0.79	0.9317	96.0	96.0	0.1871	0.1871	95.97	
$ 37Cl4-2,3,7,8-TCDD	20.929	39241		1.0083	1.902	1.902	0.006151	0.006151	95.11	
2,3,7,8-TCDD	20.929	34971	0.82	1.0753	1.778	1.778	0.0298	0.0298	88.89	
S Total TCDD					1.778	1.778	0.0298	0.0298		
D 13C-1,2,3,7,8-PeCDF	26.541	2234847	1.61	1.1405	95.8	95.8	0.3208	0.3208	95.78	
1,2,3,7,8-PeCDF	26.566	210335	1.55	1.0543	8.927	8.927	0.0325	0.0325	89.27	
D 13C-2,3,4,7,8-PeCDF	27.991	2228025	1.61	1.1253	96.8	96.8	0.3252	0.3252	96.77	
2,3,4,7,8-PeCDF	28.016	200175	1.56	1.0079	8.914	8.914	0.0356	0.0356	89.14	
S Total PeCDF					17.8	17.8	0.0341	0.0341		
D 13C-1,2,3,7,8-PeCDD	28.784	1364144	1.60	0.7165	93.1	93.1	0.1177	0.1177	93.06	
1,2,3,7,8-PeCDD	28.809	129872	1.62	1.0465	9.097	9.097	0.0251	0.0251	90.97	
S Total PeCDD					9.097	9.097	0.0251	0.0251		
D 13C-1,2,3,4,7,8-HxCDF	34.367	1545033	0.52	0.9648	90.2	90.2	0.3810	0.3810	90.23	
1,2,3,4,7,8-HxCDF	34.384	155611	1.20	1.1474	8.778	8.778	0.0522	0.0522	87.78	
D 13C-1,2,3,6,7,8-HxCDF	34.544	1692336	0.52	1.0708	89.1	89.1	0.3433	0.3433	89.05	
1,2,3,6,7,8-HxCDF	34.569	185321	1.24	1.2178	8.992	8.992	0.0483	0.0483	89.92	
D 13C-2,3,4,6,7,8-HxCDF	35.429	1740015	0.54	1.0413	94.2	94.2	0.3530	0.3530	94.16	
2,3,4,6,7,8-HxCDF	35.446	191527	1.25	1.2145	9.063	9.063	0.0405	0.0405	90.63	
D 13C-1,2,3,7,8,9-HxCDF	36.374	1735785	0.52	0.9731	100.5	100.5	0.3778	0.3778	101	
1,2,3,7,8,9-HxCDF	36.390	195077	1.27	1.2401	9.062	9.062	0.0369	0.0369	90.62	
S Total HxCDF					35.9	35.9	0.0445	0.0445		
* 13C-1,2,3,7,8,9-HxCDD	36.180	1774694	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.665	1363103	1.28	0.7587	101.2	101.2	0.1971	0.1971	101	
1,2,3,4,7,8-HxCDD	35.682	132244	1.27	1.0608	9.146	9.146	0.0258	0.0258	91.46	
D 13C-1,2,3,6,7,8-HxCDD	35.792	1558668	1.27	0.8593	102.2	102.2	0.1740	0.1740	102	
1,2,3,6,7,8-HxCDD	35.809	138142	1.21	0.9933	8.922	8.922	0.0262	0.0262	89.22	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.196	139741	1.27	1.1094	8.622	8.622	0.0240	0.0240	86.22	
S Total HxCDD					26.7	26.7	0.0253	0.0253		
D 13C-1,2,3,4,6,7,8-HpCDF	38.291	1272526	0.47	0.7359	97.4	97.4	0.3733	0.3733	97.43	
1,2,3,4,6,7,8-HpCDF	38.308	164108	1.06	1.4421	8.943	8.943	0.0378	0.0378	89.43	
D 13C-1,2,3,4,7,8,9-HpCDF	39.589	1175351	0.46	0.6854	96.6	96.6	0.4008	0.4008	96.63	
1,2,3,4,7,8,9-HpCDF	39.598	138335	1.04	1.3092	8.990	8.990	0.0420	0.0420	89.90	
S Total HpCDF					17.9	17.9	0.0399	0.0399		
D 13C-1,2,3,4,6,7,8-HpCDD	39.286	1162117	1.05	0.6745	97.1	97.1	0.2422	0.2422	97.08	
1,2,3,4,6,7,8-HpCDD	39.294	110761	1.07	1.0503	9.075	9.075	0.0319	0.0319	90.75	
S Total HpCDD					9.075	9.075	0.0319	0.0319		
D 13C-OCDD	41.775	1833139	0.91	0.5446	189.7	189.7	0.2857	0.2857	94.83	
OCDF	41.868	217473	0.91	1.3168	18.0	18.0	0.0452	0.0452	90.09	
OCDD	41.784	182470	0.91	1.0620	18.7	18.7	0.0368	0.0368	93.73	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.534	20.547	-1		908781	140893	128	320	1101		
333.9338	20.542	20.547	0		1137158	181590	97	242	1872	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.606	19.616	-1	0.955	1167638	192853	232	580	831		
317.9389	19.615	19.616	0	0.955	1476751	240851	127	317	1896	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.641	19.646	0	1.002	22722	3787	5	12	757		
305.8987	19.632	19.646	-1	1.001	28234	4422	16	40	276	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.886	20.910	-1	1.017	809102	120100	128	320	938		
333.9338	20.895	20.910	-1	1.018	1020151	151021	97	242	1557	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.929	20.935	0	1.019	39241	6110	8	20	764		
2,3,7,8-TCDD											
319.8965	20.929	20.939	-1	1.002	15743	2433	27	67	90		
321.8936	20.929	20.939	-1	1.002	19228	3031	8	20	379	0.82(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.541	26.560	-1	1.293	1380136	237735	280	700	849		
353.8970	26.549	26.560	-1	1.293	854711	147619	192	480	769	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.566	26.584	-1	1.001	127910	22847	25	62	914		
341.8567	26.566	26.584	-1	1.001	82425	14553	28	70	520	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	27.991	28.014	-1	1.363	1373543	227507	280	700	813		
353.8970	27.991	28.014	-1	1.363	854482	140253	192	480	730	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.016	28.039	-1	1.001	121955	19987	25	62	799		
341.8567	28.016	28.039	-1	1.001	78220	12878	28	70	460	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.784	28.801	-1	1.402	839338	134094	55	137	2438		
369.8919	28.775	28.801	-2	1.401	524806	82953	54	135	1536	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.809	28.828	-1	1.001	80255	12276	18	45	682		
357.8516	28.809	28.828	-1	1.001	49617	7332	5	12	1466	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.367	34.384	-1	0.950	530041	107506	195	487	551		
385.8610	34.367	34.384	-1	0.950	1014992	209541	410	1025	511	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.384	34.405	-1	1.000	84954	17499	46	115	380		
375.8178	34.384	34.405	-1	1.000	70657	14926	30	75	498	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.544	34.562	-1	0.955	582468	111482	195	487	572		
385.8610	34.544	34.562	-1	0.955	1109868	211659	410	1025	516	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.569	34.582	-1	1.001	102510	19443	46	115	423		
375.8178	34.561	34.582	-1	1.000	82811	15785	30	75	526	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.429	35.444	-1	0.979	608469	136128	195	487	698		
385.8610	35.429	35.444	-1	0.979	1131546	250431	410	1025	611	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.446	35.461	-1	1.000	106373	23069	46	115	502		
375.8178	35.446	35.461	-1	1.000	85154	19256	30	75	642	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.374	36.388	-1	1.005	597532	142559	195	487	731		
385.8610	36.374	36.388	-1	1.005	1138253	273050	410	1025	666	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.390	36.402	-1	1.000	109103	26446	46	115	575		
375.8178	36.390	36.402	-1	1.000	85974	20436	30	75	681	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.180	36.192	-1		992912	228100	138	345	1653		
403.8529	36.180	36.192	-1		781782	183211	108	270	1696	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.665	35.680	-1	0.986	765726	187664	138	345	1360		
403.8529	35.665	35.680	-1	0.986	597377	148078	108	270	1371	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.682	35.695	-1	1.000	73908	17289	18	45	961		
391.8127	35.682	35.695	-1	1.000	58336	14382	19	47	757	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.792	35.805	-1	0.989	870562	199612	138	345	1446		
403.8529	35.792	35.805	-1	0.989	688106	154356	108	270	1429	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.809	35.820	-1	1.000	75558	17193	18	45	955		
391.8127	35.809	35.820	-1	1.000	62584	14006	19	47	737	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.196	36.208	-1	1.015	78157	18353	18	45	1020		
391.8127	36.196	36.208	-1	1.015	61584	14405	19	47	758	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.291	38.305	-1	1.058	404086	116332	150	375	776		
419.8220	38.291	38.305	-1	1.058	868440	254106	302	755	841	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.308	38.317	-1	1.000	84325	24268	44	110	552		
409.7788	38.299	38.317	-1	1.000	79783	22737	37	92	615	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.589	39.600	-1	1.094	368476	114509	150	375	763		
419.8220	39.589	39.600	-1	1.094	806875	252758	302	755	837	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	70636	21558	44	110	490		
409.7788	39.598	39.608	-1	1.000	67699	21216	37	92	573	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.286	39.293	0	1.086	594894	185269	137	342	1352		
437.8140	39.286	39.293	0	1.086	567223	172933	132	330	1310	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.294	39.301	0	1.000	57275	17734	30	75	591		
425.7737	39.294	39.301	0	1.000	53486	17016	18	45	945	1.07(0.88-1.20)	
13C-OCDD											
469.7780	41.775	41.785	-1	1.155	873143	243136	128	320	1900		
471.7750	41.775	41.785	-1	1.155	959996	268180	128	320	2095	0.91(0.76-1.02)	
OCDF											
441.7428	41.868	41.875	0	1.002	103359	30074	20	50	1504		
443.7399	41.859	41.875	-1	1.002	114114	32506	41	102	793	0.91(0.76-1.02)	
OCDD											
457.7377	41.784	41.794	-1	1.000	86745	24118	17	42	1419		
459.7348	41.784	41.794	-1	1.000	95725	27065	23	57	1177	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

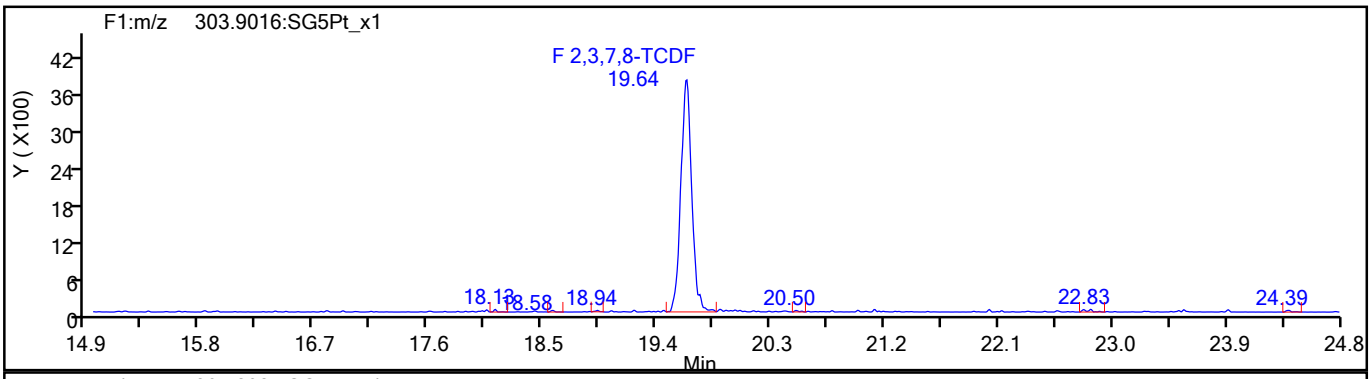

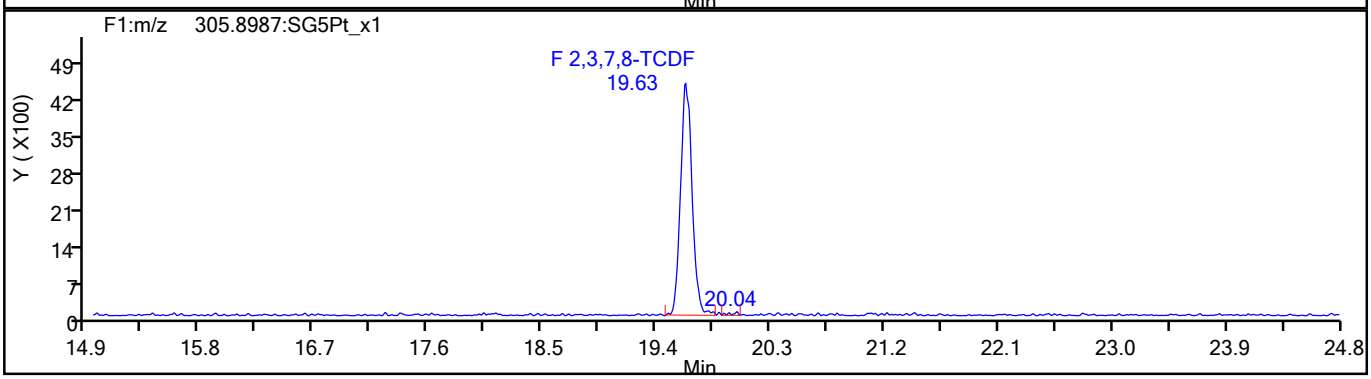

TCDF Standards

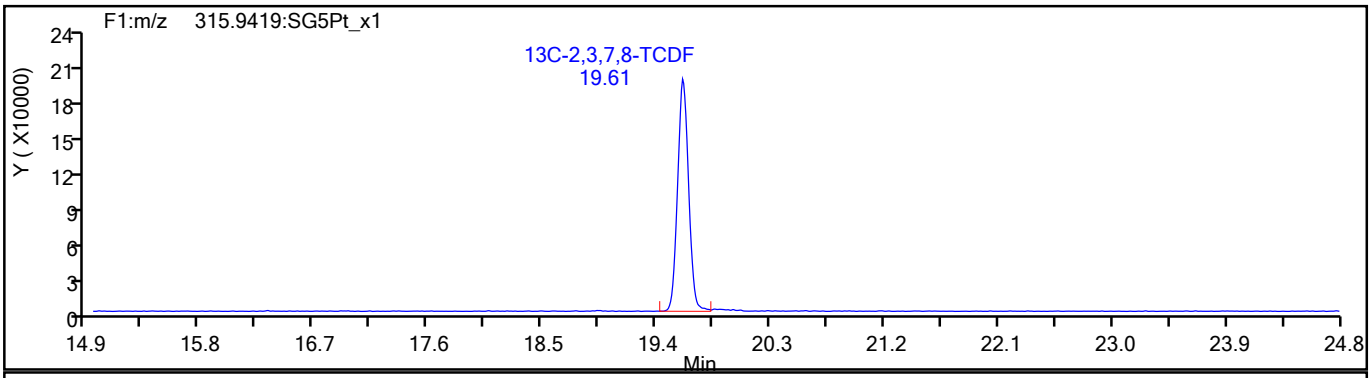

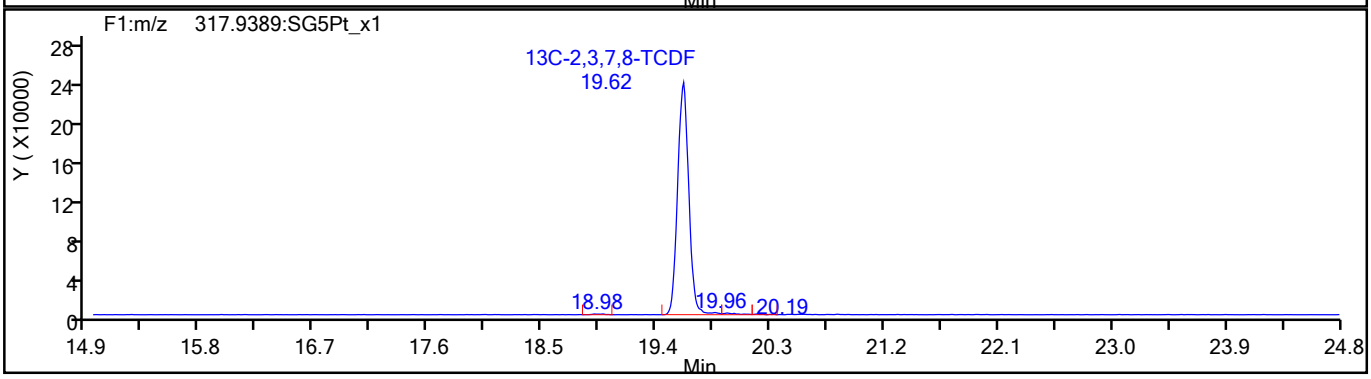

785838

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

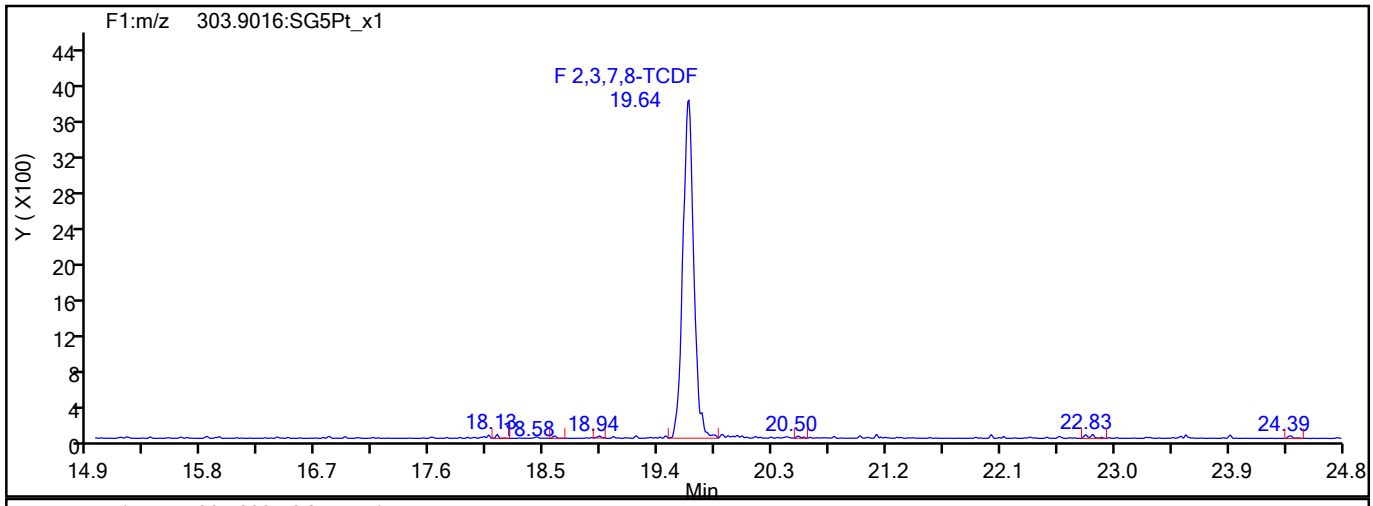

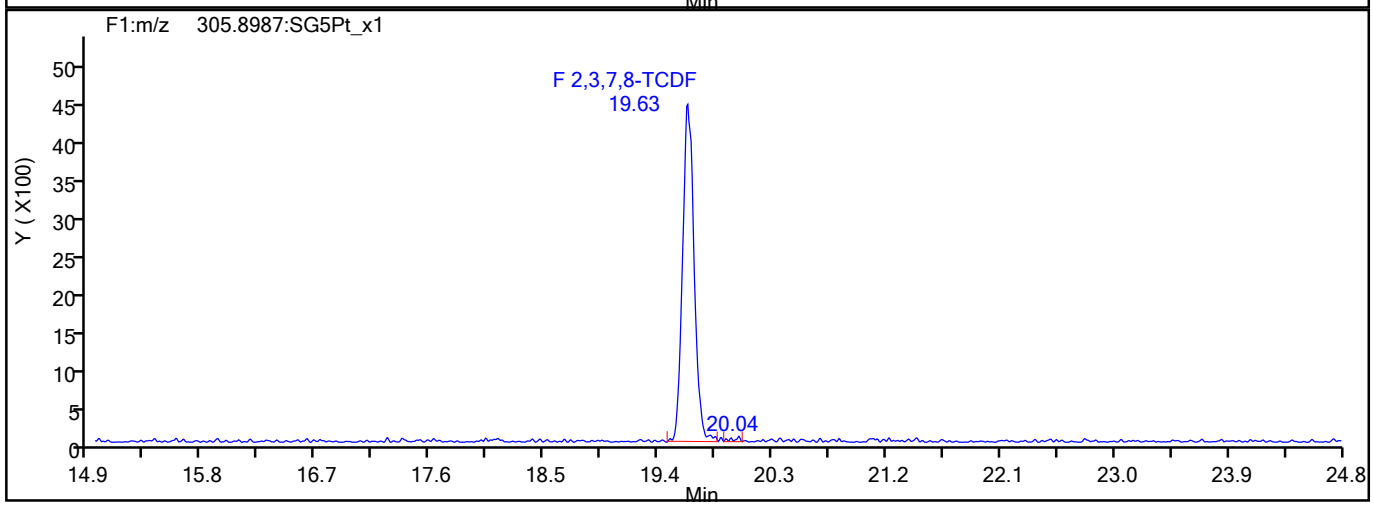

TCDF Interference Mass

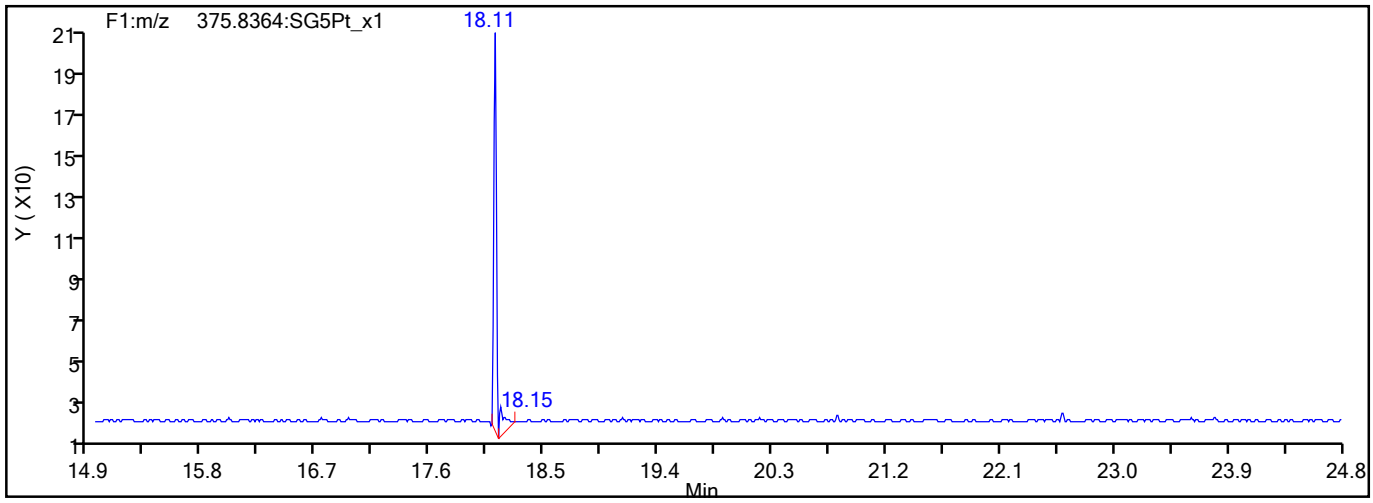

785839

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

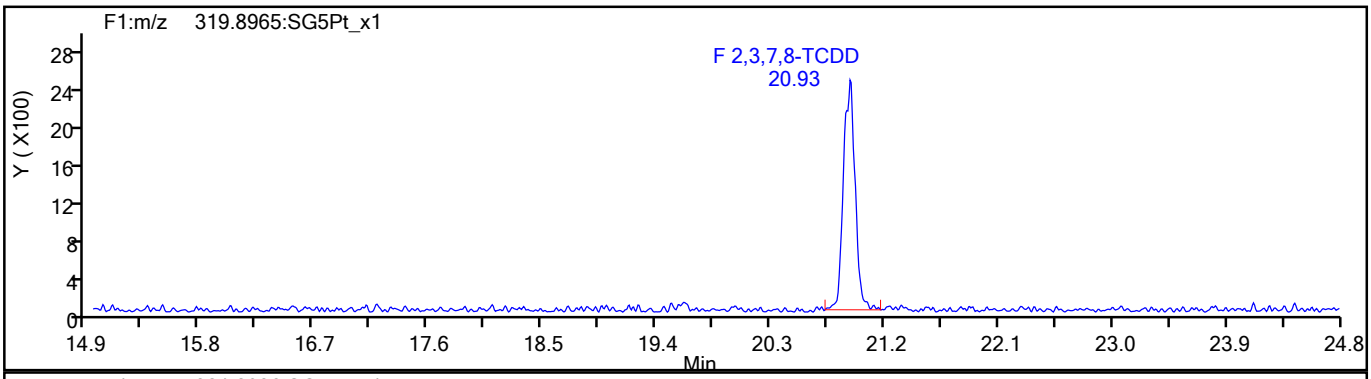

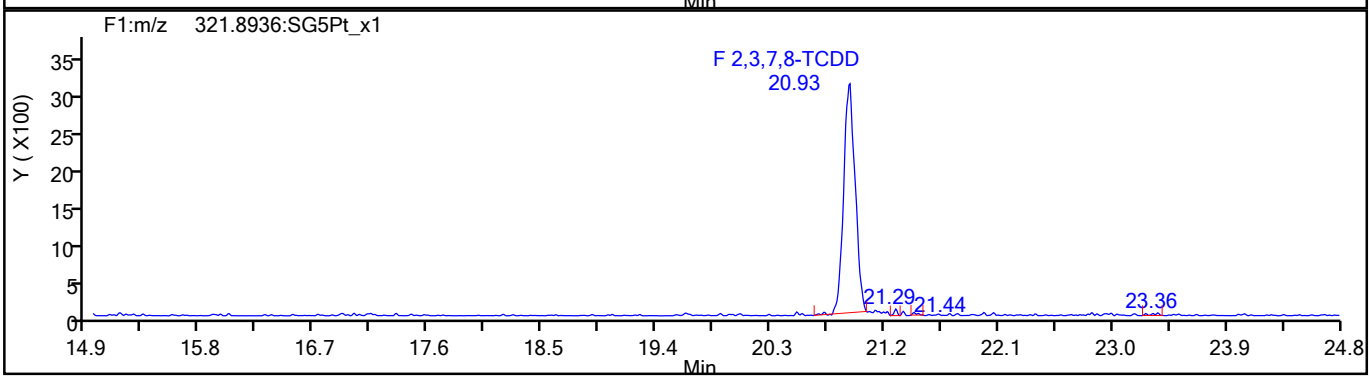

TCDD Standards

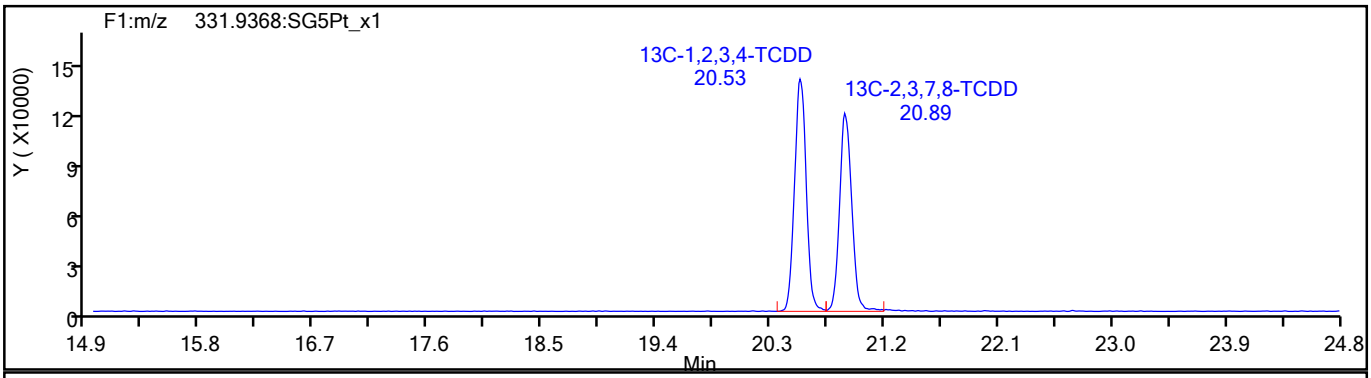

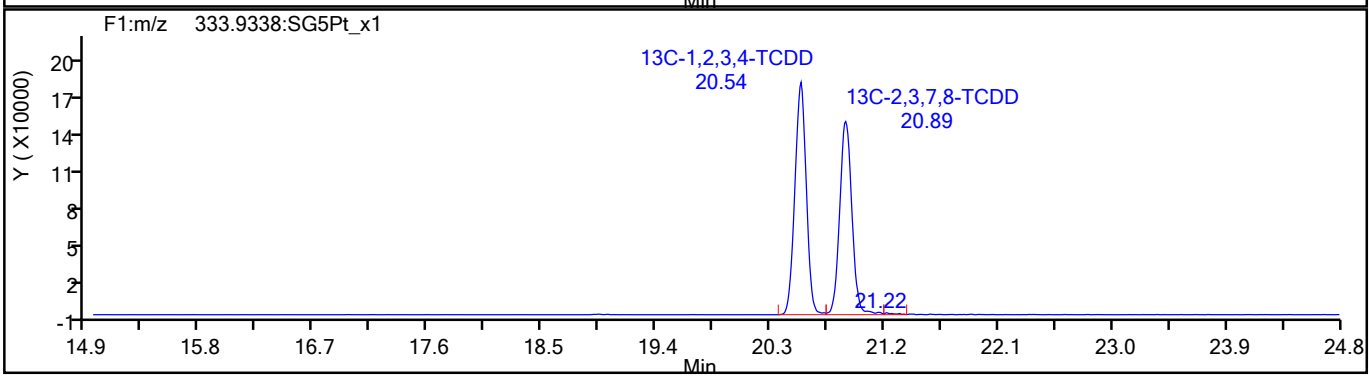

785840

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

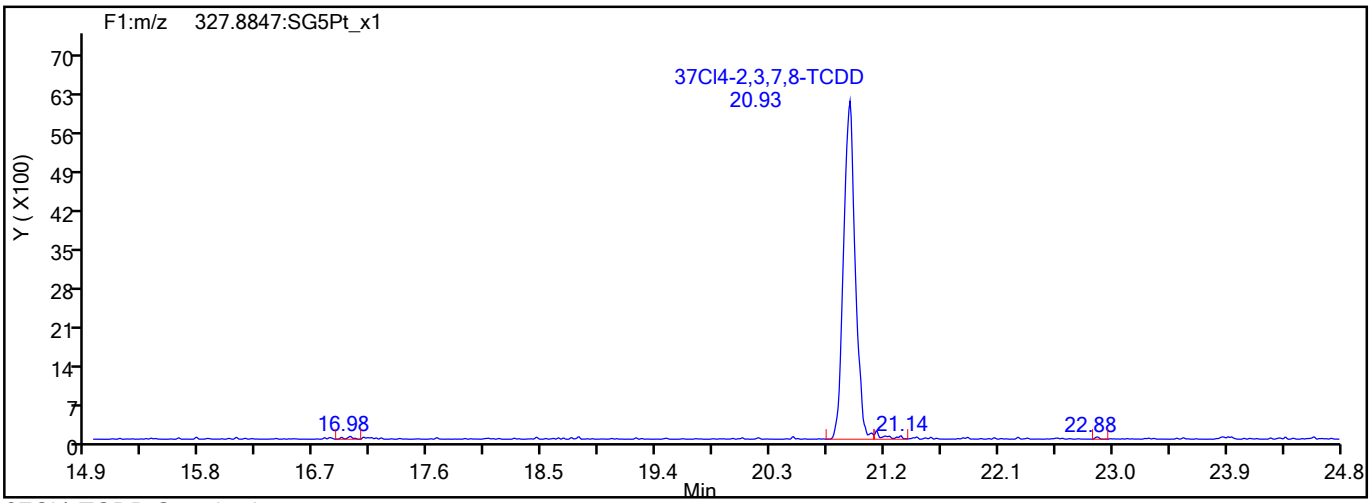

37Cl4-TCDD Standards

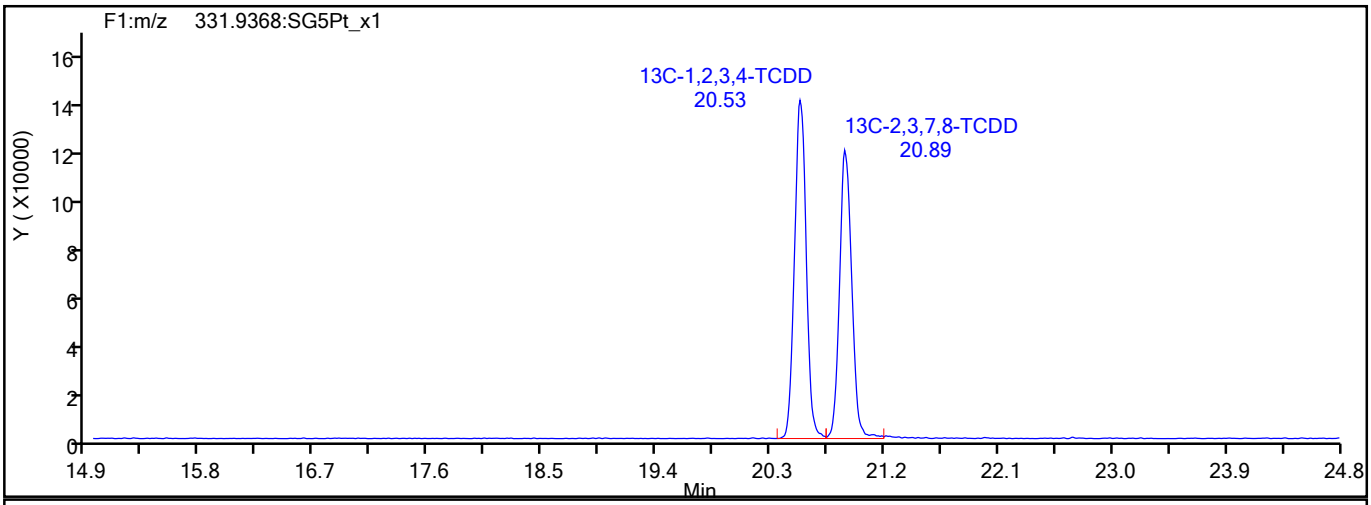

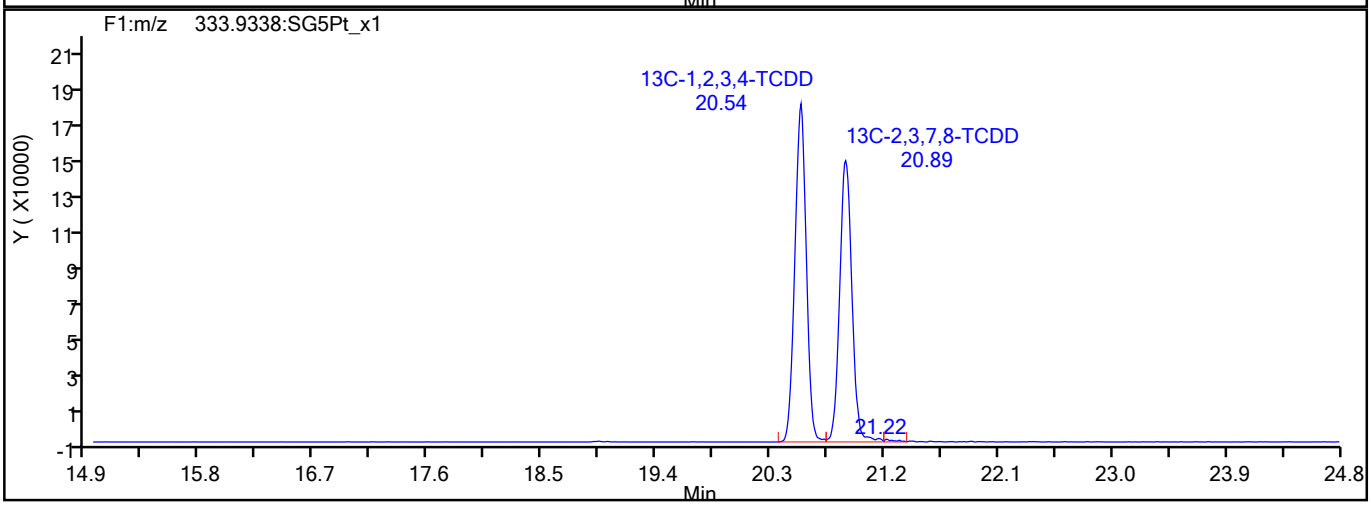

785841

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

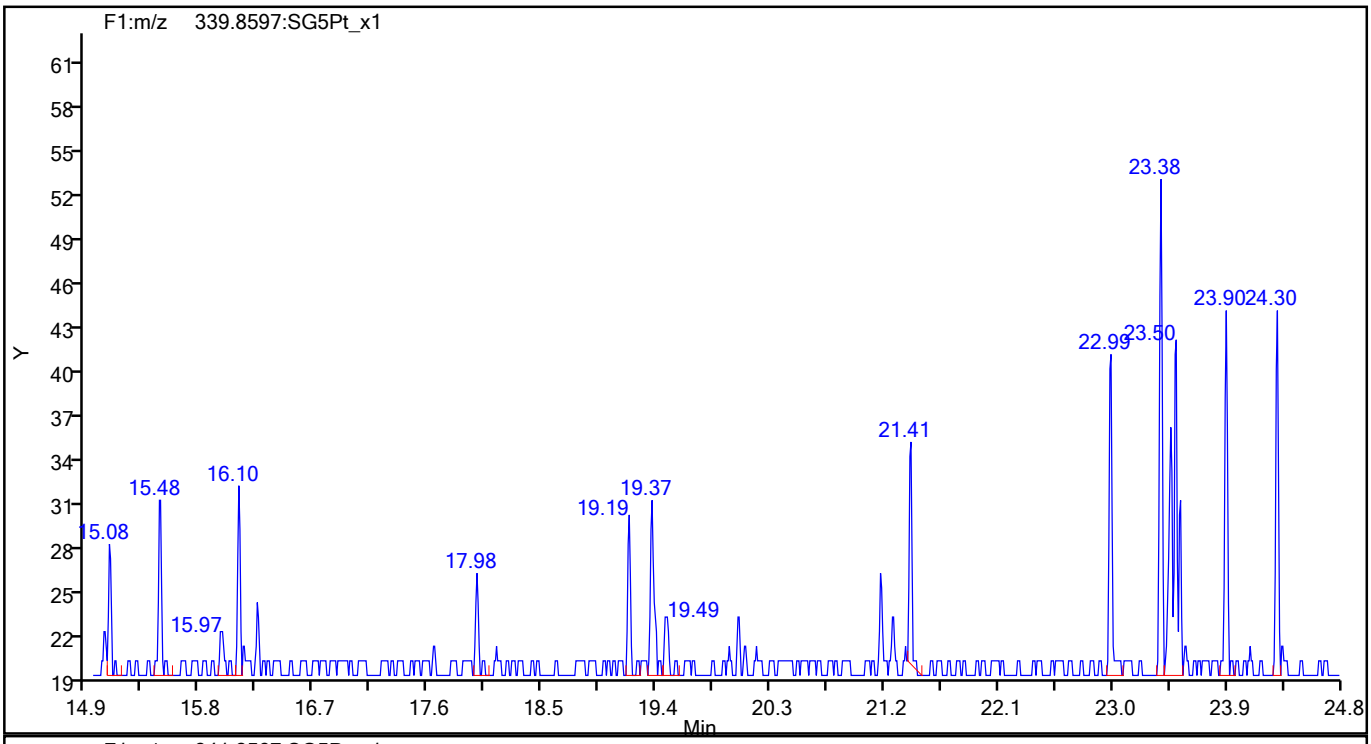

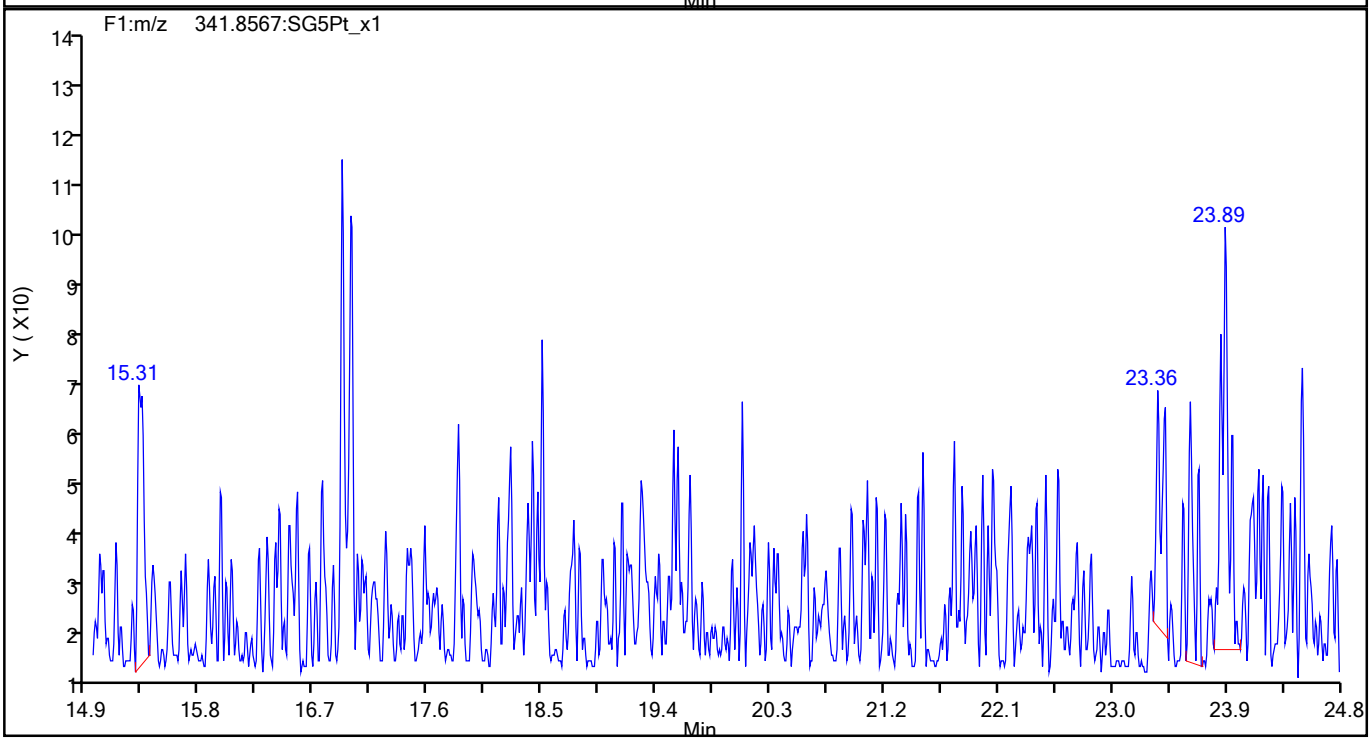

785842

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

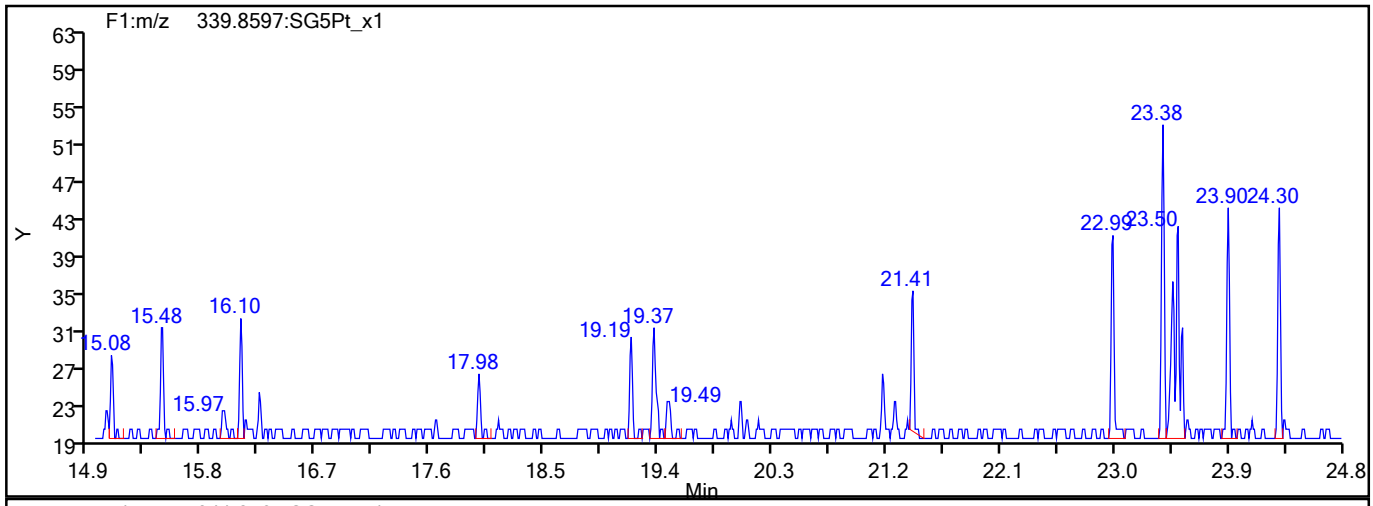

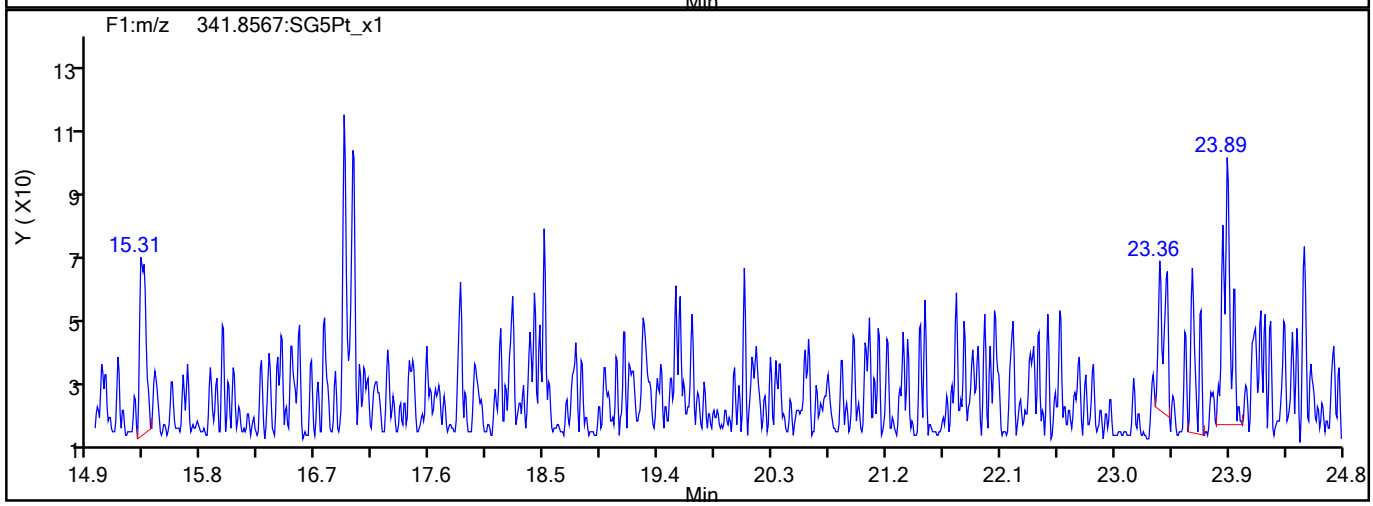

F1 PeCDFs Interference Mass

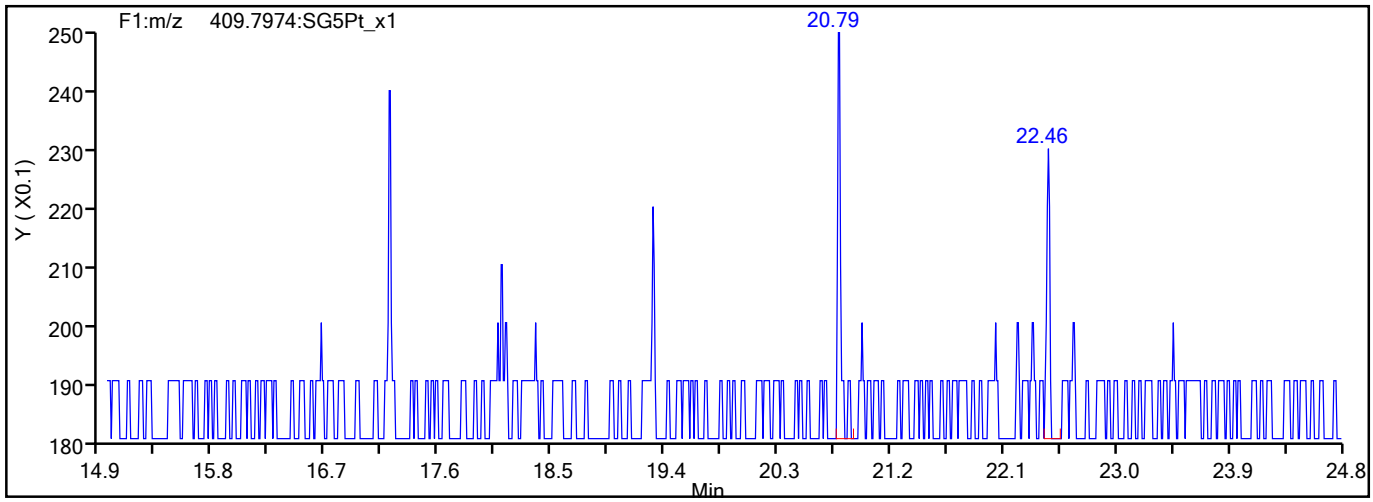

785843

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

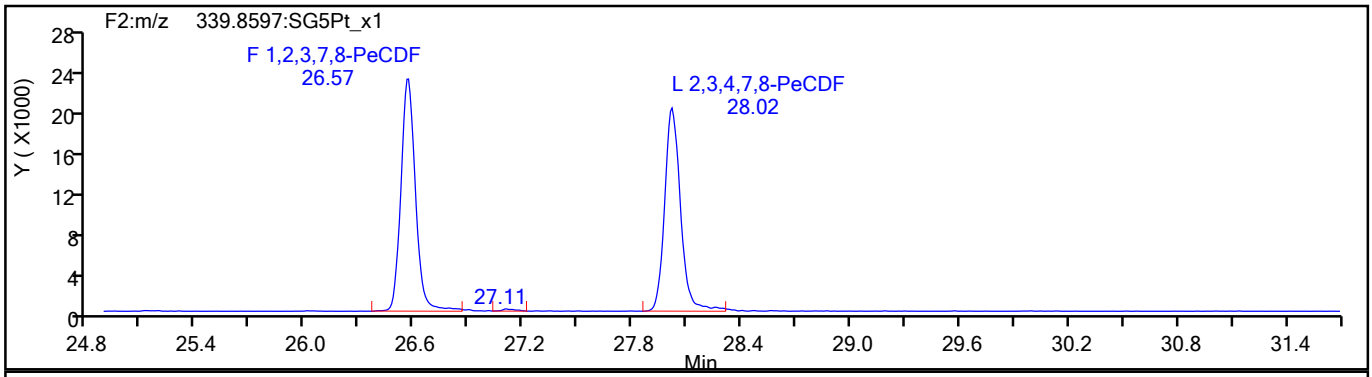

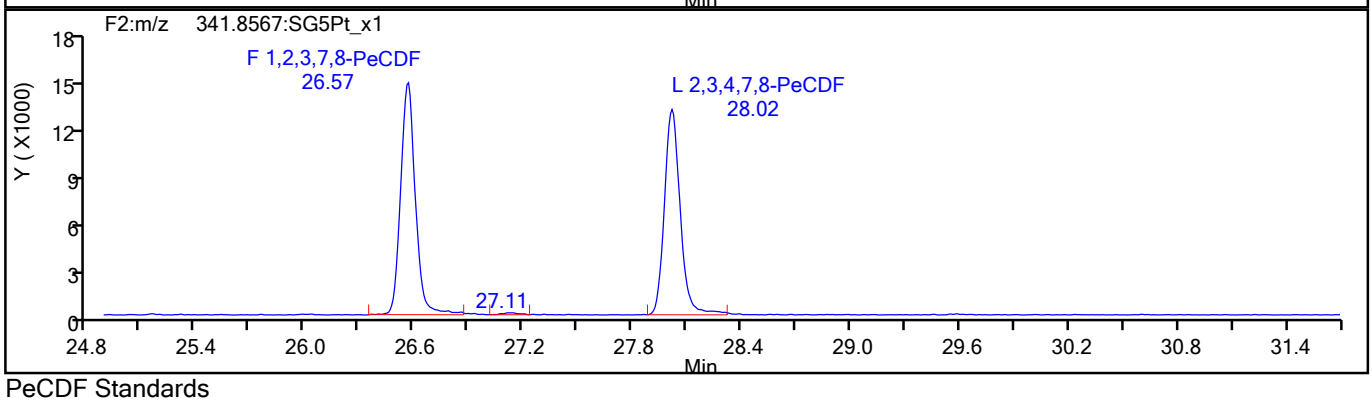

PeCDF Standards

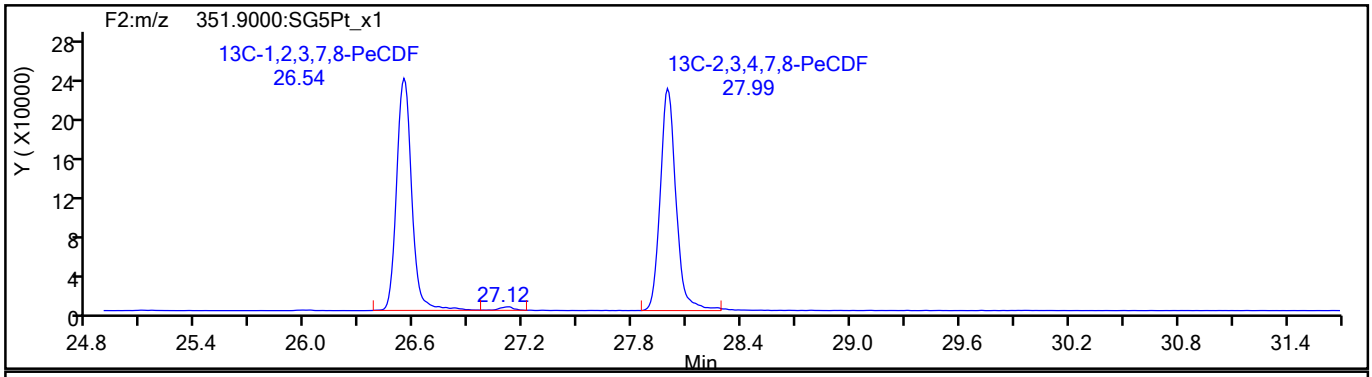

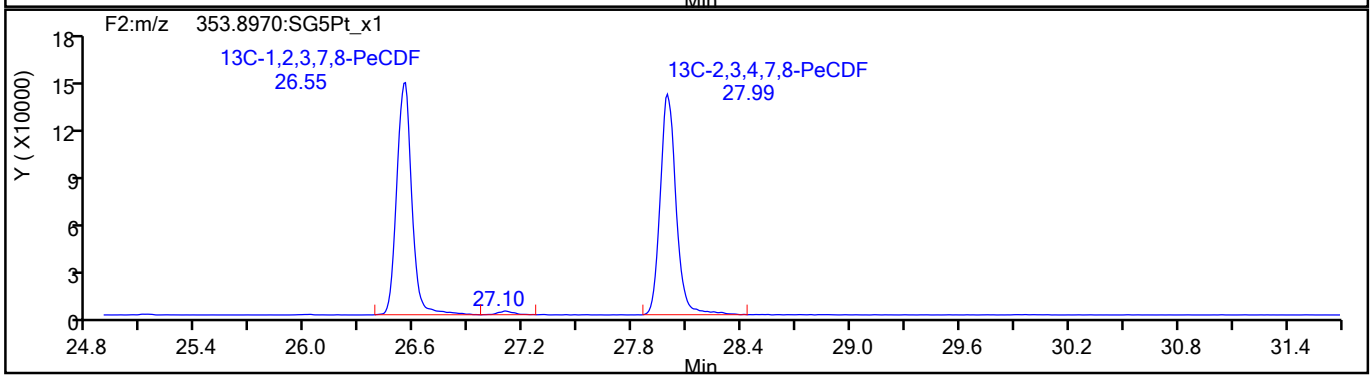

785844

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

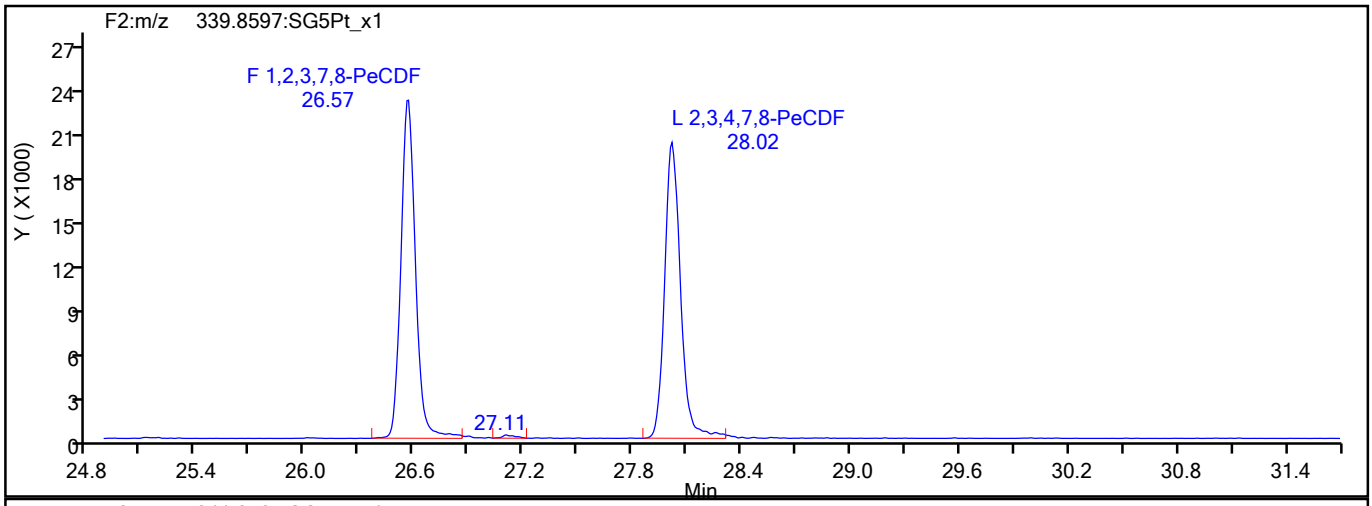

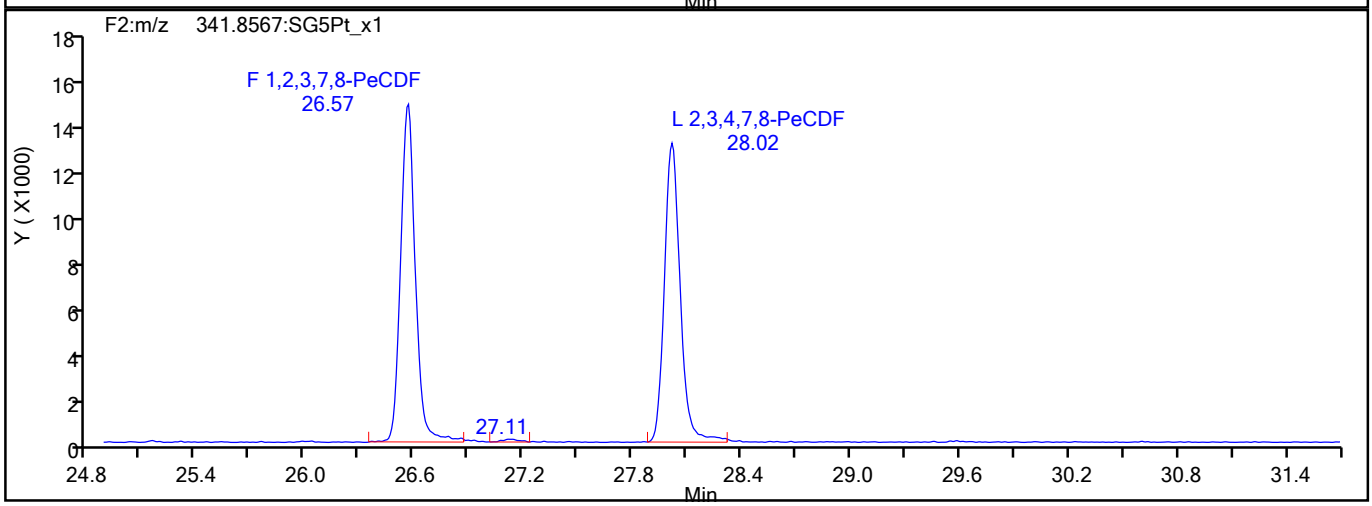

PeCDF Interference Mass

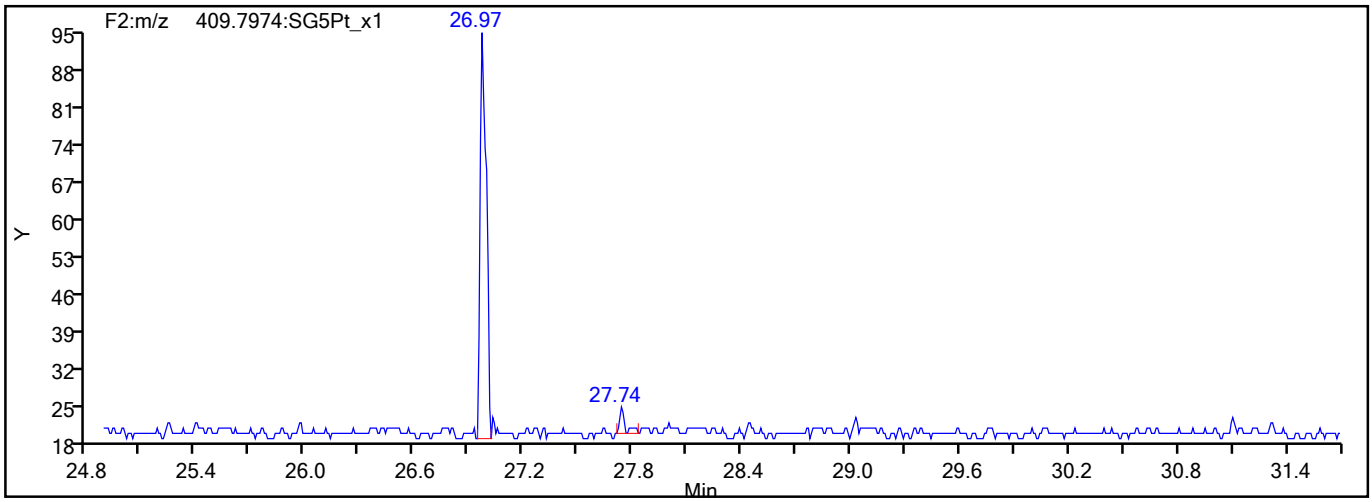

785845

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

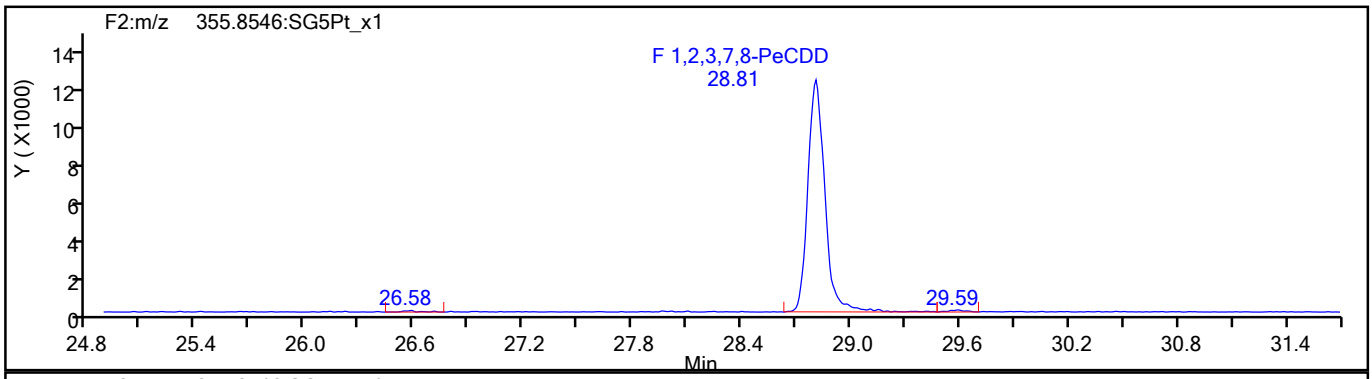

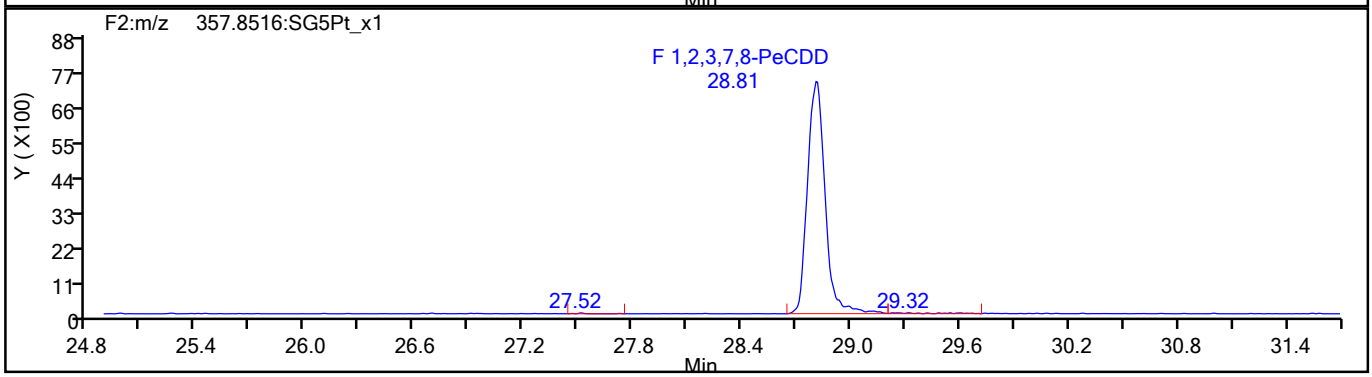

PeCDD Standards

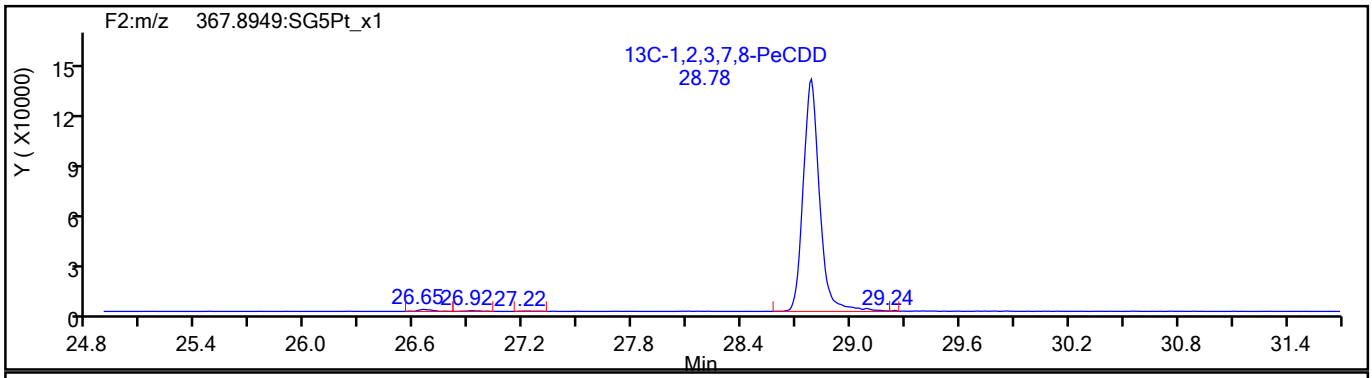

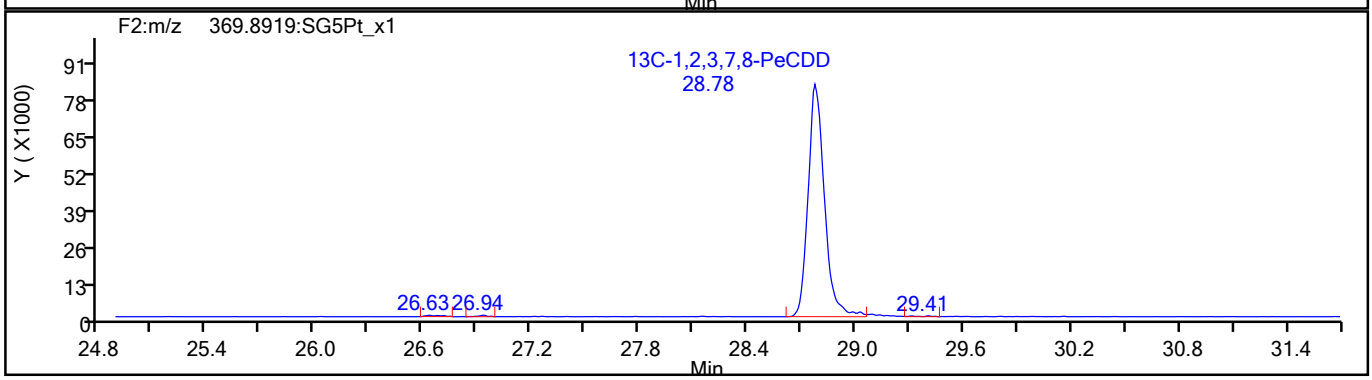

785846

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

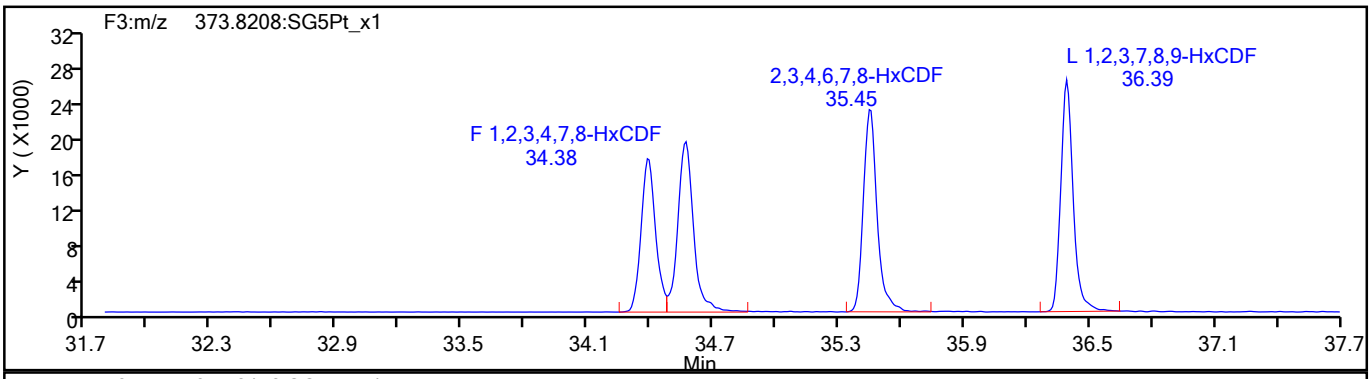

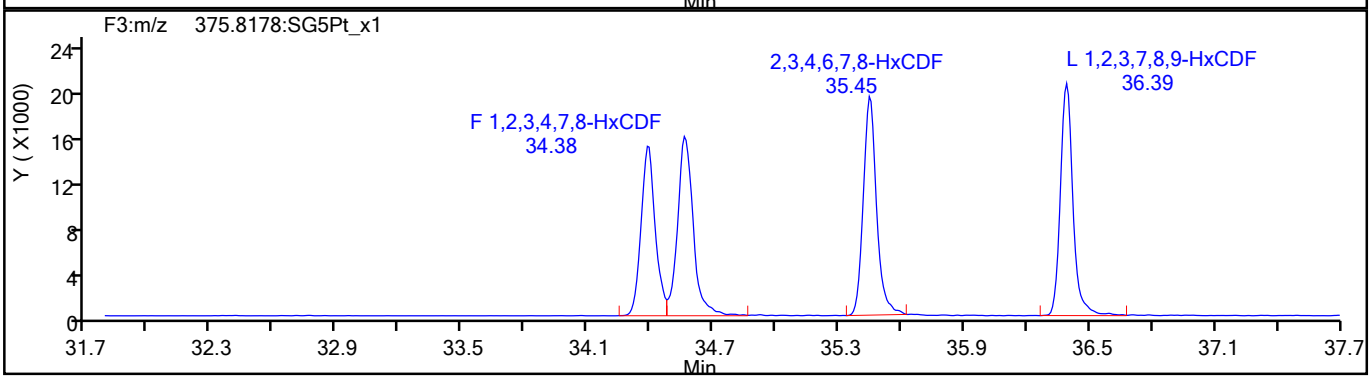

HxCDF Standards

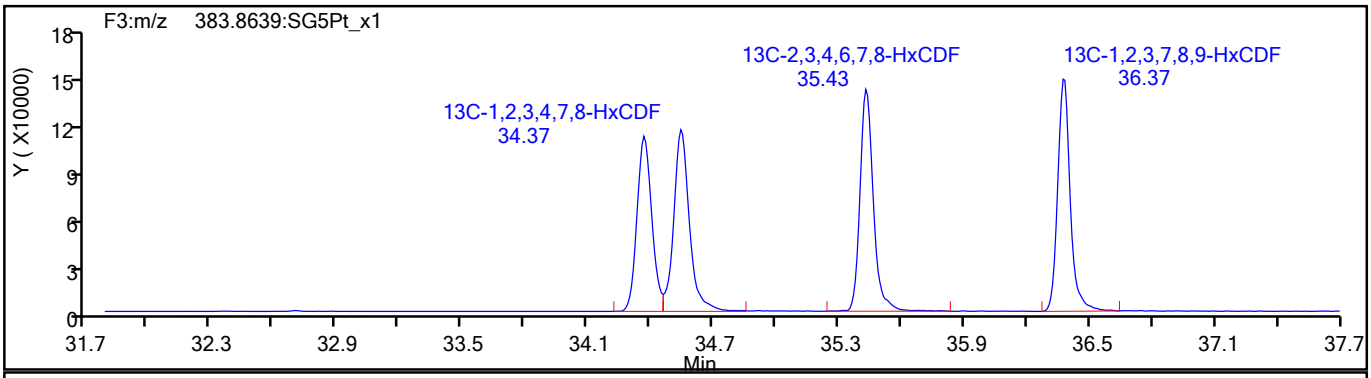

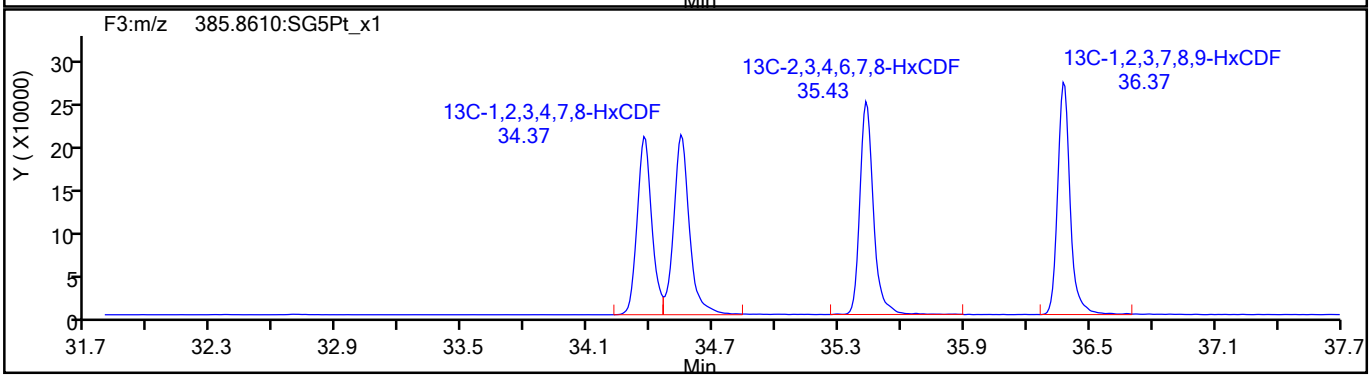

785847

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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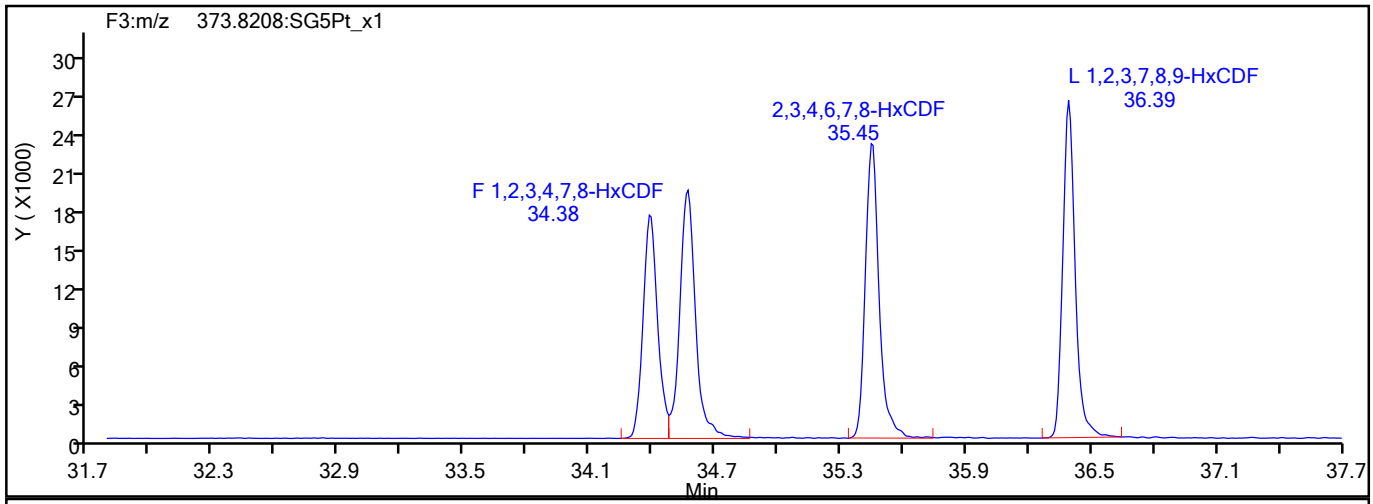

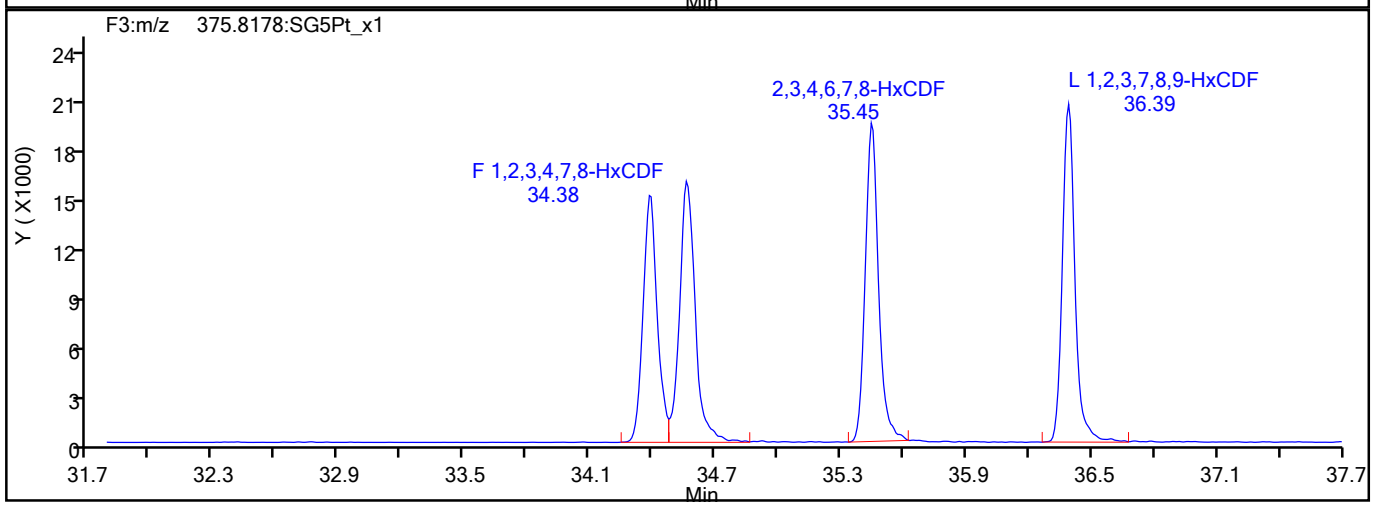

HxCDF Interference Mass

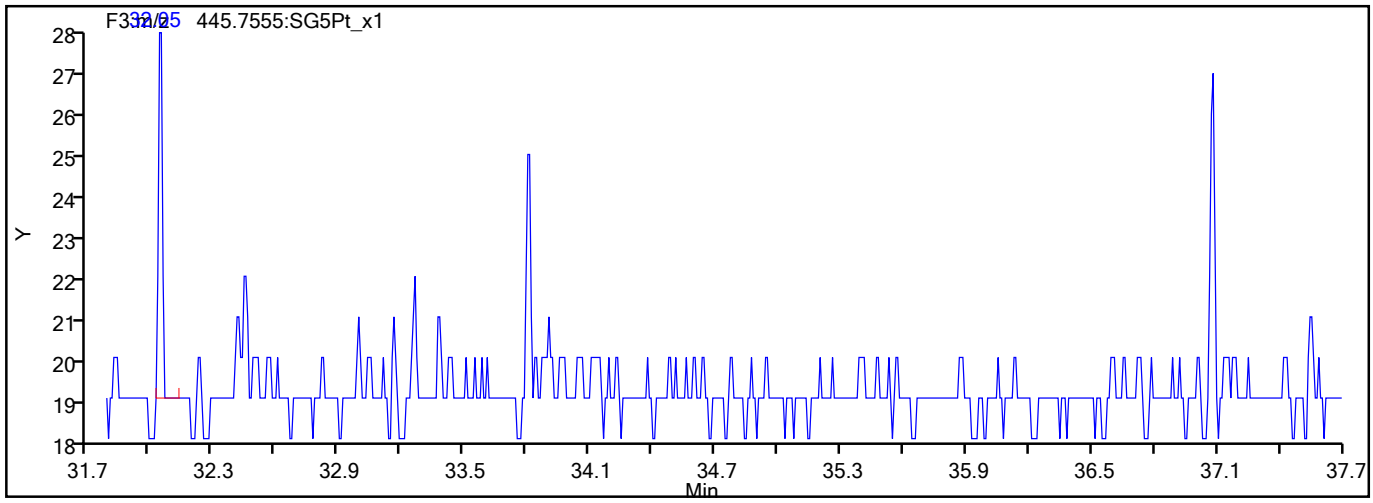

785848

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDD

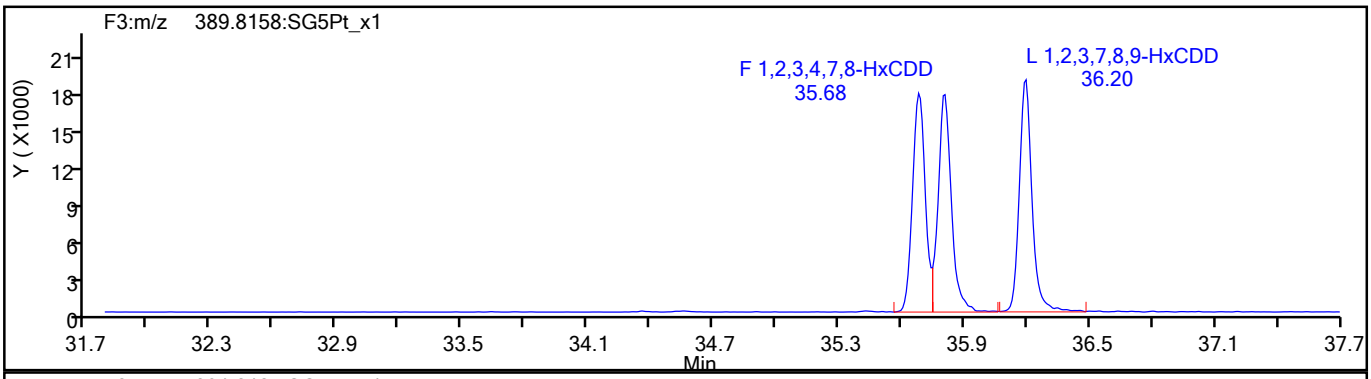

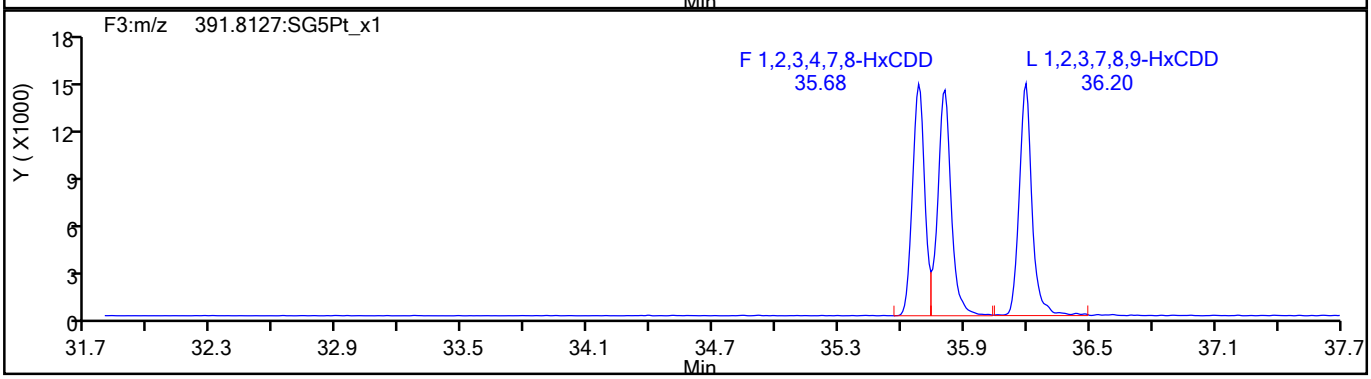

HxCDD Standards

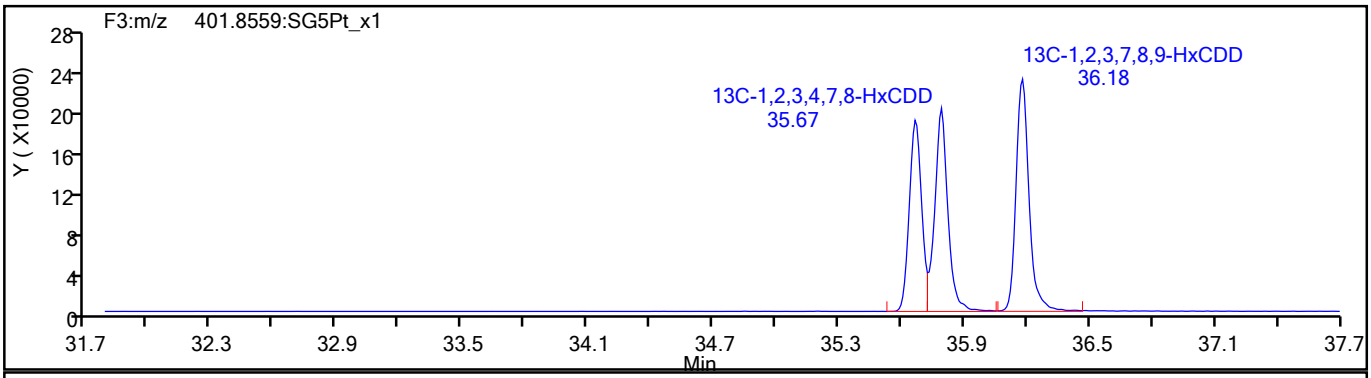

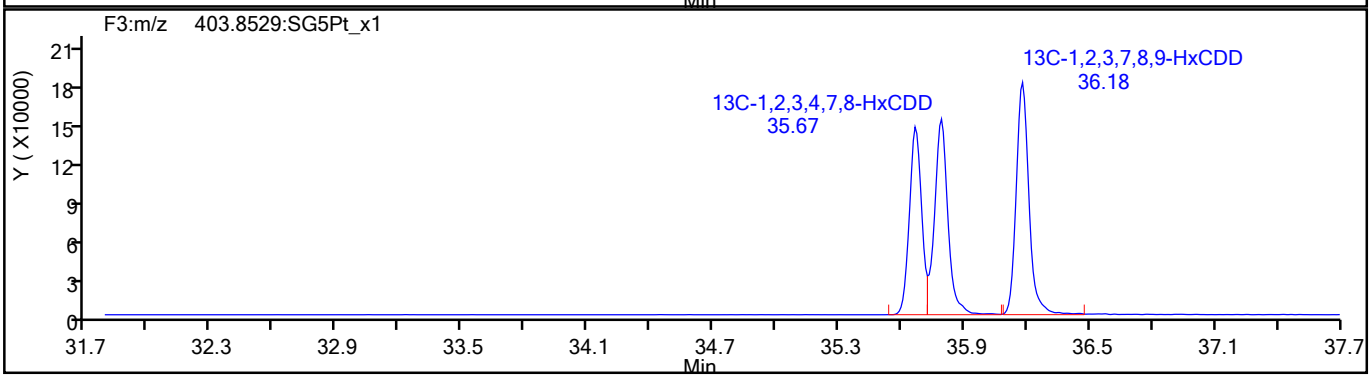

785849

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Eurofins TestAmerica, Sacramento

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HpCDF

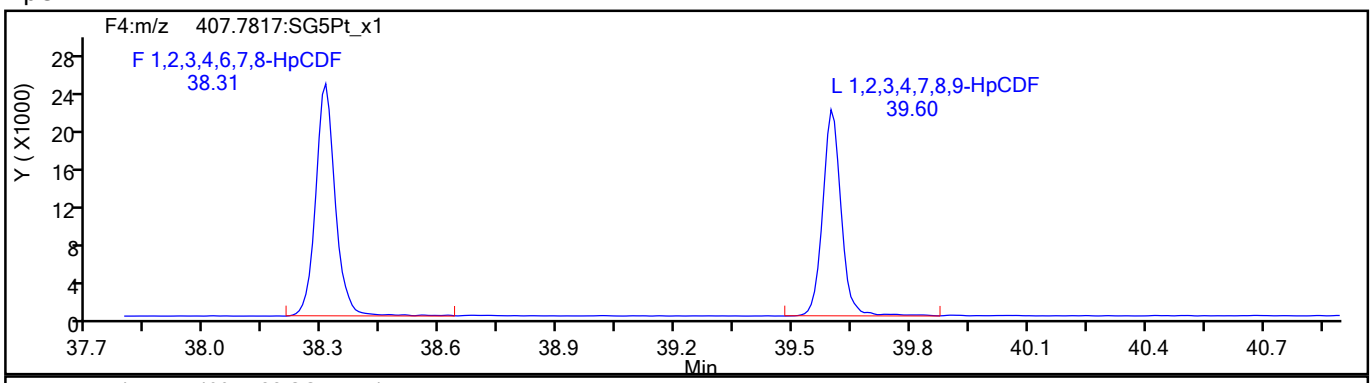

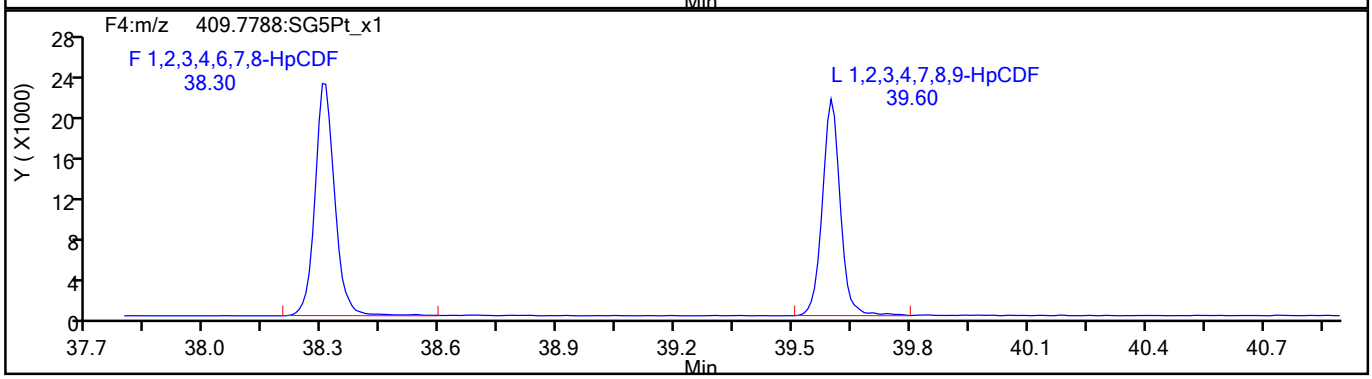

HpCDF Standards

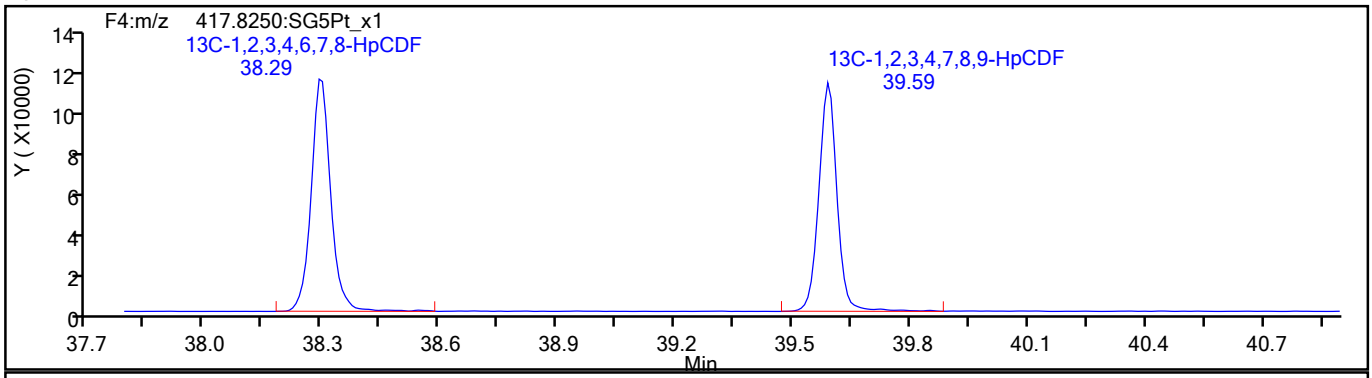

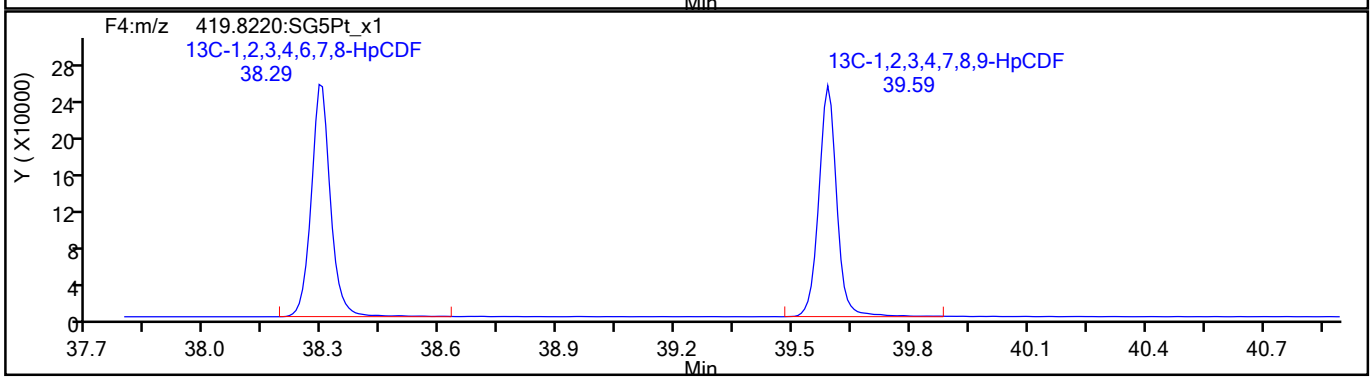

785850

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

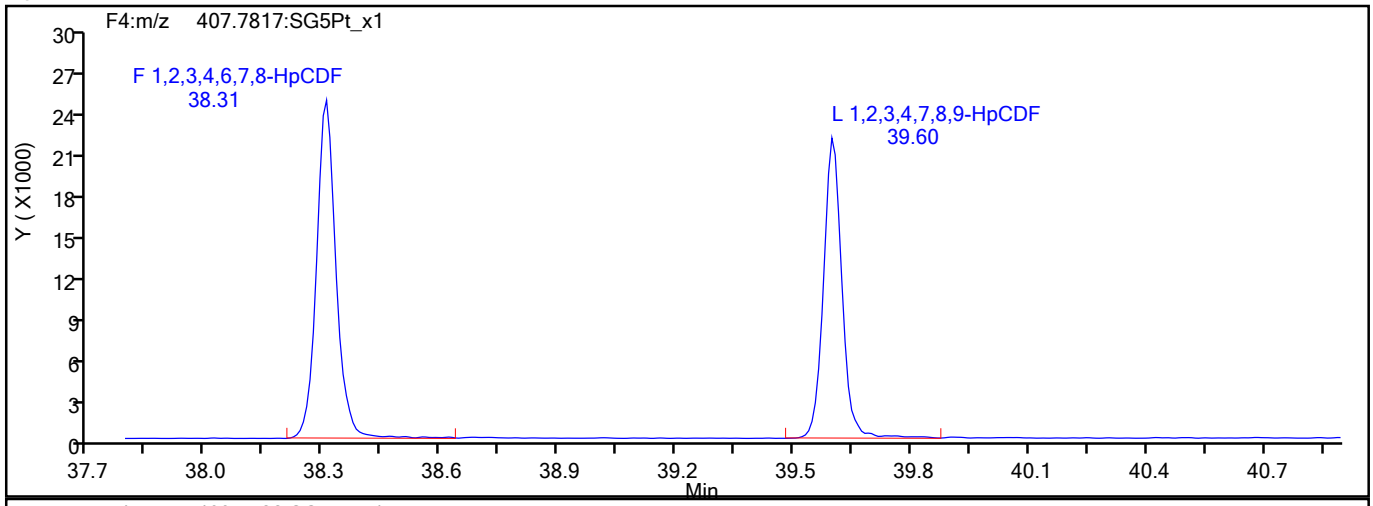

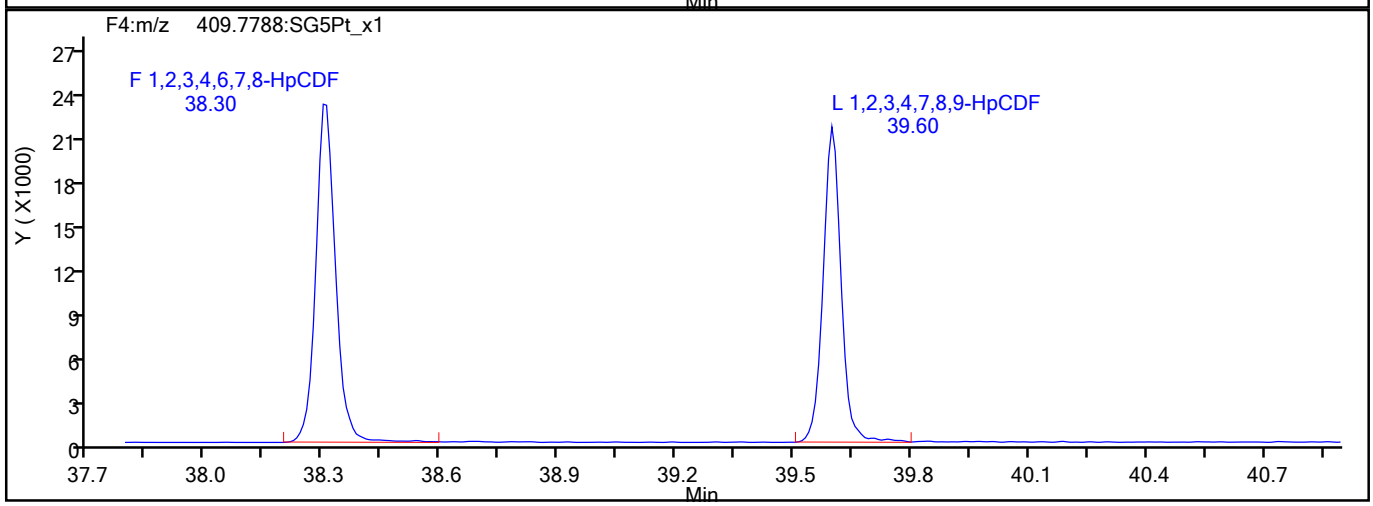

HpCDF Interference Mass

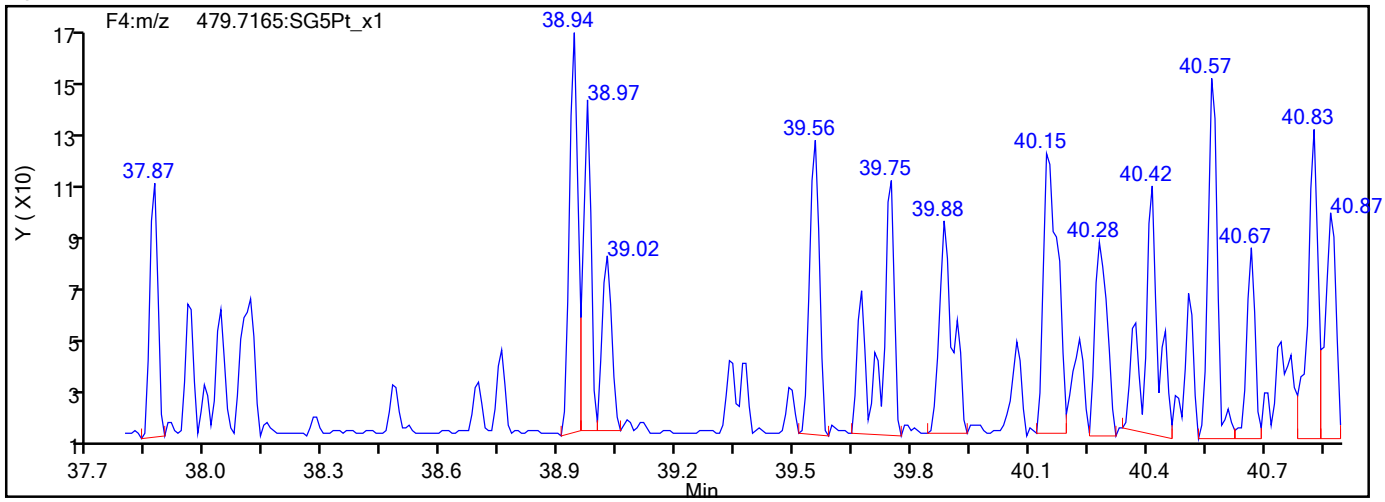

785851

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

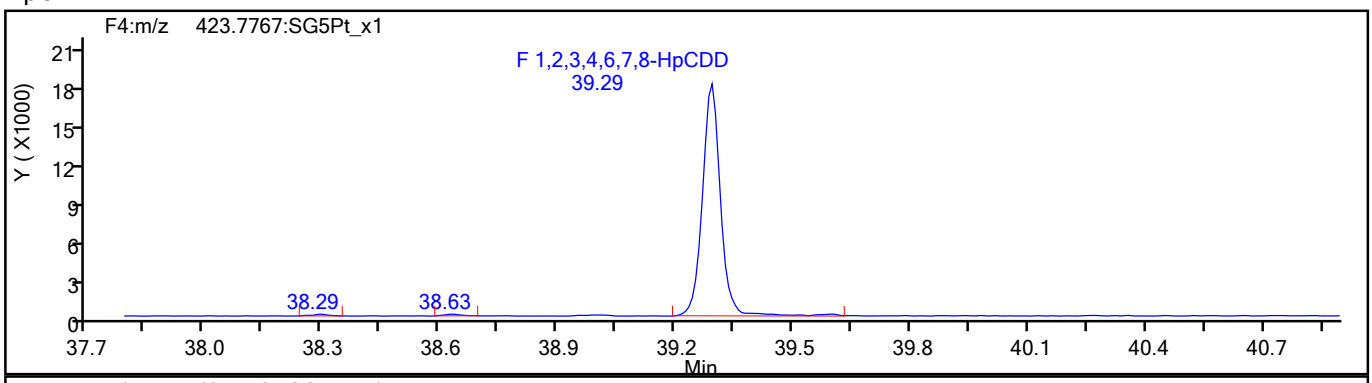

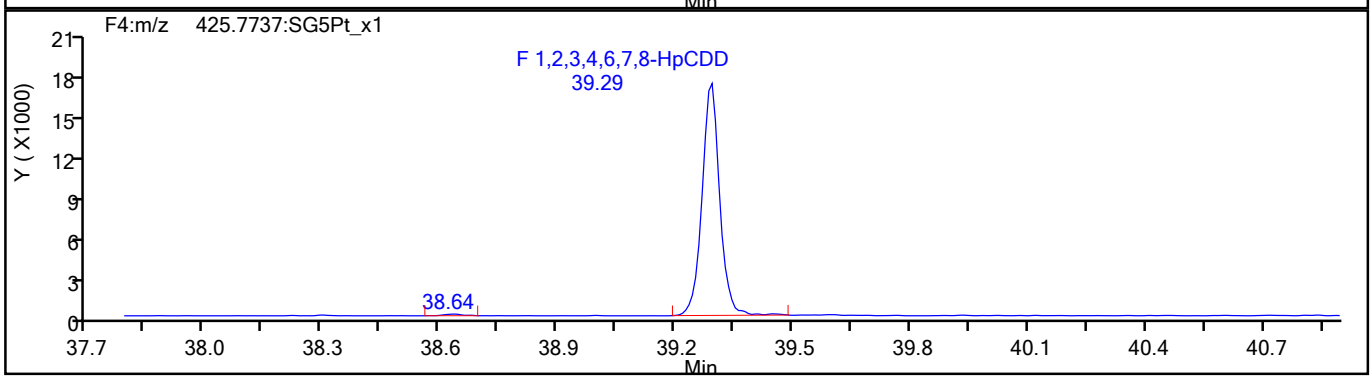

HpCDD Standards

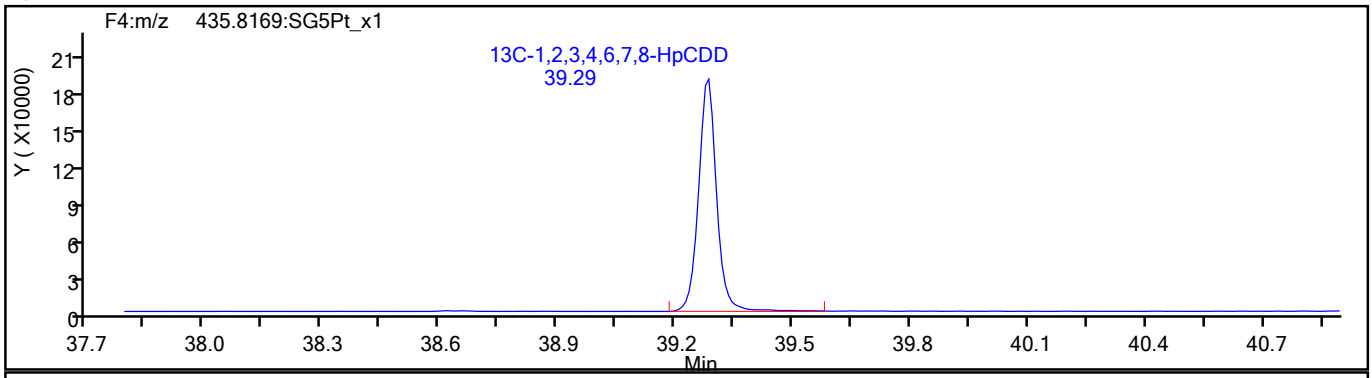

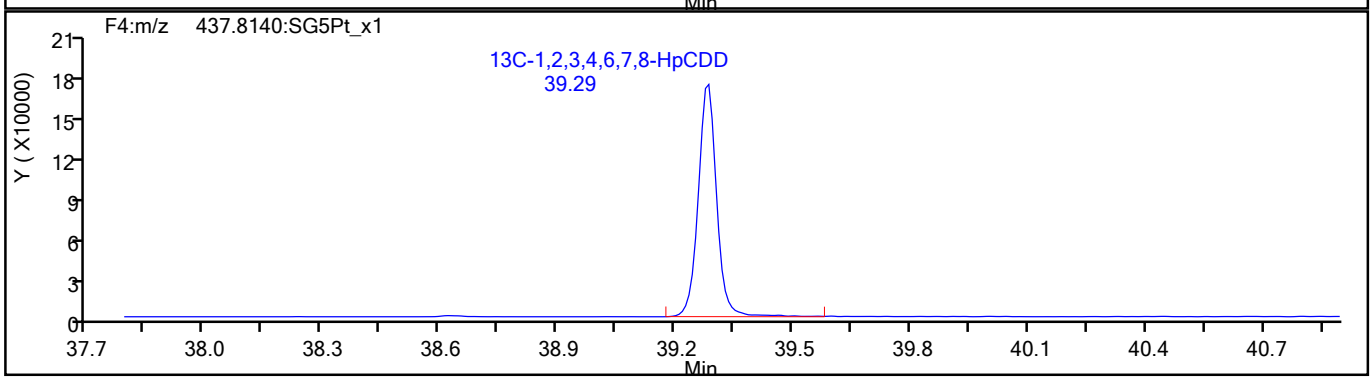

785852

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDF

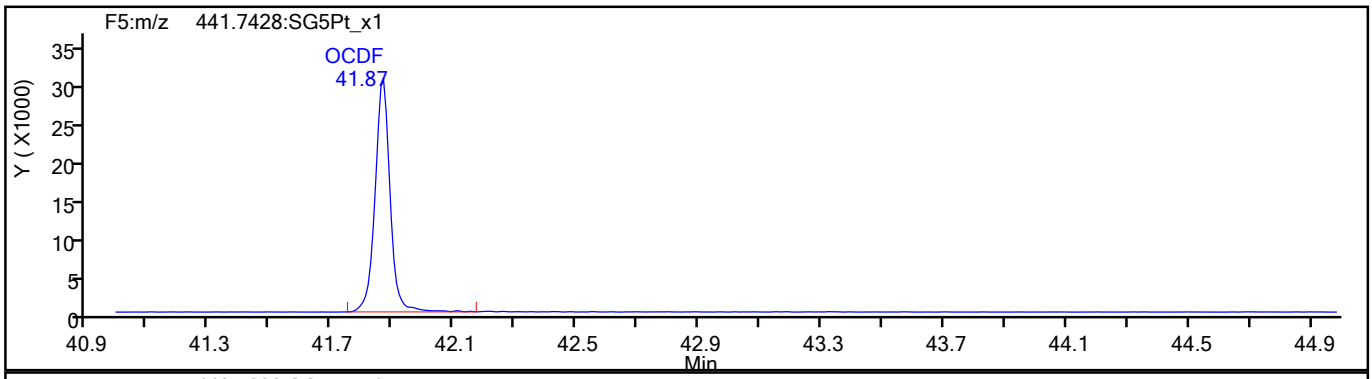

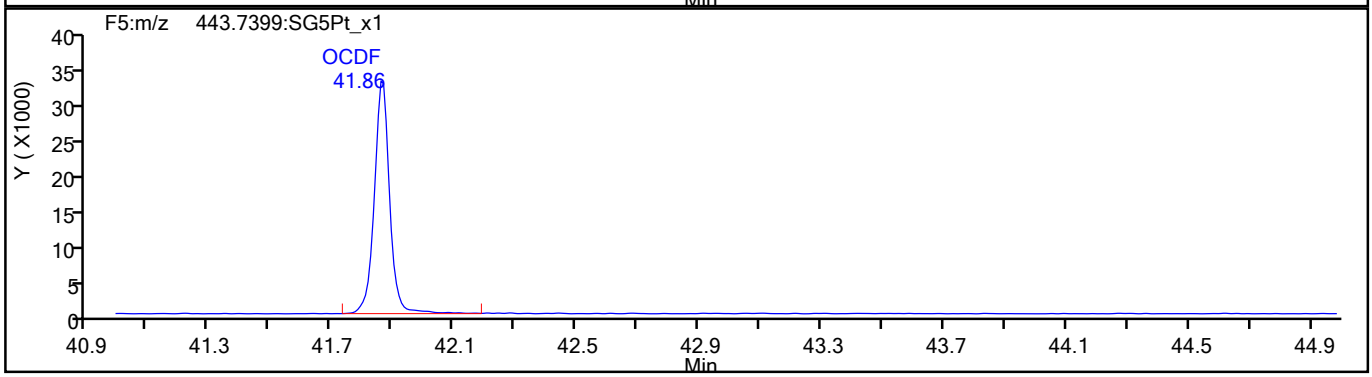

OCDF Standards

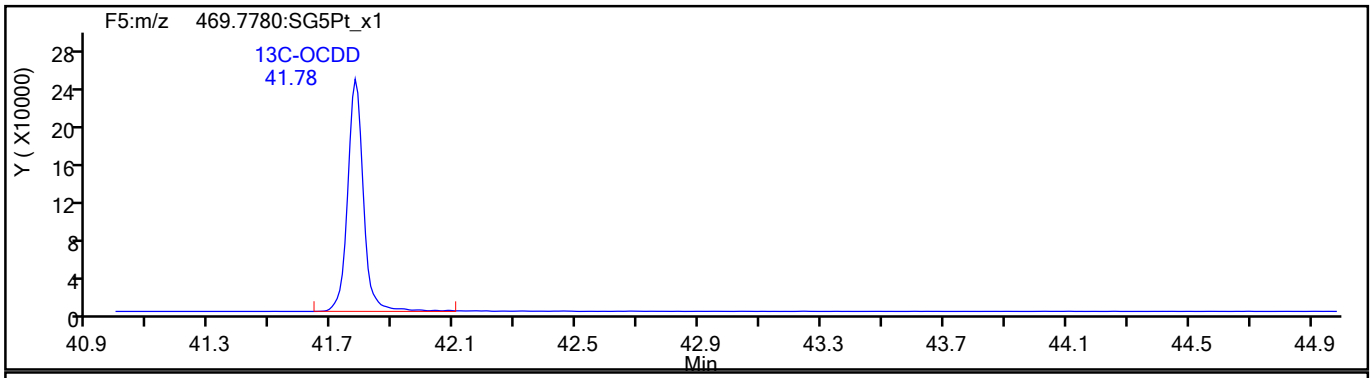

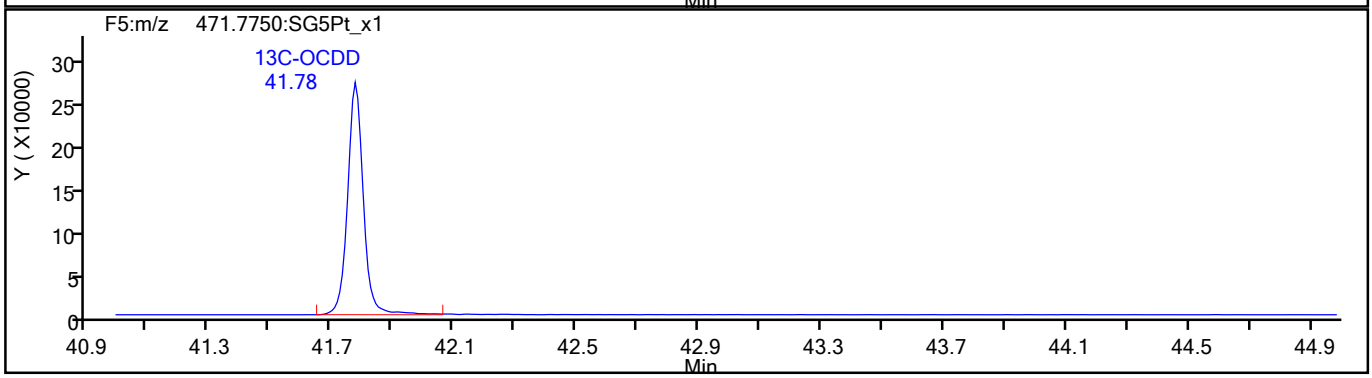

785853

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

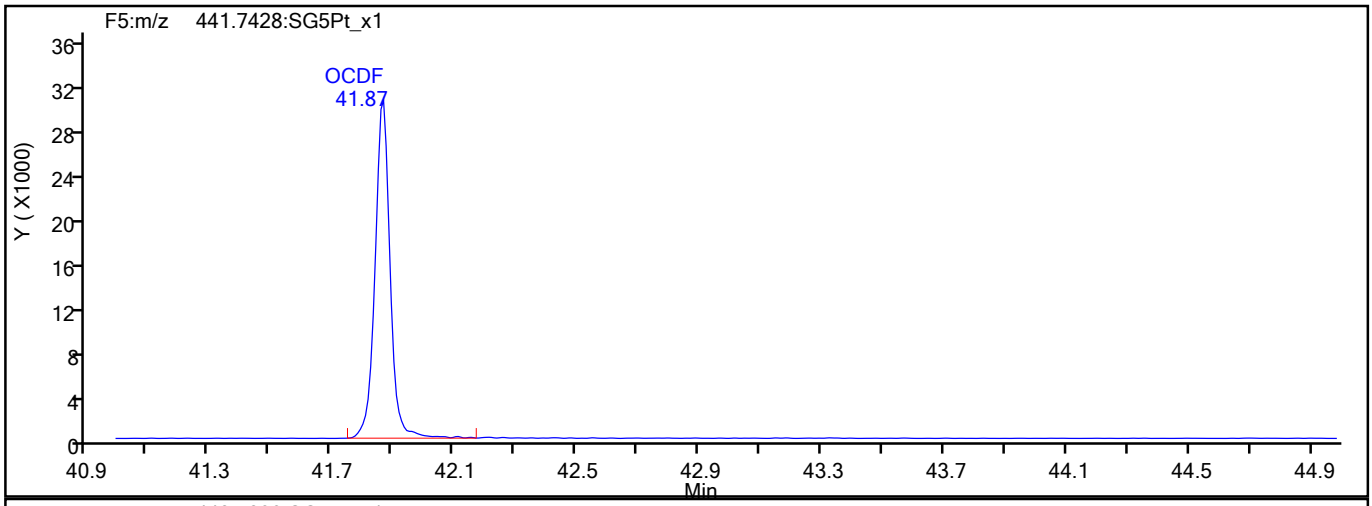

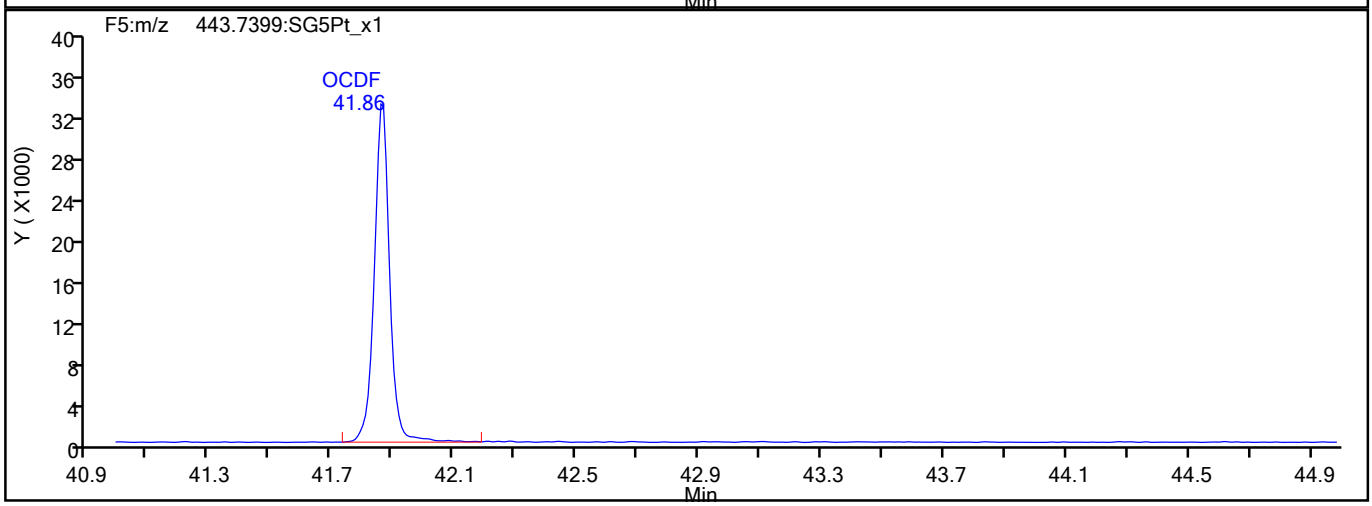

OCDF Interference Mass

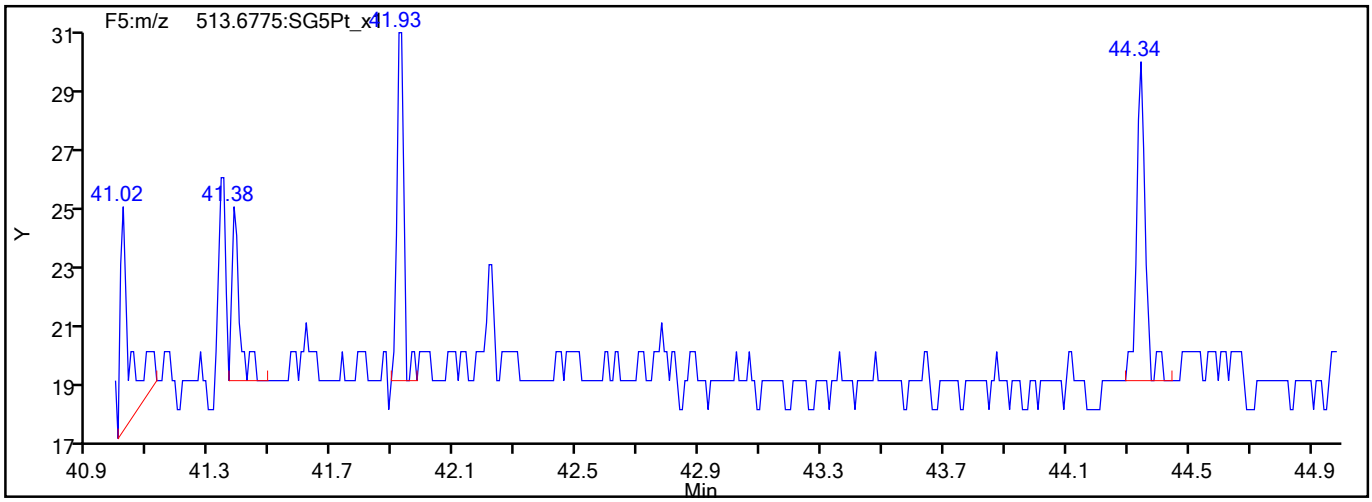

785854

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDD

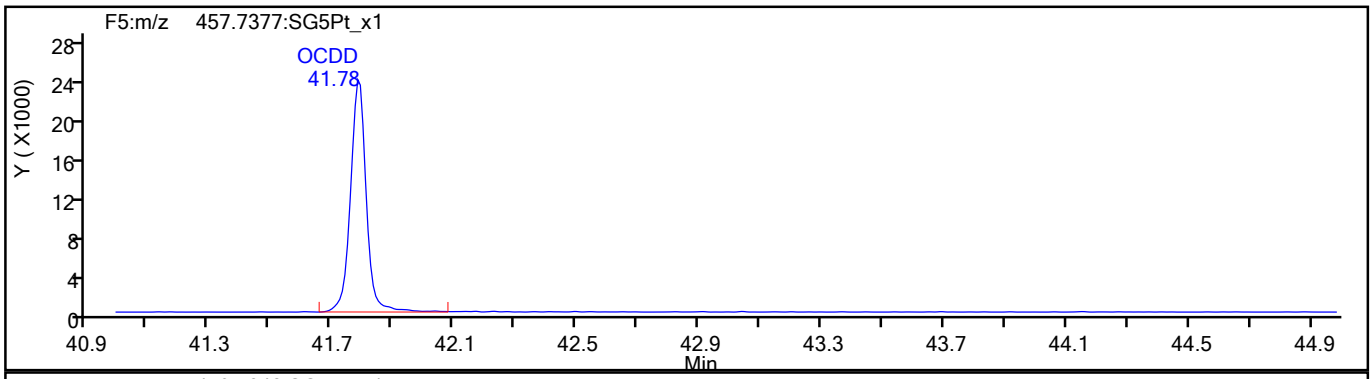

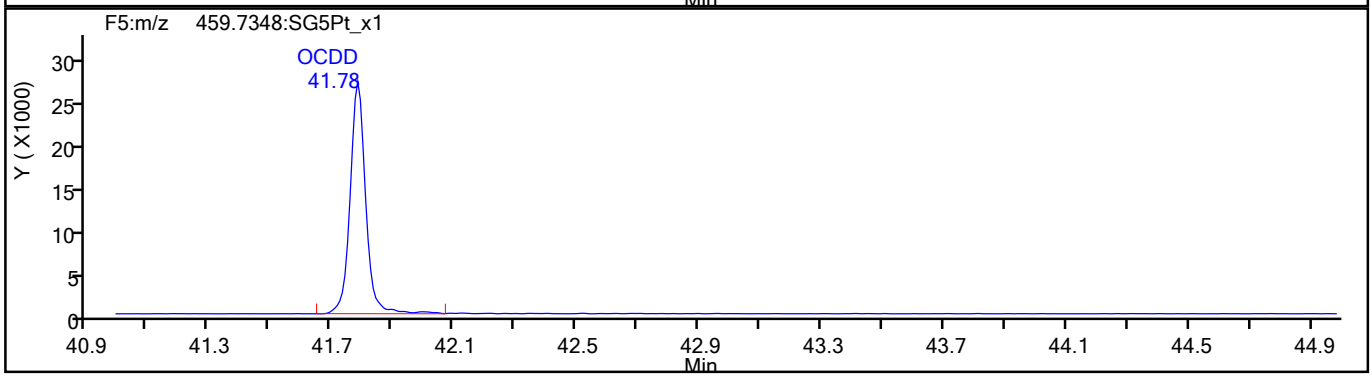

OCDD Standards

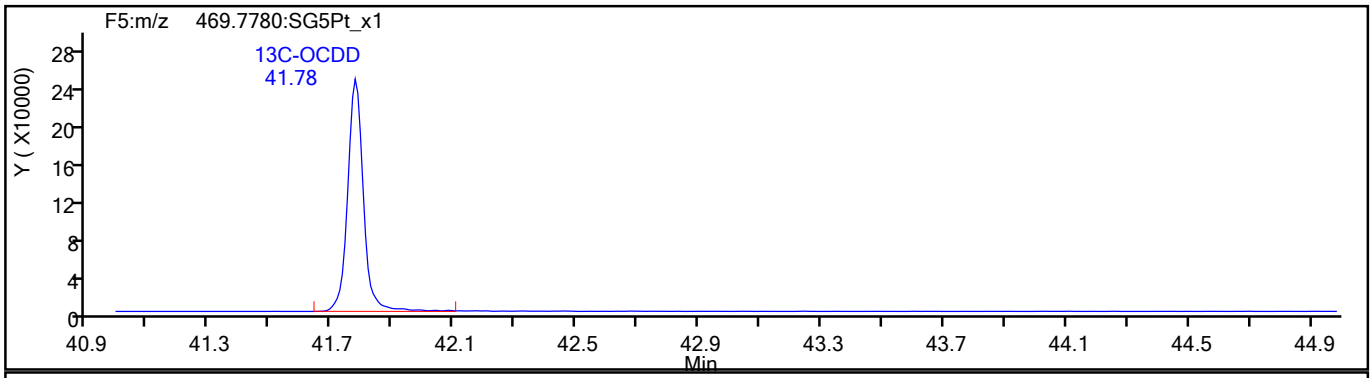

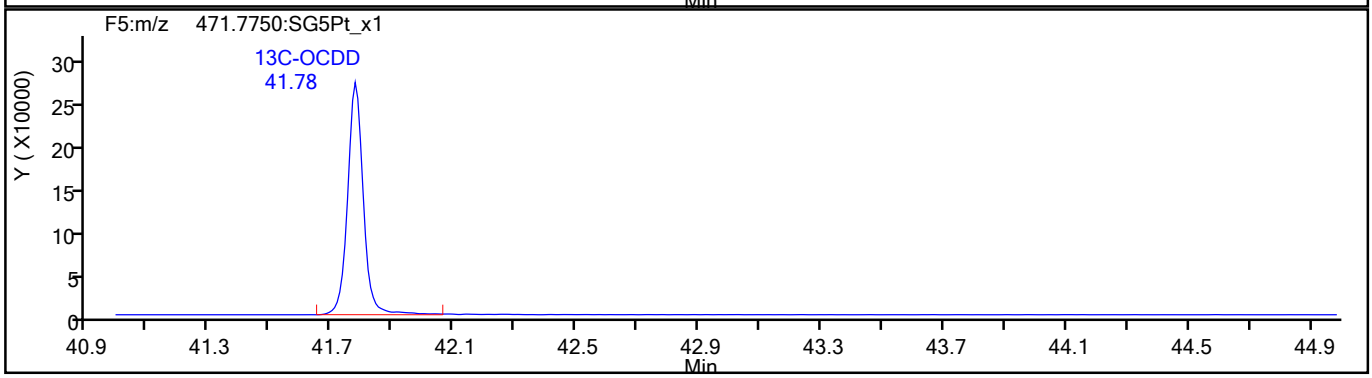

785855

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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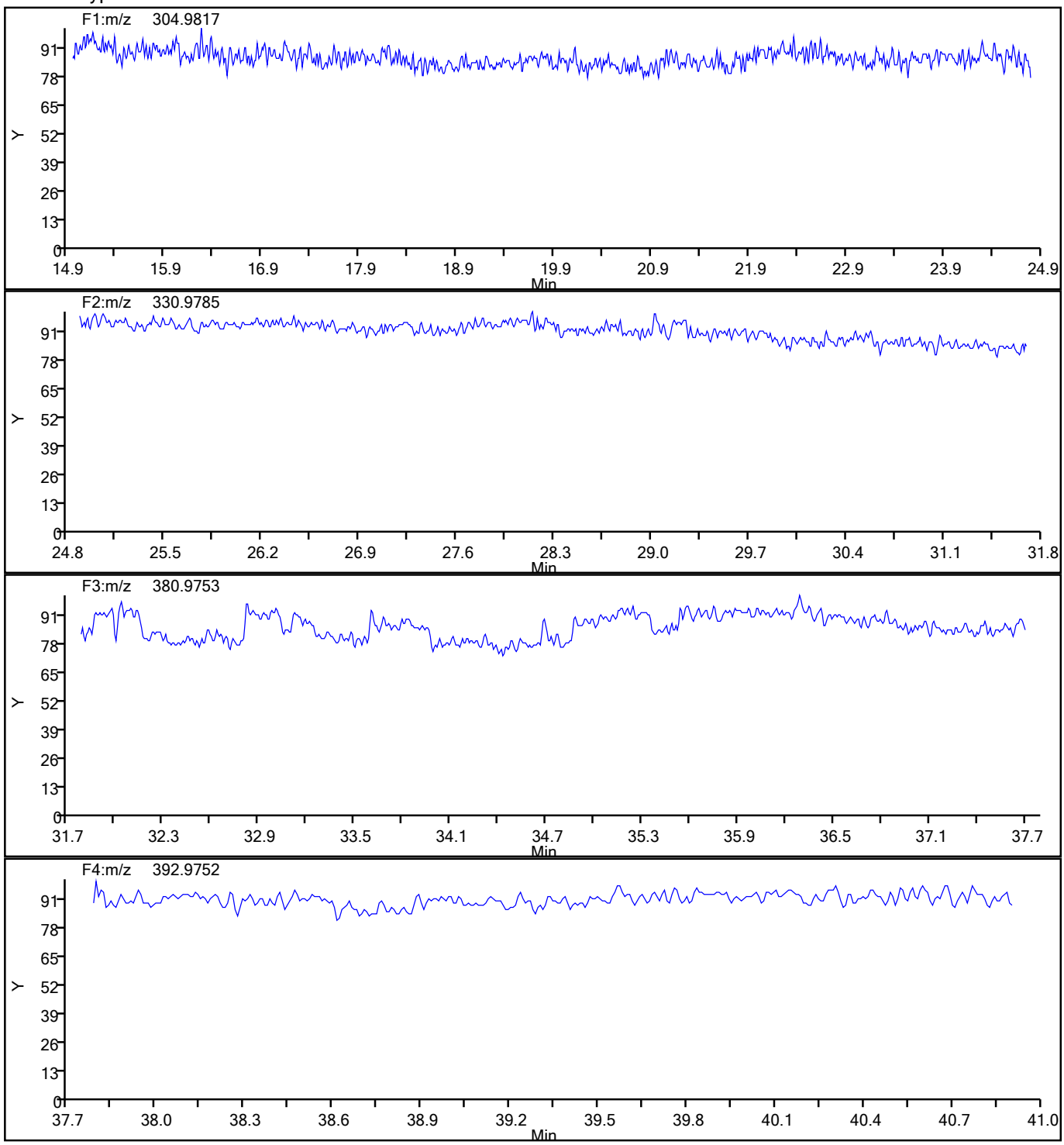

785856

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

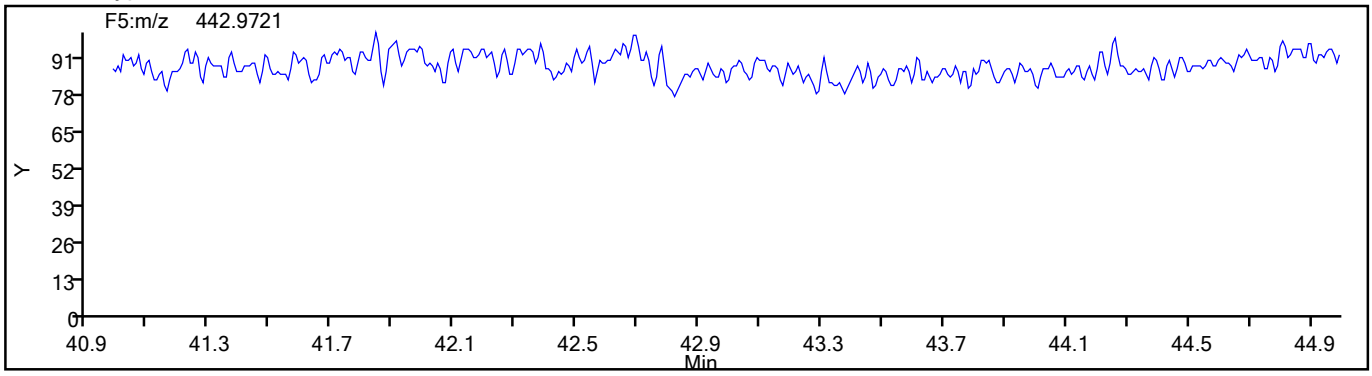

785857

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.546	1900111	0.78	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.619	2465726	0.79	1.3459	96.4	96.4	0.1978	0.1978	96.42	
2,3,7,8-TCDF	19.645	258022	0.78	1.0802	9.687	9.687	0.0168	0.0168	96.87	
S Total TCDF					9.687	9.687	0.0168	0.0168		
D 13C-2,3,7,8-TCDD	20.907	1800864	0.81	0.9317	101.7	101.7	0.1641	0.1641	102	
$ 37Cl4-2,3,7,8-TCDD	20.933	203726		1.0083	10.6	10.6	0.0134	0.0134	106	
2,3,7,8-TCDD	20.924	198062	0.75	1.0753	10.2	10.2	0.0351	0.0351	102	
S Total TCDD					10.2	10.2	0.0351	0.0351		
D 13C-1,2,3,7,8-PeCDF	26.556	2149791	1.60	1.1405	99.2	99.2	0.3269	0.3269	99.20	
1,2,3,7,8-PeCDF	26.573	1114982	1.57	1.0543	49.2	49.2	0.1379	0.1379	98.39	
D 13C-2,3,4,7,8-PeCDF	28.006	1991303	1.58	1.1253	93.1	93.1	0.3313	0.3313	93.13	
2,3,4,7,8-PeCDF	28.031	987812	1.58	1.0079	49.2	49.2	0.1665	0.1665	98.44	
S Total PeCDF					98.4	98.4	0.1522	0.1522		
D 13C-1,2,3,7,8-PeCDD	28.790	1388641	1.58	0.7165	102.0	102.0	0.1629	0.1629	102	
1,2,3,7,8-PeCDD	28.824	741897	1.57	1.0465	51.1	51.1	0.0499	0.0499	102	
S Total PeCDD					51.1	51.1	0.0499	0.0499		
D 13C-1,2,3,4,7,8-HxCDF	34.384	1841825	0.54	0.9648	115.8	115.8	0.3936	0.3936	116	
1,2,3,4,7,8-HxCDF	34.401	1093397	1.25	1.1474	51.7	51.7	0.1928	0.1928	103	
D 13C-1,2,3,6,7,8-HxCDF	34.561	2015594	0.53	1.0708	114.2	114.2	0.3547	0.3547	114	
1,2,3,6,7,8-HxCDF	34.578	1245549	1.24	1.2178	50.7	50.7	0.1720	0.1720	101	
D 13C-2,3,4,6,7,8-HxCDF	35.447	1861559	0.53	1.0413	108.4	108.4	0.3647	0.3647	108	
2,3,4,6,7,8-HxCDF	35.463	1151149	1.26	1.2145	50.9	50.9	0.1650	0.1650	102	
D 13C-1,2,3,7,8,9-HxCDF	36.399	1657413	0.54	0.9731	103.3	103.3	0.3903	0.3903	103	
1,2,3,7,8,9-HxCDF	36.408	1038574	1.24	1.2401	50.5	50.5	0.1718	0.1718	101	
S Total HxCDF					203.9	203.9	0.1754	0.1754		
* 13C-1,2,3,7,8,9-HxCDD	36.197	1648545	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.691	1348471	1.27	0.7587	107.8	107.8	0.2143	0.2143	108	
1,2,3,4,7,8-HxCDD	35.699	724729	1.28	1.0608	50.7	50.7	0.0918	0.0918	101	
D 13C-1,2,3,6,7,8-HxCDD	35.809	1460100	1.24	0.8593	103.1	103.1	0.1892	0.1892	103	
1,2,3,6,7,8-HxCDD	35.826	760446	1.23	0.9933	52.4	52.4	0.0967	0.0967	105	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.214	786511	1.27	1.1094	50.5	50.5	0.0872	0.0872	101	
S Total HxCDD					153.6	153.6	0.0919	0.0919		
D 13C-1,2,3,4,6,7,8-HpCDF	38.316	1182209	0.45	0.7359	97.4	97.4	0.3866	0.3866	97.44	
1,2,3,4,6,7,8-HpCDF	38.324	878086	1.05	1.4421	51.5	51.5	0.1699	0.1699	103	
D 13C-1,2,3,4,7,8,9-HpCDF	39.614	1080883	0.46	0.6854	95.7	95.7	0.4151	0.4151	95.66	
1,2,3,4,7,8,9-HpCDF	39.622	727362	1.05	1.3092	51.4	51.4	0.1875	0.1875	103	
S Total HpCDF					102.9	102.9	0.1787	0.1787		
D 13C-1,2,3,4,6,7,8-HpCDD	39.302	1094713	1.07	0.6745	98.4	98.4	0.2448	0.2448	98.45	
1,2,3,4,6,7,8-HpCDD	39.310	572466	1.05	1.0503	49.8	49.8	0.1044	0.1044	99.58	
S Total HpCDD					49.8	49.8	0.1044	0.1044		
D 13C-OCDD	41.794	1676139	0.90	0.5446	186.7	186.7	0.2845	0.2845	93.34	
OCDF	41.887	1118740	0.90	1.3168	101.4	101.4	0.1189	0.1189	101	
OCDD	41.803	910980	0.89	1.0620	102.4	102.4	0.1082	0.1082	102	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.546	20.547	0		832498	129736	116	290	1118		
333.9338	20.546	20.547	0		1067613	165878	65	162	2552	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.619	19.616	0	0.955	1091704	180342	213	532	847		
317.9389	19.619	19.616	0	0.955	1374022	217372	102	255	2131	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.645	19.646	0	1.001	113254	18239	10	25	1824		
305.8987	19.645	19.646	0	1.001	144768	23858	19	47	1256	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.907	20.910	0	1.018	803279	117913	116	290	1016		
333.9338	20.907	20.910	0	1.018	997585	152094	65	162	2340	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.933	20.935	0	1.019	203726	29833	16	40	1865		
2,3,7,8-TCDD											
319.8965	20.924	20.939	-1	1.001	85173	13080	31	77	422		
321.8936	20.941	20.939	0	1.002	112889	16258	10	25	1626	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.556	26.560	0	1.292	1323851	238814	266	665	898		
353.8970	26.556	26.560	0	1.292	825940	146442	175	437	837	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.573	26.584	-1	1.001	680306	120693	132	330	914		
341.8567	26.573	26.584	-1	1.001	434676	76404	92	230	830	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.006	28.014	0	1.363	1219332	203015	266	665	763		
353.8970	28.006	28.014	0	1.363	771971	130766	175	437	747	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.031	28.039	0	1.001	604266	98138	132	330	743		
341.8567	28.031	28.039	0	1.001	383546	62644	92	230	681	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.790	28.801	-1	1.401	851334	132655	82	205	1618		
369.8919	28.790	28.801	-1	1.401	537307	81623	56	140	1458	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.824	28.828	0	1.001	452903	70092	31	77	2261		
357.8516	28.824	28.828	0	1.001	288994	44853	14	35	3204	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.384	34.384	0	0.950	645542	131022	198	495	662		
385.8610	34.384	34.384	0	0.950	1196283	248690	400	1000	622	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.401	34.405	0	1.000	607111	119877	181	452	662		
375.8178	34.401	34.405	0	1.000	486286	95304	155	387	615	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.561	34.562	0	0.955	696119	139607	198	495	705		
385.8610	34.561	34.562	0	0.955	1319475	261396	400	1000	653	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.578	34.582	0	1.000	690624	134257	181	452	742		
375.8178	34.578	34.582	0	1.000	554925	106932	155	387	690	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.447	35.444	0	0.979	648311	145832	198	495	737		
385.8610	35.447	35.444	0	0.979	1213248	273234	400	1000	683	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.463	35.461	0	1.000	640849	139500	181	452	771		
375.8178	35.463	35.461	0	1.000	510300	111840	155	387	722	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.399	36.388	1	1.006	579583	134604	198	495	680		
385.8610	36.399	36.388	1	1.006	1077830	259553	400	1000	649	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.408	36.402	0	1.000	575769	139453	181	452	770		
375.8178	36.408	36.402	0	1.000	462805	111702	155	387	721	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.197	36.192	0		918631	219913	146	365	1506		
403.8529	36.197	36.192	0		729914	173739	110	275	1579	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.691	35.680	1	0.986	754120	185149	146	365	1268		
403.8529	35.691	35.680	1	0.986	594351	145418	110	275	1322	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.699	35.695	0	1.000	407415	100236	71	177	1412		
391.8127	35.699	35.695	0	1.000	317314	80745	58	145	1392	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.809	35.805	0	0.989	809032	182963	146	365	1253		
403.8529	35.809	35.805	0	0.989	651068	152224	110	275	1384	1.24(1.05-1.43)	

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.826	35.820	0	1.000	419224	96522	71	177	1359		
391.8127	35.826	35.820	0	1.000	341222	77256	58	145	1332	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.214	36.208	0	1.015	440686	104923	71	177	1478		
391.8127	36.214	36.208	0	1.015	345825	82846	58	145	1428	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.316	38.305	1	1.059	366846	105531	154	385	685		
419.8220	38.316	38.305	1	1.059	815363	231224	294	735	786	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.324	38.317	0	1.000	449936	128816	169	422	762		
409.7788	38.324	38.317	0	1.000	428150	123728	161	402	768	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.614	39.600	1	1.094	340338	106309	154	385	690		
419.8220	39.606	39.600	0	1.094	740545	229697	294	735	781	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.622	39.608	1	1.000	372140	117961	169	422	698		
409.7788	39.622	39.608	1	1.000	355222	111585	161	402	693	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.302	39.293	1	1.086	567057	176920	136	340	1301		
437.8140	39.302	39.293	1	1.086	527656	171361	124	310	1382	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.310	39.301	1	1.000	293602	91347	77	192	1186		
425.7737	39.310	39.301	1	1.000	278864	87962	76	190	1157	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.794	41.785	1	1.155	795323	226496	132	330	1716		
471.7750	41.794	41.785	1	1.155	880816	252365	112	280	2253	0.90(0.76-1.02)	
OCDF											
441.7428	41.887	41.875	1	1.002	530577	155278	73	182	2127		
443.7399	41.887	41.875	1	1.002	588163	168537	77	192	2189	0.90(0.76-1.02)	
OCDD											
457.7377	41.803	41.794	1	1.000	427984	122796	54	135	2274		
459.7348	41.803	41.794	1	1.000	482996	140394	56	140	2507	0.89(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

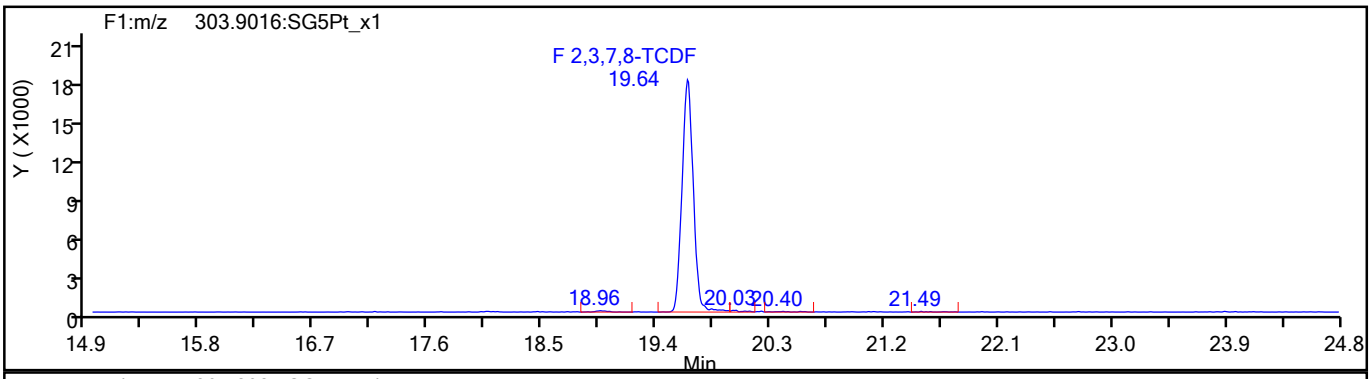

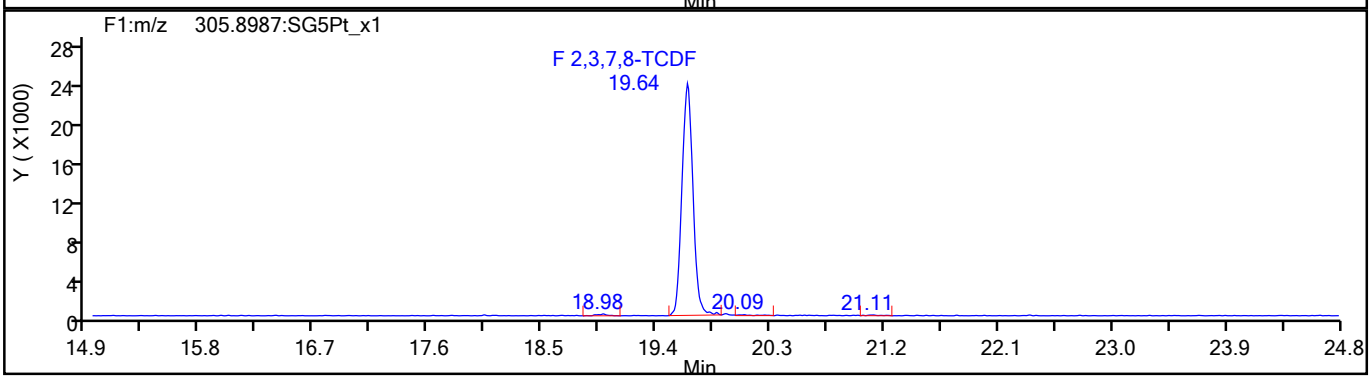

TCDF Standards

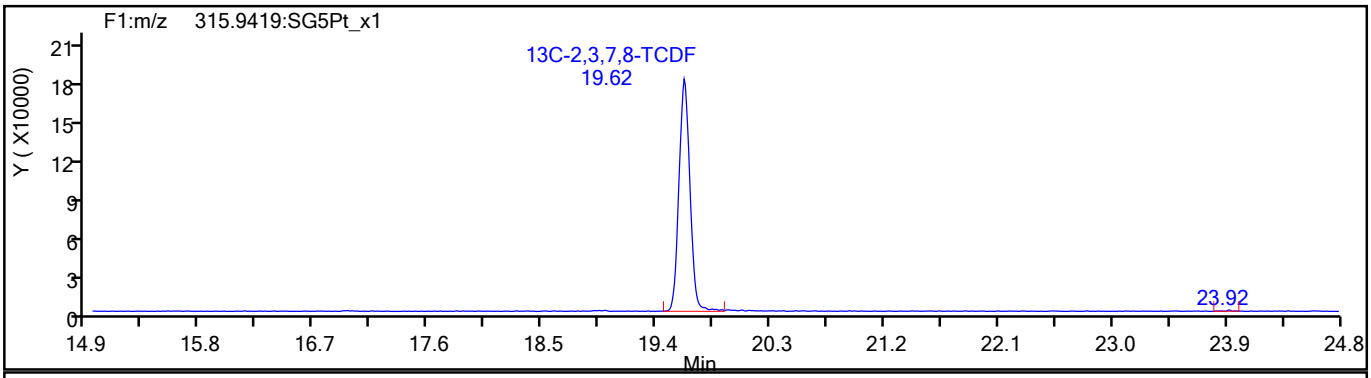

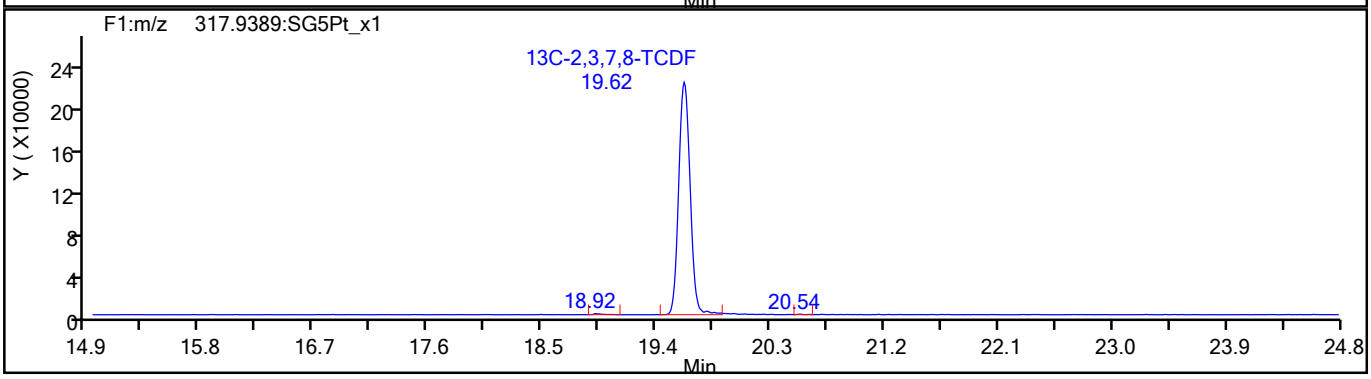

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Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

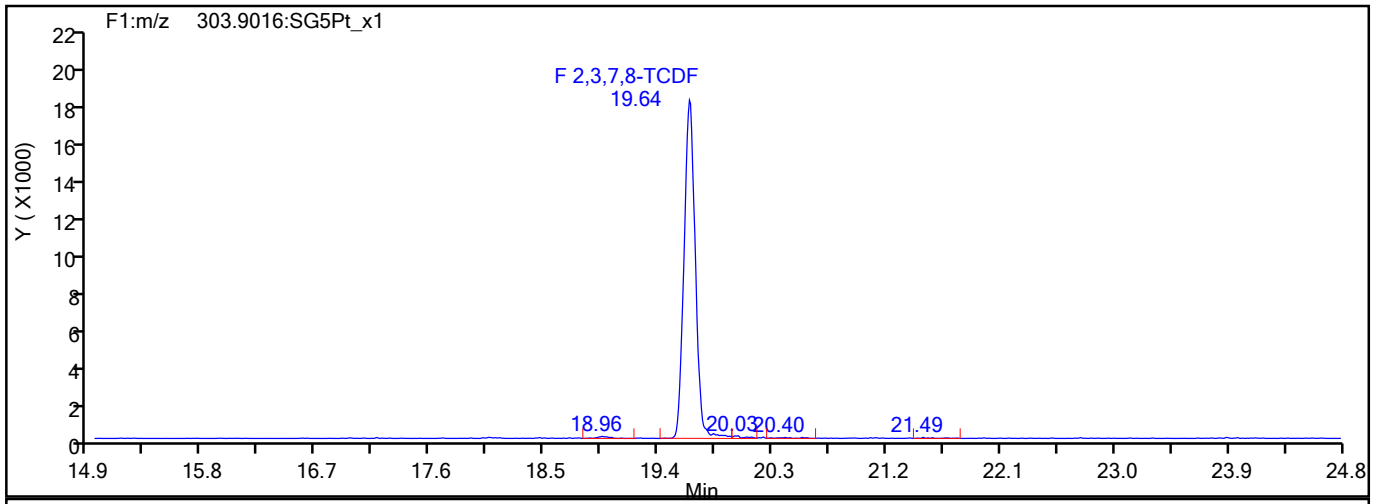

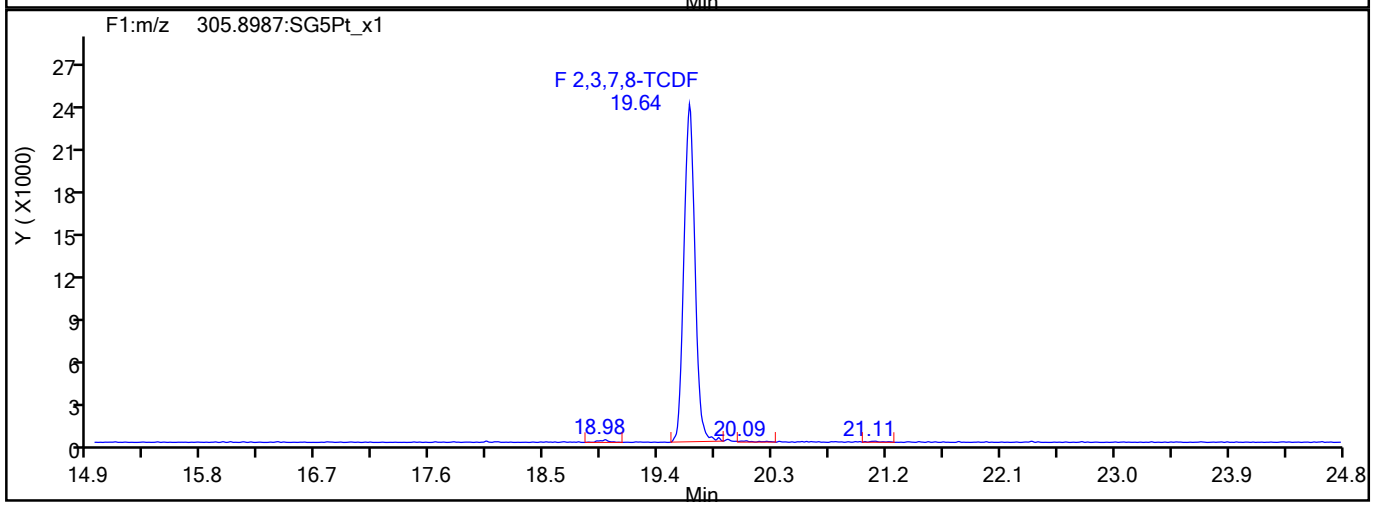

TCDF Interference Mass

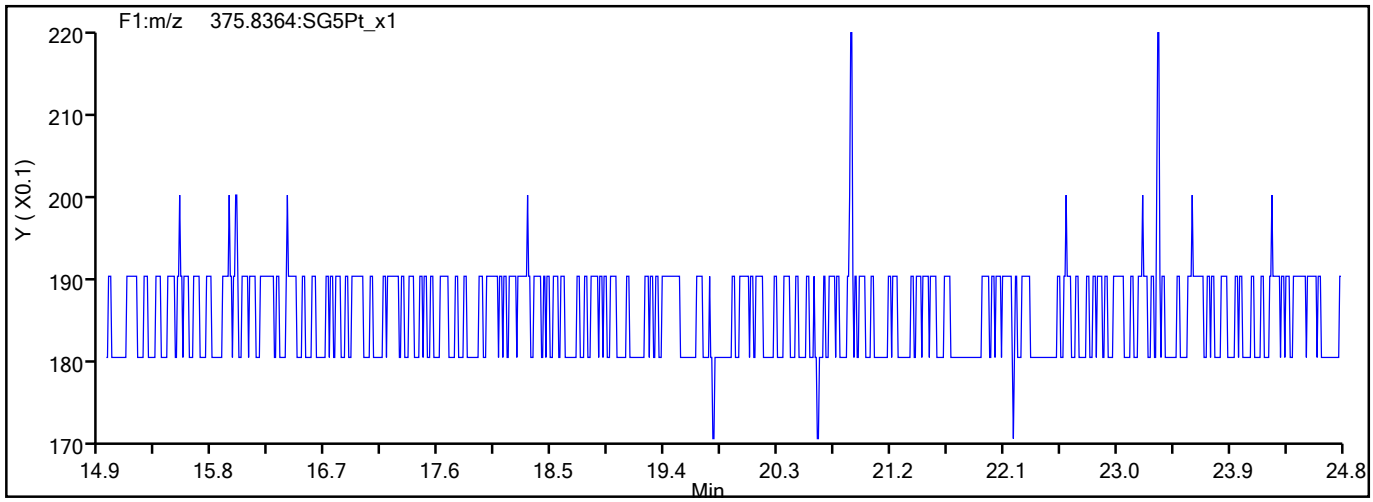

785864

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

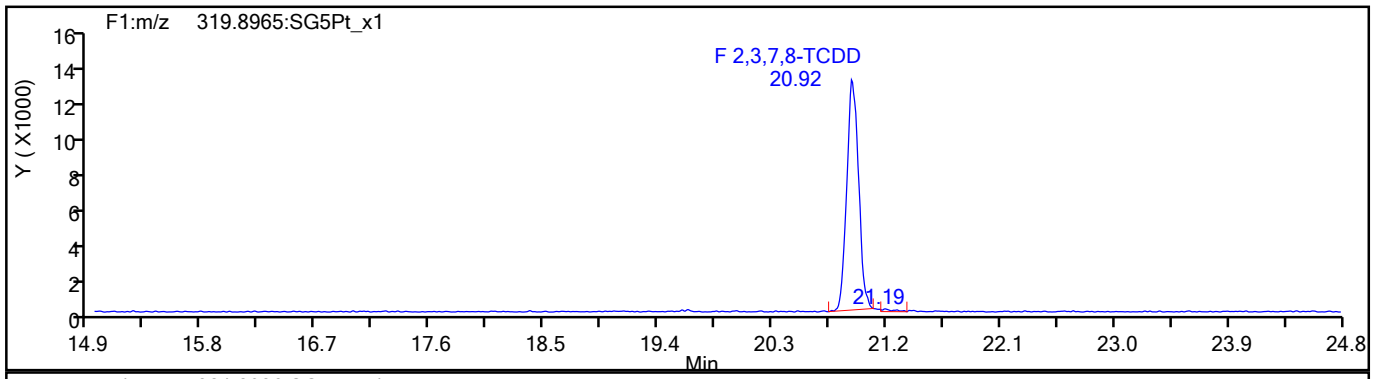

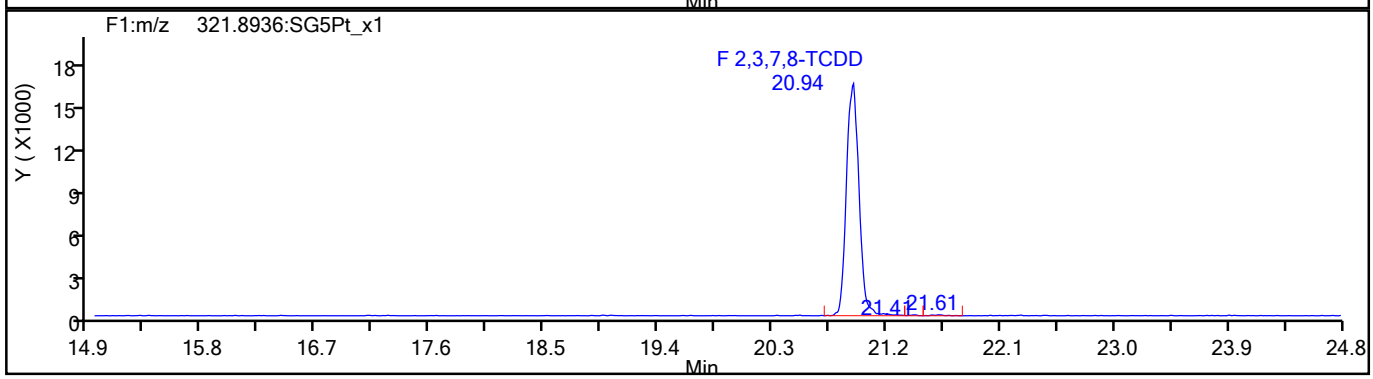

TCDD Standards

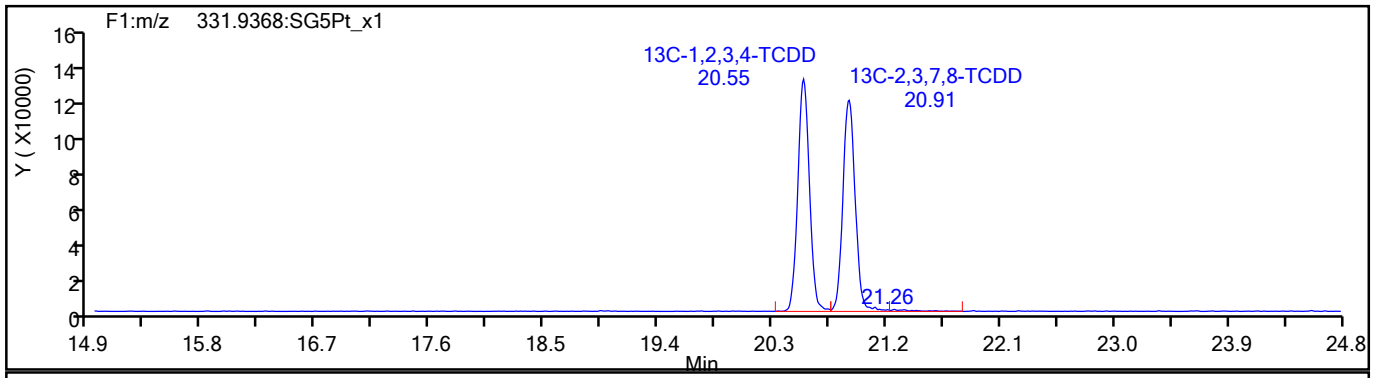

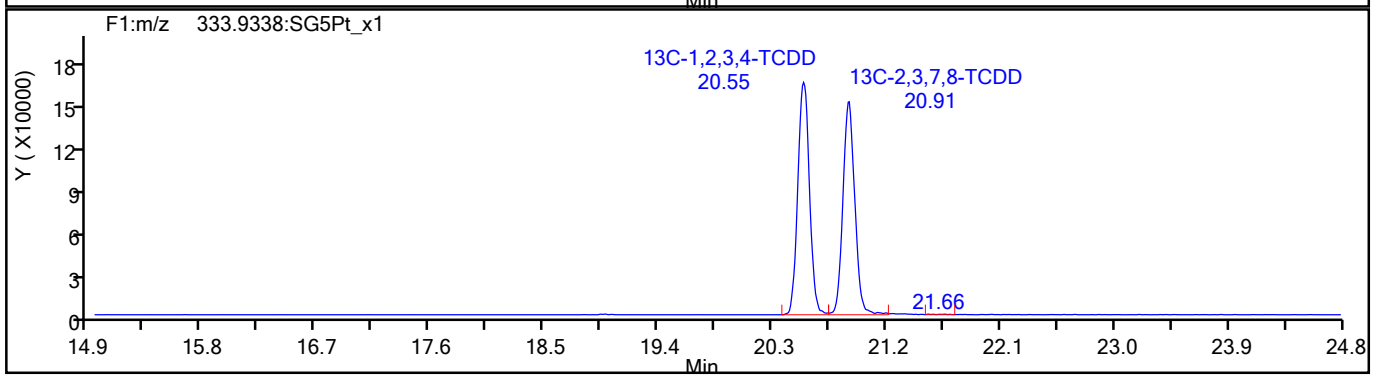

785865

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

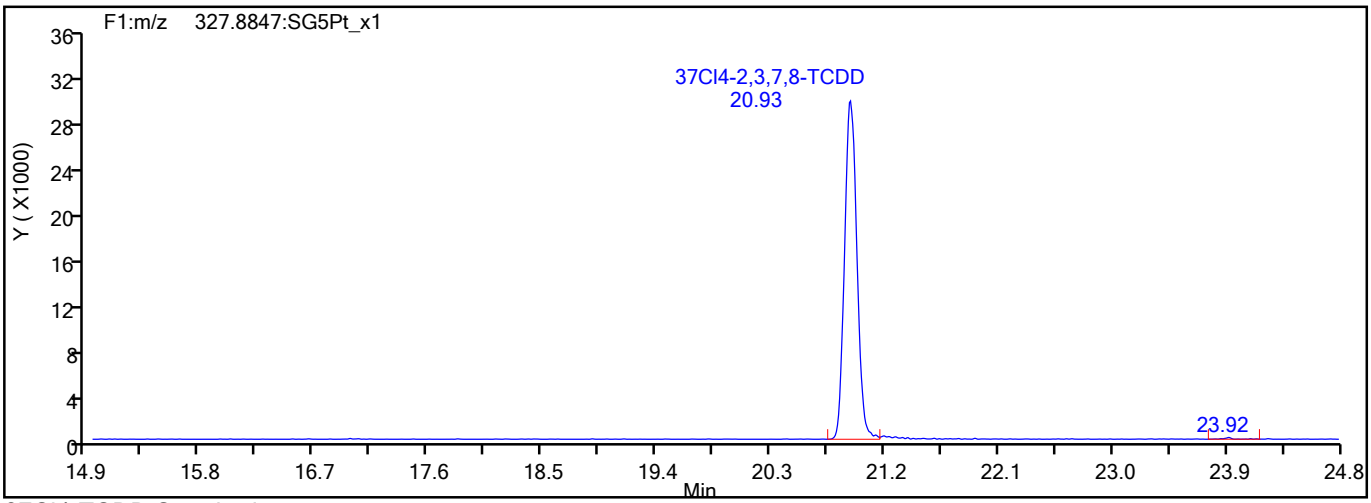

37Cl4-TCDD Standards

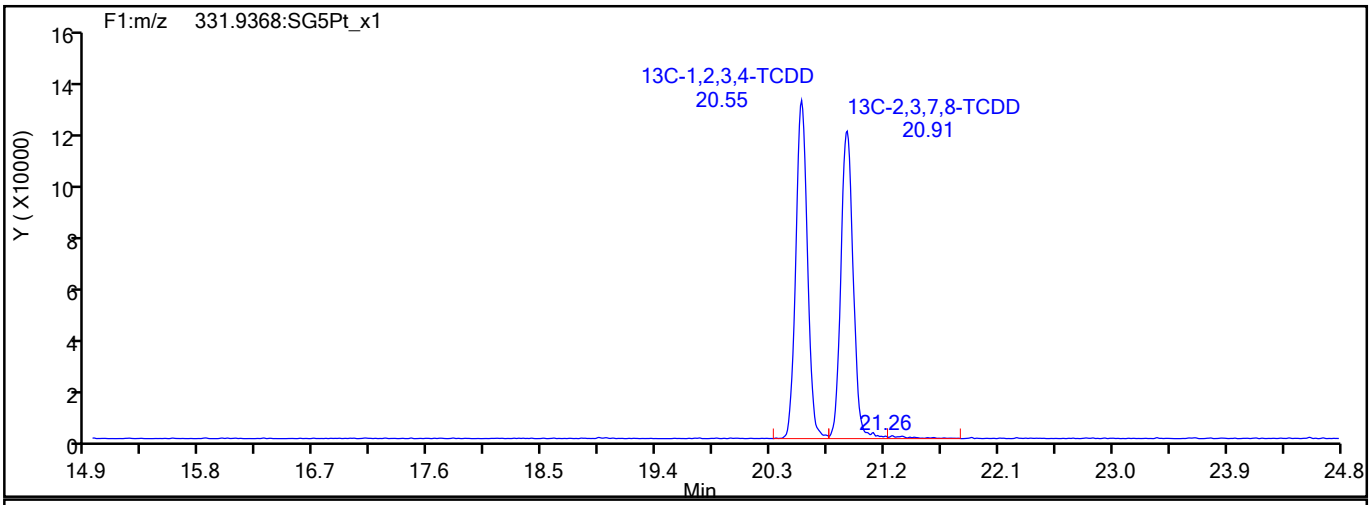

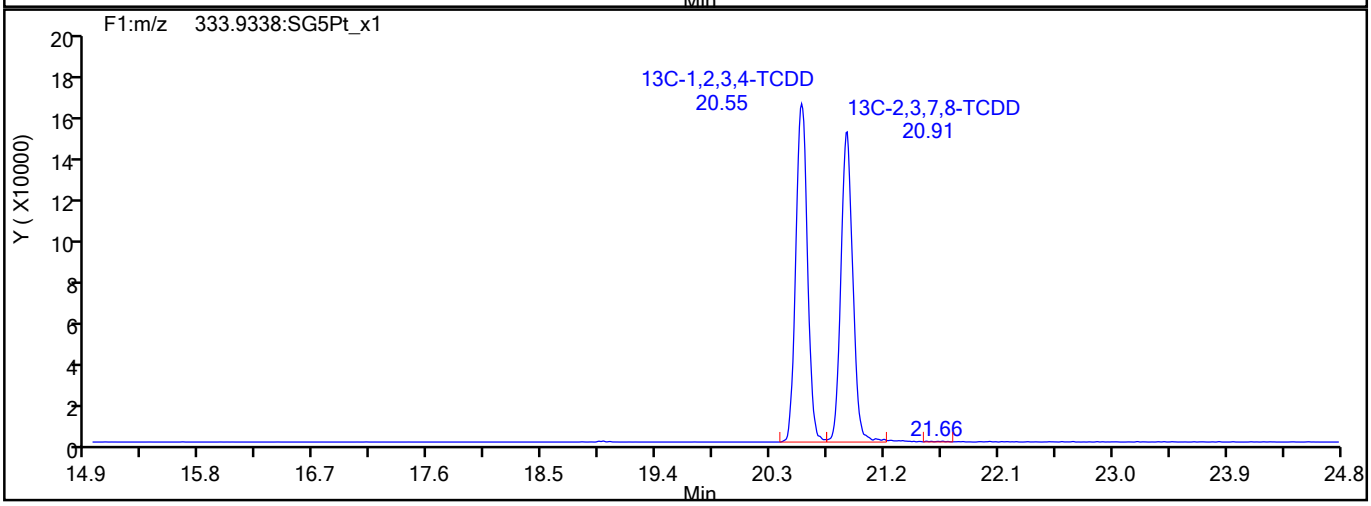

785866

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

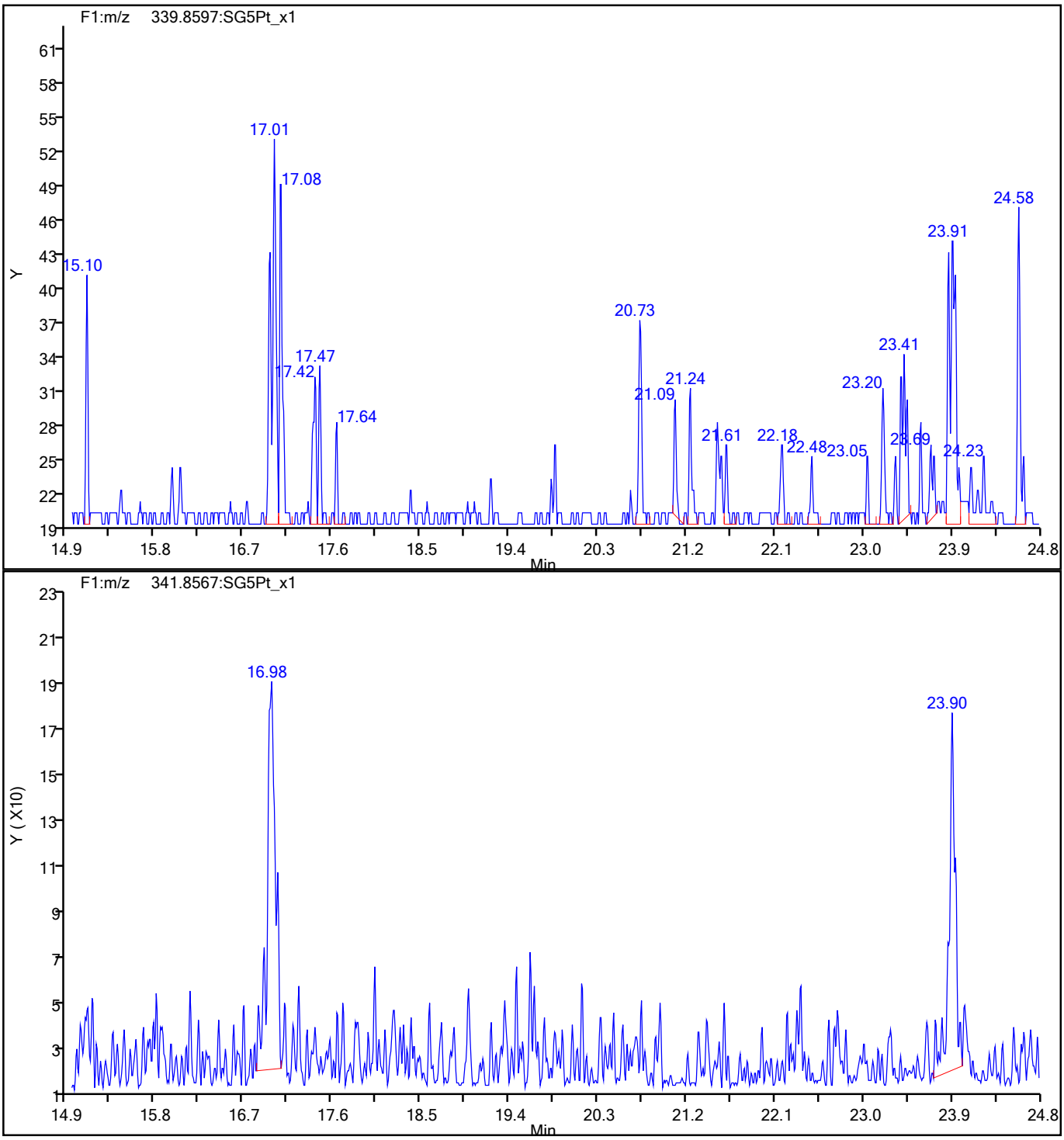

785867

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

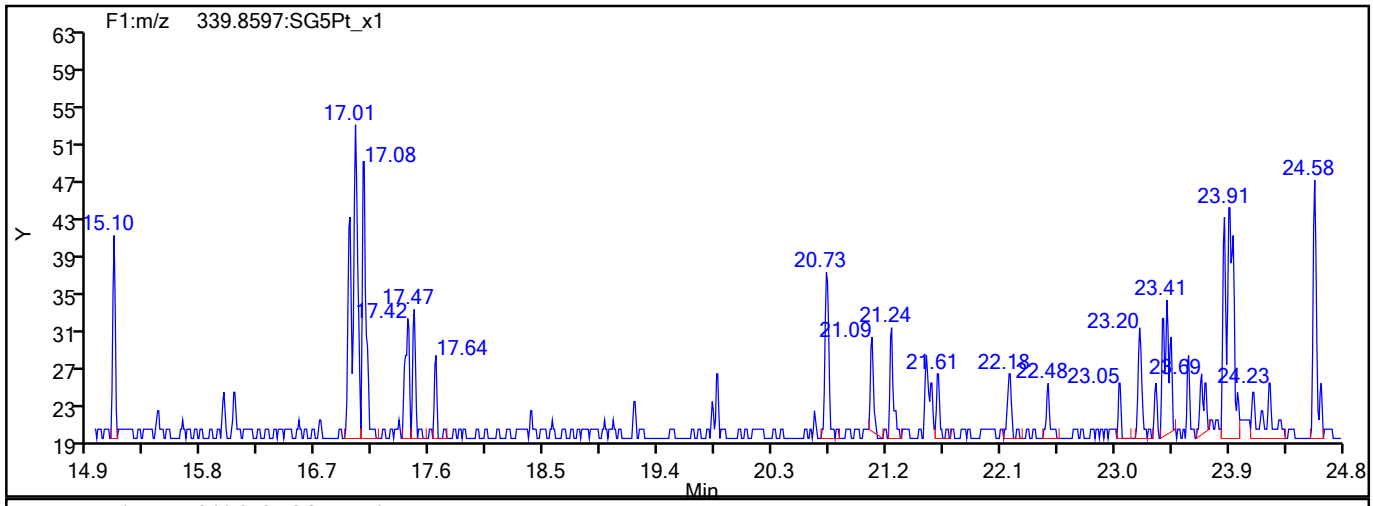

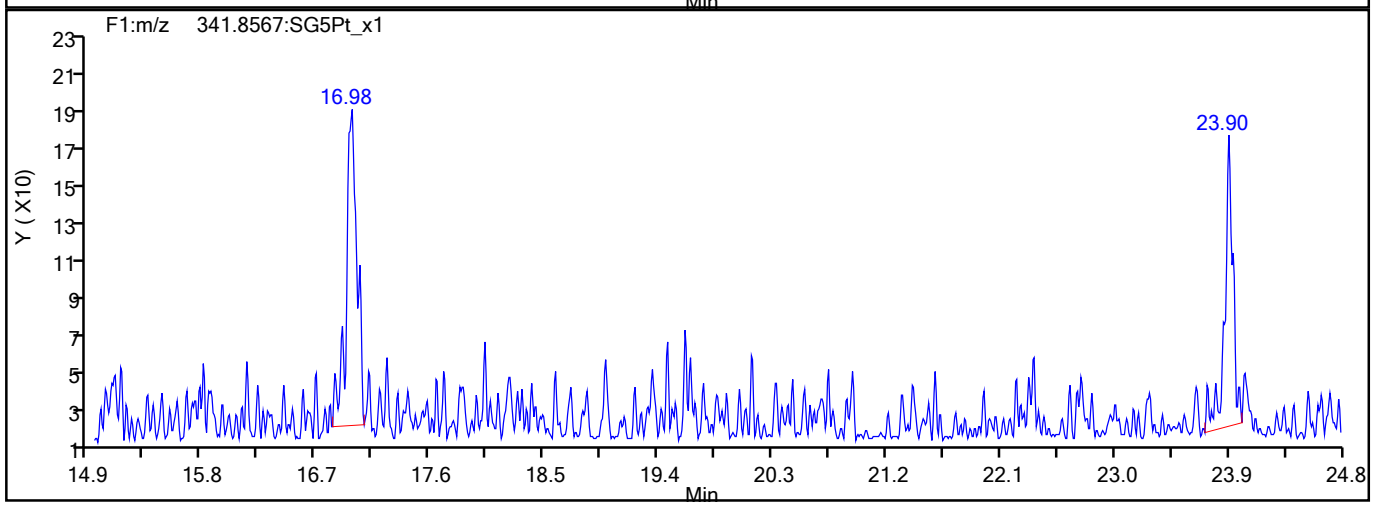

F1 PeCDFs Interference Mass

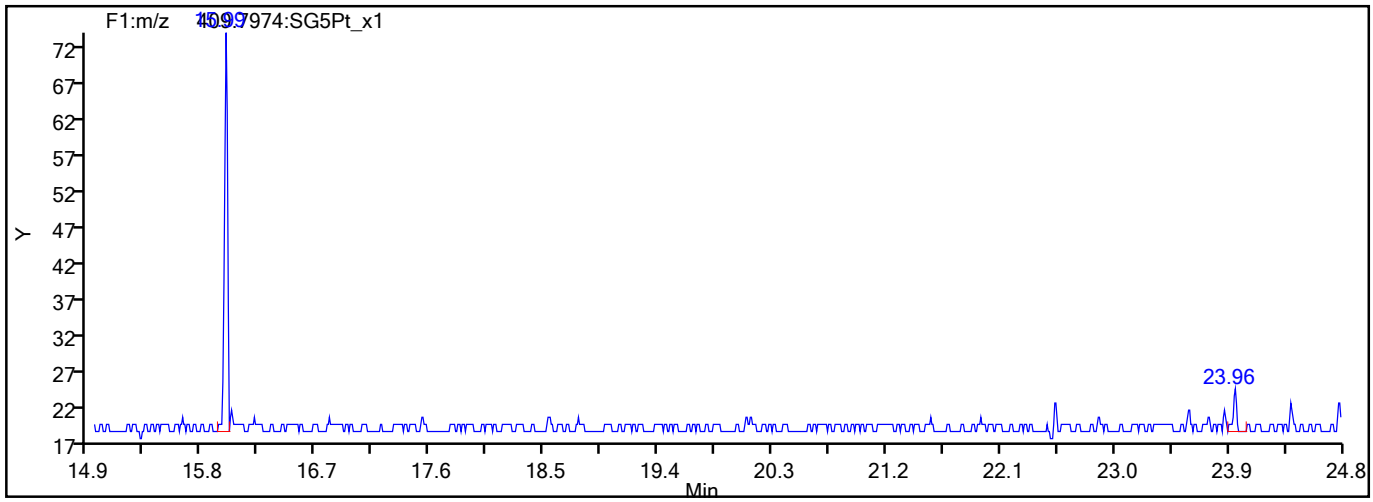

785868

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

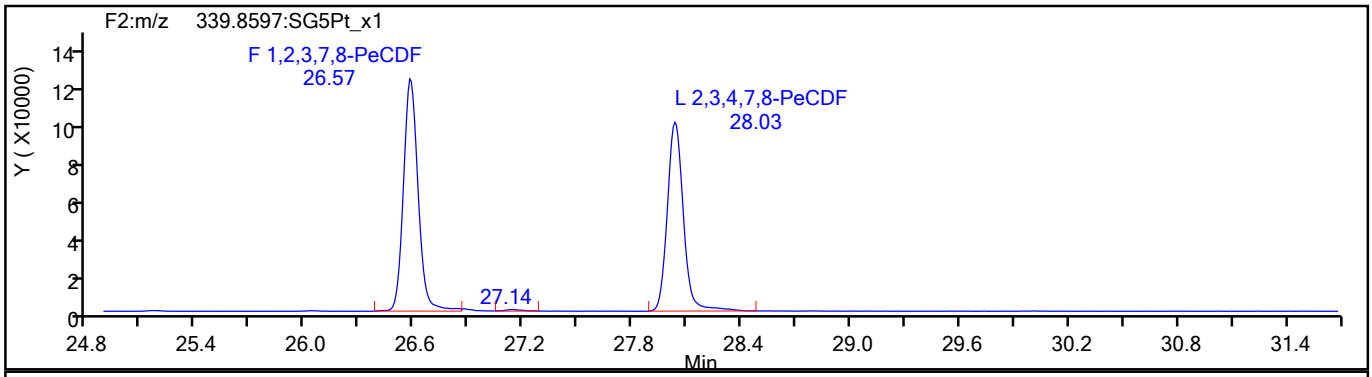

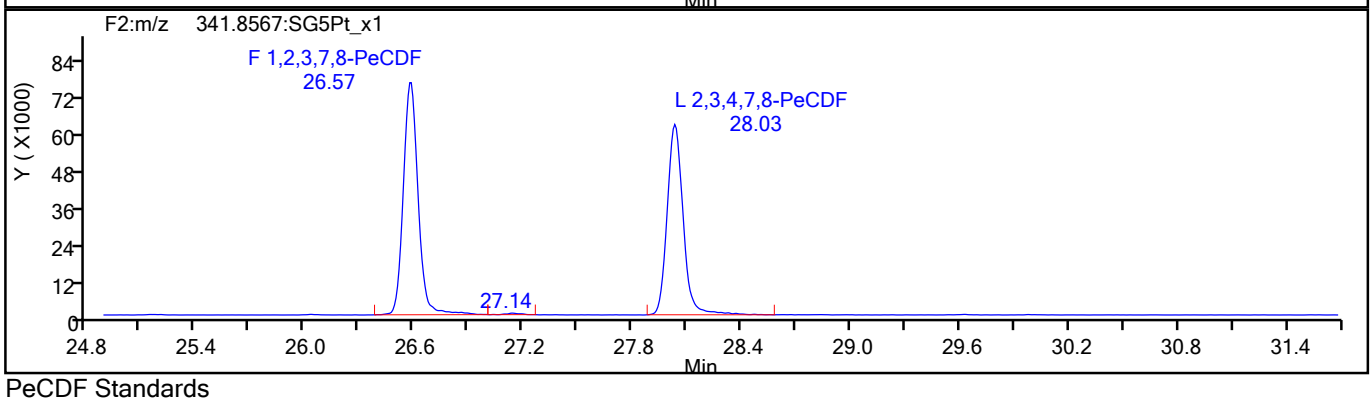

PeCDF Standards

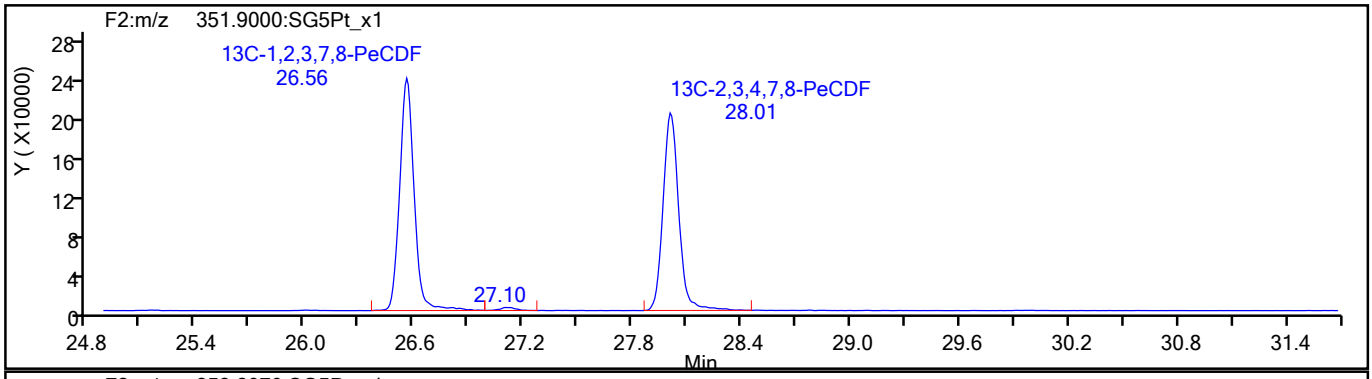

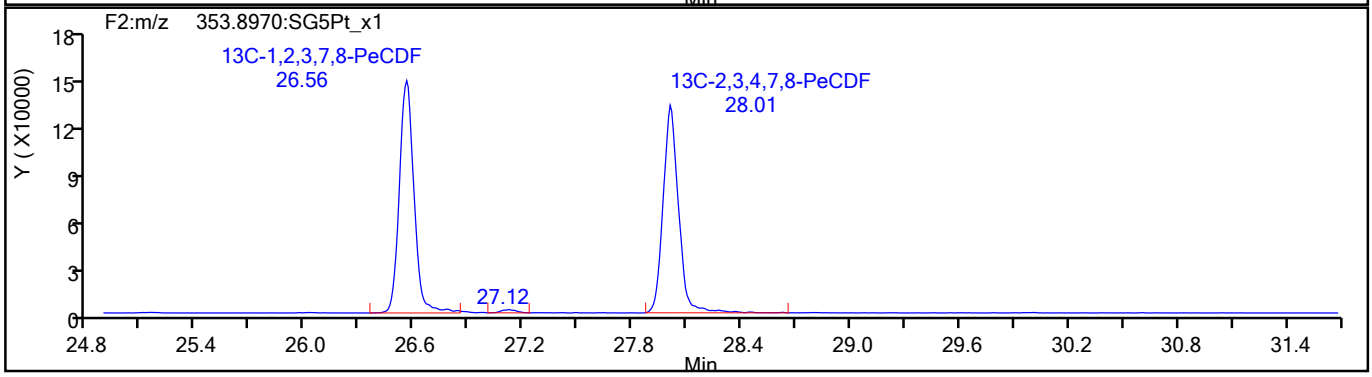

785869

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

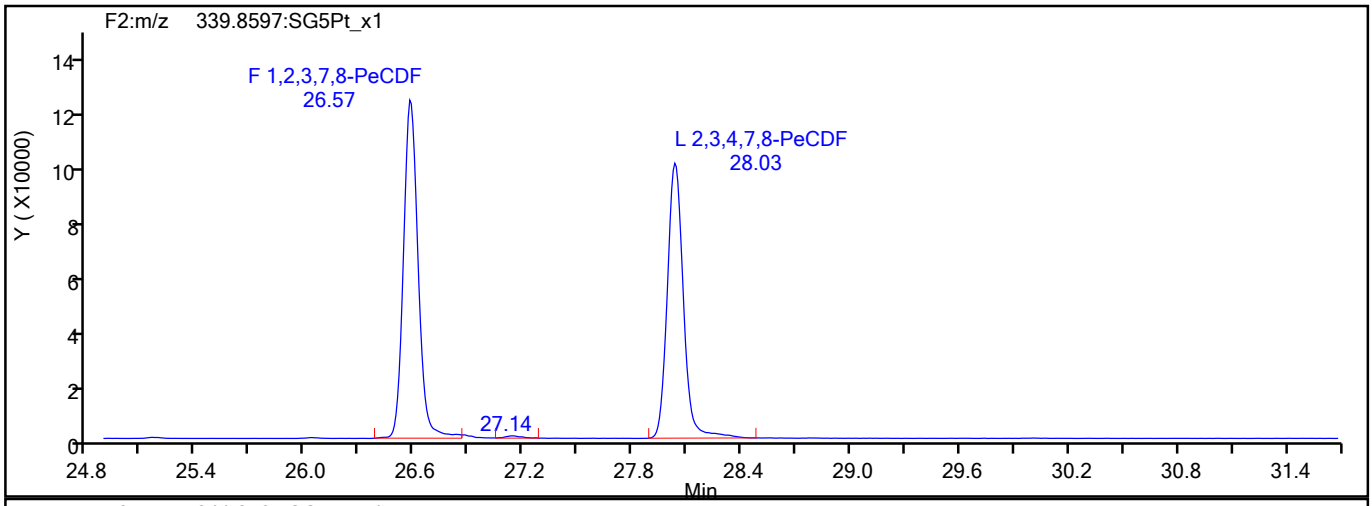

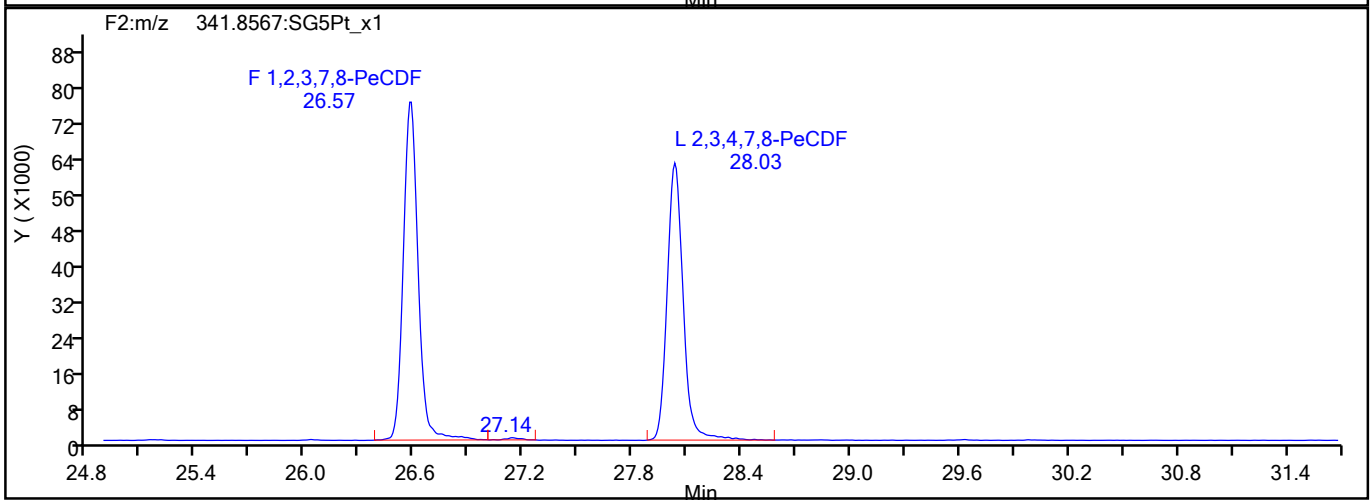

PeCDF Interference Mass

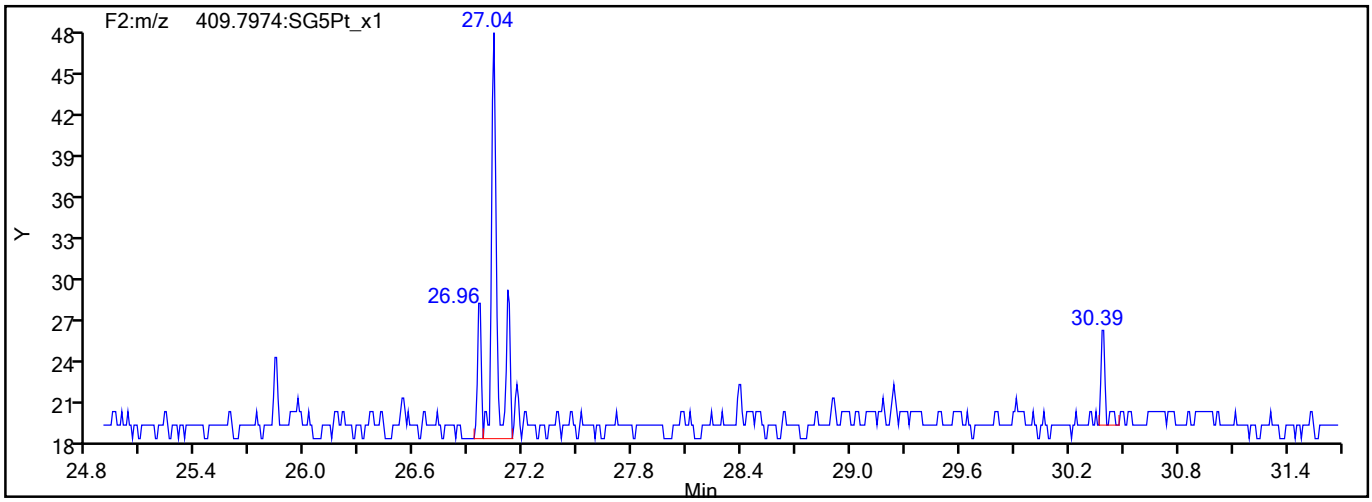

785870

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

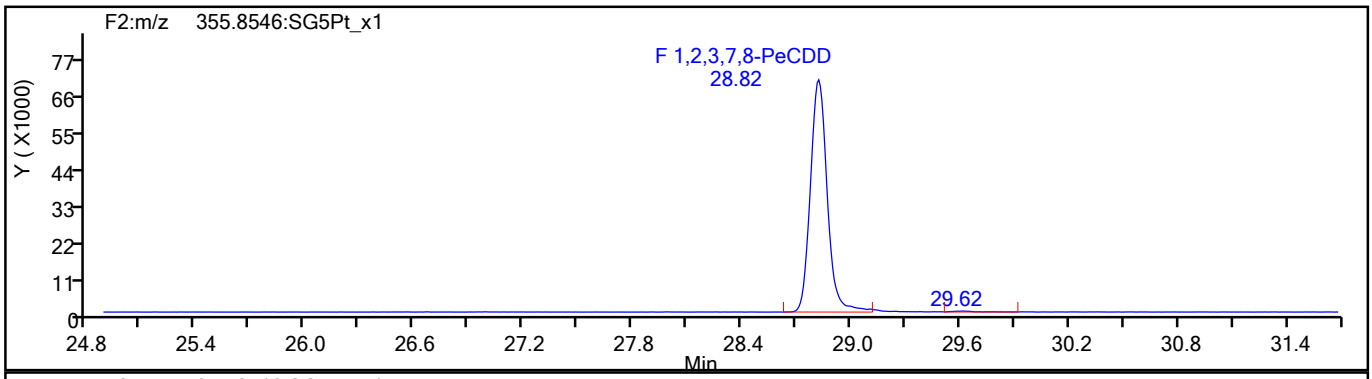

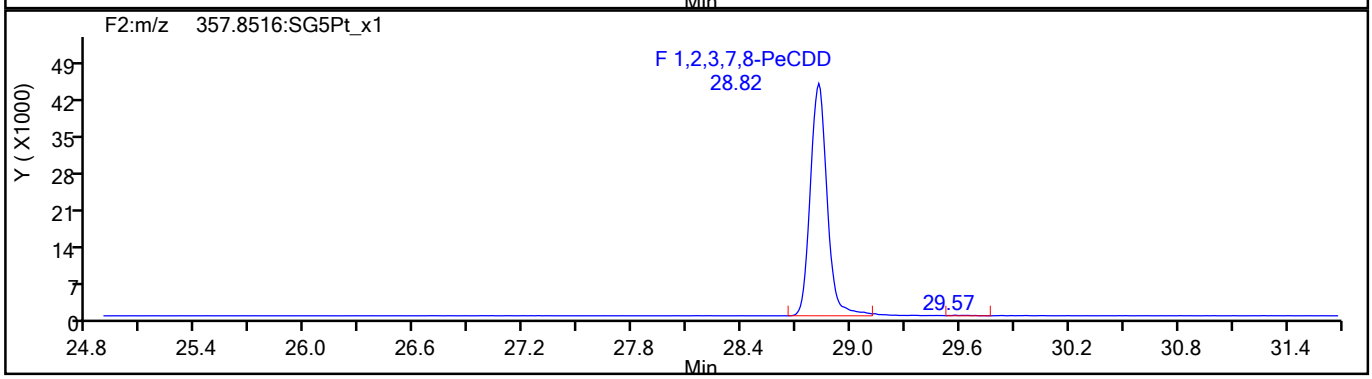

PeCDD Standards

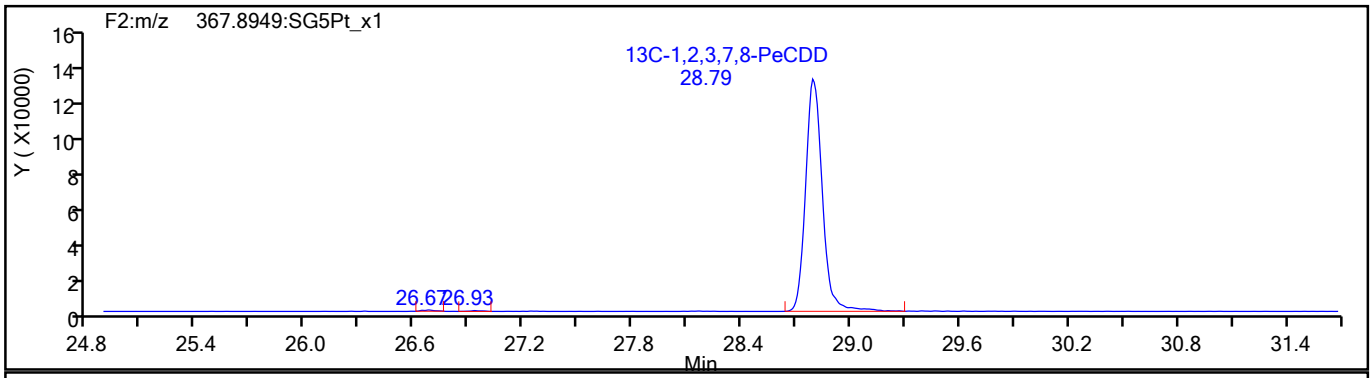

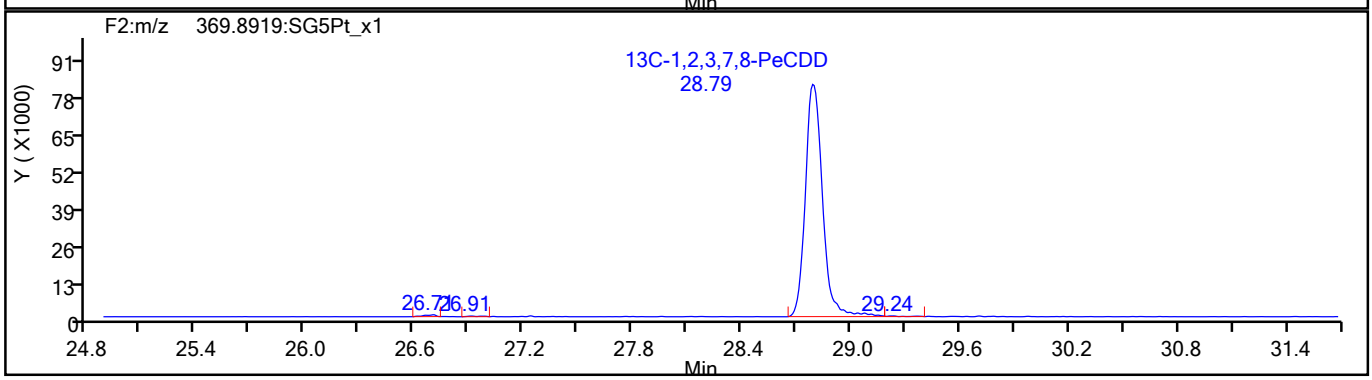

785871

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

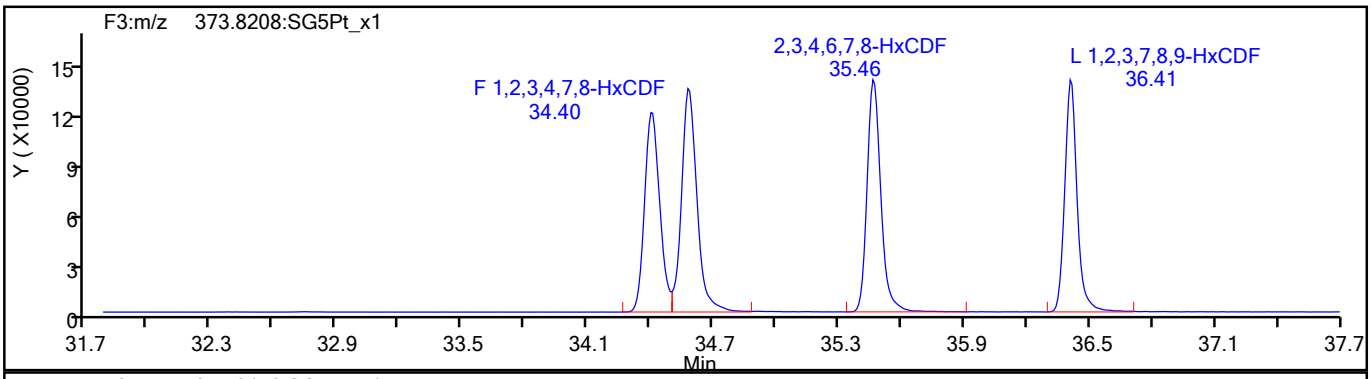

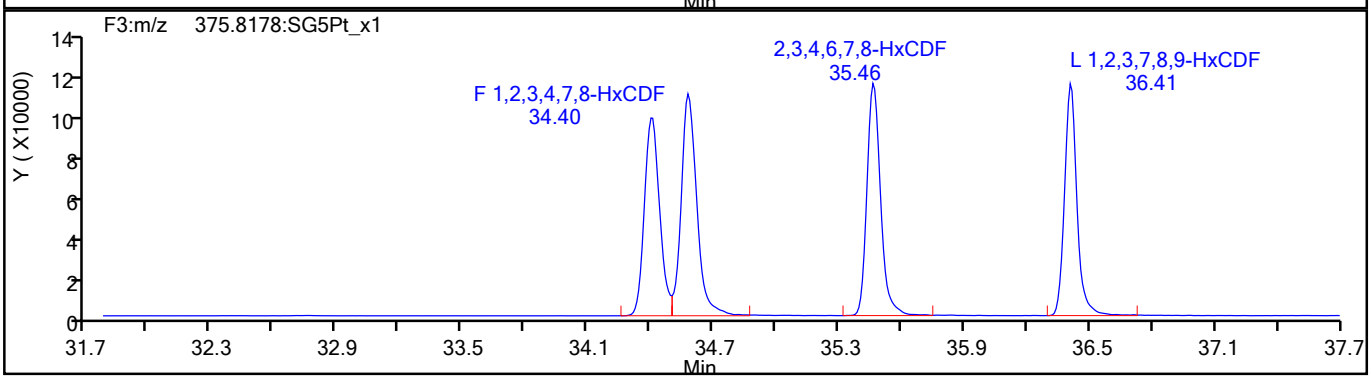

HxCDF Standards

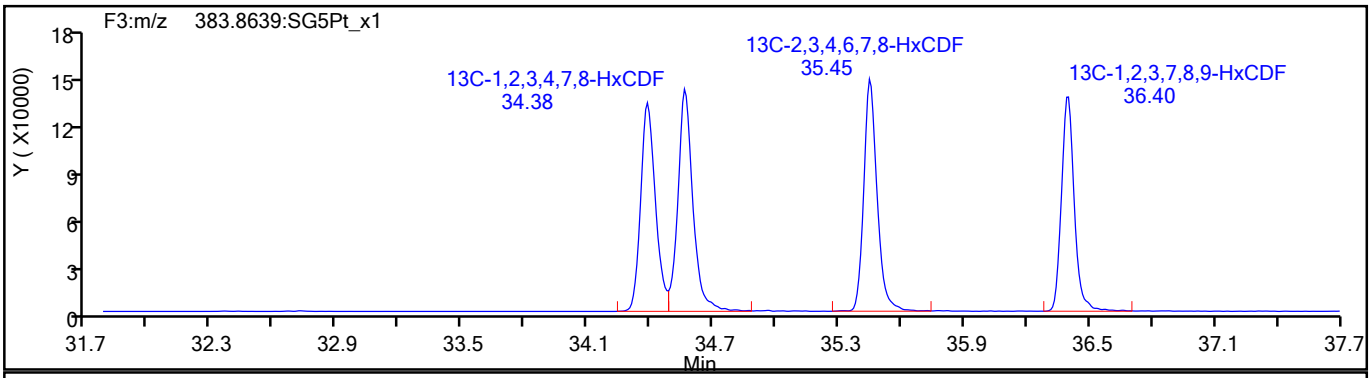

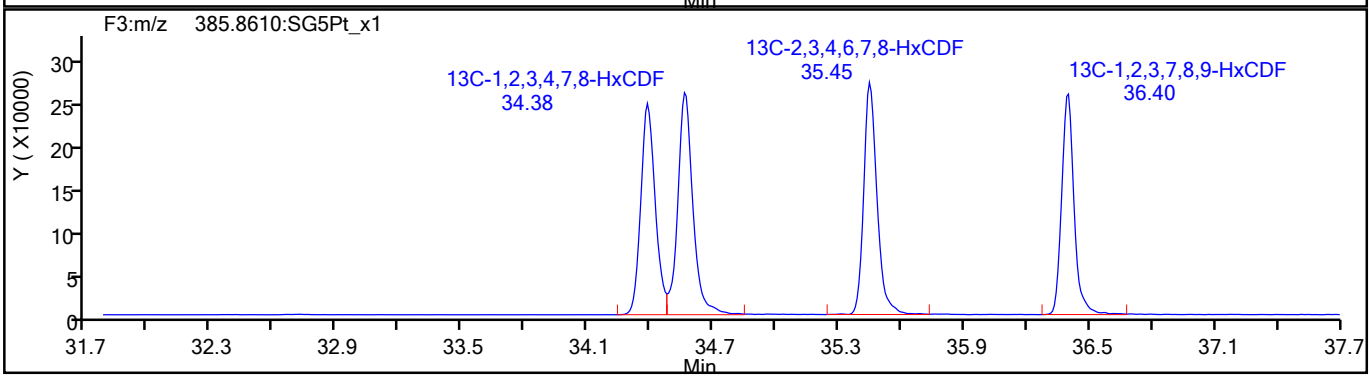

785872

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

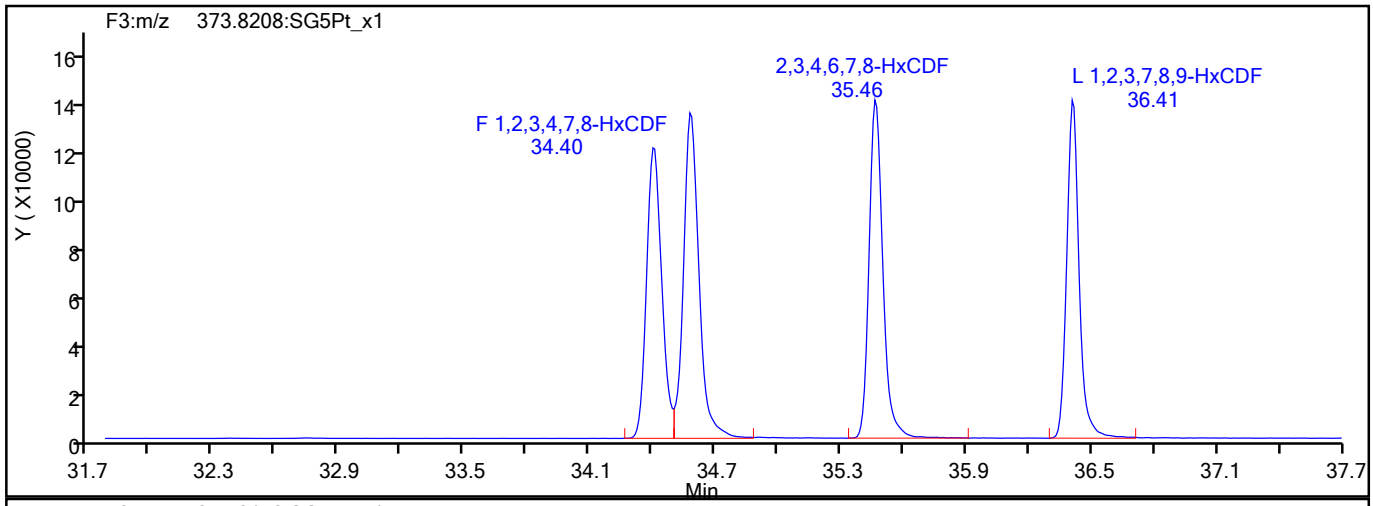

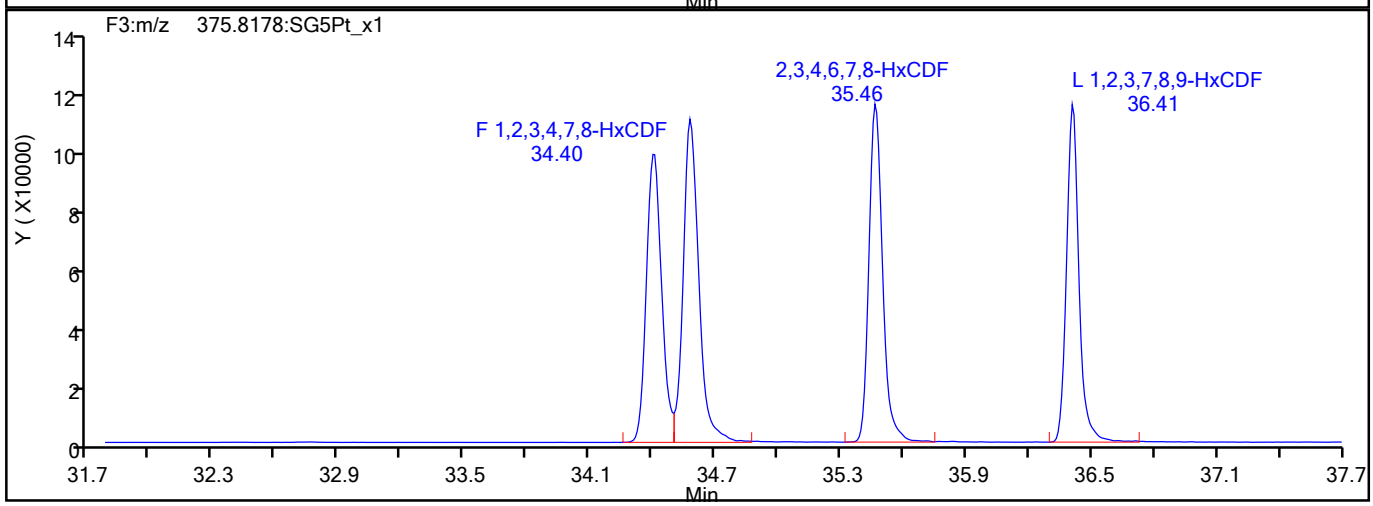

HxCDF Interference Mass

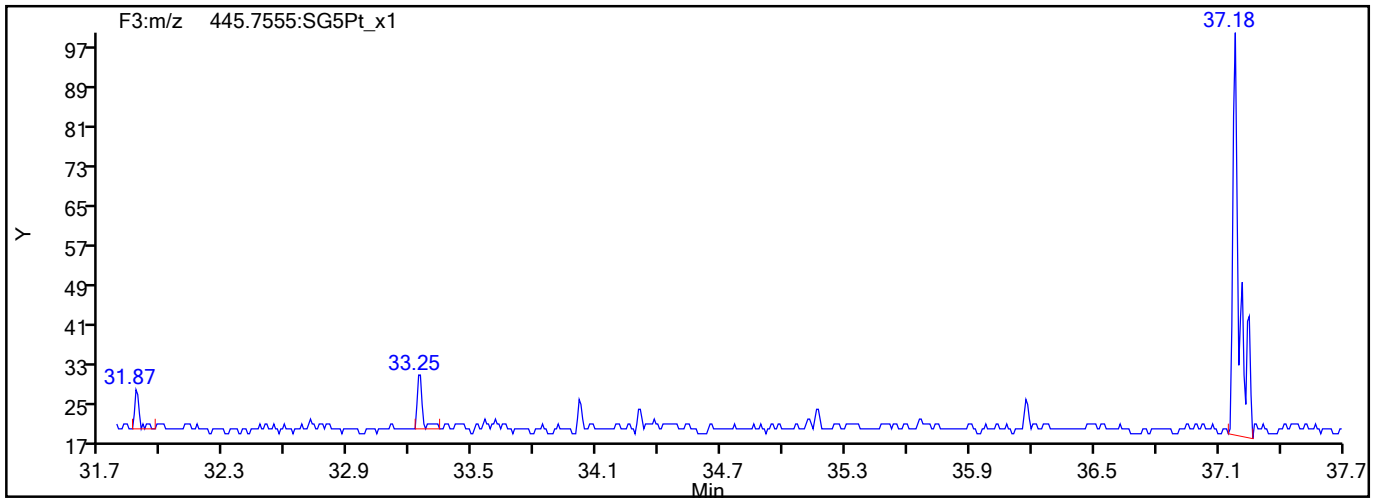

785873

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

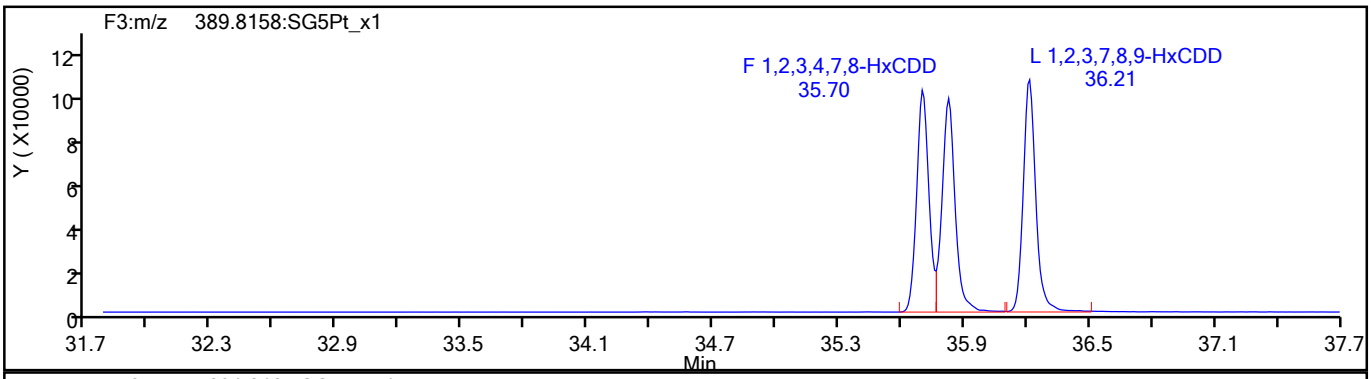

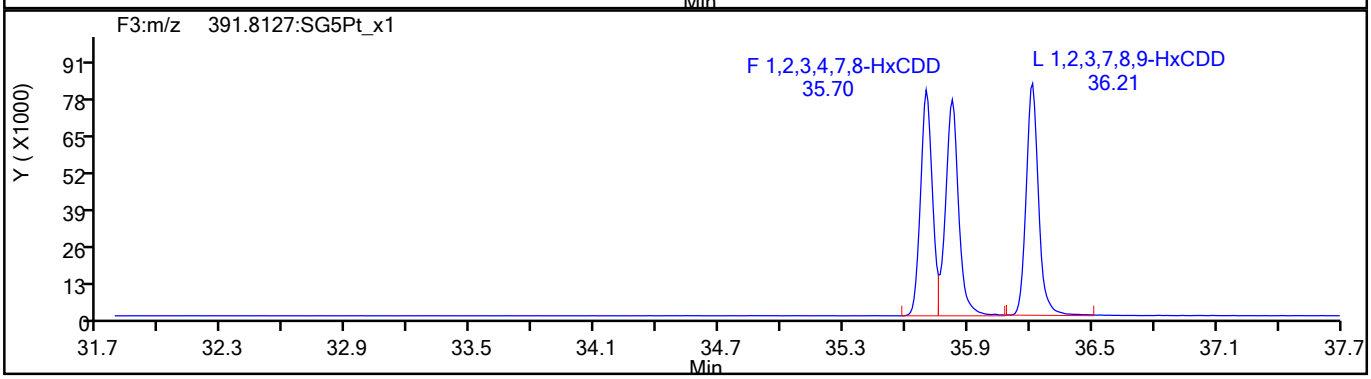

HxCDD Standards

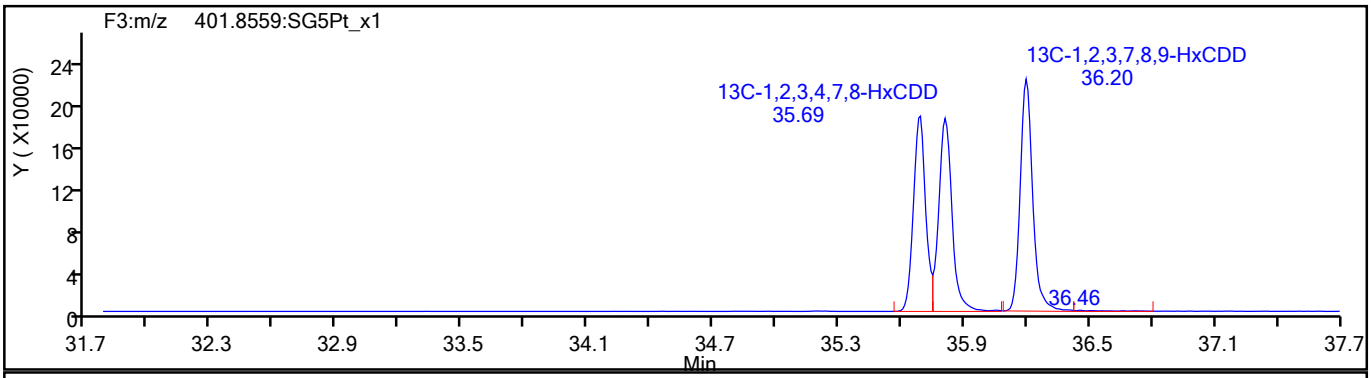

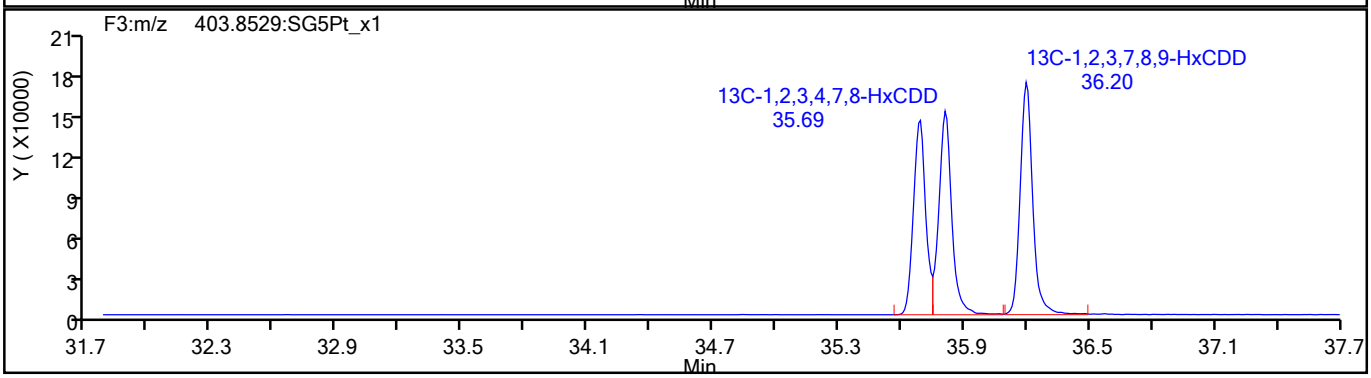

785874

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

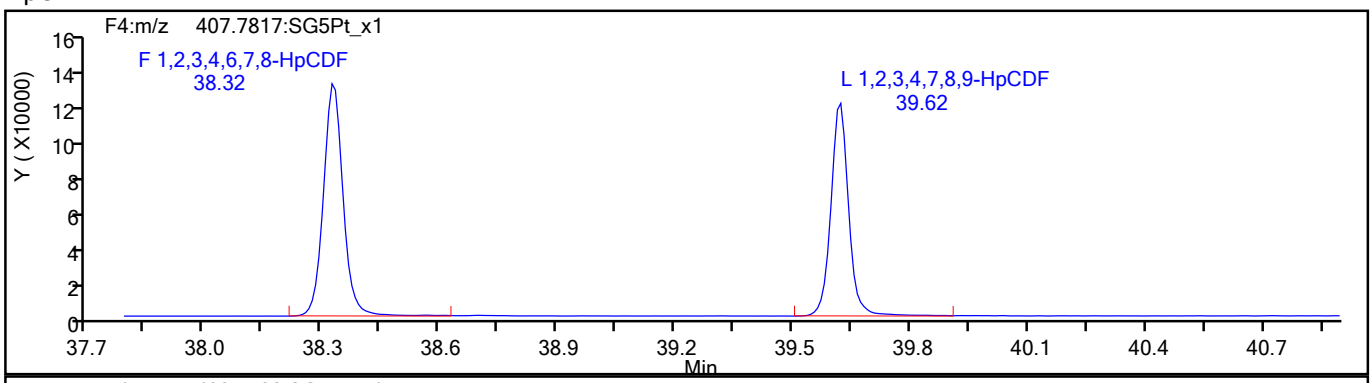

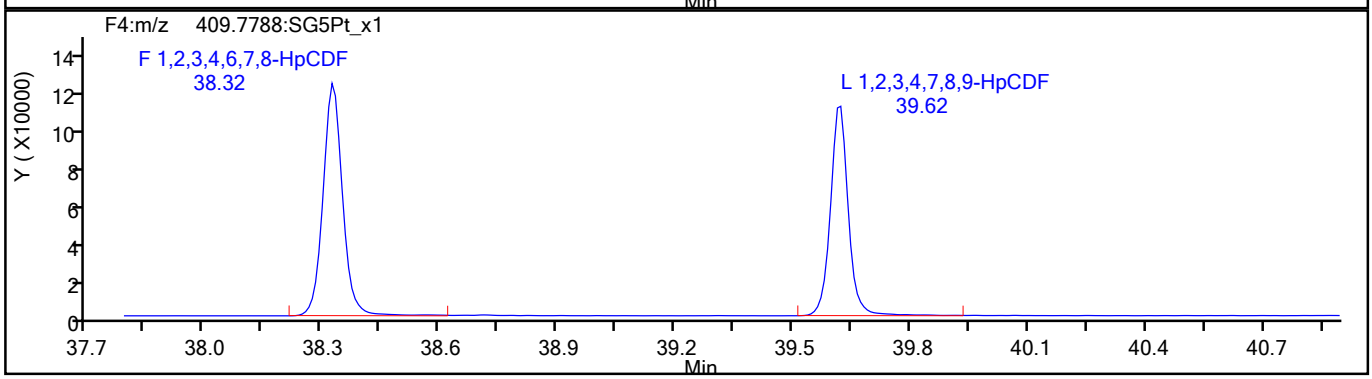

HpCDF Standards

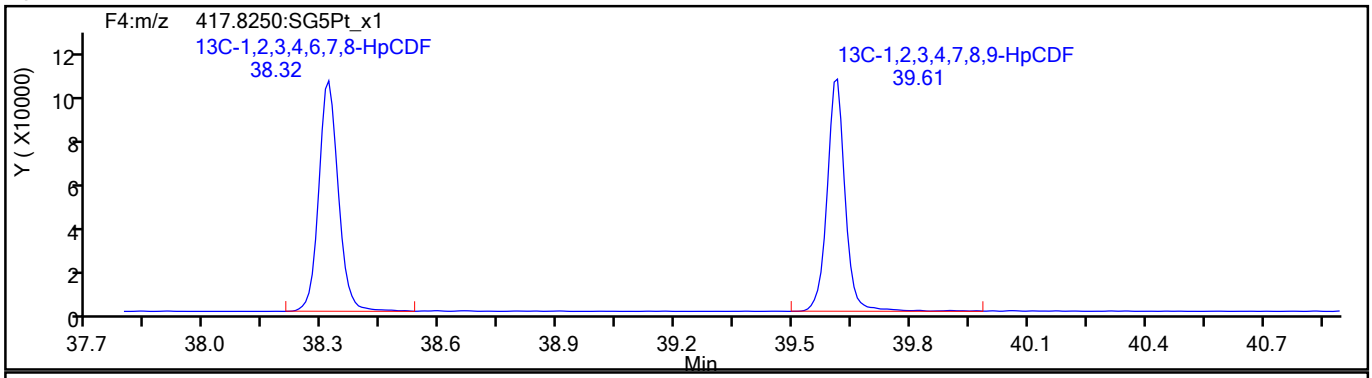

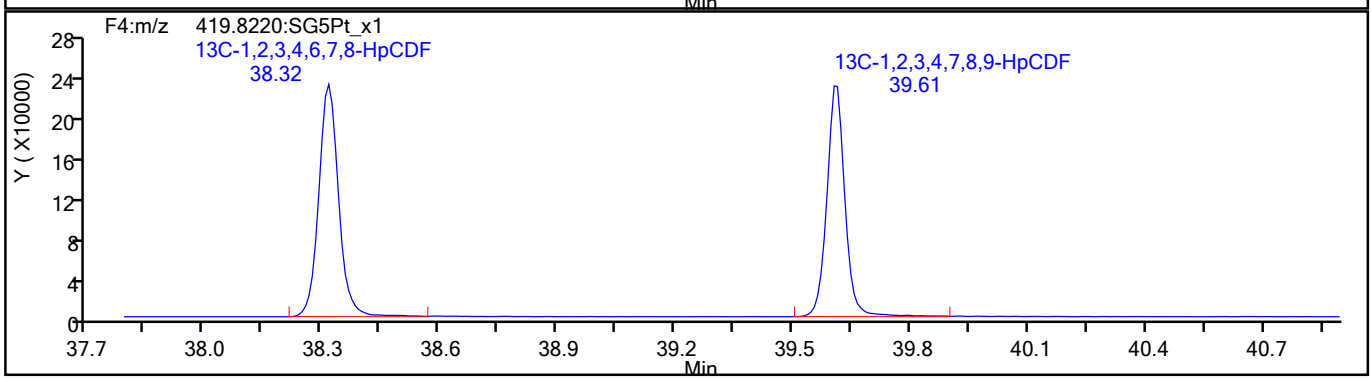

785875

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

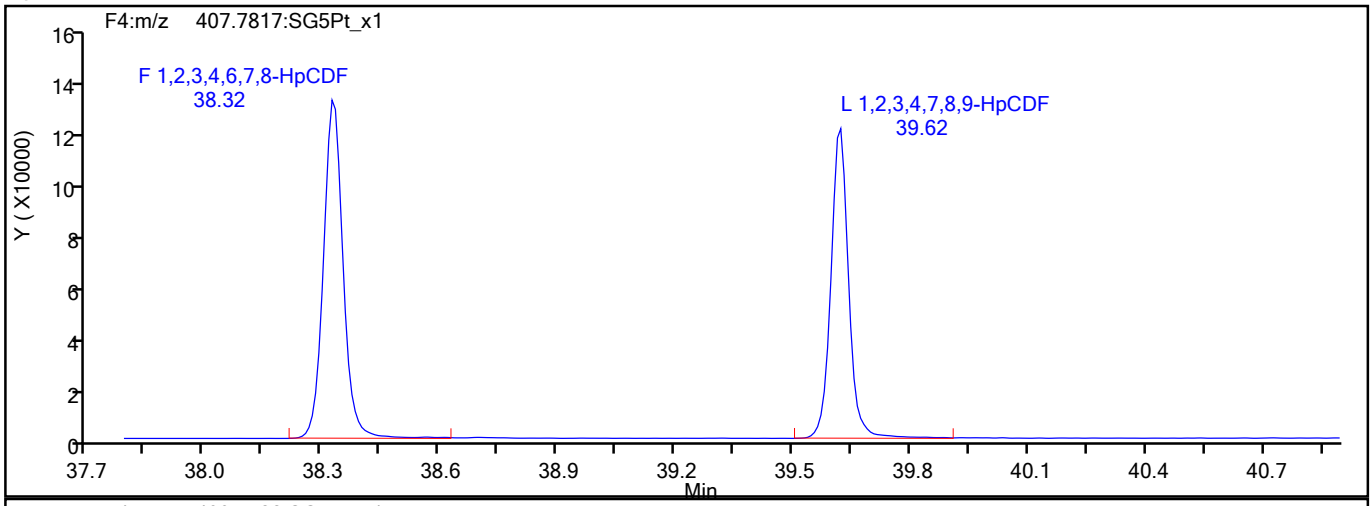

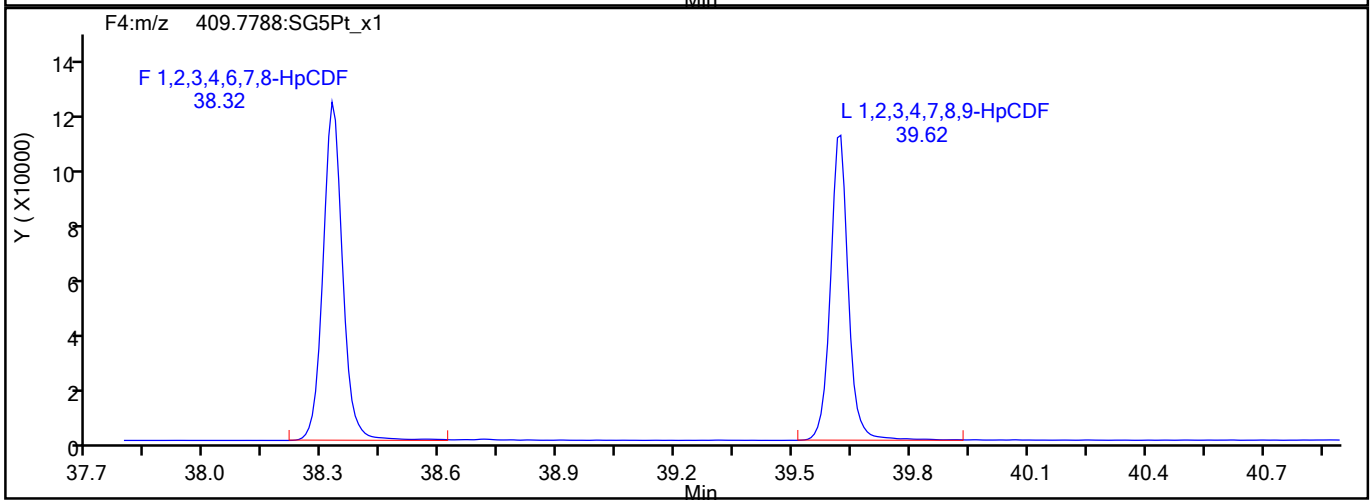

HpCDF Interference Mass

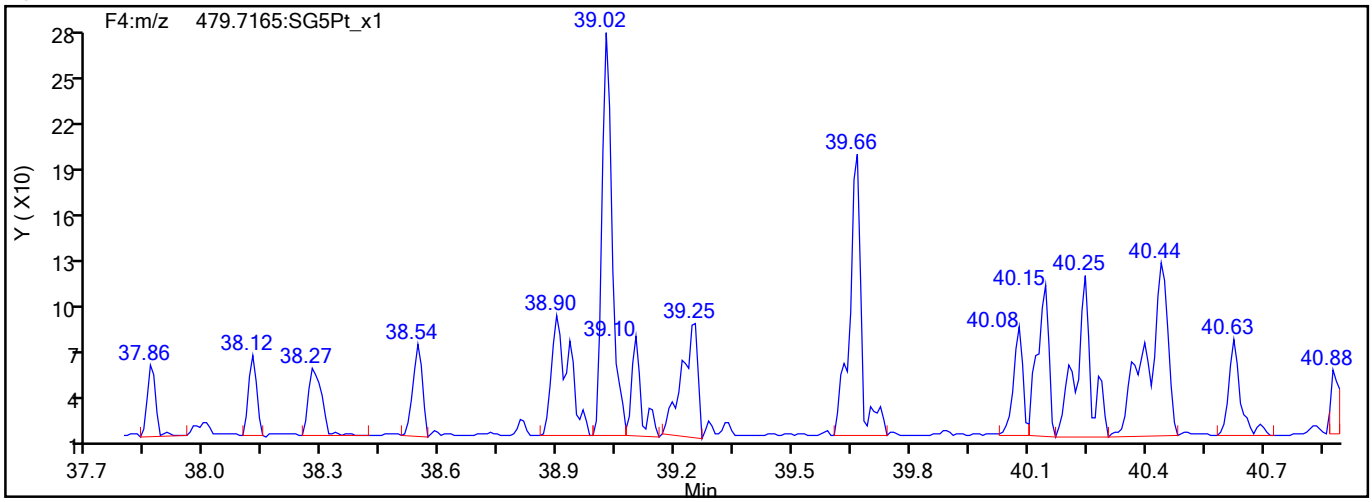

785876

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

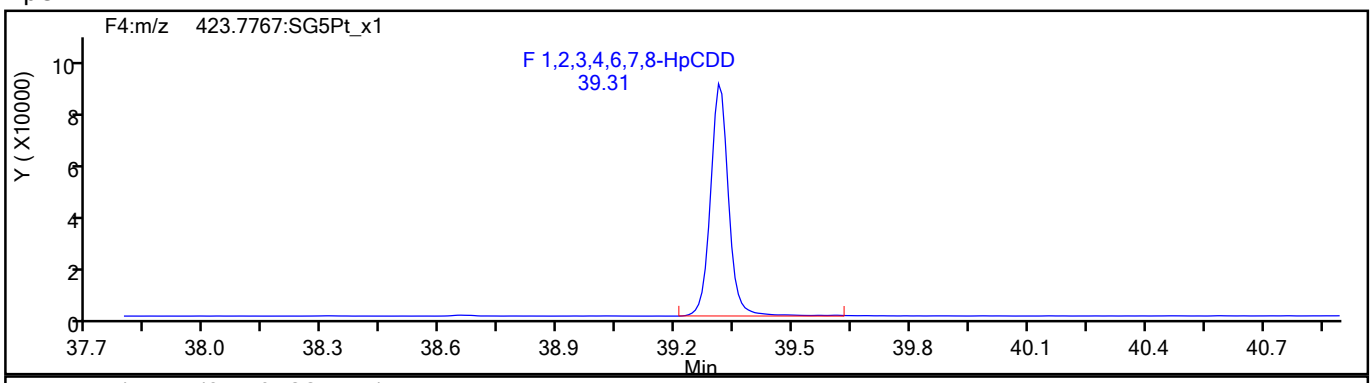

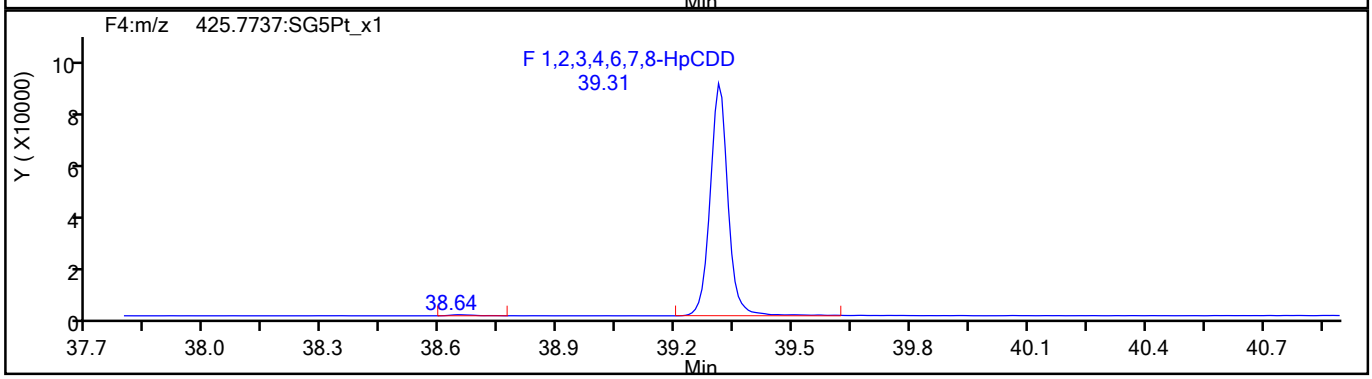

HpCDD Standards

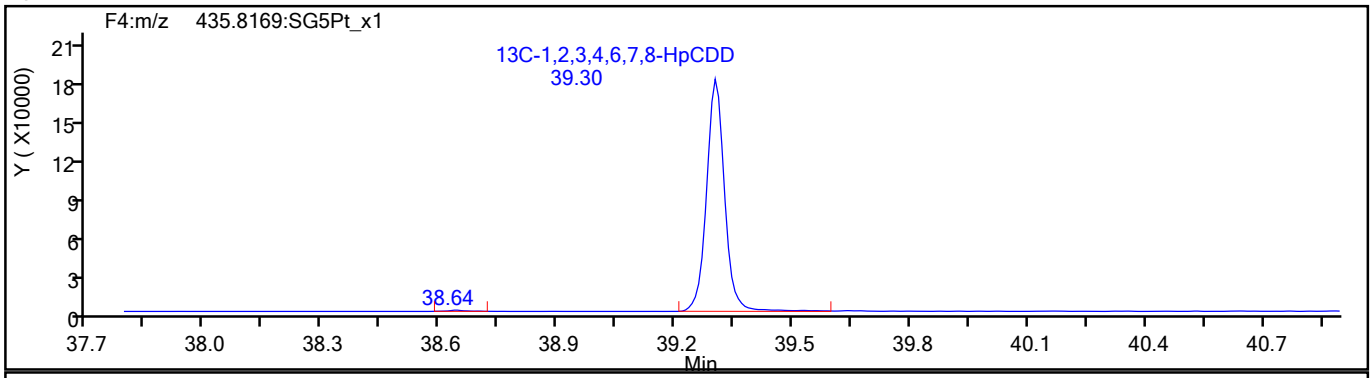

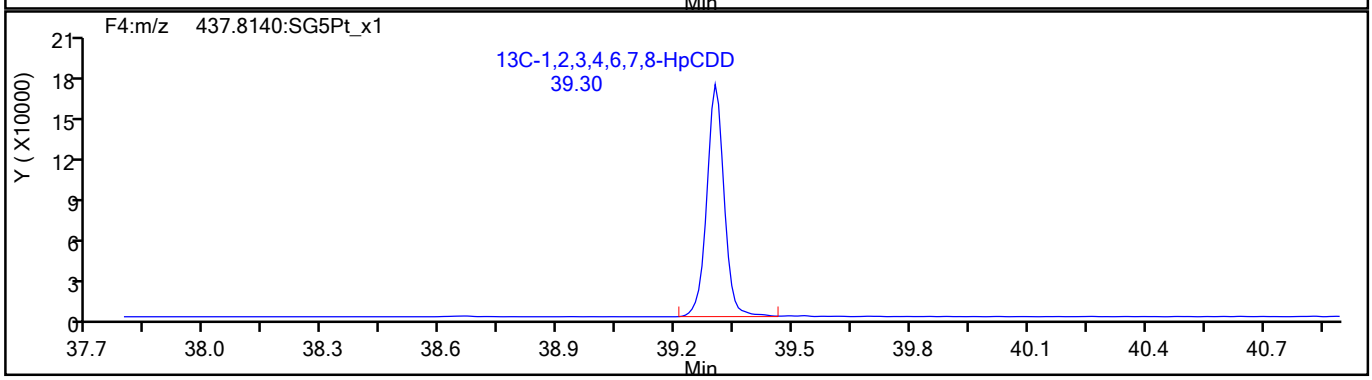

785877

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

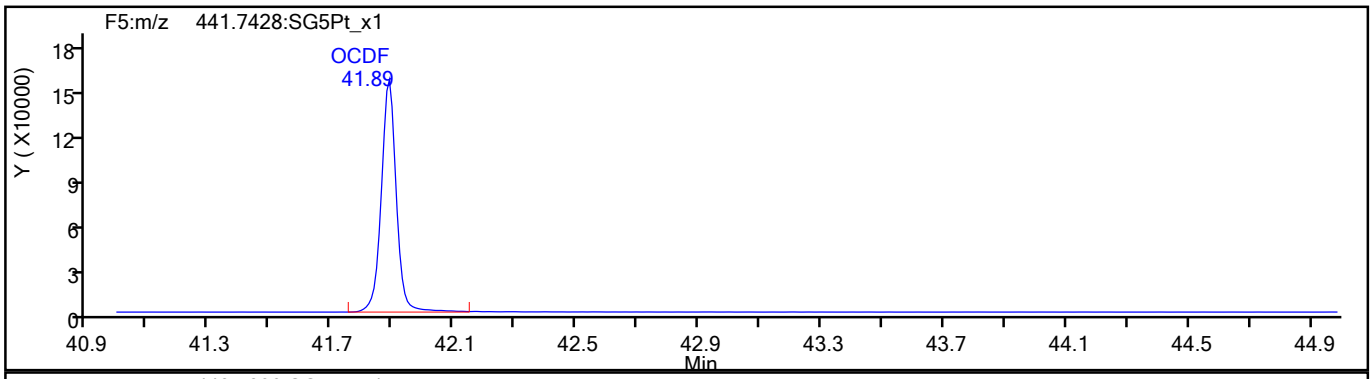

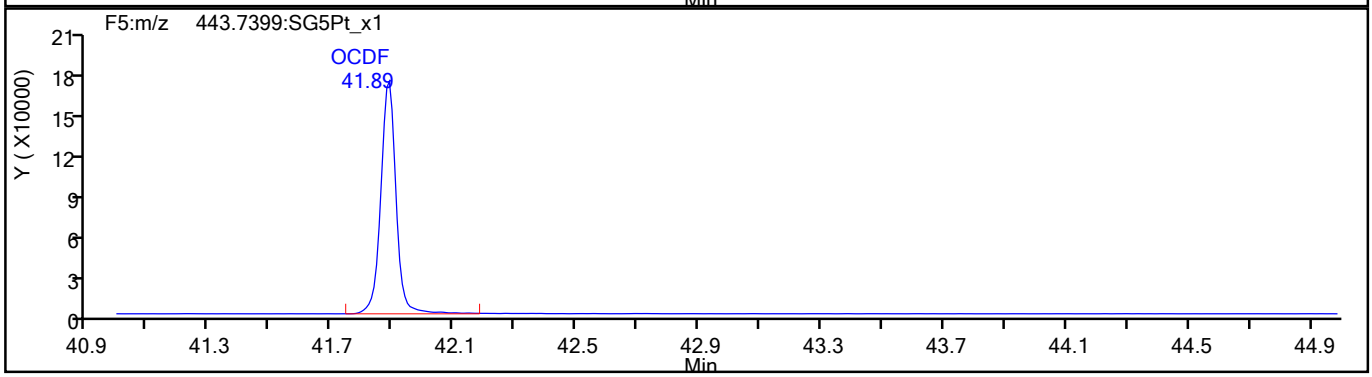

OCDF Standards

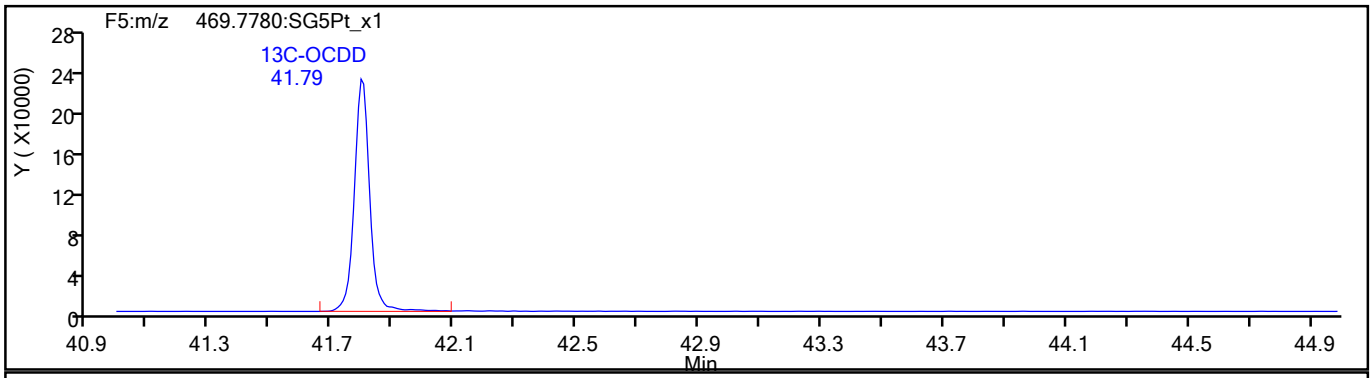

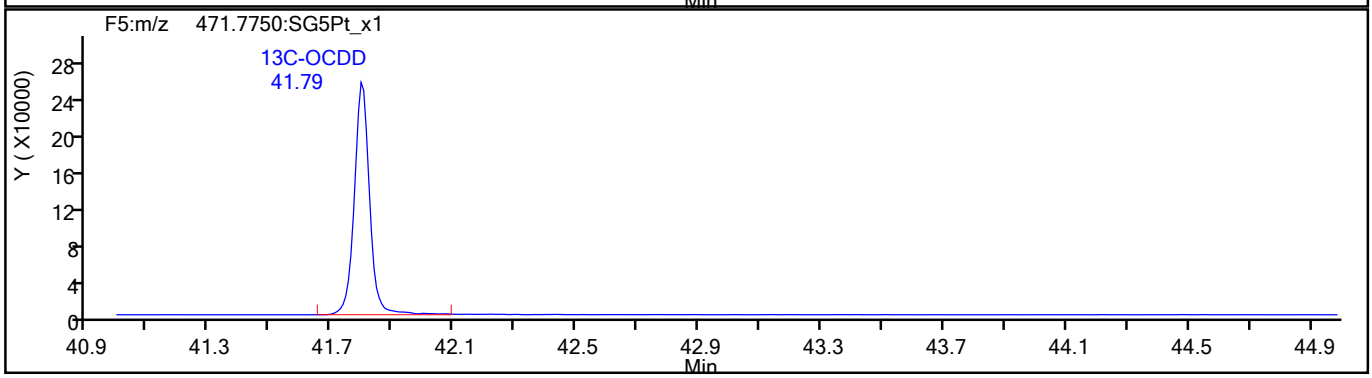

785878

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

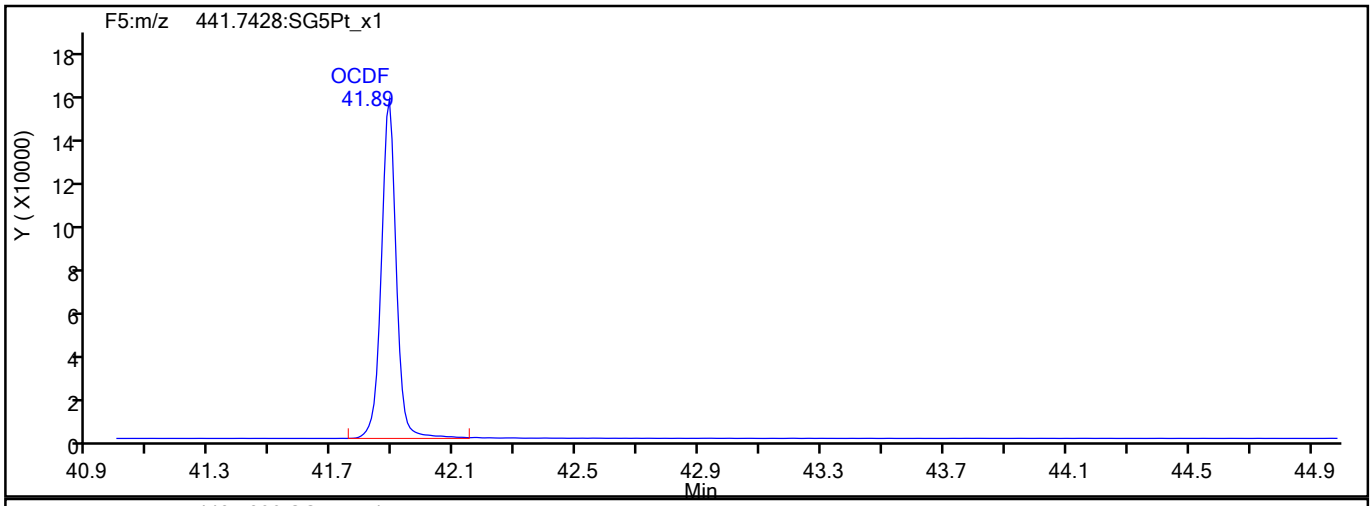

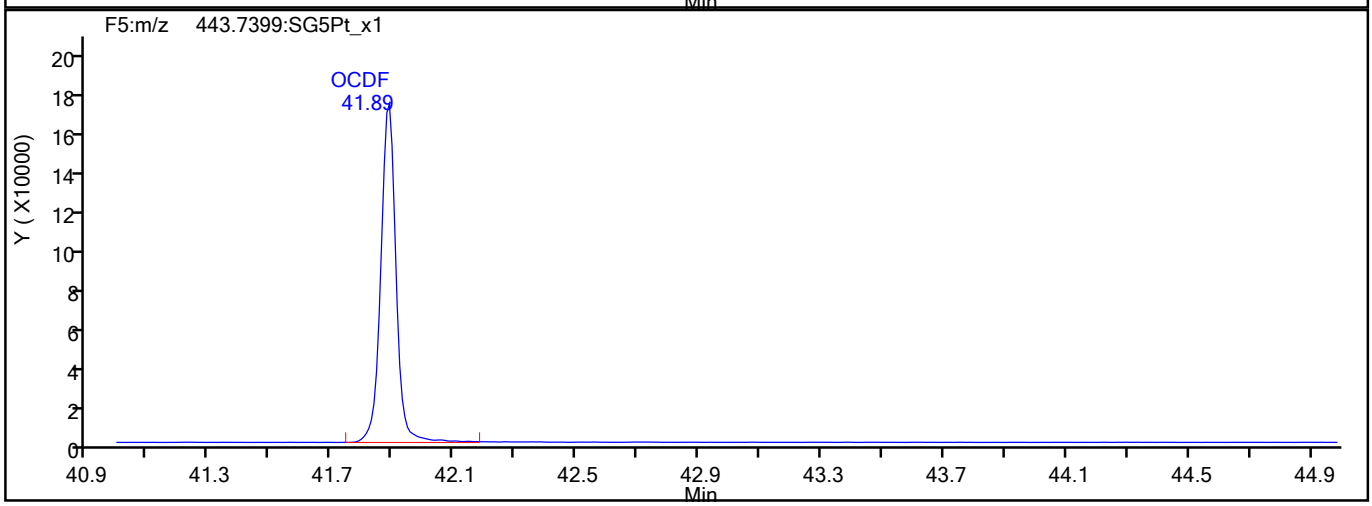

OCDF Interference Mass

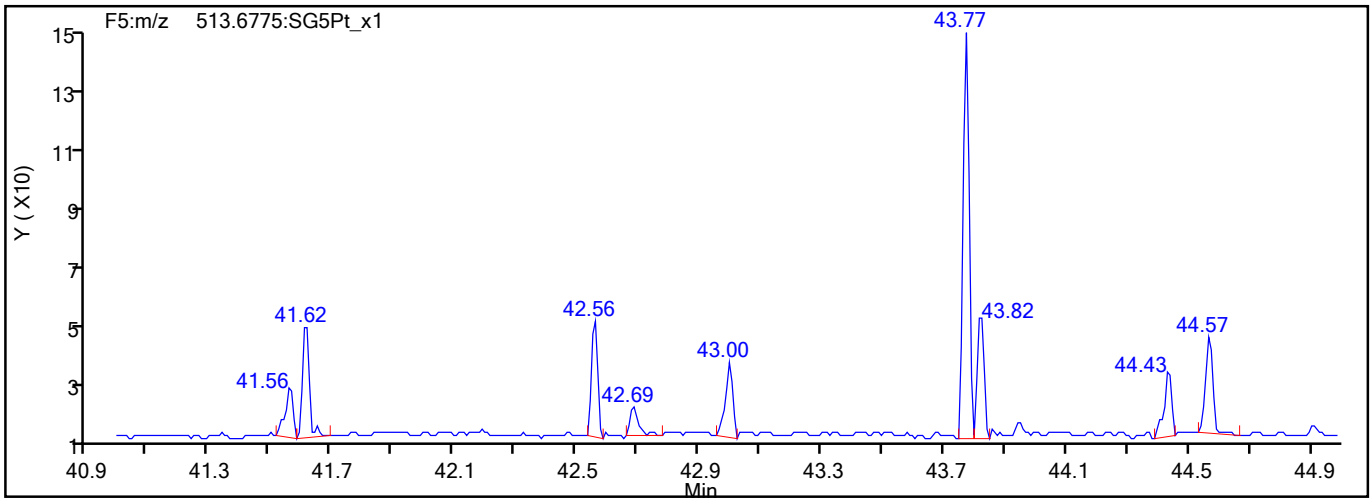

785879

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

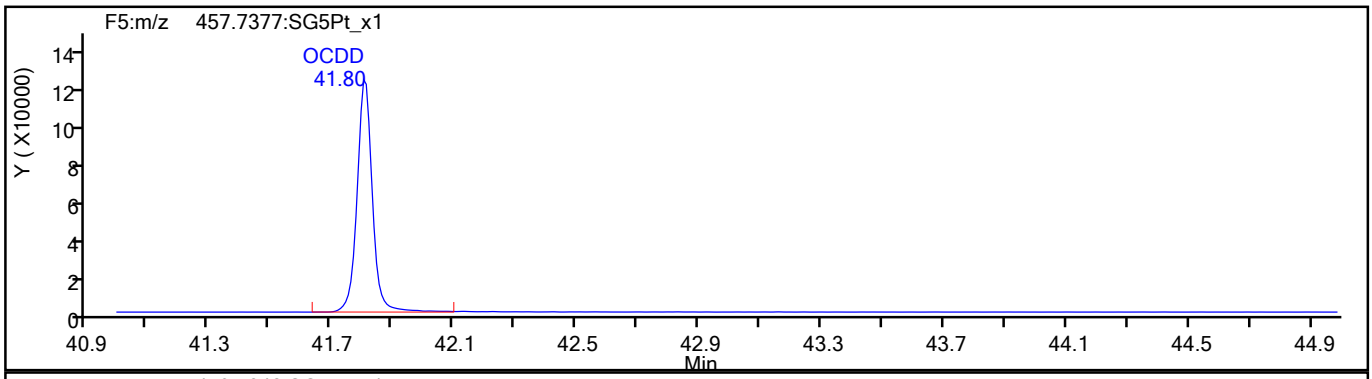

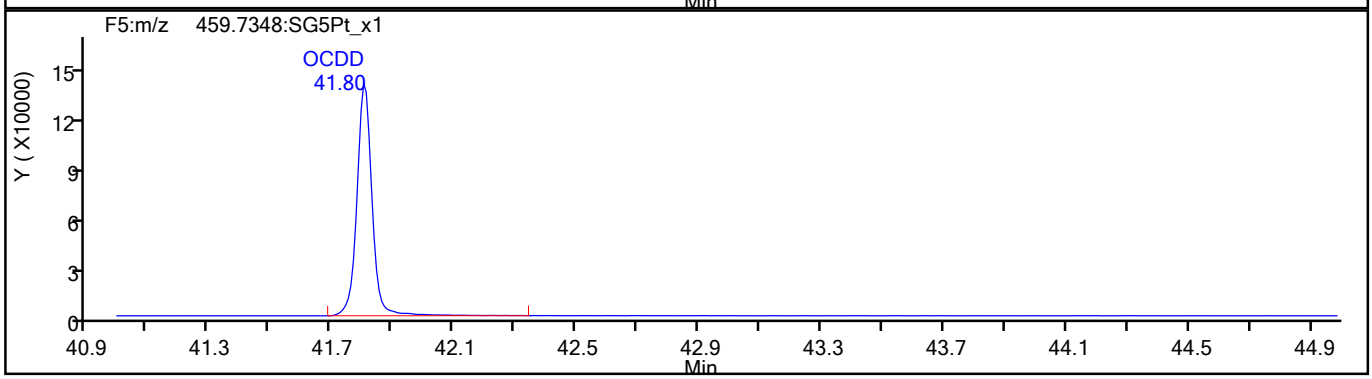

OCDD Standards

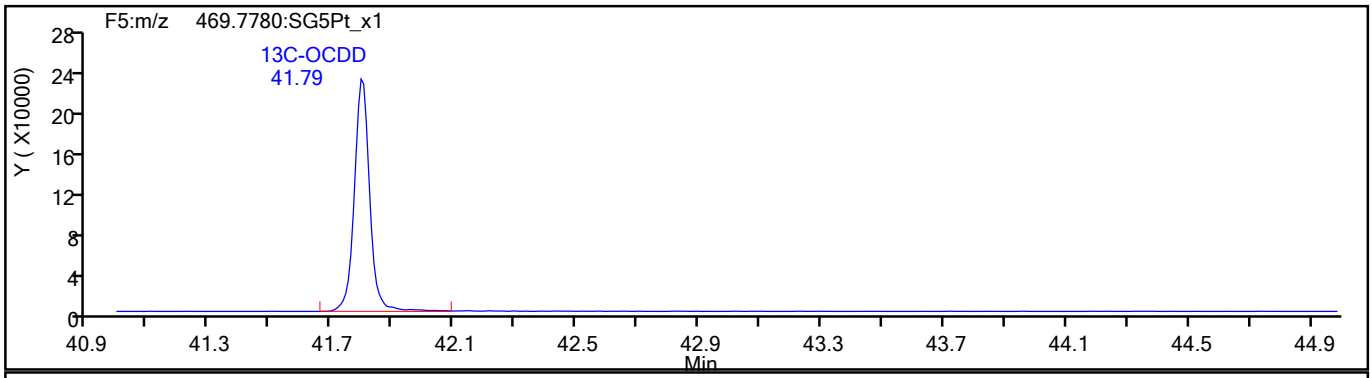

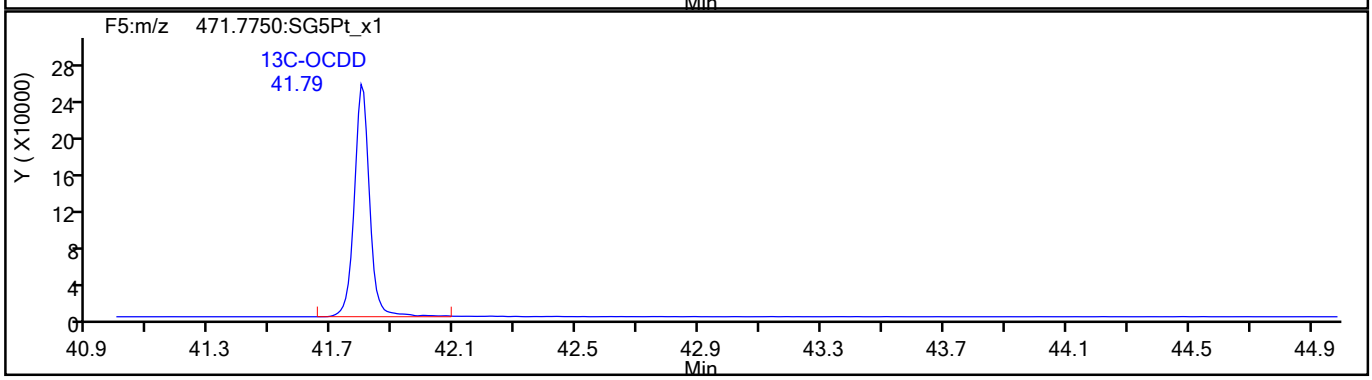

785880

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

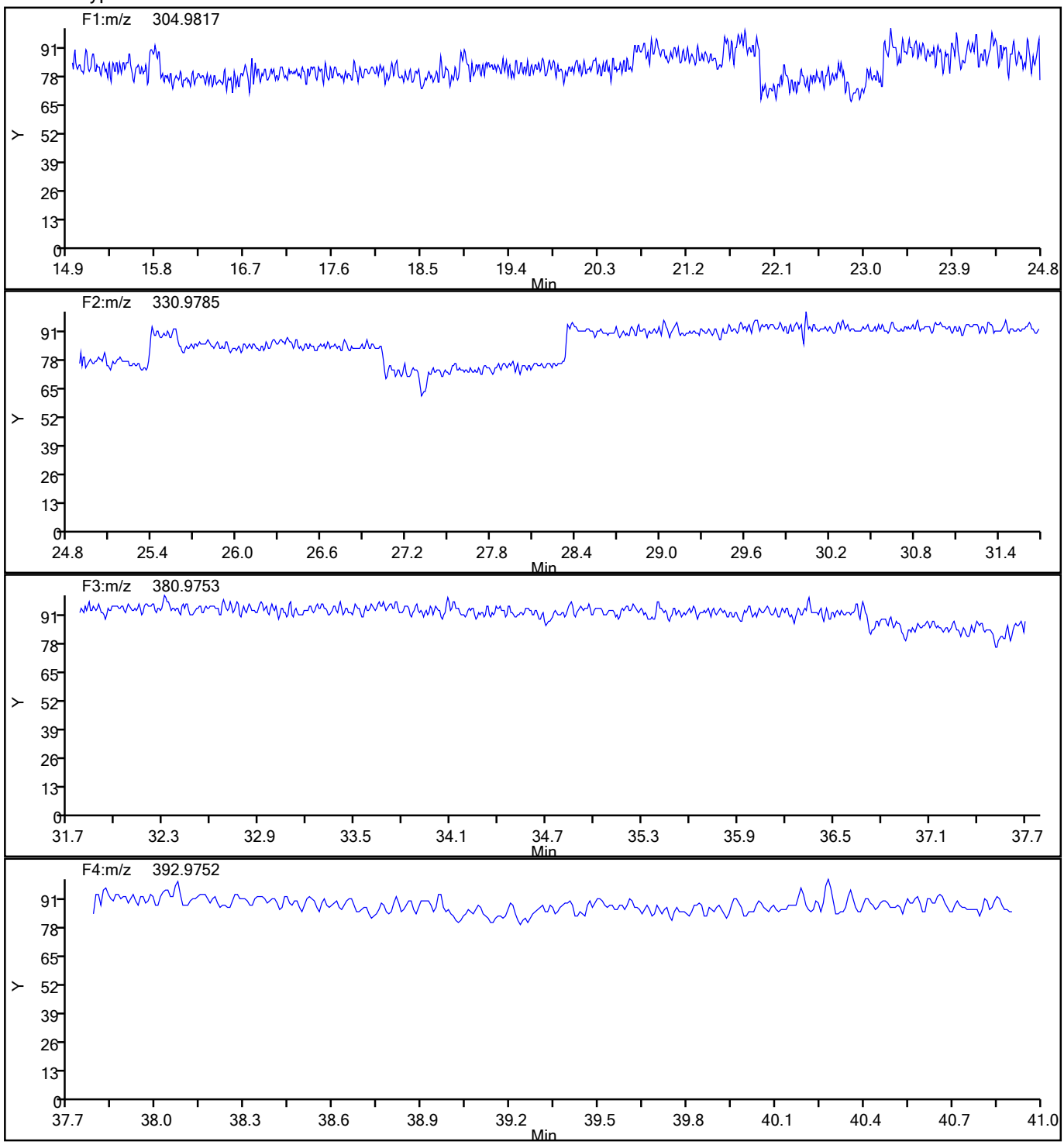

785881

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

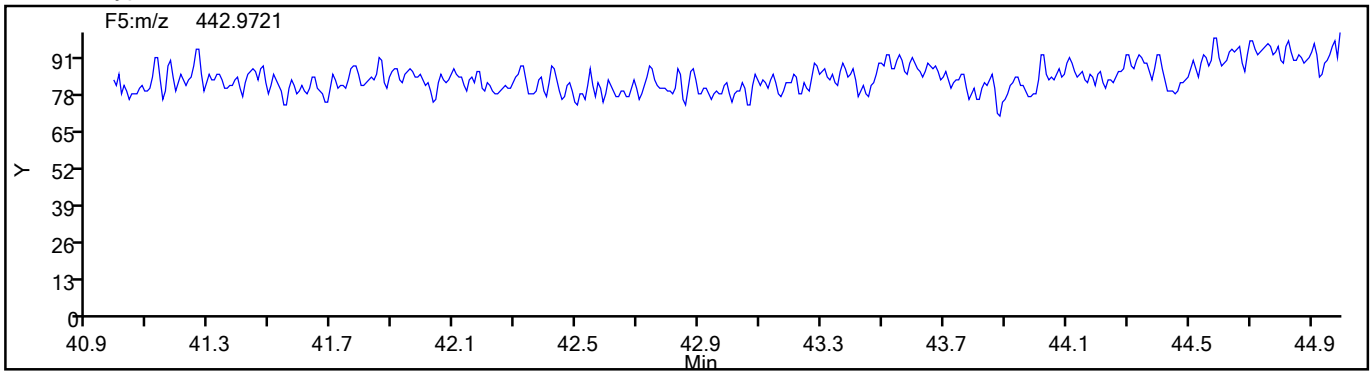

785882

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.548	2105852	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.612	2839435	0.79	1.3459	100.2	100.2	0.1786	0.1786	100	
2,3,7,8-TCDF	19.638	1274052	0.79	1.0802	41.5	41.5	0.0460	0.0460	104	
S Total TCDF					41.5	41.5	0.0460	0.0460		
D 13C-2,3,7,8-TCDD	20.909	1948011	0.81	0.9317	99.3	99.3	0.1662	0.1662	99.29	
$ 37Cl4-2,3,7,8-TCDD	20.935	848616		1.0083	40.0	40.0	0.0168	0.0168	99.92	
2,3,7,8-TCDD	20.935	875630	0.79	1.0753	41.8	41.8	0.0546	0.0546	105	
S Total TCDD					41.8	41.8	0.0546	0.0546		
D 13C-1,2,3,7,8-PeCDF	26.564	2432949	1.58	1.1405	101.3	101.3	0.3082	0.3082	101	
1,2,3,7,8-PeCDF	26.589	5302236	1.57	1.0543	206.7	206.7	0.5886	0.5886	103	
D 13C-2,3,4,7,8-PeCDF	28.023	2374722	1.60	1.1253	100.2	100.2	0.3123	0.3123	100	
2,3,4,7,8-PeCDF	28.048	5051373	1.58	1.0079	211.1	211.1	0.6756	0.6756	106	
S Total PeCDF					417.8	417.8	0.6321	0.6321		
D 13C-1,2,3,7,8-PeCDD	28.806	1521254	1.60	0.7165	100.8	100.8	0.1214	0.1214	101	
1,2,3,7,8-PeCDD	28.832	3351337	1.58	1.0465	210.5	210.5	0.1088	0.1088	105	
S Total PeCDD					210.5	210.5	0.1088	0.1088		
D 13C-1,2,3,4,7,8-HxCDF	34.391	1778238	0.53	0.9648	100.0	100.0	0.3266	0.3266	100	
1,2,3,4,7,8-HxCDF	34.407	4293581	1.24	1.1474	210.4	210.4	0.7958	0.7958	105	
D 13C-1,2,3,6,7,8-HxCDF	34.568	1995567	0.54	1.0708	101.1	101.1	0.2943	0.2943	101	
1,2,3,6,7,8-HxCDF	34.584	4991420	1.25	1.2178	205.4	205.4	0.6778	0.6778	103	
D 13C-2,3,4,6,7,8-HxCDF	35.444	2042874	0.53	1.0413	106.5	106.5	0.3026	0.3026	106	
2,3,4,6,7,8-HxCDF	35.461	5157631	1.25	1.2145	207.9	207.9	0.5811	0.5811	104	
D 13C-1,2,3,7,8,9-HxCDF	36.388	1742331	0.52	0.9731	97.2	97.2	0.3238	0.3238	97.17	
1,2,3,7,8,9-HxCDF	36.397	4445357	1.26	1.2401	205.7	205.7	0.6020	0.6020	103	
S Total HxCDF					829.5	829.5	0.6642	0.6642		
* 13C-1,2,3,7,8,9-HxCDD	36.194	1842630	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.680	1432215	1.28	0.7587	102.4	102.4	0.1598	0.1598	102	
1,2,3,4,7,8-HxCDD	35.697	3222329	1.26	1.0608	212.1	212.1	0.2911	0.2911	106	
D 13C-1,2,3,6,7,8-HxCDD	35.806	1669337	1.24	0.8593	105.4	105.4	0.1411	0.1411	105	
1,2,3,6,7,8-HxCDD	35.815	3426727	1.26	0.9933	206.7	206.7	0.2773	0.2773	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.203	3436144	1.26	1.1094	199.7	199.7	0.2625	0.2625	99.86	
S Total HxCDD					618.5	618.5	0.2770	0.2770		
D 13C-1,2,3,4,6,7,8-HpCDF	38.305	1392194	0.46	0.7359	102.7	102.7	0.3327	0.3327	103	
1,2,3,4,6,7,8-HpCDF	38.314	4243438	1.05	1.4421	211.4	211.4	0.6211	0.6211	106	
D 13C-1,2,3,4,7,8,9-HpCDF	39.595	1337573	0.45	0.6854	105.9	105.9	0.3573	0.3573	106	
1,2,3,4,7,8,9-HpCDF	39.603	3728415	1.05	1.3092	212.9	212.9	0.6974	0.6974	106	
S Total HpCDF					424.3	424.3	0.6592	0.6592		
D 13C-1,2,3,4,6,7,8-HpCDD	39.291	1337869	1.09	0.6745	107.6	107.6	0.2398	0.2398	108	
1,2,3,4,6,7,8-HpCDD	39.300	2935203	1.04	1.0503	208.9	208.9	0.3525	0.3525	104	
S Total HpCDD					208.9	208.9	0.3525	0.3525		
D 13C-OCDD	41.782	2177938	0.90	0.5446	217.0	217.0	0.3019	0.3019	109	
OCDF	41.866	6082696	0.91	1.3168	424.2	424.2	0.3916	0.3916	106	
OCDD	41.790	4803166	0.89	1.0620	415.3	415.3	0.3872	0.3872	104	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.548	20.547	0		944131	150571	127	317	1186		
333.9338	20.548	20.547	0		1161721	185169	81	202	2286	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.612	19.616	0	0.954	1253649	203983	215	537	949		
317.9389	19.621	19.616	0	0.955	1585786	258903	108	270	2397	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.638	19.646	0	1.001	561539	89311	44	110	2030		
305.8987	19.638	19.646	0	1.001	712513	111913	48	120	2332	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.909	20.910	0	1.018	869542	131887	127	317	1038		
333.9338	20.909	20.910	0	1.018	1078469	161266	81	202	1991	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.935	20.935	0	1.019	848616	126683	23	57	5508		
2,3,7,8-TCDD											
319.8965	20.935	20.939	0	1.001	385954	58537	36	90	1626		
321.8936	20.935	20.939	0	1.001	489676	72800	33	82	2206	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.564	26.560	0	1.293	1489826	258263	302	755	855		
353.8970	26.564	26.560	0	1.293	943123	164307	170	425	967	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.589	26.584	0	1.001	3241988	556504	638	1595	872		
341.8567	26.589	26.584	0	1.001	2060248	355863	411	1027	866	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.023	28.014	1	1.364	1460304	235761	302	755	781		
353.8970	28.023	28.014	1	1.364	914418	149333	170	425	878	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.048	28.039	1	1.001	3094556	515182	638	1595	807		
341.8567	28.048	28.039	1	1.001	1956817	323488	411	1027	787	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.806	28.801	0	1.402	936578	147383	82	205	1797		
369.8919	28.806	28.801	0	1.402	584676	95987	35	87	2742	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.832	28.828	0	1.001	2051590	320770	72	180	4455		
357.8516	28.832	28.828	0	1.001	1299747	208335	39	97	5342	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.391	34.384	0	0.950	617675	123602	191	477	647		
385.8610	34.382	34.384	0	0.950	1160563	234726	378	945	621	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.407	34.405	0	1.000	2381065	482843	745	1862	648		
375.8178	34.407	34.405	0	1.000	1912516	389022	564	1410	690	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.568	34.562	0	0.955	696940	140400	191	477	735		
385.8610	34.568	34.562	0	0.955	1298627	255987	378	945	677	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.584	34.582	0	1.000	2775629	556827	745	1862	747		
375.8178	34.584	34.582	0	1.000	2215791	440544	564	1410	781	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.444	35.444	0	0.979	707399	160237	191	477	839		
385.8610	35.444	35.444	0	0.979	1335475	303406	378	945	803	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.461	35.461	0	1.000	2866027	647502	745	1862	869		
375.8178	35.461	35.461	0	1.000	2291604	520419	564	1410	923	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.388	36.388	0	1.005	598306	148820	191	477	779		
385.8610	36.388	36.388	0	1.005	1144025	289476	378	945	766	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.397	36.402	0	1.000	2476452	605954	745	1862	813		
375.8178	36.397	36.402	0	1.000	1968905	483719	564	1410	858	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.194	36.192	0		1026134	250783	116	290	2162		
403.8529	36.186	36.192	0		816496	200495	103	257	1947	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.680	35.680	0	0.986	804332	193336	116	290	1667		
403.8529	35.680	35.680	0	0.986	627883	151493	103	257	1471	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.697	35.695	0	1.000	1795969	436602	241	602	1812		
391.8127	35.697	35.695	0	1.000	1426360	347066	185	462	1876	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.806	35.805	0	0.989	925744	214247	116	290	1847		
403.8529	35.806	35.805	0	0.989	743593	172424	103	257	1674	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.815	35.820	0	1.000	1911971	434863	241	602	1804		
391.8127	35.815	35.820	0	1.000	1514756	347831	185	462	1880	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.203	36.208	0	1.015	1913013	474198	241	602	1968		
391.8127	36.203	36.208	0	1.015	1523131	377483	185	462	2040	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.305	38.305	0	1.058	436356	136587	154	385	887		
419.8220	38.305	38.305	0	1.058	955838	295474	288	720	1026	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.314	38.317	0	1.000	2176116	664265	789	1972	842		
409.7788	38.314	38.317	0	1.000	2067322	632606	759	1897	833	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.595	39.600	0	1.094	416057	129213	154	385	839		
419.8220	39.595	39.600	0	1.094	921516	294690	288	720	1023	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.603	39.608	0	1.000	1911190	607125	789	1972	769		
409.7788	39.603	39.608	0	1.000	1817225	579552	759	1897	764	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.291	39.293	0	1.086	696483	219725	150	375	1465		
437.8140	39.291	39.293	0	1.086	641386	202177	142	355	1424	1.09(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.300	39.301	0	1.000	1499524	478443	315	787	1519		
425.7737	39.300	39.301	0	1.000	1435679	451932	310	775	1458	1.04(0.88-1.20)	
13C-OCDD											
469.7780	41.782	41.785	0	1.154	1033665	317462	144	360	2205		
471.7750	41.782	41.785	0	1.154	1144273	352280	153	382	2302	0.90(0.76-1.02)	
OCDF											
441.7428	41.866	41.875	-1	1.002	2905097	900371	326	815	2762		
443.7399	41.866	41.875	-1	1.002	3177599	981356	365	912	2689	0.91(0.76-1.02)	
OCDD											
457.7377	41.790	41.794	0	1.000	2268006	705330	257	642	2744		
459.7348	41.790	41.794	0	1.000	2535160	785518	294	735	2672	0.89(0.76-1.02)	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

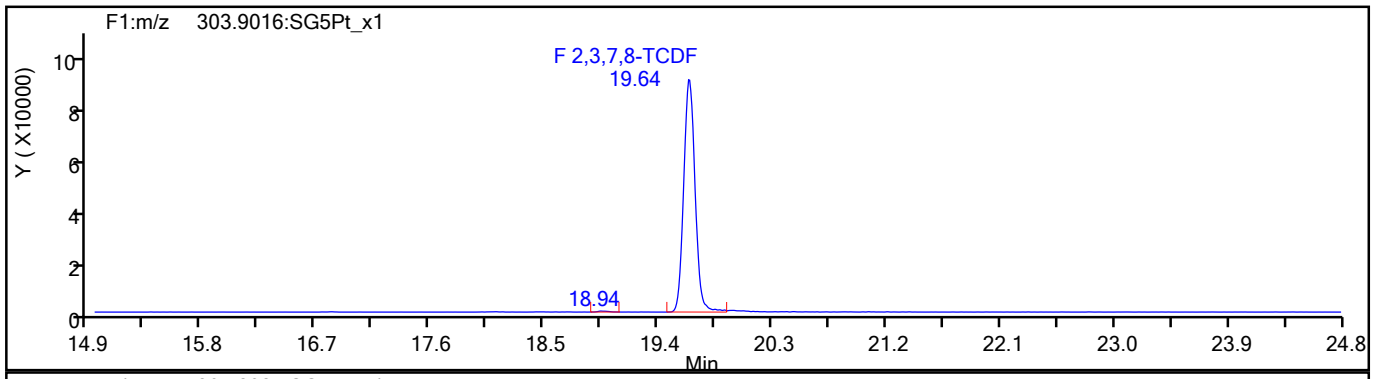

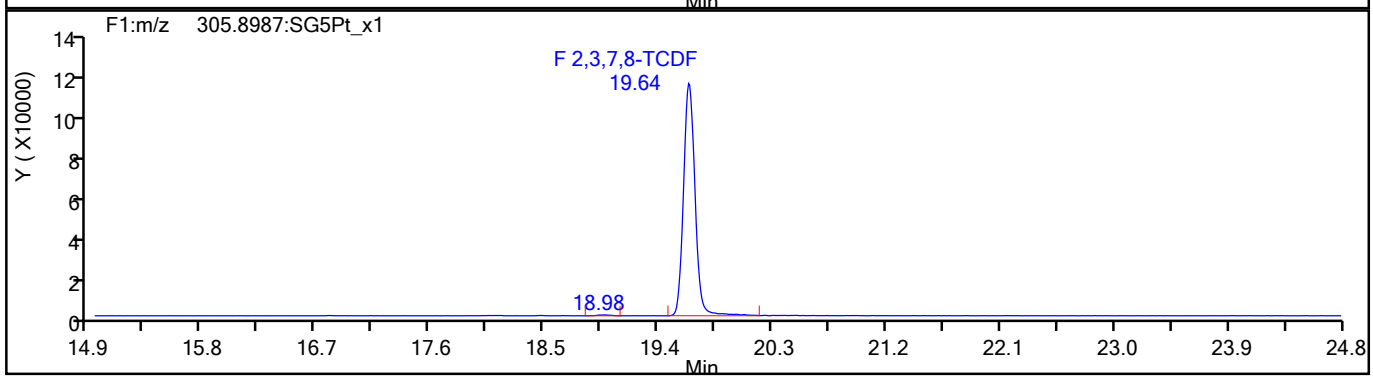

TCDF Standards

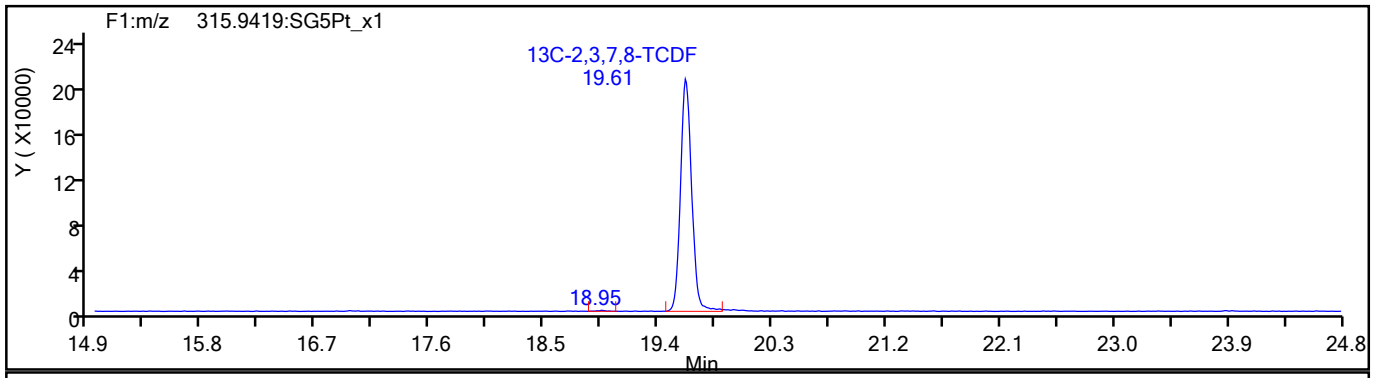

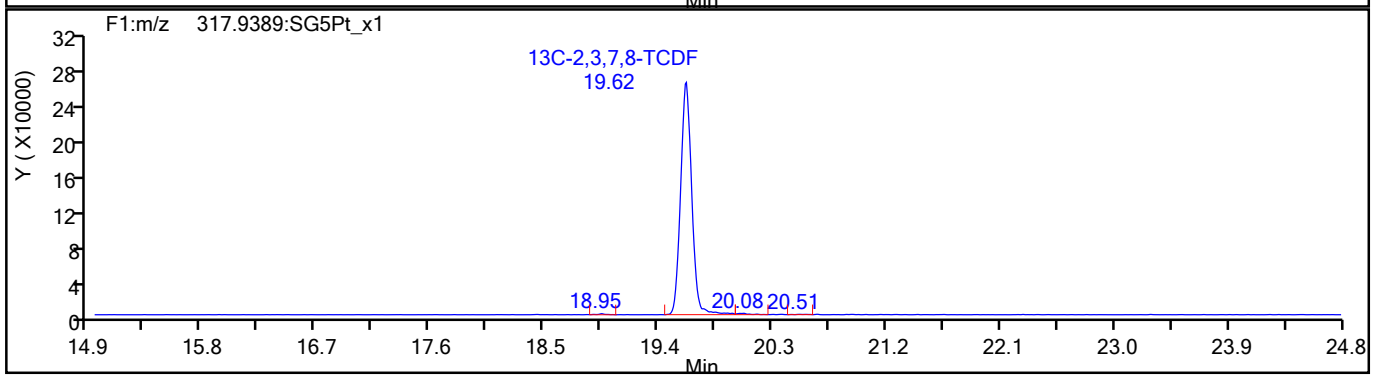

785888

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

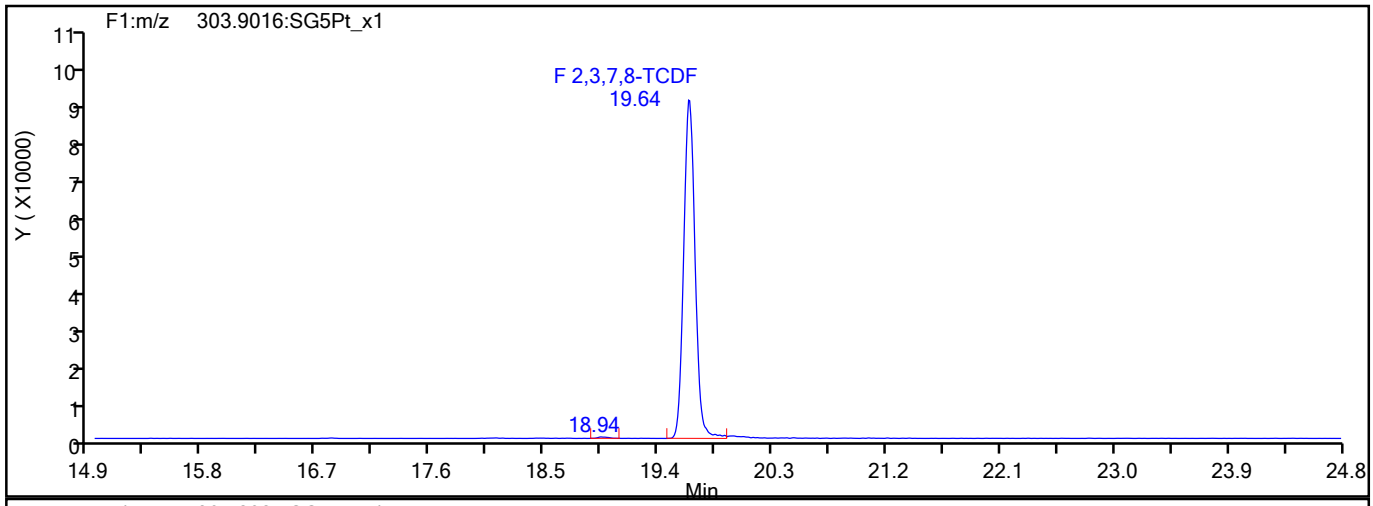

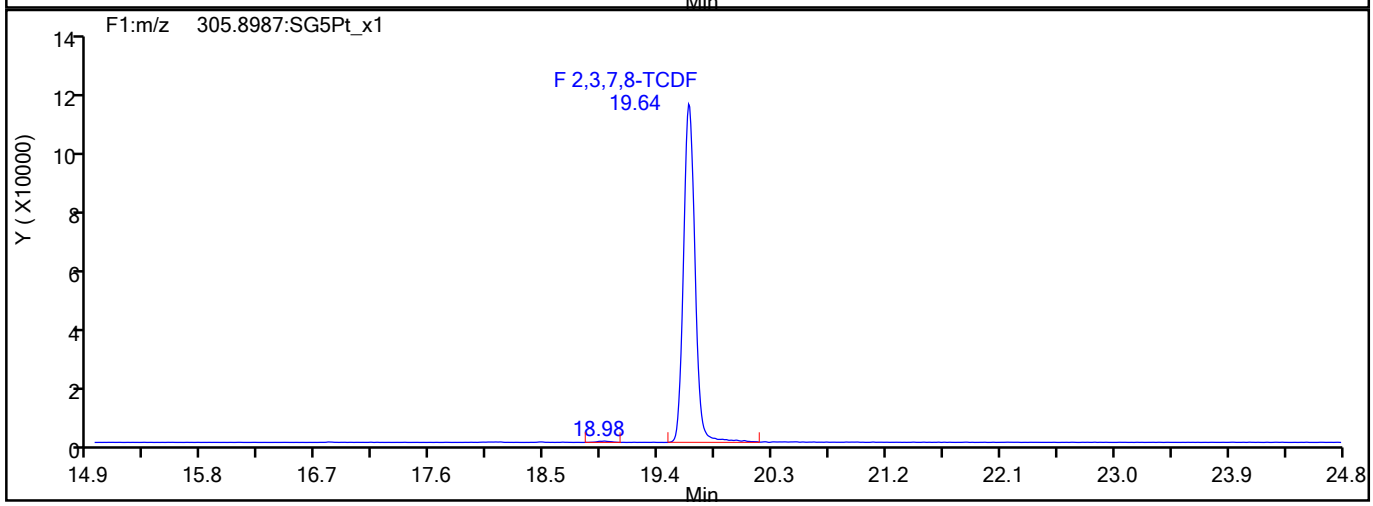

TCDF Interference Mass

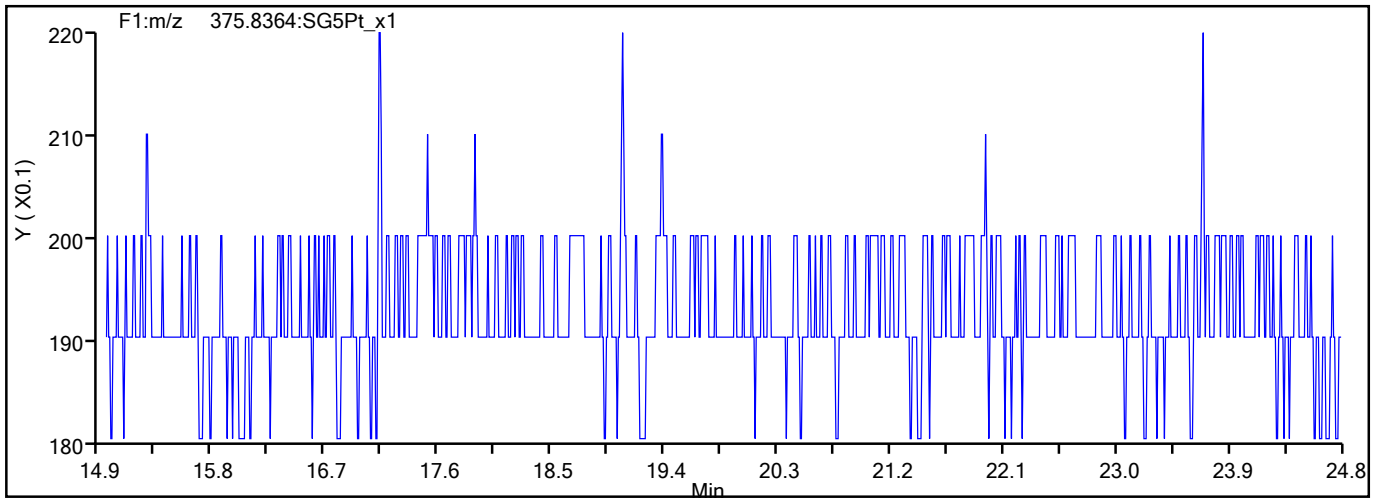

785889

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

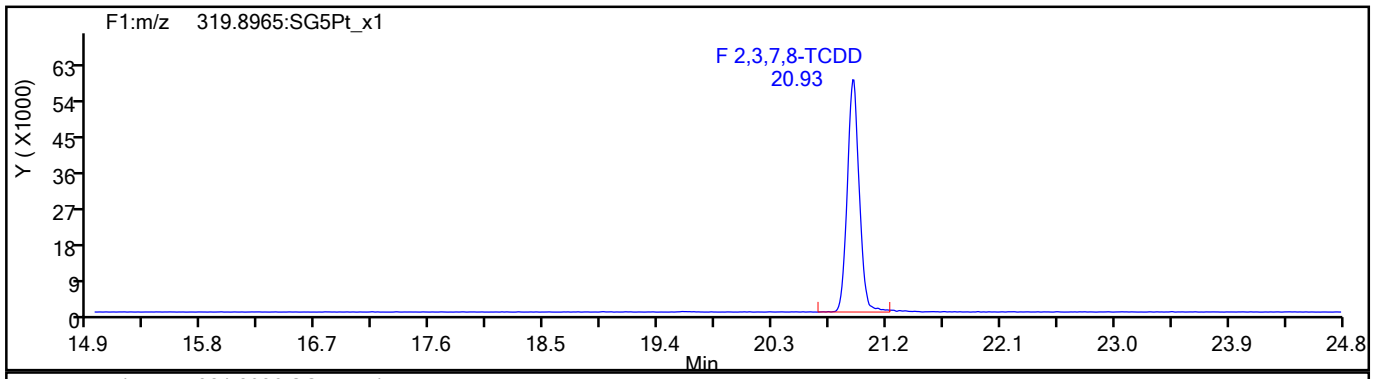

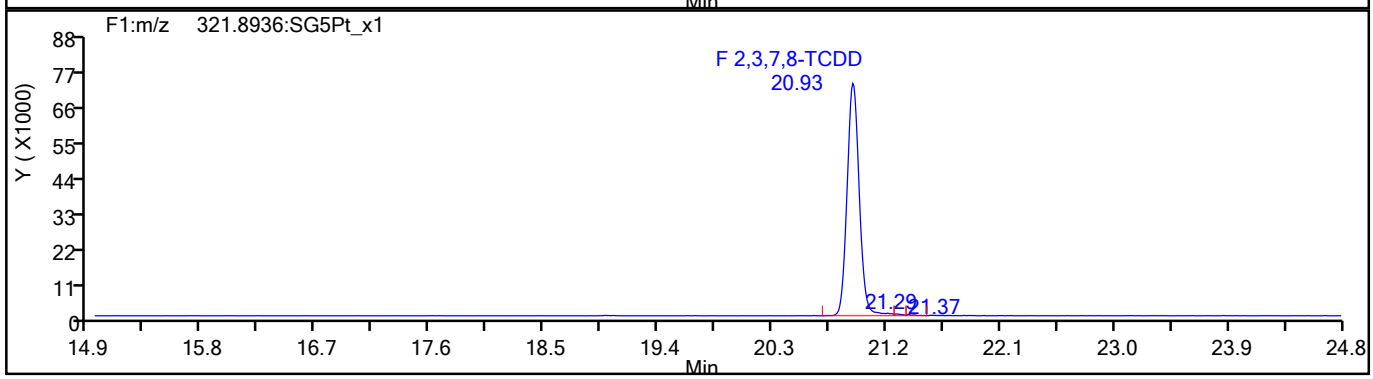

TCDD Standards

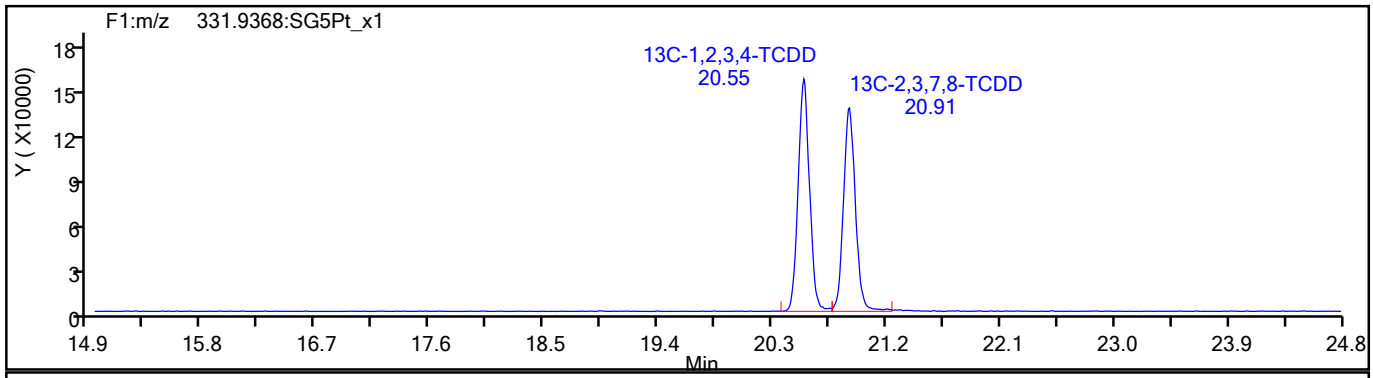

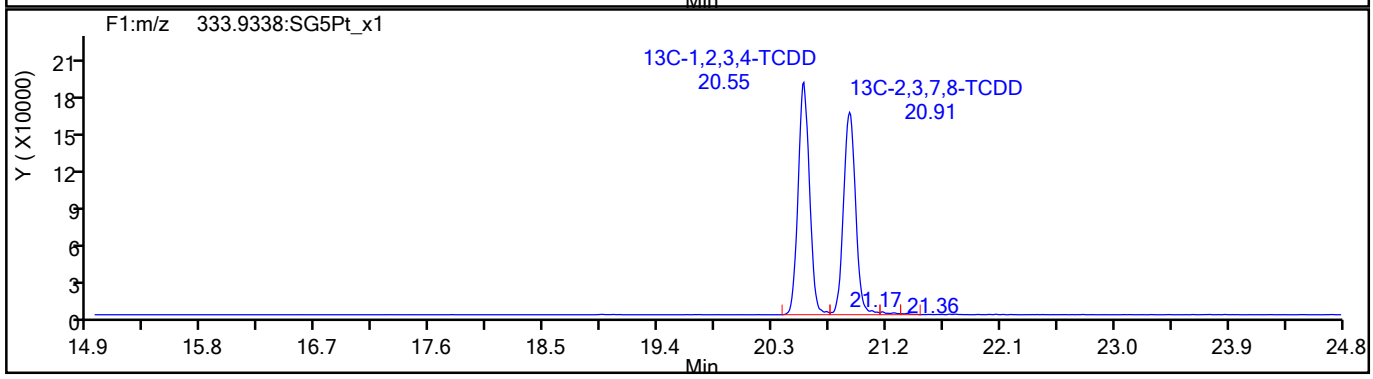

785890

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

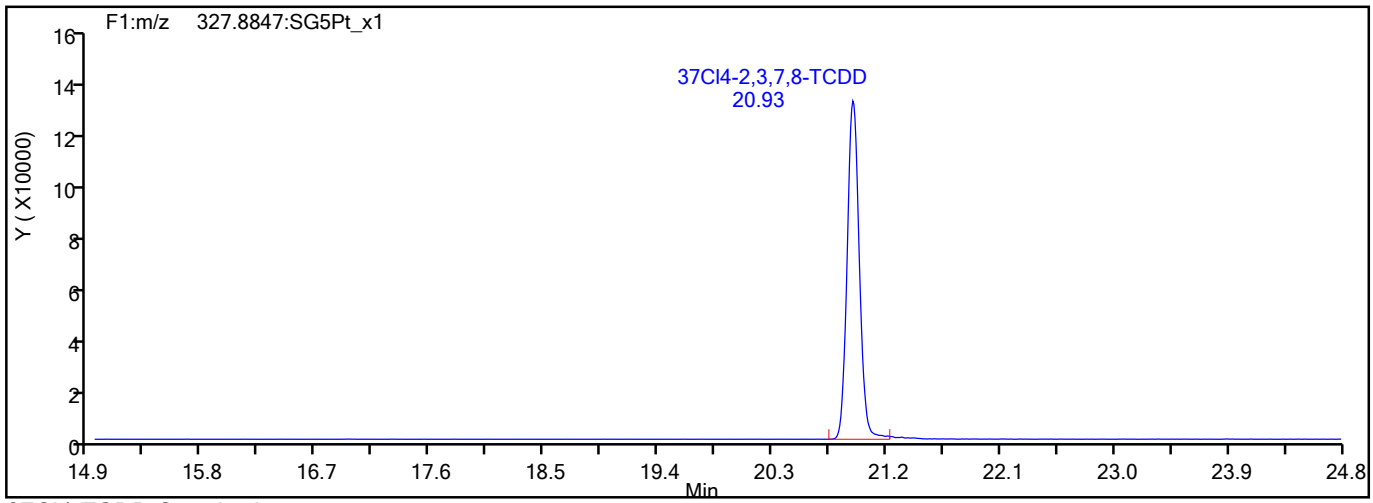

37Cl4-TCDD Standards

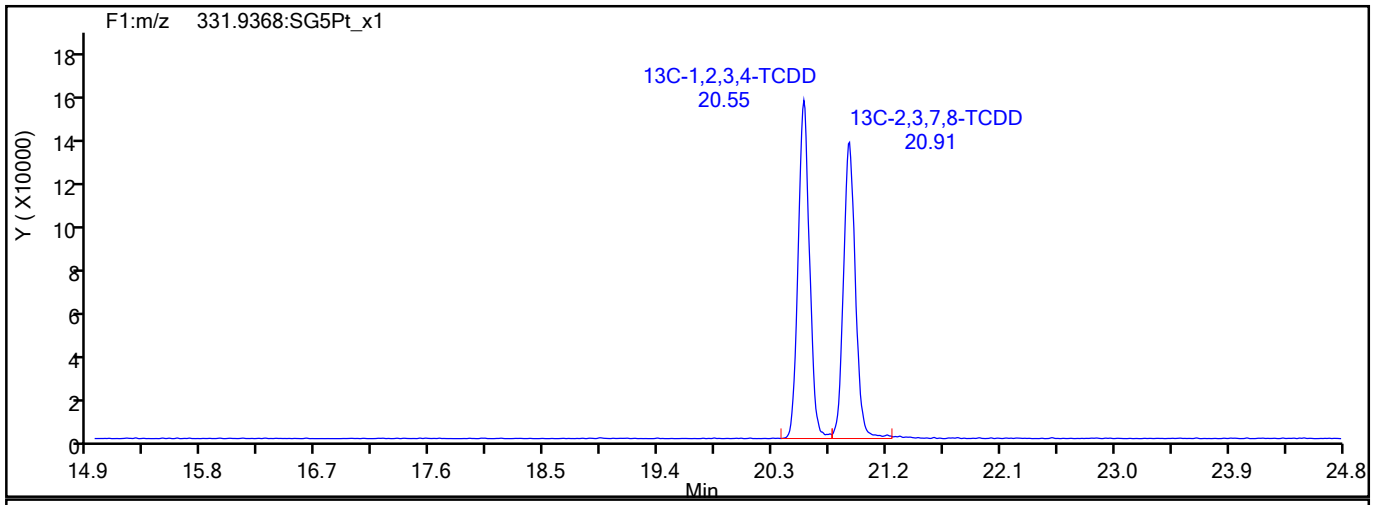

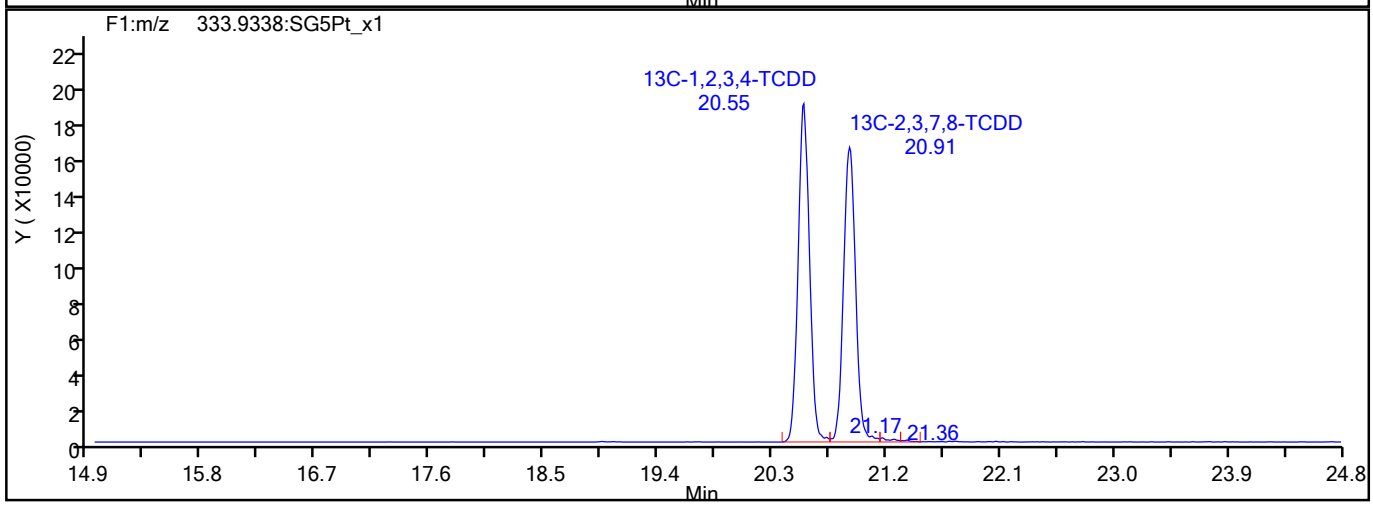

785891

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

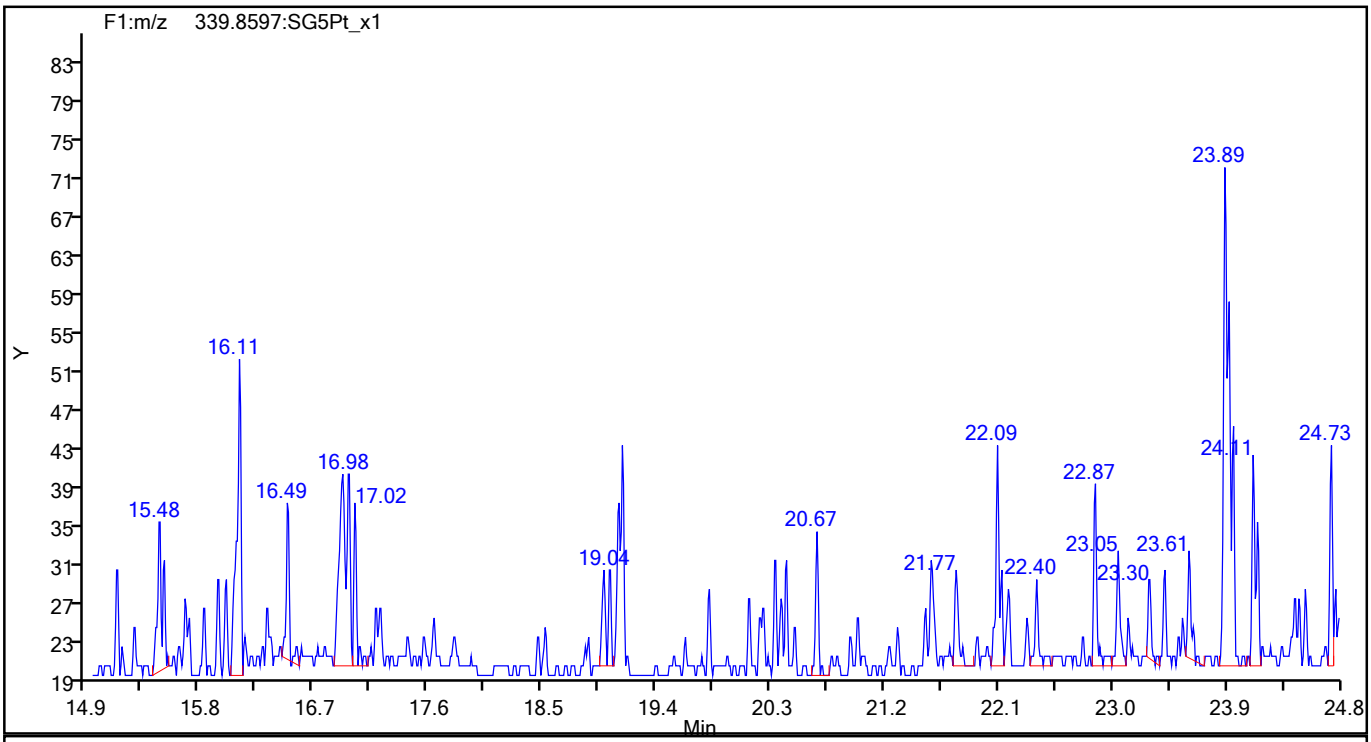

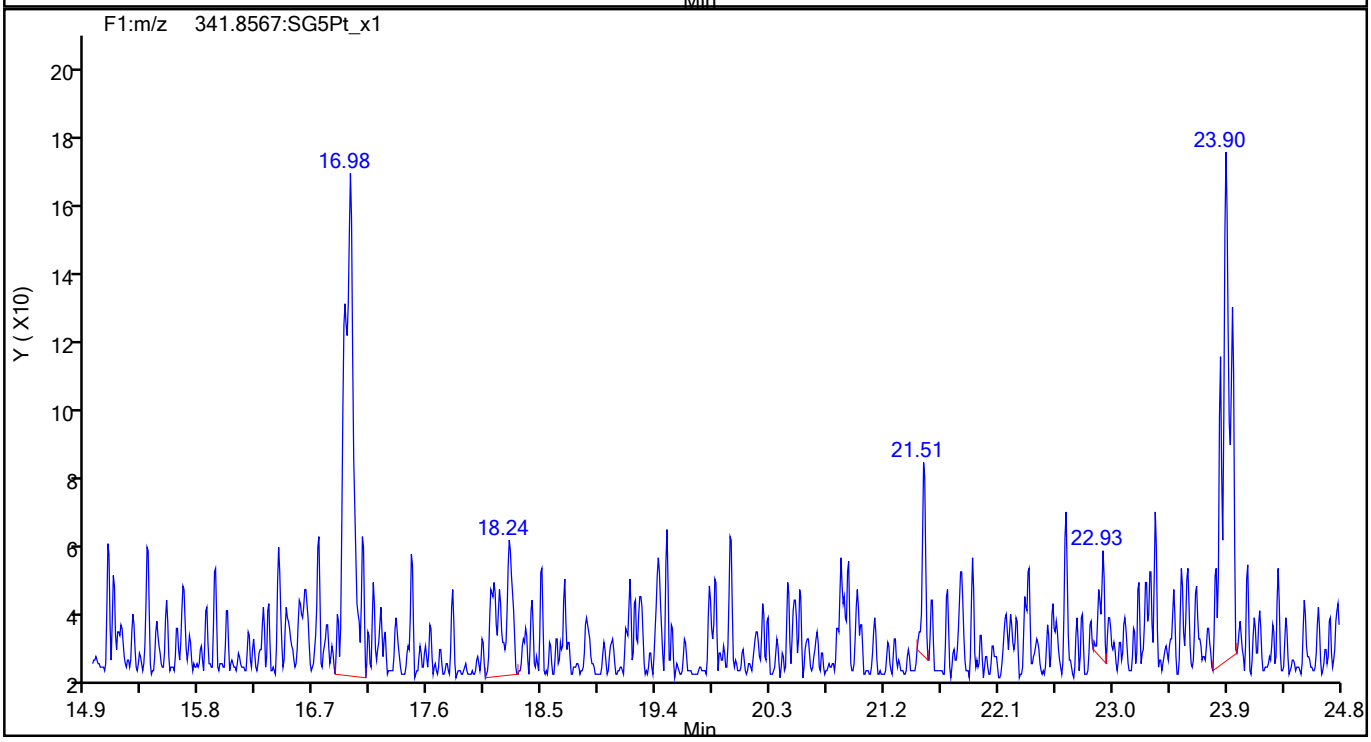

785892

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

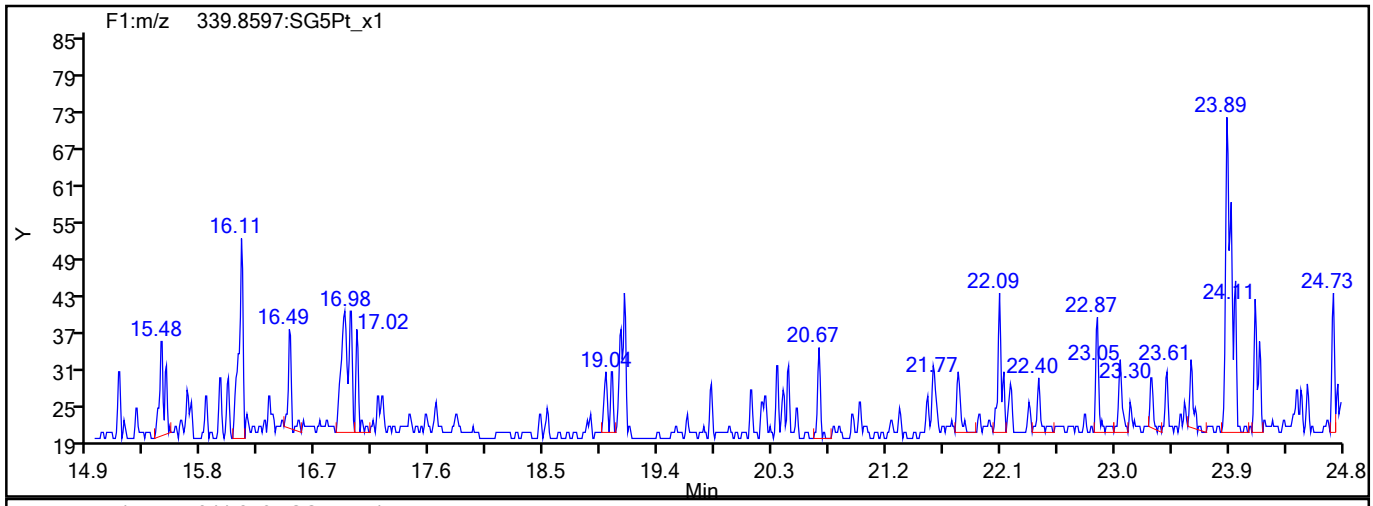

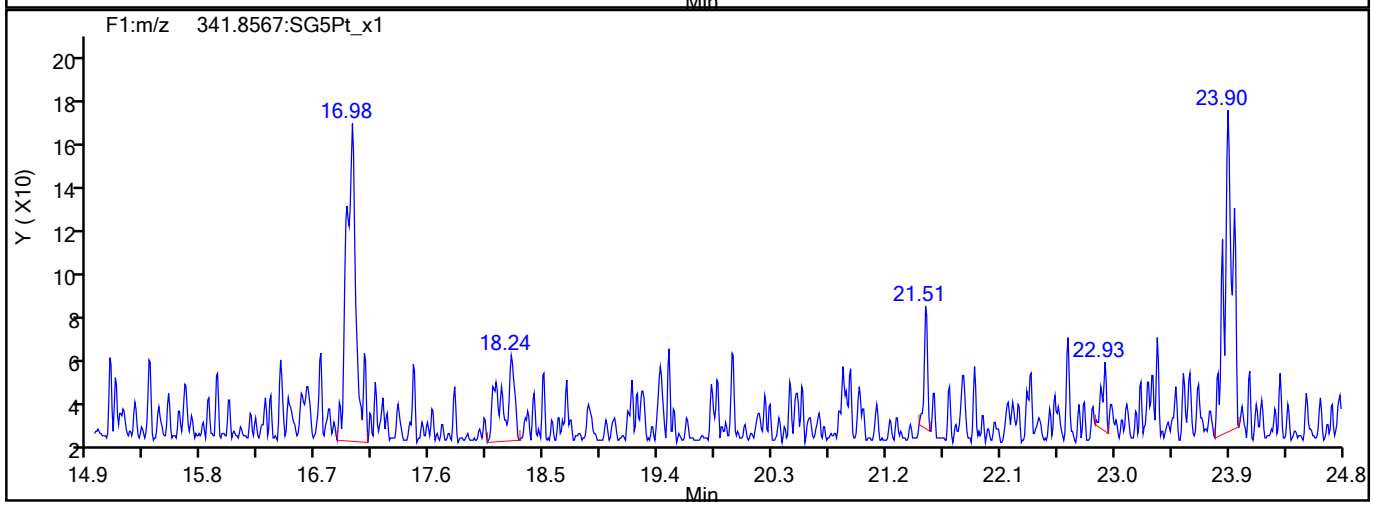

F1 PeCDFs Interference Mass

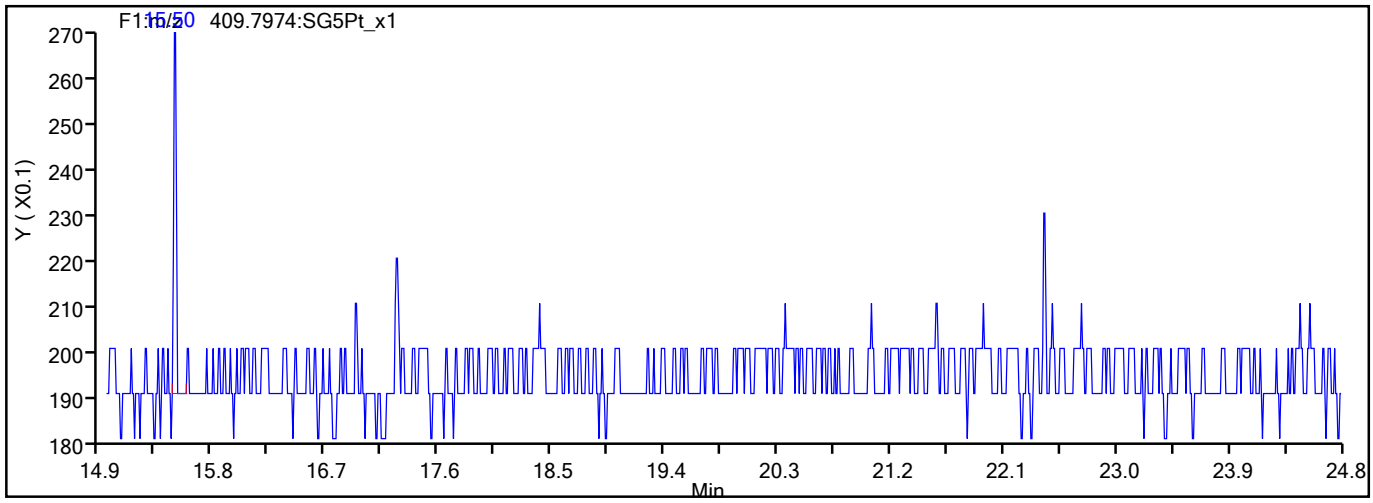

785893

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

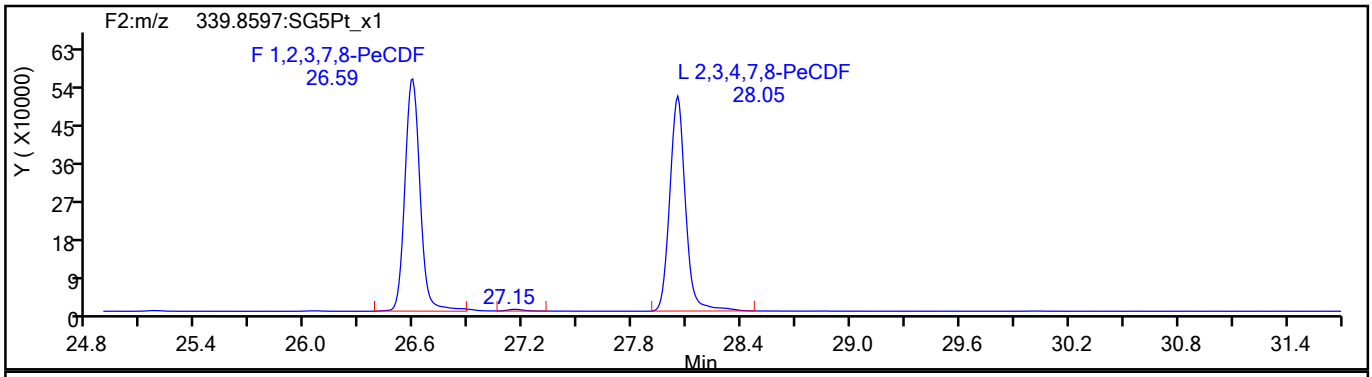

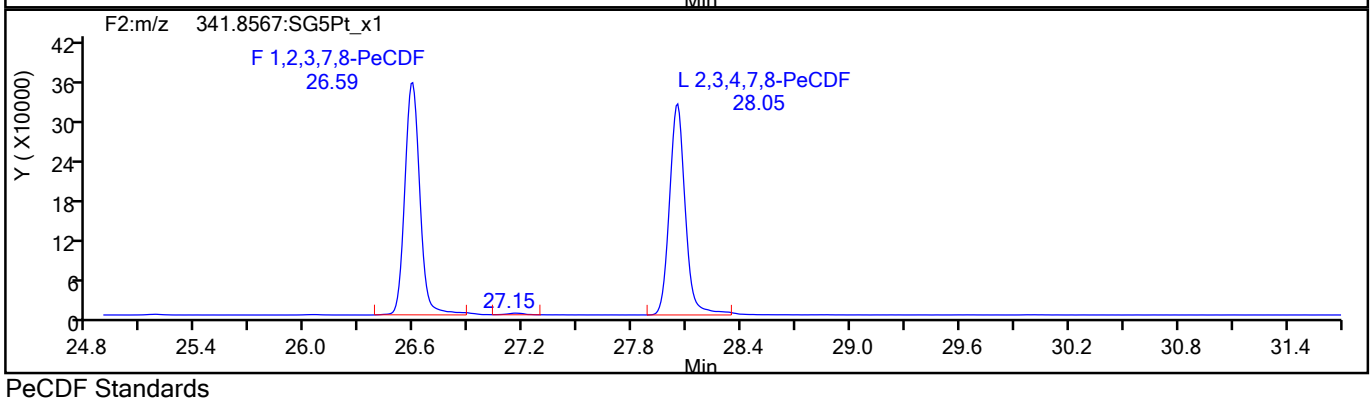

PeCDF Standards

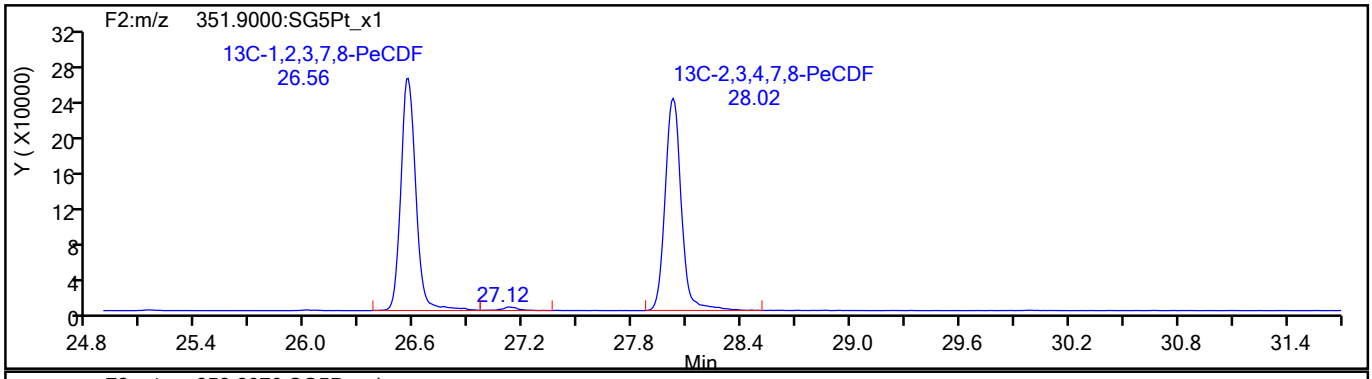

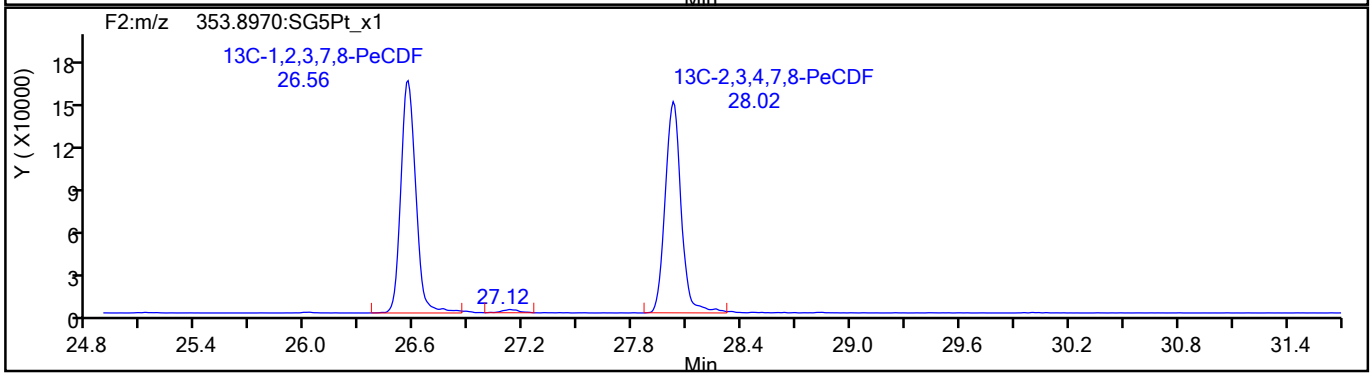

785894

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

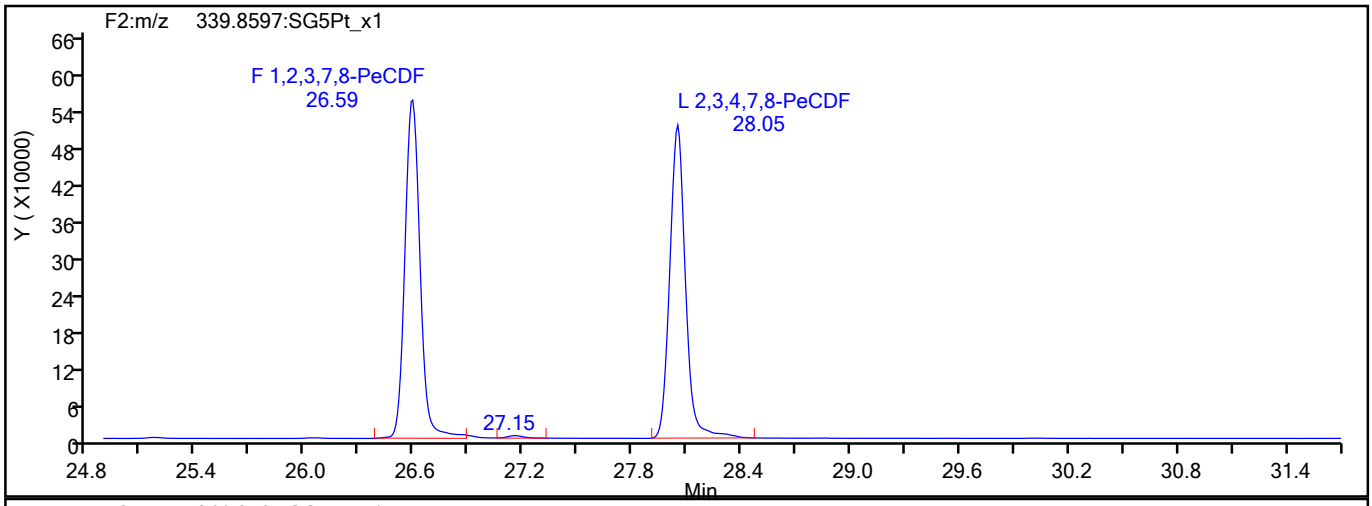

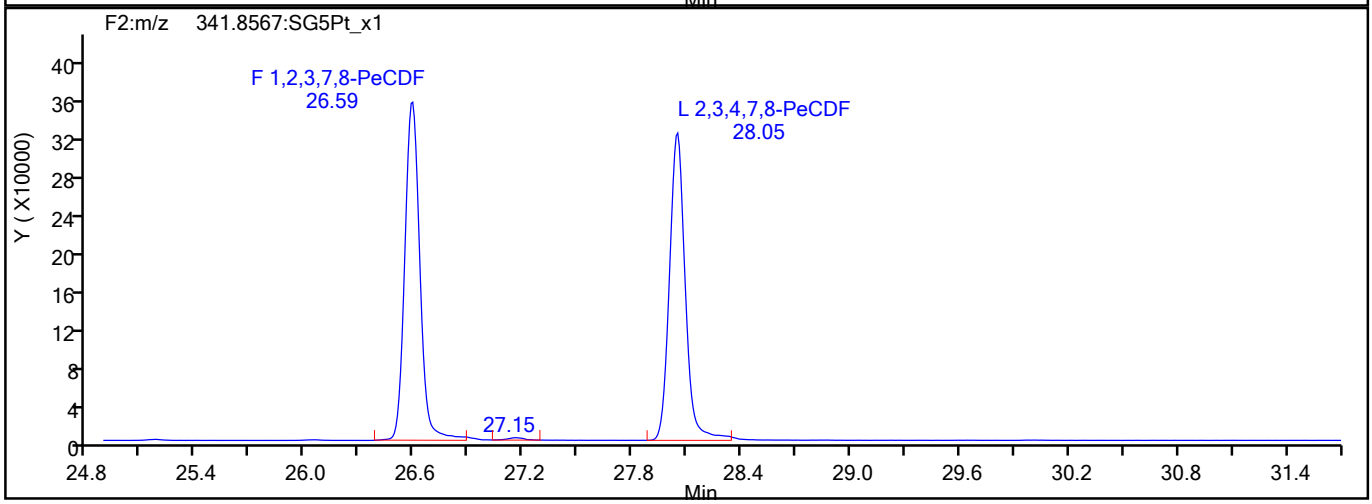

PeCDF Interference Mass

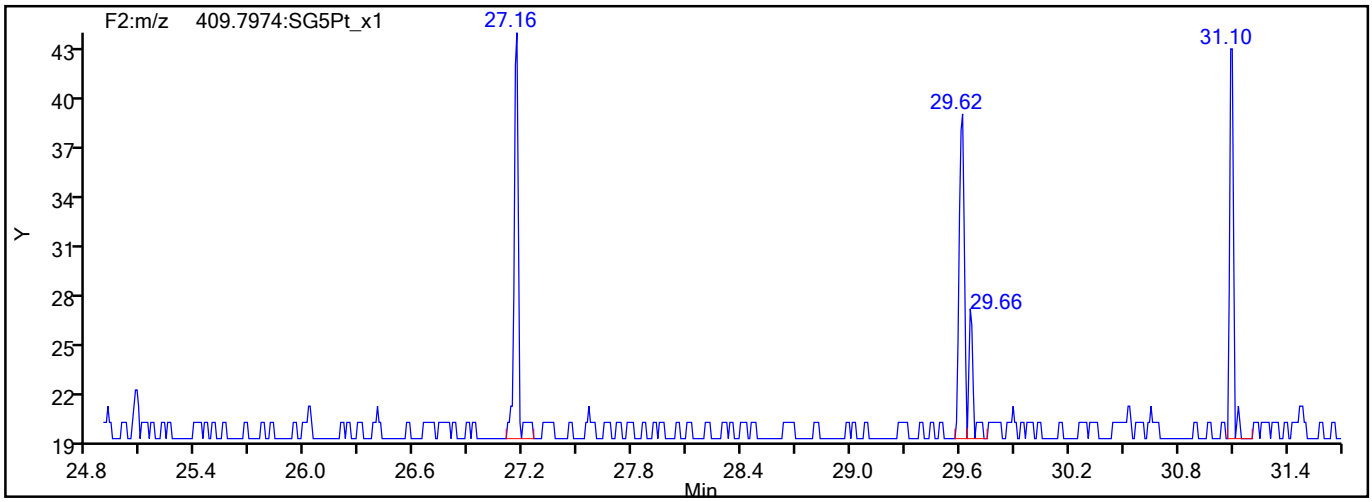

785895

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

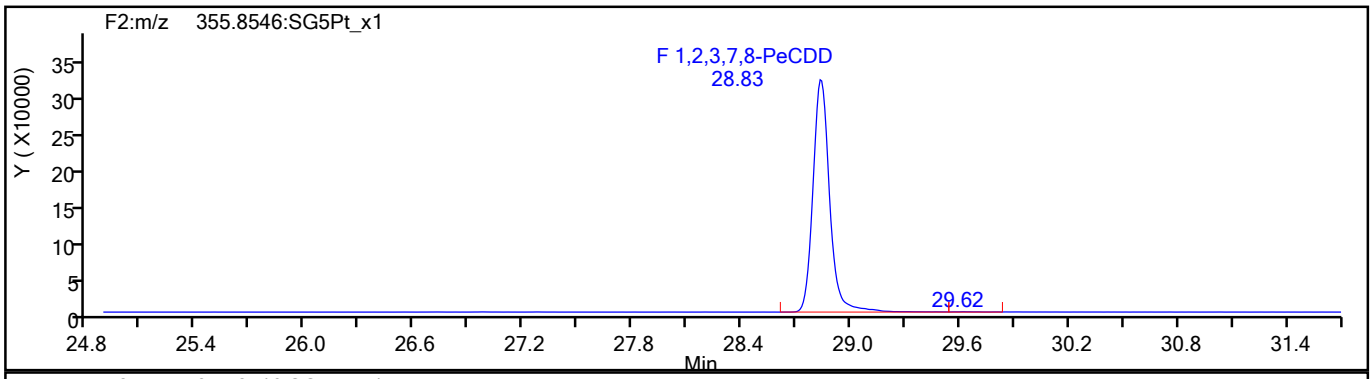

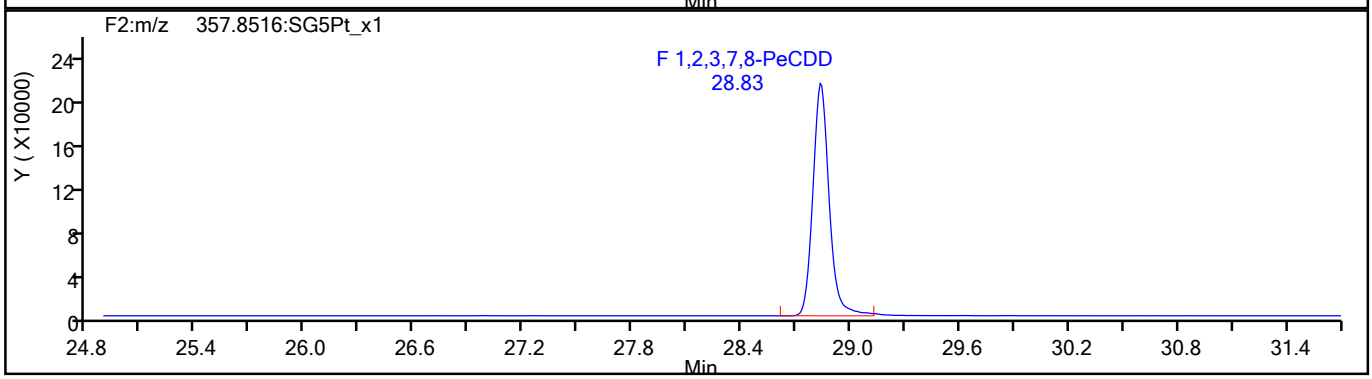

PeCDD Standards

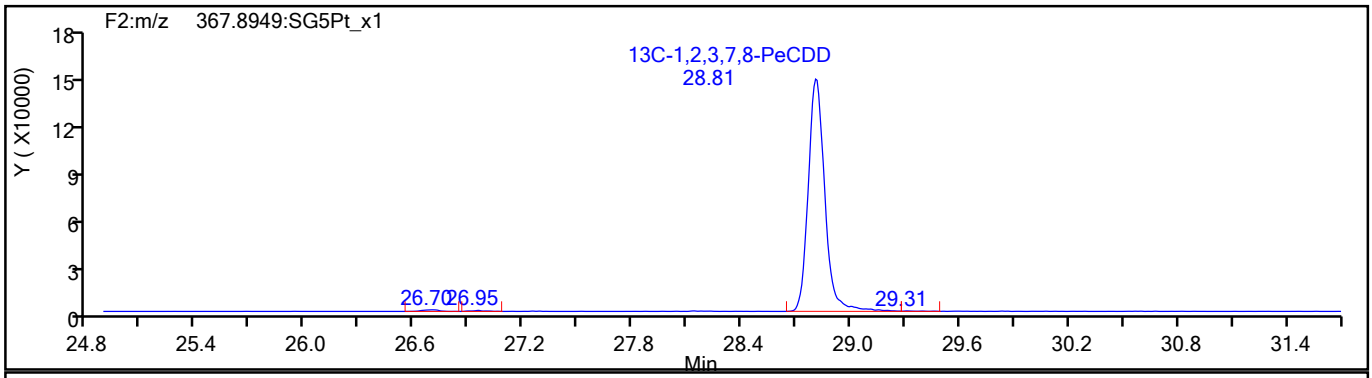

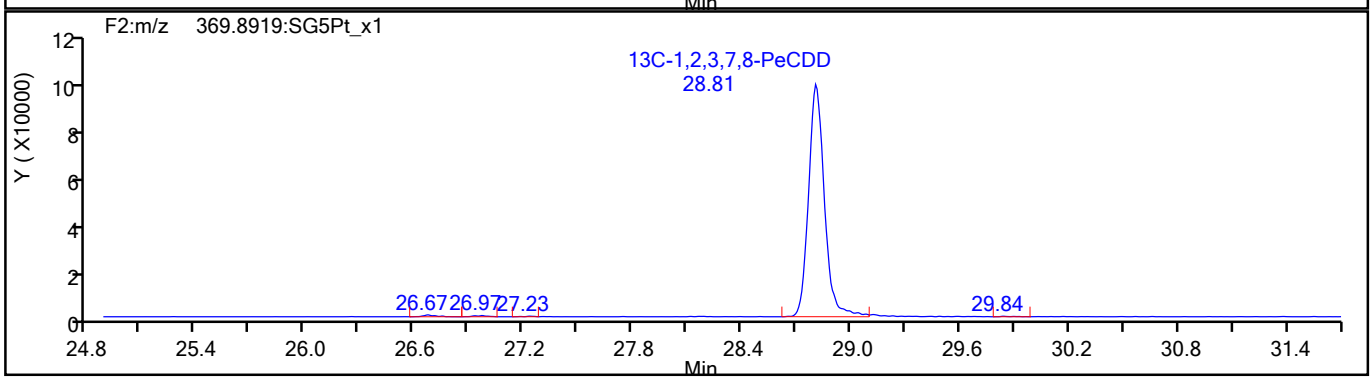

785896

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

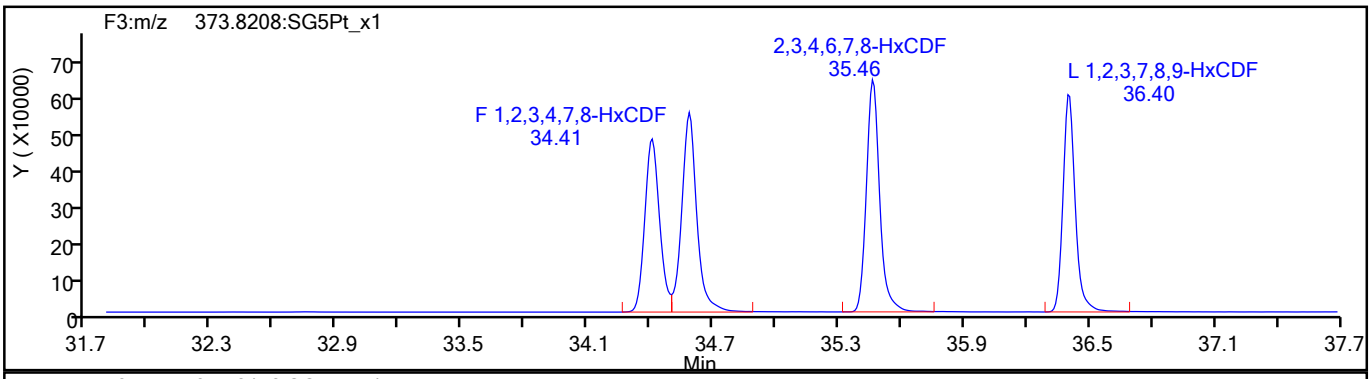

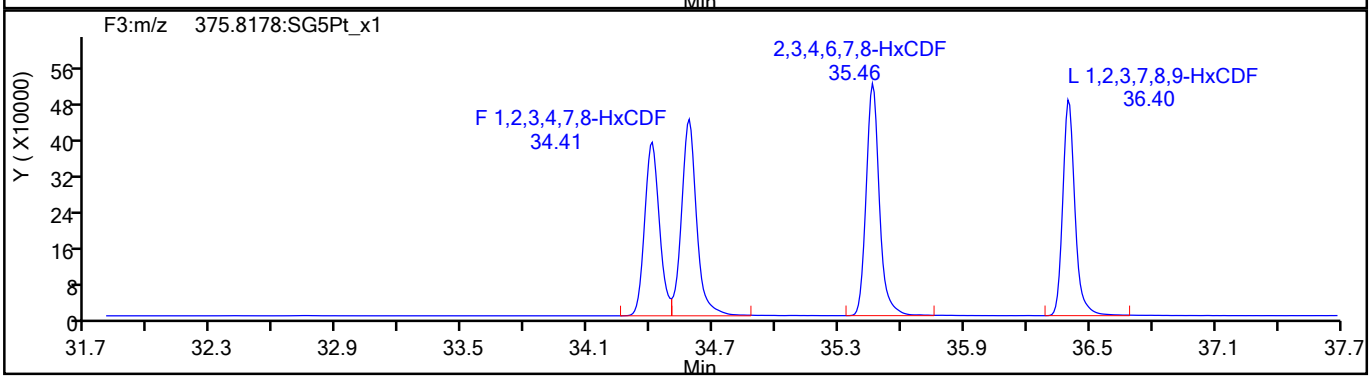

HxCDF Standards

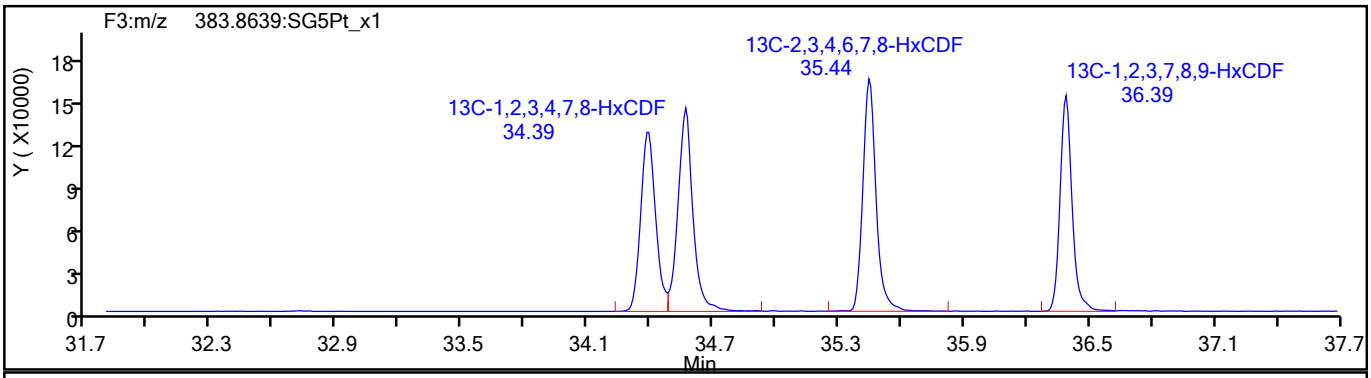

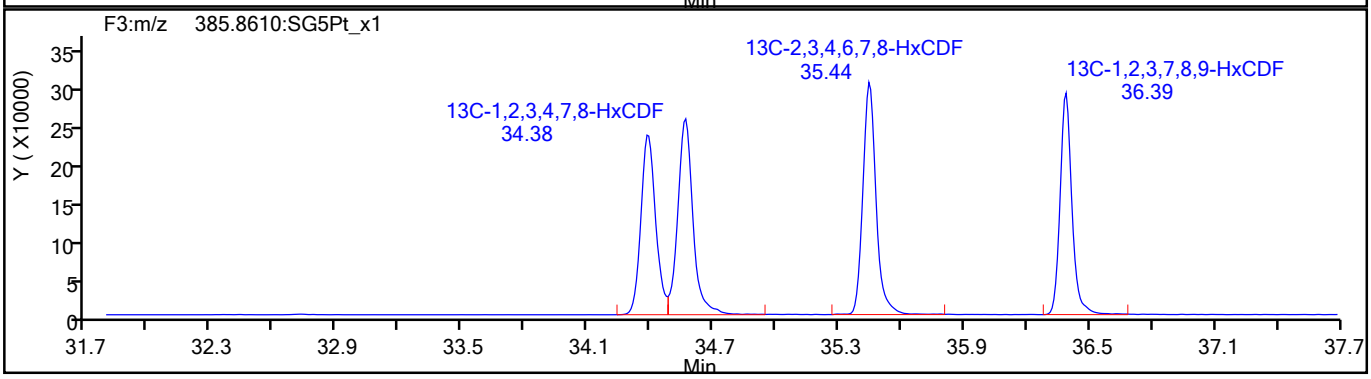

785897

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

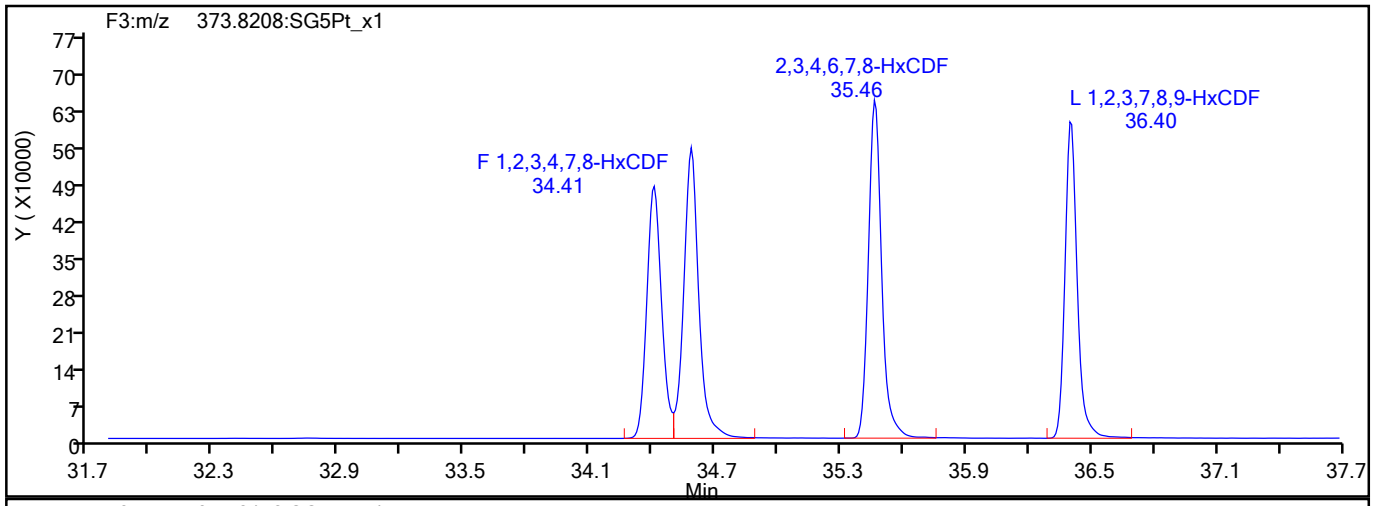

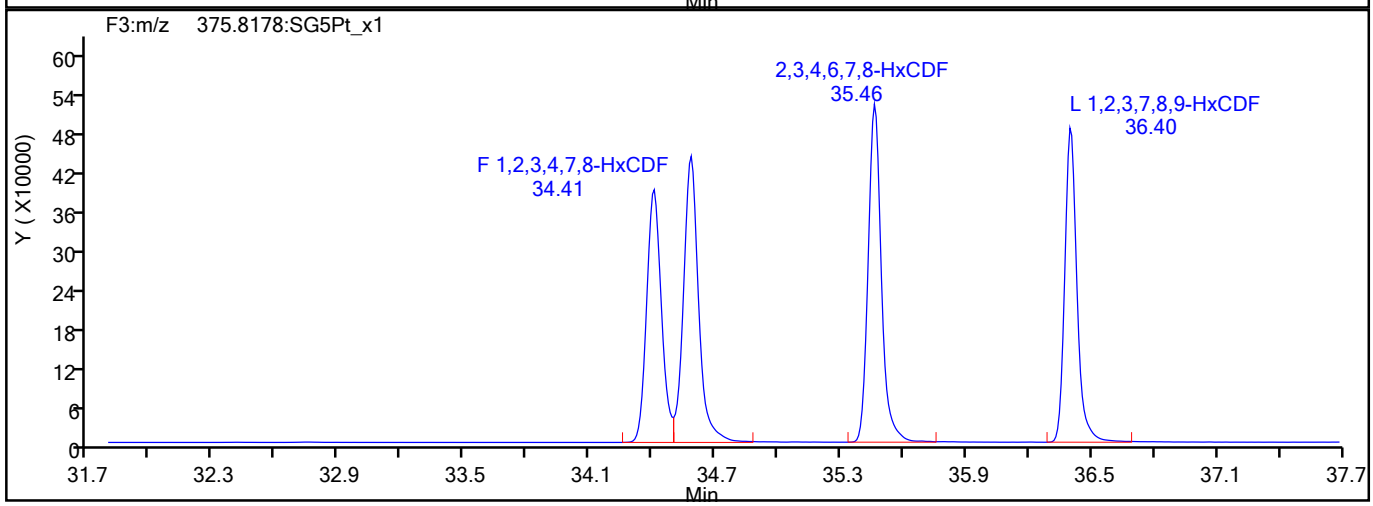

HxCDF Interference Mass

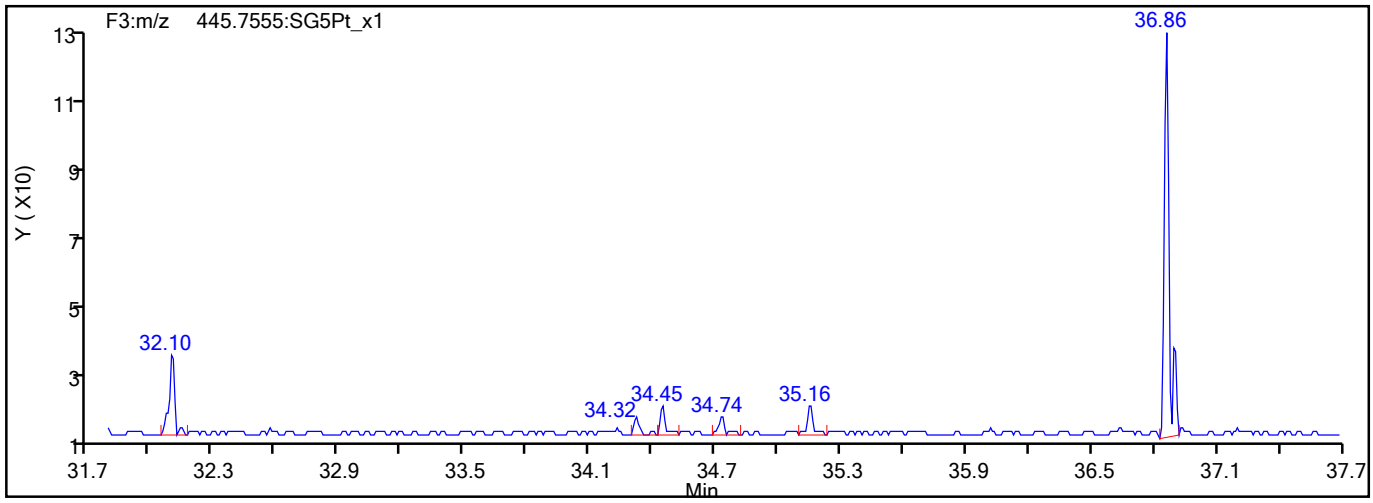

785898

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

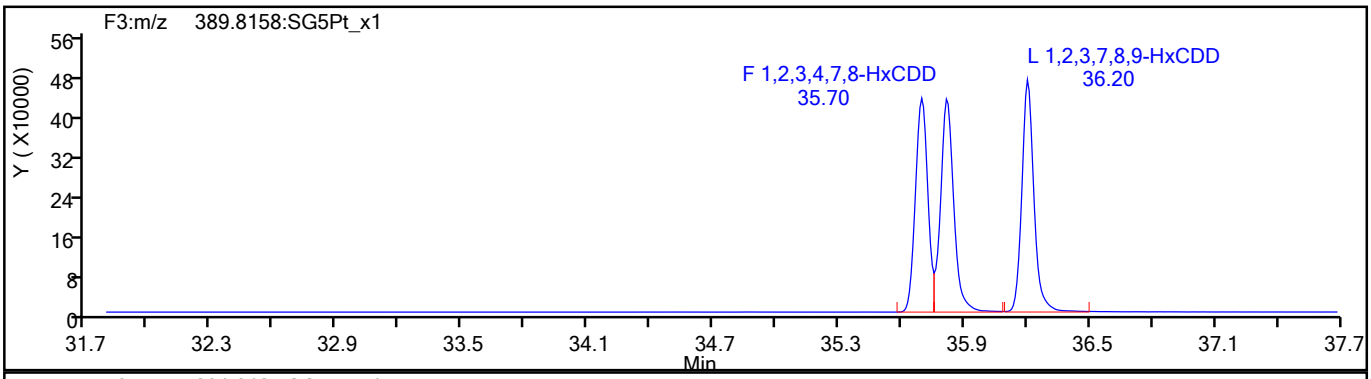

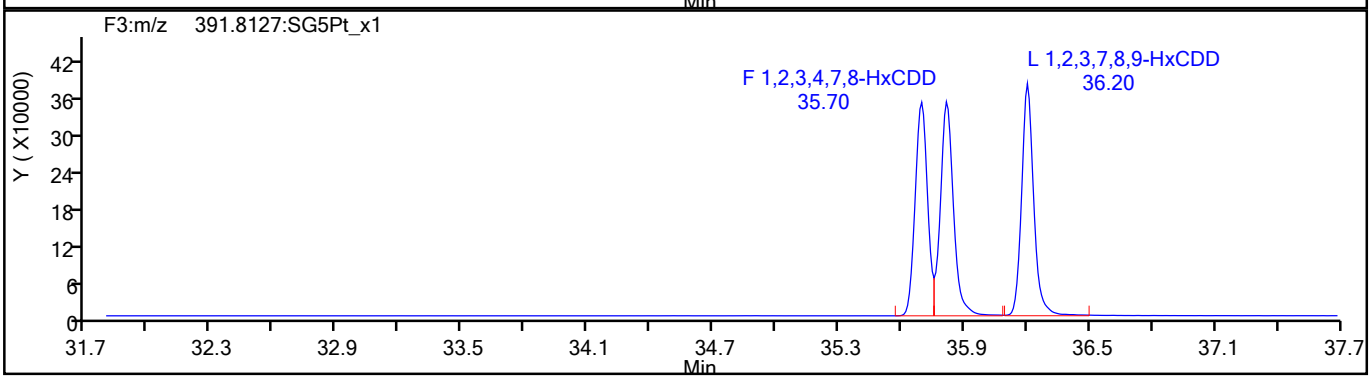

HxCDD Standards

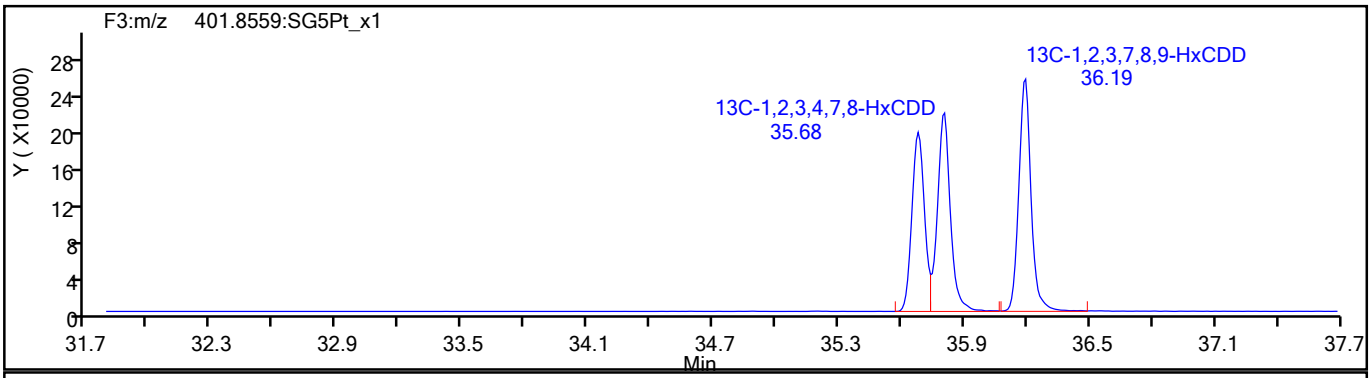

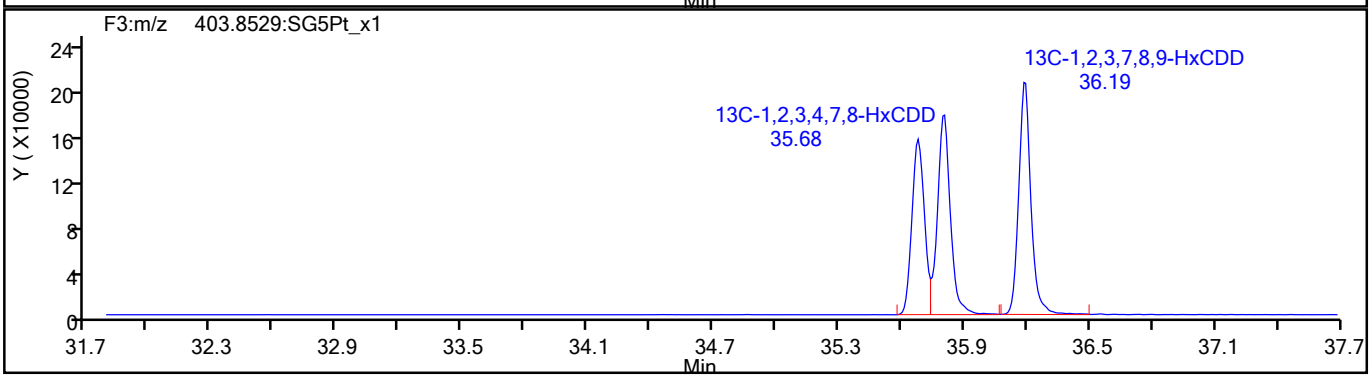

785899

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

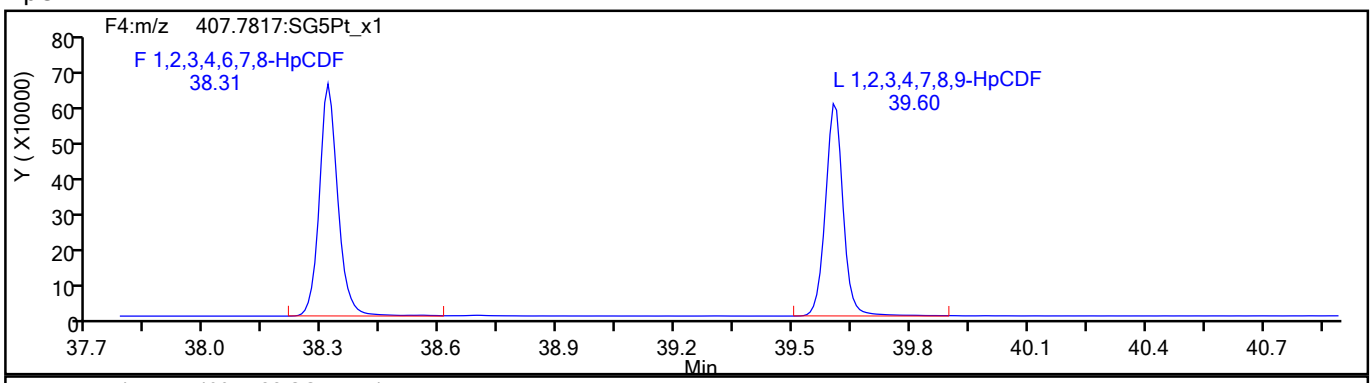

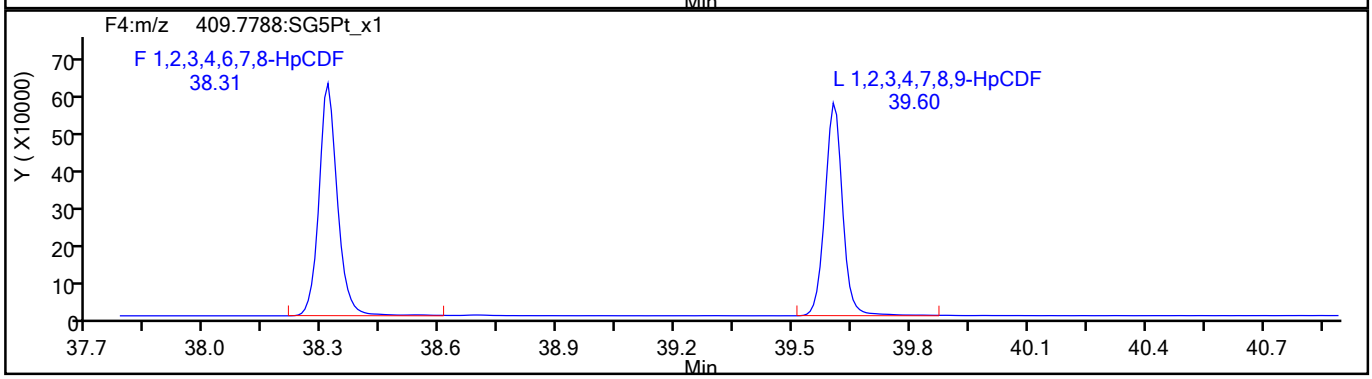

HpCDF Standards

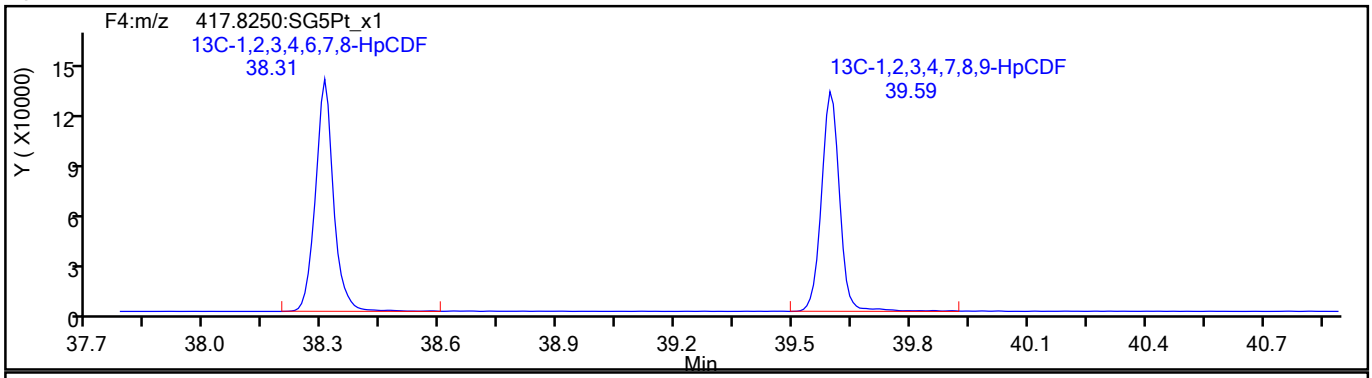

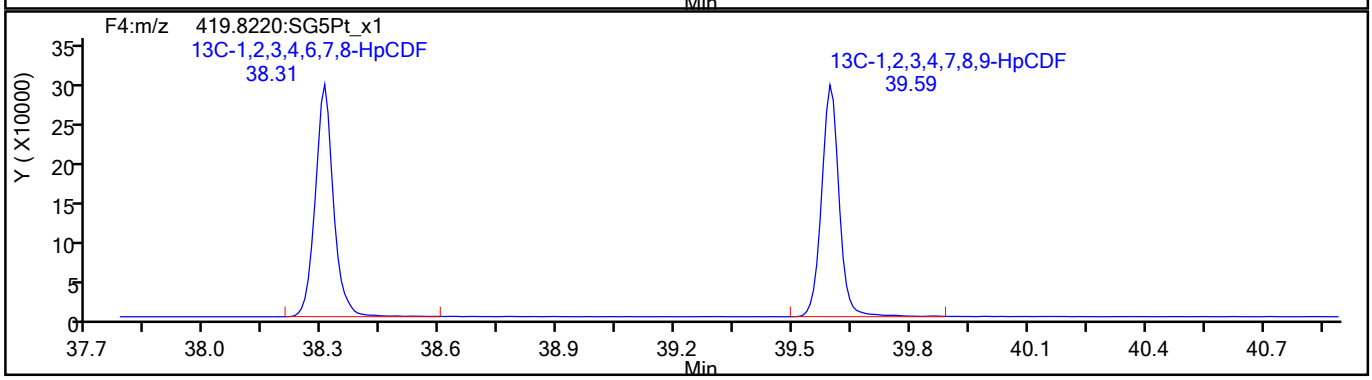

785900

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

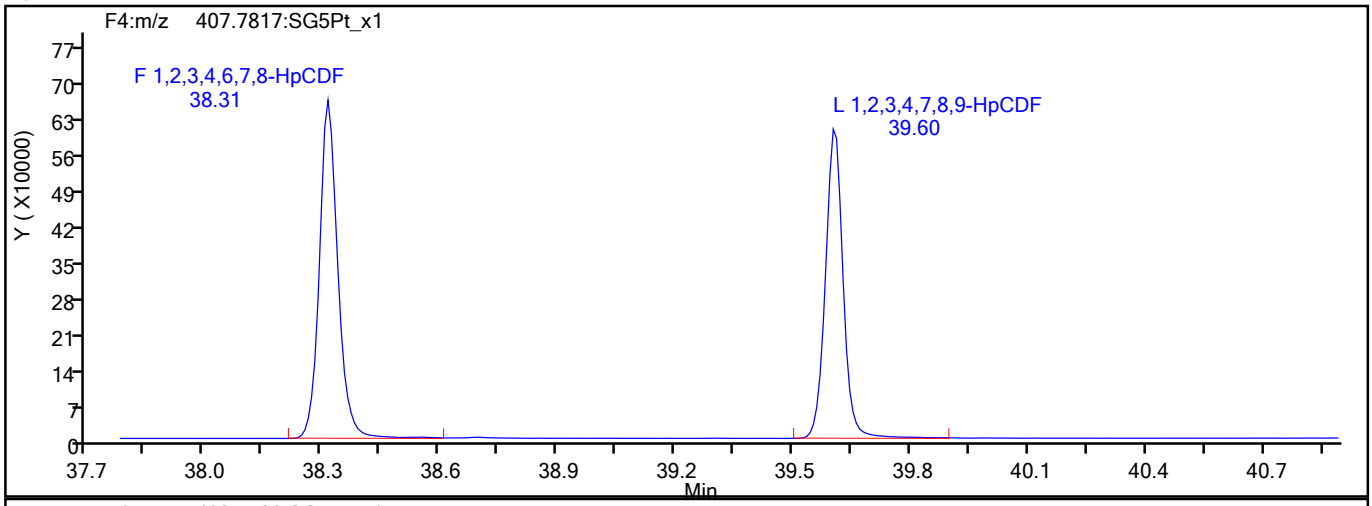

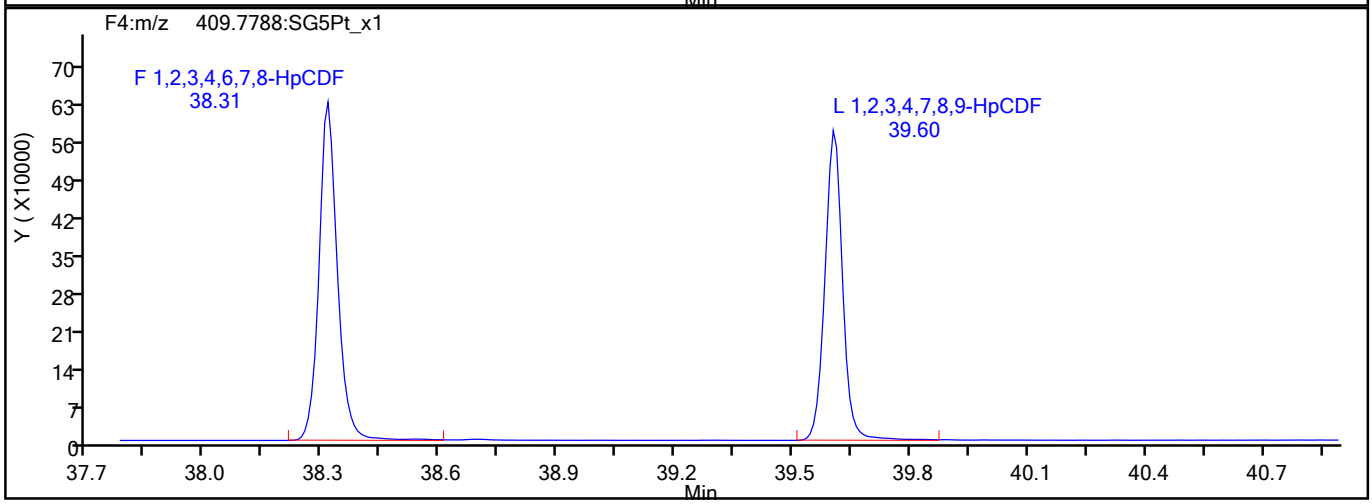

HpCDF Interference Mass

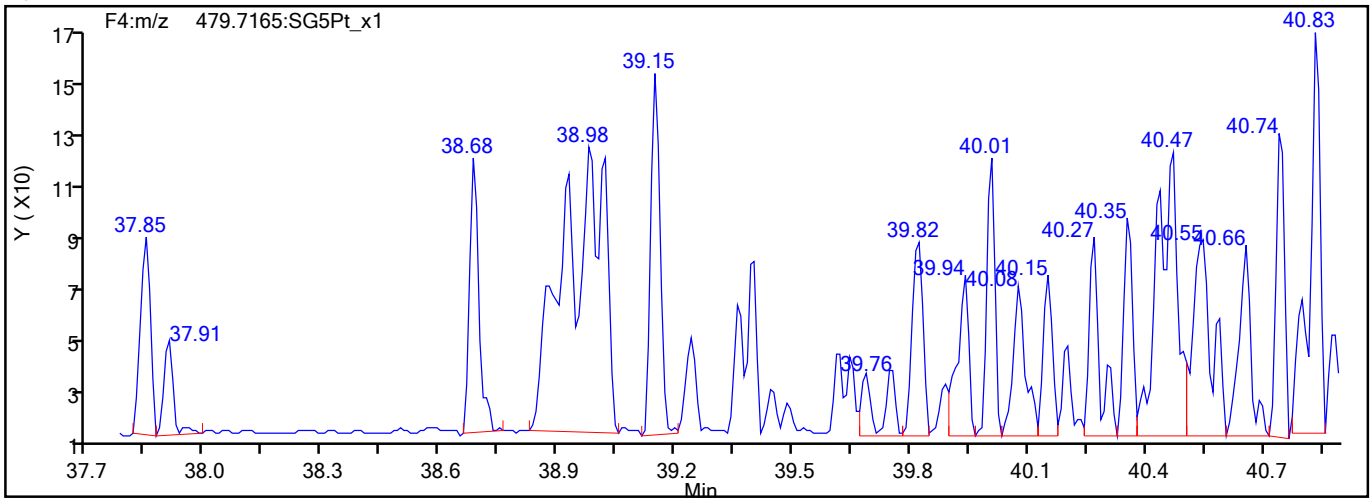

785901

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

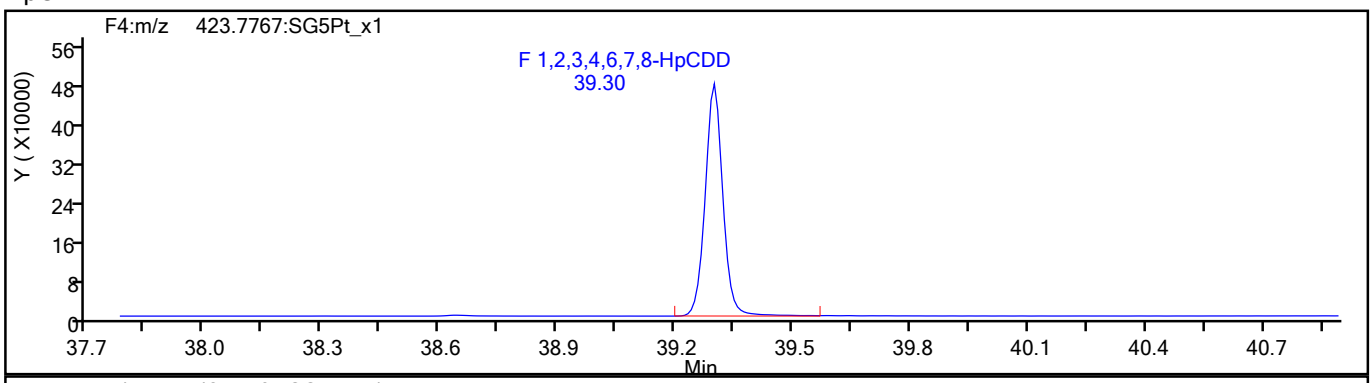

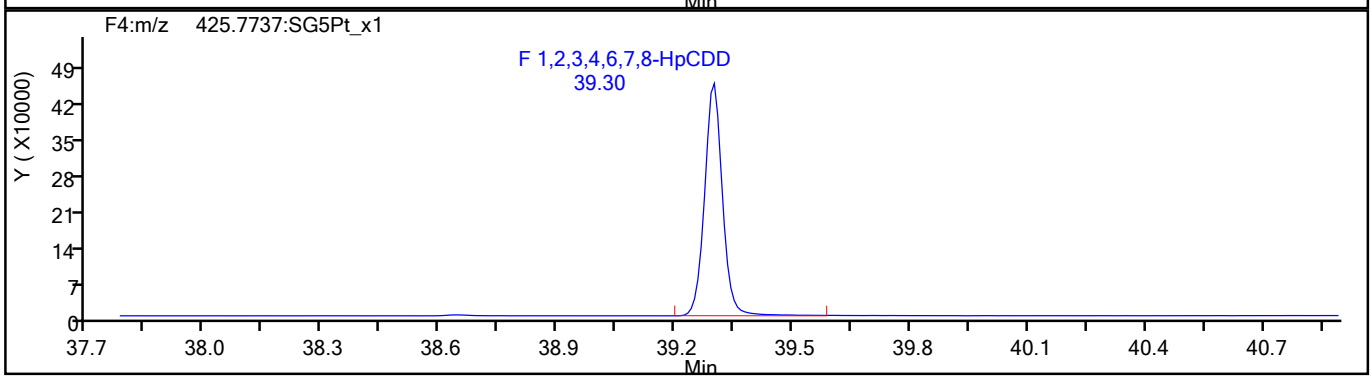

HpCDD Standards

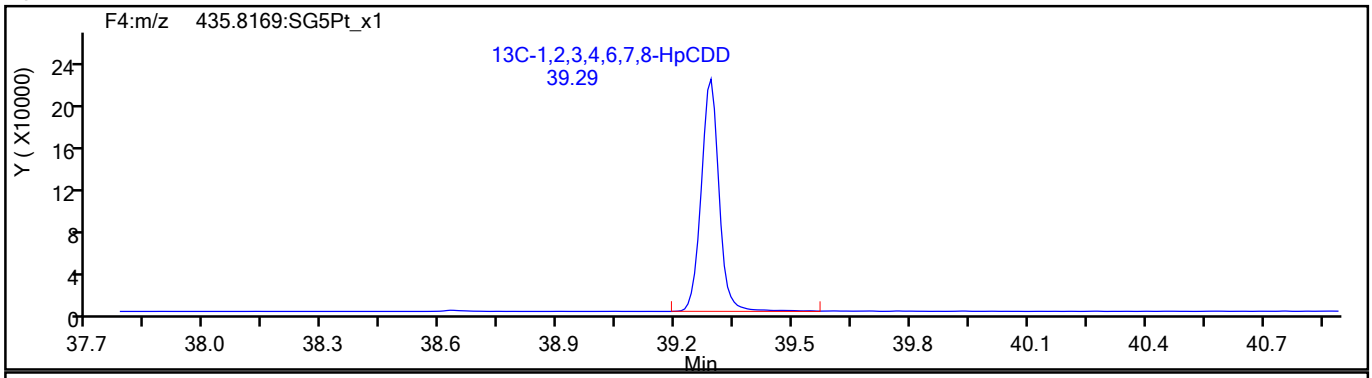

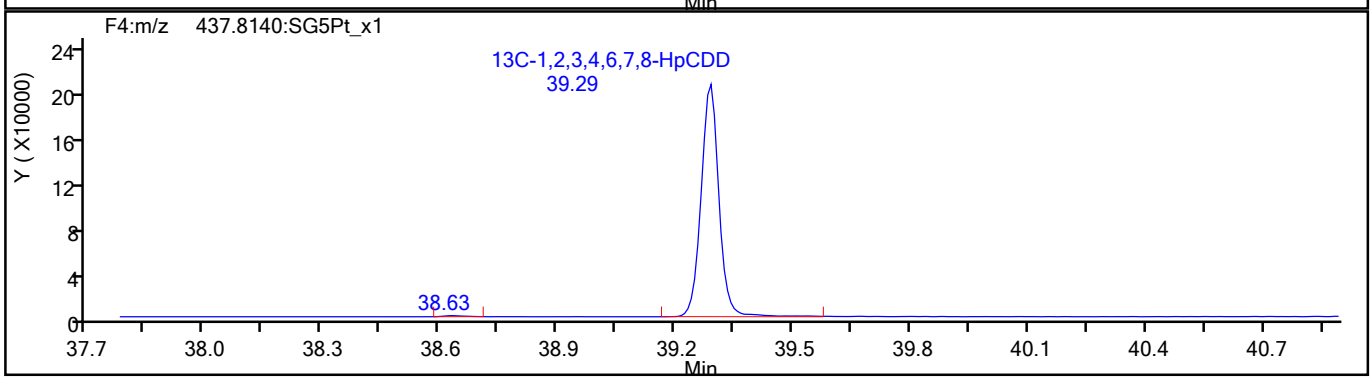

785902

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

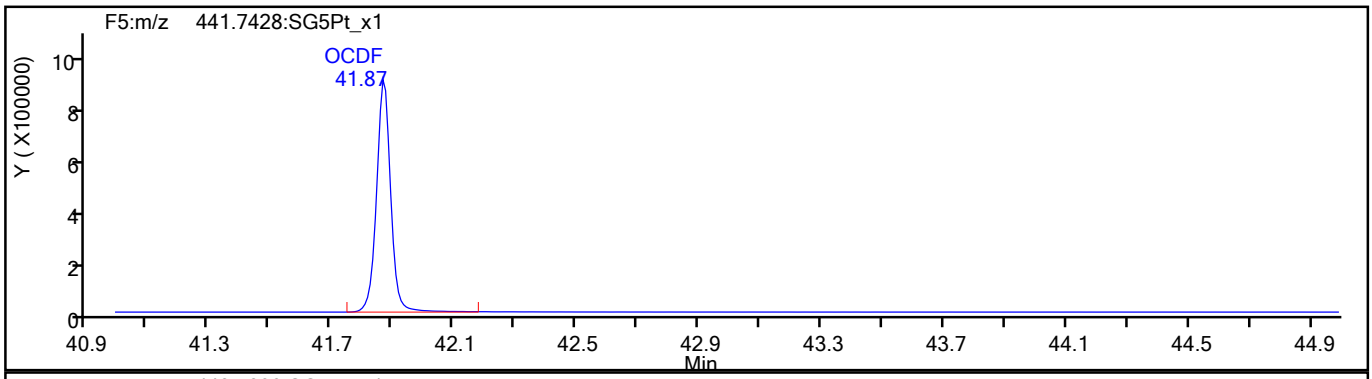

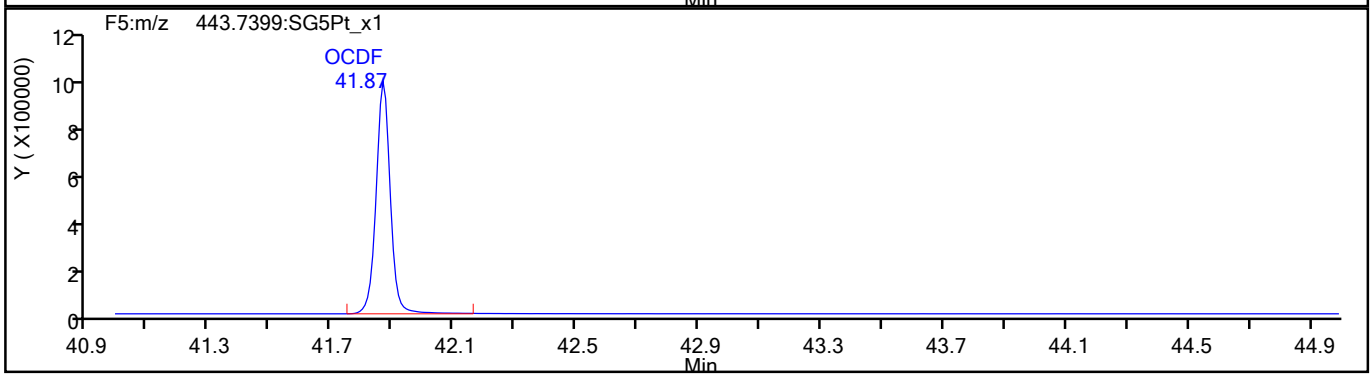

OCDF Standards

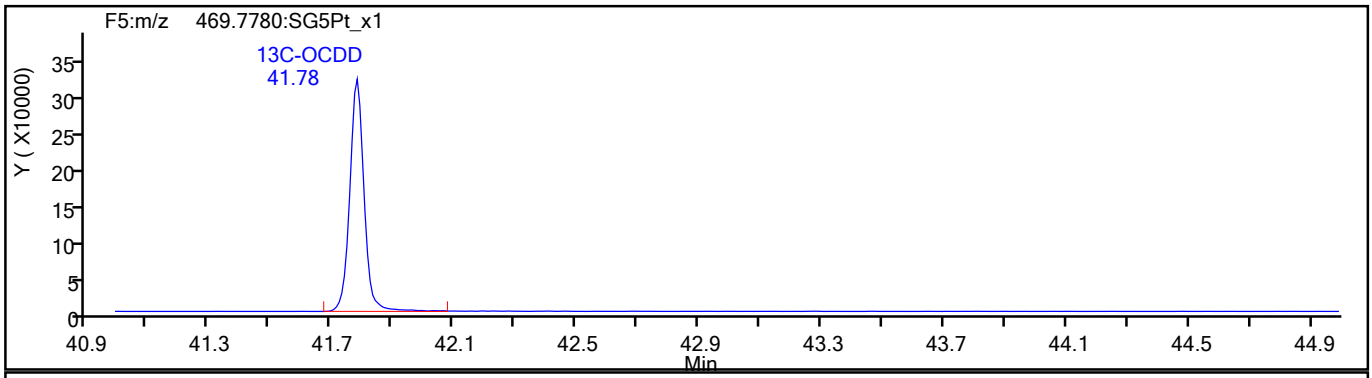

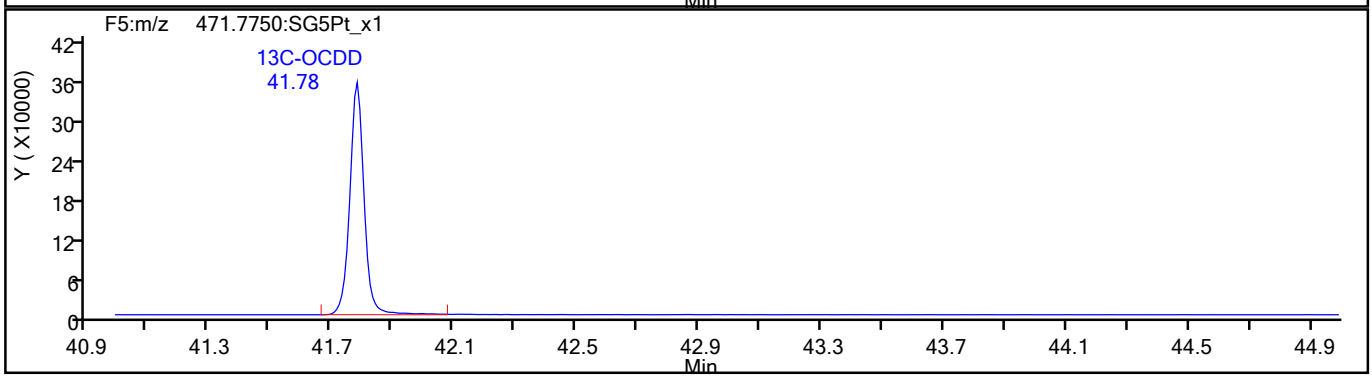

785903

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

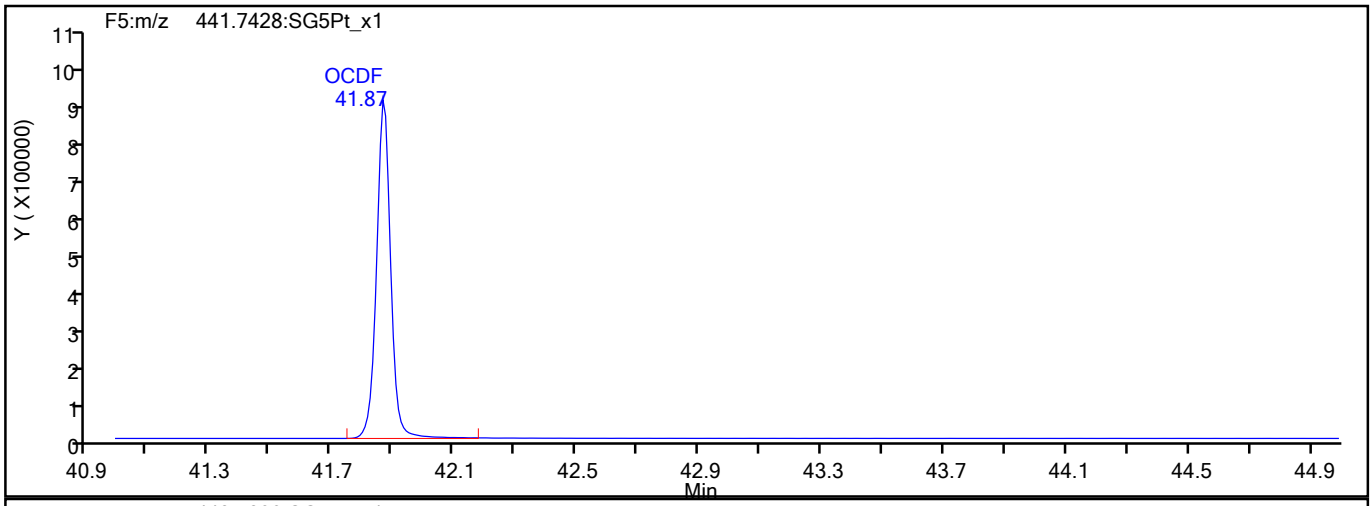

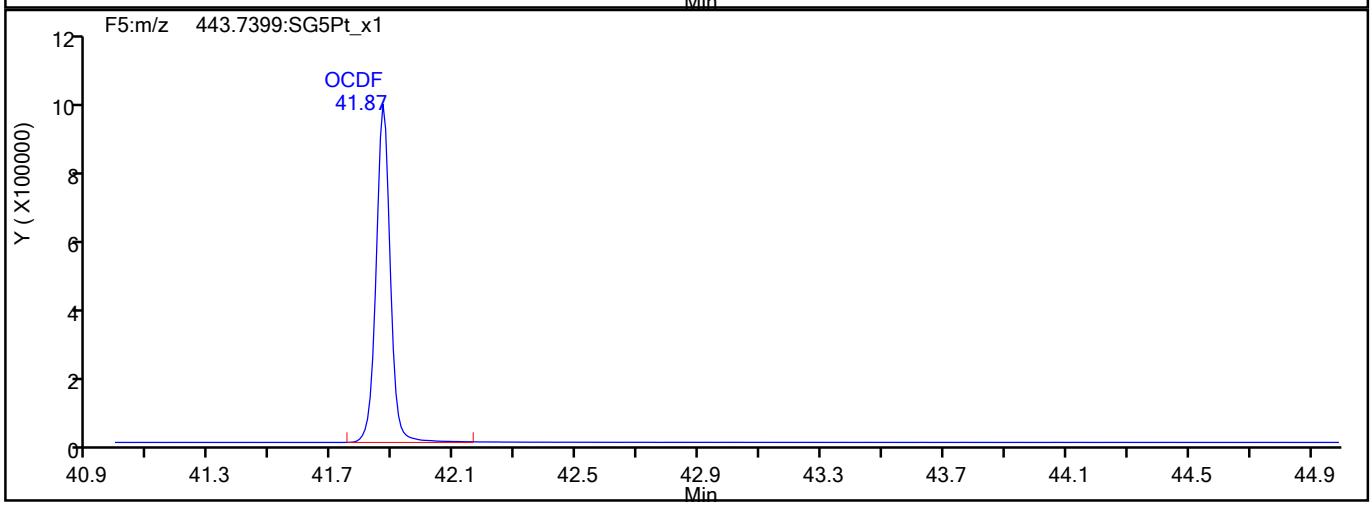

OCDF Interference Mass

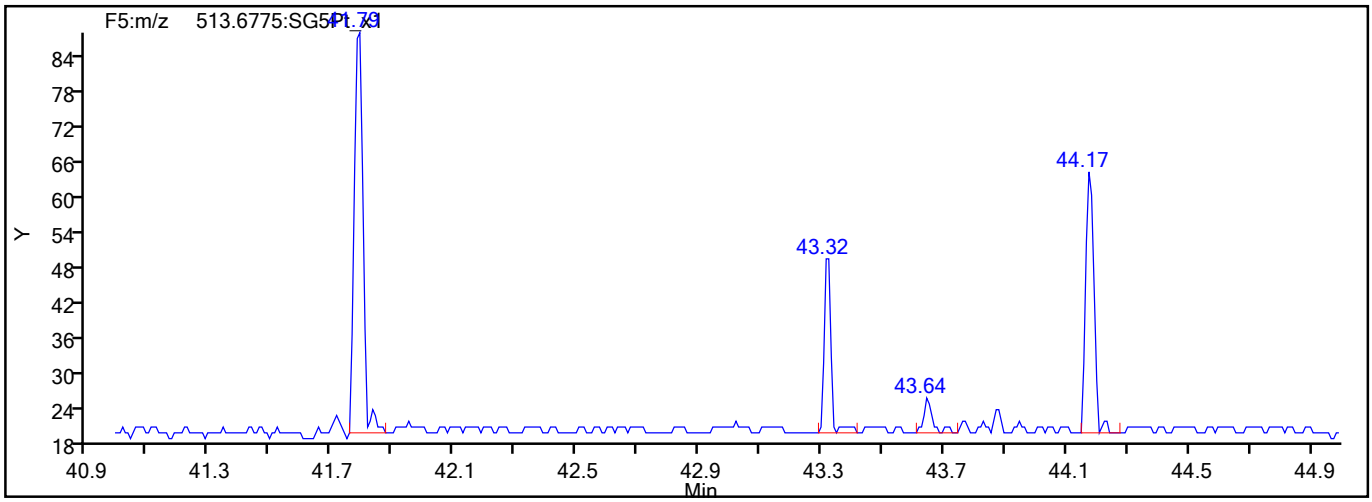

785904

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDD

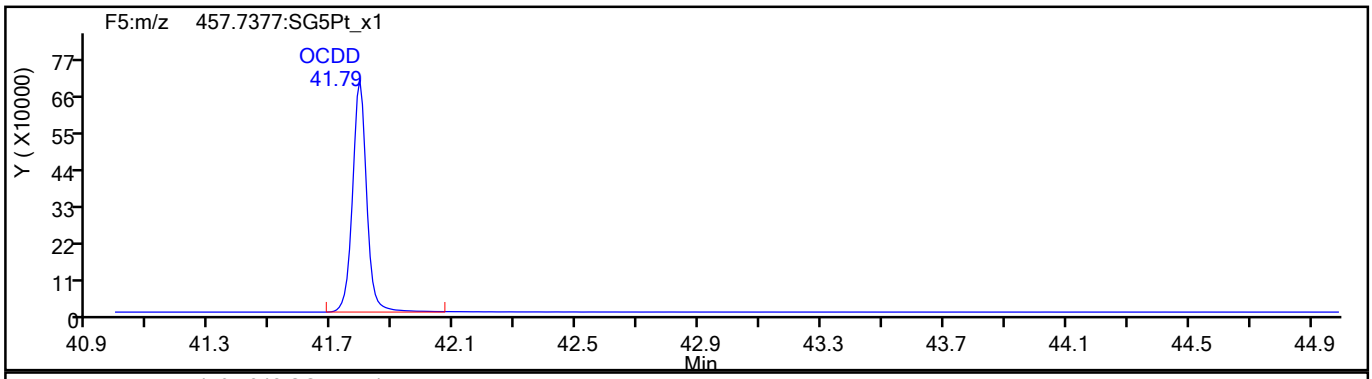

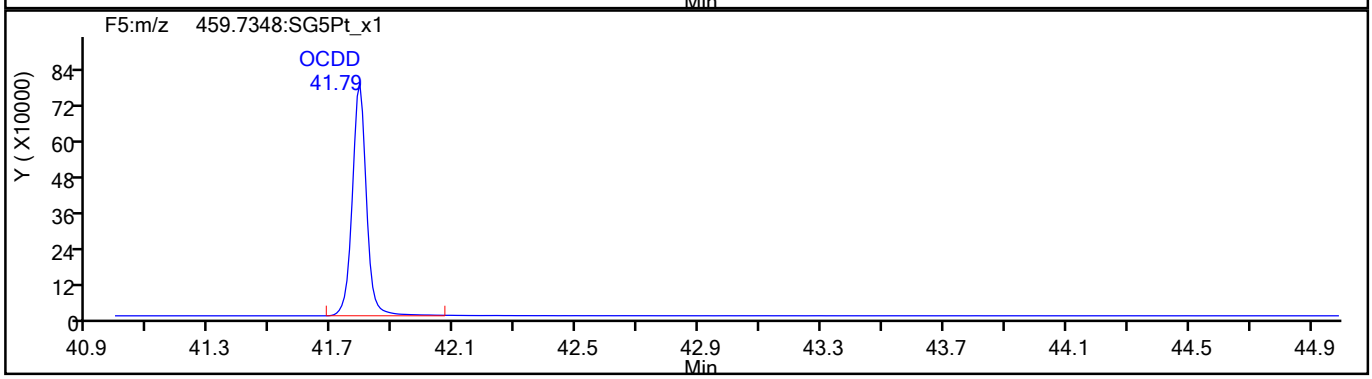

OCDD Standards

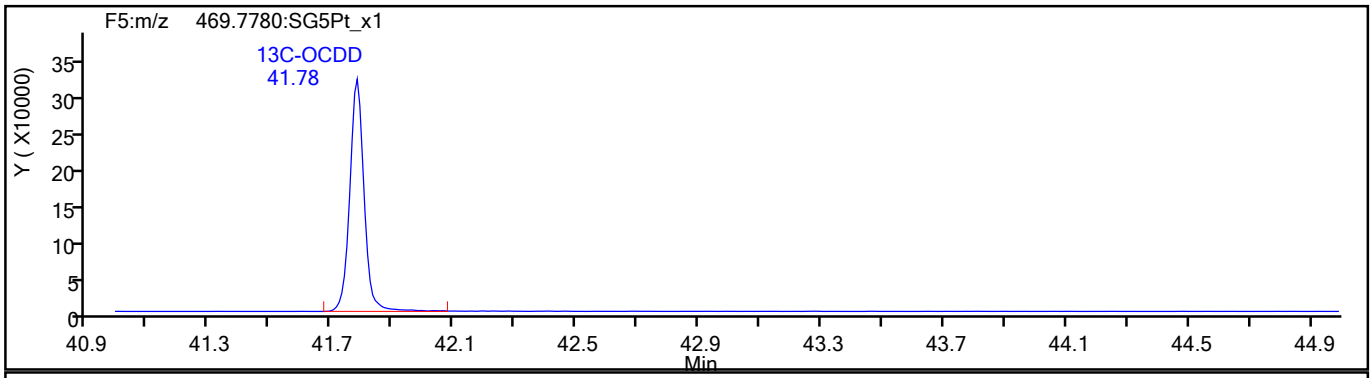

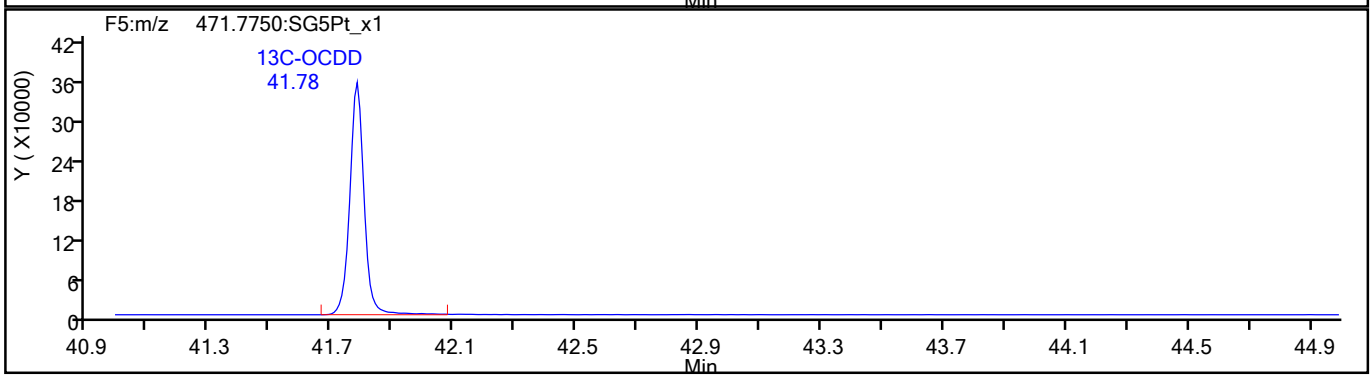

785905

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

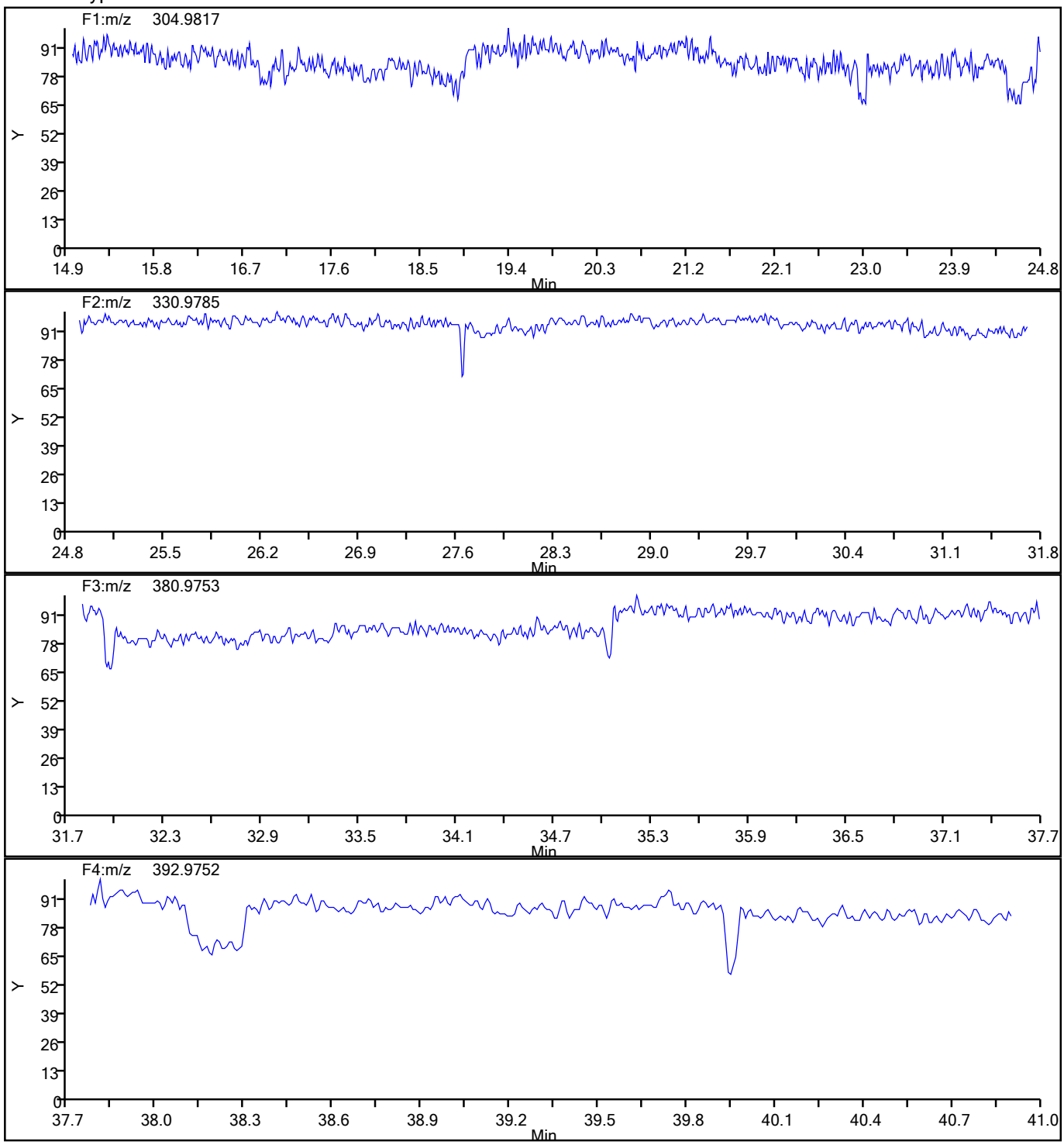

785906

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

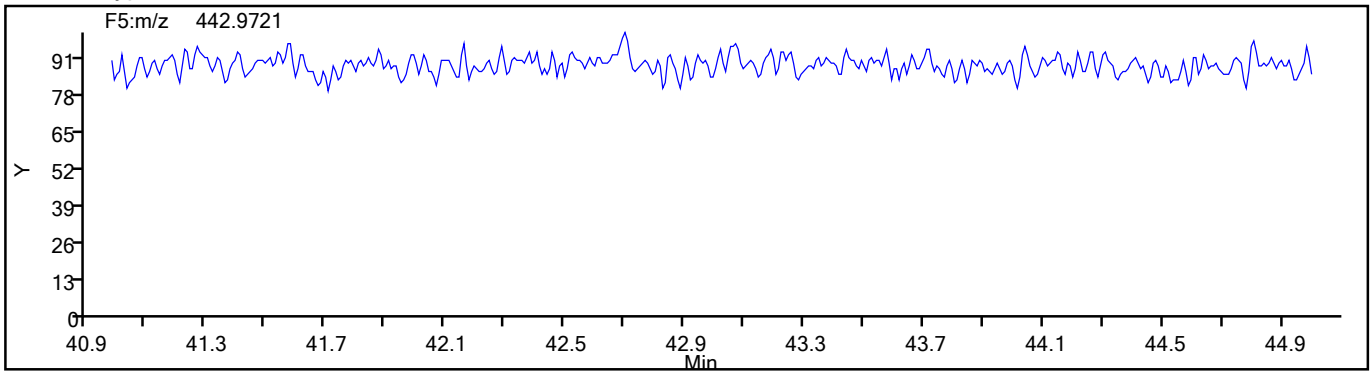

785907

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.544	2066088	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.616	2962515	0.80	1.3459	106.5	106.5	0.1844	0.1844	107	
2,3,7,8-TCDF	19.642	6137031	0.79	1.0802	191.8	191.8	0.1493	0.1493	95.89	
S Total TCDF					191.8	191.8	0.1493	0.1493		
D 13C-2,3,7,8-TCDD	20.913	2014532	0.80	0.9317	104.7	104.7	0.1455	0.1455	105	
$ 37Cl4-2,3,7,8-TCDD	20.939	4287059		1.0083	205.8	205.8	0.0958	0.0958	103	
2,3,7,8-TCDD	20.939	4286034	0.79	1.0753	197.8	197.8	0.1041	0.1041	98.92	
S Total TCDD					197.8	197.8	0.1041	0.1041		
D 13C-1,2,3,7,8-PeCDF	26.552	2574521	1.60	1.1405	109.3	109.3	0.2956	0.2956	109	
1,2,3,7,8-PeCDF	26.578	26032333	1.55	1.0543	959.1	959.1	2.101	2.101	95.91	
D 13C-2,3,4,7,8-PeCDF	28.002	2584740	1.63	1.1253	111.2	111.2	0.2996	0.2996	111	
2,3,4,7,8-PeCDF	28.028	24861382	1.54	1.0079	954.4	954.4	2.393	2.393	95.44	
S Total PeCDF					1913.5	1913.5	2.247	2.247		
D 13C-1,2,3,7,8-PeCDD	28.795	1602880	1.57	0.7165	108.3	108.3	0.1169	0.1169	108	
1,2,3,7,8-PeCDD	28.820	16645947	1.55	1.0465	992.4	992.4	0.3154	0.3154	99.24	
S Total PeCDD					992.4	992.4	0.3154	0.3154		
D 13C-1,2,3,4,7,8-HxCDF	34.370	1968615	0.53	0.9648	104.2	104.2	0.2764	0.2764	104	
1,2,3,4,7,8-HxCDF	34.404	21902419	1.26	1.1474	969.7	969.7	2.964	2.964	96.97	
D 13C-1,2,3,6,7,8-HxCDF	34.555	2283961	0.53	1.0708	109.0	109.0	0.2490	0.2490	109	
1,2,3,6,7,8-HxCDF	34.572	26721257	1.24	1.2178	960.7	960.7	2.280	2.280	96.07	
D 13C-2,3,4,6,7,8-HxCDF	35.432	2190509	0.53	1.0413	107.5	107.5	0.2561	0.2561	107	
2,3,4,6,7,8-HxCDF	35.449	25388405	1.26	1.2145	954.3	954.3	2.195	2.195	95.43	
D 13C-1,2,3,7,8,9-HxCDF	36.376	1895740	0.54	0.9731	99.5	99.5	0.2741	0.2741	99.52	
1,2,3,7,8,9-HxCDF	36.393	22553786	1.25	1.2401	959.4	959.4	2.206	2.206	95.94	
S Total HxCDF					3844.1	3844.1	2.411	2.411		
* 13C-1,2,3,7,8,9-HxCDD	36.182	1957513	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.668	1539784	1.30	0.7587	103.7	103.7	0.1260	0.1260	104	
1,2,3,4,7,8-HxCDD	35.685	15558498	1.24	1.0608	952.5	952.5	0.9710	0.9710	95.25	
D 13C-1,2,3,6,7,8-HxCDD	35.794	1741498	1.29	0.8593	103.5	103.5	0.1112	0.1112	104	
1,2,3,6,7,8-HxCDD	35.811	16661405	1.25	0.9933	963.1	963.1	0.9604	0.9604	96.31	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.198	17279185	1.24	1.1094	949.3	949.3	0.8929	0.8929	94.93	
S Total HxCDD					2865.0	2865.0	0.9414	0.9414		
D 13C-1,2,3,4,6,7,8-HpCDF	38.292	1546113	0.45	0.7359	107.3	107.3	0.2883	0.2883	107	
1,2,3,4,6,7,8-HpCDF	38.309	21181967	1.05	1.4421	950.0	950.0	2.277	2.277	95.00	
D 13C-1,2,3,4,7,8,9-HpCDF	39.591	1455766	0.46	0.6854	108.5	108.5	0.3095	0.3095	109	
1,2,3,4,7,8,9-HpCDF	39.600	17812004	1.04	1.3092	934.6	934.6	2.410	2.410	93.46	
S Total HpCDF					1884.6	1884.6	2.344	2.344		
D 13C-1,2,3,4,6,7,8-HpCDD	39.279	1355803	1.07	0.6745	102.7	102.7	0.1997	0.1997	103	
1,2,3,4,6,7,8-HpCDD	39.287	13800004	1.05	1.0503	969.1	969.1	1.263	1.263	96.91	
S Total HpCDD					969.1	969.1	1.263	1.263		
D 13C-OCDD	41.778	2298668	0.91	0.5446	215.6	215.6	0.2297	0.2297	108	
OCDF	41.862	30505464	0.91	1.3168	2015.6	2015.6	1.318	1.318	101	
OCDD	41.786	22803823	0.89	1.0620	1868.3	1868.3	1.408	1.408	93.41	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.544	20.547	0		920603	150087	115	287	1305		
333.9338	20.544	20.547	0		1145485	178229	63	157	2829	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.616	19.616	0	0.955	1315625	222528	203	507	1096		
317.9389	19.625	19.616	1	0.955	1646890	273662	123	307	2225	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.642	19.646	0	1.001	2713655	446561	138	345	3236		
305.8987	19.642	19.646	0	1.001	3423376	567597	182	455	3119	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.913	20.910	0	1.018	893612	134635	115	287	1171		
333.9338	20.913	20.910	0	1.018	1120920	170916	63	157	2713	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.939	20.935	0	1.019	4287059	670067	127	317	5276		
2,3,7,8-TCDD											
319.8965	20.939	20.939	0	1.001	1891754	292983	63	157	4651		
321.8936	20.939	20.939	0	1.001	2394280	370217	74	185	5003	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.552	26.560	0	1.292	1583459	282119	248	620	1138		
353.8970	26.552	26.560	0	1.292	991062	177690	195	487	911	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.578	26.584	0	1.001	15809872	2840843	2484	6210	1144		
341.8567	26.578	26.584	0	1.001	10222461	1821485	1590	3975	1146	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.002	28.014	-1	1.363	1602860	260320	248	620	1050		
353.8970	28.002	28.014	-1	1.363	981880	162024	195	487	831	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.028	28.039	-1	1.001	15085675	2478093	2484	6210	998		
341.8567	28.028	28.039	-1	1.001	9775707	1618127	1590	3975	1018	1.54(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.795	28.801	0	1.402	978472	153717	62	155	2479		
369.8919	28.795	28.801	0	1.402	624408	97747	48	120	2036	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.820	28.828	0	1.001	10130500	1566899	211	527	7426		
357.8516	28.820	28.828	0	1.001	6515447	1012500	121	302	8368	1.55(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.370	34.384	-1	0.950	681535	131177	206	515	637		
385.8610	34.370	34.384	-1	0.950	1287080	241920	293	732	826	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.404	34.405	0	1.001	12221224	2429393	2850	7125	852		
375.8178	34.404	34.405	0	1.001	9681195	1938109	2226	5565	871	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.555	34.562	0	0.955	787279	159086	206	515	772		
385.8610	34.555	34.562	0	0.955	1496682	297889	293	732	1017	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.572	34.582	-1	1.000	14789206	2955884	2850	7125	1037		
375.8178	34.572	34.582	-1	1.000	11932051	2355841	2226	5565	1058	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.432	35.444	-1	0.979	755749	165004	206	515	801		
385.8610	35.432	35.444	-1	0.979	1434760	311089	293	732	1062	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.449	35.461	-1	1.000	14140079	3143736	2850	7125	1103		
375.8178	35.449	35.461	-1	1.000	11248326	2509936	2226	5565	1128	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.376	36.388	-1	1.005	661276	161798	206	515	785		
385.8610	36.376	36.388	-1	1.005	1234464	302164	293	732	1031	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.393	36.402	-1	1.000	12520528	3053286	2850	7125	1071		
375.8178	36.393	36.402	-1	1.000	10033258	2435227	2226	5565	1094	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.182	36.192	-1		1094886	260943	101	252	2584		
403.8529	36.182	36.192	-1		862627	206665	78	195	2650	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.668	35.680	-1	0.986	871516	210376	101	252	2083		
403.8529	35.668	35.680	-1	0.986	668268	161161	78	195	2066	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.685	35.695	-1	1.000	8624435	2104573	873	2182	2411		
391.8127	35.685	35.695	-1	1.000	6934063	1696812	658	1645	2579	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.794	35.805	-1	0.989	980230	223296	101	252	2211		
403.8529	35.794	35.805	-1	0.989	761268	177860	78	195	2280	1.29(1.05-1.43)	

Report Date: 09-Jun-2021 08:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.811	35.820	-1	1.000	9246987	2090881	873	2182	2395		
391.8127	35.811	35.820	-1	1.000	7414418	1678531	658	1645	2551	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.198	36.208	-1	1.015	9564246	2295203	873	2182	2629		
391.8127	36.198	36.208	-1	1.015	7714939	1845750	658	1645	2805	1.24(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.292	38.305	-1	1.058	482843	137759	141	352	977		
419.8220	38.292	38.305	-1	1.058	1063270	304088	256	640	1188	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	10831802	3065791	3002	7505	1021		
409.7788	38.309	38.317	0	1.000	10350165	2906390	2802	7005	1037	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.591	39.600	-1	1.094	458518	146875	141	352	1042		
419.8220	39.591	39.600	-1	1.094	997248	313009	256	640	1223	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.600	39.608	-1	1.000	9086557	2852631	3002	7505	950		
409.7788	39.600	39.608	-1	1.000	8725447	2728020	2802	7005	974	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.279	39.293	-1	1.086	700550	219811	138	345	1593		
437.8140	39.279	39.293	-1	1.086	655253	202475	114	285	1776	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.287	39.301	-1	1.000	7071387	2141109	1133	2832	1890		
425.7737	39.287	39.301	-1	1.000	6728617	2063900	1107	2767	1864	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.778	41.785	0	1.155	1096060	330168	115	287	2871		
471.7750	41.778	41.785	0	1.155	1202608	365220	119	297	3069	0.91(0.76-1.02)	
OCDF											
441.7428	41.862	41.875	-1	1.002	14551716	4304688	1153	2882	3733		
443.7399	41.862	41.875	-1	1.002	15953748	4798066	1261	3152	3805	0.91(0.76-1.02)	
OCDD											
457.7377	41.786	41.794	0	1.000	10735225	3226535	983	2457	3282		
459.7348	41.786	41.794	0	1.000	12068598	3663774	1097	2742	3340	0.89(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

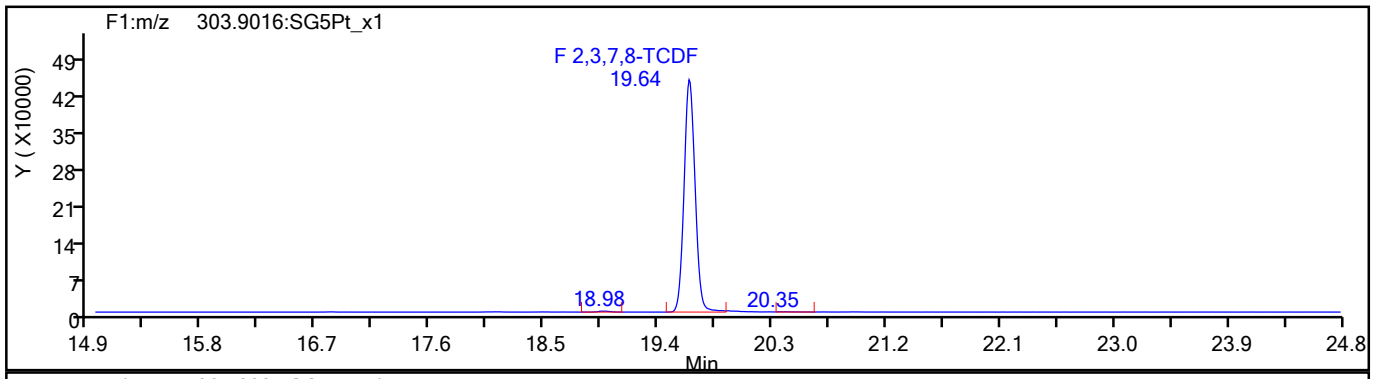

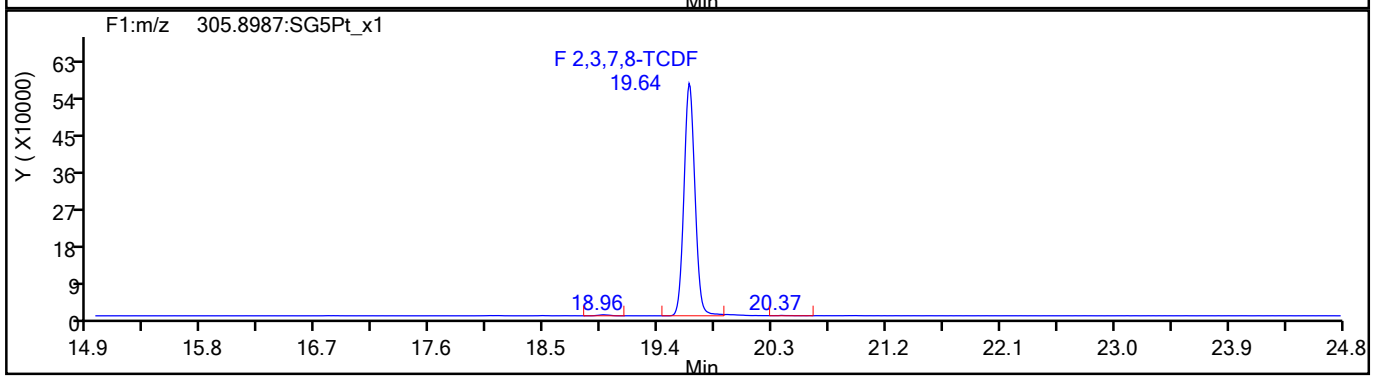

TCDF Standards

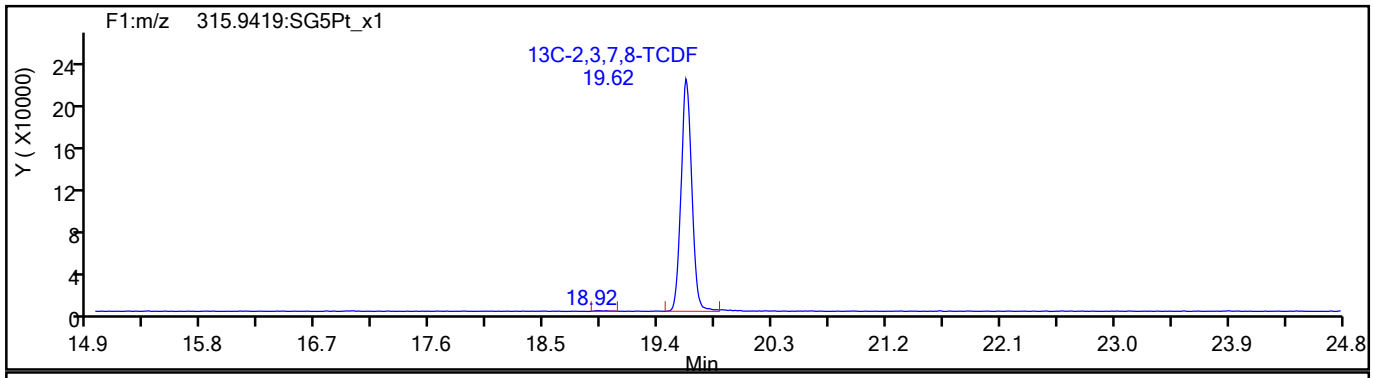

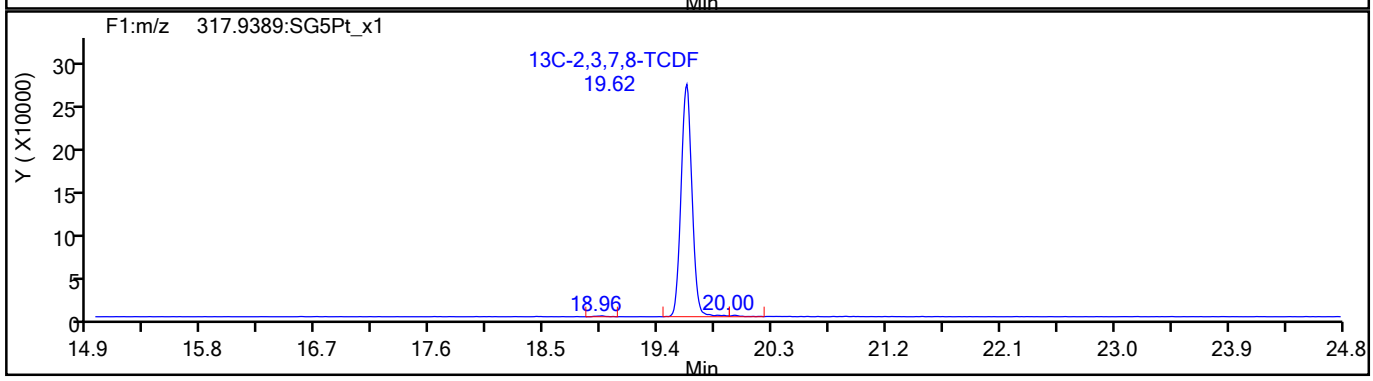

785913

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

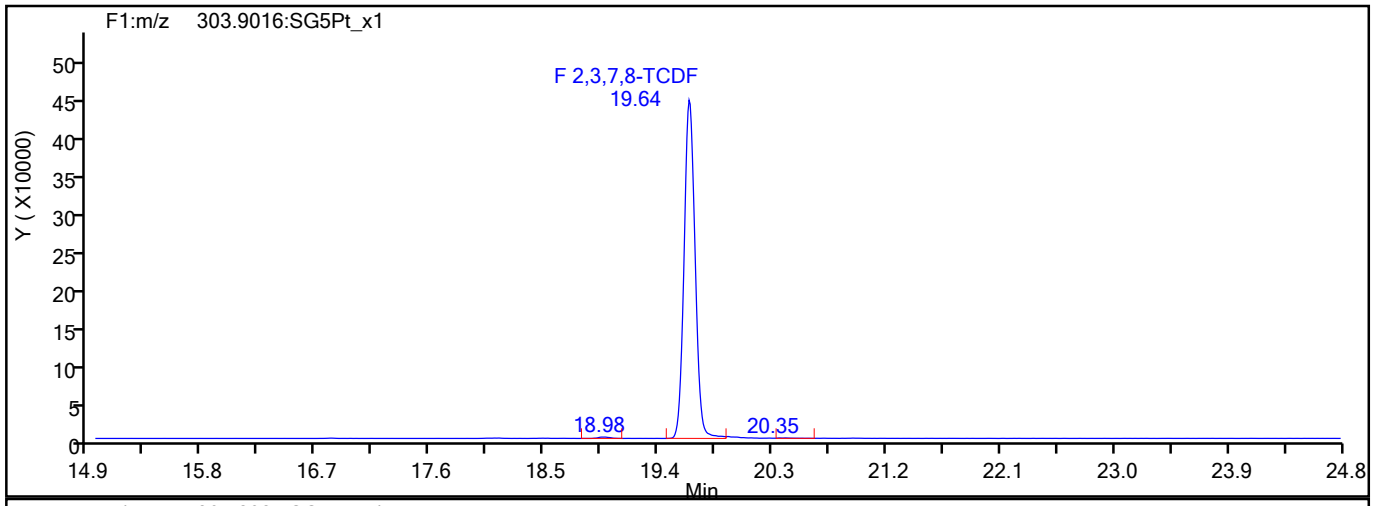

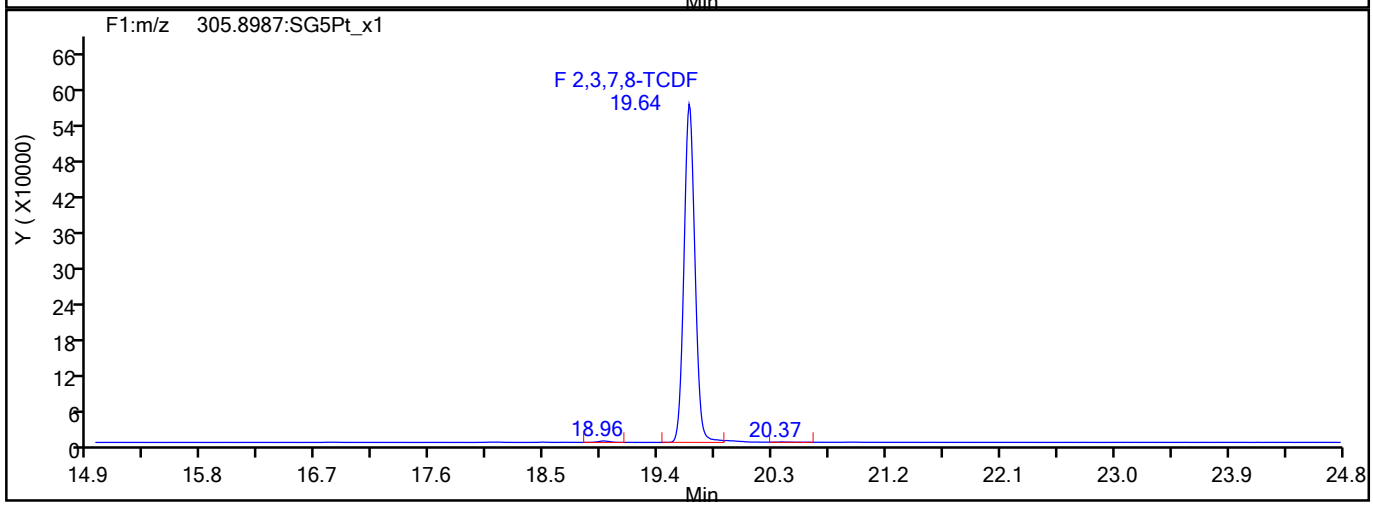

TCDF Interference Mass

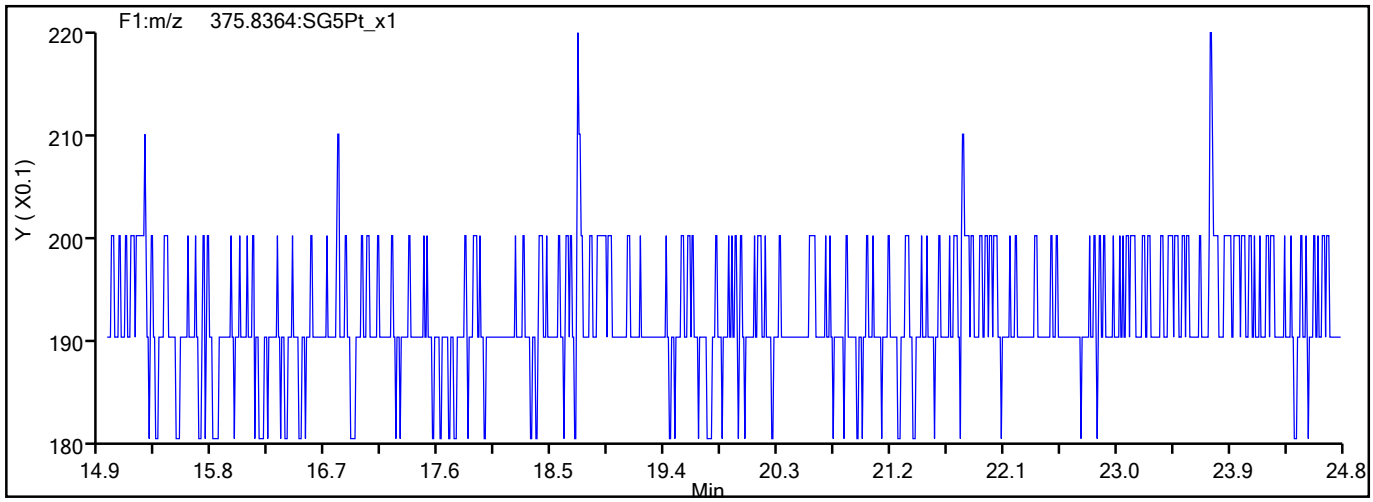

785914

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

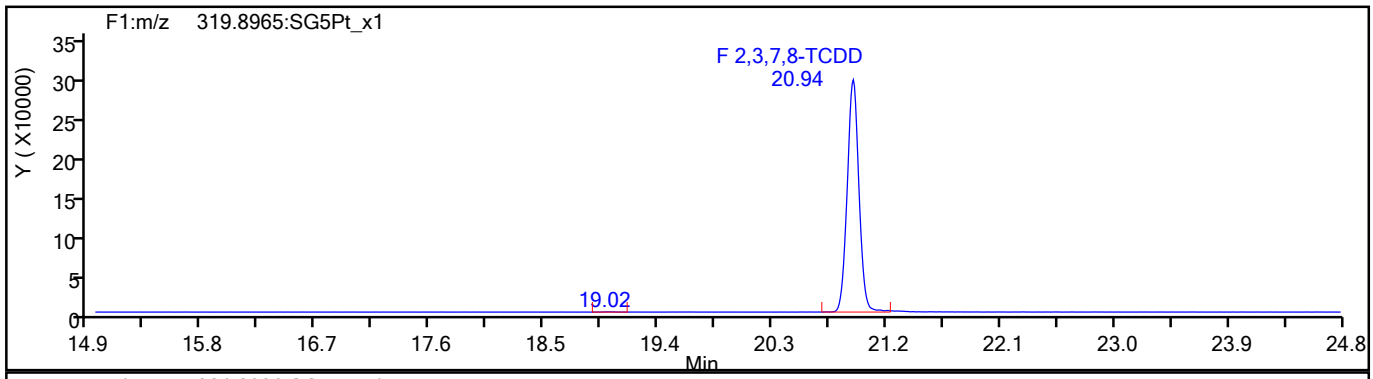

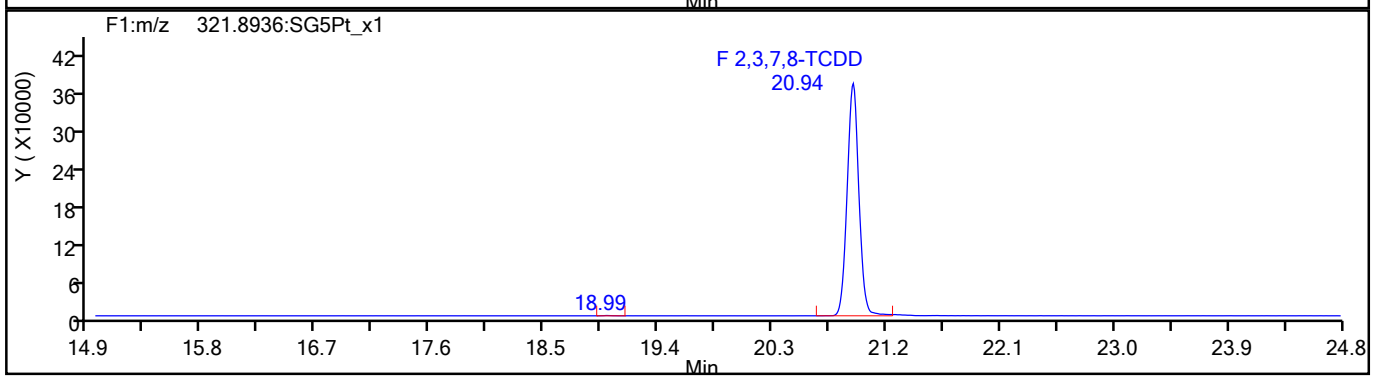

TCDD Standards

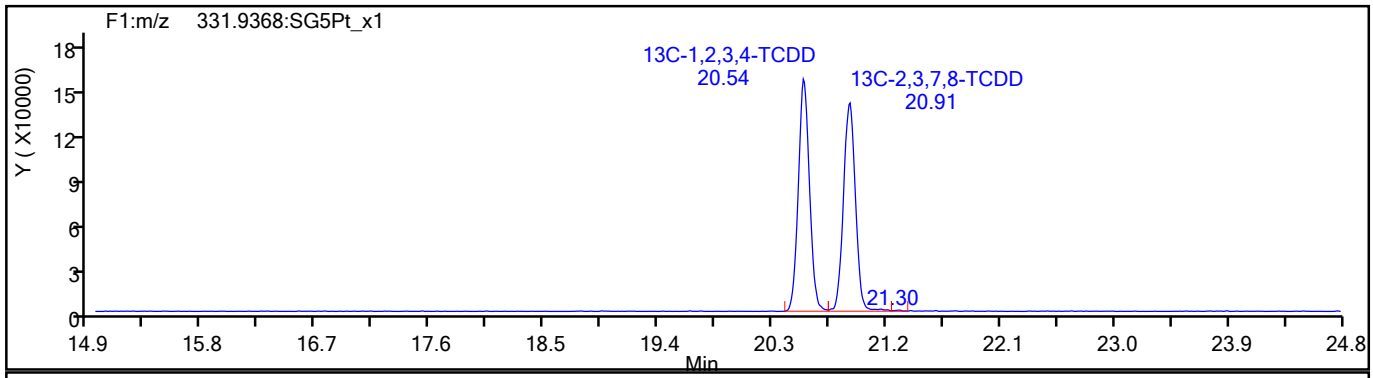

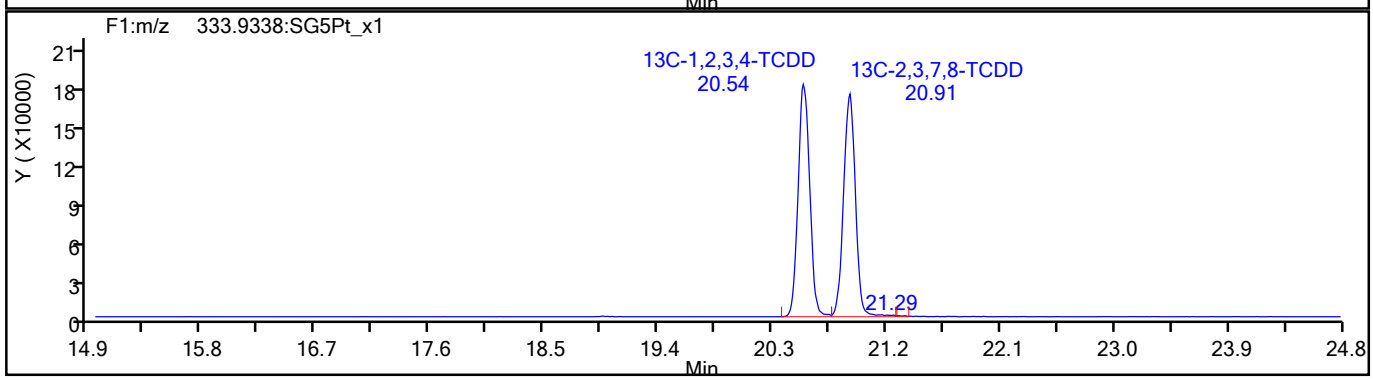

785915

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

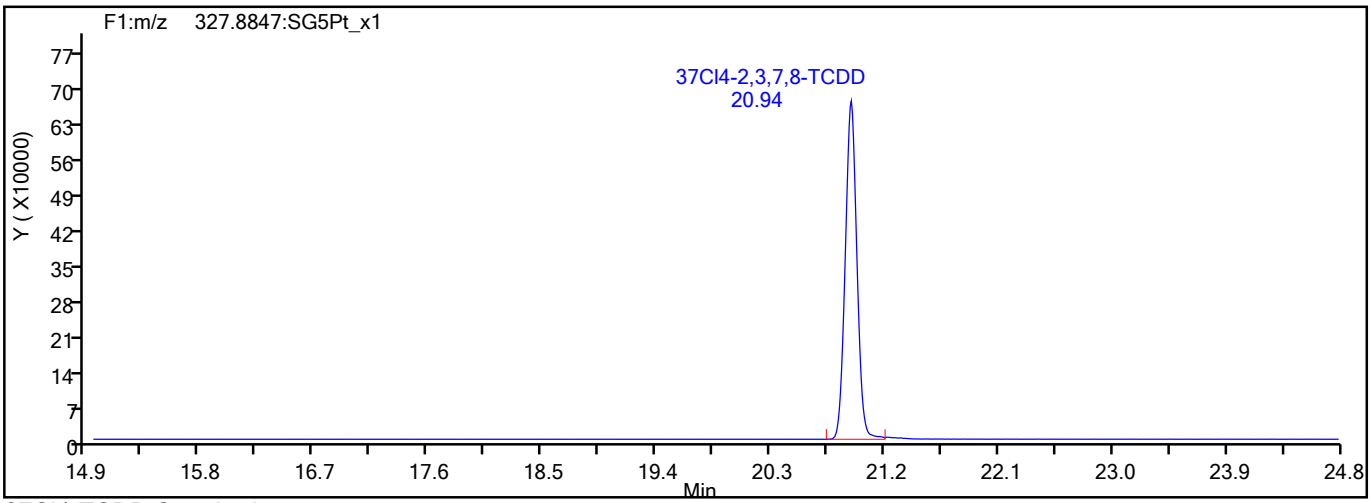

37Cl4-TCDD Standards

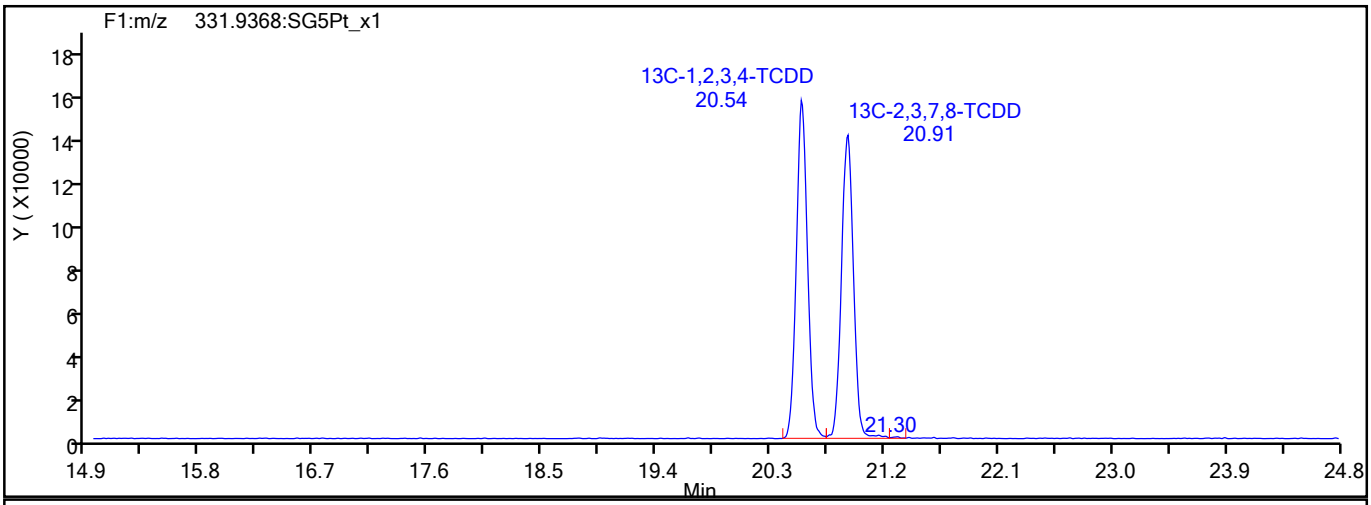

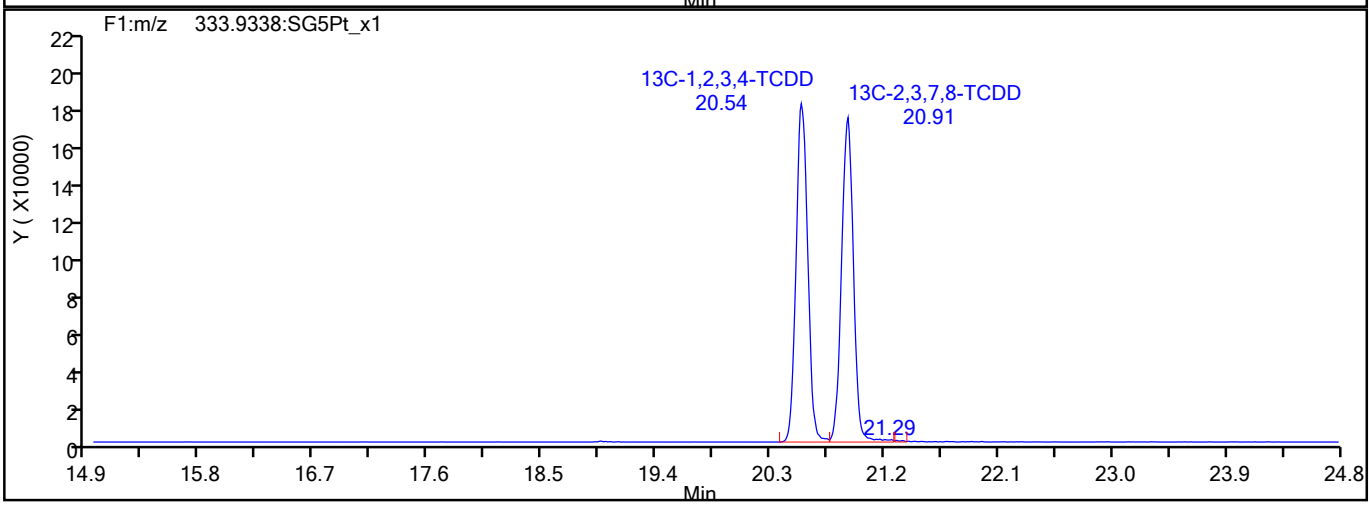

785916

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

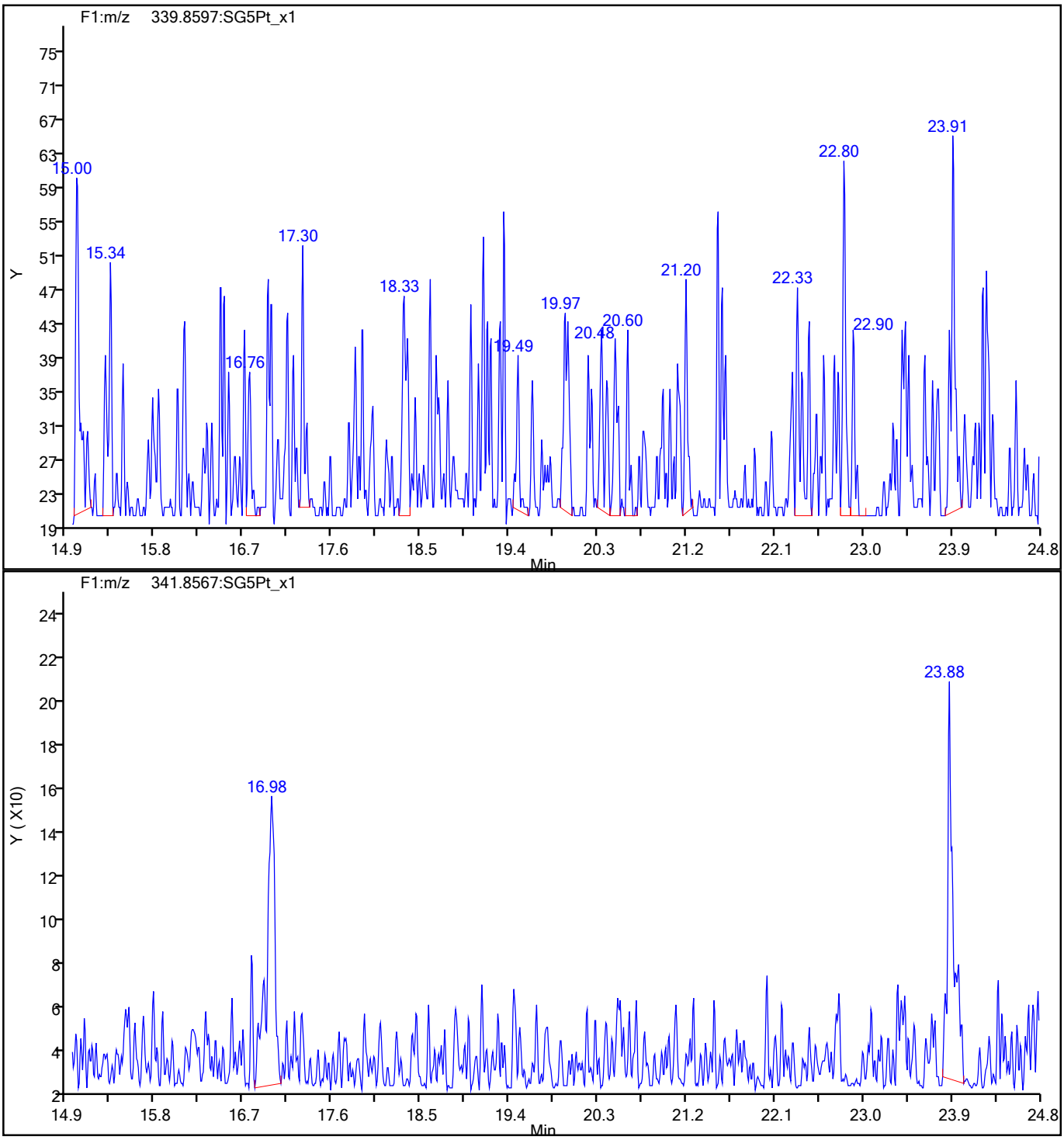

785917

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

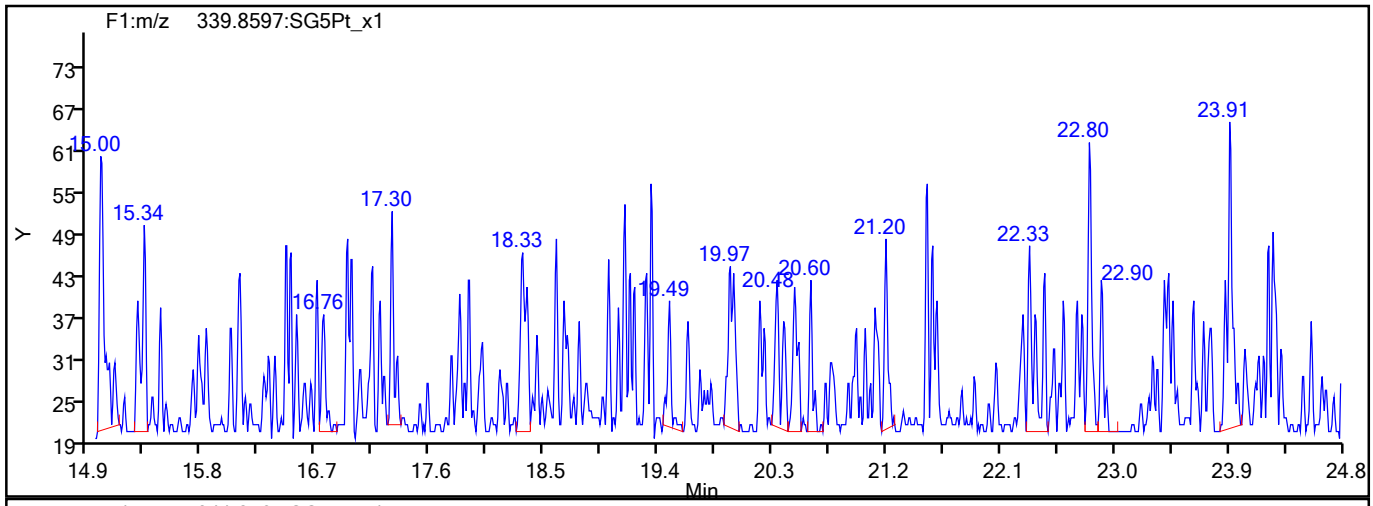

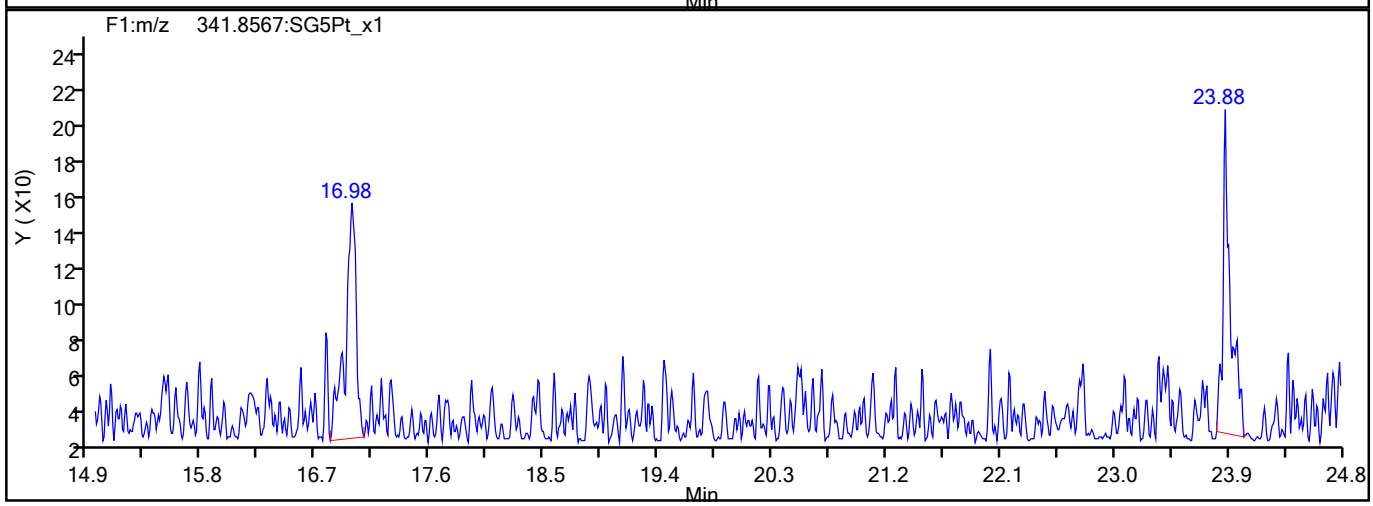

F1 PeCDFs Interference Mass

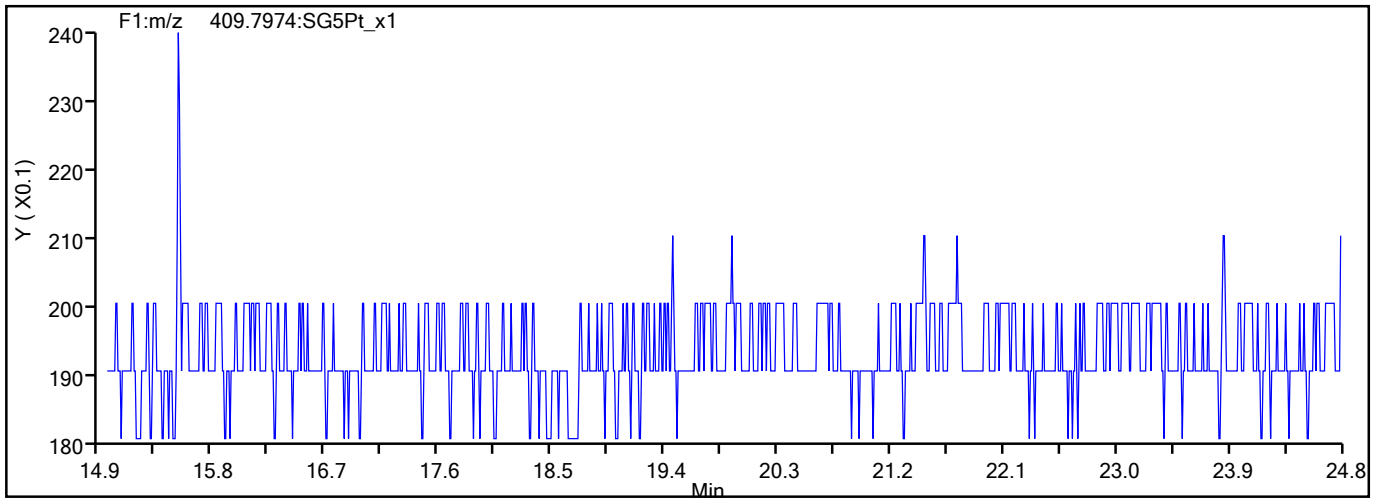

785918

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

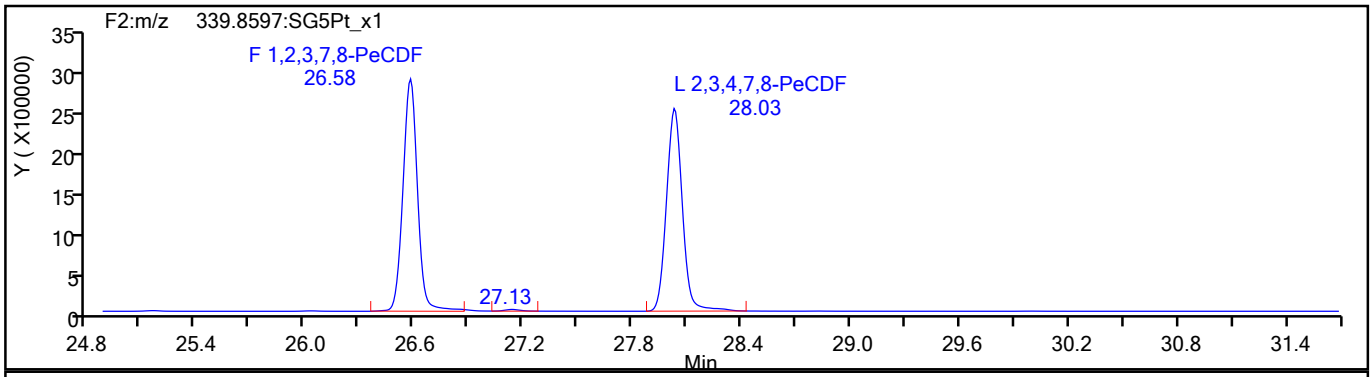

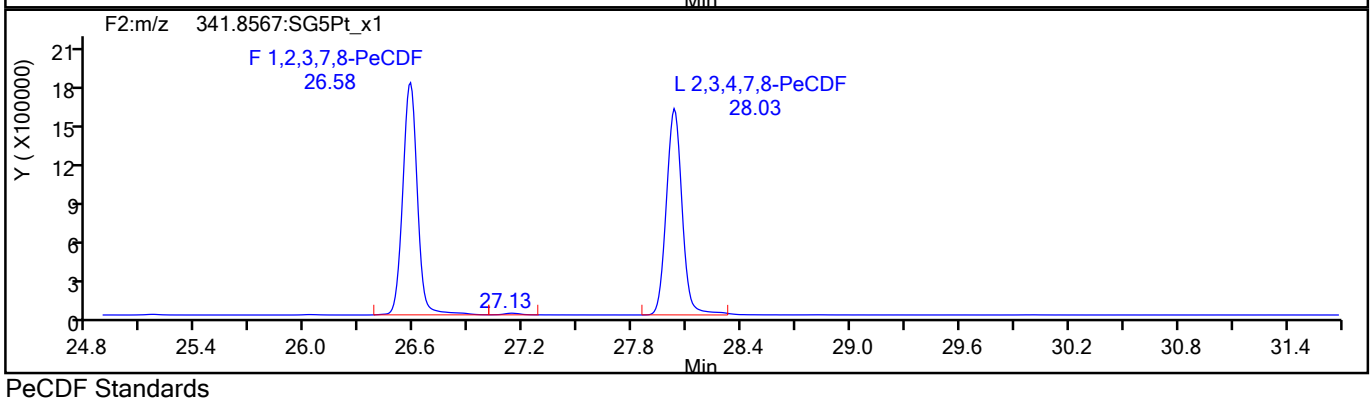

PeCDF Standards

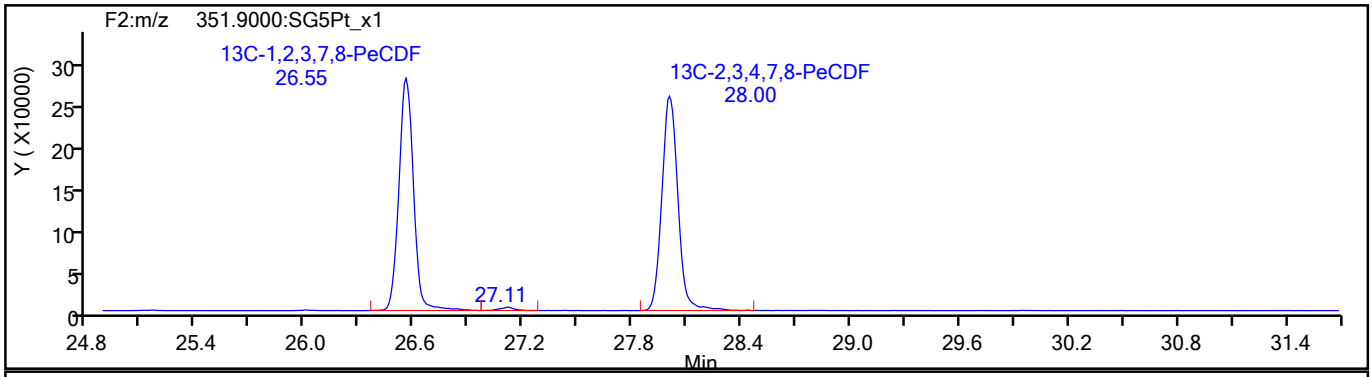

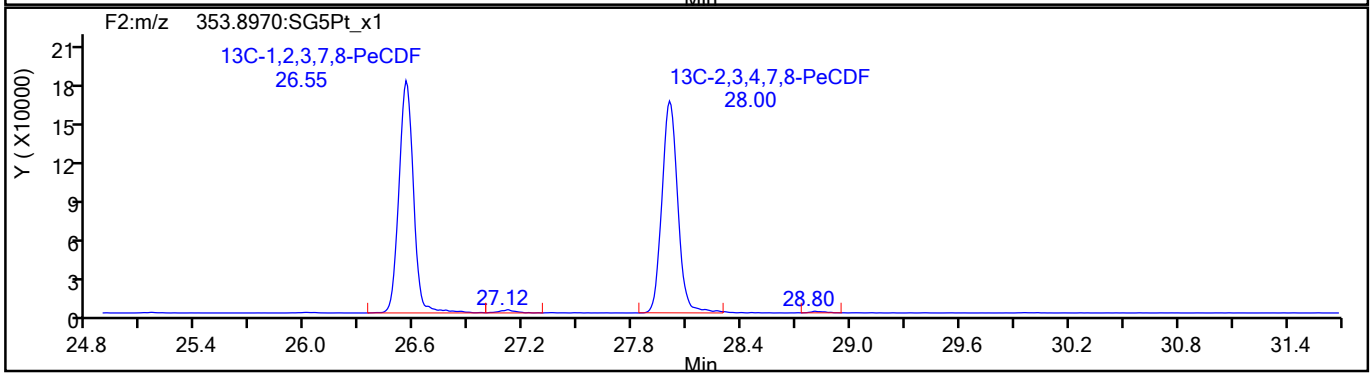

785919

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

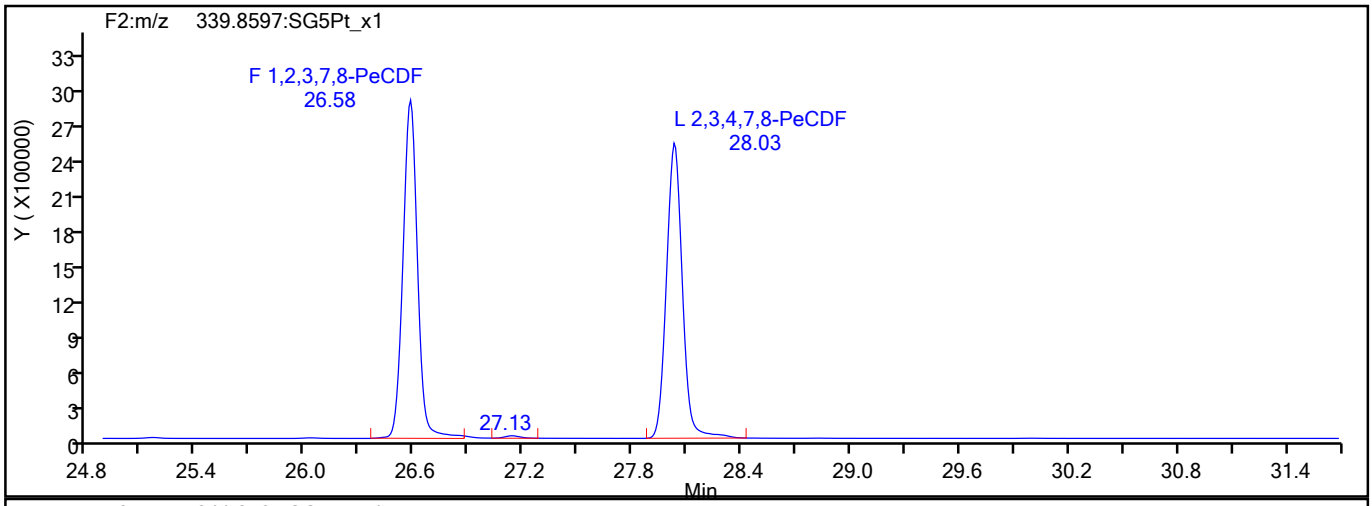

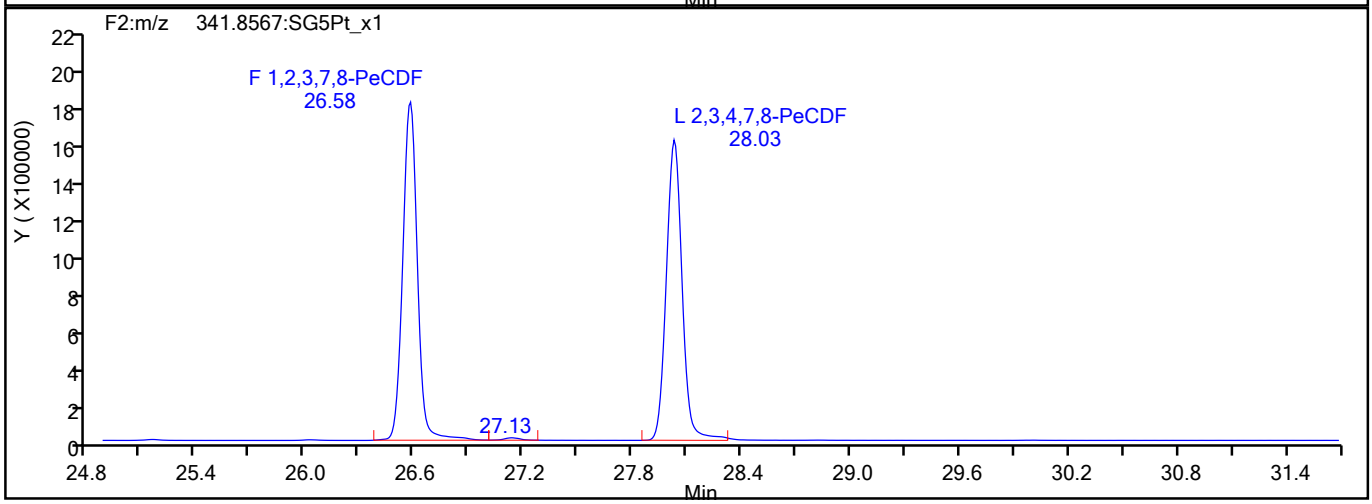

PeCDF Interference Mass

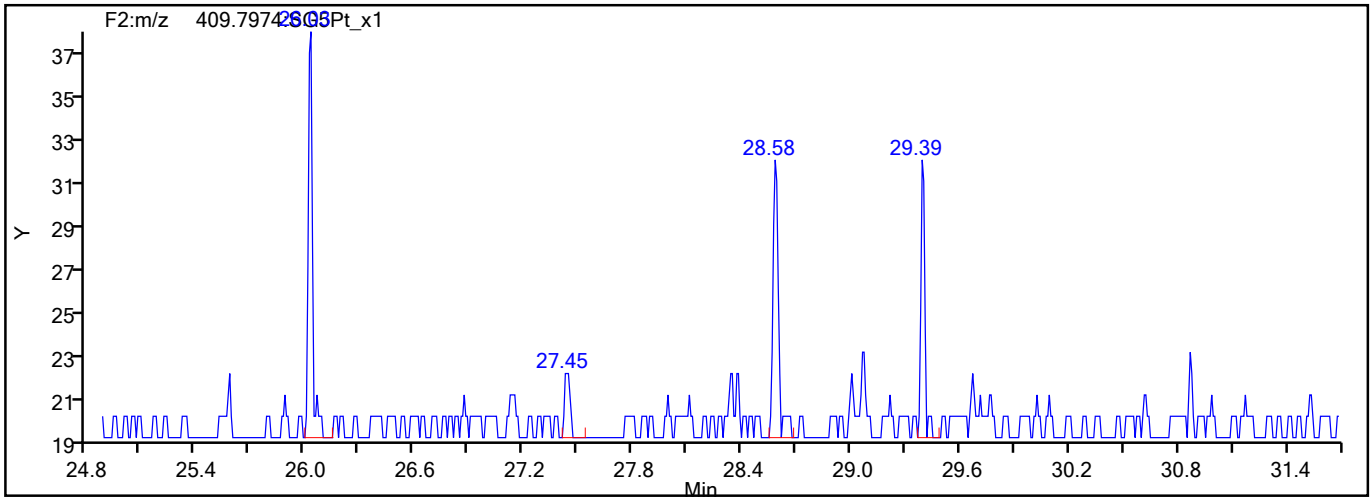

785920

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

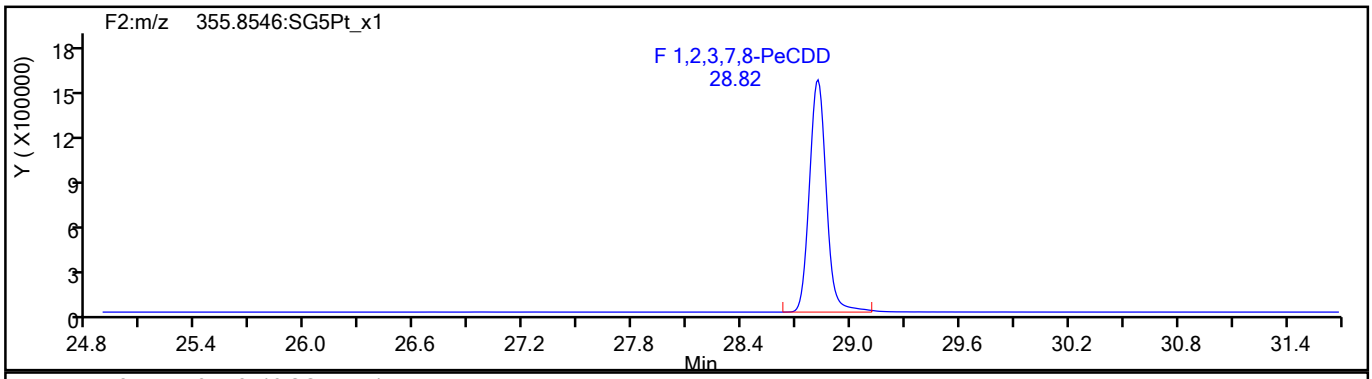

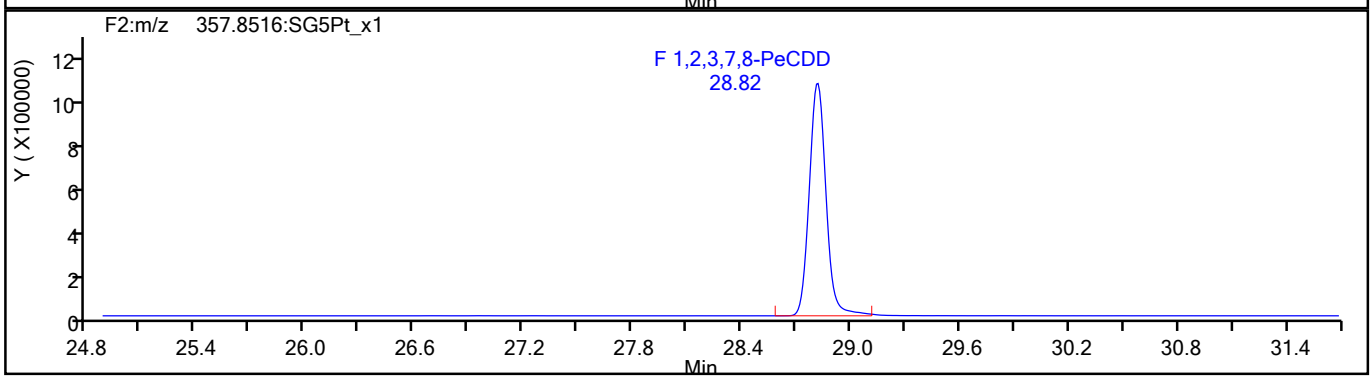

PeCDD Standards

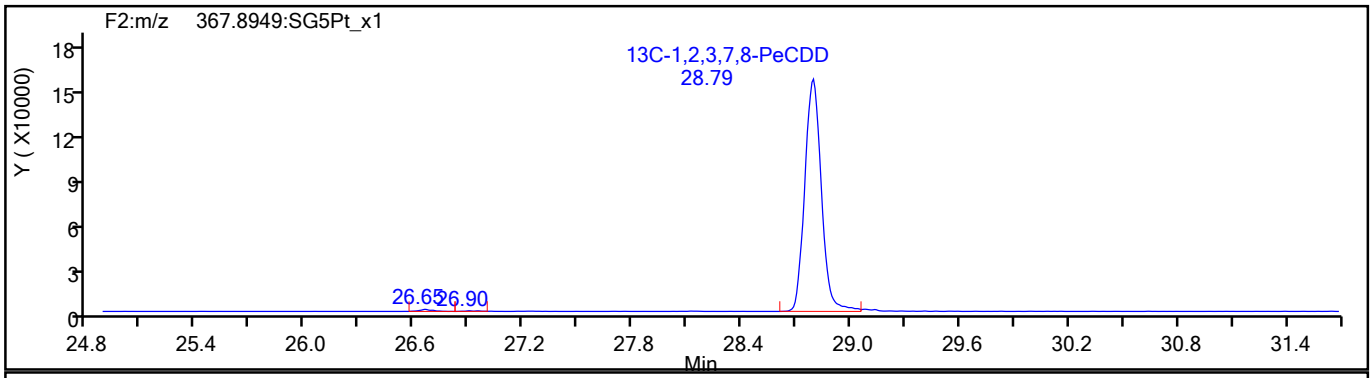

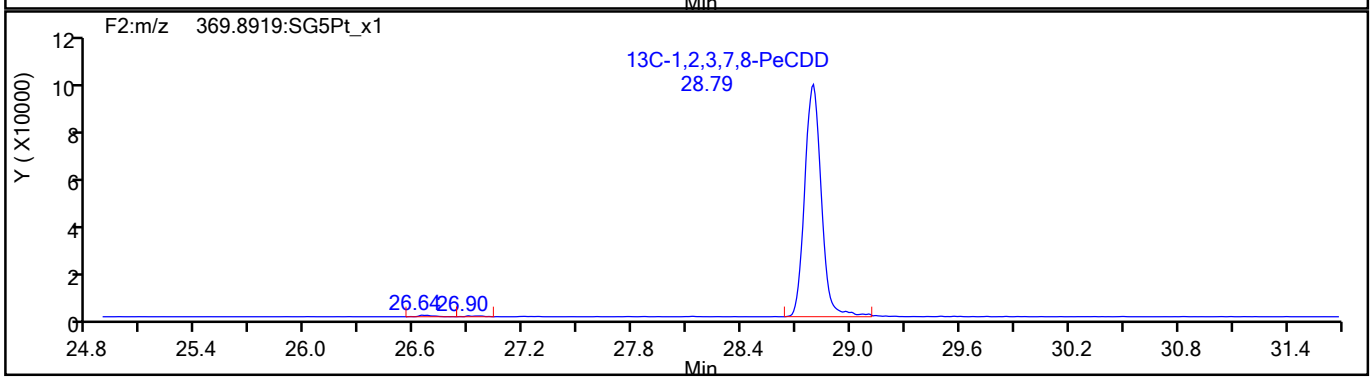

785921

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

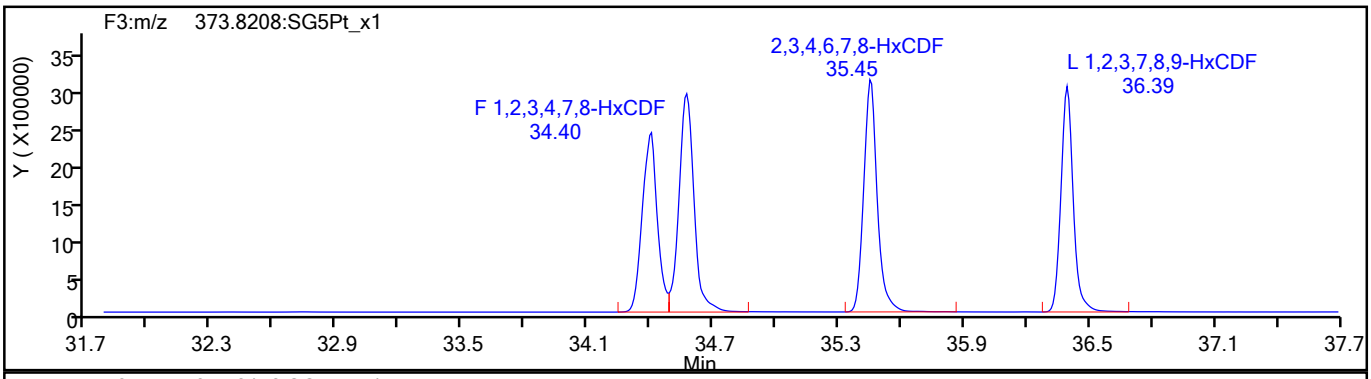

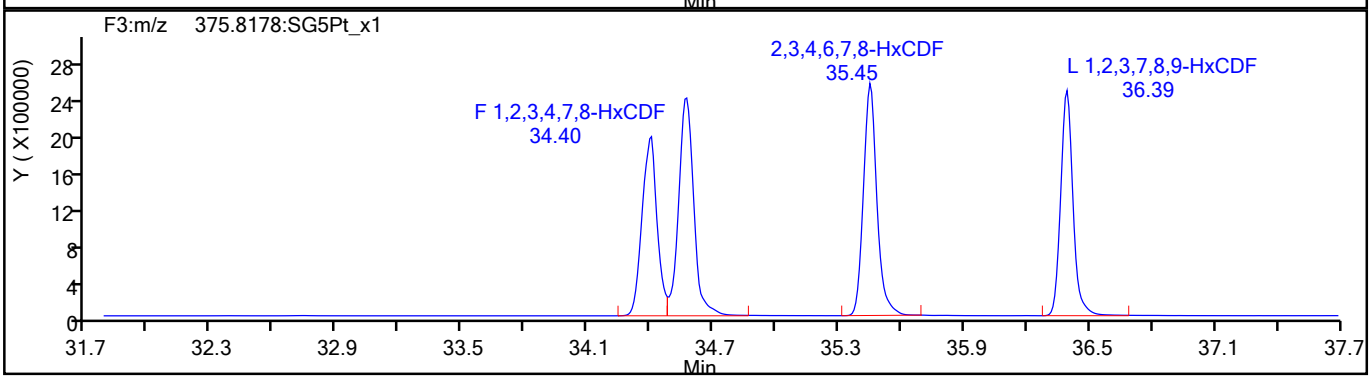

HxCDF Standards

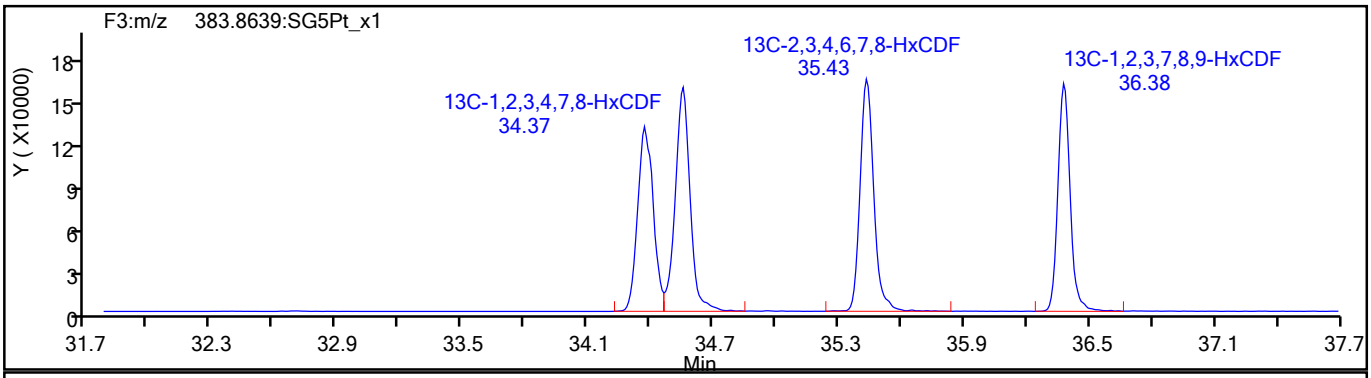

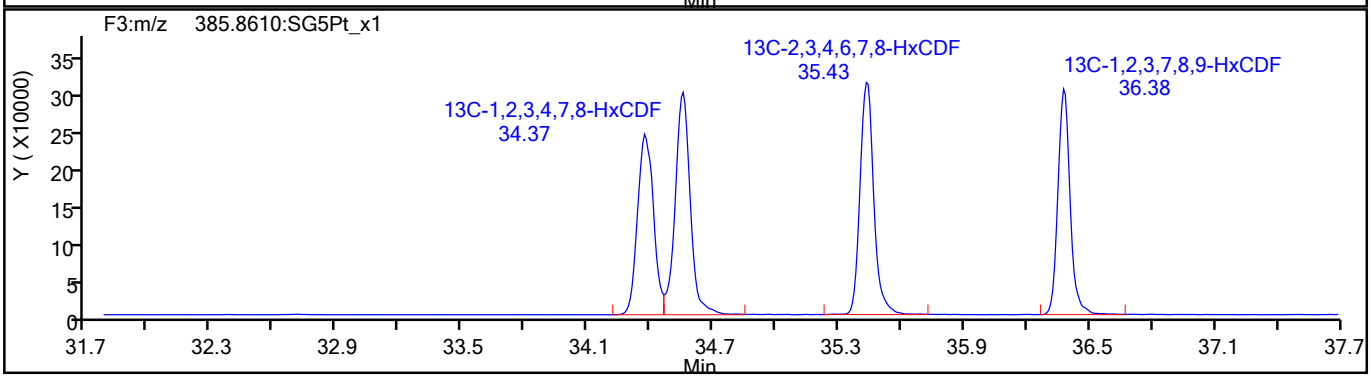

785922

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

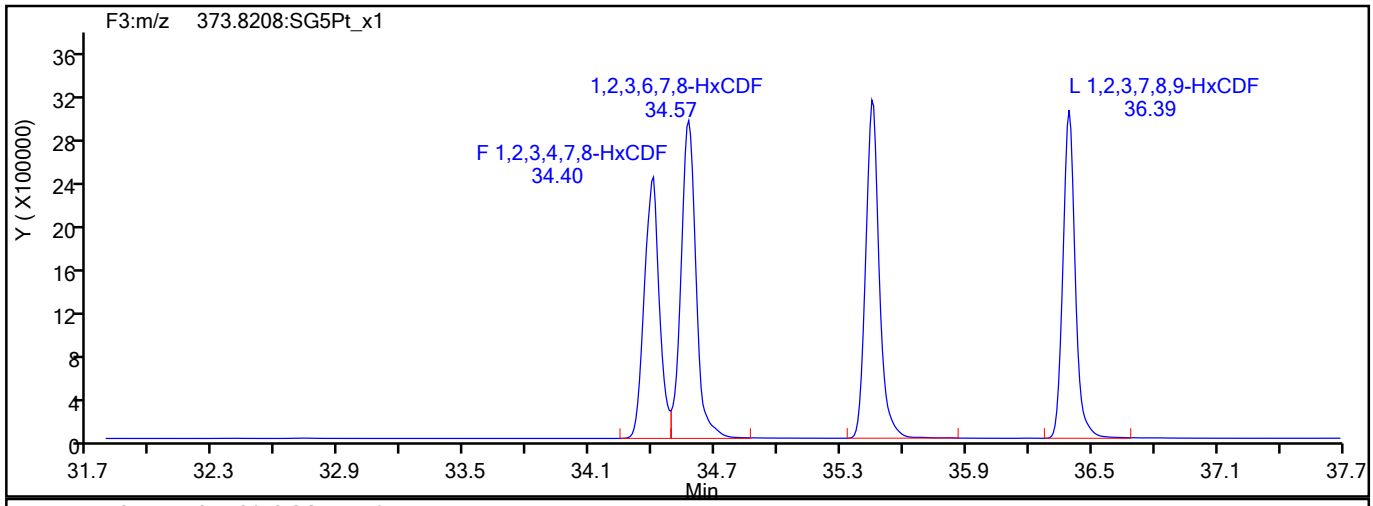

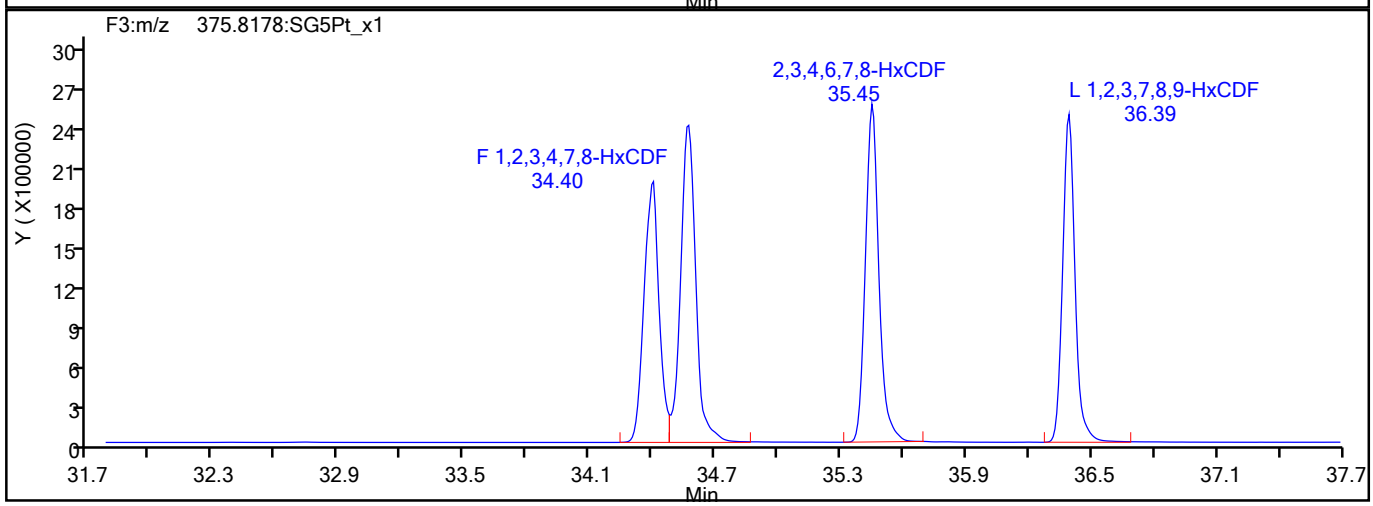

HxCDF Interference Mass

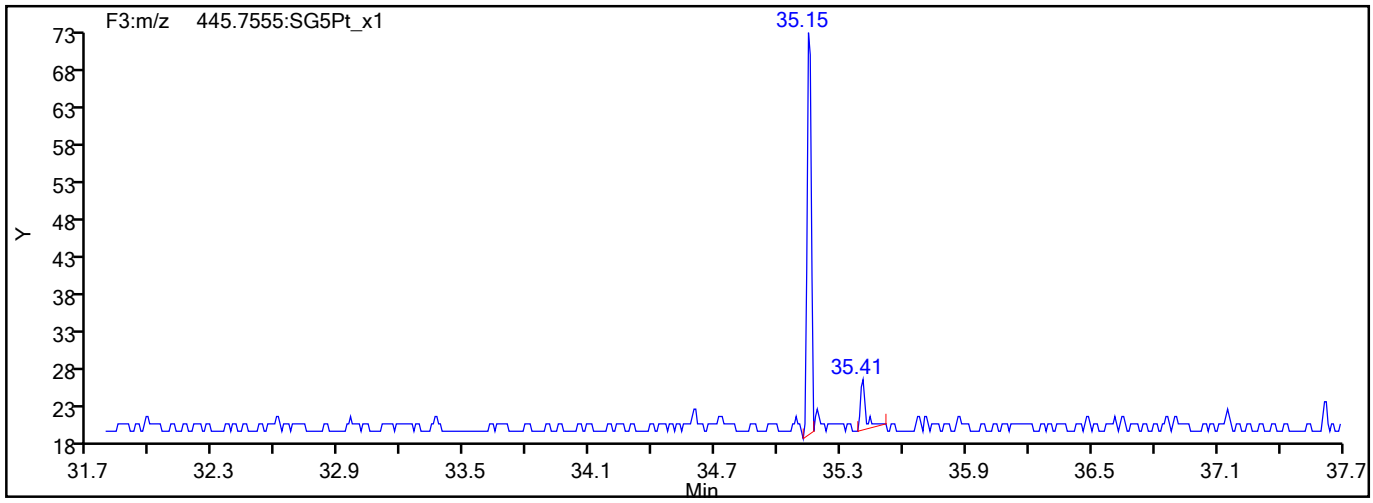

785923

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

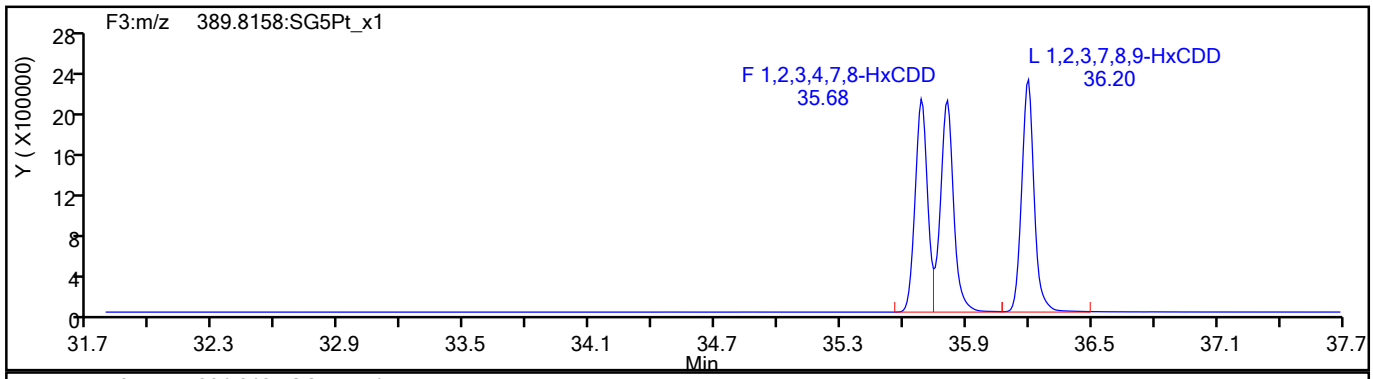

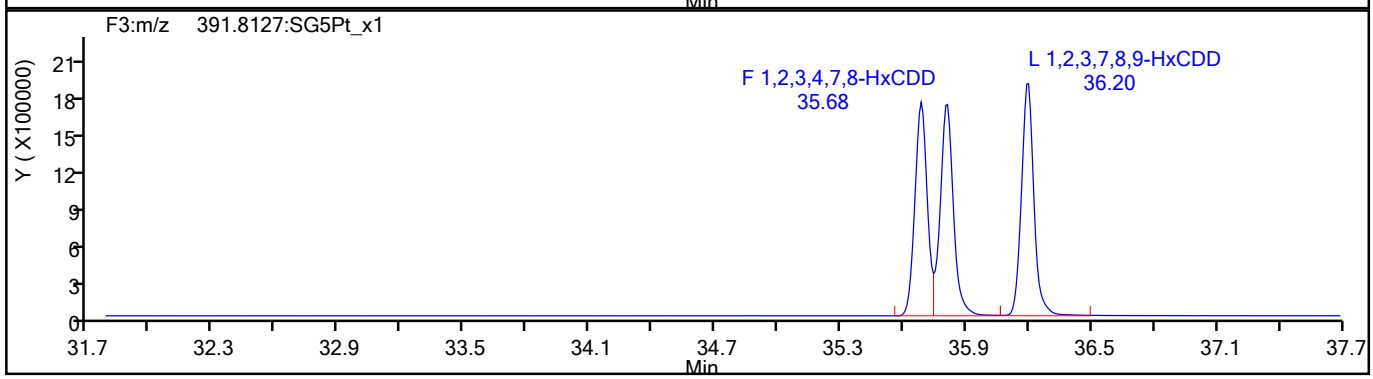

HxCDD Standards

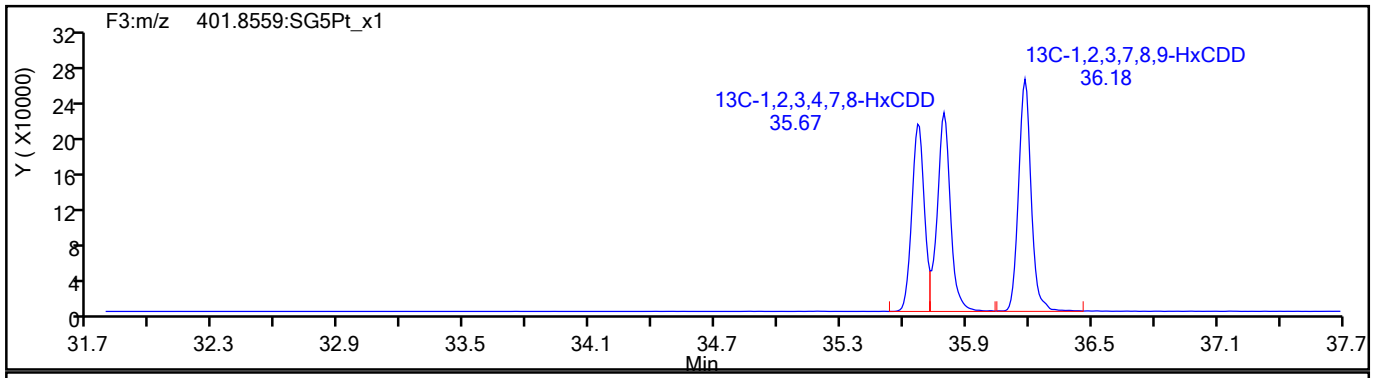

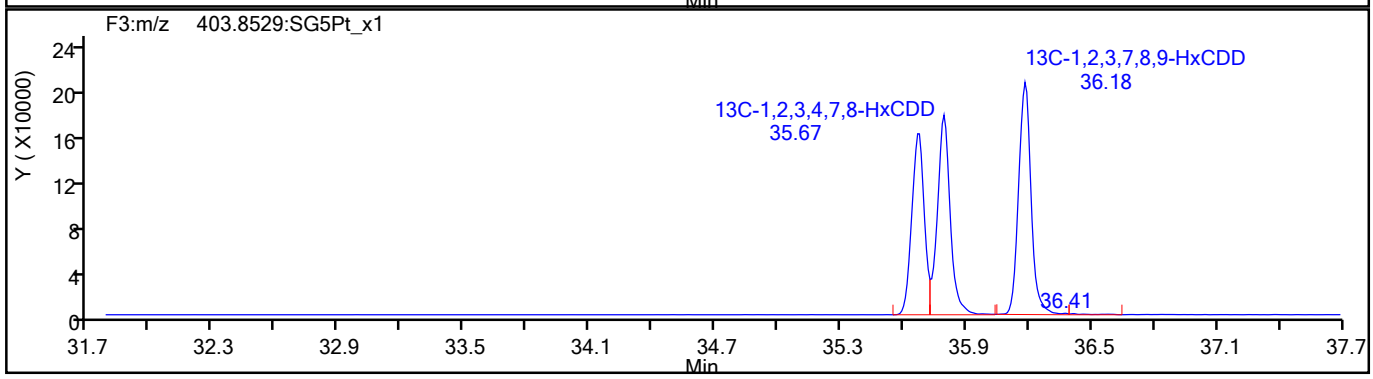

785924

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

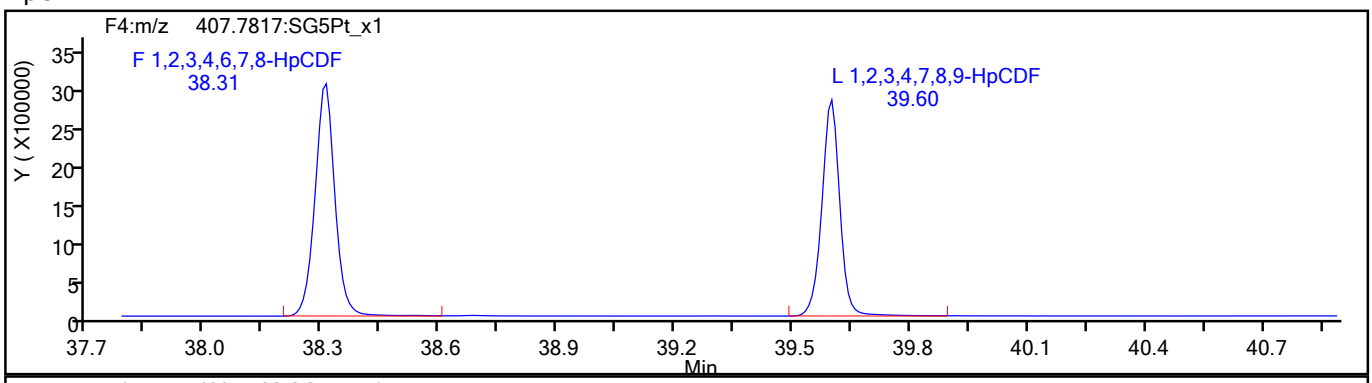

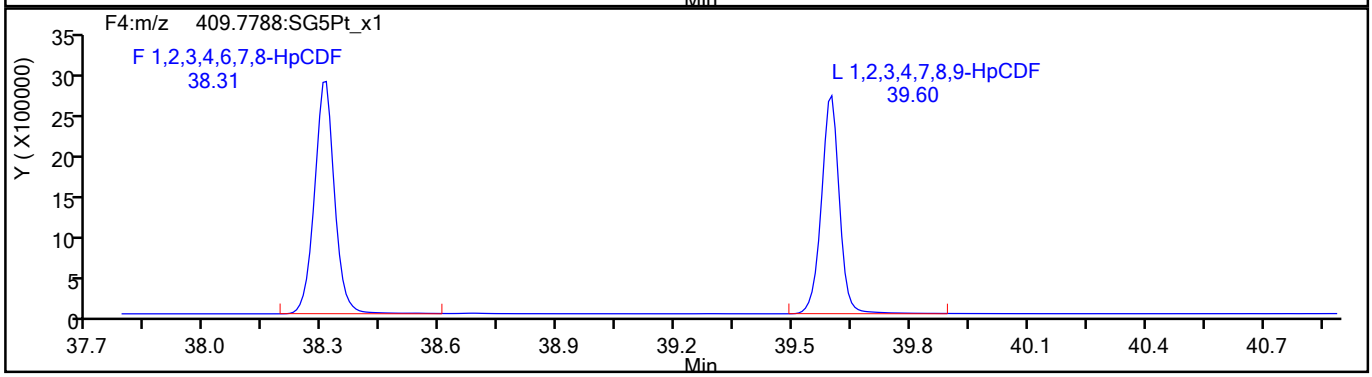

HpCDF Standards

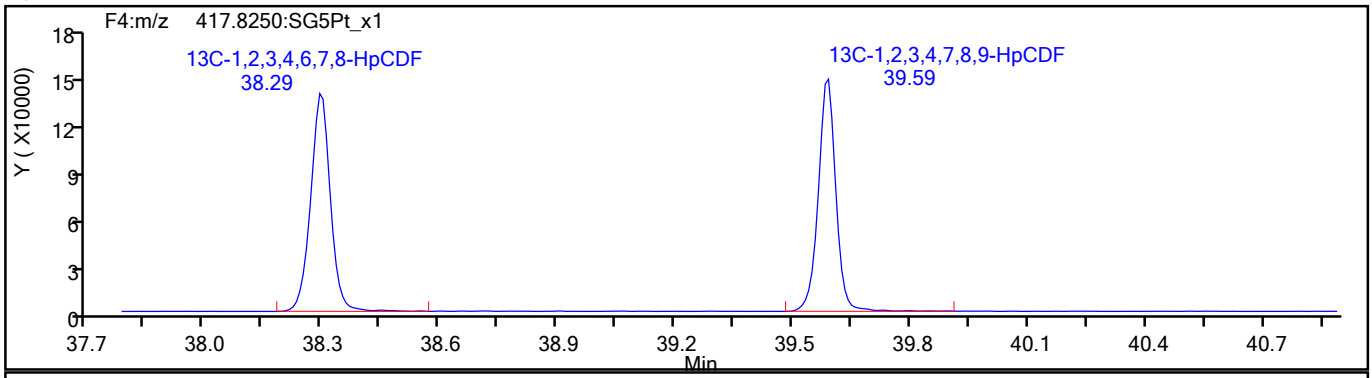

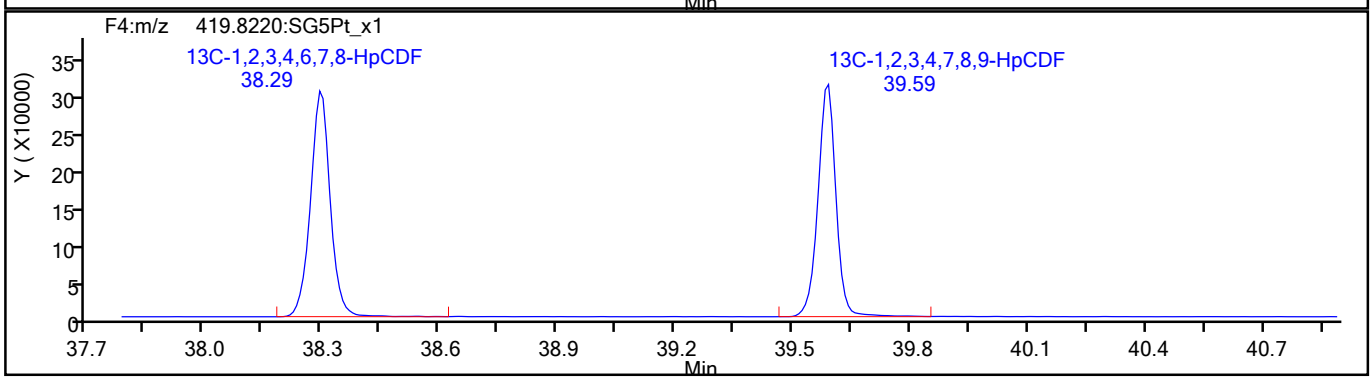

785925

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

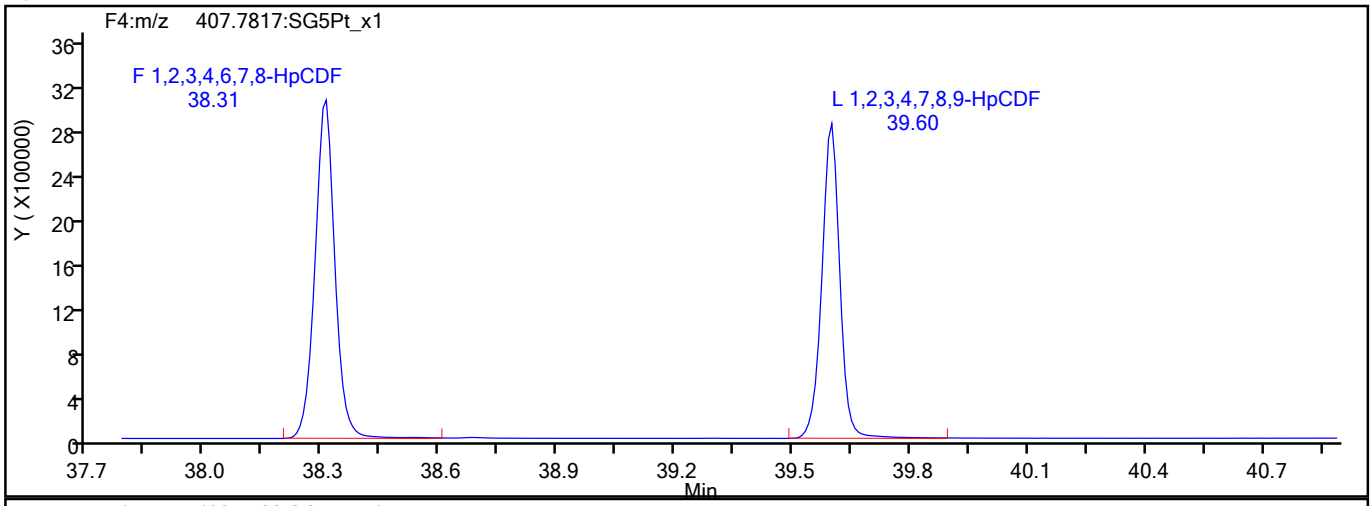

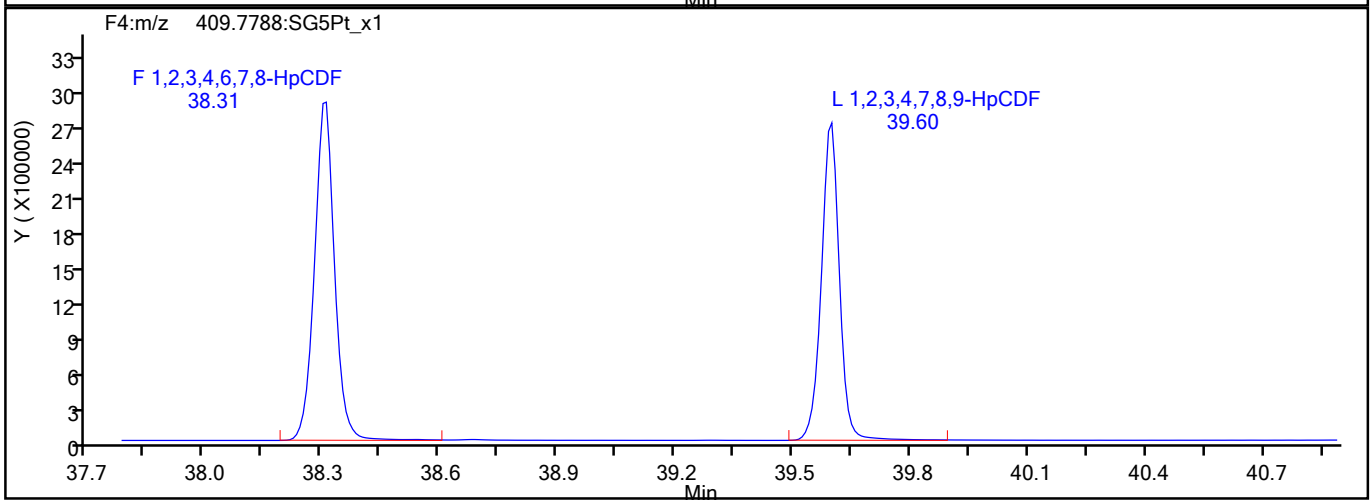

HpCDF Interference Mass

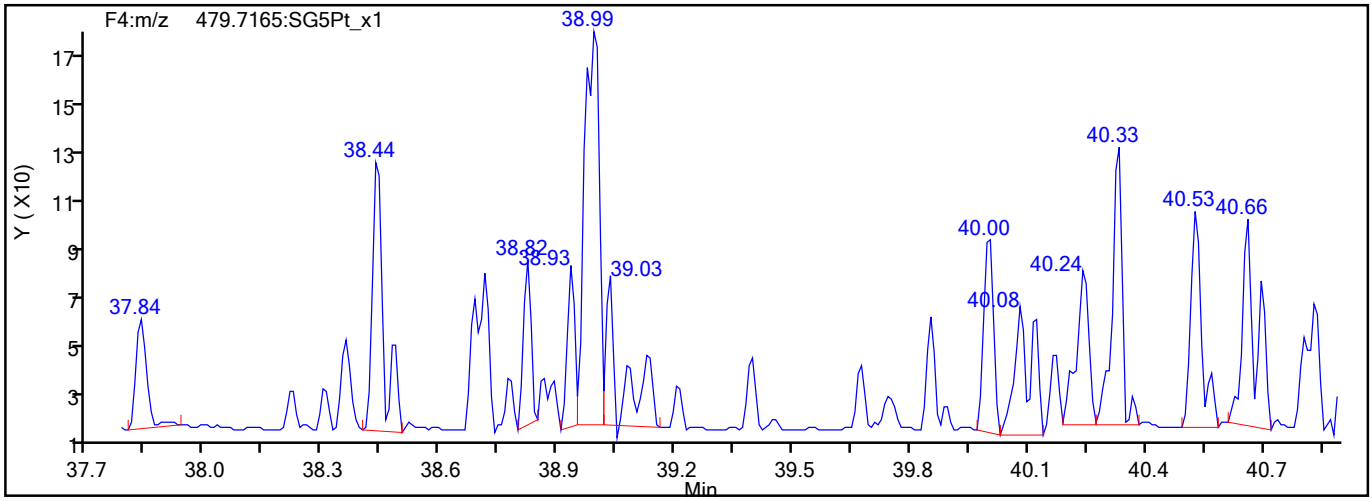

785926

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

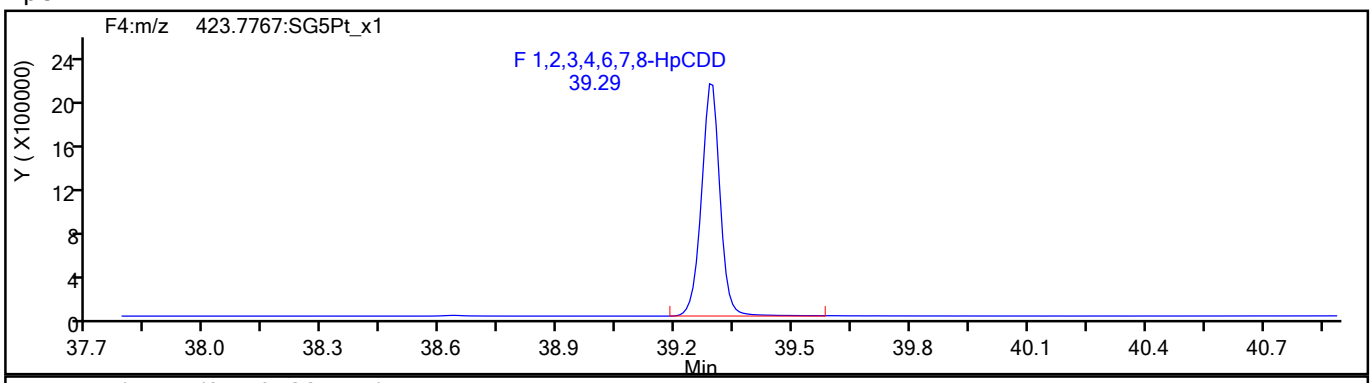

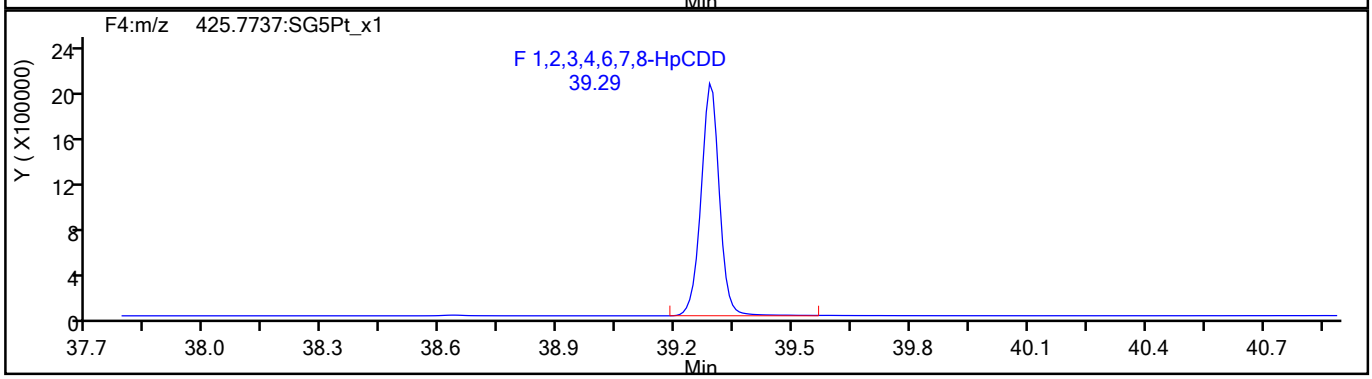

HpCDD Standards

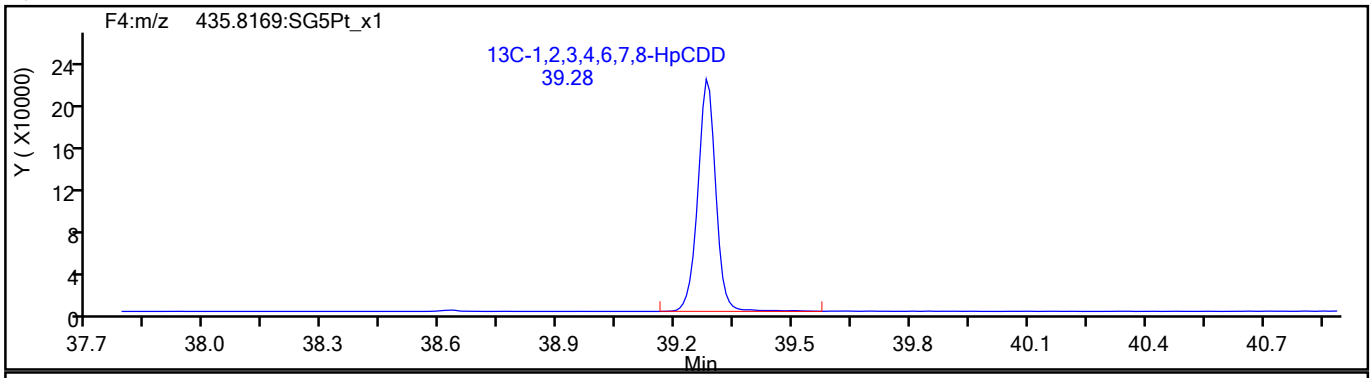

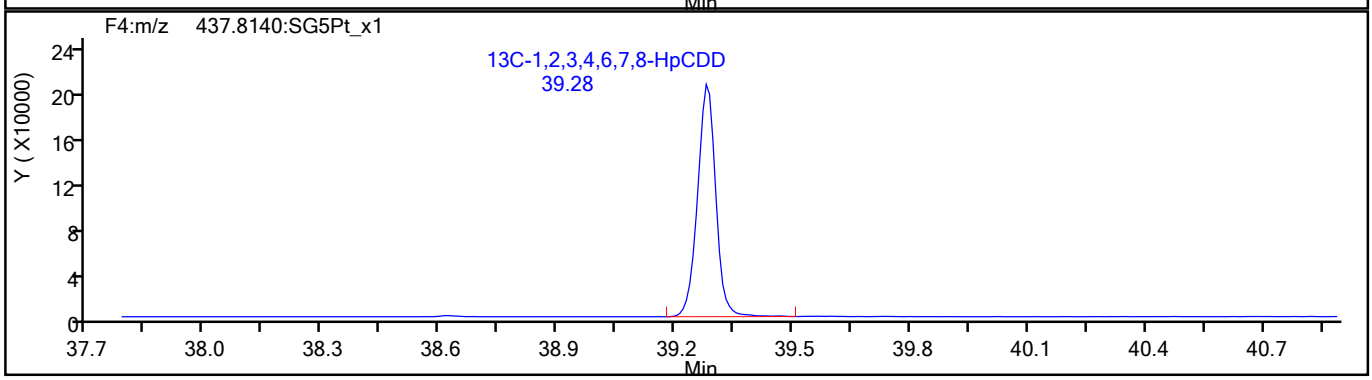

785927

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

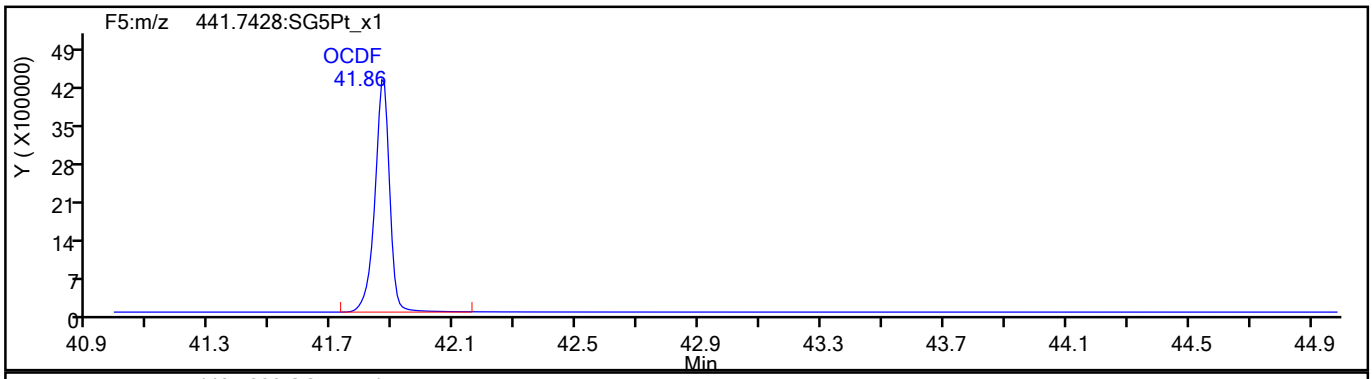

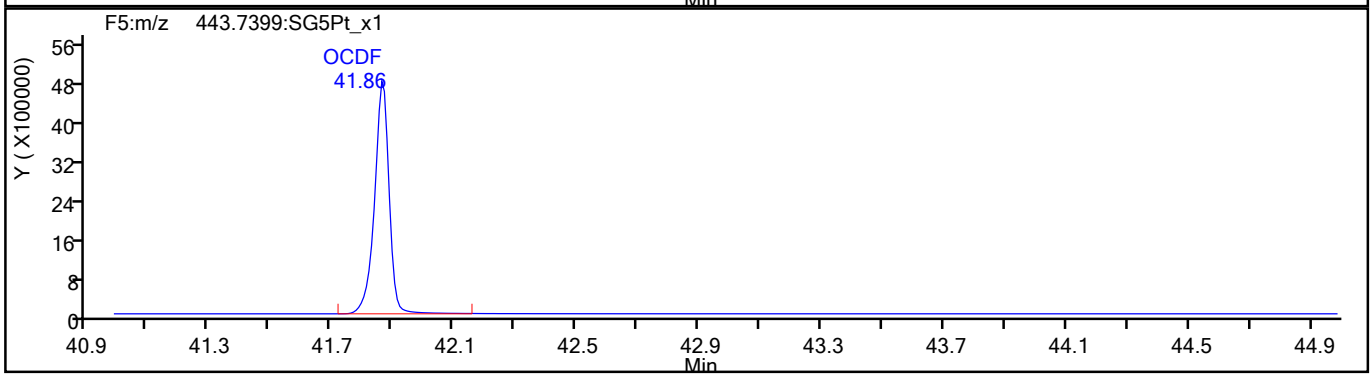

OCDF Standards

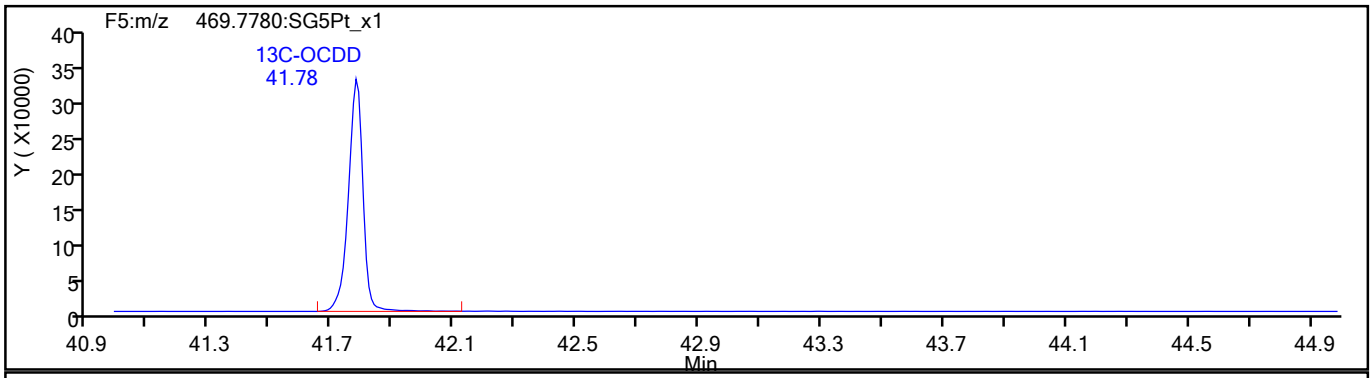

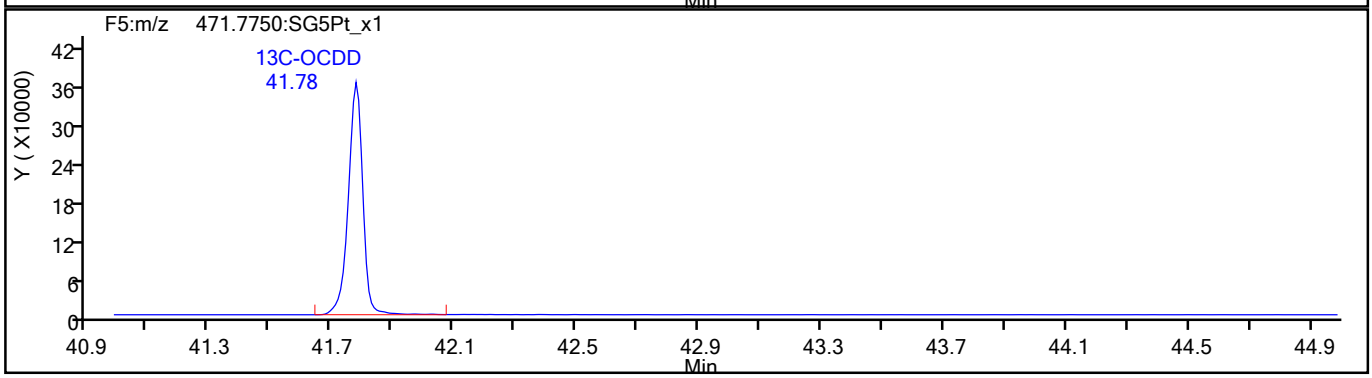

785928

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

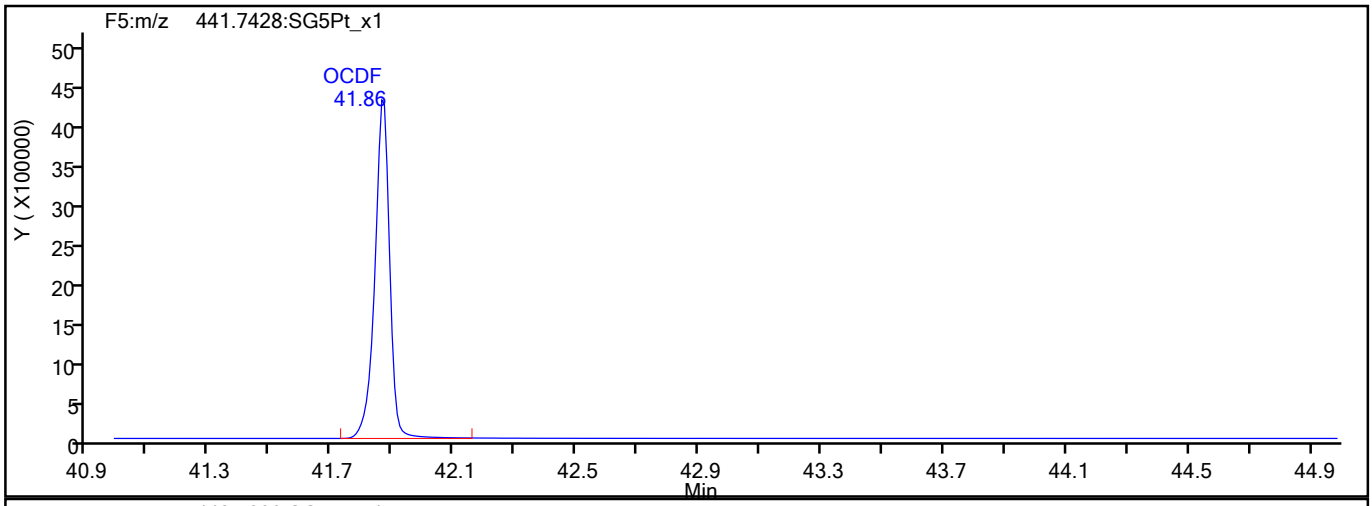

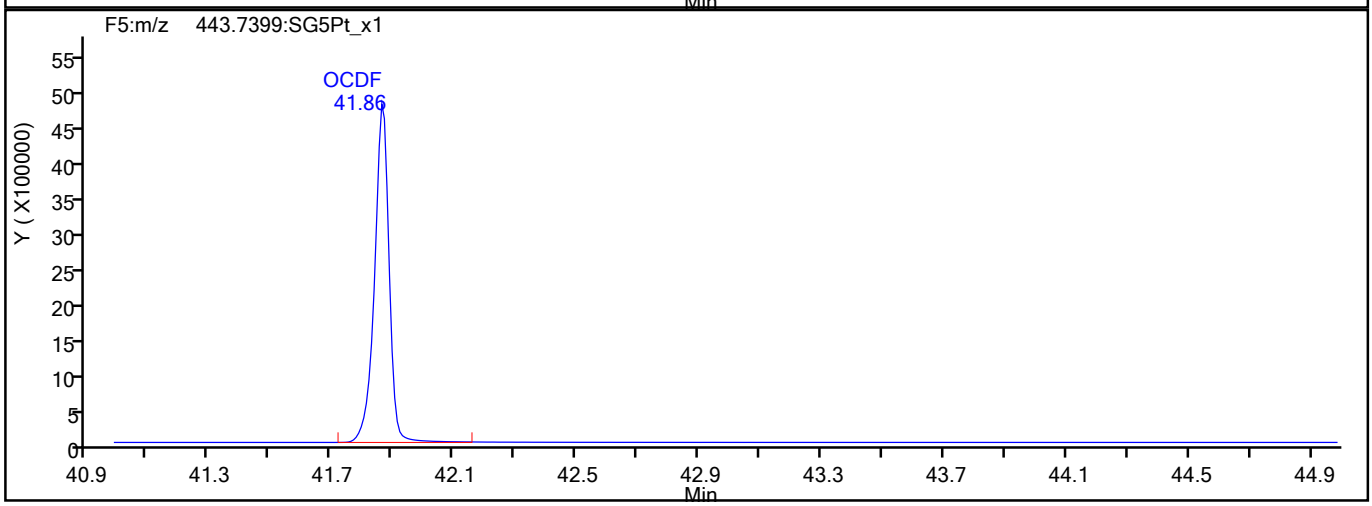

OCDF Interference Mass

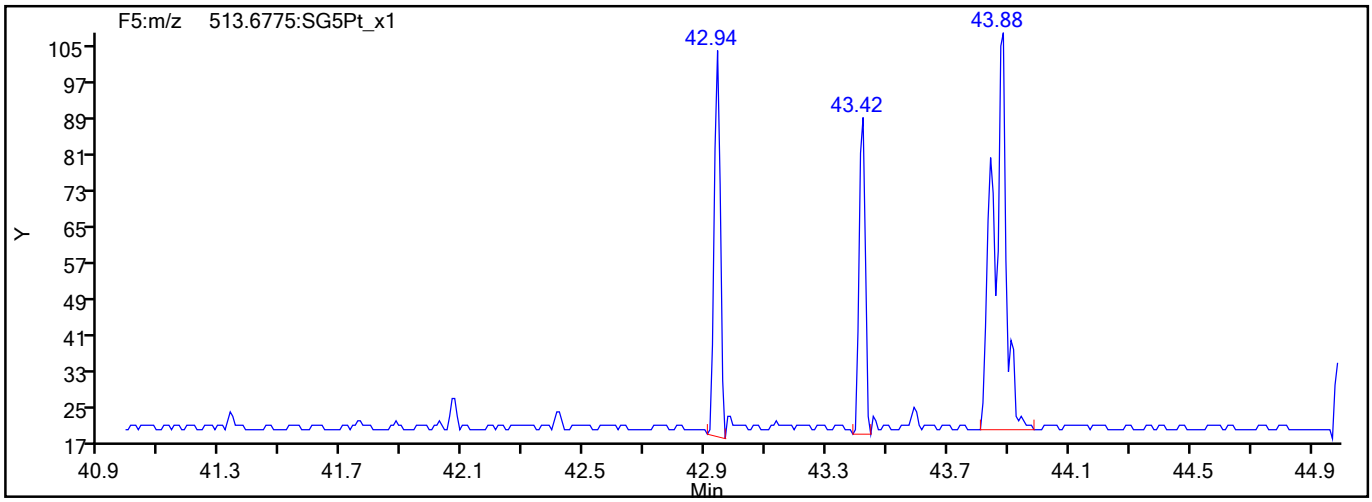

785929

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

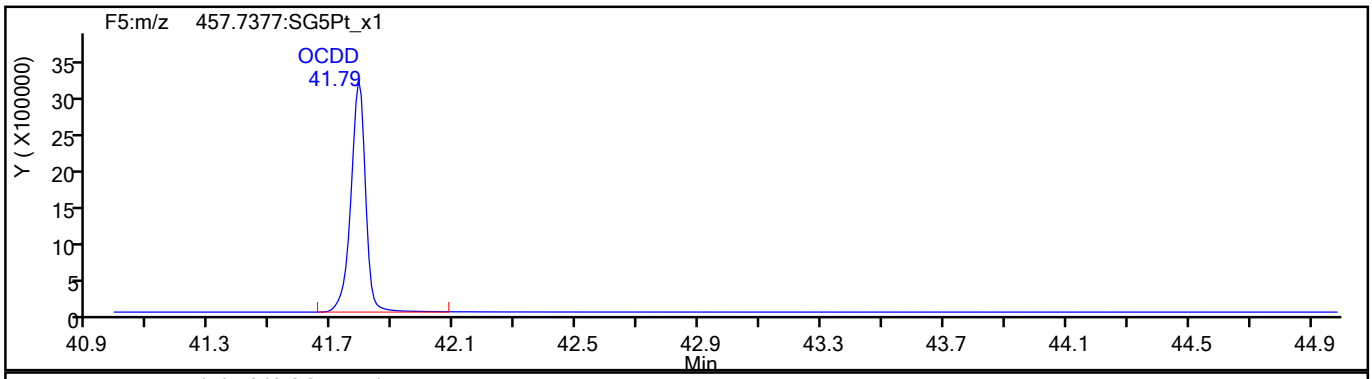

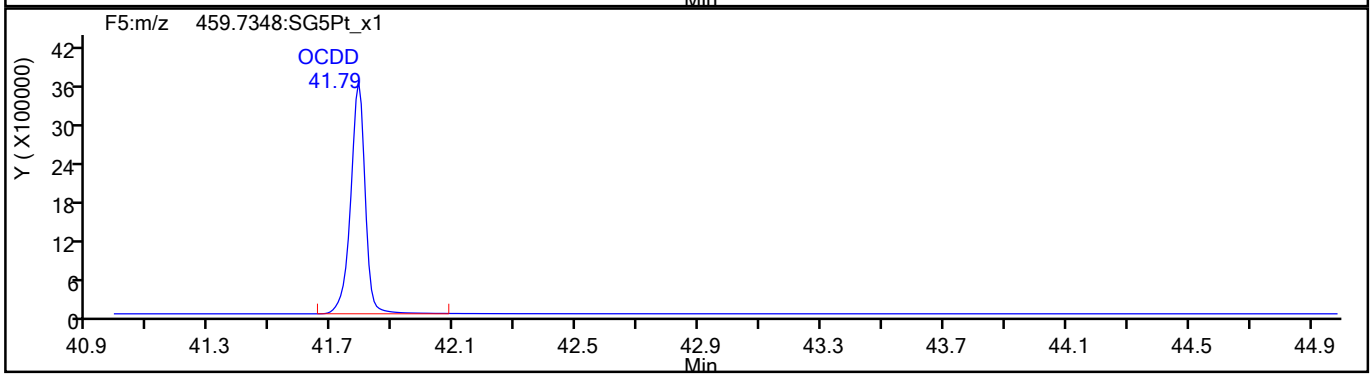

OCDD Standards

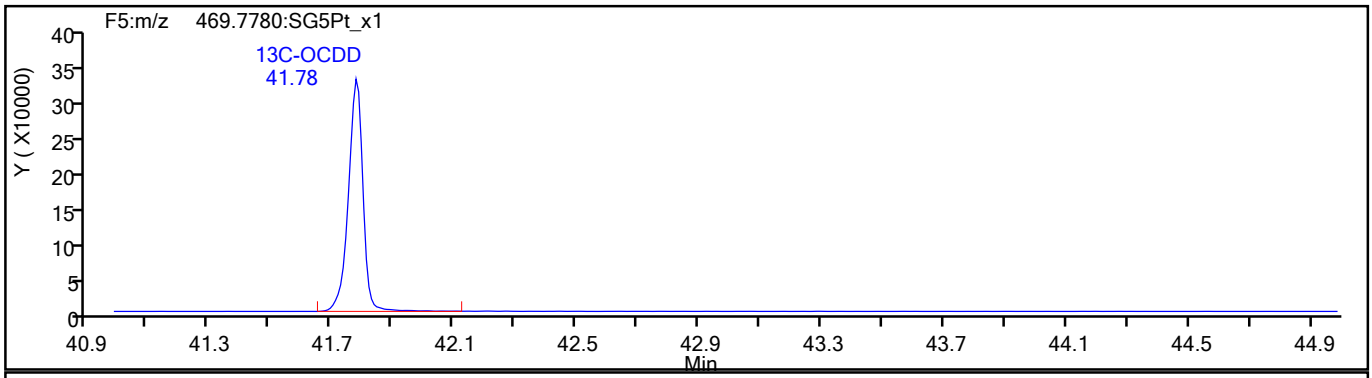

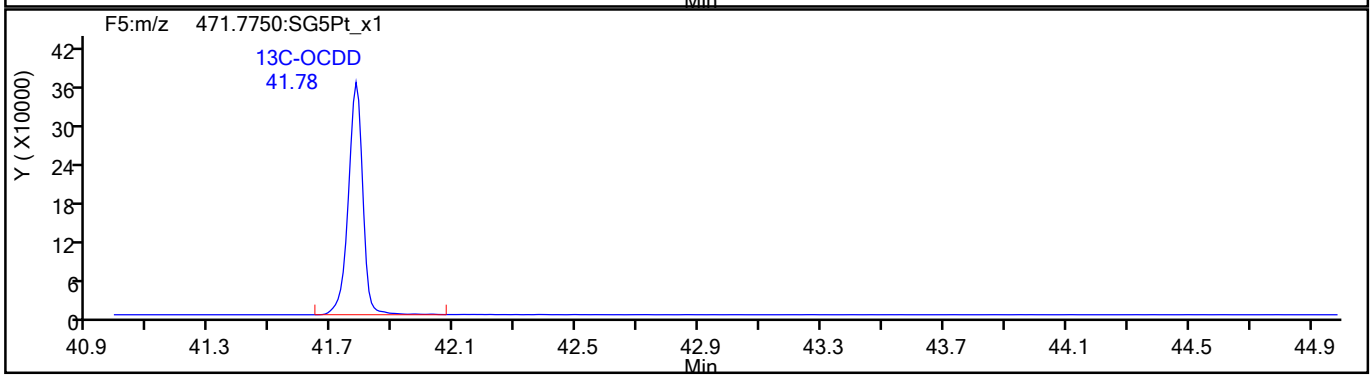

785930

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

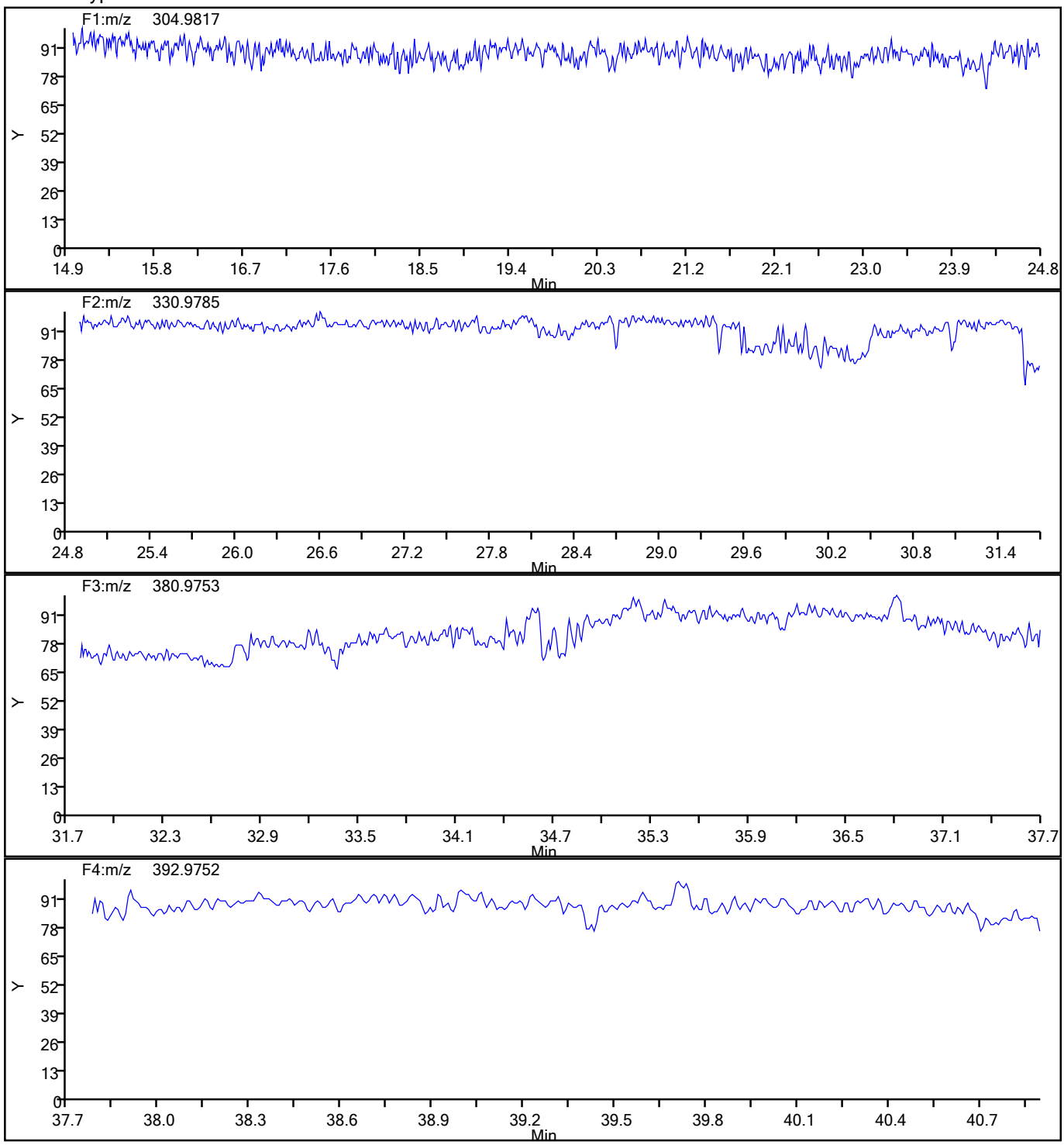

785931

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

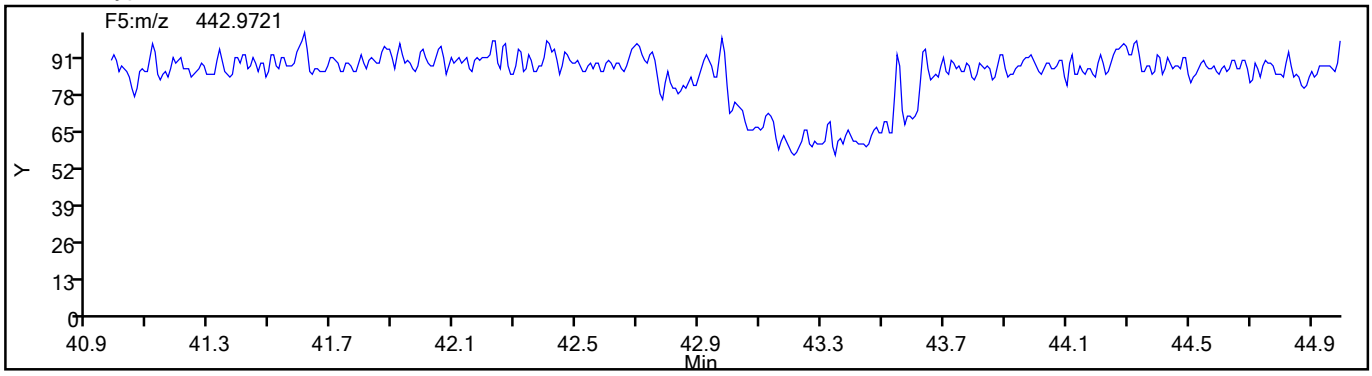

785932

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.05

Error Coefficients

Standard Error:	7060000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.844284	100.0	1113145.0	1.137713	Y
2	IC 320-496688/4	10.0	9.530968	100.0	1162117.0	0.953097	Y
3	IC 320-496688/5	50.0	52.293706	100.0	1094713.0	1.045874	Y
4	IC 320-496688/6	200.0	219.393902	100.0	1337869.0	1.09697	Y
5	IC 320-496688/7	1000.0	1017.847283	100.0	1355803.0	1.017847	Y

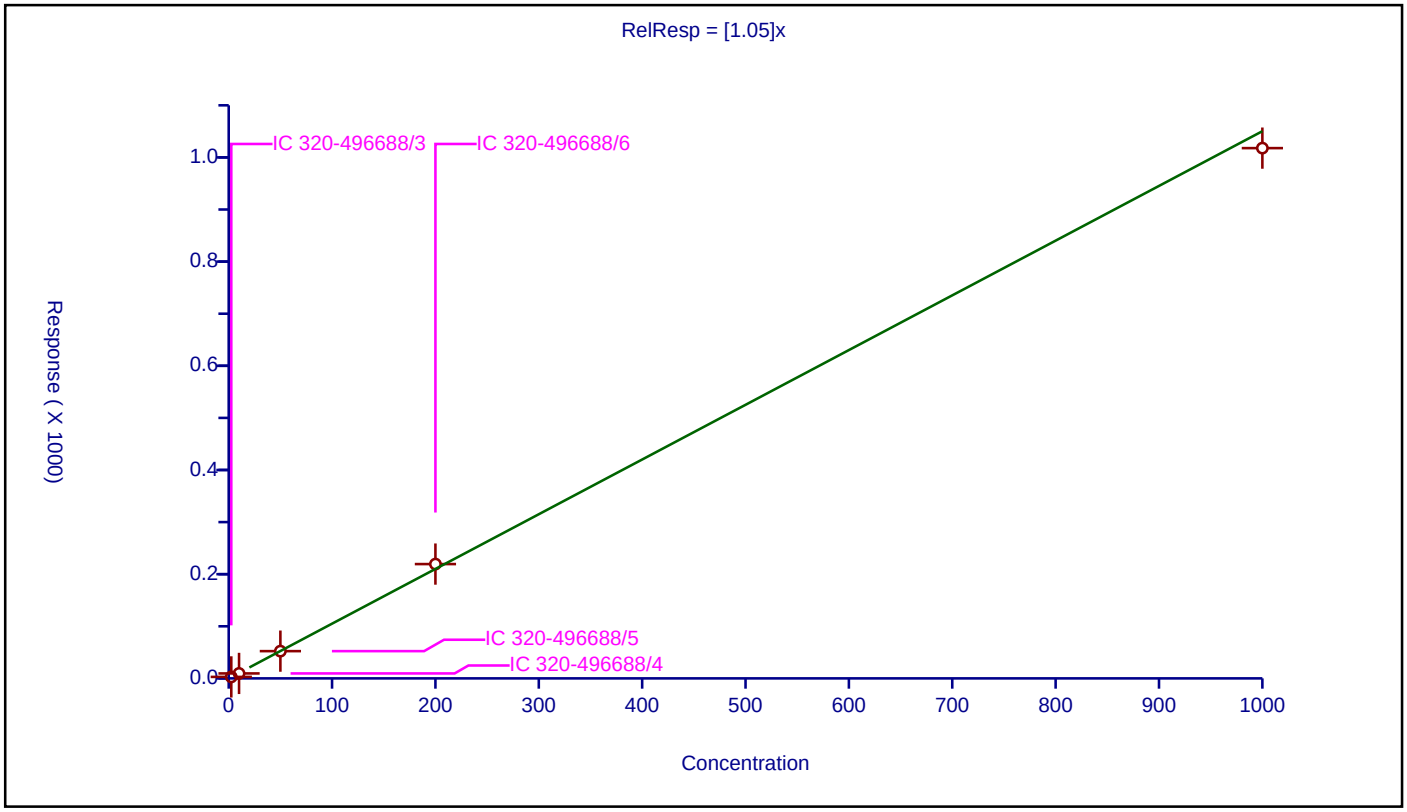

785933

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.442

Error Coefficients

Standard Error:	10800000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.852995	100.0	1227279.0	1.541198	Y
2	IC 320-496688/4	10.0	12.896239	100.0	1272526.0	1.289624	Y
3	IC 320-496688/5	50.0	74.275022	100.0	1182209.0	1.4855	Y
4	IC 320-496688/6	200.0	304.802204	100.0	1392194.0	1.524011	Y
5	IC 320-496688/7	1000.0	1370.014158	100.0	1546113.0	1.370014	Y

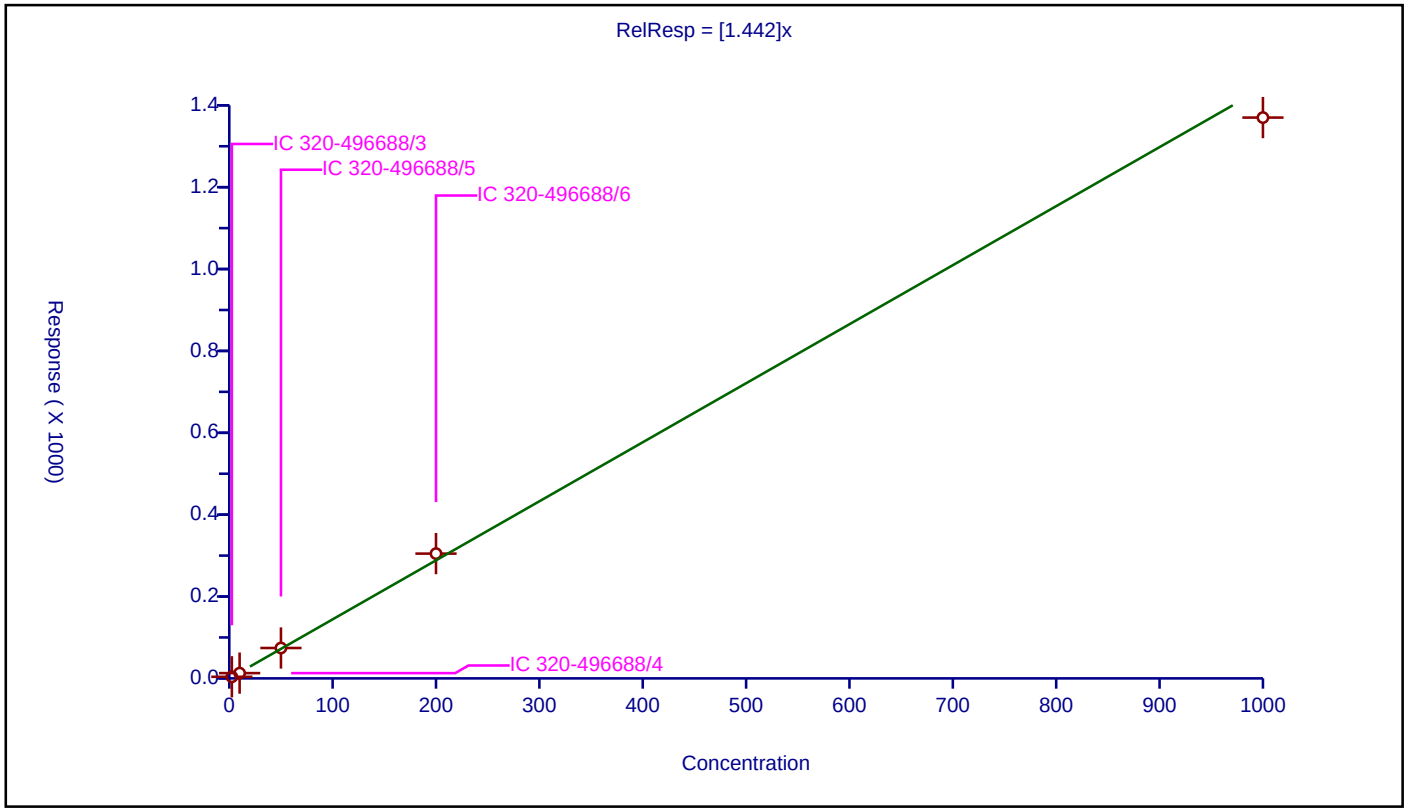

785934

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.309

Error Coefficients

Standard Error:	9110000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.51417	100.0	1120663.0	1.405668	Y
2	IC 320-496688/4	10.0	11.769676	100.0	1175351.0	1.176968	Y
3	IC 320-496688/5	50.0	67.293315	100.0	1080883.0	1.345866	Y
4	IC 320-496688/6	200.0	278.744786	100.0	1337573.0	1.393724	Y
5	IC 320-496688/7	1000.0	1223.548565	100.0	1455766.0	1.223549	Y

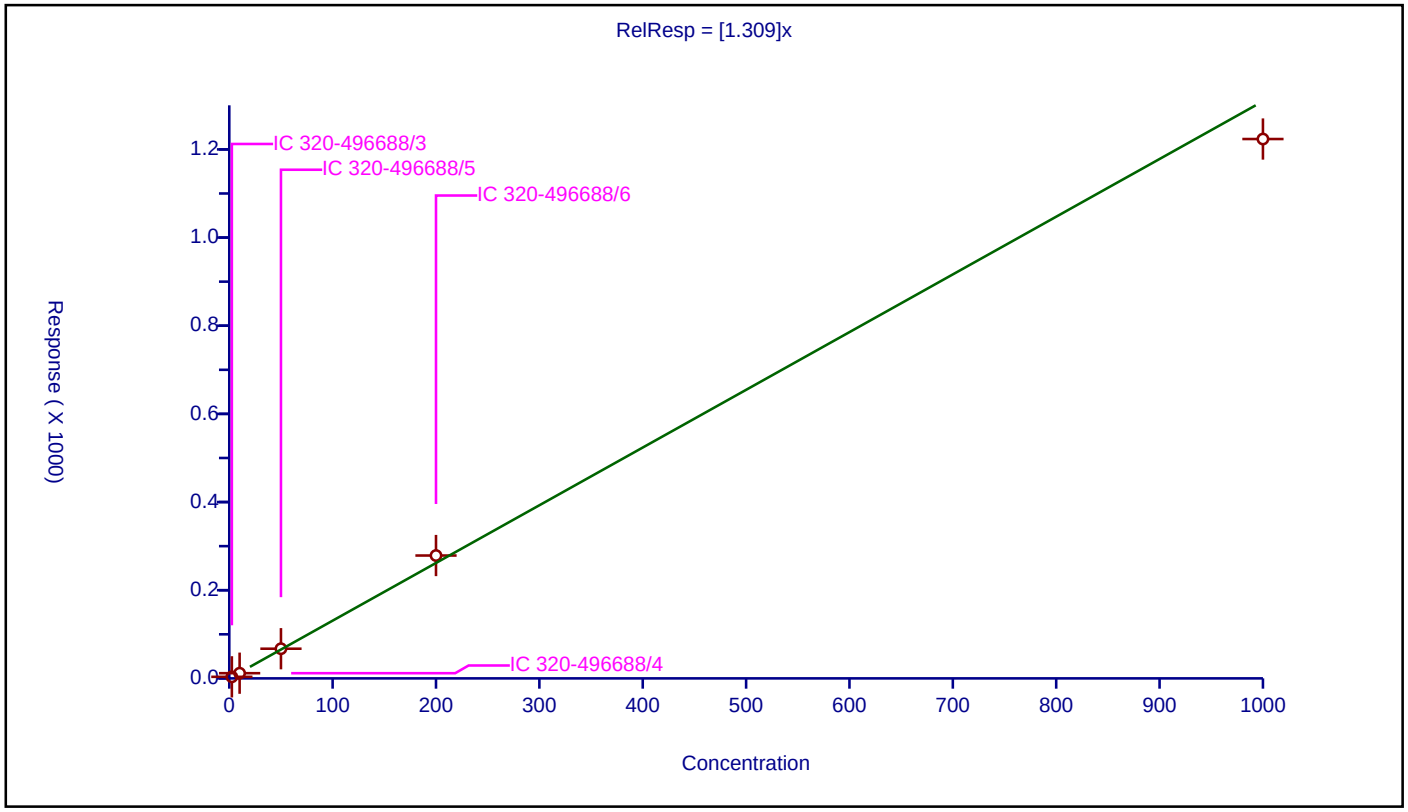

785935

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	7950000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808772	100.0	1127895.0	1.123509	Y
2	IC 320-496688/4	10.0	9.701688	100.0	1363103.0	0.970169	Y
3	IC 320-496688/5	50.0	53.7445	100.0	1348471.0	1.07489	Y
4	IC 320-496688/6	200.0	224.989195	100.0	1432215.0	1.124946	Y
5	IC 320-496688/7	1000.0	1010.433801	100.0	1539784.0	1.010434	Y

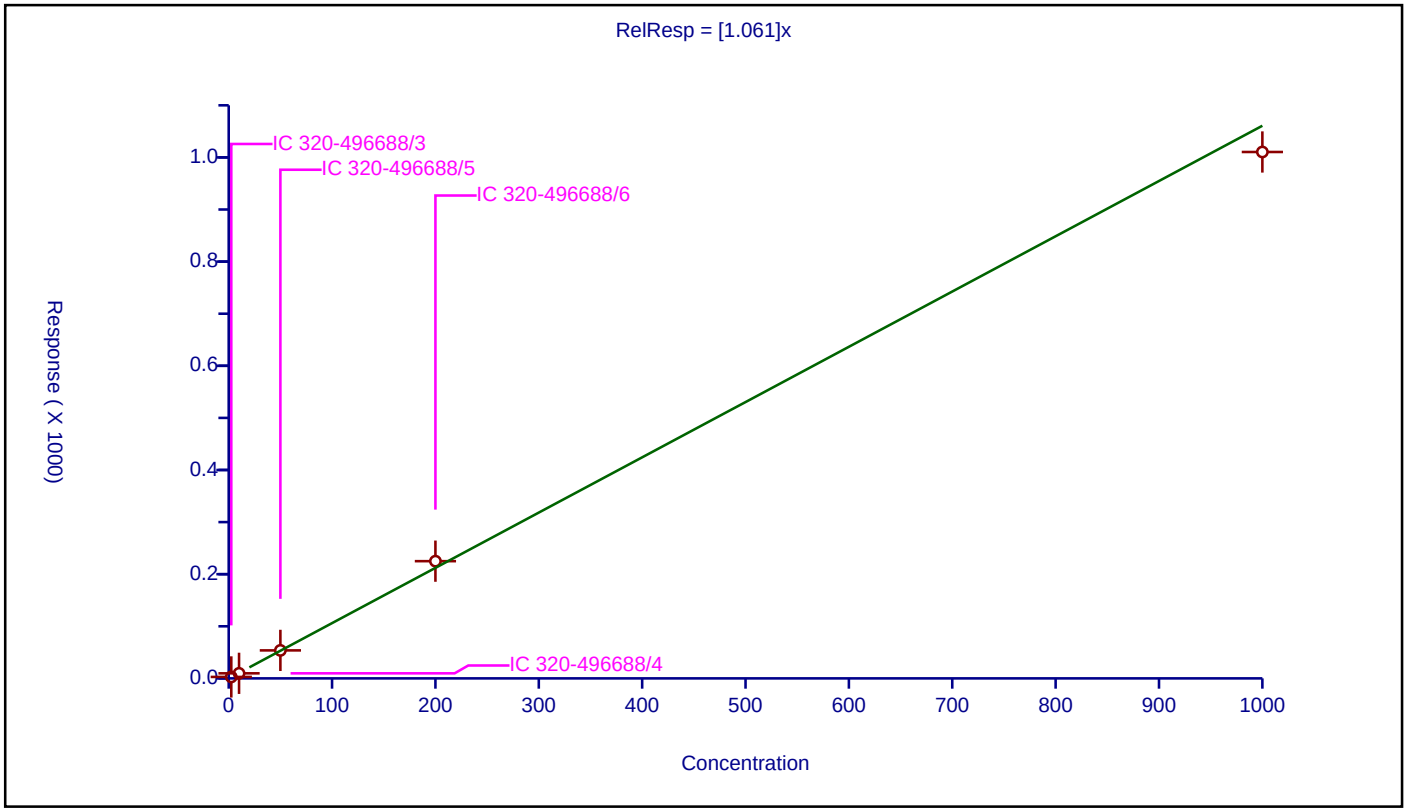

785936

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.147

Error Coefficients

Standard Error:	11200000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.056507	100.0	1517222.0	1.222603	Y
2	IC 320-496688/4	10.0	10.071694	100.0	1545033.0	1.007169	Y
3	IC 320-496688/5	50.0	59.364869	100.0	1841825.0	1.187297	Y
4	IC 320-496688/6	200.0	241.451426	100.0	1778238.0	1.207257	Y
5	IC 320-496688/7	1000.0	1112.580113	100.0	1968615.0	1.11258	Y

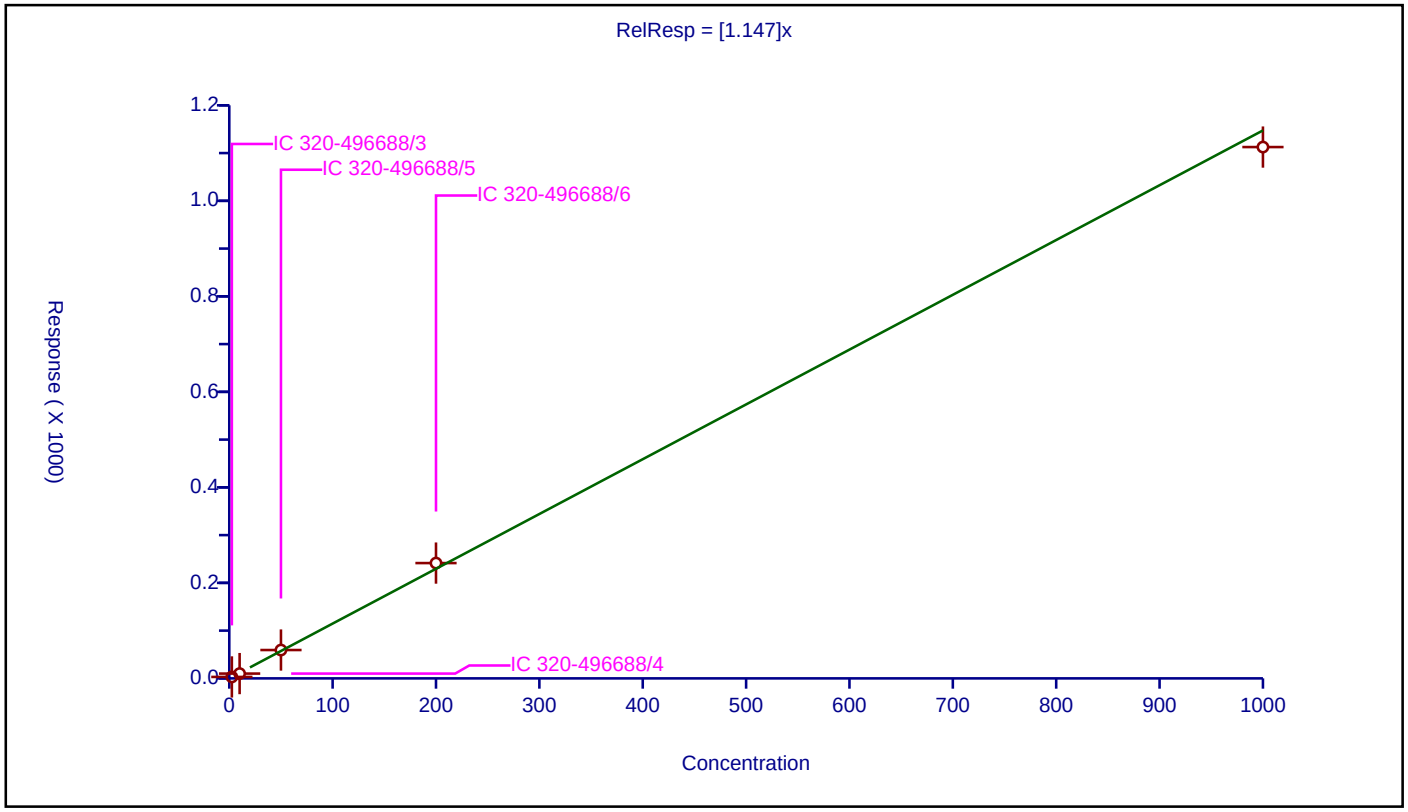

785937

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9933

Error Coefficients

Standard Error:	8510000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.639223	100.0	1291365.0	1.055689	Y
2	IC 320-496688/4	10.0	8.862824	100.0	1558668.0	0.886282	Y
3	IC 320-496688/5	50.0	52.081775	100.0	1460100.0	1.041636	Y
4	IC 320-496688/6	200.0	205.274729	100.0	1669337.0	1.026374	Y
5	IC 320-496688/7	1000.0	956.728345	100.0	1741498.0	0.956728	Y

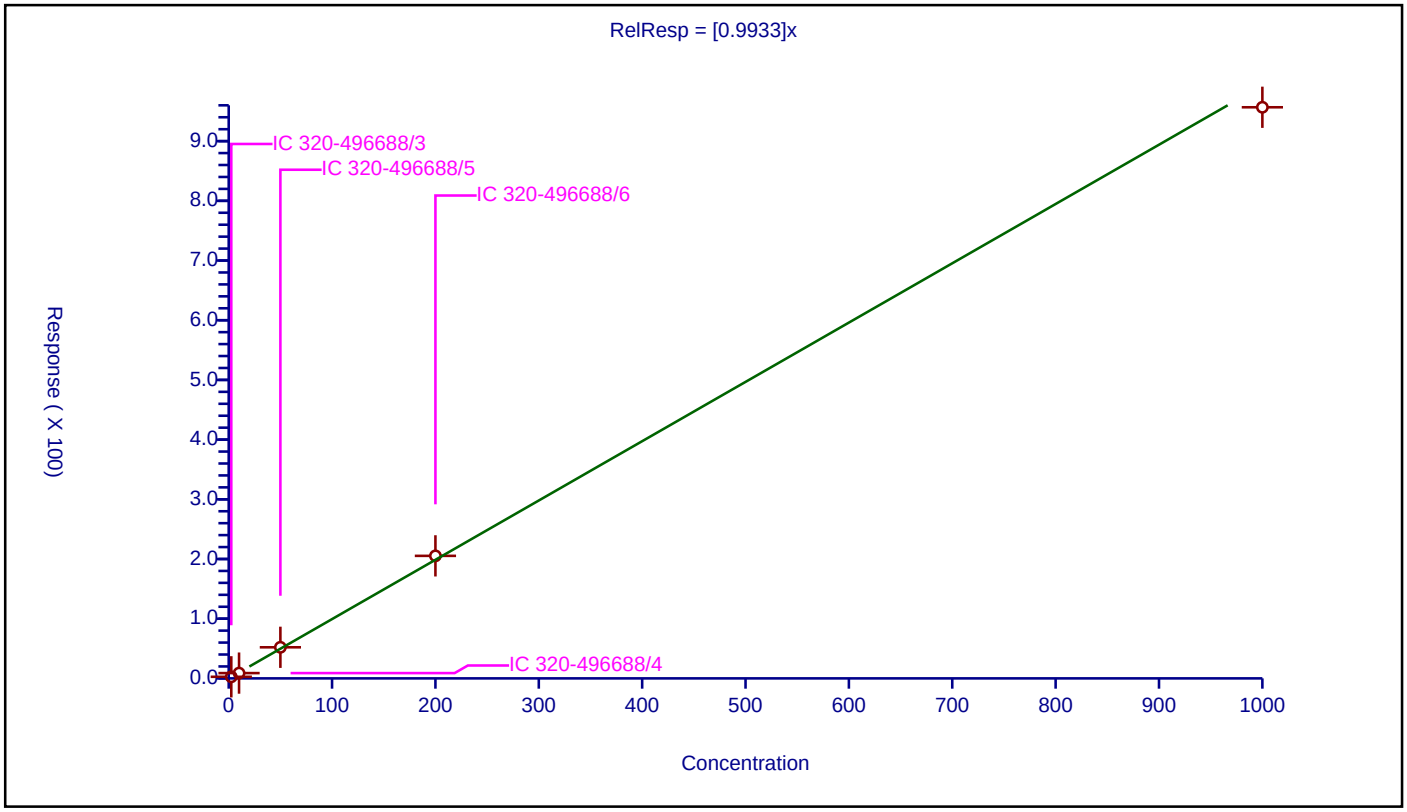

785938

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.218

Error Coefficients

Standard Error:	13600000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.343553	100.0	1626653.0	1.337421	Y
2	IC 320-496688/4	10.0	10.950603	100.0	1692336.0	1.09506	Y
3	IC 320-496688/5	50.0	61.795629	100.0	2015594.0	1.235913	Y
4	IC 320-496688/6	200.0	250.125403	100.0	1995567.0	1.250627	Y
5	IC 320-496688/7	1000.0	1169.95242	100.0	2283961.0	1.169952	Y

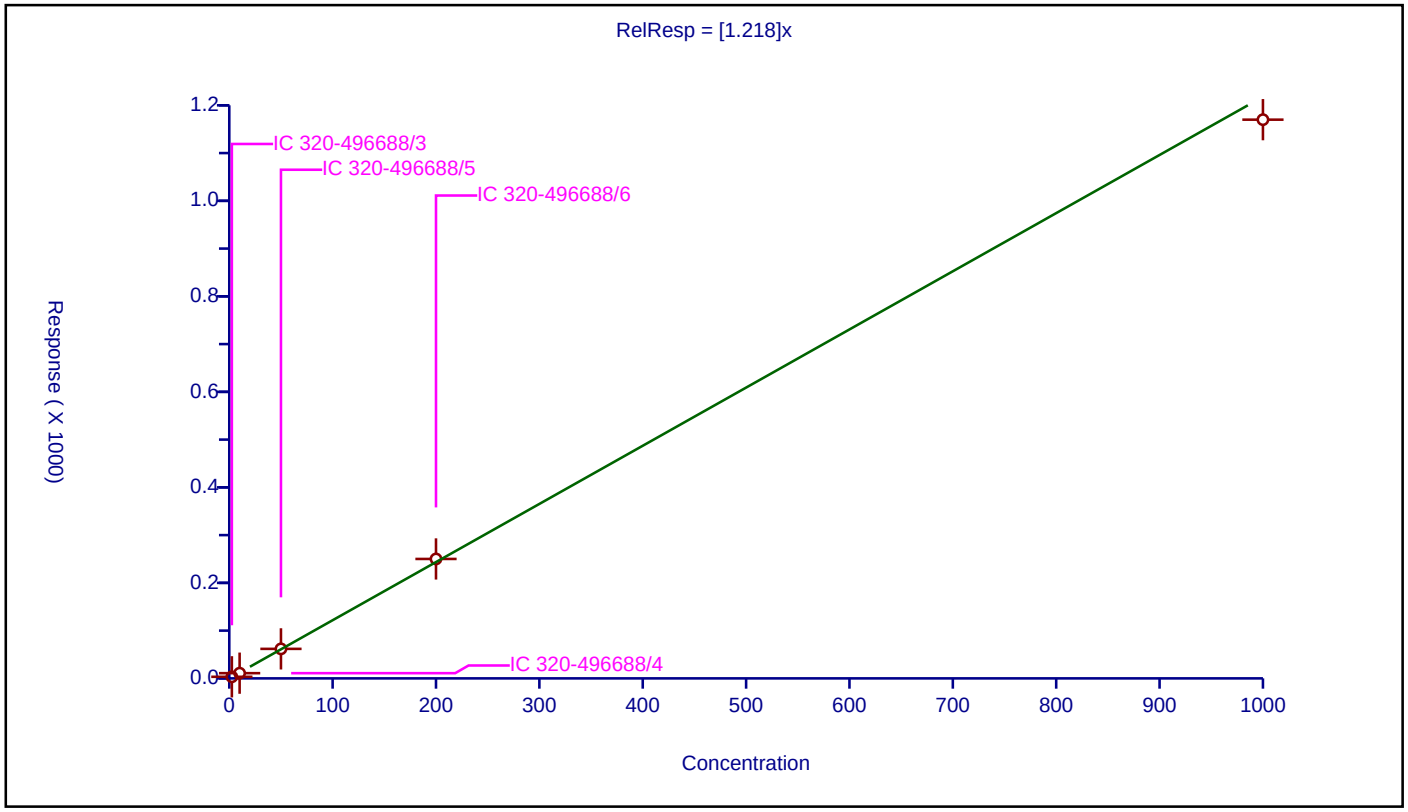

785939

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.184

Error Coefficients

Standard Error:	8820000
Relative Standard Error:	11.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.510522	100.0	1127895.0	1.404209	Y
2	IC 320-496688/4	10.0	10.251683	100.0	1363103.0	1.025168	Y
3	IC 320-496688/5	50.0	58.326134	100.0	1348471.0	1.166523	Y
4	IC 320-496688/6	200.0	239.918169	100.0	1432215.0	1.199591	Y
5	IC 320-496688/7	1000.0	1122.182397	100.0	1539784.0	1.122182	Y

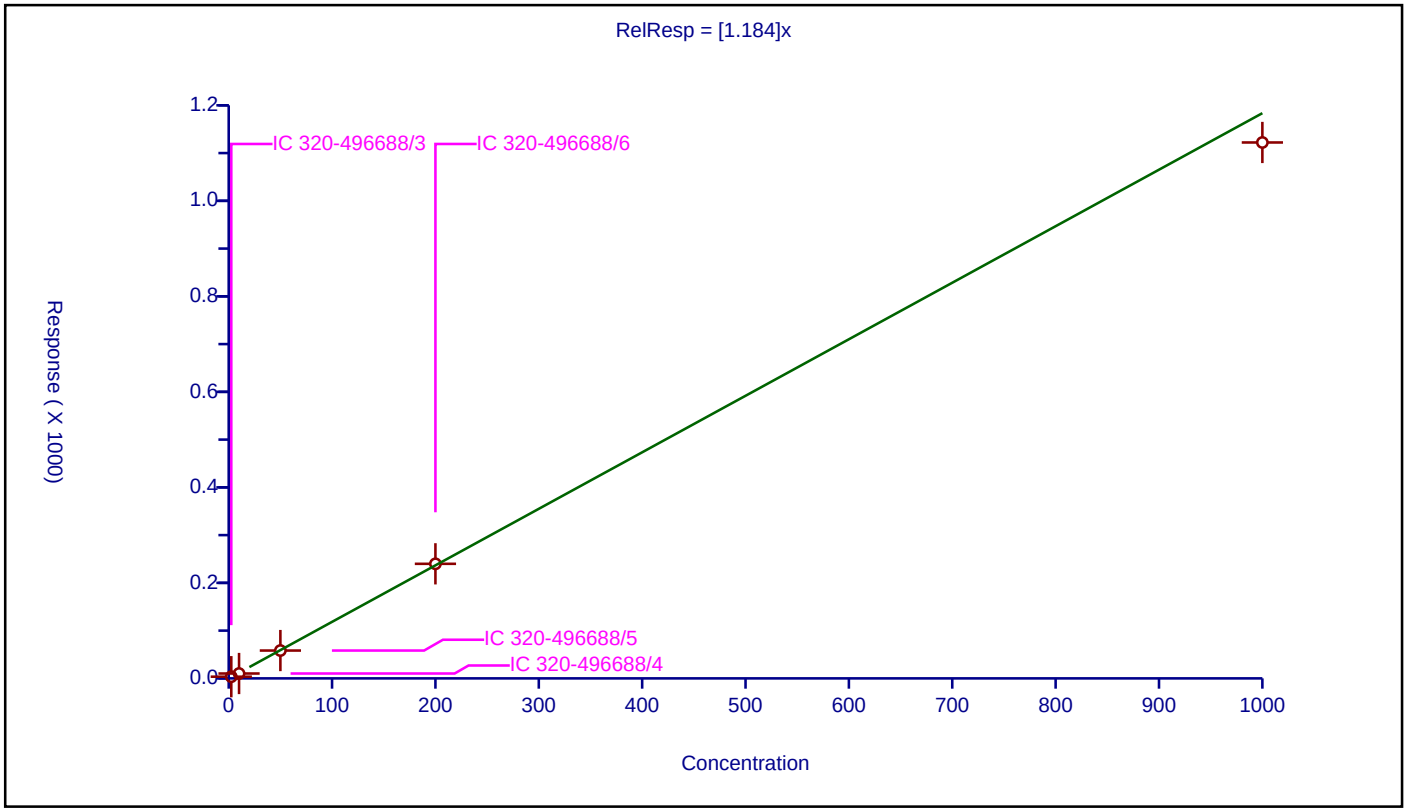

785940

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.24

Error Coefficients

Standard Error:	11500000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.395229	100.0	1696557.0	1.358092	Y
2	IC 320-496688/4	10.0	11.238546	100.0	1735785.0	1.123855	Y
3	IC 320-496688/5	50.0	62.662354	100.0	1657413.0	1.253247	Y
4	IC 320-496688/6	200.0	255.13849	100.0	1742331.0	1.275692	Y
5	IC 320-496688/7	1000.0	1189.708821	100.0	1895740.0	1.189709	Y

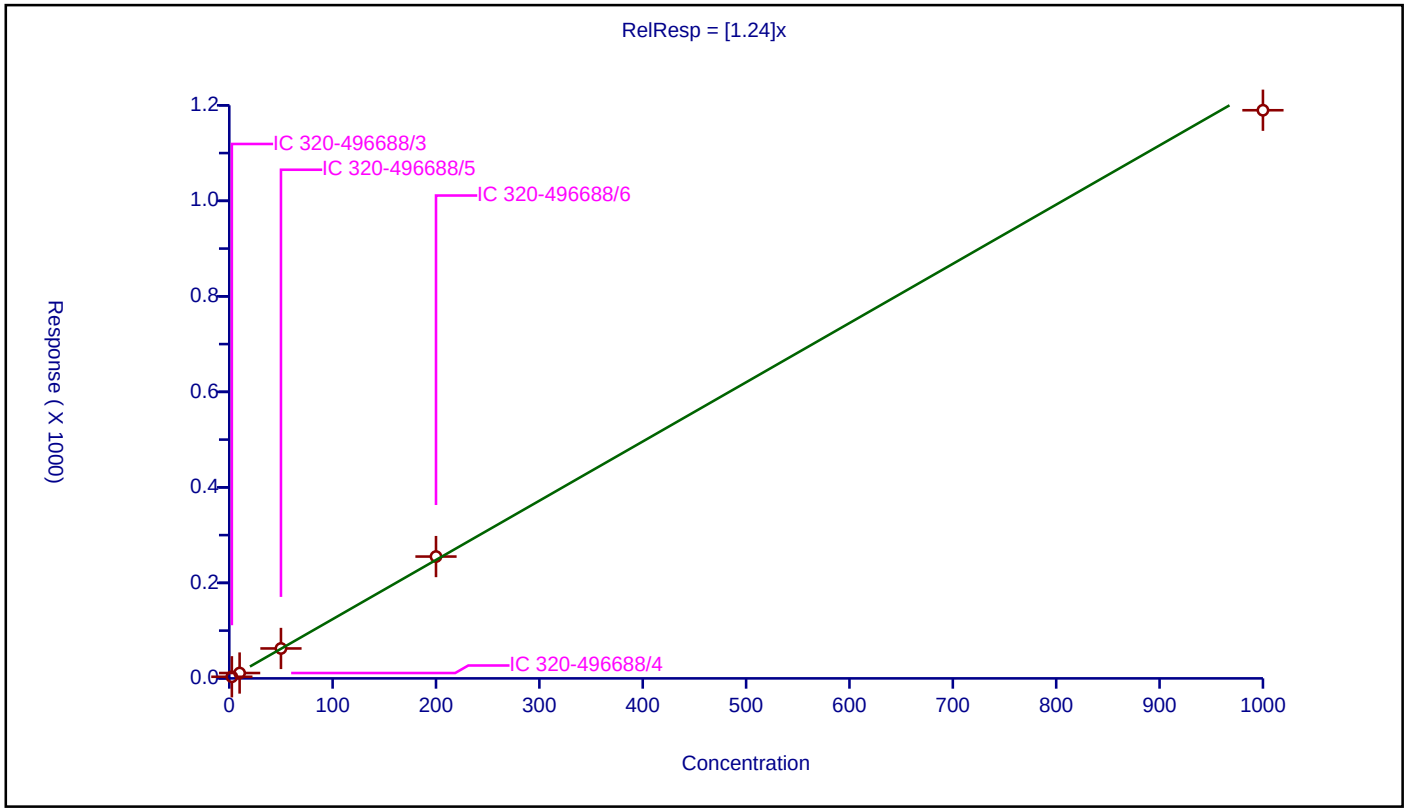

785941

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.046

Error Coefficients

Standard Error:	8500000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.679791	100.0	1602476.0	1.071916	Y
2	IC 320-496688/4	10.0	9.520403	100.0	1364144.0	0.95204	Y
3	IC 320-496688/5	50.0	53.426119	100.0	1388641.0	1.068522	Y
4	IC 320-496688/6	200.0	220.300949	100.0	1521254.0	1.101505	Y
5	IC 320-496688/7	1000.0	1038.502383	100.0	1602880.0	1.038502	Y

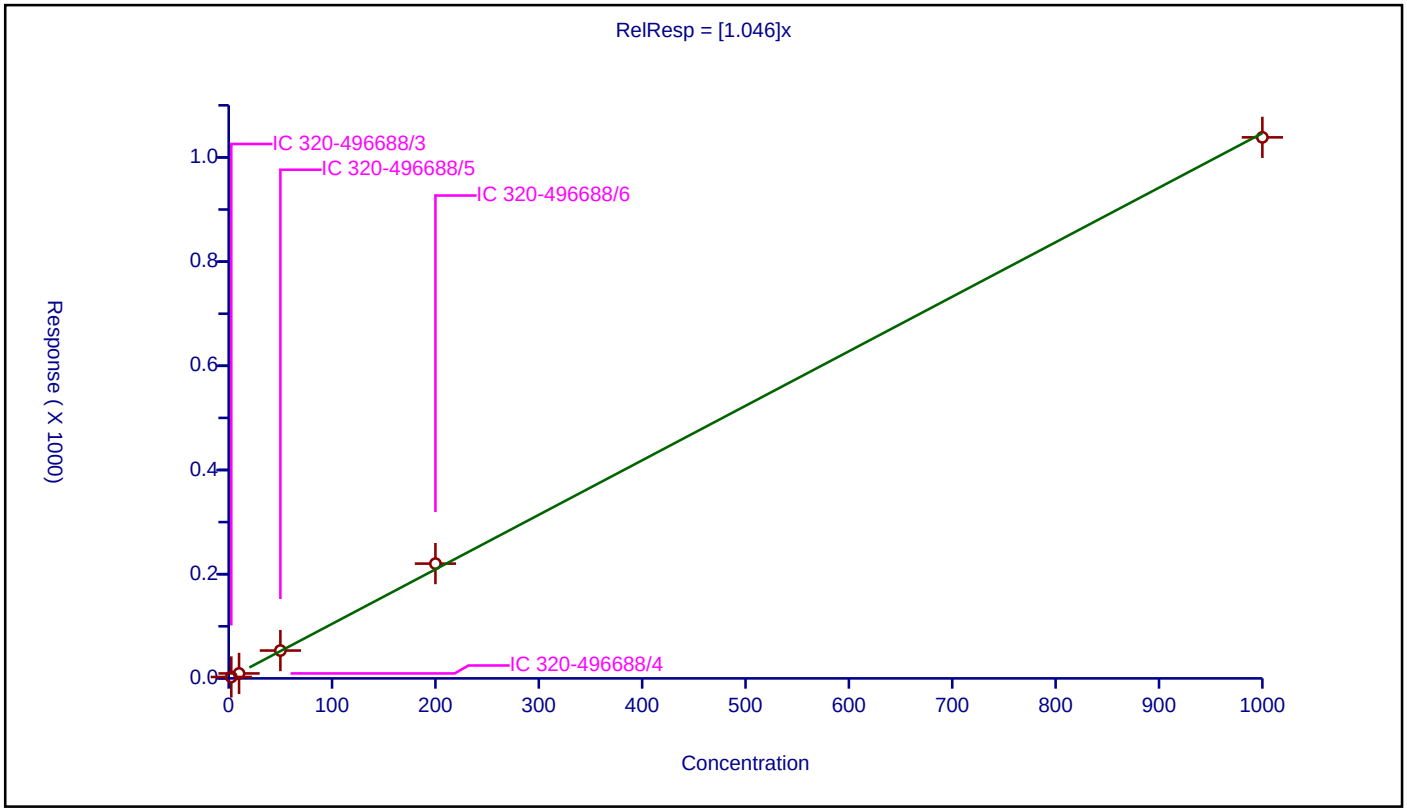

785942

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.054

Error Coefficients

Standard Error:	13300000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.980089	100.0	2514489.0	1.192035	Y
2	IC 320-496688/4	10.0	9.411606	100.0	2234847.0	0.941161	Y
3	IC 320-496688/5	50.0	51.86467	100.0	2149791.0	1.037293	Y
4	IC 320-496688/6	200.0	217.934531	100.0	2432949.0	1.089673	Y
5	IC 320-496688/7	1000.0	1011.152482	100.0	2574521.0	1.011152	Y

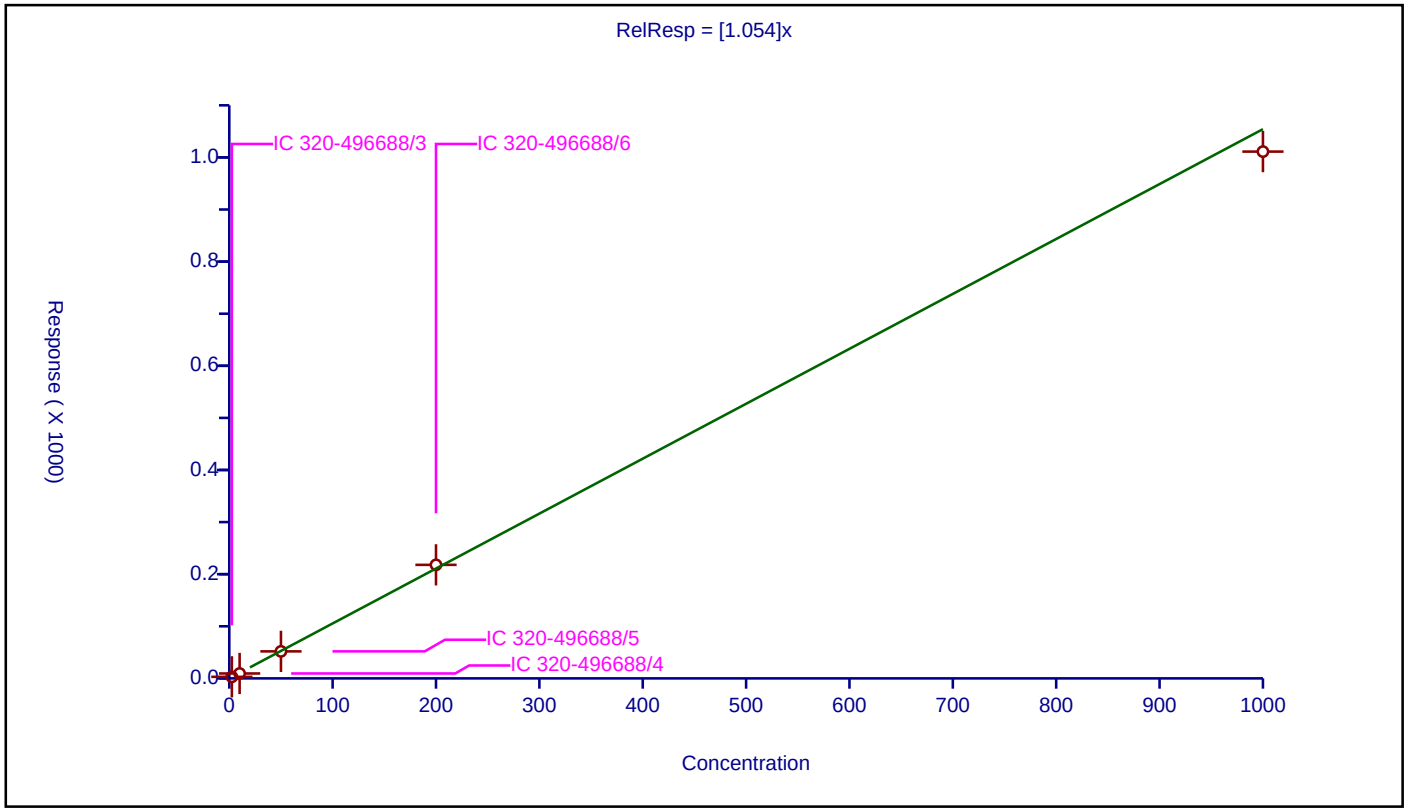

785943

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.214

Error Coefficients

Standard Error:	13000000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.283761	100.0	1523436.0	1.313504	Y
2	IC 320-496688/4	10.0	11.007204	100.0	1740015.0	1.10072	Y
3	IC 320-496688/5	50.0	61.8379	100.0	1861559.0	1.236758	Y
4	IC 320-496688/6	200.0	252.469364	100.0	2042874.0	1.262347	Y
5	IC 320-496688/7	1000.0	1159.01852	100.0	2190509.0	1.159019	Y

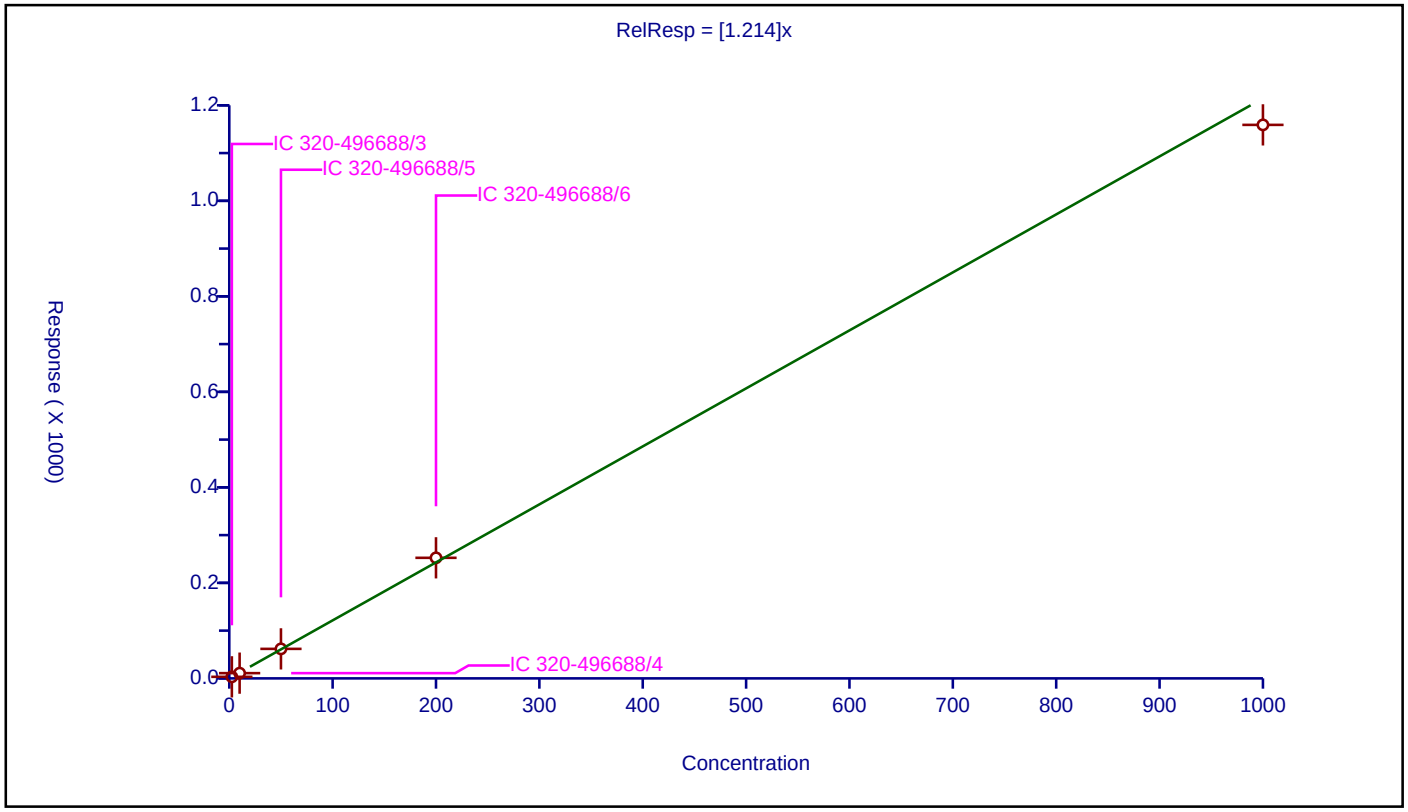

785944

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	12700000
Relative Standard Error:	8.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808272	100.0	2592947.0	1.123309	Y
2	IC 320-496688/4	10.0	8.984414	100.0	2228025.0	0.898441	Y
3	IC 320-496688/5	50.0	49.606313	100.0	1991303.0	0.992126	Y
4	IC 320-496688/6	200.0	212.714288	100.0	2374722.0	1.063571	Y
5	IC 320-496688/7	1000.0	961.852333	100.0	2584740.0	0.961852	Y

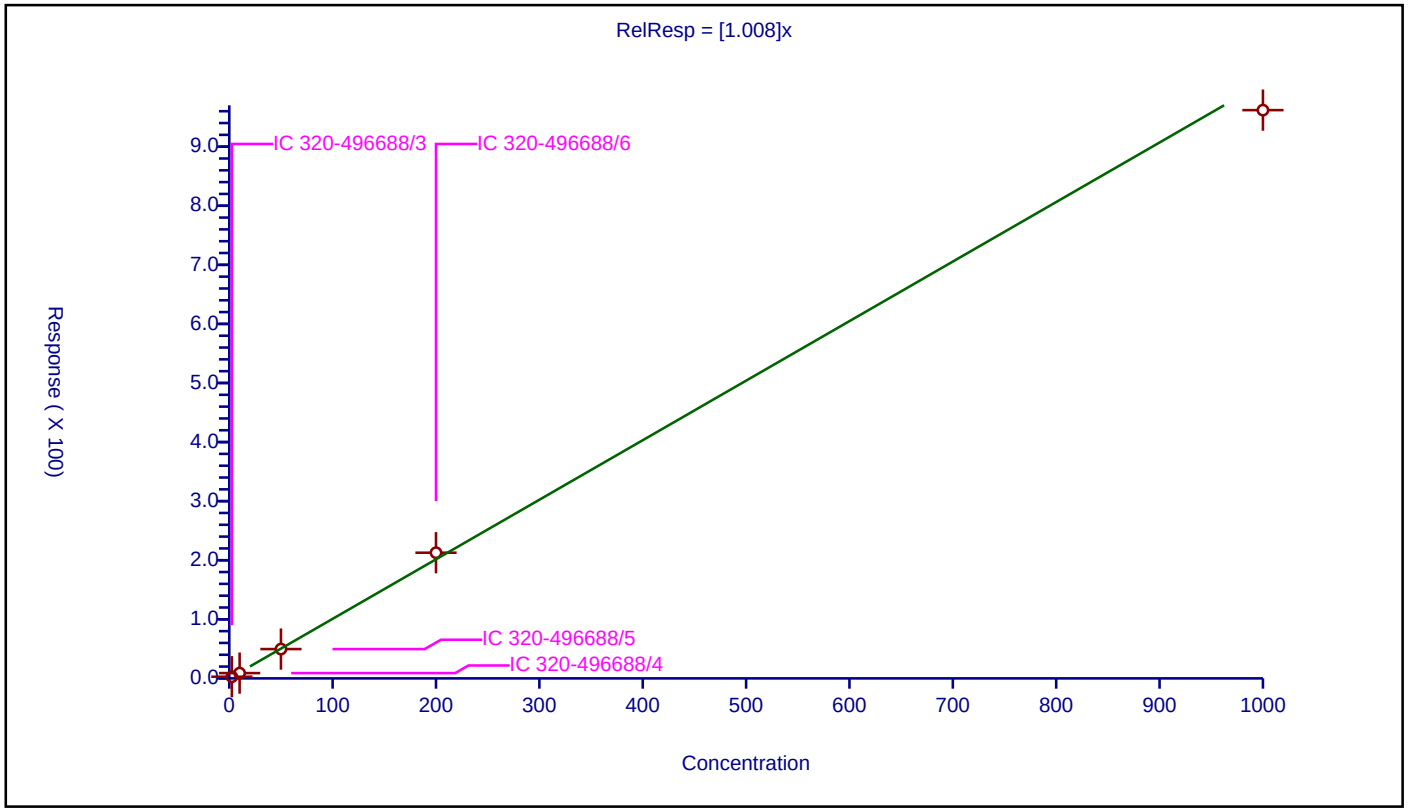

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.075

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.566752	100.0	2138853.0	1.133505	Y
2	IC 320-496688/4	2.0	1.911764	100.0	1829253.0	0.955882	Y
3	IC 320-496688/5	10.0	10.998165	100.0	1800864.0	1.099817	Y
4	IC 320-496688/6	40.0	44.949952	100.0	1948011.0	1.123749	Y
5	IC 320-496688/7	200.0	212.755816	100.0	2014532.0	1.063779	Y

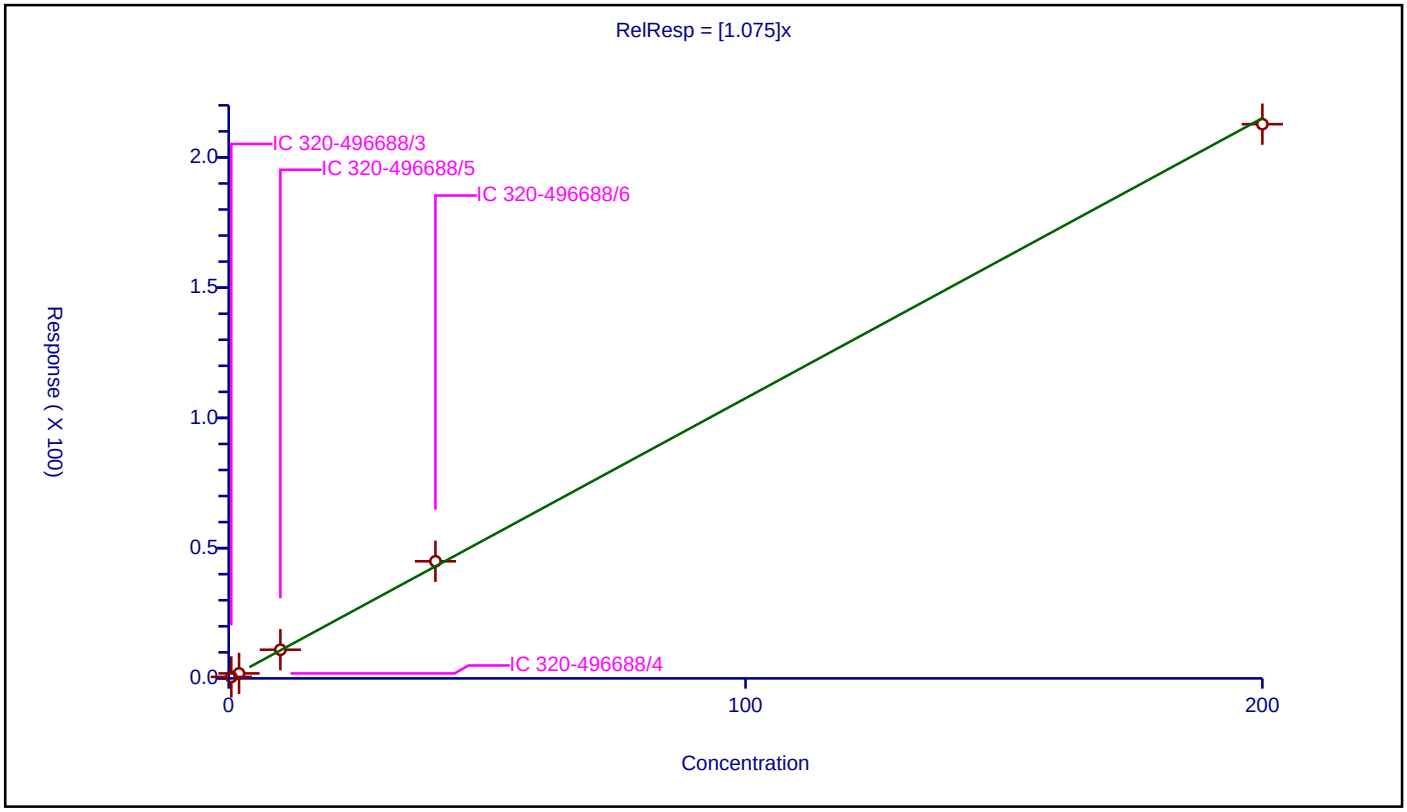

785946

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.08

Error Coefficients

Standard Error:	3140000
Relative Standard Error:	9.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.616764	100.0	3167014.0	1.233528	Y
2	IC 320-496688/4	2.0	1.926948	100.0	2644389.0	0.963474	Y
3	IC 320-496688/5	10.0	10.464342	100.0	2465726.0	1.046434	Y
4	IC 320-496688/6	40.0	44.869913	100.0	2839435.0	1.121748	Y
5	IC 320-496688/7	200.0	207.156116	100.0	2962515.0	1.035781	Y

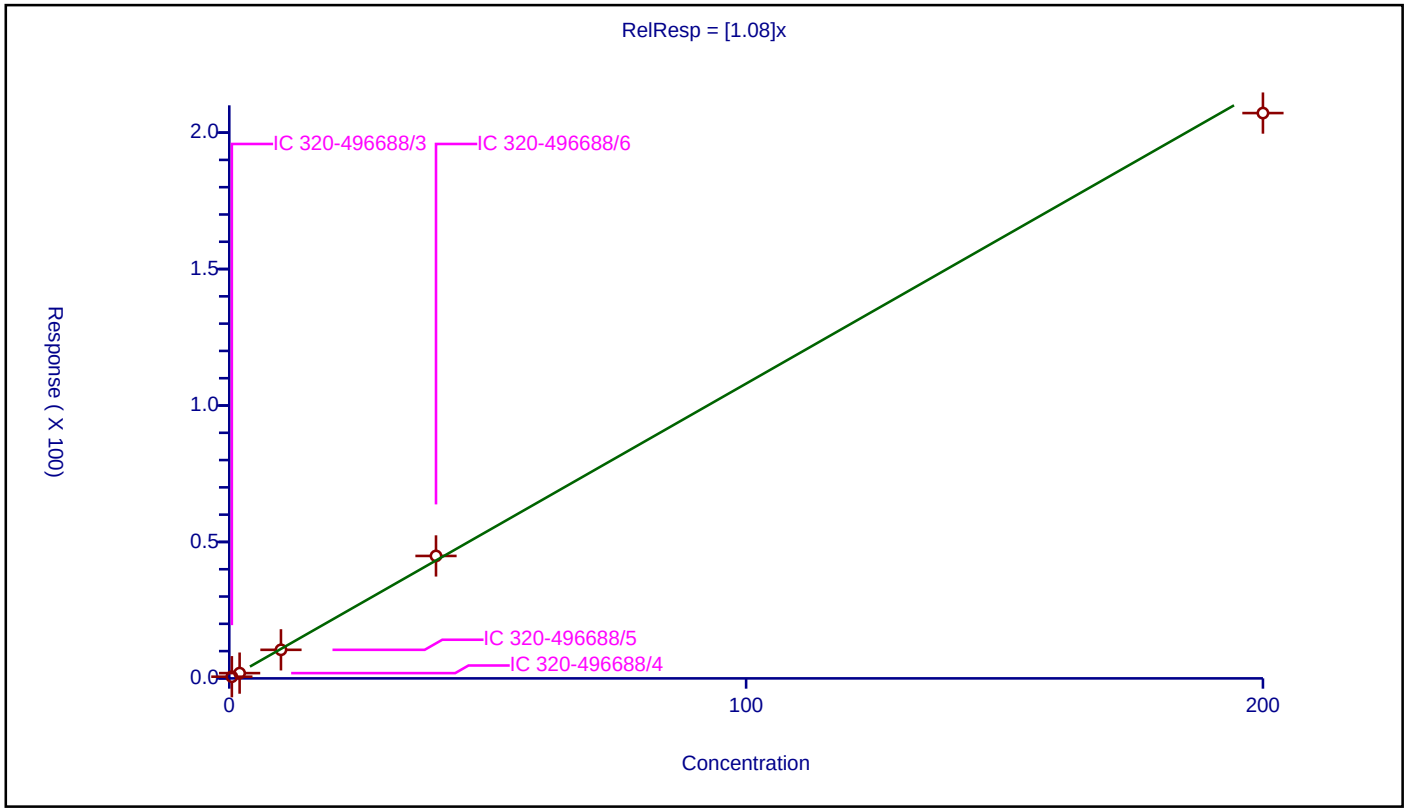

785947

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.482683	100.0	2334037.0	0.965366	Y
2	IC 320-496688/4	2.0	1.917995	100.0	2045939.0	0.958997	Y
3	IC 320-496688/5	10.0	10.721795	100.0	1900111.0	1.072179	Y
4	IC 320-496688/6	40.0	40.297989	100.0	2105852.0	1.00745	Y
5	IC 320-496688/7	200.0	207.496438	100.0	2066088.0	1.037482	Y

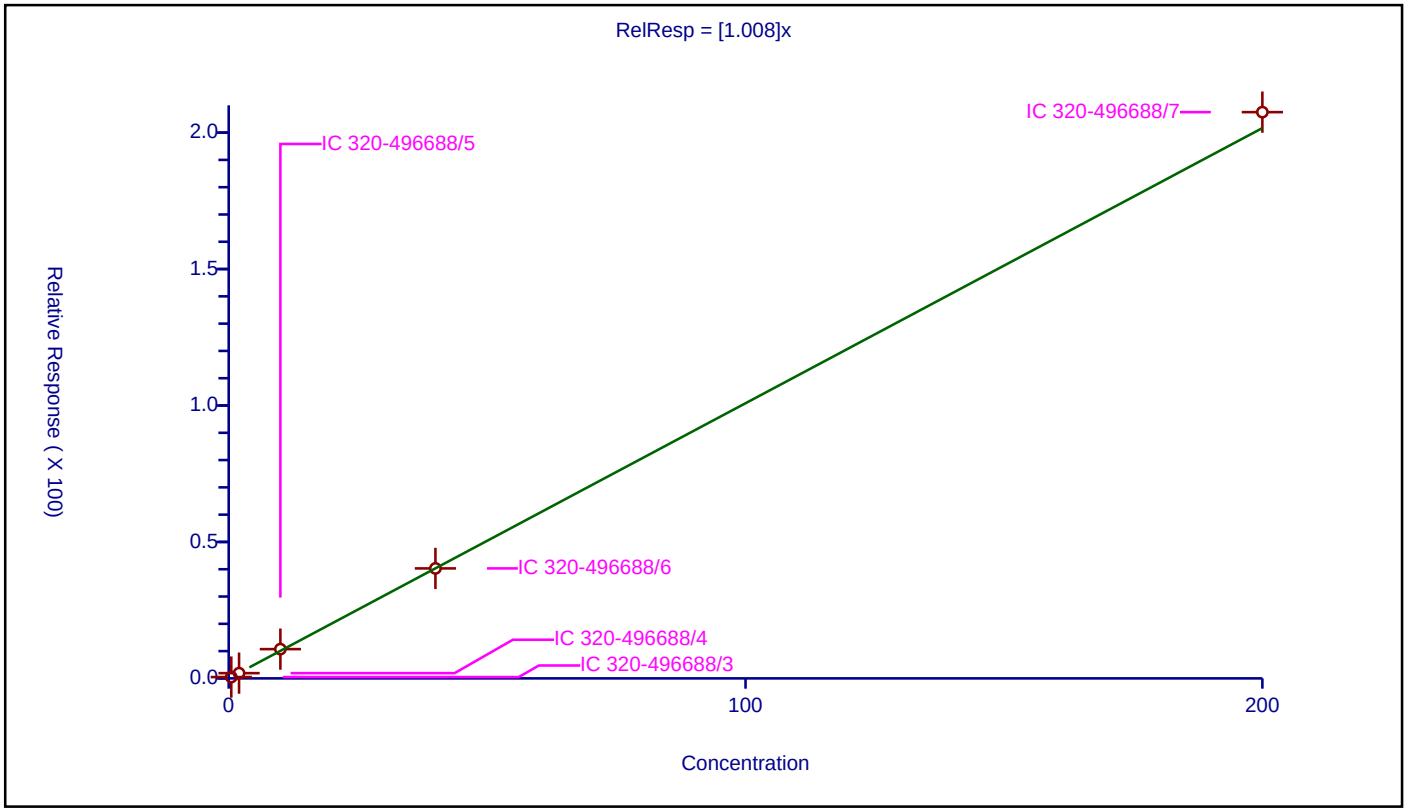

785948

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.062

Error Coefficients

Standard Error:	11700000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	5.664077	200.0	1823492.0	1.132815	Y
2	IC 320-496688/4	20.0	19.907928	200.0	1833139.0	0.995396	Y
3	IC 320-496688/5	100.0	108.699815	200.0	1676139.0	1.086998	Y
4	IC 320-496688/6	400.0	441.074631	200.0	2177938.0	1.102687	Y
5	IC 320-496688/7	2000.0	1984.090177	200.0	2298668.0	0.992045	Y

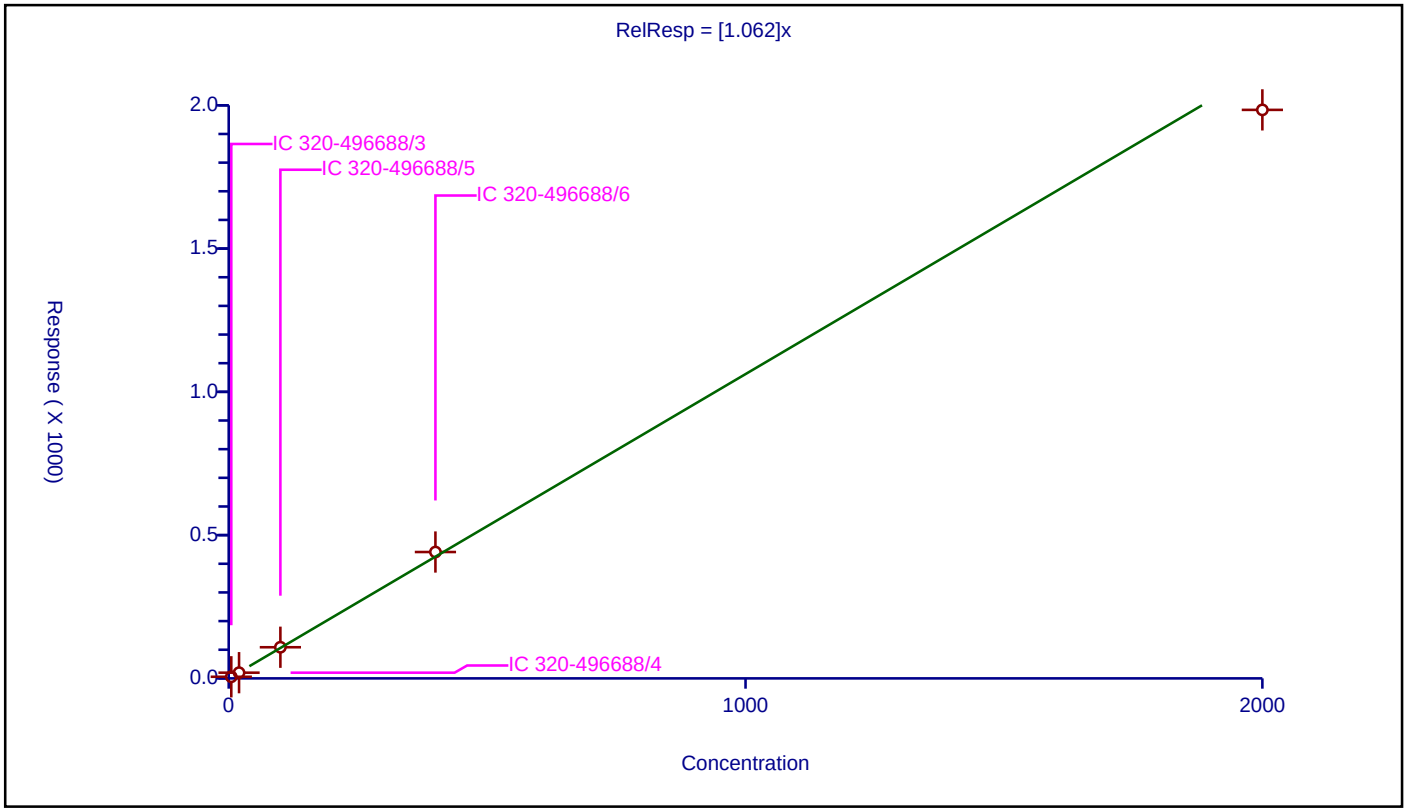

785949

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	15600000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	6.696054	200.0	1823492.0	1.339211	Y
2	IC 320-496688/4	20.0	23.726842	200.0	1833139.0	1.186342	Y
3	IC 320-496688/5	100.0	133.490122	200.0	1676139.0	1.334901	Y
4	IC 320-496688/6	400.0	558.573844	200.0	2177938.0	1.396435	Y
5	IC 320-496688/7	2000.0	2654.186163	200.0	2298668.0	1.327093	Y

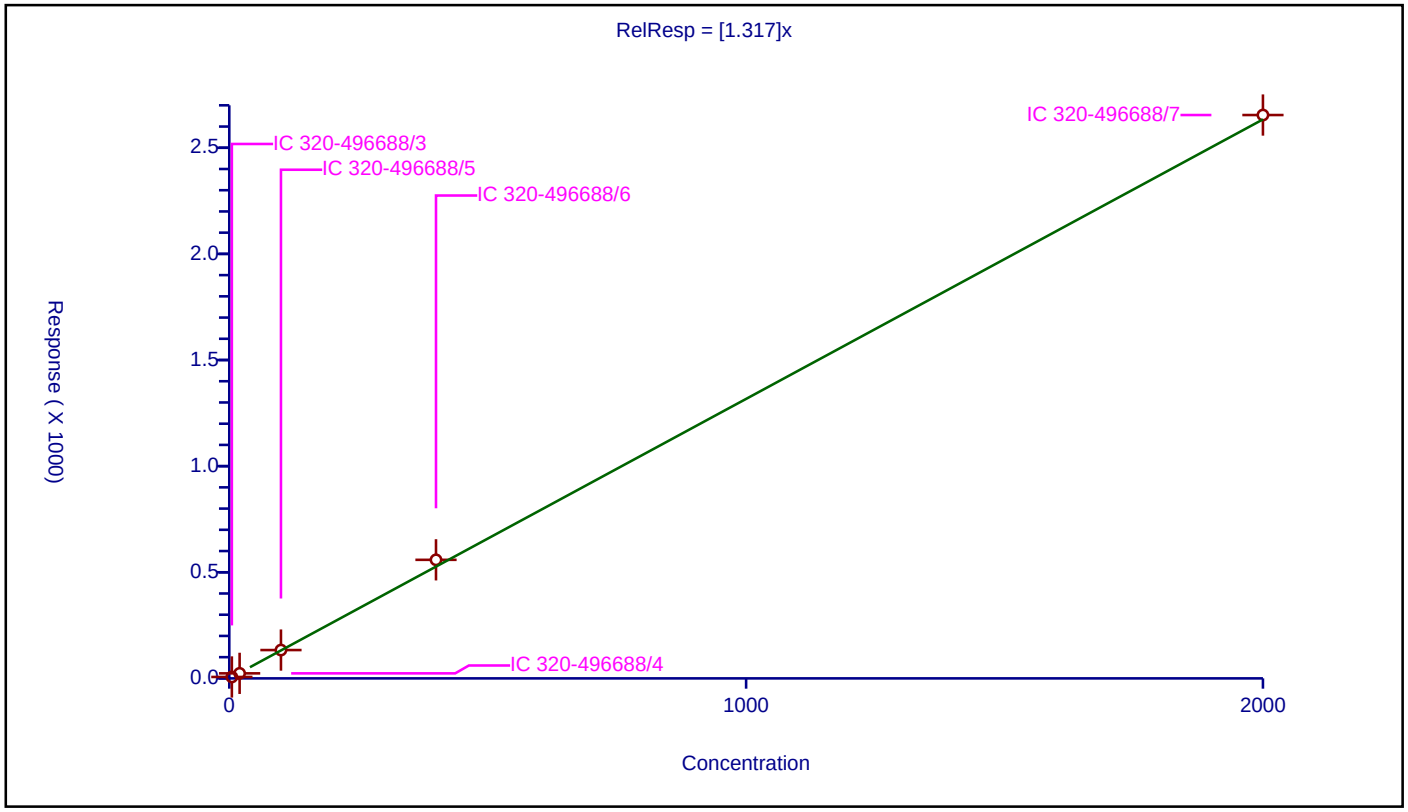

785950

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID (1): WDM 320-496688/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 06/08/2021 12:40

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	20.95	13

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d				
Injection Date:	08-Jun-2021 12:40:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 7095
H (Peak Height) = 55991

%R = 13 <= 25
Passed

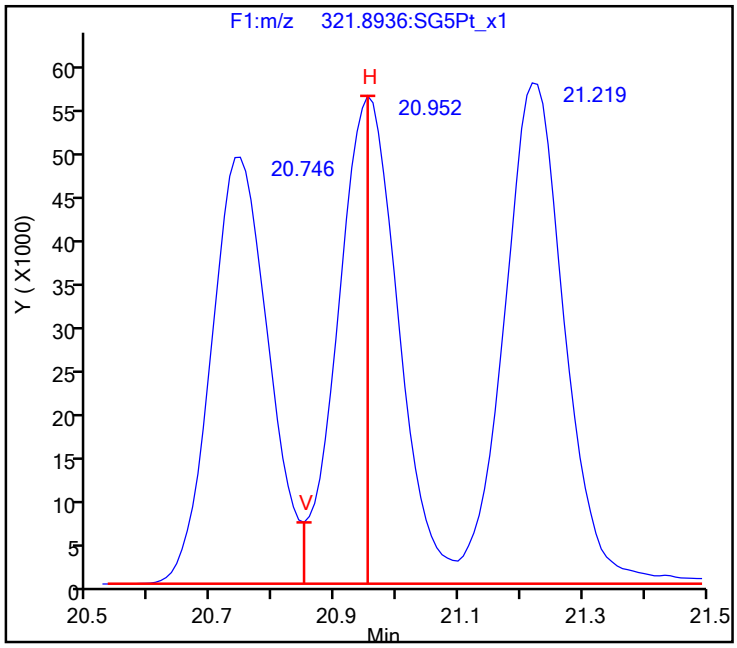

785952

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

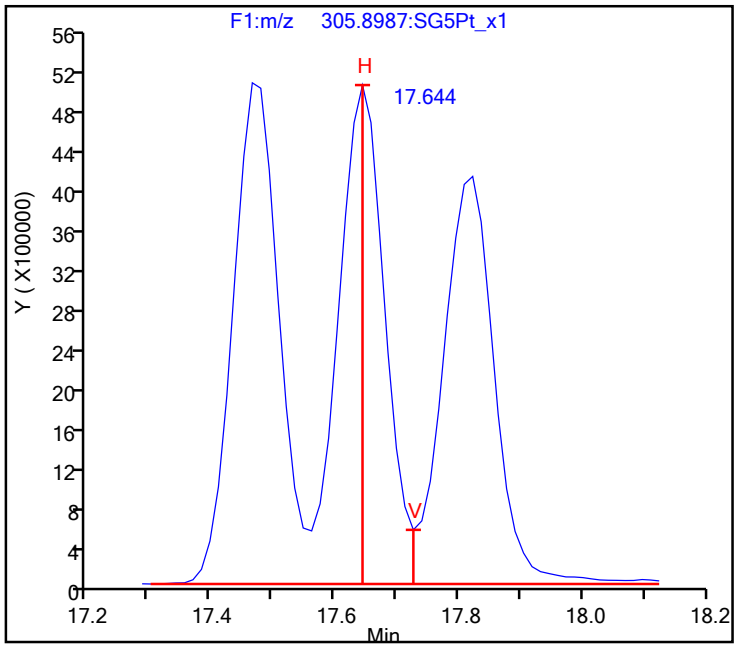

785954

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID (1): WDM 320-517196/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/17/2021 14:27

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.93	19

FORM VI 1613B

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d				
Injection Date:	17-Aug-2021 14:27:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 3883
H (Peak Height) = 20212

%R = 19 <= 25
Passed

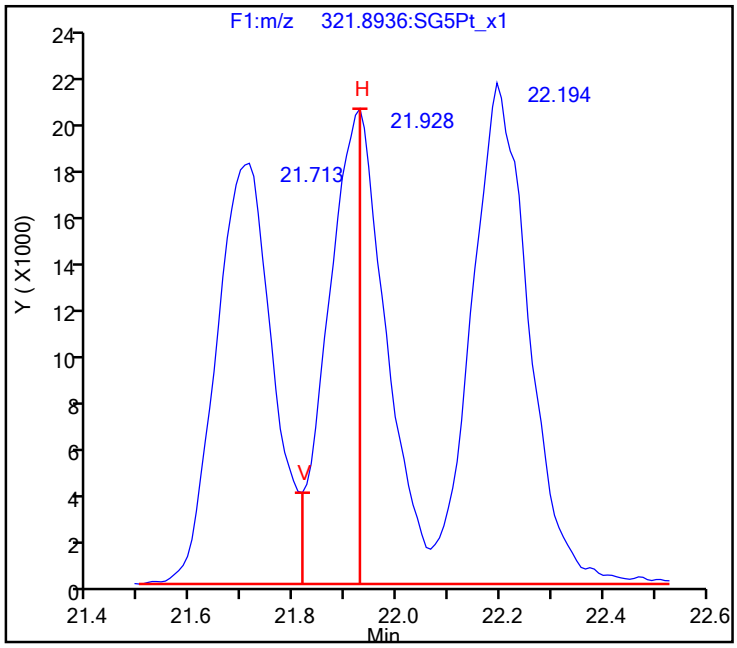

785956

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID (1): WDM 320-517461/30 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/18/2021 14:50

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.89	18

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d				
Injection Date:	18-Aug-2021 14:50:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 791
H (Peak Height) = 4354

%R = 18 <= 25
Passed

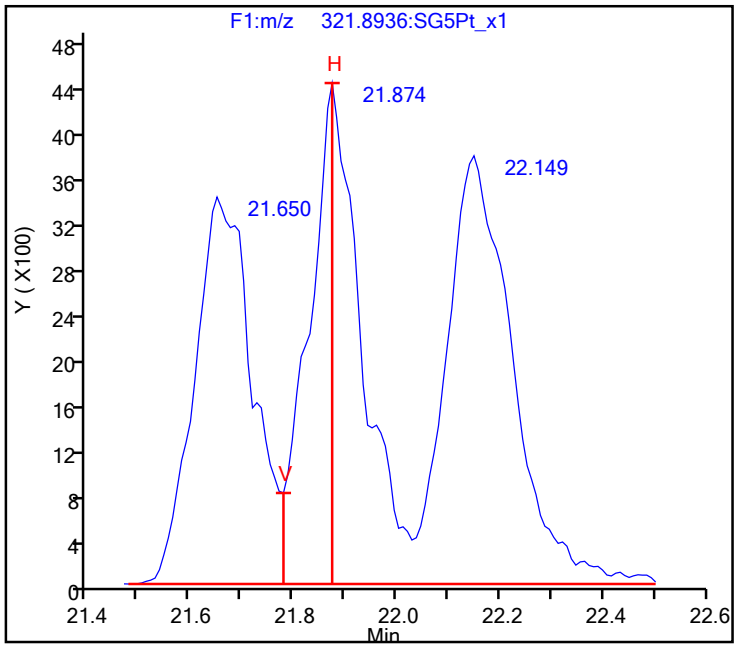

785958

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID (1): WDM 320-517462/44 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/19/2021 02:19

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.78	21

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d				
Injection Date:	19-Aug-2021 02:19:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	44
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 5301
H (Peak Height) = 24781

%R = 21 <= 25
Passed

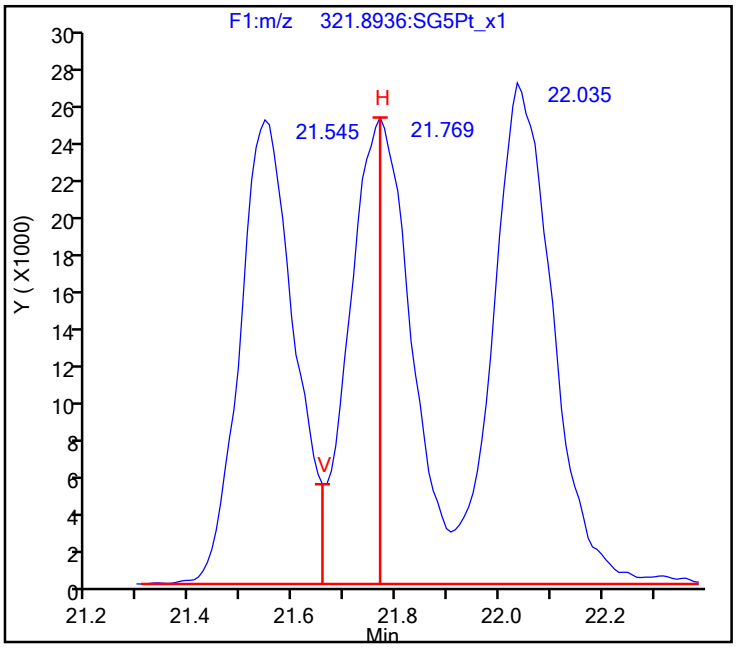

785960

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID (1): WDM 320-517891/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/19/2021 13:59

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.84	22

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d				
Injection Date:	19-Aug-2021 13:59:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 916
H (Peak Height) = 4212

%R = 22 <= 25
Passed

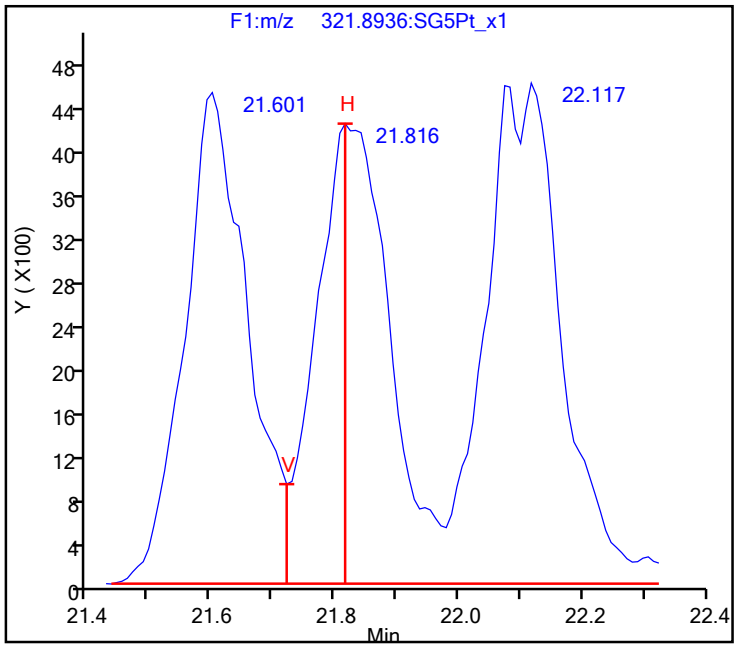

785962

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID (1): WDM 320-518043/16 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/20/2021 02:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.73	20

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d				
Injection Date:	20-Aug-2021 02:21:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 5211
H (Peak Height) = 25746

%R = 20 <= 25
Passed

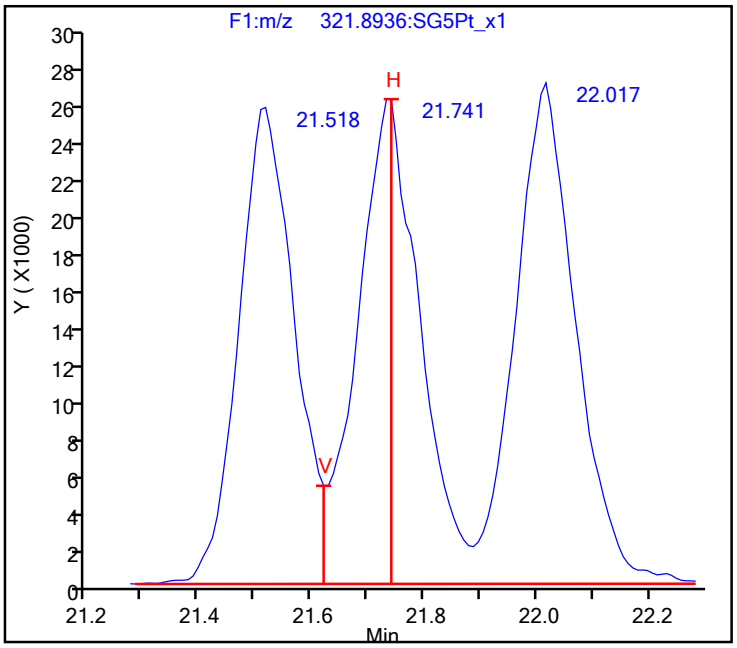

785964

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID (1): CPS 320-519438/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/24/2021 08:28

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	13

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d				
Injection Date:	24-Aug-2021 08:28:58	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 298756
H (Peak Height) = 2238451

%R = 13 <= 25
Passed

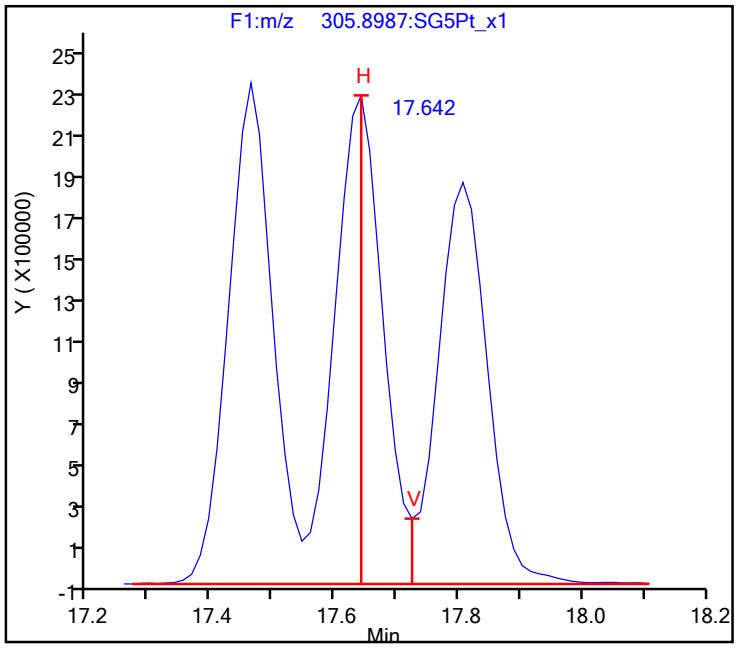

785966

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d				
Injection Date:	24-Aug-2021 08:28:58	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID (1): CPS 320-519650/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 08:48

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.63	11

Report Date: 25-Aug-2021 13:23:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d				
Injection Date:	25-Aug-2021 08:48:55	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 334173
H (Peak Height) = 2977162

%R = 11 <= 25
Passed

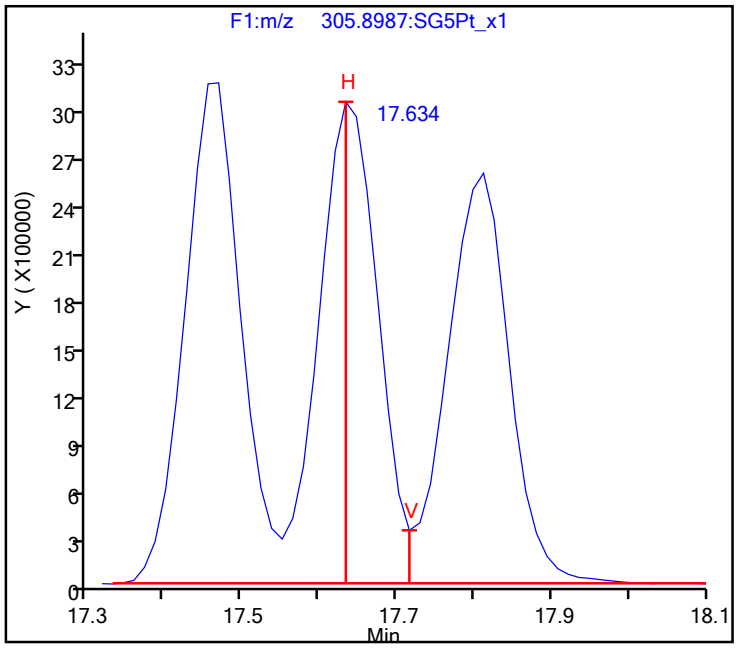

785969

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID (1): CPS 320-519744/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 12:59

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	14

FORM VI 1613B

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d				
Injection Date:	25-Aug-2021 12:59:07	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 447420
H (Peak Height) = 3303038

%R = 14 <= 25
Passed

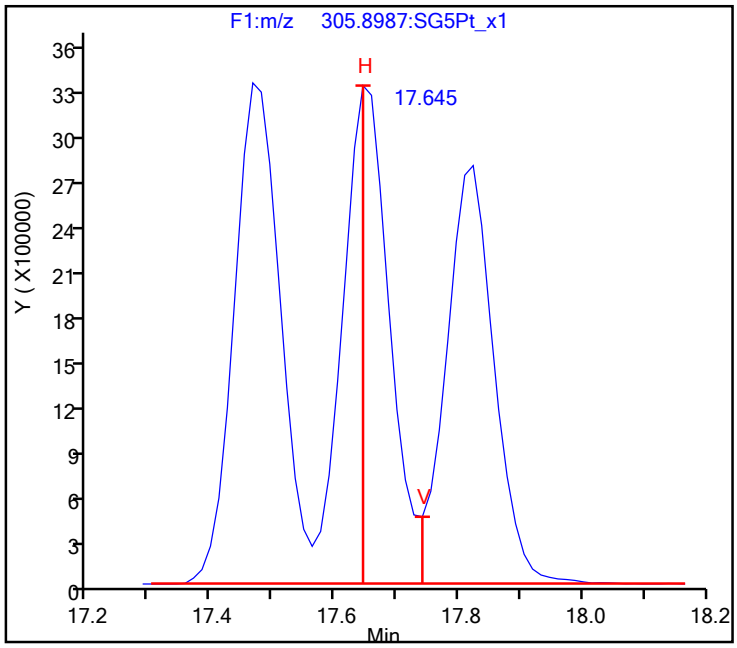

785971

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d				
Injection Date:	25-Aug-2021 12:59:07	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID (1): CPS 320-520145/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/26/2021 15:17

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.65	13

Report Date: 27-Aug-2021 09:43:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_001.d				
Injection Date:	26-Aug-2021 15:17:03	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 648568
H (Peak Height) = 5159325

%R = 13 <= 25
Passed

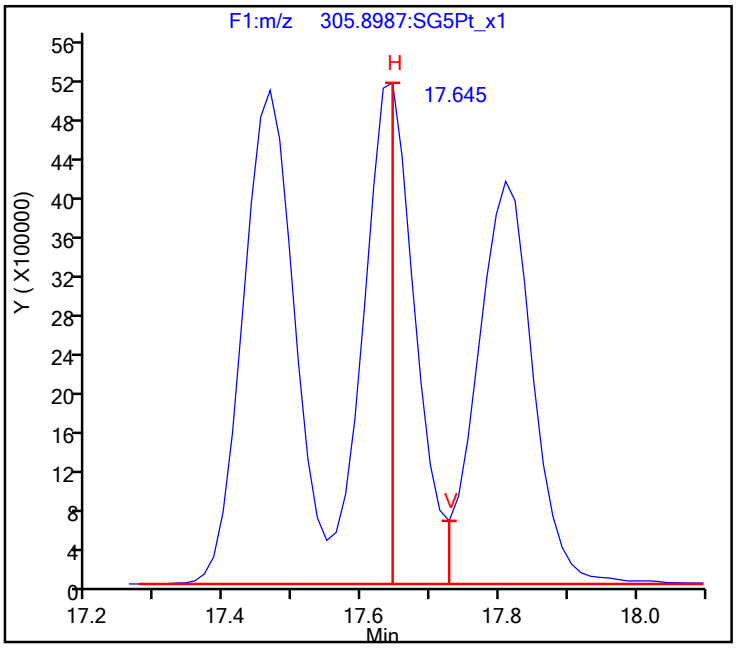

785974

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID (1): CPS 320-520438/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/27/2021 08:59

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	11

FORM VI 1613B

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d				
Injection Date:	27-Aug-2021 08:59:39	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 444126
H (Peak Height) = 3930424

%R = 11 <= 25
Passed

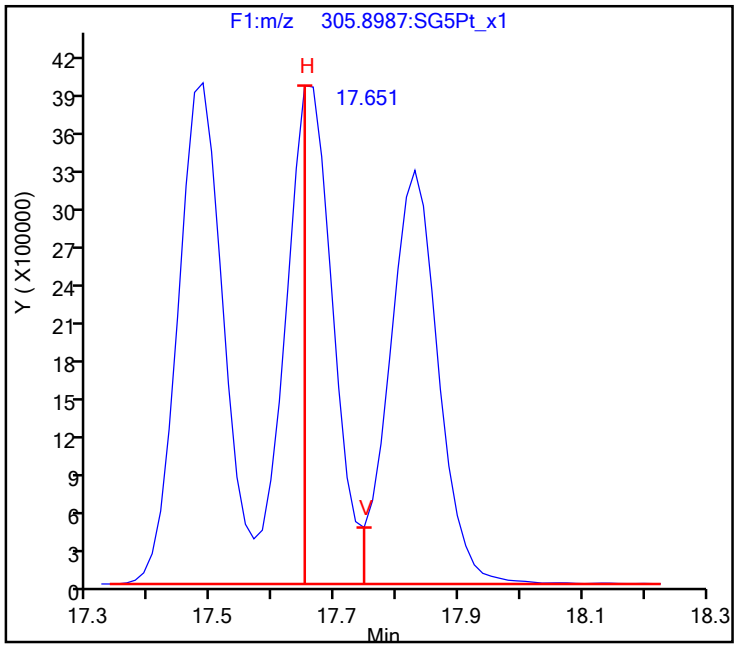

785976

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

785978

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

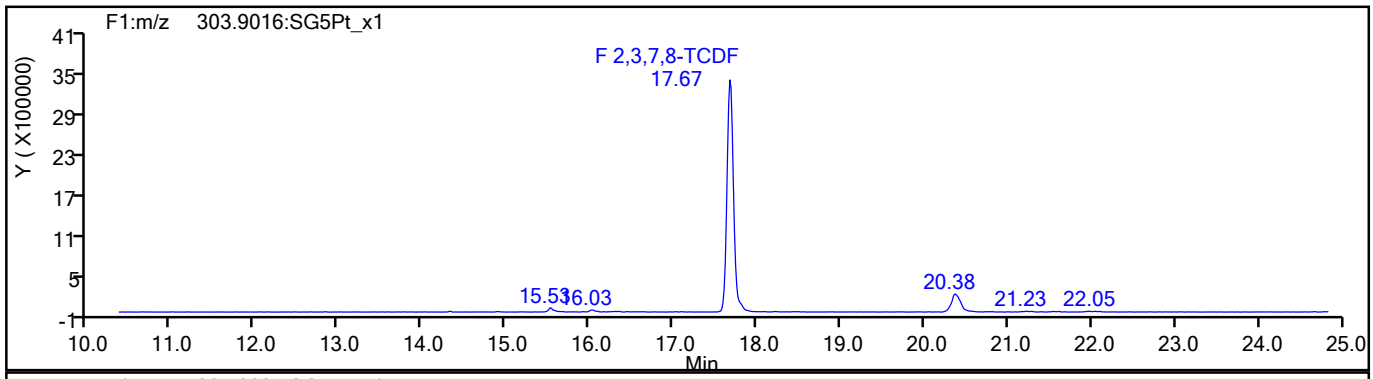

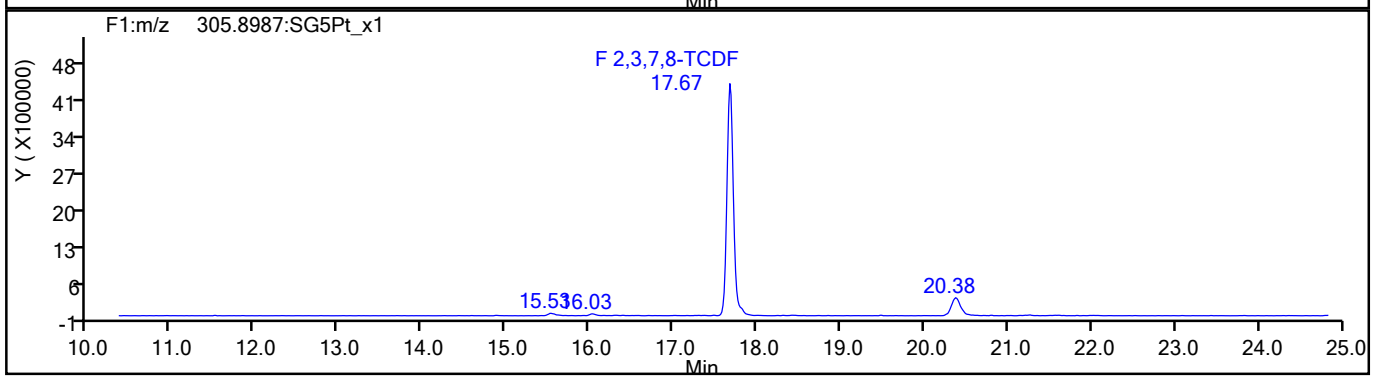

TCDF Standards

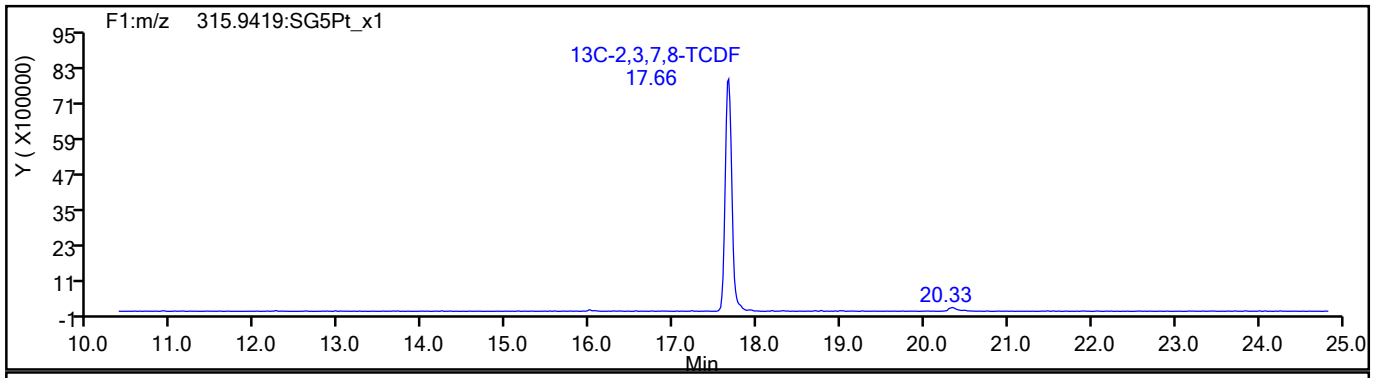

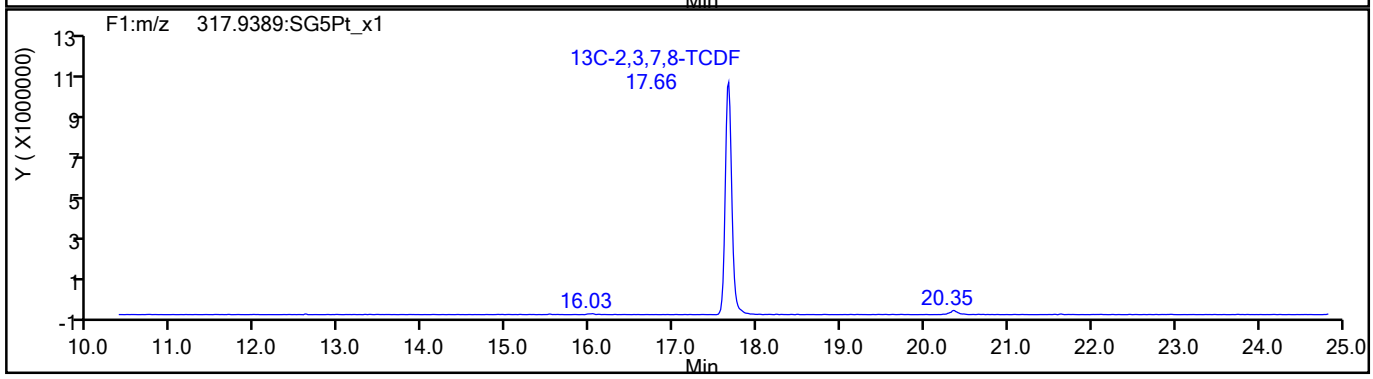

785980

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

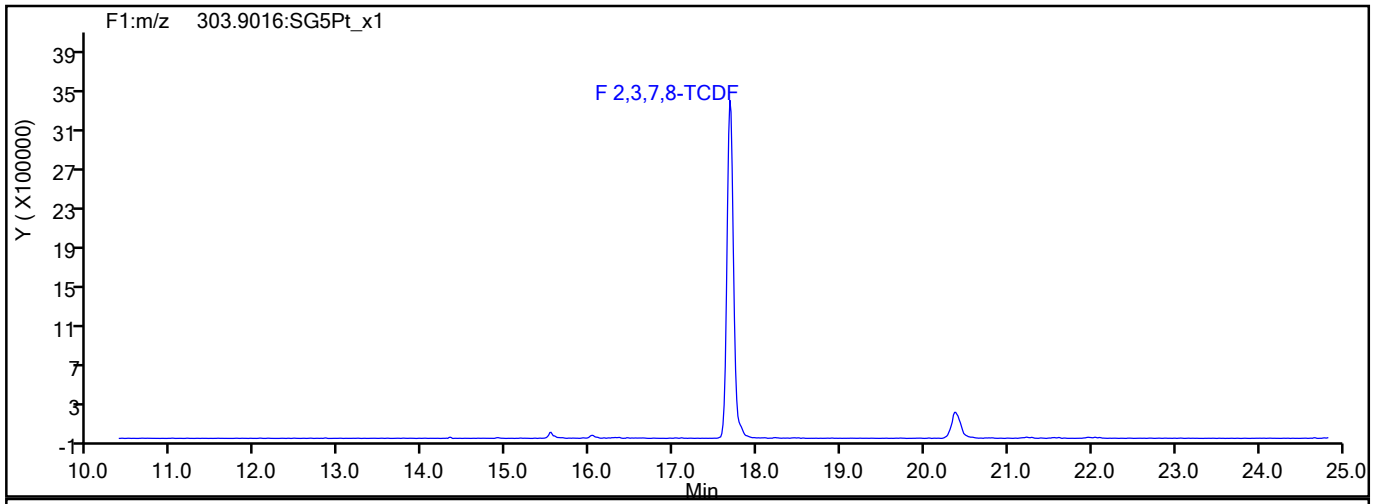

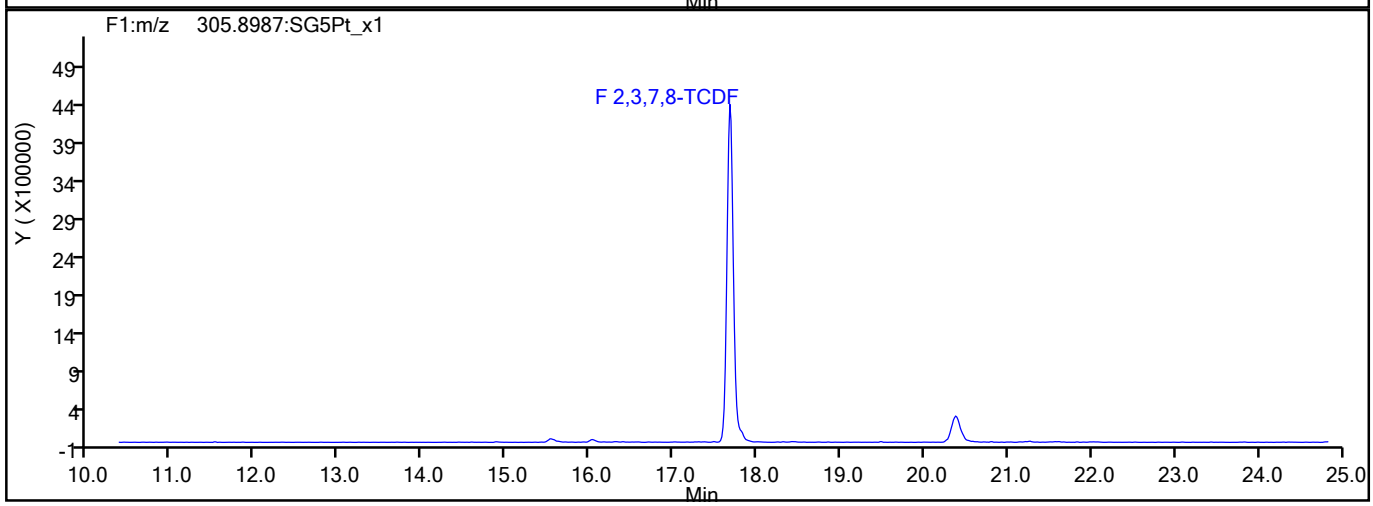

TCDF Interference Mass

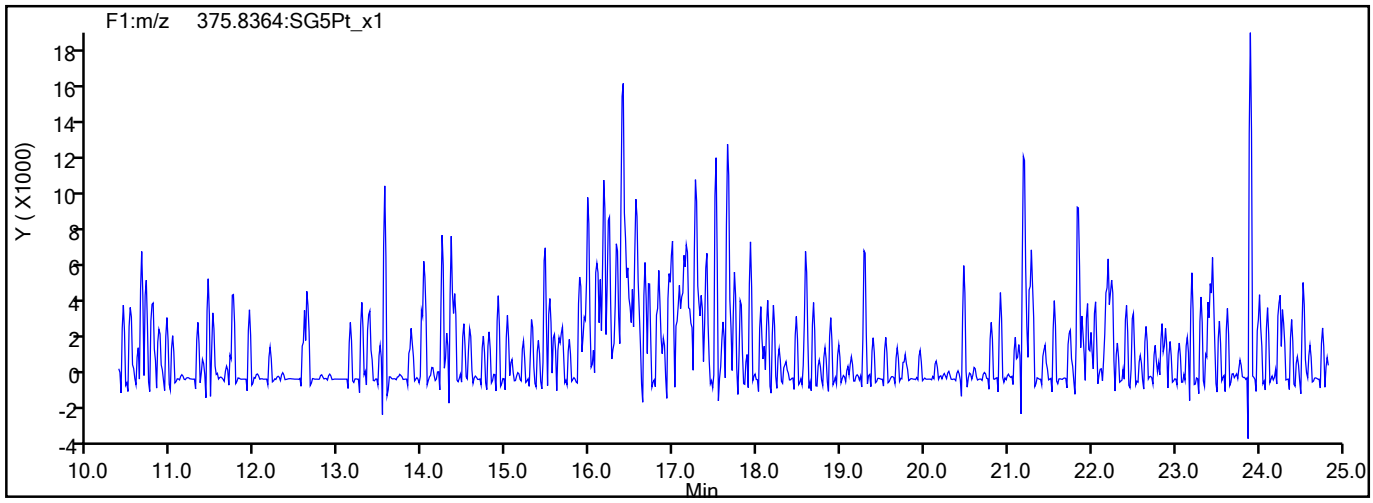

785981

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

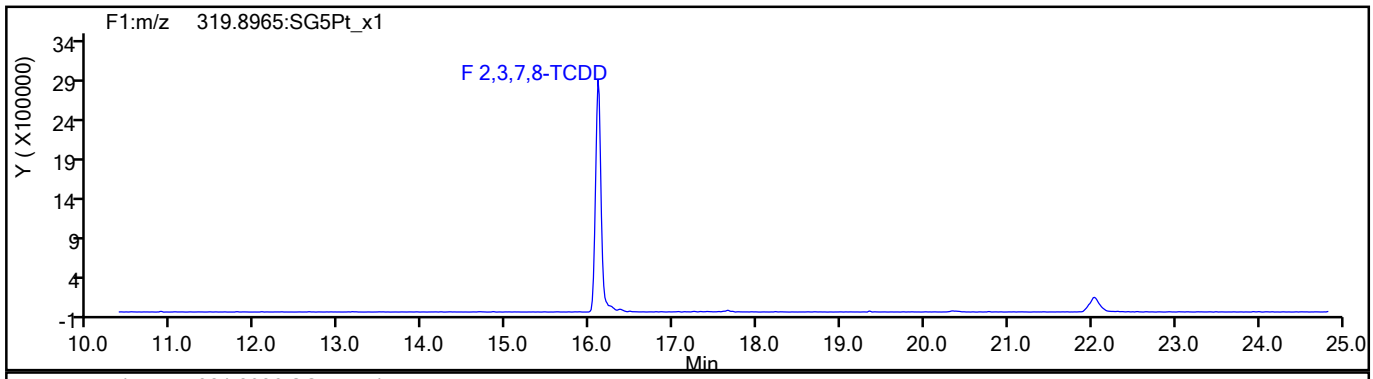

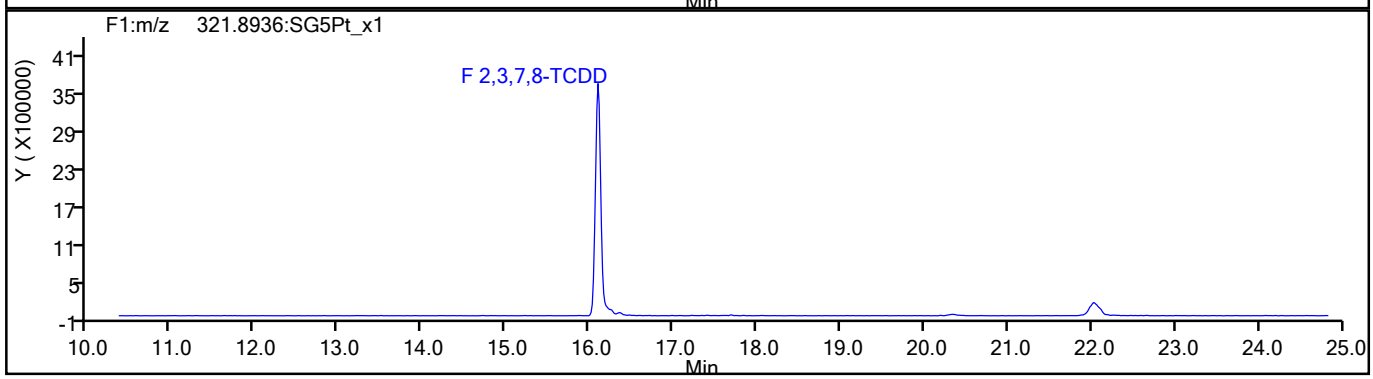

TCDD Standards

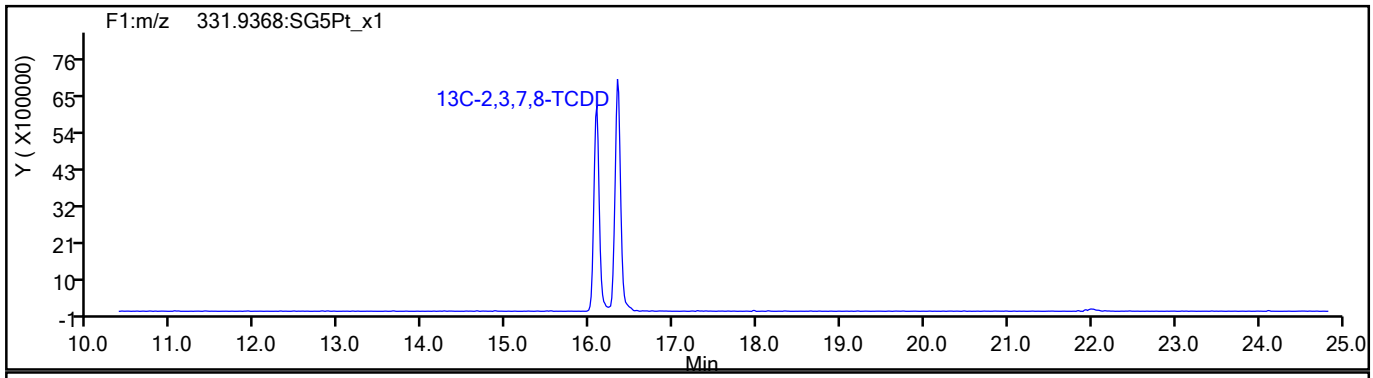

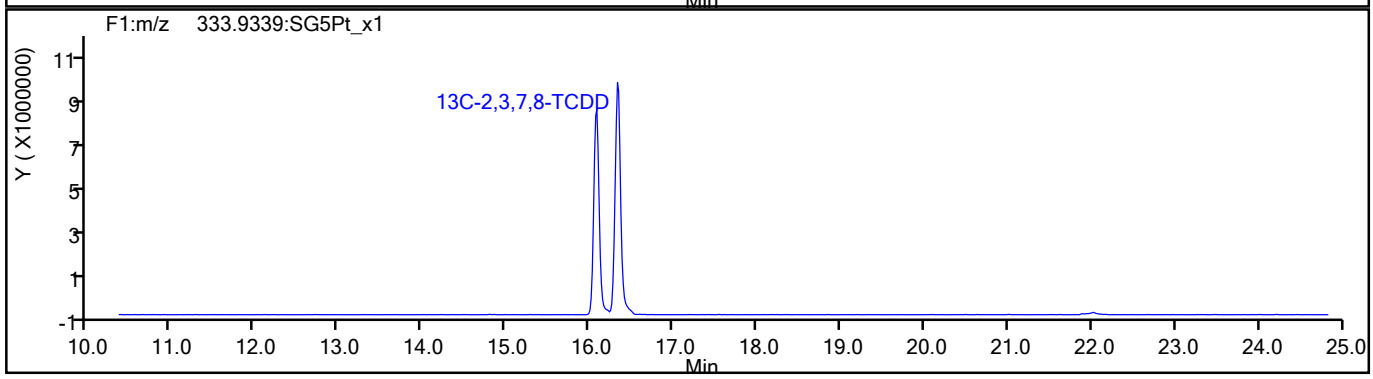

785982

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

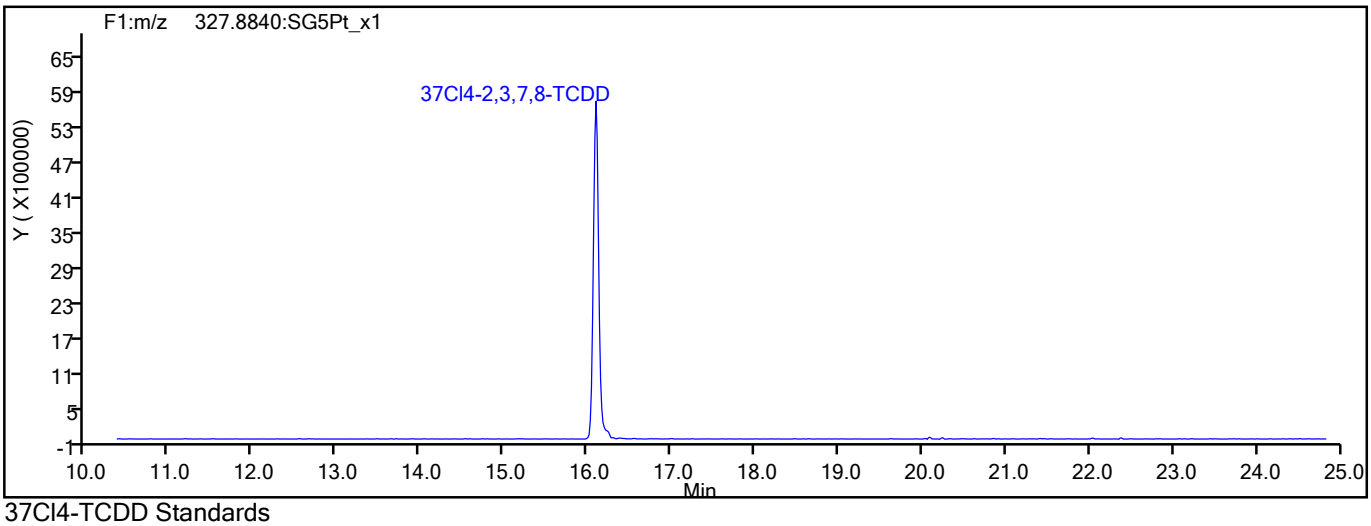

37Cl4-TCDD Standards

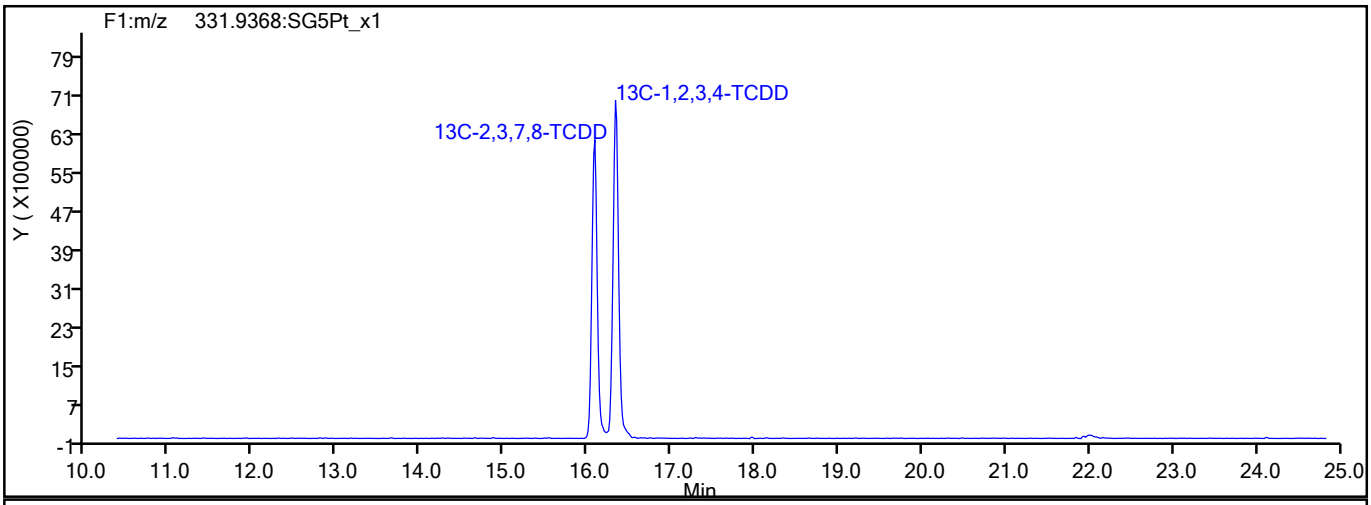

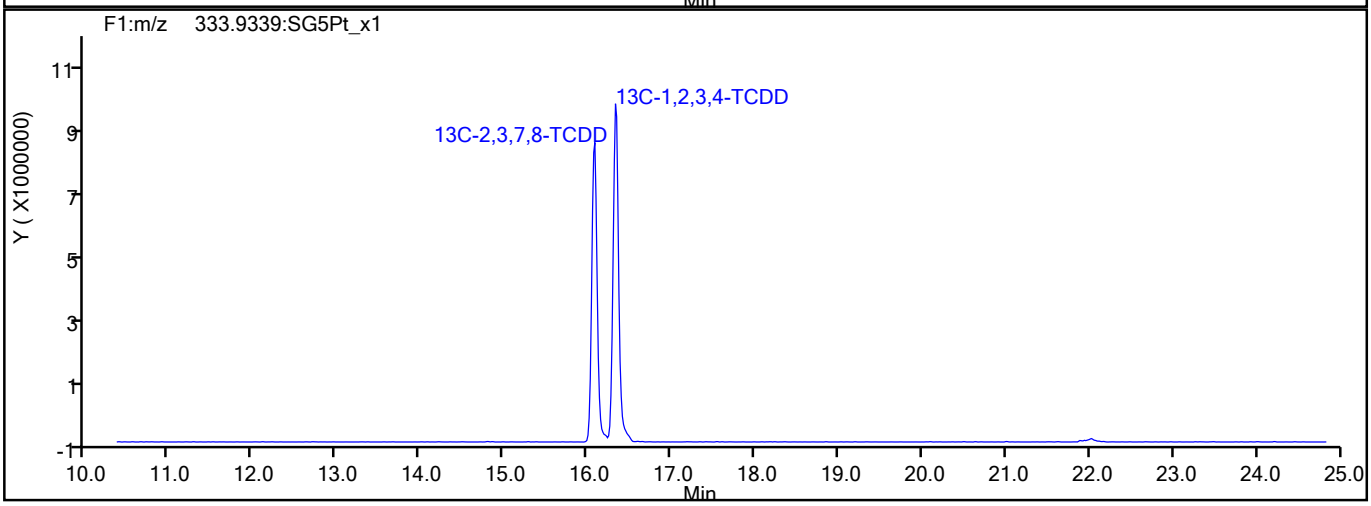

785983

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

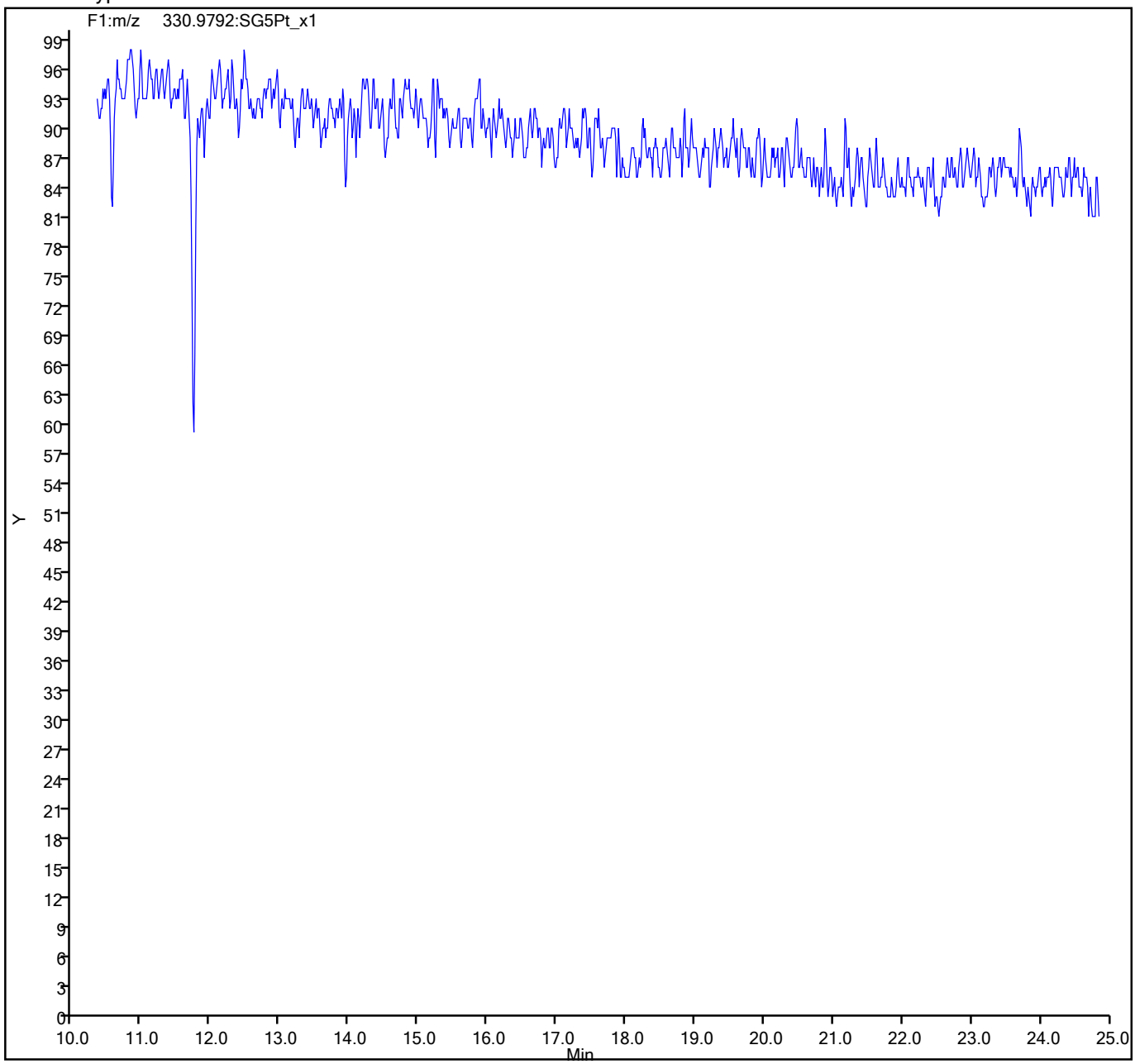

785984

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID: CCV 320-519438/2 Calibration Date: 08/24/2021 09:07

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 24AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.028		9.73	10.0	97	78-129
2,3,7,8-TCDF	AveID	0.998	0.9203		9.22	10.0	92	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9731		111	100	111	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.568		118	100	118	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9663		11.2	10.0	112	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
24AU2111D2	1	CPS 082421	CPS HRDXNCP_00044				1.00000	
24AU2111D2	2	CCV 082421	CCV CS-4 HRDXNL4_00100				1.00000	
24AU2111D2	3	SB 082421	Solvent Blank C-14				1.00000	
24AU2111D2	4	320-513879	MB 320-513879/1-A	20	1613B/Solid	D267	10.00000	g
24AU2111D2	5	320-513585	320-76769-A-18-A	20	1613B/Solid	D265	10.00000	g
24AU2111D2	6	320-513585	320-76769-A-2-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	7	320-513585	320-76769-A-14-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	8	320-513585	320-76769-A-26-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	9	320-513585	320-76769-A-28-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	10	320-513586	320-76769-A-27-A	20	1613B/Solid	D266	10.00000	g
24AU2111D2	11	320-513586	320-76769-A-27-B MS	20	1613B/Solid		10.00000	g
24AU2111D2	12	320-513586	320-76769-A-27-C MSD	20	1613B/Solid		10.00000	g
24AU2111D2	13						1.00000	
24AU2111D2	14						1.00000	
24AU2111D2	15						1.00000	
24AU2111D2	16						1.00000	
24AU2111D2	17						1.00000	
24AU2111D2	18		KSS 08-24-21				1.00000	
24AU2111D2	19						1.00000	

LOGFILE CHECKED
DB 8/24/21

785986

Peak Locate Examination:24-AUG-2021:08:27 File:24AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

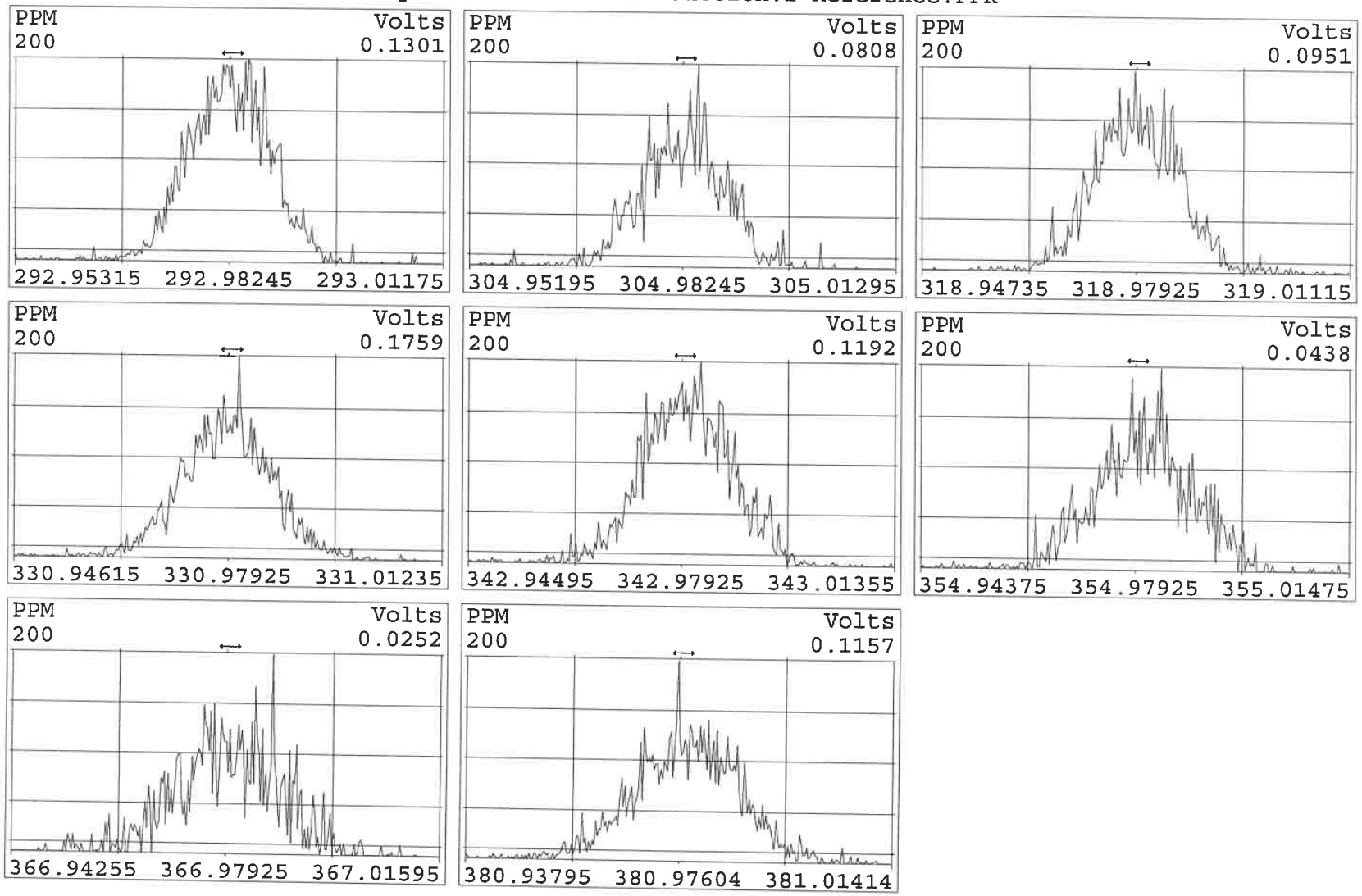

785987

Peak Locate Examination:24-AUG-2021:16:14 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

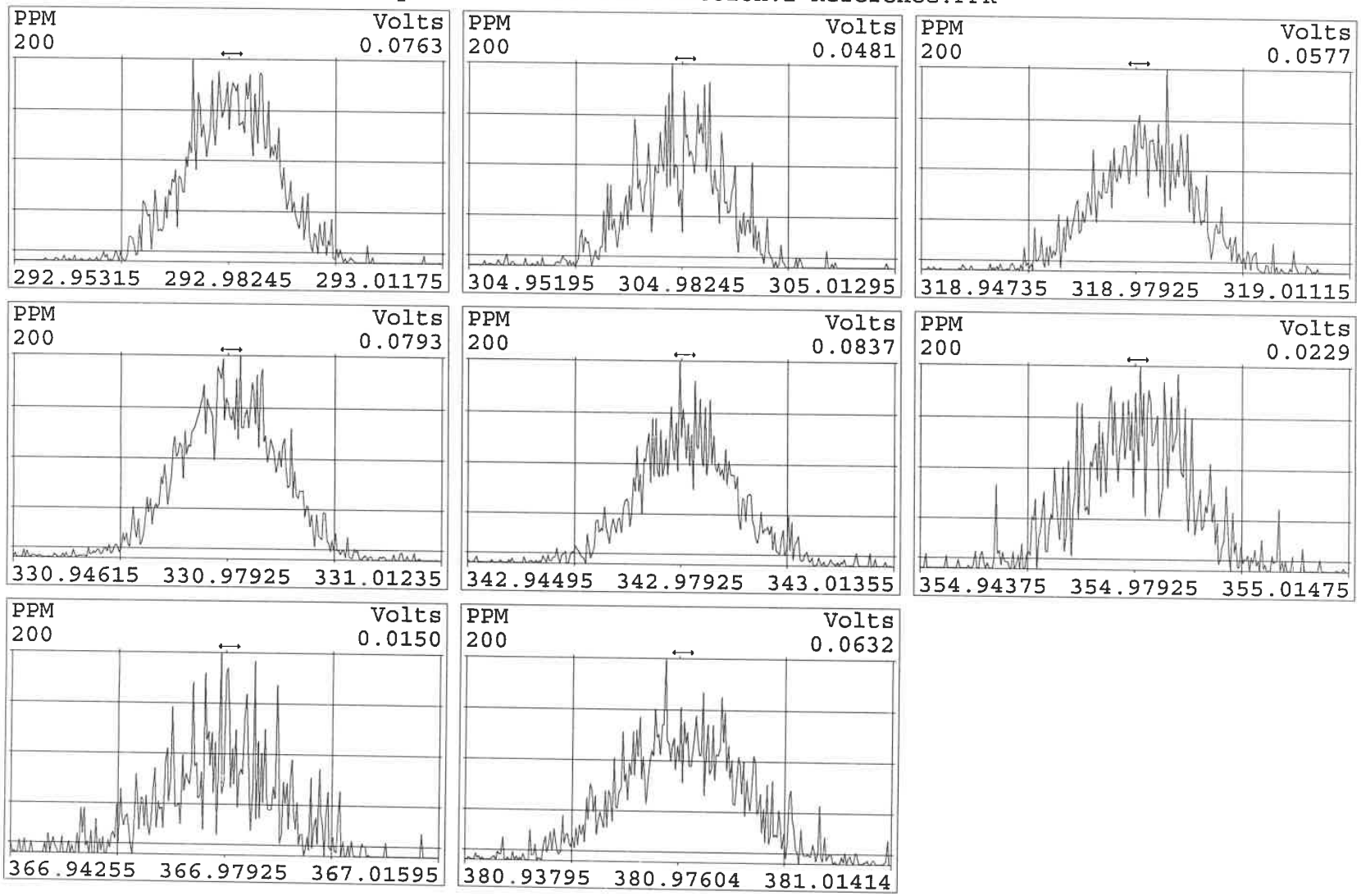

785988

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 09:07:16 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:42

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.283	33559774	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	52629254	0.80	1.3327	117.7	117.7	0.2512	0.2512	118	
2,3,7,8-TCDF	17.641	4843376	0.77	0.9978	9.223	9.223	0.0442	0.0442	92.23	
D 13C-2,3,7,8-TCDD	16.050	32656269	0.76	0.8749	111.2	111.2	0.4262	0.4262	111	
$ 37Cl4-2,3,7,8-TCDD	16.063	3242735		0.8648	11.2	11.2	0.0810	0.0810	112	
2,3,7,8-TCDD	16.077	3357078	0.83	1.0570	9.726	9.726	0.0680	0.0680	97.26	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

785989

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 09:07:16 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:42

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.283	16.283	0		14514242	3109306	5198	12995	598		
333.9339	16.283	16.283	0		19045532	4067992	5508	13770	739	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.613	0	1.082	23419943	4217062	5707	14267	739		
317.9389	17.599	17.613	-1	1.081	29209311	5613115	3903	9757	1438	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.641	17.641	0	1.002	2101458	376732	657	1642	573		
305.8987	17.627	17.641	-1	1.001	2741918	507422	1079	2697	470	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.050	16.050	0	0.986	14062884	3232967	5198	12995	622		
333.9339	16.050	16.050	0	0.986	18593385	4326423	5508	13770	785	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.063	16.063	0	0.987	3242735	728649	2011	5027	362		
2,3,7,8-TCDD											
319.8965	16.077	16.077	0	1.002	1524098	338203	902	2255	375		
321.8936	16.077	16.077	0	1.002	1832980	395830	1270	3175	312	0.83(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

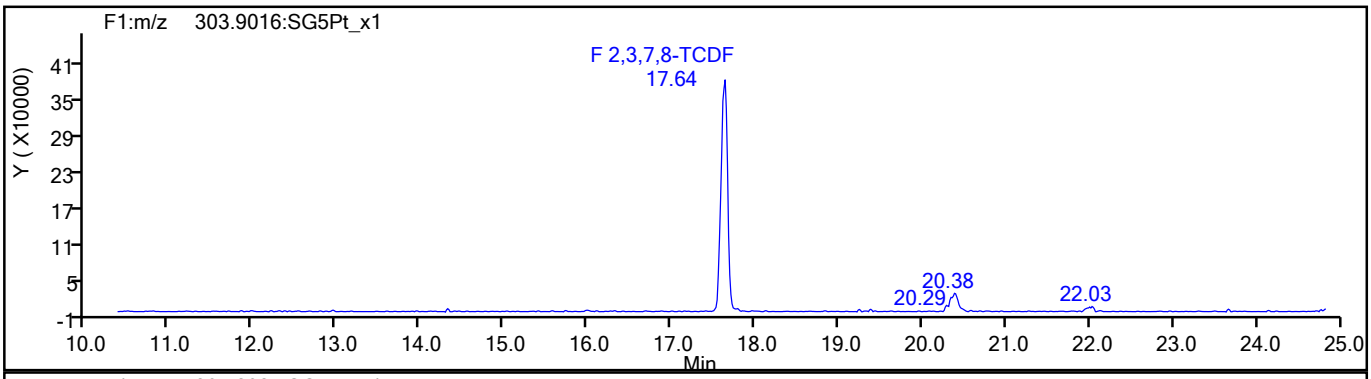

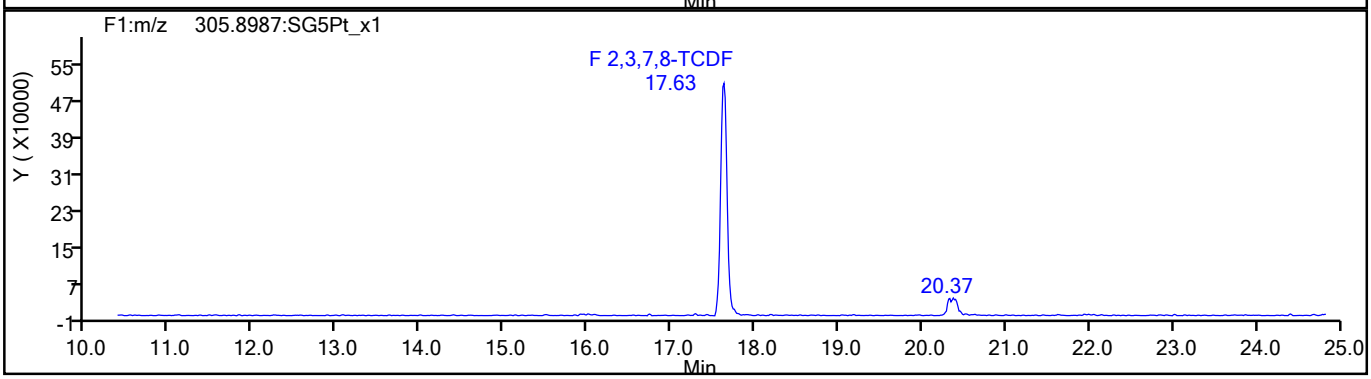

TCDF Standards

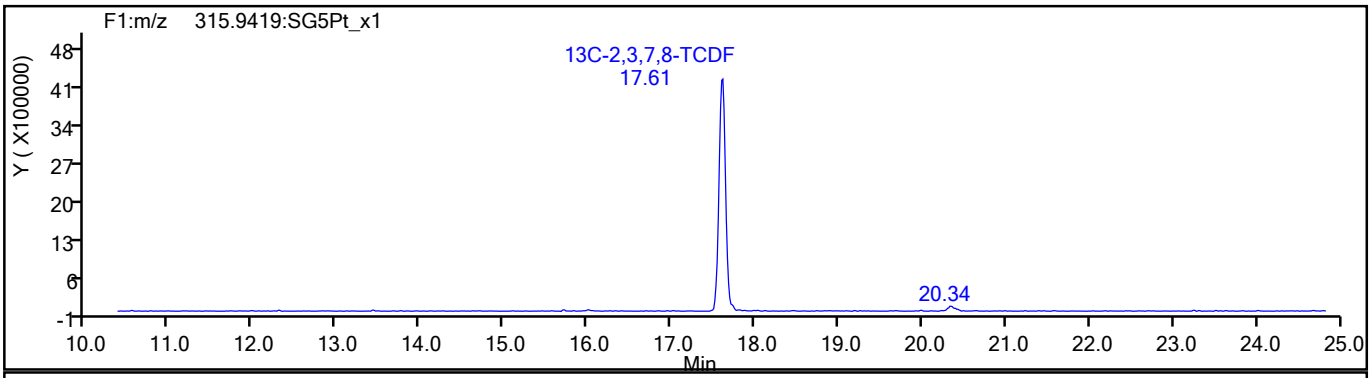

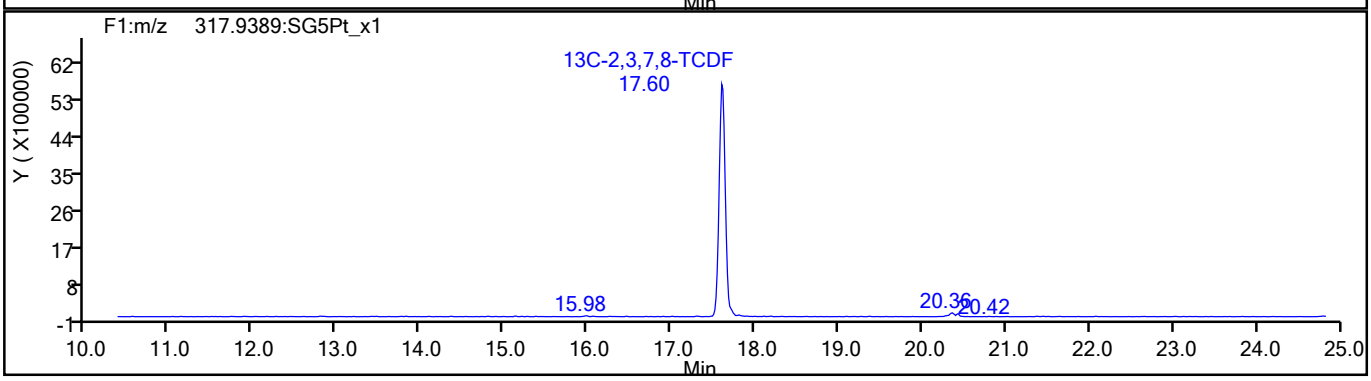

785991

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

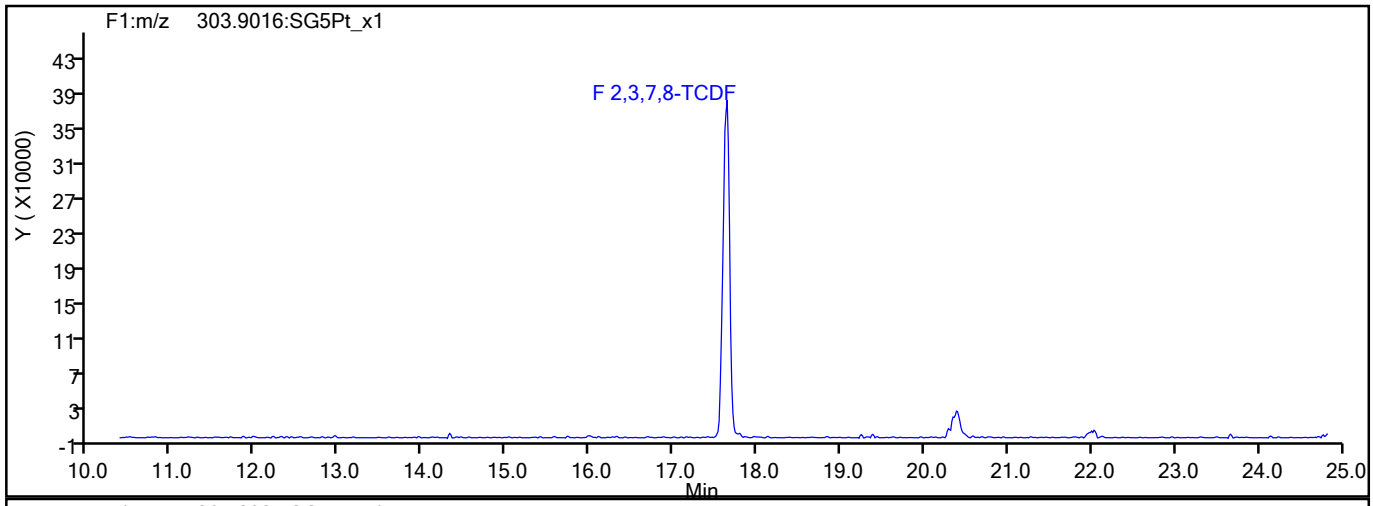

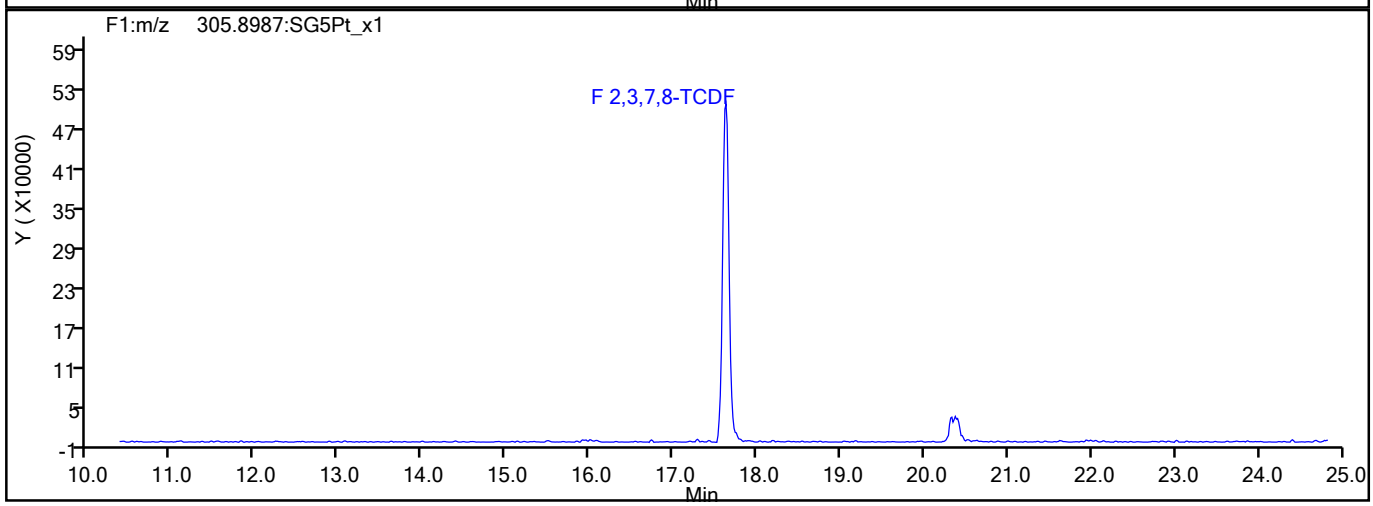

TCDF Interference Mass

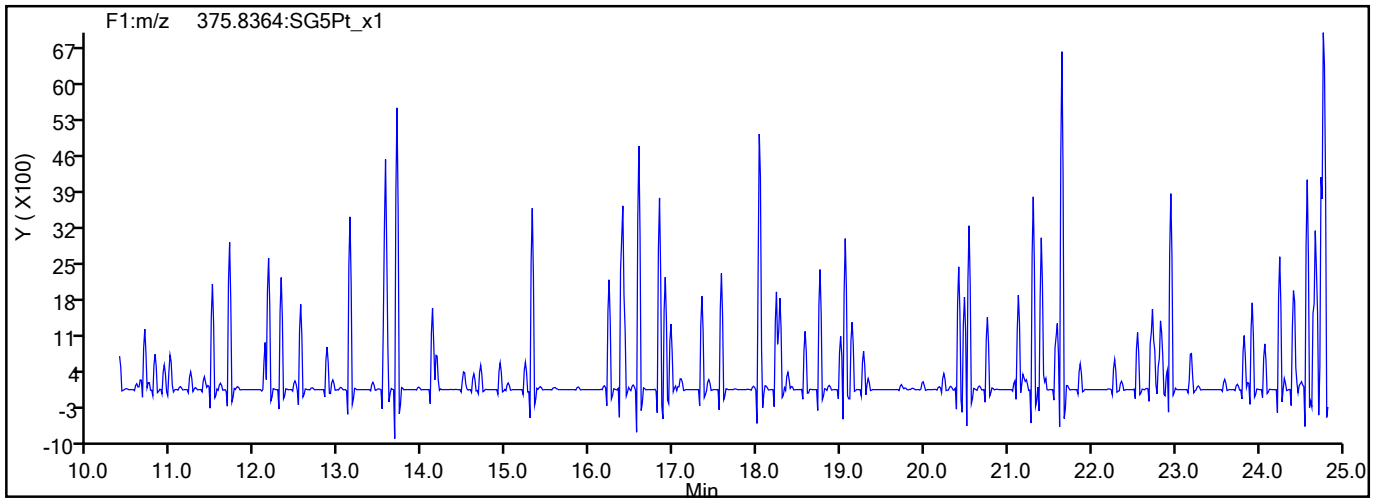

785992

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

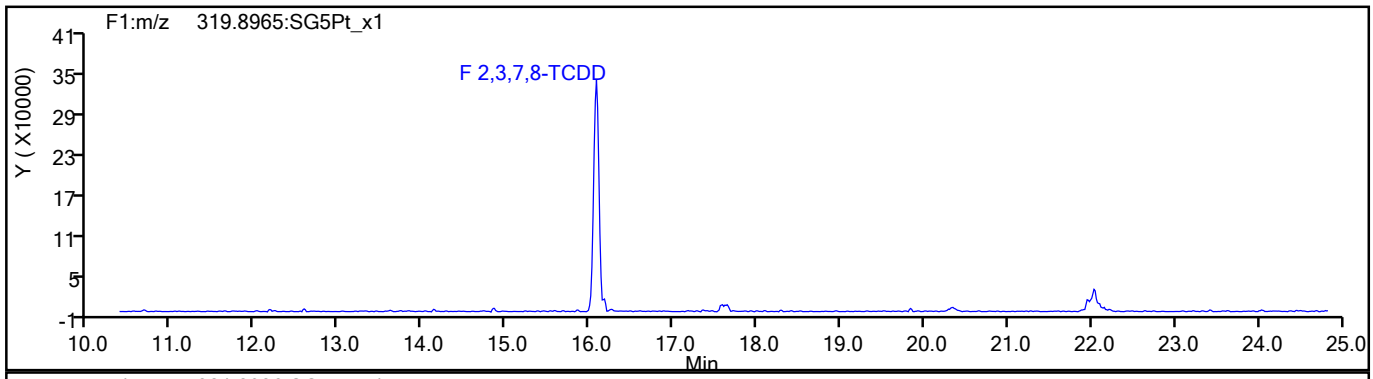

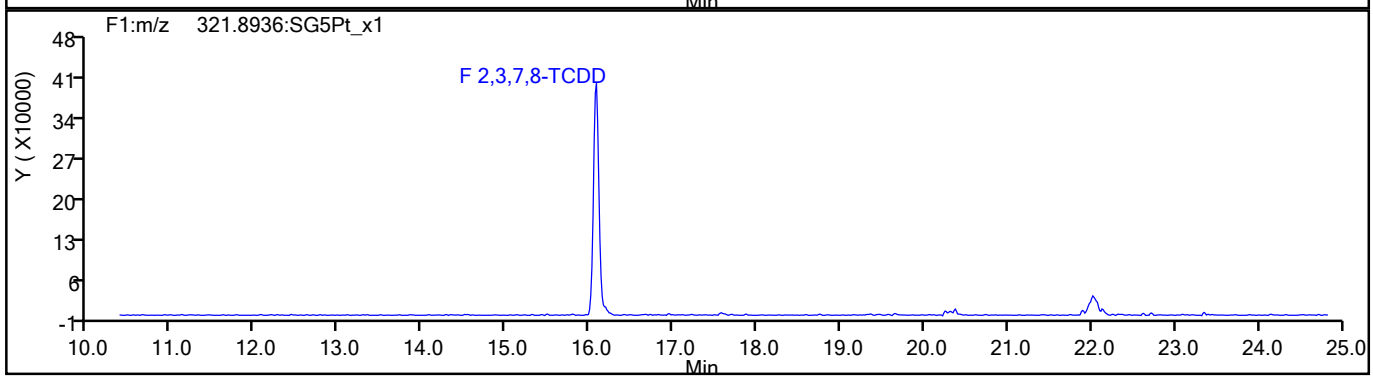

TCDD Standards

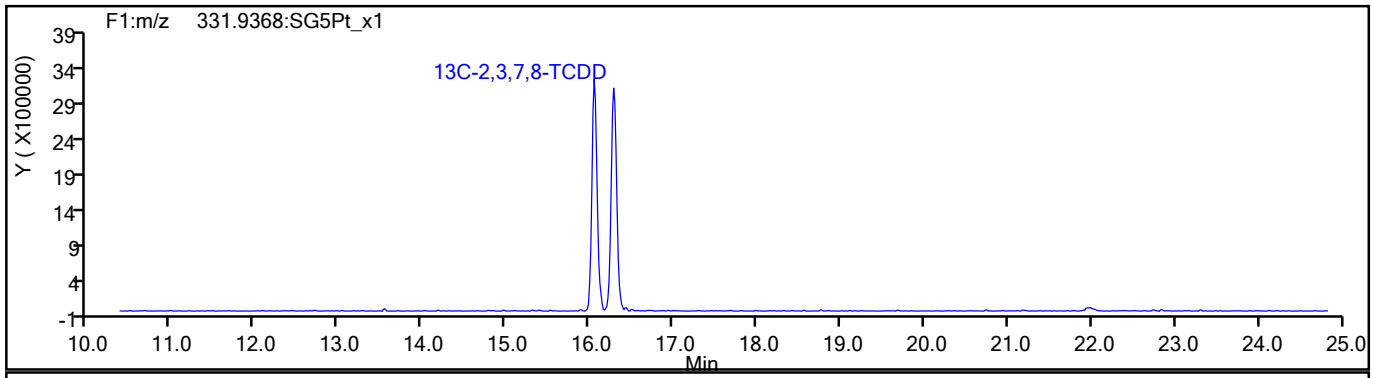

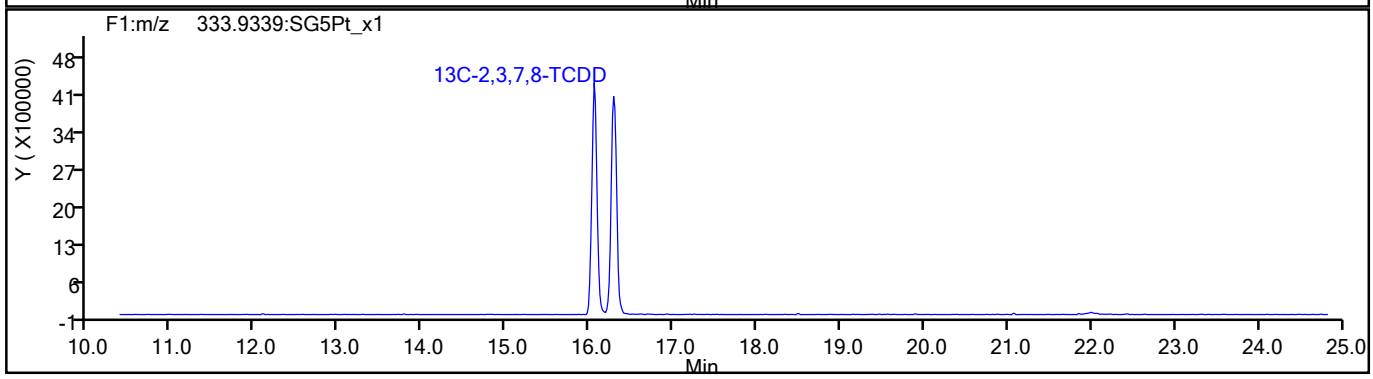

785993

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

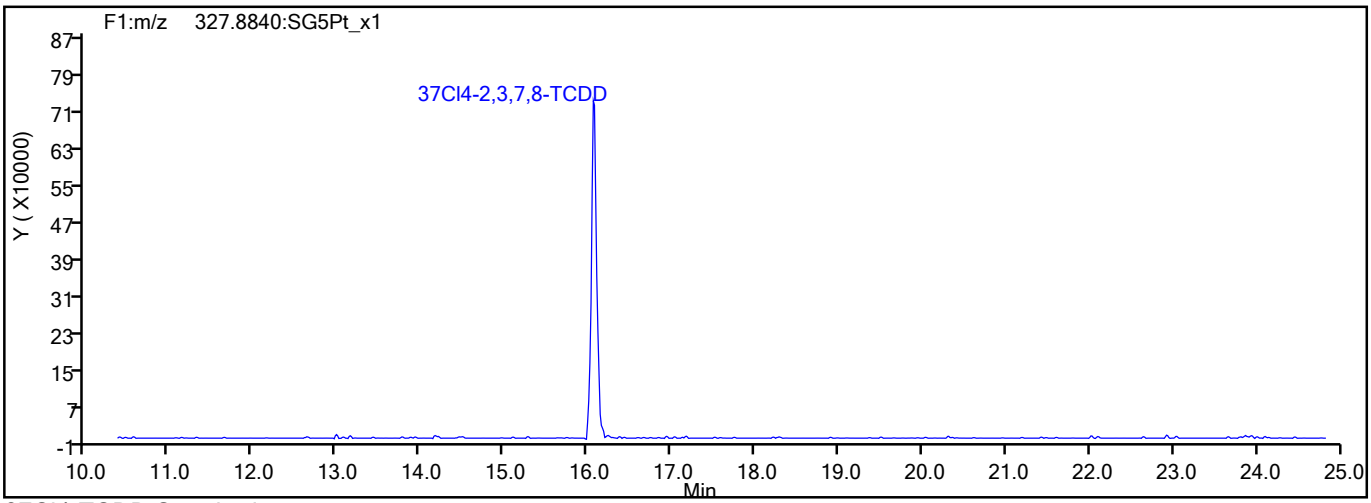

37Cl4-TCDD Standards

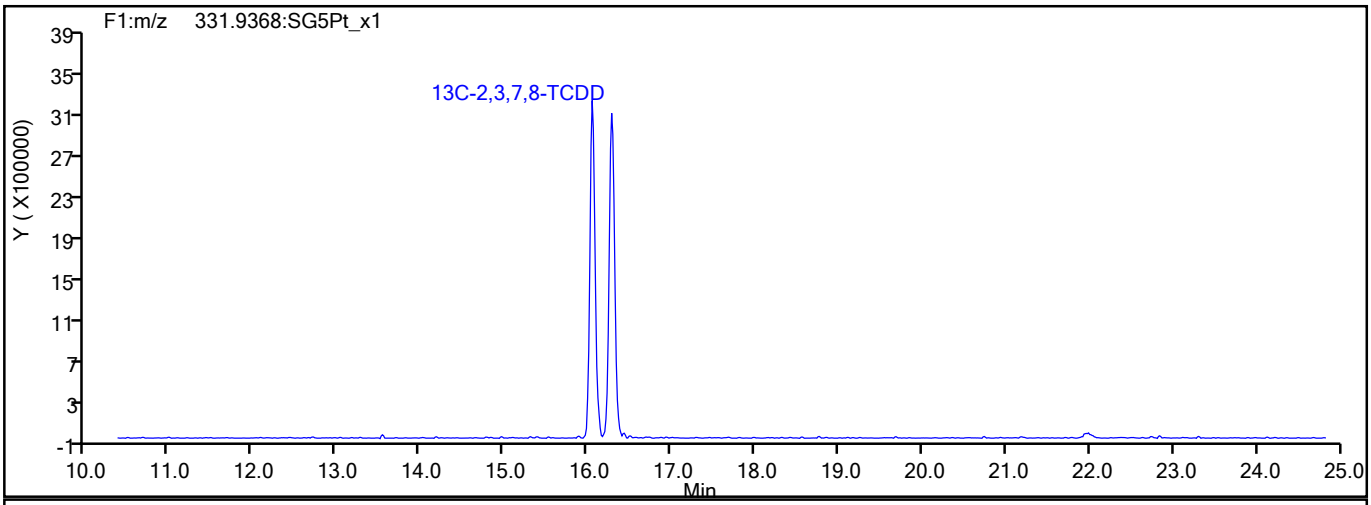

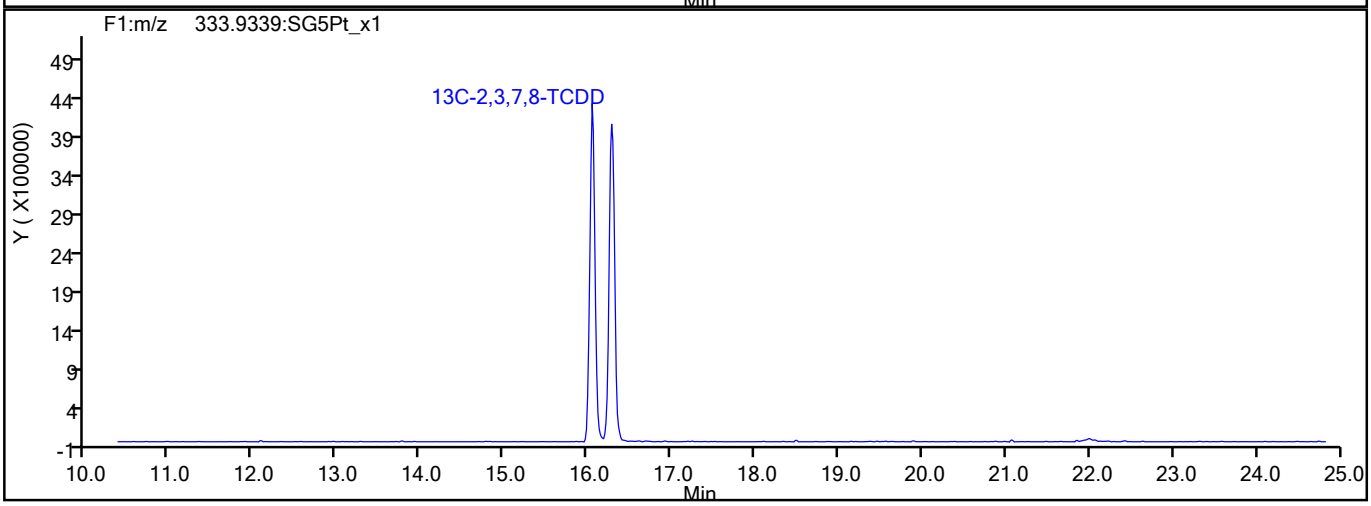

785994

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

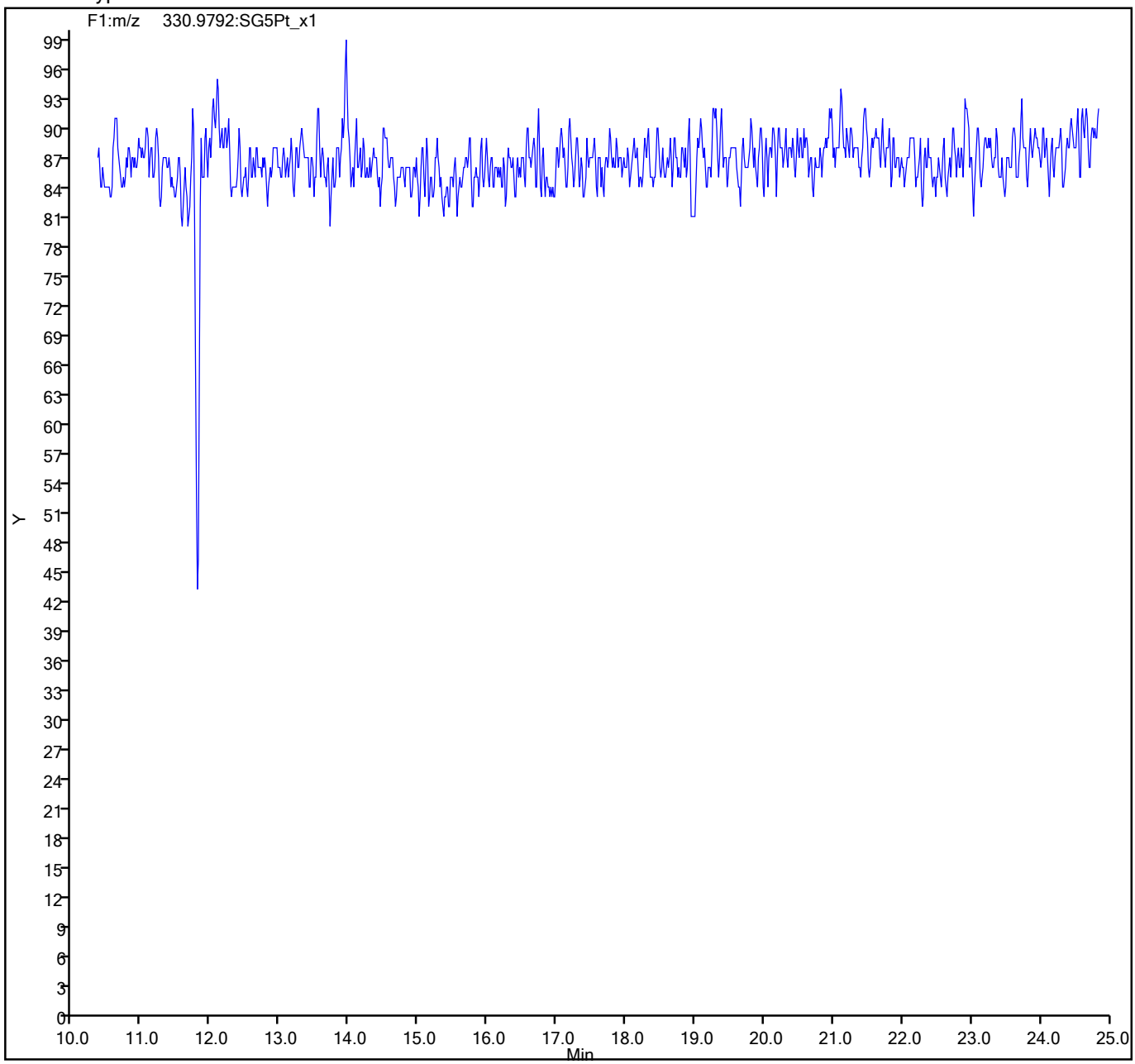

785995

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID: CCV 320-519650/2 Calibration Date: 08/25/2021 09:27

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 25AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.067		10.1	10.0	101	78-129
2,3,7,8-TCDF	AveID	0.998	0.9412		9.43	10.0	94	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9516		109	100	109	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.537		115	100	115	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9365		10.8	10.0	108	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
25AU2111D2	1	CPS 082521	CPS HRDXNCP_00044				1.00000	
25AU2111D2	2	CCV 082521	CCV CS-4 HRDXNL4_00100				1.00000	
25AU2111D2	3	SB 082521	Solvent Blank C-14				1.00000	
25AU2111D2	4	320-513879	320-76888-A-1-A X10	20	1613B/Solid	D267	10.00000	g
25AU2111D2	5	320-513879	320-76888-A-1-B MS X10	20	1613B/Solid		10.00000	g
25AU2111D2	6	320-513879	320-76888-A-1-C MSD X10	20	1613B/Solid		10.00000	g
25AU2111D2	7						1.00000	
25AU2111D2	8						1.00000	
25AU2111D2	9						1.00000	
25AU2111D2	10						1.00000	
25AU2111D2	11						1.00000	
25AU2111D2	12		DB 08-25-21				1.00000	
25AU2111D2	13						1.00000	

RUNLOG CHECKED
DB 8/25/21

785997

Peak Locate Examination:25-AUG-2021:08:48 File:25AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

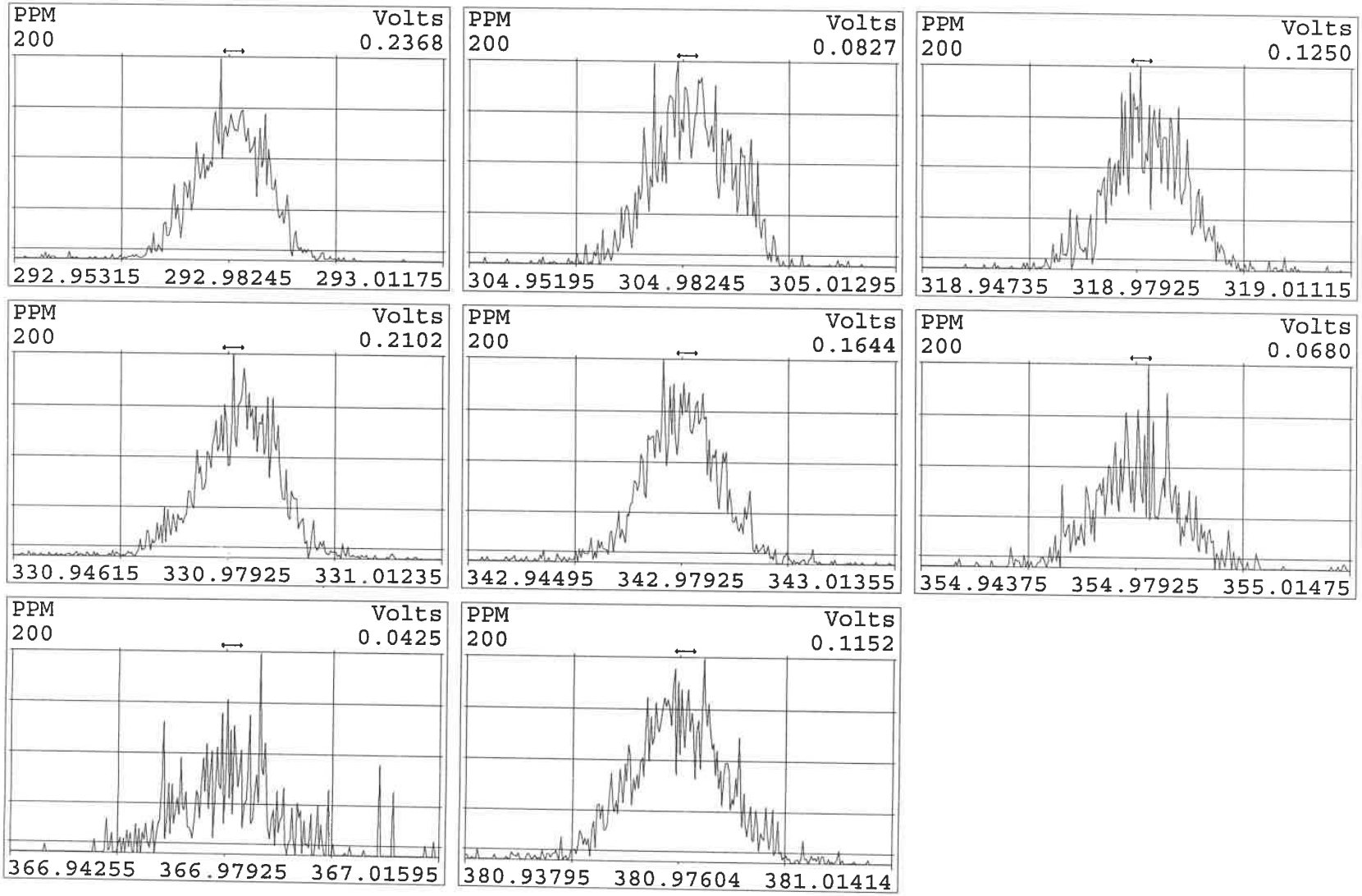

785998

Peak Locate Examination:25-AUG-2021:12:49 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

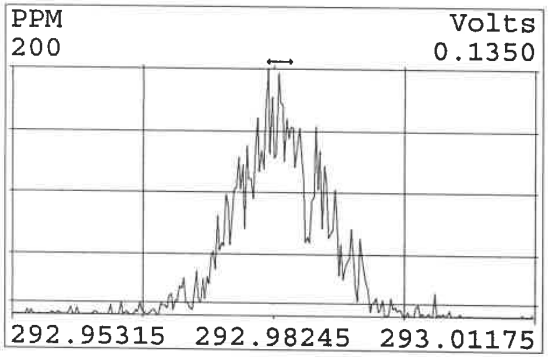

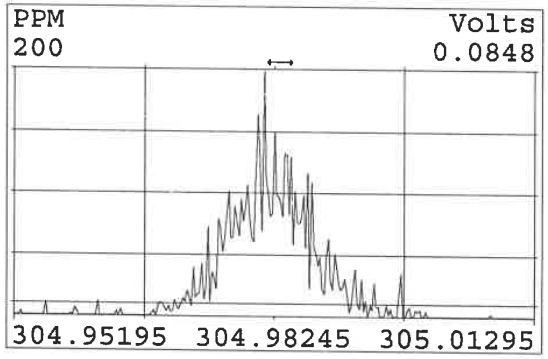

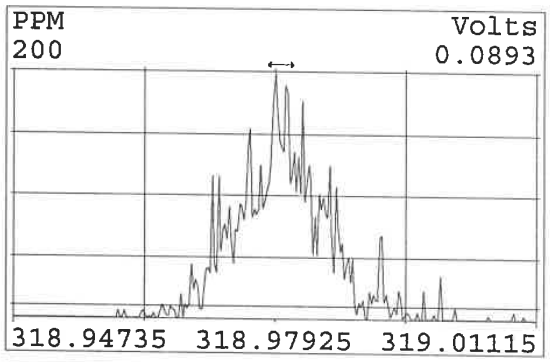

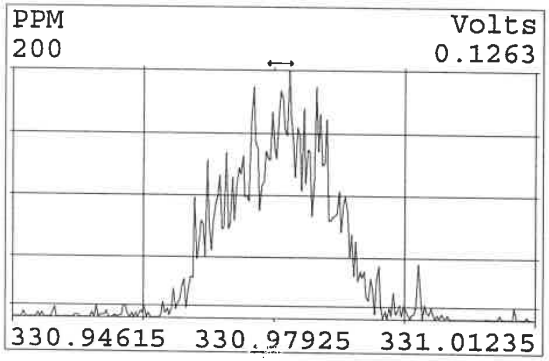

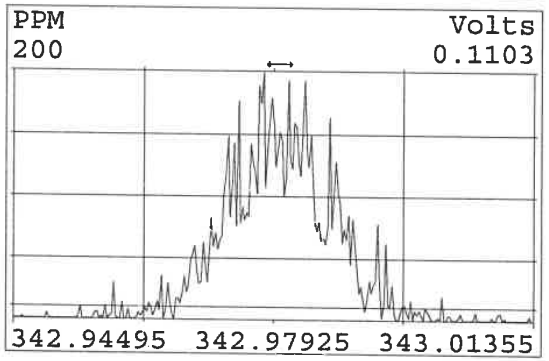

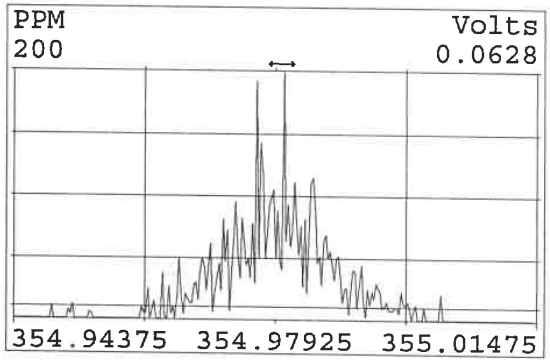

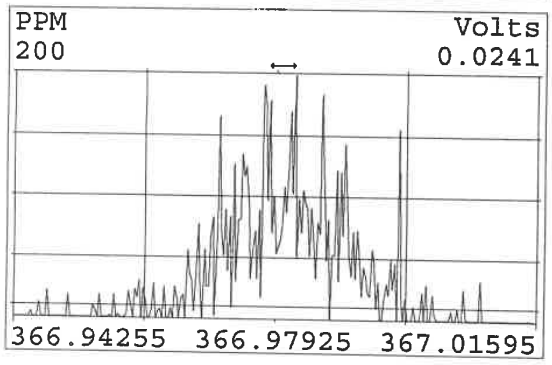

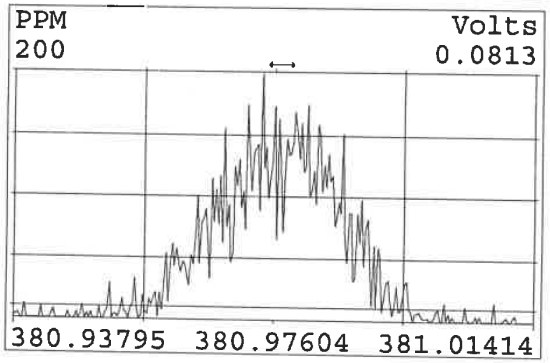

785999

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 09:27:12 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:08:24

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.285	41505218	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.601	63810084	0.80	1.3327	115.4	115.4	0.2725	0.2725	115	
2,3,7,8-TCDF	17.629	6005659	0.76	0.9978	9.432	9.432	0.0437	0.0437	94.32	
D 13C-2,3,7,8-TCDD	16.051	39498195	0.78	0.8749	108.8	108.8	0.4121	0.4121	109	
2,3,7,8-TCDD	16.079	4212727	0.79	1.0570	10.1	10.1	0.0500	0.0500	101	
$ 37Cl4-2,3,7,8-TCDD	16.079	3887170		0.8648	10.8	10.8	0.0505	0.0505	108	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 09:27:12 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:08:24

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.285	16.285	0		18219819	4161833	6361	15902	654		
333.9339	16.285	16.285	0		23285399	5071465	6956	17390	729	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.601	17.601	0	1.081	28324668	5203466	6186	15465	841		
317.9389	17.601	17.601	0	1.081	35485416	6670555	7229	18072	923	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.629	0	1.002	2584414	460518	959	2397	480		
305.8987	17.629	17.629	0	1.002	3421245	616042	1110	2775	555	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.051	16.051	0	0.986	17309487	3706712	6361	15902	583		
333.9339	16.065	16.051	1	0.987	22188708	4844866	6956	17390	697	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.079	16.079	0	1.002	1858384	420124	841	2102	500		
321.8936	16.065	16.079	-1	1.001	2354343	486411	965	2412	504	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.079	16.079	0	0.987	3887170	870116	1612	4030	540		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

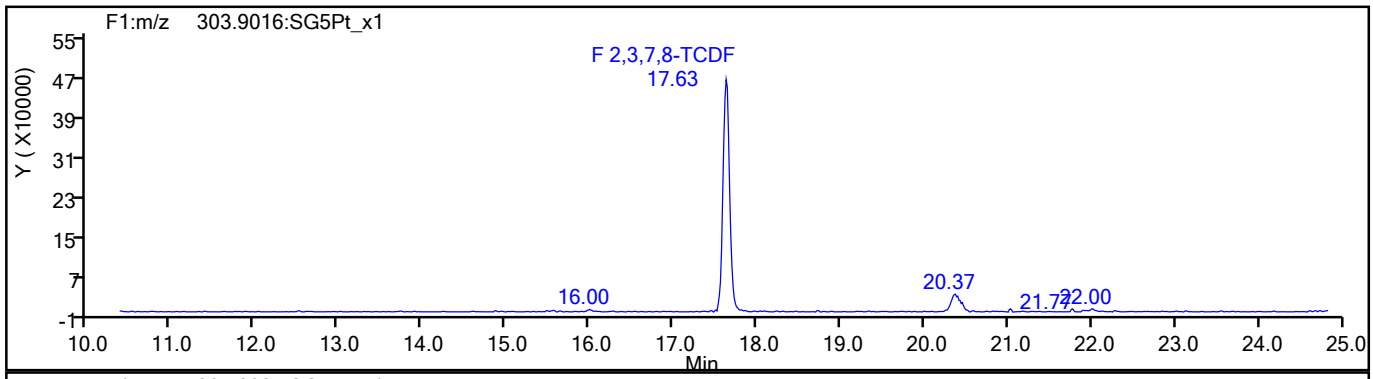

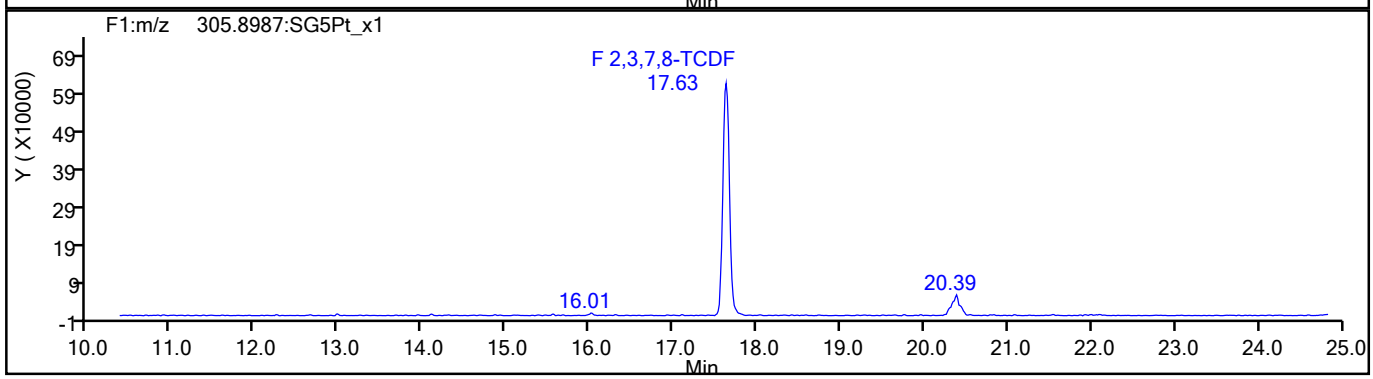

TCDF Standards

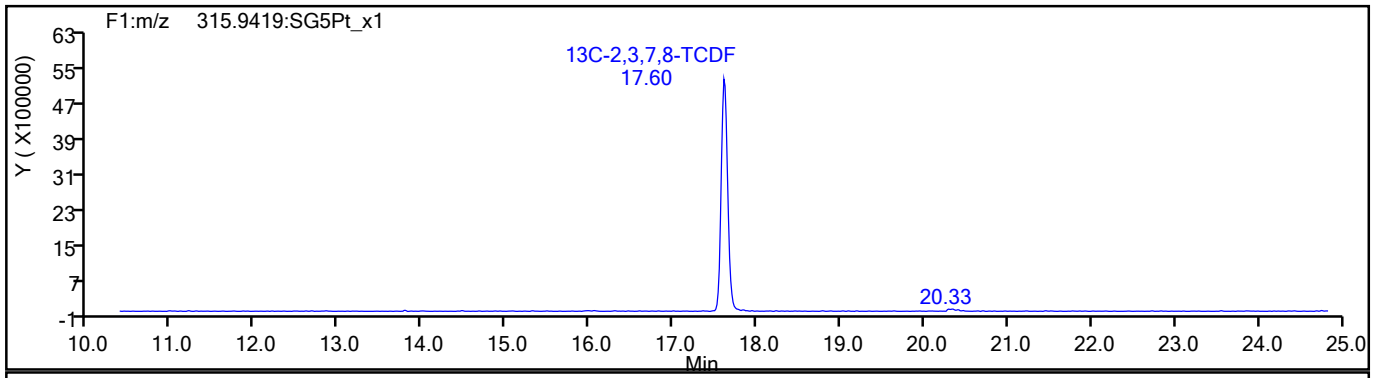

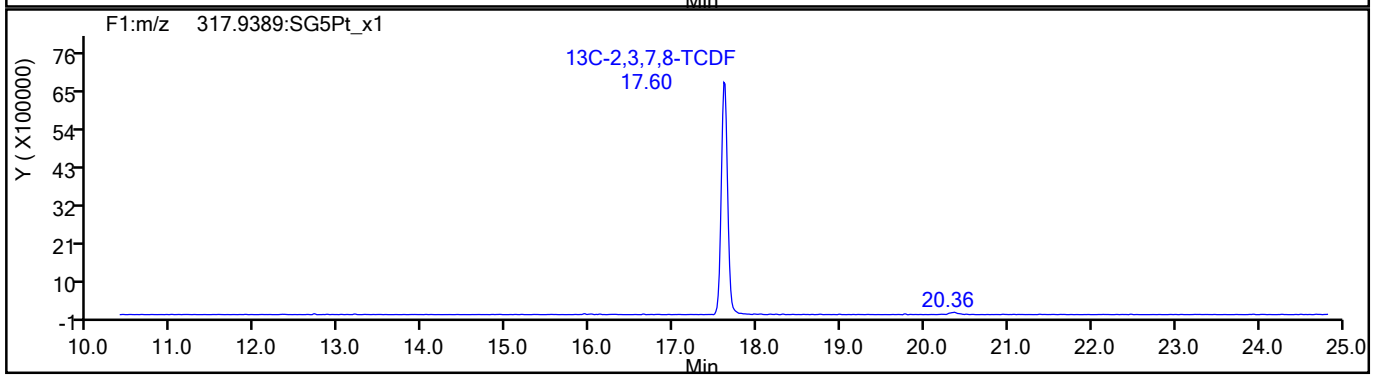

786002

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

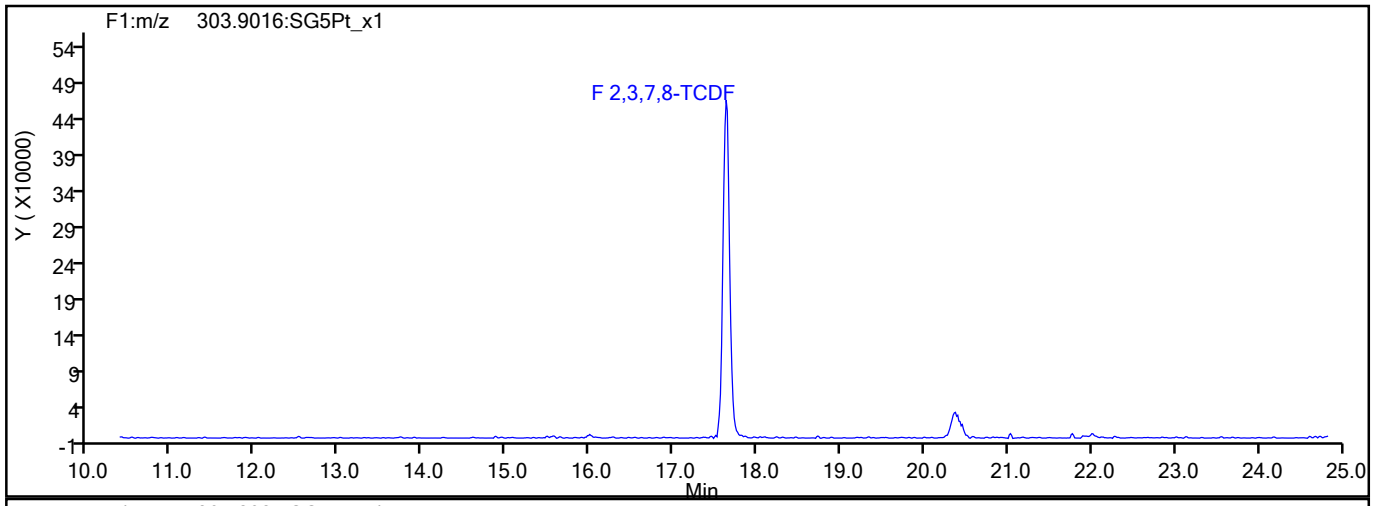

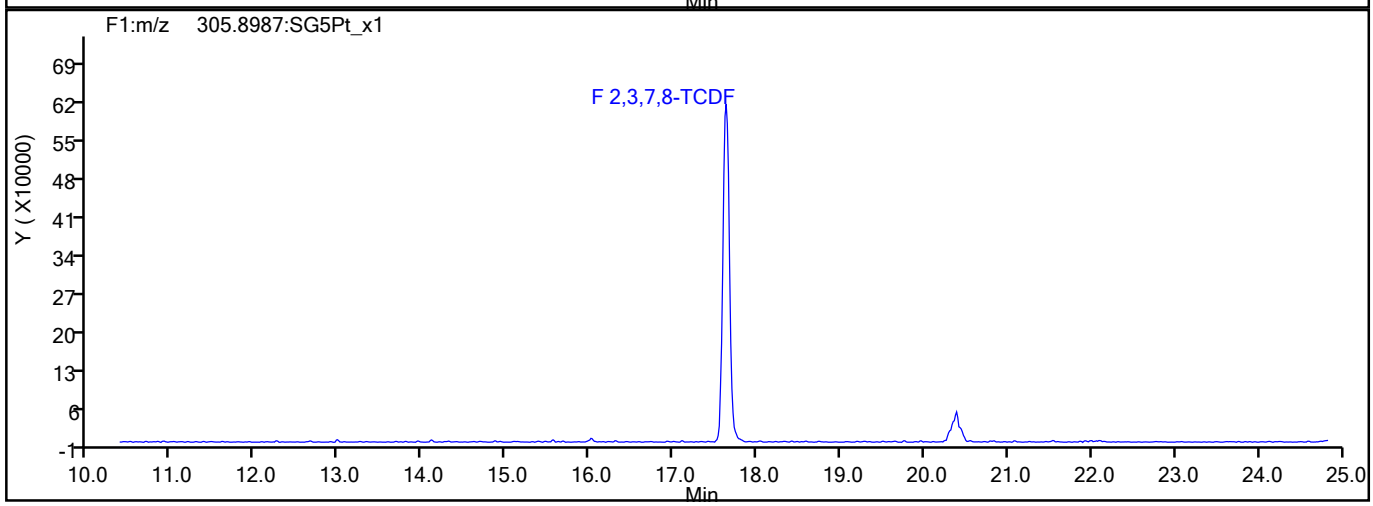

TCDF Interference Mass

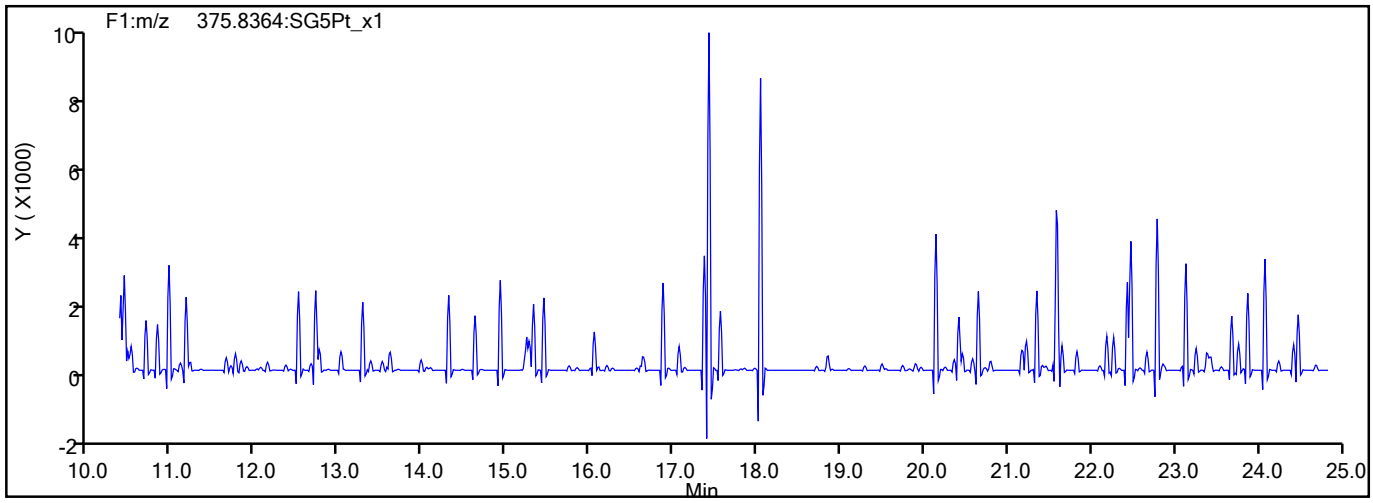

786003

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

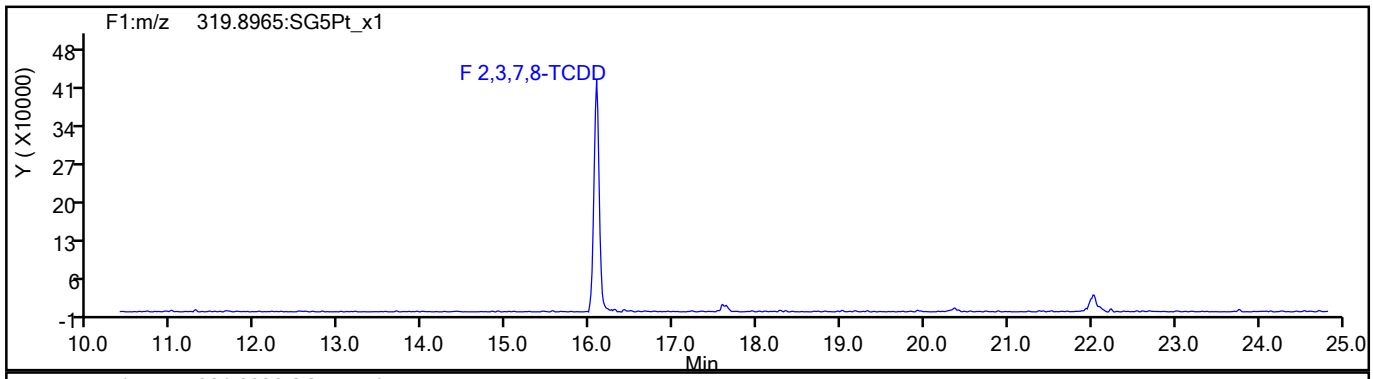

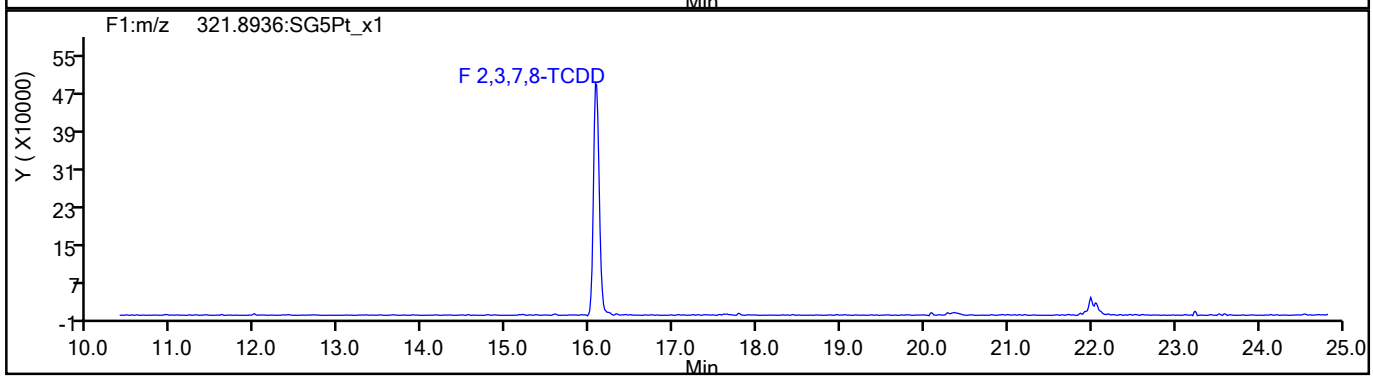

TCDD Standards

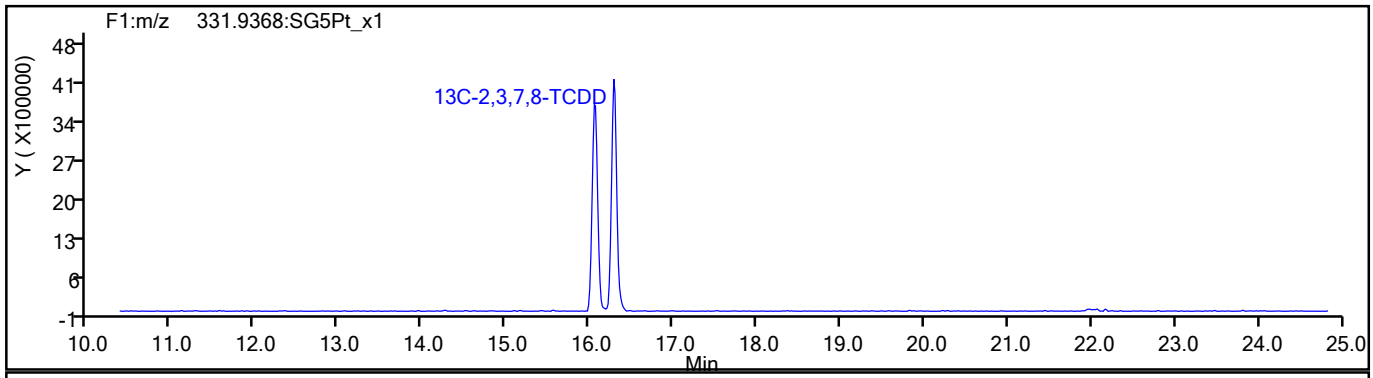

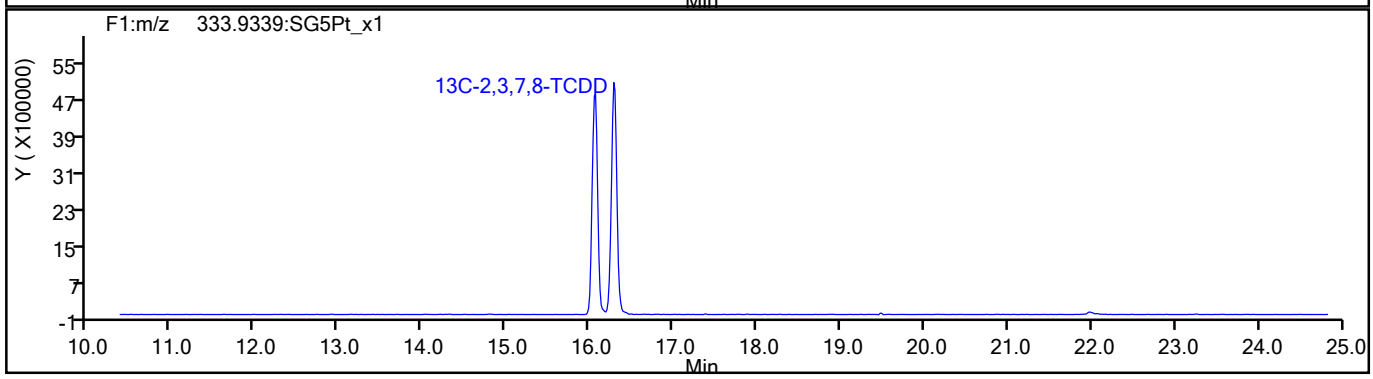

786004

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

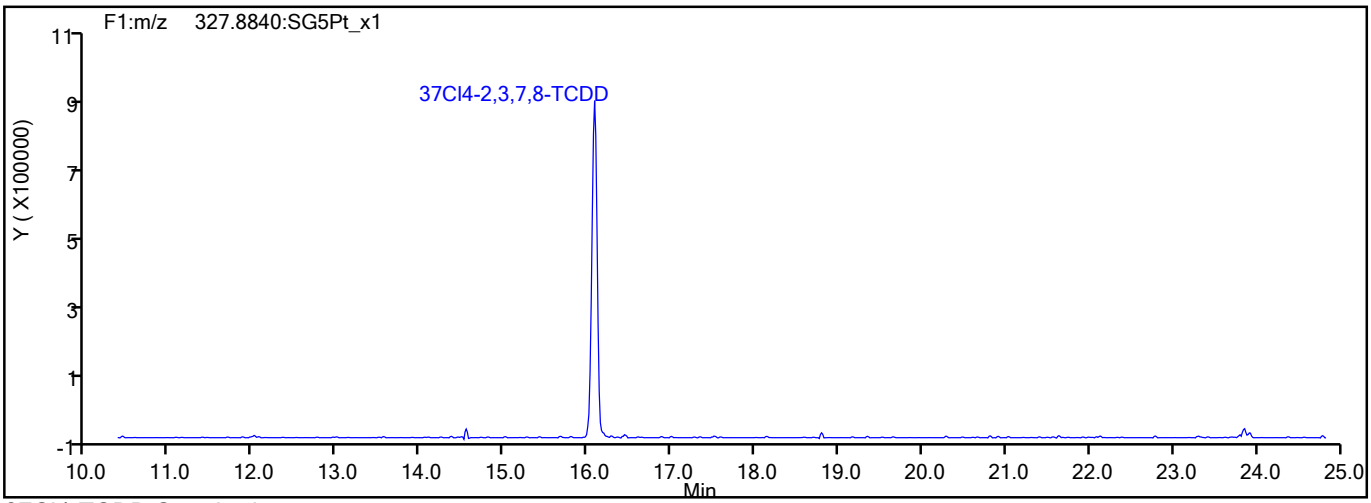

37Cl4-TCDD Standards

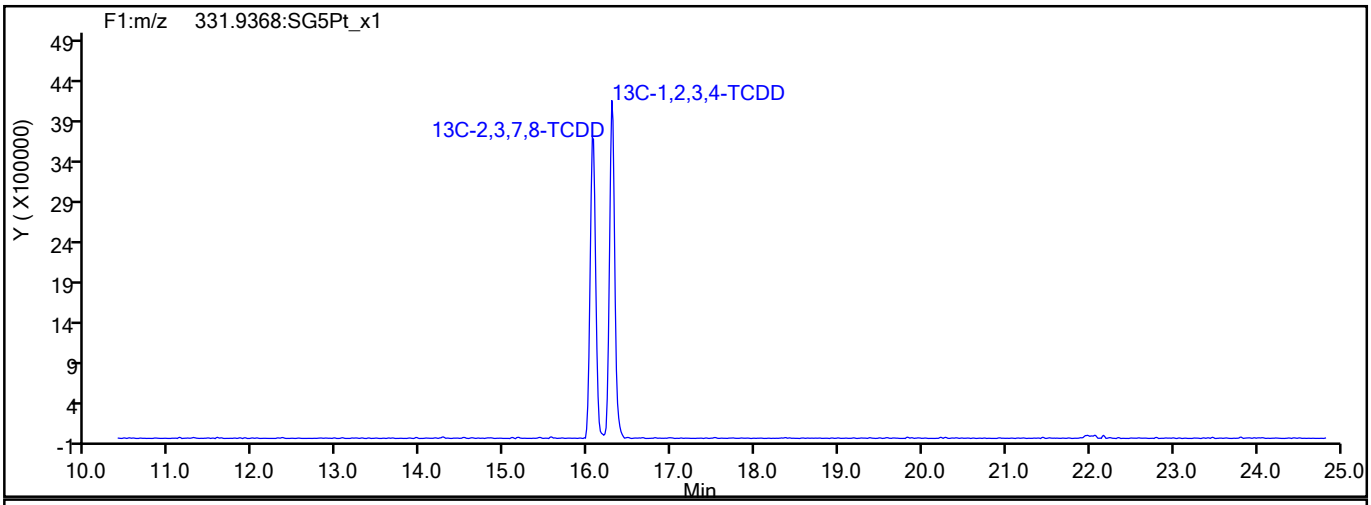

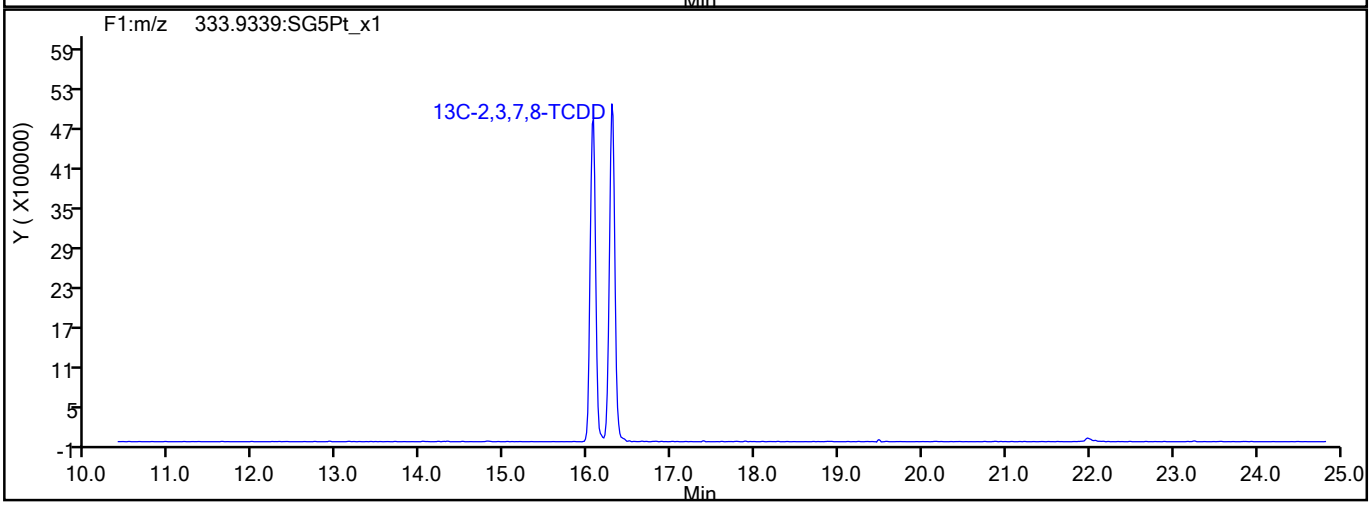

786005

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

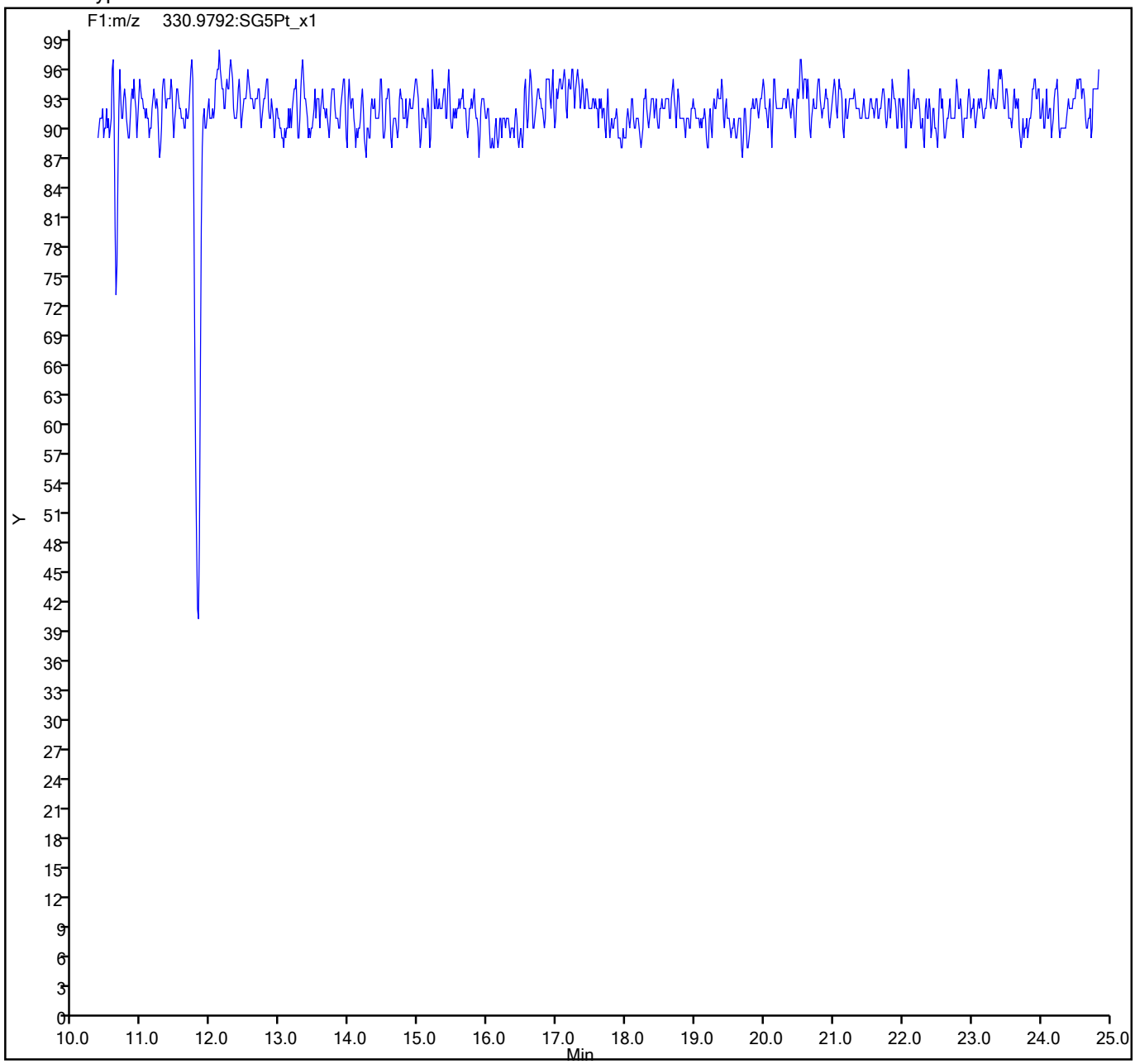

786006

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID: CCV 320-519744/2 Calibration Date: 08/25/2021 13:37

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 25AU21A11D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.014		9.59	10.0	96	78-129
2,3,7,8-TCDF	AveID	0.998	0.9106		9.13	10.0	91	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9659		110	100	110	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.534		115	100	115	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9227		10.7	10.0	107	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
25AU21A11D2	1	CPS 082521A	CPS HRDXNCP_00044				1.00000	
25AU21A11D2	2	CCV 082521A	CCV CS-4 HRDXNL4_00100				1.00000	
25AU21A11D2	3	SB 082521A	Solvent Blank C-14				1.00000	
25AU21A11D2	4	320-513586	320-76887-A-8-A	20	1613B/Solid	D266	10.00000	g
25AU21A11D2	5	320-513586	320-76887-A-13-A	20	1613B/Solid		10.00000	g
25AU21A11D2	6	320-513586	320-76887-A-4-A	20	1613B/Solid		10.00000	g
25AU21A11D2	7	320-513586	320-76887-A-7-A	20	1613B/Solid		10.00000	g
25AU21A11D2	8	320-513586	320-76887-A-6-A	20	1613B/Solid		10.00000	g
25AU21A11D2	9	320-513586	320-76887-A-3-A	20	1613B/Solid		10.00000	g
25AU21A11D2	10	320-513586	320-76888-A-13-A	20	1613B/Solid		10.00000	g
25AU21A11D2	11	320-513586	320-76887-A-5-A	20	1613B/Solid		10.00000	g
25AU21A11D2	12	320-512871	320-76788-A-1-A X5	20	1613B/Solid	D265	10.00000	g
25AU21A11D2	13	320-512871	320-76788-A-13-A X5	20	1613B/Solid		10.00000	g
25AU21A11D2	14	320-512871	320-76788-A-14-A X5	20	1613B/Solid		10.00000	g
25AU21A11D2	15	320-513586	320-76887-A-2-A X10	20	1613B/Solid	D266	10.00000	g
25AU21A11D2	16	320-513586	320-76887-A-2-B MS X10	20	1613B/Solid		10.00000	g
25AU21A11D2	17	320-513586	320-76887-A-2-C MSD X10	20	1613B/Solid		10.00000	g
25AU21A11D2	18	320-513586	320-76887-A-1-A X10	20	1613B/Solid		10.00000	g
25AU21A11D2	19						1.00000	
25AU21A11D2	20						1.00000	
25AU21A11D2	21						1.00000	
25AU21A11D2	22						1.00000	
25AU21A11D2	23						1.00000	
25AU21A11D2	24		DB 08-25-21		Logfile ✓ id 8/26/21 WSS		1.00000	
25AU21A11D2	25						1.00000	

786008

Peak Locate Examination:25-AUG-2021:12:57 File:25AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

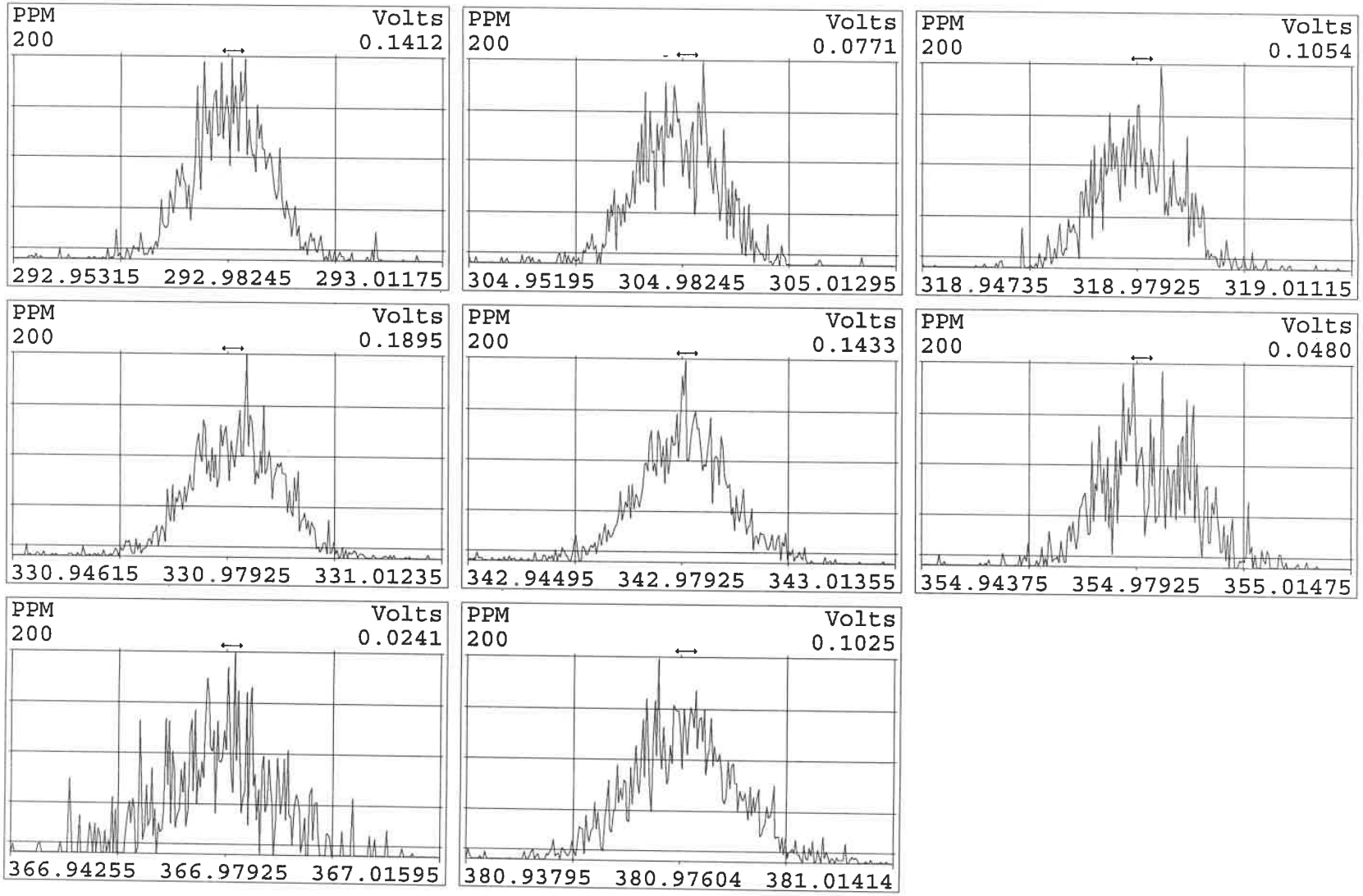

786009

Peak Locate Examination:26-AUG-2021:00:53 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

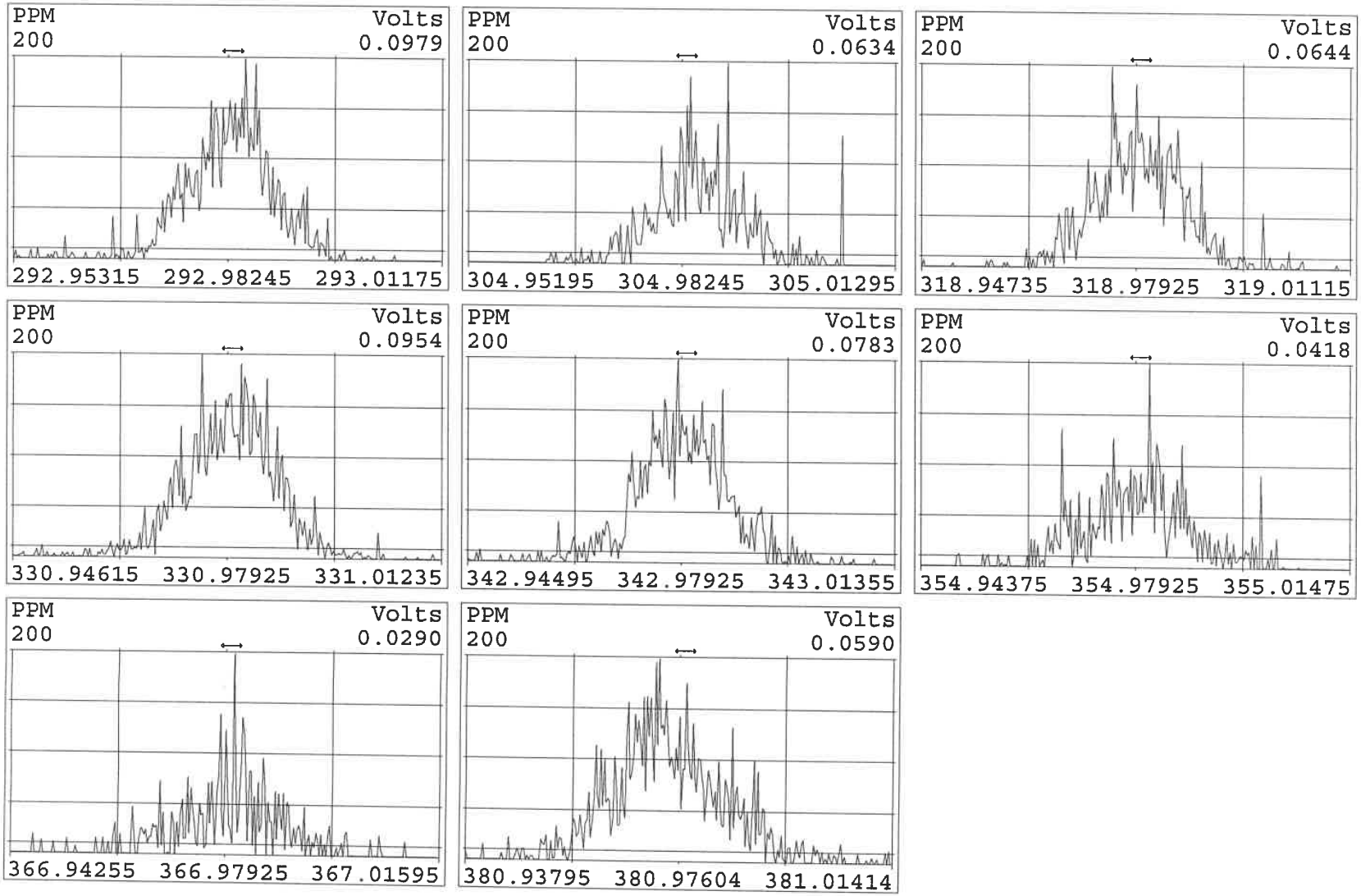

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 13:37:25 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:58:03

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	44613223	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	68447211	0.78	1.3327	115.1	115.1	0.4009	0.4009	115	
2,3,7,8-TCDF	17.628	6233038	0.76	0.9978	9.126	9.126	0.0456	0.0456	91.26	
D 13C-2,3,7,8-TCDD	16.065	43090707	0.78	0.8749	110.4	110.4	0.4999	0.4999	110	
2,3,7,8-TCDD	16.078	4369493	0.82	1.0570	9.593	9.593	0.0503	0.0503	95.93	
$ 37Cl4-2,3,7,8-TCDD	16.078	4116418		0.8648	10.7	10.7	0.0403	0.0403	107	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 13:37:25 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:34 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:58:03

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.298	16.298	0		19220204	4118470	10824	27060	380		
333.9339	16.298	16.298	0		25393019	5598505	6177	15442	906	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.081	30012344	5677395	10361	25902	548		
317.9389	17.615	17.615	0	1.081	38434867	7538958	10404	26010	725	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.628	0	1.001	2692252	497103	1141	2852	436		
305.8987	17.628	17.628	0	1.001	3540786	659047	1262	3155	522	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	0.986	18814987	4187657	10824	27060	387		
333.9339	16.065	16.065	0	0.986	24275720	5412651	6177	15442	876	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.078	16.078	0	1.001	1970068	437591	1166	2915	375		
321.8936	16.078	16.078	0	1.001	2399425	530002	877	2192	604	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.078	0	0.987	4116418	976537	1354	3385	721		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

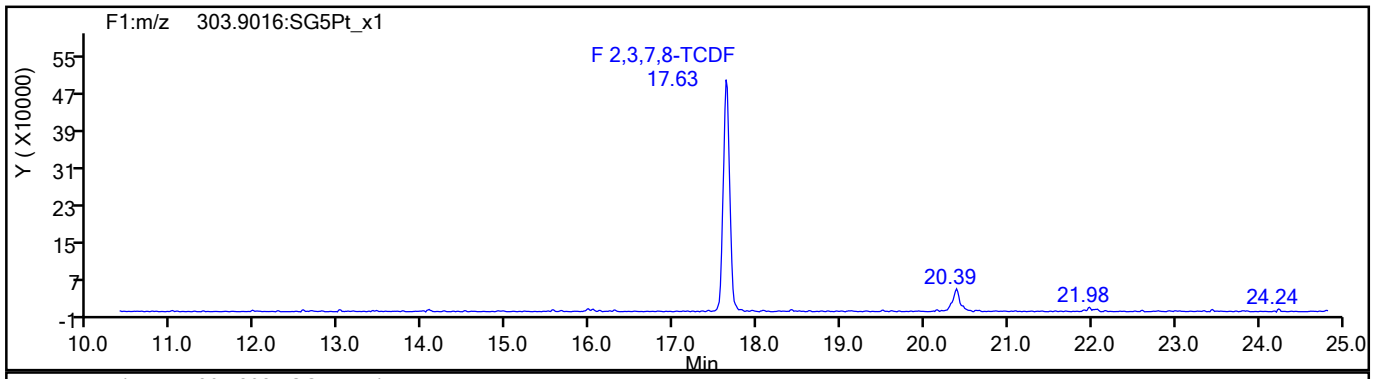

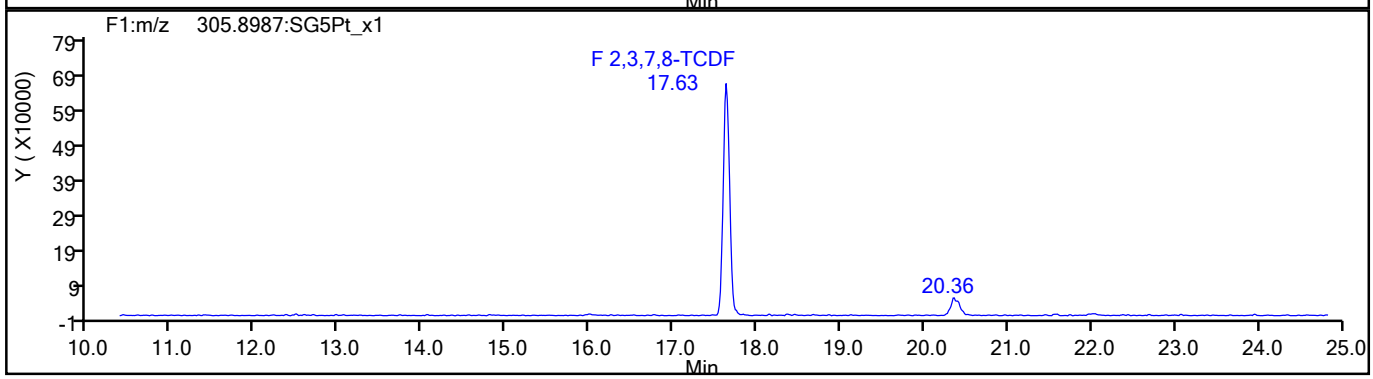

TCDF Standards

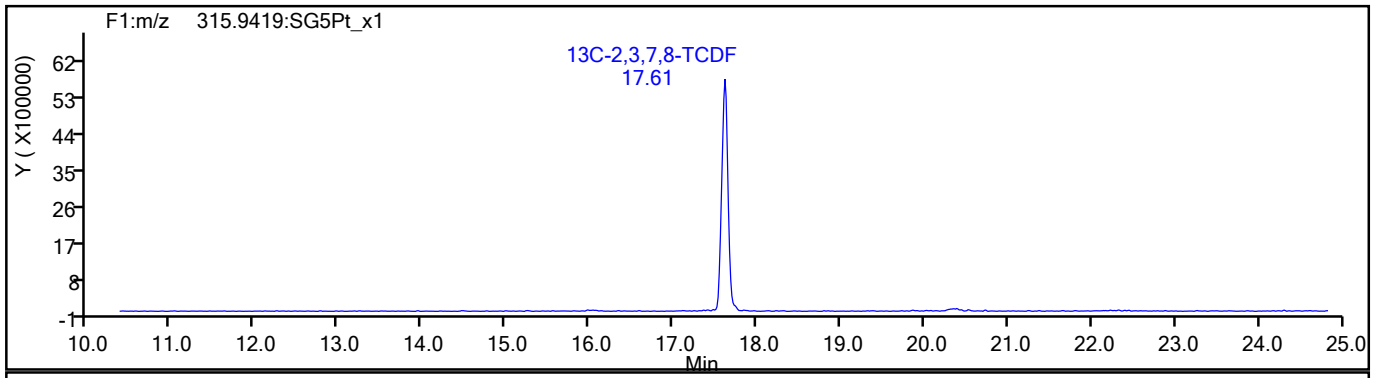

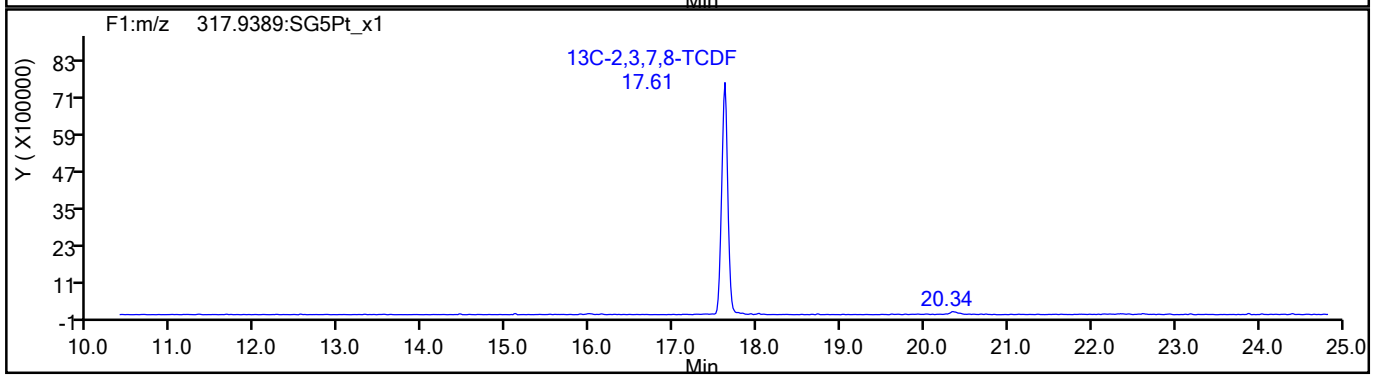

786013

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

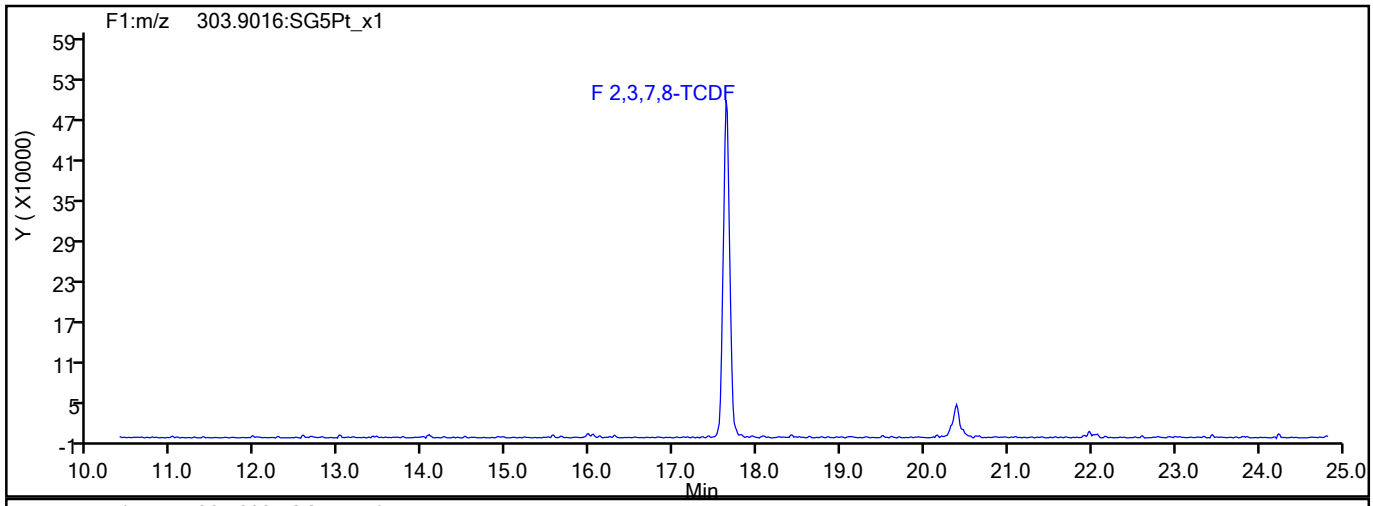

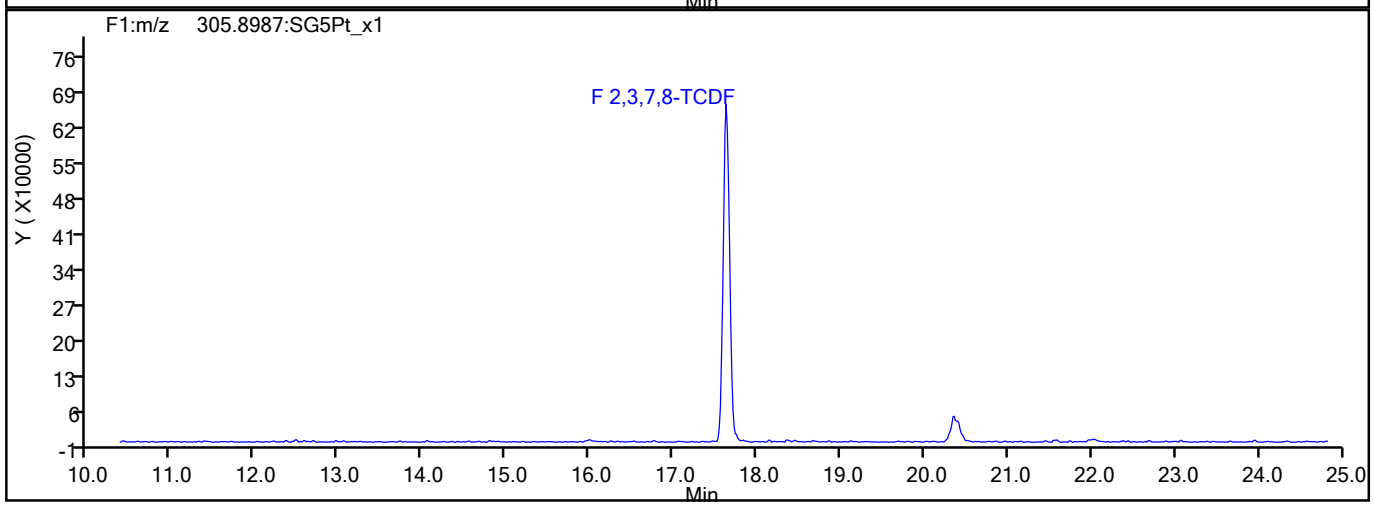

TCDF Interference Mass

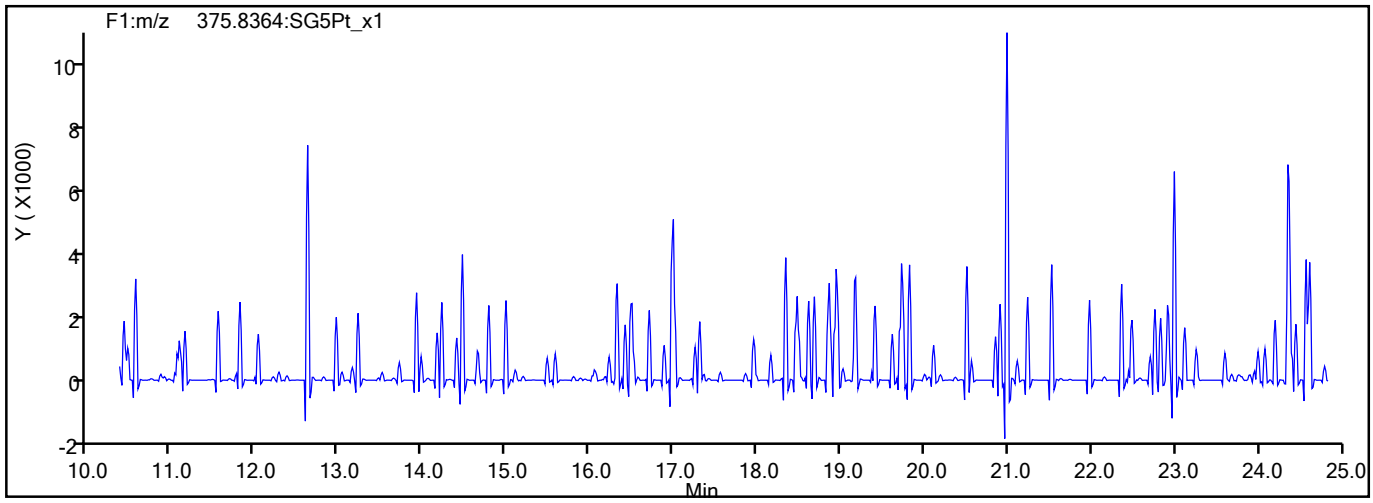

786014

Report Date: 26-Aug-2021 09:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

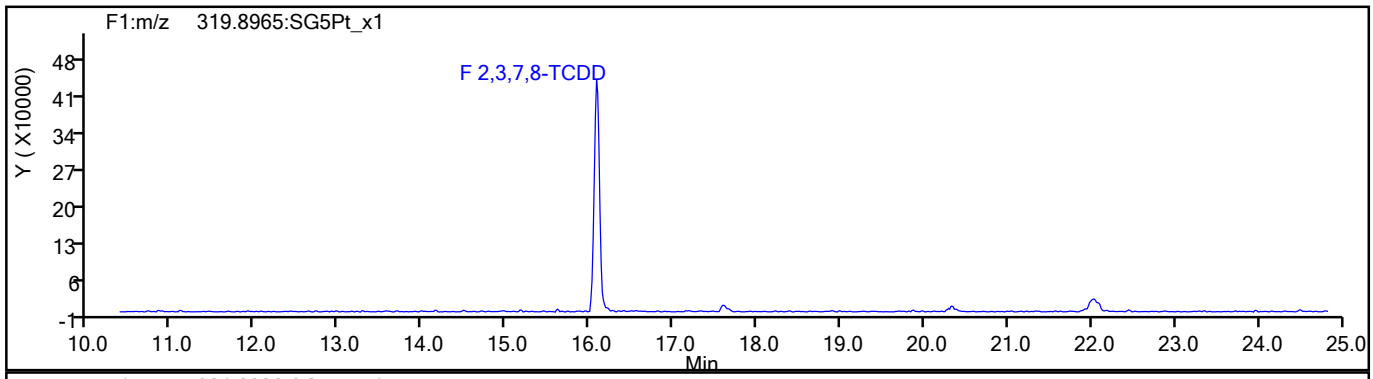

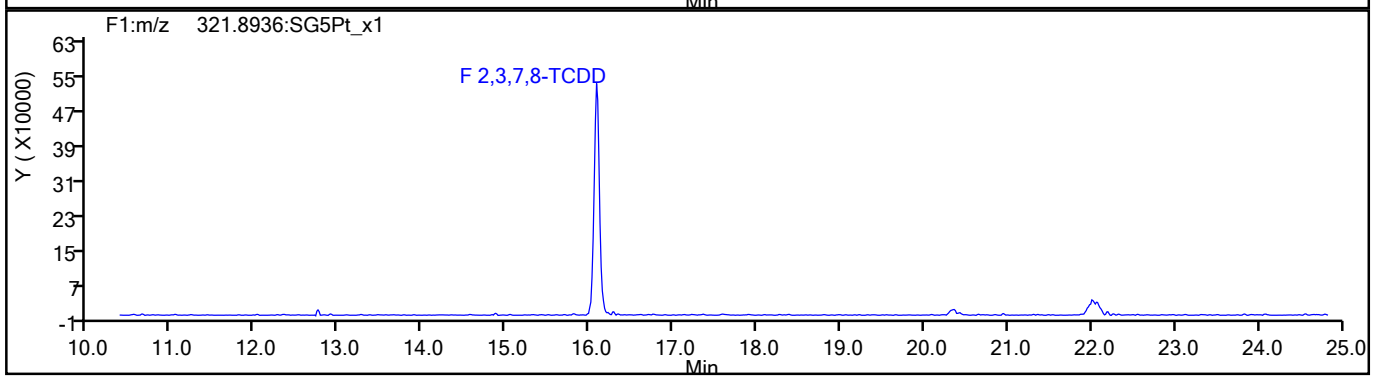

TCDD Standards

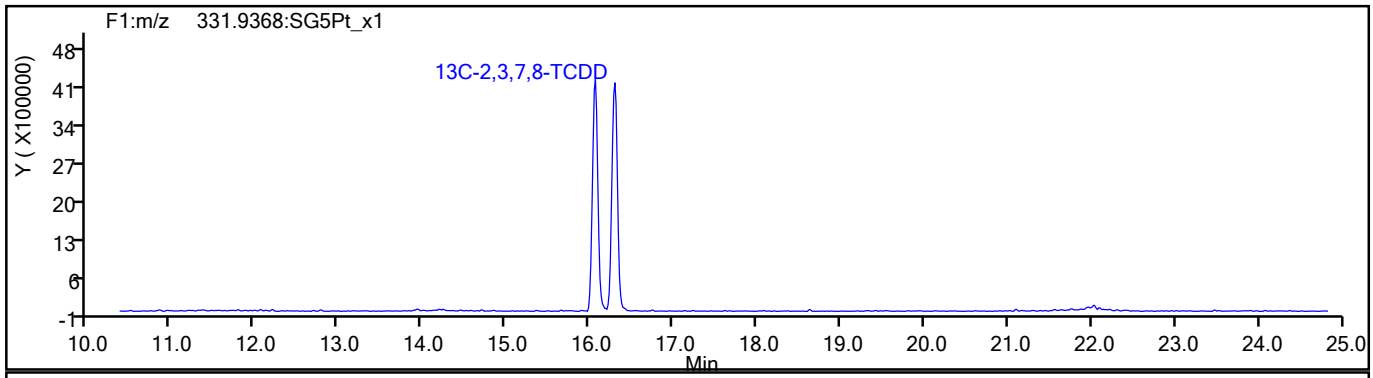

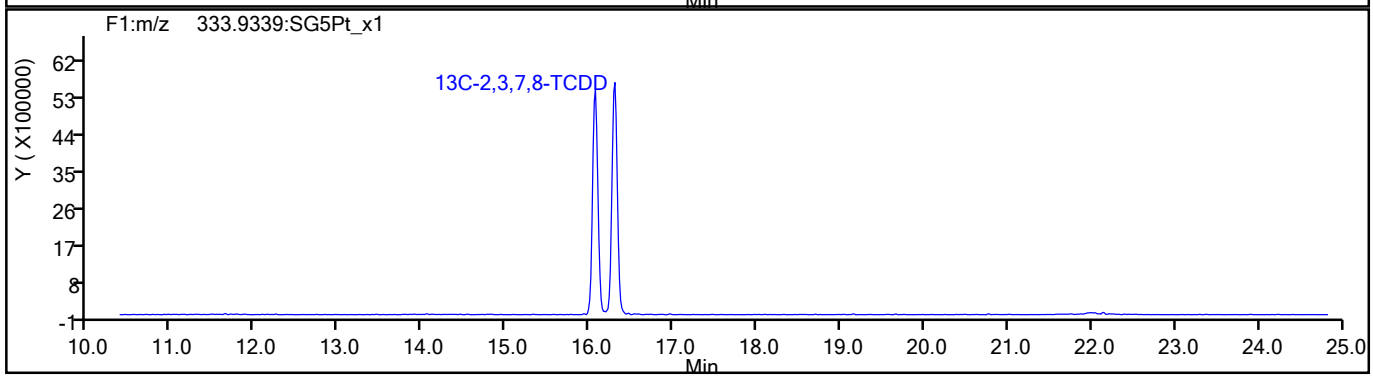

786015

Report Date: 26-Aug-2021 09:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

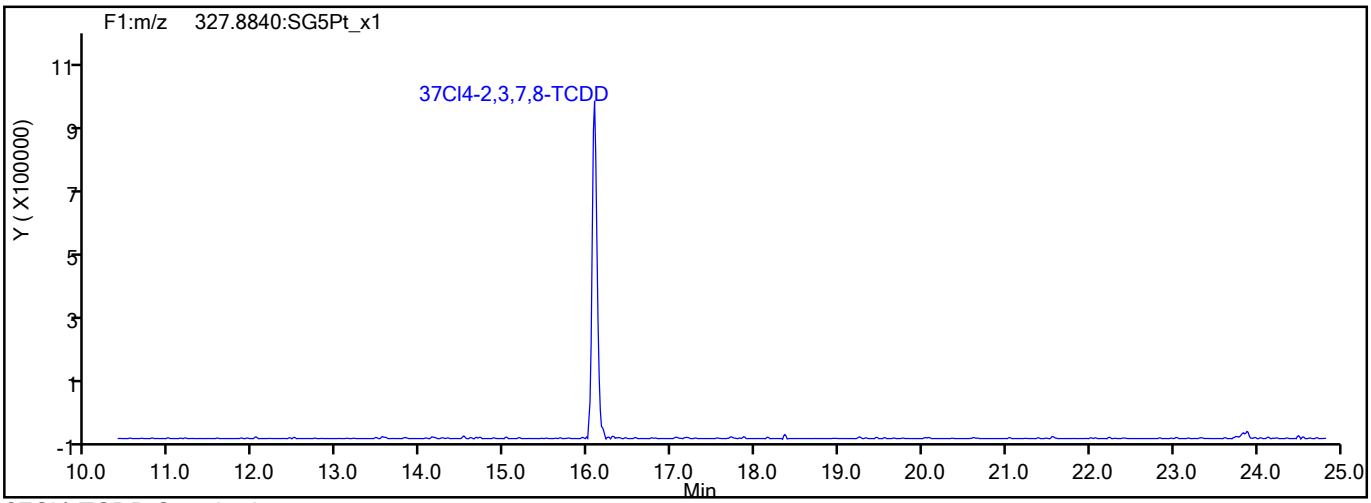

37Cl4-TCDD Standards

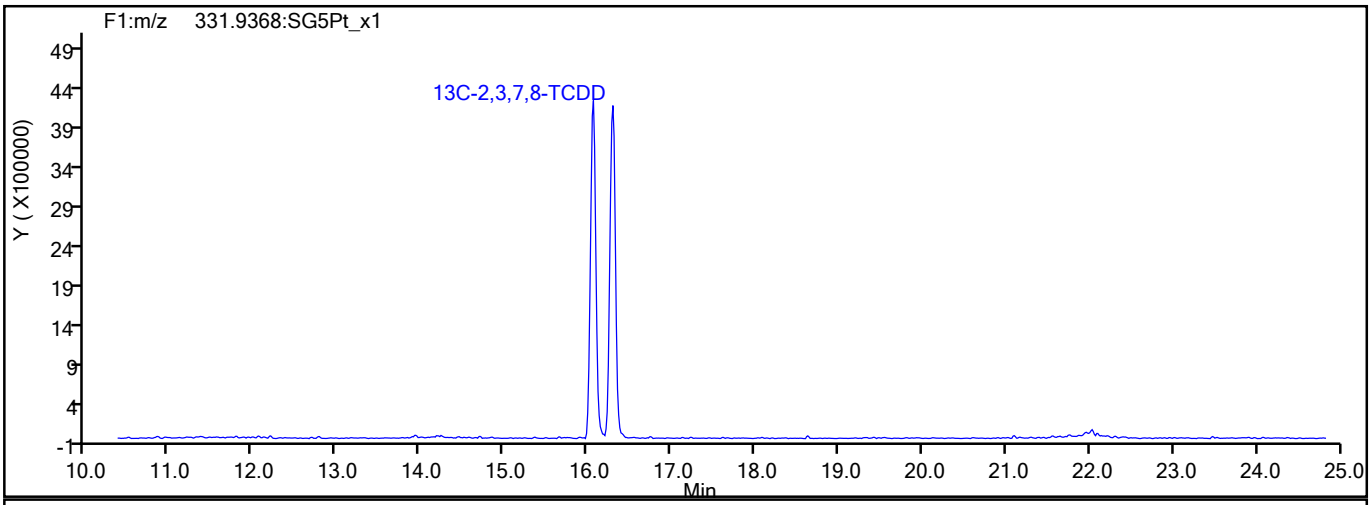

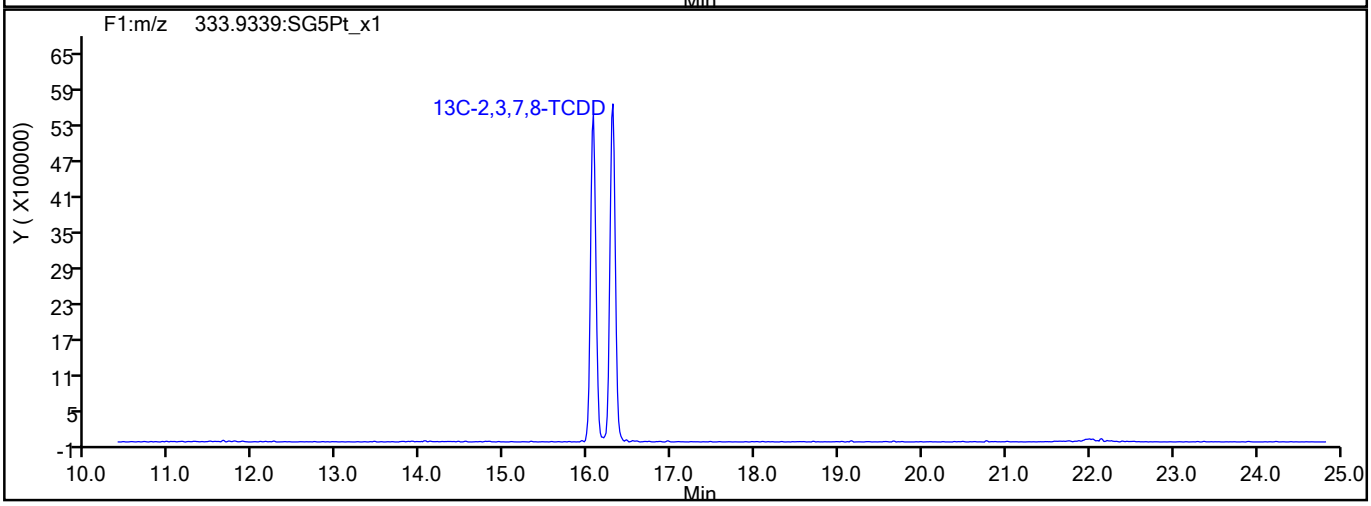

786016

Report Date: 26-Aug-2021 09:30:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_002.d		
Injection Date:	25-Aug-2021 13:37:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

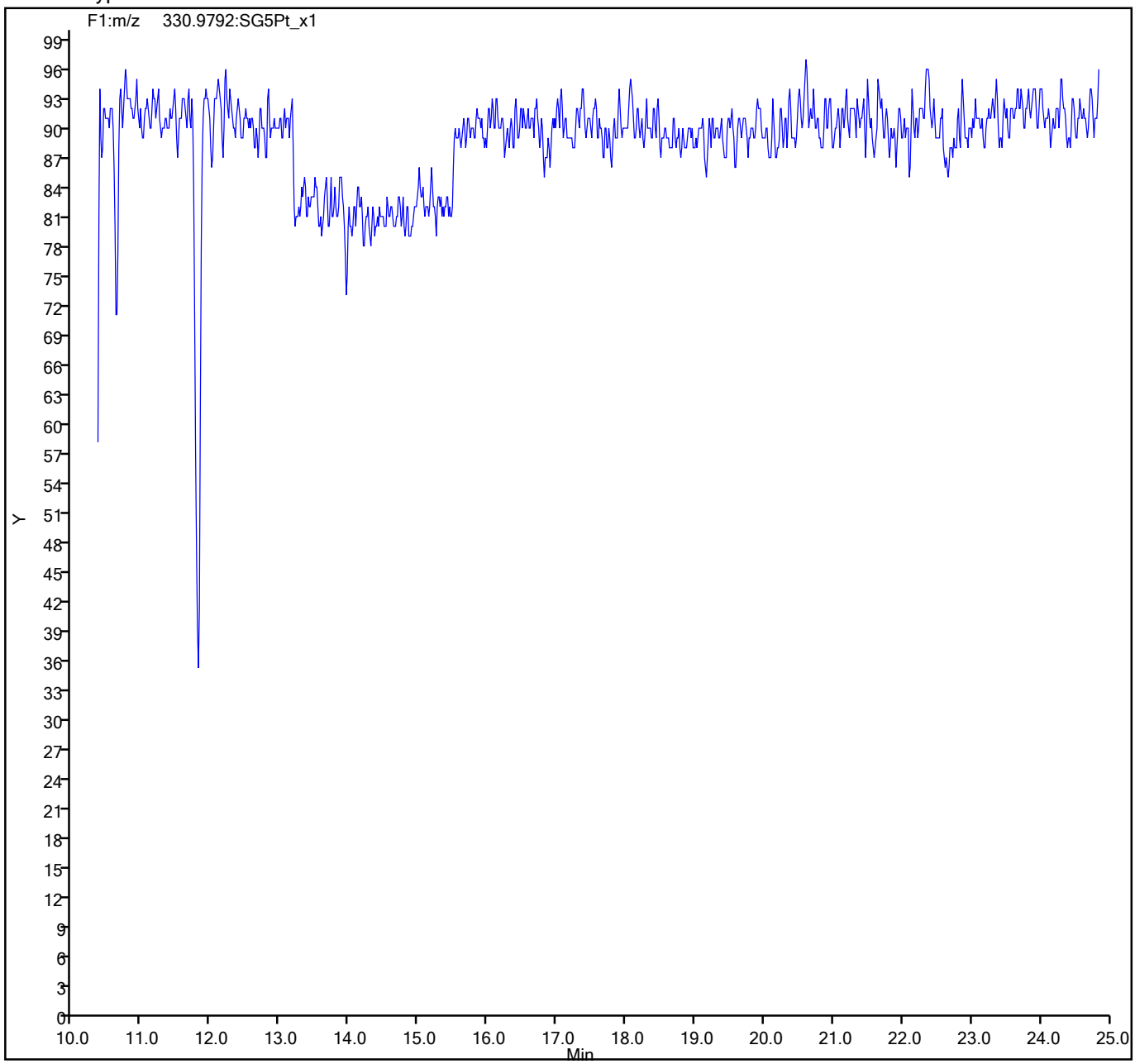

786017

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID: CCV 320-520145/2 Calibration Date: 08/26/2021 15:55

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 26AU21A11D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.013		9.59	10.0	96	78-129
2,3,7,8-TCDF	AveID	0.998	0.8988		9.01	10.0	90	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9319		107	100	107	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.446		109	100	109	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9097		10.5	10.0	105	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
26AU21A11D2	1	CPS 082621A	CPS HRDXNCP_00044				1.00000	
26AU21A11D2	2	CCV 082621B	CCV CS-4 HRDXNL4_00100				1.00000	
26AU21A11D2	3	SB 082621	Solvent Blank C-14				1.00000	
26AU21A11D2	4	320-513259	860-8784-C-20-A	20	1613B/Water	D261	1.00000	L
26AU21A11D2	5	320-512170	240-153681-B-1-A	20	8290A/Solid	D261	10.00000	g
26AU21A11D2	6	320-512170	240-153681-B-13-A	20	8290A/Solid		10.00000	g
26AU21A11D2	7	320-512170	240-153681-B-14-A	20	8290A/Solid		10.00000	g
26AU21A11D2	8	320-514741	400-206690-C-19-A	20	1613B/Solid	D262	10.00000	g
26AU21A11D2	9	320-514741	400-206690-C-16-A	20	1613B/Solid		10.00000	g
26AU21A11D2	10	320-514741	400-206690-C-17-A	20	1613B/Solid		10.00000	g
26AU21A11D2	11	320-513212	320-76905-A-1-A	20	EPA_23/Air	105	1.00000	SA
26AU21A11D2	12	320-513879	320-76888-A-6-A	20	1613B/Solid	D267	10.00000	g
26AU21A11D2	13	320-513879	320-76888-A-5-A 5X	20	1613B/Solid		10.00000	g
26AU21A11D2	14	320-513879	320-76888-A-2-A 10X	20	1613B/Solid		10.00000	g
26AU21A11D2	15	320-513879	320-76888-A-3-A 10X	20	1613B/Solid		10.00000	g
26AU21A11D2	16	320-513879	320-76888-A-4-A 10X	20	1613B/Solid		10.00000	g
26AU21A11D2	17	CCV 082621C	CCV CS-4 HRDXNL4_00100				1.00000	
26AU21A11D2	18						1.00000	
26AU21A11D2	19						1.00000	
26AU21A11D2	20						1.00000	
26AU21A11D2	21						1.00000	
26AU21A11D2	22		DB 08-26-21				1.00000	
26AU21A11D2	23						1.00000	

log file checked
08/27/21 SMA

Peak Locate Examination:26-AUG-2021:15:15 File:26AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

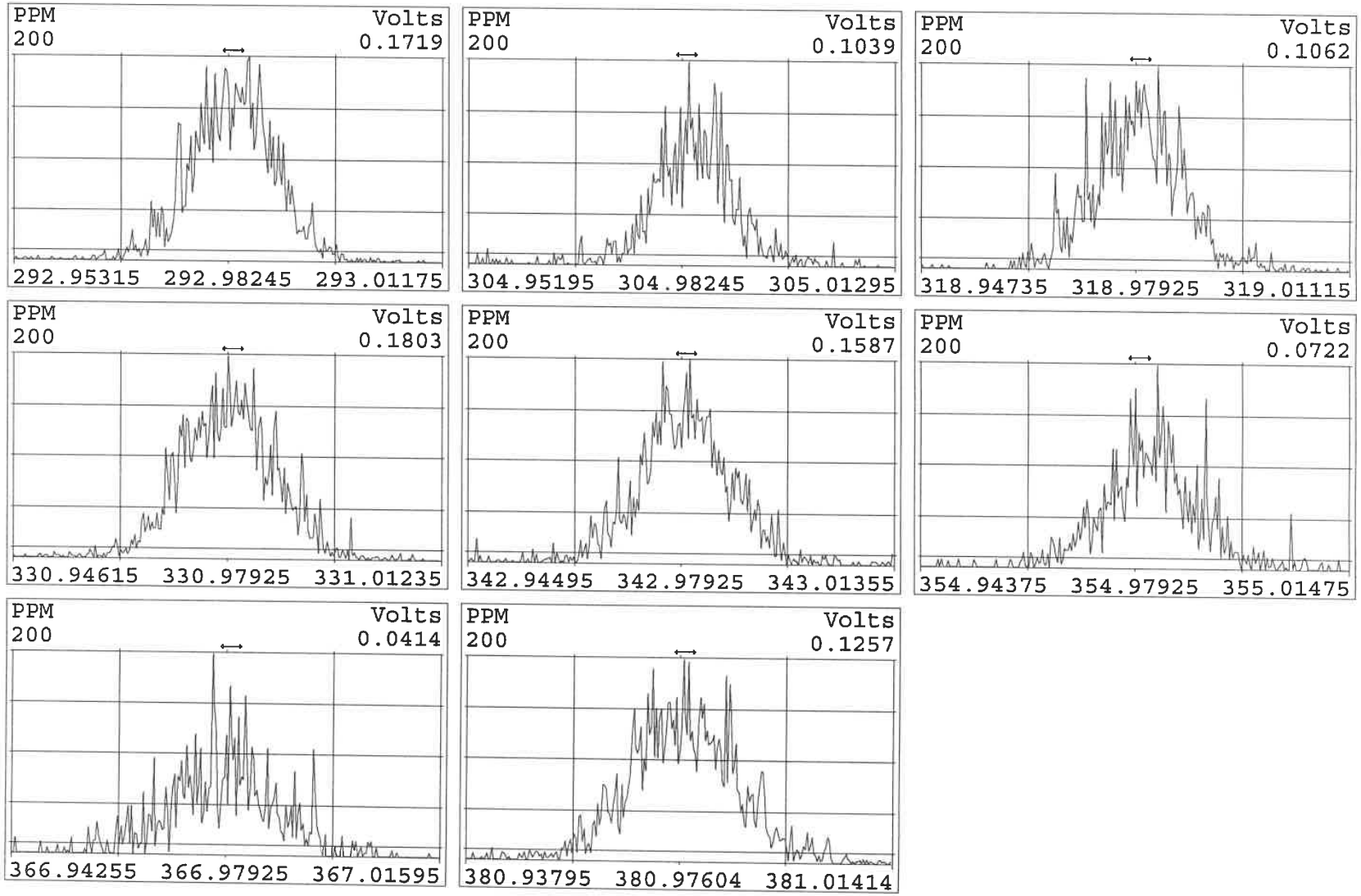

786020

Peak Locate Examination:27-AUG-2021:03:09 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

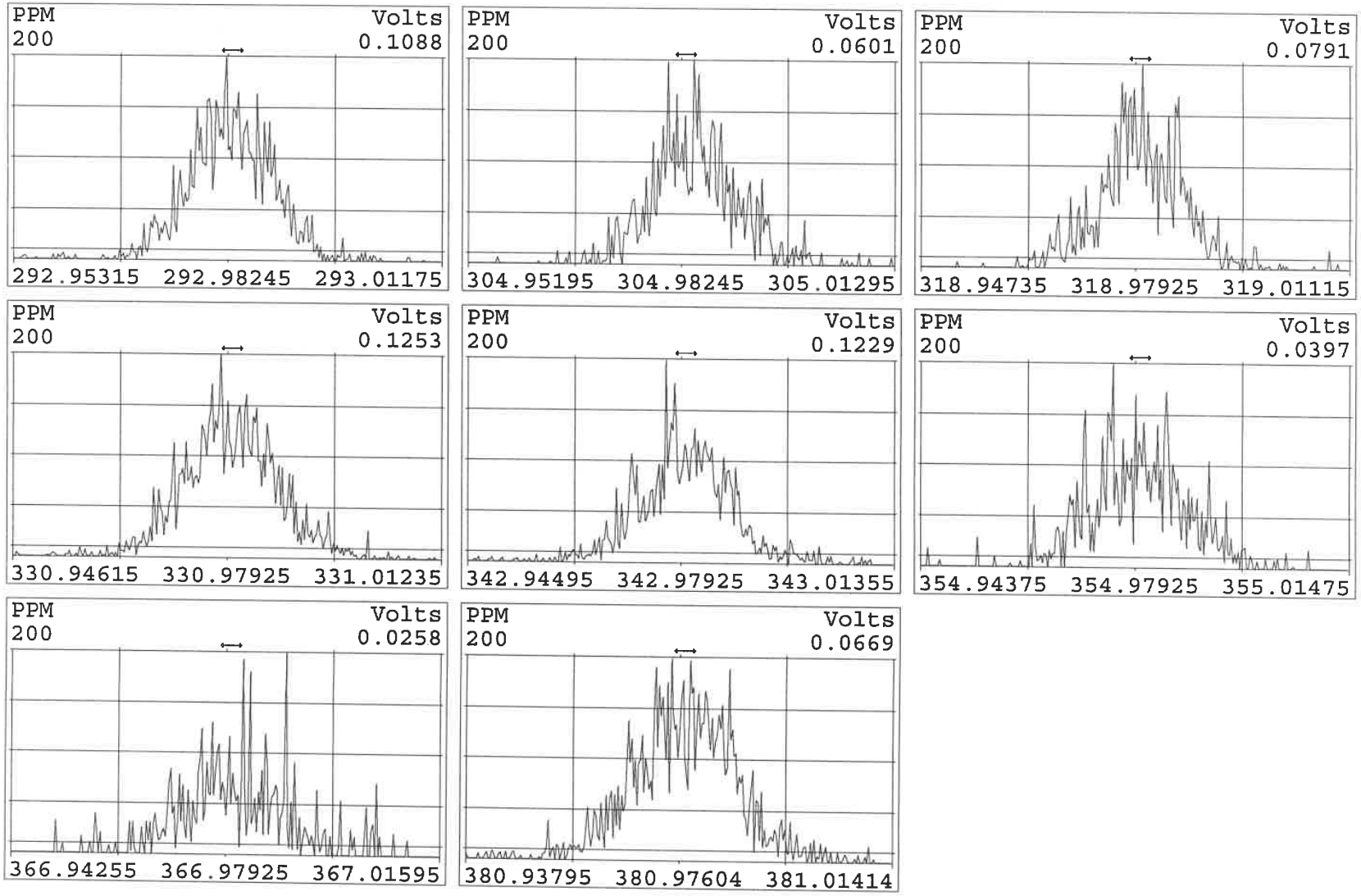

786021

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Aug-2021 15:55:20 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 09:19:42

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.288	70987914	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.619	102662195	0.79	1.3327	108.5	108.5	0.3164	0.3164	109	
2,3,7,8-TCDF	17.632	9227123	0.78	0.9978	9.008	9.008	0.0390	0.0390	90.08	
D 13C-2,3,7,8-TCDD	16.069	66150221	0.77	0.8749	106.5	106.5	0.2450	0.2450	107	
2,3,7,8-TCDD	16.082	6704204	0.80	1.0570	9.588	9.588	0.0454	0.0454	95.88	
$ 37Cl4-2,3,7,8-TCDD	16.082	6457633		0.8648	10.5	10.5	0.0386	0.0386	105	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 27-Aug-2021 09:43:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Aug-2021 15:55:20 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 09:19:42

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.288	16.288	0		30821470	6672294	7492	18730	891		
333.9339	16.302	16.288	1		40166444	8665970	5659	14147	1531	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.619	17.619	0	1.082	45313743	8613551	12853	32132	670		
317.9389	17.619	17.619	0	1.082	57348452	11149409	13016	32540	857	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.632	17.632	0	1.001	4039219	733541	1189	2972	617		
305.8987	17.632	17.632	0	1.001	5187904	942858	1890	4725	499	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.069	16.069	0	0.987	28706241	6640837	7492	18730	886		
333.9339	16.069	16.069	0	0.987	37443980	8538648	5659	14147	1509	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.082	16.082	0	1.001	2983088	649892	1210	3025	537		
321.8936	16.082	16.082	0	1.001	3721116	839525	1702	4255	493	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.082	16.082	0	0.987	6457633	1494634	2048	5120	730		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 27-Aug-2021 09:43:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_002.d		
Injection Date:	26-Aug-2021 15:55:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520145	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

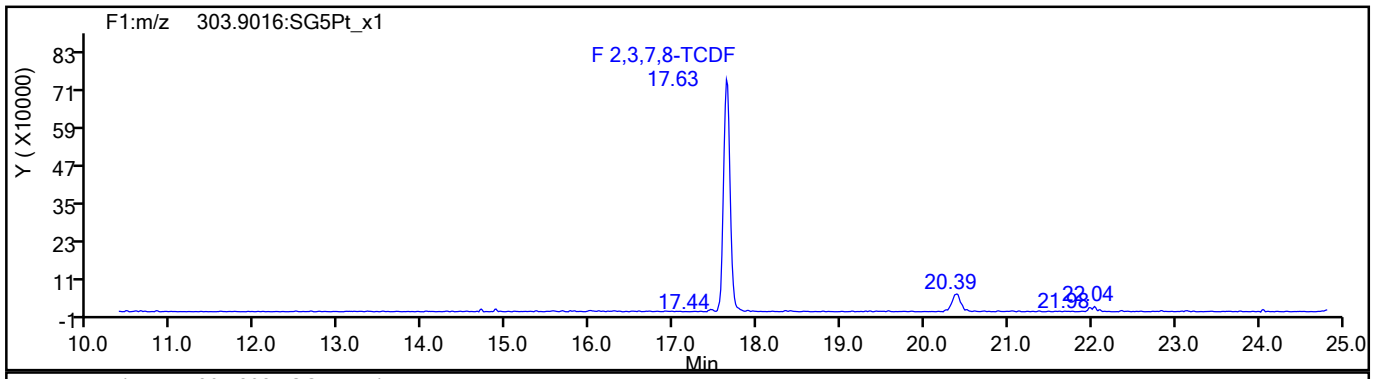

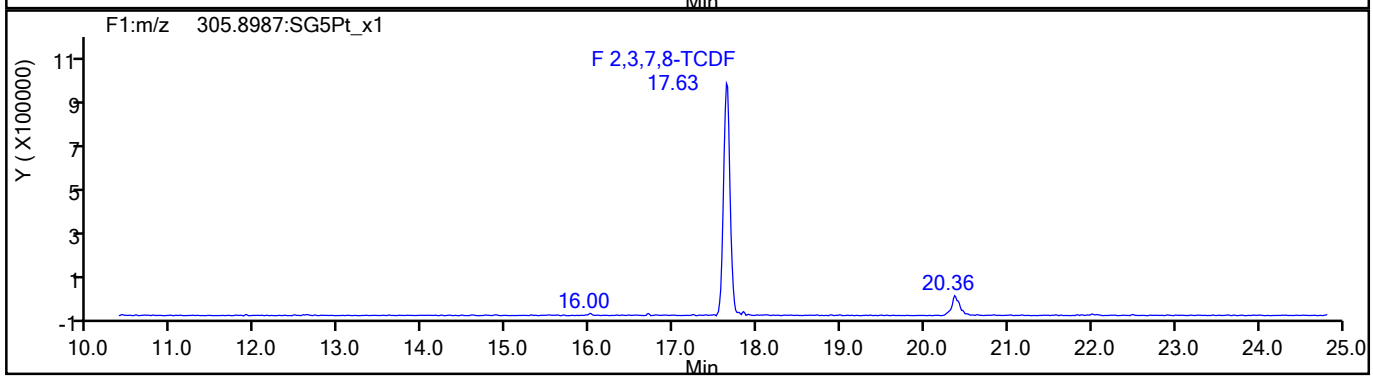

TCDF Standards

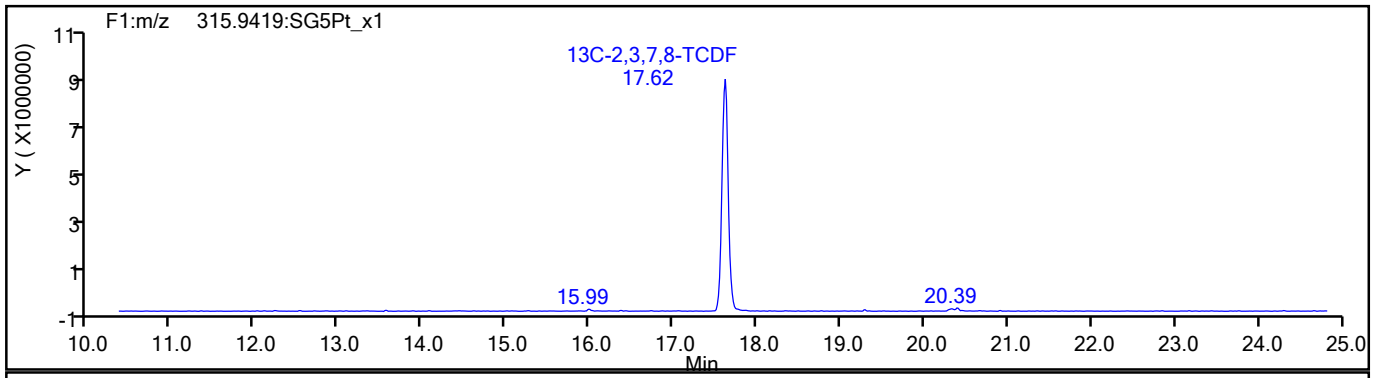

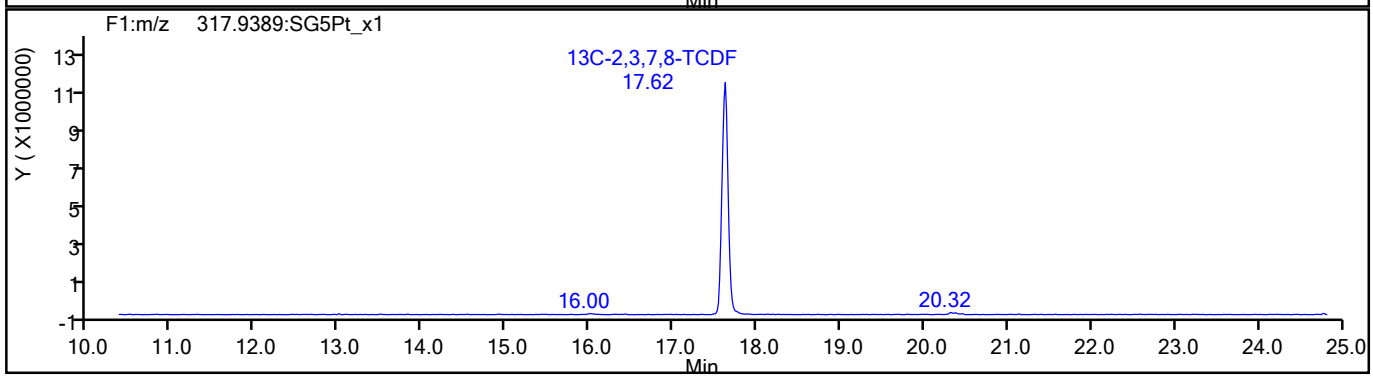

786024

Report Date: 27-Aug-2021 09:43:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_002.d		
Injection Date:	26-Aug-2021 15:55:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520145	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

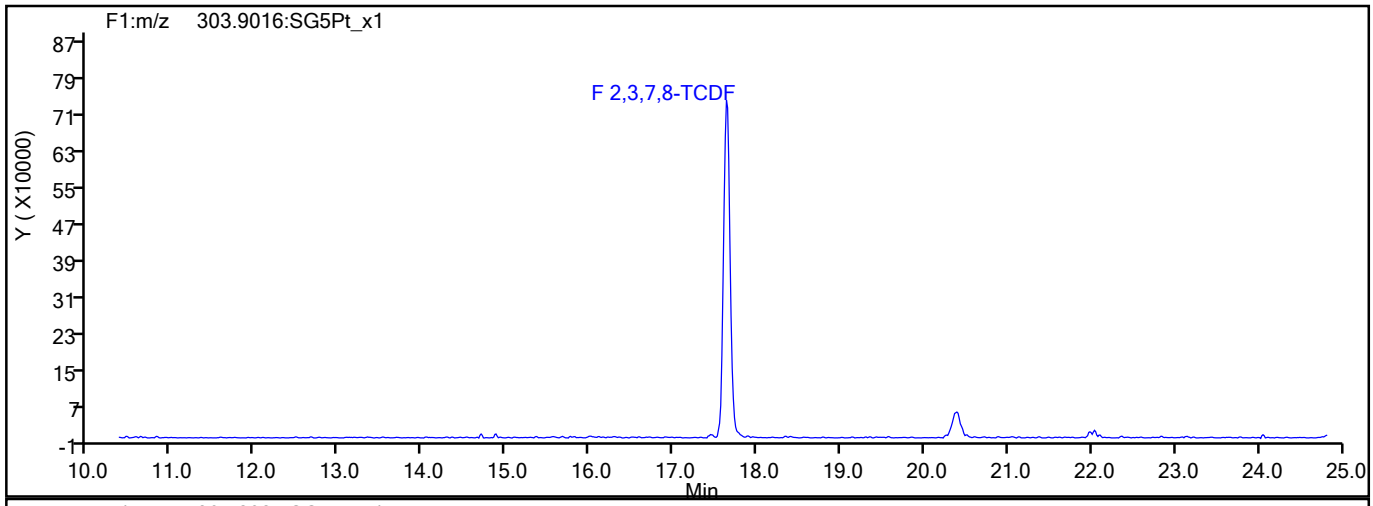

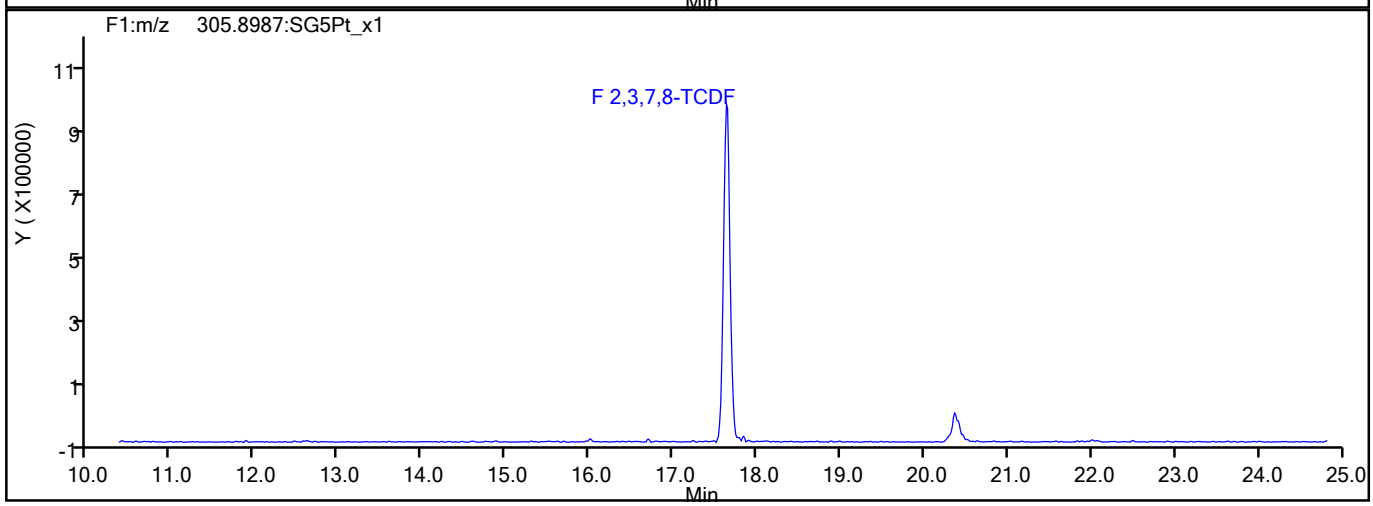

TCDF Interference Mass

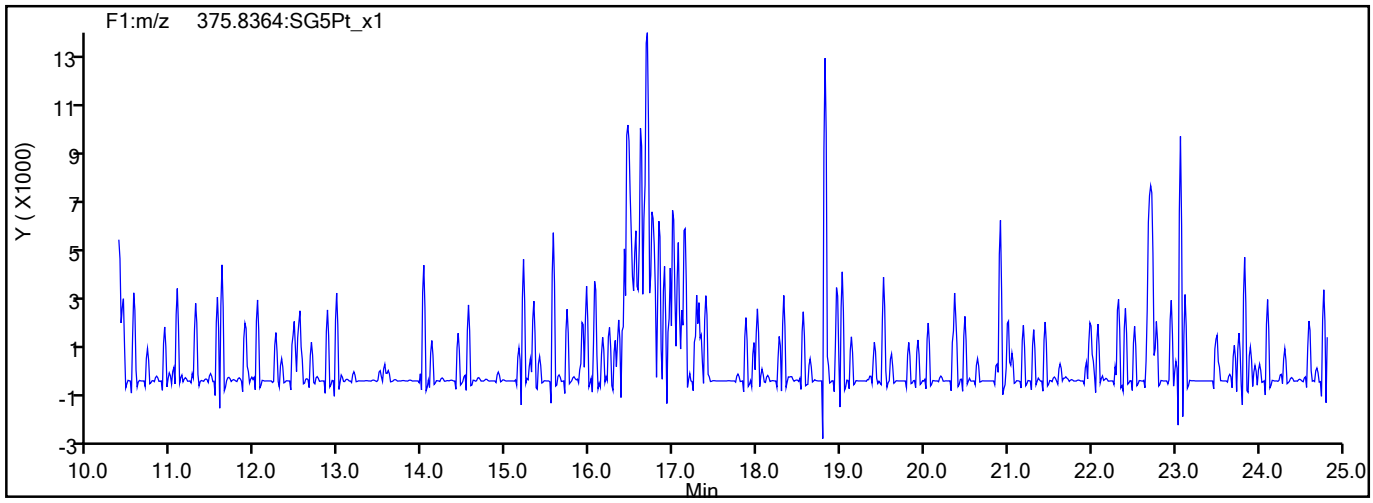

786025

Report Date: 27-Aug-2021 09:43:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_002.d		
Injection Date:	26-Aug-2021 15:55:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520145	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

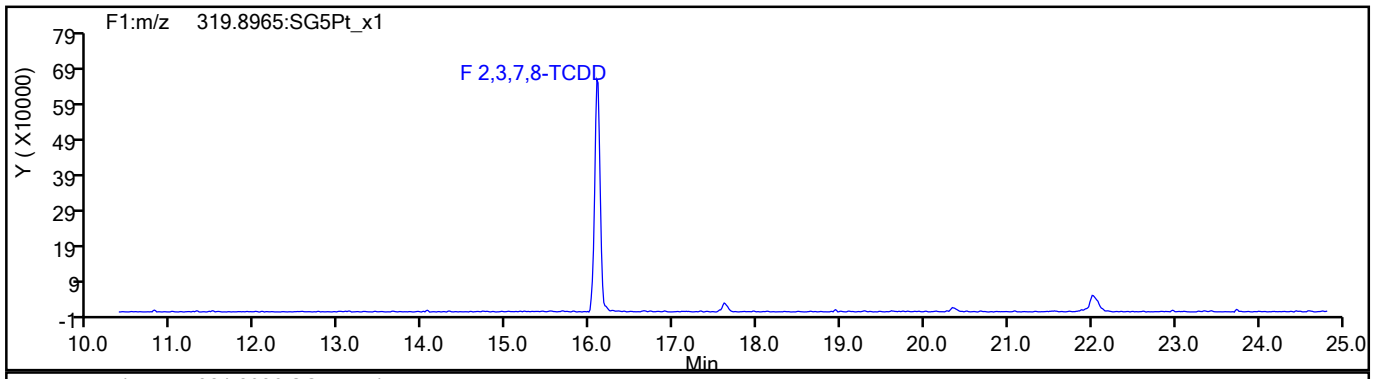

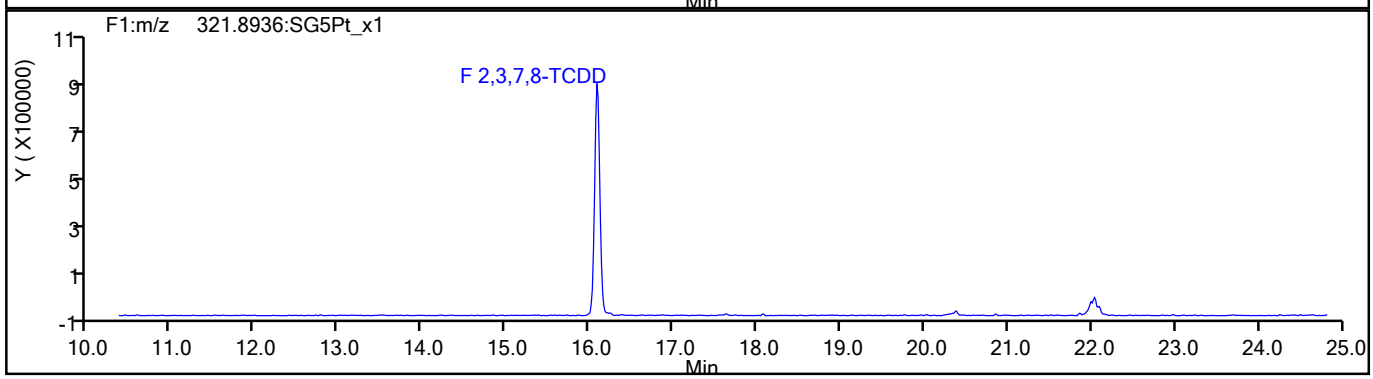

TCDD Standards

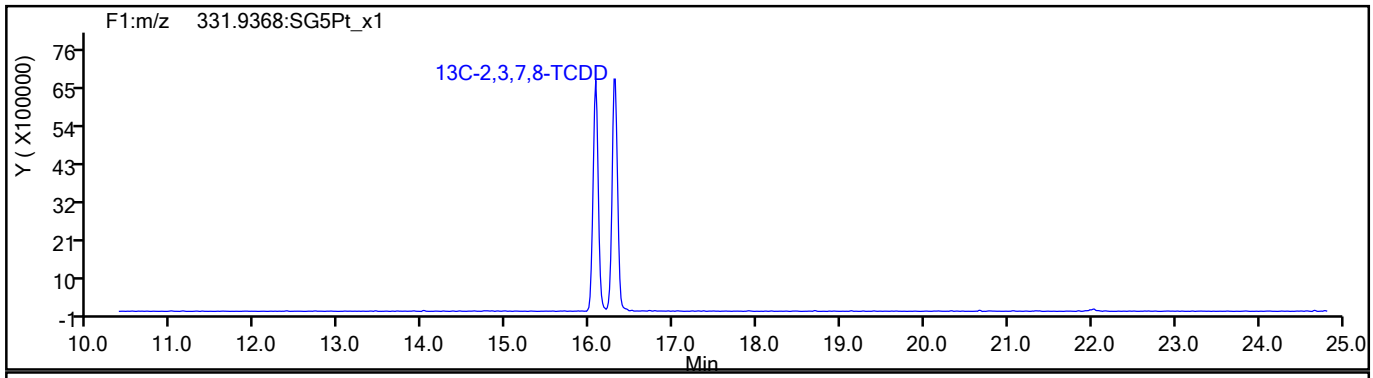

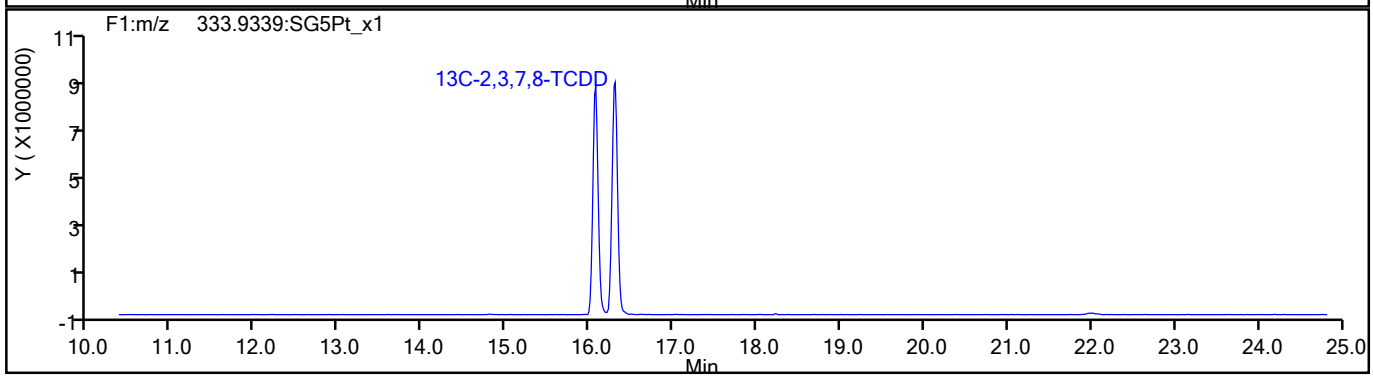

786026

Report Date: 27-Aug-2021 09:43:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_002.d		
Injection Date:	26-Aug-2021 15:55:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520145	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

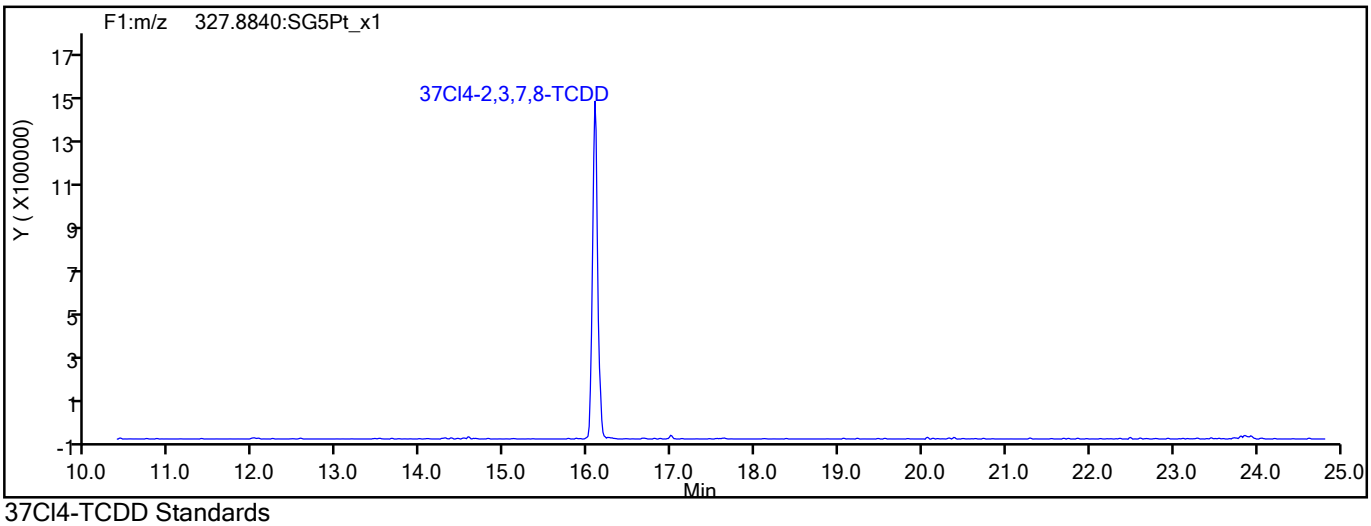

37Cl4-TCDD Standards

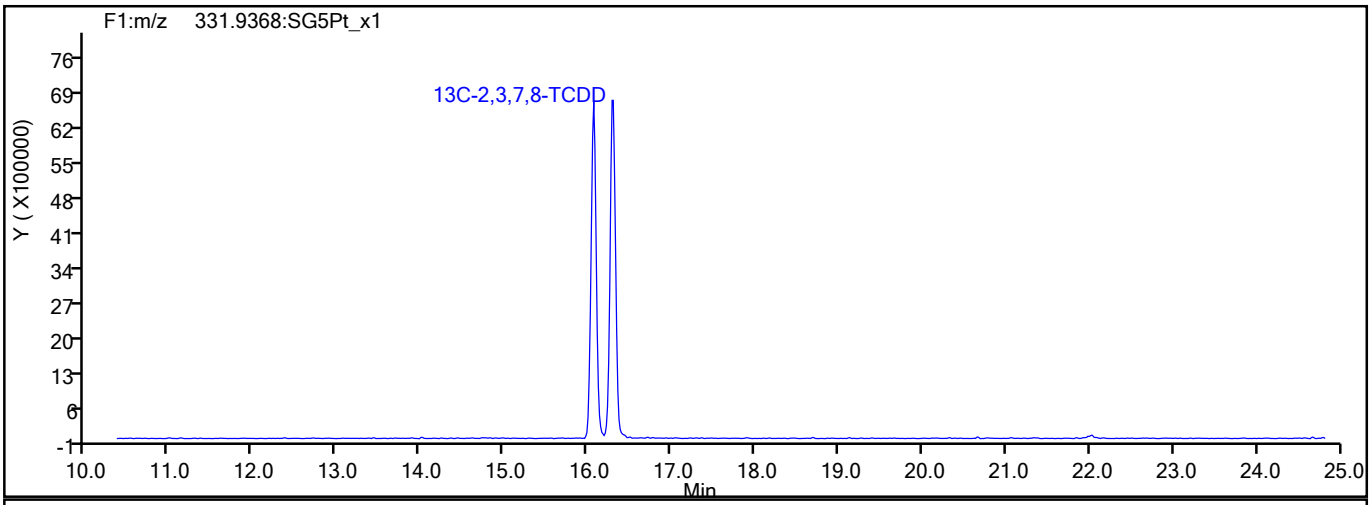

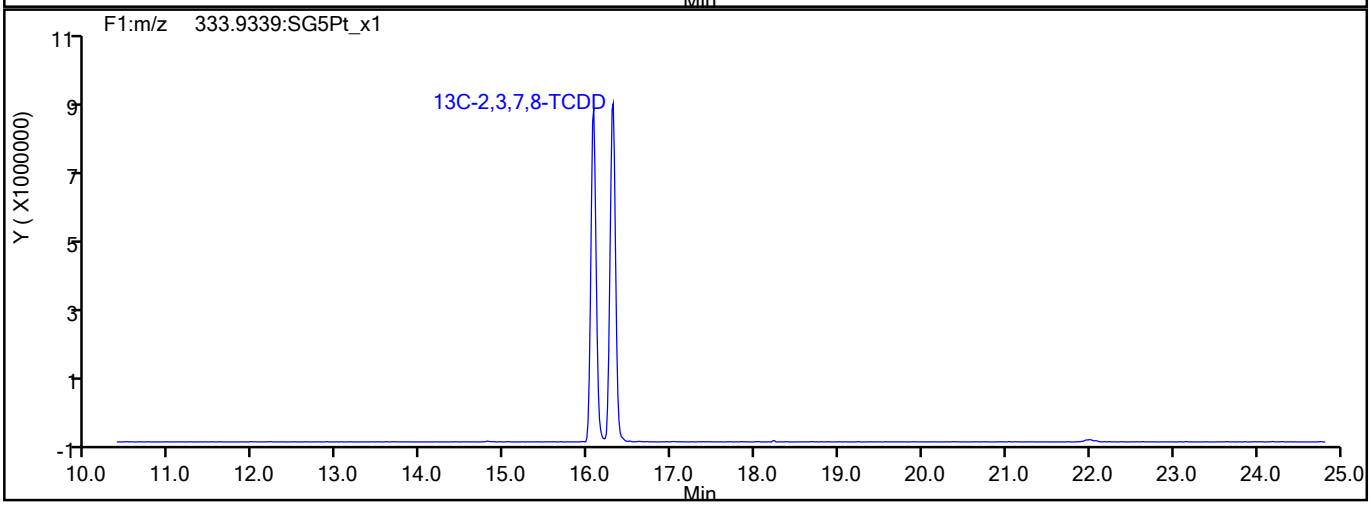

786027

Report Date: 27-Aug-2021 09:43:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_002.d		
Injection Date:	26-Aug-2021 15:55:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520145	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

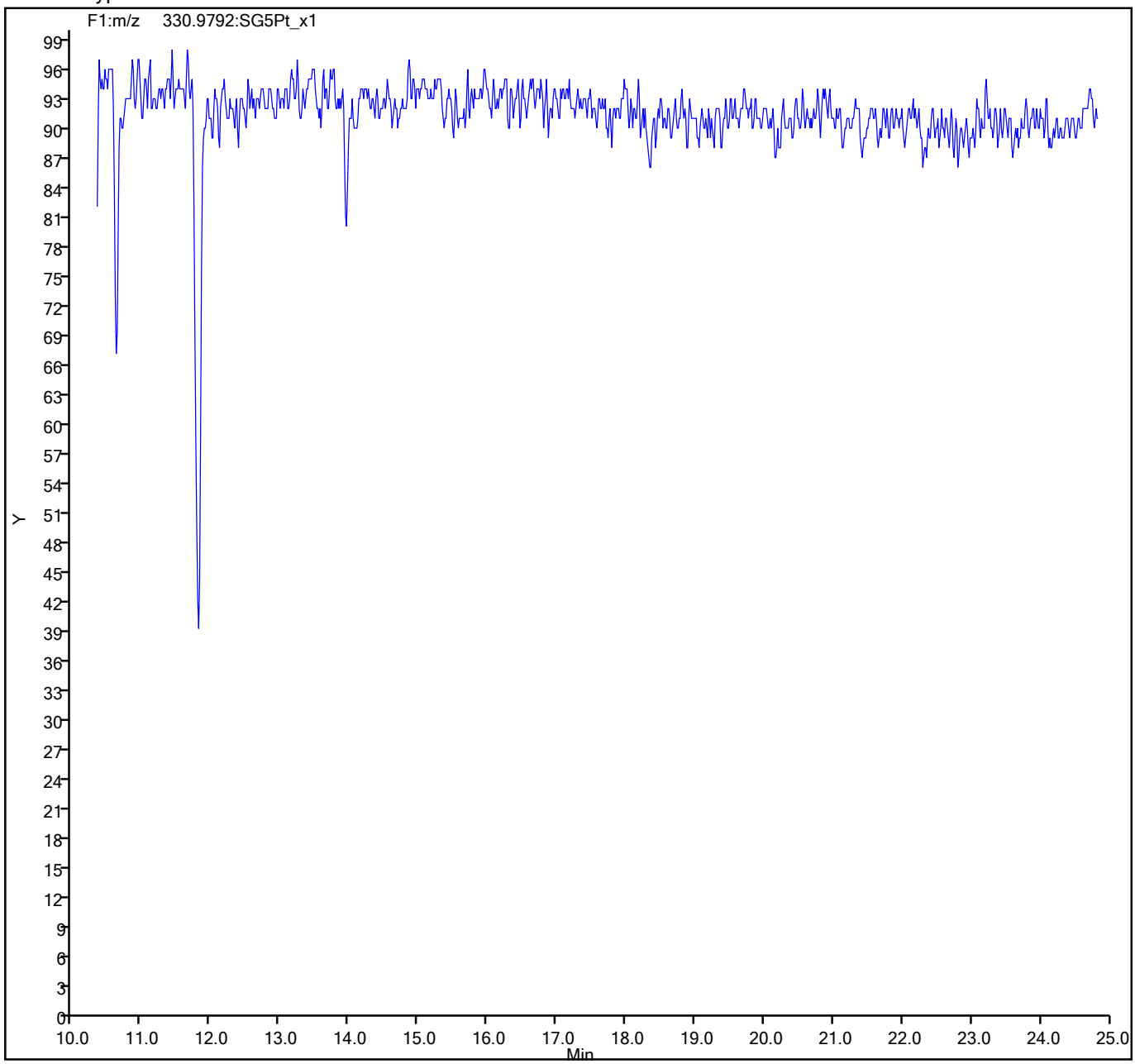

786028

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID: CCV 320-520438/2 Calibration Date: 08/27/2021 09:37

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 27AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.031		9.75	10.0	97	78-129
2,3,7,8-TCDF	AveID	0.998	0.8964		8.98	10.0	90	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9556		109	100	109	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.511		113	100	113	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8788		10.2	10.0	102	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
27AU2111D2	1	CPS 082721	CPS HRDXNCP_00044				1.00000	
27AU2111D2	2	CCV 082721	CCV CS-4 HRDXNL4_00100				1.00000	
27AU2111D2	3	SB 082721	Solvent Blank C-14				1.00000	
27AU2111D2	4	320-513879	320-76901-A-13-A	20	1613B/Solid	D267	10.00000	g
27AU2111D2	5	320-513879	320-76901-A-6-A	20	1613B/Solid		10.00000	g
27AU2111D2	6	320-513879	320-76901-A-2-A	20	1613B/Solid		10.00000	g
27AU2111D2	7	320-513879	320-76901-A-2-B MS	20	1613B/Solid		10.00000	g
27AU2111D2	8	320-513879	320-76901-A-2-C MSD	20	1613B/Solid		10.00000	g
27AU2111D2	9	320-513879	320-76888-A-7-A	20	1613B/Solid		10.00000	g
27AU2111D2	10	320-513879	320-76888-A-8-A	20	1613B/Solid		10.00000	g
27AU2111D2	11						1.00000	
27AU2111D2	12						1.00000	
27AU2111D2	13						1.00000	
27AU2111D2	14						1.00000	
27AU2111D2	15		DB 08-28-21				1.00000	
27AU2111D2	16						1.00000	

LOGFILE CHECKED
DB 8/27/21

Peak Locate Examination:27-AUG-2021:08:58 File:27AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

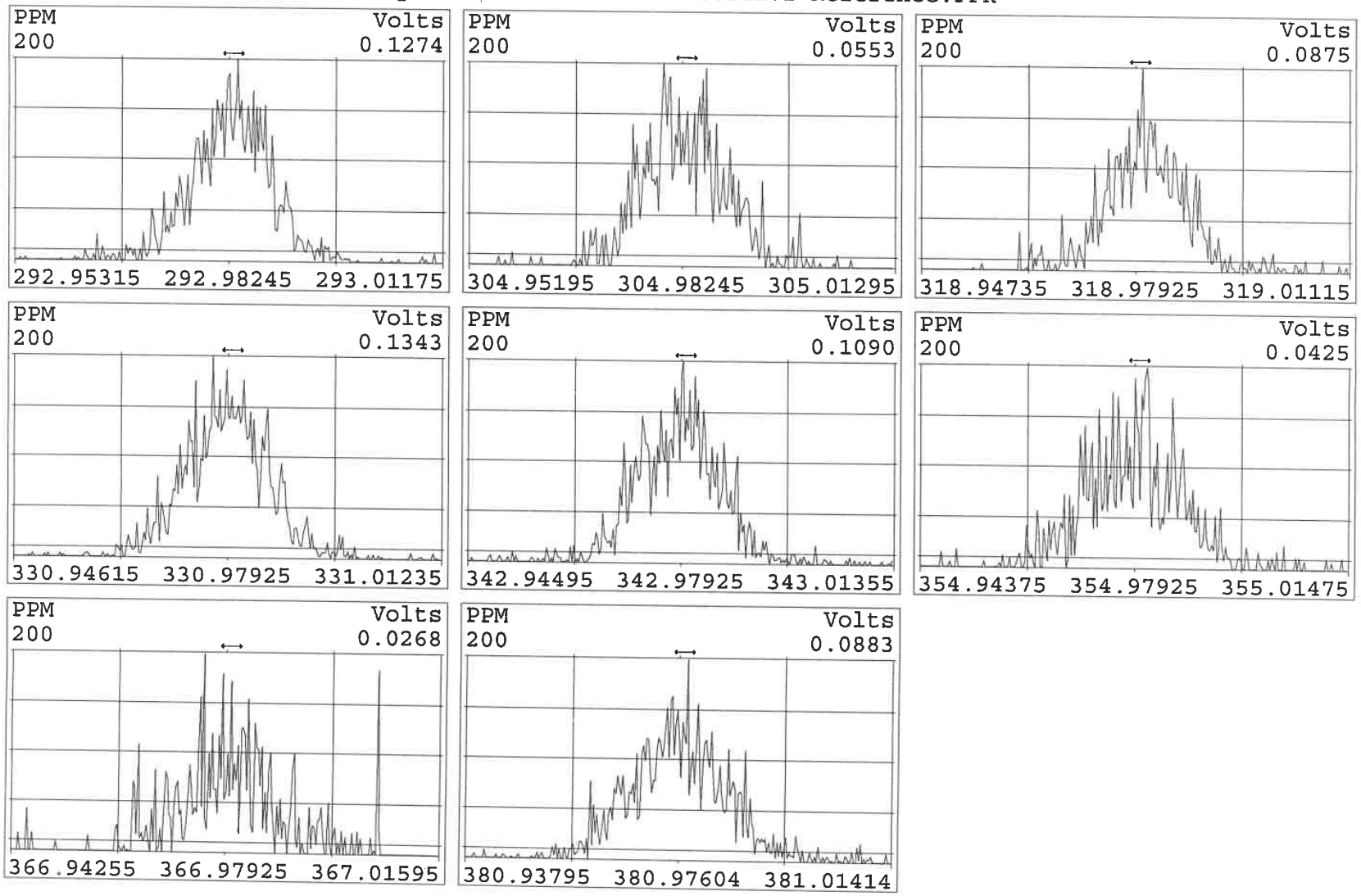

786031

Peak Locate Examination:27-AUG-2021:15:32 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

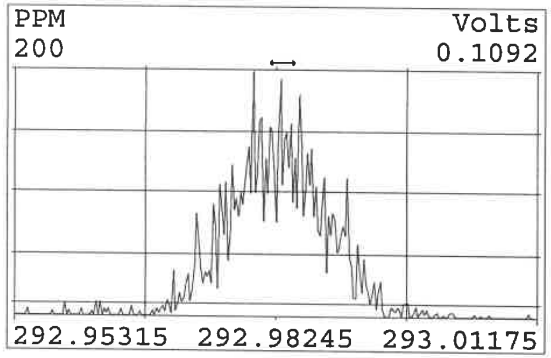

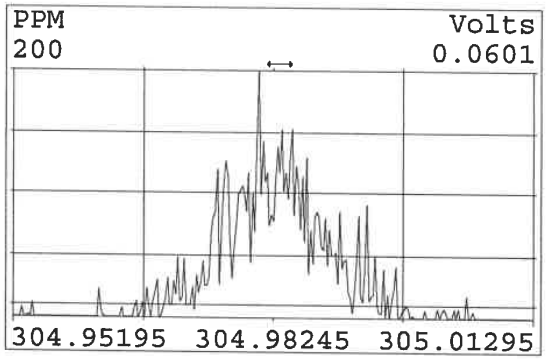

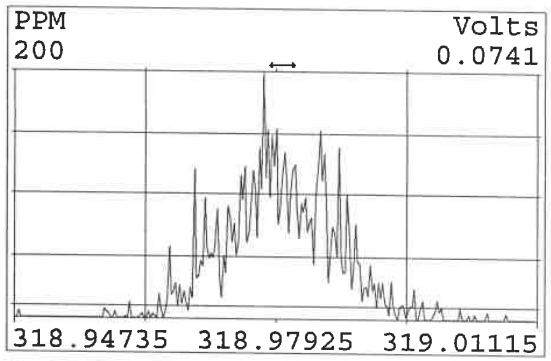

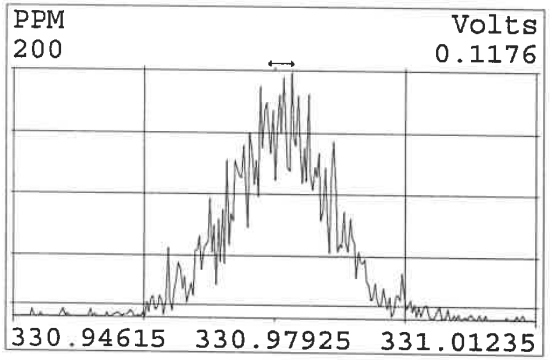

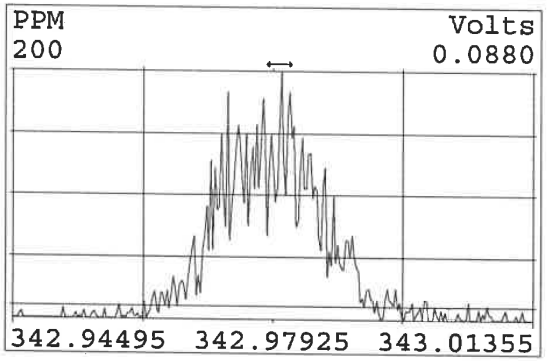

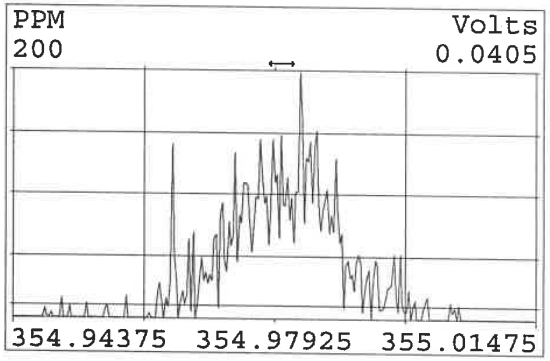

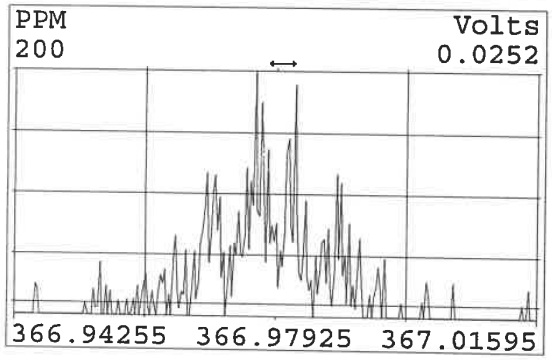

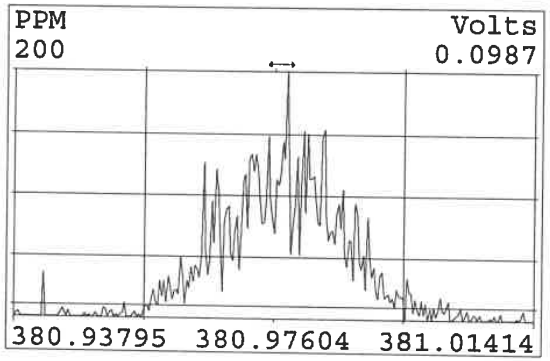

786032

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 09:37:57 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:48:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.284	57069656	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.614	86240244	0.76	1.3327	113.4	113.4	0.2571	0.2571	113	
2,3,7,8-TCDF	17.628	7730382	0.81	0.9978	8.983	8.983	0.0324	0.0324	89.83	
D 13C-2,3,7,8-TCDD	16.064	54534600	0.79	0.8749	109.2	109.2	0.2932	0.2932	109	
2,3,7,8-TCDD	16.078	5619957	0.82	1.0570	9.750	9.750	0.0472	0.0472	97.50	
$ 37Cl4-2,3,7,8-TCDD	16.078	5015089		0.8648	10.2	10.2	0.0341	0.0341	102	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 09:37:57 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:48:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.284	16.284	0		25007159	5610326	8221	20552	682		
333.9339	16.297	16.284	1		32062497	6929297	4645	11612	1492	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.614	17.614	0	1.082	37188579	7168347	8551	21377	838		
317.9389	17.600	17.614	-1	1.081	49051665	9433887	8633	21582	1093	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.628	0	1.001	3452785	630428	1003	2507	629		
305.8987	17.628	17.628	0	1.001	4277597	811560	1141	2852	711	0.81(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.064	0	0.987	24091403	5572015	8221	20552	678		
333.9339	16.064	16.064	0	0.987	30443197	6988447	4645	11612	1505	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.078	16.078	0	1.001	2525483	543598	891	2227	610		
321.8936	16.078	16.078	0	1.001	3094474	688607	1617	4042	426	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.078	0	0.987	5015089	1139283	1480	3700	770		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

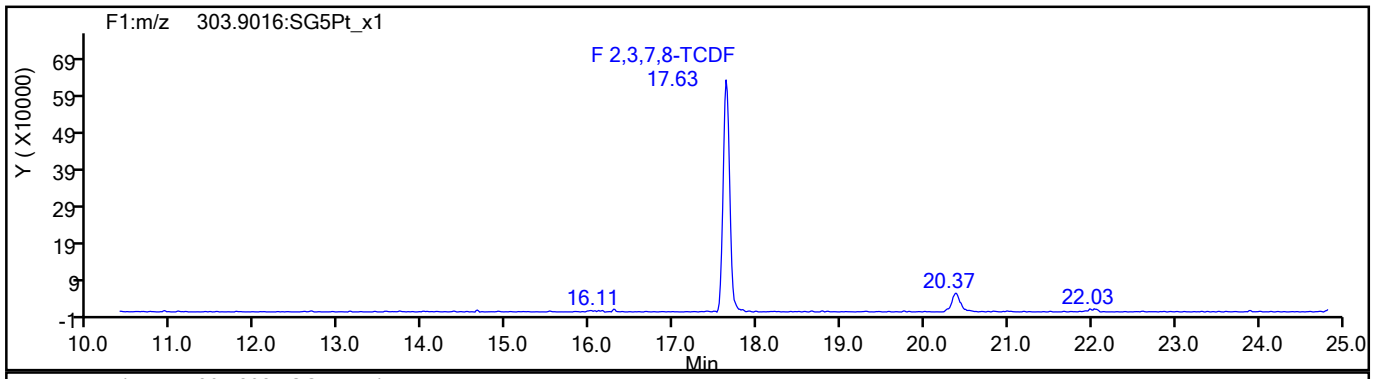

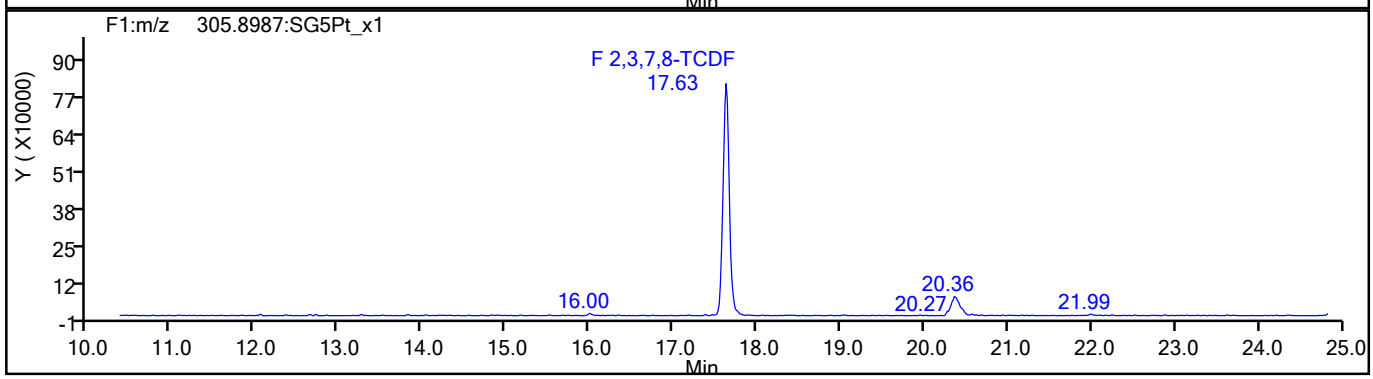

TCDF Standards

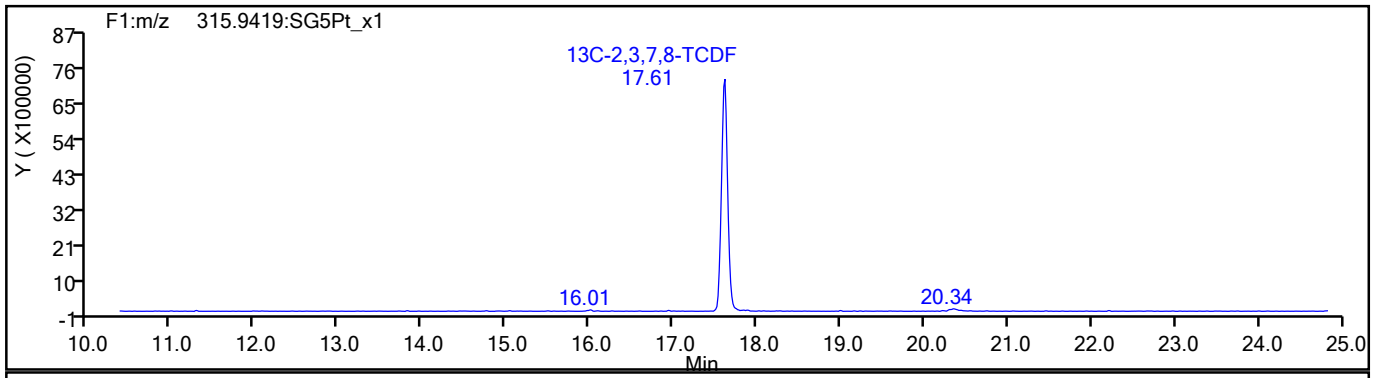

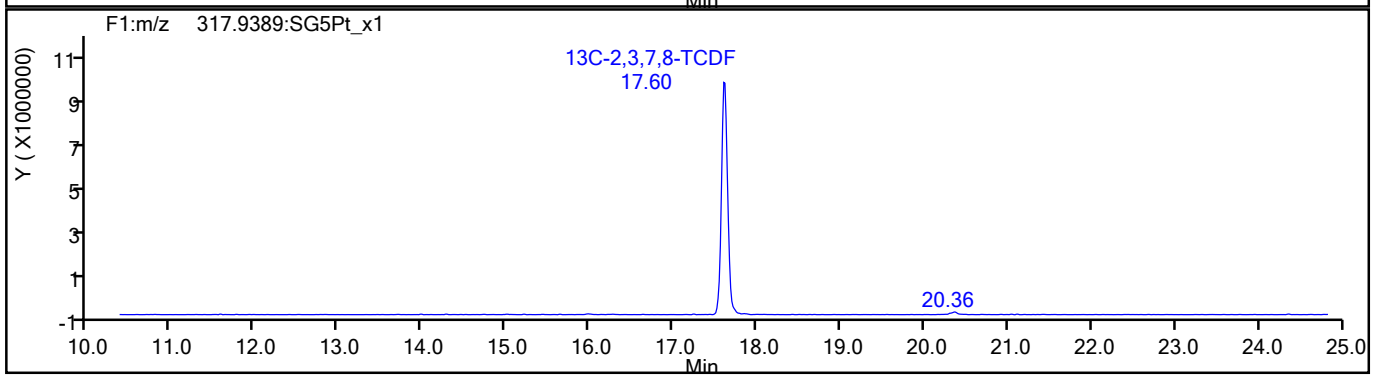

786035

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

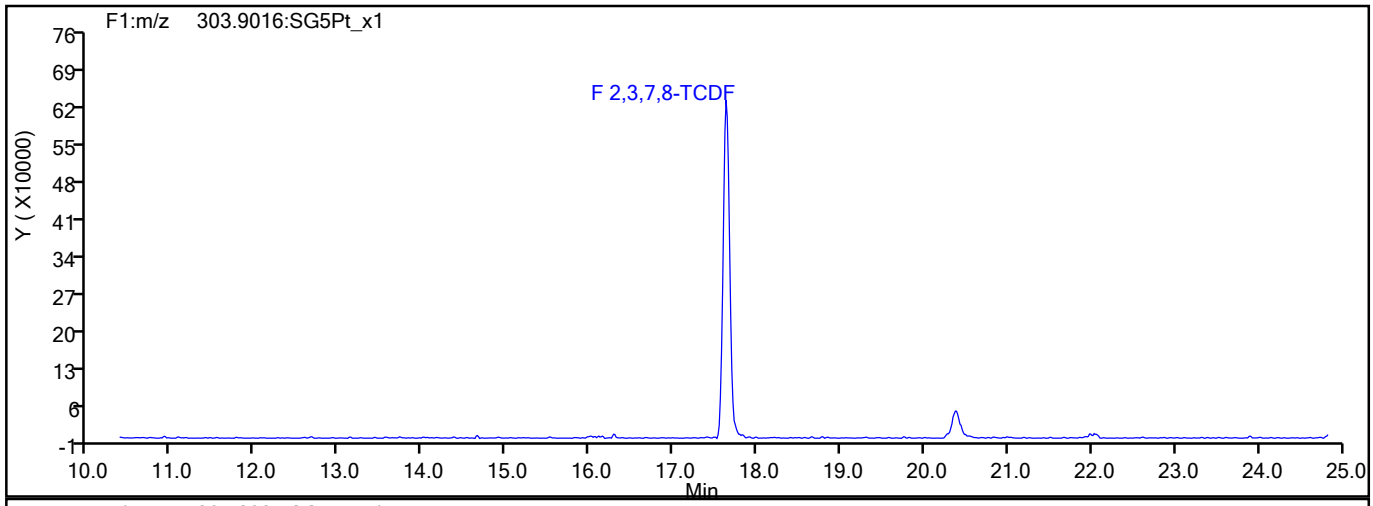

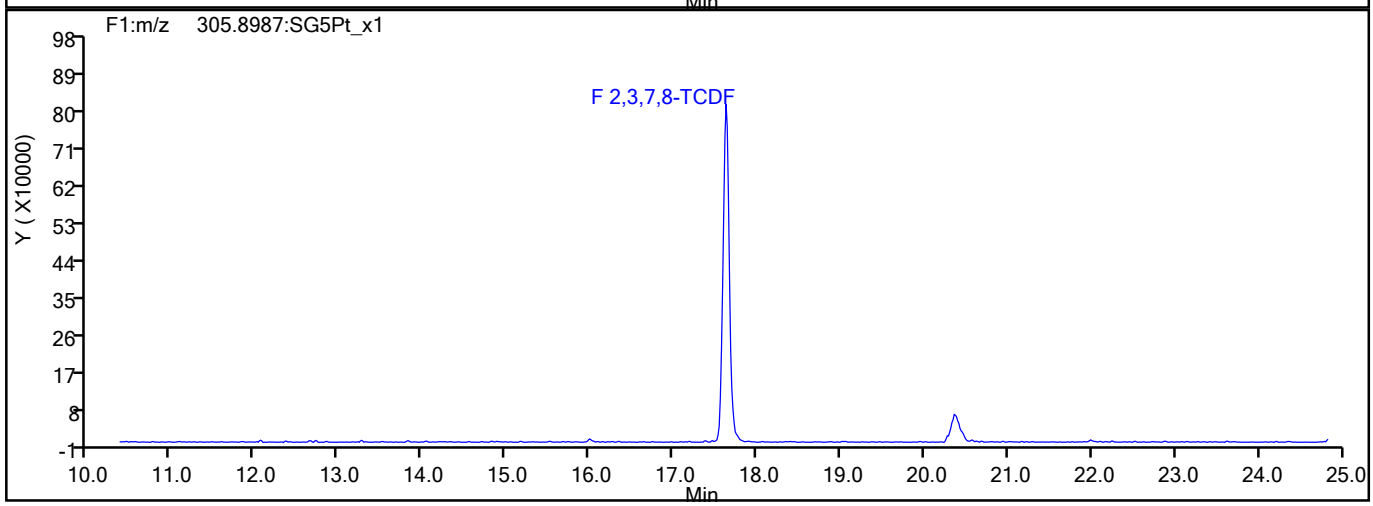

TCDF Interference Mass

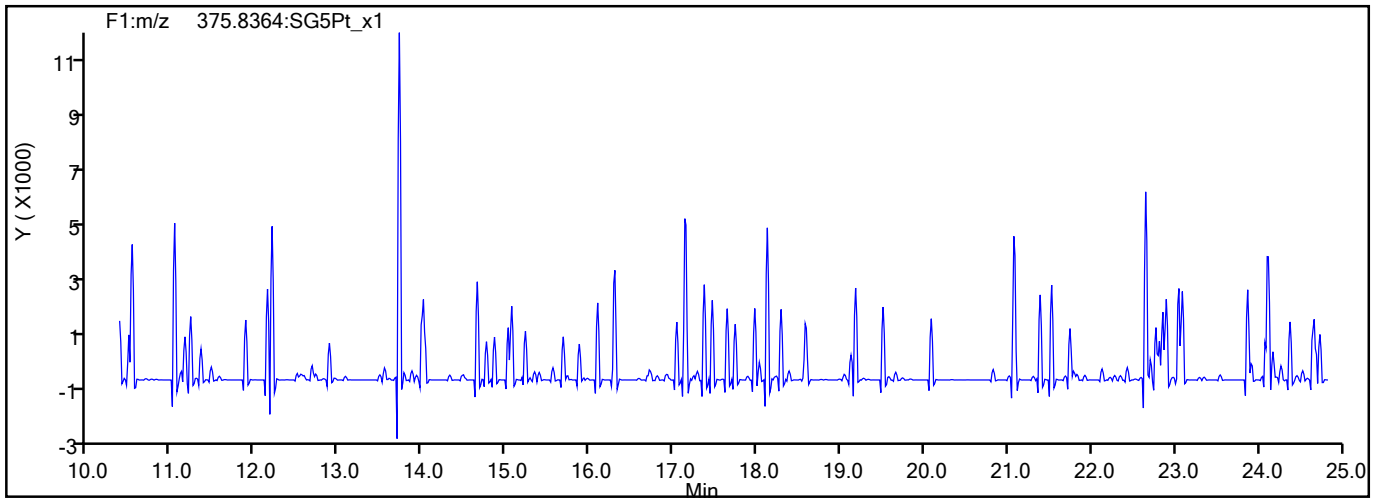

786036

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

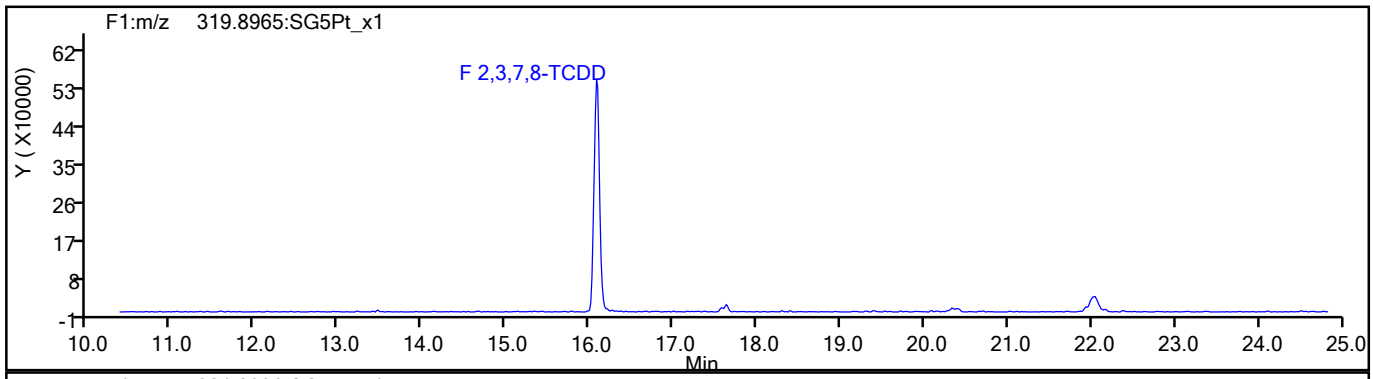

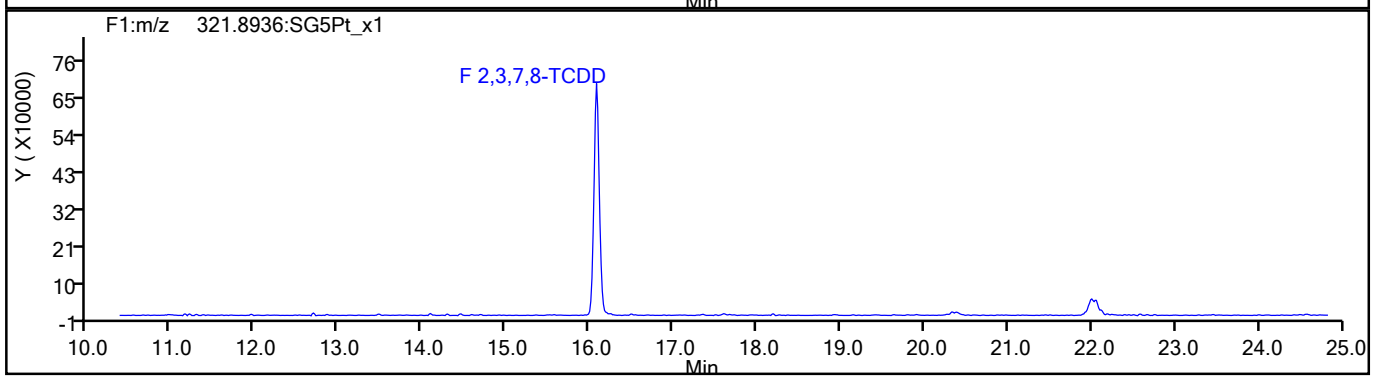

TCDD Standards

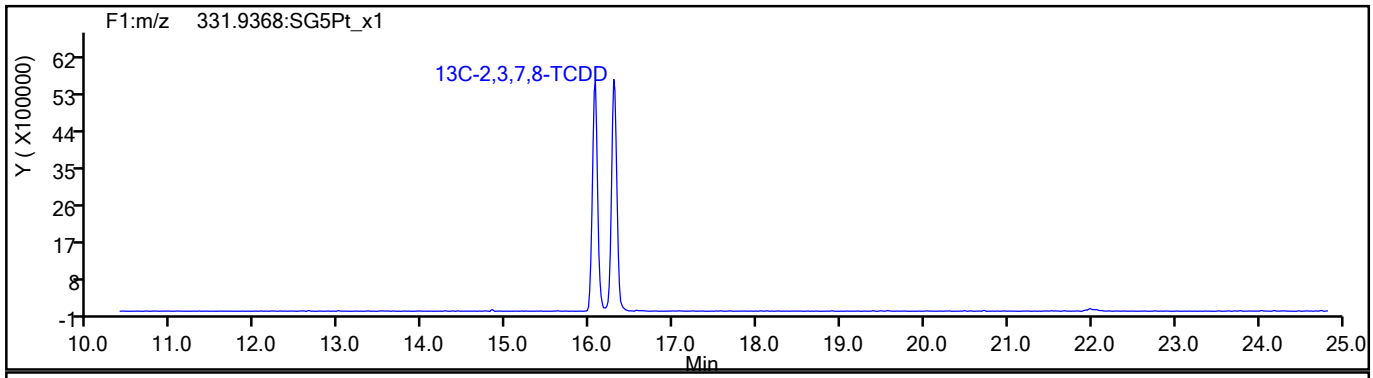

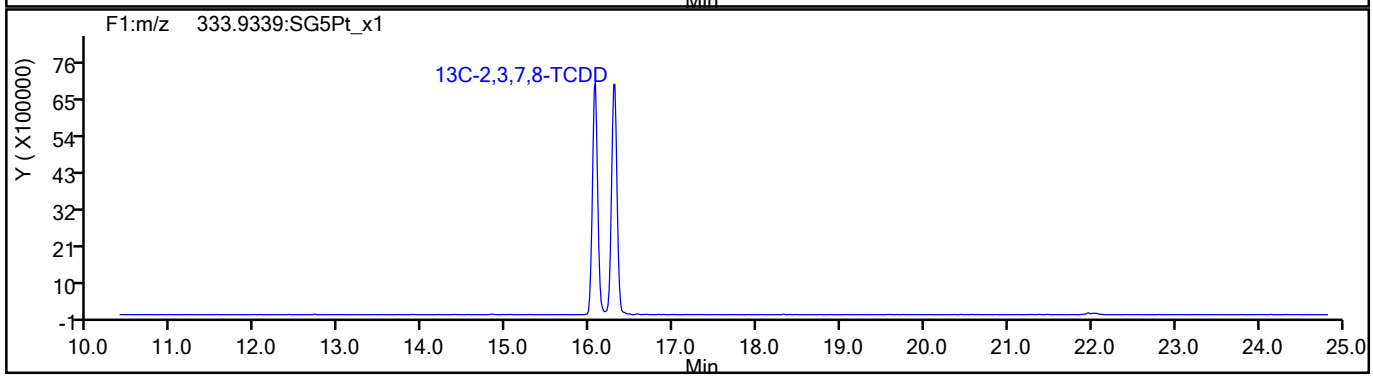

786037

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

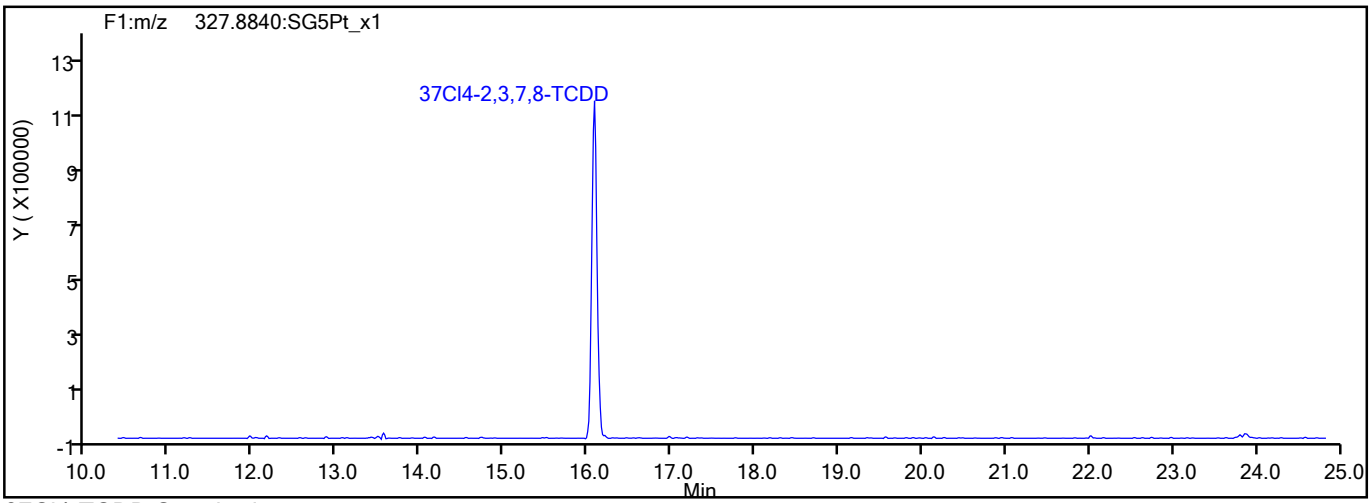

37Cl4-TCDD Standards

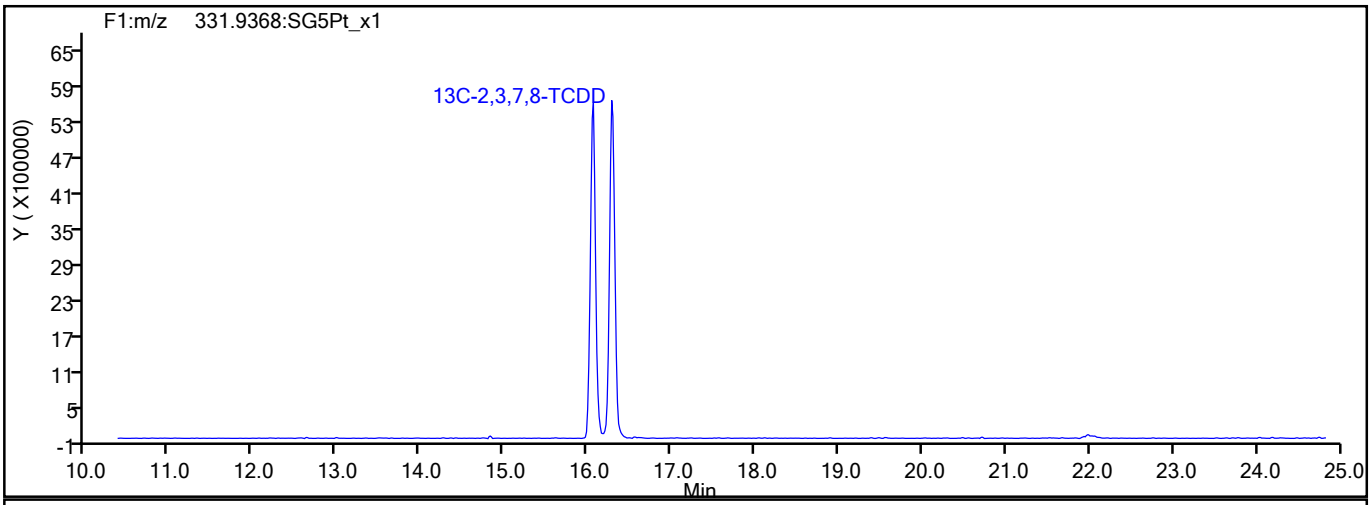

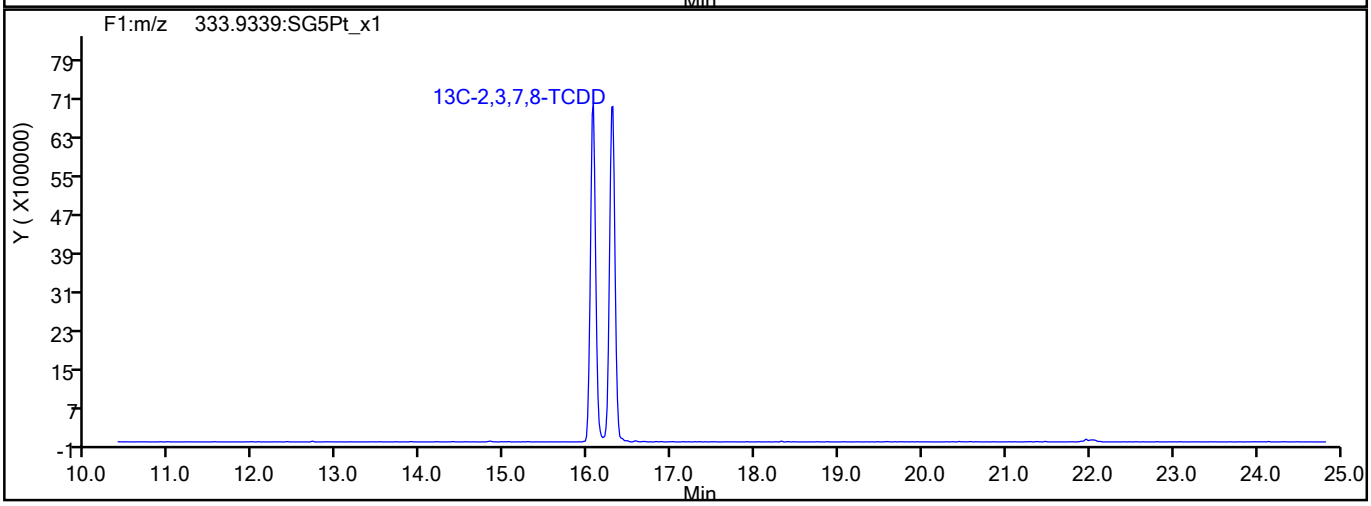

786038

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

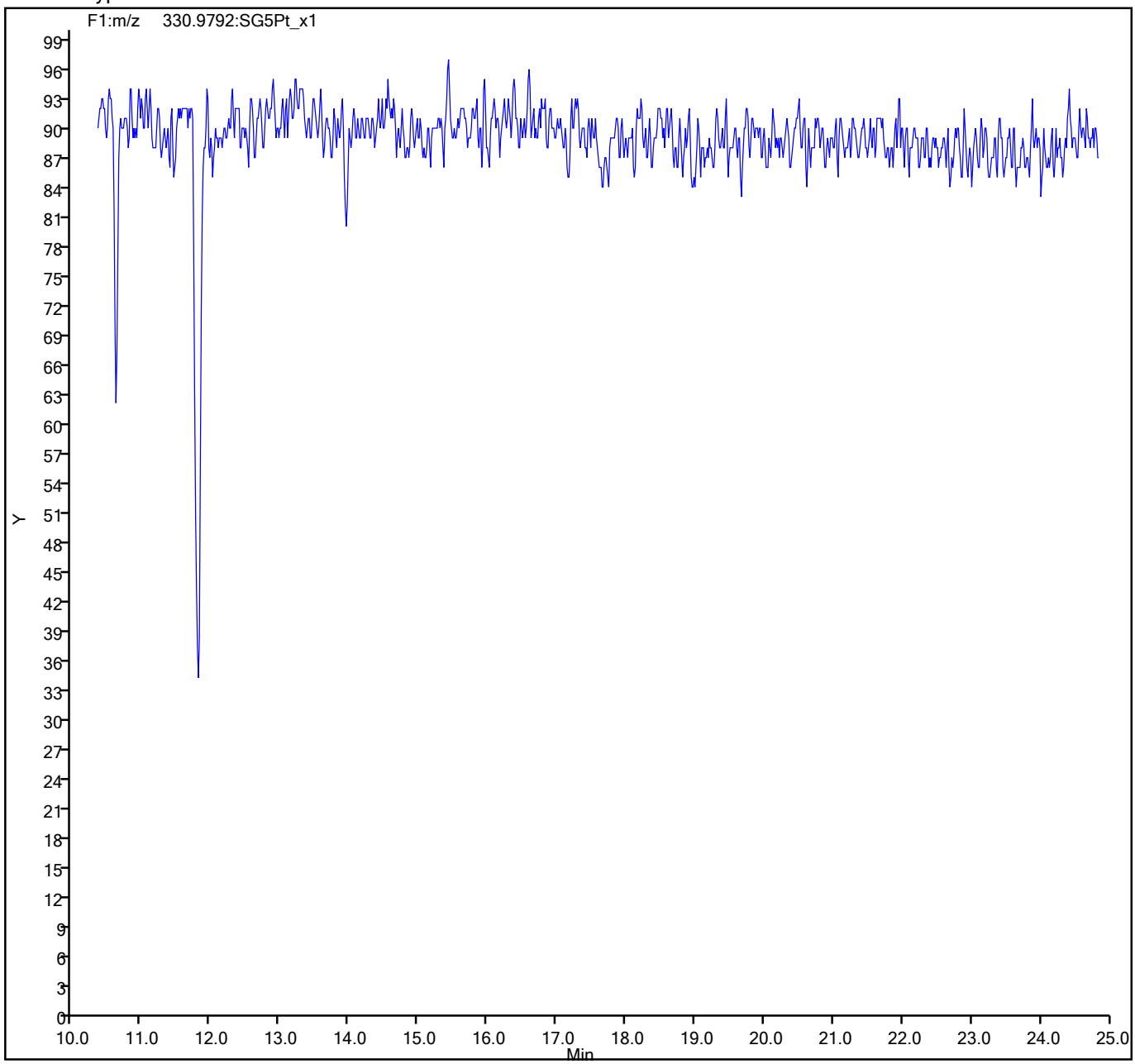

786039

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID: ICV 320-496688/9 Calibration Date: 06/08/2021 19:25

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 08jn21adfs1_11.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.086		40.2	40.0	101	70-130
2,3,7,8-TCDD	AveID	1.075	1.121		41.7	40.0	104	70-130
1,2,3,7,8-PeCDF	AveID	1.054	1.024		194	200	97	70-130
2,3,4,7,8-PeCDF	AveID	1.008	1.118		222	200	111	70-130
1,2,3,7,8-PeCDD	AveID	1.046	1.030		197	200	98	70-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.173		204	200	102	70-130
1,2,3,6,7,8-HxCDF	AveID	1.218	1.270		209	200	104	70-130
2,3,4,6,7,8-HxCDF	AveID	1.214	1.289		212	200	106	70-130
1,2,3,4,7,8-HxCDD	AveID	1.061	1.071		202	200	101	70-130
1,2,3,6,7,8-HxCDD	AveID	0.9933	1.055		212	200	106	70-130
1,2,3,7,8,9-HxCDD	AveID	1.109	1.001		180	200	90	70-130
1,2,3,7,8,9-HxCDF	AveID	1.240	1.220		197	200	98	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.505		209	200	104	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.076		205	200	102	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.299		198	200	99	70-130
OCDD	AveID	1.062	1.116		420	400	105	70-130
OCDF	AveID	1.317	1.367		415	400	104	70-130
13C-2,3,7,8-TCDF	Ave	1.346	1.311		97.4	100	97	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9331		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.095		96.0	100	96	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.137		101	100	101	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7038		98.2	100	98	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.080		112	100	112	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.244		116	100	116	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.134		109	100	109	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8428		111	100	111	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9479		110	100	110	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9309		95.7	100	96	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7732		105	100	105	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7344		109	100	109	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7385		108	100	108	77-129
13C-OCDD	Ave	0.5446	0.5501		202	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.000		39.7	40.0	99	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.559	1125768	0.79	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.623	1476391	0.81	1.3459	97.4	97.4	0.3116	0.3116	97.44	
2,3,7,8-TCDF	19.648	641186	0.78	1.0802	40.2	40.2	0.0827	0.0827	101	
A Non-2,3,7,8-sub-TCDF	19.213	10768	0.77	1.0802	0.7248	0.6752	0.0827	0.3523		RQ
S Total TCDF					40.9	40.9	0.0827	0.0827		RQ
D 13C-2,3,7,8-TCDD	20.928	1050504	0.81	0.9317	100.2	100.2	0.3032	0.3032	100	
$ 37Cl4-2,3,7,8-TCDD	20.946	450121		1.0083	39.7	39.7	0.0185	0.0185	99.14	
2,3,7,8-TCDD	20.946	471118	0.76	1.0753	41.7	41.7	0.1073	0.1073	104	
A Non-2,3,7,8-sub-TCDD	20.025	9415	0.75	1.0753	0.8334	0.8334	0.1073	0.8334		
S Total TCDD					42.5	42.5	0.1073	0.1073		
D 13C-1,2,3,7,8-PeCDF	26.596	1232285	1.59	1.1405	96.0	96.0	0.3457	0.3457	95.98	
1,2,3,7,8-PeCDF	26.612	2524406	1.56	1.0543	194.3	194.3	0.8579	0.8579	97.16	
D 13C-2,3,4,7,8-PeCDF	28.053	1280265	1.57	1.1253	101.1	101.1	0.3504	0.3504	101	
2,3,4,7,8-PeCDF	28.079	2861521	1.56	1.0079	221.8	221.8	0.9445	0.9445	111	
A F1 PeCDFs	24.098						0.0158	0.0158		
A Non-2,3,7,8-sub-PeCDF	27.473	63446	1.59	1.0311	4.898	4.898	0.8996	4.898		
S Total PeCDF					421.0	421.0	0.9012	0.9012		
D 13C-1,2,3,7,8-PeCDD	28.846	792316	1.60	0.7165	98.2	98.2	0.1154	0.1154	98.23	
1,2,3,7,8-PeCDD	28.871	1631677	1.56	1.0465	196.8	196.8	0.1550	0.1550	98.39	
A Non-2,3,7,8-sub-PeCDD	27.656						0.1550	0.1550		n
S Total PeCDD					196.8	196.8	0.1550	0.1550		
D 13C-1,2,3,4,7,8-HxCDF	34.420	999392	0.53	0.9648	111.9	111.9	0.3215	0.3215	112	
1,2,3,4,7,8-HxCDF	34.437	2343900	1.24	1.1474	204.4	204.4	0.8372	0.8372	102	
D 13C-1,2,3,6,7,8-HxCDF	34.597	1151145	0.54	1.0708	116.1	116.1	0.2896	0.2896	116	
1,2,3,6,7,8-HxCDF	34.614	2923094	1.25	1.2178	208.5	208.5	0.6918	0.6918	104	
D 13C-2,3,4,6,7,8-HxCDF	35.473	1049318	0.52	1.0413	108.9	108.9	0.2978	0.2978	109	
2,3,4,6,7,8-HxCDF	35.490	2704850	1.25	1.2145	212.3	212.3	0.6697	0.6697	106	
D 13C-1,2,3,7,8,9-HxCDF	36.409	861729	0.52	0.9731	95.7	95.7	0.3187	0.3187	95.67	
1,2,3,7,8,9-HxCDF	36.425	2103282	1.26	1.2401	196.8	196.8	0.7295	0.7295	98.41	
A Non-2,3,7,8-sub-HxCDF	34.470						0.7275	0.7275		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					822.0	822.0	0.7320	0.7320		
* 13C-1,2,3,7,8,9-HxCDD	36.215	925657	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.709	780111	1.25	0.7587	111.1	111.1	0.1965	0.1965	111	
1,2,3,4,7,8-HxCDD	35.726	1671580	1.25	1.0608	202.0	202.0	0.2912	0.2912	101	
D 13C-1,2,3,6,7,8-HxCDD	35.827	877428	1.29	0.8593	110.3	110.3	0.1735	0.1735	110	
1,2,3,6,7,8-HxCDD	35.844	1852033	1.25	0.9933	212.5	212.5	0.2936	0.2936	106	
1,2,3,7,8,9-HxCDD	36.232	1658680	1.25	1.1094	180.4	180.4	0.2704	0.2704	90.20	
A Non-2,3,7,8-sub-HxCDD	34.896						0.2845	0.2845		
S Total HxCDD					594.9	594.9	0.2851	0.2851		
D 13C-1,2,3,4,6,7,8-HpCDF	38.325	715749	0.46	0.7359	105.1	105.1	0.4232	0.4232	105	
1,2,3,4,6,7,8-HpCDF	38.334	2154882	1.05	1.4421	208.8	208.8	0.7056	0.7056	104	
D 13C-1,2,3,4,7,8,9-HpCDF	39.615	683594	0.46	0.6854	107.8	107.8	0.4545	0.4545	108	
1,2,3,4,7,8,9-HpCDF	39.623	1775948	1.06	1.3092	198.4	198.4	0.7773	0.7773	99.22	
A Non-2,3,7,8-sub-HpCDF	38.954						0.7397	0.7397		
S Total HpCDF					407.2	407.2	0.7415	0.7415		
D 13C-1,2,3,4,6,7,8-HpCDD	39.311	679765	1.07	0.6745	108.9	108.9	0.3101	0.3101	109	
1,2,3,4,6,7,8-HpCDD	39.320	1462615	1.05	1.0503	204.9	204.9	0.4465	0.4465	102	
A Non-2,3,7,8-sub-HpCDD	38.962						0.4465	0.4465		n
S Total HpCDD					204.9	204.9	0.4465	0.4465		
D 13C-OCDD	41.801	1018443	0.90	0.5446	202.0	202.0	0.2655	0.2655	101	
OCDF	41.885	2784055	0.91	1.3168	415.2	415.2	0.4728	0.4728	104	
OCDD	41.809	2272994	0.89	1.0620	420.3	420.3	0.4613	0.4613	105	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.559	20.544	1		497786	76231	115	287	663		
333.9338	20.550	20.544	0		627982	95455	79	197	1208	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.623	19.630	0	0.954	658944	105750	176	440	601		
317.9389	19.623	19.630	0	0.954	817447	135001	112	280	1205	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.648	19.673	-1	1.001	281905	45248	31	77	1460		
305.8987	19.648	19.673	-1	1.001	359281	56056	55	137	1019	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.489	19.213	-43	0.942	2444	489	31	77	16		
305.8987	18.489	19.213	-43	0.942	3965	647	55	137	12	0.62(0.65-0.89)	
	Empc Correction				3174	635	55	137	12		
303.9016	18.961	19.213	-15	0.966	2103	355	31	77	11		
305.8987	18.961	19.213	-15	0.966	3047	540	55	137	10	0.69(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.928	20.918	1	1.018	469892	68601	115	287	597		
333.9338	20.920	20.918	0	1.018	580612	84734	79	197	1073	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.946	20.939	0	1.019	450121	64795	13	32	4984		
2,3,7,8-TCDD											
319.8965	20.946	20.952	0	1.001	203710	30841	43	107	717		
321.8936	20.946	20.952	0	1.001	267408	39251	28	70	1402	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	20.748	20.025	43	0.991	4027	748	43	107	17		
321.8936	20.748	20.025	43	0.991	5388	912	28	70	33	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.596	26.552	3	1.294	756622	134257	176	440	763		
353.8970	26.596	26.552	3	1.294	475663	85437	95	237	899	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.612	26.578	2	1.001	1538811	266495	482	1205	553		
341.8567	26.612	26.578	2	1.001	985595	170105	313	782	543	1.56(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.053	28.002	3	1.365	781677	129402	176	440	735		
353.8970	28.062	28.002	4	1.365	498588	79335	95	237	835	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.079	28.028	3	1.001	1744490	280566	482	1205	582		
341.8567	28.079	28.028	3	1.001	1117031	182233	313	782	582	1.56(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.098						3	7			
341.8567	24.098						11	27			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.186	27.473	-17	1.022	38961	6595	482	1205	14		
341.8567	27.177	27.473	-18	1.022	24485	4217	313	782	13	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.846	28.795	3	1.403	487930	72898	31	77	2352		
369.8919	28.846	28.795	3	1.403	304386	45466	26	65	1749	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.871	28.820	3	1.001	995242	153111	50	125	3062		
357.8516	28.871	28.820	3	1.001	636435	96130	27	67	3560	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.214	27.656	33	0.978	1514	293	50	125	6		
357.8516	28.197	27.656	32	0.978	953	151	27	67	6	1.59(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.420	34.370	3	0.950	347982	68430	100	250	684		
385.8610	34.411	34.370	2	0.950	651410	129057	179	447	721	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.437	34.404	2	1.000	1299118	260435	435	1087	599		
375.8178	34.437	34.404	2	1.000	1044782	207176	324	810	639	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.597	34.555	2	0.955	402116	75630	100	250	756		
385.8610	34.597	34.555	2	0.955	749029	149555	179	447	836	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.614	34.572	2	1.000	1625084	318250	435	1087	732		
375.8178	34.614	34.572	2	1.000	1298010	254878	324	810	787	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.473	35.432	2	0.980	359196	80141	100	250	801		
385.8610	35.473	35.432	2	0.980	690122	153108	179	447	855	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.490	35.449	2	1.000	1504442	338765	435	1087	779		
375.8178	35.490	35.449	2	1.000	1200408	271192	324	810	837	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.409	36.376	2	1.005	295983	71192	100	250	712		
385.8610	36.409	36.376	2	1.005	565746	138504	179	447	774	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.425	36.393	2	1.000	1172455	286668	435	1087	659		
375.8178	36.425	36.393	2	1.000	930827	227290	324	810	702	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						435	1087			
375.8178	34.470						324	810			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.215	36.182	2		517474	125327	80	200	1567		
403.8529	36.215	36.182	2		408183	99401	54	135	1841	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.709	35.668	2	0.986	434094	107490	80	200	1344		
403.8529	35.709	35.668	2	0.986	346017	85806	54	135	1589	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.726	35.685	2	1.000	928783	231750	132	330	1756		
391.8127	35.726	35.685	2	1.000	742797	185332	107	267	1732	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.827	35.794	2	0.989	493784	113946	80	200	1424		
403.8529	35.827	35.794	2	0.989	383644	90754	54	135	1681	1.29(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	35.844	35.811	2	1.000	1030480	241468	132	330	1829		
391.8127	35.844	35.811	2	1.000	821553	192627	107	267	1800	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.232	36.198	2	1.015	920944	222717	132	330	1687		
391.8127	36.223	36.198	1	1.014	737736	175856	107	267	1644	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.896						132	330			
391.8127	34.896						107	267			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.325	38.292	2	1.058	225843	65327	102	255	640		
419.8220	38.325	38.292	2	1.058	489906	143703	178	445	807	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.334	38.309	1	1.000	1104308	315033	437	1092	721		
409.7788	38.334	38.309	1	1.000	1050574	298985	414	1035	722	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.615	39.591	1	1.094	215253	65848	102	255	646		
419.8220	39.615	39.591	1	1.094	468341	143162	178	445	804	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.623	39.598	1	1.000	914515	283964	437	1092	650		
409.7788	39.623	39.598	1	1.000	861433	268143	414	1035	648	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						437	1092			
409.7788	38.954						414	1035			

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.311	39.279	2	1.086	351100	106957	105	262	1019		
437.8140	39.311	39.279	2	1.086	328665	103097	83	207	1242	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.320	39.295	1	1.000	749316	235728	209	522	1128		
425.7737	39.320	39.295	1	1.000	713299	221333	185	462	1196	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.662	38.962	-18	0.983	5341	1580	209	522	8		
425.7737	38.662	38.962	-18	0.983	5423	1624	185	462	9	0.98(0.88-1.20)	
13C-OCDD											
469.7780	41.801	41.778	1	1.154	483015	136908	66	165	2074		
471.7750	41.801	41.778	1	1.154	535428	149653	64	160	2338	0.90(0.76-1.02)	
OCDF											
441.7428	41.885	41.862	1	1.002	1324086	386680	165	412	2344		
443.7399	41.885	41.862	1	1.002	1459969	425131	192	480	2214	0.91(0.76-1.02)	
OCDD											
457.7377	41.809	41.786	1	1.000	1072812	307543	147	367	2092		
459.7348	41.809	41.786	1	1.000	1200182	343135	134	335	2561	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1476391	240751

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1476391	240751

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.489	2444	489	3965	647	0.4019	0.62	RQ
18.489	2444	489	3174	635	0.3523		Empc Correction
18.961	2103	355	3047	540	0.3229	0.69	n
Signal Totals:							
	4547	844	6221	1175			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11559	2031				0.65	RQ
	10768	2019					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7248 = (11559 * 100.000) / (1476391 * 1.080)
Empc Amount: 0.6752 = (10768 * 100.000) / (1476391 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDD, RT: 20.025

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	1050504	153335

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	1050504	153335

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
20.748	4027	748	5388	912	0.8334	0.75	
Signal Totals:							
	4027	748	5388	912			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9415	1660				0.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8334 = (9415 * 100.000) / (1050504 * 1.075)

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1232285	219694
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1280265	208737

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1256275	214215

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.186	38961	6595	24485	4217	4.90	1.59	
Signal Totals:							
	38961	6595	24485	4217			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63446	10812				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.898 = (63446 * 100.000) / (1256275 * 1.031)

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

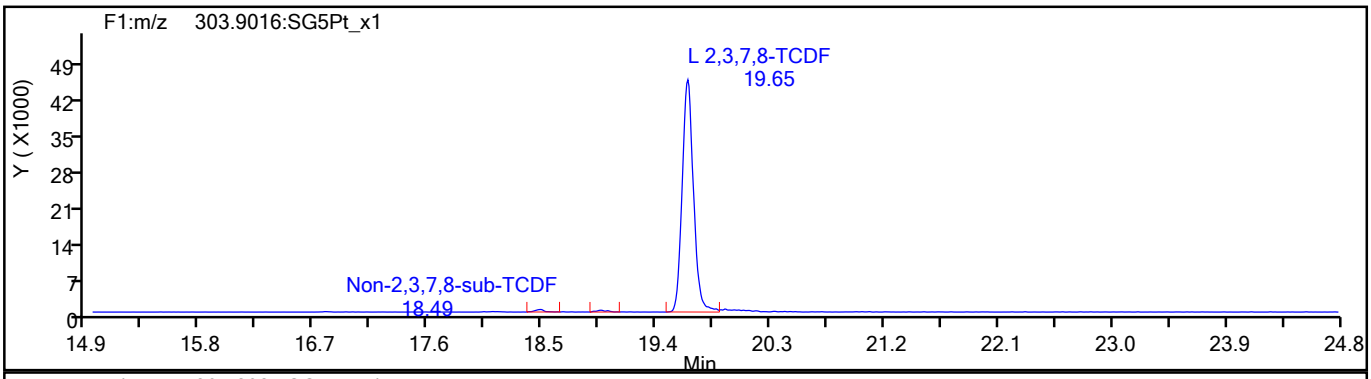

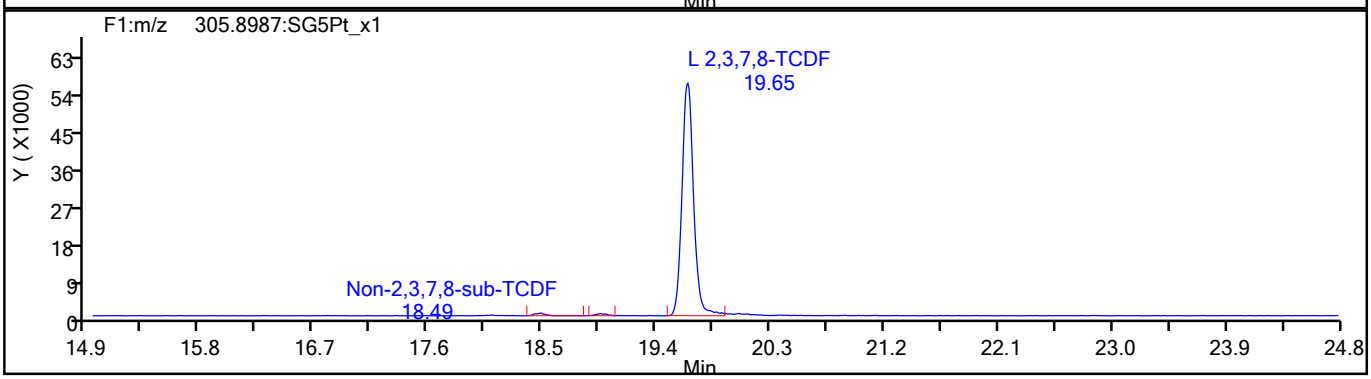

TCDF Standards

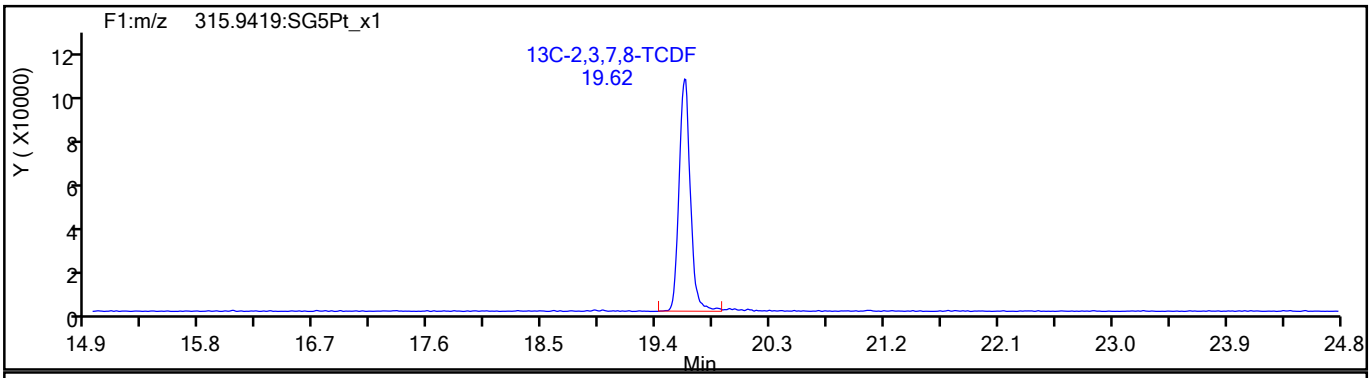

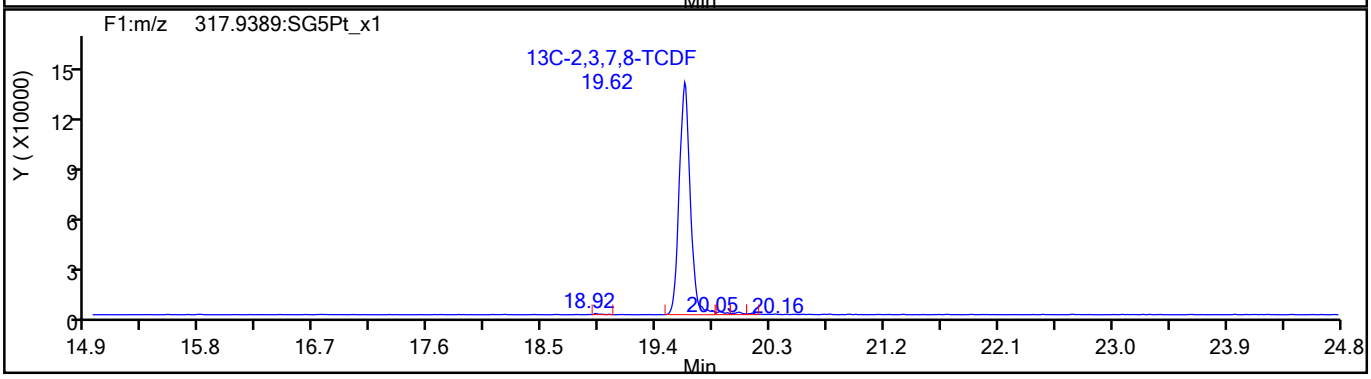

786050

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

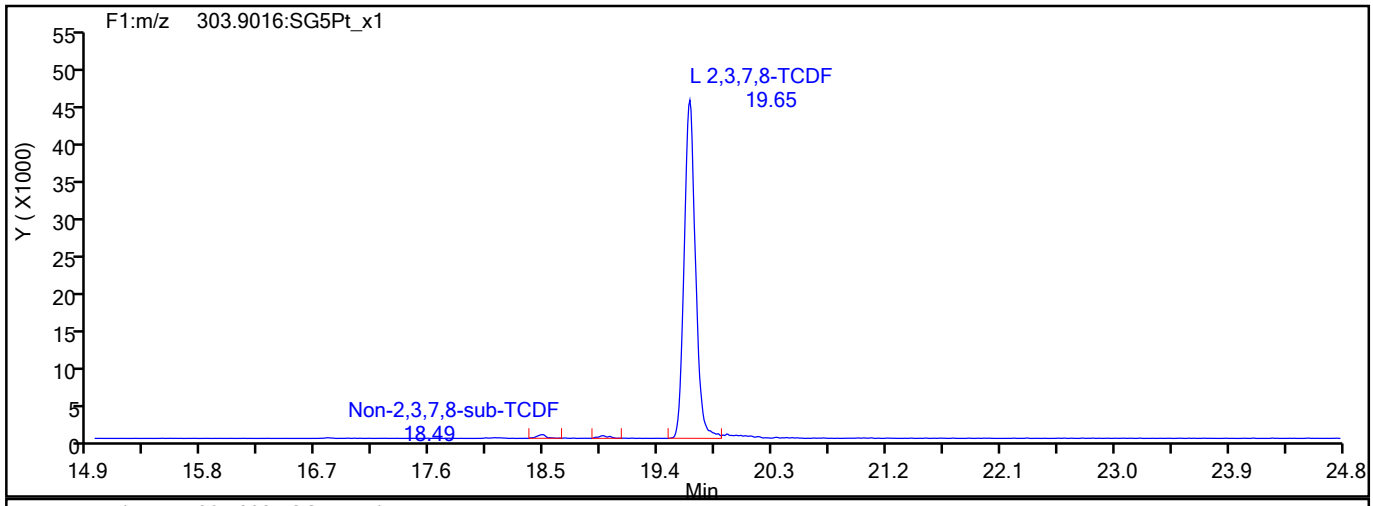

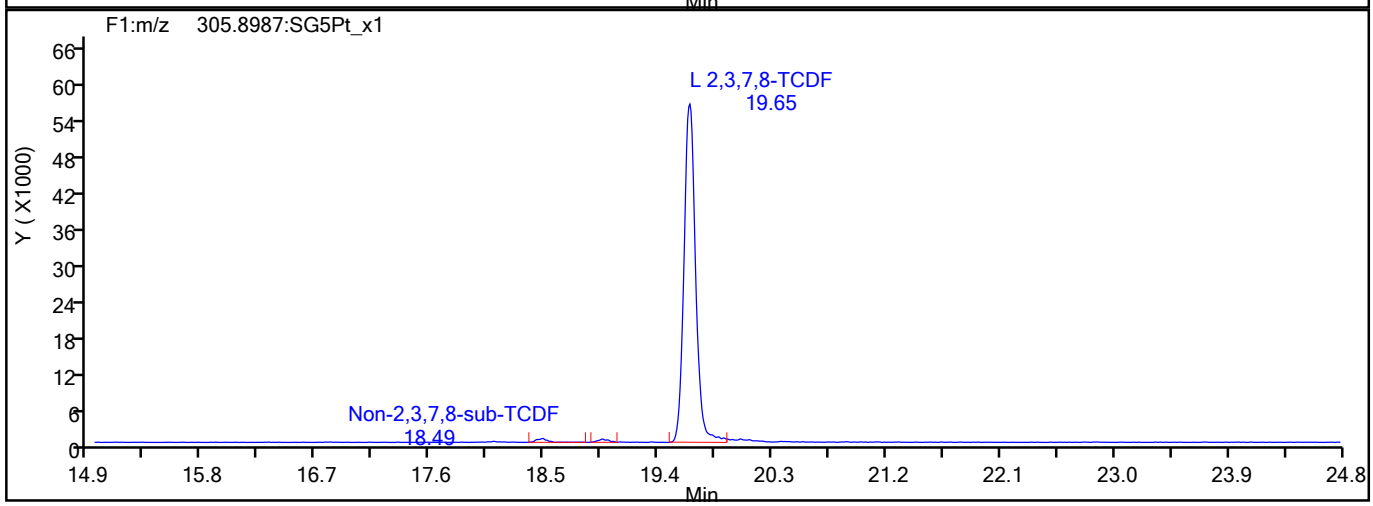

TCDF Interference Mass

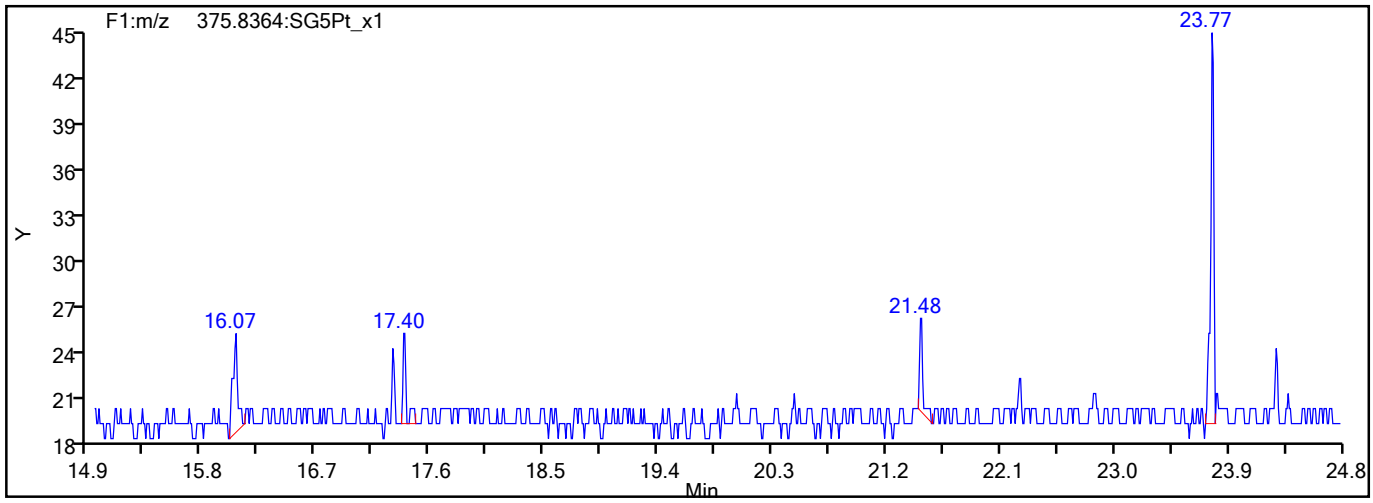

786051

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

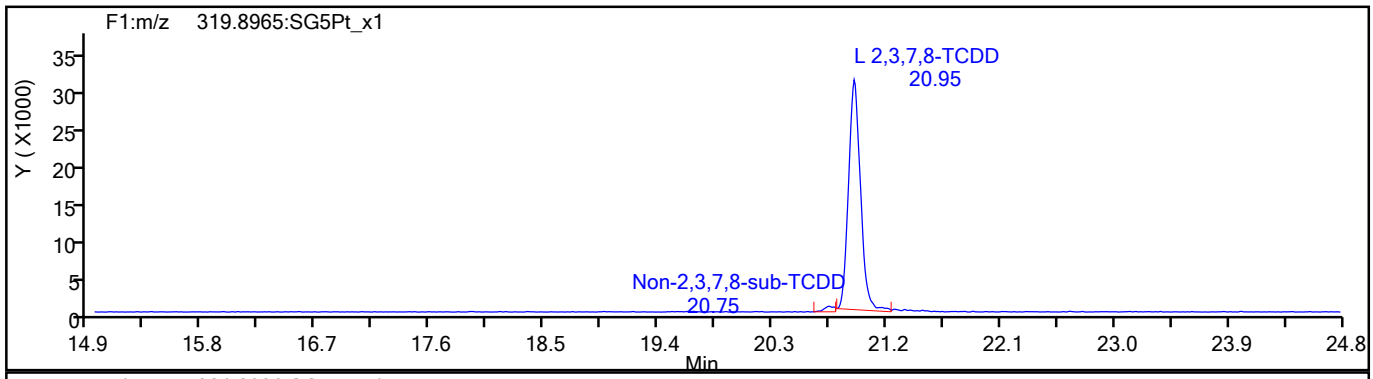

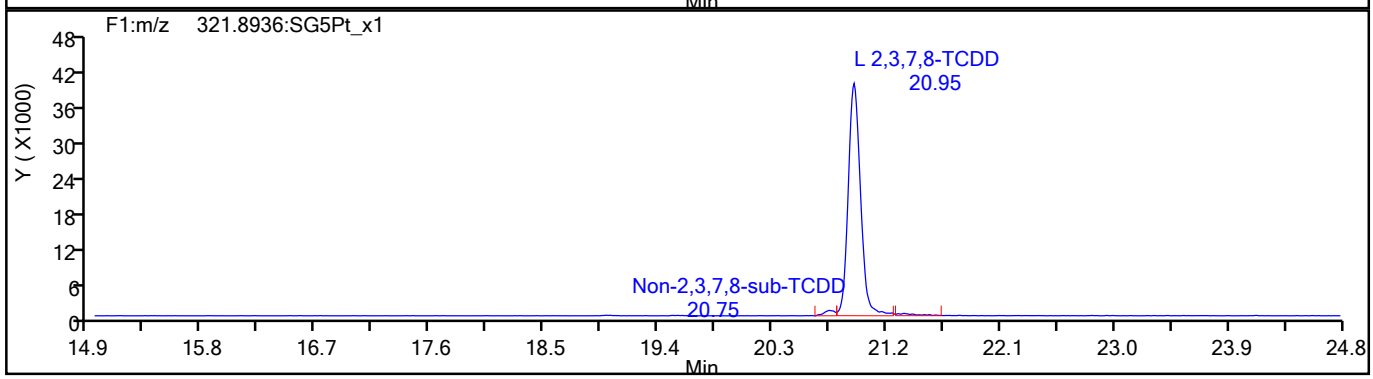

TCDD Standards

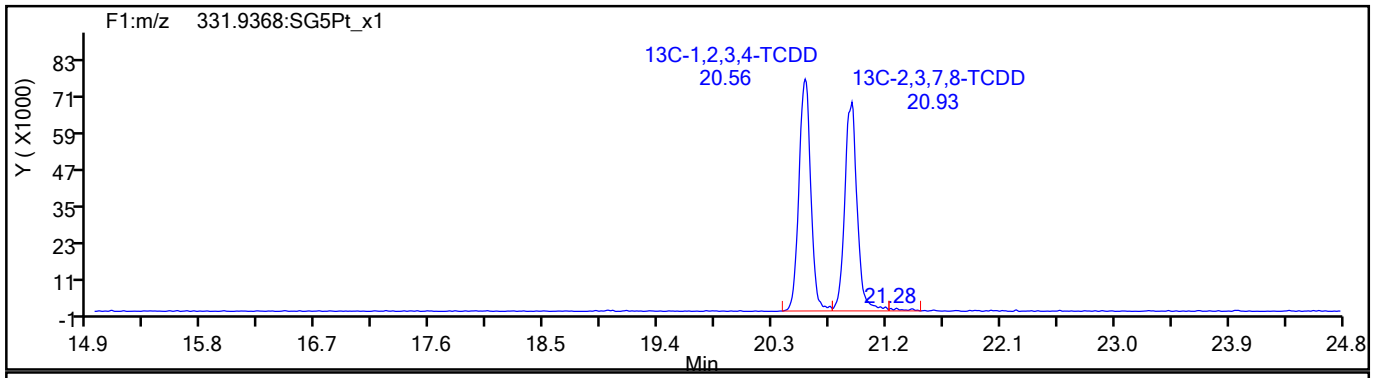

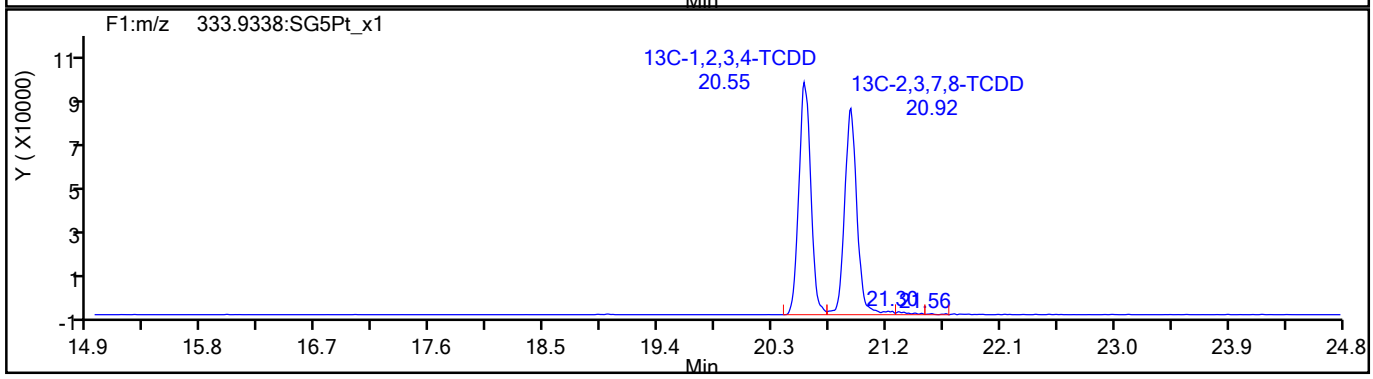

786052

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

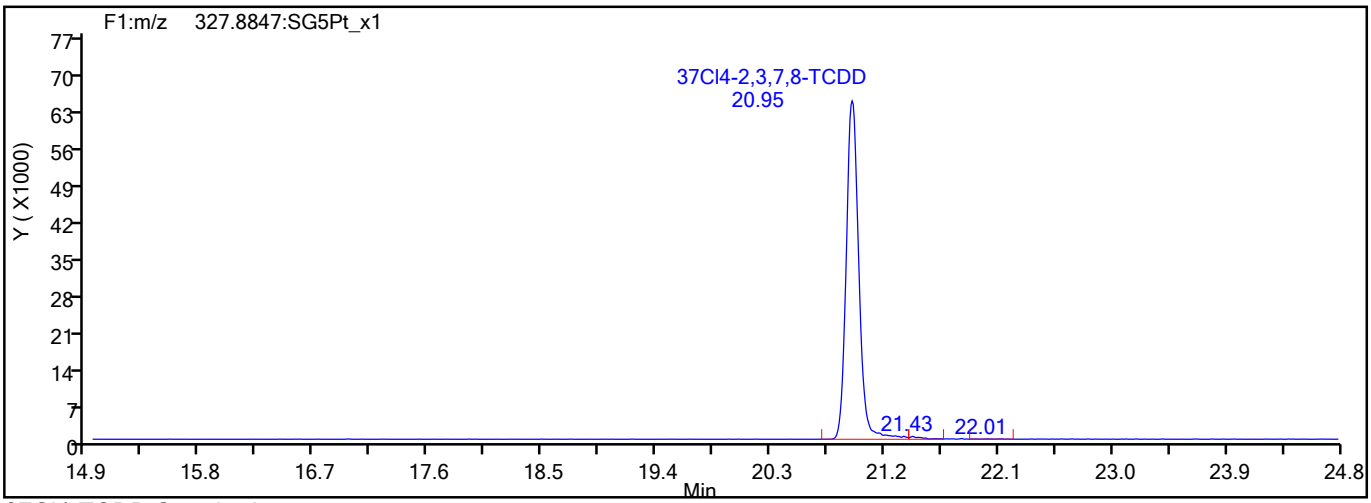

37Cl4-TCDD Standards

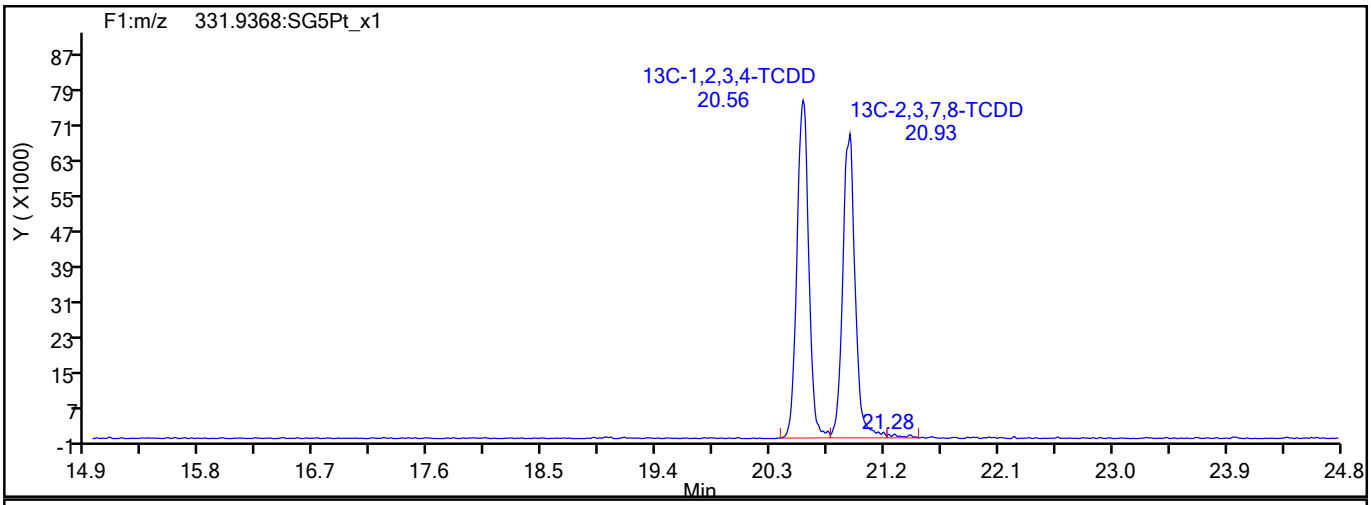

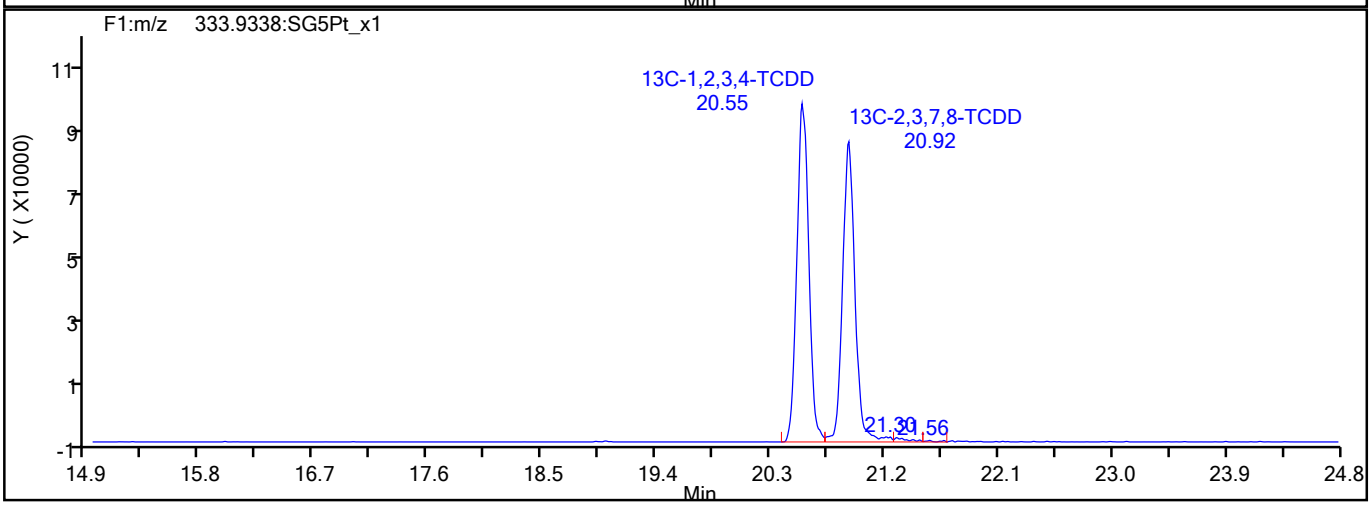

786053

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

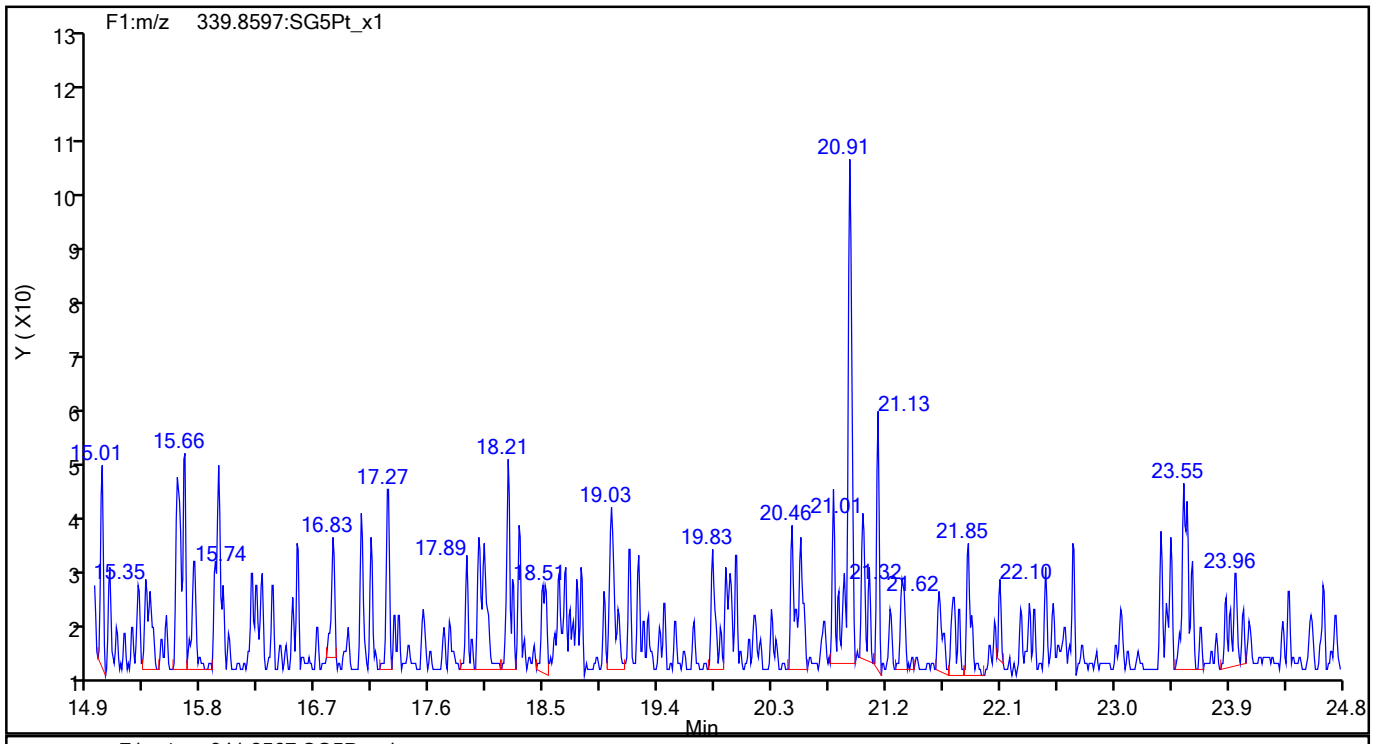

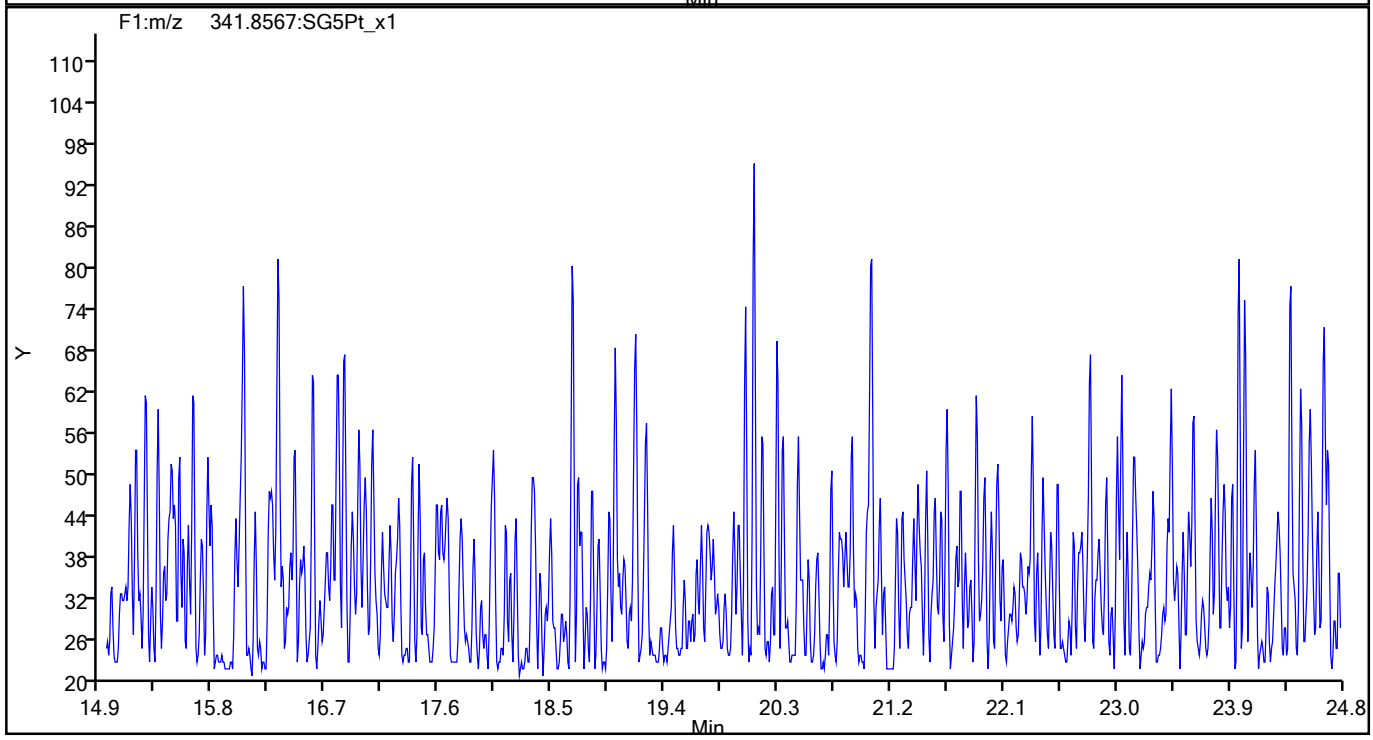

786054

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

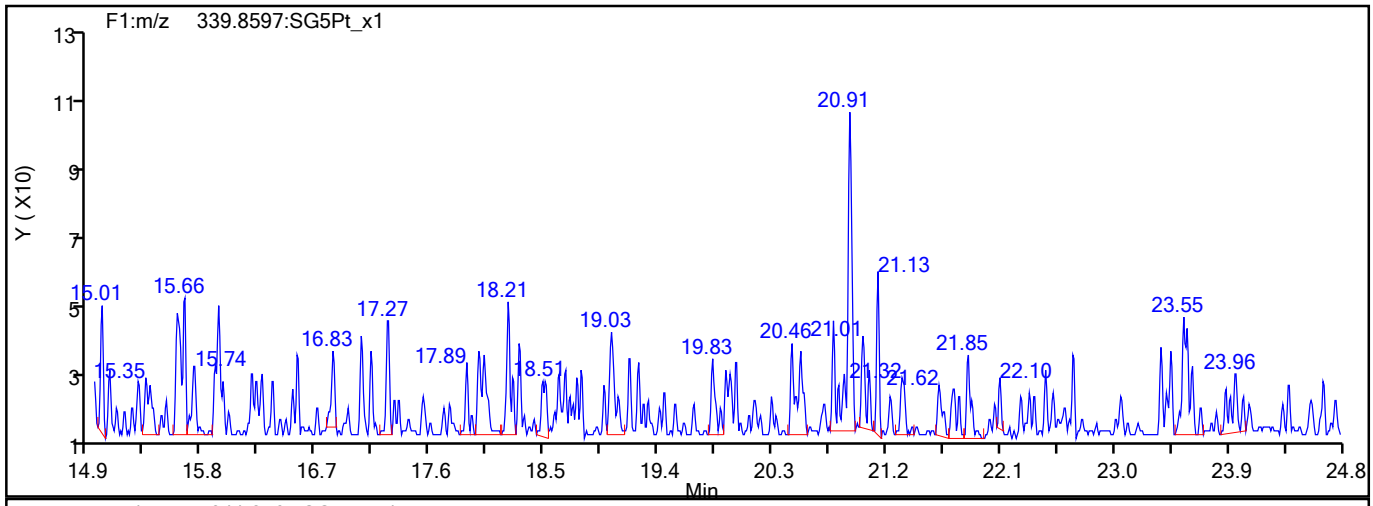

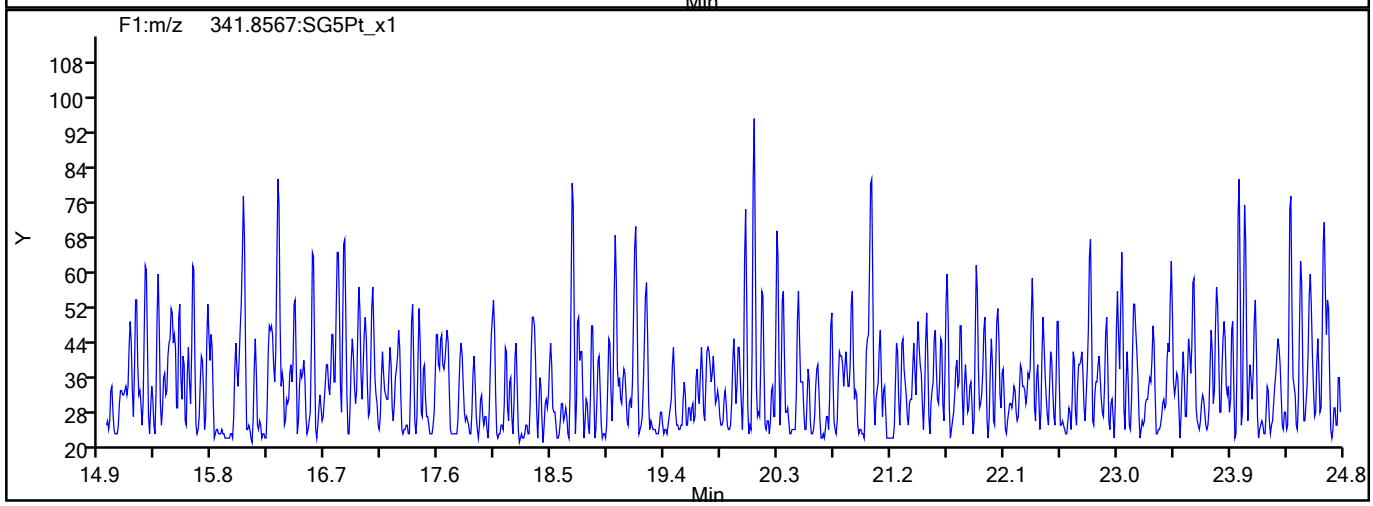

F1 PeCDFs Interference Mass

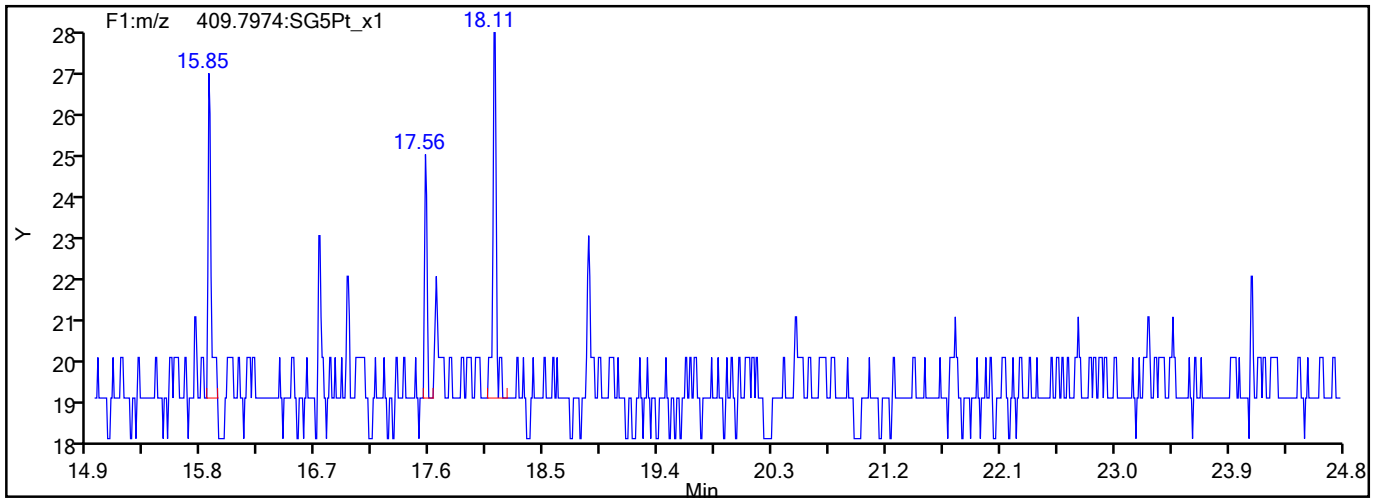

786055

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

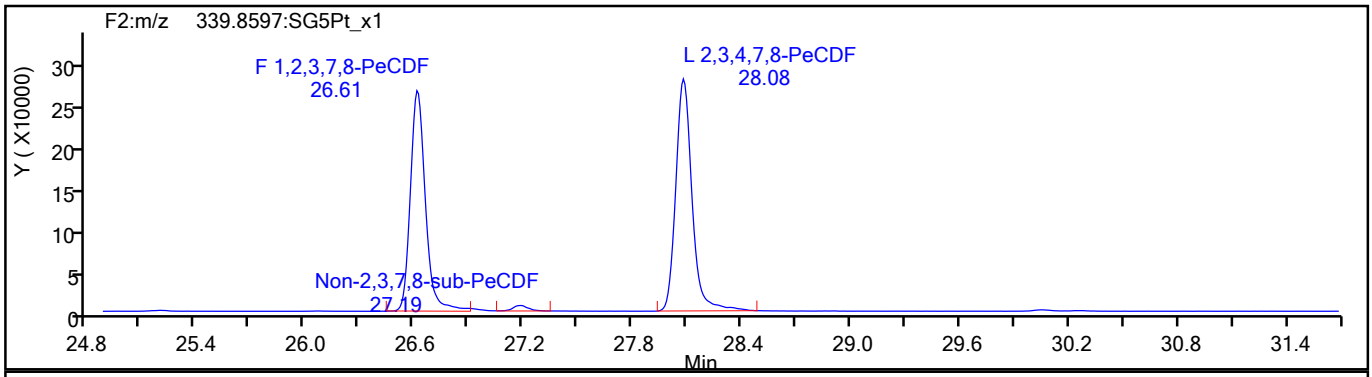

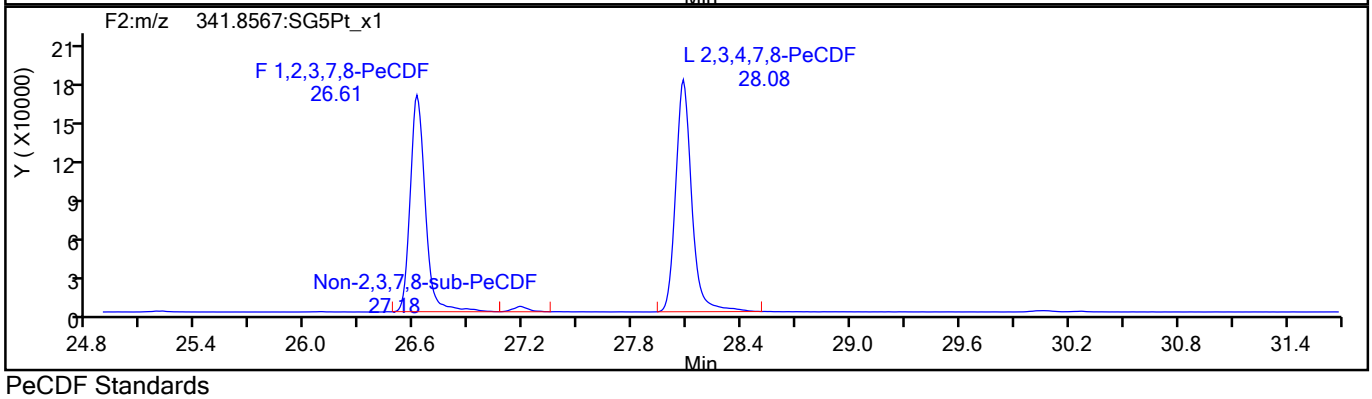

PeCDF Standards

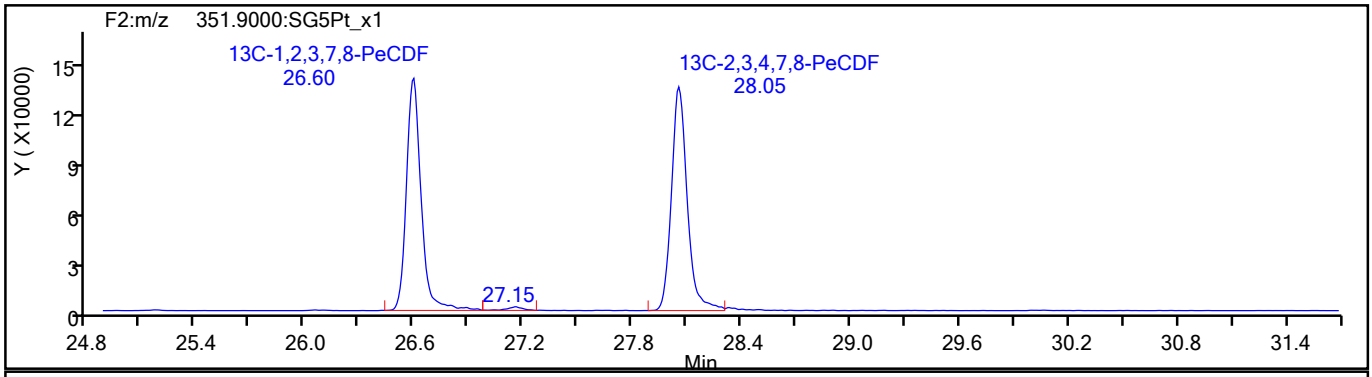

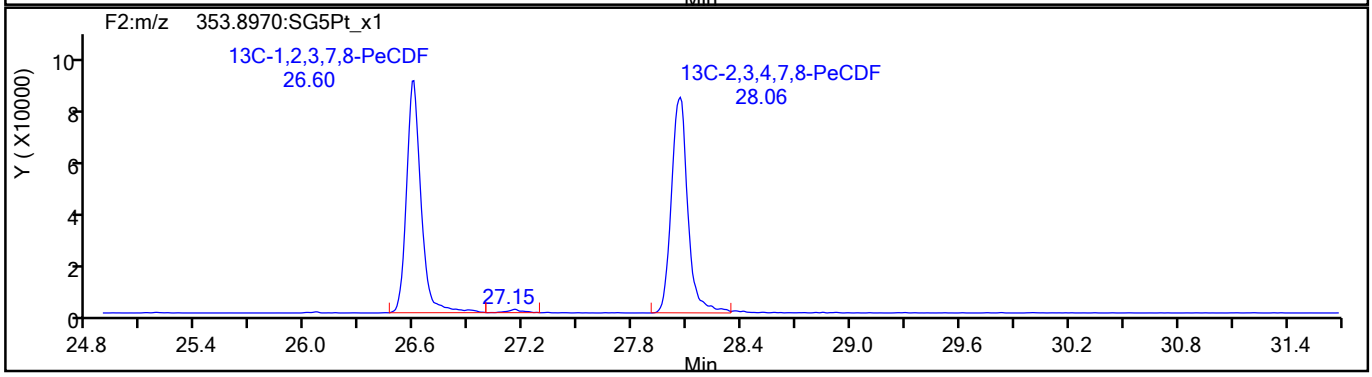

786056

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

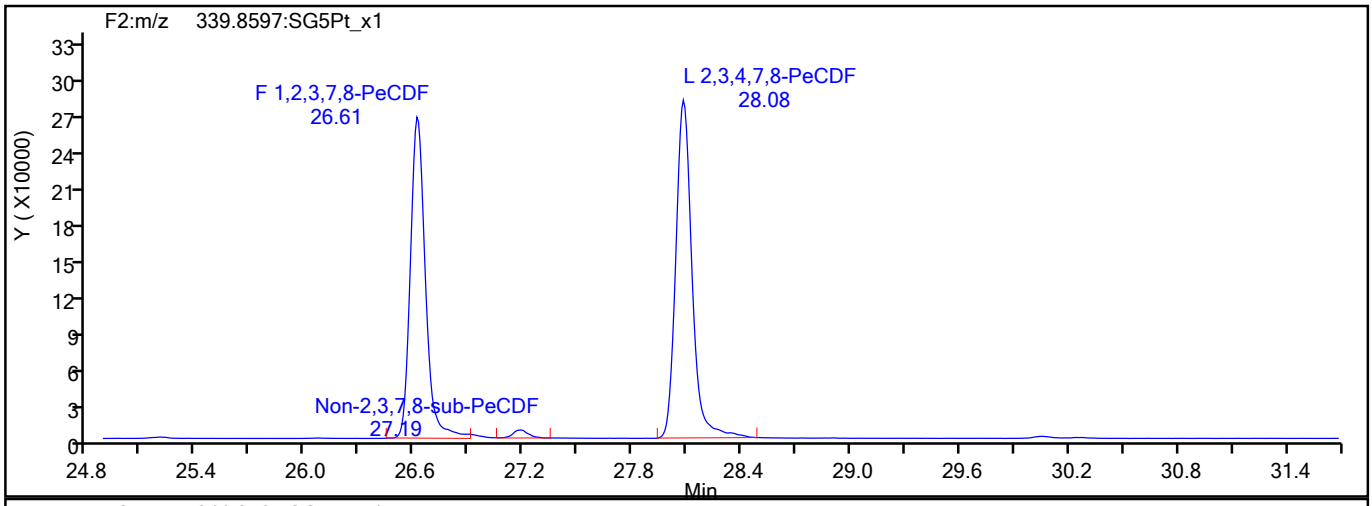

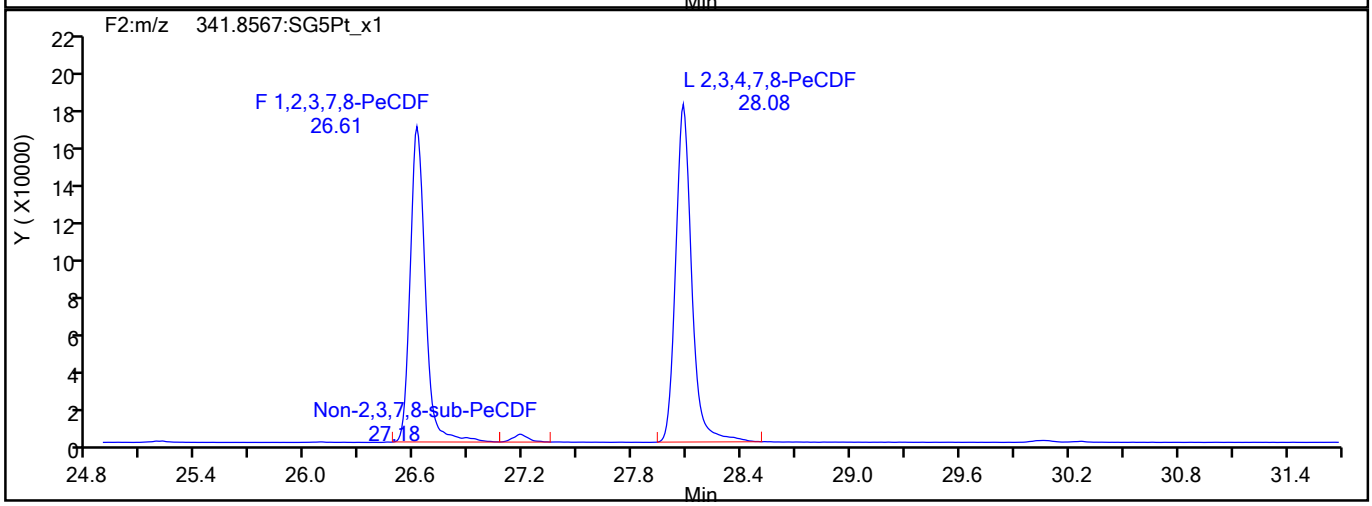

PeCDF Interference Mass

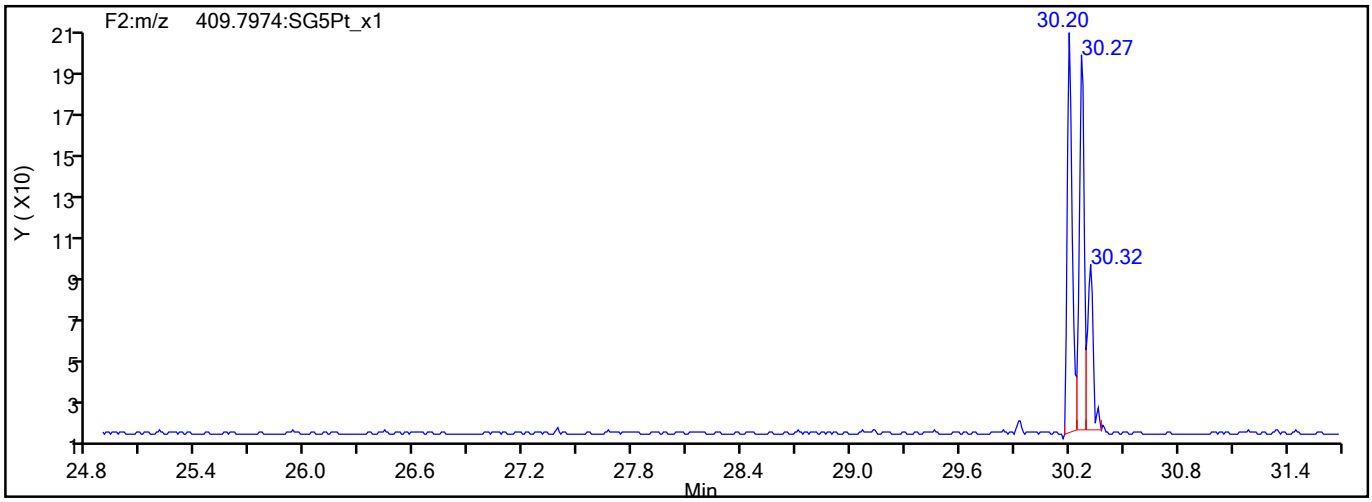

786057

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

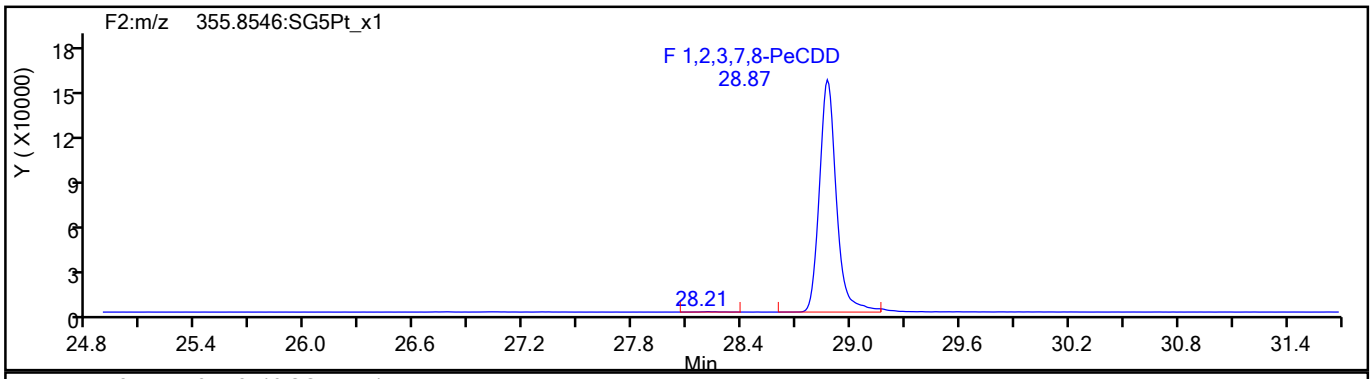

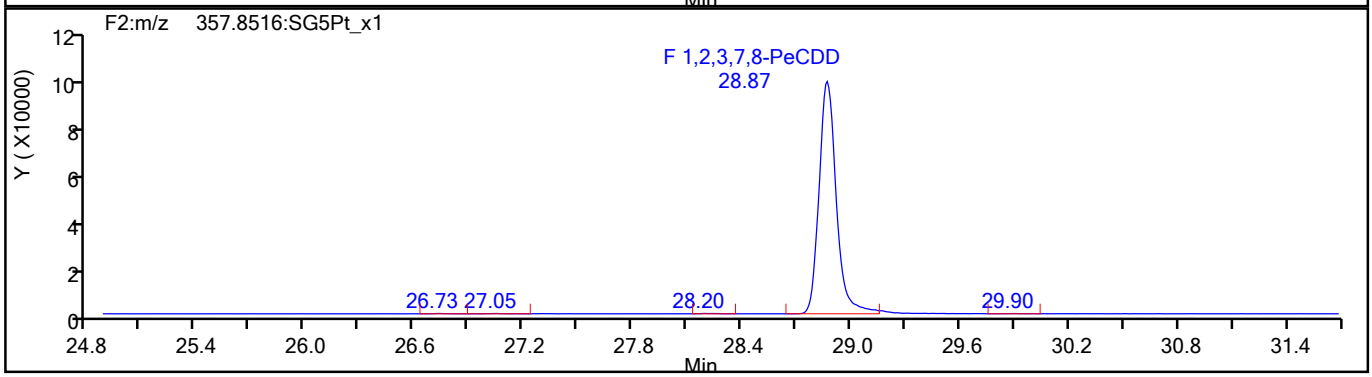

PeCDD Standards

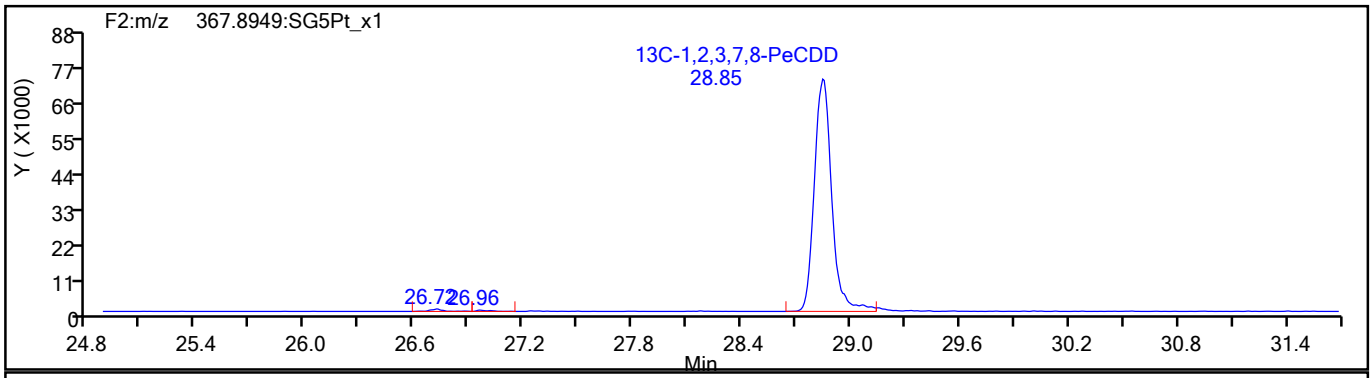

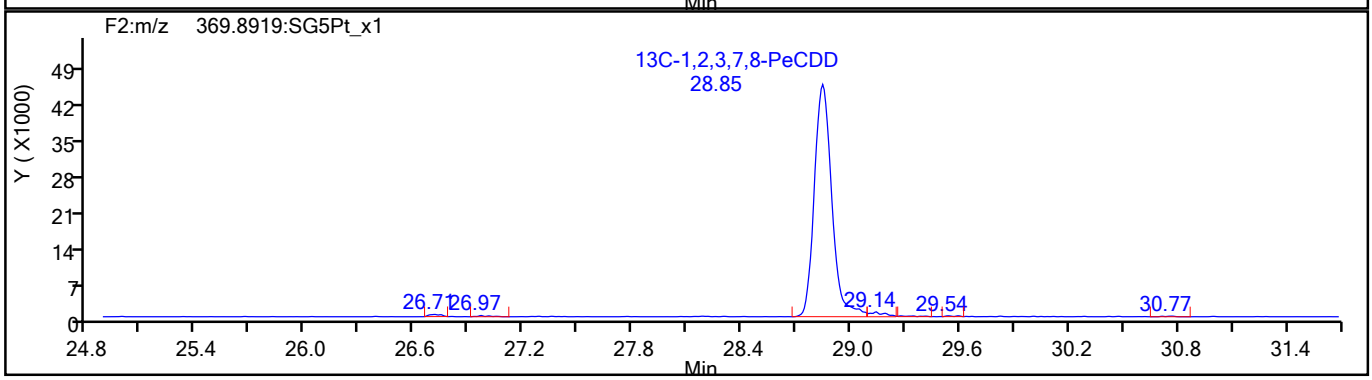

786058

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

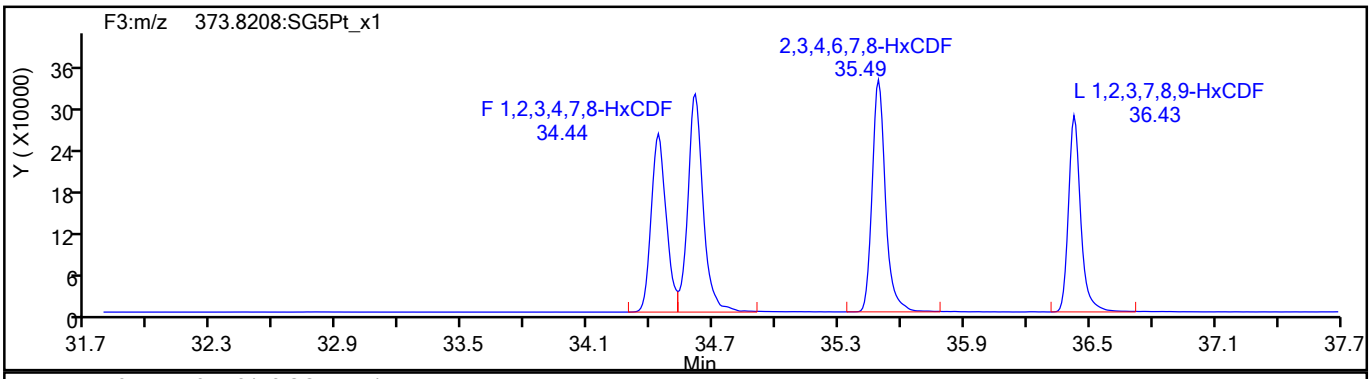

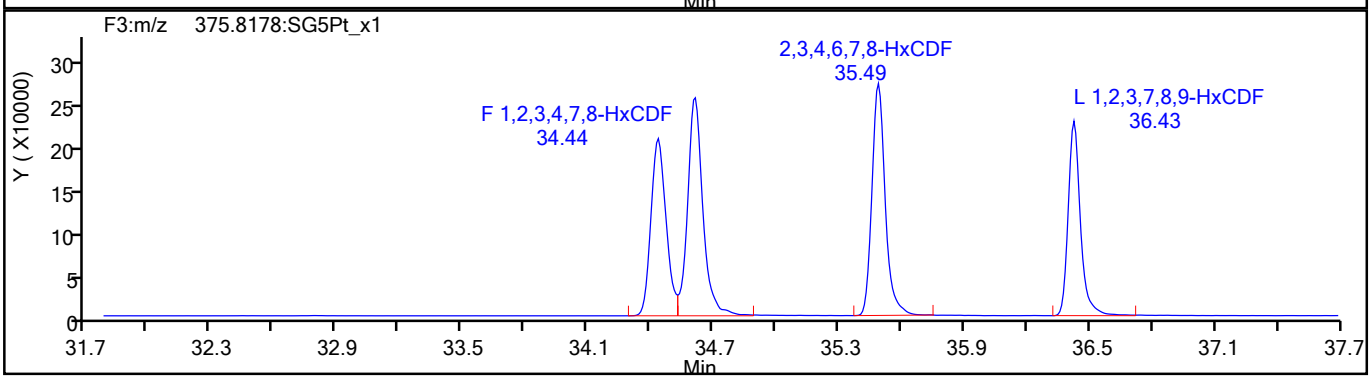

HxCDF Standards

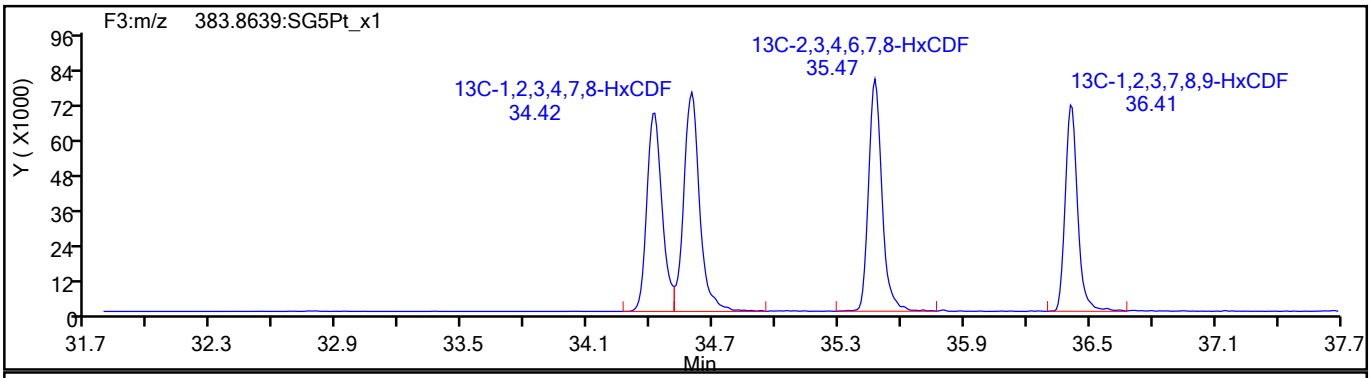

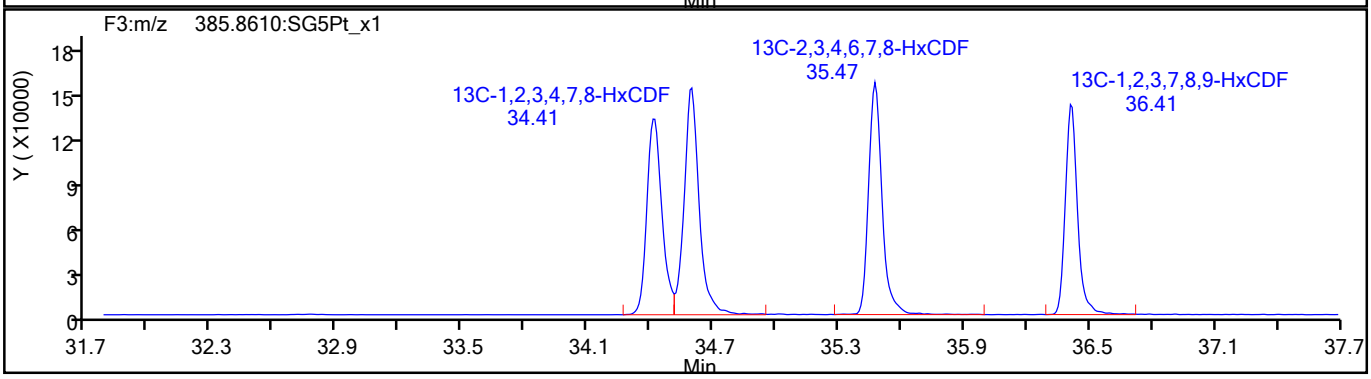

786059

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

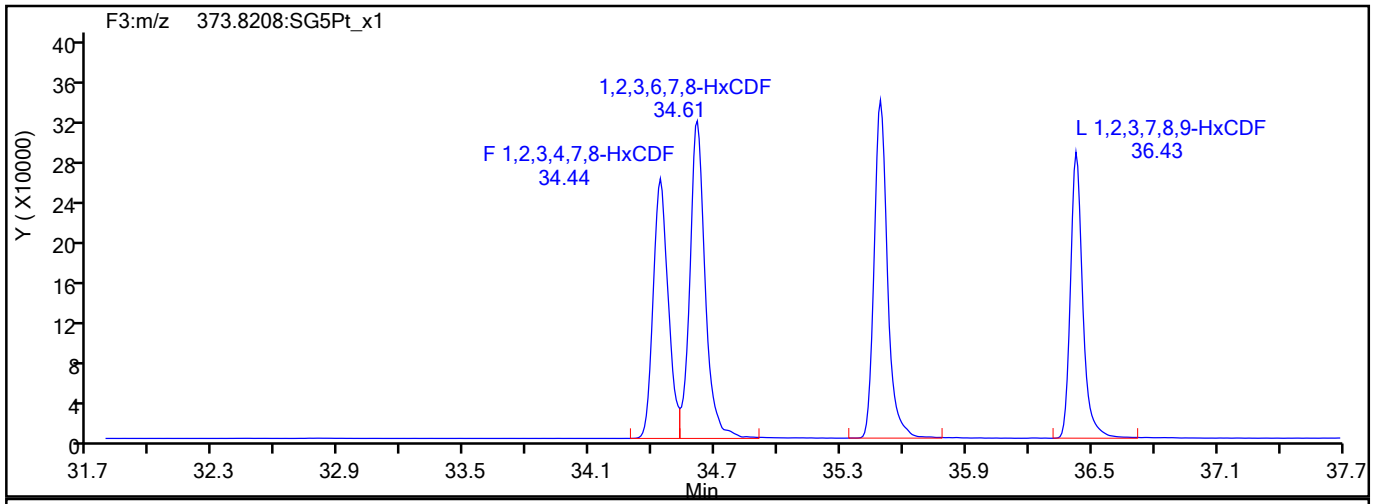

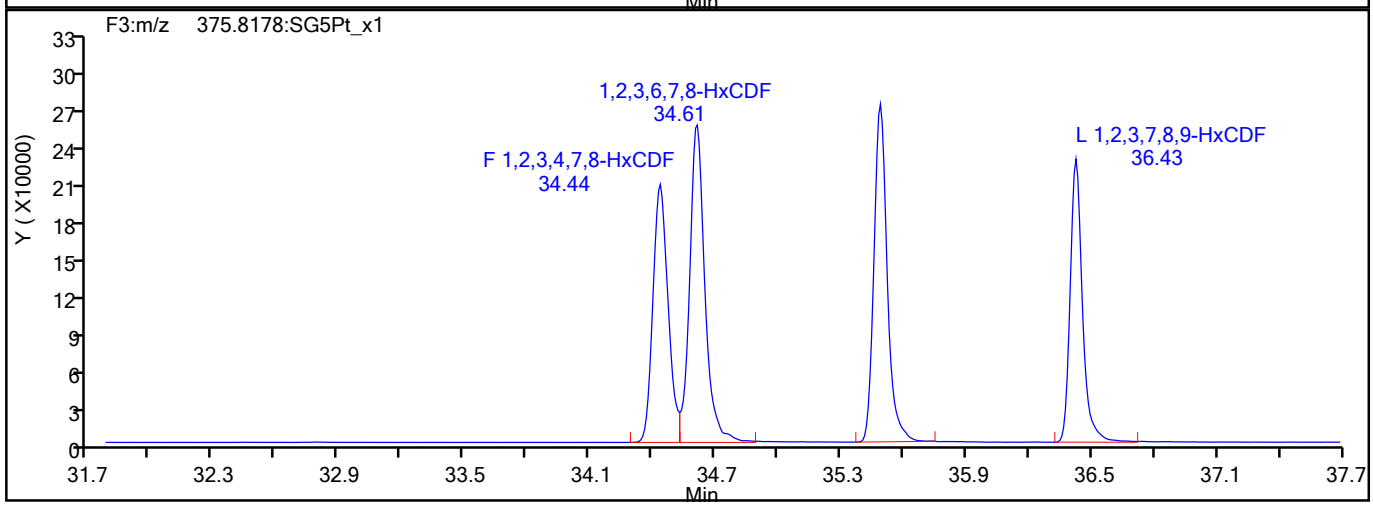

HxCDF Interference Mass

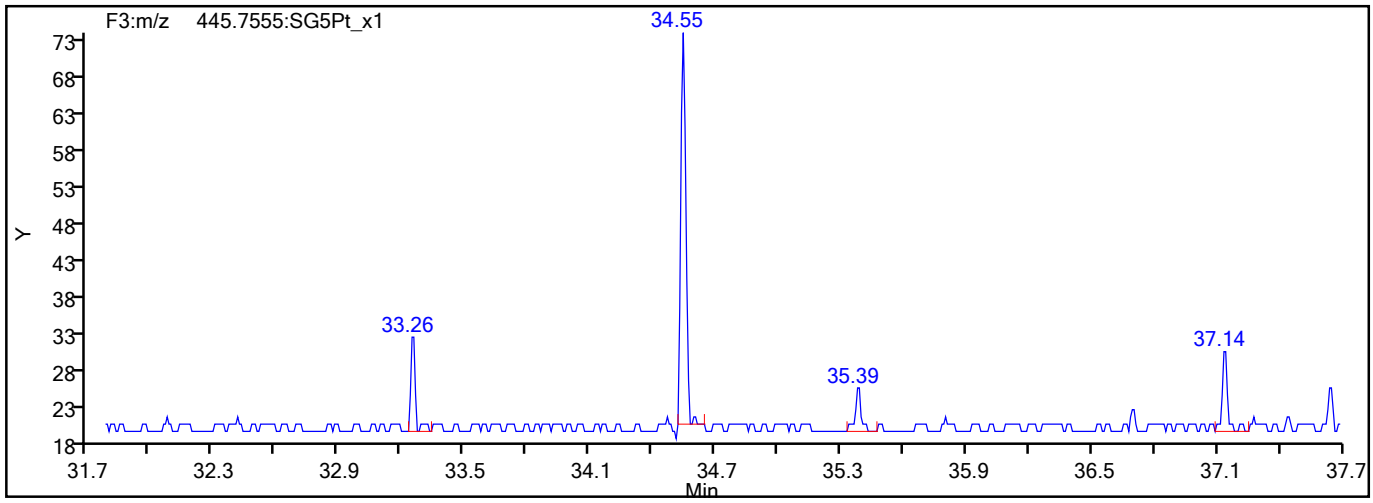

786060

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

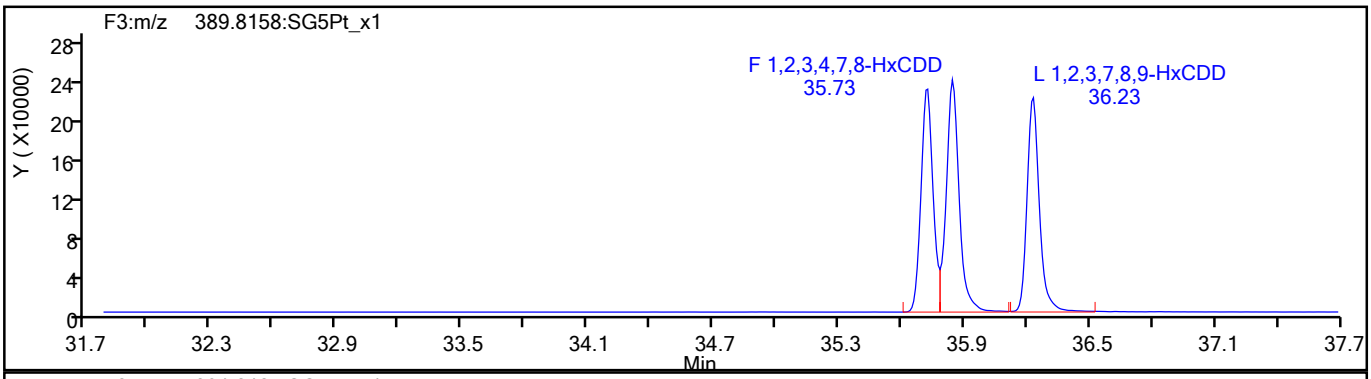

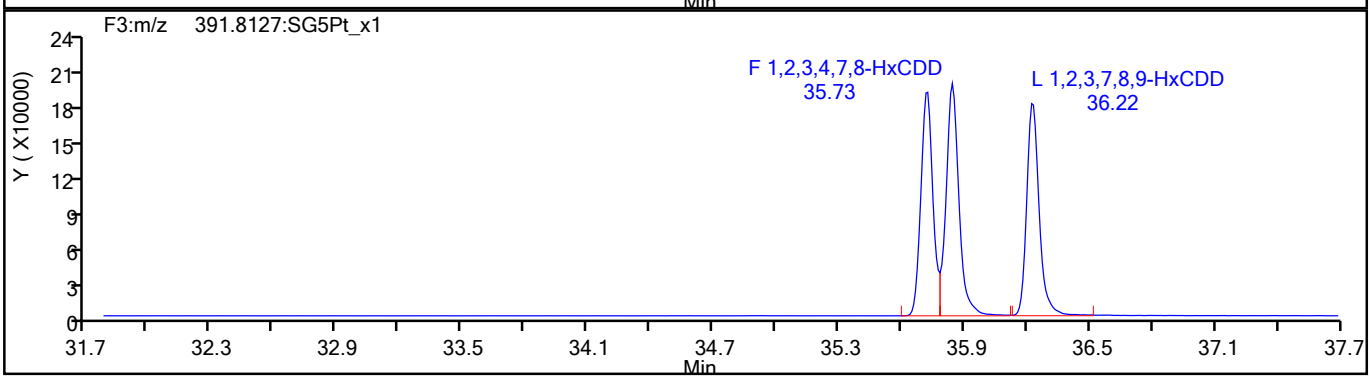

HxCDD Standards

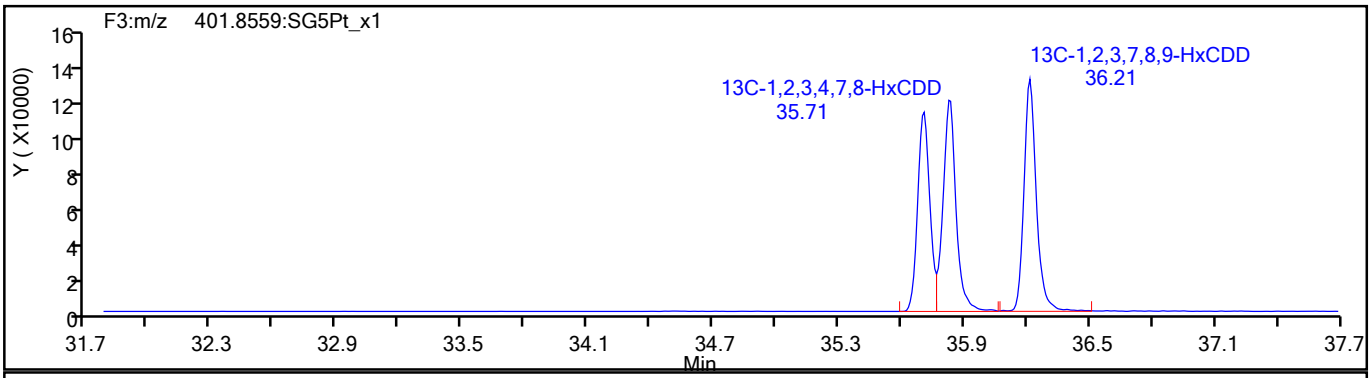

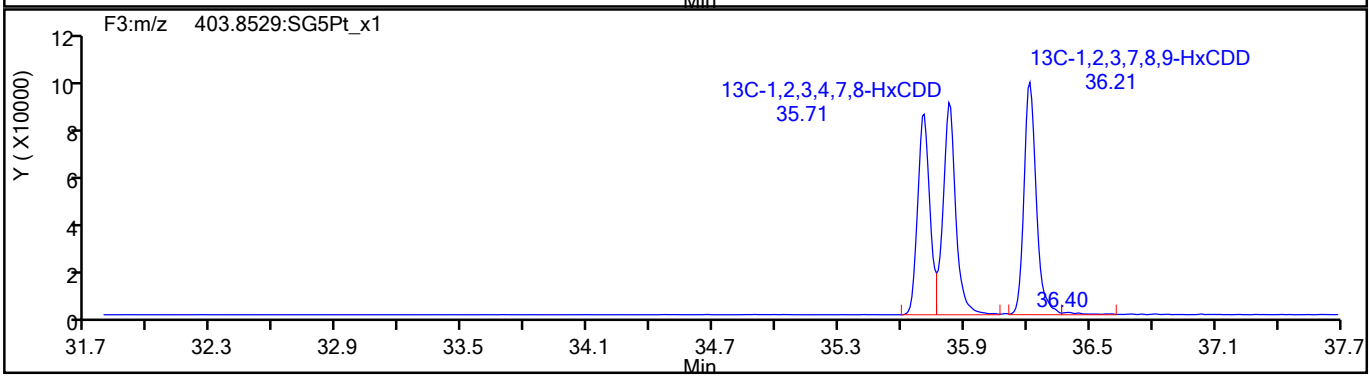

786061

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

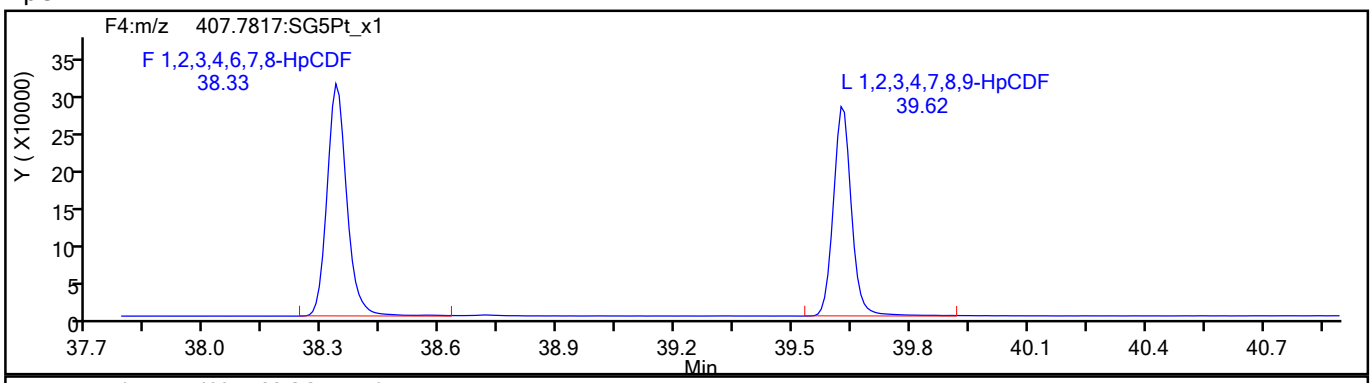

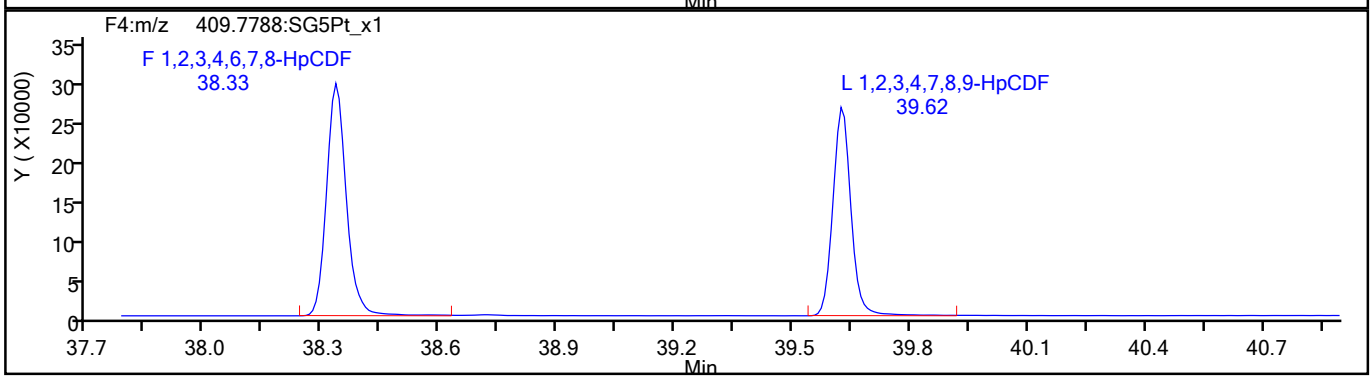

HpCDF Standards

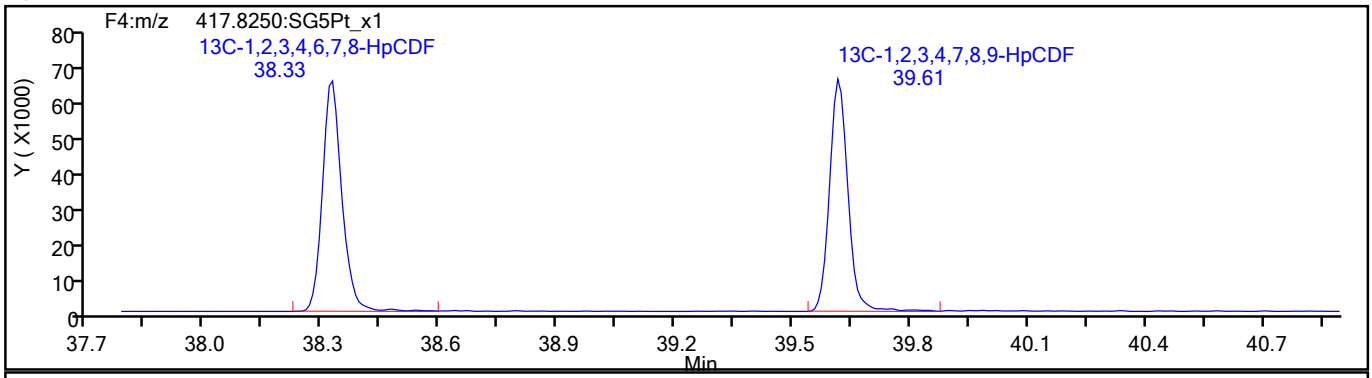

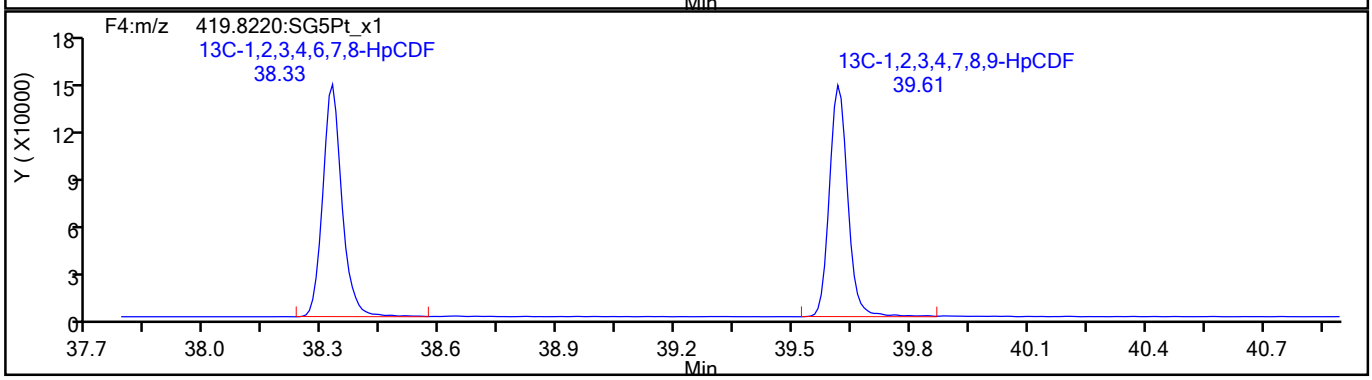

786062

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

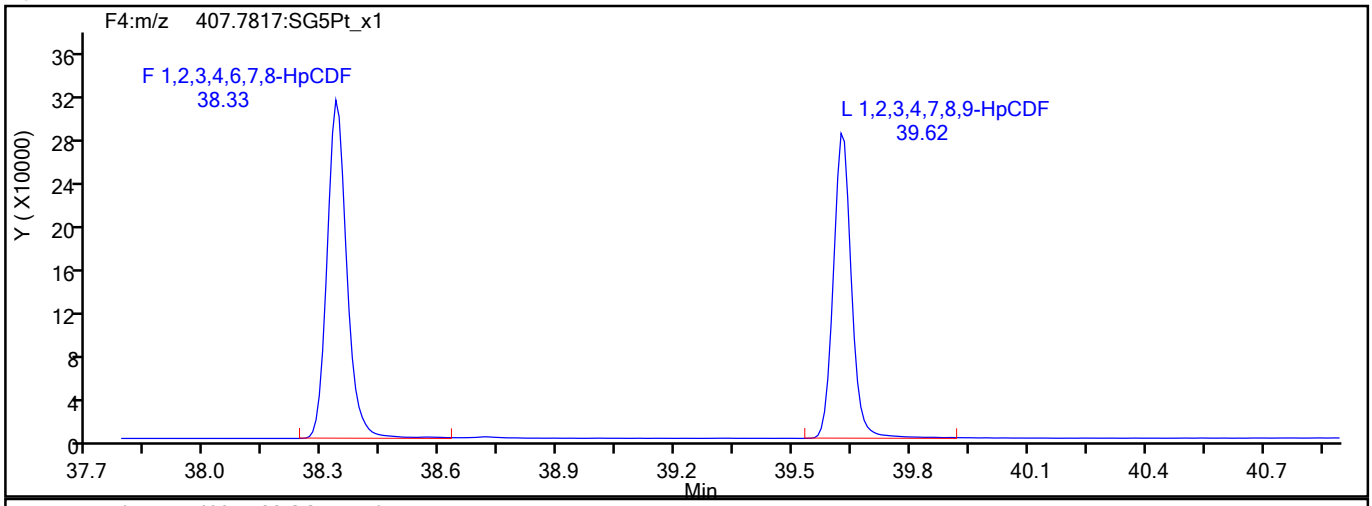

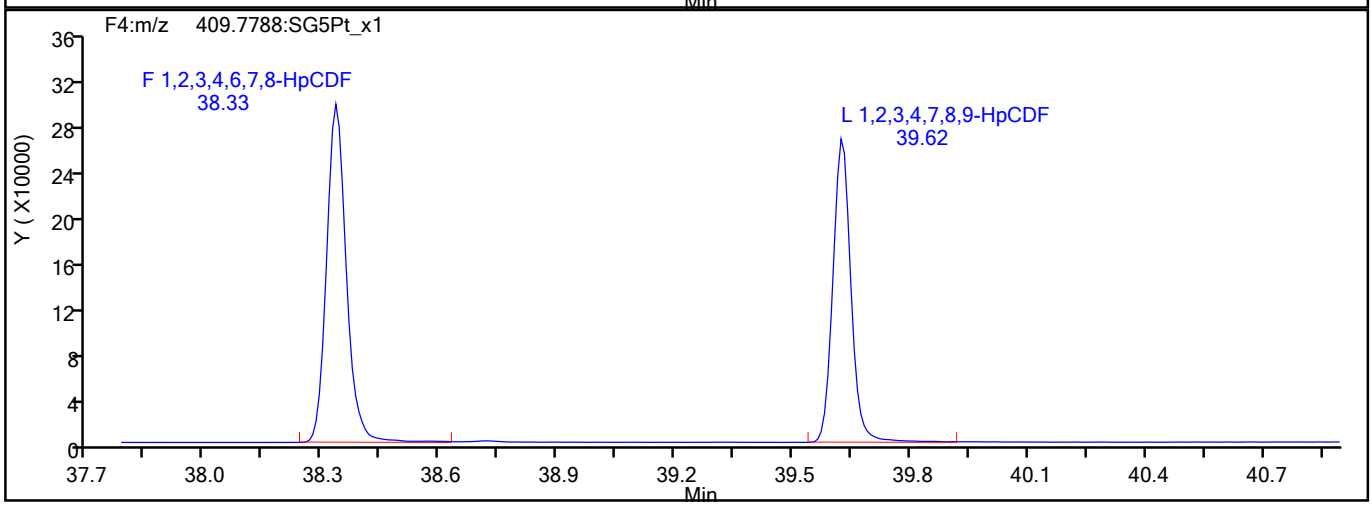

HpCDF Interference Mass

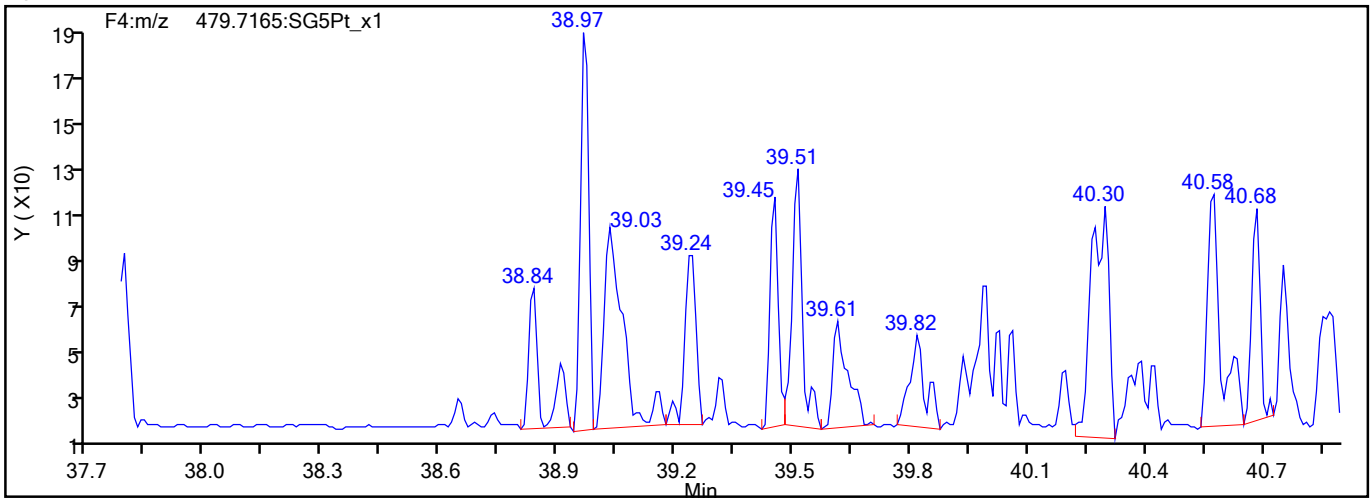

786063

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

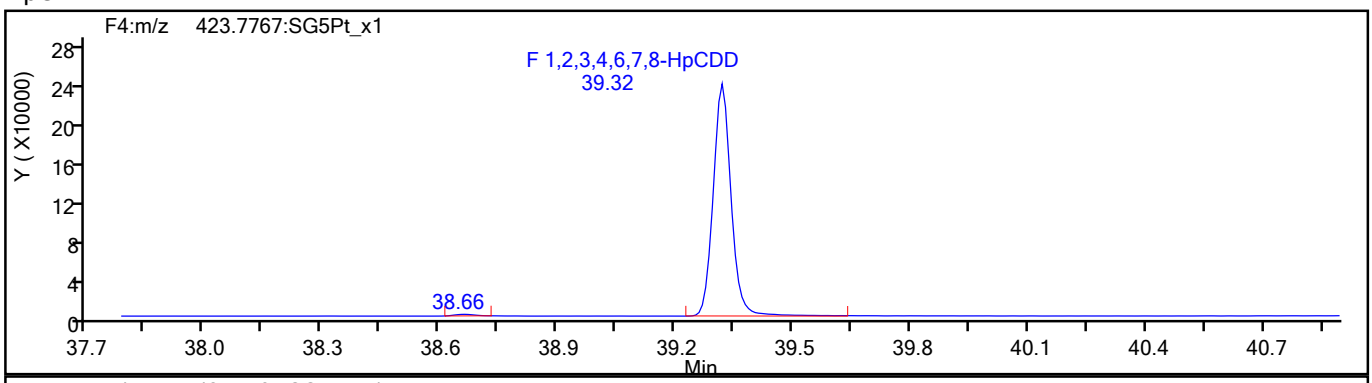

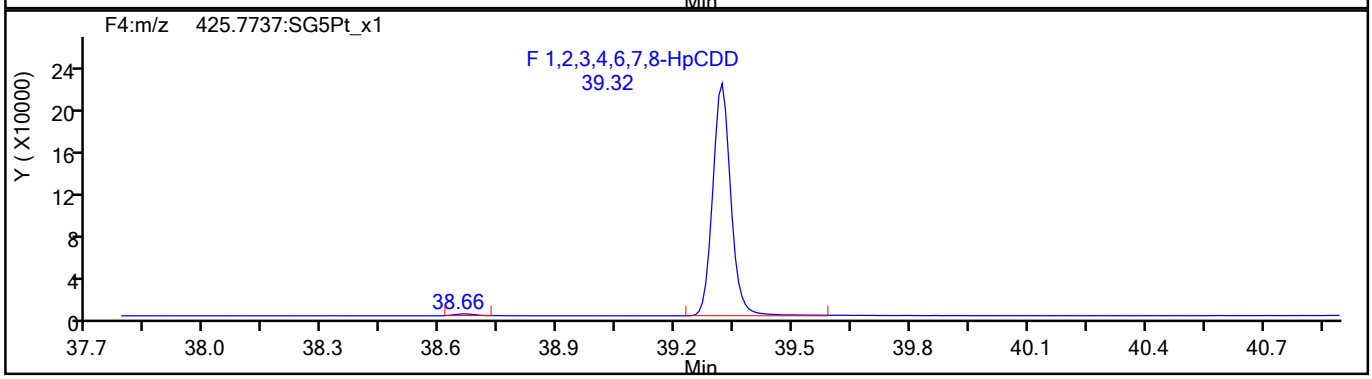

HpCDD Standards

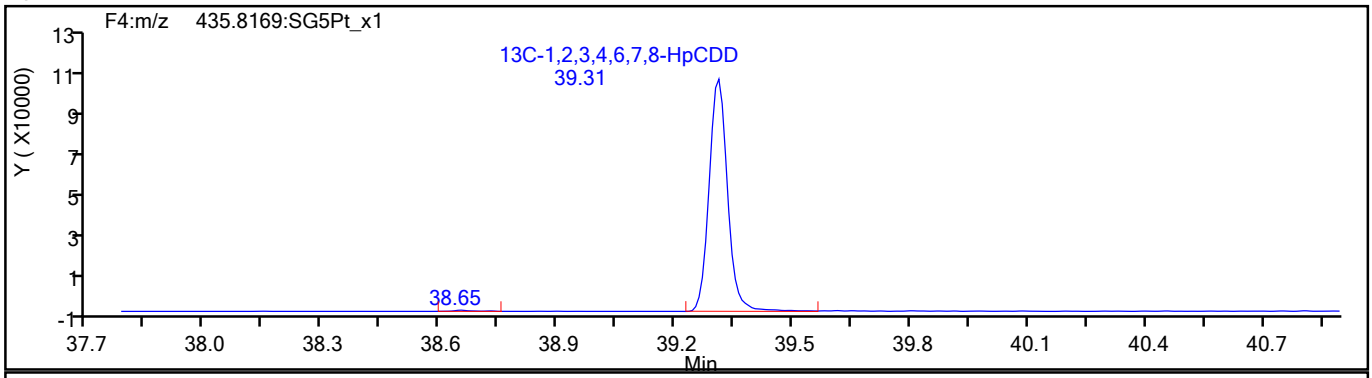

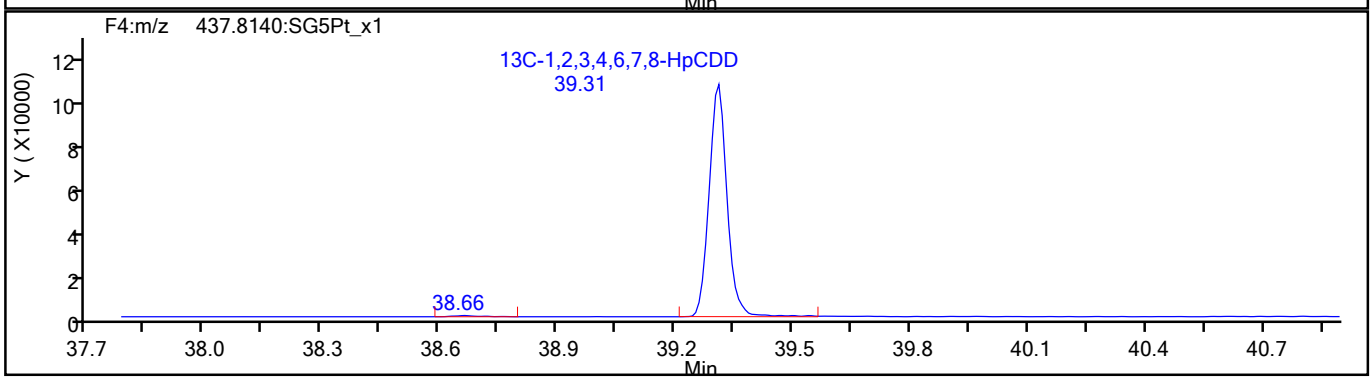

786064

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

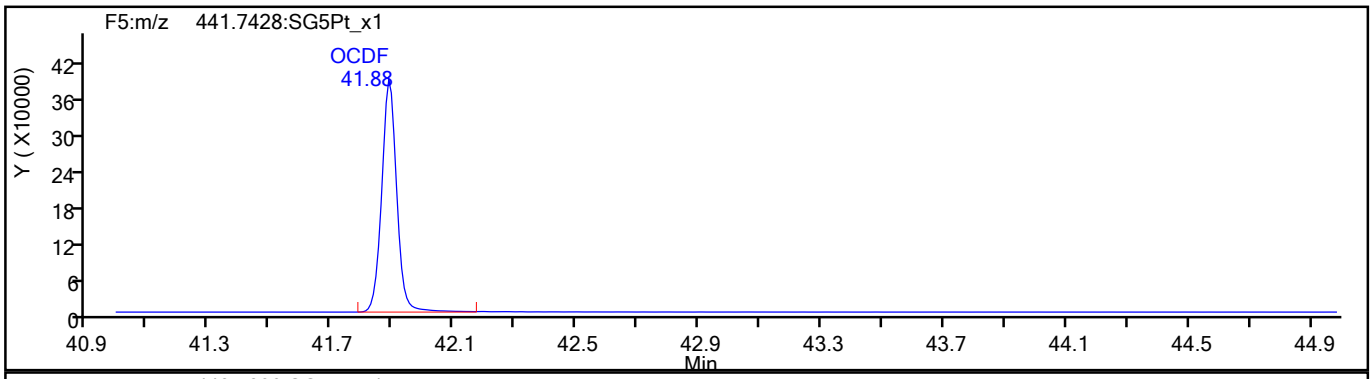

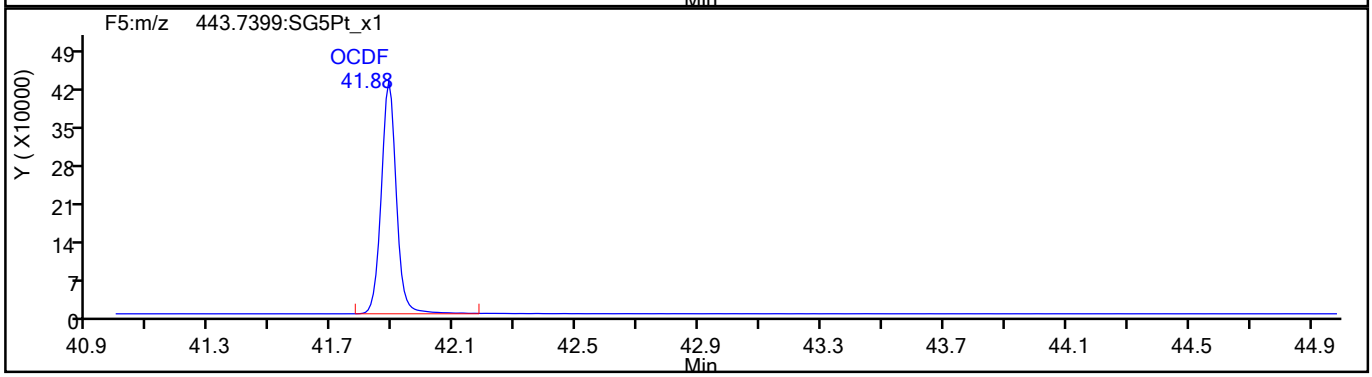

OCDF Standards

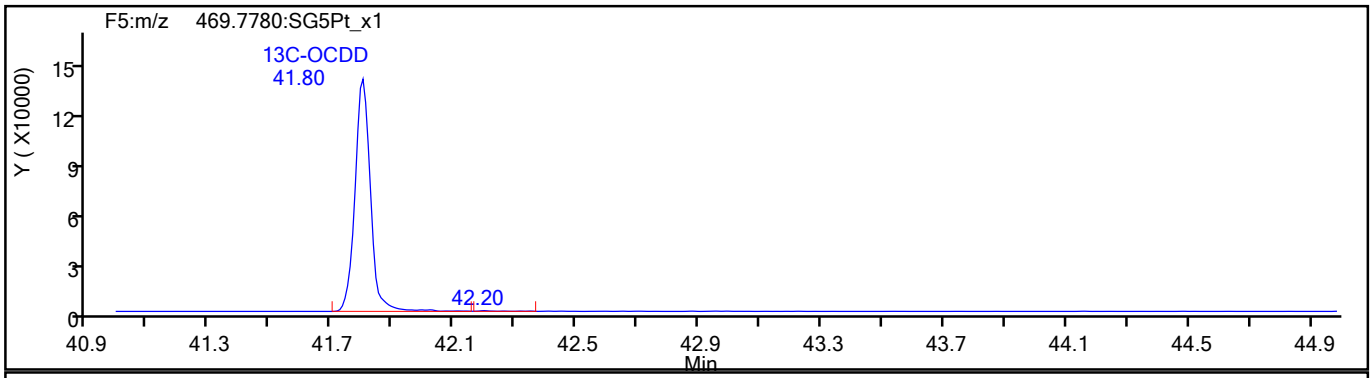

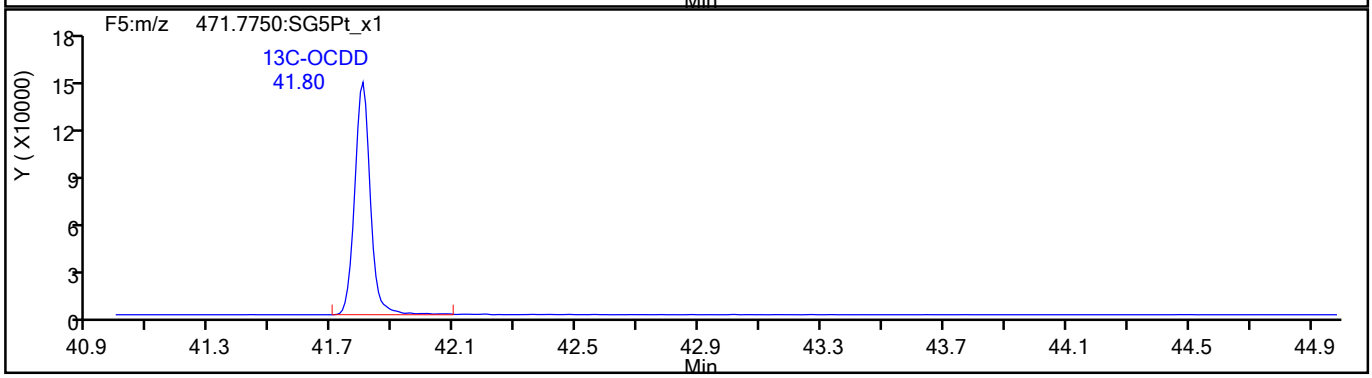

786065

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

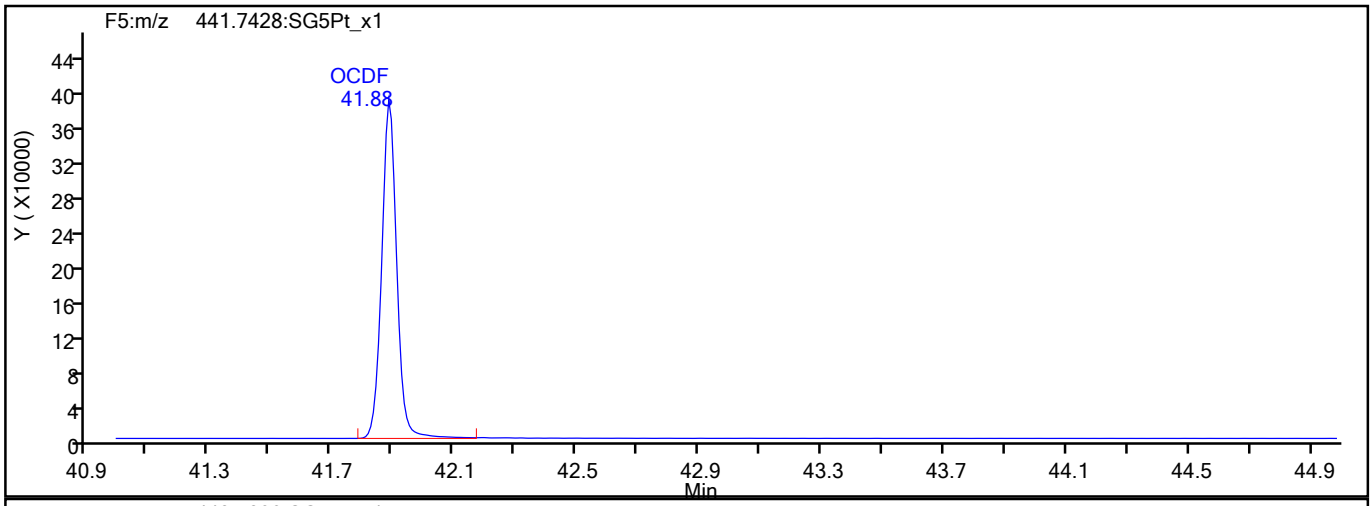

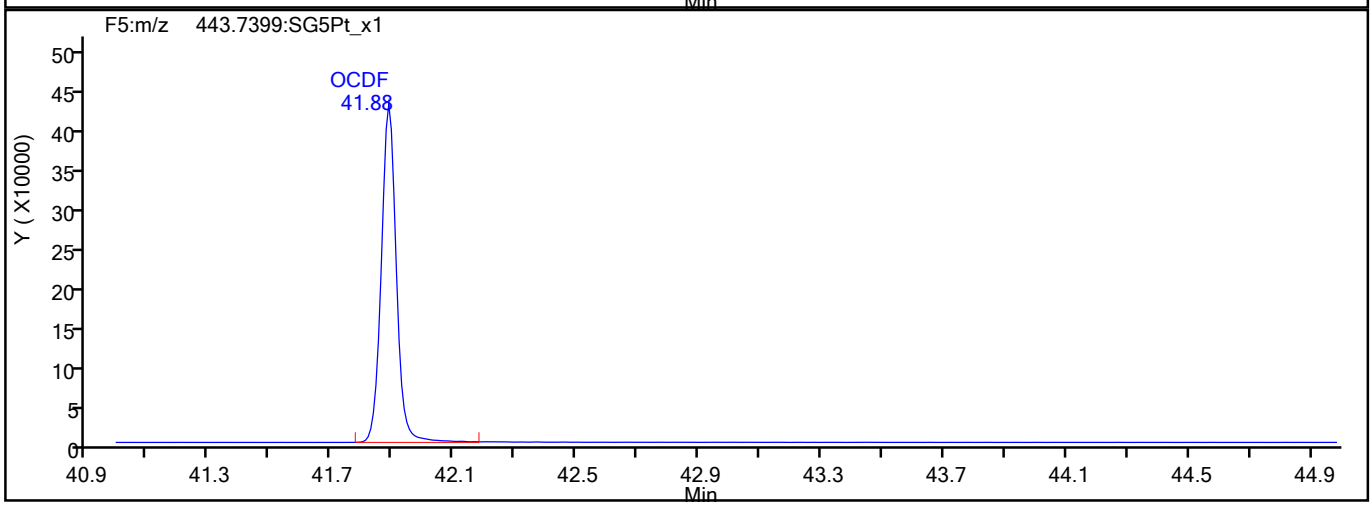

OCDF Interference Mass

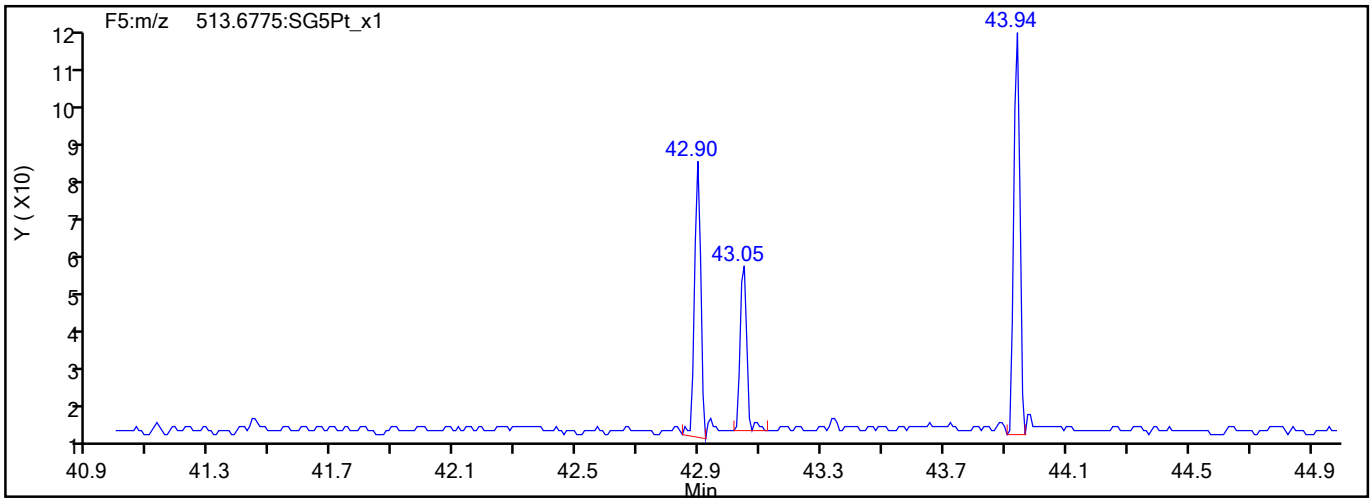

786066

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

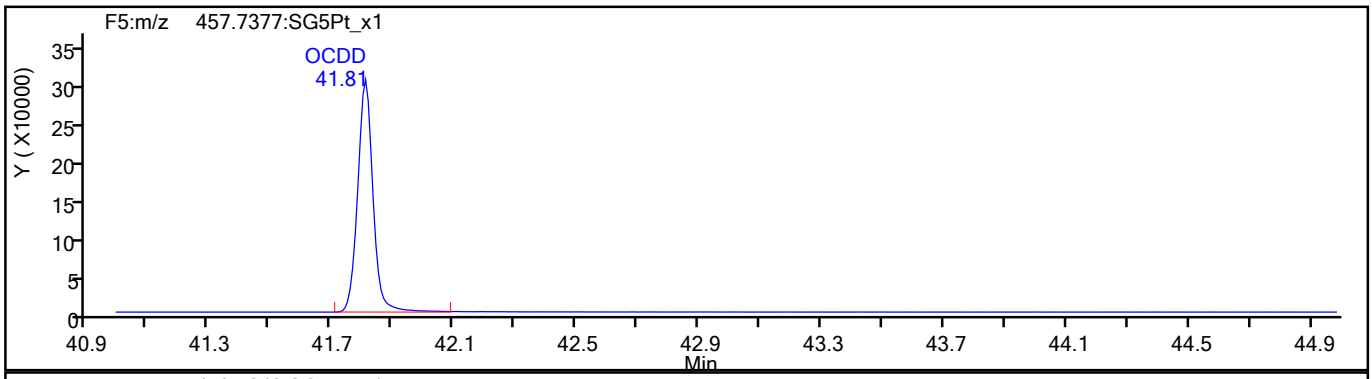

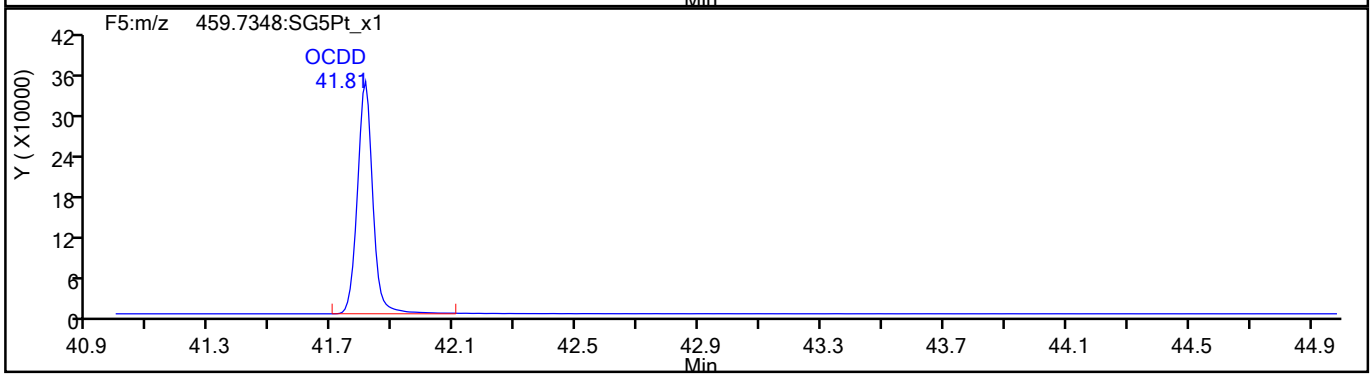

OCDD Standards

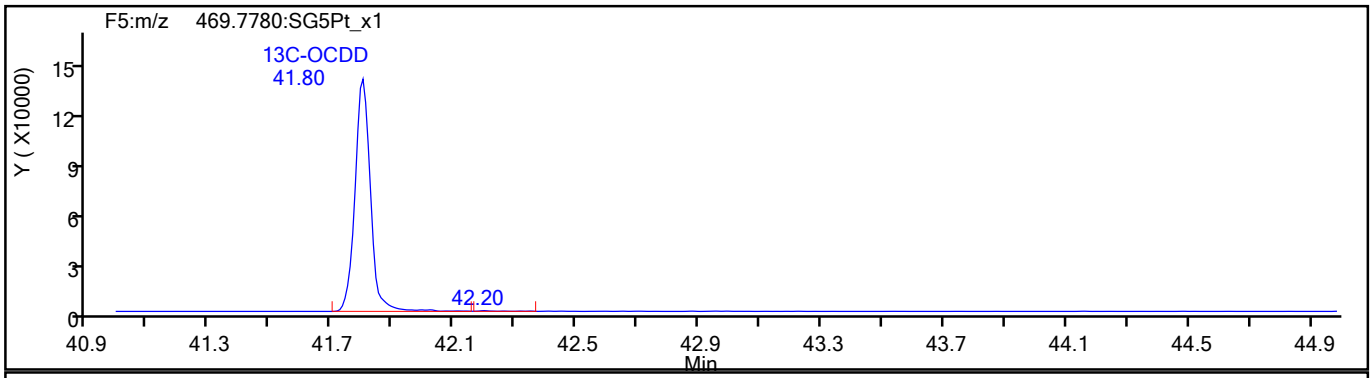

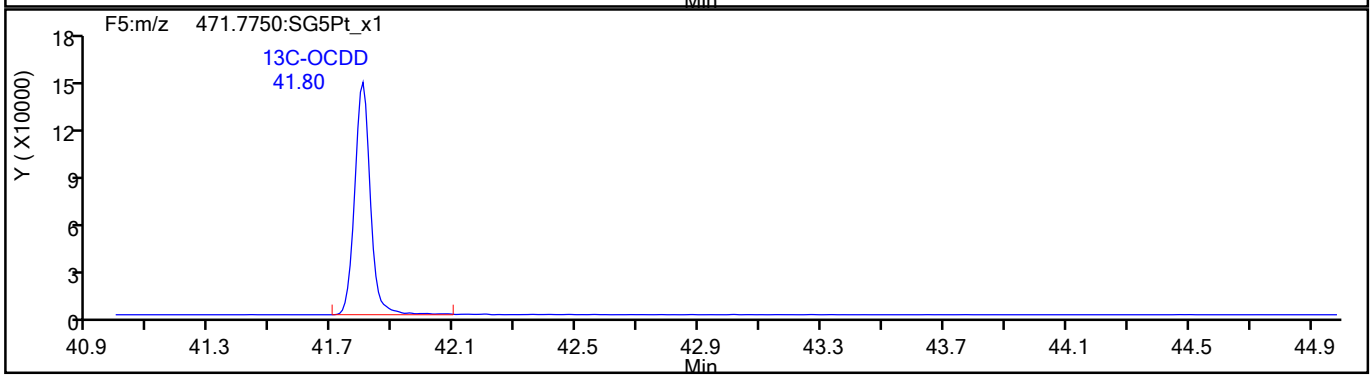

786067

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

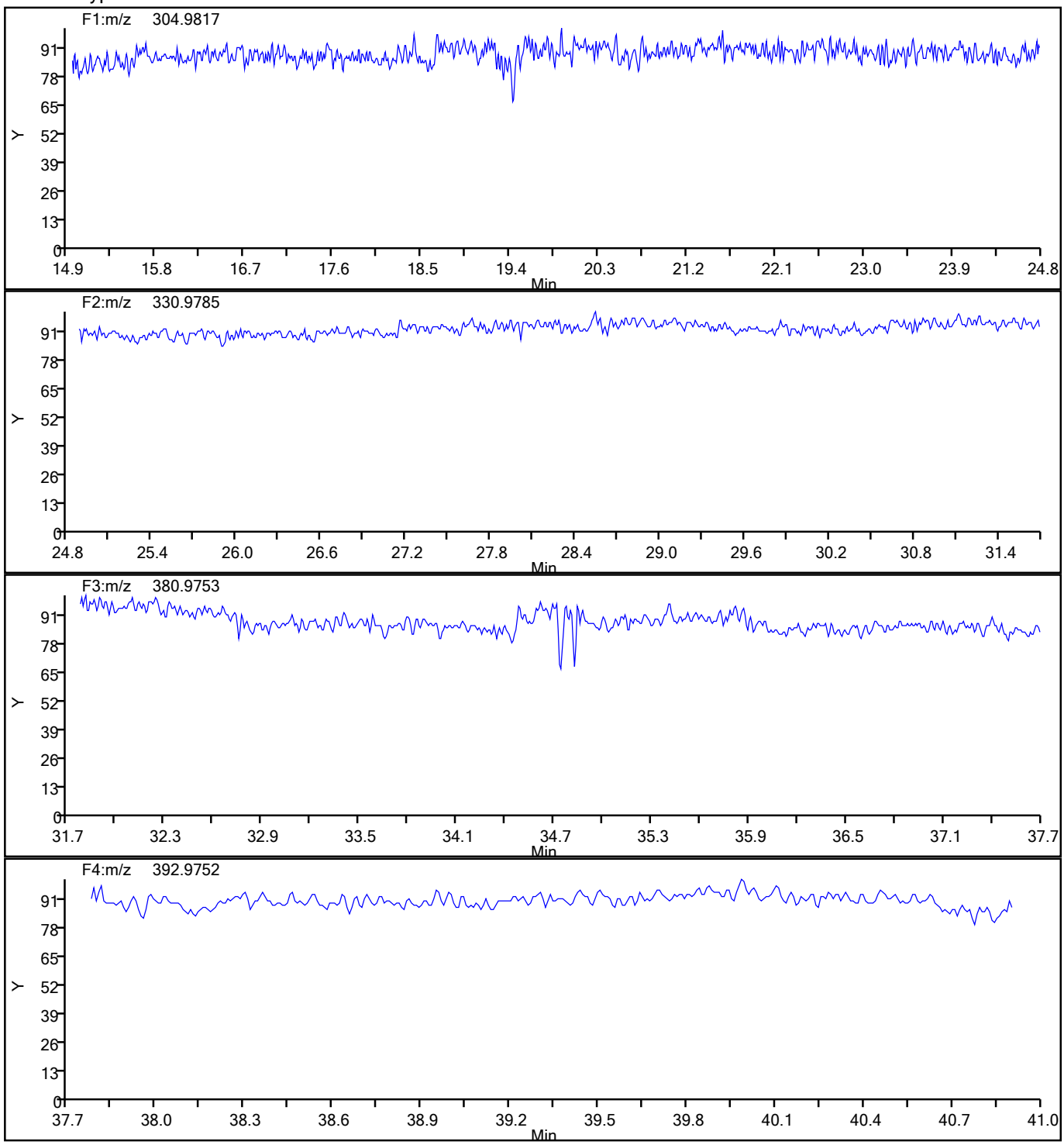

786068

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

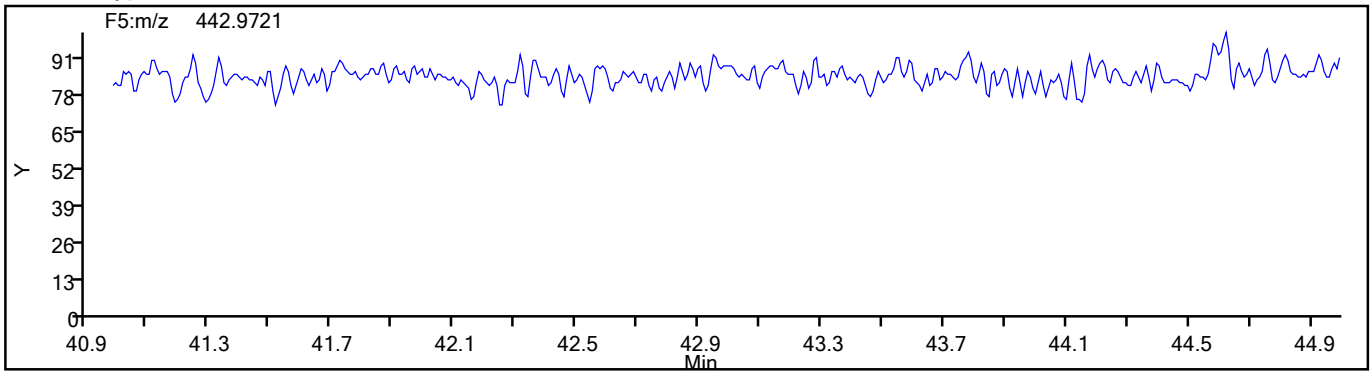

786069

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID: CCV 320-517196/2 Calibration Date: 08/17/2021 15:14

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_3.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.077		9.97	10.0	100	84-120
2,3,7,8-TCDD	AveID	1.075	0.9913		9.22	10.0	92	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.070		50.8	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9639		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.056		50.5	50.0	101	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.128		49.1	50.0	98	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.287		52.8	50.0	106	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.292		53.2	50.0	106	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	1.011		47.7	50.0	95	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9724		48.9	50.0	98	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.091		49.2	50.0	98	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.320		53.2	50.0	106	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.363		47.2	50.0	94	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.056		50.3	50.0	101	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.271		48.6	50.0	97	86-116
OCDD	AveID	1.062	1.047		98.6	100	99	79-126
OCDF	AveID	1.317	1.405		107	100	107	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.353		101	100	101	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9742		105	100	105	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.209		106	100	106	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.245		111	100	111	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7328		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.102		114	100	114	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.114		104	100	104	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.089		105	100	105	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7976		105	100	105	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9094		106	100	106	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.082		111	100	111	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.9310		127	100	127	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.8156		121	100	121	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.8837		129	100	129	77-129
13C-OCDD	Ave	0.5446	0.7572		278	200	139	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.015		10.1	10.0	101	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	17AU21DFS1_1	Resolution Check	RC 081721	46			KSS	1.000	
2	17AU21DFS1_2	WDM HRDXNCP_00044	WDM 081721	1	Dioxin		KSS	1.000	
3	17AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081621	2	Dioxin		KSS	1.000	
4	17AU21DFS1_4	SB Solvent Blank C14	SB 081621	3	Dioxin		KSS	1.000	
5	17AU21DFS1_5	mb 320-513586/1-a	mb 320-513586/1-a	4	1613B/Solid	D266	KSS	1.000	g
6	17AU21DFS1_6	lcs 320-513586/2-a	lcs 320-513586/2-a	5	1613B/Solid		KSS	1.000	g
7	17AU21DFS1_7	320-76724-a-16-a 10X	320-76724-a-16-a	6	1613B/Solid	D261	KSS	1.000	g
8	17AU21DFS1_8	320-76764-a-14-a 10X	320-76764-a-14-a	7	1613B/Solid	D263	KSS	1.000	g
9	17AU21DFS1_9	320-76764-a-16-a 10X	320-76764-a-16-a	8	1613B/Solid		KSS	1.000	g
10	17AU21DFS1_10	320-76764-a-38-a 10X	320-76764-a-38-a	9	1613B/Solid		KSS	1.000	g
11	17AU21DFS1_11	320-76765-a-4-a 5X	320-76765-a-4-a	10	1613B/Solid	D264	KSS	1.000	g
12	17AU21DFS1_12	320-76769-A-30-A	320-76769-A-30-A	11	1613B/Solid	D266	KSS	1.000	g
13	17AU21DFS1_13	320-76769-A-31-A	320-76769-A-31-A	12	1613B/Solid		KSS	1.000	g
14	17AU21DFS1_14	320-76769-A-32-A	320-76769-A-32-A	13	1613B/Solid		KSS	1.000	g
15	17AU21DFS1_15	SB Solvent Blank C14	SB 081721A	3	Dioxin		KSS	1.000	
16	17AU21DFS1_16	Resolution Check	RC 081721A	46			KSS	1.000	
17	17AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081621A	2	Dioxin		KSS	1.000	
18	17AU21DFS1_18	WDM HRDXNCP_00044	WDM 081721A	1	Dioxin		KSS	1.000	
19	17AU21DFS1_19	SB Solvent Blank C14	SB 081721B	3	Dioxin		KSS	1.000	
20	17AU21DFS1_20	320-76769-A-33-A	320-76769-A-33-A	14	1613B/Solid	D266	KSS	1.000	g
21	17AU21DFS1_21	320-76769-A-34-A	320-76769-A-34-A	15	1613B/Solid		KSS	1.000	g
22	17AU21DFS1_22	320-76887-A-2-A	320-76887-A-2-A	16	1613B/Solid		KSS	1.000	g
23	17AU21DFS1_23	320-76887-A-2-B MS	320-76887-A-2-B MS	17	1613B/Solid		KSS	1.000	g
24	17AU21DFS1_24	320-76887-A-2-C MSD	320-76887-A-2-C MSD	18	1613B/Solid		KSS	1.000	g
25	17AU21DFS1_25	320-76887-A-3-A	320-76887-A-3-A	19	1613B/Solid		KSS	1.000	g
26	17AU21DFS1_26	320-76887-A-4-A	320-76887-A-4-A	20	1613B/Solid		KSS	1.000	g
27	17AU21DFS1_27	320-76887-A-5-A	320-76887-A-5-A	21	1613B/Solid		KSS	1.000	g
28	17AU21DFS1_28	320-76887-A-6-A	320-76887-A-6-A	22	1613B/Solid		KSS	1.000	g
29	17AU21DFS1_29	320-76887-A-7-A	320-76887-A-7-A	23	1613B/Solid		KSS	1.000	g
30	17AU21DFS1_30	SB Solvent Blank C14	SB 081721C	3	Dioxin		KSS	1.000	
31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A	12	1613B/Solid	D266	KSS	1.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	1.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	1.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	1.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A	27	1613B/Solid		KSS	1.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	1.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	1.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	1.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A	31	1613B/Solid		KSS	1.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32	1613B/Solid		KSS	1.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	

Log file checked
08/18/21 SMA

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	17 Aug 2021 14:07
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11192 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10617 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10669 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10902 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10643 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10651 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 9999 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10320 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10065 [5%height]

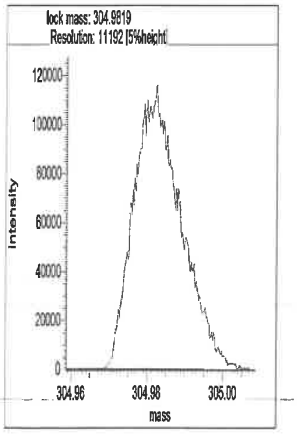

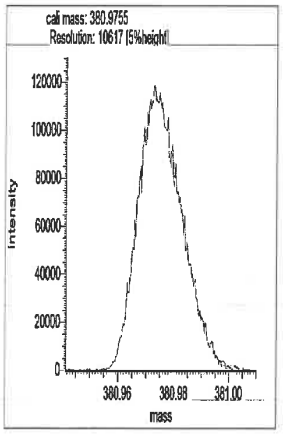

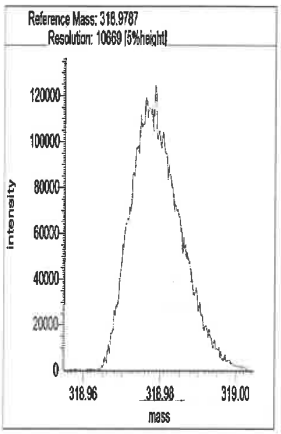

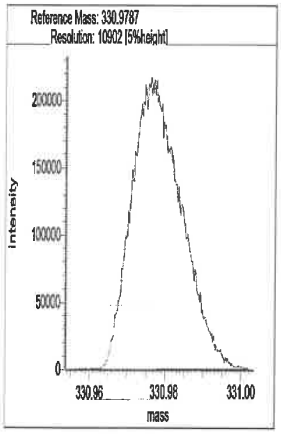

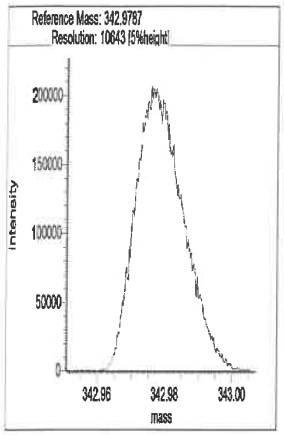

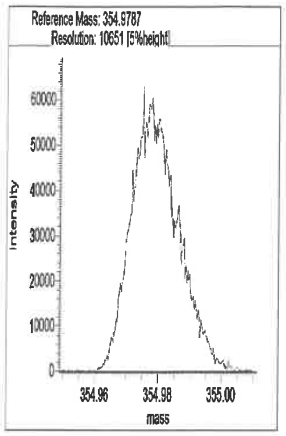

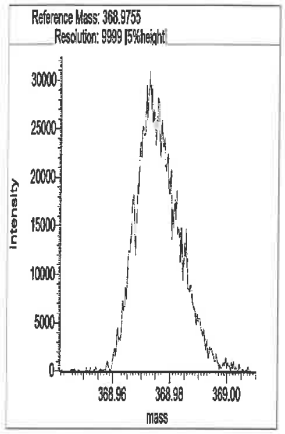

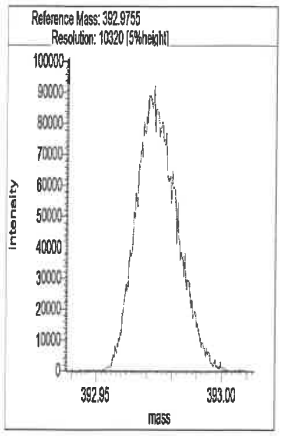

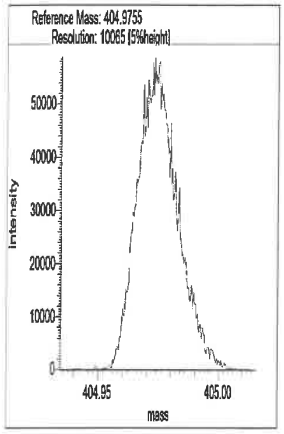

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11006 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10213 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10478 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11117 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10460 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10915 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10374 [5%height]

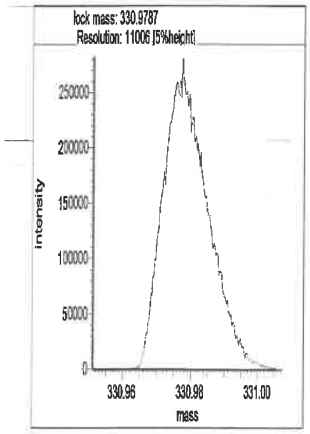

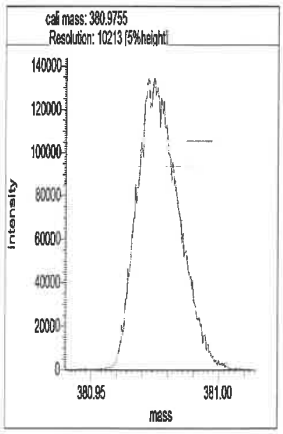

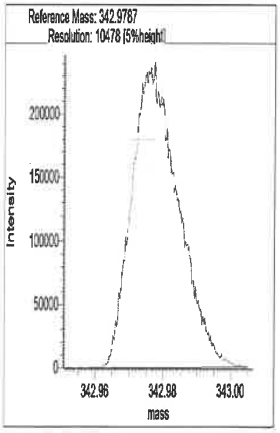

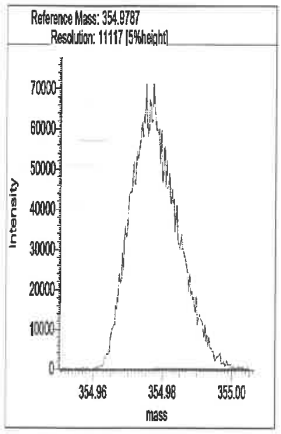

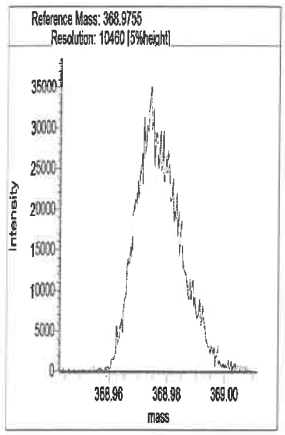

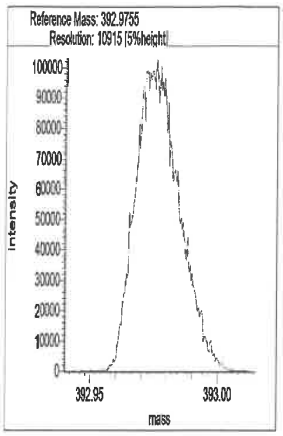

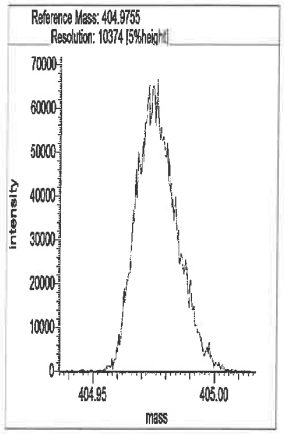

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10663 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10424 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10673 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10509 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11250 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10511 [5%height]

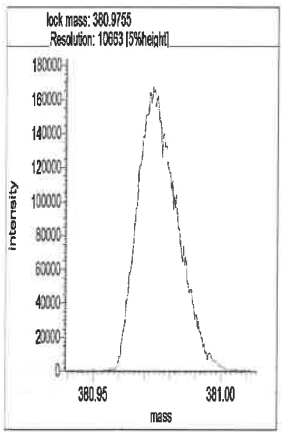

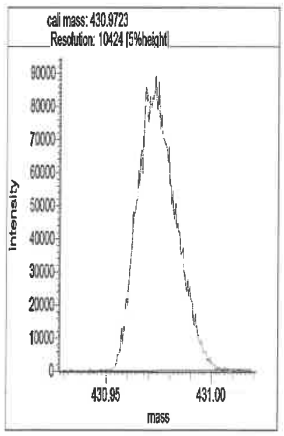

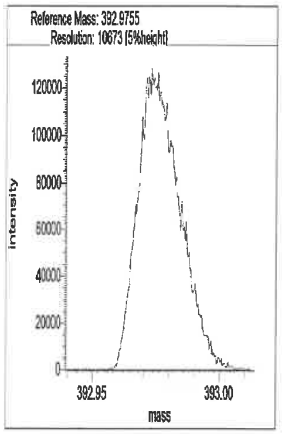

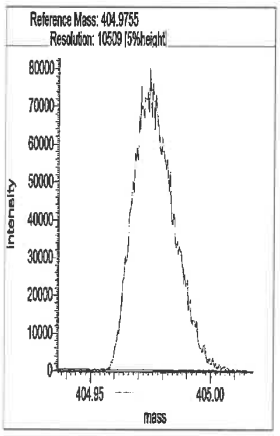

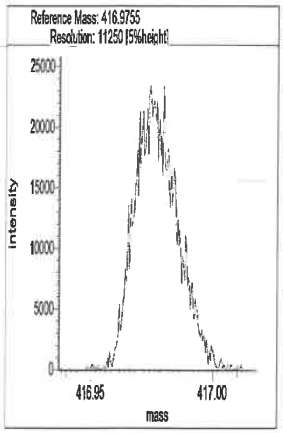

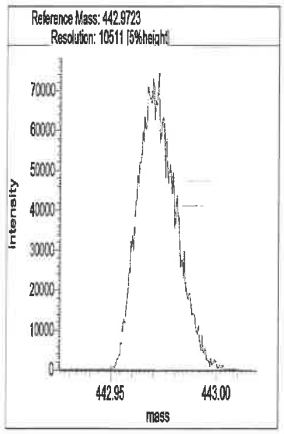

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10570 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11001 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10492 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10831 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10371 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10525 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 9876 [5%height]

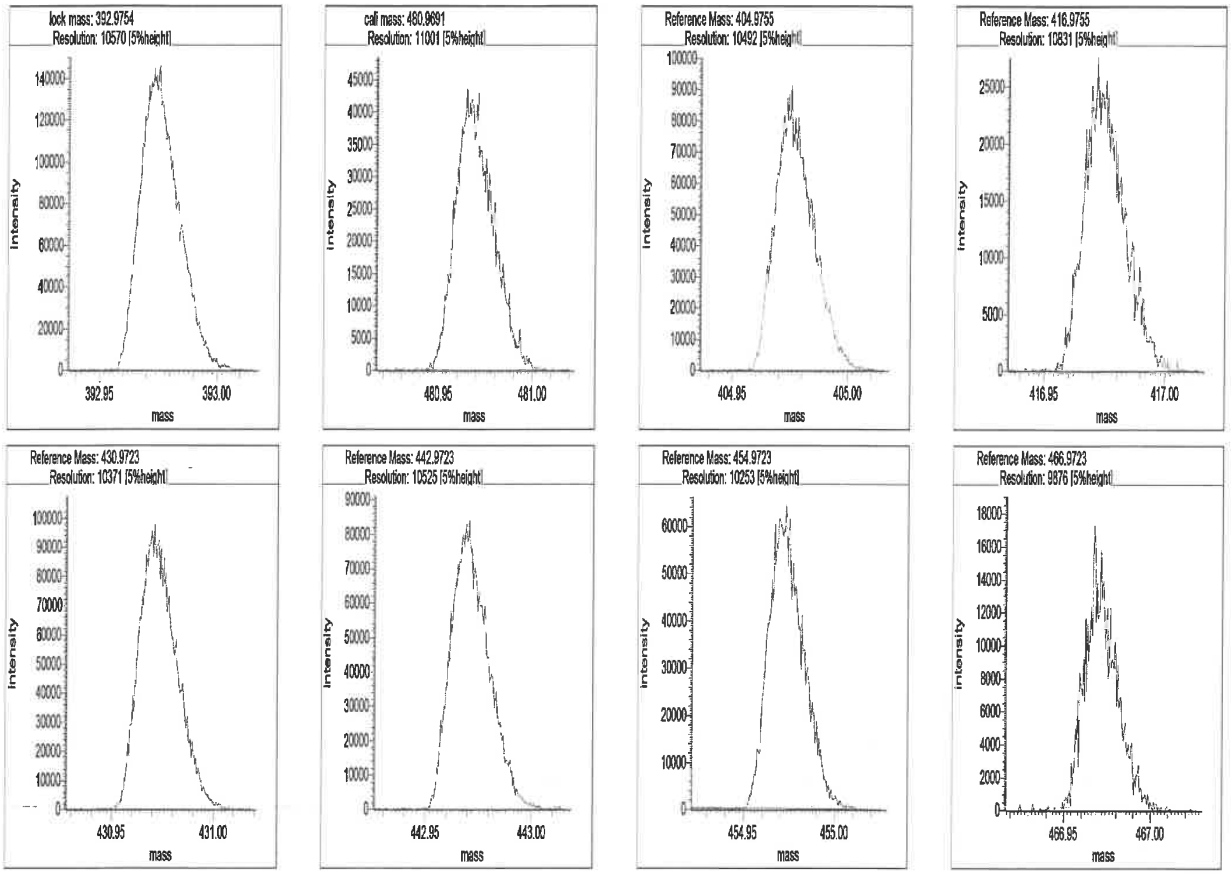

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10598 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10769 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11729 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10589 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10479 [5%height]

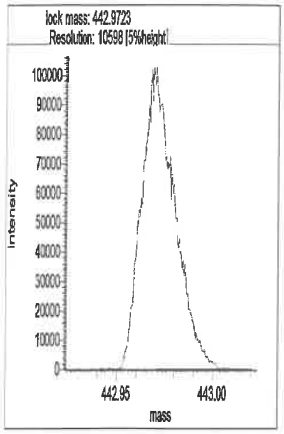
lock mass: 442.9723
Resolution: 10598 [5%height]
Intensity
mass

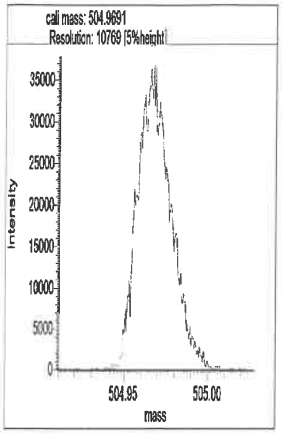
cali mass: 504.9691
Resolution: 10769 [5%height]
Intensity
mass

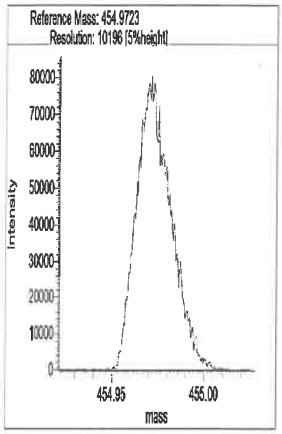
Reference Mass: 454.9723
Resolution: 10196 [5%height]
Intensity
mass

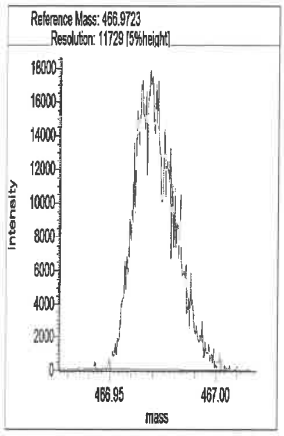
Reference Mass: 466.9723
Resolution: 11729 [5%height]
Intensity
mass

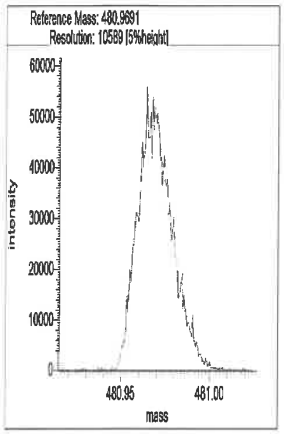
Reference Mass: 480.9691
Resolution: 10589 [5%height]
Intensity
mass

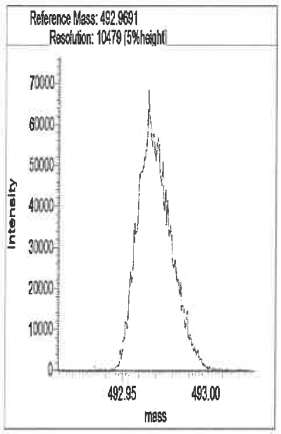
Reference Mass: 492.9691
Resolution: 10479 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 01:48
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10717 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10164 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10292 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10631 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10633 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10192 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10253 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9908 [5%height] 8/18/21 KS
Ref. mass 404.9755 [m/z] Resolution: 10394 [5%height]

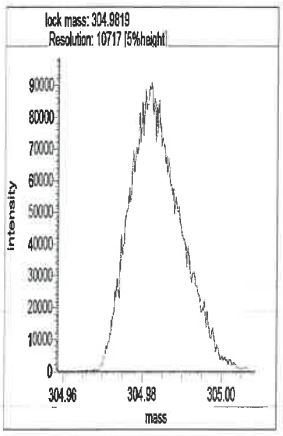

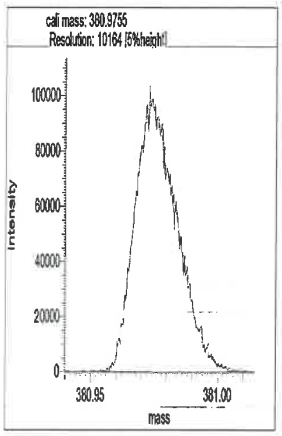

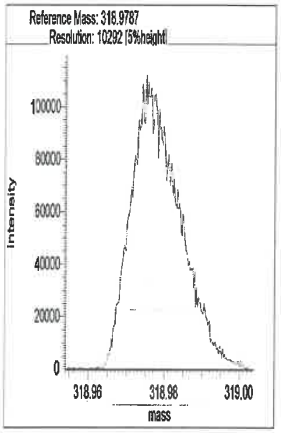

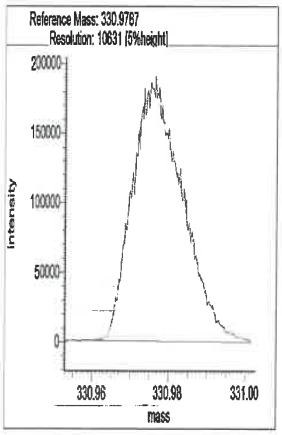

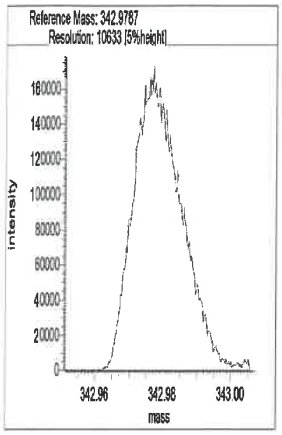

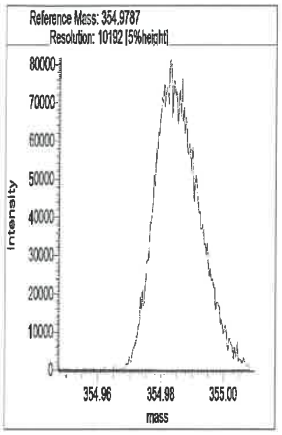

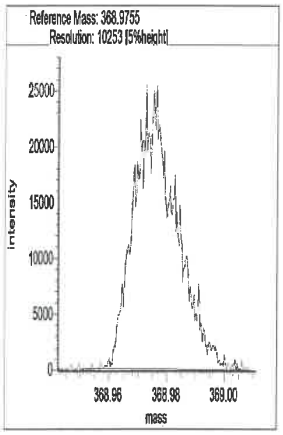

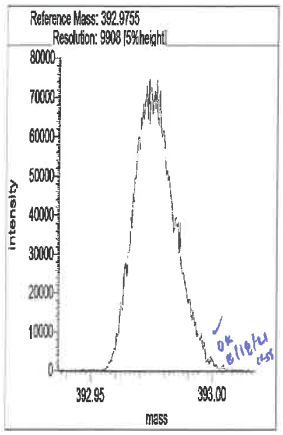

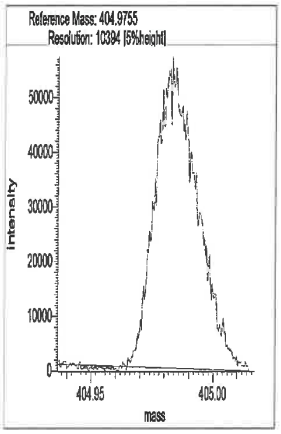

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10724 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10571 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10185 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10507 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 9890 [5%height] ✓

Ref. mass 392.9755 [m/z] Resolution: 10160 [5%height] 8/10/24 KJS

Ref. mass 404.9755 [m/z] Resolution: 9838 [5%height] ✓

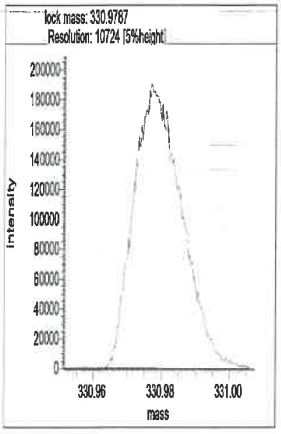

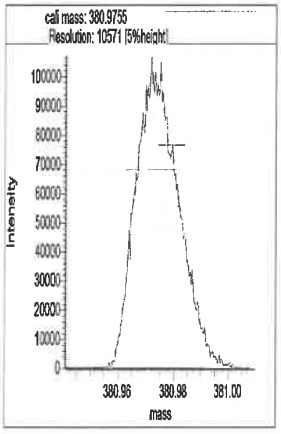

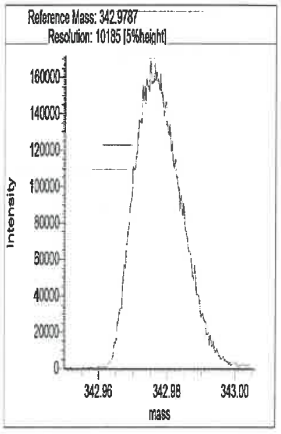

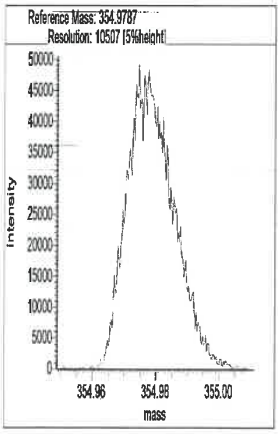

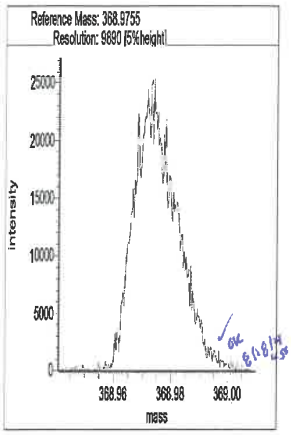

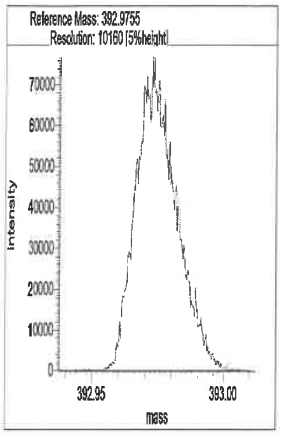

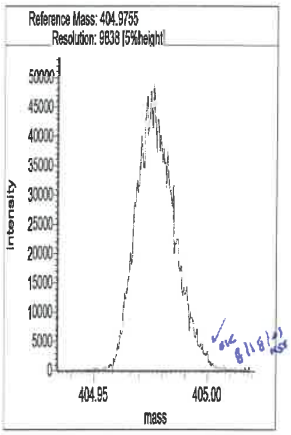

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10569 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10686 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10326 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11023 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11063 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11204 [5%height]

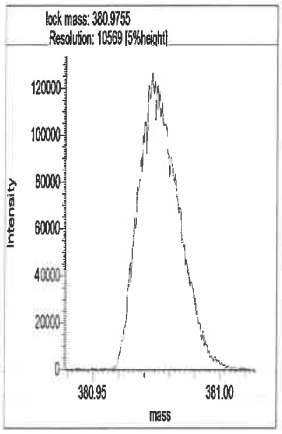

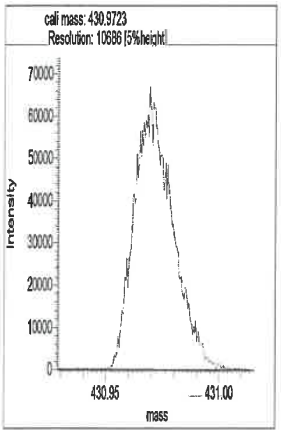

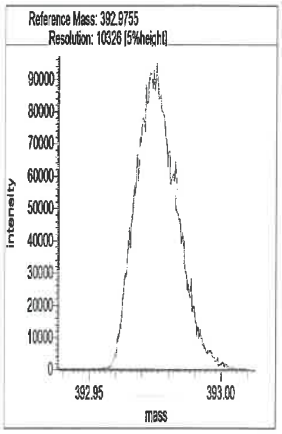

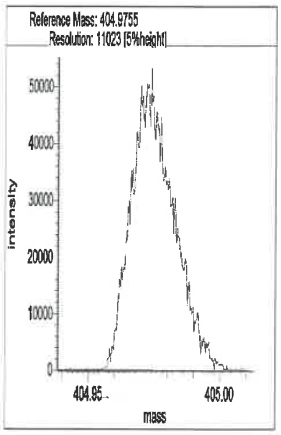

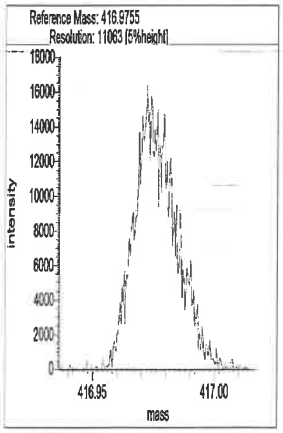

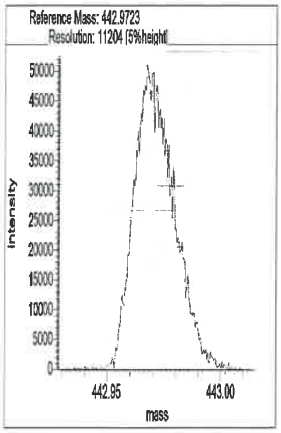

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10576 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10771 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10184 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11006 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10416 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11131 [5%height]

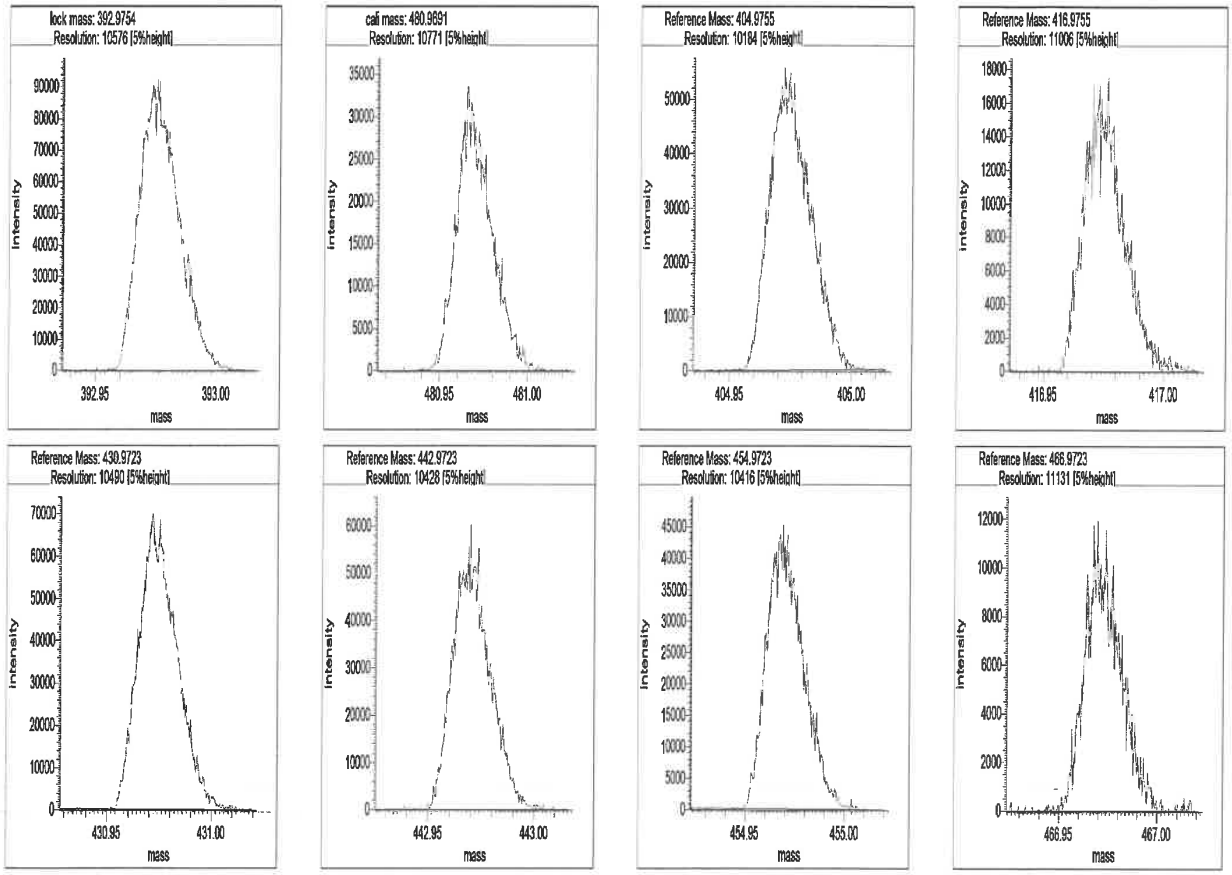

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10847 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11373 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10903 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10602 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10379 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10595 [5%height]

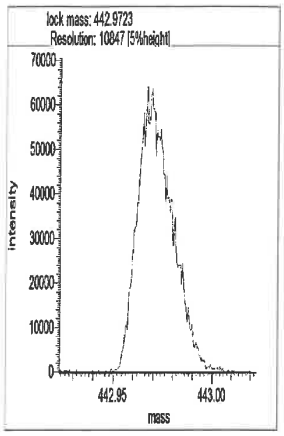
lock mass: 442.9723
Resolution: 10847 [5%height]
Intensity
mass

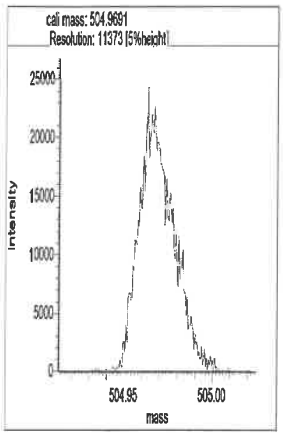
cali mass: 504.9691
Resolution: 11373 [5%height]
Intensity
mass

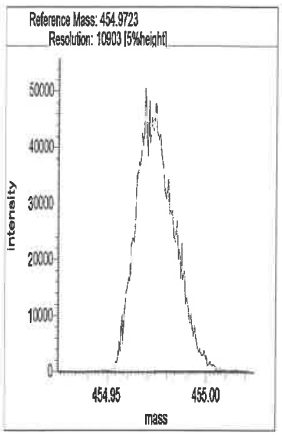
Reference Mass: 454.9723
Resolution: 10903 [5%height]
Intensity
mass

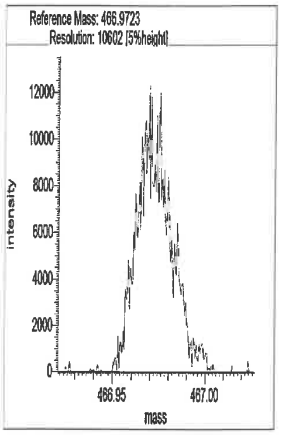
Reference Mass: 466.9723
Resolution: 10602 [5%height]
Intensity
mass

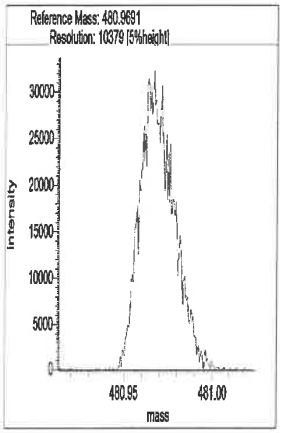
Reference Mass: 480.9691
Resolution: 10379 [5%height]
Intensity
mass

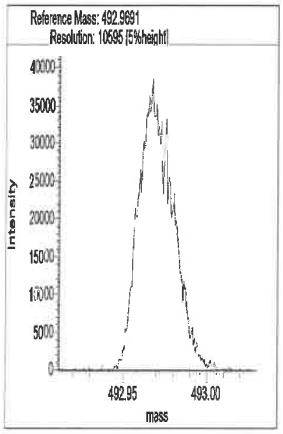
Reference Mass: 492.9691
Resolution: 10595 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

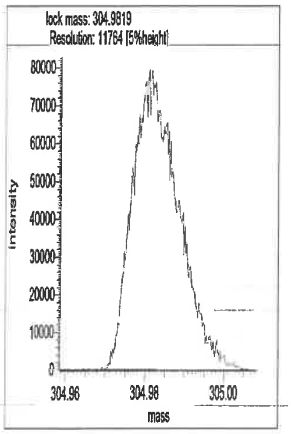

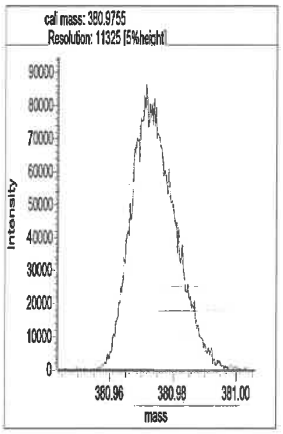

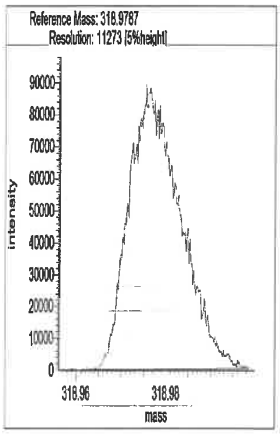

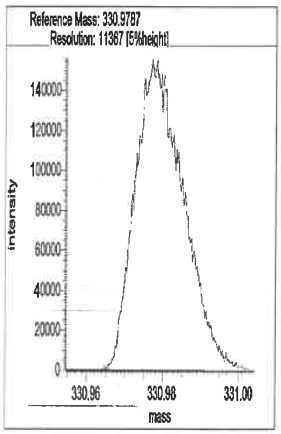

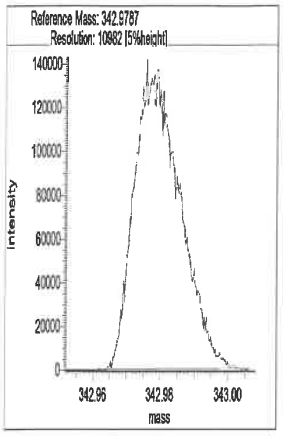

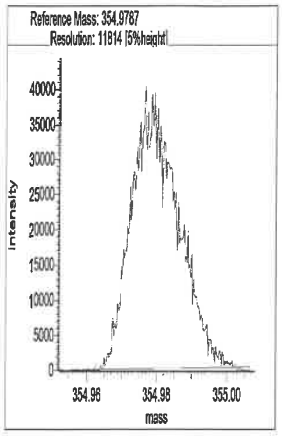

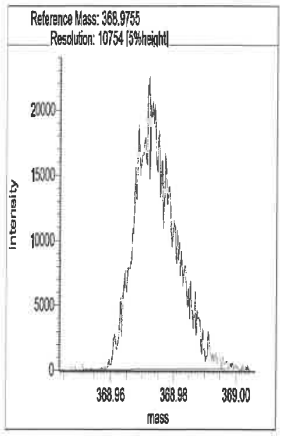

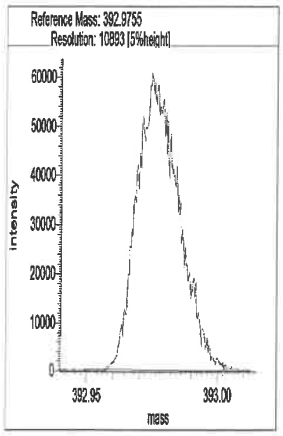

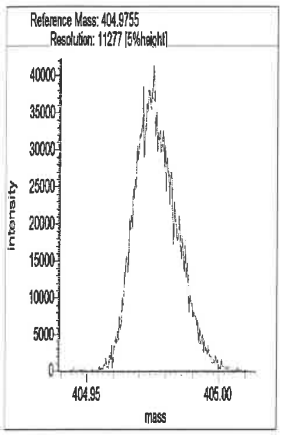

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

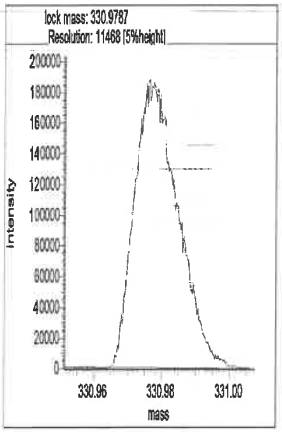

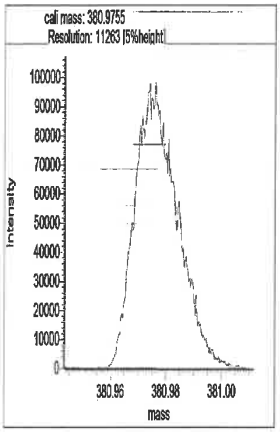

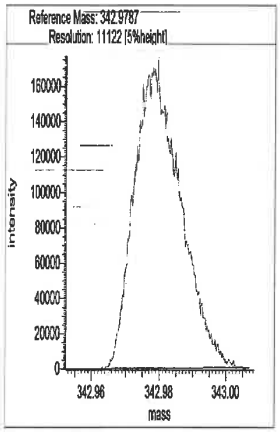

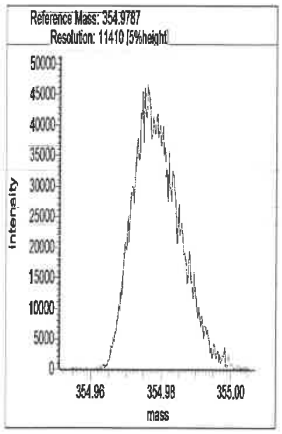

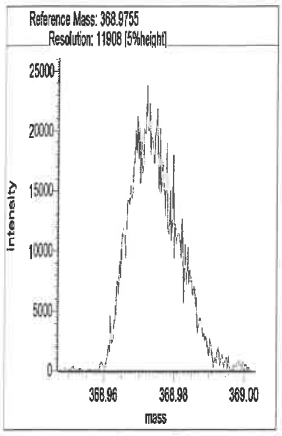

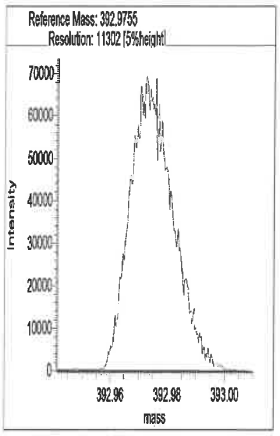

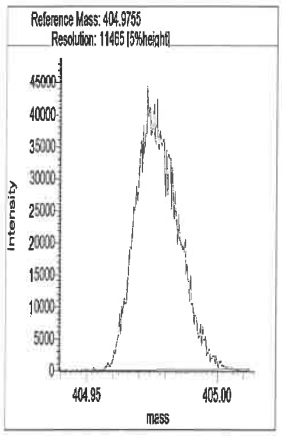

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

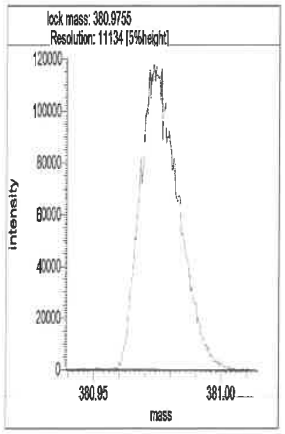

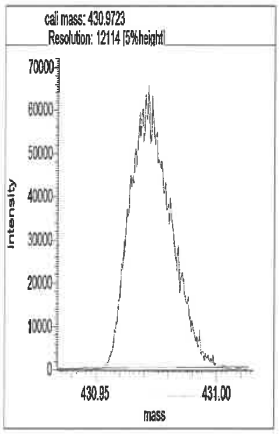

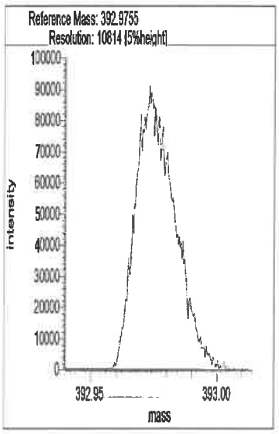

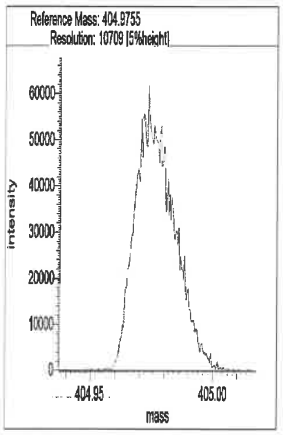

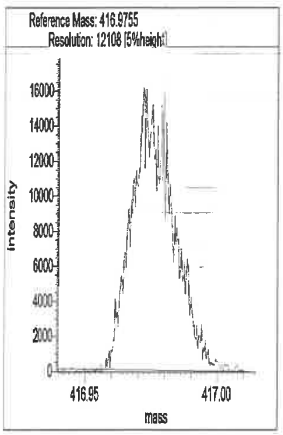

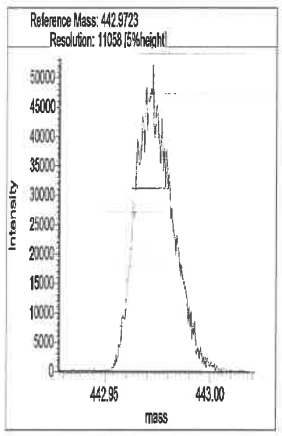

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

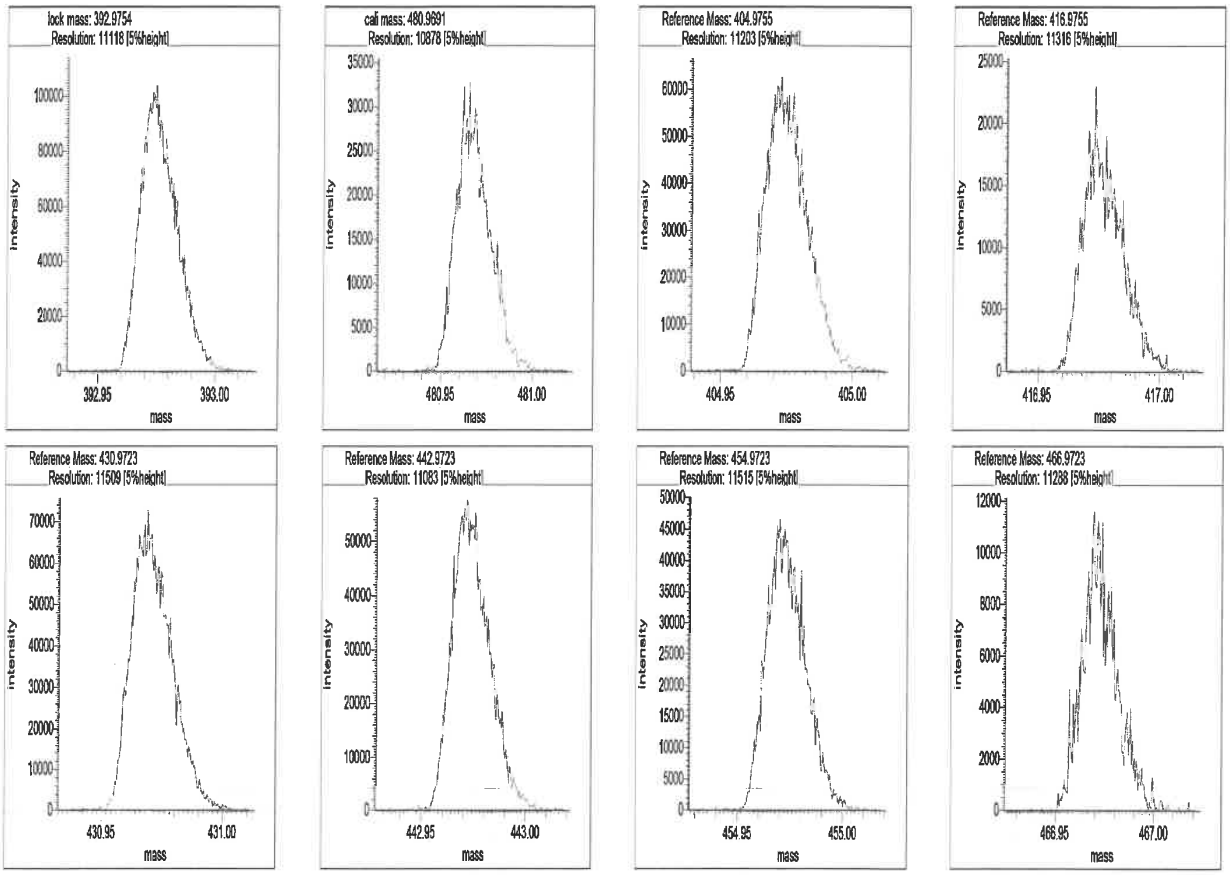

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

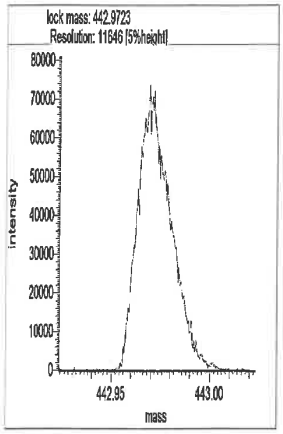
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

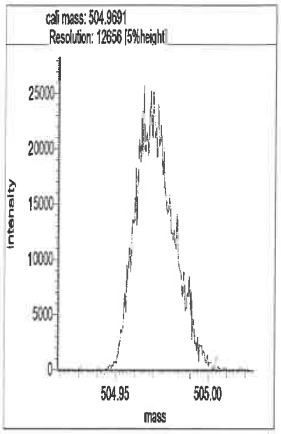
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

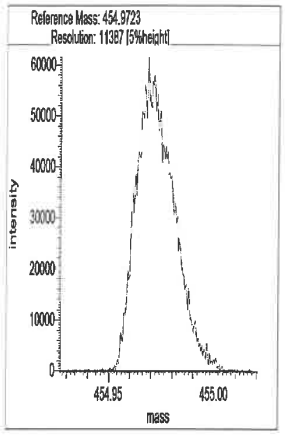
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

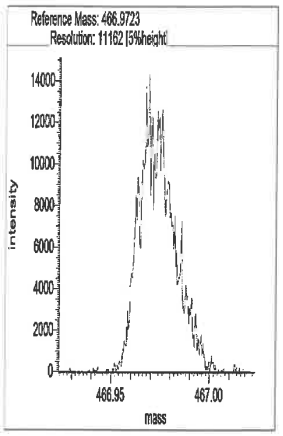
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

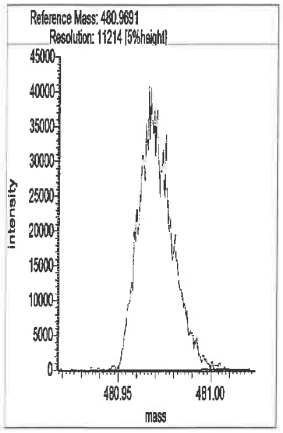
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

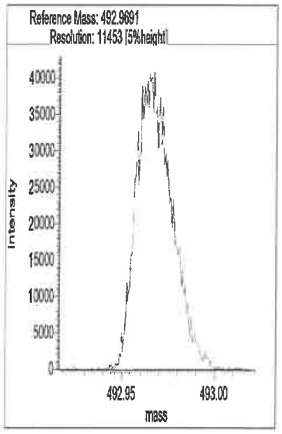
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Aug-2021 15:14:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:12 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 17:09:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.505	872844	0.84	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.517	1180751	0.79	1.3459	100.5	100.5	0.2362	0.2362	101	
2,3,7,8-TCDF	20.535	127151	0.81	1.0802	9.969	9.969	0.0201	0.0201	99.69	M
A Non-2,3,7,8-sub-TCDF	19.983	4146	0.77	1.0802	0.3965	0.3251	0.0201	0.1142	0.00	RQ
S Total TCDF					10.4	10.3	0.0201	0.0201		RQ
D 13C-2,3,7,8-TCDD	21.891	850336	0.79	0.9317	104.6	104.6	0.1468	0.1468	105	
$ 37Cl4-2,3,7,8-TCDD	21.926	88617		1.0083	10.1	10.1	0.006047	0.006047	101	
2,3,7,8-TCDD	21.900	84293	0.79	1.0753	9.218	9.218	0.0312	0.0312	92.18	
A Non-2,3,7,8-sub-TCDD	20.816	223	0.77	1.0753	0.0629	0.0244	0.0312	0.0312	0.00	RQ
S Total TCDD					9.281	9.243	0.0312	0.0312		RQ
D 13C-1,2,3,7,8-PeCDF	27.375	1055618	1.59	1.1405	106.0	106.0	0.3337	0.3337	106	
1,2,3,7,8-PeCDF	27.401	564968	1.61	1.0543	50.8	50.8	0.1524	0.1524	102	
D 13C-2,3,4,7,8-PeCDF	28.900	1086262	1.60	1.1253	110.6	110.6	0.3382	0.3382	111	
2,3,4,7,8-PeCDF	28.934	523506	1.59	1.0079	47.8	47.8	0.1622	0.1622	95.63	
A F1 PeCDFs	24.695	113	1.55	1.0311	0.0243	0.0102	0.003144	0.008151	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.196						0.1572	0.1572		n
S Total PeCDF					98.6	98.6	0.1573	0.1573		RQ
D 13C-1,2,3,7,8-PeCDD	29.734	639607	1.60	0.7165	102.3	102.3	0.1969	0.1969	102	
1,2,3,7,8-PeCDD	29.750	337811	1.56	1.0465	50.5	50.5	0.0678	0.0678	101	
A Non-2,3,7,8-sub-PeCDD	28.556						0.0678	0.0678		
S Total PeCDD					50.5	50.5	0.0678	0.0678		
D 13C-1,2,3,4,7,8-HxCDF	35.008	1081014	0.54	0.9648	114.2	114.2	0.3692	0.3692	114	
1,2,3,4,7,8-HxCDF	35.034	609522	1.29	1.1474	49.1	49.1	0.2200	0.2200	98.28	
D 13C-1,2,3,6,7,8-HxCDF	35.177	1092903	0.52	1.0708	104.0	104.0	0.3326	0.3326	104	
1,2,3,6,7,8-HxCDF	35.185	703282	1.26	1.2178	52.8	52.8	0.2080	0.2080	106	
D 13C-2,3,4,6,7,8-HxCDF	35.977	1067773	0.54	1.0413	104.5	104.5	0.3421	0.3421	105	
2,3,4,6,7,8-HxCDF	35.994	689655	1.27	1.2145	53.2	53.2	0.1898	0.1898	106	
D 13C-1,2,3,7,8,9-HxCDF	36.861	1061355	0.53	0.9731	111.2	111.2	0.3660	0.3660	111	
1,2,3,7,8,9-HxCDF	36.878	700315	1.29	1.2401	53.2	53.2	0.1808	0.1808	106	
A Non-2,3,7,8-sub-HxCDF	35.117						0.1987	0.1987		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					208.4	208.4	0.1996	0.1996		
* 13C-1,2,3,7,8,9-HxCDD	36.667	980938	1.26	1.8E+04	100.0	100.0				M
D 13C-1,2,3,4,7,8-HxCDD	36.196	782379	1.29	0.7587	105.1	105.1	0.2282	0.2282	105	
1,2,3,4,7,8-HxCDD	36.204	395636	1.27	1.0608	47.7	47.7	0.1125	0.1125	95.34	
D 13C-1,2,3,6,7,8-HxCDD	36.305	892057	1.27	0.8593	105.8	105.8	0.2015	0.2015	106	
1,2,3,6,7,8-HxCDD	36.322	433723	1.26	0.9933	48.9	48.9	0.1139	0.1139	97.89	
1,2,3,7,8,9-HxCDD	36.684	456594	1.27	1.1094	49.2	49.2	0.1047	0.1047	98.32	
A Non-2,3,7,8-sub-HxCDD	35.475						0.1102	0.1102		
S Total HxCDD					145.8	145.8	0.1104	0.1104		
D 13C-1,2,3,4,6,7,8-HpCDF	38.668	913255	0.46	0.7359	126.5	126.5	0.4372	0.4372	127	
1,2,3,4,6,7,8-HpCDF	38.685	622245	1.03	1.4421	47.2	47.2	0.2066	0.2066	94.50	
D 13C-1,2,3,4,7,8,9-HpCDF	39.923	866894	0.46	0.6854	128.9	128.9	0.4695	0.4695	129	M
1,2,3,4,7,8,9-HpCDF	39.932	551031	1.06	1.3092	48.6	48.6	0.2261	0.2261	97.11	
A Non-2,3,7,8-sub-HpCDF	39.301						0.2159	0.2159		n
S Total HpCDF					95.8	95.8	0.2164	0.2164		
D 13C-1,2,3,4,6,7,8-HpCDD	39.612	800046	1.03	0.6745	120.9	120.9	0.3371	0.3371	121	
1,2,3,4,6,7,8-HpCDD	39.620	422590	1.04	1.0503	50.3	50.3	0.1108	0.1108	101	
A Non-2,3,7,8-sub-HpCDD	39.297	9241	1.16	1.0503	1.100	1.100	0.1108	1.100	0.00	
S Total HpCDD					51.4	51.4	0.1108	0.1108		
D 13C-OCDD	42.118	1485464	0.88	0.5446	278.0	278.0	0.3266	0.3266	139	
OCDF	42.211	1043496	0.93	1.3168	106.7	106.7	0.1409	0.1409	107	
OCDD	42.126	777414	0.91	1.0620	98.6	98.6	0.1110	0.1110	98.56	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 17-Aug-2021 15:14:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:12 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 17:09:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.505	21.505	0		399246	51899	51	127	1018		a
333.9338	21.470	21.505	-2		473598	62915	12	30	5243	0.84(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.517	20.517	0	0.954	520031	67444	106	265	636		
317.9389	20.509	20.517	-1	0.954	660720	93847	40	100	2346	0.79(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.535	20.580	-3	1.001	56730	7695	5	12	1539		M
305.8987	20.543	20.580	-2	1.001	70421	9641	9	22	1071	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.938	19.983	-63	0.923	170	62	5	12	12		
305.8987	18.955	19.983	-62	0.924	483	58	9	22	6	0.35(0.65-0.89)	
	Empc Correction				220	80	9	22	9		
303.9016	19.805	19.983	-11	0.965	792	127	5	12	25		
	Empc Correction				587	121	5	12	24		
305.8987	19.840	19.983	-9	0.967	763	158	9	22	18	1.04(0.65-0.89)	
303.9016	20.809	19.983	49	1.014	966	211	5	12	42		
	Empc Correction				633	132	5	12	26		
305.8987	20.809	19.983	49	1.014	823	172	9	22	19	1.17(0.65-0.89)	
303.9016	20.869	19.983	53	1.017	259	106	5	12	21		
305.8987	20.904	19.983	55	1.019	397	182	9	22	20	0.65(0.65-0.89)	
303.9016	22.123	19.983	128	1.078	128	60	5	12	12		
305.8987	22.115	19.983	128	1.078	276	92	9	22	10	0.46(0.65-0.89)	
	Empc Correction				166	77	9	22	9		
13C-2,3,7,8-TCDD											
331.9368	21.891	21.891	0	1.018	376057	46512	51	127	912		
333.9338	21.866	21.891	-2	1.017	474279	57849	12	30	4821	0.79(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											
327.8847	21.926	21.926	0	1.020	88617	11185	3	7	3728		
2,3,7,8-TCDD											
319.8965	21.900	21.928	-2	1.000	37238	5208	11	27	473		
321.8936	21.917	21.928	-1	1.001	47055	5923	3	7	1974	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.347	20.816	92	1.021	449	96	11	27	9		
	Empc Correction				97	52	11	27	5		
321.8936	22.364	20.816	93	1.022	126	68	3	7	23	3.56(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.375	27.375	0	1.273	648386	95776	93	232	1030		
353.8970	27.375	27.375	0	1.273	407232	59794	82	205	729	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.401	27.401	0	1.001	348720	51626	58	145	890		
341.8567	27.401	27.401	0	1.001	216248	31764	42	105	756	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.900	28.900	0	1.344	668645	94221	93	232	1013		
353.8970	28.908	28.900	1	1.344	417617	58719	82	205	716	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.934	28.934	0	1.001	321600	44628	58	145	769		
341.8567	28.934	28.934	0	1.001	201906	27959	42	105	666	1.59(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.107	24.695	-35	0.881	55	39	1	2	39		
341.8567	24.098	24.695	-36	0.880	103	52	1	2	52	0.53(1.32-1.78)	
	Empc Correction				35	25	1	2	25		
339.8597	24.167	24.695	-32	0.883	14	7	1	2	7		
341.8567	24.158	24.695	-32	0.882	96	38	1	2	38	0.15(1.32-1.78)	
	Empc Correction				9	4	1	2	4		
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.990	28.196	-12	1.022	3347	463	58	145	8		
341.8567	28.007	28.196	-11	1.023	1993	308	42	105	7	1.68(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.734	29.734	0	1.383	393342	53131	43	107	1236		
369.8919	29.717	29.734	-1	1.382	246265	31489	22	55	1431	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.750	29.750	0	1.001	206041	26780	17	42	1575		
357.8516	29.742	29.750	-1	1.000	131770	17431	7	17	2490	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						17	42			
357.8516	28.556						7	17			
13C-1,2,3,4,7,8-HxCDF											
383.8639	35.008	35.008	0	0.955	377816	74219	109	272	681		
385.8610	35.017	35.008	1	0.955	703198	136560	193	482	708	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.034	35.034	0	1.001	343279	67338	118	295	571		
375.8178	35.034	35.034	0	1.001	266243	52523	95	237	553	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.177	35.177	0	0.959	376027	74811	109	272	686		
385.8610	35.177	35.177	0	0.959	716876	135202	193	482	701	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.185	35.185	0	1.000	392015	74402	118	295	631		
375.8178	35.185	35.185	0	1.000	311267	58994	95	237	621	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.977	35.977	0	0.981	372963	83270	109	272	764		
385.8610	35.985	35.977	1	0.981	694810	147559	193	482	765	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.994	35.994	0	1.000	386238	84058	118	295	712		
375.8178	35.994	35.994	0	1.000	303417	65154	95	237	686	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.861	36.861	0	1.005	369514	83111	109	272	762		
385.8610	36.870	36.861	1	1.006	691841	154196	193	482	799	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.878	36.878	0	1.000	393832	87889	118	295	745		
375.8178	36.878	36.878	0	1.000	306483	68413	95	237	720	1.29(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.117						118	295			
375.8178	35.117						95	237			
13C-1,2,3,7,8,9-HxCDD											M
401.8559	36.667	36.667	0		547692	117622	80	200	1470		M
403.8529	36.667	36.667	0		433246	94341	67	167	1408	1.26(1.05-1.43)	M
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.196	36.196	0	0.987	440249	100900	80	200	1261		
403.8529	36.187	36.196	-1	0.987	342130	79230	67	167	1183	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.204	36.204	0	1.000	221550	51035	52	130	981		
391.8127	36.204	36.204	0	1.000	174086	38510	34	85	1133	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.305	36.305	0	0.990	498419	104261	80	200	1303		
403.8529	36.305	36.305	0	0.990	393638	85751	67	167	1280	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.322	36.322	0	1.000	242161	51161	52	130	984		
391.8127	36.322	36.322	0	1.000	191562	39885	34	85	1173	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.684	36.684	0	1.013	255516	54919	52	130	1056		
391.8127	36.684	36.684	0	1.013	201078	43958	34	85	1293	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.475						52	130			
391.8127	35.475						34	85			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.668	38.668	0	1.055	285619	74123	93	232	797		
419.8220	38.668	38.668	0	1.055	627636	159832	180	450	888	0.46(0.37-0.51)	

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											
407.7817	38.685	38.685	0	1.000	315818	79975	147	367	544		
409.7788	38.685	38.685	0	1.000	306427	78448	132	330	594	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											M
417.8250	39.923	39.923	0	1.089	274228	74693	93	232	803		M
419.8220	39.923	39.923	0	1.089	592666	160744	180	450	893	0.46(0.37-0.51)	M
1,2,3,4,7,8,9-HpCDF											
407.7817	39.932	39.932	0	1.000	282904	78576	147	367	535		
409.7788	39.932	39.932	0	1.000	268127	73201	132	330	555	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.912	39.301	-23	1.006	4859	976	147	367	7		
409.7788	38.912	39.301	-23	1.006	4264	991	132	330	8	1.14(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.612	39.612	0	1.080	406701	112657	68	170	1657		
437.8140	39.612	39.612	0	1.080	393345	110709	125	312	886	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.620	39.620	0	1.000	215461	58465	40	100	1462		
425.7737	39.620	39.620	0	1.000	207129	56768	64	160	887	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.988	39.297	-19	0.984	4970	1304	40	100	33		
425.7737	38.996	39.297	-18	0.984	4271	1241	64	160	19	1.16(0.88-1.20)	
13C-OCDD											
469.7780	42.118	42.118	0	1.149	697151	158566	72	180	2202		
471.7750	42.109	42.118	-1	1.148	788313	180878	79	197	2290	0.88(0.76-1.02)	
OCDF											
441.7428	42.211	42.211	0	1.002	502591	114869	45	112	2553		
443.7399	42.211	42.211	0	1.002	540905	125676	81	202	1552	0.93(0.76-1.02)	
OCDD											
457.7377	42.126	42.126	0	1.000	369625	84840	36	90	2357		
459.7348	42.126	42.126	0	1.000	407789	93747	44	110	2131	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 17-Aug-2021 15:14:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.983

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1180751	161291

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1180751	161291

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.938	170	62	483	58	0.0512	0.35	RnQ
18.938	170	62	220	80	0.0306		Empc Correction
19.805	792	127	763	158	0.1219	1.04	RQ
19.805	587	121	763	158	0.1058		Empc Correction
20.809	966	211	823	172	0.1403	1.17	RQ
20.809	633	132	823	172	0.1142		Empc Correction
20.869	259	106	397	182	0.0514	0.65	
22.123	128	60	276	92	0.0317	0.46	RQ
22.123	128	60	166	77	0.0231		Empc Correction
Signal Totals:							
	1777	481	2369	669			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5057	1228				0.84	RQ
	4146	1150					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3965 = (5057 * 100.000) / (1180751 * 1.080)
Empc Amount: 0.3251 = (4146 * 100.000) / (1180751 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 17-Aug-2021 15:14:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDD, RT: 20.816

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	850336	104361

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	850336	104361

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.347	449	96	126	68	0.0629	3.56	RnQ
22.347	97	52	126	68	0.0244		Empc Correction
Signal Totals:							
	97	52	126	68			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	575	164				3.56	RQ
	223	120					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0629 = (575 * 100.000) / (850336 * 1.075)
Empc Amount: 0.0244 = (223 * 100.000) / (850336 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 17-Aug-2021 15:14:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.695

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1055618	155570
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1086262	152940

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1070940	154255

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.107	55	39	103	52	0.0143	0.53	RQ
24.107	55	39	35	25	0.008151		Empc Correction
24.167	14	7	96	38	0.0100	0.15	RnQ
24.167	14	7	9	4	0.002083		Empc Correction
Signal Totals:							
	69	46	44	29			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	268	136				0.35	RQ
	113	75					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0243 = (268 * 100.000) / (1070940 * 1.031)
Empc Amount: 0.0102 = (113 * 100.000) / (1070940 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	17-Aug-2021 15:14:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-HpCDD, RT: 39.297

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	800046	223366

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	800046	223366

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.988	4970	1304	4271	1241	1.10	1.16	
Signal Totals:							
	4970	1304	4271	1241			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9241	2545				1.16	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.100 = (9241 * 100.000) / (800046 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Not Detected
Expected RT: 21.50

Processing Integration Results

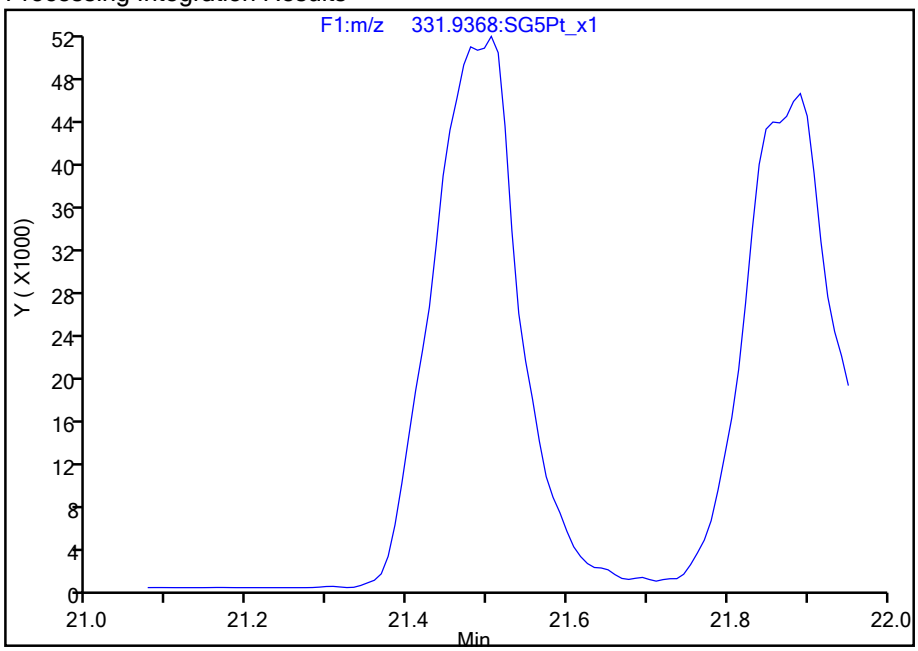

Manual Integration Results

RT: 21.50
Area: 399246
Amount: 100.0000
Amount Units: pg/ul

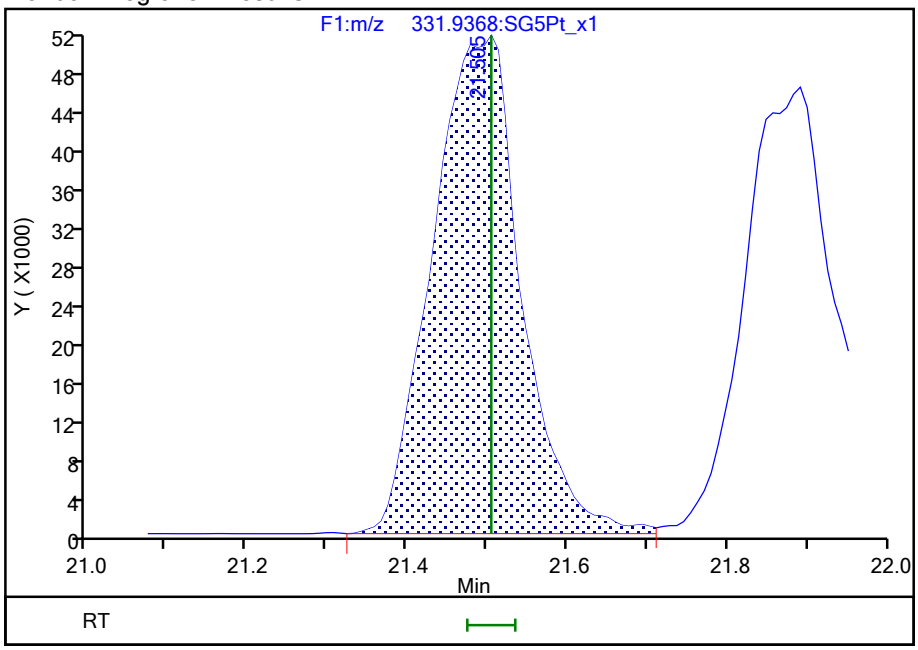

Reviewer: stephensk, 17-Aug-2021 16:07:19
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

786098

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.53
Area: 54682
Amount: 9.808624
Amount Units: pg/ul

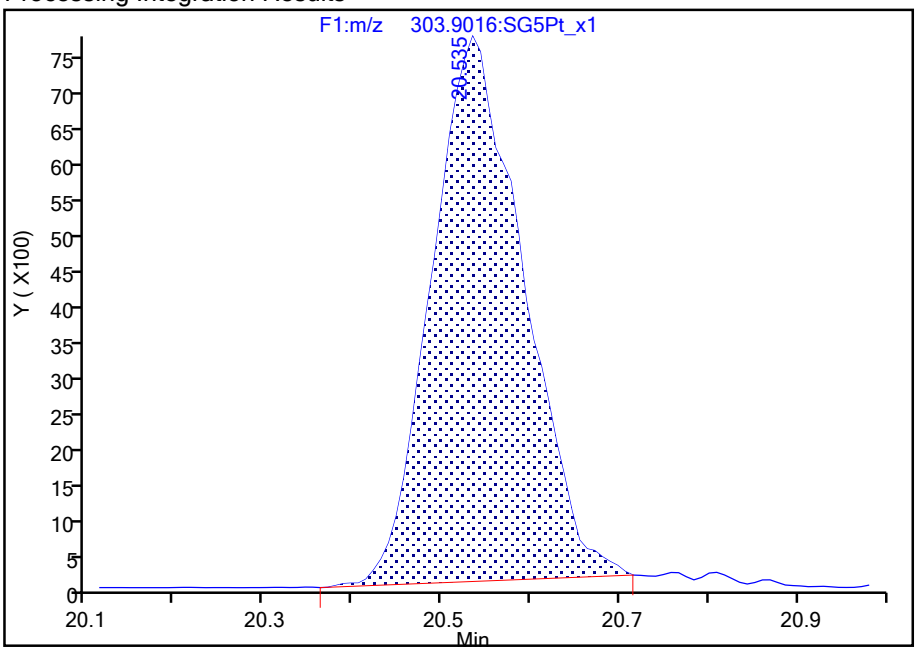

Manual Integration Results

RT: 20.53
Area: 56730
Amount: 9.969196
Amount Units: pg/ul

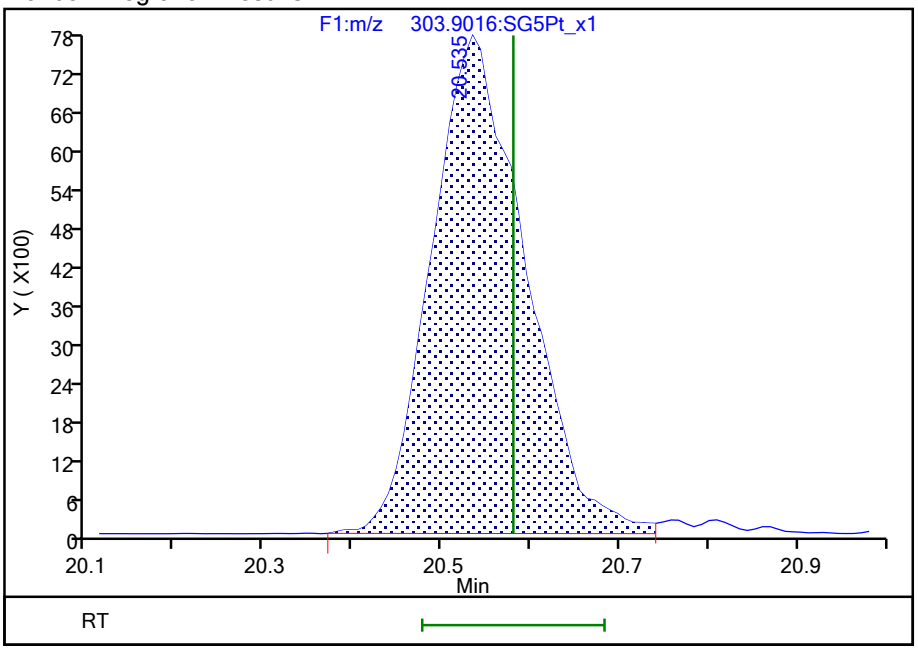

Reviewer: stephensk, 17-Aug-2021 16:07:38

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 1

Processing Integration Results

RT: 36.67
Area: 546030
Amount: 100.0000
Amount Units: pg/ul

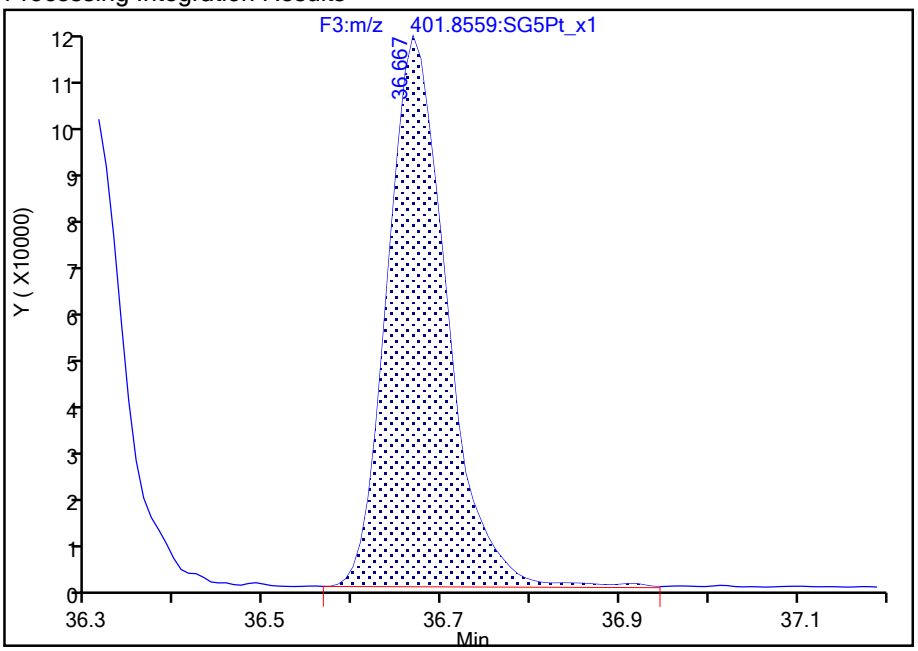

Manual Integration Results

RT: 36.67
Area: 547692
Amount: 100.0000
Amount Units: pg/ul

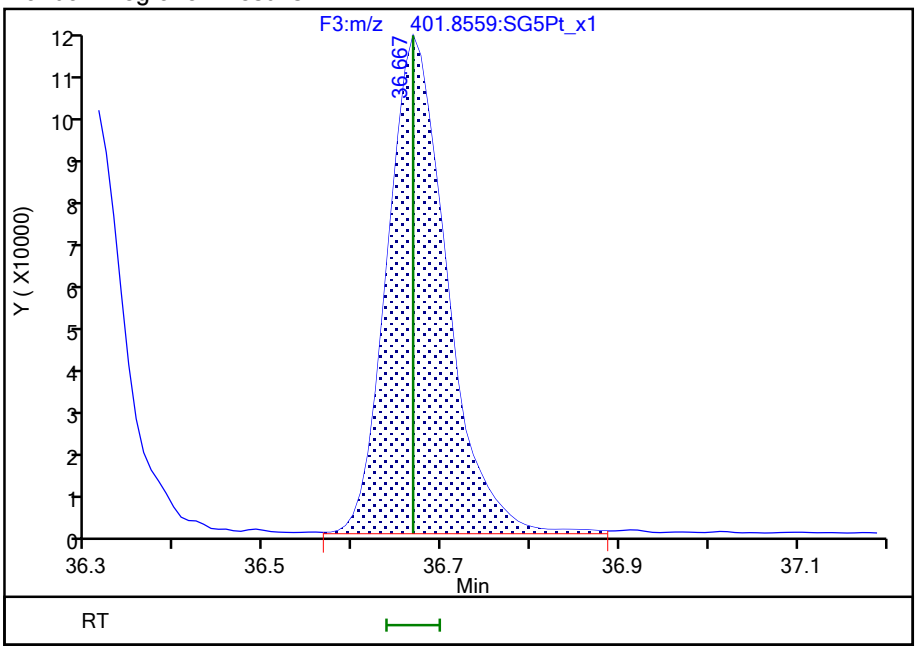

Reviewer: stephensk, 17-Aug-2021 16:09:43

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 2

Processing Integration Results

RT: 36.67
Area: 430515
Amount: 100.0000
Amount Units: pg/ul

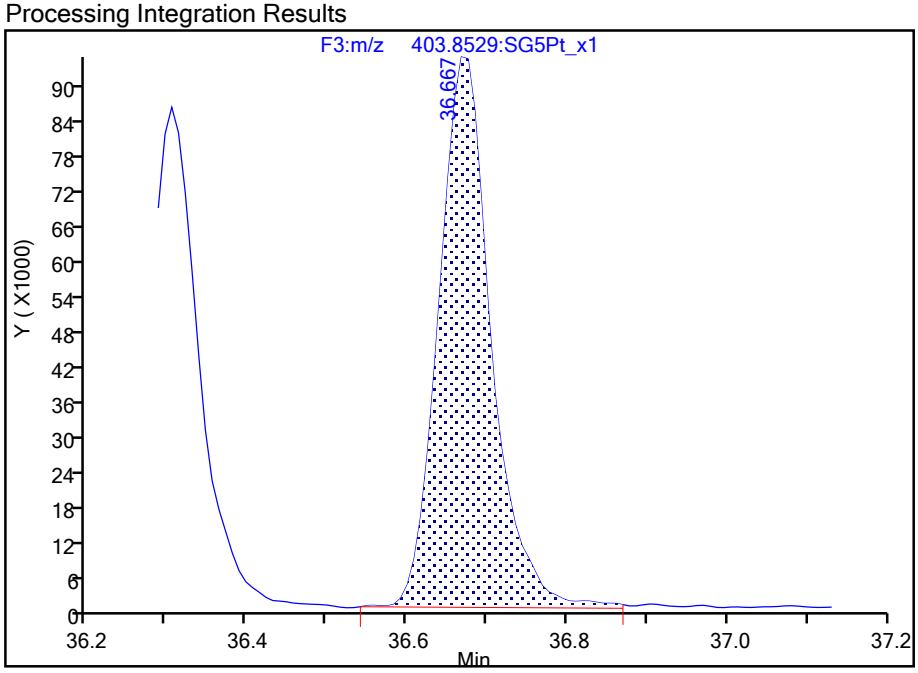

Manual Integration Results

RT: 36.67
Area: 433246
Amount: 100.0000
Amount Units: pg/ul

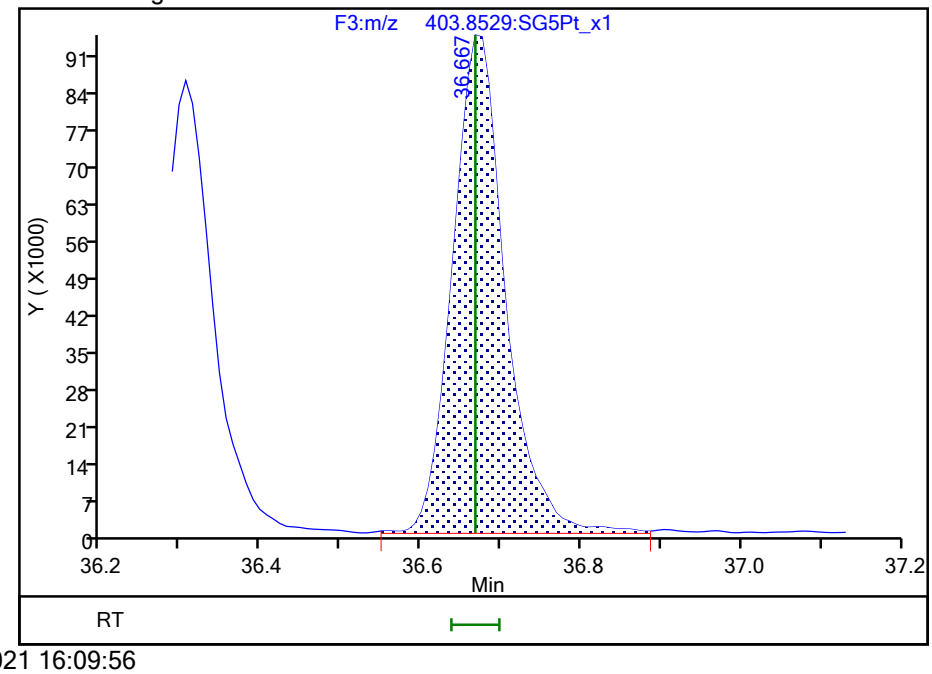

Reviewer: stephensk, 17-Aug-2021 16:09:56

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

RT: 39.92
Area: 275099
Amount: 130.6760
Amount Units: pg/ul

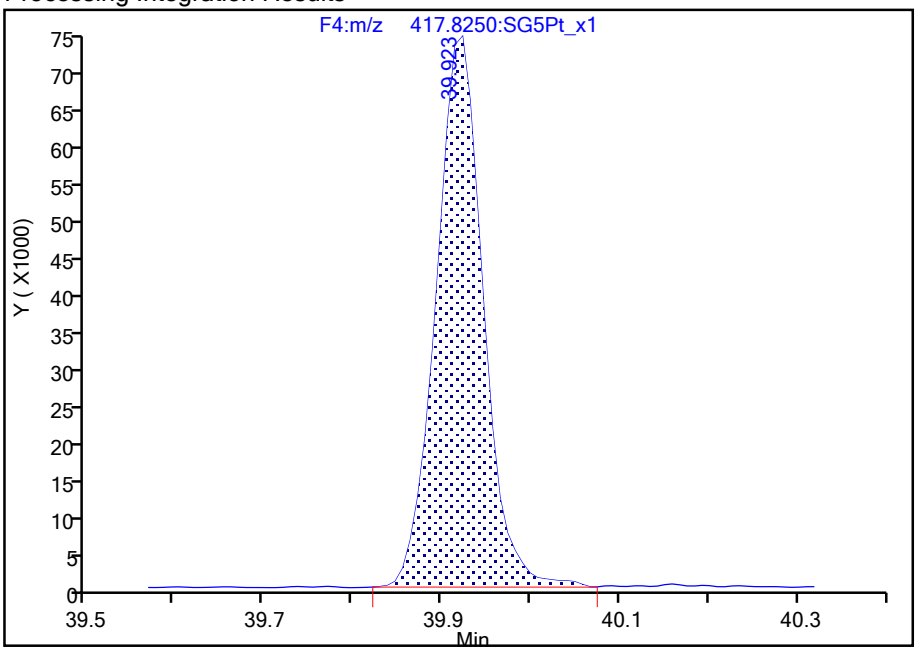

Manual Integration Results

RT: 39.92
Area: 274228
Amount: 128.9419
Amount Units: pg/ul

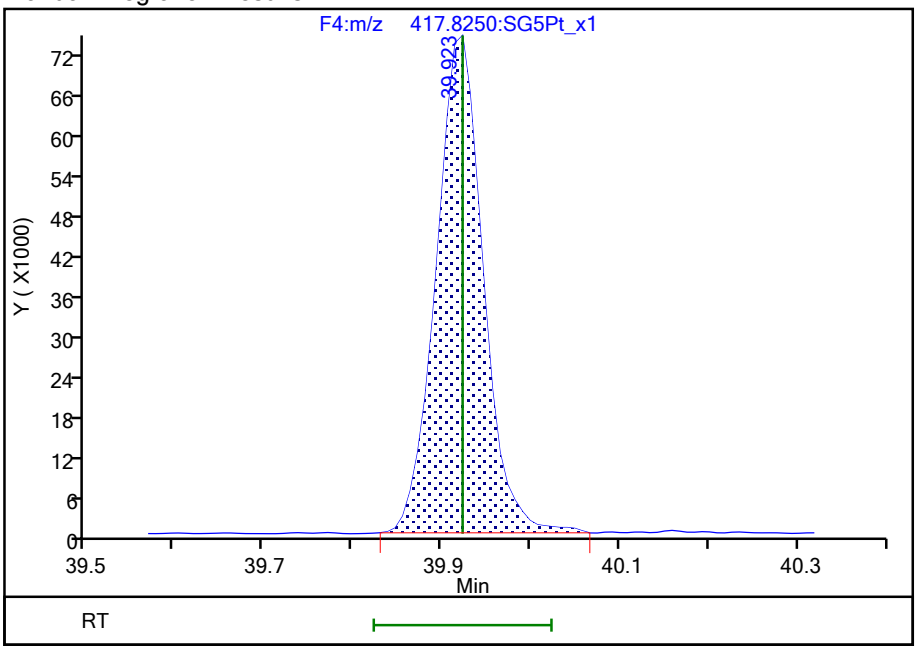

Reviewer: stephensk, 17-Aug-2021 16:09:13

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d				
Injection Date:	17-Aug-2021 15:14:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 2

Processing Integration Results

RT: 39.92
Area: 599519
Amount: 130.6760
Amount Units: pg/ul

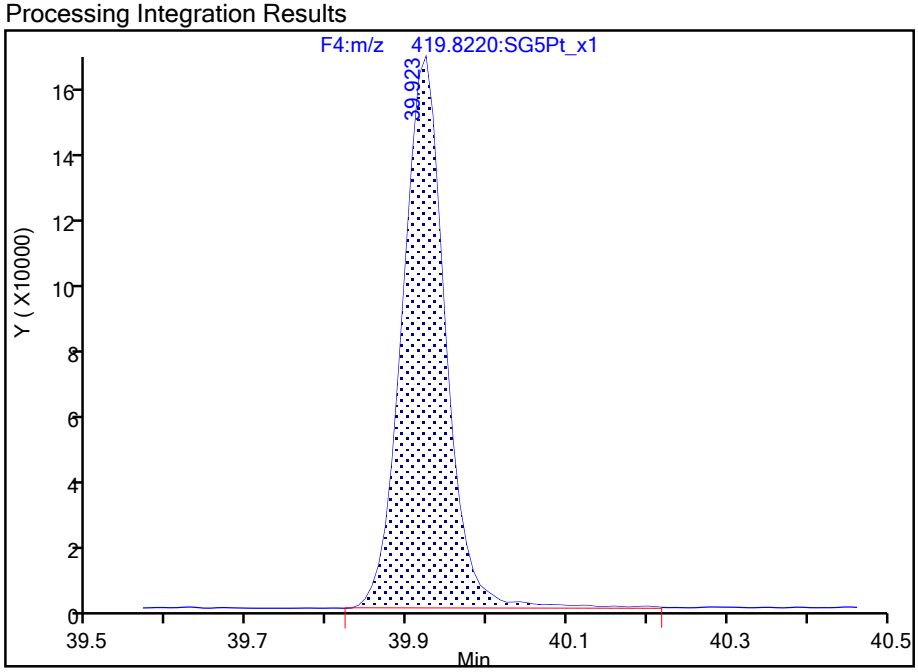

Manual Integration Results

RT: 39.92
Area: 592666
Amount: 128.9419
Amount Units: pg/ul

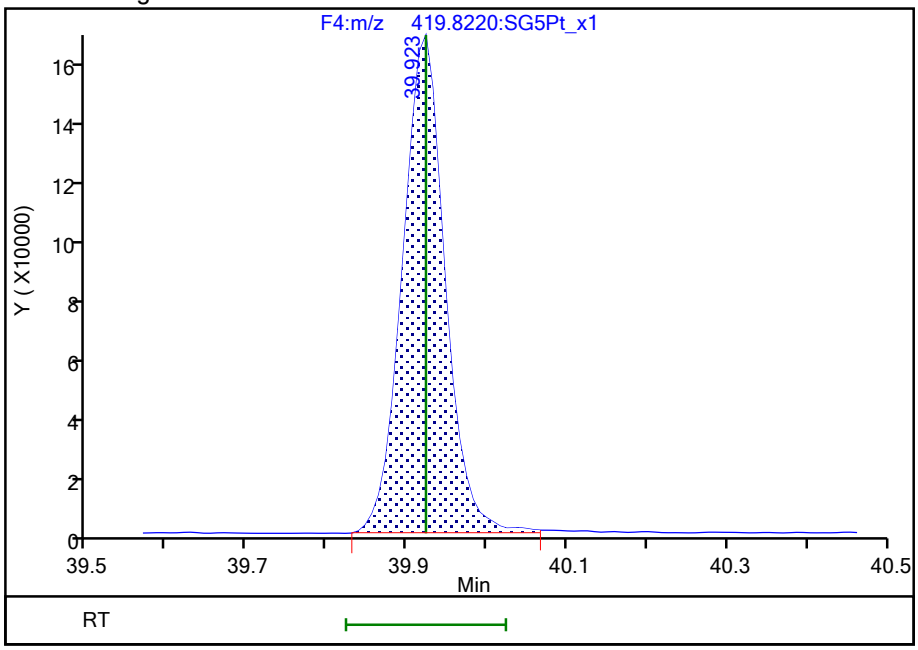

Reviewer: stephensk, 17-Aug-2021 16:09:23

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

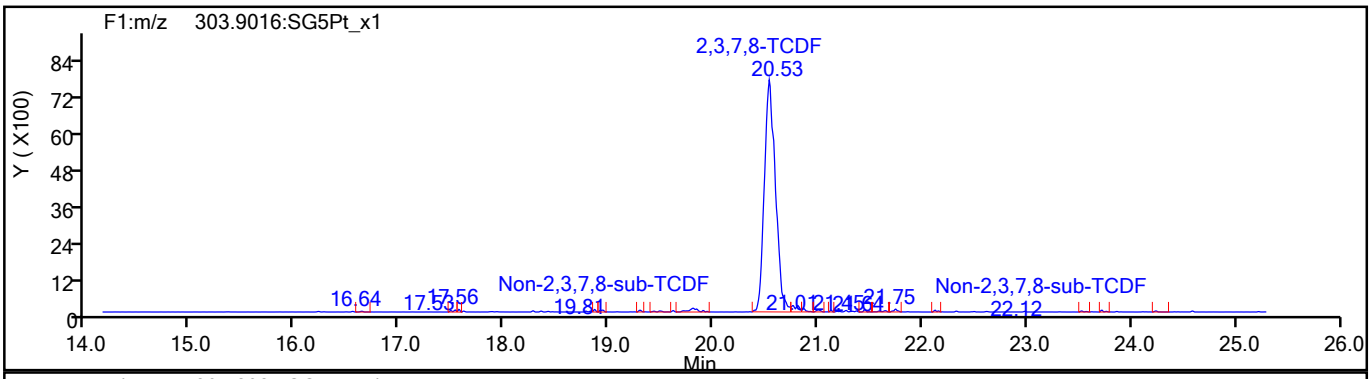

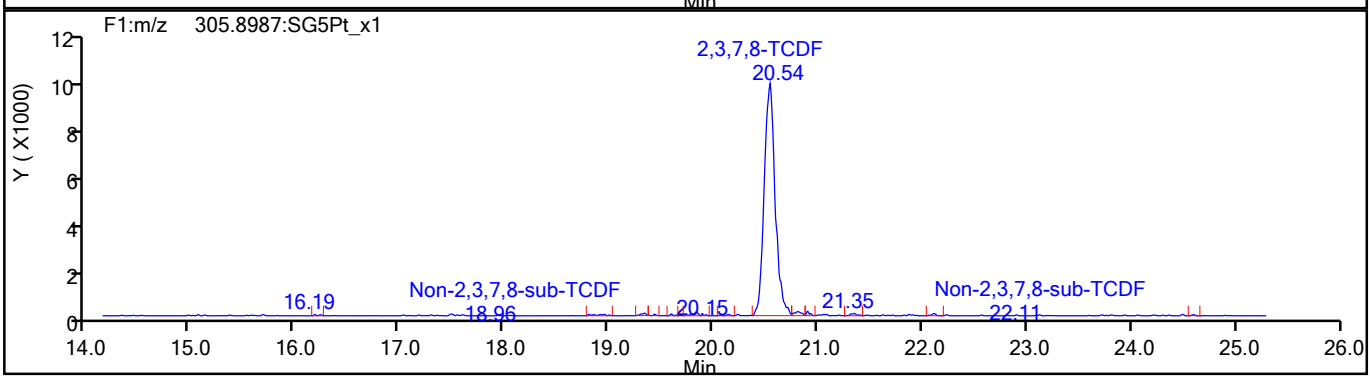

TCDF Standards

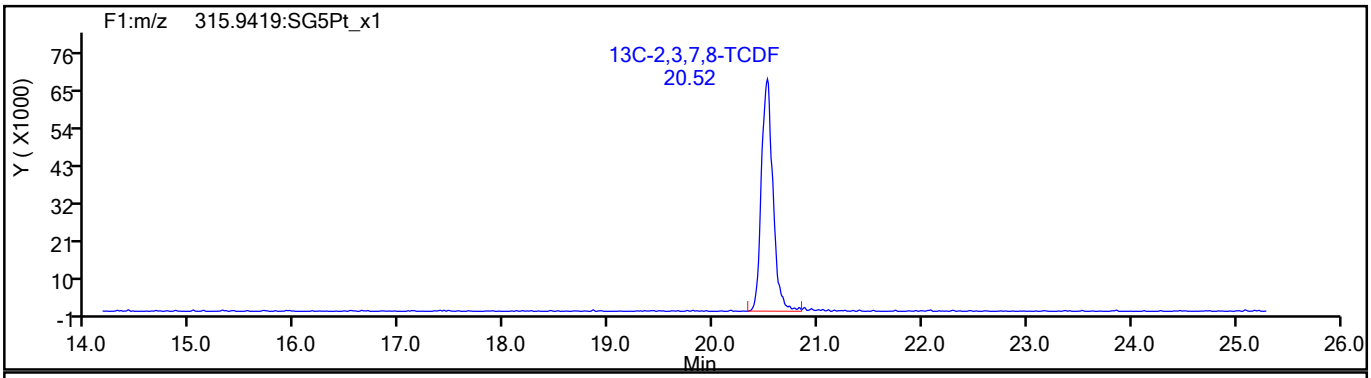

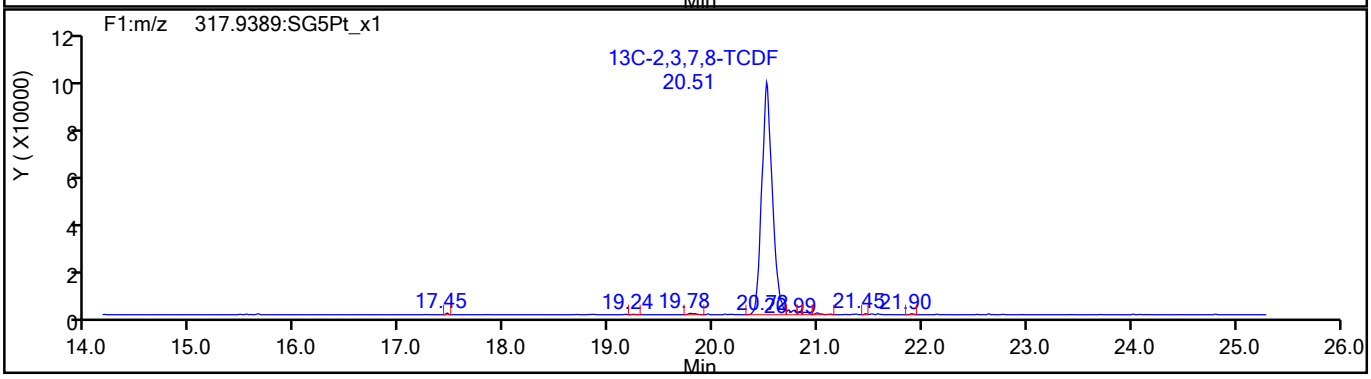

786104

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

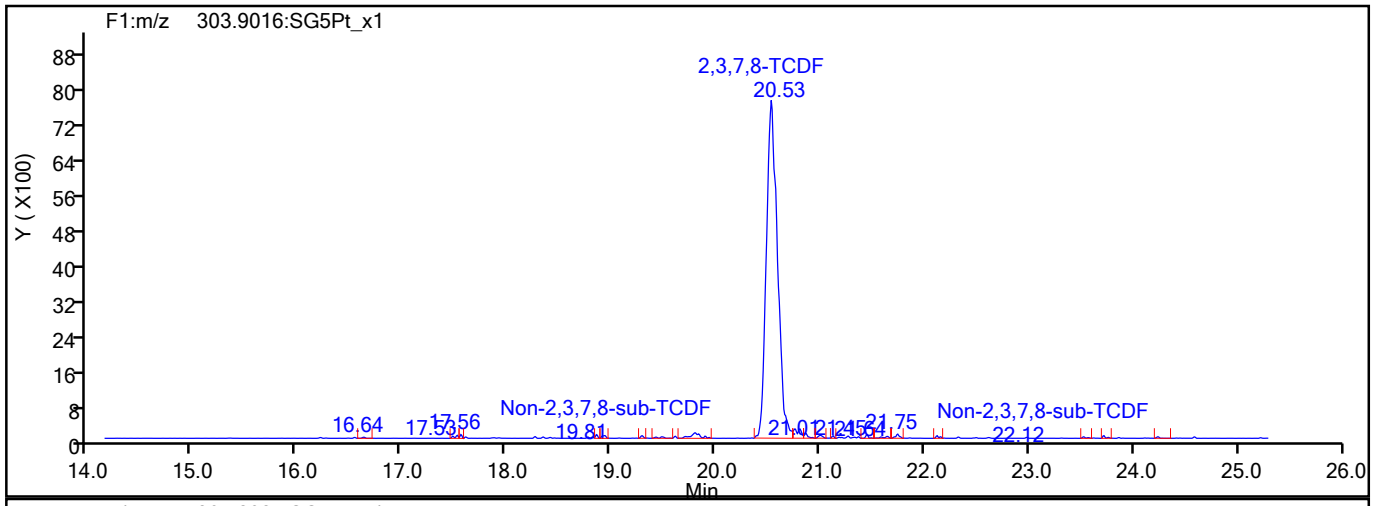

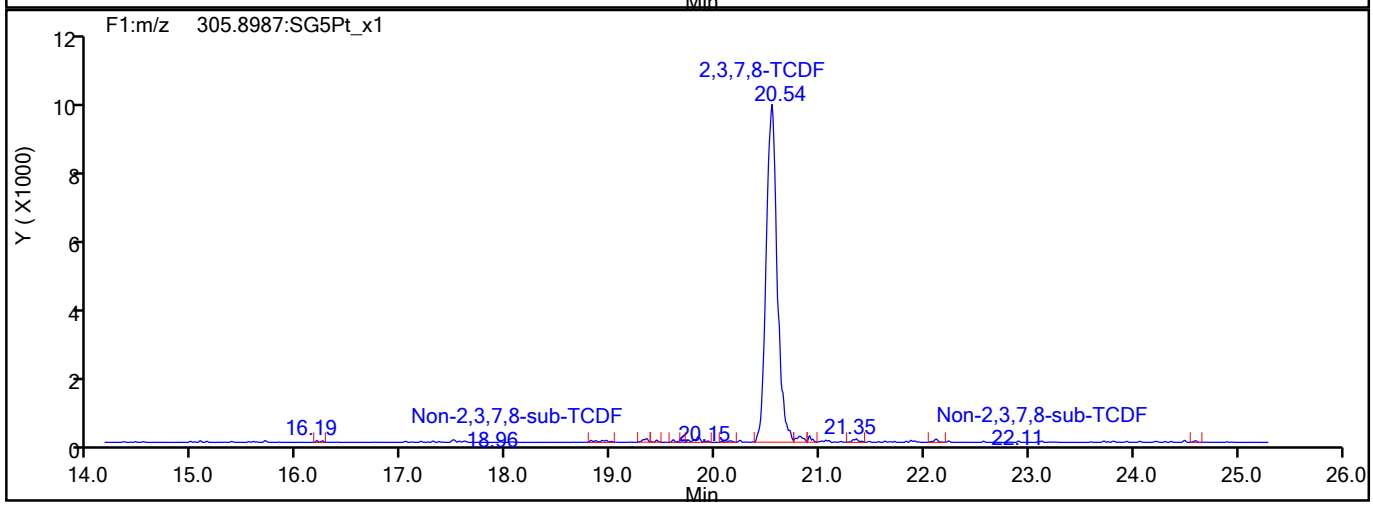

TCDF Interference Mass

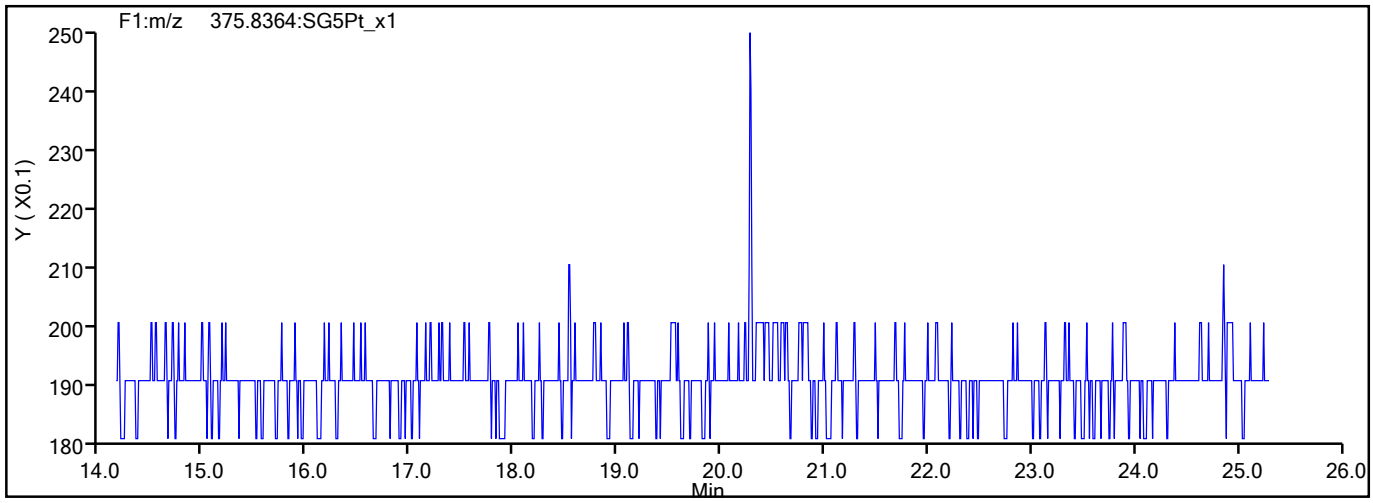

786105

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

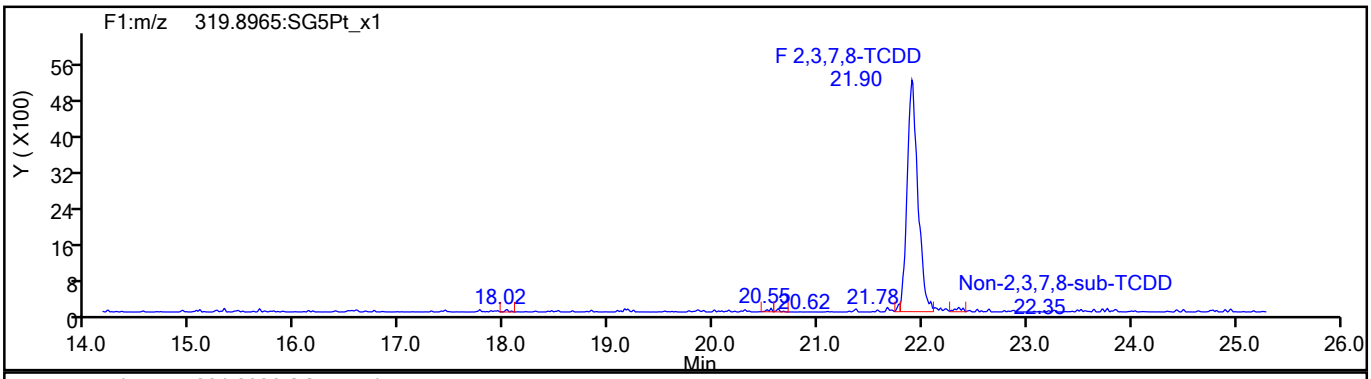

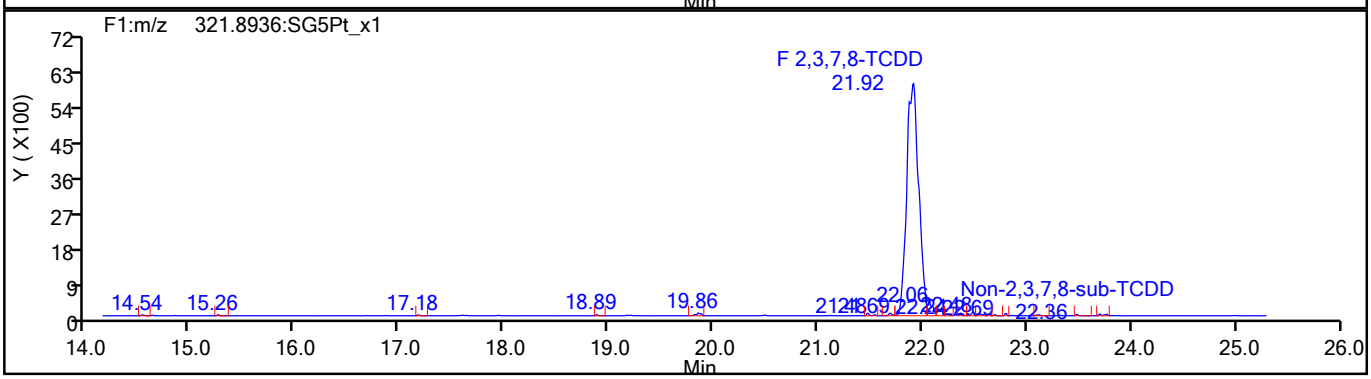

TCDD Standards

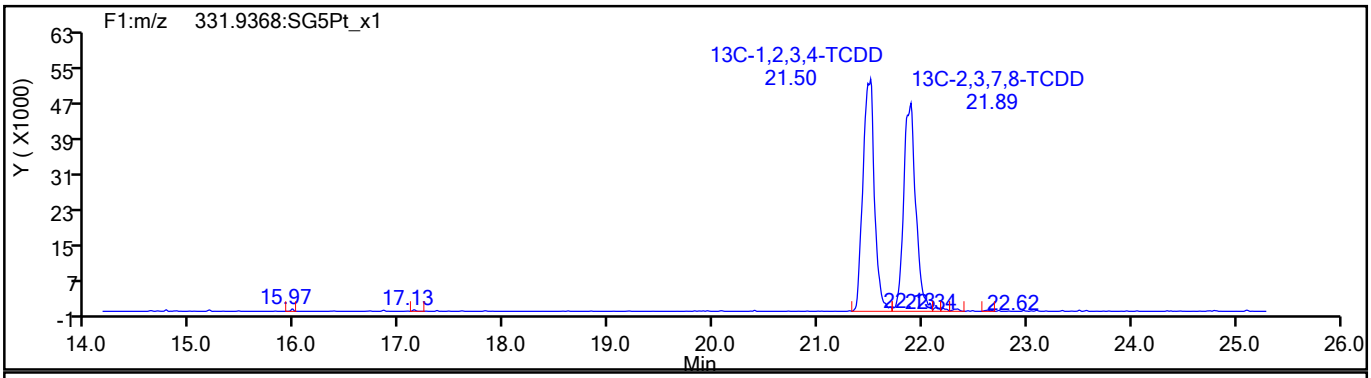

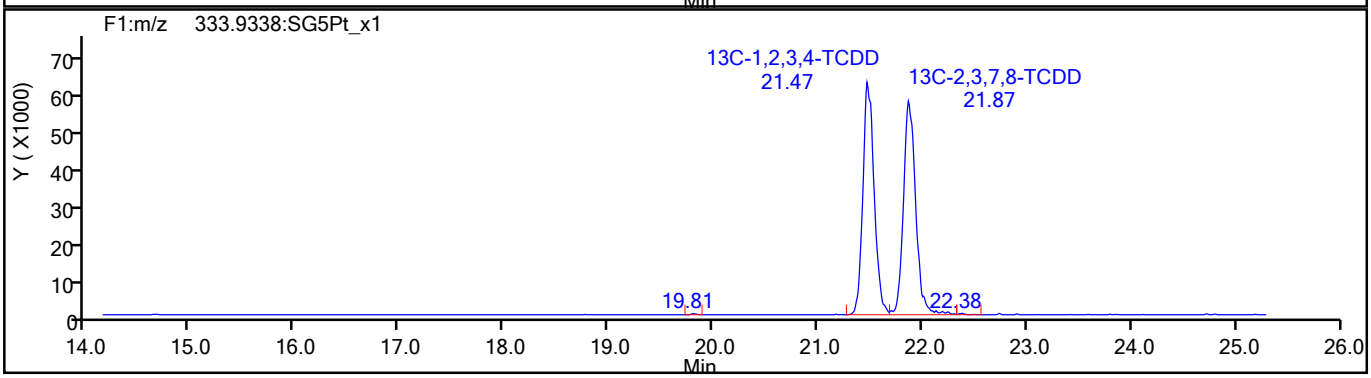

786106

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

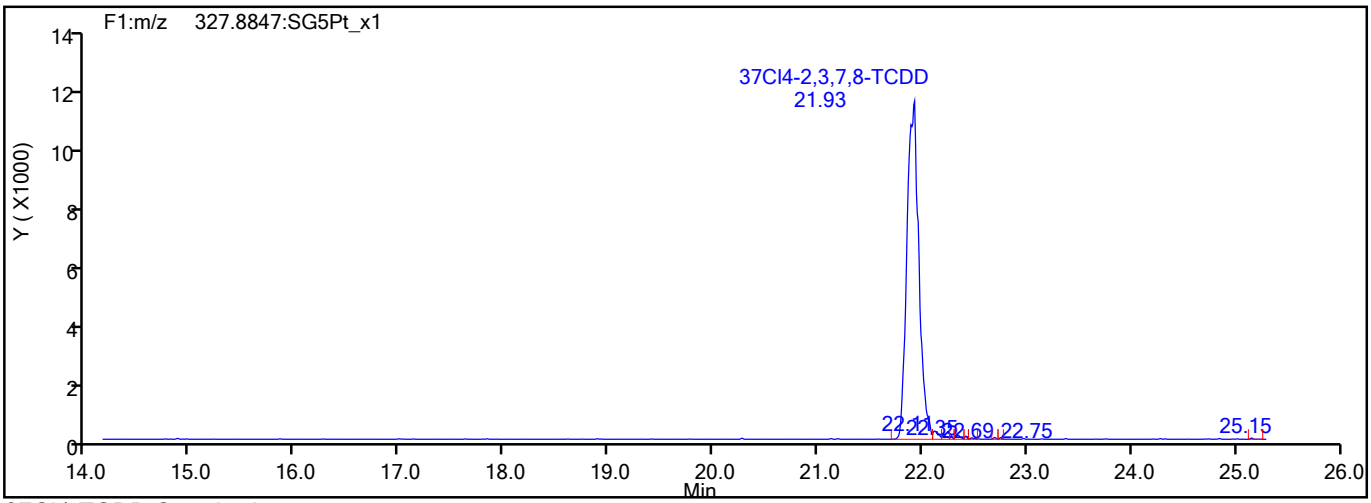

37Cl4-TCDD Standards

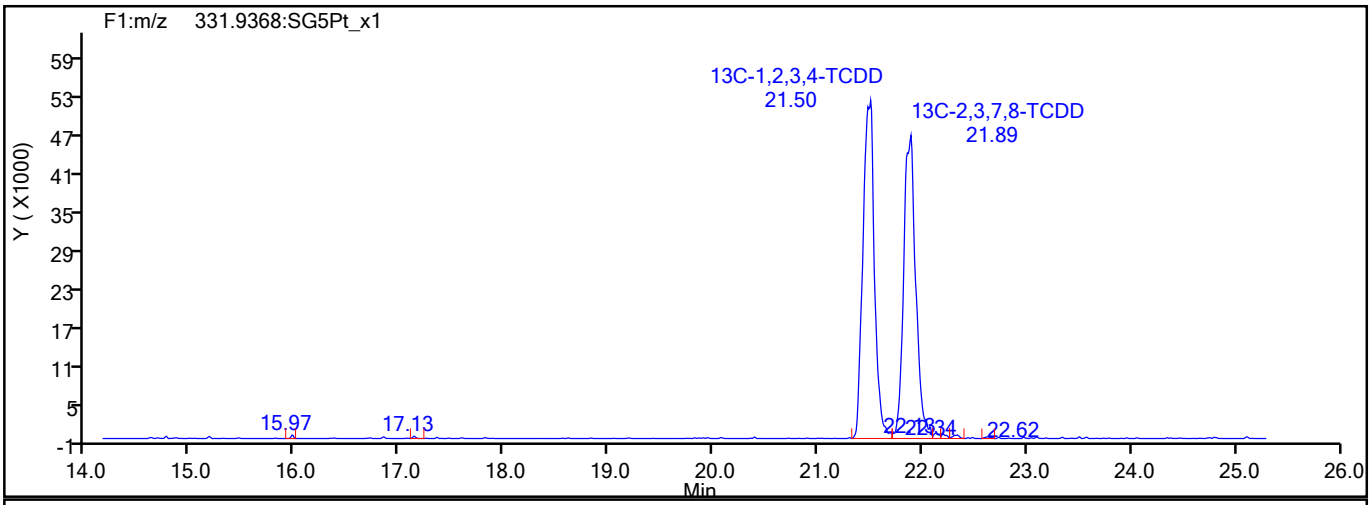

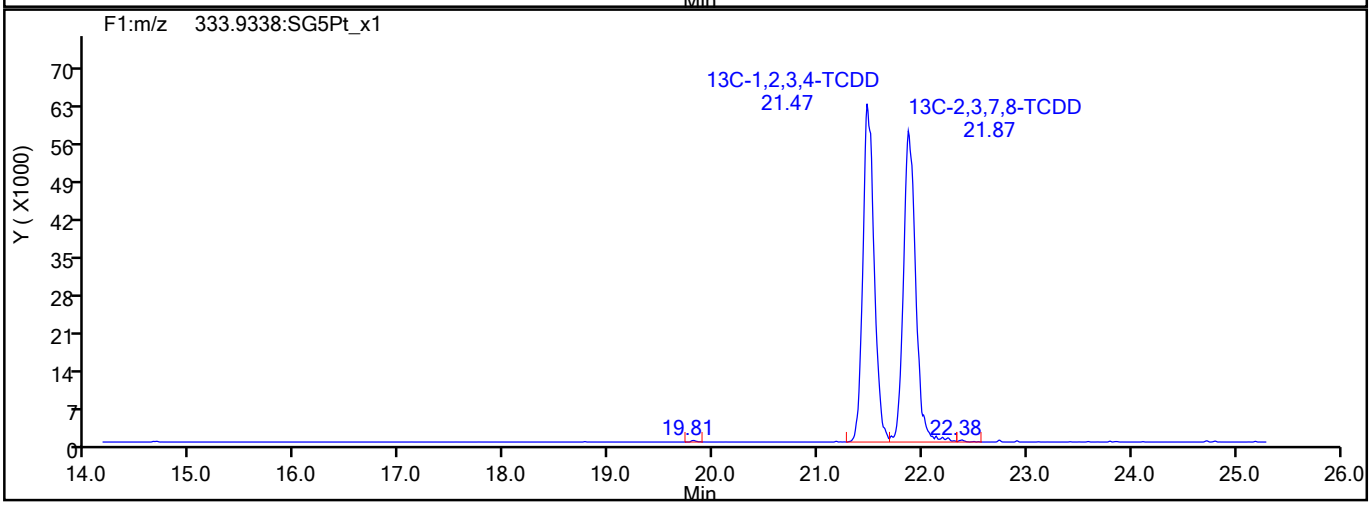

786107

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

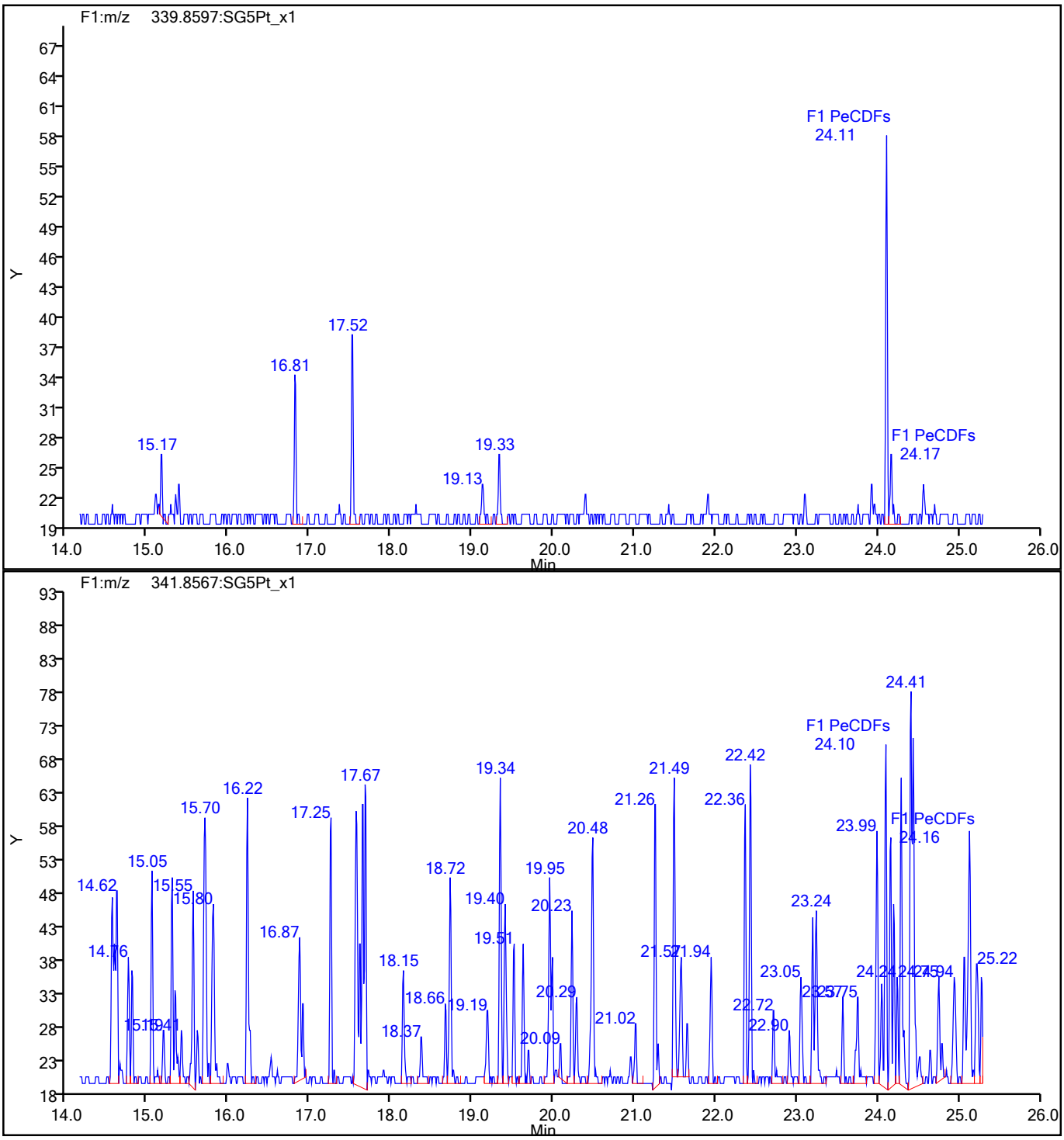

786108

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

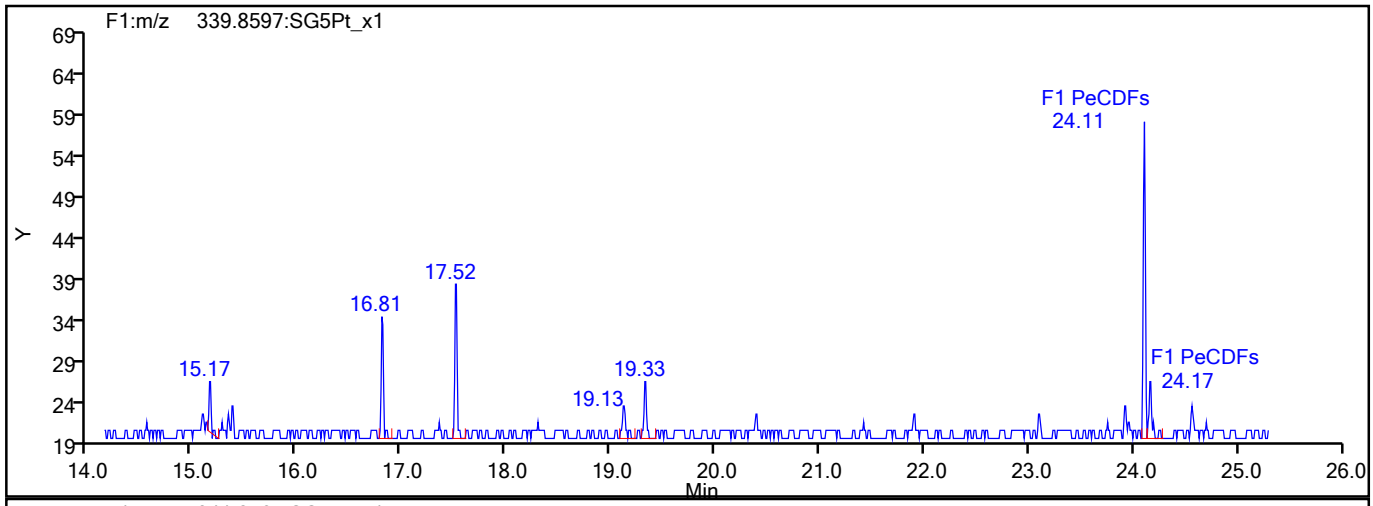

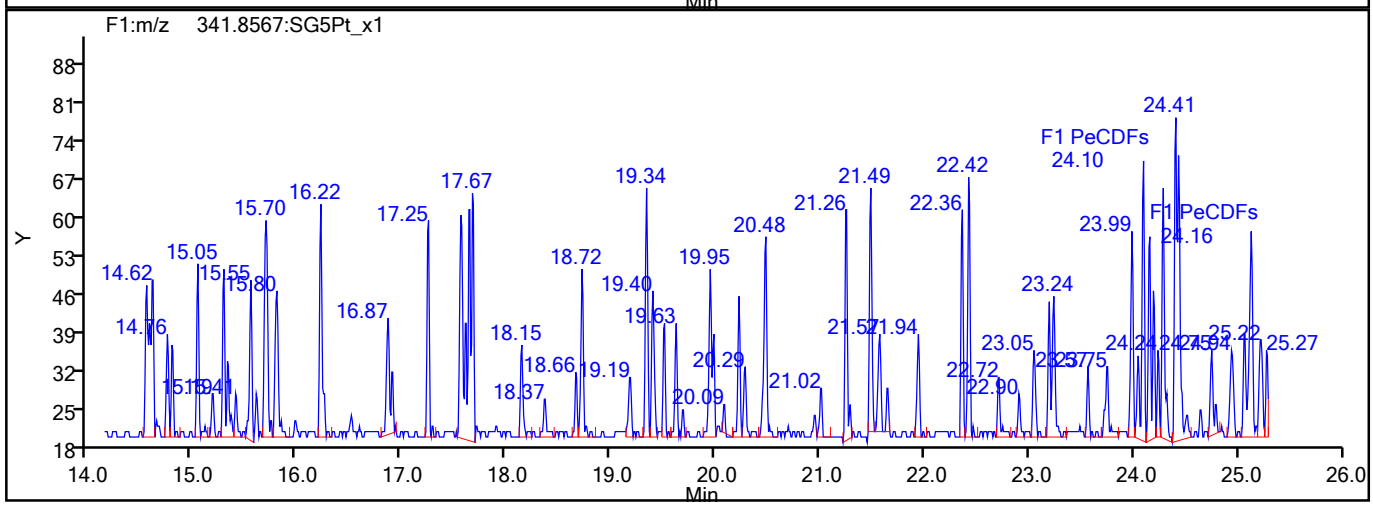

F1 PeCDFs Interference Mass

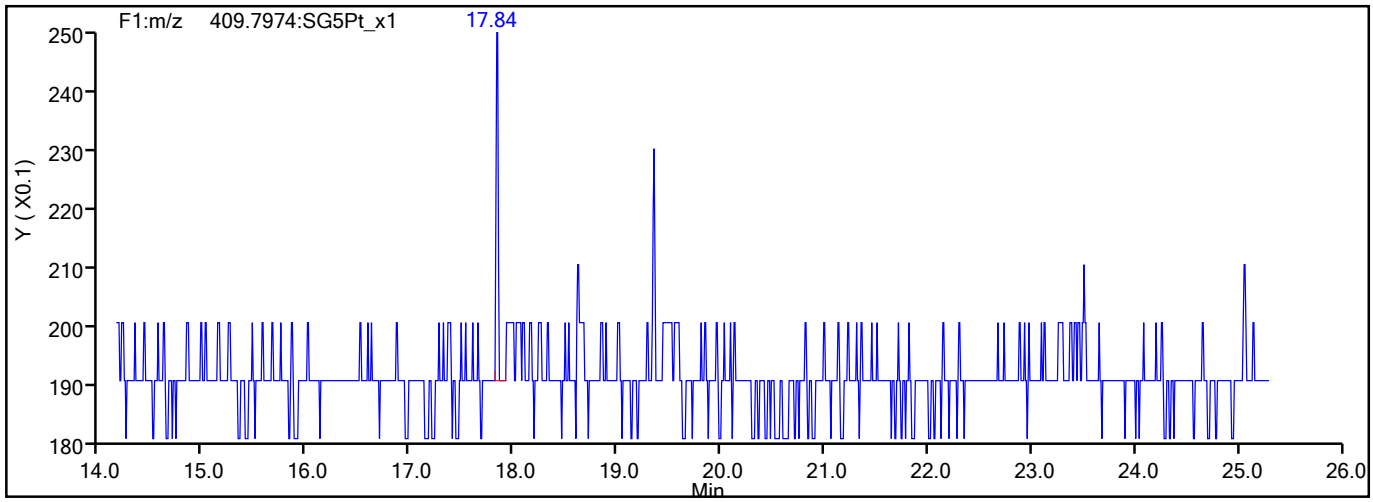

786109

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

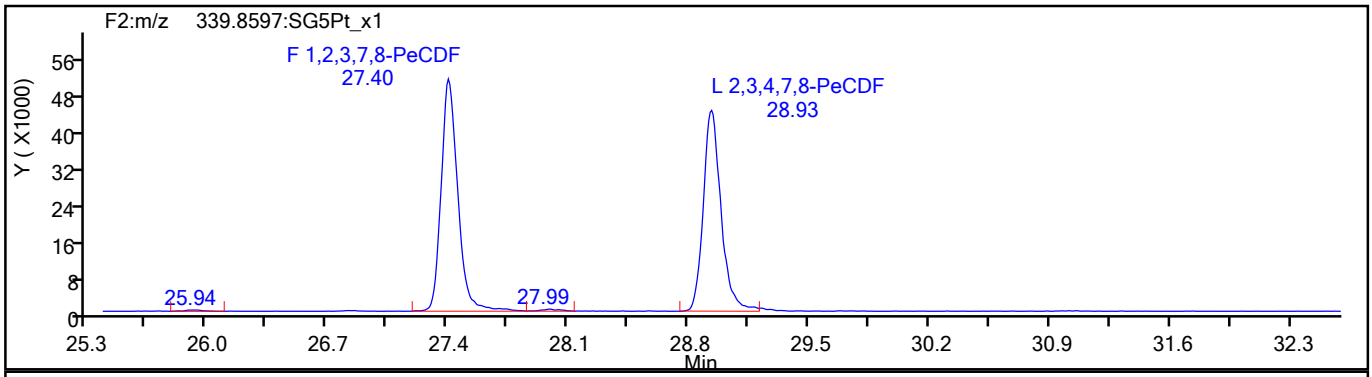

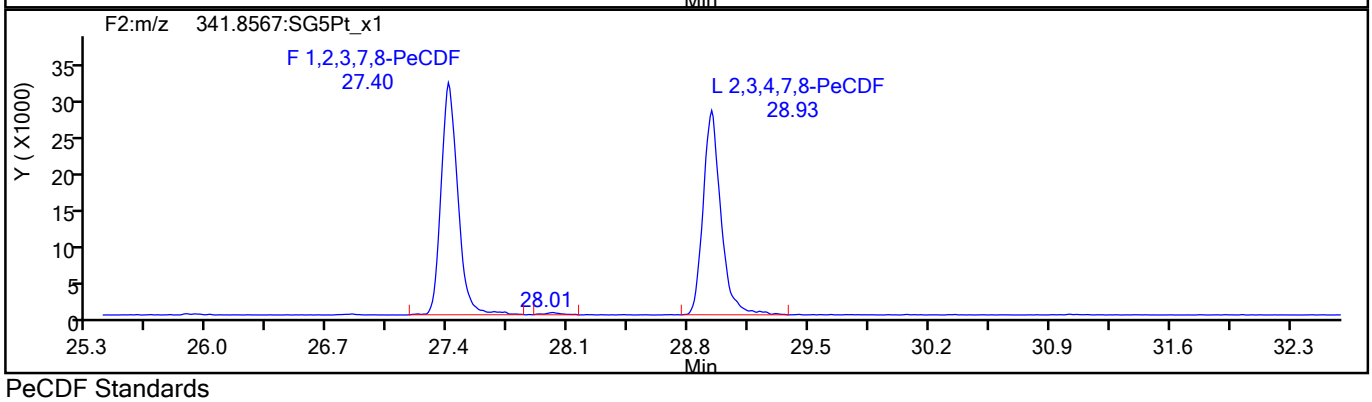

PeCDF Standards

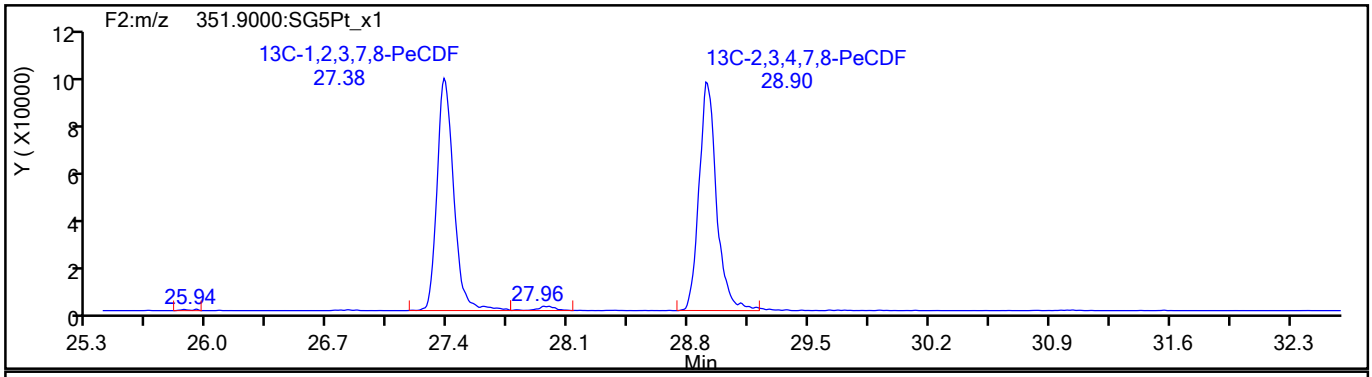

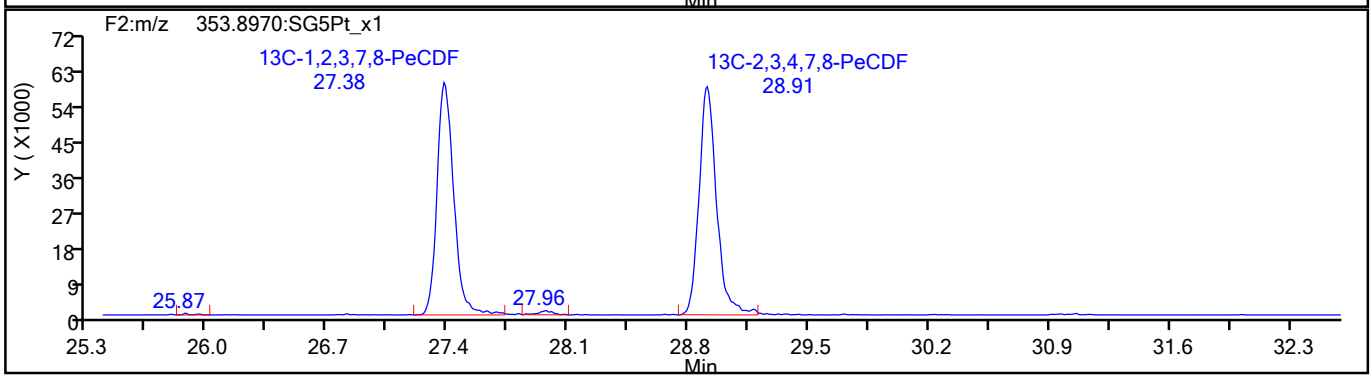

786110

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

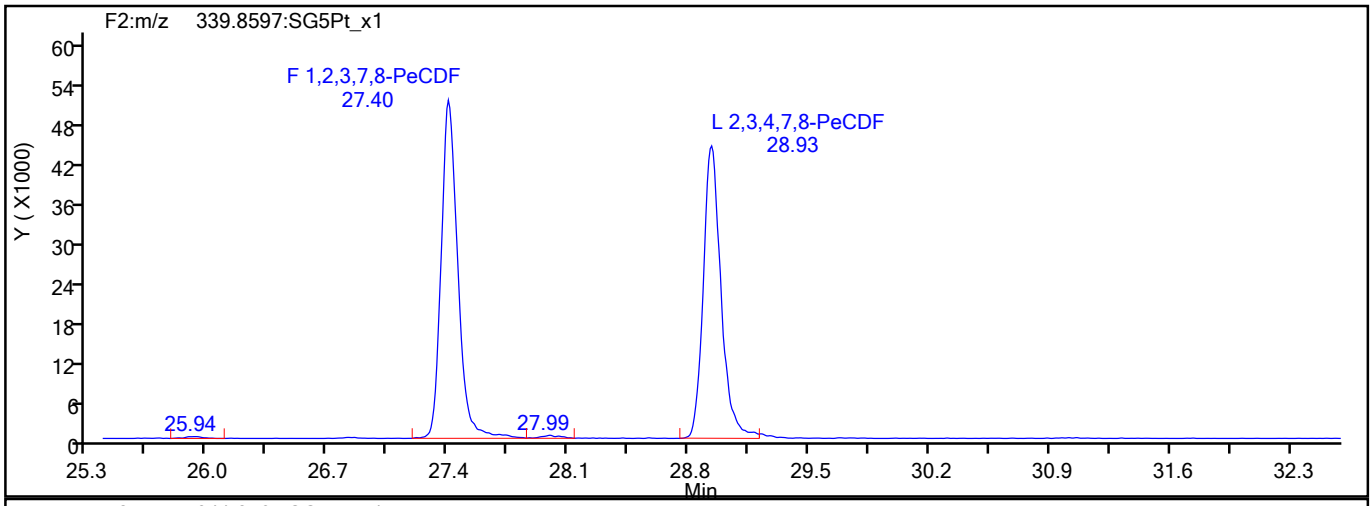

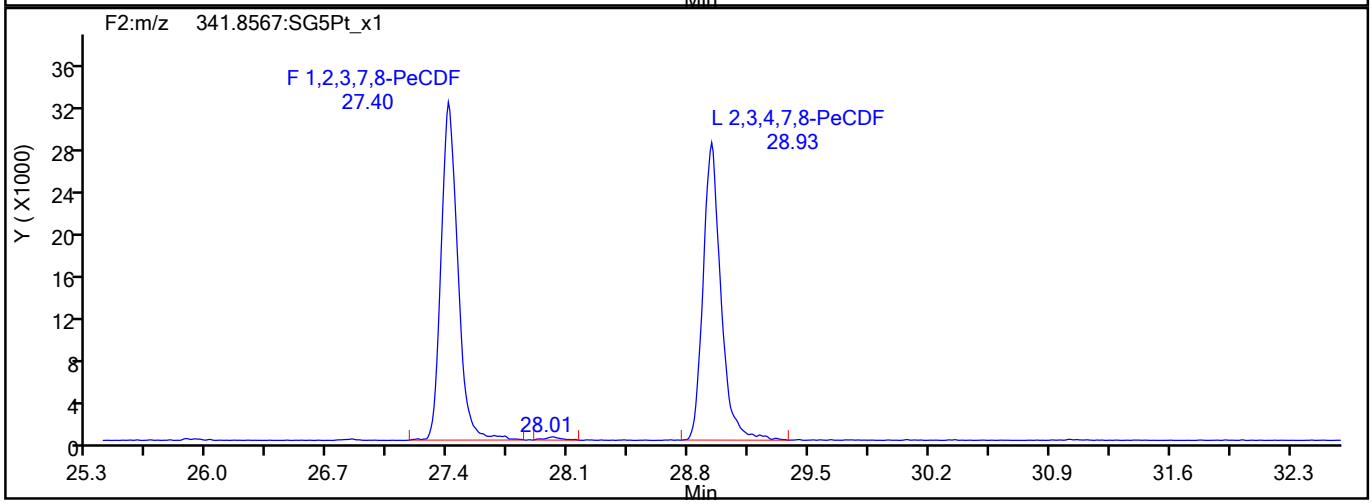

PeCDF Interference Mass

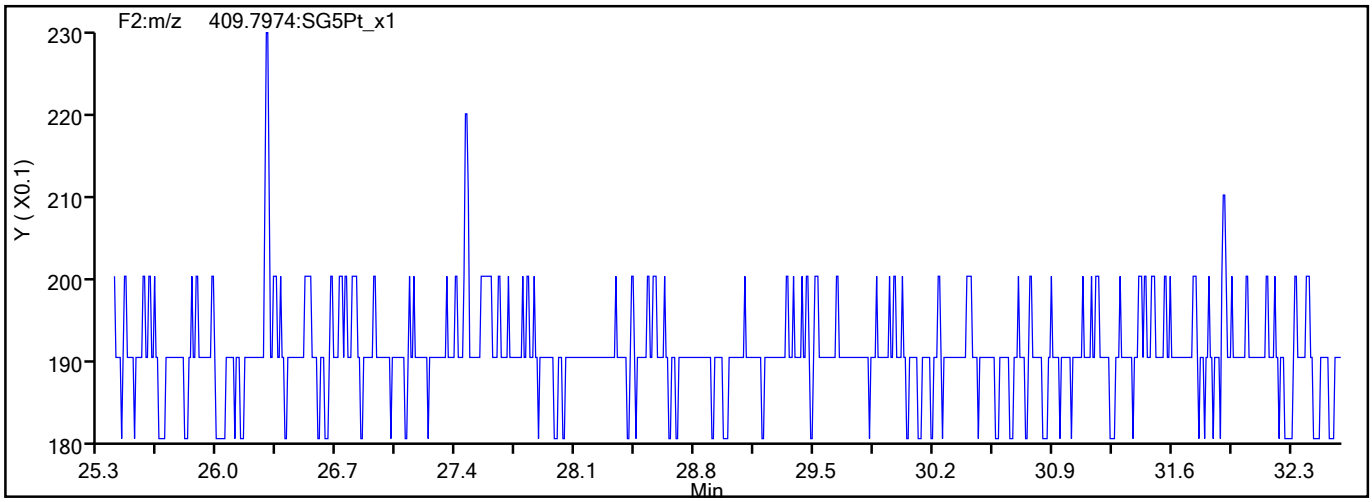

786111

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDD

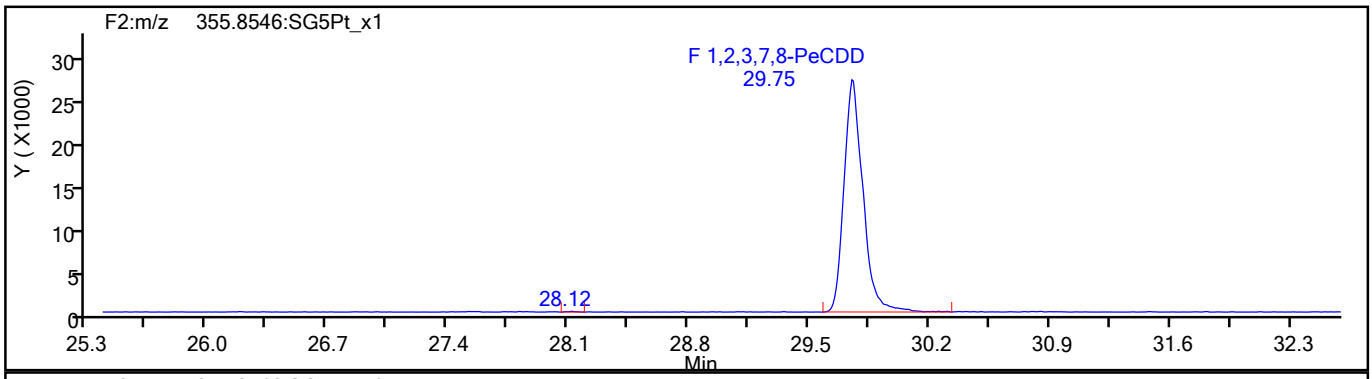

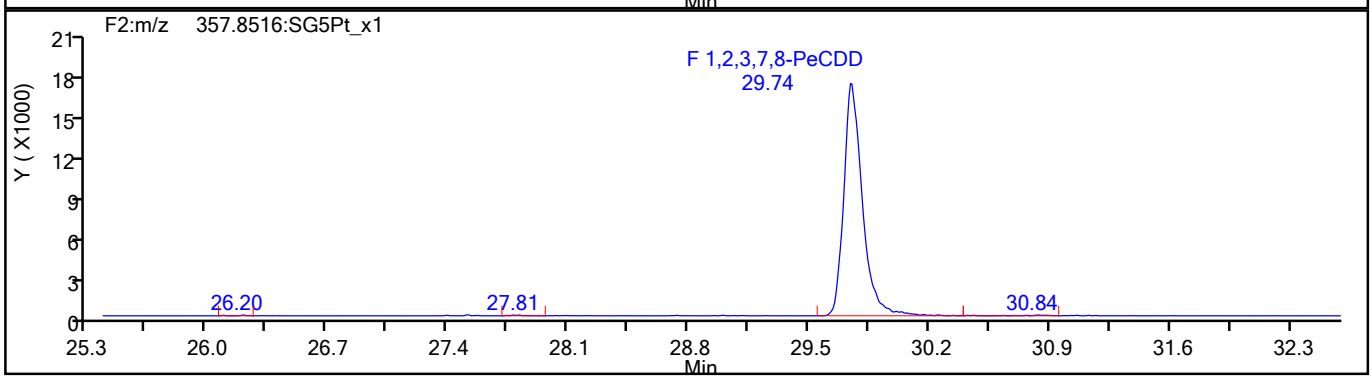

PeCDD Standards

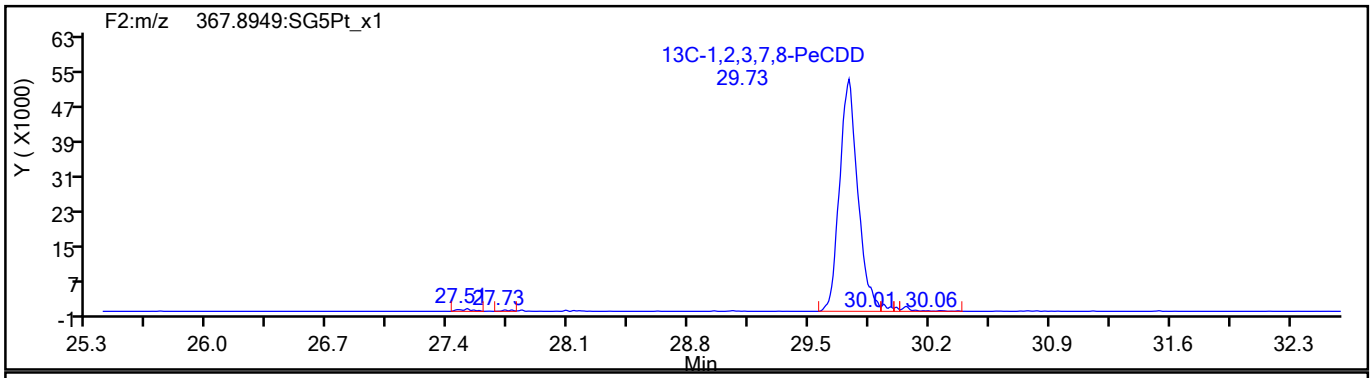

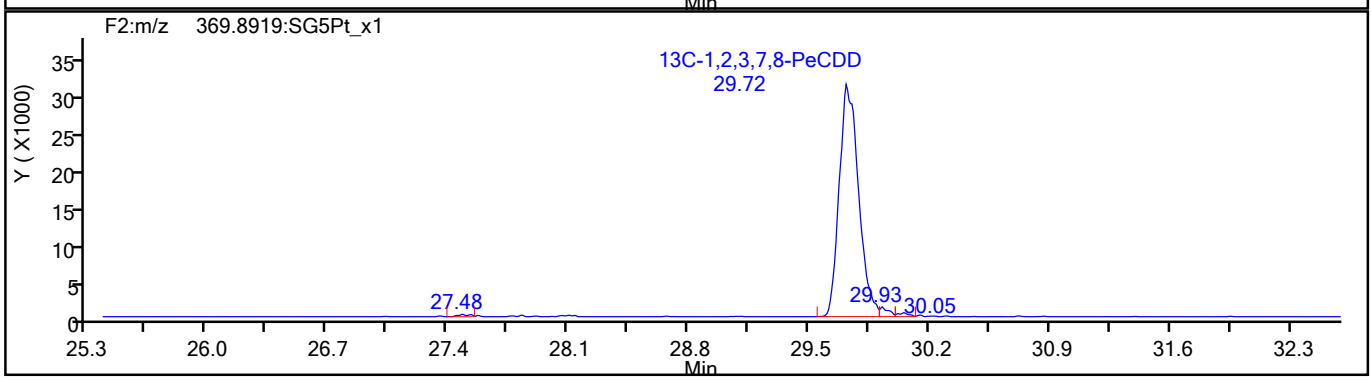

786112

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

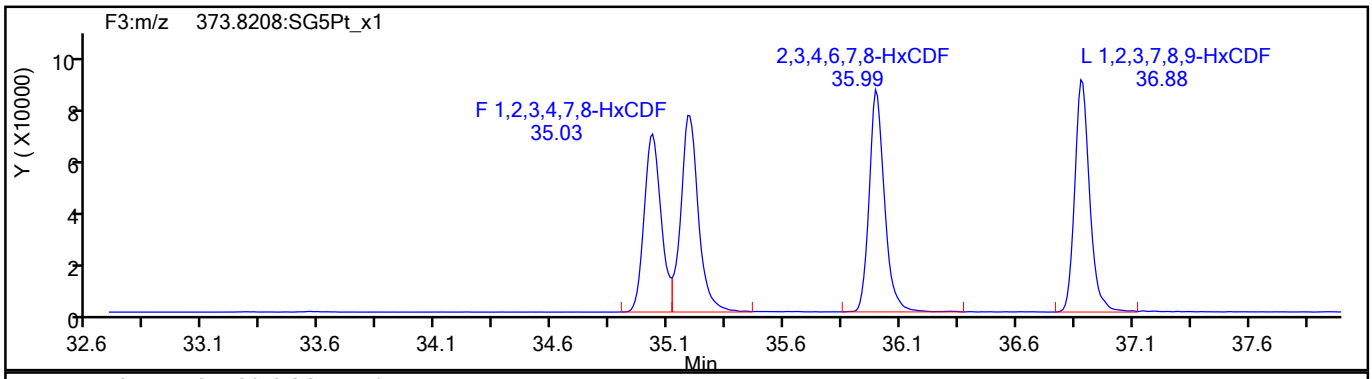

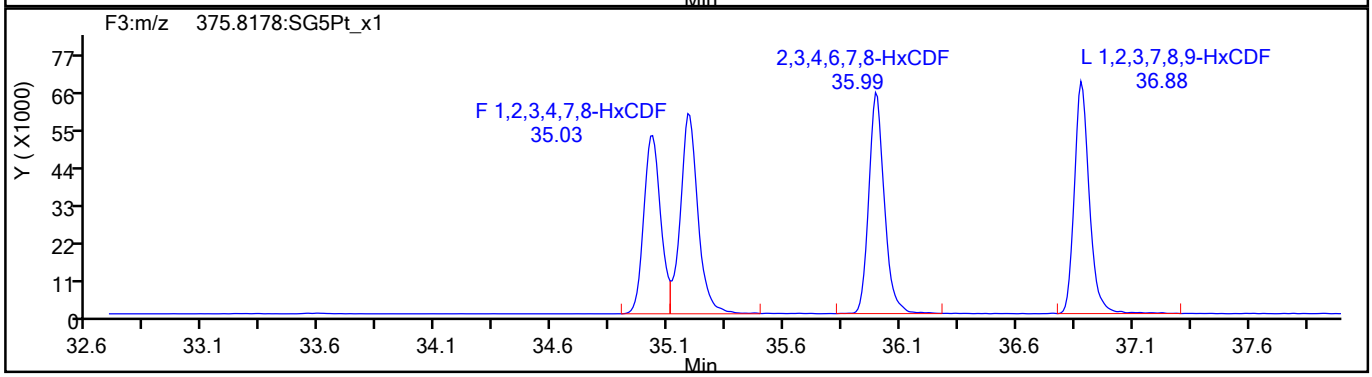

HxCDF Standards

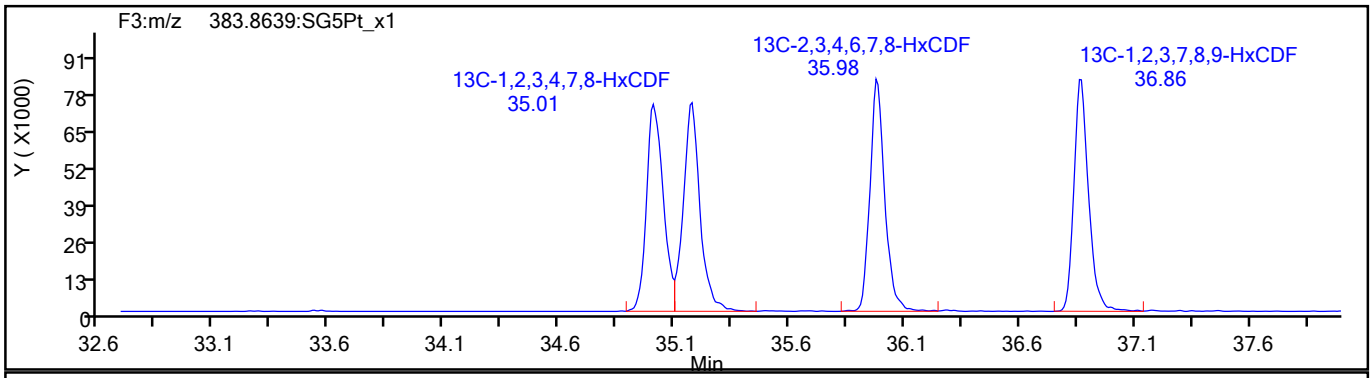

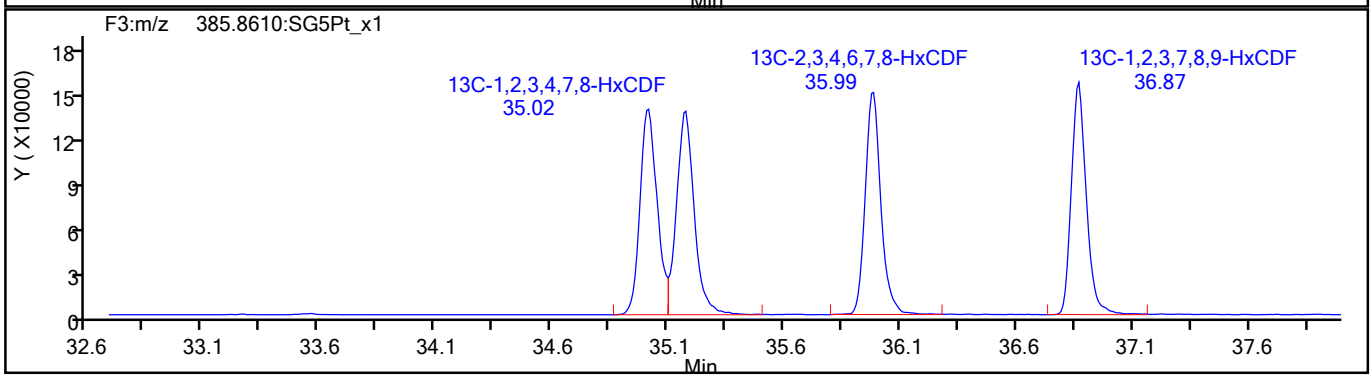

786113

Report Date: 18-Aug-2021 14:54:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

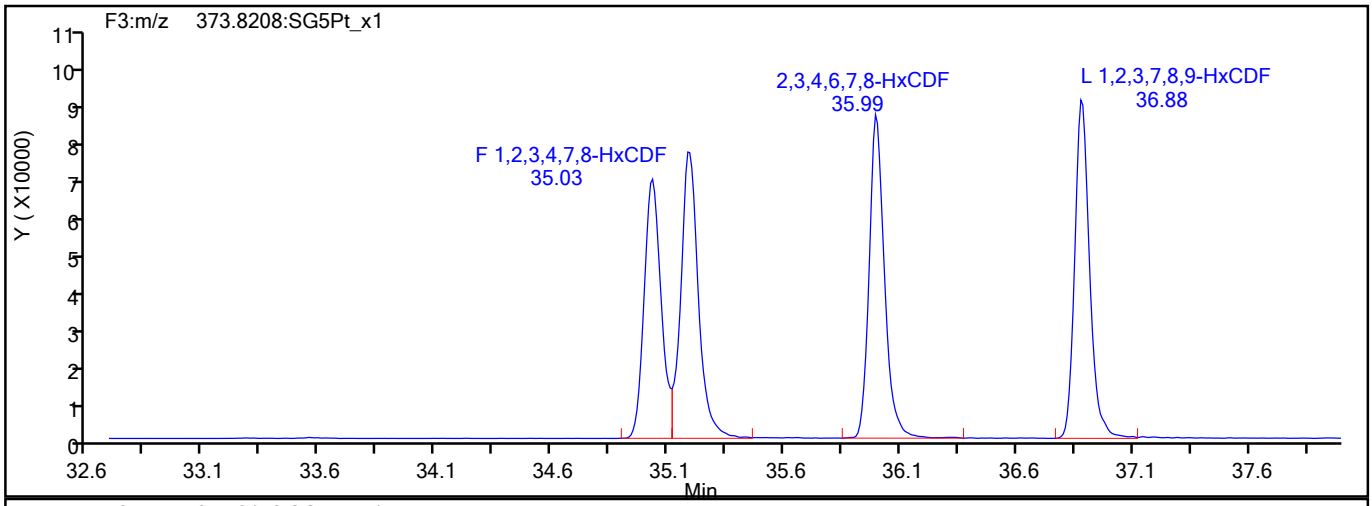

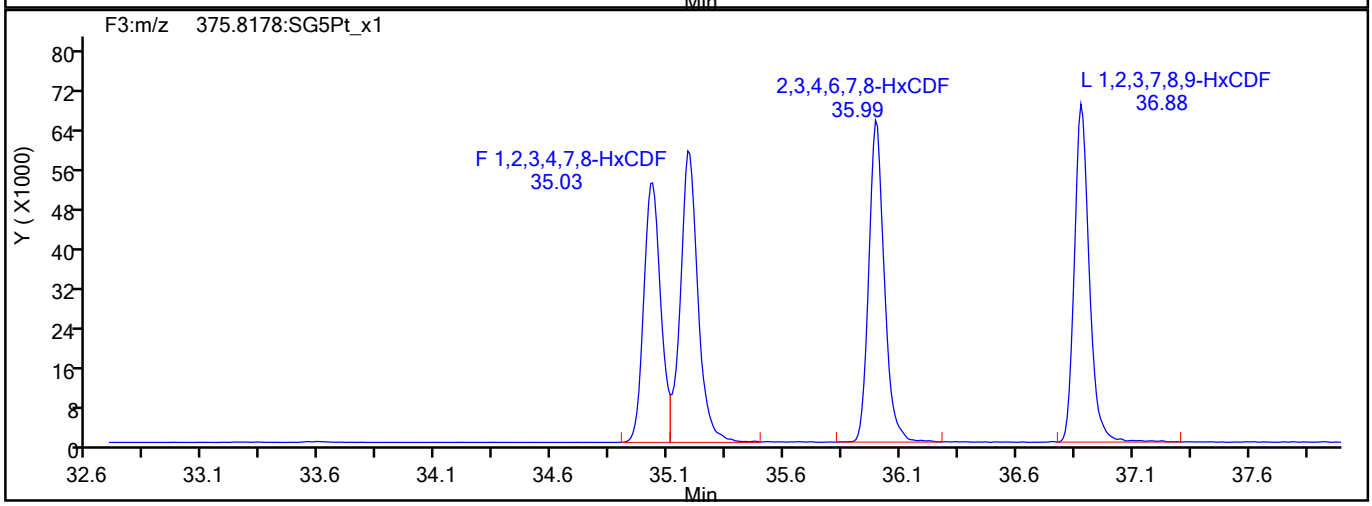

HxCDF Interference Mass

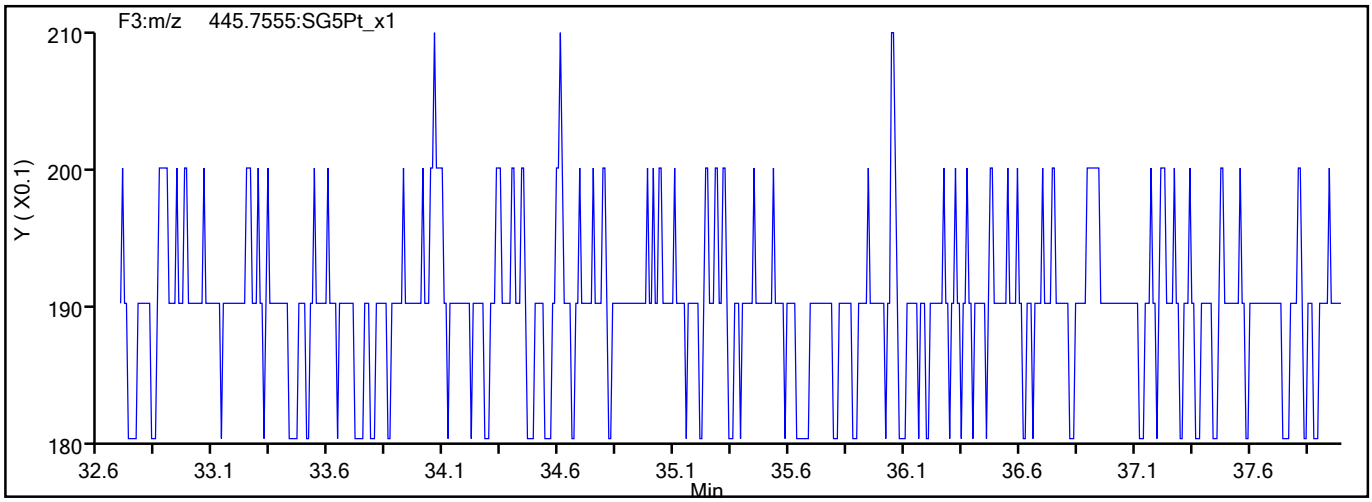

786114

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

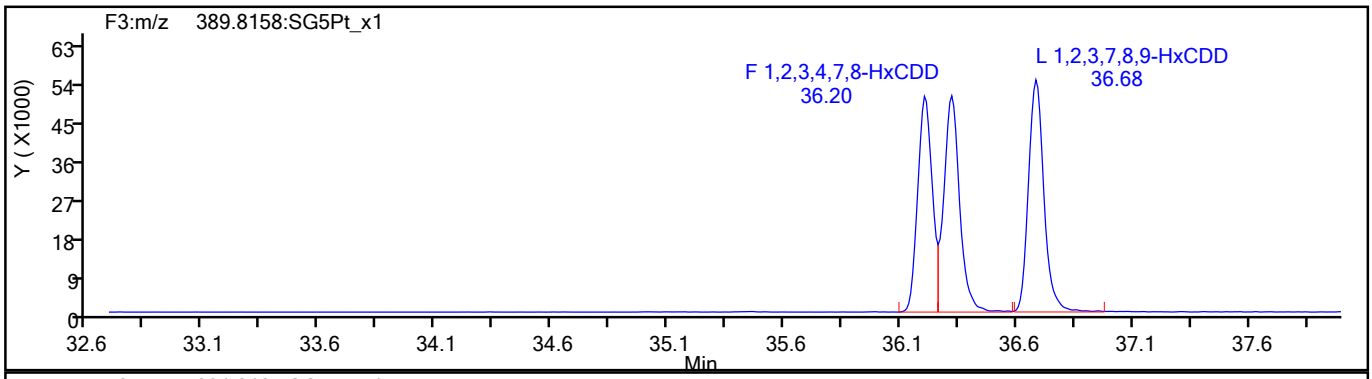

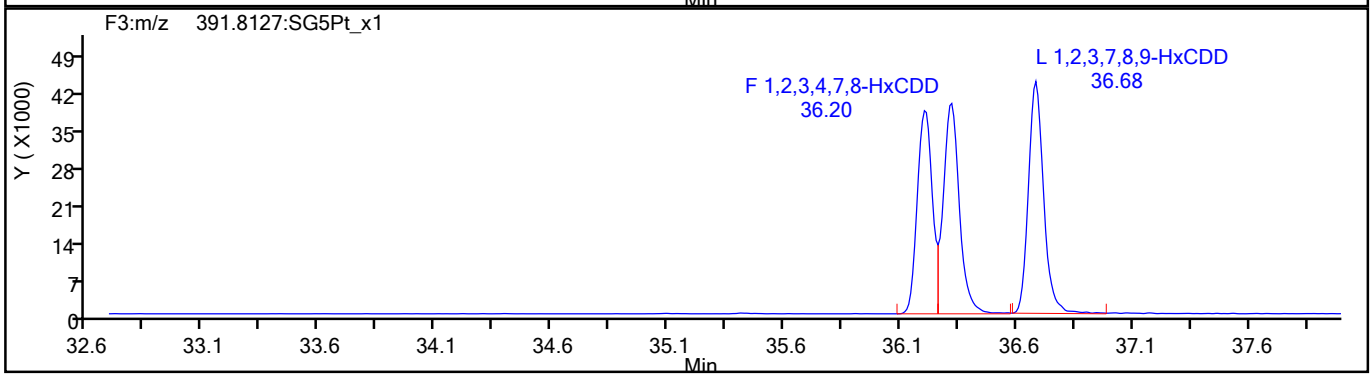

HxCDD Standards

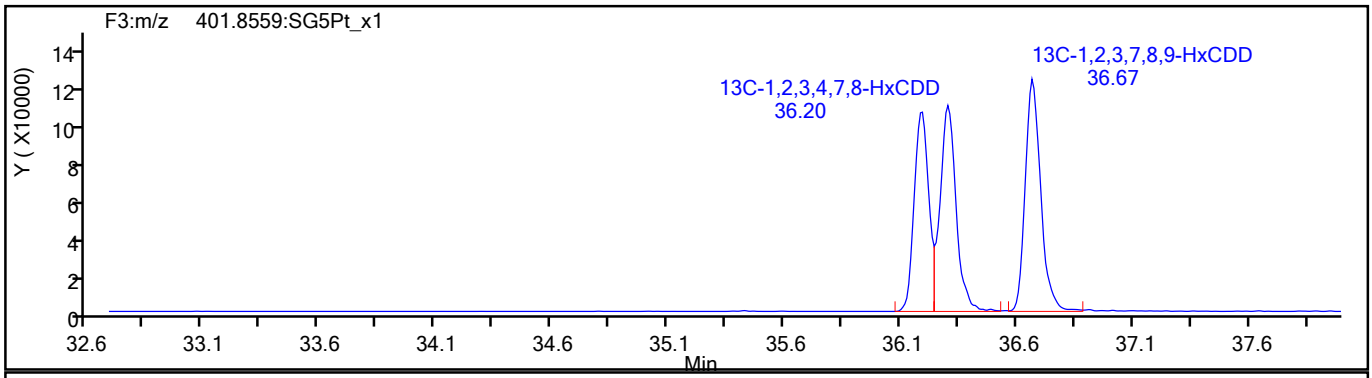

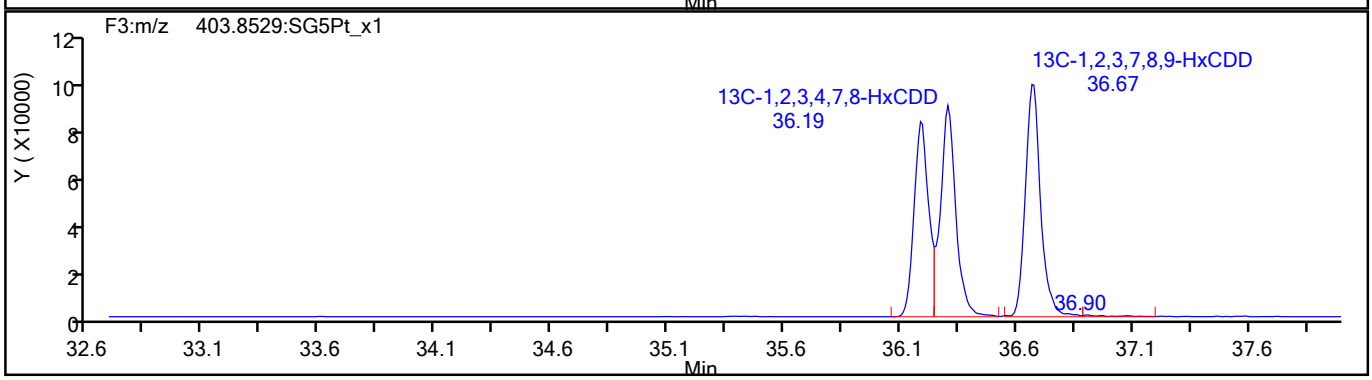

786115

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

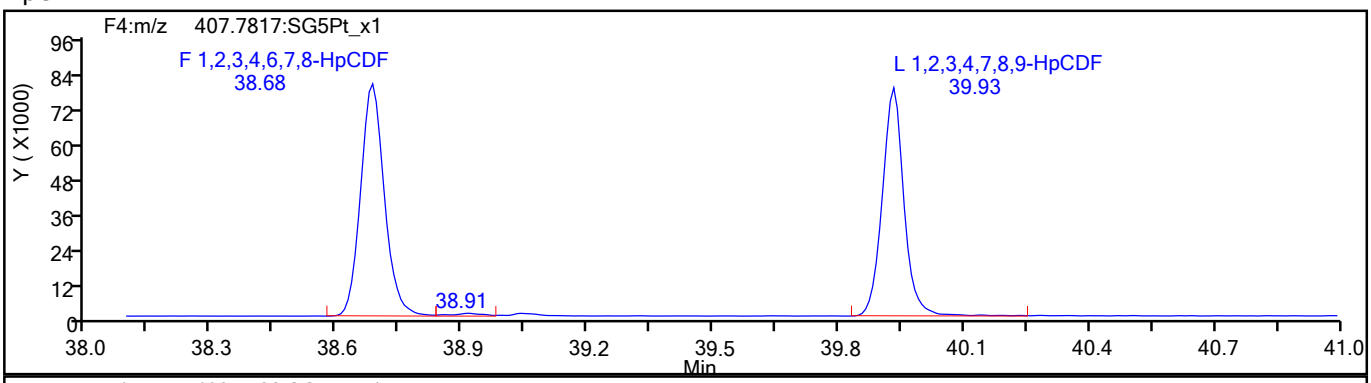

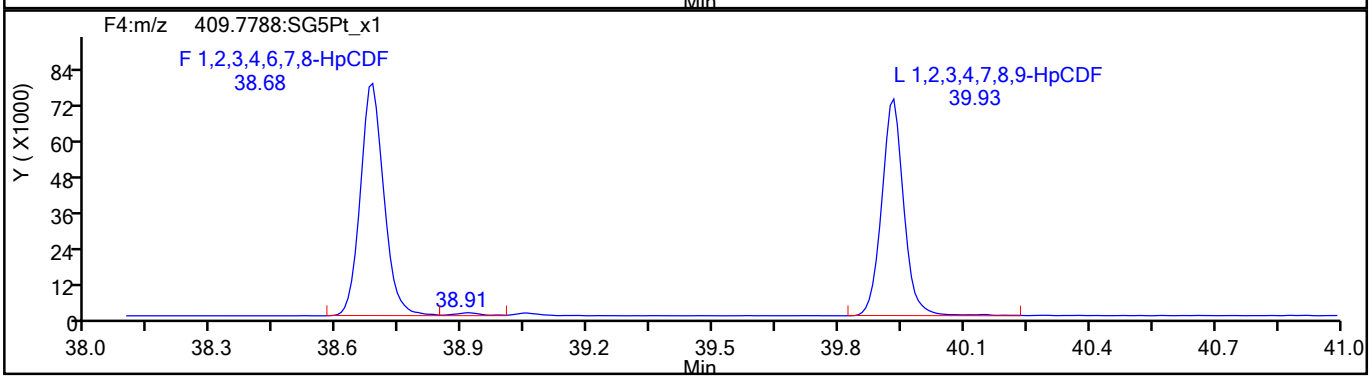

HpCDF Standards

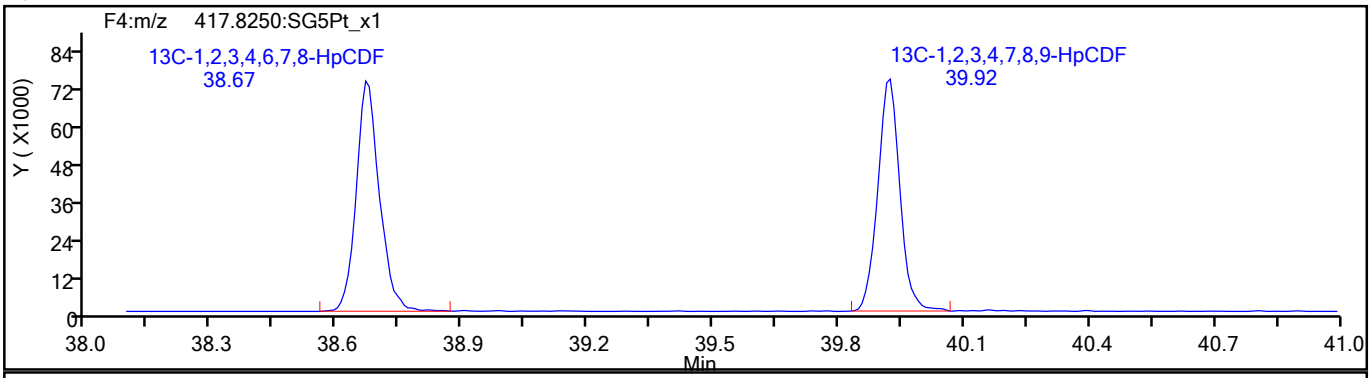

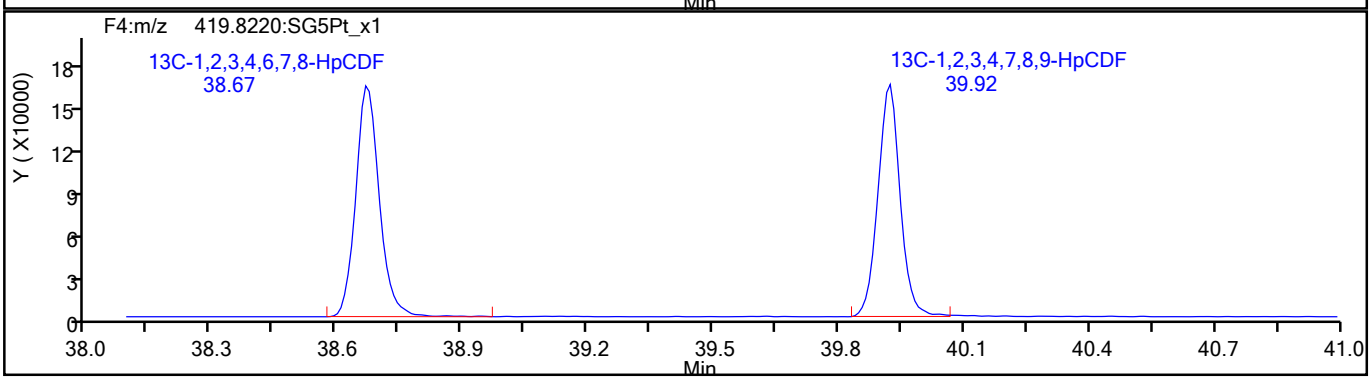

786116

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

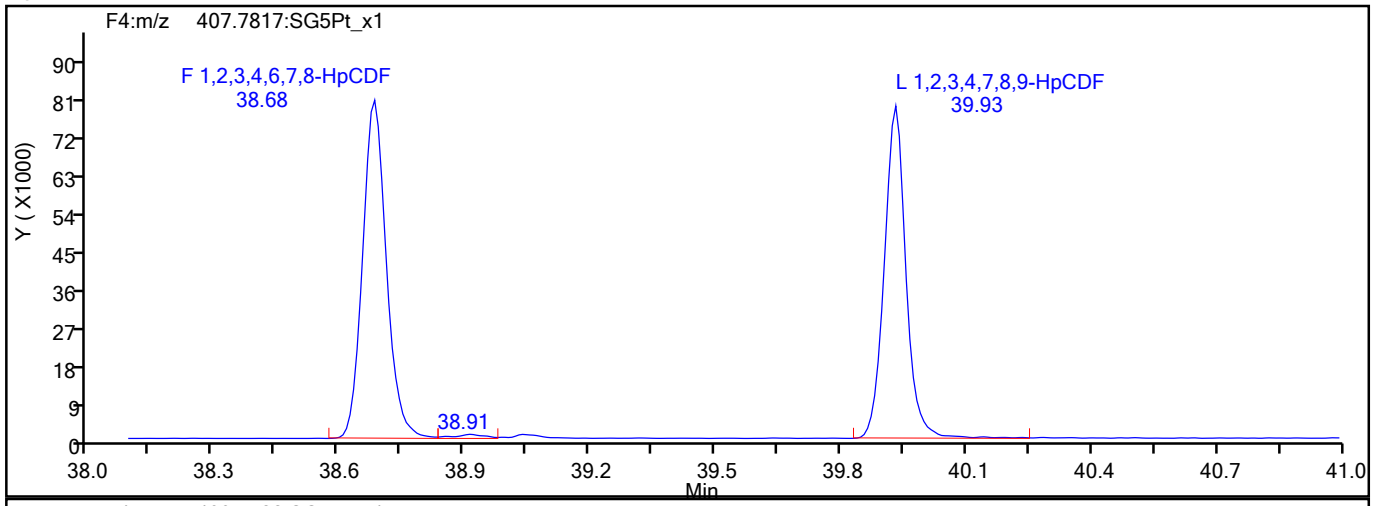

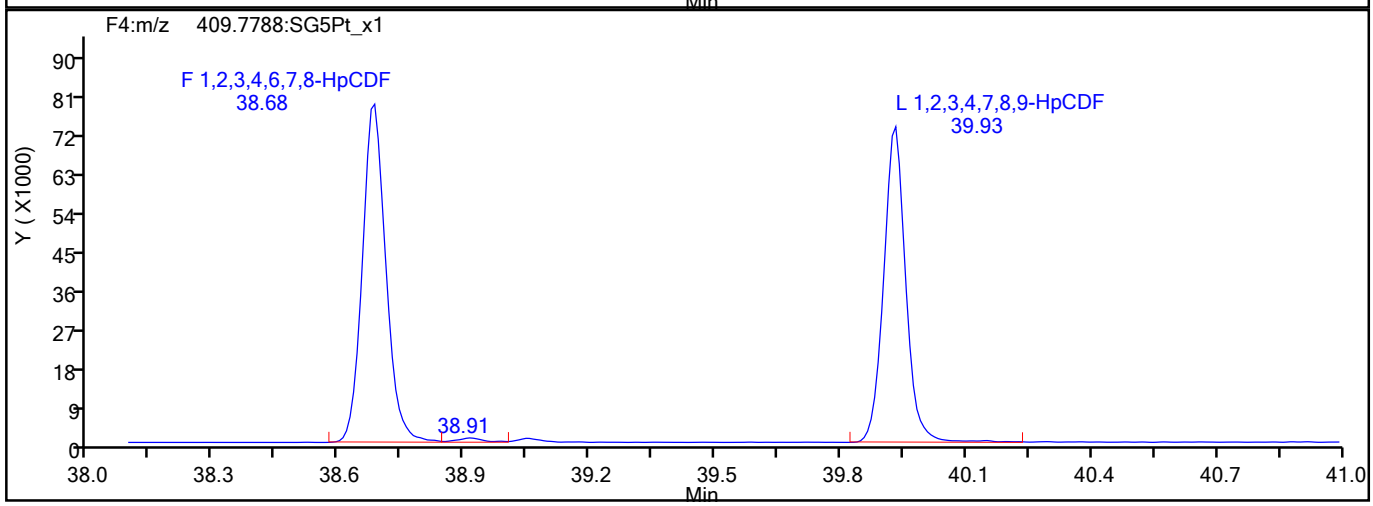

HpCDF Interference Mass

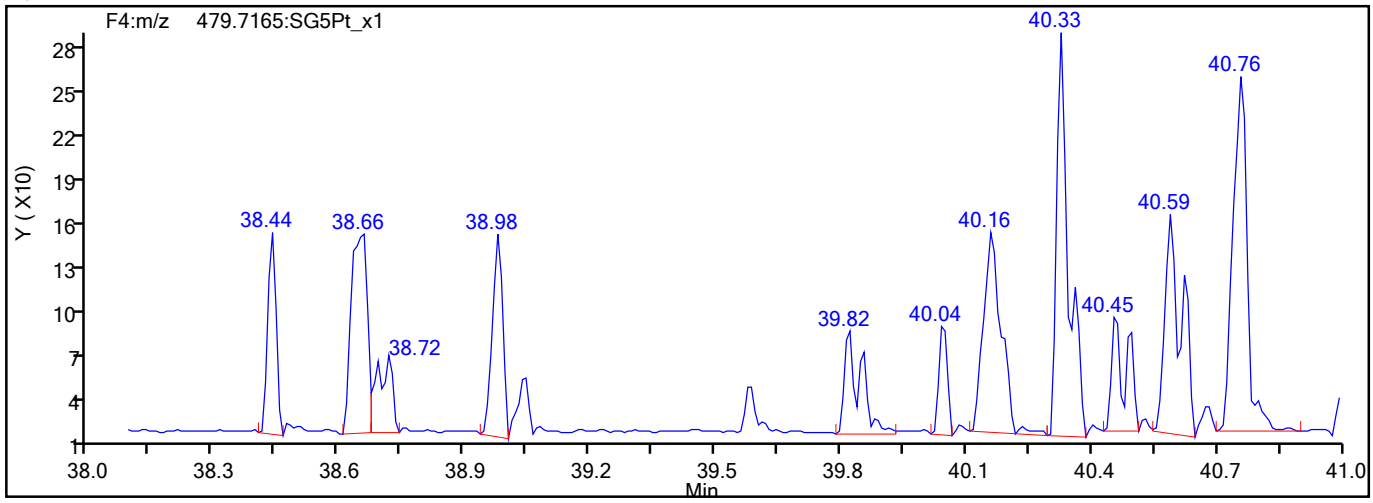

786117

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

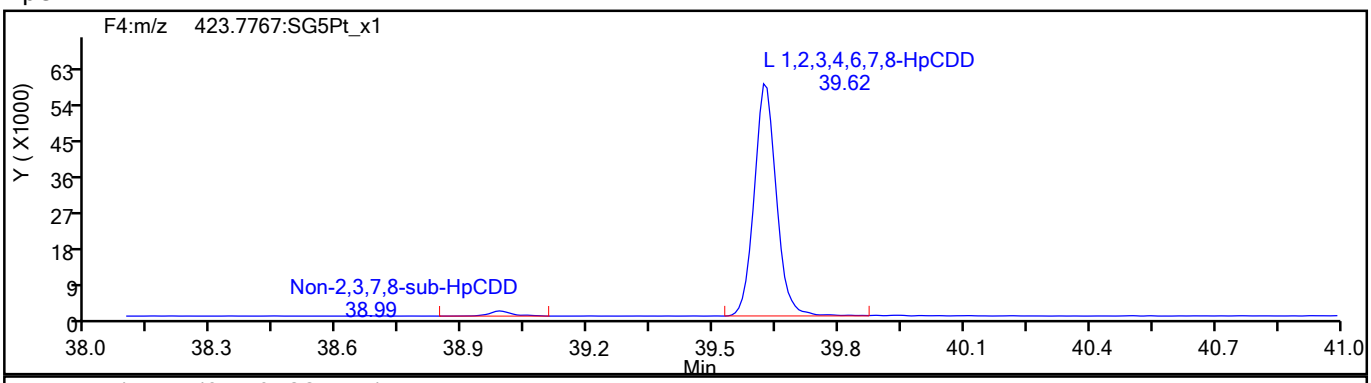

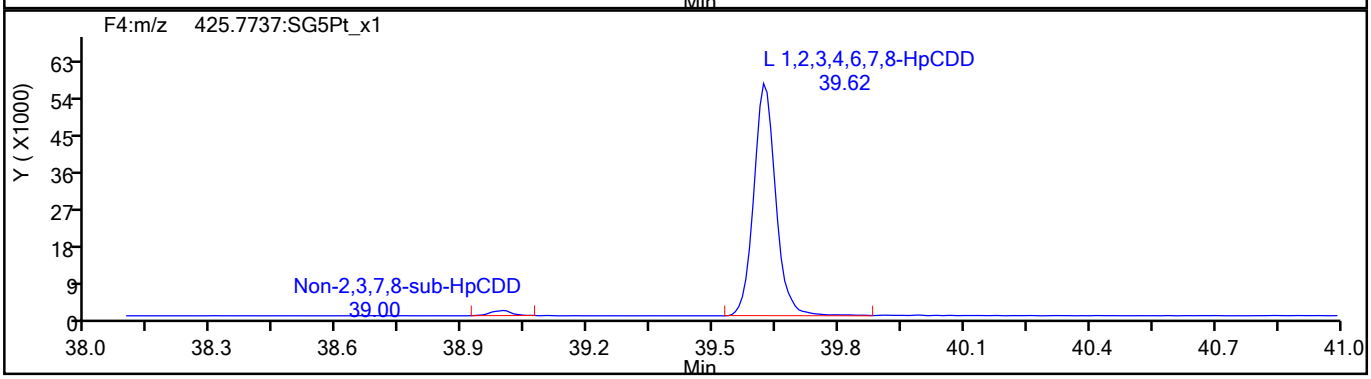

HpCDD Standards

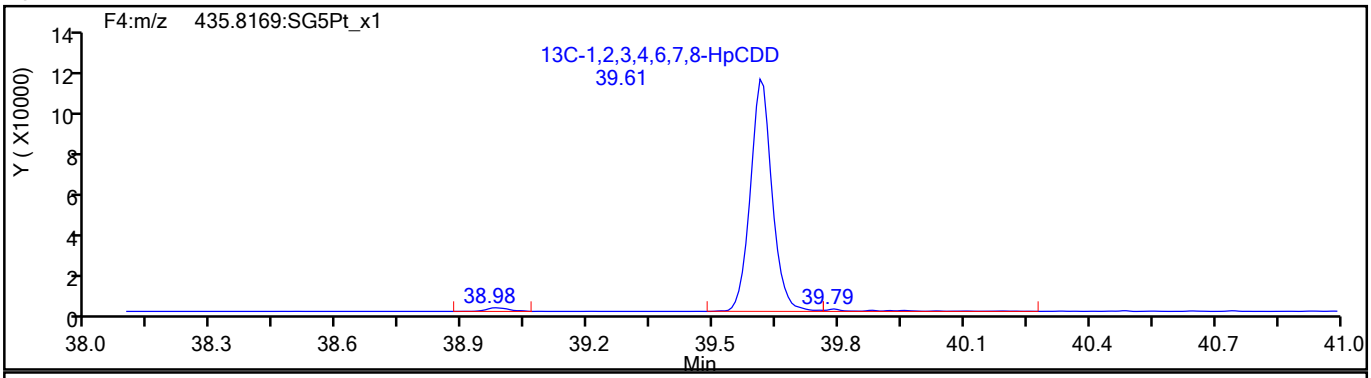

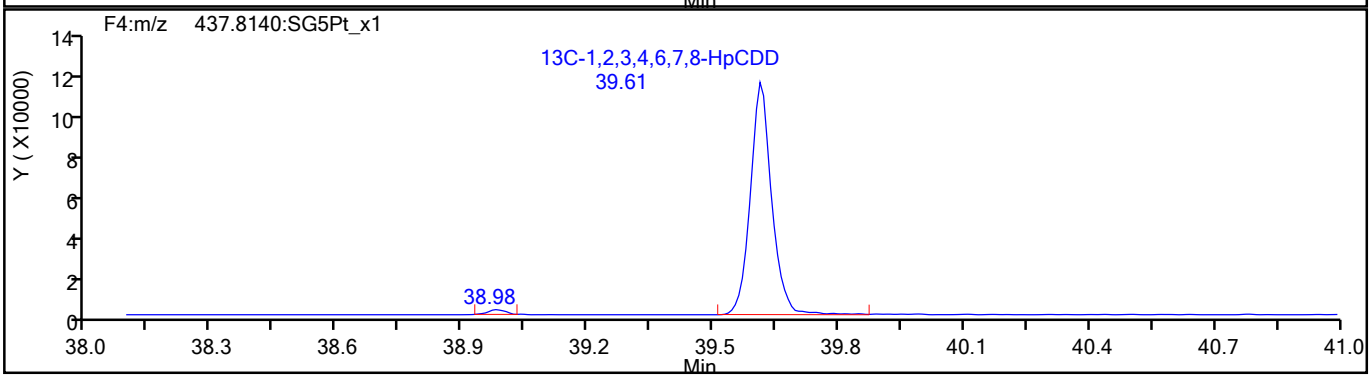

786118

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

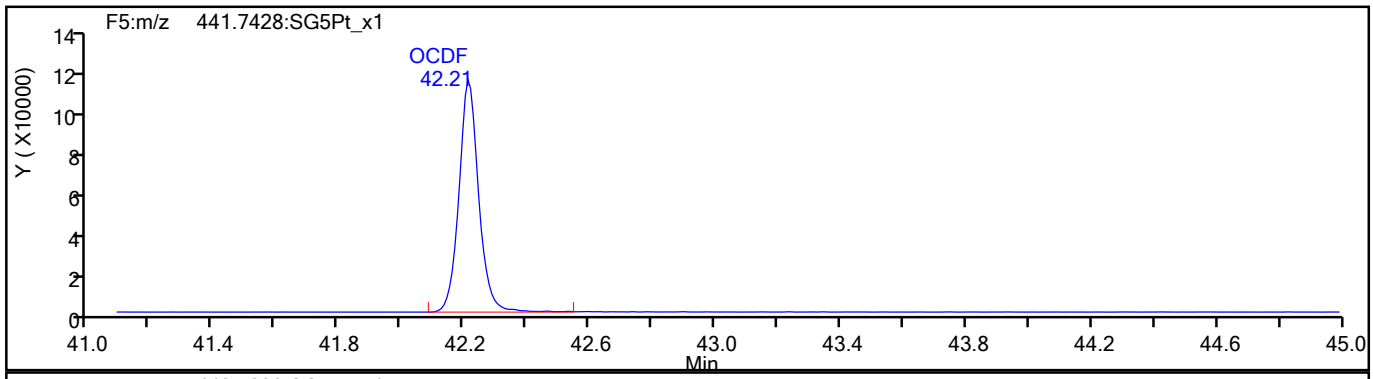

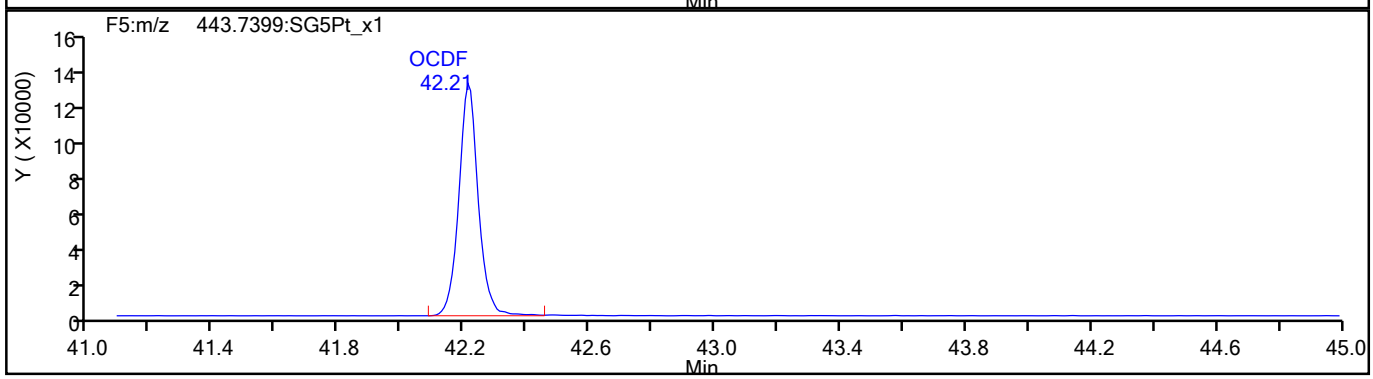

OCDF Standards

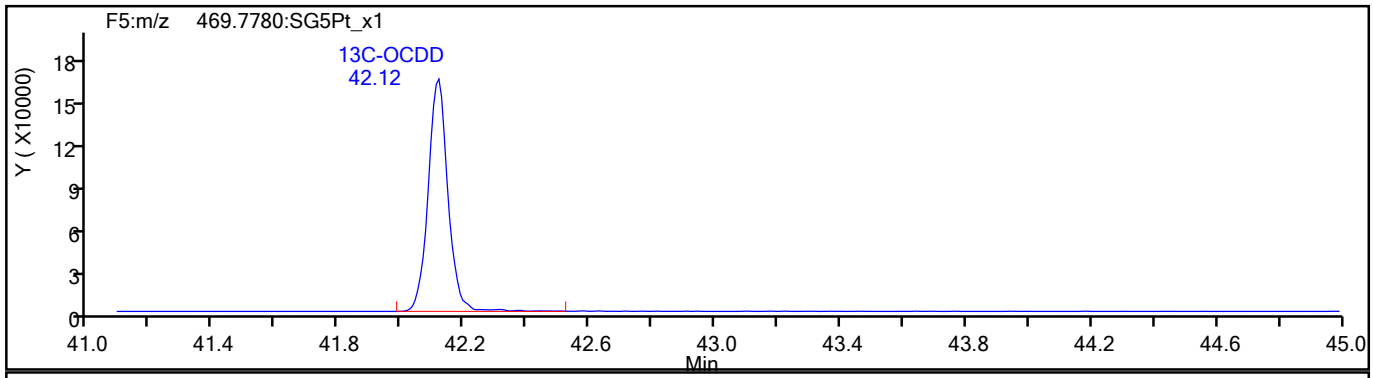

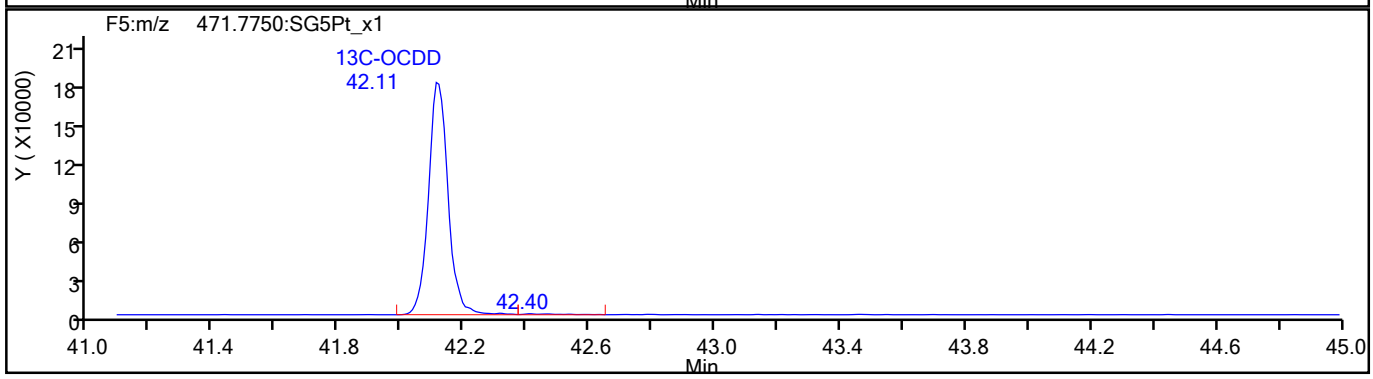

786119

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

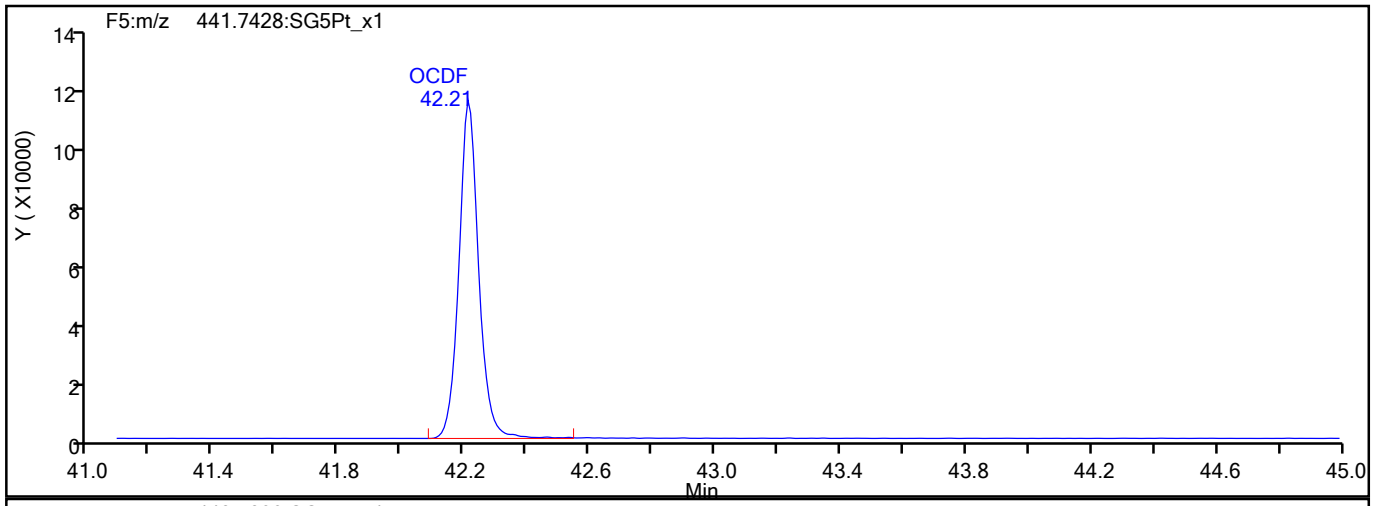

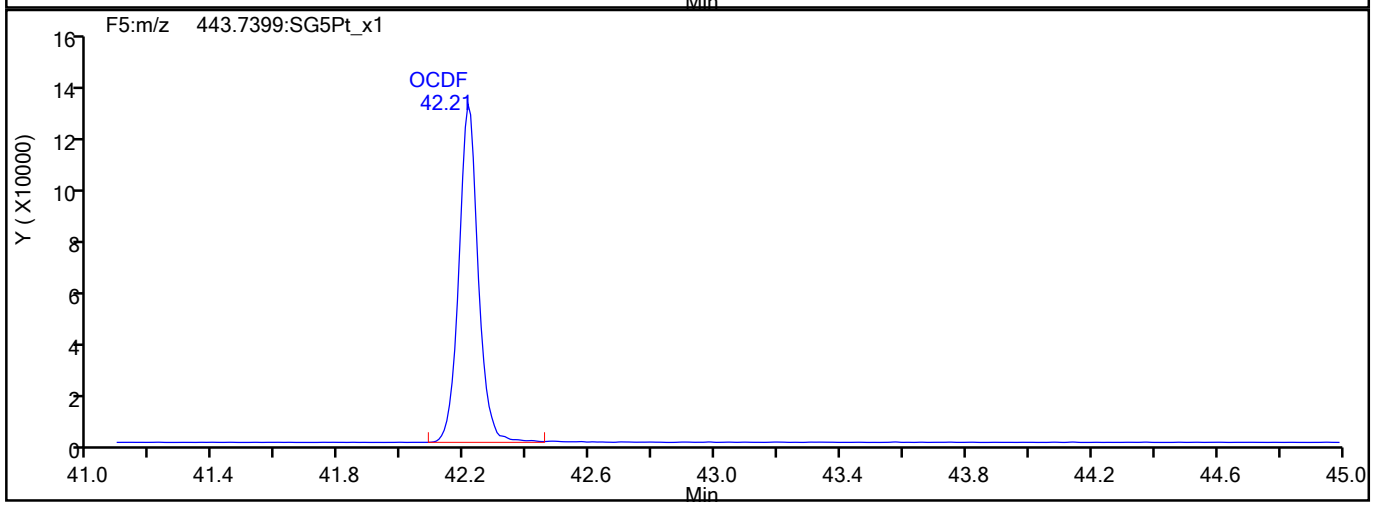

OCDF Interference Mass

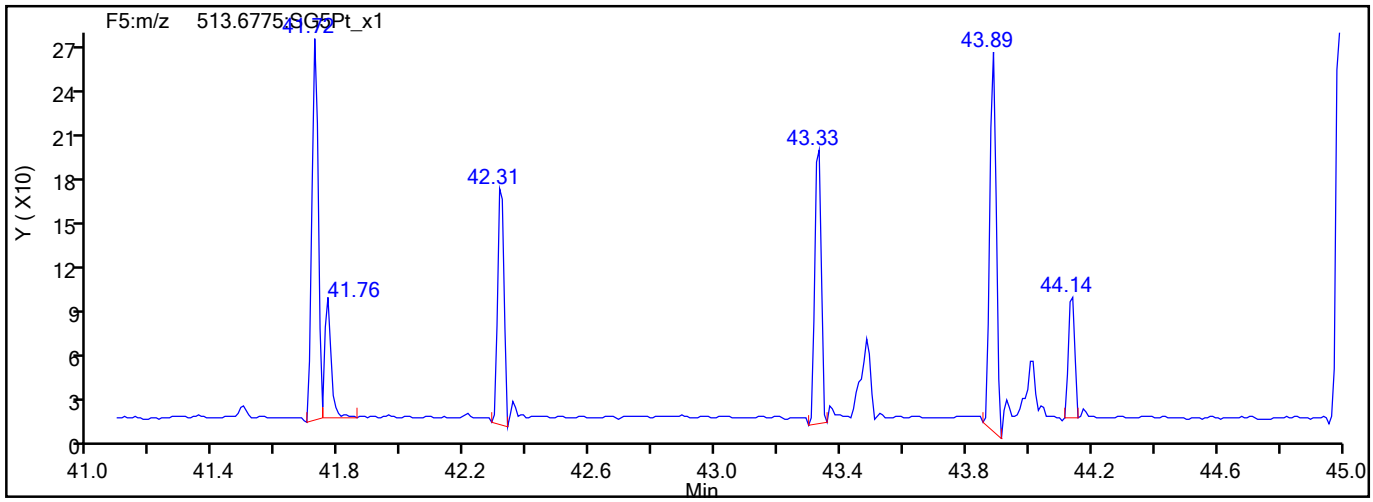

786120

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

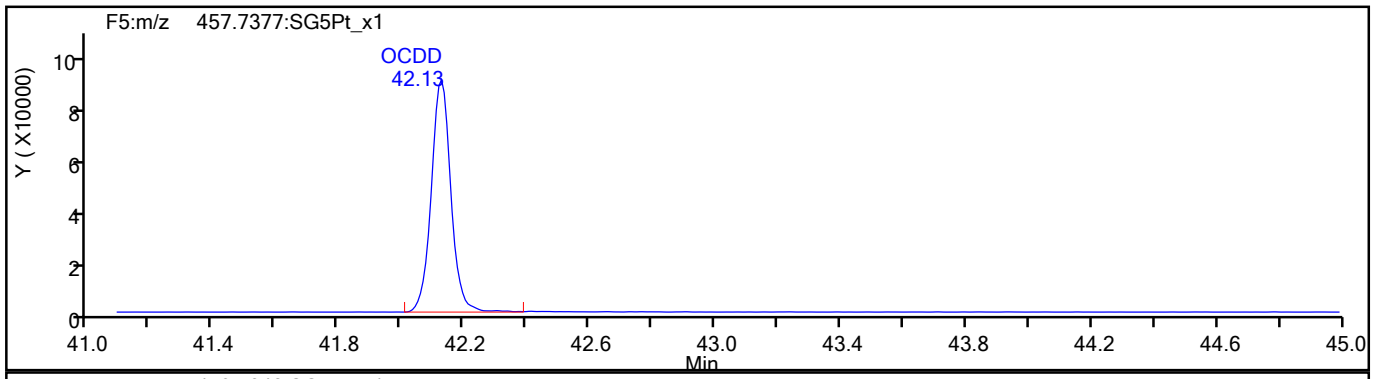

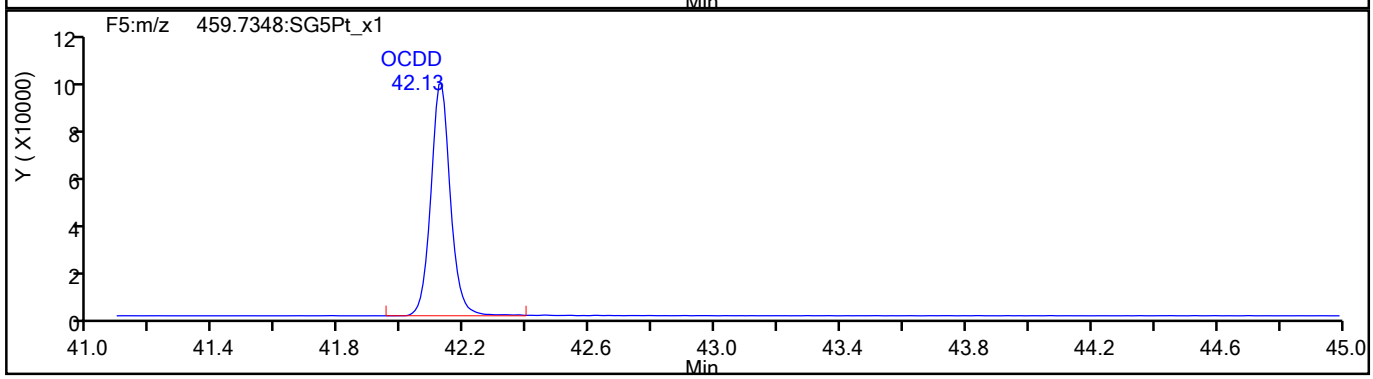

OCDD Standards

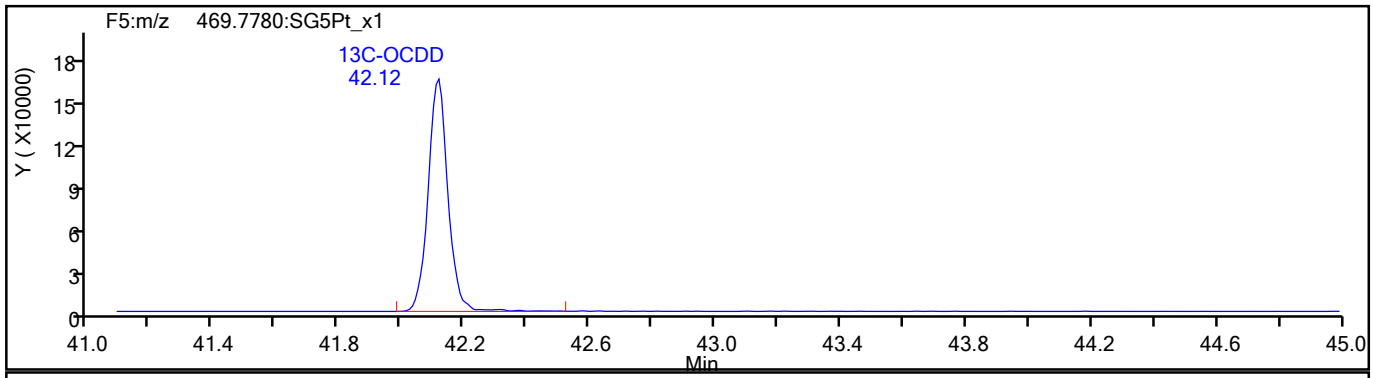

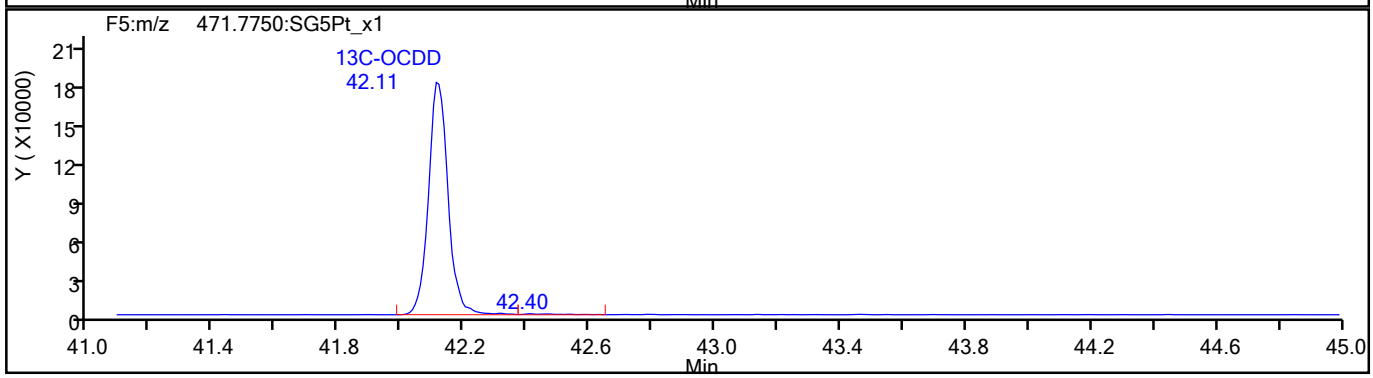

786121

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

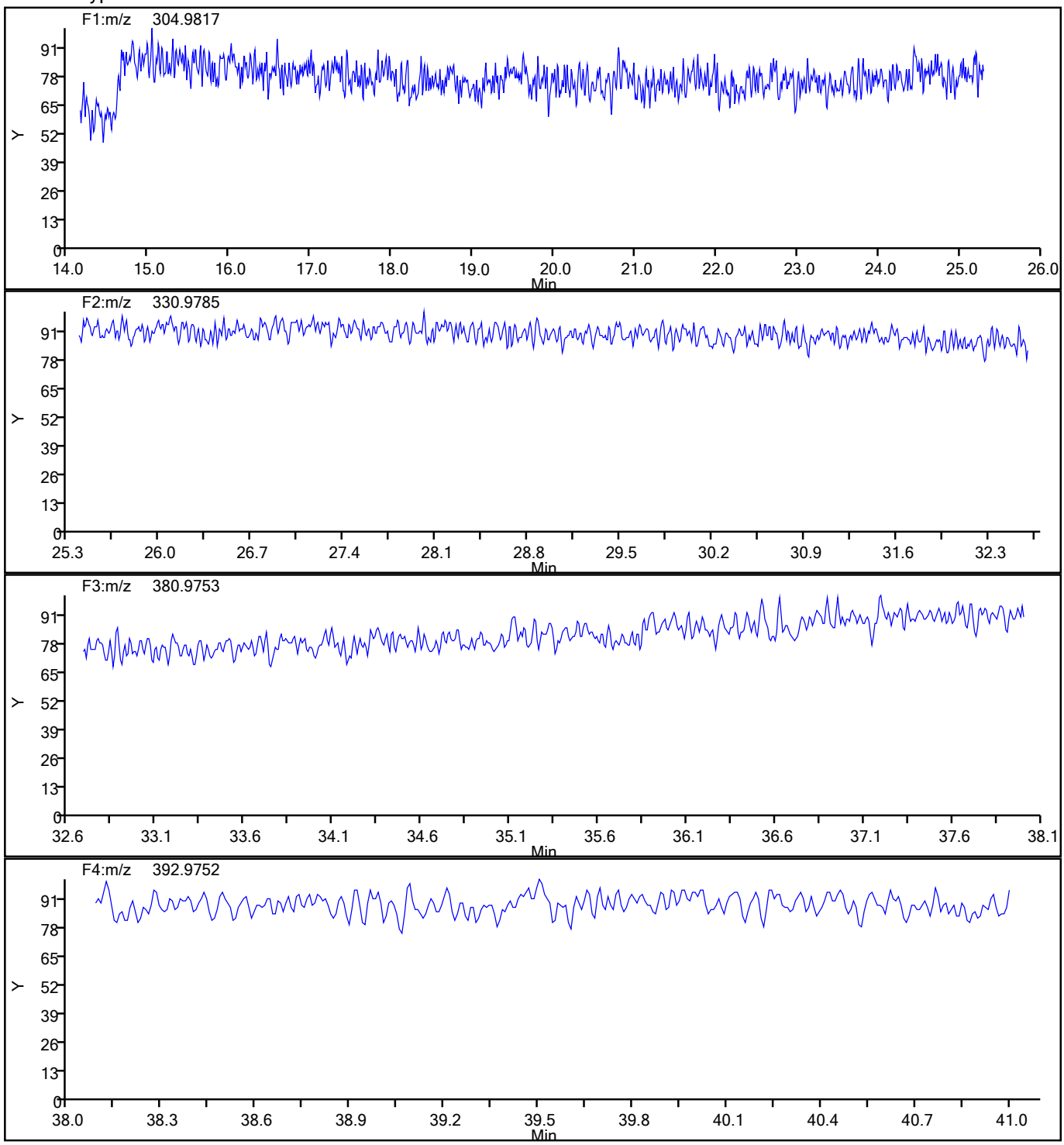

786122

Report Date: 18-Aug-2021 14:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_3.d		
Injection Date:	17-Aug-2021 15:14:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

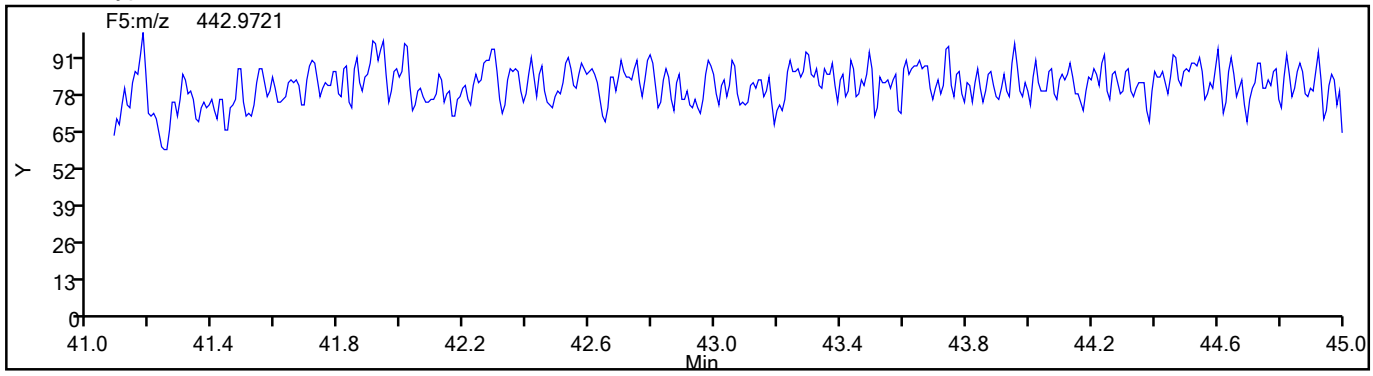

786123

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID: CCV 320-517461/29 Calibration Date: 08/18/2021 13:48

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_32.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.039		9.61	10.0	96	84-120
2,3,7,8-TCDD	AveID	1.075	1.014		9.43	10.0	94	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.060		50.3	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9459		46.9	50.0	94	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.062		50.8	50.0	102	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.121		48.9	50.0	98	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.226		50.3	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.252		51.5	50.0	103	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9839		46.4	50.0	93	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9275		46.7	50.0	93	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.136		51.2	50.0	102	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.262		50.9	50.0	102	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.407		48.8	50.0	98	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.031		49.1	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.253		47.9	50.0	96	86-116
OCDD	AveID	1.062	1.015		95.6	100	96	79-126
OCDF	AveID	1.317	1.285		97.6	100	98	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.493		111	100	111	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	1.020		109	100	109	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.199		105	100	105	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.262		112	100	112	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7188		100	100	100	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.068		111	100	111	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.069		99.8	100	100	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.005		96.5	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7788		103	100	103	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.8427		98.1	100	98	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.020		105	100	105	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.8333		113	100	113	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7590		113	100	113	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.8873		129	100	129	77-129
13C-OCDD	Ave	0.5446	0.7162		263	200	132	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.104		11.0	10.0	110	79-127

31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A b.i. NU	12	1613B/Solid	D266	KSS	10.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	10.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	10.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	10.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A bad inj.	27	1613B/Solid		KSS	10.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	10.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	10.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	10.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A needs 20x	31 } reanalyze	1613B/Solid		KSS	10.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32 }	1613B/Solid		KSS	10.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	
47	17AU21DFS1_47	CCV CS-4 HRDXNL4_00100	CCV 081721C	2	Dioxin		KSS	1.000	
48	17AU21DFS1_48	WDM HRDXNCP_00044	WDM 081721C	1	Dioxin		KSS	1.000	
49	17AU21DFS1_49	SB Solvent Blank C14	SB 081721F	3	Dioxin		KSS	1.000	
50	17AU21DFS1_50	mb 320-513879/1-a	mb 320-513879/1-a	33	1613B/Solid	D267	KSS	10.000	g
51	17AU21DFS1_51	lcs 320-513879/2-a	lcs 320-513879/2-a	34	1613B/Solid		KSS	10.000	g
52	17AU21DFS1_52	320-76901-a-2-a	320-76901-a-2-a	35	1613B/Solid		KSS	10.000	g
53	17AU21DFS1_53	320-76901-a-2-b ms	320-76901-a-2-b ms	36	1613B/Solid		KSS	10.000	g
54	17AU21DFS1_54	320-76901-a-2-c msd	320-76901-a-2-c msd	37	1613B/Solid		KSS	10.000	g
55	17AU21DFS1_55	320-76769-a-4-b	320-76769-a-4-b	38	1613B/Solid		KSS	10.000	g
56	17AU21DFS1_56	320-76888-a-6-a	320-76888-a-6-a	39	1613B/Solid		KSS	10.000	g
57	17AU21DFS1_57	320-76888-a-7-a	320-76888-a-7-a	40	1613B/Solid		KSS	10.000	g
58	17AU21DFS1_58	320-76888-a-8-a	320-76888-a-8-a	41	1613B/Solid		KSS	10.000	g
59	17AU21DFS1_59	320-76888-a-9-a	320-76888-a-9-a	42	1613B/Solid		KSS	10.000	g
60	17AU21DFS1_60	SB Solvent Blank C14	SB 081721G	3	Dioxin		KSS	1.000	
61	17AU21DFS1_61	Resolution Check	RC 081721D	46			KSS	1.000	

LOGFILE CHECKED)
DB 8/18/21

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

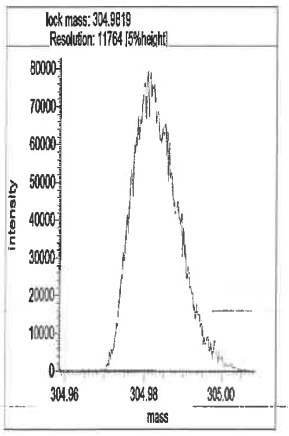

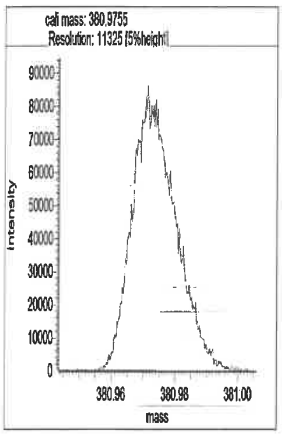

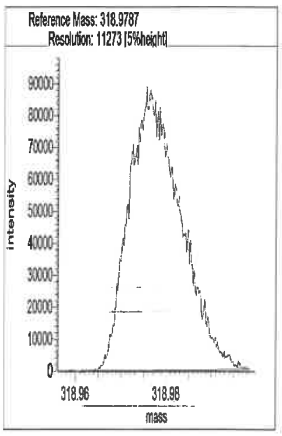

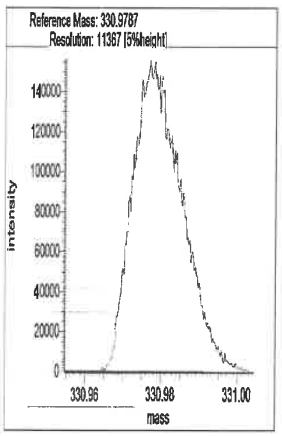

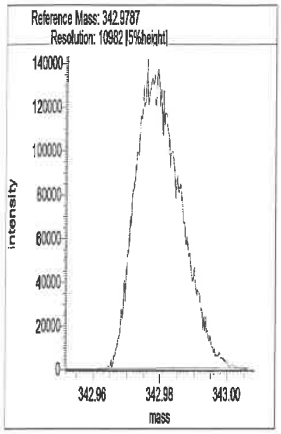

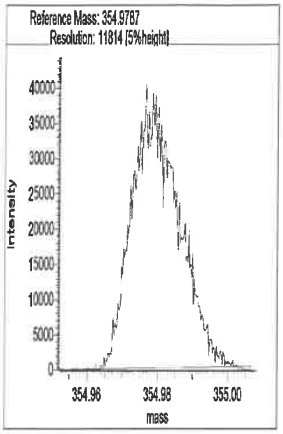

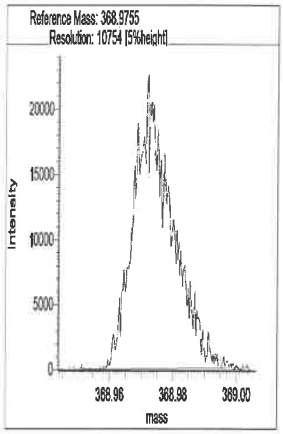

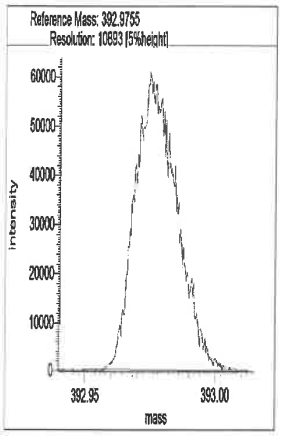

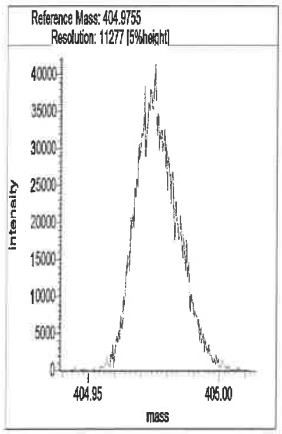

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

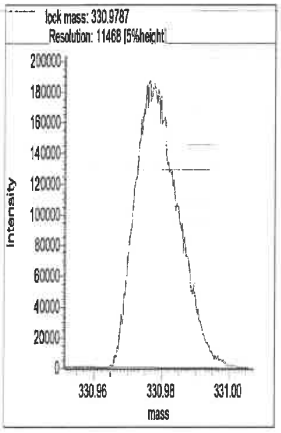

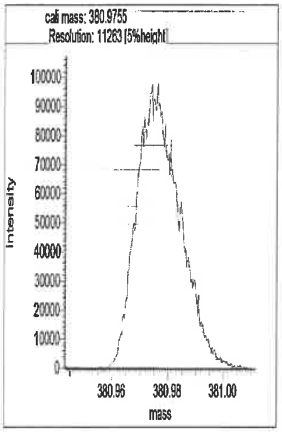

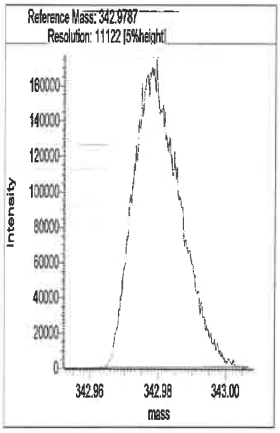

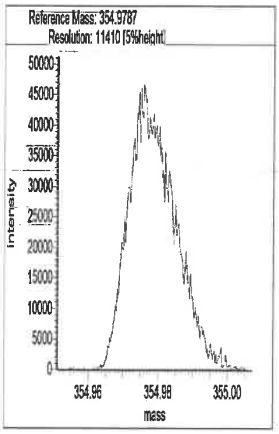

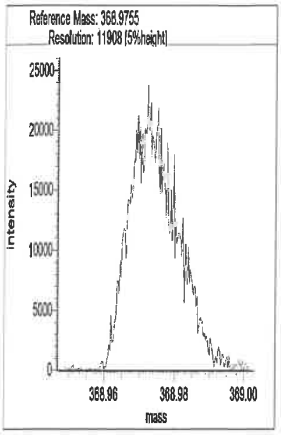

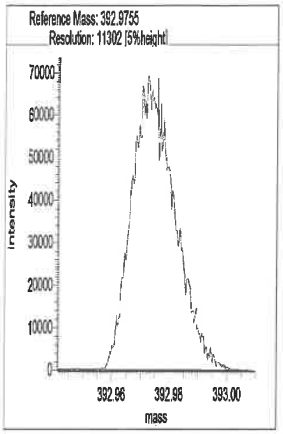

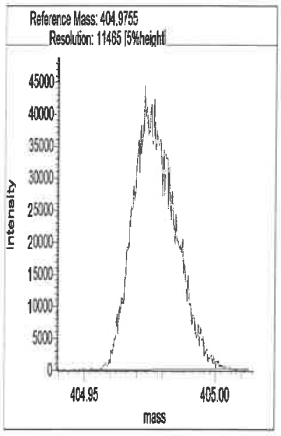

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

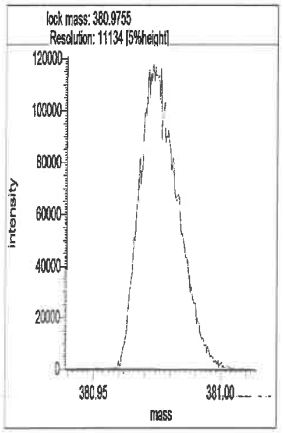

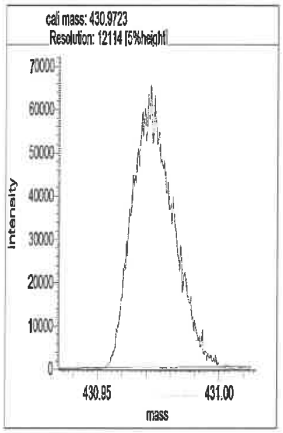

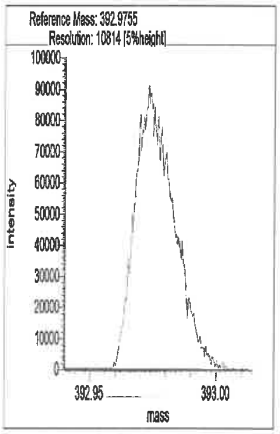

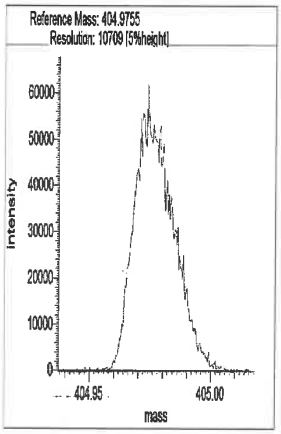

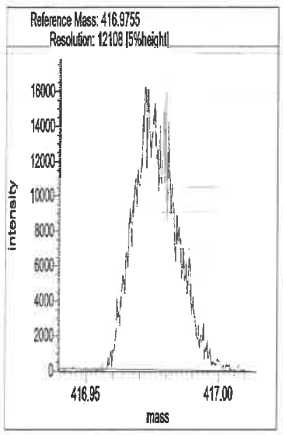

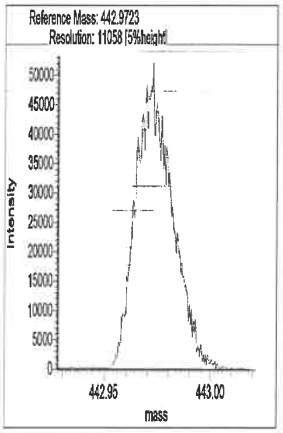

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

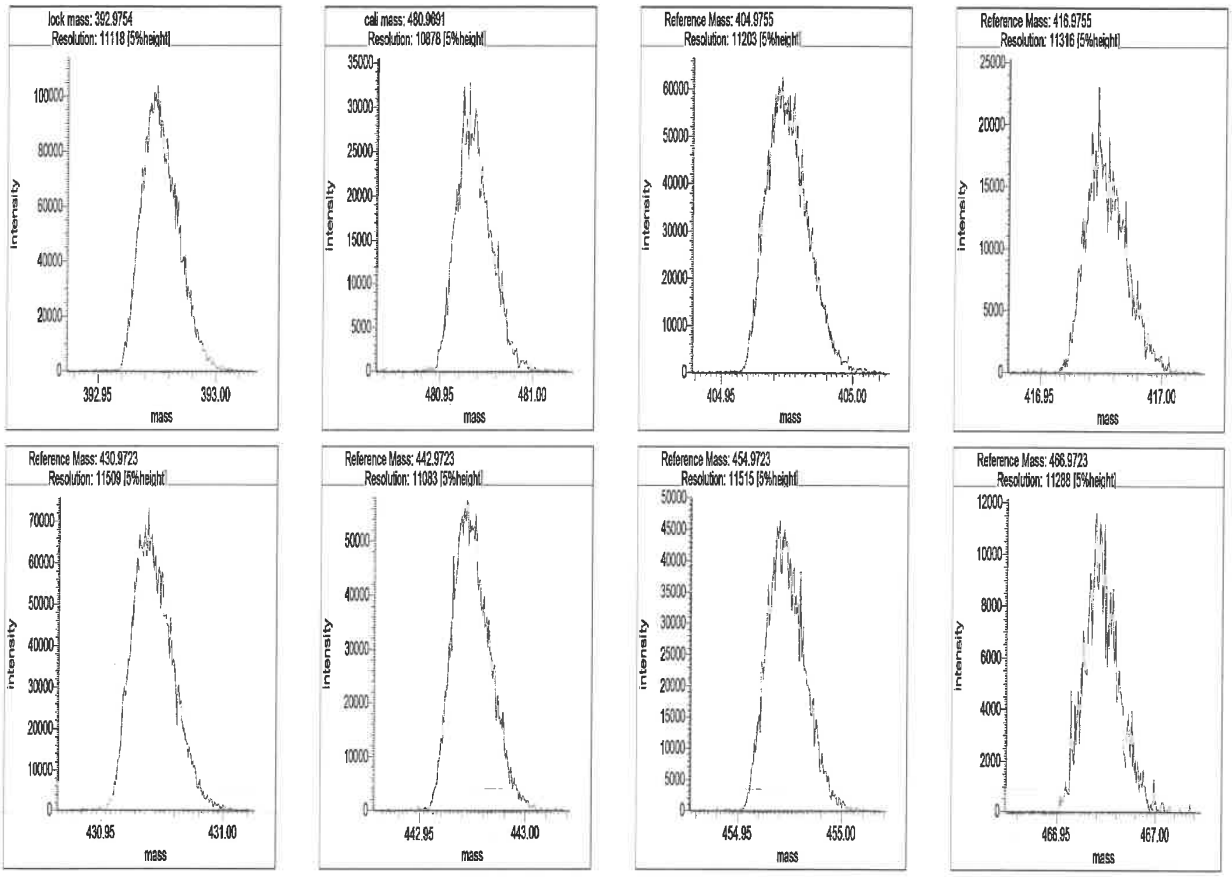

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

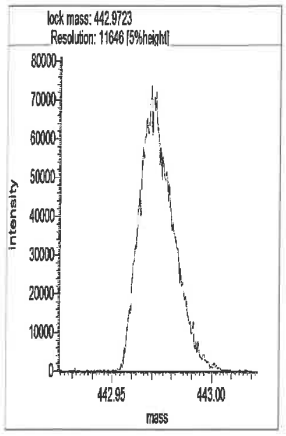
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

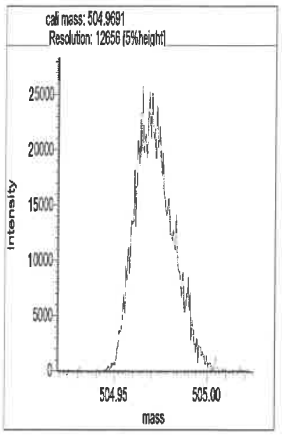
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

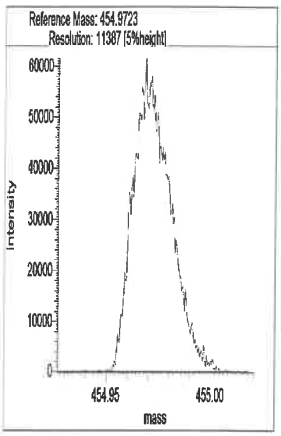
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

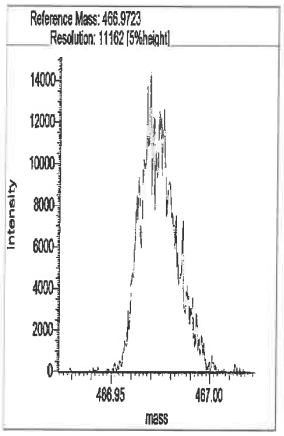
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

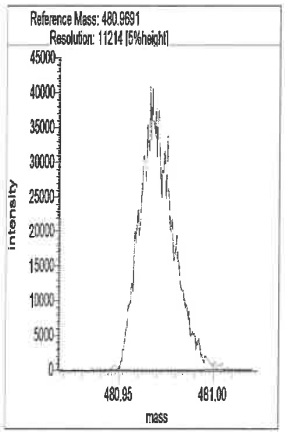
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

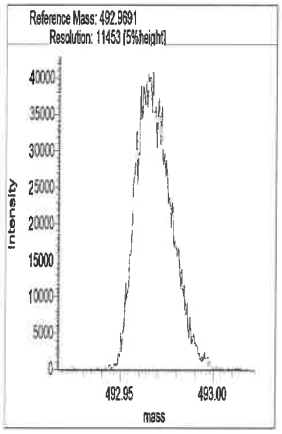
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 01:12
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10755 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10064 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11004 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10862 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10493 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11020 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10113 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10231 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9724 [5%height] ✓ ok 8/19/21

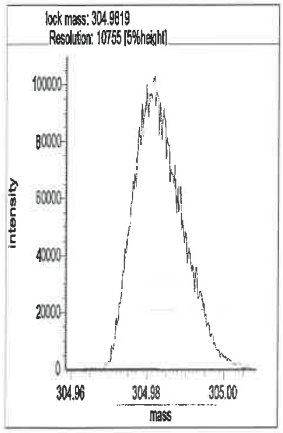

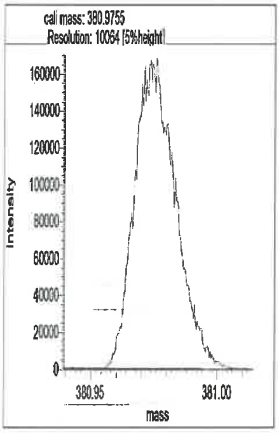

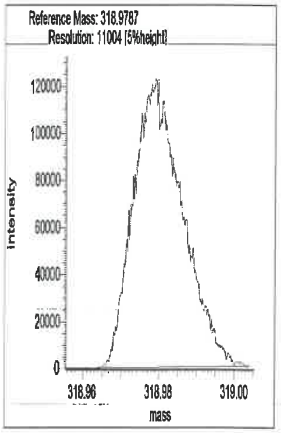

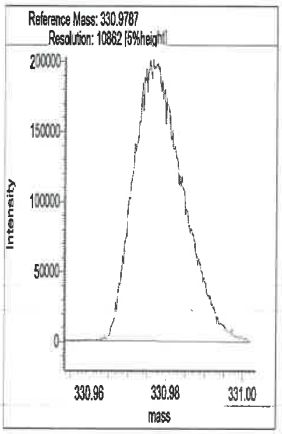

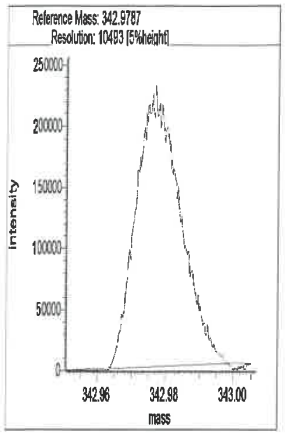

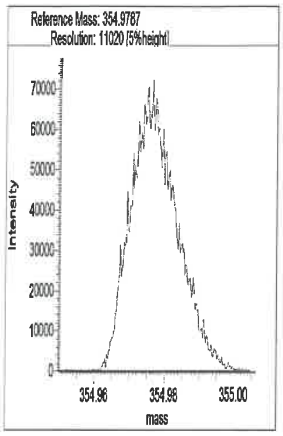

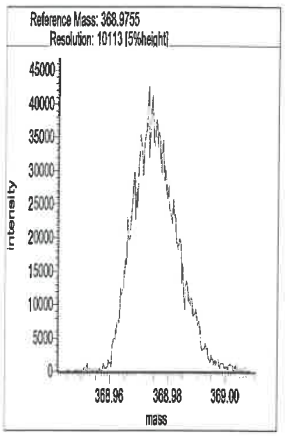

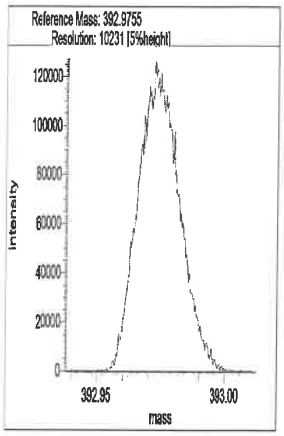

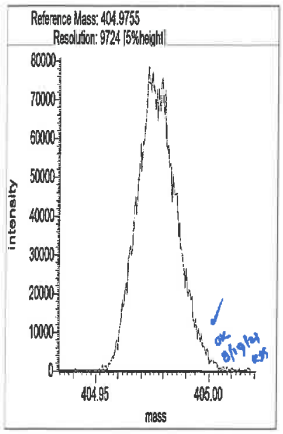

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10868 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10796 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10893 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11154 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10747 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10242 [5%height]

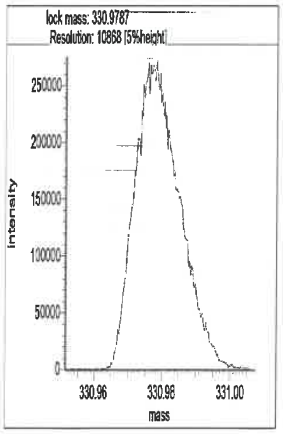

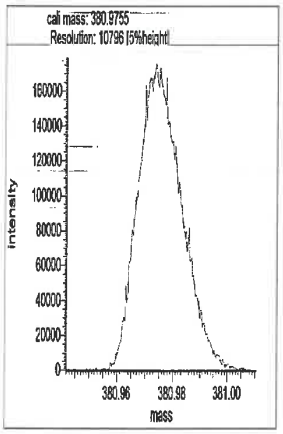

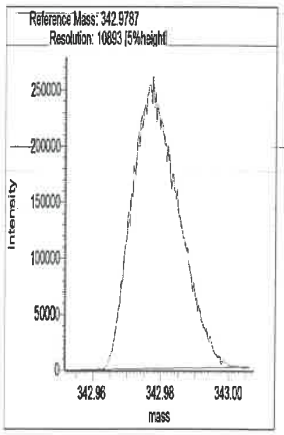

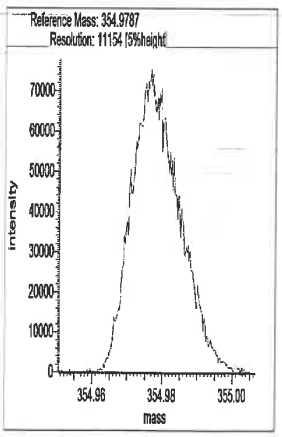

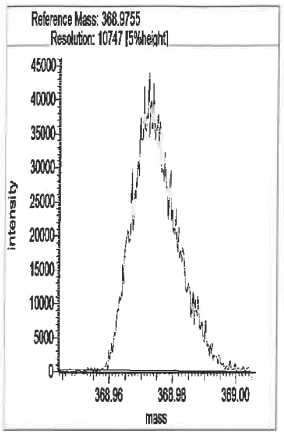

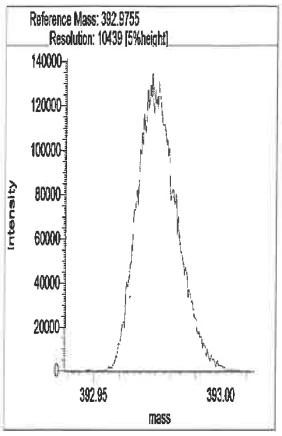

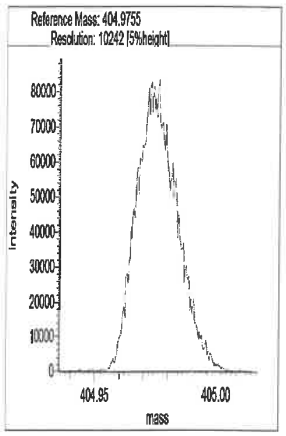

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11012 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10577 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11026 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10658 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11077 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10816 [5%height]

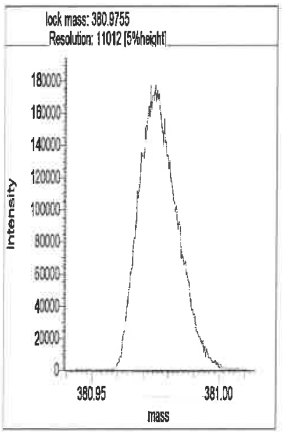

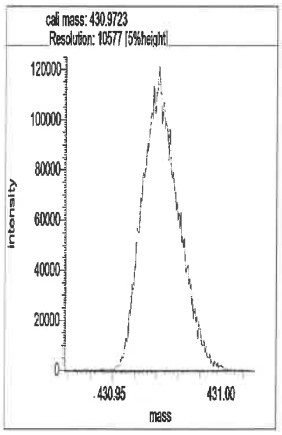

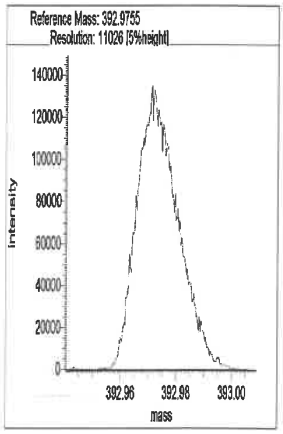

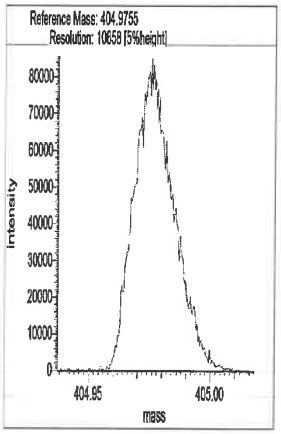

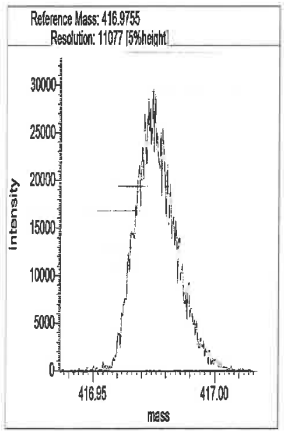

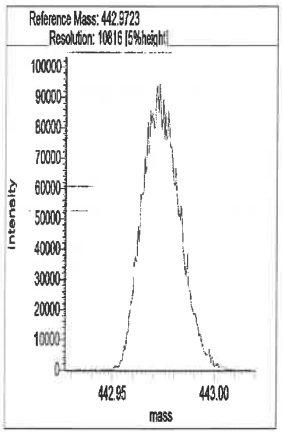

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11599 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10409 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11028 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11067 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10523 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10883 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10838 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11180 [5%height]

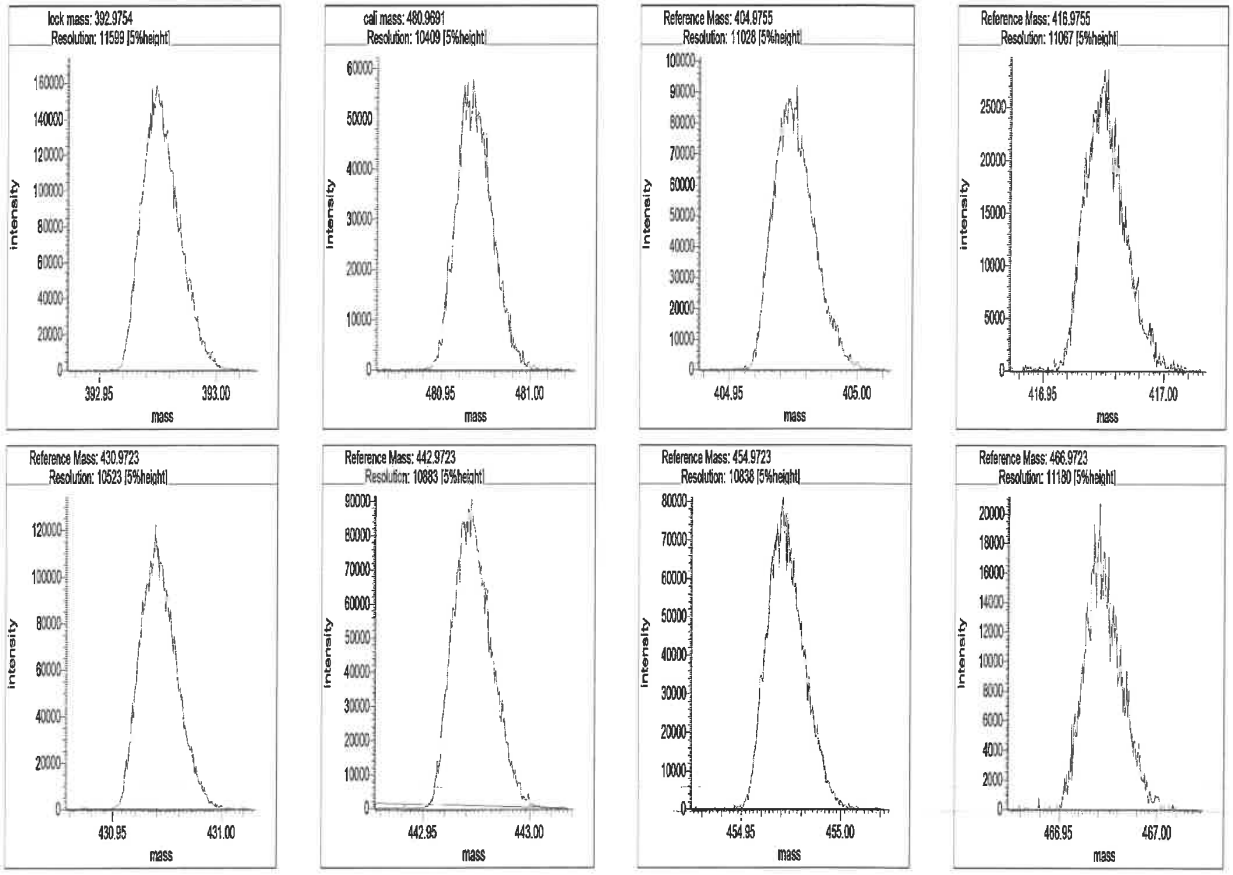

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11216 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10772 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11002 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11259 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10778 [5%height]

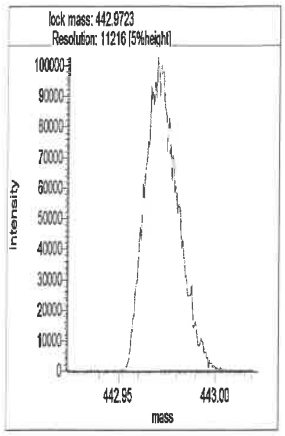
lock mass: 442.9723
Resolution: 11216 [5%height]
Intensity
mass

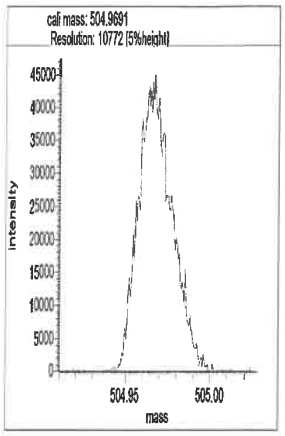
cali mass: 504.9691
Resolution: 10772 [5%height]
Intensity
mass

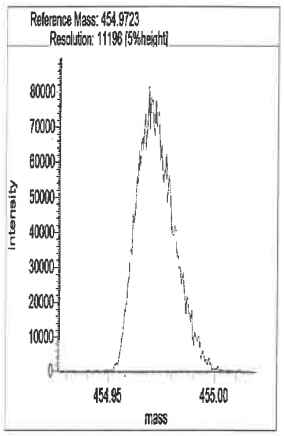
Reference Mass: 454.9723
Resolution: 11196 [5%height]
Intensity
mass

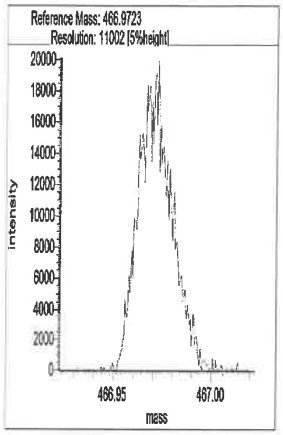
Reference Mass: 466.9723
Resolution: 11002 [5%height]
Intensity
mass

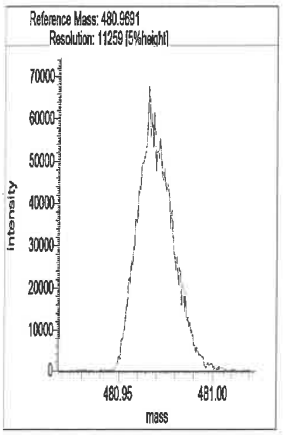
Reference Mass: 480.9691
Resolution: 11259 [5%height]
Intensity
mass

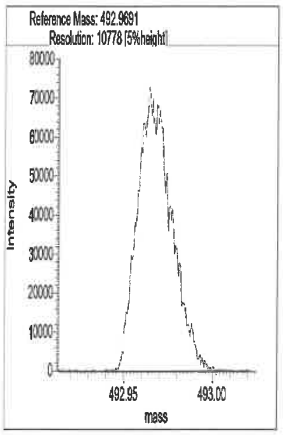
Reference Mass: 492.9691
Resolution: 10778 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 12:47
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11862 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10668 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11408 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11603 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11057 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11275 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11232 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10101 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9688 [5%height] ✓ 8/19/21 KCF

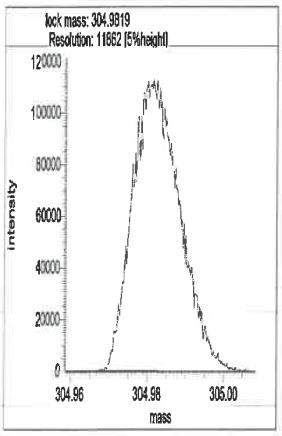

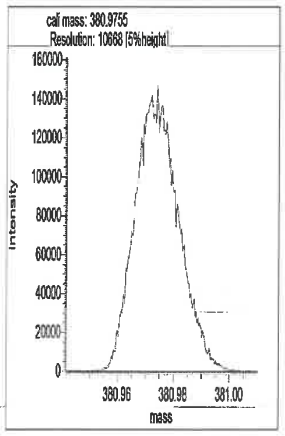

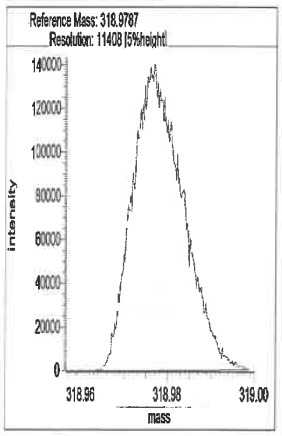

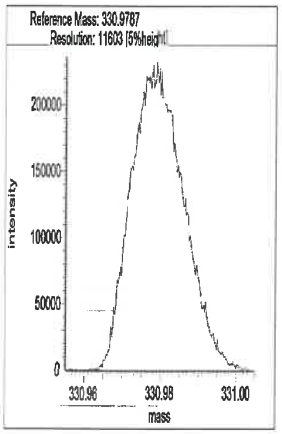

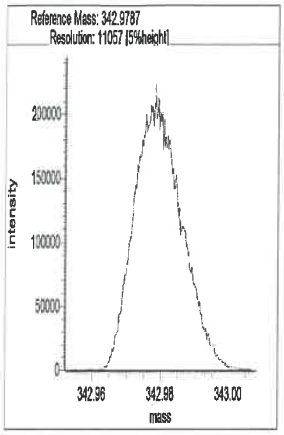

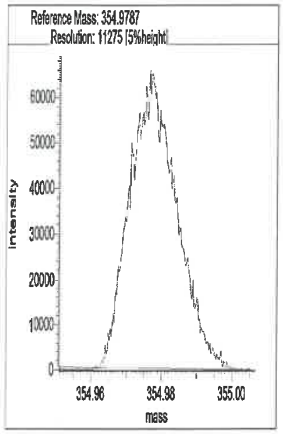

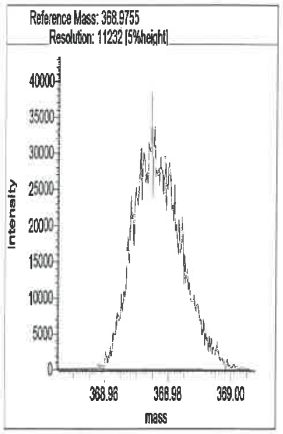

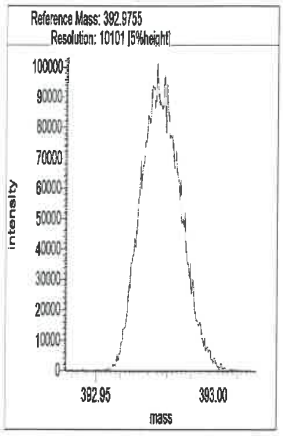

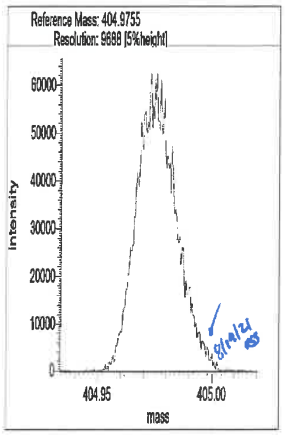

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11409 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11096 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11275 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10877 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10816 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11177 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10770 [5%height]

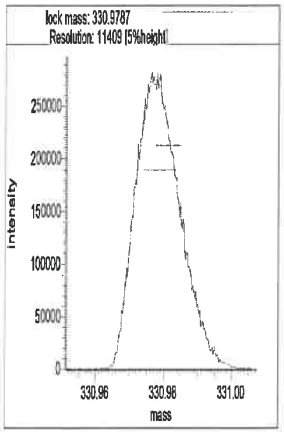

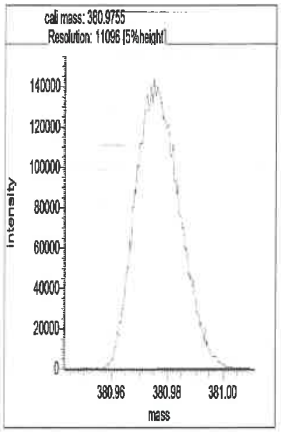

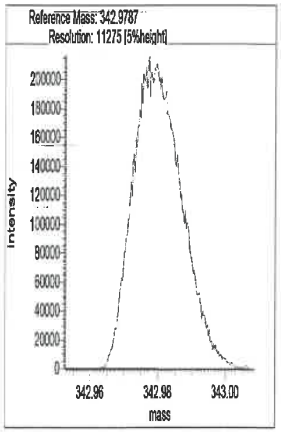

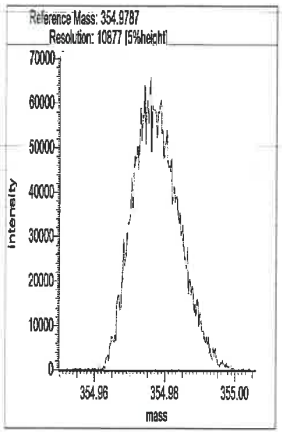

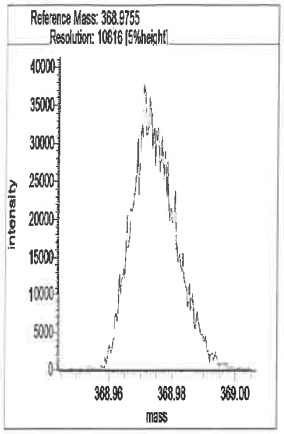

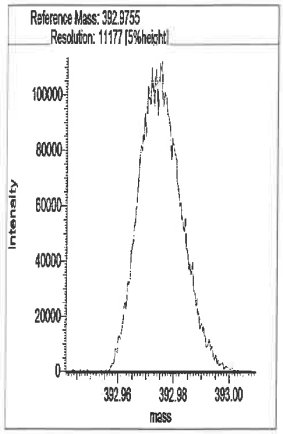

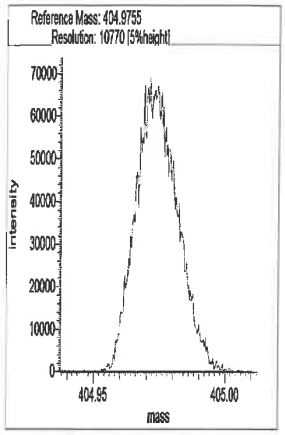

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11068 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11154 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11414 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11295 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10788 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10614 [5%height]

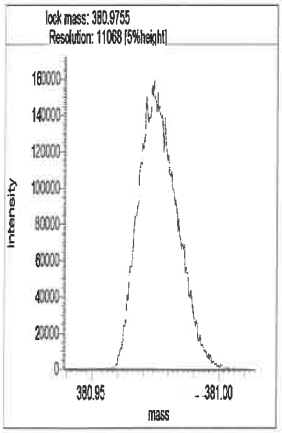

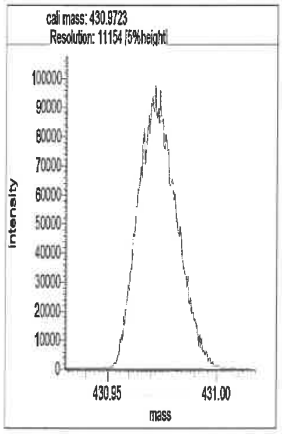

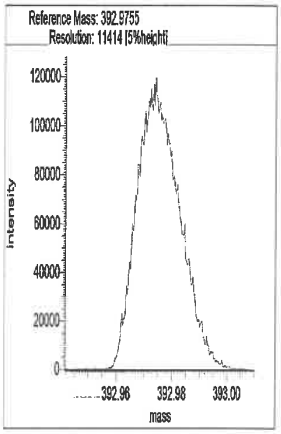

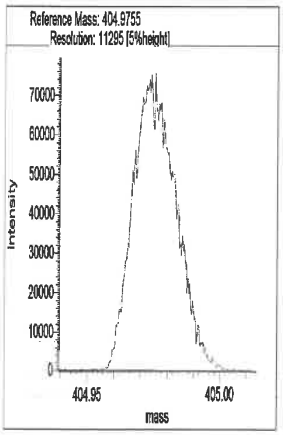

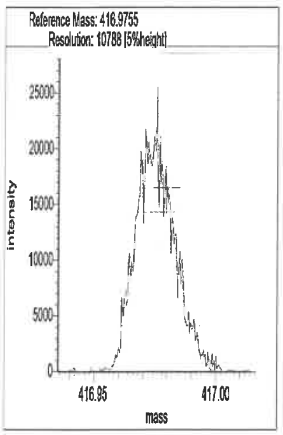

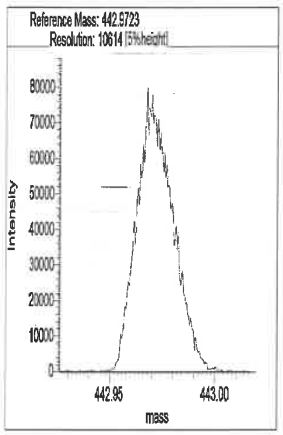

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11418 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11823 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11599 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11335 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10811 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11056 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10732 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10827 [5%height]

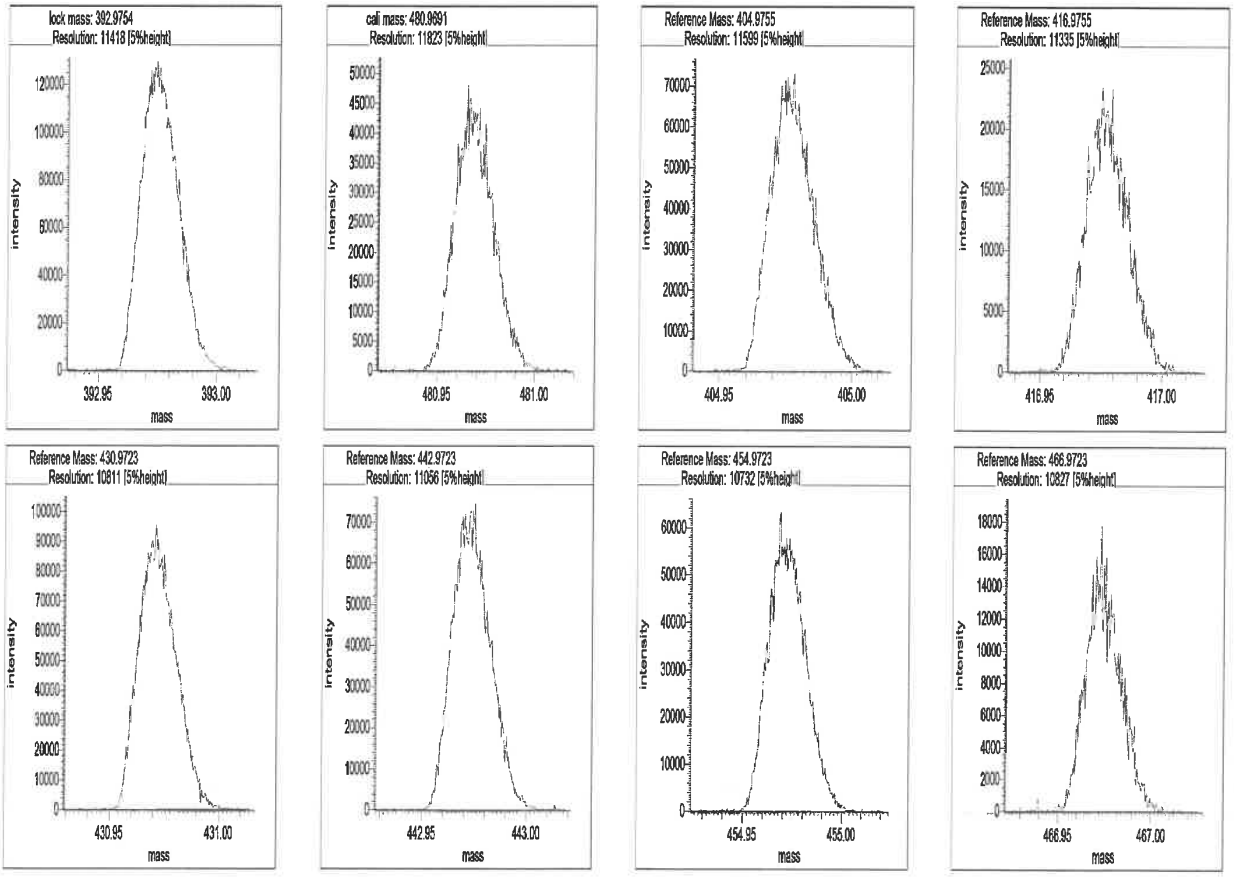

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11579 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11377 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11119 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12204 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10698 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10928 [5%height]

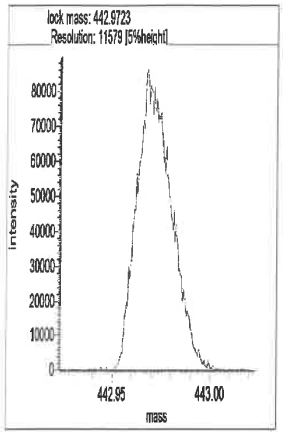
lock mass: 442.9723
Resolution: 11579 [5%height]
Intensity
mass

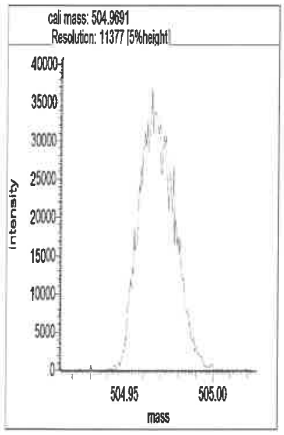
cali mass: 504.9691
Resolution: 11377 [5%height]
Intensity
mass

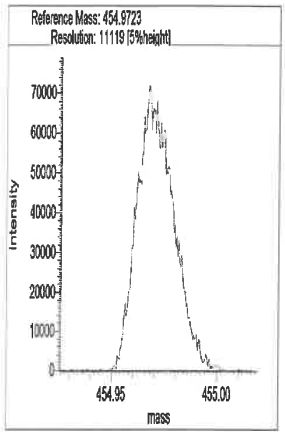
Reference Mass: 454.9723
Resolution: 11119 [5%height]
Intensity
mass

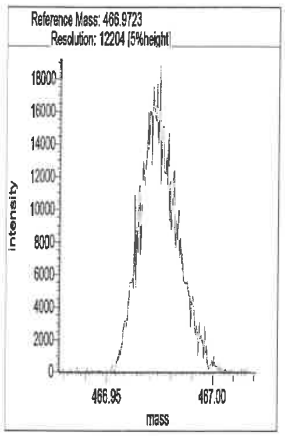
Reference Mass: 466.9723
Resolution: 12204 [5%height]
Intensity
mass

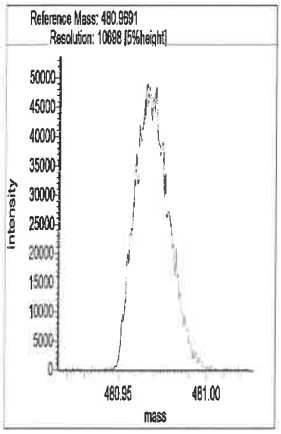
Reference Mass: 480.9691
Resolution: 10628 [5%height]
Intensity
mass

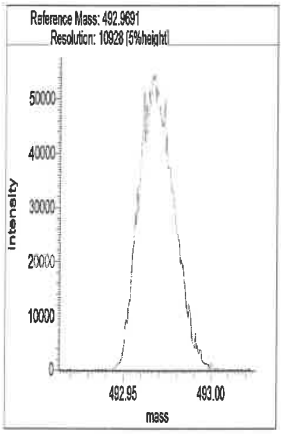
Reference Mass: 492.9691
Resolution: 10928 [5%height]
Intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 13:48:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:36 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 15:08:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.444	583584	0.84	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.480	871422	0.81	1.3459	110.9	110.9	0.2490	0.2490	111	
2,3,7,8-TCDF	20.523	90505	0.83	1.0802	9.615	9.615	0.0222	0.0222	96.15	M
A Non-2,3,7,8-sub-TCDF	19.878	1359	0.77	1.0802	0.2814	0.1444	0.0222	0.0337	0.00	RQM
S Total TCDF					9.896	9.759	0.0222	0.0222		RQ
D 13C-2,3,7,8-TCDD	21.831	595187	0.83	0.9317	109.5	109.5	0.2082	0.2082	109	
$ 37Cl4-2,3,7,8-TCDD	21.857	64449		1.0083	11.0	11.0	0.0117	0.0117	110	
2,3,7,8-TCDD	21.882	60333	0.89	1.0753	9.427	9.427	0.0245	0.0245	94.27	M
A Non-2,3,7,8-sub-TCDD	20.707	208	0.77	1.0753	0.0619	0.0325	0.0245	0.0245	0.00	RQM
S Total TCDD					9.488	9.459	0.0245	0.0245		RQ
D 13C-1,2,3,7,8-PeCDF	27.304	699918	1.55	1.1405	105.2	105.2	0.2134	0.2134	105	
1,2,3,7,8-PeCDF	27.330	370990	1.59	1.0543	50.3	50.3	0.1259	0.1259	101	
D 13C-2,3,4,7,8-PeCDF	28.820	736640	1.63	1.1253	112.2	112.2	0.2163	0.2163	112	
2,3,4,7,8-PeCDF	28.845	348407	1.57	1.0079	46.9	46.9	0.1301	0.1301	93.86	
A F1 PeCDFs	24.648	81	1.55	1.0311	0.0600	0.0109	0.004669	0.008777	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.125	4158	1.55	1.0311	0.6367	0.5614	0.1279	0.5614	0.00	RQ
S Total PeCDF					97.9	97.8	0.1280	0.1280		RQ
D 13C-1,2,3,7,8-PeCDD	29.645	419476	1.56	0.7165	100.3	100.3	0.1428	0.1428	100	
1,2,3,7,8-PeCDD	29.670	222798	1.53	1.0465	50.8	50.8	0.0611	0.0611	102	
A Non-2,3,7,8-sub-PeCDD	28.489						0.0611	0.0611		
S Total PeCDD					50.8	50.8	0.0611	0.0611		
D 13C-1,2,3,4,7,8-HxCDF	34.955	674175	0.54	0.9648	110.7	110.7	0.3609	0.3609	111	
1,2,3,4,7,8-HxCDF	34.972	377904	1.23	1.1474	48.9	48.9	0.1894	0.1894	97.71	
D 13C-1,2,3,6,7,8-HxCDF	35.123	674580	0.52	1.0708	99.8	99.8	0.3252	0.3252	99.80	
1,2,3,6,7,8-HxCDF	35.132	413479	1.26	1.2178	50.3	50.3	0.1934	0.1934	101	
D 13C-2,3,4,6,7,8-HxCDF	35.932	634377	0.53	1.0413	96.5	96.5	0.3344	0.3344	96.51	
2,3,4,6,7,8-HxCDF	35.949	397022	1.26	1.2145	51.5	51.5	0.1754	0.1754	103	
D 13C-1,2,3,7,8,9-HxCDF	36.816	643754	0.55	0.9731	104.8	104.8	0.3579	0.3579	105	
1,2,3,7,8,9-HxCDF	36.833	406240	1.28	1.2401	50.9	50.9	0.1567	0.1567	102	
A Non-2,3,7,8-sub-HxCDF	35.028						0.1777	0.1777		

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					201.6	201.6	0.1788	0.1788		
* 13C-1,2,3,7,8,9-HxCDD	36.623	631247	1.29	1.8E+04	100.0	100.0				M
D 13C-1,2,3,4,7,8-HxCDD	36.134	491591	1.35	0.7587	102.6	102.6	0.2264	0.2264	103	
1,2,3,4,7,8-HxCDD	36.159	241838	1.29	1.0608	46.4	46.4	0.0904	0.0904	92.75	
D 13C-1,2,3,6,7,8-HxCDD	36.260	531922	1.23	0.8593	98.1	98.1	0.1999	0.1999	98.07	
1,2,3,6,7,8-HxCDD	36.269	246666	1.18	0.9933	46.7	46.7	0.0900	0.0900	93.37	
1,2,3,7,8,9-HxCDD	36.631	290723	1.25	1.1094	51.2	51.2	0.0834	0.0834	102	
A Non-2,3,7,8-sub-HxCDD	35.394						0.0878	0.0878		
S Total HxCDD					144.3	144.3	0.0880	0.0880		
D 13C-1,2,3,4,6,7,8-HpCDF	38.630	526049	0.45	0.7359	113.2	113.2	0.4054	0.4054	113	
1,2,3,4,6,7,8-HpCDF	38.638	370093	1.06	1.4421	48.8	48.8	0.1783	0.1783	97.57	
D 13C-1,2,3,4,7,8,9-HpCDF	39.876	560124	0.44	0.6854	129.5	129.5	0.4354	0.4354	129	M
1,2,3,4,7,8,9-HpCDF	39.885	351003	1.05	1.3092	47.9	47.9	0.1621	0.1621	95.73	
A Non-2,3,7,8-sub-HpCDF	39.258						0.1690	0.1690		
S Total HpCDF					96.7	96.7	0.1702	0.1702		
D 13C-1,2,3,4,6,7,8-HpCDD	39.573	479110	1.01	0.6745	112.5	112.5	0.3461	0.3461	113	
1,2,3,4,6,7,8-HpCDD	39.582	246982	1.07	1.0503	49.1	49.1	0.1221	0.1221	98.16	
A Non-2,3,7,8-sub-HpCDD	39.258	2973	1.04	1.0503	0.7180	0.5908	0.1221	0.5908	0.00	RQ
S Total HpCDD					49.8	49.7	0.1221	0.1221		RQ
D 13C-OCDD	42.069	904193	0.89	0.5446	263.0	263.0	0.3342	0.3342	132	
OCDF	42.170	580843	0.91	1.3168	97.6	97.6	0.0938	0.0938	97.57	
OCDD	42.078	458801	0.90	1.0620	95.6	95.6	0.0951	0.0951	95.56	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 18-Aug-2021 13:48:00 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:36 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 15:08:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.444	21.444	0		265855	39874	42	105	949		a
333.9338	21.453	21.444	1		317729	45174	24	60	1882	0.84(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.480	20.480	0	0.955	389124	57100	79	197	723		
317.9389	20.489	20.480	1	0.955	482298	68240	35	87	1950	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.523	20.523	0	1.002	40929	5463	4	10	1366		M
305.8987	20.506	20.523	-1	1.001	49576	7254	8	20	907	0.83(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	17.486	19.878	-143	0.854	72	49	4	10	12		
305.8987	17.503	19.878	-142	0.855	325	77	8	20	10	0.22(0.65-0.89)	
	Empc Correction				93	63	8	20	8		
303.9016	19.749	19.878	-8	0.964	138	54	4	10	14		
305.8987	19.775	19.878	-6	0.966	511	125	8	20	16	0.27(0.65-0.89)	
	Empc Correction				179	70	8	20	9		
303.9016	20.911	19.878	62	1.021	628	84	4	10	21		
	Empc Correction				136	73	4	10	18		
305.8987	20.893	19.878	61	1.020	177	96	8	20	12	3.55(0.65-0.89)	
303.9016	21.005	19.878	67	1.026	138	57	4	10	14		
305.8987	20.988	19.878	66	1.025	265	51	8	20	6	0.52(0.65-0.89)	
	Empc Correction				179	74	8	20	9		
303.9016	21.281	19.878	84	1.039	255	95	4	10	24		
	Empc Correction				107	72	4	10	18		
305.8987	21.315	19.878	86	1.041	140	94	8	20	12	1.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											
331.9368	21.831	21.831	0	1.018	269248	34531	42	105	822		
333.9338	21.822	21.831	-1	1.018	325939	41230	24	60	1718	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.857	21.857	0	1.019	64449	8479	4	10	2120		
2,3,7,8-TCDD											M
319.8965	21.882	21.882	0	1.002	28457	3845	7	17	549		M
321.8936	21.882	21.882	0	1.002	31876	3953	1	2	3953	0.89(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQM
319.8965	21.668	20.707	58	0.993	120	81	7	17	12		
	Empc Correction				33	23	7	17	3		
321.8936	21.693	20.707	59	0.994	43	31	1	2	31	2.79(0.65-0.89)	
319.8965	22.399	20.707	101	1.026	158	67	7	17	10		
	Empc Correction				57	22	7	17	3		
321.8936	22.330	20.707	97	1.023	75	29	1	2	29	2.11(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.304	27.304	0	1.273	425195	63633	45	112	1414		
353.8970	27.313	27.304	1	1.274	274723	39611	38	95	1042	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.330	27.330	0	1.001	227987	33133	32	80	1035		
341.8567	27.338	27.330	1	1.001	143003	20797	23	57	904	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.820	28.820	0	1.344	456611	65087	45	112	1446		
353.8970	28.812	28.820	-1	1.344	280029	39384	38	95	1036	1.63(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.845	28.845	0	1.001	212877	28369	32	80	887		
341.8567	28.837	28.845	-1	1.001	135530	17603	23	57	765	1.57(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.256	24.648	-23	0.888	10	6	1	2	6		
341.8567	24.230	24.648	-25	0.887	25	14	1	2	14	0.40(1.32-1.78)	
	Empc Correction				6	3	1	2	3		
339.8597	24.420	24.648	-14	0.894	40	22	1	2	22		
341.8567	24.394	24.648	-15	0.893	369	90	1	2	90	0.11(1.32-1.78)	
	Empc Correction				25	14	1	2	14		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.919	28.125	-12	1.023	2528	386	32	80	12		
341.8567	27.953	28.125	-10	1.024	2187	262	23	57	11	1.16(1.32-1.78)	
	Empc Correction				1630	249	23	57	11		
13C-1,2,3,7,8-PeCDD											
367.8949	29.645	29.645	0	1.382	255348	35062	26	65	1349		
369.8919	29.636	29.645	-1	1.382	164128	22831	9	22	2537	1.56(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.670	29.670	0	1.001	134733	17174	10	25	1717		
357.8516	29.662	29.670	-1	1.001	88065	11340	5	12	2268	1.53(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						10	25			
357.8516	28.489						5	12			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.955	34.955	0	0.954	237033	46467	65	162	715		
385.8610	34.955	34.955	0	0.954	437142	82345	111	277	742	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.972	34.972	0	1.000	208303	39400	62	155	635		
375.8178	34.972	34.972	0	1.000	169601	31161	50	125	623	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.123	35.123	0	0.959	230353	41039	65	162	631		
385.8610	35.106	35.123	-1	0.959	444227	77817	111	277	701	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.132	35.132	0	1.000	230885	42672	62	155	688		
375.8178	35.132	35.132	0	1.000	182594	33631	50	125	673	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.932	35.932	0	0.981	219287	44412	65	162	683		
385.8610	35.923	35.932	-1	0.981	415090	86999	111	277	784	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.949	35.949	0	1.000	221069	46435	62	155	749		
375.8178	35.940	35.949	-1	1.000	175953	36135	50	125	723	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.816	36.816	0	1.005	227331	51062	65	162	786		
385.8610	36.816	36.816	0	1.005	416423	93051	111	277	838	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.833	36.833	0	1.000	228342	52008	62	155	839		
375.8178	36.833	36.833	0	1.000	177898	40049	50	125	801	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						62	155			
375.8178	35.028						50	125			
13C-1,2,3,7,8,9-HxCDD											M
401.8559	36.623	36.623	0		355684	70512	58	145	1216		M
403.8529	36.623	36.623	0		275563	55836	29	72	1925	1.29(1.05-1.43)	M
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.134	36.134	0	0.987	282661	63231	58	145	1090		
403.8529	36.134	36.134	0	0.987	208930	46276	29	72	1596	1.35(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.159	36.159	0	1.001	136378	30119	23	57	1310		
391.8127	36.151	36.159	-1	1.000	105460	23953	19	47	1261	1.29(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.260	36.260	0	0.990	293421	65852	58	145	1135		
403.8529	36.252	36.260	-1	0.990	238501	51544	29	72	1777	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.269	36.269	0	1.000	133735	29949	23	57	1302		
391.8127	36.269	36.269	0	1.000	112931	23931	19	47	1260	1.18(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDD											
389.8158	36.631	36.631	0	1.014	161603	35208	23	57	1531		
391.8127	36.640	36.631	1	1.014	129120	27227	19	47	1433	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.394						23	57			
391.8127	35.394						19	47			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.630	38.630	0	1.055	163701	41181	54	135	763		
419.8220	38.630	38.630	0	1.055	362348	91864	97	242	947	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.638	38.638	0	1.000	190629	47504	72	180	660		
409.7788	38.638	38.638	0	1.000	179464	44416	65	162	683	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											M
417.8250	39.876	39.876	0	1.089	170131	49846	54	135	923		M
419.8220	39.876	39.876	0	1.089	389993	111269	97	242	1147	0.44(0.37-0.51)	M
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885	39.885	0	1.000	180078	50639	72	180	703		
409.7788	39.885	39.885	0	1.000	170925	47586	65	162	732	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						72	180			
409.7788	39.258						65	162			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.573	39.573	0	1.081	240258	68218	63	157	1083		
437.8140	39.573	39.573	0	1.081	238852	65955	55	137	1199	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.582	39.582	0	1.000	127862	35481	35	87	1014		
425.7737	39.582	39.582	0	1.000	119120	33435	34	85	983	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.950	39.258	-18	0.984	1516	518	35	87	15		
425.7737	38.941	39.258	-19	0.984	2097	634	34	85	19	0.72(0.88-1.20)	
	Empc Correction				1457	498	34	85	15		
13C-OCDD											
469.7780	42.069	42.069	0	1.149	426510	101505	54	135	1880		
471.7750	42.069	42.069	0	1.149	477683	120225	38	95	3164	0.89(0.76-1.02)	
OCDF											
441.7428	42.170	42.170	0	1.002	277003	63466	24	60	2644		
443.7399	42.170	42.170	0	1.002	303840	69097	31	77	2229	0.91(0.76-1.02)	
OCDD											
457.7377	42.078	42.078	0	1.000	217935	51979	16	40	3249		
459.7348	42.078	42.078	0	1.000	240866	57297	29	72	1976	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 13:48:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 29
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	871422	125340

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	871422	125340

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.486	72	49	325	77	0.0422	0.22	RnQ
17.486	72	49	93	63	0.0175		Empc Correction
19.749	138	54	511	125	0.0689	0.27	RQ
19.749	138	54	179	70	0.0337		Empc Correction
20.911	628	84	177	96	0.0855	3.55	RQ
20.911	136	73	177	96	0.0333		Empc Correction
21.005	138	57	265	51	0.0428	0.52	RnQ
21.005	138	57	179	74	0.0337		Empc Correction
21.281	255	95	140	94	0.0420	1.82	RQ
21.281	107	72	140	94	0.0262		Empc Correction
Signal Totals:							
	591	305	768	397			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2649	782				0.87	RQ
	1359	702					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2814 = (2649 * 100.000) / (871422 * 1.080)
Empc Amount: 0.1444 = (1359 * 100.000) / (871422 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	18-Aug-2021 13:48:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	29
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	595187	75761

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	595187	75761

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.668	120	81	43	31	0.0255	2.79	RQ
21.668	33	23	43	31	0.0119		Empc Correction
22.399	158	67	75	29	0.0364	2.11	RnQ
22.399	57	22	75	29	0.0206		Empc Correction
Signal Totals:							
	90	45	118	60			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	396	208				2.36	RQ
	208	105					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0619 = (396 * 100.000) / (595187 * 1.075)

Empc Amount: 0.0325 = (208 * 100.000) / (595187 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d
Lims ID: CCV
Client ID:
Inject. Date: 18-Aug-2021 13:48:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 29
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	699918	103244
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	736640	104471

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	718279	103857

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.256	10	6	25	14	0.004726	0.40	RnQ
24.256	10	6	6	3	0.002160		Empc Correction
24.420	40	22	369	90	0.0552	0.11	RQ
24.420	40	22	25	14	0.008777		Empc Correction
Signal Totals:							
	50	28	31	17			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	444	132				0.13	RQ
	81	45					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0600 = (444 * 100.000) / (718279 * 1.031)
Empc Amount: 0.0109 = (81 * 100.000) / (718279 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	18-Aug-2021 13:48:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	29
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	699918	103244
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	736640	104471

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	718279	103857

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.919	2528	386	2187	262	0.6367	1.16	RQ
27.919	2528	386	1630	249	0.5614		Empc Correction
Signal Totals:							
	2528	386	1630	249			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4715	648				1.16	RQ
	4158	635					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.6367 = (4715 * 100.000) / (718279 * 1.031)

Empc Amount: 0.5614 = (4158 * 100.000) / (718279 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	18-Aug-2021 13:48:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	29
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	479110	134173

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	479110	134173

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.950	1516	518	2097	634	0.7180	0.72	RQ
38.950	1516	518	1457	498	0.5908		Empc Correction
Signal Totals:							
	1516	518	1457	498			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3613	1152				0.72	RQ
	2973	1016					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7180 = (3613 * 100.000) / (479110 * 1.050)
Empc Amount: 0.5908 = (2973 * 100.000) / (479110 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.44

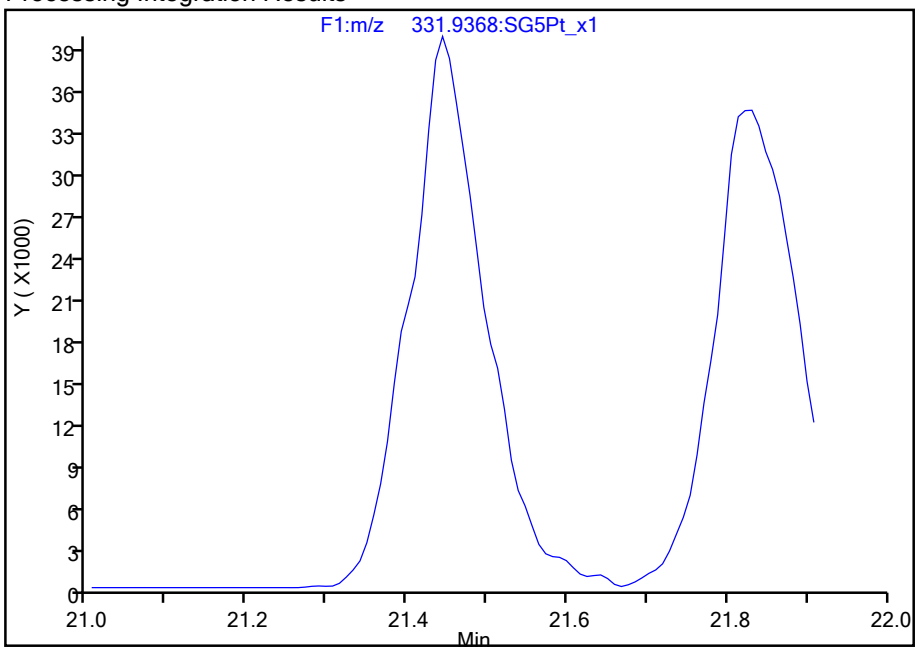

Manual Integration Results

RT: 21.44
Area: 265855
Amount: 100.0000
Amount Units: pg/ul

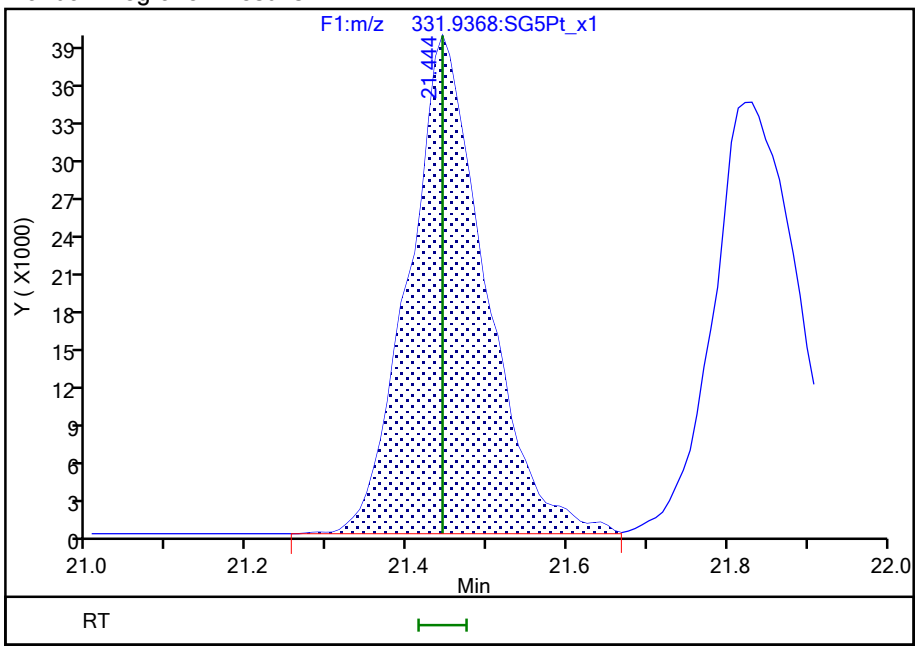

Reviewer: stephensk, 18-Aug-2021 14:37:53

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.52
Area: 39804
Amount: 9.495340
Amount Units: pg/ul

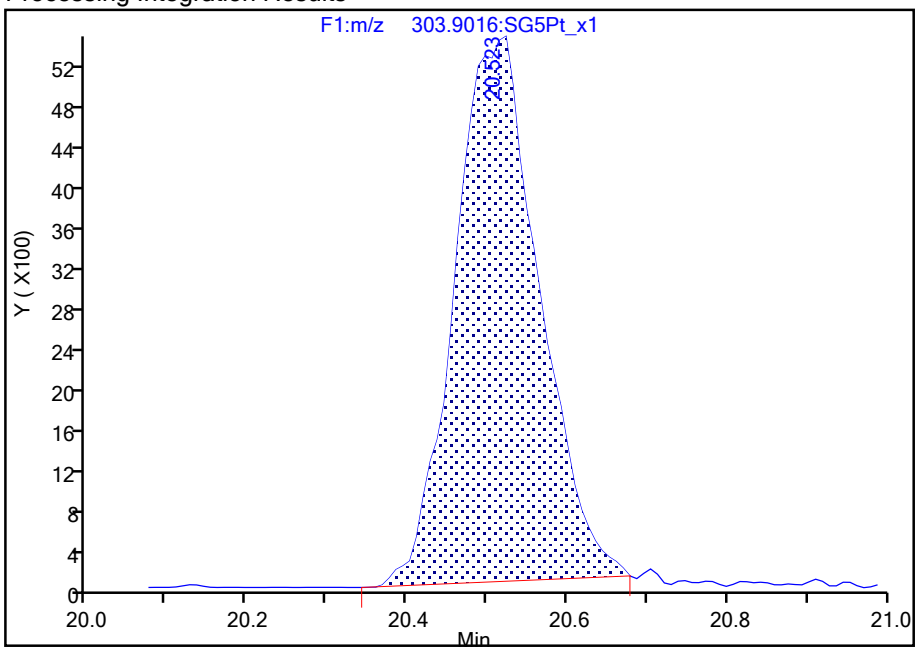

Manual Integration Results

RT: 20.52
Area: 40929
Amount: 9.614855
Amount Units: pg/ul

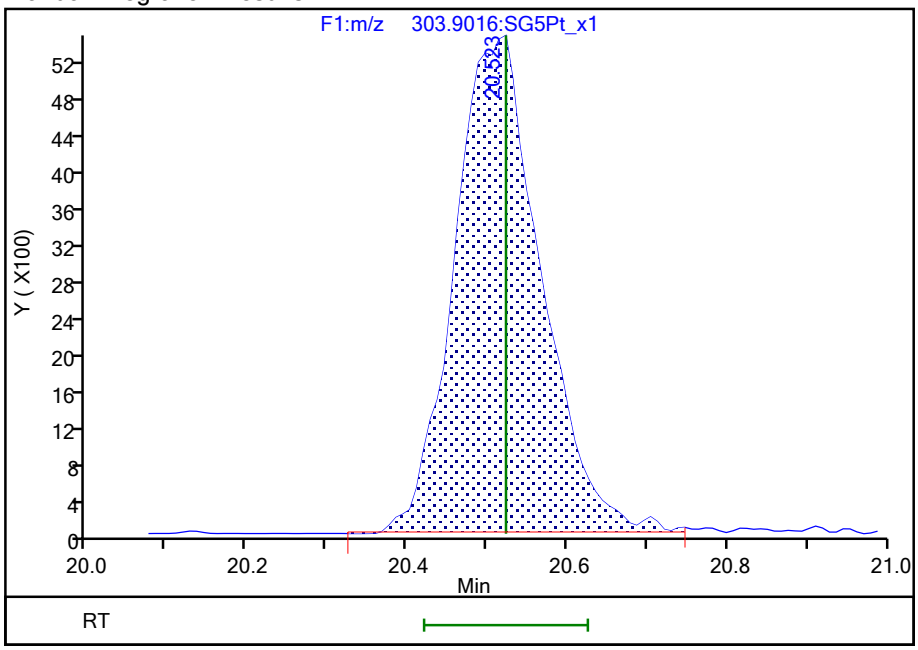

Reviewer: stephensk, 18-Aug-2021 14:38:12

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.88
Area: 26782
Amount: 9.164853
Amount Units: pg/ul

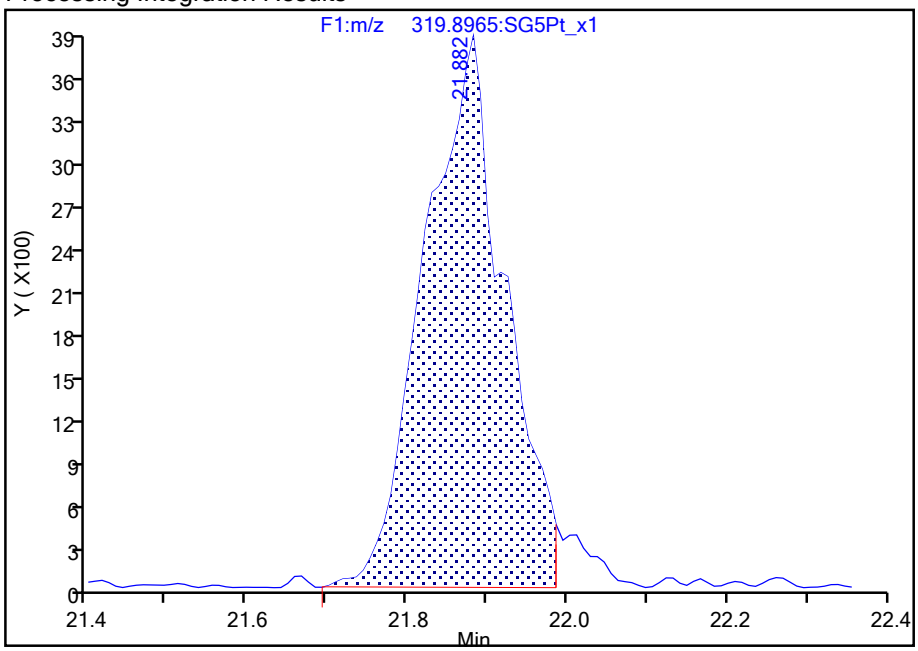

Manual Integration Results

RT: 21.88
Area: 28457
Amount: 9.426559
Amount Units: pg/ul

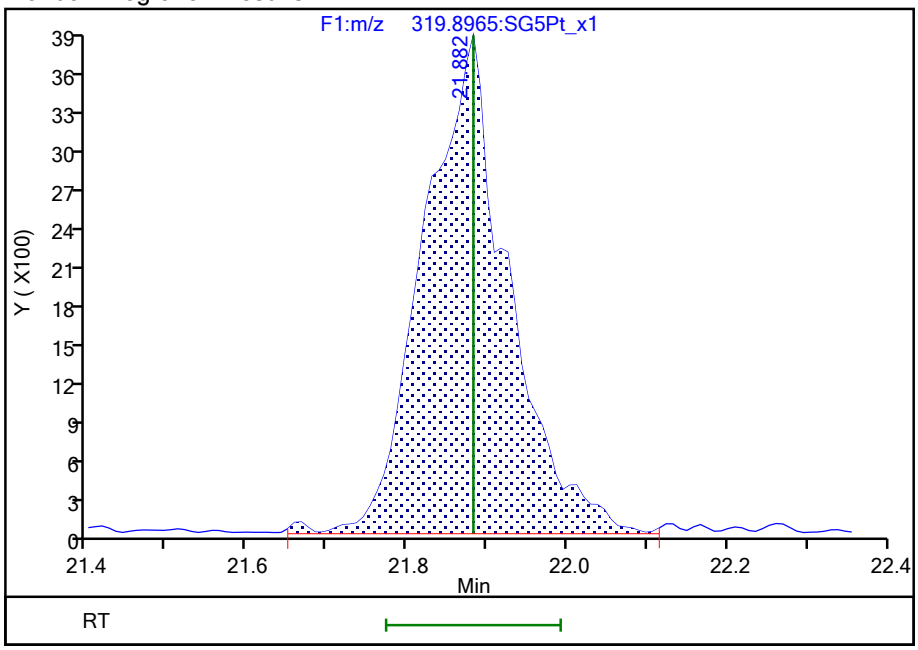

Reviewer: stephensk, 18-Aug-2021 14:38:34

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 1

Processing Integration Results

RT: 36.62
Area: 350740
Amount: 100.0000
Amount Units: pg/ul

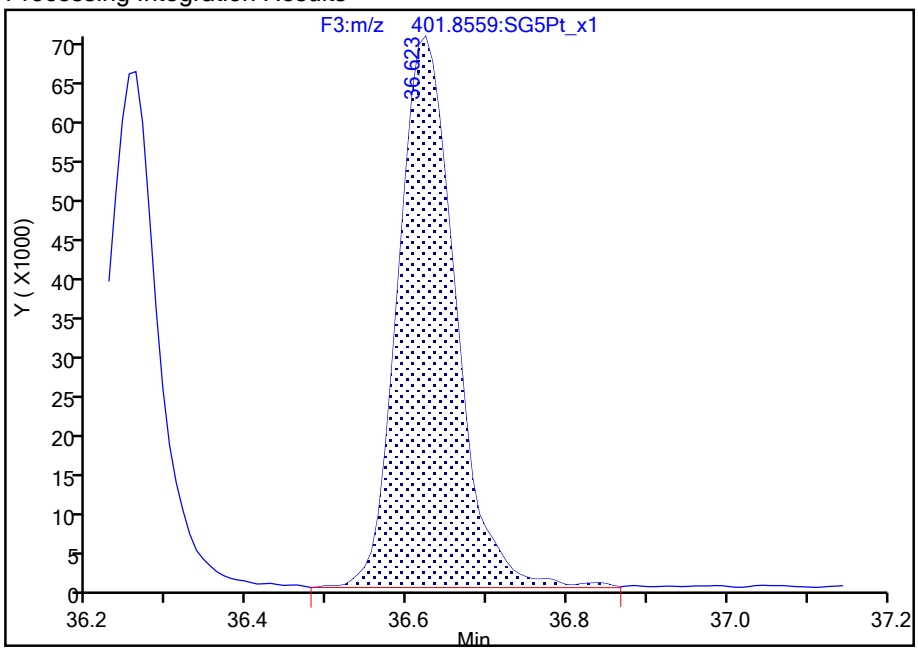

Manual Integration Results

RT: 36.62
Area: 355684
Amount: 100.0000
Amount Units: pg/ul

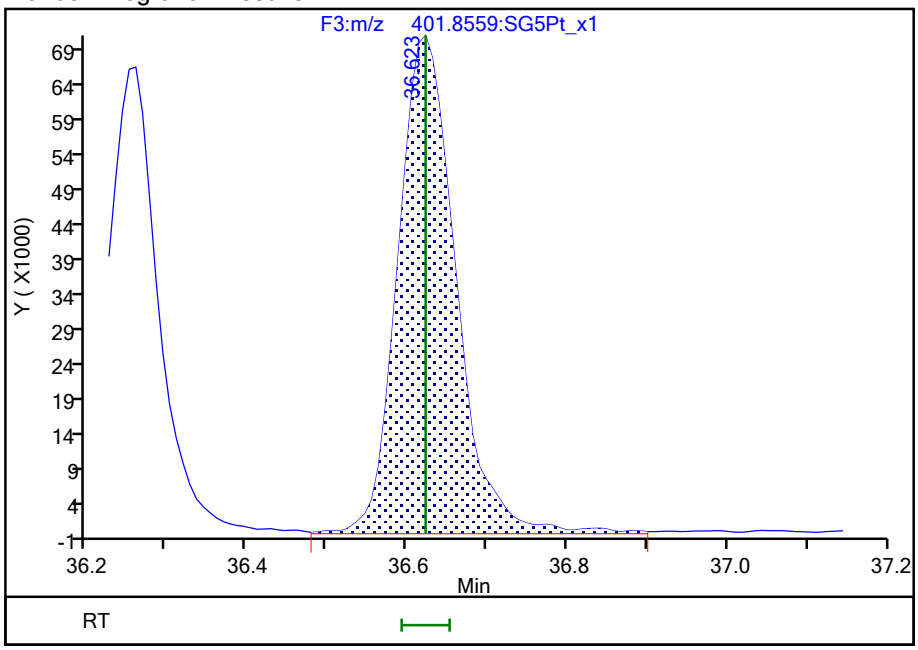

Reviewer: stephensk, 18-Aug-2021 15:08:03

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,7,8,9-HxCDD, CAS: 109719-82-6

Signal: 2

Processing Integration Results

RT: 36.62
Area: 267152
Amount: 100.0000
Amount Units: pg/ul

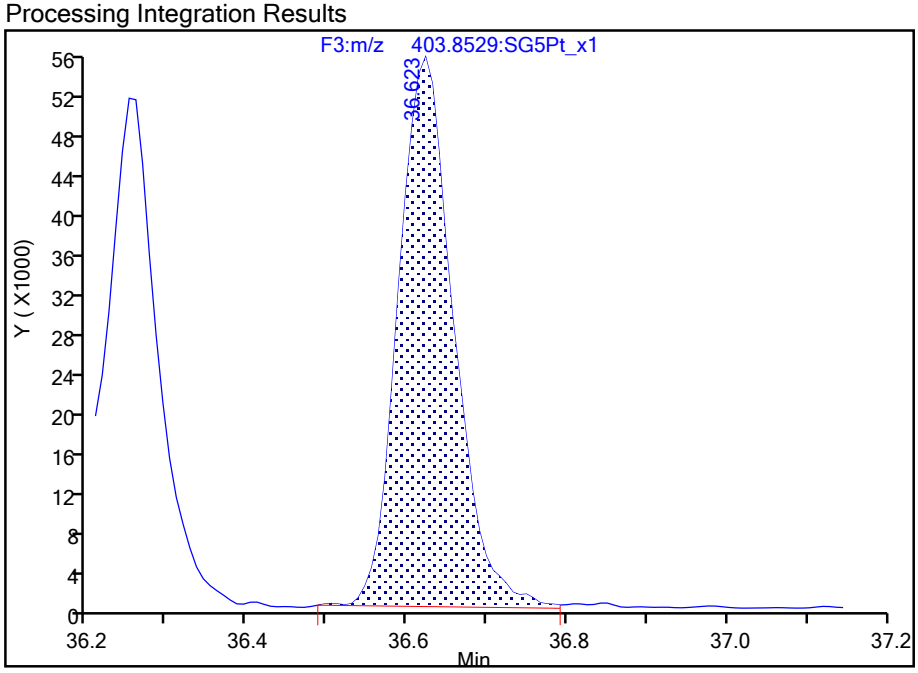

Manual Integration Results

RT: 36.62
Area: 275563
Amount: 100.0000
Amount Units: pg/ul

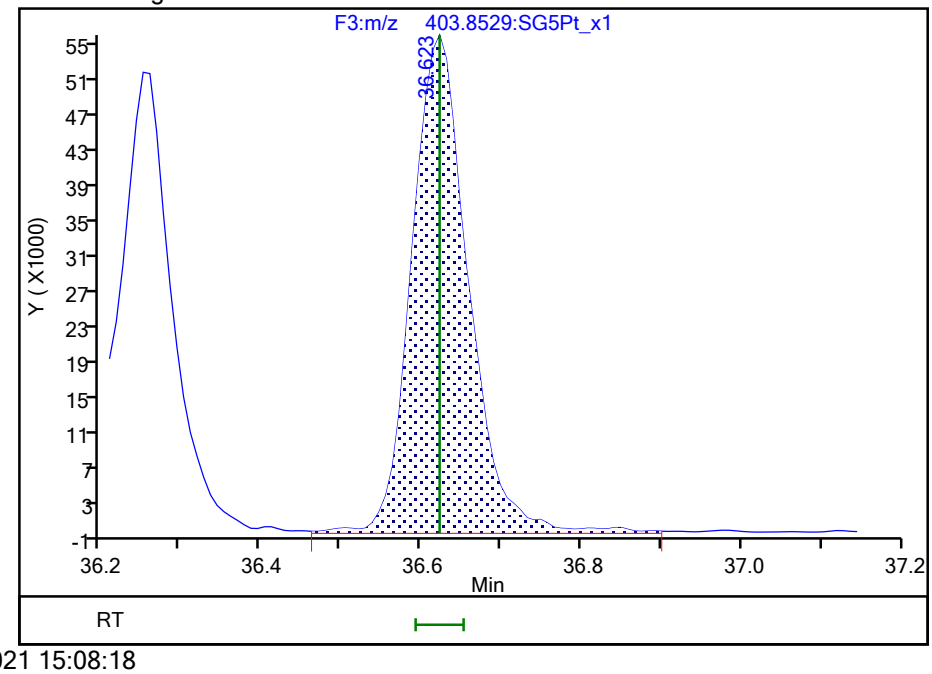

Reviewer: stephensk, 18-Aug-2021 15:08:18

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

RT: 39.88
Area: 171335
Amount: 133.8873
Amount Units: pg/ul

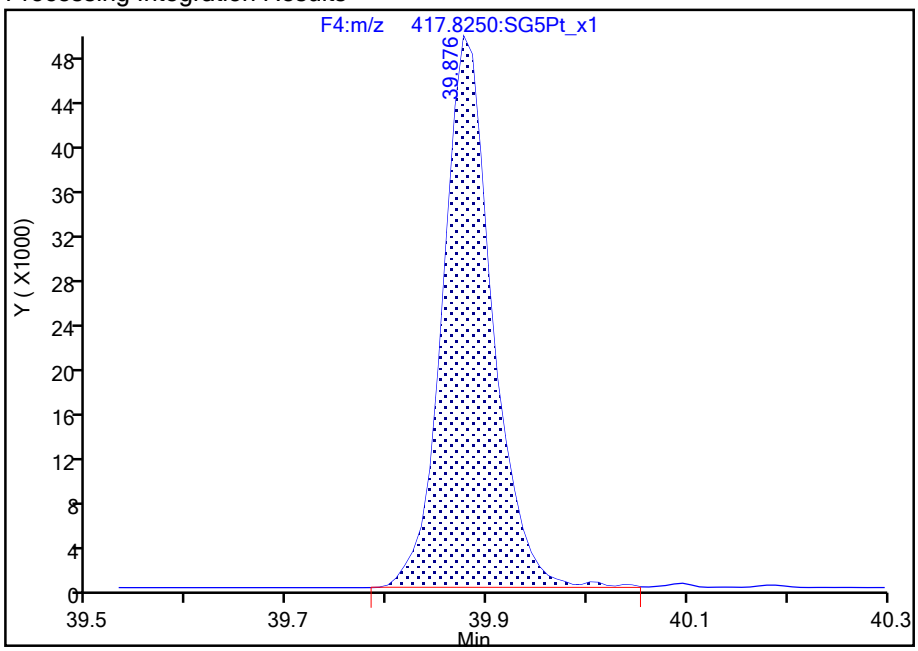

Manual Integration Results

RT: 39.88
Area: 170131
Amount: 129.4656
Amount Units: pg/ul

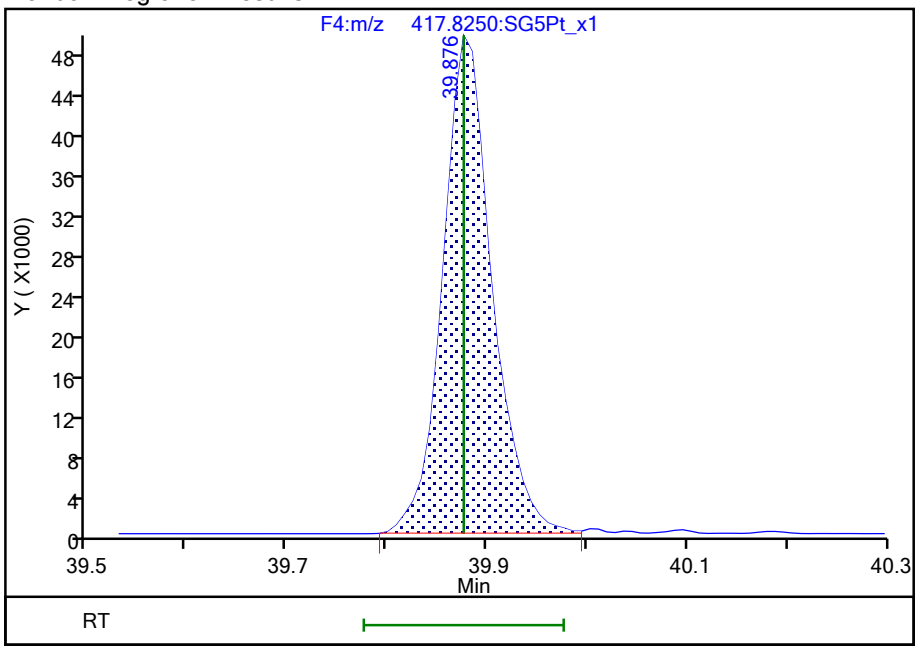

Reviewer: stephensk, 18-Aug-2021 14:43:11

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d				
Injection Date:	18-Aug-2021 13:48:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 2

Processing Integration Results

RT: 39.88
Area: 395664
Amount: 133.8873
Amount Units: pg/ul

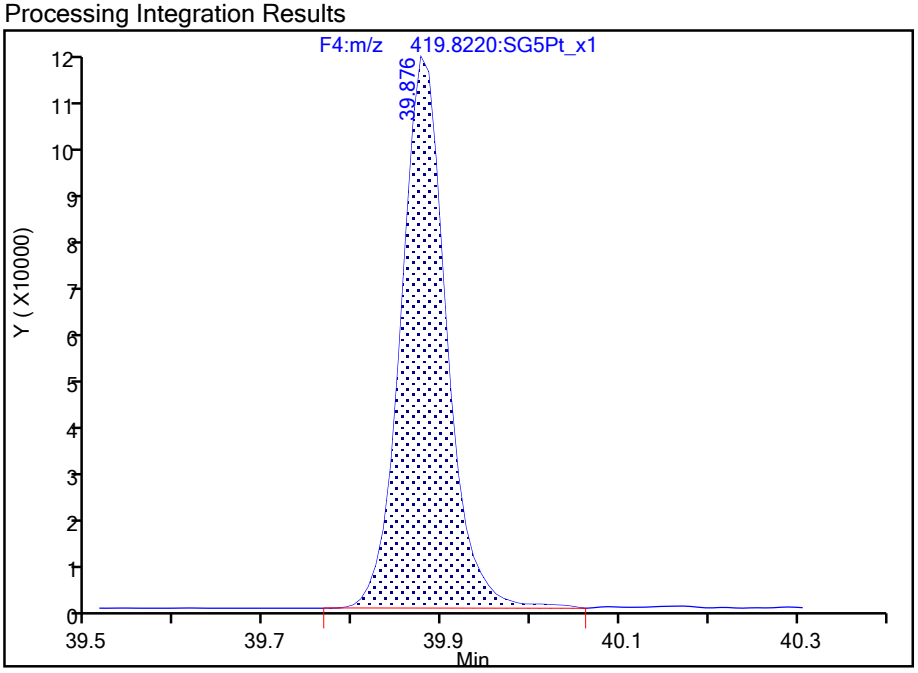

Manual Integration Results

RT: 39.88
Area: 389993
Amount: 129.4656
Amount Units: pg/ul

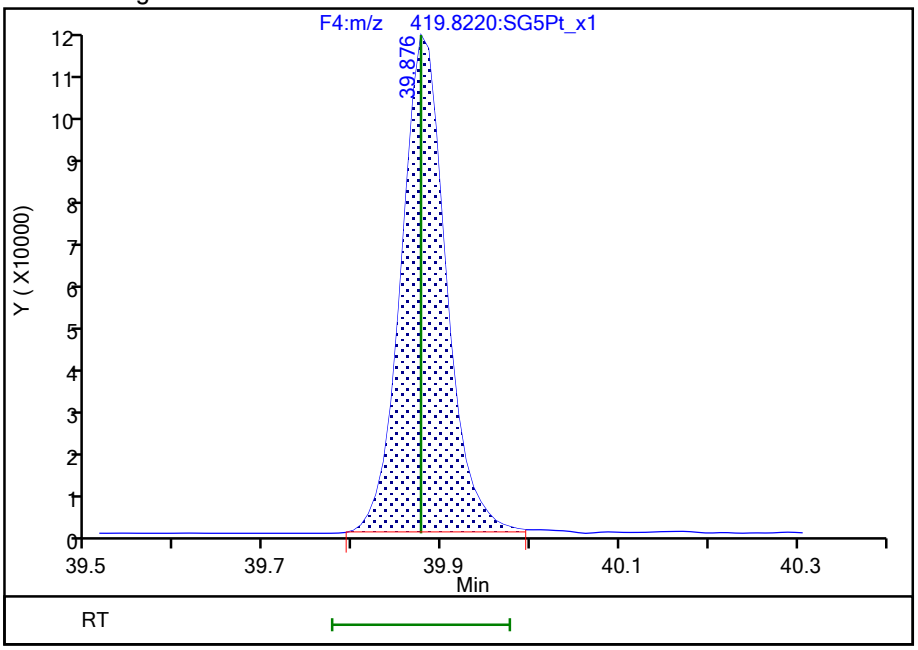

Reviewer: stephensk, 18-Aug-2021 14:43:21

Audit Action: Manually Integrated Audit Reason: Baseline

786160

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

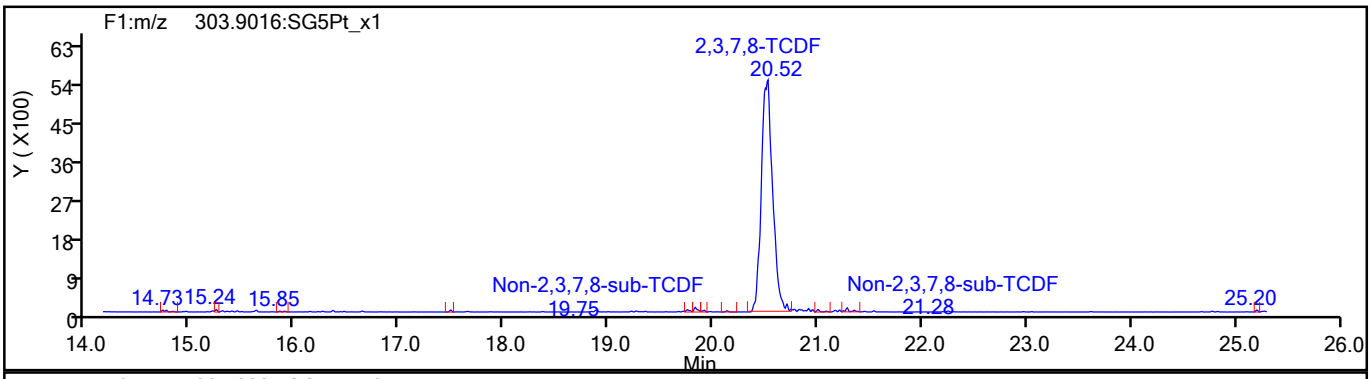

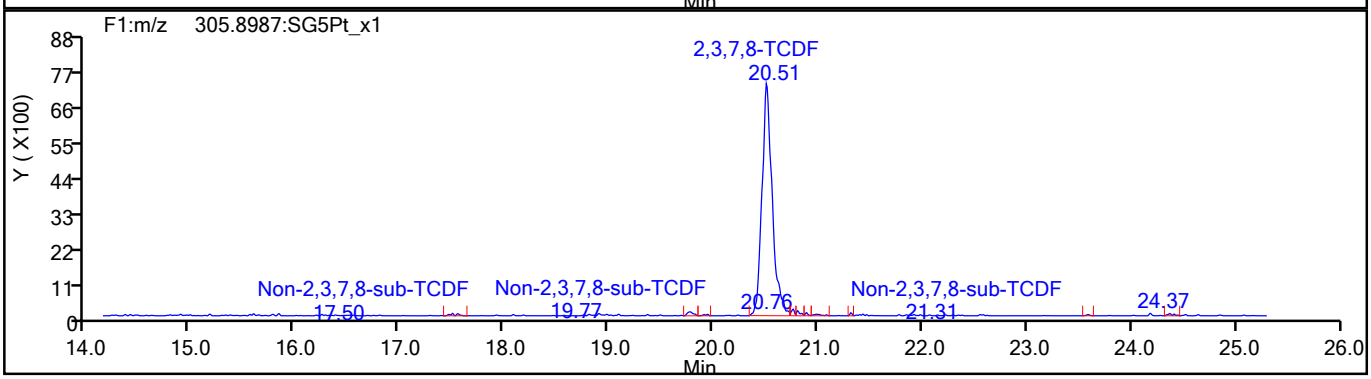

TCDF Standards

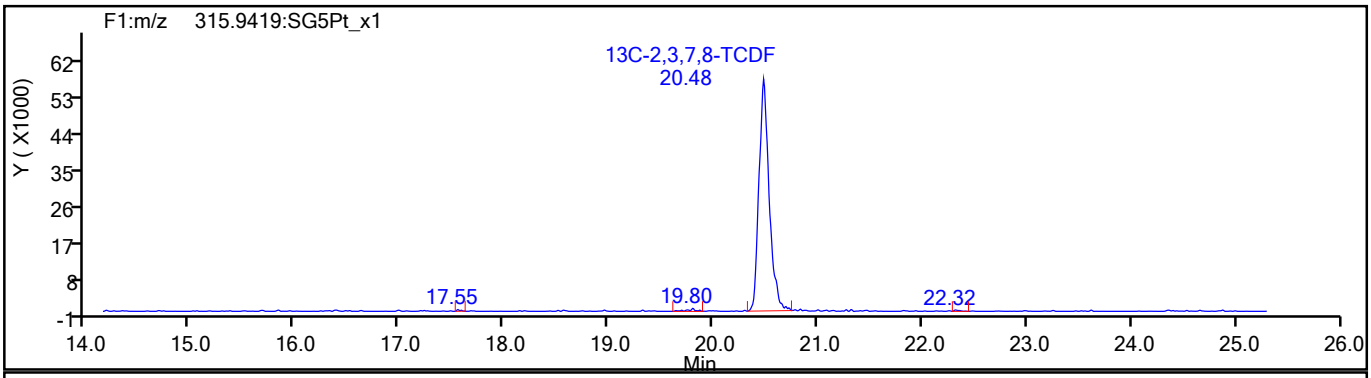

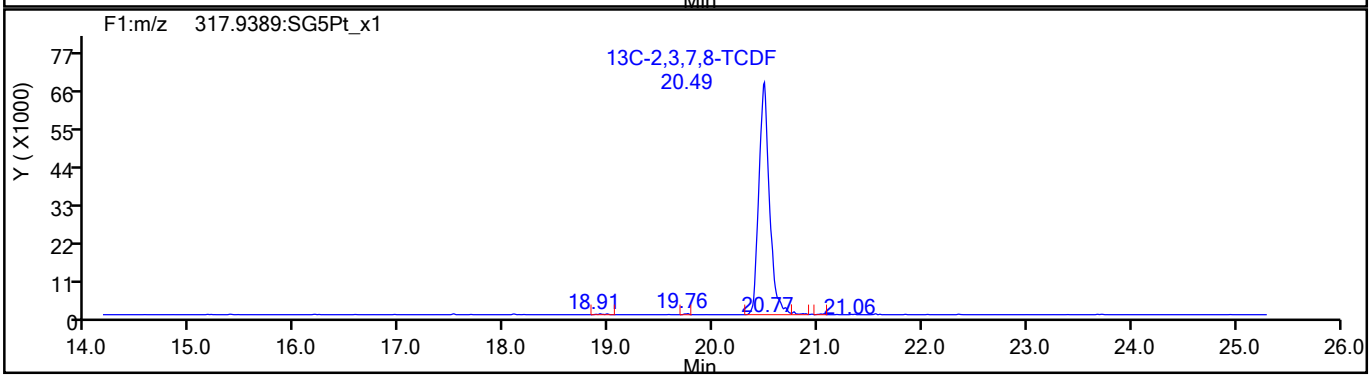

786161

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

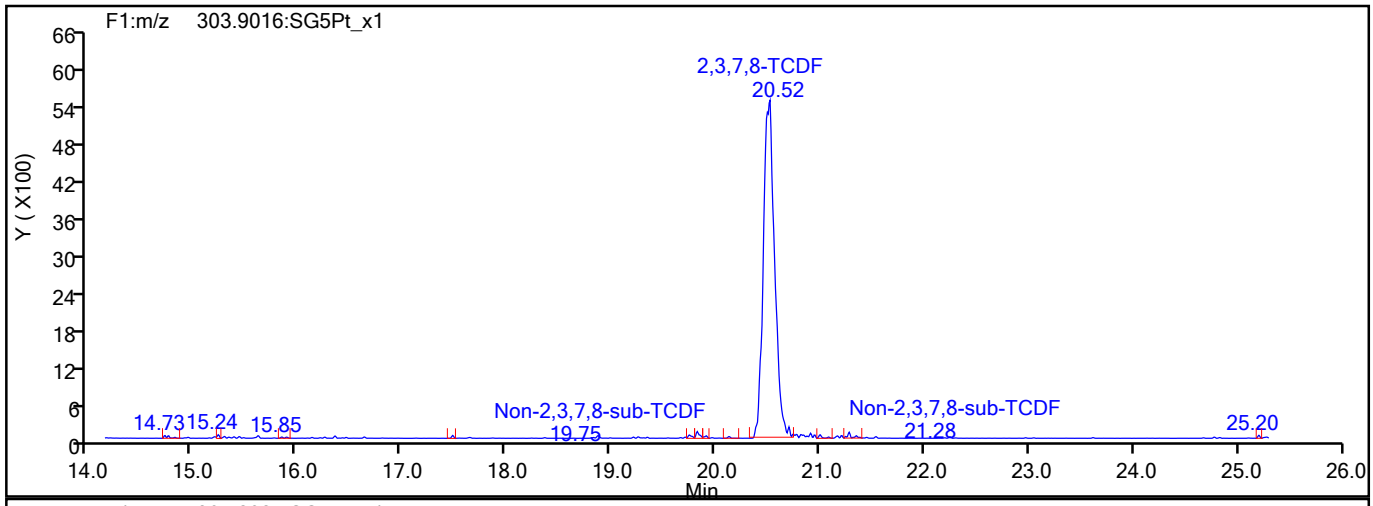

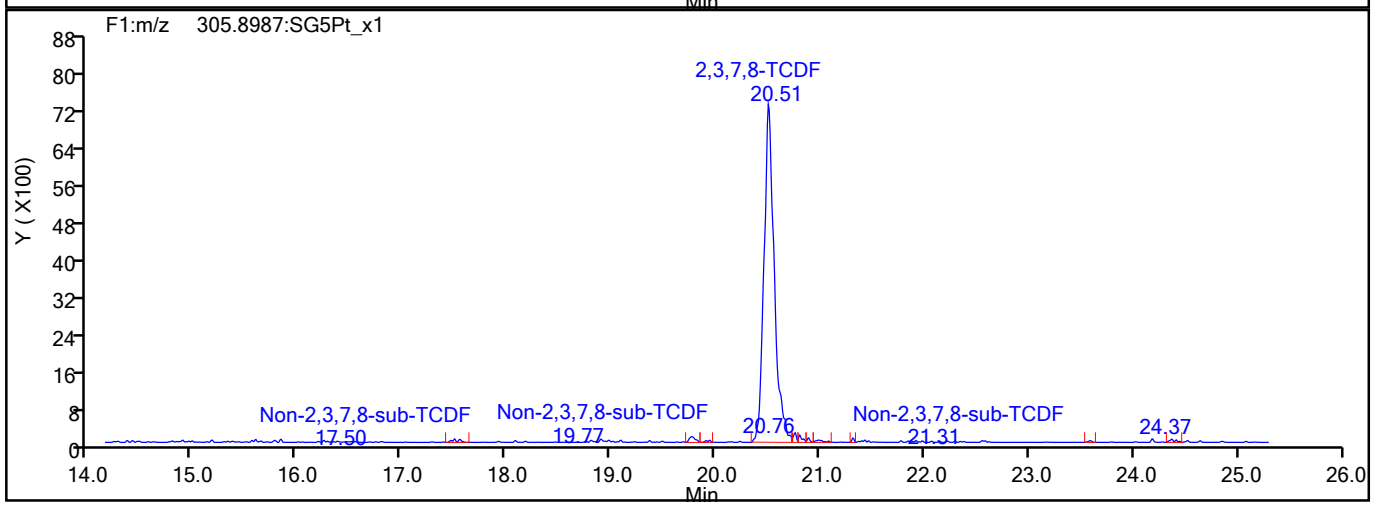

TCDF Interference Mass

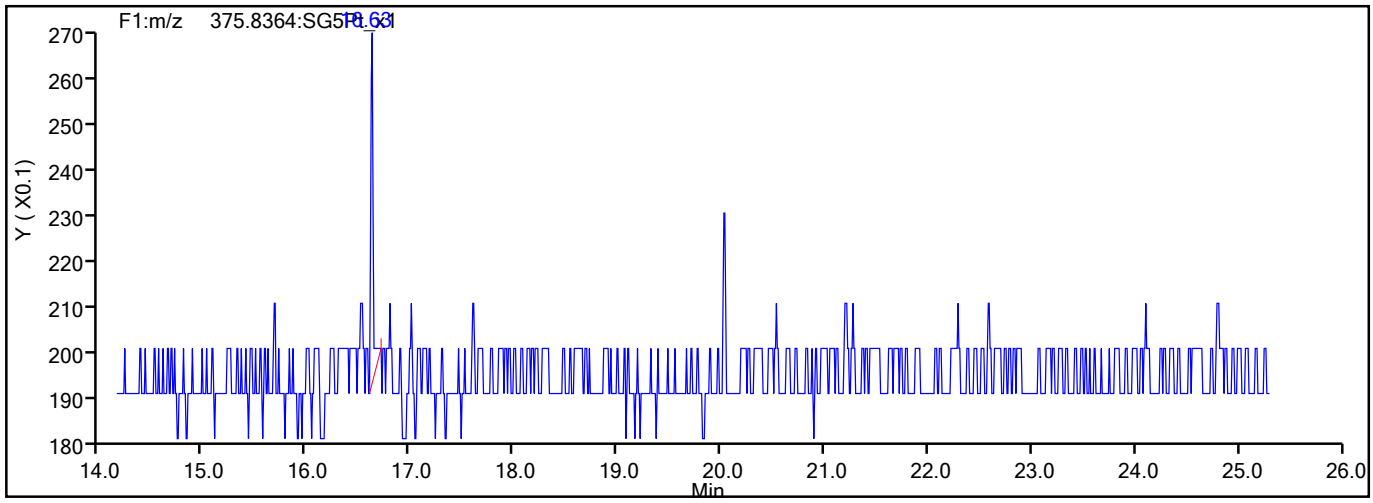

786162

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

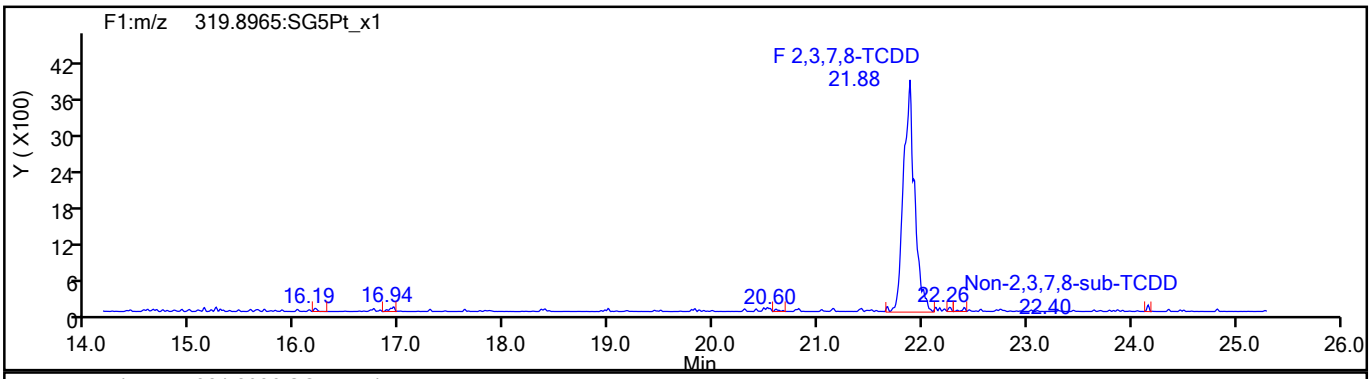

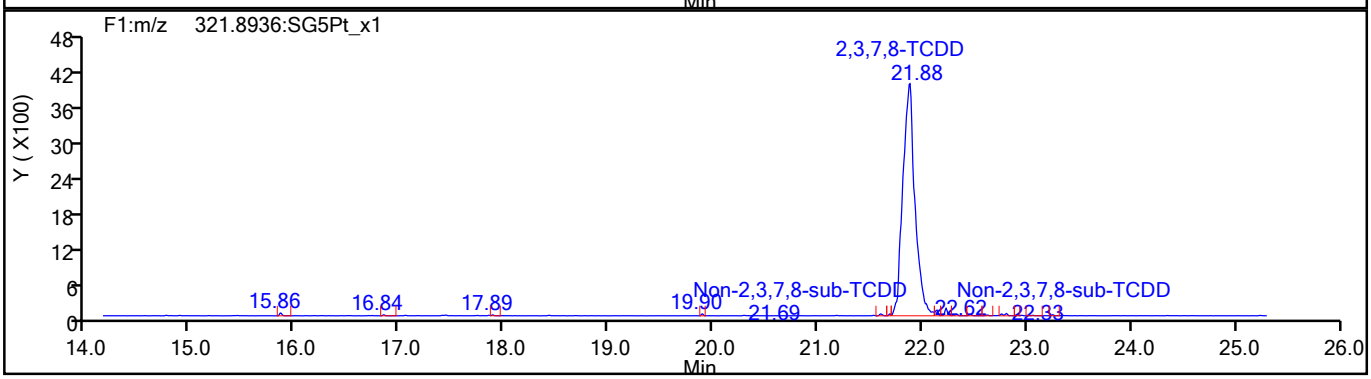

TCDD Standards

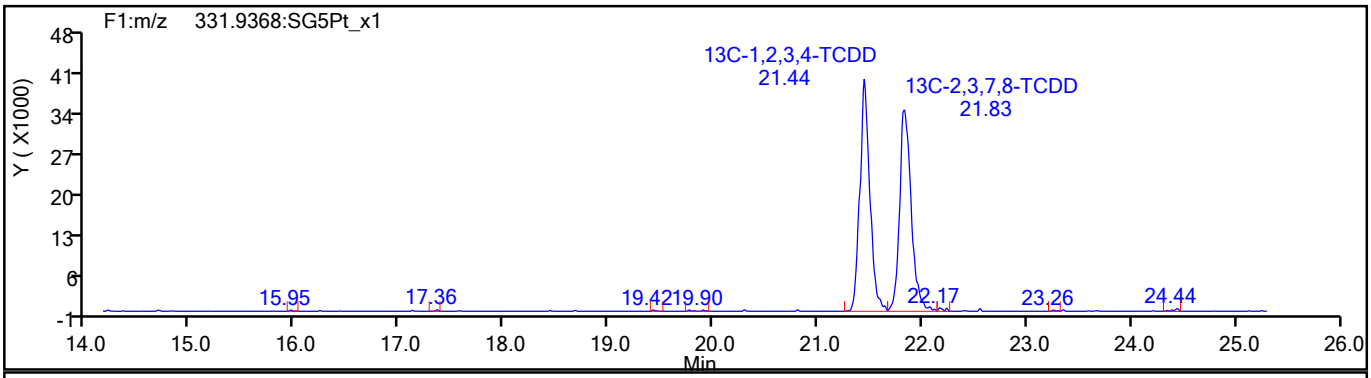

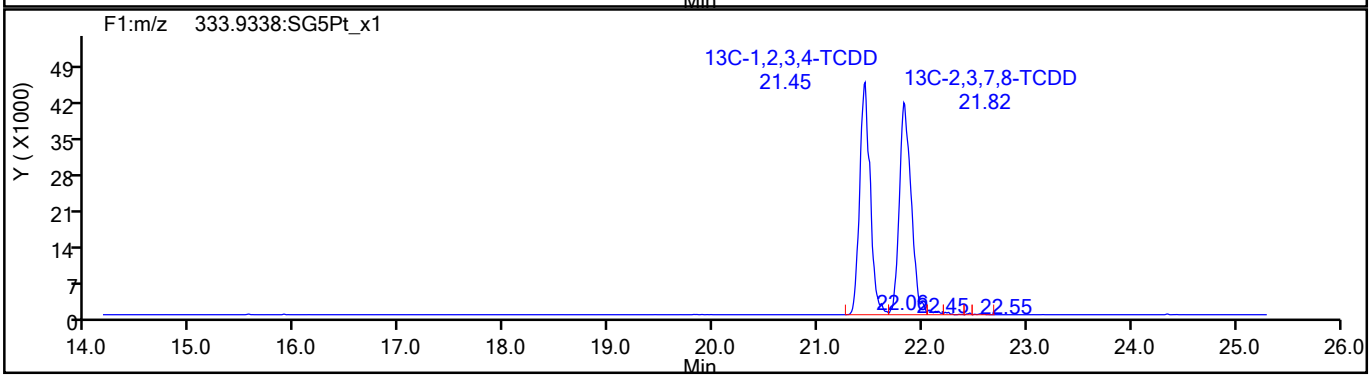

786163

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

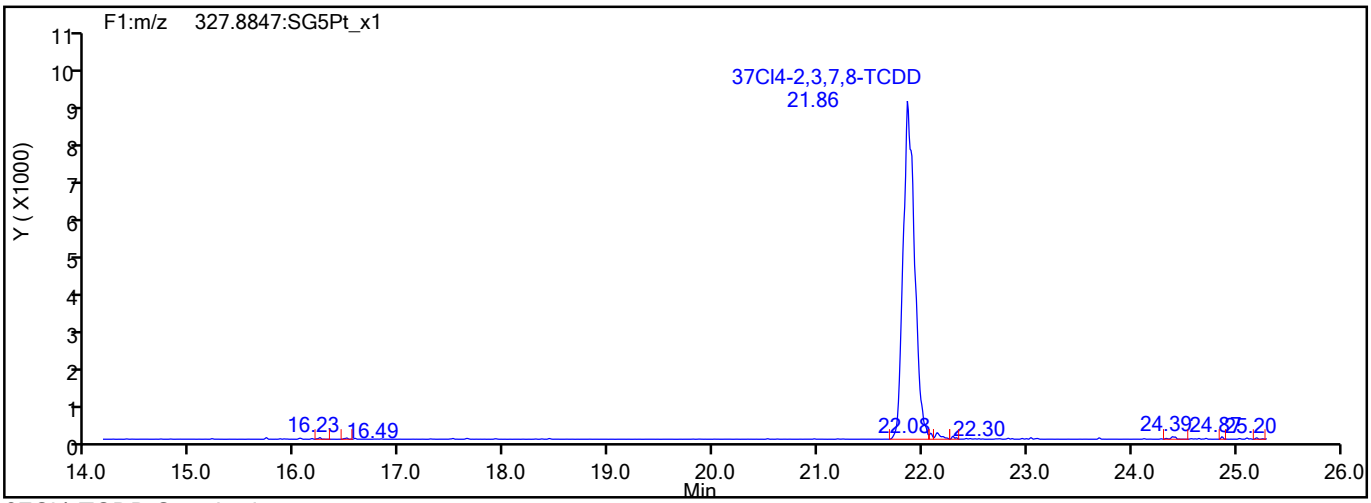

37Cl4-TCDD Standards

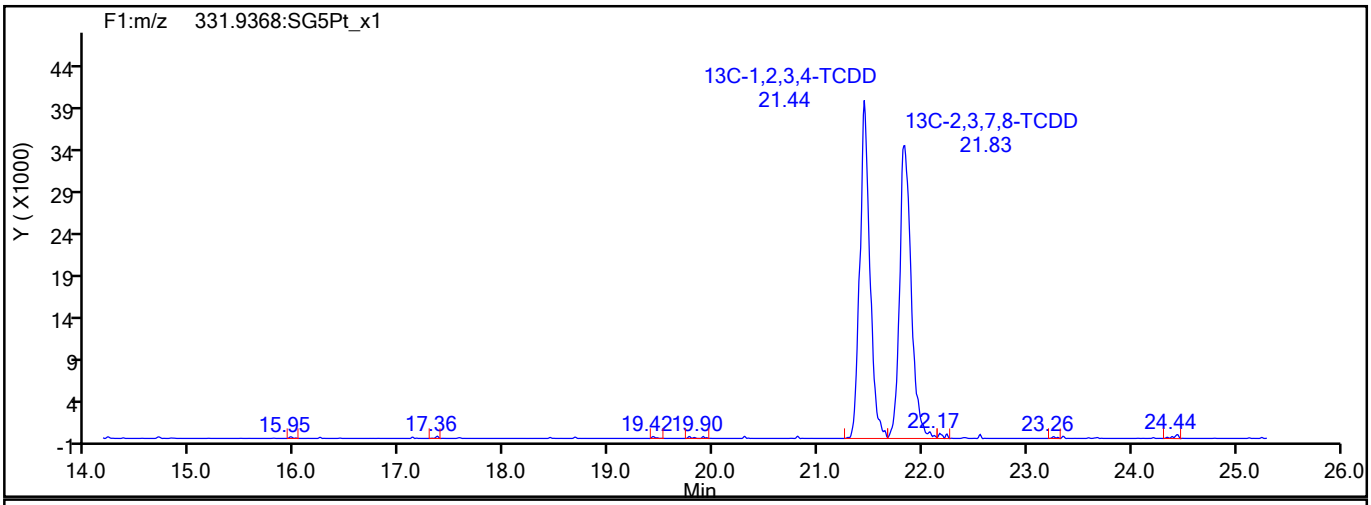

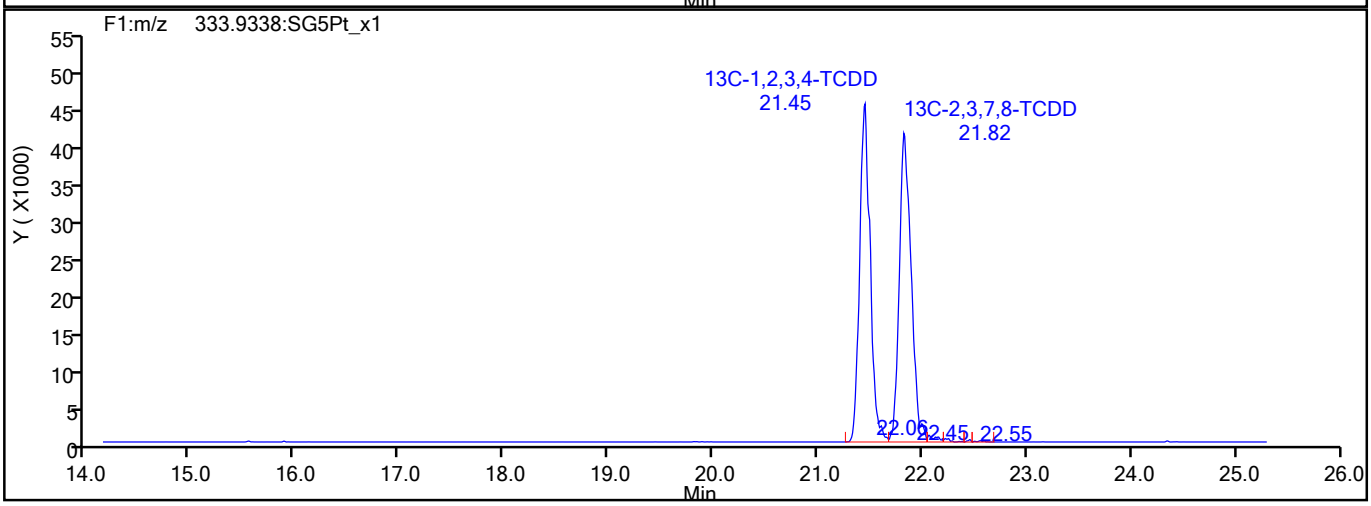

786164

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

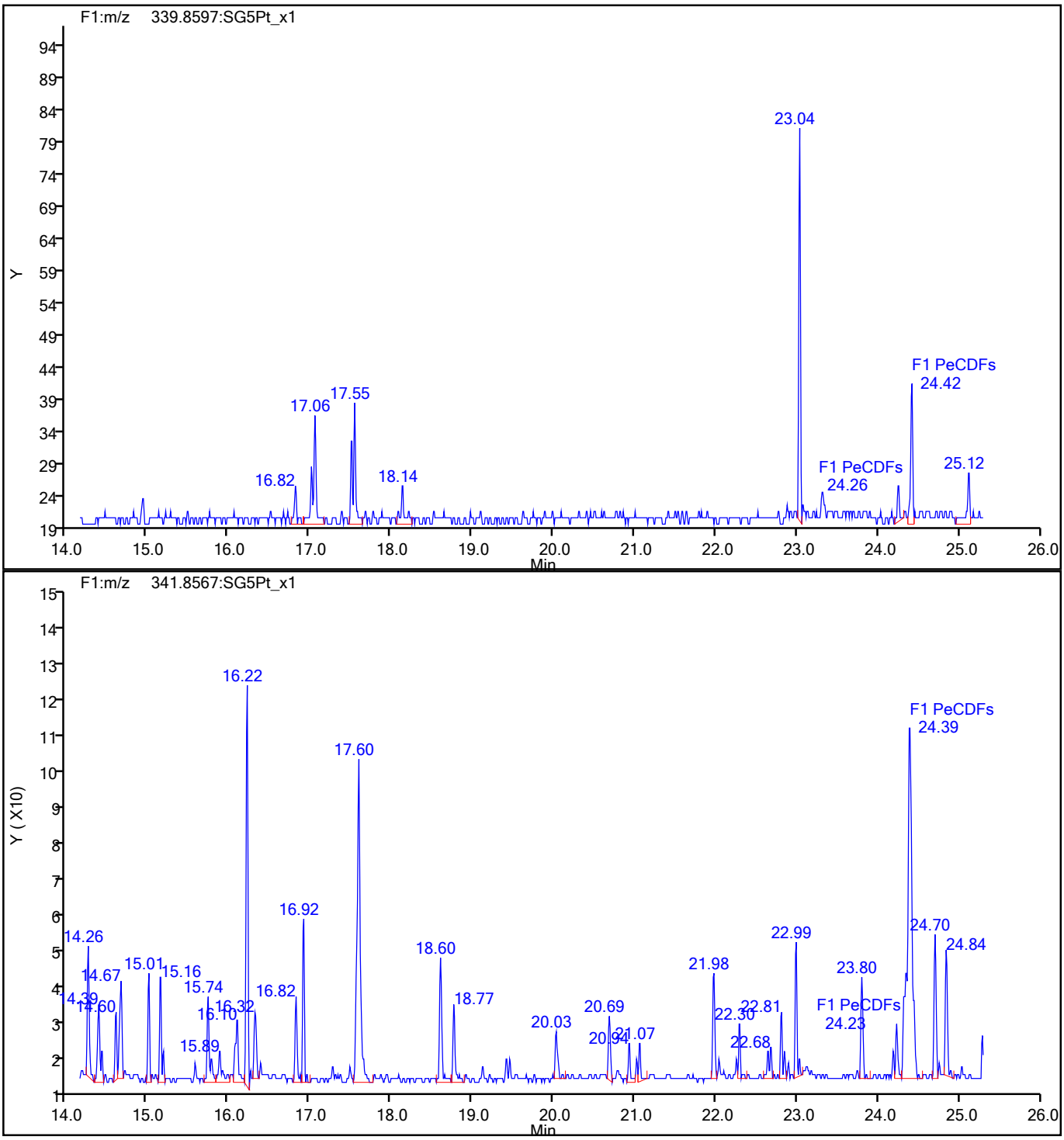

786165

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
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F1 PeCDFs

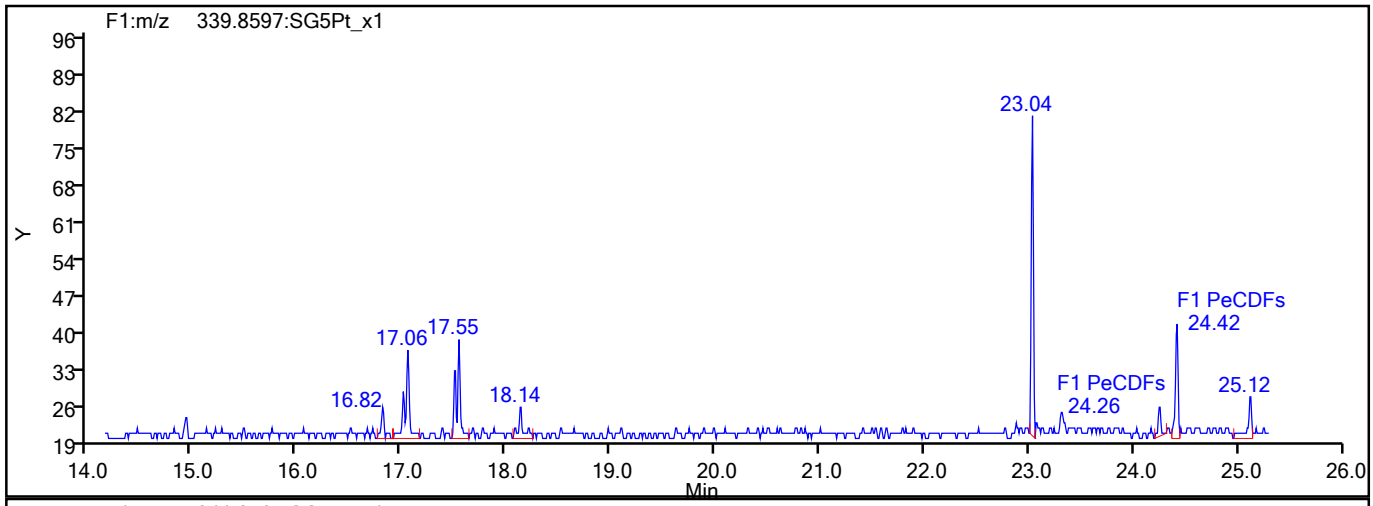

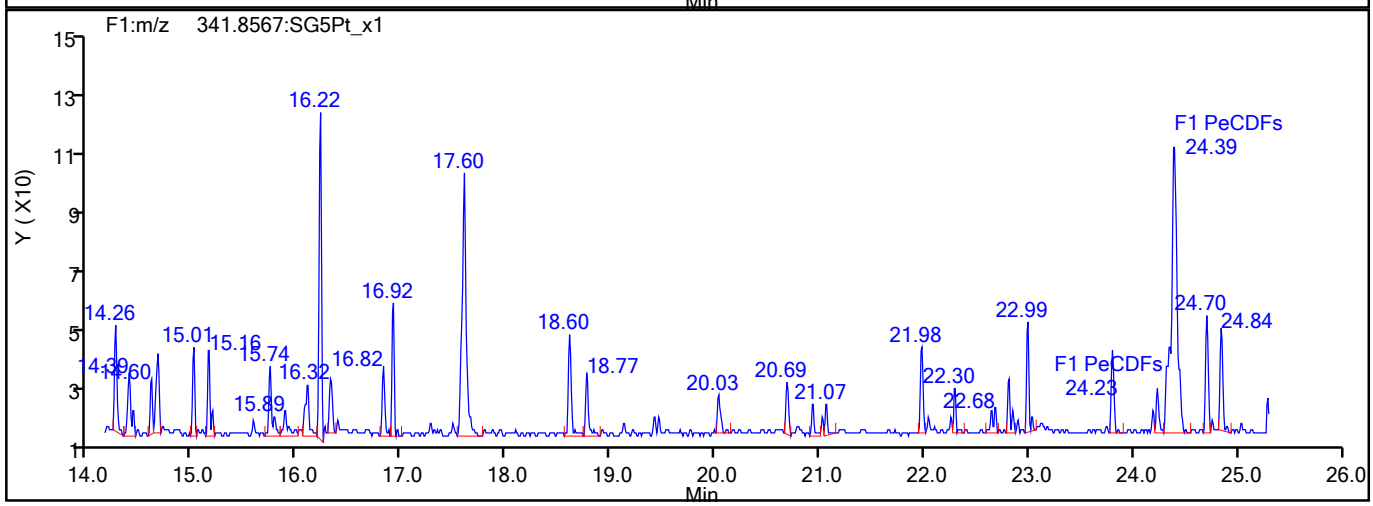

F1 PeCDFs Interference Mass

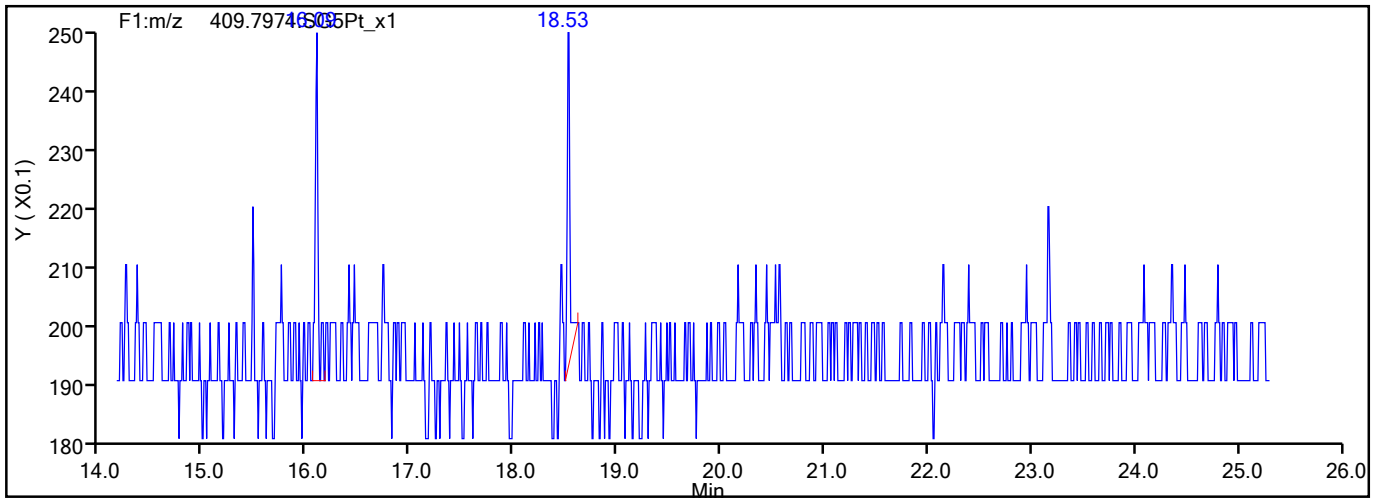

786166

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

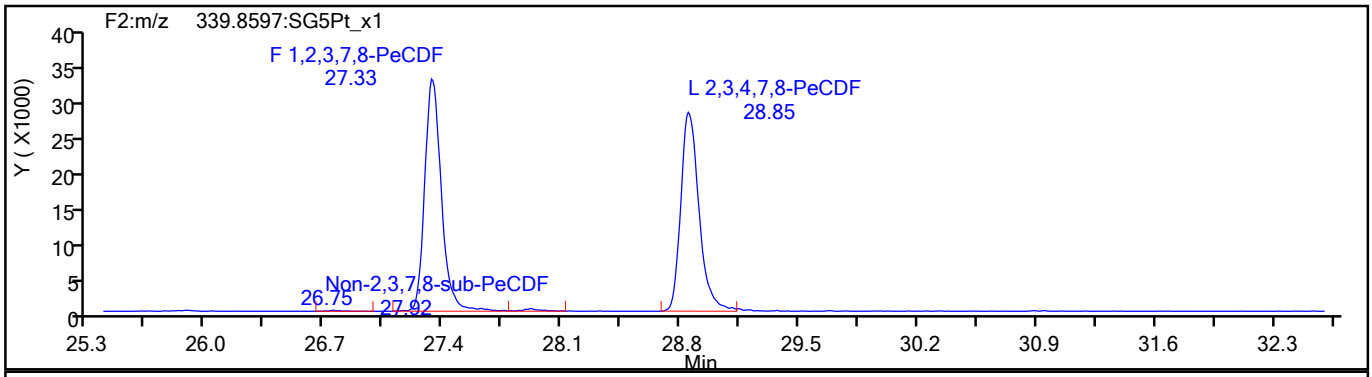

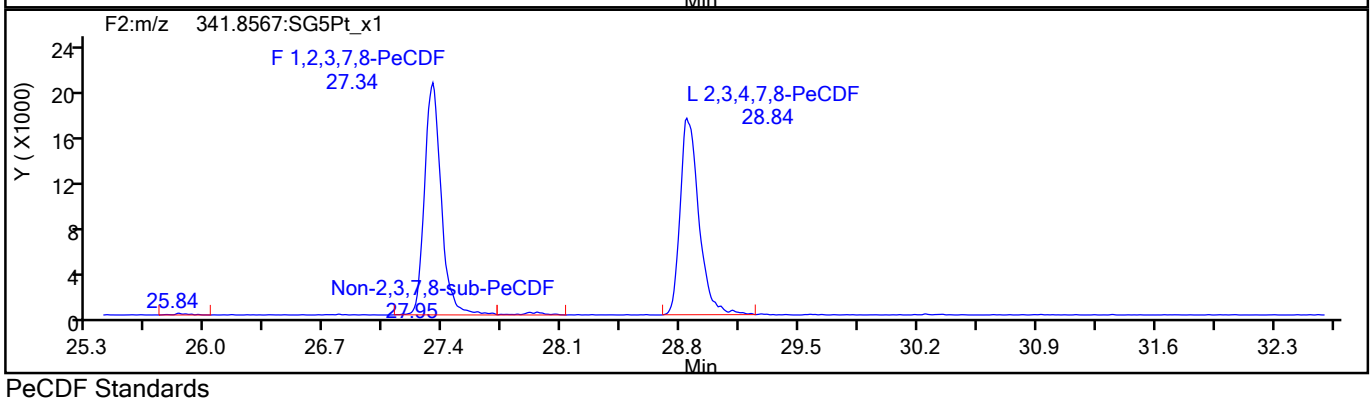

PeCDF Standards

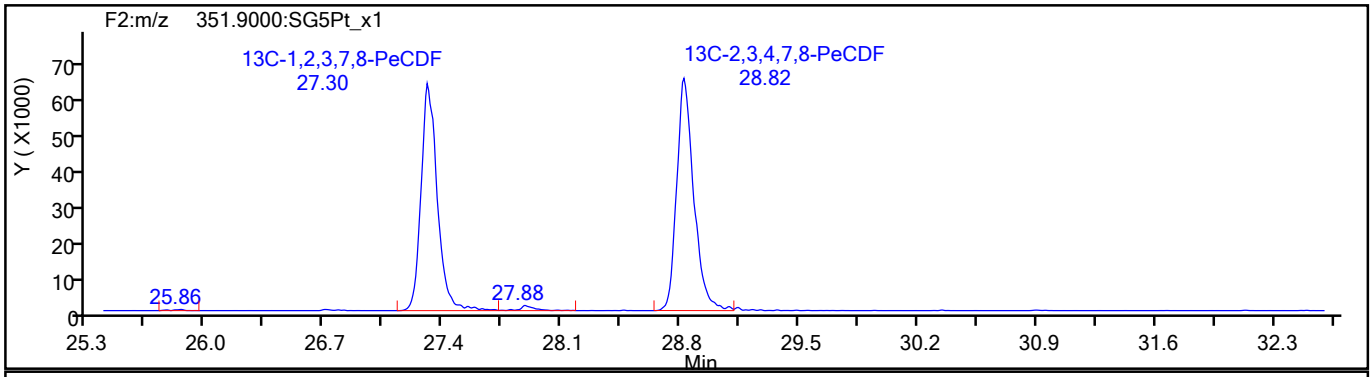

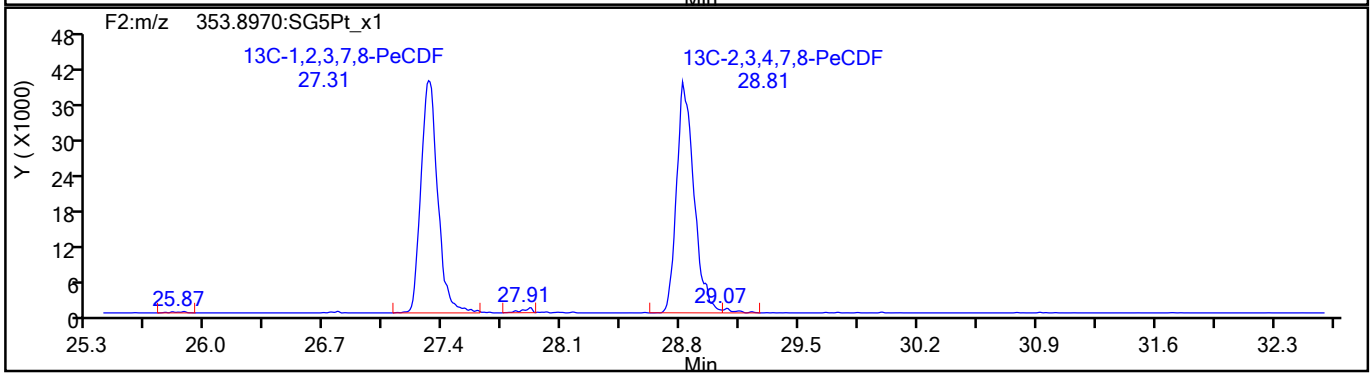

786167

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

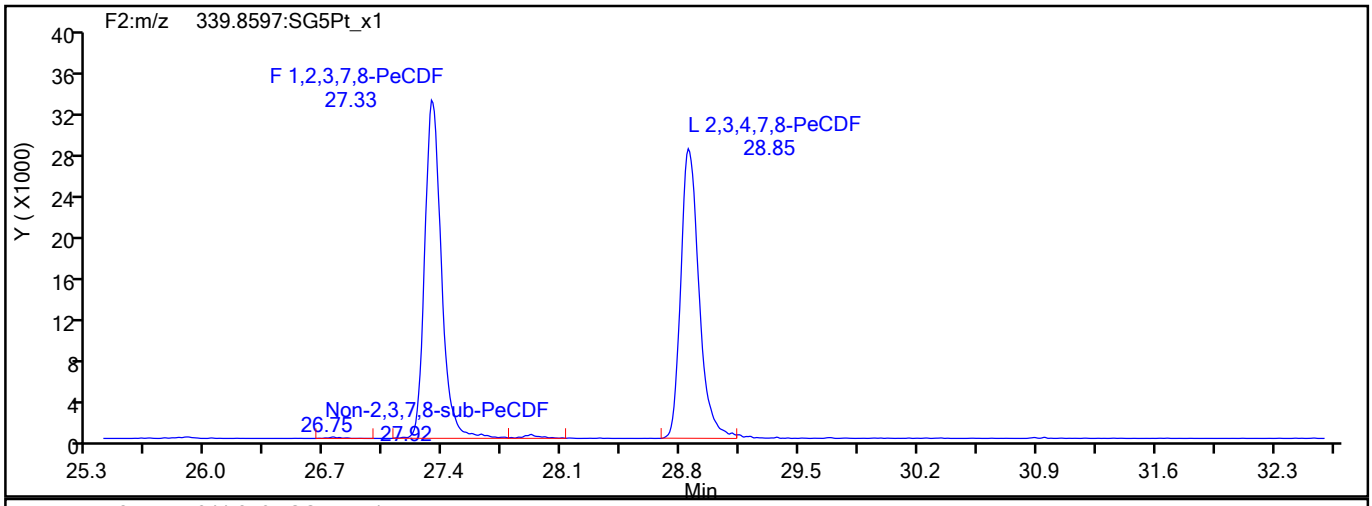

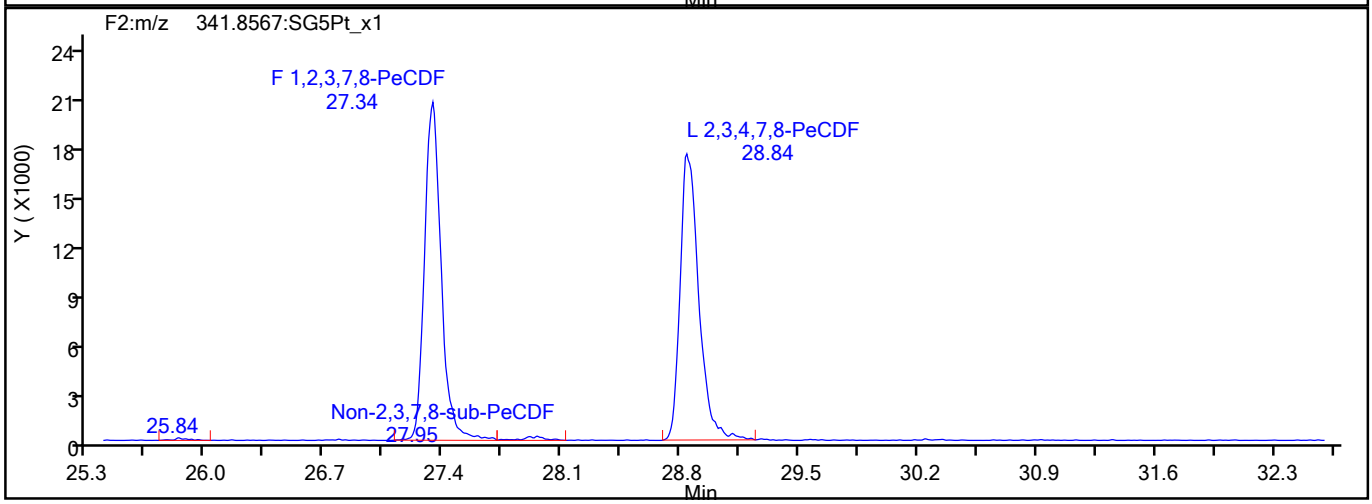

PeCDF Interference Mass

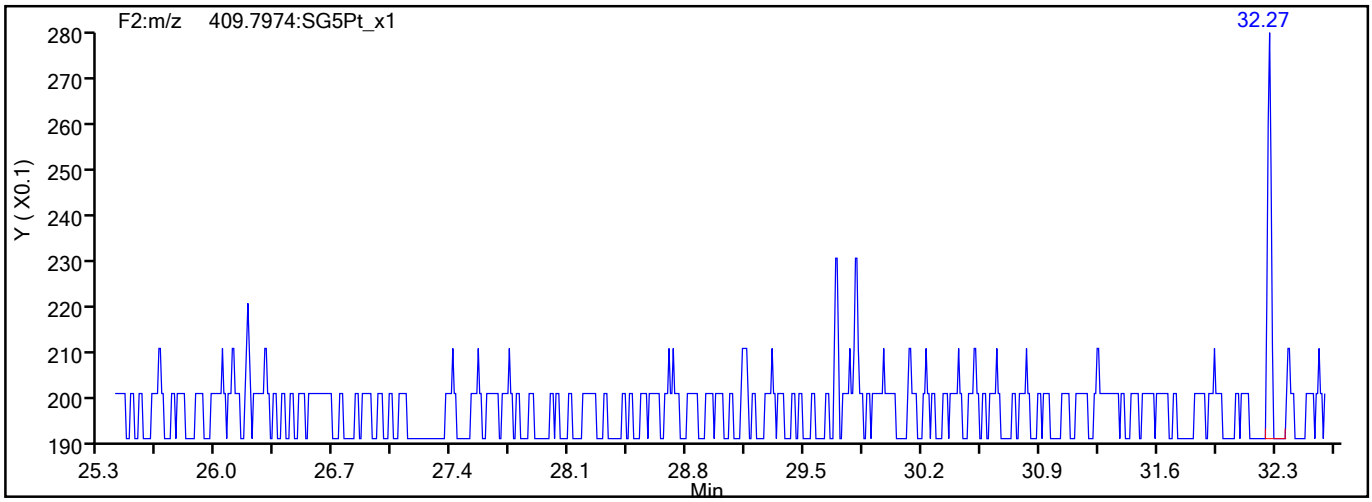

786168

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

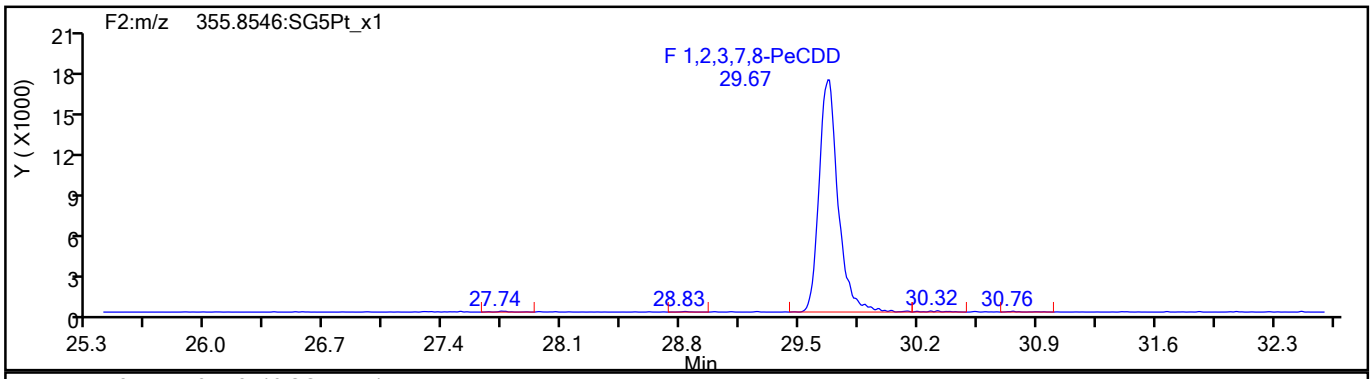

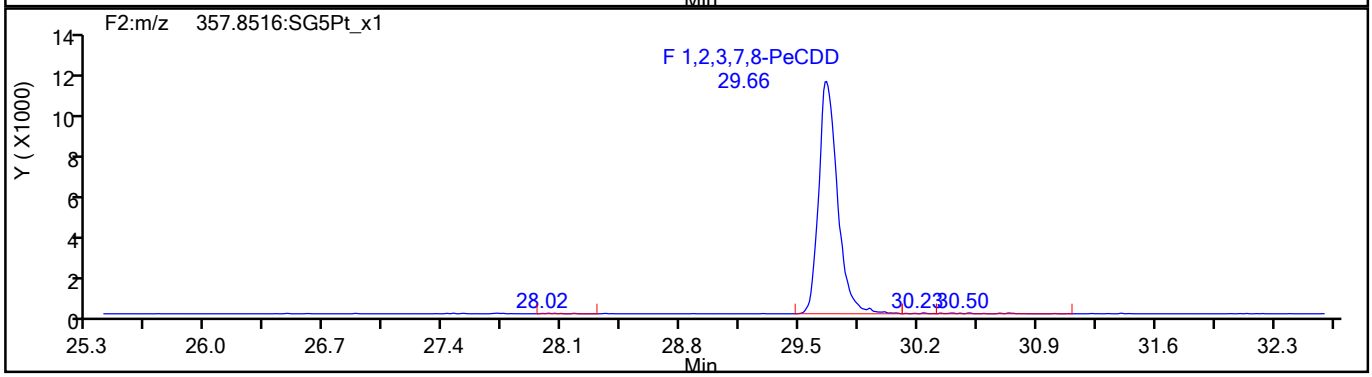

PeCDD Standards

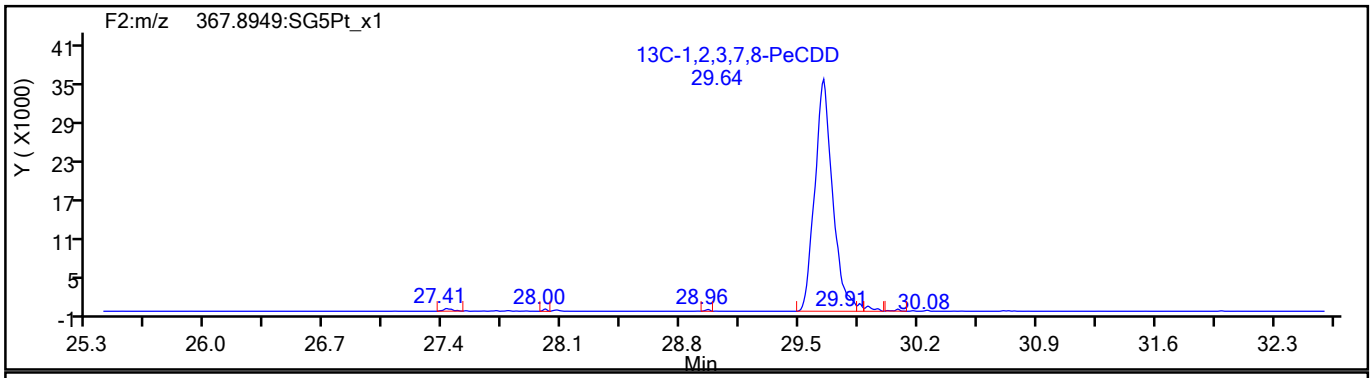

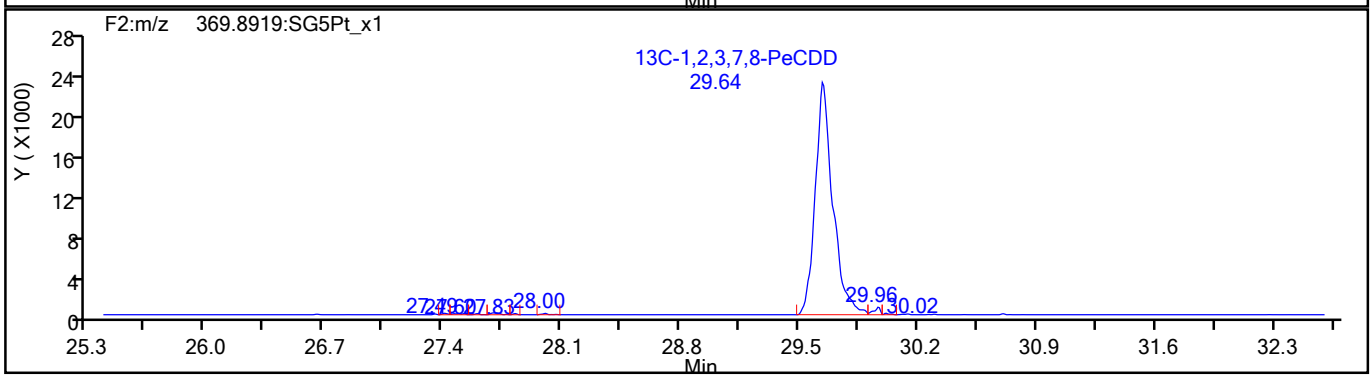

786169

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

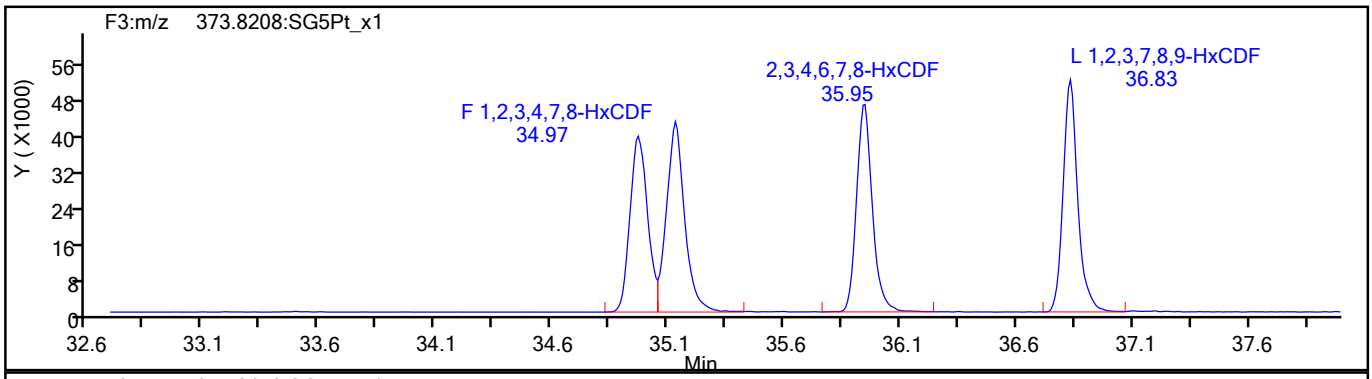

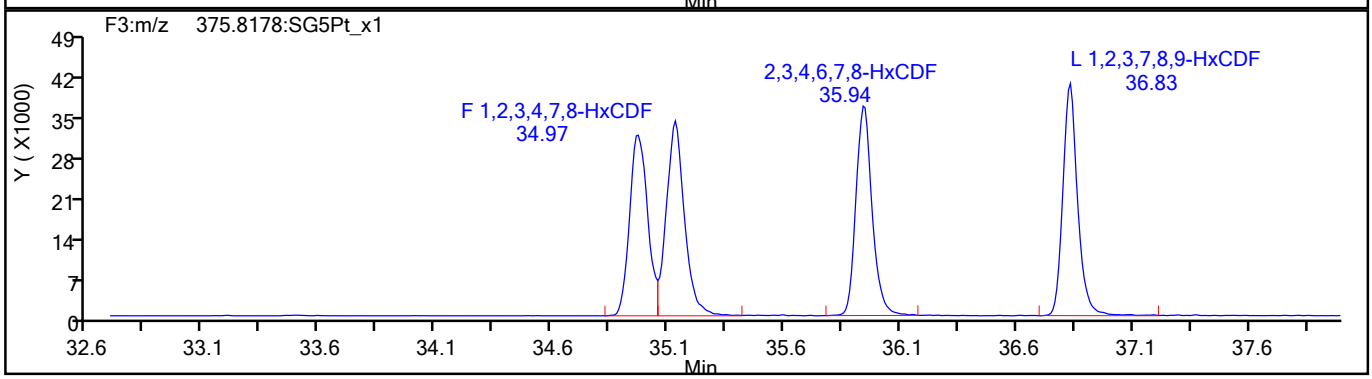

HxCDF Standards

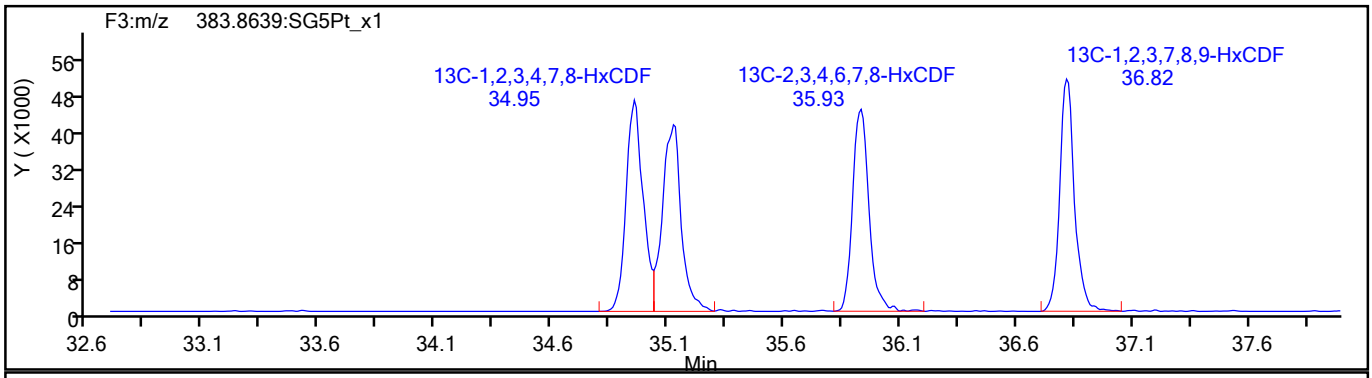

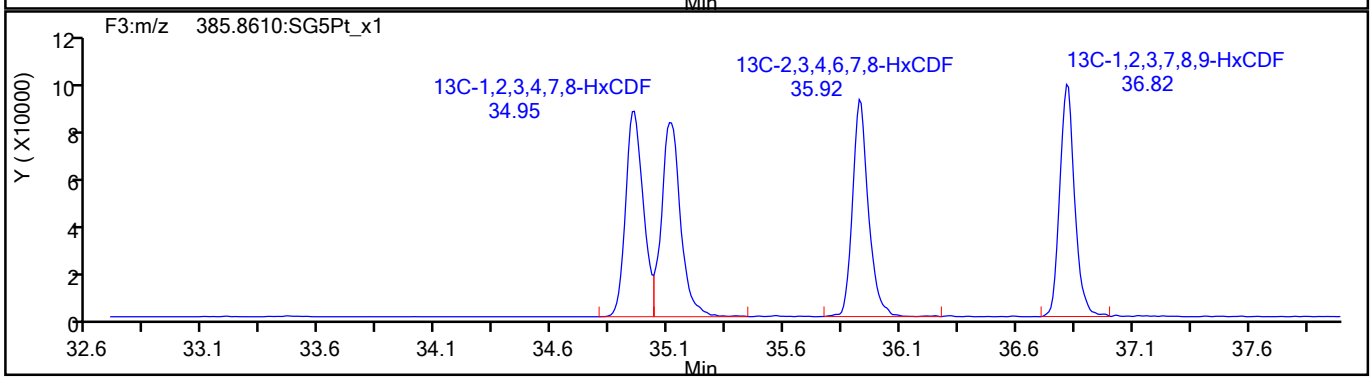

786170

Report Date: 19-Aug-2021 15:48:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

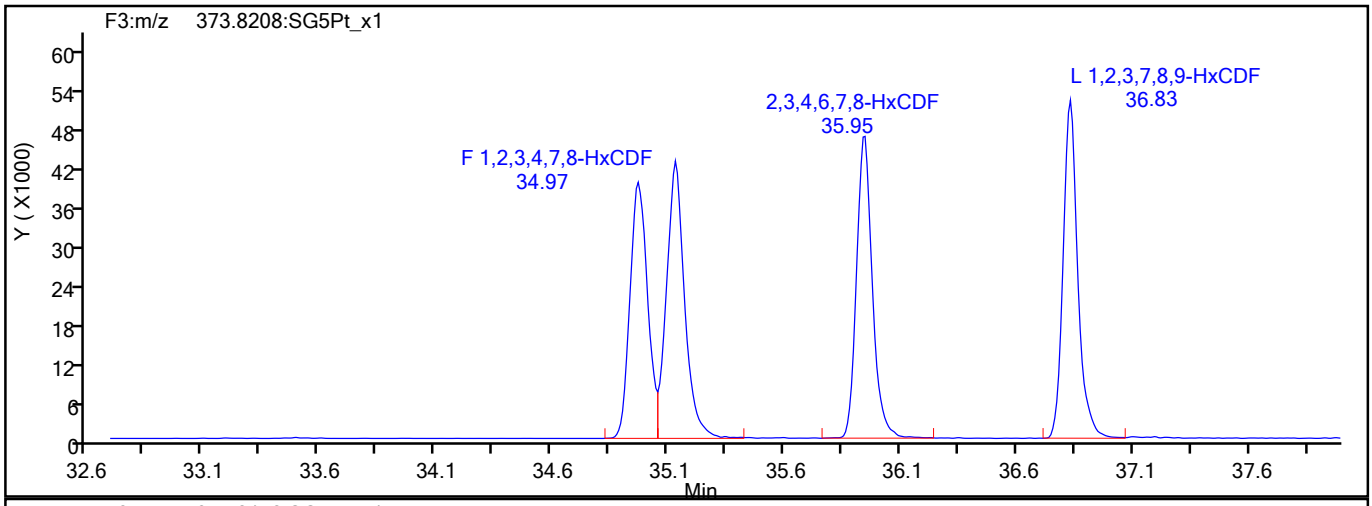

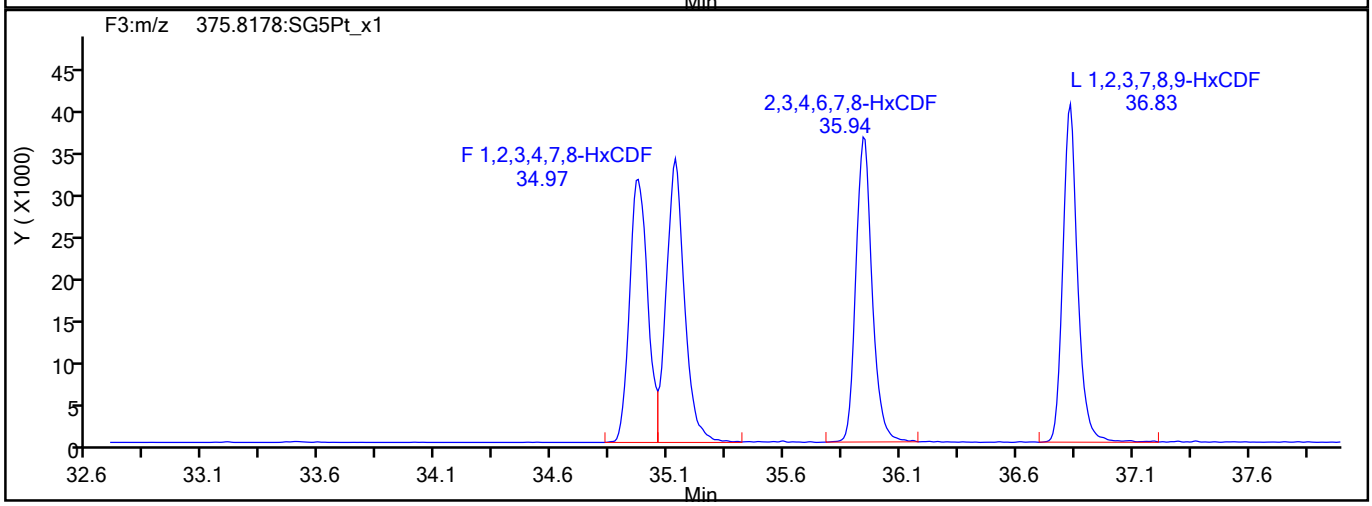

HxCDF Interference Mass

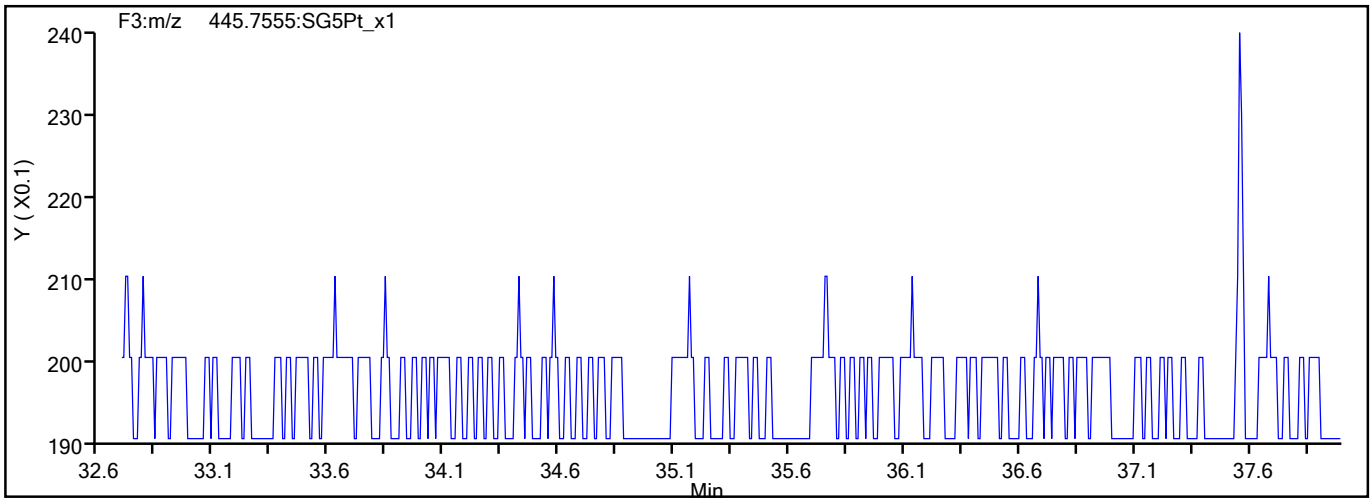

786171

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

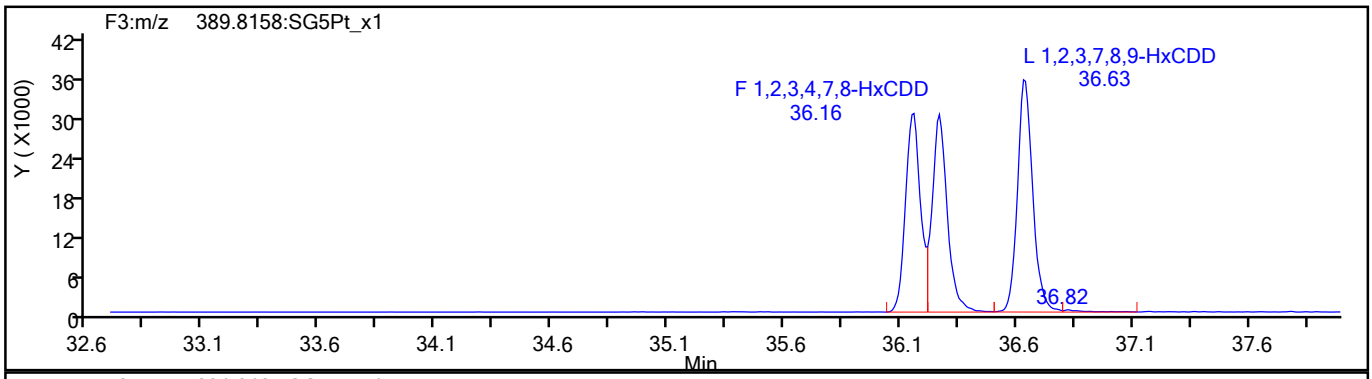

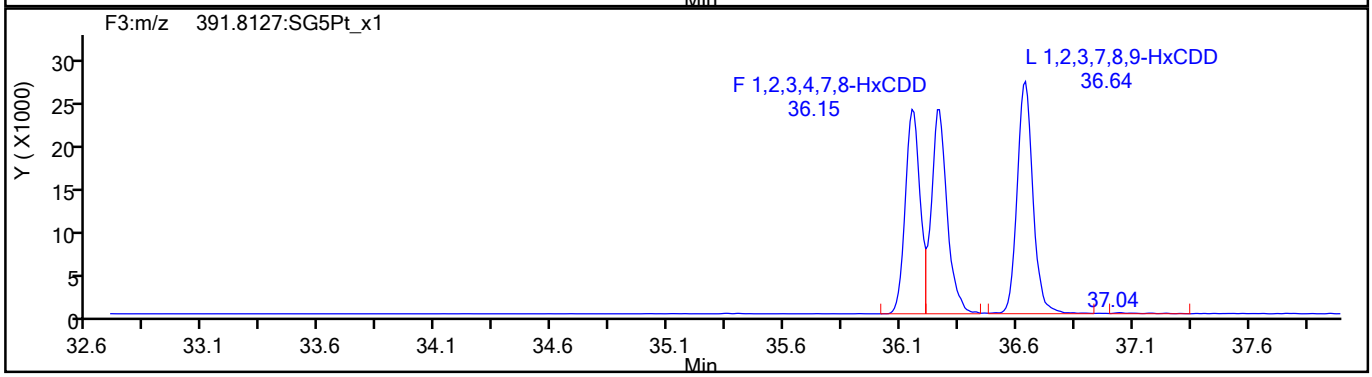

HxCDD Standards

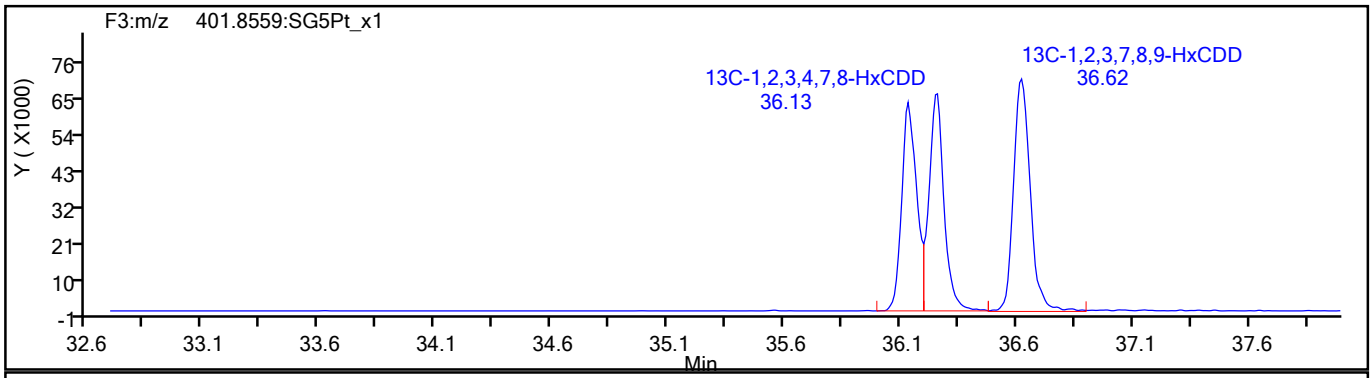

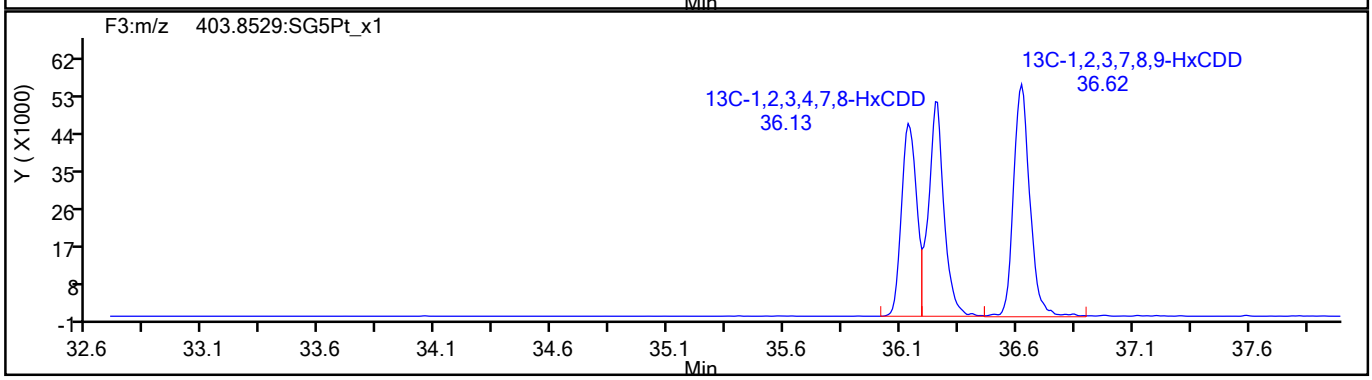

786172

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

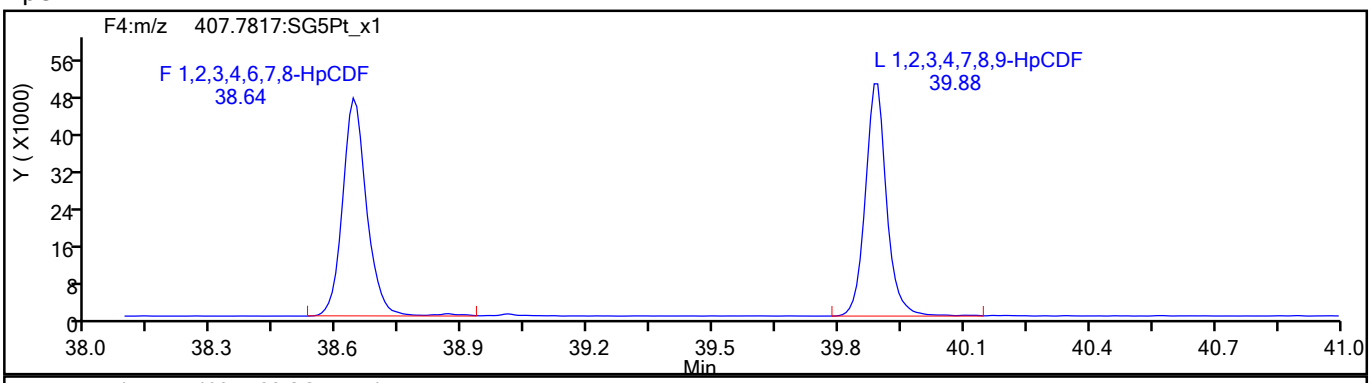

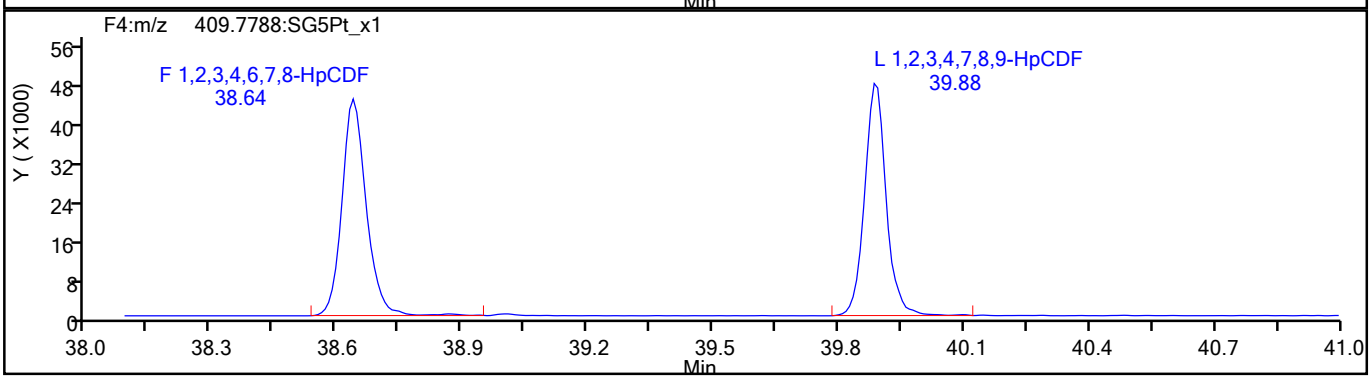

HpCDF Standards

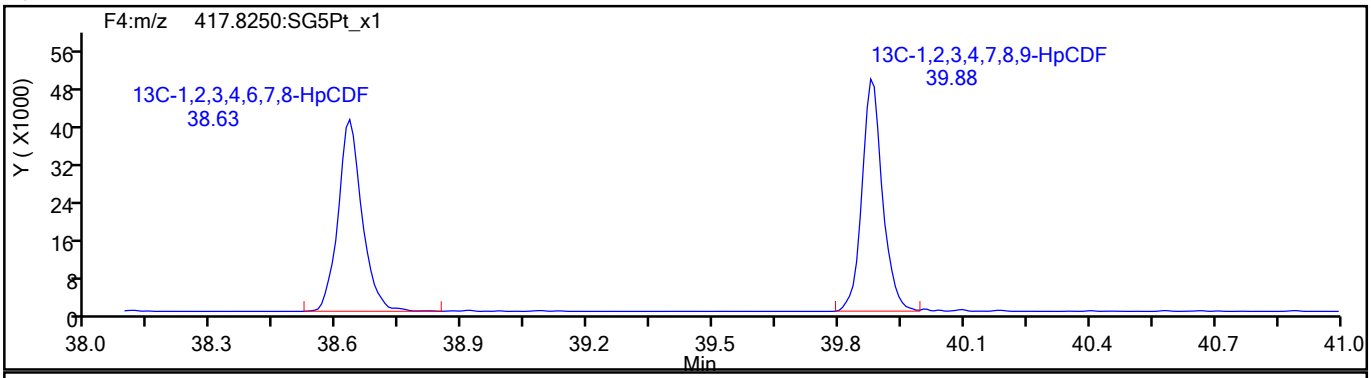

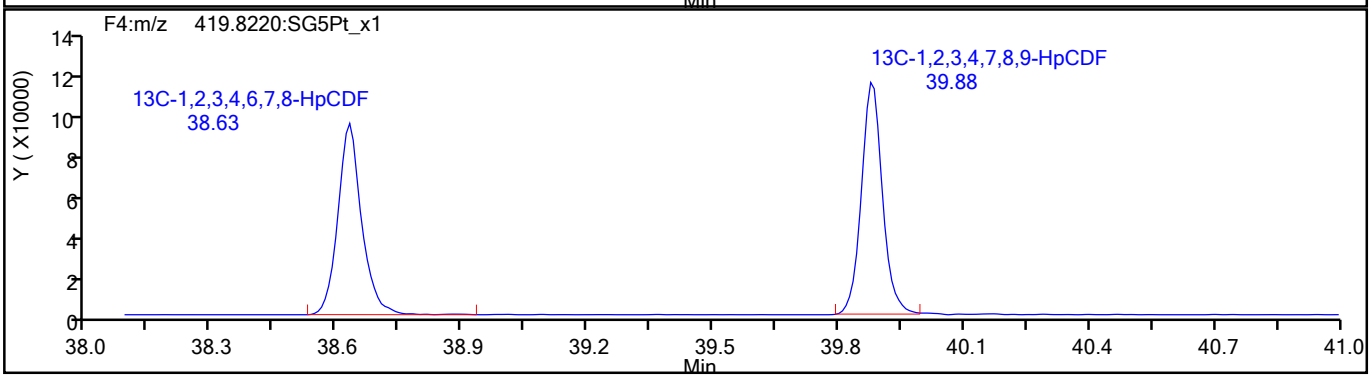

786173

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

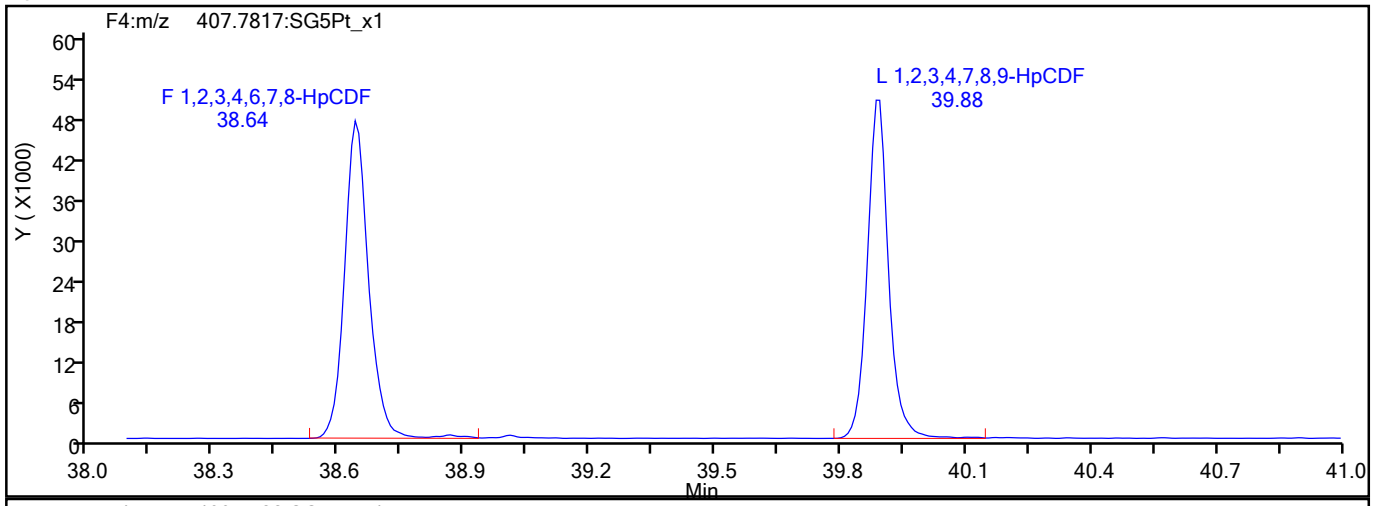

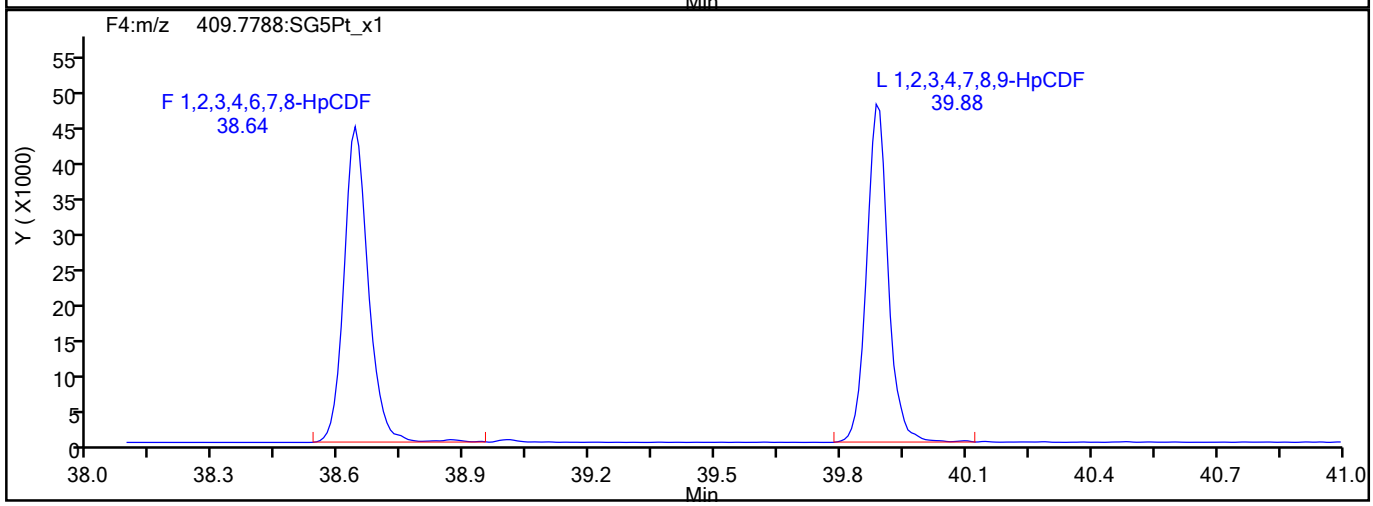

HpCDF Interference Mass

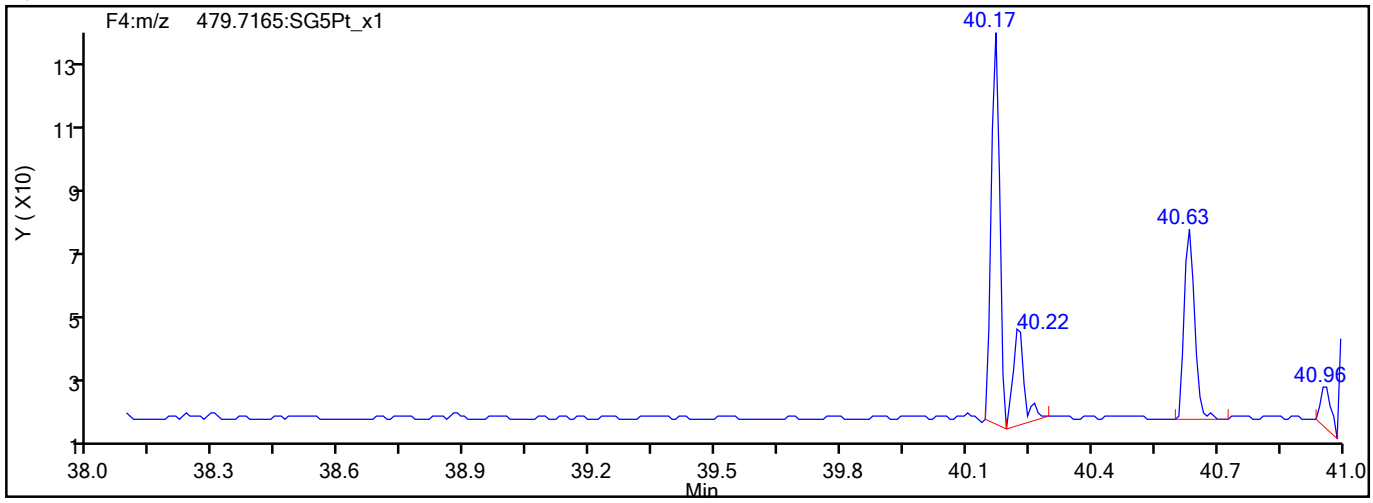

786174

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

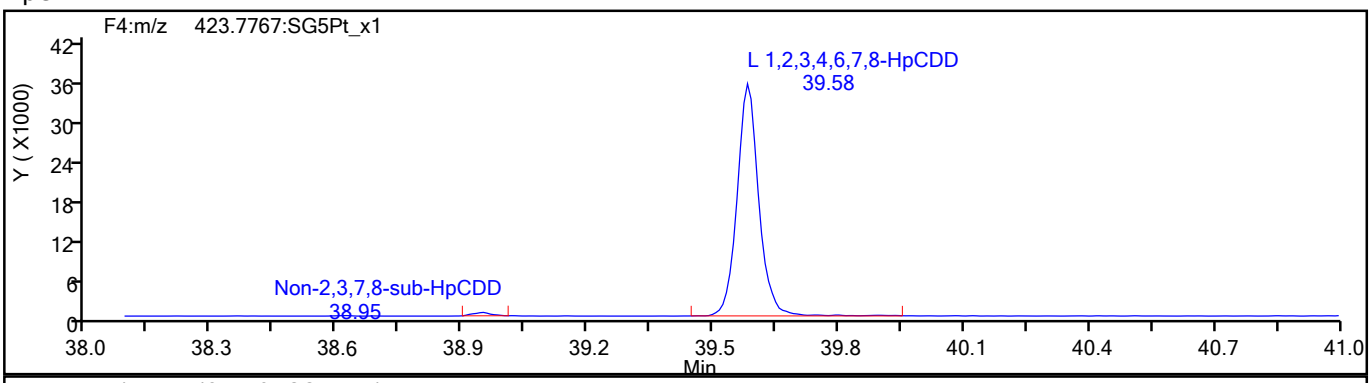

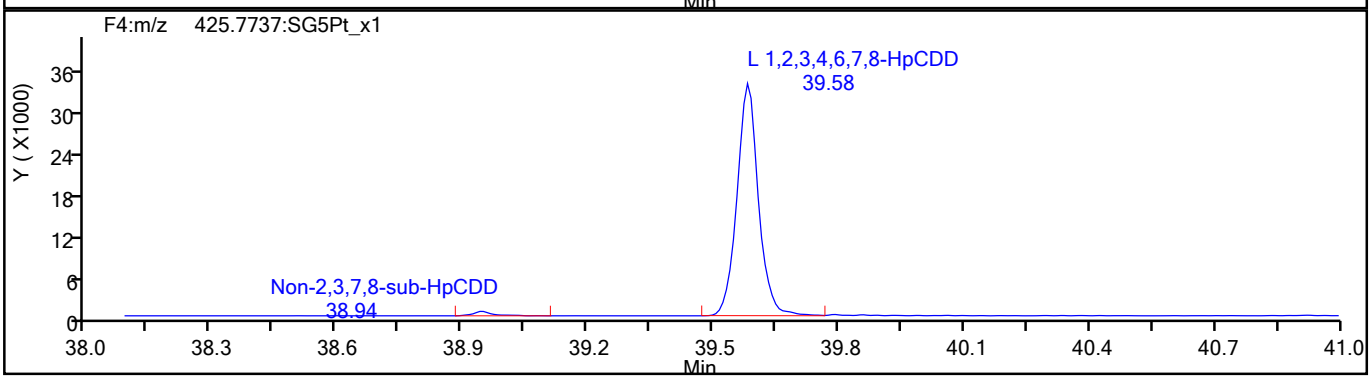

HpCDD Standards

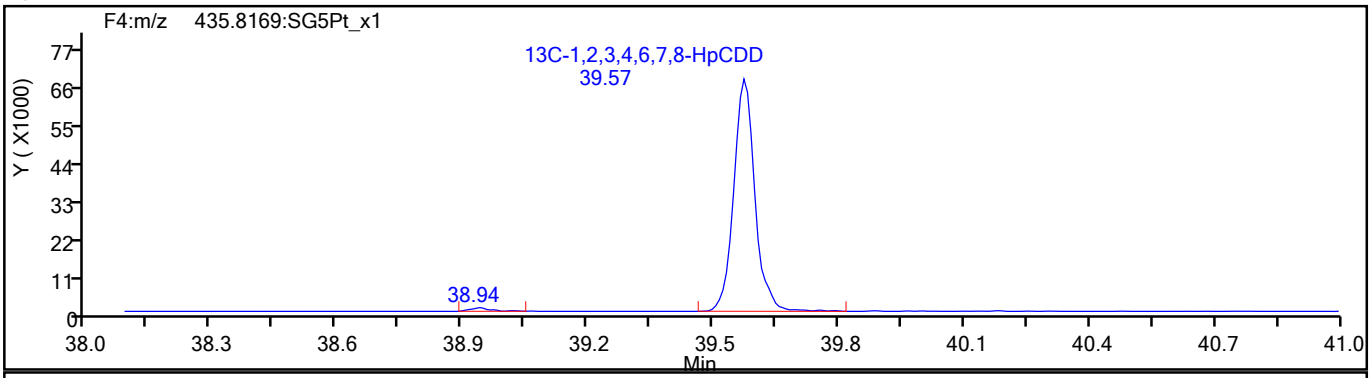

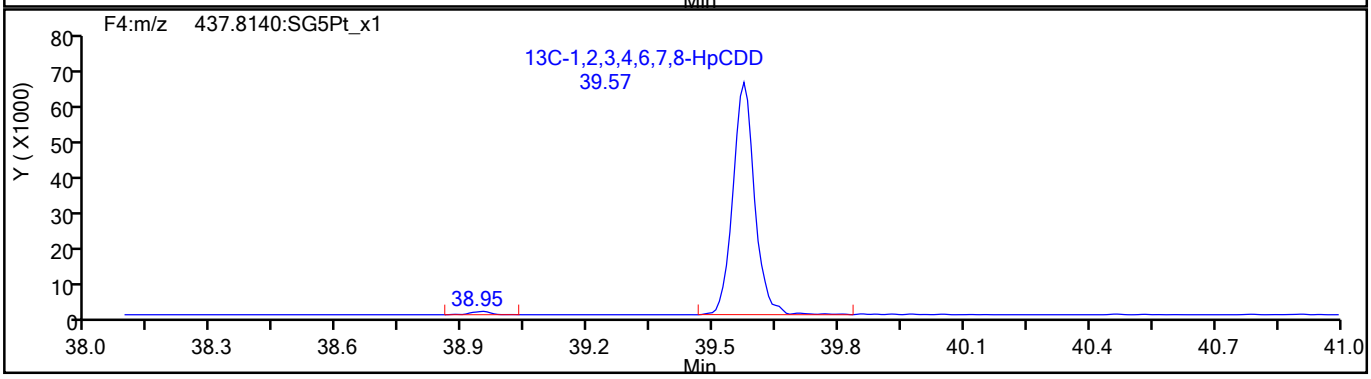

786175

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

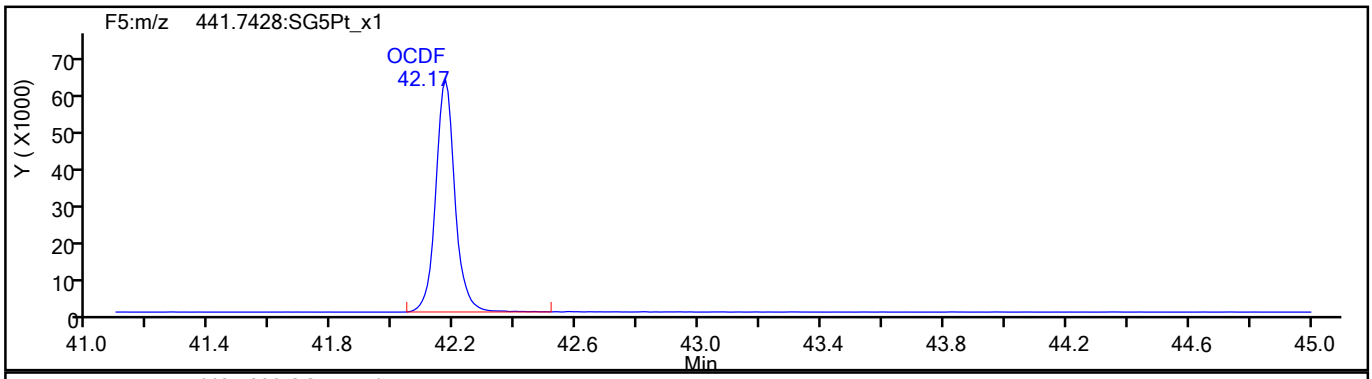

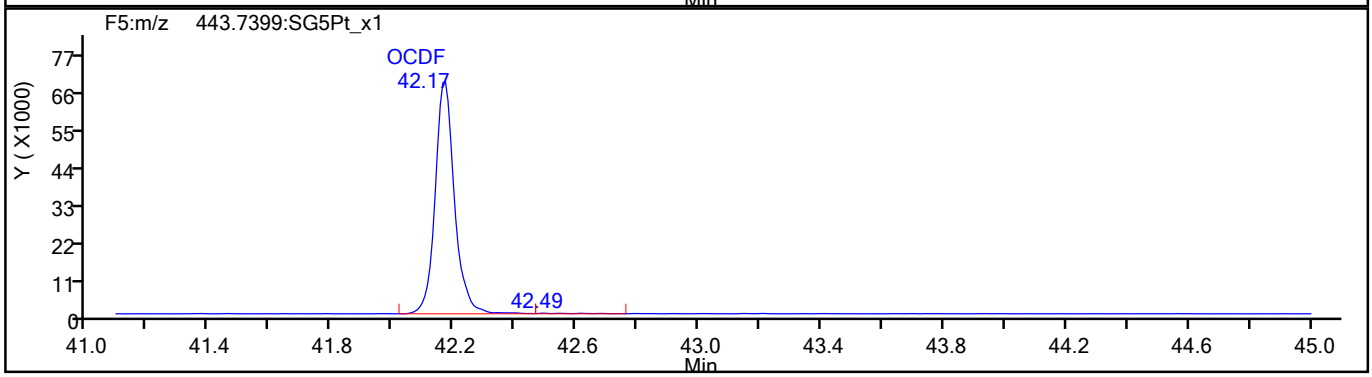

OCDF Standards

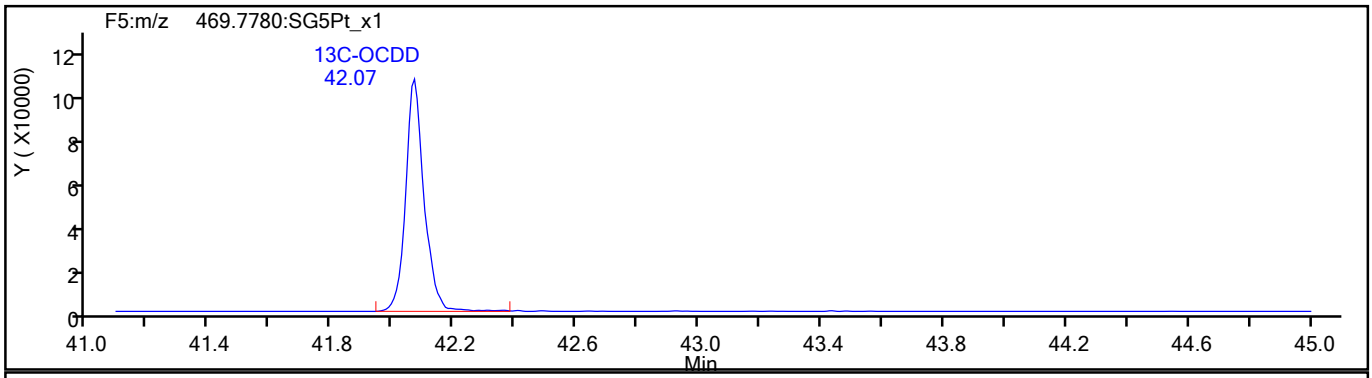

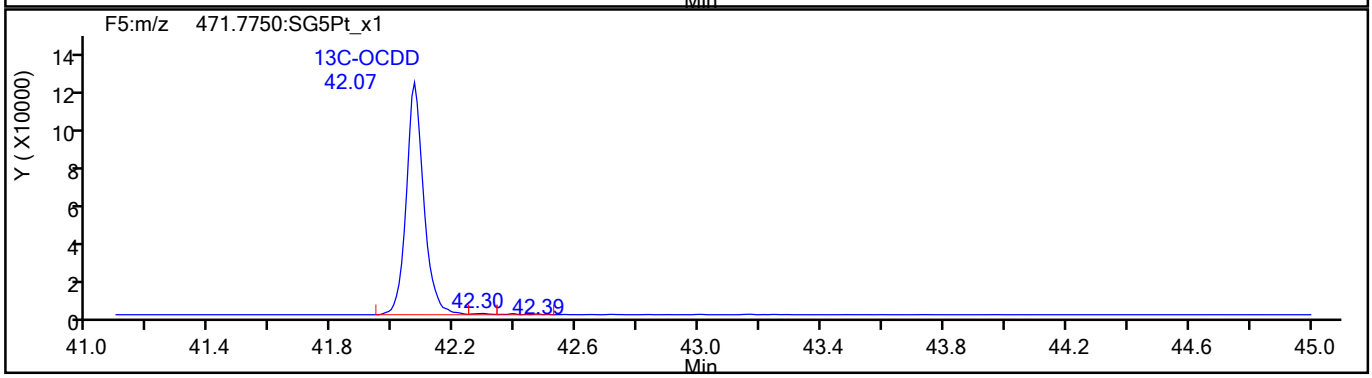

786176

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
Injection Date:	18-Aug-2021 13:48:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

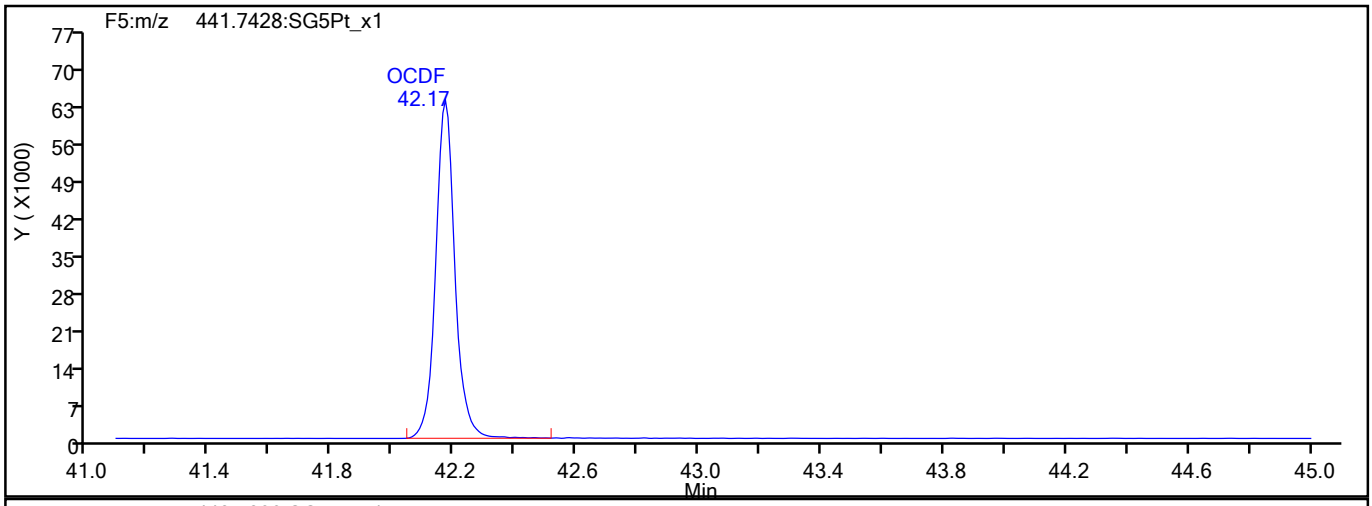

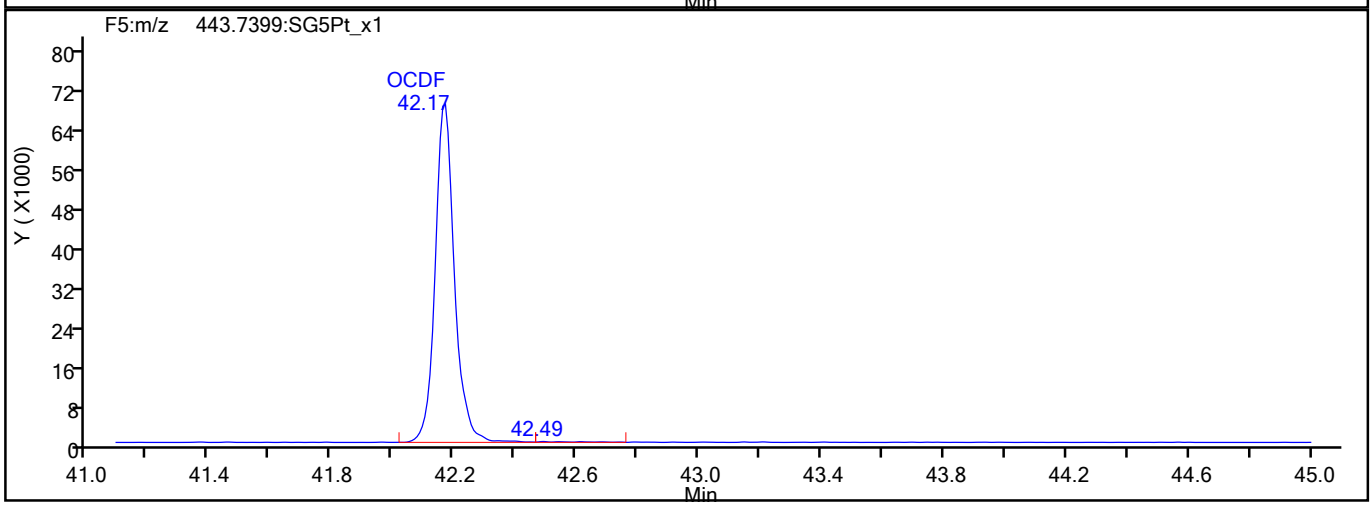

OCDF Interference Mass

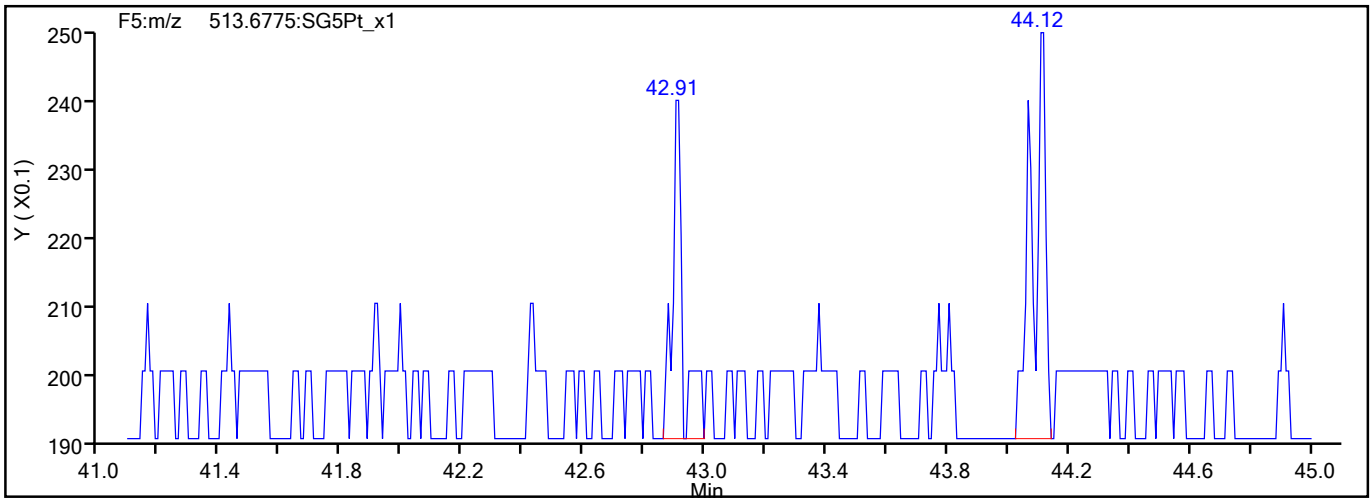

786177

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

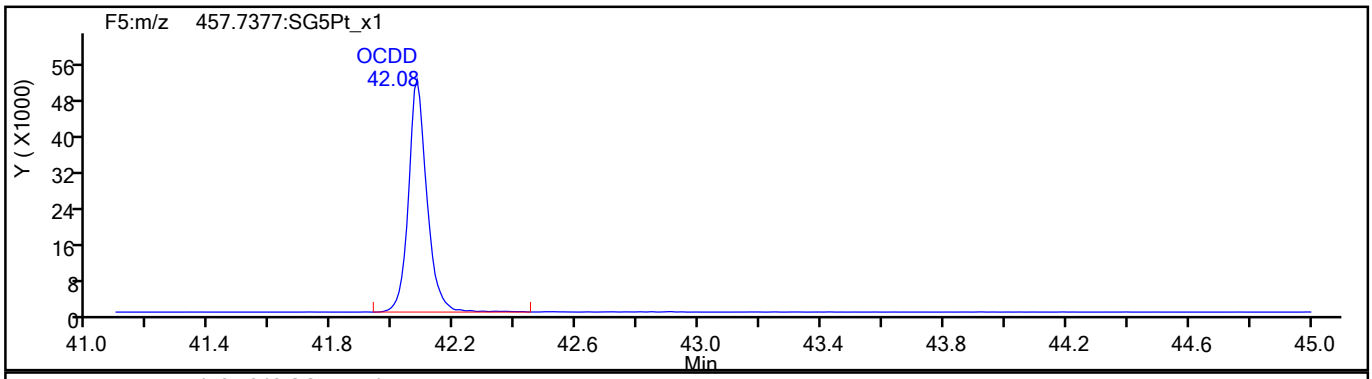

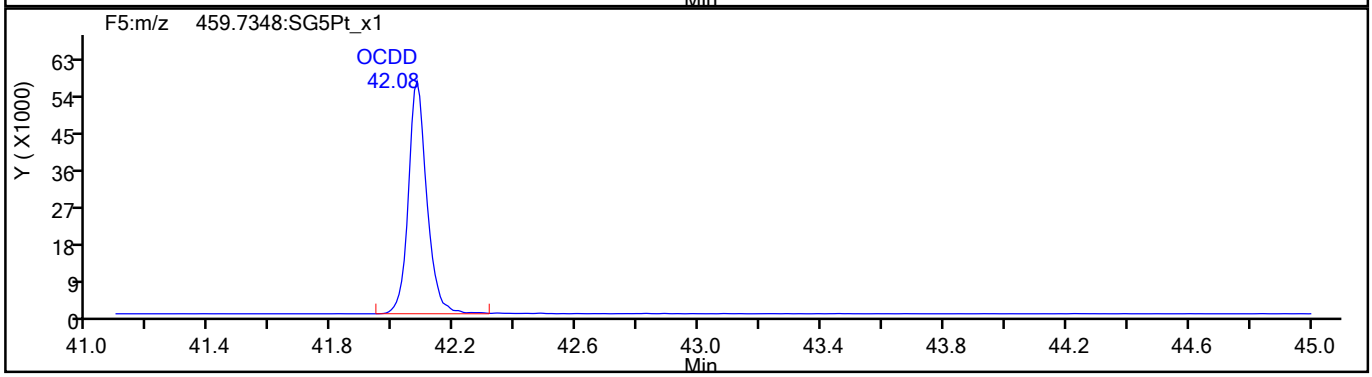

OCDD Standards

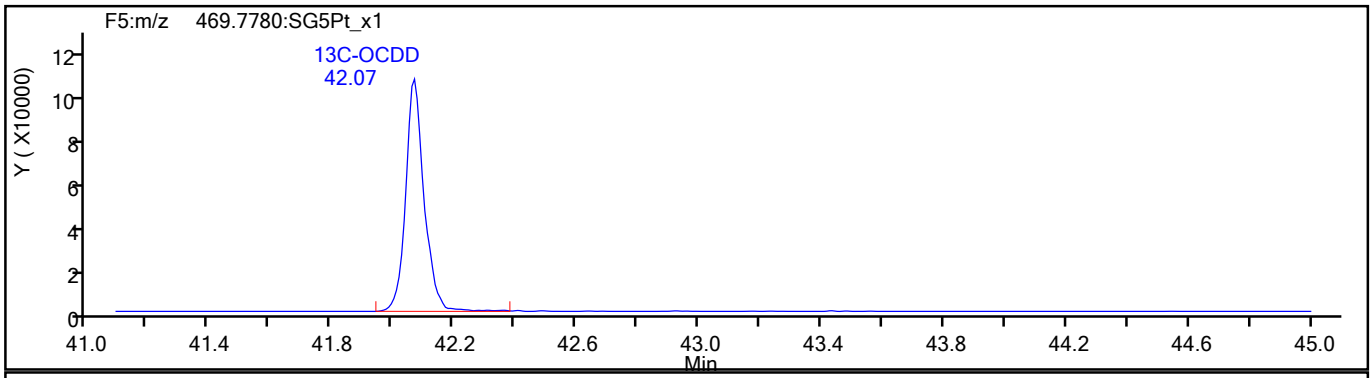

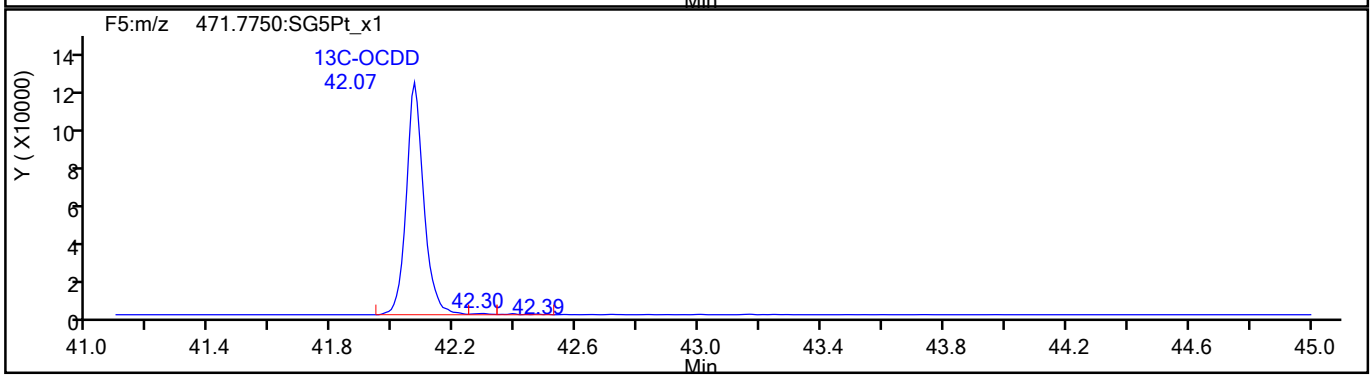

786178

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

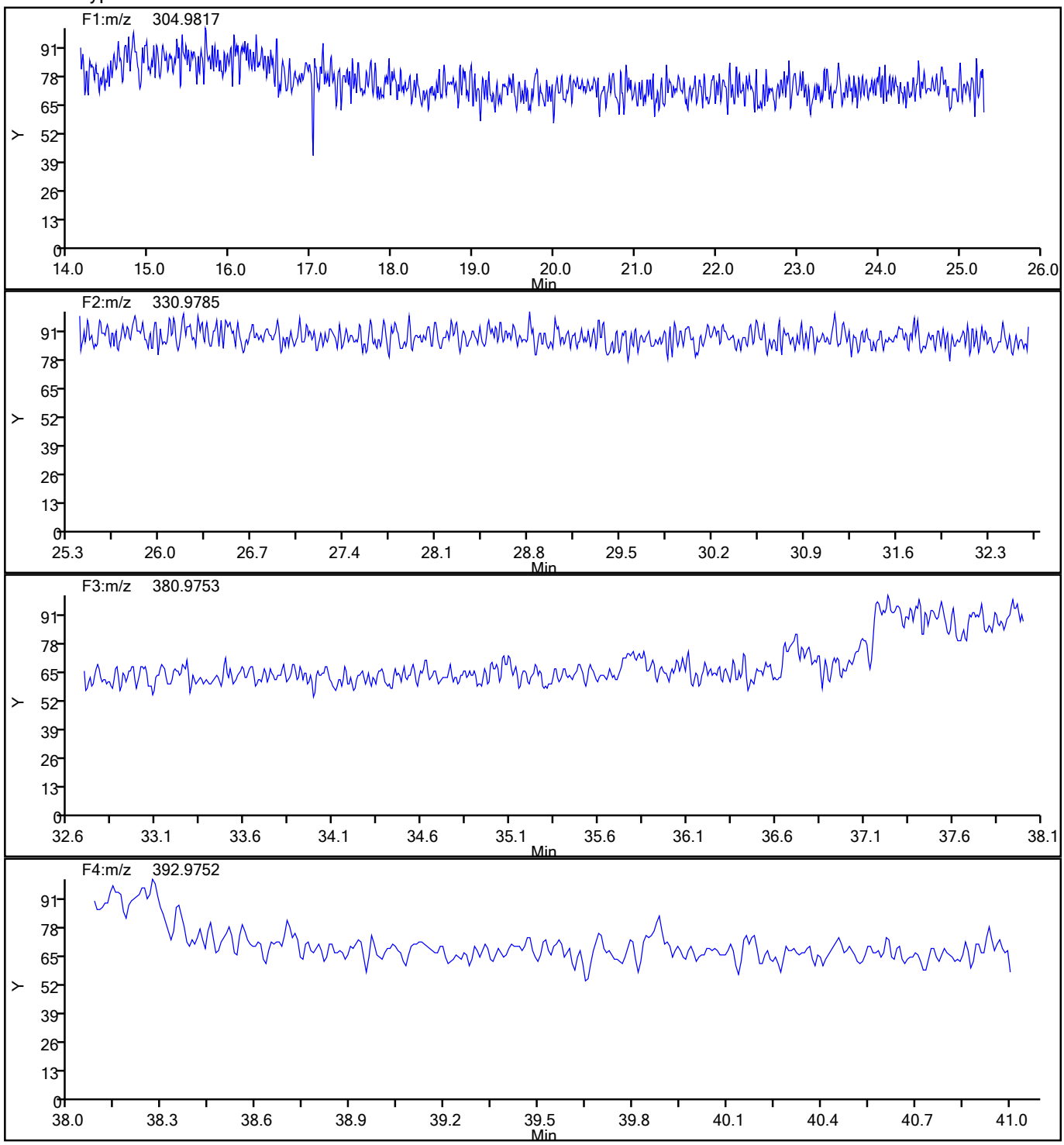

786179

Report Date: 19-Aug-2021 15:48:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_32.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	29
Column Type:	DB-5	Column Dia:	0.32 mm

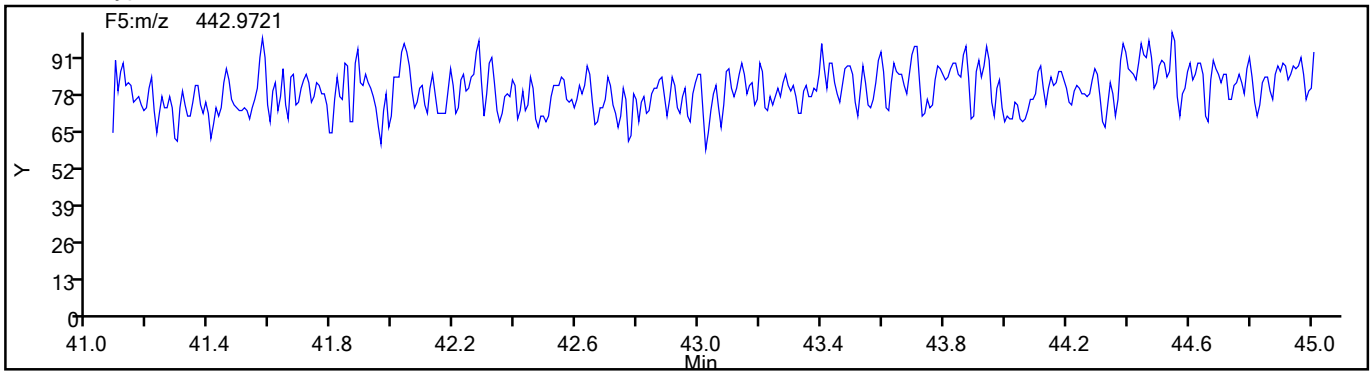

786180

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID: CCV 320-517462/43 Calibration Date: 08/19/2021 01:32

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_47.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.245		11.5	10.0	115	84-120
2,3,7,8-TCDD	AveID	1.075	1.091		10.1	10.0	101	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.086		51.5	50.0	103	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9679		48.0	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.034		49.4	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.177		51.3	50.0	103	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.349		55.4	50.0	111	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.333		54.9	50.0	110	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9806		46.2	50.0	92	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9110		45.9	50.0	92	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.012		45.6	50.0	91	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.321		53.3	50.0	107	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.388		48.1	50.0	96	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.035		49.3	50.0	99	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.305		49.8	50.0	100	86-116
OCDD	AveID	1.062	1.020		96.0	100	96	79-126
OCDF	AveID	1.317	1.321		100	100	100	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.297		96.4	100	96	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9349		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.121		98.3	100	98	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.082		96.1	100	96	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6859		95.7	100	96	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.092		113	100	113	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.016		94.9	100	95	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	0.9659		92.8	100	93	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8144		107	100	107	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9636		112	100	112	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9078		93.3	100	93	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7453		101	100	101	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7361		109	100	109	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.6807		99.3	100	99	77-129
13C-OCDD	Ave	0.5446	0.6101		224	200	112	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	0.9902		9.82	10.0	98	79-127

31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A b.i. NU	12	1613B/Solid	D266	KSS	10.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	10.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	10.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	10.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A bad inj.	27	1613B/Solid		KSS	10.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	10.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	10.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	10.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A needs 20x	31 } matrix	1613B/Solid		KSS	10.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32 }	1613B/Solid		KSS	10.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	
47	17AU21DFS1_47	CCV CS-4 HRDXNL4_00100	CCV 081721C	2	Dioxin		KSS	1.000	
48	17AU21DFS1_48	WDM HRDXNCP_00044	WDM 081721C	1	Dioxin		KSS	1.000	
49	17AU21DFS1_49	SB Solvent Blank C14	SB 081721F	3	Dioxin		KSS	1.000	
50	17AU21DFS1_50	mb 320-513879/1-a	mb 320-513879/1-a	33	1613B/Solid	D267	KSS	10.000	g
51	17AU21DFS1_51	lcs 320-513879/2-a	lcs 320-513879/2-a	34	1613B/Solid		KSS	10.000	g
52	17AU21DFS1_52	320-76901-a-2-a	320-76901-a-2-a	35	1613B/Solid		KSS	10.000	g
53	17AU21DFS1_53	320-76901-a-2-b ms	320-76901-a-2-b ms	36	1613B/Solid		KSS	10.000	g
54	17AU21DFS1_54	320-76901-a-2-c msd	320-76901-a-2-c msd	37	1613B/Solid		KSS	10.000	g
55	17AU21DFS1_55	320-76769-a-4-b	320-76769-a-4-b	38	1613B/Solid		KSS	10.000	g
56	17AU21DFS1_56	320-76888-a-6-a	320-76888-a-6-a	39	1613B/Solid		KSS	10.000	g
57	17AU21DFS1_57	320-76888-a-7-a	320-76888-a-7-a	40	1613B/Solid		KSS	10.000	g
58	17AU21DFS1_58	320-76888-a-8-a	320-76888-a-8-a	41	1613B/Solid		KSS	10.000	g
59	17AU21DFS1_59	320-76888-a-9-a	320-76888-a-9-a	42	1613B/Solid		KSS	10.000	g
60	17AU21DFS1_60	SB Solvent Blank C14	SB 081721G	3	Dioxin		KSS	1.000	
61	17AU21DFS1_61	Resolution Check	RC 081721D	46			KSS	1.000	

LOGFILE CHECKED)
DB 8/18/21

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

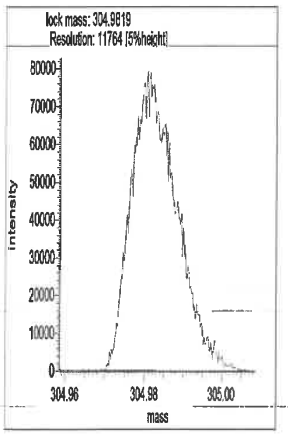

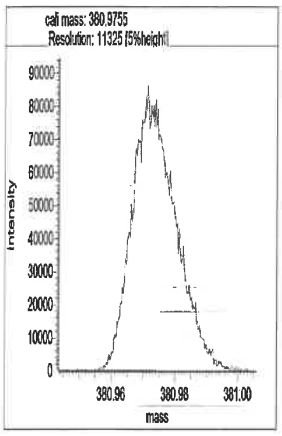

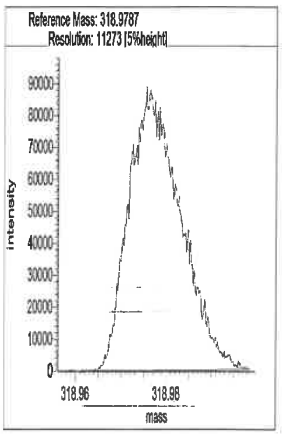

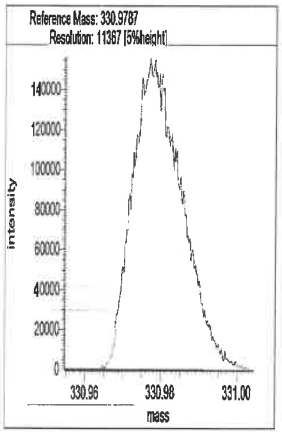

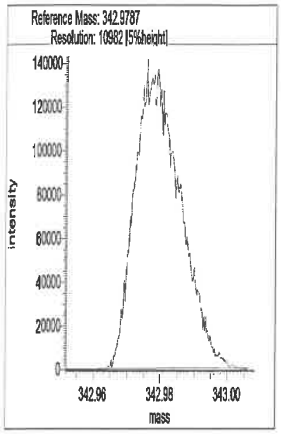

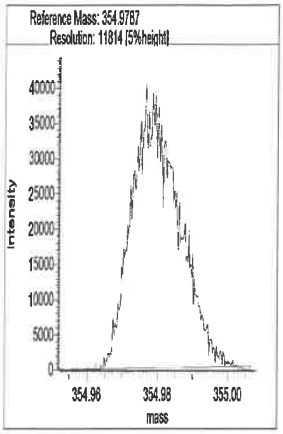

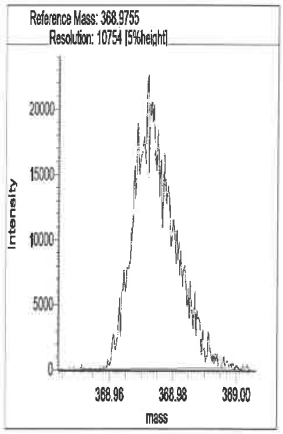

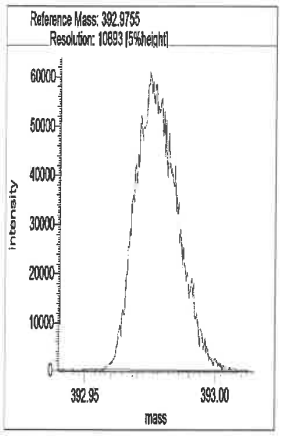

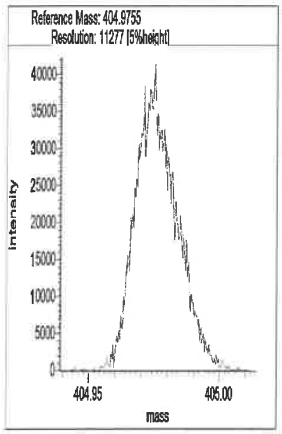

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

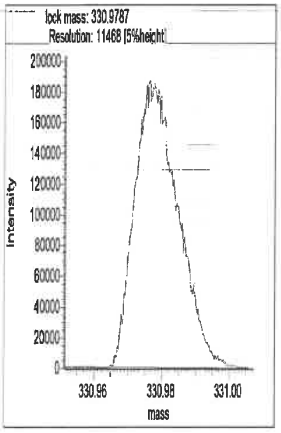

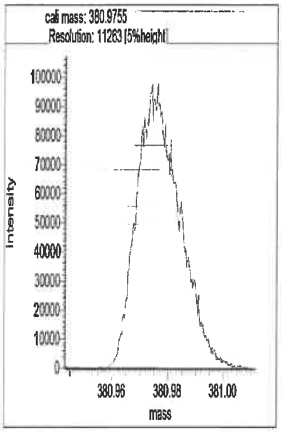

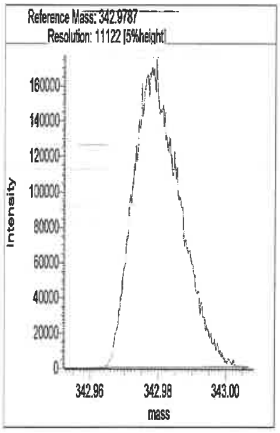

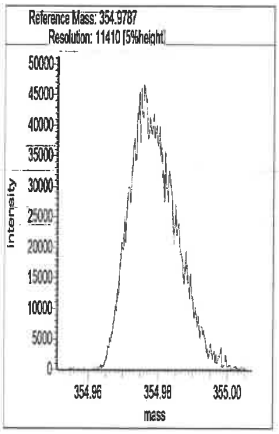

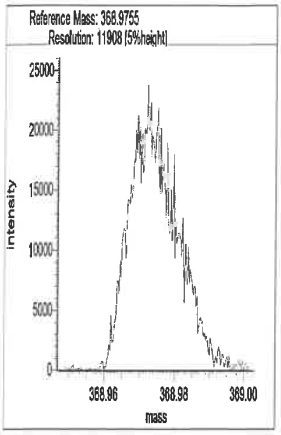

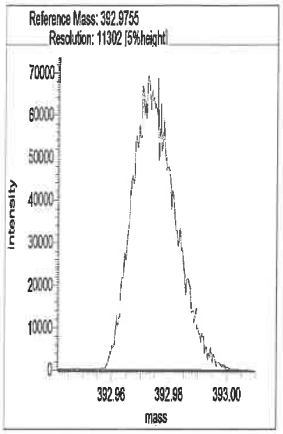

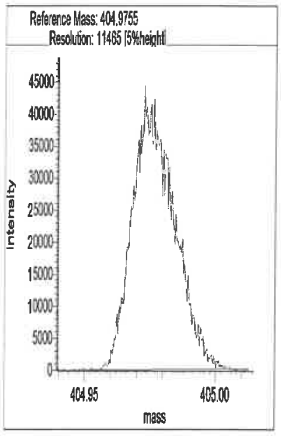

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

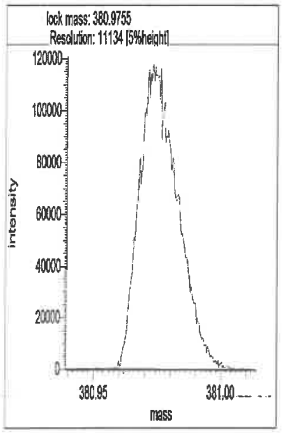

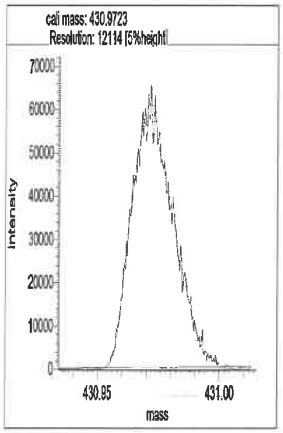

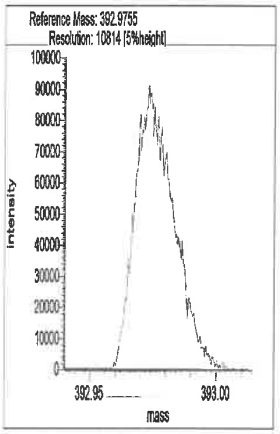

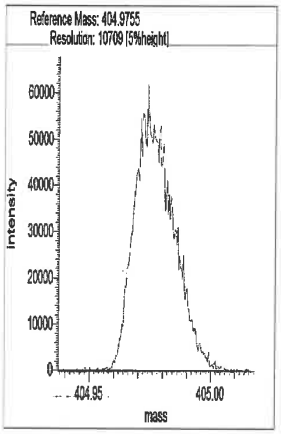

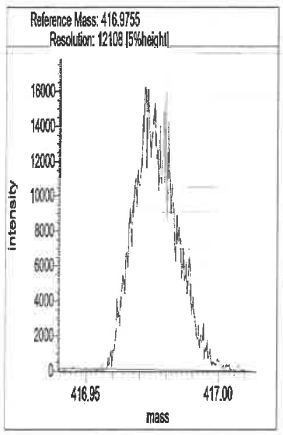

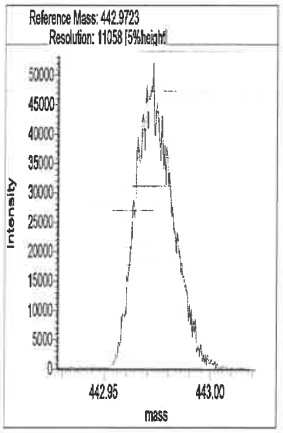

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

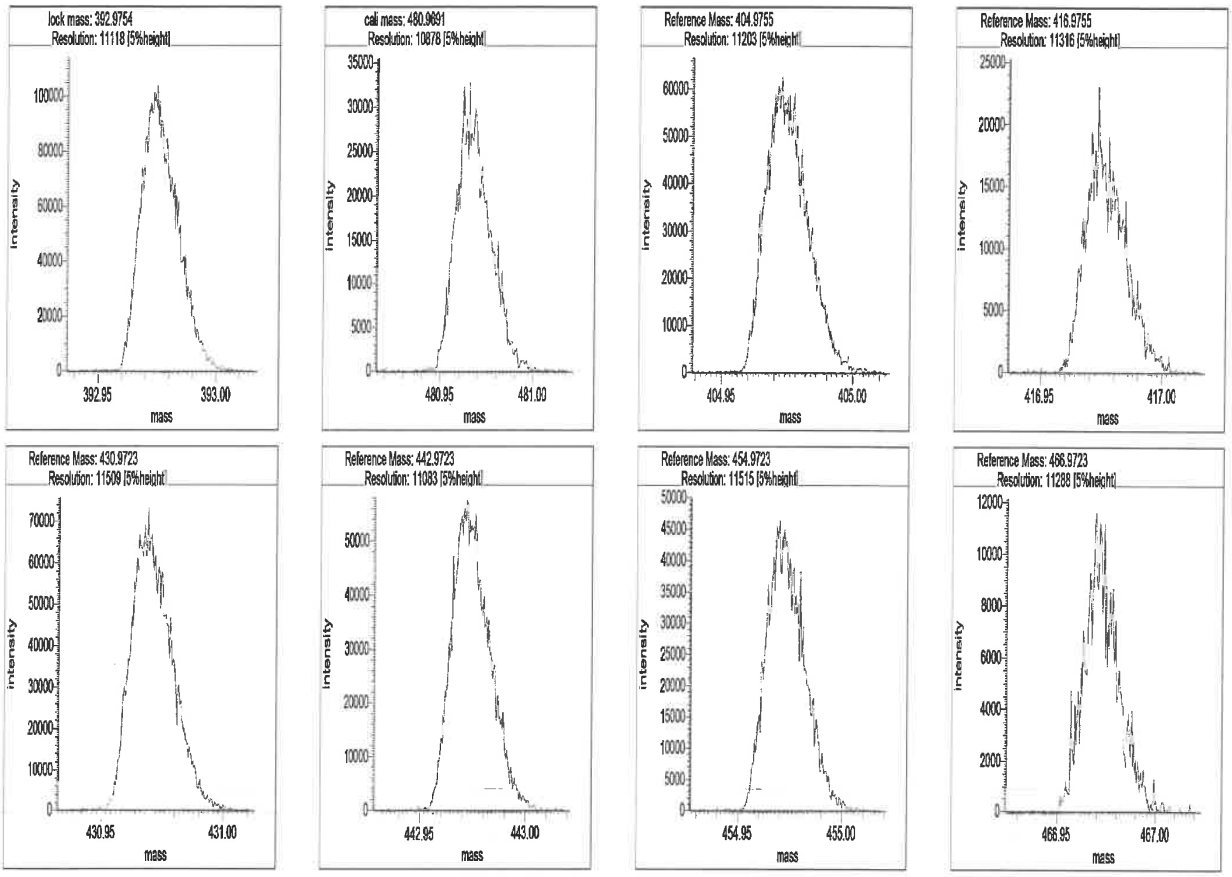

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

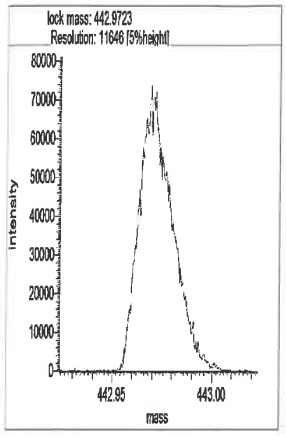
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

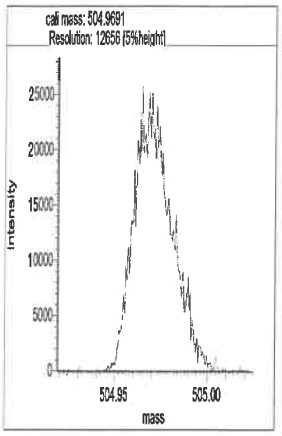
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

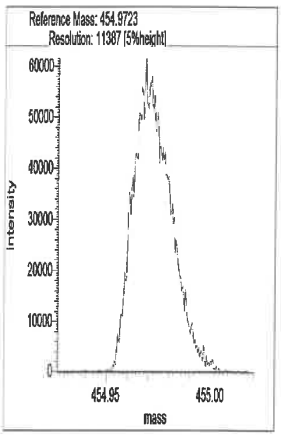
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

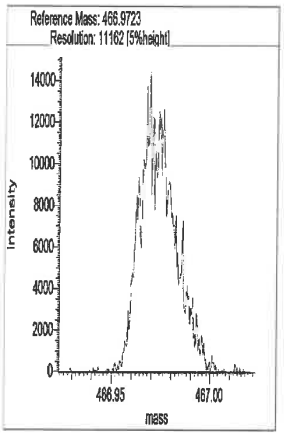
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

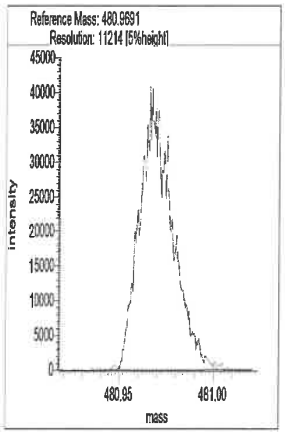
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

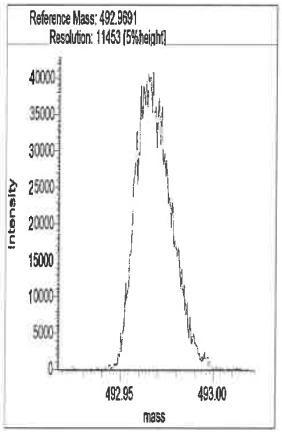
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 01:12
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10755 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10064 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 11004 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 10862 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10493 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11020 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10113 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10231 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9724 [5%height] ✓ ok 8/19/21

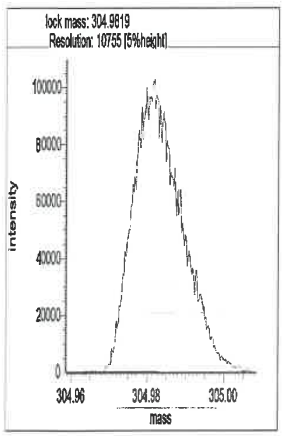

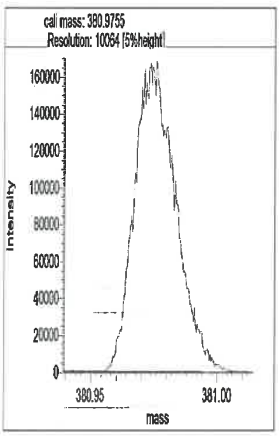

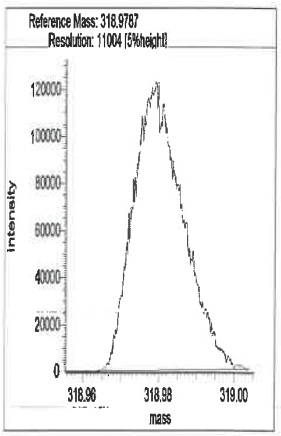

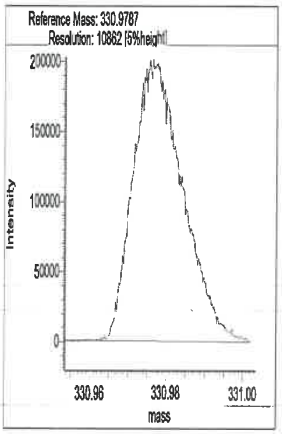

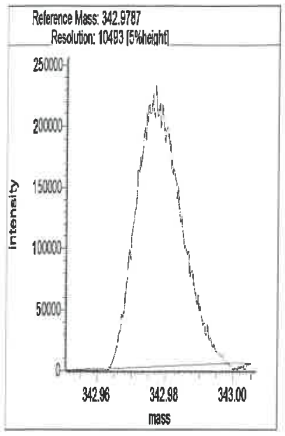

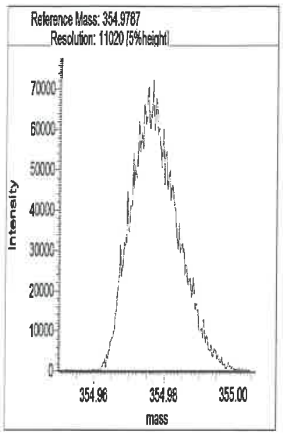

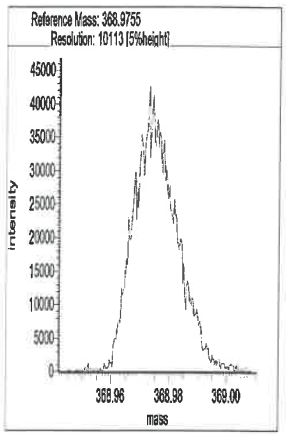

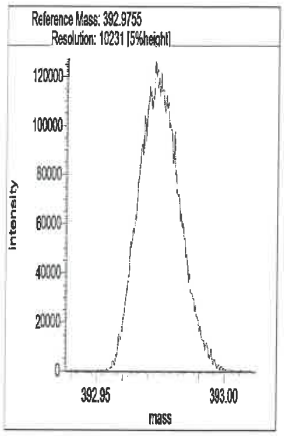

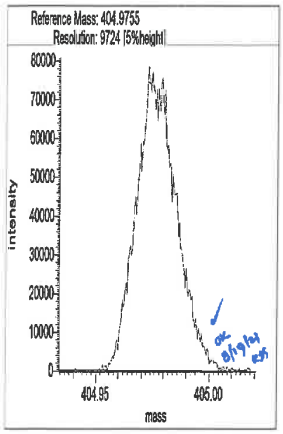

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10868 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10796 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10893 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11154 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10747 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10242 [5%height]

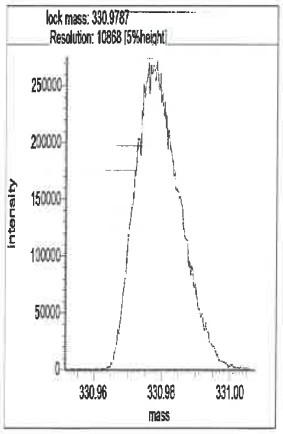

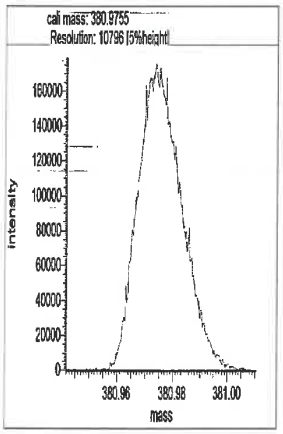

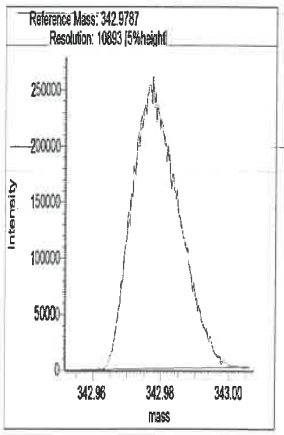

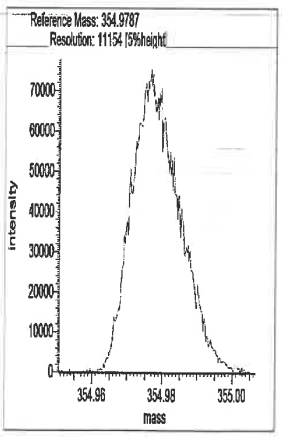

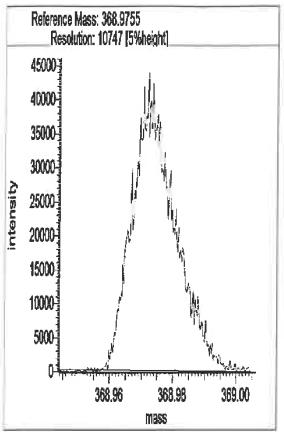

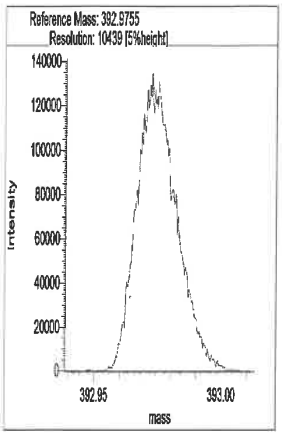

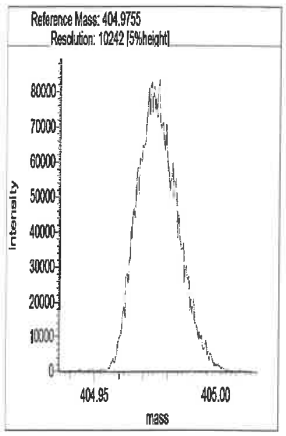

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11012 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10577 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11026 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10658 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11077 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10816 [5%height]

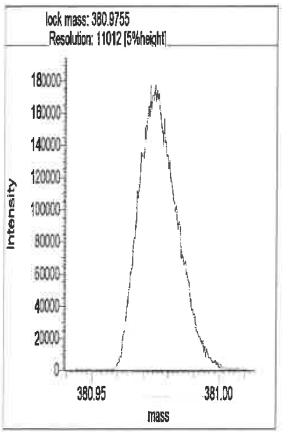

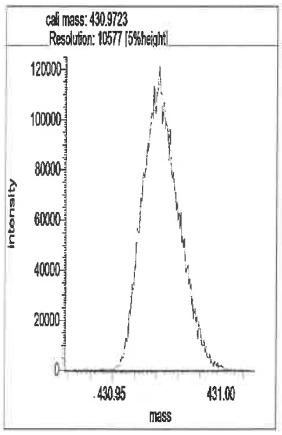

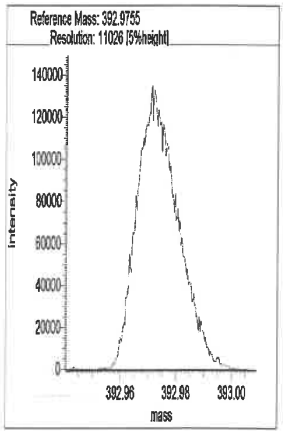

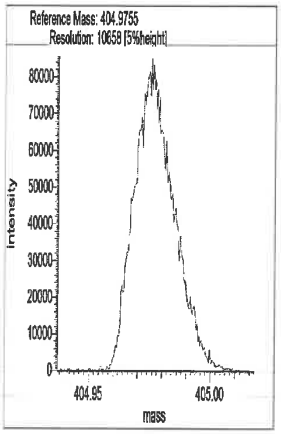

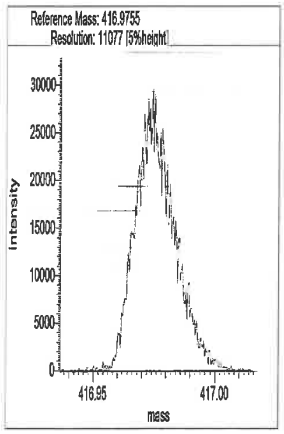

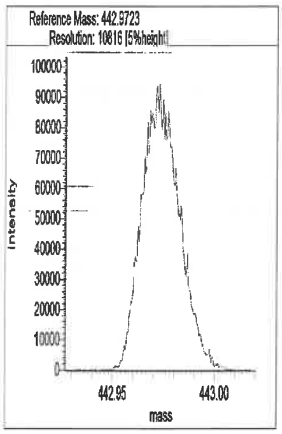

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11599 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10409 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11028 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11067 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10523 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10883 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10838 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11180 [5%height]

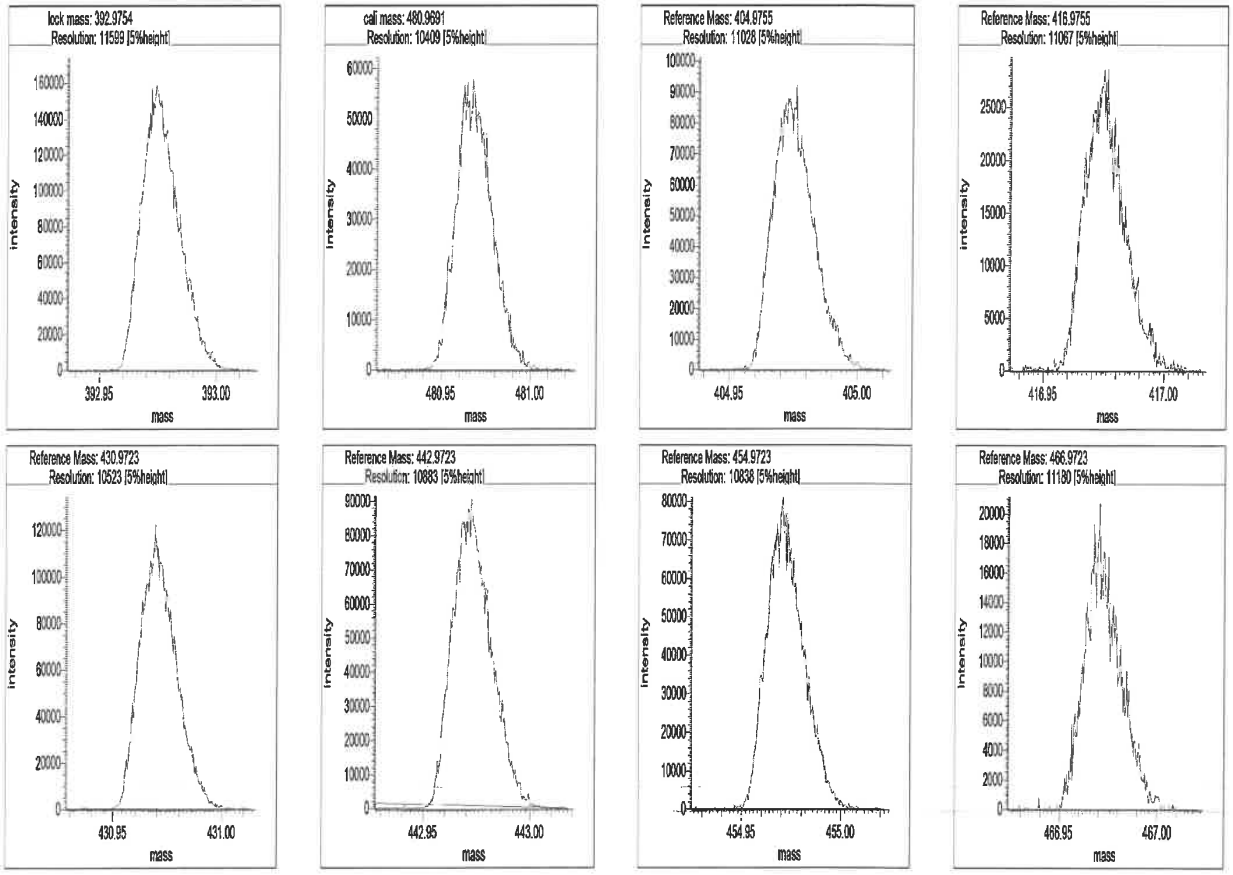

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11216 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10772 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11002 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11259 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10778 [5%height]

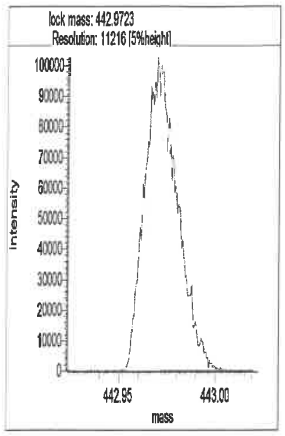
lock mass: 442.9723
Resolution: 11216 [5%height]
Intensity
mass

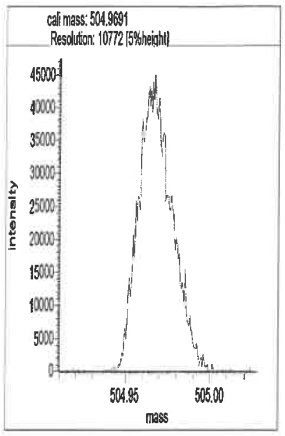
cali mass: 504.9691
Resolution: 10772 [5%height]
Intensity
mass

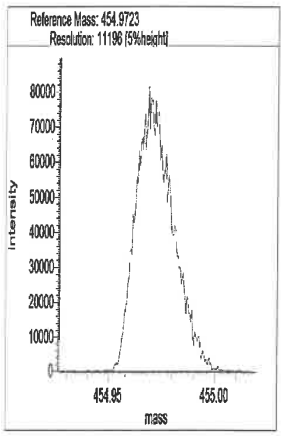
Reference Mass: 454.9723
Resolution: 11196 [5%height]
Intensity
mass

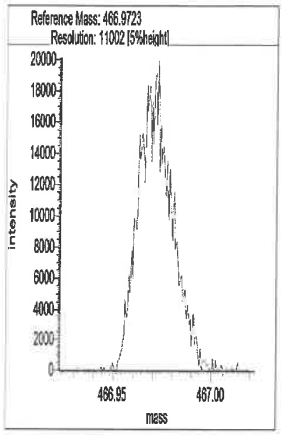
Reference Mass: 466.9723
Resolution: 11002 [5%height]
Intensity
mass

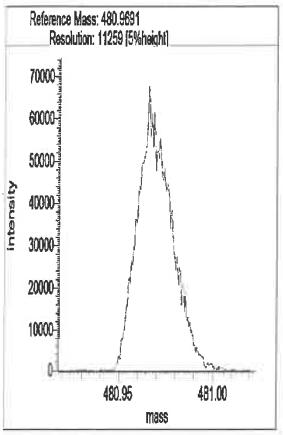
Reference Mass: 480.9691
Resolution: 11259 [5%height]
Intensity
mass

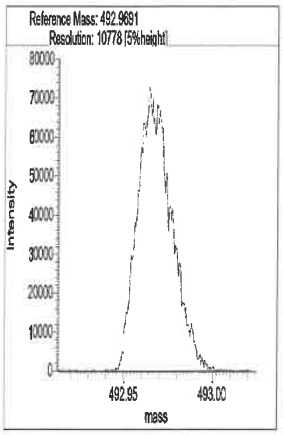
Reference Mass: 492.9691
Resolution: 10778 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 12:47
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11862 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10668 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11408 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11603 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11057 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11275 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11232 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10101 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9688 [5%height] ✓ 8/19/21 KCF

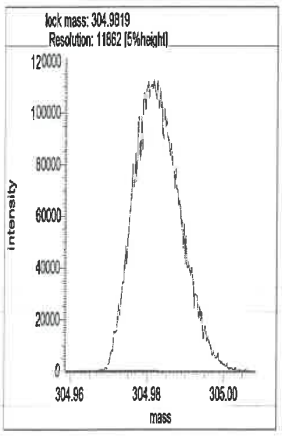

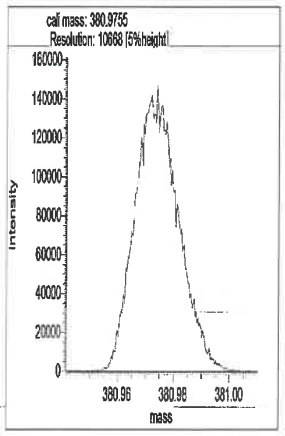

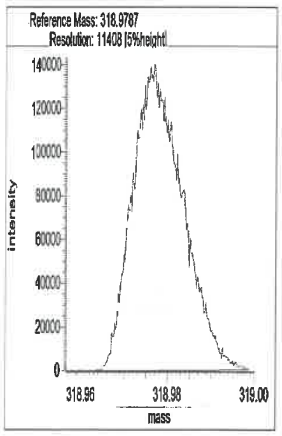

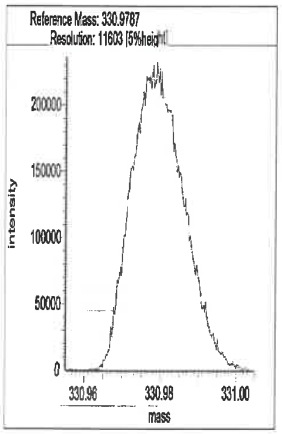

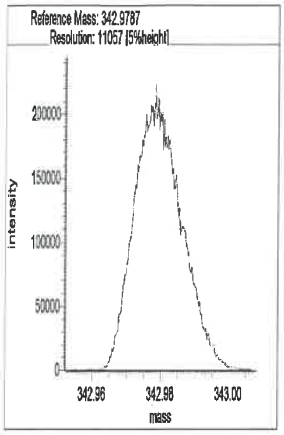

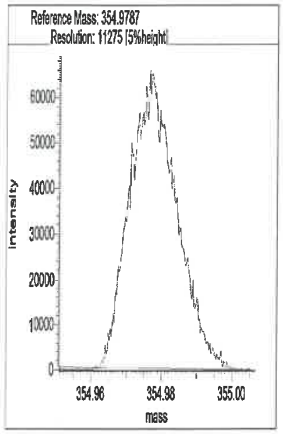

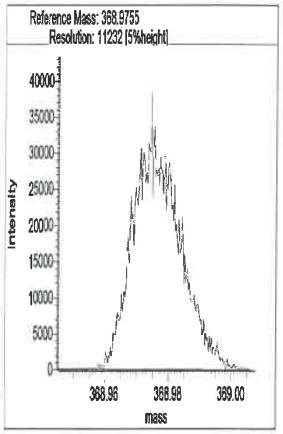

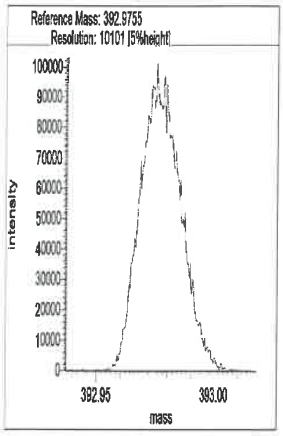

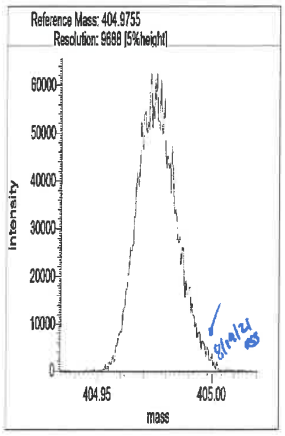

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11409 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11096 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11275 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10877 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10816 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11177 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10770 [5%height]

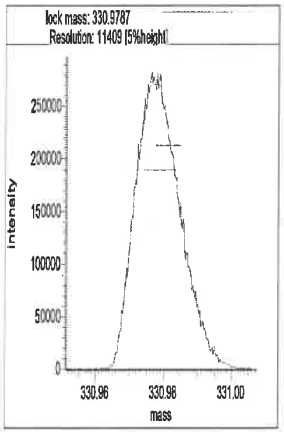

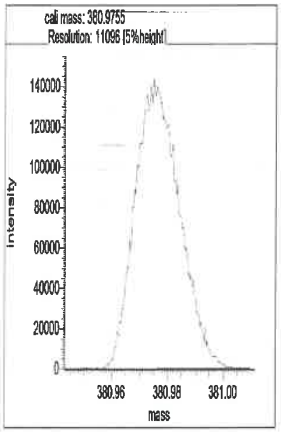

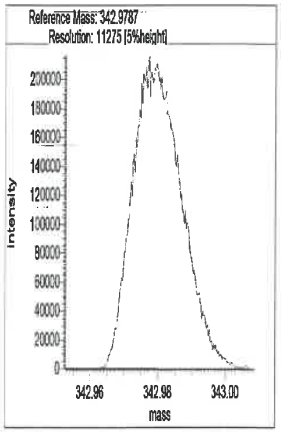

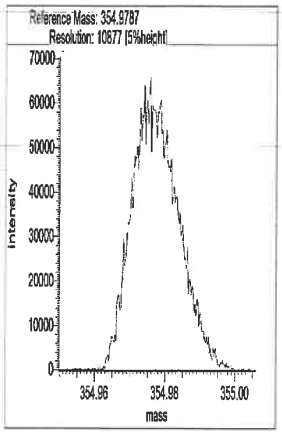

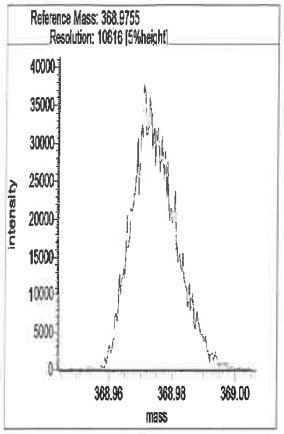

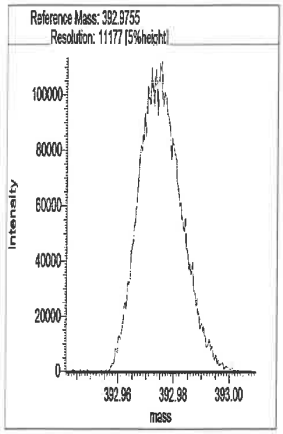

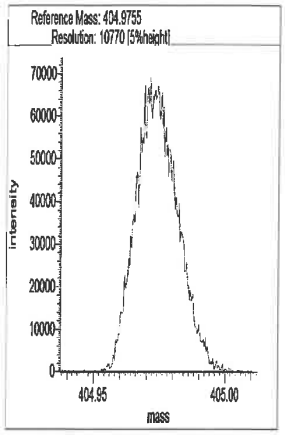

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11068 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11154 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11414 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11295 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10788 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10614 [5%height]

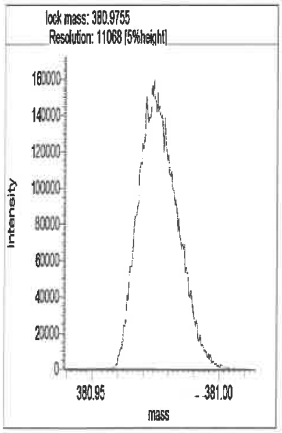

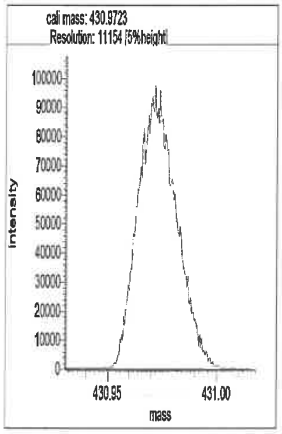

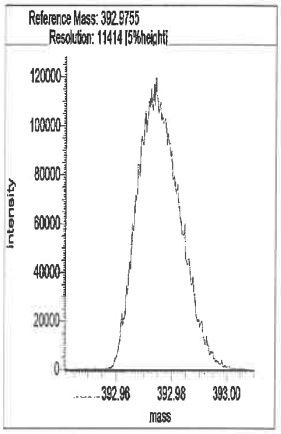

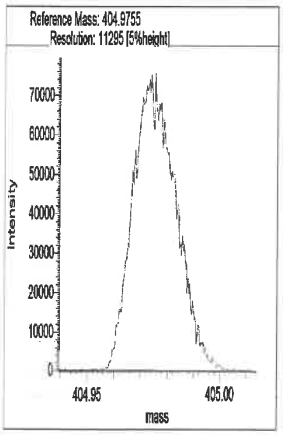

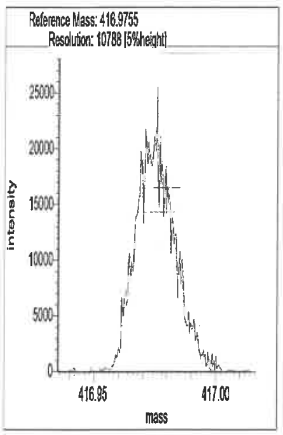

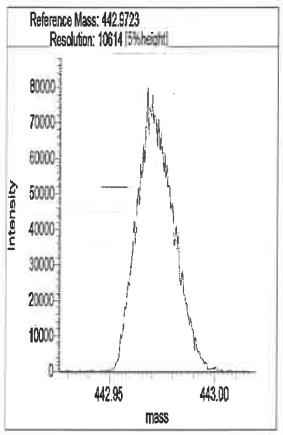

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11418 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11823 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11599 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11335 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10811 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11056 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10732 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10827 [5%height]

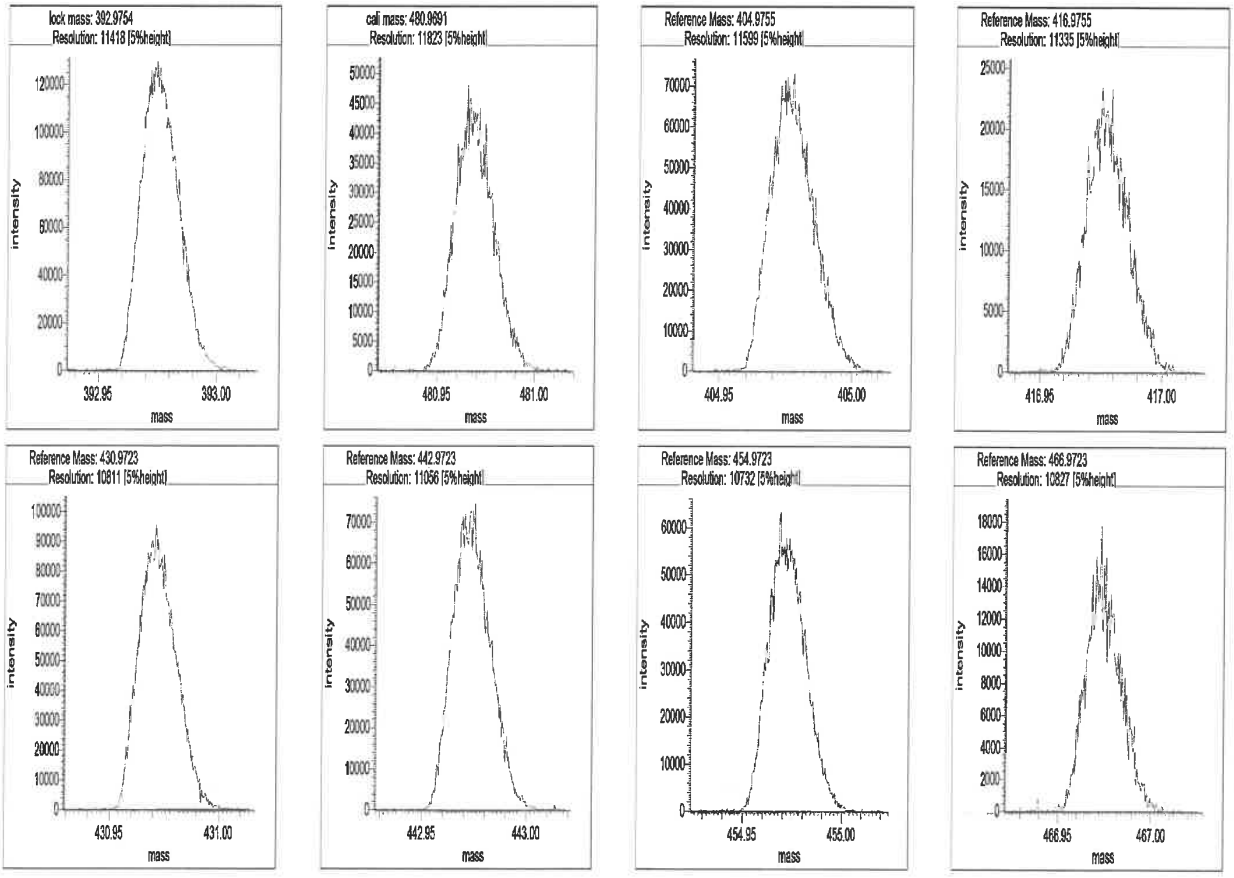

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11579 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11377 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11119 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12204 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10698 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10928 [5%height]

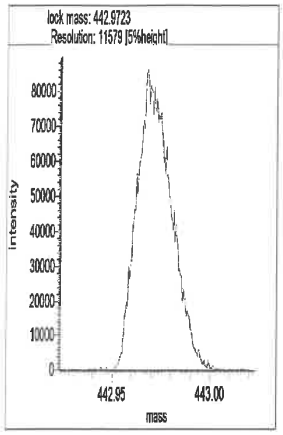
lock mass: 442.9723
Resolution: 11579 [5%height]
Intensity
mass

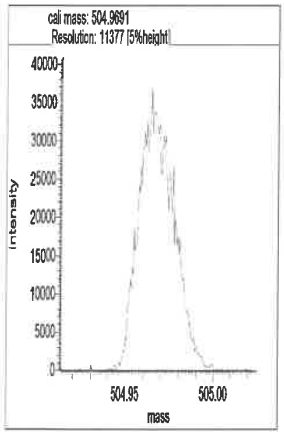
cali mass: 504.9691
Resolution: 11377 [5%height]
Intensity
mass

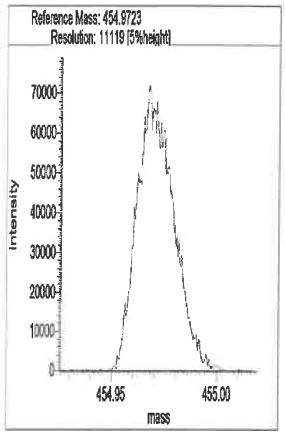
Reference Mass: 454.9723
Resolution: 11119 [5%height]
Intensity
mass

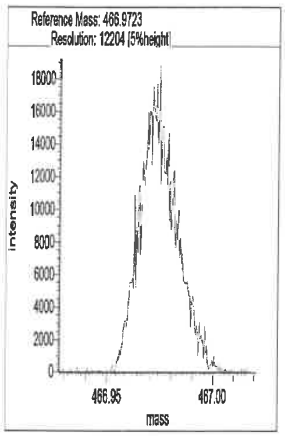
Reference Mass: 466.9723
Resolution: 12204 [5%height]
Intensity
mass

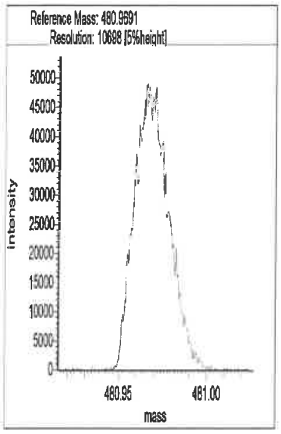
Reference Mass: 480.9691
Resolution: 10628 [5%height]
Intensity
mass

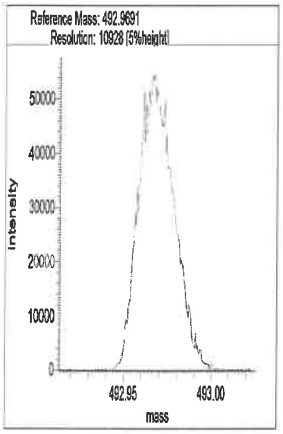
Reference Mass: 492.9691
Resolution: 10928 [5%height]
Intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 01:32:00 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:22:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.427	984489	0.83	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.464	1276686	0.81	1.3459	96.4	96.4	0.2841	0.2841	96.35	
2,3,7,8-TCDF	20.490	158938	0.88	1.0802	11.5	11.5	0.1590	0.1590	115	M
A Non-2,3,7,8-sub-TCDF	19.946						0.1590	0.1590		
S Total TCDF					11.5	11.5	0.1590	0.1590		
D 13C-2,3,7,8-TCDD	21.806	920353	0.75	0.9317	100.3	100.3	0.5973	0.5973	100	
2,3,7,8-TCDD	21.840	100432	0.75	1.0753	10.1	10.1	0.0654	0.0654	101	M
$ 37Cl4-2,3,7,8-TCDD	21.849	97480		1.0083	9.820	9.820	0.0128	0.0128	98.20	
A Non-2,3,7,8-sub-TCDD	20.781						0.0654	0.0654		
S Total TCDD					10.1	10.1	0.0654	0.0654		
D 13C-1,2,3,7,8-PeCDF	27.288	1103721	1.59	1.1405	98.3	98.3	0.2569	0.2569	98.30	
1,2,3,7,8-PeCDF	27.313	599354	1.65	1.0543	51.5	51.5	0.1124	0.1124	103	
D 13C-2,3,4,7,8-PeCDF	28.795	1065050	1.63	1.1253	96.1	96.1	0.2604	0.2604	96.13	
2,3,4,7,8-PeCDF	28.820	515414	1.63	1.0079	48.0	48.0	0.1284	0.1284	96.03	
A F1 PeCDFs	24.697	361	1.55	1.0311	0.0544	0.0323	0.004263	0.0291	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.194	6323	1.61	1.0311	0.5655	0.5655	0.1200	0.5655	0.00	
S Total PeCDF					100.1	100.1	0.1204	0.1204		RQ
D 13C-1,2,3,7,8-PeCDD	29.612	675256	1.54	0.7165	95.7	95.7	0.2875	0.2875	95.73	M
1,2,3,7,8-PeCDD	29.637	349091	1.55	1.0465	49.4	49.4	0.2994	0.2994	98.80	
A Non-2,3,7,8-sub-PeCDD	28.489						0.2994	0.2994		
S Total PeCDD					49.4	49.4	0.2994	0.2994		
D 13C-1,2,3,4,7,8-HxCDF	34.942	961464	0.54	0.9648	113.2	113.2	0.2217	0.2217	113	
1,2,3,4,7,8-HxCDF	34.959	565917	1.34	1.1474	51.3	51.3	0.1626	0.1626	103	
D 13C-1,2,3,6,7,8-HxCDF	35.111	894964	0.54	1.0708	94.9	94.9	0.1997	0.1997	94.92	
1,2,3,6,7,8-HxCDF	35.119	603750	1.33	1.2178	55.4	55.4	0.1845	0.1845	111	
D 13C-2,3,4,6,7,8-HxCDF	35.919	850492	0.53	1.0413	92.8	92.8	0.2054	0.2054	92.76	
2,3,4,6,7,8-HxCDF	35.936	566662	1.32	1.2145	54.9	54.9	0.1693	0.1693	110	
D 13C-1,2,3,7,8,9-HxCDF	36.811	799349	0.53	0.9731	93.3	93.3	0.2198	0.2198	93.29	
1,2,3,7,8,9-HxCDF	36.828	528030	1.35	1.2401	53.3	53.3	0.1512	0.1512	107	
A Non-2,3,7,8-sub-HxCDF	35.107						0.1659	0.1659		
S Total HxCDF					214.8	214.8	0.1669	0.1669		

786198

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.609	880537	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.129	717142	1.25	0.7587	107.3	107.3	0.1846	0.1846	107	
1,2,3,4,7,8-HxCDD	36.146	351624	1.23	1.0608	46.2	46.2	0.0806	0.0806	92.44	
D 13C-1,2,3,6,7,8-HxCDD	36.247	848519	1.22	0.8593	112.1	112.1	0.1630	0.1630	112	
1,2,3,6,7,8-HxCDD	36.264	386501	1.24	0.9933	45.9	45.9	0.0800	0.0800	91.71	
1,2,3,7,8,9-HxCDD	36.626	395938	1.20	1.1094	45.6	45.6	0.0743	0.0743	91.18	
A Non-2,3,7,8-sub-HxCDD	35.460						0.0781	0.0781		
S Total HxCDD					137.7	137.7	0.0783	0.0783		
D 13C-1,2,3,4,6,7,8-HpCDF	38.626	656274	0.44	0.7359	101.3	101.3	0.2851	0.2851	101	
1,2,3,4,6,7,8-HpCDF	38.634	455320	1.06	1.4421	48.1	48.1	0.1685	0.1685	96.22	
D 13C-1,2,3,4,7,8,9-HpCDF	39.880	599385	0.45	0.6854	99.3	99.3	0.3061	0.3061	99.32	
1,2,3,4,7,8,9-HpCDF	39.888	390971	1.08	1.3092	49.8	49.8	0.1885	0.1885	99.65	
A Non-2,3,7,8-sub-HpCDF	39.288						0.1780	0.1780		
S Total HpCDF					97.9	97.9	0.1785	0.1785		
D 13C-1,2,3,4,6,7,8-HpCDD	39.569	648199	1.06	0.6745	109.1	109.1	0.2831	0.2831	109	
1,2,3,4,6,7,8-HpCDD	39.577	335357	1.04	1.0503	49.3	49.3	0.1045	0.1045	98.52	
A Non-2,3,7,8-sub-HpCDD	39.288	3567	1.04	1.0503	0.5786	0.5239	0.1045	0.5239	0.00	RQ
S Total HpCDD					49.8	49.8	0.1045	0.1045		RQ
D 13C-OCDD	42.072	1074471	0.91	0.5446	224.1	224.1	0.2244	0.2244	112	
OCDF	42.165	709884	0.97	1.3168	100.3	100.3	0.1011	0.1011	100	
OCDD	42.081	547805	0.90	1.0620	96.0	96.0	0.1077	0.1077	96.02	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 01:32:00 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:22:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.427	21.427	0		445977	61730	165	412	374		
333.9338	21.444	21.427	1		538512	70339	129	322	545	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.464	20.464	0	0.955	572920	76535	109	272	702		
317.9389	20.464	20.464	0	0.955	703766	101095	93	232	1087	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.490	20.490	0	1.001	74325	10071	54	135	187		M
305.8987	20.490	20.490	0	1.001	84613	12394	68	170	182	0.88(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	19.946						54	135			
305.8987	19.946						68	170			
13C-2,3,7,8-TCDD											
331.9368	21.806	21.806	0	1.018	395703	49232	165	412	298		
333.9338	21.806	21.806	0	1.018	524650	67347	129	322	522	0.75(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.840	21.840	0	1.002	43022	5107	20	50	255		M
321.8936	21.840	21.840	0	1.002	57410	7402	13	32	569	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.849	21.849	0	1.020	97480	12477	7	17	1782		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.781						20	50			
321.8936	20.781						13	32			
13C-1,2,3,7,8-PeCDF											
351.9000	27.288	27.288	0	1.274	677865	102468	92	230	1114		
353.8970	27.279	27.288	-1	1.273	425856	63812	63	157	1013	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.313	27.313	0	1.001	373055	54148	41	102	1321		
341.8567	27.313	27.313	0	1.001	226299	33164	38	95	873	1.65(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.795	28.795	0	1.344	659478	94038	92	230	1022		
353.8970	28.795	28.795	0	1.344	405572	58215	63	157	924	1.63(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.820	28.820	0	1.001	319323	44133	41	102	1076		
341.8567	28.820	28.820	0	1.001	196091	26521	38	95	698	1.63(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.267	24.697	-26	0.889	22	14	1	2	14		
341.8567	24.250	24.697	-27	0.889	64	21	2	5	11	0.34(1.32-1.78)	
	Empc Correction				14	9	2	5	5		
339.8597	24.379	24.697	-19	0.893	198	49	1	2	49		
341.8567	24.379	24.697	-19	0.893	324	81	2	5	41	0.61(1.32-1.78)	
	Empc Correction				127	31	2	5	16		
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.894	28.194	-18	1.022	3897	465	41	102	11		
341.8567	27.877	28.194	-19	1.022	2426	361	38	95	10	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											M
367.8949	29.612	29.612	0	1.382	408922	48749	62	155	786		
369.8919	29.628	29.612	1	1.383	266334	33288	47	117	708	1.54(1.32-1.78)	M
1,2,3,7,8-PeCDD											
355.8546	29.637	29.637	0	1.001	212257	27310	81	202	337		
357.8516	29.637	29.637	0	1.001	136834	17949	22	55	816	1.55(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						81	202			
357.8516	28.489						22	55			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.942	34.942	0	0.954	336469	68825	57	142	1207		
385.8610	34.942	34.942	0	0.954	624995	114454	111	277	1031	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.959	34.959	0	1.000	323795	64220	78	195	823		
375.8178	34.959	34.959	0	1.000	242122	47319	59	147	802	1.34(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.111	35.111	0	0.959	313436	52098	57	142	914		
385.8610	35.111	35.111	0	0.959	581528	100114	111	277	902	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.119	35.119	0	1.000	344594	62612	78	195	803		
375.8178	35.119	35.119	0	1.000	259156	47352	59	147	803	1.33(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.919	35.919	0	0.981	293056	57881	57	142	1015		
385.8610	35.919	35.919	0	0.981	557436	108473	111	277	977	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.936	35.936	0	1.000	321979	63834	78	195	818		
375.8178	35.936	35.936	0	1.000	244683	48323	59	147	819	1.32(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.811	36.811	0	1.006	276711	60371	57	142	1059		
385.8610	36.811	36.811	0	1.006	522638	121974	111	277	1099	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.828	36.828	0	1.000	302880	64959	78	195	833		
375.8178	36.828	36.828	0	1.000	225150	48893	59	147	829	1.35(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.107						78	195			
375.8178	35.107						59	147			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.609	36.609	0		486696	109333	53	132	2063		
403.8529	36.617	36.609	1		393841	87046	57	142	1527	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.129	36.129	0	0.987	398284	87752	53	132	1656		
403.8529	36.129	36.129	0	0.987	318858	70052	57	142	1229	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.146	36.146	0	1.000	194100	42368	32	80	1324		
391.8127	36.146	36.146	0	1.000	157524	35287	22	55	1604	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.247	36.247	0	0.990	466694	92606	53	132	1747		
403.8529	36.247	36.247	0	0.990	381825	77360	57	142	1357	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.264	36.264	0	1.000	214301	44193	32	80	1381		
391.8127	36.255	36.264	-1	1.000	172200	36180	22	55	1645	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.626	36.626	0	1.014	215900	47500	32	80	1484		
391.8127	36.626	36.626	0	1.014	180038	40127	22	55	1824	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.460						32	80			
391.8127	35.460						22	55			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.626	38.626	0	1.055	200757	51554	47	117	1097		
419.8220	38.626	38.626	0	1.055	455517	113911	118	295	965	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.634	38.634	0	1.000	234238	59520	82	205	726		
409.7788	38.634	38.634	0	1.000	221082	55709	79	197	705	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.880	39.880	0	1.089	186100	51202	47	117	1089		
419.8220	39.880	39.880	0	1.089	413285	111683	118	295	946	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.888	39.888	0	1.000	203424	55186	82	205	673		
409.7788	39.888	39.888	0	1.000	187547	51038	79	197	646	1.08(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.288						82	205			
409.7788	39.288						79	197			

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.569	39.569	0	1.081	333648	91786	80	200	1147		
437.8140	39.569	39.569	0	1.081	314551	90360	70	175	1291	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.577	39.577	0	1.000	170747	48038	40	100	1201		
425.7737	39.577	39.577	0	1.000	164610	46442	40	100	1161	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.946	39.288	-21	0.984	2190	476	40	100	12		
	Empc Correction				1818	545	40	100	14		
425.7737	38.946	39.288	-21	0.984	1749	525	40	100	13	1.25(0.88-1.20)	
13C-OCDD											
469.7780	42.072	42.072	0	1.149	513322	127575	59	147	2162		
471.7750	42.064	42.072	-1	1.149	561149	138295	37	92	3738	0.91(0.76-1.02)	
OCDF											
441.7428	42.165	42.165	0	1.002	349557	84896	33	82	2573		
443.7399	42.165	42.165	0	1.002	360327	89931	38	95	2367	0.97(0.76-1.02)	
OCDD											
457.7377	42.081	42.081	0	1.000	259339	62403	31	77	2013		
459.7348	42.072	42.081	-1	1.000	288466	70332	30	75	2344	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.697

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1103721	166280
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1065050	152253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1084385	159266

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.267	22	14	64	21	0.007692	0.34	RQ
24.267	22	14	14	9	0.003220		Empc Correction
24.379	198	49	324	81	0.0467	0.61	RQ
24.379	198	49	127	31	0.0291		Empc Correction
Signal Totals:							
	220	63	141	40			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	608	165				0.57	RQ
	361	103					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0544 = (608 * 100.000) / (1084385 * 1.031)
Empc Amount: 0.0323 = (361 * 100.000) / (1084385 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.194

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1103721	166280
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1065050	152253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1084385	159266

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.894	3897	465	2426	361	0.5655	1.61	n
Signal Totals:							
	3897	465	2426	361			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6323	826				1.61	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5655 = (6323 * 100.000) / (1084385 * 1.031)

QC Flag Legend

Processing Flags
n - Failed Sig-To-Noise Test

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.288

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	648199	182146

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	648199	182146

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.946	2190	476	1749	525	0.5786	1.25	RQ
38.946	1818	545	1749	525	0.5239		Empc Correction
Signal Totals:							
	1818	545	1749	525			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3939	1001				1.25	RQ
	3567	1070					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5786 = (3939 * 100.000) / (648199 * 1.050)
Empc Amount: 0.5239 = (3567 * 100.000) / (648199 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.49
Area: 70726
Amount: 11.264064
Amount Units: pg/ul

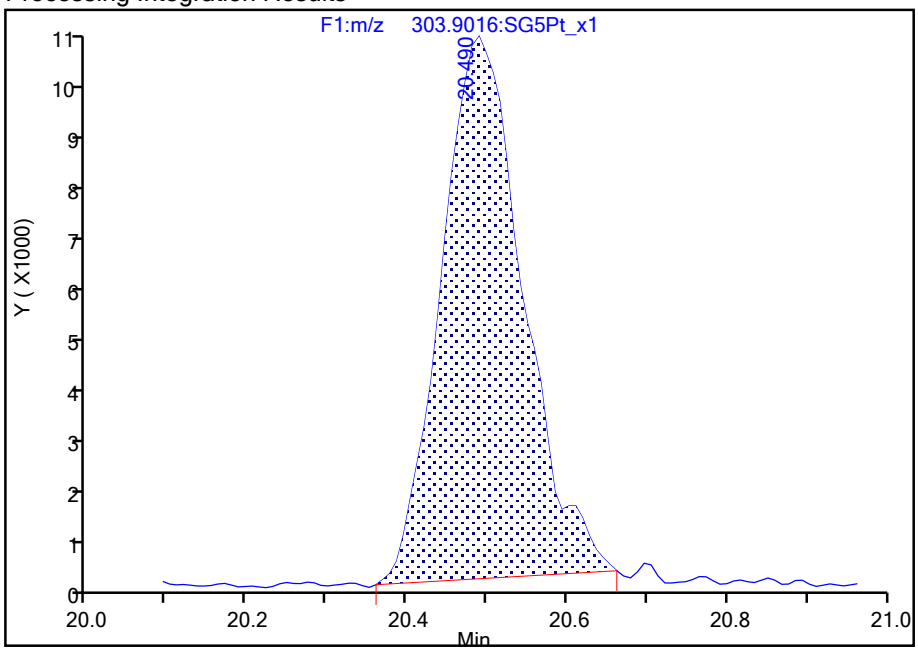

Manual Integration Results

RT: 20.49
Area: 74325
Amount: 11.525037
Amount Units: pg/ul

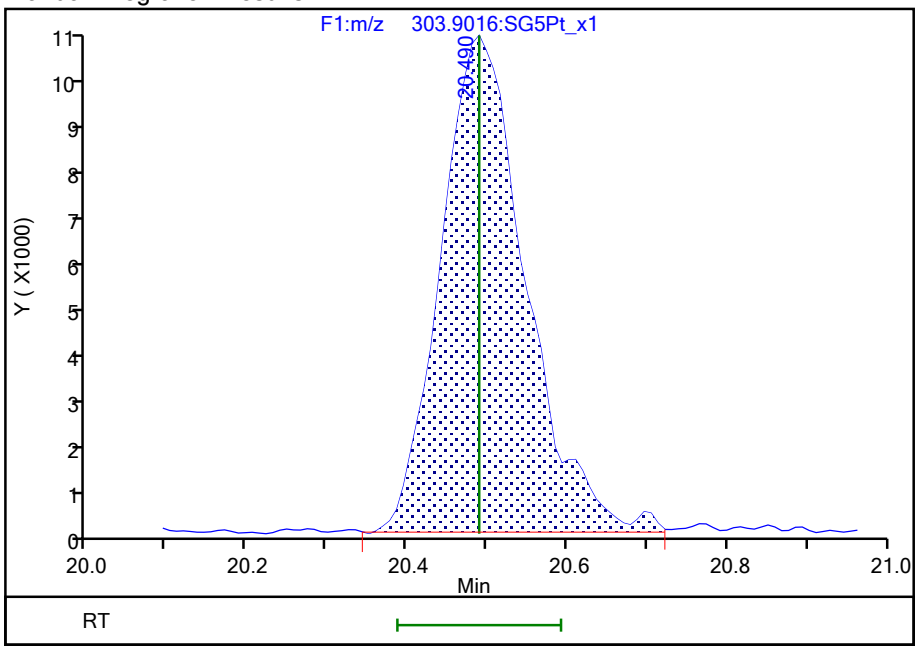

Reviewer: stephensk, 19-Aug-2021 09:20:42

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.84
Area: 41863
Amount: 10.030634
Amount Units: pg/ul

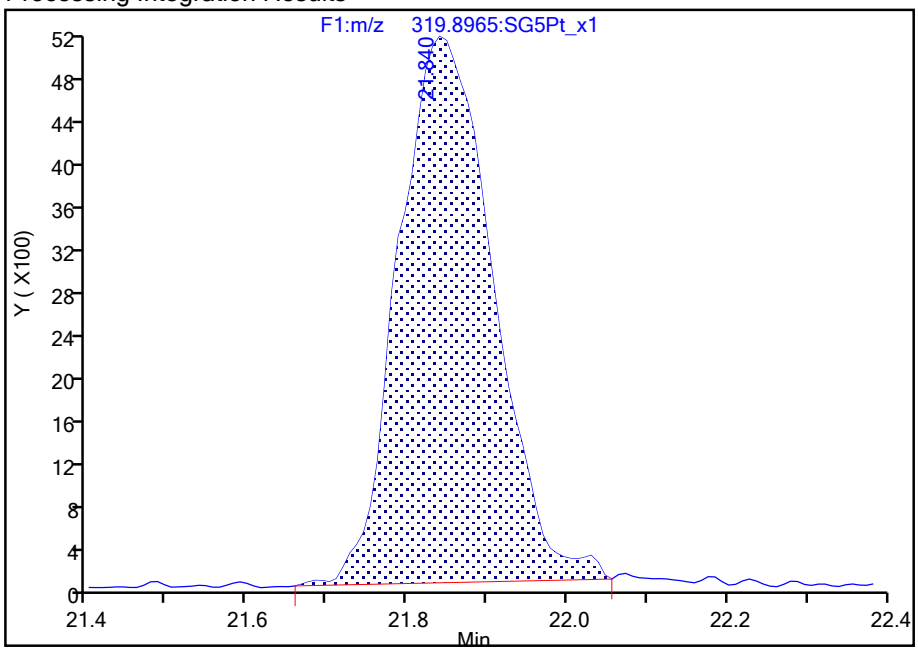

Manual Integration Results

RT: 21.84
Area: 43022
Amount: 10.147741
Amount Units: pg/ul

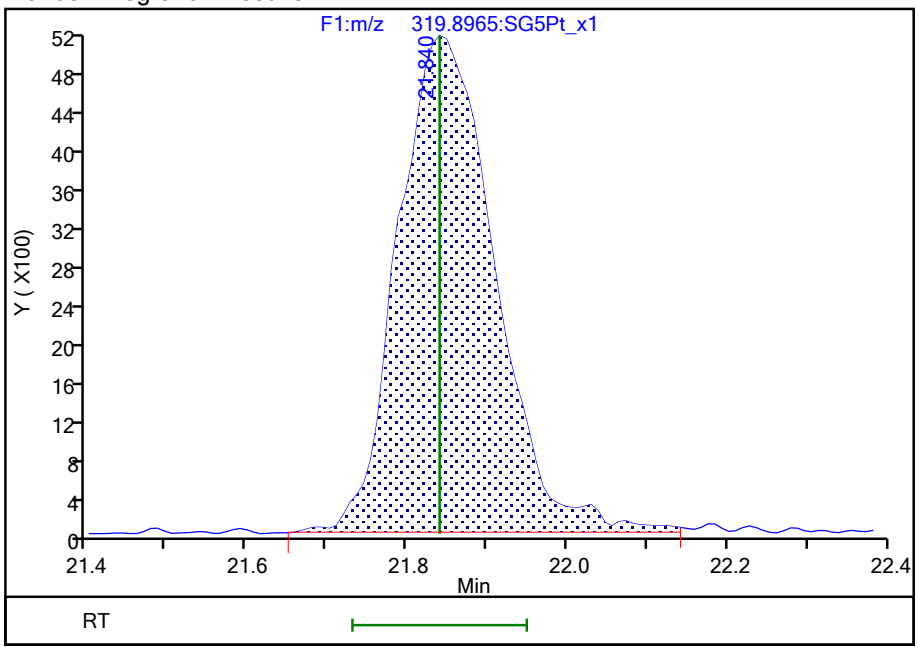

Reviewer: stephensk, 19-Aug-2021 09:21:00

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 2

Processing Integration Results

RT: 29.63
Area: 252502
Amount: 93.771696
Amount Units: pg/ul

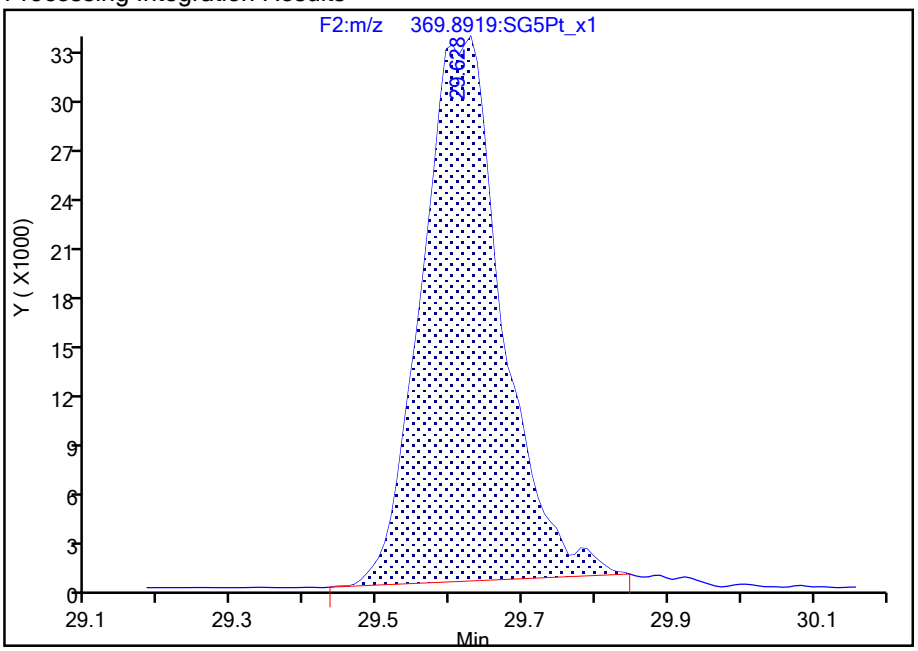

Manual Integration Results

RT: 29.63
Area: 266334
Amount: 95.732693
Amount Units: pg/ul

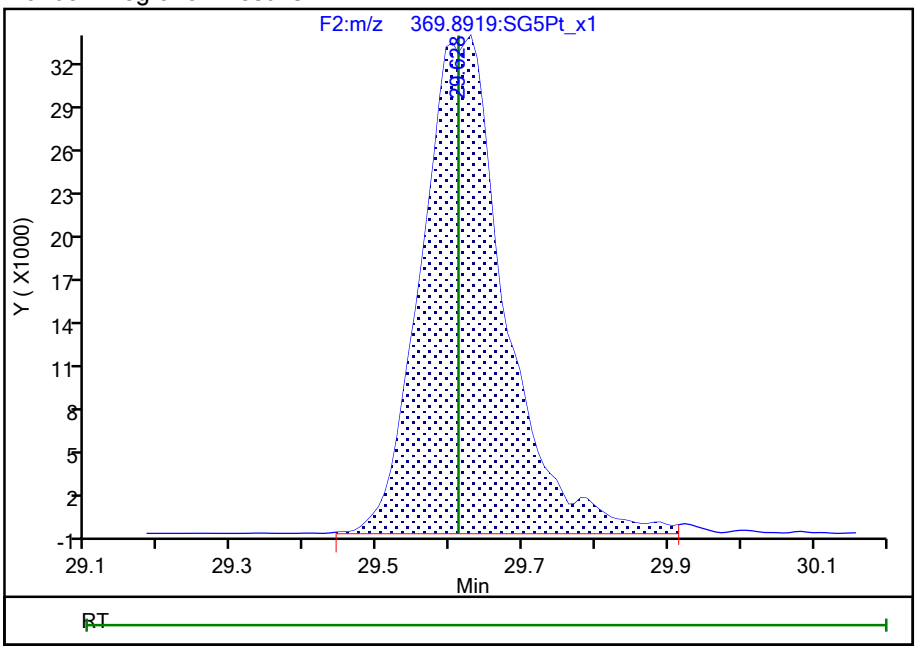

Reviewer: stephensk, 19-Aug-2021 09:21:19

Audit Action: Manually Integrated Audit Reason: Baseline

786209

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

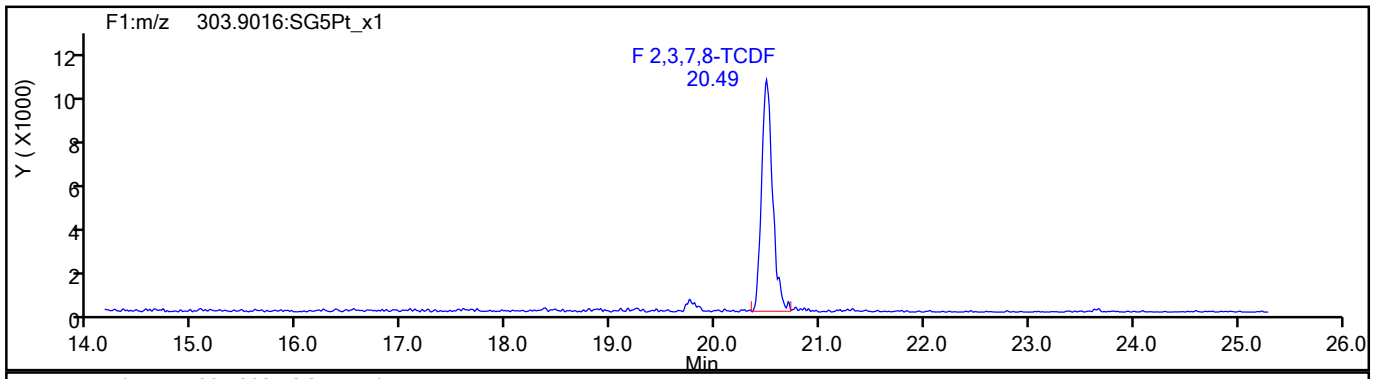

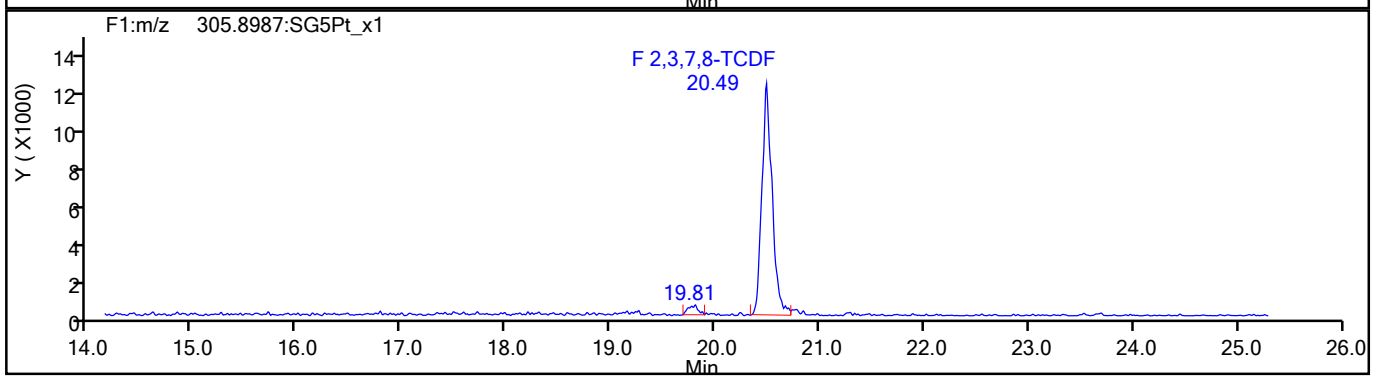

TCDF Standards

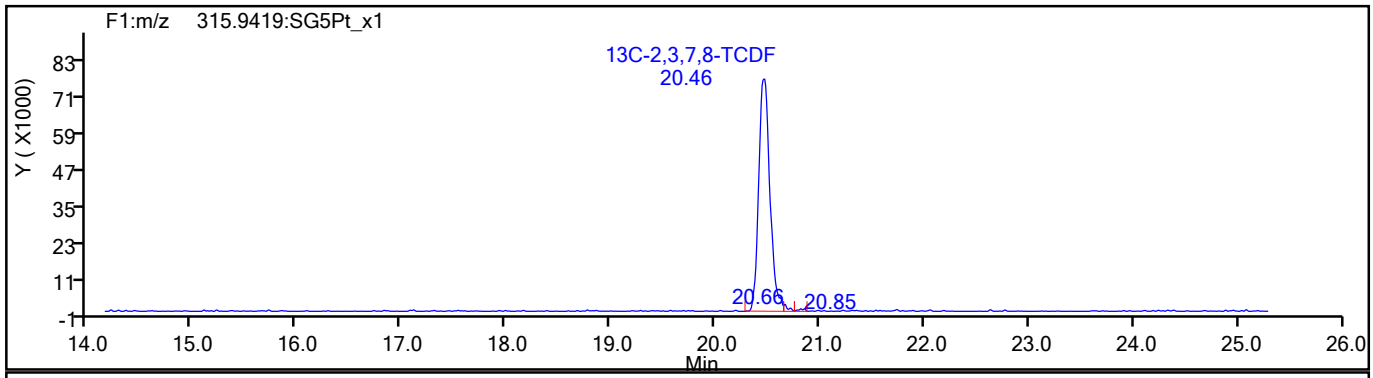

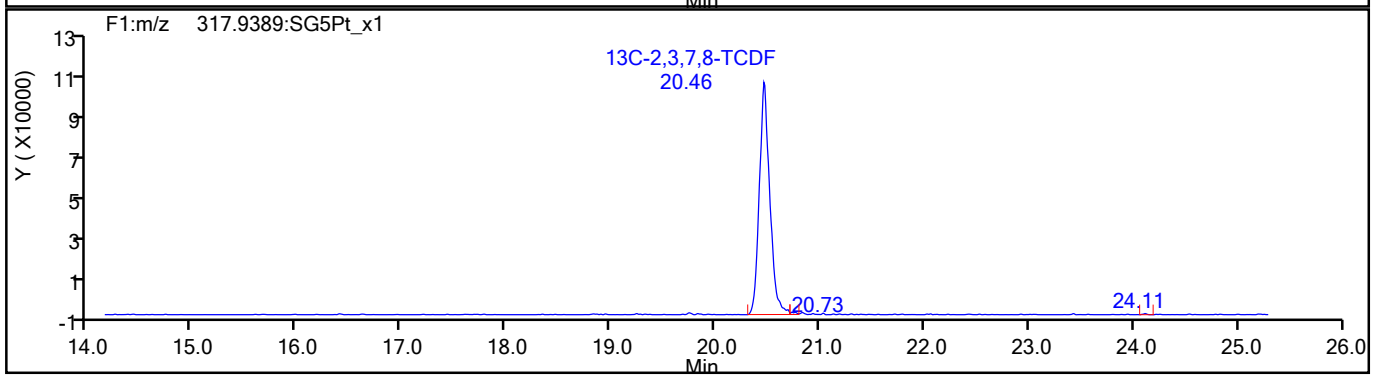

786210

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

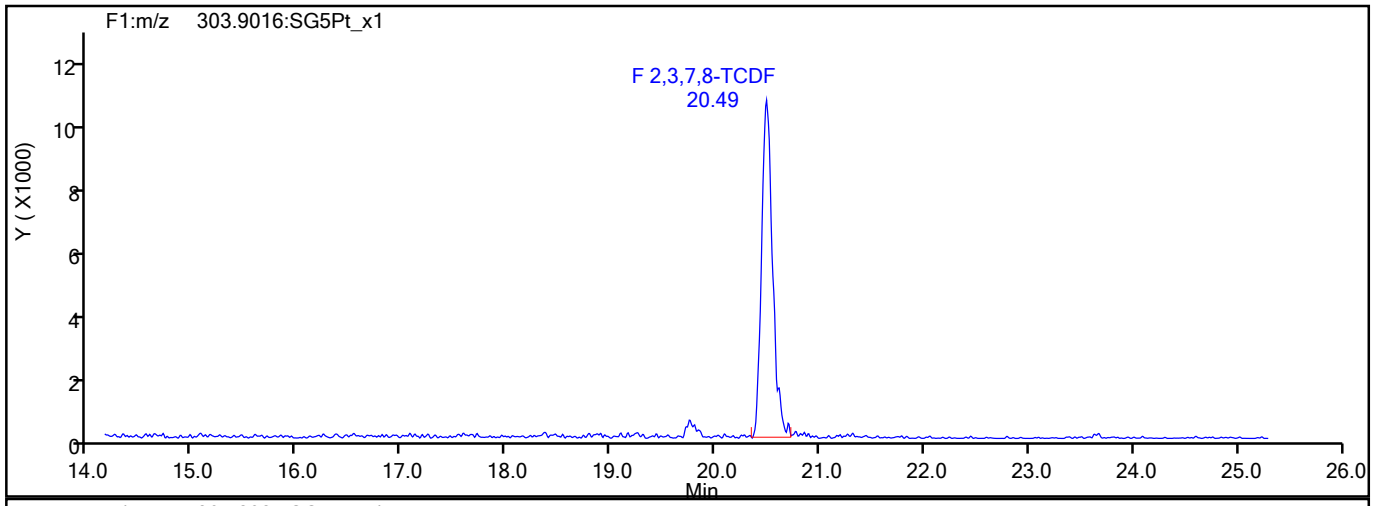

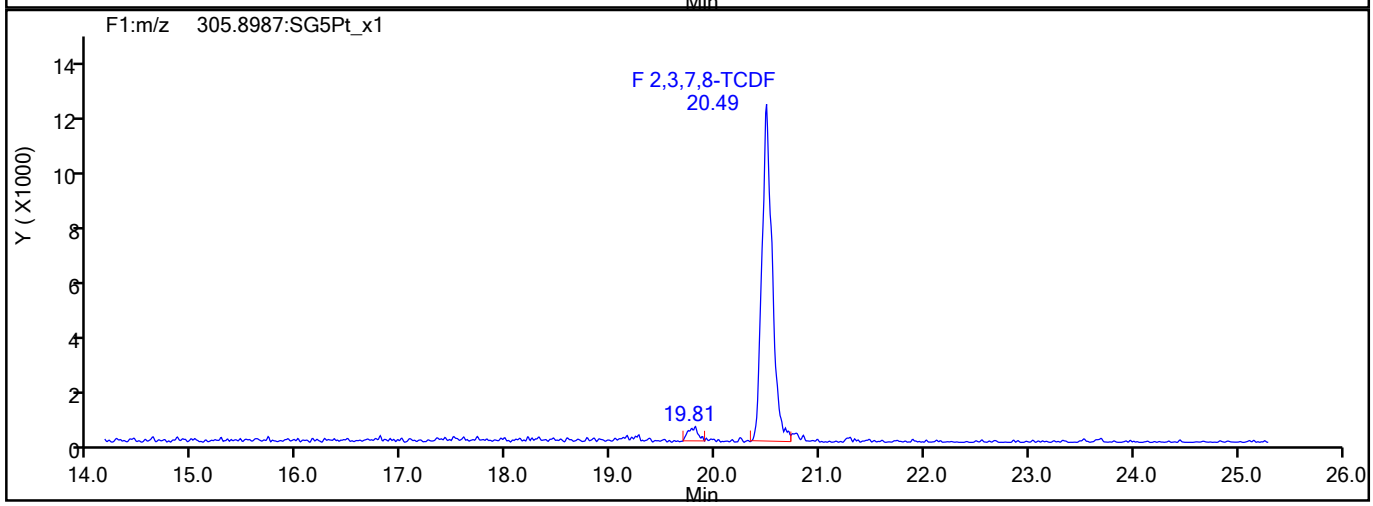

TCDF Interference Mass

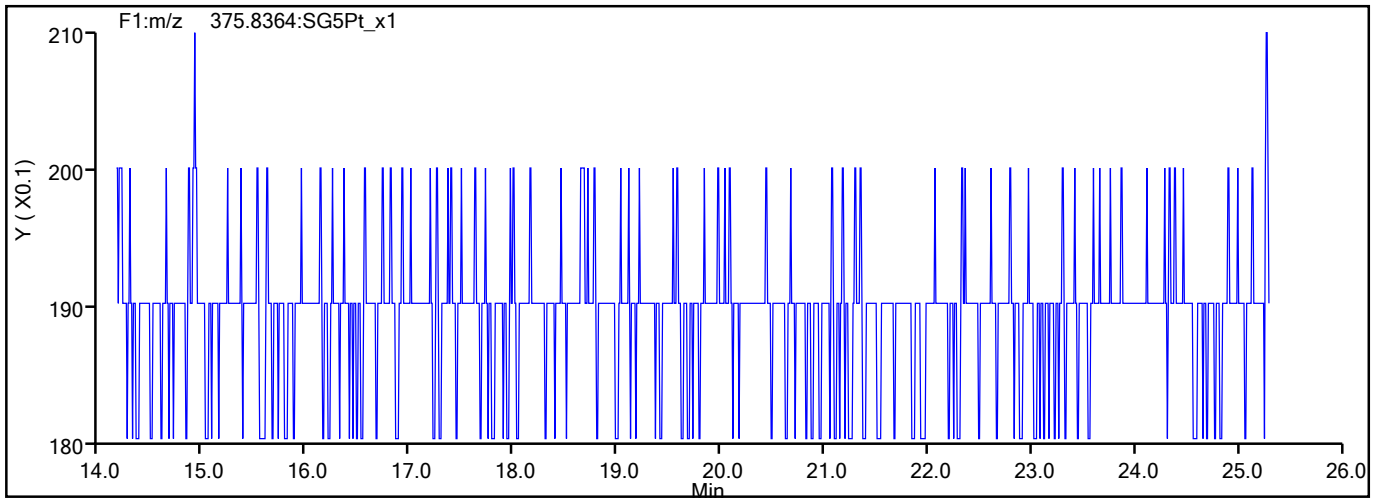

786211

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

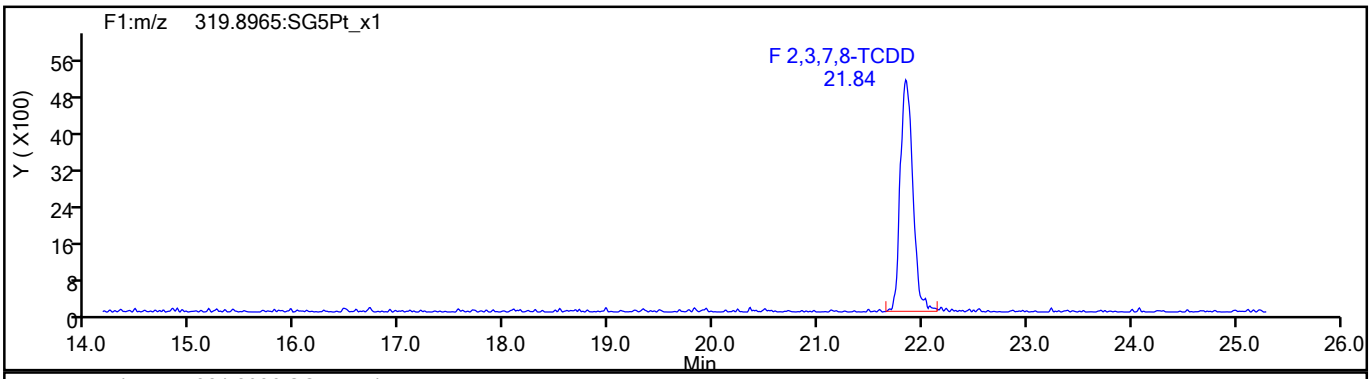

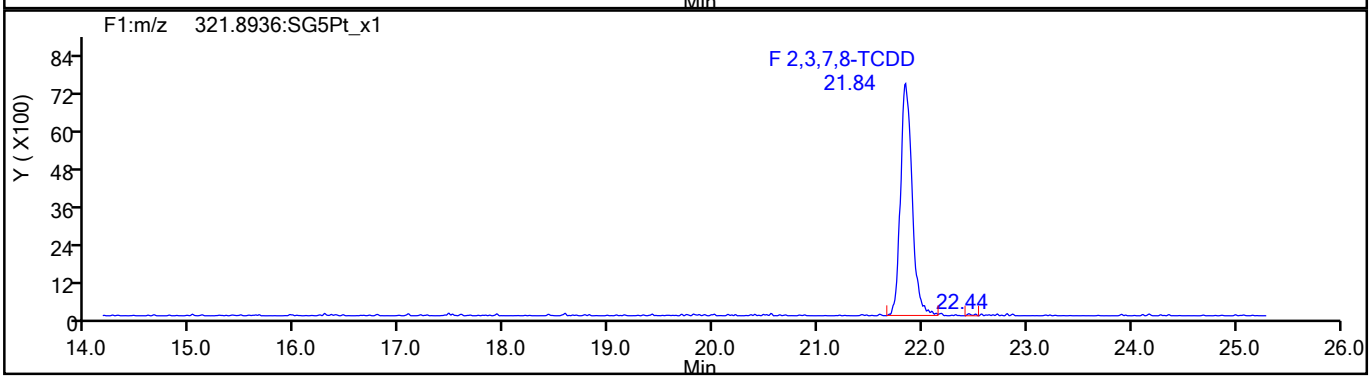

TCDD Standards

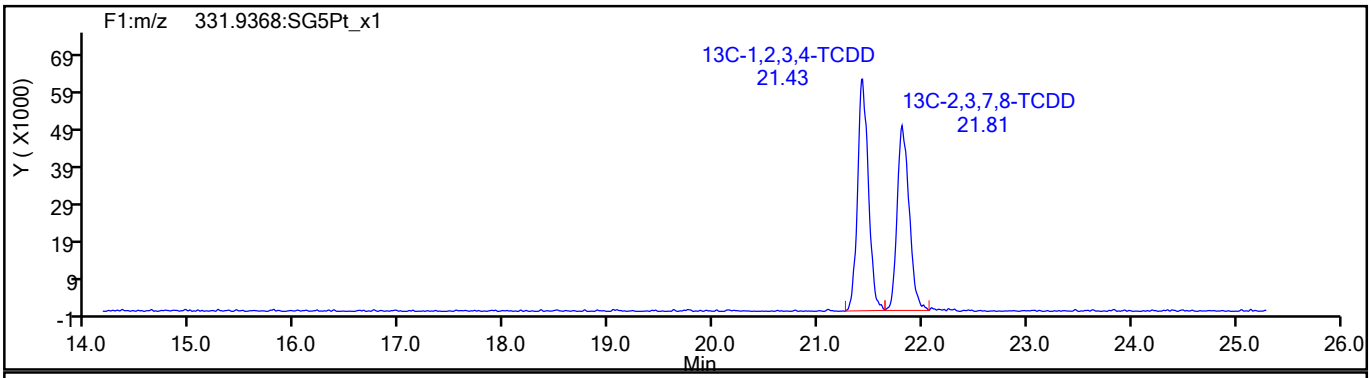

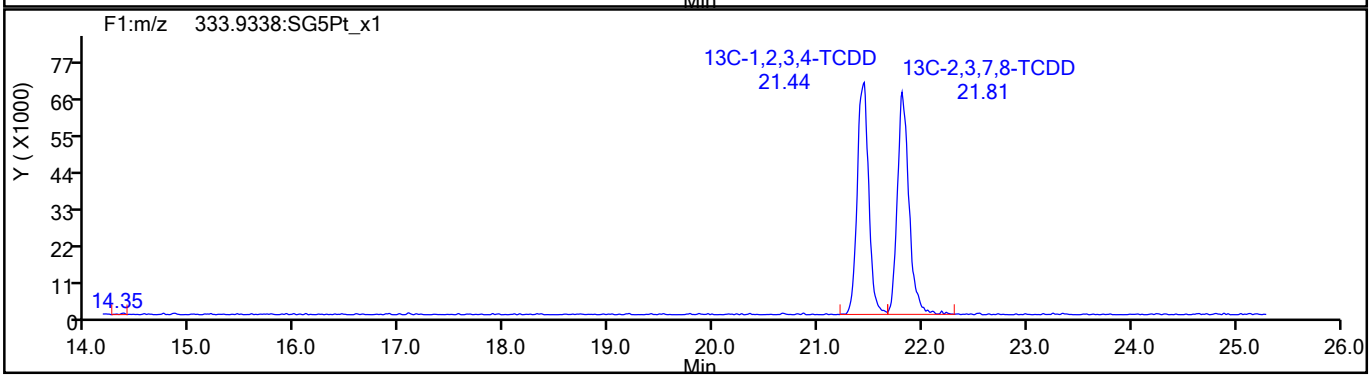

786212

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

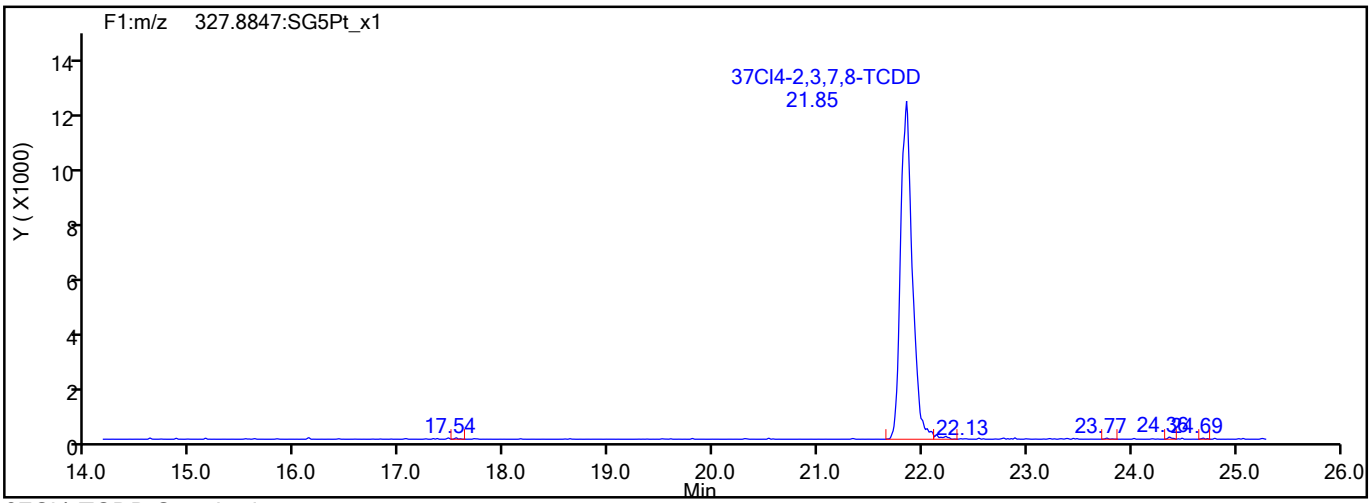

37Cl4-TCDD Standards

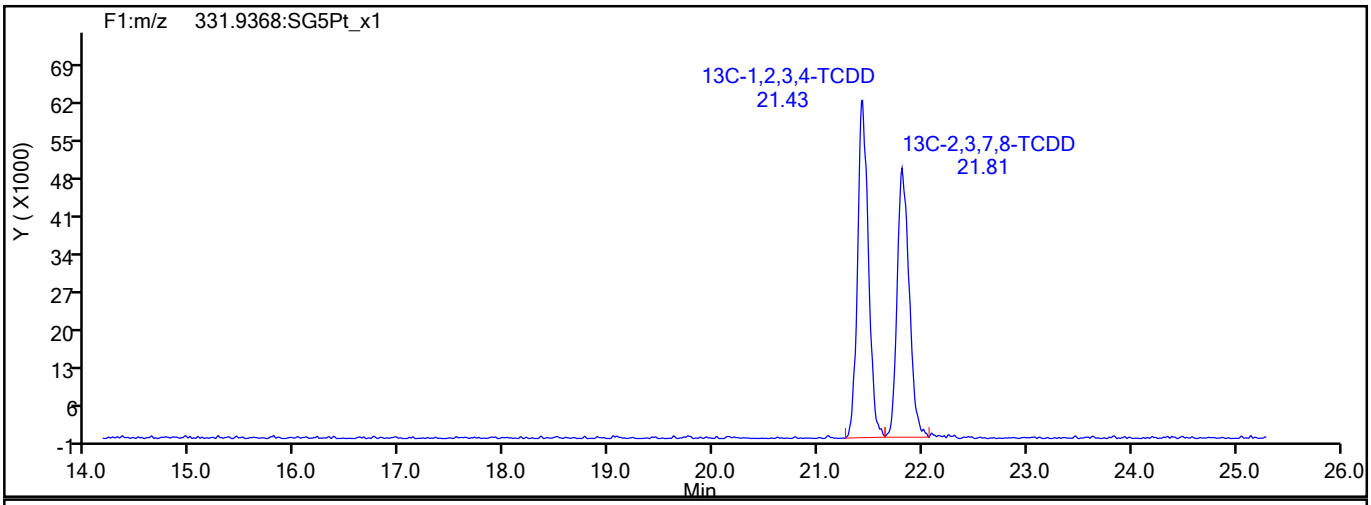

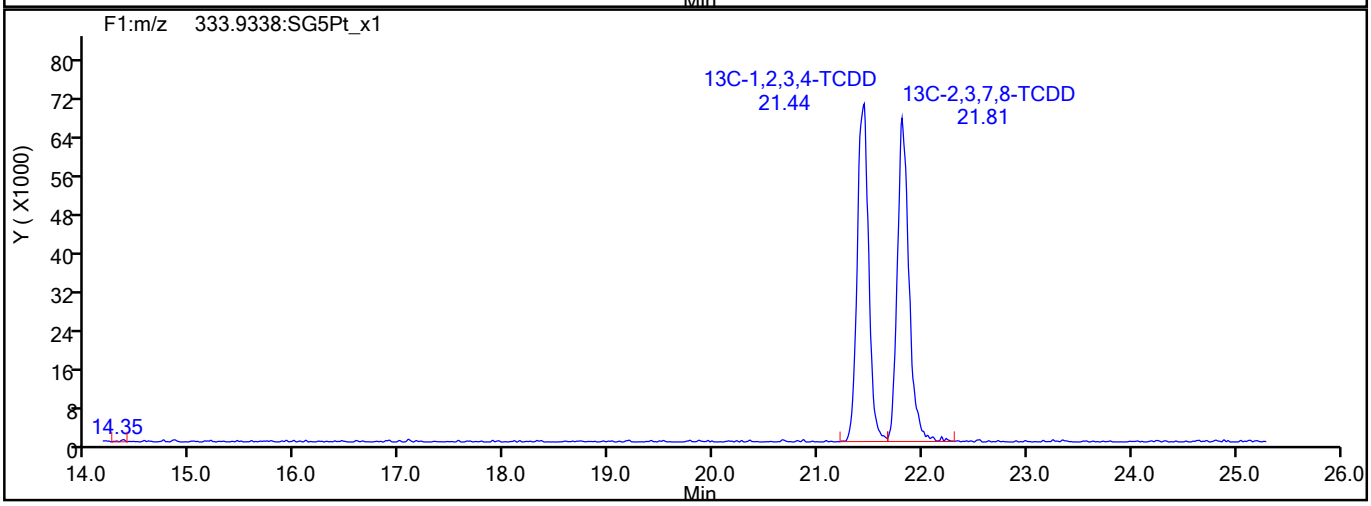

786213

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

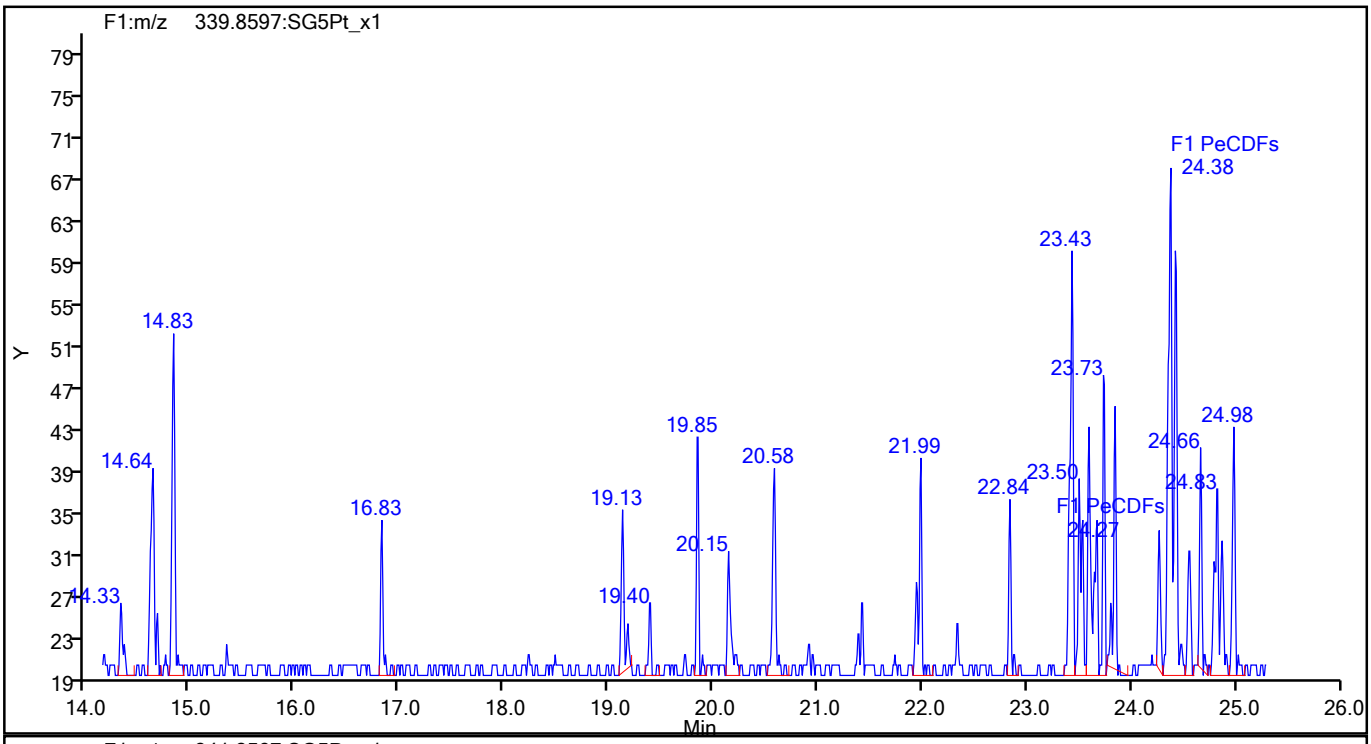

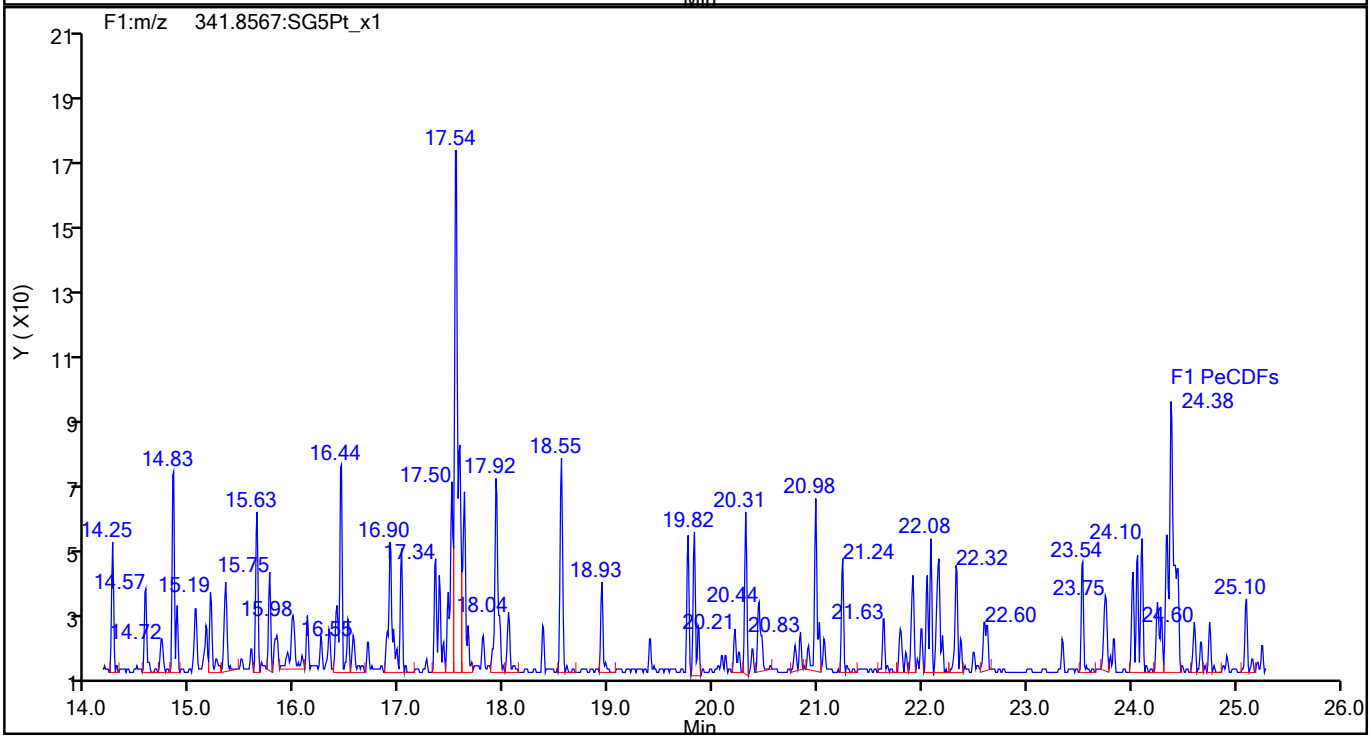

786214

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

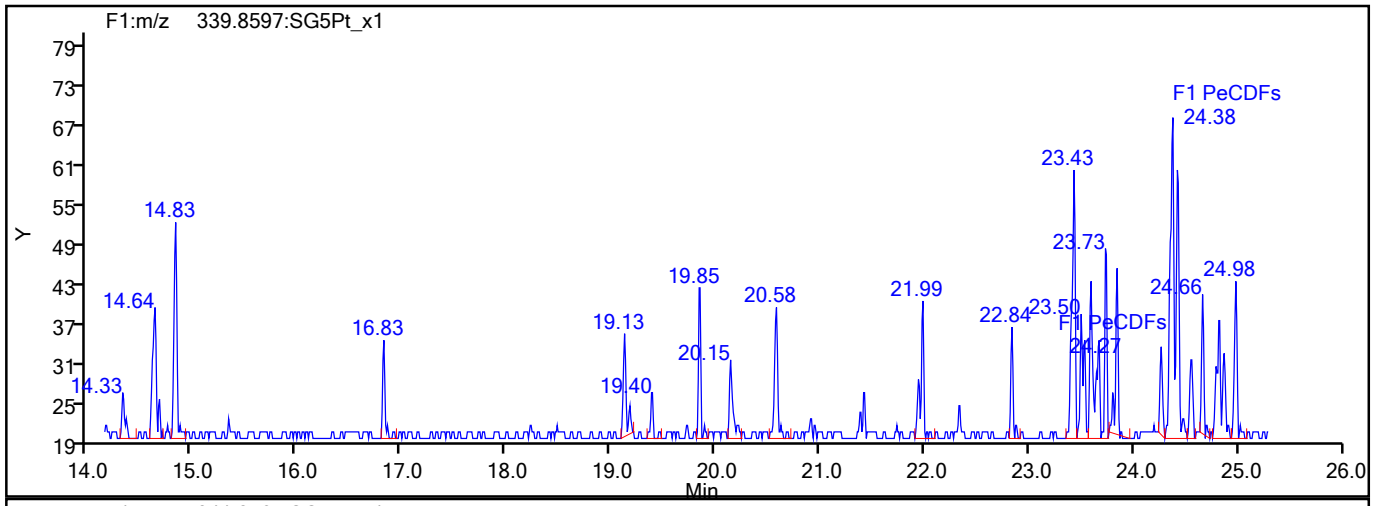

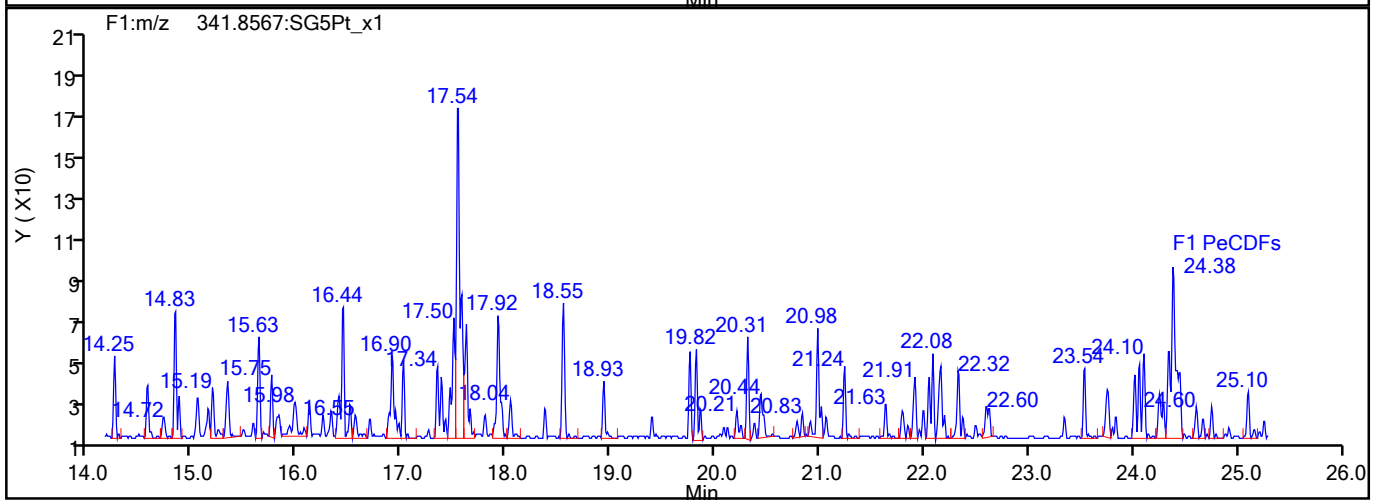

F1 PeCDFs Interference Mass

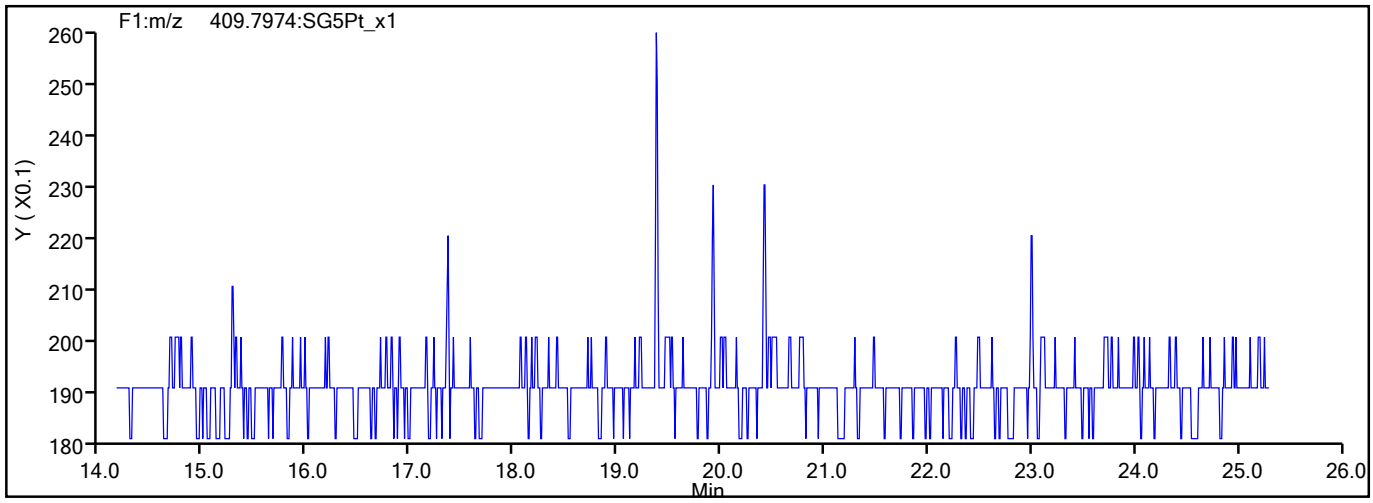

786215

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

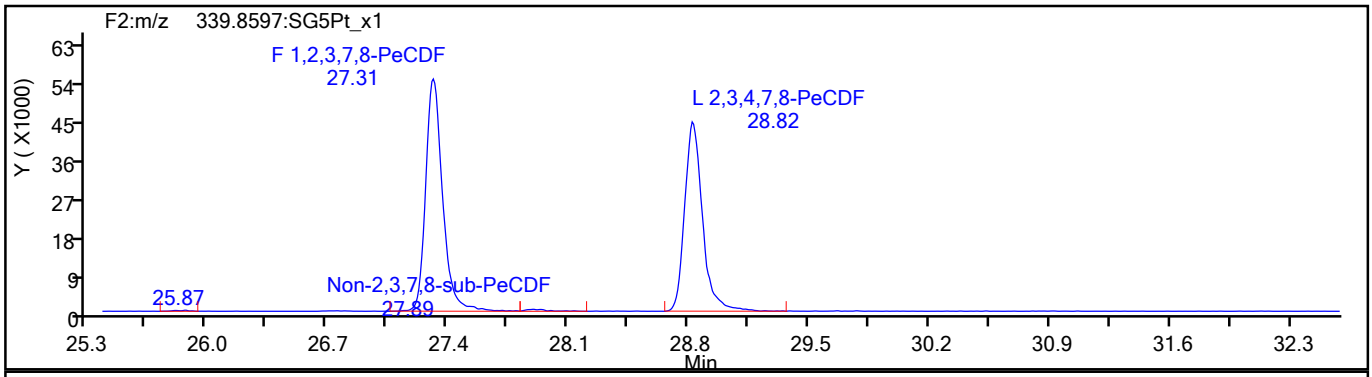

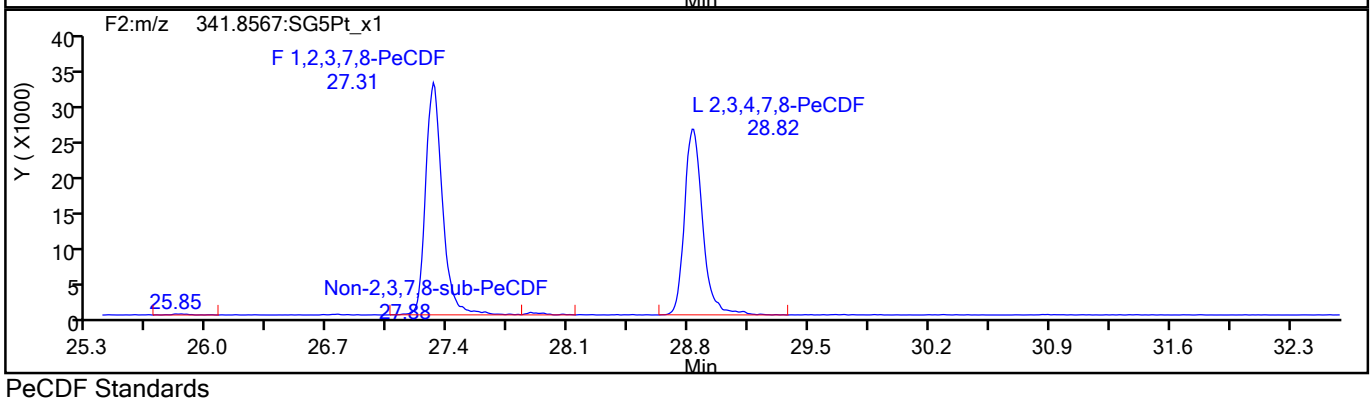

PeCDF Standards

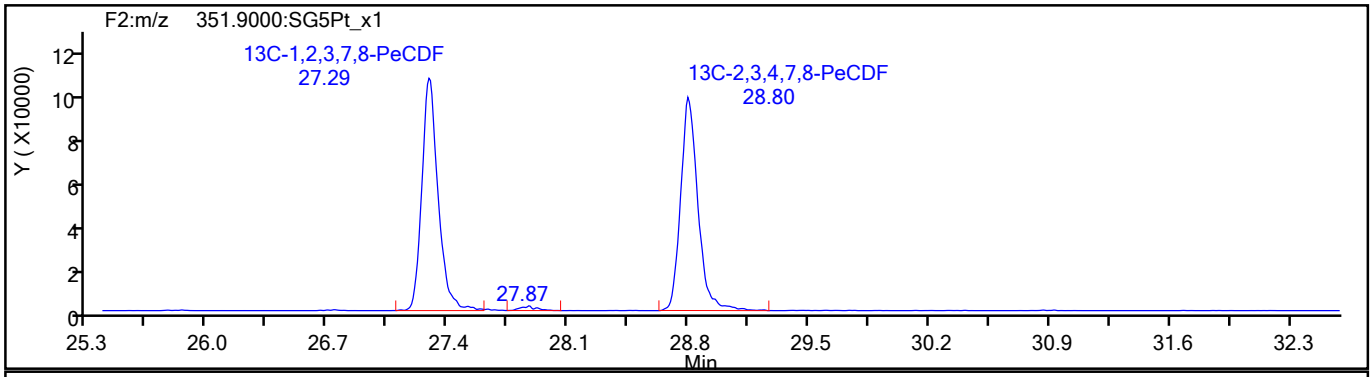

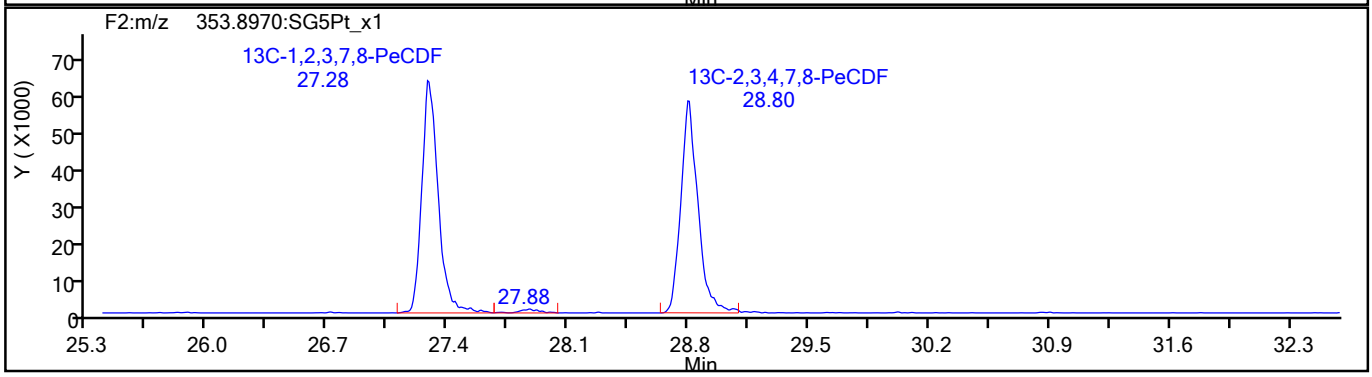

786216

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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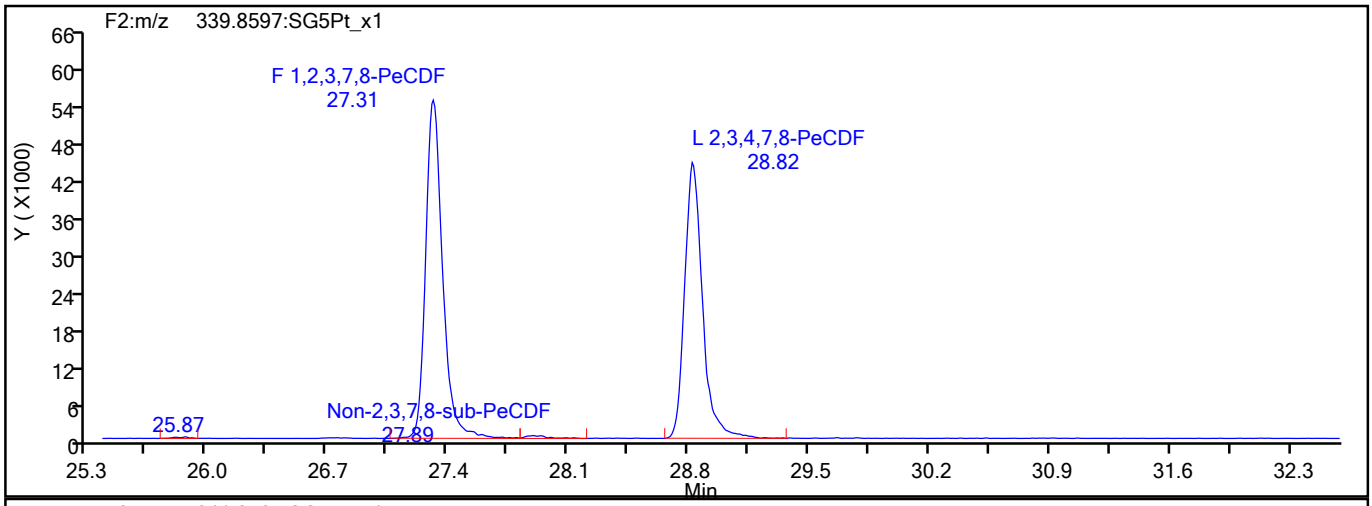

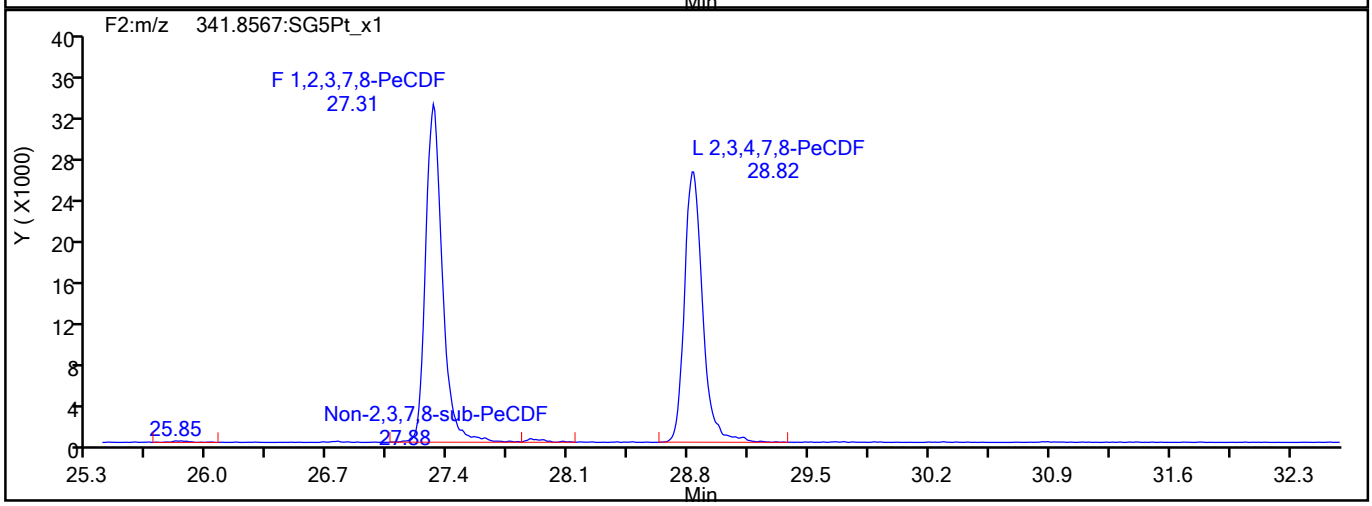

PeCDF Interference Mass

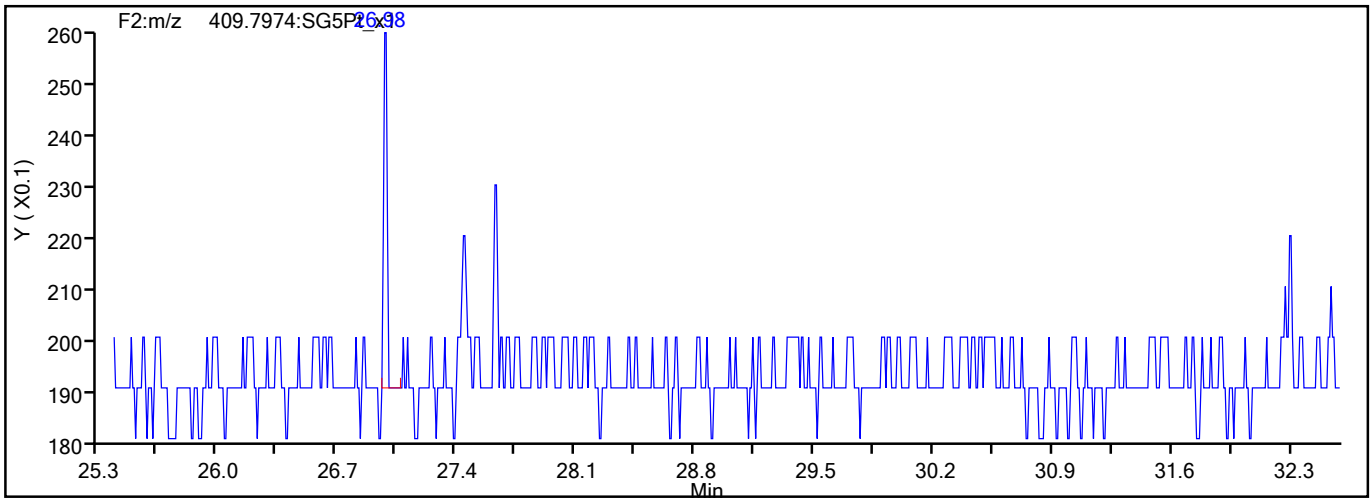

786217

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDD

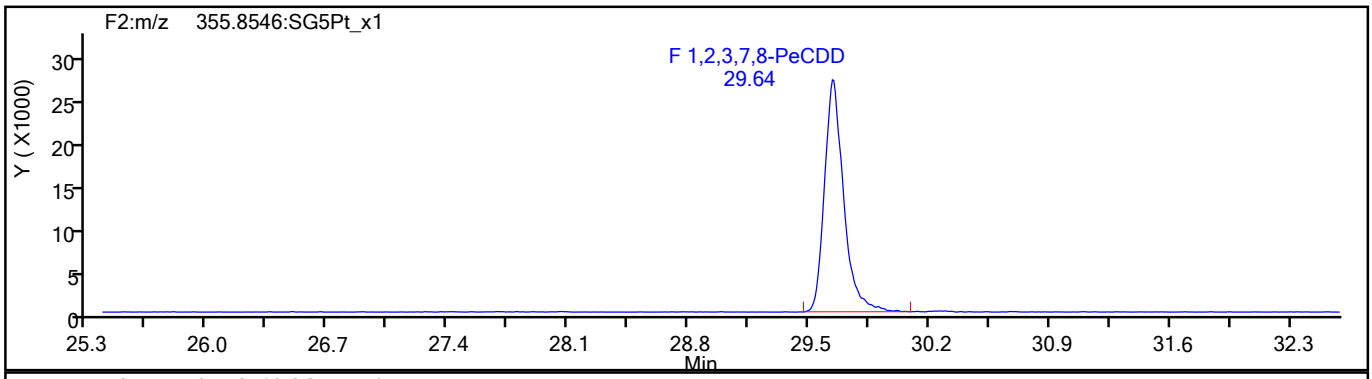

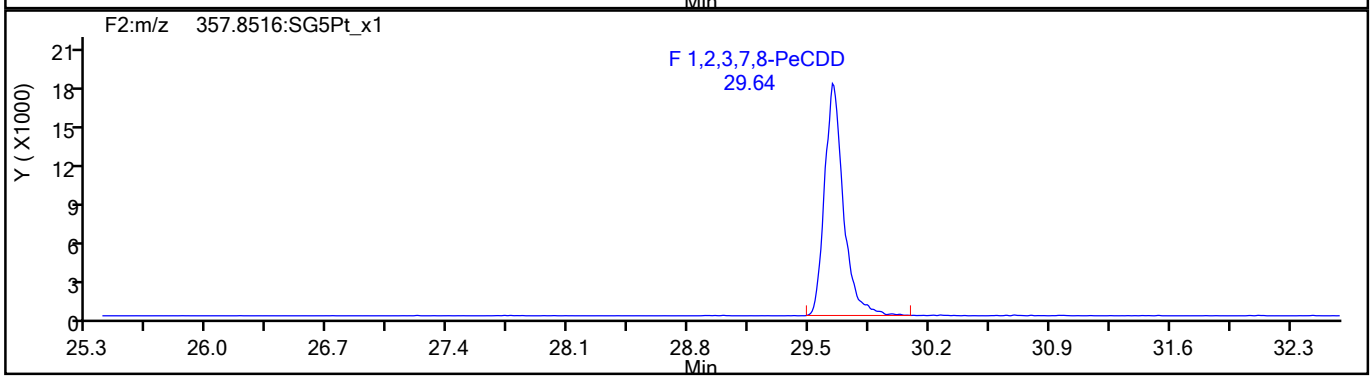

PeCDD Standards

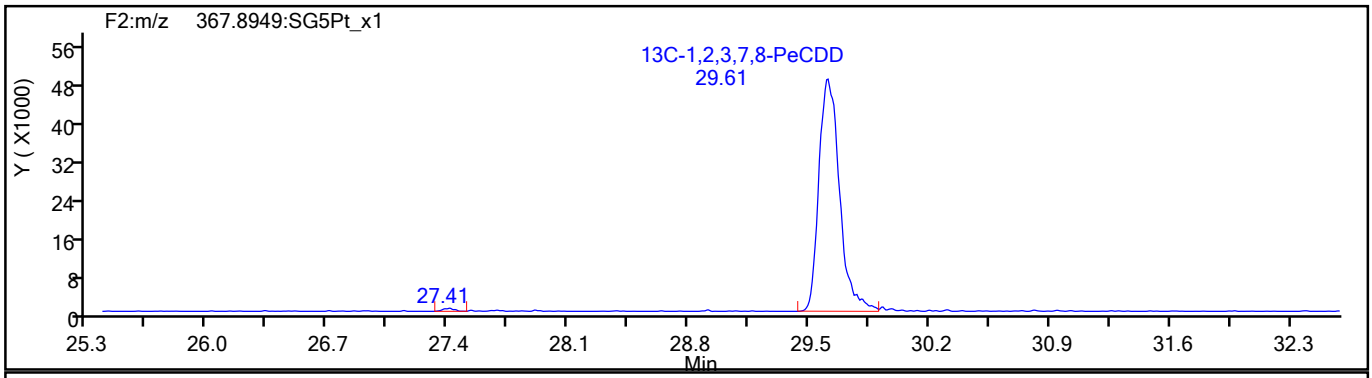

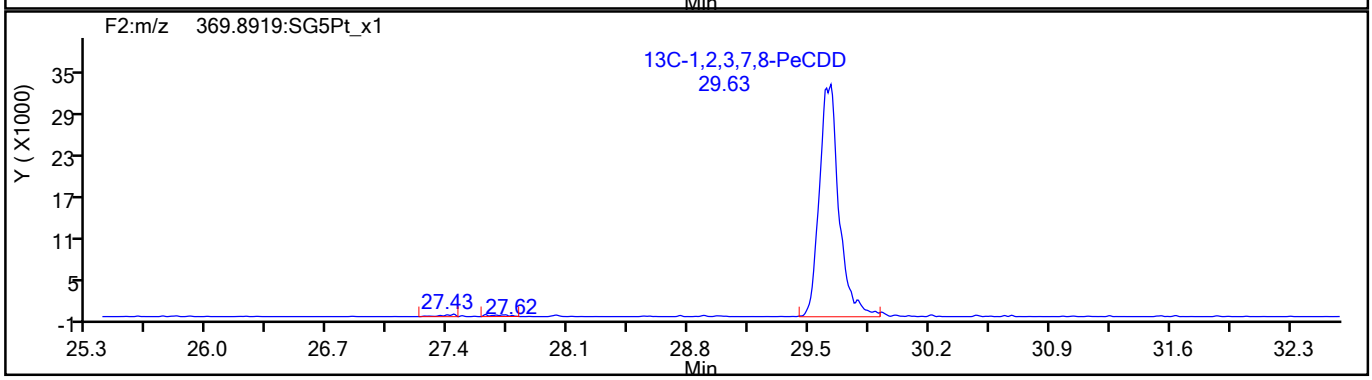

786218

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

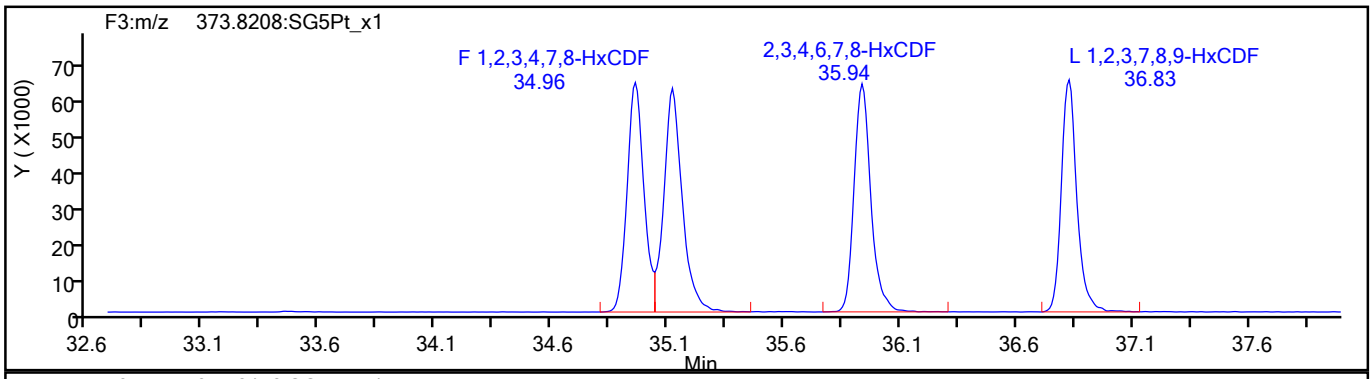

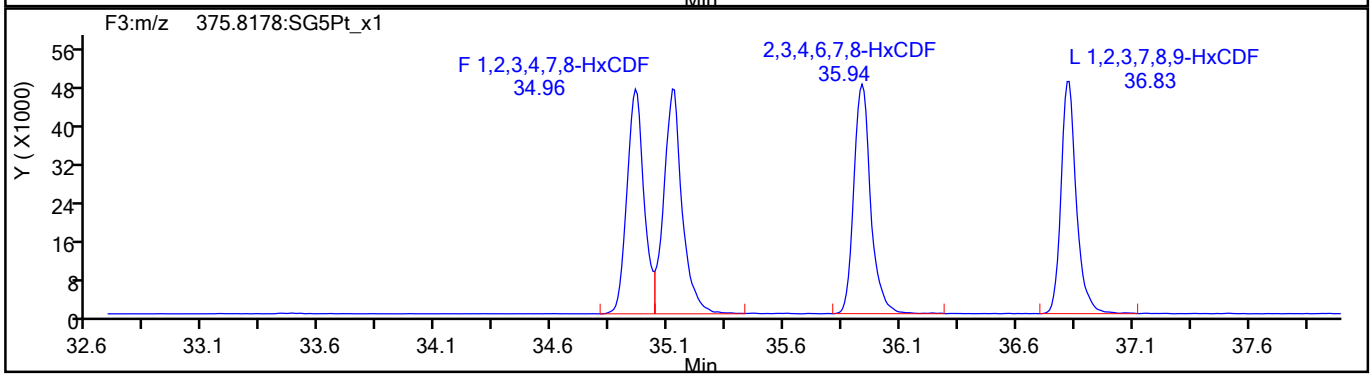

HxCDF Standards

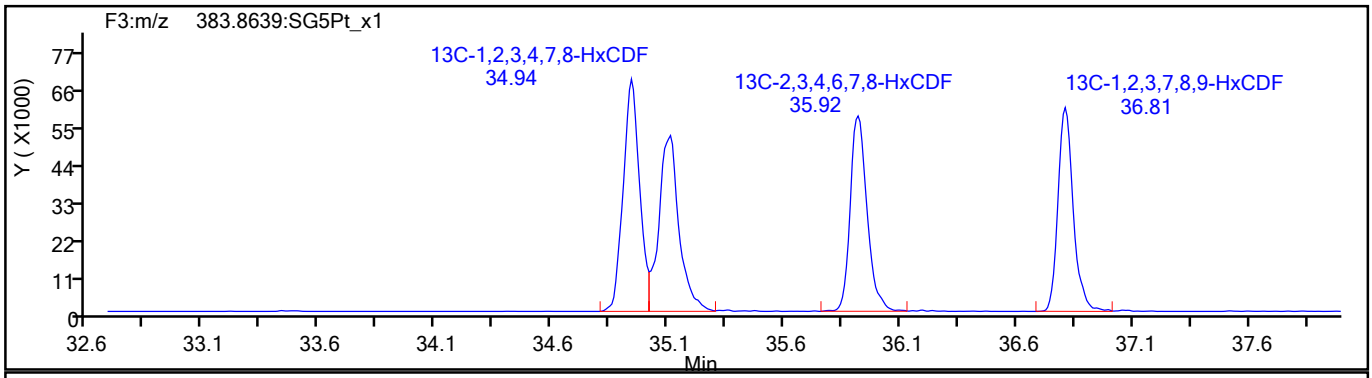

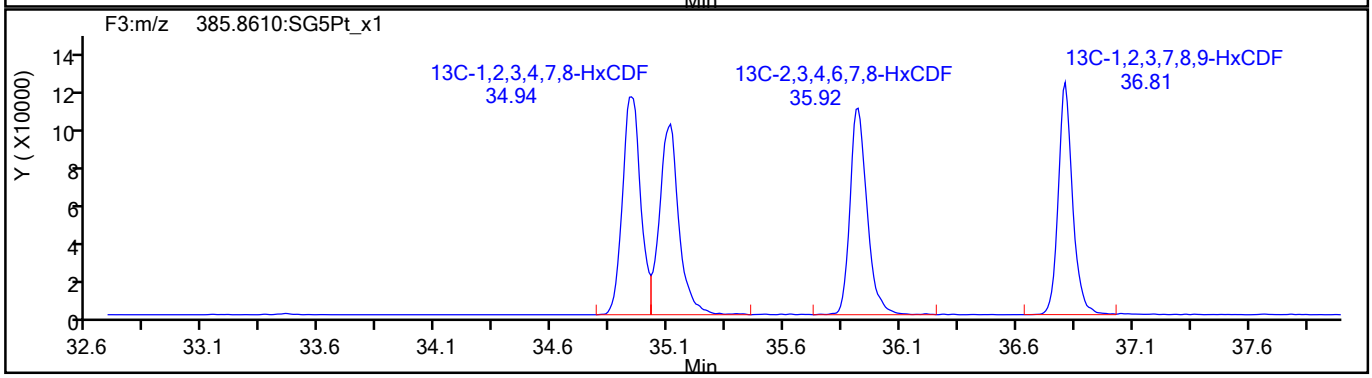

786219

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

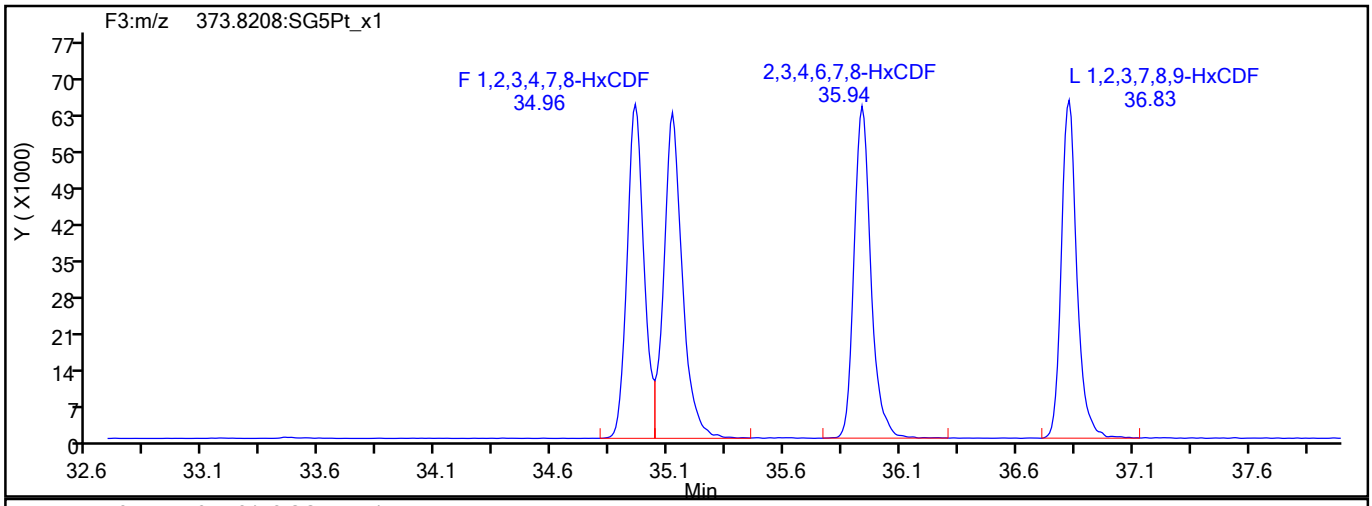

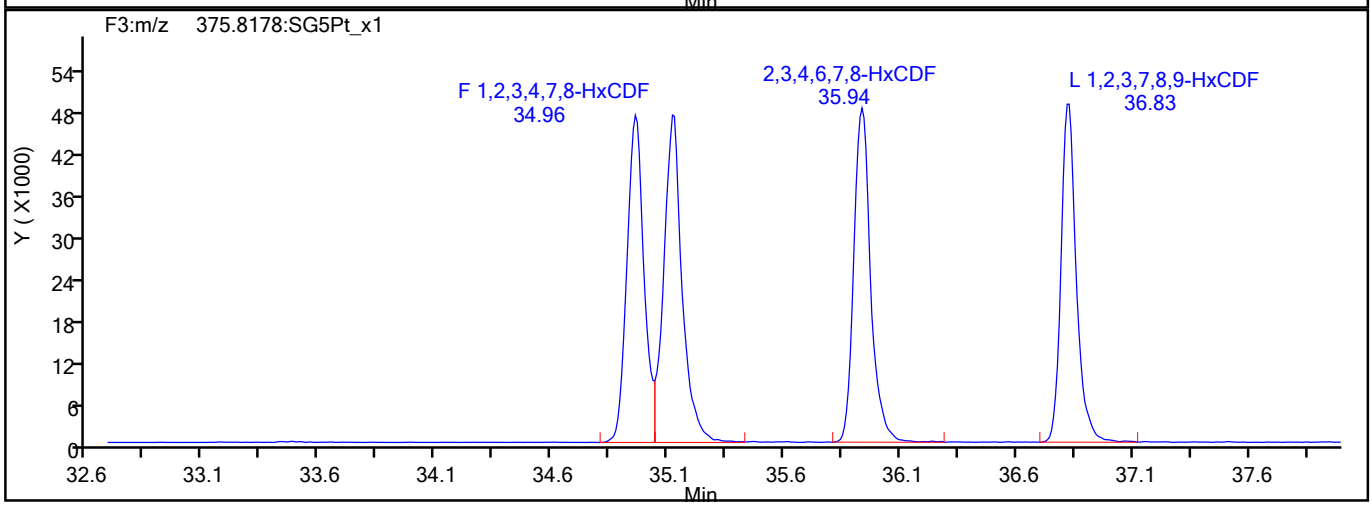

HxCDF Interference Mass

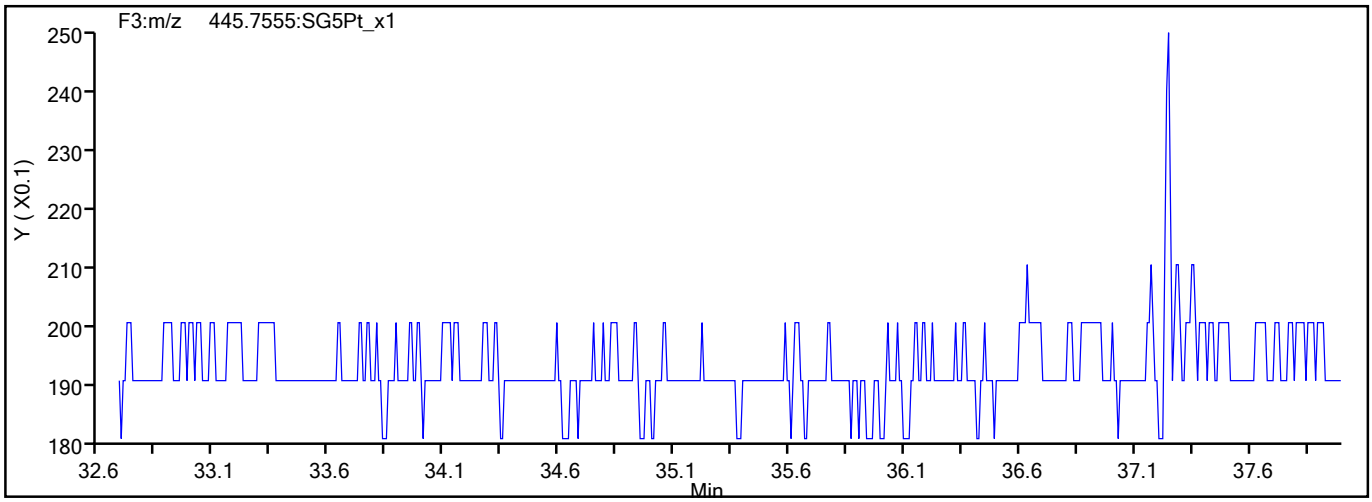

786220

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

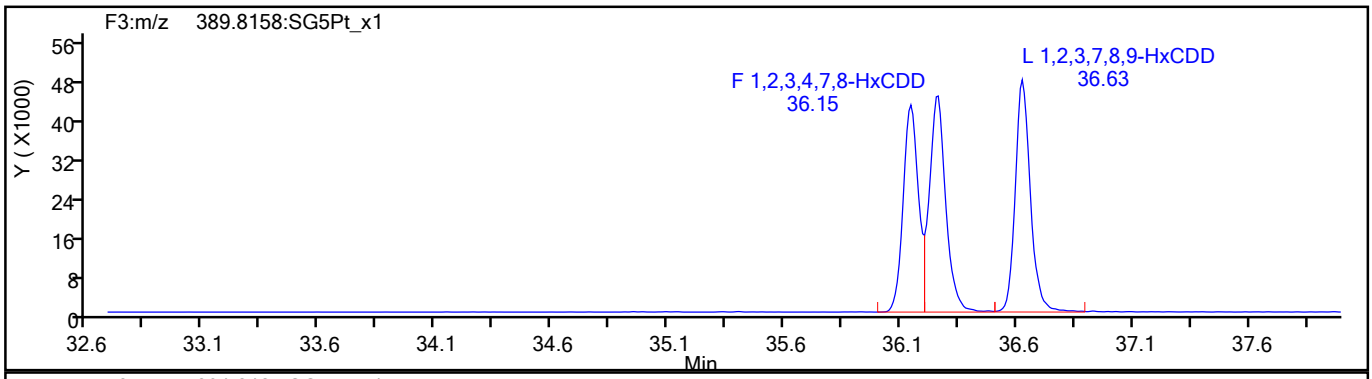

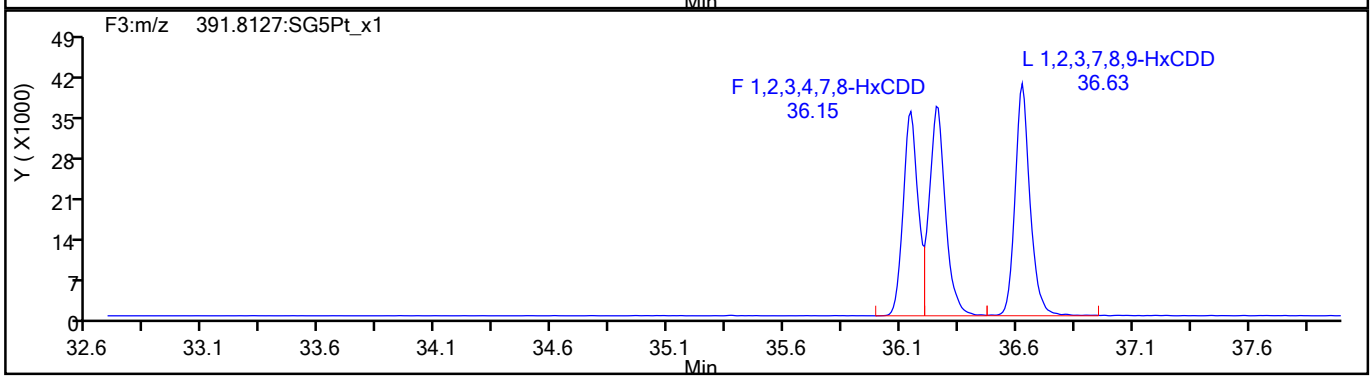

HxCDD Standards

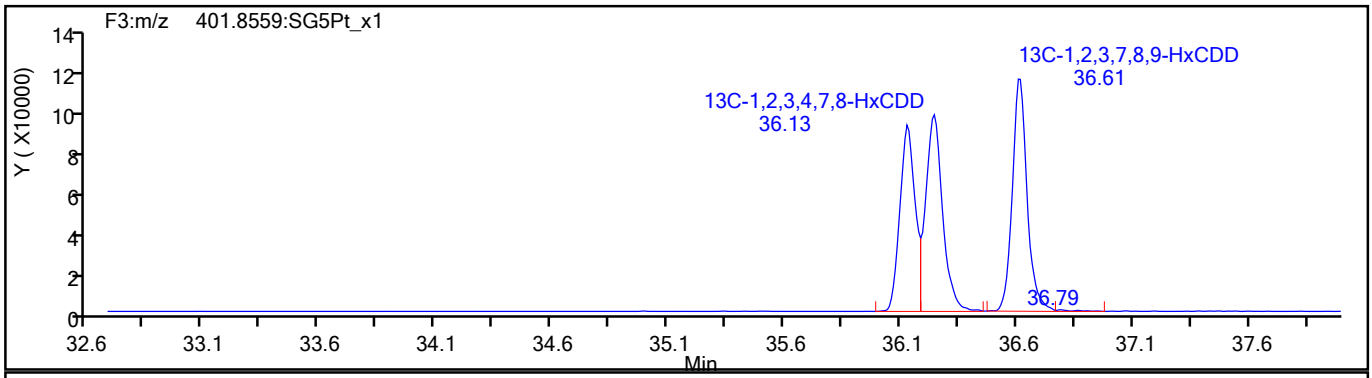

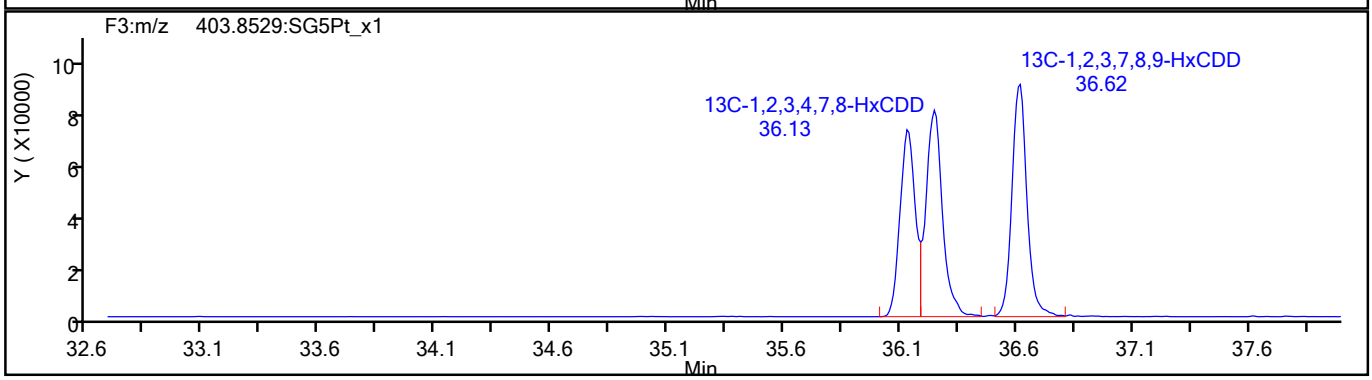

786221

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

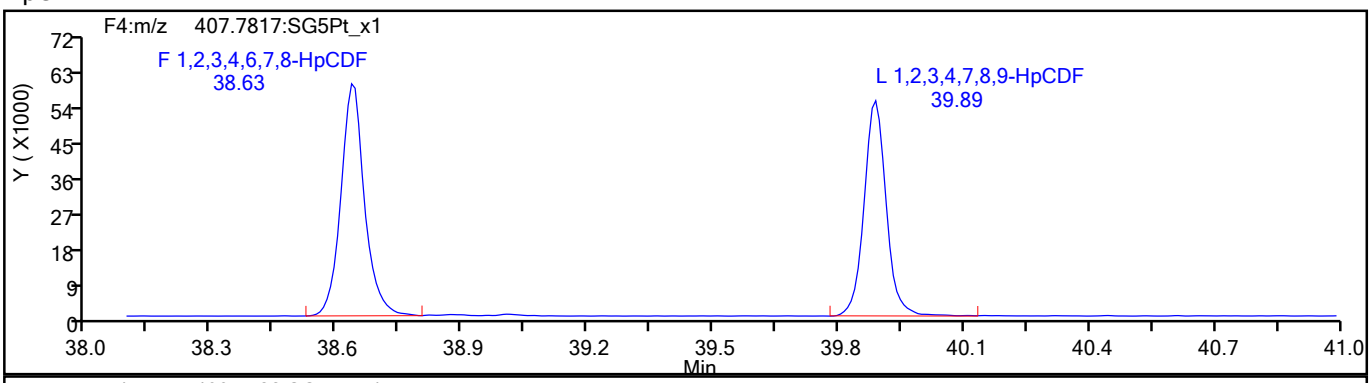

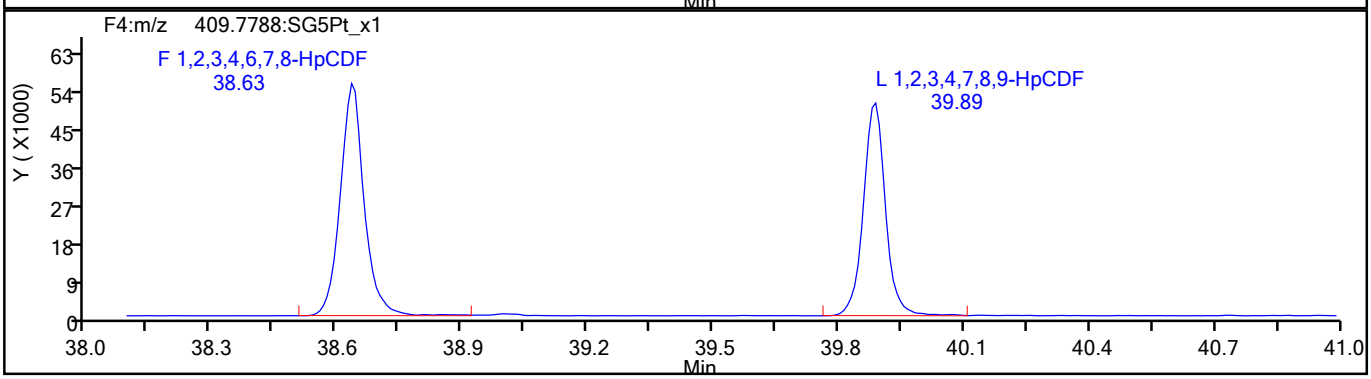

HpCDF Standards

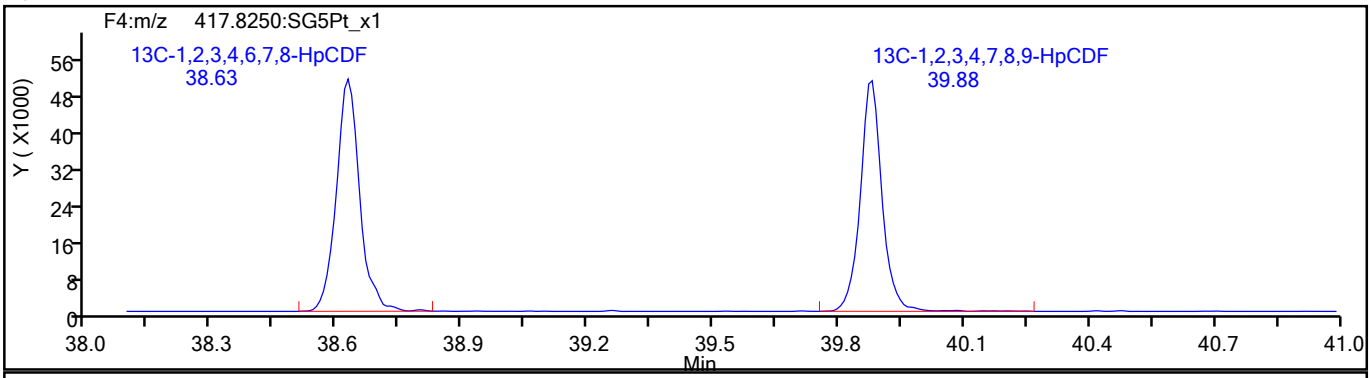

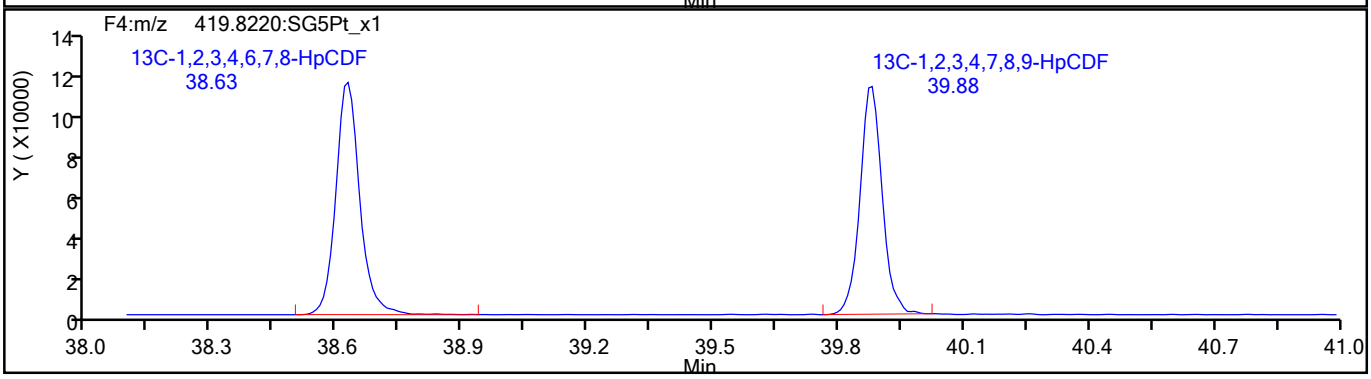

786222

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

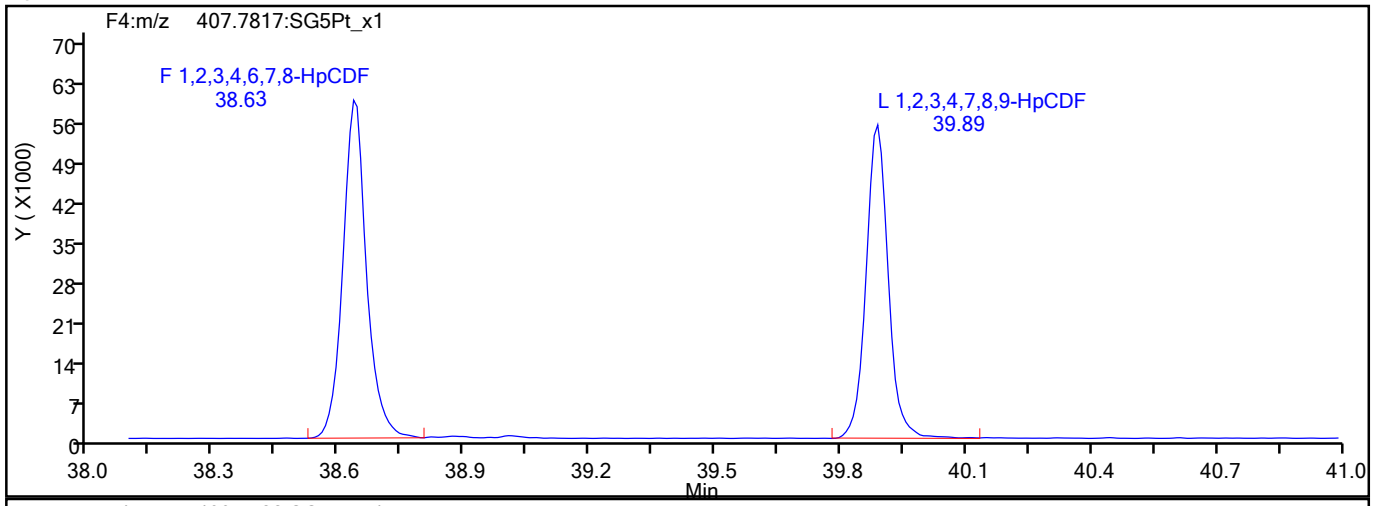

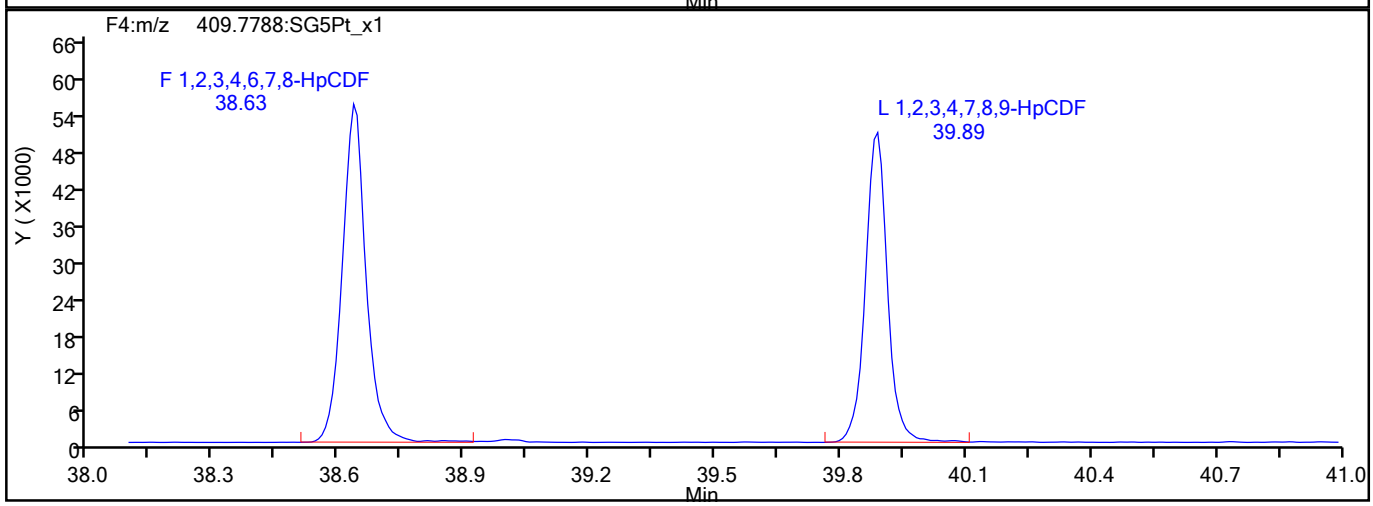

HpCDF Interference Mass

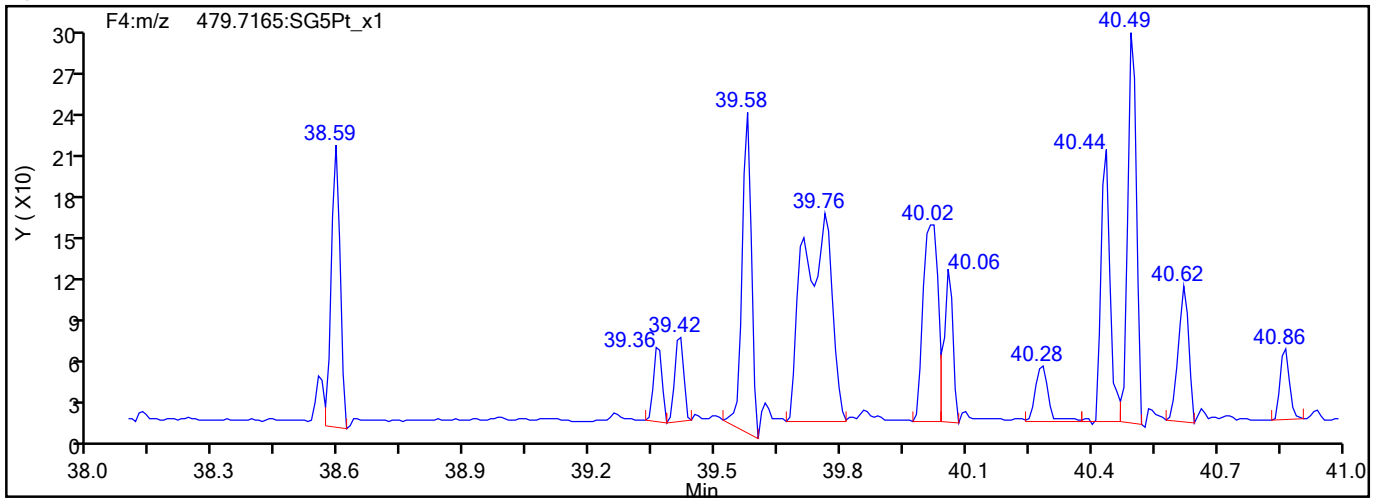

786223

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDD

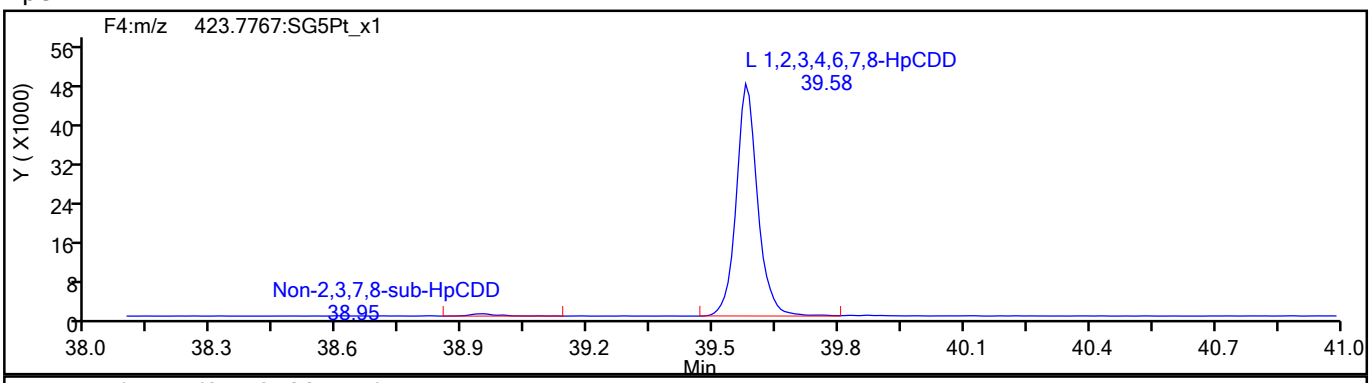

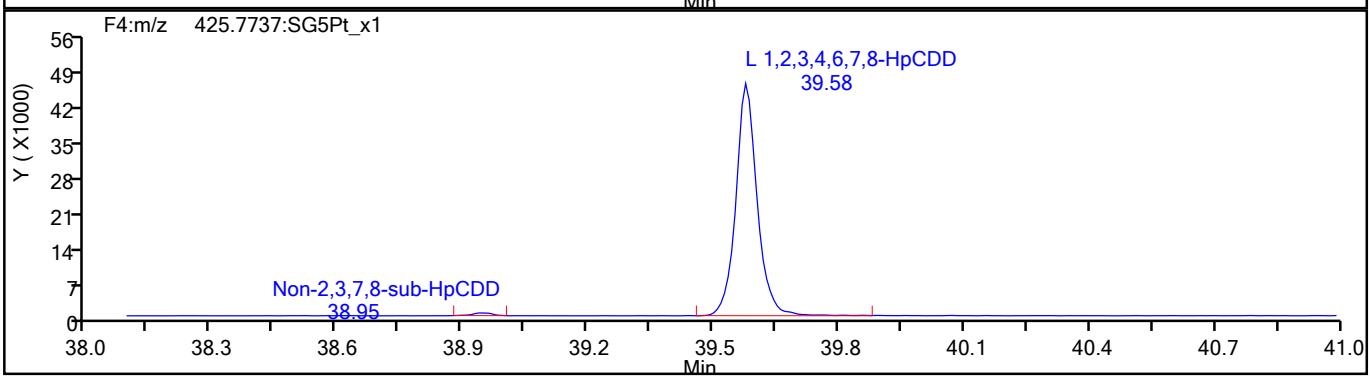

HpCDD Standards

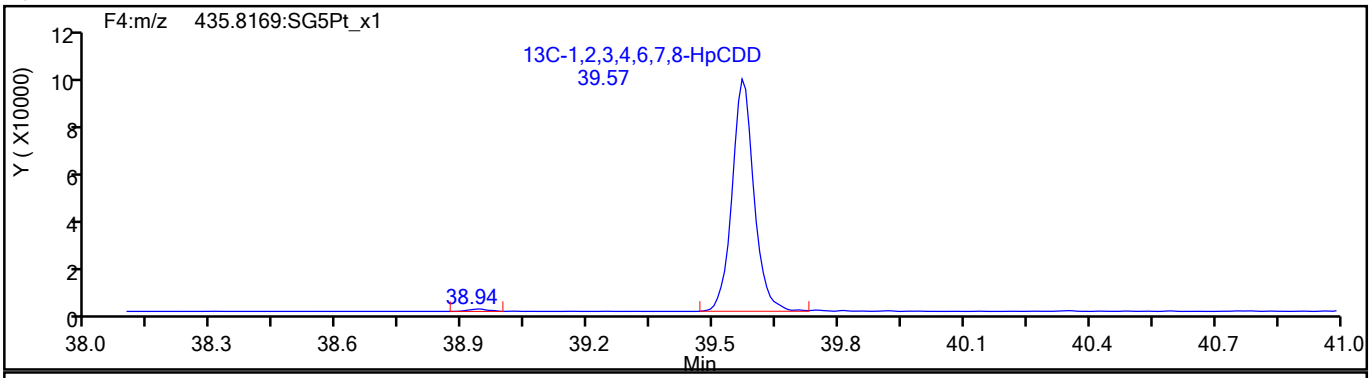

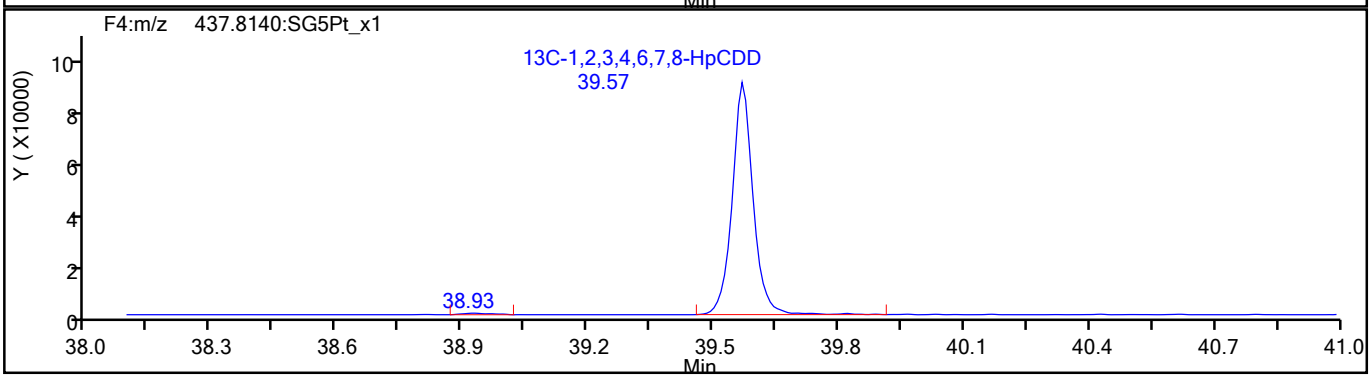

786224

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

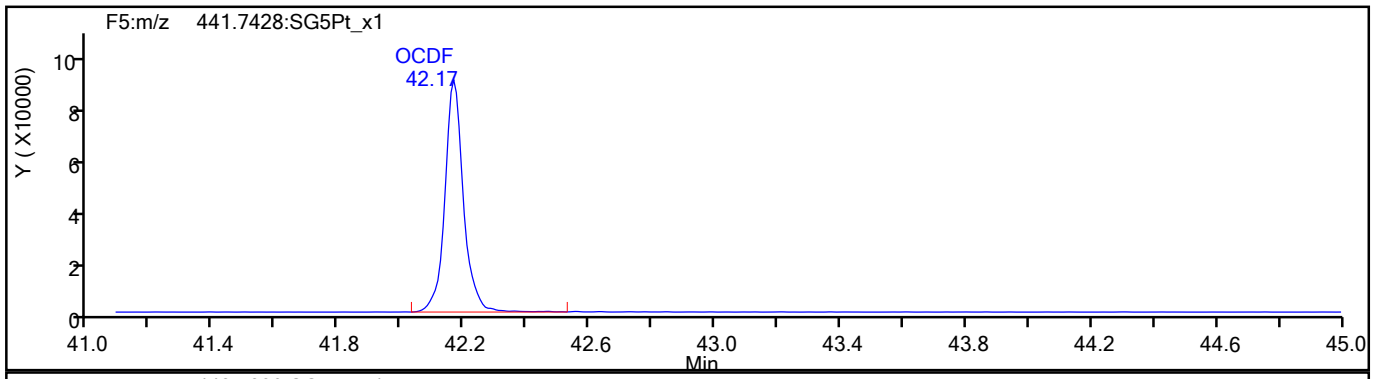

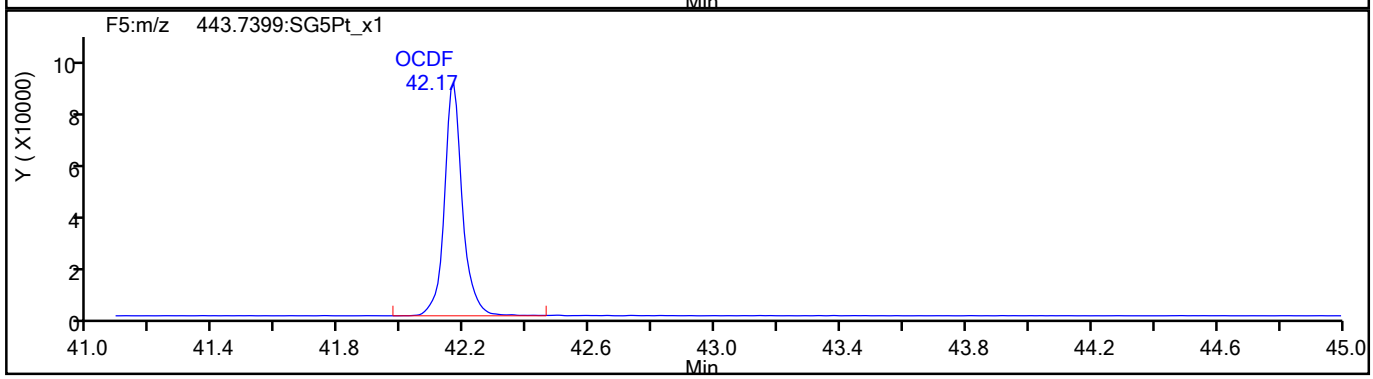

OCDF Standards

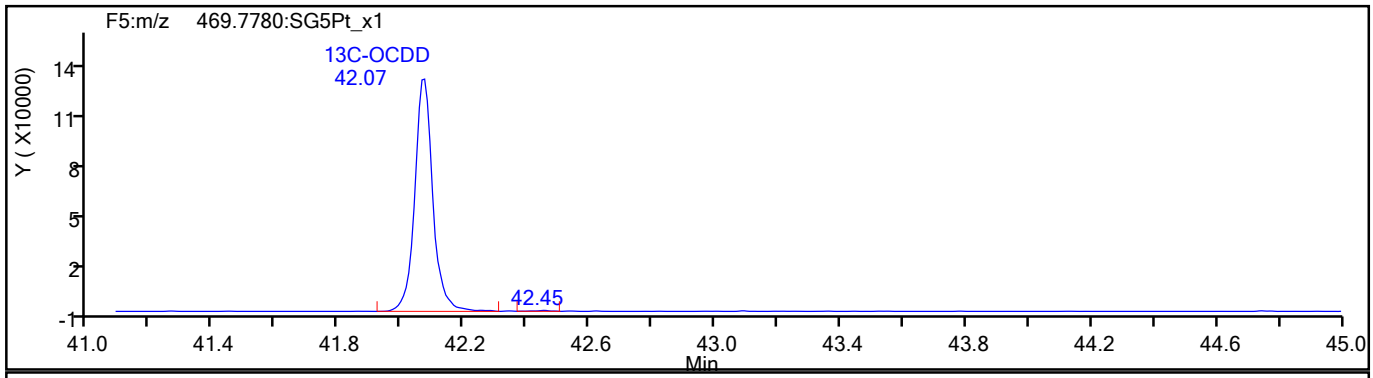

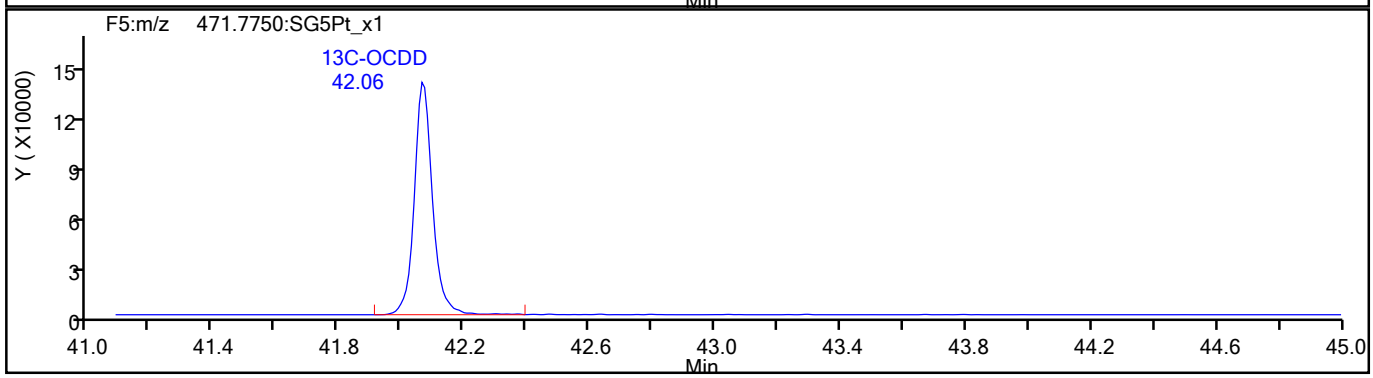

786225

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

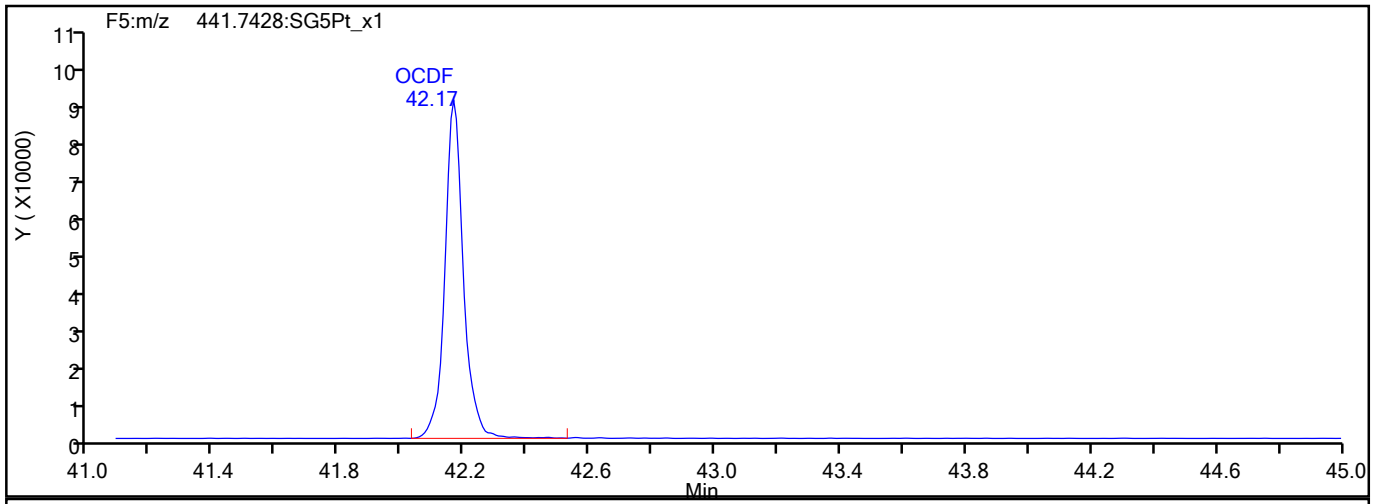

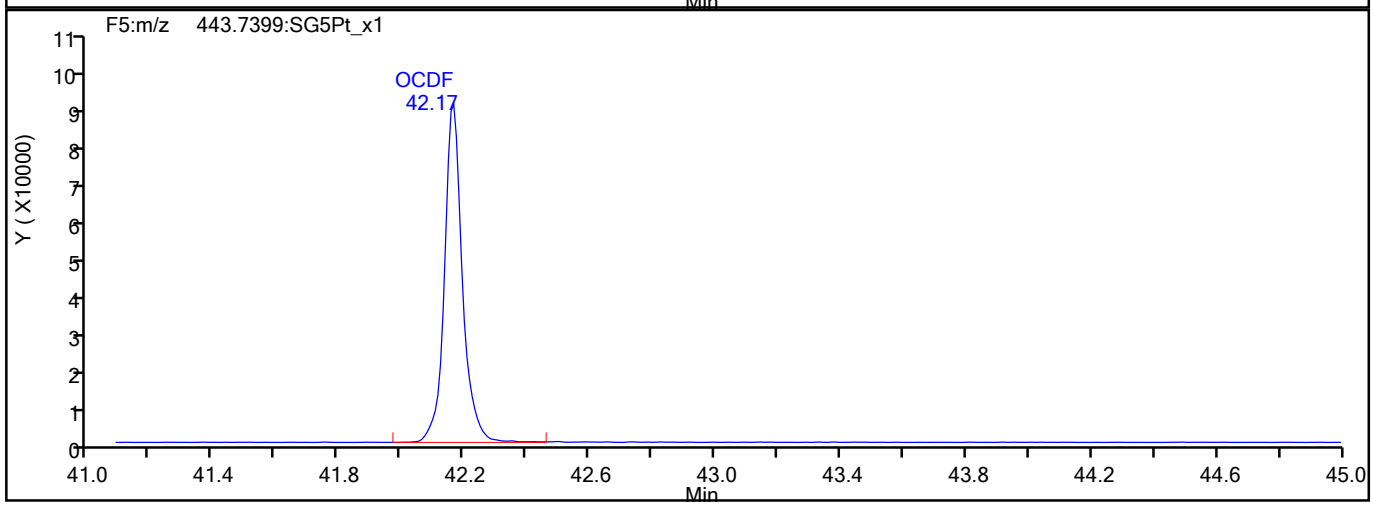

OCDF Interference Mass

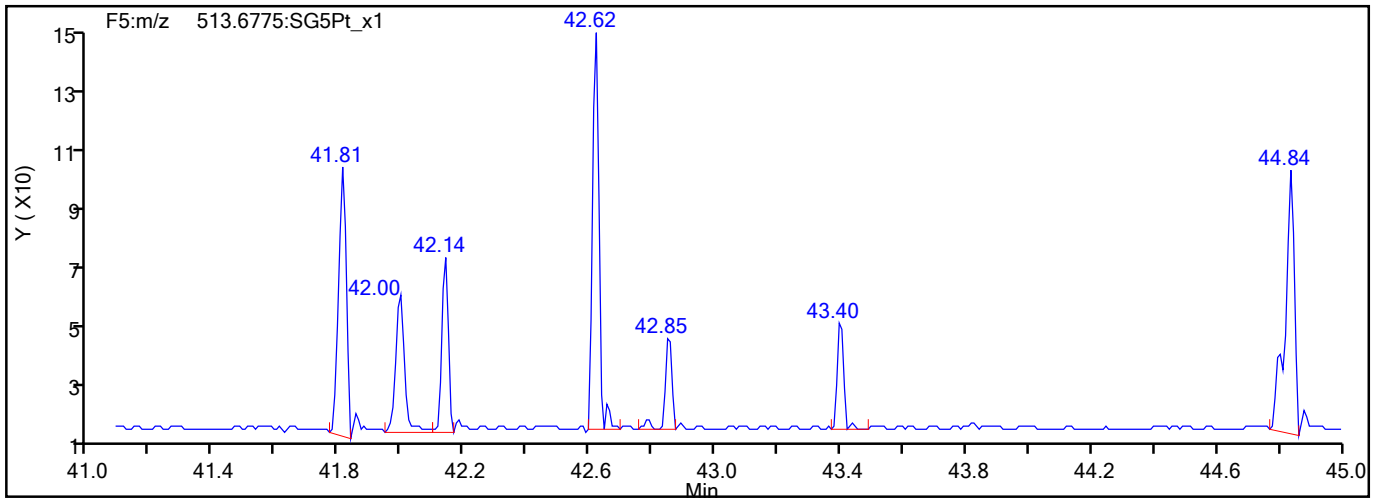

786226

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

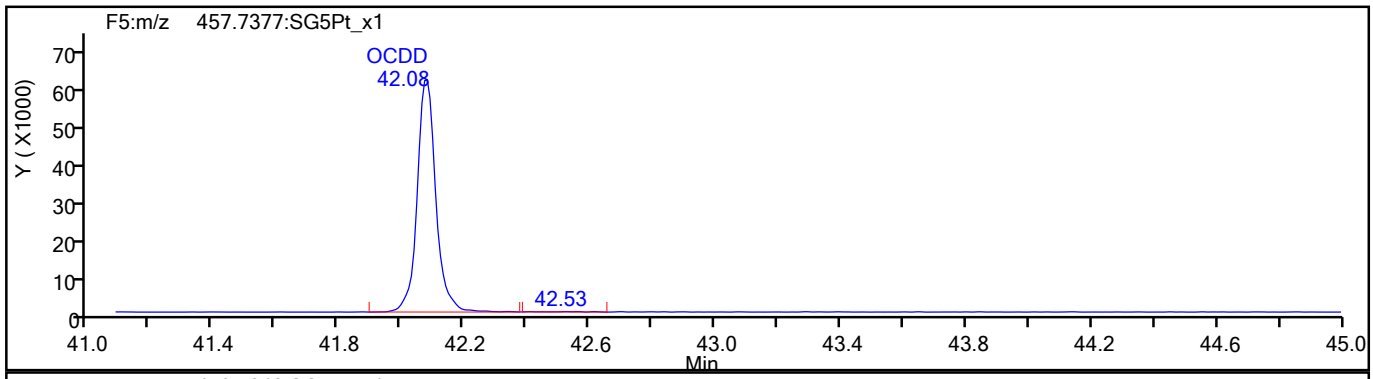

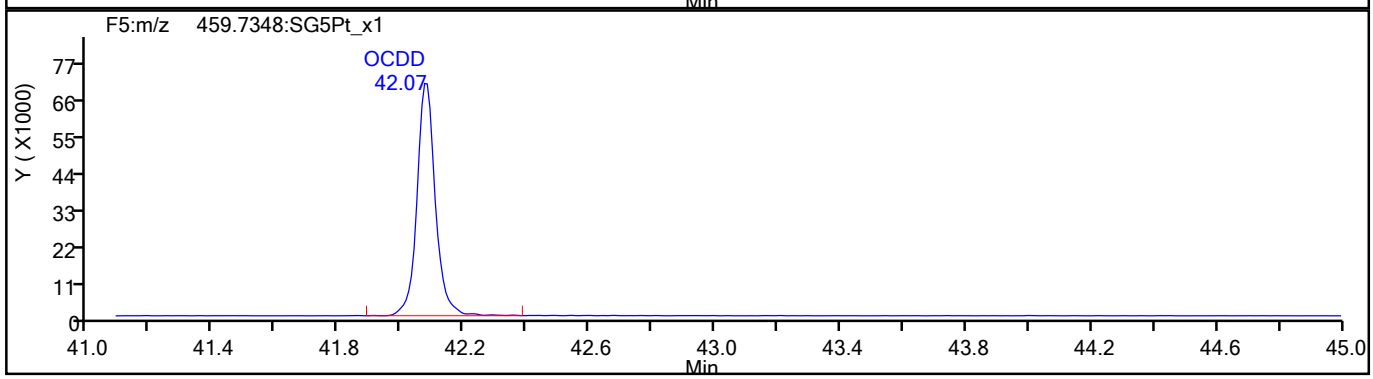

OCDD Standards

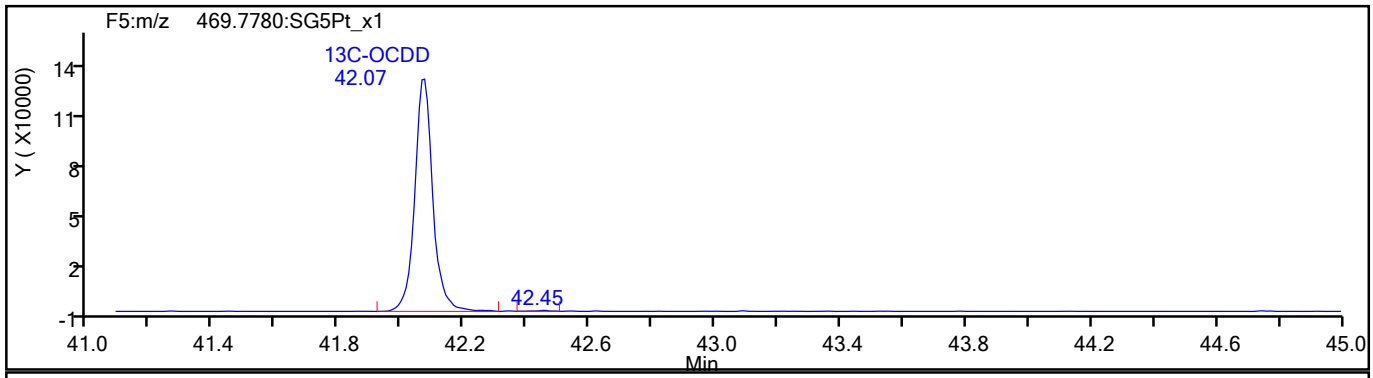

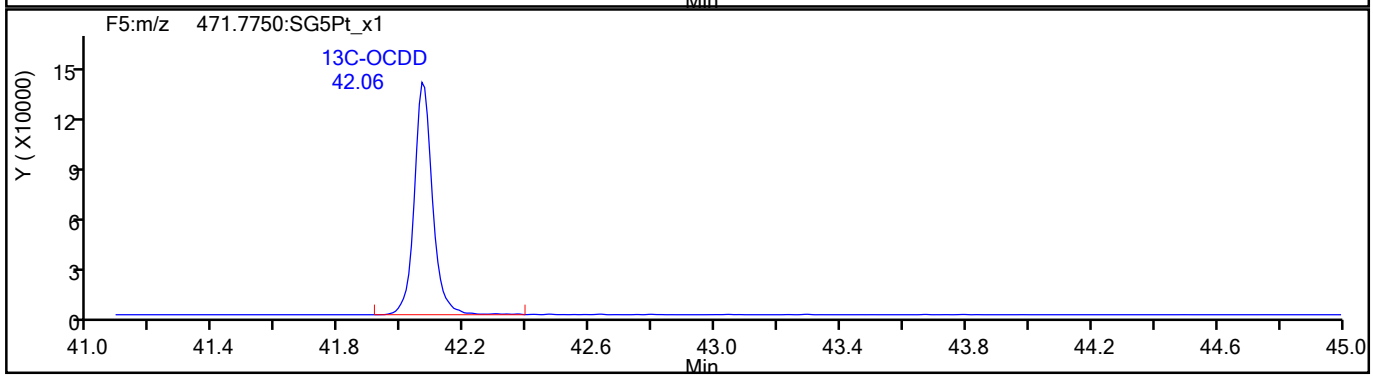

786227

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

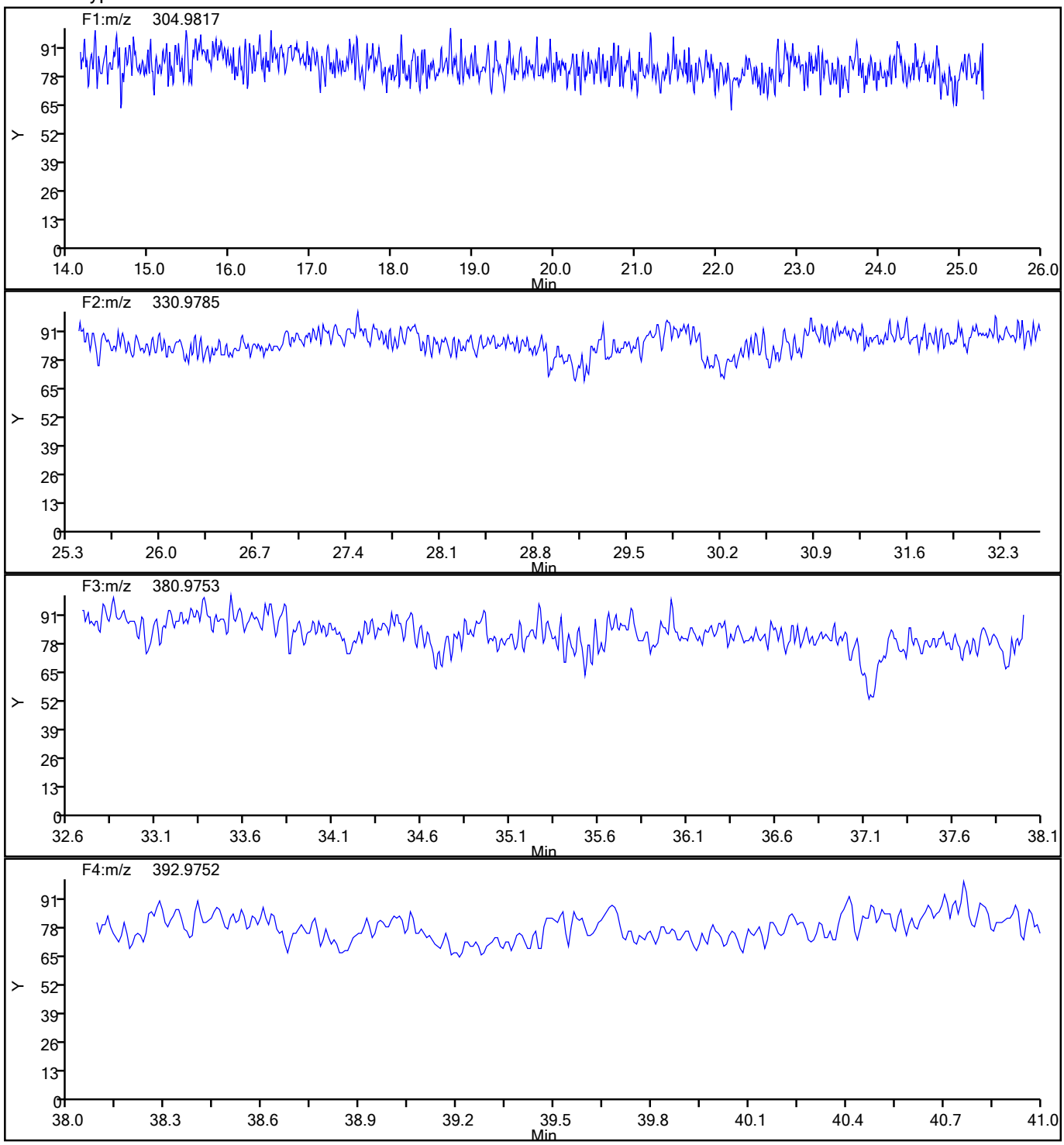

786228

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

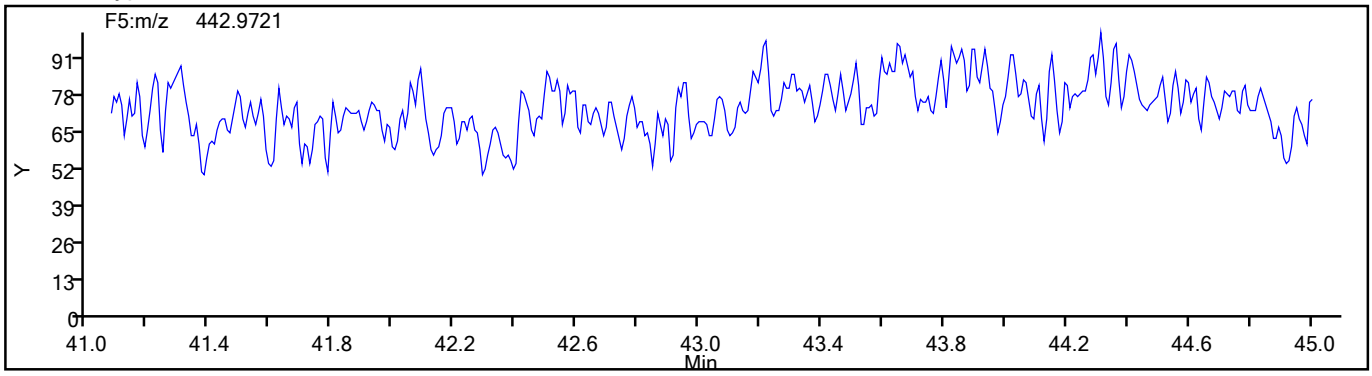

786229

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID: CCV 320-517891/2 Calibration Date: 08/19/2021 14:46

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 19au21dfs1_3.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.050		9.72	10.0	97	84-120
2,3,7,8-TCDD	AveID	1.075	1.033		9.60	10.0	96	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.077		51.1	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9629		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.051		50.2	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.164		50.7	50.0	101	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.285		52.8	50.0	106	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.306		53.7	50.0	107	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9728		45.9	50.0	92	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9017		45.4	50.0	91	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.036		46.7	50.0	93	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.311		52.8	50.0	106	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.348		46.7	50.0	93	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.013		48.2	50.0	96	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.260		48.1	50.0	96	86-116
OCDD	AveID	1.062	1.013		95.4	100	95	79-126
OCDF	AveID	1.317	1.434		109	100	109	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.419		105	100	105	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9767		105	100	105	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	0.996		87.4	100	87	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.099		97.7	100	98	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6618		92.4	100	92	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.074		111	100	111	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.086		101	100	101	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.008		96.8	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7840		103	100	103	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9106		106	100	106	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9343		96.0	100	96	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7901		107	100	107	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7627		113	100	113	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7751		113	100	113	77-129
13C-OCDD	Ave	0.5446	0.6405		235	200	118	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.001		9.93	10.0	99	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	19AU21DFS1_1	Resolution Check	RC 081921	46			KSS	1.000	
2	19AU21DFS1_2	WDM HRDXNCP_00044	WDM 081921	1	Dioxin		KSS	1.000	
3	19AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081921	2	Dioxin		KSS	1.000	
4	19AU21DFS1_4	SB Solvent Blank C14	SB 081921	3	Dioxin		KSS	1.000	
5	19AU21DFS1_5	mb 320-513879/1-a RI	mb 320-513879/1-a	4	1613B/Solid	D267	KSS	10.000	g
6	19AU21DFS1_6	320-76888-a-13-a RI	320-76888-a-13-a	5	1613B/Solid	D266	KSS	10.000	g
7	19AU21DFS1_7	320-76901-a-3-a	320-76901-a-3-a	6	1613B/Solid	D267	KSS	10.000	g
8	19AU21DFS1_8	320-76901-a-4-a	320-76901-a-4-a	7	1613B/Solid		KSS	10.000	g
9	19AU21DFS1_9	320-76901-a-5-a	320-76901-a-5-a	8	1613B/Solid		KSS	10.000	g
10	19AU21DFS1_10	320-76901-a-6-a	320-76901-a-6-a	9	1613B/Solid		KSS	10.000	g
11	19AU21DFS1_11	320-76901-a-7-a	320-76901-a-7-a	10	1613B/Solid		KSS	10.000	g
12	19AU21DFS1_12	320-76901-a-8-a	320-76901-a-8-a	11	1613B/Solid		KSS	10.000	g
13	19AU21DFS1_13	320-76901-a-9-a	320-76901-a-9-a	12	1613B/Solid		KSS	10.000	g
14	19AU21DFS1_14	320-76901-a-13-a	320-76901-a-13-a	13	1613B/Solid		KSS	10.000	g
15	19AU21DFS1_15	SB Solvent Blank C14	SB 081921A	3	Dioxin		KSS	1.000	
16	19AU21DFS1_16	Resolution Check	RC 081921A	46			KSS	1.000	
17	19AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081921A	2	Dioxin		KSS	1.000	
18	19AU21DFS1_18	WDM HRDXNCP_00044	WDM 081921A	1	Dioxin		KSS	1.000	
19	19AU21DFS1_19	SB Solvent Blank C14	SB 081921B	3	Dioxin		KSS	1.000	
20	19AU21DFS1_20	320-76888-a-5-a 5X	320-76888-a-5-a	14	1613B/Solid	D267	KSS	10.000	g
21	19AU21DFS1_21	320-76888-a-1-a 10X	320-76888-a-1-a	15	1613B/Solid		KSS	10.000	g
22	19AU21DFS1_22	320-76888-a-1-b ms 10X	320-76888-a-1-b ms	16	1613B/Solid		KSS	10.000	g
23	19AU21DFS1_23	320-76888-a-1-c msd 10X	320-76888-a-1-c msd	17	1613B/Solid		KSS	10.000	g
24	19AU21DFS1_24	320-76888-a-4-a 10X	320-76888-a-4-a	18	1613B/Solid		KSS	10.000	g
25	19AU21DFS1_25	320-76888-a-2-a 10X	320-76888-a-2-a	19	1613B/Solid		KSS	10.000	g
26	19AU21DFS1_26	320-76901-a-1-a 10X	320-76901-a-1-a	20	1613B/Solid		KSS	10.000	g
27	19AU21DFS1_27	320-76888-a-3-a 10X	320-76888-a-3-a	21	1613B/Solid		KSS	10.000	g
28	19AU21DFS1_28	SB Solvent Blank C14	SB 081921C	3	Dioxin		KSS	1.000	
29	19AU21DFS1_29	SB Solvent Blank C14	SB 081921D	3	Dioxin		KSS	1.000	
30	19AU21DFS1_30	Resolution Check	RC 081921B	46			KSS	1.000	

Logfile ✓'d
8/21/21
KSS

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 13:39
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11552 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10549 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11385 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11272 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11335 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11001 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11059 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10420 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10449 [5%height]

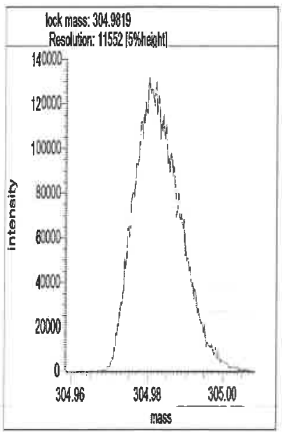

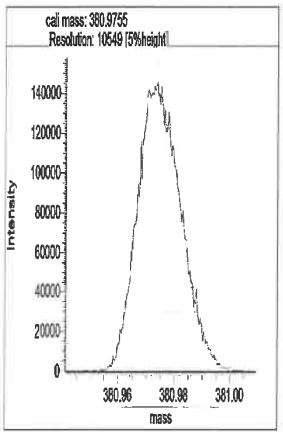

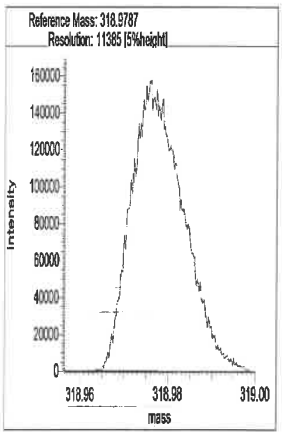

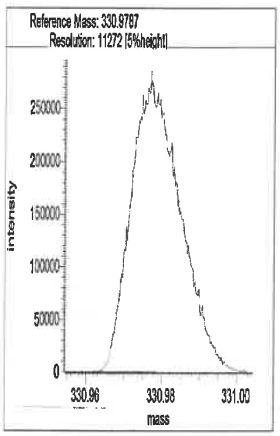

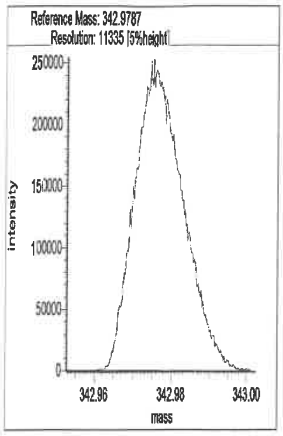

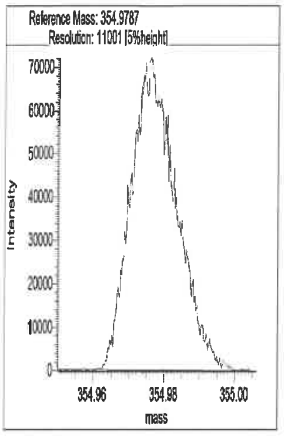

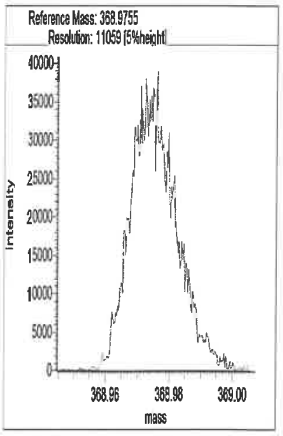

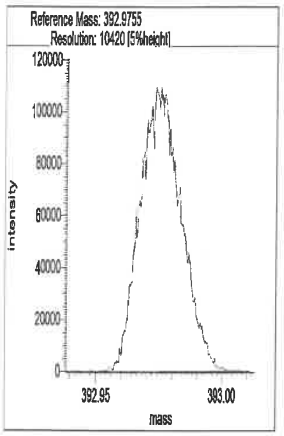

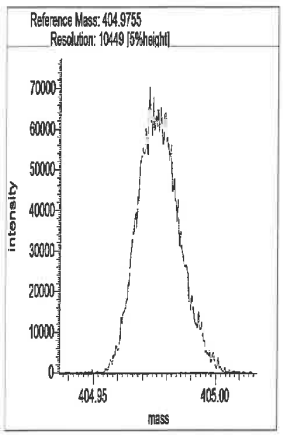

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11485 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10793 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11226 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11398 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10683 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10785 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10698 [5%height]

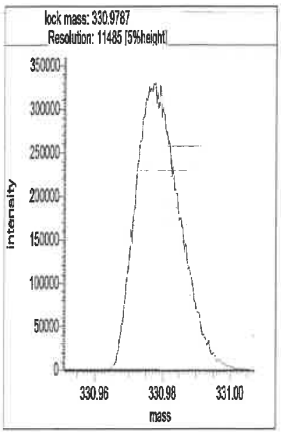

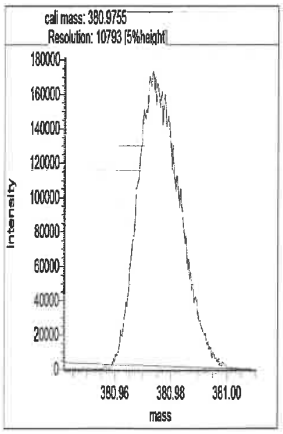

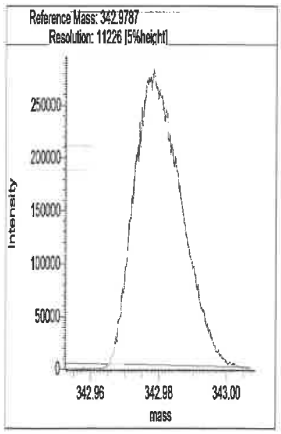

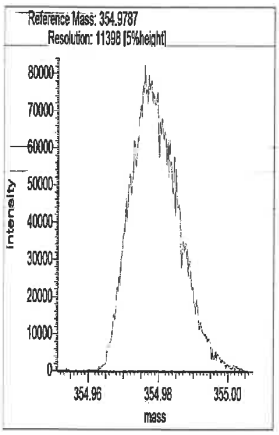

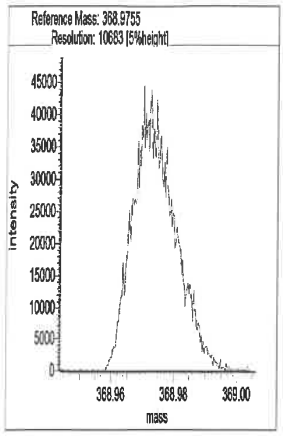

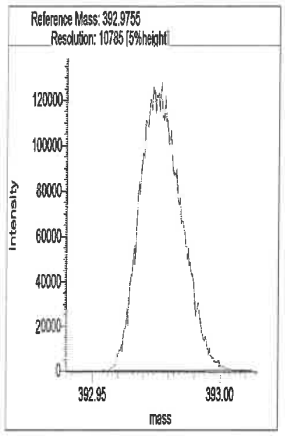

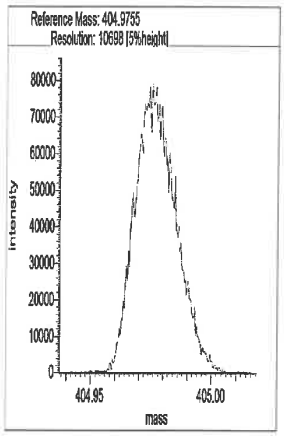

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11415 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10771 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11020 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11042 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12007 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10745 [5%height]

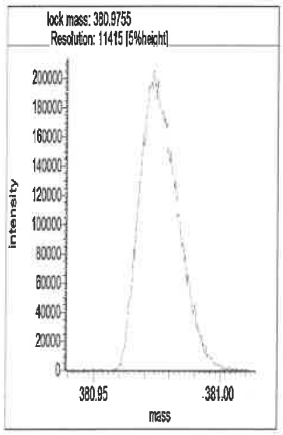

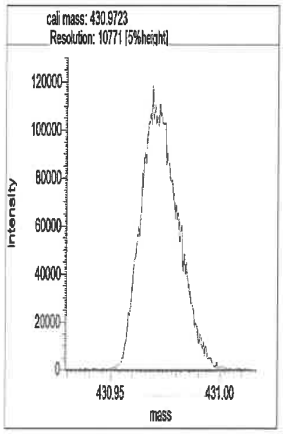

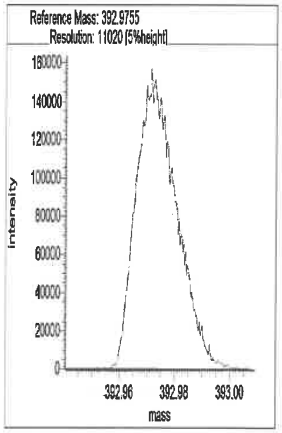

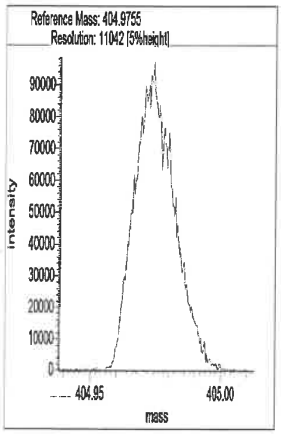

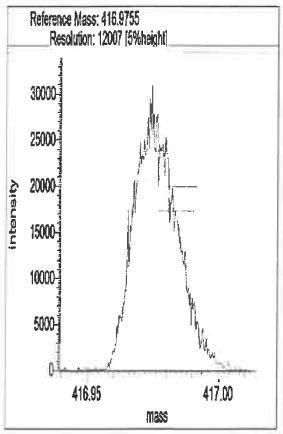

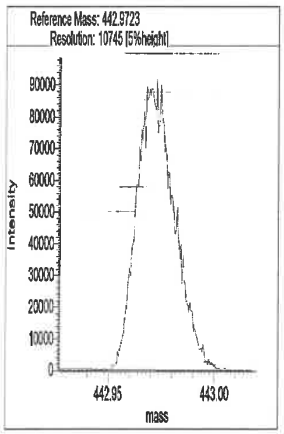

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11386 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10623 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11300 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10989 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11023 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10728 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10731 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10778 [5%height]

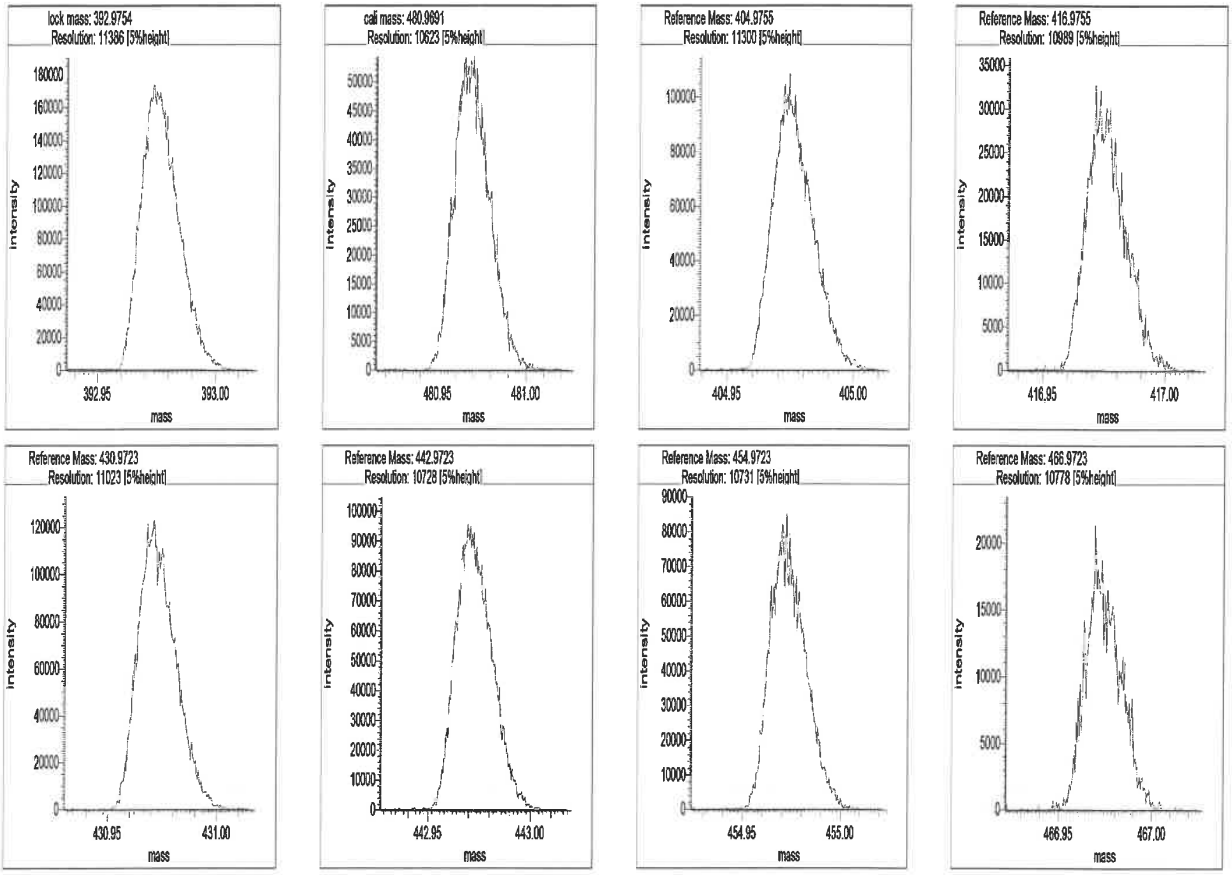

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11445 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11134 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11159 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10809 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11068 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10706 [5%height]

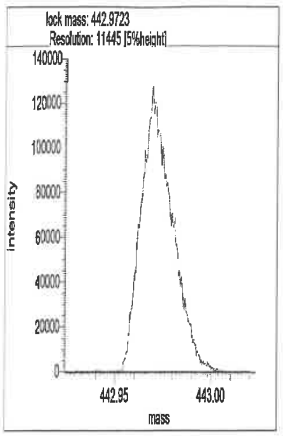
lock mass: 442.9723
Resolution: 11445 [5%height]
Intensity
mass

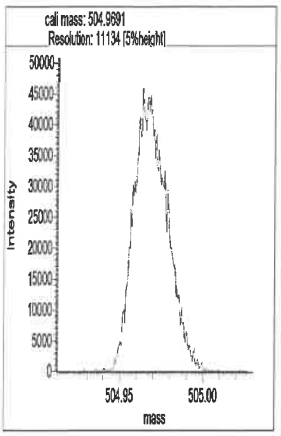
cali mass: 504.9691
Resolution: 11134 [5%height]
Intensity
mass

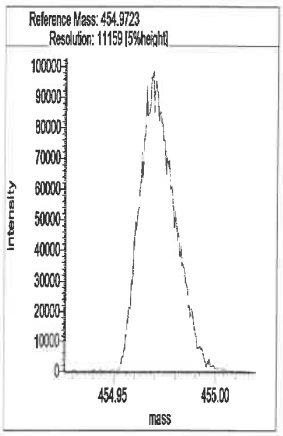
Reference Mass: 454.9723
Resolution: 11159 [5%height]
Intensity
mass

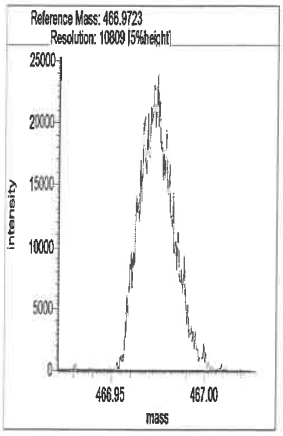
Reference Mass: 466.9723
Resolution: 10809 [5%height]
Intensity
mass

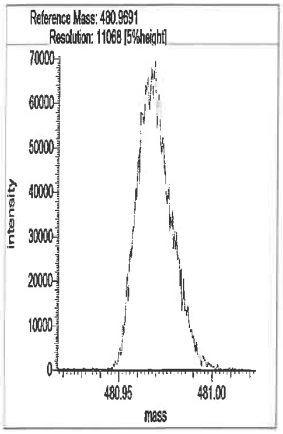
Reference Mass: 480.9691
Resolution: 11068 [5%height]
Intensity
mass

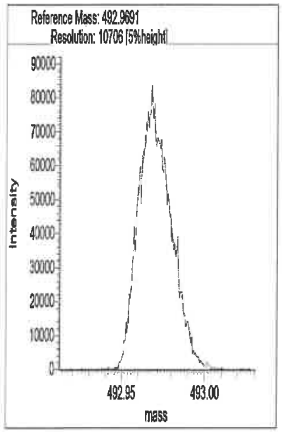
Reference Mass: 492.9691
Resolution: 10706 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 01:14
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10904 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10388 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10733 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10622 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10608 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10712 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10070 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9982 [5%height] ✓ DK 8/21/21
Ref. mass 404.9755 [m/z] Resolution: 10023 [5%height]

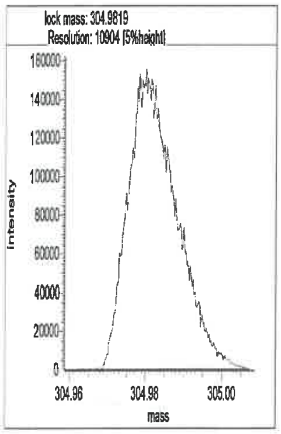

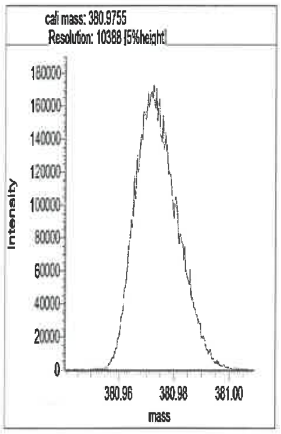

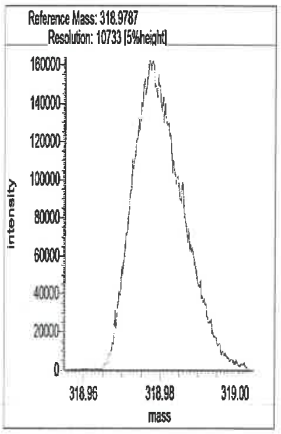

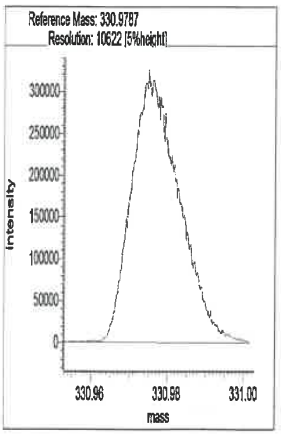

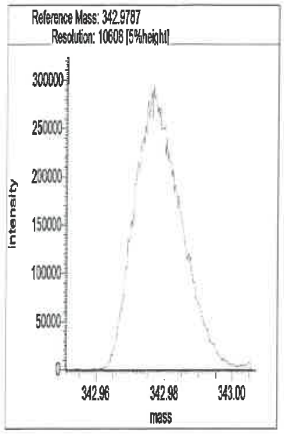

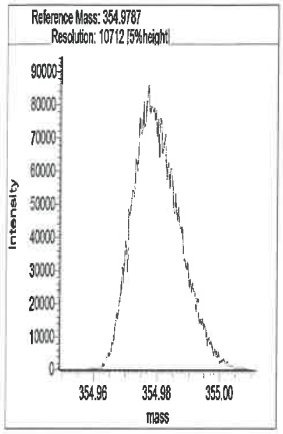

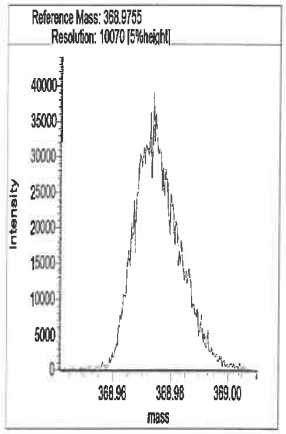

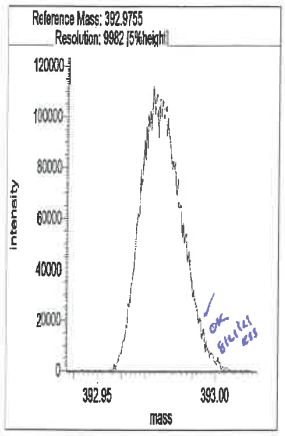

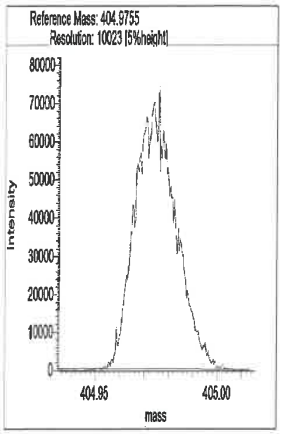

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10787 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10782 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11025 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11013 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10635 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10603 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10396 [5%height]

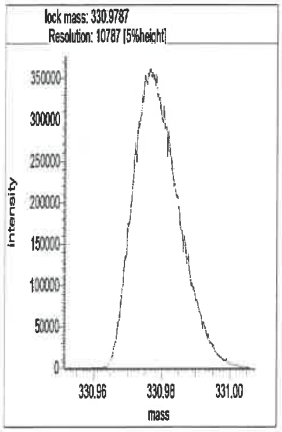

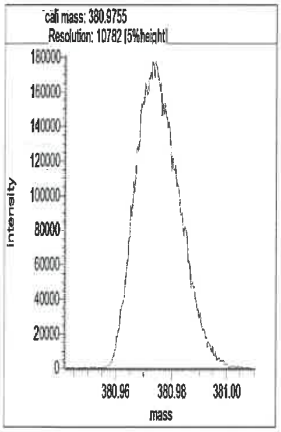

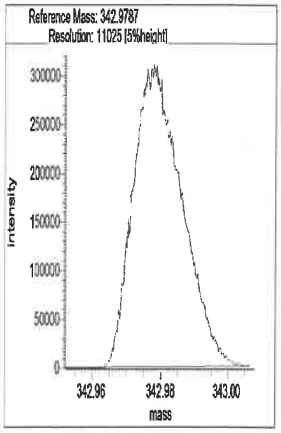

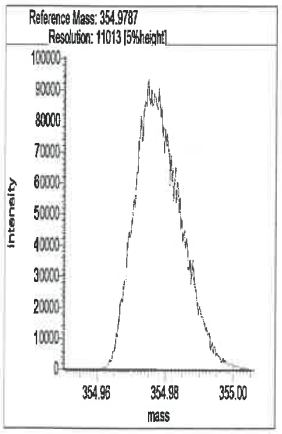

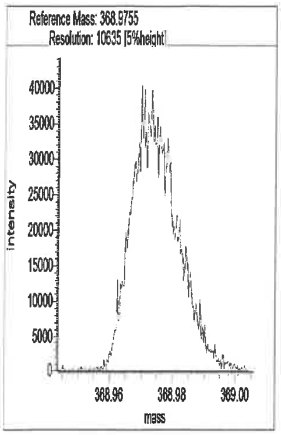

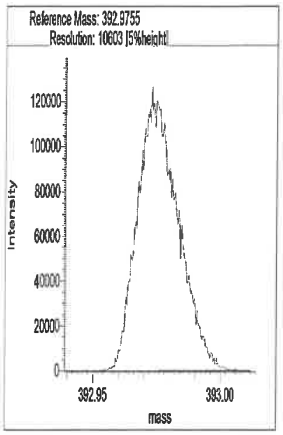

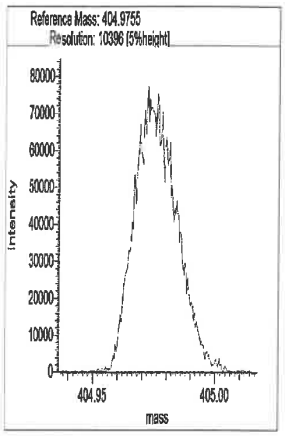

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11029 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10564 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10871 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10418 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11260 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10446 [5%height]

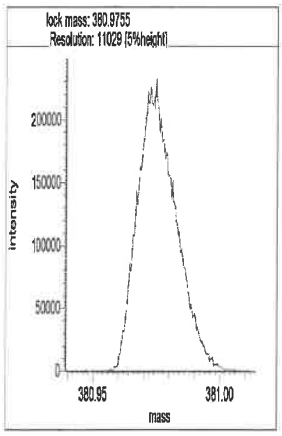

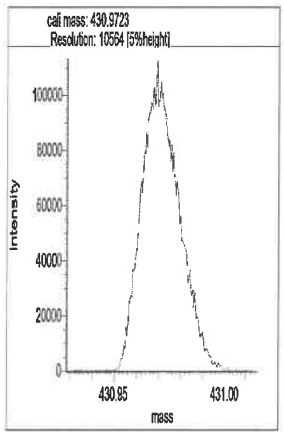

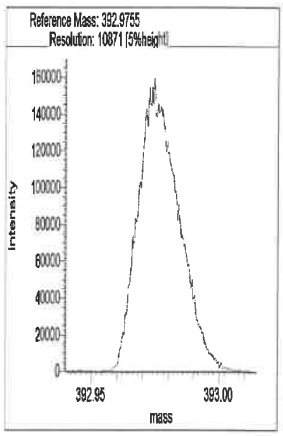

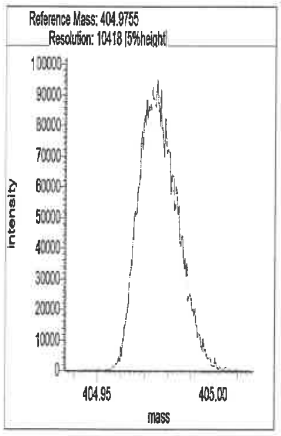

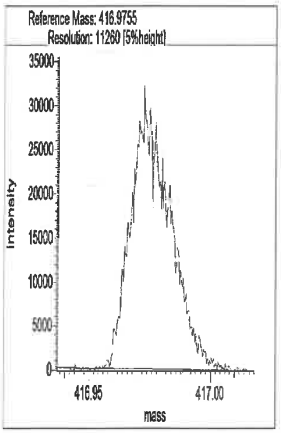

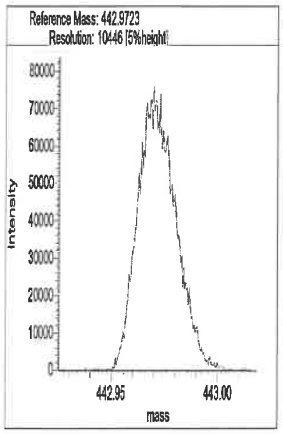

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10922 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10352 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10773 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12243 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10710 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11096 [5%height]

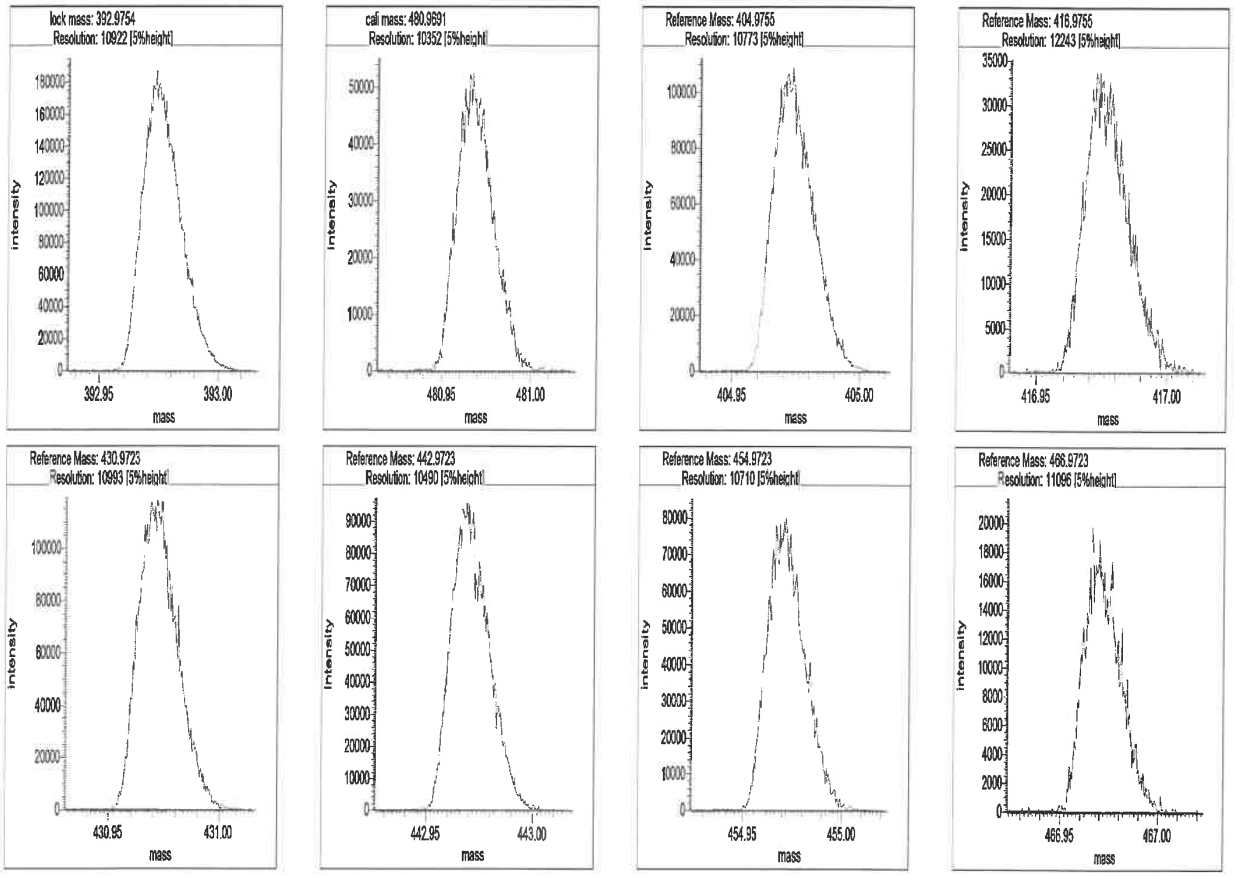

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11165 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10856 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11100 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10488 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11155 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10611 [5%height]

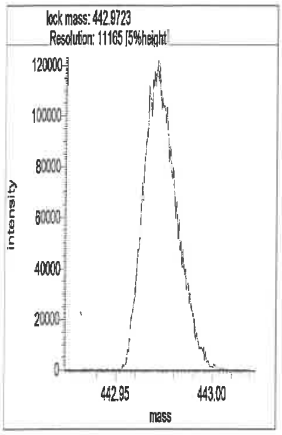
lock mass: 442.9723
Resolution: 11165 [5%height]
intensity
mass

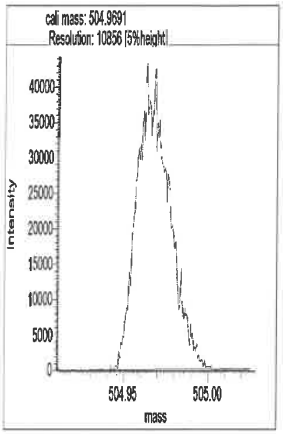
cali mass: 504.9691
Resolution: 10856 [5%height]
intensity
mass

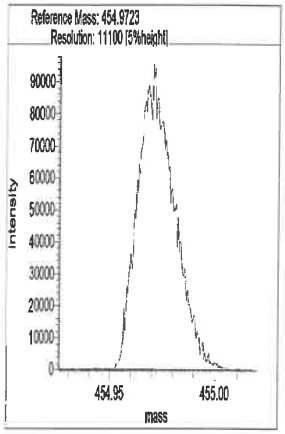
Reference Mass: 454.9723
Resolution: 11100 [5%height]
intensity
mass

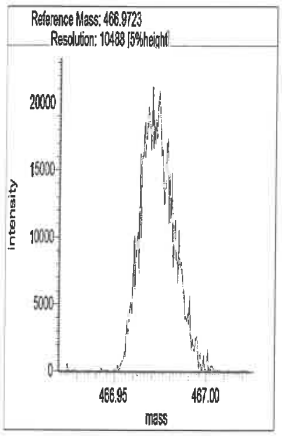
Reference Mass: 466.9723
Resolution: 10488 [5%height]
intensity
mass

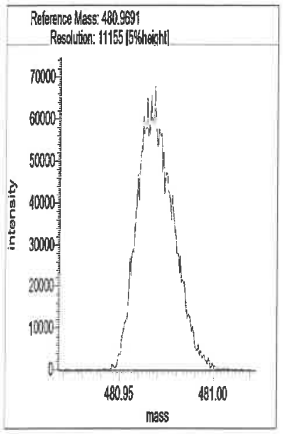
Reference Mass: 480.9691
Resolution: 11155 [5%height]
intensity
mass

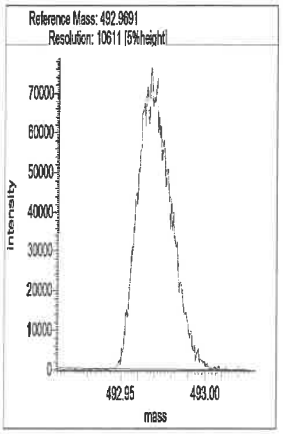
Reference Mass: 492.9691
Resolution: 10611 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 11:56
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10511 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10099 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 10342 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 10503 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10344 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 27776 [5%height] ? software glitch. [illegible]

Ref. mass 368.9755 [m/z] Resolution: 10394 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 9749 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9682 [5%height]

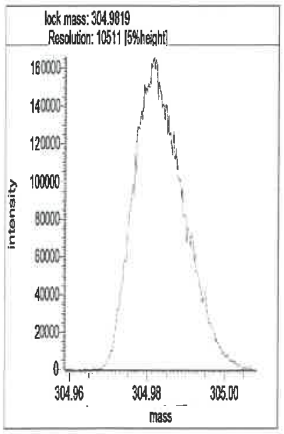

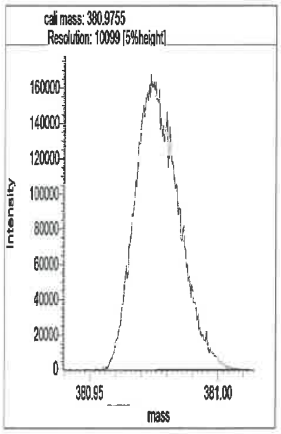

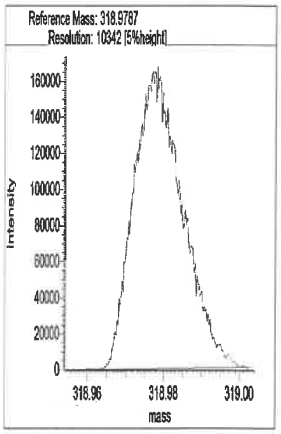

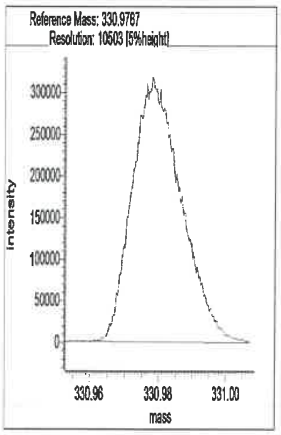

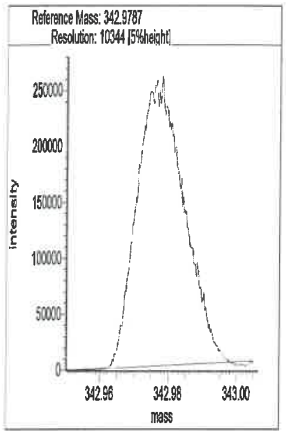

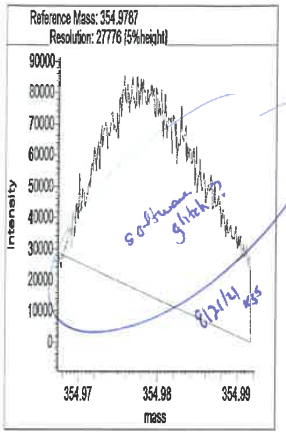

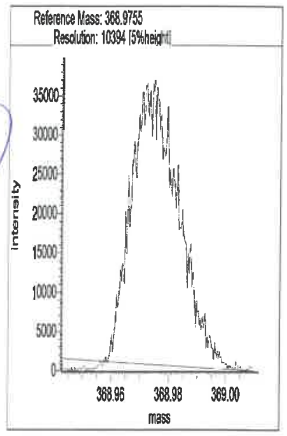

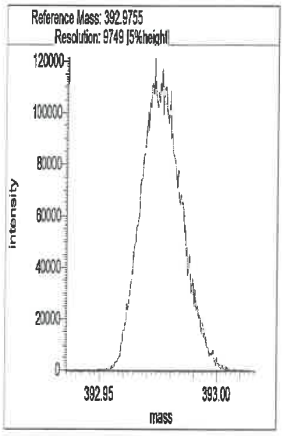

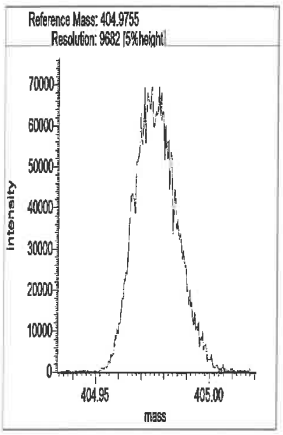

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10733 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10393 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10683 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10545 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10150 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10185 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10040 [5%height]

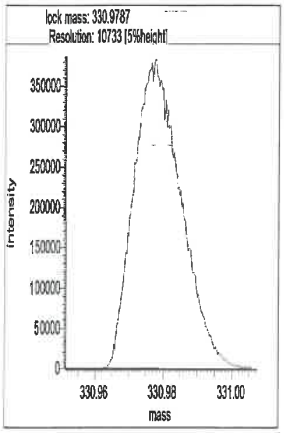

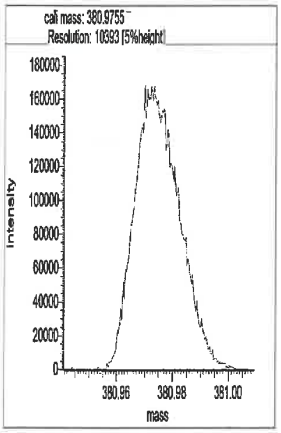

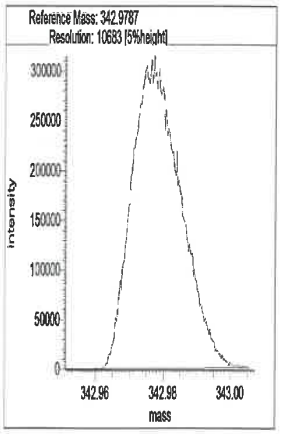

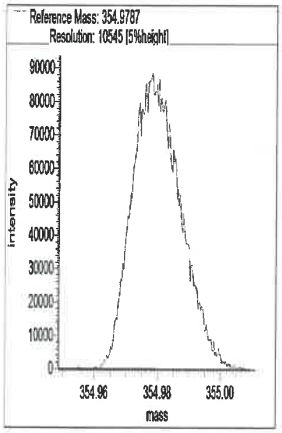

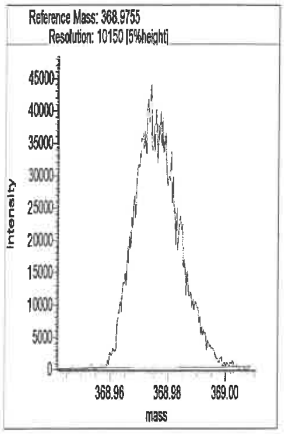

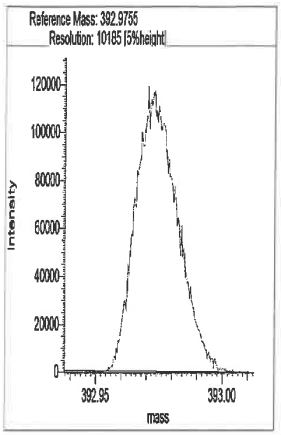

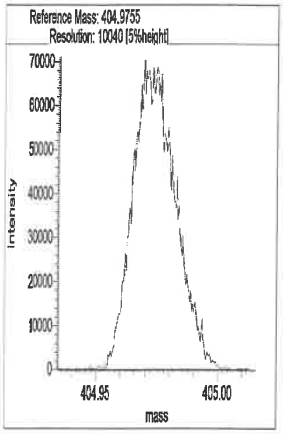

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10536 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10403 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10410 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10419 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10244 [5%height]

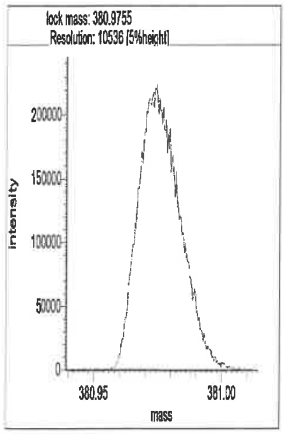

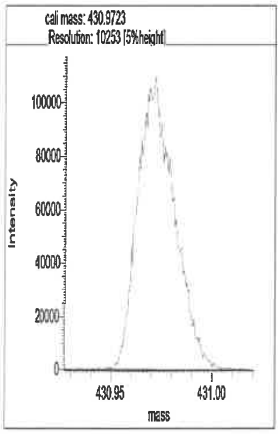

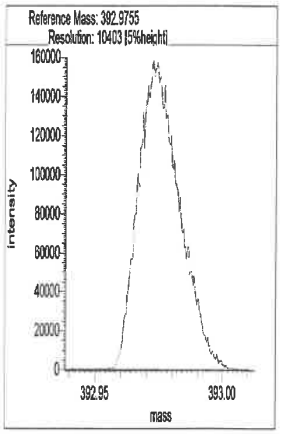

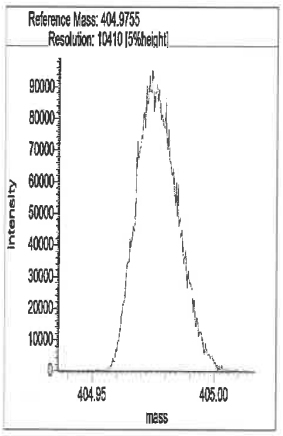

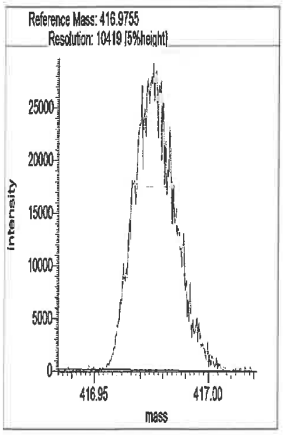

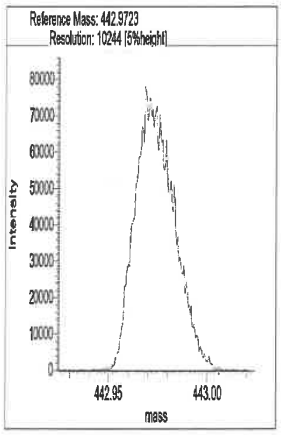

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10914 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 9523 [5%height] ✓ OK 8/21/21 KD

Ref. mass 404.9755 [m/z] Resolution: 10727 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10613 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10522 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10235 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10314 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10509 [5%height]

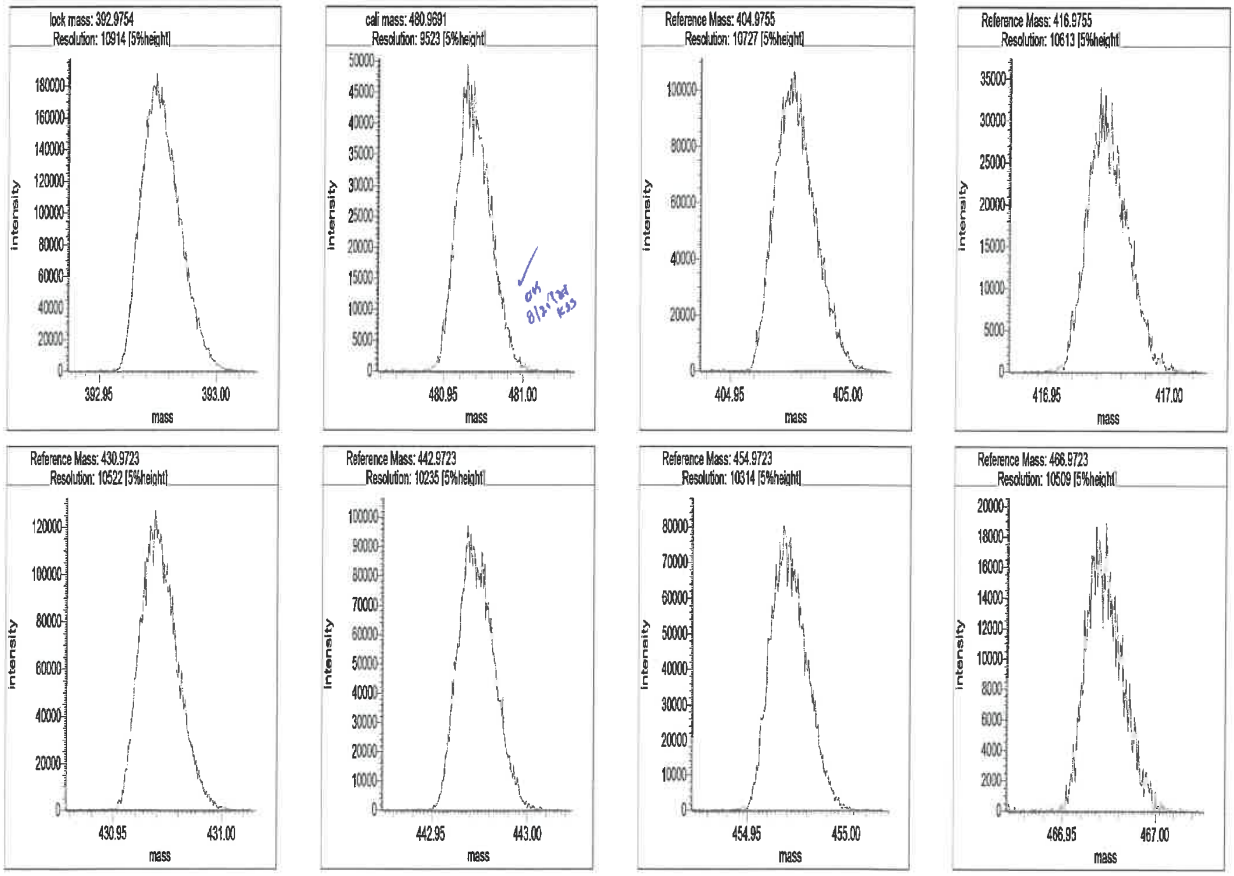

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10927 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10443 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10654 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11221 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10354 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10748 [5%height]

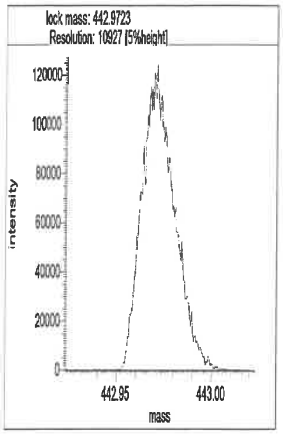
lock mass: 442.9723
Resolution: 10927 [5%height]
intensity
mass

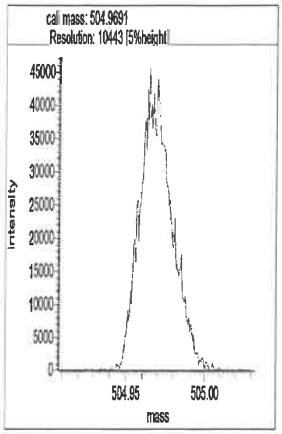
cali mass: 504.9691
Resolution: 10443 [5%height]
intensity
mass

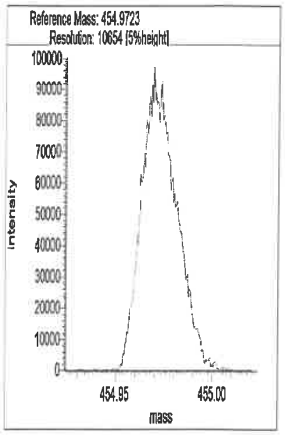
Reference Mass: 454.9723
Resolution: 10654 [5%height]
intensity
mass

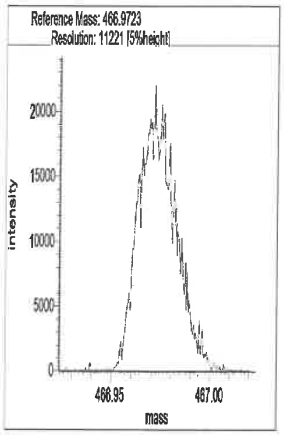
Reference Mass: 466.9723
Resolution: 11221 [5%height]
intensity
mass

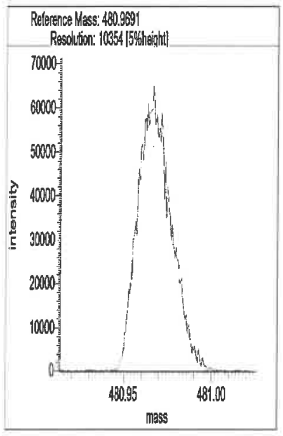
Reference Mass: 480.9691
Resolution: 10354 [5%height]
intensity
mass

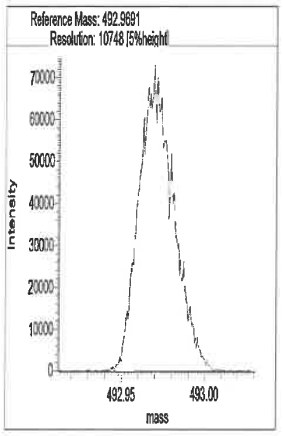
Reference Mass: 492.9691
Resolution: 10748 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 14:46:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:38:43

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.350	880144	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.395	1248688	0.81	1.3459	105.4	105.4	0.3439	0.3439	105	
2,3,7,8-TCDF	20.421	131092	0.83	1.0802	9.719	9.719	0.0187	0.0187	97.19	
A Non-2,3,7,8-sub-TCDF	19.885	2548	0.77	1.0802	0.2183	0.1889	0.0187	0.0708	0.00	RQ
S Total TCDF					9.937	9.908	0.0187	0.0187		RQ
D 13C-2,3,7,8-TCDD	21.746	859664	0.80	0.9317	104.8	104.8	0.2310	0.2310	105	
2,3,7,8-TCDD	21.754	88765	0.76	1.0753	9.602	9.602	0.0289	0.0289	96.02	M
$ 37Cl4-2,3,7,8-TCDD	21.772	88098		1.0083	9.927	9.927	0.0148	0.0148	99.27	
A Non-2,3,7,8-sub-TCDD	20.727						0.0289	0.0289		
S Total TCDD					9.602	9.602	0.0289	0.0289		
D 13C-1,2,3,7,8-PeCDF	27.246	876942	1.58	1.1405	87.4	87.4	0.2980	0.2980	87.36	
1,2,3,7,8-PeCDF	27.263	472088	1.57	1.0543	51.1	51.1	0.1254	0.1254	102	
D 13C-2,3,4,7,8-PeCDF	28.762	967288	1.58	1.1253	97.7	97.7	0.3020	0.3020	97.66	
2,3,4,7,8-PeCDF	28.787	465705	1.60	1.0079	47.8	47.8	0.1325	0.1325	95.54	
A F1 PeCDFs	24.666	72	1.55	1.0311	0.0354	0.007573	0.007281	0.007281	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.176	3649	1.55	1.0311	0.4206	0.3838	0.1289	0.3838	0.00	RQ
S Total PeCDF					99.3	99.2	0.1289	0.1289		RQ
D 13C-1,2,3,7,8-PeCDD	29.570	582520	1.58	0.7165	92.4	92.4	0.1287	0.1287	92.38	
1,2,3,7,8-PeCDD	29.595	305999	1.58	1.0465	50.2	50.2	0.2556	0.2556	100	
A Non-2,3,7,8-sub-PeCDD	28.536						0.2556	0.2556		
S Total PeCDD					50.2	50.2	0.2556	0.2556		
D 13C-1,2,3,4,7,8-HxCDF	34.922	857555	0.54	0.9648	111.3	111.3	0.3425	0.3425	111	
1,2,3,4,7,8-HxCDF	34.938	499173	1.30	1.1474	50.7	50.7	0.1885	0.1885	101	
D 13C-1,2,3,6,7,8-HxCDF	35.073	867107	0.50	1.0708	101.4	101.4	0.3086	0.3086	101	
1,2,3,6,7,8-HxCDF	35.099	557239	1.26	1.2178	52.8	52.8	0.1873	0.1873	106	
D 13C-2,3,4,6,7,8-HxCDF	35.899	805042	0.53	1.0413	96.8	96.8	0.3173	0.3173	96.79	
2,3,4,6,7,8-HxCDF	35.916	525498	1.33	1.2145	53.7	53.7	0.1797	0.1797	107	
D 13C-1,2,3,7,8,9-HxCDF	36.800	746273	0.55	0.9731	96.0	96.0	0.3396	0.3396	96.01	
1,2,3,7,8,9-HxCDF	36.808	489075	1.31	1.2401	52.8	52.8	0.1691	0.1691	106	
A Non-2,3,7,8-sub-HxCDF	35.073						0.1808	0.1808		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					210.1	210.1	0.1812	0.1812		
* 13C-1,2,3,7,8,9-HxCDD	36.598	798781	1.28	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.109	626230	1.27	0.7587	103.3	103.3	0.1789	0.1789	103	
1,2,3,4,7,8-HxCDD	36.126	304605	1.24	1.0608	45.9	45.9	0.0786	0.0786	91.71	
D 13C-1,2,3,6,7,8-HxCDD	36.227	727407	1.24	0.8593	106.0	106.0	0.1580	0.1580	106	
1,2,3,6,7,8-HxCDD	36.244	327966	1.26	0.9933	45.4	45.4	0.0820	0.0820	90.78	
1,2,3,7,8,9-HxCDD	36.606	350583	1.24	1.1094	46.7	46.7	0.0743	0.0743	93.38	
A Non-2,3,7,8-sub-HxCDD	35.427						0.0781	0.0781		
S Total HxCDD					137.9	137.9	0.0783	0.0783		
D 13C-1,2,3,4,6,7,8-HpCDF	38.614	631083	0.46	0.7359	107.4	107.4	0.3595	0.3595	107	
1,2,3,4,6,7,8-HpCDF	38.622	425207	1.05	1.4421	46.7	46.7	0.1807	0.1807	93.45	
D 13C-1,2,3,4,7,8,9-HpCDF	39.869	619112	0.44	0.6854	113.1	113.1	0.3861	0.3861	113	
1,2,3,4,7,8,9-HpCDF	39.877	390127	1.03	1.3092	48.1	48.1	0.1991	0.1991	96.27	
A Non-2,3,7,8-sub-HpCDF	39.253						0.1894	0.1894		
S Total HpCDF					94.9	94.9	0.1899	0.1899		
D 13C-1,2,3,4,6,7,8-HpCDD	39.557	609233	1.02	0.6745	113.1	113.1	0.2887	0.2887	113	
1,2,3,4,6,7,8-HpCDD	39.574	308551	1.04	1.0503	48.2	48.2	0.1086	0.1086	96.44	
A Non-2,3,7,8-sub-HpCDD	39.253	2712	1.04	1.0503	0.4815	0.4238	0.1086	0.4238	0.00	RQ
S Total HpCDD					48.7	48.6	0.1086	0.1086		RQ
D 13C-OCDD	42.064	1023273	0.90	0.5446	235.2	235.2	0.2892	0.2892	118	
OCDF	42.157	733525	0.95	1.3168	108.9	108.9	0.1126	0.1126	109	
OCDD	42.073	518459	0.87	1.0620	95.4	95.4	0.1218	0.1218	95.42	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 14:46:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:38:43

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.350	21.350	0		392365	50129	68	170	737		a
333.9338	21.359	21.350	1		487779	63734	30	75	2124	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.395	20.395	0	0.955	557813	78278	117	292	669		
317.9389	20.387	20.395	-1	0.955	690875	94571	94	235	1006	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.421	20.421	0	1.001	59271	8014	5	12	1603		
305.8987	20.421	20.421	0	1.001	71821	9716	9	22	1080	0.83(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.717	19.885	-70	0.918	165	55	5	12	11		
305.8987	18.760	19.885	-67	0.920	328	106	9	22	12	0.50(0.65-0.89)	
	Empc Correction				214	71	9	22	8		
303.9016	19.724	19.885	-10	0.967	539	104	5	12	21		
	Empc Correction				415	97	5	12	19		
305.8987	19.689	19.885	-12	0.965	540	127	9	22	14	1.00(0.65-0.89)	
303.9016	20.696	19.885	49	1.015	334	82	5	12	16		
305.8987	20.696	19.885	49	1.015	398	183	9	22	20	0.84(0.65-0.89)	
303.9016	20.808	19.885	55	1.020	210	86	5	12	17		
305.8987	20.757	19.885	52	1.018	431	109	9	22	12	0.49(0.65-0.89)	
	Empc Correction				272	111	9	22	12		
13C-2,3,7,8-TCDD											
331.9368	21.746	21.746	0	1.019	380761	50135	68	170	737		
333.9338	21.737	21.746	-1	1.018	478903	62607	30	75	2087	0.80(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.754	21.754	0	1.000	38393	4783	10	25	478		M
321.8936	21.772	21.754	1	1.001	50372	6262	4	10	1566	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											
327.8847	21.772	21.772	0	1.020	88098	11715	7	17	1674		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.727						10	25			
321.8936	20.727						4	10			
13C-1,2,3,7,8-PeCDF											
351.9000	27.246	27.246	0	1.276	537093	80730	85	212	950		
353.8970	27.246	27.246	0	1.276	339849	53122	70	175	759	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.263	27.263	0	1.001	288515	42689	34	85	1256		
341.8567	27.263	27.263	0	1.001	183573	26170	37	92	707	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.762	28.762	0	1.347	592788	80849	85	212	951		
353.8970	28.753	28.762	-1	1.347	374500	51726	70	175	739	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.787	28.787	0	1.001	286668	39229	34	85	1154		
341.8567	28.787	28.787	0	1.001	179037	24246	37	92	655	1.60(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.352	24.666	-19	0.894	30	12	1	2	12		
341.8567	24.343	24.666	-19	0.893	194	92	3	7	31	0.15(1.32-1.78)	
	Empc Correction				19	7	3	7	2		
339.8597	25.005	24.666	20	0.918	14	8	1	2	8		
341.8567	25.023	24.666	21	0.918	99	47	3	7	16	0.14(1.32-1.78)	
	Empc Correction				9	5	3	7	2		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.869	28.176	-18	1.023	2568	448	34	85	13		
	Empc Correction				2218	396	34	85	12		
341.8567	27.877	28.176	-18	1.023	1431	256	37	92	7	1.79(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.570	29.570	0	1.385	356741	48302	23	57	2100		
369.8919	29.562	29.570	-1	1.385	225779	30199	19	47	1589	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.595	29.595	0	1.001	187317	23303	59	147	395		
357.8516	29.604	29.595	1	1.001	118682	15295	25	62	612	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.536						59	147			
357.8516	28.536						25	62			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.922	34.922	0	0.954	301743	58450	70	175	835		
385.8610	34.922	34.922	0	0.954	555812	106606	161	402	662	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.938	34.938	0	1.000	282106	53539	84	210	637		
375.8178	34.930	34.938	-1	1.000	217067	41553	59	147	704	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.073	35.073	0	0.958	289842	54372	70	175	777		
385.8610	35.082	35.073	1	0.959	577265	102104	161	402	634	0.50(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDF											
373.8208	35.099	35.099	0	1.001	311153	56921	84	210	678		
375.8178	35.099	35.099	0	1.001	246086	45717	59	147	775	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.899	35.899	0	0.981	279239	55912	70	175	799		
385.8610	35.899	35.899	0	0.981	525803	107690	161	402	669	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.916	35.916	0	1.000	300256	62548	84	210	745		
375.8178	35.916	35.916	0	1.000	225242	47171	59	147	800	1.33(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.800	36.800	0	1.006	263890	60577	70	175	865		
385.8610	36.791	36.800	-1	1.005	482383	109655	161	402	681	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.808	36.808	0	1.000	276925	62991	84	210	750		
375.8178	36.808	36.808	0	1.000	212150	48219	59	147	817	1.31(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						84	210			
375.8178	35.073						59	147			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.598	36.598	0		447919	95381	56	140	1703		
403.8529	36.598	36.598	0		350862	79228	39	97	2031	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.109	36.109	0	0.987	350834	84152	56	140	1503		
403.8529	36.109	36.109	0	0.987	275396	65709	39	97	1685	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.126	36.126	0	1.000	168355	39063	26	65	1502		
391.8127	36.126	36.126	0	1.000	136250	30911	24	60	1288	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.227	36.227	0	0.990	402538	84276	56	140	1505		
403.8529	36.227	36.227	0	0.990	324869	69268	39	97	1776	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.244	36.244	0	1.000	182565	37967	26	65	1460		
391.8127	36.236	36.244	-1	1.000	145401	30482	24	60	1270	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.606	36.606	0	1.014	194341	42531	26	65	1636		
391.8127	36.606	36.606	0	1.014	156242	33894	24	60	1412	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.427						26	65			
391.8127	35.427						24	60			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.614	38.614	0	1.055	199982	53427	62	155	862		
419.8220	38.614	38.614	0	1.055	431101	110427	123	307	898	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.622	38.622	0	1.000	218080	55878	91	227	614		
409.7788	38.622	38.622	0	1.000	207127	52397	80	200	655	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.869	39.869	0	1.089	188242	48045	62	155	775		
419.8220	39.869	39.869	0	1.089	430870	115800	123	307	941	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.877	39.877	0	1.000	198124	52467	91	227	577		
409.7788	39.877	39.877	0	1.000	192003	50350	80	200	629	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						91	227			
409.7788	39.253						80	200			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.557	39.557	0	1.081	307328	83776	71	177	1180		
437.8140	39.557	39.557	0	1.081	301905	84577	65	162	1301	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.574	39.574	0	1.000	157219	41341	38	95	1088		
425.7737	39.574	39.574	0	1.000	151332	41049	39	97	1053	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.950	39.253	-18	0.985	1383	343	38	95	9		
425.7737	38.925	39.253	-20	0.984	1698	522	39	97	13	0.81(0.88-1.20)	
	Empc Correction				1329	329	39	97	8		
13C-OCDD											
469.7780	42.064	42.064	0	1.149	483730	114644	56	140	2047		
471.7750	42.064	42.064	0	1.149	539543	128072	54	135	2372	0.90(0.76-1.02)	
OCDF											
441.7428	42.157	42.157	0	1.002	357311	85331	29	72	2942		
443.7399	42.157	42.157	0	1.002	376214	89559	43	107	2083	0.95(0.76-1.02)	
OCDD											
457.7377	42.073	42.073	0	1.000	241071	58376	32	80	1824		
459.7348	42.073	42.073	0	1.000	277388	67400	31	77	2174	0.87(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 14:46:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1248688	172849

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1248688	172849

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.717	165	55	328	106	0.0366	0.50	RQ
18.717	165	55	214	71	0.0281		Empc Correction
19.724	539	104	540	127	0.0800	1.00	RQ
19.724	415	97	540	127	0.0708		Empc Correction
20.696	334	82	398	183	0.0543	0.84	
20.808	210	86	431	109	0.0475	0.49	RQ
20.808	210	86	272	111	0.0357		Empc Correction
Signal Totals:							
	1124	320	1424	492			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2945	852				0.74	RQ
	2548	812					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2183 = (2945 * 100.000) / (1248688 * 1.080)
Empc Amount: 0.1889 = (2548 * 100.000) / (1248688 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 14:46:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.666

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	876942	133852
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	967288	132575

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	922115	133213

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.352	30	12	194	92	0.0236	0.15	RQ
24.352	30	12	19	7	0.005154		Empc Correction
25.005	14	8	99	47	0.0119	0.14	RnQ
25.005	14	8	9	5	0.002419		Empc Correction
Signal Totals:							
	44	20	28	12			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	337	159				0.15	RQ
	72	32					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0354 = (337 * 100.000) / (922115 * 1.031)
Empc Amount: 0.007573 = (72 * 100.000) / (922115 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	19-Aug-2021 14:46:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	876942	133852
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	967288	132575

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	922115	133213

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.869	2568	448	1431	256	0.4206	1.79	RnQ
27.869	2218	396	1431	256	0.3838		Empc Correction
Signal Totals:							
	2218	396	1431	256			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3999	704				1.79	RQ
	3649	652					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.4206 = (3999 * 100.000) / (922115 * 1.031)

Empc Amount: 0.3838 = (3649 * 100.000) / (922115 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 14:46:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.253

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	609233	168353

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	609233	168353

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.950	1383	343	1698	522	0.4815	0.81	RnQ
38.950	1383	343	1329	329	0.4238		Empc Correction
Signal Totals:							
	1383	343	1329	329			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3081	865				0.81	RQ
	2712	672					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4815 = (3081 * 100.000) / (609233 * 1.050)
Empc Amount: 0.4238 = (2712 * 100.000) / (609233 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d				
Injection Date:	19-Aug-2021 14:46:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Not Detected
Expected RT: 21.35

Processing Integration Results

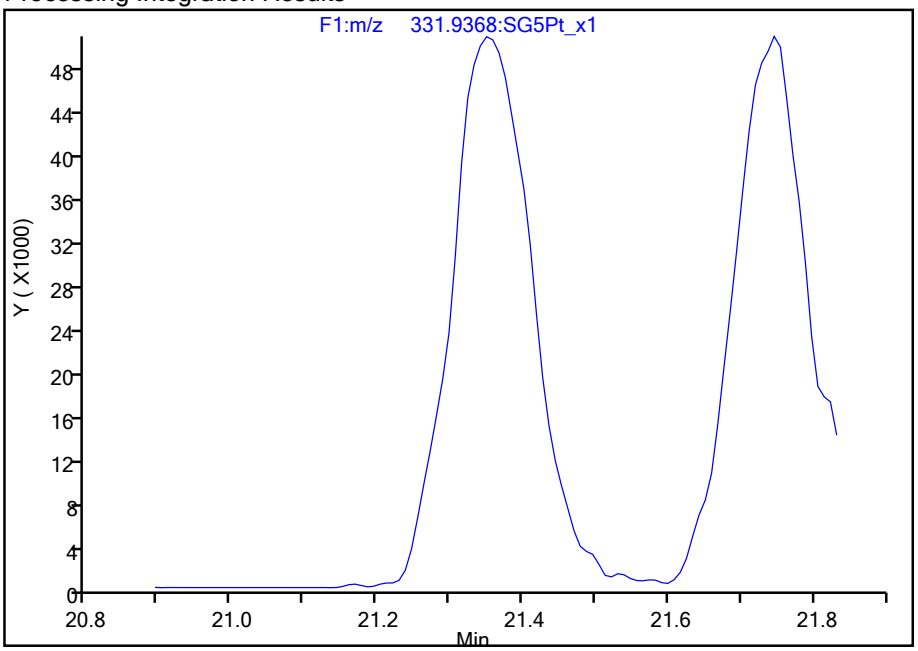

Manual Integration Results

RT: 21.35
Area: 392365
Amount: 100.0000
Amount Units: pg/ul

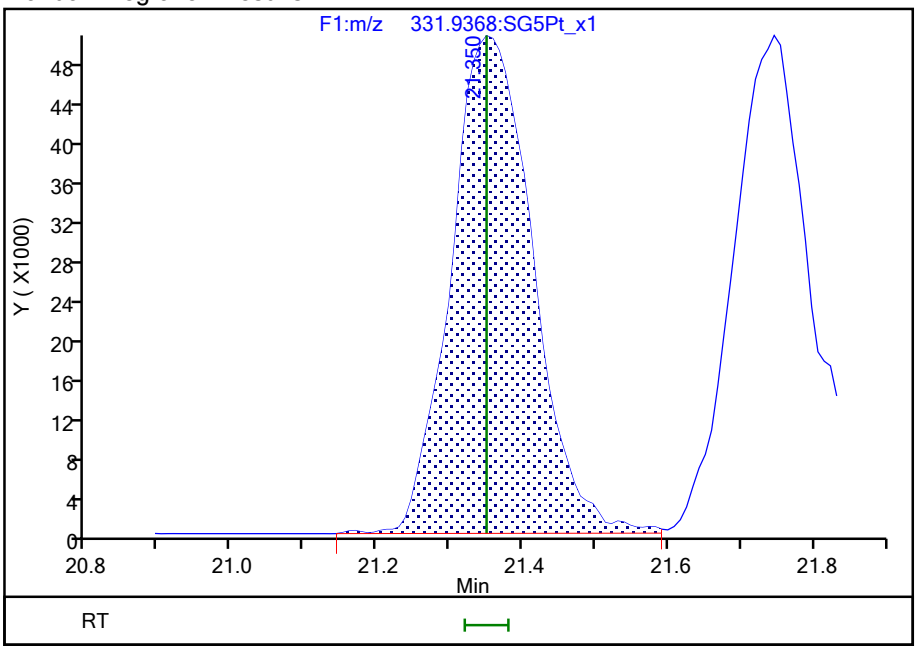

Reviewer: stephensk, 19-Aug-2021 15:37:52
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

786257

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d				
Injection Date:	19-Aug-2021 14:46:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.75
Area: 36392
Amount: 9.385610
Amount Units: pg/ul

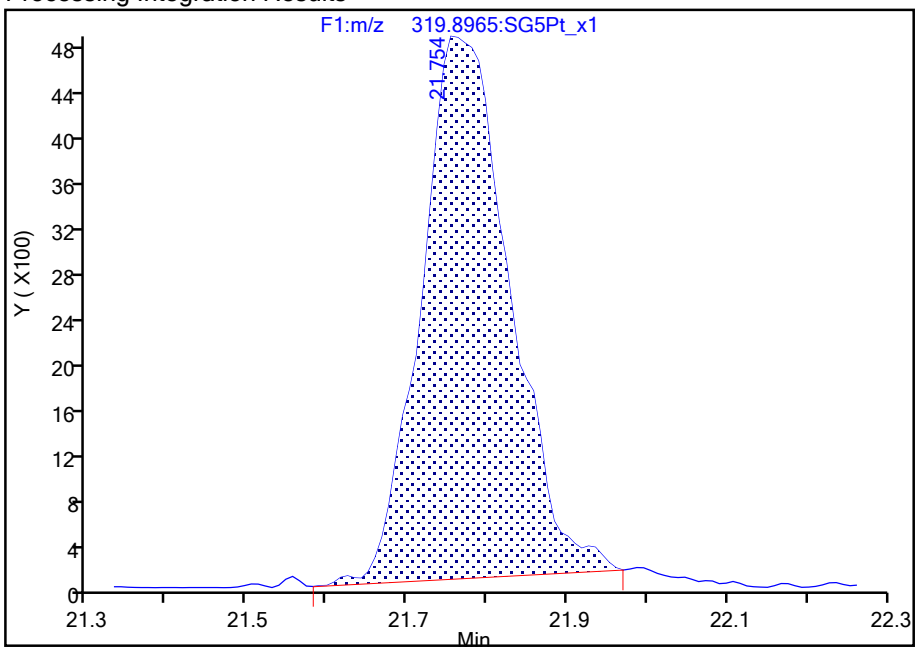

Manual Integration Results

RT: 21.75
Area: 38393
Amount: 9.602066
Amount Units: pg/ul

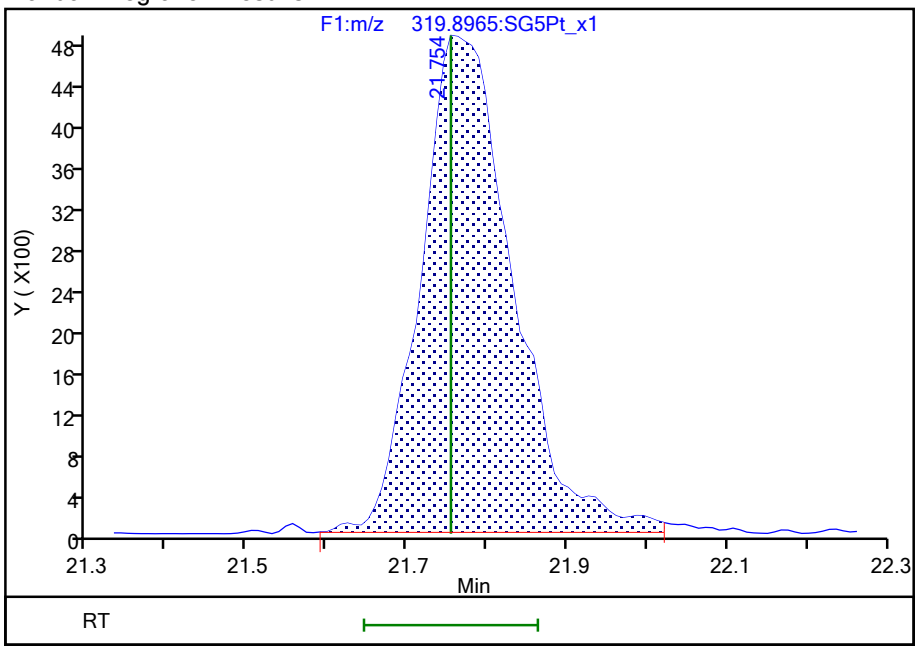

Reviewer: stephensk, 19-Aug-2021 15:38:12

Audit Action: Manually Integrated Audit Reason: Baseline

786258

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

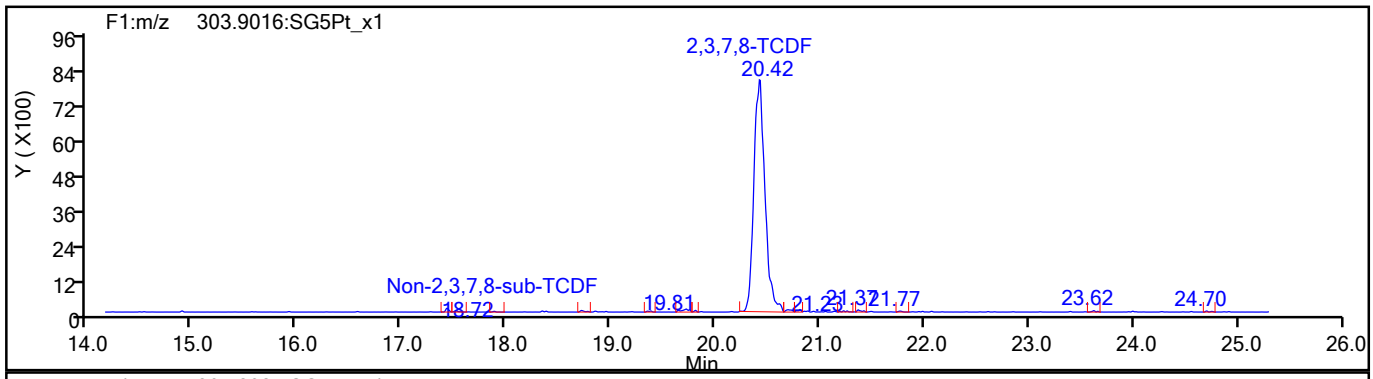

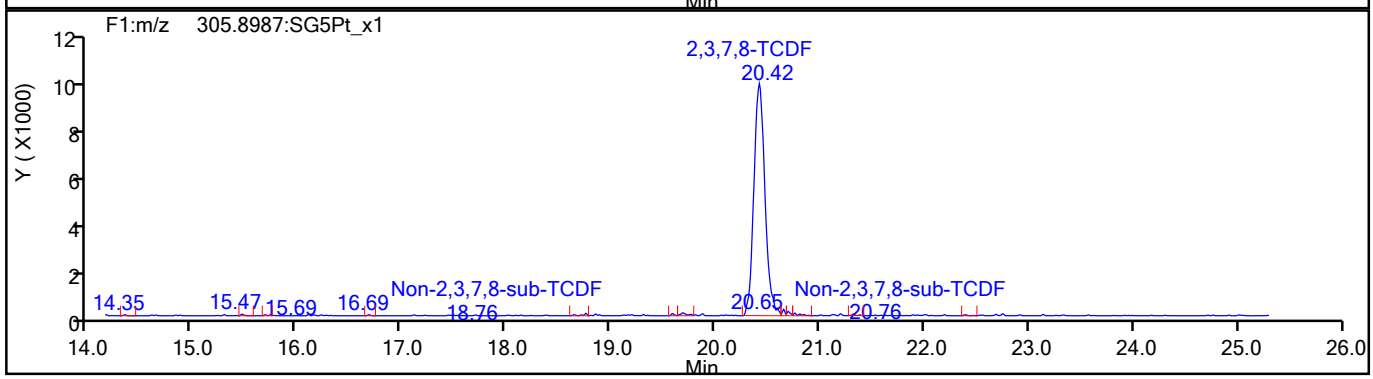

TCDF Standards

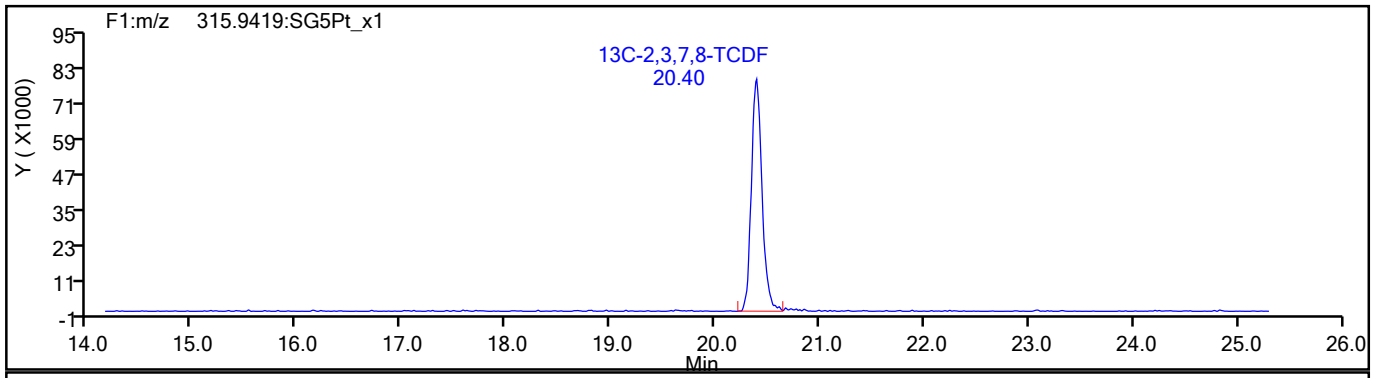

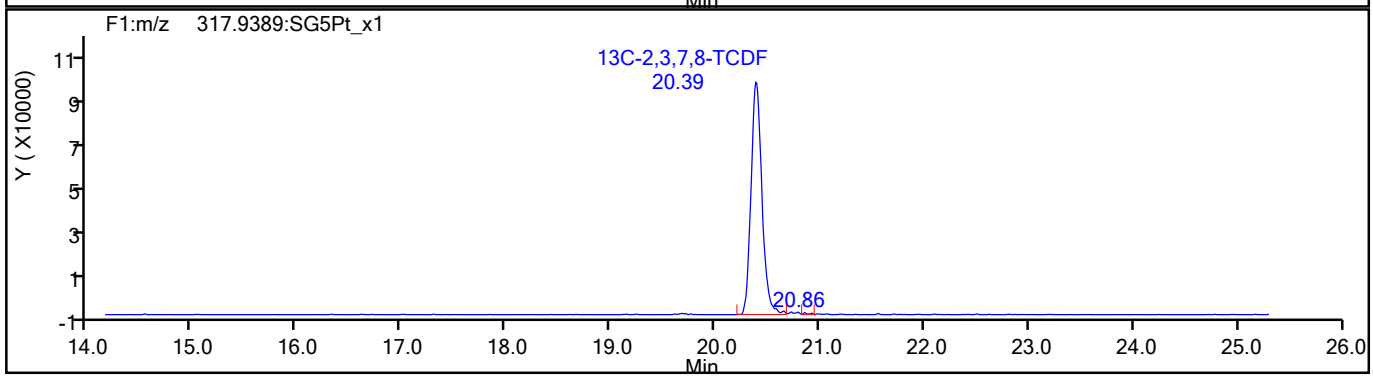

786259

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

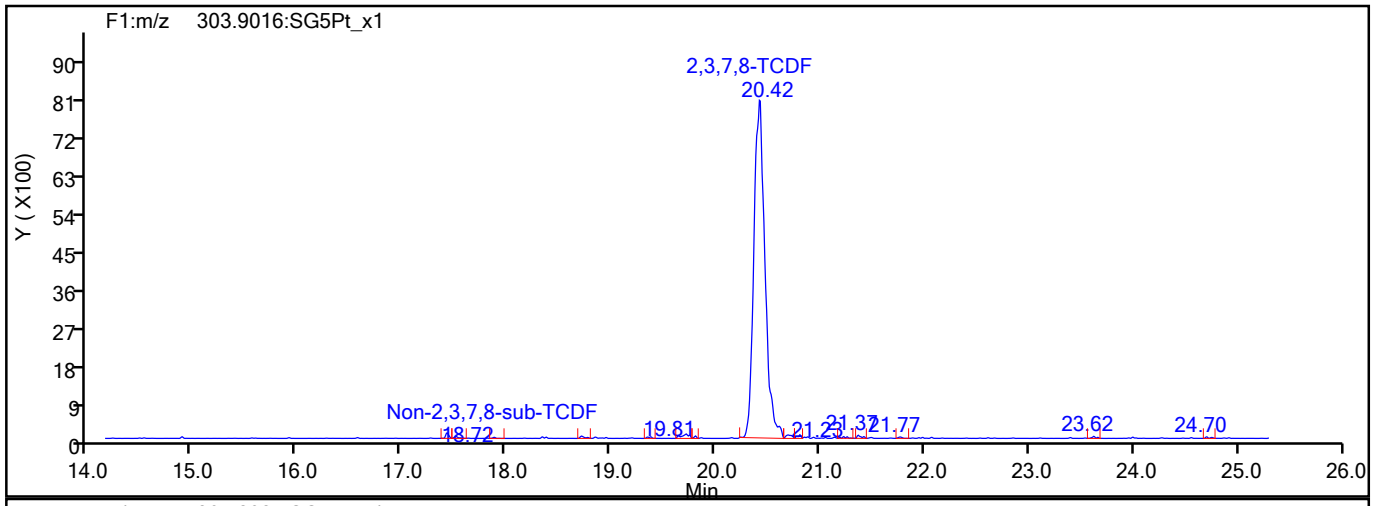

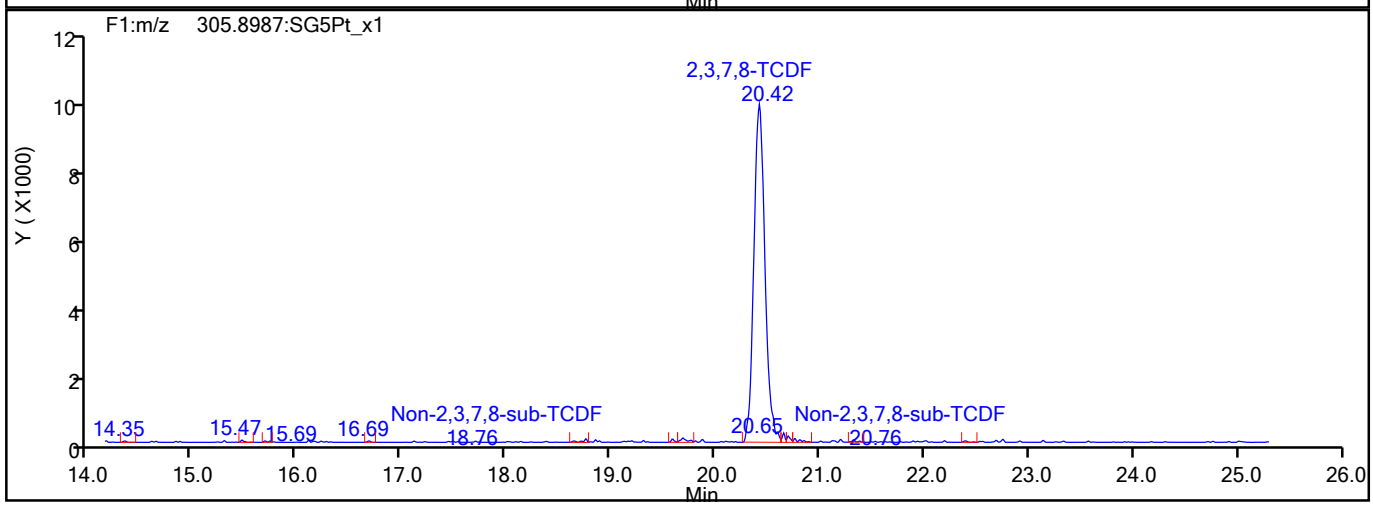

TCDF Interference Mass

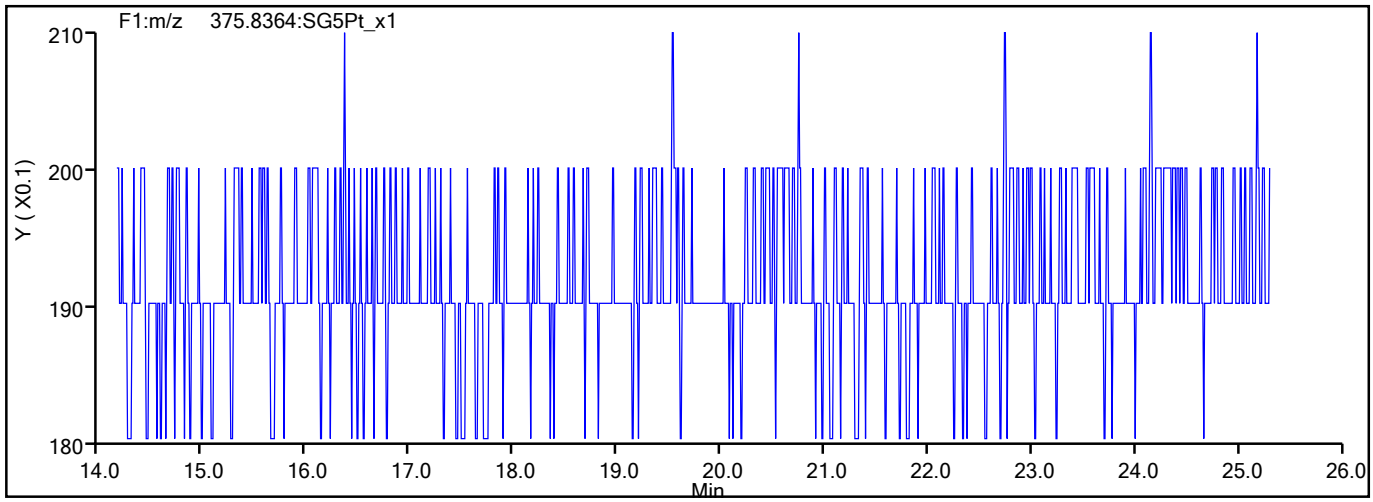

786260

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

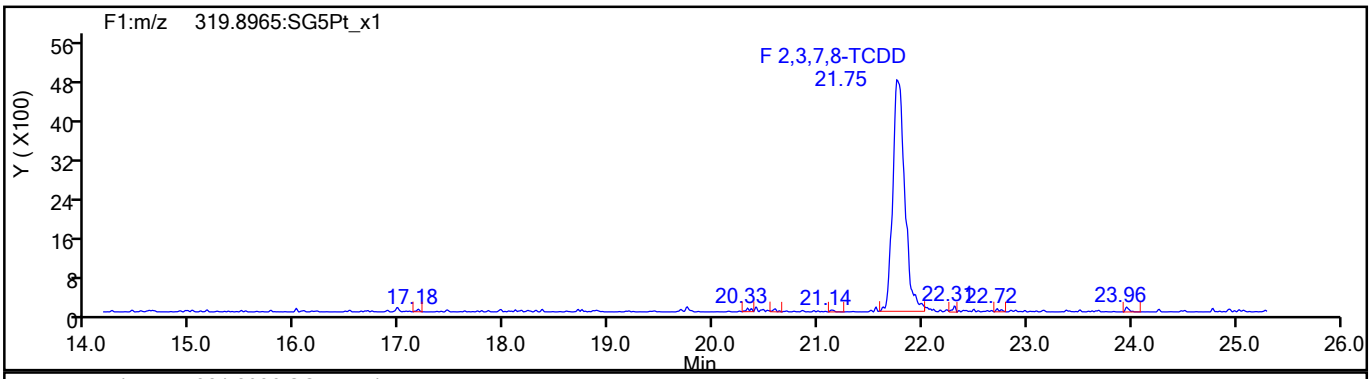

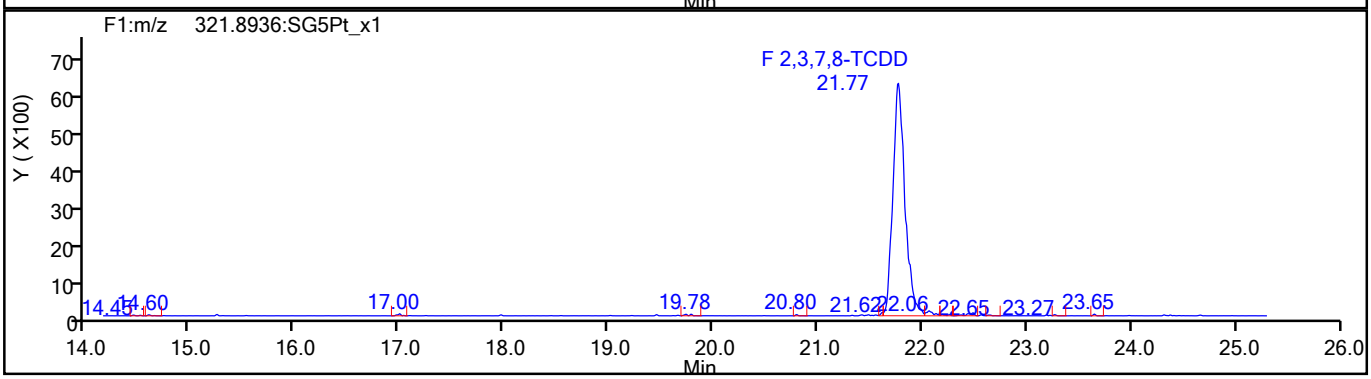

TCDD Standards

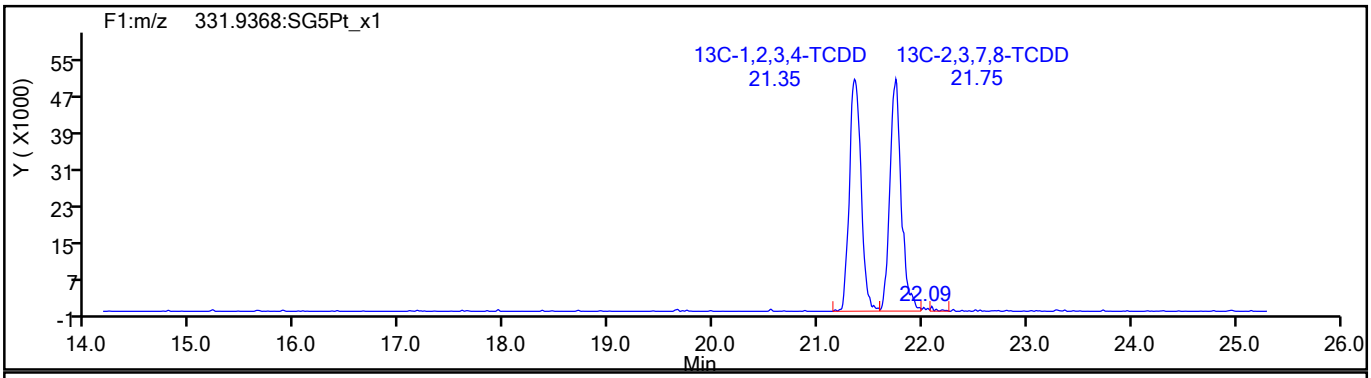

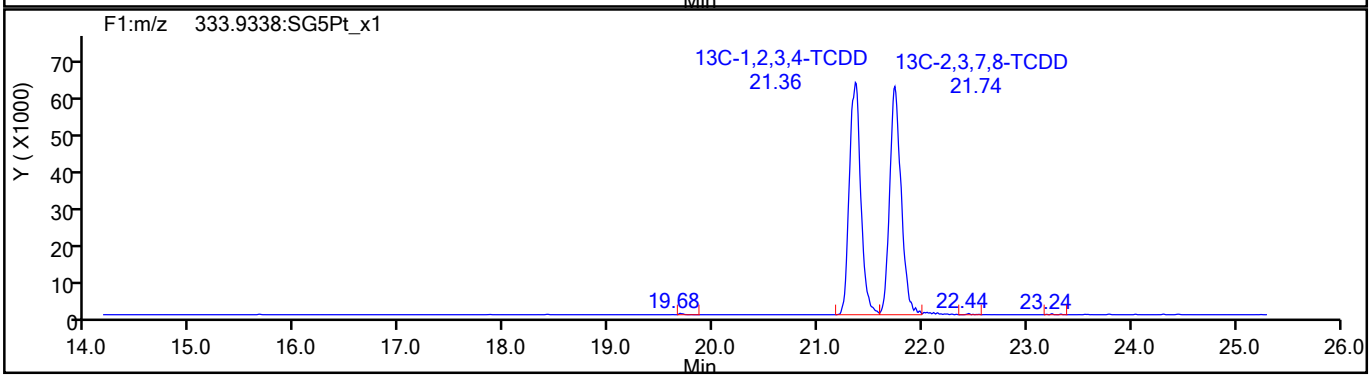

786261

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

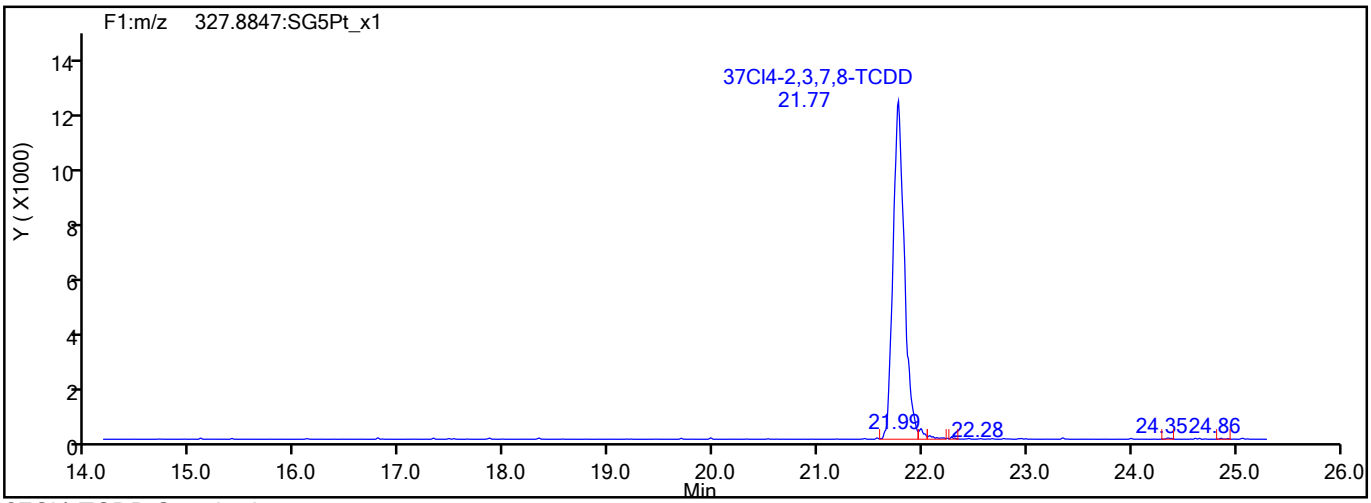

37Cl4-TCDD Standards

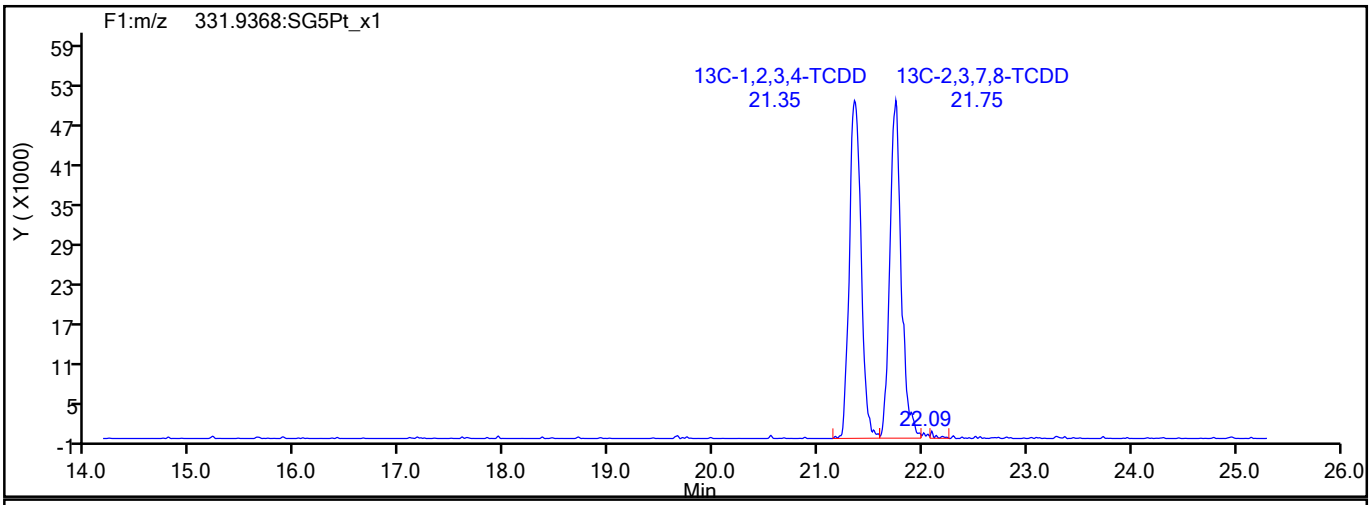

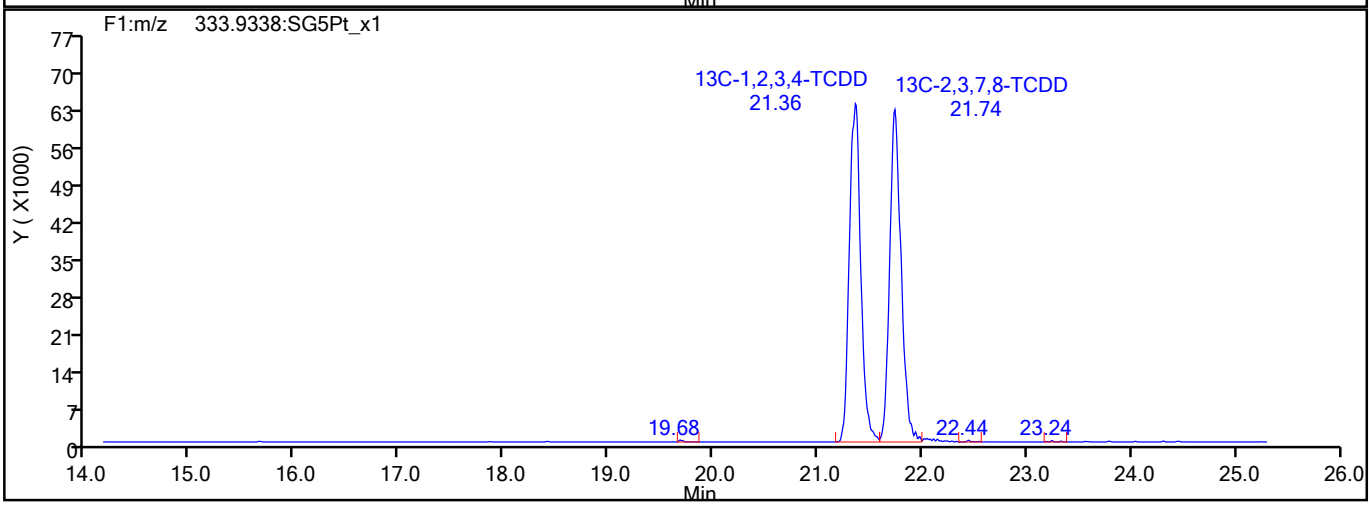

786262

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

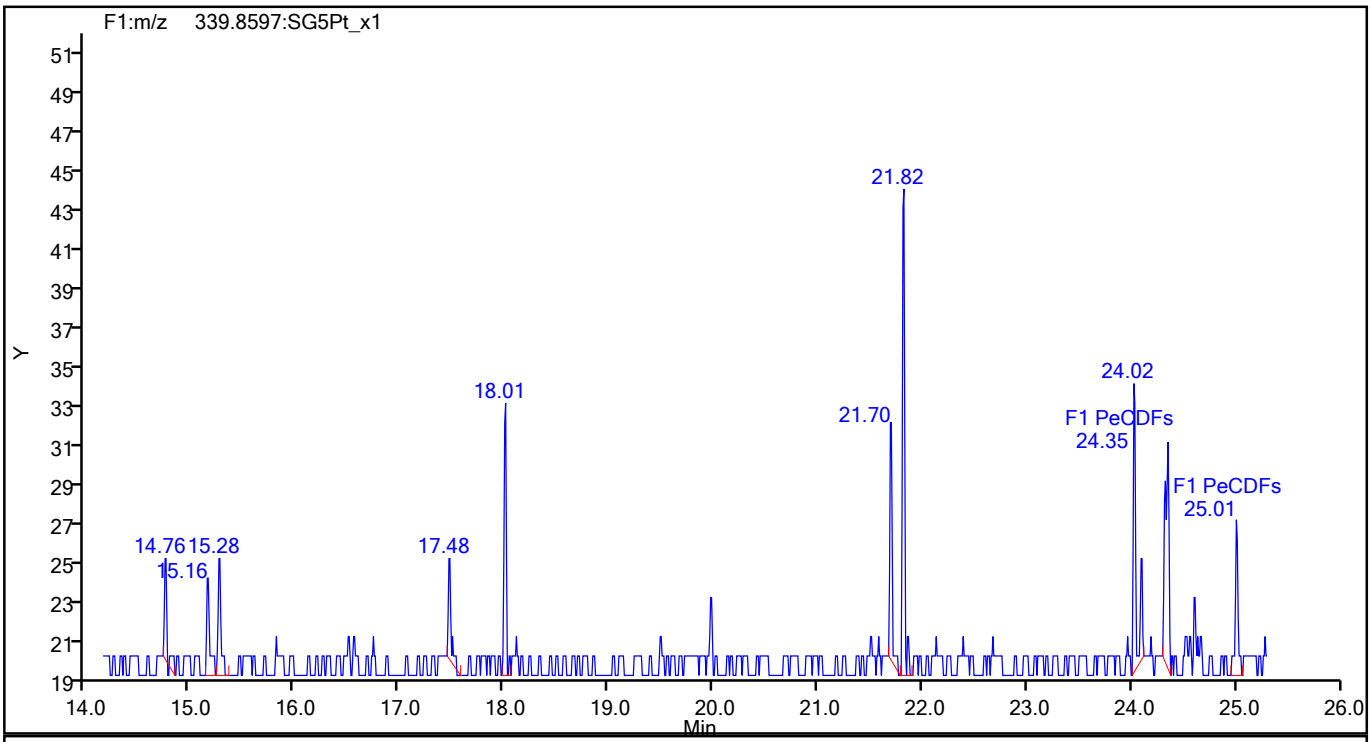

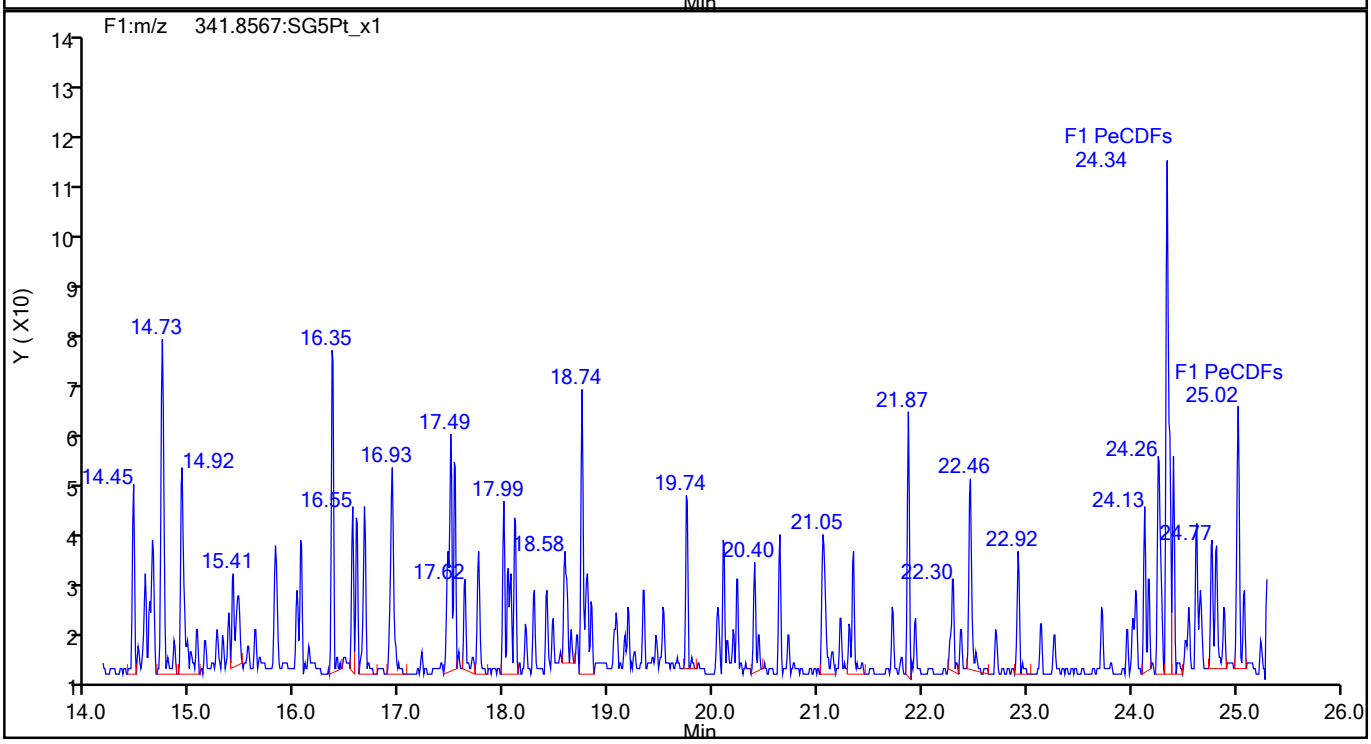

786263

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

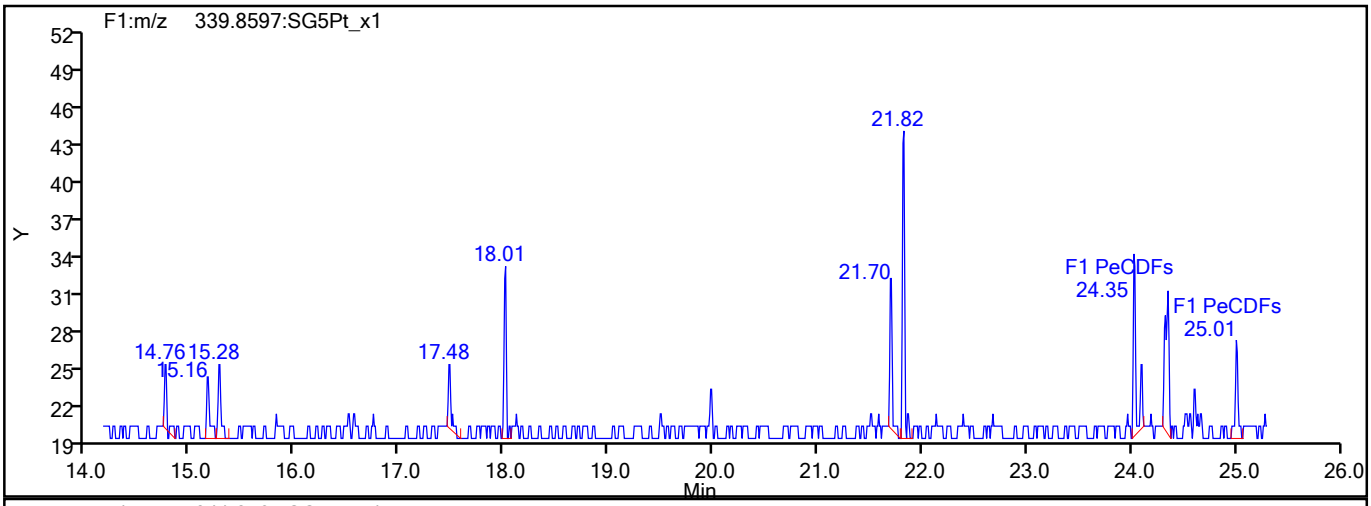

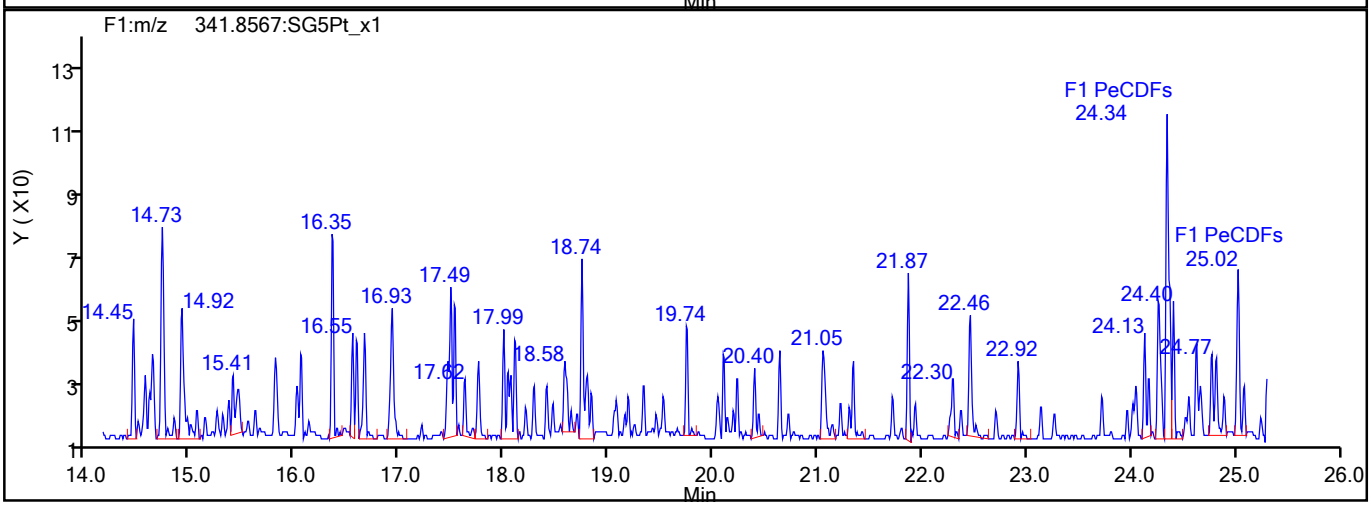

F1 PeCDFs Interference Mass

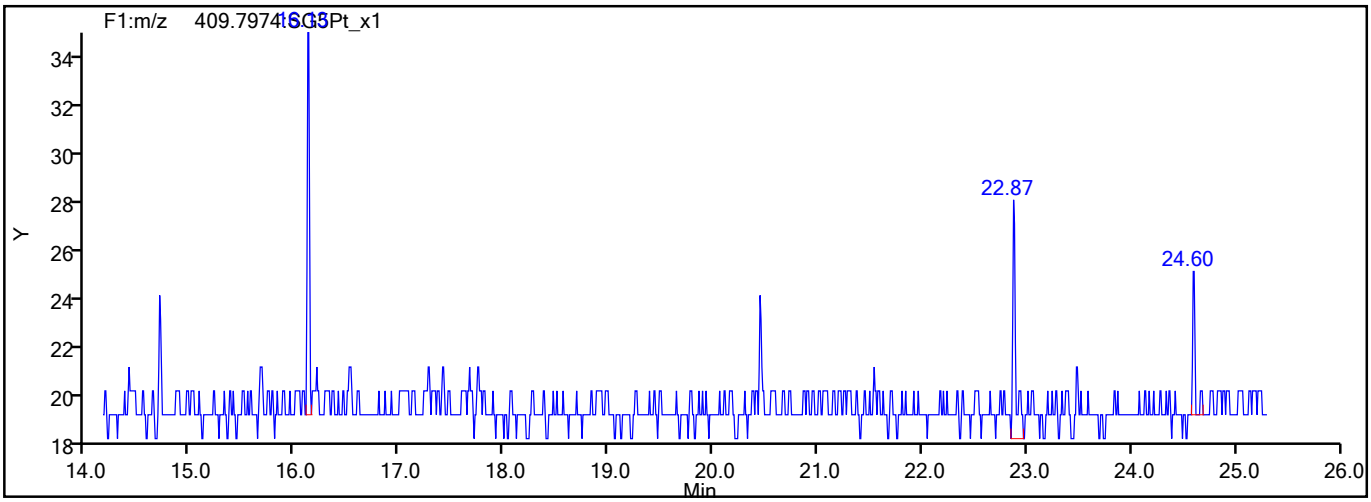

786264

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

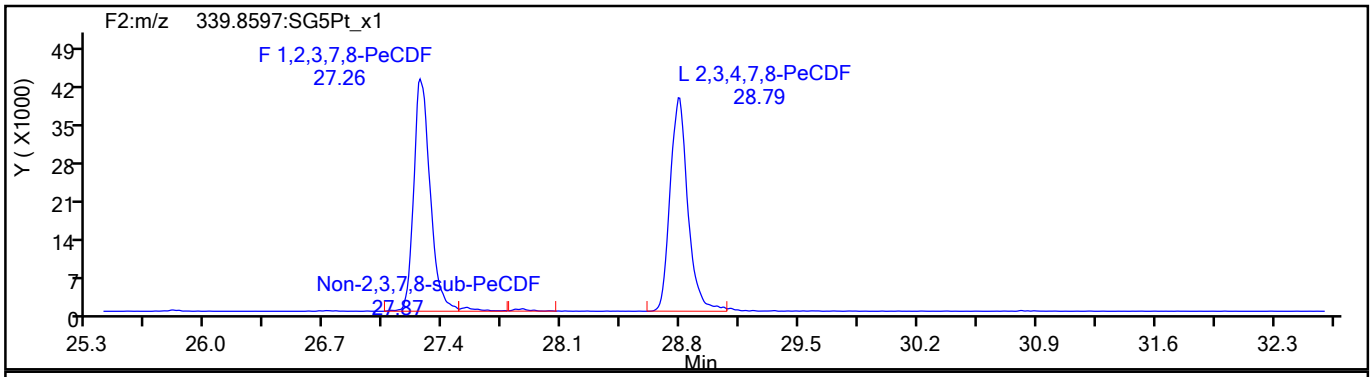

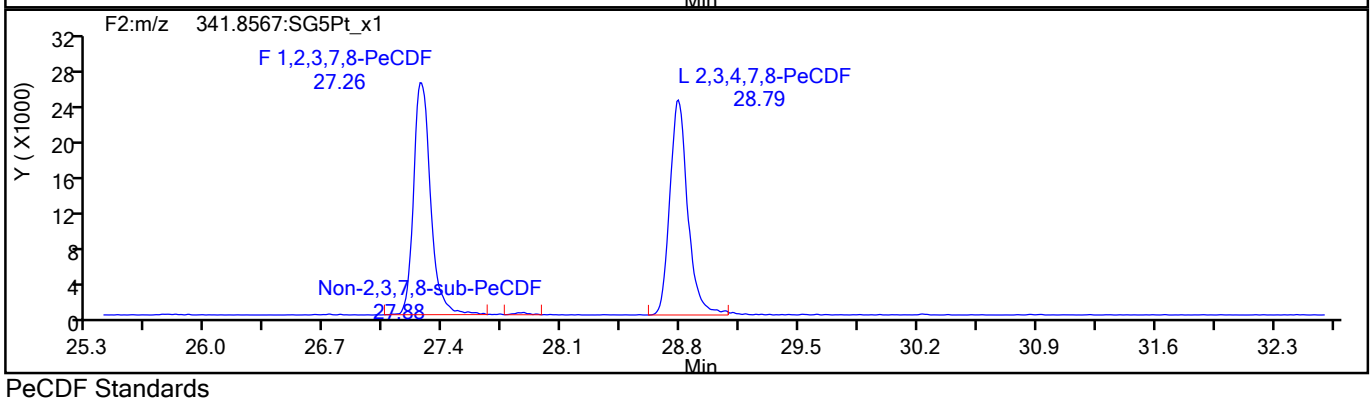

PeCDF Standards

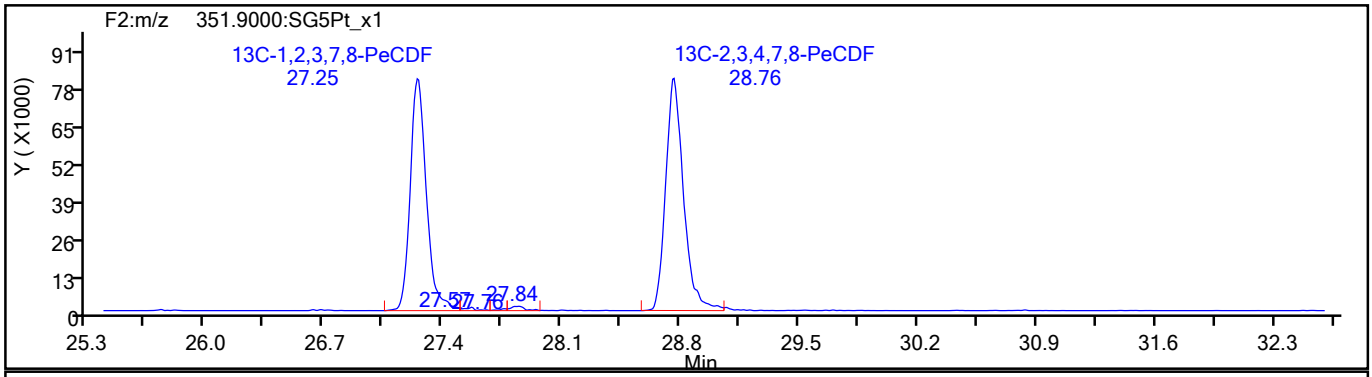

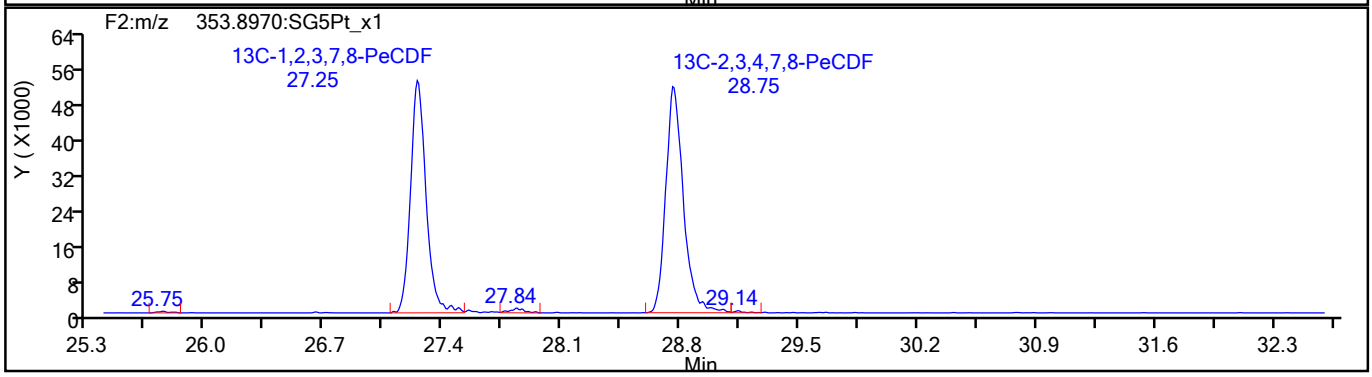

786265

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

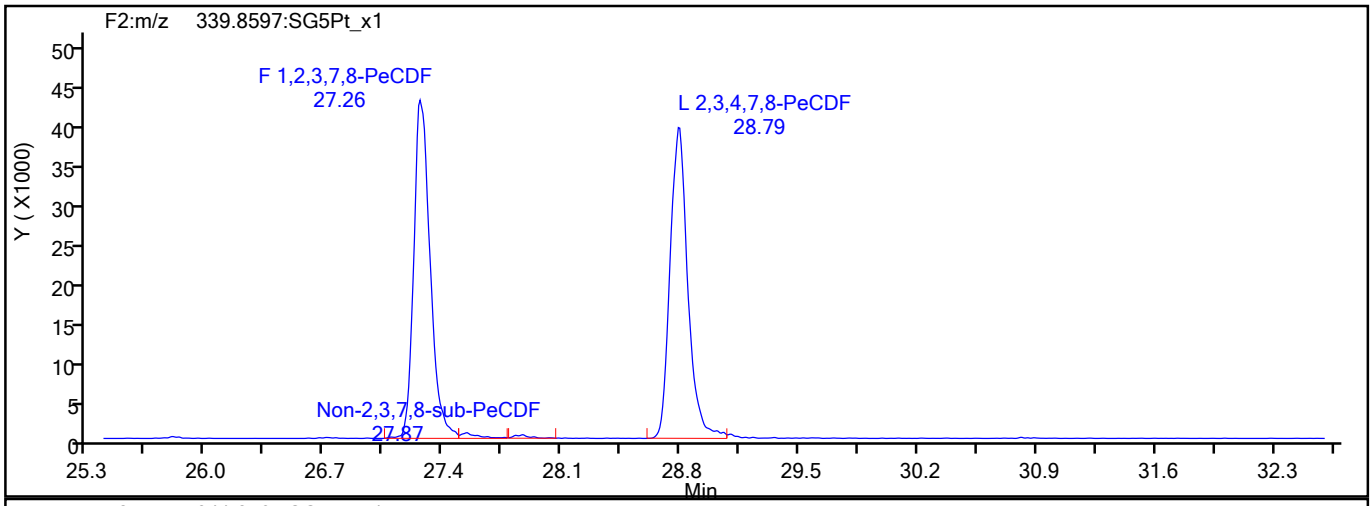

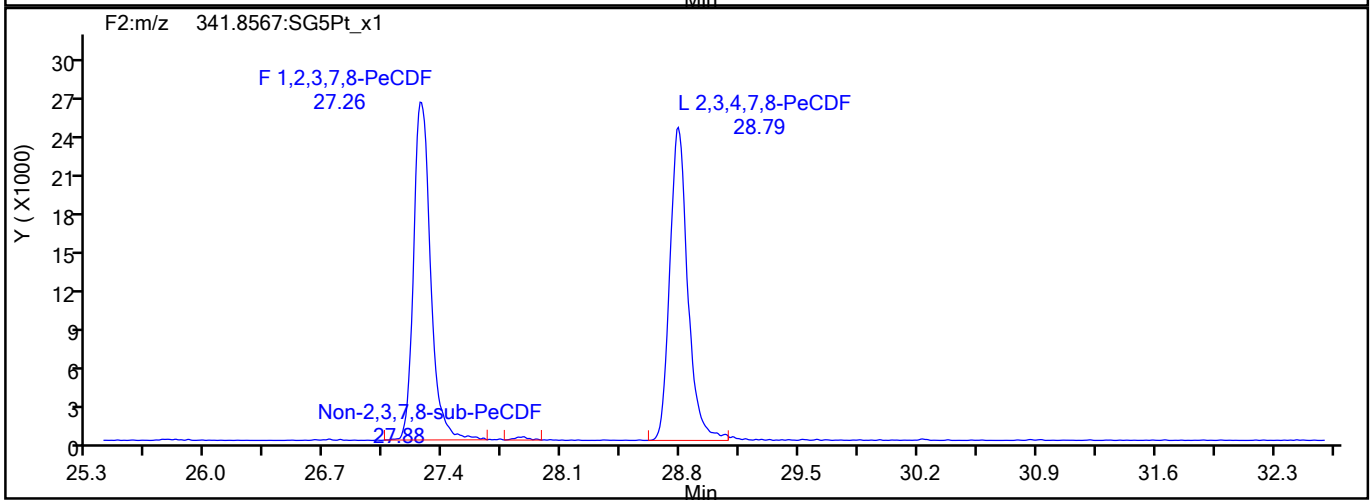

PeCDF Interference Mass

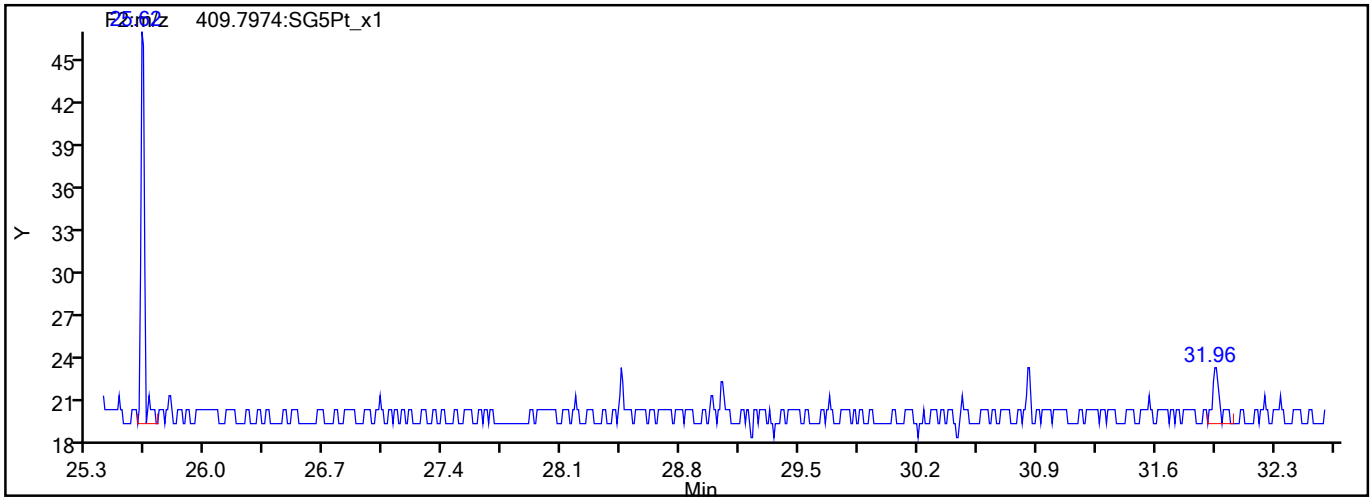

786266

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

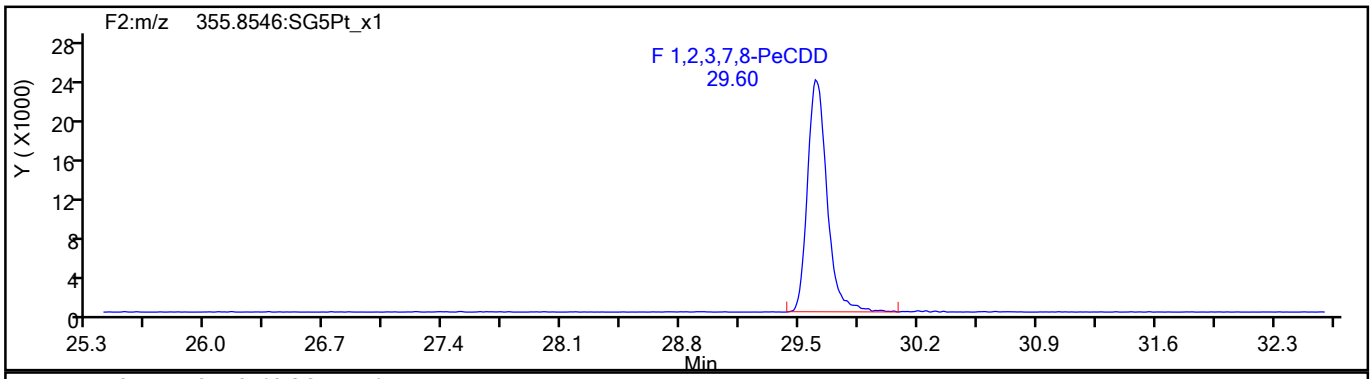

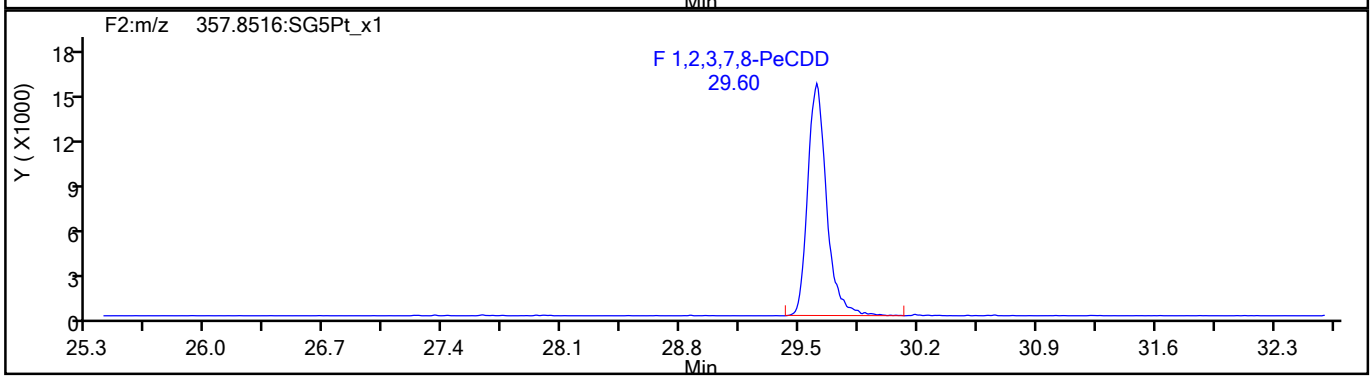

PeCDD Standards

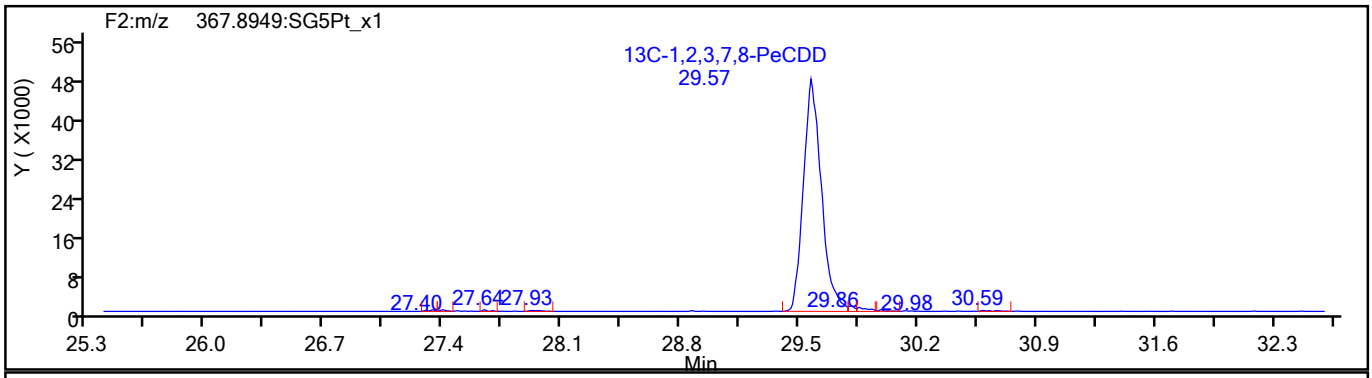

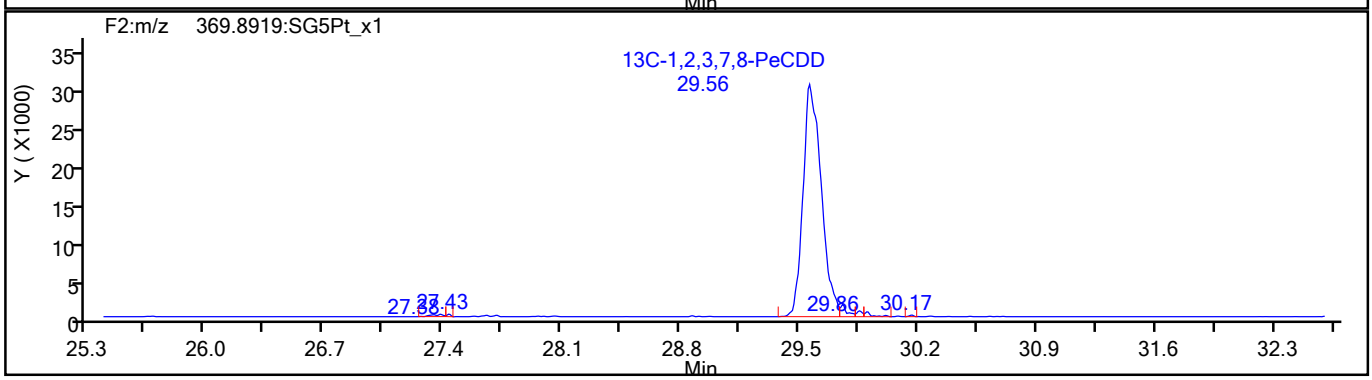

786267

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

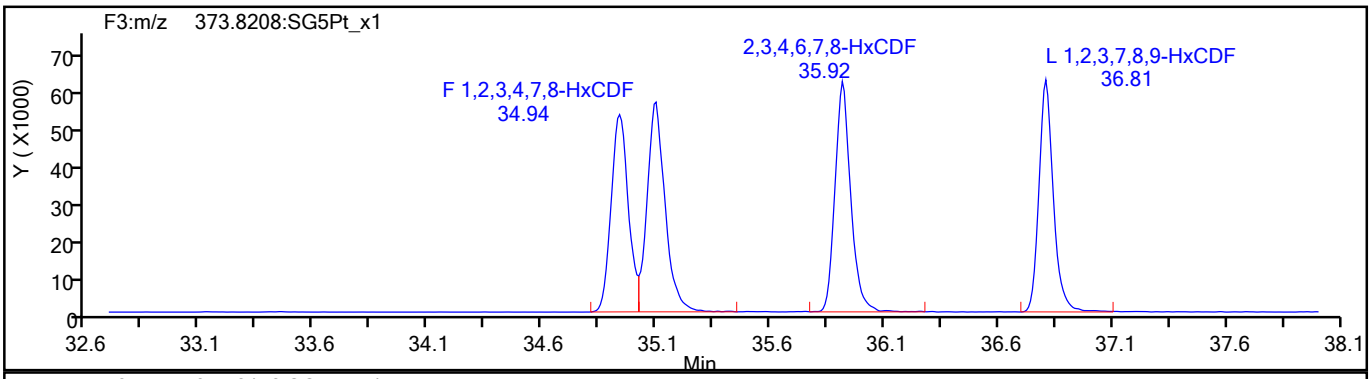

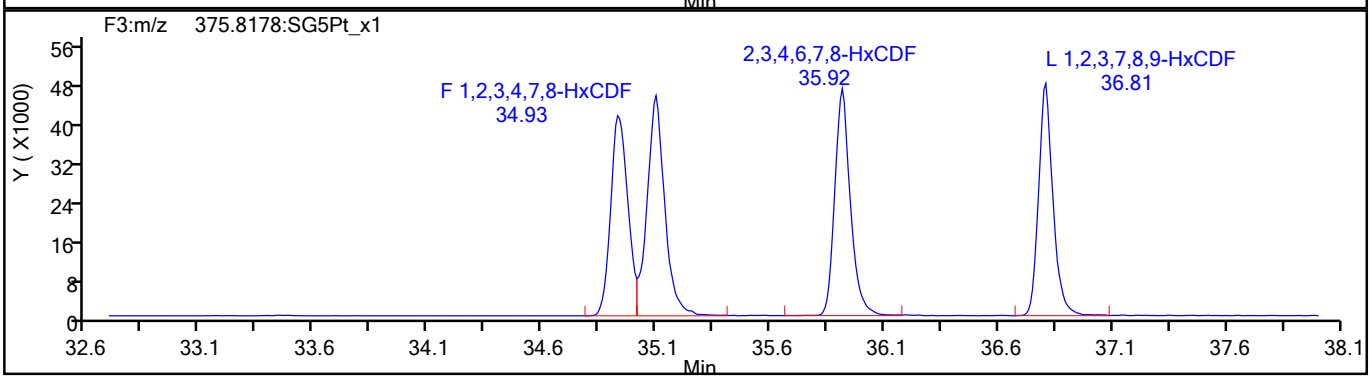

HxCDF Standards

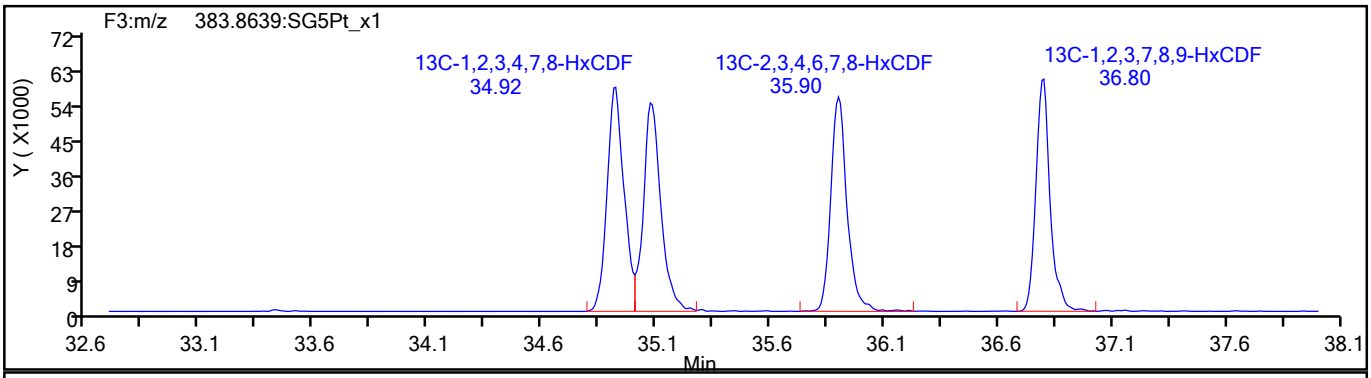

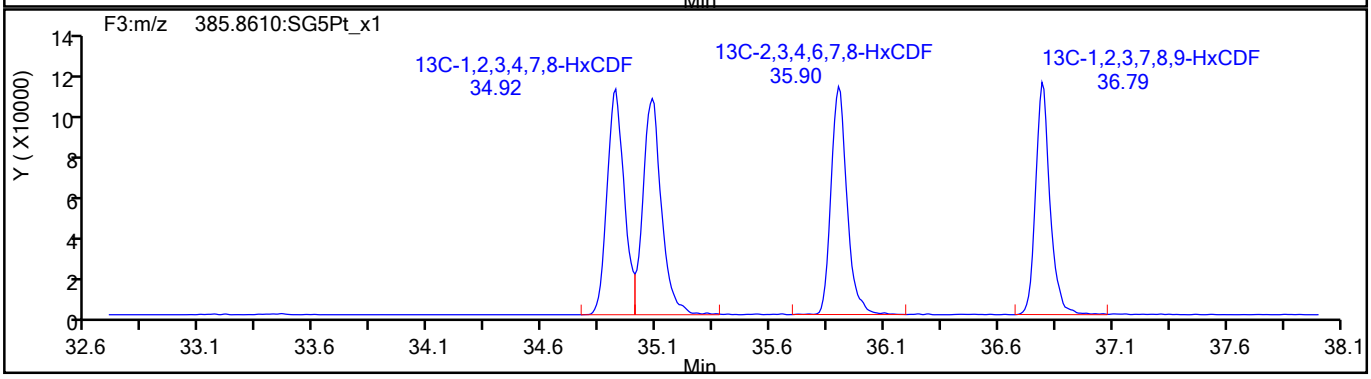

786268

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

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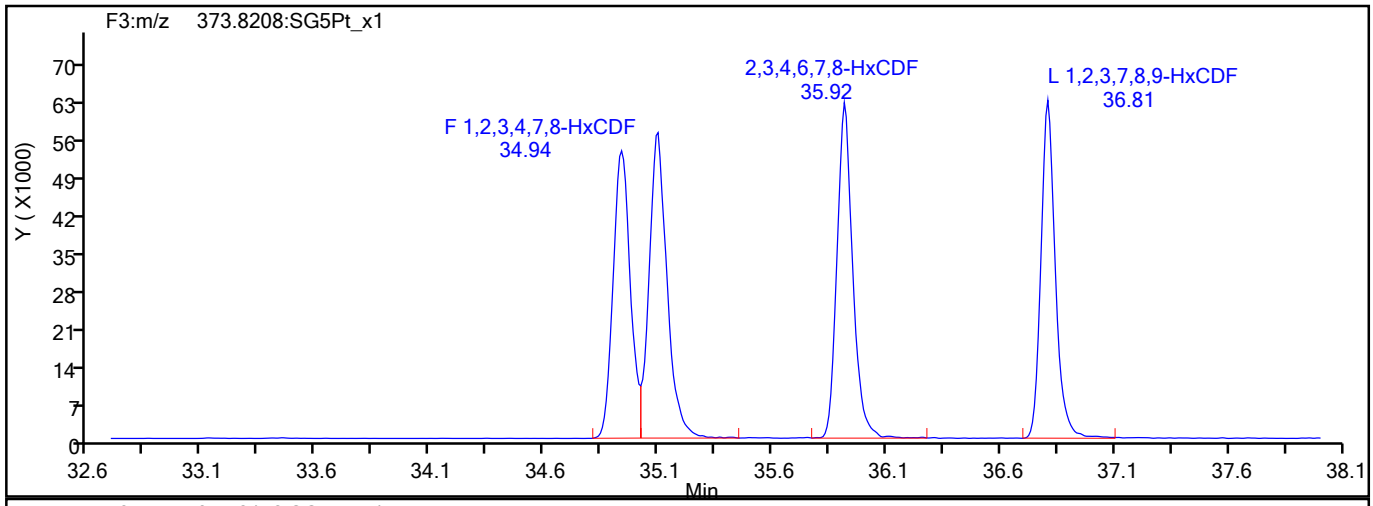

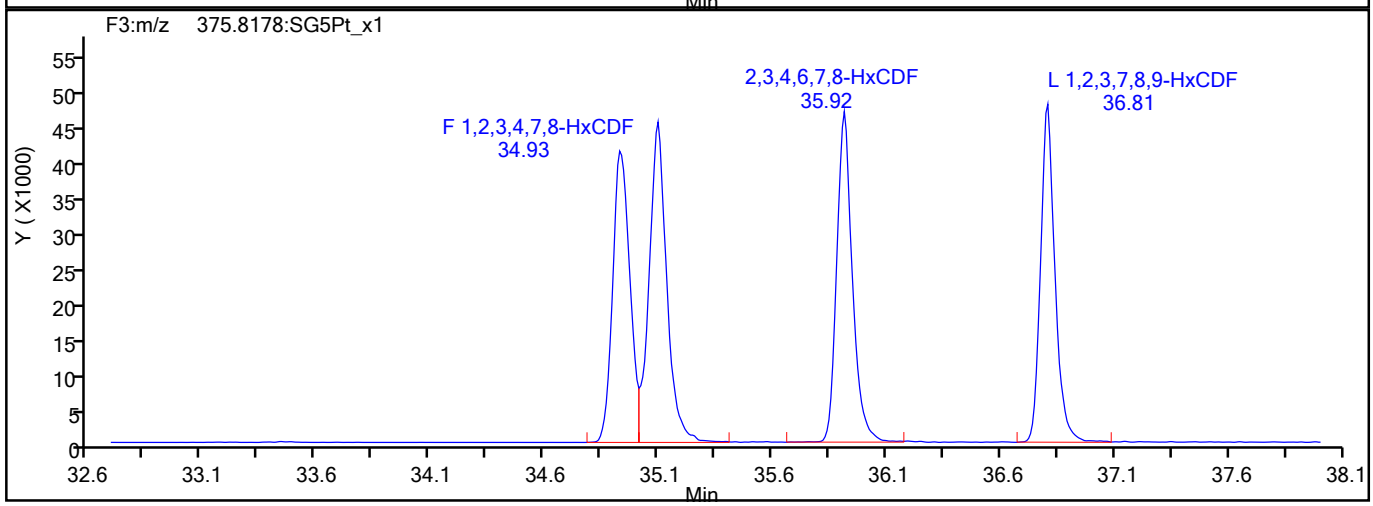

HxCDF Interference Mass

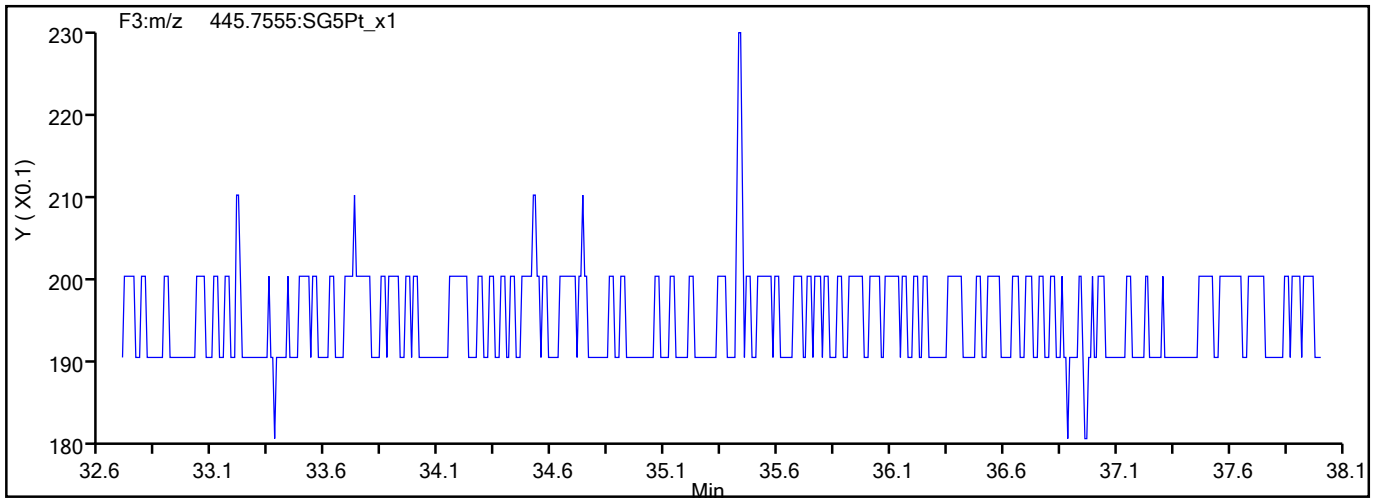

786269

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

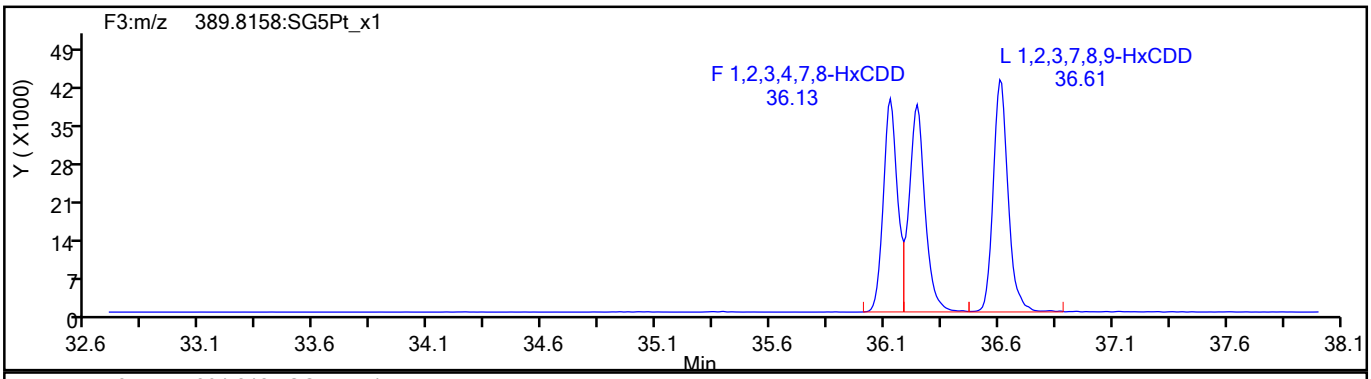

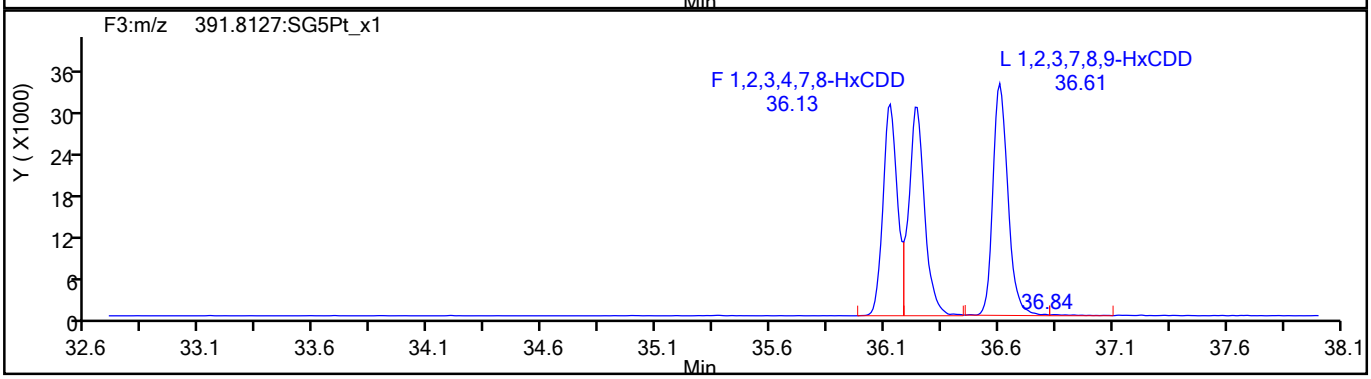

HxCDD Standards

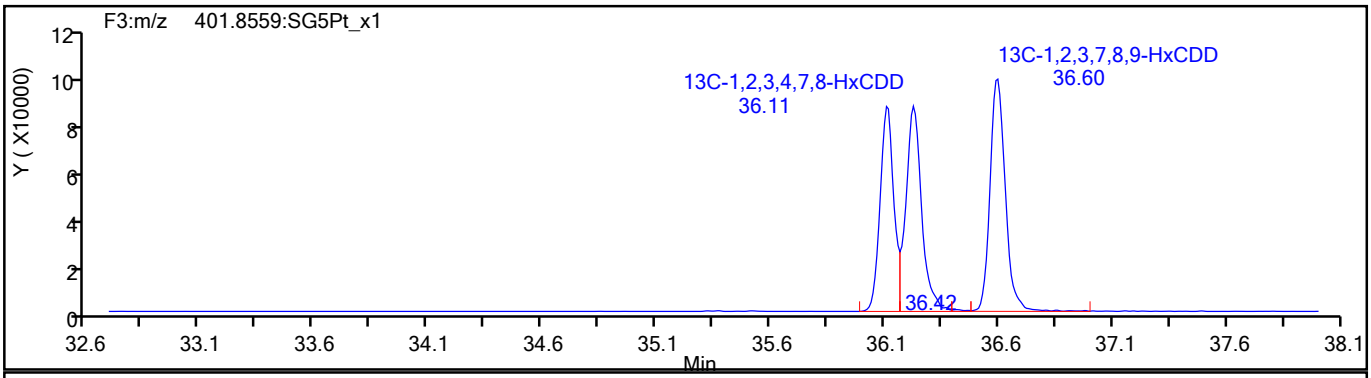

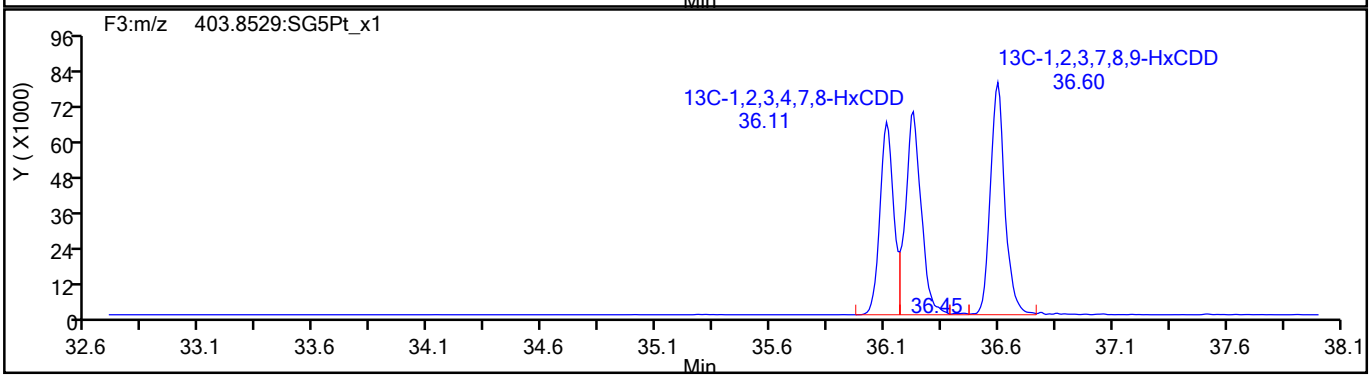

786270

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

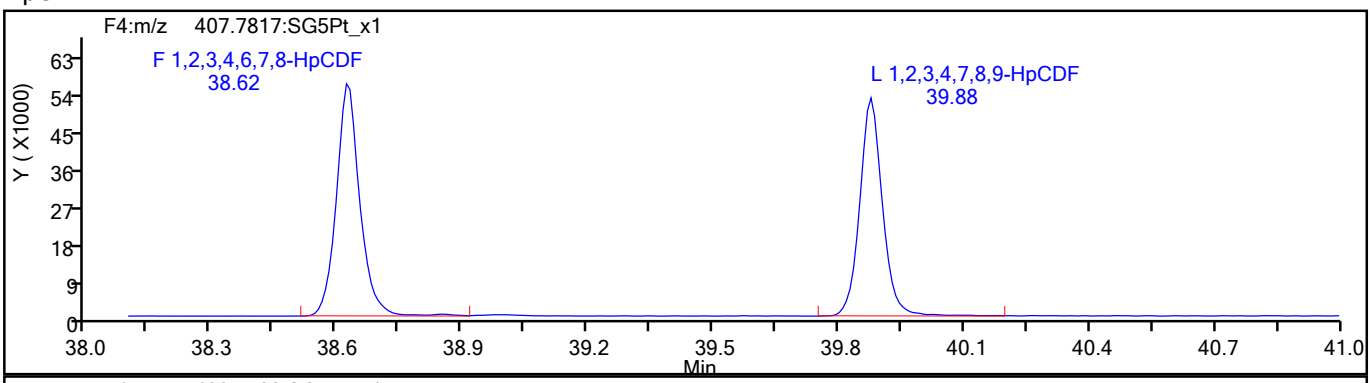

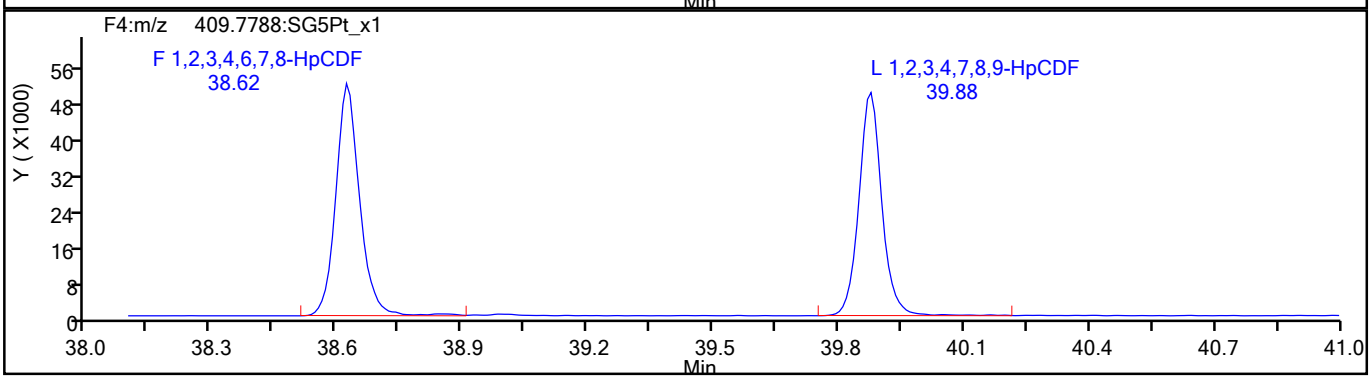

HpCDF Standards

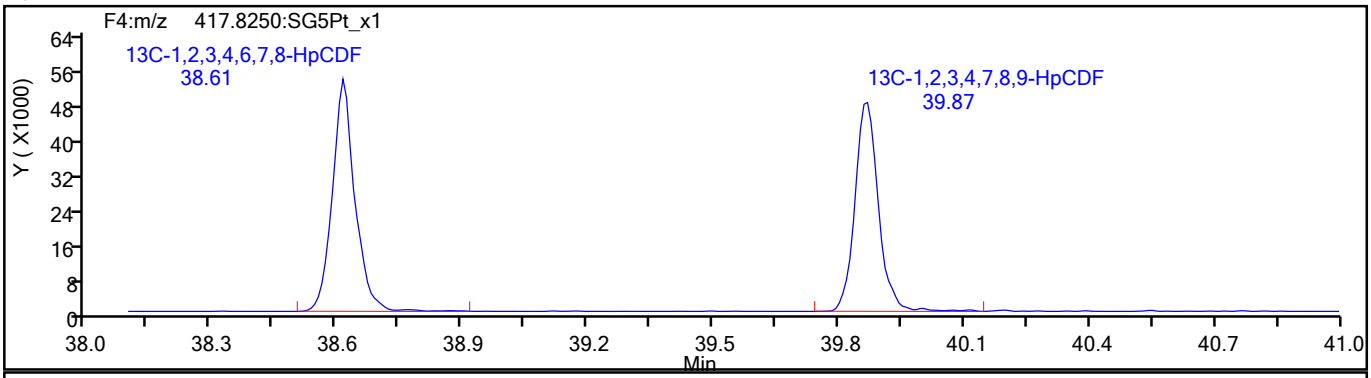

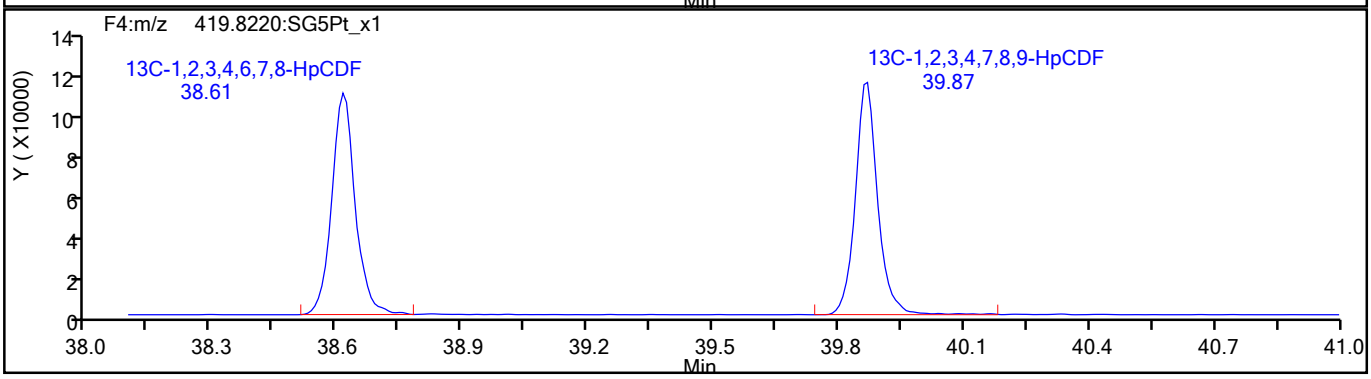

786271

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

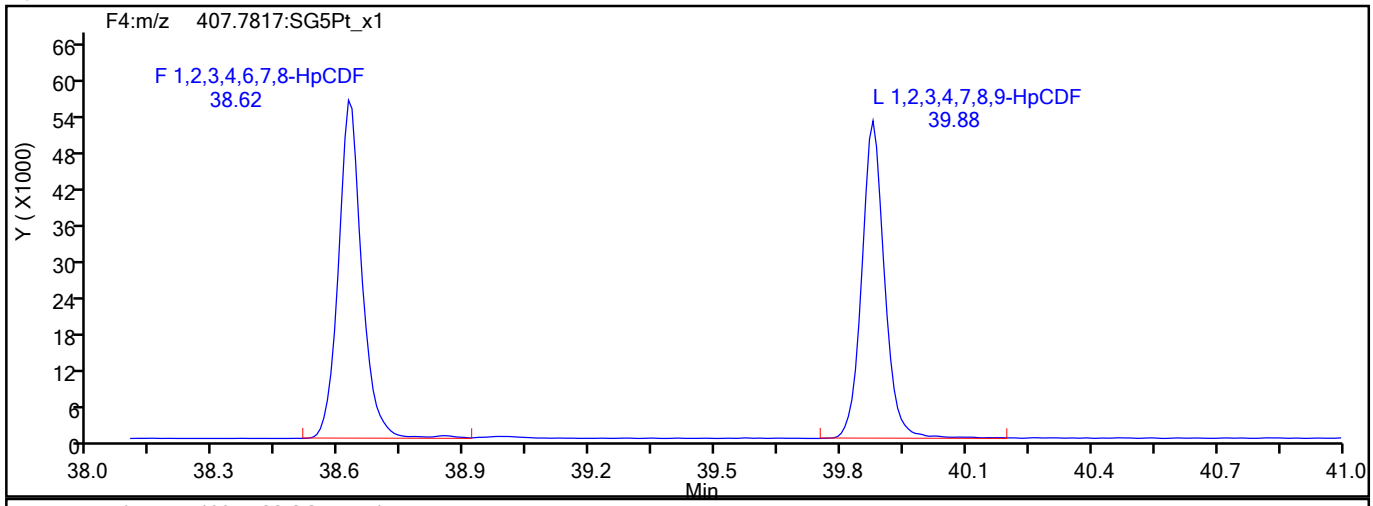

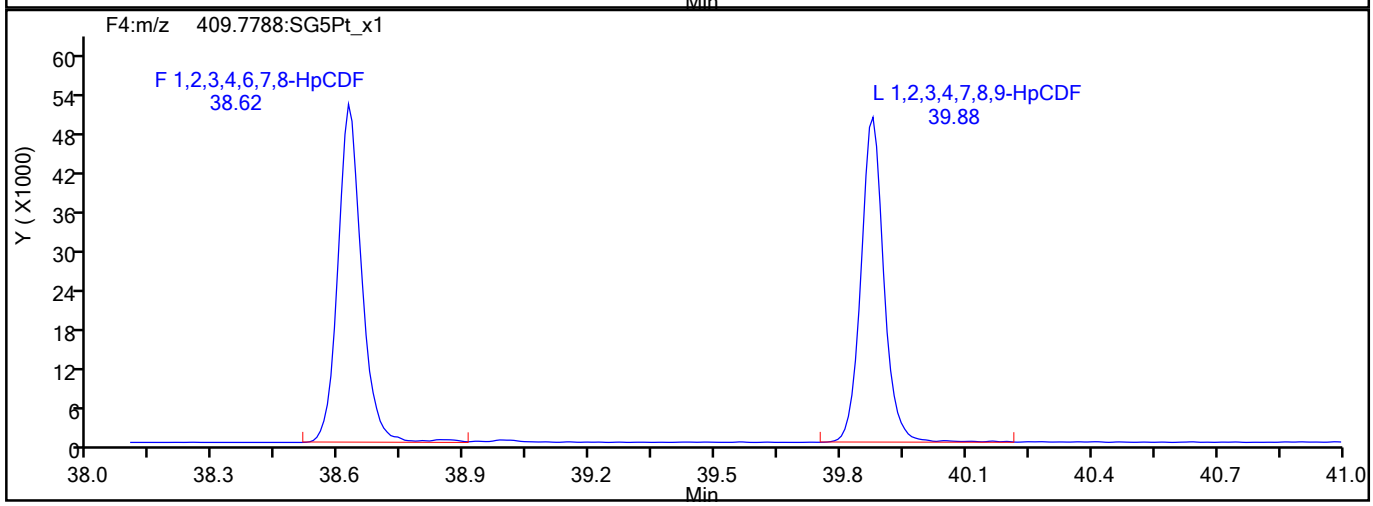

HpCDF Interference Mass

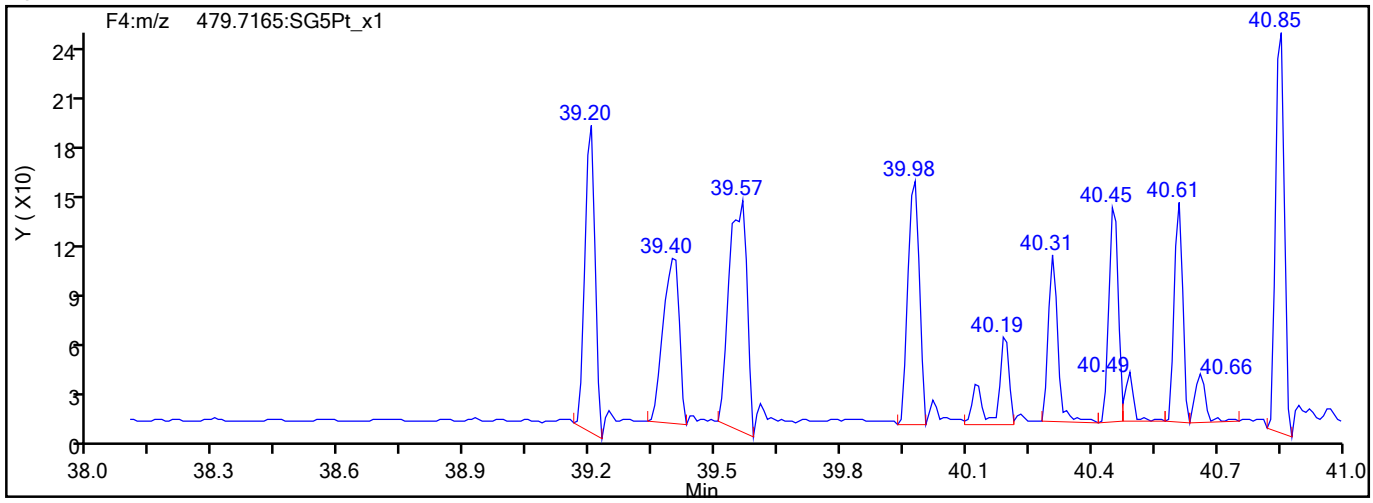

786272

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

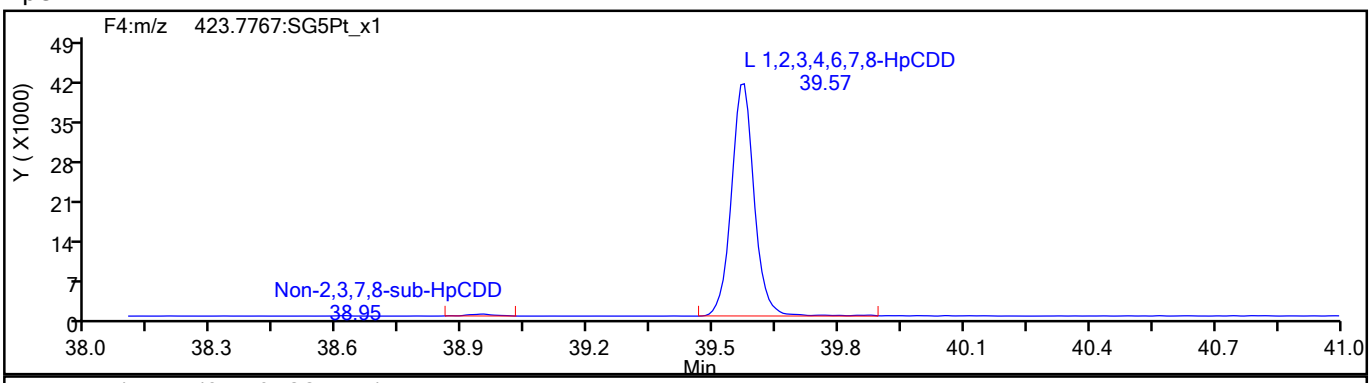

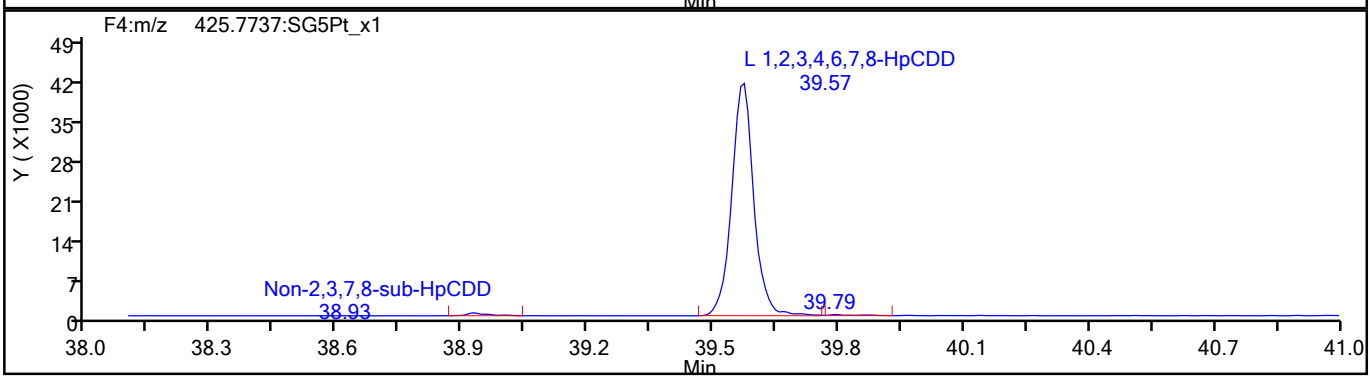

HpCDD Standards

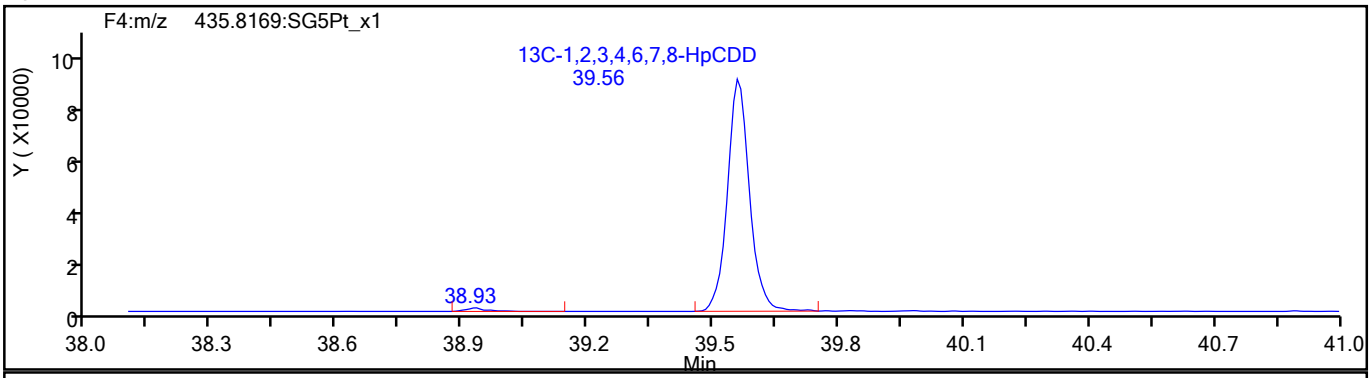

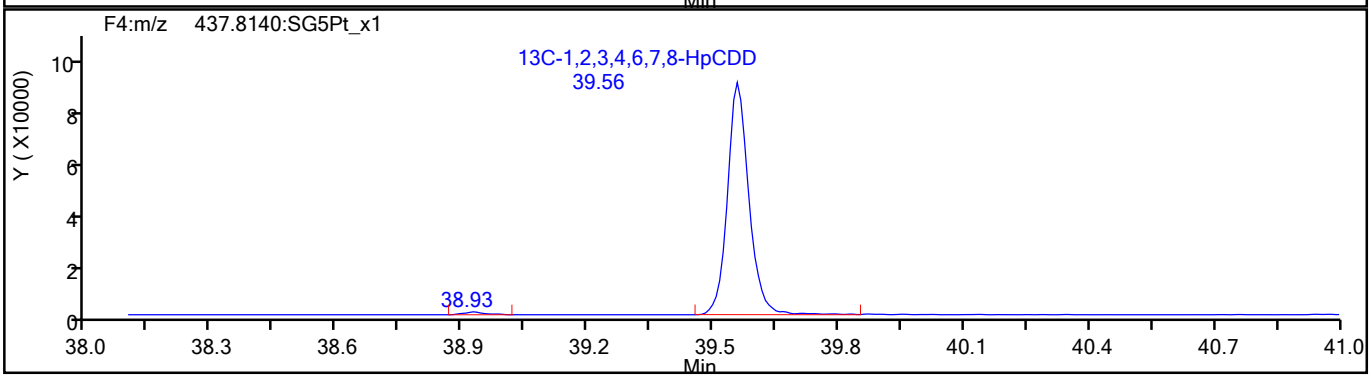

786273

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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OCDF

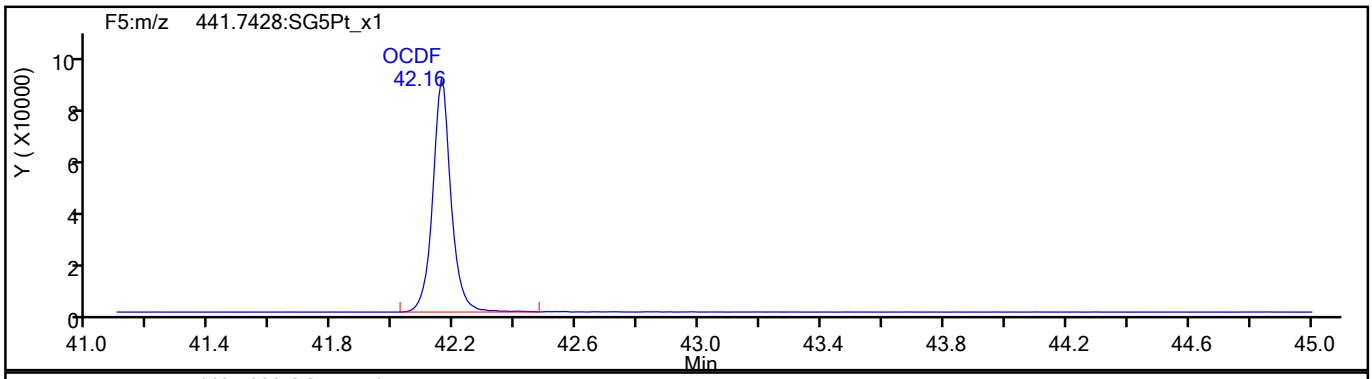

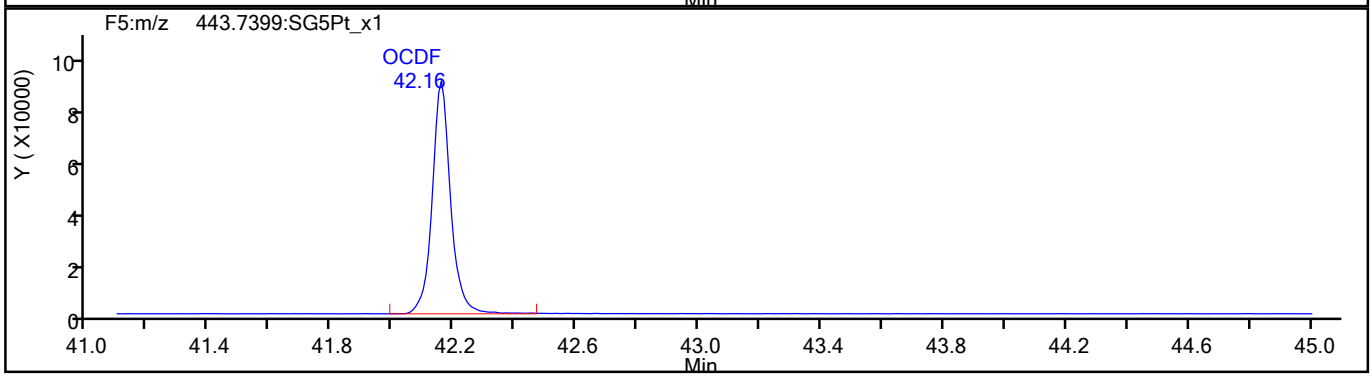

OCDF Standards

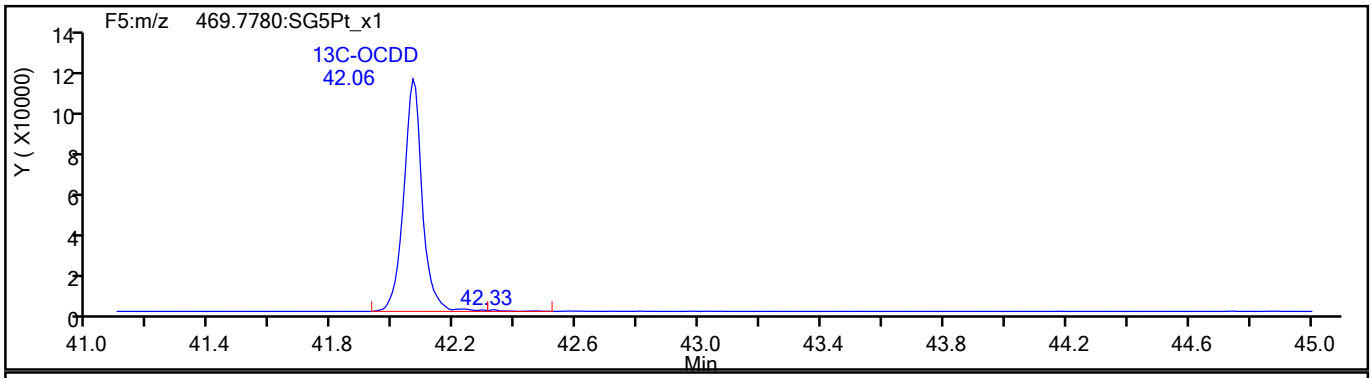

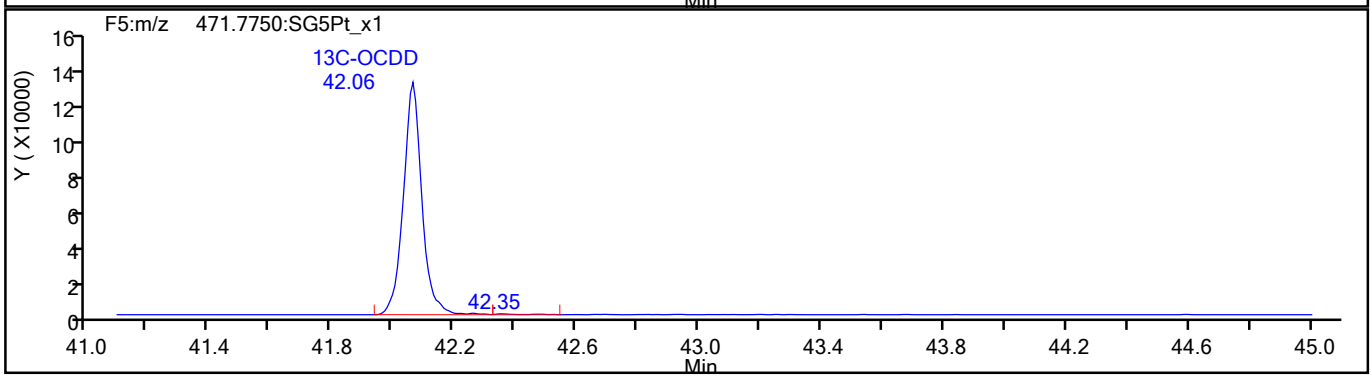

786274

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

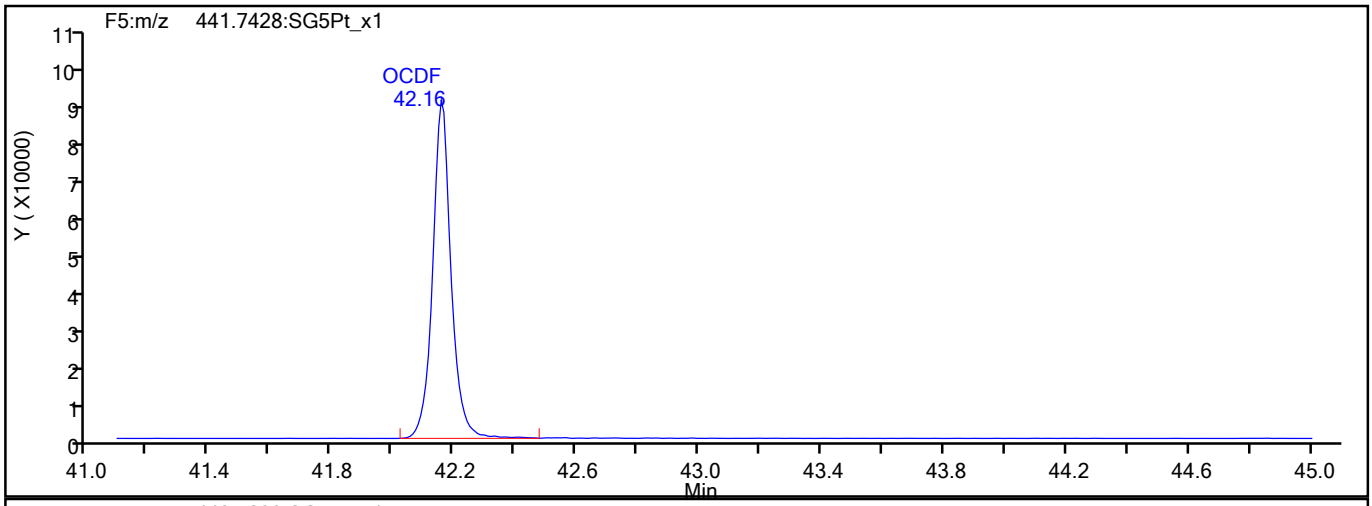

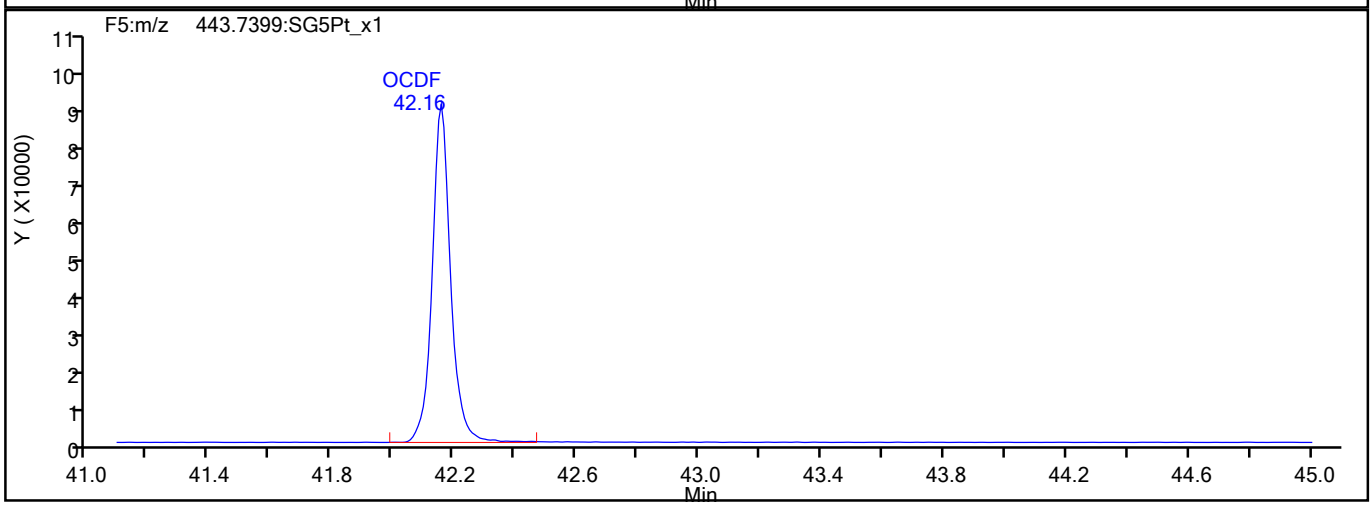

OCDF Interference Mass

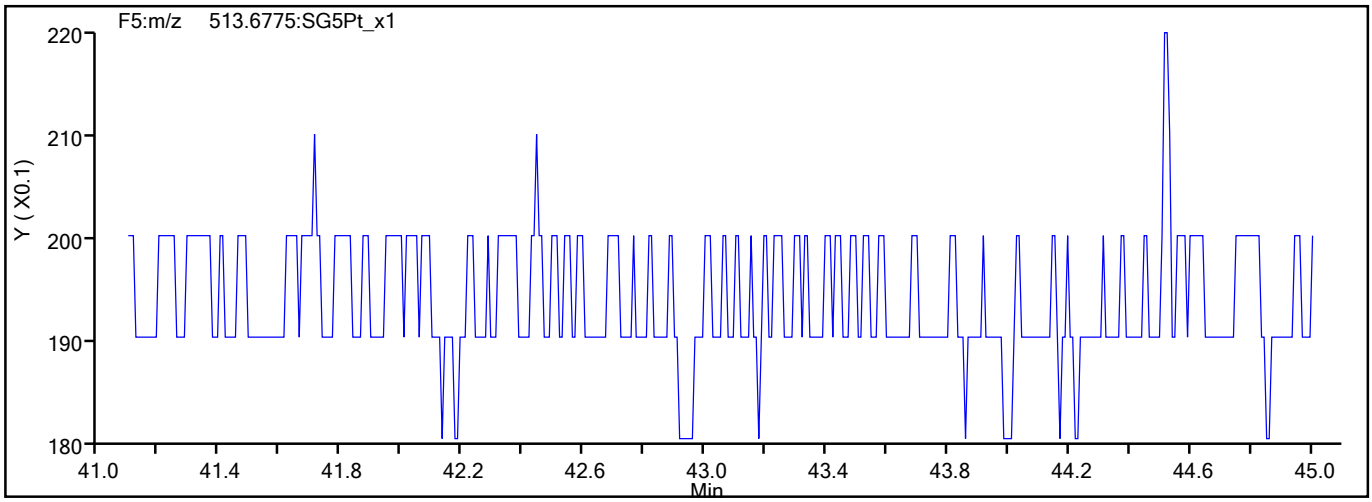

786275

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

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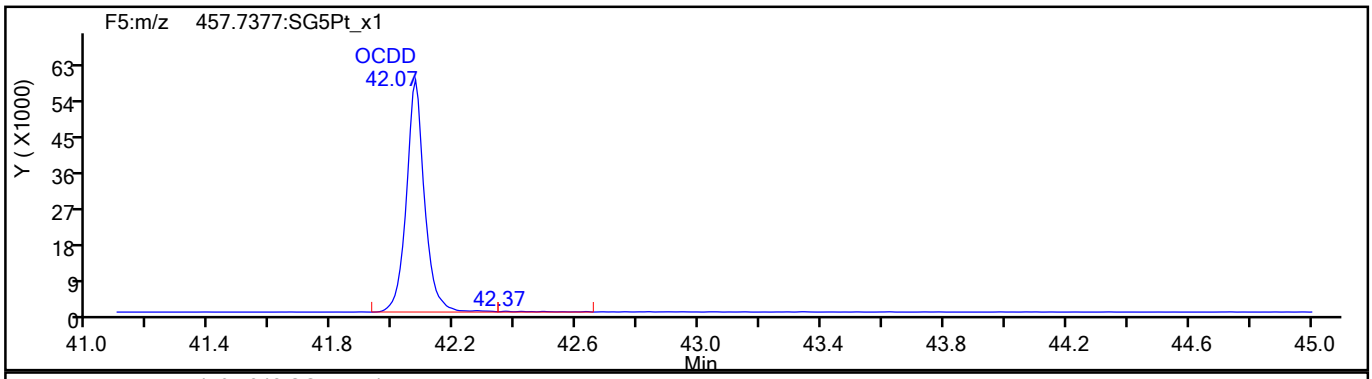

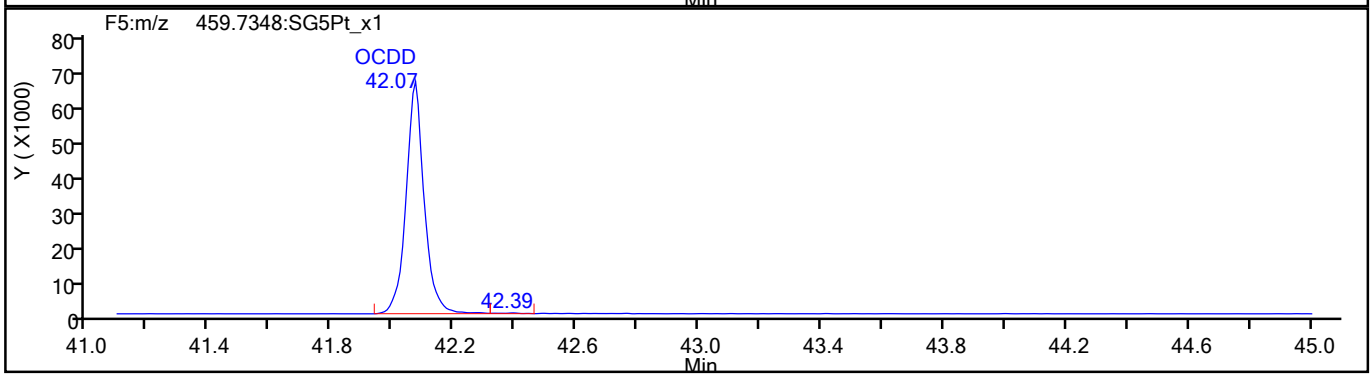

OCDD Standards

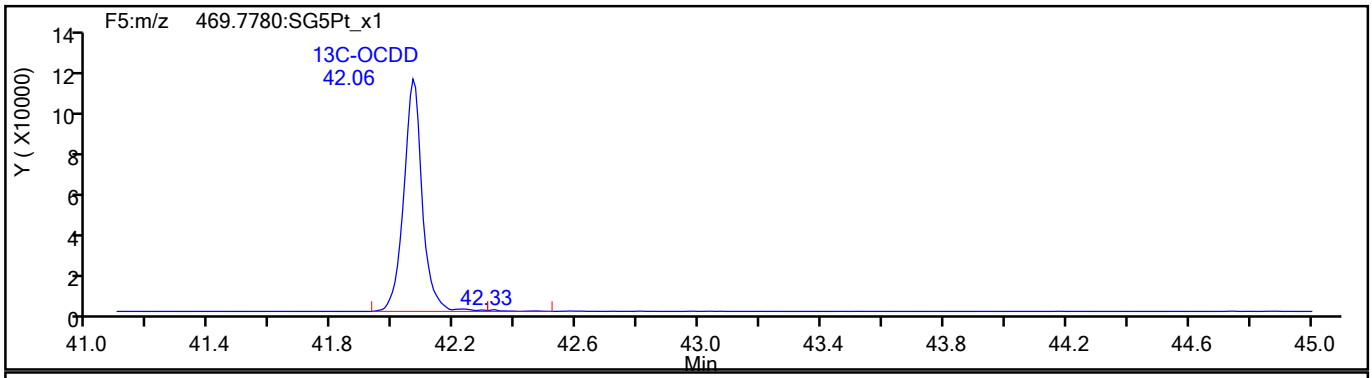

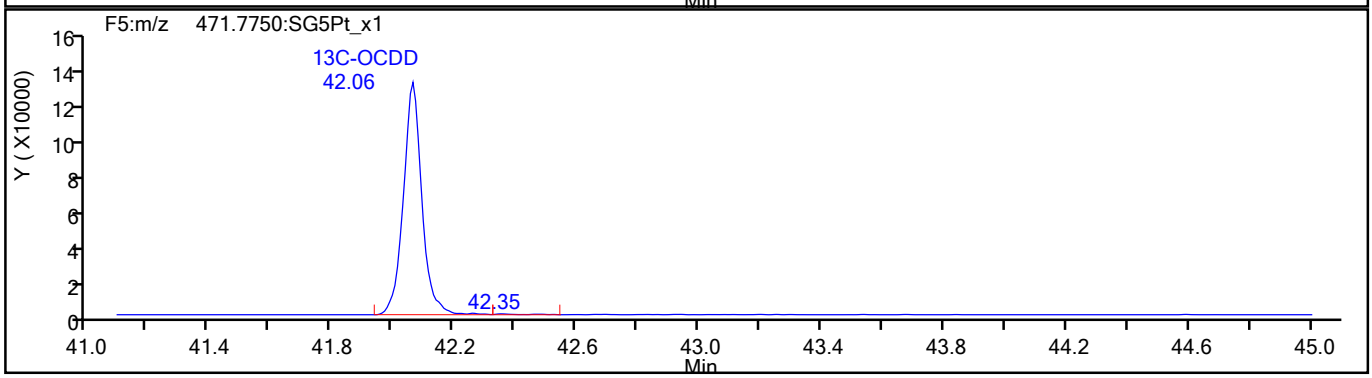

786276

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
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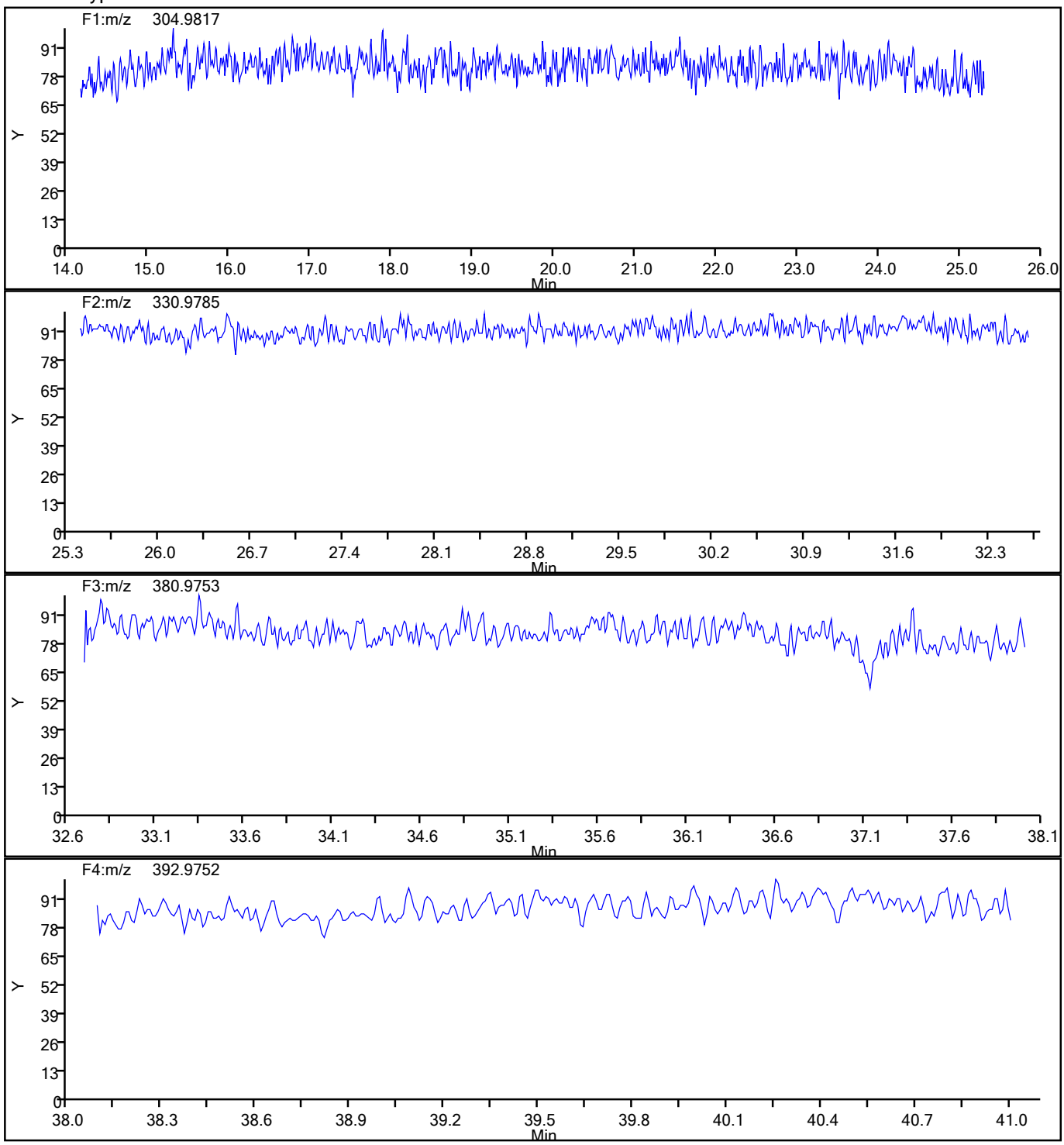

786277

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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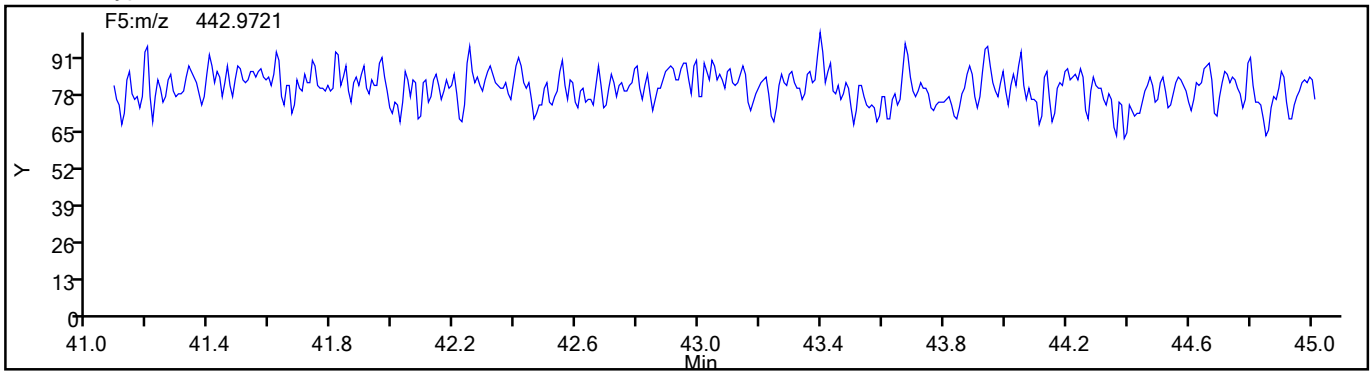

786278

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Lab Sample ID: CCV 320-518043/15 Calibration Date: 08/20/2021 01:34

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 19au21dfs1_17.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.048		9.71	10.0	97	84-120
2,3,7,8-TCDD	AveID	1.075	1.025		9.54	10.0	95	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.061		50.3	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9636		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.060		50.7	50.0	101	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.159		50.5	50.0	101	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.243		51.0	50.0	102	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.301		53.5	50.0	107	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9540		45.0	50.0	90	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9885		49.8	50.0	100	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.141		51.4	50.0	103	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.300		52.4	50.0	105	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.388		48.1	50.0	96	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.034		49.2	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.281		48.9	50.0	98	86-116
OCDD	AveID	1.062	1.054		99.3	100	99	79-126
OCDF	AveID	1.317	1.471		112	100	112	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.409		105	100	105	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9327		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.157		101	100	101	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.165		103	100	103	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6996		97.6	100	98	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.060		110	100	110	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.105		103	100	103	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.008		96.8	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8016		106	100	106	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.8667		101	100	101	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.116		115	100	115	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.9098		124	100	124	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.6899		102	100	102	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7820		114	100	114	77-129
13C-OCDD	Ave	0.5446	0.6551		241	200	120	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	0.9918		9.84	10.0	98	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	19AU21DFS1_1	Resolution Check	RC 081921	46			KSS	1.000	
2	19AU21DFS1_2	WDM HRDXNCP_00044	WDM 081921	1	Dioxin		KSS	1.000	
3	19AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081921	2	Dioxin		KSS	1.000	
4	19AU21DFS1_4	SB Solvent Blank C14	SB 081921	3	Dioxin		KSS	1.000	
5	19AU21DFS1_5	mb 320-513879/1-a RI	mb 320-513879/1-a	4	1613B/Solid	D267	KSS	10.000	g
6	19AU21DFS1_6	320-76888-a-13-a RI	320-76888-a-13-a	5	1613B/Solid	D266	KSS	10.000	g
7	19AU21DFS1_7	320-76901-a-3-a	320-76901-a-3-a	6	1613B/Solid	D267	KSS	10.000	g
8	19AU21DFS1_8	320-76901-a-4-a	320-76901-a-4-a	7	1613B/Solid		KSS	10.000	g
9	19AU21DFS1_9	320-76901-a-5-a	320-76901-a-5-a	8	1613B/Solid		KSS	10.000	g
10	19AU21DFS1_10	320-76901-a-6-a	320-76901-a-6-a	9	1613B/Solid		KSS	10.000	g
11	19AU21DFS1_11	320-76901-a-7-a	320-76901-a-7-a	10	1613B/Solid		KSS	10.000	g
12	19AU21DFS1_12	320-76901-a-8-a	320-76901-a-8-a	11	1613B/Solid		KSS	10.000	g
13	19AU21DFS1_13	320-76901-a-9-a	320-76901-a-9-a	12	1613B/Solid		KSS	10.000	g
14	19AU21DFS1_14	320-76901-a-13-a	320-76901-a-13-a	13	1613B/Solid		KSS	10.000	g
15	19AU21DFS1_15	SB Solvent Blank C14	SB 081921A	3	Dioxin		KSS	1.000	
16	19AU21DFS1_16	Resolution Check	RC 081921A	46			KSS	1.000	
17	19AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081921A	2	Dioxin		KSS	1.000	
18	19AU21DFS1_18	WDM HRDXNCP_00044	WDM 081921A	1	Dioxin		KSS	1.000	
19	19AU21DFS1_19	SB Solvent Blank C14	SB 081921B	3	Dioxin		KSS	1.000	
20	19AU21DFS1_20	320-76888-a-5-a 5X	320-76888-a-5-a	14	1613B/Solid	D267	KSS	10.000	g
21	19AU21DFS1_21	320-76888-a-1-a 10X	320-76888-a-1-a	15	1613B/Solid		KSS	10.000	g
22	19AU21DFS1_22	320-76888-a-1-b ms 10X	320-76888-a-1-b ms	16	1613B/Solid		KSS	10.000	g
23	19AU21DFS1_23	320-76888-a-1-c msd 10X	320-76888-a-1-c msd	17	1613B/Solid		KSS	10.000	g
24	19AU21DFS1_24	320-76888-a-4-a 10X	320-76888-a-4-a	18	1613B/Solid		KSS	10.000	g
25	19AU21DFS1_25	320-76888-a-2-a 10X	320-76888-a-2-a	19	1613B/Solid		KSS	10.000	g
26	19AU21DFS1_26	320-76901-a-1-a 10X	320-76901-a-1-a	20	1613B/Solid		KSS	10.000	g
27	19AU21DFS1_27	320-76888-a-3-a 10X	320-76888-a-3-a	21	1613B/Solid		KSS	10.000	g
28	19AU21DFS1_28	SB Solvent Blank C14	SB 081921C	3	Dioxin		KSS	1.000	
29	19AU21DFS1_29	SB Solvent Blank C14	SB 081921D	3	Dioxin		KSS	1.000	
30	19AU21DFS1_30	Resolution Check	RC 081921B	46			KSS	1.000	

Logfile ✓'d
8/21/21
KSS

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 13:39
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11552 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10549 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11385 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11272 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11335 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11001 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11059 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10420 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10449 [5%height]

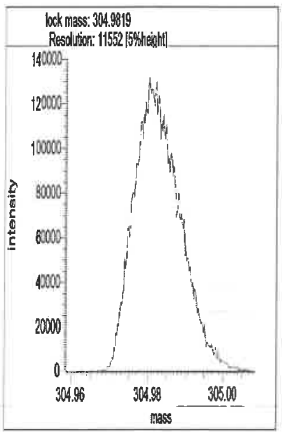

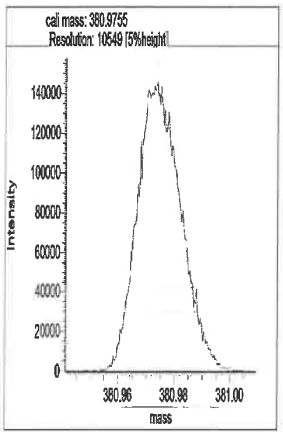

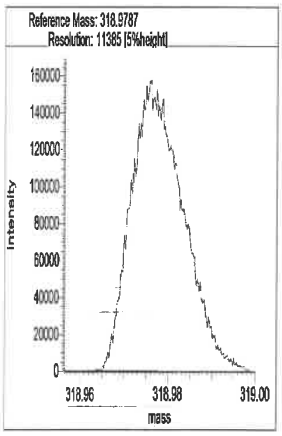

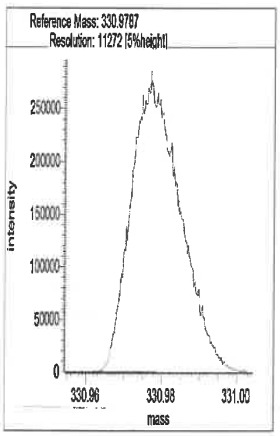

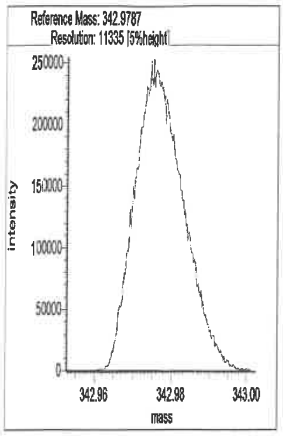

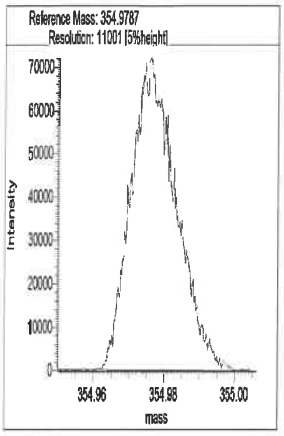

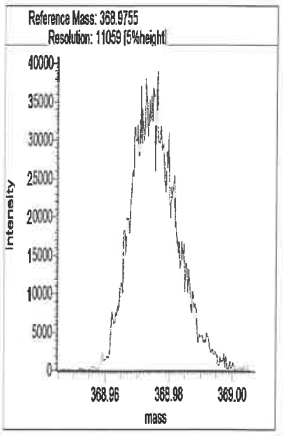

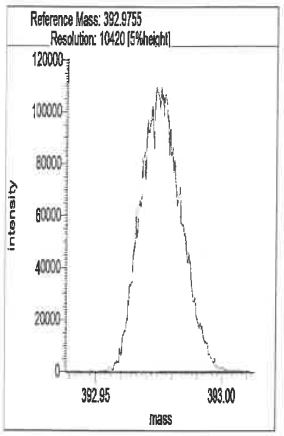

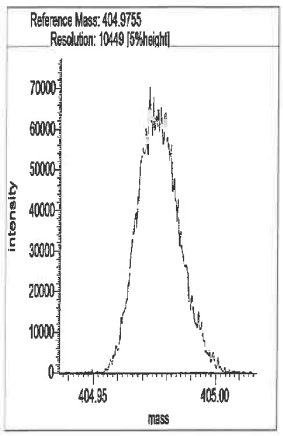

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11485 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10793 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11226 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11398 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10683 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10785 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10698 [5%height]

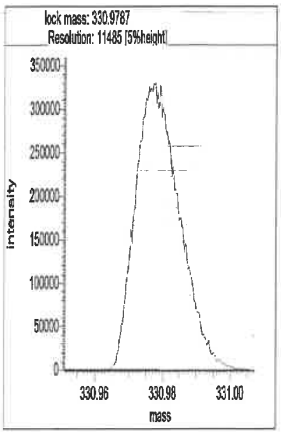

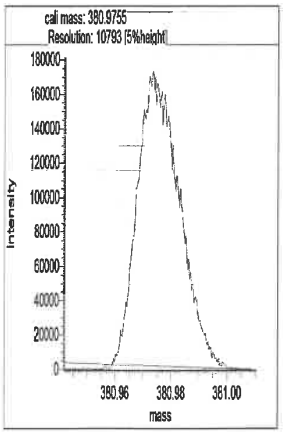

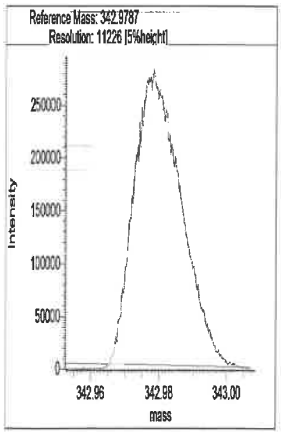

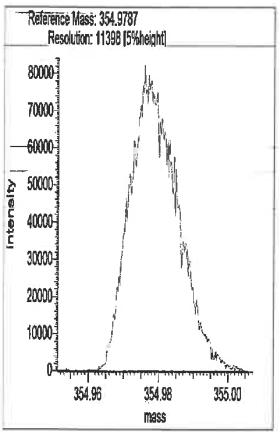

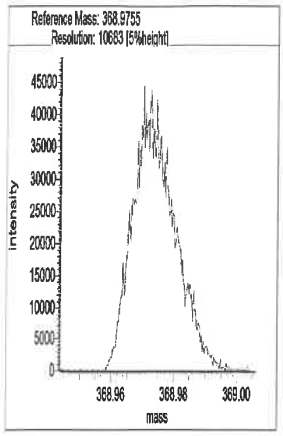

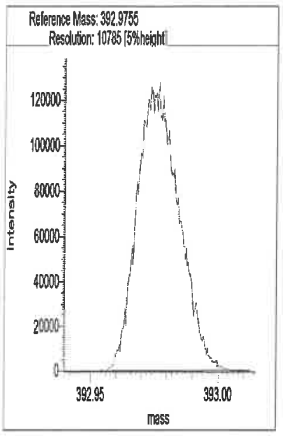

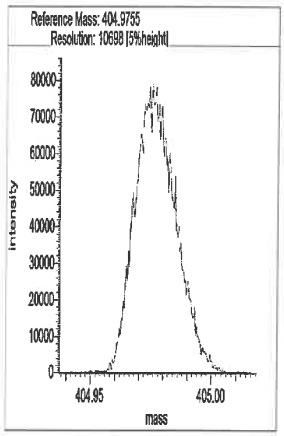

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11415 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10771 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11020 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11042 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12007 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10745 [5%height]

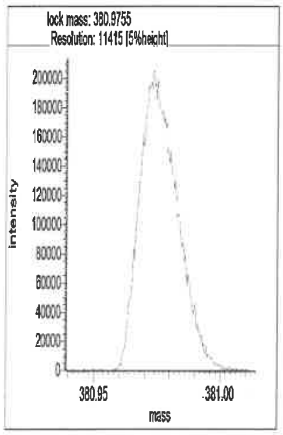

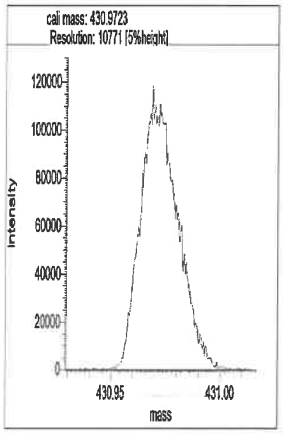

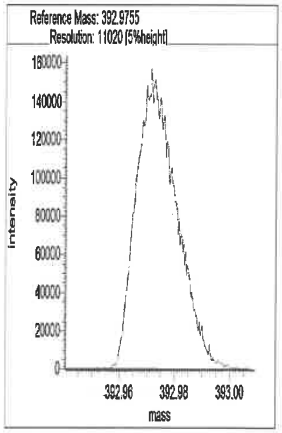

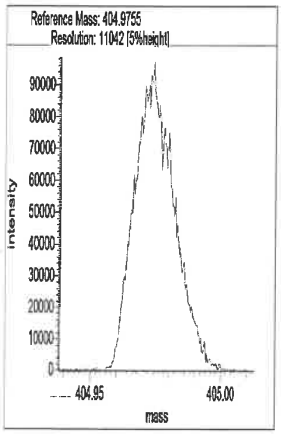

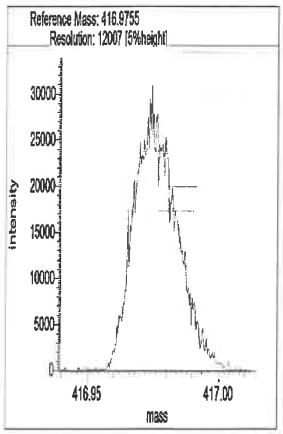

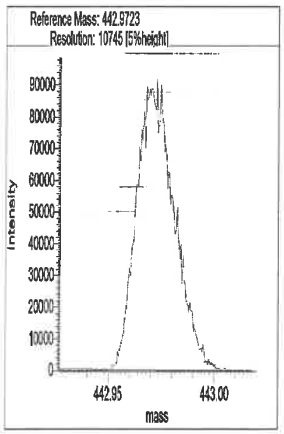

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11386 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10623 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11300 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10989 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11023 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10728 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10731 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10778 [5%height]

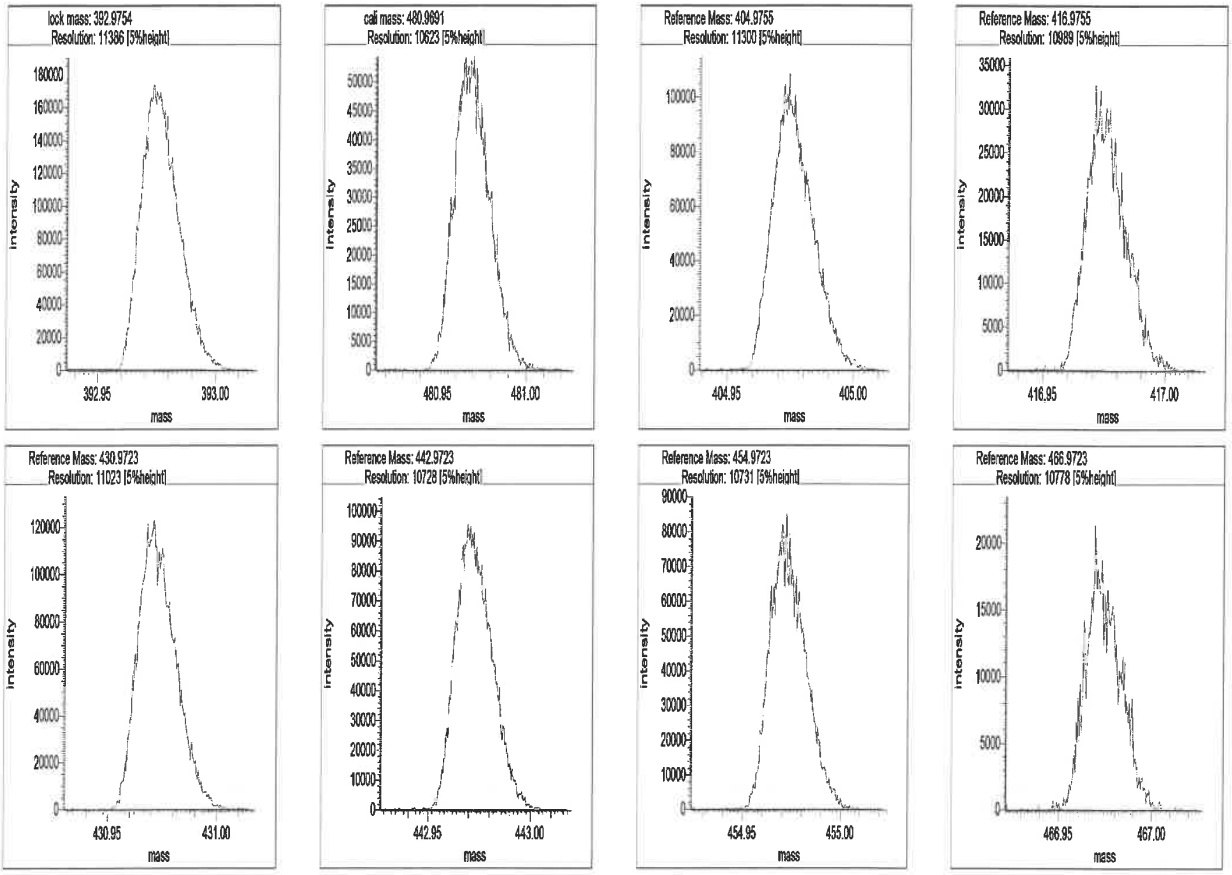

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11445 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11134 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11159 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10809 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11068 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10706 [5%height]

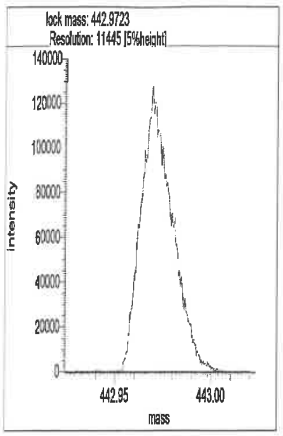
lock mass: 442.9723
Resolution: 11445 [5%height]
Intensity
mass

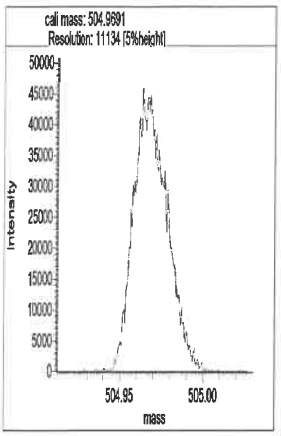
cali mass: 504.9691
Resolution: 11134 [5%height]
Intensity
mass

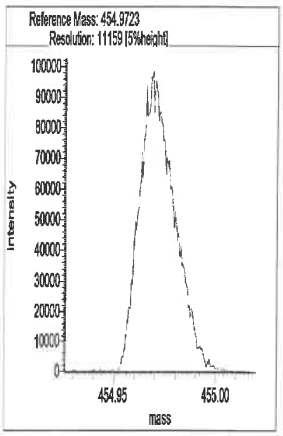
Reference Mass: 454.9723
Resolution: 11159 [5%height]
Intensity
mass

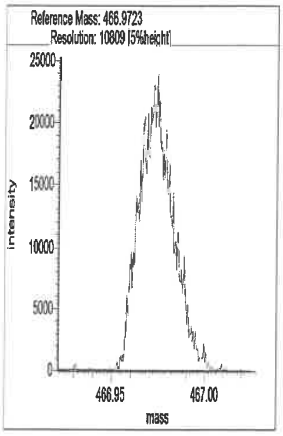
Reference Mass: 466.9723
Resolution: 10809 [5%height]
Intensity
mass

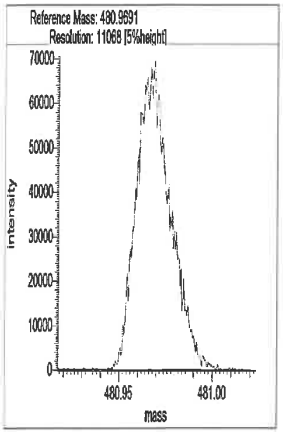
Reference Mass: 480.9691
Resolution: 11068 [5%height]
Intensity
mass

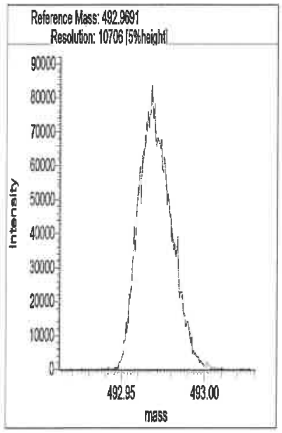
Reference Mass: 492.9691
Resolution: 10706 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 01:14
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10904 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10388 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10733 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10622 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10608 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10712 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10070 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9982 [5%height] ✓ DK 8/21/21
Ref. mass 404.9755 [m/z] Resolution: 10023 [5%height]

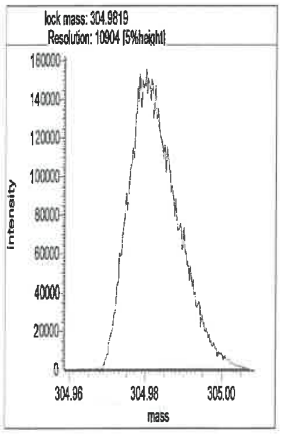

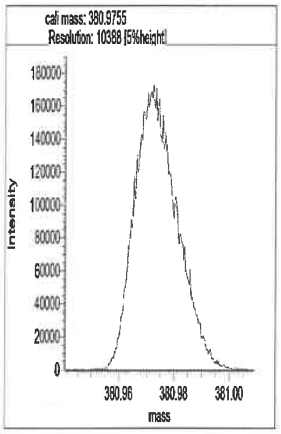

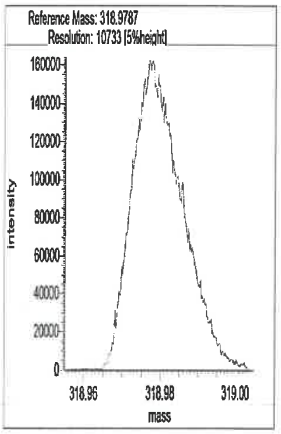

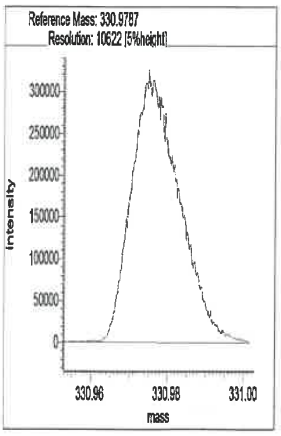

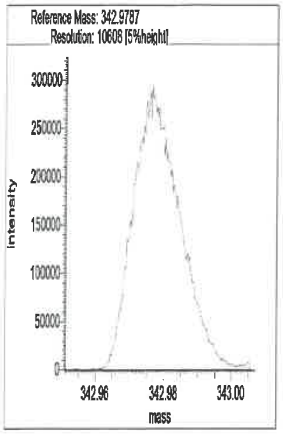

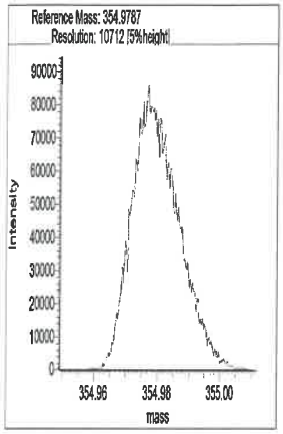

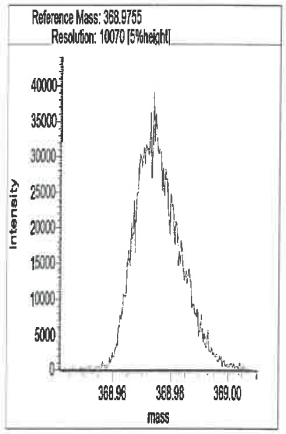

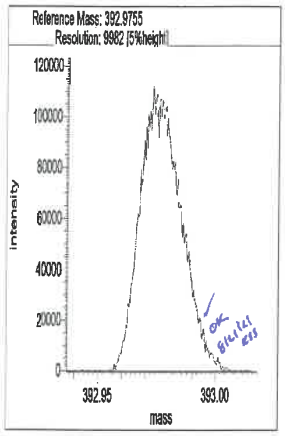

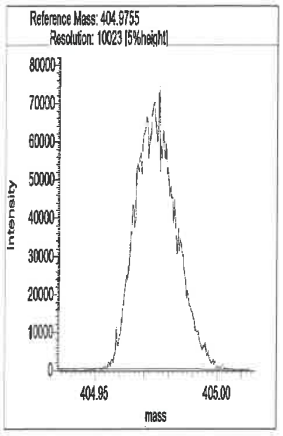

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10787 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10782 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11025 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11013 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10635 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10603 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10396 [5%height]

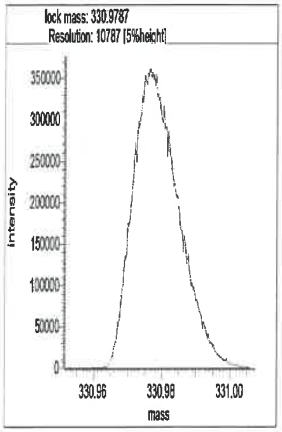

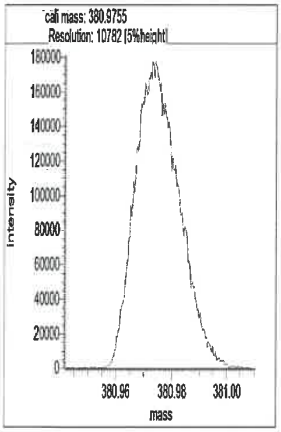

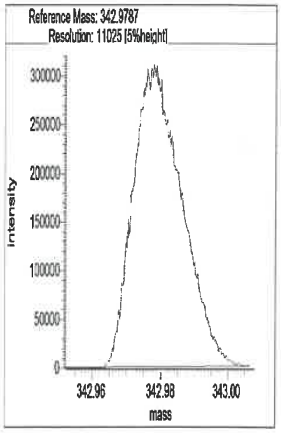

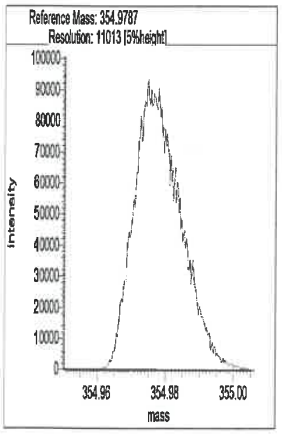

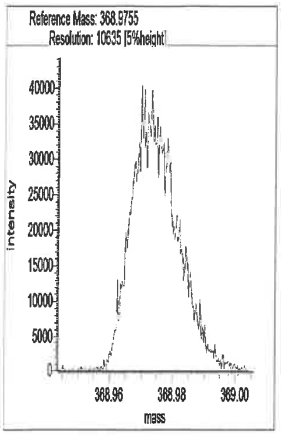

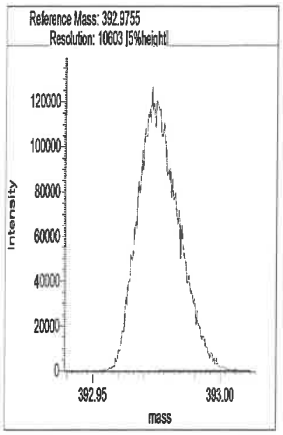

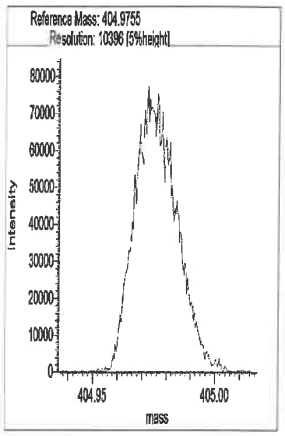

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11029 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10564 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10871 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10418 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11260 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10446 [5%height]

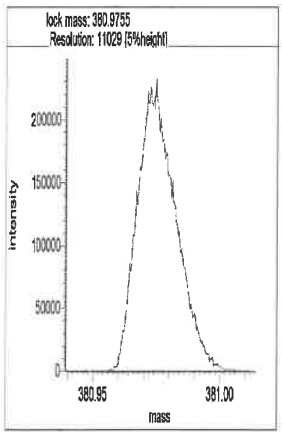

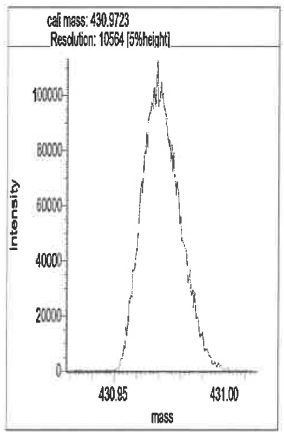

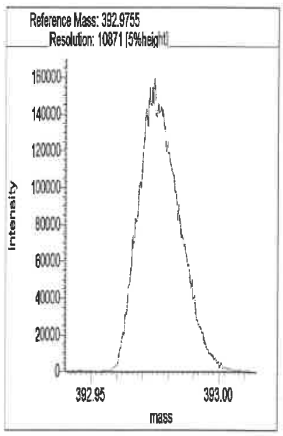

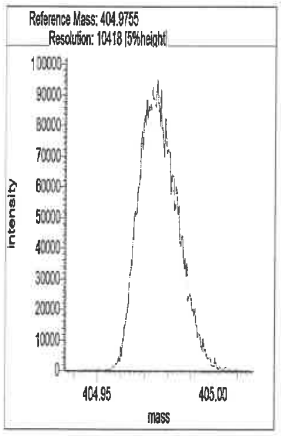

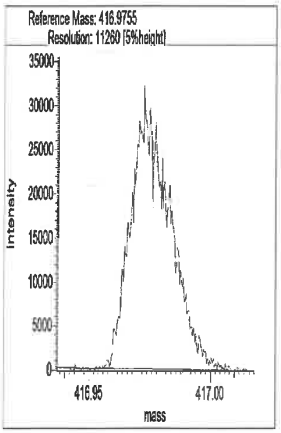

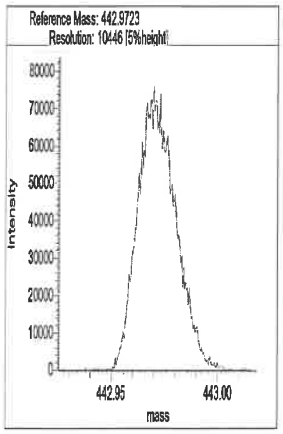

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10922 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10352 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10773 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12243 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10710 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11096 [5%height]

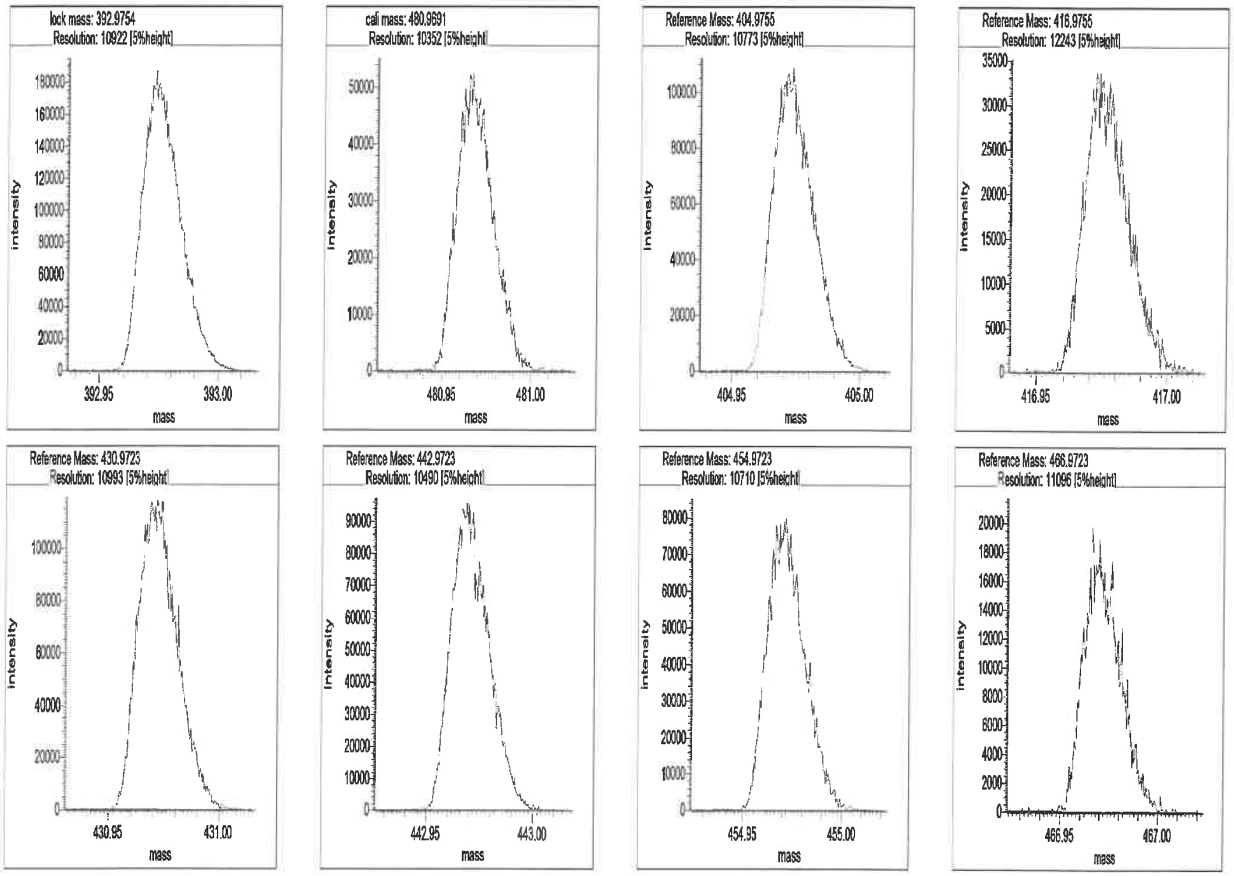

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11165 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10856 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11100 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10488 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11155 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10611 [5%height]

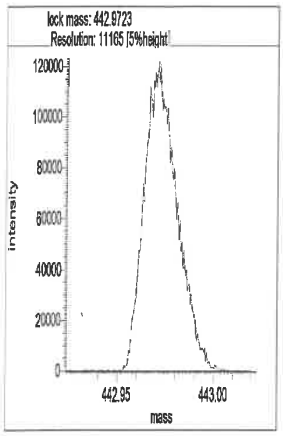
lock mass: 442.9723
Resolution: 11165 [5%height]
intensity
mass

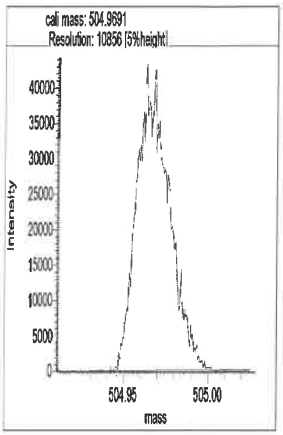
cali mass: 504.9691
Resolution: 10856 [5%height]
intensity
mass

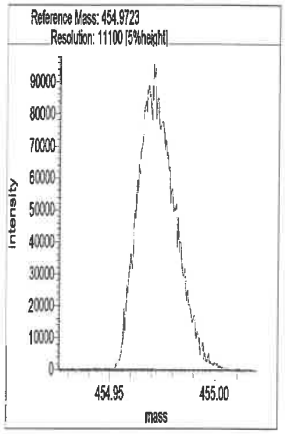
Reference Mass: 454.9723
Resolution: 11100 [5%height]
intensity
mass

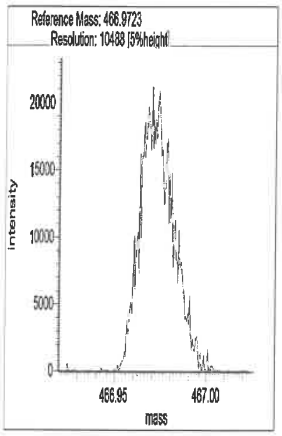
Reference Mass: 466.9723
Resolution: 10488 [5%height]
intensity
mass

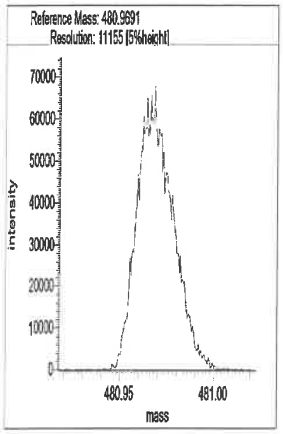
Reference Mass: 480.9691
Resolution: 11155 [5%height]
intensity
mass

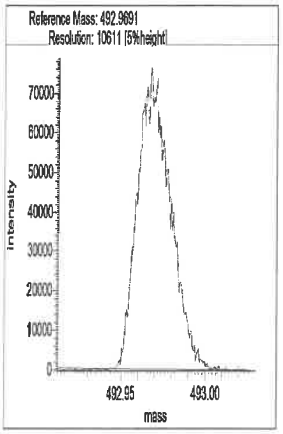
Reference Mass: 492.9691
Resolution: 10611 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 11:56
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10511 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10099 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 10342 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 10503 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10344 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 27776 [5%height] ? software glitch. [illegible]

Ref. mass 368.9755 [m/z] Resolution: 10394 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 9749 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9682 [5%height]

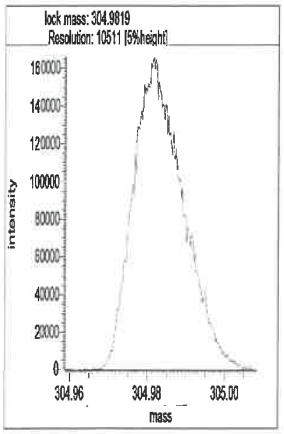

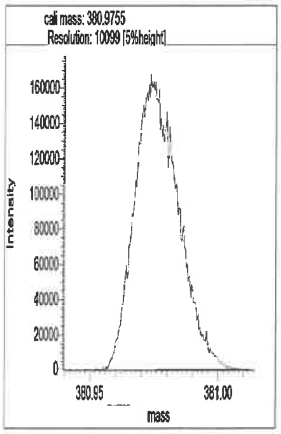

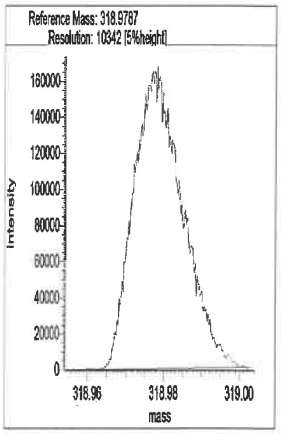

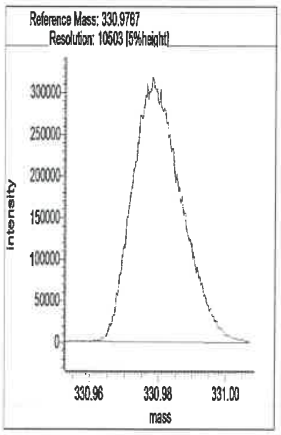

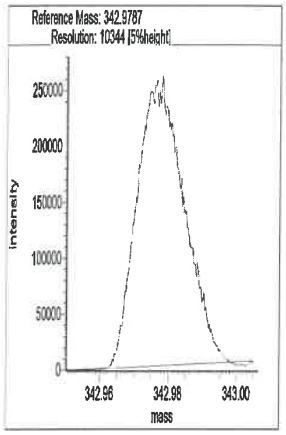

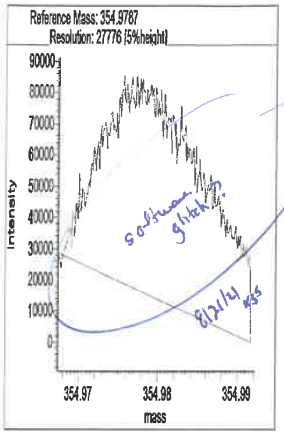

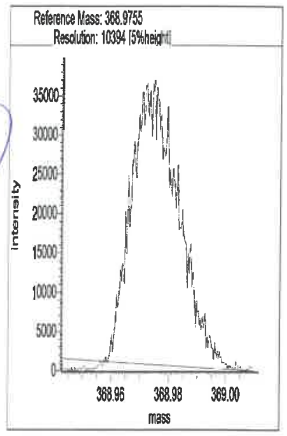

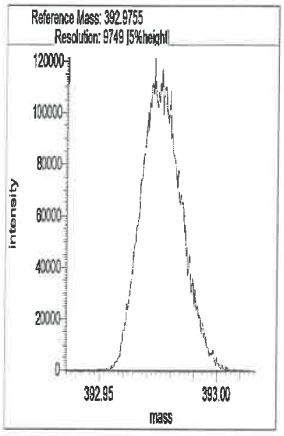

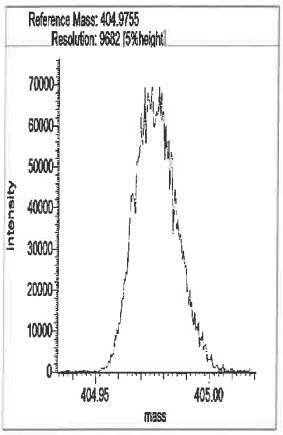

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10733 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10393 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10683 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10545 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10150 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10185 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10040 [5%height]

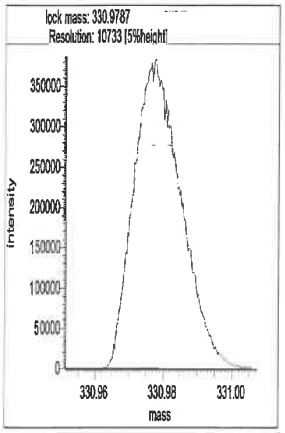

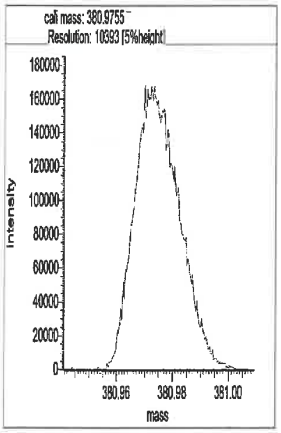

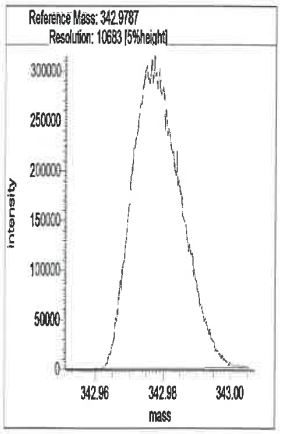

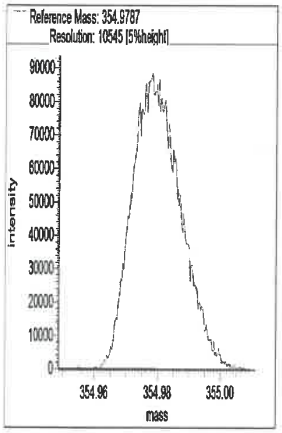

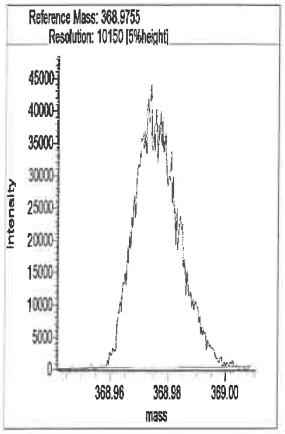

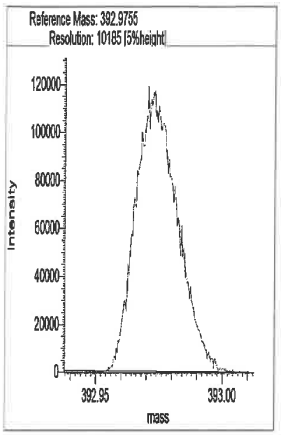

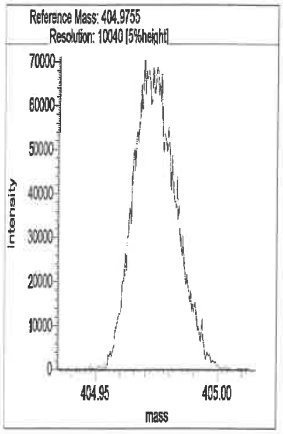

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10536 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10403 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10410 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10419 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10244 [5%height]

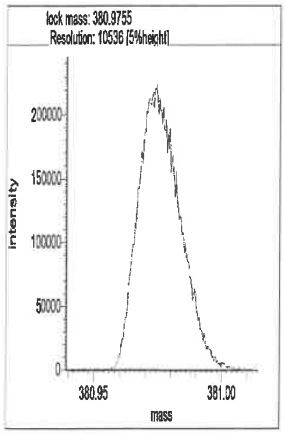

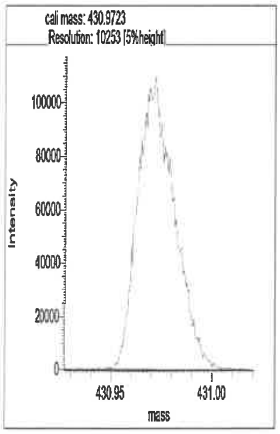

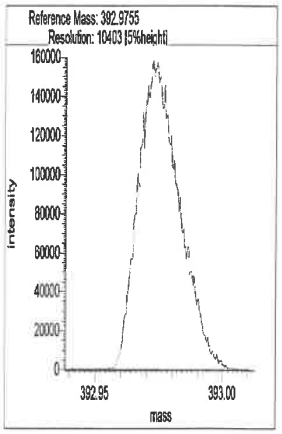

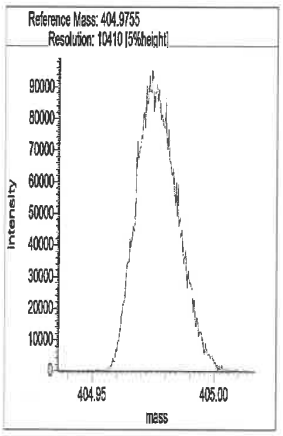

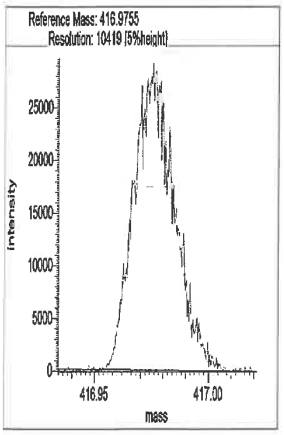

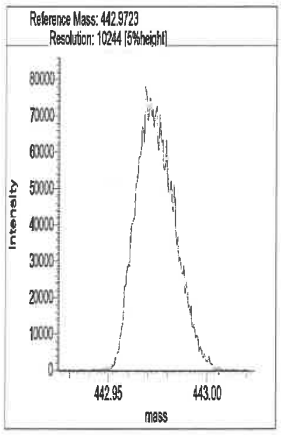

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10914 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 9523 [5%height] ✓ OK 8/21/21 KD

Ref. mass 404.9755 [m/z] Resolution: 10727 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10613 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10522 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10235 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10314 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10509 [5%height]

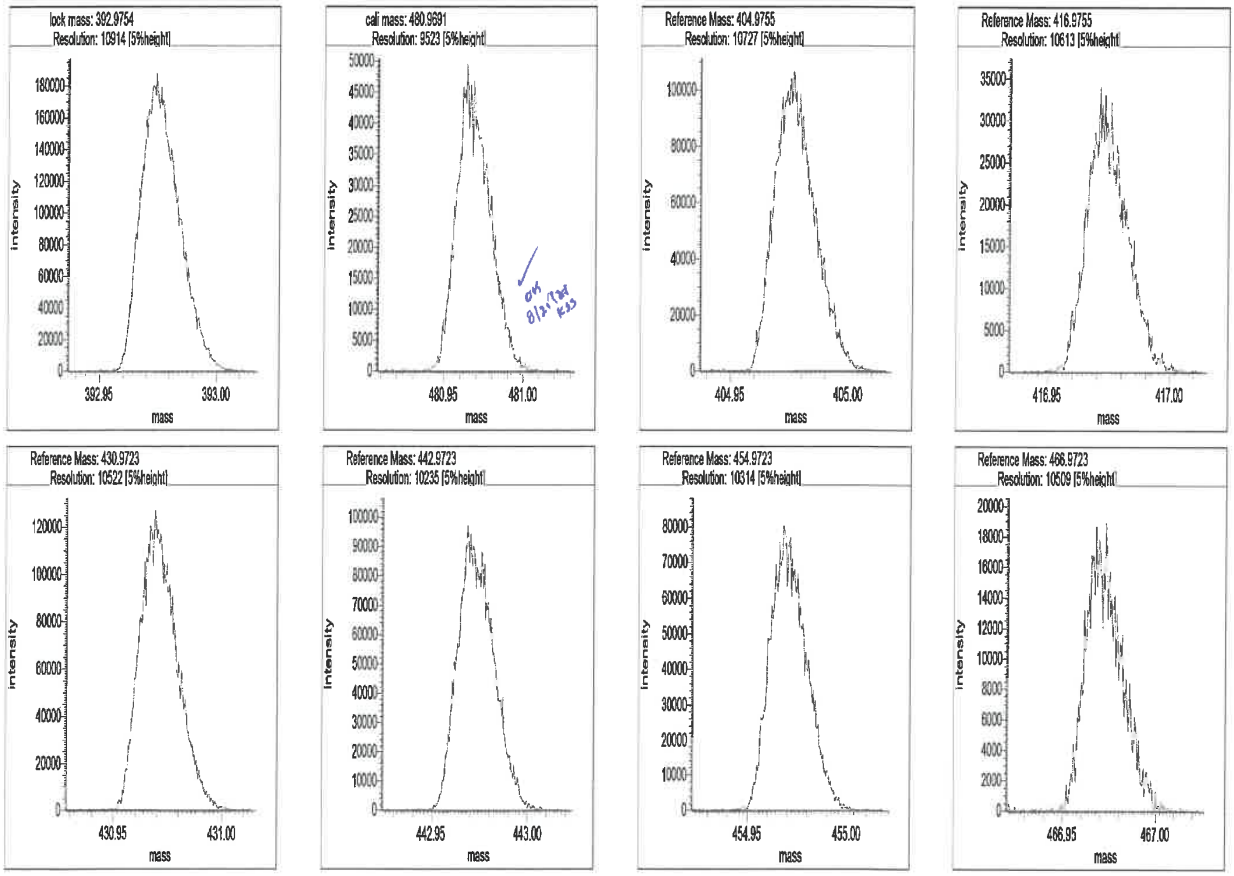

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10927 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10443 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10654 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11221 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10354 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10748 [5%height]

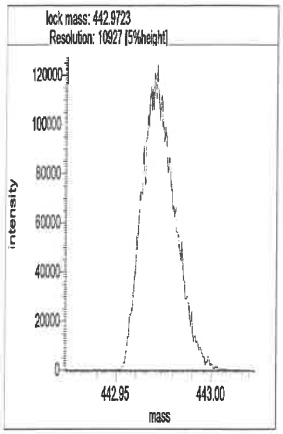
lock mass: 442.9723
Resolution: 10927 [5%height]
intensity
mass

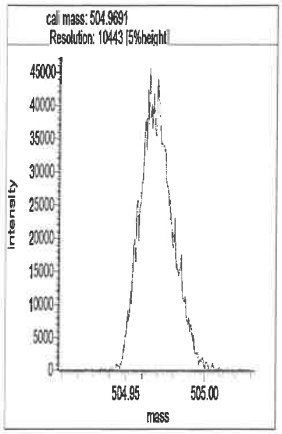
cali mass: 504.9691
Resolution: 10443 [5%height]
intensity
mass

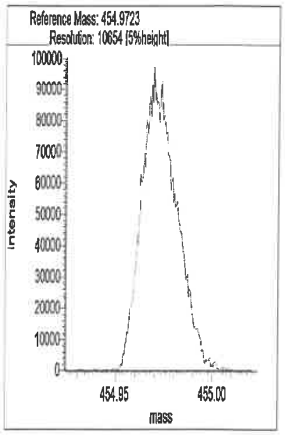
Reference Mass: 454.9723
Resolution: 10654 [5%height]
intensity
mass

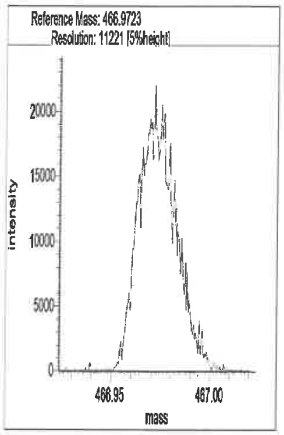
Reference Mass: 466.9723
Resolution: 11221 [5%height]
intensity
mass

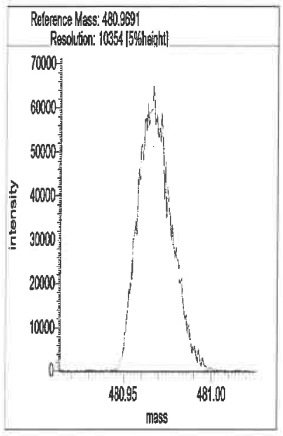
Reference Mass: 480.9691
Resolution: 10354 [5%height]
intensity
mass

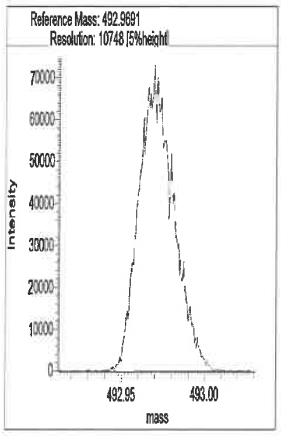
Reference Mass: 492.9691
Resolution: 10748 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 20-Aug-2021 01:34:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:09:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.395	870777	0.77	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.432	1227122	0.85	1.3459	104.7	104.7	0.2055	0.2055	105	
2,3,7,8-TCDF	20.458	128655	0.70	1.0802	9.706	9.706	0.0217	0.0217	97.06	
A Non-2,3,7,8-sub-TCDF	19.885	2870	0.77	1.0802	0.2742	0.2165	0.0217	0.0967	0.00	RQ
S Total TCDF					9.980	9.922	0.0217	0.0217		RQ
D 13C-2,3,7,8-TCDD	21.782	812184	0.79	0.9317	100.1	100.1	0.1327	0.1327	100	
2,3,7,8-TCDD	21.799	83283	0.83	1.0753	9.536	9.536	0.0291	0.0291	95.36	
$ 37Cl4-2,3,7,8-TCDD	21.799	86367		1.0083	9.837	9.837	0.008068	0.008068	98.37	
A Non-2,3,7,8-sub-TCDD	20.727	1705	0.77	1.0753	0.2671	0.1952	0.0291	0.0876	0.00	RQ
S Total TCDD					9.803	9.731	0.0291	0.0291		RQ
D 13C-1,2,3,7,8-PeCDF	27.251	1007111	1.60	1.1405	101.4	101.4	0.2068	0.2068	101	
1,2,3,7,8-PeCDF	27.276	534435	1.55	1.0543	50.3	50.3	0.1177	0.1177	101	
D 13C-2,3,4,7,8-PeCDF	28.757	1014118	1.65	1.1253	103.5	103.5	0.2096	0.2096	103	
2,3,4,7,8-PeCDF	28.791	488593	1.55	1.0079	47.8	47.8	0.1348	0.1348	95.61	
A F1 PeCDFs	24.666						0.003311	0.003311		
A Non-2,3,7,8-sub-PeCDF	28.176	4461	1.55	1.0311	0.4954	0.4281	0.1258	0.4281	0.00	RQ
S Total PeCDF					98.6	98.6	0.1263	0.1263		RQ
D 13C-1,2,3,7,8-PeCDD	29.574	609217	1.61	0.7165	97.6	97.6	0.0965	0.0965	97.65	
1,2,3,7,8-PeCDD	29.616	322963	1.59	1.0465	50.7	50.7	0.3115	0.3115	101	
A Non-2,3,7,8-sub-PeCDD	28.536						0.3115	0.3115		
S Total PeCDD					50.7	50.7	0.3115	0.3115		
D 13C-1,2,3,4,7,8-HxCDF	34.906	957306	0.54	0.9648	109.9	109.9	0.3367	0.3367	110	
1,2,3,4,7,8-HxCDF	34.922	554867	1.23	1.1474	50.5	50.5	0.2017	0.2017	101	
D 13C-1,2,3,6,7,8-HxCDF	35.066	997413	0.54	1.0708	103.2	103.2	0.3034	0.3034	103	
1,2,3,6,7,8-HxCDF	35.082	619855	1.26	1.2178	51.0	51.0	0.1914	0.1914	102	
D 13C-2,3,4,6,7,8-HxCDF	35.890	910006	0.53	1.0413	96.8	96.8	0.3120	0.3120	96.79	
2,3,4,6,7,8-HxCDF	35.907	591761	1.24	1.2145	53.5	53.5	0.1763	0.1763	107	
D 13C-1,2,3,7,8,9-HxCDF	36.782	1007667	0.55	0.9731	114.7	114.7	0.3339	0.3339	115	
1,2,3,7,8,9-HxCDF	36.791	654973	1.28	1.2401	52.4	52.4	0.1413	0.1413	105	
A Non-2,3,7,8-sub-HxCDF	35.073						0.1748	0.1748		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					207.5	207.5	0.1777	0.1777		
* 13C-1,2,3,7,8,9-HxCDD	36.581	902938	1.25	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.092	723760	1.28	0.7587	105.7	105.7	0.2345	0.2345	106	
1,2,3,4,7,8-HxCDD	36.109	345231	1.23	1.0608	45.0	45.0	0.0877	0.0877	89.93	
D 13C-1,2,3,6,7,8-HxCDD	36.210	782596	1.27	0.8593	100.9	100.9	0.2070	0.2070	101	
1,2,3,6,7,8-HxCDD	36.227	386782	1.25	0.9933	49.8	49.8	0.0944	0.0944	99.51	
1,2,3,7,8,9-HxCDD	36.597	429511	1.25	1.1094	51.4	51.4	0.0842	0.0842	103	
A Non-2,3,7,8-sub-HxCDD	35.427						0.0886	0.0886		
S Total HxCDD					146.1	146.1	0.0888	0.0888		
D 13C-1,2,3,4,6,7,8-HpCDF	38.596	821510	0.47	0.7359	123.6	123.6	0.3385	0.3385	124	
1,2,3,4,6,7,8-HpCDF	38.613	569968	1.06	1.4421	48.1	48.1	0.1682	0.1682	96.22	
D 13C-1,2,3,4,7,8,9-HpCDF	39.850	706137	0.47	0.6854	114.1	114.1	0.3635	0.3635	114	
1,2,3,4,7,8,9-HpCDF	39.859	452390	1.04	1.3092	48.9	48.9	0.1894	0.1894	97.87	
A Non-2,3,7,8-sub-HpCDF	39.253						0.1782	0.1782		
S Total HpCDF					97.0	97.0	0.1788	0.1788		
D 13C-1,2,3,4,6,7,8-HpCDD	39.547	622968	1.07	0.6745	102.3	102.3	0.3007	0.3007	102	
1,2,3,4,6,7,8-HpCDD	39.556	322055	1.03	1.0503	49.2	49.2	0.1146	0.1146	98.44	
A Non-2,3,7,8-sub-HpCDD	39.253	3653	0.97	1.0503	0.5583	0.5583	0.1146	0.5583	0.00	
S Total HpCDD					49.8	49.8	0.1146	0.1146		
D 13C-OCDD	42.036	1182987	0.89	0.5446	240.6	240.6	0.2013	0.2013	120	
OCDF	42.137	870176	0.93	1.3168	111.7	111.7	0.1096	0.1096	112	
OCDD	42.053	623449	0.91	1.0620	99.3	99.3	0.0862	0.0862	99.25	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 20-Aug-2021 01:34:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:09:19

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.395	21.395	0		378196	54432	46	115	1183		a
333.9338	21.395	21.395	0		492581	68496	15	37	4566	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.432	20.432	0	0.955	563293	79642	82	205	971		
317.9389	20.432	20.432	0	0.955	663829	90836	54	135	1682	0.85(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.458	20.458	0	1.001	52907	7930	3	7	2643		
305.8987	20.449	20.458	-1	1.001	75748	10580	13	32	814	0.70(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.254	19.885	-38	0.942	158	58	3	7	19		
305.8987	19.202	19.885	-41	0.940	283	105	13	32	8	0.56(0.65-0.89)	
	Empc Correction				205	75	13	32	6		
303.9016	19.727	19.885	-9	0.965	558	160	3	7	53		
305.8987	19.727	19.885	-9	0.965	1084	193	13	32	15	0.51(0.65-0.89)	
	Empc Correction				724	207	13	32	16		
303.9016	20.733	19.885	51	1.015	533	92	3	7	31		
305.8987	20.741	19.885	51	1.015	1018	140	13	32	11	0.52(0.65-0.89)	
	Empc Correction				692	119	13	32	9		
13C-2,3,7,8-TCDD											
331.9368	21.782	21.782	0	1.018	359415	45756	46	115	995		
333.9338	21.774	21.782	-1	1.018	452769	56603	15	37	3774	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.799	21.799	0	1.001	37679	5159	11	27	469		
321.8936	21.817	21.799	1	1.002	45604	5681	2	5	2841	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.799	21.799	0	1.019	86367	10928	4	10	2732		

786298

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	19.727	20.727	-60	0.906	309	131	11	27	12		
	Empc Correction				36	20	11	27	2		
321.8936	19.753	20.727	-58	0.907	48	26	2	5	13	6.44(0.65-0.89)	
319.8965	20.380	20.727	-21	0.936	408	89	11	27	8		
	Empc Correction				53	28	11	27	3		
321.8936	20.363	20.727	-22	0.935	70	37	2	5	19	5.83(0.65-0.89)	
319.8965	22.014	20.727	77	1.011	354	122	11	27	11		
321.8936	22.092	20.727	82	1.014	411	123	2	5	62	0.86(0.65-0.89)	
319.8965	22.118	20.727	83	1.015	322	96	11	27	9		
321.8936	22.092	20.727	82	1.014	411	123	2	5	62	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.251	27.251	0	1.274	619620	94605	72	180	1314		
353.8970	27.259	27.251	1	1.274	387491	58543	44	110	1331	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.276	27.276	0	1.001	325227	47467	43	107	1104		
341.8567	27.276	27.276	0	1.001	209208	30740	33	82	932	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.757	28.757	0	1.344	630965	86581	72	180	1203		
353.8970	28.766	28.757	1	1.344	383153	53222	44	110	1210	1.65(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.791	28.791	0	1.001	296979	39367	43	107	916		
341.8567	28.791	28.791	0	1.001	191614	26294	33	82	797	1.55(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.666						1	2			
341.8567	24.666						1	2			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.882	28.176	-18	1.023	2712	384	43	107	9		
341.8567	27.857	28.176	-19	1.022	2450	331	33	82	10	1.11(1.32-1.78)	
	Empc Correction				1749	247	33	82	7		
13C-1,2,3,7,8-PeCDD											
367.8949	29.574	29.574	0	1.382	375736	50925	22	55	2315		
369.8919	29.574	29.574	0	1.382	233481	32502	12	30	2709	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616	29.616	0	1.001	198400	24604	104	260	237		
357.8516	29.616	29.616	0	1.001	124563	16634	5	12	3327	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.536						104	260			
357.8516	28.536						5	12			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.906	34.906	0	0.954	335150	62206	104	260	598		
385.8610	34.906	34.906	0	0.954	622156	117085	157	392	746	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.922	34.922	0	1.000	306264	56530	98	245	577		
375.8178	34.931	34.922	1	1.001	248603	46439	68	170	683	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.066	35.066	0	0.959	349001	62636	104	260	602		
385.8610	35.066	35.066	0	0.959	648412	115434	157	392	735	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.082	35.082	0	1.000	345877	63685	98	245	650		
375.8178	35.082	35.082	0	1.000	273978	49689	68	170	731	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.890	35.890	0	0.981	315886	69314	104	260	666		
385.8610	35.890	35.890	0	0.981	594120	124533	157	392	793	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.907	35.907	0	1.000	327418	70468	98	245	719		
375.8178	35.907	35.907	0	1.000	264343	55699	68	170	819	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.782	36.782	0	1.006	355986	85136	104	260	819		
385.8610	36.782	36.782	0	1.006	651681	151674	157	392	966	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791	36.791	0	1.000	367965	84048	98	245	858		
375.8178	36.791	36.791	0	1.000	287008	65537	68	170	964	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						98	245			
375.8178	35.073						68	170			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.581	36.581	0		500778	110918	96	240	1155		
403.8529	36.589	36.581	1		402160	89771	47	117	1910	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.092	36.092	0	0.987	406606	94681	96	240	986		
403.8529	36.092	36.092	0	0.987	317154	74046	47	117	1575	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.109	36.109	0	1.000	190473	44726	32	80	1398		
391.8127	36.117	36.109	1	1.001	154758	35613	31	77	1149	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.210	36.210	0	0.990	437873	93109	96	240	970		
403.8529	36.210	36.210	0	0.990	344723	74267	47	117	1580	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.227	36.227	0	1.000	214850	43622	32	80	1363		
391.8127	36.227	36.227	0	1.000	171932	35324	31	77	1139	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.597	36.597	0	1.014	238372	51108	32	80	1597		
391.8127	36.597	36.597	0	1.014	191139	41299	31	77	1332	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.427						32	80			
391.8127	35.427						31	77			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.596	38.596	0	1.055	262759	61898	82	205	755		
419.8220	38.596	38.596	0	1.055	558751	138925	118	295	1177	0.47(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											
407.7817	38.613	38.613	0	1.000	292766	74037	102	255	726		
409.7788	38.605	38.613	-1	1.000	277202	69784	93	232	750	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.850	39.850	0	1.089	225724	63173	82	205	770		
419.8220	39.850	39.850	0	1.089	480413	133267	118	295	1129	0.47(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.859	39.859	0	1.000	230887	65916	102	255	646		
409.7788	39.859	39.859	0	1.000	221503	62046	93	232	667	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						102	255			
409.7788	39.253						93	232			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.547	39.547	0	1.081	322605	89433	92	230	972		
437.8140	39.547	39.547	0	1.081	300363	82619	71	177	1164	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.556	39.556	0	1.000	163232	44143	41	102	1077		
425.7737	39.547	39.556	-1	1.000	158823	43134	42	105	1027	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.916	39.253	-20	0.984	1800	475	41	102	12		
425.7737	38.916	39.253	-20	0.984	1853	453	42	105	11	0.97(0.88-1.20)	
13C-OCDD											
469.7780	42.036	42.036	0	1.149	557785	137107	35	87	3917		
471.7750	42.036	42.036	0	1.149	625202	146861	53	132	2771	0.89(0.76-1.02)	
OCDF											
441.7428	42.137	42.137	0	1.002	419758	104739	35	87	2993		
443.7399	42.137	42.137	0	1.002	450418	110462	47	117	2350	0.93(0.76-1.02)	
OCDD											
457.7377	42.053	42.053	0	1.000	297170	72135	25	62	2885		
459.7348	42.053	42.053	0	1.000	326279	80759	27	67	2991	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1227122	170478

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1227122	170478

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.254	158	58	283	105	0.0333	0.56	RnQ
19.254	158	58	205	75	0.0274		Empc Correction
19.727	558	160	1084	193	0.1239	0.51	RQ
19.727	558	160	724	207	0.0967		Empc Correction
20.733	533	92	1018	140	0.1170	0.52	RQ
20.733	533	92	692	119	0.0924		Empc Correction
Signal Totals:							
	1249	310	1621	401			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3634	748				0.52	RQ
	2870	711					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2742 = (3634 * 100.000) / (1227122 * 1.080)
Empc Amount: 0.2165 = (2870 * 100.000) / (1227122 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDD, RT: 20.727

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	812184	102359

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	812184	102359

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.727	309	131	48	26	0.0409	6.44	RQ
19.727	36	20	48	26	0.009618		Empc Correction
20.380	408	89	70	37	0.0547	5.83	RnQ
20.380	53	28	70	37	0.0141		Empc Correction
22.014	354	122	411	123	0.0876	0.86	
22.118	322	96	411	123	0.0839	0.78	n
Signal Totals:							
	765	266	940	309			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2333	747				1.48	RQ
	1705	575					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2671 = (2333 * 100.000) / (812184 * 1.075)
Empc Amount: 0.1952 = (1705 * 100.000) / (812184 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1007111	153148
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1014118	139803

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1010614	146475

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.882	2712	384	2450	331	0.4954	1.11	RnQ
27.882	2712	384	1749	247	0.4281		Empc Correction
Signal Totals:							
	2712	384	1749	247			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5162	715				1.11	RQ
	4461	631					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4954 = (5162 * 100.000) / (1010614 * 1.031)
Empc Amount: 0.4281 = (4461 * 100.000) / (1010614 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	20-Aug-2021 01:34:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	15
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-HpCDD, RT: 39.253

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	622968	172052

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	622968	172052

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.916	1800	475	1853	453	0.5583	0.97	
Signal Totals:							
	1800	475	1853	453			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3653	928				0.97	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5583 = (3653 * 100.000) / (622968 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d				
Injection Date:	20-Aug-2021 01:34:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.40

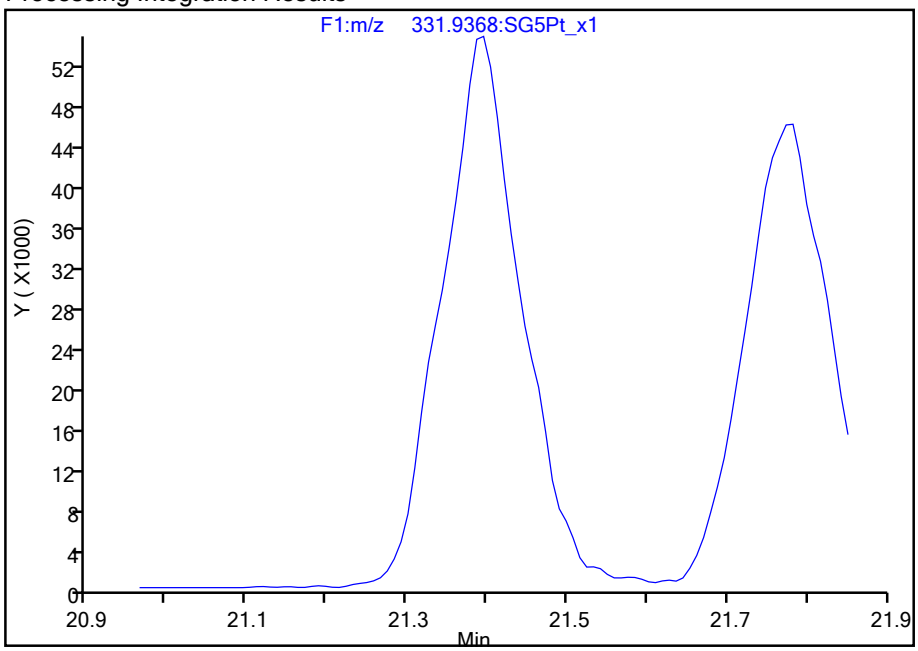

Manual Integration Results

RT: 21.40
Area: 378196
Amount: 100.0000
Amount Units: pg/ul

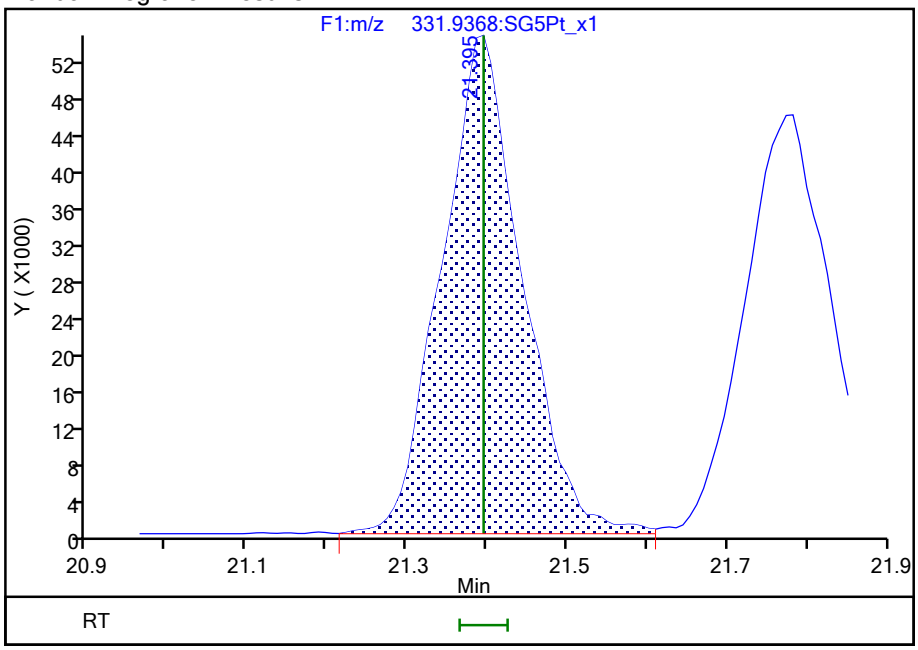

Reviewer: arghestanis, 20-Aug-2021 09:08:31
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

786306

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

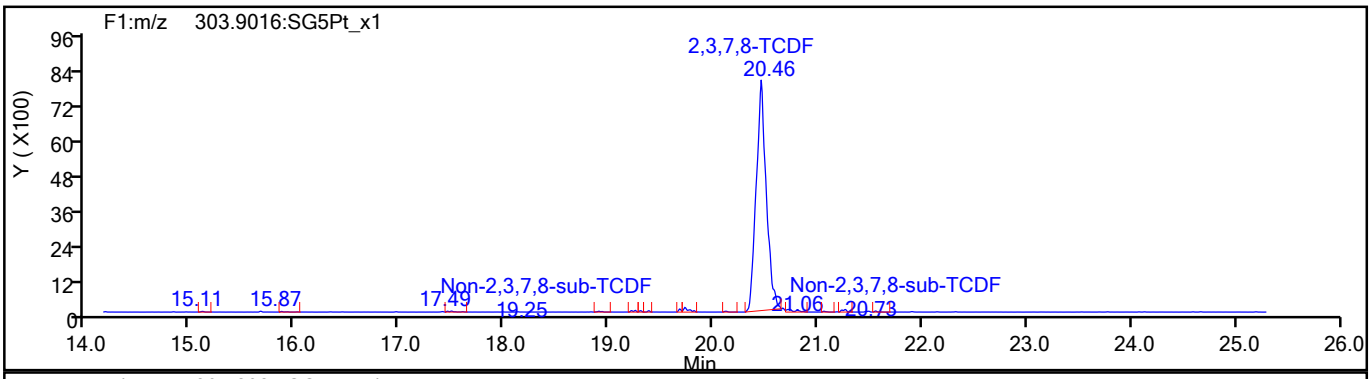

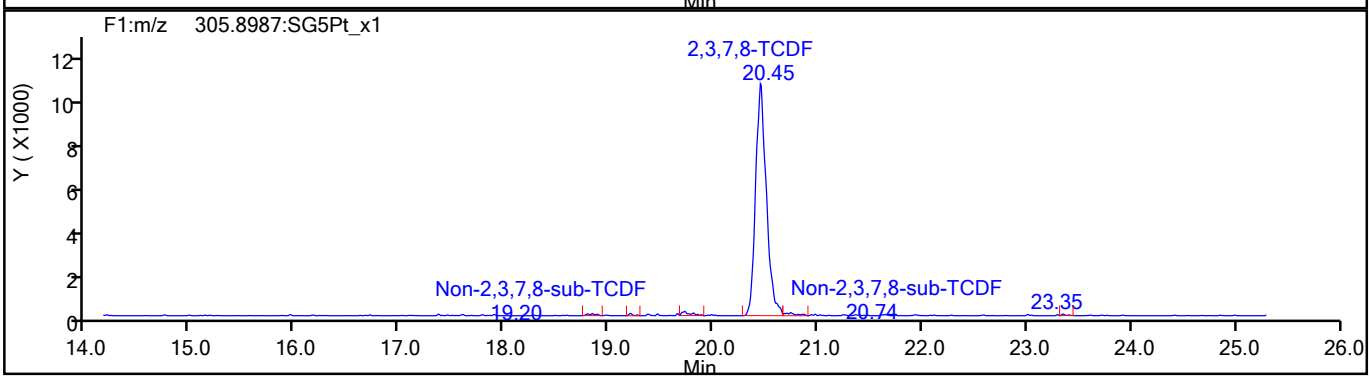

TCDF Standards

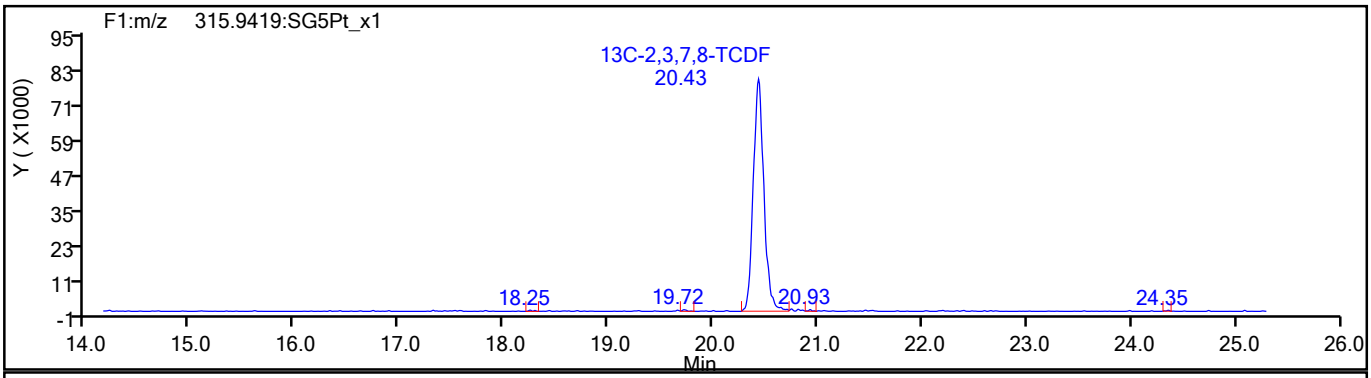

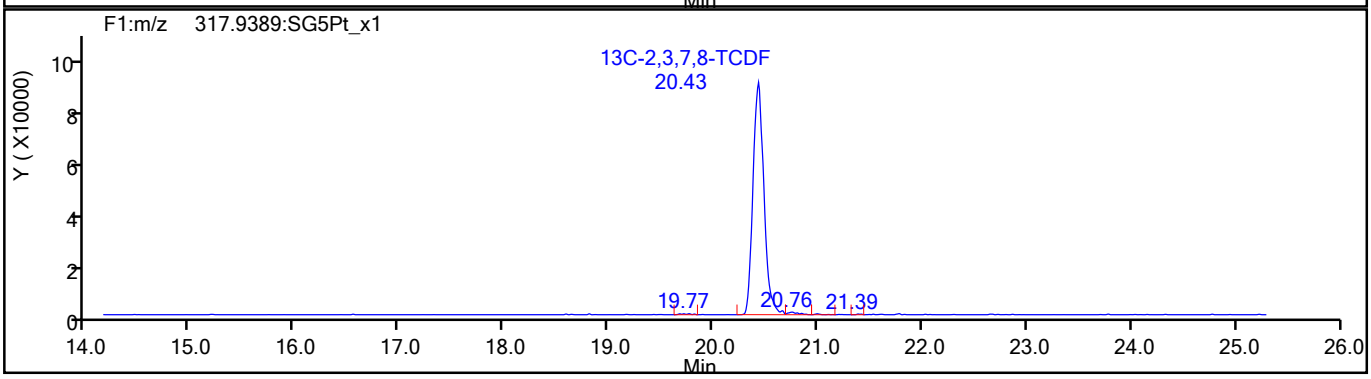

786307

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

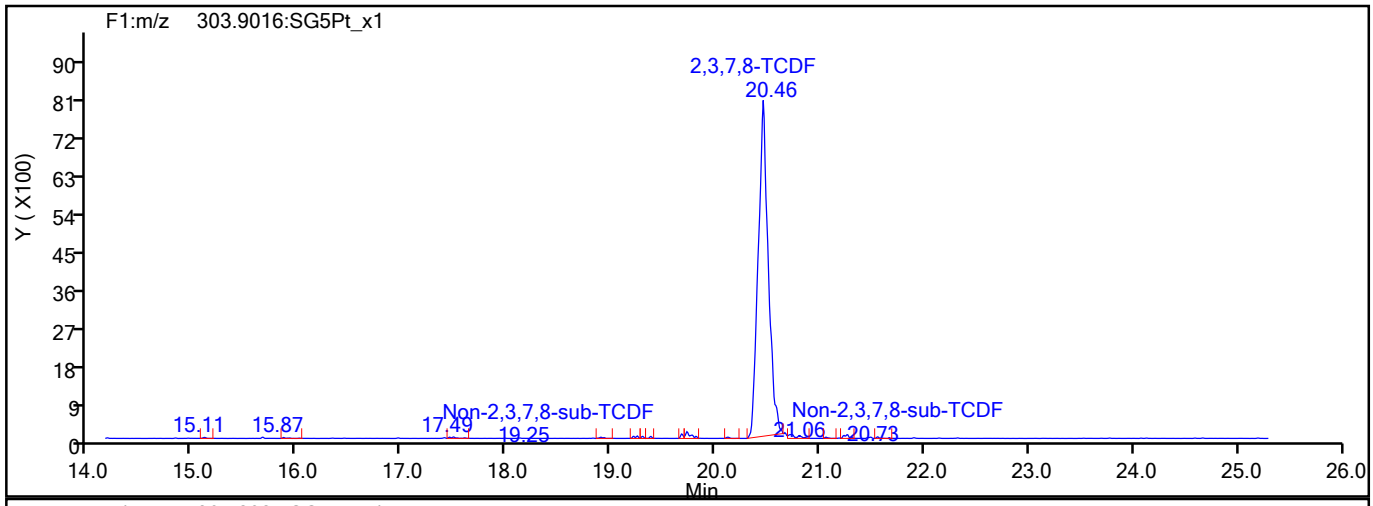

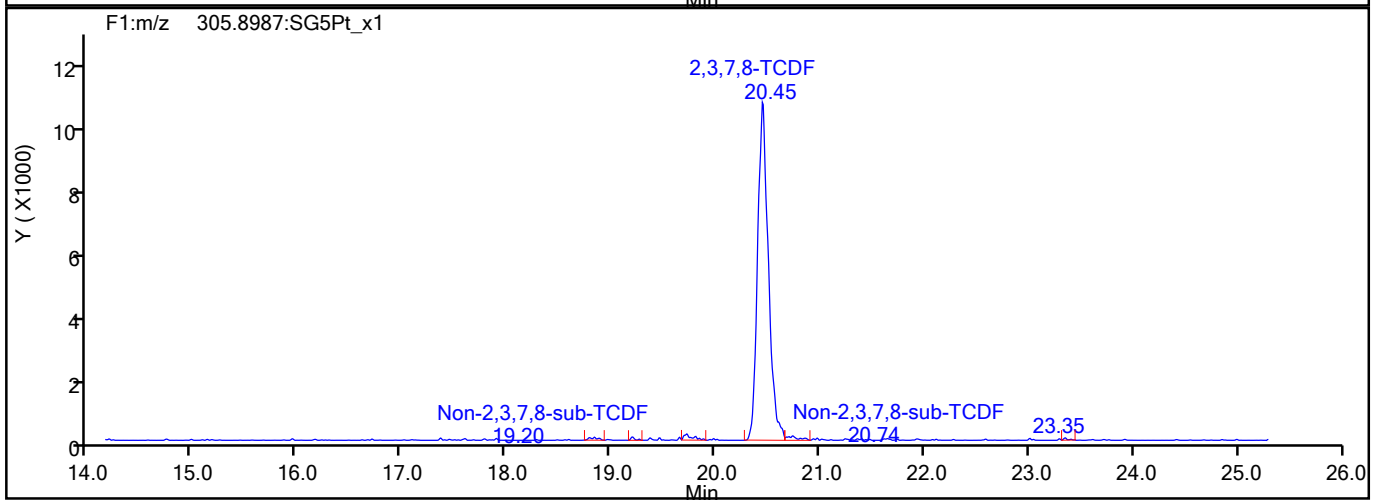

TCDF Interference Mass

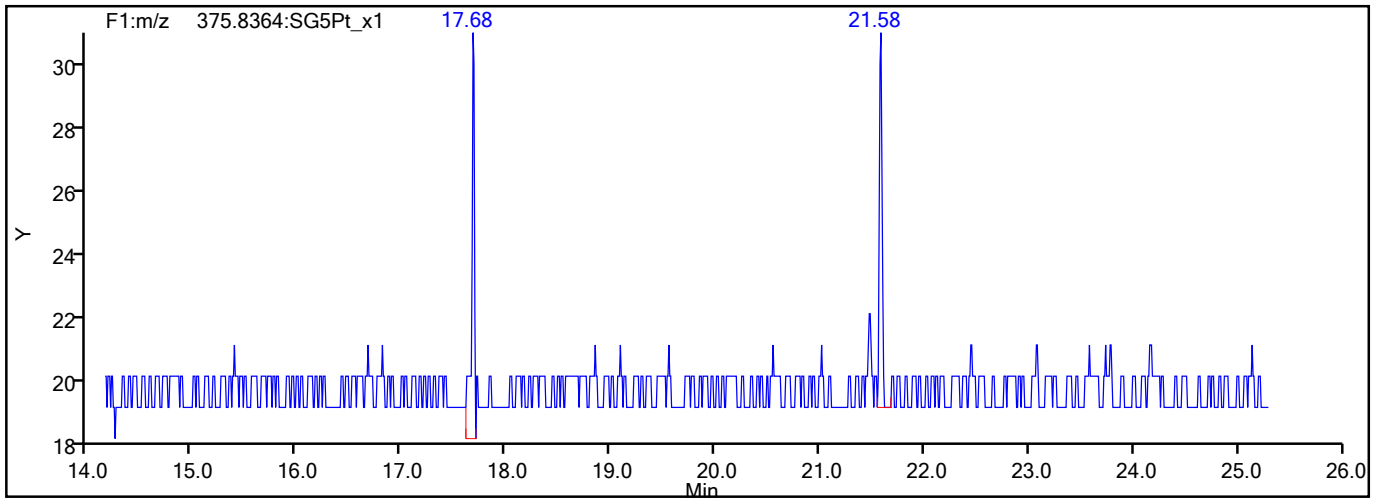

786308

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

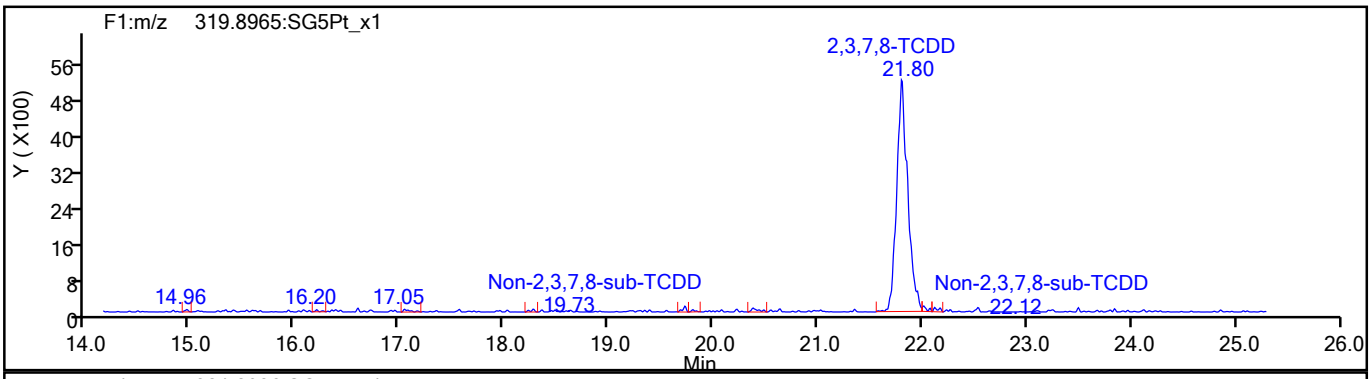

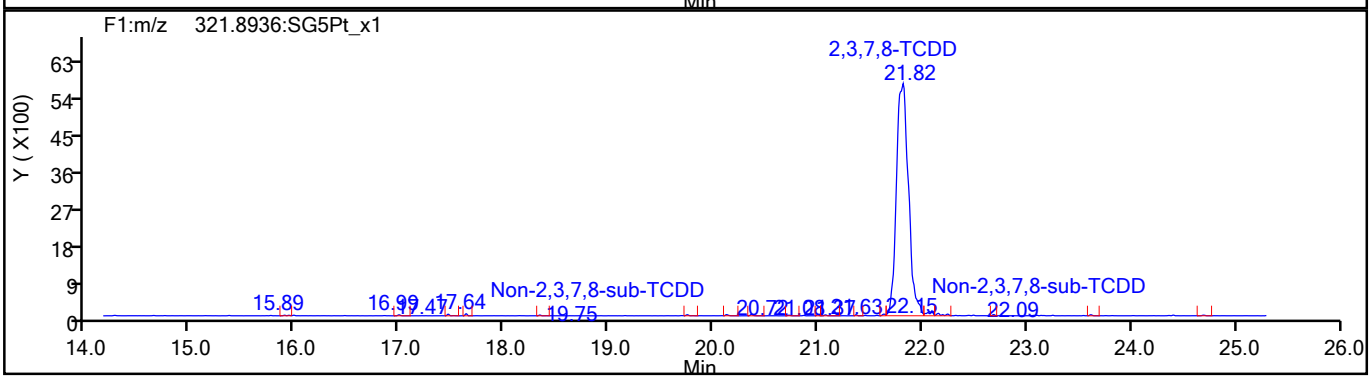

TCDD Standards

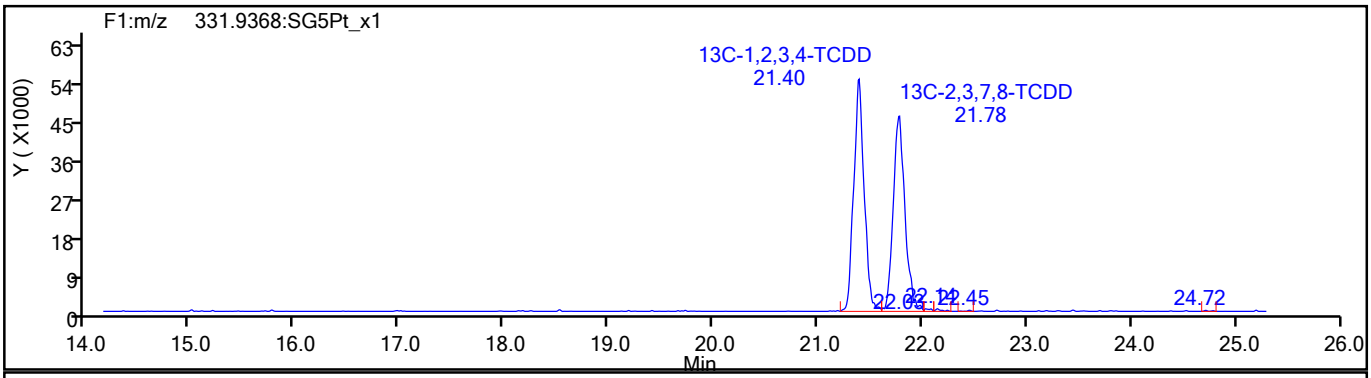

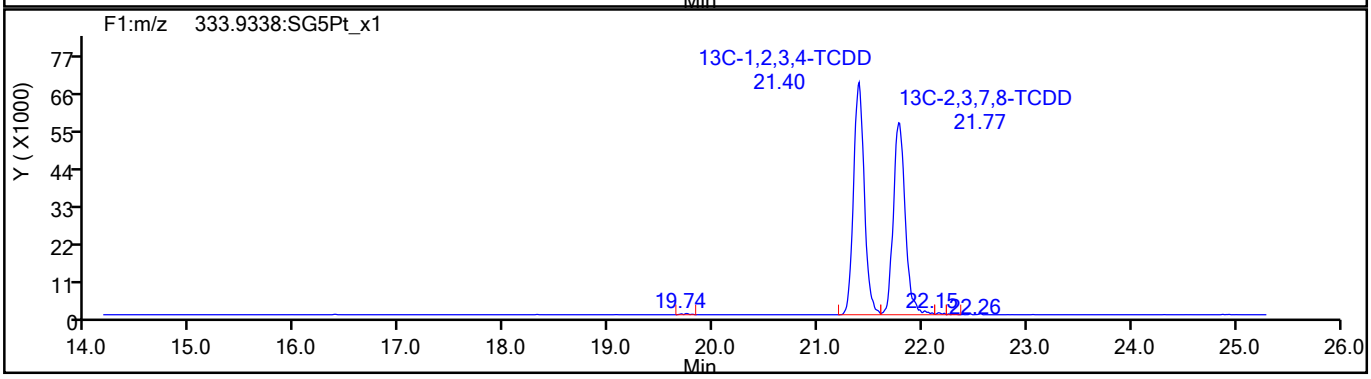

786309

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

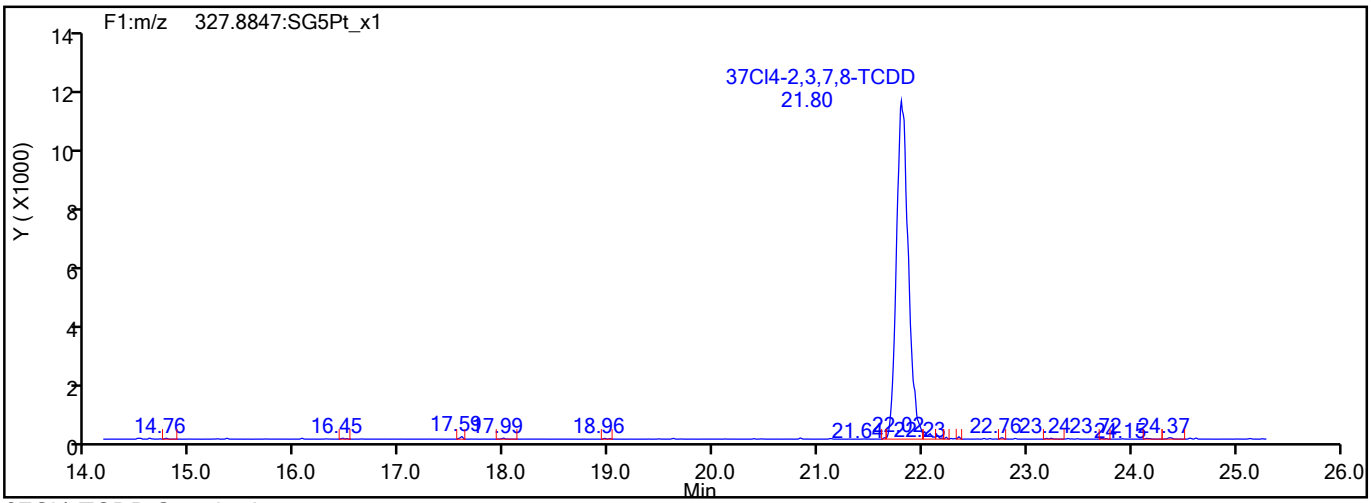

37Cl4-TCDD Standards

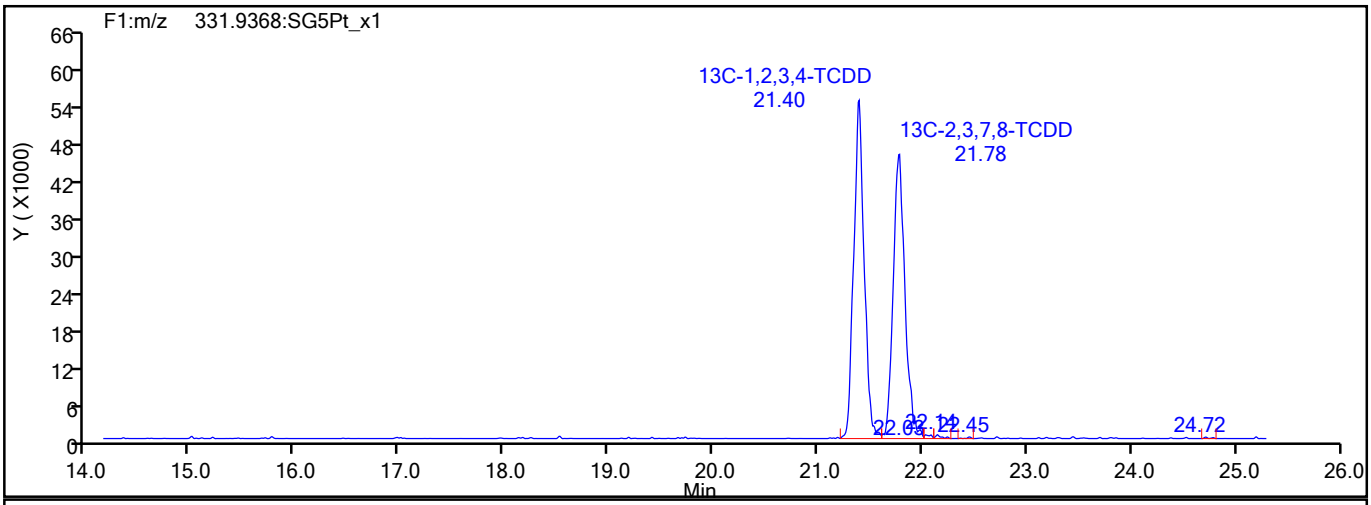

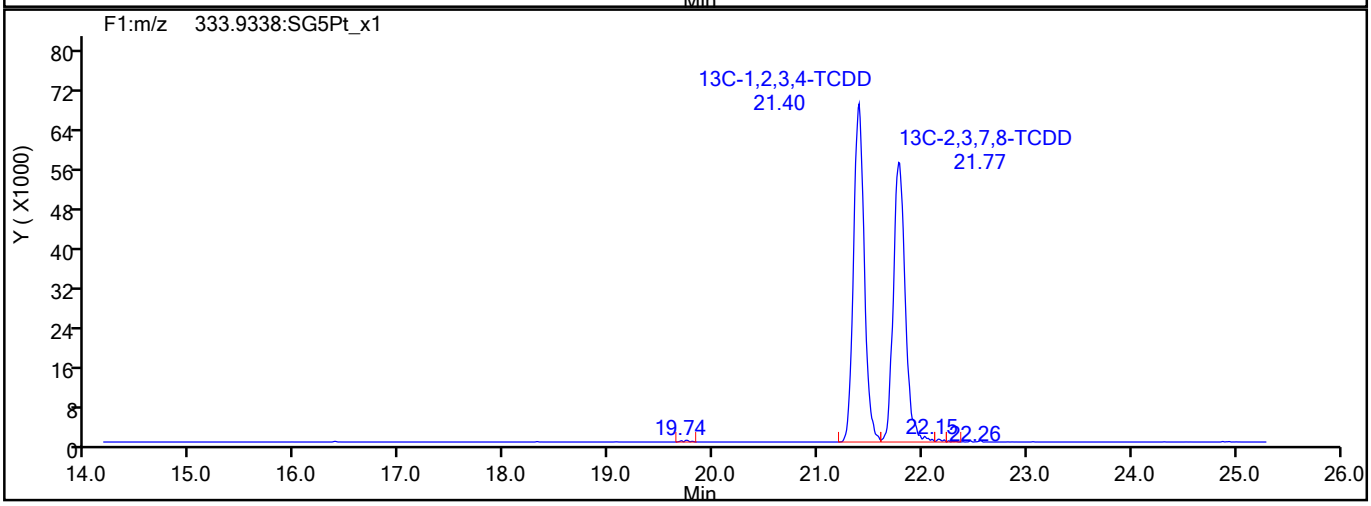

786310

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

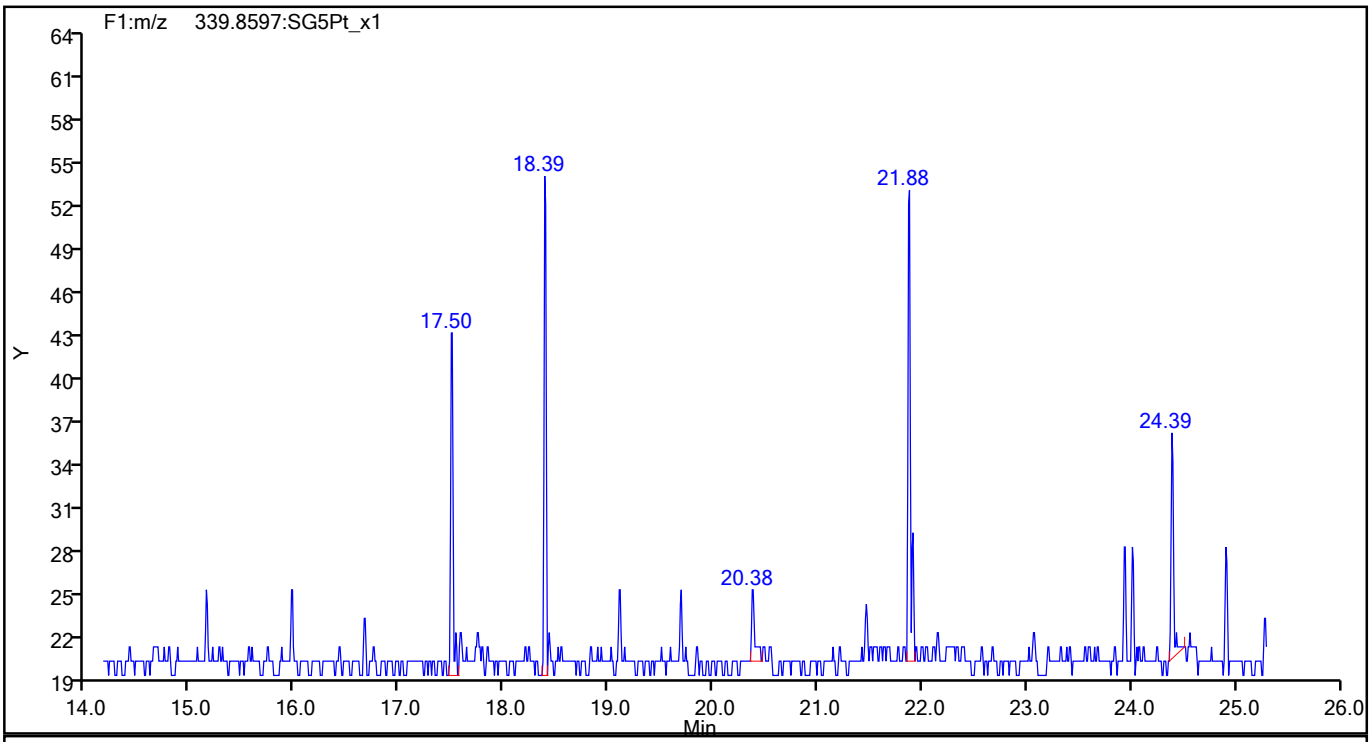

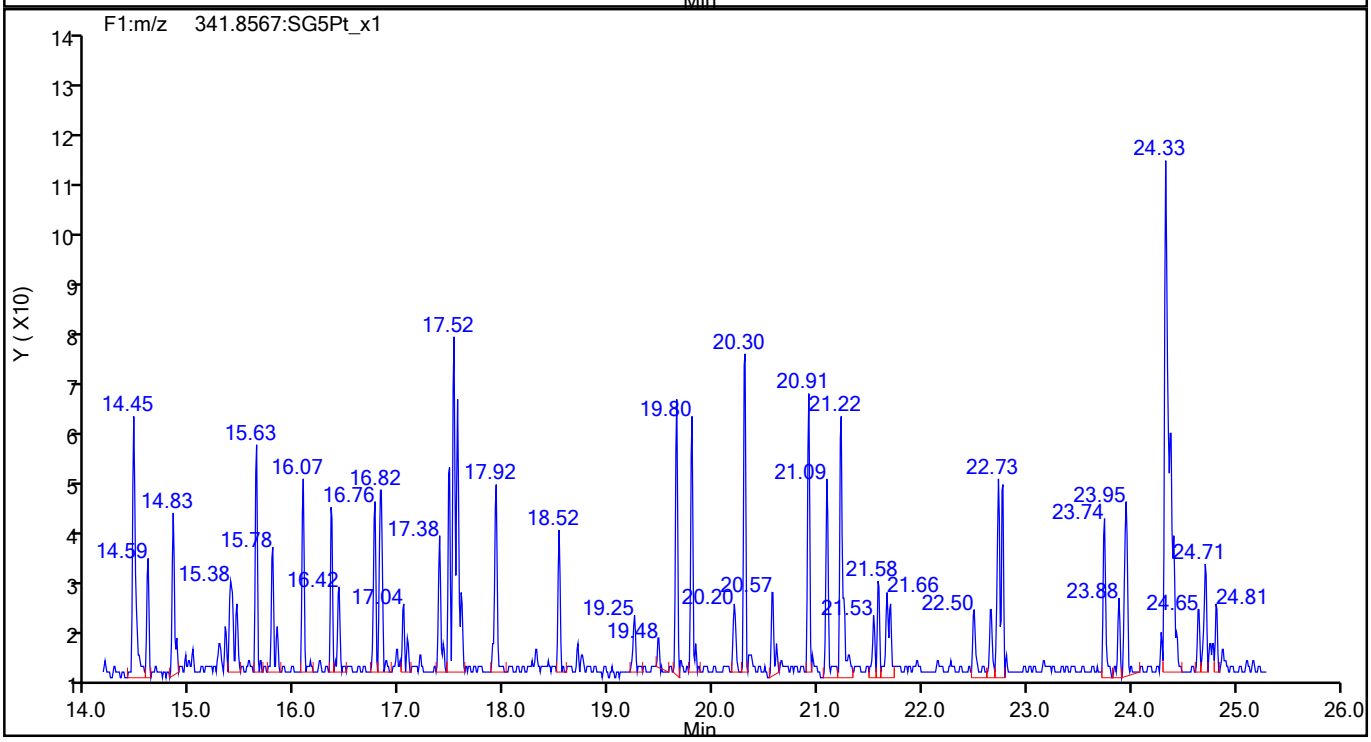

786311

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

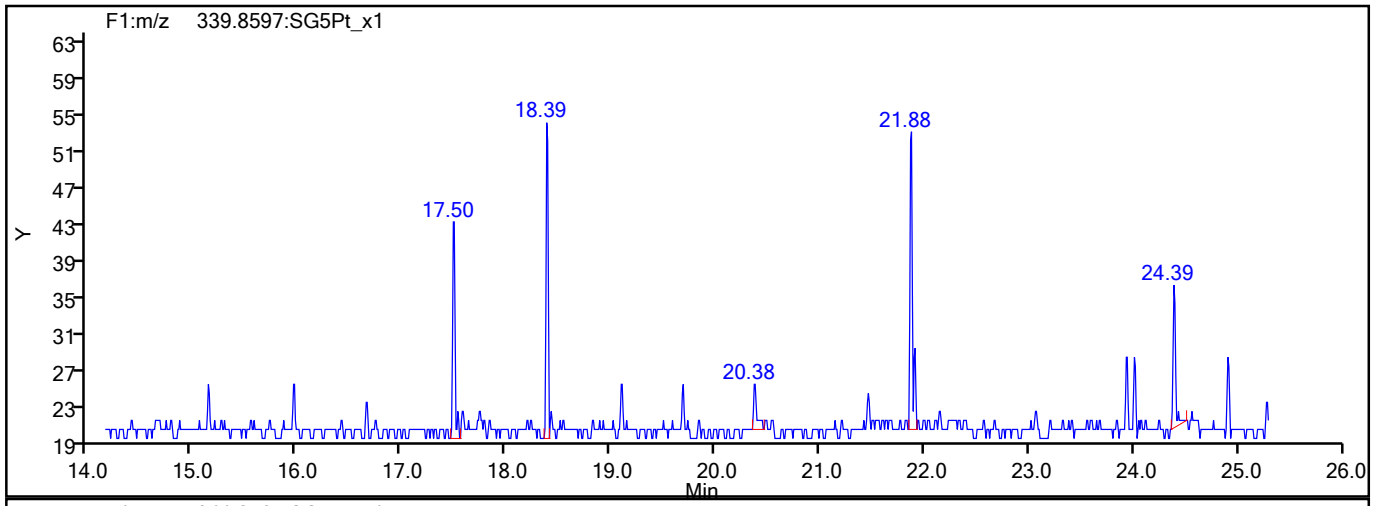

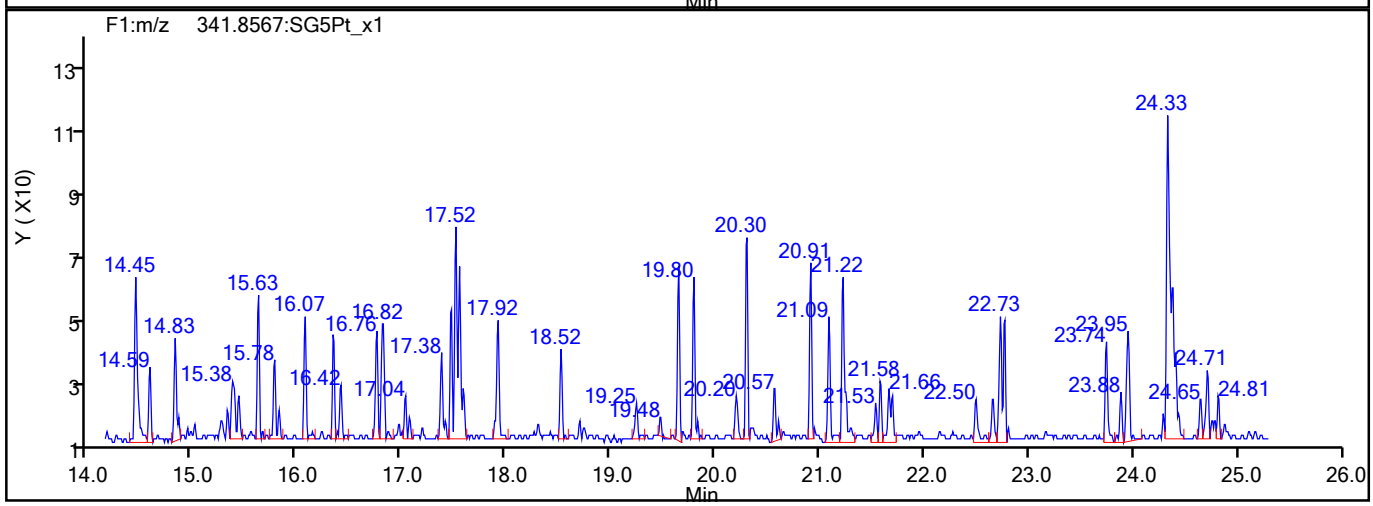

F1 PeCDFs Interference Mass

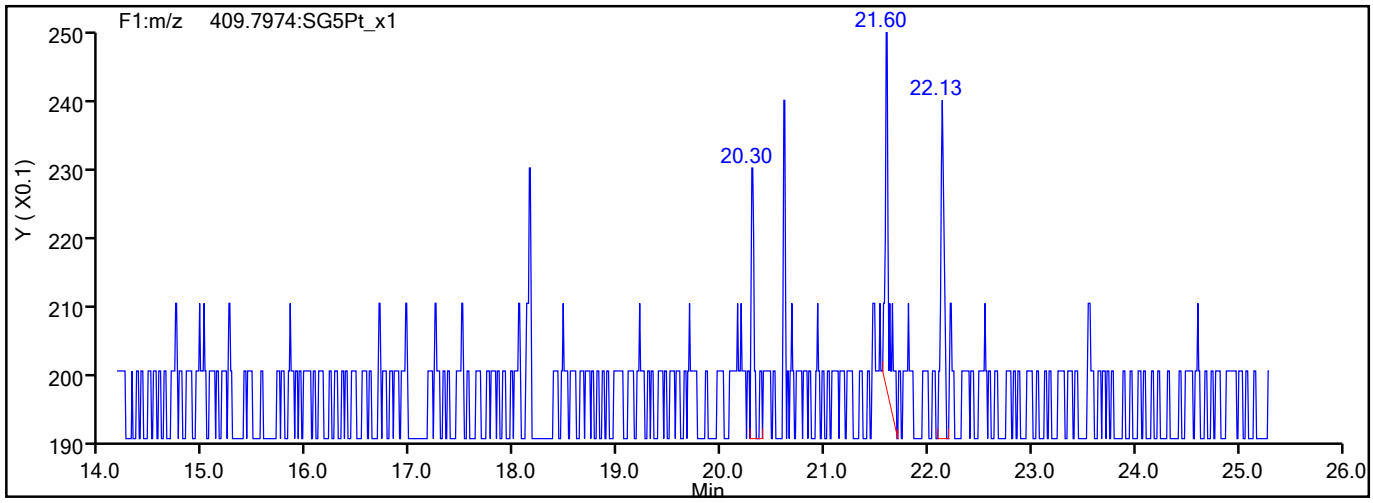

786312

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

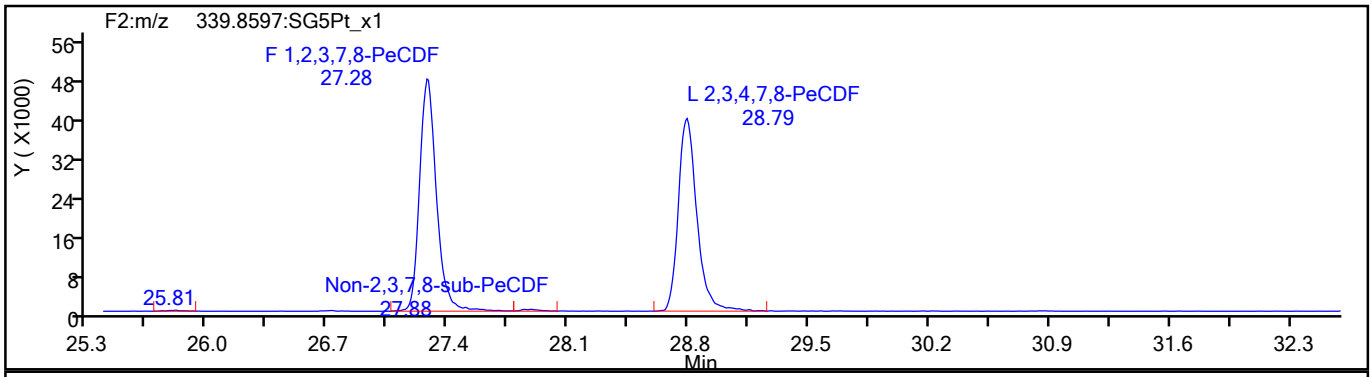

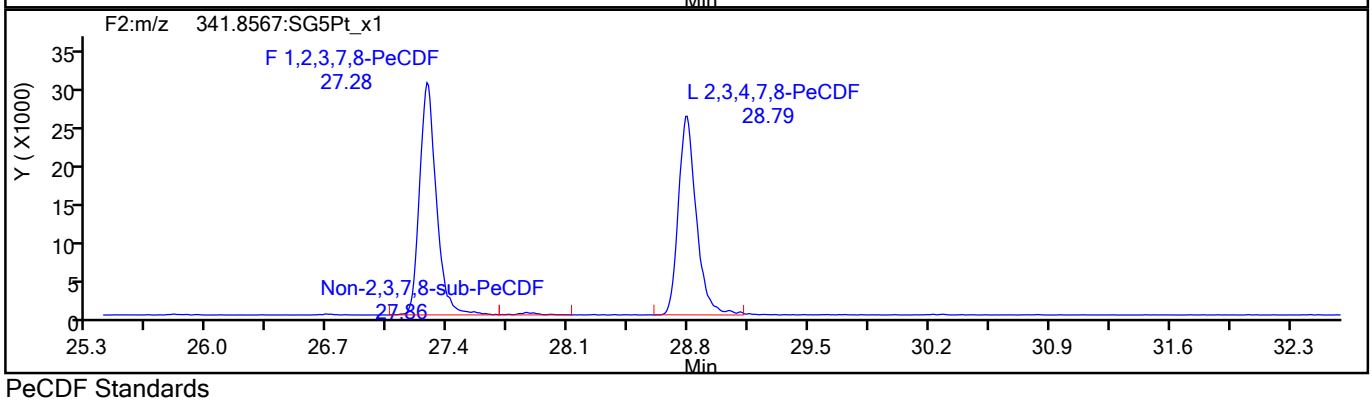

PeCDF Standards

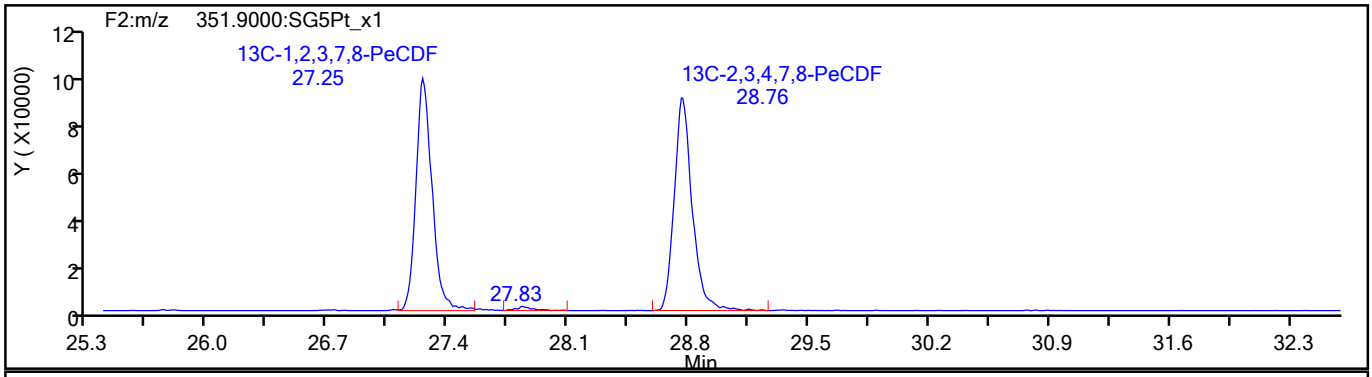

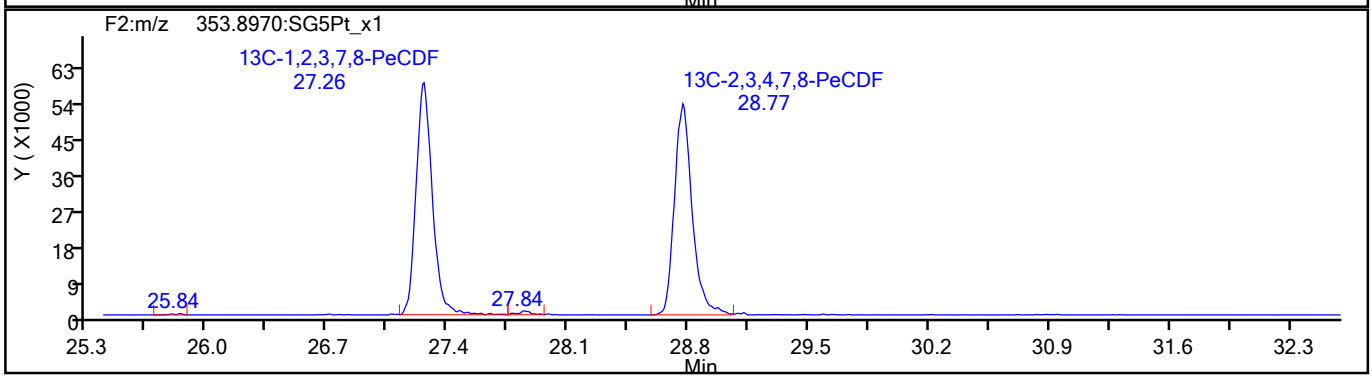

786313

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

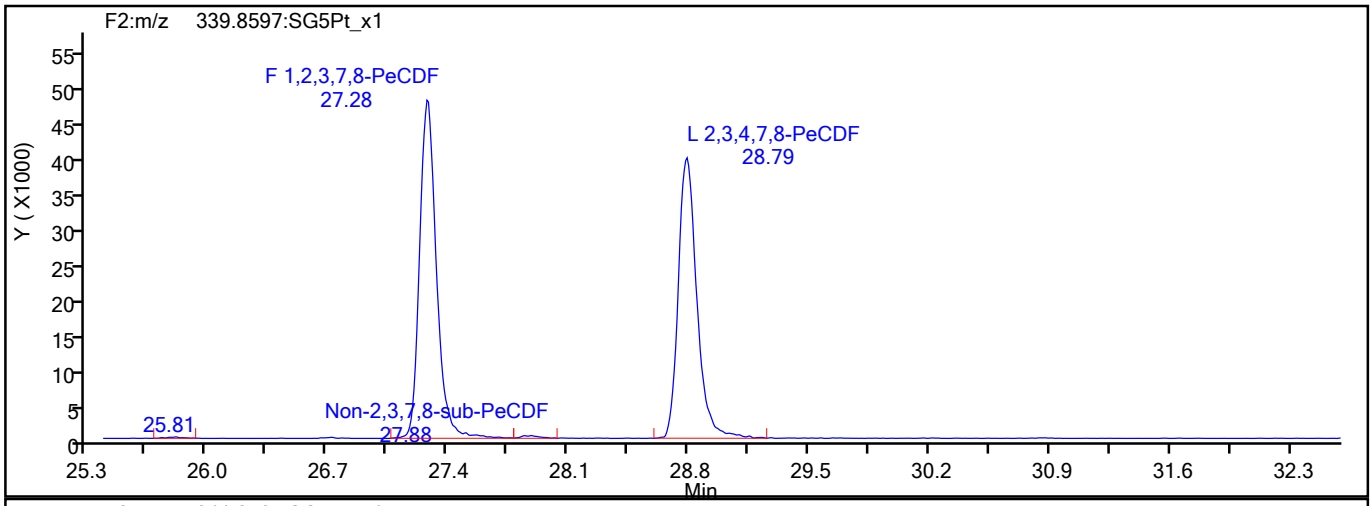

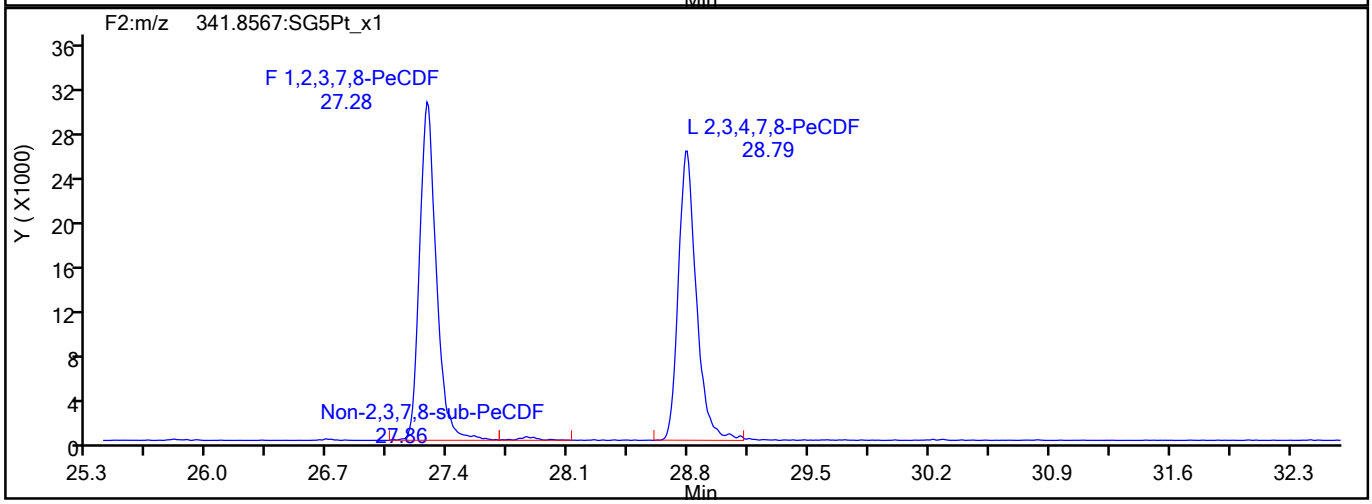

PeCDF Interference Mass

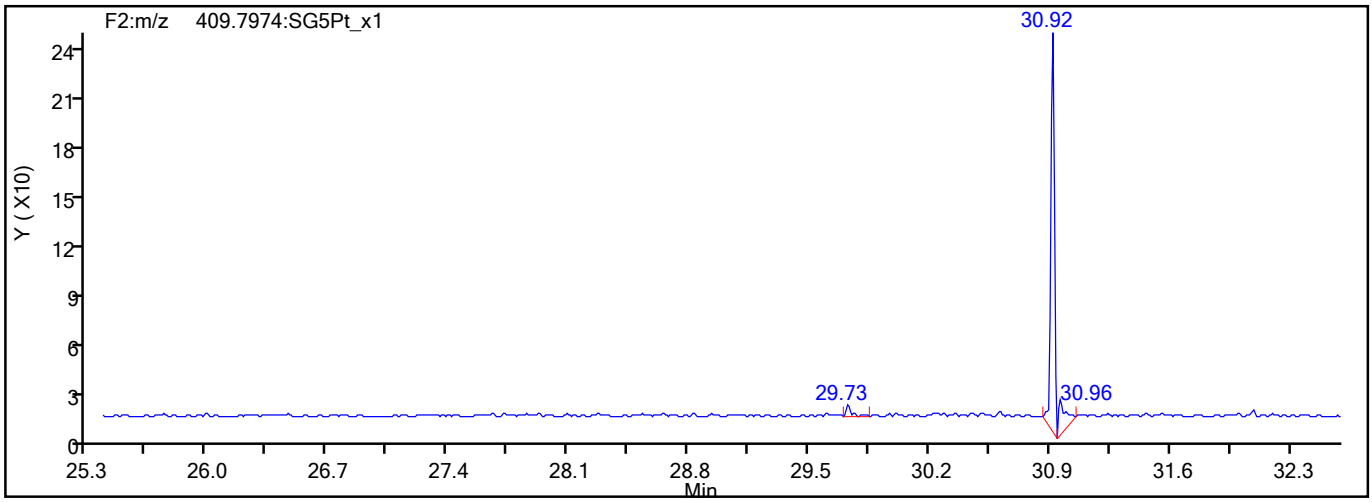

786314

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

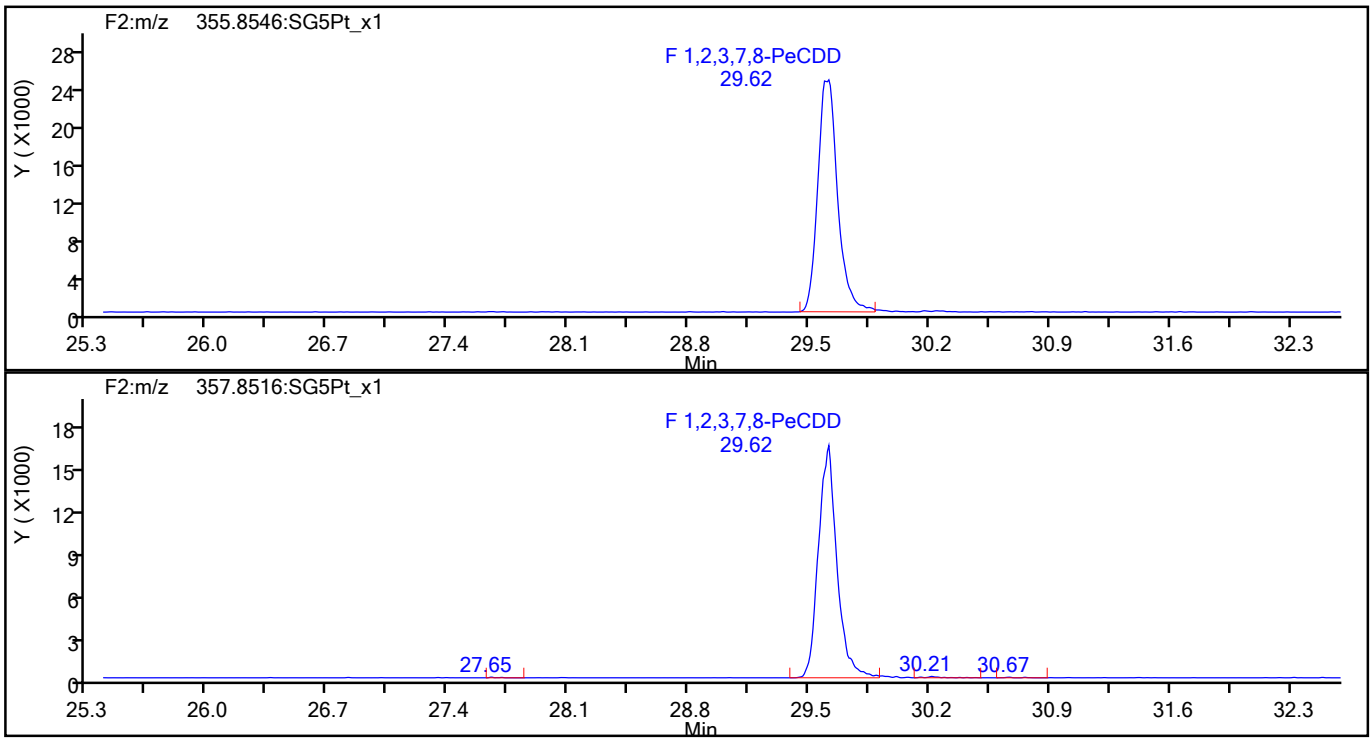

PeCDD Standards

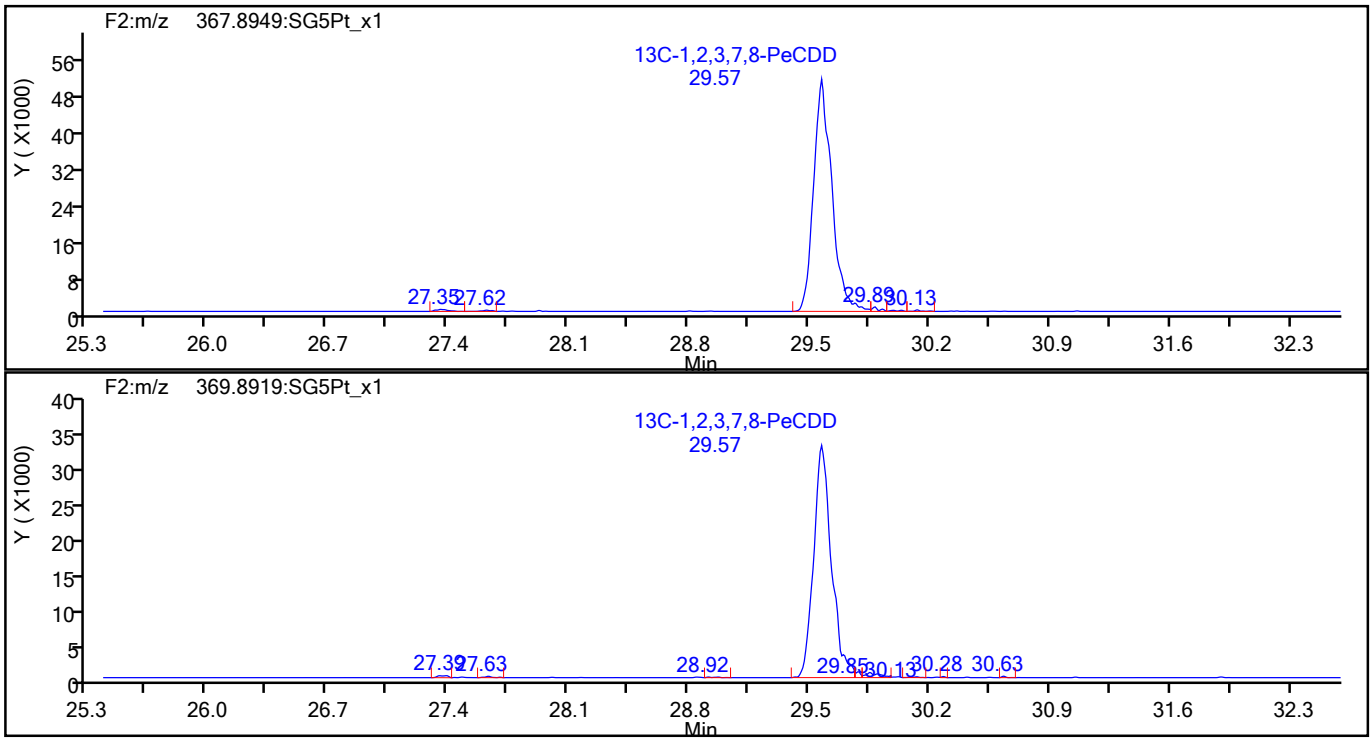

786315

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

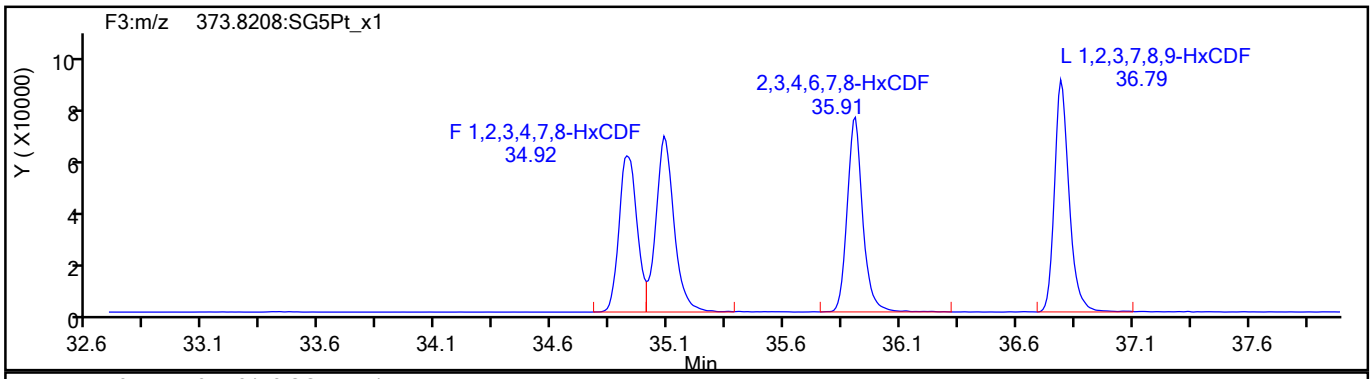

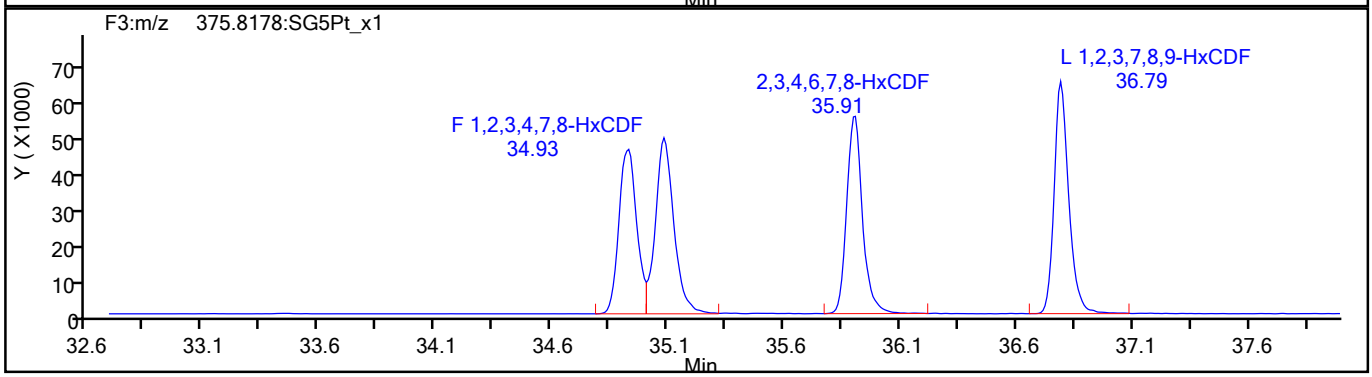

HxCDF Standards

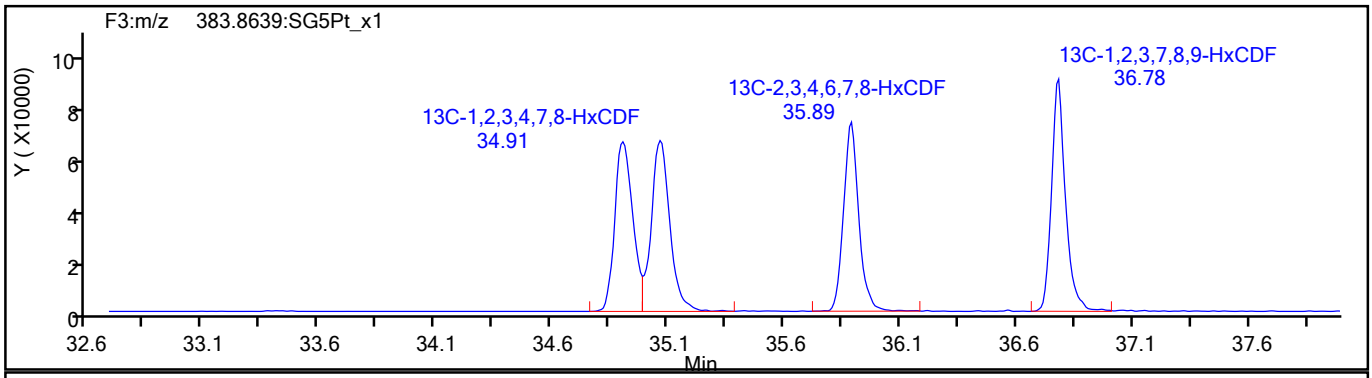

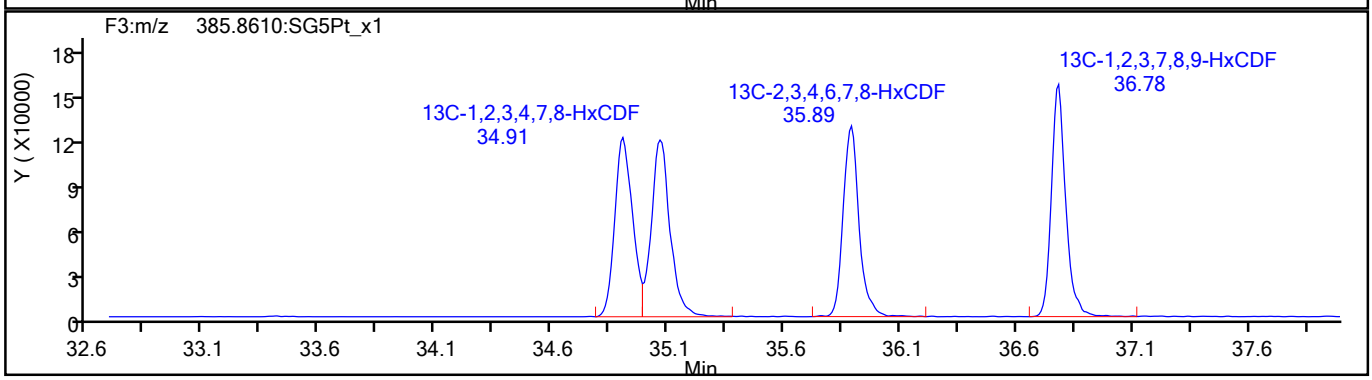

786316

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

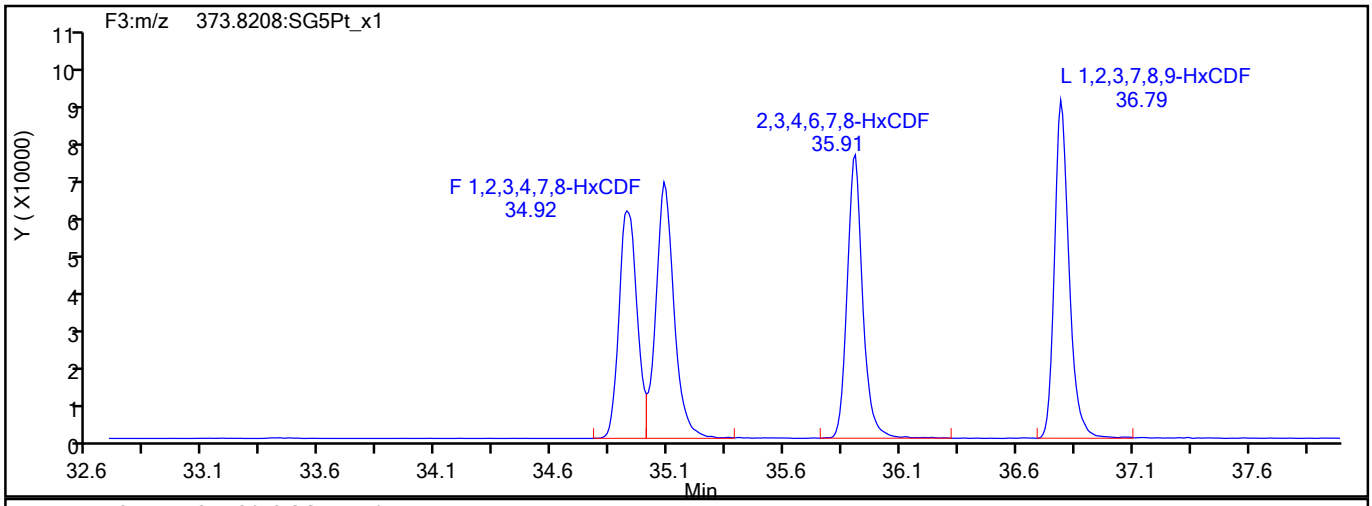

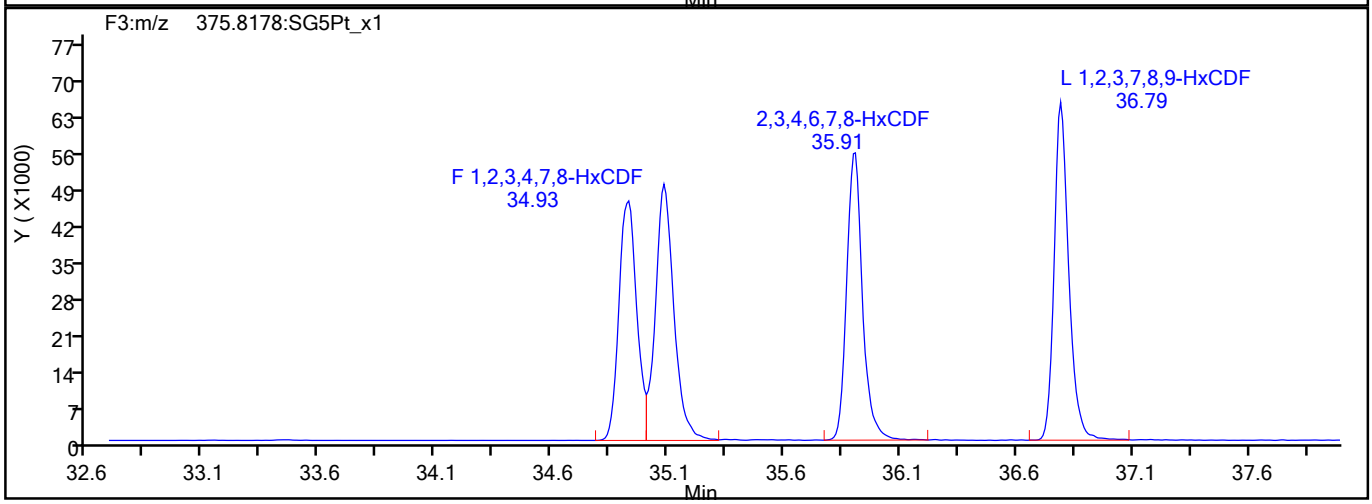

HxCDF Interference Mass

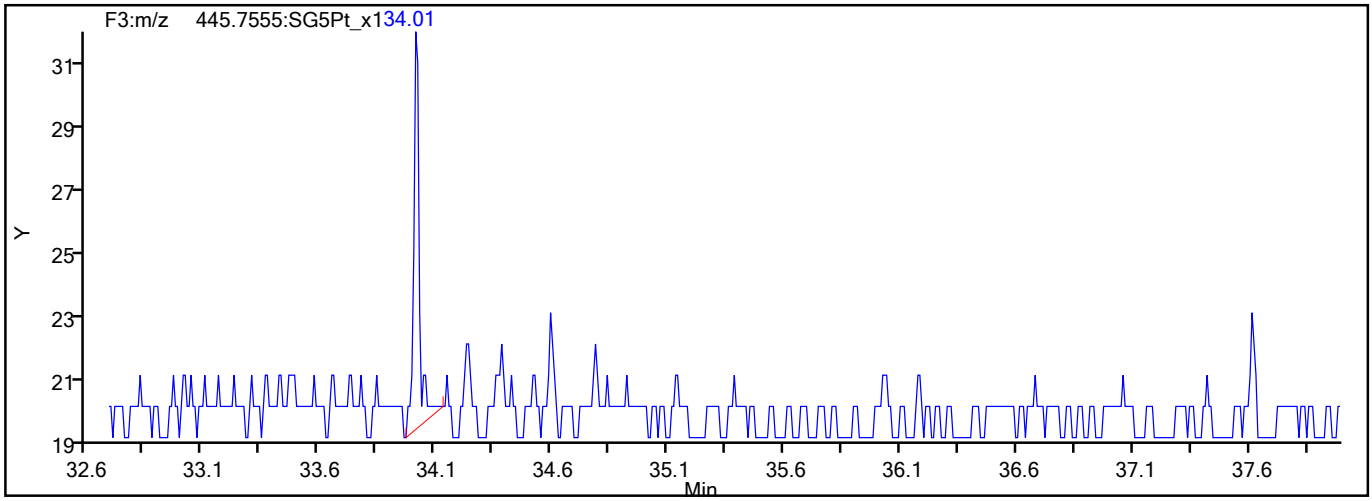

786317

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

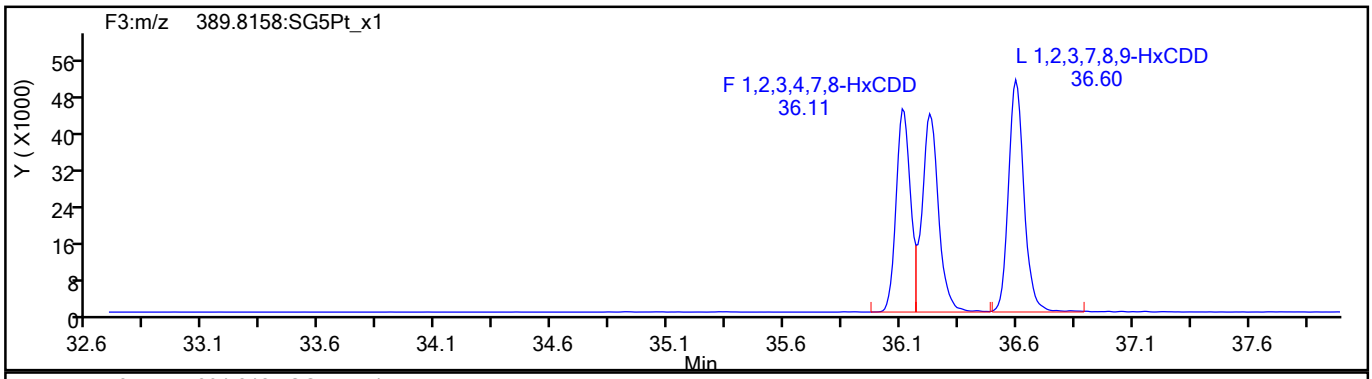

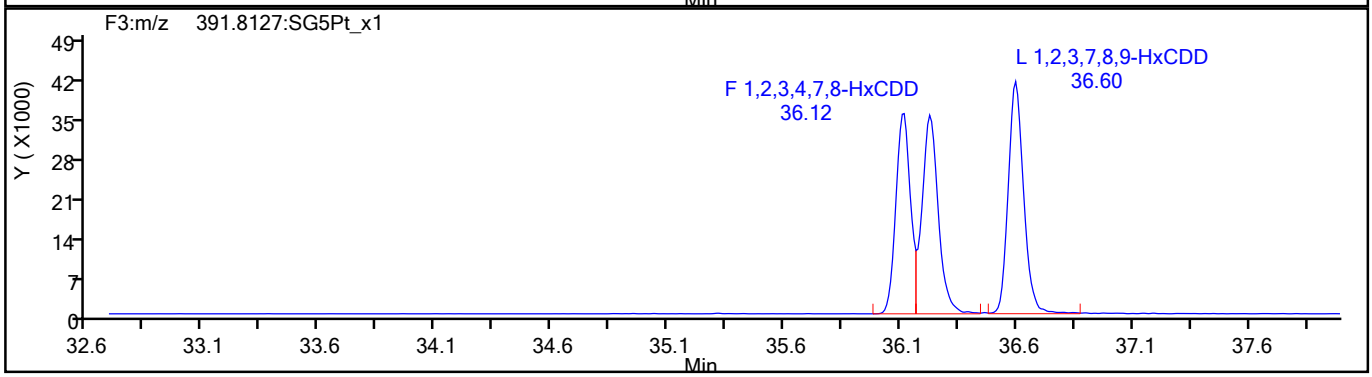

HxCDD Standards

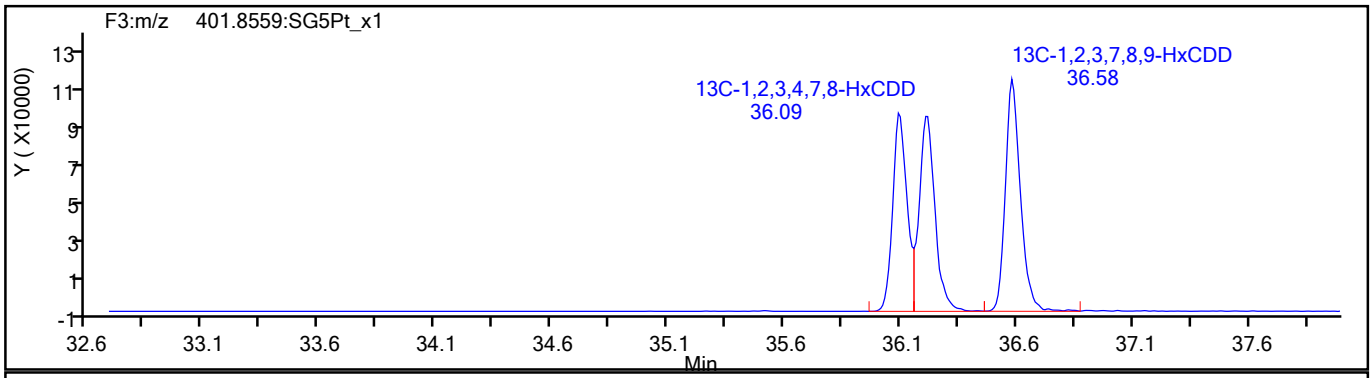

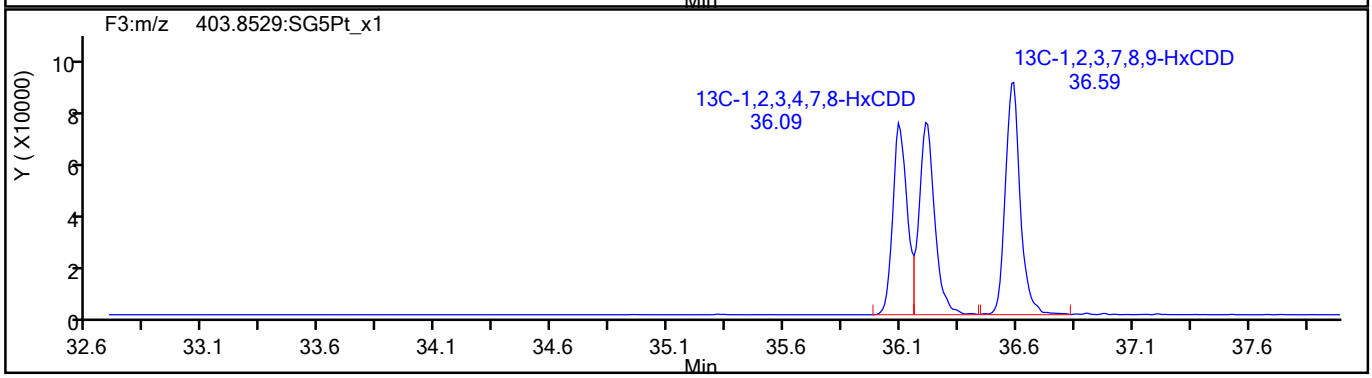

786318

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

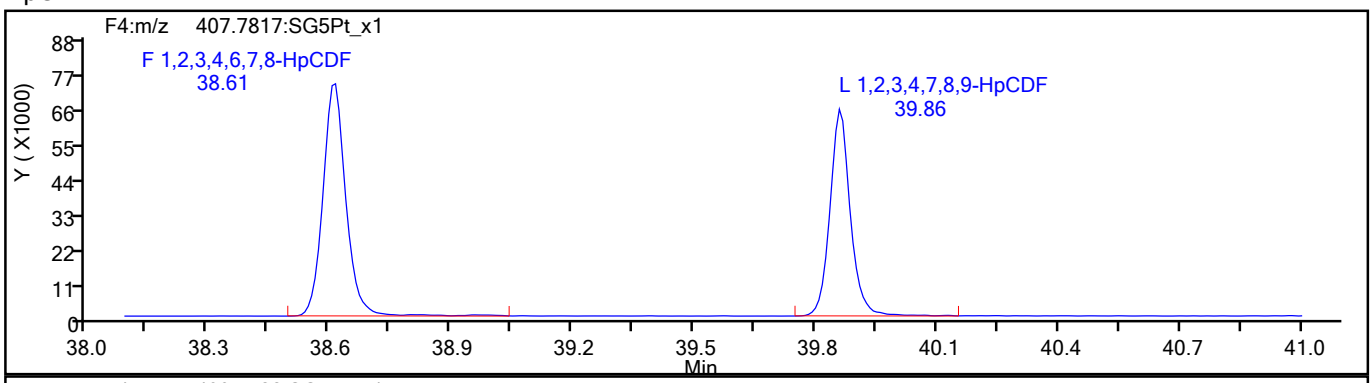

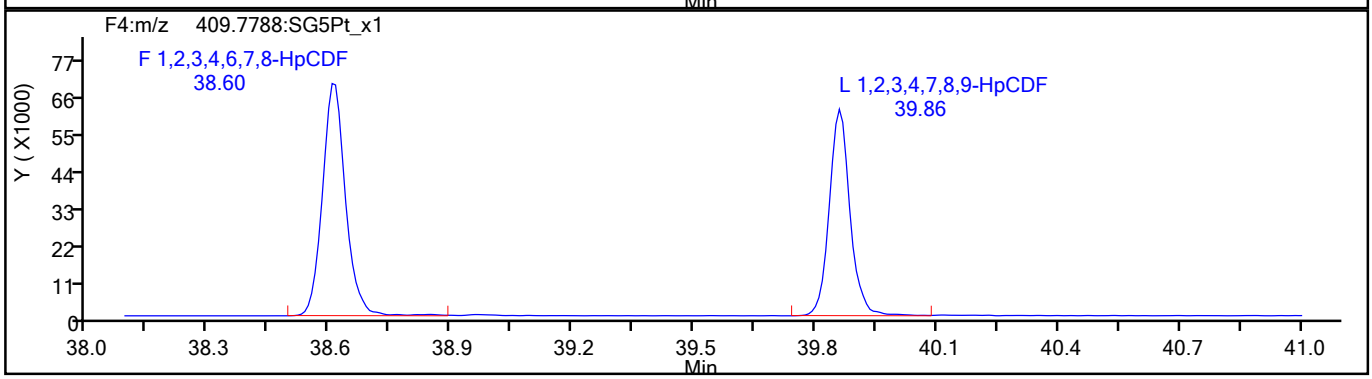

HpCDF Standards

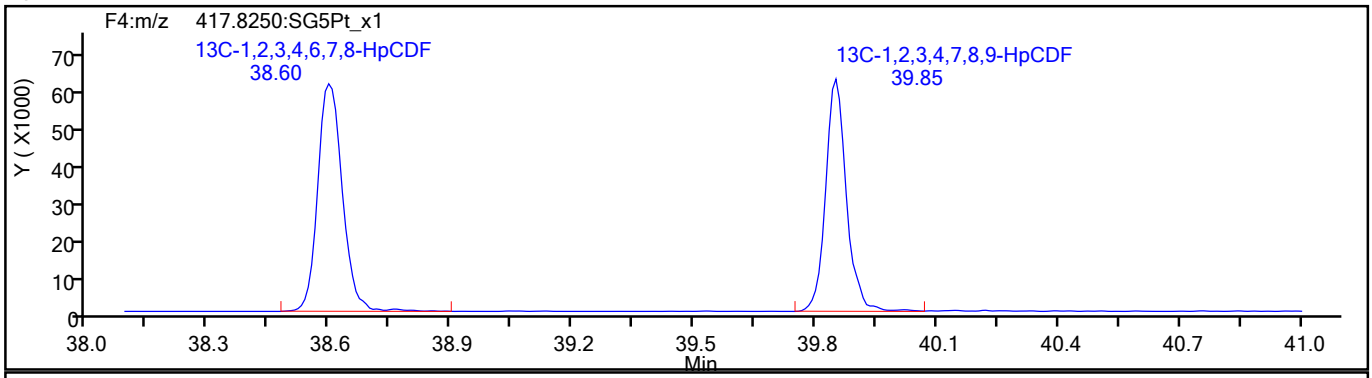

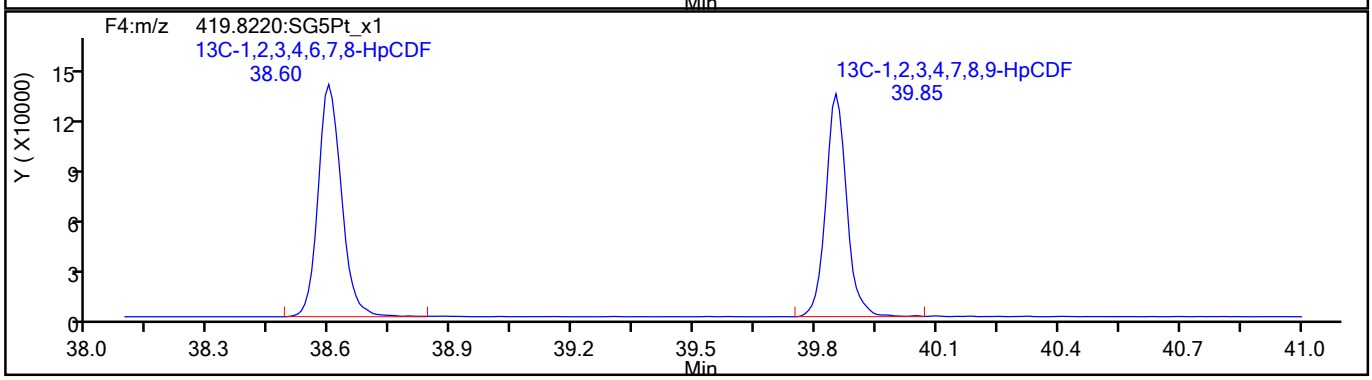

786319

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

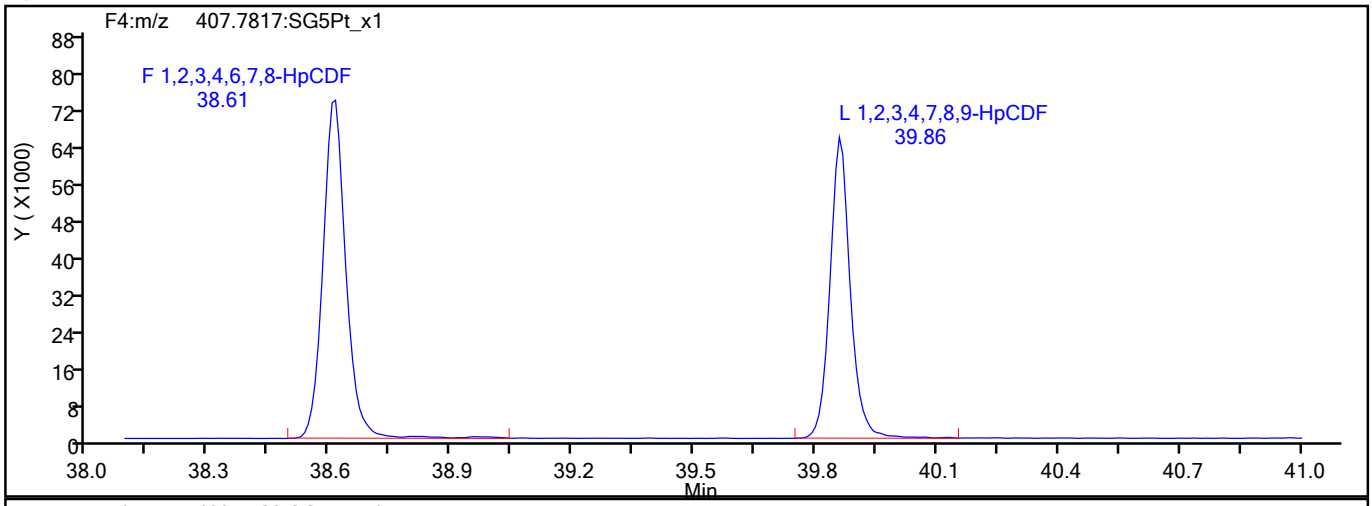

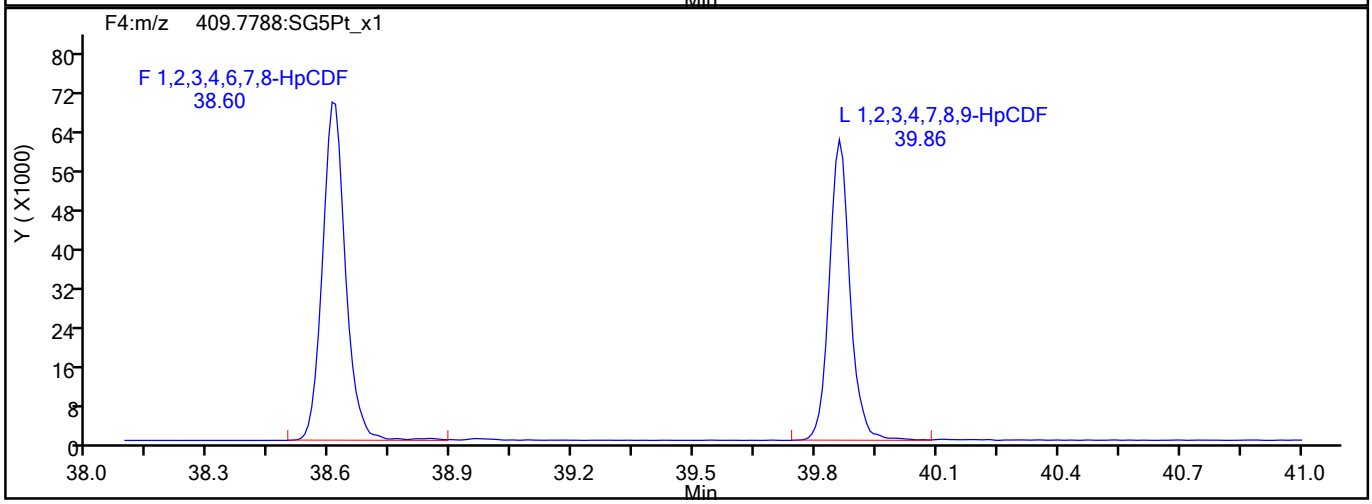

HpCDF Interference Mass

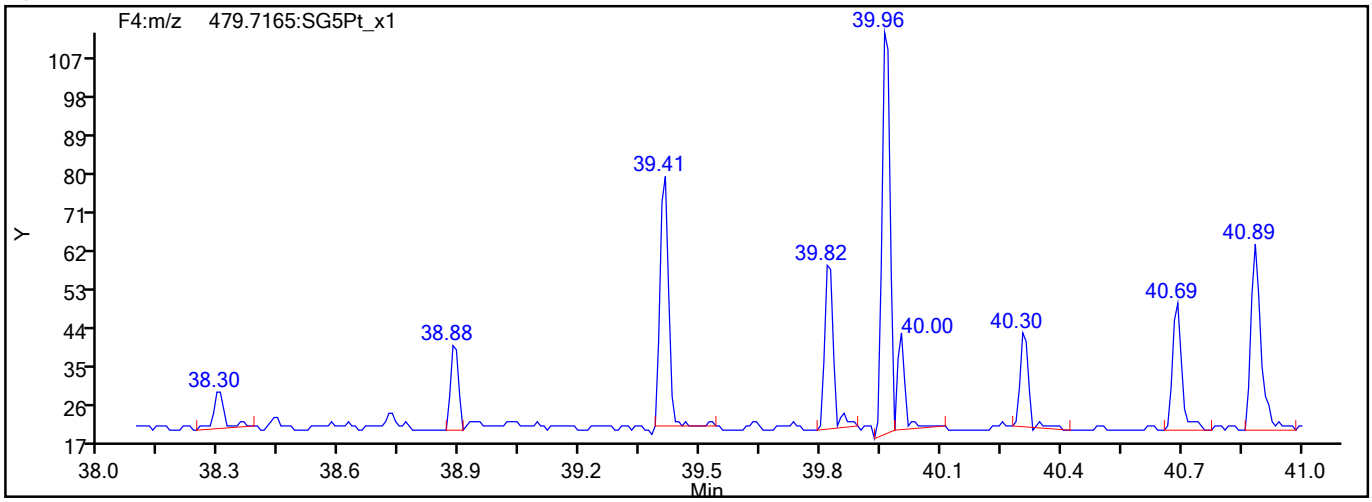

786320

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

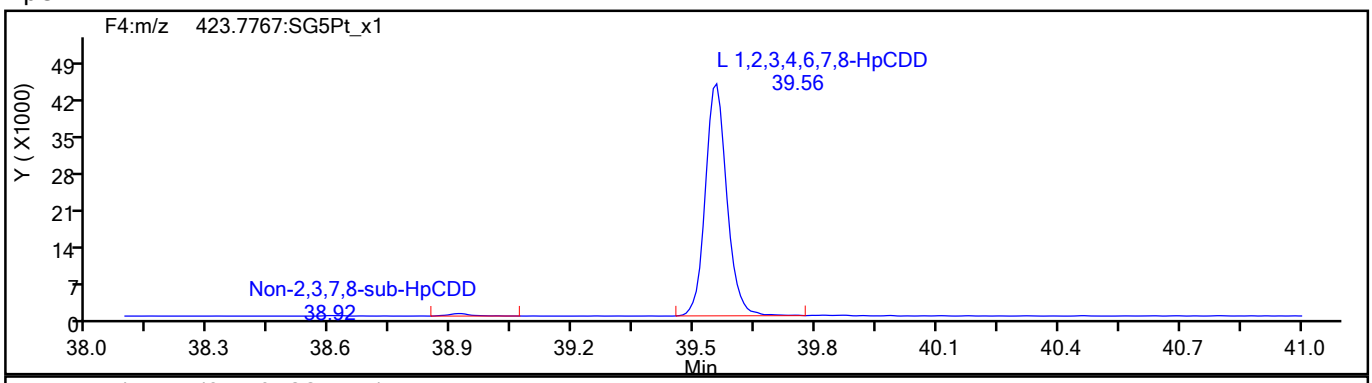

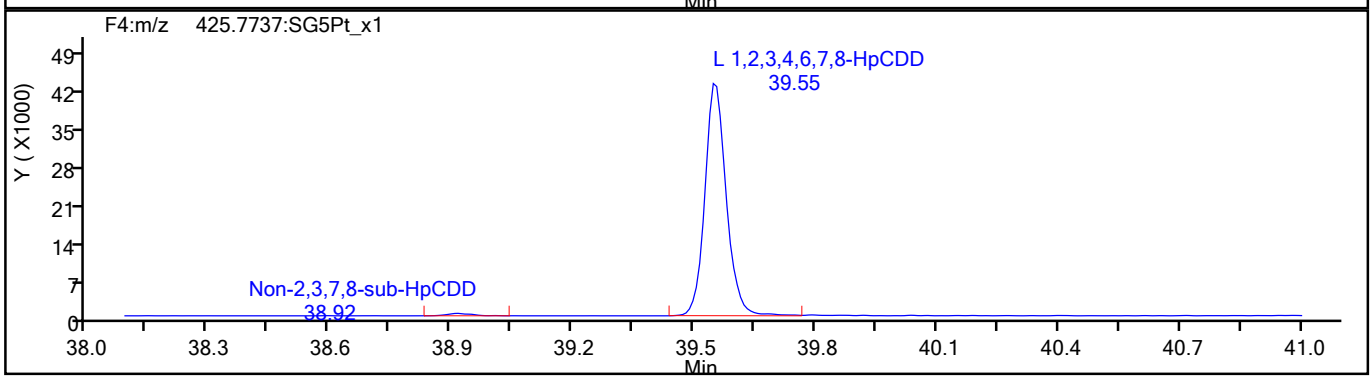

HpCDD Standards

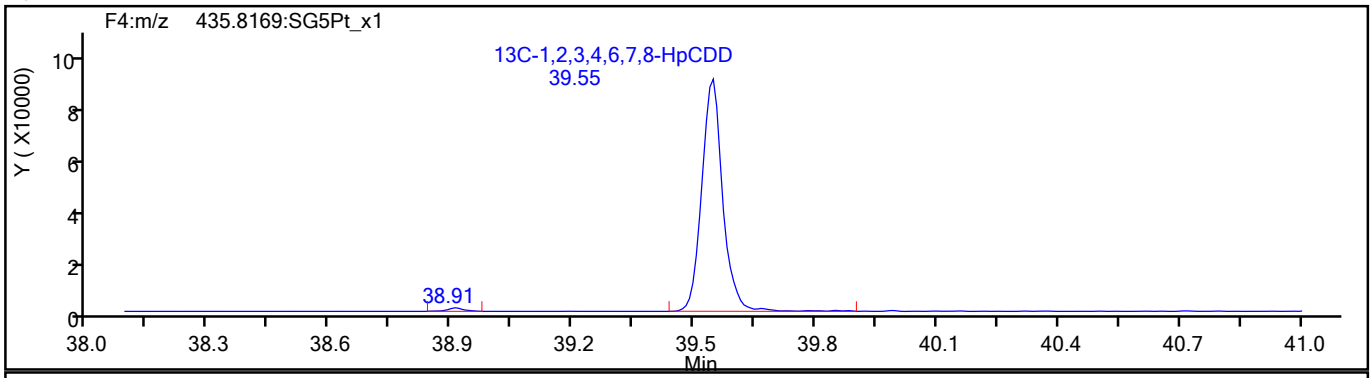

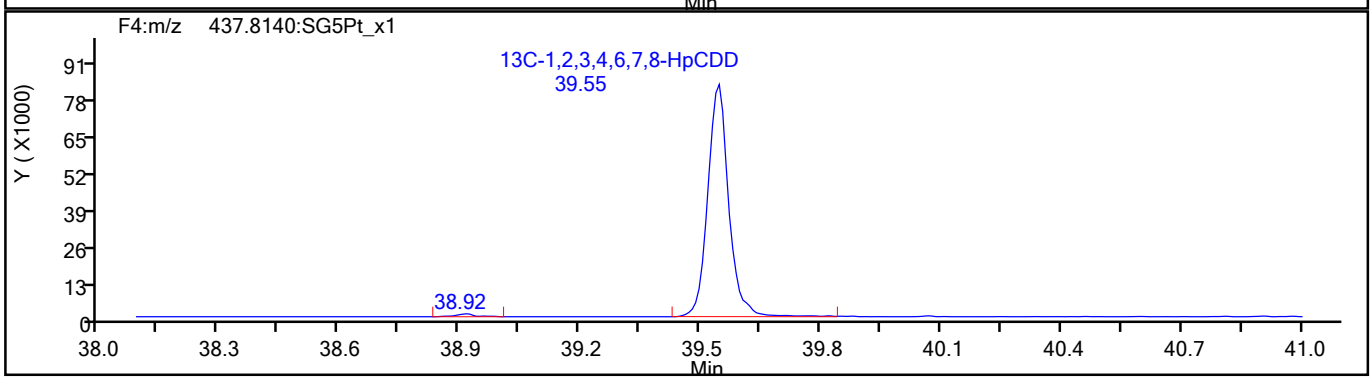

786321

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

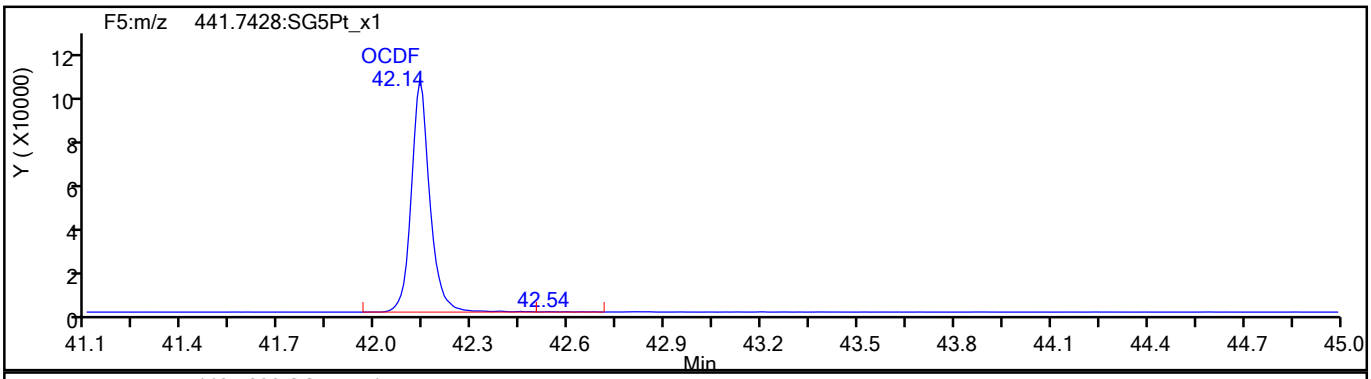

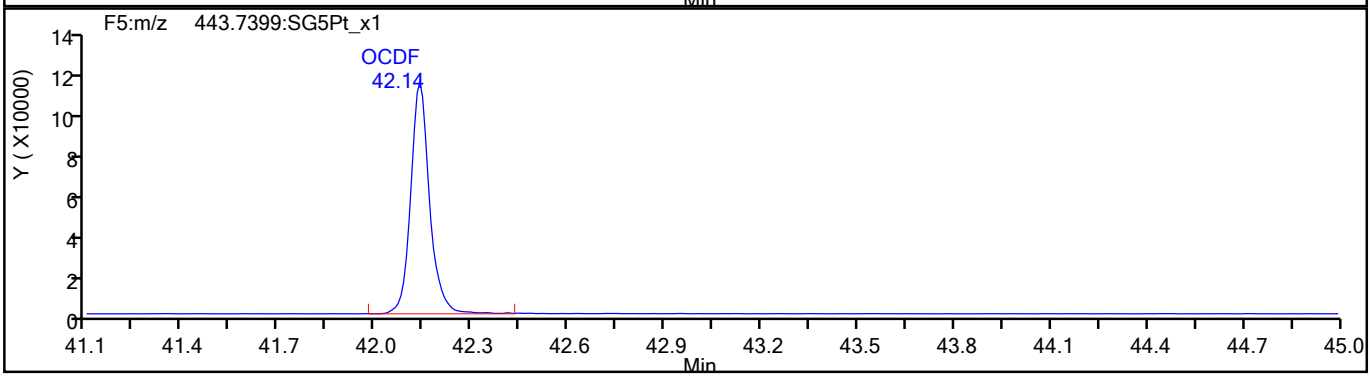

OCDF Standards

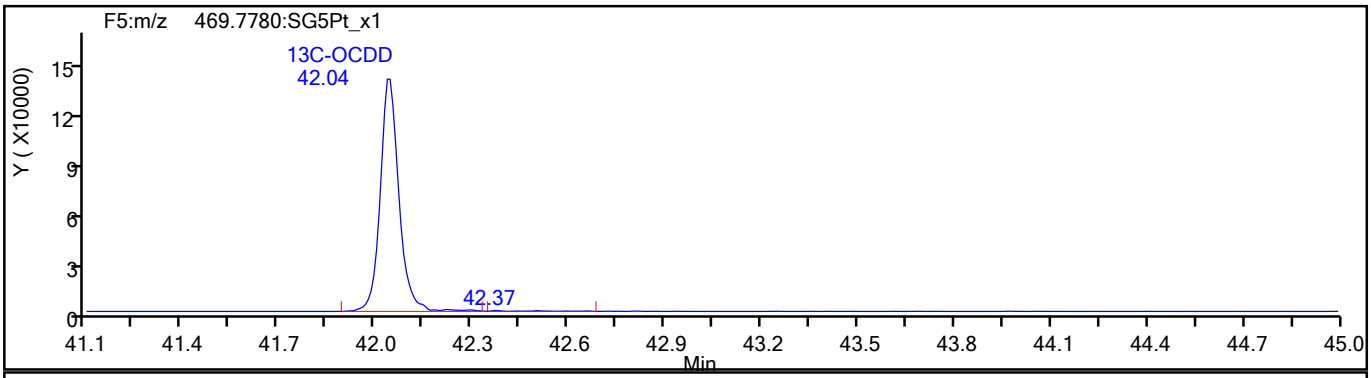

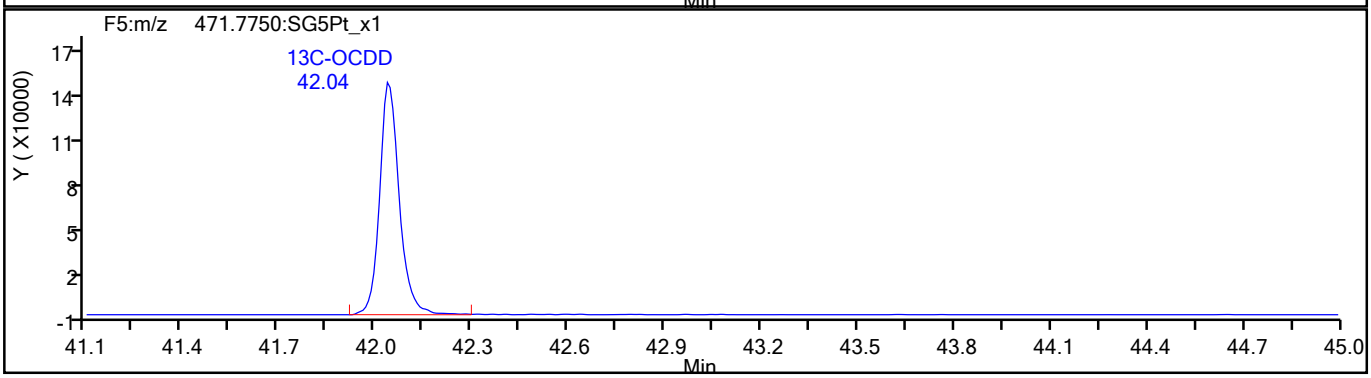

786322

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

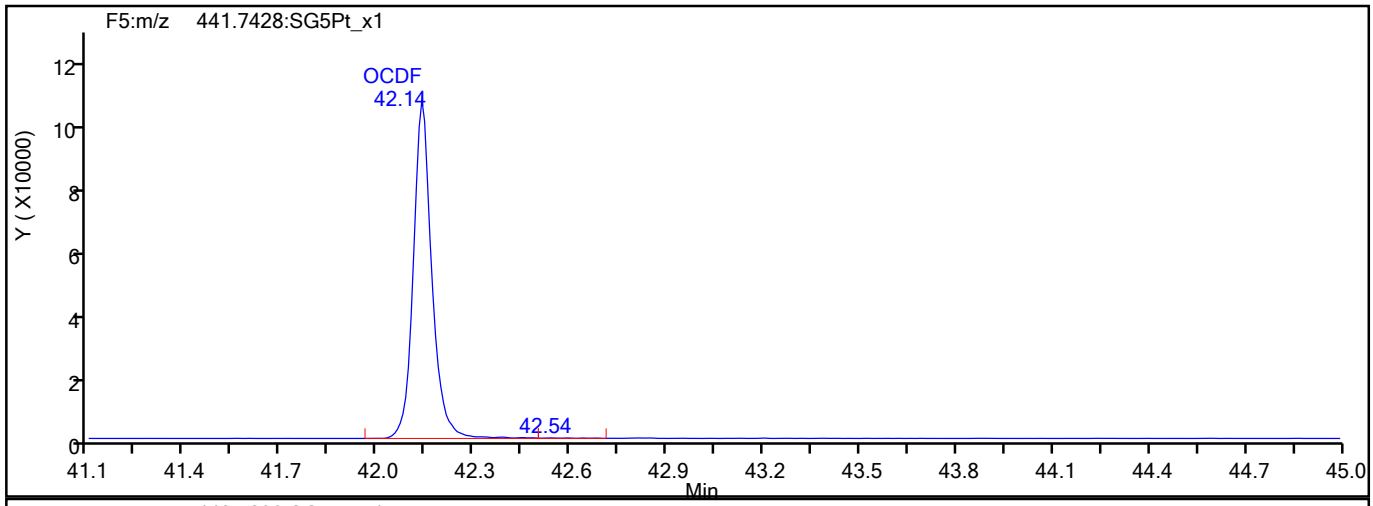

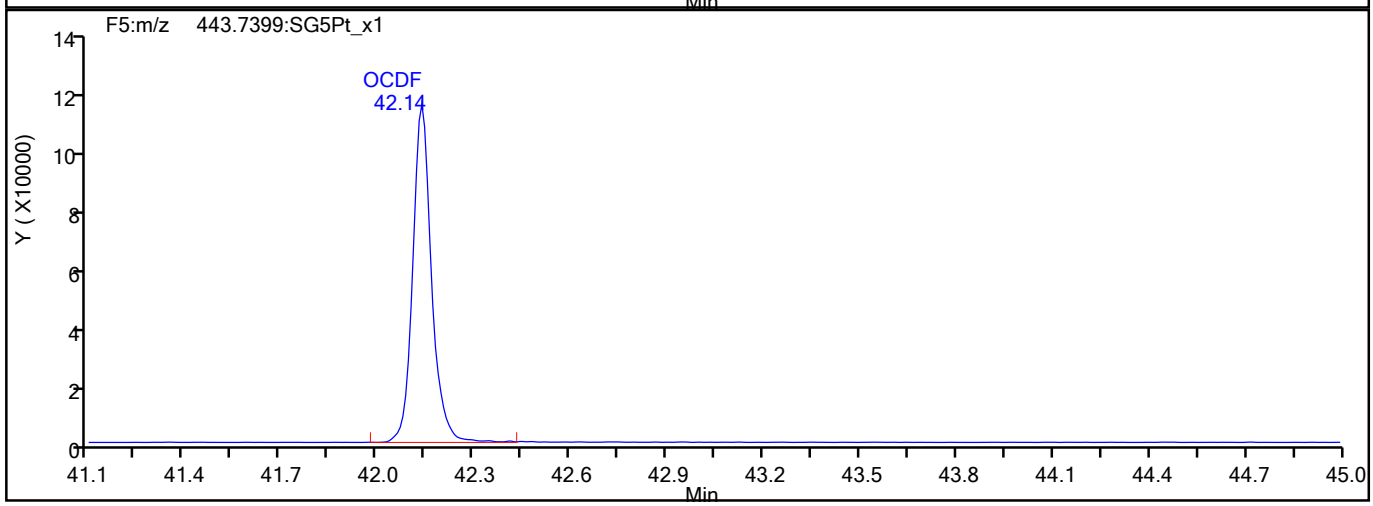

OCDF Interference Mass

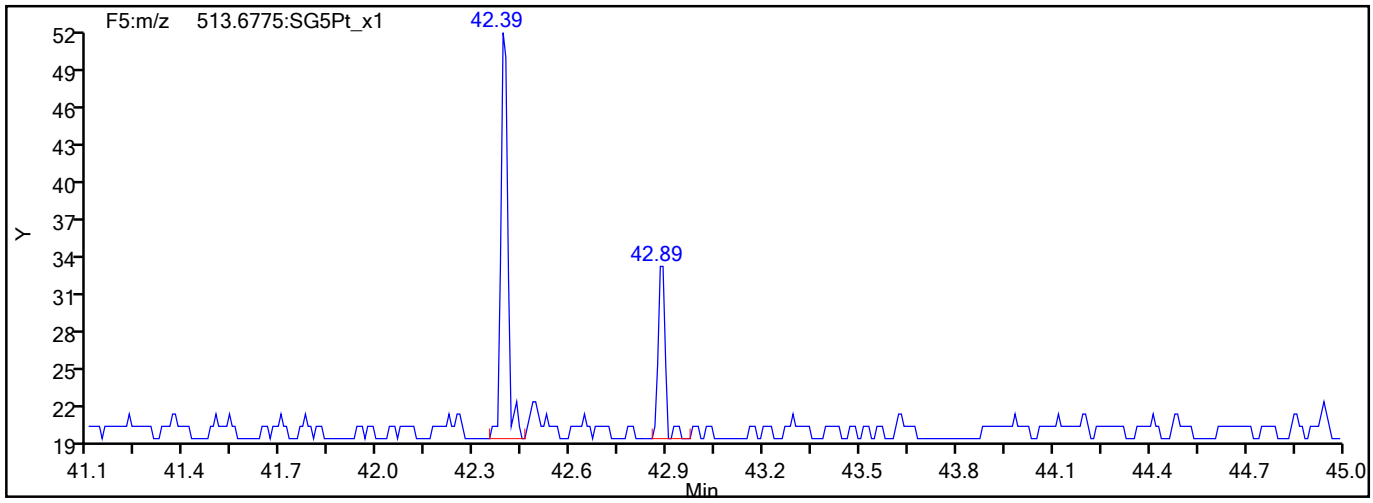

786323

Report Date: 21-Aug-2021 17:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

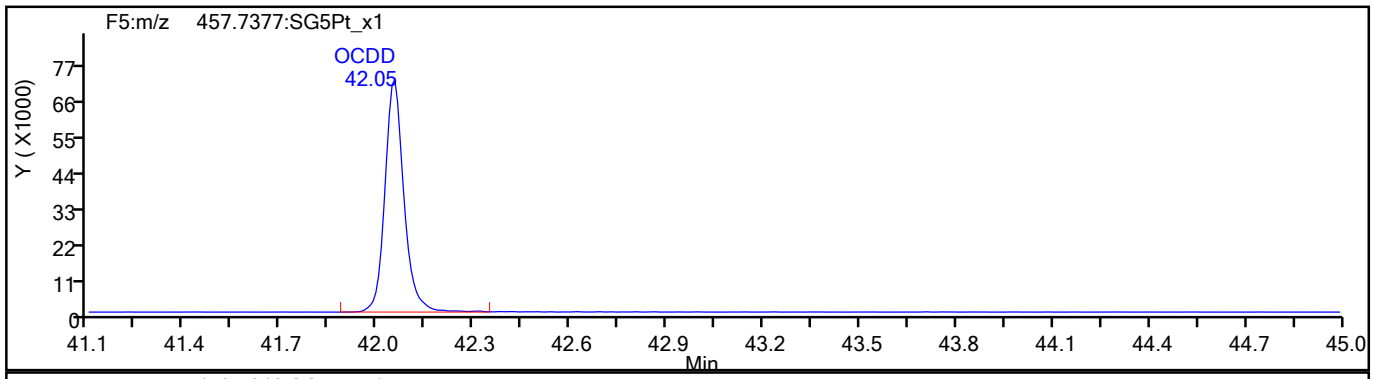

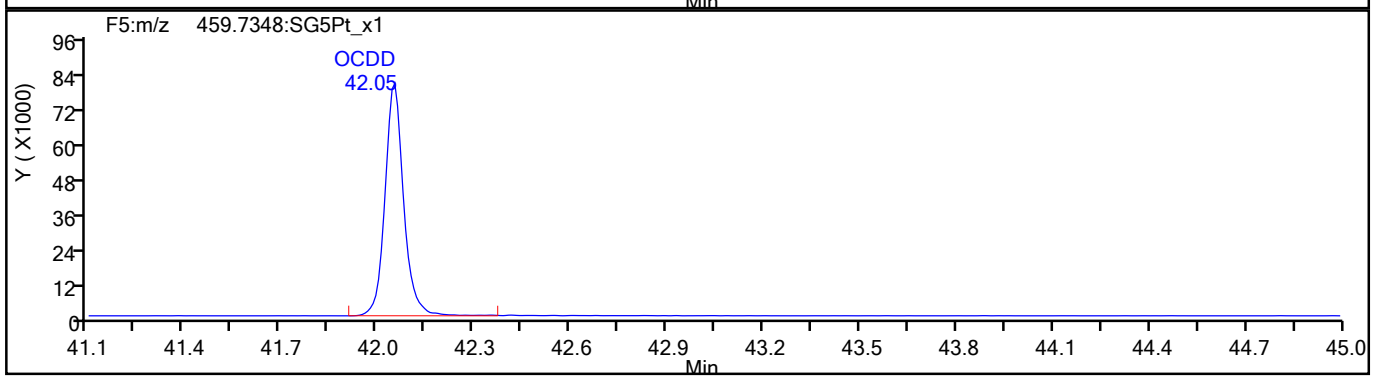

OCDD Standards

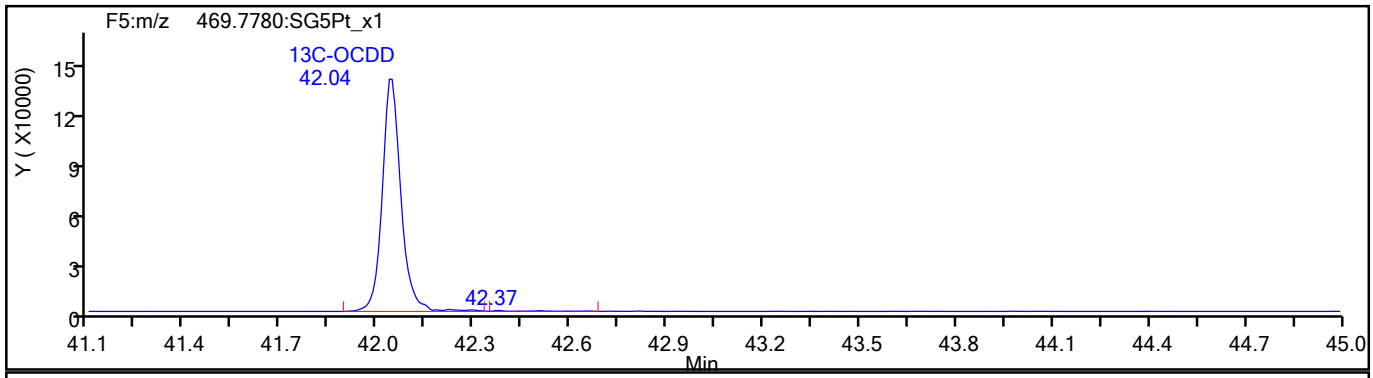

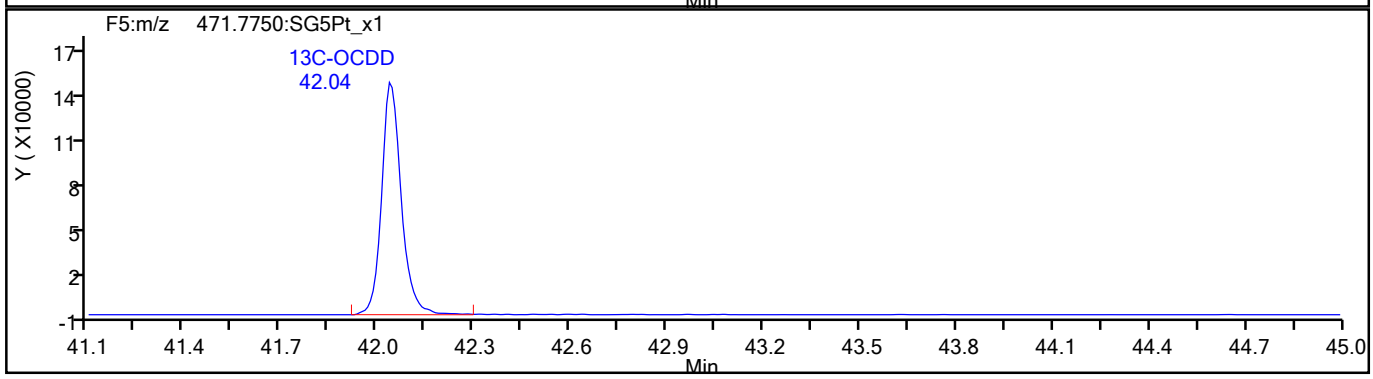

786324

Report Date: 21-Aug-2021 17:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

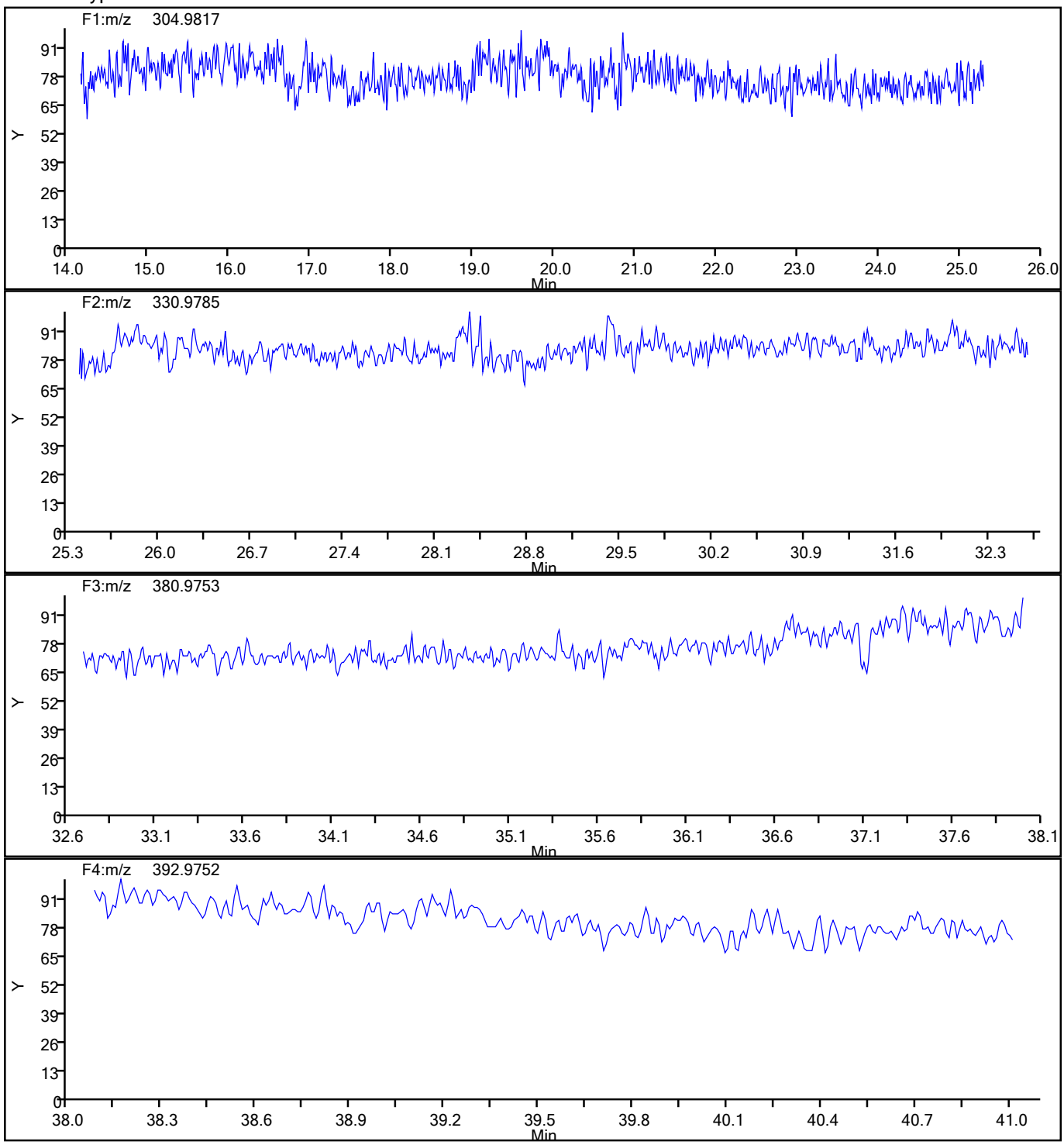

786325

Report Date: 21-Aug-2021 17:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

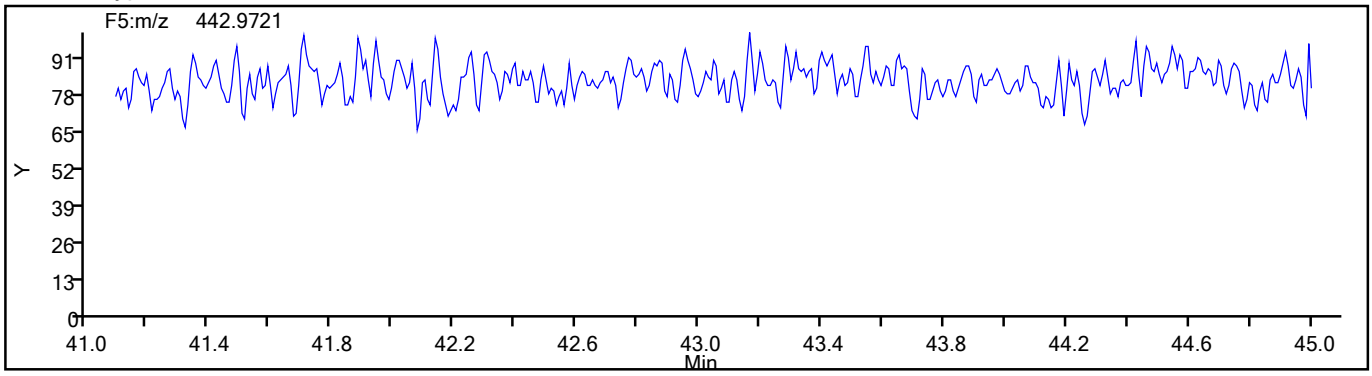

786326

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

786327

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

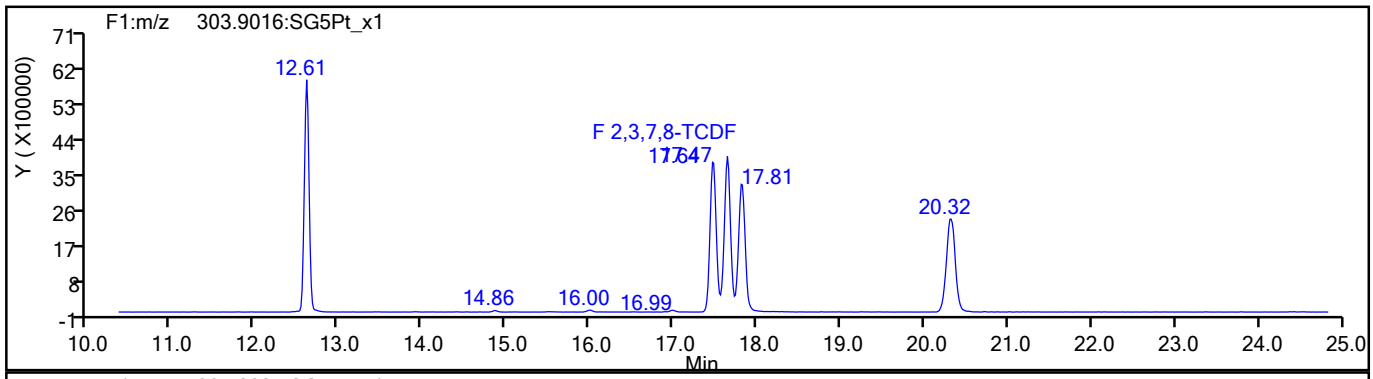

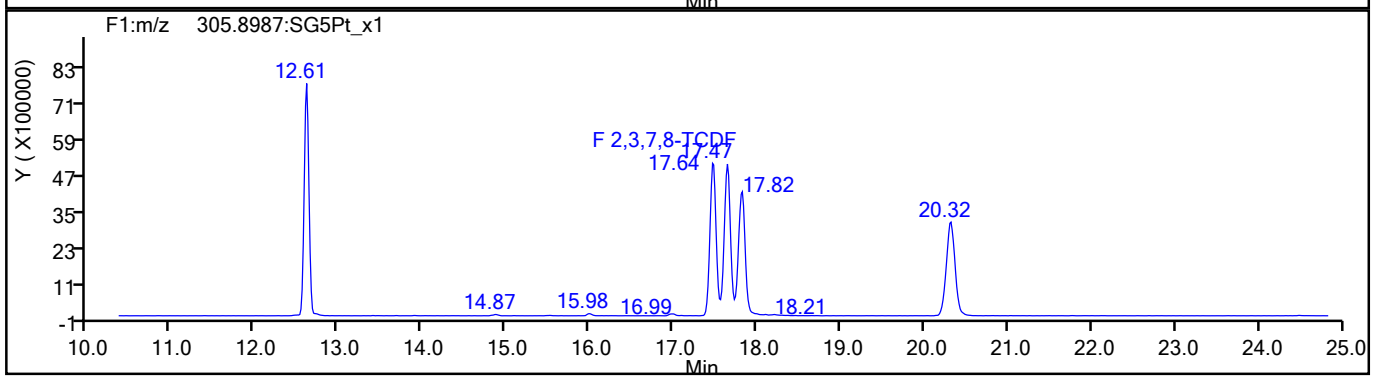

TCDF Standards

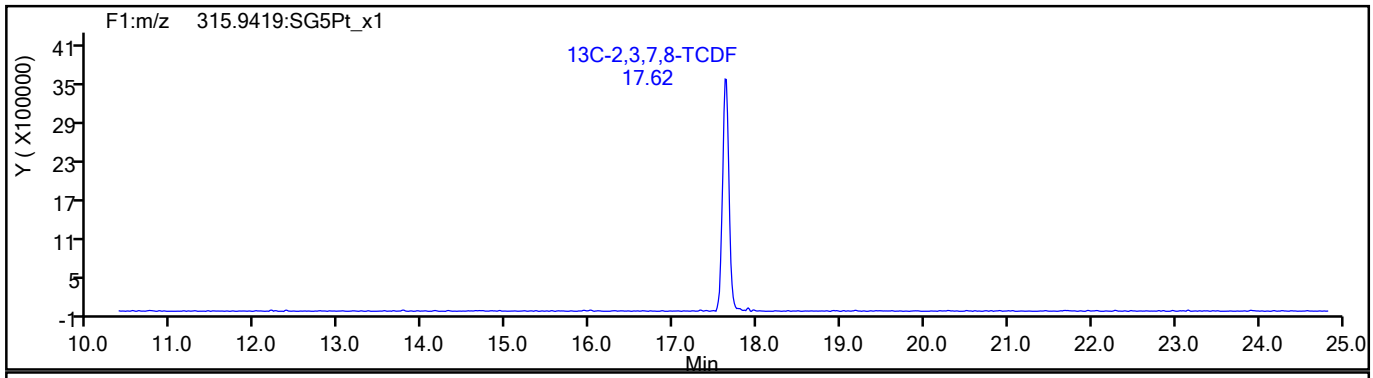

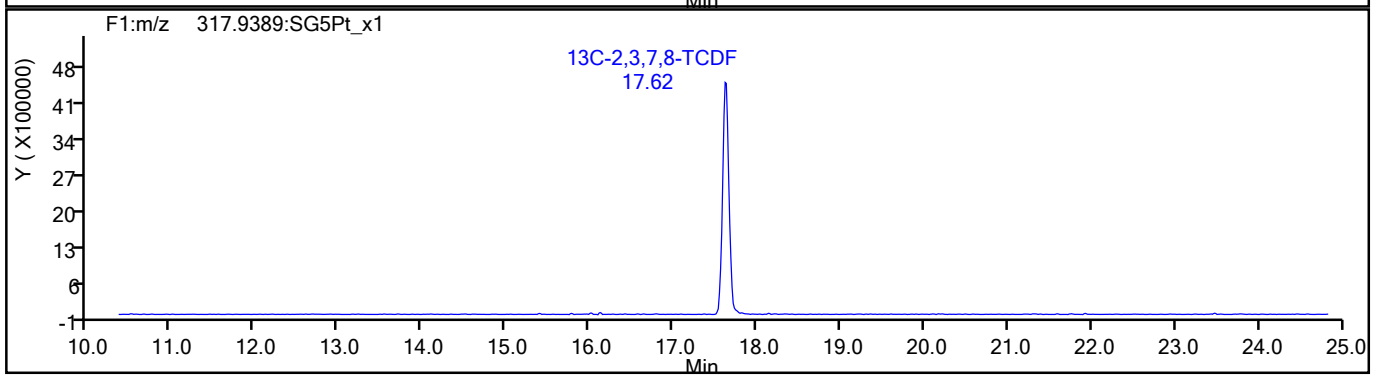

786329

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

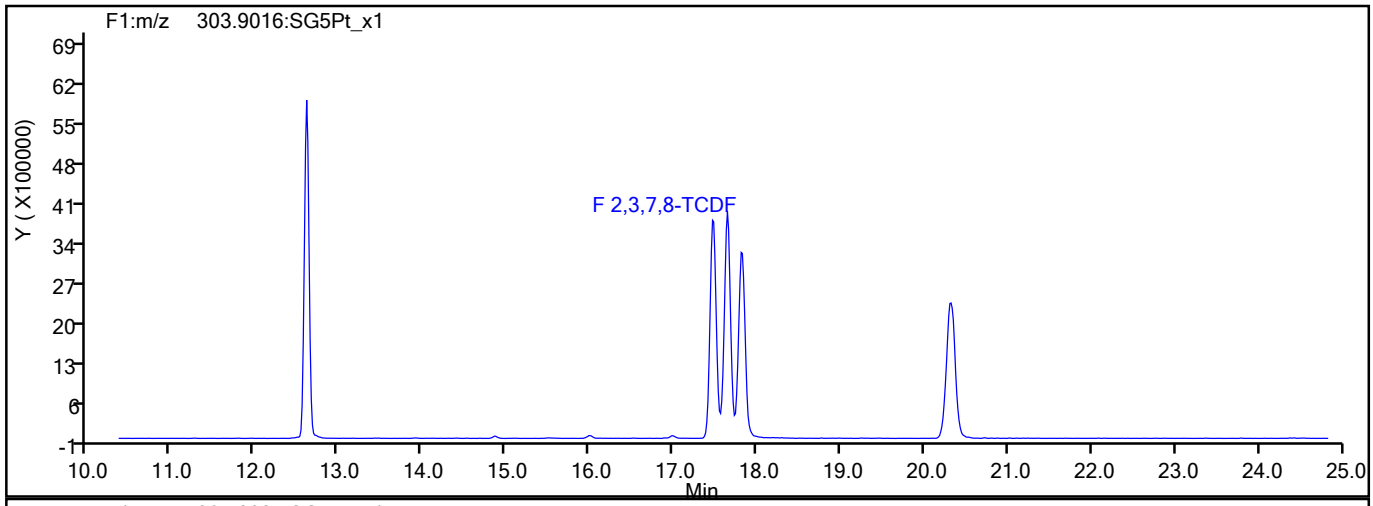

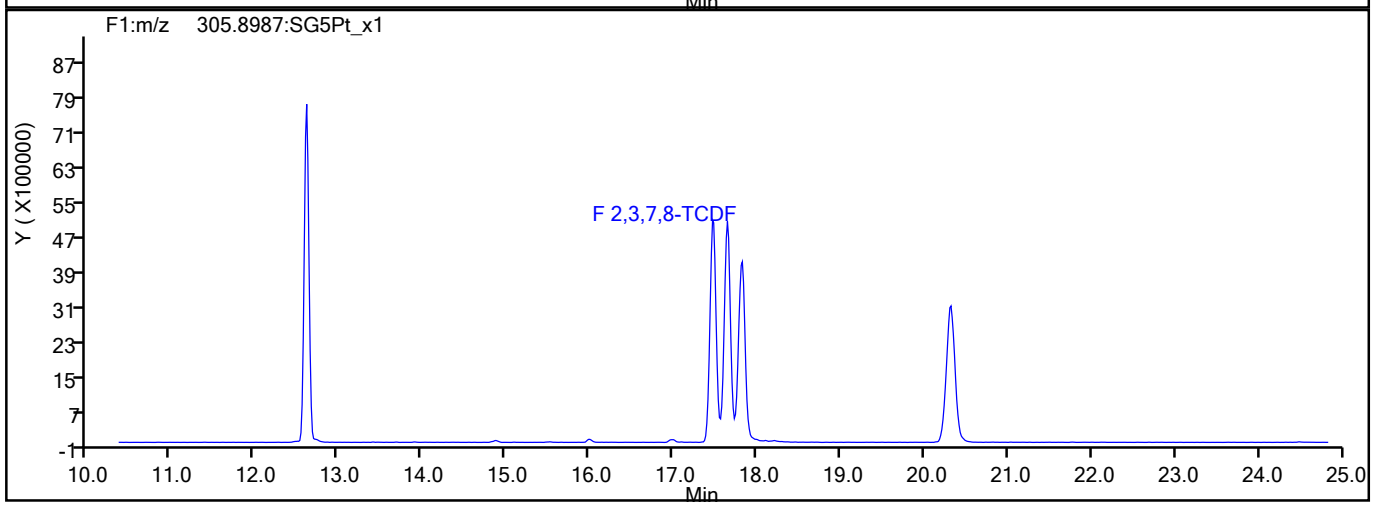

TCDF Interference Mass

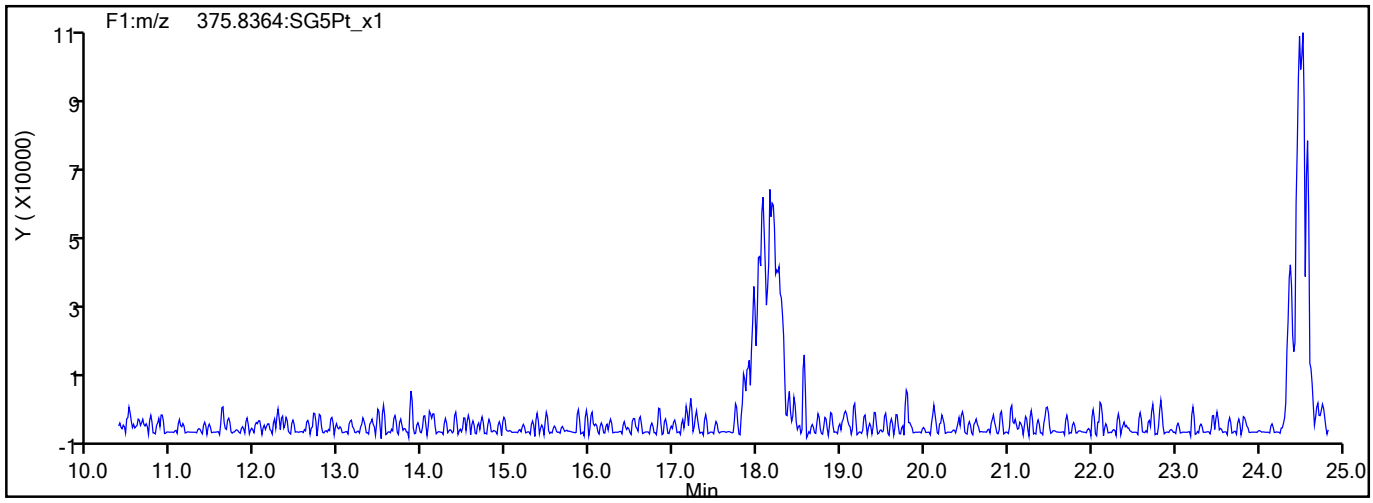

786330

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

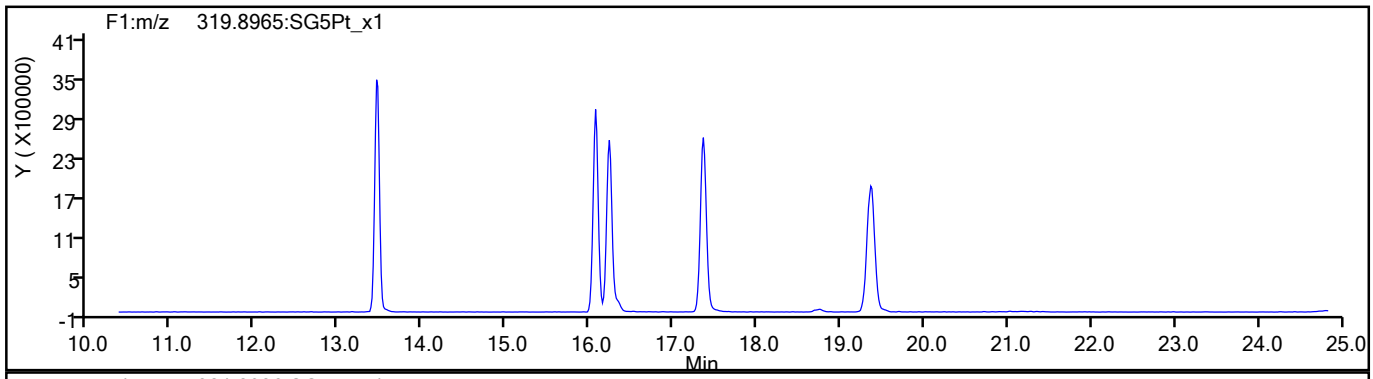

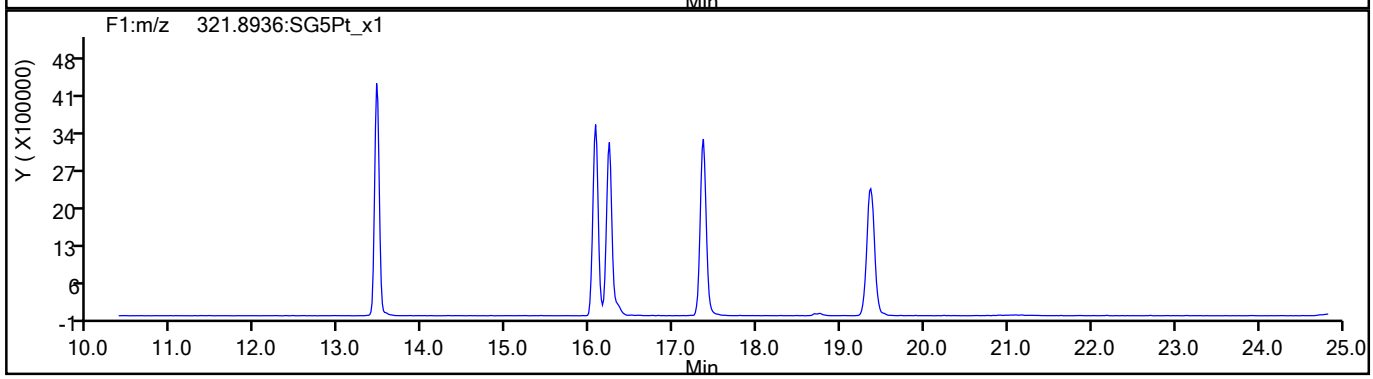

TCDD Standards

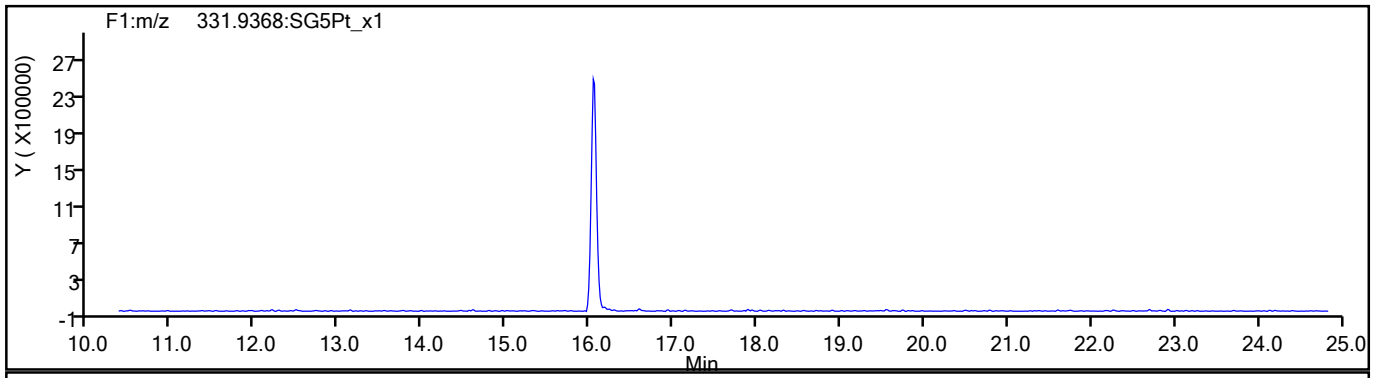

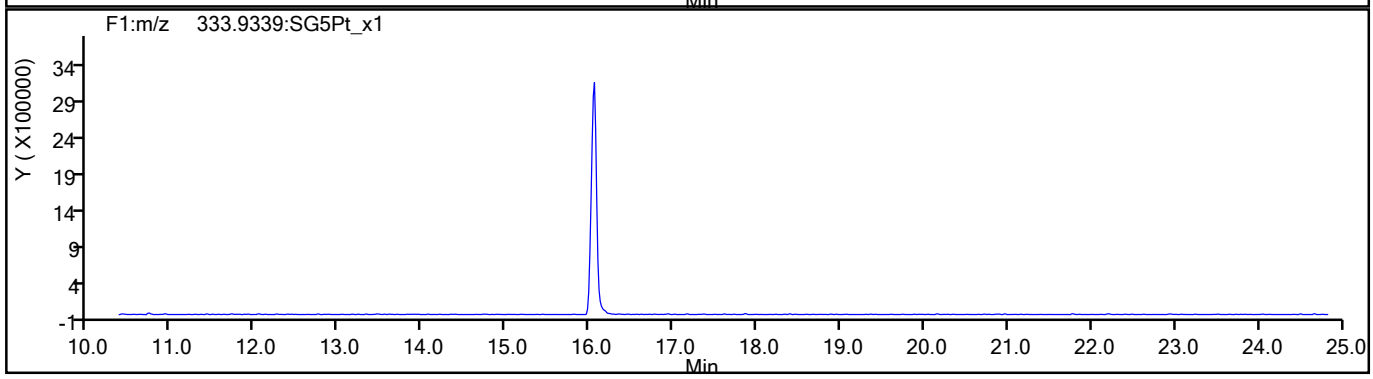

786331

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

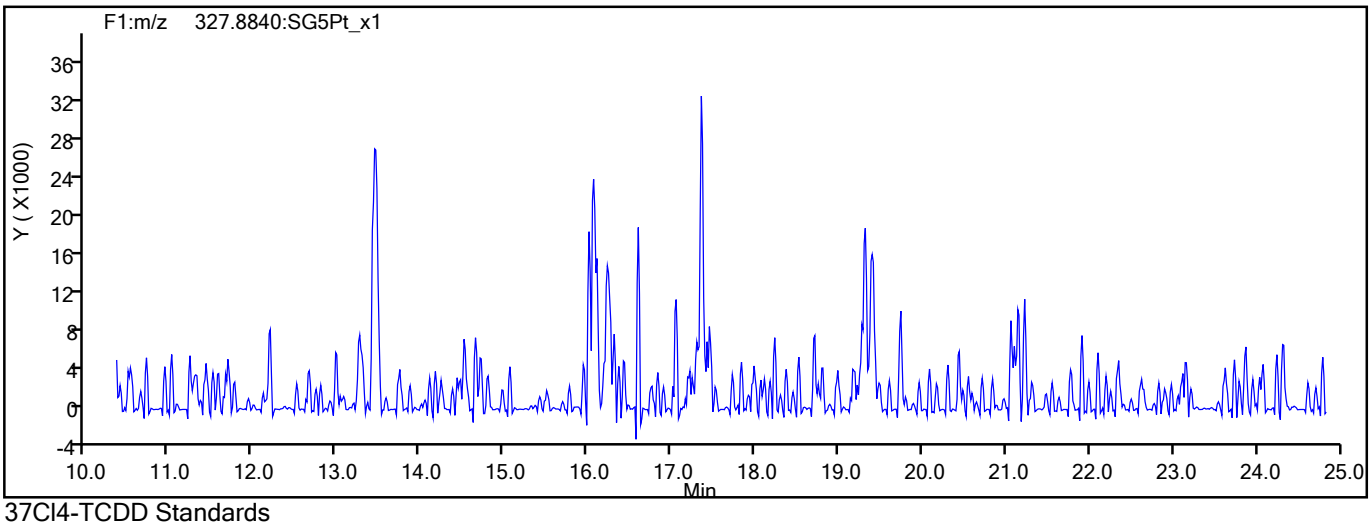

37Cl4-TCDD Standards

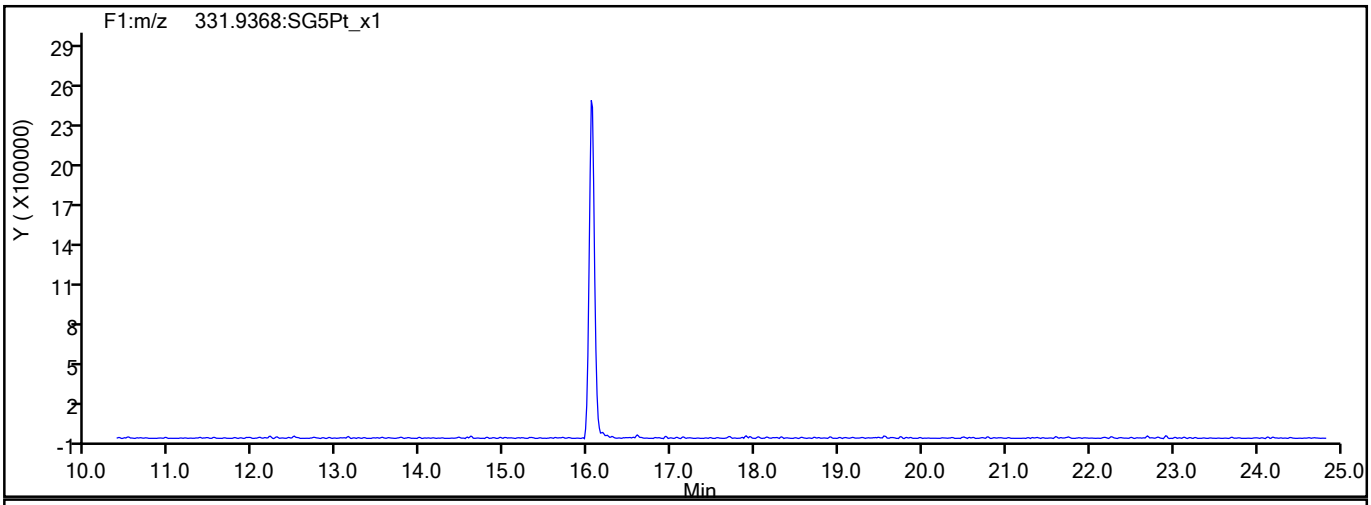

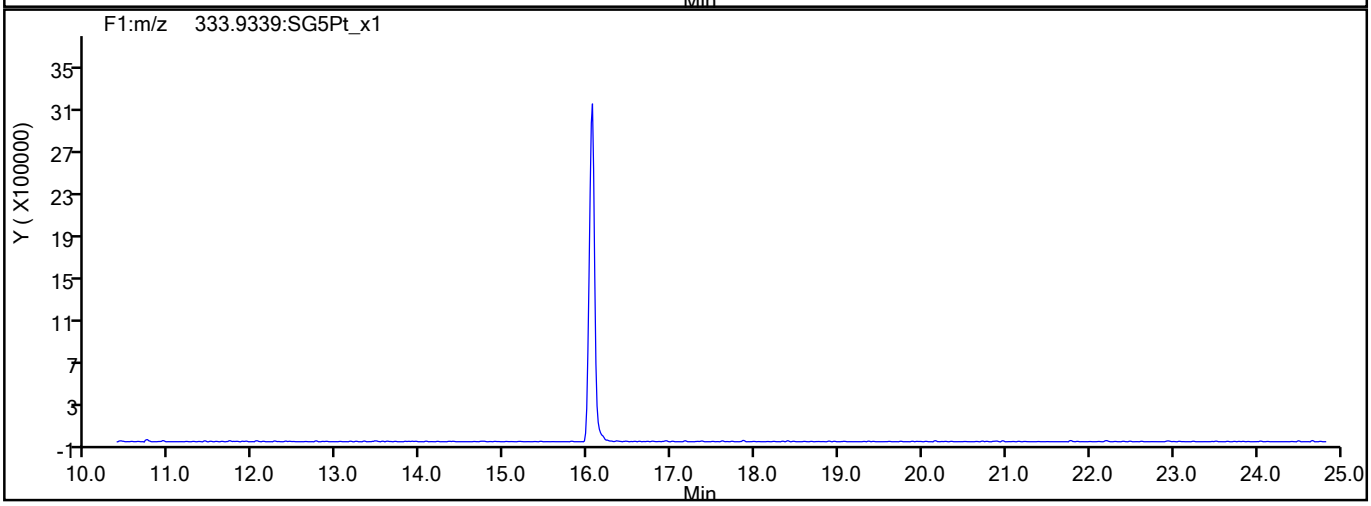

786332

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

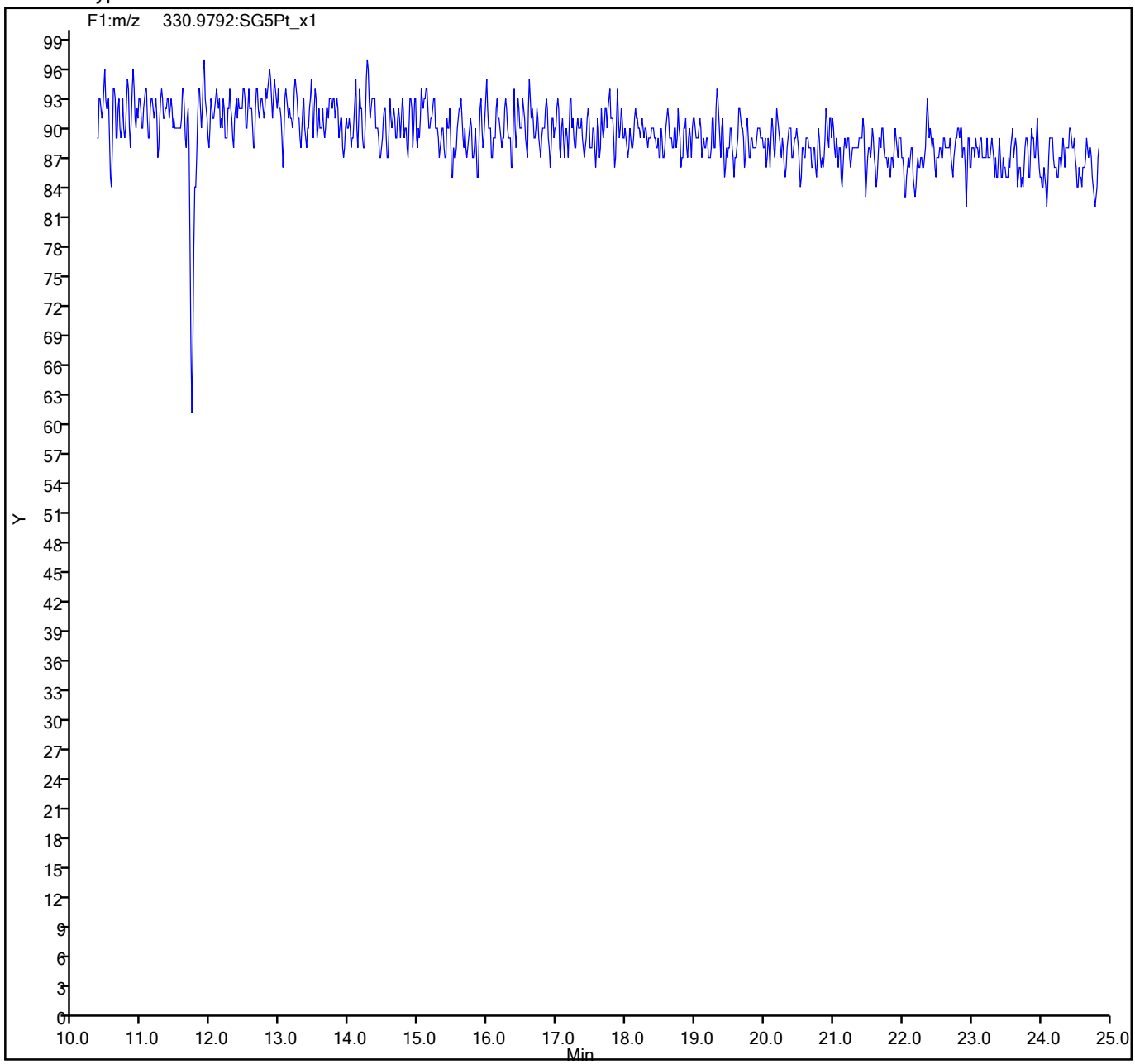

786333

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 08:28:58 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:02

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.615	20166287	0.80	1.3327					0.00	
2,3,7,8-TCDF	17.642	21336126	0.77	0.9978	42.4	42.4	0.0930	0.0930		
D 13C-2,3,7,8-TCDD	16.065	11857898	0.79	0.8749					0.00	
2,3,7,8-TCDD	16.092	14178098	0.79	1.0570	45.2	45.2	0.1126	0.1126		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 08:28:58 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:02

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.000	8953190	1656694	4027	10067	411		
317.9389	17.615	17.615	0	1.000	11213097	2115870	3038	7595	696	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.642	17.642	0	1.002	9272598	1746650	1553	3882	1125		
305.8987	17.642	17.642	0	1.002	12063528	2238983	1948	4870	1149	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	1.000	5225809	1131264	4006	10015	282		
333.9339	16.065	16.065	0	1.000	6632089	1437296	1641	4102	876	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.092	16.092	0	1.002	6258759	1439127	1606	4015	896		
321.8936	16.078	16.092	-1	1.001	7919339	1769891	1451	3627	1220	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

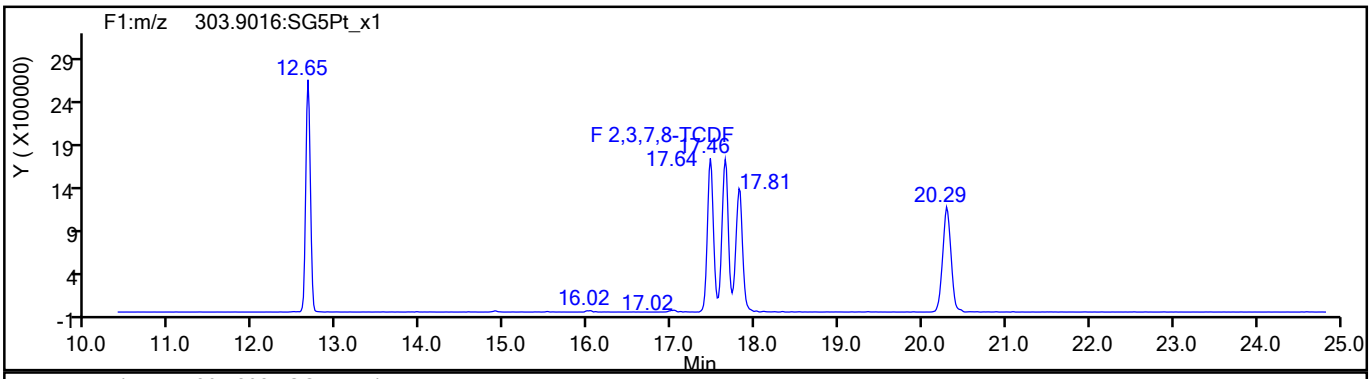

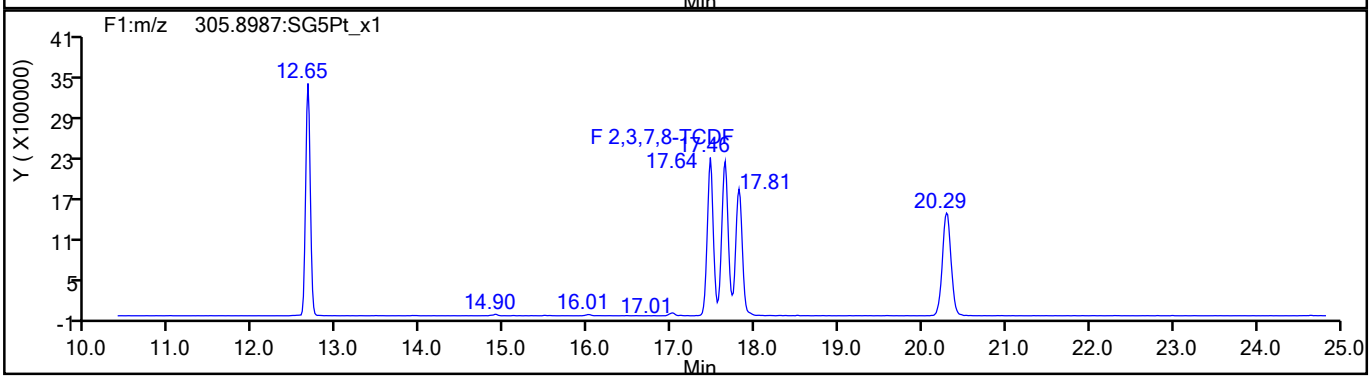

TCDF Standards

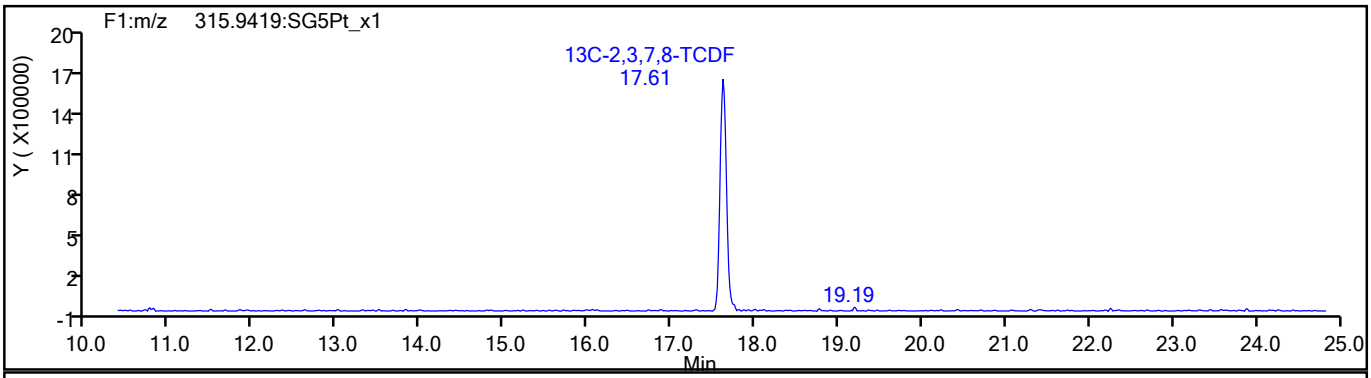

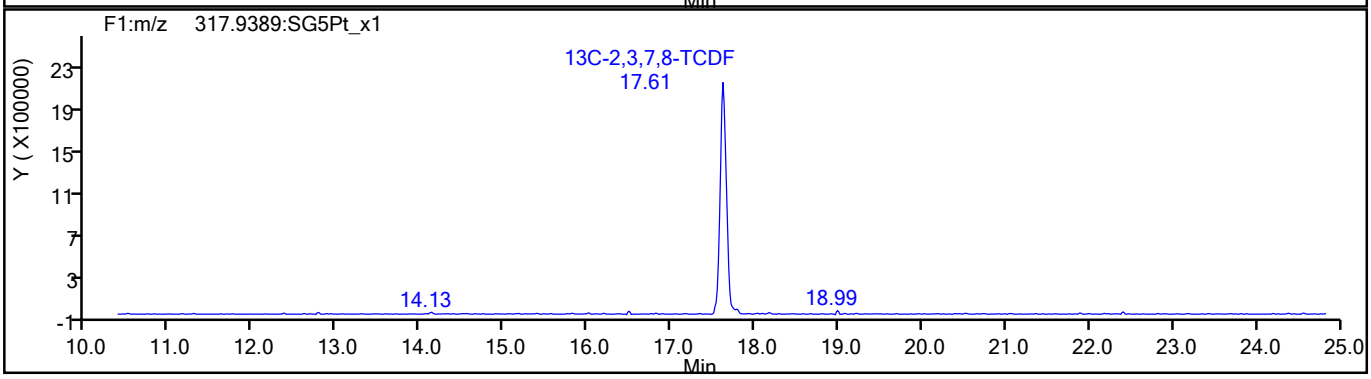

786336

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

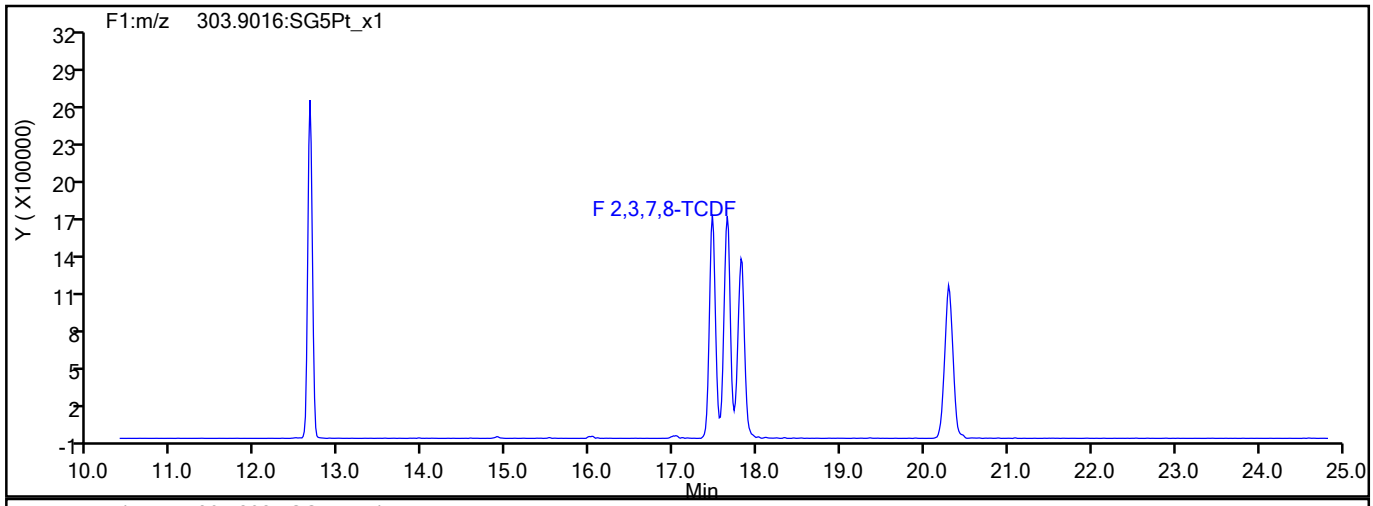

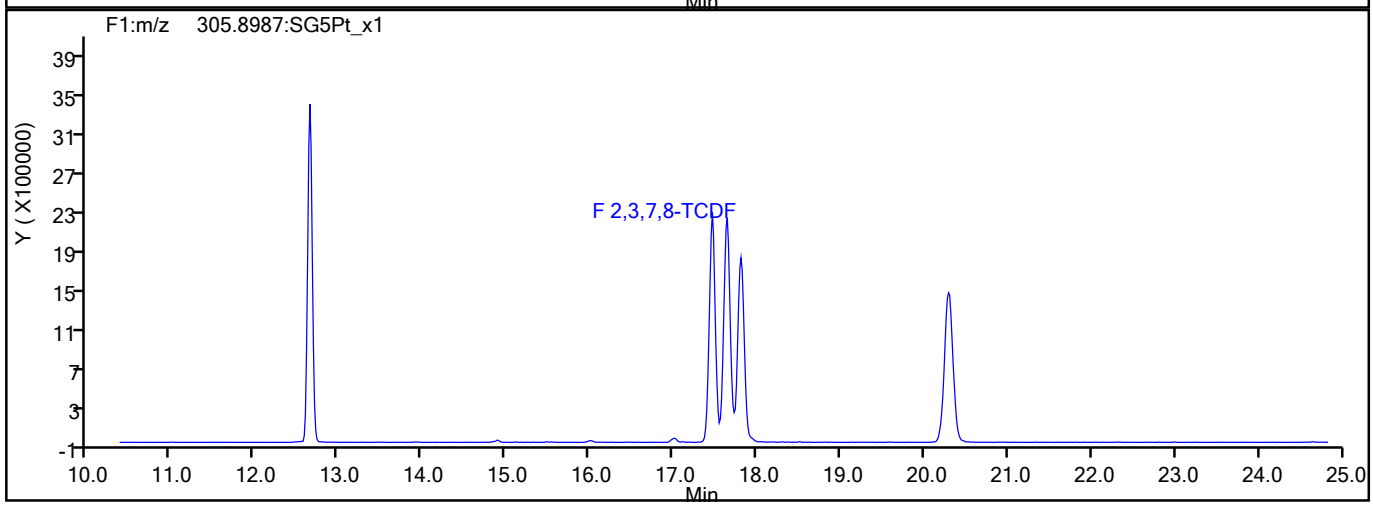

TCDF Interference Mass

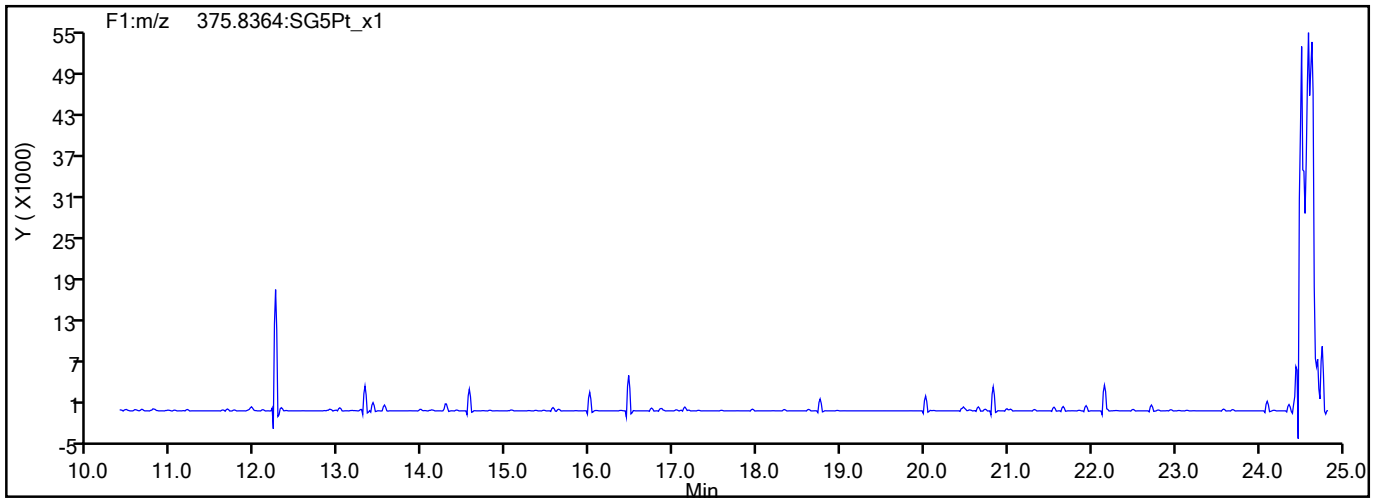

786337

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

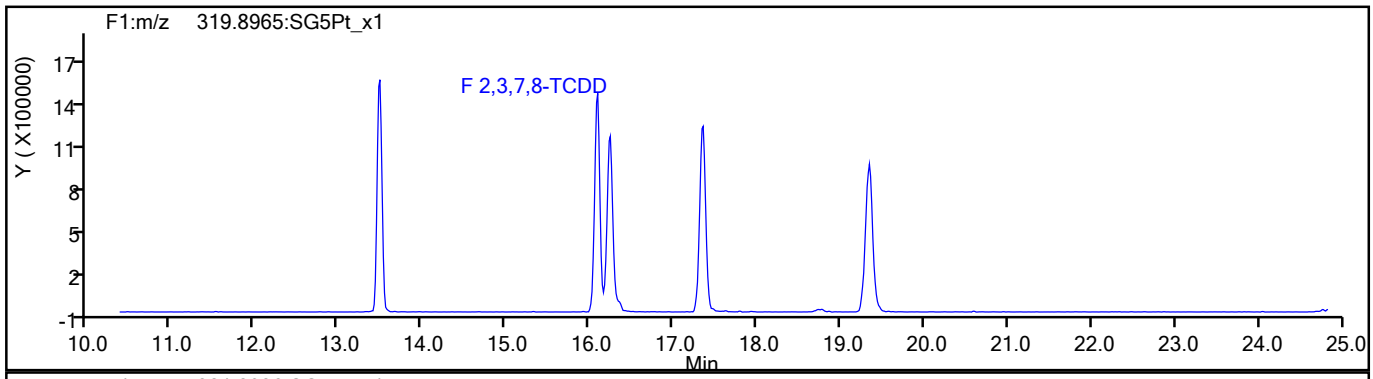

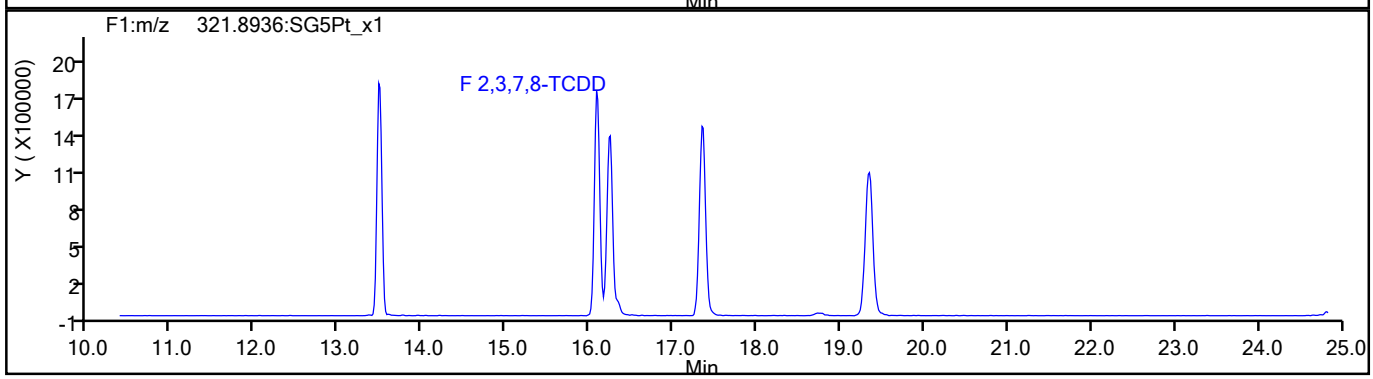

TCDD Standards

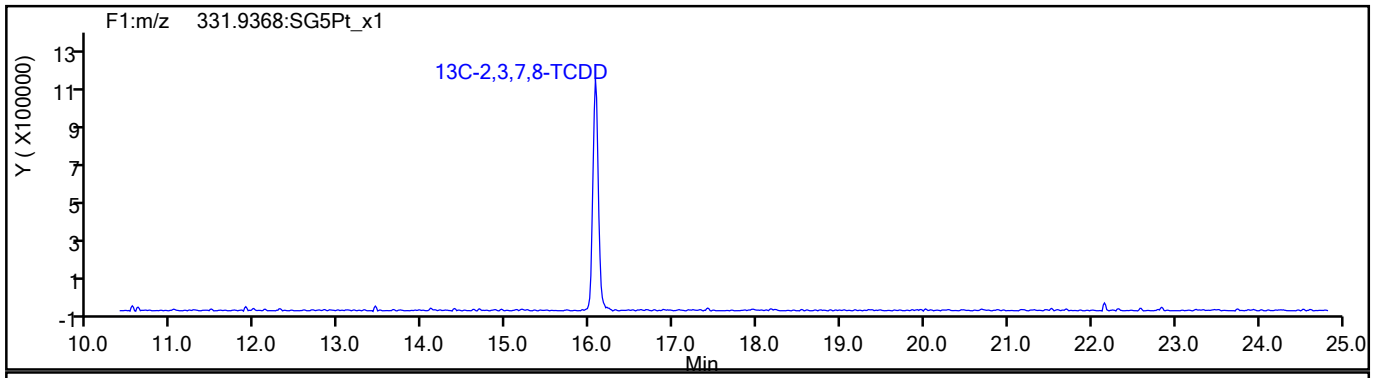

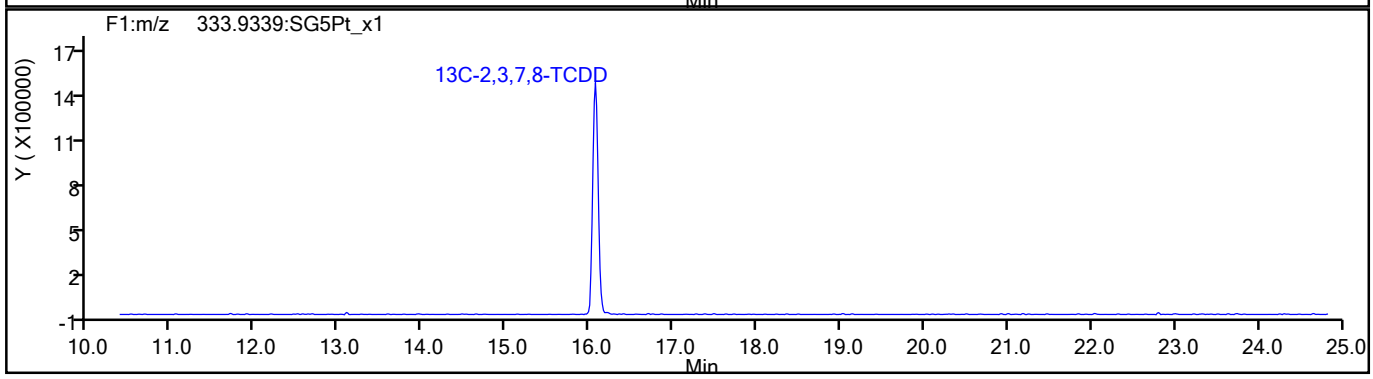

786338

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

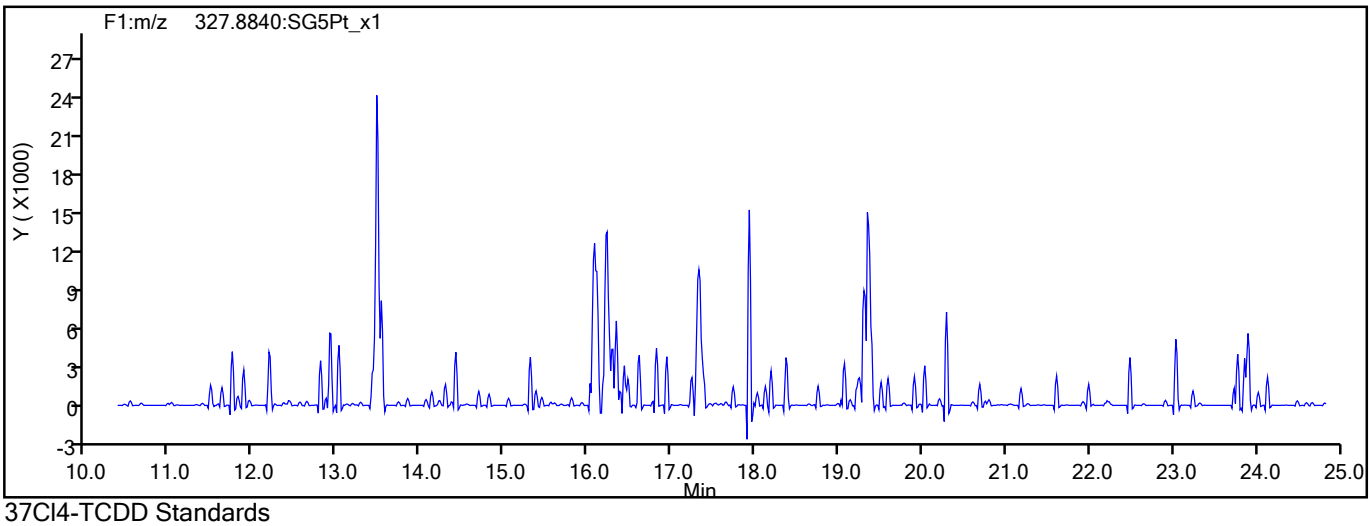

37Cl4-TCDD Standards

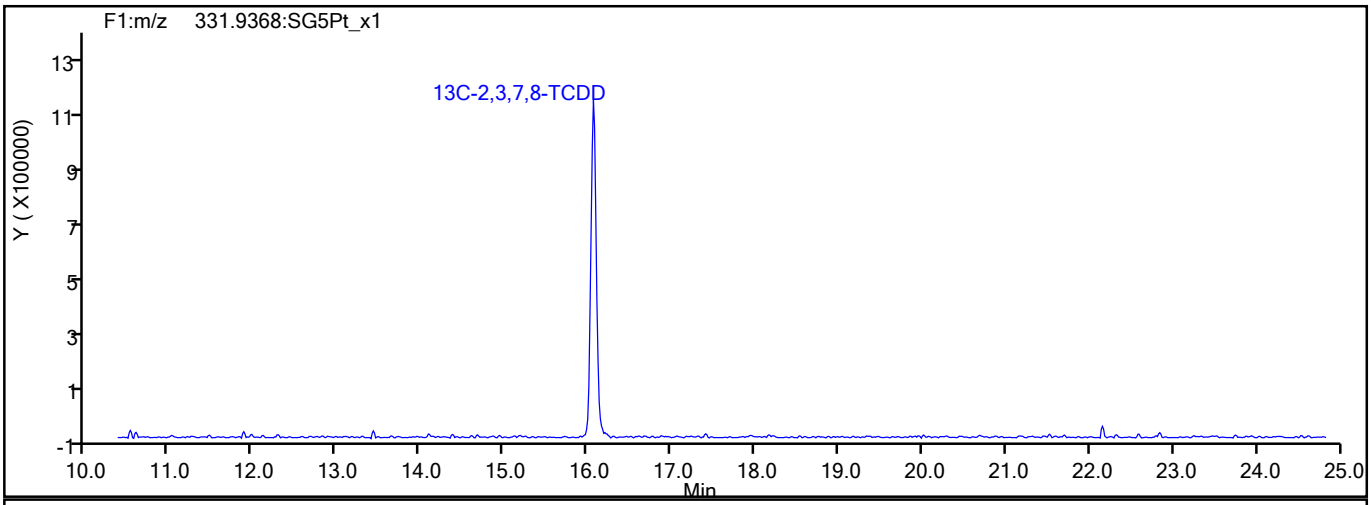

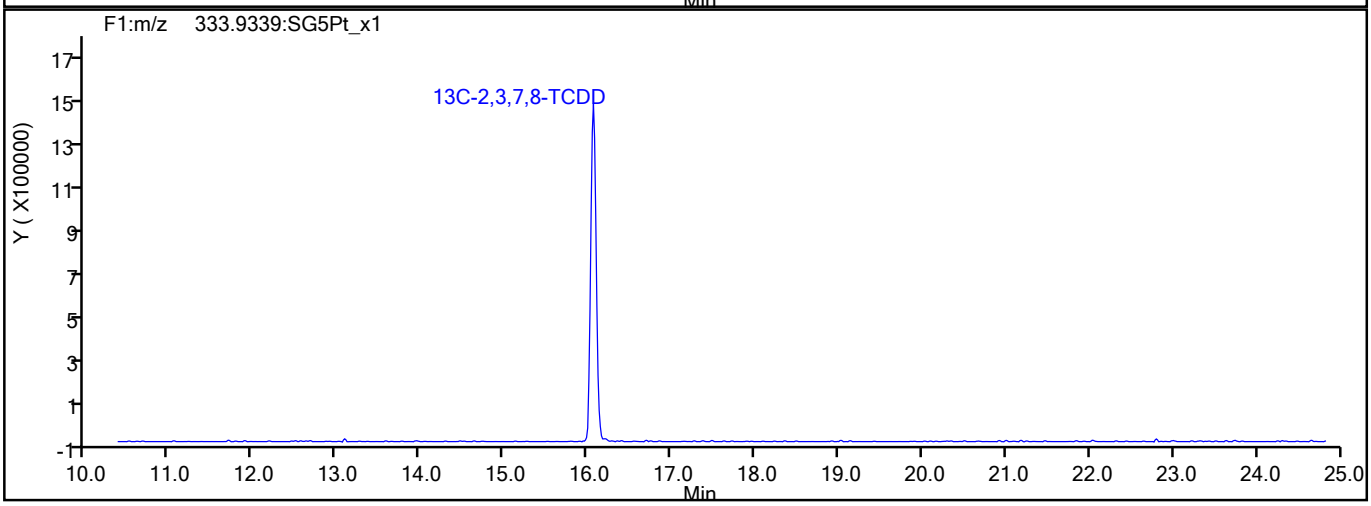

786339

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

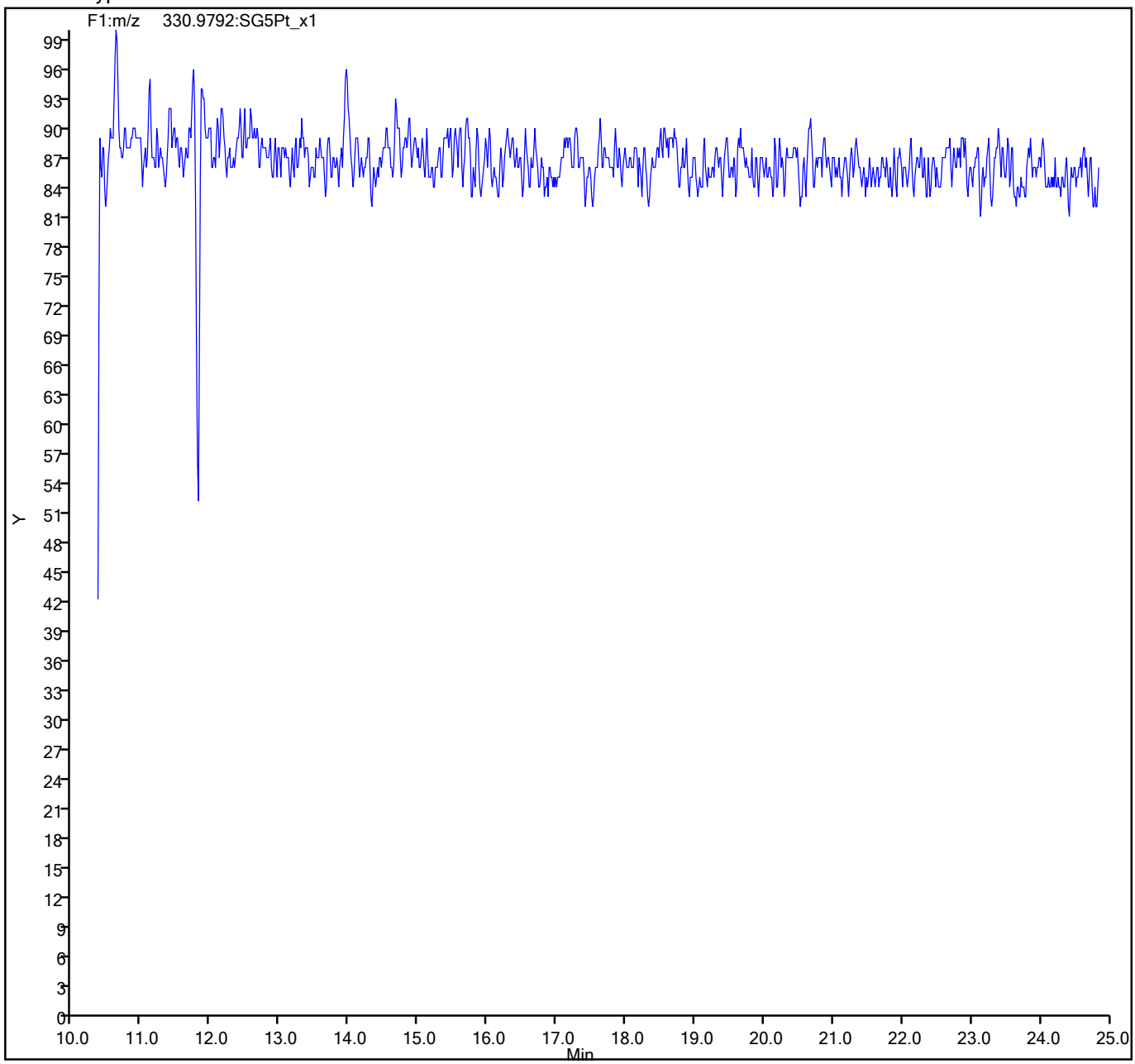

786340

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 08:48:55 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:07:58

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.620	27354850	0.80	1.3327					0.00	
2,3,7,8-TCDF	17.634	28239846	0.79	0.9978	41.4	41.4	0.0895	0.0895		
D 13C-2,3,7,8-TCDD	16.070	15199563	0.71	0.8749					0.00	
2,3,7,8-TCDD	16.084	18529027	0.79	1.0570	46.1	46.1	0.0939	0.0939		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 25-Aug-2021 13:23:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 08:48:55 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:07:58

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.620	17.620	0	1.000	12156891	2249102	3968	9920	567		
317.9389	17.620	17.620	0	1.000	15197959	2989621	4477	11192	668	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.634	17.634	0	1.001	12470724	2311945	2087	5217	1108		
305.8987	17.634	17.634	0	1.001	15769122	2977863	2593	6482	1148	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.070	16.070	0	1.000	6313938	1304830	4828	12070	270		
333.9339	16.056	16.070	-1	1.000	8885625	2042860	2726	6815	749	0.71(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.084	16.084	0	1.001	8201624	1837071	1687	4217	1089		
321.8936	16.084	16.084	0	1.001	10327403	2337477	1635	4087	1430	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 25-Aug-2021 13:23:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

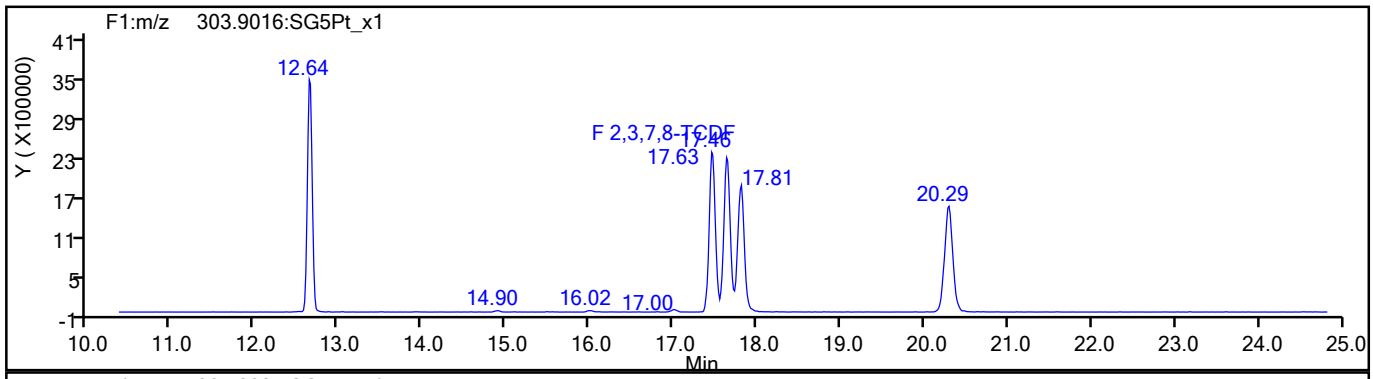

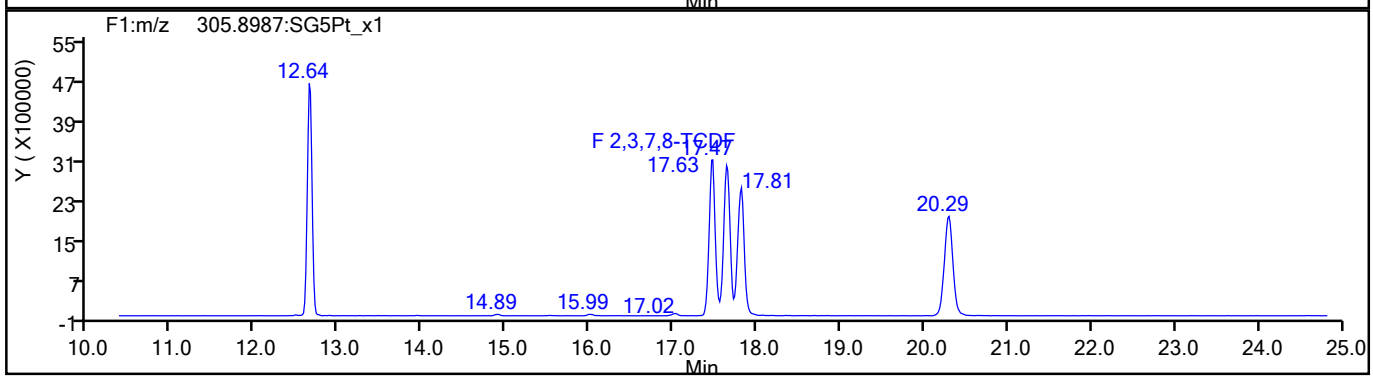

TCDF Standards

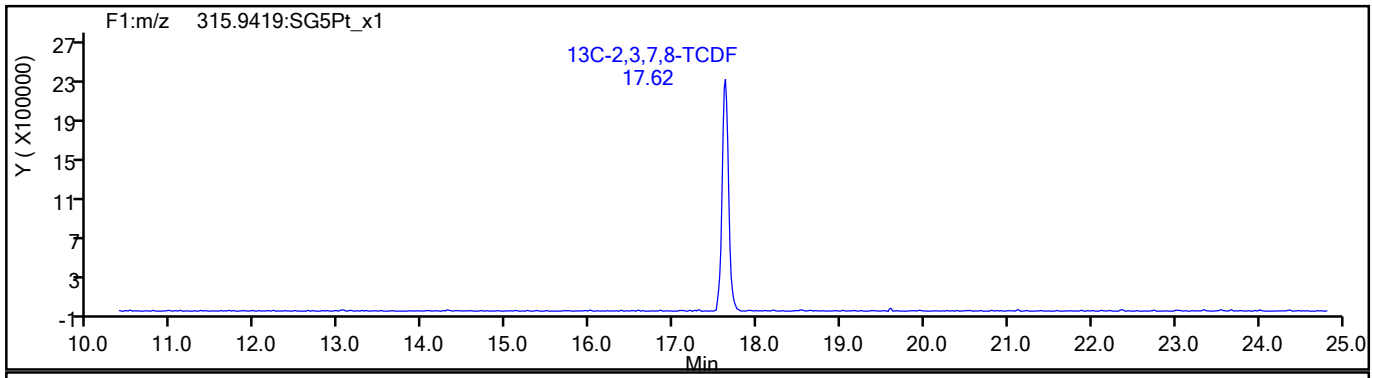

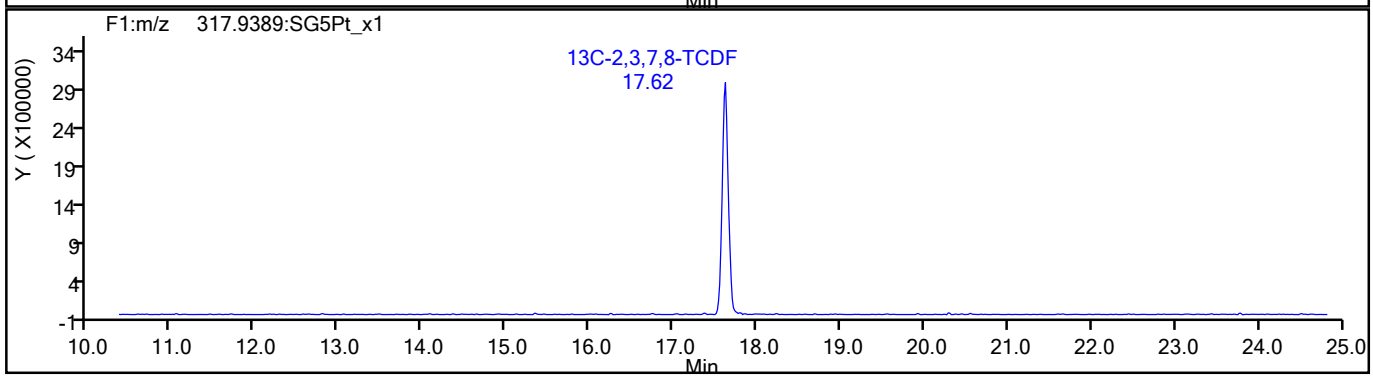

786343

Report Date: 25-Aug-2021 13:23:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

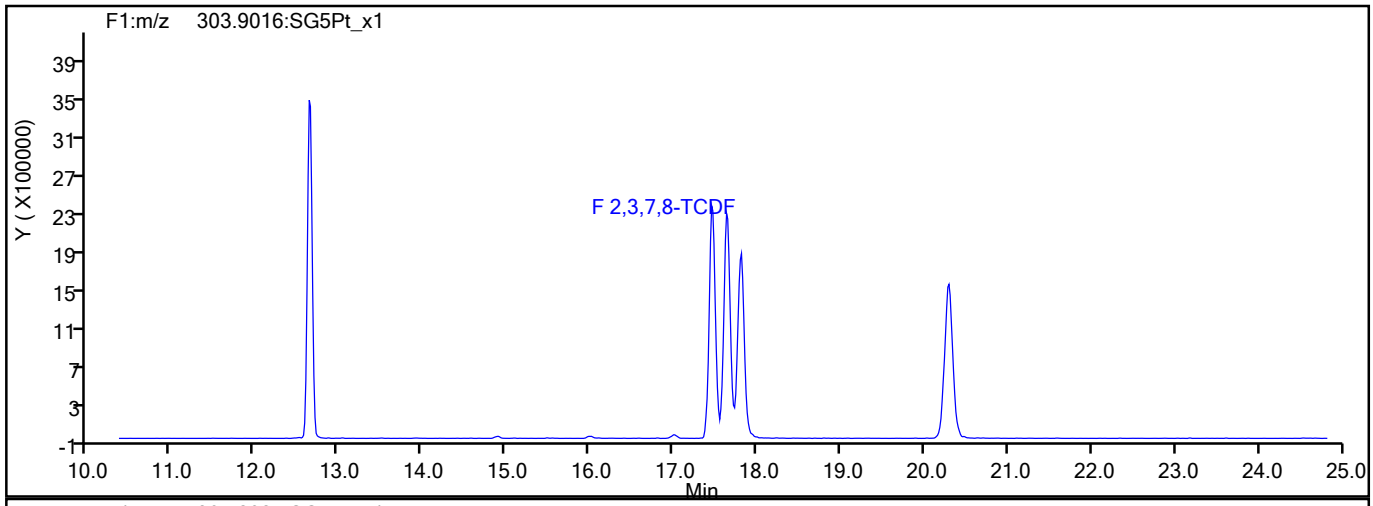

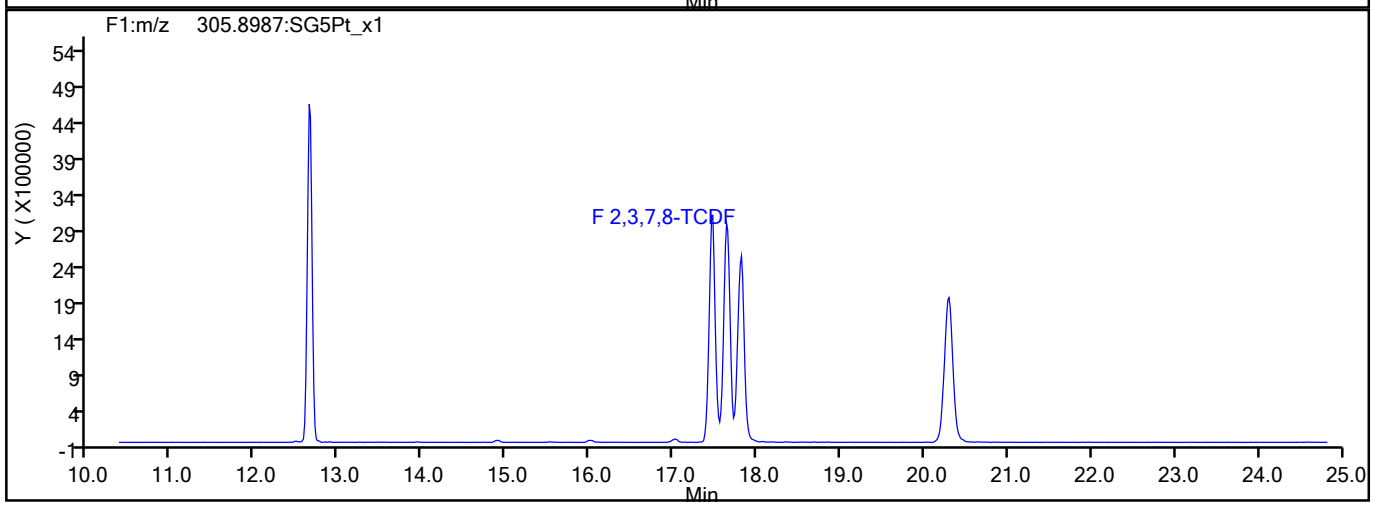

TCDF Interference Mass

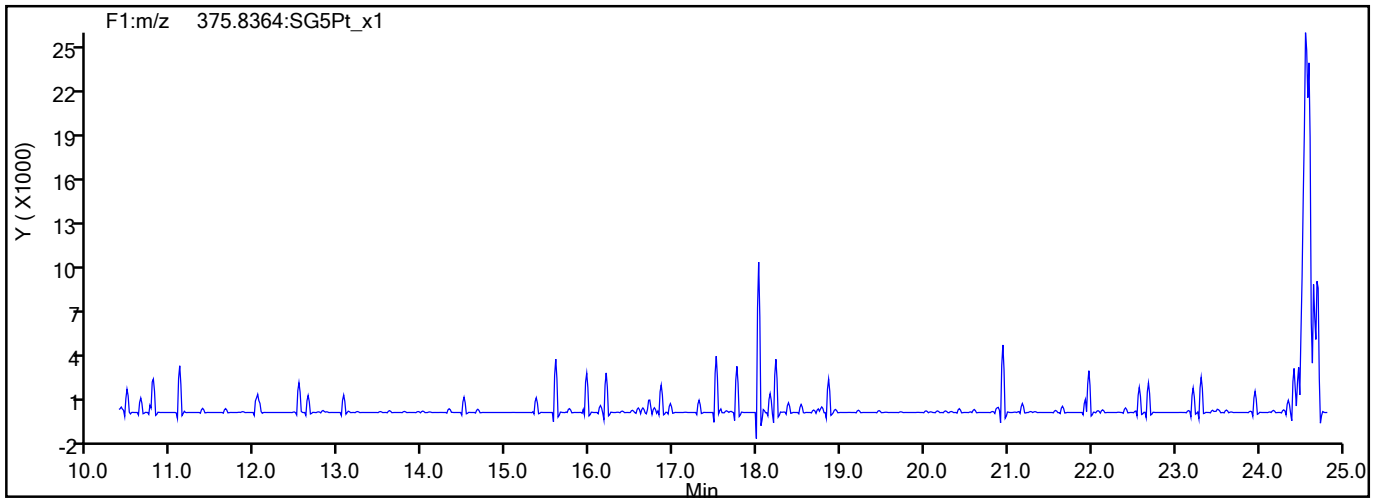

786344

Report Date: 25-Aug-2021 13:23:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

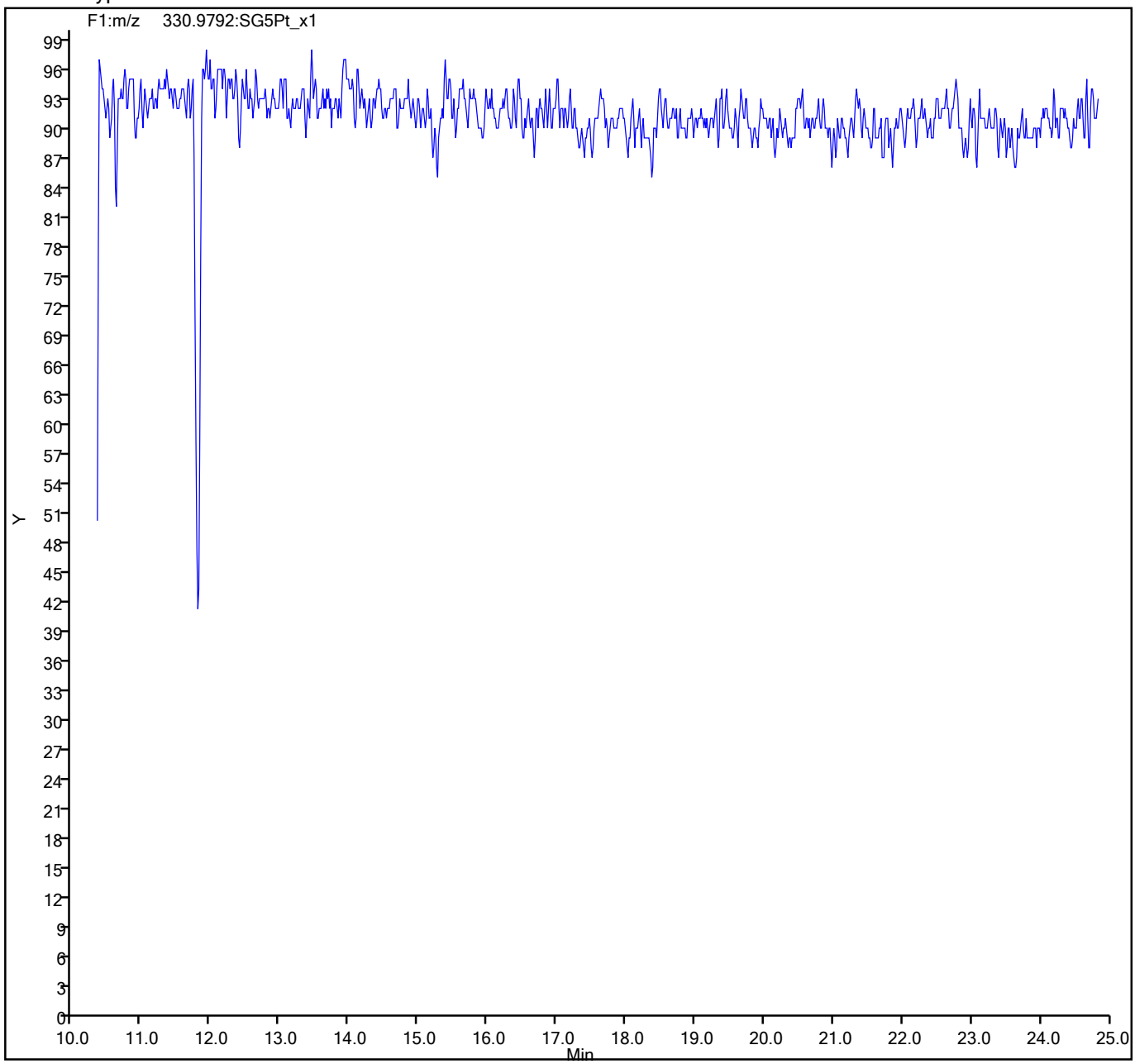

786345

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 12:59:07 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:33 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:56:58

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.631	29054878	0.79	1.3327					0.00	
2,3,7,8-TCDF	17.659	30793724	0.77	0.9978	42.5	42.5	0.0965	0.0965		
D 13C-2,3,7,8-TCDD	16.081	17349695	0.82	0.8749					0.00	
2,3,7,8-TCDD	16.095	19254291	0.78	1.0570	42.0	42.0	0.1075	0.1075		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 26-Aug-2021 09:30:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 12:59:07 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 09:30:33 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1614

First Level Reviewer: stephensk Date: 26-Aug-2021 08:56:58

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.631	17.631	0	1.000	12787012	2551981	13654	34135	187		
317.9389	17.631	17.631	0	1.000	16267866	3076922	11183	27957	275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.659	17.659	0	1.002	13417414	2552580	2769	6922	922		
305.8987	17.645	17.659	-1	1.001	17376310	3303374	2652	6630	1246	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.081	16.081	0	1.000	7825356	1694452	30090	75225	56		
333.9339	16.068	16.081	-1	1.000	9524339	2014028	12442	31105	162	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.095	16.095	0	1.001	8416026	1883087	1907	4767	987		
321.8936	16.095	16.095	0	1.001	10838265	2417244	2305	5762	1049	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

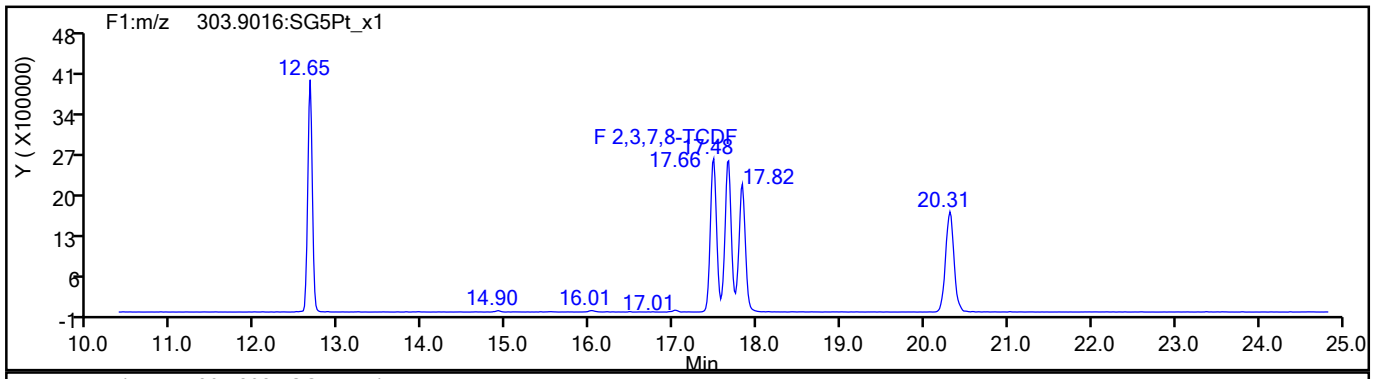

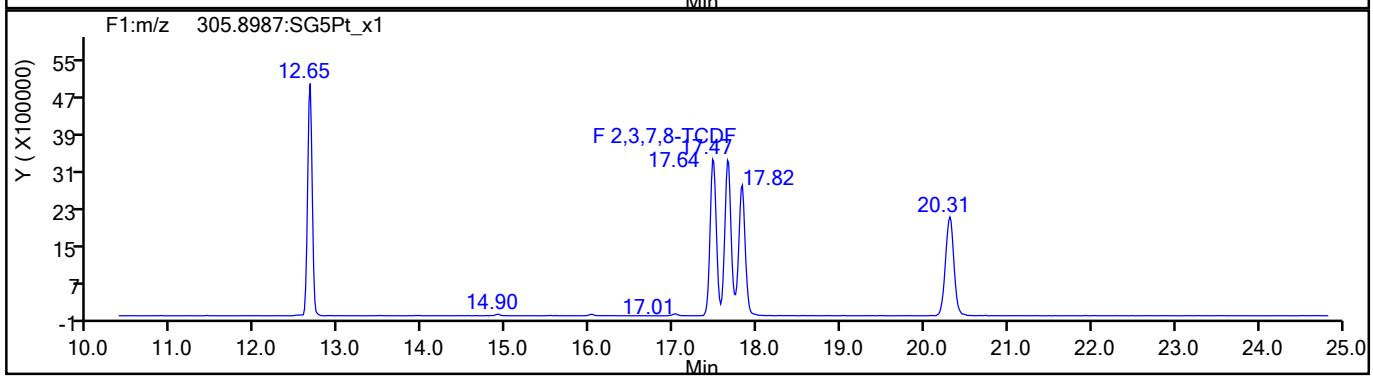

TCDF Standards

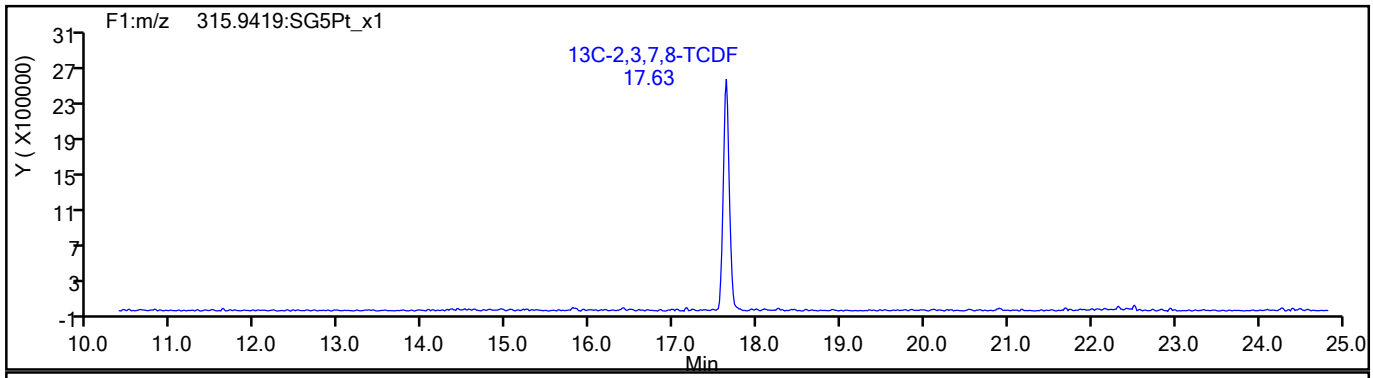

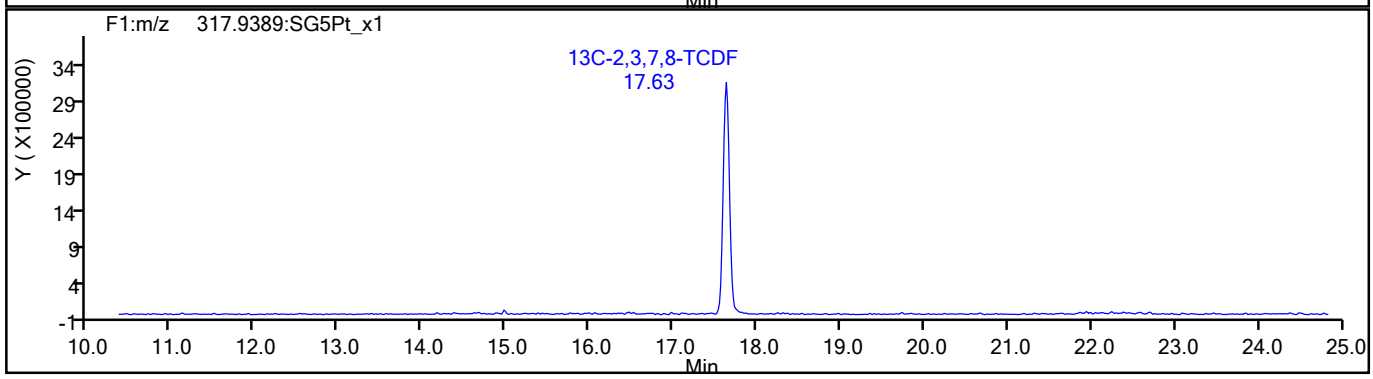

786348

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

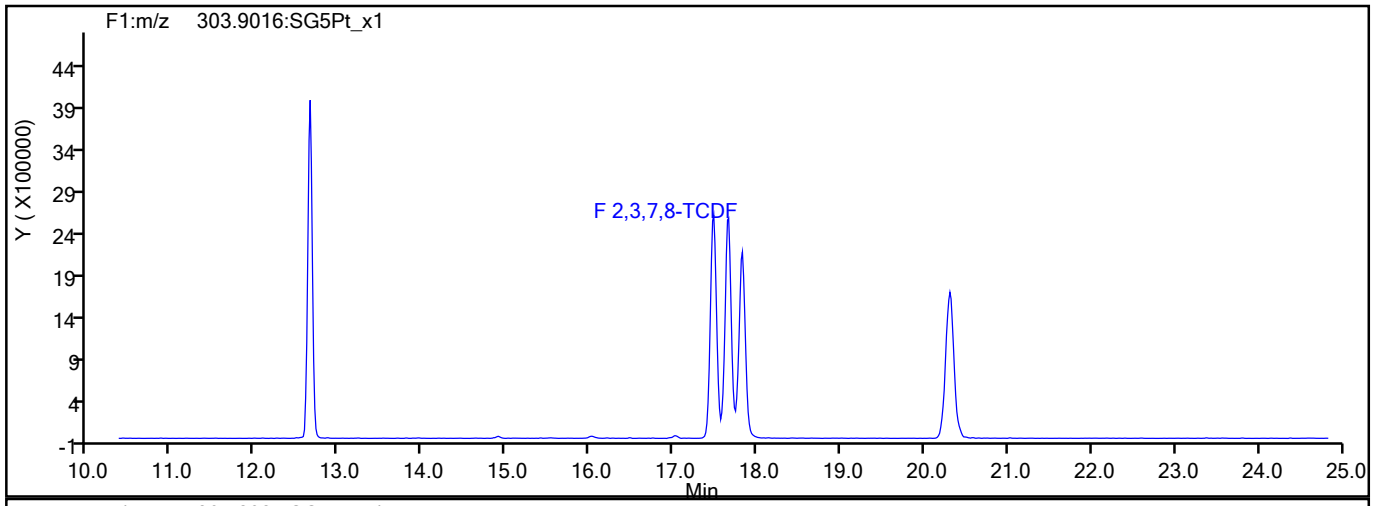

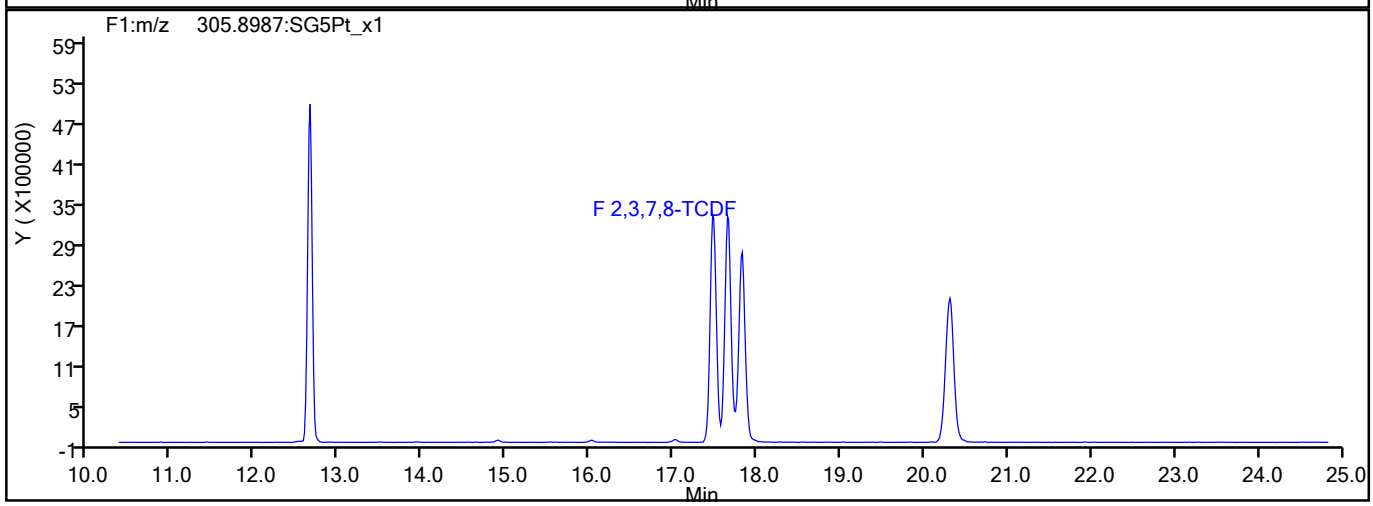

TCDF Interference Mass

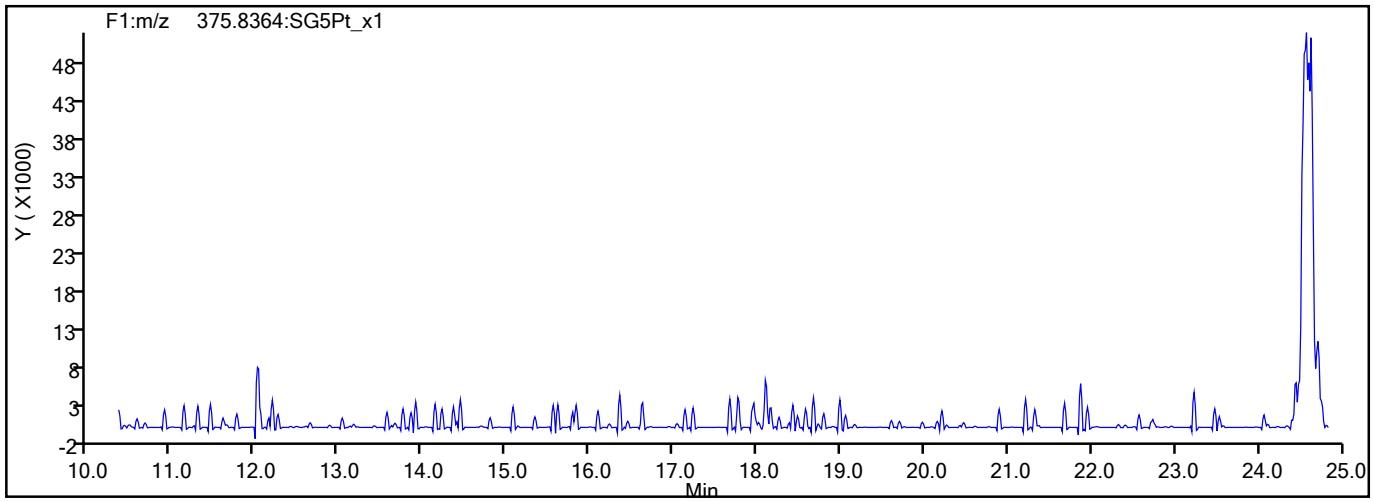

786349

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

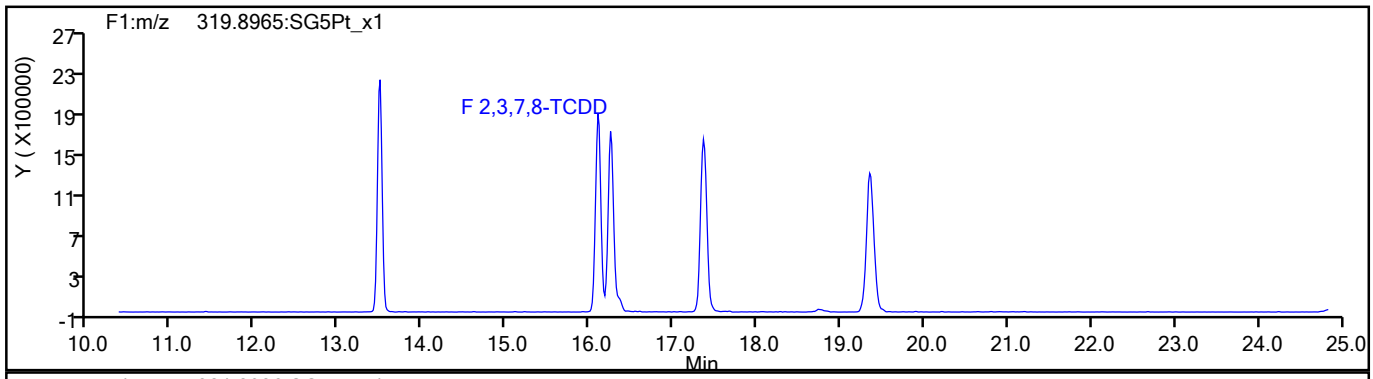

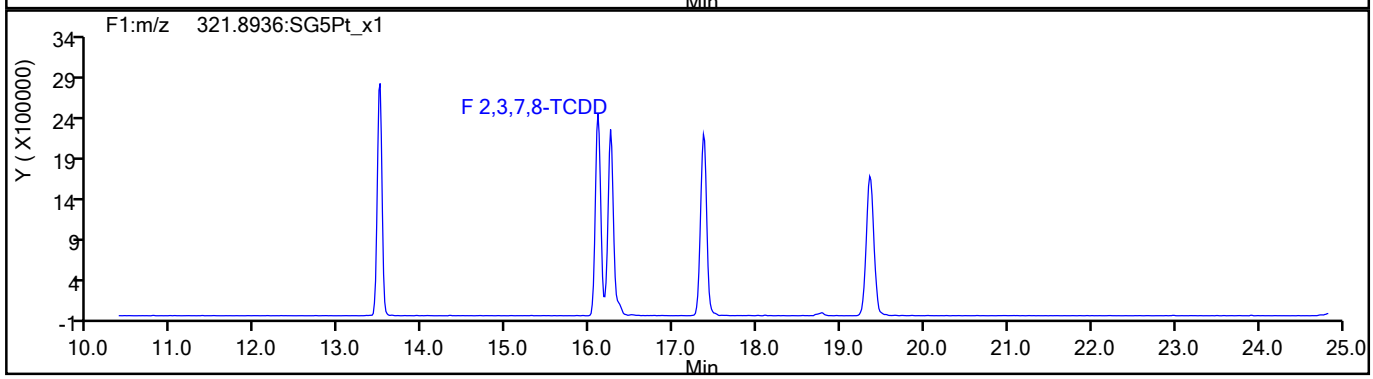

TCDD Standards

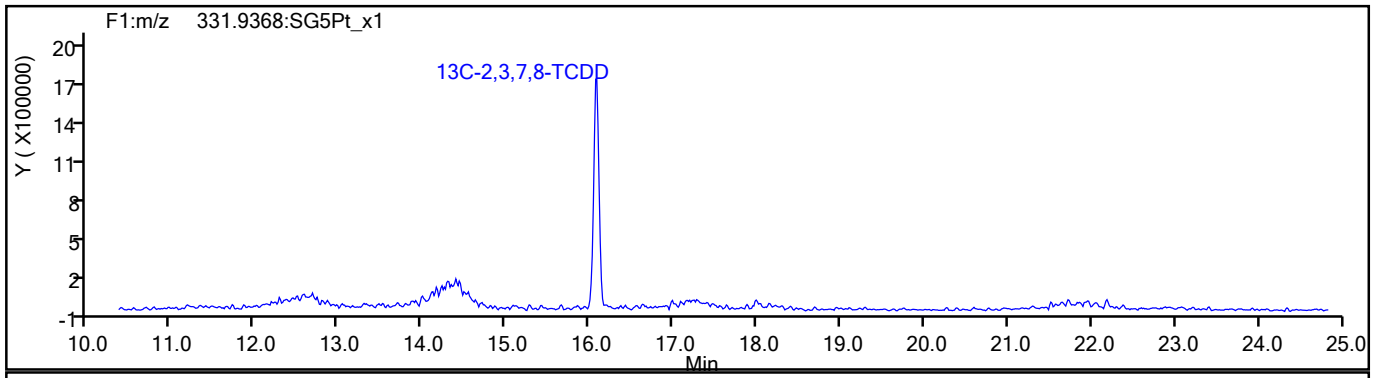

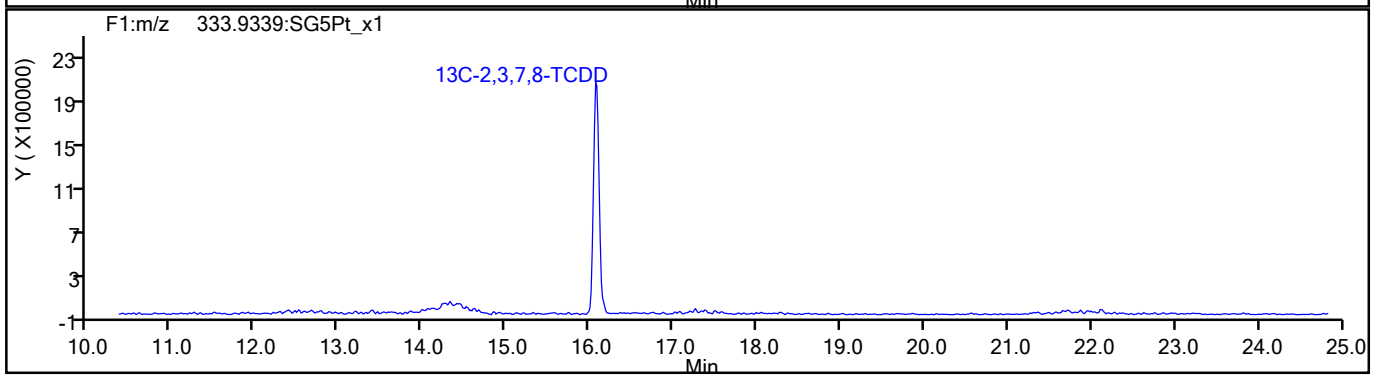

786350

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

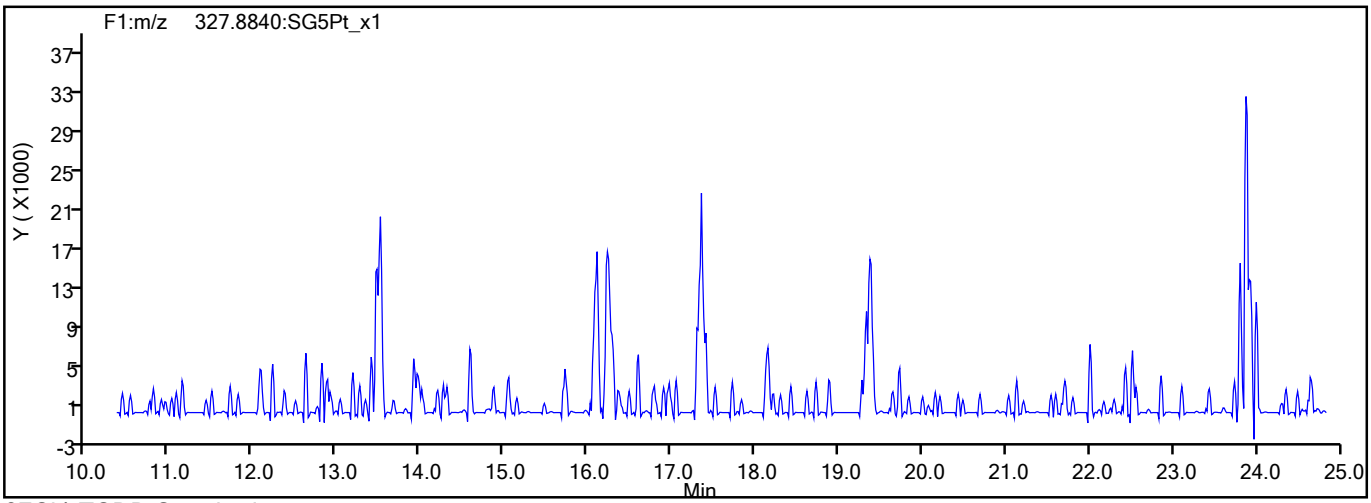

37Cl4-TCDD Standards

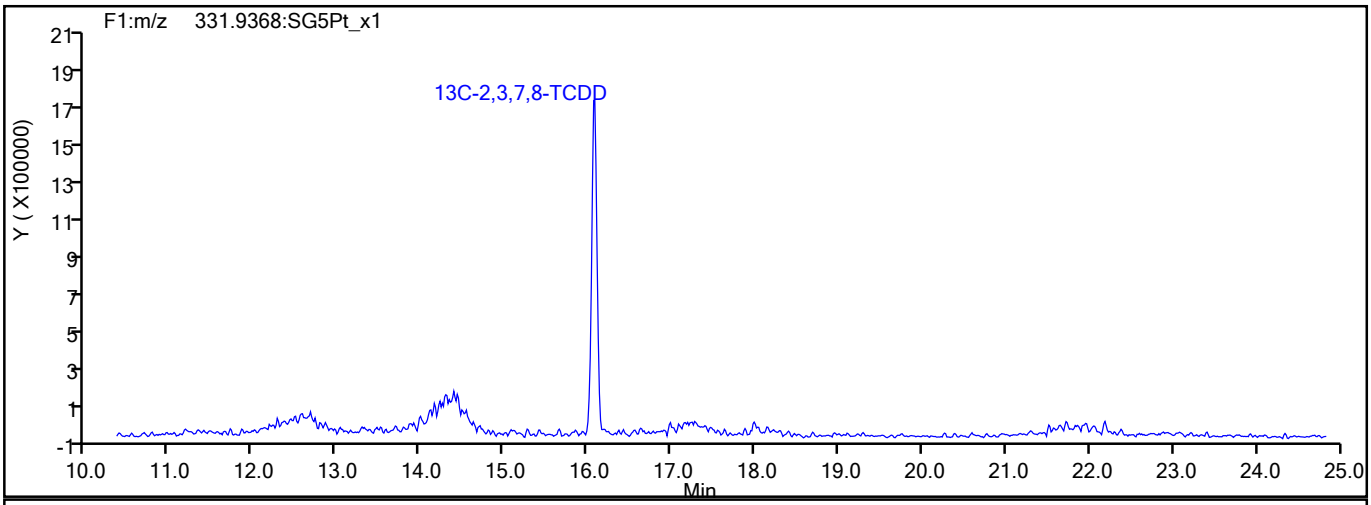

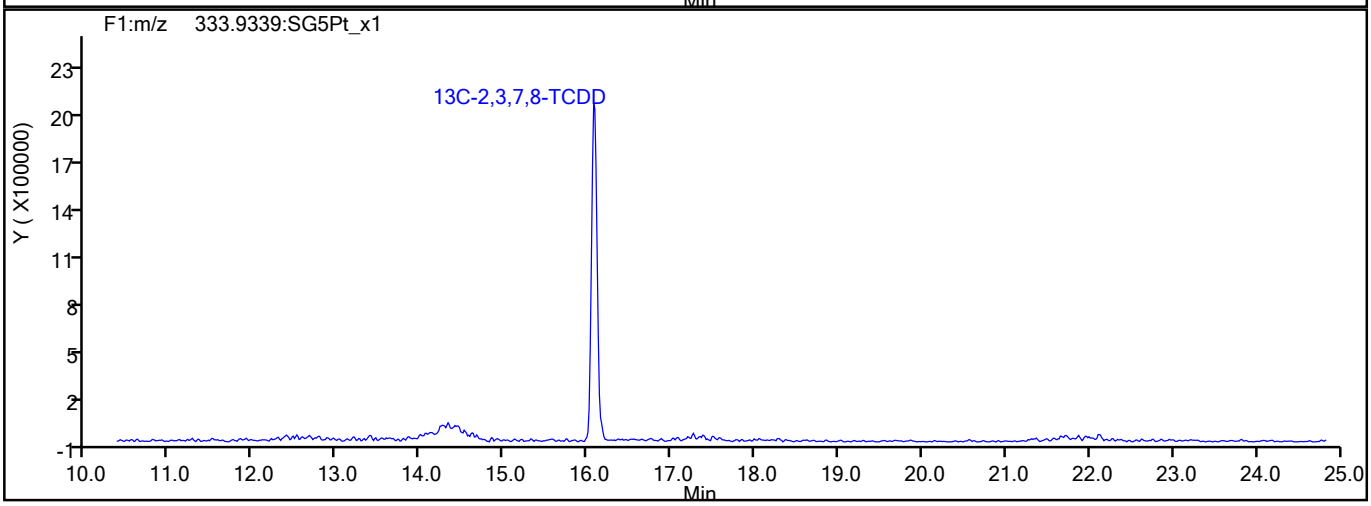

786351

Report Date: 26-Aug-2021 09:30:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125718.b\25AU21A11D2_001.d		
Injection Date:	25-Aug-2021 12:59:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519744	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

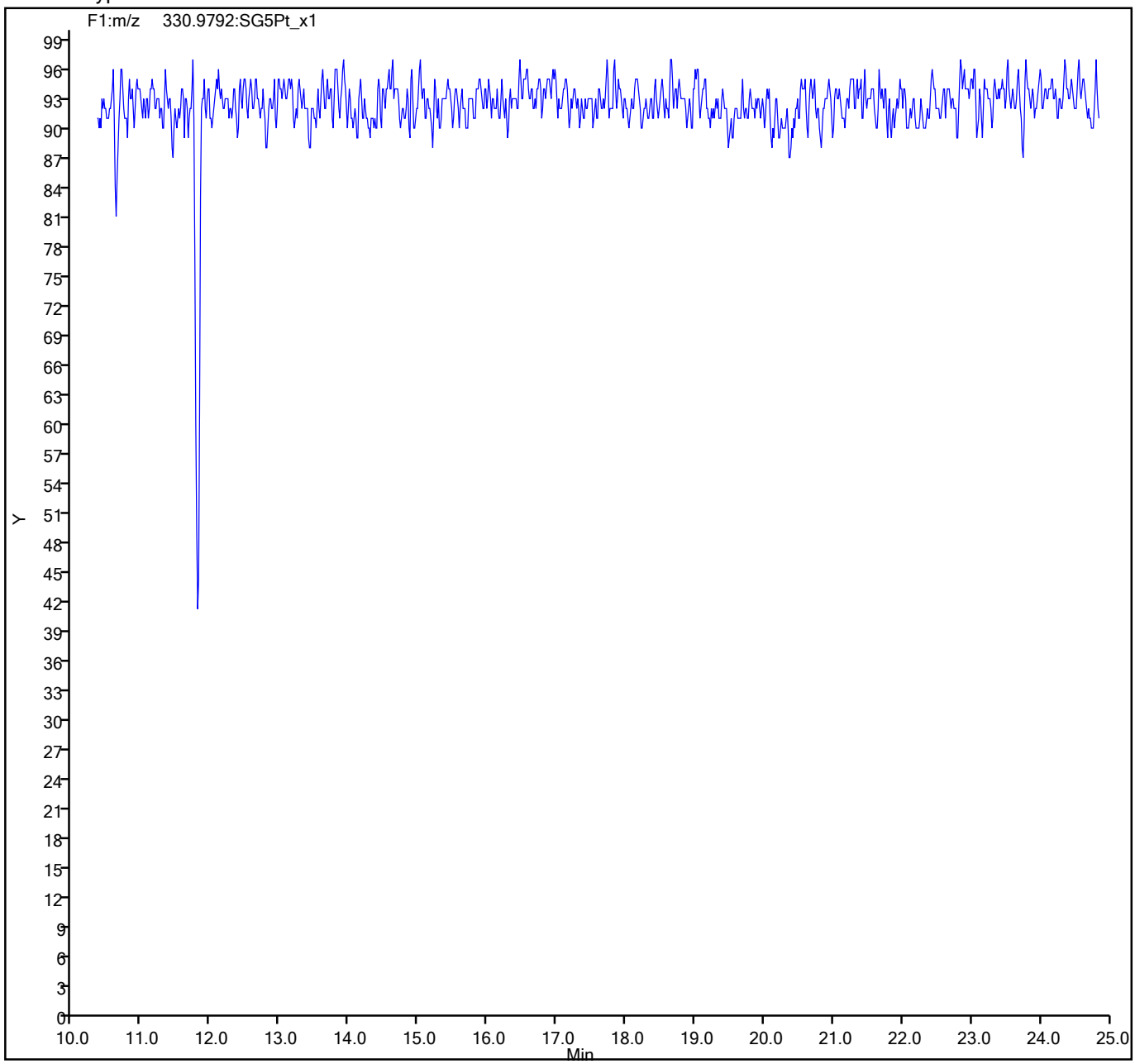

786352

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 26-Aug-2021 15:17:03 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:08 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 09:18:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	45286473	0.77	1.3327					0.00	
2,3,7,8-TCDF	17.645	47779372	0.78	0.9978	42.3	42.3	0.0782	0.0782		
D 13C-2,3,7,8-TCDD	16.068	27466097	0.79	0.8749					0.00	
2,3,7,8-TCDD	16.081	30846725	0.78	1.0570	42.5	42.5	0.1007	0.1007		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 26-Aug-2021 15:17:03 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:08 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 09:18:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19761403	3914333	7767	19417	504		
317.9389	17.617	17.617	0	1.000	25525070	4743283	9037	22592	525	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.645	17.645	0	1.002	20965812	4055625	2963	7407	1369		
305.8987	17.645	17.645	0	1.002	26813560	5160307	3794	9485	1360	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	1.000	12119120	2764080	6706	16765	412		
333.9339	16.068	16.068	0	1.000	15346977	3424936	5691	14227	602	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.081	16.081	0	1.001	13516653	3006595	3152	7880	954		
321.8936	16.081	16.081	0	1.001	17330072	3945961	3437	8592	1148	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 27-Aug-2021 09:43:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_001.d		
Injection Date:	26-Aug-2021 15:17:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520145	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

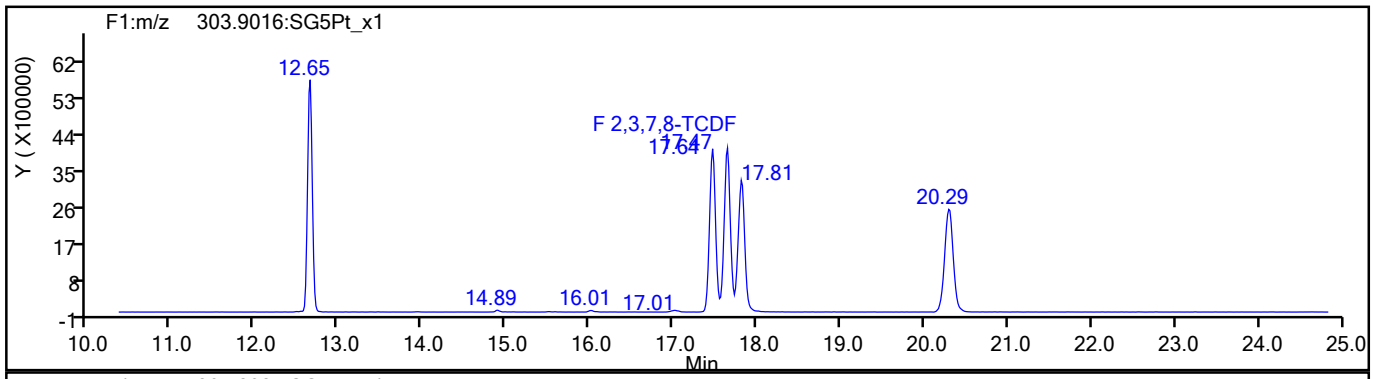

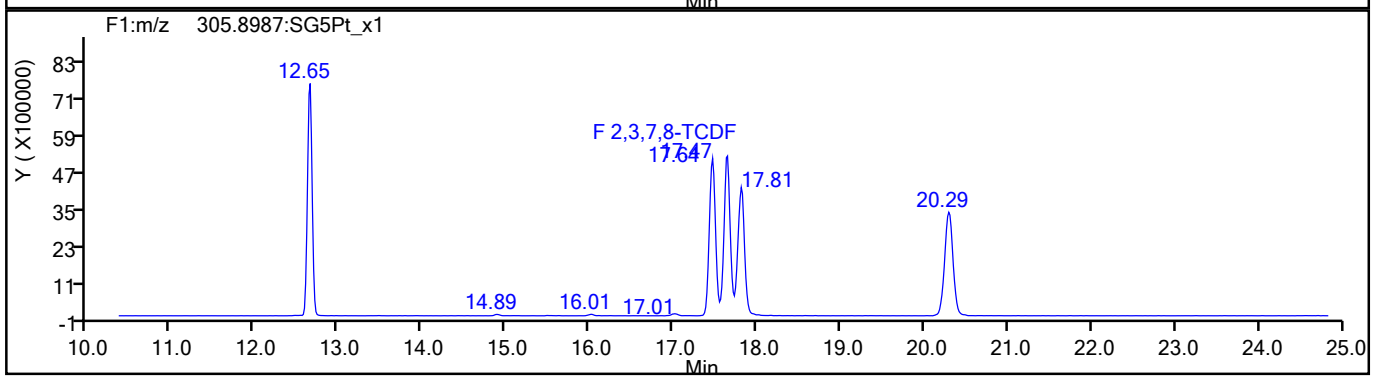

TCDF Standards

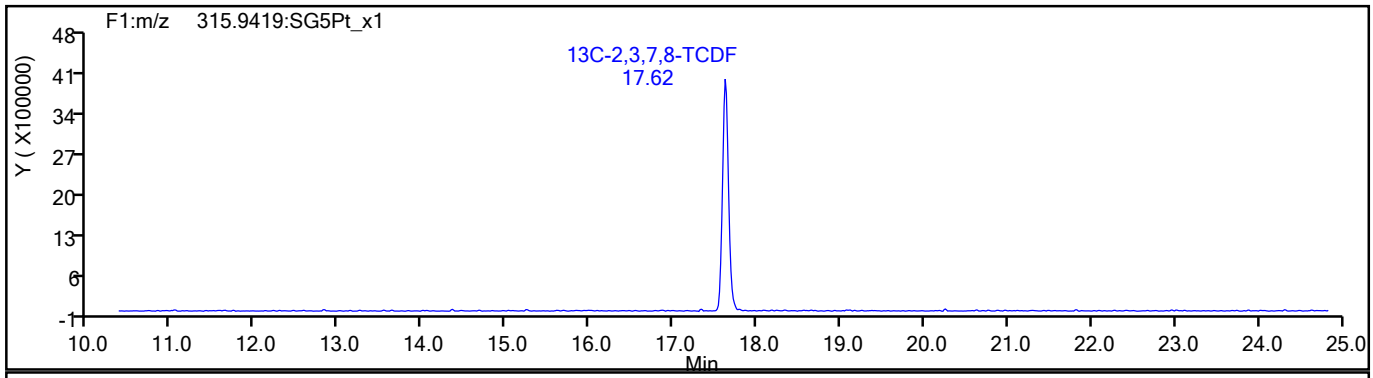

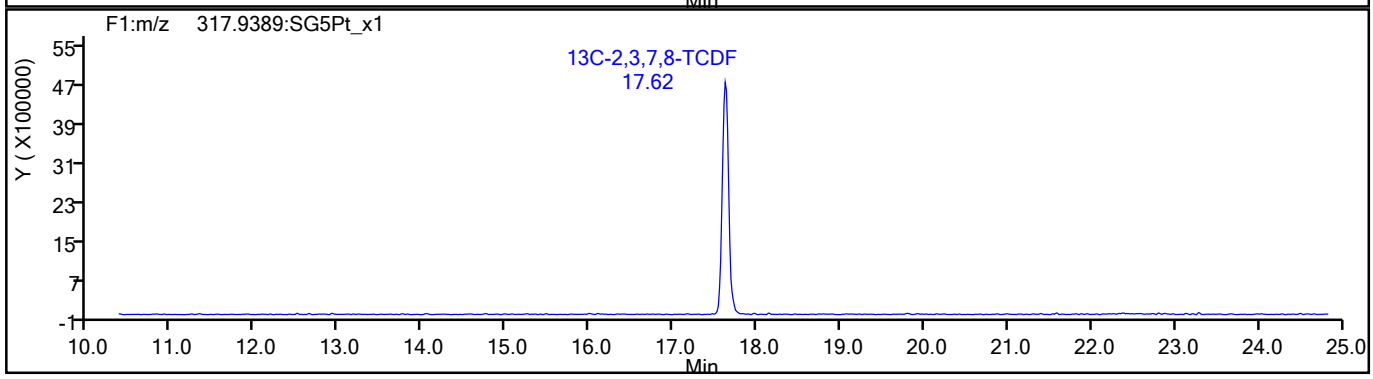

786355

Report Date: 27-Aug-2021 09:43:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_001.d		
Injection Date:	26-Aug-2021 15:17:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520145	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

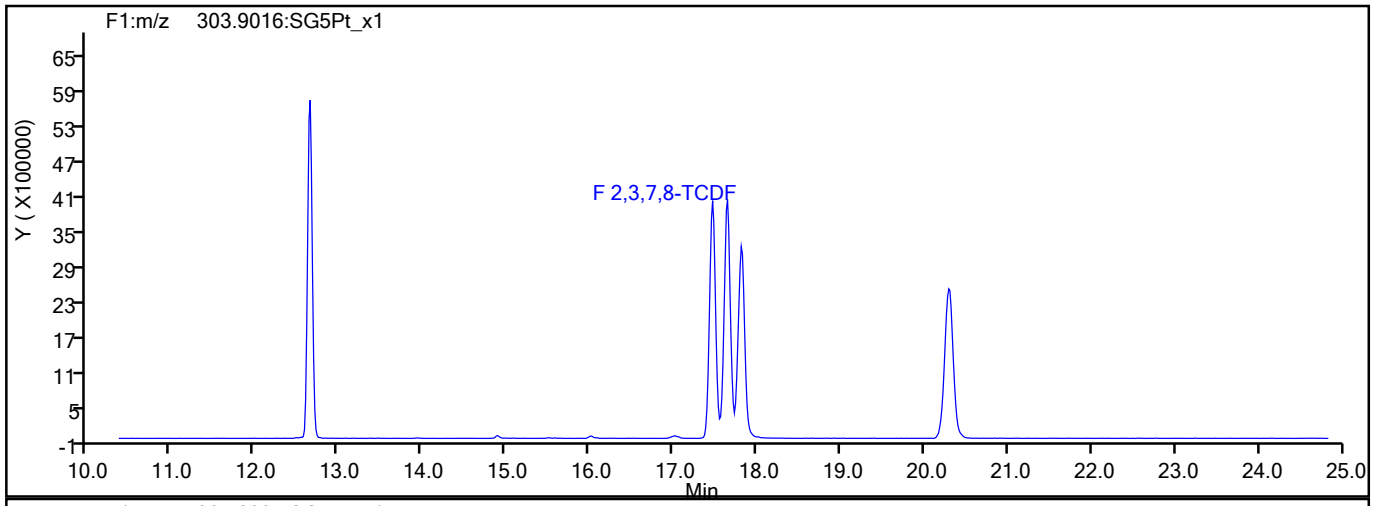

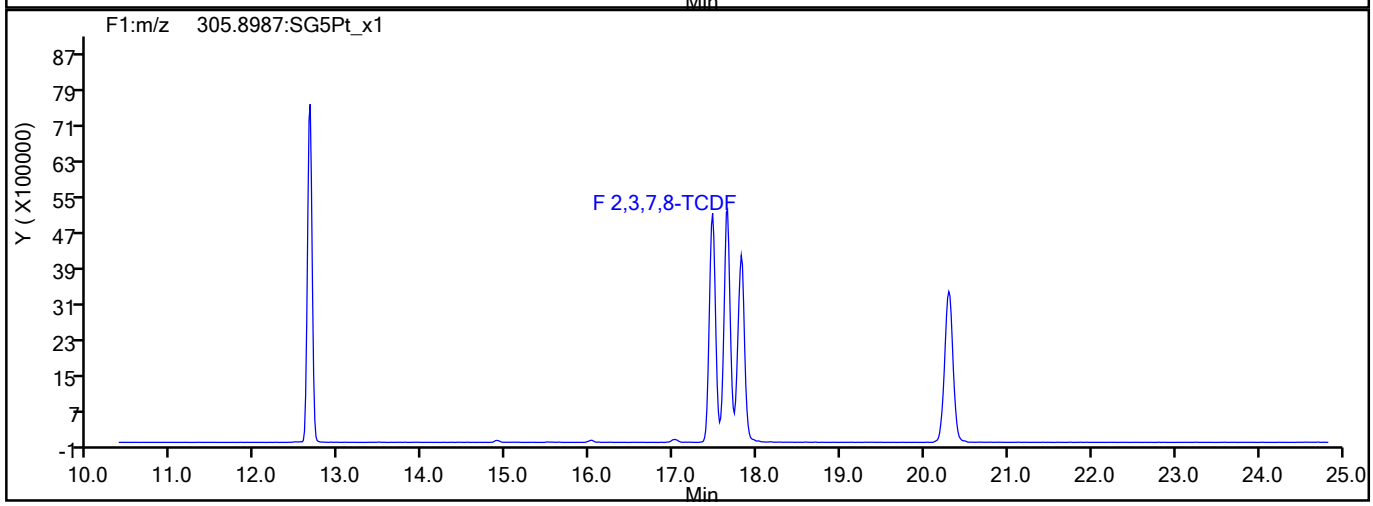

TCDF Interference Mass

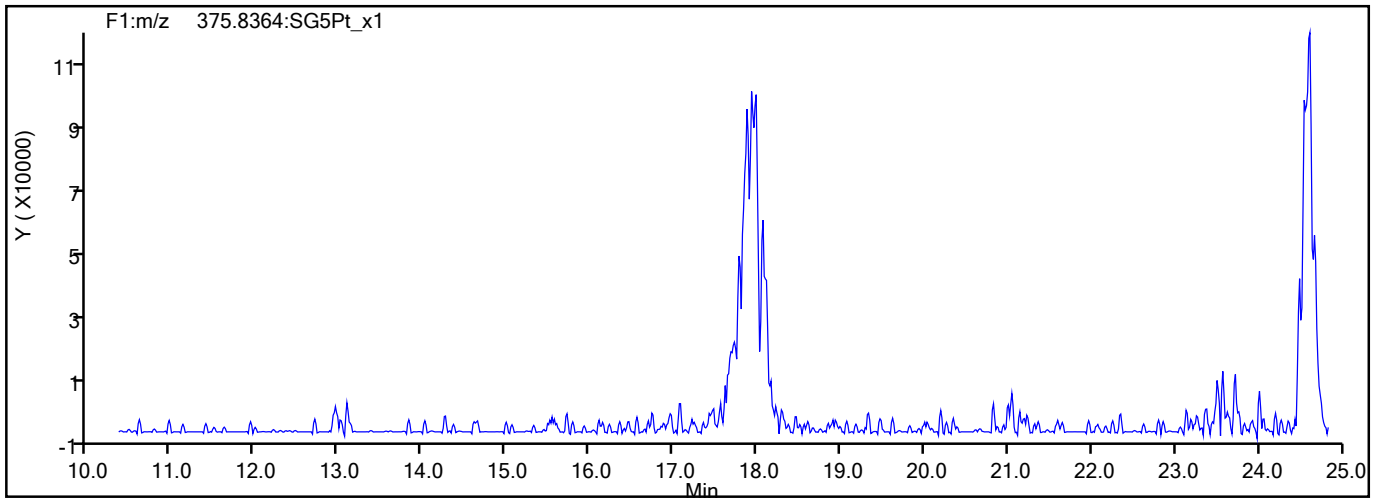

786356

Report Date: 27-Aug-2021 09:43:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210826-125802.b\26AU21A11D2_001.d		
Injection Date:	26-Aug-2021 15:17:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520145	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

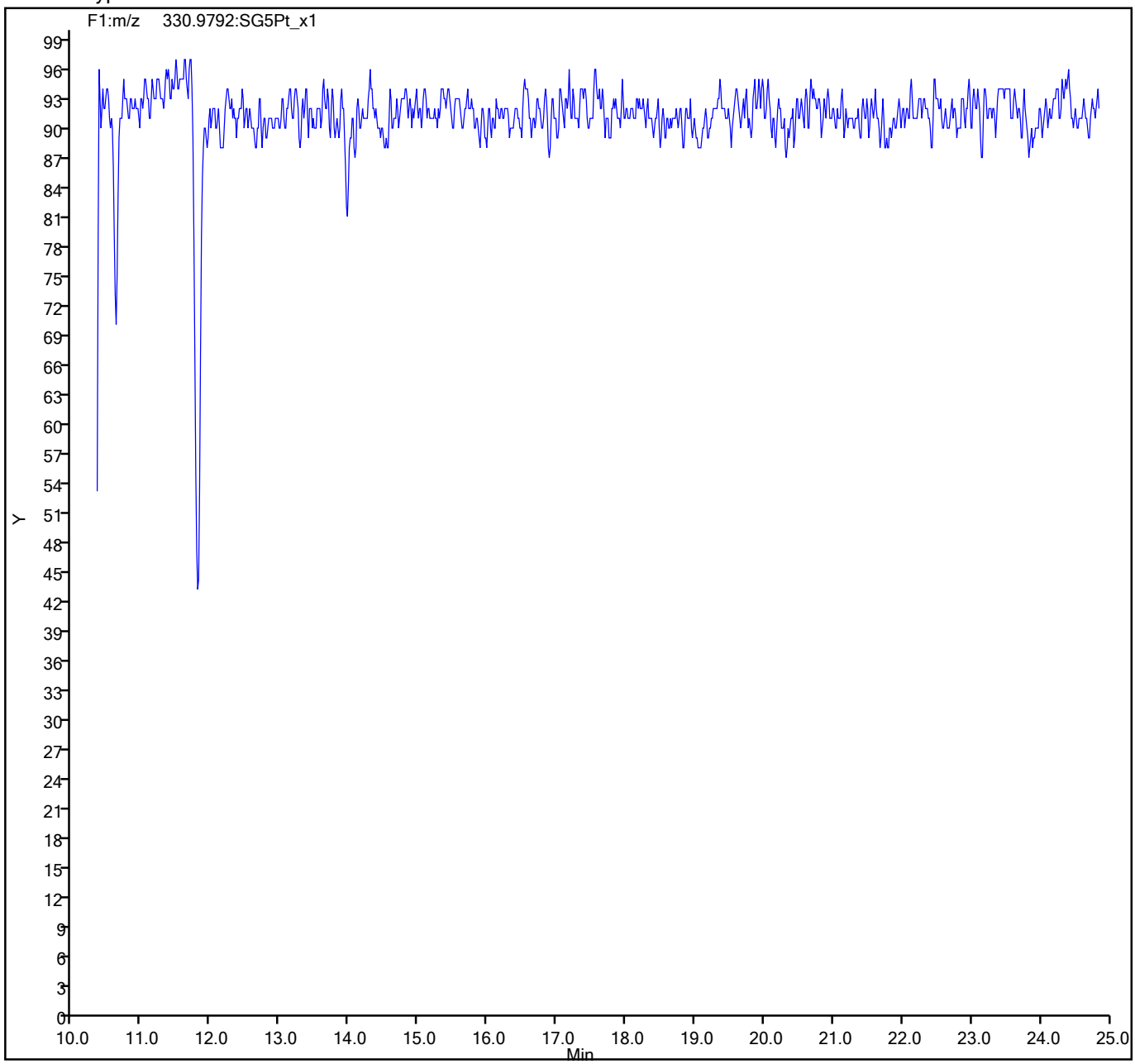

786357

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 08:59:39 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:48:00

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.637	35431848	0.77	1.3327					0.00	
2,3,7,8-TCDF	17.664	37045761	0.78	0.9978	41.9	41.9	0.0744	0.0744		
D 13C-2,3,7,8-TCDD	16.087	21057076	0.77	0.8749					0.00	
2,3,7,8-TCDD	16.101	24884372	0.77	1.0570	44.7	44.7	0.0846	0.0846		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 27-Aug-2021 15:52:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 08:59:39 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:48:00

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.637	17.637	0	1.000	15459314	2940845	6227	15567	472		
317.9389	17.637	17.637	0	1.000	19972534	3794757	4880	12200	778	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.664	17.664	0	1.002	16254265	3079391	2319	5797	1328		
305.8987	17.651	17.664	-1	1.001	20791496	3931055	2679	6697	1467	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.087	16.087	0	1.000	9175721	2009725	4286	10715	469		
333.9339	16.087	16.087	0	1.000	11881355	2546873	2779	6947	916	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.101	16.101	0	1.001	10861375	2477041	1751	4377	1415		
321.8936	16.101	16.101	0	1.001	14022997	3266493	2324	5810	1406	0.77(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d		
Injection Date:	27-Aug-2021 08:59:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

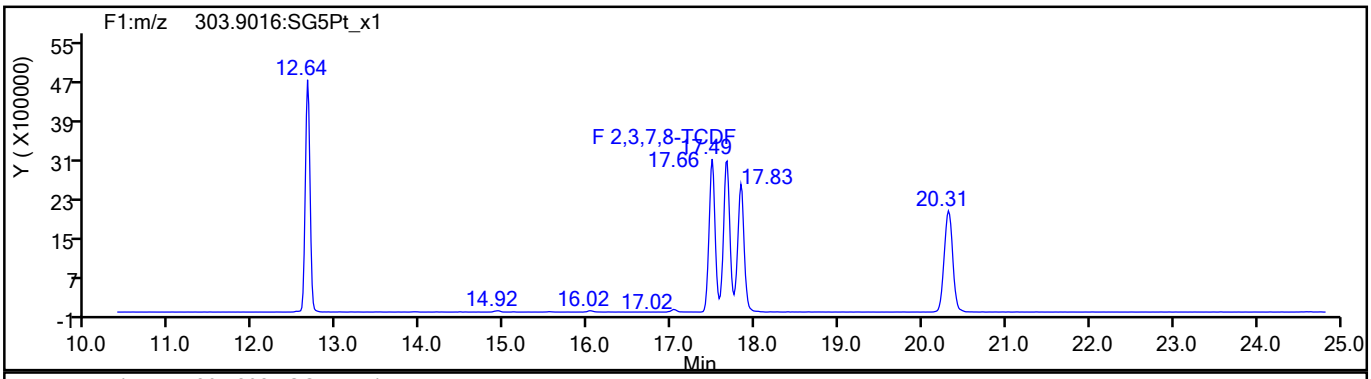

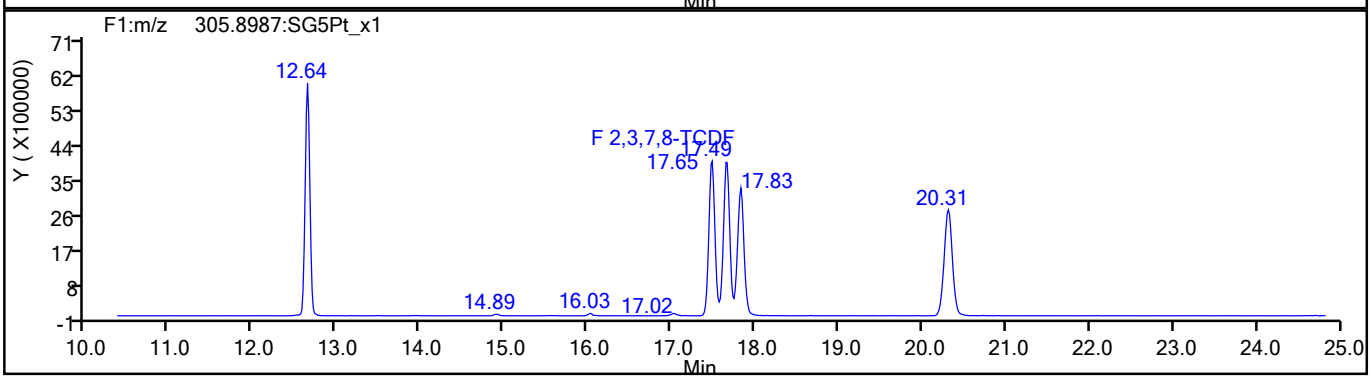

TCDF Standards

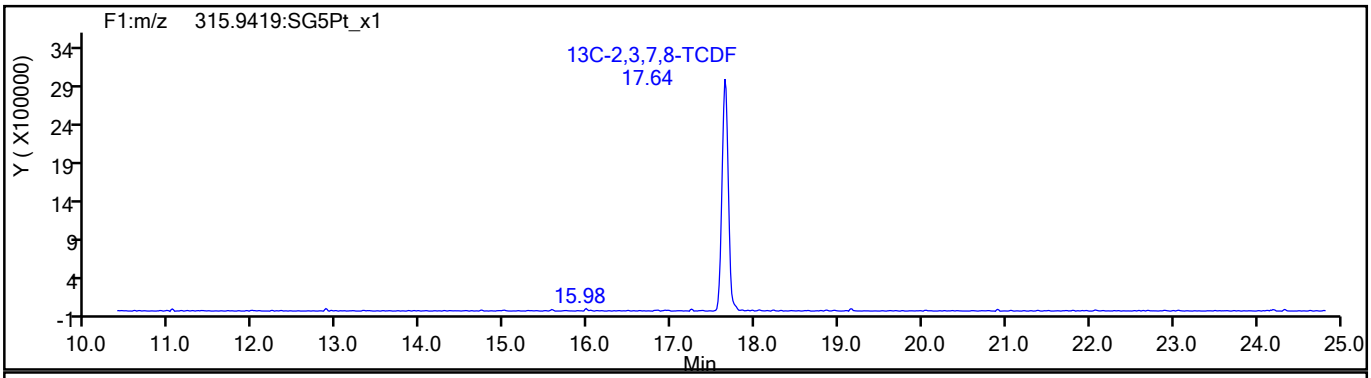

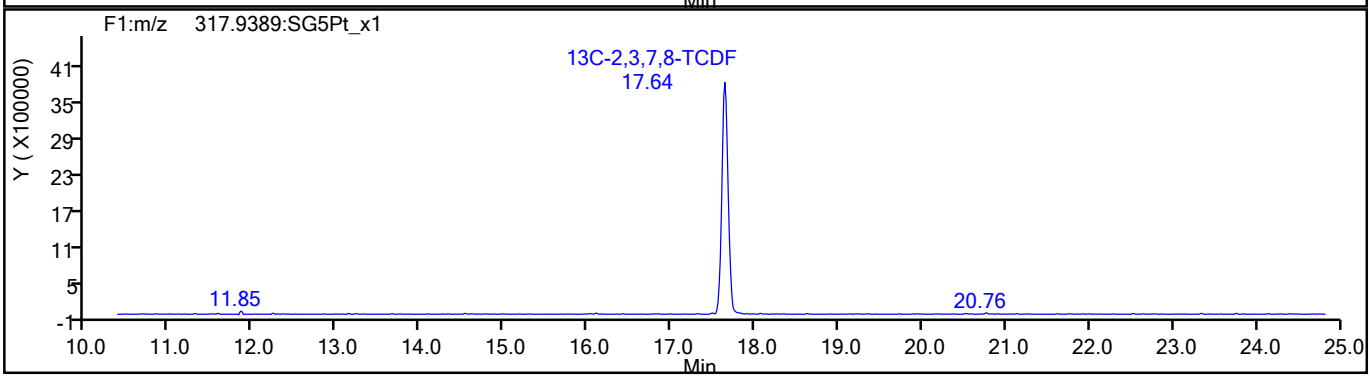

786360

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d		
Injection Date:	27-Aug-2021 08:59:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

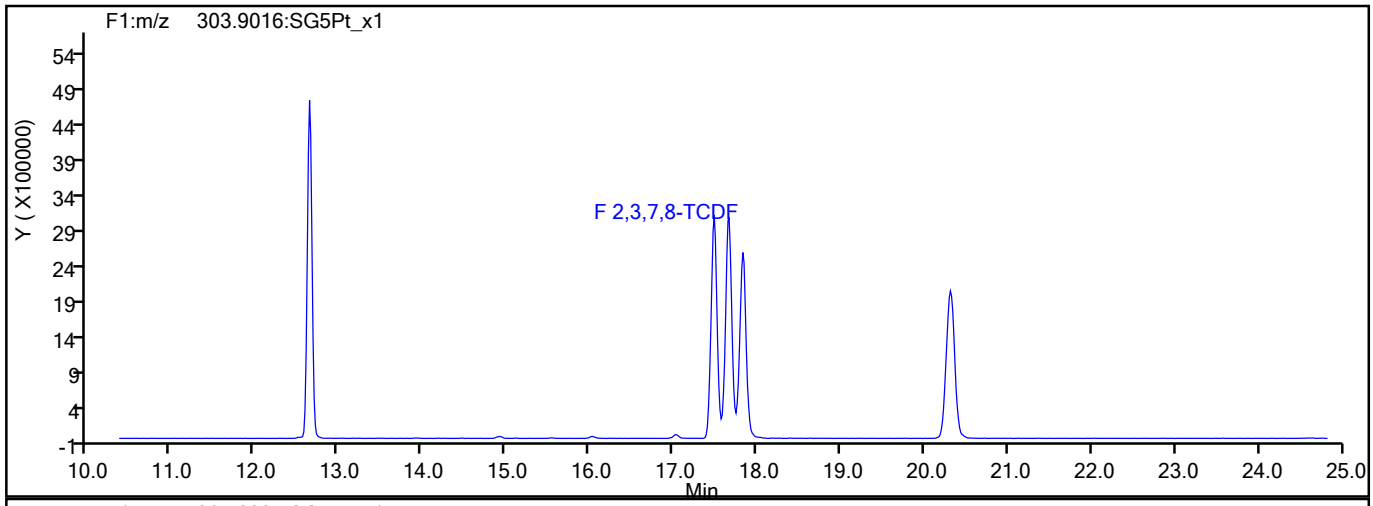

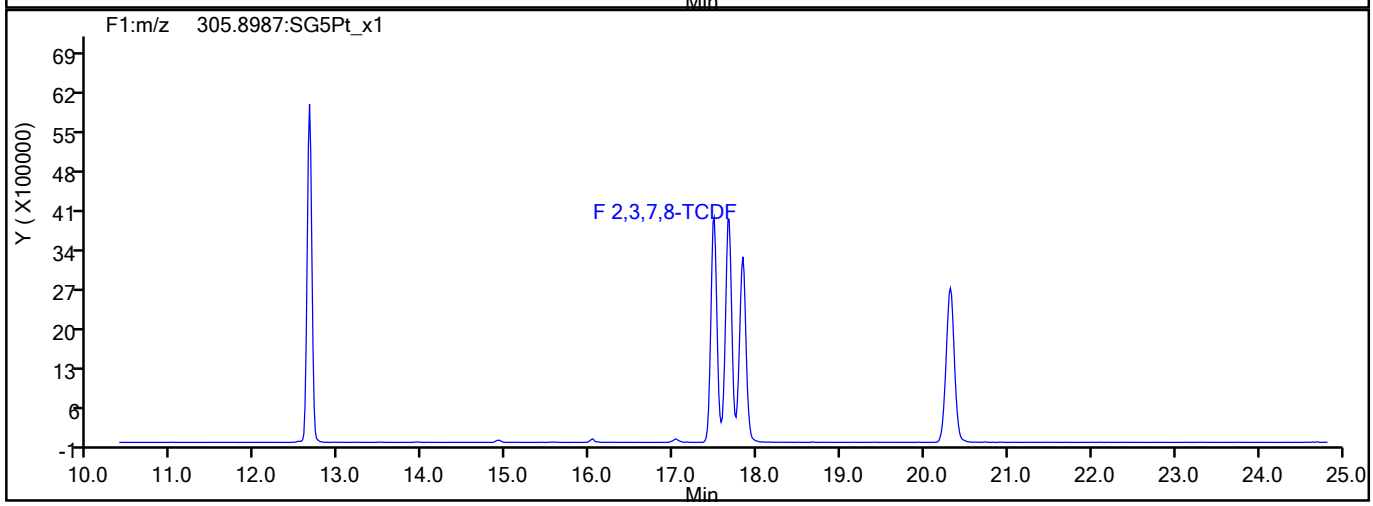

TCDF Interference Mass

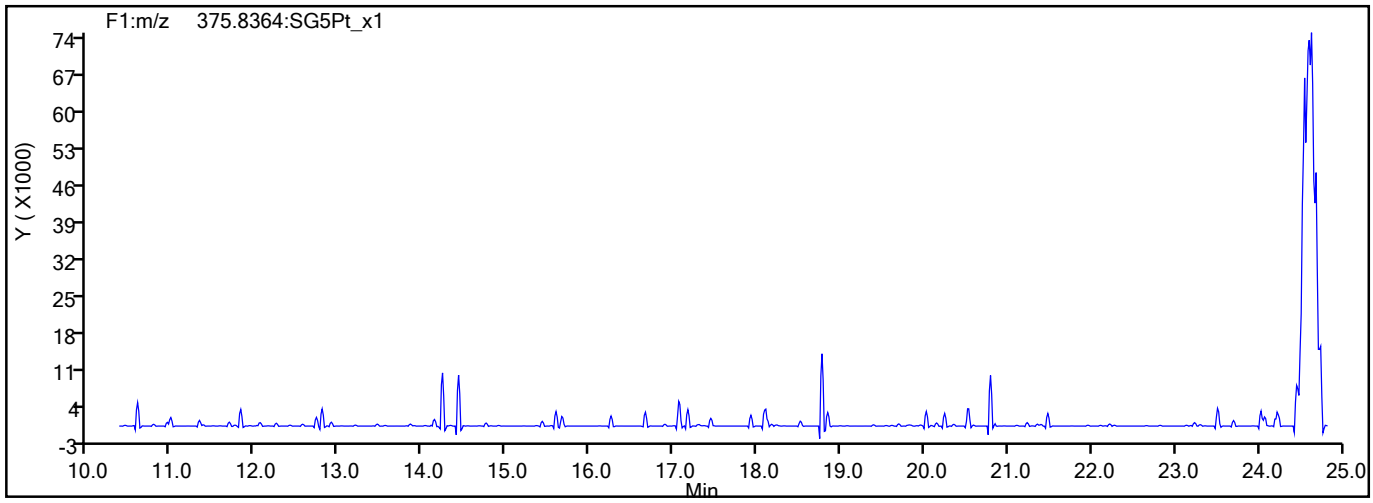

786361

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d		
Injection Date:	27-Aug-2021 08:59:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

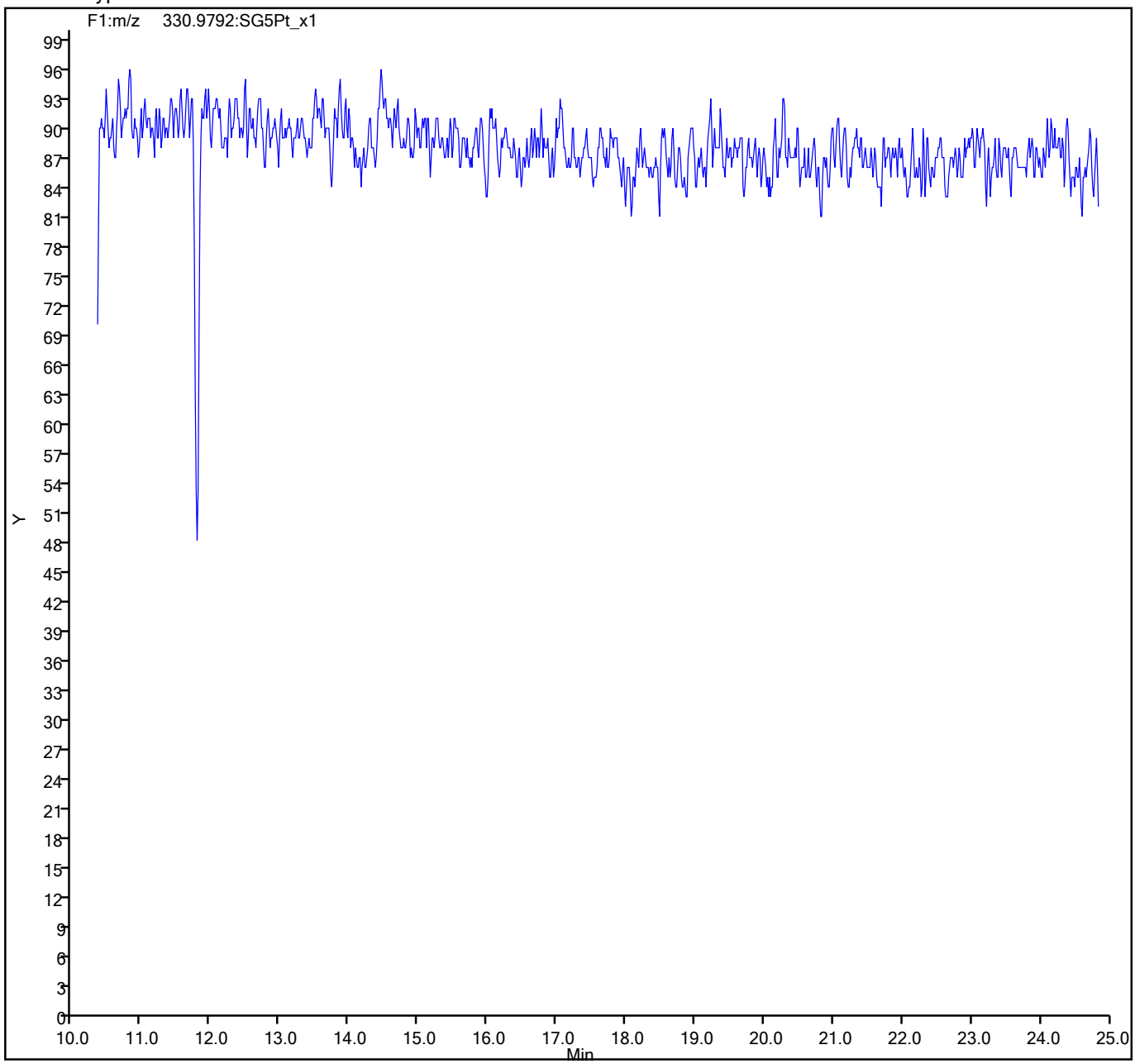

786362

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	19.630	956054	0.80	1.3459					0.00	
2,3,7,8-TCDF	19.673	1998250	0.78	1.0802	77.4	77.4	0.2129	0.2129		
A Non-2,3,7,8-sub-TCDF	19.213	12503	0.80	1.0802	0.4843	0.4843	0.2129	0.4843		
S Total TCDF					77.9	77.9	0.2129	0.2129		
D 13C-2,3,7,8-TCDD	20.918	596833	0.84	0.9317					0.00	
2,3,7,8-TCDD	20.952	682873	0.80	1.0753	42.6	42.6	0.1742	0.1742		
A Non-2,3,7,8-sub-TCDD	20.025						0.1742	0.1742		
S Total TCDD					42.6	42.6	0.1742	0.1742		
A F1 PeCDFs	24.098						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	27.473	14452	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	27.656						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	34.470						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	34.896	7360	1.11	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.309	643675	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.598	537364	1.05	1.3092						
A Non-2,3,7,8-sub-HpCDF	38.954						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.295	435480	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	38.962						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.592	1199920	0.78							
1,3,6,8-TCDD	17.122	706482	0.80							
2,3,4,7-TCDF	19.673	1998250	0.78							
1,2,3,7-TCDD	20.746	567957	0.79							
1,2,3,9-TCDF	21.124	860286	0.78							
1,2,3,9-TCDD	21.227	705730	0.80							
1,2,8,9-TCDF	22.833	906629	0.79							

786363

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	22.927	290535								
1,3,4,6,8-PeCDF	23.417	833719	1.57							
1,2,4,7,9-PeCDD	25.443	580592	1.56							
1,2,3,8,9-PeCDD	29.870	532099	1.58							
1,2,3,8,9-PeCDF	30.030	680377	1.58							
1,2,3,4,6,8-HxCDF	32.430	811785	1.23							
1,2,4,6,7,9-HxCDD	33.644	577087	1.25							
1,2,3,4,6,7-HxCDD	36.148	580699	1.24							
1,2,3,4,8,9-HxCDF	36.510	710754	1.25							
1,2,3,4,6,7,9-HpCDD	38.629	486479	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	19.630	19.630	0	1.000	423520	68874	224	560	307		
317.9389	19.639	19.630	1	1.000	532534	85912	93	232	924	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.673	19.646	2	1.002	874984	129163	148	370	873		
305.8987	19.673	19.646	2	1.002	1123266	166698	208	520	801	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	23.417	19.213	252	1.193	5547	1019	148	370	7		
305.8987	23.417	19.213	252	1.193	6956	1132	208	520	5	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.918	20.918	0	1.000	272607	40247	106	265	380		
333.9338	20.927	20.918	1	1.000	324226	50518	46	115	1098	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	20.952	20.939	1	1.002	302613	44836	90	225	498		
321.8936	20.952	20.939	1	1.002	380260	55991	80	200	700	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.025						90	225			
321.8936	20.025						80	200			
A F1 PeCDFs											
339.8597	24.098						6	15			
341.8567	24.098						22	55			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.114	27.473	-141	1.000	1272	231	55	137	4		
341.8567	25.123	27.473	-141	1.000	842	169	40	100	4	1.51(1.32-1.78)	
339.8597	26.033	27.473	-86	1.000	1834	347	55	137	6		
341.8567	26.067	27.473	-84	1.000	1408	247	40	100	6	1.30(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	26.623	27.473	-51	1.000	3412	452	55	137	8		
341.8567	26.606	27.473	-52	1.000	2424	350	40	100	9	1.41(1.32-1.78)	
339.8597	27.205	27.473	-16	1.000	2495	380	55	137	7		
341.8567	27.188	27.473	-17	1.000	1367	235	40	100	6	1.83(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	27.656						71	177			
357.8516	27.656						35	87			
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						89	222			
375.8178	34.470						66	165			
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.875	34.896	-1	1.000	3879	711	57	142	12		
391.8127	34.866	34.896	-2	1.000	3481	707	48	120	15	1.11(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	330574	91984	132	330	697		
409.7788	38.309	38.317	0	1.000	313101	85674	117	292	732	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	275340	83564	132	330	633		
409.7788	39.598	39.608	-1	1.000	262024	79894	117	292	683	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						132	330			
409.7788	38.954						117	292			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.295	39.301	0	1.000	225083	68745	95	237	724		
425.7737	39.295	39.301	0	1.000	210397	63713	87	217	732	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.962						95	237			
425.7737	38.962						87	217			
1,3,6,8-TCDF											
303.9016	15.592	15.592	0		526894	111834	148	370	756		
305.8987	15.583	15.592	-1		673026	142703	208	520	686	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.122	17.122	0		313043	59426	90	225	660		
321.8936	17.122	17.122	0		393439	76022	80	200	950	0.80(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	19.673	19.673	0		874984	129163	148	370	873		
305.8987	19.673	19.673	0		1123266	166698	208	520	801	0.78(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	20.746	20.746	0		250988	38559	90	225	428		
321.8936	20.746	20.746	0		316969	48950	80	200	612	0.79(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.124	21.124	0		377767	55151	148	370	373		
305.8987	21.124	21.124	0		482519	70000	208	520	337	0.78(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	21.227	21.227	0		313060	44546	90	225	495		
321.8936	21.219	21.227	-1		392670	57474	80	200	718	0.80(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	22.833	22.833	0		399193	52133	148	370	352		
305.8987	22.833	22.833	0		507436	68524	208	520	329	0.79(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	22.927	22.927	0		290535	38894	90	225	432		
1,3,4,6,8-PeCDF											
339.8597	23.417	23.417	0		509034	87286	6	15	14548		
341.8567	23.417	23.417	0		324685	55380	22	55	2517	1.57(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	25.443	25.443	0		354036	58724	71	177	827		
357.8516	25.443	25.443	0		226556	37367	35	87	1068	1.56(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	29.870	29.870	0		325767	47119	71	177	664		
357.8516	29.870	29.870	0		206332	29856	35	87	853	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.030	30.030	0		416382	57063	55	137	1038		
341.8567	30.030	30.030	0		263995	36391	40	100	910	1.58(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	32.430	32.430	0		447956	61361	89	222	689		
375.8178	32.421	32.430	-1		363829	50870	66	165	771	1.23(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	33.644	33.644	0		320872	55052	57	142	966		
391.8127	33.644	33.644	0		256215	45045	48	120	938	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.148	36.148	0		321739	75271	57	142	1321		
391.8127	36.148	36.148	0		258960	61340	48	120	1278	1.24(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.510	36.510	0		394836	96545	89	222	1085		
375.8178	36.510	36.510	0		315918	78144	66	165	1184	1.25(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.629	38.629	0		248662	72309	95	237	761		
425.7737	38.629	38.629	0		237817	69783	87	217	802	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	956054	154786

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	956054	154786

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
23.417	5547	1019	6956	1132	0.4843	0.80	
Signal Totals:							
	5547	1019	6956	1132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12503	2151				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4843 = (12503 * 40.000) / (956054 * 1.080)

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	08-Jun-2021 12:40:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	496688	Lims Sample ID:	1

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.114	1272	231	842	169		1.51	
26.033	1834	347	1408	247		1.30	R
26.623	3412	452	2424	350		1.41	
27.205	2495	380	1367	235		1.83	R
Signal Totals:							
	9013	1410	6041	1001			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15054	2411				1.49	RQ
	14452	2371					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (15054 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (14452 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	08-Jun-2021 12:40:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	496688	Lims Sample ID:	1

Non-2,3,7,8-sub-HxCDD, RT: 34.896

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.875	3879	711	3481	707		1.11	
Signal Totals:							
	3879	711	3481	707			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7360	1418				1.11	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (7360 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

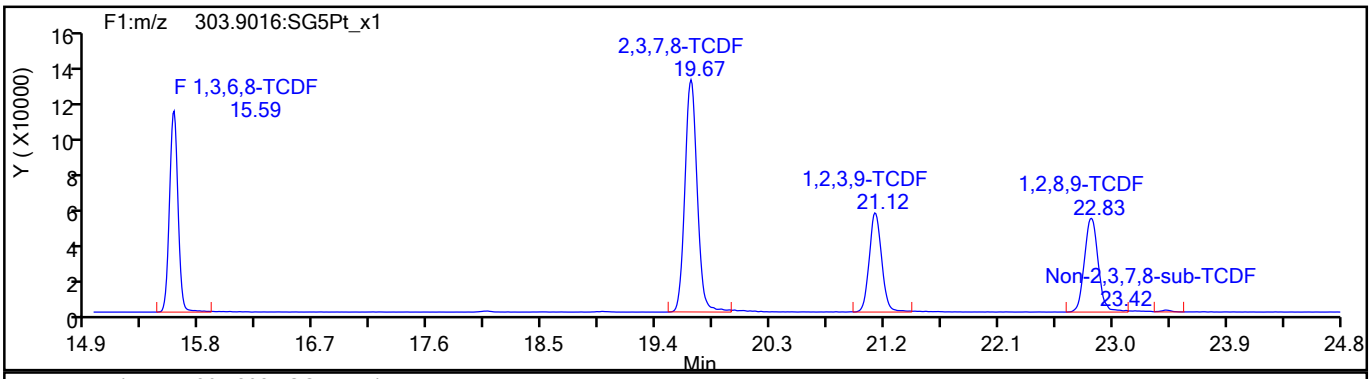

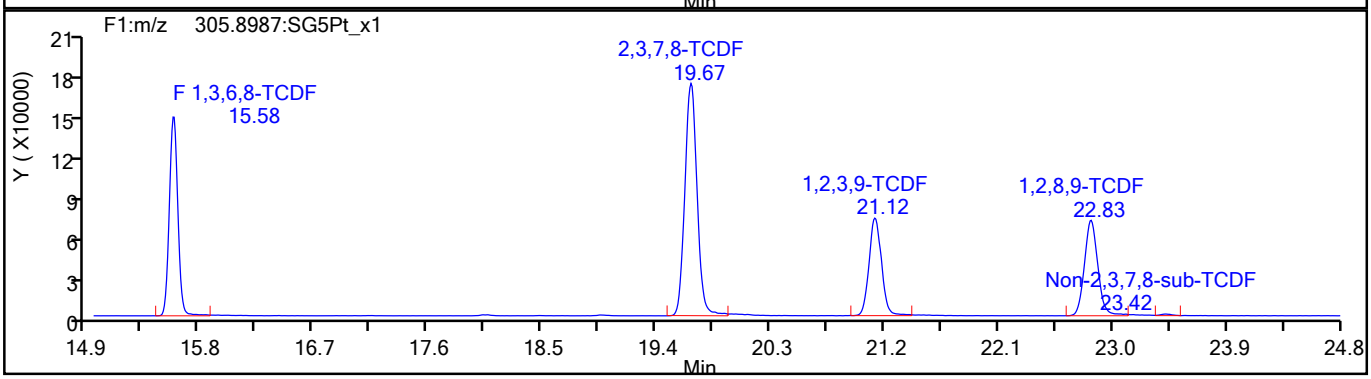

TCDF Standards

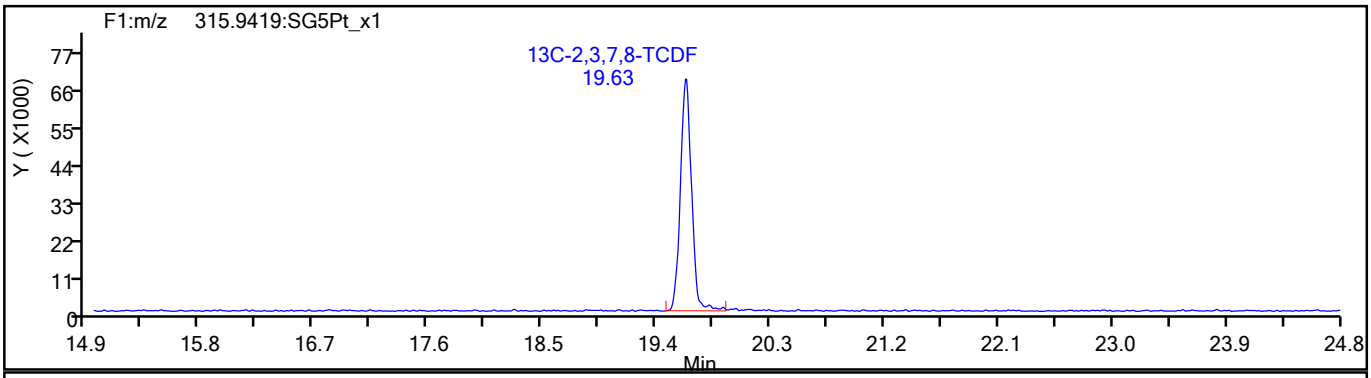

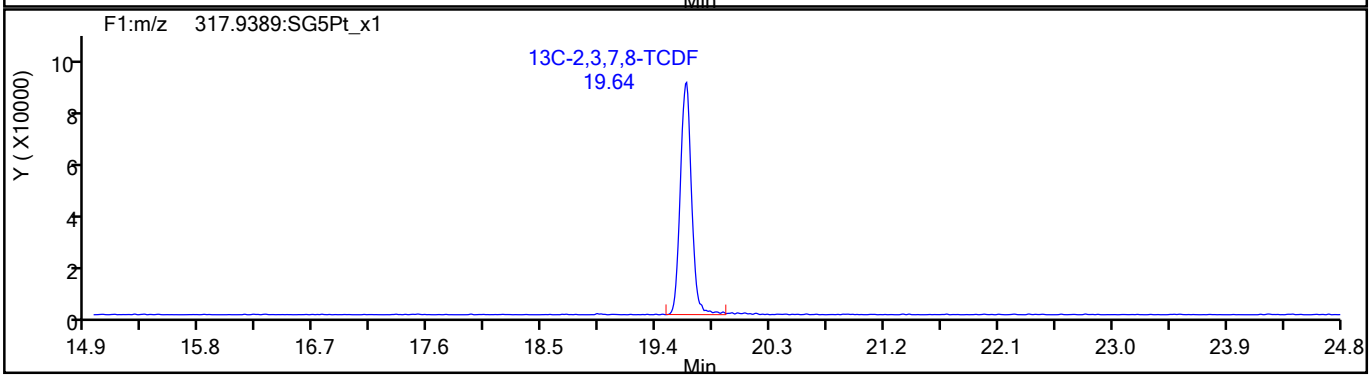

786371

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

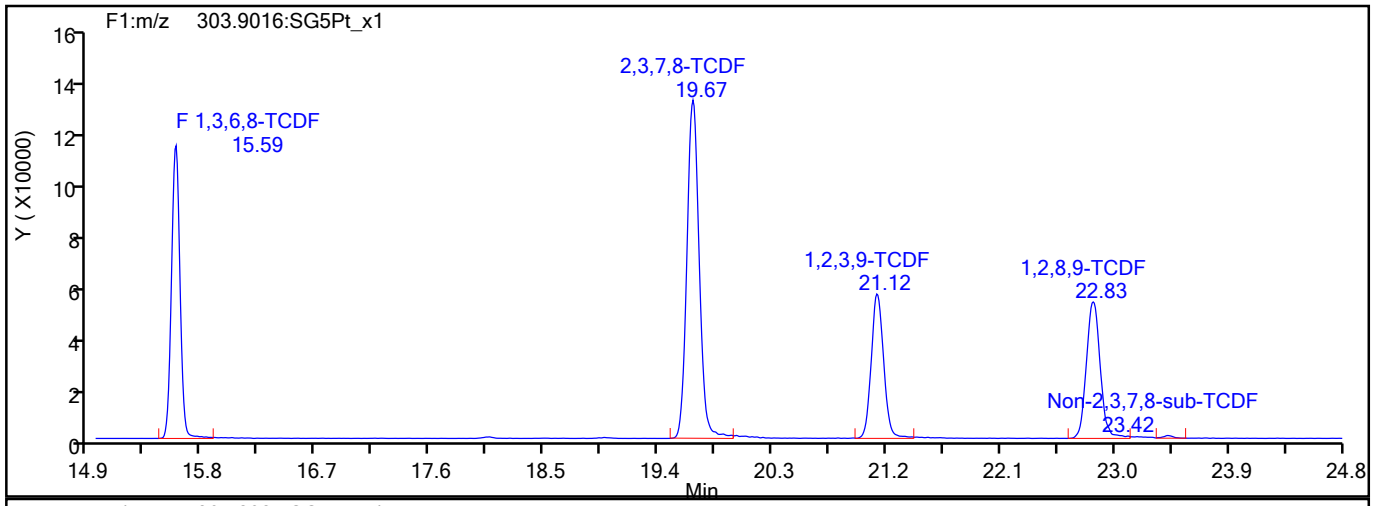

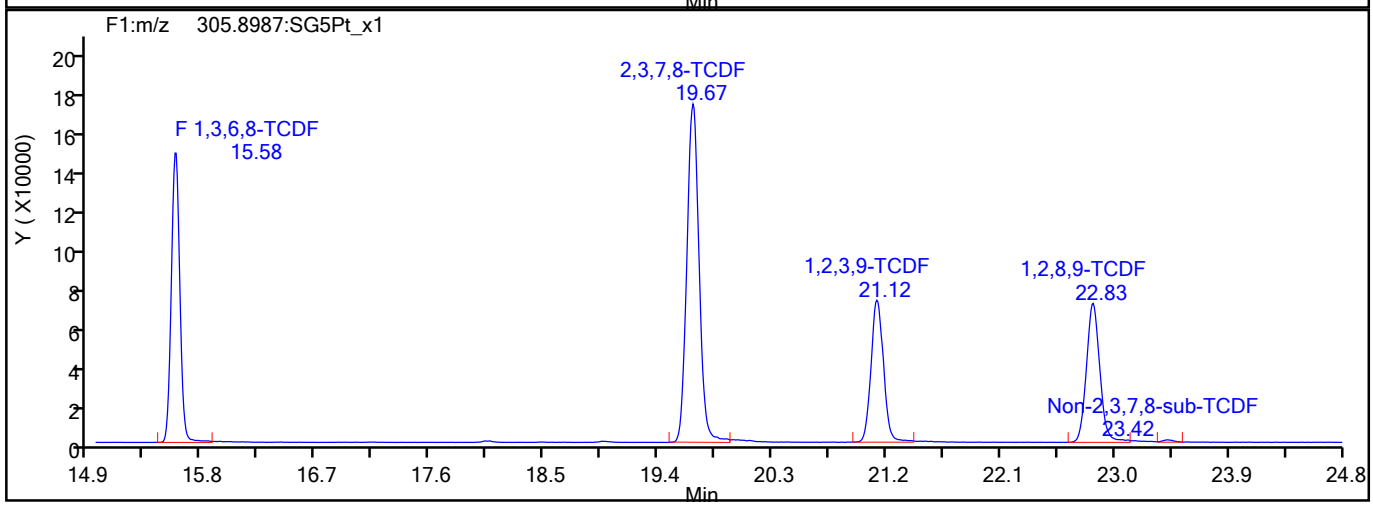

TCDF Interference Mass

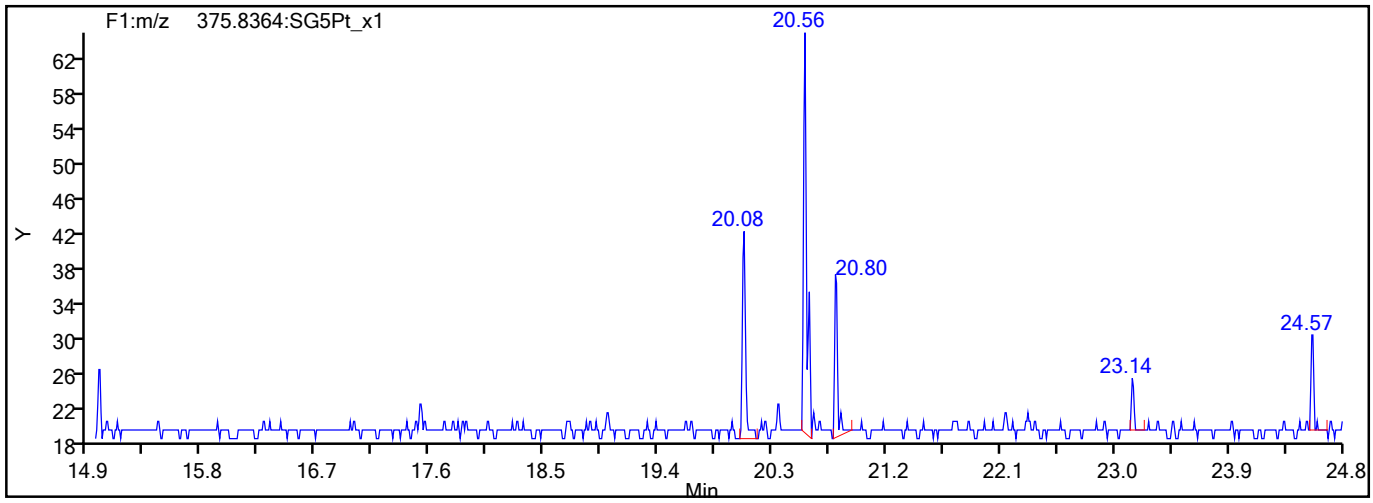

786372

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

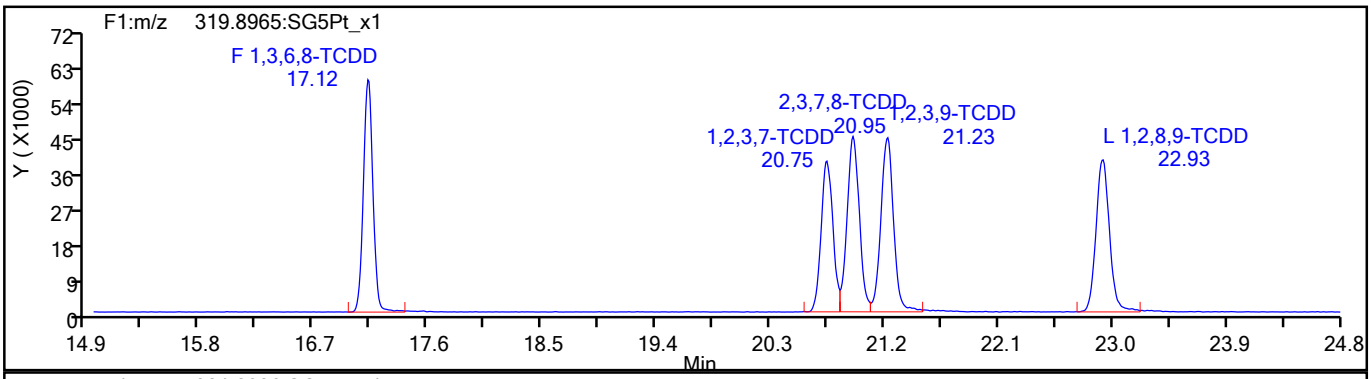

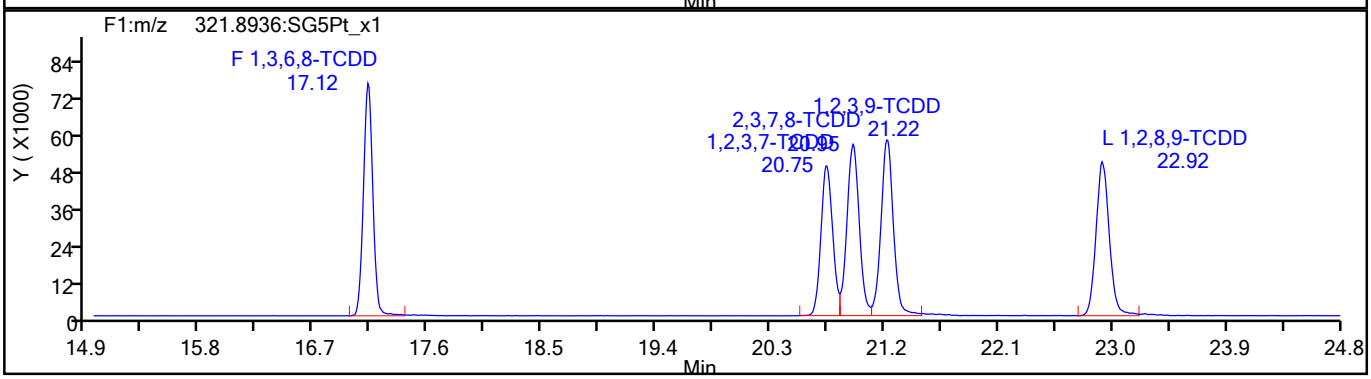

TCDD Standards

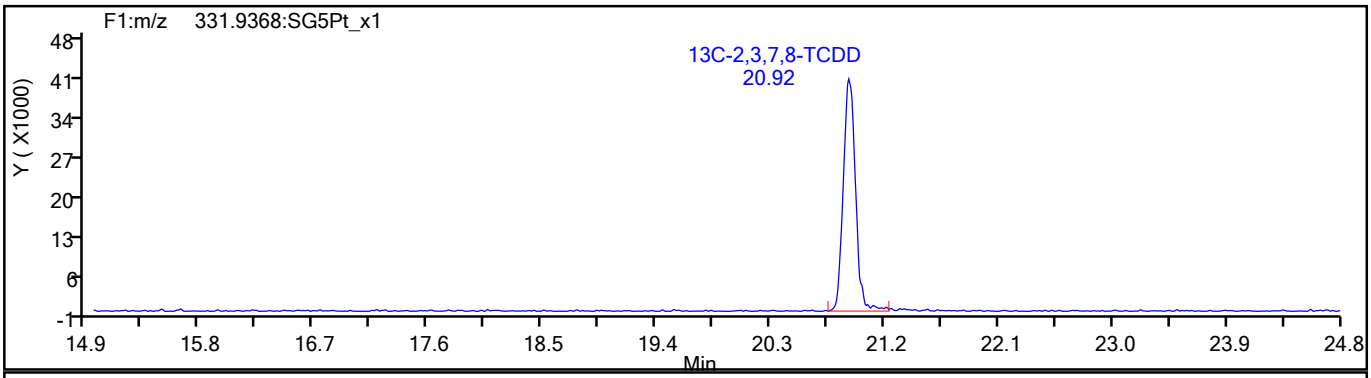

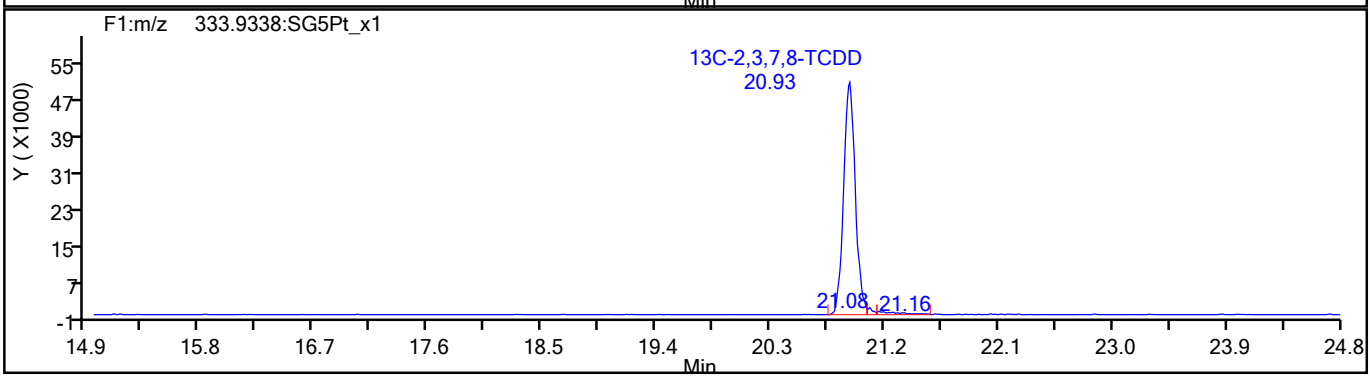

786373

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

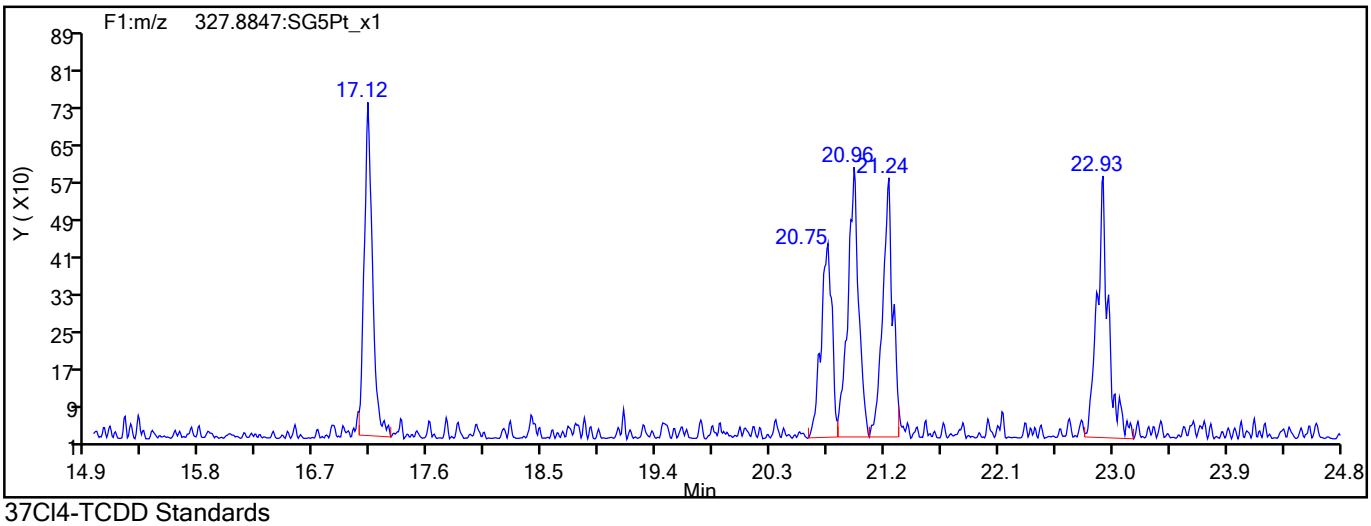

37Cl4-TCDD Standards

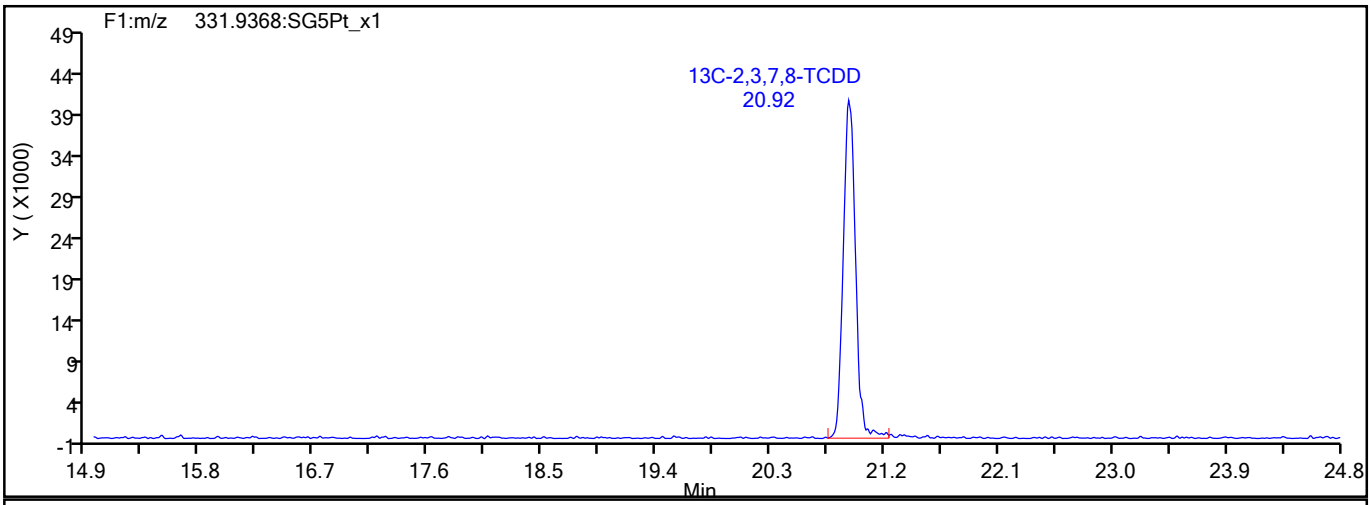

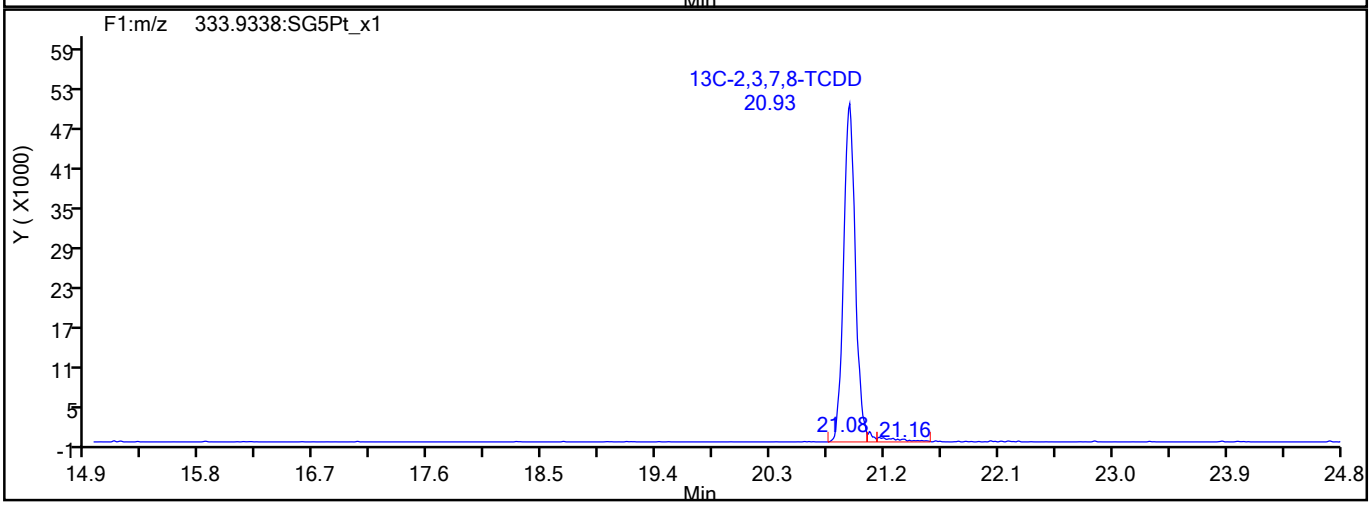

786374

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

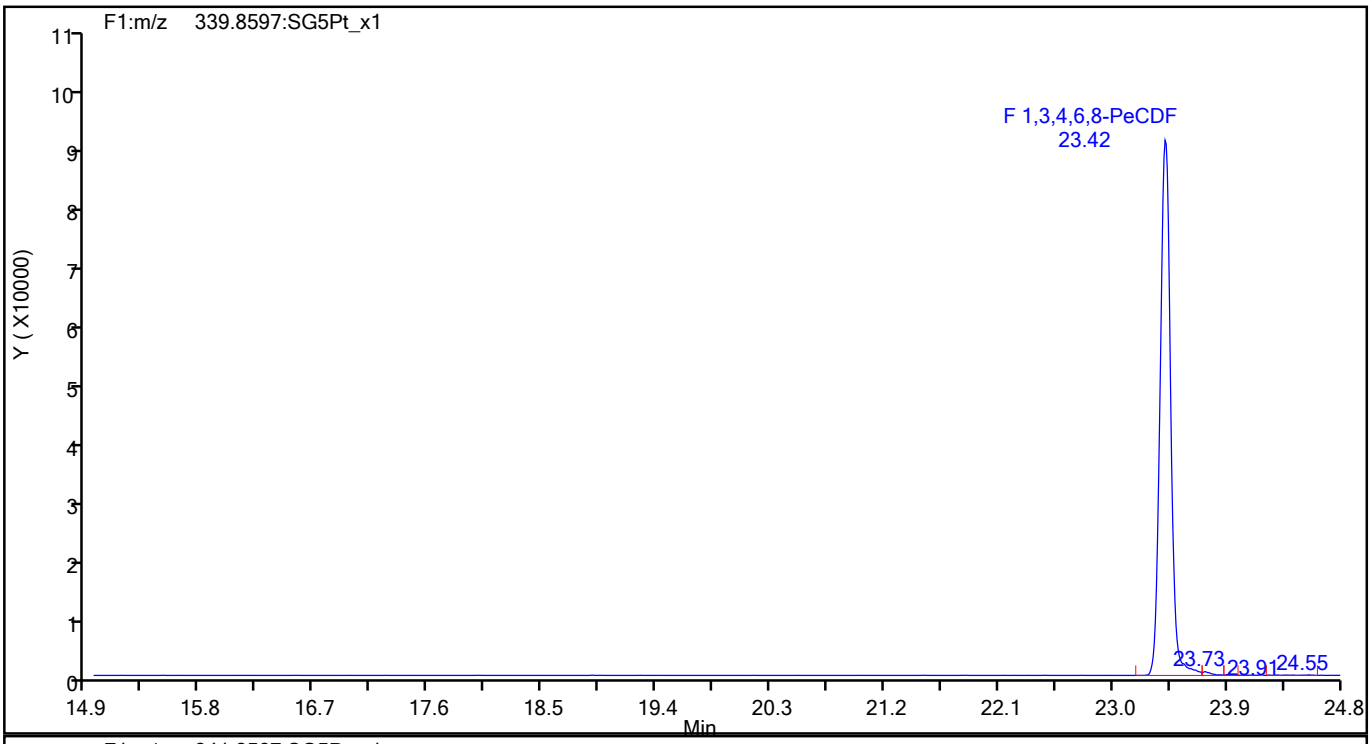

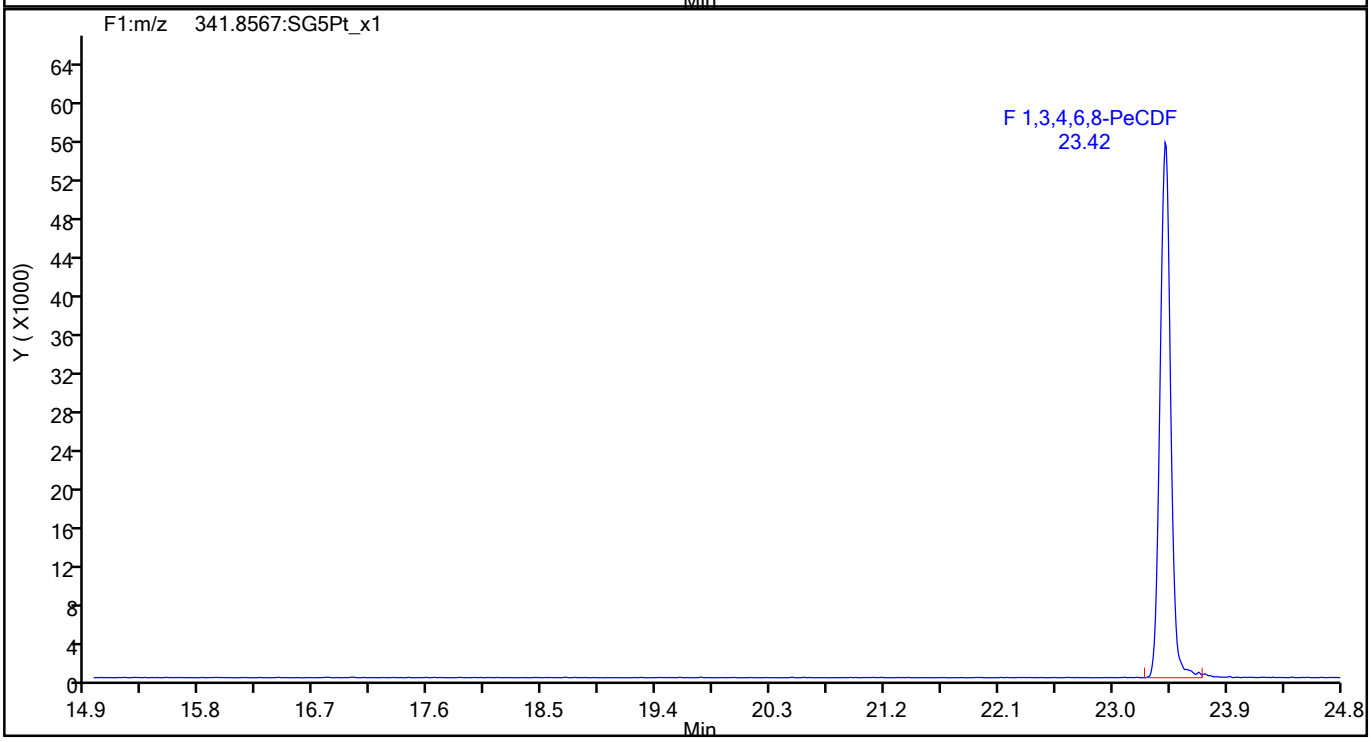

786375

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
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F1 PeCDFs

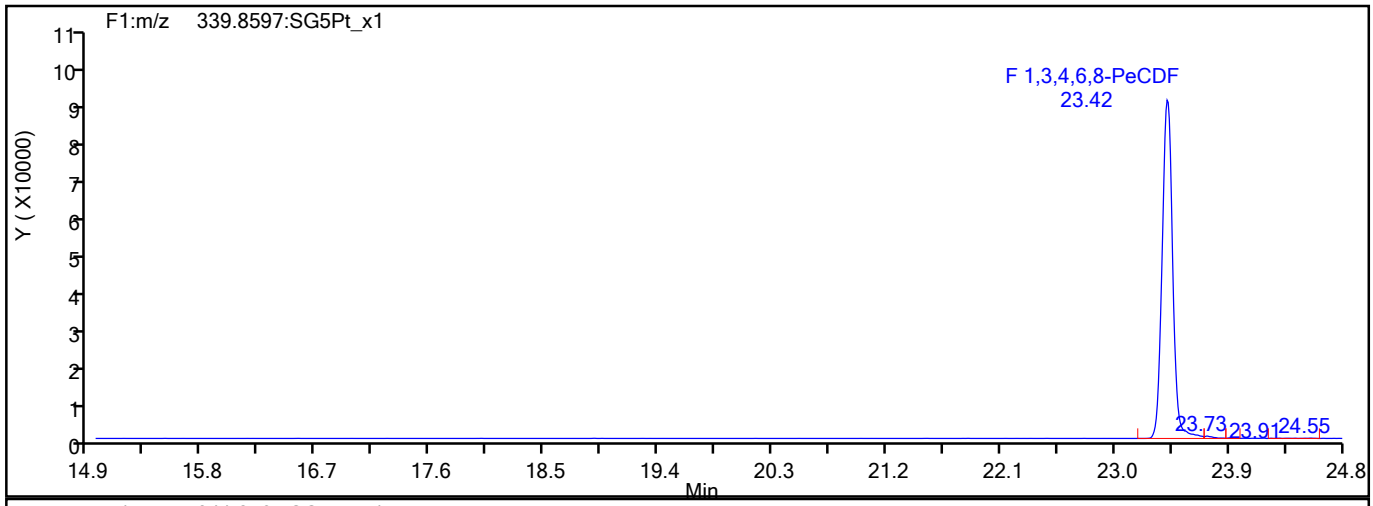

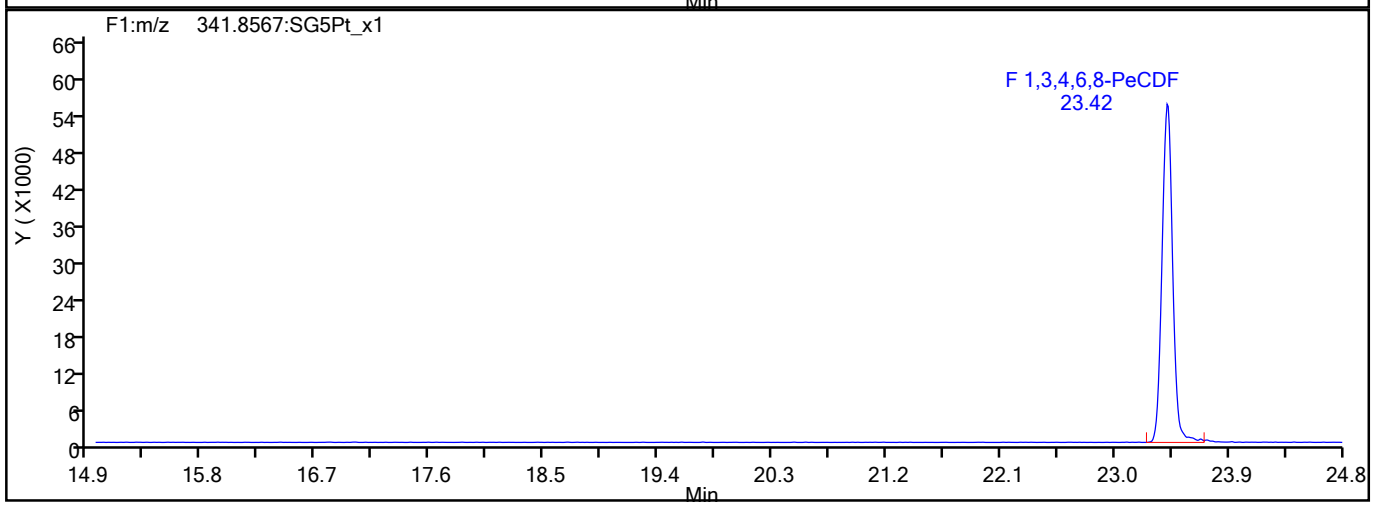

F1 PeCDFs Interference Mass

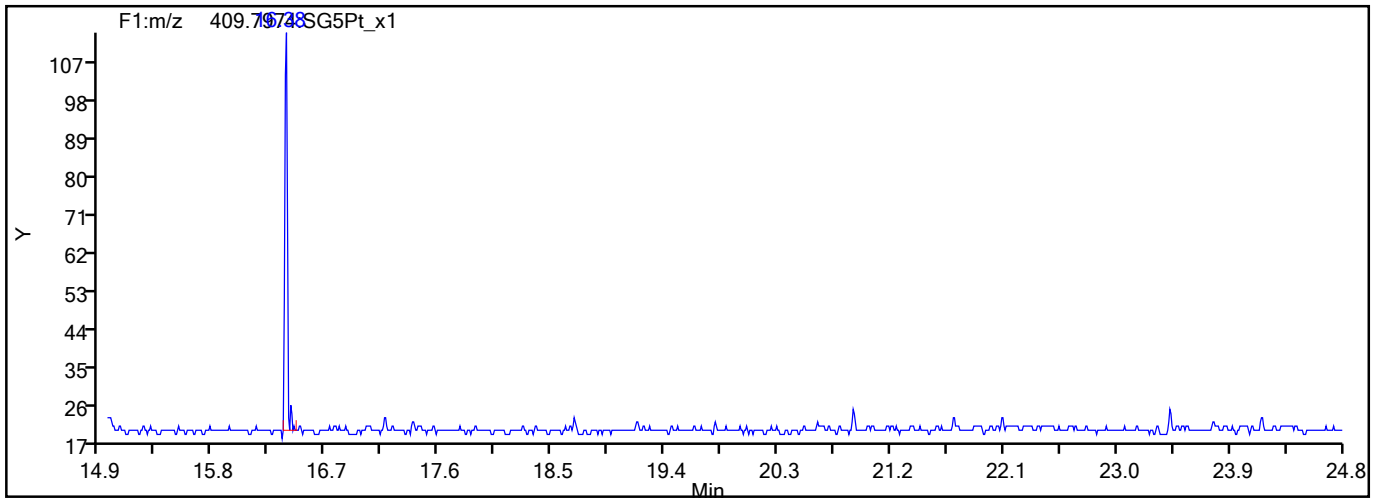

786376

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

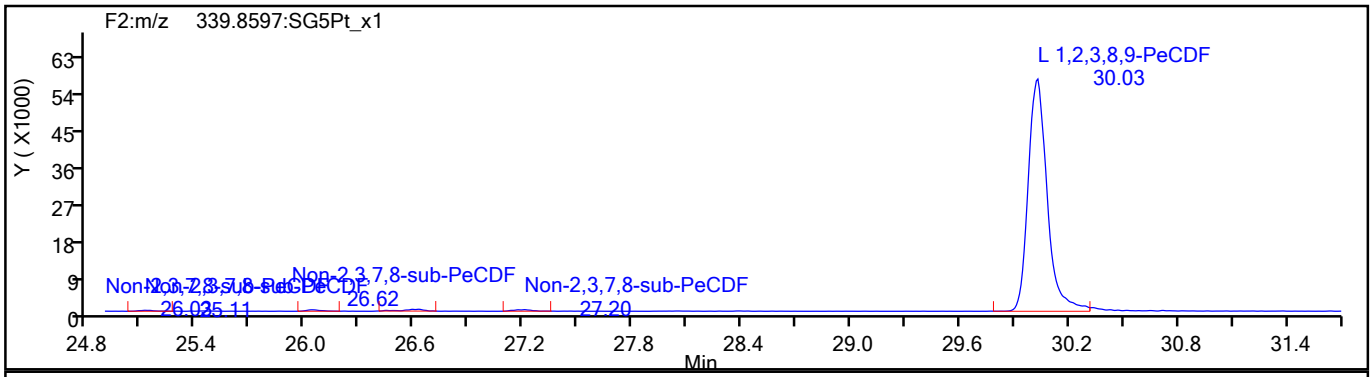

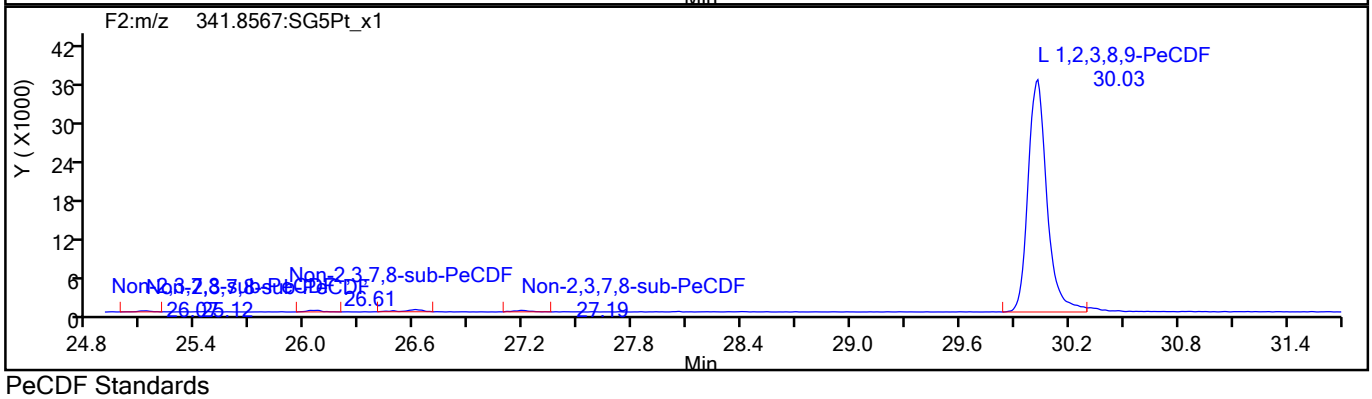

PeCDF Standards

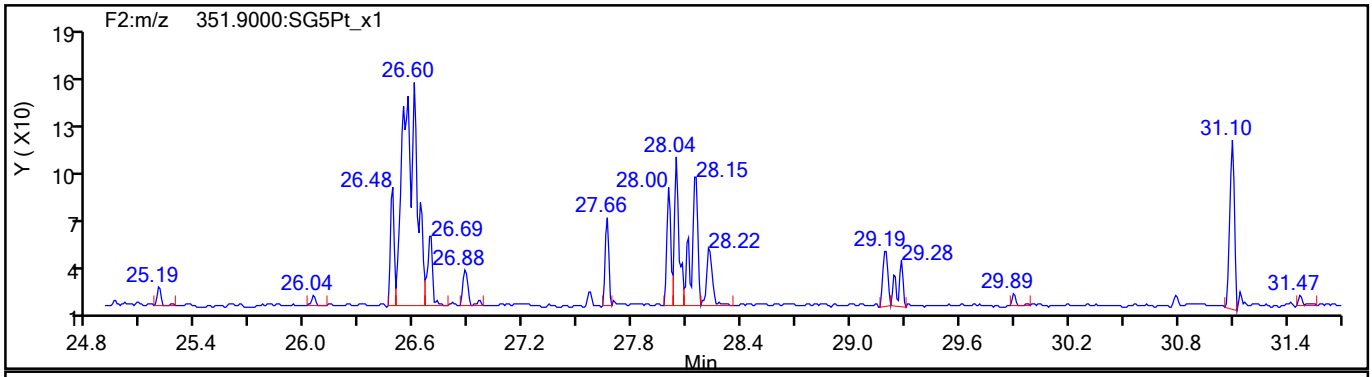

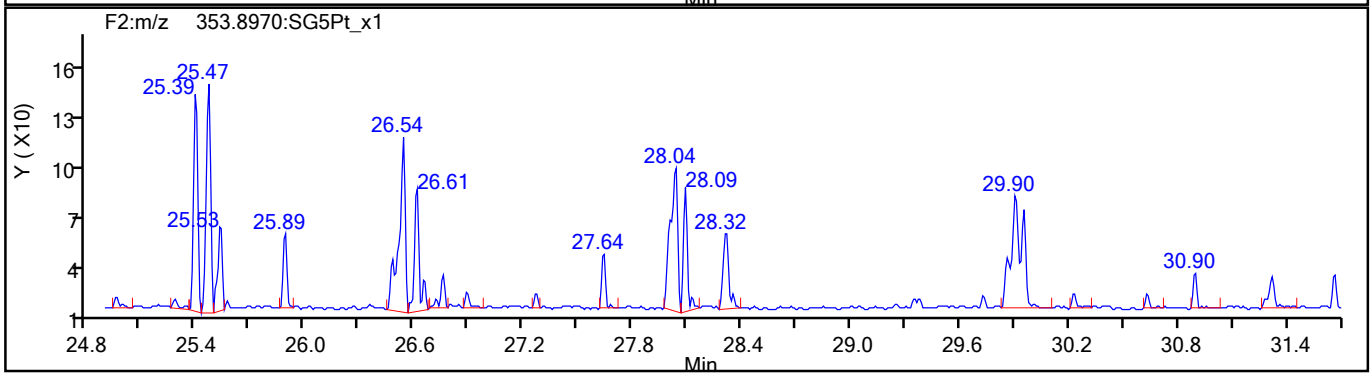

786377

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

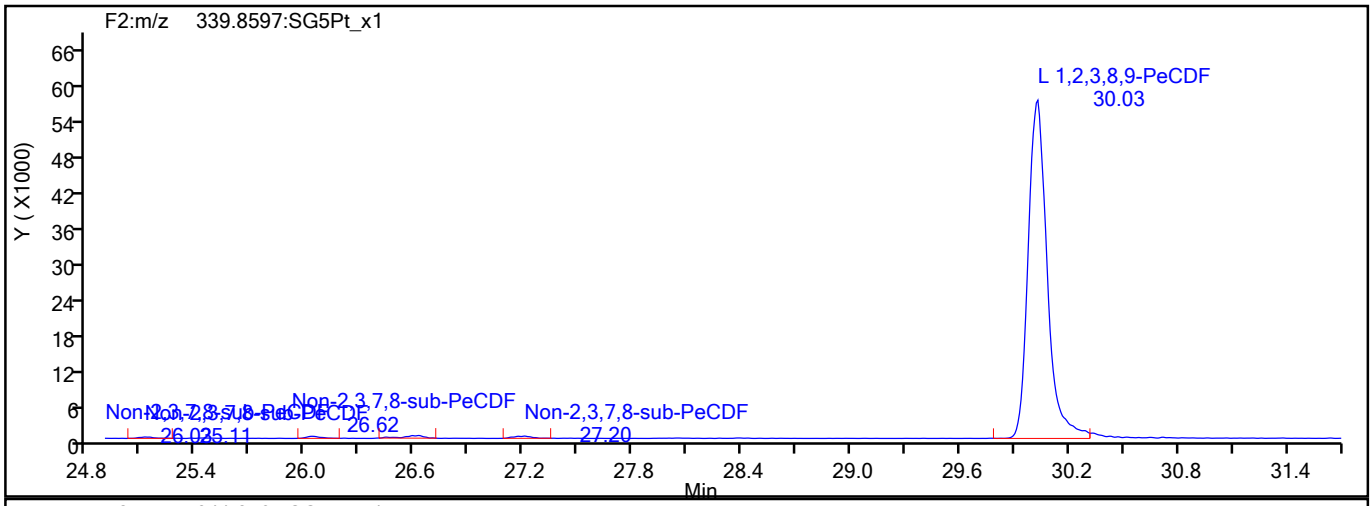

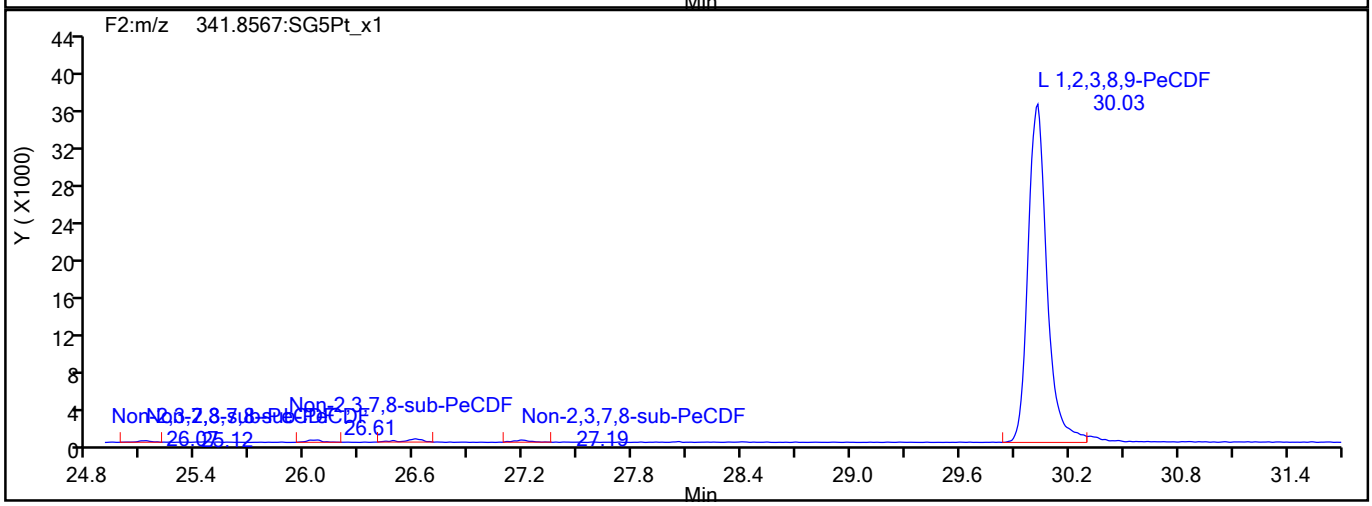

PeCDF Interference Mass

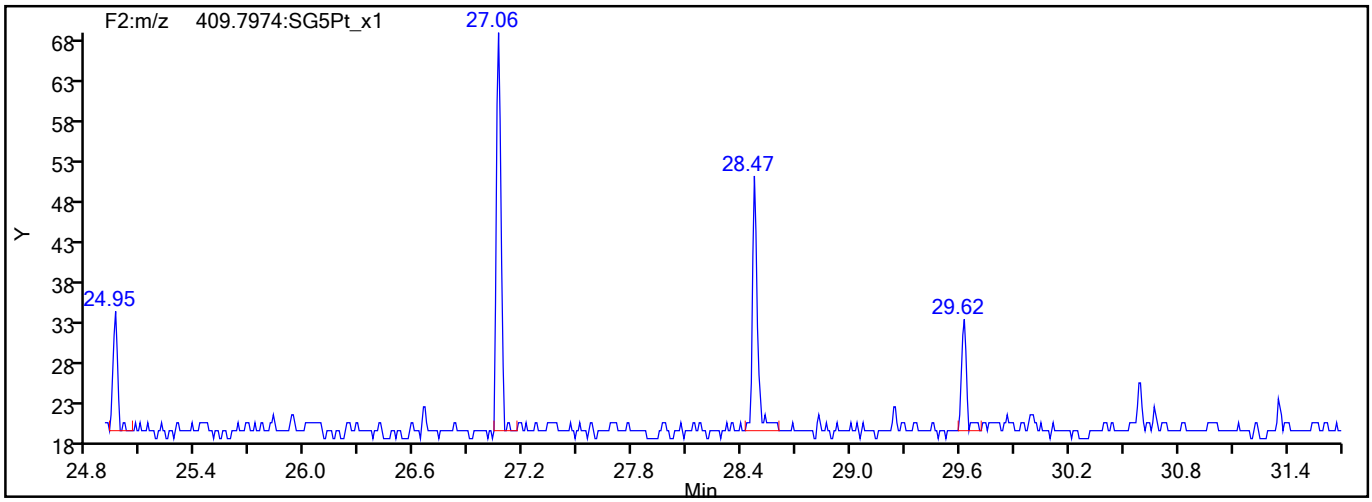

786378

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

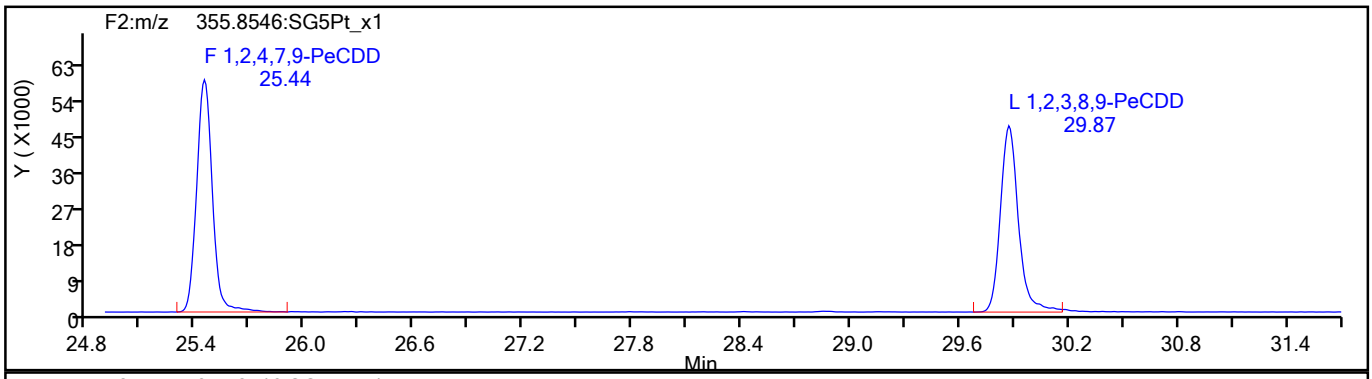

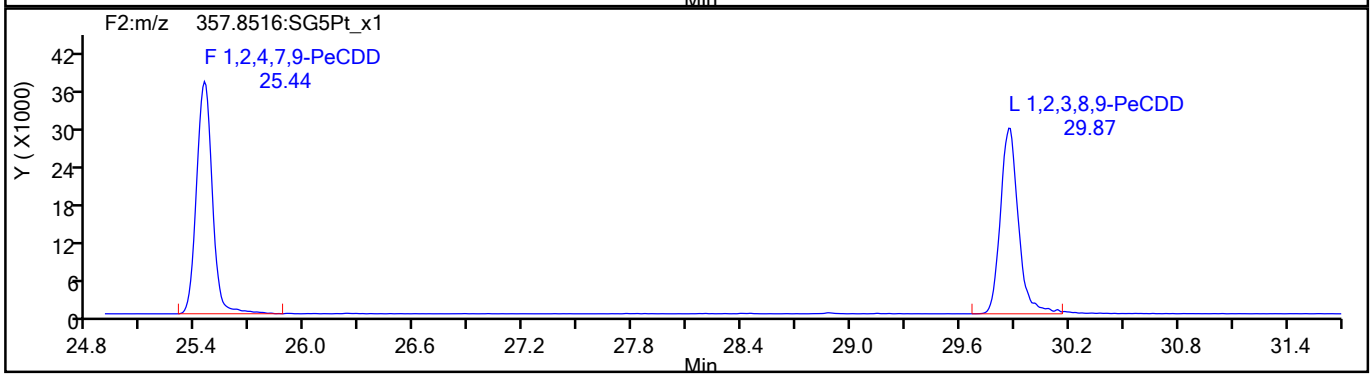

PeCDD Standards

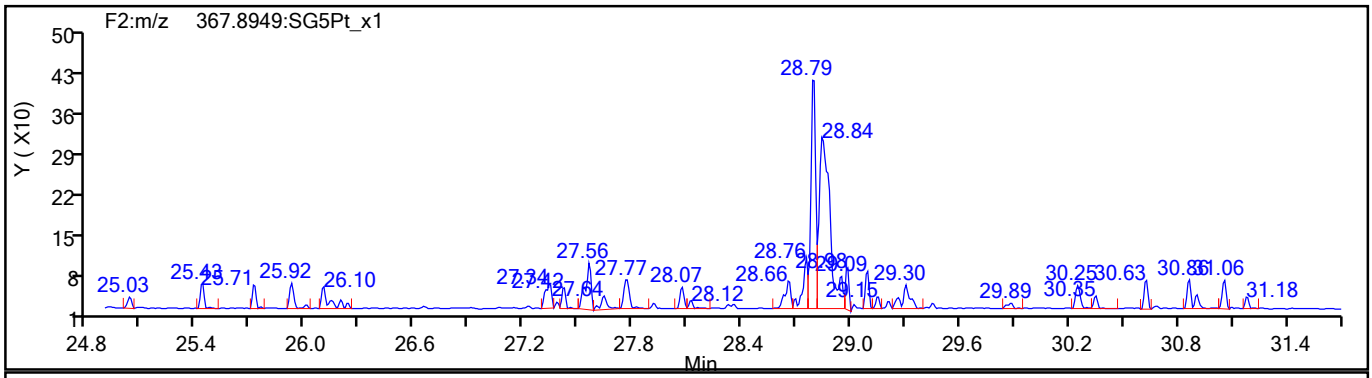

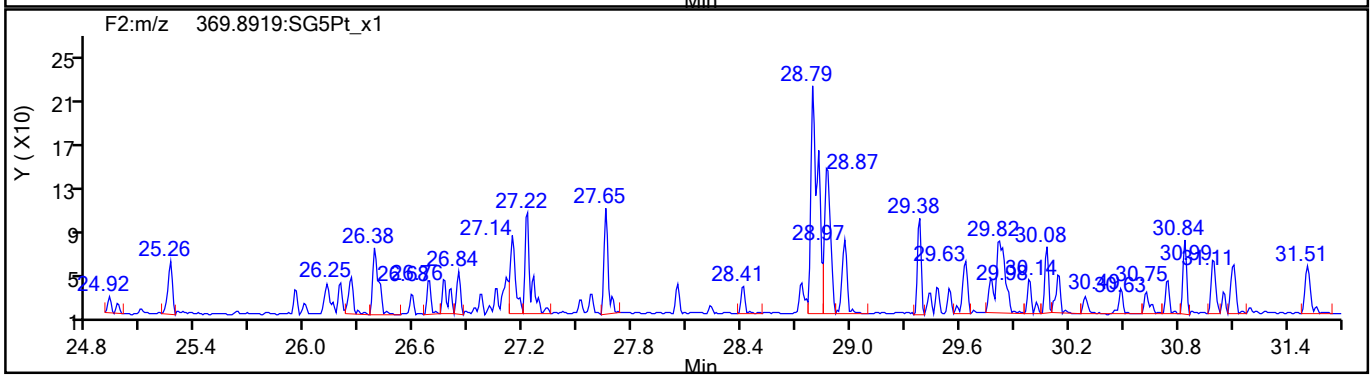

786379

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

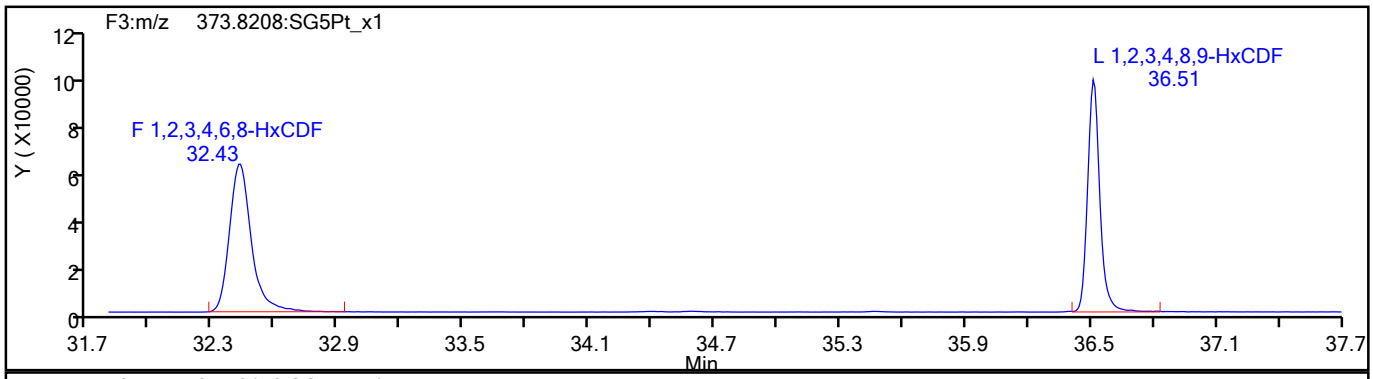

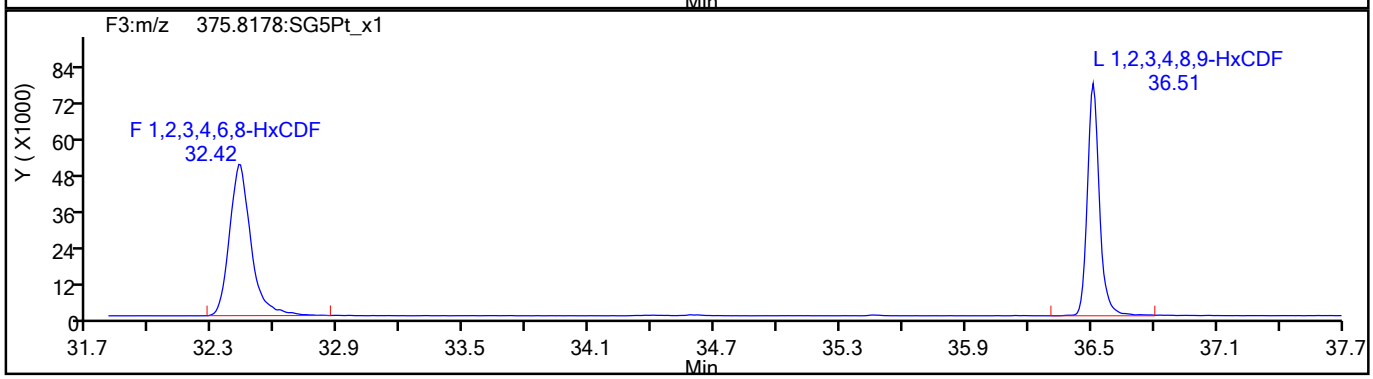

HxCDF Standards

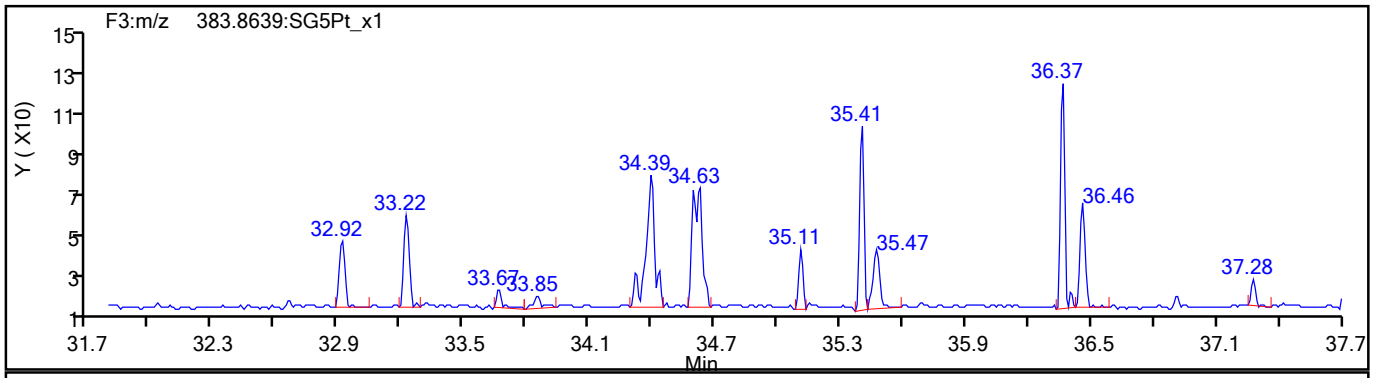

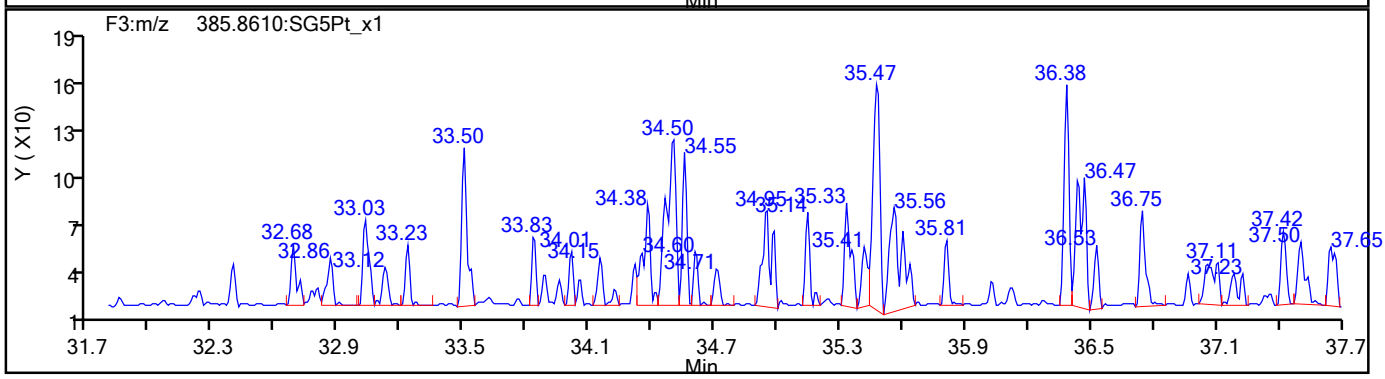

786380

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

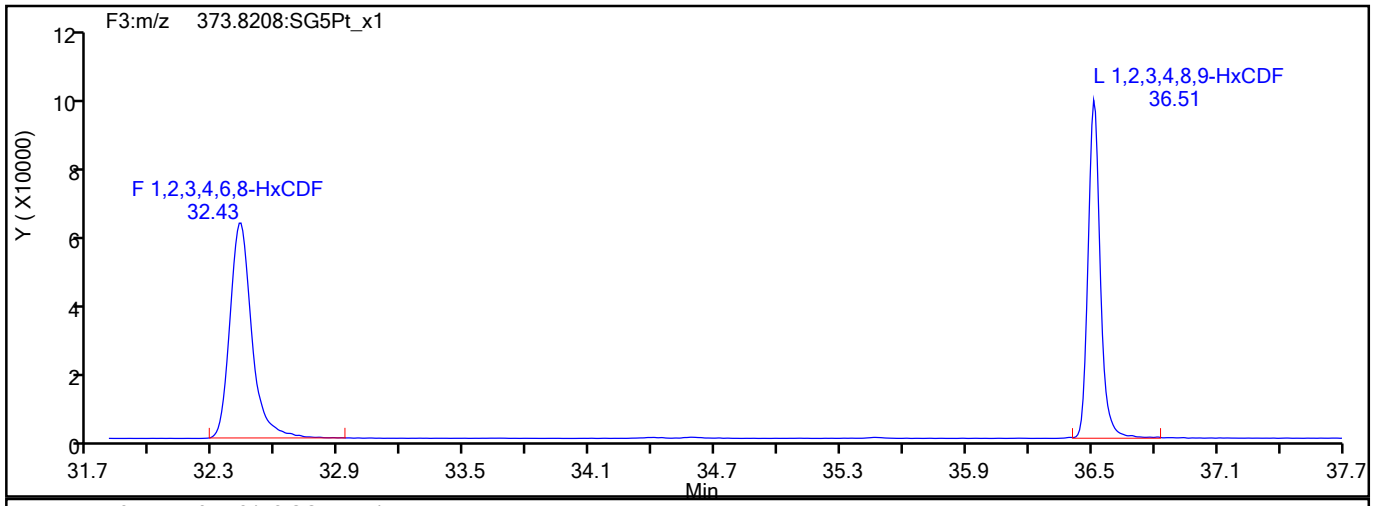

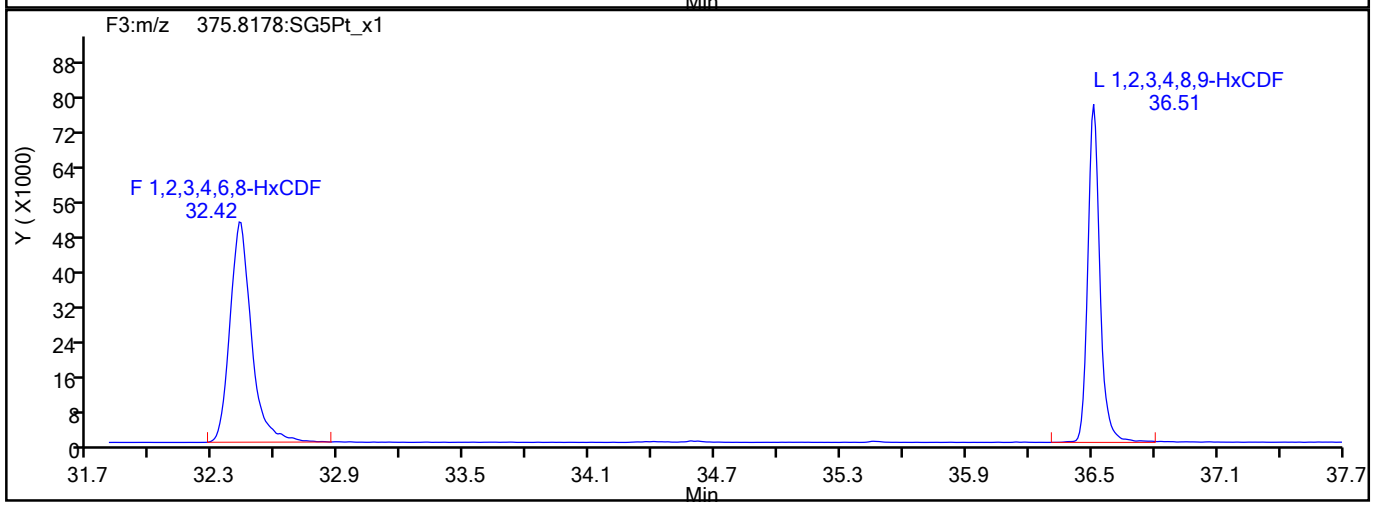

HxCDF Interference Mass

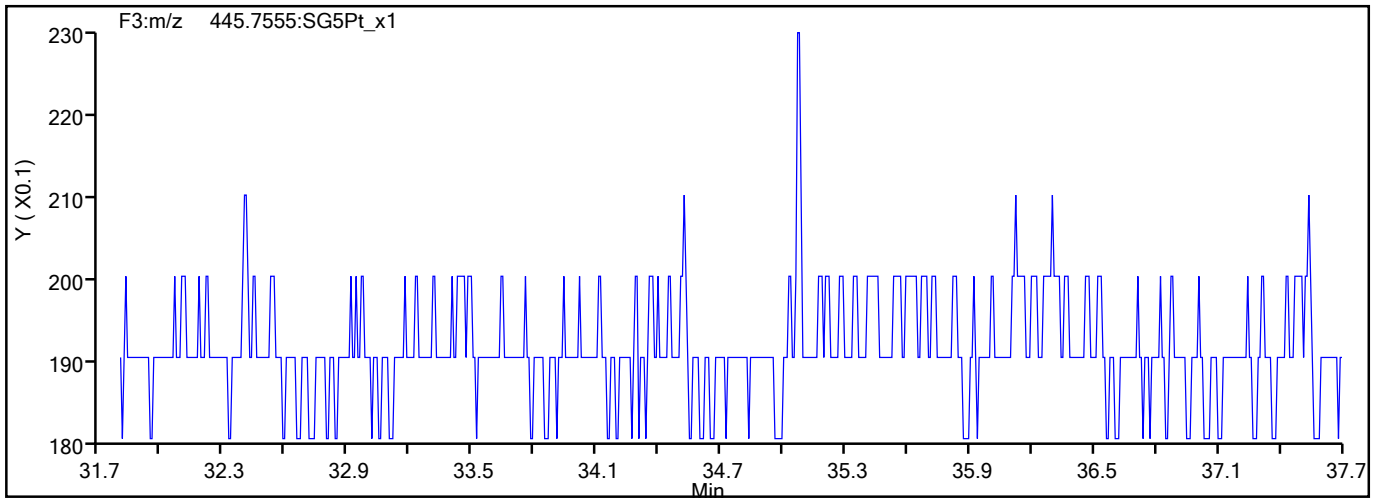

786381

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

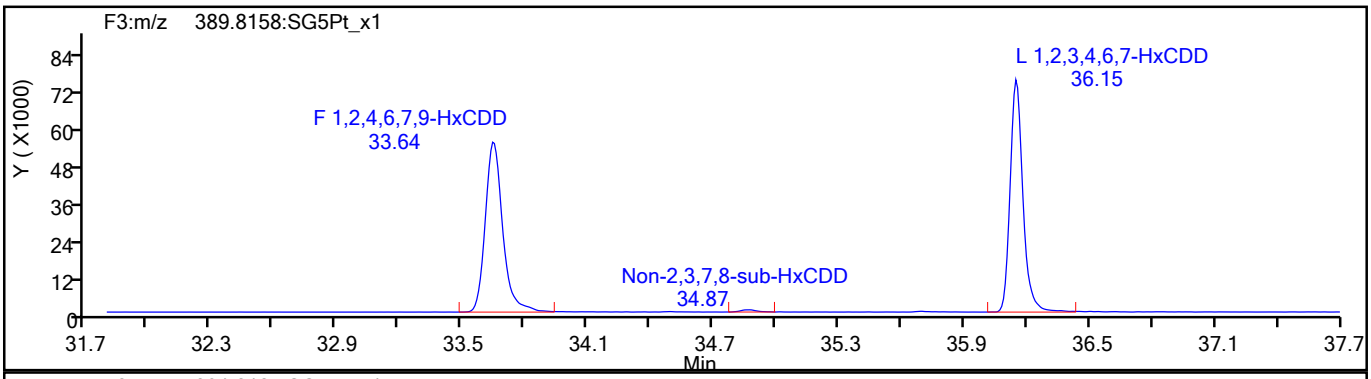

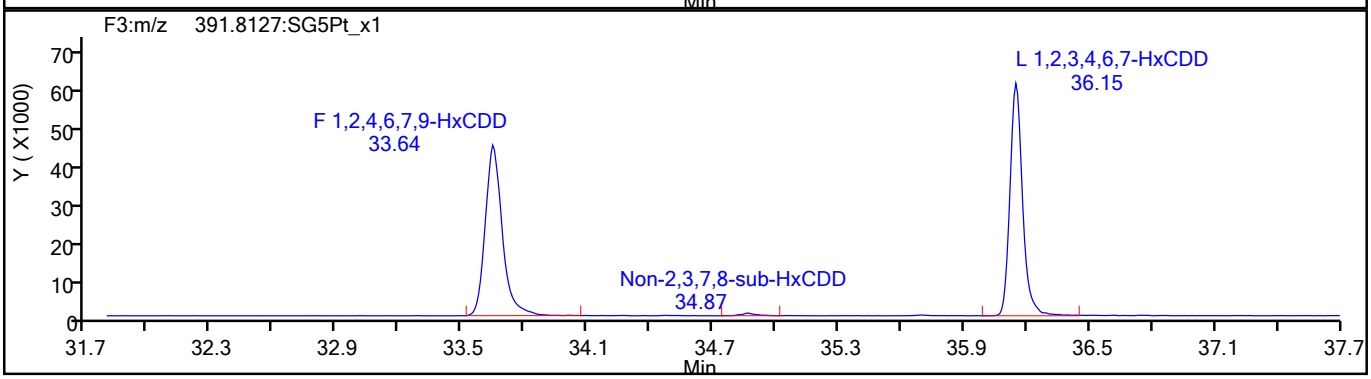

HxCDD Standards

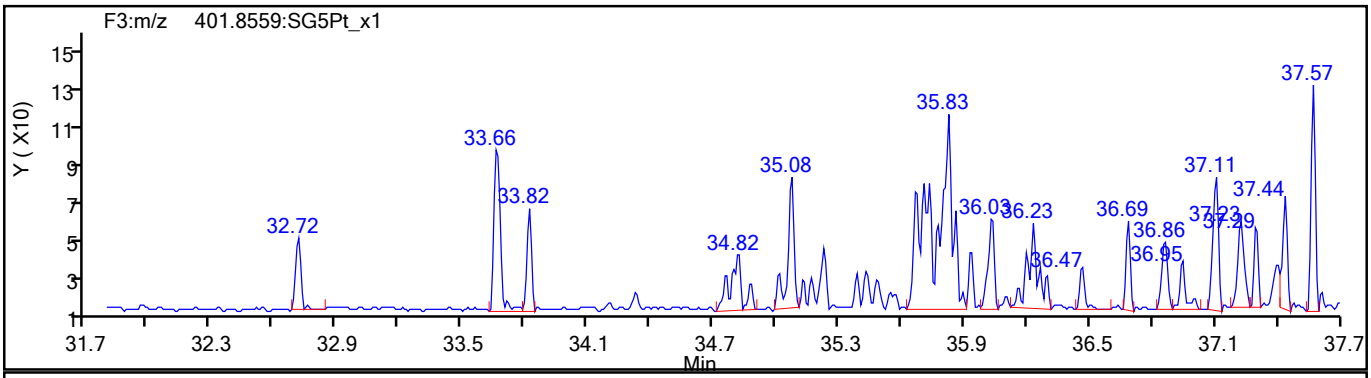

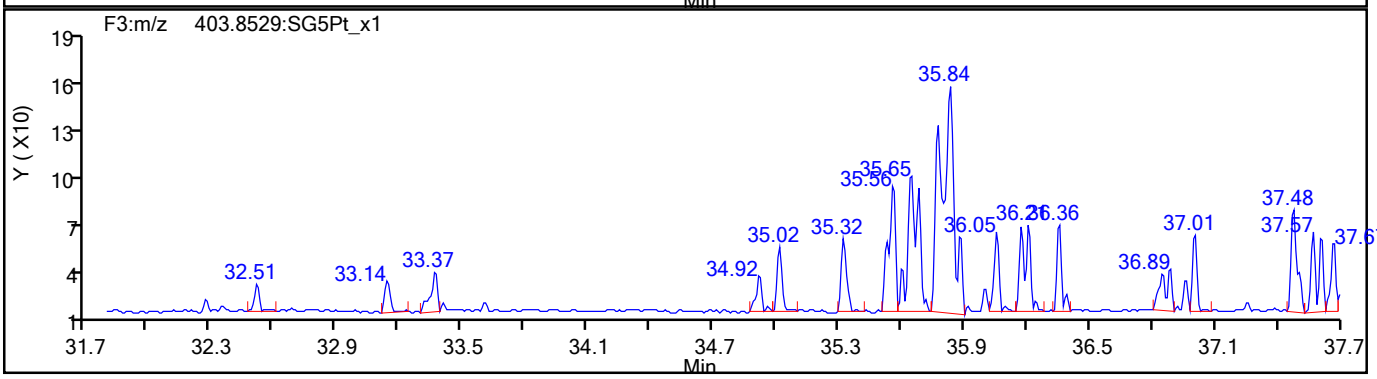

786382

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

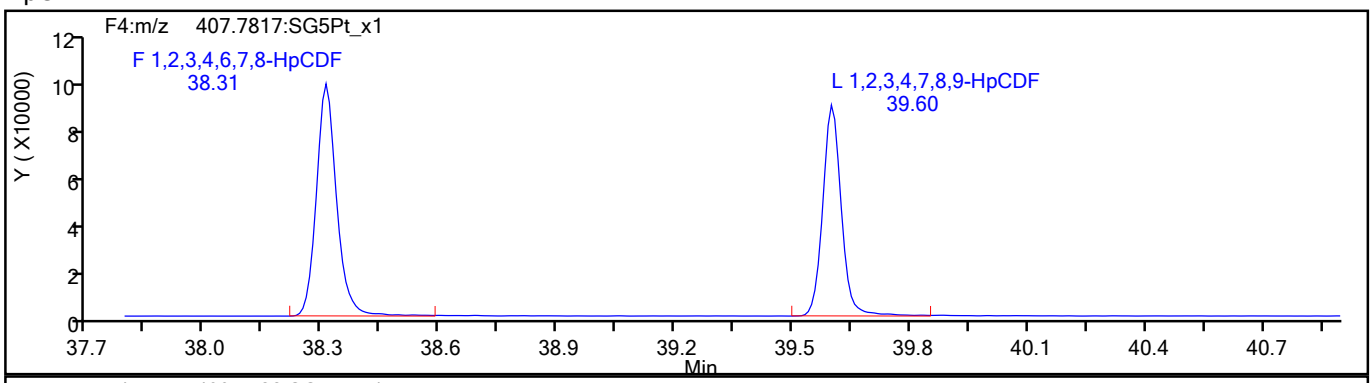

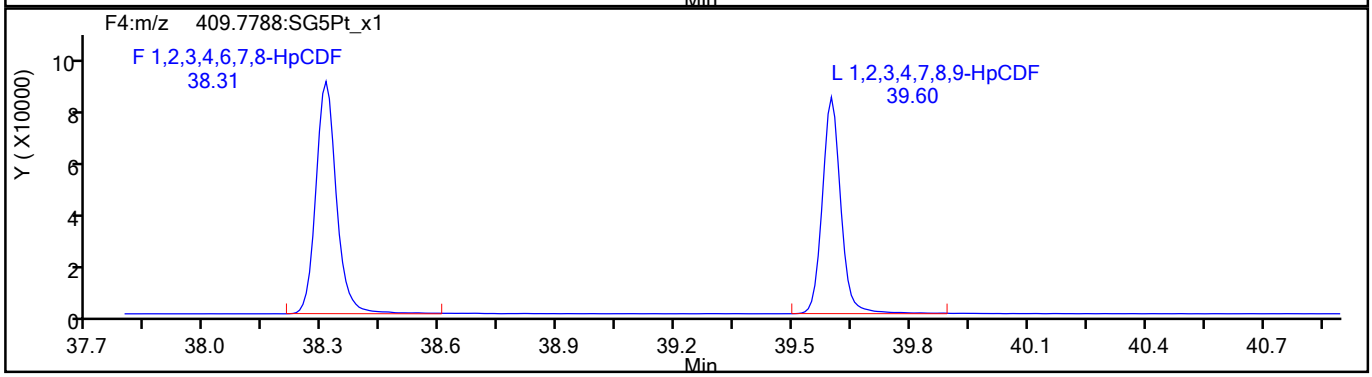

HpCDF Standards

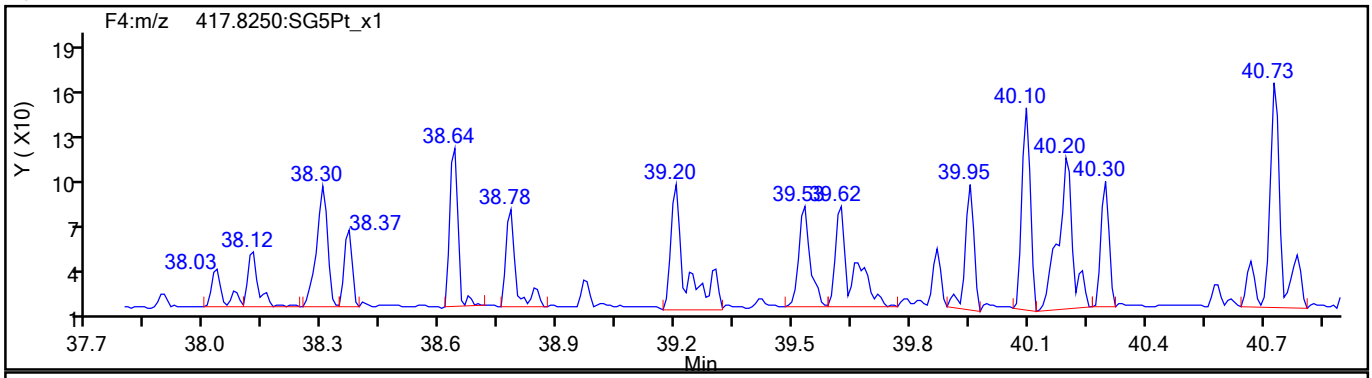

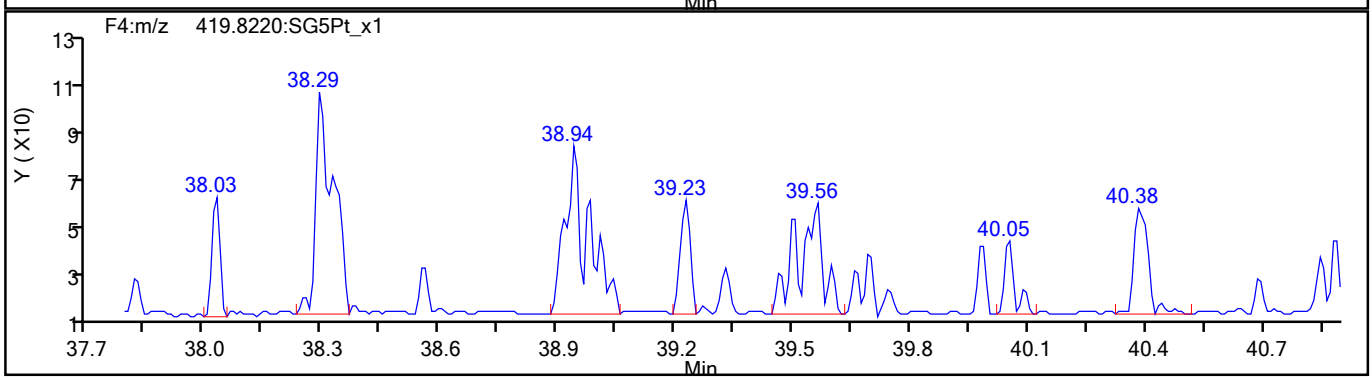

786383

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

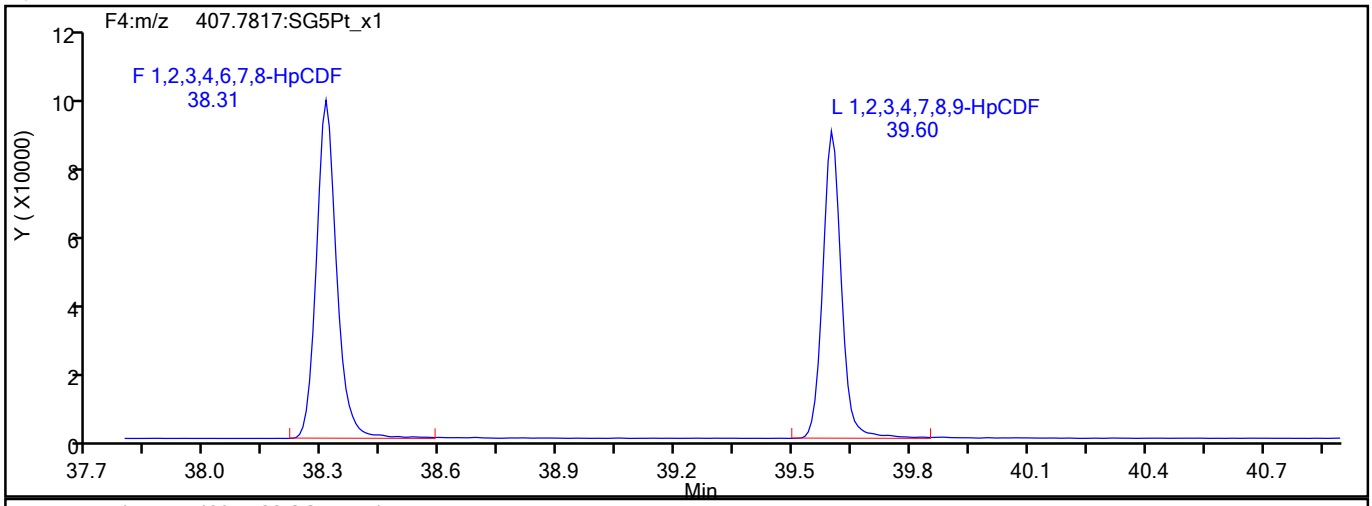

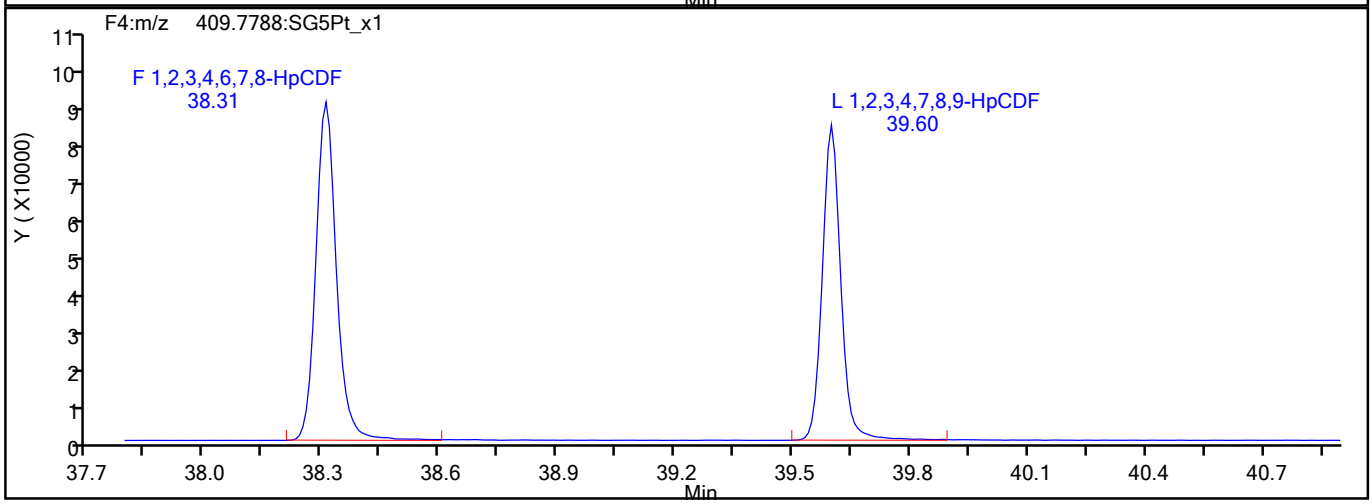

HpCDF Interference Mass

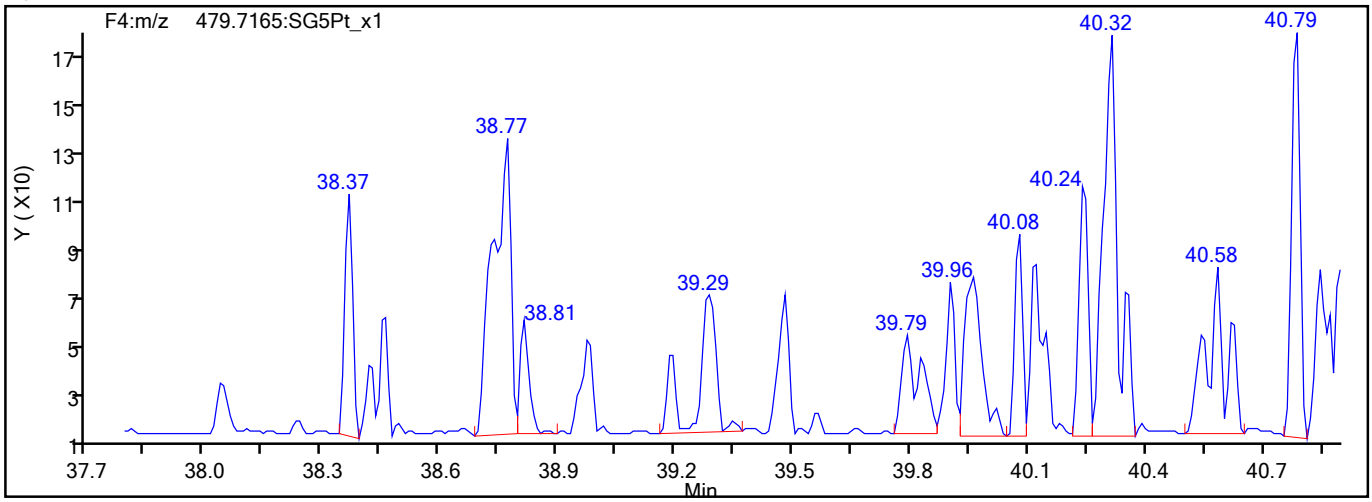

786384

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

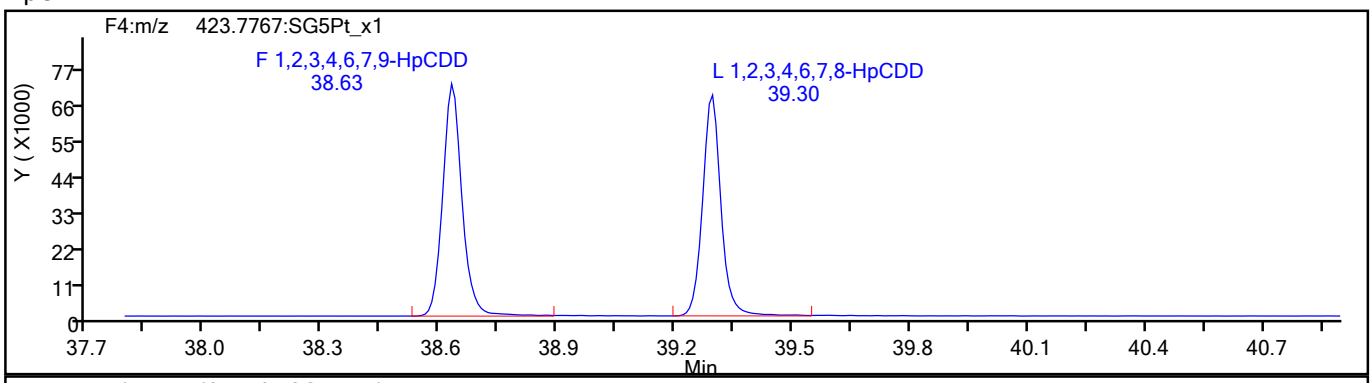

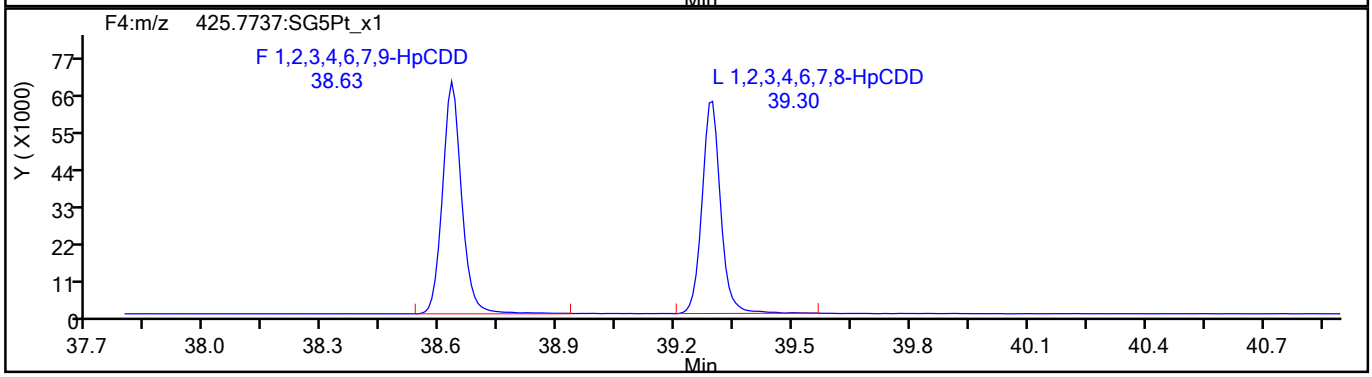

HpCDD Standards

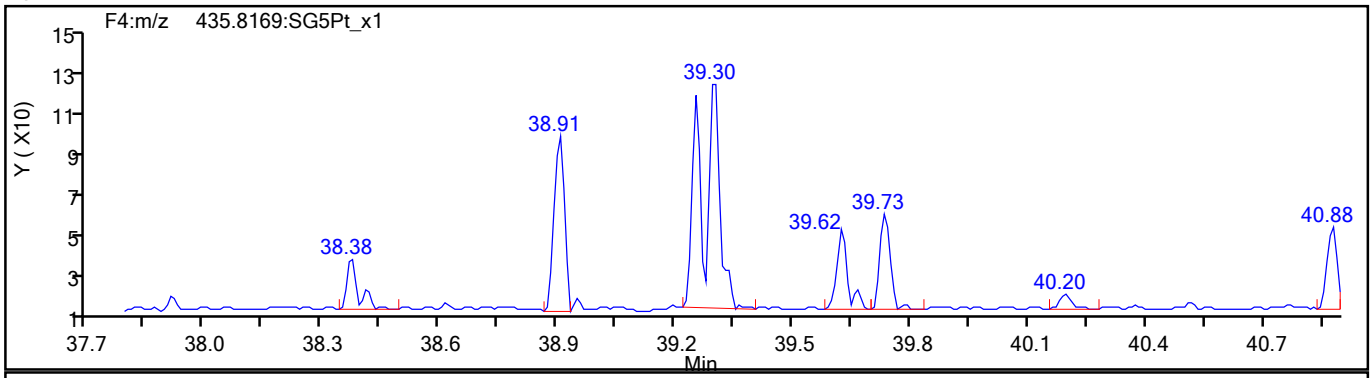

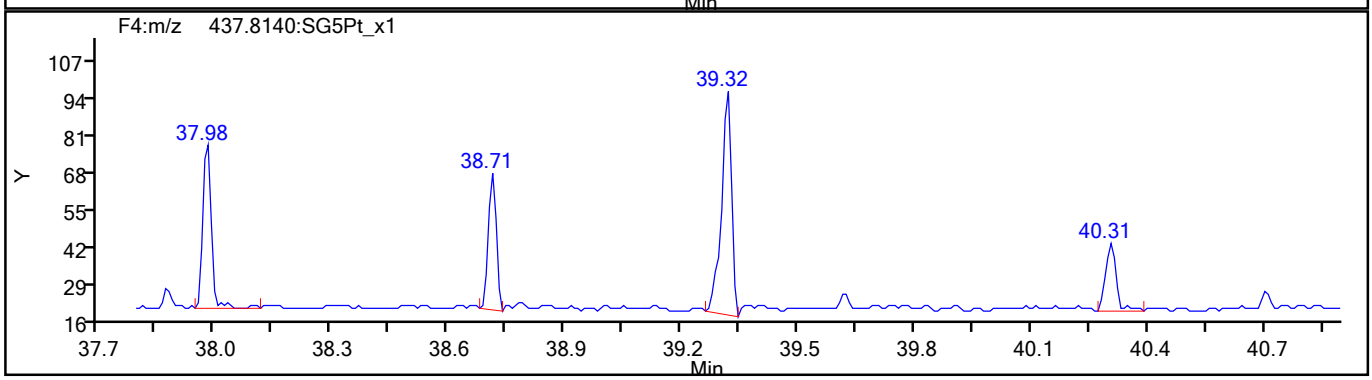

786385

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

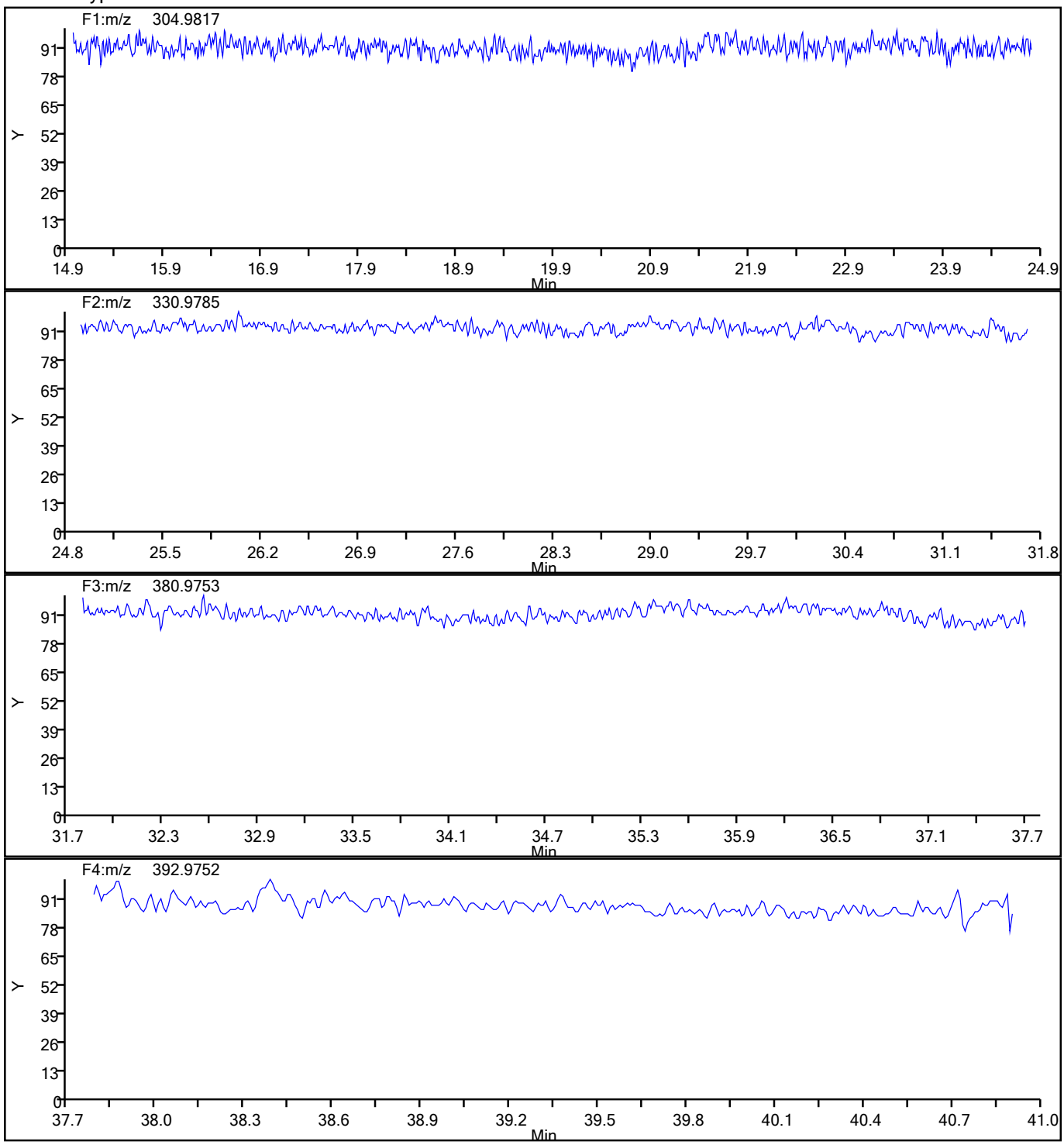

786386

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

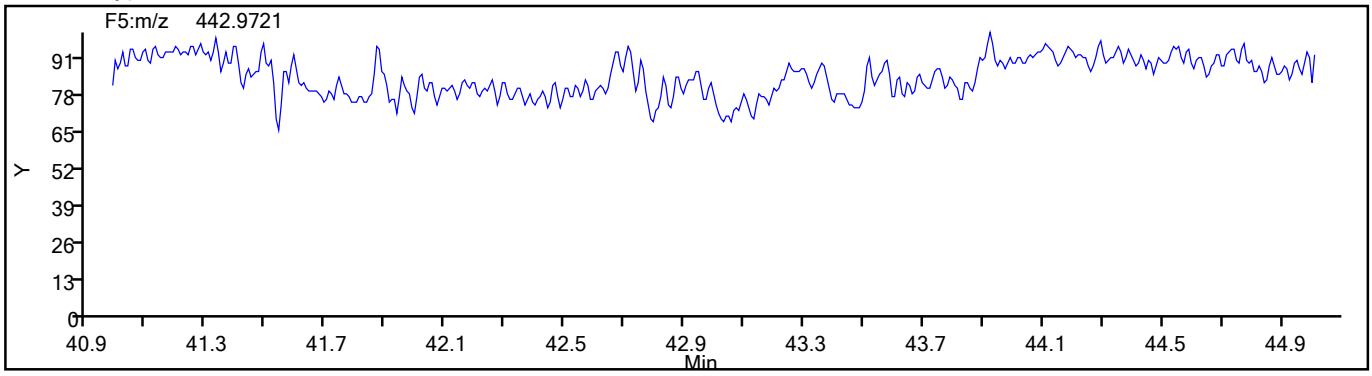

786387

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 17-Aug-2021 14:27:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 16:07:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.529	393112	0.77	1.3459					0.00	
2,3,7,8-TCDF	20.580	883074	0.78	1.0802	83.2	83.2	0.1765	0.1765		
A Non-2,3,7,8-sub-TCDF	19.983	14516	0.77	1.0802	1.441	1.367	0.1765	0.7533		RQ
S Total TCDF					84.6	84.6	0.1765	0.1765		RQ
D 13C-2,3,7,8-TCDD	21.902	237674	0.79	0.9317					0.00	
2,3,7,8-TCDD	21.928	282066	0.80	1.0753	44.1	44.1	0.1251	0.1251		
A Non-2,3,7,8-sub-TCDD	20.816						0.1251	0.1251		
S Total TCDD					44.1	44.1	0.1251	0.1251		
A F1 PeCDFs	24.695	314	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.196	12272	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.556						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.117	9319	1.28	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.475	5418	1.08	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.678	524513	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.925	436983	1.02	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.301						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.613	344276	1.05	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.297						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.251	552143	0.76							
1,3,6,8-TCDD	17.867	286795	0.81							
2,3,4,7-TCDF	20.580	883074	0.78							
1,2,3,7-TCDD	21.713	246746	0.80							
1,2,3,9-TCDF	22.091	375235	0.81							
1,2,3,9-TCDD	22.203	294638	0.78							
1,2,8,9-TCDF	23.714	427941	0.80							

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.766	127271								
1,3,4,6,8-PeCDF	24.126	385071	1.61							
1,2,3,8,9-PeCDD	26.181	276939	1.58							
1,2,4,7,9-PeCDD	30.804	272114	1.59							
1,2,3,8,9-PeCDF	30.989	368041	1.62							
1,2,3,4,6,8-HxCDF	33.260	451714	1.27							
1,2,4,6,7,9-HxCDD	34.329	334369	1.26							
1,2,3,4,6,7-HxCDD	36.620	364948	1.23							
1,2,3,4,8,9-HxCDF	36.973	519420	1.27							
1,2,3,4,6,7,9-HpCDD	38.981	383342	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 17-Aug-2021 14:27:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 18-Aug-2021 14:54:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1685

First Level Reviewer: stephensk Date: 17-Aug-2021 16:07:09

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.529	20.529	0	1.000	170513	24451	60	150	408		
317.9389	20.537	20.529	1	1.000	222599	31155	14	35	2225	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.580	20.580	0	1.003	386703	50727	45	112	1127		
305.8987	20.572	20.580	-1	1.002	496371	65154	61	152	1068	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.889	19.983	-65	0.920	1545	292	45	112	6		
305.8987	18.889	19.983	-65	0.920	1924	396	61	152	6	0.80(0.65-0.89)	
303.9016	19.808	19.983	-10	0.965	3532	597	45	112	13		
305.8987	19.825	19.983	-9	0.966	4465	768	61	152	13	0.79(0.65-0.89)	
303.9016	24.160	19.983	250	1.177	1327	241	45	112	5		
305.8987	24.126	19.983	248	1.175	2504	449	61	152	7	0.53(0.65-0.89)	
	Empc Correction				1723	312	61	152	5		
13C-2,3,7,8-TCDD											
331.9368	21.902	21.902	0	1.000	105089	13957	10	25	1396		
333.9338	21.876	21.902	-2	1.000	132585	19347	14	35	1382	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.928	21.928	0	1.001	125335	16412	25	62	656		
321.8936	21.928	21.928	0	1.001	156731	20206	20	50	1010	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.816						25	62			
321.8936	20.816						20	50			
A F1 PeCDFs											RQ
339.8597	24.925	24.695	14	1.000	191	35	2	5	18		
341.8567	24.950	24.695	15	1.000	174	103	8	20	13	1.10(1.32-1.78)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.844	28.196	-141	1.000	766	192	27	67	7		
341.8567	25.827	28.196	-142	1.000	749	122	20	50	6	1.02(1.32-1.78)	
339.8597	26.812	28.196	-83	1.000	1473	236	27	67	9		
341.8567	26.804	28.196	-83	1.000	1238	175	20	50	9	1.19(1.32-1.78)	
339.8597	27.242	28.196	-57	1.000	774	228	27	67	8		
341.8567	27.242	28.196	-57	1.000	414	129	20	50	6	1.87(1.32-1.78)	
339.8597	27.410	28.196	-47	1.000	2007	272	27	67	10		
341.8567	27.419	28.196	-47	1.000	1023	119	20	50	6	1.96(1.32-1.78)	
339.8597	28.009	28.196	-11	1.000	3045	480	27	67	18		
341.8567	28.000	28.196	-12	1.000	1881	272	20	50	14	1.62(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						31	77			
357.8516	28.556						12	30			
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028	35.117	-5	1.000	1563	301	78	195	4		
375.8178	35.028	35.117	-5	1.000	1453	309	63	157	5	1.08(1.05-1.43)	
373.8208	35.180	35.117	4	1.000	3670	776	78	195	10		
375.8178	35.171	35.117	3	1.000	2633	573	63	157	9	1.39(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.424	35.475	-3	1.000	2814	512	49	122	10		
391.8127	35.415	35.475	-4	1.000	2604	510	37	92	14	1.08(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.678	38.678	0	1.000	269858	70534	95	237	742		
409.7788	38.678	38.678	0	1.000	254655	66103	84	210	787	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.925	39.925	0	1.000	221169	60461	95	237	636		
409.7788	39.916	39.925	-1	1.000	215814	60231	84	210	717	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.301						95	237			
409.7788	39.301						84	210			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.613	39.613	0	1.000	176113	47810	61	152	784		
425.7737	39.613	39.613	0	1.000	168163	46077	62	155	743	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.297						61	152			
425.7737	39.297						62	155			
1,3,6,8-TCDF											
303.9016	16.251	16.251	0		238917	44390	45	112	986		
305.8987	16.251	16.251	0		313226	56510	61	152	926	0.76(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.867	17.867	0		128143	22094	25	62	884		
321.8936	17.876	17.867	1		158652	27668	20	50	1383	0.81(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.580	20.580	0		386703	50727	45	112	1127		
305.8987	20.572	20.580	-1		496371	65154	61	152	1068	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7-TCDD											
319.8965	21.713	21.713	0		109917	14539	25	62	582		
321.8936	21.713	21.713	0		136829	17891	20	50	895	0.80(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.091	22.091	0		167447	21351	45	112	474		
305.8987	22.100	22.091	1		207788	27306	61	152	448	0.81(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.203	22.203	0		128657	16375	25	62	655		
321.8936	22.194	22.203	-1		165981	21311	20	50	1066	0.78(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.714	23.714	0		189792	31730	45	112	705		
305.8987	23.714	23.714	0		238149	40152	61	152	658	0.80(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.766	23.766	0		127271	24228	25	62	969		
1,3,4,6,8-PeCDF											
339.8597	24.126	24.126	0		237485	45645	2	5	22823		
341.8567	24.117	24.126	-1		147586	28368	8	20	3546	1.61(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.181	26.181	0		169516	25557	31	77	824		
357.8516	26.181	26.181	0		107423	16002	12	30	1334	1.58(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.804	30.804	0		166968	21361	31	77	689		
357.8516	30.796	30.804	-1		105146	13117	12	30	1093	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.989	30.989	0		227678	26376	27	67	977		
341.8567	30.973	30.989	-1		140363	16634	20	50	832	1.62(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.260	33.260	0		252670	38083	78	195	488		
375.8178	33.260	33.260	0		199044	29014	63	157	461	1.27(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.329	34.329	0		186543	32347	49	122	660		
391.8127	34.321	34.329	-1		147826	25220	37	92	682	1.26(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.620	36.620	0		200927	47066	49	122	961		
391.8127	36.620	36.620	0		164021	38120	37	92	1030	1.23(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.973	36.973	0		290634	66772	78	195	856		
375.8178	36.973	36.973	0		228786	52982	63	157	841	1.27(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.981	38.981	0		196303	52734	61	152	864		
425.7737	38.981	38.981	0		187039	50357	62	155	812	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

Non-2,3,7,8-sub-TCDF, RT: 19.983

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	393112	55606

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	393112	55606

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.889	1545	292	1924	396	0.3268	0.80	
19.808	3532	597	4465	768	0.7533	0.79	
24.160	1327	241	2504	449	0.3609	0.53	RQ
24.160	1327	241	1723	312	0.2873		Empc Correction
Signal Totals:							
	6404	1130	8112	1476			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15297	2743				0.72	RQ
	14516	2606					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.441 = (15297 * 40.000) / (393112 * 1.080)
Empc Amount: 1.367 = (14516 * 40.000) / (393112 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

F1 PeCDFs, RT: 24.695

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.925	191	35	174	103		1.10	R
Signal Totals:							
	191	35	174	103			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	365	138				1.10	RQ
	314	57					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (365 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (314 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

Non-2,3,7,8-sub-PeCDF, RT: 28.196

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.844	766	192	749	122		1.02	R
26.812	1473	236	1238	175		1.19	R
27.242	774	228	414	129		1.87	R
27.410	2007	272	1023	119		1.96	R
28.009	3045	480	1881	272		1.62	
Signal Totals:							
	8065	1408	5305	817			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13370	2225				1.52	RQ
	12272	2086					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (13370 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (12272 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 17-Aug-2021 14:27:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 35.117

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
35.028	1563	301	1453	309		1.08	
35.180	3670	776	2633	573		1.39	
Signal Totals:							
	5233	1077	4086	882			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9319	1959				1.28	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (9319 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	17-Aug-2021 14:27:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	1

Non-2,3,7,8-sub-HxCDD, RT: 35.475

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.424	2814	512	2604	510		1.08	
Signal Totals:							
	2814	512	2604	510			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5418	1022				1.08	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (5418 * 0.0) / (0 * 0.000)

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

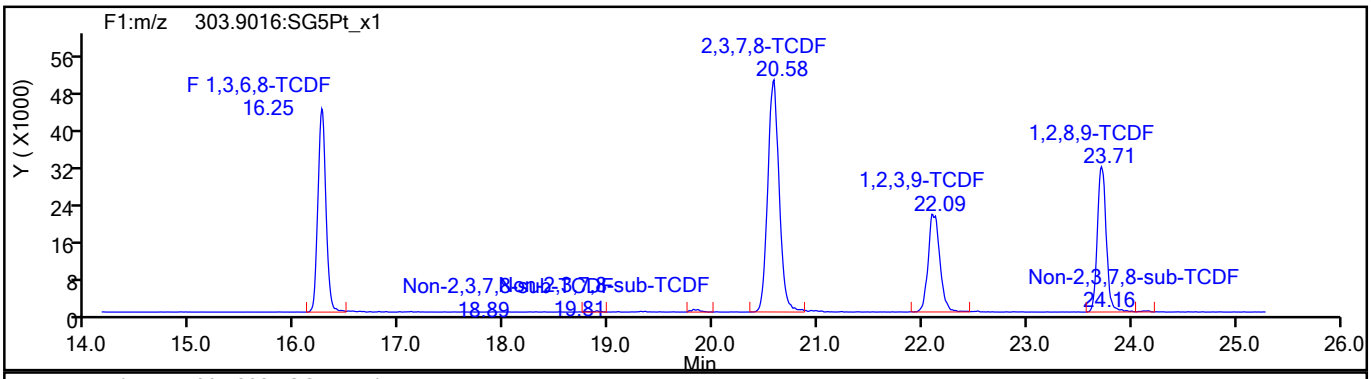

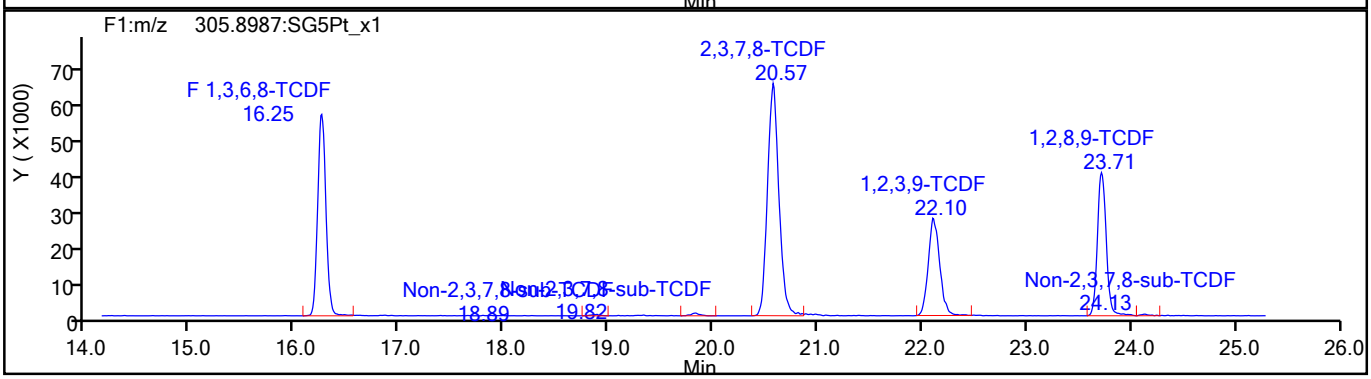

TCDF Standards

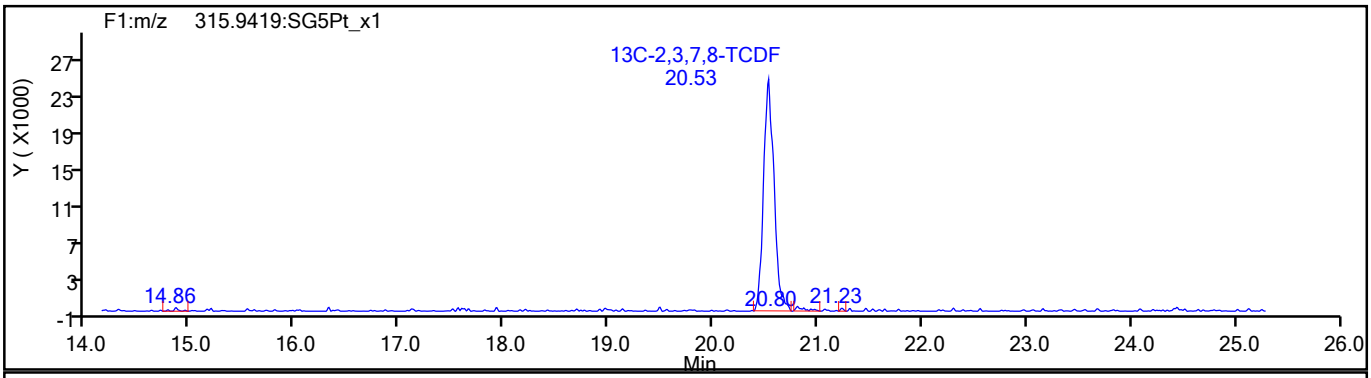

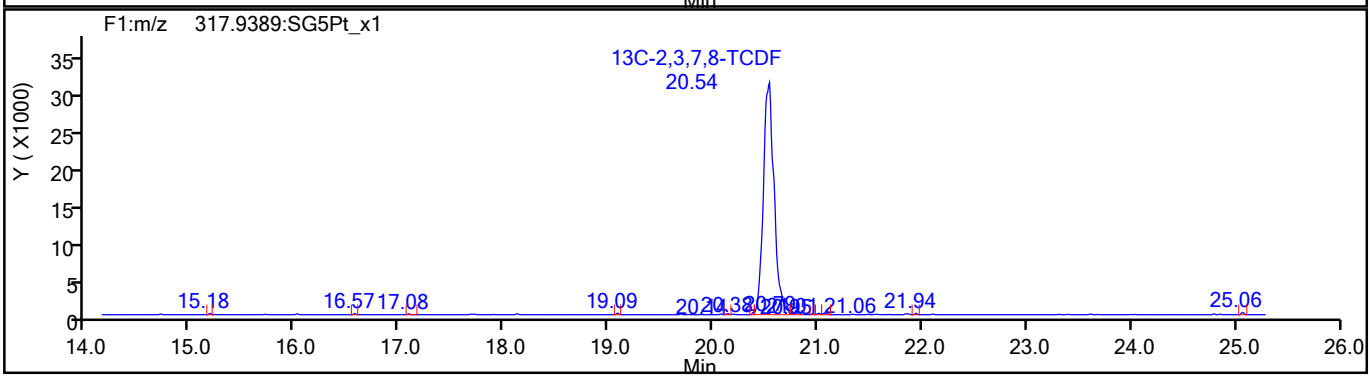

786399

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

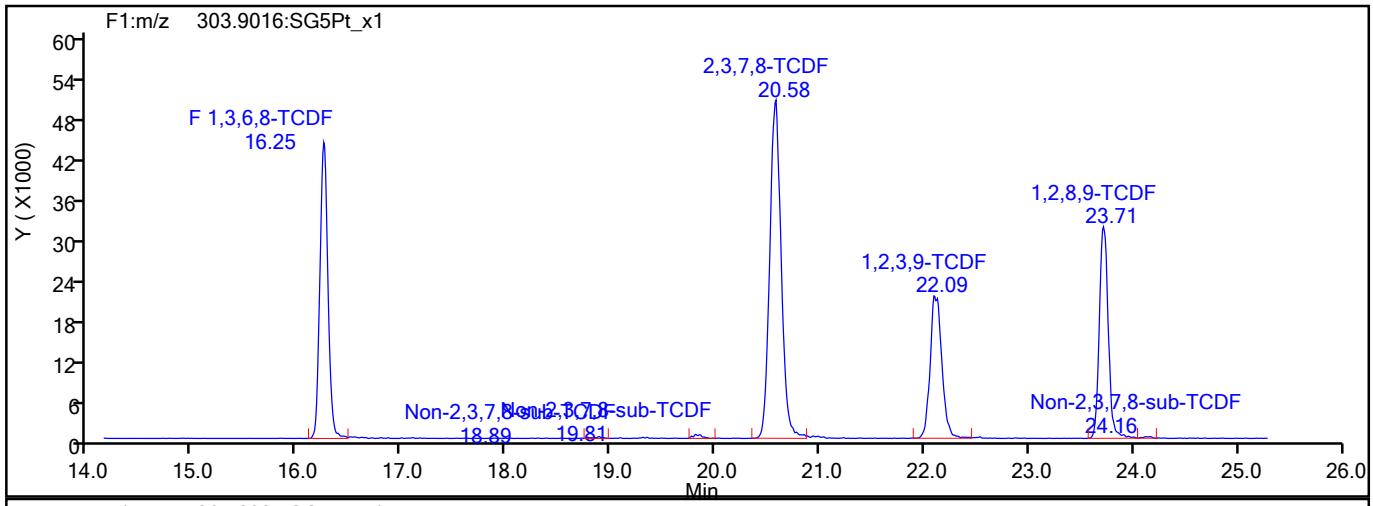

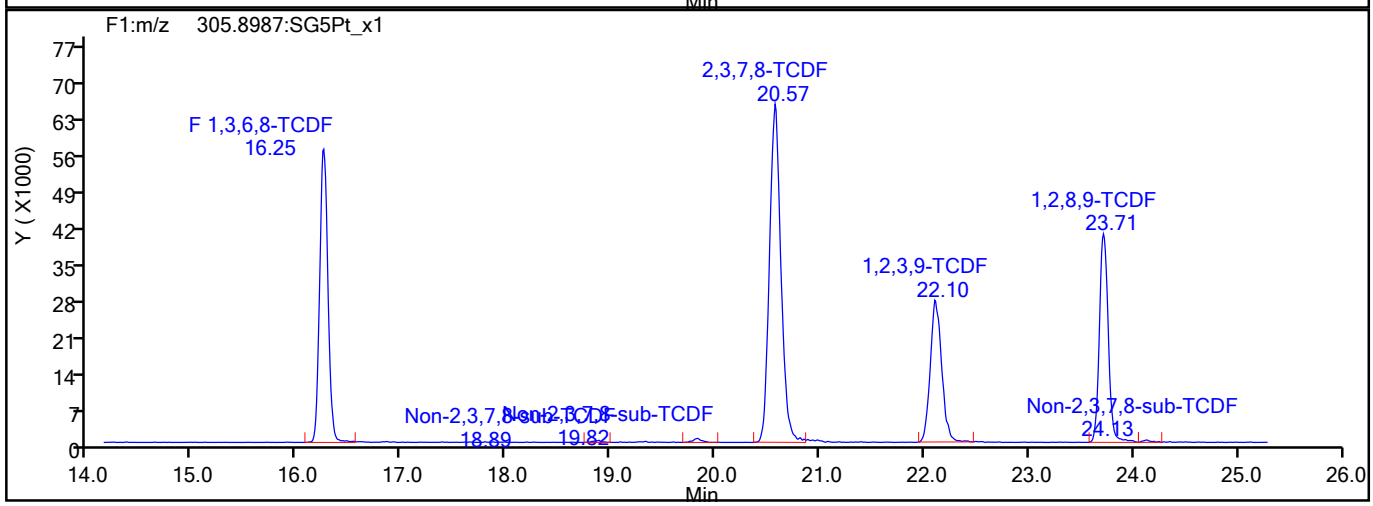

TCDF Interference Mass

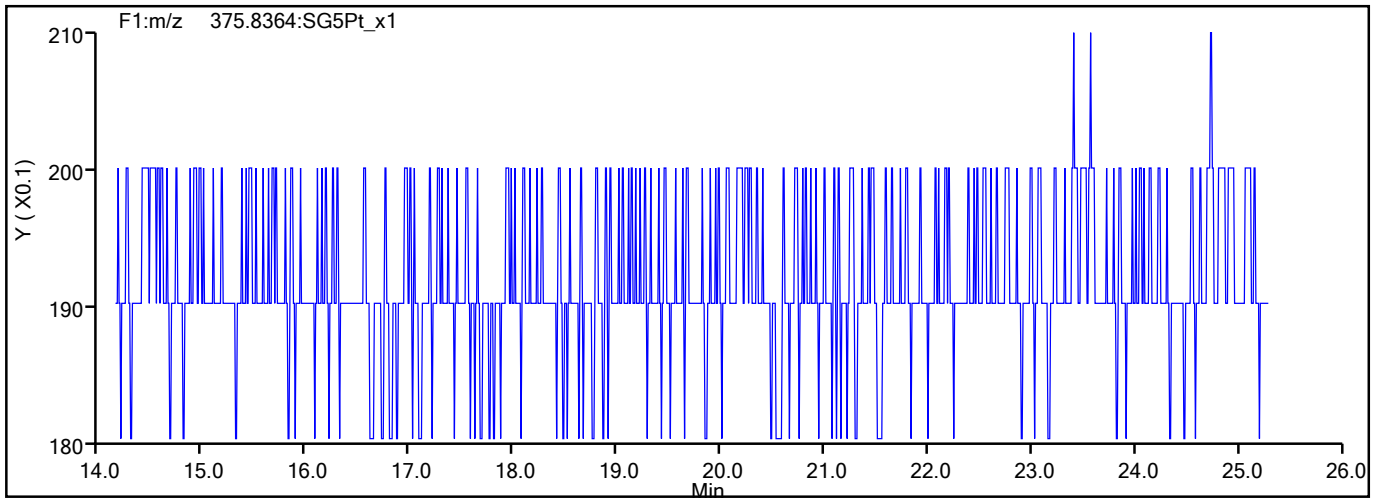

786400

Report Date: 18-Aug-2021 14:54:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

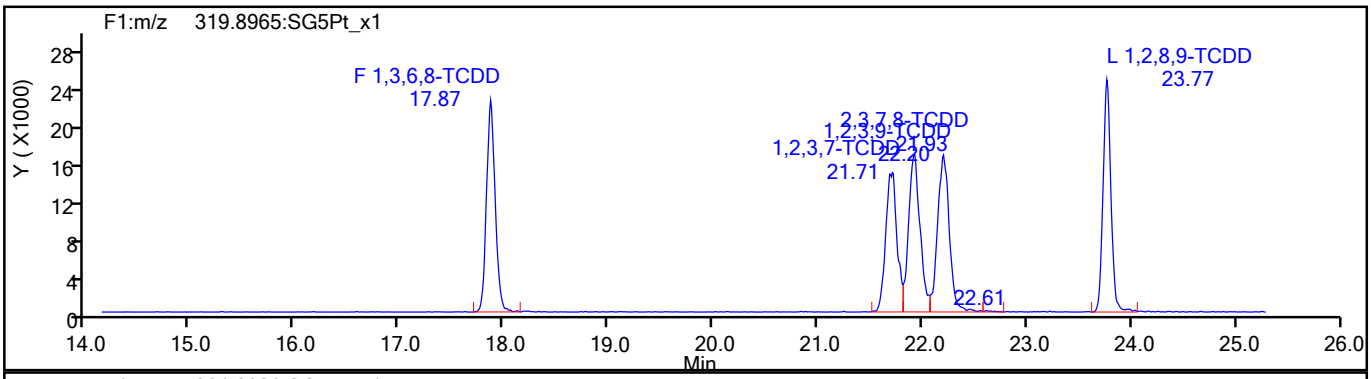

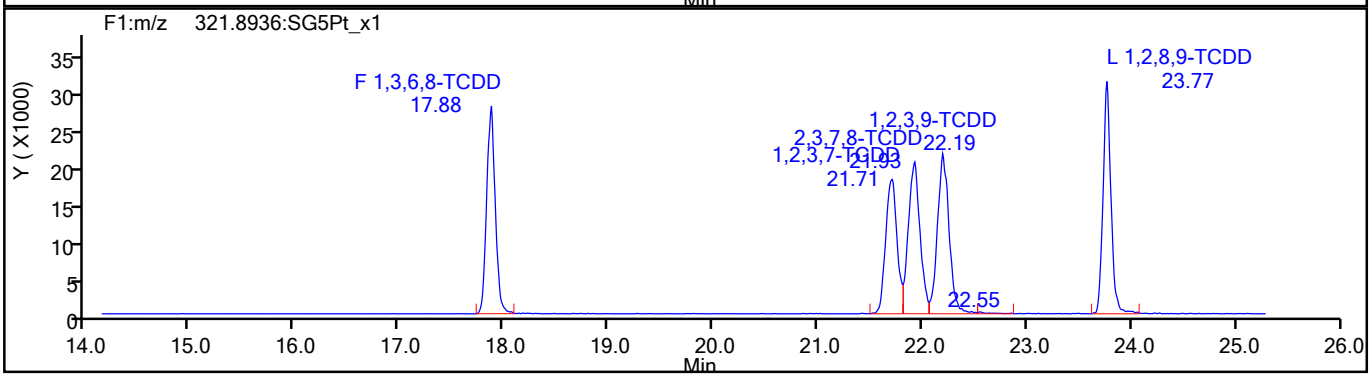

TCDD Standards

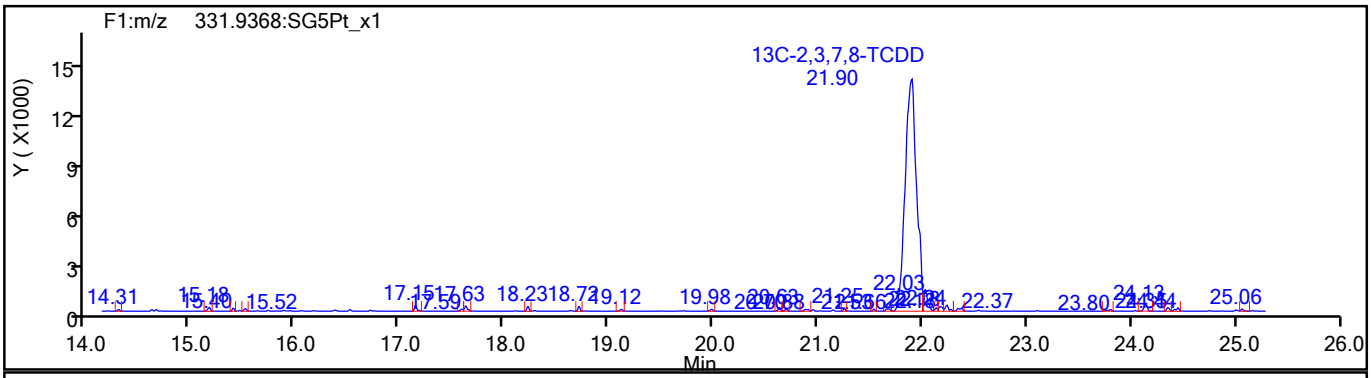

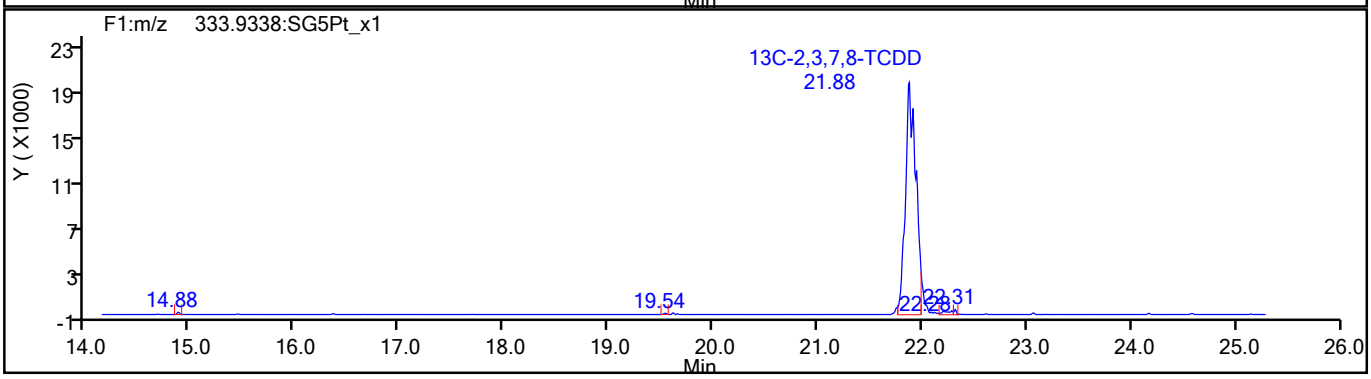

786401

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

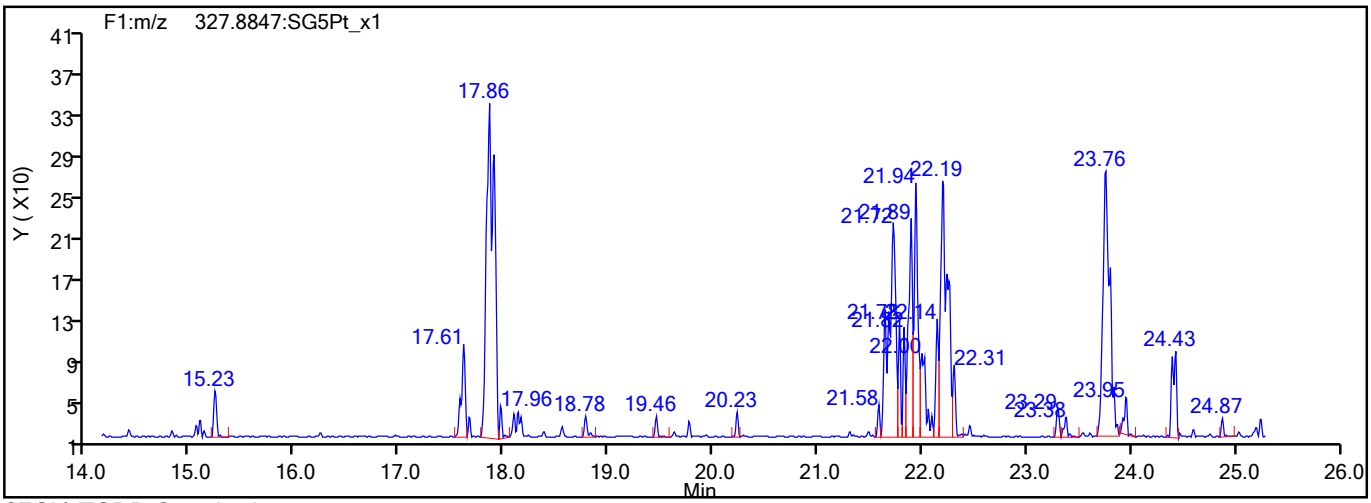

37Cl4-TCDD Standards

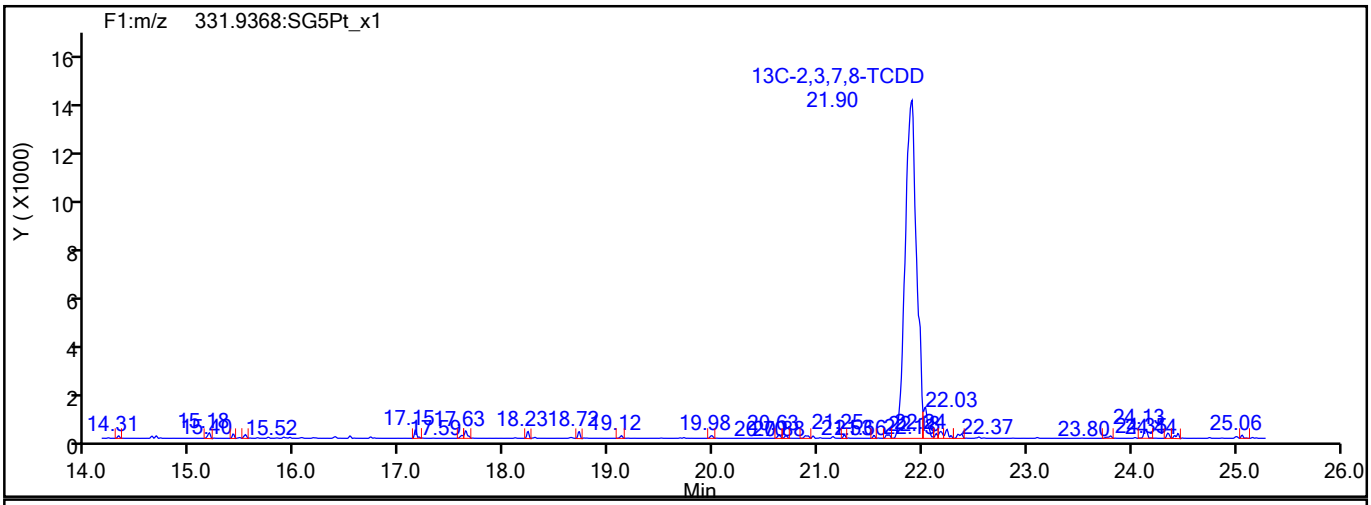

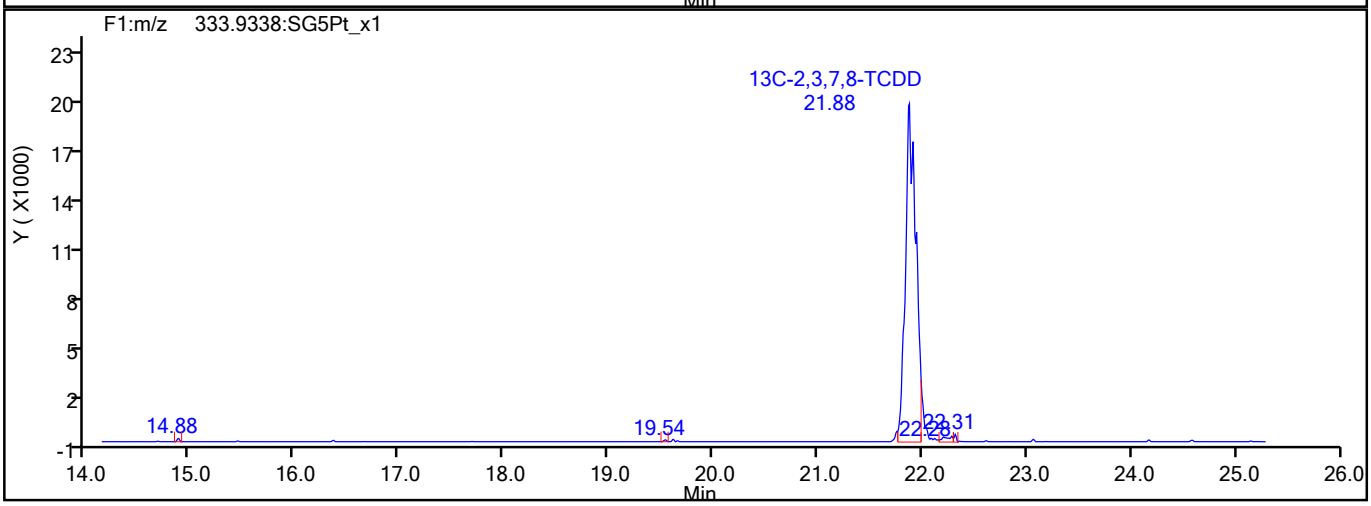

786402

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

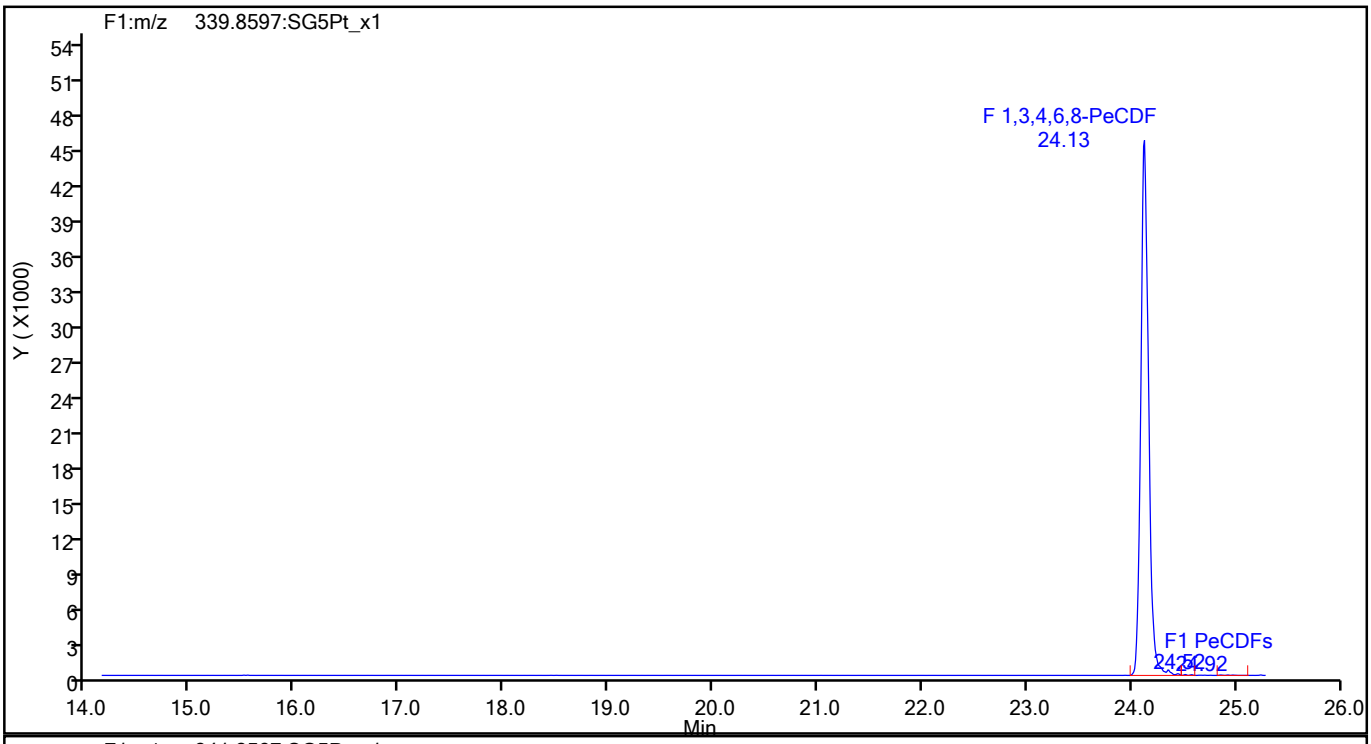

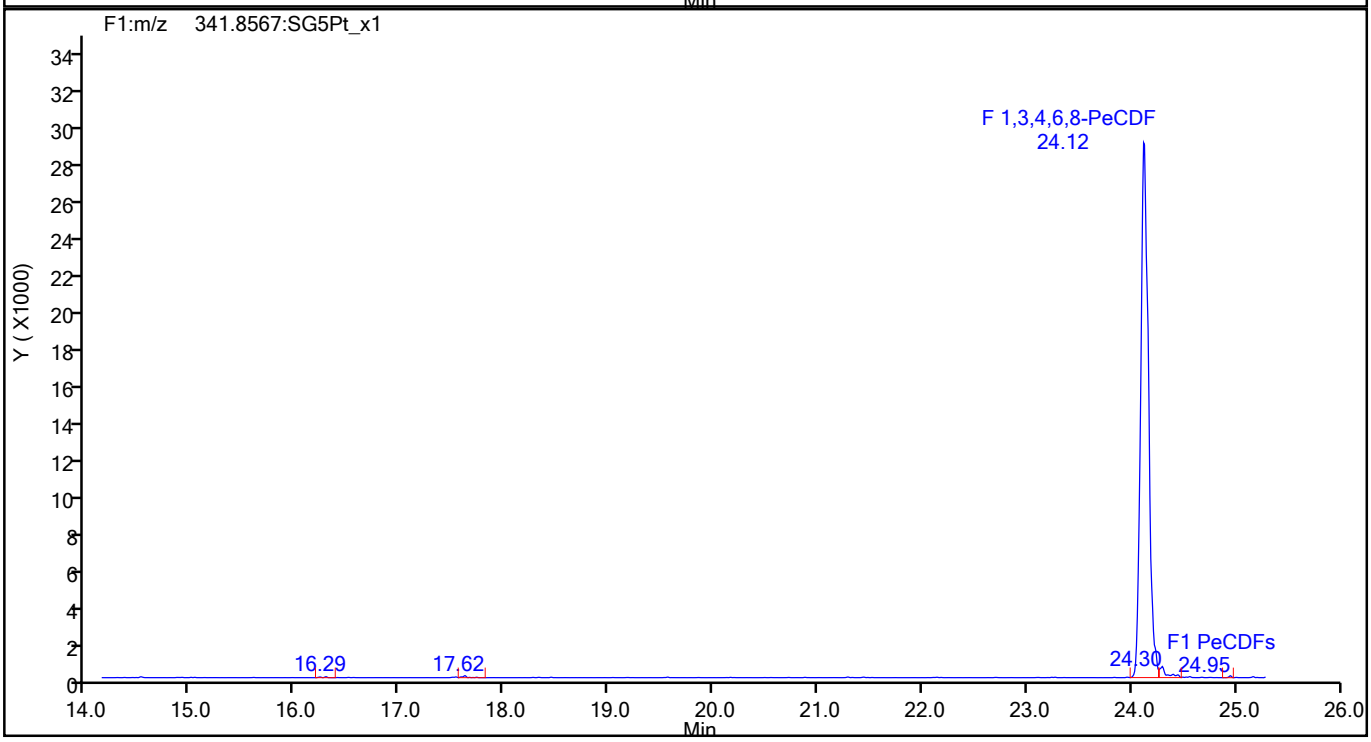

786403

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

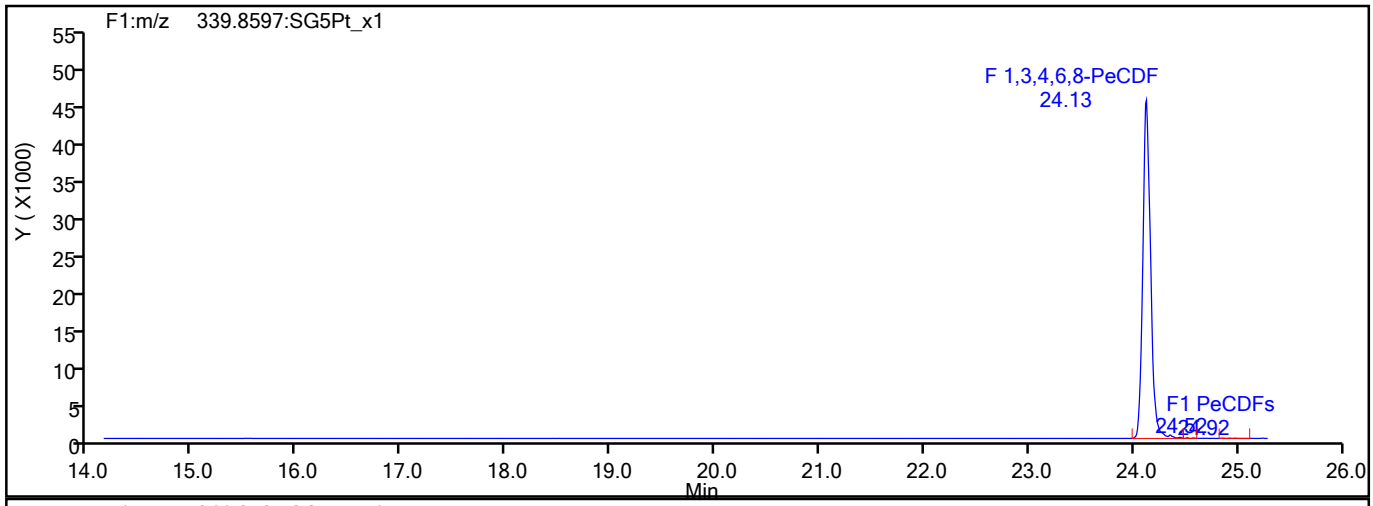

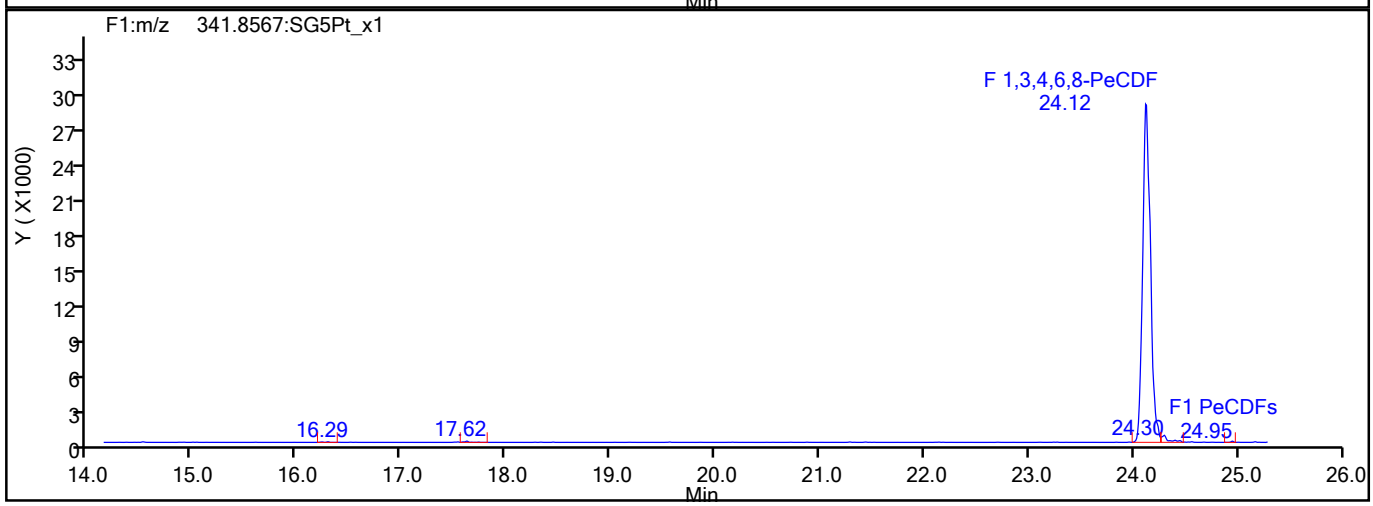

F1 PeCDFs Interference Mass

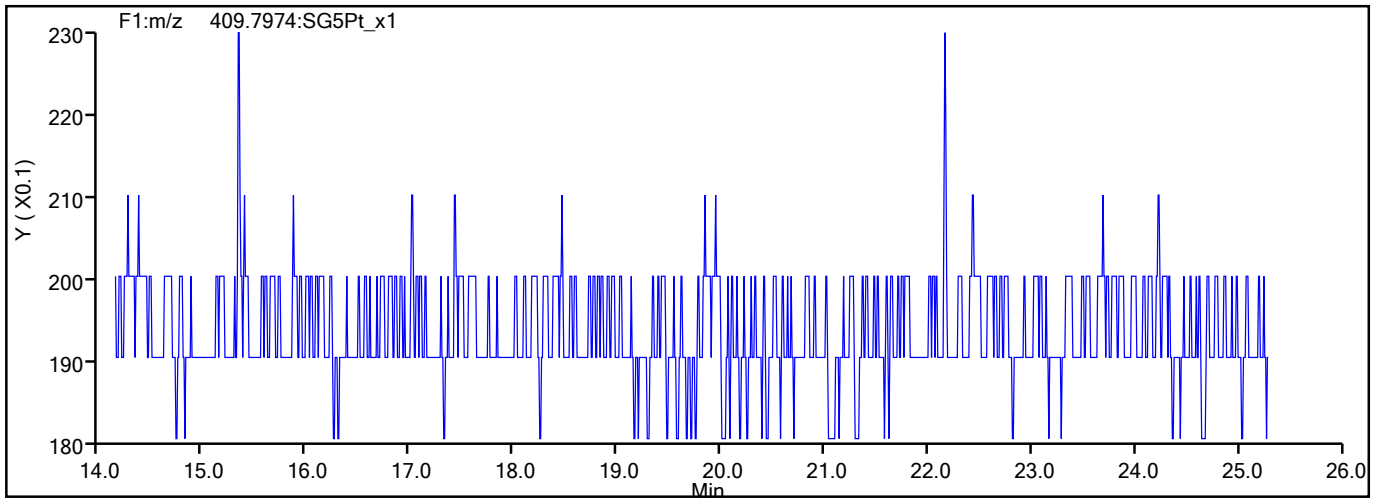

786404

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

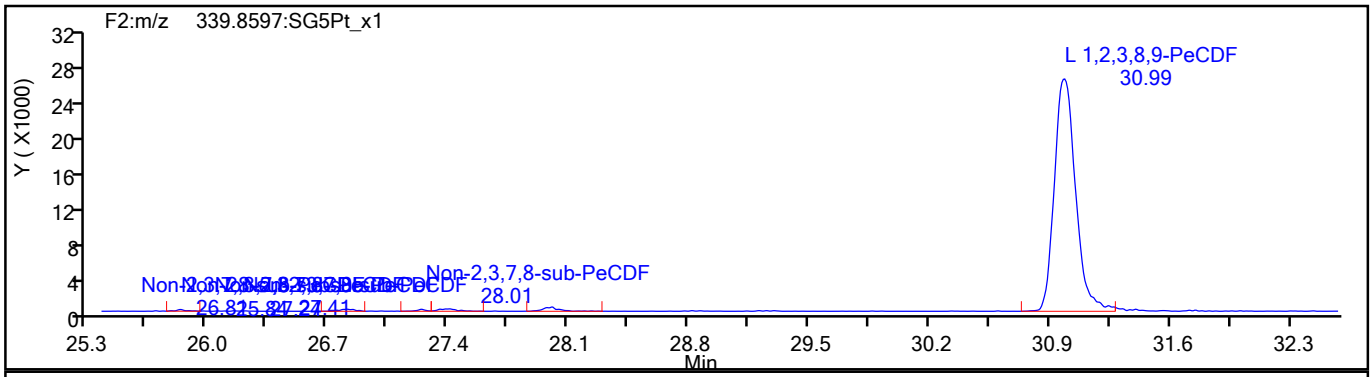

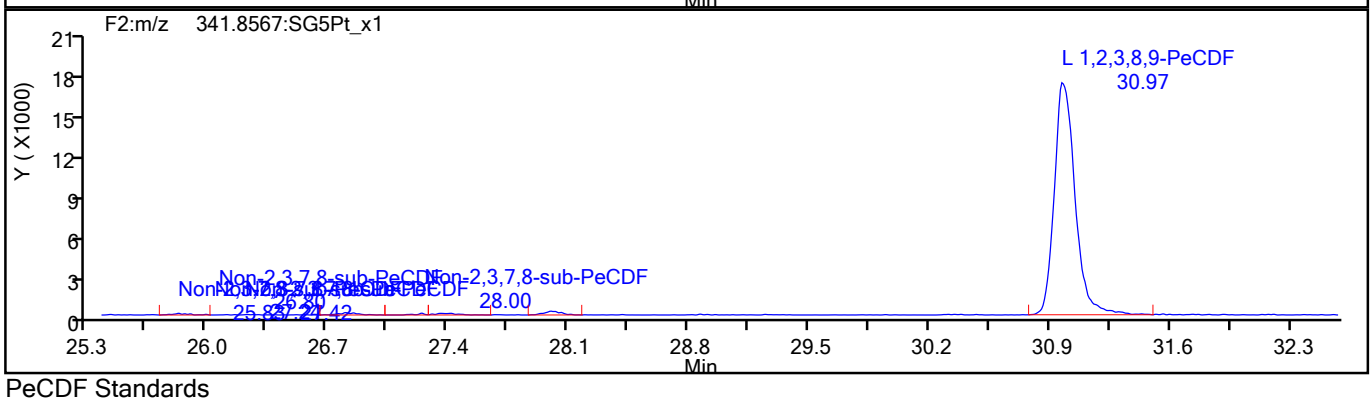

PeCDF Standards

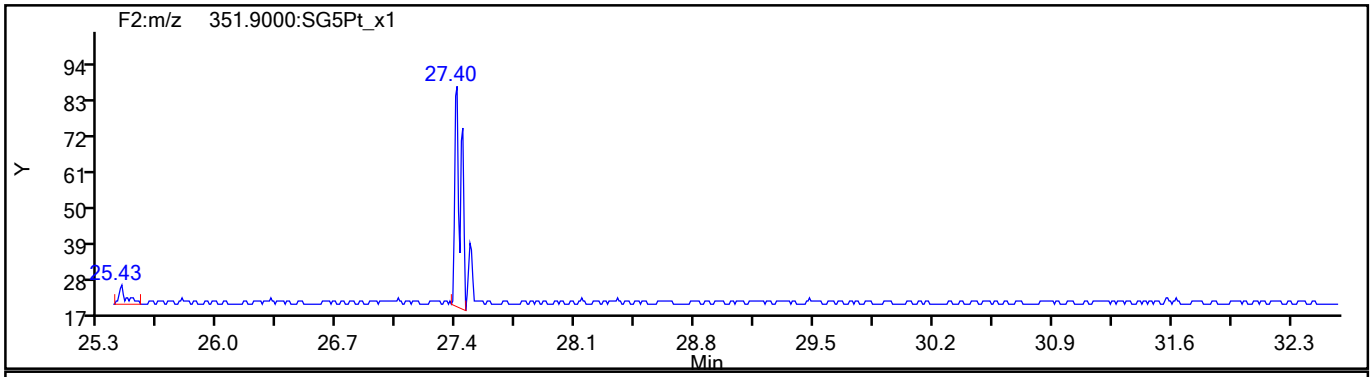

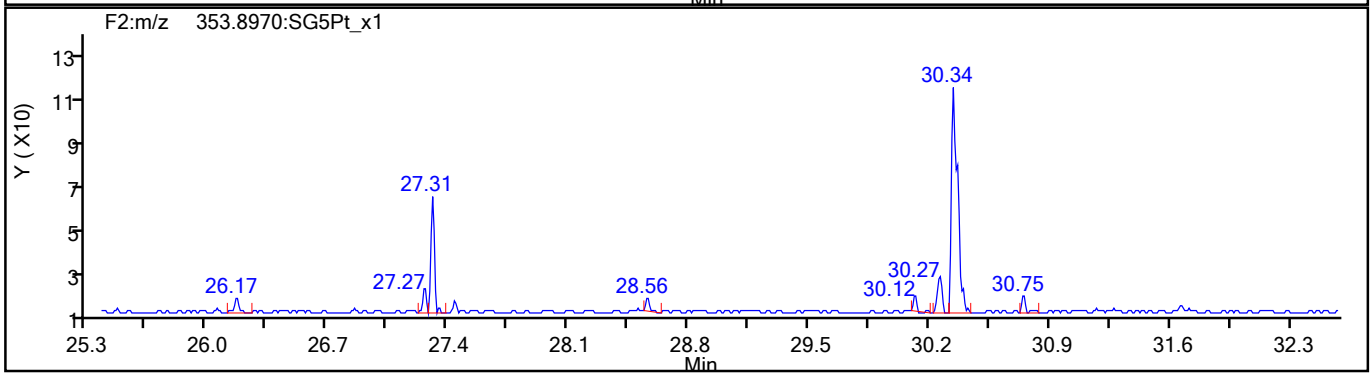

786405

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

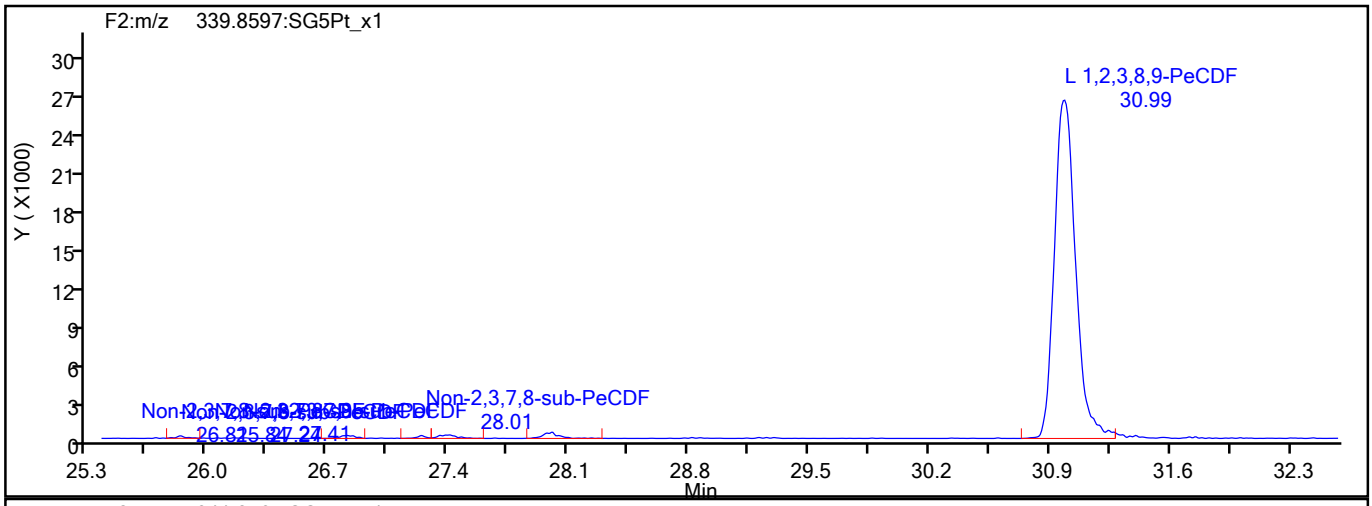

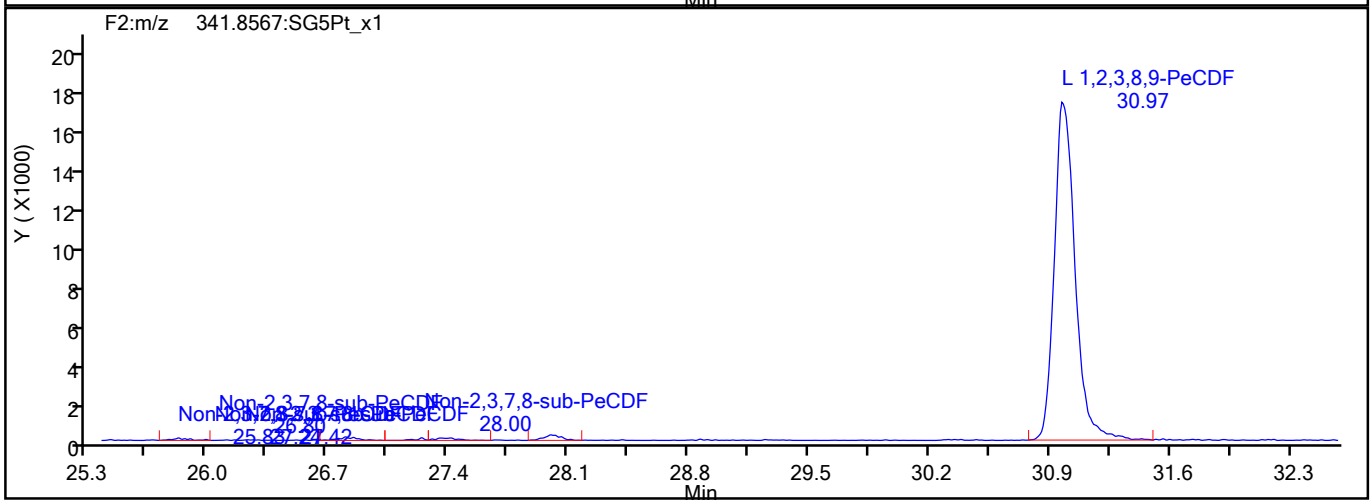

PeCDF Interference Mass

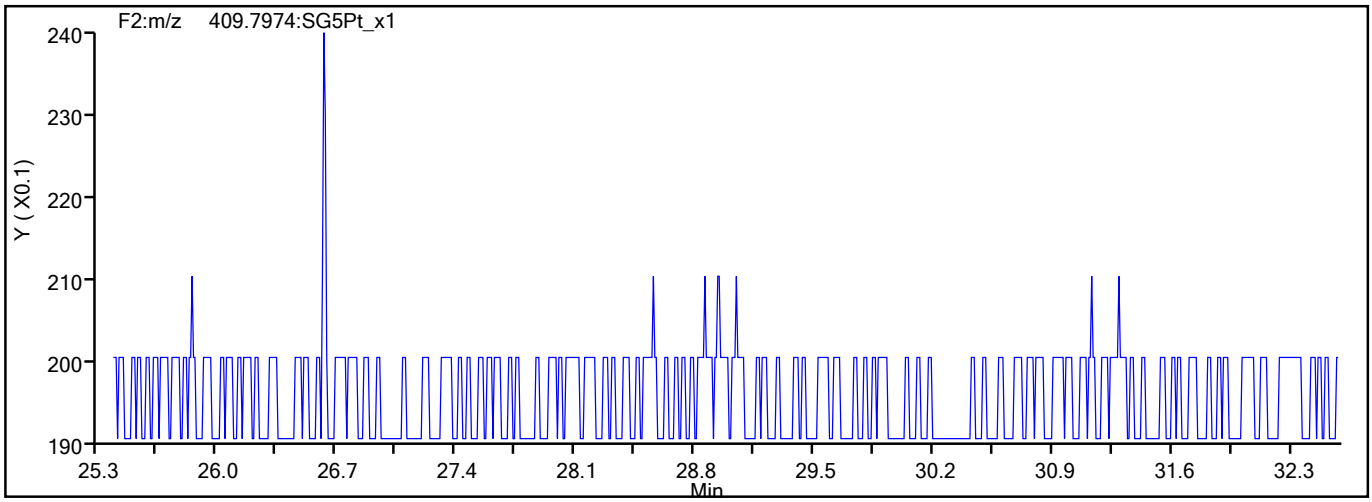

786406

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

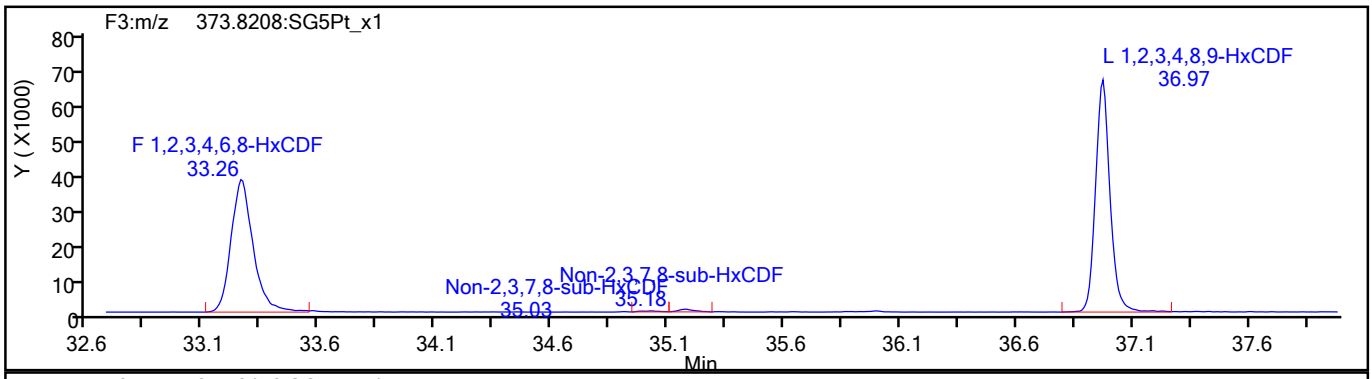

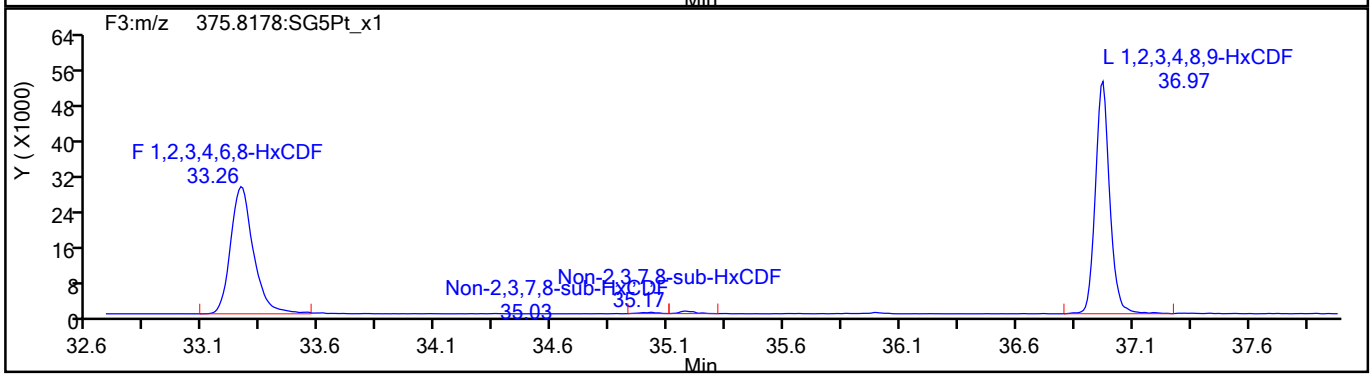

HxCDF Standards

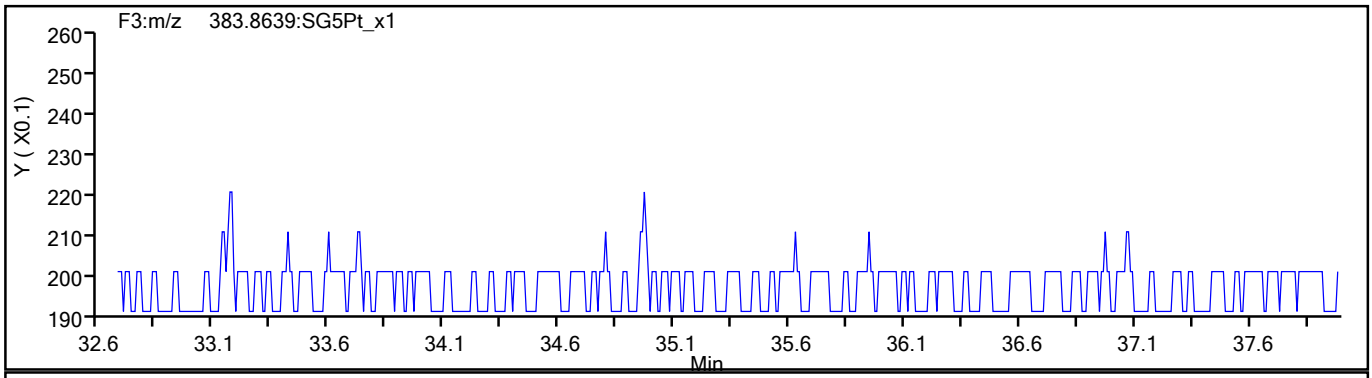

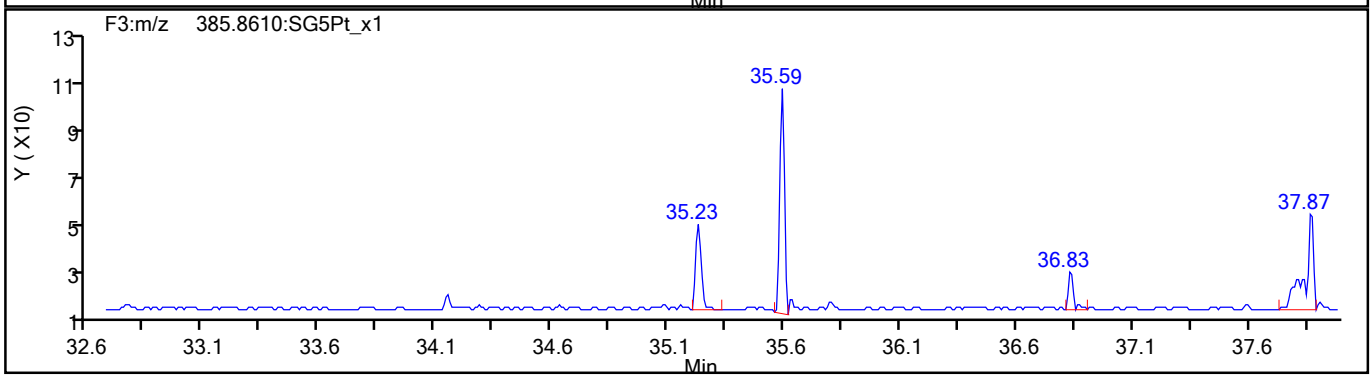

786407

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

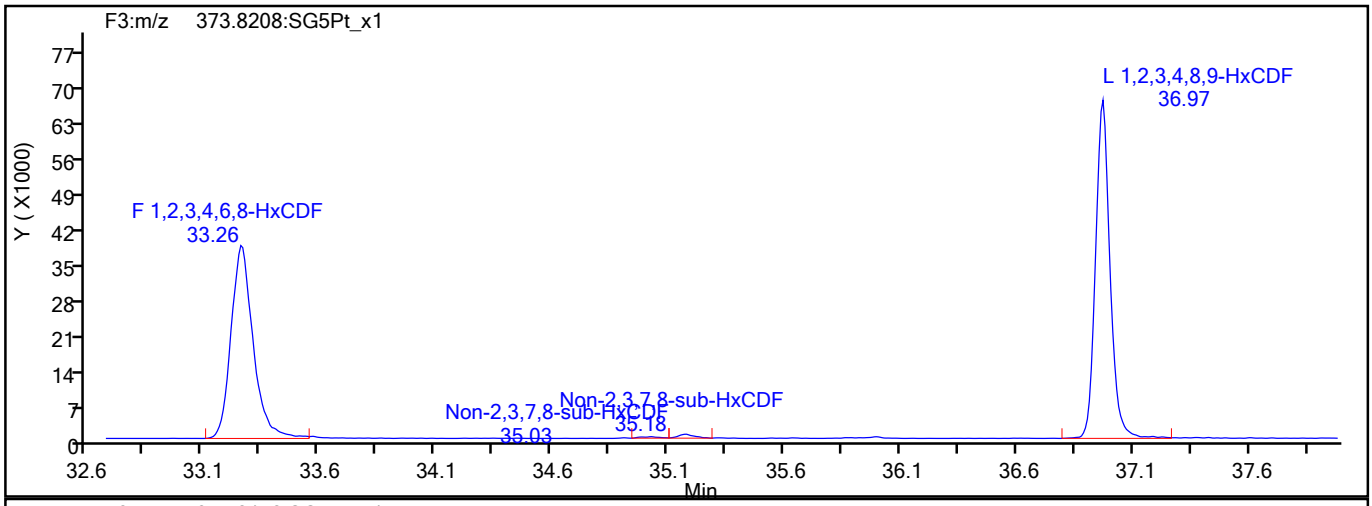

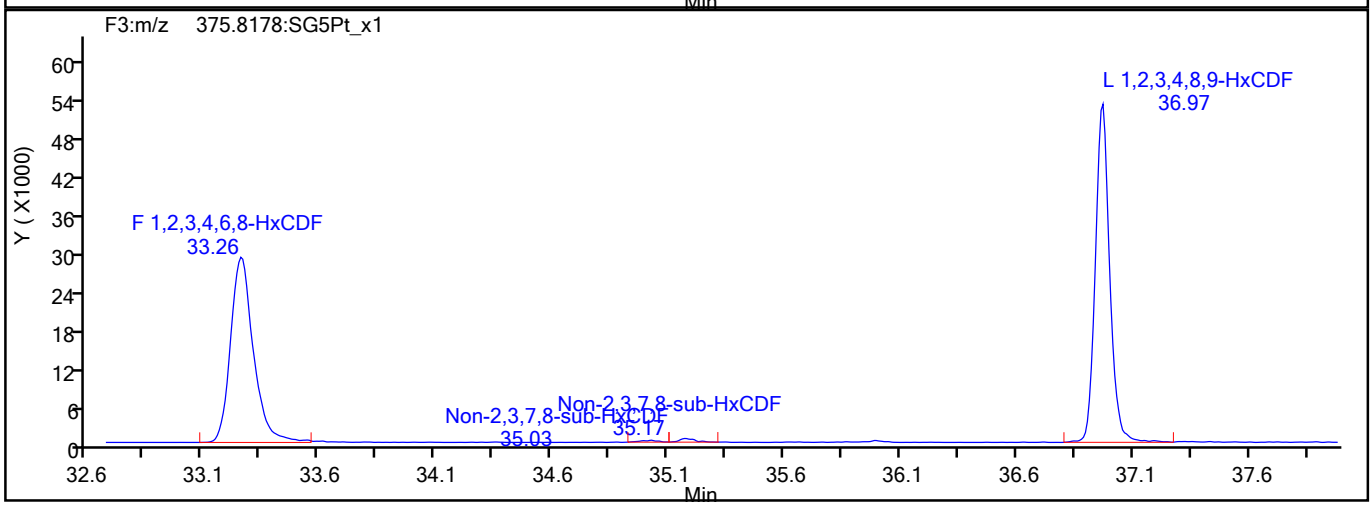

HxCDF Interference Mass

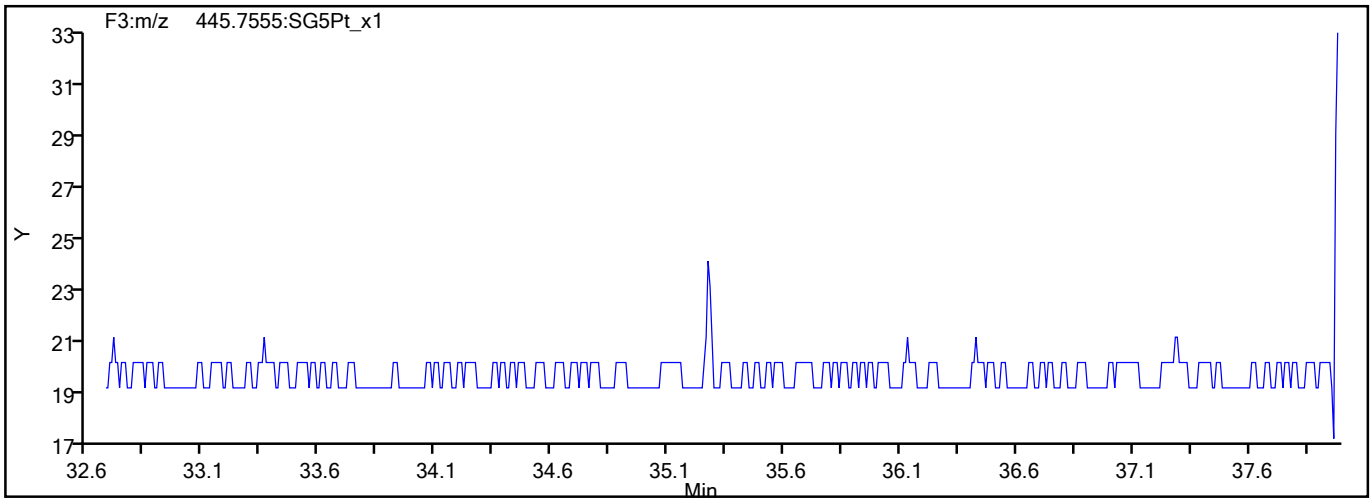

786408

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

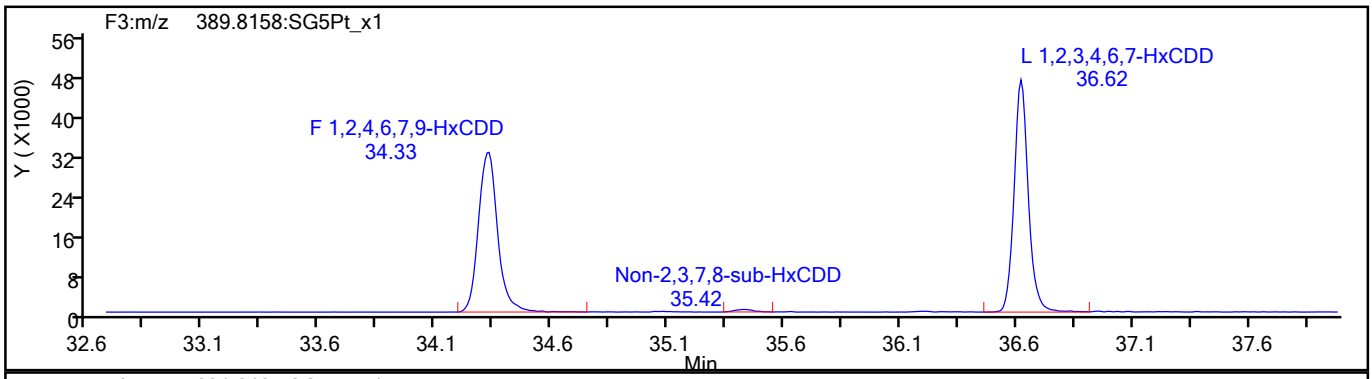

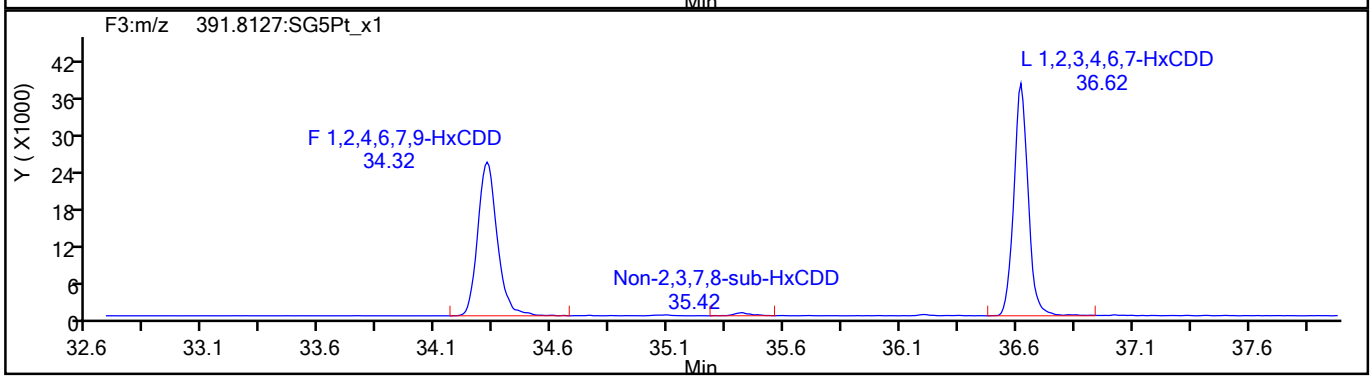

HxCDD Standards

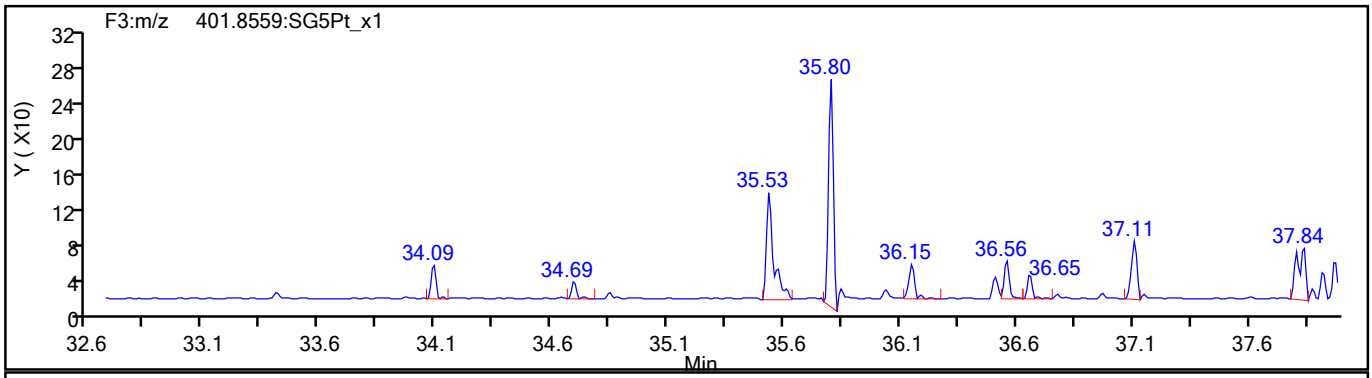

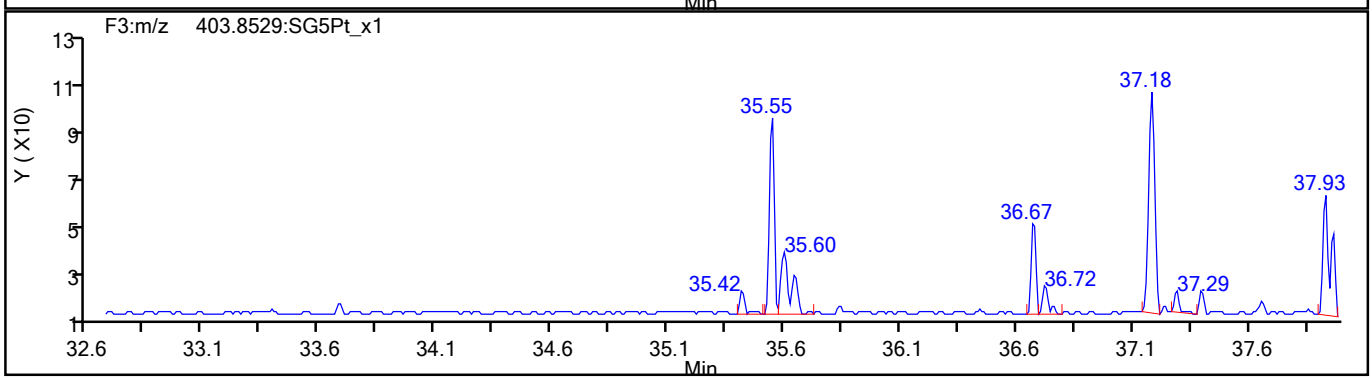

786409

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
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HpCDF

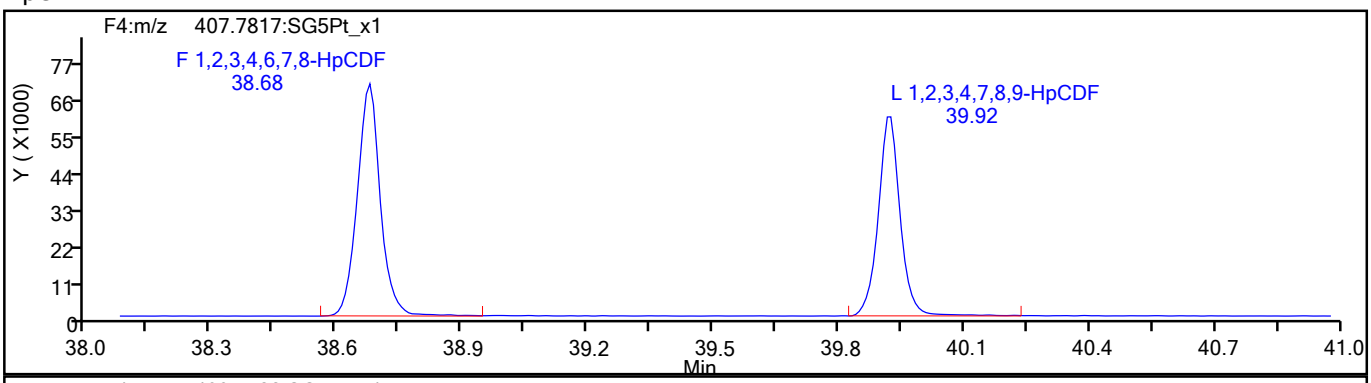

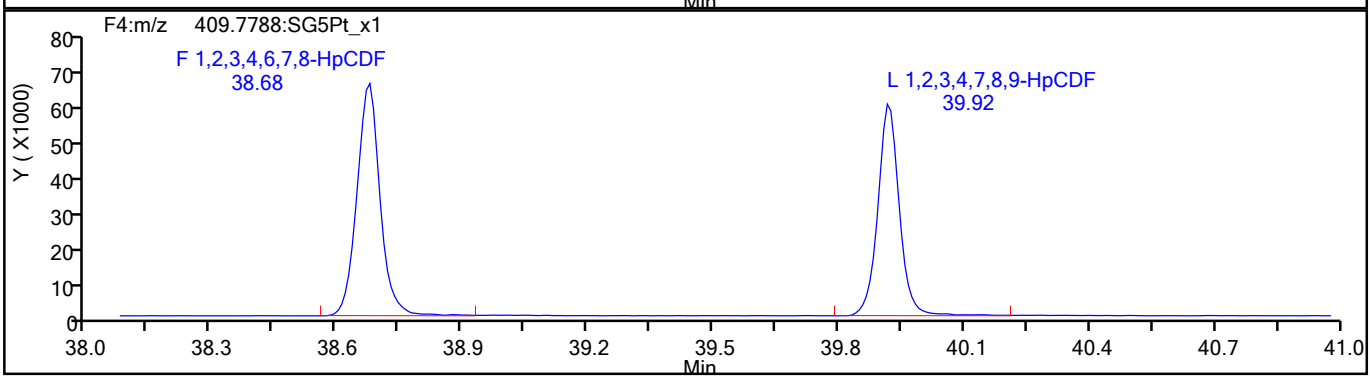

HpCDF Standards

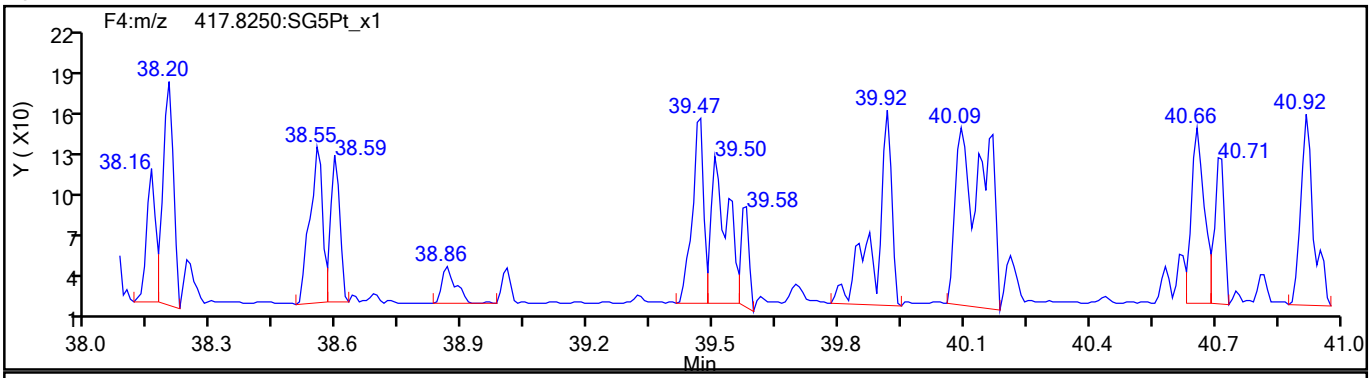

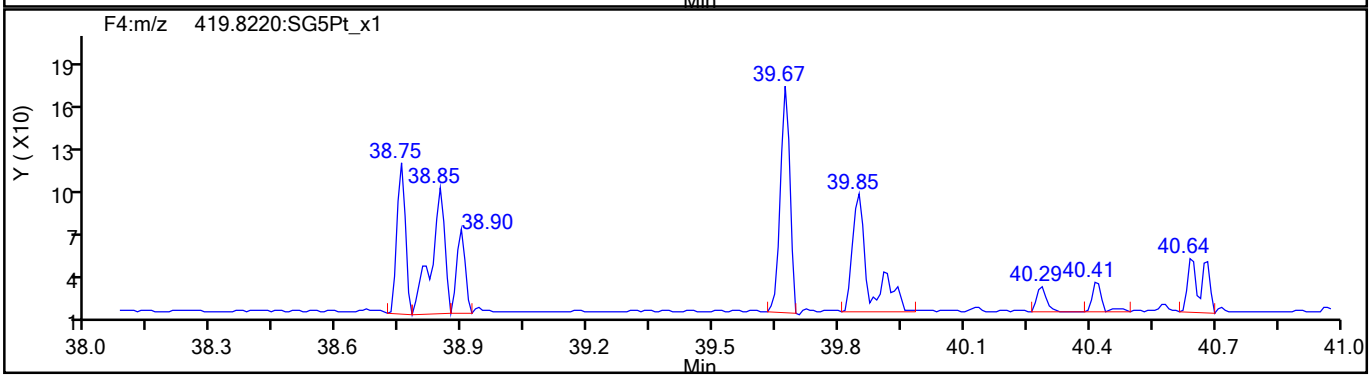

786410

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

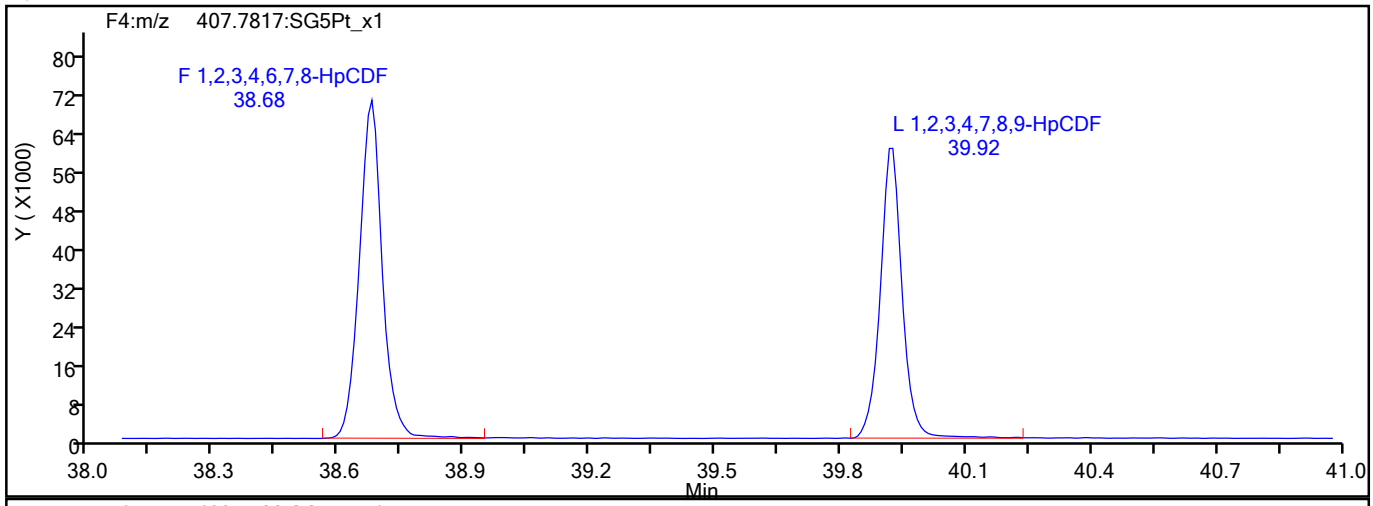

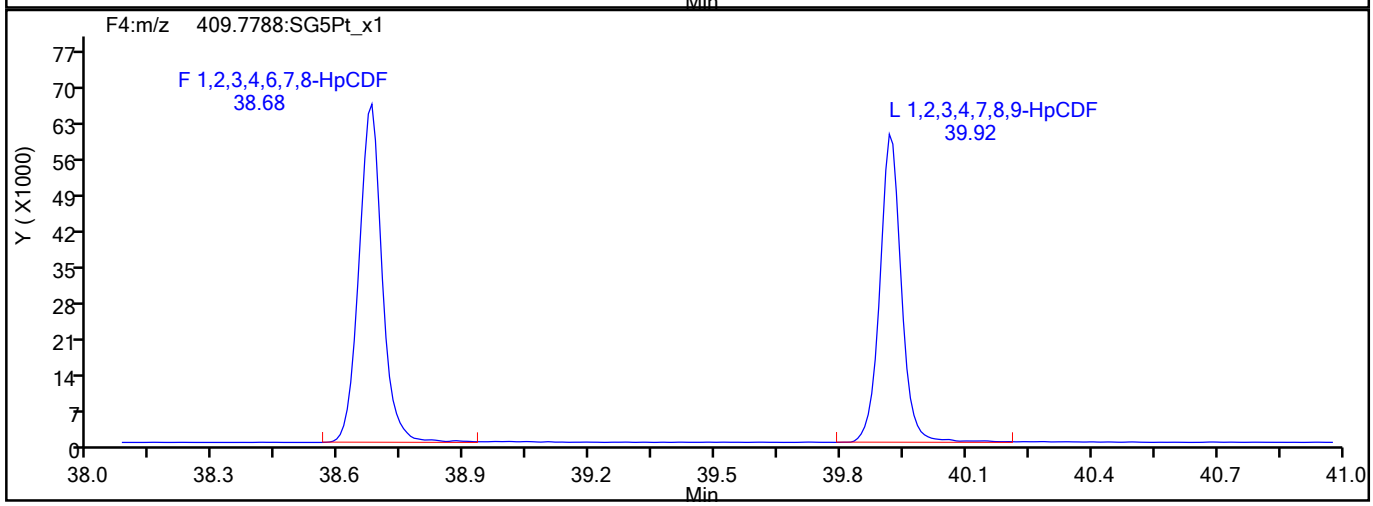

HpCDF Interference Mass

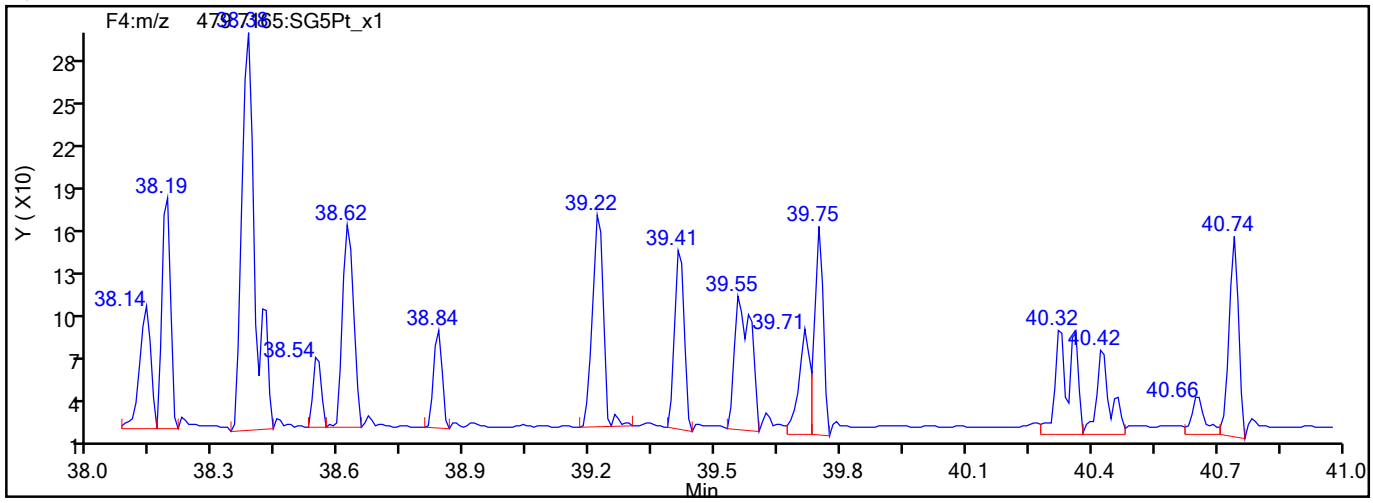

786411

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

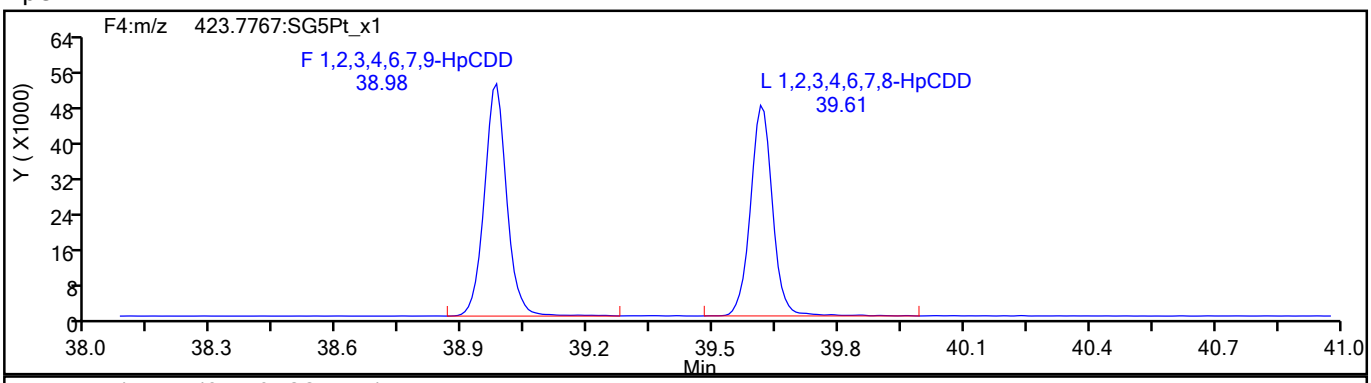

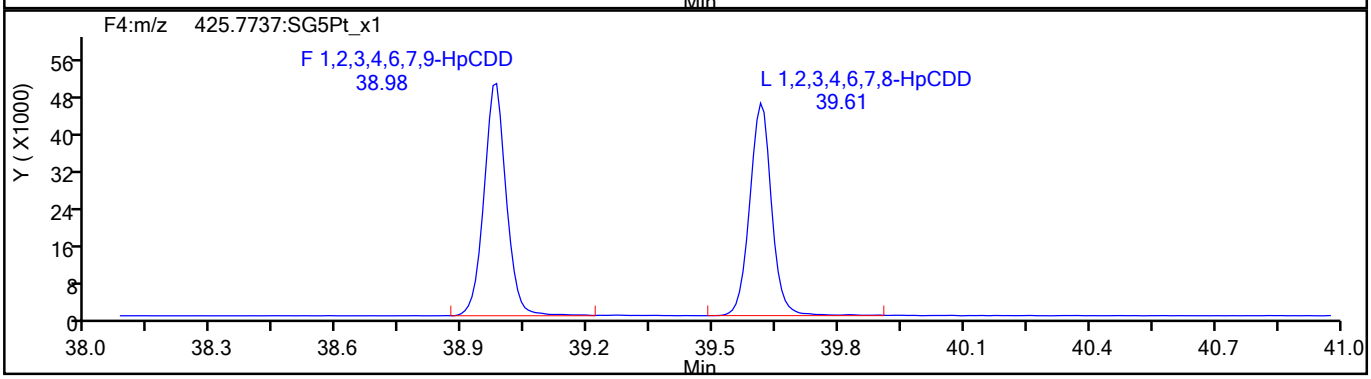

HpCDD Standards

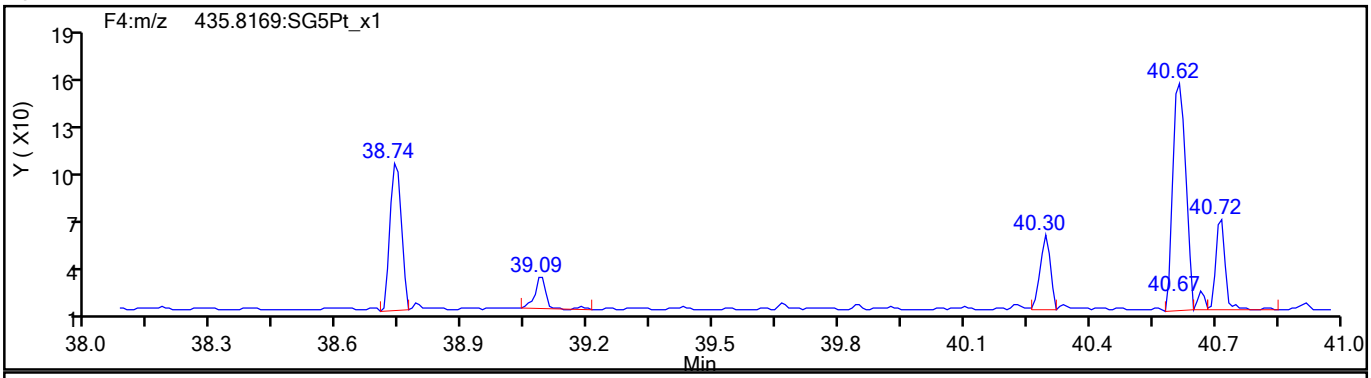

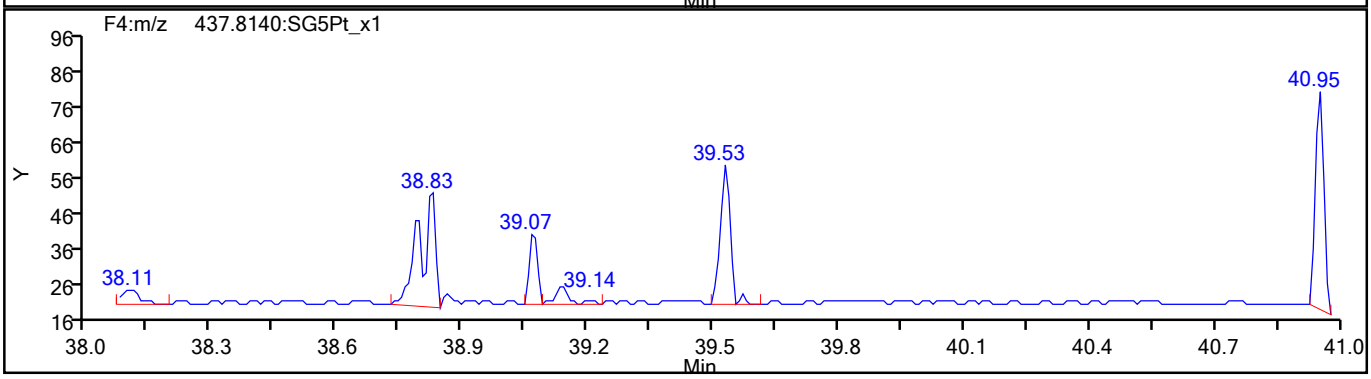

786412

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
Injection Date:	17-Aug-2021 14:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

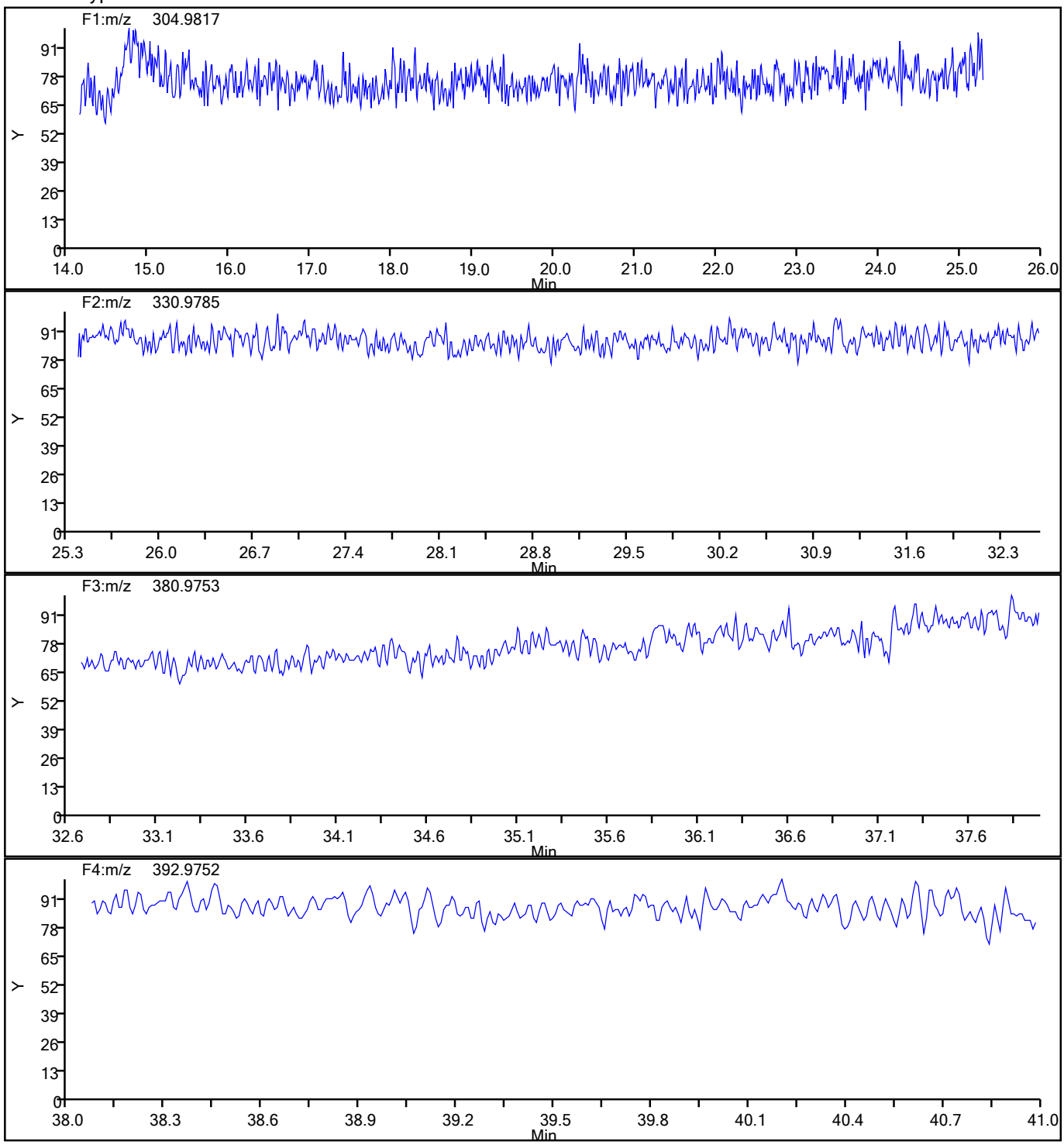

786413

Report Date: 18-Aug-2021 14:54:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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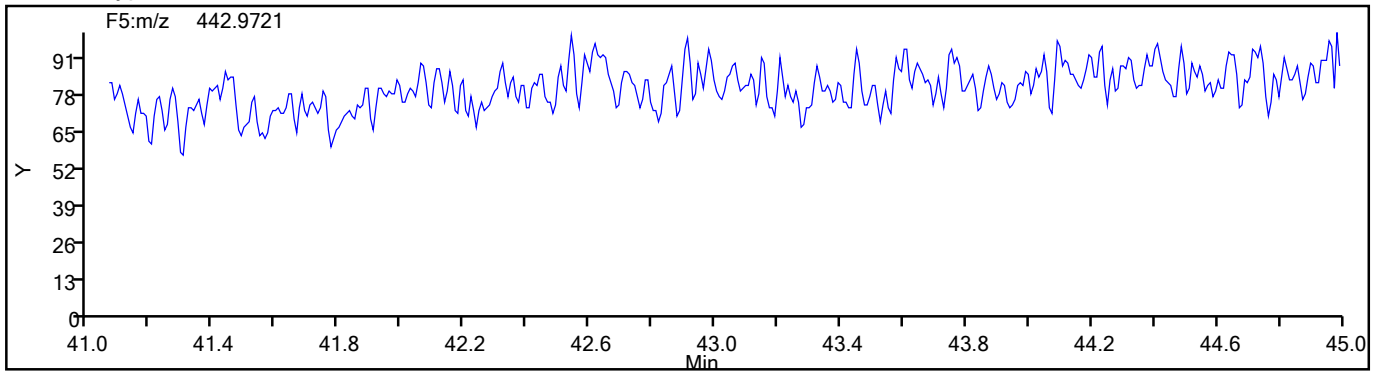

786414

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:50:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:40 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 17:49:01

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.515	79976	0.91	1.3459					0.00	R
2,3,7,8-TCDF	20.532	165011	0.80	1.0802	76.4	76.4	0.3112	0.3112		
A Non-2,3,7,8-sub-TCDF	19.946	3139	0.77	1.0802	2.721	1.453	0.3112	0.7927		RQ
S Total TCDF					79.1	77.9	0.3112	0.3112		RQ
D 13C-2,3,7,8-TCDD	21.874	21127	3.29	0.9317					0.00	R
2,3,7,8-TCDD	21.891	55608	0.81	1.0753	97.9	97.9	0.6109	0.6109		
A Non-2,3,7,8-sub-TCDD	20.781						0.6109	0.6109		
S Total TCDD					97.9	97.9	0.6109	0.6109		
A F1 PeCDFs	24.697	1039	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.194						0.0	0.0		
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.489						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.107						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.460	880	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.669	68328	1.07	1.4421						
1,2,3,4,7,8,9-HpCDF	39.907	44006	1.13	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.288						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.604	40915	1.01	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.288						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.186	98623	0.78							
1,3,6,8-TCDD	17.804	59806	0.85							
2,3,4,7-TCDF	20.532	165011	0.80							
1,2,3,7-TCDD	21.659	47985	0.81							
1,2,3,9-TCDF	22.072	74538	0.76							
1,2,3,9-TCDD	22.167	58731	0.76							
1,2,8,9-TCDF	23.706	76728	0.73							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.757	24107								
1,3,4,6,8-PeCDF	24.119	69782	1.60							
1,2,3,8,9-PeCDD	26.166	50624	1.46							
1,2,4,7,9-PeCDD	30.806	43678	1.58							
1,2,3,8,9-PeCDF	30.974	58543	1.62							
1,2,3,4,6,8-HxCDF	33.250	76257	1.26							
1,2,4,6,7,9-HxCDD	34.311	50756	1.33							
1,2,3,4,6,7-HxCDD	36.610	49652	1.28							
1,2,3,4,8,9-HxCDF	36.963	67795	1.20							
1,2,3,4,6,7,9-HpCDD	38.972	47358	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 18-Aug-2021 14:50:00 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:48:40 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 18-Aug-2021 17:49:01

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											R
315.9419	20.515	20.515	0	1.000	38178	5878	63	157	93		
317.9389	20.498	20.515	-1	1.000	41798	6617	4	10	1654	0.91(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.532	20.523	1	1.001	73204	9732	18	45	541		
305.8987	20.523	20.523	0	1.000	91807	11784	24	60	491	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	20.842	19.946	54	1.016	745	243	18	45	14		
305.8987	20.859	19.946	55	1.017	3144	272	24	60	11	0.24(0.65-0.89)	
	Empc Correction				967	315	24	60	13		
303.9016	24.075	19.946	247	1.174	621	118	18	45	7		
305.8987	24.119	19.946	250	1.176	1367	222	24	60	9	0.45(0.65-0.89)	
	Empc Correction				806	153	24	60	6		
13C-2,3,7,8-TCDD											R
331.9368	21.874	21.874	0	1.000	16200	2990	21	52	142		
333.9338	21.908	21.874	2	1.000	4927	2186	1	2	2186	3.29(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.891	21.882	1	1.001	24886	3342	27	67	124		
321.8936	21.874	21.882	-1	1.000	30722	4352	7	17	622	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.781						27	67			
321.8936	20.781						7	17			
A F1 PeCDFs											RQ
339.8597	15.816	24.697	-532	1.000	99	51	2	5	26		
341.8567	15.893	24.697	-527	1.000	68	44	4	10	11	1.46(1.32-1.78)	
339.8597	24.325	24.697	-22	1.000	587	136	2	5	68		
341.8567	24.316	24.697	-23	1.000	294	137	4	10	34	2.00(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	24.737	24.697	2	1.000	75	52	2	5	26		
341.8567	24.755	24.697	3	1.000	78	54	4	10	14	0.96(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.194						9	22			
341.8567	28.194						12	30			
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						13	32			
357.8516	28.489						10	25			
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.107						50	125			
375.8178	35.107						15	37			
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.430	35.460	-2	1.000	583	185	14	35	13		
391.8127	35.414	35.460	-3	1.000	393	84	12	30	7	1.48(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.669	38.638	2	1.000	35335	9256	22	55	421		
409.7788	38.669	38.638	2	1.000	32993	8367	11	27	761	1.07(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.907	39.885	1	1.000	23333	6317	22	55	287		
409.7788	39.916	39.885	2	1.000	20673	5103	11	27	464	1.13(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.288						22	55			
409.7788	39.288						11	27			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.604	39.582	1	1.000	20550	5578	12	30	465		
425.7737	39.596	39.582	1	1.000	20365	5300	10	25	530	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.288						12	30			
425.7737	39.288						10	25			
1,3,6,8-TCDF											
303.9016	16.186	16.186	0		43329	7699	18	45	428		
305.8987	16.186	16.186	0		55294	9985	24	60	416	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.804	17.804	0		27400	4703	27	67	174		
321.8936	17.813	17.804	1		32406	5212	7	17	745	0.85(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.532	20.532	0		73204	9732	18	45	541		
305.8987	20.523	20.532	-1		91807	11784	24	60	491	0.80(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.659	21.659	0		21515	2915	27	67	108		
321.8936	21.650	21.659	-1		26470	3363	7	17	480	0.81(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.072	22.072	0		32270	4169	18	45	232		
305.8987	22.063	22.072	-1		42268	5203	24	60	217	0.76(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.167	22.167	0		25374	3037	27	67	112		
321.8936	22.149	22.167	-1		33357	3722	7	17	532	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	23.706	23.706	0		32443	5107	18	45	284		
305.8987	23.697	23.706	-1		44285	7203	24	60	300	0.73(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.757	23.757	0		24107	4090	27	67	151		
1,3,4,6,8-PeCDF											
339.8597	24.119	24.119	0		42897	7179	2	5	3590		
341.8567	24.101	24.119	-1		26885	5048	4	10	1262	1.60(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.166	26.166	0		30013	4216	13	32	324		
357.8516	26.158	26.166	-1		20611	3257	10	25	326	1.46(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.806	30.806	0		26774	3220	13	32	248		
357.8516	30.815	30.806	1		16904	2007	10	25	201	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.974	30.974	0		36159	4045	9	22	449		
341.8567	31.000	30.974	2		22384	2622	12	30	219	1.62(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.250	33.250	0		42505	5788	50	125	116		
375.8178	33.267	33.250	1		33752	5024	15	37	335	1.26(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.311	34.311	0		29002	4807	14	35	343		
391.8127	34.319	34.311	1		21754	3912	12	30	326	1.33(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.610	36.610	0		27870	6094	14	35	435		
391.8127	36.610	36.610	0		21782	4999	12	30	417	1.28(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.963	36.963	0		37010	8343	50	125	167		
375.8178	36.963	36.963	0		30785	7337	15	37	489	1.20(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.972	38.972	0		24197	6959	12	30	580		
425.7737	38.972	38.972	0		23161	6428	10	25	643	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:50:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 30

Non-2,3,7,8-sub-TCDF, RT: 19.946

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	79976	12495

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	79976	12495

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
20.842	745	243	3144	272	1.80	0.24	RQ
20.842	745	243	967	315	0.7927		Empc Correction
24.075	621	118	1367	222	0.9205	0.45	RQ
24.075	621	118	806	153	0.6607		Empc Correction
Signal Totals:							
	1366	361	1773	468			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5877	855				0.30	RQ
	3139	829					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.721 = (5877 * 40.000) / (79976 * 1.080)
Empc Amount: 1.453 = (3139 * 40.000) / (79976 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d
Lims ID: WDM
Client ID:
Inject. Date: 18-Aug-2021 14:50:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517461 Lims Sample ID: 30

F1 PeCDFs, RT: 24.697

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
15.816	99	51	68	44		1.46	
24.325	587	136	294	137		2.00	R
24.737	75	52	78	54		0.96	R
Signal Totals:							
	761	239	440	235			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1201	474				1.73	RQ
	1039	529					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1201 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (1039 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	18-Aug-2021 14:50:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	30

Non-2,3,7,8-sub-HxCDD, RT: 35.460

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.430	583	185	393	84		1.48	R
Signal Totals:							
	583	185	393	84			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	976	269				1.48	RQ
	880	188					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (976 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (880 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:48:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

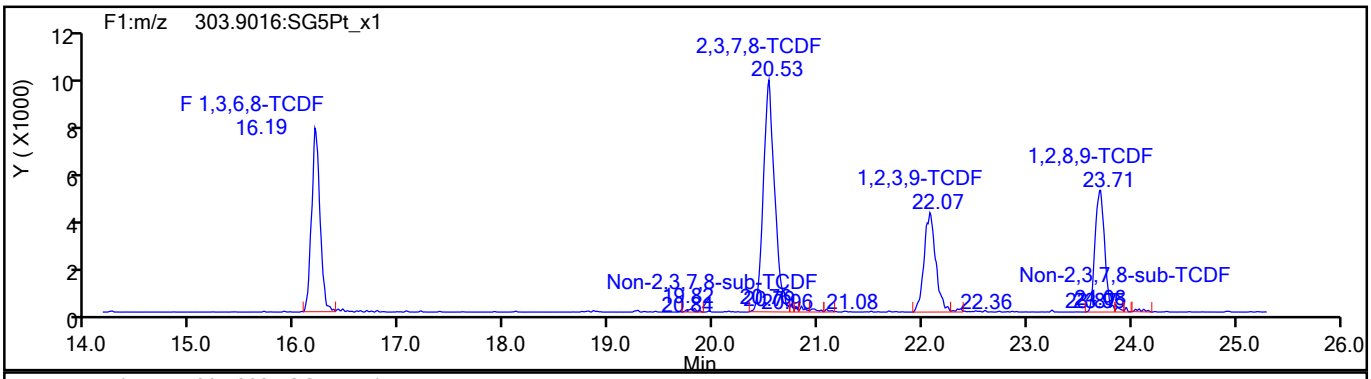

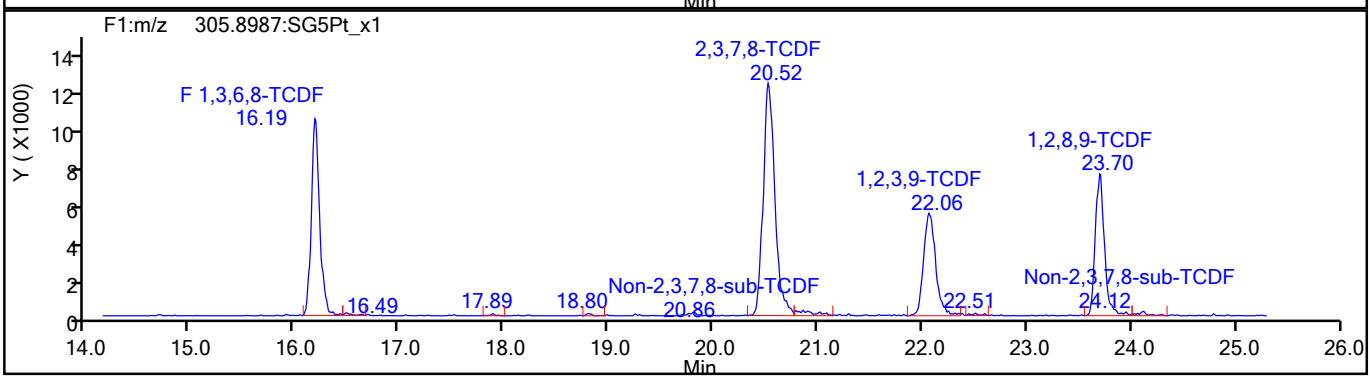

TCDF Standards

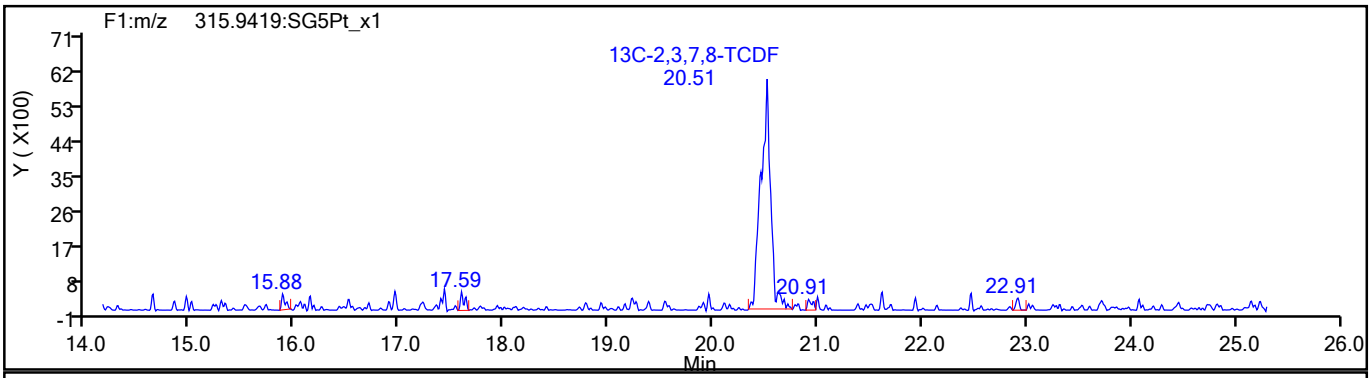

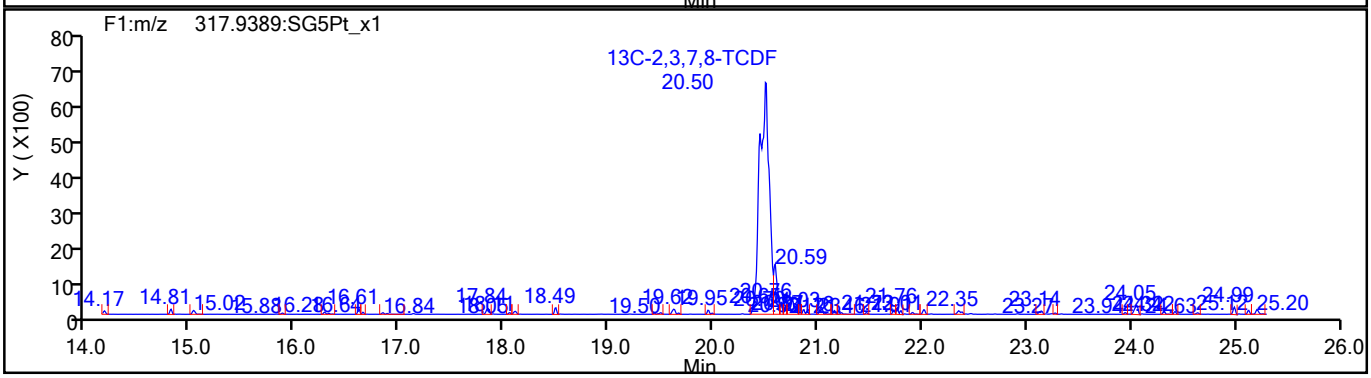

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Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

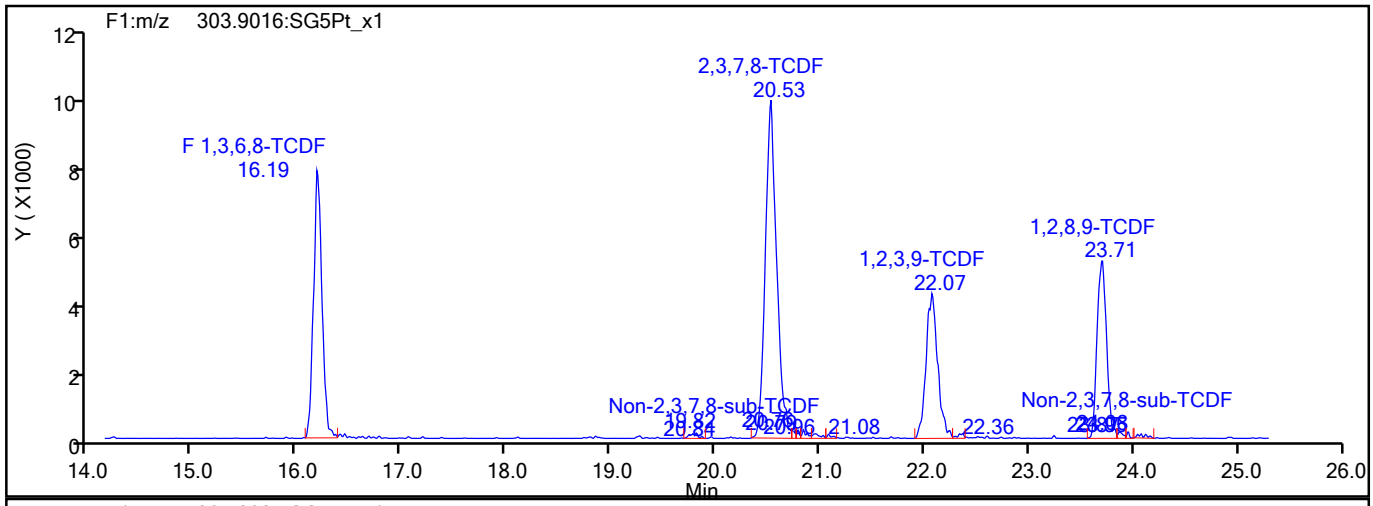

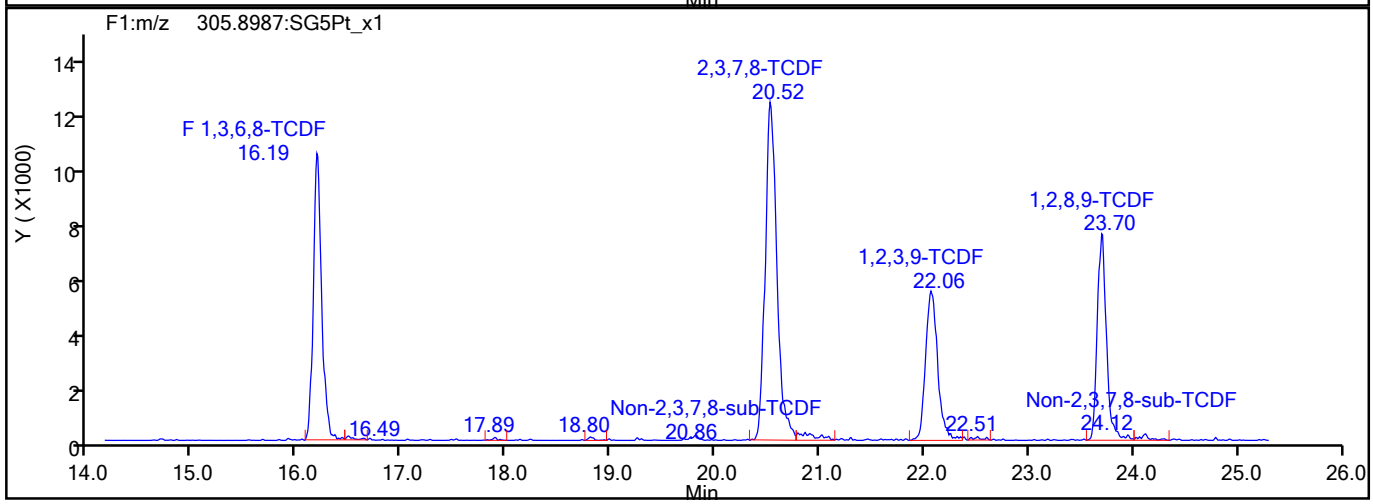

TCDF Interference Mass

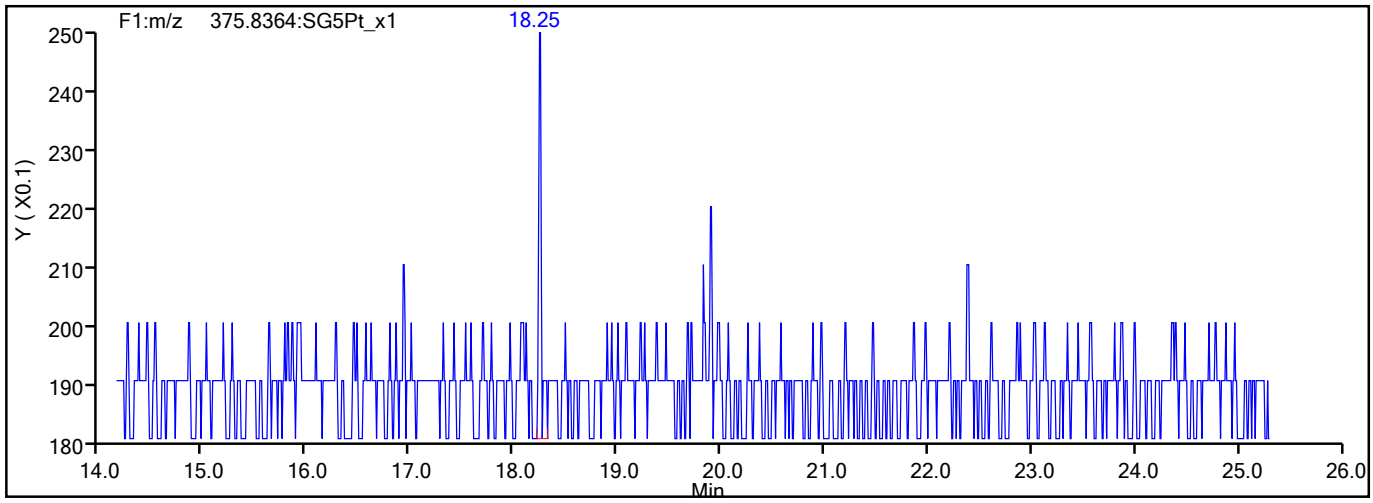

786424

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

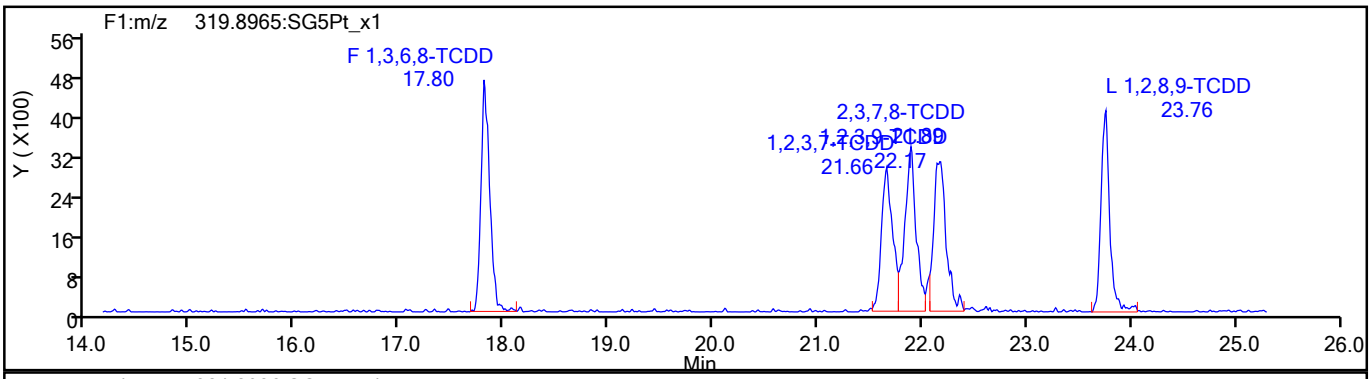

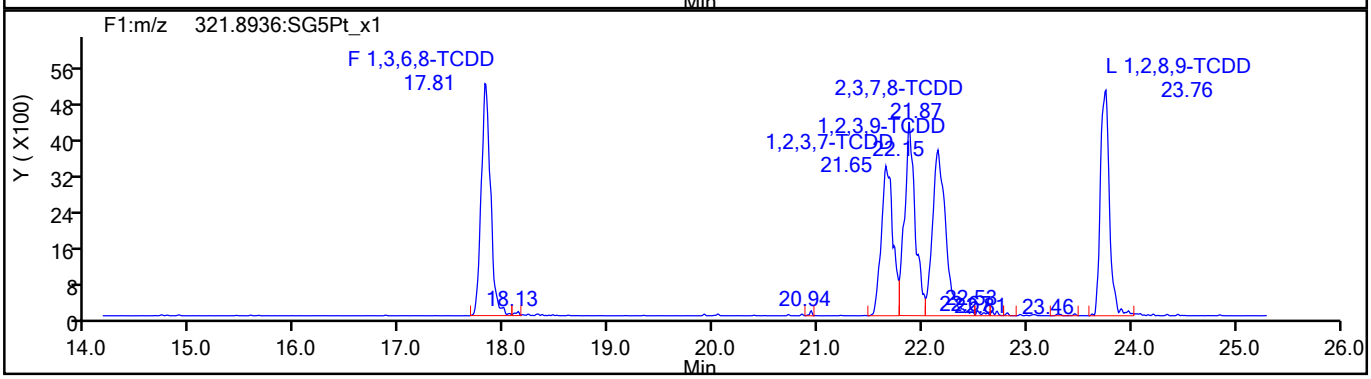

TCDD Standards

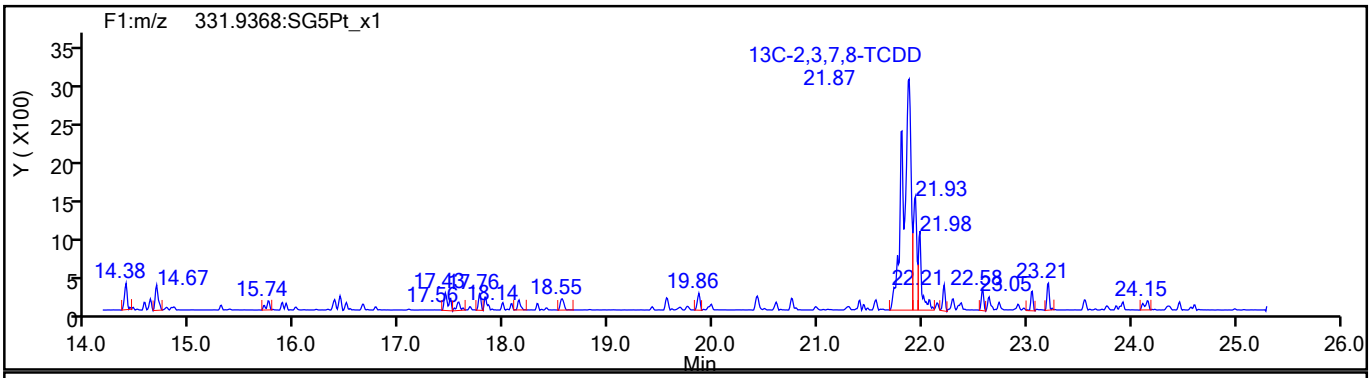

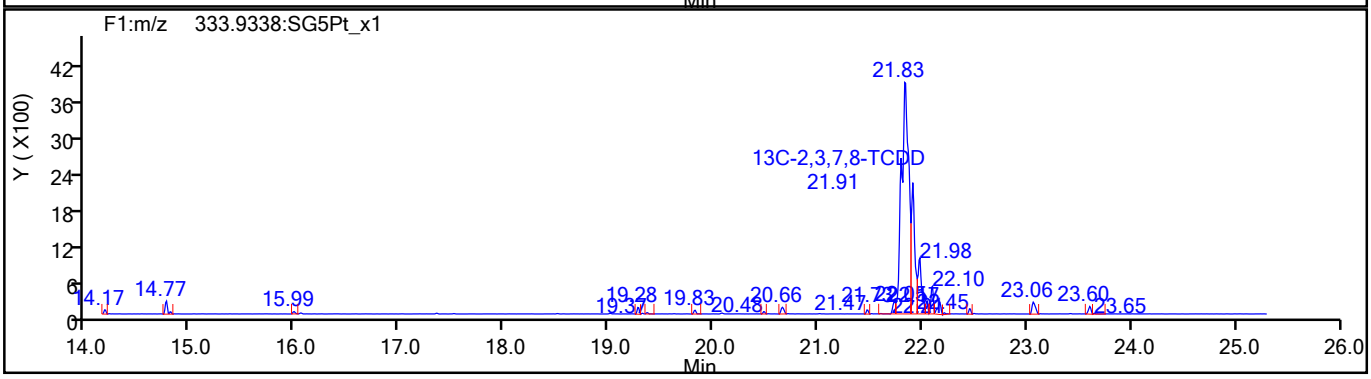

786425

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

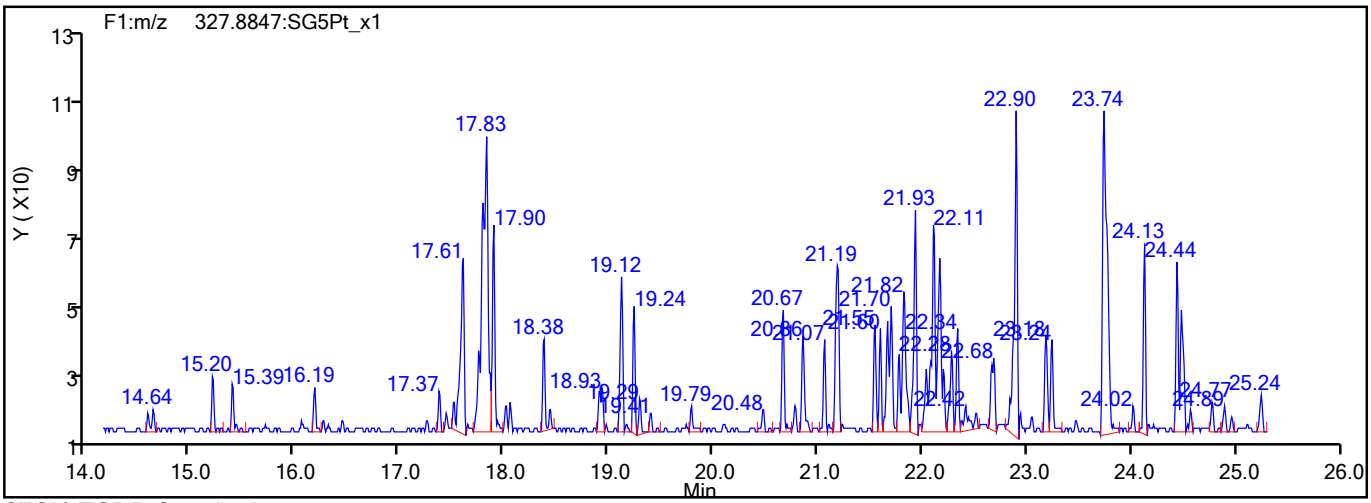

37Cl4-TCDD Standards

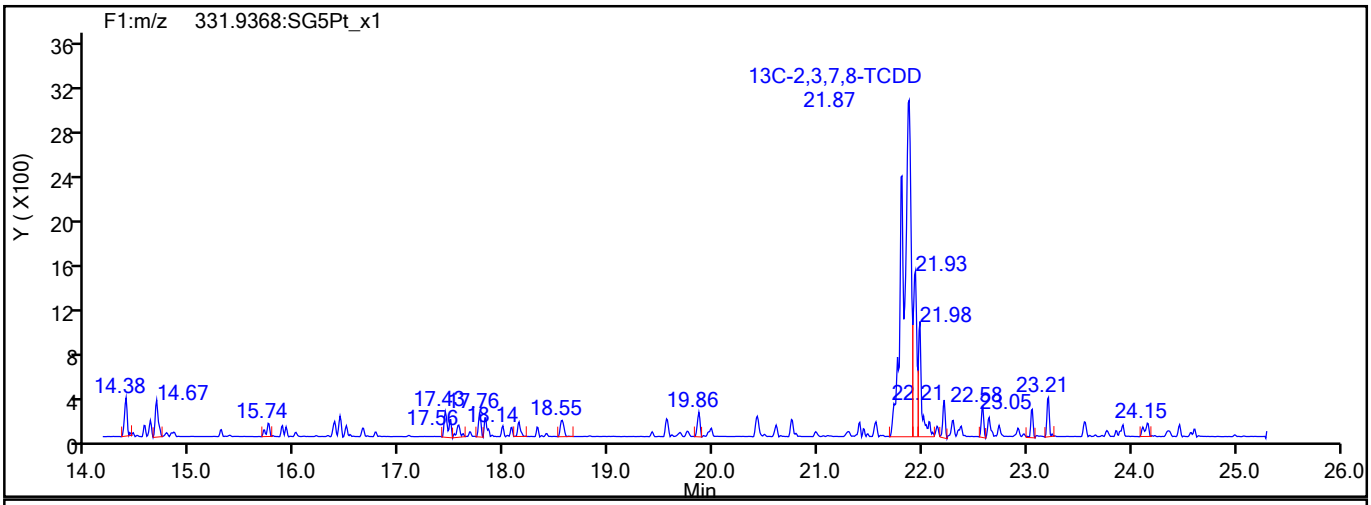

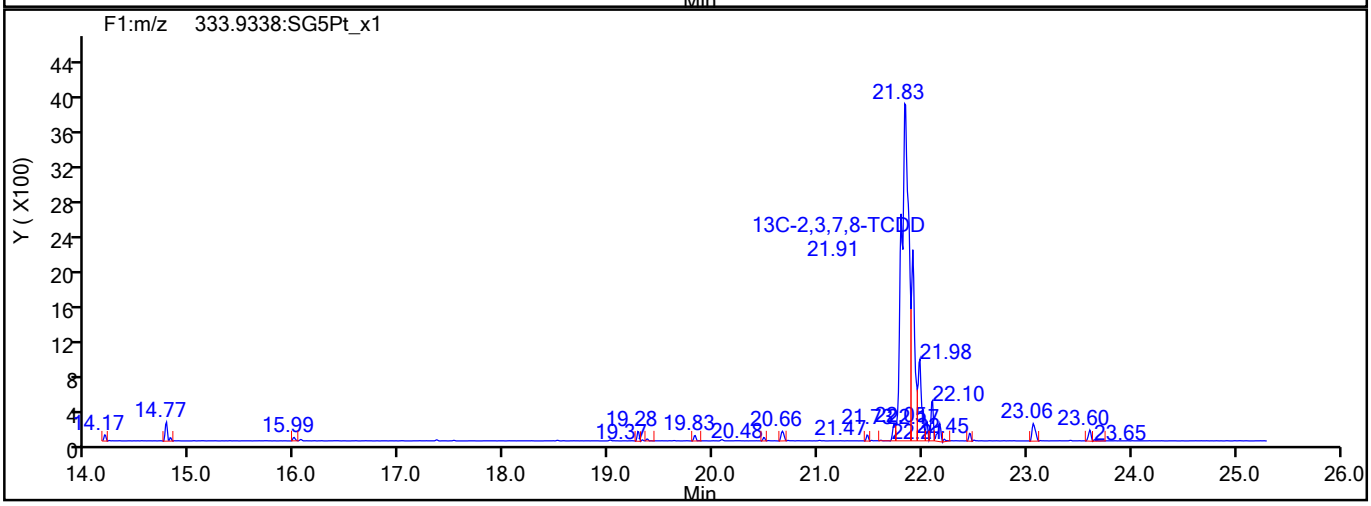

786426

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

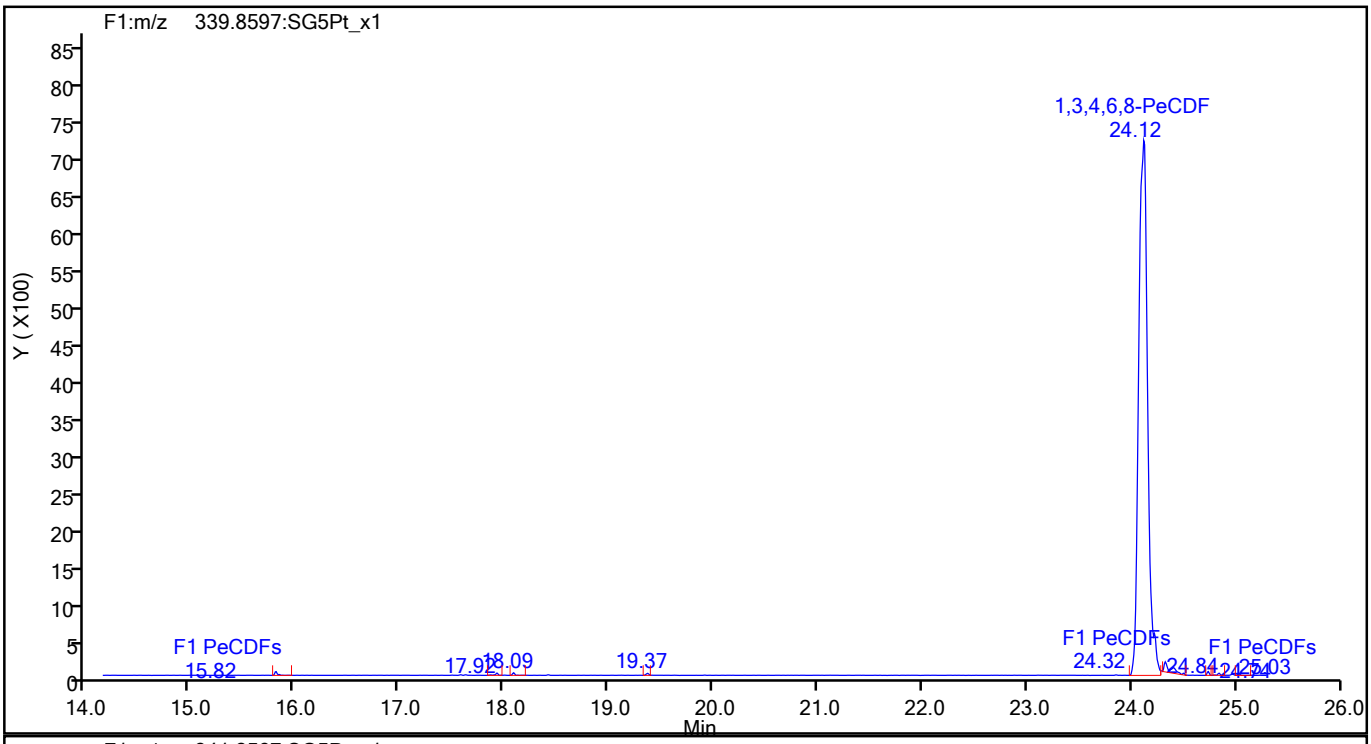

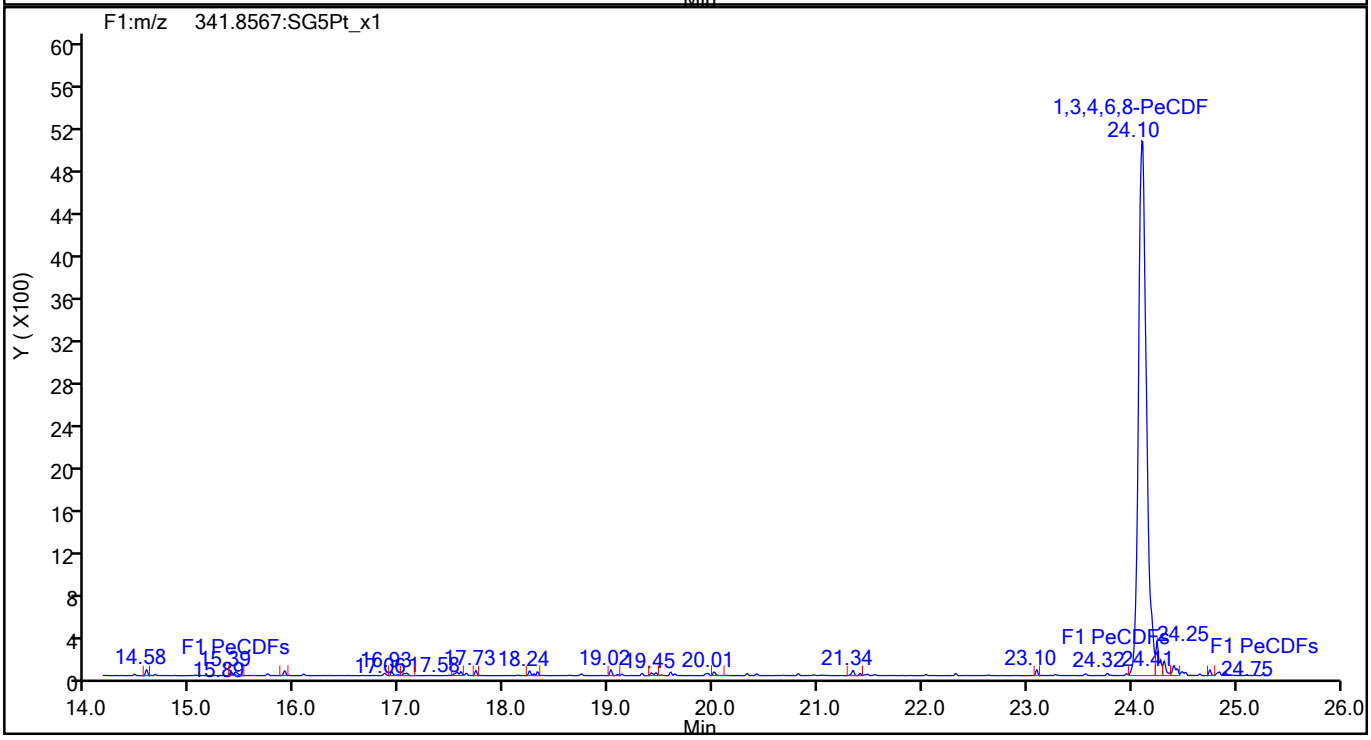

786427

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

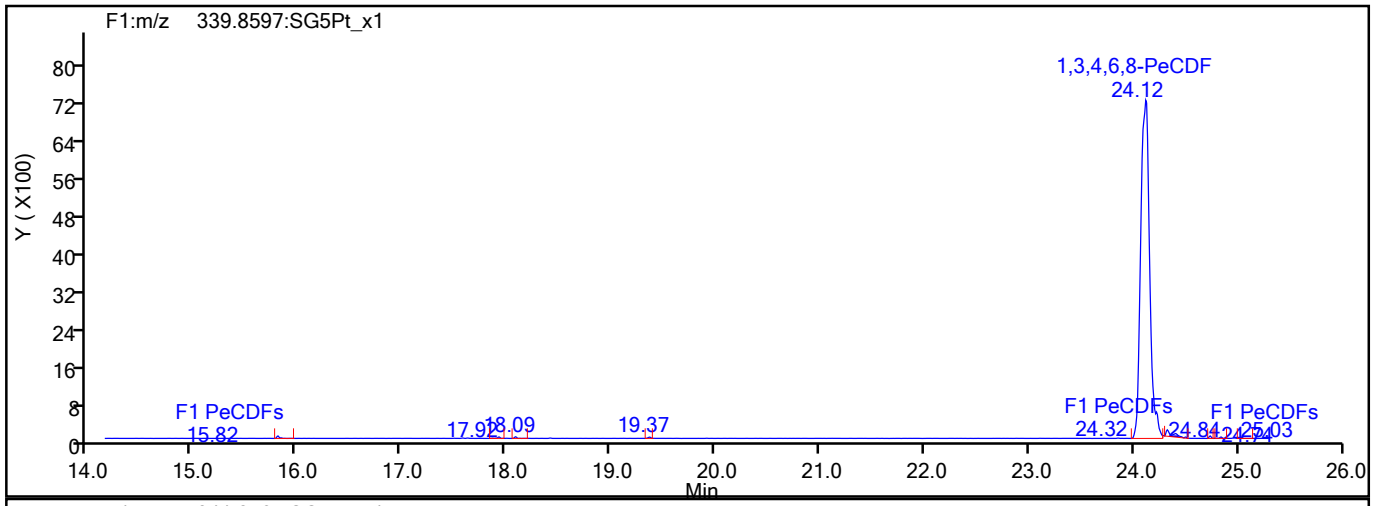

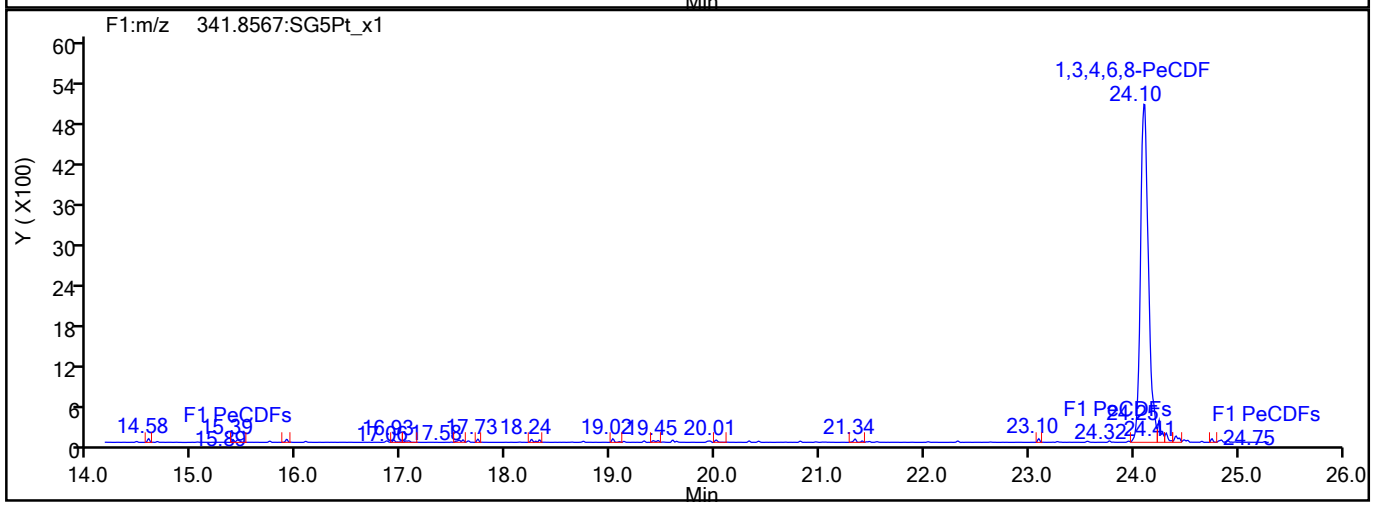

F1 PeCDFs Interference Mass

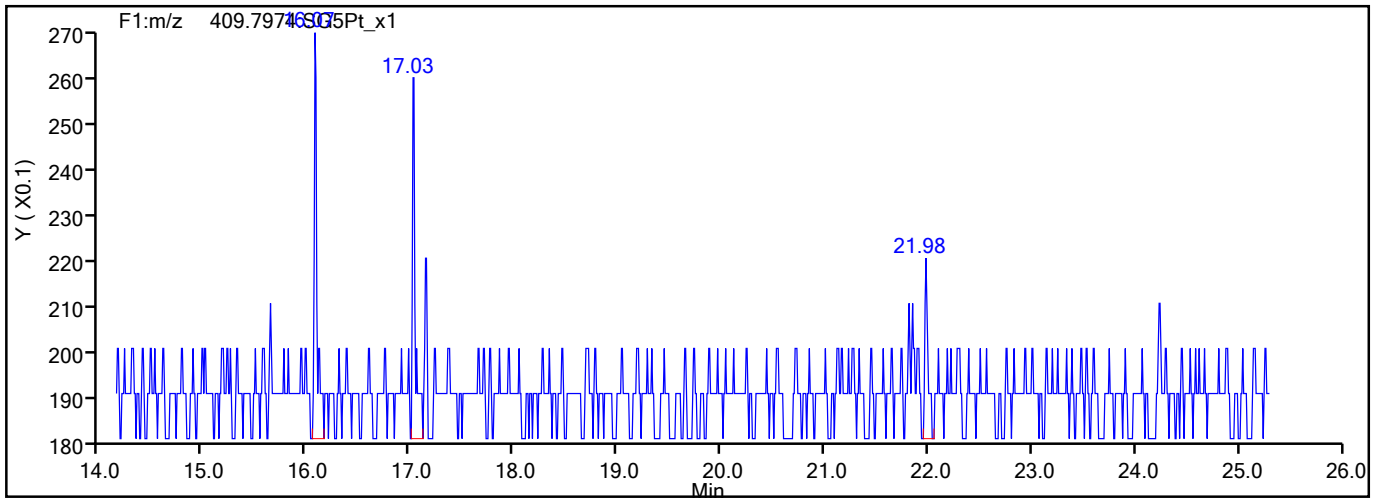

786428

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

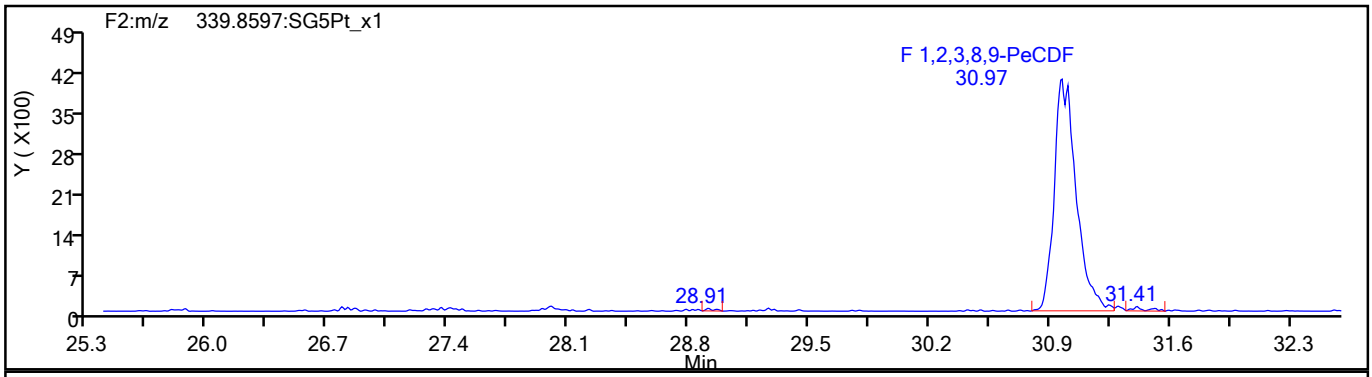

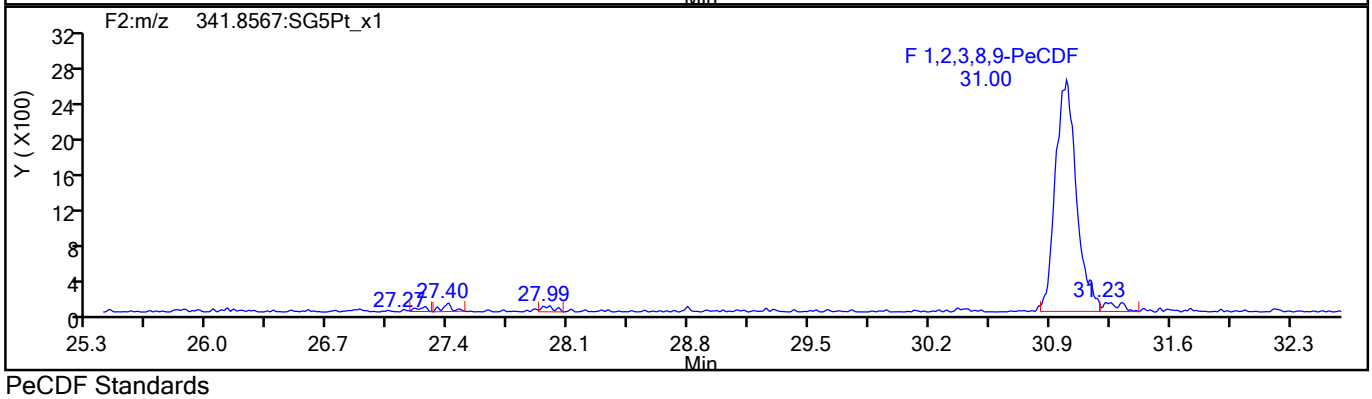

PeCDF Standards

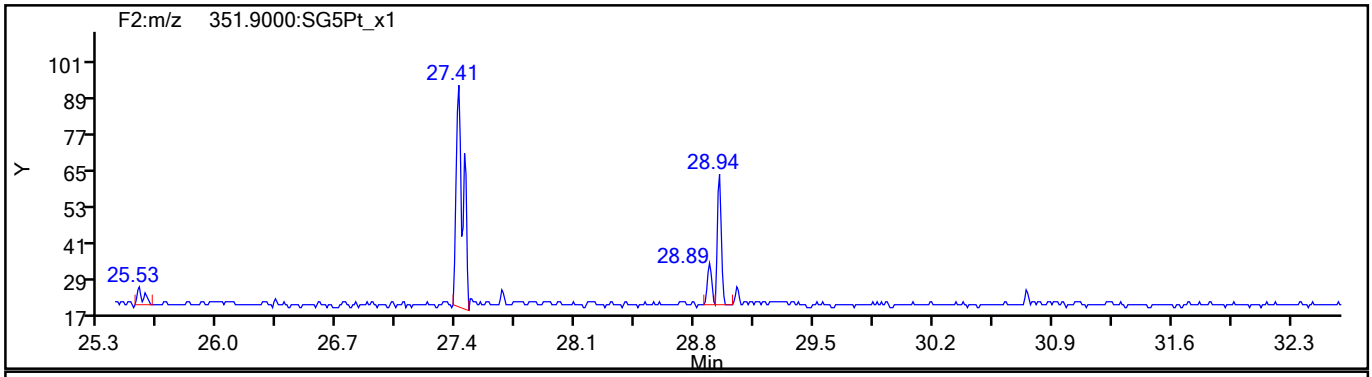

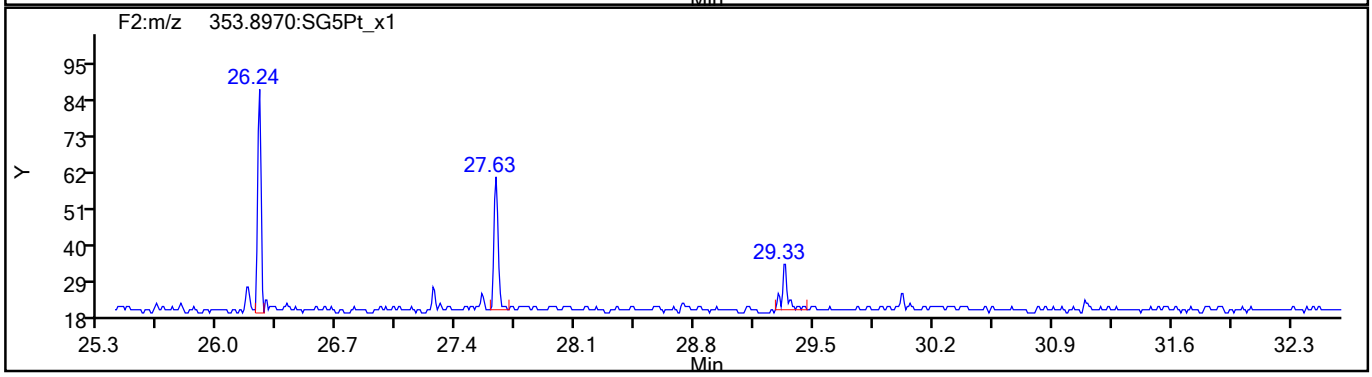

786429

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

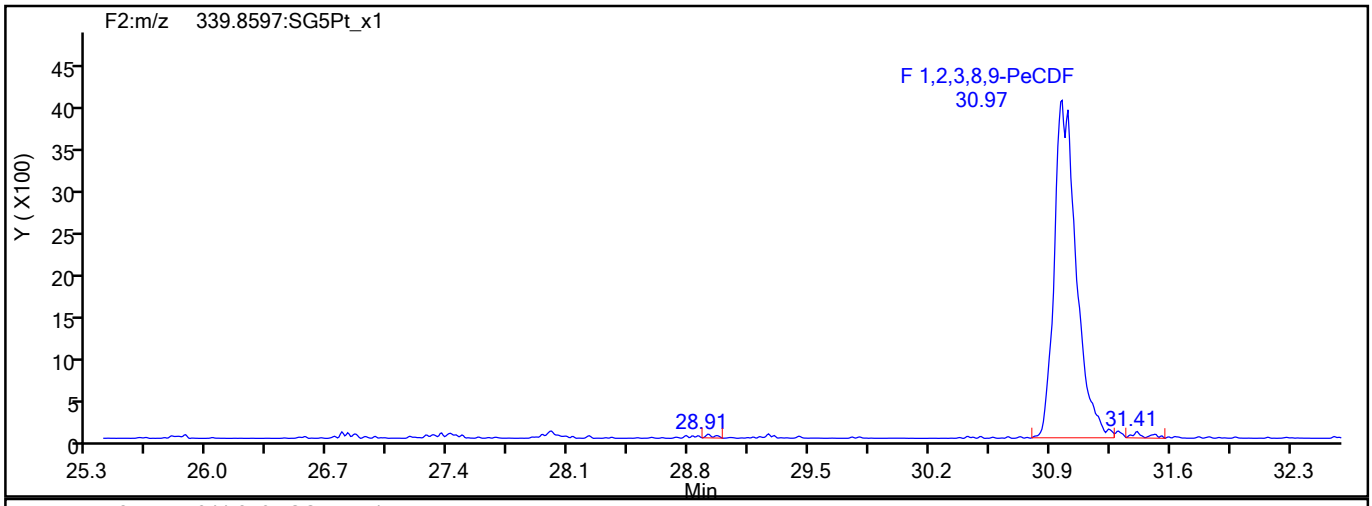

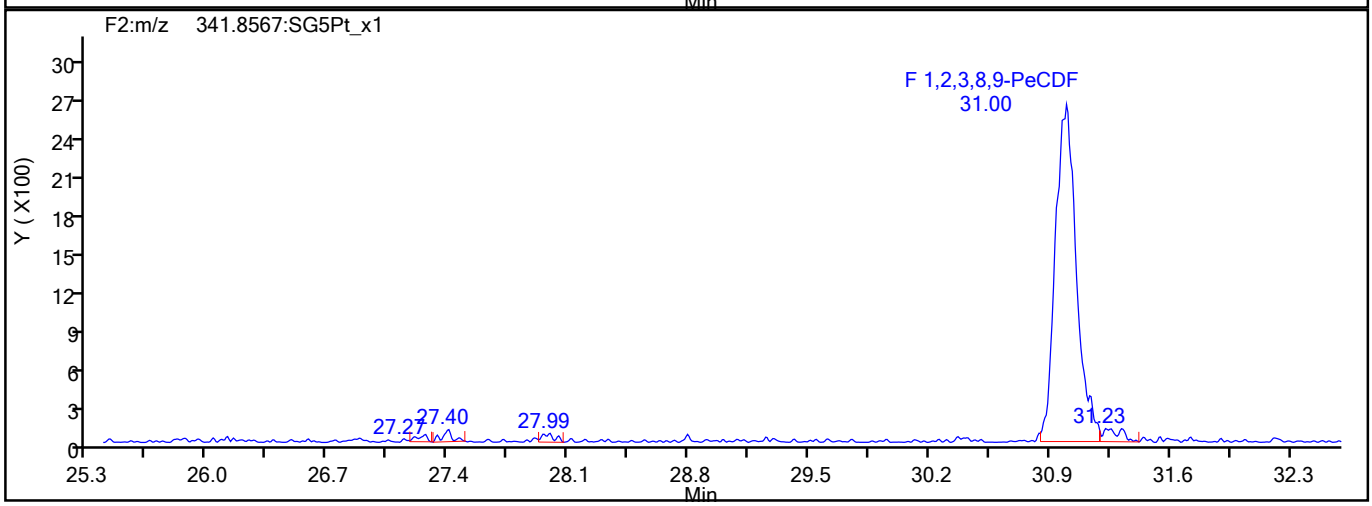

PeCDF Interference Mass

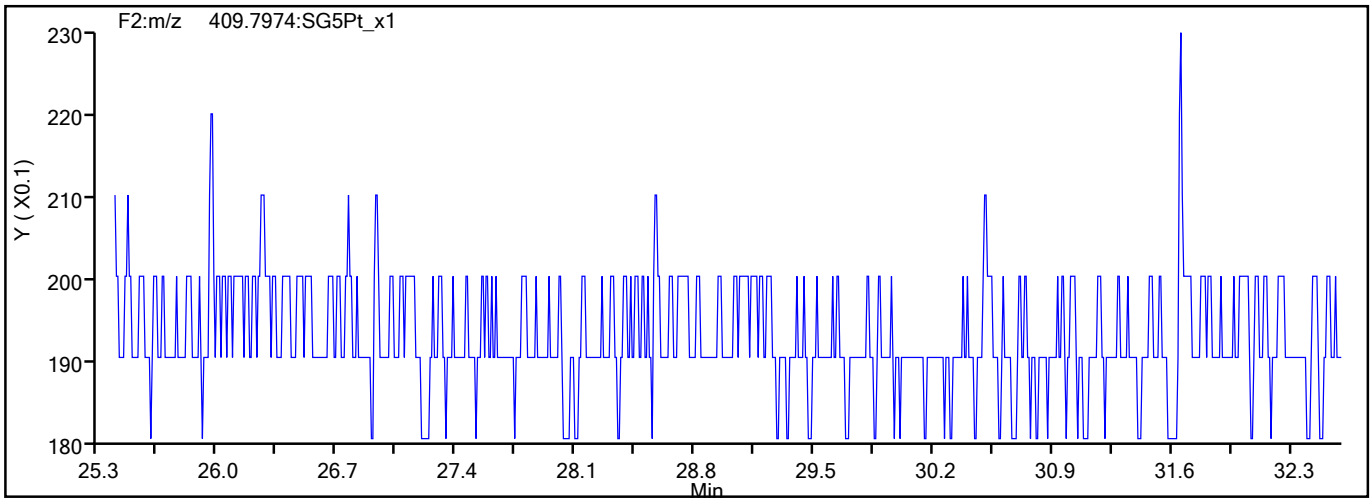

786430

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

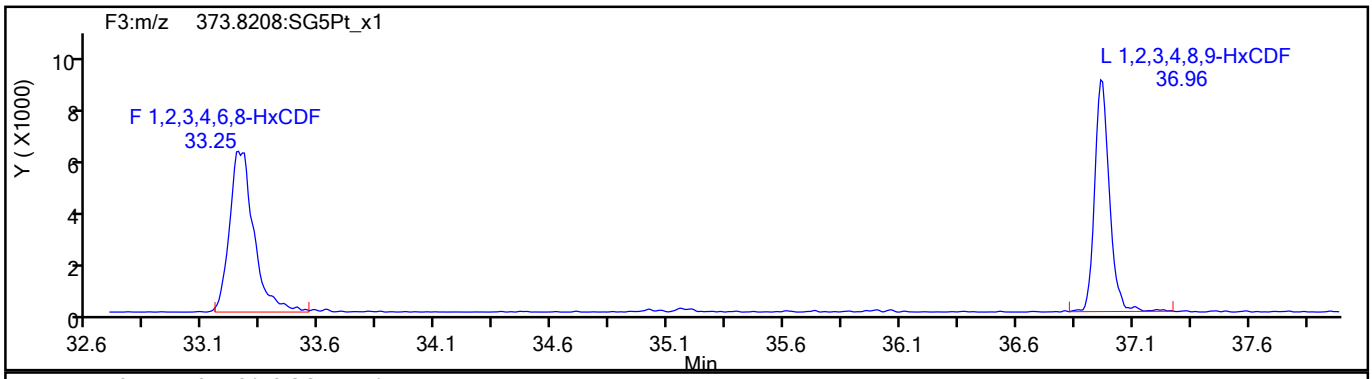

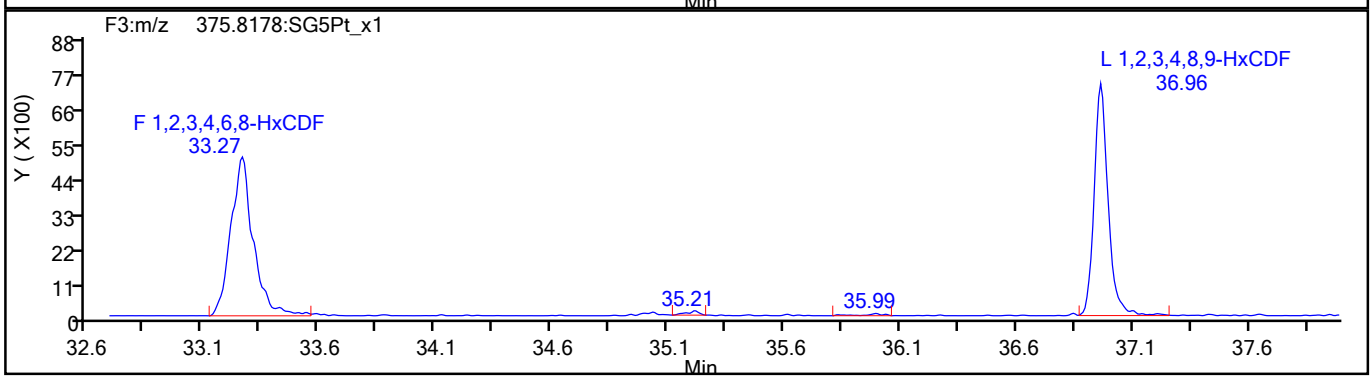

HxCDF Standards

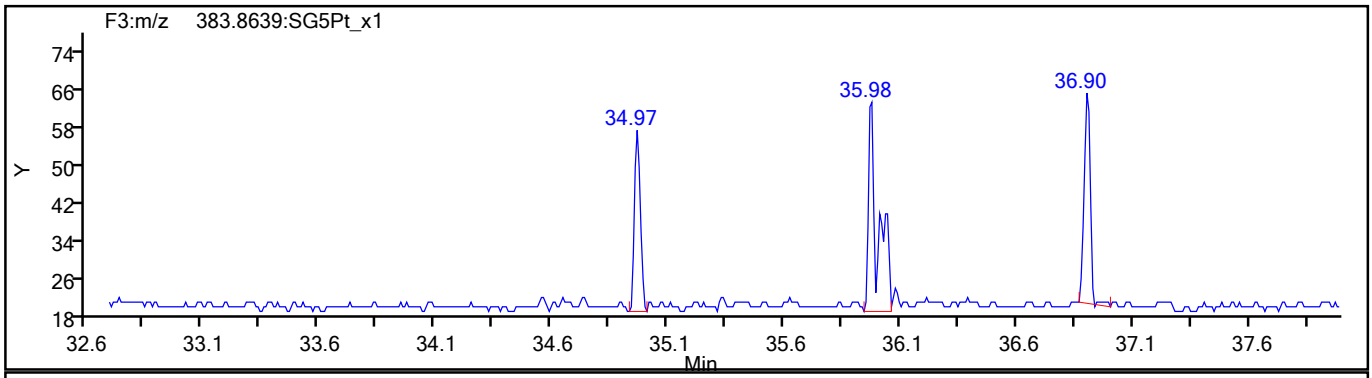

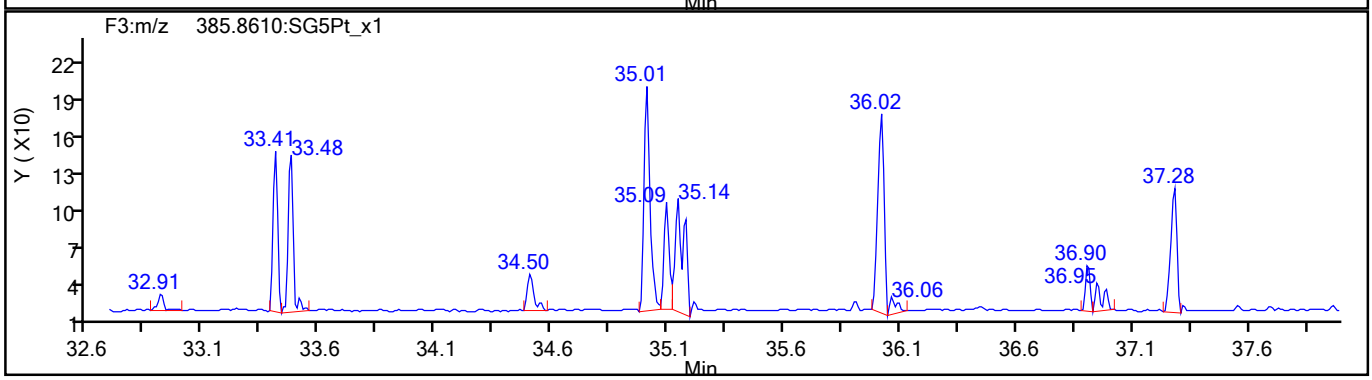

786431

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

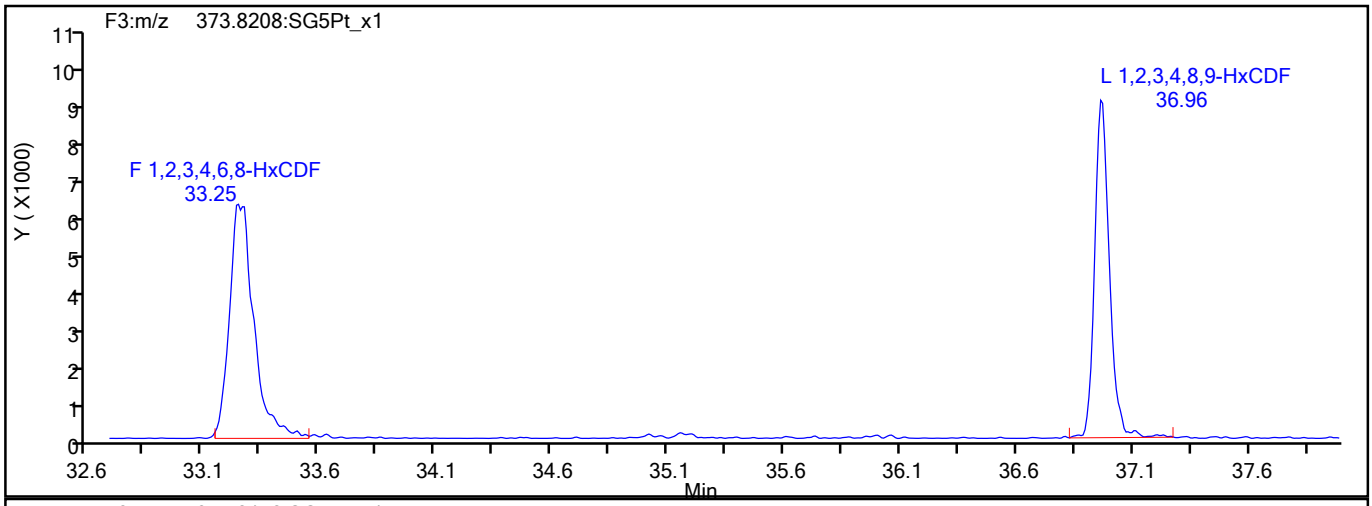

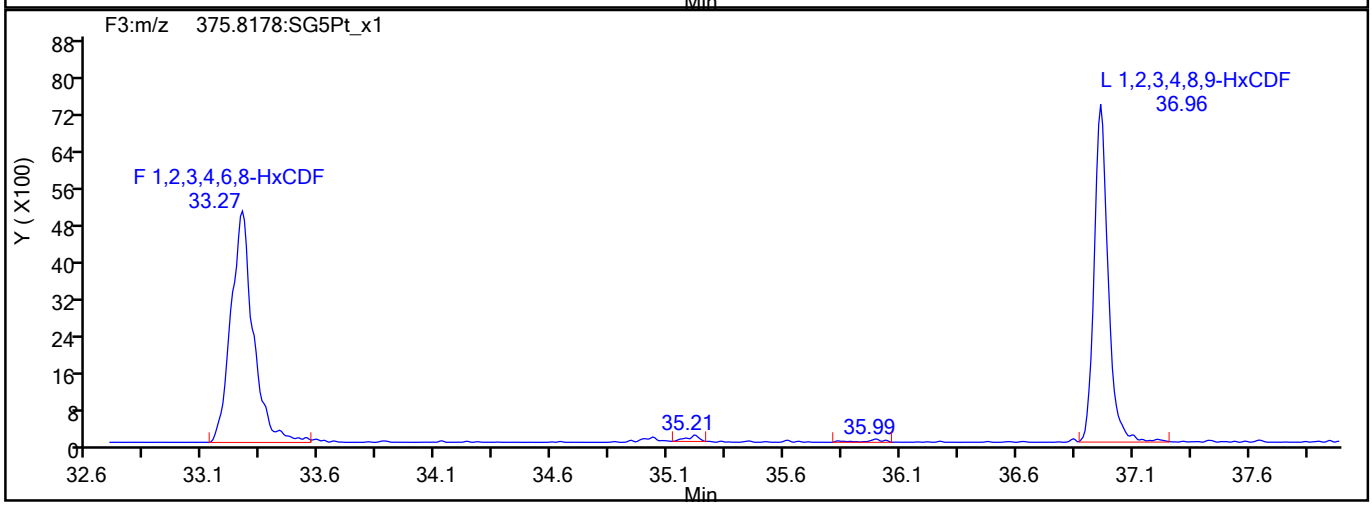

HxCDF Interference Mass

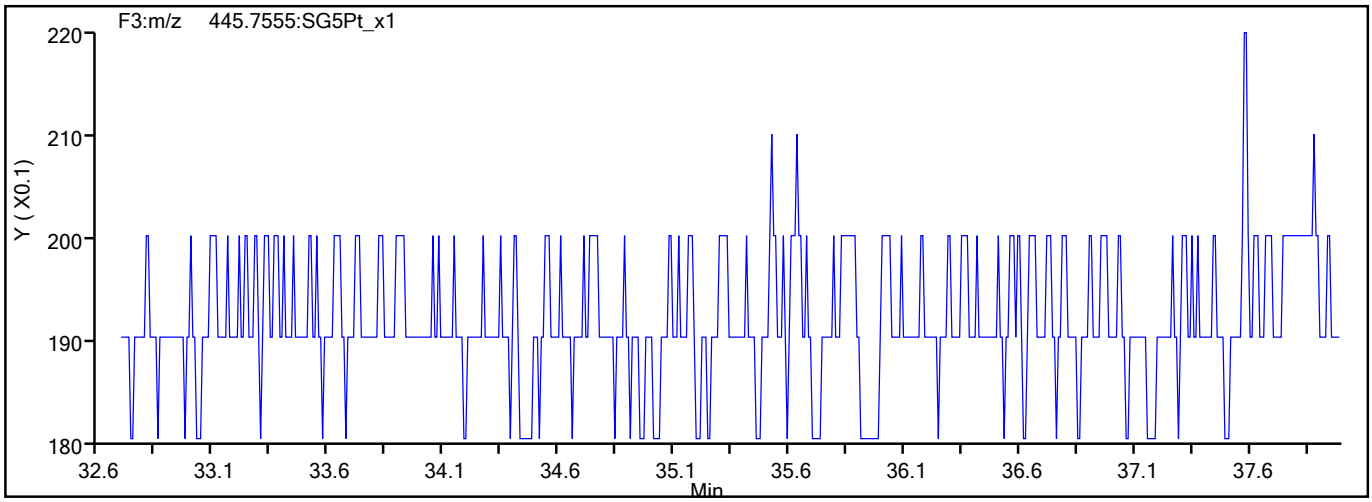

786432

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

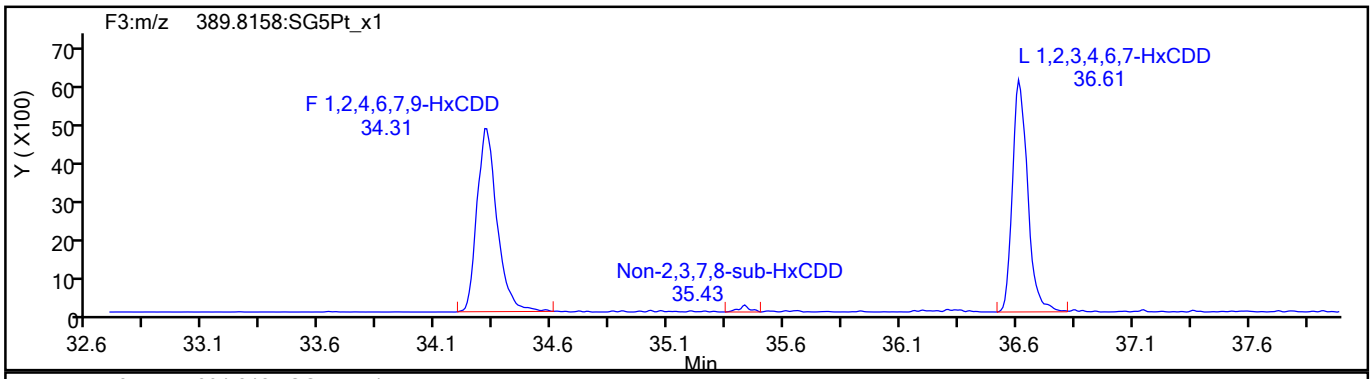

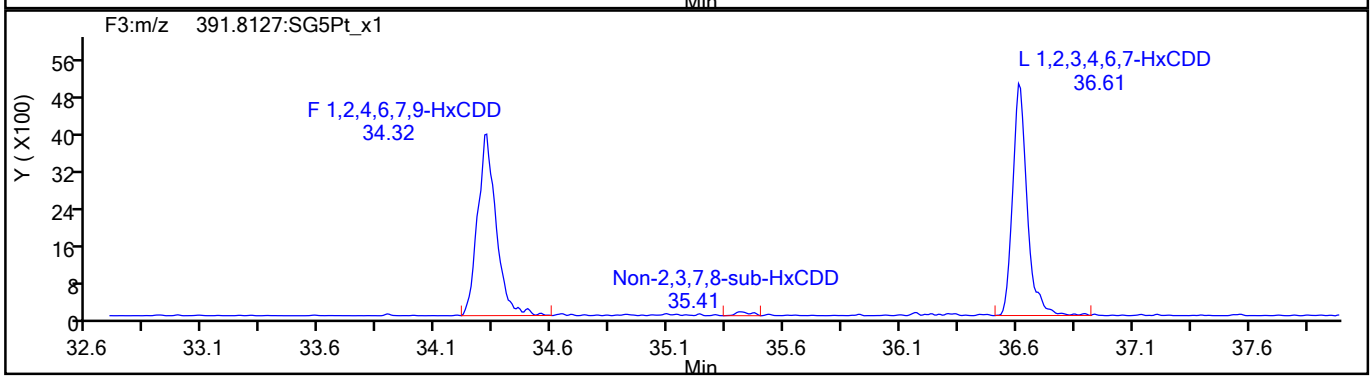

HxCDD Standards

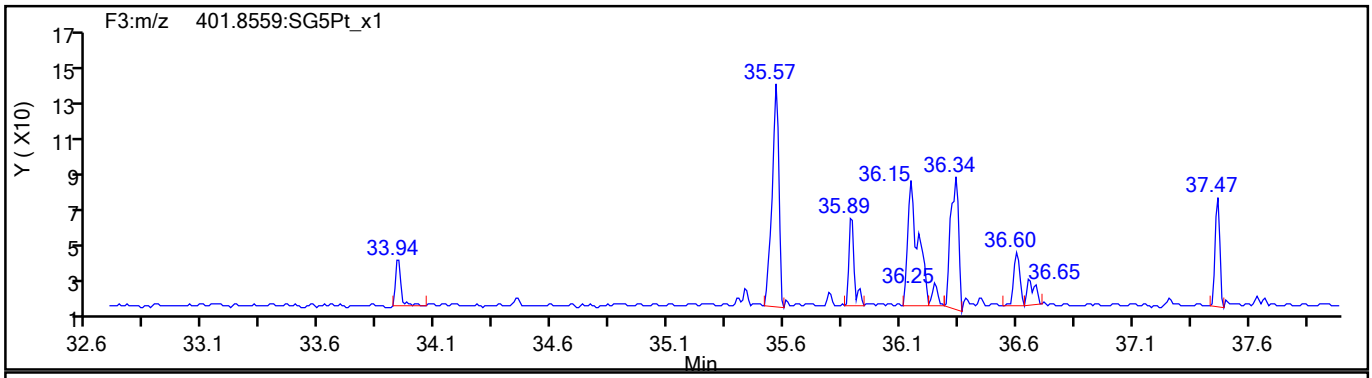

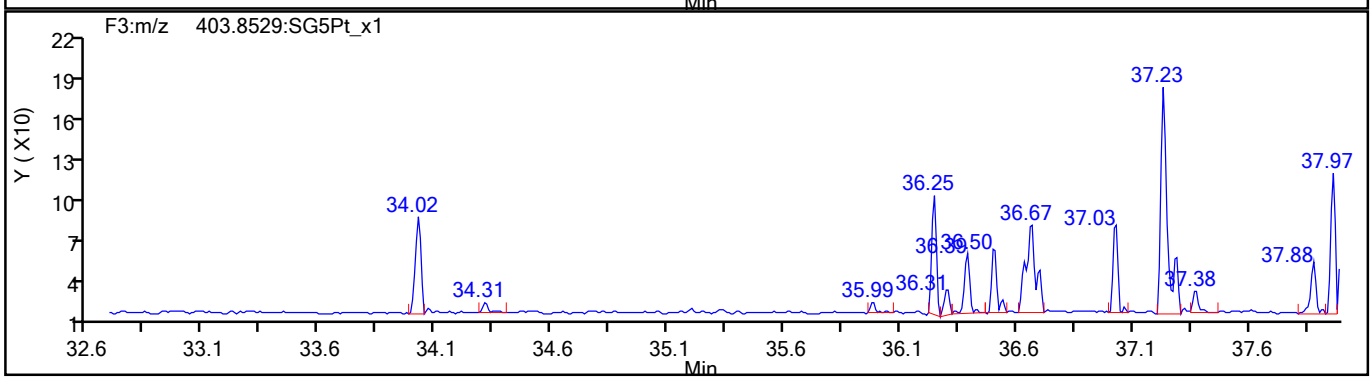

786433

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

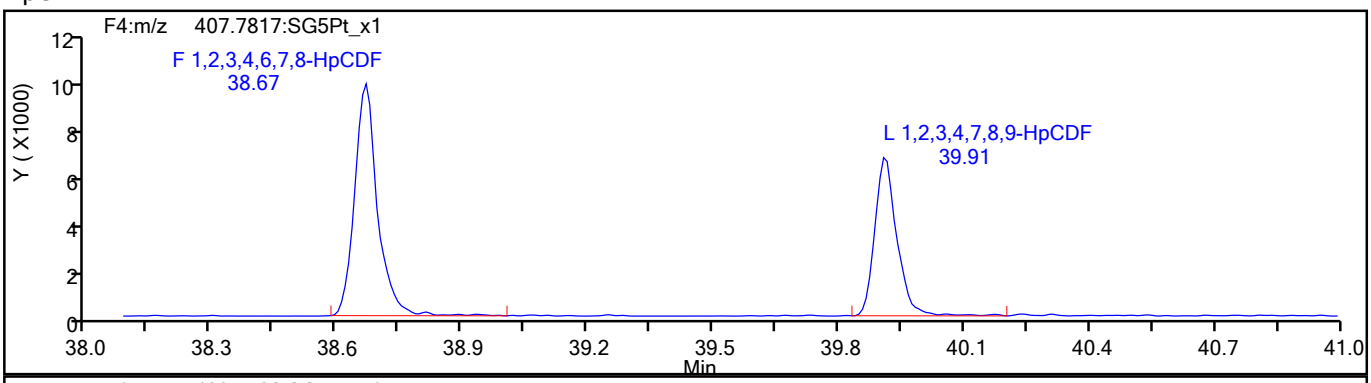

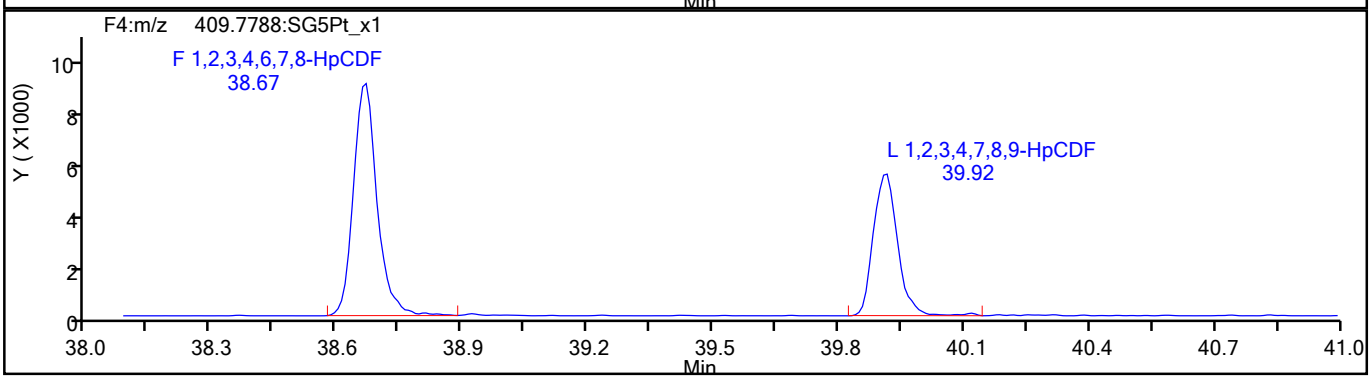

HpCDF Standards

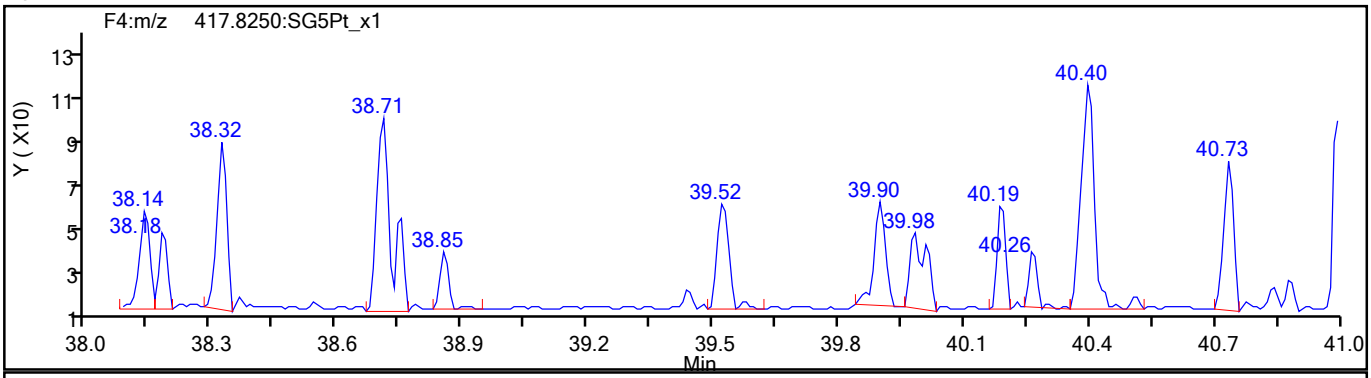

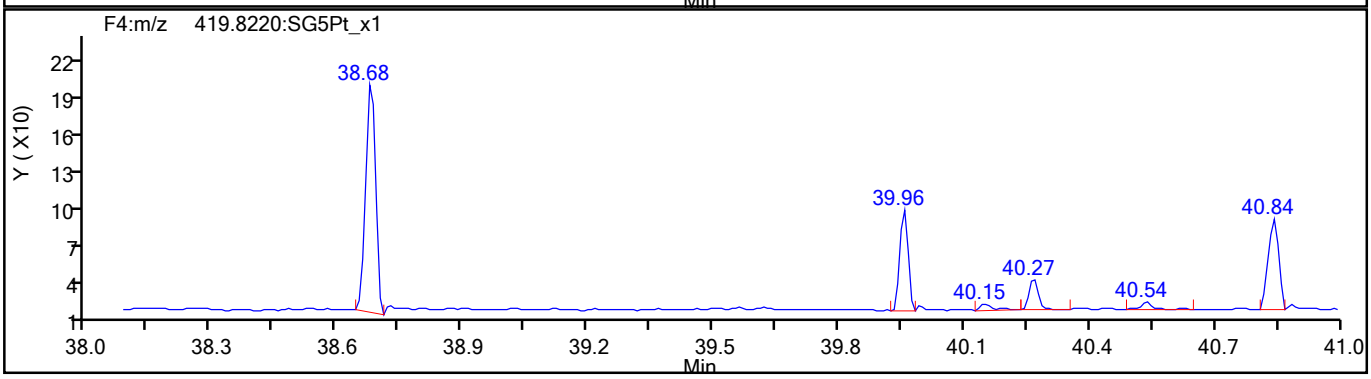

786434

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

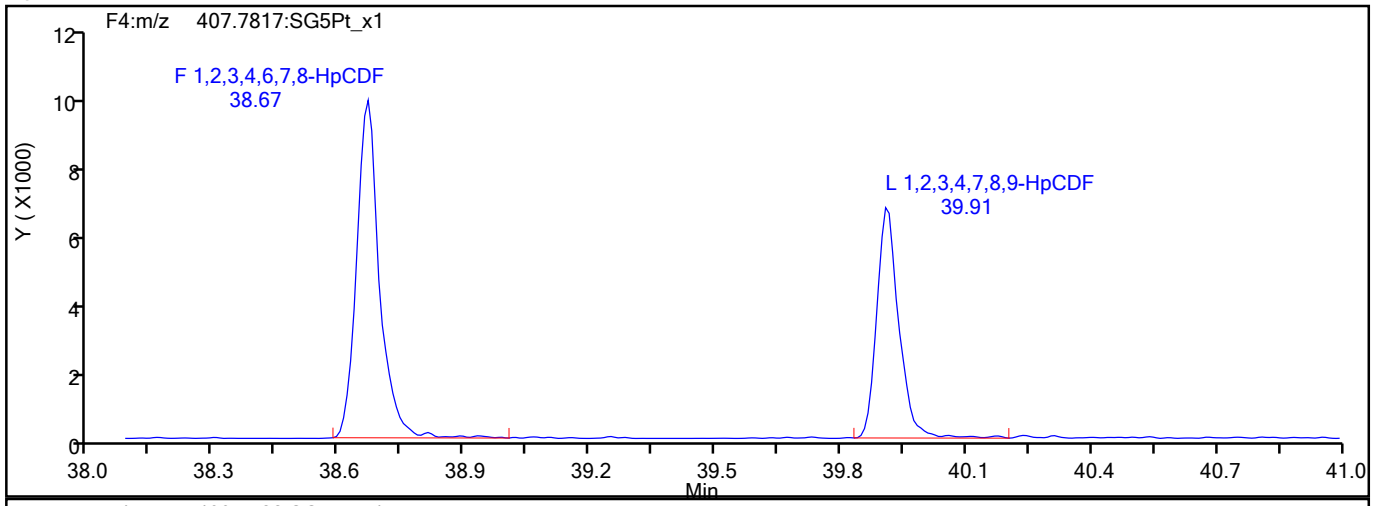

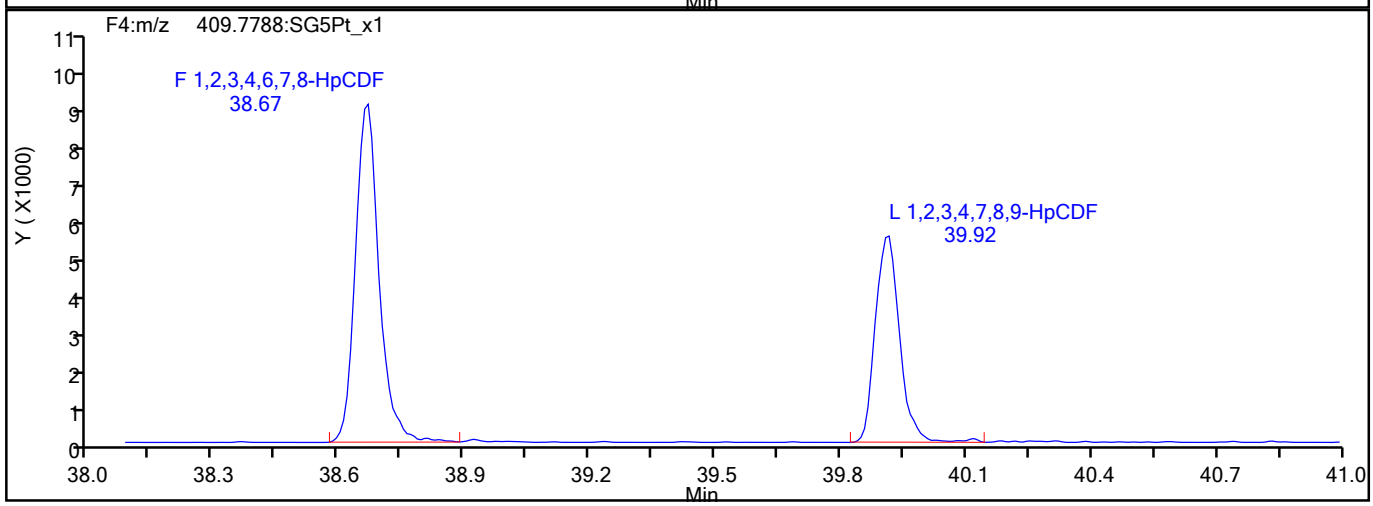

HpCDF Interference Mass

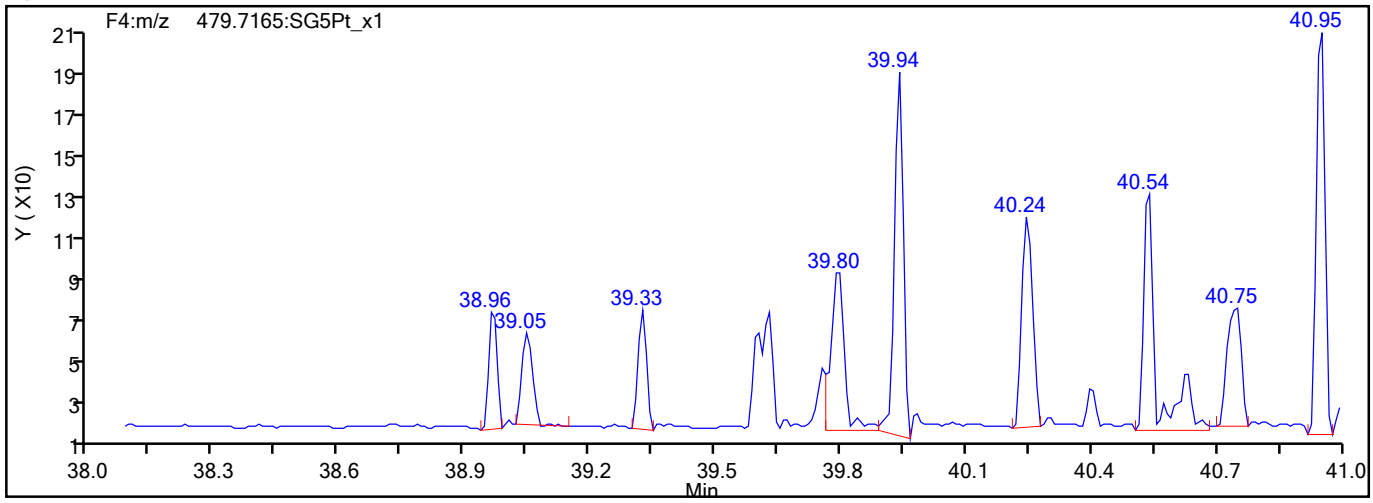

786435

Report Date: 19-Aug-2021 15:48:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

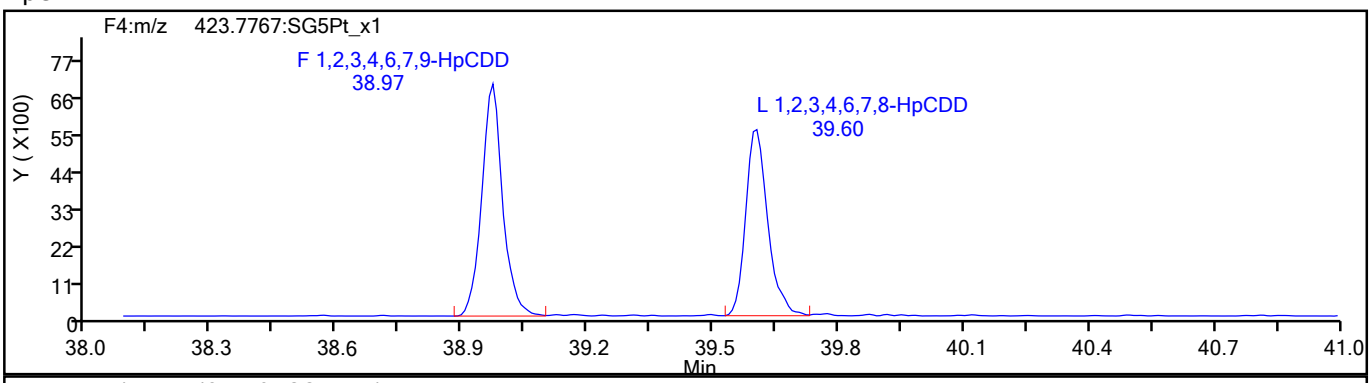

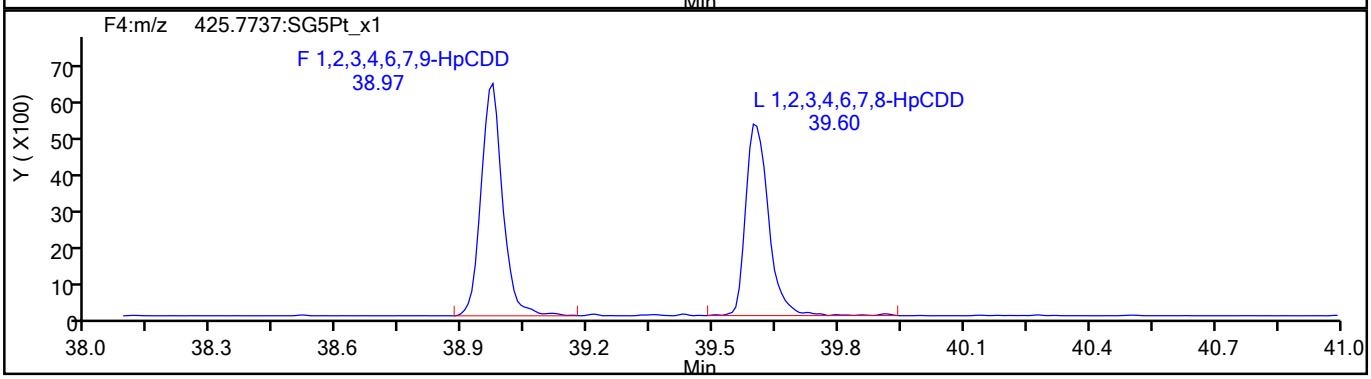

HpCDD Standards

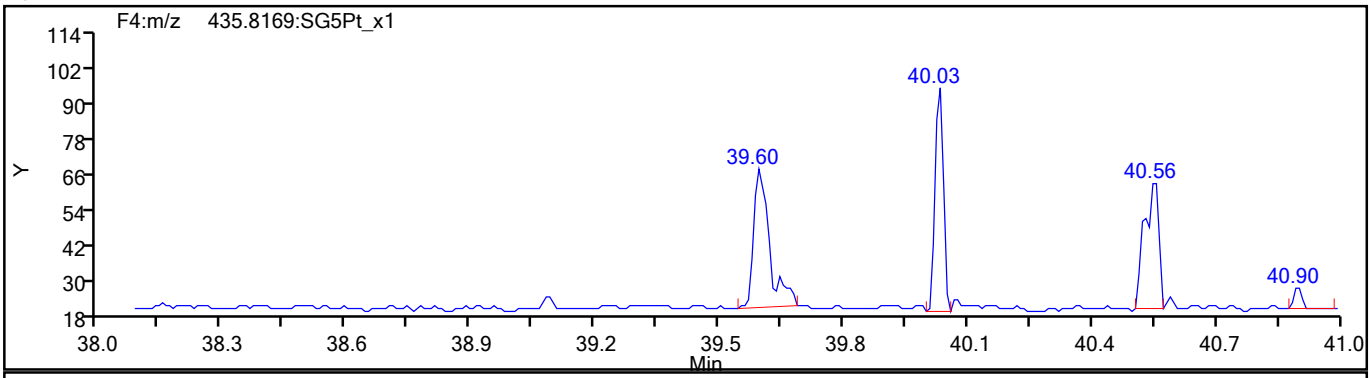

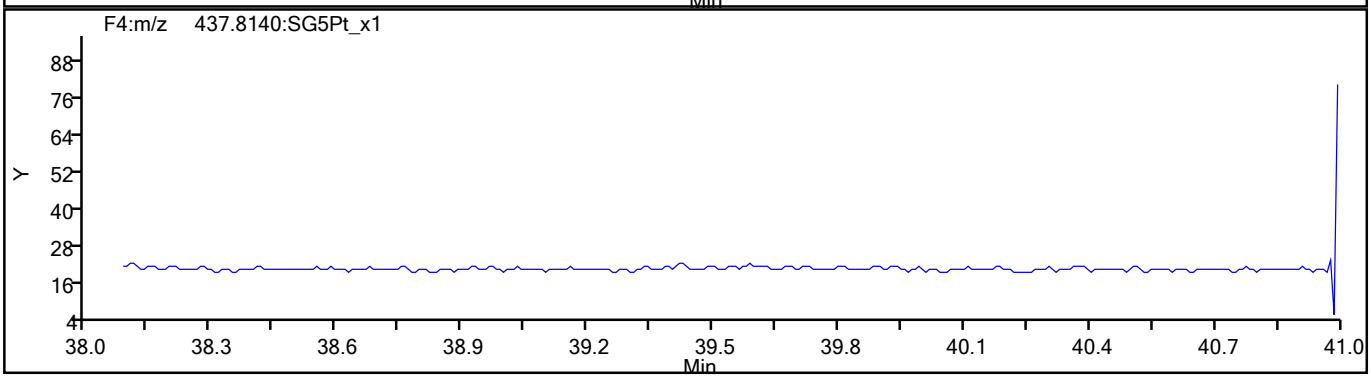

786436

Report Date: 19-Aug-2021 15:48:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

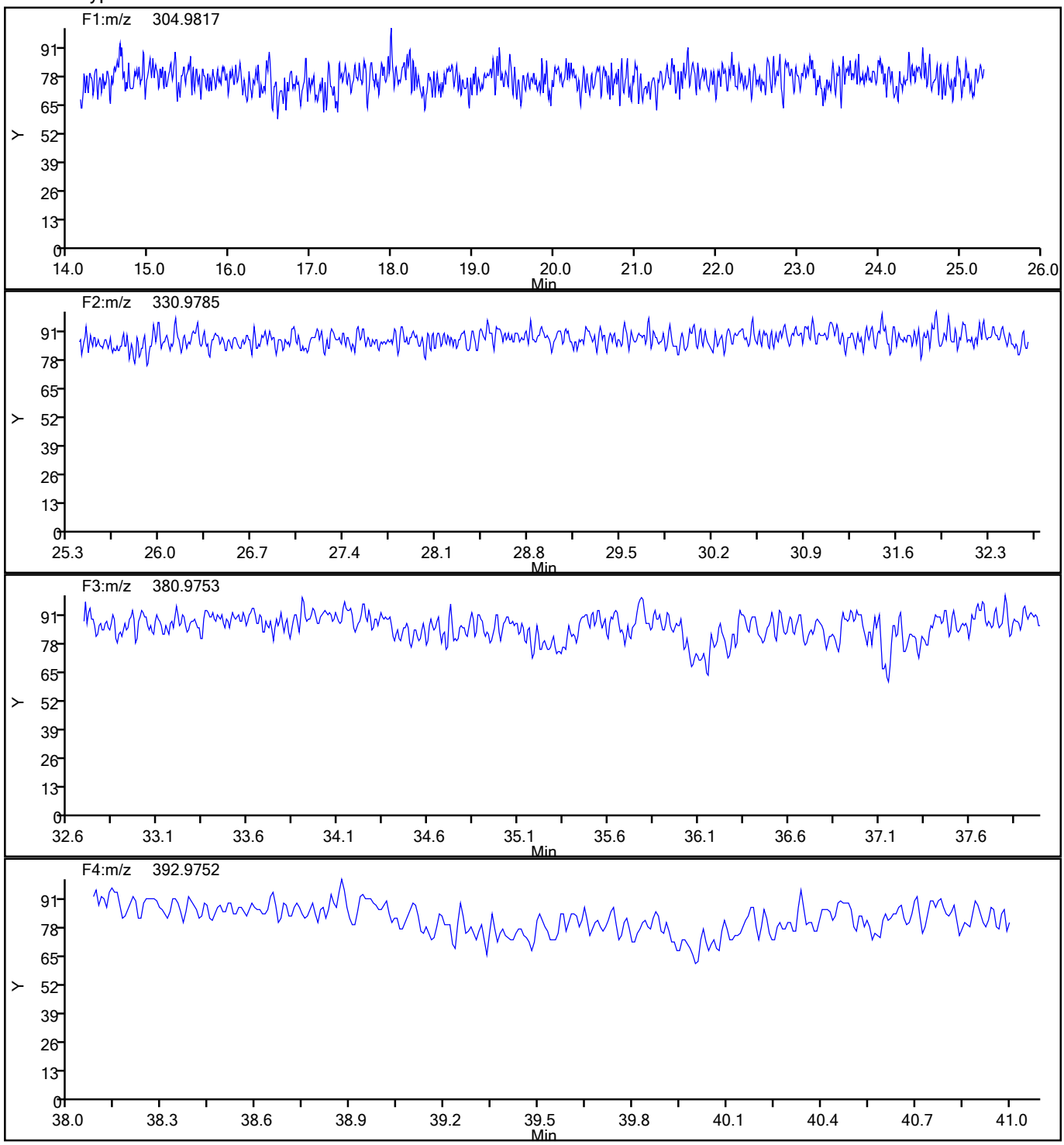

786437

Report Date: 19-Aug-2021 15:48:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_33.d		
Injection Date:	18-Aug-2021 14:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517461	Sample Line#:	30
Column Type:	DB-5	Column Dia:	0.32 mm

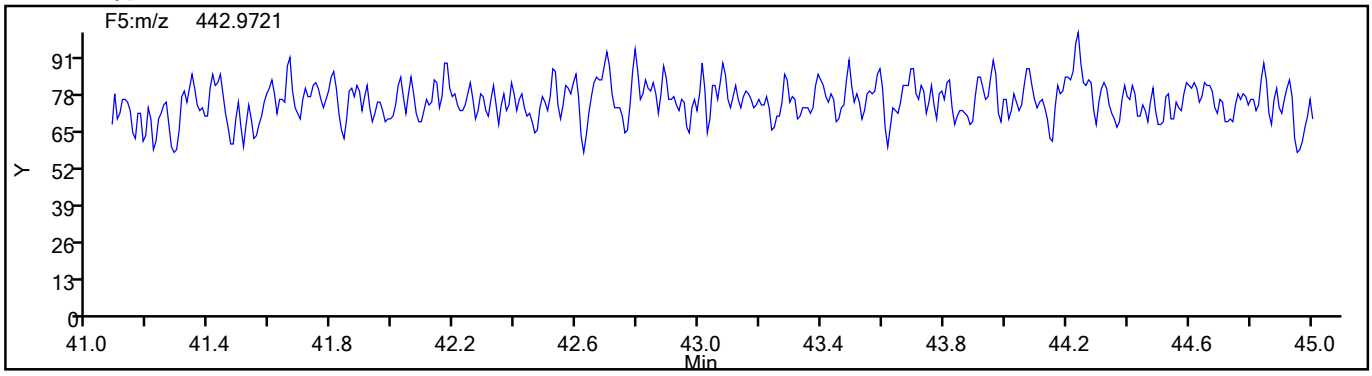

786438

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 02:19:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:24:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.401	485361	0.82	1.3459					0.00	
2,3,7,8-TCDF	20.436	1188413	0.84	1.0802	90.7	90.7	0.2813	0.2813		
A Non-2,3,7,8-sub-TCDF	19.878	19901	0.77	1.0802	1.727	1.518	0.2813	0.7822		RQ
S Total TCDF					92.4	92.2	0.2813	0.2813		RQ
D 13C-2,3,7,8-TCDD	21.743	329600	0.81	0.9317					0.00	
2,3,7,8-TCDD	21.777	370047	0.80	1.0753	41.8	41.8	0.1249	0.1249		
A Non-2,3,7,8-sub-TCDD	20.707	3685	0.77	1.0753	0.5012	0.4159	0.1249	0.4159		RQ
S Total TCDD					42.3	42.2	0.1249	0.1249		RQ
A F1 PeCDFs	24.648	904	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.125						0.0	0.0		
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.489	1055	1.45	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.028	10297	1.24	0.0000						RQ
S Total HxCDF										RQ
A Non-2,3,7,8-sub-HxCDD	35.394	4006	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.630	364225	1.07	1.4421						
1,2,3,4,7,8,9-HpCDF	39.885	322997	1.06	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.258						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.582	244067	1.05	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.258						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.156	689898	0.82							
1,3,6,8-TCDD	17.754	384589	0.80							
2,3,4,7-TCDF	20.436	1190538	0.84							
1,2,3,7-TCDD	21.545	321799	0.78							
1,2,3,9-TCDF	21.958	518792	0.84							
1,2,3,9-TCDD	22.035	386037	0.78							
1,2,8,9-TCDF	23.600	554349	0.82							

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.660	159041								
1,3,4,6,8-PeCDF	24.022	462305	1.58							
1,2,3,8,9-PeCDD	26.056	316607	1.54							
1,2,4,7,9-PeCDD	30.652	304812	1.54							
1,2,3,8,9-PeCDF	30.838	407641	1.63							
1,2,3,4,6,8-HxCDF	33.138	482293	1.31							
1,2,4,6,7,9-HxCDD	34.224	313209	1.25							
1,2,3,4,6,7-HxCDD	36.564	309337	1.23							
1,2,3,4,8,9-HxCDF	36.918	413489	1.31							
1,2,3,4,6,7,9-HpCDD	38.934	270894	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 02:19:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:24:20

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.401	20.401	0	1.000	219196	29055	85	212	342		
317.9389	20.393	20.401	-1	1.000	266165	33471	26	65	1287	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.436	20.436	0	1.002	544208	70535	85	212	830		
305.8987	20.436	20.436	0	1.002	644205	86812	105	262	827	0.84(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.713	19.878	-10	0.966	6415	874	85	212	10		
	Empc Correction				4460	790	85	212	9		
305.8987	19.678	19.878	-12	0.965	5793	1027	105	262	10	1.11(0.65-0.89)	
303.9016	24.013	19.878	248	1.177	4973	730	85	212	9		
	Empc Correction				4197	736	85	212	9		
305.8987	24.004	19.878	247	1.177	5451	956	105	262	9	0.91(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.743	21.743	0	1.000	147378	19307	97	242	199		
333.9338	21.734	21.743	-1	1.000	182222	24457	55	137	445	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.777	21.777	0	1.002	164836	19708	37	92	533		
321.8936	21.769	21.777	-1	1.001	205211	24772	22	55	1126	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.396	20.707	101	1.030	2359	261	37	92	7		
	Empc Correction				1603	201	37	92	5		
321.8936	22.457	20.707	105	1.033	2082	262	22	55	12	1.13(0.65-0.89)	
A F1 PeCDFs											RQ
339.8597	24.434	24.648	-13	1.000	323	113	8	20	14		
341.8567	24.486	24.648	-10	1.000	477	79	7	17	11	0.68(1.32-1.78)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	24.873	24.648	14	1.000	227	52	8	20	7		
341.8567	24.890	24.648	15	1.000	236	71	7	17	10	0.96(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.125						28	70			
341.8567	28.125						115	287			
A Non-2,3,7,8-sub-PeCDD											
355.8546	26.898	28.489	-95	1.000	625	122	24	60	5		
357.8516	26.856	28.489	-98	1.000	430	72	13	32	6	1.45(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	34.973	35.028	-3	1.000	2250	338	67	167	5		
375.8178	34.956	35.028	-4	1.000	1567	325	45	112	7	1.44(1.05-1.43)	
373.8208	35.116	35.028	5	1.000	3879	551	67	167	8		
375.8178	35.125	35.028	6	1.000	2908	527	45	112	12	1.33(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.344	35.394	-3	1.000	2218	414	33	82	13		
391.8127	35.335	35.394	-4	1.000	2261	396	31	77	13	0.98(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.630	38.630	0	1.000	188441	47249	63	157	750		
409.7788	38.630	38.630	0	1.000	175784	44386	54	135	822	1.07(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885	39.885	0	1.000	166495	43364	63	157	688		
409.7788	39.877	39.885	-1	1.000	156502	41246	54	135	764	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						63	157			
409.7788	39.258						54	135			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.582	39.582	0	1.000	125253	34507	41	102	842		
425.7737	39.573	39.582	-1	1.000	118814	33009	40	100	825	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.258						41	102			
425.7737	39.258						40	100			
1,3,6,8-TCDF											
303.9016	16.156	16.156	0		310778	57406	85	212	675		
305.8987	16.148	16.156	-1		379120	70718	105	262	674	0.82(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.754	17.754	0		170993	27785	37	92	751		
321.8936	17.754	17.754	0		213596	36009	22	55	1637	0.80(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.436	20.436	0		545121	70571	85	212	830		
305.8987	20.436	20.436	0		645417	86859	105	262	827	0.84(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.545	21.545	0		141111	18226	37	92	493		
321.8936	21.545	21.545	0		180688	24656	22	55	1121	0.78(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.958	21.958	0		236345	29756	85	212	350		
305.8987	21.949	21.958	-1		282447	37233	105	262	355	0.84(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,9-TCDD											
319.8965	22.035	22.035	0		168553	20335	37	92	550		
321.8936	22.035	22.035	0		217484	26622	22	55	1210	0.78(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.600	23.600	0		249931	41792	85	212	492		
305.8987	23.609	23.600	1		304418	49051	105	262	467	0.82(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.660	23.660	0		159041	26777	37	92	724		
1,3,4,6,8-PeCDF											
339.8597	24.022	24.022	0		282879	51764	8	20	6471		
341.8567	24.022	24.022	0		179426	33084	7	17	4726	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.056	26.056	0		191787	27480	24	60	1145		
357.8516	26.056	26.056	0		124820	18312	13	32	1409	1.54(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.652	30.652	0		184760	22522	24	60	938		
357.8516	30.661	30.652	1		120052	14042	13	32	1080	1.54(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.838	30.838	0		252442	29783	28	70	1064		
341.8567	30.846	30.838	1		155199	17958	115	287	156	1.63(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.138	33.138	0		273839	36209	67	167	540		
375.8178	33.138	33.138	0		208454	28574	45	112	635	1.31(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.224	34.224	0		173942	30009	33	82	909		
391.8127	34.224	34.224	0		139267	24561	31	77	792	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.564	36.564	0		170654	37355	33	82	1132		
391.8127	36.556	36.564	-1		138683	30201	31	77	974	1.23(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.918	36.918	0		234506	51404	67	167	767		
375.8178	36.918	36.918	0		178983	40201	45	112	893	1.31(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.934	38.934	0		137960	35037	41	102	855		
425.7737	38.934	38.934	0		132934	34741	40	100	869	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 02:19:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 44

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	485361	62526

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	485361	62526

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.713	6415	874	5793	1027	0.9314	1.11	RQ
19.713	4460	790	5793	1027	0.7822		Empc Correction
24.013	4973	730	5451	956	0.7953	0.91	RQ
24.013	4197	736	5451	956	0.7361		Empc Correction
Signal Totals:							
	8657	1526	11244	1983			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	22632	3587				1.01	RQ
	19901	3509					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.727 = (22632 * 40.000) / (485361 * 1.080)
Empc Amount: 1.518 = (19901 * 40.000) / (485361 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	40.000	329600	43764

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		40.000	329600	43764

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.396	2359	261	2082	262	0.5012	1.13	RQ
22.396	1603	201	2082	262	0.4159		Empc Correction
Signal Totals:							
	1603	201	2082	262			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4441	523				1.13	RQ
	3685	463					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5012 = (4441 * 40.000) / (329600 * 1.075)

Empc Amount: 0.4159 = (3685 * 40.000) / (329600 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.434	323	113	477	79		0.68	R
24.873	227	52	236	71		0.96	R
Signal Totals:							
	550	165	713	150			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1263	315				0.77	RQ
	904	270					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1263 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (904 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.898	625	122	430	72		1.45	
Signal Totals:							
	625	122	430	72			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1055	194				1.45	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (1055 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
34.973	2250	338	1567	325		1.44	R
35.116	3879	551	2908	527		1.33	
Signal Totals:							
	6129	889	4475	852			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10604	1741				1.37	RQ
	10297	1806					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (10604 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (10297 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.344	2218	414	2261	396		0.98	R
Signal Totals:							
	2218	414	2261	396			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4479	810				0.98	RQ
	4006	747					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4479 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (4006 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

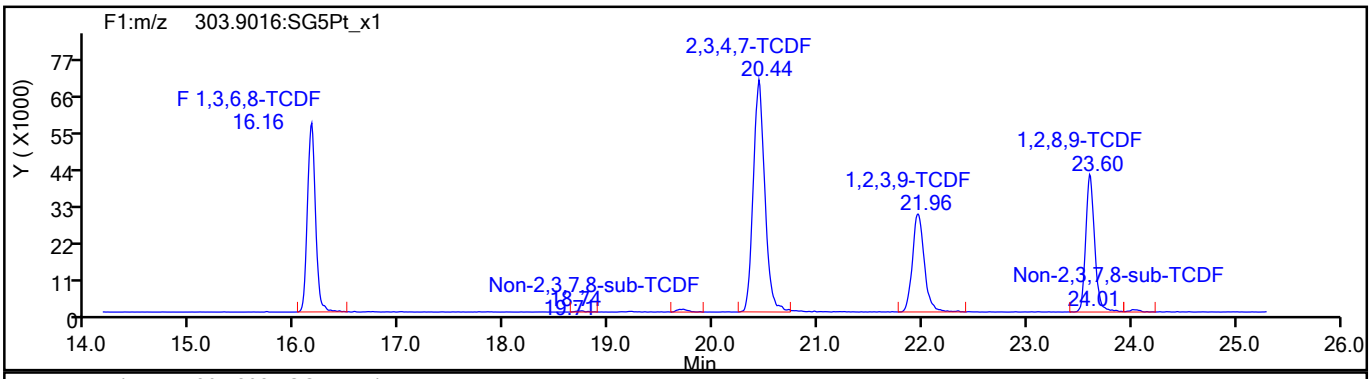

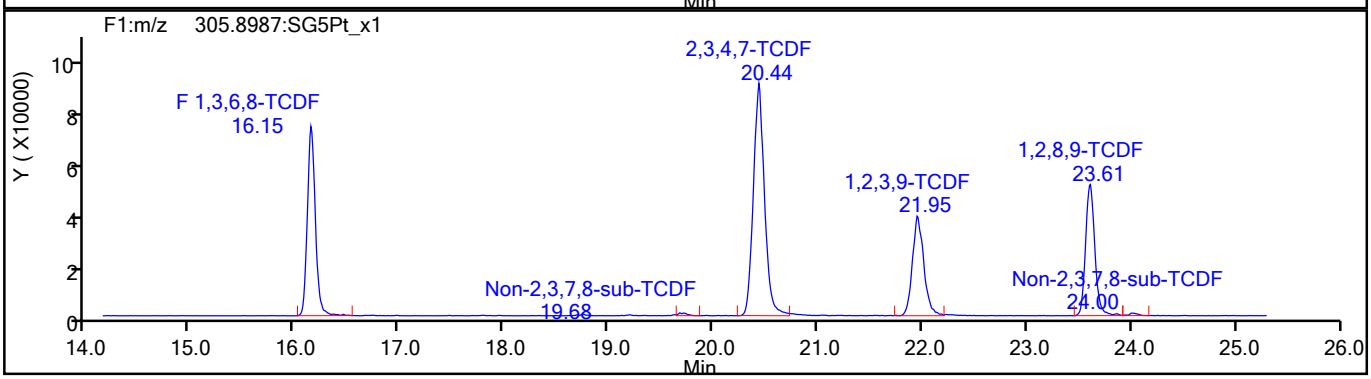

TCDF Standards

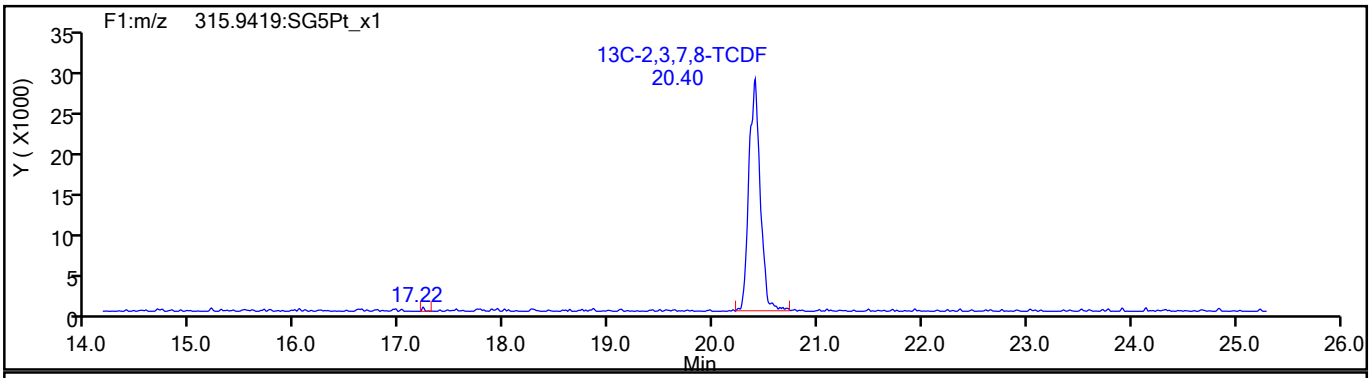

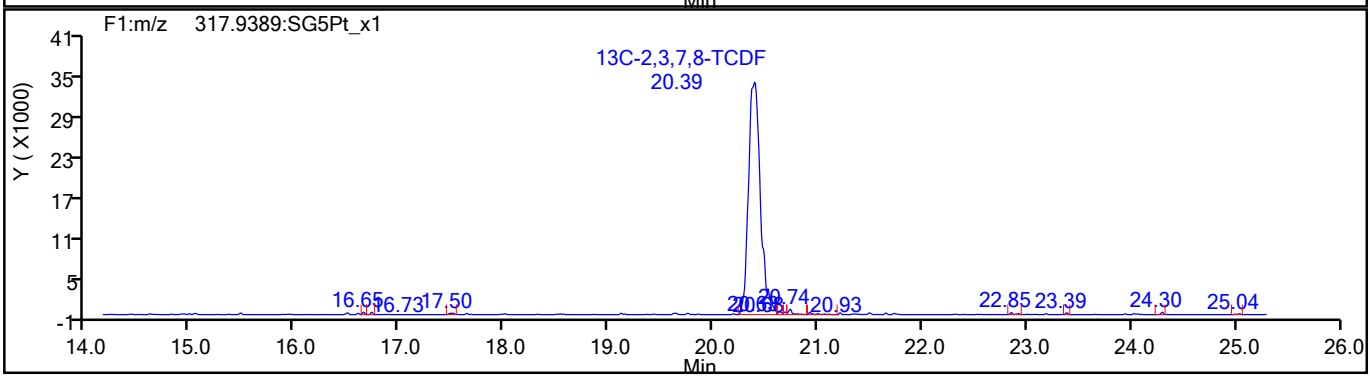

786450

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

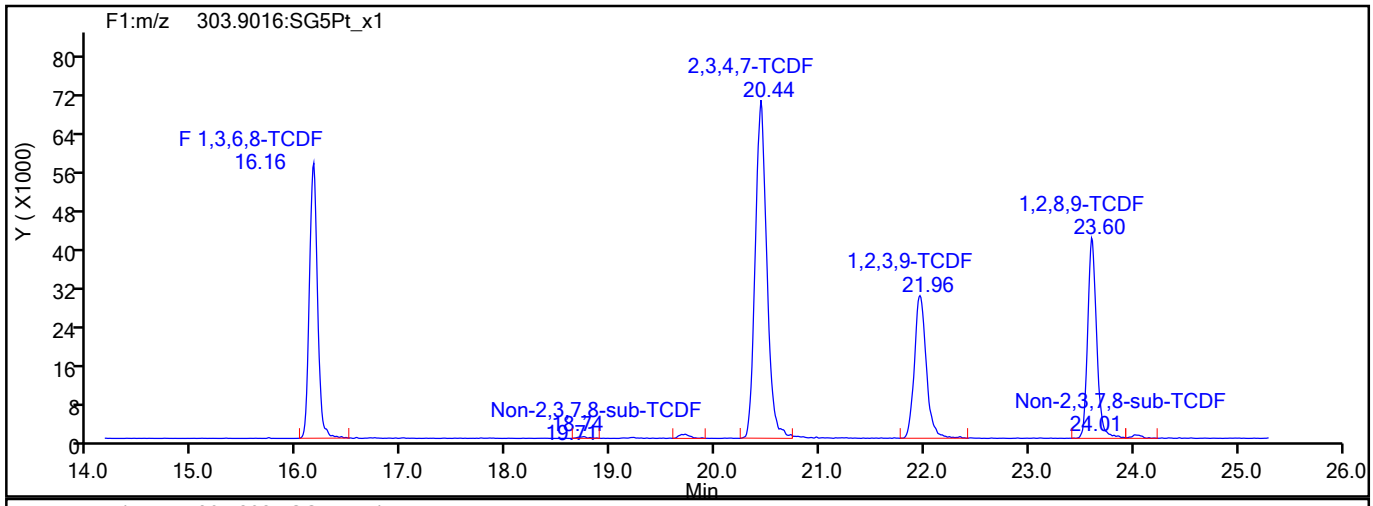

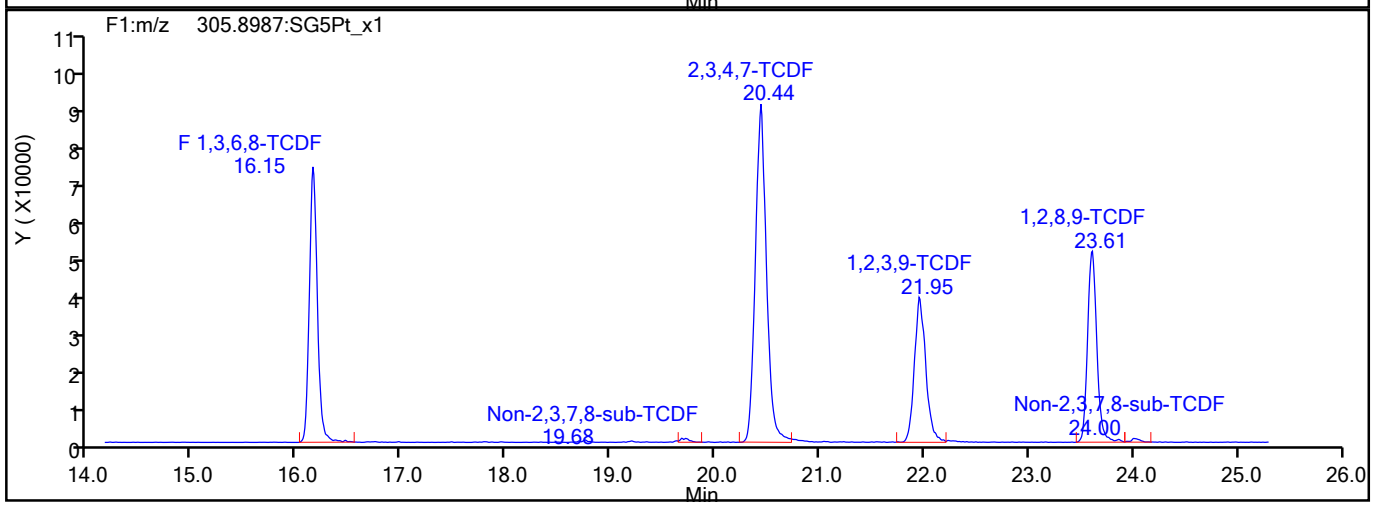

TCDF Interference Mass

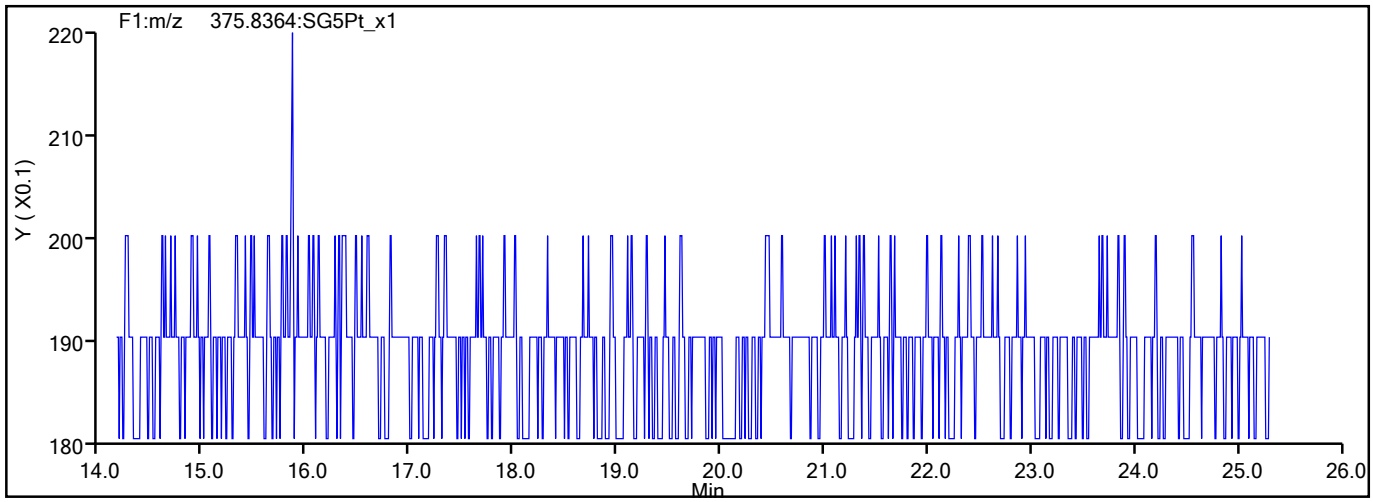

786451

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

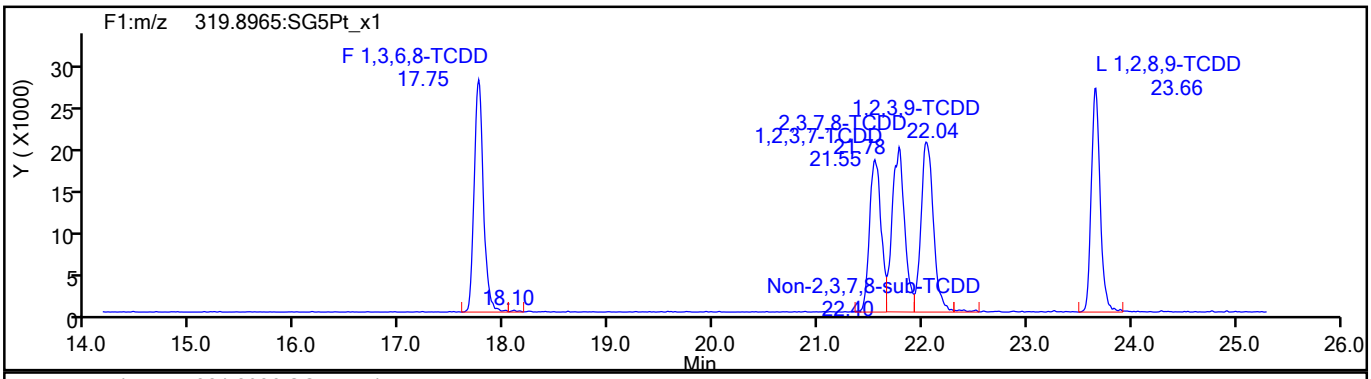

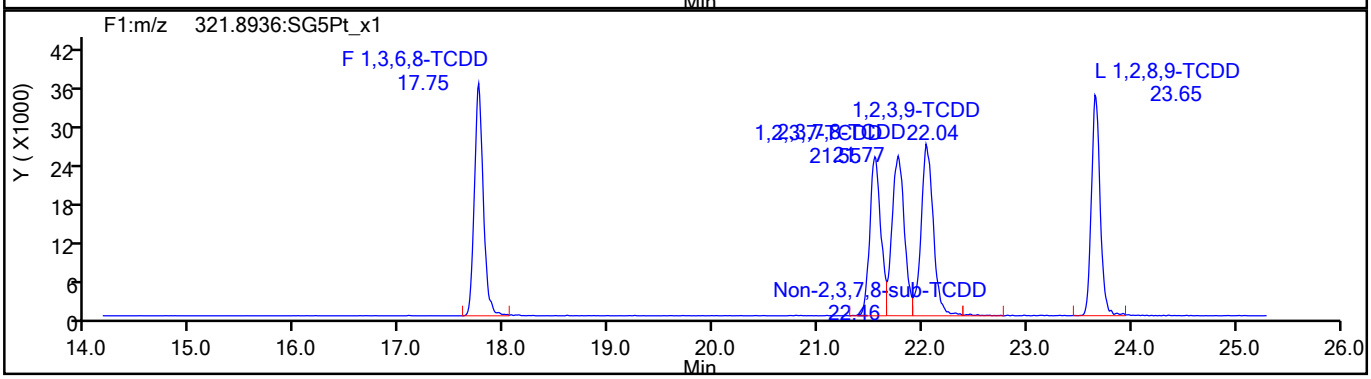

TCDD Standards

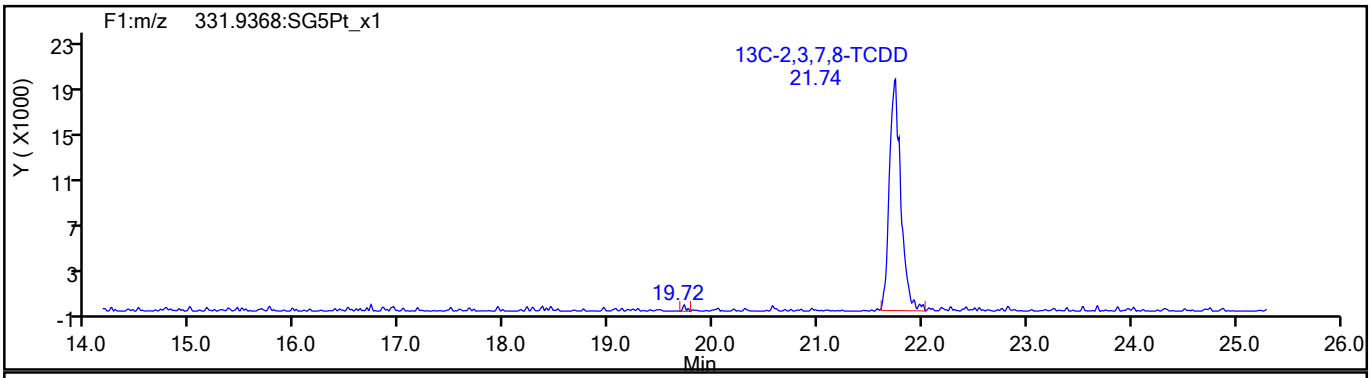

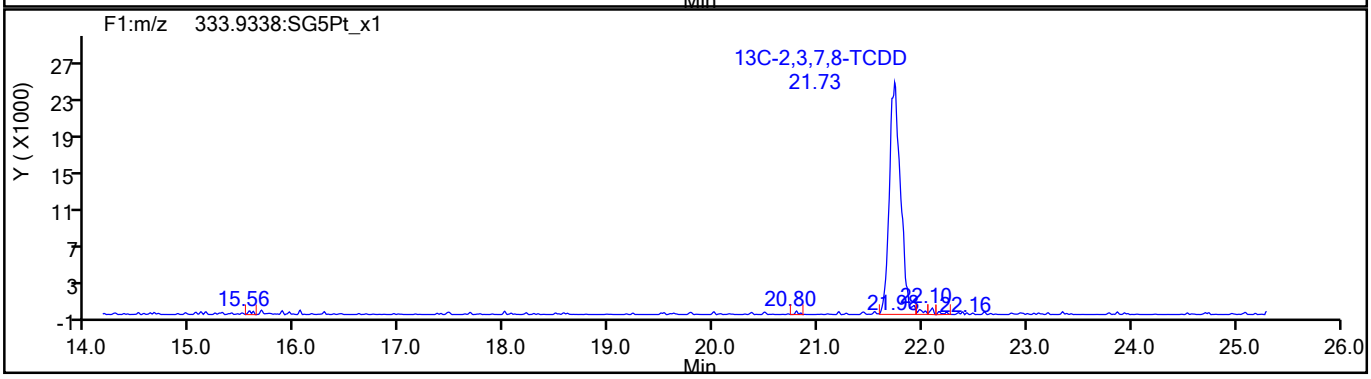

786452

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

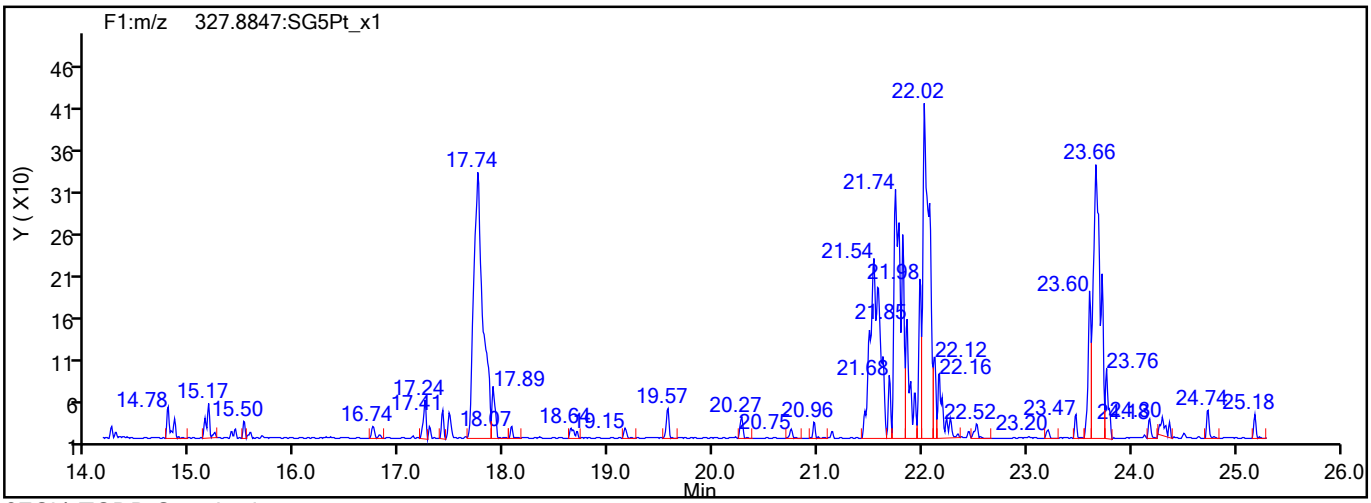

37Cl4-TCDD Standards

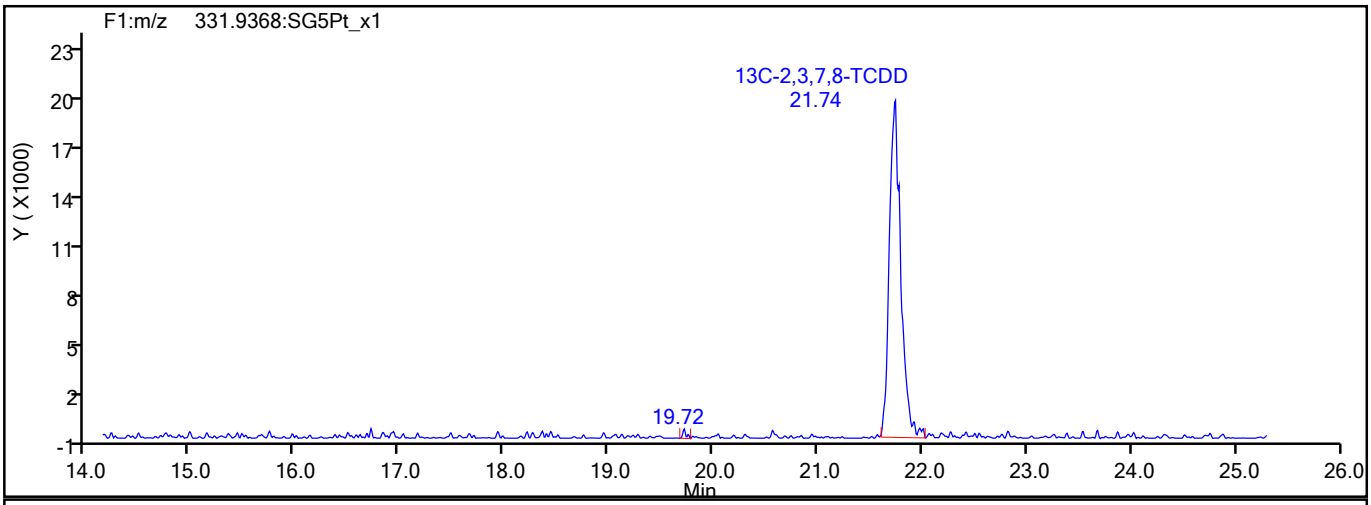

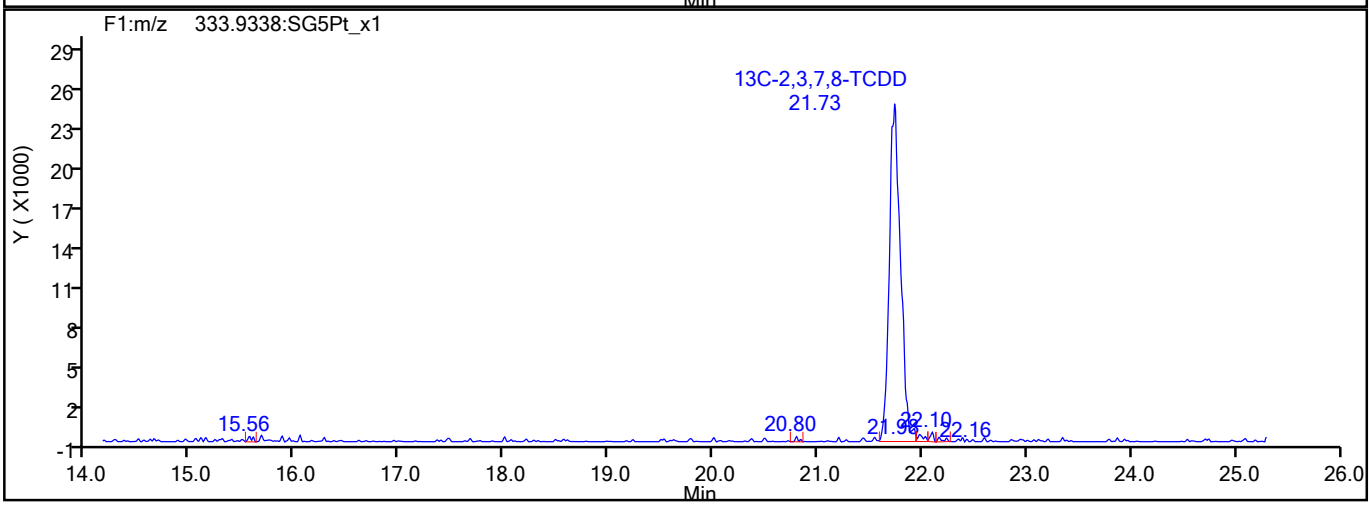

786453

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

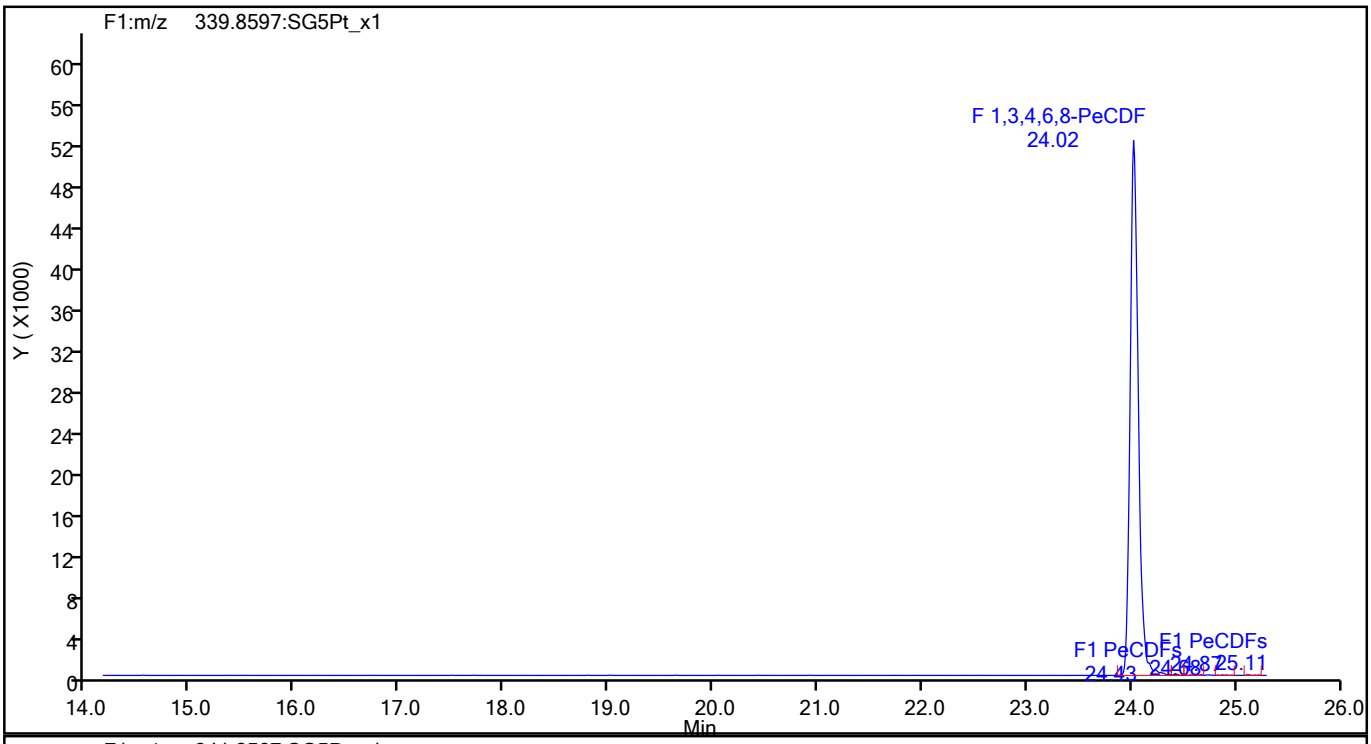

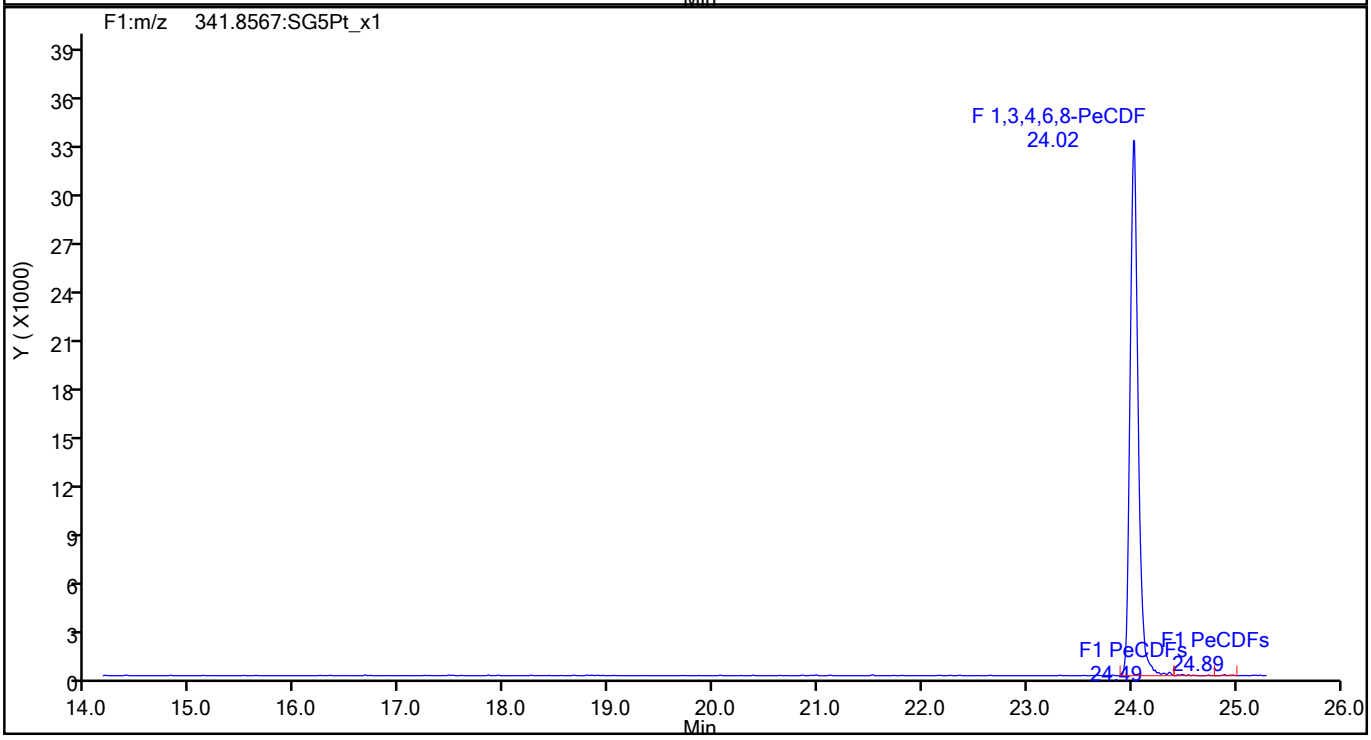

786454

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

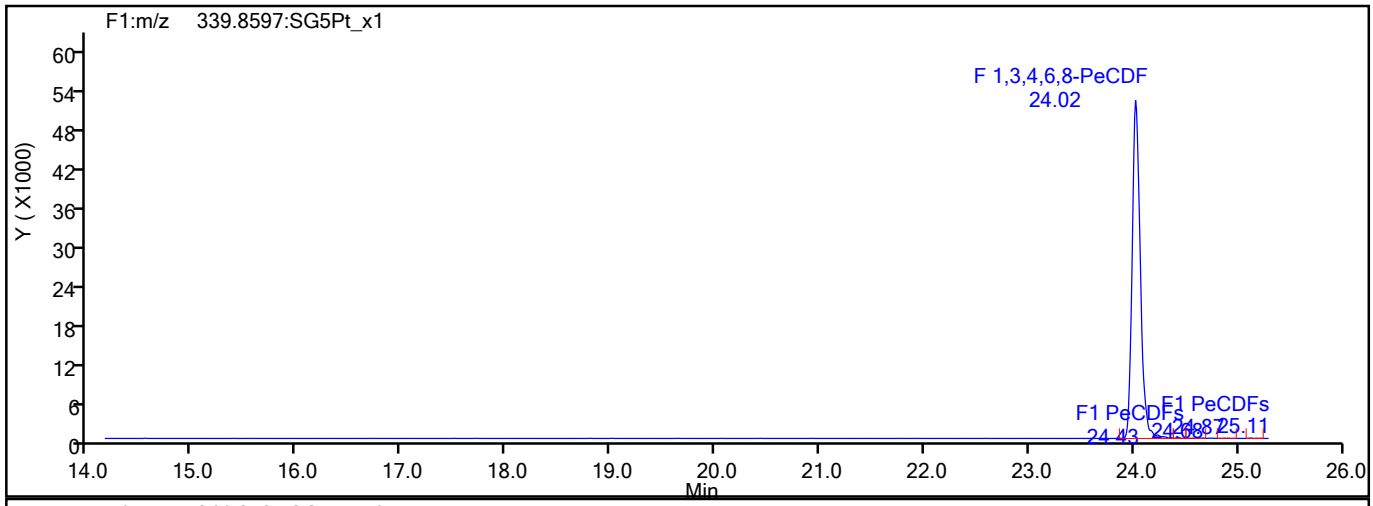

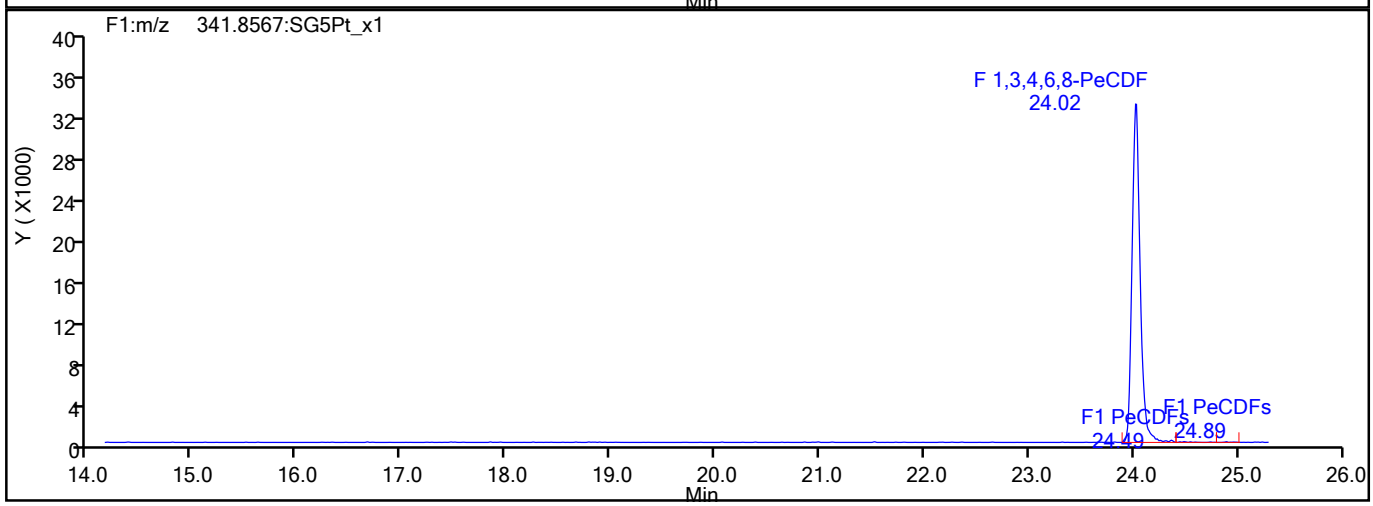

F1 PeCDFs Interference Mass

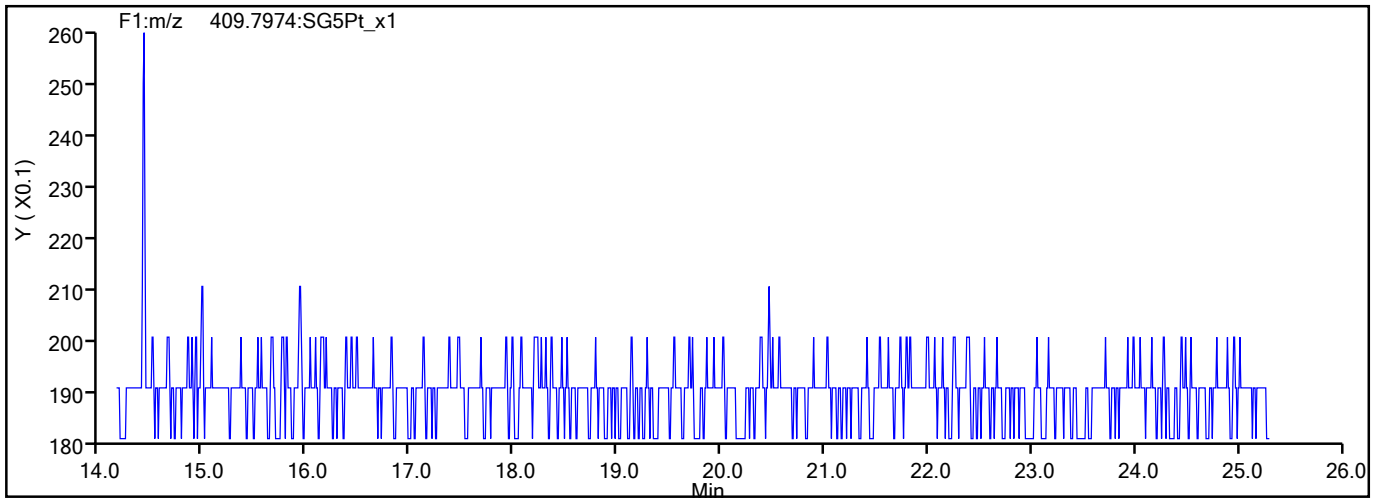

786455

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

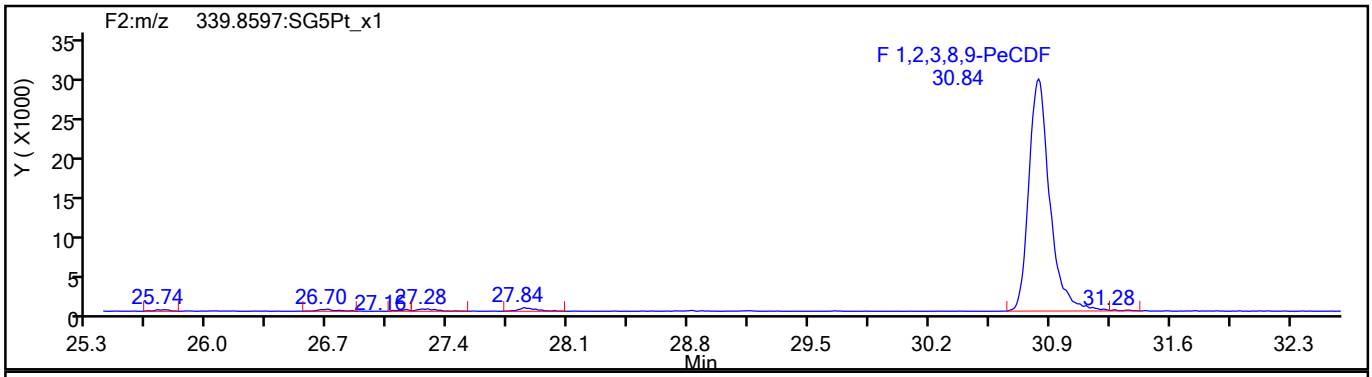

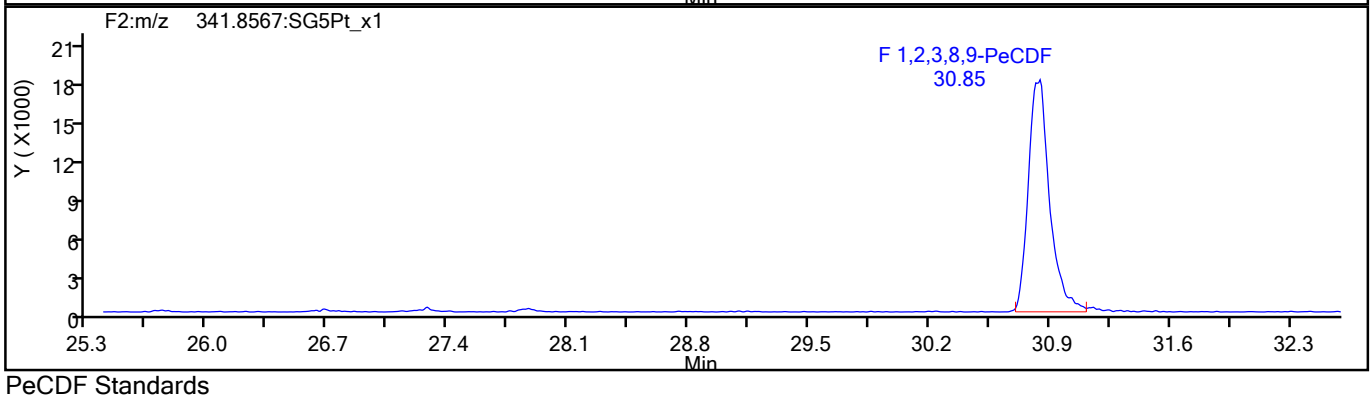

PeCDF Standards

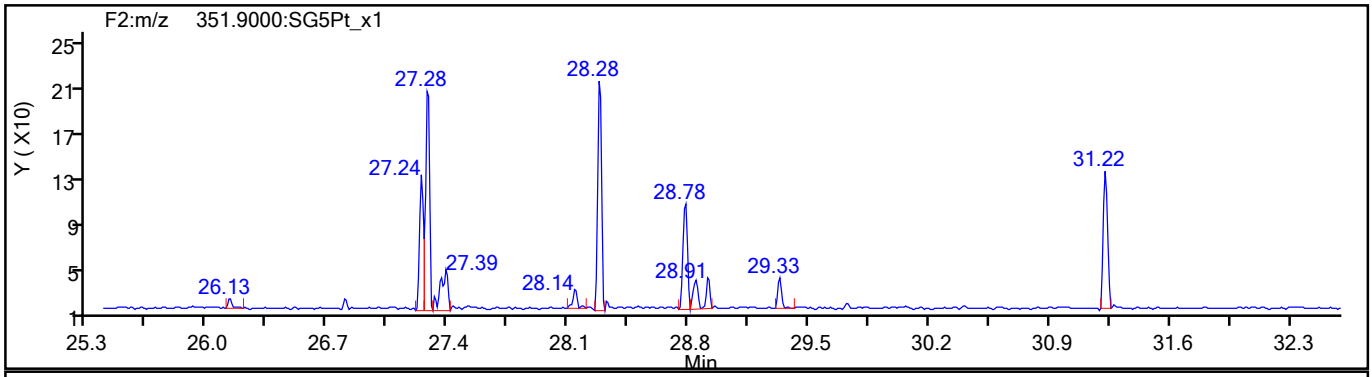

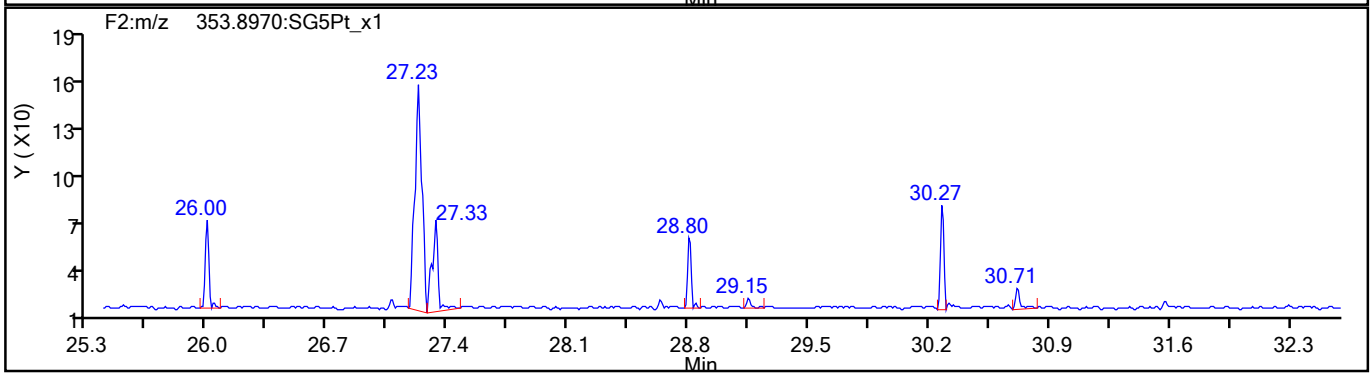

786456

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

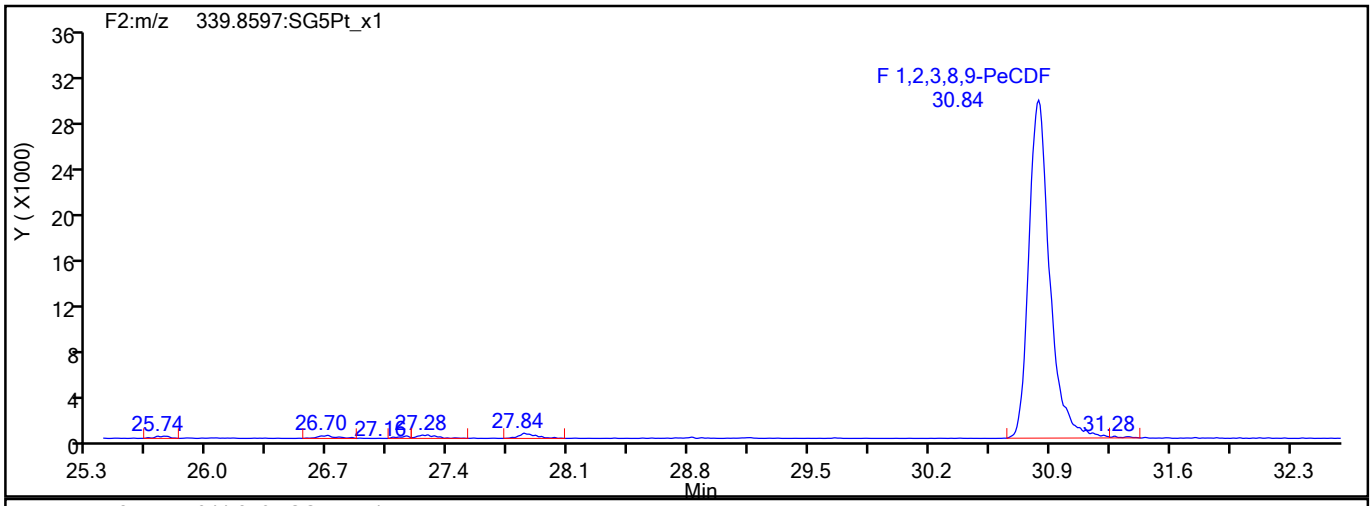

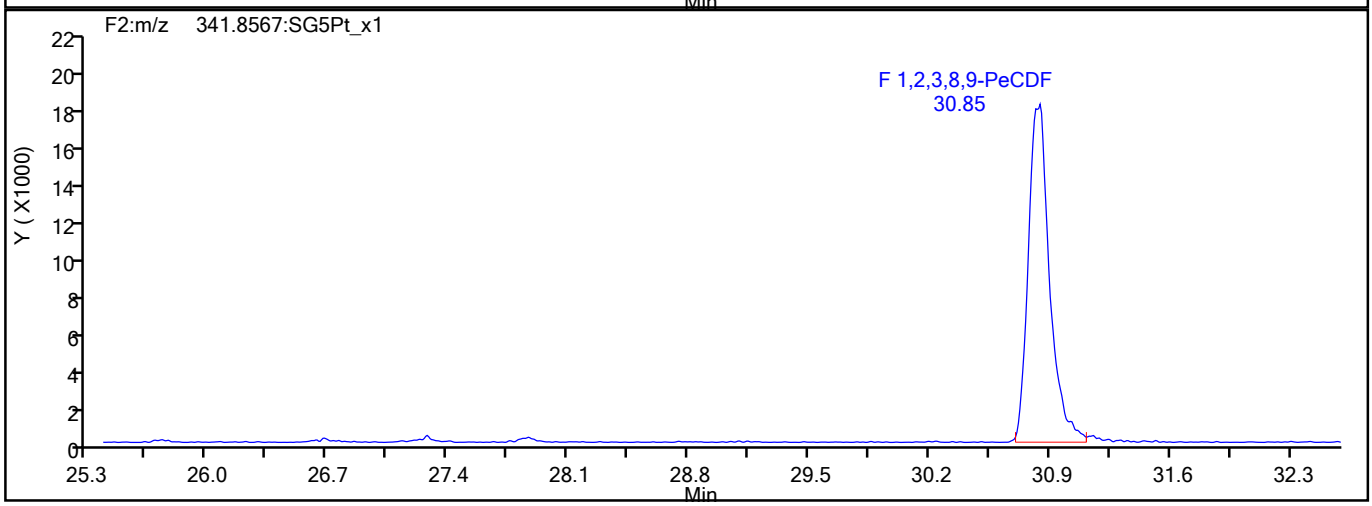

PeCDF Interference Mass

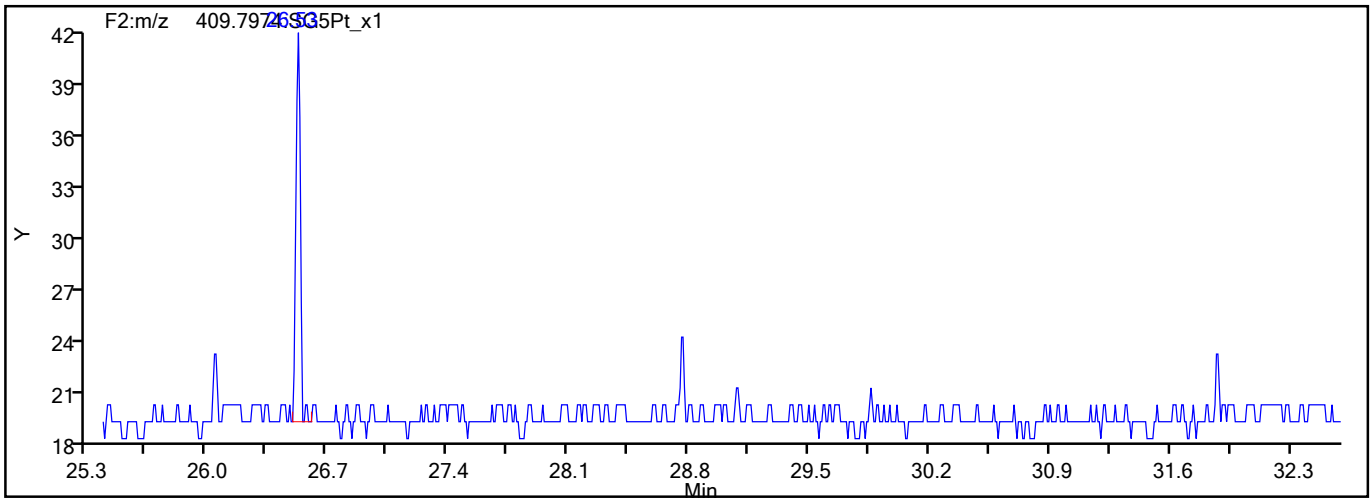

786457

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

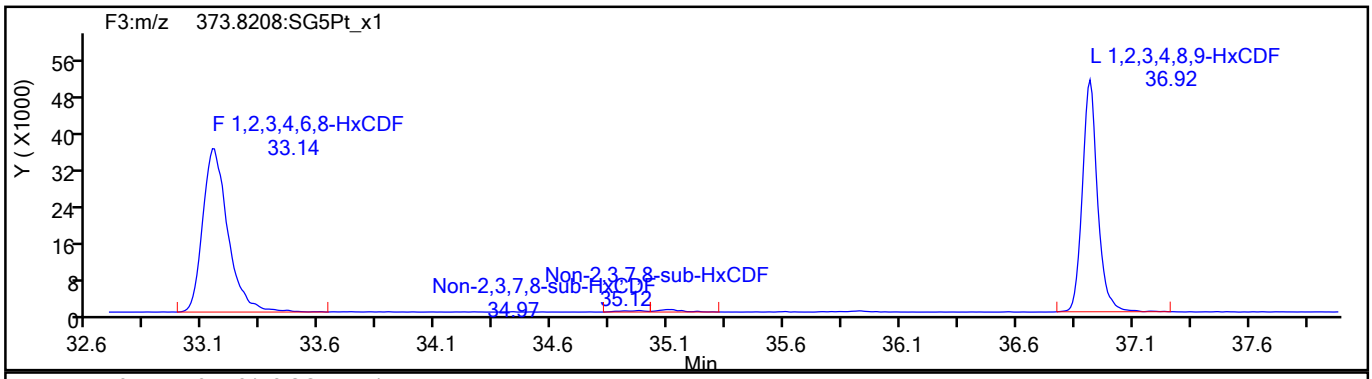

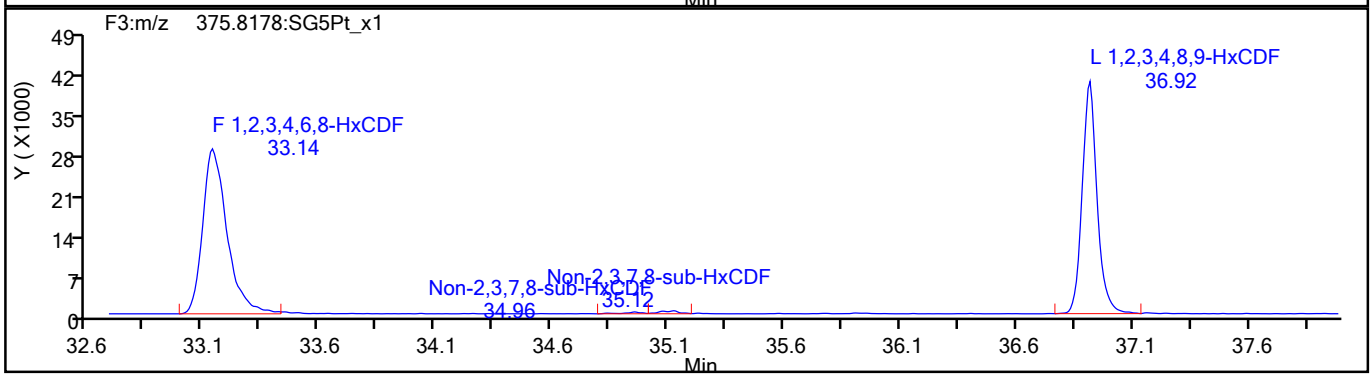

HxCDF Standards

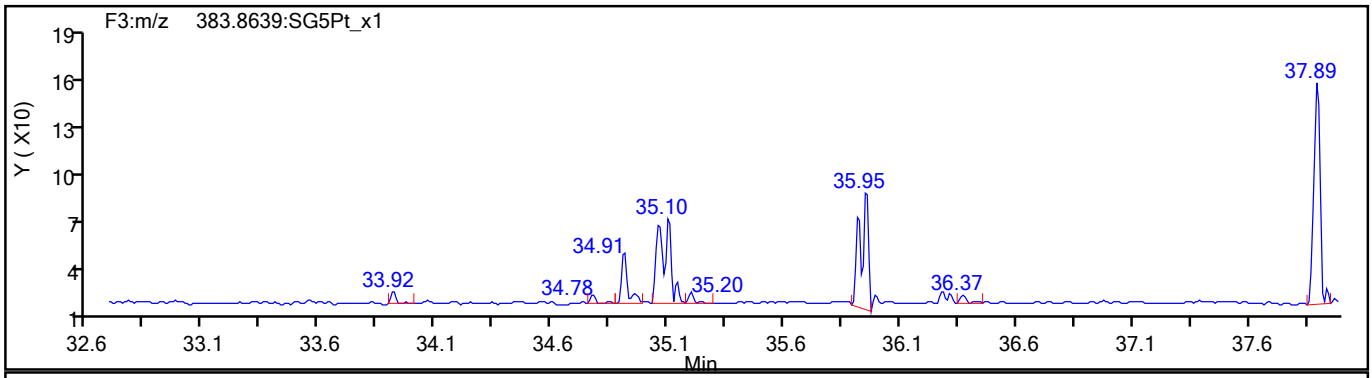

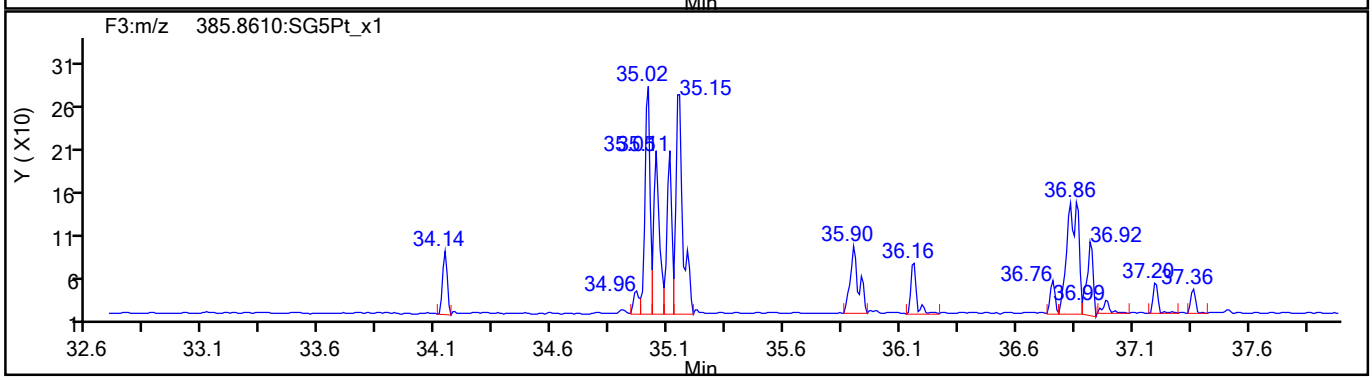

786458

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

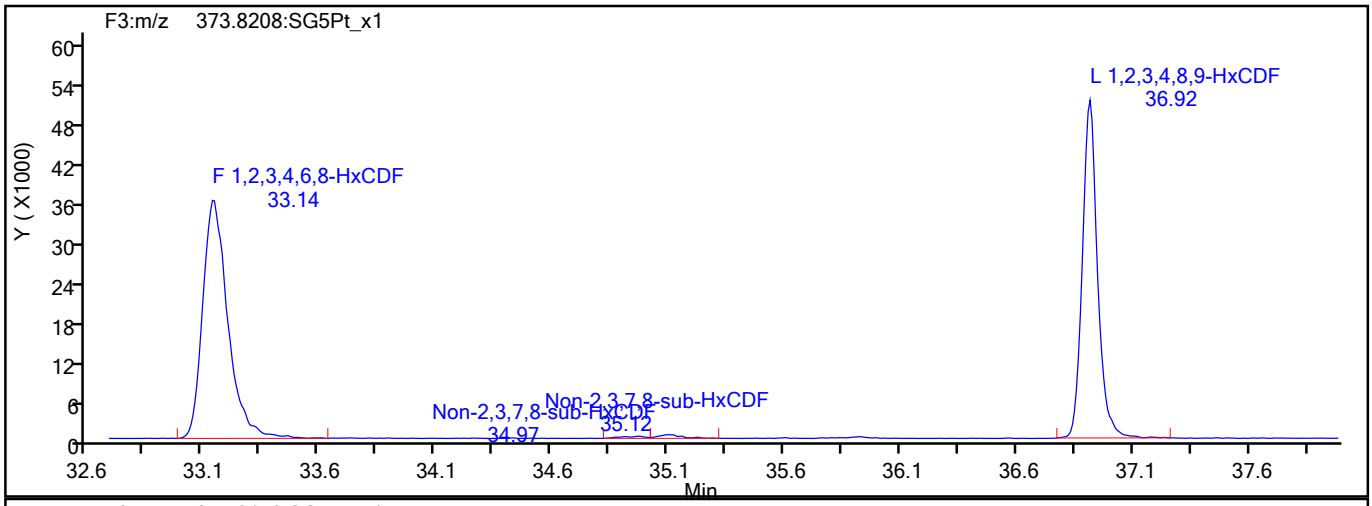

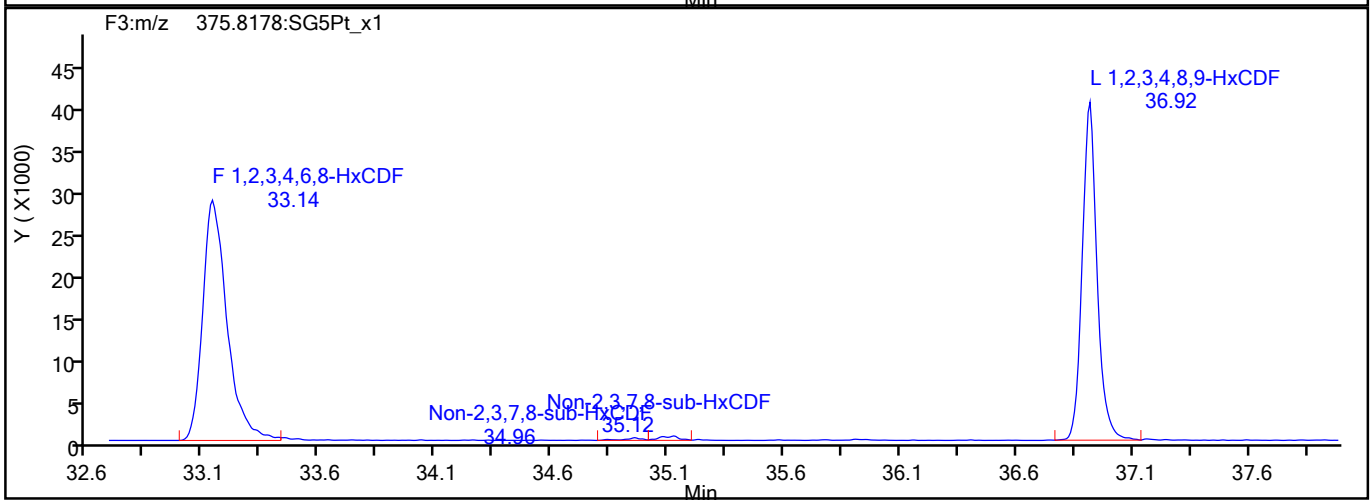

HxCDF Interference Mass

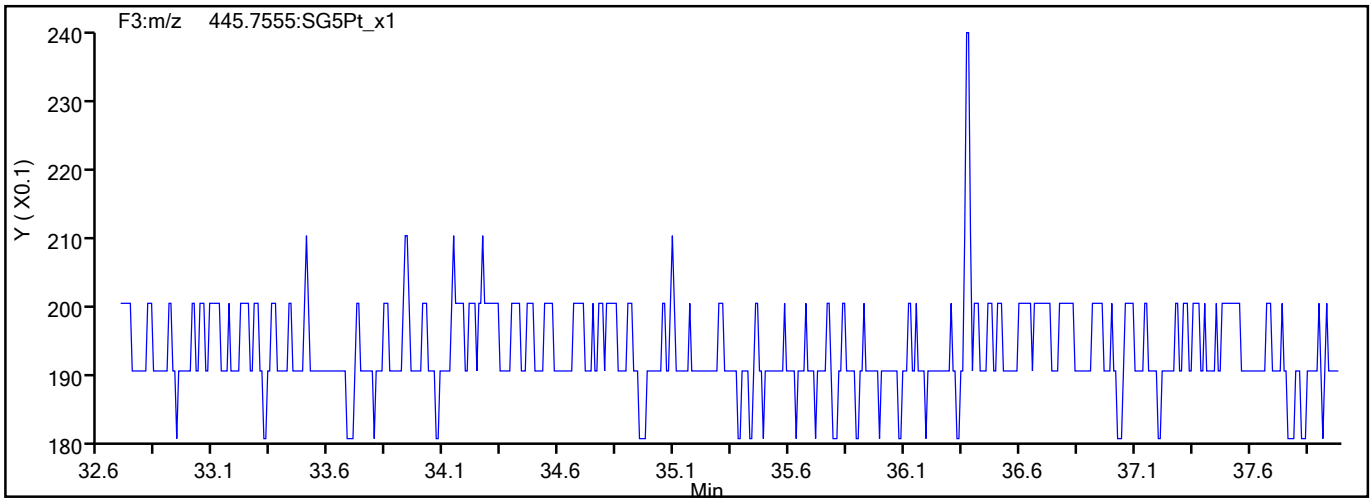

786459

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

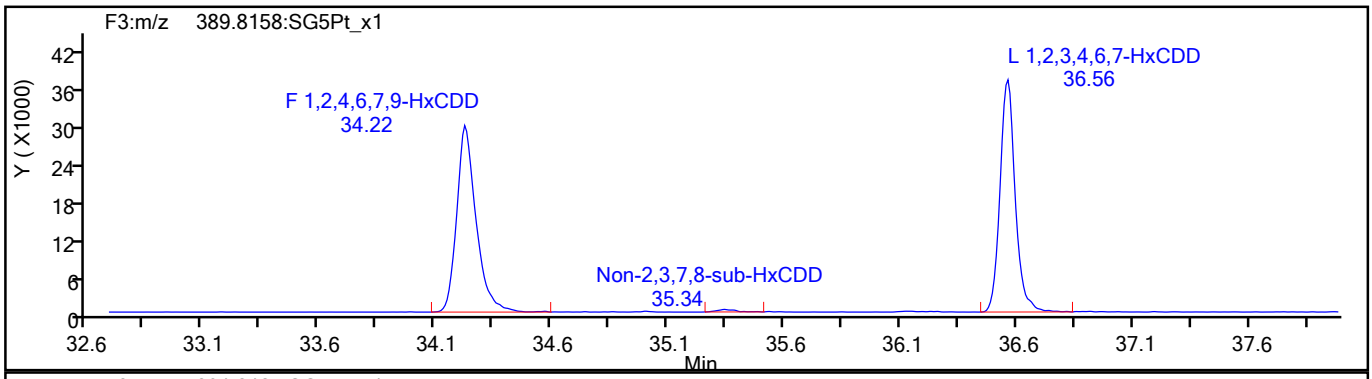

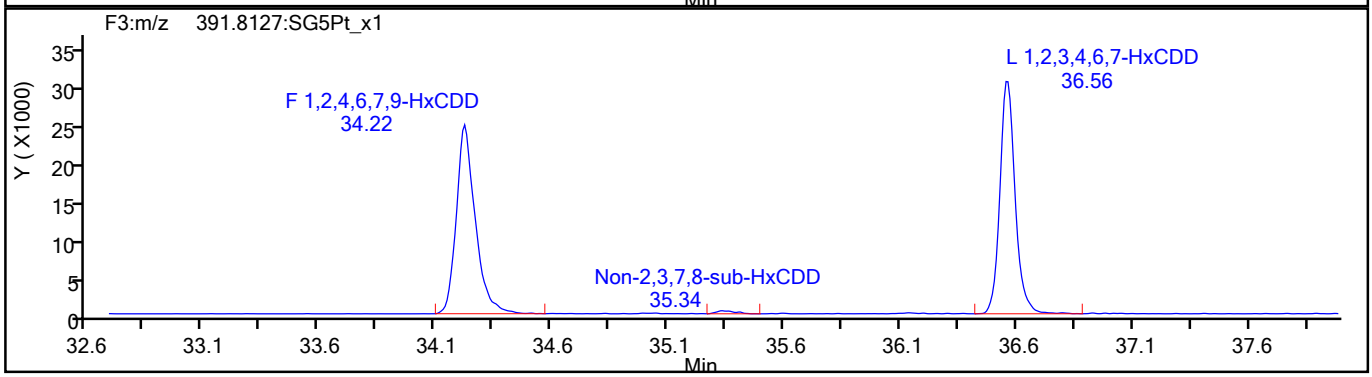

HxCDD Standards

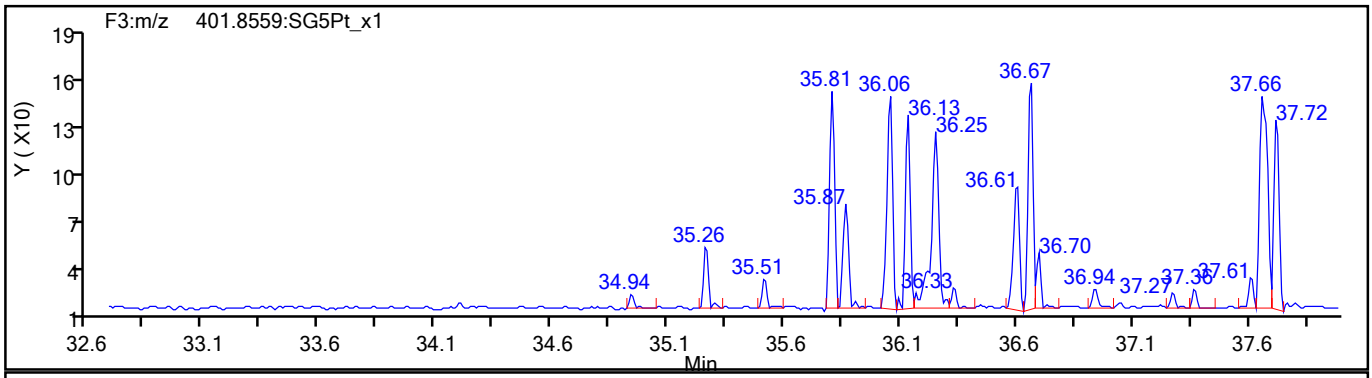

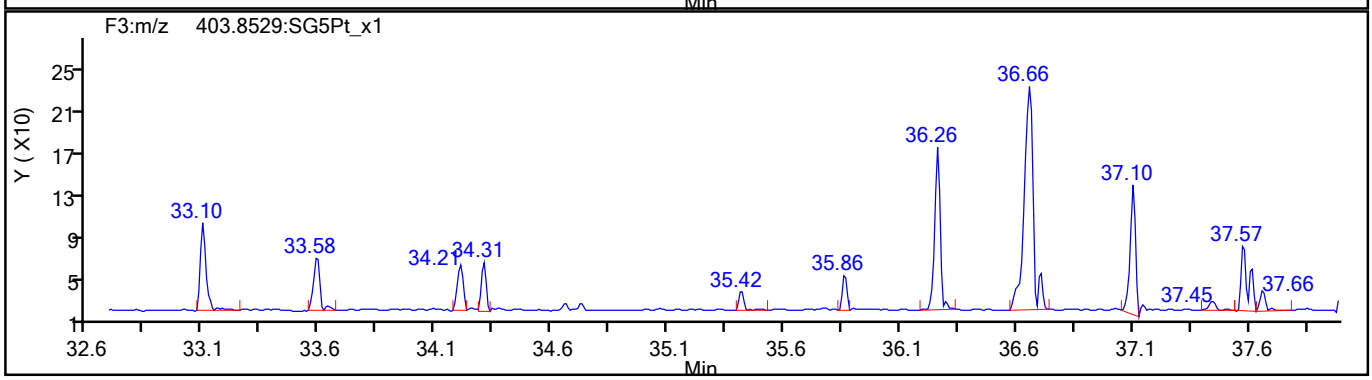

786460

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

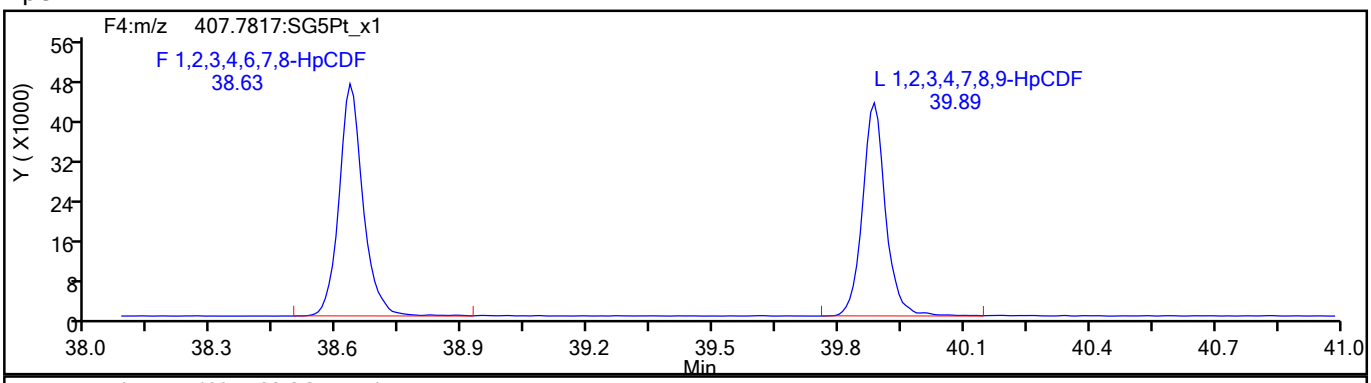

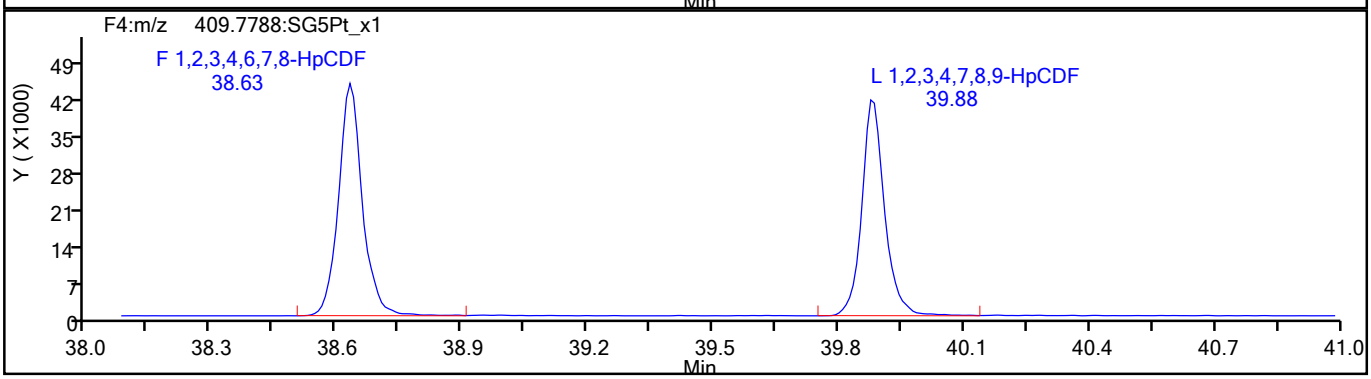

HpCDF Standards

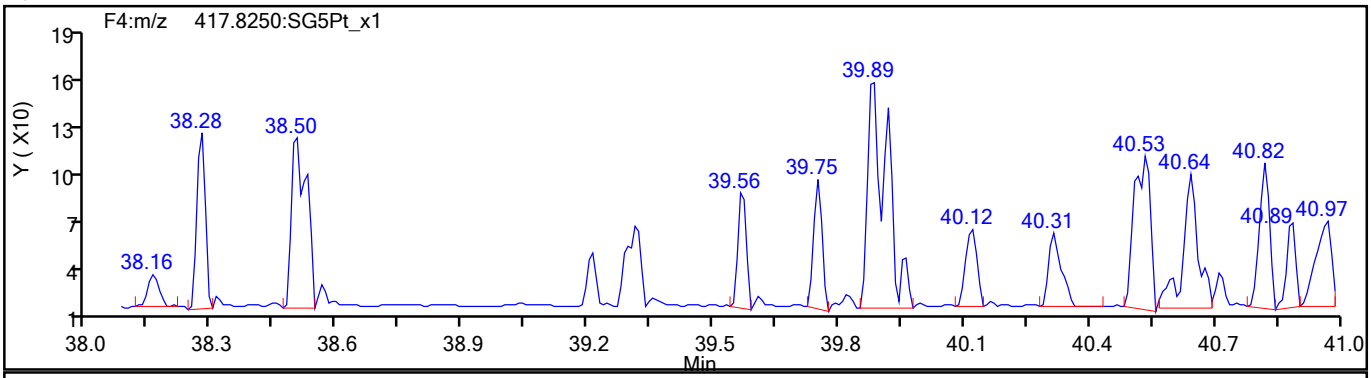

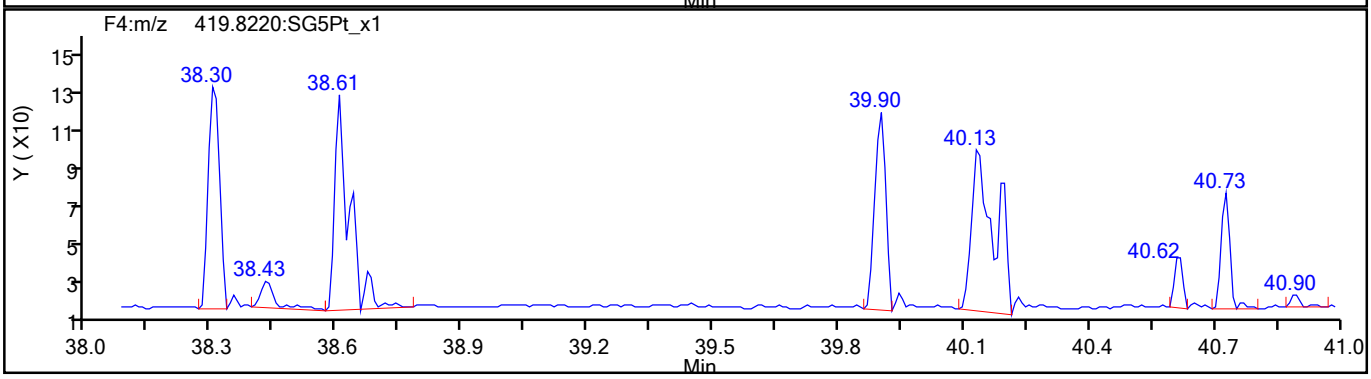

786461

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

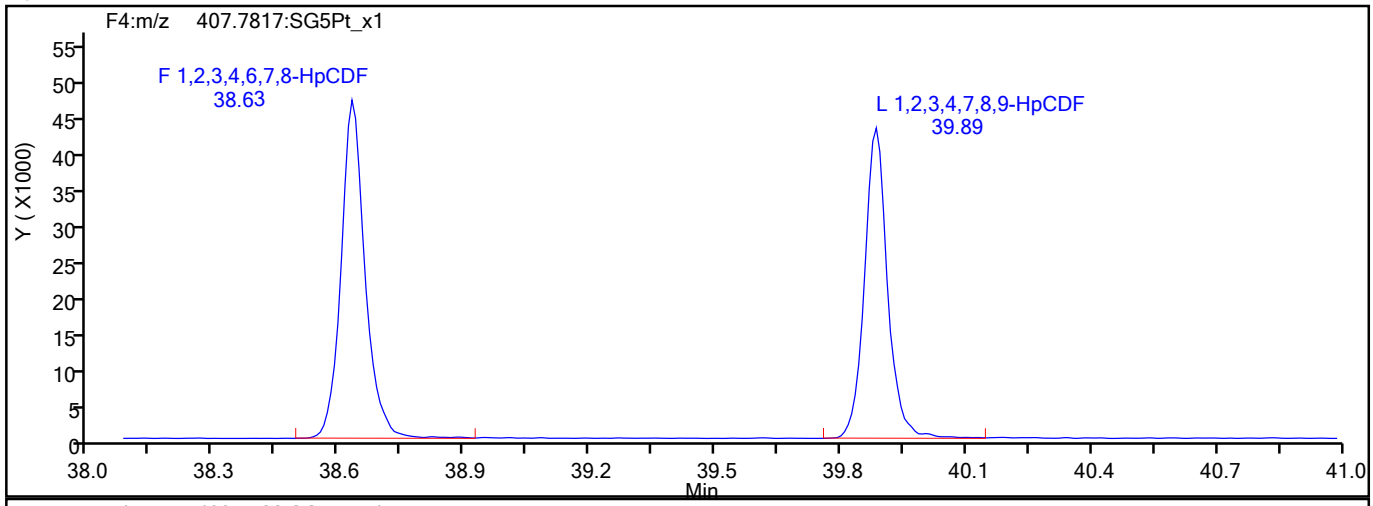

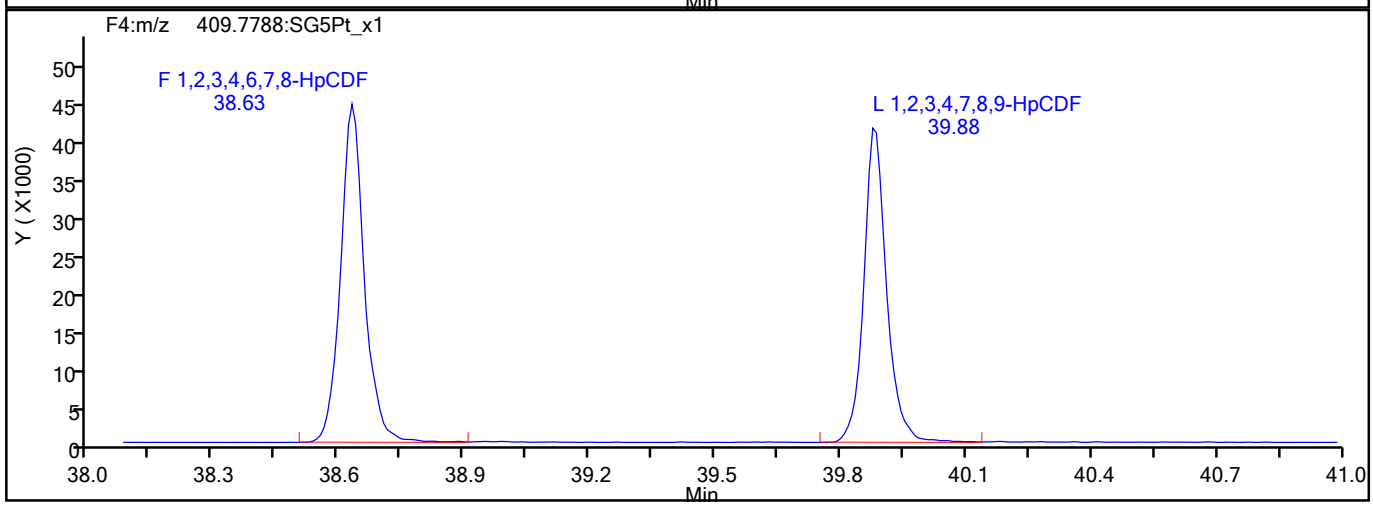

HpCDF Interference Mass

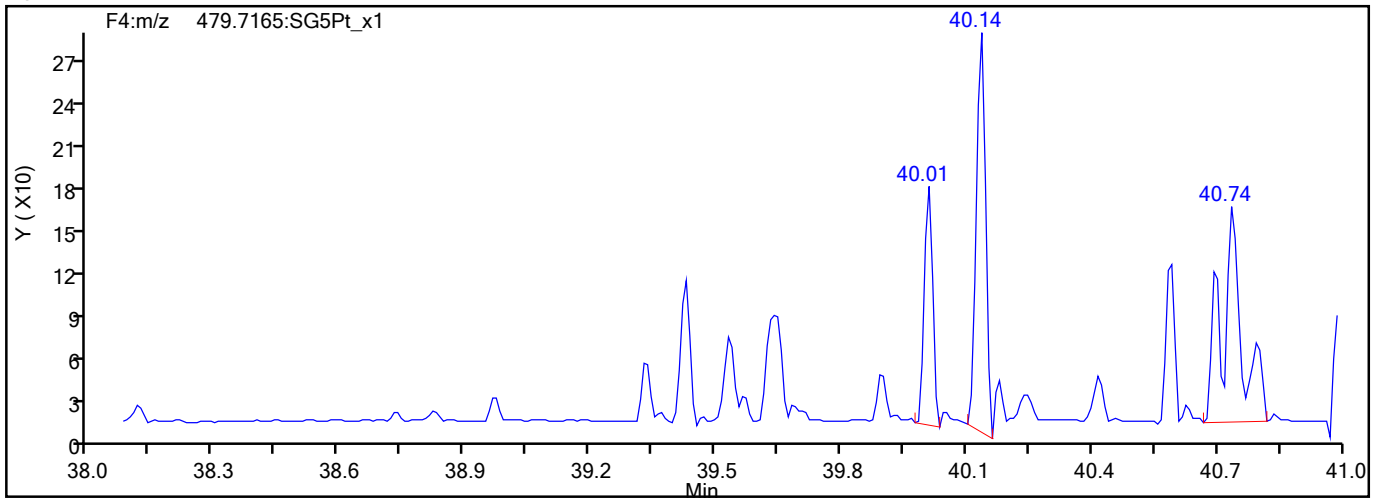

786462

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

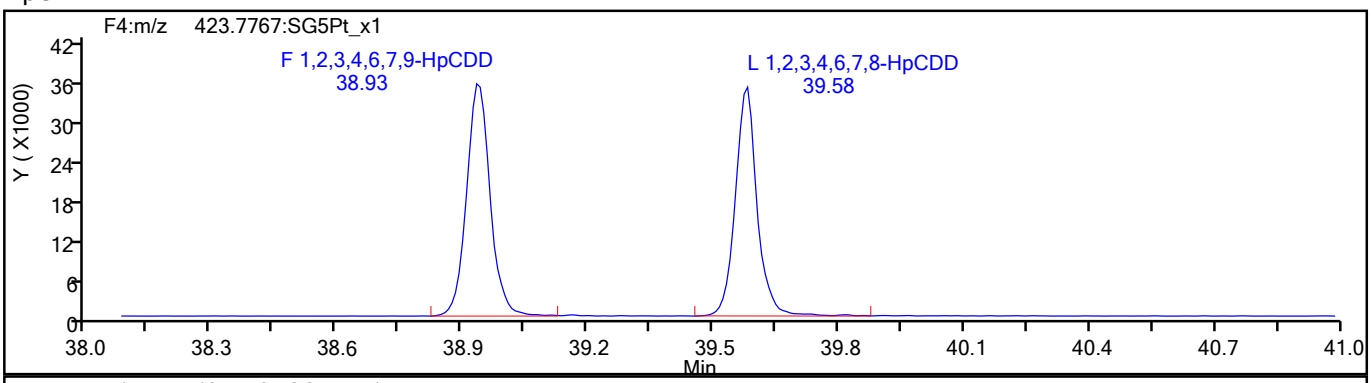

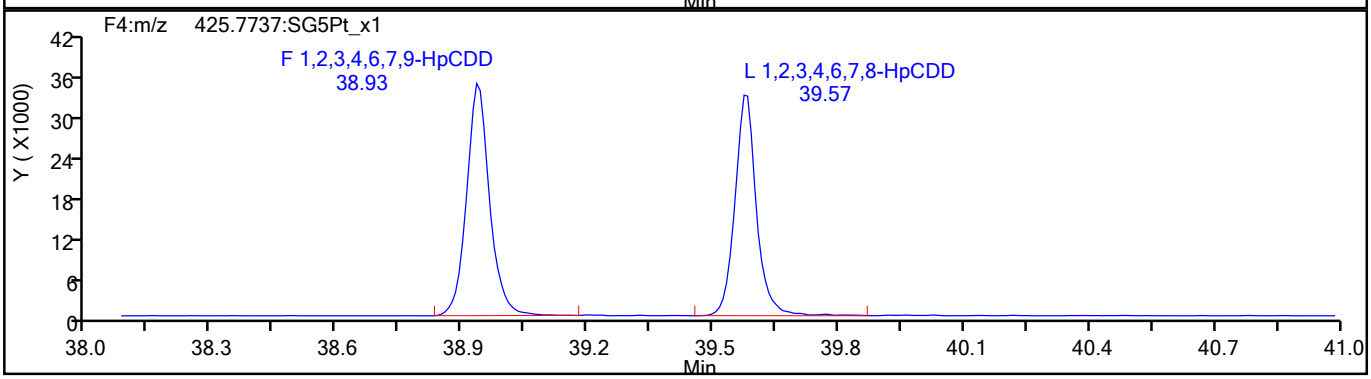

HpCDD Standards

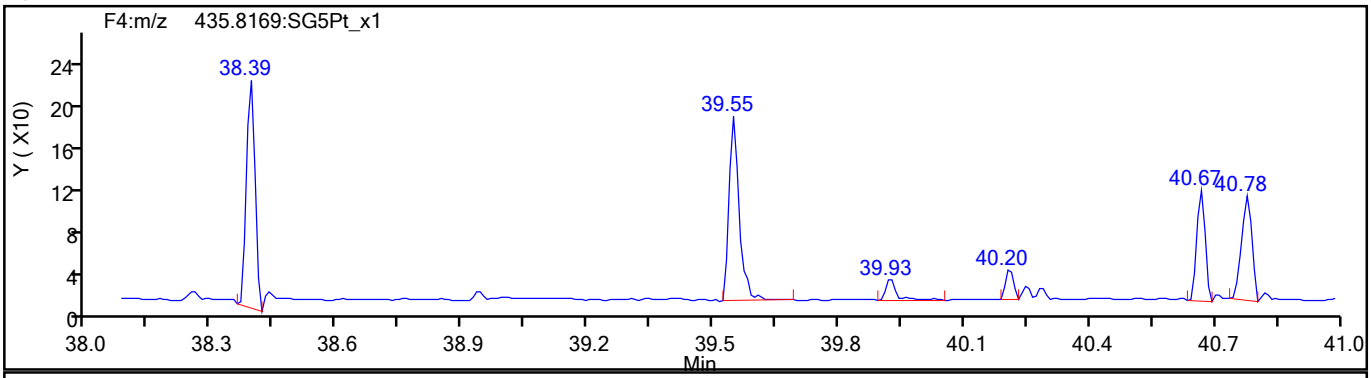

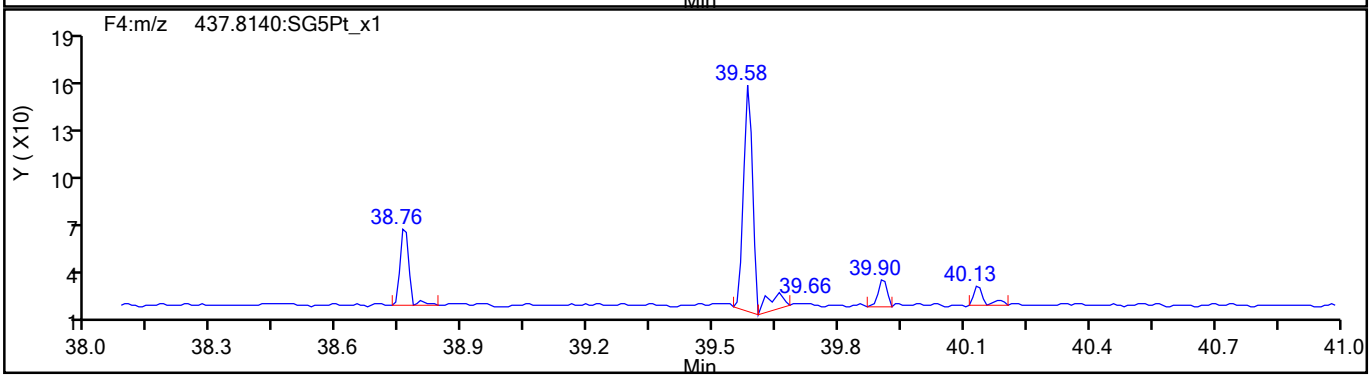

786463

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

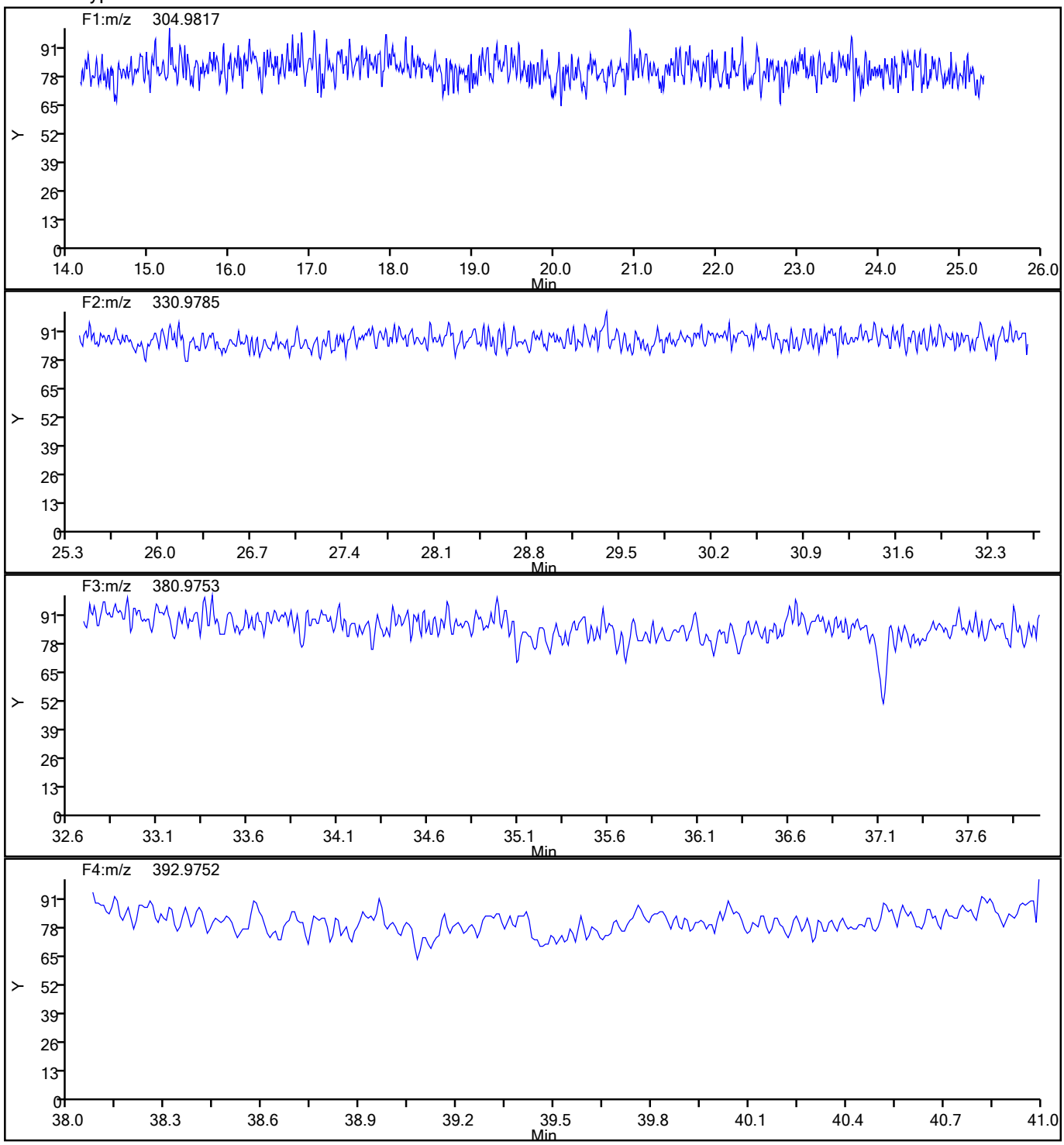

786464

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

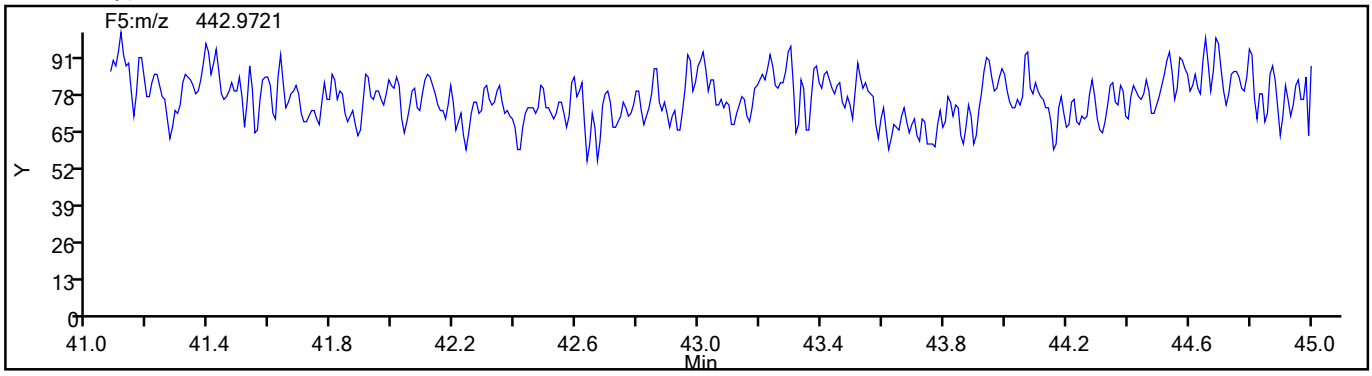

786465

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 13:59:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:08 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:37:44

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.414	82325	0.77	1.3459					0.00	
2,3,7,8-TCDF	20.465	207971	0.79	1.0802	93.5	93.5	0.3796	0.3796		
A Non-2,3,7,8-sub-TCDF	19.885	7691	0.77	1.0802	4.296	3.459	0.3796	0.998		RQ
S Total TCDF					97.8	97.0	0.3796	0.3796		RQ
D 13C-2,3,7,8-TCDD	21.782	52515	0.84	0.9317					0.00	
2,3,7,8-TCDD	21.842	61999	0.78	1.0753	43.9	43.9	0.8255	0.8255		
A Non-2,3,7,8-sub-TCDD	20.727	1960	0.77	1.0753	1.960	1.388	0.8255	1.388		RQ
S Total TCDD					45.9	45.3	0.8255	0.8255		RQ
A F1 PeCDFs	24.666	2431	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.176	71975	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.536	53316	1.56	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.073						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.427	1106	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.630	78952	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.876	71095	1.09	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.253						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.573	55161	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.253						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.121	116172	0.79							
1,3,6,8-TCDD	17.755	65500	0.83							
2,3,4,7-TCDF	20.465	207971	0.79							
1,2,3,7-TCDD	21.584	55945	0.75							
1,2,3,9-TCDF	22.005	88819	0.75							
1,2,3,9-TCDD	22.100	69760	0.77							
1,2,8,9-TCDF	23.649	94787	0.80							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.700	26243								
1,3,4,6,8-PeCDF	24.062	81931	1.50							
1,2,3,8,9-PeCDD	26.119	58169	1.69							
1,2,4,7,9-PeCDD	30.776	53316	1.56							a
1,2,3,8,9-PeCDF	30.944	68306	1.60							a
1,2,3,4,6,8-HxCDF	33.212	94798	1.31							
1,2,4,6,7,9-HxCDD	34.273	63223	1.25							
1,2,3,4,6,7-HxCDD	36.581	60887	1.16							
1,2,3,4,8,9-HxCDF	36.934	83283	1.29							
1,2,3,4,6,7,9-HpCDD	38.933	59370	1.04							

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 13:59:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:08 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:37:44

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.414	20.414	0	1.000	35682	5599	44	110	127		
317.9389	20.414	20.414	0	1.000	46643	6790	11	27	617	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.465	20.465	0	1.003	91905	11730	19	47	617		
305.8987	20.474	20.465	1	1.003	116066	13607	32	80	425	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.708	19.885	-11	0.965	1142	200	19	47	11		
	Empc Correction				920	249	19	47	13		
305.8987	19.742	19.885	-9	0.967	1195	324	32	80	10	0.96(0.65-0.89)	
303.9016	20.982	19.885	66	1.028	799	152	19	47	8		
305.8987	20.982	19.885	66	1.028	2231	334	32	80	10	0.36(0.65-0.89)	
	Empc Correction				1037	197	32	80	6		
303.9016	22.324	19.885	146	1.094	951	173	19	47	9		
305.8987	22.393	19.885	150	1.097	1268	204	32	80	6	0.75(0.65-0.89)	
303.9016	24.053	19.885	250	1.178	662	199	19	47	10		
305.8987	24.036	19.885	249	1.177	1302	181	32	80	6	0.51(0.65-0.89)	
	Empc Correction				859	258	32	80	8		
13C-2,3,7,8-TCDD											
331.9368	21.782	21.782	0	1.000	23953	3420	22	55	155		
333.9338	21.816	21.782	2	1.000	28562	4240	1	2	4240	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.842	21.842	0	1.003	27074	3242	31	77	105		
321.8936	21.816	21.842	-2	1.002	34925	4202	37	92	114	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.358	20.727	98	1.026	853	199	31	77	6		
321.8936	22.341	20.727	97	1.026	1914	264	37	92	7	0.45(0.65-0.89)	
	Empc Correction				1107	258	37	92	7		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A F1 PeCDFs											RQ
339.8597	24.268	24.666	-24	1.000	930	276	5	12	55		
341.8567	24.285	24.666	-23	1.000	557	133	3	7	44	1.67(1.32-1.78)	
339.8597	24.328	24.666	-20	1.000	574	173	5	12	35		
341.8567	24.397	24.666	-16	1.000	801	142	3	7	47	0.72(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.365	28.176	-49	1.000	493	76	7	17	11		
341.8567	27.323	28.176	-51	1.000	293	68	13	32	5	1.68(1.32-1.78)	
339.8597	30.944	28.176	166	1.000	42003	5021	7	17	717		
341.8567	30.952	28.176	166	1.000	26303	3283	13	32	253	1.60(1.32-1.78)	
339.8597	31.197	28.176	181	1.000	1166	325	7	17	46		
341.8567	31.155	28.176	178	1.000	921	220	13	32	17	1.27(1.32-1.78)	
339.8597	31.281	28.176	186	1.000	587	172	7	17	25		
341.8567	31.298	28.176	187	1.000	571	77	13	32	6	1.03(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	30.776	28.536	134	1.000	32522	3921	50	125	78		
357.8516	30.759	28.536	133	1.000	20794	2627	8	20	328	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						19	47			
375.8178	35.073						16	40			
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.385	35.427	-3	1.000	720	183	13	32	14		
391.8127	35.376	35.427	-3	1.000	494	115	10	25	12	1.46(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.630	38.630	0	1.000	40696	10611	27	67	393		
409.7788	38.630	38.630	0	1.000	38256	9931	15	37	662	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.876	39.876	0	1.000	37049	10134	27	67	375		
409.7788	39.876	39.876	0	1.000	34046	9582	15	37	639	1.09(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						27	67			
409.7788	39.253						15	37			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.573	39.573	0	1.000	28472	8182	15	37	545		
425.7737	39.573	39.573	0	1.000	26689	7927	18	45	440	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.253						15	37			
425.7737	39.253						18	45			
1,3,6,8-TCDF											
303.9016	16.121	16.121	0		51259	8761	19	47	461		
305.8987	16.129	16.121	1		64913	11170	32	80	349	0.79(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.755	17.755	0		29748	4895	31	77	158		
321.8936	17.772	17.755	1		35752	5364	37	92	145	0.83(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7-TCDF											
303.9016	20.465	20.465	0		91905	11730	19	47	617		
305.8987	20.474	20.465	1		116066	13607	32	80	425	0.79(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.584	21.584	0		24036	3484	31	77	112		
321.8936	21.601	21.584	1		31909	4496	37	92	122	0.75(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.005	22.005	0		38078	4978	19	47	262		
305.8987	22.005	22.005	0		50741	6292	32	80	197	0.75(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.100	22.100	0		30261	3819	31	77	123		
321.8936	22.117	22.100	1		39499	4583	37	92	124	0.77(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.649	23.649	0		42091	6762	19	47	356		
305.8987	23.640	23.649	-1		52696	8507	32	80	266	0.80(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.700	23.700	0		26243	4229	31	77	136		
1,3,4,6,8-PeCDF											
339.8597	24.062	24.062	0		49143	8715	5	12	1743		
341.8567	24.070	24.062	1		32788	6207	3	7	2069	1.50(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.119	26.119	0		36563	4902	50	125	98		
357.8516	26.136	26.119	1		21606	3187	8	20	398	1.69(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	30.776	30.776	0		32522	3921	50	125	78		a
357.8516	30.759	30.776	-1		20794	2627	8	20	328	1.56(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	30.944	30.944	0		42003	5021	7	17	717		a
341.8567	30.952	30.944	1		26303	3283	13	32	253	1.60(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.212	33.212	0		53745	7067	19	47	372		
375.8178	33.212	33.212	0		41053	5227	16	40	327	1.31(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.273	34.273	0		35102	5925	13	32	456		
391.8127	34.273	34.273	0		28121	4682	10	25	468	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.581	36.581	0		32760	7052	13	32	542		
391.8127	36.572	36.581	-1		28127	6383	10	25	638	1.16(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.934	36.934	0		46978	11482	19	47	604		
375.8178	36.926	36.934	-1		36305	9134	16	40	571	1.29(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.933	38.933	0		30305	8179	15	37	545		
425.7737	38.933	38.933	0		29065	7829	18	45	435	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	82325	12389

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	82325	12389

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.708	1142	200	1195	324	1.05	0.96	RQ
19.708	920	249	1195	324	0.9513		Empc Correction
20.982	799	152	2231	334	1.36	0.36	RQ
20.982	799	152	1037	197	0.8258		Empc Correction
22.324	951	173	1268	204	1.00	0.75	
24.053	662	199	1302	181	0.8834	0.51	RQ
24.053	662	199	859	258	0.6842		Empc Correction
Signal Totals:							
	3332	773	4359	983			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9550	1767				0.59	RQ
	7691	1756					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.296 = (9550 * 40.000) / (82325 * 1.080)

Empc Amount: 3.459 = (7691 * 40.000) / (82325 * 1.080)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

Non-2,3,7,8-sub-TCDD, RT: 20.727

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	40.000	52515	7660

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		40.000	52515	7660

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.358	853	199	1914	264	1.96	0.45	RQ
22.358	853	199	1107	258	1.39		Empc Correction
Signal Totals:							
	853	199	1107	258			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2767	463				0.45	RQ
	1960	457					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.960 = (2767 * 40.000) / (52515 * 1.075)

Empc Amount: 1.388 = (1960 * 40.000) / (52515 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

F1 PeCDFs, RT: 24.666

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.268	930	276	557	133		1.67	
24.328	574	173	801	142		0.72	R
Signal Totals:							
	1504	449	1358	275			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2862	724				1.11	RQ
	2431	693					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (2862 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (2431 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.365	493	76	293	68		1.68	
30.944	42003	5021	26303	3283		1.60	
31.197	1166	325	921	220		1.27	R
31.281	587	172	571	77		1.03	R
Signal Totals:							
	44249	5594	28088	3648			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	72337	9242				1.58	RQ
	71975	9264					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (72337 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (71975 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.776	32522	3921	20794	2627		1.56	
Signal Totals:							
	32522	3921	20794	2627			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	53316	6548				1.56	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (53316 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

Non-2,3,7,8-sub-HxCDD, RT: 35.427

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.385	720	183	494	115		1.46	R
Signal Totals:							
	720	183	494	115			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1214	298				1.46	RQ
	1106	257					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1214 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (1106 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

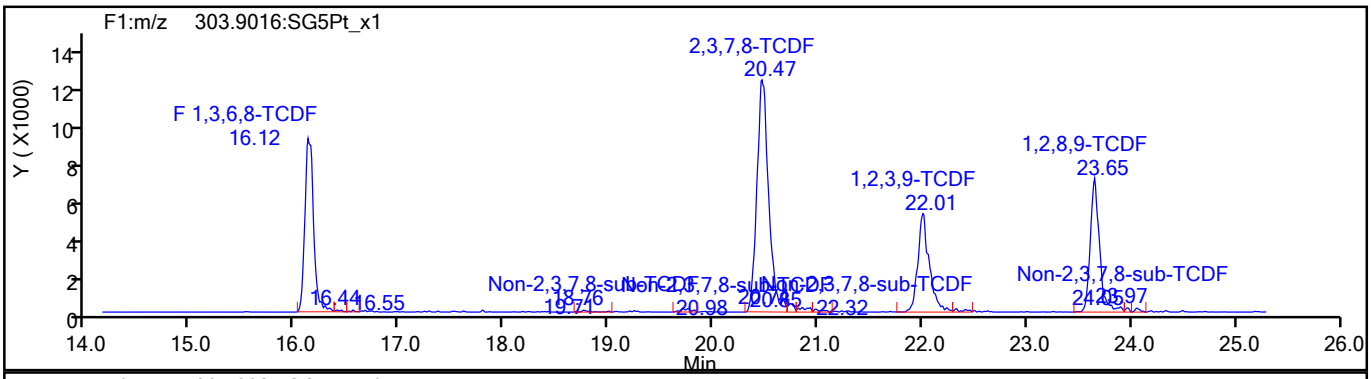

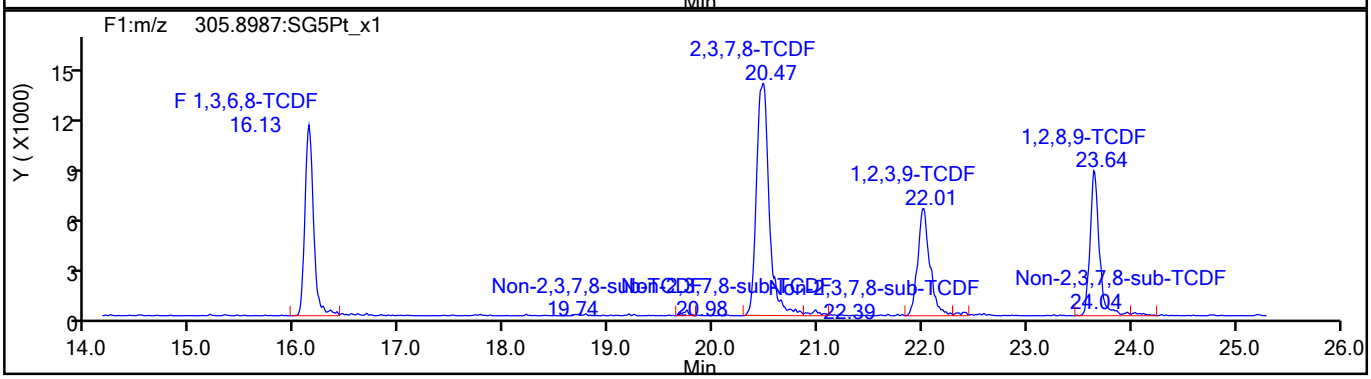

TCDF Standards

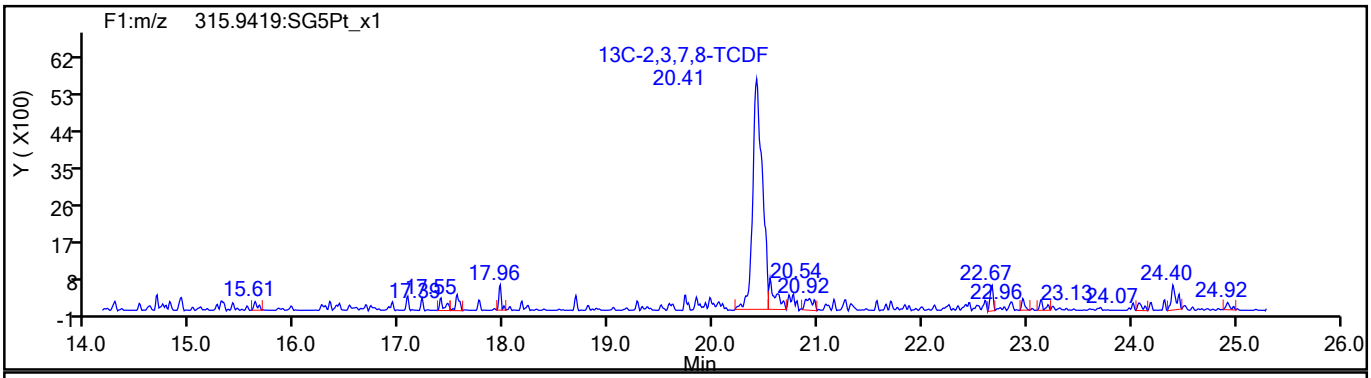

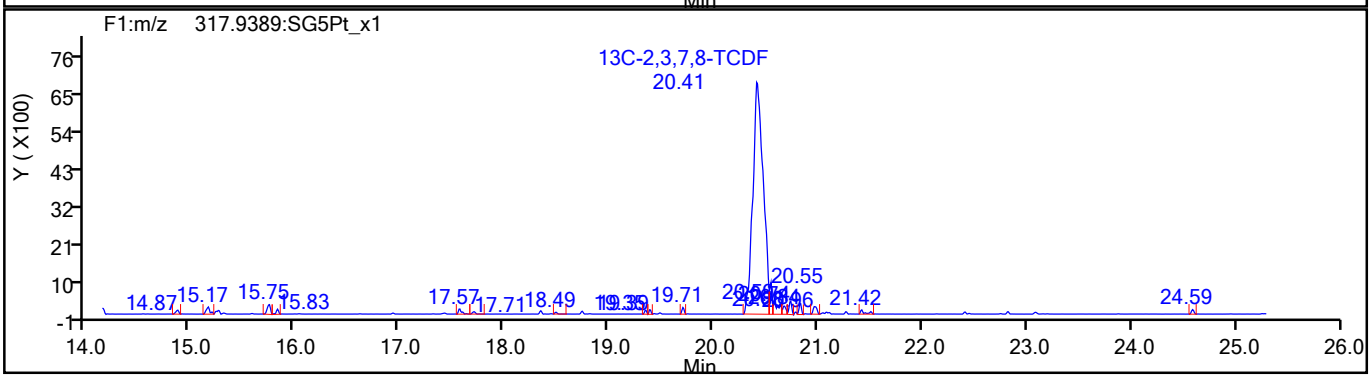

786478

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

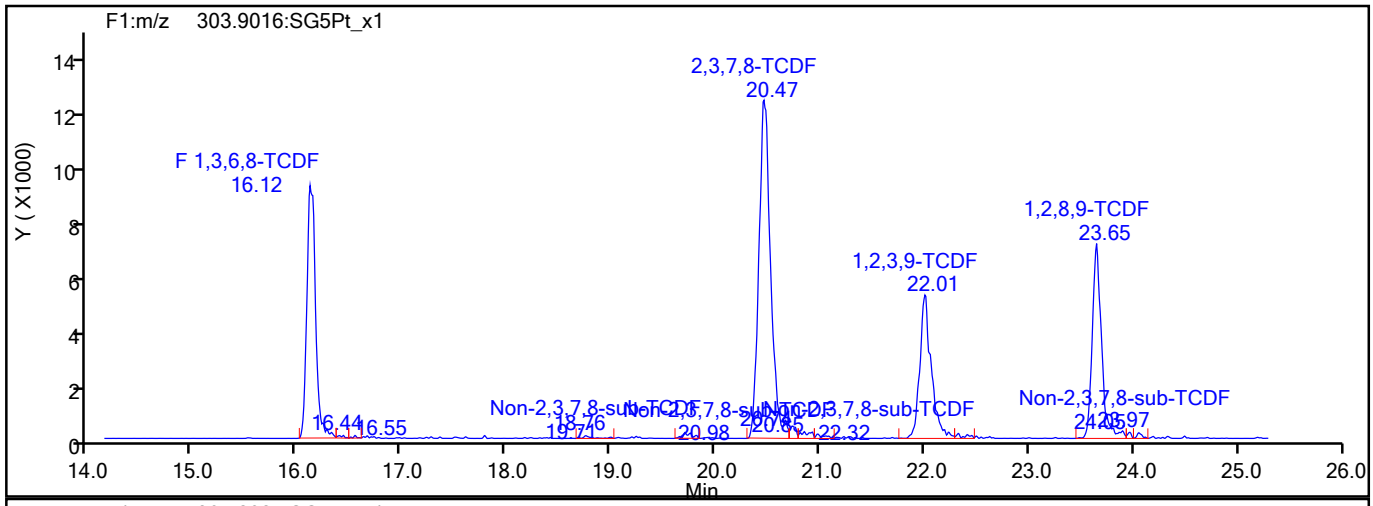

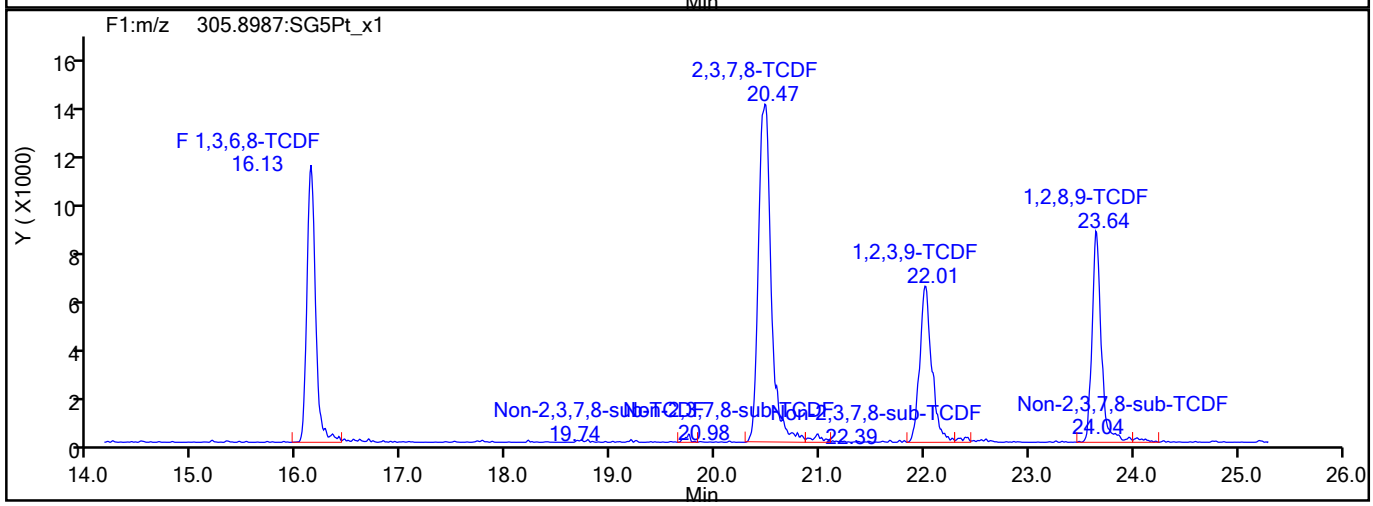

TCDF Interference Mass

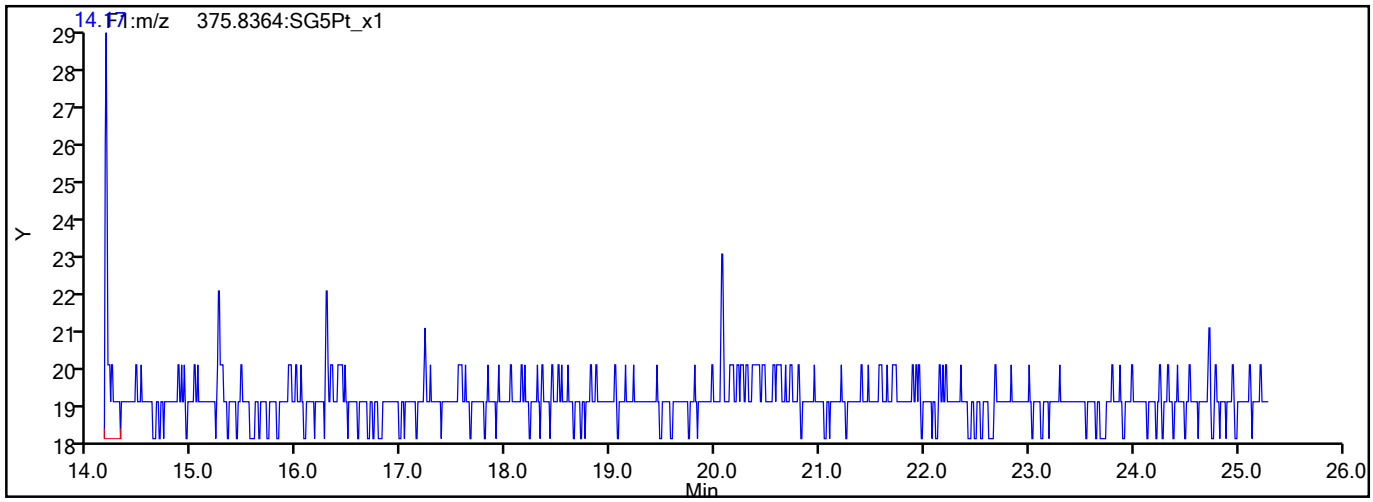

786479

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

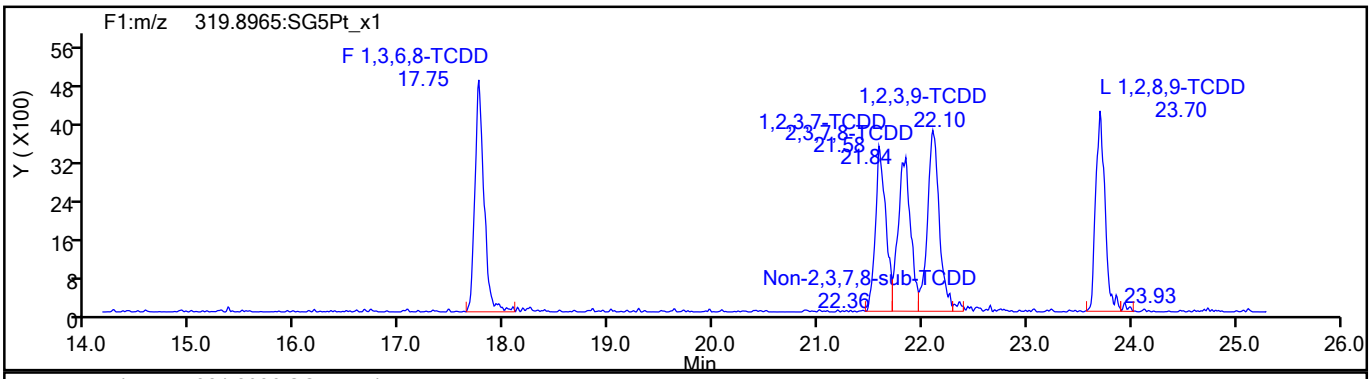

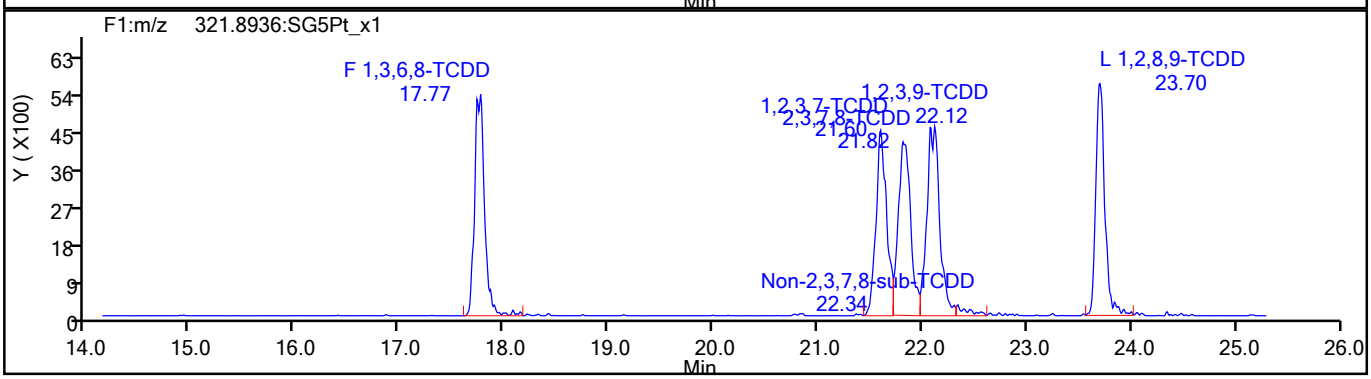

TCDD Standards

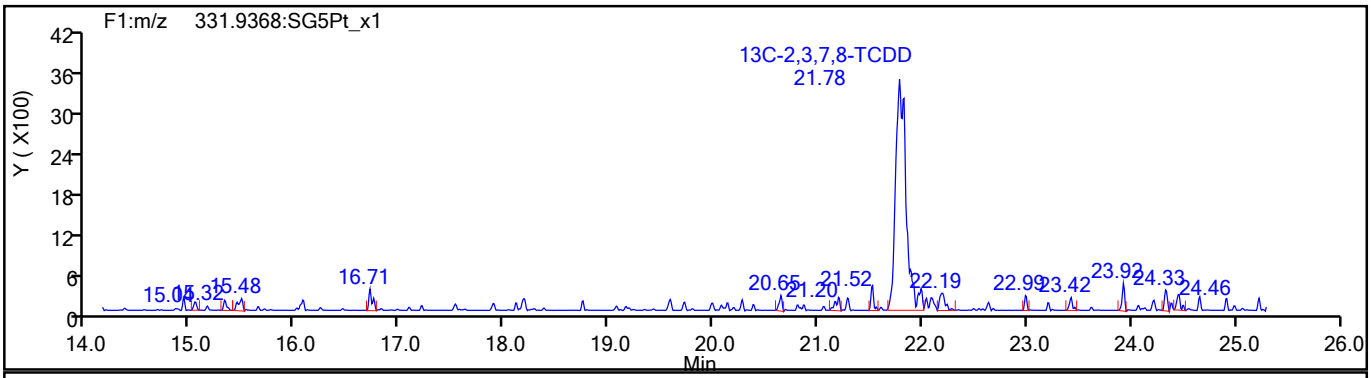

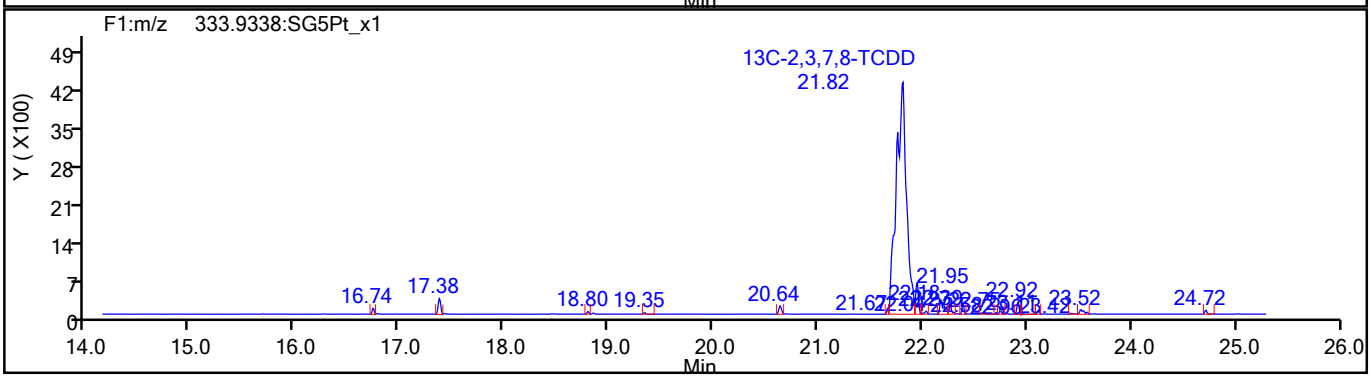

786480

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

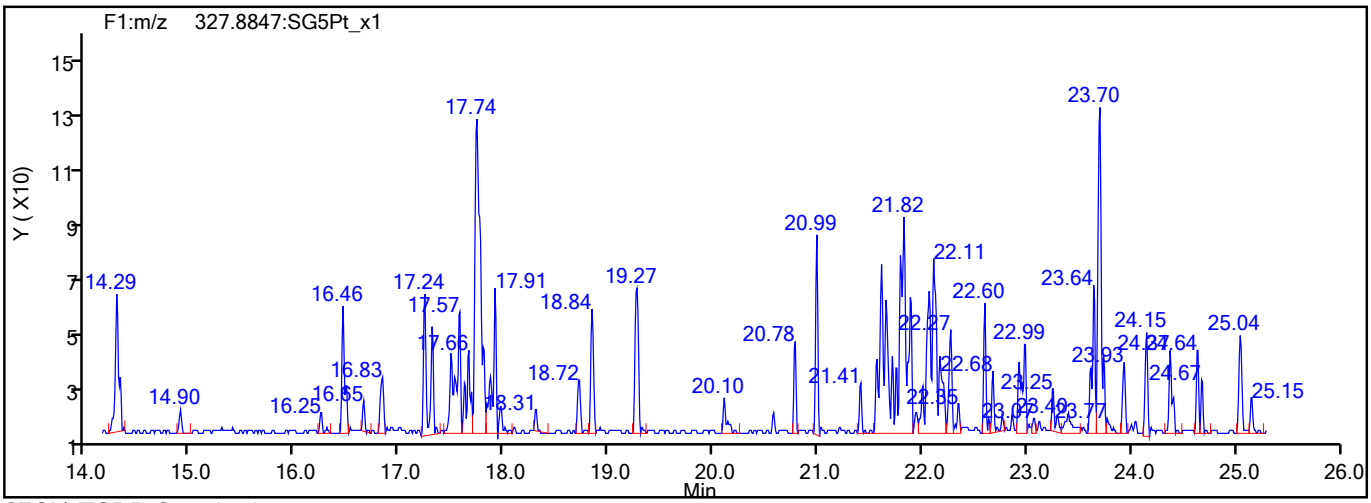

37Cl4-TCDD Standards

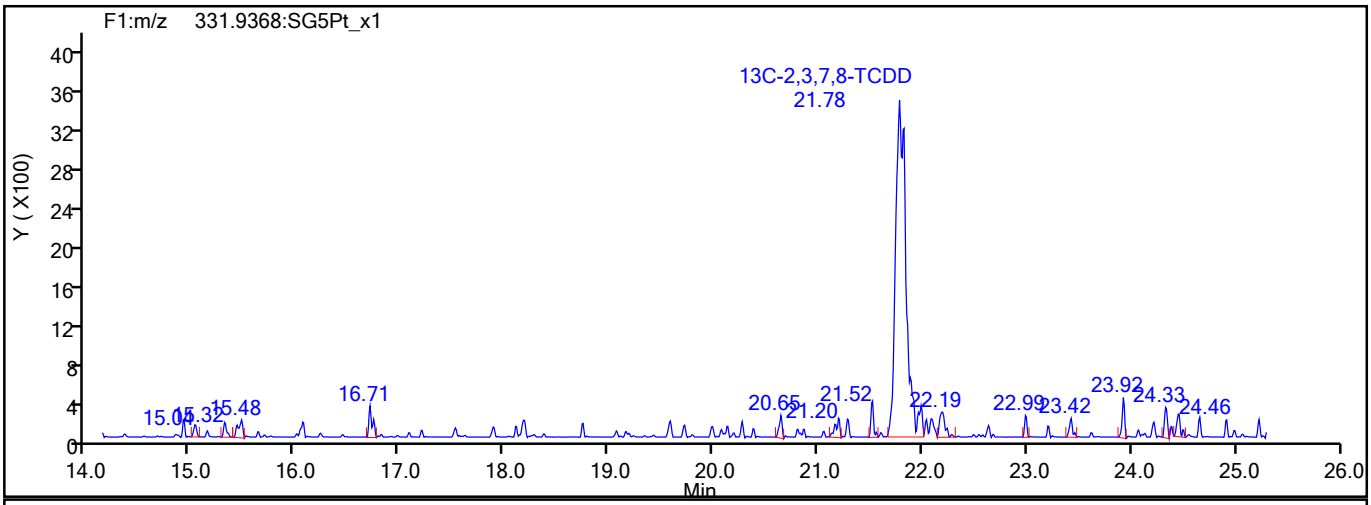

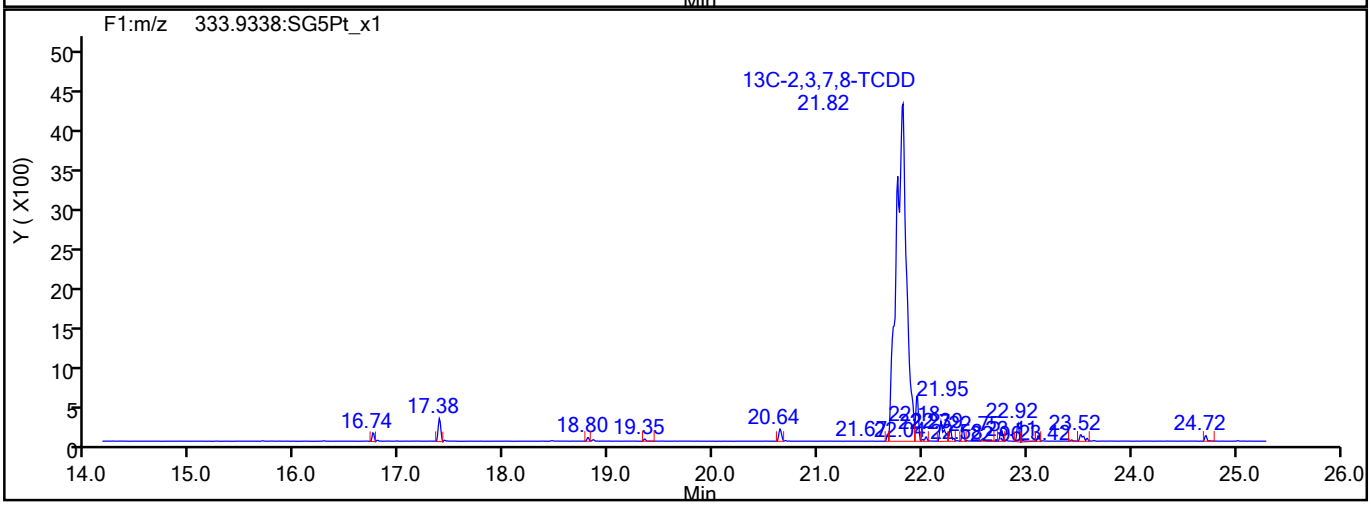

786481

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

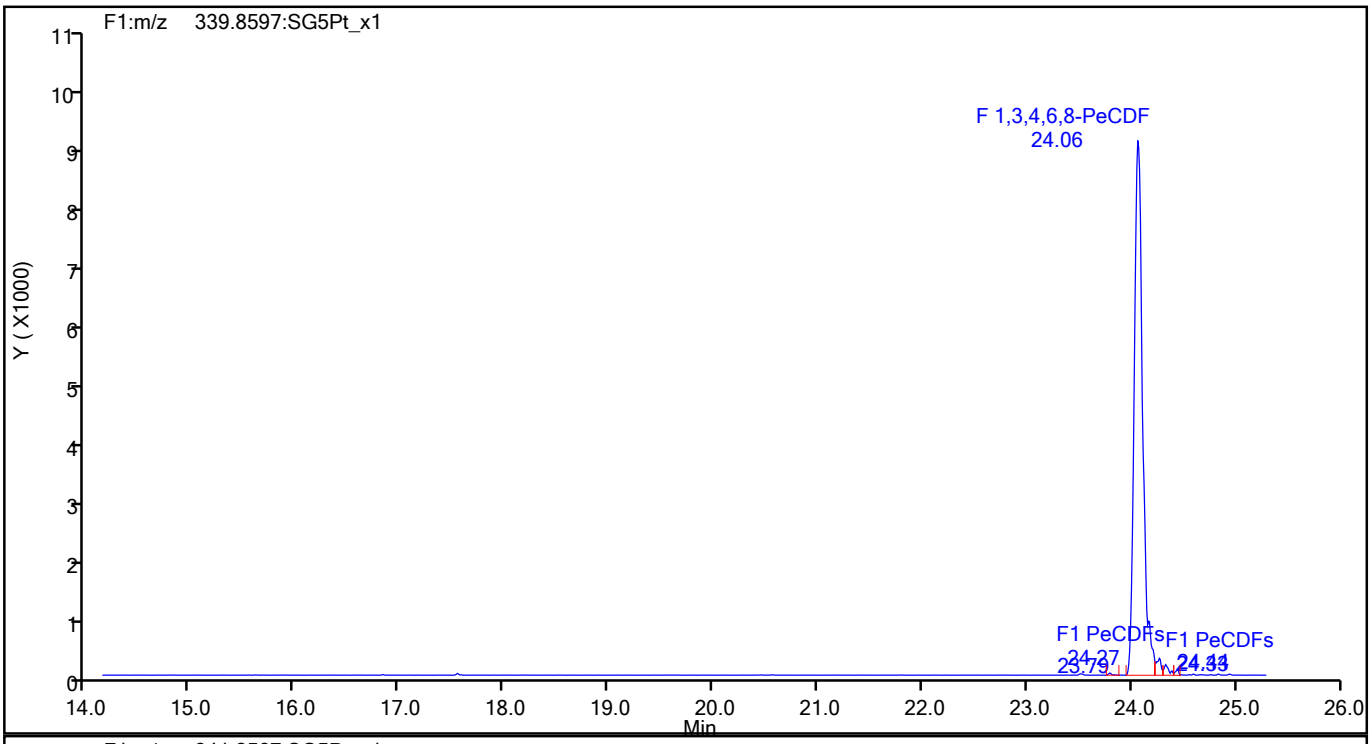

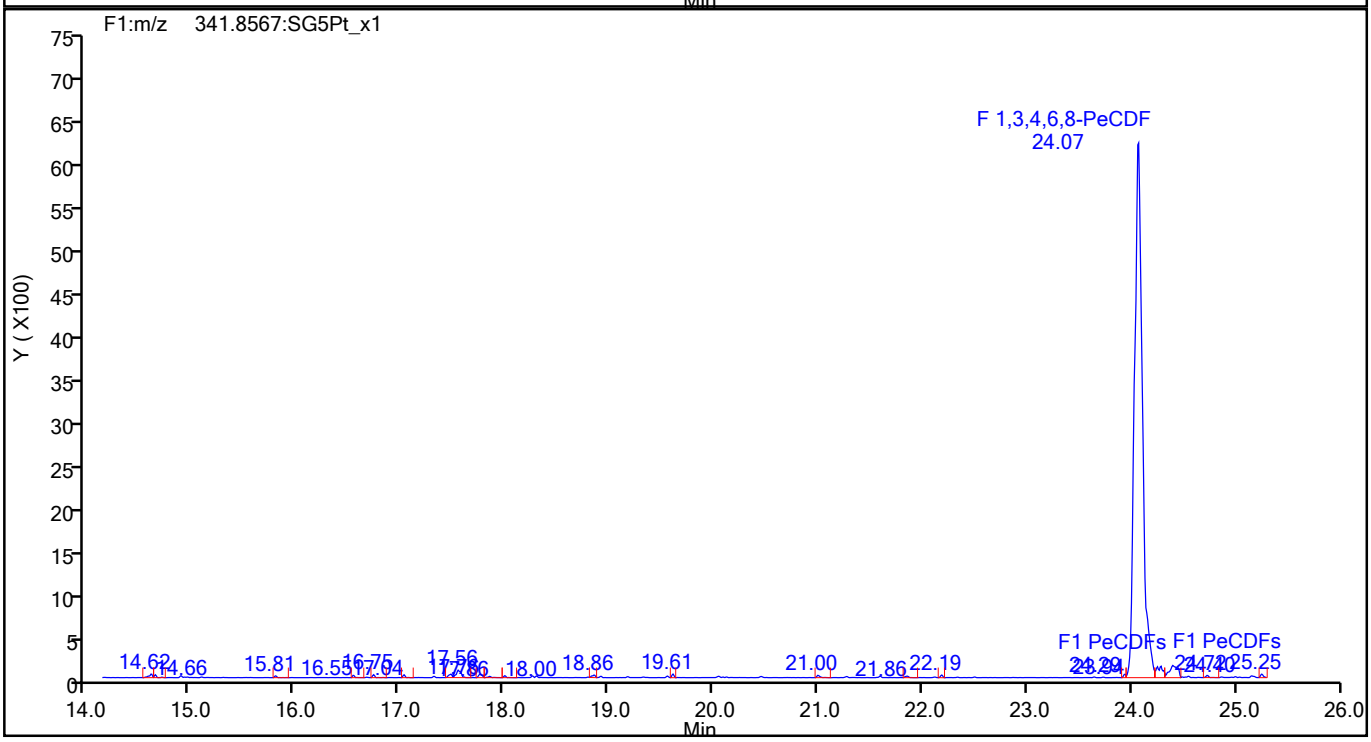

786482

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

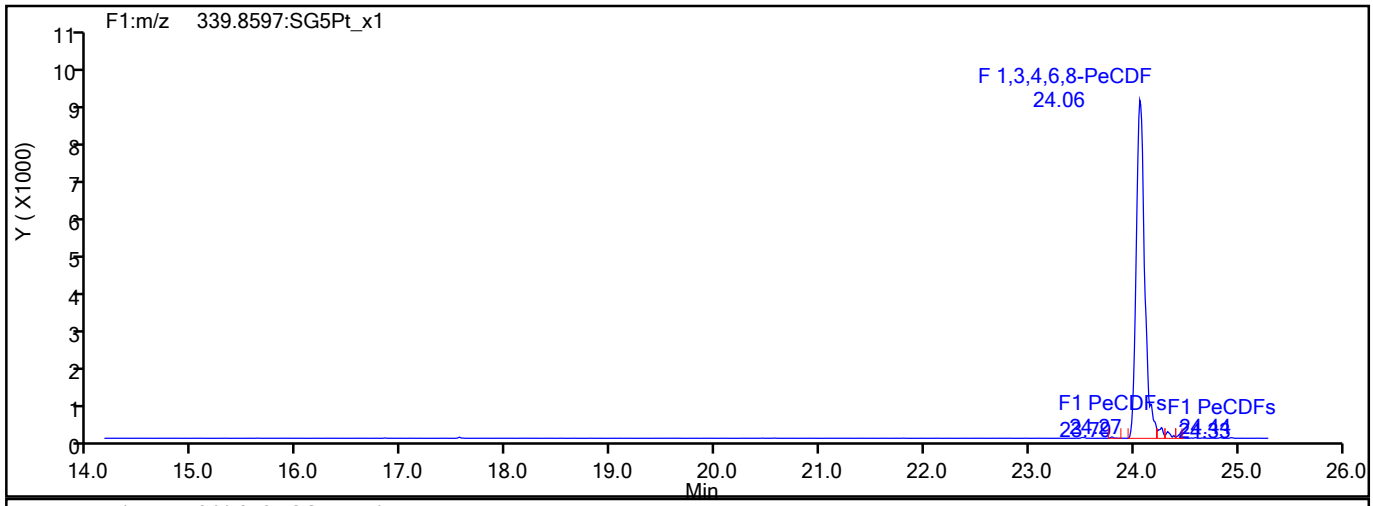

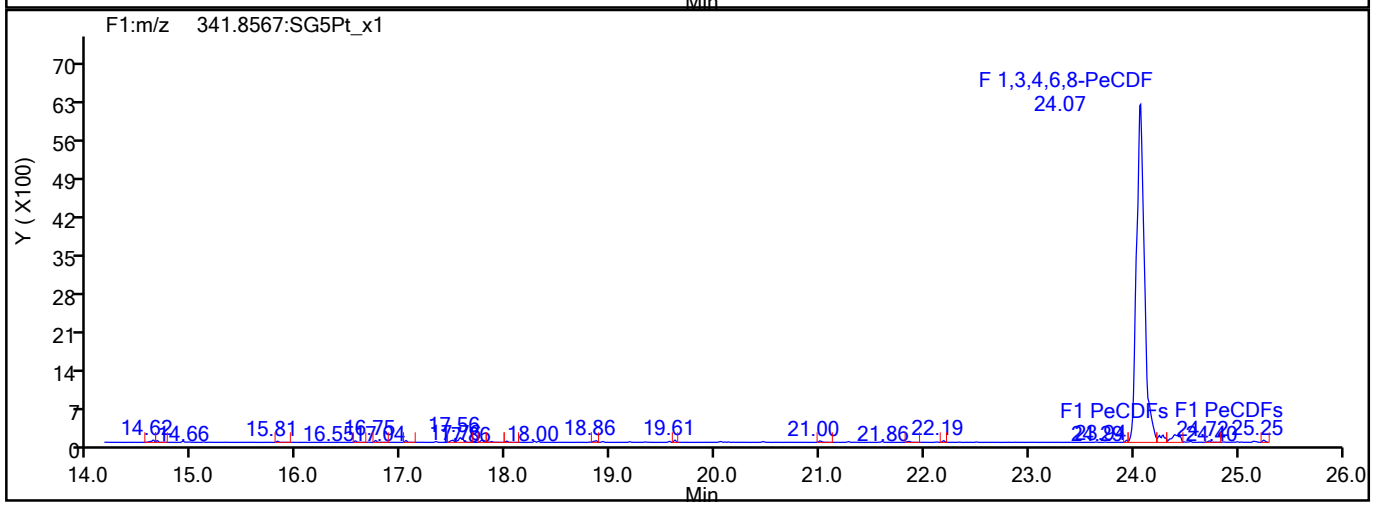

F1 PeCDFs Interference Mass

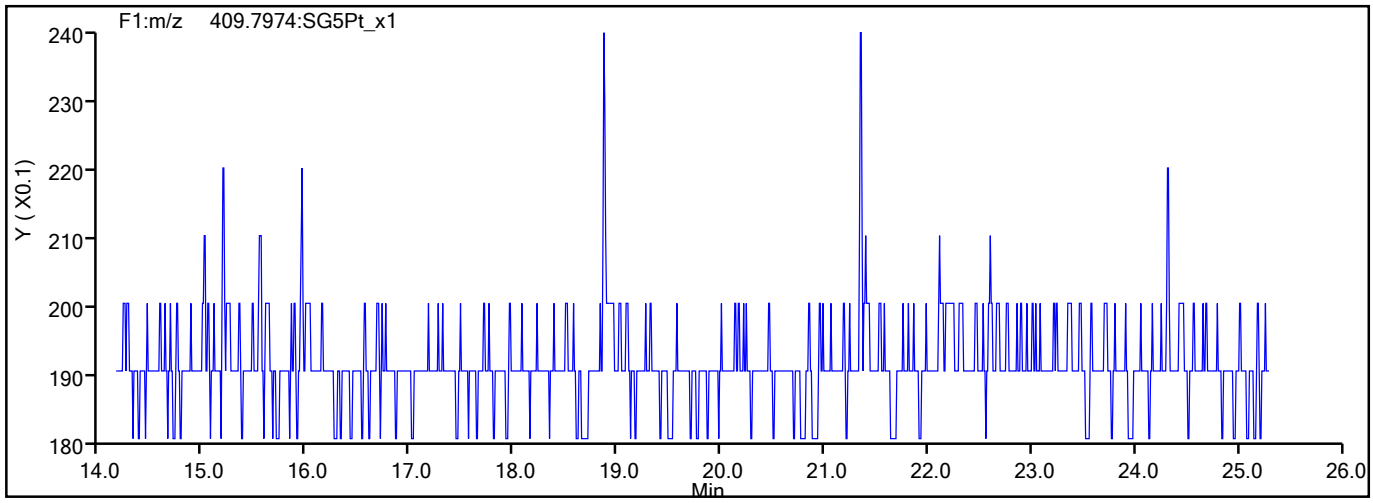

786483

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

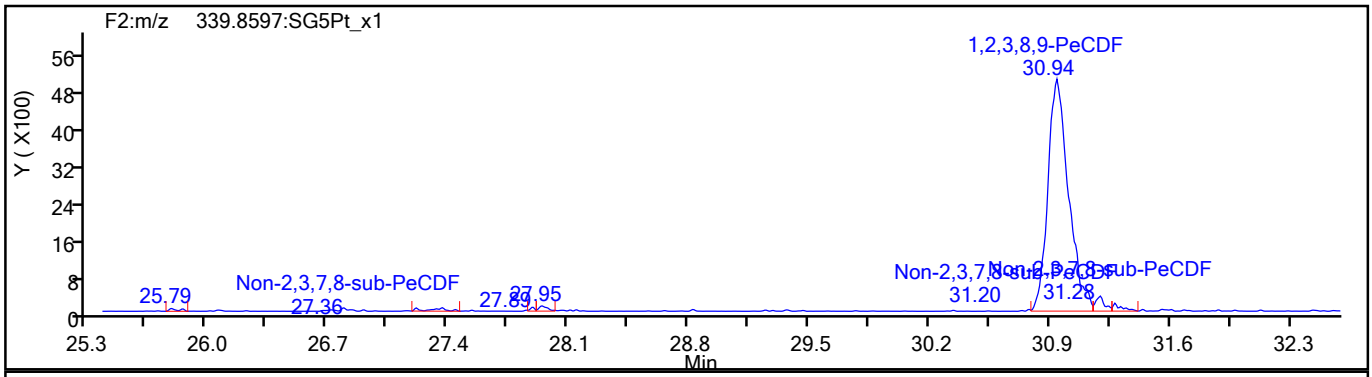

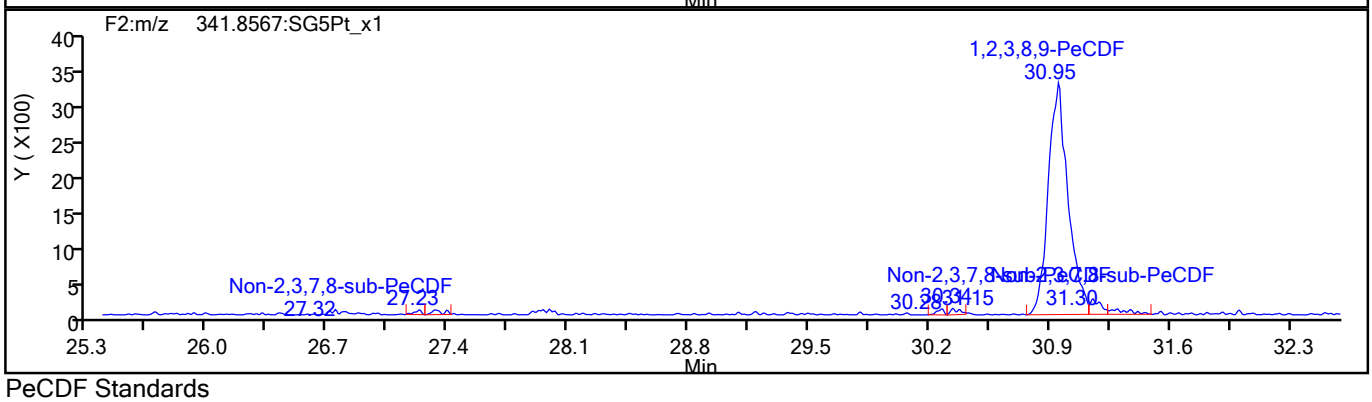

PeCDF Standards

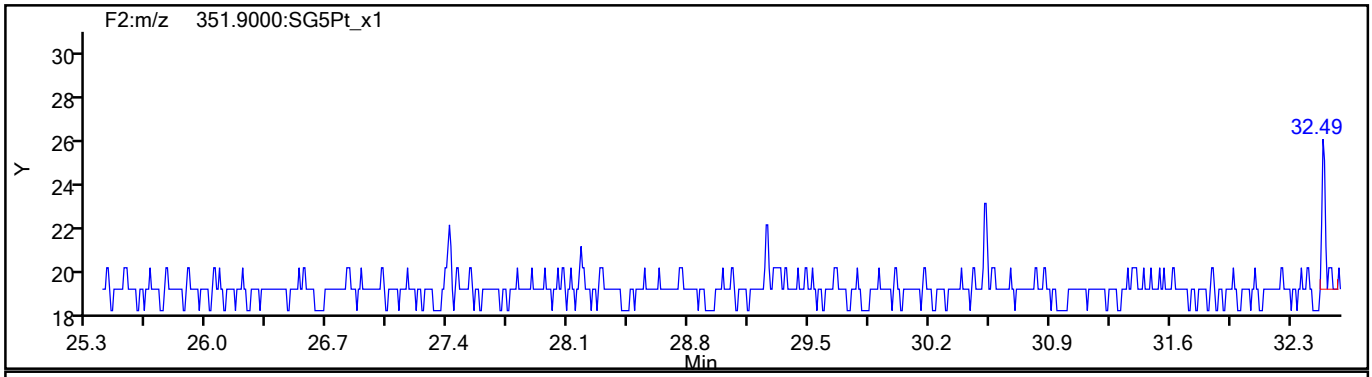

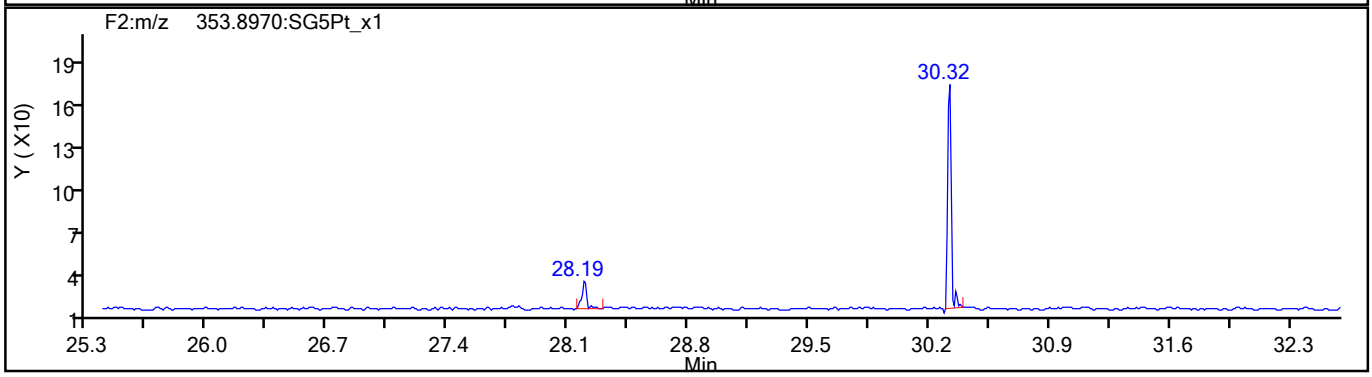

786484

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

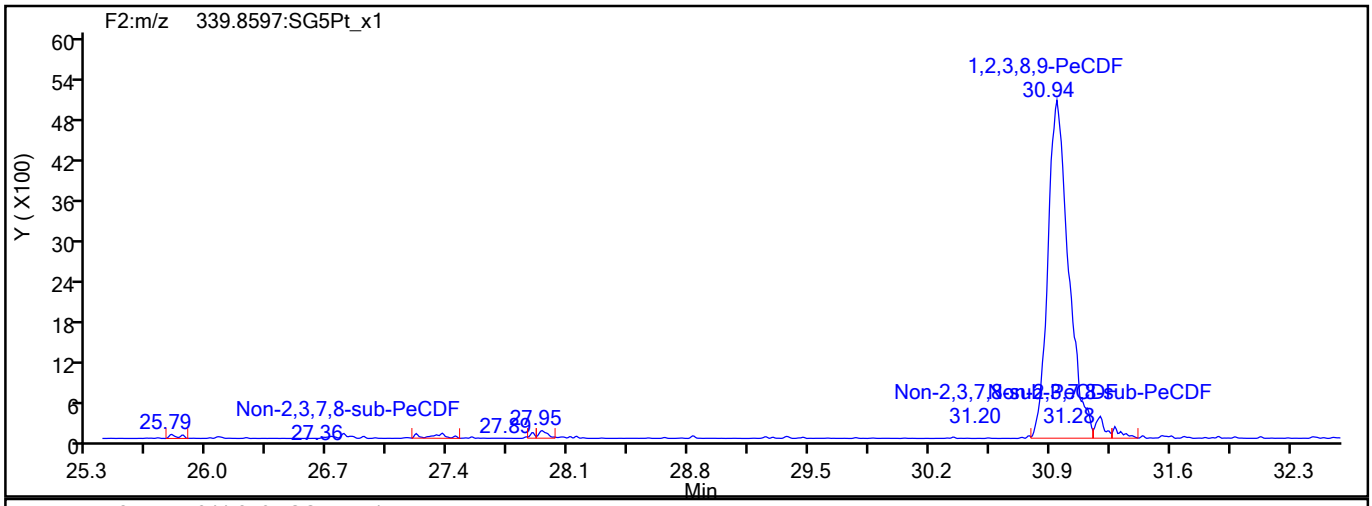

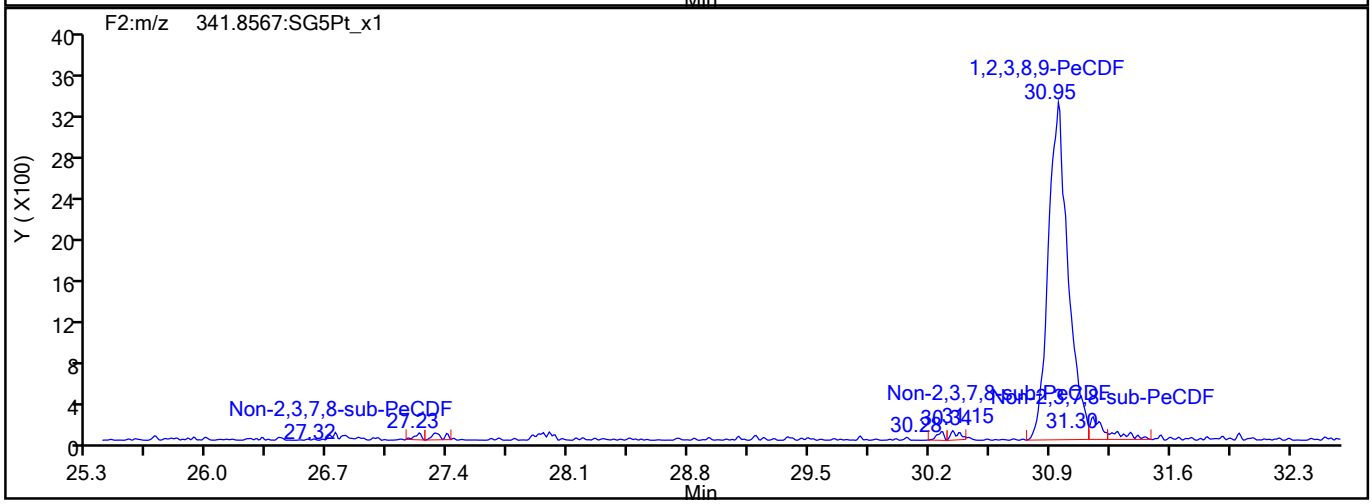

PeCDF Interference Mass

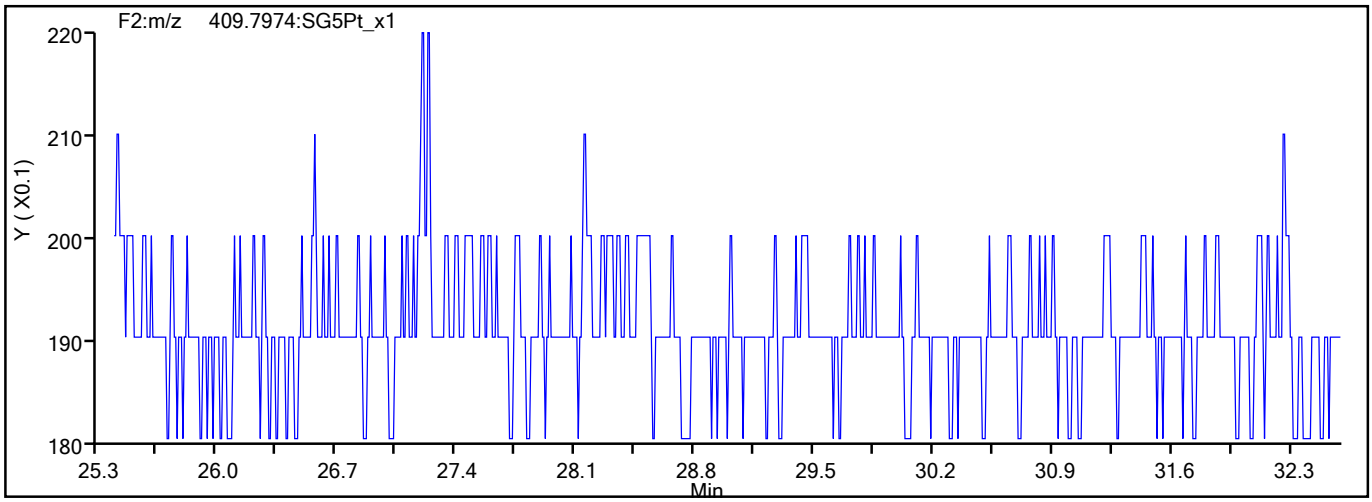

786485

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

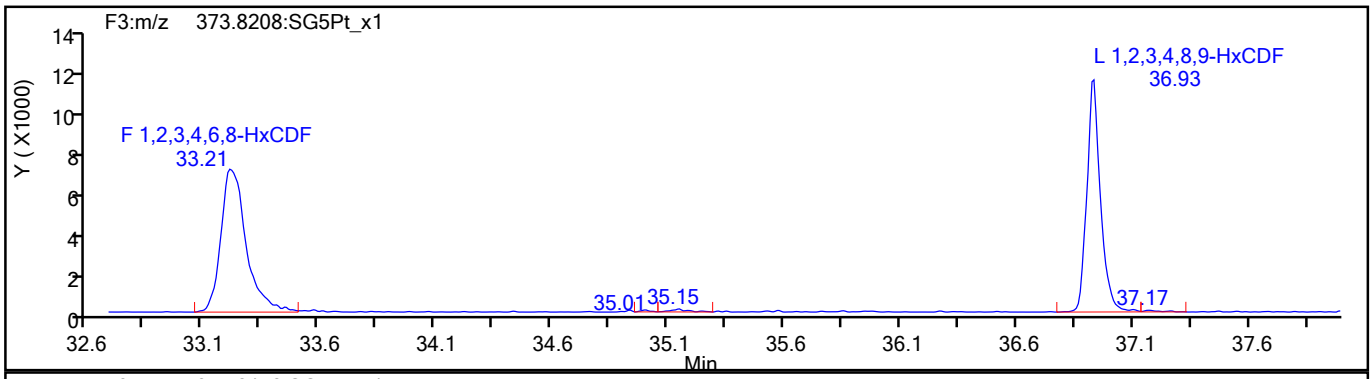

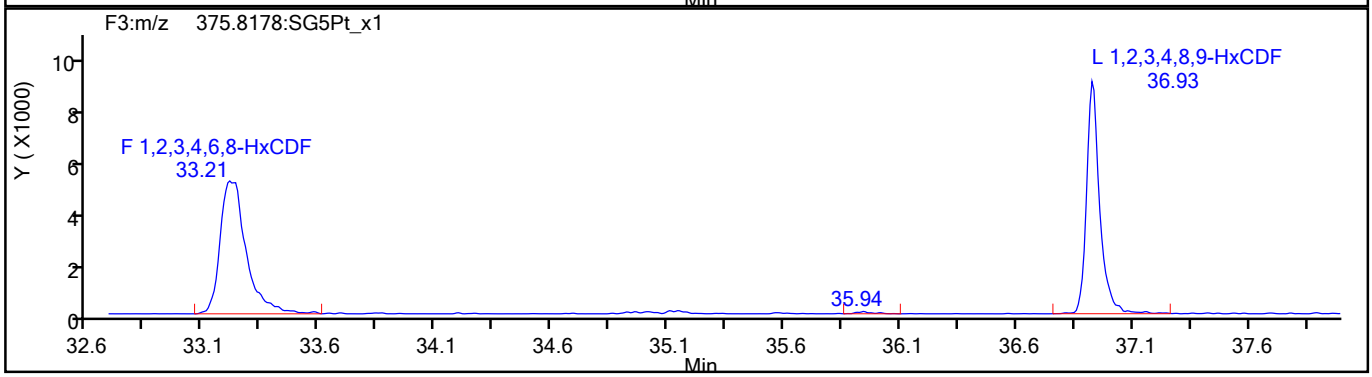

HxCDF Standards

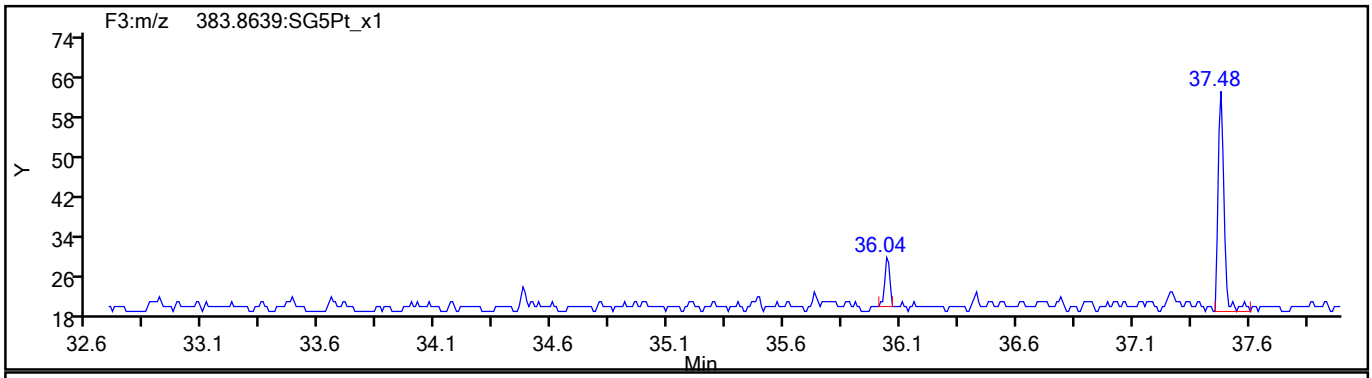

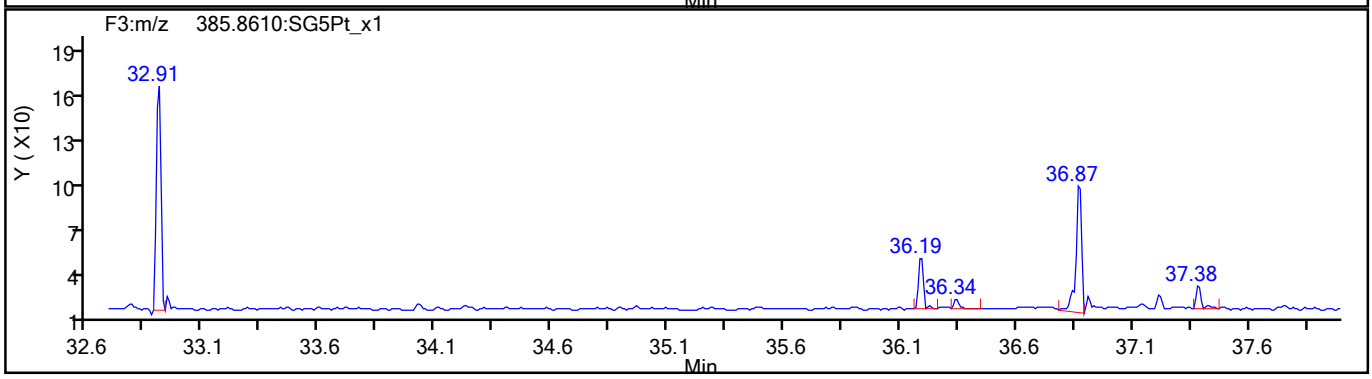

786486

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

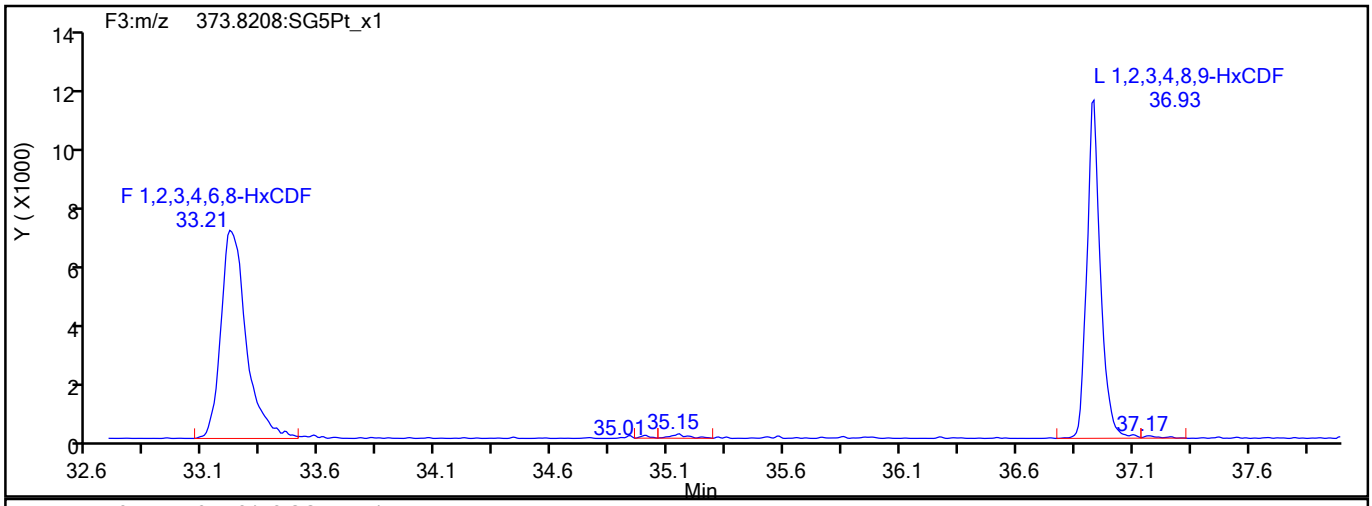

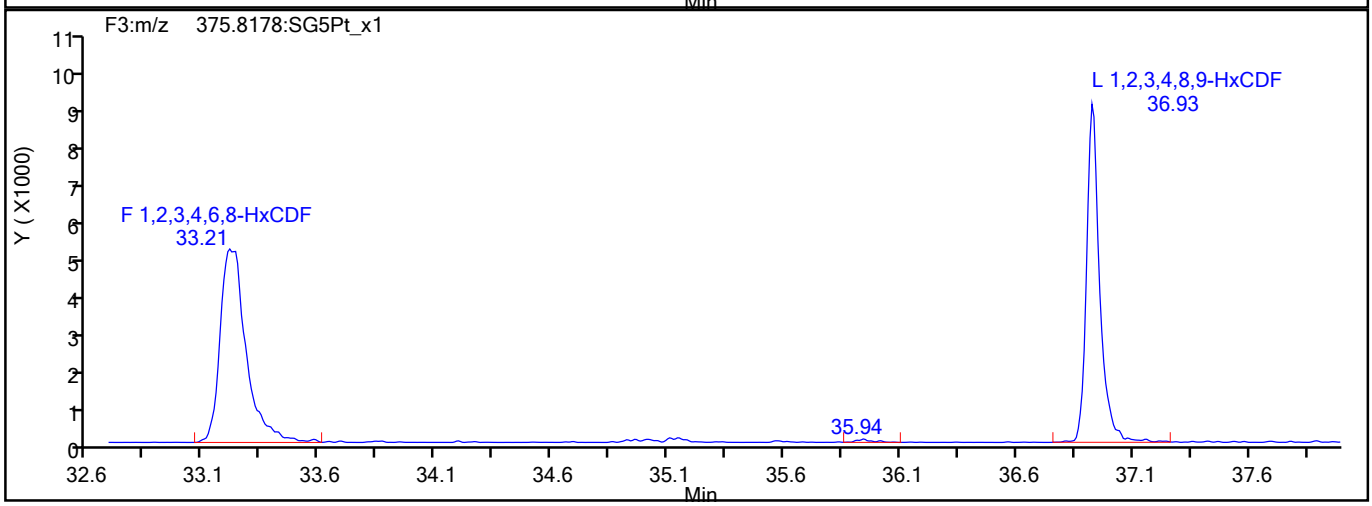

HxCDF Interference Mass

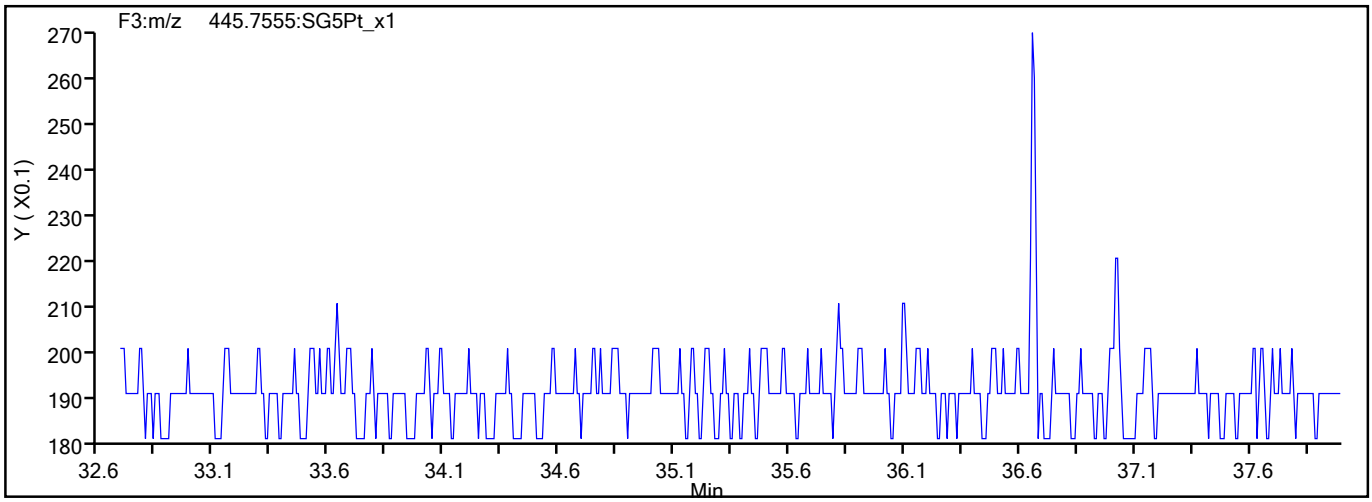

786487

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

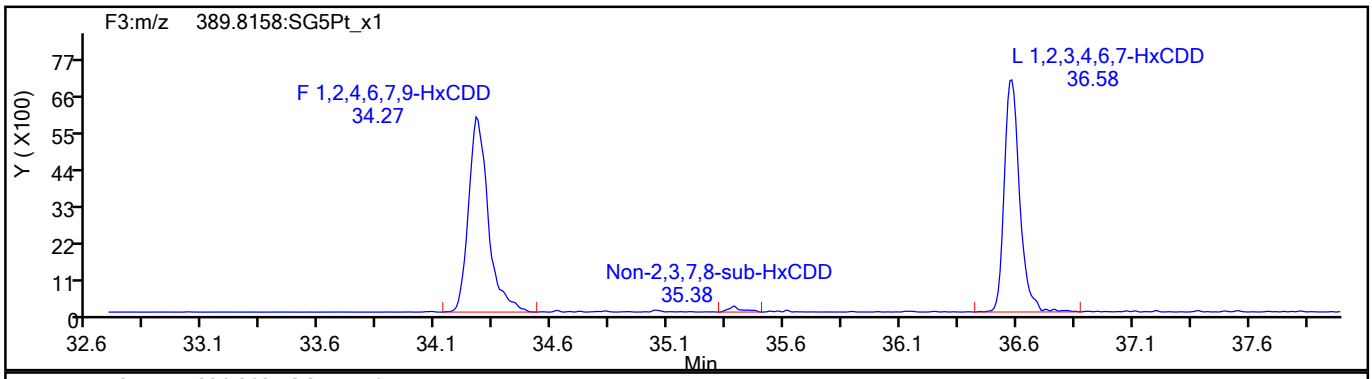

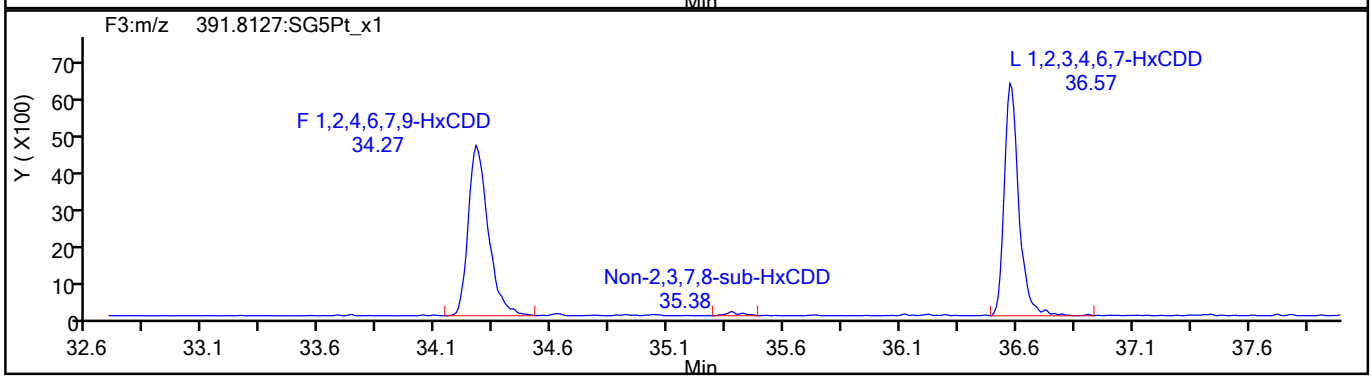

HxCDD Standards

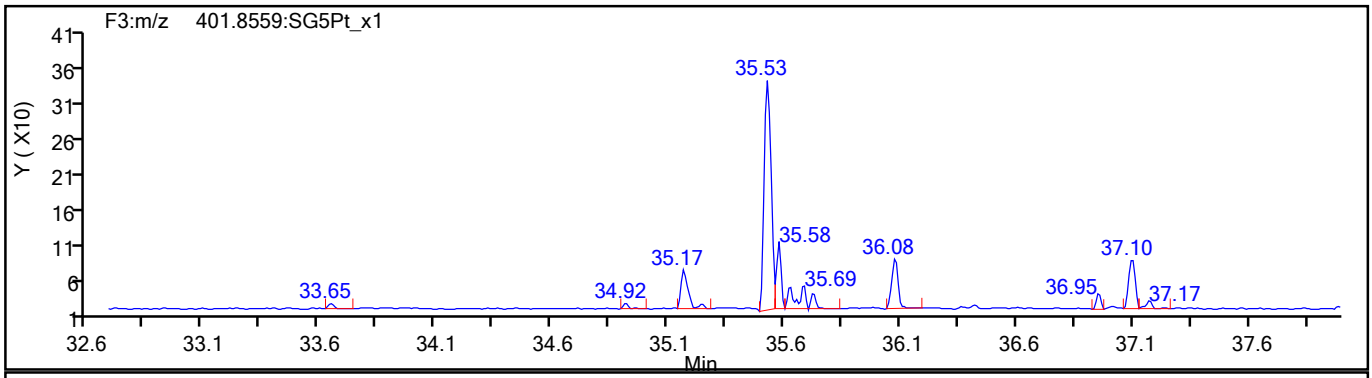

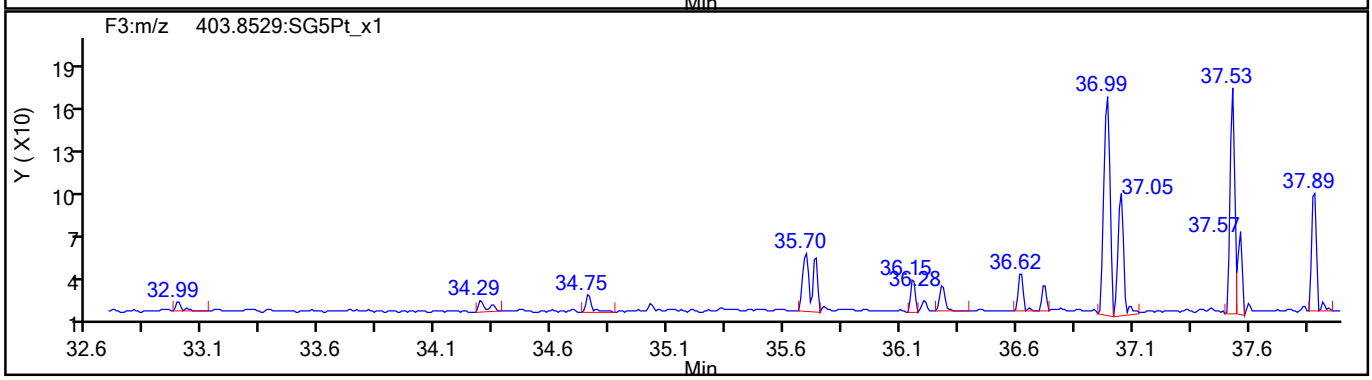

786488

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

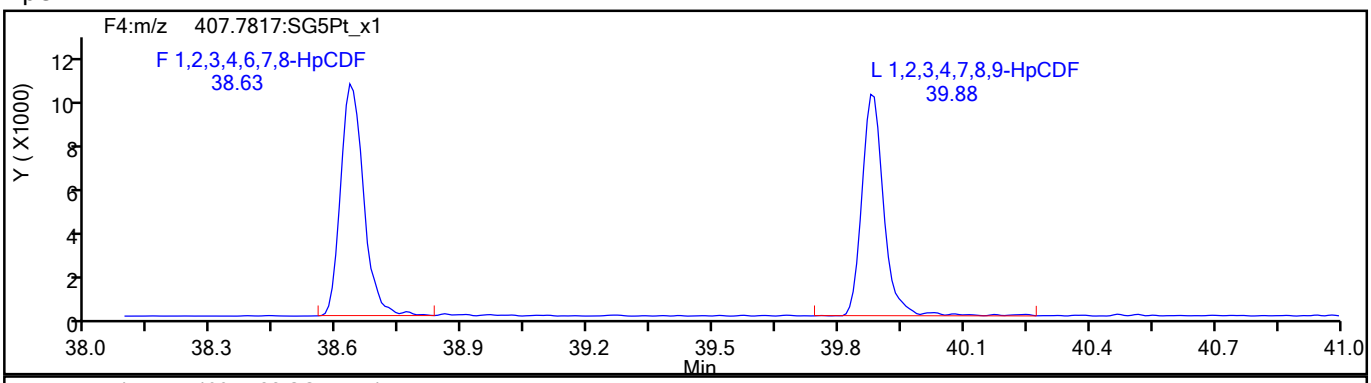

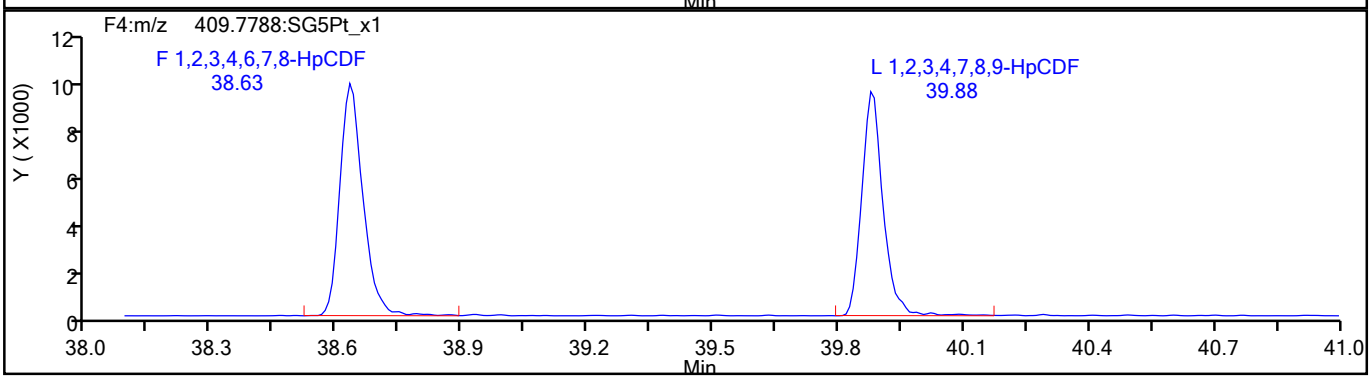

HpCDF Standards

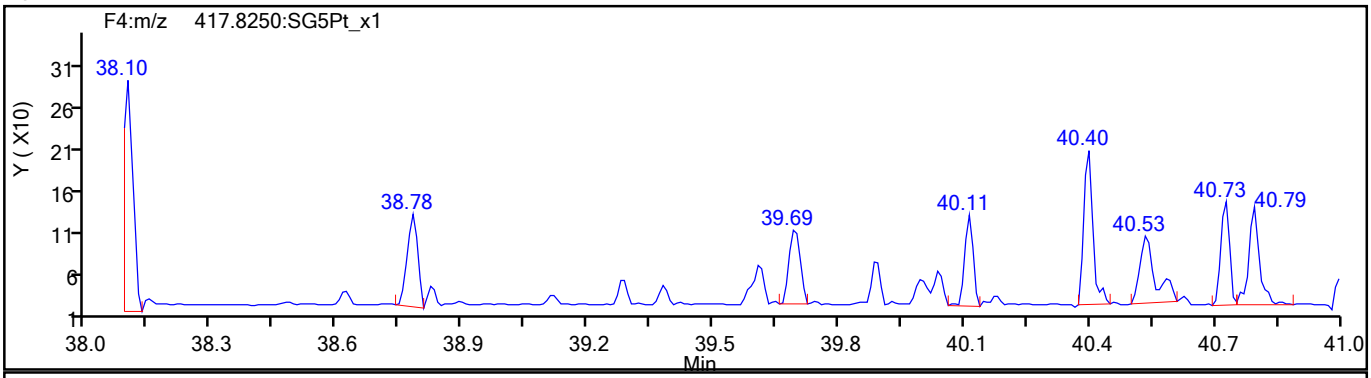

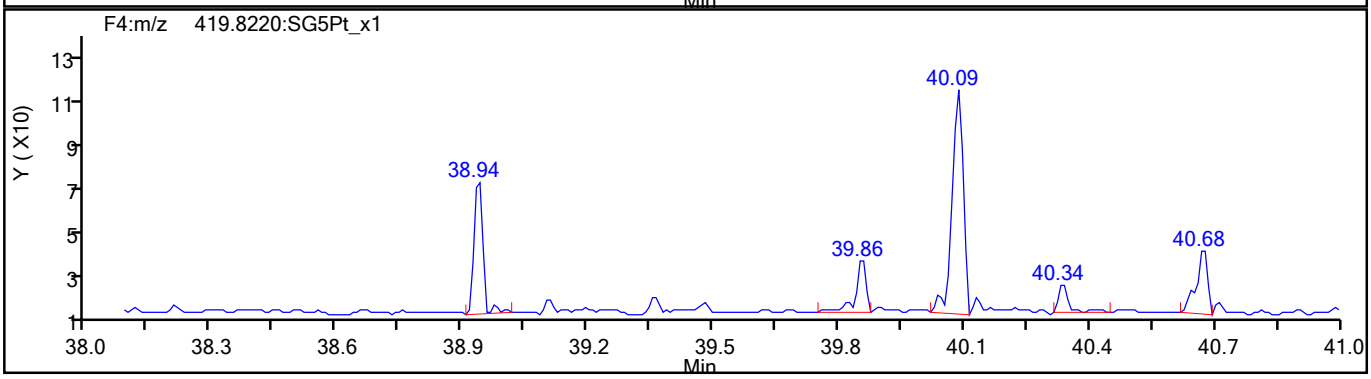

786489

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

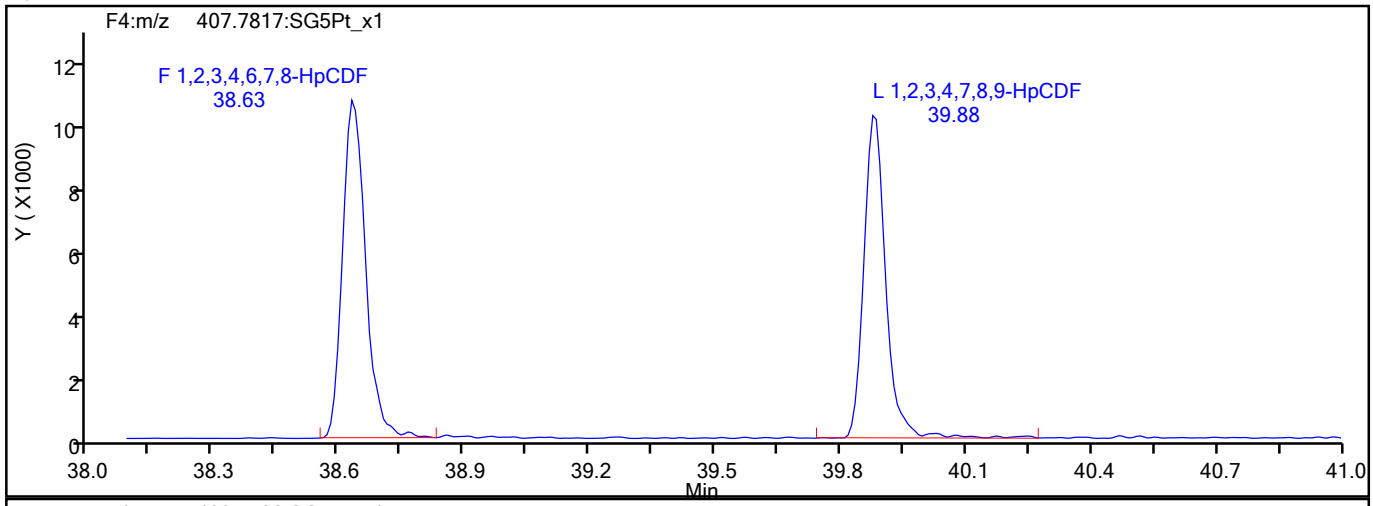

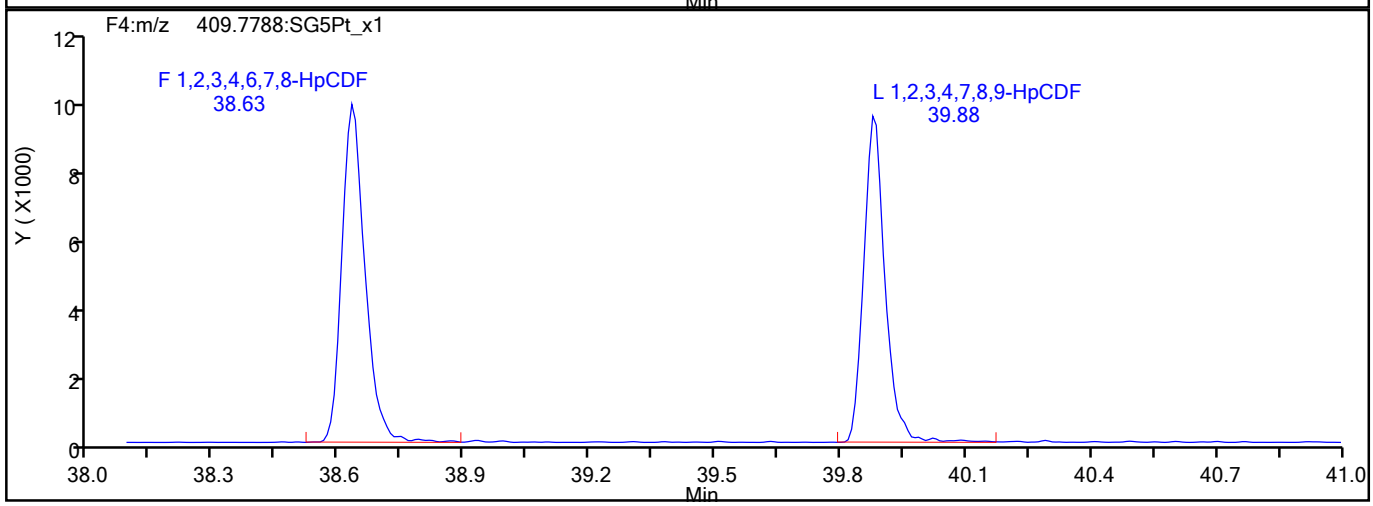

HpCDF Interference Mass

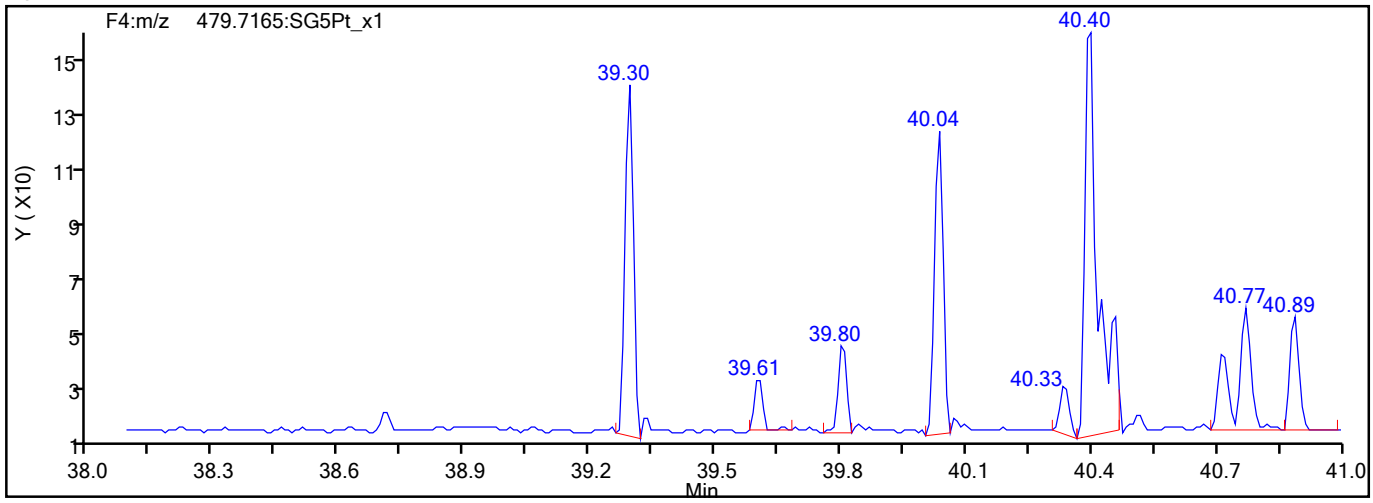

786490

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

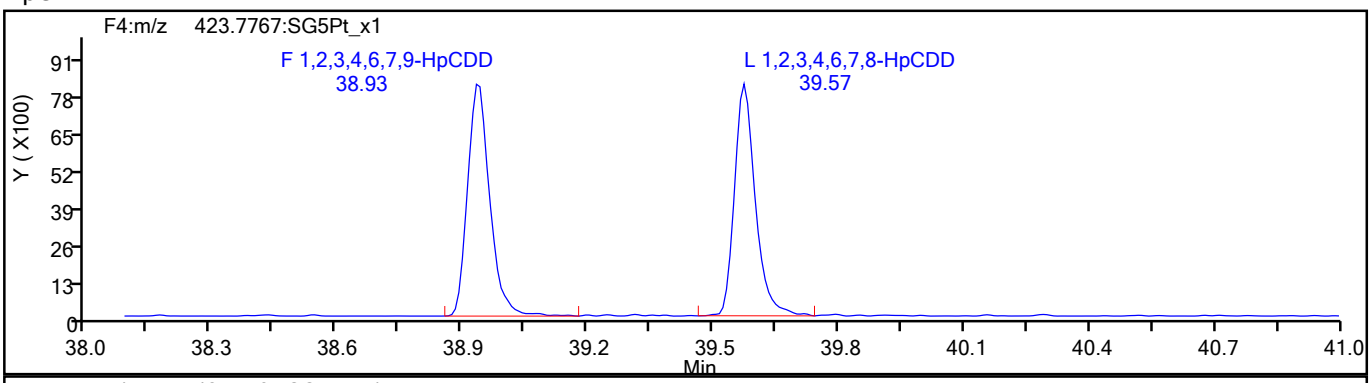

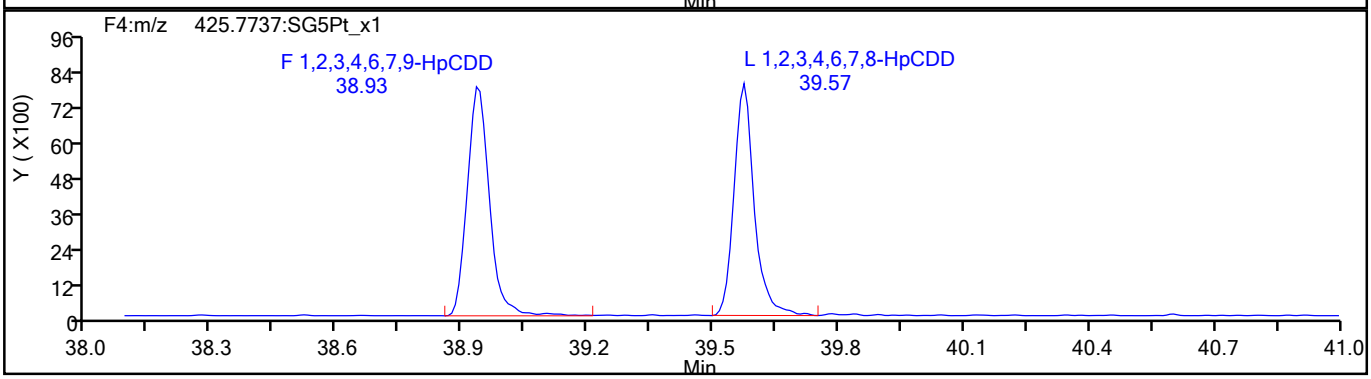

HpCDD Standards

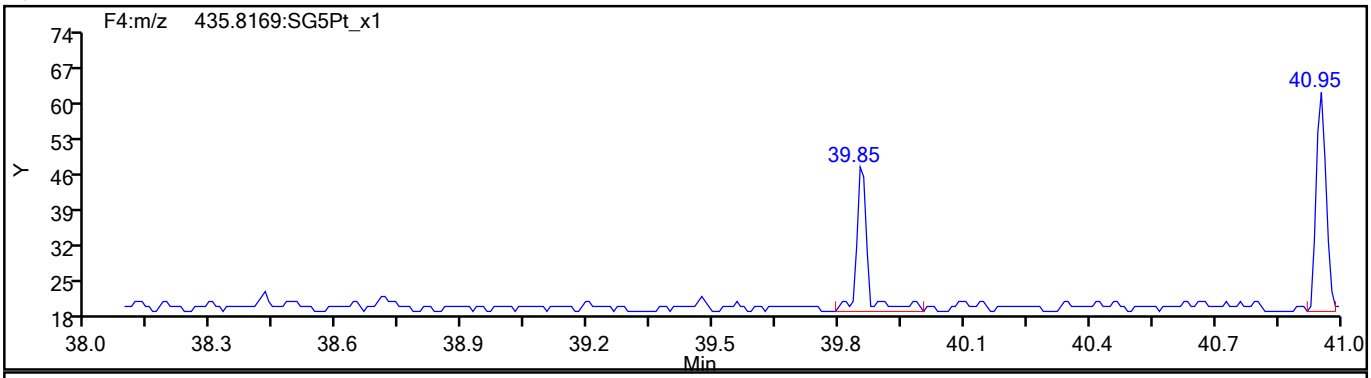

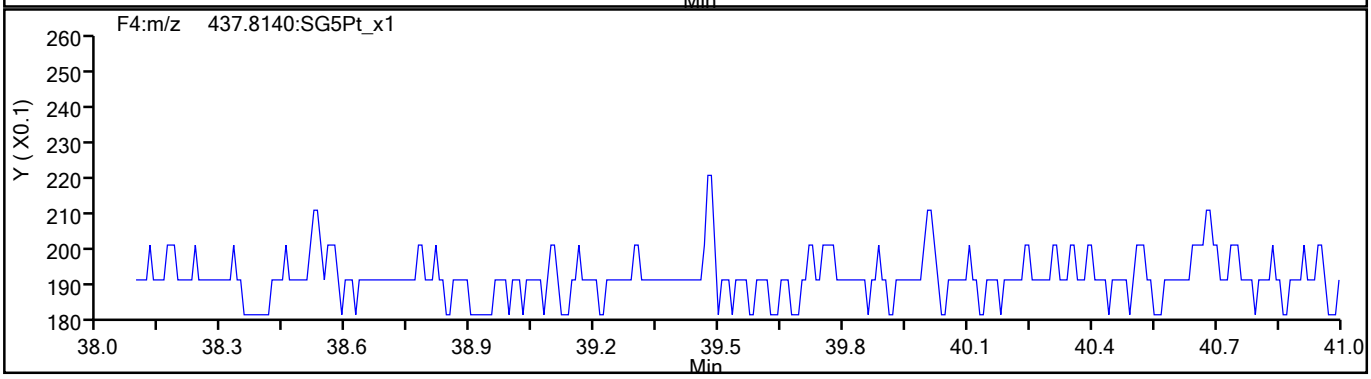

786491

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

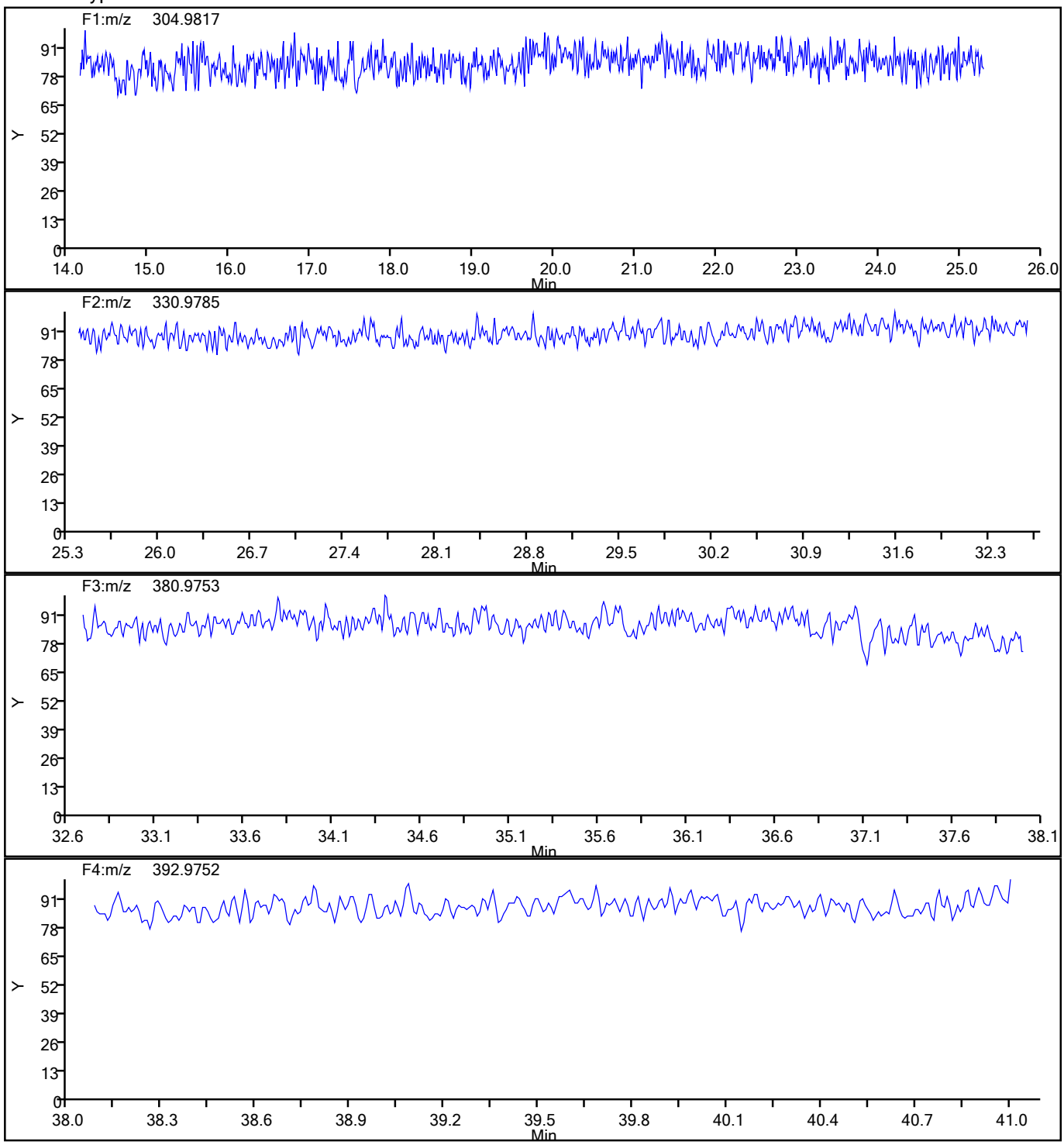

786492

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

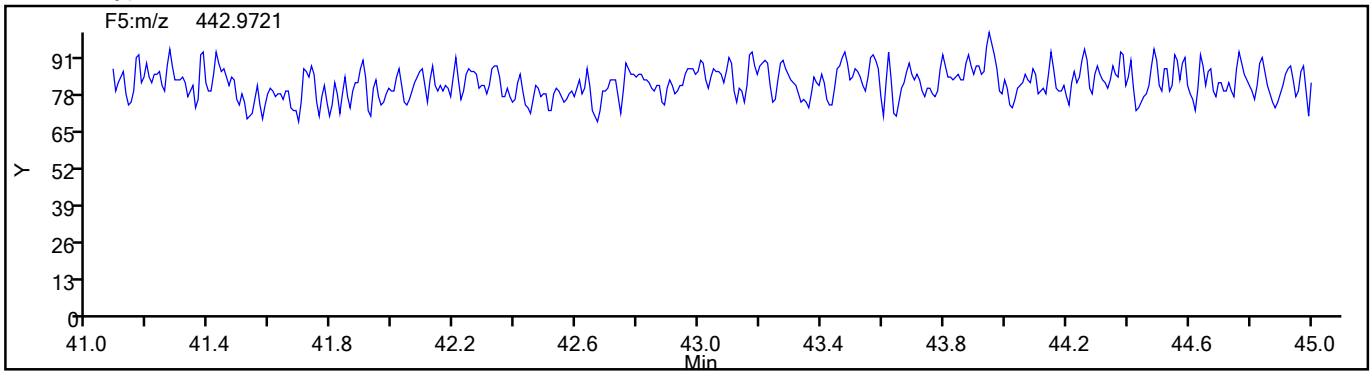

786493

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 20-Aug-2021 02:21:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:41 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:17:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.365	467833	0.81	1.3459					0.00	
2,3,7,8-TCDF	20.408	1028230	0.68	1.0802	81.4	81.4	0.2004	0.2004		
A Non-2,3,7,8-sub-TCDF	19.851	19218	0.77	1.0802	1.833	1.521	0.2004	0.6601		RQ
S Total TCDF					83.2	82.9	0.2004	0.2004		RQ
D 13C-2,3,7,8-TCDD	21.716	306095	0.83	0.9317					0.00	
2,3,7,8-TCDD	21.733	360703	0.82	1.0753	43.8	43.8	0.1149	0.1149		
A Non-2,3,7,8-sub-TCDD	20.684						0.1149	0.1149		
S Total TCDD					43.8	43.8	0.1149	0.1149		
A F1 PeCDFs	24.634	713	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.173	388340	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.478	284602	1.57	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.009	7010	1.24	0.0000						RQ
S Total HxCDF										RQ
A Non-2,3,7,8-sub-HxCDD	35.375	3880	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.618	417242	1.02	1.4421						
1,2,3,4,7,8,9-HpCDF	39.872	395176	1.06	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.245						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.561	315483	1.06	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.241						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.128	632851	0.68							
1,3,6,8-TCDD	17.726	345944	0.79							
2,3,4,7-TCDF	20.408	1028230	0.68							
1,2,3,7-TCDD	21.518	306508	0.76							
1,2,3,9-TCDF	21.939	443680	0.70							
1,2,3,9-TCDD	22.008	363657	0.82							
1,2,8,9-TCDF	23.574	570780	0.73							

786494

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.643	174001								
1,3,4,6,8-PeCDF	24.004	470784	1.65							
1,2,3,8,9-PeCDD	26.038	304807	1.59							
1,2,4,7,9-PeCDD	30.776						0.0	0.0		
1,2,3,8,9-PeCDF	30.944						0.0	0.0		
1,2,3,4,6,8-HxCDF	33.120	491975	1.24							
1,2,4,6,7,9-HxCDD	34.205	337333	1.27							
1,2,3,4,6,7-HxCDD	36.545	327967	1.27							
1,2,3,4,8,9-HxCDF	36.898	474737	1.23							
1,2,3,4,6,7,9-HpCDD	38.921	308708	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 20-Aug-2021 02:21:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:41 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:17:20

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.365	20.365	0	1.000	208816	29479	77	192	383		
317.9389	20.356	20.365	-1	1.000	259017	35573	20	50	1779	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.408	20.408	0	1.002	415746	51351	54	135	951		
305.8987	20.399	20.408	-1	1.002	612484	78065	87	217	897	0.68(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.731	19.851	-67	0.920	1292	284	54	135	5		
305.8987	18.714	19.851	-68	0.919	2953	608	87	217	7	0.44(0.65-0.89)	
	Empc Correction				1677	368	87	217	4		
303.9016	19.651	19.851	-12	0.965	3565	599	54	135	11		
305.8987	19.651	19.851	-12	0.965	4345	691	87	217	8	0.82(0.65-0.89)	
303.9016	23.995	19.851	248	1.178	3628	632	54	135	12		
305.8987	23.995	19.851	248	1.178	7371	1071	87	217	12	0.49(0.65-0.89)	
	Empc Correction				4711	820	87	217	9		
13C-2,3,7,8-TCDD											
331.9368	21.716	21.716	0	1.000	138947	18418	16	40	1151		
333.9338	21.681	21.716	-2	1.000	167148	21073	58	145	363	0.83(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.733	21.733	0	1.001	162087	21343	27	67	790		
321.8936	21.741	21.733	1	1.001	198616	25745	22	55	1170	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.684						27	67			
321.8936	20.684						22	55			
A F1 PeCDFs											RQ
339.8597	24.399	24.634	-14	1.000	637	92	7	17	13		
341.8567	24.408	24.634	-14	1.000	280	114	9	22	13	2.28(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.701	28.173	-148	1.000	1007	221	33	82	7		
341.8567	25.726	28.173	-147	1.000	618	105	25	62	4	1.63(1.32-1.78)	
339.8597	26.652	28.173	-91	1.000	1282	272	33	82	8		
341.8567	26.719	28.173	-87	1.000	1199	139	25	62	6	1.07(1.32-1.78)	
339.8597	27.233	28.173	-56	1.000	2704	359	33	82	11		
341.8567	27.266	28.173	-54	1.000	1654	276	25	62	11	1.63(1.32-1.78)	
339.8597	27.847	28.173	-20	1.000	2865	363	33	82	11		
341.8567	27.830	28.173	-21	1.000	1857	264	25	62	11	1.54(1.32-1.78)	
339.8597	30.801	28.173	157	1.000	228677	27894	33	82	845		
341.8567	30.801	28.173	157	1.000	146849	18011	25	62	720	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	30.624	28.478	129	1.000	173911	21451	25	62	858		
357.8516	30.624	28.478	129	1.000	110691	13444	22	55	611	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	35.097	35.009	5	1.000	3881	661	70	175	9		
375.8178	35.097	35.009	5	1.000	3878	670	63	157	11	1.00(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.316	35.375	-4	1.000	2148	405	37	92	11		
391.8127	35.333	35.375	-3	1.000	2394	461	29	72	16	0.90(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.618	38.618	0	1.000	210762	52957	76	190	697		
409.7788	38.610	38.618	-1	1.000	206480	51508	66	165	780	1.02(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872	39.872	0	1.000	203770	54845	76	190	722		
409.7788	39.864	39.872	-1	1.000	191406	52568	66	165	796	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.245						76	190			
409.7788	39.245						66	165			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.561	39.561	0	1.000	162373	45421	47	117	966		
425.7737	39.561	39.561	0	1.000	153110	43013	51	127	843	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.241						47	117			
425.7737	39.241						51	127			
1,3,6,8-TCDF											
303.9016	16.128	16.128	0		256933	49037	54	135	908		
305.8987	16.128	16.128	0		375918	69992	87	217	805	0.68(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.726	17.726	0		153088	25266	27	67	936		
321.8936	17.734	17.726	1		192856	31475	22	55	1431	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.408	20.408	0		415746	51351	54	135	951		
305.8987	20.399	20.408	-1		612484	78065	87	217	897	0.68(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7-TCDD											
319.8965	21.518	21.518	0		132540	17783	27	67	659		
321.8936	21.518	21.518	0		173968	25305	22	55	1150	0.76(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.939	21.939	0		182383	22694	54	135	420		
305.8987	21.931	21.939	-1		261297	32313	87	217	371	0.70(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.008	22.008	0		163777	22768	27	67	843		
321.8936	22.017	22.008	1		199880	26605	22	55	1209	0.82(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.574	23.574	0		240977	39036	54	135	723		
305.8987	23.574	23.574	0		329803	55021	87	217	632	0.73(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.643	23.643	0		174001	29575	27	67	1095		
1,3,4,6,8-PeCDF											
339.8597	24.004	24.004	0		293455	51890	7	17	7413		
341.8567	24.012	24.004	1		177329	31853	9	22	3539	1.65(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.038	26.038	0		187015	26181	25	62	1047		
357.8516	26.038	26.038	0		117792	16681	22	55	758	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.776						25	62			
357.8516	30.776						22	55			
1,2,3,8,9-PeCDF											
339.8597	30.944						33	82			
341.8567	30.944						25	62			
1,2,3,4,6,8-HxCDF											
373.8208	33.120	33.120	0		271876	38426	70	175	549		
375.8178	33.111	33.120	-1		220099	29793	63	157	473	1.24(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.205	34.205	0		188918	32295	37	92	873		
391.8127	34.197	34.205	-1		148415	25256	29	72	871	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.545	36.545	0		183615	42121	37	92	1138		
391.8127	36.536	36.545	-1		144352	33027	29	72	1139	1.27(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.898	36.898	0		262044	59186	70	175	846		
375.8178	36.898	36.898	0		212693	49326	63	157	783	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.921	38.921	0		157870	43353	47	117	922		
425.7737	38.921	38.921	0		150838	40670	51	127	797	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Inject. Date: 20-Aug-2021 02:21:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 16

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	467833	65052

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	467833	65052

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.731	1292	284	2953	608	0.3360	0.44	RQ
18.731	1292	284	1677	368	0.2350		Empc Correction
19.651	3565	599	4345	691	0.6261	0.82	
23.995	3628	632	7371	1071	0.8706	0.49	RQ
23.995	3628	632	4711	820	0.6601		Empc Correction
Signal Totals:							
	8485	1515	10733	1879			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23154	3885				0.58	RQ
	19218	3394					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.833 = (23154 * 40.000) / (467833 * 1.080)
Empc Amount: 1.521 = (19218 * 40.000) / (467833 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.399	637	92	280	114		2.28	R
Signal Totals:							
	637	92	280	114			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	917	206				2.28	RQ
	713	290					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (917 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (713 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.701	1007	221	618	105		1.63	
26.652	1282	272	1199	139		1.07	R
27.233	2704	359	1654	276		1.63	
27.847	2865	363	1857	264		1.54	
30.801	228677	27894	146849	18011		1.56	
Signal Totals:							
	236535	29109	152177	18795			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	388712	47904				1.55	RQ
	388340	47940					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (388712 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (388340 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Inject. Date: 20-Aug-2021 02:21:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 16

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.624	173911	21451	110691	13444		1.57	
Signal Totals:							
	173911	21451	110691	13444			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	284602	34895				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (284602 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
35.097	3881	661	3878	670		1.00	R
Signal Totals:							
	3881	661	3878	670			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7759	1331				1.00	RQ
	7010	1194					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (7759 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (7010 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.316	2148	405	2394	461		0.90	R
Signal Totals:							
	2148	405	2394	461			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4542	866				0.90	RQ
	3880	731					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4542 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (3880 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

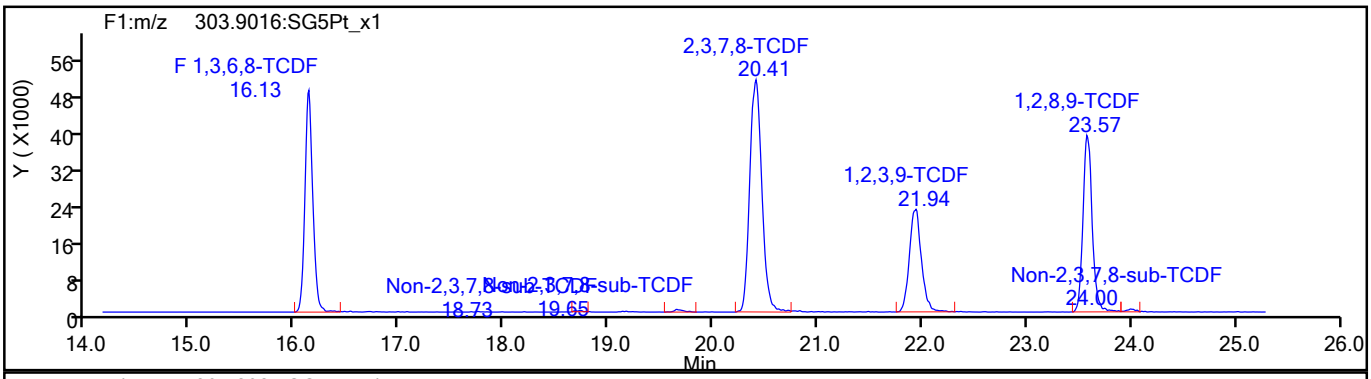

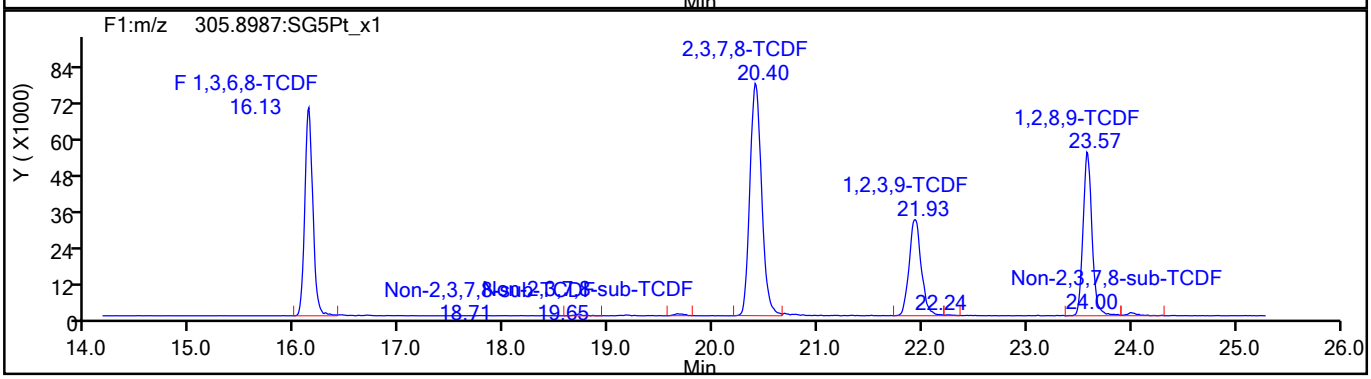

TCDF Standards

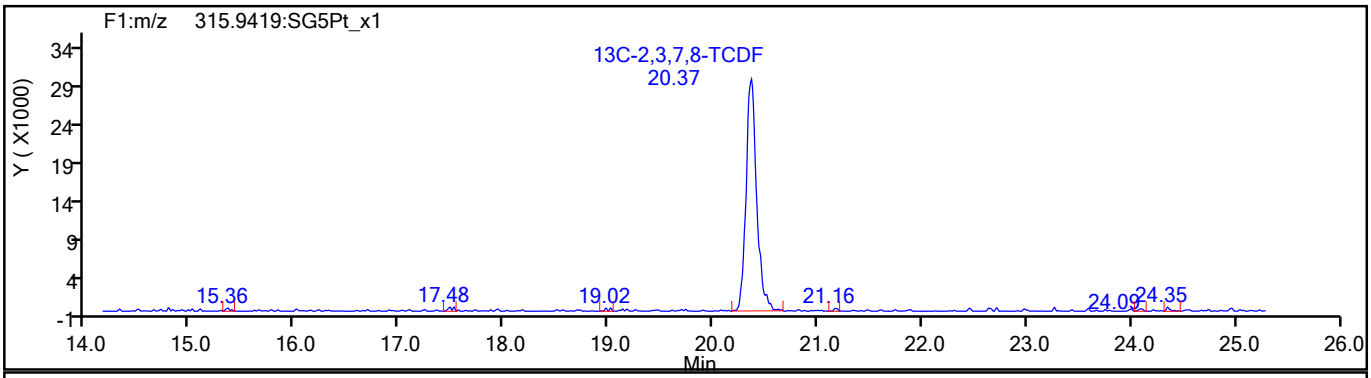

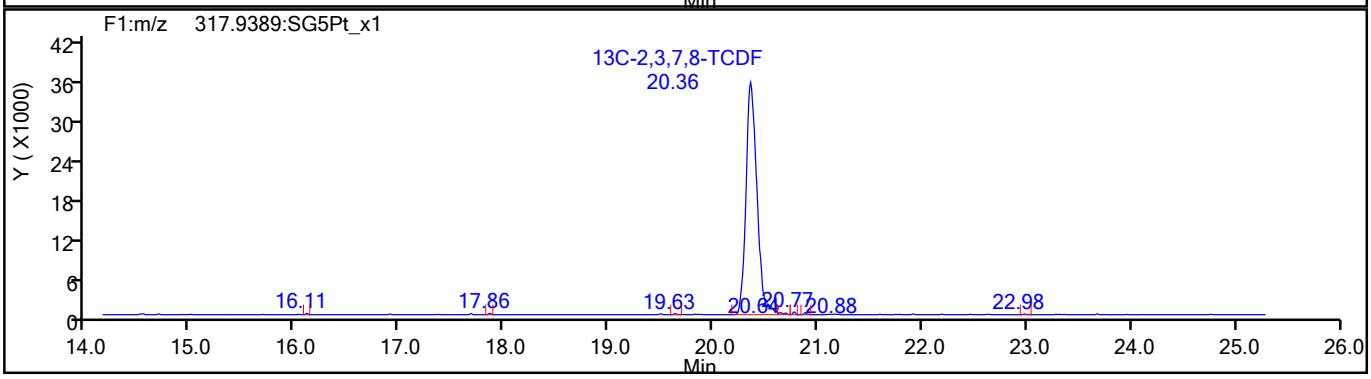

786506

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

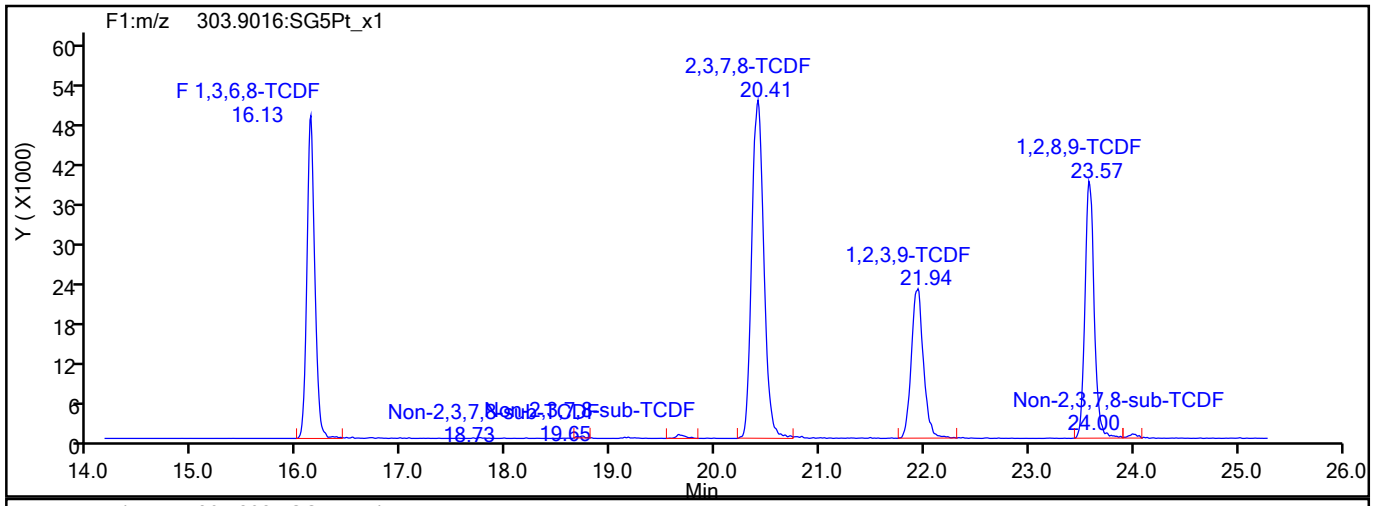

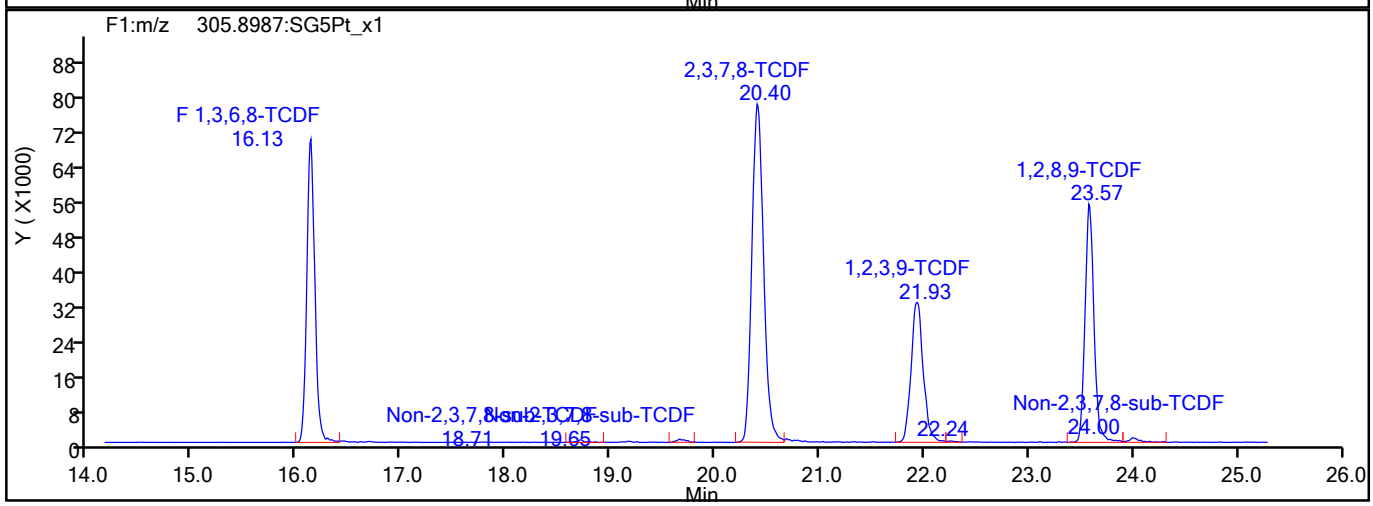

TCDF Interference Mass

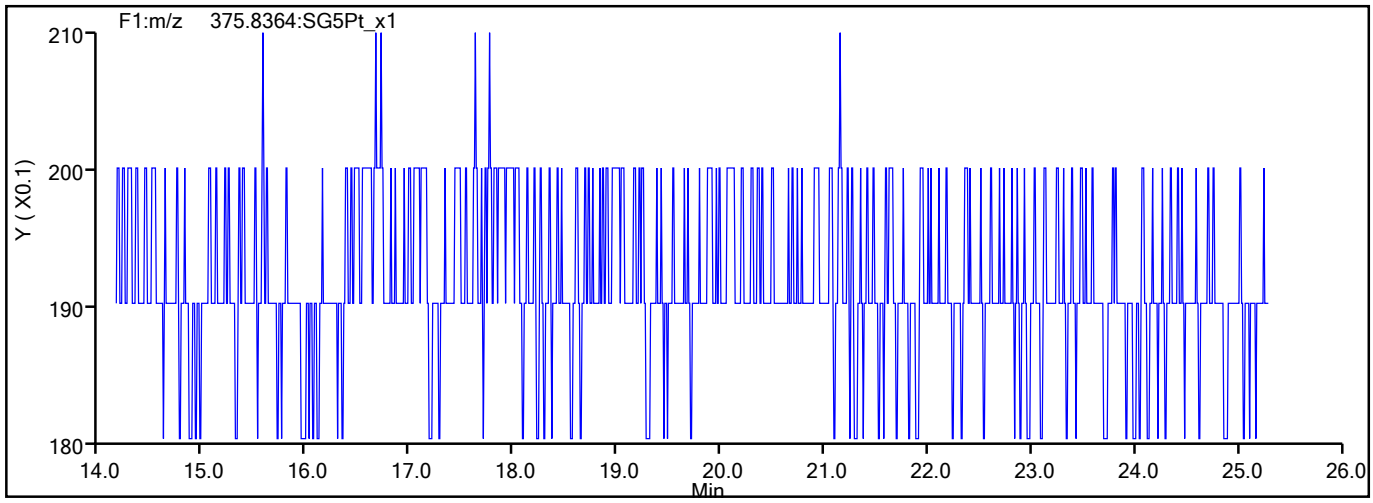

786507

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

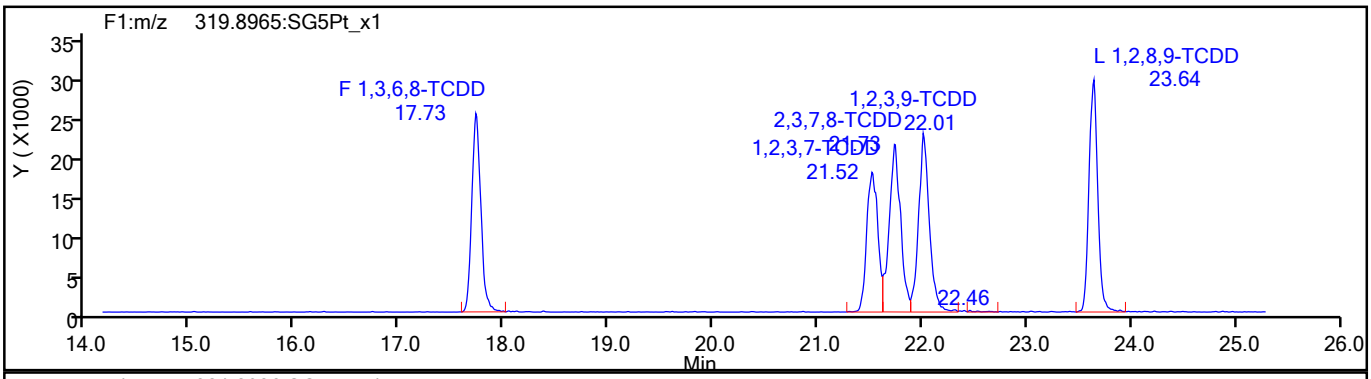

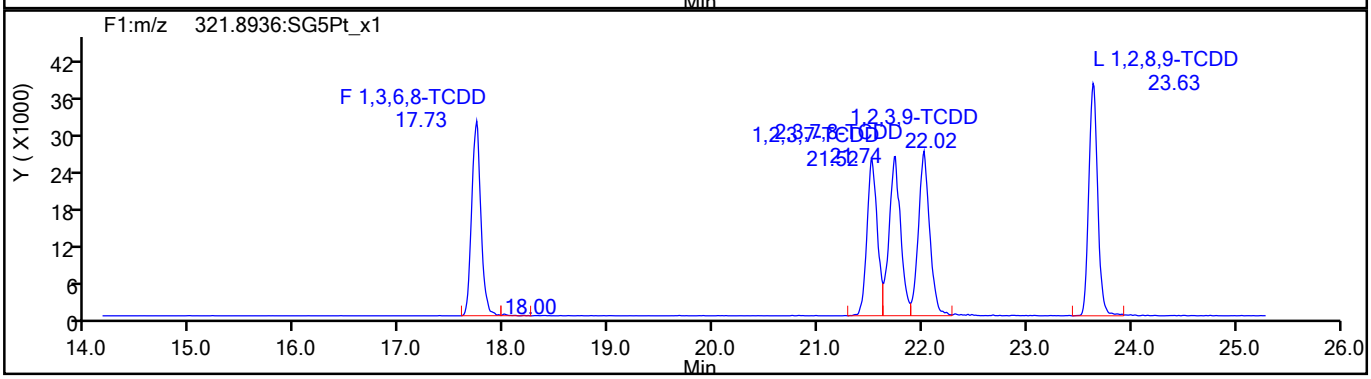

TCDD Standards

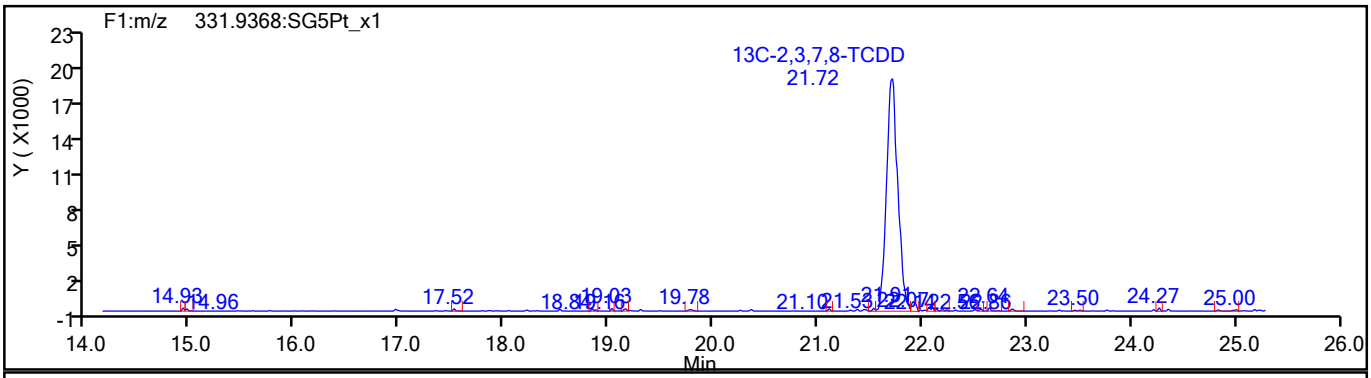

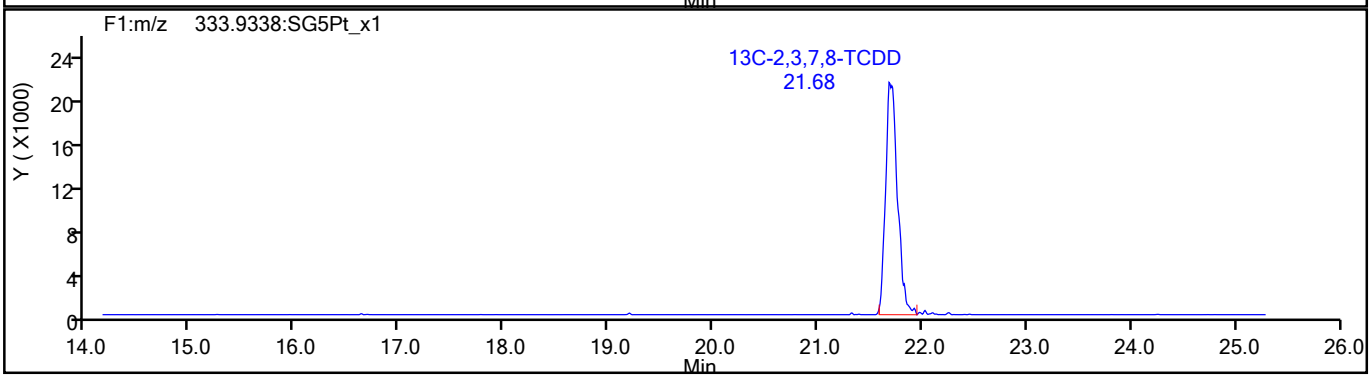

786508

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

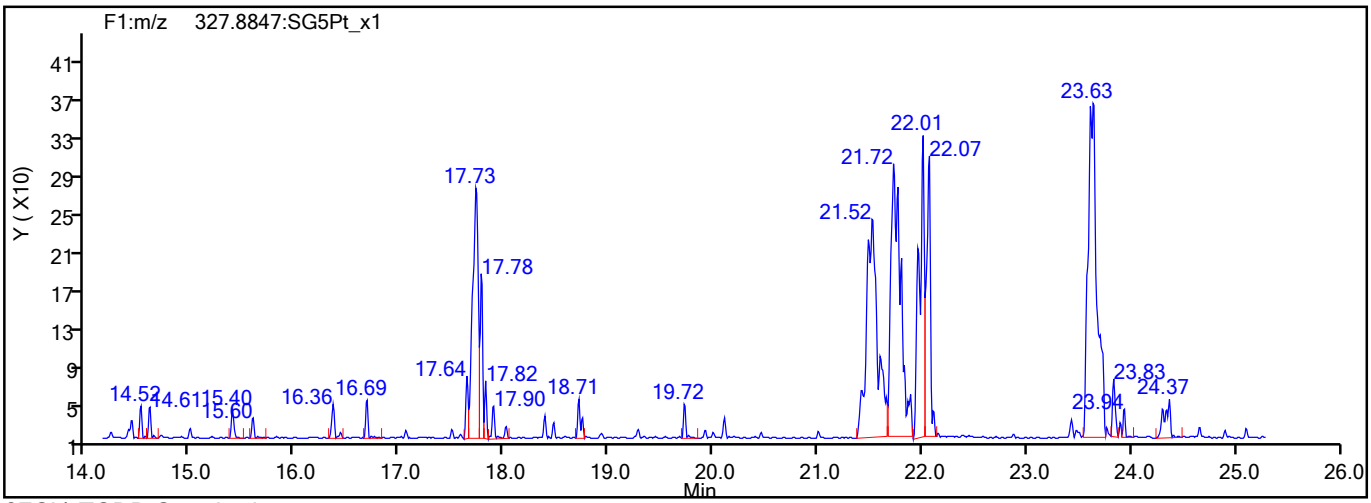

37Cl4-TCDD Standards

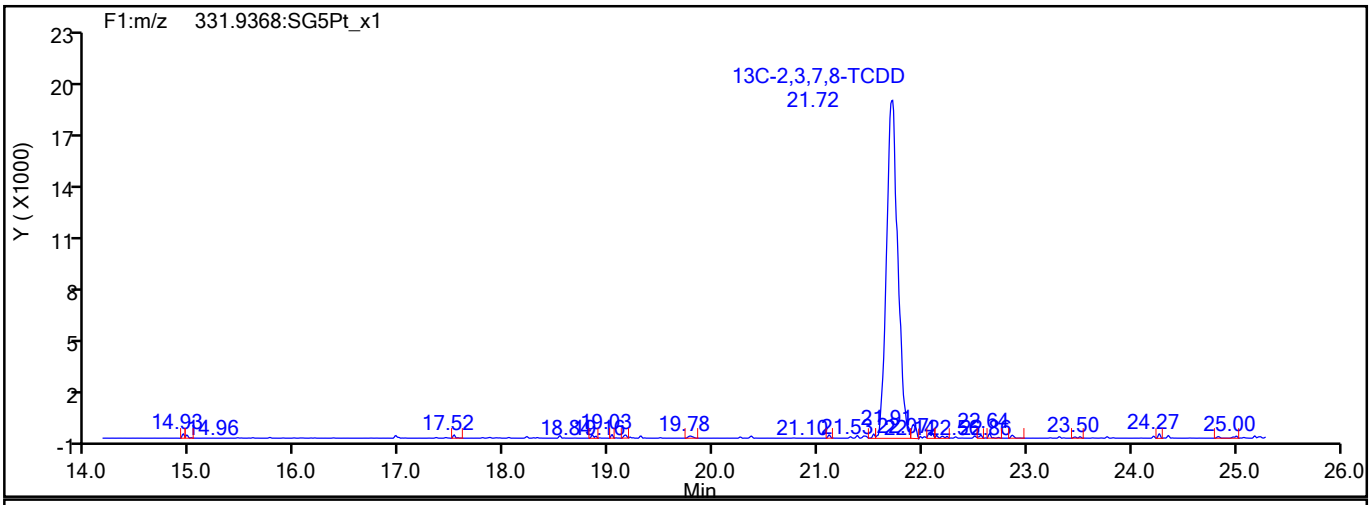

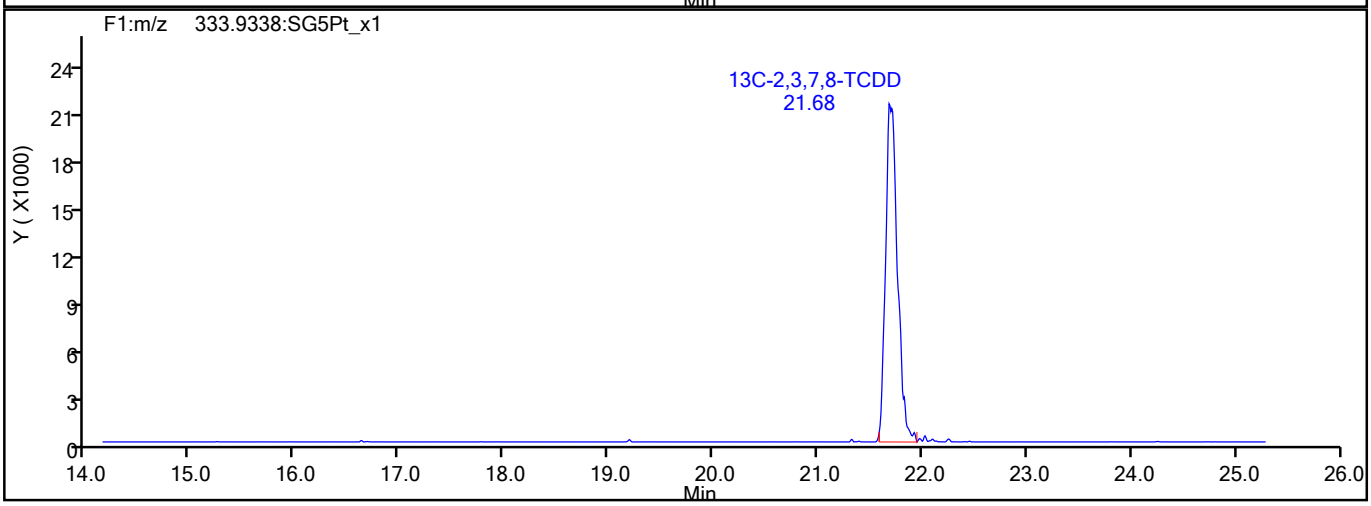

786509

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

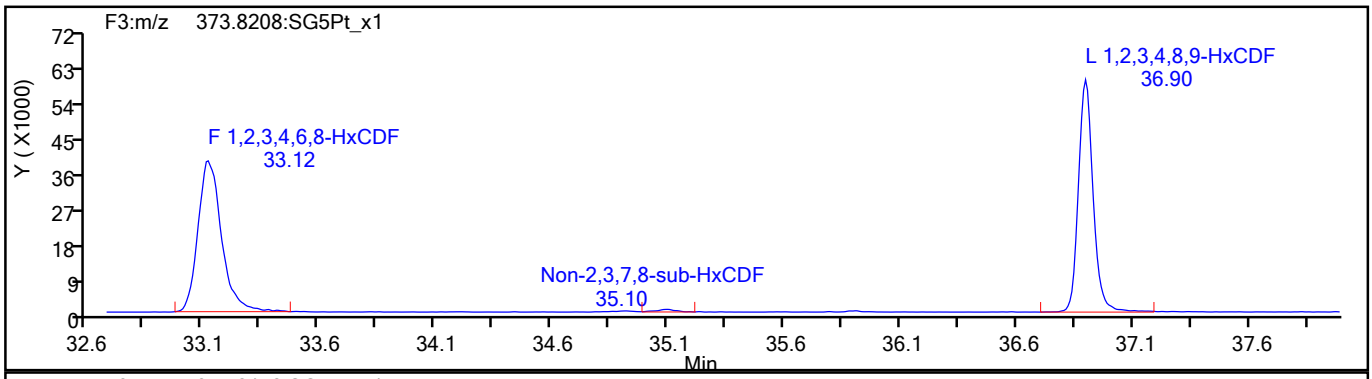

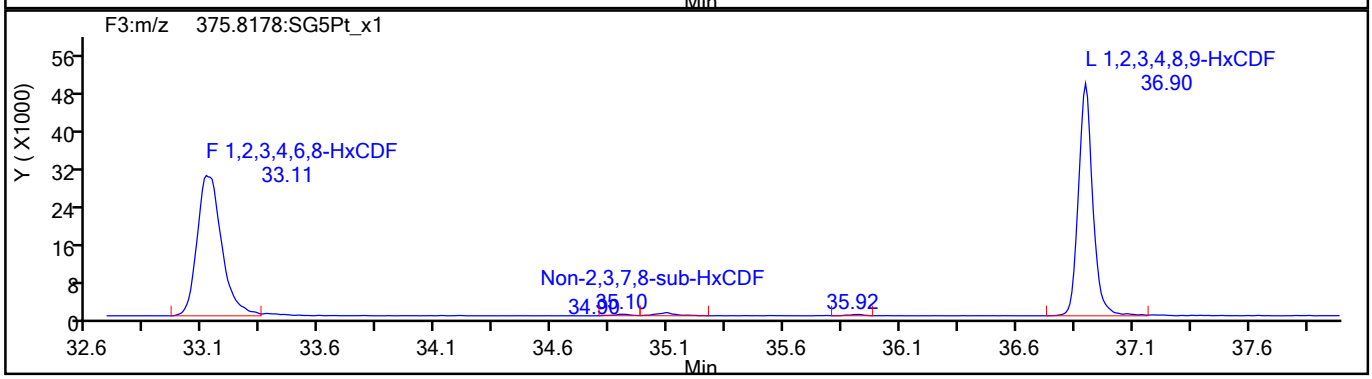

HxCDF Standards

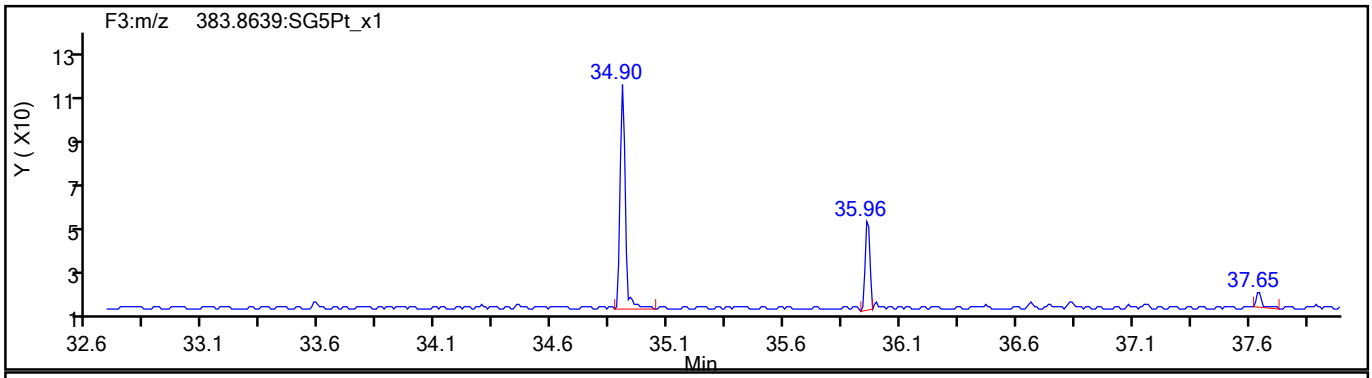

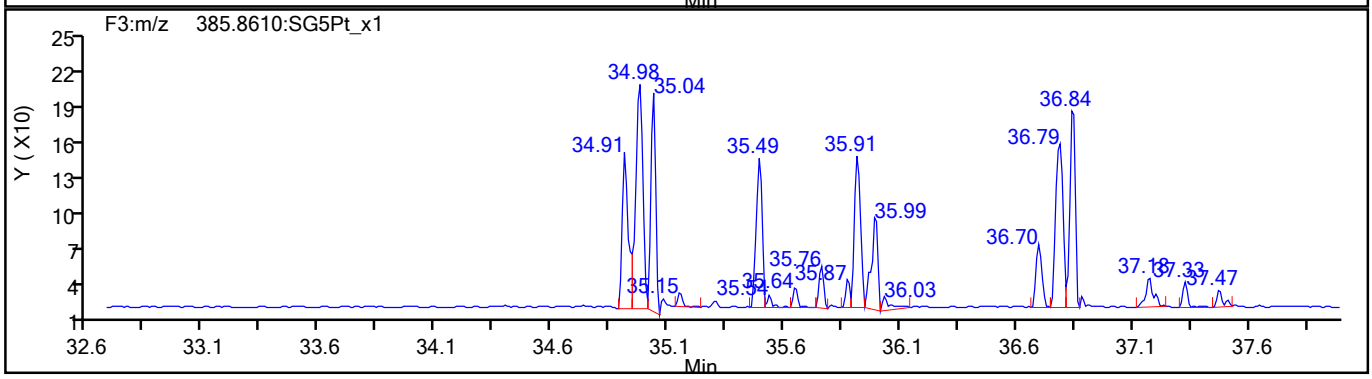

786510

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

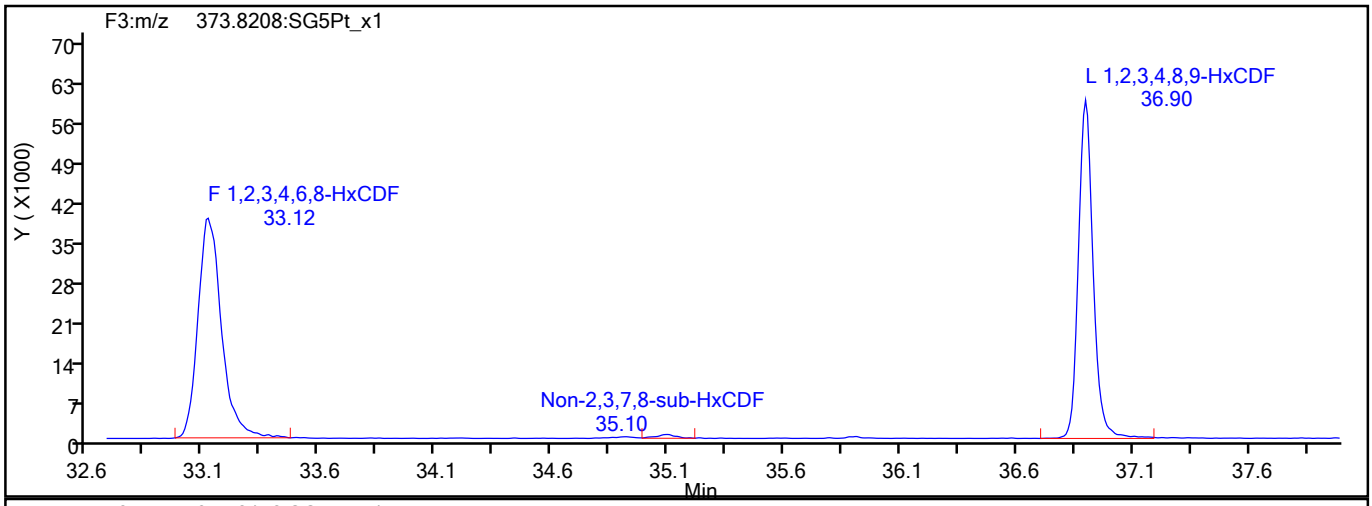

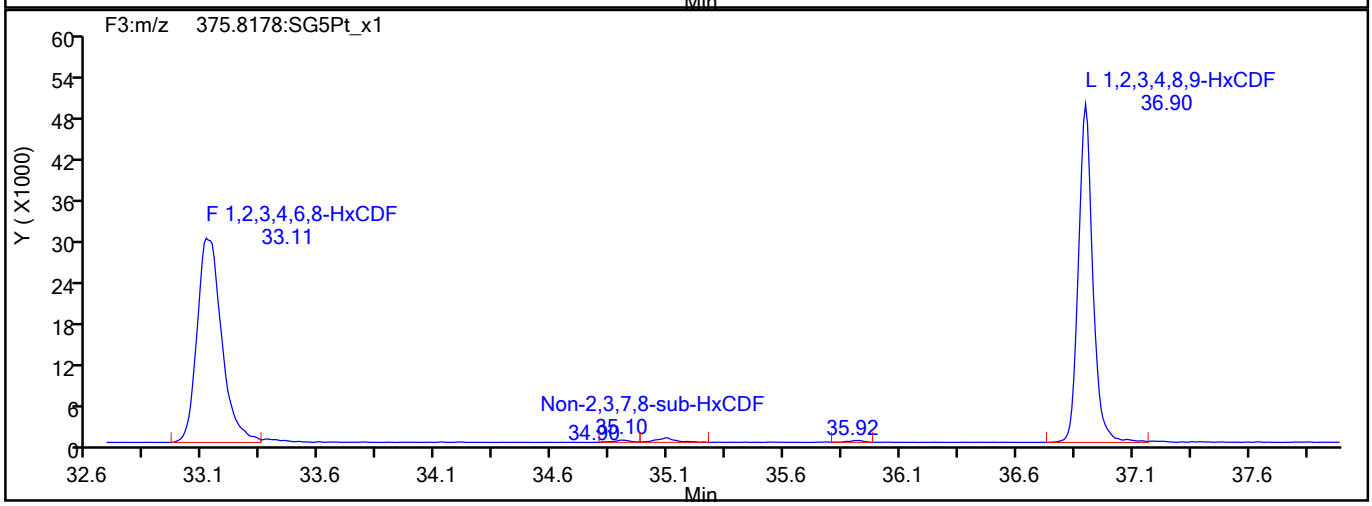

HxCDF Interference Mass

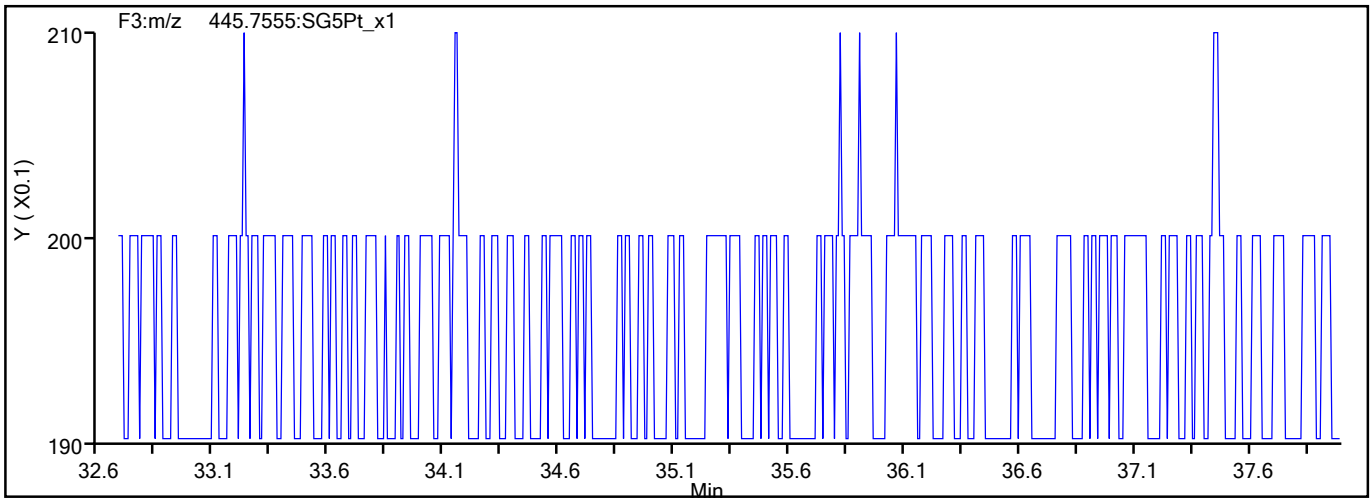

786511

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

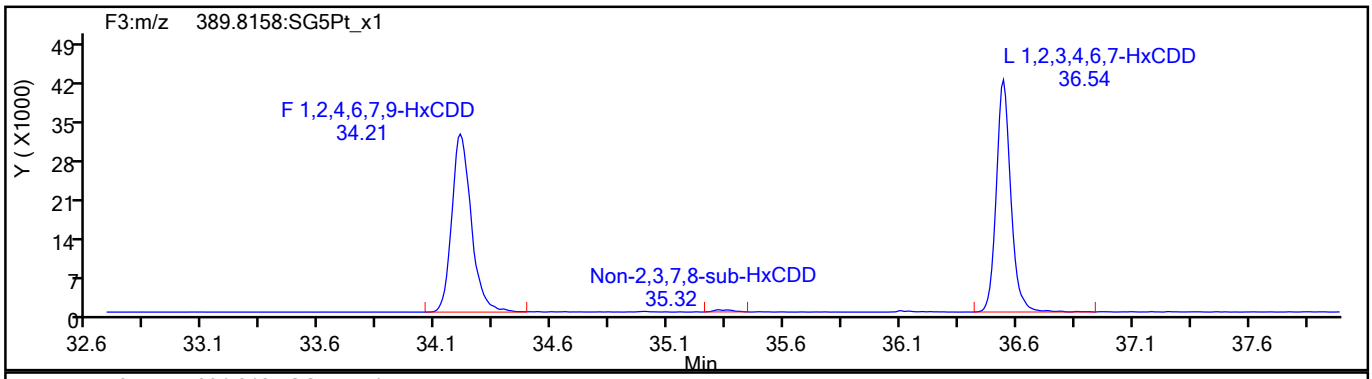

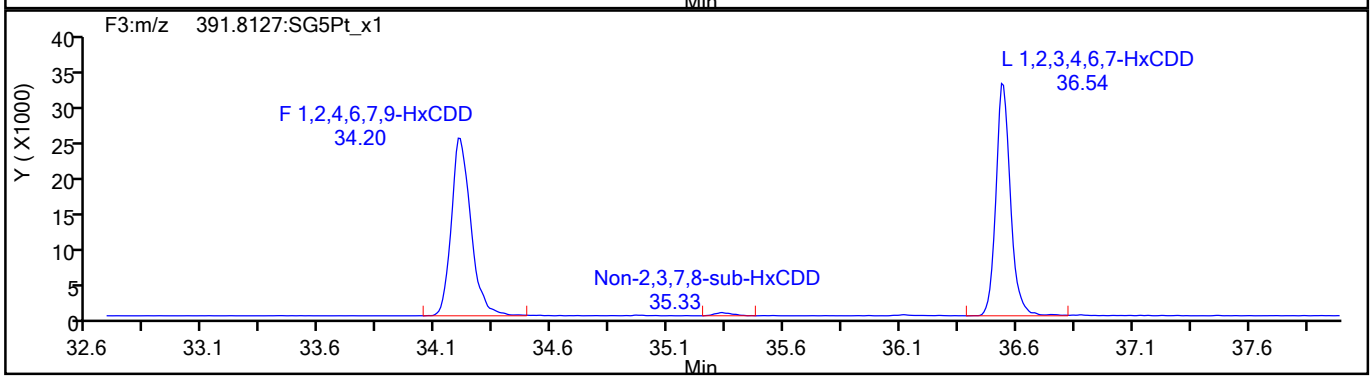

HxCDD Standards

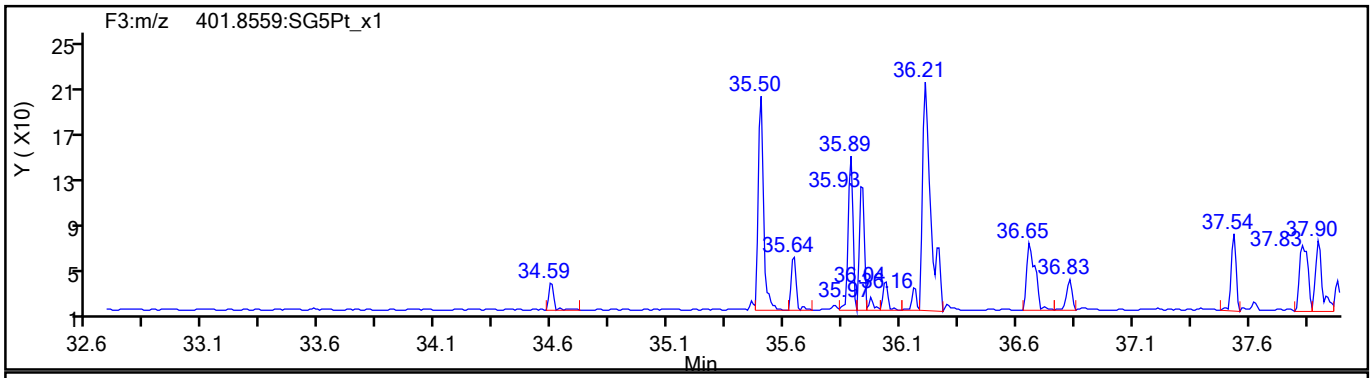

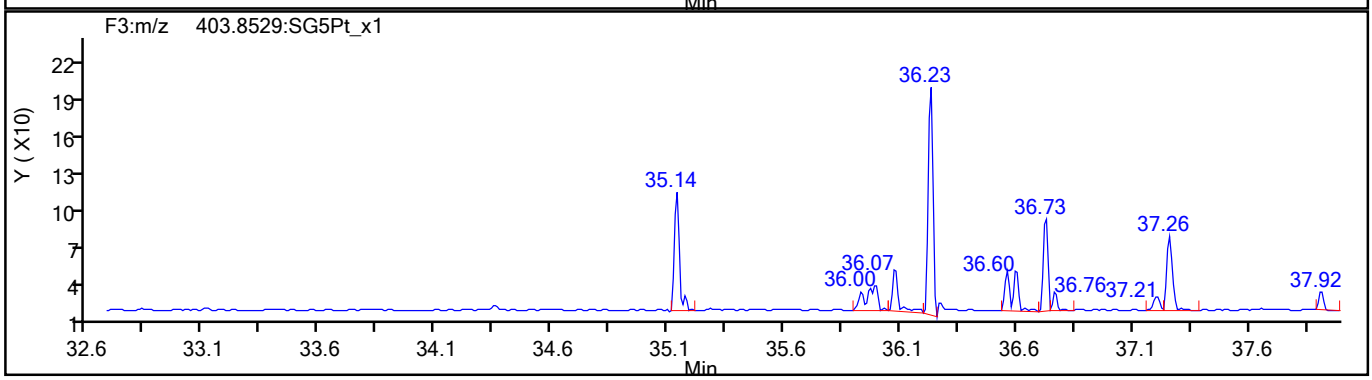

786512

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

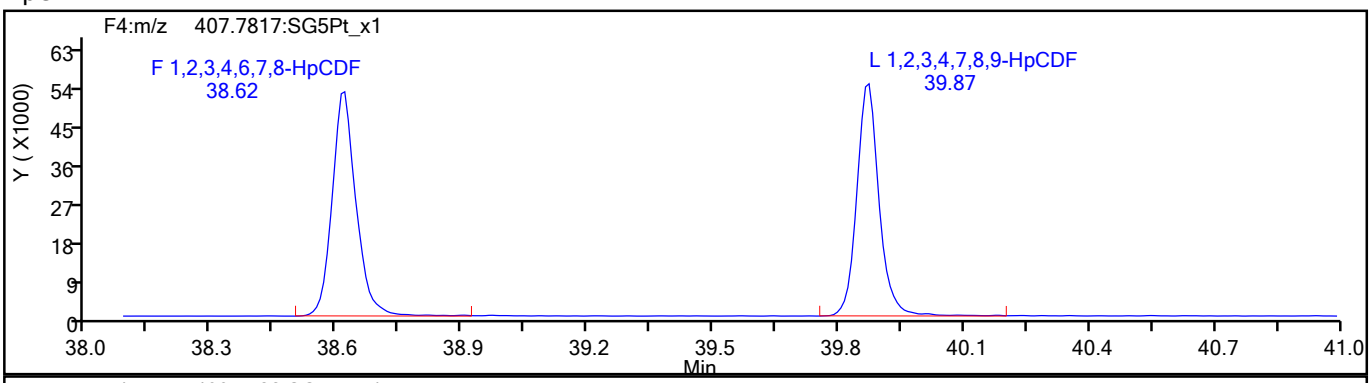

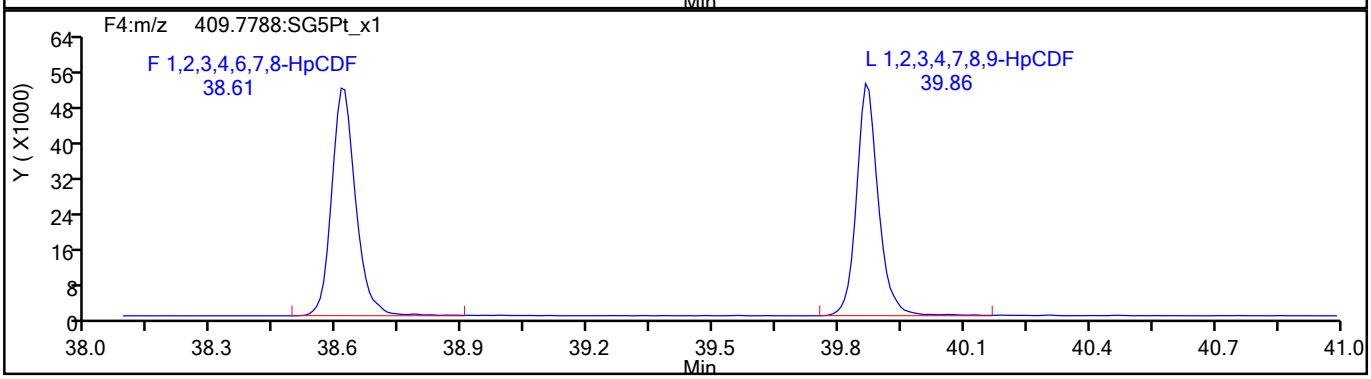

HpCDF Standards

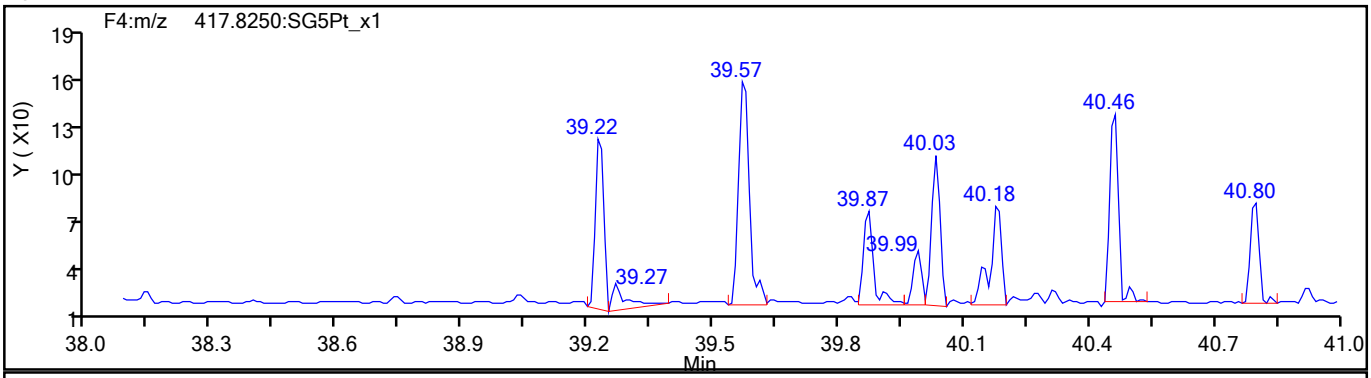

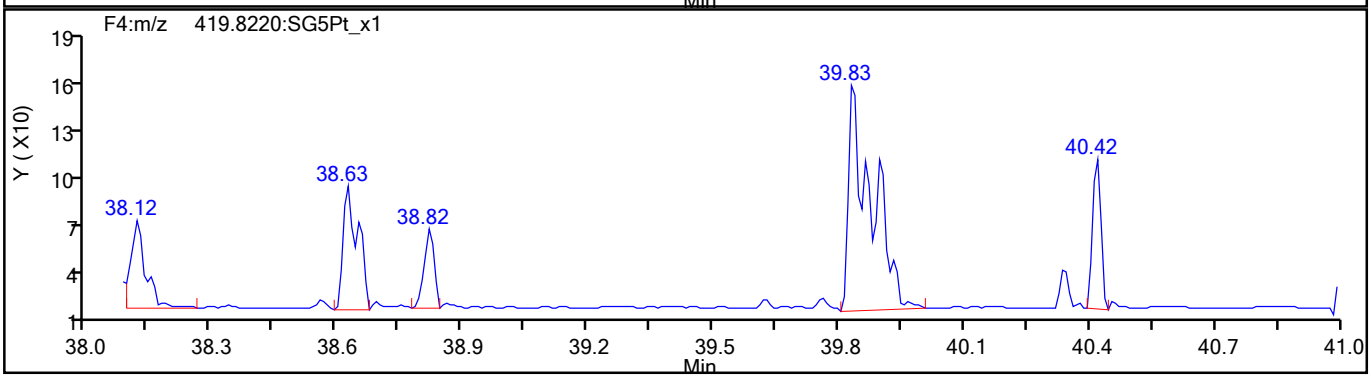

786513

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

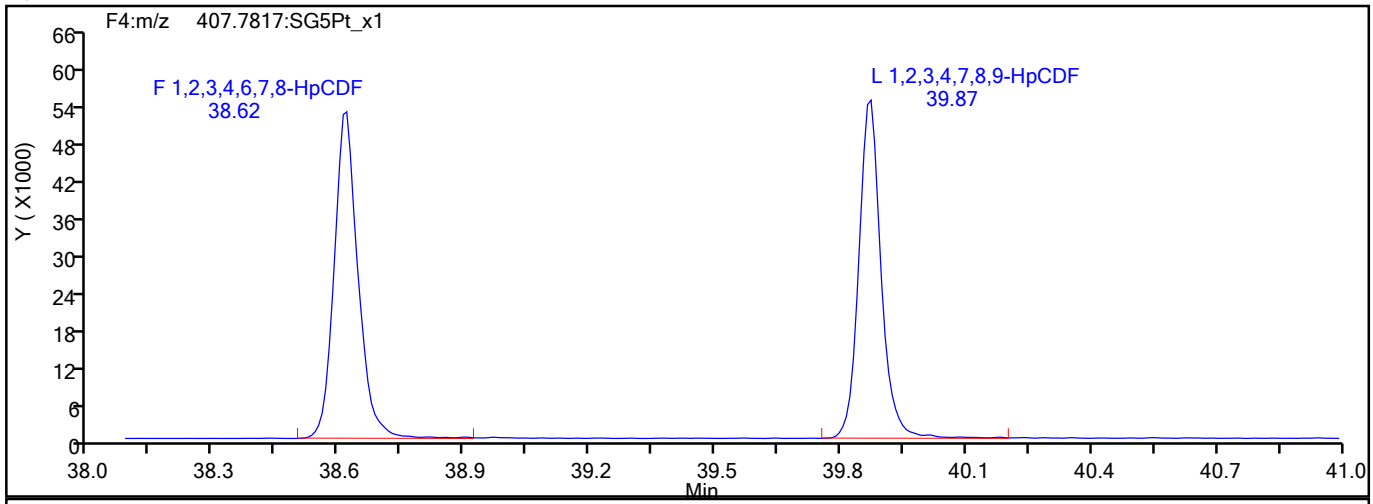

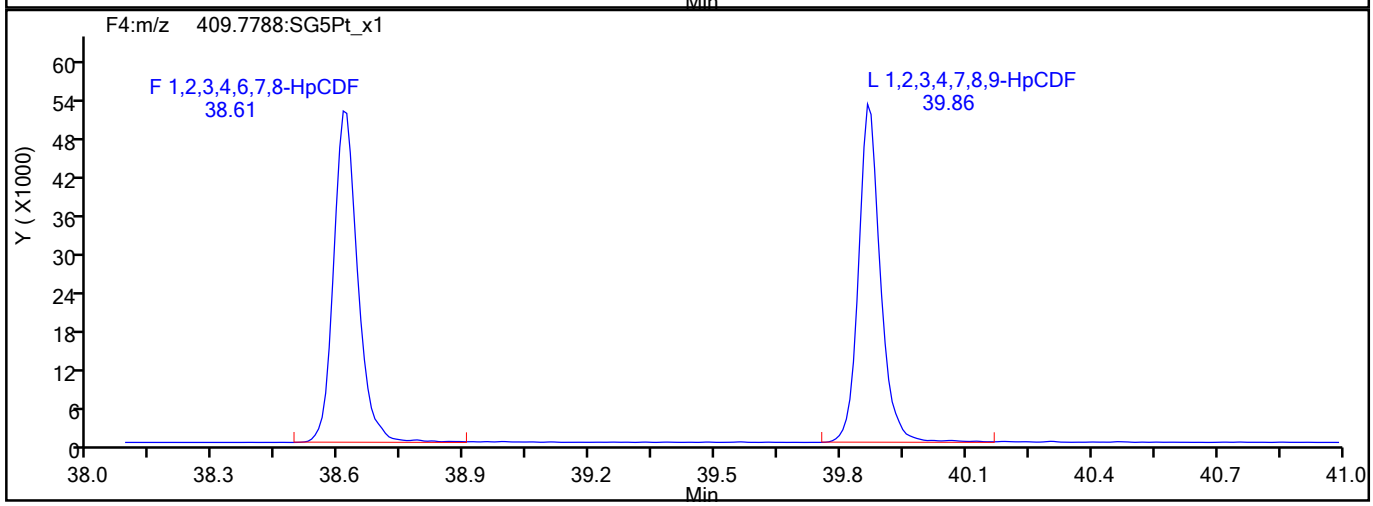

HpCDF Interference Mass

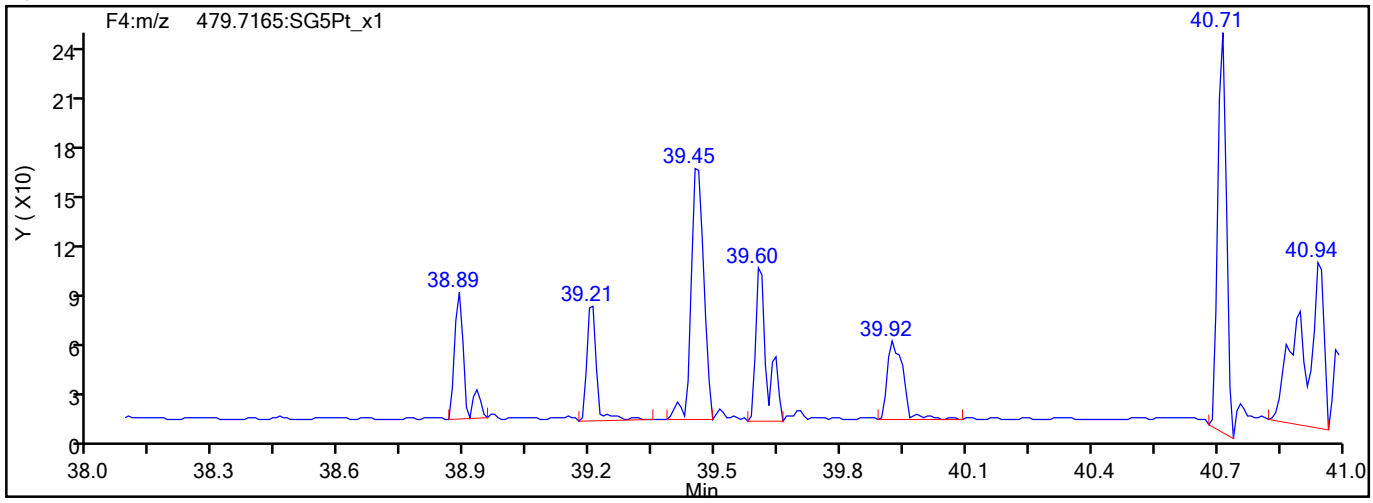

786514

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

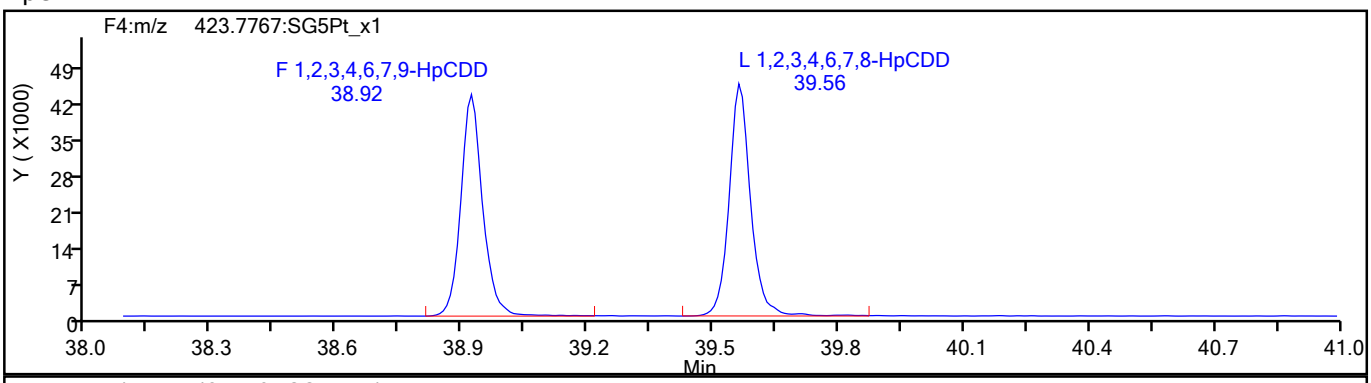

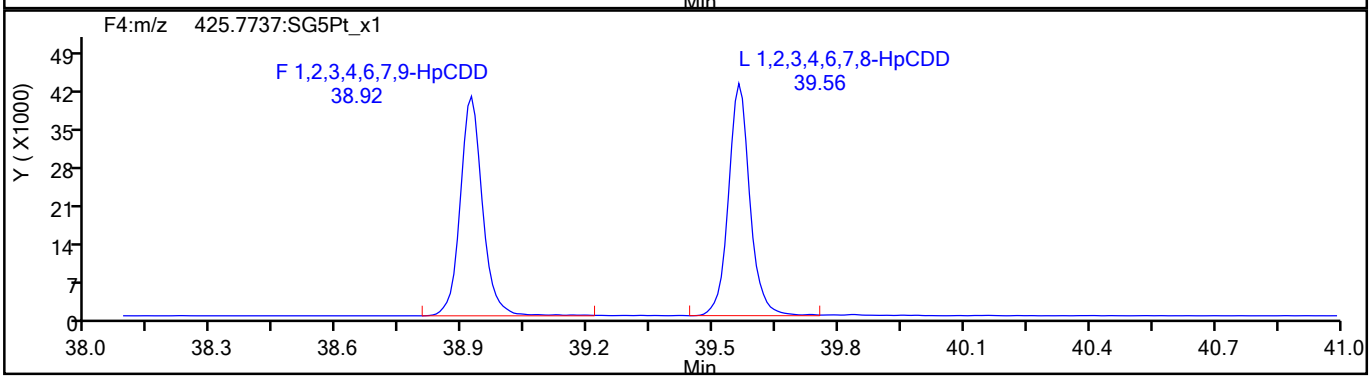

HpCDD Standards

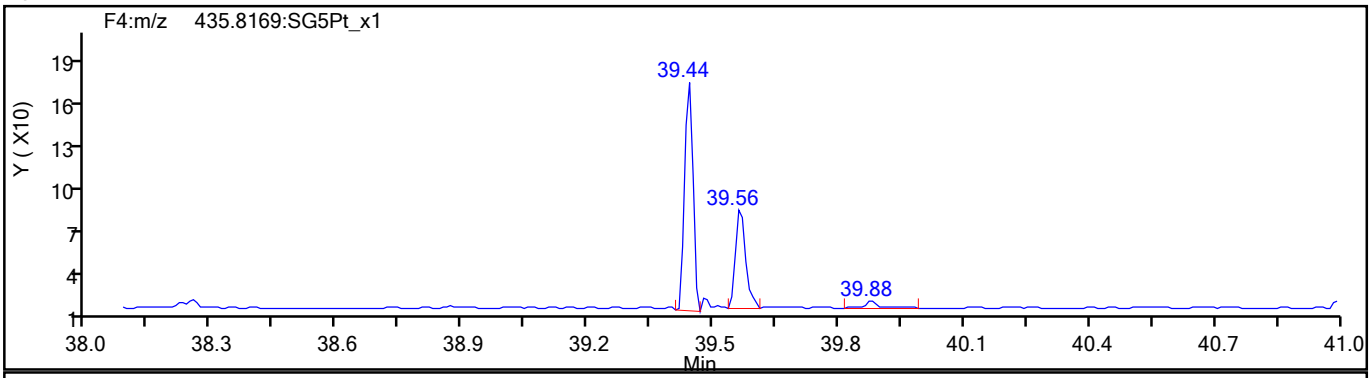

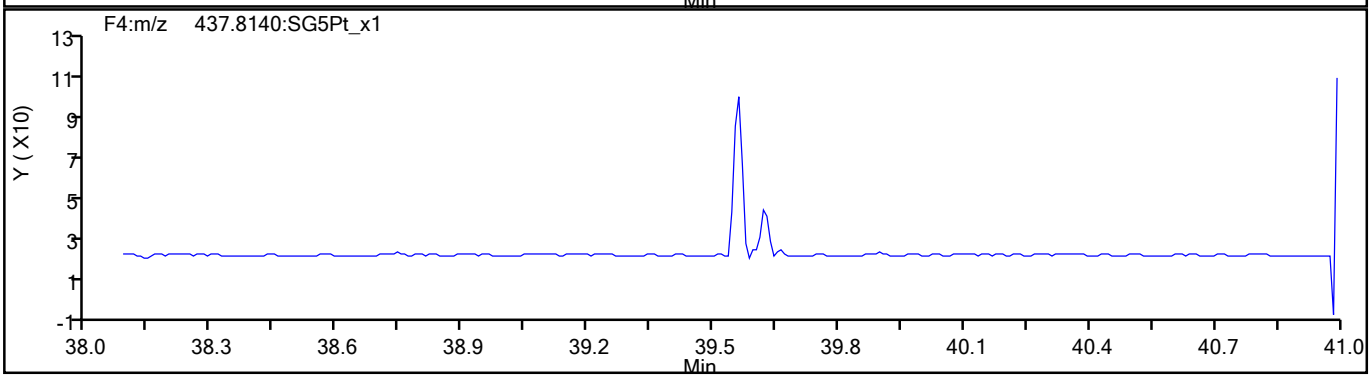

786515

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

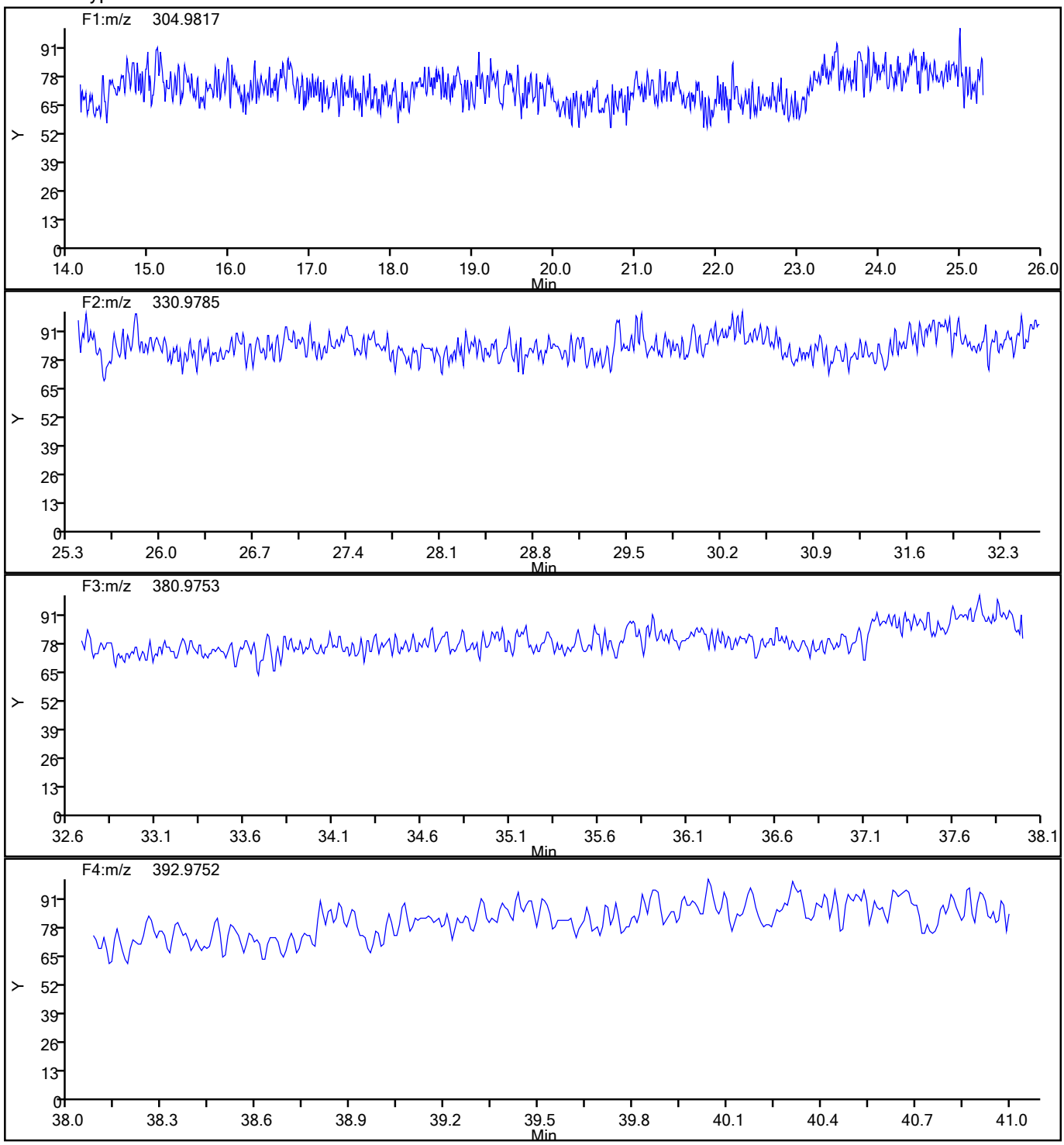

786516

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

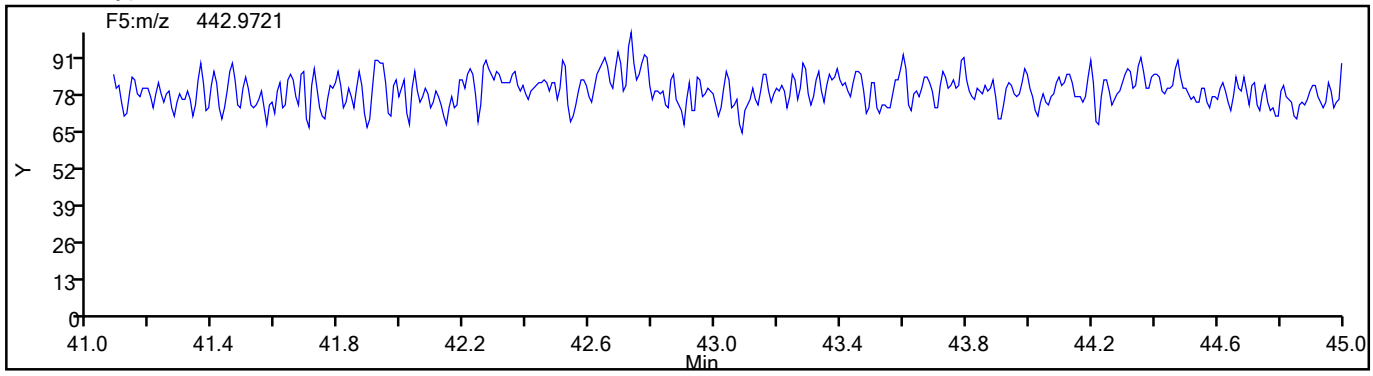

786517

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-513586/1-A
Matrix: Sediment
Lab File ID: 17au21dfs1_5.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10(g)
Date Analyzed: 08/17/2021 17:01
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517196
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.031
51207-31-9	2,3,7,8-TCDF	ND		1.0	0.011
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.041
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.026
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.028
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.0	0.034
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.034
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.031
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.015
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.016
72918-21-9	1,2,3,7,8,9-HxCDF	ND		5.0	0.015
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.015
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.198	J	5.0	0.021
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		5.0	0.039
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.037
3268-87-9	OCDD	0.435	J	10	0.035
39001-02-0	OCDF	ND		10	0.061
41903-57-5	Total TCDD	ND		1.0	0.031
30402-14-3	Total TCDF	ND		1.0	0.13
36088-22-9	Total PeCDD	ND		5.0	0.16
30402-15-4	Total PeCDF	ND		5.0	0.028
34465-46-8	Total HxCDD	ND		5.0	0.16
55684-94-1	Total HxCDF	ND		5.0	0.036
37871-00-4	Total HpCDD	0.357	J	5.0	0.021
38998-75-3	Total HpCDF	ND		5.0	0.039

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513586/1-A

Matrix: Sediment Lab File ID: 17au21dfs1_5.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10(g) Date Analyzed: 08/17/2021 17:01

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517196 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	57		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	61		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	65		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	65		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	60		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	74		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	64		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	61		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	61		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	72		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	65		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	78		26-138
114423-97-1	13C-OCDD	76		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	68		35-197

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d
Lims ID: MB 320-513586/1-A
Client ID:
Sample Type: MB
Inject. Date: 17-Aug-2021 17:01:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513586/1-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:08:49 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 18:32:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.495	799097	0.80	2.1E+04	100.0	100.0				
2,3,7,8-TCDF	20.533						0.005480	0.005480		MU
D 13C-2,3,7,8-TCDF	20.533	613921	0.82	1.3459	57.1	57.1	0.1280	0.1280	57.08	
A Non-2,3,7,8-sub-TCDF	19.916						0.005480	0.0627		RQMU
S Total TCDF							0.0627	0.0627		
D 13C-2,3,7,8-TCDD	21.864	441482	0.78	0.9317	59.3	59.3	0.1206	0.1206	59.30	
2,3,7,8-TCDD	21.899						0.0157	0.0157		U
$ 37Cl4-2,3,7,8-TCDD	21.907	219939		1.0083	27.3	27.3	0.0155	0.0155	68.24	
A Non-2,3,7,8-sub-TCDD	20.750						0.0157	0.0157		RQU
S Total TCDD							0.0157	0.0157		
D 13C-1,2,3,7,8-PeCDF	27.350	557472	1.51	1.1405	61.2	61.2	0.2141	0.2141	61.17	
1,2,3,7,8-PeCDF	27.401						0.0130	0.0130		
D 13C-2,3,4,7,8-PeCDF	28.859	583289	1.60	1.1253	64.9	64.9	0.2170	0.2170	64.86	
2,3,4,7,8-PeCDF	28.934						0.0142	0.0142		
A F1 PeCDFs	24.676						0.005660	0.005660		
A Non-2,3,7,8-sub-PeCDF	28.167						0.0136	0.0136		
S Total PeCDF							0.0142	0.0142		
D 13C-1,2,3,7,8-PeCDD	29.675	334387	1.53	0.7165	58.4	58.4	0.0836	0.0836	58.41	
1,2,3,7,8-PeCDD	29.734						0.0203	0.0203		RQU
A Non-2,3,7,8-sub-PeCDD	28.556						0.0203	0.0777		RQU
S Total PeCDD							0.0777	0.0777		
D 13C-1,2,3,4,7,8-HxCDF	34.986	562635	0.53	0.9648	74.0	74.0	0.2255	0.2255	74.01	
1,2,3,4,7,8-HxCDF	35.028						0.007677	0.007677		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.146	535930	0.52	1.0708	63.5	63.5	0.2032	0.2032	63.52	
1,2,3,6,7,8-HxCDF	35.028						0.008144	0.008144		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.963	499899	0.53	1.0413	60.9	60.9	0.2089	0.2089	60.92	
2,3,4,6,7,8-HxCDF	36.148						0.007599	0.007599		RQU
D 13C-1,2,3,7,8,9-HxCDF	36.856	469783	0.53	0.9731	61.3	61.3	0.2236	0.2236	61.27	
1,2,3,7,8,9-HxCDF	37.025						0.007441	0.007441		RQU
A Non-2,3,7,8-sub-HxCDF	35.074						0.007701	0.0180		RQU
S Total HxCDF							0.0180	0.0180		
* 13C-1,2,3,7,8,9-HxCDD	36.654	787976	1.29	1.8E+04	100.0	100.0				

786520

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-1,2,3,4,7,8-HxCDD	36.174	391222	1.29	0.7587	65.4	65.4	0.1682	0.1682	65.44	
1,2,3,4,7,8-HxCDD	36.182						0.0168	0.0168		U
D 13C-1,2,3,6,7,8-HxCDD	36.283	409175	1.25	0.8593	60.4	60.4	0.1485	0.1485	60.43	
1,2,3,6,7,8-HxCDD	36.182						0.0170	0.0170		U
1,2,3,7,8,9-HxCDD	36.684						0.0156	0.0156		
A Non-2,3,7,8-sub-HxCDD	35.432						0.0164	0.0822		RQU
S Total HxCDD							0.0822	0.0822		
D 13C-1,2,3,4,6,7,8-HpCDF	38.669	378902	0.49	0.7359	65.3	65.3	0.3017	0.3017	65.34	
1,2,3,4,6,7,8-HpCDF	38.686						0.0193	0.0193		RQU
1,2,3,4,7,8,9-HpCDF	40.043						0.0187	0.0187		RQU
D 13C-1,2,3,4,7,8,9-HpCDF	39.916	420192	0.49	0.6854	77.8	77.8	0.3240	0.3240	77.80	
A Non-2,3,7,8-sub-HpCDF	39.277						0.0189	0.0189		
S Total HpCDF							0.0193	0.0193		
D 13C-1,2,3,4,6,7,8-HpCDD	39.604	381174	1.05	0.6745	71.7	71.7	0.2350	0.2350	71.72	
1,2,3,4,6,7,8-HpCDD	39.613	397	1.04	1.0503	0.1097	0.0992	0.0107	0.0107		RQM
A Non-2,3,7,8-sub-HpCDD	39.277	318	1.04	1.0503	0.1034	0.0794	0.0107	0.0794		RQ
S Total HpCDD					0.2131	0.1786	0.0107	0.0107		RQ
D 13C-OCDD	42.111	656031	0.92	0.5446	152.9	152.9	0.1569	0.1569	76.43	
OCDF	42.170						0.0304	0.0304		RQU
OCDD	42.119	757	0.89	1.0620	0.2701	0.2173	0.0177	0.0177		RQM

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d
Lims ID: MB 320-513586/1-A
Client ID:
Sample Type: MB
Inject. Date: 17-Aug-2021 17:01:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513586/1-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:08:49 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 18:32:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.495	21.483	1		354691	47564	32	80	1486		
333.9338	21.486	21.483	0		444406	60975	17	42	3587	0.80(0.65-0.89)	
2,3,7,8-TCDF											MU
303.9016	20.482						1	2			
305.8987	20.482						1	2			
13C-2,3,7,8-TCDF											
315.9419	20.533	20.594	-4	0.955	276238	38140	51	127	748		
317.9389	20.533	20.594	-4	0.955	337683	46326	24	60	1930	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											MU
303.9016	17.312	19.916	-156	0.843	28	13	1	2	13		
305.8987	17.355	19.916	-153	0.845	68	44	1	2	44	0.41(0.65-0.89)	
	Empc Correction				36	16	1	2	16		
13C-2,3,7,8-TCDD											
331.9368	21.864	21.790	4	1.017	193397	25177	32	80	787		
333.9338	21.881	21.790	5	1.018	248085	34117	17	42	2007	0.78(0.65-0.89)	
2,3,7,8-TCDD											U
319.8965	21.825						3	7			
321.8936	21.825						1	2			
37Cl4-2,3,7,8-TCDD											
327.8847	21.907	21.905	0	1.019	219939	28238	7	17	4034		
A Non-2,3,7,8-sub-TCDD											U
319.8965	20.750	20.750	0	0.949	48	23	3	7			
	Empc Correction				30	19	3	7	0		
321.8936	20.750	20.750	0	0.949	40	25	1	2		1.20(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	27.350	27.343	0	1.272	335540	53824	58	145	928		
353.8970	27.350	27.343	0	1.272	221932	33777	48	120	704	1.51(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.368						1	2			
341.8567	27.368						4	10			
13C-2,3,4,7,8-PeCDF											
351.9000	28.859	28.867	0	1.343	359159	51112	58	145	881		
353.8970	28.875	28.867	1	1.343	224130	32642	48	120	680	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.884						1	2			
341.8567	28.884						4	10			
A F1 PeCDFs											
339.8597	24.676						1	2			
341.8567	24.676						1	2			
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.167						1	2			
341.8567	28.167						4	10			
13C-1,2,3,7,8-PeCDD											
367.8949	29.675	29.667	0	1.381	202336	27337	16	40	1709		
369.8919	29.684	29.667	1	1.381	132051	19768	10	25	1977	1.53(1.32-1.78)	
1,2,3,7,8-PeCDD											RQU
355.8546	29.692						3	7			
357.8516	29.692						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.556	28.556	0	0.962	304	118	3	7			
	Empc Correction				210	84	3	7	0		
357.8516	28.556	28.556	0	0.962	156	68	1	2		1.95(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.986	34.974	1	0.954	195123	37085	54	135	687		
385.8610	34.986	34.974	1	0.954	367512	76444	101	252	757	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	35.000						2	5			
375.8178	35.000						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.146	35.134	1	0.959	184147	34968	54	135	648		
385.8610	35.154	35.134	1	0.959	351783	65864	101	252	652	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.151						2	5			
375.8178	35.151						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.963	35.951	1	0.981	172829	38826	54	135	719		
385.8610	35.963	35.951	1	0.981	327070	69530	101	252	688	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQU
373.8208	35.968						2	5			
375.8178	35.968						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.856	36.843	1	1.006	163509	37541	54	135	695		
385.8610	36.848	36.843	0	1.005	306274	70829	101	252	701	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQU
373.8208	36.852						2	5			
375.8178	36.852						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.529	35.074	-93	0.958	61	31	2	5	16		
375.8178	33.571	35.074	-90	0.960	51	23	2	5	12	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.654	36.641	1		443438	99421	59	147	1685		
403.8529	36.654	36.641	1		344538	78478	32	80	2452	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.174	36.161	1	0.987	220623	48424	59	147	821		
403.8529	36.182	36.161	1	0.987	170599	35600	32	80	1113	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											U
389.8158	36.178						3	7			
391.8127	36.178						3	7			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.283	36.279	0	0.990	227133	50882	59	147	862		
403.8529	36.283	36.279	0	0.990	182042	38077	32	80	1190	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											U
389.8158	36.296						3	7			
391.8127	36.296						3	7			
1,2,3,7,8,9-HxCDD											
389.8158	36.658						3	7			
391.8127	36.658						3	7			
A Non-2,3,7,8-sub-HxCDD											U
389.8158	35.053	35.432	-23	0.966	183	48	3	7	16		
391.8127	35.062	35.432	-22	0.966	164	56	3	7	19	1.12(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.669	38.647	1	1.055	124116	30519	63	157	484		
419.8220	38.661	38.647	1	1.055	254786	66630	95	237	701	0.49(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQU
407.7817	38.654						9	22			
409.7788	38.654						2	5			
1,2,3,4,7,8,9-HpCDF											RQU
407.7817	39.900						9	22			
409.7788	39.900						2	5			
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.916	39.901	1	1.089	138143	37432	63	157	594		
419.8220	39.916	39.901	1	1.089	282049	73073	95	237	769	0.49(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.277						9	22			
409.7788	39.277						2	5			

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.604	39.590	1	1.080	195625	54023	53	132	1019		
437.8140	39.604	39.590	1	1.080	185549	52645	60	150	877	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											RQM
423.7767	39.613	39.597	1	1.000	244	64	4	10	16		M
	Empc Correction				202	77	4	10	19		
425.7737	39.621	39.597	1	1.000	195	75	1	2	75	1.25(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.989	39.277	-17	0.984	258	73	4	10	18		
	Empc Correction				162	42	4	10	11		
425.7737	38.964	39.277	-19	0.984	156	41	1	2	41	1.65(0.88-1.20)	
13C-OCDD											
469.7780	42.111	42.094	1	1.149	314902	77358	24	60	3223		
471.7750	42.111	42.094	1	1.149	341129	82612	37	92	2233	0.92(0.76-1.02)	
OCDF											RQU
441.7428	42.187						2	5			
443.7399	42.187						11	27			
OCDD											RQM
457.7377	42.119	42.103	1	1.000	540	229	3	7	76		M
	Empc Correction				356	164	3	7	55		
459.7348	42.119	42.103	1	1.000	401	185	3	7	62	1.35(0.76-1.02)	M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	613921	84466

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	613921	84466

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.312	28	13	68	44	0.0145	0.41	RQ
17.312	28	13	36	16	0.009651		Empc Correction
18.815	37	23	79	16	0.0175	0.47	RQ
18.815	37	23	48	29	0.0128		Empc Correction
19.253	9	7	53	21	0.009349	0.17	RQ
19.253	9	7	11	9	0.003016		Empc Correction
19.820	181	83	291	94	0.0712	0.62	RQ
19.820	181	83	235	107	0.0627		Empc Correction
19.863	92	55	104	72	0.0296	0.88	
20.645	94	53	64	39	0.0238	1.47	RQ
20.645	49	30	64	39	0.0170		Empc Correction
20.928	31	18	31	19	0.009349	1.00	RQ
20.928	23	14	31	19	0.008143		Empc Correction
23.547	26	13	31	15	0.008595	0.84	

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDD, RT: 20.750

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	441482	59294

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	441482	59294

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.122	48	23	40	25	0.0185	1.20	RQ
22.122	30	19	40	25	0.0147		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDD, RT: 28.556

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	334387	47105

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	334387	47105

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
28.791	42	25	12	7	0.0154	3.50	RQ
28.791	18	10	12	7	0.008573		Empc Correction
28.993	27	14	37	22	0.0183	0.73	RQ
28.993	27	14	17	9	0.0126		Empc Correction
30.307	235	79	107	39	0.0977	2.20	RQ
30.307	165	60	107	39	0.0777		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDF, RT: 35.074

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	562635	113529
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	535930	100832
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	499899	108356
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	469783	108370

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	517061	107771

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.529	61	31	51	23	0.0180	1.20	
36.308	89	40	34	21	0.0197	2.62	RQ
36.308	42	26	34	21	0.0122		Empc Correction

Compound is Marked ND

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDD, RT: 35.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	391222	84024
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	409175	88959
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	400198	86491

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.053	183	48	164	56	0.0822	1.12	
35.963	128	44	157	22	0.0675	0.82	RQ
35.963	128	44	103	35	0.0547		Empc Correction

Compound is Marked ND

786530

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDF, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	378902	97149
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	420192	110505

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	399547	103827

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
Signal Totals:							
	0	0	0	0			

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Lims ID:	MB 320-513586/1-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:01:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	381174	106668

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	381174	106668

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.989	258	73	156	41	0.1034	1.65	RQ
38.989	162	42	156	41	0.0794		Empc Correction
Signal Totals:							
	162	42	156	41			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	414	114				1.65	RQ
	318	83					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.1034 = (414 * 100.000) / (381174 * 1.050)

Empc Amount: 0.0794 = (318 * 100.000) / (381174 * 1.050)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 3

Processing Integration Results

RT: 39.61
Area: 310
Amount: 0.077433
Amount Units: pg/ul

Manual Integration Results

RT: 39.61
Area: 439
Amount: 0.109655
Amount Units: pg/ul
Reviewer: dadunj, 19-Aug-2021 12:07:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 39.61
Area: 153
Amount: 0.077433
Amount Units: pg/ul

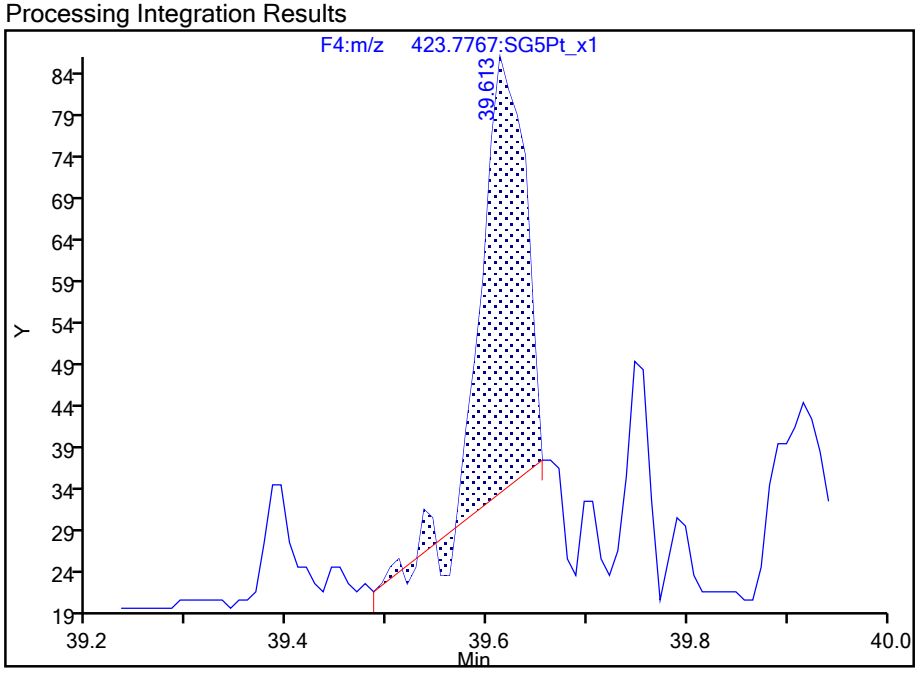

Manual Integration Results

RT: 39.61
Area: 244
Amount: 0.109655
Amount Units: pg/ul

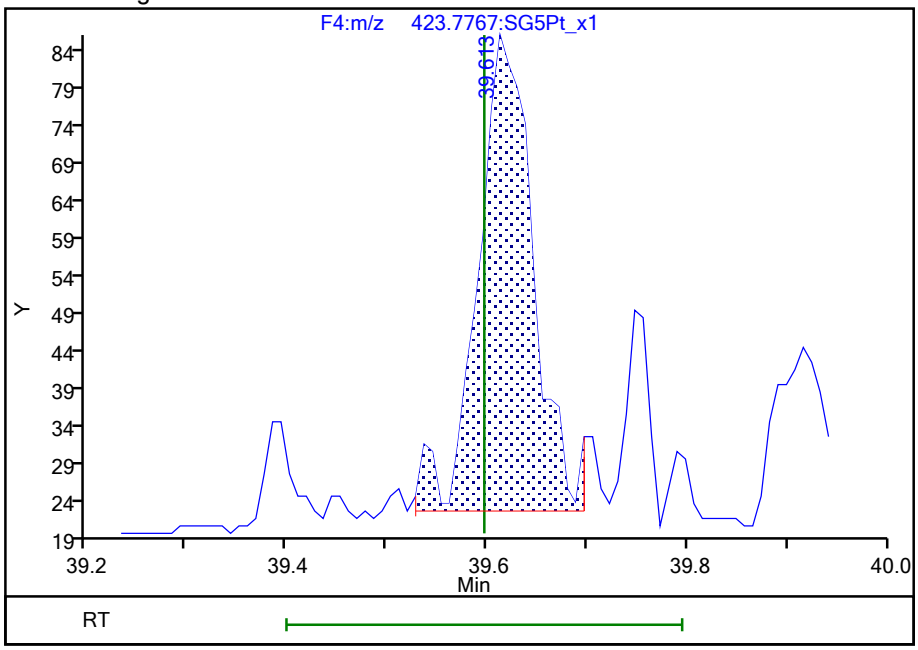

Reviewer: dadunj, 19-Aug-2021 12:07:16

Audit Action: Manually Integrated Audit Reason: Baseline

786534

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 39.62
Area: 157
Amount: 0.077433
Amount Units: pg/ul

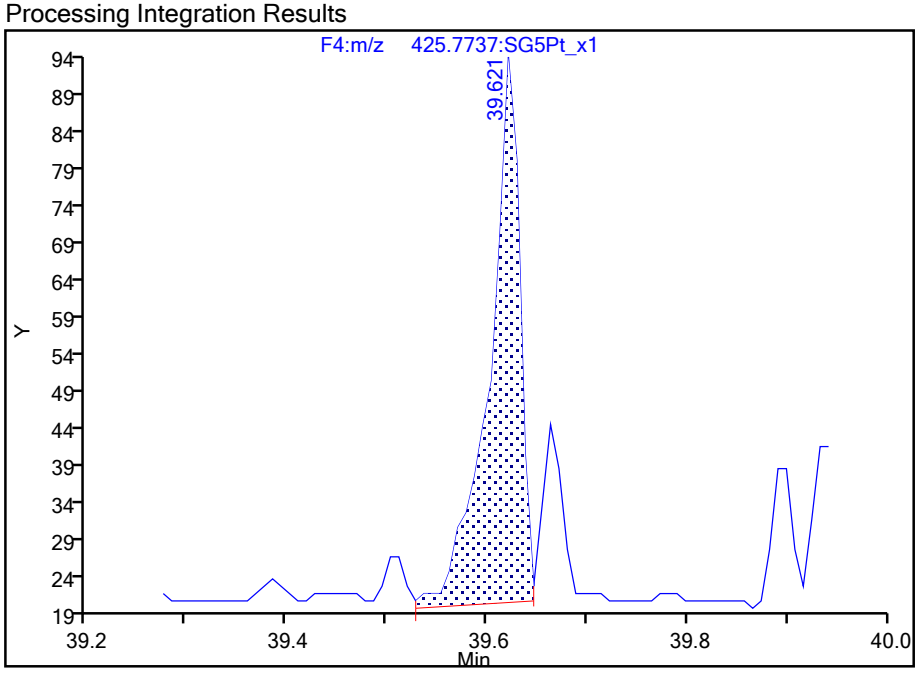

Manual Integration Results

RT: 39.62
Area: 195
Amount: 0.109655
Amount Units: pg/ul

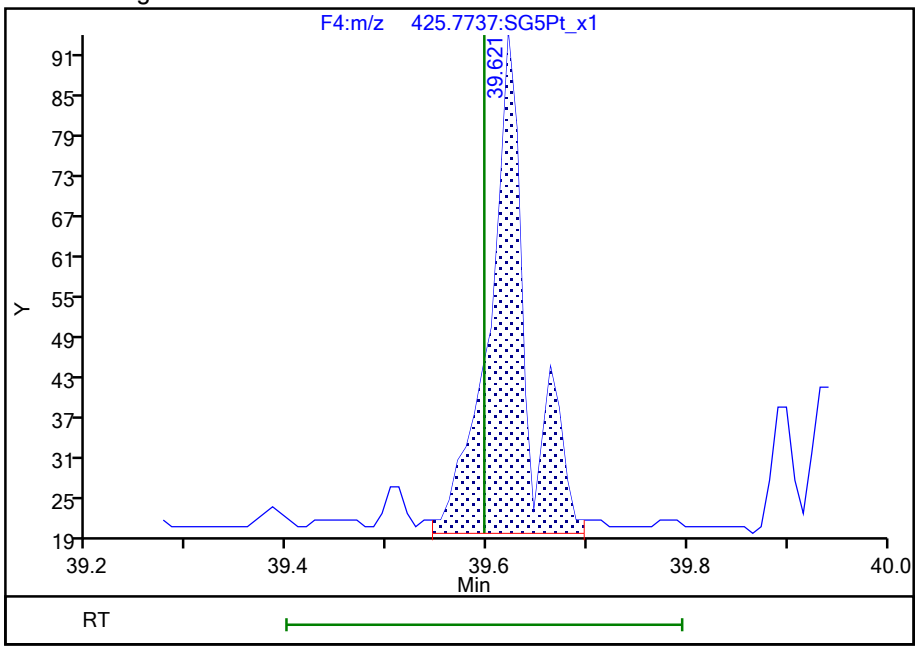

Reviewer: dadunj, 19-Aug-2021 12:07:19

Audit Action: Manually Integrated Audit Reason: Baseline

786535

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 2

Processing Integration Results

RT: 42.12
Area: 542
Amount: 0.343334
Amount Units: pg/ul

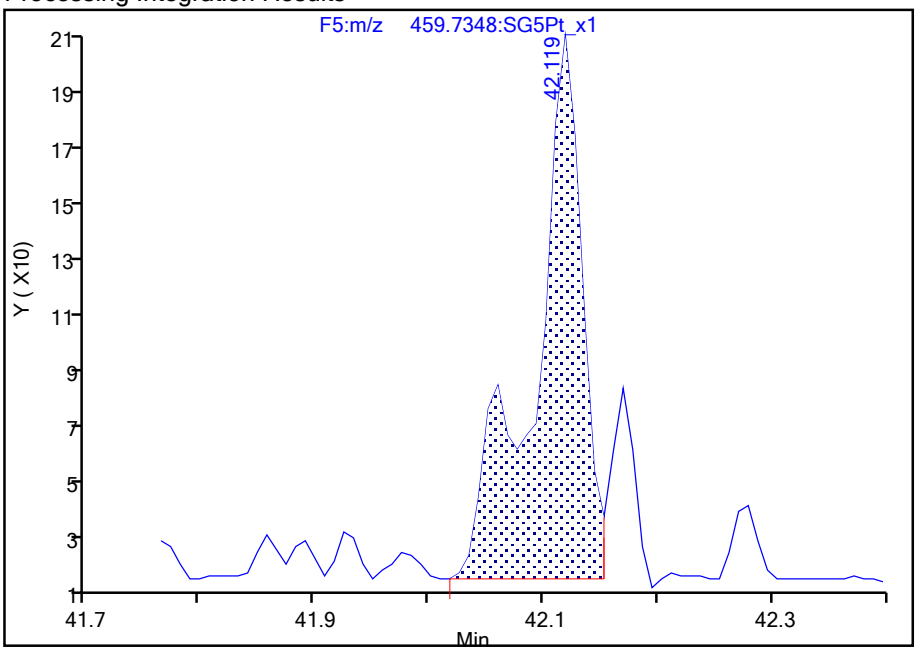

Manual Integration Results

RT: 42.12
Area: 401
Amount: 0.270132
Amount Units: pg/ul

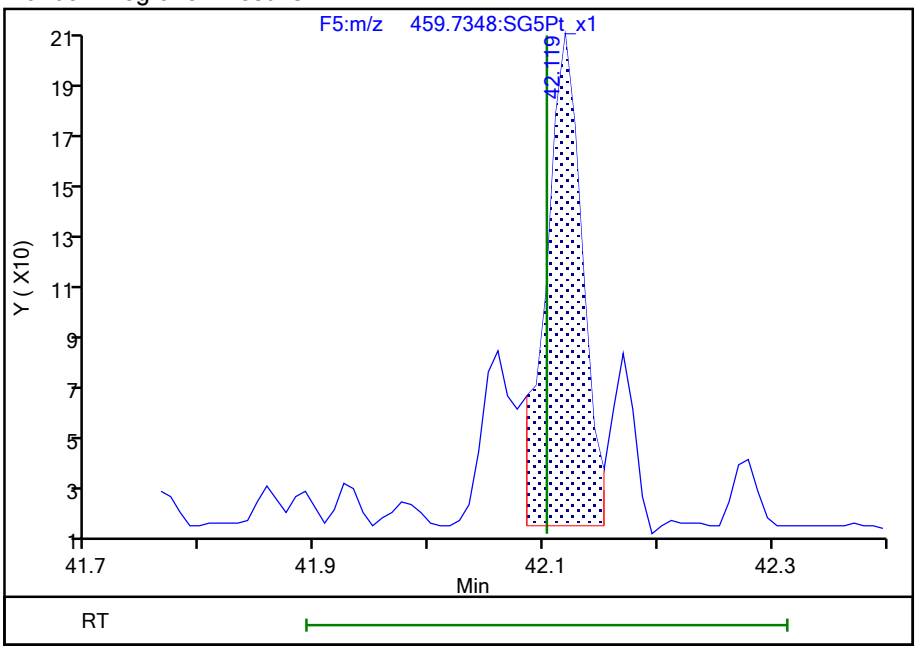

Reviewer: dadunj, 19-Aug-2021 12:07:46

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d				
Injection Date:	17-Aug-2021 17:01:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513586/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 42.12
Area: 654
Amount: 0.343334
Amount Units: pg/ul

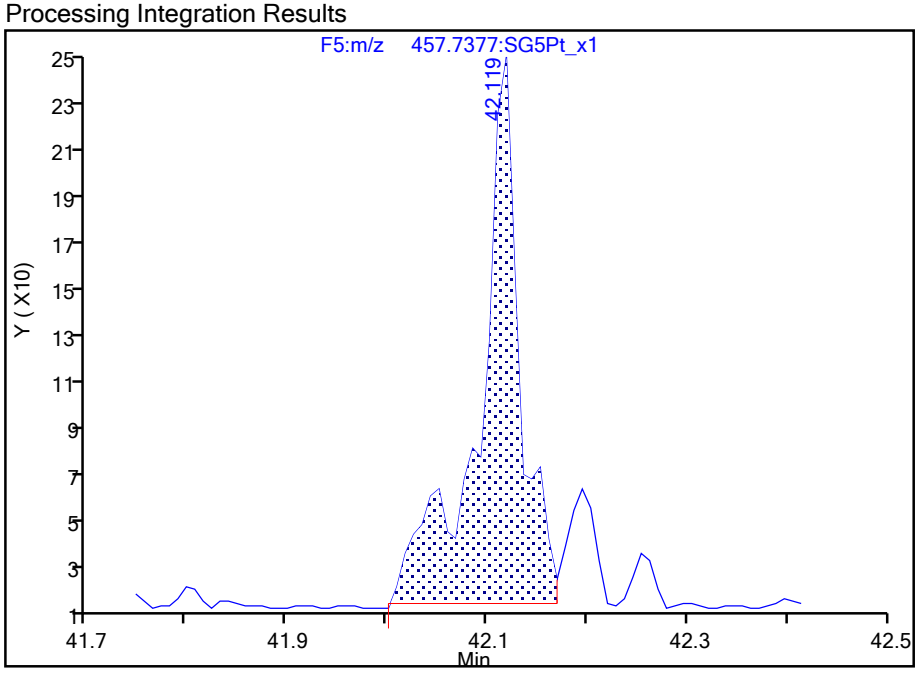

Manual Integration Results

RT: 42.12
Area: 540
Amount: 0.270132
Amount Units: pg/ul

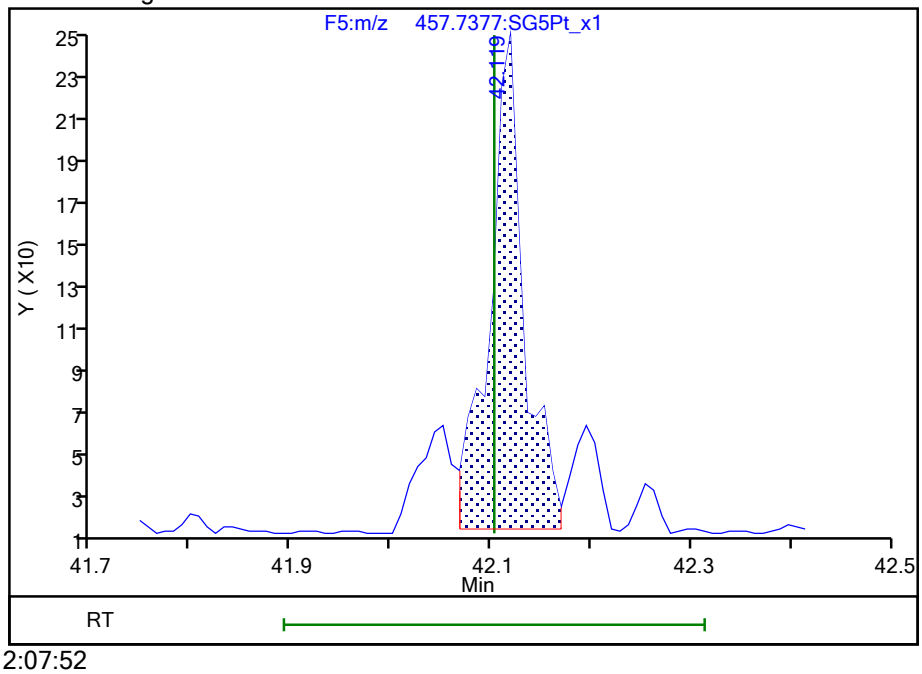

Reviewer: dadunj, 19-Aug-2021 12:07:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

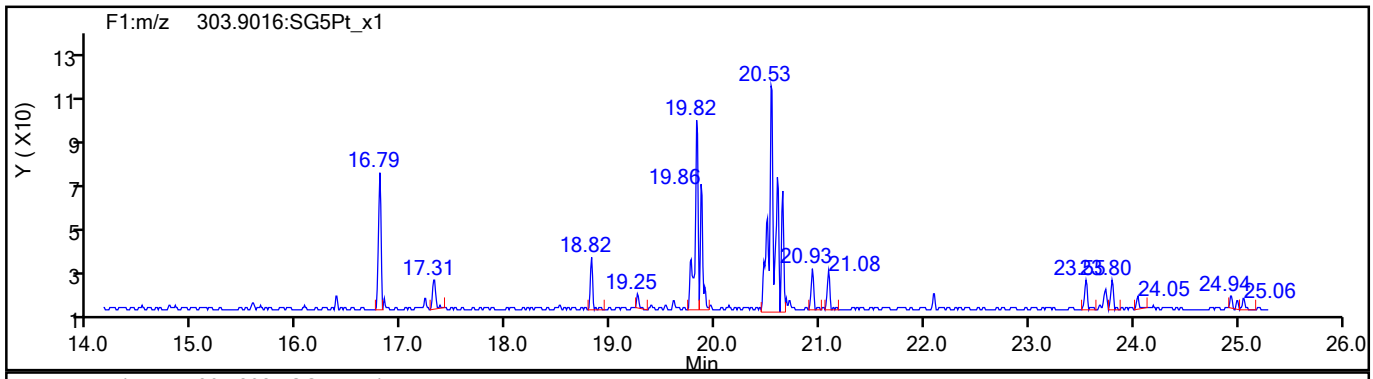

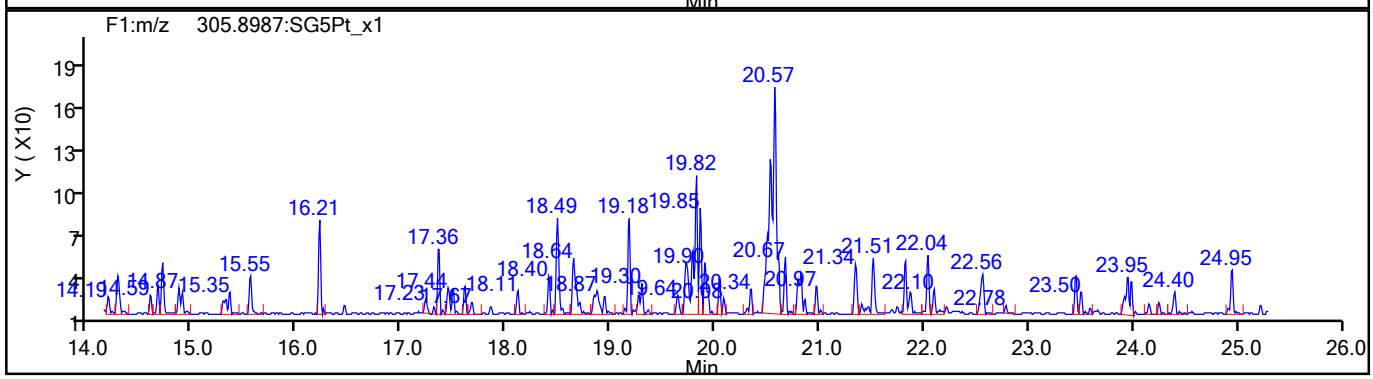

TCDF Standards

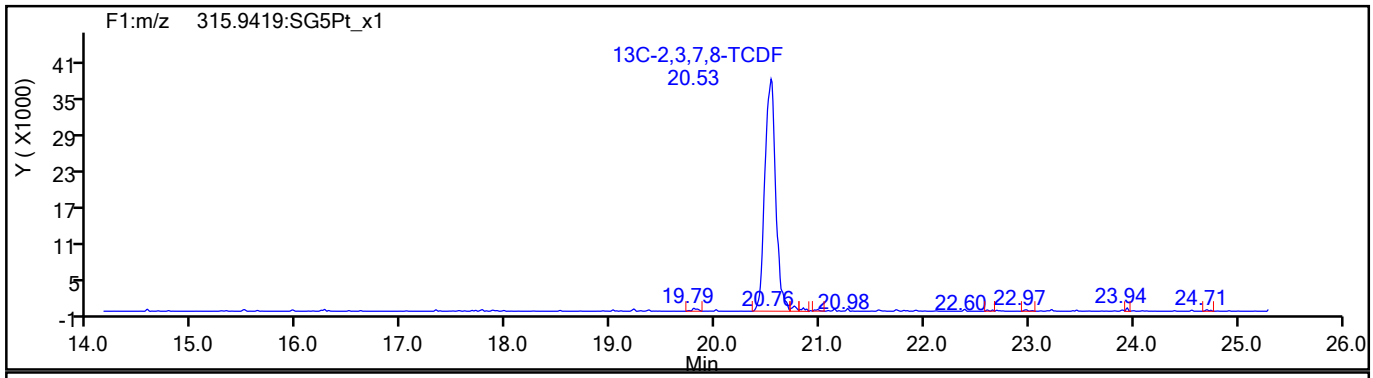

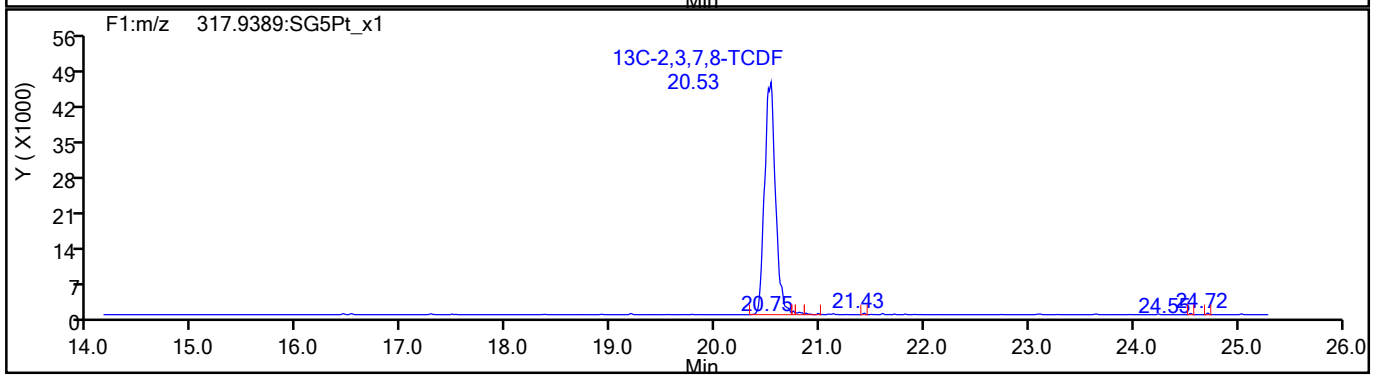

786538

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

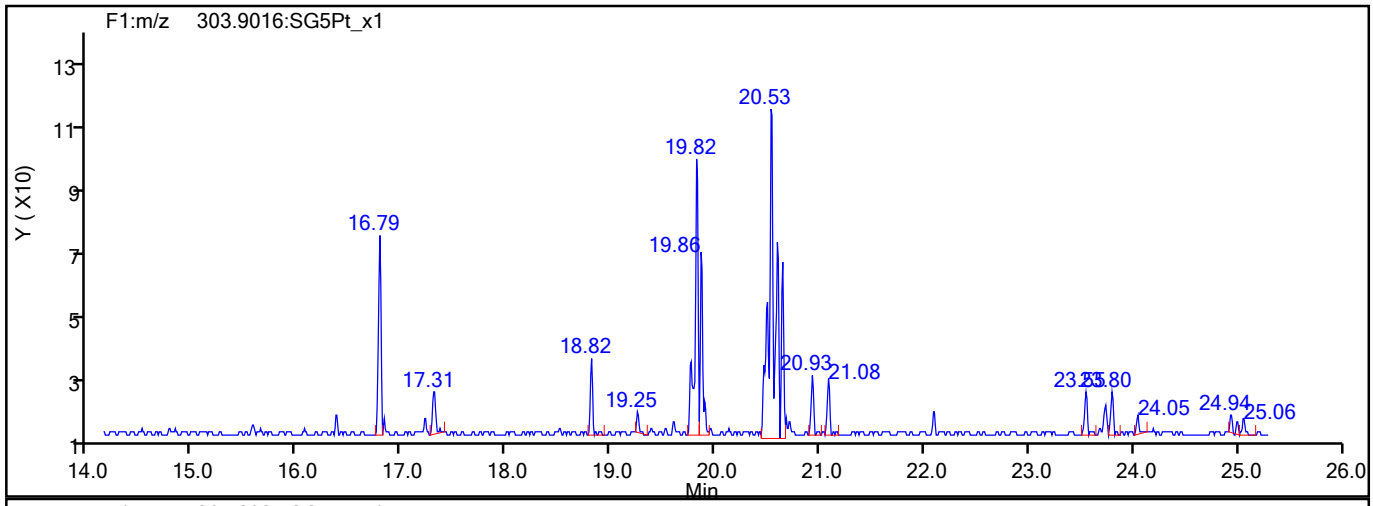

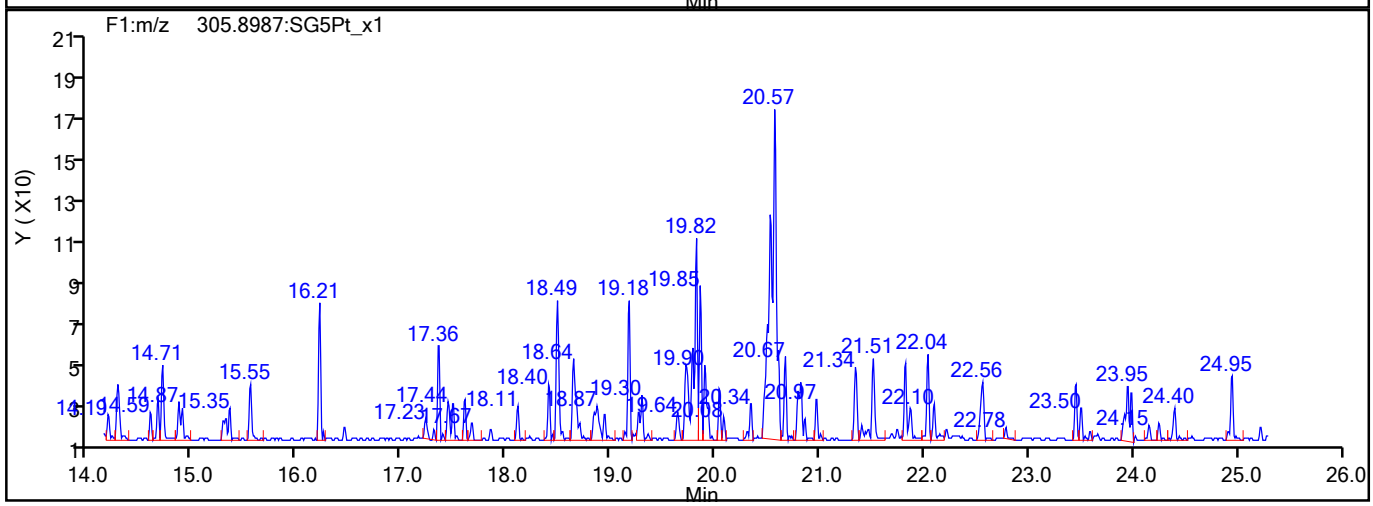

TCDF Interference Mass

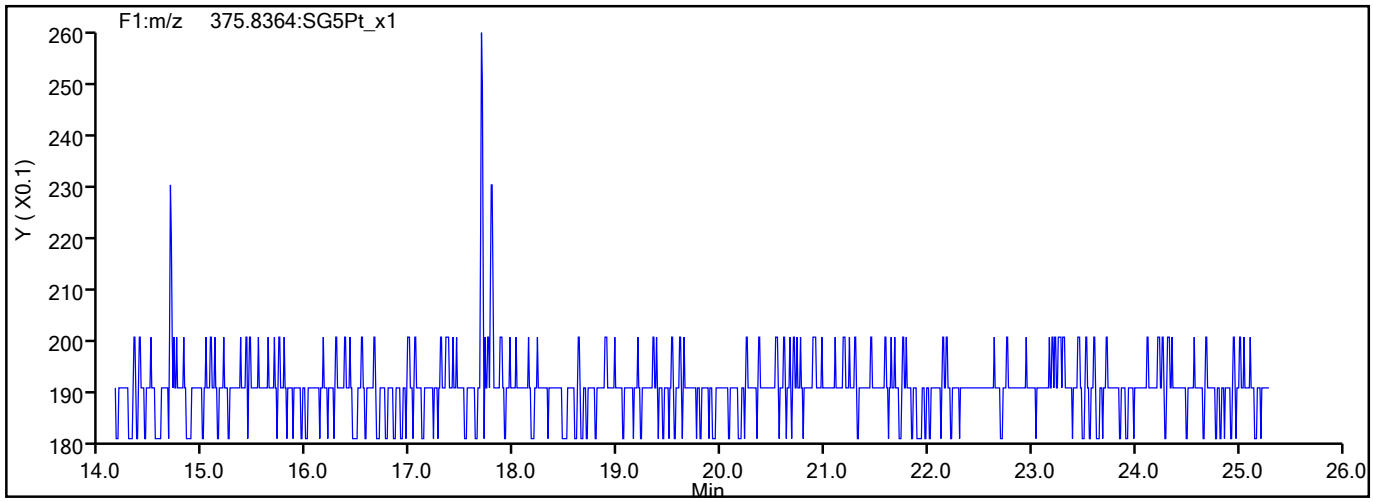

786539

Report Date: 19-Aug-2021 12:08:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

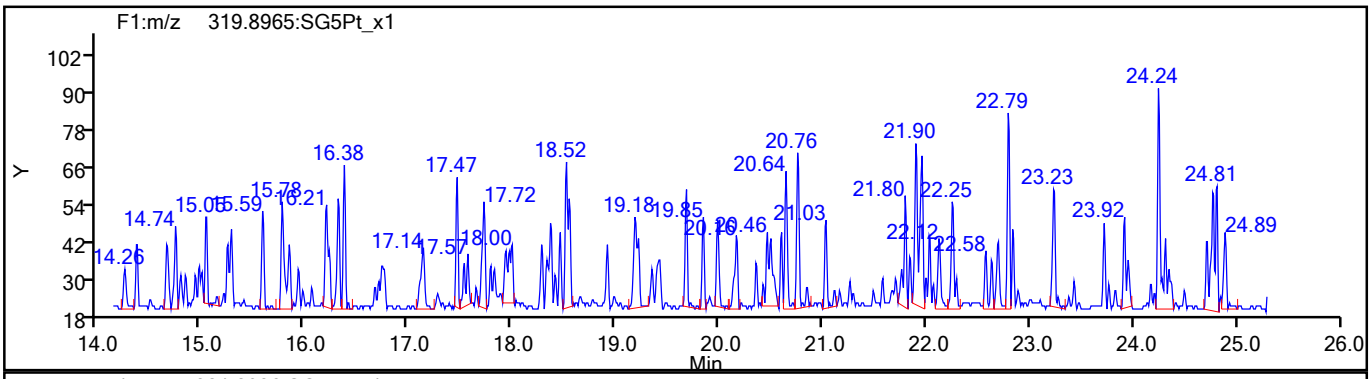

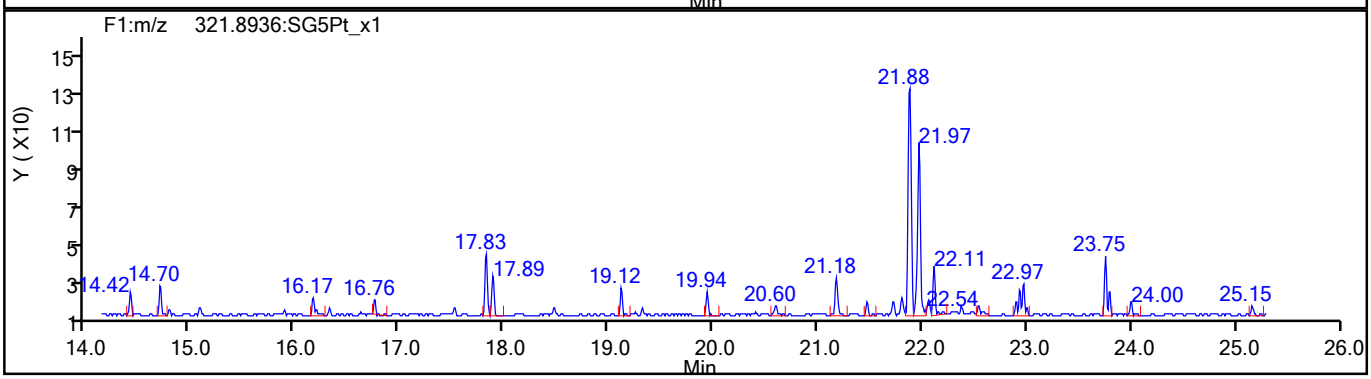

TCDD Standards

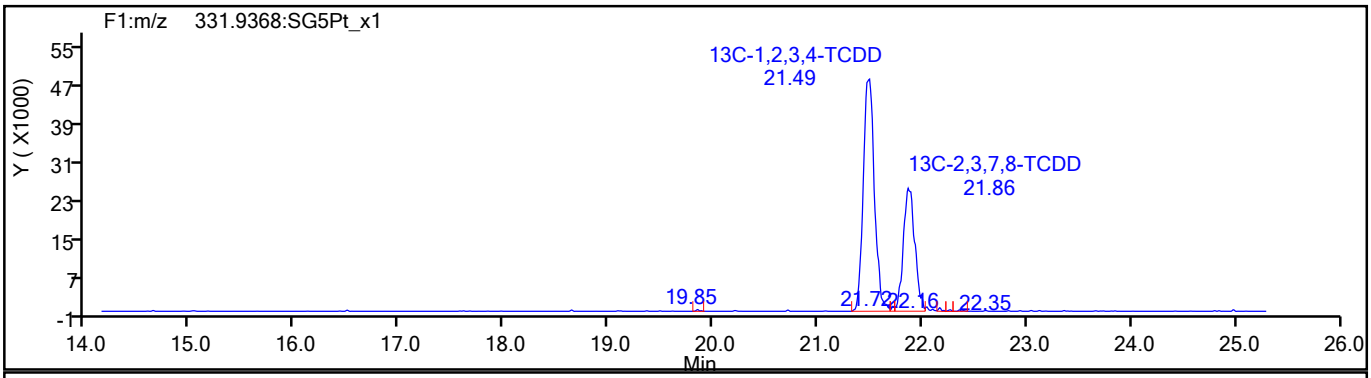

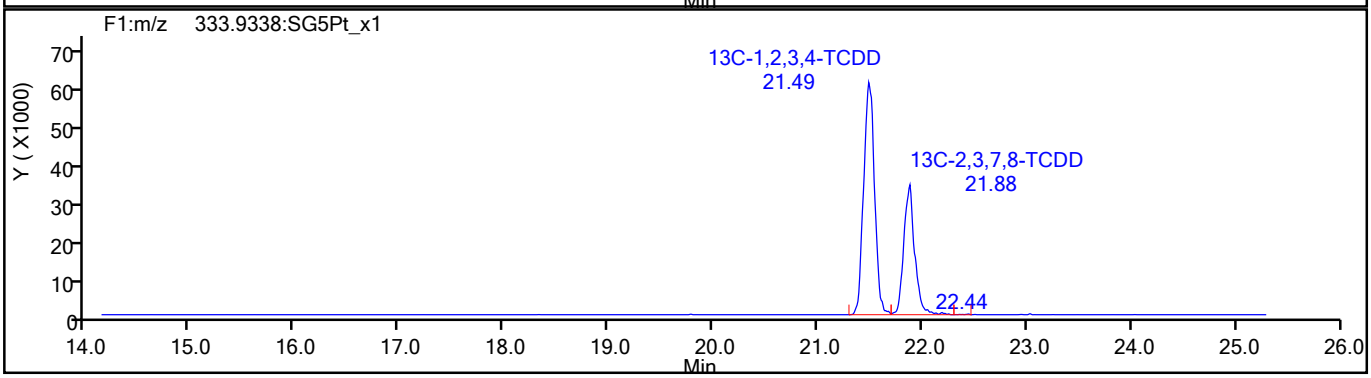

786540

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

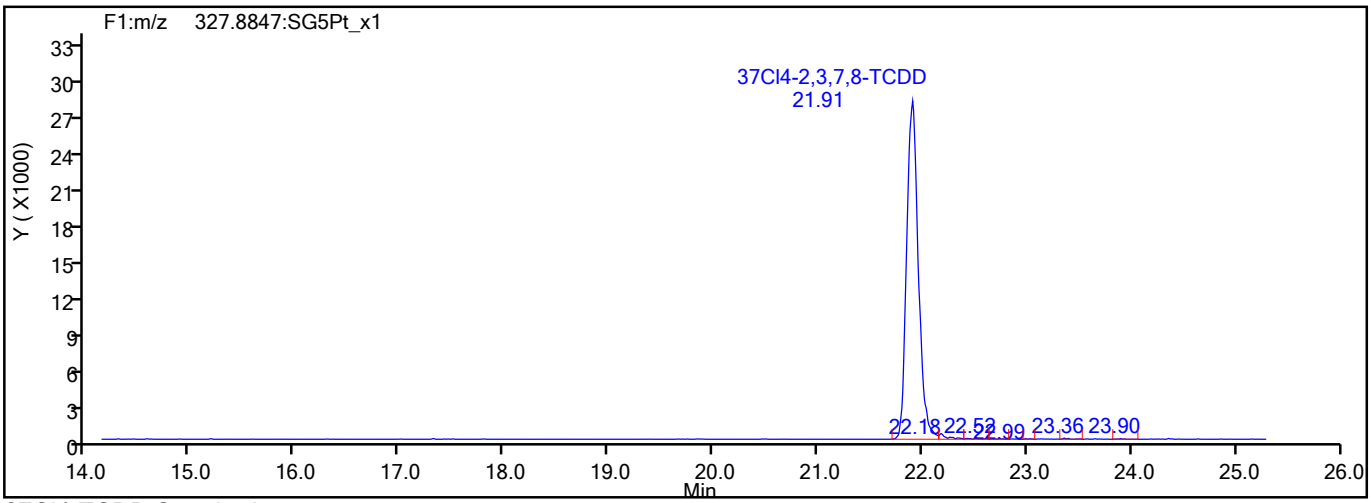

37Cl4-TCDD Standards

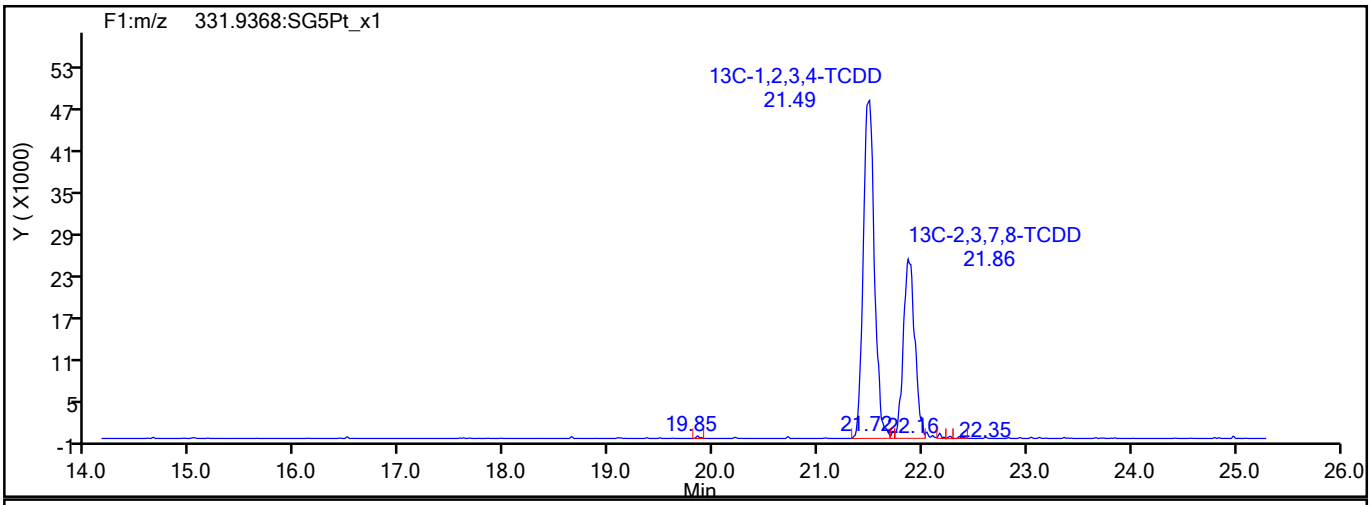

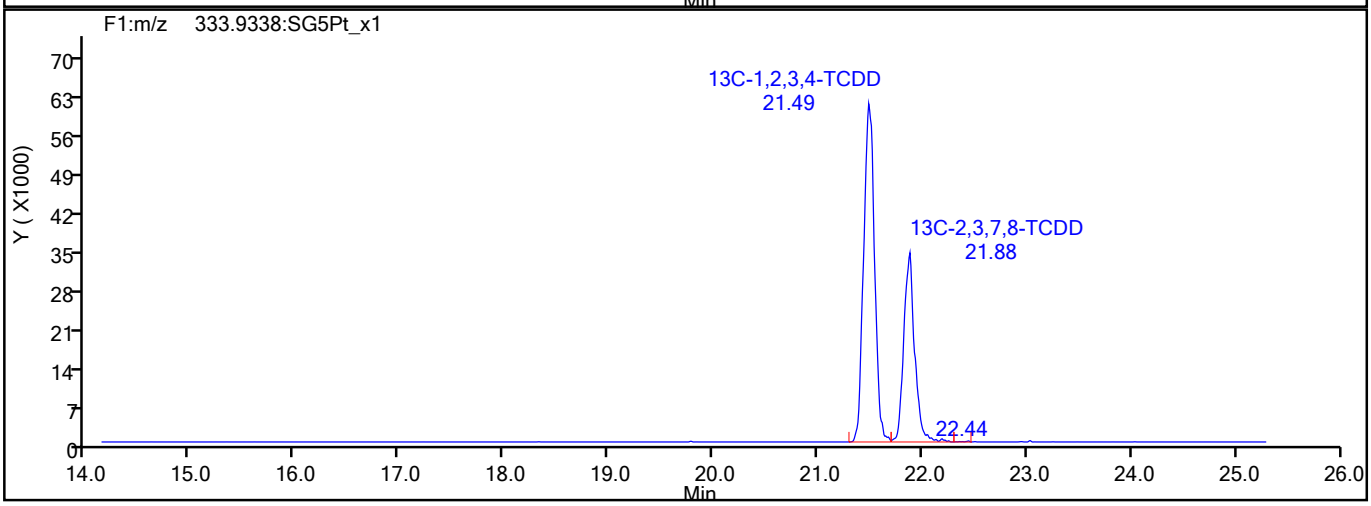

786541

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

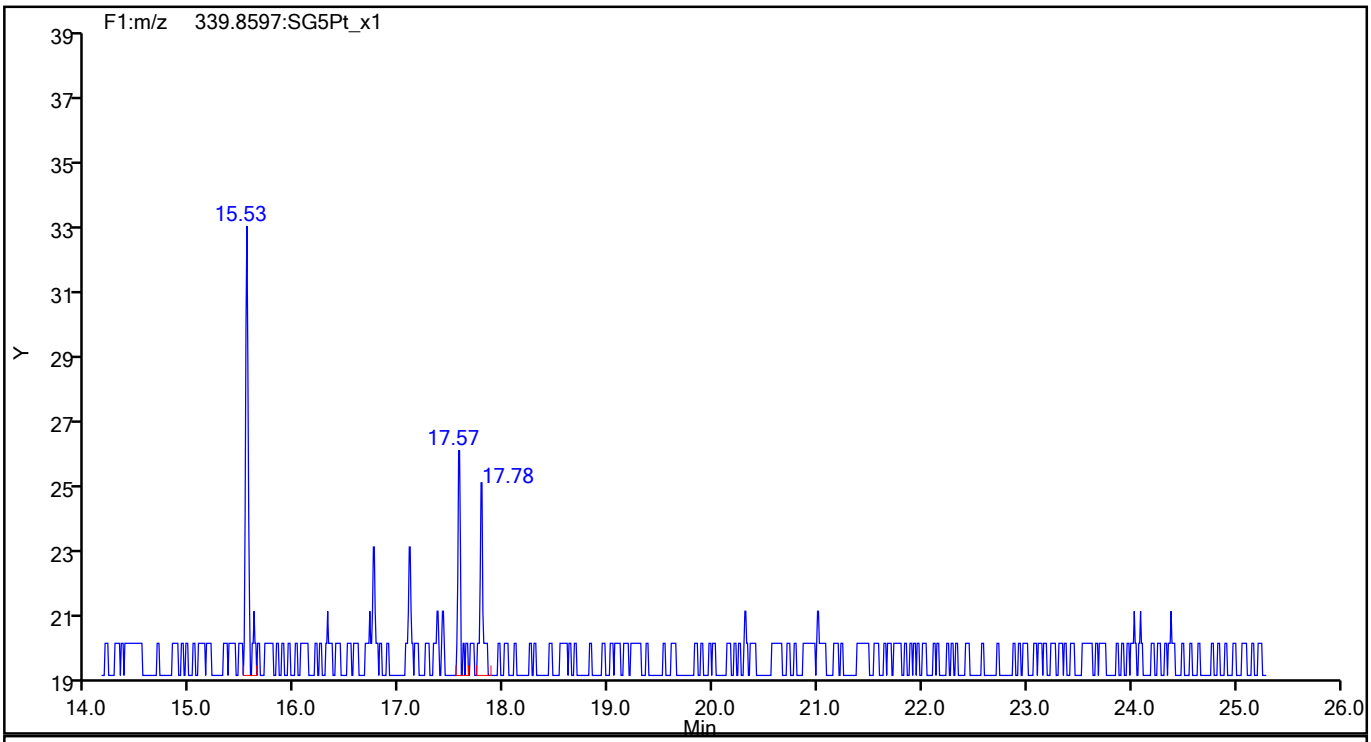

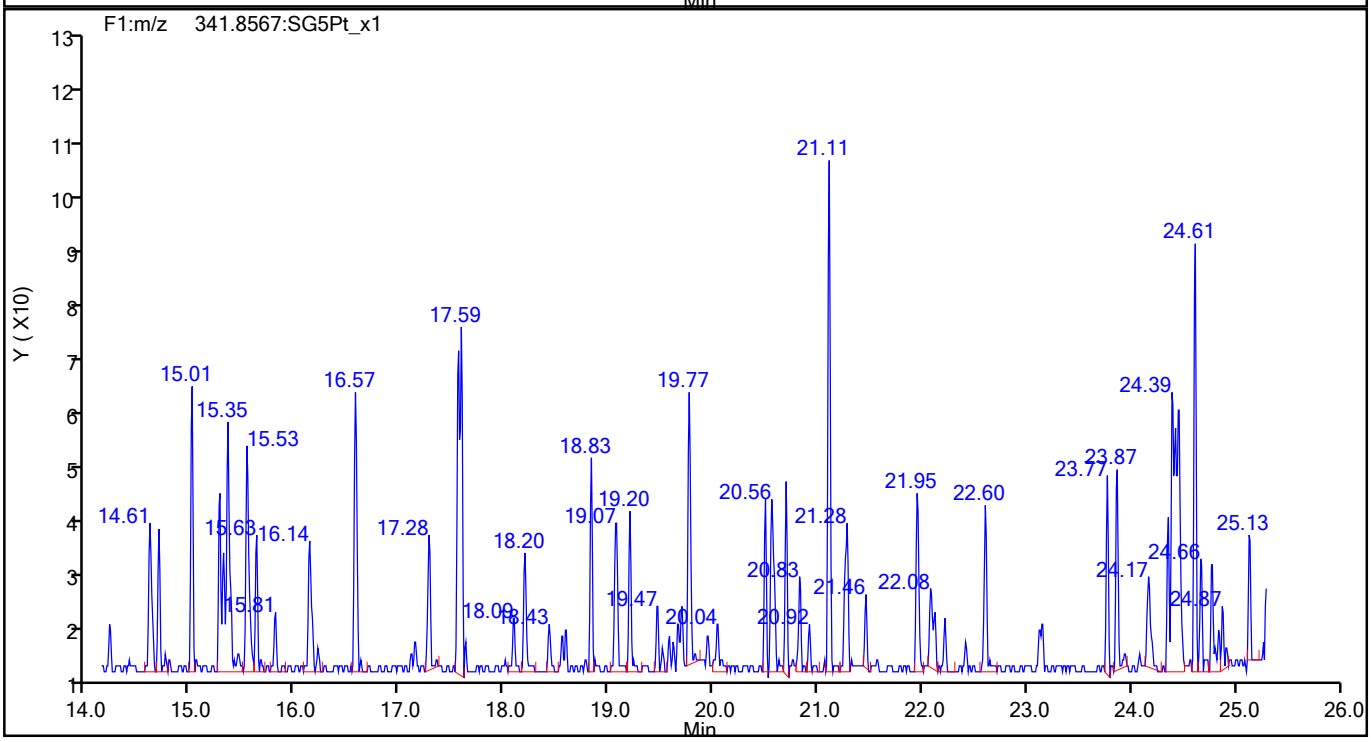

786542

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

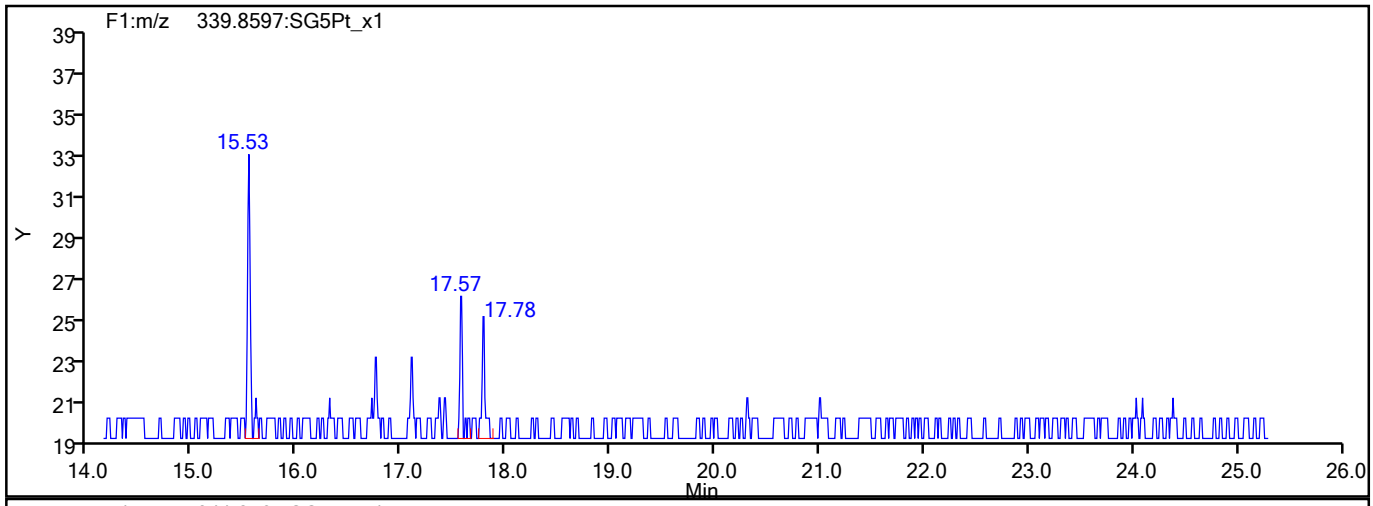

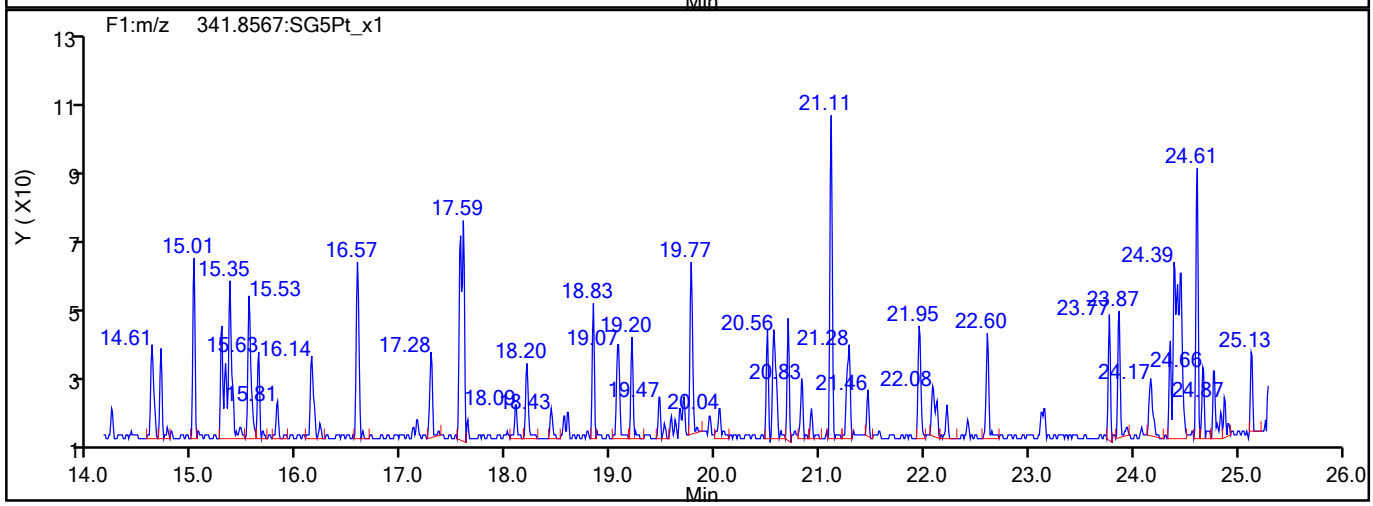

F1 PeCDFs Interference Mass

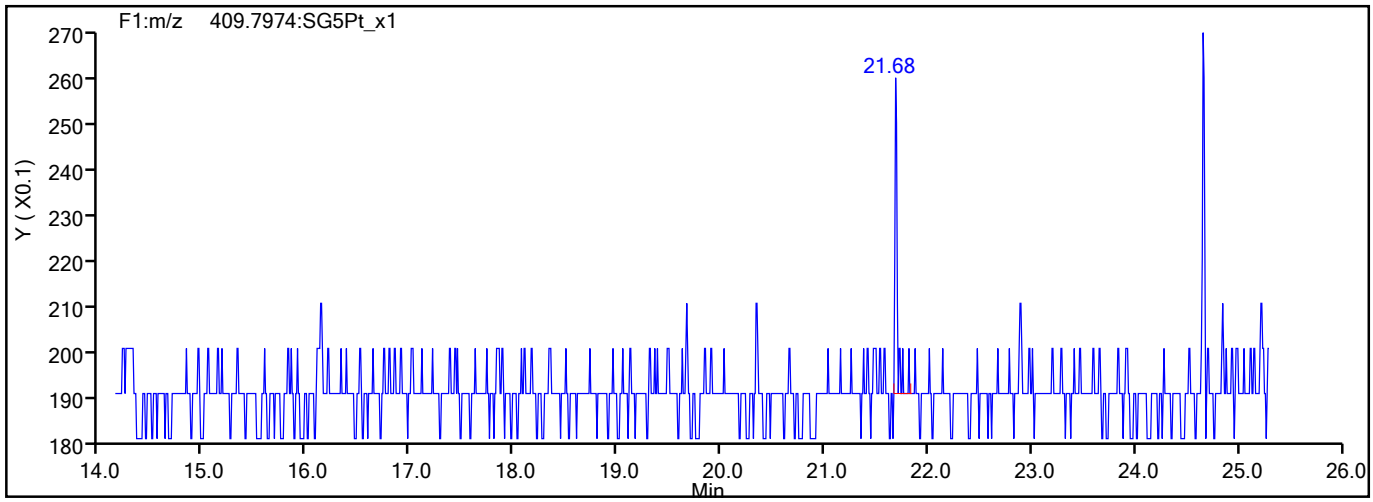

786543

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

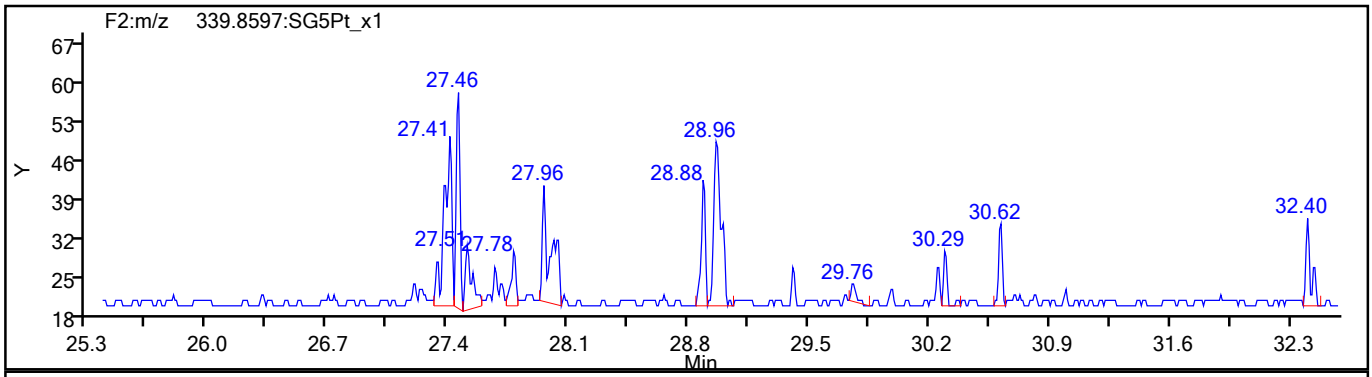

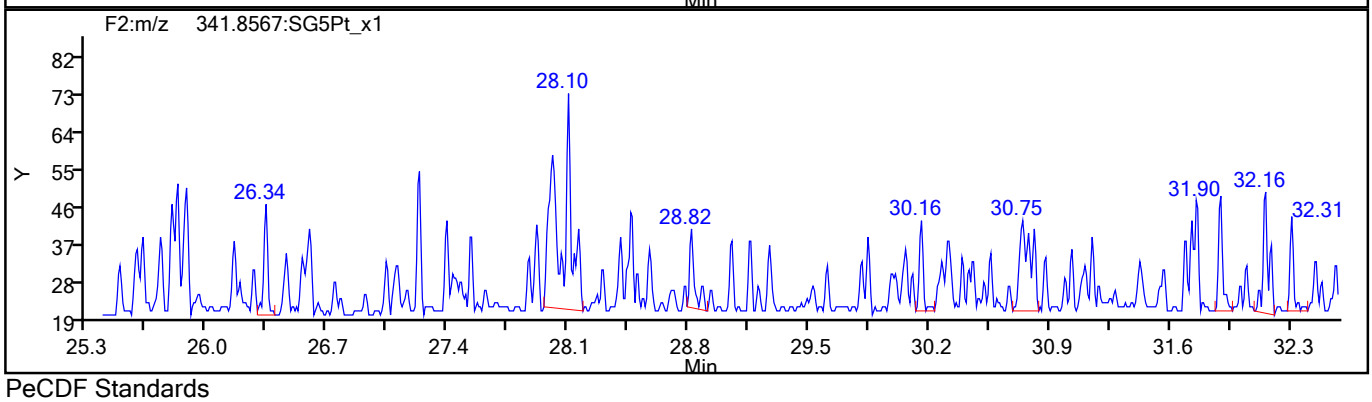

PeCDF Standards

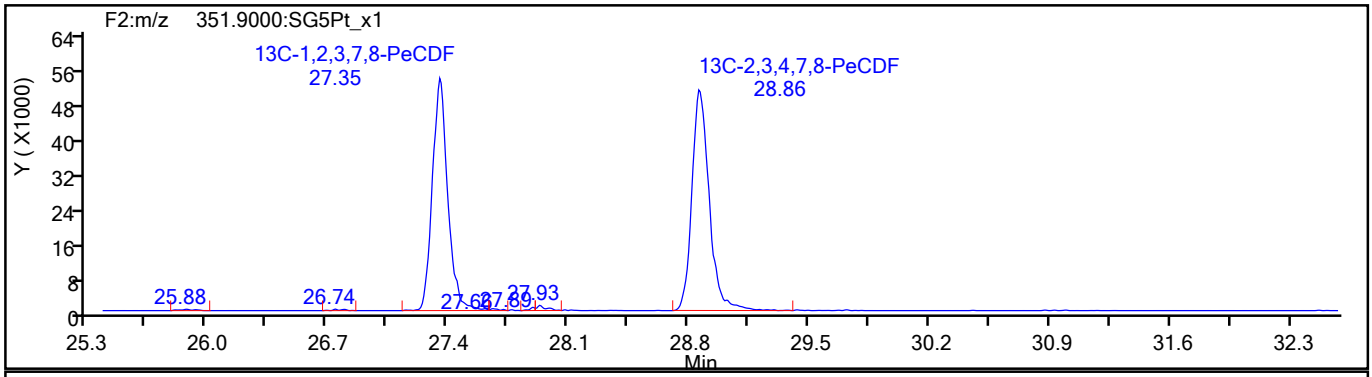

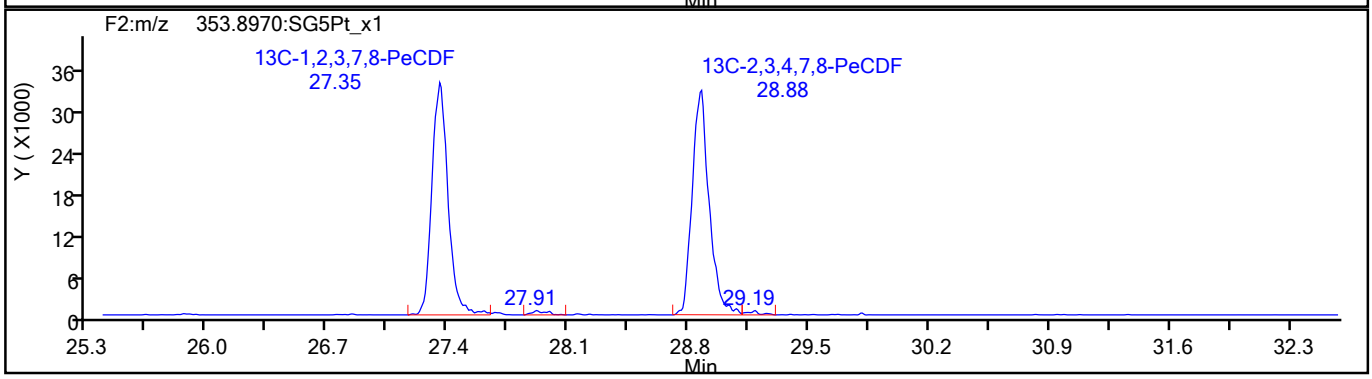

786544

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

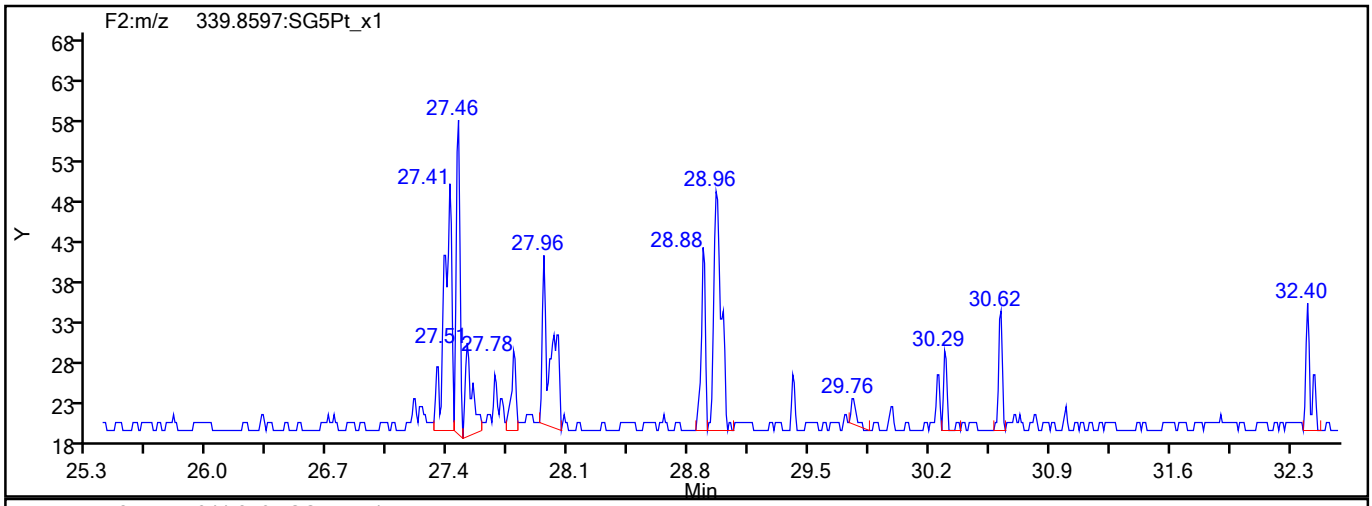

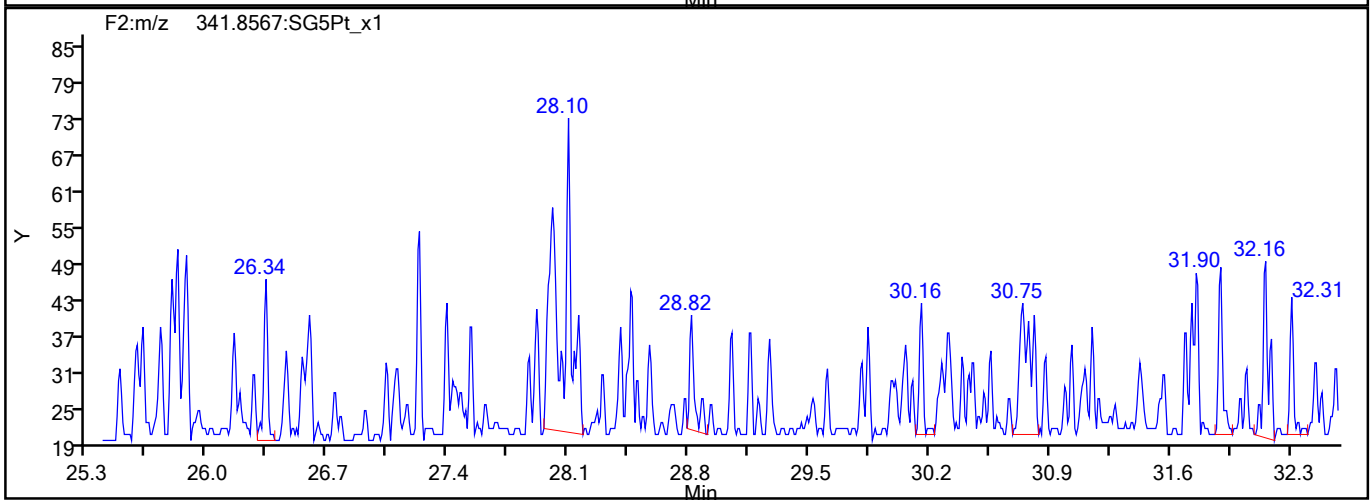

PeCDF Interference Mass

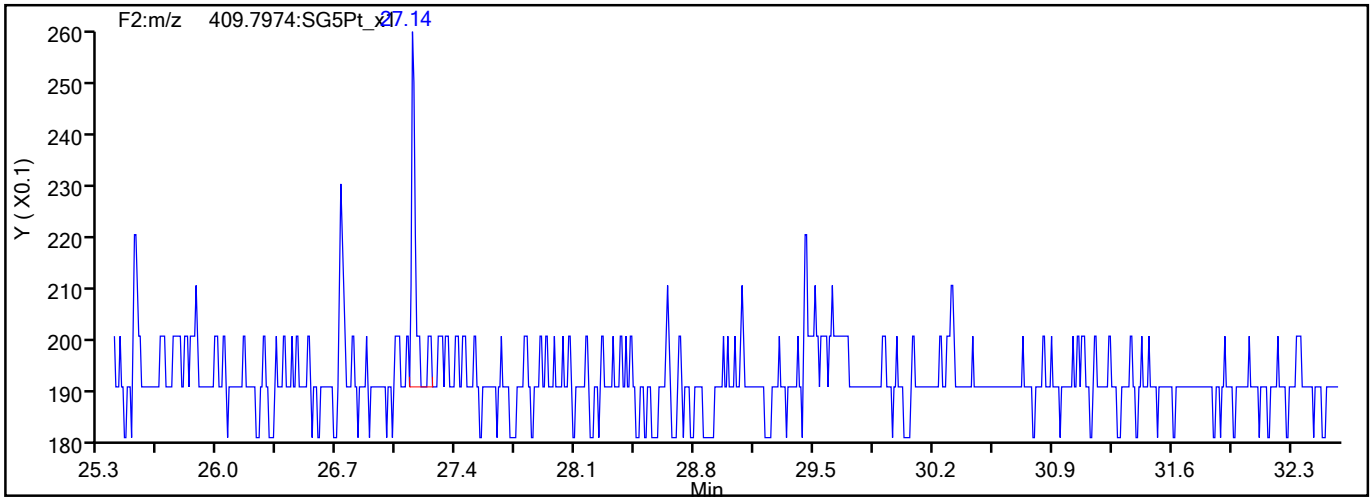

786545

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

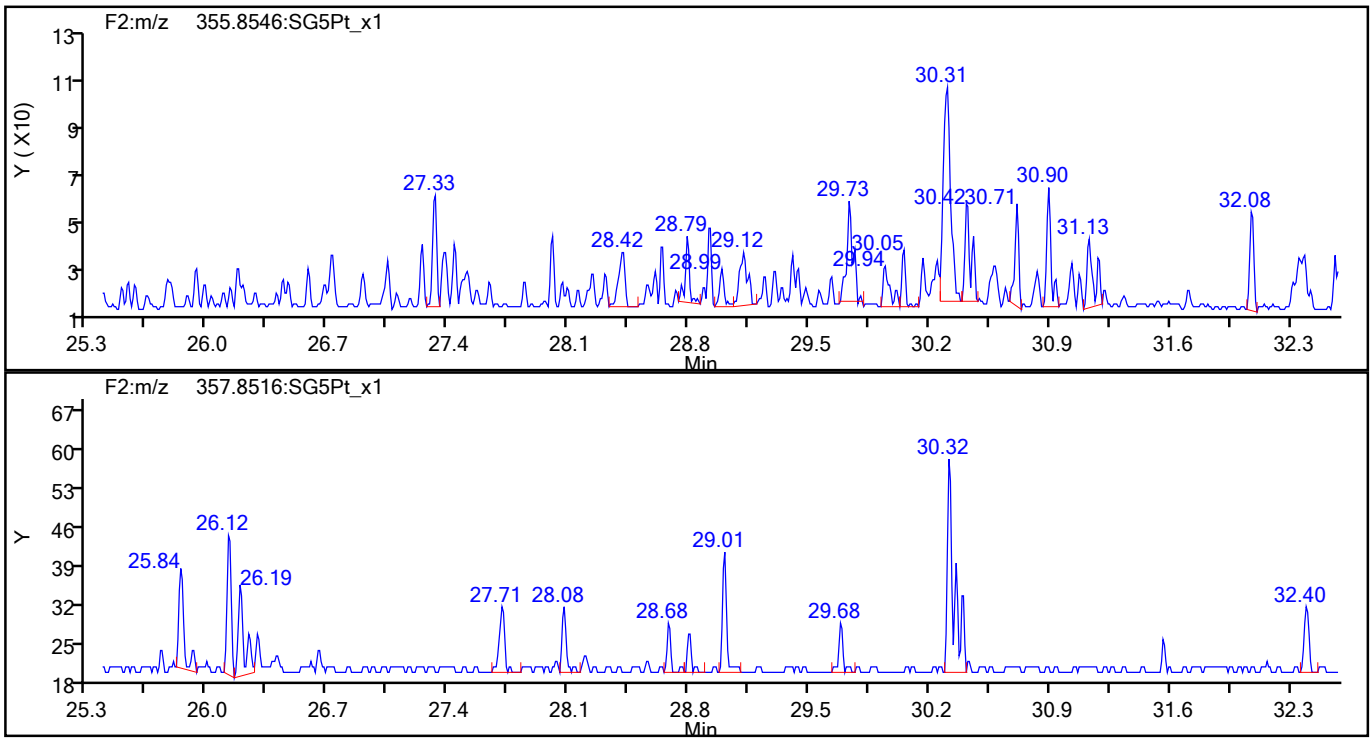

PeCDD Standards

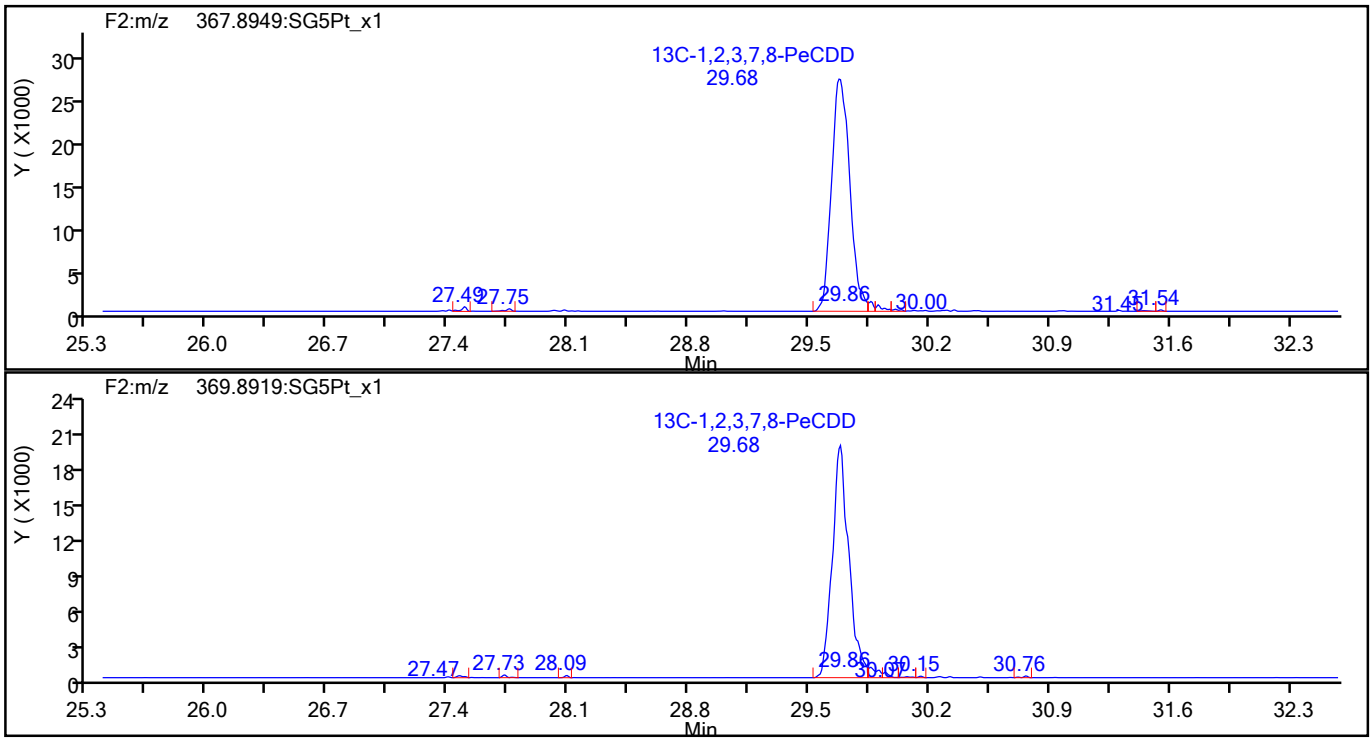

786546

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

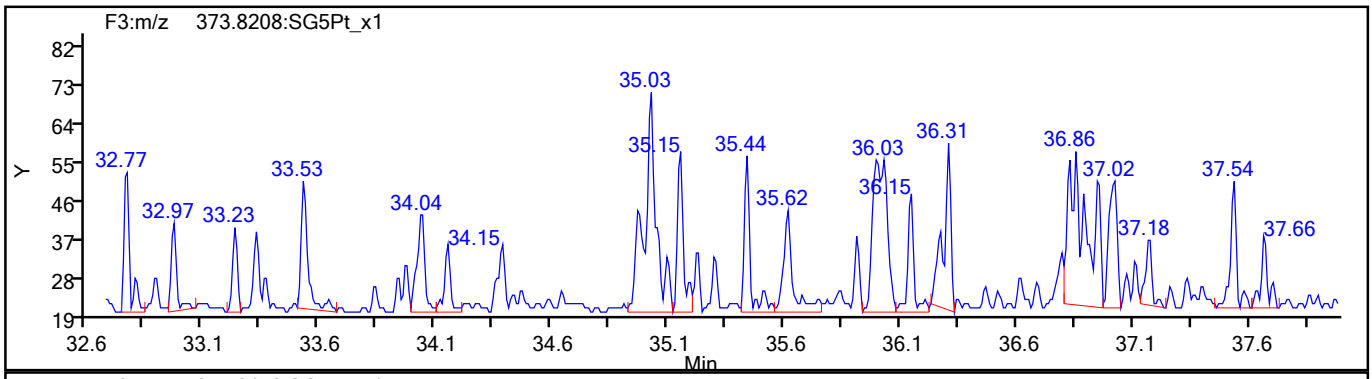

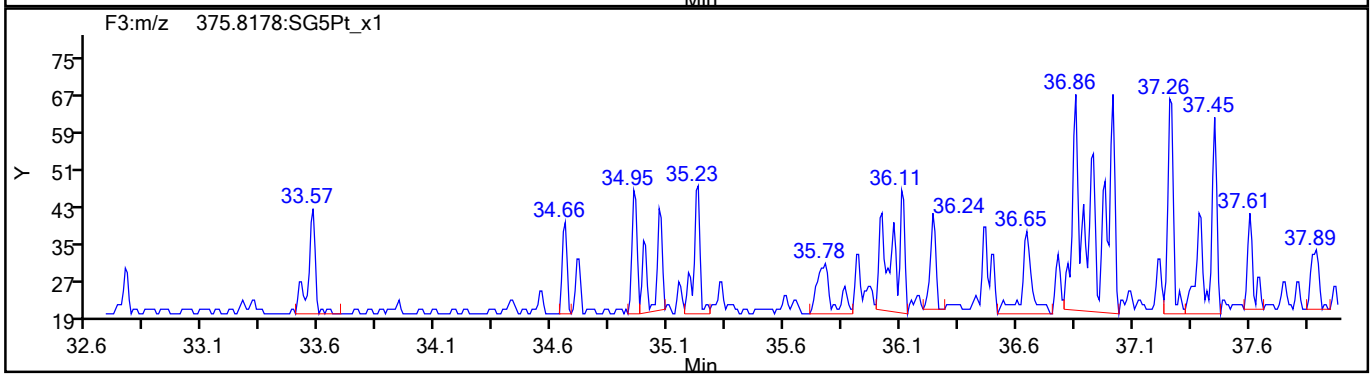

HxCDF Standards

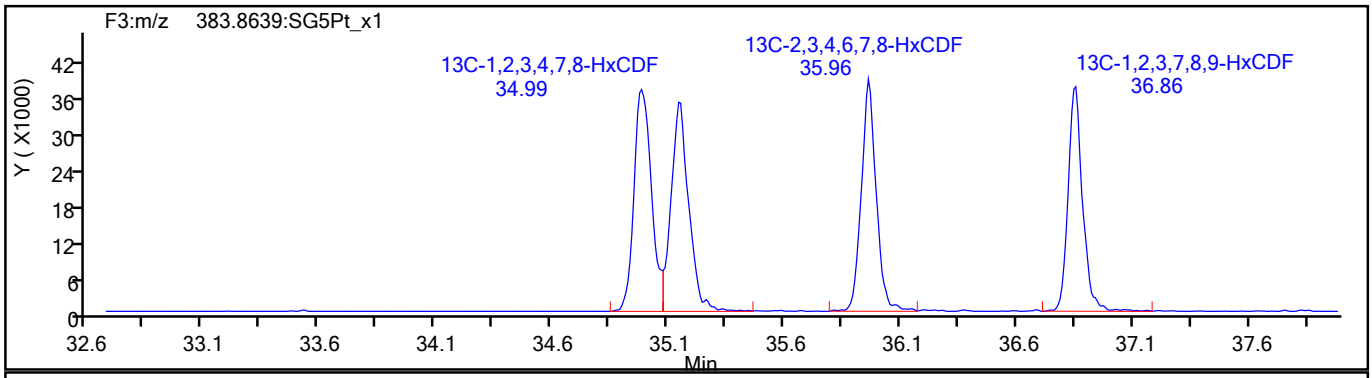

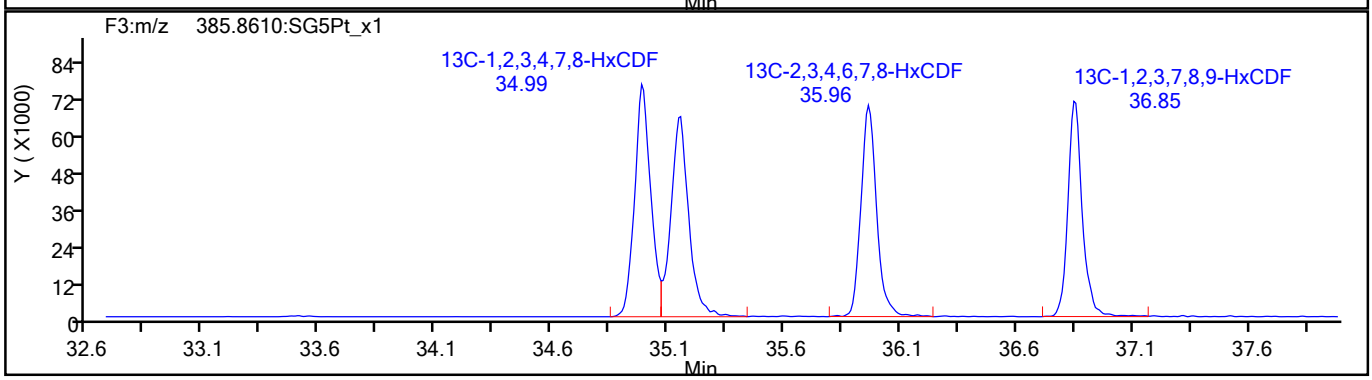

786547

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

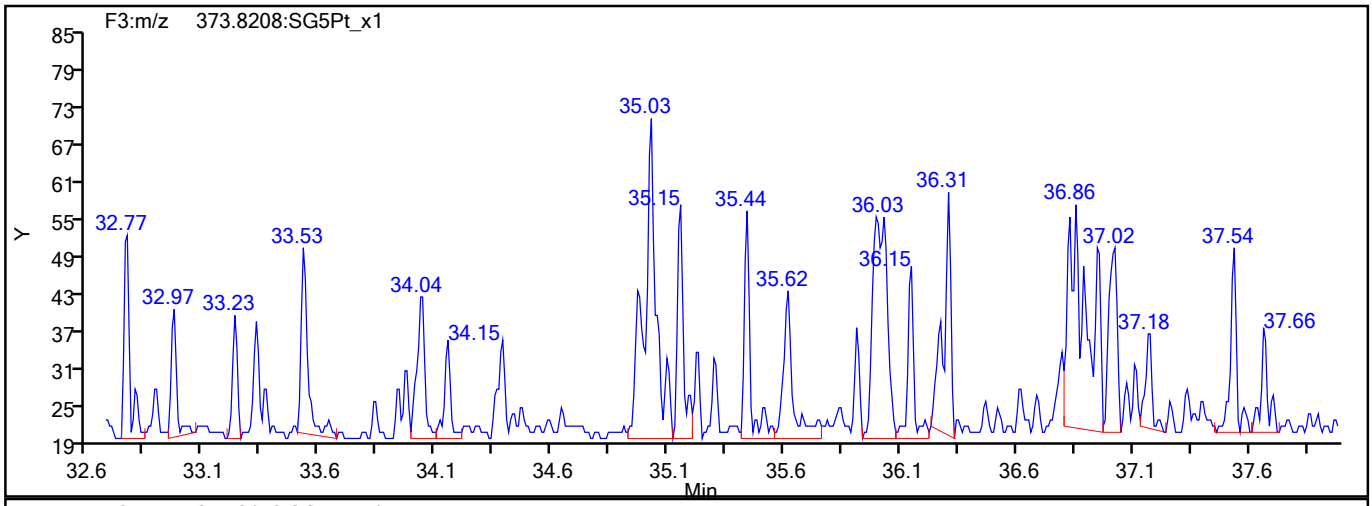

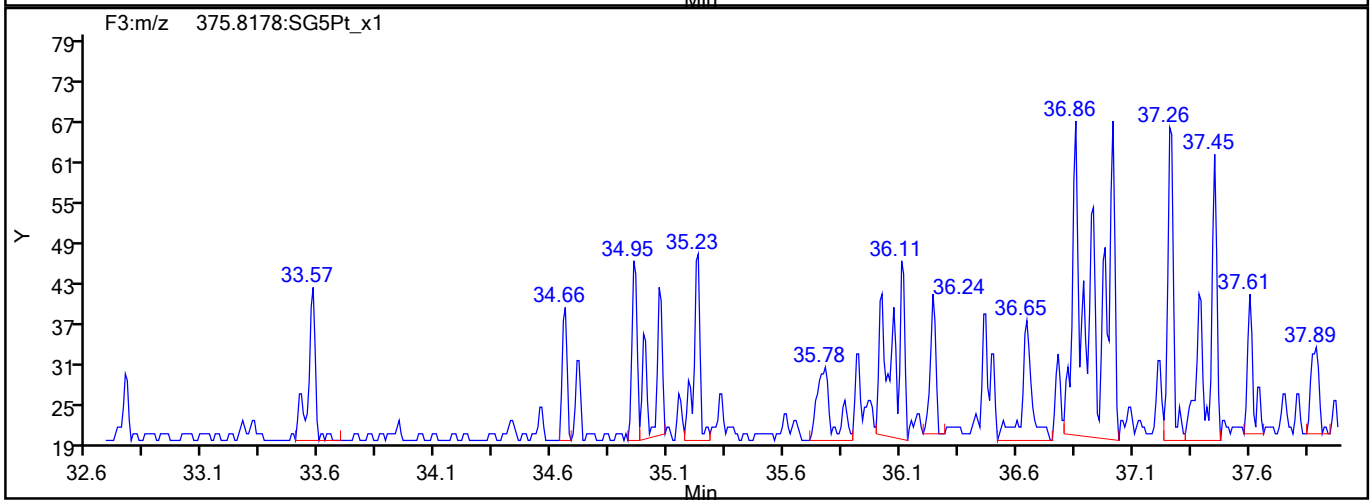

HxCDF Interference Mass

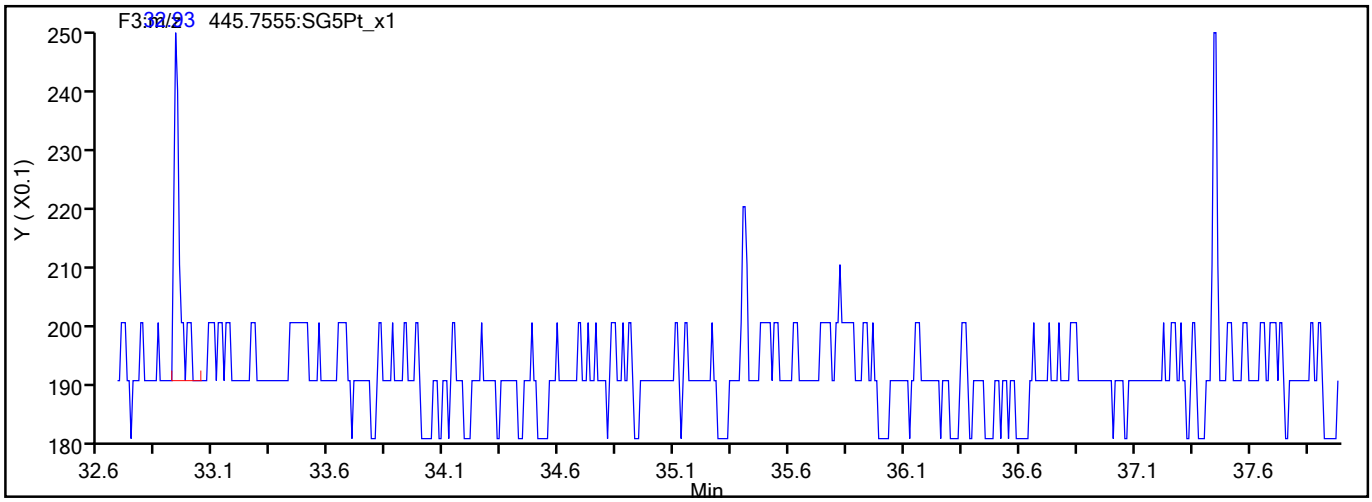

786548

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

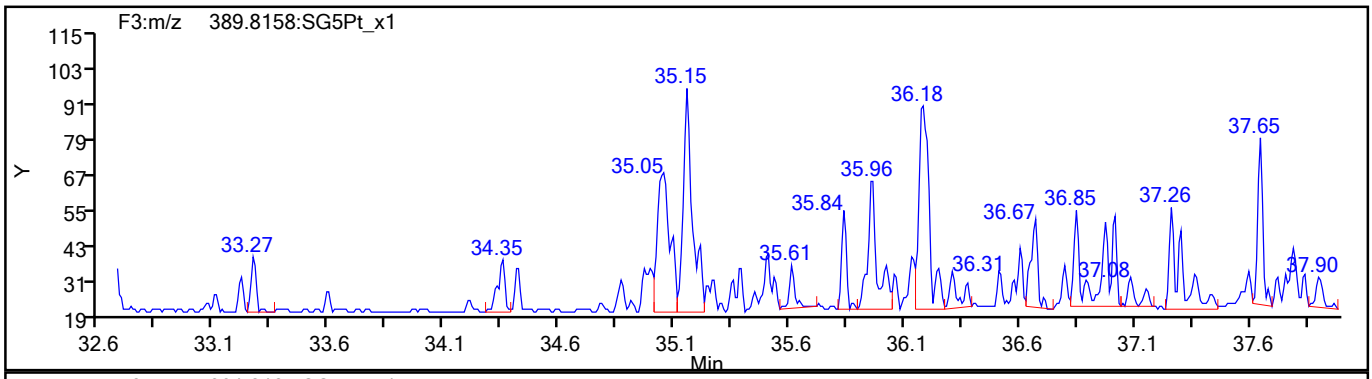

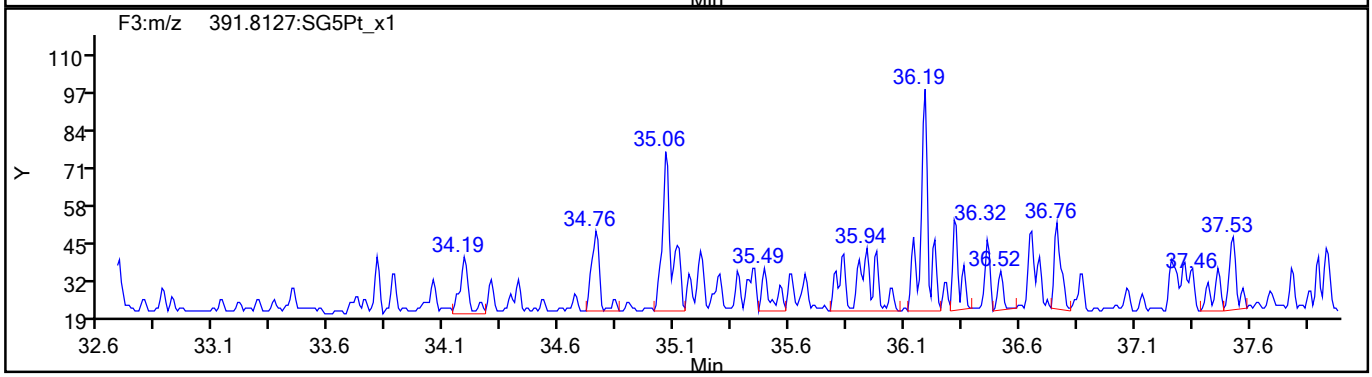

HxCDD Standards

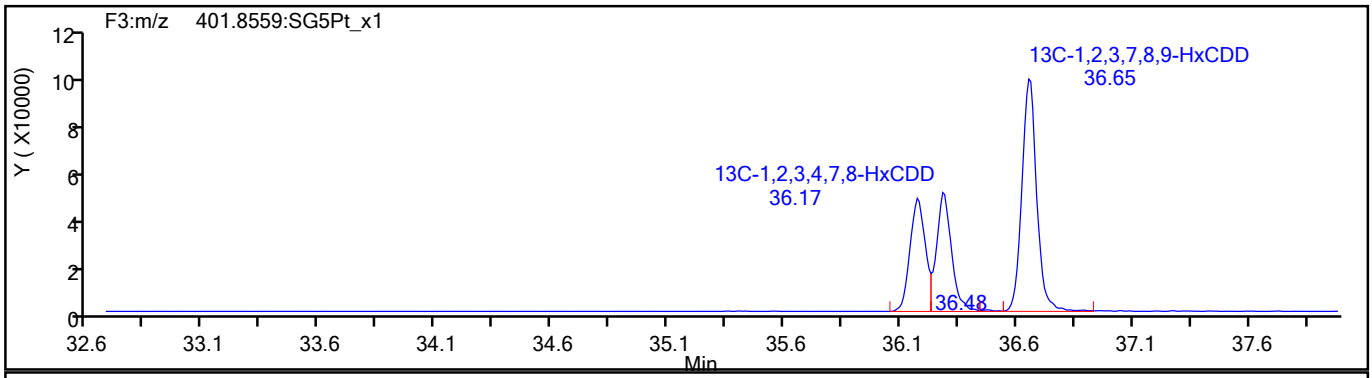

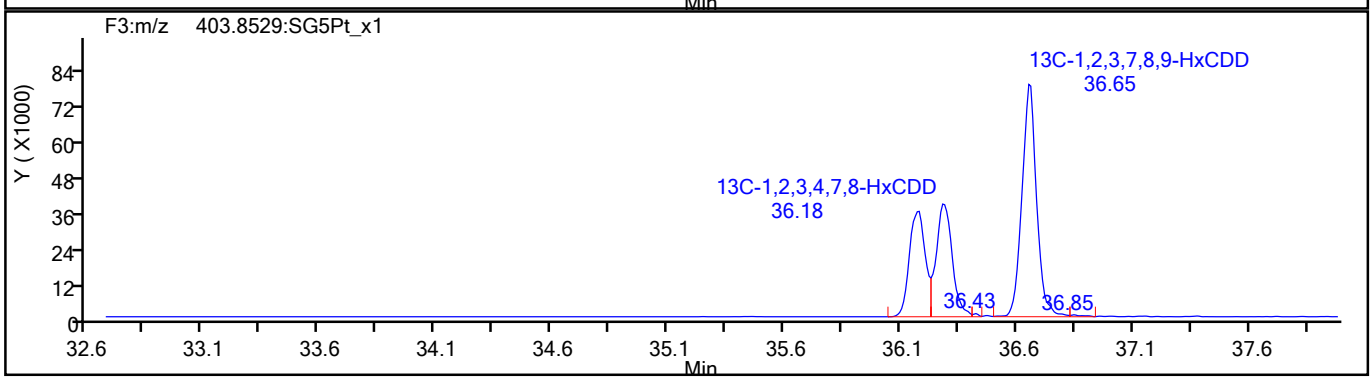

786549

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

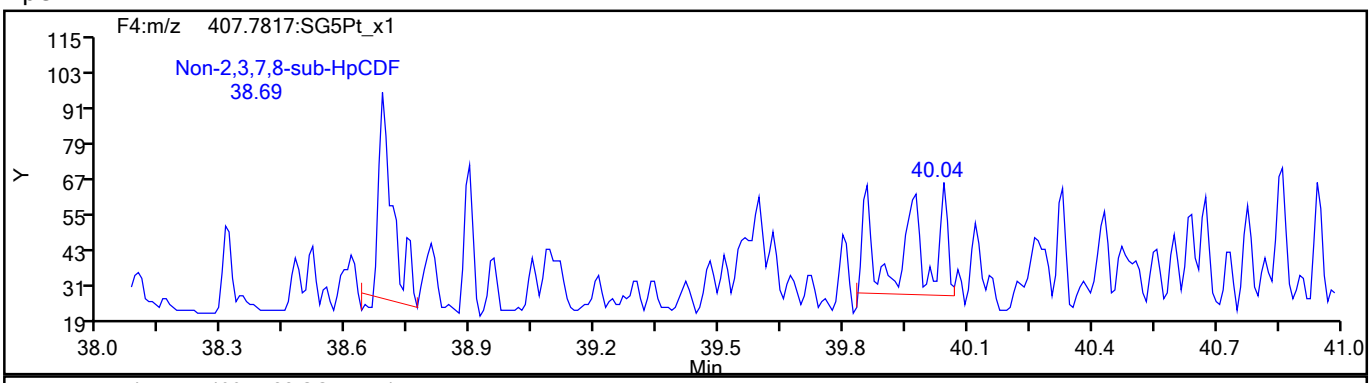

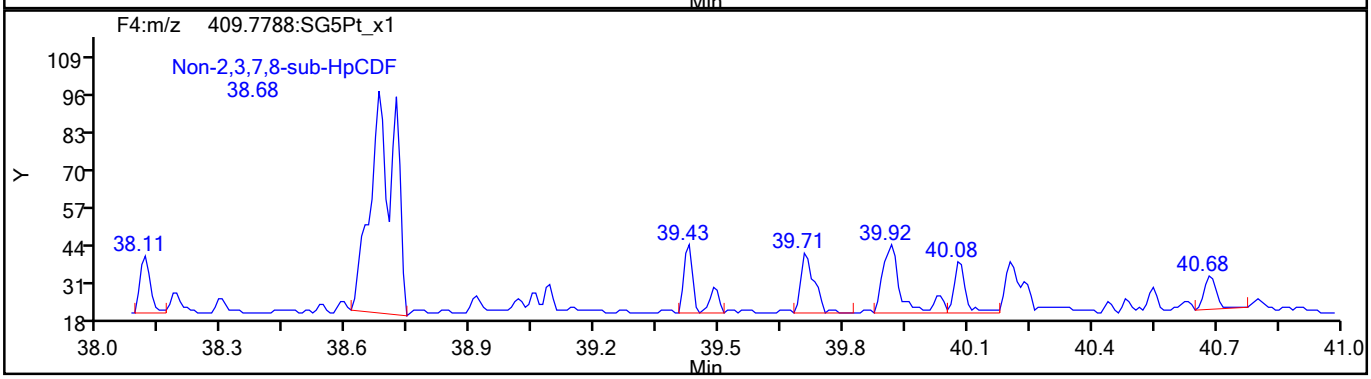

HpCDF Standards

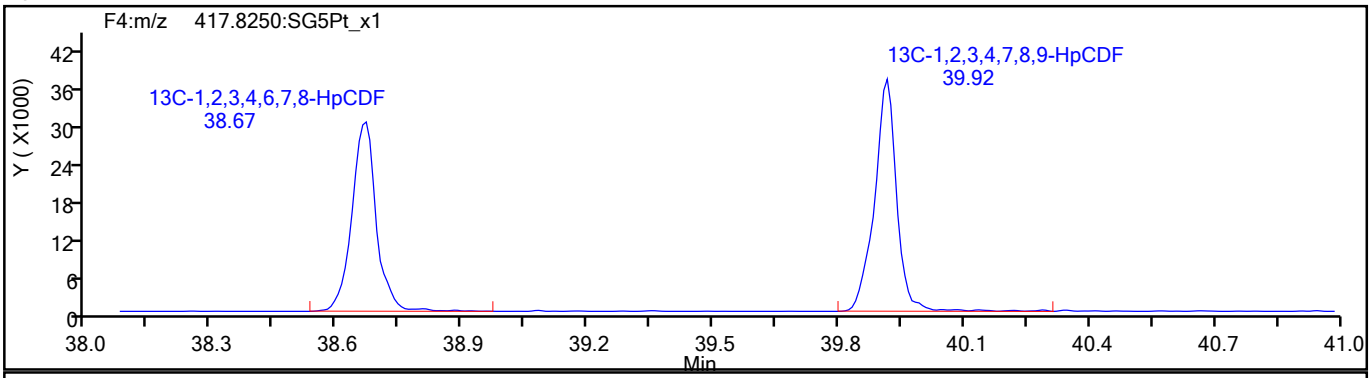

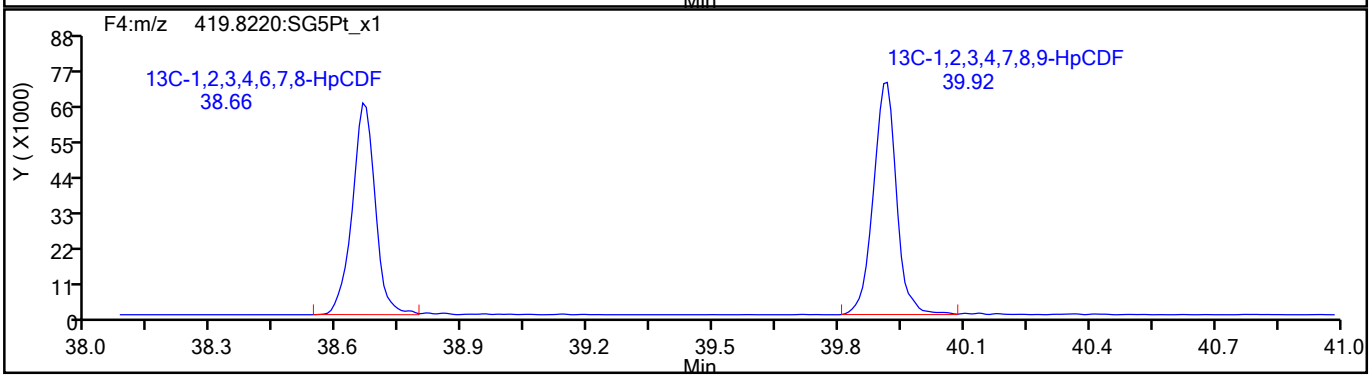

786550

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

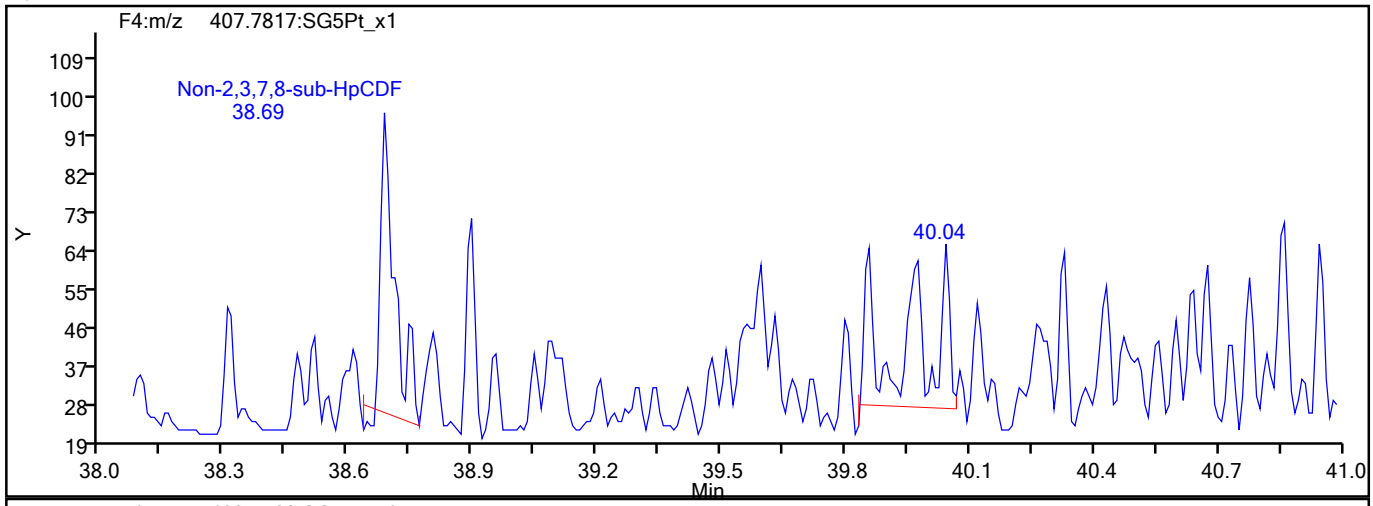

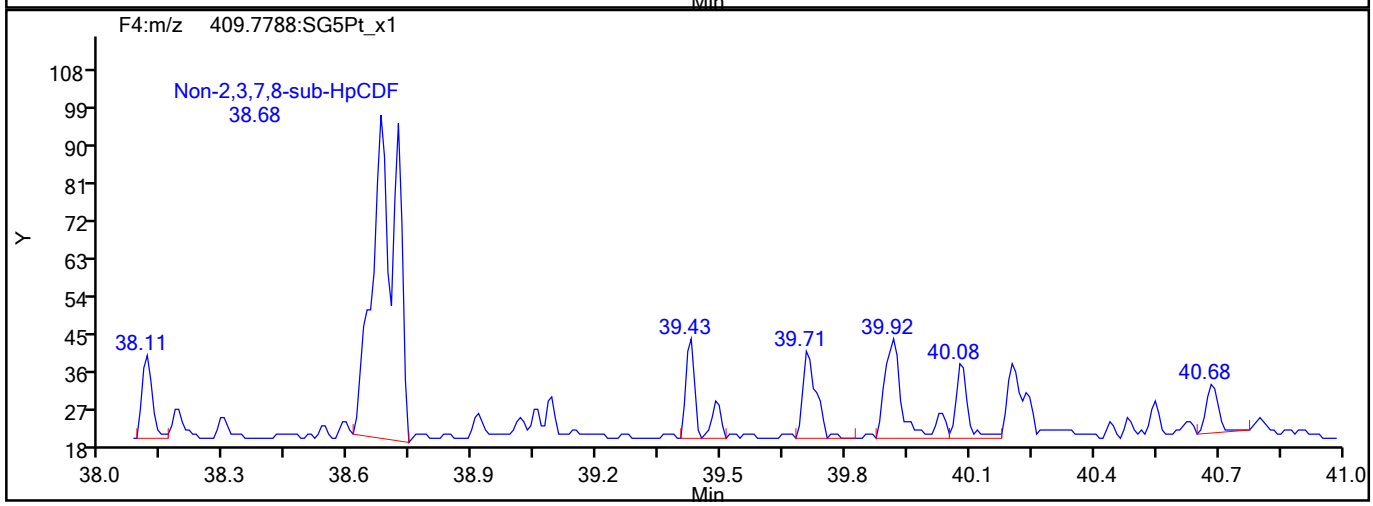

HpCDF Interference Mass

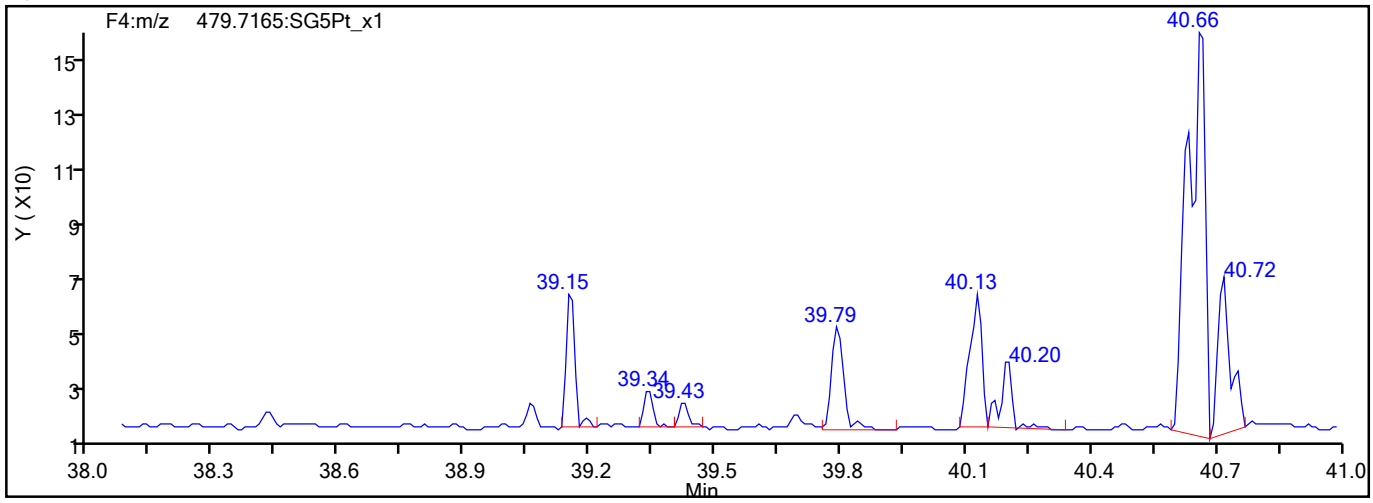

786551

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

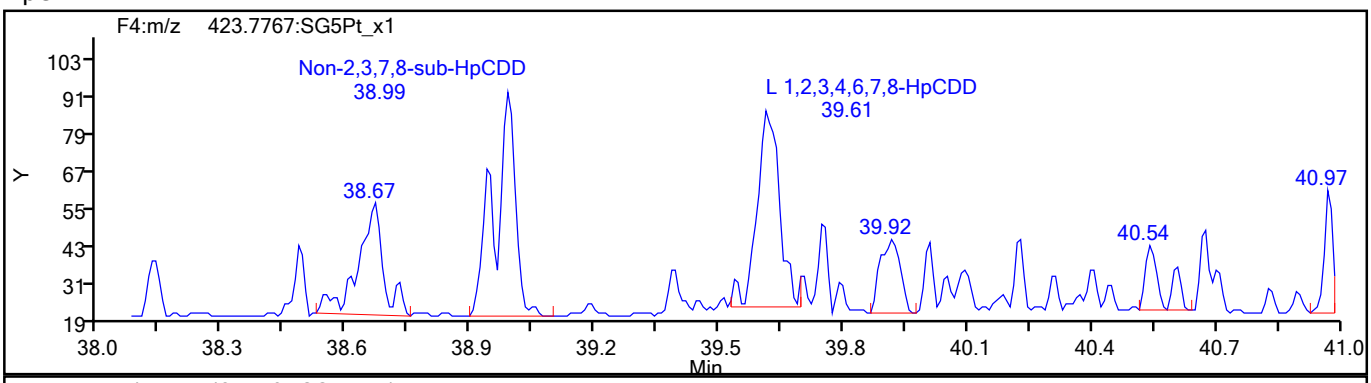

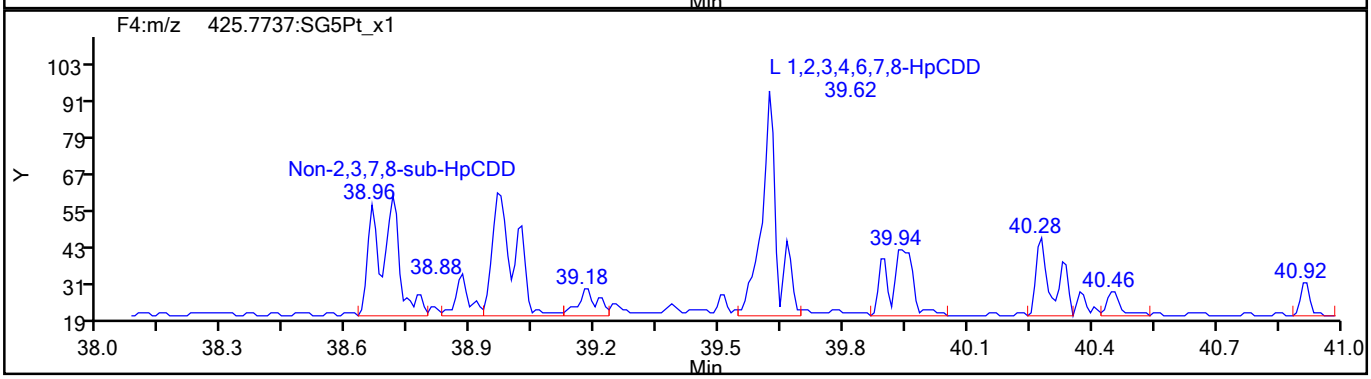

HpCDD Standards

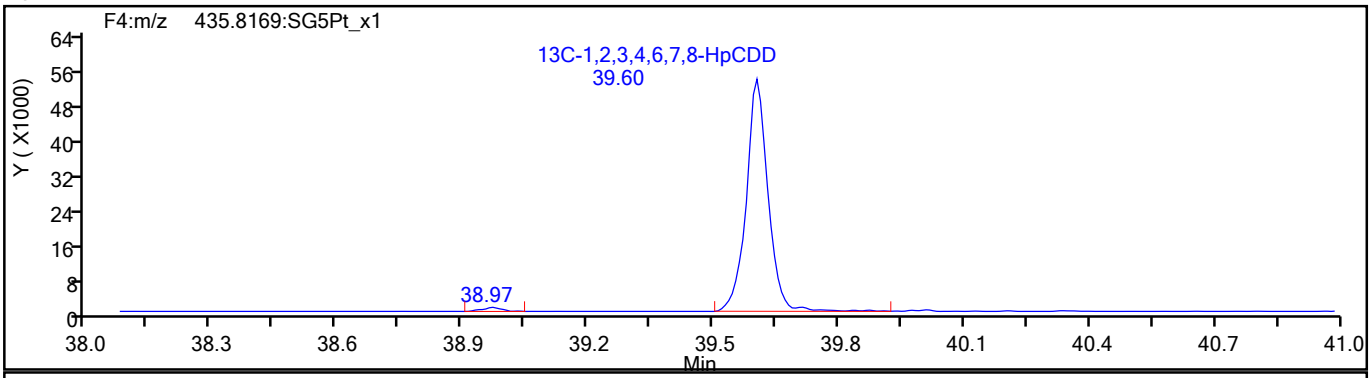

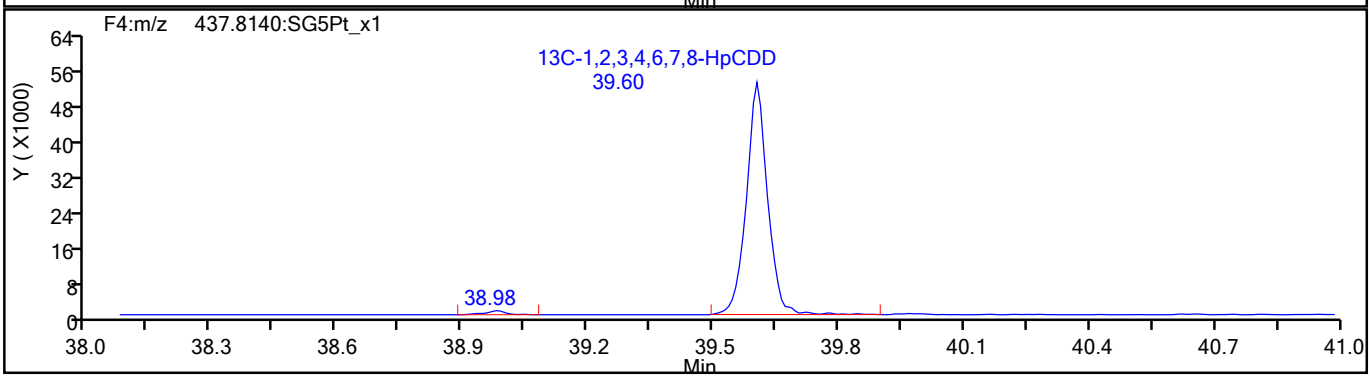

786552

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

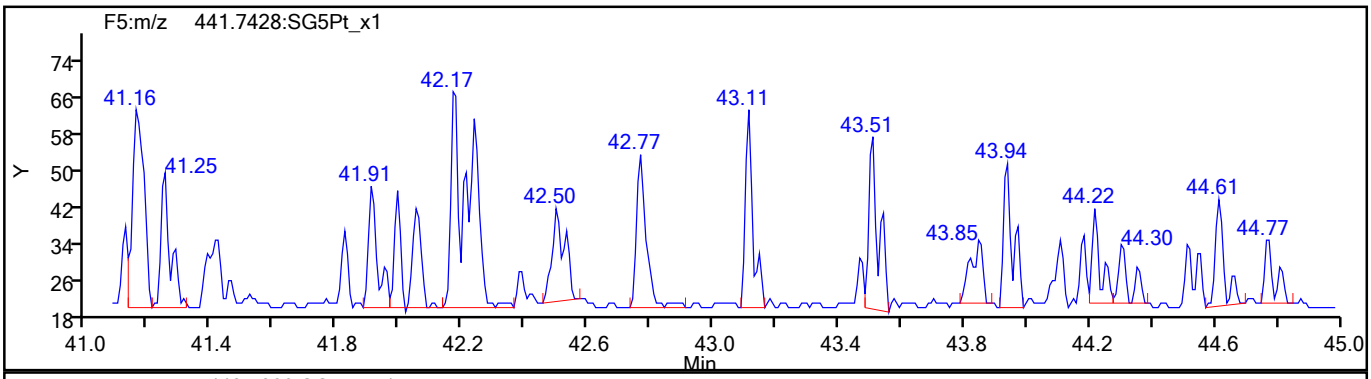

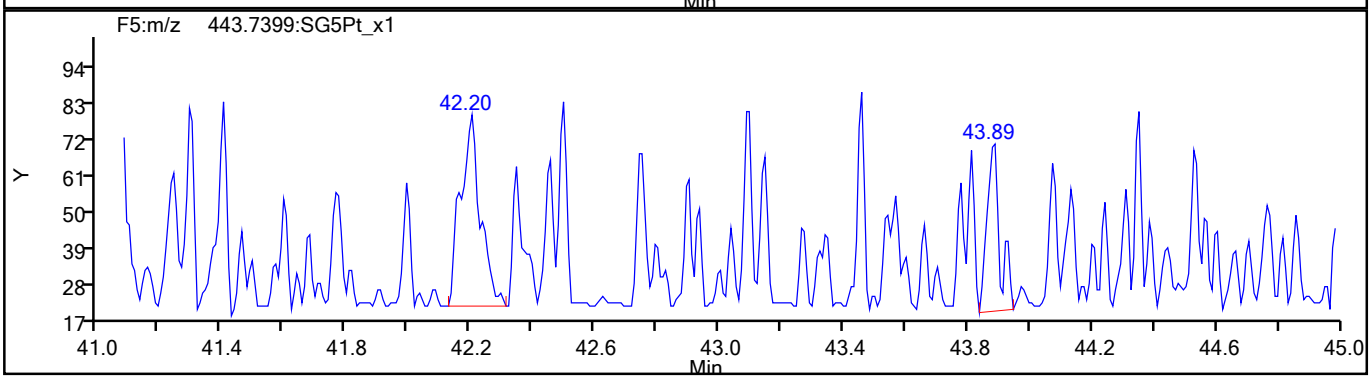

OCDF Standards

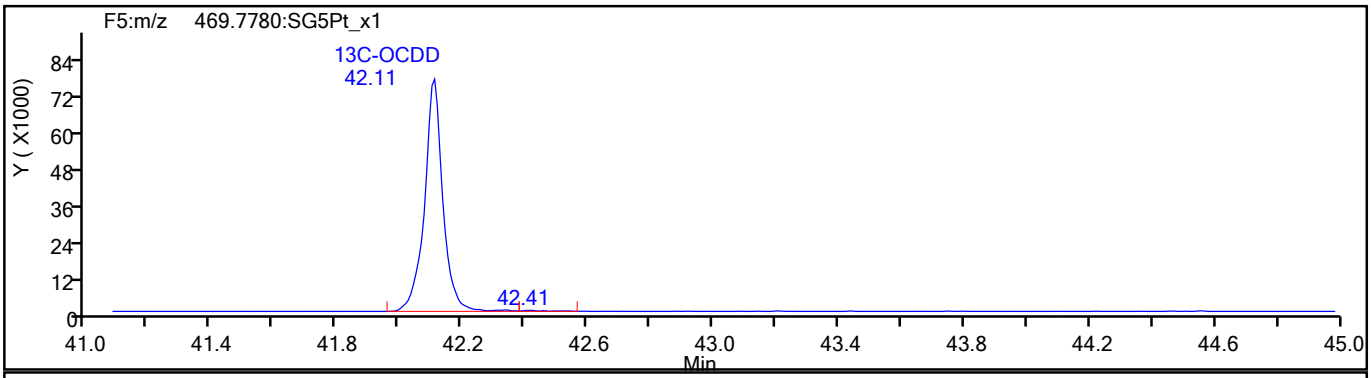

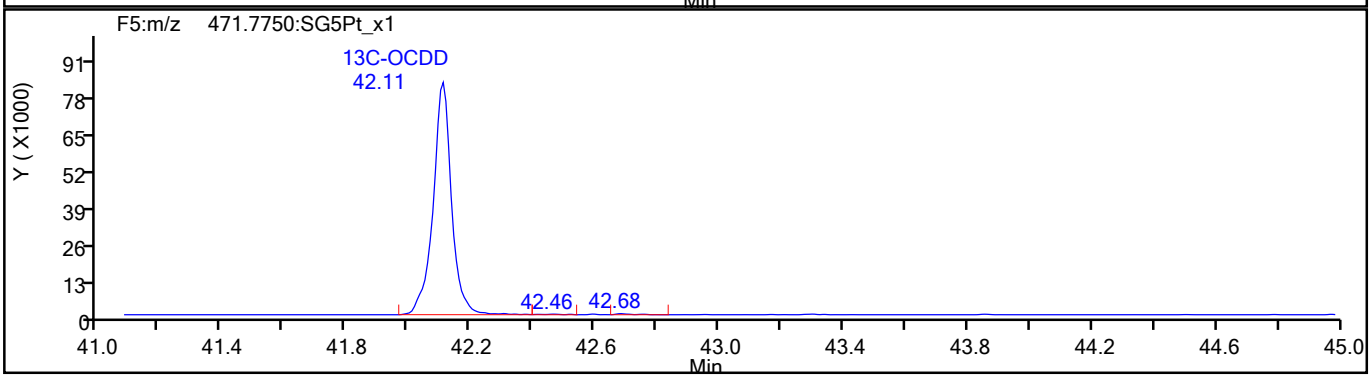

786553

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

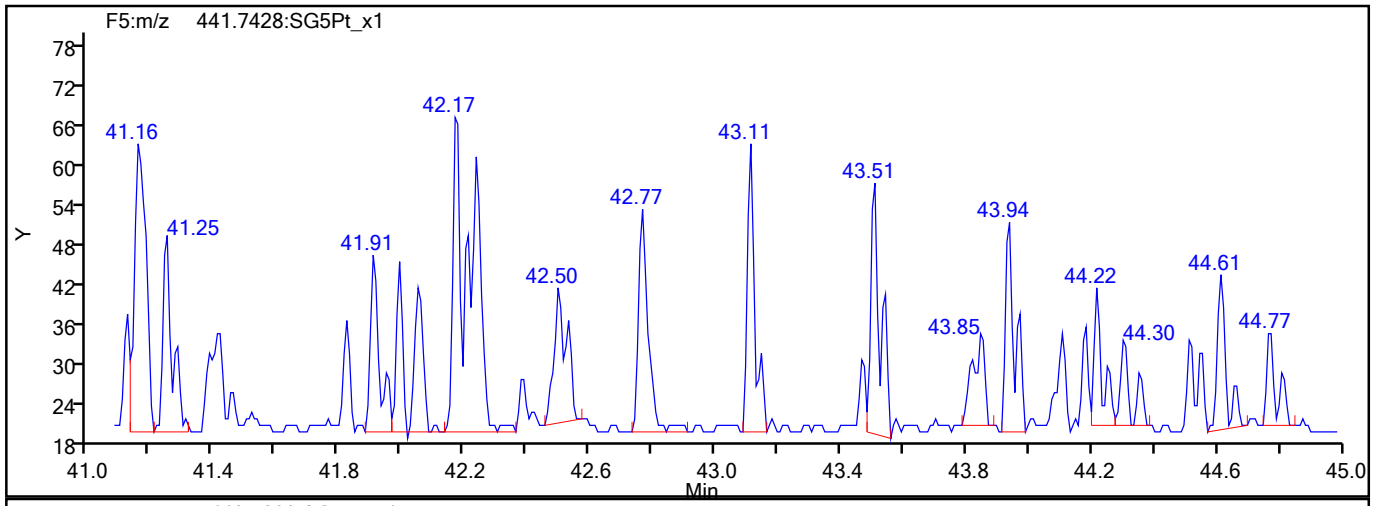

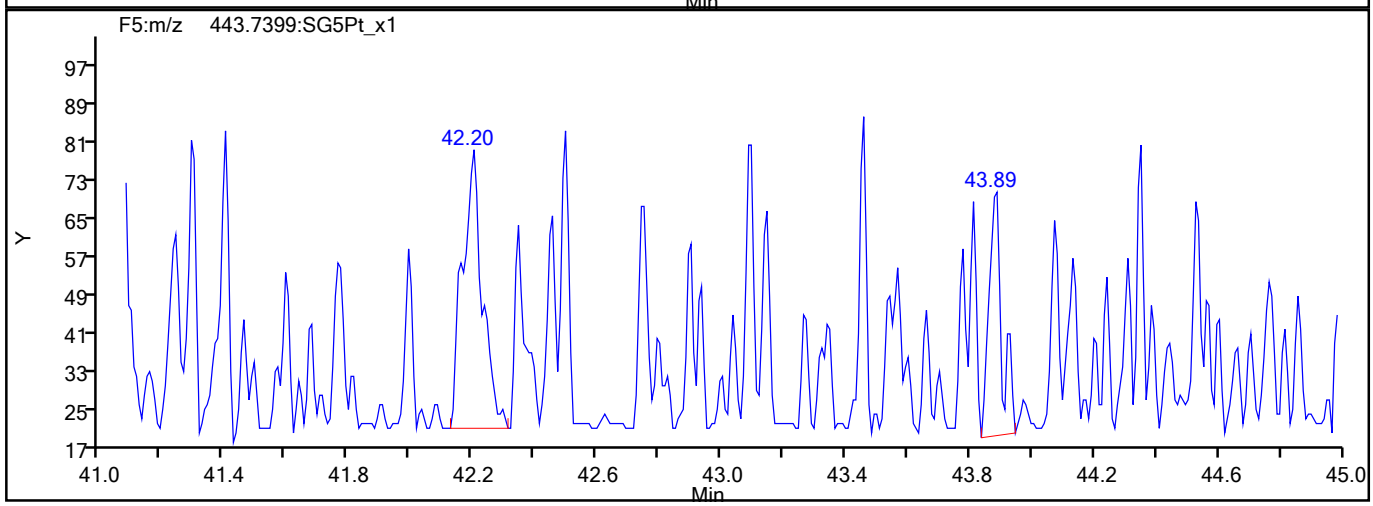

OCDF Interference Mass

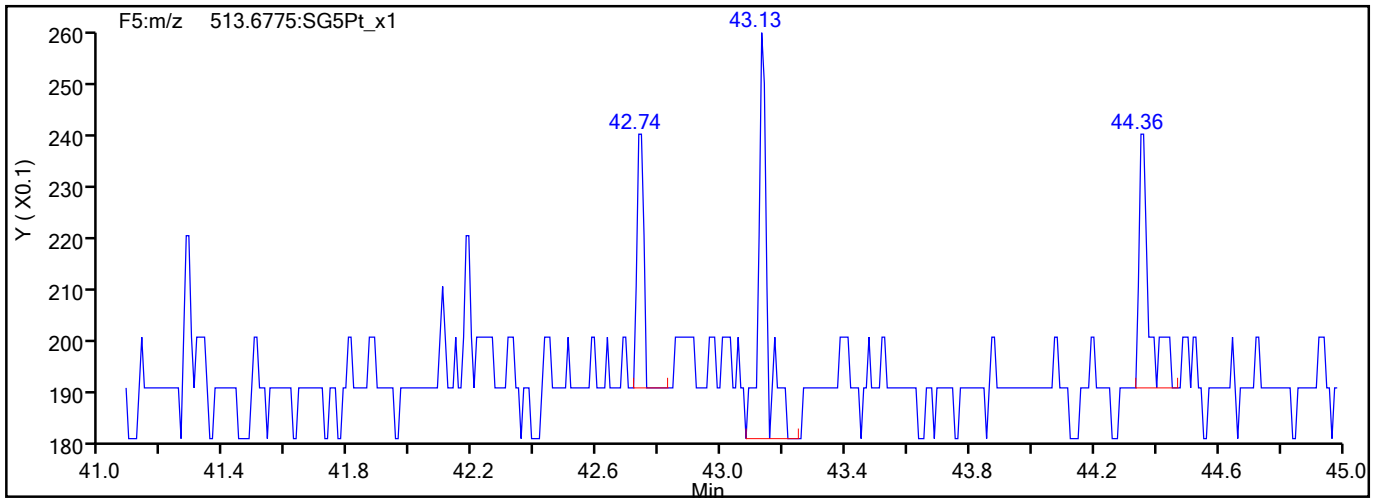

786554

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

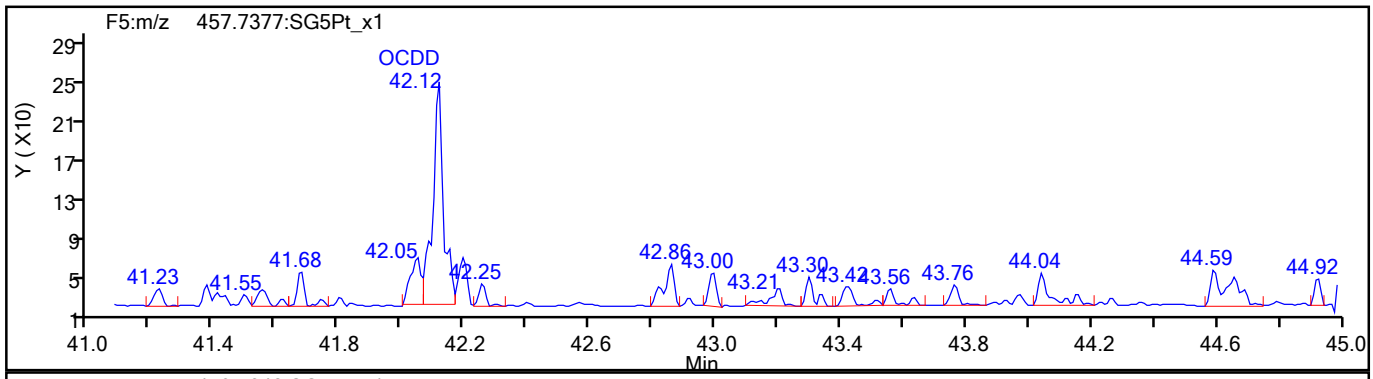

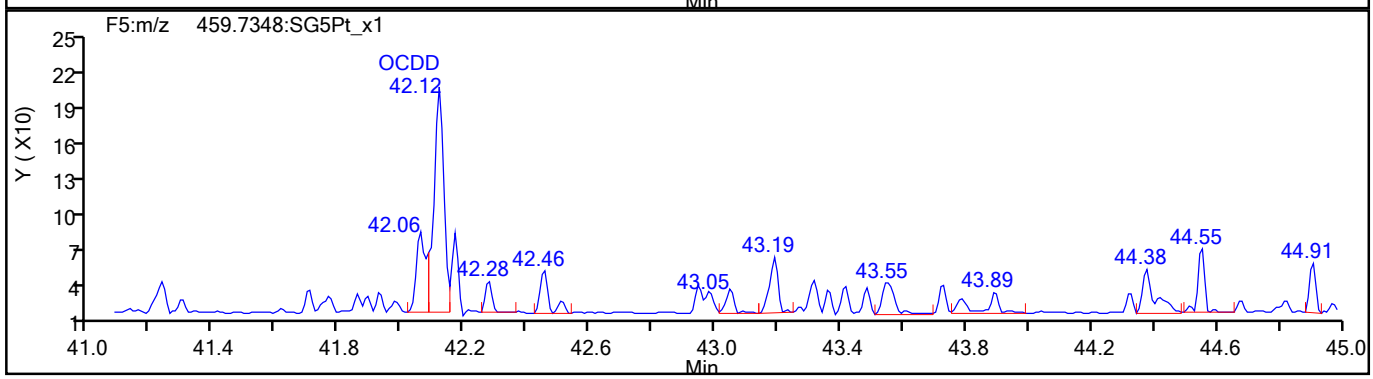

OCDD Standards

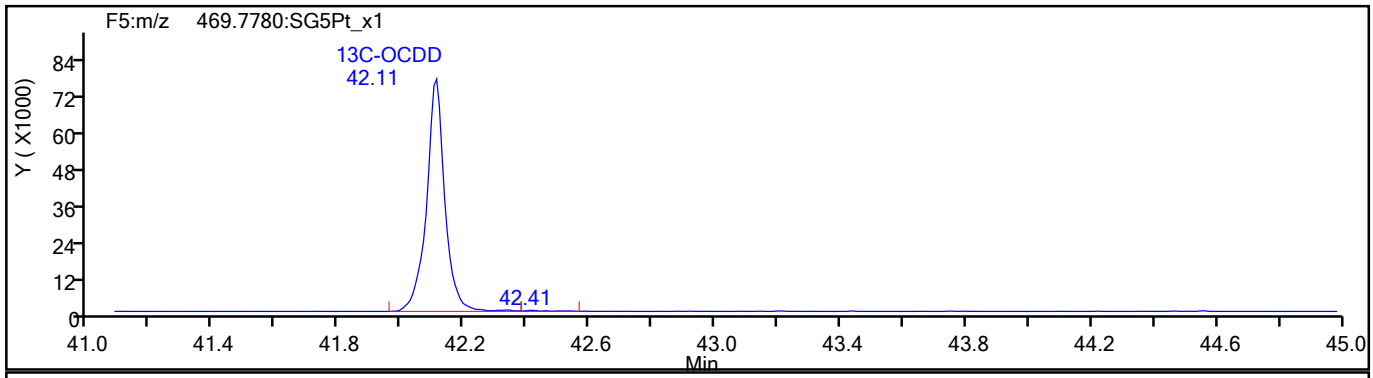

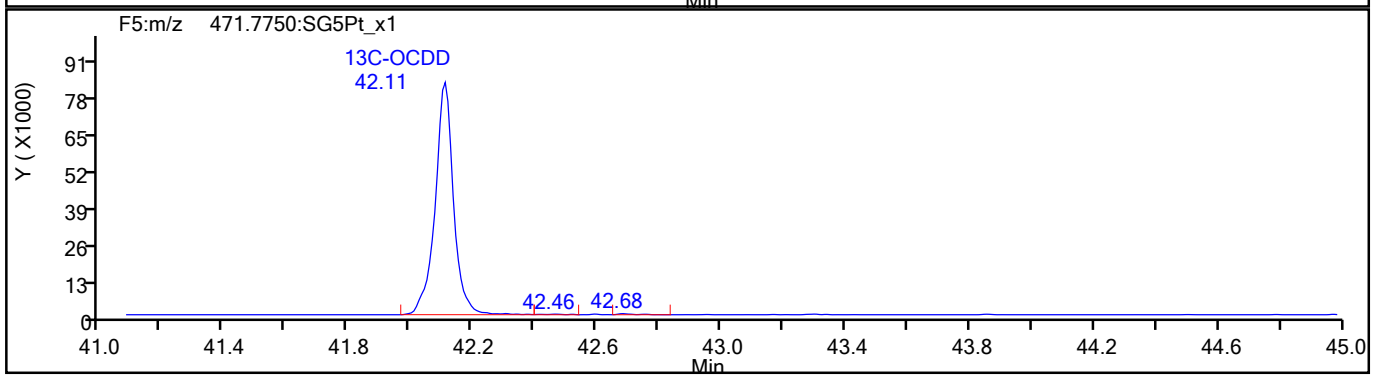

786555

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

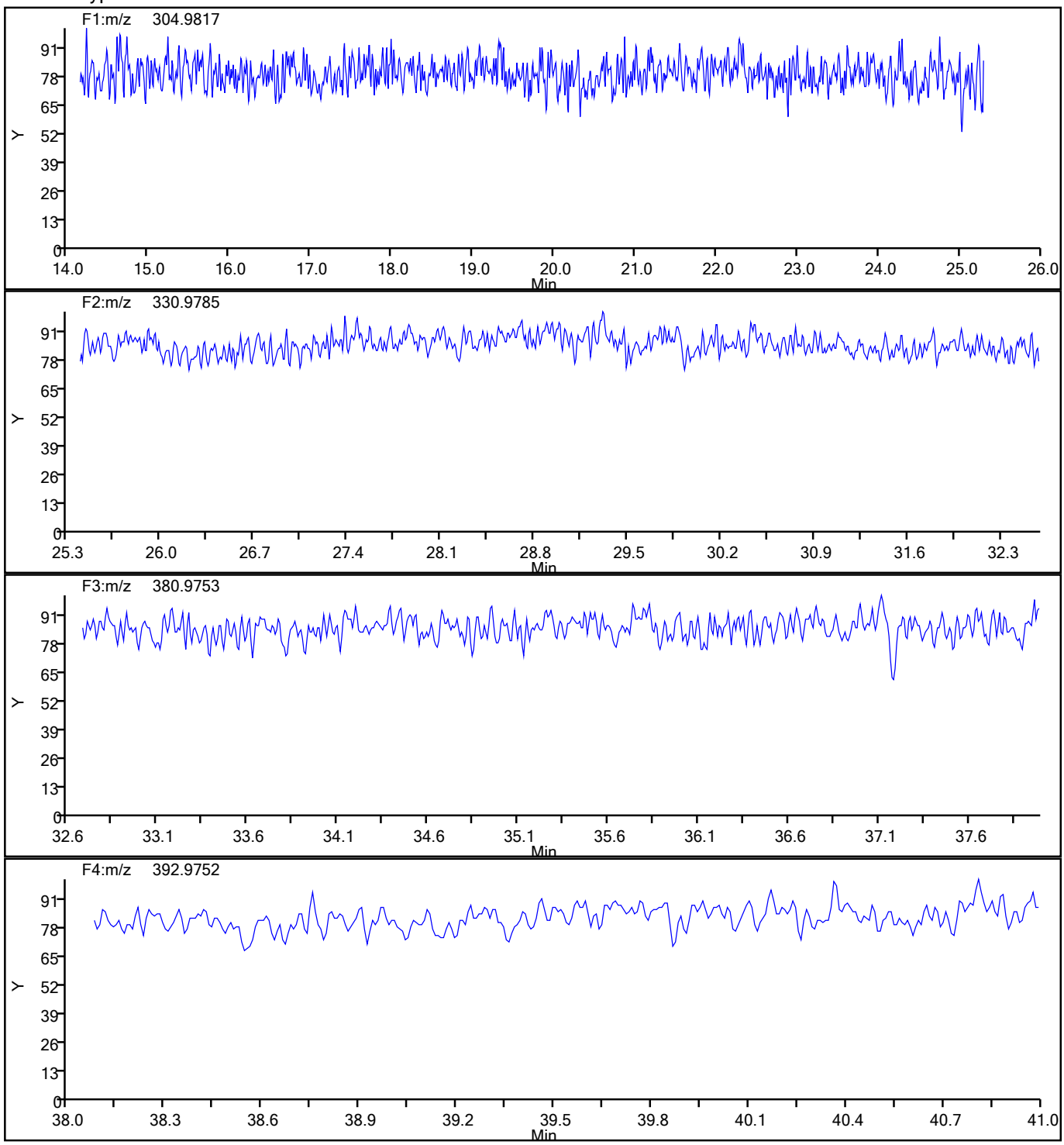

786556

Report Date: 19-Aug-2021 12:08:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_5.d		
Injection Date:	17-Aug-2021 17:01:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

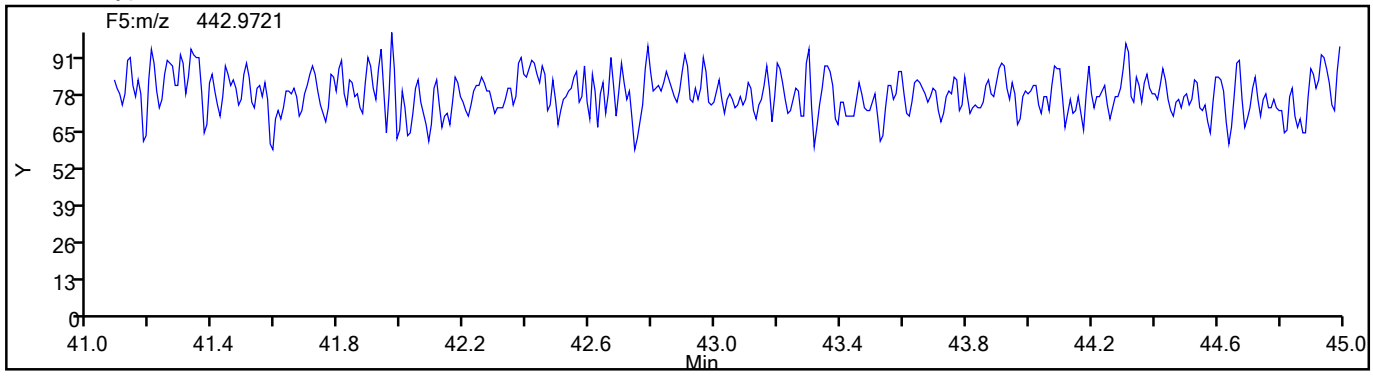

786557

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Lab File ID: 19au21dfs1_5.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/19/2021 16:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.073
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.067
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.052
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.055
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.0	0.042
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.046
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.041
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.021
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.020
72918-21-9	1,2,3,7,8,9-HxCDF	ND		5.0	0.020
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.022
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.338	J	5.0	0.032
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.177	J	5.0	0.038
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.041
3268-87-9	OCDD	1.21	J	10	0.029
39001-02-0	OCDF	ND		10	0.12
41903-57-5	Total TCDD	ND		1.0	0.14
30402-14-3	Total TCDF	4.06		1.0	0.047
36088-22-9	Total PeCDD	ND		5.0	0.21
30402-15-4	Total PeCDF	ND		5.0	0.055
34465-46-8	Total HxCDD	ND		5.0	0.19
55684-94-1	Total HxCDF	ND		5.0	0.040
37871-00-4	Total HpCDD	0.546	J	5.0	0.032
38998-75-3	Total HpCDF	0.177	J	5.0	0.039

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Lab File ID: 19au21dfs1_5.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/19/2021 16:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	36		25-164
89059-46-1	13C-2,3,7,8-TCDF	36		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	35		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	36		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	40		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	40		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	39		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	47		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	43		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	39		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	38		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	41		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	41		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	42		26-138
114423-97-1	13C-OCDD	36		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	46		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 19-Aug-2021 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513879/1-a RI
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 08:56:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: dadunj Date: 23-Aug-2021 08:56:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.367	999541	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.413	482916	0.81	1.3459	35.9	35.9	0.2062	0.2062	35.90	
2,3,7,8-TCDF	20.422	7680	0.67	1.0802	1.472	1.472	0.0237	0.0237		M
A Non-2,3,7,8-sub-TCDF	19.851	2918	0.78	1.0802	0.5594	0.5594	0.0237	0.5594		a
S Total TCDF					2.032	2.032	0.0237	0.0237		
D 13C-2,3,7,8-TCDD	21.745	331874	0.84	0.9317	35.6	35.6	0.1263	0.1263	35.64	
2,3,7,8-TCDD	21.797						0.0367	0.0367		RQU
$ 37Cl4-2,3,7,8-TCDD	21.780	184847		1.0083	18.3	18.3	0.0144	0.0144	45.85	
A Non-2,3,7,8-sub-TCDD	20.684						0.0367	0.0717		RQU
S Total TCDD							0.0717	0.0717		
D 13C-1,2,3,7,8-PeCDF	27.242	411361	1.64	1.1405	36.1	36.1	0.1592	0.1592	36.09	
1,2,3,7,8-PeCDF	27.263						0.0262	0.0262		
D 13C-2,3,4,7,8-PeCDF	28.759	451402	1.71	1.1253	40.1	40.1	0.1614	0.1614	40.13	
2,3,4,7,8-PeCDF	28.910						0.0273	0.0273		RQU
A F1 PeCDFs	24.634						0.007863	0.007863		RQU
A Non-2,3,7,8-sub-PeCDF	28.173						0.0267	0.0267		RQU
S Total PeCDF							0.0273	0.0273		
D 13C-1,2,3,7,8-PeCDD	29.559	251252	1.75	0.7165	35.1	35.1	0.0527	0.0527	35.08	
1,2,3,7,8-PeCDD	29.616						0.0337	0.0337		
A Non-2,3,7,8-sub-PeCDD	28.478						0.0337	0.1027		RQU
S Total PeCDD							0.1027	0.1027		
D 13C-1,2,3,4,7,8-HxCDF	34.909	442177	0.56	0.9648	46.8	46.8	0.1353	0.1353	46.82	
1,2,3,4,7,8-HxCDF	34.918						0.0106	0.0106		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.070	452714	0.55	1.0708	43.2	43.2	0.1220	0.1220	43.19	
1,2,3,6,7,8-HxCDF	35.087						0.009816	0.009816		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.887	384775	0.54	1.0413	37.7	37.7	0.1254	0.1254	37.75	
2,3,4,6,7,8-HxCDF	35.916						0.0110	0.0110		
D 13C-1,2,3,7,8,9-HxCDF	36.788	369514	0.55	0.9731	38.8	38.8	0.1342	0.1342	38.79	
1,2,3,7,8,9-HxCDF	36.791						0.0102	0.0102		
A Non-2,3,7,8-sub-HxCDF	35.009						0.0104	0.0199		RQU
S Total HxCDF							0.0199	0.0199		

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Report Date: 23-Aug-2021 08:56:17 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.586	978844	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.097	300443	1.30	0.7587	40.5	40.5	0.1264	0.1264	40.46	
1,2,3,4,7,8-HxCDD	36.126						0.0212	0.0212		
D 13C-1,2,3,6,7,8-HxCDD	36.215	325228	1.26	0.8593	38.7	38.7	0.1116	0.1116	38.67	
1,2,3,6,7,8-HxCDD	36.244						0.0231	0.0231		
1,2,3,7,8,9-HxCDD	36.552						0.0205	0.0205		RQU
A Non-2,3,7,8-sub-HxCDD	35.375						0.0215	0.0943		RQU
S Total HxCDD							0.0943	0.0943		
D 13C-1,2,3,4,6,7,8-HpCDF	38.610	296829	0.48	0.7359	41.2	41.2	0.1807	0.1807	41.20	
1,2,3,4,6,7,8-HpCDF	38.619	379	0.90	1.4421	0.0885	0.0885	0.0188	0.0188		M
D 13C-1,2,3,4,7,8,9-HpCDF	39.857	279786	0.49	0.6854	41.7	41.7	0.1940	0.1940	41.70	
1,2,3,4,7,8,9-HpCDF	39.872						0.0205	0.0205		
A Non-2,3,7,8-sub-HpCDF	39.245						0.0196	0.0196		
S Total HpCDF					0.0885	0.0885	0.0197	0.0197		
D 13C-1,2,3,4,6,7,8-HpCDD	39.554	269457	1.07	0.6745	40.8	40.8	0.0880	0.0880	40.81	
1,2,3,4,6,7,8-HpCDD	39.570	478	1.01	1.0503	0.1689	0.1689	0.0159	0.0159		M
A Non-2,3,7,8-sub-HpCDD	39.241	295	1.12	1.0503	0.1042	0.1042	0.0159	0.1042		
S Total HpCDD					0.2731	0.2731	0.0159	0.0159		
D 13C-OCDD	42.051	387569	0.87	0.5446	72.7	72.7	0.2546	0.2546	36.35	
OCDF	42.157						0.0584	0.0584		
OCDD	42.068	1247	0.84	1.0620	0.6059	0.6059	0.0145	0.0145		M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 19-Aug-2021 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513879/1-a RI
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 08:56:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: dadunj Date: 23-Aug-2021 08:56:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.367	21.395	-2		448088	60917	46	115	1324		
333.9338	21.359	21.395	-2		551453	76764	19	47	4040	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.413	20.365	3	0.955	216659	29555	127	317	233		
317.9389	20.388	20.365	1	0.954	266257	36744	26	65	1413	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.422	20.408	1	1.000	3077	466	1	2	466		M
305.8987	20.422	20.408	1	1.000	4603	728	6	15	121	0.67(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	19.734	19.851	-7	0.967	1278	284	1	2	284		a
305.8987	19.709	19.851	-9	0.965	1640	273	6	15	46	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.745	21.716	2	1.018	151821	19232	46	115	418		
333.9338	21.737	21.716	1	1.017	180053	23875	19	47	1257	0.84(0.65-0.89)	
2,3,7,8-TCDD											RQU
319.8965	21.733						6	15			
321.8936	21.733						1	2			
37Cl4-2,3,7,8-TCDD											
327.8847	21.780	21.799	-1	1.019	184847	22658	8	20	2832		
A Non-2,3,7,8-sub-TCDD											U
319.8965	17.808	20.684	-172	0.819	189	61	6	15	10		
	Empc Correction				111	40	6	15	7		
321.8936	17.774	20.684	-174	0.817	145	52	1	2	52	1.30(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.242	27.251	-1	1.275	255453	37782	54	135	700		
353.8970	27.242	27.251	-1	1.275	155908	23687	46	115	515	1.64(1.32-1.78)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.276						1	2			
341.8567	27.276						6	15			
13C-2,3,4,7,8-PeCDF											
351.9000	28.759	28.757	0	1.346	284972	39477	54	135	731		
353.8970	28.742	28.757	-1	1.345	166430	22399	46	115	487	1.71(1.32-1.78)	
2,3,4,7,8-PeCDF											RQU
339.8597	28.791						1	2			
341.8567	28.791						6	15			
A F1 PeCDFs											U
339.8597	24.270	24.634	-22	0.891	14	10	1	2	10		
341.8567	24.347	24.634	-17	0.894	375	126	1	2	126	0.04(1.32-1.78)	
	Empc Correction				9	6	1	2	6		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	28.173	28.173	0	1.034	22	12	1	2			
341.8567	28.173	28.173	0	1.034	163	52	6	15		0.13(1.32-1.78)	
	Empc Correction				14	7	6	15	0		
13C-1,2,3,7,8-PeCDD											
367.8949	29.559	29.574	-1	1.383	159751	21868	10	25	2187		
369.8919	29.575	29.574	0	1.384	91501	12206	11	27	1110	1.75(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616						4	10			
357.8516	29.616						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.063	28.478	-145	0.882	120	38	4	10	10		
	Empc Correction				54	24	4	10	6		
357.8516	26.054	28.478	-145	0.881	35	16	1	2	16	3.43(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.909	34.906	0	0.954	159560	29606	34	85	871		
385.8610	34.909	34.906	0	0.954	282617	52423	76	190	690	0.56(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	34.922						2	5			
375.8178	34.922						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.070	35.066	0	0.959	161024	31293	34	85	920		
385.8610	35.061	35.066	0	0.958	291690	52360	76	190	689	0.55(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.082						2	5			
375.8178	35.082						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.887	35.890	0	0.981	134908	26852	34	85	790		
385.8610	35.887	35.890	0	0.981	249867	47678	76	190	627	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.907						2	5			
375.8178	35.907						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.788	36.782	0	1.006	131797	27710	34	85	815		
385.8610	36.780	36.782	0	1.005	237717	51610	76	190	679	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791						2	5			
375.8178	36.791						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.419	35.009	-95	0.957	41	29	2	5	15		
375.8178	33.427	35.009	-95	0.958	46	15	2	5	8	0.89(1.05-1.43)	
	Empc Correction				33	23	2	5	12		
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.586	36.581	0		542767	116573	46	115	2534		
403.8529	36.586	36.581	0		436077	94013	35	87	2686	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.097	36.092	0	0.987	169567	35941	46	115	781		
403.8529	36.097	36.092	0	0.987	130876	30793	35	87	880	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.109						4	10			
391.8127	36.109						2	5			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.215	36.210	0	0.990	181621	37484	46	115	815		
403.8529	36.215	36.210	0	0.990	143607	27866	35	87	796	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.227						4	10			
391.8127	36.227						2	5			
1,2,3,7,8,9-HxCDD											RQU
389.8158	36.597						4	10			
391.8127	36.597						2	5			
A Non-2,3,7,8-sub-HxCDD											U
389.8158	34.977	35.375	-24	0.966	247	48	4	10	12		
	Empc Correction				172	48	4	10	12		
391.8127	34.994	35.375	-23	0.966	139	39	2	5	20	1.78(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.610	38.596	1	1.055	96572	24055	41	102	587		
419.8220	38.610	38.596	1	1.055	200257	49761	71	177	701	0.48(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7817	38.619	38.618	0	1.000	180	61	6	15	10		
409.7788	38.619	38.618	0	1.000	199	84	2	5	42	0.90(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.857	39.850	0	1.089	91751	25313	41	102	617		
419.8220	39.857	39.850	0	1.089	188035	49089	71	177	691	0.49(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872						6	15			
409.7788	39.872						2	5			
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.245						6	15			
409.7788	39.245						2	5			

Report Date: 23-Aug-2021 08:56:17 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.554	39.547	0	1.081	139342	37216	23	57	1618		
437.8140	39.554	39.547	0	1.081	130115	34855	27	67	1291	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											M
423.7767	39.570	39.561	1	1.000	240	101	4	10	25		
425.7737	39.562	39.561	0	1.000	238	76	1	2	76	1.01(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.947	39.241	-18	0.985	156	65	4	10	16		
425.7737	38.914	39.241	-20	0.984	139	52	1	2	52	1.12(0.88-1.20)	
13C-OCDD											
469.7780	42.051	42.036	1	1.149	180767	43311	74	185	585		
471.7750	42.051	42.036	1	1.149	206802	47640	43	107	1108	0.87(0.76-1.02)	
OCDF											
441.7428	42.137						3	7			
443.7399	42.137						11	27			
OCDD											M
457.7377	42.068	42.053	1	1.000	569	118	1	2	118		M
459.7348	42.051	42.053	0	1.000	678	161	2	5	81	0.84(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	482916	66299

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	482916	66299

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.734	1278	284	1640	273	0.5594	0.78	a
Signal Totals:							
	1278	284	1640	273			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2918	557				0.78	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5594 = (2918 * 100.000) / (482916 * 1.080)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	331874	43107

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	331874	43107

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.808	189	61	145	52	0.0936	1.30	RQ
17.808	111	40	145	52	0.0717		Empc Correction
21.960	78	44	37	20	0.0322	2.11	RQ
21.960	28	15	37	20	0.0182		Empc Correction
23.385	139	62	10	5	0.0418	13.90	RQ
23.385	7	3	10	5	0.004764		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	411361	61469
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	451402	61876

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	431381	61672

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.270	14	10	375	126	0.0875	0.04	RQ
24.270	14	10	9	6	0.005171		Empc Correction
24.553	8	4	62	43	0.0157	0.13	RQ
24.553	8	4	5	2	0.002923		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	411361	61469
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	451402	61876

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	431381	61672

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
29.567	22	12	163	52	0.0416	0.13	RQ
29.567	22	12	14	7	0.008094		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	251252	34074

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	251252	34074

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.063	120	38	35	16	0.0590	3.43	RQ
26.063	54	24	35	16	0.0338		Empc Correction
26.374	55	36	12	6	0.0255	4.58	RQ
26.374	18	9	12	6	0.0114		Empc Correction
30.224	437	87	106	40	0.2065	4.12	RQ
30.224	164	61	106	40	0.1027		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	442177	82029
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	452714	83653
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	384775	74530
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	369514	79320

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	412295	79883

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.419	41	29	46	15	0.0175	0.89	RQ
33.419	41	29	33	23	0.0149		Empc Correction
35.407	52	27	47	31	0.0199	1.11	

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	300443	66734
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	325228	65350
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	312835	66042

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.977	247	48	139	39	0.1170	1.78	RQ
34.977	172	48	139	39	0.0943		Empc Correction
35.297	59	22	62	34	0.0367	0.95	RQ
35.297	59	22	47	17	0.0321		Empc Correction
35.904	124	47	45	32	0.0512	2.76	RQ
35.904	55	39	45	32	0.0303		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	269457	72071

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	269457	72071

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.947	156	65	139	52	0.1042	1.12	
Signal Totals:							
	156	65	139	52			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	295	117				1.12	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.1042 = (295 * 100.000) / (269457 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.42
Area: 2721
Amount: 1.404027
Amount Units: pg/ul

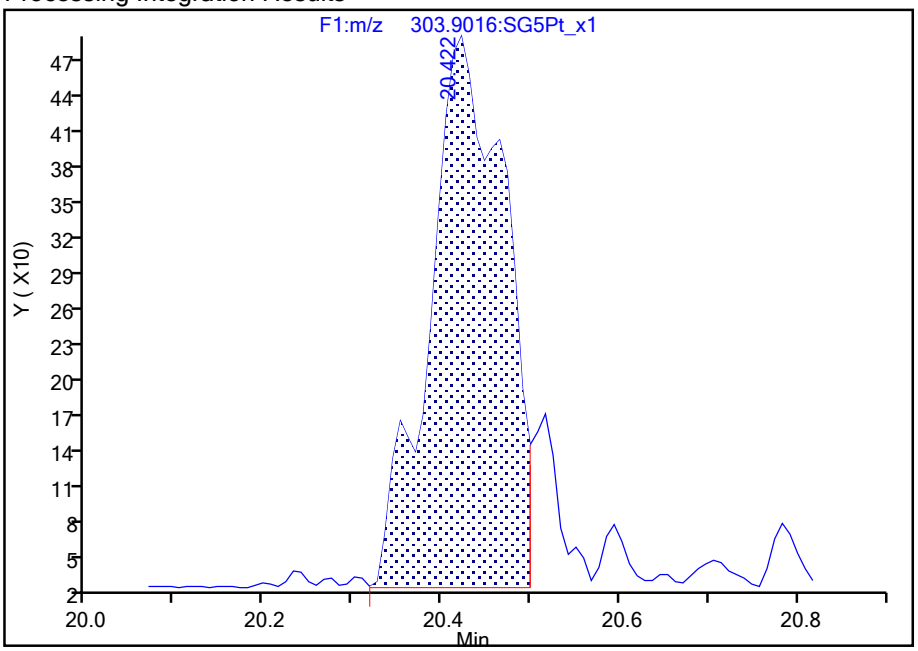

Manual Integration Results

RT: 20.42
Area: 3077
Amount: 1.472273
Amount Units: pg/ul

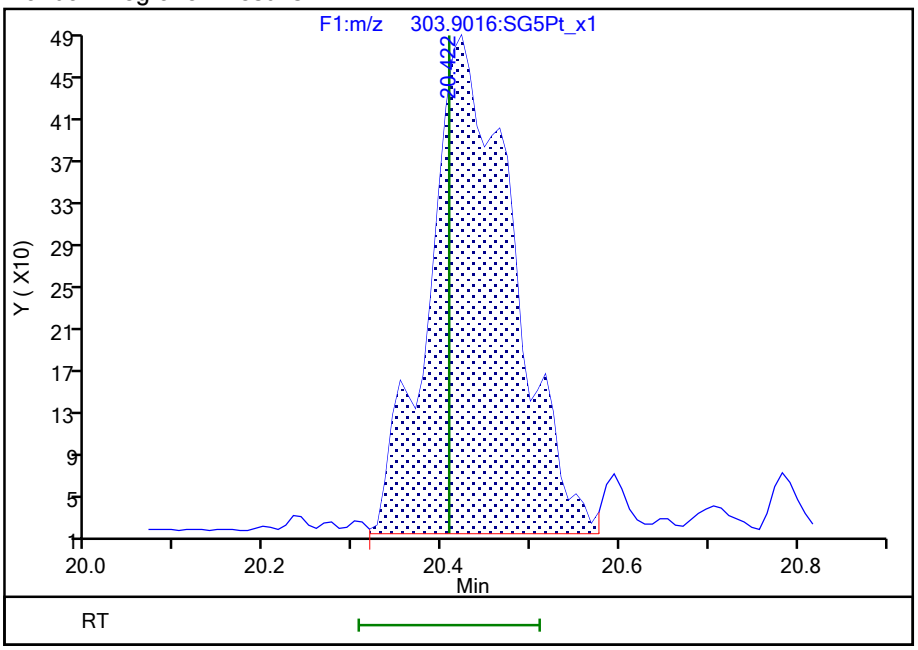

Reviewer: dadunj, 23-Aug-2021 08:53:56

Audit Action: Manually Integrated Audit Reason: Baseline

786574

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.62
Area: 339
Amount: 0.121248
Amount Units: pg/ul

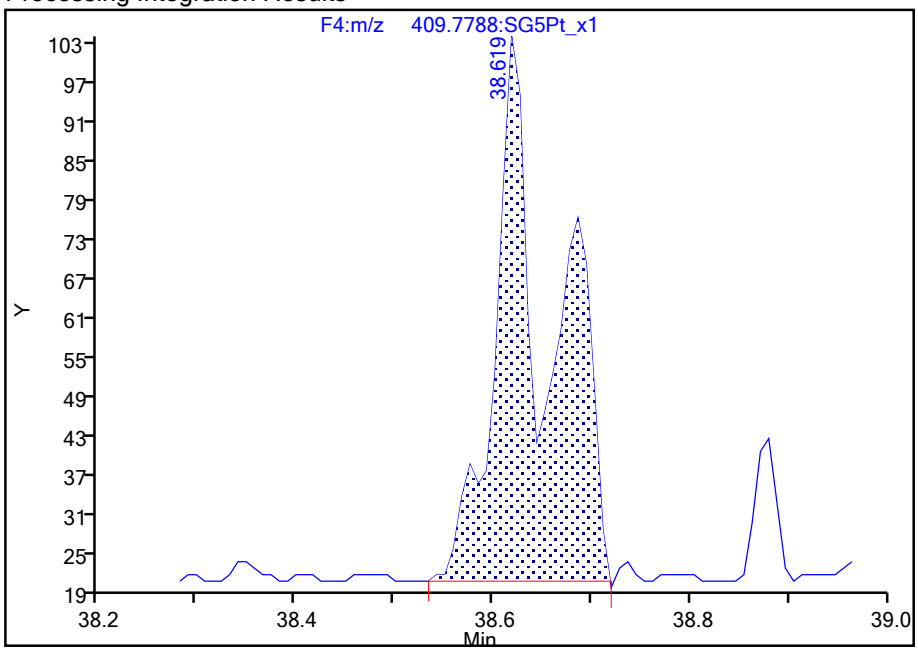

Manual Integration Results

RT: 38.62
Area: 199
Amount: 0.088541
Amount Units: pg/ul

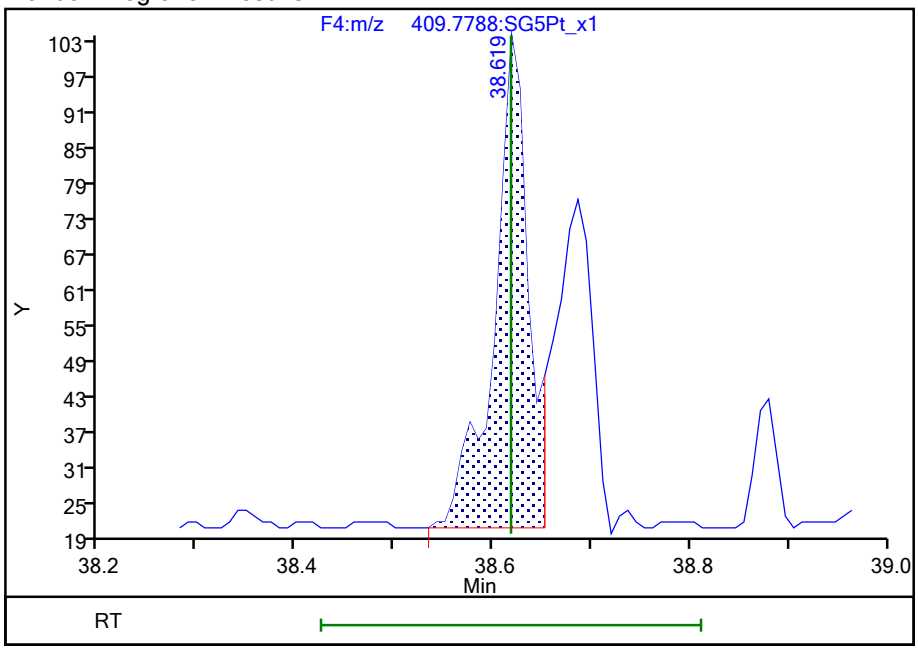

Reviewer: dadunj, 23-Aug-2021 08:55:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 39.56
Area: 255
Amount: 0.174905
Amount Units: pg/ul

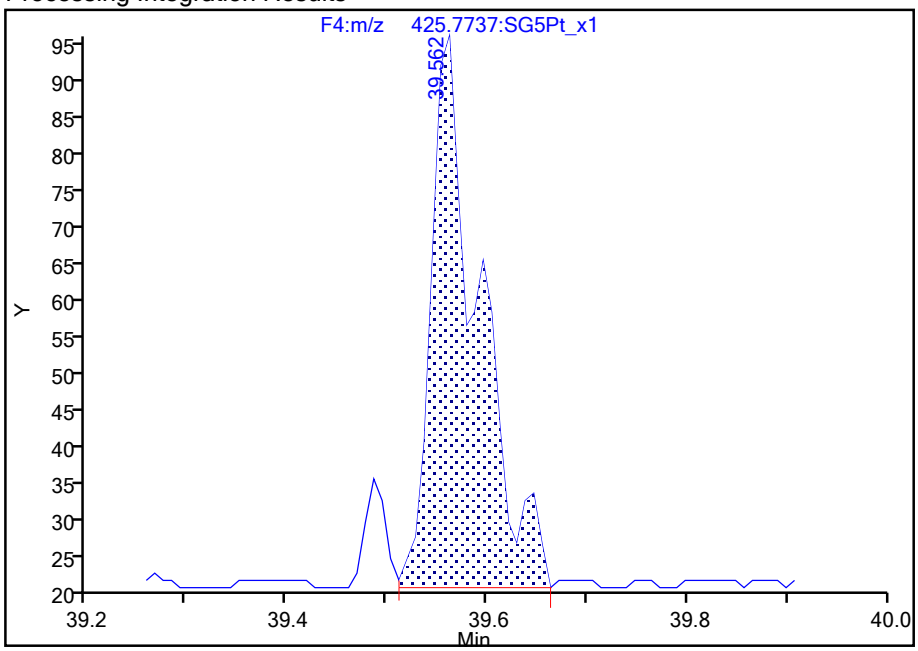

Manual Integration Results

RT: 39.56
Area: 238
Amount: 0.168898
Amount Units: pg/ul

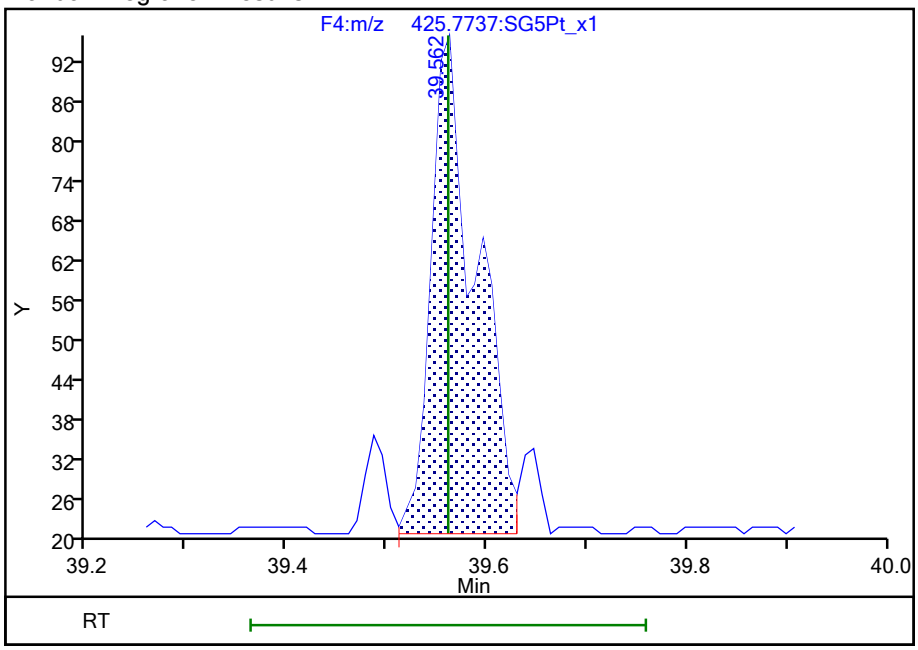

Reviewer: dadunj, 23-Aug-2021 08:55:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

786576

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 42.07
Area: 520
Amount: 0.582127
Amount Units: pg/ul

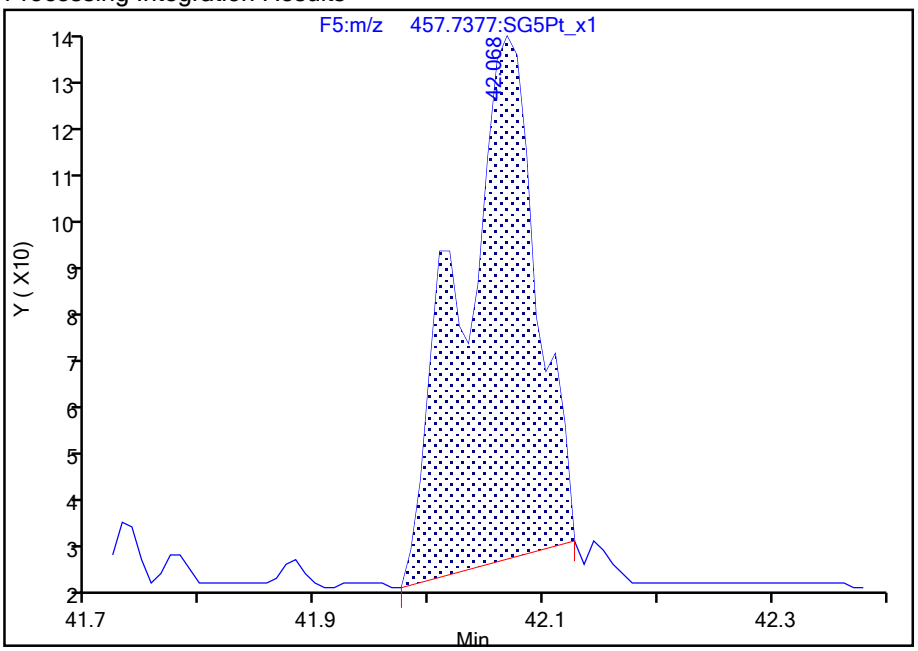

Manual Integration Results

RT: 42.07
Area: 569
Amount: 0.605937
Amount Units: pg/ul

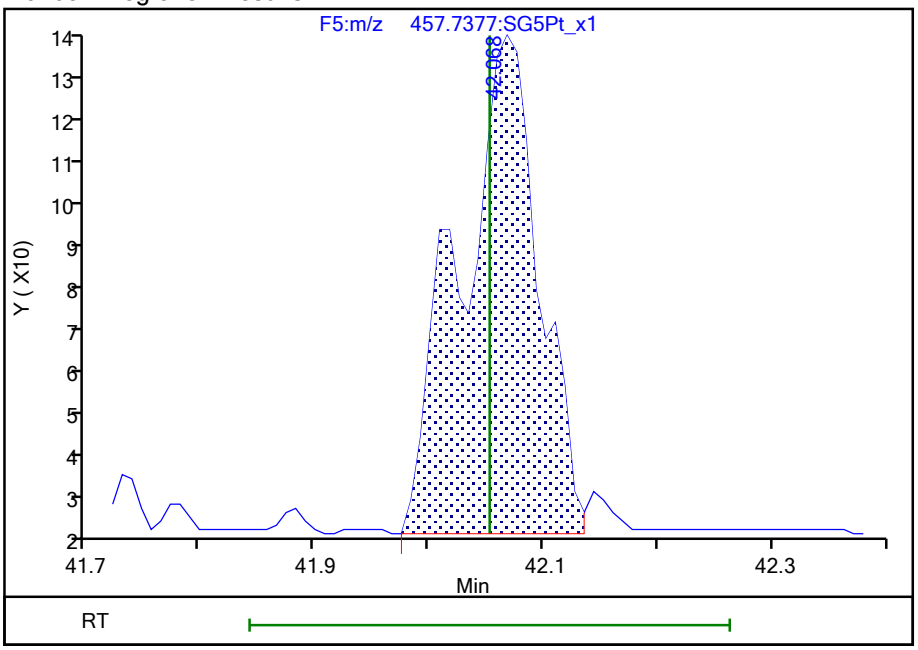

Reviewer: dadunj, 23-Aug-2021 08:55:45

Audit Action: Manually Integrated Audit Reason: Baseline

786577

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

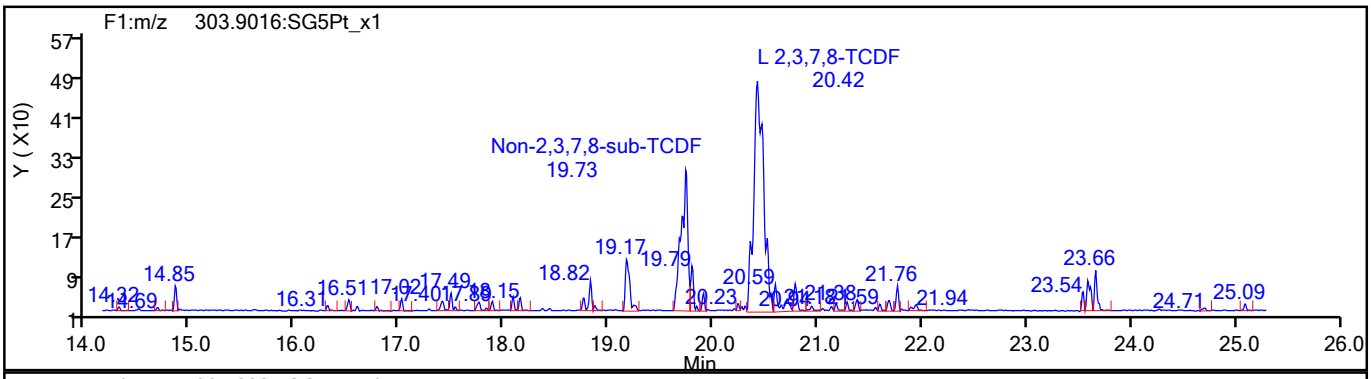

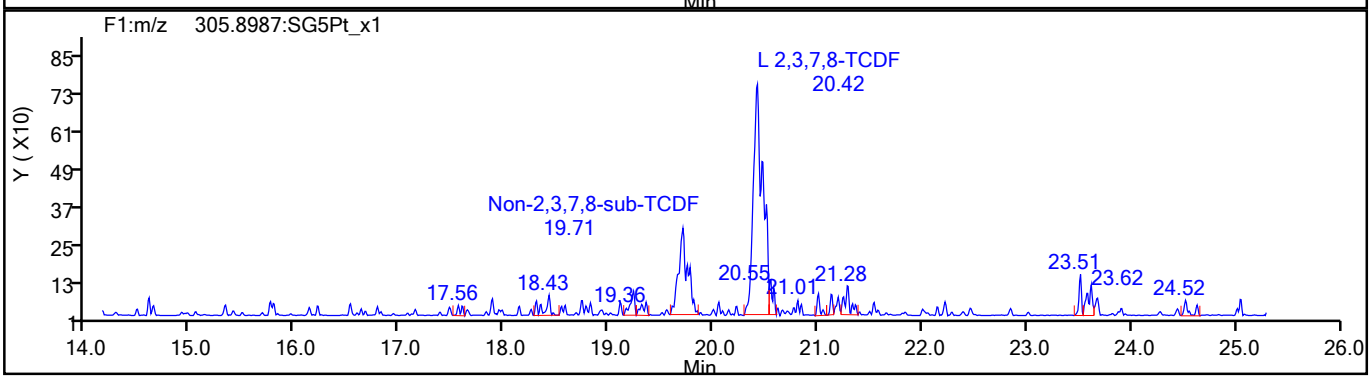

TCDF Standards

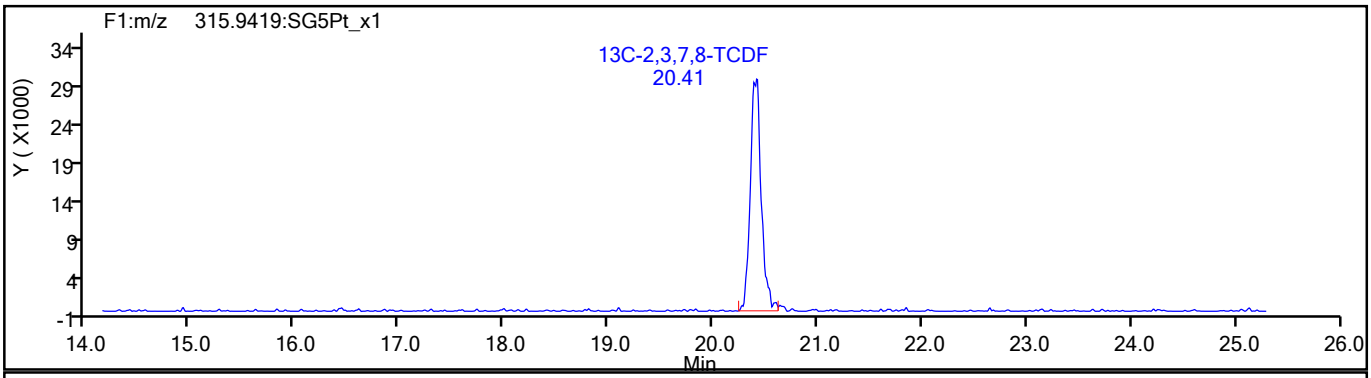

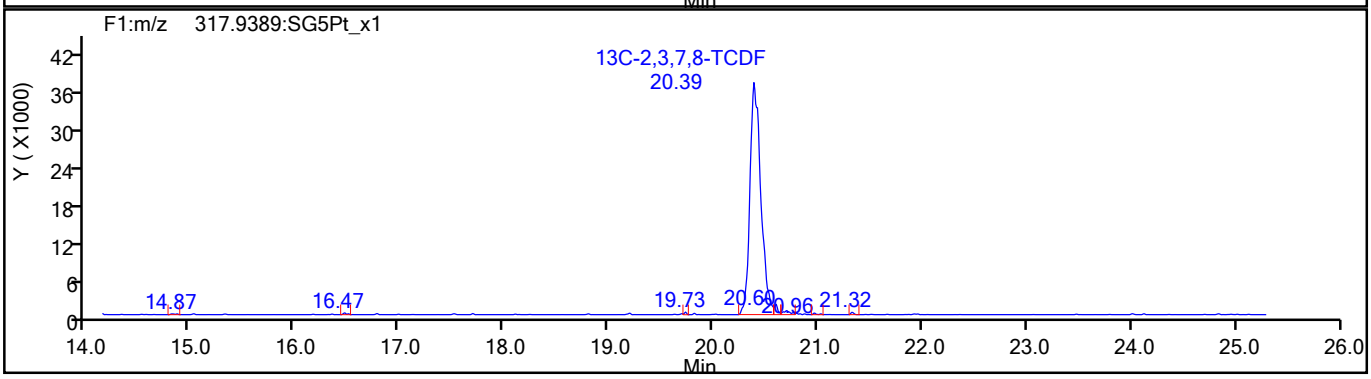

786578

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

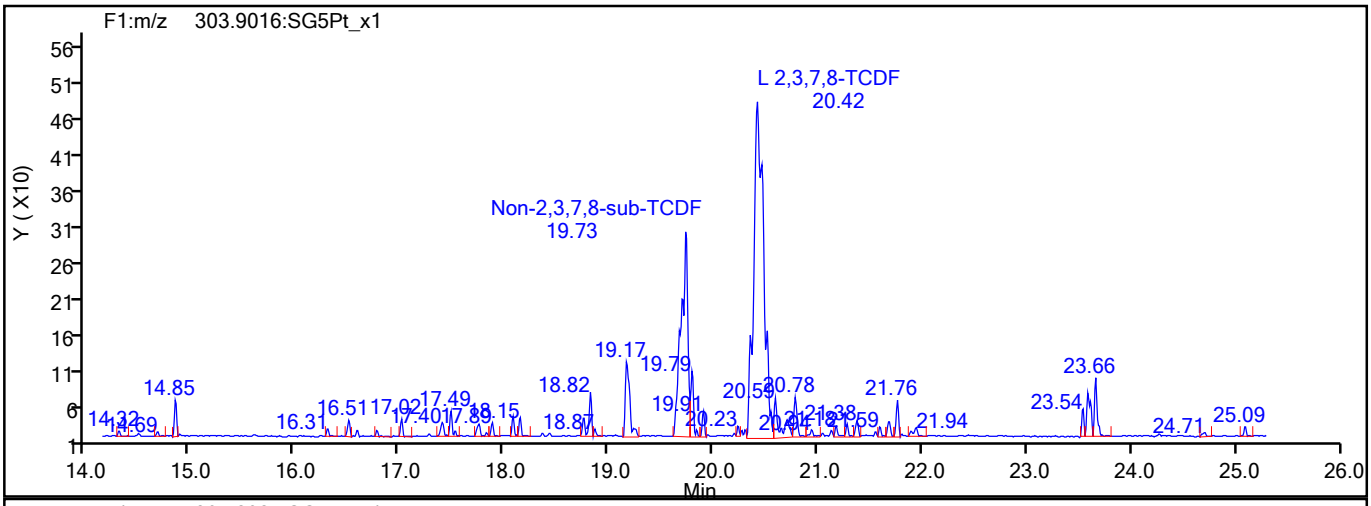

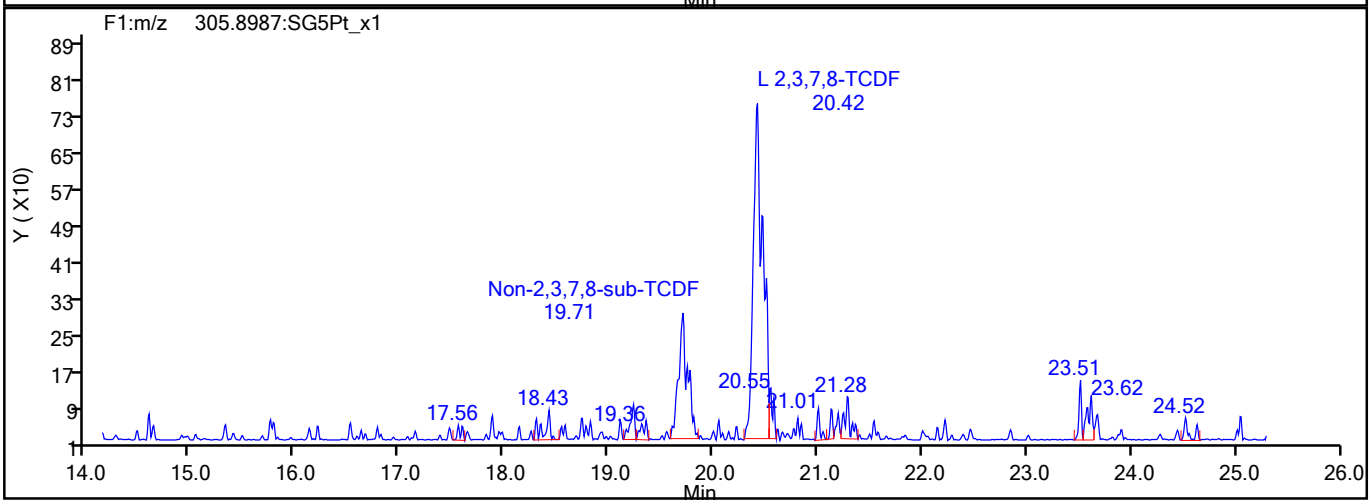

TCDF Interference Mass

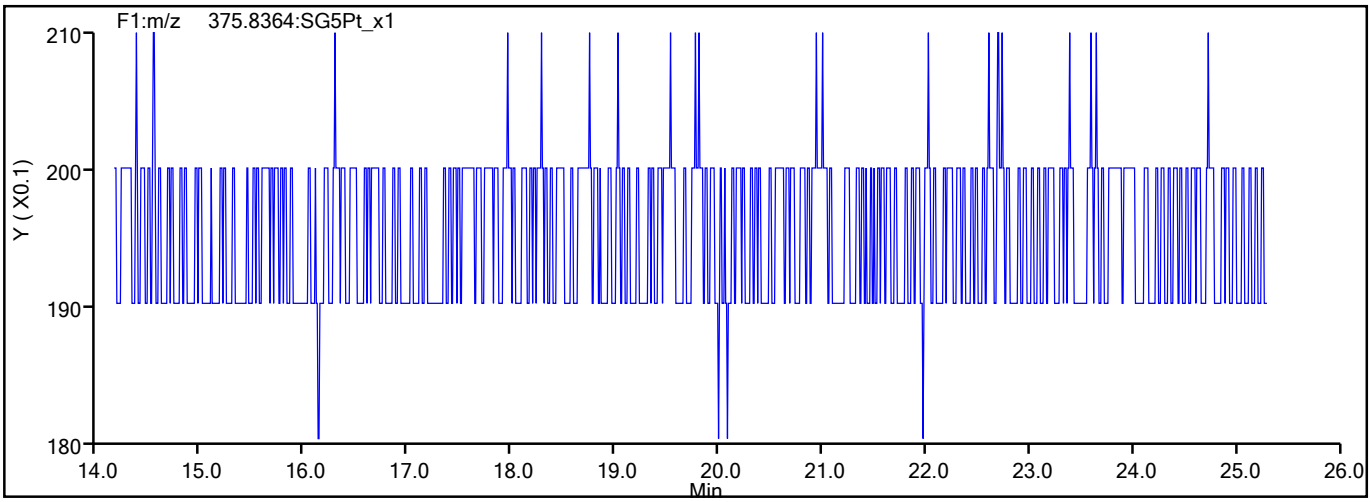

786579

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

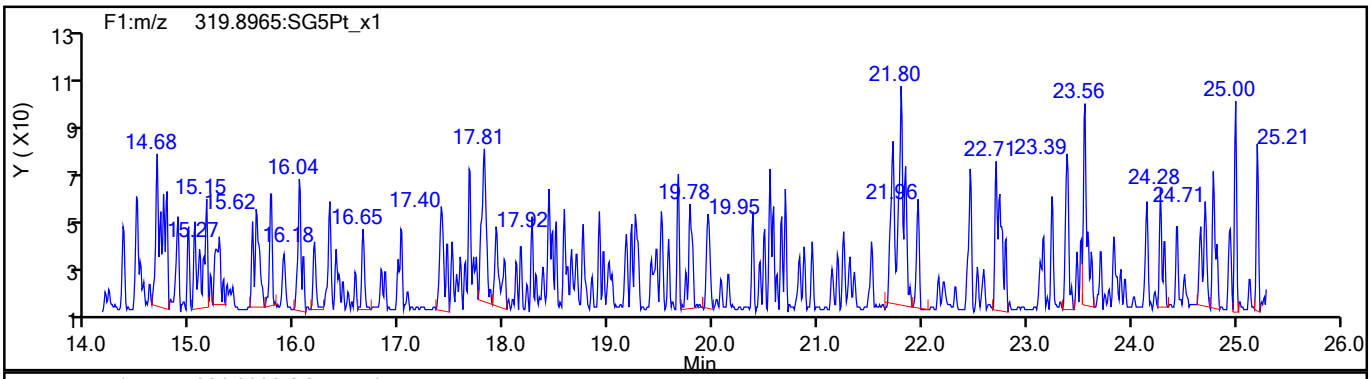

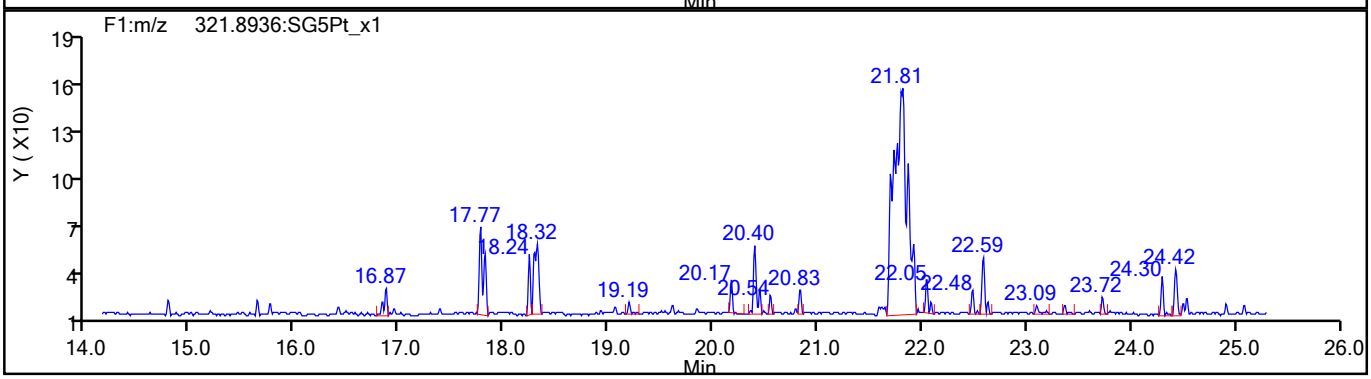

TCDD Standards

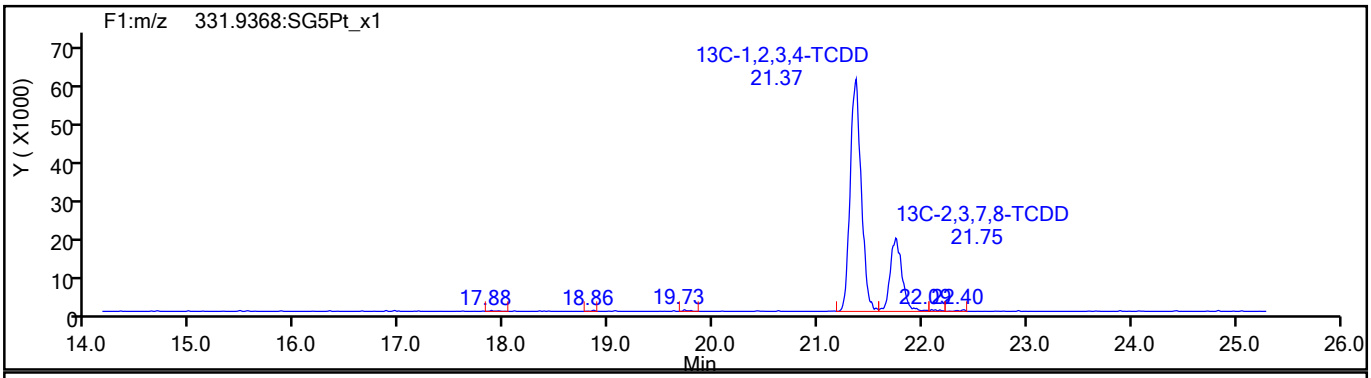

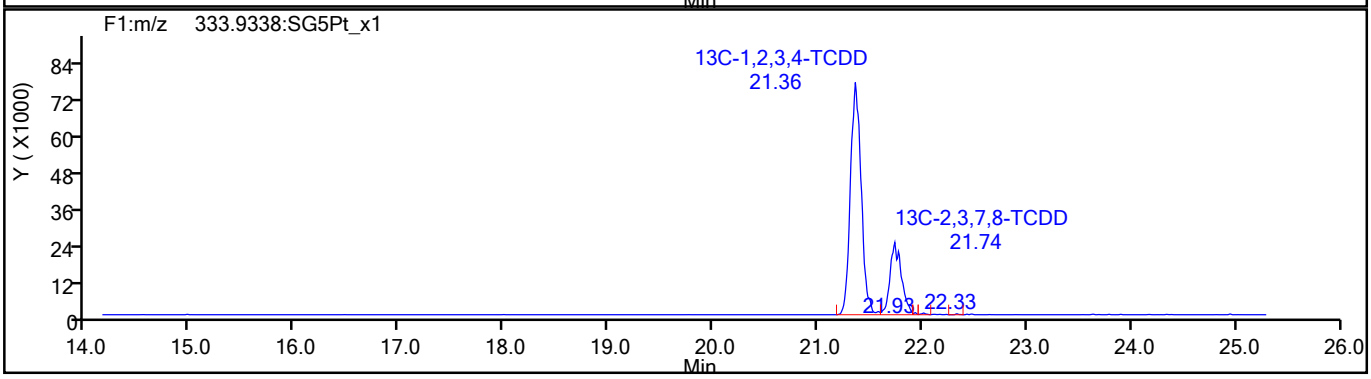

786580

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

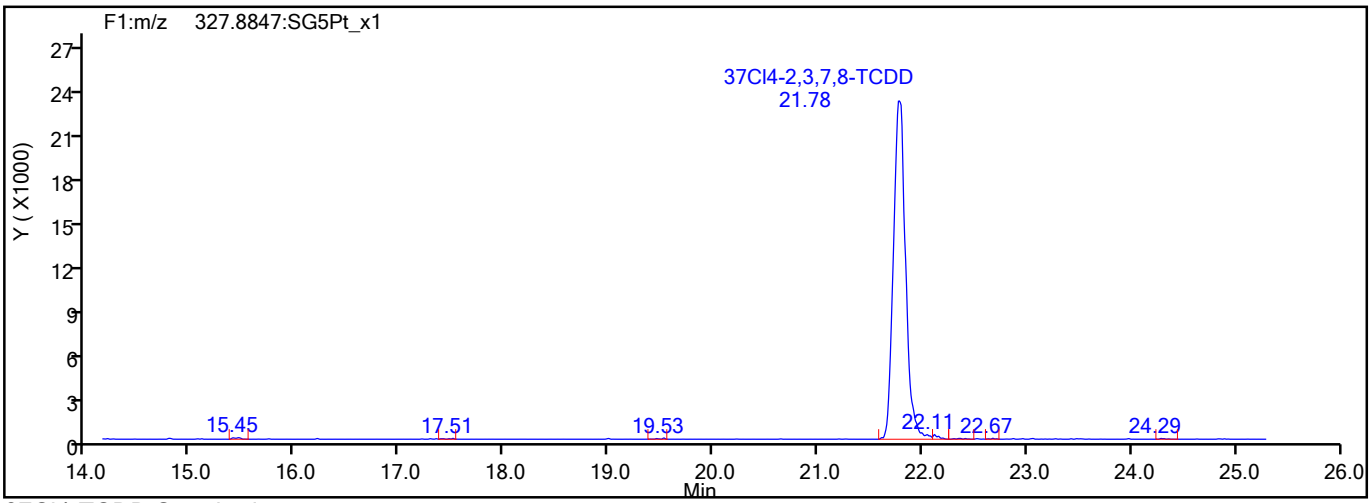

37Cl4-TCDD Standards

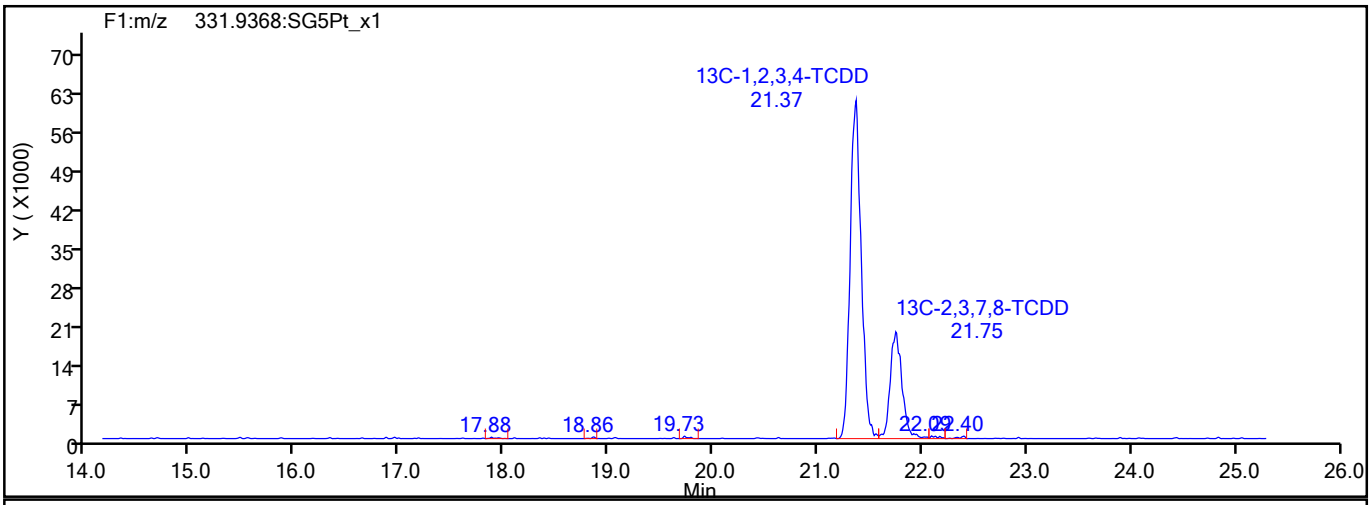

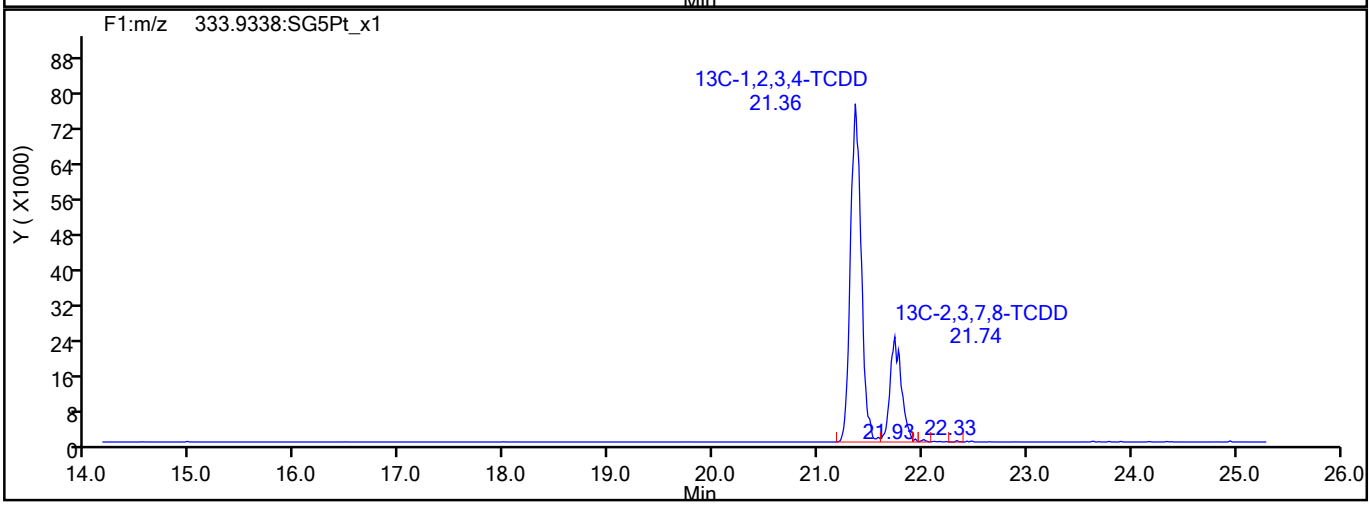

786581

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

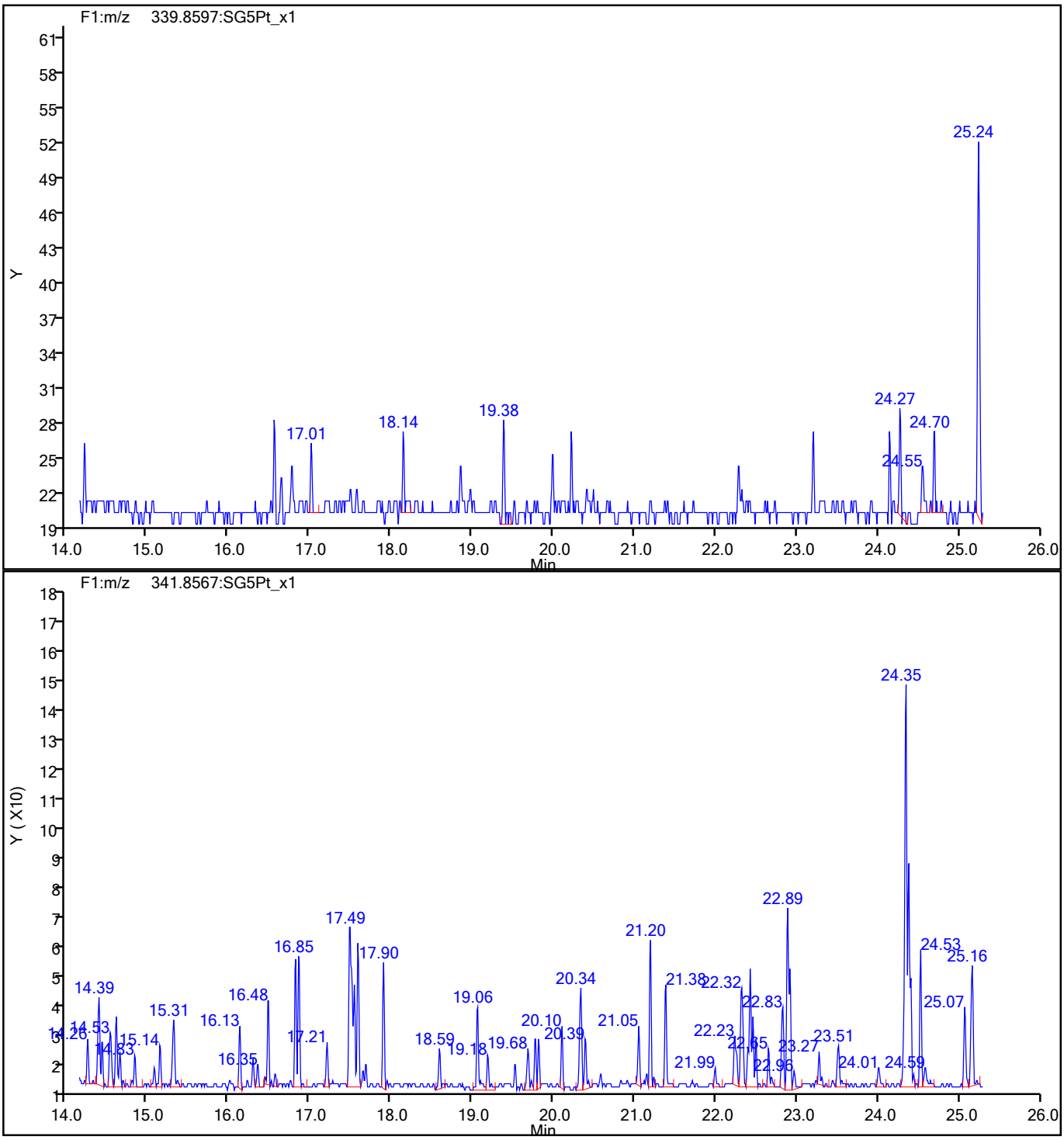

786582

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

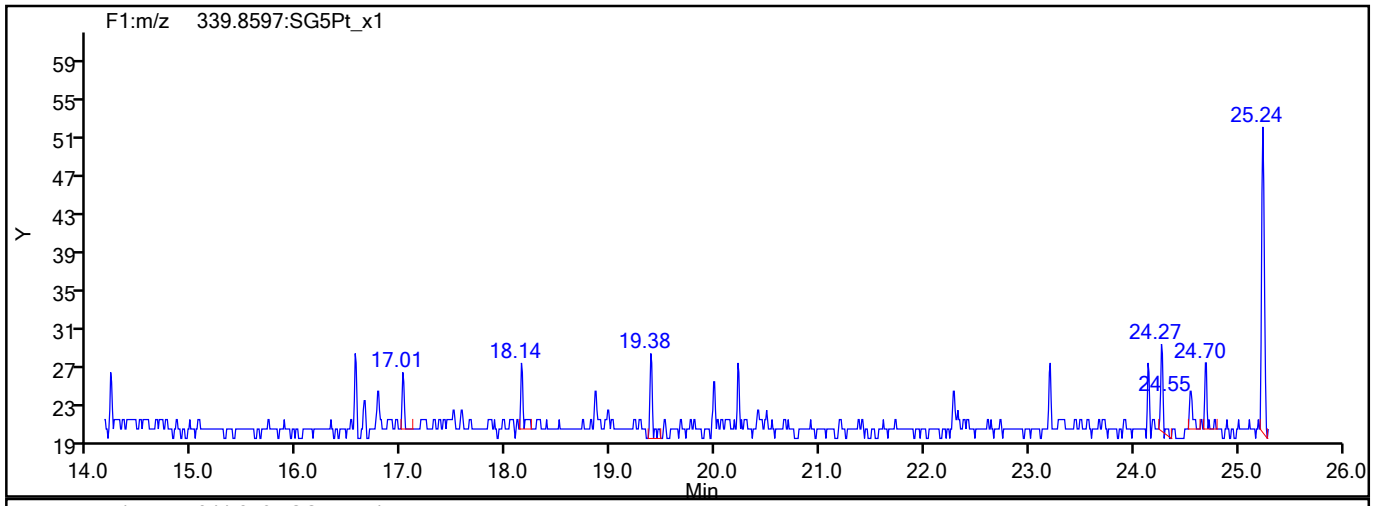

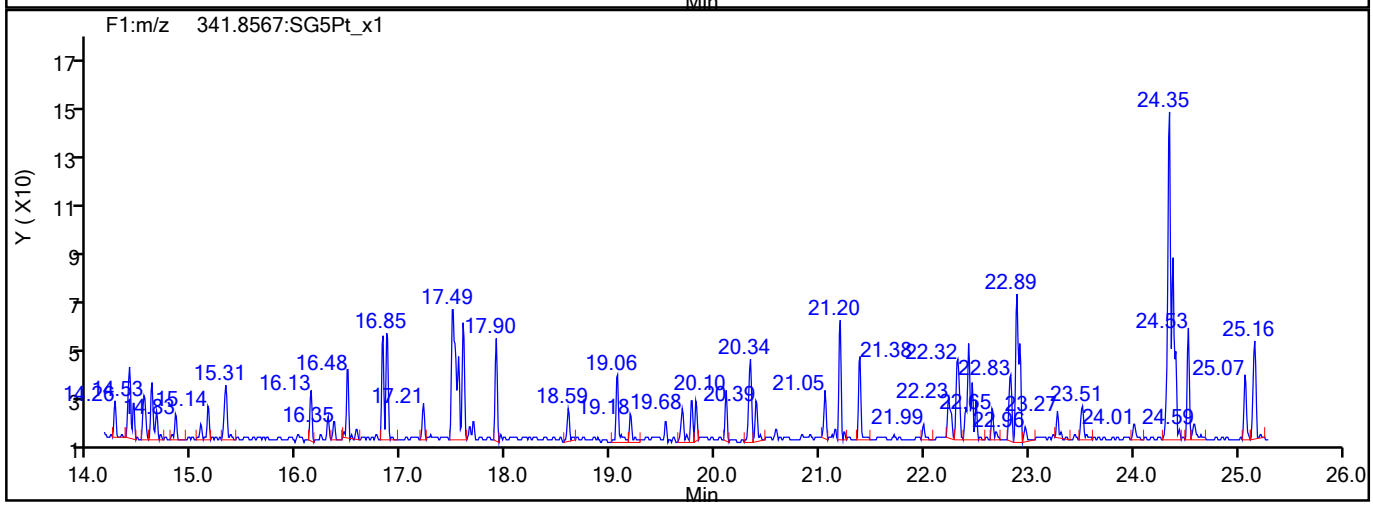

F1 PeCDFs Interference Mass

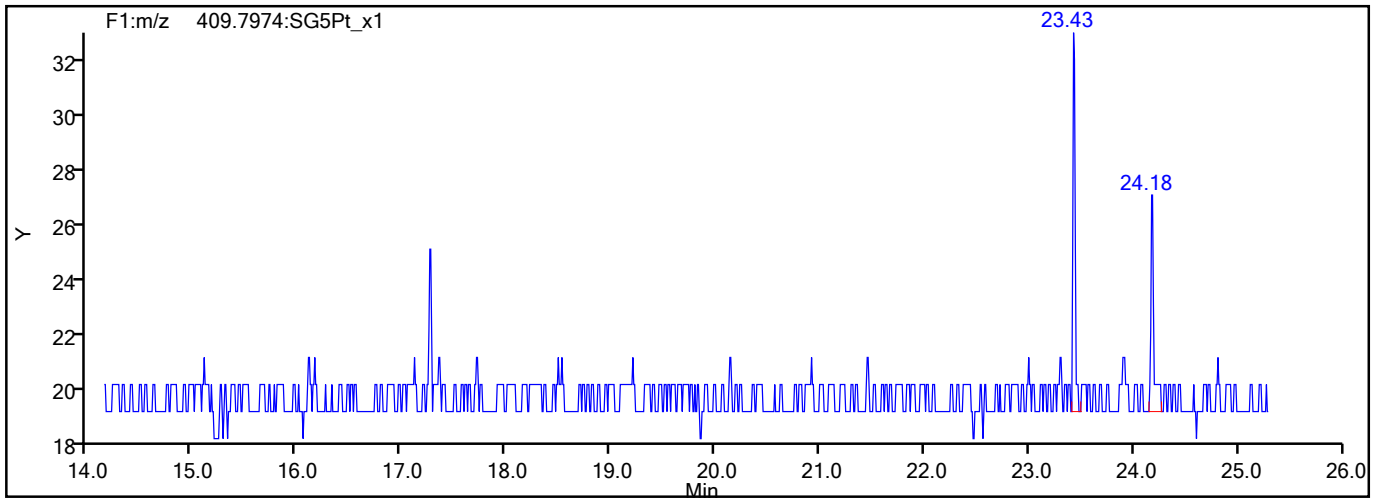

786583

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

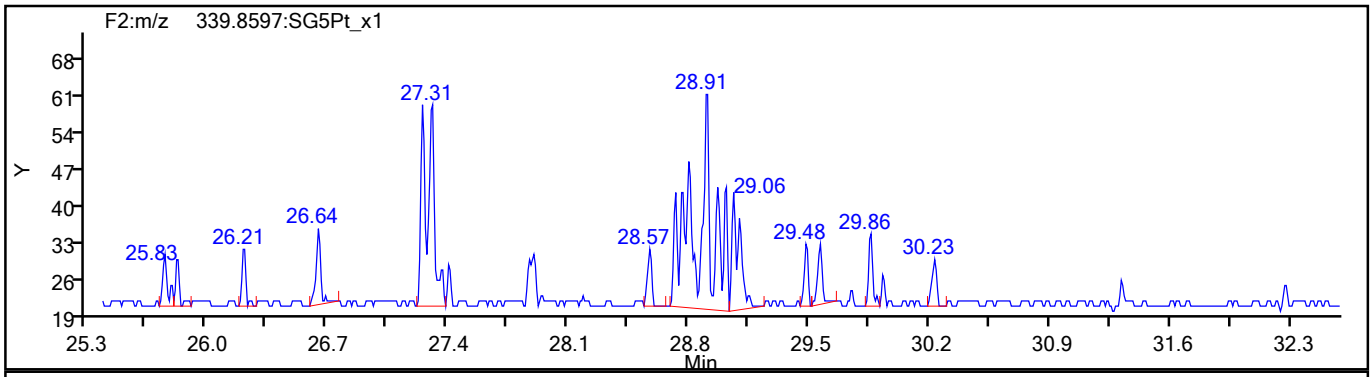

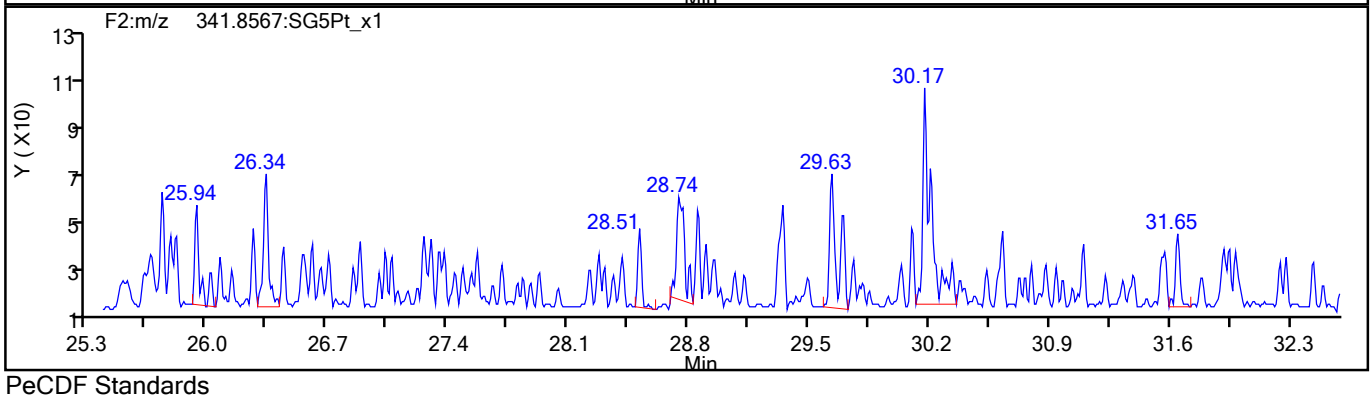

PeCDF Standards

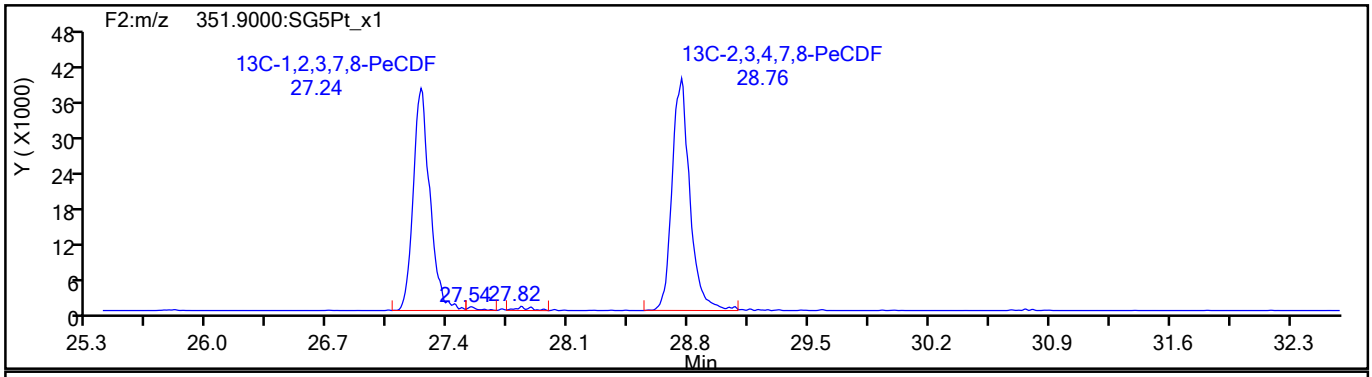

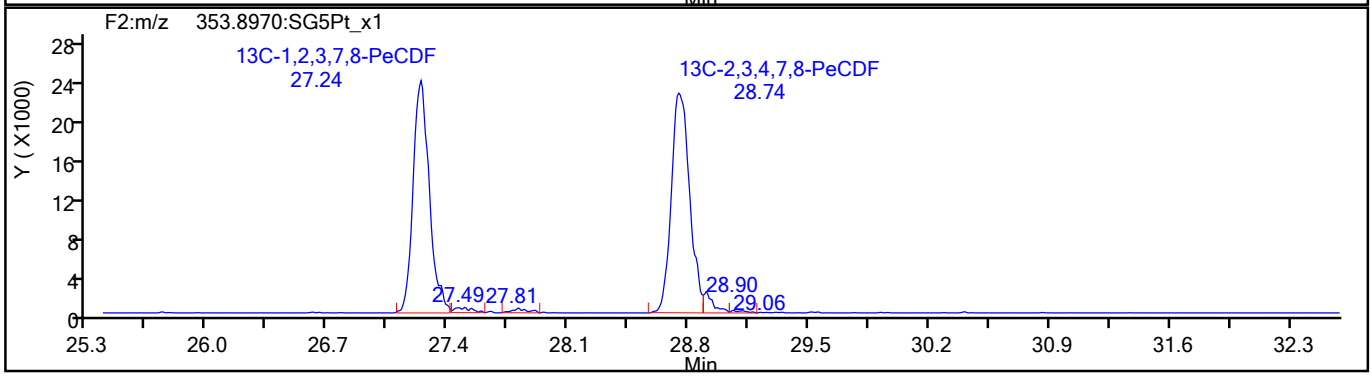

786584

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

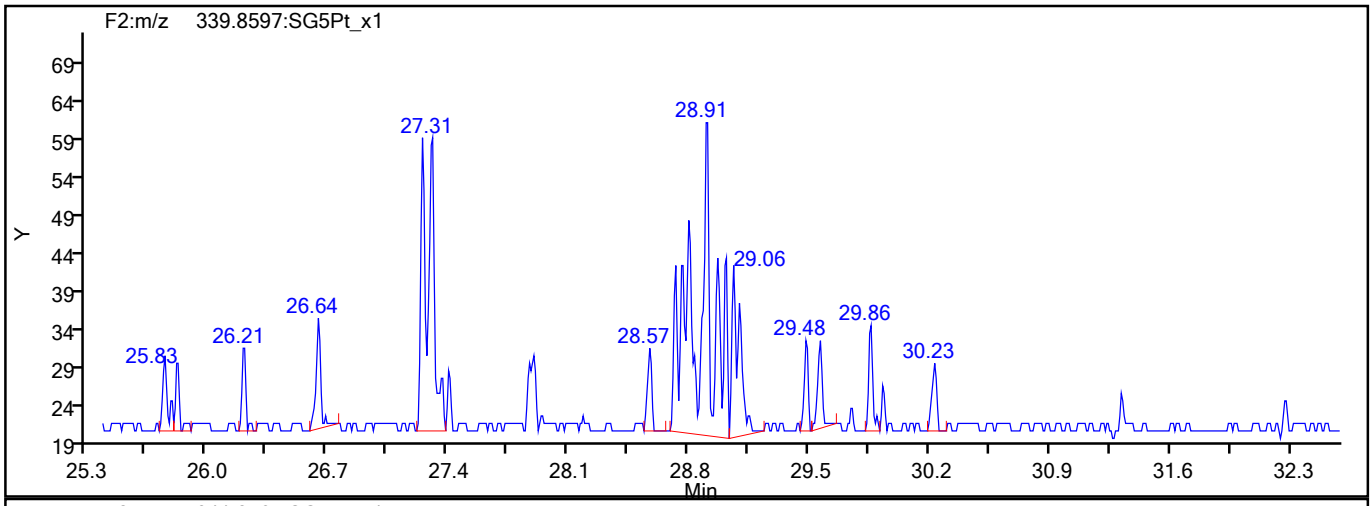

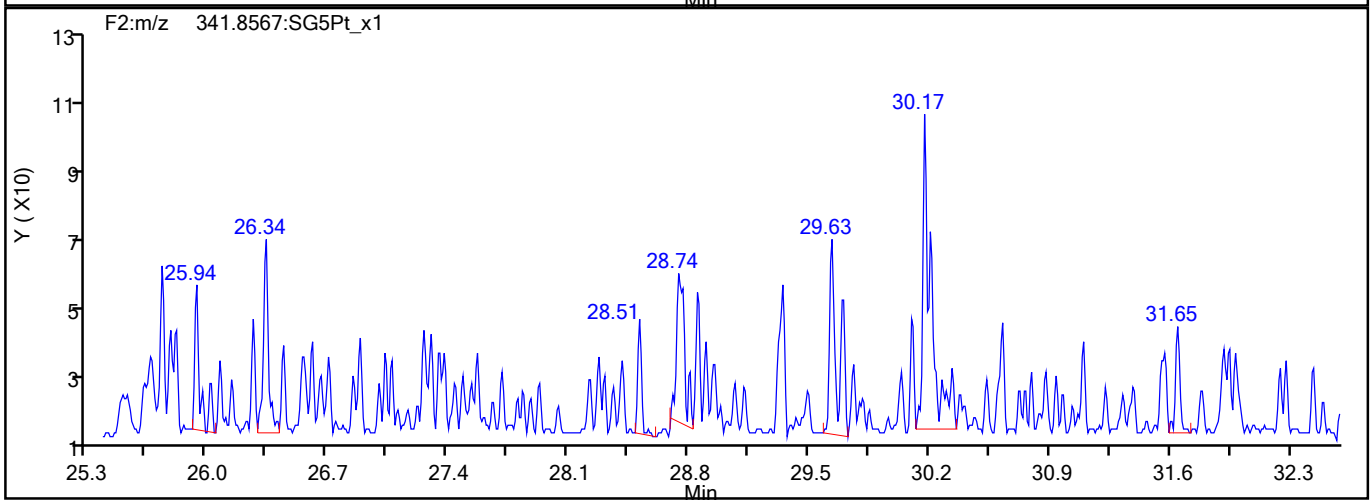

PeCDF Interference Mass

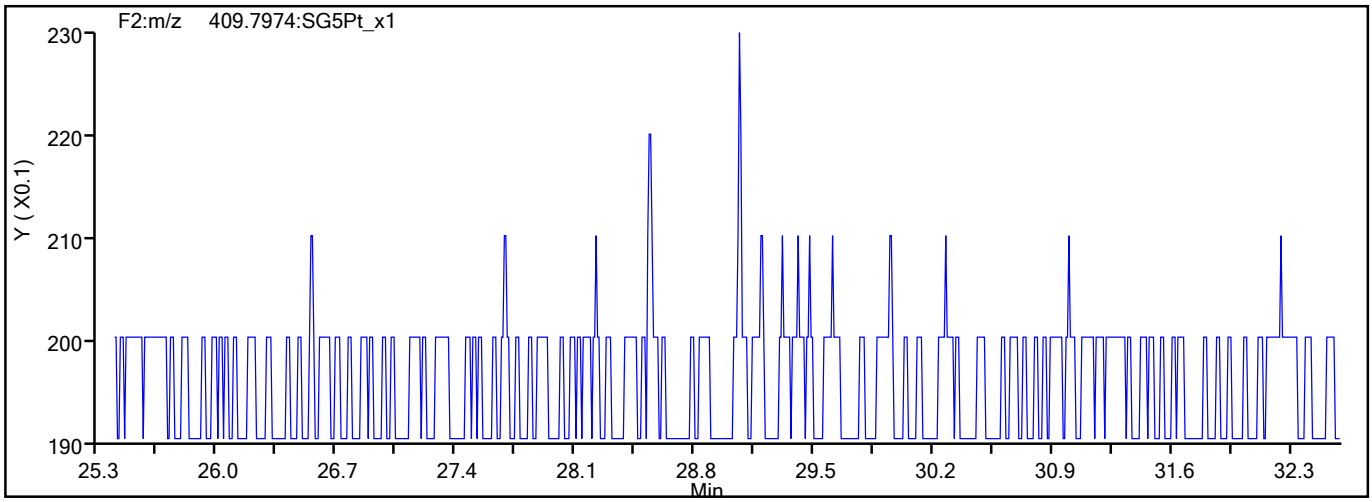

786585

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

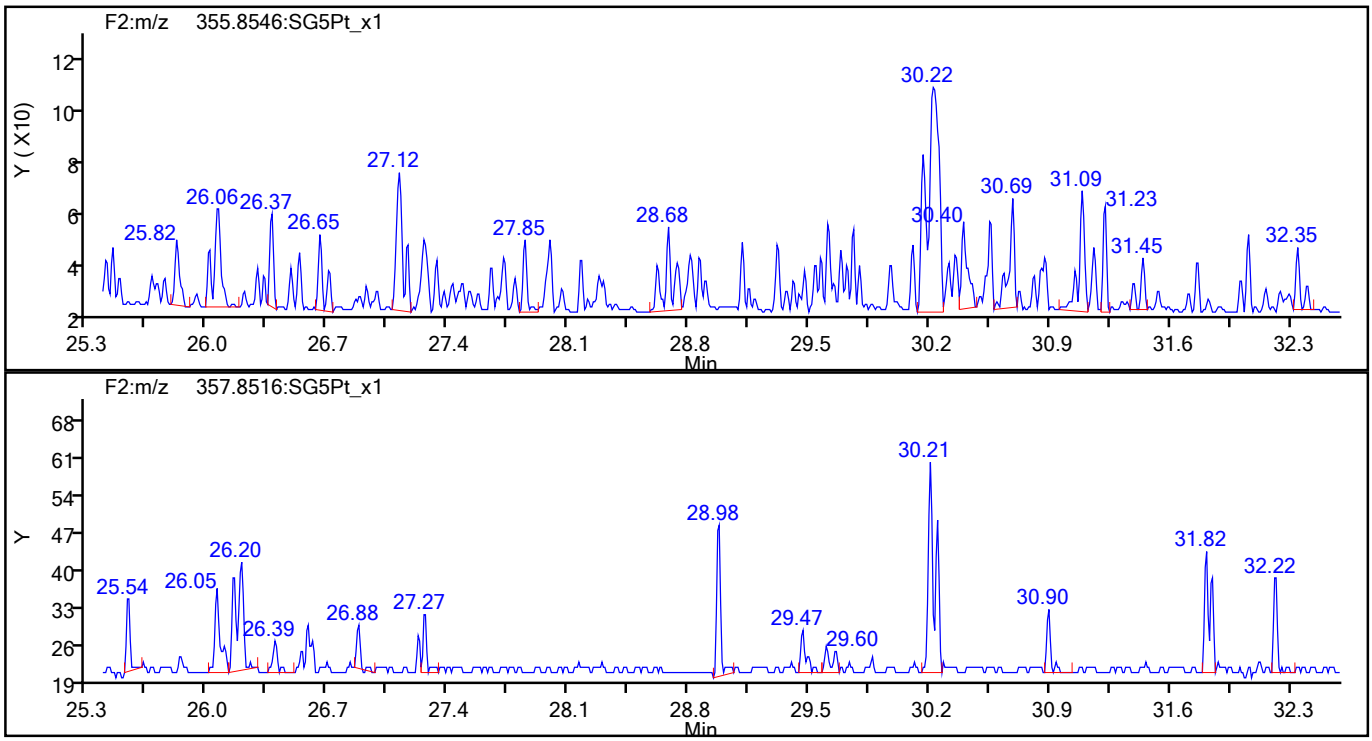

PeCDD Standards

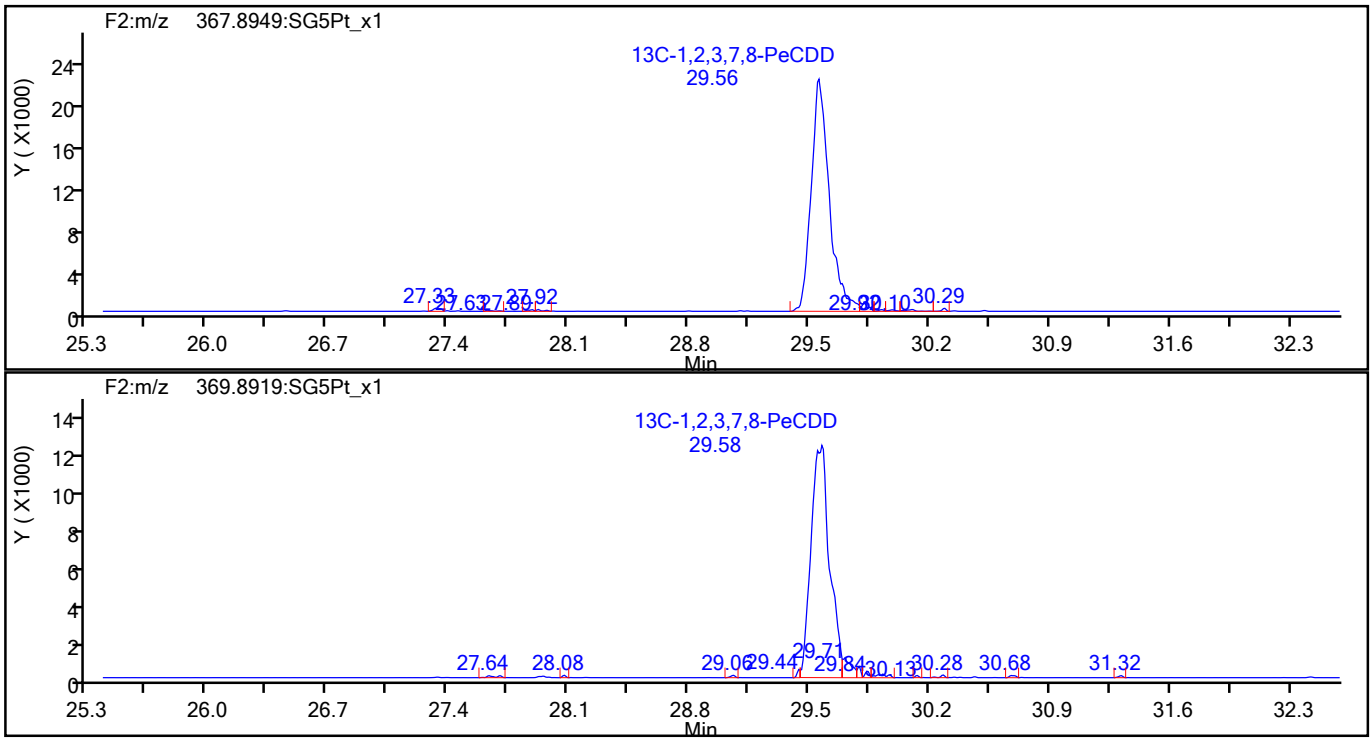

786586

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

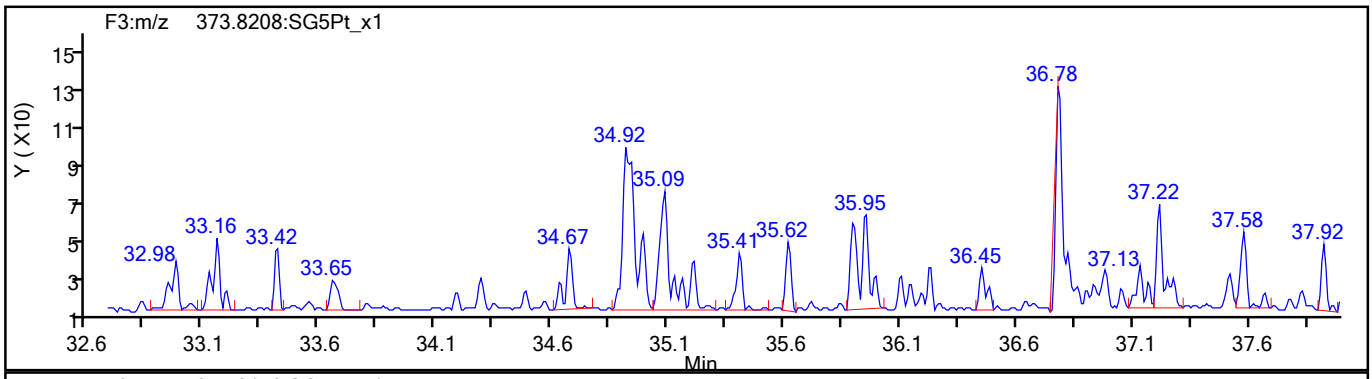

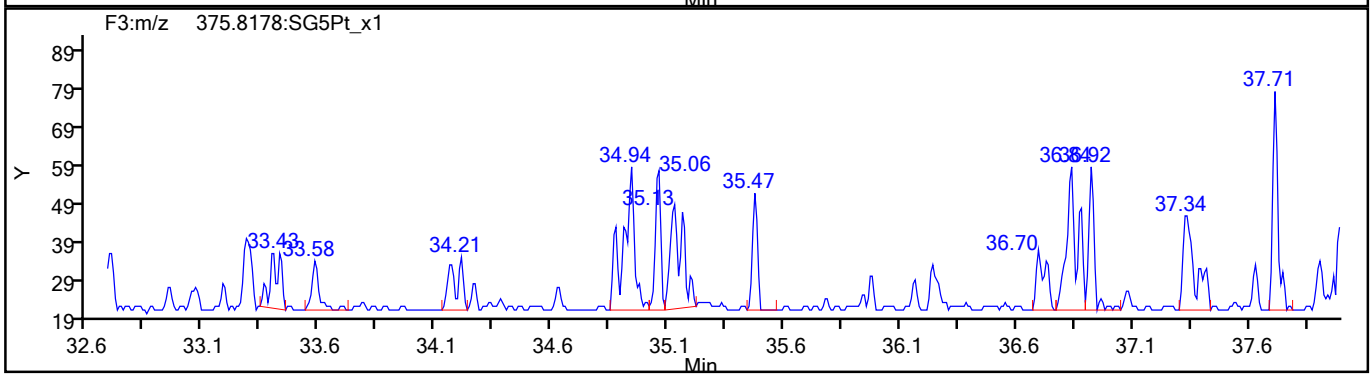

HxCDF Standards

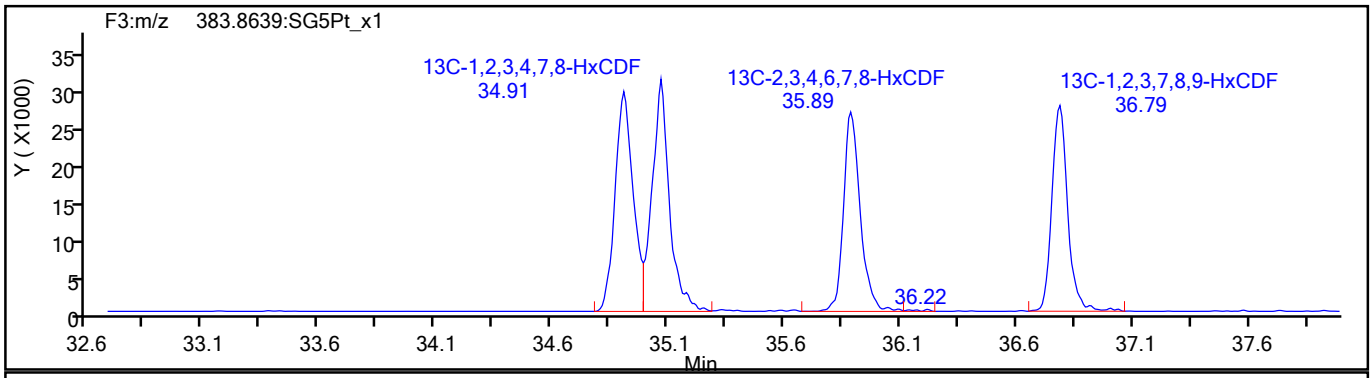

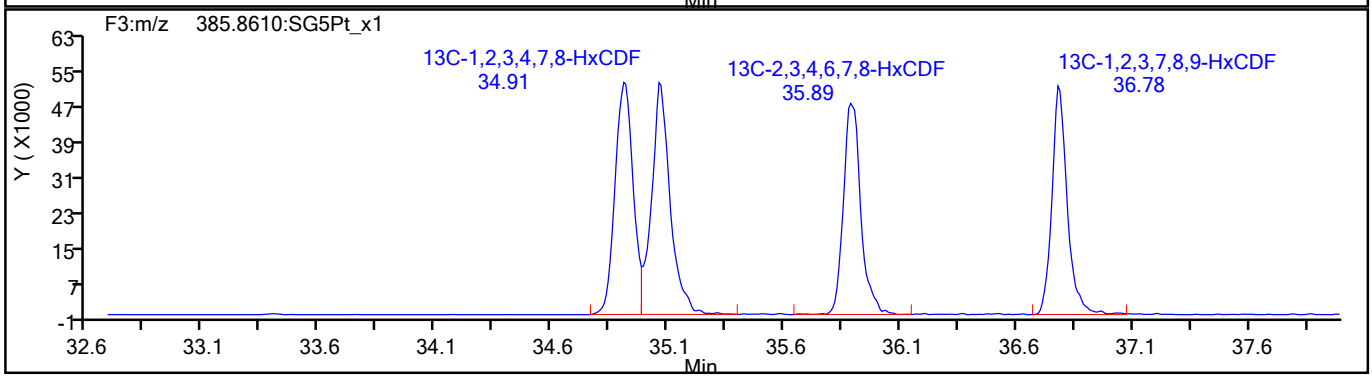

786587

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

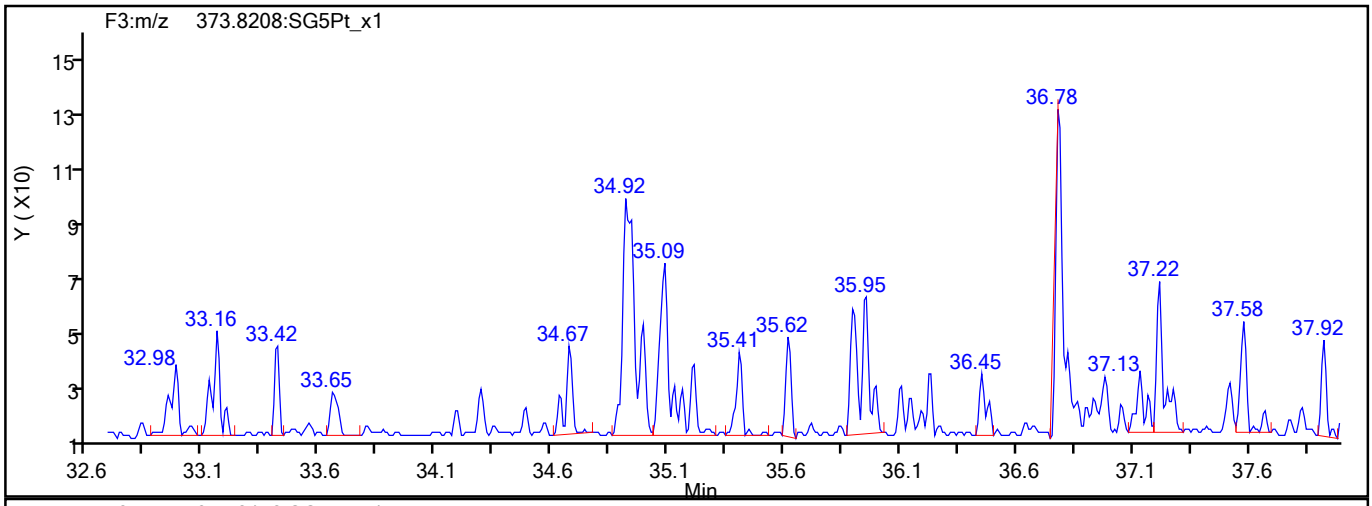

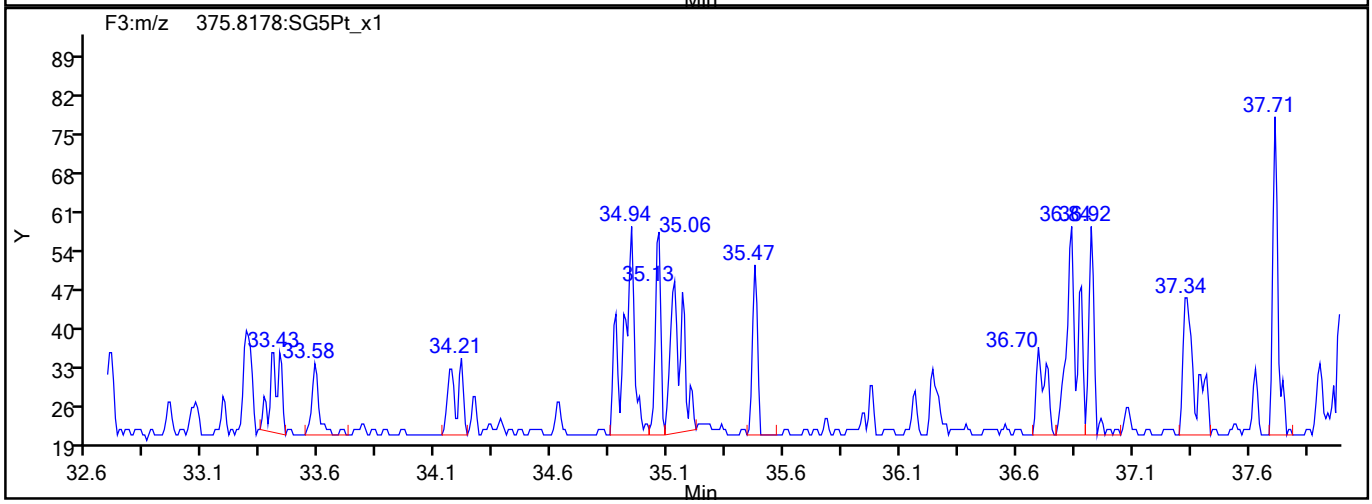

HxCDF Interference Mass

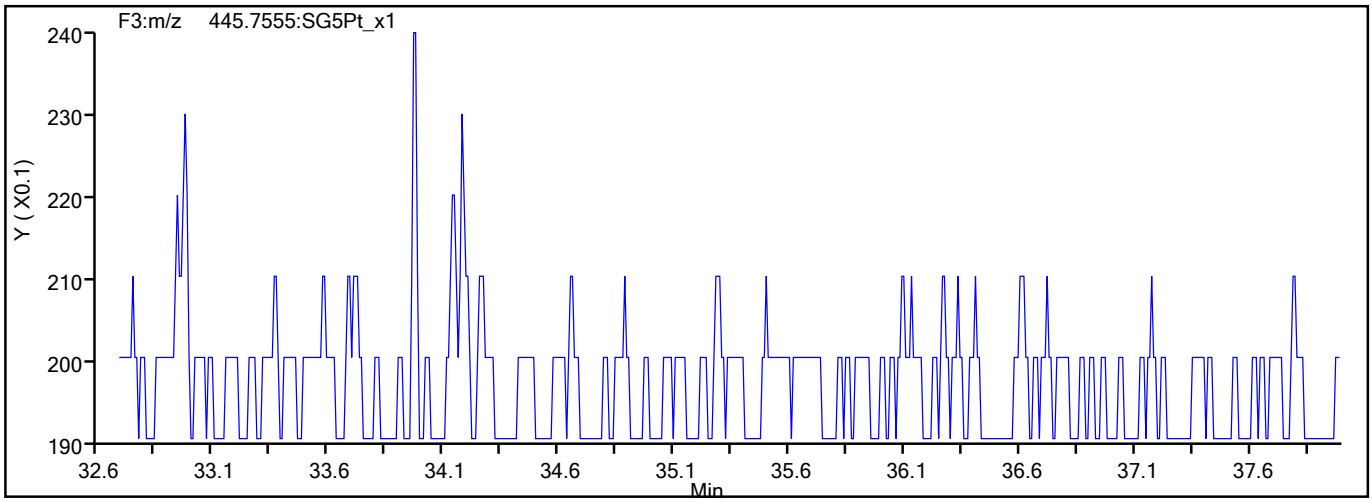

786588

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDD

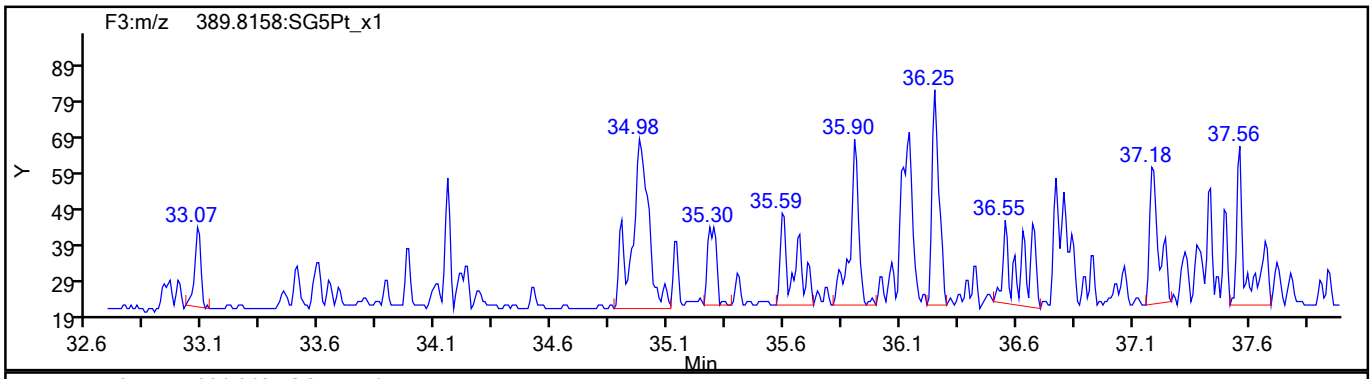

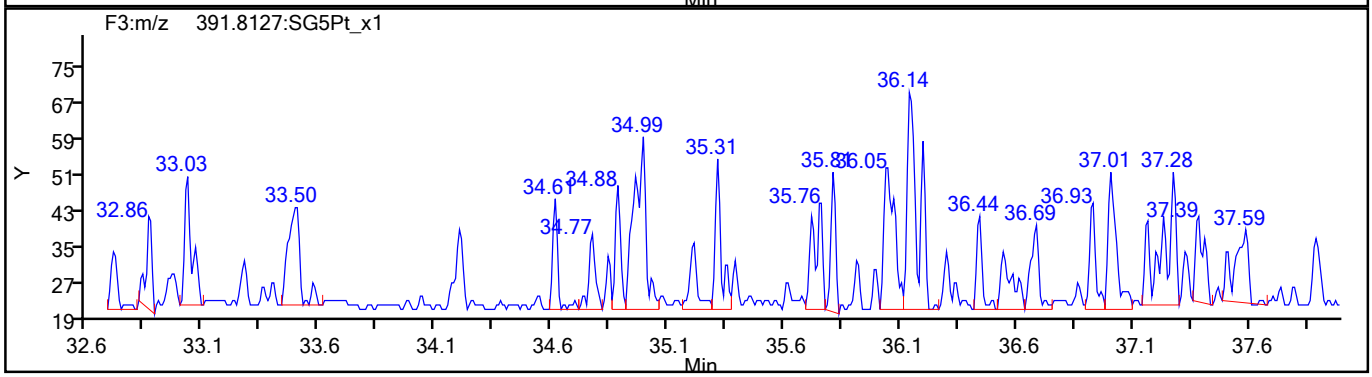

HxCDD Standards

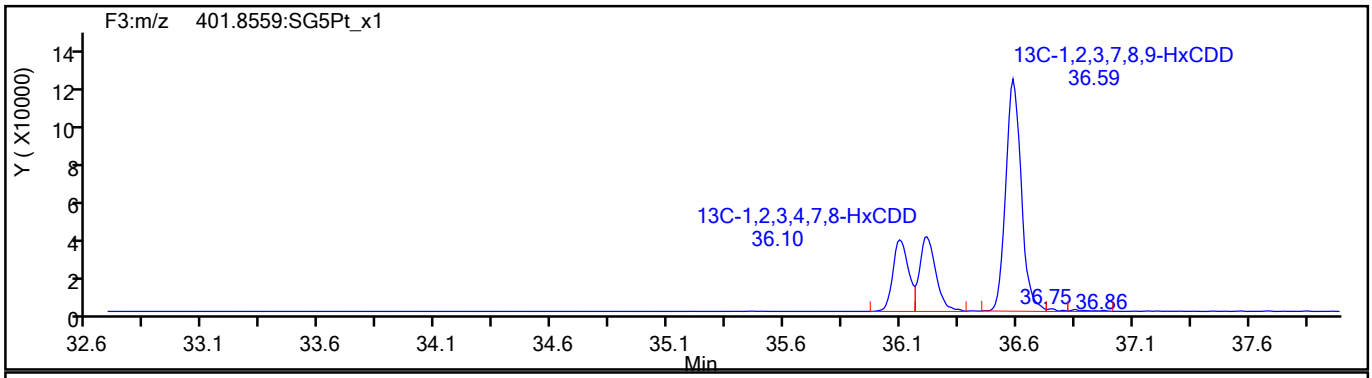

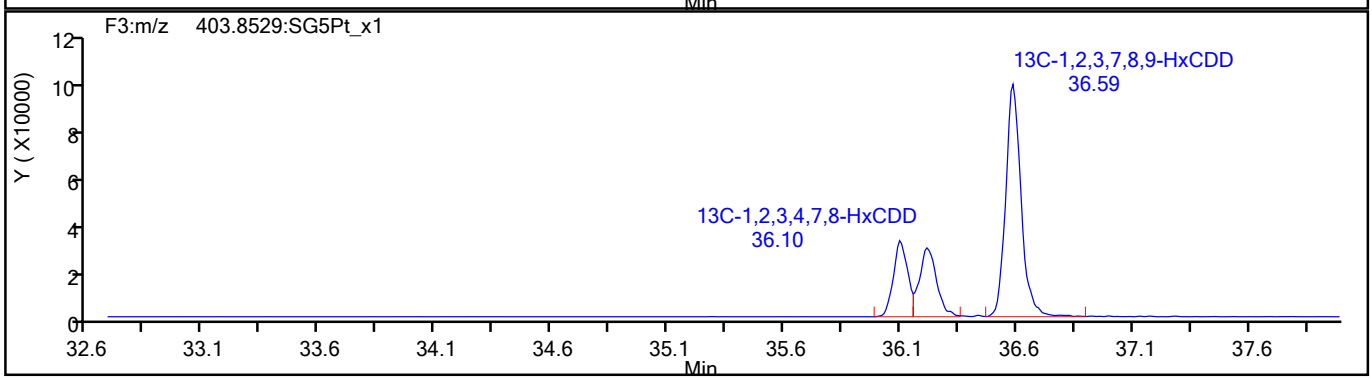

786589

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

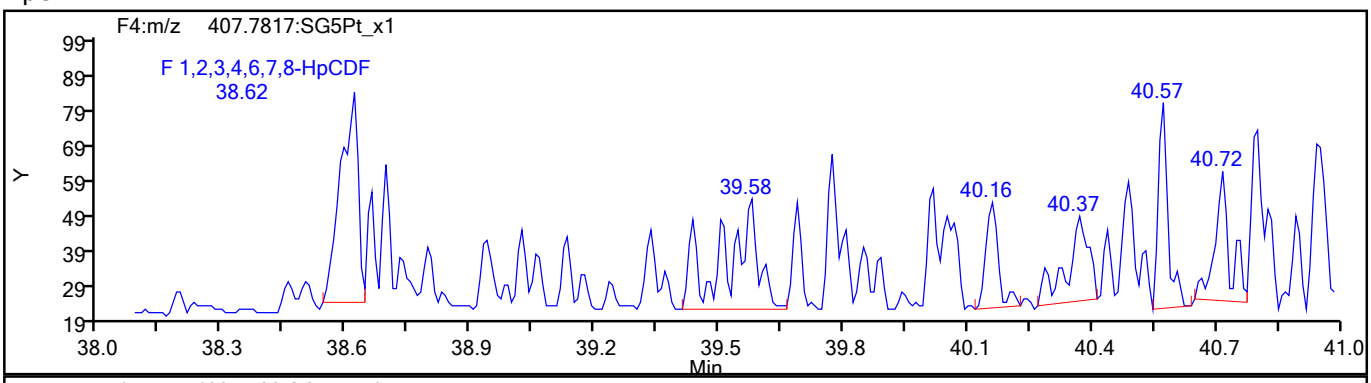

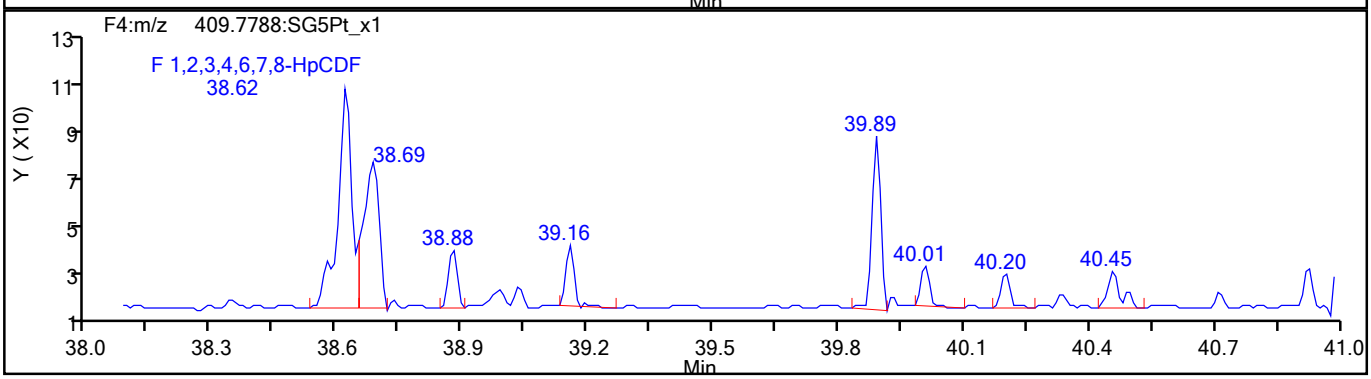

HpCDF Standards

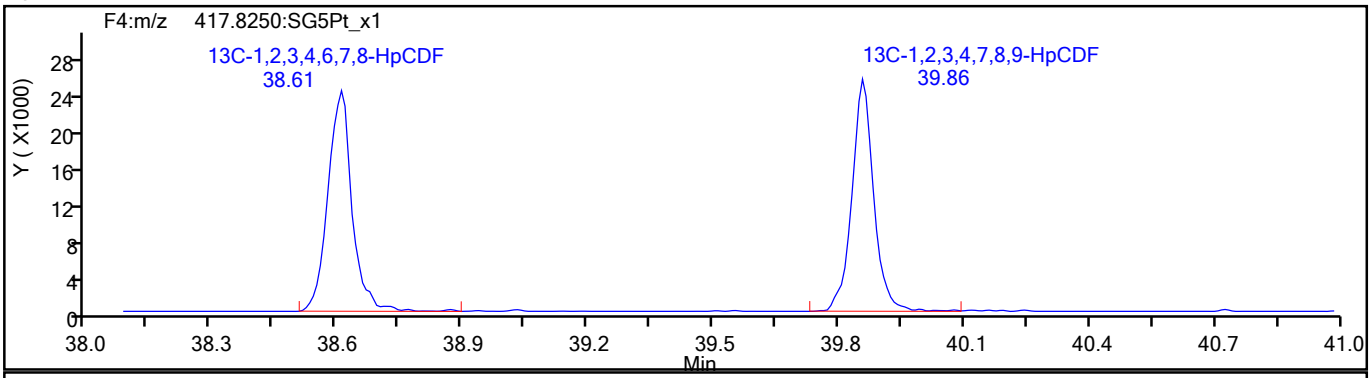

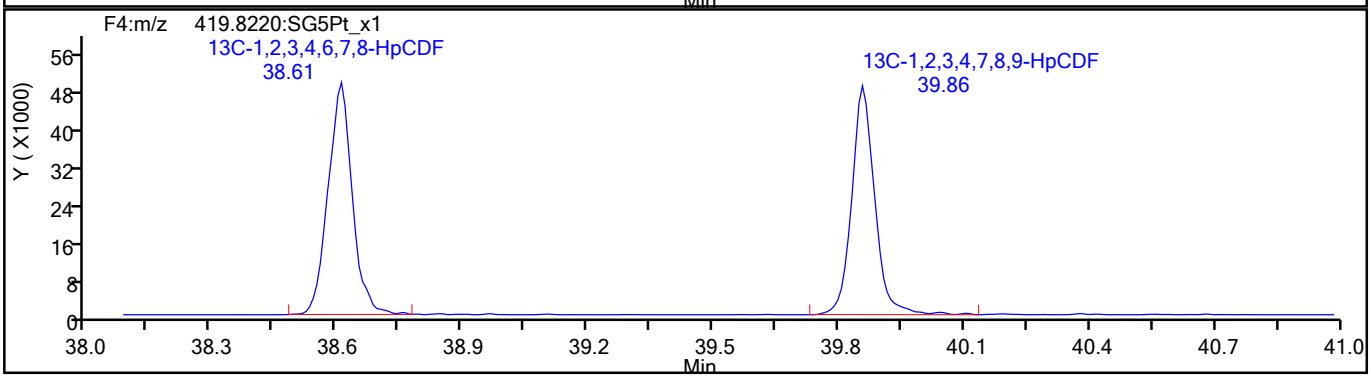

786590

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

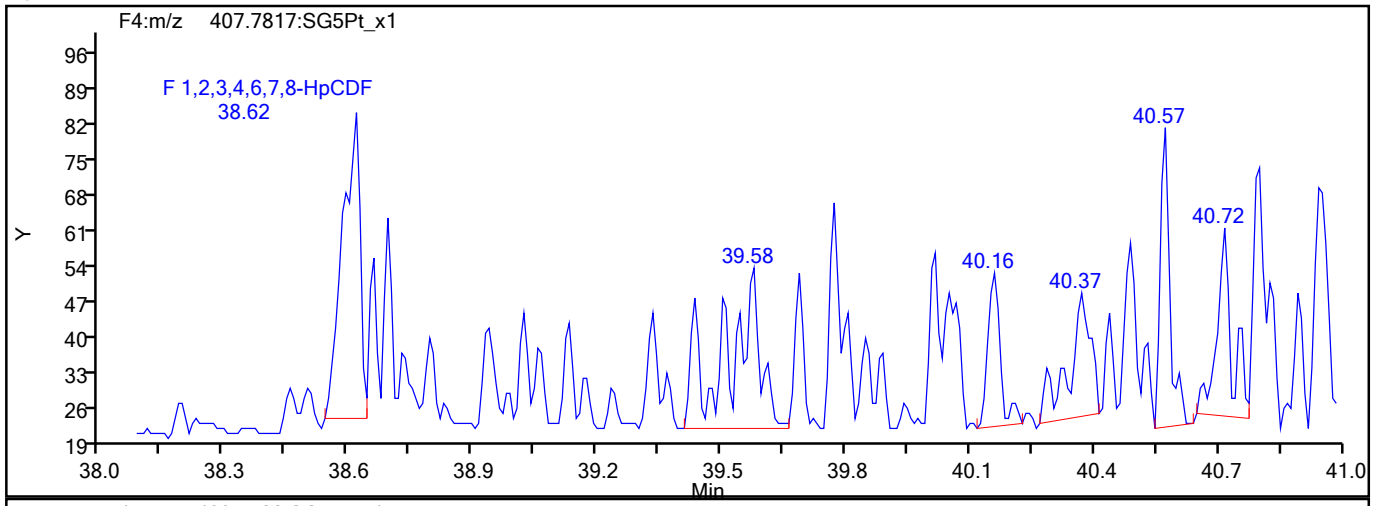

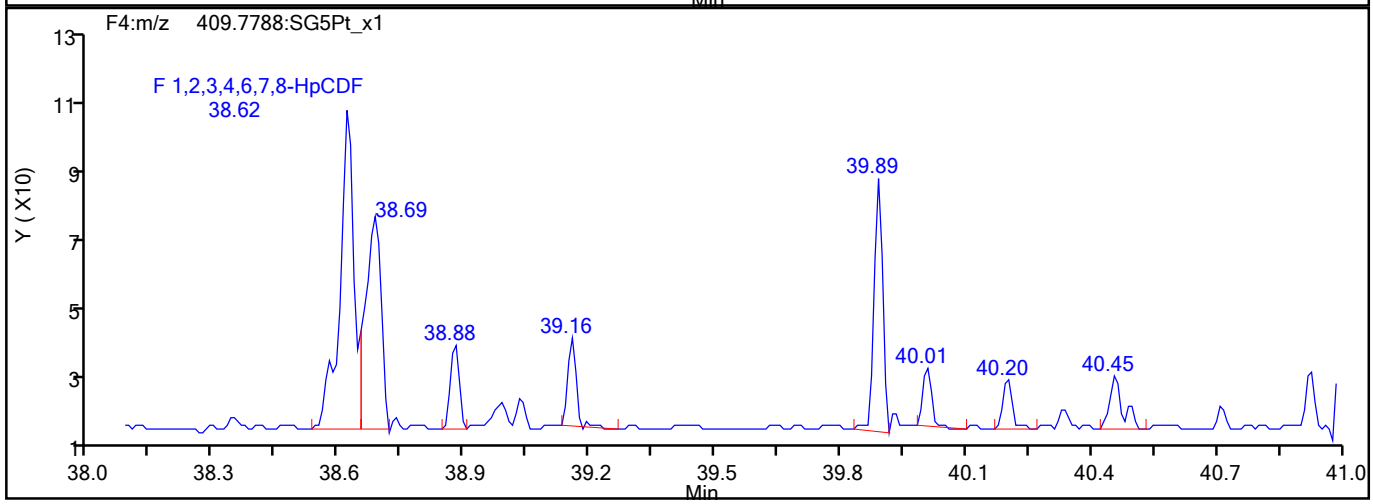

HpCDF Interference Mass

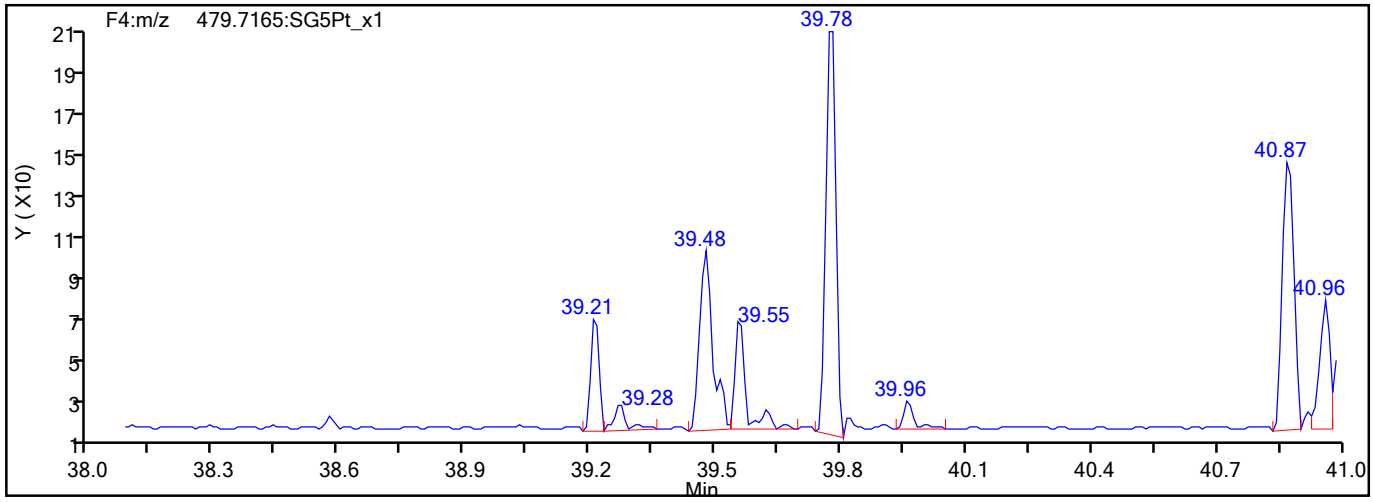

786591

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

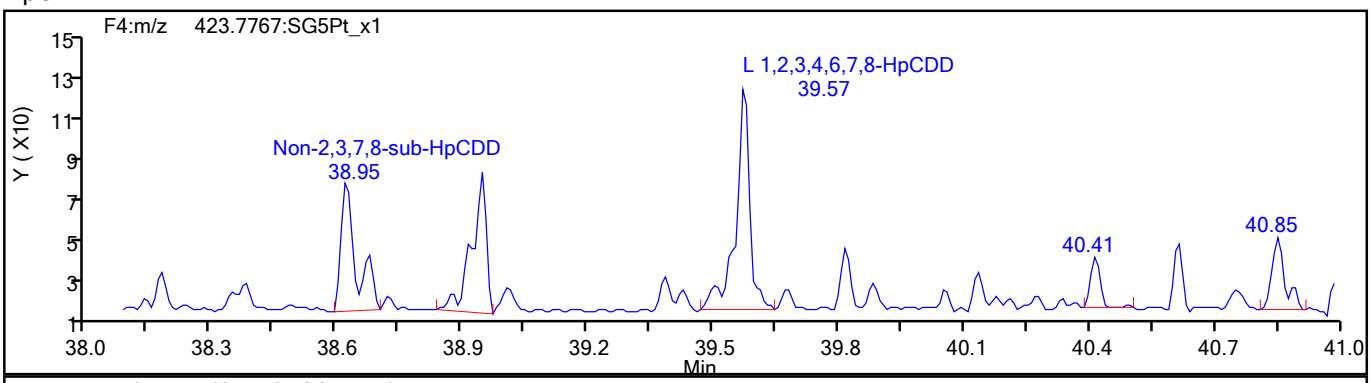

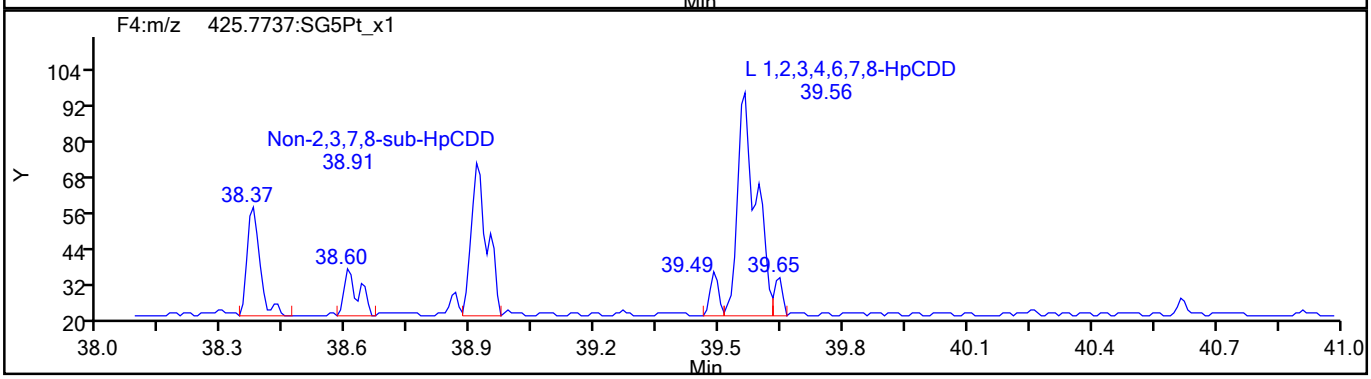

HpCDD Standards

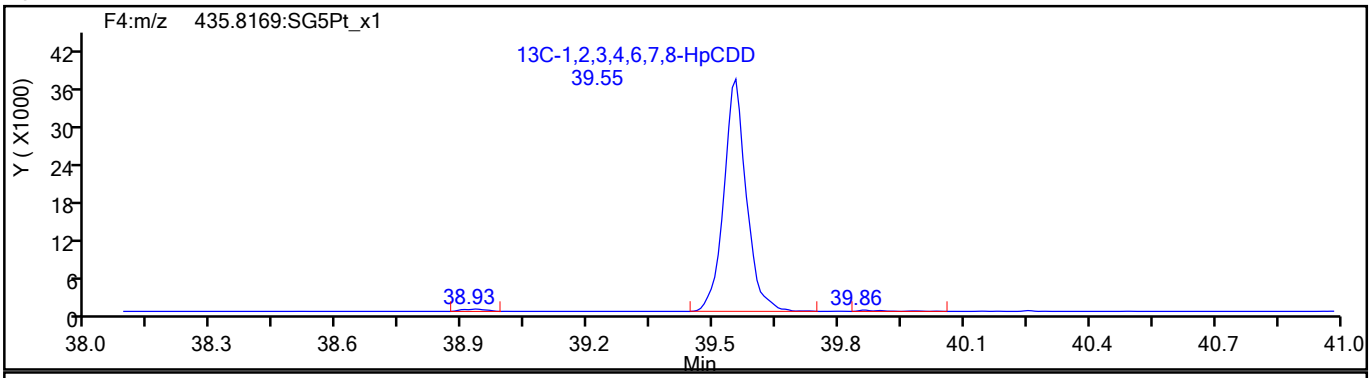

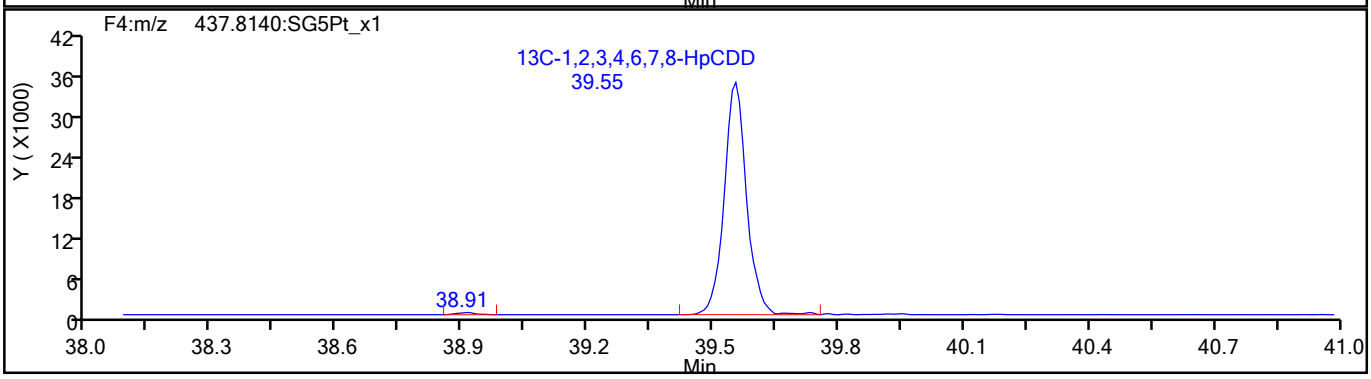

786592

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

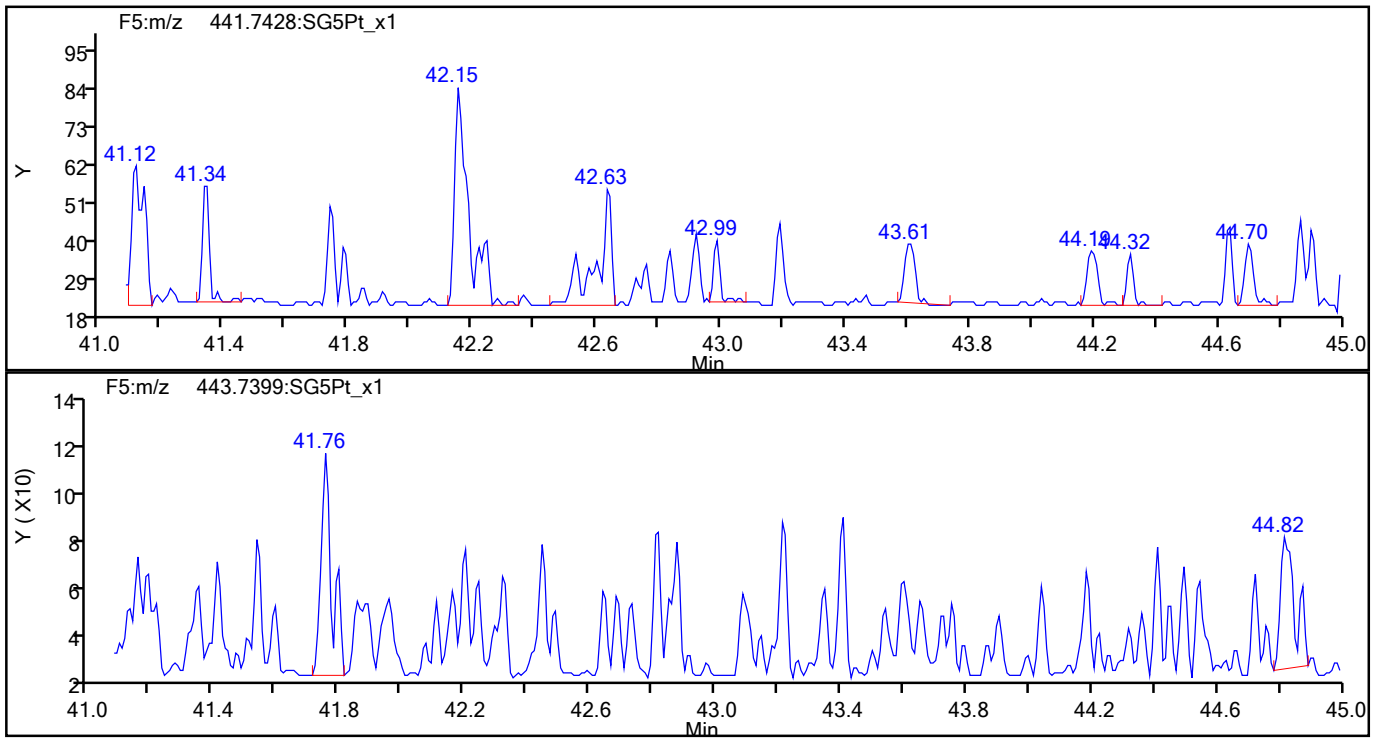

OCDF Standards

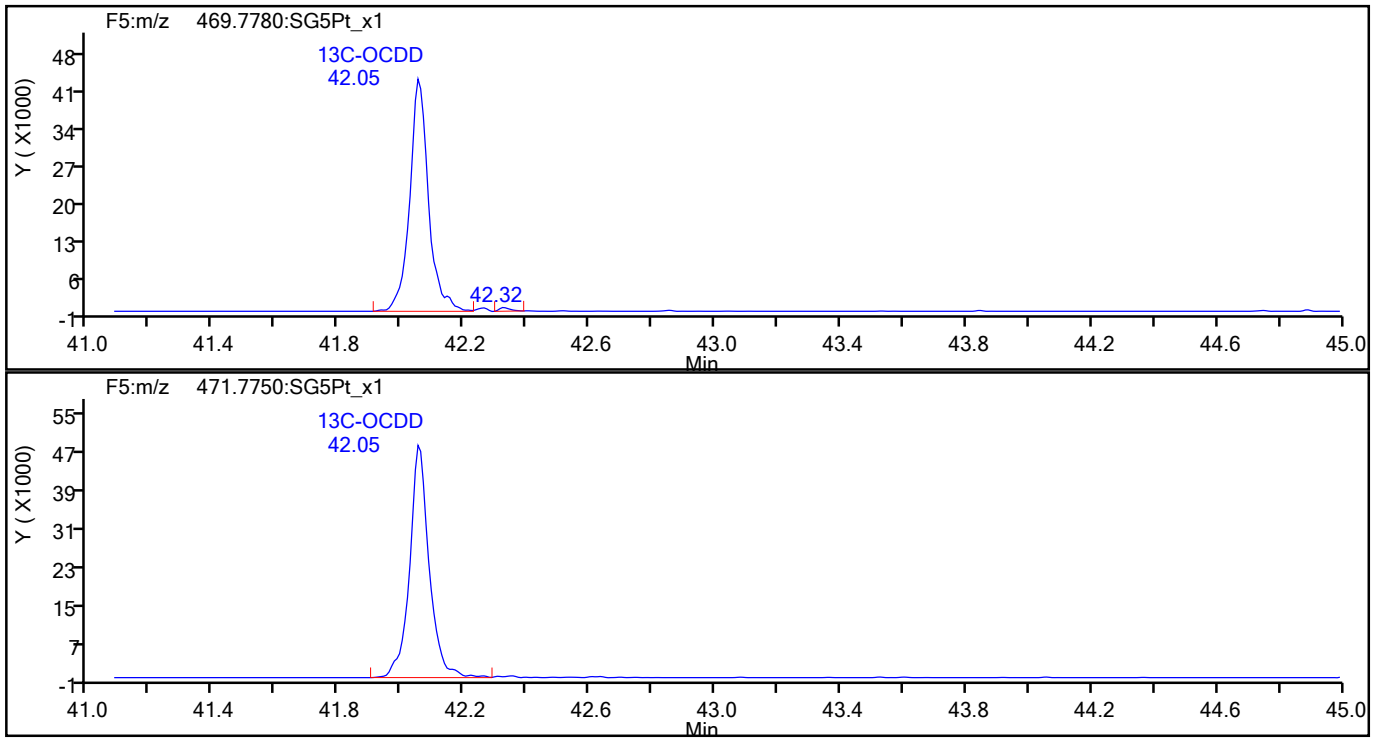

786593

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

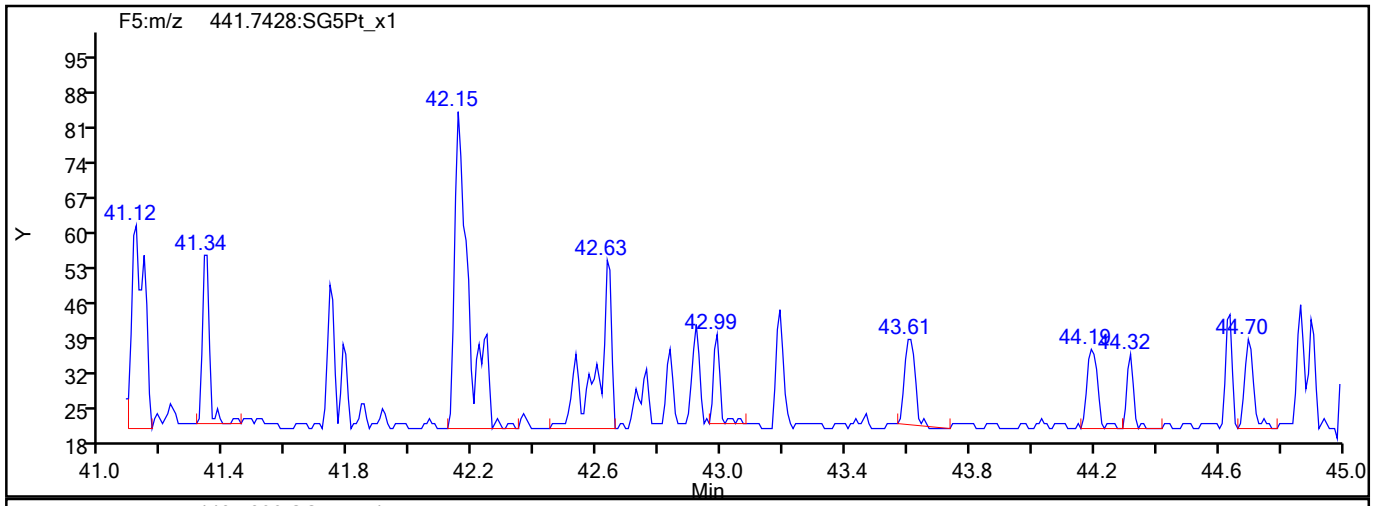

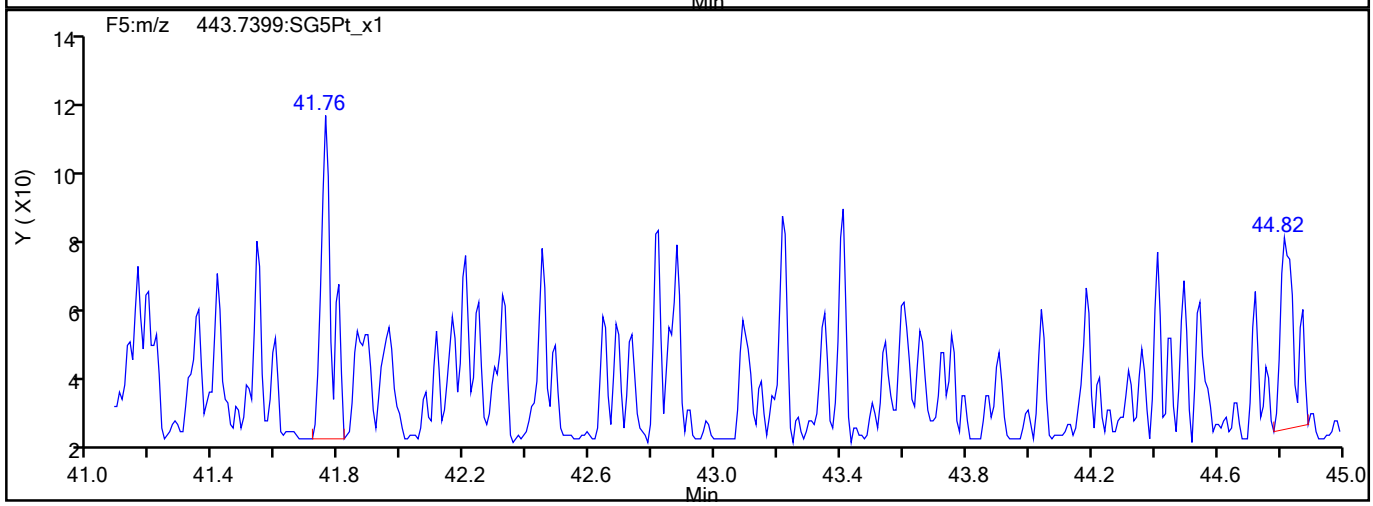

OCDF Interference Mass

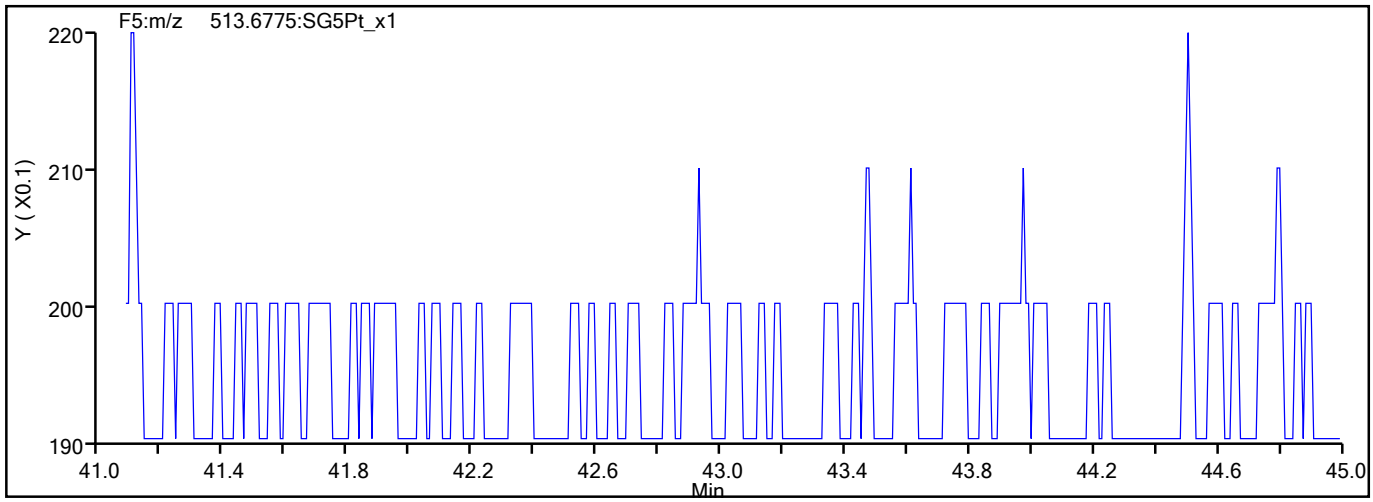

786594

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

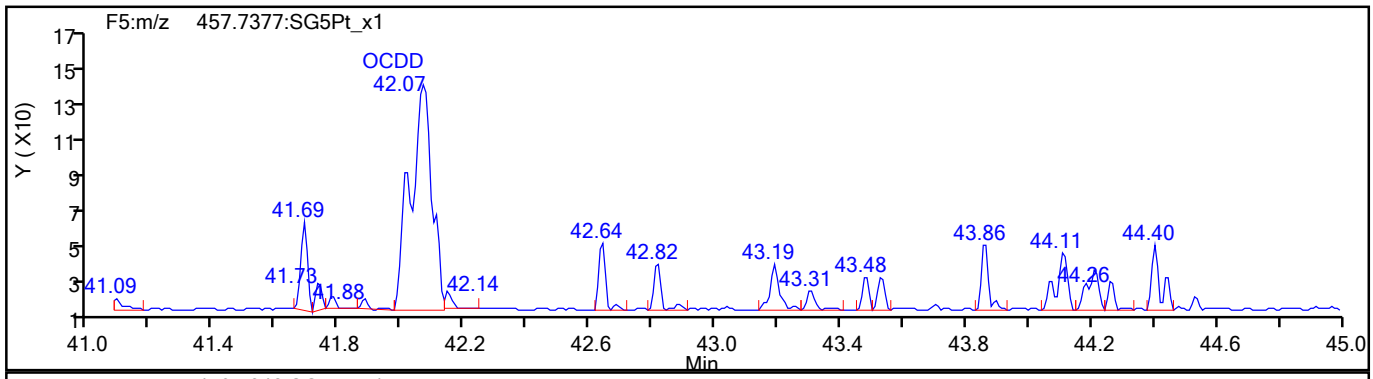

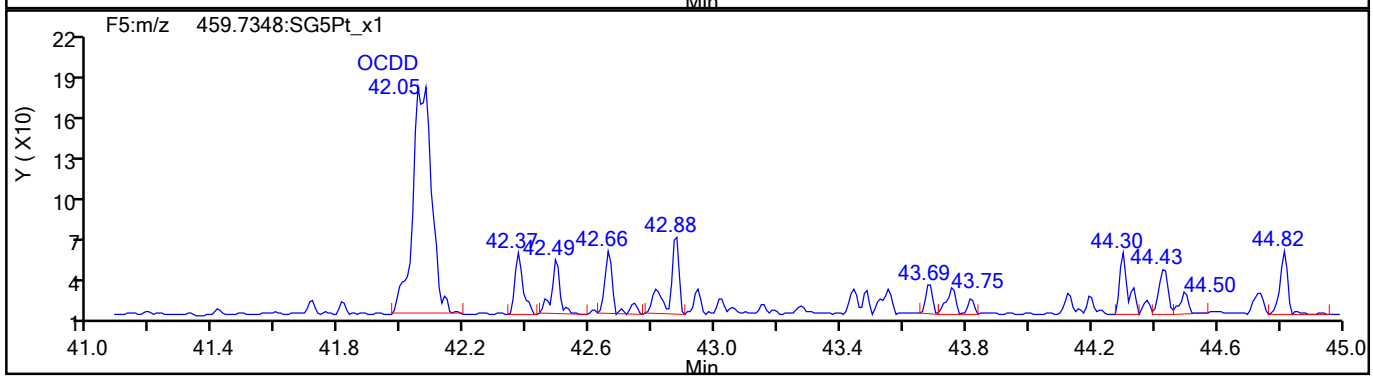

OCDD Standards

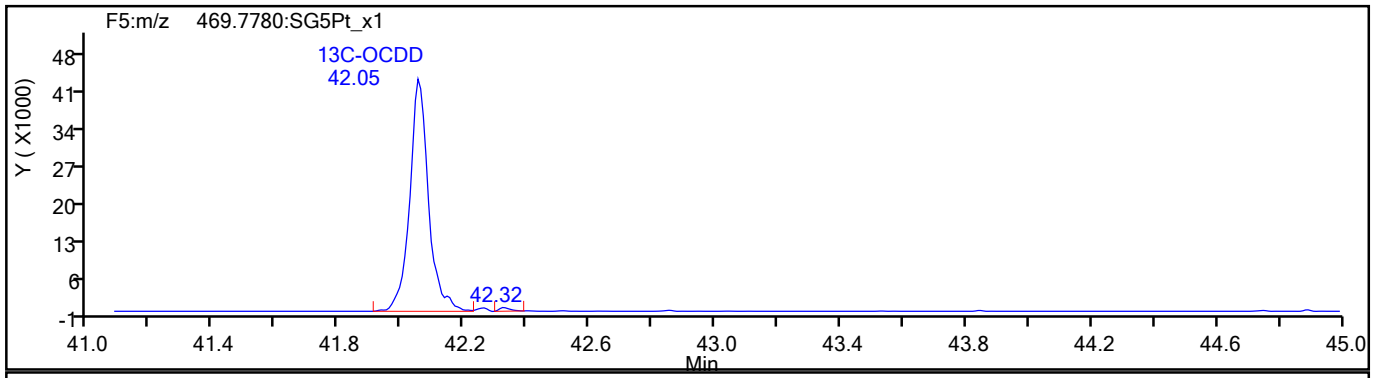

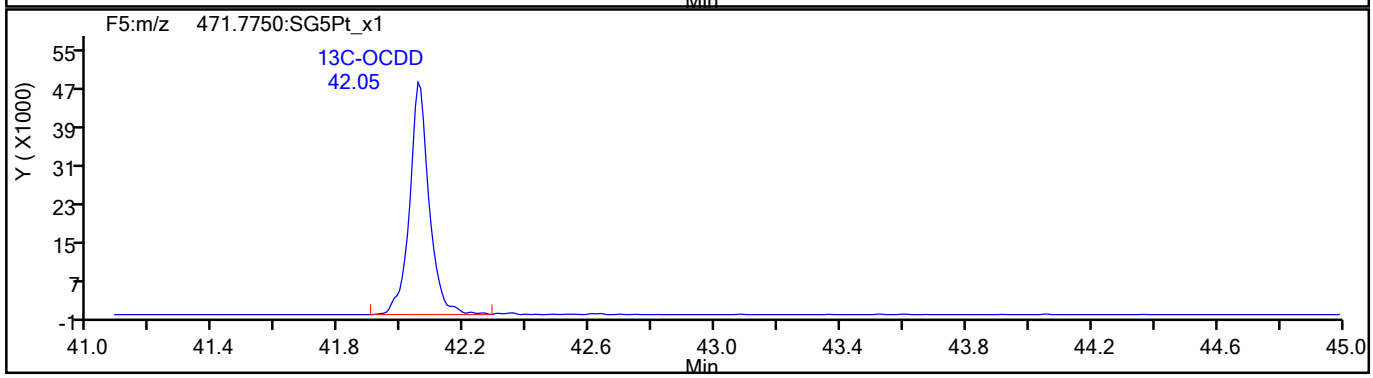

786595

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

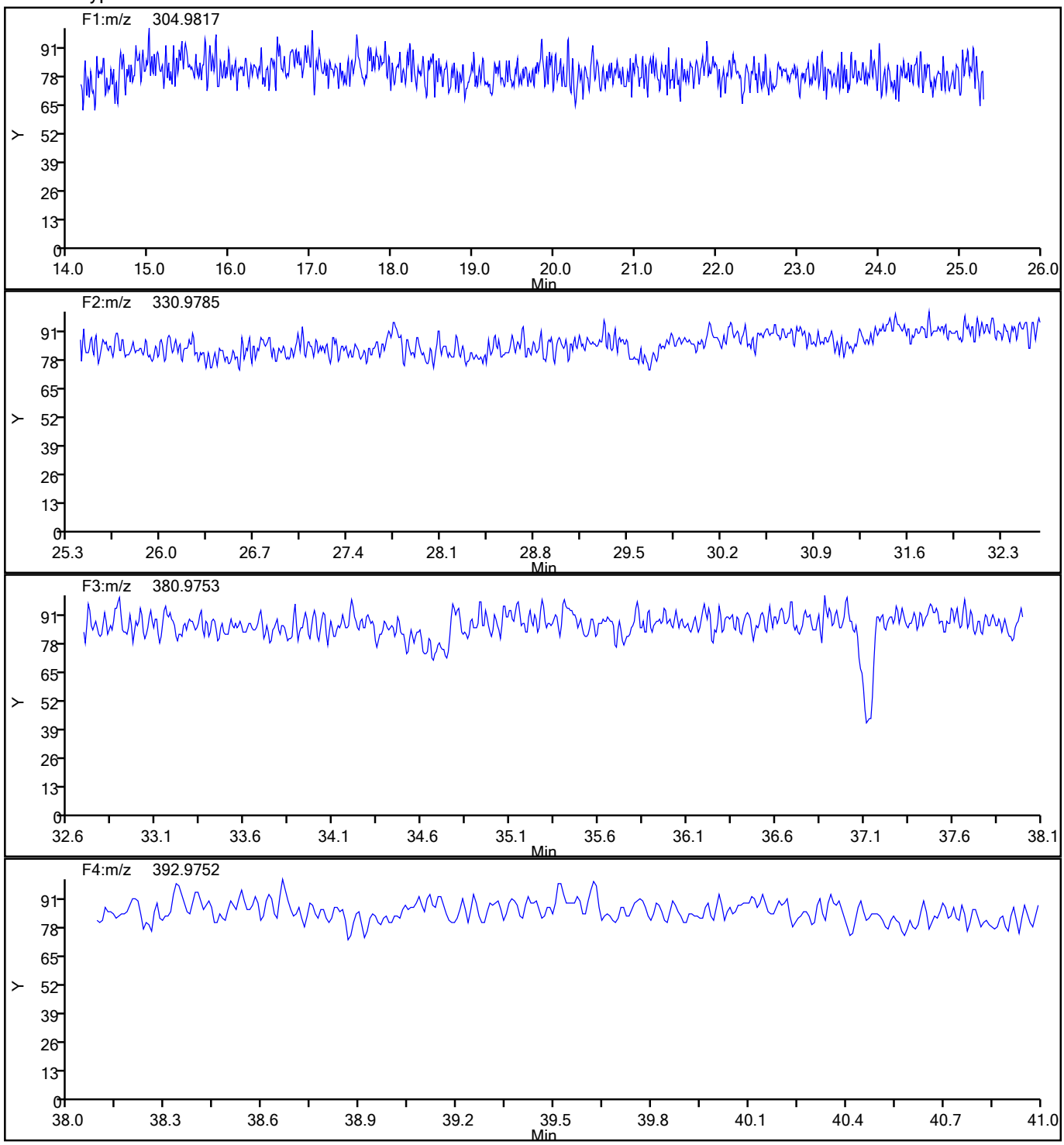

786596

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

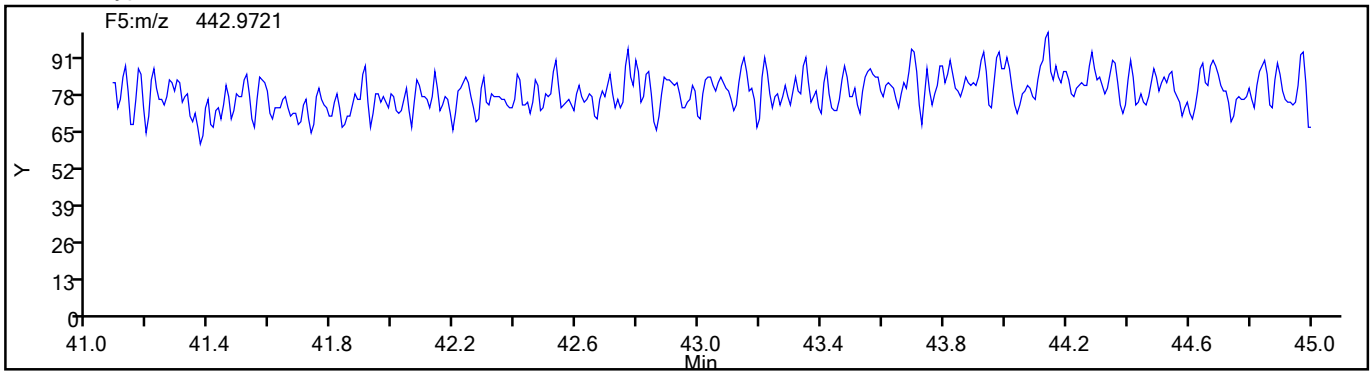

786597

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-513879/1-A RA
Matrix: Sediment
Lab File ID: 24AU2111D2_004.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/24/2021 10:23
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	2.39		1.0	0.22

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	37		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	50		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Aug-2021 10:23:51 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-513879/1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:45:21

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.296	33759459	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.599	16734440	0.77	1.3327	37.2	37.2	0.2026	0.2026	37.20	
2,3,7,8-TCDF	17.627	199129	0.67	0.9978	1.193	1.193	0.1094	0.1094		
D 13C-2,3,7,8-TCDD	16.063	10422147	0.73	0.8749	35.3	35.3	0.3776	0.3776	35.29	
$ 37Cl4-2,3,7,8-TCDD	16.077	5861410		0.8648	20.1	20.1	0.0638	0.0638	50.19	
2,3,7,8-TCDD	16.077	55715	0.68	1.0570	0.5058	0.5058	0.1084	0.1084		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

786599

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Aug-2021 10:23:51 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-513879/1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:45:21

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.296	16.283	1		14575481	3405725	5651	14127	603		
333.9339	16.296	16.283	1		19183978	4267762	4489	11222	951	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.599	17.613	-1	1.080	7306406	1361111	3621	9052	376		
317.9389	17.613	17.613	0	1.081	9428034	1838509	4668	11670	394	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.627	17.641	-1	1.002	79942	15130	769	1922	20		
305.8987	17.640	17.641	0	1.002	119187	24047	628	1570	38	0.67(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.063	16.050	1	0.986	4380782	989974	5651	14127	175		
333.9339	16.063	16.050	1	0.986	6041365	1466938	4489	11222	327	0.73(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.077	16.063	1	0.987	5861410	1265710	1693	4232	748		
2,3,7,8-TCDD											
319.8965	16.077	16.077	0	1.001	22554	5305	627	1567	8		
321.8936	16.077	16.077	0	1.001	33161	10494	499	1247	21	0.68(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

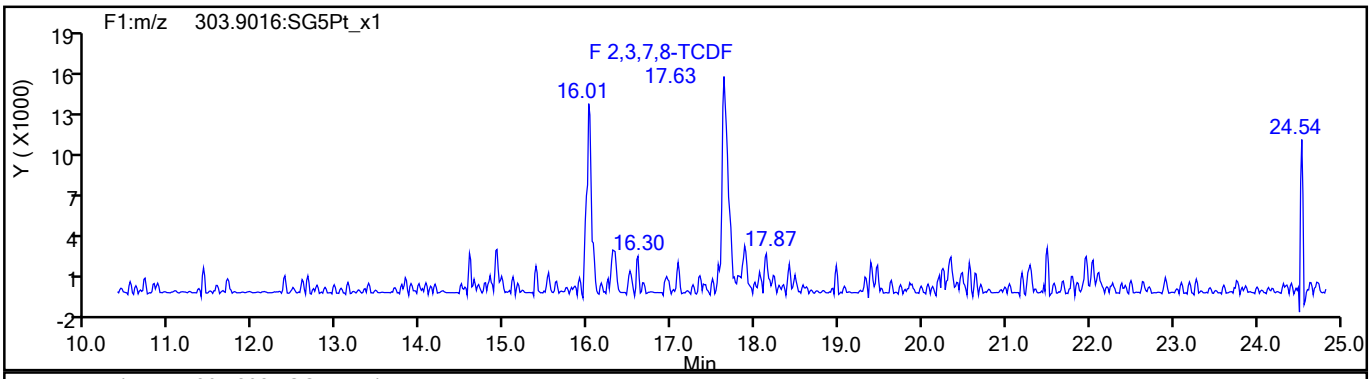

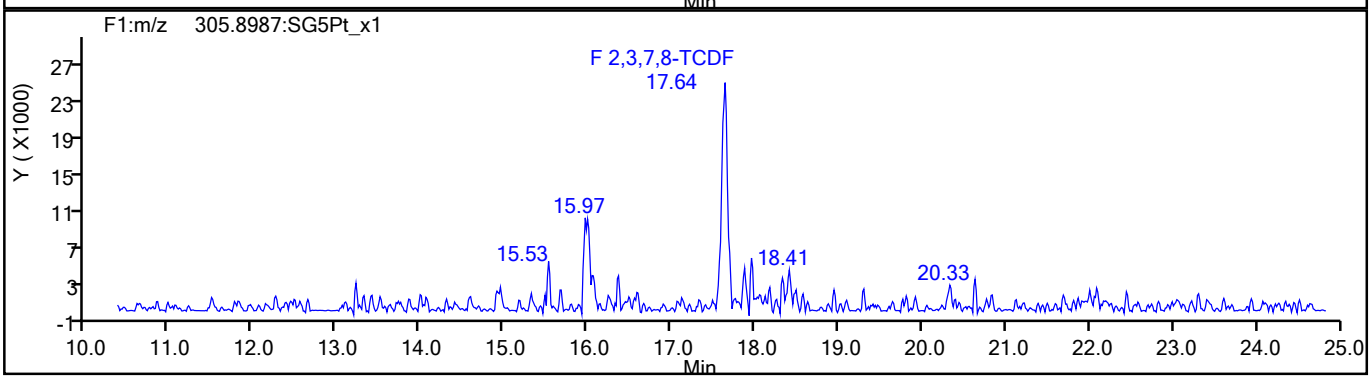

TCDF Standards

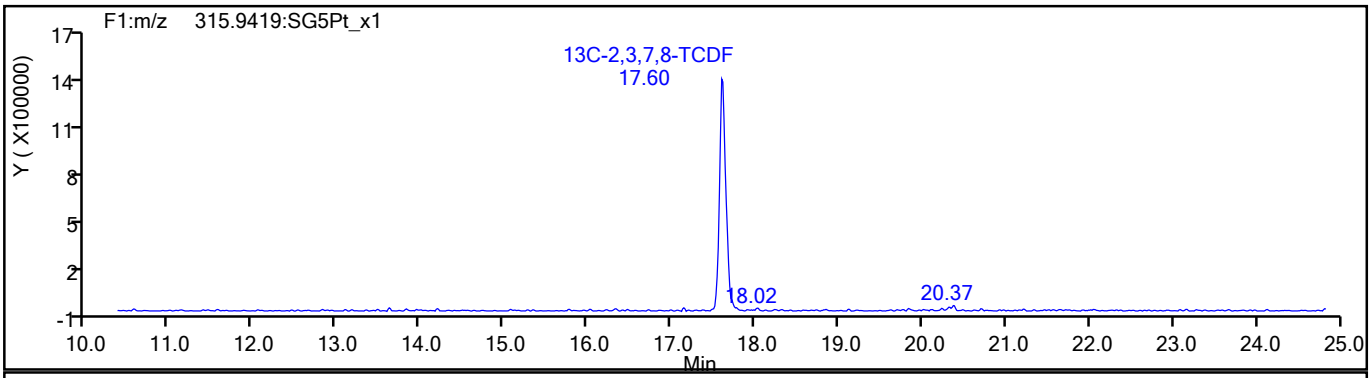

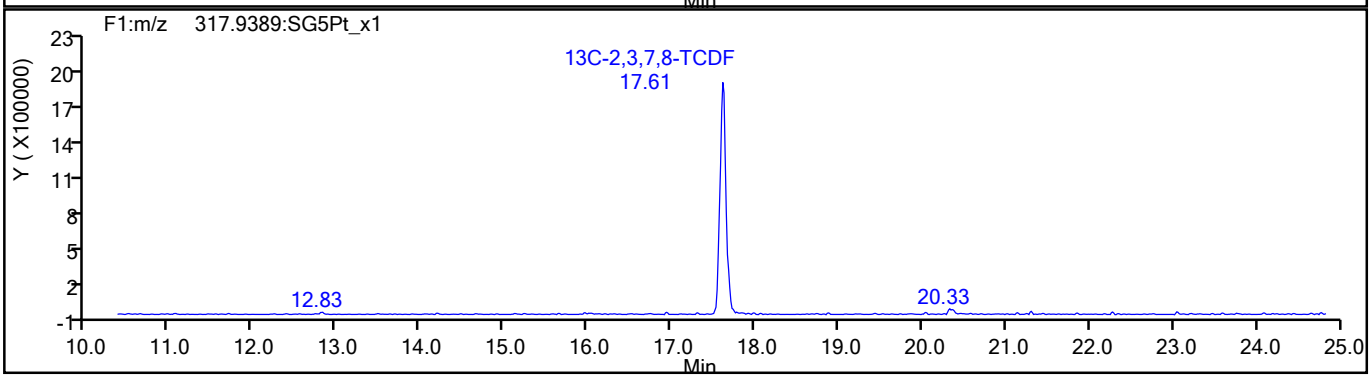

786601

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

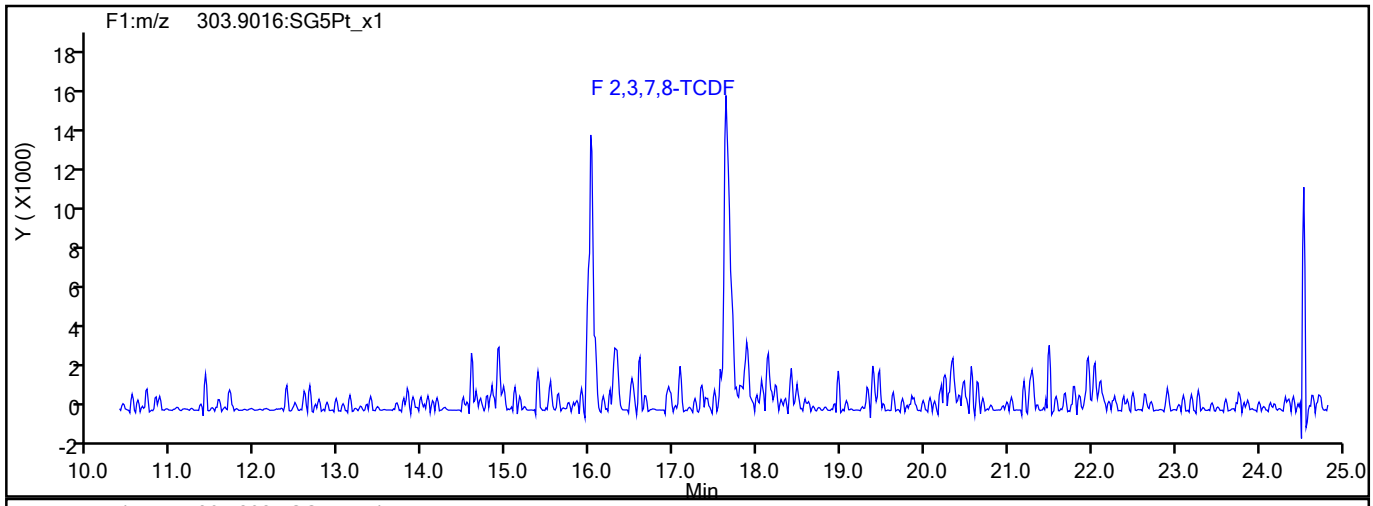

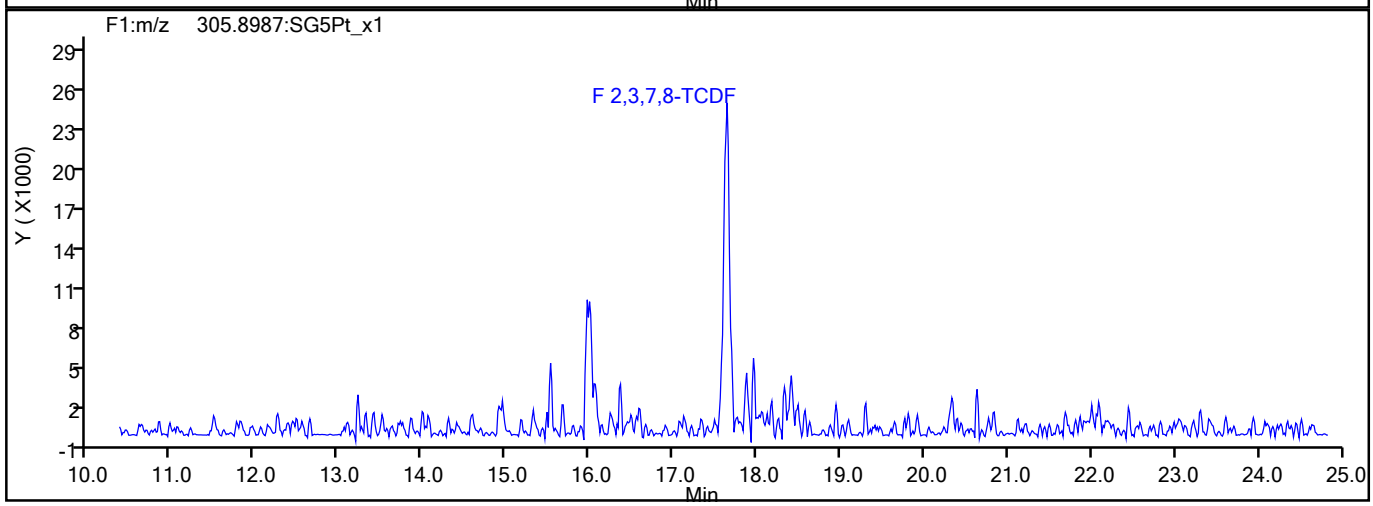

TCDF Interference Mass

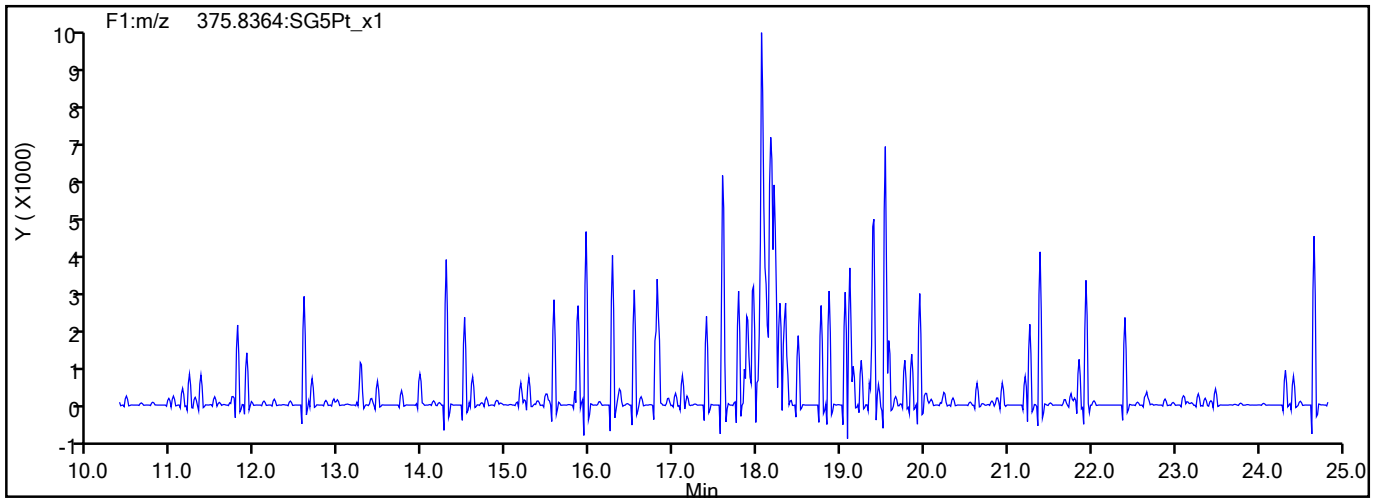

786602

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

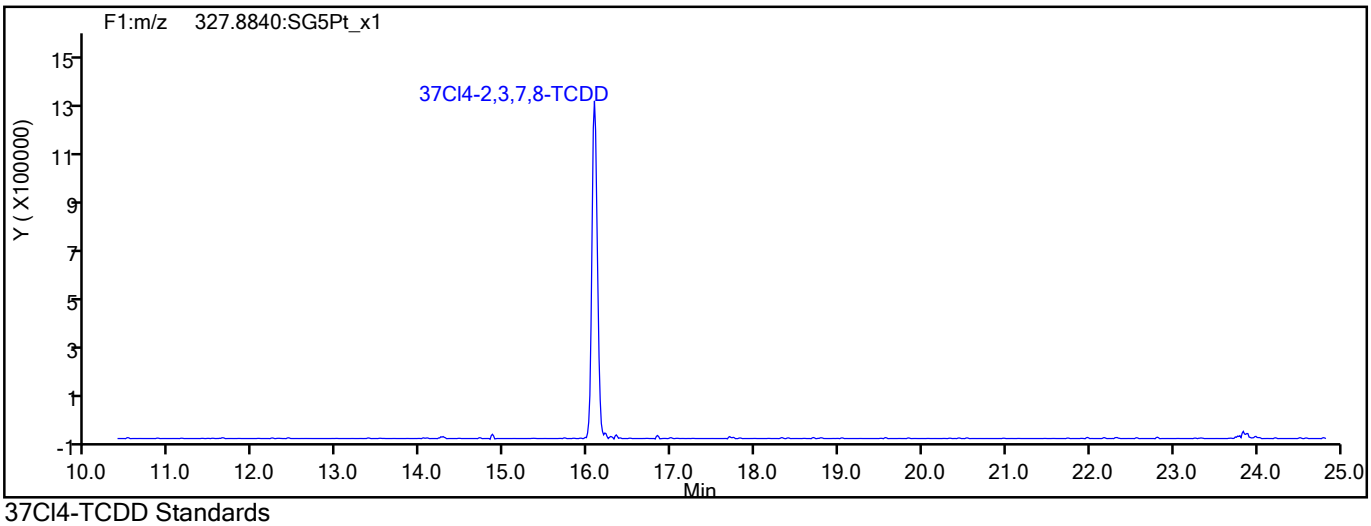

37Cl4-TCDD Standards

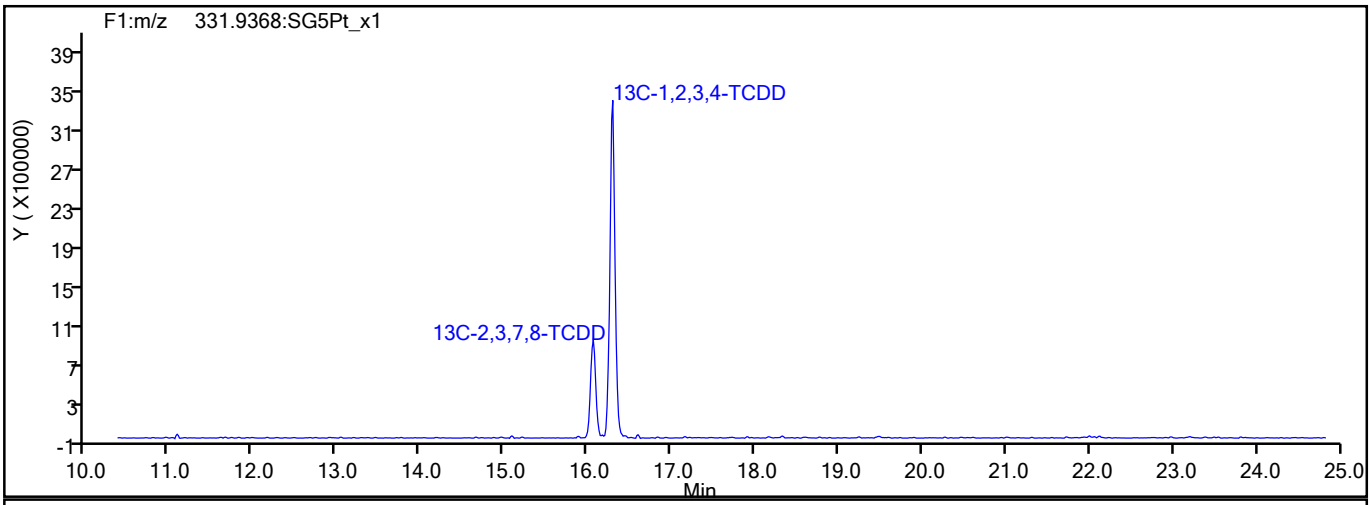

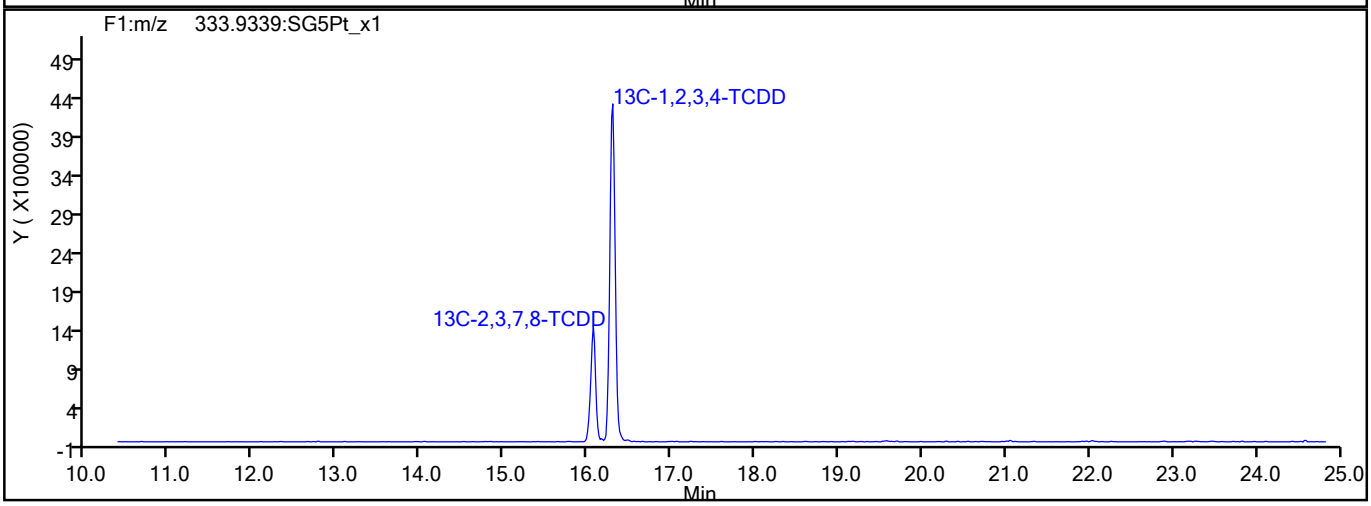

786603

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

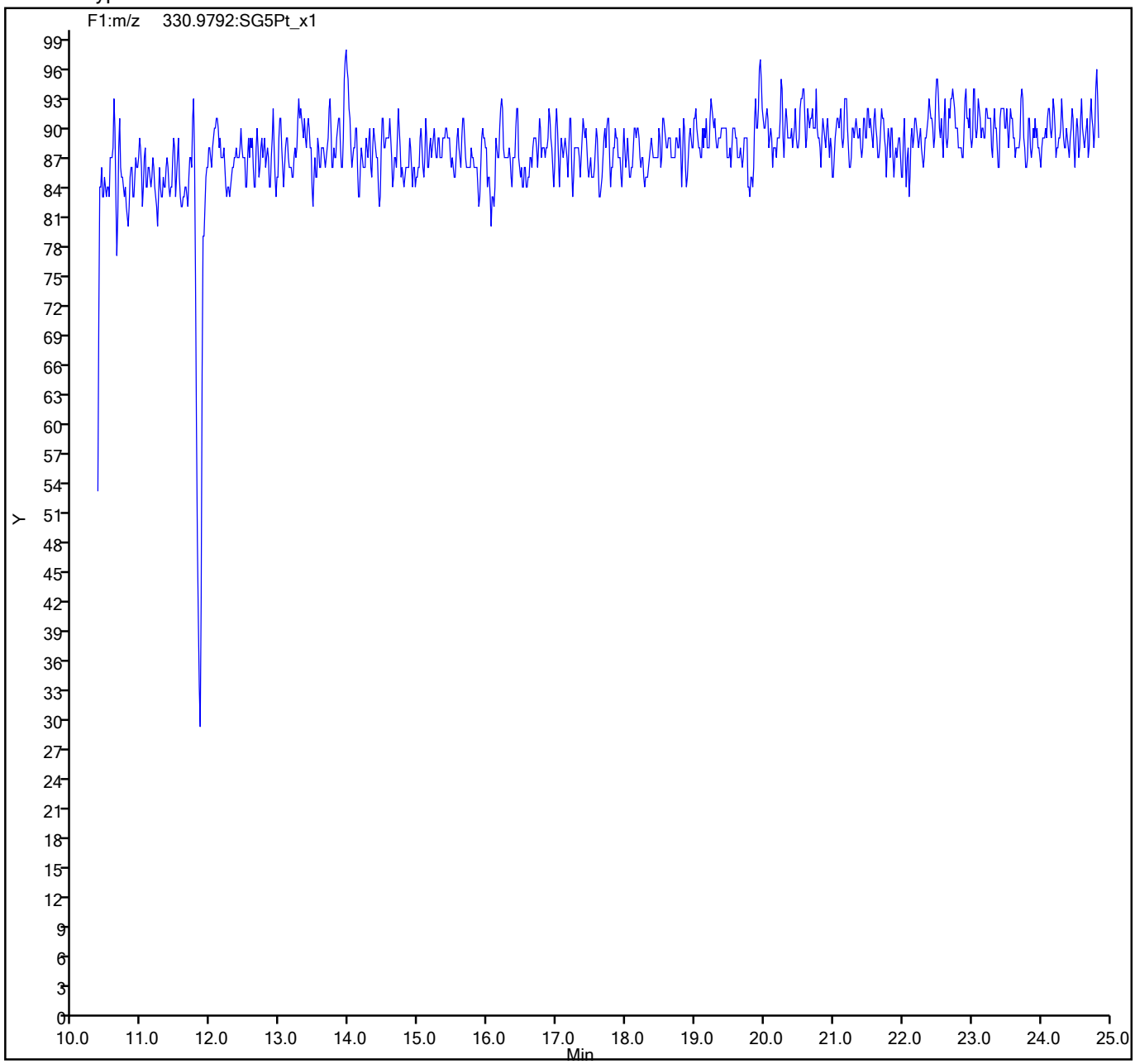

786604

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-513586/2-A
Matrix: Sediment
Lab File ID: 17au21dfs1_6.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10(g)
Date Analyzed: 08/17/2021 17:49
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517196
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	21.3		1.0	0.15
51207-31-9	2,3,7,8-TCDF	21.8		1.0	0.046
40321-76-4	1,2,3,7,8-PeCDD	112		5.0	0.19
57117-41-6	1,2,3,7,8-PeCDF	114		5.0	0.31
57117-31-4	2,3,4,7,8-PeCDF	105		5.0	0.32
39227-28-6	1,2,3,4,7,8-HxCDD	101		5.0	0.22
57653-85-7	1,2,3,6,7,8-HxCDD	111		5.0	0.26
19408-74-3	1,2,3,7,8,9-HxCDD	110		5.0	0.22
70648-26-9	1,2,3,4,7,8-HxCDF	107		5.0	0.41
57117-44-9	1,2,3,6,7,8-HxCDF	112		5.0	0.40
72918-21-9	1,2,3,7,8,9-HxCDF	116		5.0	0.41
60851-34-5	2,3,4,6,7,8-HxCDF	117		5.0	0.41
35822-46-9	1,2,3,4,6,7,8-HpCDD	108		5.0	0.29
67562-39-4	1,2,3,4,6,7,8-HpCDF	112		5.0	0.51
55673-89-7	1,2,3,4,7,8,9-HpCDF	105		5.0	0.48
3268-87-9	OCDD	228		10	0.25
39001-02-0	OCDF	248		10	0.31
41903-57-5	Total TCDD	21.3		1.0	0.15
30402-14-3	Total TCDF	21.8		1.0	0.046
36088-22-9	Total PeCDD	112		5.0	0.19
30402-15-4	Total PeCDF	221		5.0	0.31
34465-46-8	Total HxCDD	322		5.0	0.24
55684-94-1	Total HxCDF	452		5.0	0.41
37871-00-4	Total HpCDD	110		5.0	0.29
38998-75-3	Total HpCDF	217		5.0	0.49

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513586/2-A

Matrix: Sediment Lab File ID: 17au21dfs1_6.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 05:28

Sample wt/vol: 10(g) Date Analyzed: 08/17/2021 17:49

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517196 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		20-175
89059-46-1	13C-2,3,7,8-TCDF	54		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	59		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	56		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	63		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	60		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	67		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	58		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	67		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	63		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	72		20-186
114423-97-1	13C-OCDD	71		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	69		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d
Lims ID: LCS 320-513586/2-A
Client ID:
Sample Type: LCS
Inject. Date: 17-Aug-2021 17:49:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513586/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:09:35 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 19:22:53

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.491	781428	0.79	2.1E+04	100.0	100.0				
2,3,7,8-TCDF	20.555	66994	0.76	1.0802	10.9	10.9	0.0232	0.0232	109	
D 13C-2,3,7,8-TCDF	20.520	568874	0.80	1.3459	54.1	54.1	0.1036	0.1036	54.09	
A Non-2,3,7,8-sub-TCDF	19.916						0.0232	0.1455		RQU
S Total TCDF					10.9	10.9	0.0232	0.0232		
D 13C-2,3,7,8-TCDD	21.860	395704	0.85	0.9317	54.4	54.4	0.2364	0.2364	54.35	
2,3,7,8-TCDD	21.894	45397	0.79	1.0753	10.7	10.7	0.0774	0.0774	107	
$ 37Cl4-2,3,7,8-TCDD	21.903	217136		1.0083	27.6	27.6	0.0138	0.0138	68.90	
A Non-2,3,7,8-sub-TCDD	20.750						0.0774	0.0774		
S Total TCDD					10.7	10.7	0.0774	0.0774		
D 13C-1,2,3,7,8-PeCDF	27.335	501609	1.68	1.1405	56.3	56.3	0.2160	0.2160	56.28	
1,2,3,7,8-PeCDF	27.368	301701	1.58	1.0543	57.1	57.1	0.1540	0.1540	114	
D 13C-2,3,4,7,8-PeCDF	28.868	556312	1.55	1.1253	63.3	63.3	0.2189	0.2189	63.26	
2,3,4,7,8-PeCDF	28.893	295657	1.58	1.0079	52.7	52.7	0.1609	0.1609	105	
A F1 PeCDFs	24.676						0.006051	0.006051		
A Non-2,3,7,8-sub-PeCDF	28.167	3852	1.43	1.0311	0.7063	0.7063	0.1573	0.7063	0.00	
S Total PeCDF					110.5	110.5	0.1574	0.1574		
D 13C-1,2,3,7,8-PeCDD	29.685	328312	1.73	0.7165	58.6	58.6	0.0778	0.0778	58.64	
1,2,3,7,8-PeCDD	29.710	192359	1.58	1.0465	56.0	56.0	0.0962	0.0962	112	
A Non-2,3,7,8-sub-PeCDD	28.556						0.0962	0.0962		
S Total PeCDD					56.0	56.0	0.0962	0.0962		
D 13C-1,2,3,4,7,8-HxCDF	34.995	518980	0.54	0.9648	66.5	66.5	0.2256	0.2256	66.55	
1,2,3,4,7,8-HxCDF	35.012	317201	1.24	1.1474	53.3	53.3	0.2039	0.2039	107	
D 13C-1,2,3,6,7,8-HxCDF	35.147	504596	0.52	1.0708	58.3	58.3	0.2032	0.2032	58.30	
1,2,3,6,7,8-HxCDF	35.163	344779	1.28	1.2178	56.1	56.1	0.2020	0.2020	112	
D 13C-2,3,4,6,7,8-HxCDF	35.964	451934	0.54	1.0413	53.7	53.7	0.2090	0.2090	53.70	
2,3,4,6,7,8-HxCDF	35.981	321341	1.25	1.2145	58.5	58.5	0.2027	0.2027	117	
D 13C-1,2,3,7,8,9-HxCDF	36.849	420297	0.54	0.9731	53.4	53.4	0.2236	0.2236	53.44	
1,2,3,7,8,9-HxCDF	36.865	303602	1.26	1.2401	58.2	58.2	0.2065	0.2065	116	
A Non-2,3,7,8-sub-HxCDF	35.074						0.2036	0.2036		
S Total HxCDF					226.2	226.2	0.2038	0.2038		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.663	808260	1.30	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.174	370303	1.28	0.7587	60.4	60.4	0.1486	0.1486	60.39	
1,2,3,4,7,8-HxCDD	36.191	199314	1.29	1.0608	50.7	50.7	0.1112	0.1112	101	
D 13C-1,2,3,6,7,8-HxCDD	36.301	375488	1.28	0.8593	54.1	54.1	0.1312	0.1312	54.07	
1,2,3,6,7,8-HxCDD	36.309	206353	1.27	0.9933	55.3	55.3	0.1309	0.1309	111	
1,2,3,7,8,9-HxCDD	36.672	226911	1.24	1.1094	54.8	54.8	0.1115	0.1115	110	
A Non-2,3,7,8-sub-HxCDD	35.432						0.1173	0.1173		
S Total HxCDD					160.9	160.9	0.1178	0.1178		
D 13C-1,2,3,4,6,7,8-HpCDF	38.662	374575	0.44	0.7359	63.0	63.0	0.2745	0.2745	62.97	
1,2,3,4,6,7,8-HpCDF	38.679	302379	1.04	1.4421	56.0	56.0	0.2544	0.2544	112	
1,2,3,4,7,8,9-HpCDF	39.926	272343	1.03	1.3092	52.5	52.5	0.2383	0.2383	105	
D 13C-1,2,3,4,7,8,9-HpCDF	39.918	396261	0.47	0.6854	71.5	71.5	0.2947	0.2947	71.53	
A Non-2,3,7,8-sub-HpCDF	39.277						0.2451	0.2451		
S Total HpCDF					108.5	108.5	0.2463	0.2463		
D 13C-1,2,3,4,6,7,8-HpCDD	39.606	363095	1.10	0.6745	66.6	66.6	0.1365	0.1365	66.60	
1,2,3,4,6,7,8-HpCDD	39.614	206552	1.03	1.0503	54.2	54.2	0.1430	0.1430	108	
A Non-2,3,7,8-sub-HpCDD	39.277	2982	1.01	1.0503	0.7819	0.7819	0.1430	0.7819	0.00	
S Total HpCDD					54.9	54.9	0.1430	0.1430		
D 13C-OCDD	42.111	621791	0.91	0.5446	141.3	141.3	0.2018	0.2018	70.63	
OCDF	42.203	507114	0.92	1.3168	123.9	123.9	0.1527	0.1527	124	
OCDD	42.119	376368	0.89	1.0620	114.0	114.0	0.1262	0.1262	114	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d
Lims ID: LCS 320-513586/2-A
Client ID:
Sample Type: LCS
Inject. Date: 17-Aug-2021 17:49:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513586/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 12:09:35 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1619

First Level Reviewer: stephensk Date: 17-Aug-2021 19:22:53

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.491	21.483	0		345437	48384	25	62	1935		
333.9338	21.499	21.483	1		435991	59201	70	175	846	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.555	20.482	4	1.002	28976	4280	3	7	1427		
305.8987	20.546	20.482	4	1.001	38018	5339	5	12	1068	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.520	20.594	-4	0.955	253688	35207	40	100	880		
317.9389	20.503	20.594	-5	0.954	315186	44524	20	50	2226	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											U
303.9016	18.958	19.916	-57	0.924	113	44	3	7	15		
305.8987	18.915	19.916	-60	0.922	130	46	5	12	9	0.87(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.860	21.790	4	1.017	181844	25019	25	62	1001		
333.9338	21.860	21.790	4	1.017	213860	31474	70	175	450	0.85(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.894	21.825	4	1.002	20103	2896	5	12	579		
321.8936	21.885	21.825	4	1.001	25294	3228	14	35	231	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.903	21.905	0	1.019	217136	27685	6	15	4614		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.750						5	12			
321.8936	20.750						14	35			
13C-1,2,3,7,8-PeCDF											
351.9000	27.335	27.343	-1	1.272	314240	51089	53	132	964		
353.8970	27.335	27.343	-1	1.272	187369	29006	53	132	547	1.68(1.32-1.78)	

786609

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.368	27.368	0	1.001	184883	27670	28	70	988		
341.8567	27.377	27.368	1	1.002	116818	17194	24	60	716	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.868	28.867	0	1.343	337792	50728	53	132	957		
353.8970	28.851	28.867	-1	1.343	218520	29455	53	132	556	1.55(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.893	28.884	1	1.001	181094	26198	28	70	936		
341.8567	28.893	28.884	1	1.001	114563	15264	24	60	636	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.676						1	2			
341.8567	24.676						1	2			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.950	28.167	-13	1.023	2268	309	28	70	11		
341.8567	27.950	28.167	-13	1.023	1584	237	24	60	10	1.43(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.685	29.667	1	1.381	207955	29249	18	45	1625		
369.8919	29.668	29.667	0	1.381	120357	17448	6	15	2908	1.73(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.710	29.692	1	1.001	117826	15707	10	25	1571		
357.8516	29.710	29.692	1	1.001	74533	10483	9	22	1165	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.556						10	25			
357.8516	28.556						9	22			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.995	34.974	1	0.954	182167	37932	50	125	759		
385.8610	34.995	34.974	1	0.954	336813	65518	106	265	618	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.012	35.000	1	1.000	175404	35496	51	127	696		
375.8178	35.012	35.000	1	1.000	141797	28810	46	115	626	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.147	35.134	1	0.959	173057	33255	50	125	665		
385.8610	35.147	35.134	1	0.959	331539	65113	106	265	614	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.163	35.151	1	1.000	193669	35743	51	127	701		
375.8178	35.163	35.151	1	1.000	151110	27401	46	115	596	1.28(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.964	35.951	1	0.981	158326	33846	50	125	677		
385.8610	35.972	35.951	1	0.981	293608	64464	106	265	608	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.981	35.968	1	1.000	178371	37689	51	127	739		
375.8178	35.981	35.968	1	1.000	142970	29993	46	115	652	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.849	36.843	0	1.005	147959	32965	50	125	659		
385.8610	36.857	36.843	1	1.005	272338	61538	106	265	581	0.54(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	36.865	36.852	1	1.000	169544	38440	51	127	754		
375.8178	36.865	36.852	1	1.000	134058	29629	46	115	644	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.074						51	127			
375.8178	35.074						46	115			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.663	36.641	1		456380	101107	56	140	1805		
403.8529	36.663	36.641	1		351880	78100	25	62	3124	1.30(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.174	36.161	1	0.987	208027	48736	56	140	870		
403.8529	36.174	36.161	1	0.987	162276	37765	25	62	1511	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.191	36.178	1	1.000	112420	24753	24	60	1031		
391.8127	36.183	36.178	0	1.000	86894	19685	17	42	1158	1.29(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.301	36.279	1	0.990	211074	44321	56	140	791		
403.8529	36.292	36.279	1	0.990	164414	34129	25	62	1365	1.28(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.309	36.296	1	1.000	115636	24833	24	60	1035		
391.8127	36.309	36.296	1	1.000	90717	19079	17	42	1122	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.672	36.658	1	1.014	125718	28435	24	60	1185		
391.8127	36.672	36.658	1	1.014	101193	23432	17	42	1378	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.432						24	60			
391.8127	35.432						17	42			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.662	38.647	1	1.055	114724	29183	61	152	478		
419.8220	38.662	38.647	1	1.055	259851	63486	84	210	756	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.679	38.654	1	1.000	154442	40275	70	175	575		
409.7788	38.679	38.654	1	1.000	147937	37501	66	165	568	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.926	39.900	2	1.000	138266	38599	70	175	551		
409.7788	39.926	39.900	2	1.000	134077	37292	66	165	565	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.918	39.901	1	1.089	127445	35018	61	152	574		
419.8220	39.918	39.901	1	1.089	268816	73983	84	210	881	0.47(0.37-0.51)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.277						70	175			
409.7788	39.277						66	165			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.606	39.590	1	1.080	190429	52166	37	92	1410		
437.8140	39.606	39.590	1	1.080	172666	51054	29	72	1760	1.10(0.88-1.20)	

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.614	39.597	1	1.000	104986	29398	34	85	865		
425.7737	39.614	39.597	1	1.000	101566	28626	28	70	1022	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.982	39.277	-18	0.984	1500	459	34	85	14		
425.7737	38.982	39.277	-18	0.984	1482	509	28	70	18	1.01(0.88-1.20)	
13C-OCDD											
469.7780	42.111	42.094	1	1.149	296333	71223	40	100	1781		
471.7750	42.111	42.094	1	1.149	325458	77952	39	97	1999	0.91(0.76-1.02)	
OCDF											
441.7428	42.203	42.187	1	1.002	242906	58135	26	65	2236		
443.7399	42.203	42.187	1	1.002	264208	61787	34	85	1817	0.92(0.76-1.02)	
OCDD											
457.7377	42.119	42.103	1	1.000	177310	43889	19	47	2310		
459.7348	42.119	42.103	1	1.000	199058	47902	21	52	2281	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

U - Marked Undetected

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Lims ID:	LCS 320-513586/2-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:49:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	5

Non-2,3,7,8-sub-TCDF, RT: 19.916

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	568874	79731

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	568874	79731

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.958	113	44	130	46	0.0395	0.87	
19.842	389	66	786	257	0.1912	0.49	RQ
19.842	389	66	505	85	0.1455		Empc Correction
20.847	174	115	289	72	0.0753	0.60	RQ
20.847	174	115	225	149	0.0649		Empc Correction
20.941	55	26	93	39	0.0241	0.59	RQ
20.941	55	26	71	33	0.0205		Empc Correction
21.336	192	40	250	57	0.0719	0.77	

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d
Lims ID: LCS 320-513586/2-A
Client ID:
Inject. Date: 17-Aug-2021 17:49:00 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517196 Lims Sample ID: 5

Non-2,3,7,8-sub-PeCDF, RT: 28.167

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	501609	80095
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	556312	80183

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	528960	80139

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.950	2268	309	1584	237	0.7063	1.43	
Signal Totals:							
	2268	309	1584	237			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3852	546				1.43	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7063 = (3852 * 100.000) / (528960 * 1.031)

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Lims ID:	LCS 320-513586/2-A		
Client ID:			
Inject. Date:	17-Aug-2021 17:49:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517196	Lims Sample ID:	5

Non-2,3,7,8-sub-HpCDD, RT: 39.277

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	363095	103220

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	363095	103220

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.982	1500	459	1482	509	0.7819	1.01	
Signal Totals:							
	1500	459	1482	509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2982	968				1.01	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.7819 = (2982 * 100.000) / (363095 * 1.050)

Report Date: 19-Aug-2021 12:09:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

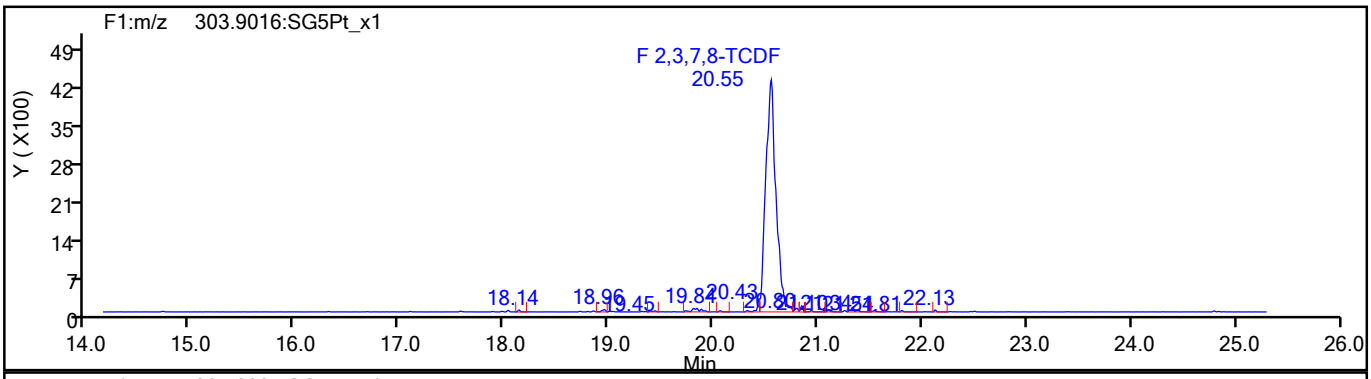

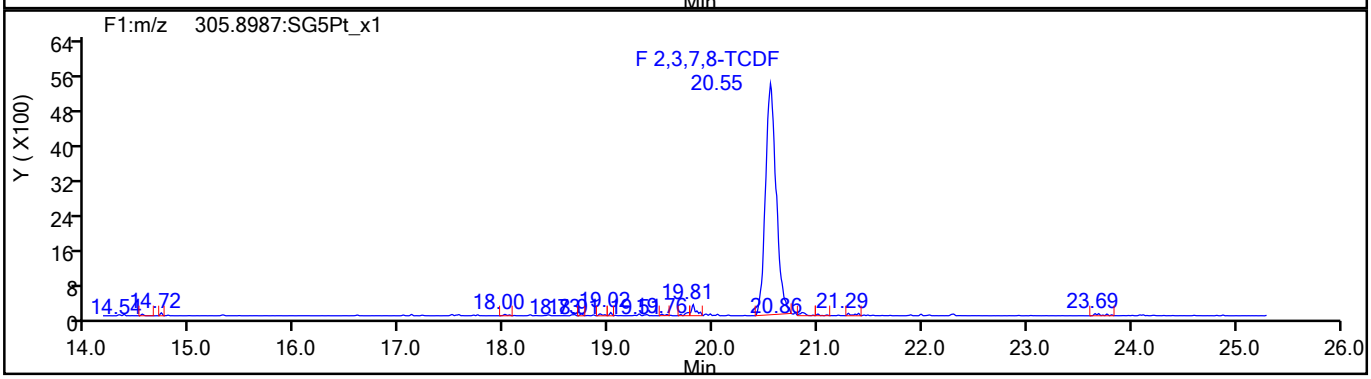

TCDF Standards

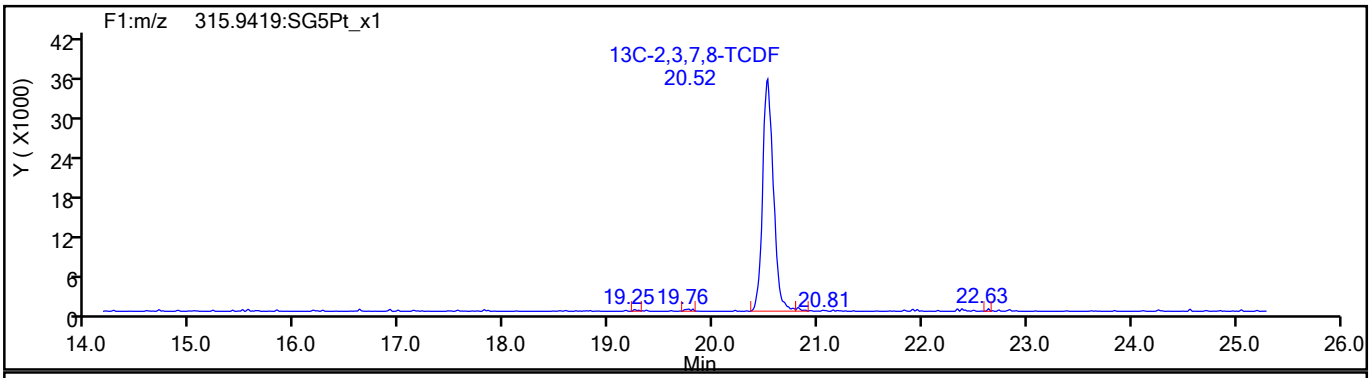

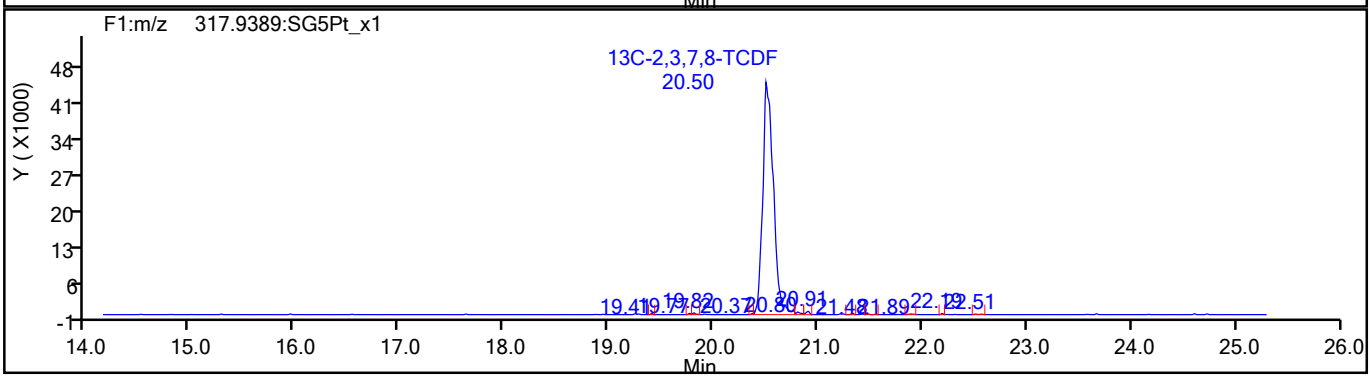

786616

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

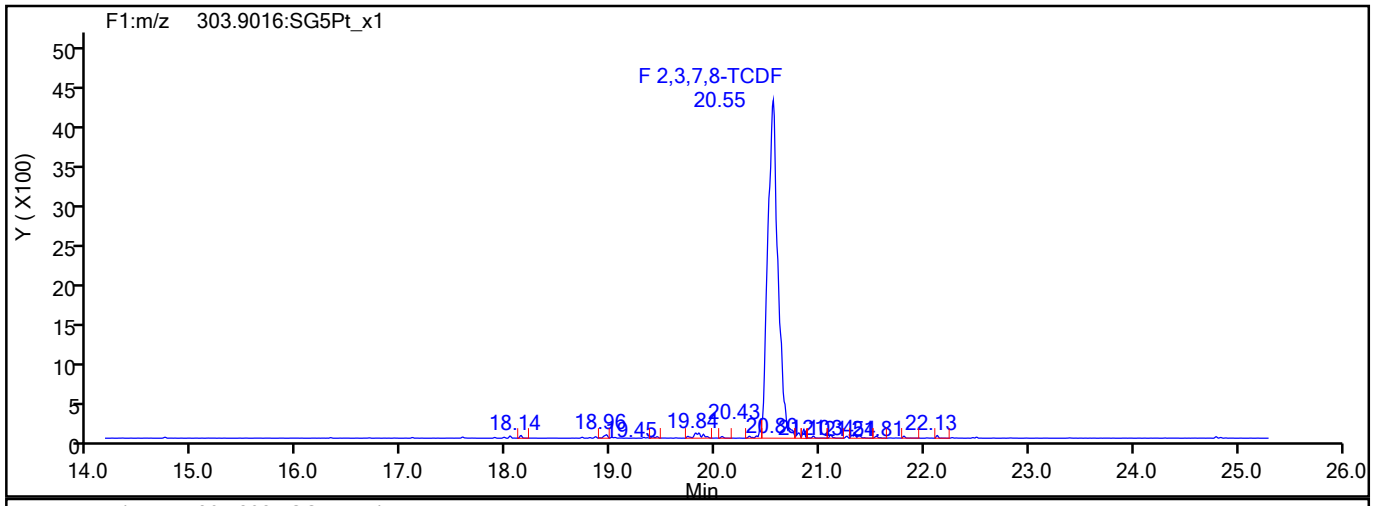

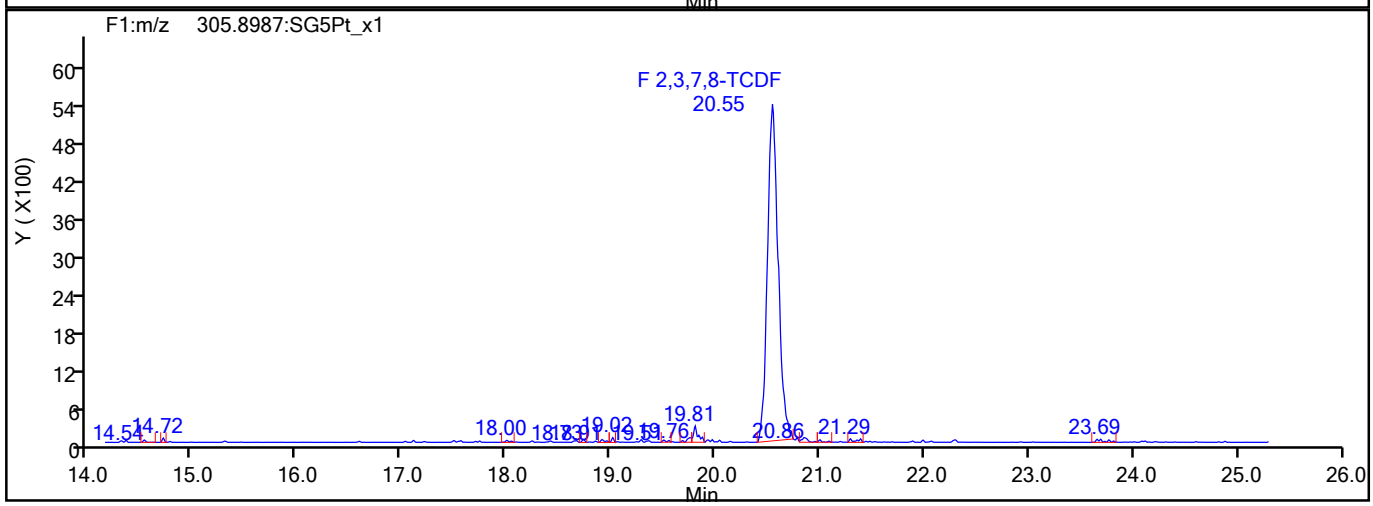

TCDF Interference Mass

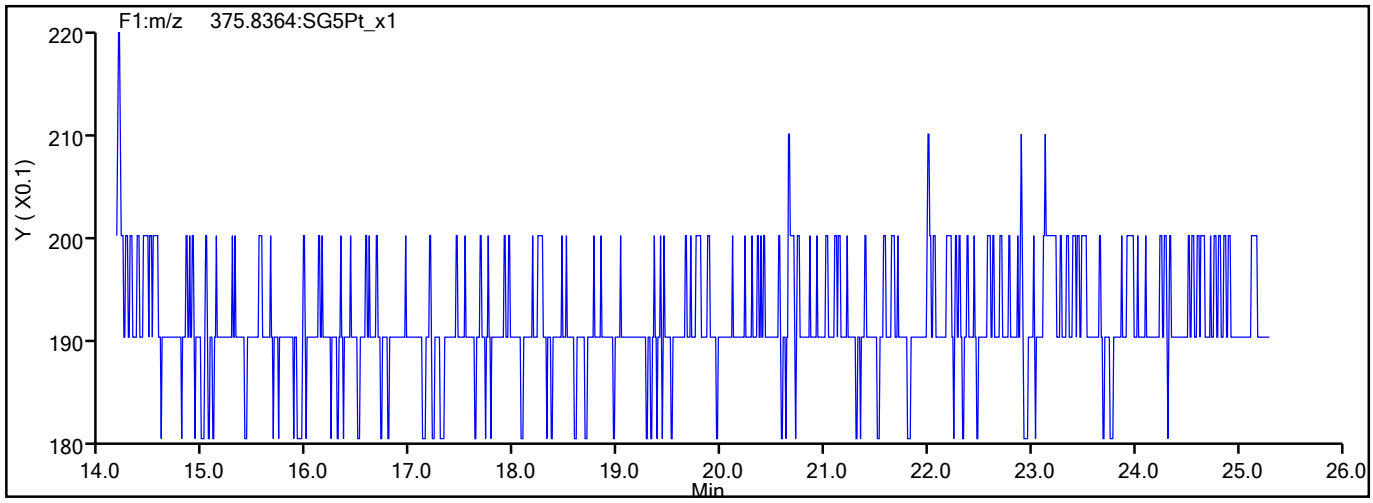

786617

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

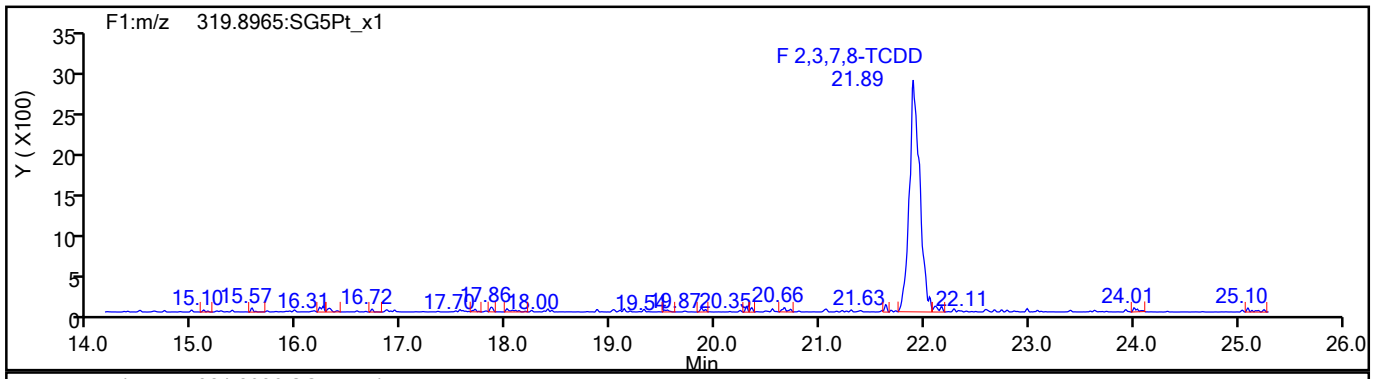

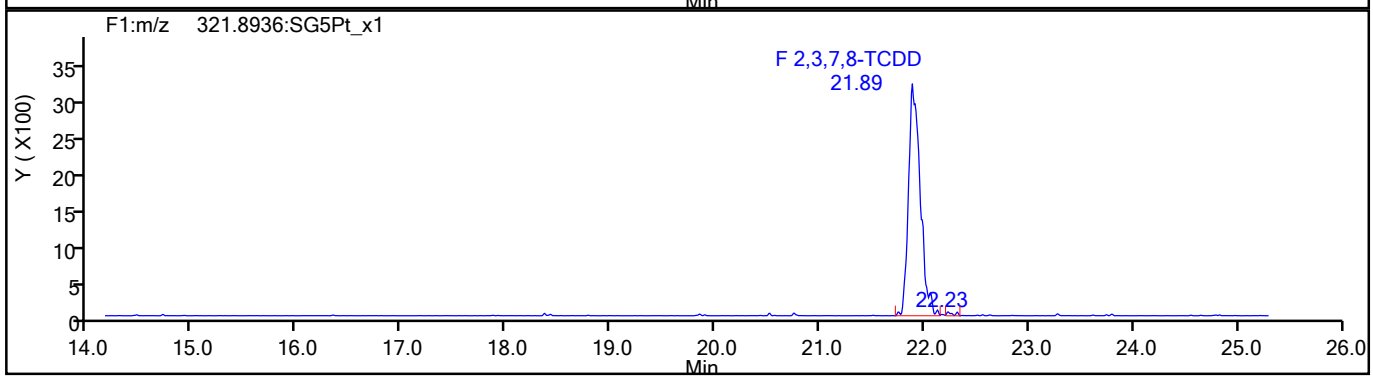

TCDD Standards

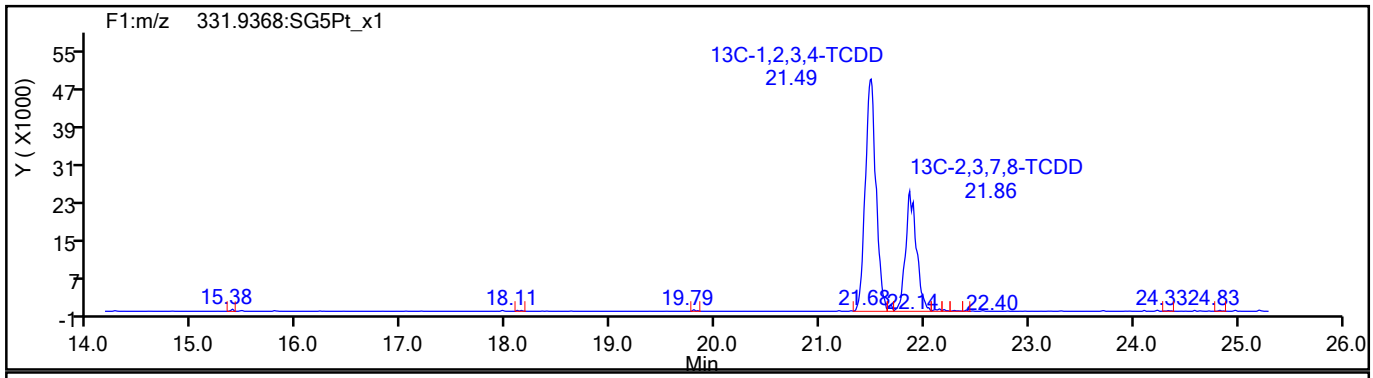

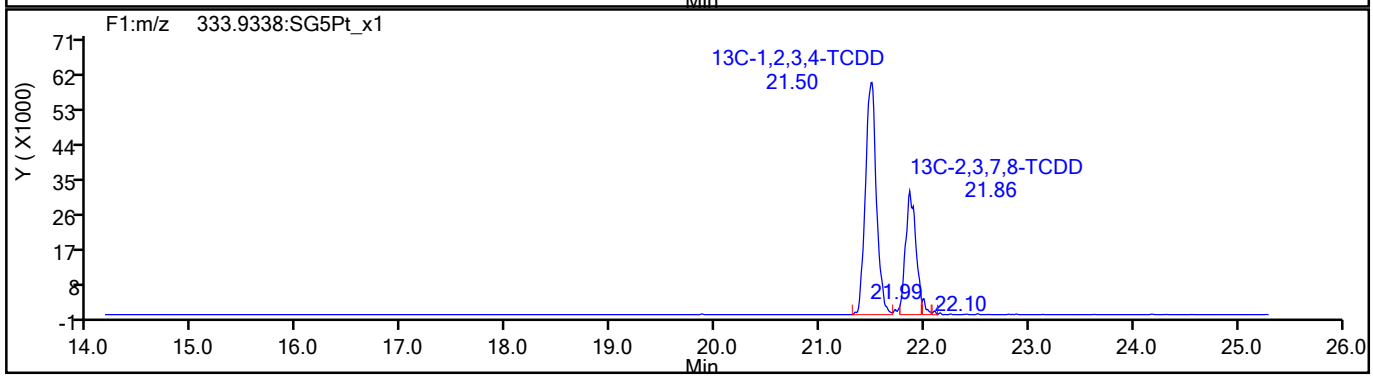

786618

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

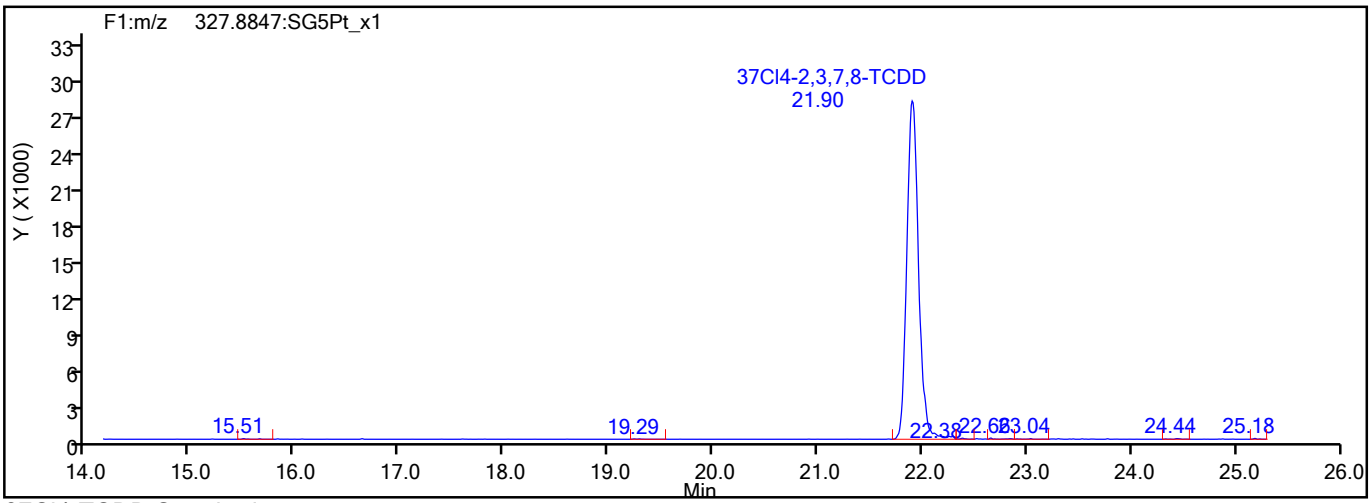

37Cl4-TCDD Standards

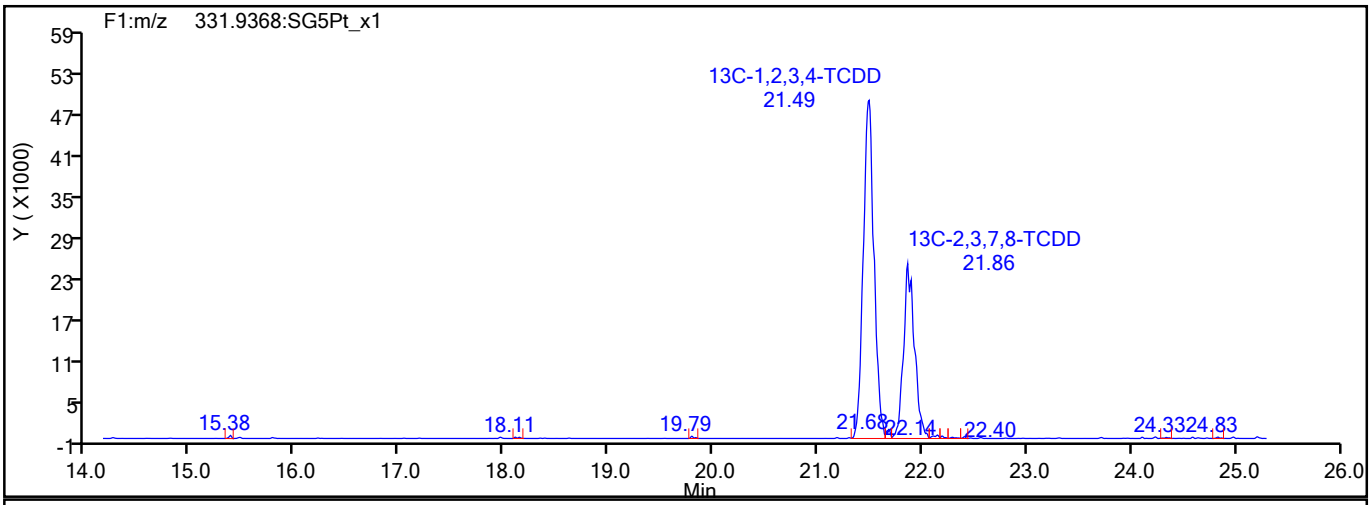

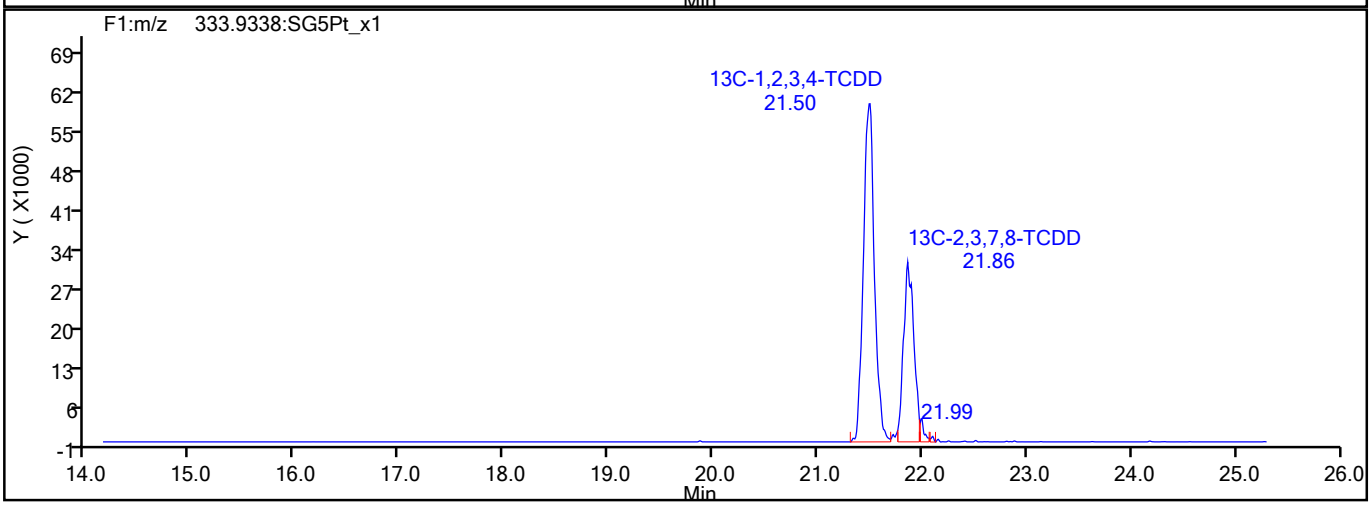

786619

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

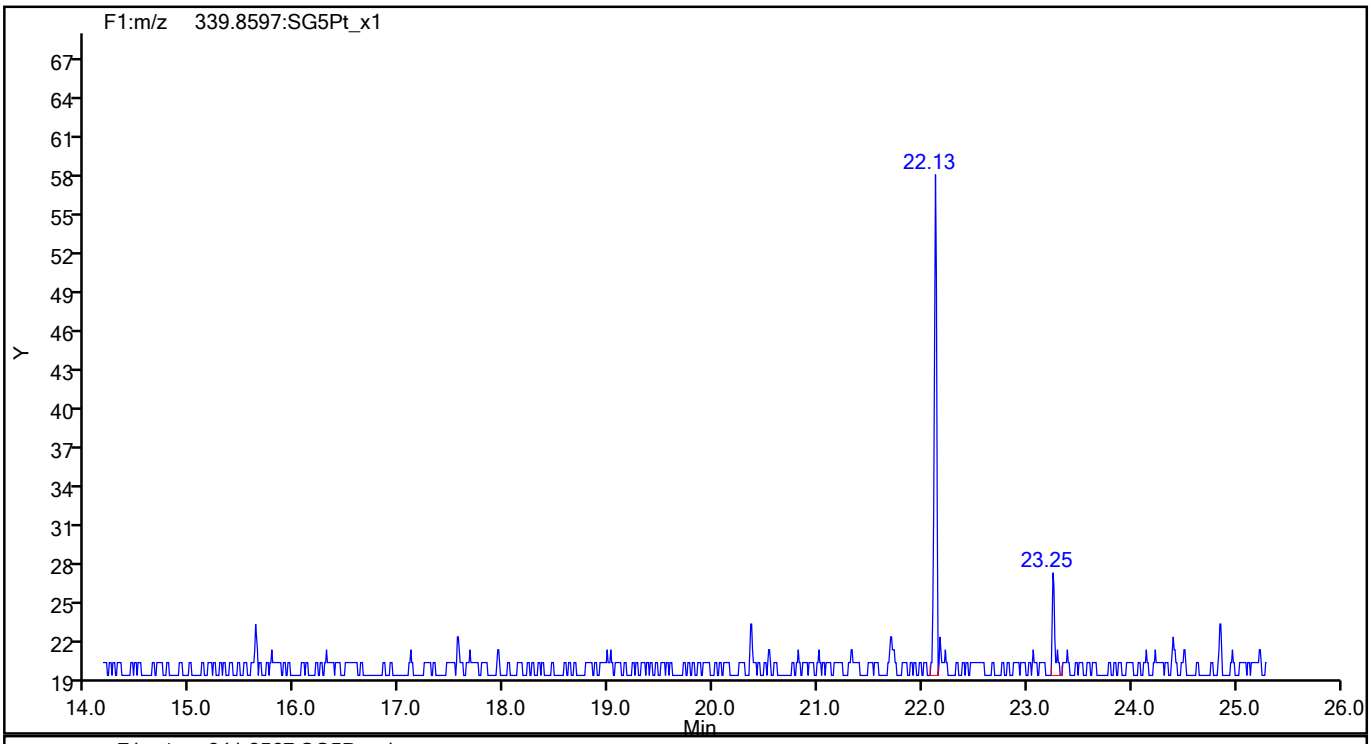

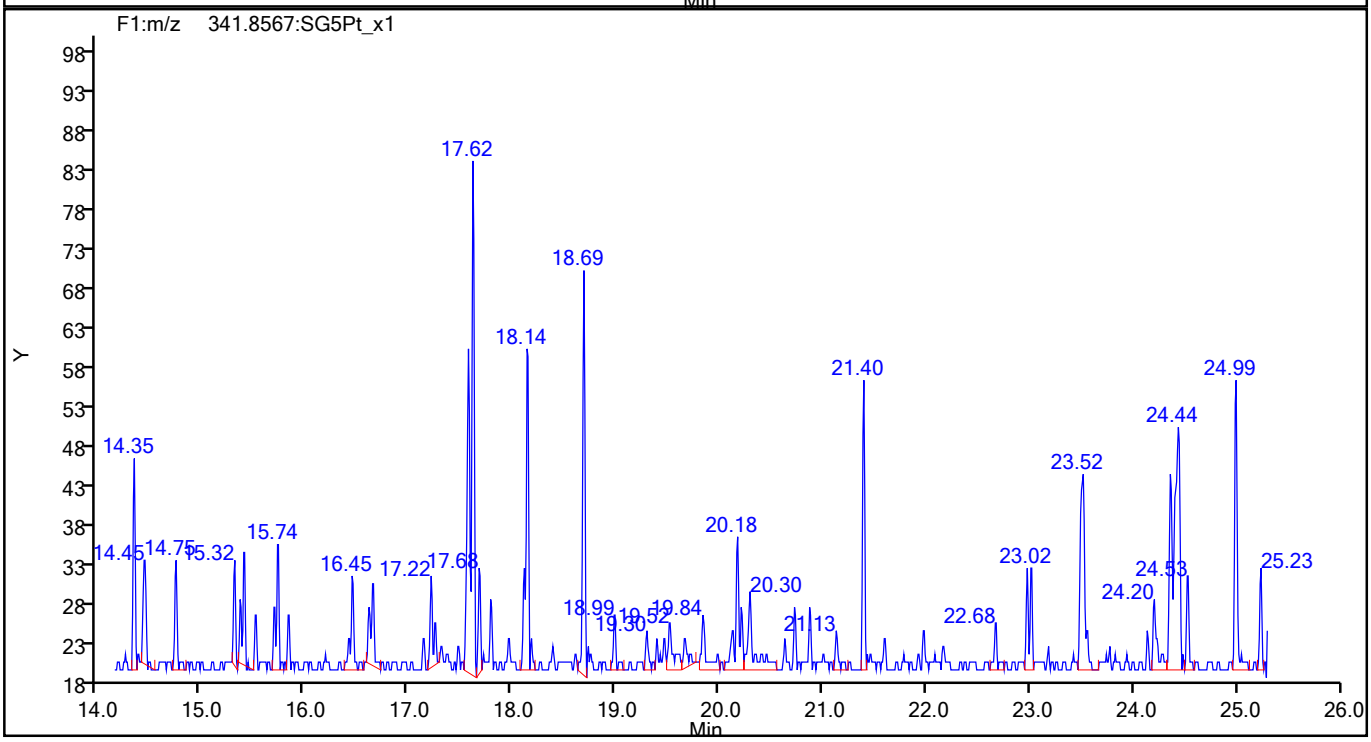

786620

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

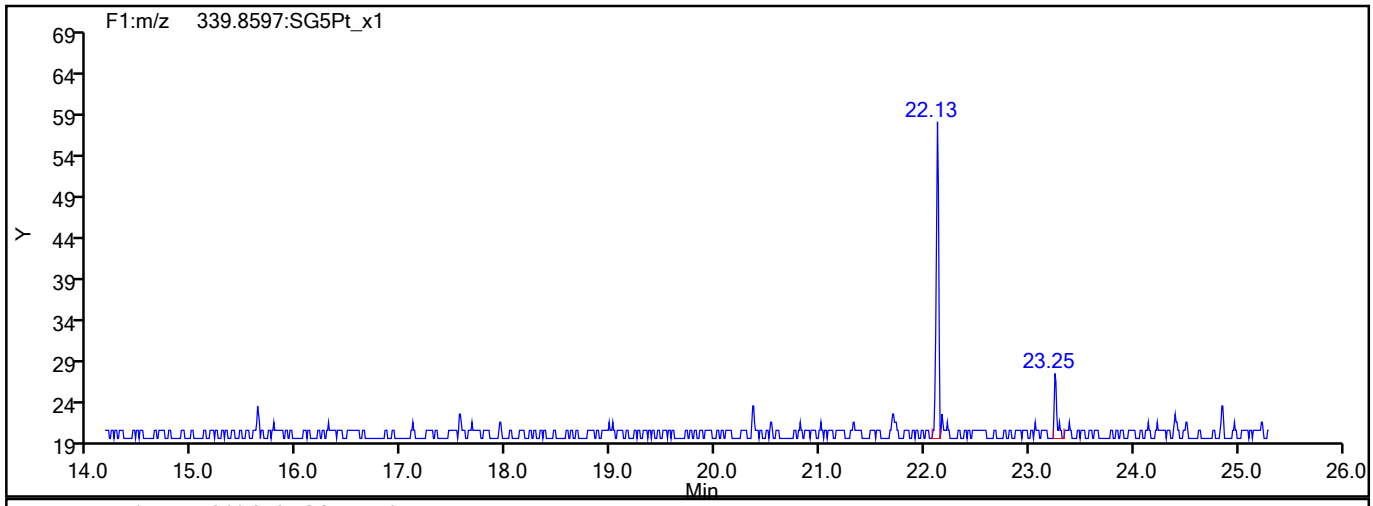

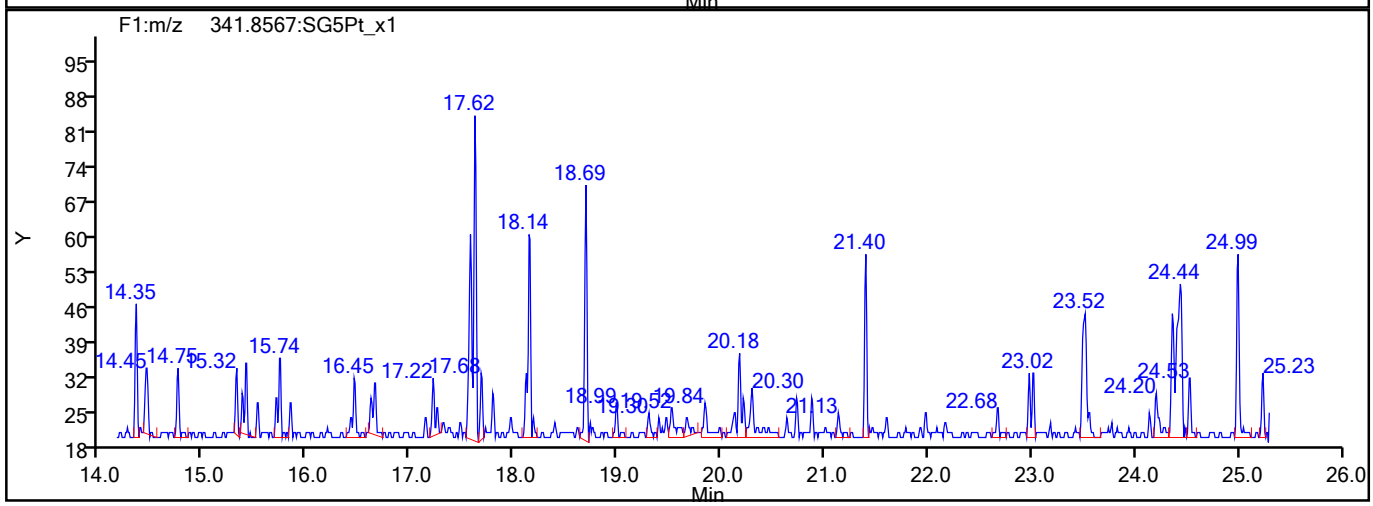

F1 PeCDFs Interference Mass

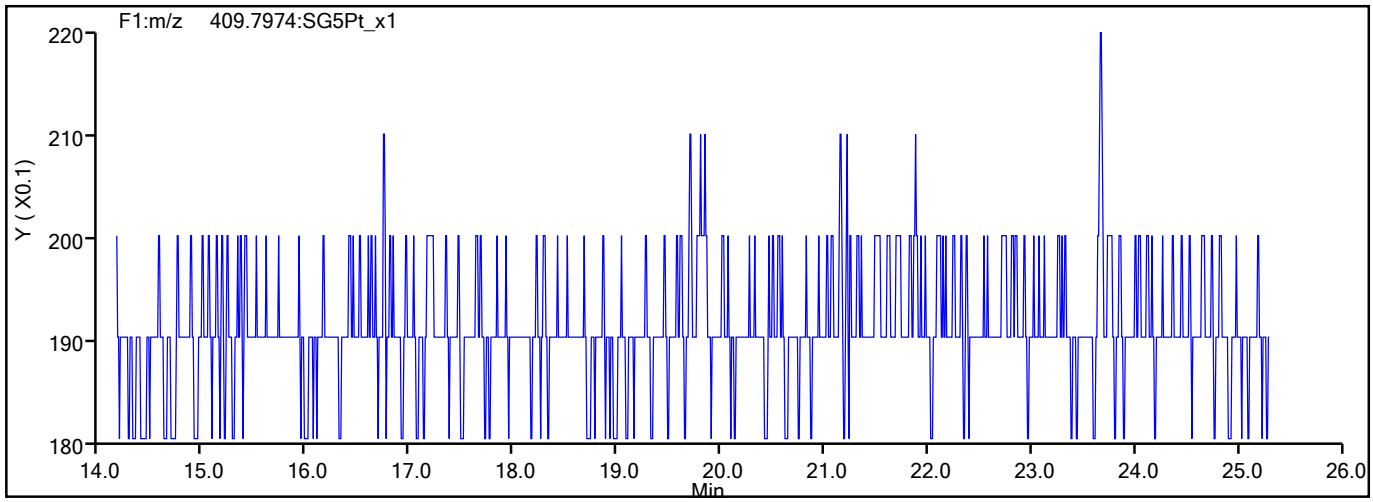

786621

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

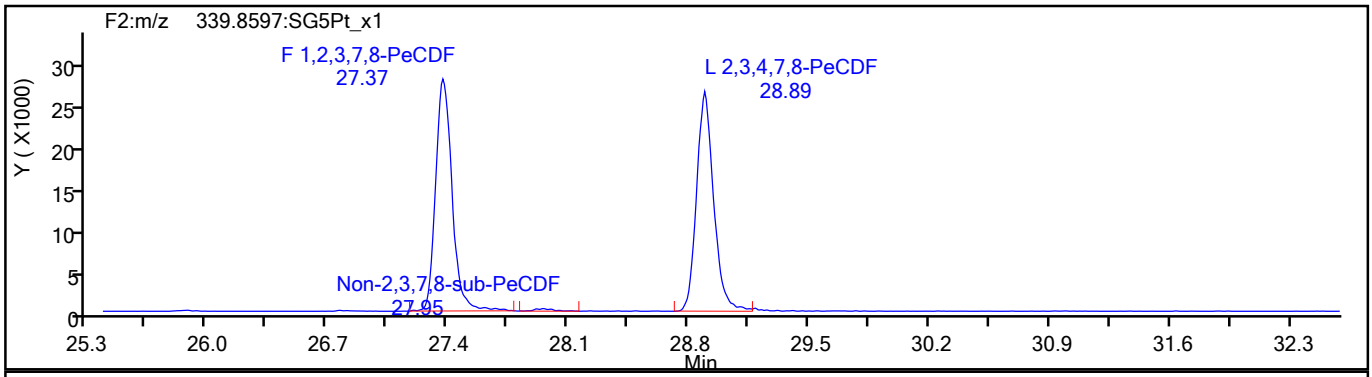

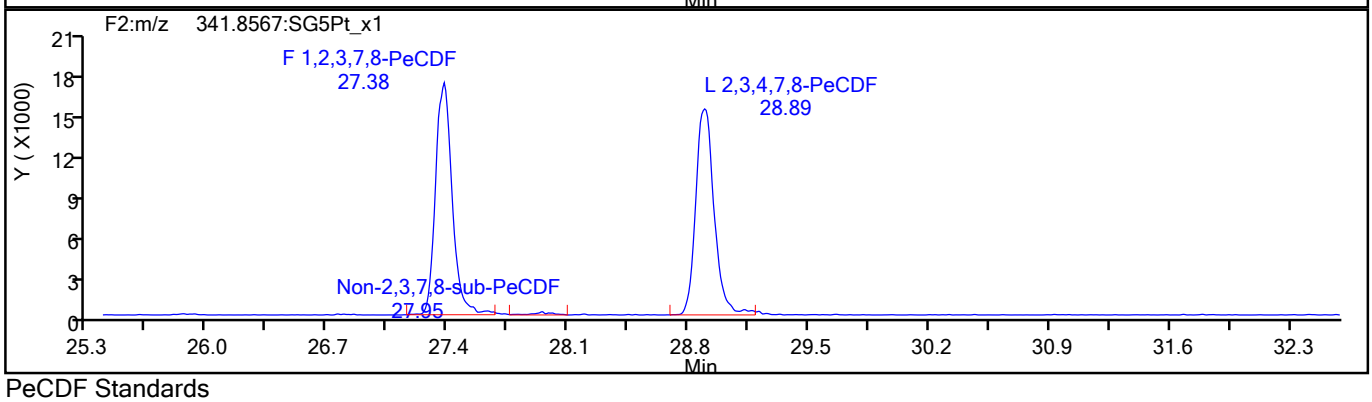

PeCDF Standards

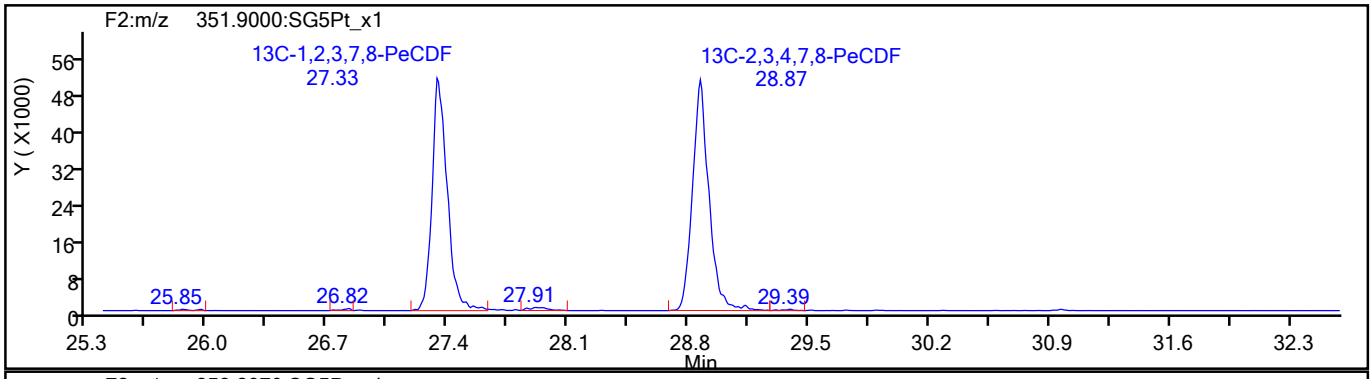

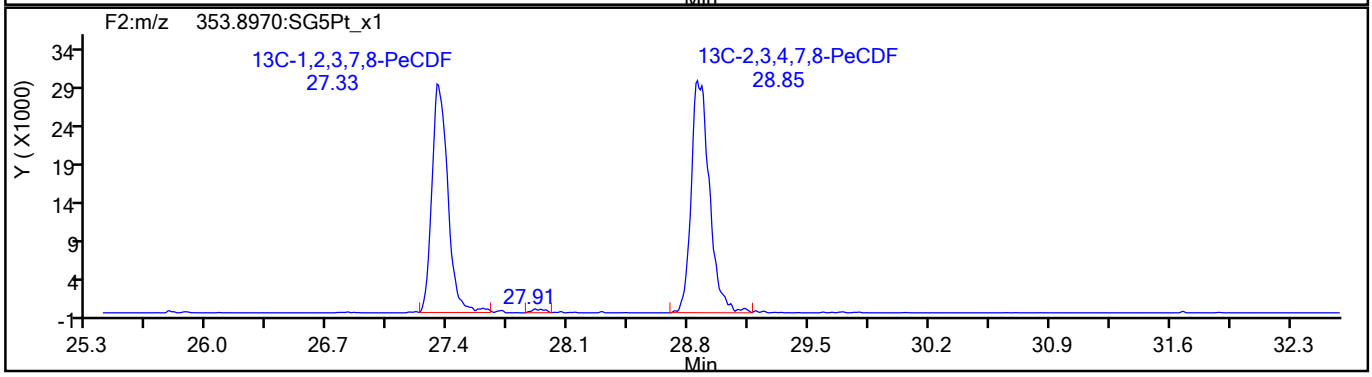

786622

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

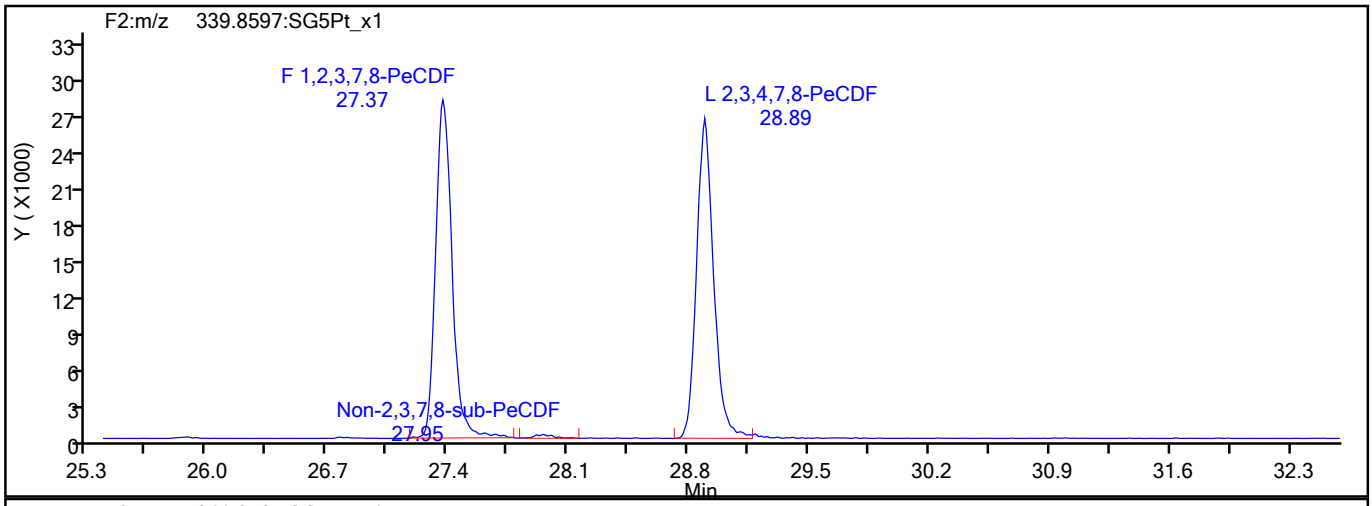

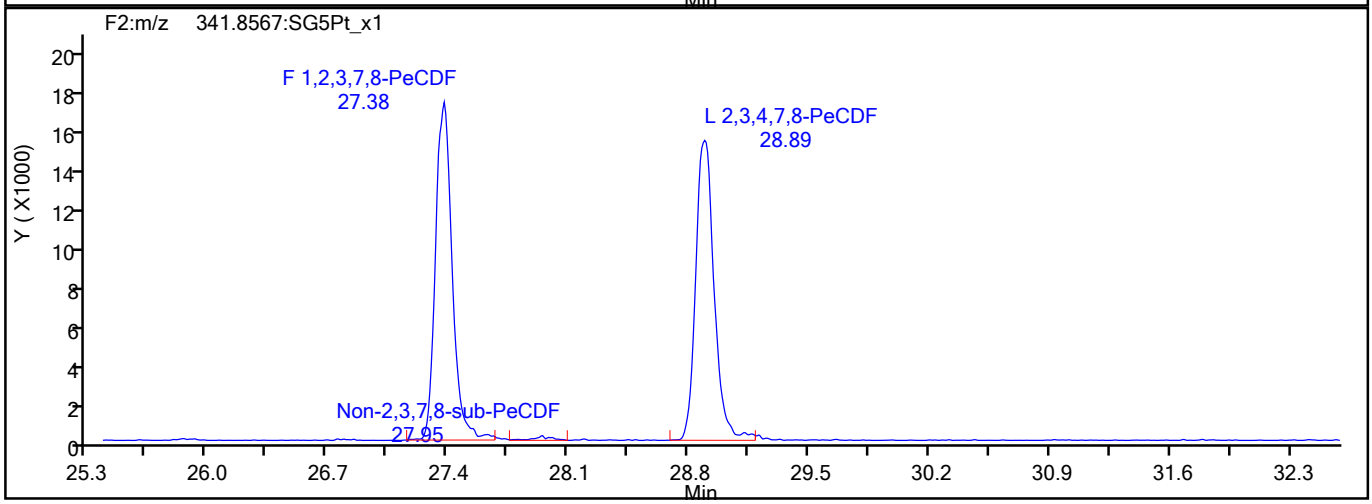

PeCDF Interference Mass

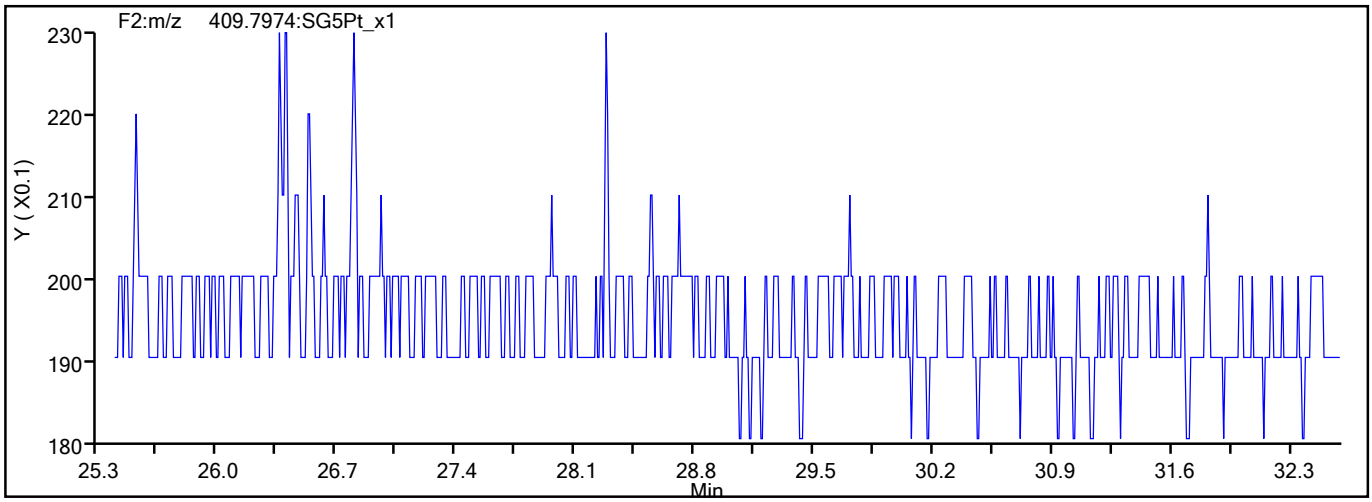

786623

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

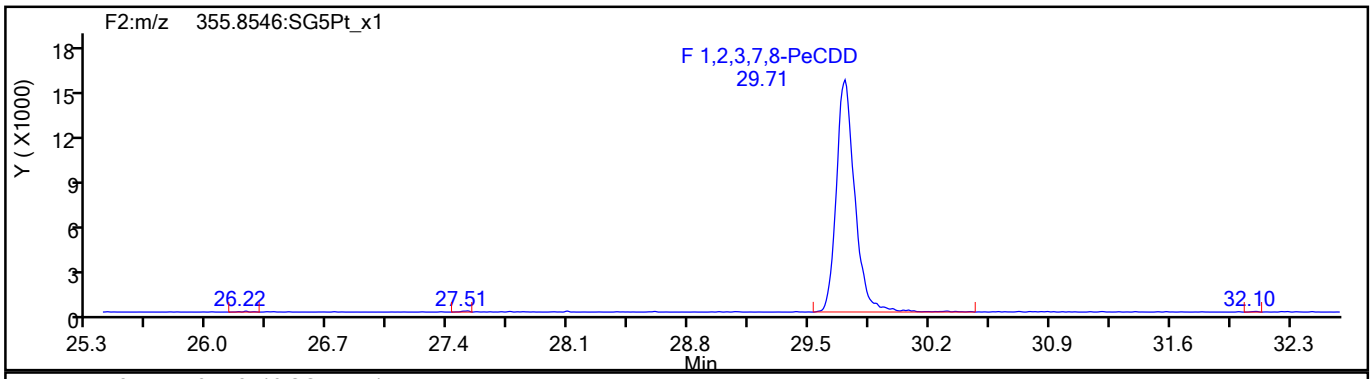

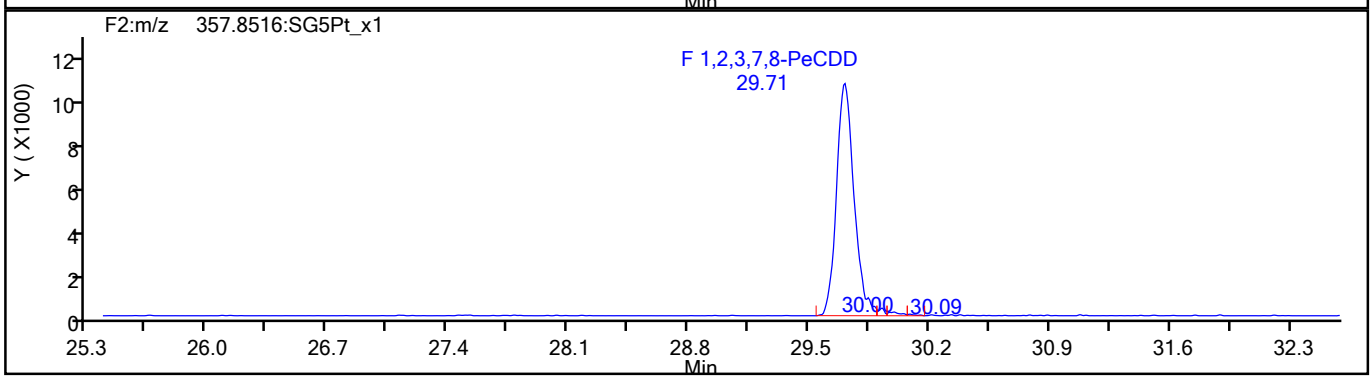

PeCDD Standards

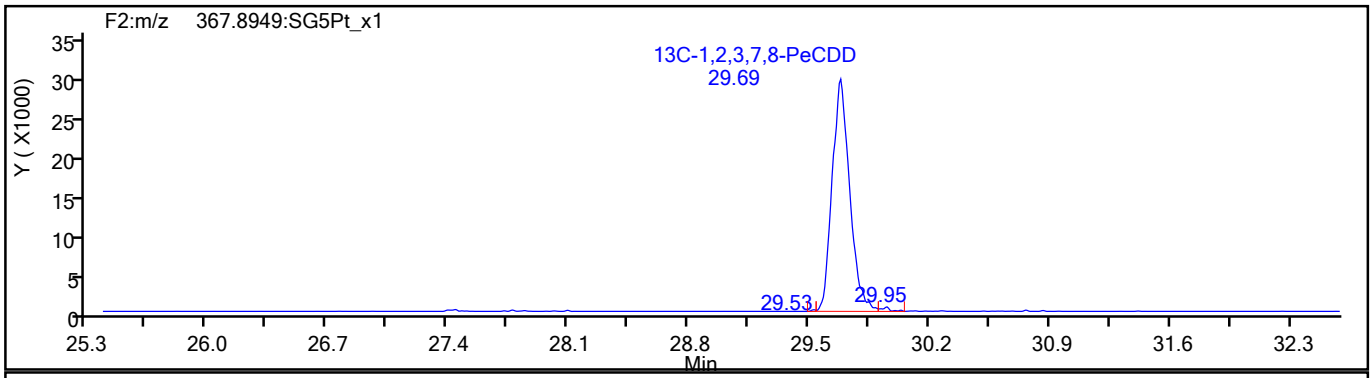

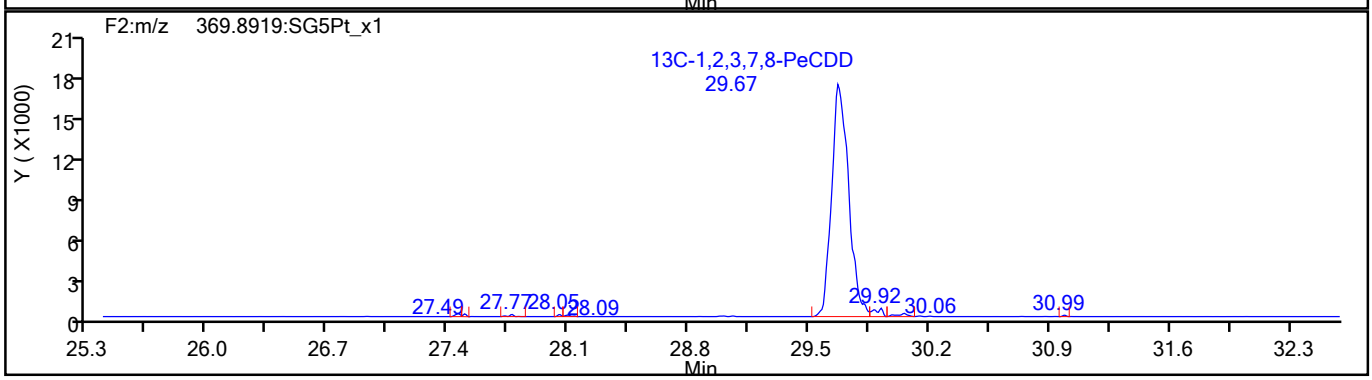

786624

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

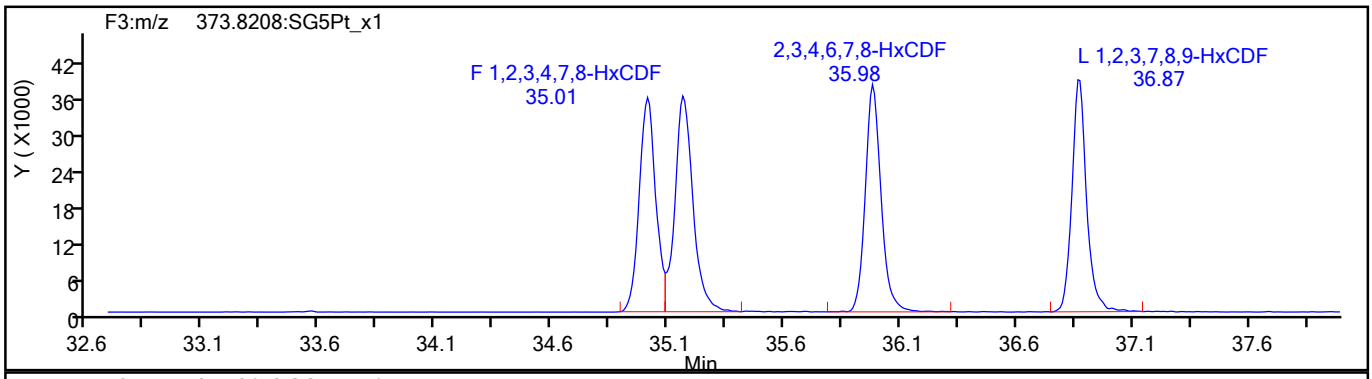

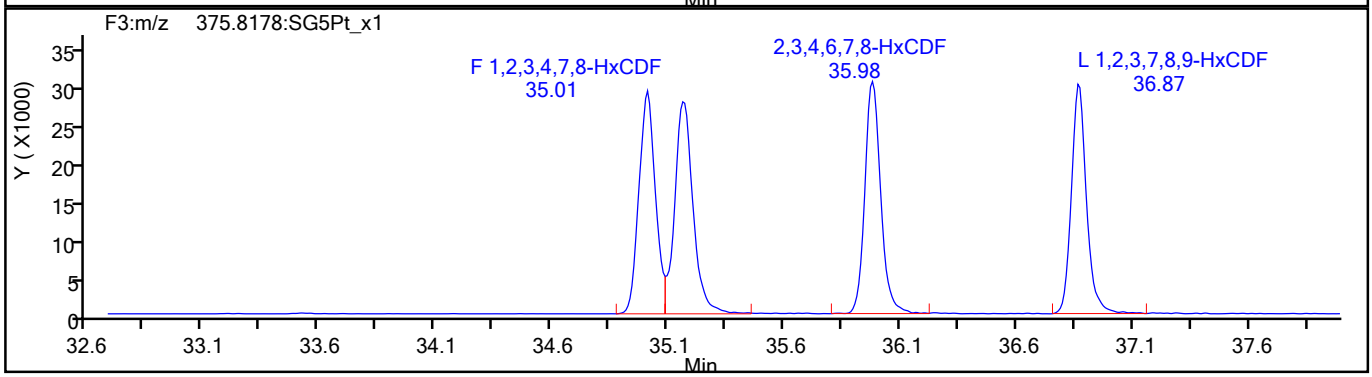

HxCDF Standards

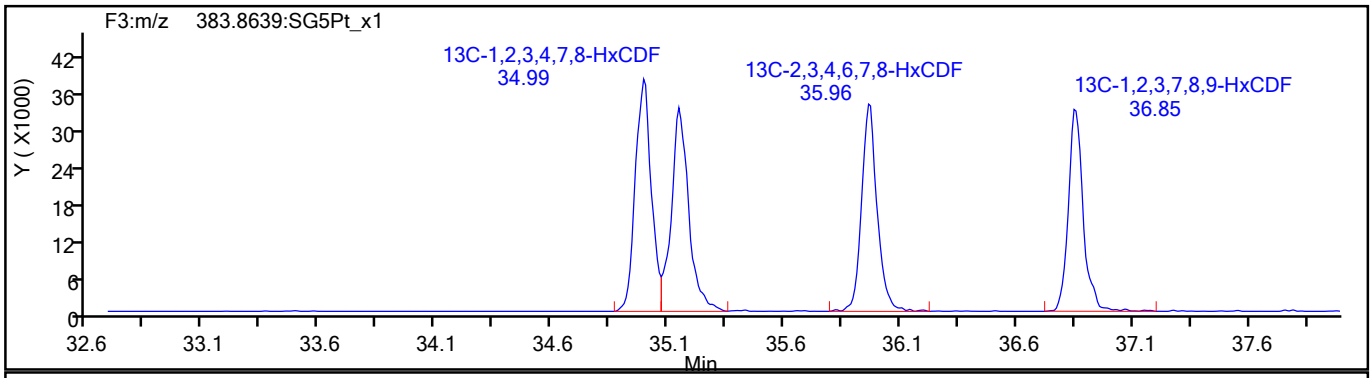

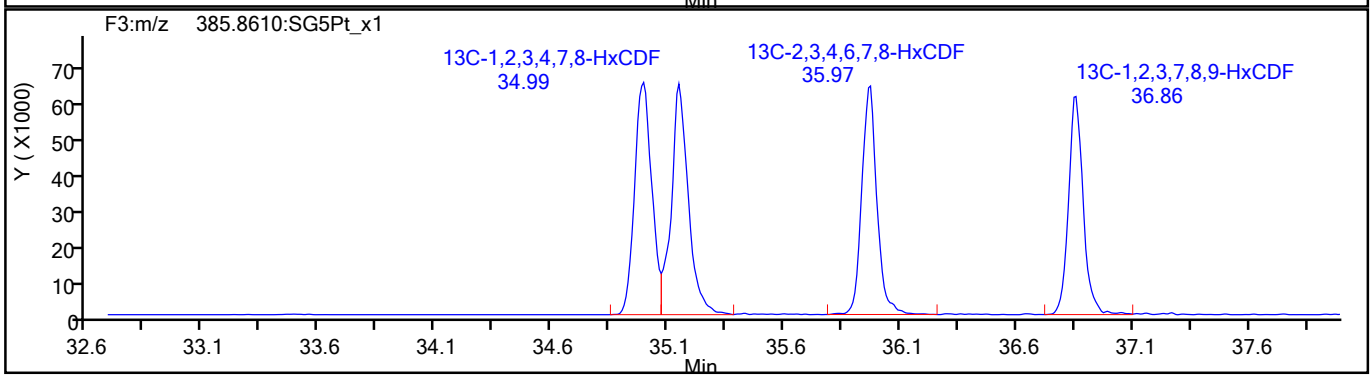

786625

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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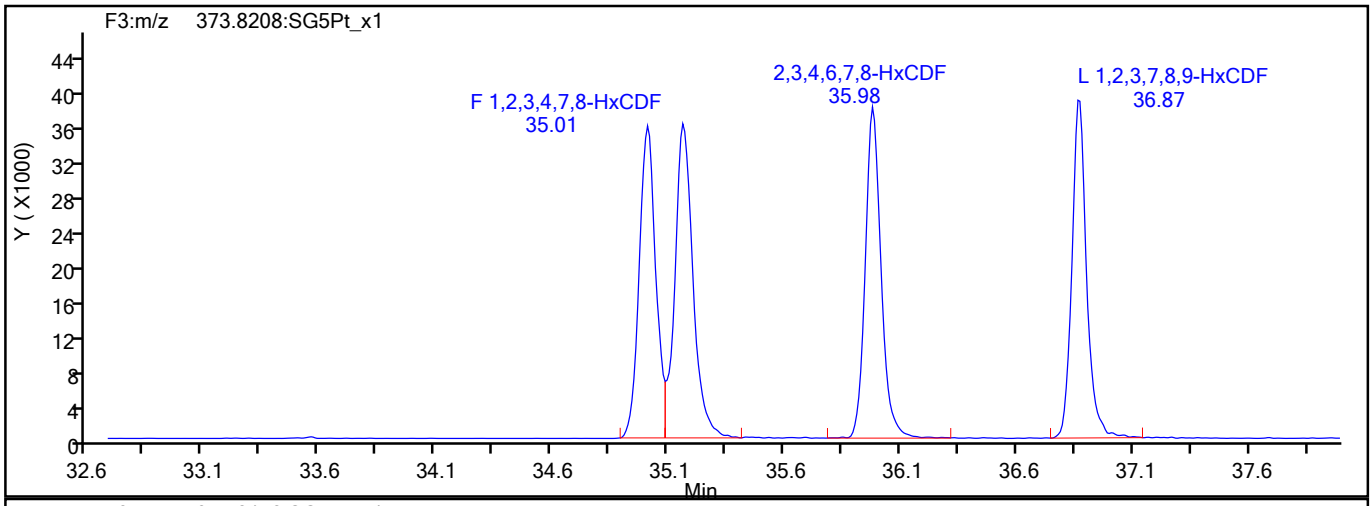

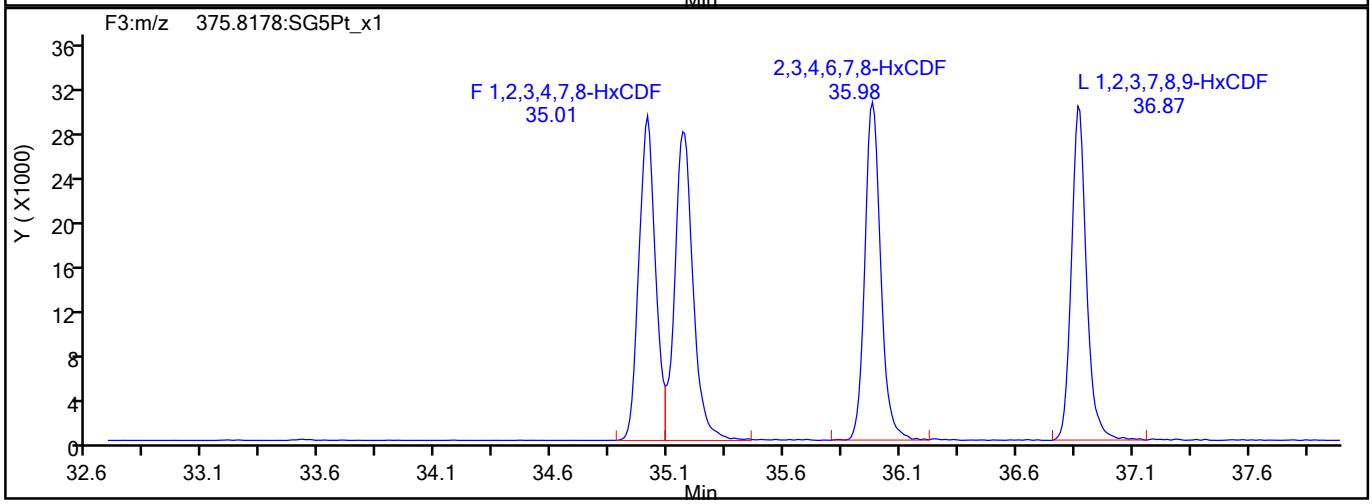

HxCDF Interference Mass

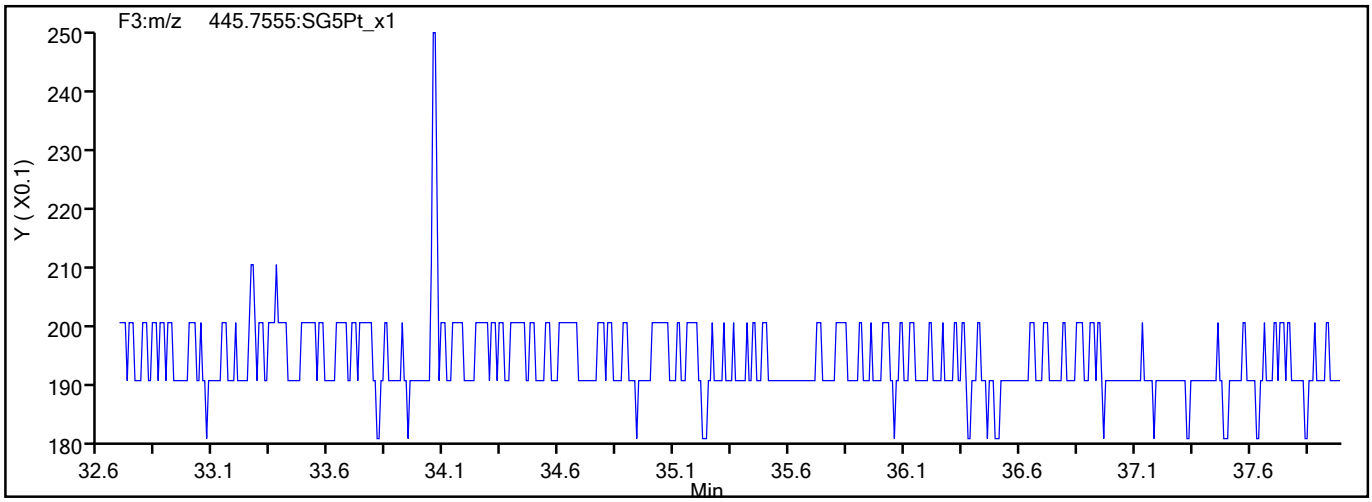

786626

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

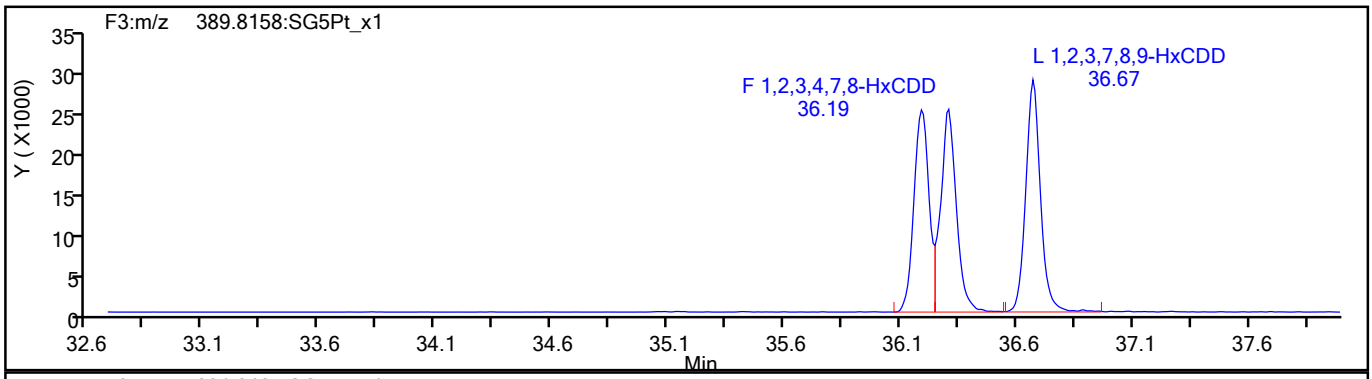

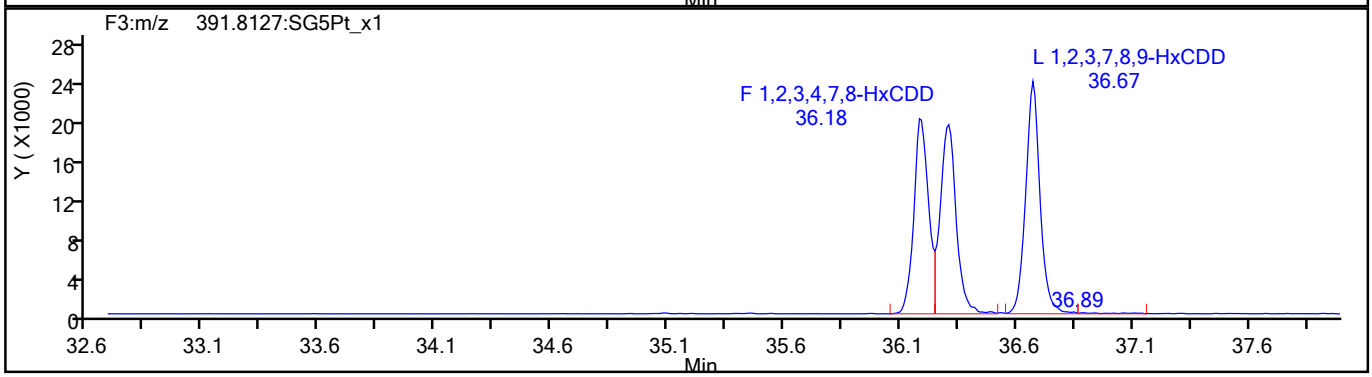

HxCDD Standards

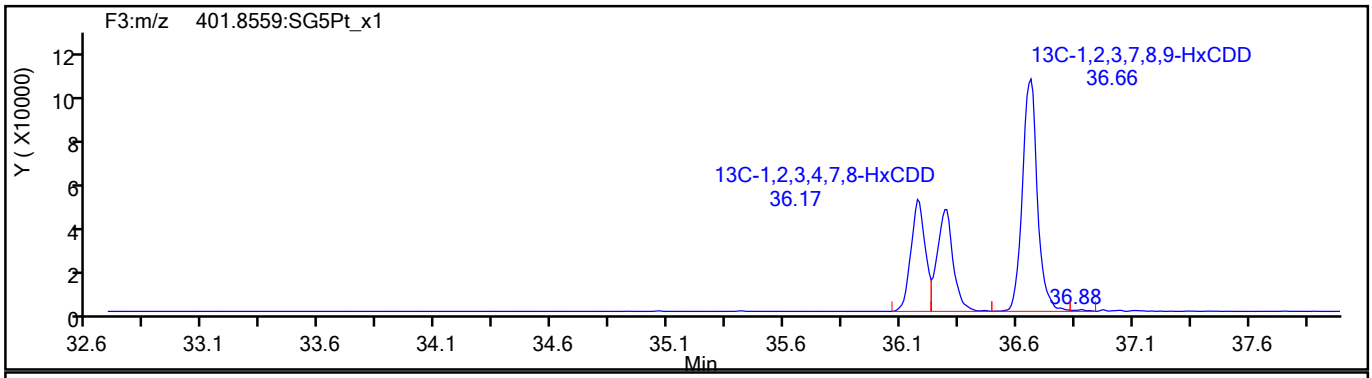

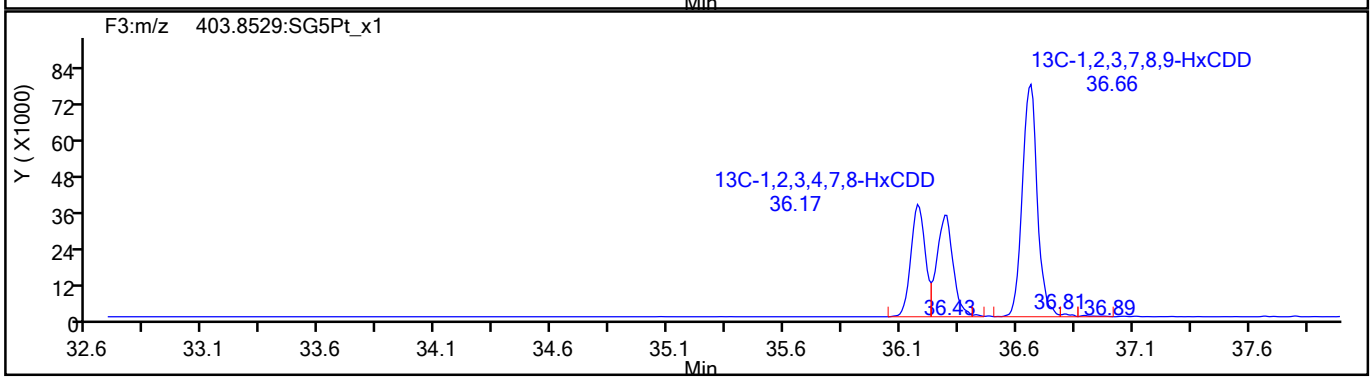

786627

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

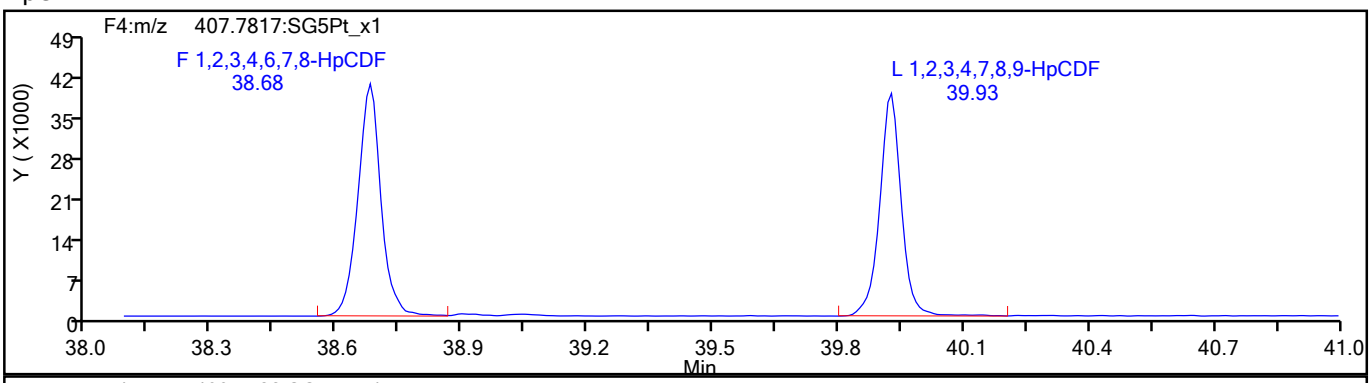

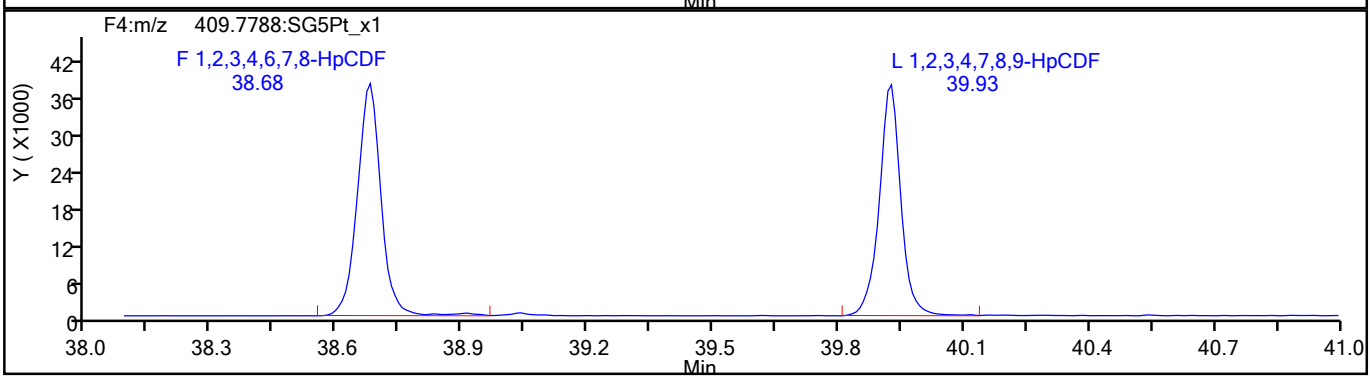

HpCDF Standards

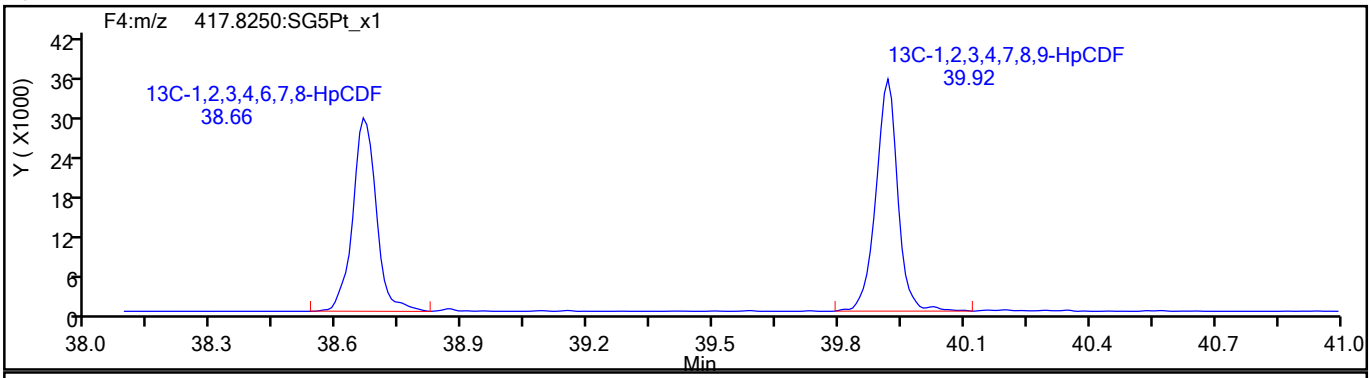

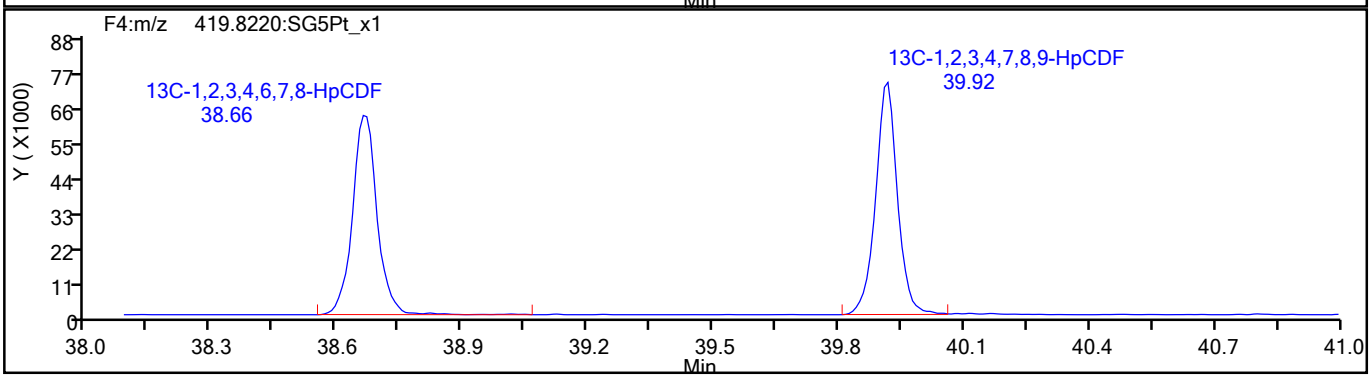

786628

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

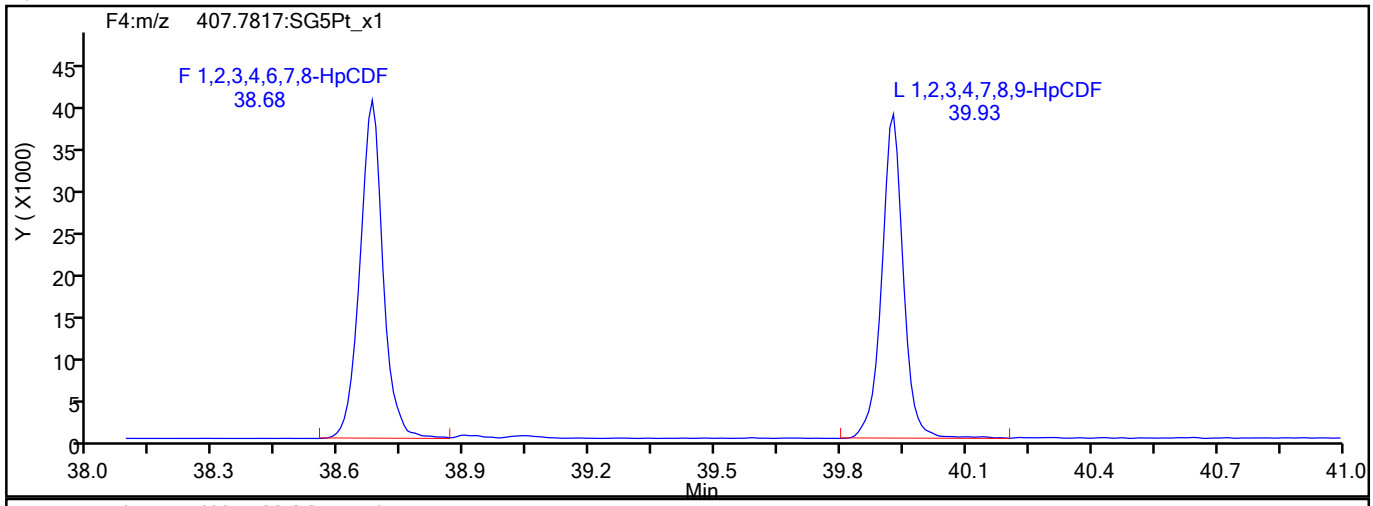

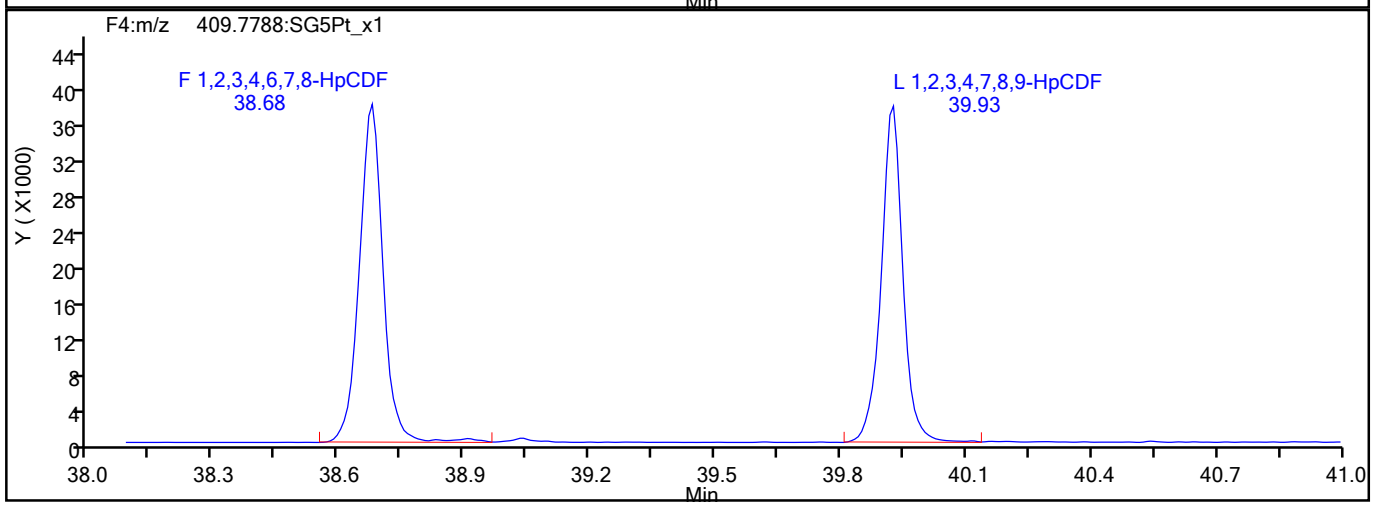

HpCDF Interference Mass

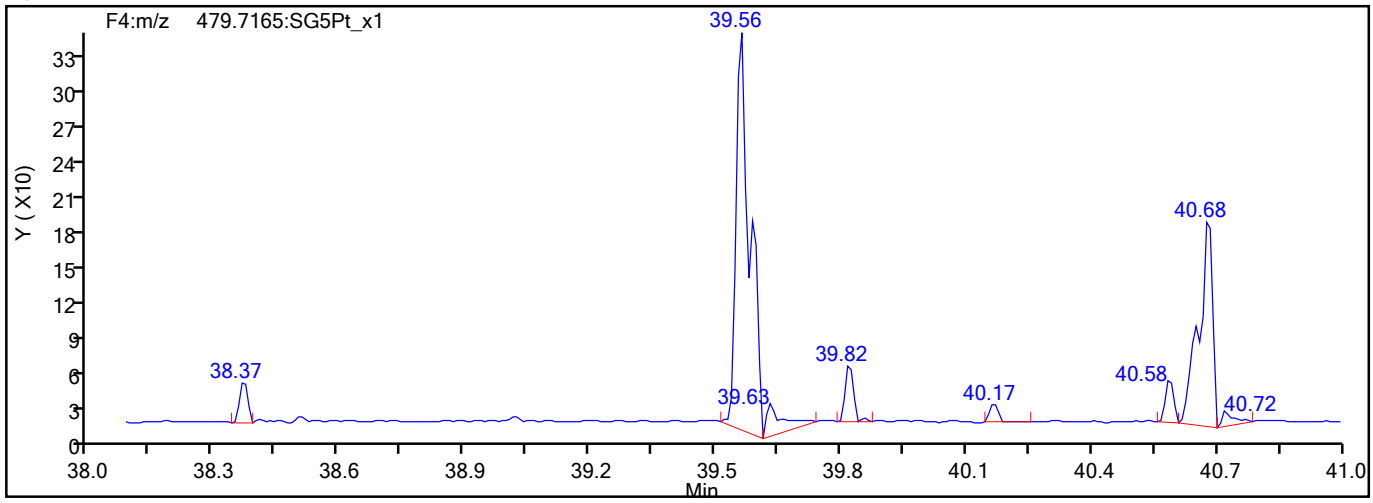

786629

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

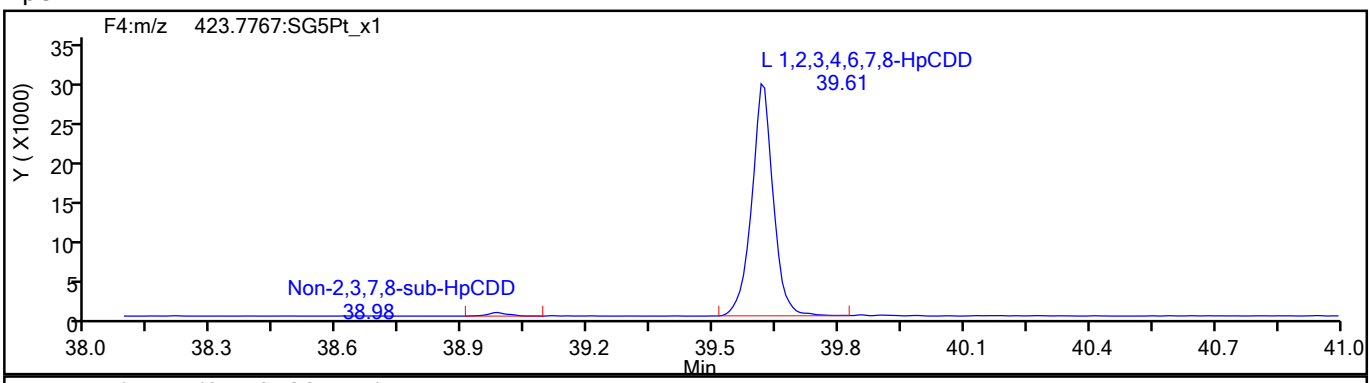

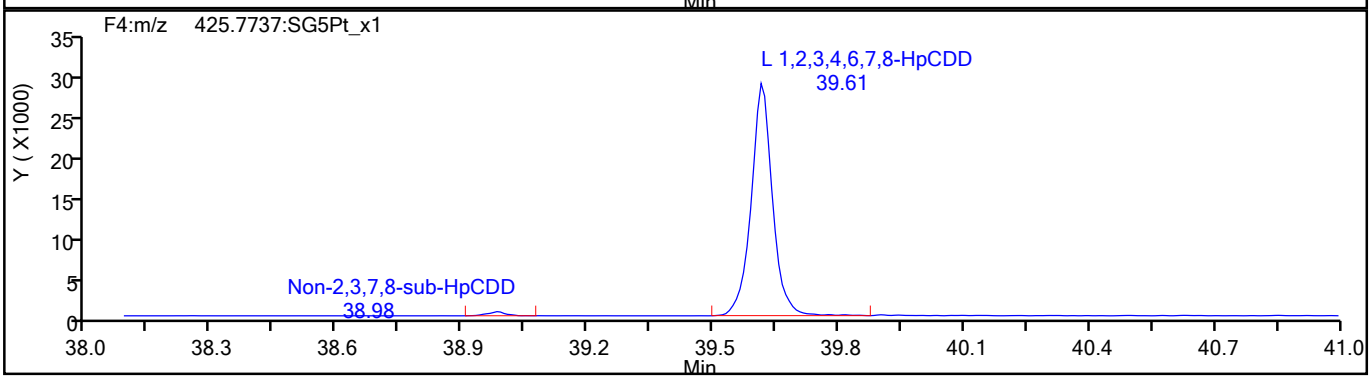

HpCDD Standards

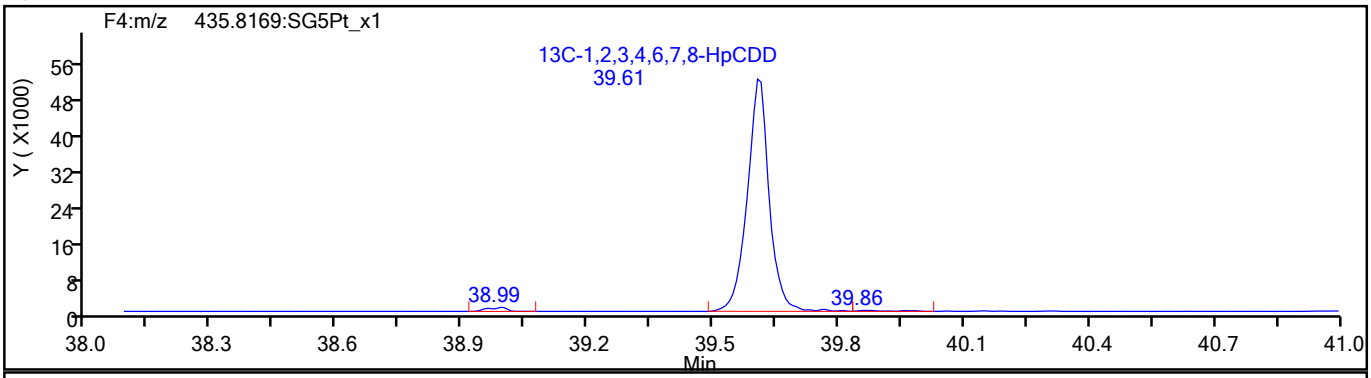

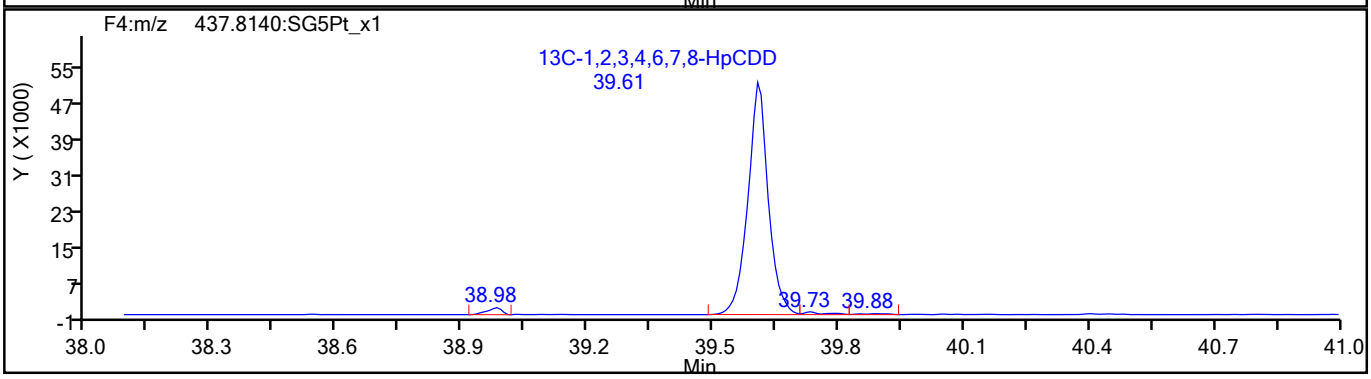

786630

Report Date: 19-Aug-2021 12:09:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

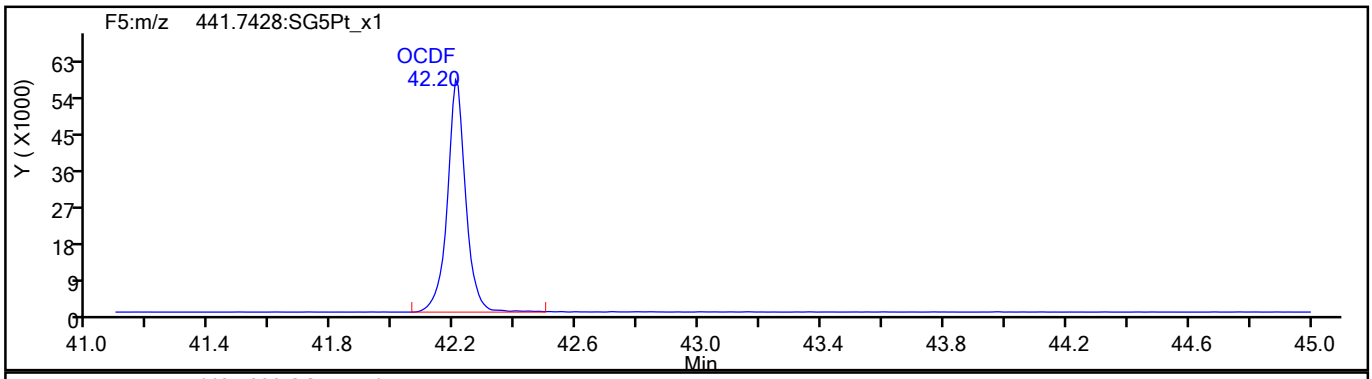

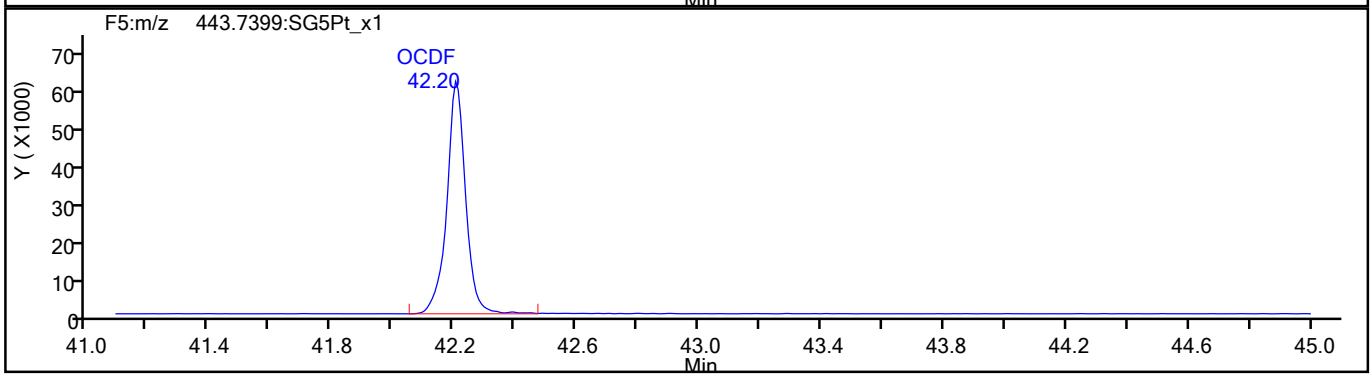

OCDF Standards

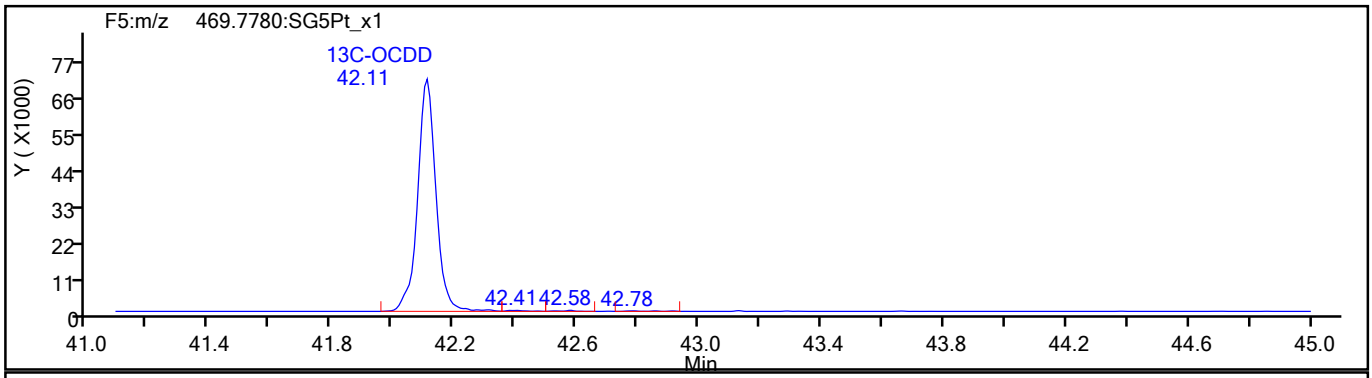

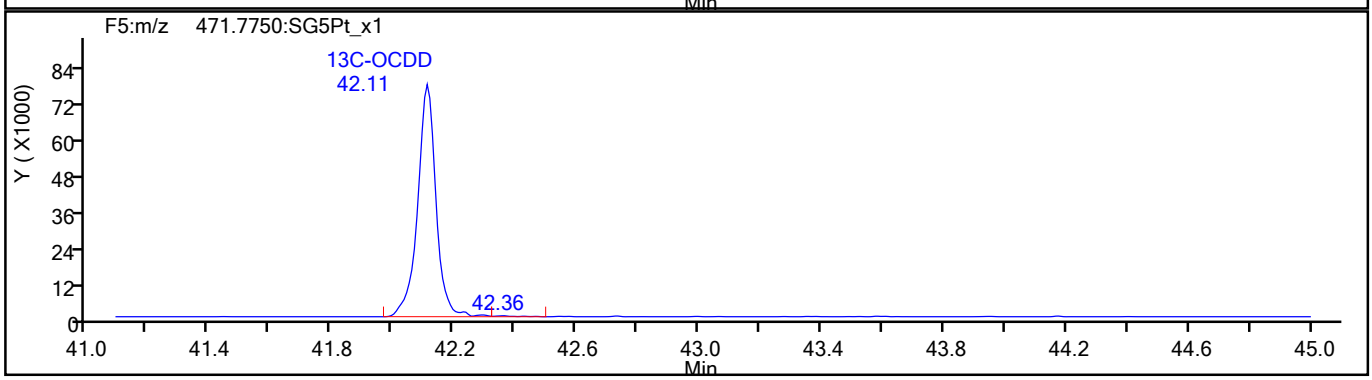

786631

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

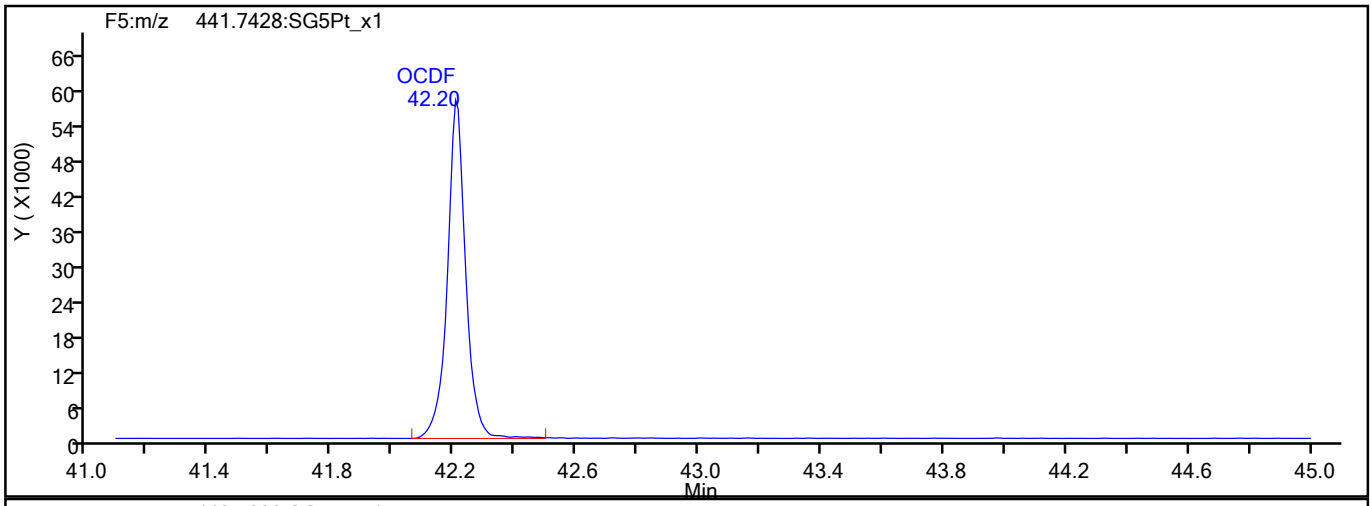

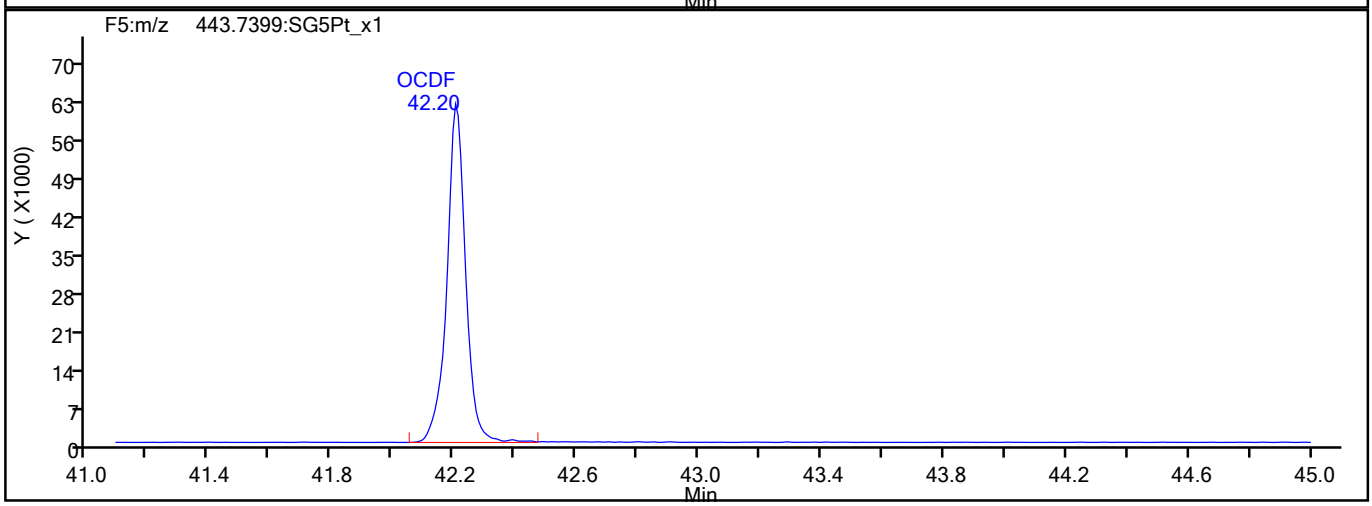

OCDF Interference Mass

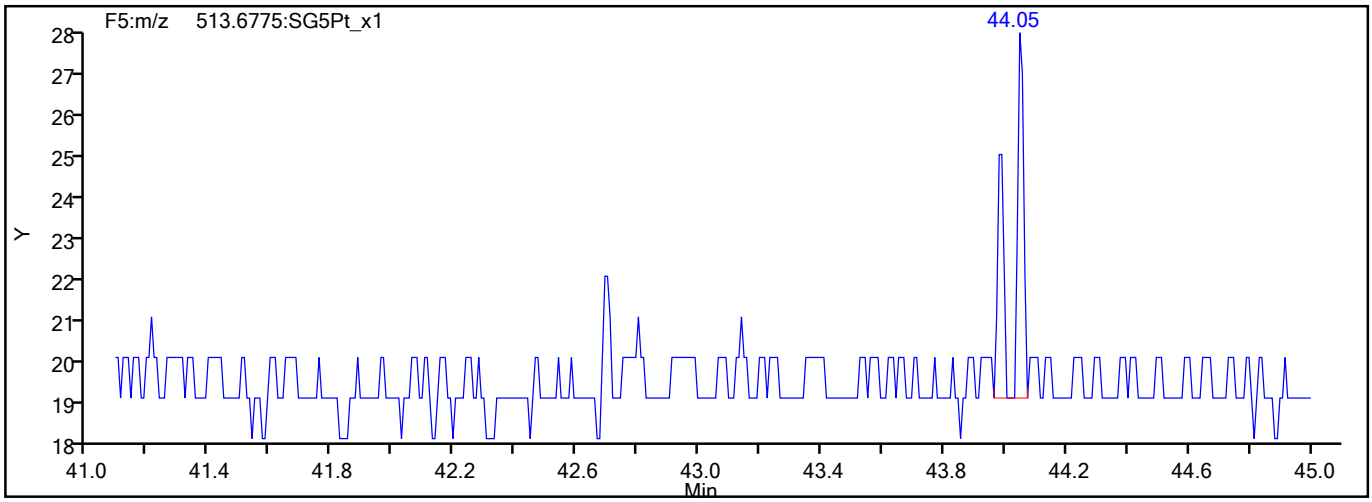

786632

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

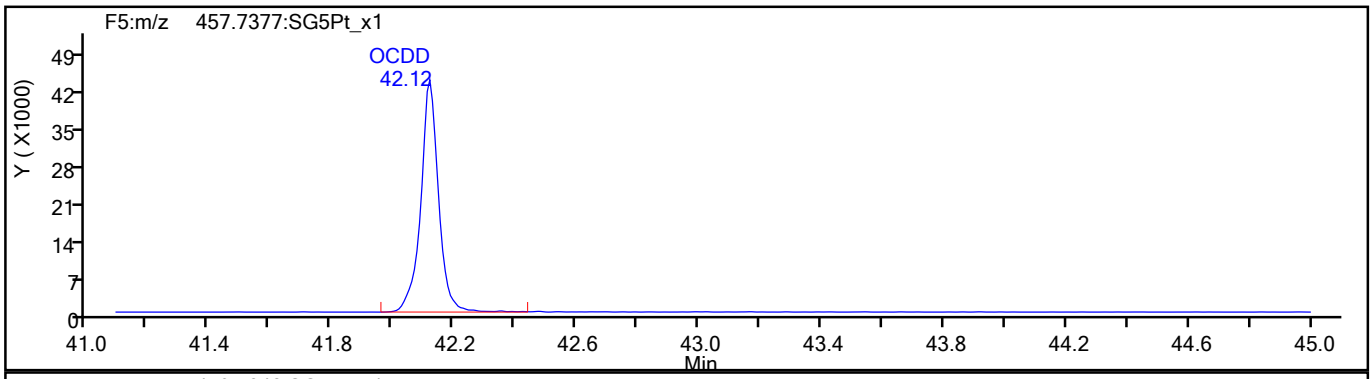

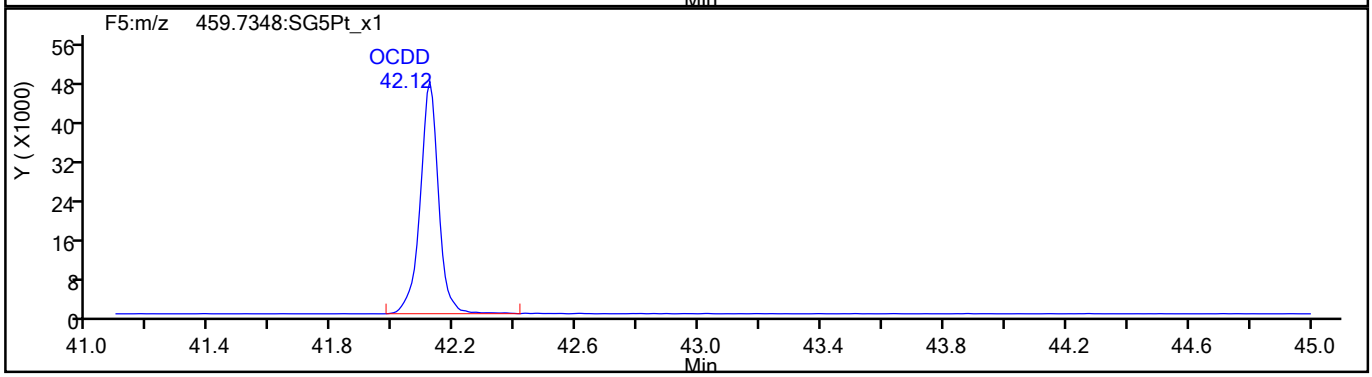

OCDD Standards

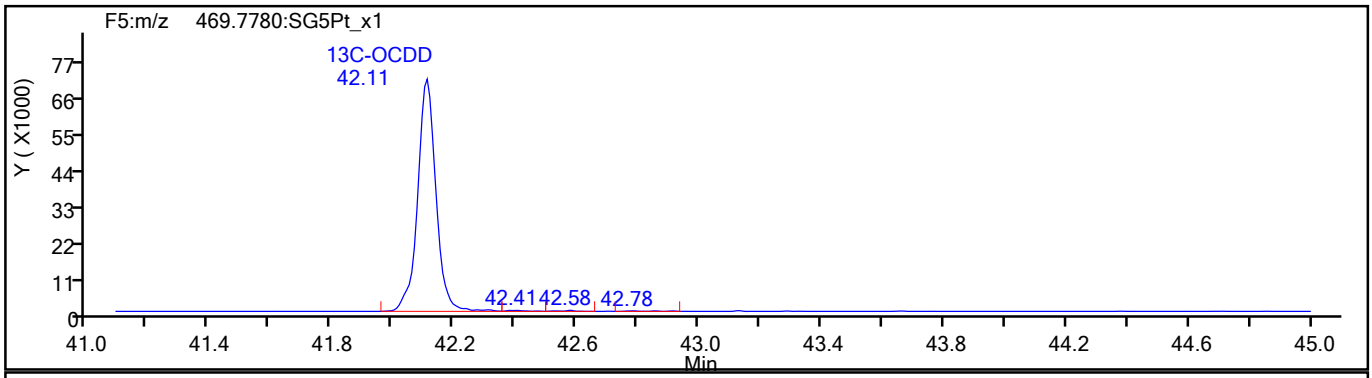

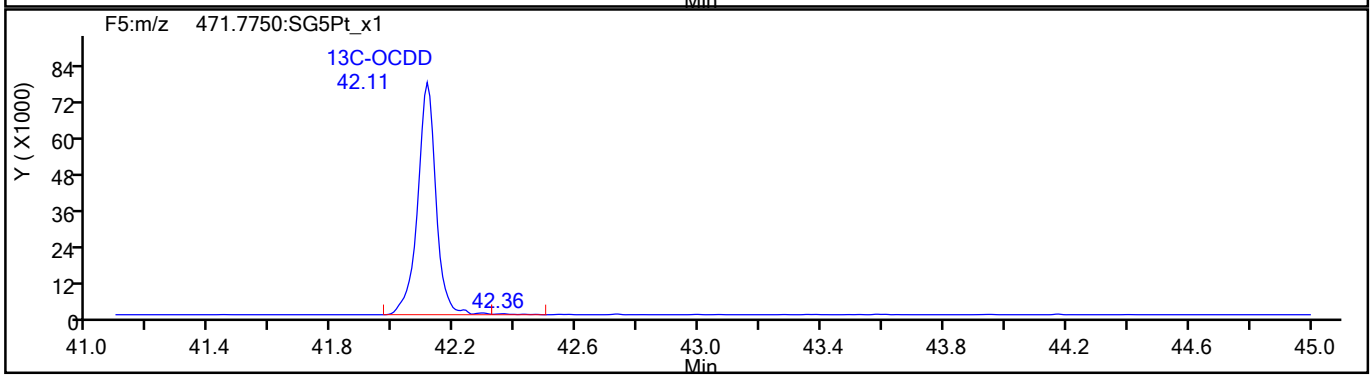

786633

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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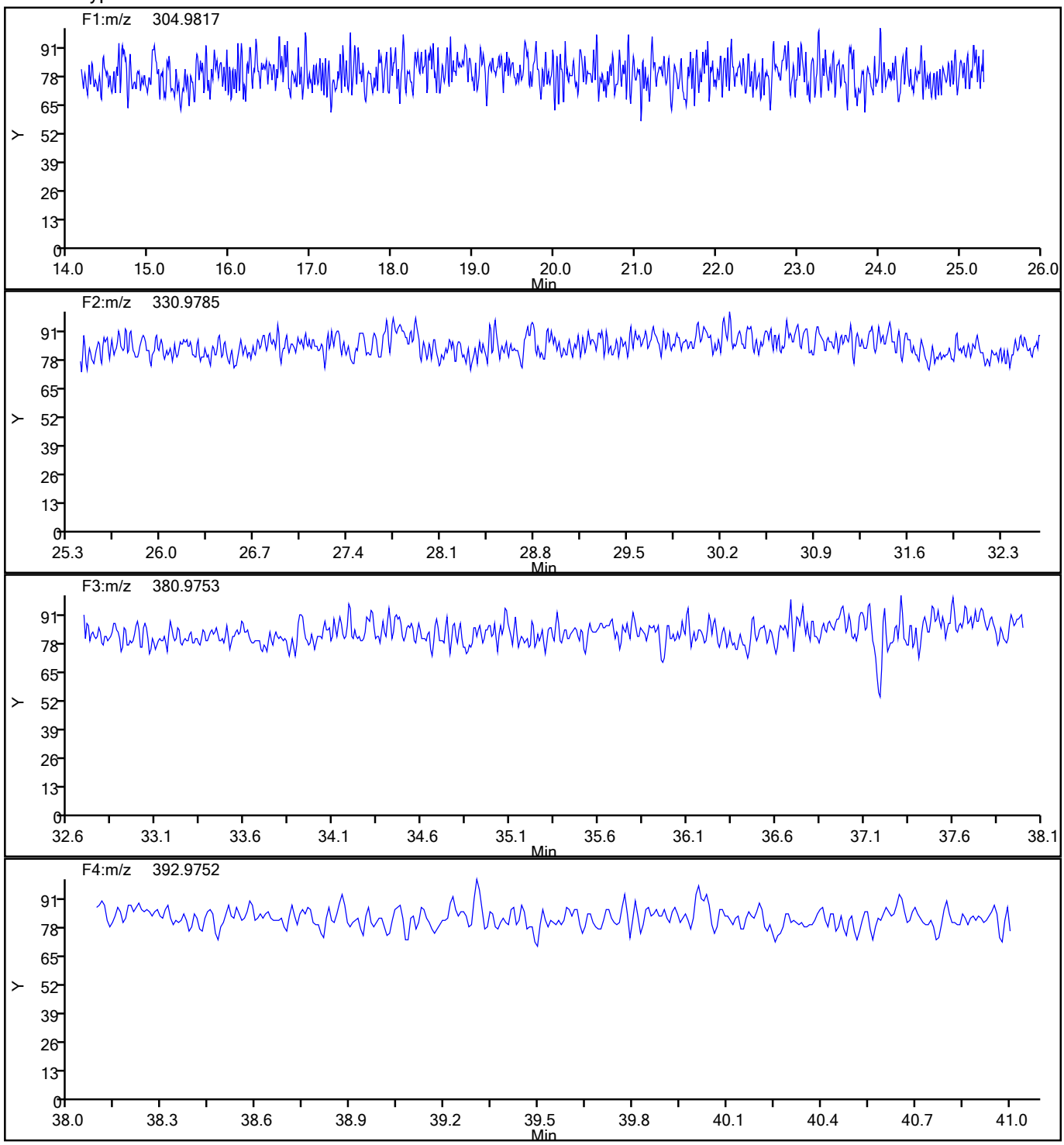

786634

Report Date: 19-Aug-2021 12:09:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210817-125160.b\17au21dfs1_6.d		
Injection Date:	17-Aug-2021 17:49:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517196	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

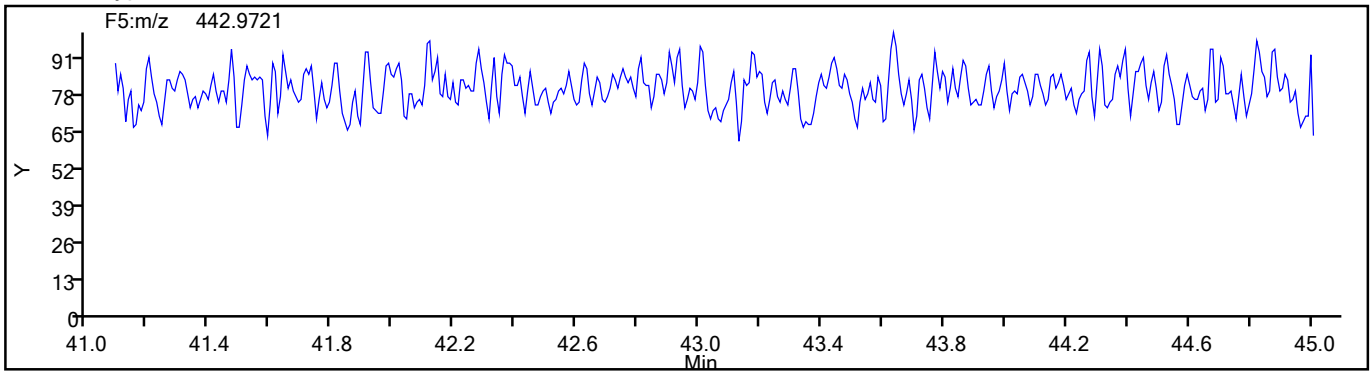

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FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-513879/2-A
Matrix: Sediment
Lab File ID: 17au21dfs1_51.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/19/2021 04:43
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	22.3		1.0	0.27
51207-31-9	2,3,7,8-TCDF	23.1		1.0	0.098
40321-76-4	1,2,3,7,8-PeCDD	113		5.0	0.26
57117-41-6	1,2,3,7,8-PeCDF	117		5.0	0.36
57117-31-4	2,3,4,7,8-PeCDF	109		5.0	0.38
39227-28-6	1,2,3,4,7,8-HxCDD	101		5.0	0.22
57653-85-7	1,2,3,6,7,8-HxCDD	112		5.0	0.27
19408-74-3	1,2,3,7,8,9-HxCDD	109		5.0	0.23
70648-26-9	1,2,3,4,7,8-HxCDF	114		5.0	0.35
57117-44-9	1,2,3,6,7,8-HxCDF	120		5.0	0.36
72918-21-9	1,2,3,7,8,9-HxCDF	118		5.0	0.36
60851-34-5	2,3,4,6,7,8-HxCDF	121		5.0	0.36
35822-46-9	1,2,3,4,6,7,8-HpCDD	111		5.0	0.32
67562-39-4	1,2,3,4,6,7,8-HpCDF	118		5.0	0.50
55673-89-7	1,2,3,4,7,8,9-HpCDF	108		5.0	0.50
3268-87-9	OCDD	232		10	0.36
39001-02-0	OCDF	243		10	0.38
41903-57-5	Total TCDD	22.3		1.0	0.27
30402-14-3	Total TCDF	23.1		1.0	0.098
36088-22-9	Total PeCDD	113		5.0	0.26
30402-15-4	Total PeCDF	226		5.0	0.37
34465-46-8	Total HxCDD	322		5.0	0.24
55684-94-1	Total HxCDF	474		5.0	0.36
37871-00-4	Total HpCDD	112		5.0	0.32
38998-75-3	Total HpCDF	227		5.0	0.50

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513879/2-A

Matrix: Sediment Lab File ID: 17au21dfs1_51.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10(g) Date Analyzed: 08/19/2021 04:43

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517462 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	34		20-175
89059-46-1	13C-2,3,7,8-TCDF	36		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	34		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	31		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	36		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	37		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	35		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	42		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	37		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	32		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	33		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	36		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	35		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	40		20-186
114423-97-1	13C-OCDD	39		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	47		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Aug-2021 04:43:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513879/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:46:32 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:28:21

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.378	1152953	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.398	552191	0.79	1.3459	35.6	35.6	0.2111	0.2111	35.59	
2,3,7,8-TCDF	20.449	68815	0.80	1.0802	11.5	11.5	0.0489	0.0489	115	
A Non-2,3,7,8-sub-TCDF	19.878						0.0489	0.3566		RQU
S Total TCDF					11.5	11.5	0.0489	0.0489		
D 13C-2,3,7,8-TCDD	21.765	368595	0.88	0.9317	34.3	34.3	0.2791	0.2791	34.31	
2,3,7,8-TCDD	21.782	44148	0.88	1.0753	11.1	11.1	0.1343	0.1343	111	
$ 37Cl4-2,3,7,8-TCDD	21.799	220145		1.0083	18.9	18.9	0.0142	0.0142	47.34	
A Non-2,3,7,8-sub-TCDD	20.707						0.1343	0.1343		
S Total TCDD					11.1	11.1	0.1343	0.1343		
D 13C-1,2,3,7,8-PeCDF	27.239	404112	1.57	1.1405	30.7	30.7	0.0980	0.0980	30.73	
1,2,3,7,8-PeCDF	27.272	248460	1.62	1.0543	58.3	58.3	0.1811	0.1811	117	
D 13C-2,3,4,7,8-PeCDF	28.763	466834	1.64	1.1253	36.0	36.0	0.0994	0.0994	35.98	
2,3,4,7,8-PeCDF	28.779	256500	1.56	1.0079	54.5	54.5	0.1893	0.1893	109	
A F1 PeCDFs	24.648						0.0108	0.0108		RQU
A Non-2,3,7,8-sub-PeCDF	28.125						0.1851	0.6069		U
S Total PeCDF					112.8	112.8	0.1852	0.1852		
D 13C-1,2,3,7,8-PeCDD	29.571	282216	1.56	0.7165	34.2	34.2	0.1243	0.1243	34.16	
1,2,3,7,8-PeCDD	29.588	167577	1.56	1.0465	56.7	56.7	0.1285	0.1285	113	
A Non-2,3,7,8-sub-PeCDD	28.489						0.1285	0.1629		RQU
S Total PeCDD					56.7	56.7	0.1285	0.1285		
D 13C-1,2,3,4,7,8-HxCDF	34.920	440250	0.54	0.9648	41.5	41.5	0.1289	0.1289	41.52	
1,2,3,4,7,8-HxCDF	34.937	287979	1.27	1.1474	57.0	57.0	0.1753	0.1753	114	
D 13C-1,2,3,6,7,8-HxCDF	35.064	437444	0.52	1.0708	37.2	37.2	0.1162	0.1162	37.17	
1,2,3,6,7,8-HxCDF	35.106	320805	1.31	1.2178	60.2	60.2	0.1818	0.1818	120	
D 13C-2,3,4,6,7,8-HxCDF	35.897	380639	0.55	1.0413	33.3	33.3	0.1194	0.1194	33.26	
2,3,4,6,7,8-HxCDF	35.914	279720	1.28	1.2145	60.5	60.5	0.1780	0.1780	121	
D 13C-1,2,3,7,8,9-HxCDF	36.790	347505	0.54	0.9731	32.5	32.5	0.1278	0.1278	32.49	
1,2,3,7,8,9-HxCDF	36.807	255102	1.35	1.2401	59.2	59.2	0.1804	0.1804	118	
A Non-2,3,7,8-sub-HxCDF	35.028						0.1786	0.1786		
S Total HxCDF					236.9	236.9	0.1789	0.1789		
* 13C-1,2,3,7,8,9-HxCDD	36.596	1099079	1.26	1.8E+04	100.0	100.0				

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-1,2,3,4,7,8-HxCDD	36.108	308239	1.13	0.7587	37.0	37.0	0.1300	0.1300	36.97	
1,2,3,4,7,8-HxCDD	36.125	165063	1.25	1.0608	50.5	50.5	0.1116	0.1116	101	
D 13C-1,2,3,6,7,8-HxCDD	36.226	327063	1.26	0.8593	34.6	34.6	0.1148	0.1148	34.63	
1,2,3,6,7,8-HxCDD	36.243	182721	1.24	0.9933	56.2	56.2	0.1330	0.1330	112	
1,2,3,7,8,9-HxCDD	36.605	191715	1.22	1.1094	54.4	54.4	0.1126	0.1126	109	
A Non-2,3,7,8-sub-HxCDD	35.394						0.1184	0.1184		
S Total HxCDD					161.1	161.1	0.1191	0.1191		
D 13C-1,2,3,4,6,7,8-HpCDF	38.620	285196	0.46	0.7359	35.3	35.3	0.1457	0.1457	35.26	
1,2,3,4,6,7,8-HpCDF	38.628	243533	1.05	1.4421	59.2	59.2	0.2492	0.2492	118	
D 13C-1,2,3,4,7,8,9-HpCDF	39.874	302406	0.45	0.6854	40.1	40.1	0.1564	0.1564	40.14	
1,2,3,4,7,8,9-HpCDF	39.882	214074	1.05	1.3092	54.1	54.1	0.2481	0.2481	108	
A Non-2,3,7,8-sub-HpCDF	39.258						0.2480	0.2480		
S Total HpCDF					113.3	113.3	0.2487	0.2487		
D 13C-1,2,3,4,6,7,8-HpCDD	39.562	268592	1.02	0.6745	36.2	36.2	0.0922	0.0922	36.23	
1,2,3,4,6,7,8-HpCDD	39.579	156038	1.04	1.0503	55.3	55.3	0.1617	0.1617	111	
A Non-2,3,7,8-sub-HpCDD	39.258	1484	1.04	1.0503	0.5969	0.5261	0.1617	0.5261	0.00	RQ
S Total HpCDD					55.9	55.8	0.1617	0.1617		RQ
D 13C-OCDD	42.068	462455	0.94	0.5446	77.3	77.3	0.1394	0.1394	38.63	
OCDF	42.161	370595	0.96	1.3168	121.7	121.7	0.1900	0.1900	122	
OCDD	42.068	284636	0.91	1.0620	115.9	115.9	0.1799	0.1799	116	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 09:46:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Aug-2021 04:43:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513879/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:46:32 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:28:21

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.378	21.427	-3		512123	71188	71	177	1003		a
333.9338	21.378	21.427	-3		640830	82634	89	222	928	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.398	20.401	0	0.954	243971	33108	139	347	238		
317.9389	20.415	20.401	1	0.955	308220	42563	36	90	1182	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.449	20.436	1	1.003	30521	4146	6	15	691		
305.8987	20.432	20.436	0	1.002	38294	5319	10	25	532	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											U
303.9016	18.739	19.878	-68	0.919	162	68	6	15	11		
	Empc Correction				119	50	6	15	8		
305.8987	18.765	19.878	-67	0.920	155	65	10	25	7	1.05(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.765	21.743	1	1.018	172091	21636	71	177	305		
333.9338	21.739	21.743	0	1.017	196504	24757	89	222	278	0.88(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.782	21.777	0	1.001	20673	2465	24	60	103		
321.8936	21.773	21.777	0	1.000	23475	3194	3	7	1065	0.88(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.799	21.849	-3	1.020	220145	28798	9	22	3200		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.707						24	60			
321.8936	20.707						3	7			
13C-1,2,3,7,8-PeCDF											
351.9000	27.239	27.288	-3	1.274	246750	37936	50	125	759		
353.8970	27.247	27.288	-2	1.275	157362	24926	19	47	1312	1.57(1.32-1.78)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.272	27.313	-2	1.001	153449	22468	27	67	832		
341.8567	27.281	27.313	-2	1.002	95011	14063	21	52	670	1.62(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.763	28.795	-2	1.345	290330	39582	50	125	792		
353.8970	28.754	28.795	-2	1.345	176504	23330	19	47	1228	1.64(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.779	28.820	-2	1.001	156208	20762	27	67	769		
341.8567	28.779	28.820	-2	1.001	100292	13170	21	52	627	1.56(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.618	24.648	-2	0.904	12	5	1	2	5		
341.8567	24.610	24.648	-2	0.903	37	18	2	5	9	0.32(1.32-1.78)	
	Empc Correction				7	3	2	5	2		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	27.879	28.125	-15	1.023	1729	241	27	67	9		
341.8567	27.811	28.125	-19	1.021	996	151	21	52	7	1.74(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.571	29.612	-2	1.383	171861	22744	21	52	1083		
369.8919	29.554	29.612	-3	1.382	110355	14435	34	85	425	1.56(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.588	29.637	-3	1.001	102094	13051	15	37	870		
357.8516	29.596	29.637	-2	1.001	65483	8320	5	12	1664	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.489	28.489	0	0.963	712	141	15	37			
	Empc Correction				292	51	15	37	0		
357.8516	28.489	28.489	0	0.963	189	33	5	12		3.77(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.920	34.942	-1	0.954	154382	28905	45	112	642		
385.8610	34.912	34.942	-2	0.954	285868	51650	71	177	727	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.937	34.959	-1	1.000	161292	30332	39	97	778		
375.8178	34.937	34.959	-1	1.000	126687	23452	26	65	902	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.064	35.111	-3	0.958	149152	25148	45	112	559		
385.8610	35.089	35.111	-1	0.959	288292	48027	71	177	676	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.106	35.119	-1	1.001	181702	30359	39	97	778		
375.8178	35.097	35.119	-1	1.001	139103	24502	26	65	942	1.31(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.897	35.919	-1	0.981	134384	27782	45	112	617		
385.8610	35.897	35.919	-1	0.981	246255	47138	71	177	664	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.914	35.936	-1	1.000	157261	31460	39	97	807		
375.8178	35.914	35.936	-1	1.000	122459	23907	26	65	920	1.28(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.790	36.811	-1	1.005	121621	25275	45	112	562		
385.8610	36.790	36.811	-1	1.005	225884	47153	71	177	664	0.54(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	36.807	36.828	-1	1.000	146578	31137	39	97	798		
375.8178	36.807	36.828	-1	1.000	108524	22657	26	65	871	1.35(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						39	97			
375.8178	35.028						26	65			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.596	36.609	-1		613234	129054	45	112	2868		
403.8529	36.596	36.609	-1		485845	104110	47	117	2215	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.108	36.129	-1	0.987	163698	37090	45	112	824		
403.8529	36.108	36.129	-1	0.987	144541	30477	47	117	648	1.13(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.125	36.146	-1	1.000	91763	20395	15	37	1360		
391.8127	36.125	36.146	-1	1.000	73300	15889	17	42	935	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.226	36.247	-1	0.990	182318	33355	45	112	741		
403.8529	36.226	36.247	-1	0.990	144745	27185	47	117	578	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.243	36.264	-1	1.000	101151	20151	15	37	1343		
391.8127	36.234	36.264	-2	1.000	81570	15244	17	42	897	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.605	36.626	-1	1.014	105175	22152	15	37	1477		
391.8127	36.613	36.626	-1	1.014	86540	19124	17	42	1125	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.394						15	37			
391.8127	35.394						17	42			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.620	38.626	0	1.055	90235	21930	39	97	562		
419.8220	38.620	38.626	0	1.055	194961	46799	61	152	767	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.628	38.630	0	1.000	124835	30815	56	140	550		
409.7788	38.628	38.630	0	1.000	118698	28856	43	107	671	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.874	39.880	0	1.090	94287	23632	39	97	606		
419.8220	39.874	39.880	0	1.090	208119	52415	61	152	859	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.882	39.885	0	1.000	109760	27352	56	140	488		
409.7788	39.874	39.885	-1	1.000	104314	26341	43	107	613	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						56	140			
409.7788	39.258						43	107			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.562	39.569	0	1.081	135567	36294	24	60	1512		
437.8140	39.562	39.569	0	1.081	133025	32596	34	85	959	1.02(0.88-1.20)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.579	39.582	0	1.000	79370	19810	28	70	708		
425.7737	39.571	39.582	-1	1.000	76668	19293	19	47	1015	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.931	39.258	-20	0.984	757	201	28	70	7		
425.7737	38.940	39.258	-19	0.984	927	213	19	47	11	0.82(0.88-1.20)	
	Empc Correction				727	193	19	47	10		
13C-OCDD											
469.7780	42.068	42.072	0	1.150	224125	50031	47	117	1064		
471.7750	42.059	42.072	-1	1.149	238330	51486	24	60	2145	0.94(0.76-1.02)	
OCDF											
441.7428	42.161	42.165	0	1.002	181285	39296	22	55	1786		
443.7399	42.161	42.165	0	1.002	189310	43296	29	72	1493	0.96(0.76-1.02)	
OCDD											
457.7377	42.068	42.081	-1	1.000	135245	30903	20	50	1545		
459.7348	42.068	42.081	-1	1.000	149391	32862	19	47	1730	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	552191	75671

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	552191	75671

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.739	162	68	155	65	0.0531	1.05	RQ
18.739	119	50	155	65	0.0459		Empc Correction
19.427	92	39	339	85	0.0723	0.27	RQ
19.427	92	39	119	50	0.0354		Empc Correction
19.728	942	162	1185	362	0.3566	0.79	
20.570	1237	306	356	162	0.2671	3.47	RQ
20.570	274	124	356	162	0.1056		Empc Correction
20.759	320	67	178	119	0.0835	1.80	RQ
20.759	137	91	178	119	0.0528		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Inject. Date: 19-Aug-2021 04:43:00 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 47

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	404112	62862
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	466834	62912

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	435473	62887

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.618	12	5	37	18	0.0109	0.32	RQ
24.618	12	5	7	3	0.004232		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	404112	62862
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	466834	62912

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	435473	62887

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.879	1729	241	996	151	0.6069	1.74	

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	282216	37179

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	282216	37179

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.245	712	141	189	33	0.3051	3.77	RQ
30.245	292	51	189	33	0.1629		Empc Correction

Compound is Marked ND

786647

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	268592	68890

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	268592	68890

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.931	757	201	927	213	0.5969	0.82	RQ
38.931	757	201	727	193	0.5261		Empc Correction
Signal Totals:							
	757	201	727	193			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1684	414				0.82	RQ
	1484	394					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5969 = (1684 * 100.000) / (268592 * 1.050)

Empc Amount: 0.5261 = (1484 * 100.000) / (268592 * 1.050)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

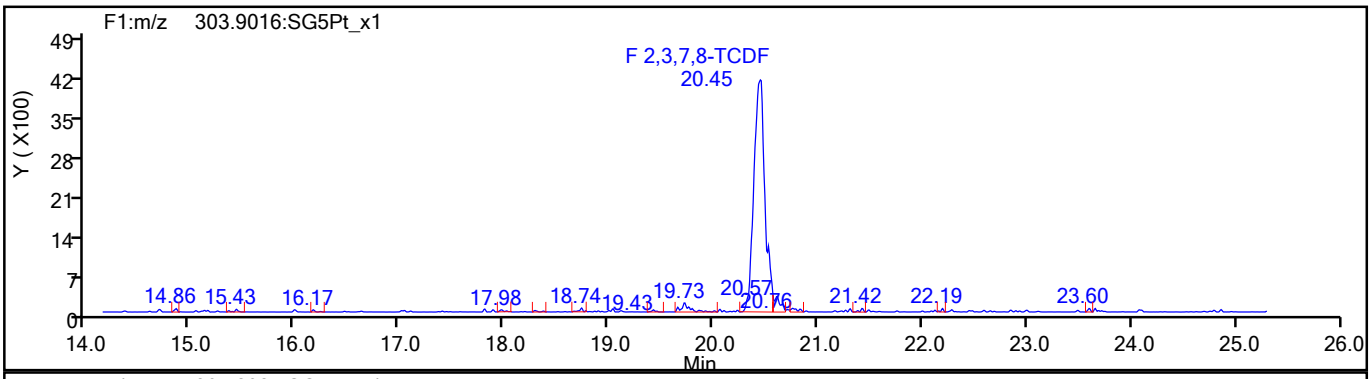

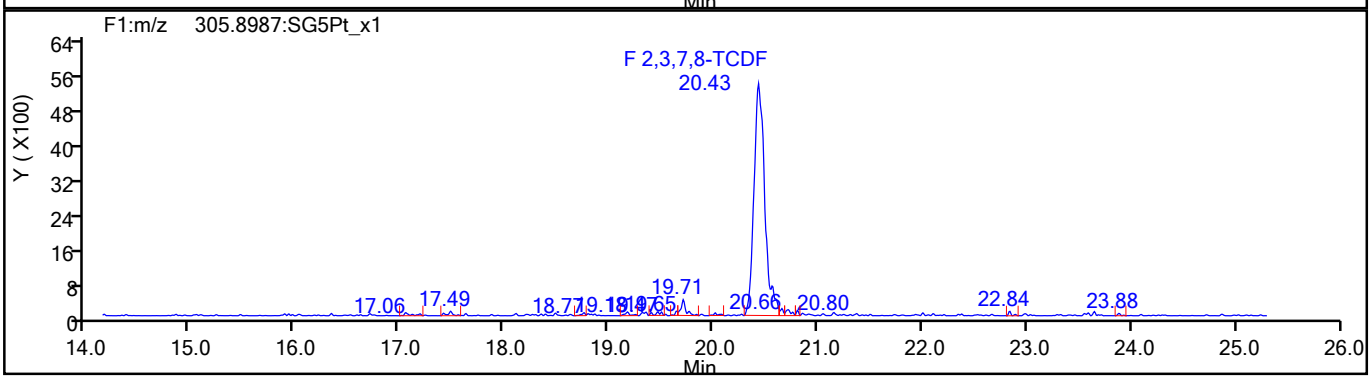

TCDF Standards

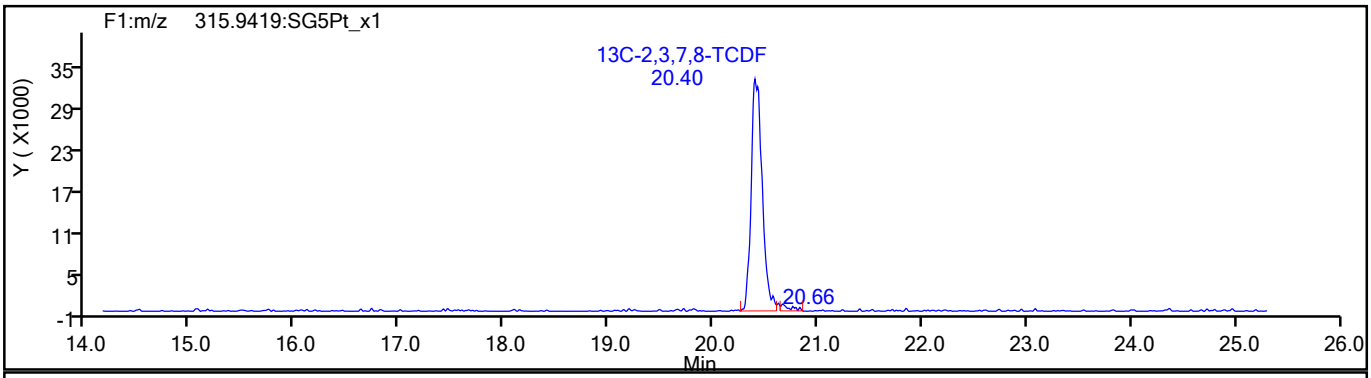

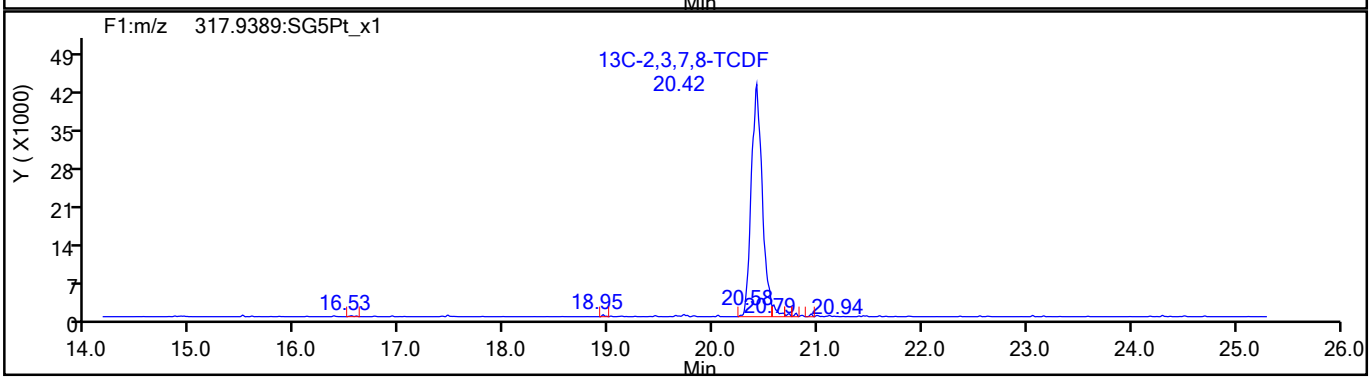

786649

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

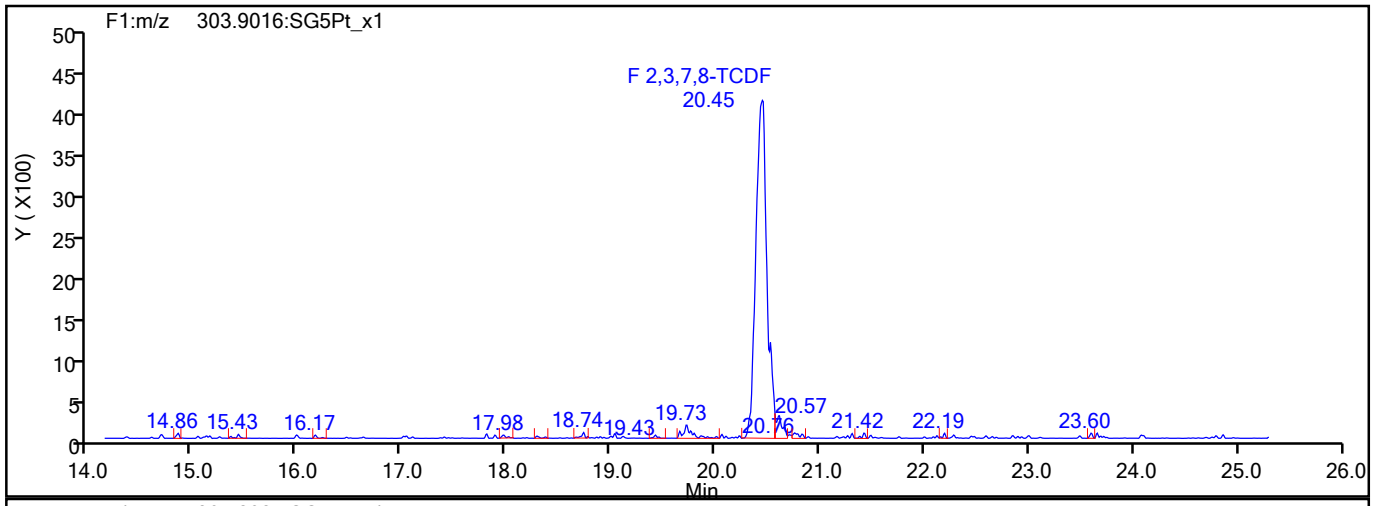

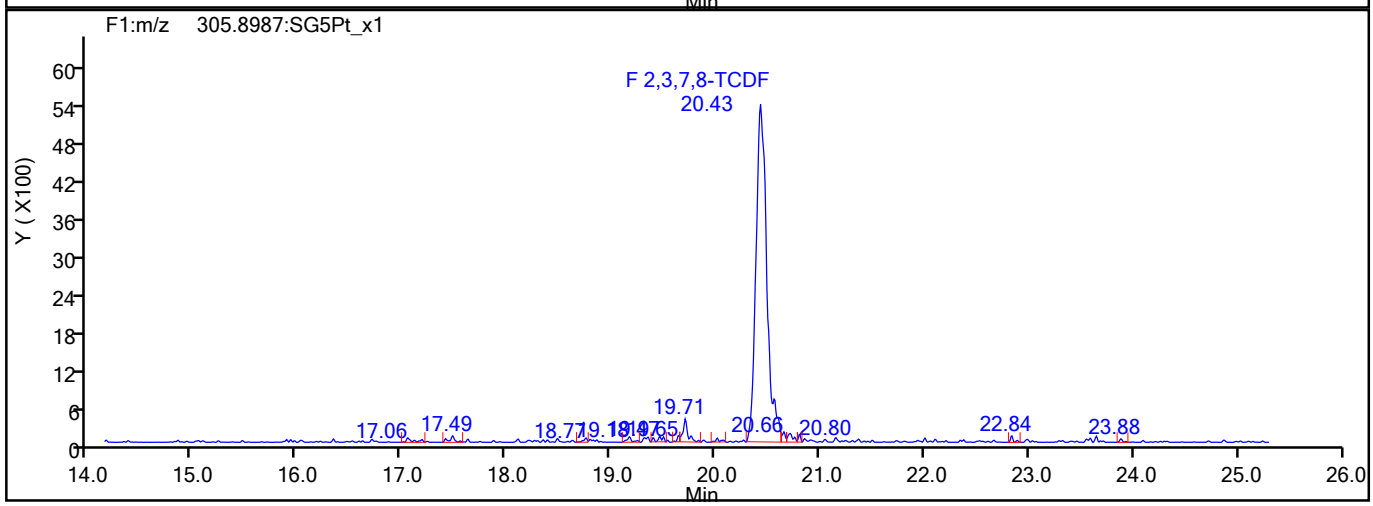

TCDF Interference Mass

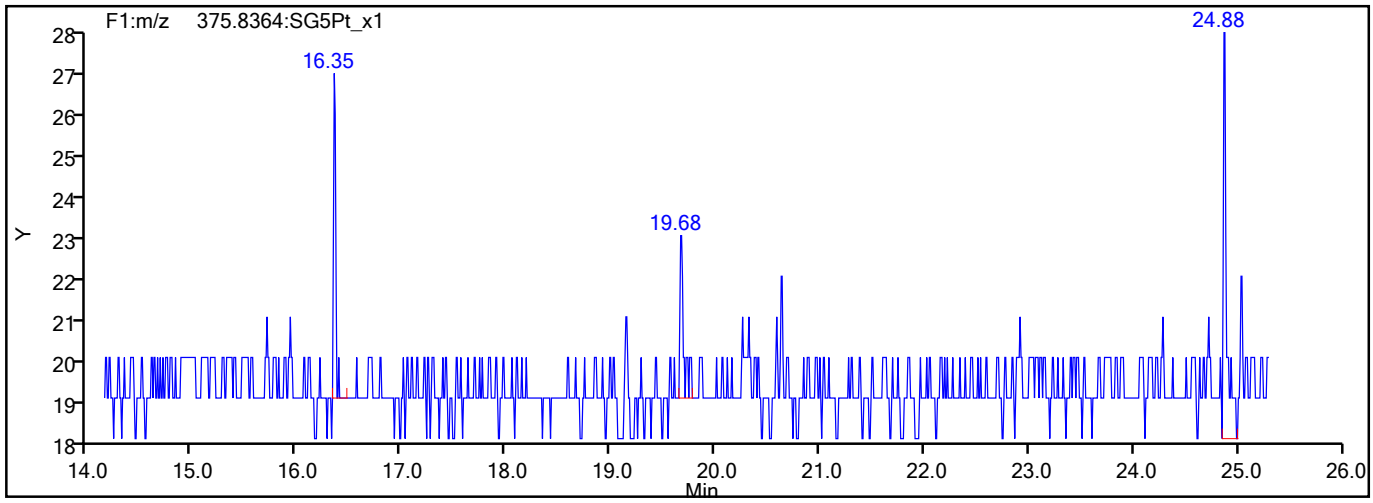

786650

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

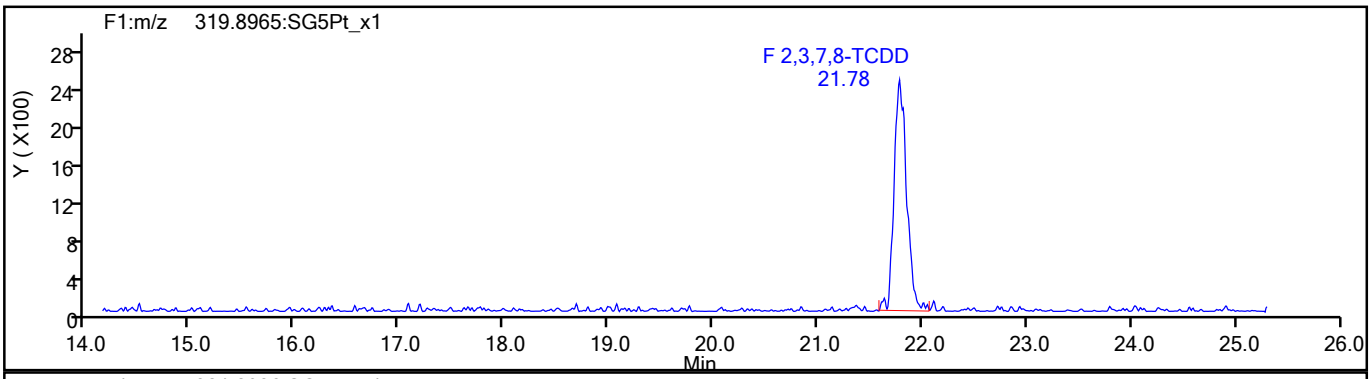

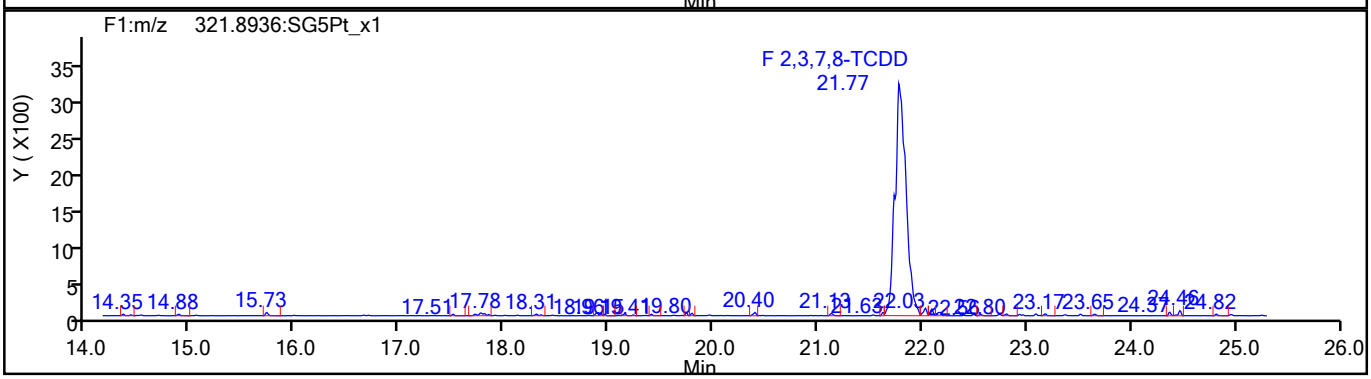

TCDD Standards

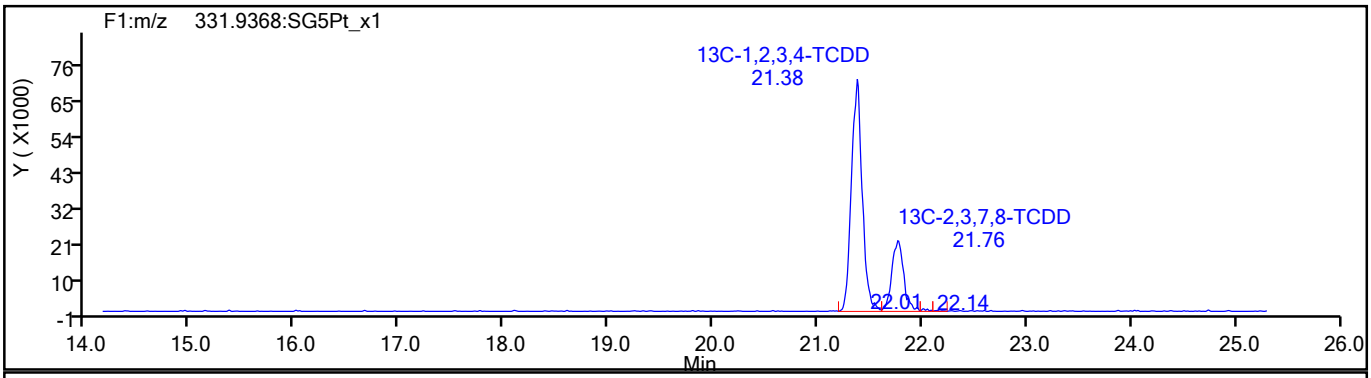

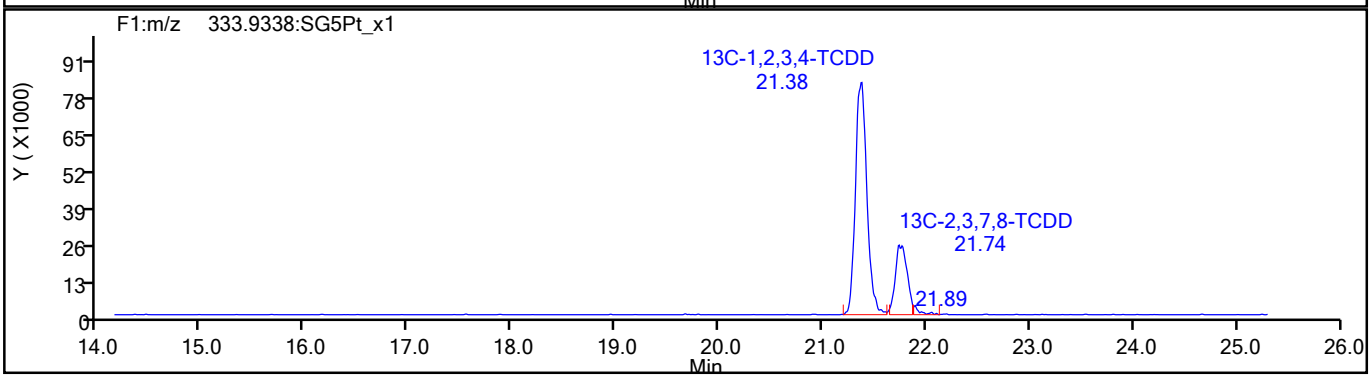

786651

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

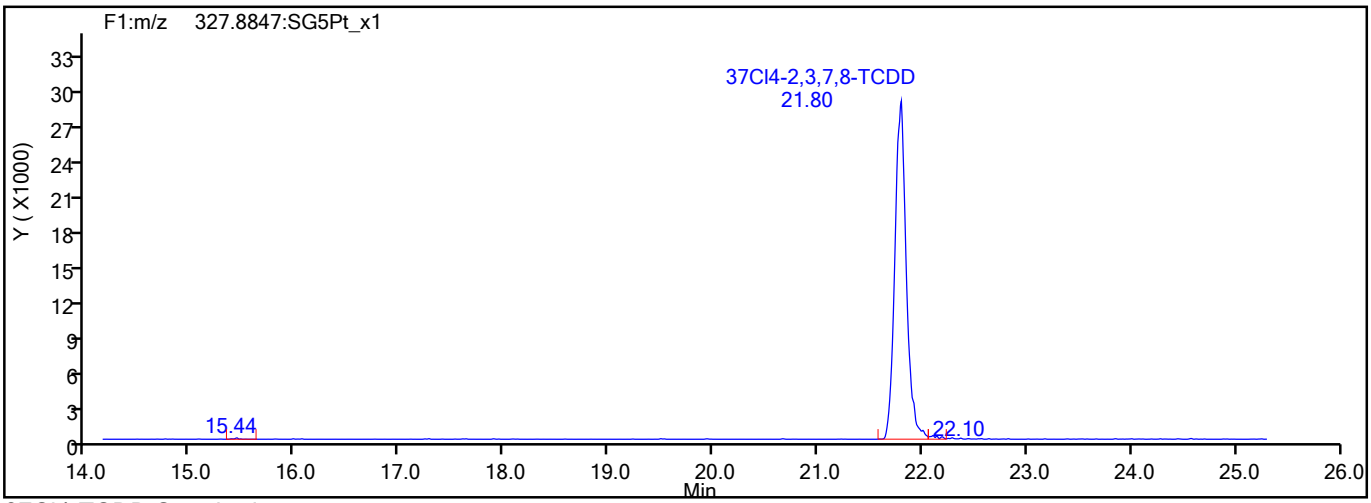

37Cl4-TCDD Standards

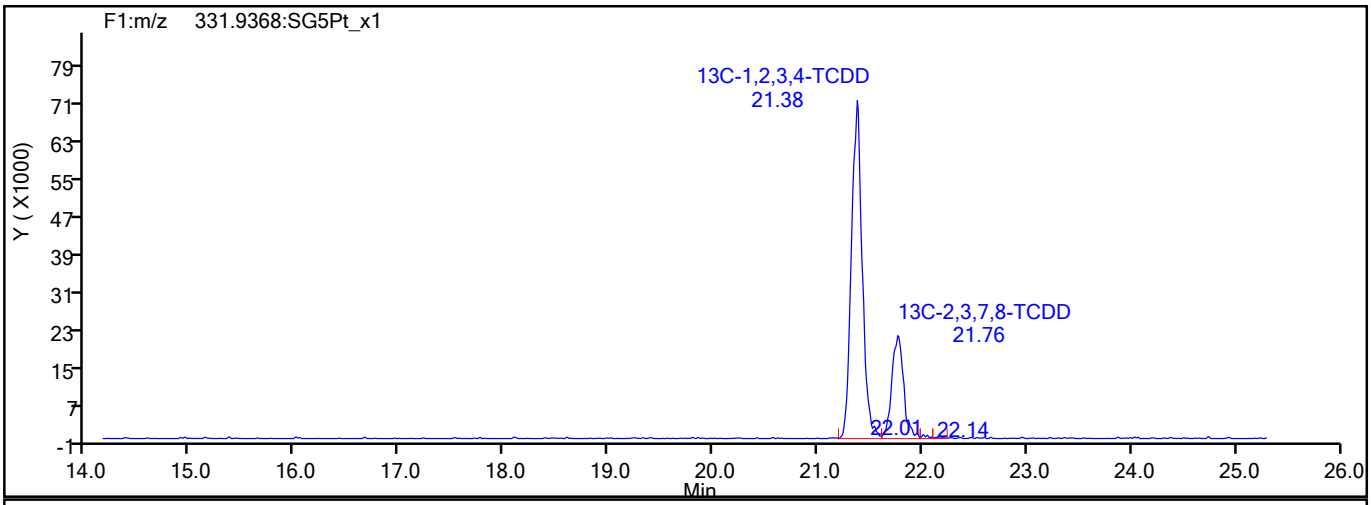

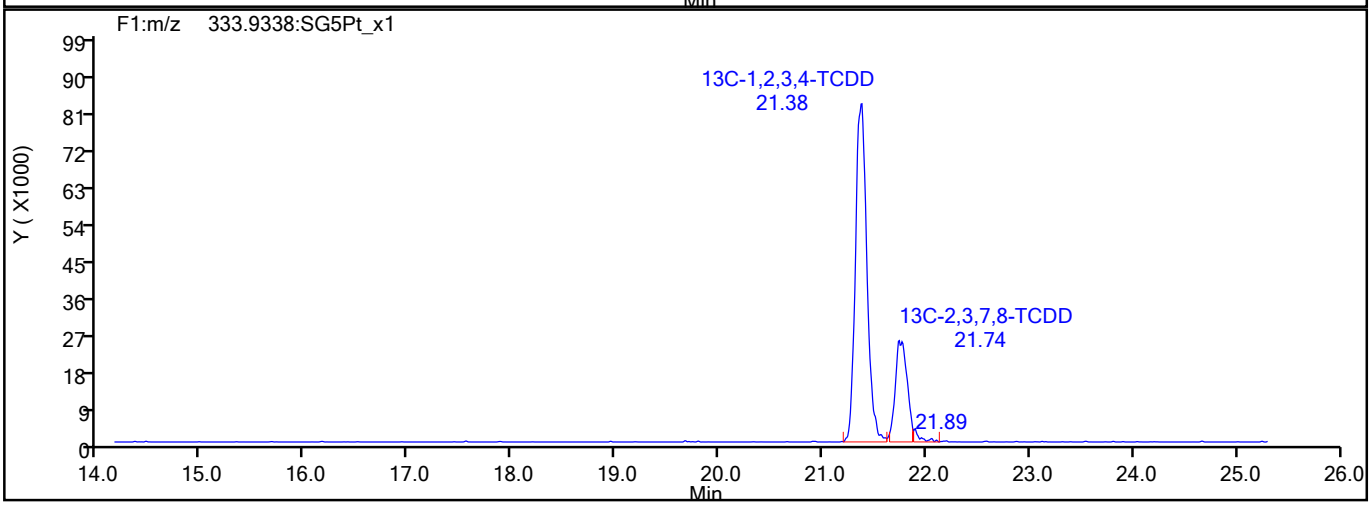

786652

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

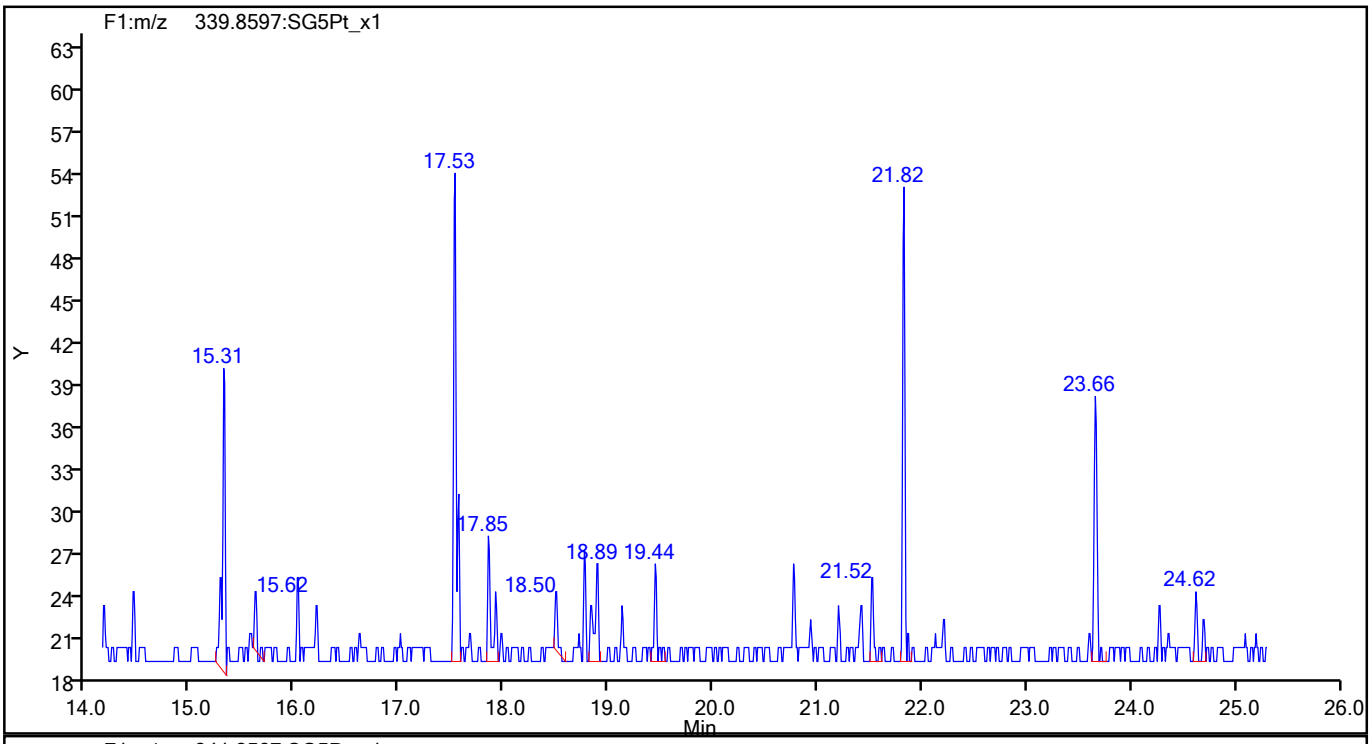

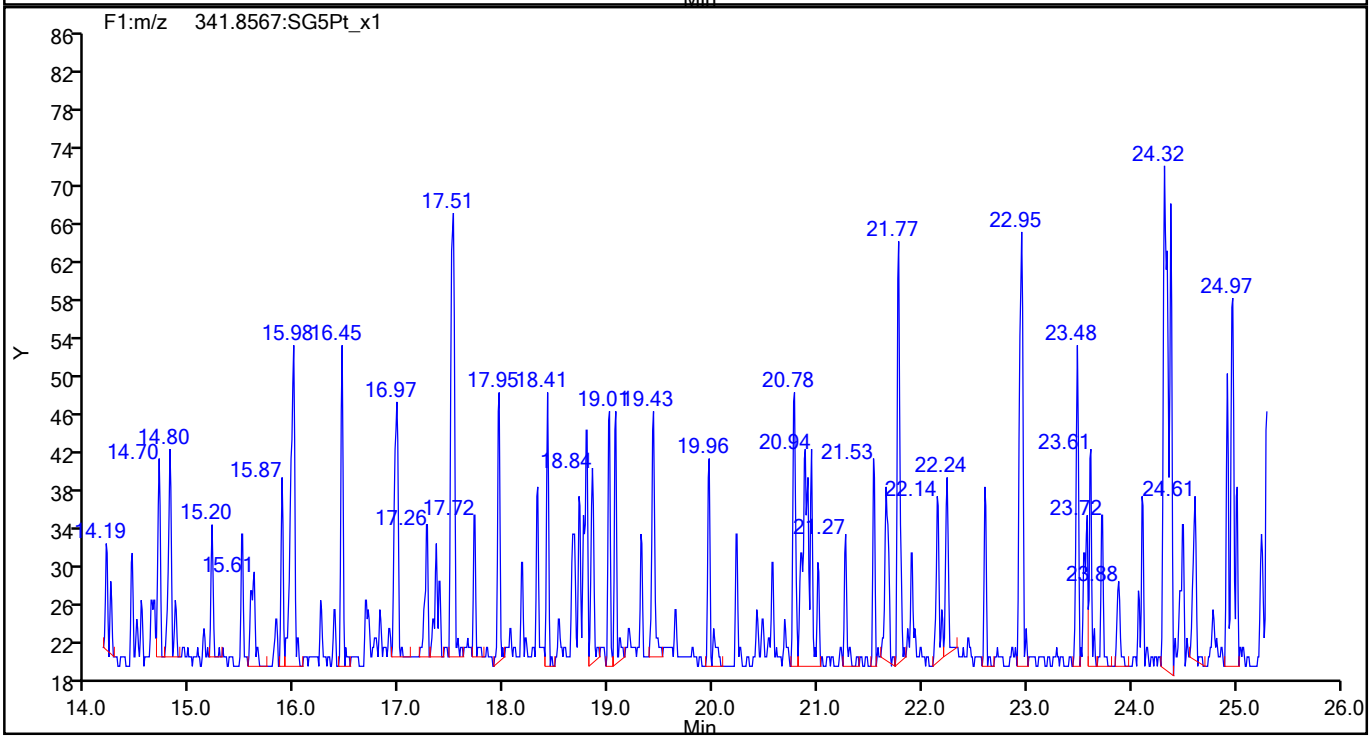

786653

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

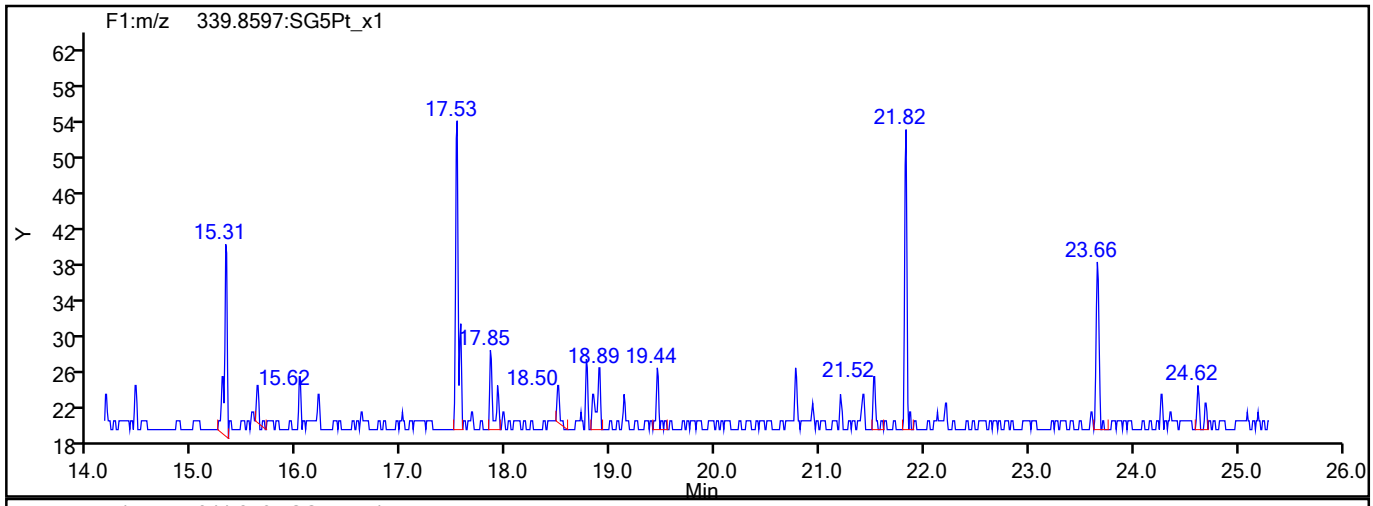

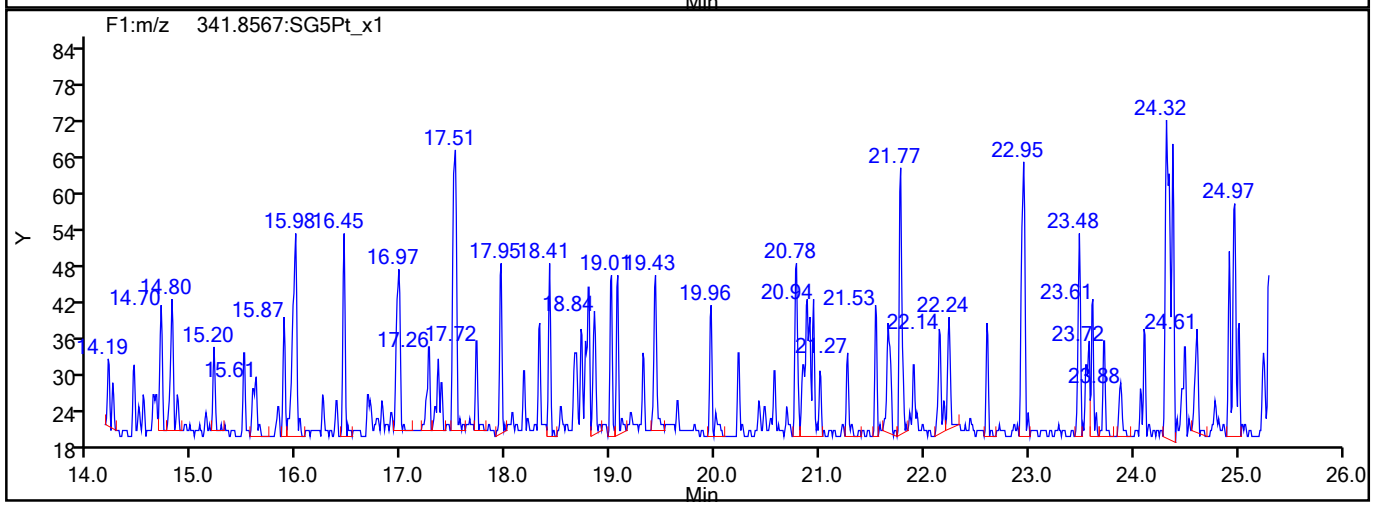

F1 PeCDFs Interference Mass

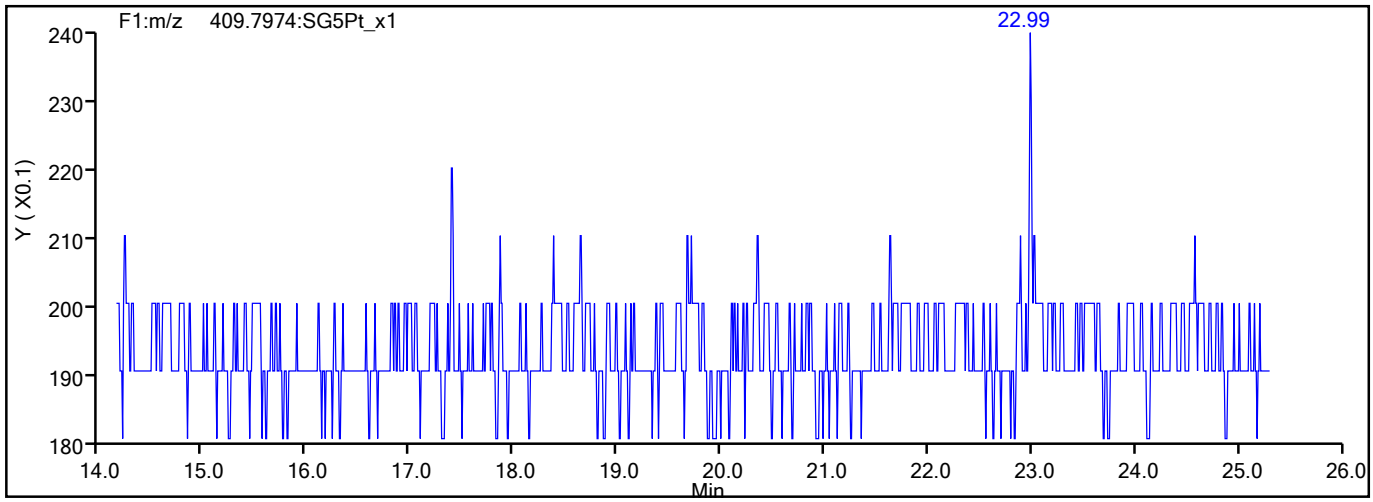

786654

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

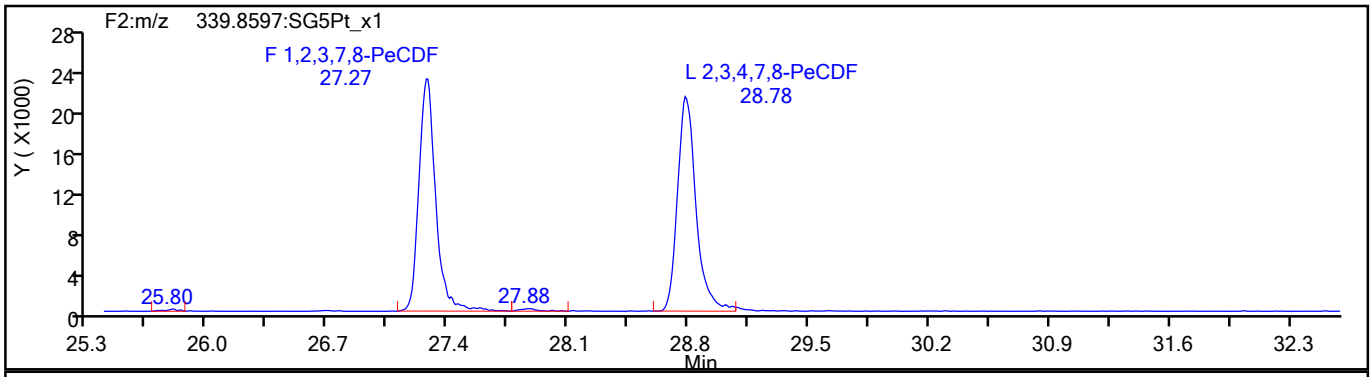

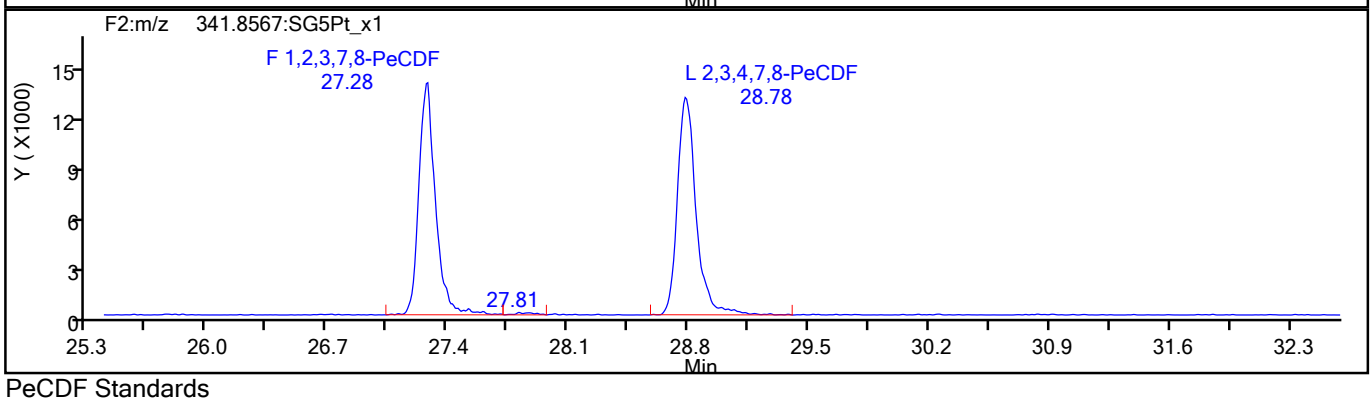

PeCDF Standards

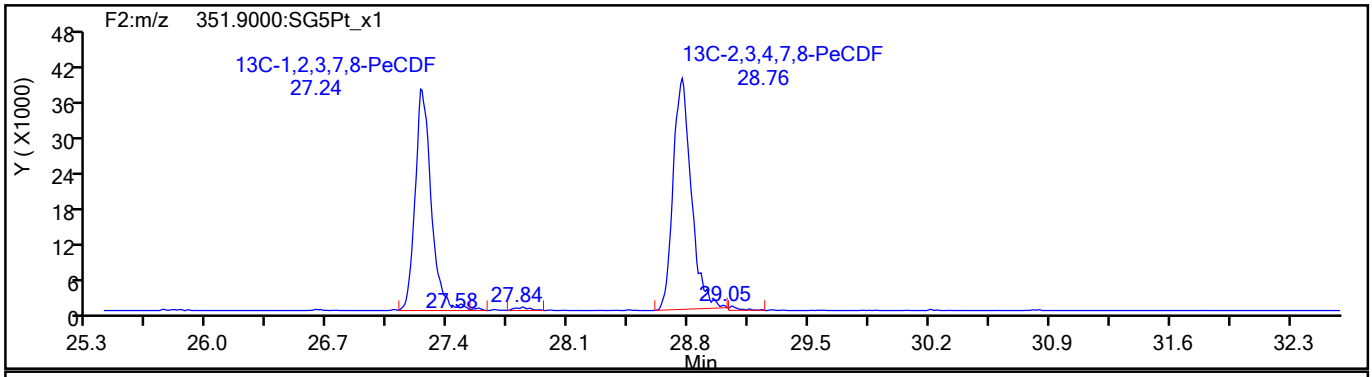

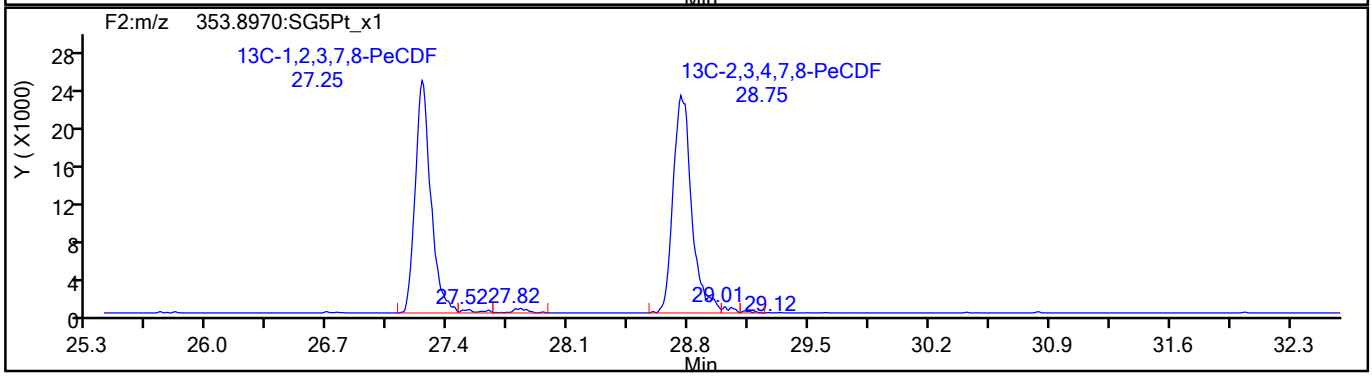

786655

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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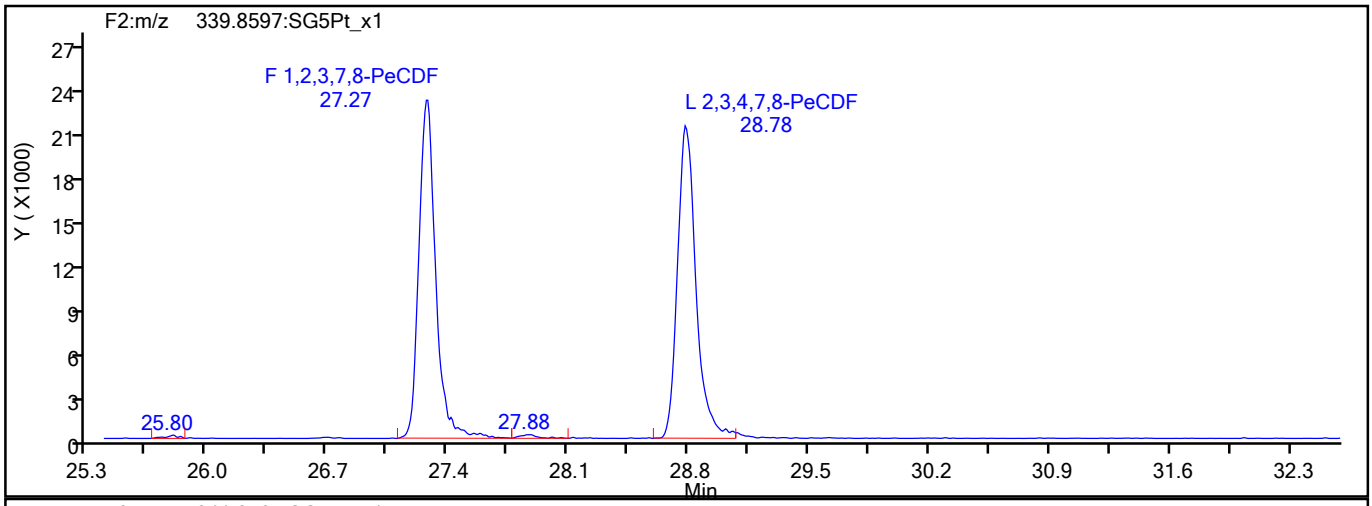

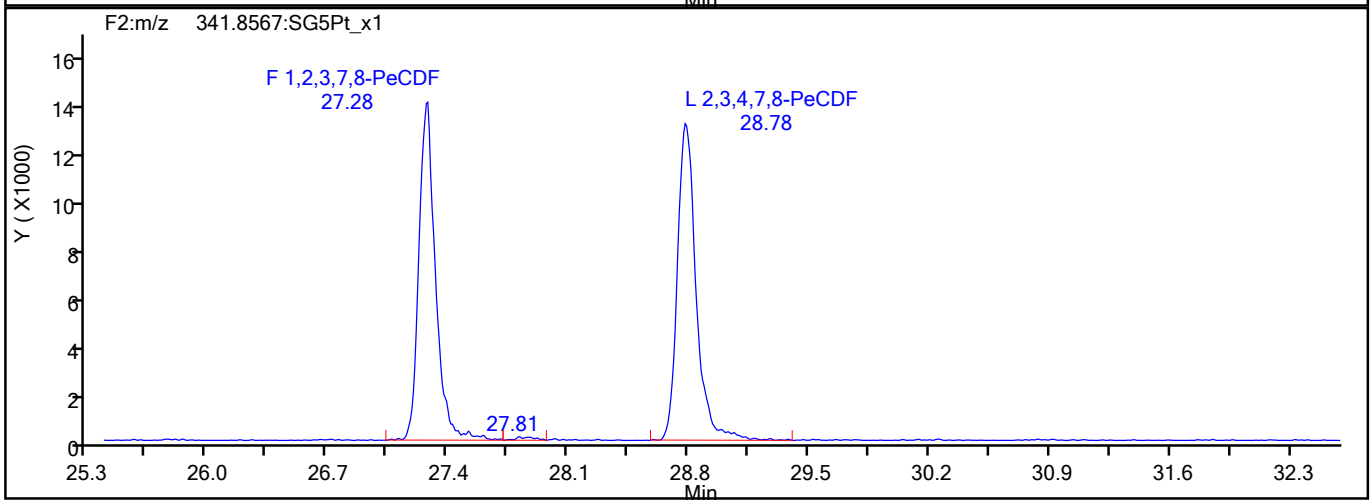

PeCDF Interference Mass

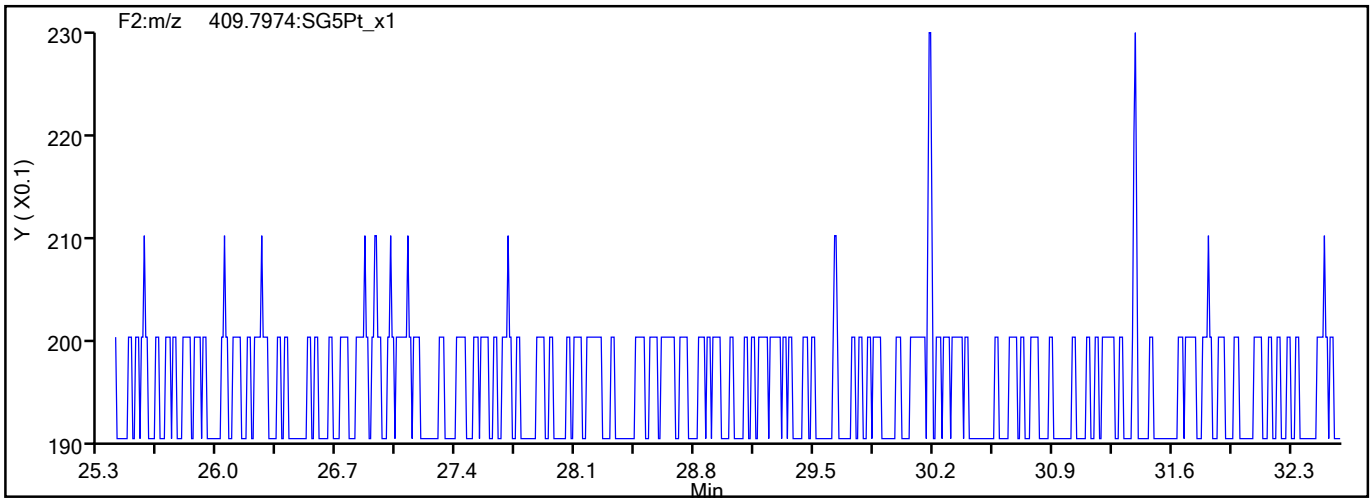

786656

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

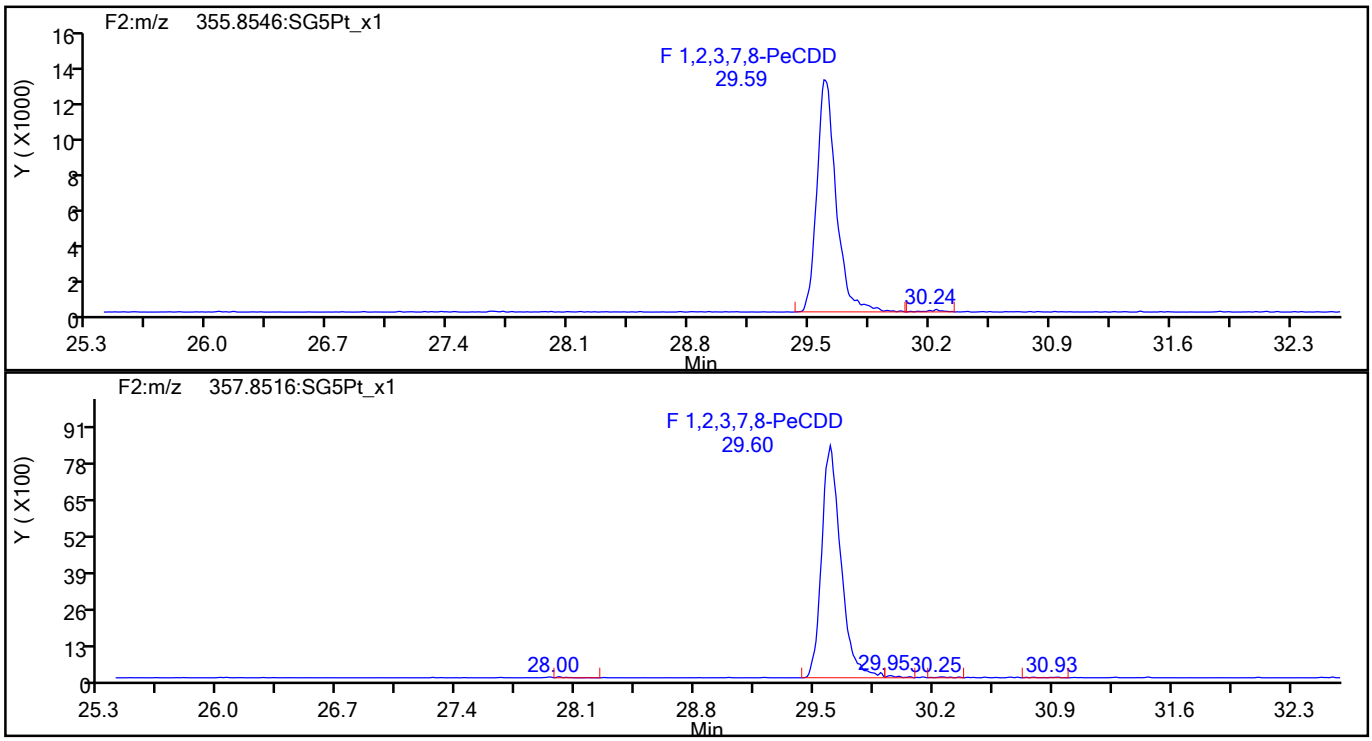

PeCDD Standards

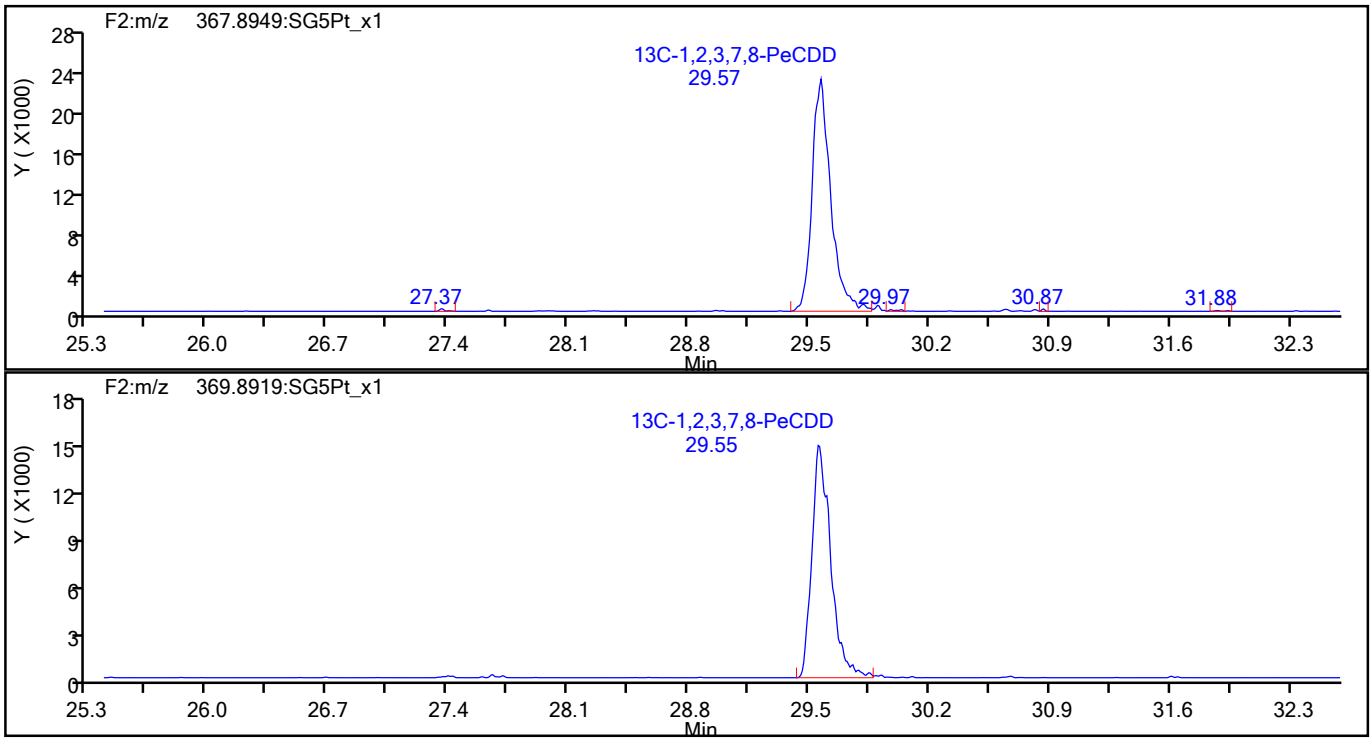

786657

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

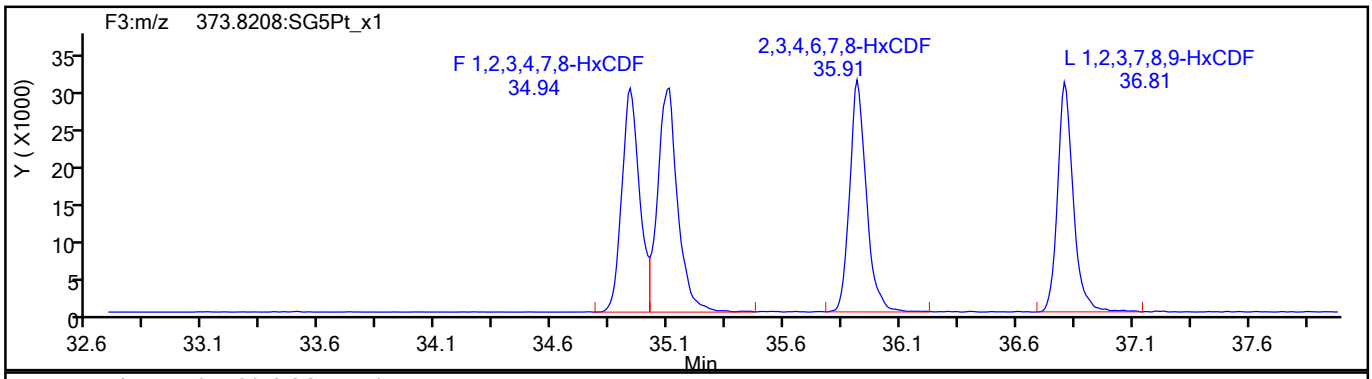

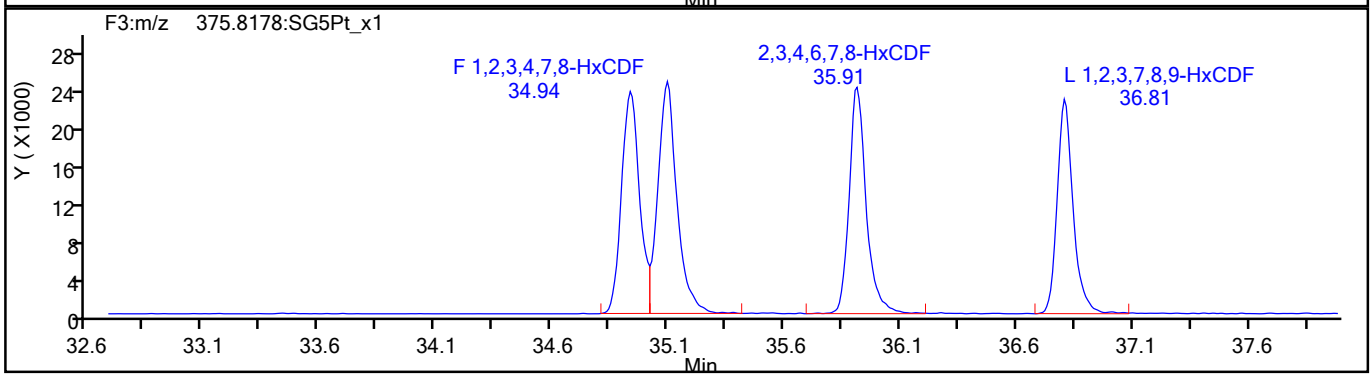

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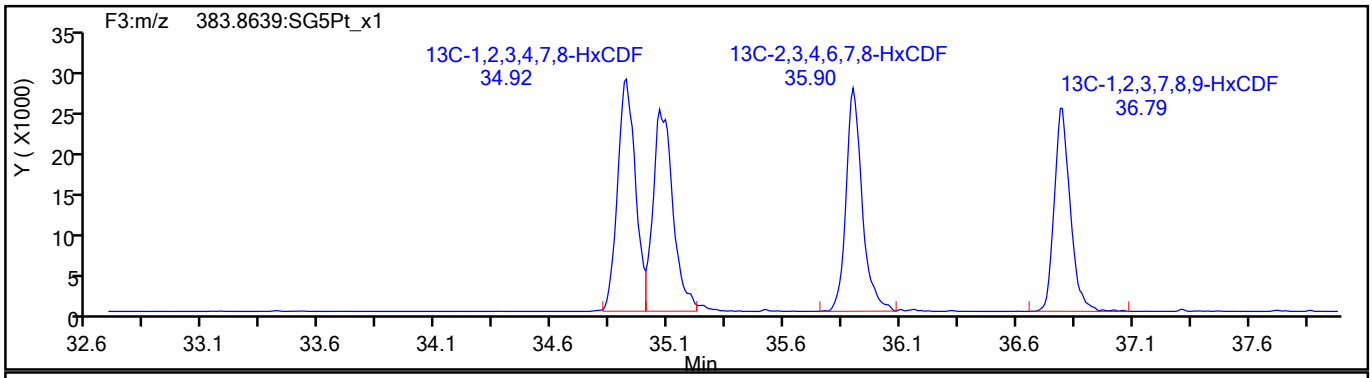

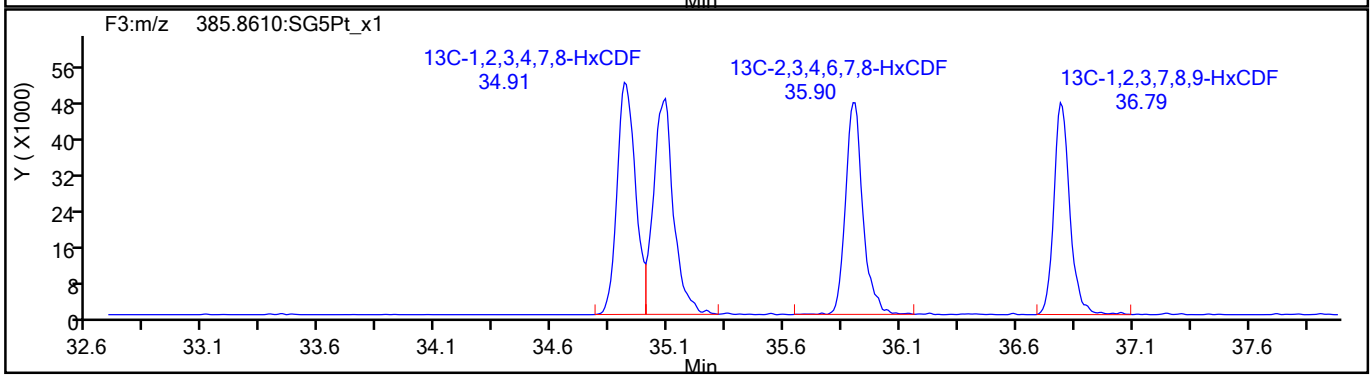

786658

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

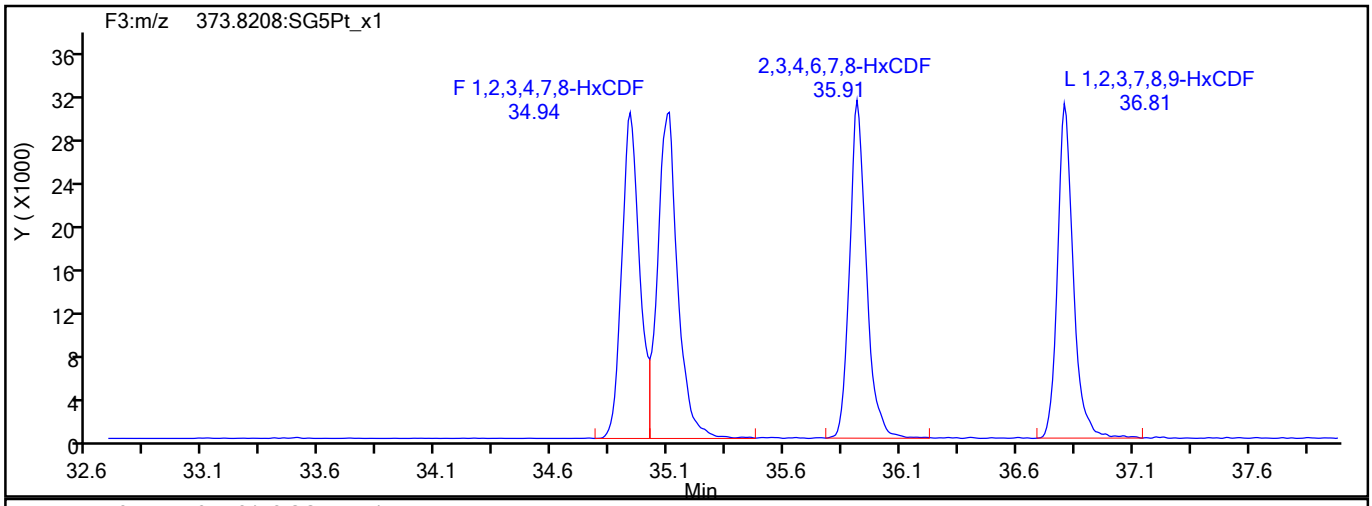

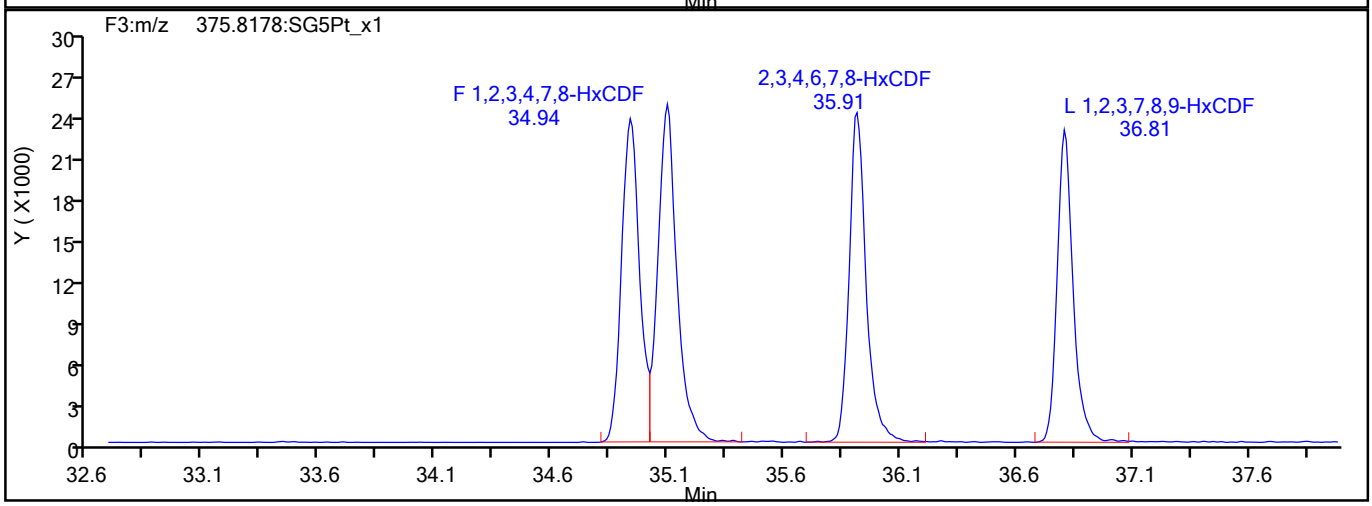

HxCDF Interference Mass

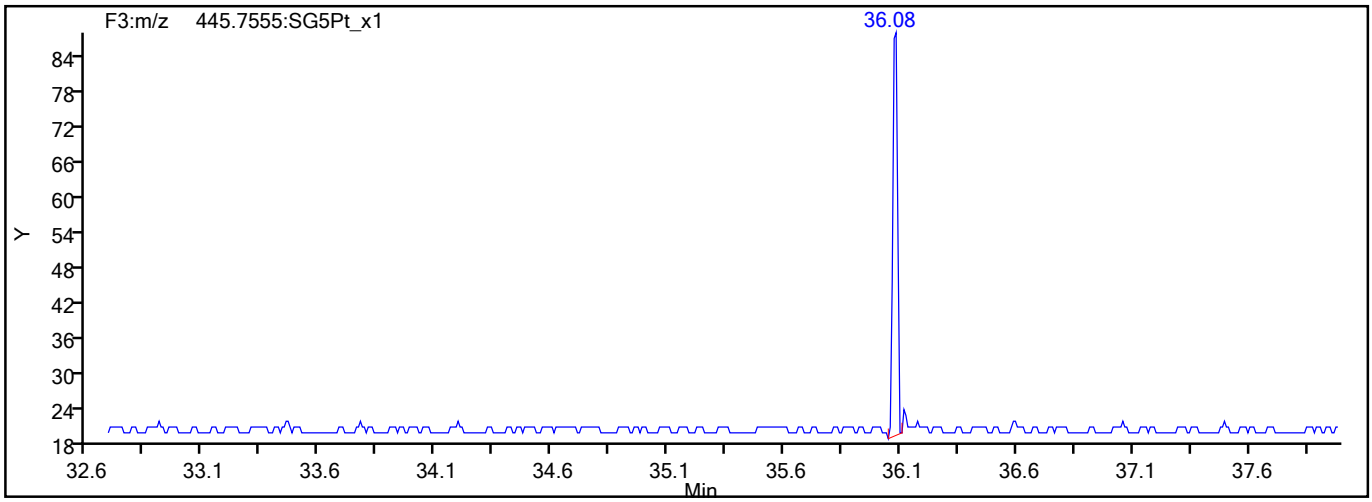

786659

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

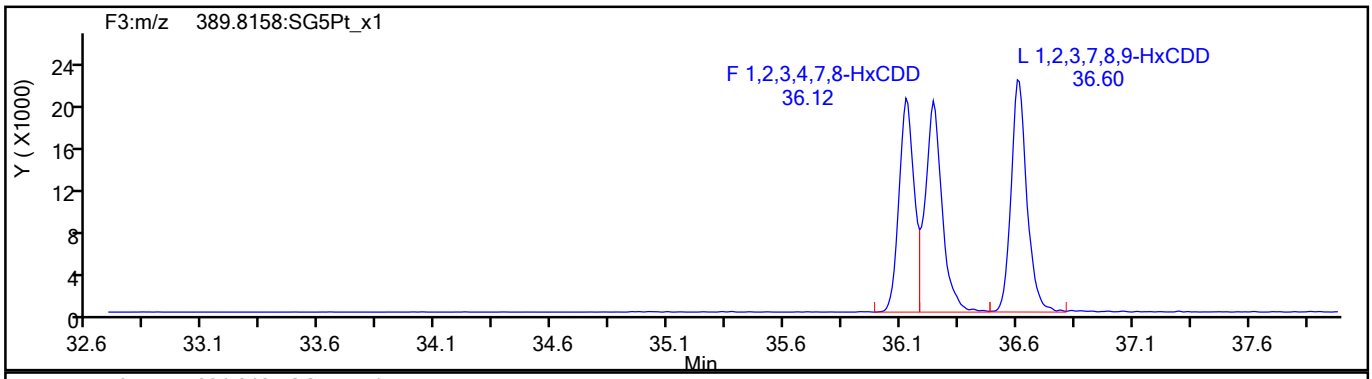

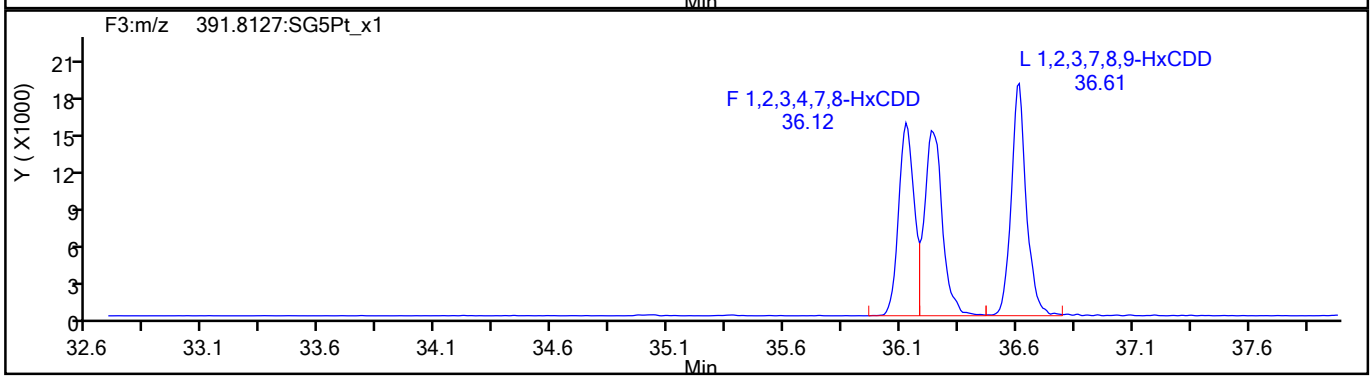

HxCDD Standards

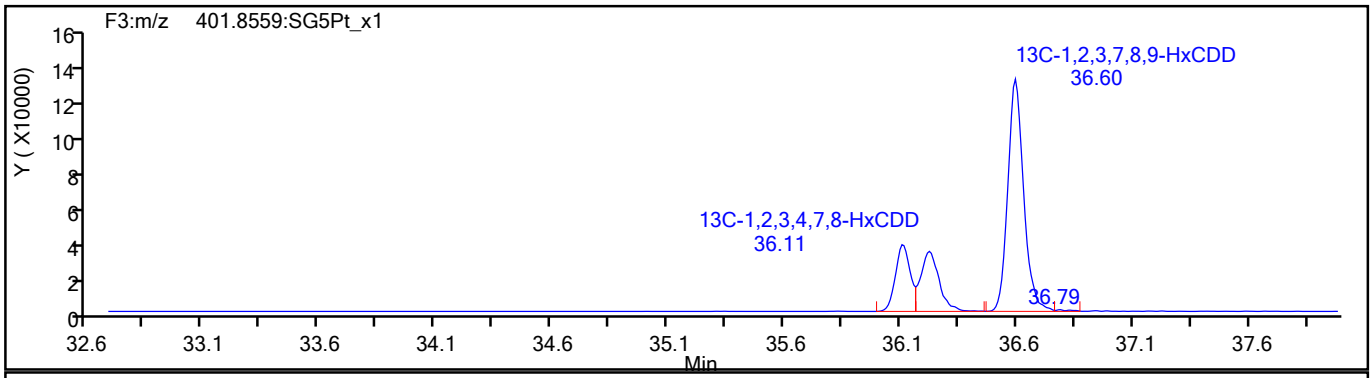

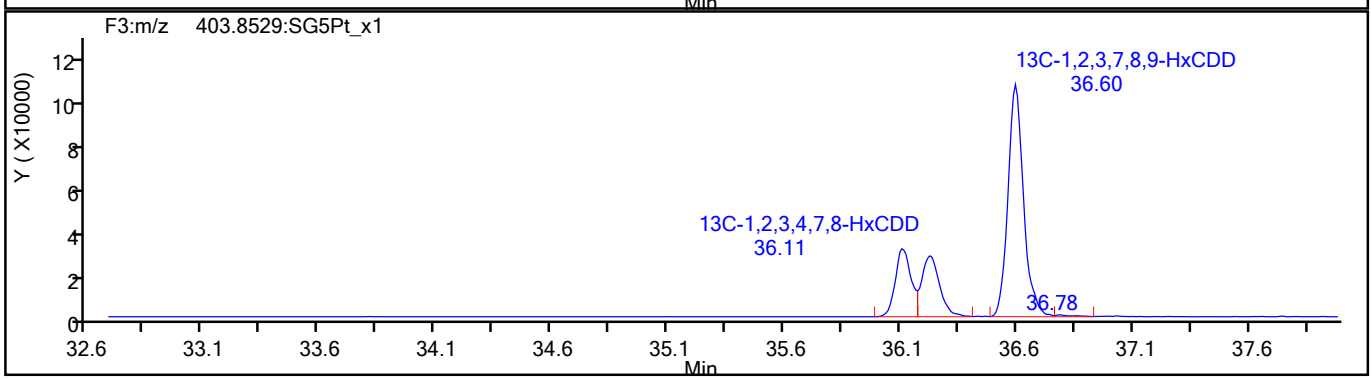

786660

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

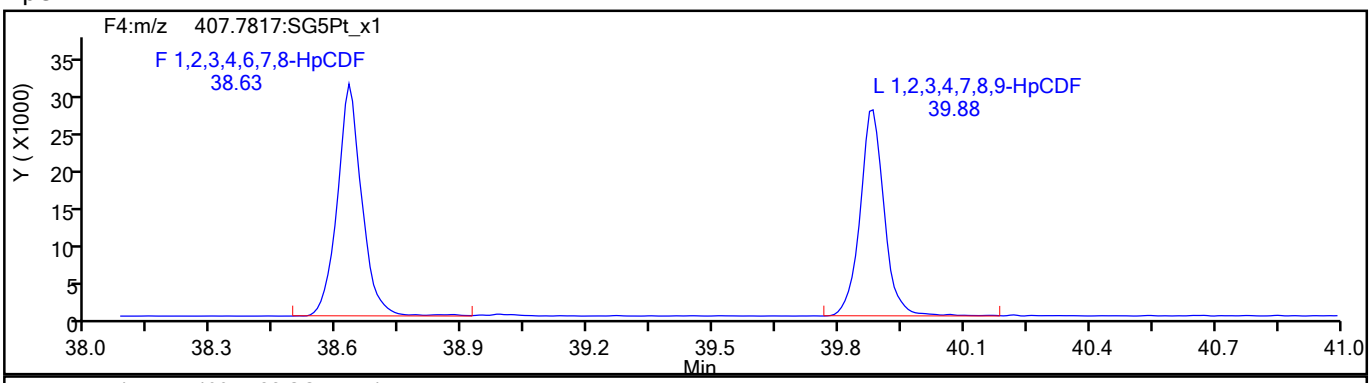

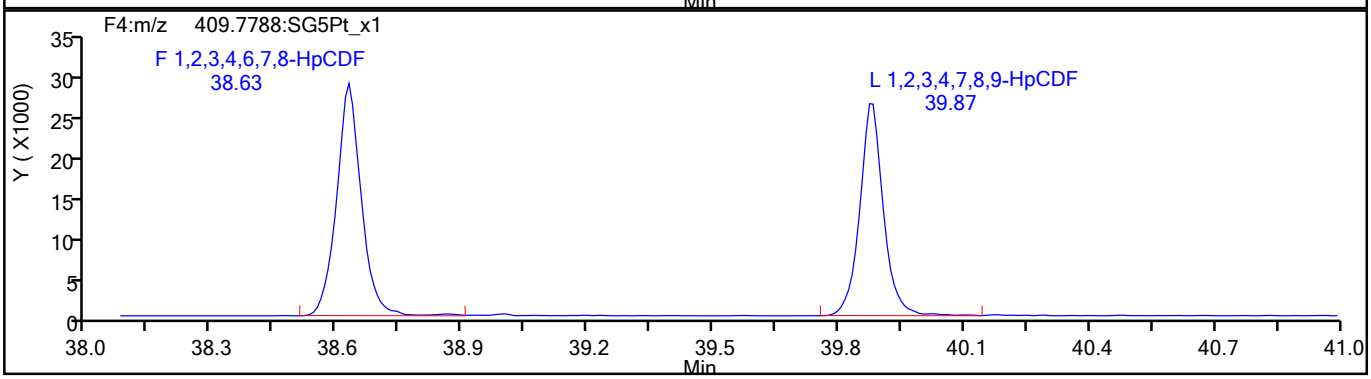

HpCDF Standards

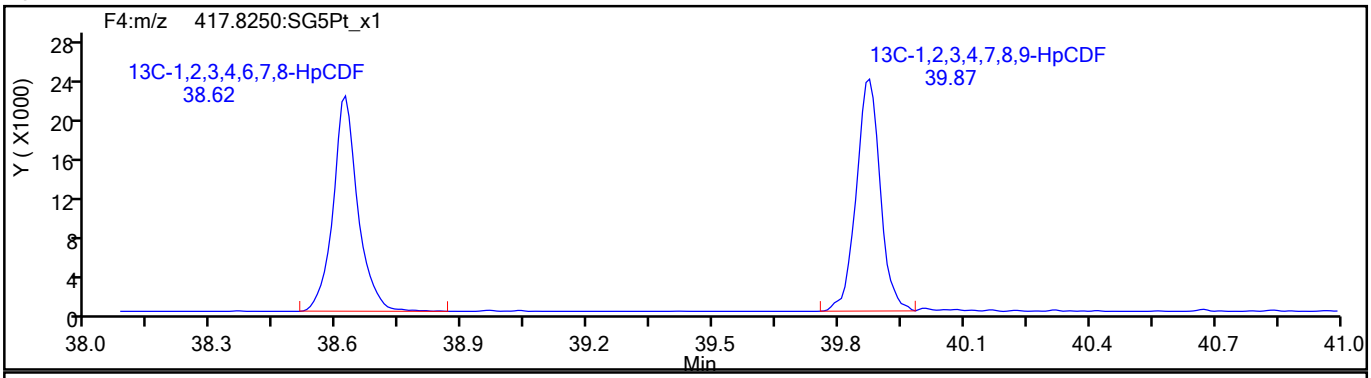

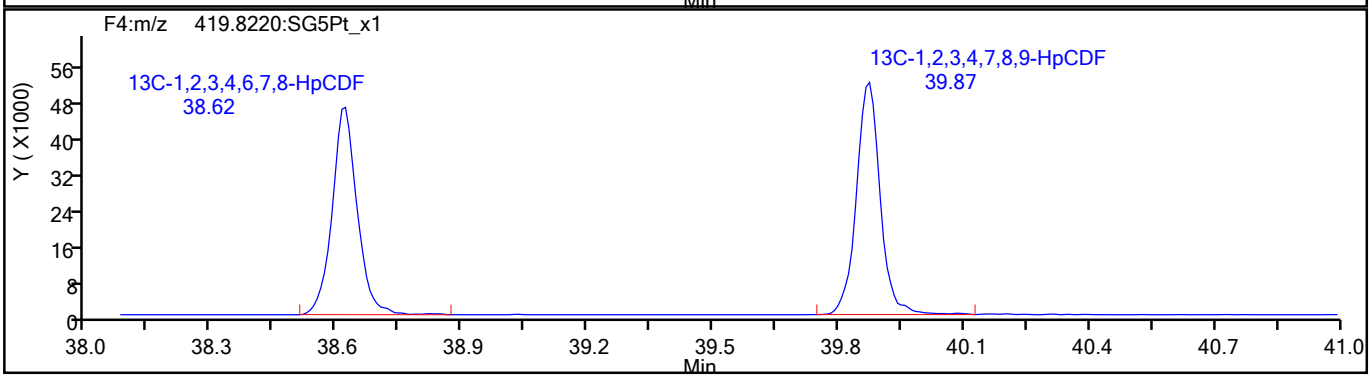

786661

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

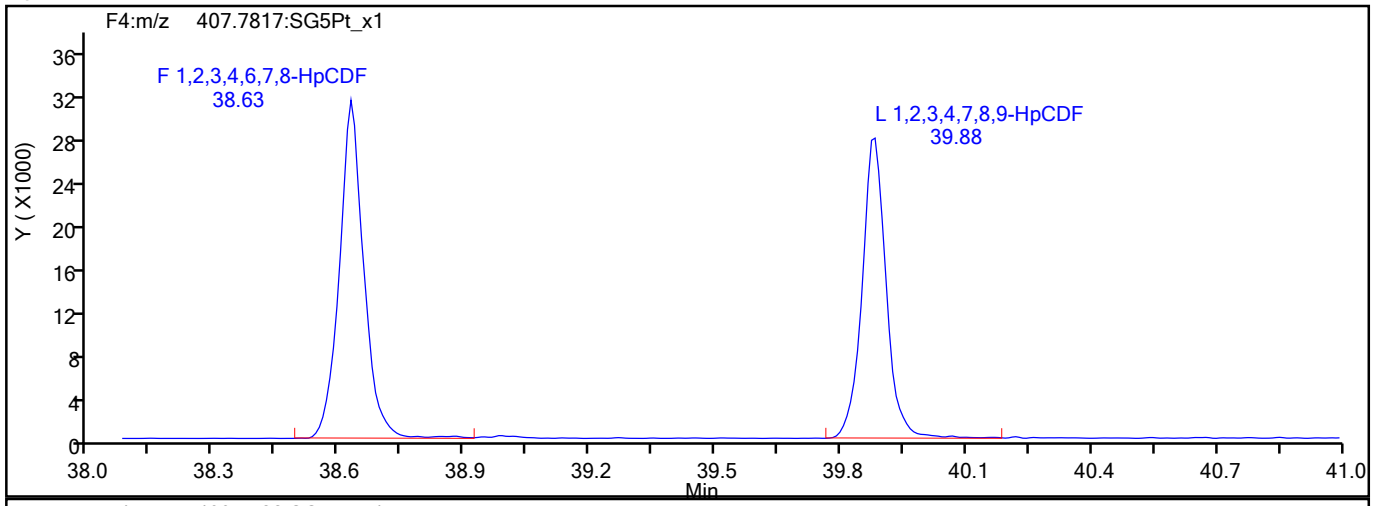

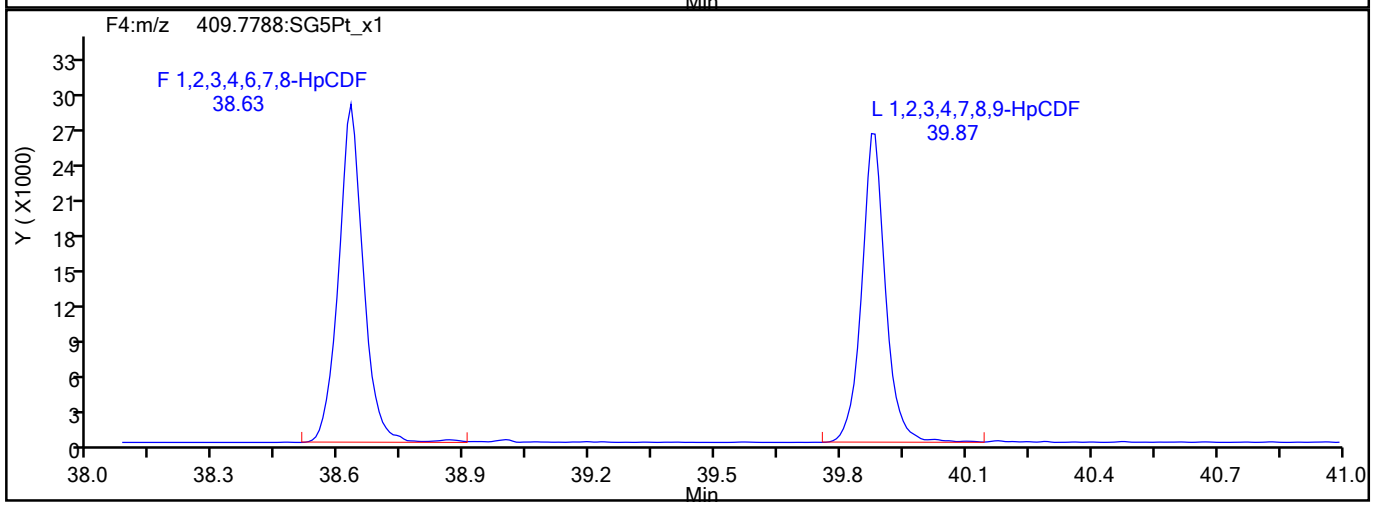

HpCDF Interference Mass

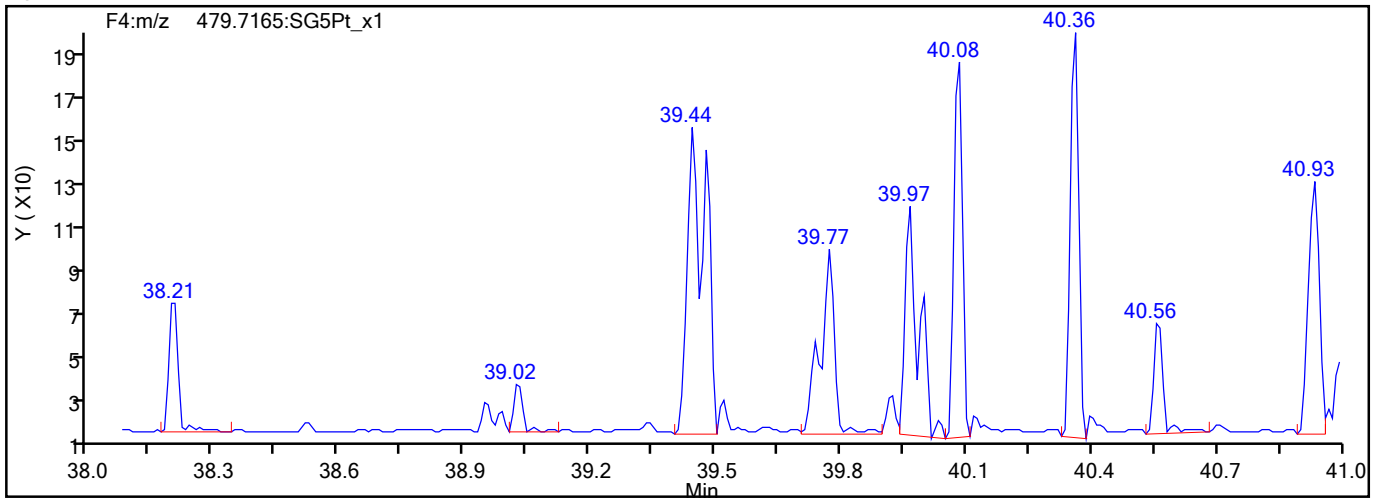

786662

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDD

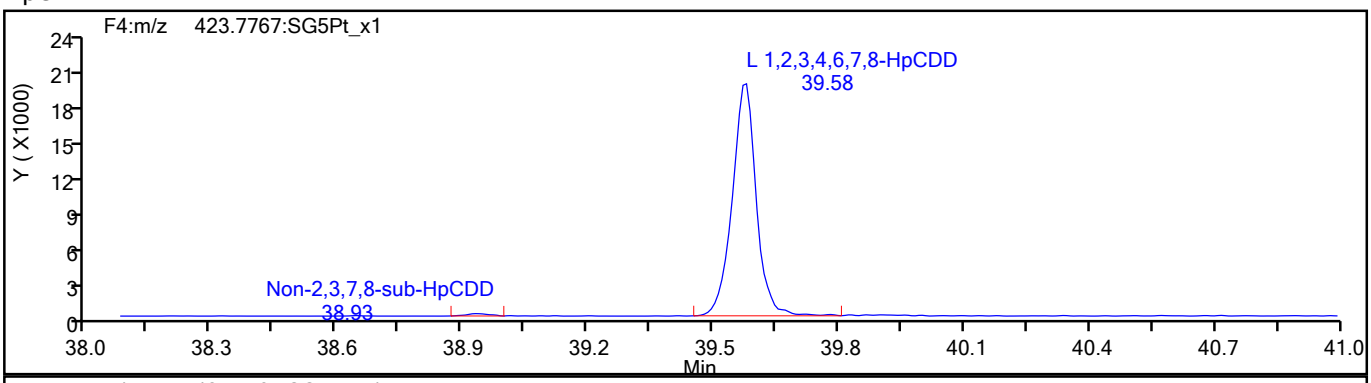

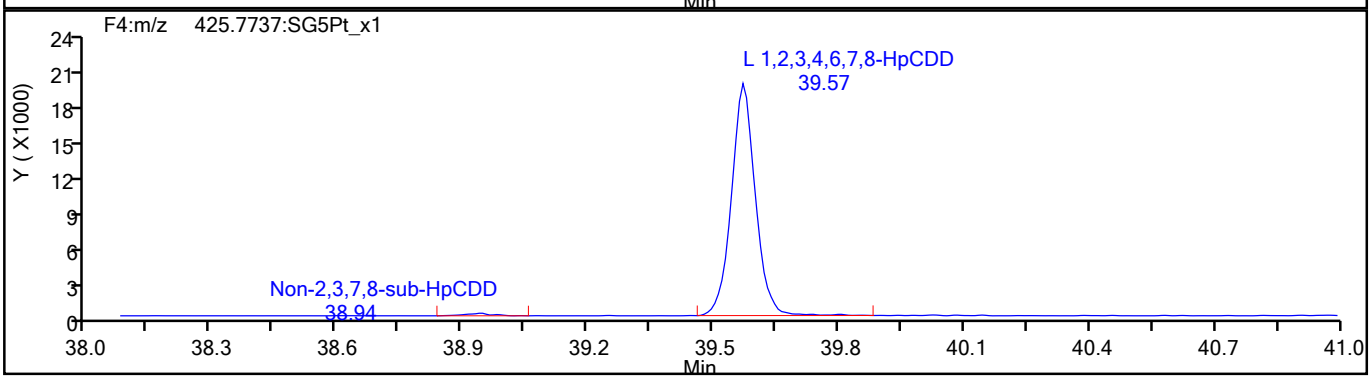

HpCDD Standards

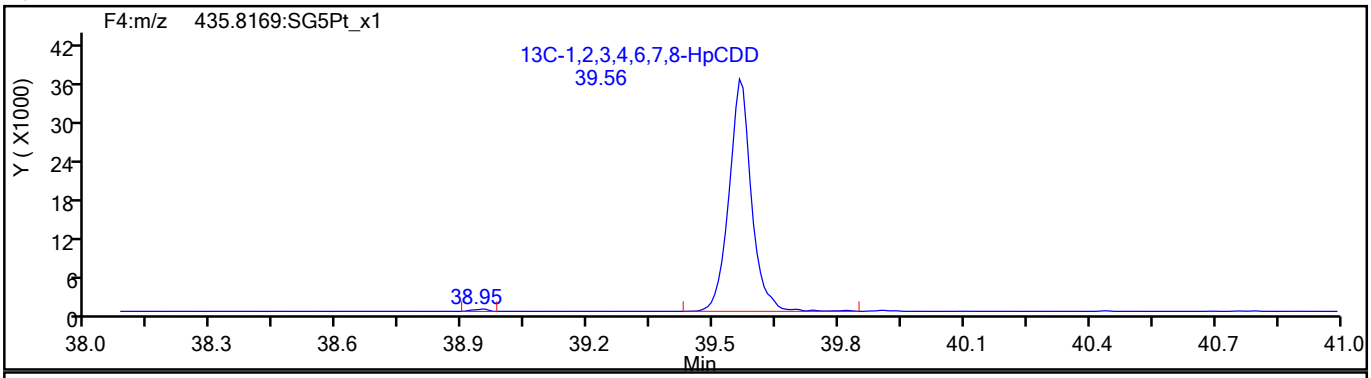

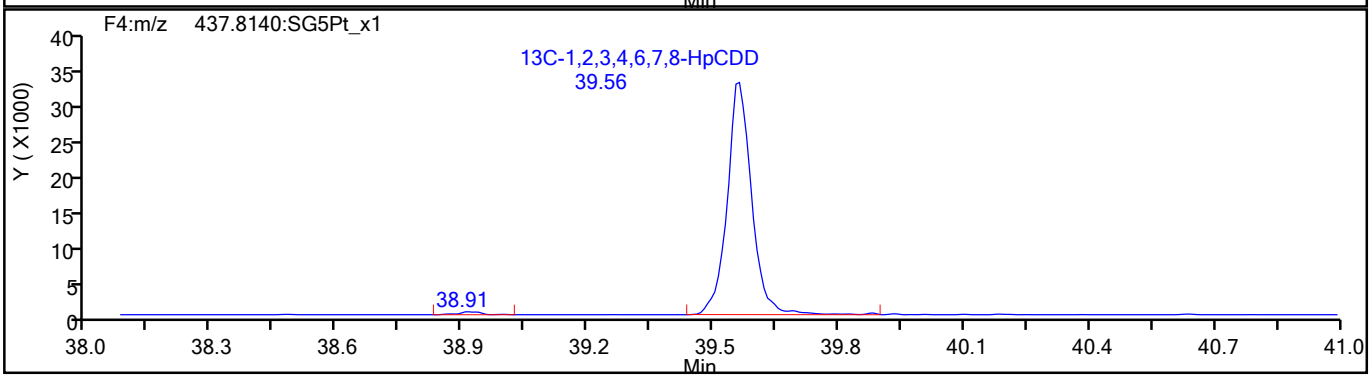

786663

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

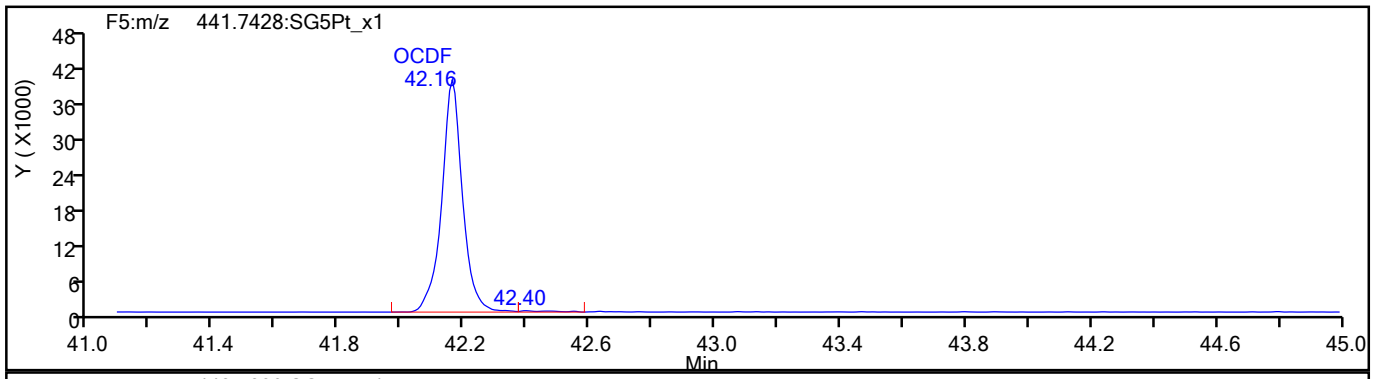

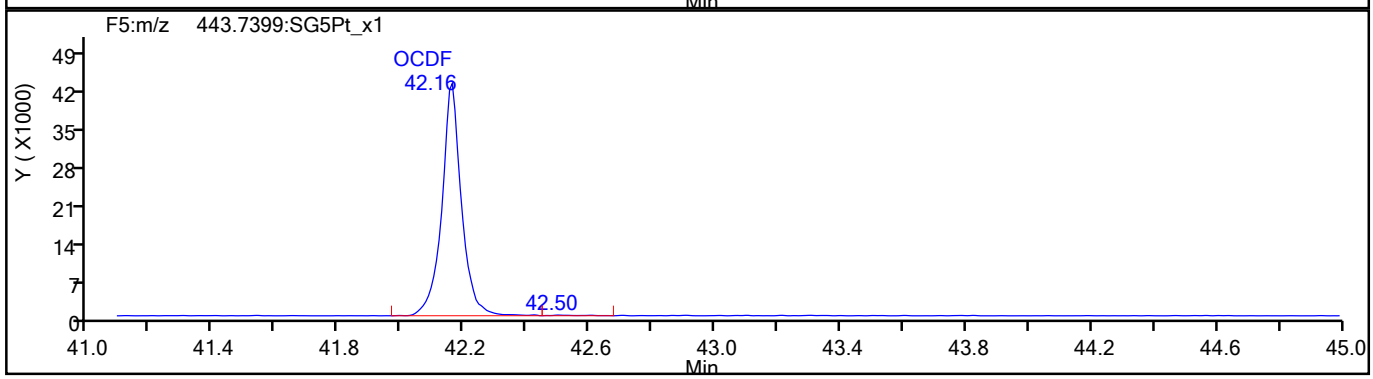

OCDF Standards

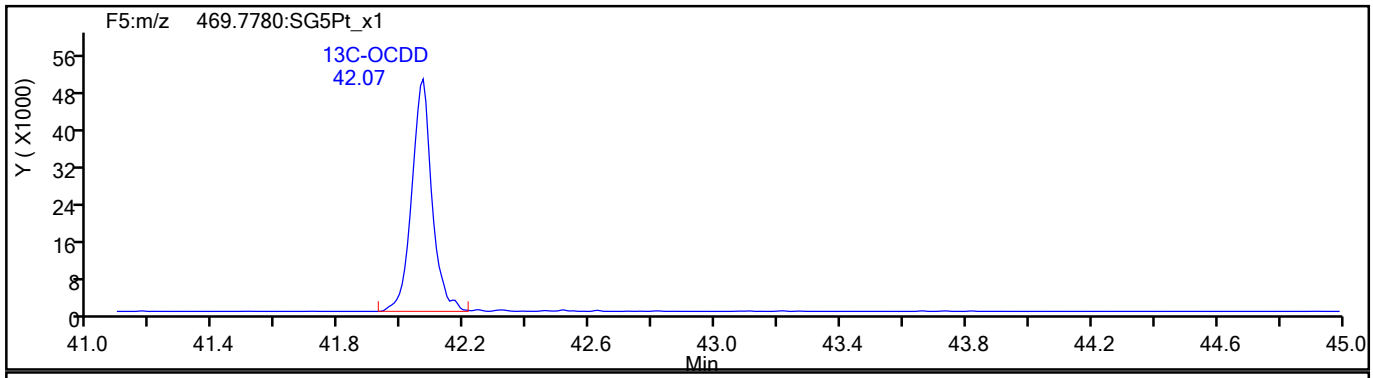

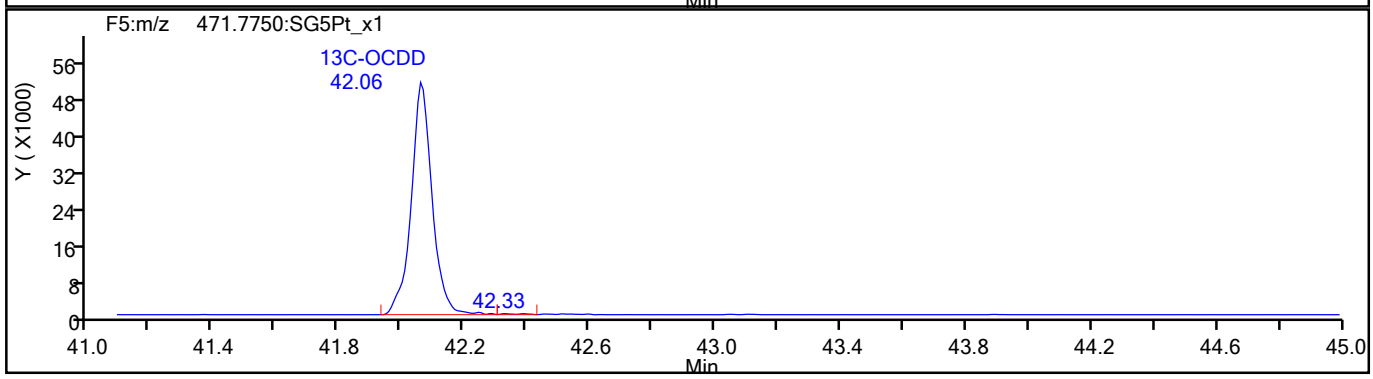

786664

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

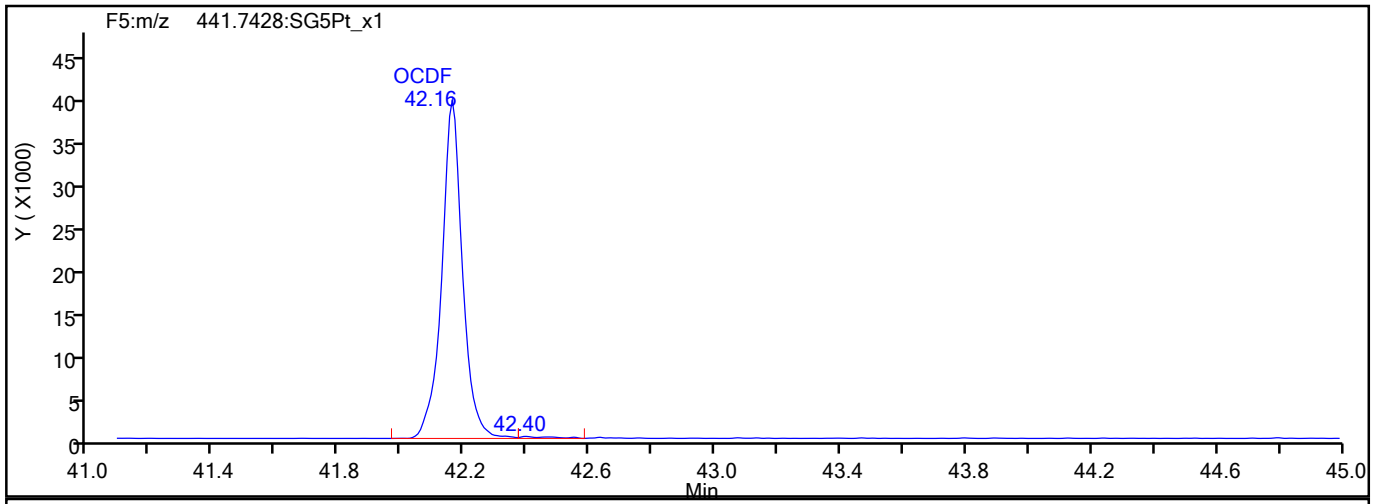

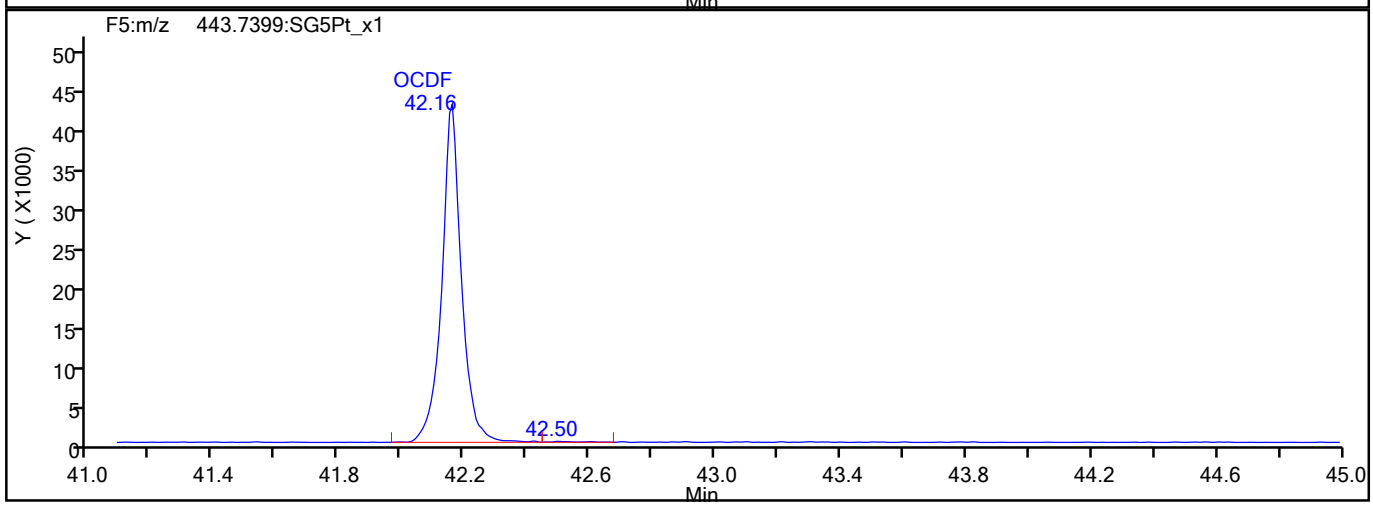

OCDF Interference Mass

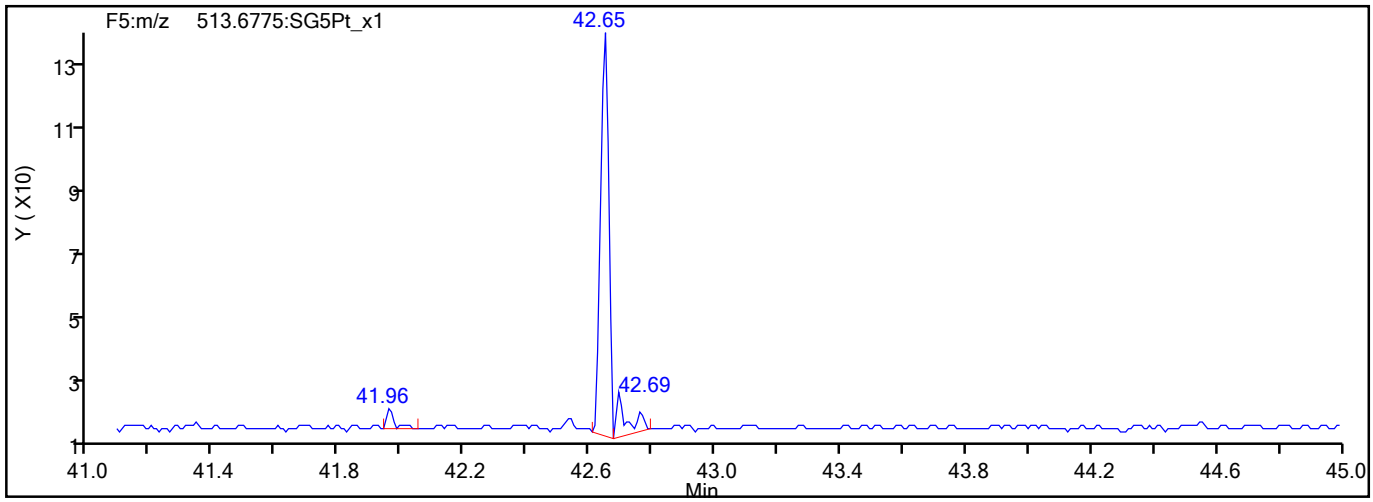

786665

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

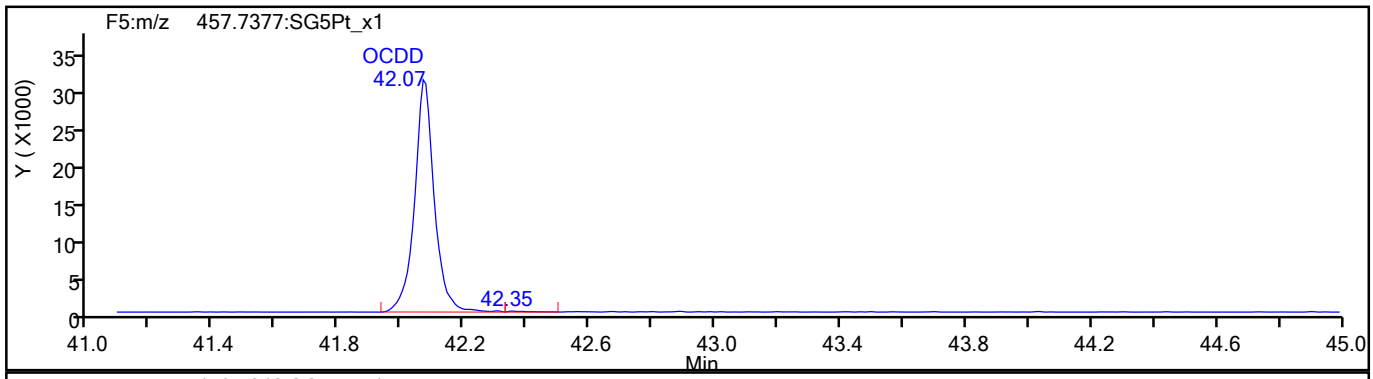

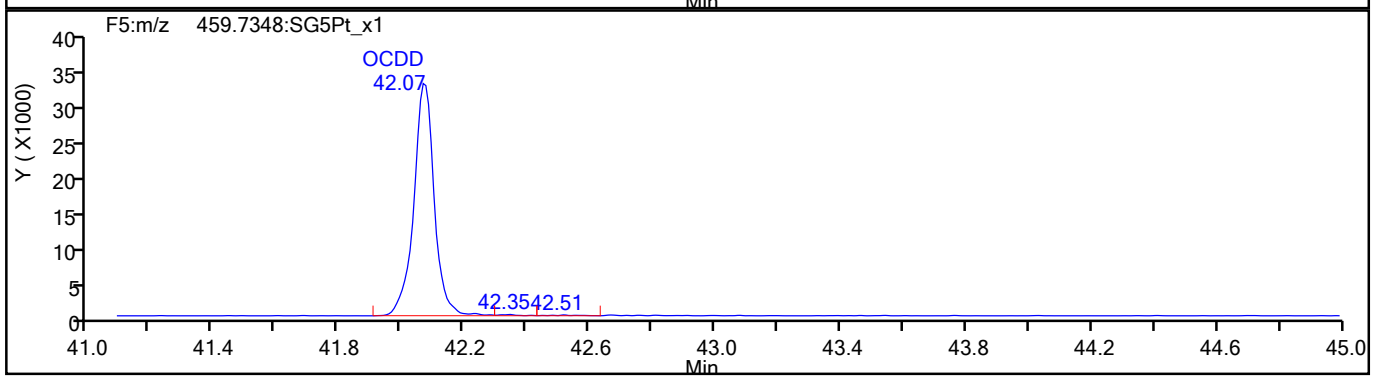

OCDD Standards

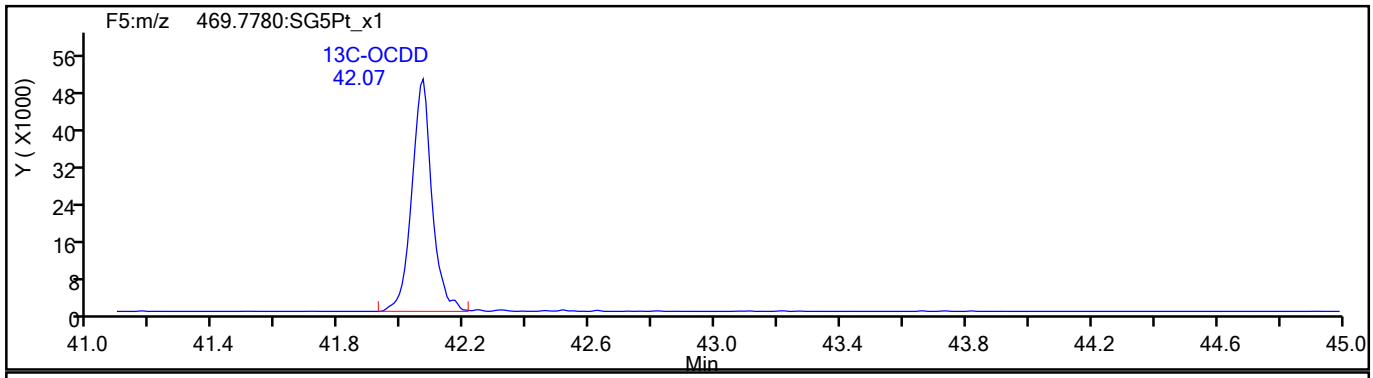

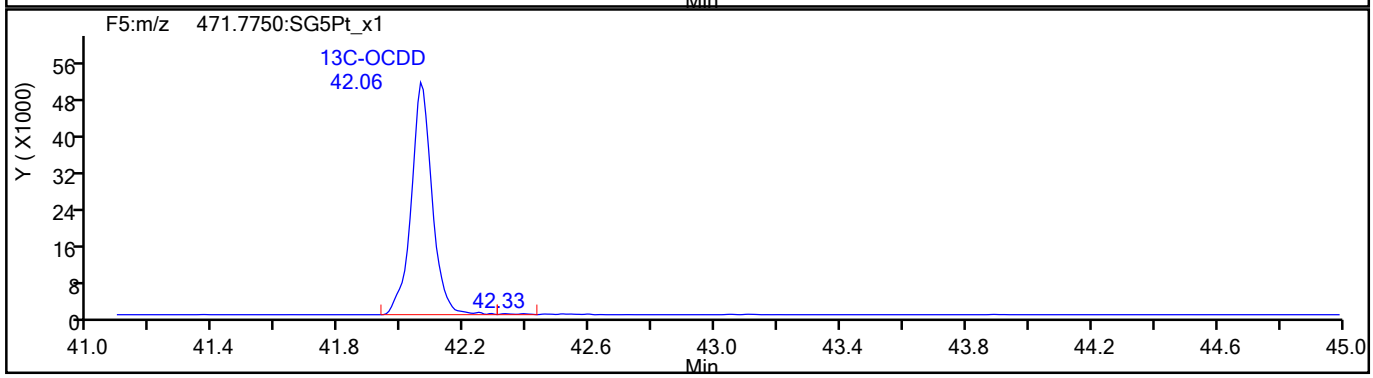

786666

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

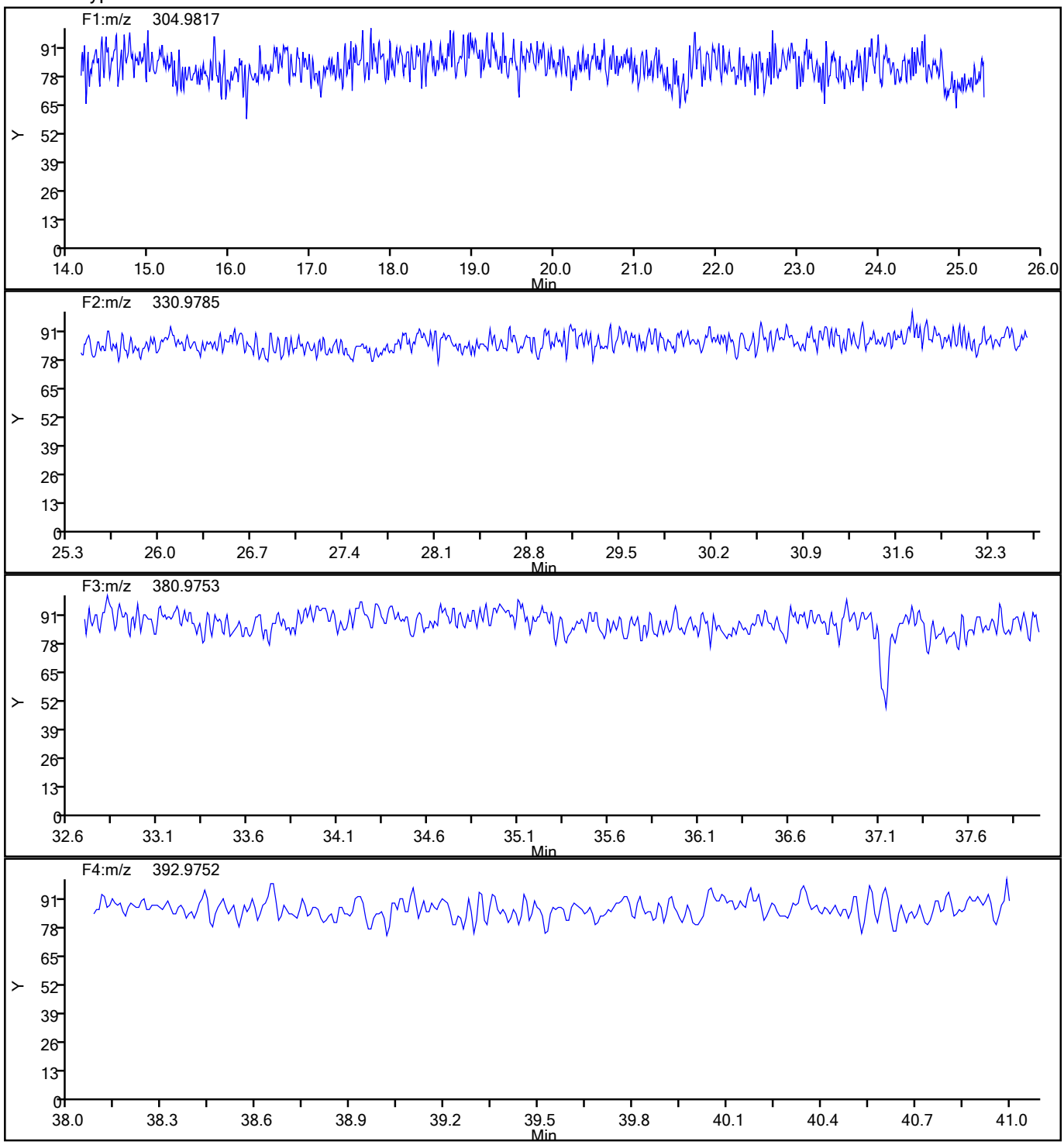

786667

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

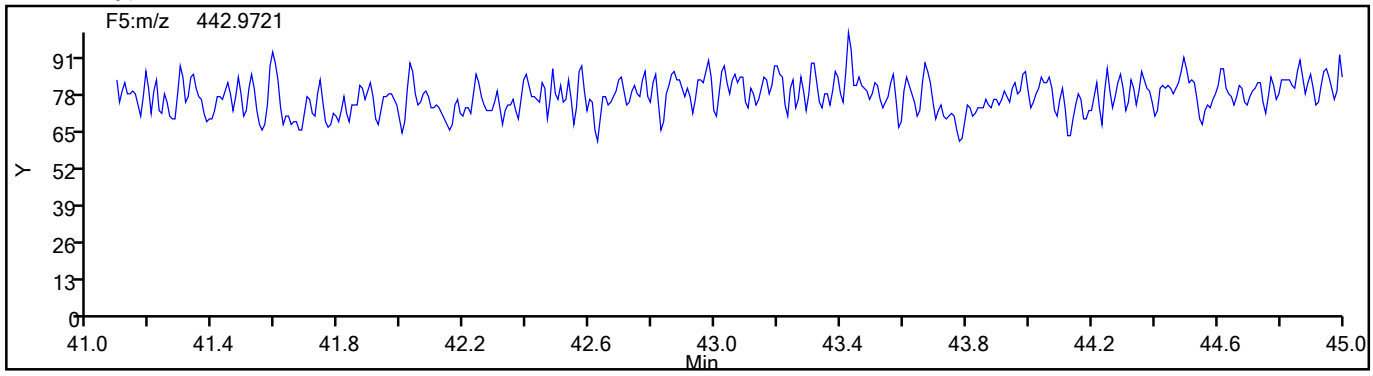

786668

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) MS
Lab Sample ID: 320-76888-1 MS
Matrix: Sediment
Lab File ID: 19au21dfs1_22.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.30(g)
Date Analyzed: 08/20/2021 05:33
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	22000		32	32
40321-76-4	1,2,3,7,8-PeCDD	470		90	6.7
57117-41-6	1,2,3,7,8-PeCDF	2670		90	14
57117-31-4	2,3,4,7,8-PeCDF	1900		90	14
39227-28-6	1,2,3,4,7,8-HxCDD	196		90	1.9
57653-85-7	1,2,3,6,7,8-HxCDD	203		90	2.1
19408-74-3	1,2,3,7,8,9-HxCDD	201		90	1.8
70648-26-9	1,2,3,4,7,8-HxCDF	3130		90	12
57117-44-9	1,2,3,6,7,8-HxCDF	1040		90	13
72918-21-9	1,2,3,7,8,9-HxCDF	251		90	13
60851-34-5	2,3,4,6,7,8-HxCDF	367		90	14
35822-46-9	1,2,3,4,6,7,8-HpCDD	265		90	1.1
67562-39-4	1,2,3,4,6,7,8-HpCDF	1100		90	3.6
55673-89-7	1,2,3,4,7,8,9-HpCDF	495		90	3.7
3268-87-9	OCDD	1050		180	2.9
39001-02-0	OCDF	890		180	3.4
41903-57-5	Total TCDD	24100		32	32
30402-14-3	Total TCDF	200000		150	150
36088-22-9	Total PeCDD	470		90	6.7
30402-15-4	Total PeCDF	7700		90	14
34465-46-8	Total HxCDD	612		90	1.9
55684-94-1	Total HxCDF	5290		90	13
37871-00-4	Total HpCDD	326		90	1.1
38998-75-3	Total HpCDF	1760		90	3.6

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) MS
Lab Sample ID: 320-76888-1 MS
Matrix: Sediment
Lab File ID: 19au21dfs1_22.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.30(g)
Date Analyzed: 08/20/2021 05:33
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	44		25-164
89059-46-1	13C-2,3,7,8-TCDF	41		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	39	q	25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	38		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	46		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	41		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	42		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	51		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	41		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	38		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	35		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	41		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	39		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	44		26-138
114423-97-1	13C-OCDD	41		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	90		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d
Lims ID: 320-76888-A-1-B MS
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MS
Inject. Date: 20-Aug-2021 05:33:00 ALS Bottle#: 0 Worklist Smp#: 20
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-b ms
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:22:19 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 16:58:35

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.444	145175	0.78	2.1E+04	10.0	10.0				a
D 13C-2,3,7,8-TCDF	20.456	80549	0.78	1.3459	4.123	4.123	0.2601	0.2601	41.23	
2,3,7,8-TCDF	20.473	27598918	0.80	1.0802	3172.0	3172.0	4.145	4.145	3.2E+005	E
A Non-2,3,7,8-sub-TCDF	19.851	20632522	0.77	1.0802	2373.0	2371.3	4.145	1392.8	0.00	RQMa
S Total TCDF					5545.0	5543.3	4.145	4.145		RQ
D 13C-2,3,7,8-TCDD	21.823	59738	0.84	0.9317	4.417	4.417	0.3983	0.3983	44.17	M
2,3,7,8-TCDD	21.848	3903989	0.80	1.0753	607.7	607.7	0.8976	0.8976	60773	Ea
$ 37Cl4-2,3,7,8-TCDD	21.840	52578		1.0083	3.592	3.592	0.2126	0.2126	89.80	
A Non-2,3,7,8-sub-TCDD	20.684	387719	0.76	1.0753	60.4	60.4	0.8976	54.1	0.00	a
S Total TCDD					668.1	668.1	0.8976	0.8976		
D 13C-1,2,3,7,8-PeCDF	27.290	63269	1.55	1.1405	3.821	3.821	0.0714	0.0714	38.21	
1,2,3,7,8-PeCDF	27.306	492047	1.57	1.0543	73.8	73.8	0.3792	0.3792	1475	M
D 13C-2,3,4,7,8-PeCDF	28.763	74448	1.66	1.1253	4.557	4.557	0.0724	0.0724	45.57	M
2,3,4,7,8-PeCDF	28.805	395052	1.62	1.0079	52.7	52.7	0.3814	0.3814	1053	
A F1 PeCDFs	24.634	4501	1.60	1.0311	0.6340	0.6340	0.006336	0.6340	0.00	a
A Non-2,3,7,8-sub-PeCDF	28.173	610241	1.55	1.0311	86.2	86.0	0.3802	27.8	0.00	RQMa
S Total PeCDF					213.2	213.0	0.3803	0.3803		RQ
D 13C-1,2,3,7,8-PeCDD	29.571	40060	1.55	0.7165	4.233	3.851	0.0131	0.0131	42.33	RQM
1,2,3,7,8-PeCDD	29.613	59938	1.58	1.0465	13.0	13.0	0.1840	0.1840	260	
A Non-2,3,7,8-sub-PeCDD	28.478						0.1840	0.3421		RQU
S Total PeCDD					13.0	13.0	0.1840	0.1840		
D 13C-1,2,3,4,7,8-HxCDF	34.920	72925	0.59	0.9648	5.092	5.092	0.0236	0.0236	50.92	
1,2,3,4,7,8-HxCDF	34.920	725377	1.26	1.1474	86.7	86.7	0.3418	0.3418	1734	
D 13C-1,2,3,6,7,8-HxCDF	35.063	64671	0.53	1.0708	4.069	4.069	0.0212	0.0212	40.69	
1,2,3,6,7,8-HxCDF	35.080	226831	1.31	1.2178	28.8	28.8	0.3582	0.3582	576	
D 13C-2,3,4,6,7,8-HxCDF	35.896	53384	0.48	1.0413	3.454	3.454	0.0219	0.0219	34.54	
2,3,4,6,7,8-HxCDF	35.905	65869	1.24	1.2145	10.2	10.2	0.3940	0.3940	203	M
D 13C-1,2,3,7,8,9-HxCDF	36.788	54492	0.59	0.9731	3.773	3.773	0.0234	0.0234	37.73	
1,2,3,7,8,9-HxCDF	36.797	46987	1.27	1.2401	6.953	6.953	0.3615	0.3615	139	M
A Non-2,3,7,8-sub-HxCDF	35.009	102124	1.28	1.2049	13.8	13.8	0.3623	5.889	0.00	Ma
S Total HxCDF					146.4	146.4	0.3639	0.3639		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.587	148437	1.20	1.8E+04	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	36.107	45625	1.20	0.7587	4.051	4.051	0.0311	0.0311	40.51	
1,2,3,4,7,8-HxCDD	36.115	26231	1.15	1.0608	5.420	5.420	0.0531	0.0531	108	
D 13C-1,2,3,6,7,8-HxCDD	36.225	53461	1.30	0.8593	4.191	4.191	0.0275	0.0275	41.91	
1,2,3,6,7,8-HxCDD	36.233	29812	1.32	0.9933	5.614	5.614	0.0569	0.0569	112	
1,2,3,7,8,9-HxCDD	36.603	30588	1.14	1.1094	5.565	5.565	0.0509	0.0509	111	
A Non-2,3,7,8-sub-HxCDD	35.375	1689	1.24	1.0545	0.4136	0.3233	0.0535	0.3233	0.00	RQ
S Total HxCDD					17.0	16.9	0.0537	0.0537		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.601	43082	0.45	0.7359	3.944	3.944	0.0385	0.0385	39.44	
1,2,3,4,6,7,8-HpCDF	38.618	188467	1.04	1.4421	30.3	30.3	0.0994	0.0994	607	
D 13C-1,2,3,4,7,8,9-HpCDF	39.855	44371	0.39	0.6854	4.361	4.361	0.0413	0.0413	43.61	
1,2,3,4,7,8,9-HpCDF	39.864	79474	1.04	1.3092	13.7	13.7	0.1011	0.1011	274	
A Non-2,3,7,8-sub-HpCDF	39.245	27529	0.98	1.3756	4.577	4.577	0.1001	4.577	0.00	
S Total HpCDF					48.6	48.6	0.1003	0.1003		
D 13C-1,2,3,4,6,7,8-HpCDD	39.552	40710	1.08	0.6745	4.066	4.066	0.0329	0.0329	40.66	
1,2,3,4,6,7,8-HpCDD	39.561	31383	1.04	1.0503	7.340	7.340	0.0316	0.0316	147	
A Non-2,3,7,8-sub-HpCDD	39.241	7160	1.09	1.0503	1.675	1.675	0.0316	1.675	0.00	
S Total HpCDD					9.014	9.014	0.0316	0.0316		
D 13C-OCDD	42.042	67064	0.94	0.5446	8.296	8.296	0.0204	0.0204	41.48	M
OCDF	42.143	108661	0.94	1.3168	24.6	24.6	0.0947	0.0947	246	
OCDD	42.058	103328	0.93	1.0620	29.0	29.0	0.0806	0.0806	290	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d
Lims ID: 320-76888-A-1-B MS
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MS
Inject. Date: 20-Aug-2021 05:33:00 ALS Bottle#: 0 Worklist Smp#: 20
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-b ms
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:22:19 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 16:58:35

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.444	21.395	3		63834	7696	139	347	55		a
333.9338	21.427	21.395	2		81341	10359	129	322	80	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.456	20.365	5	0.954	35423	5280	130	325	41		
317.9389	20.439	20.365	4	0.953	45126	6391	123	307	52	0.78(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.473	20.408	4	1.001	12289808	1660343	940	2350	1766		
305.8987	20.473	20.408	4	1.001	15309110	2023975	1150	2875	1760	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	17.484	19.851	-142	0.855	69116	10380	940	2350	11		
	Empc Correction				54235	9875	940	2350	11		
305.8987	17.475	19.851	-142	0.854	70436	12825	1150	2875	11	0.98(0.65-0.89)	
303.9016	17.939	19.851	-114	0.877	281154	45390	940	2350	48		M
305.8987	17.939	19.851	-114	0.877	383250	61627	1150	2875	54	0.73(0.65-0.89)	
303.9016	18.446	19.851	-84	0.902	444737	53615	940	2350	57		
305.8987	18.446	19.851	-84	0.902	578794	68145	1150	2875	59	0.77(0.65-0.89)	
303.9016	18.867	19.851	-59	0.922	350179	46885	940	2350	50		
305.8987	18.867	19.851	-59	0.922	477599	62212	1150	2875	54	0.73(0.65-0.89)	
303.9016	19.245	19.851	-36	0.941	510917	76027	940	2350	81		
305.8987	19.245	19.851	-36	0.941	689900	101976	1150	2875	89	0.74(0.65-0.89)	
303.9016	19.743	19.851	-6	0.965	5099293	705019	940	2350	750		
305.8987	19.743	19.851	-6	0.965	7019342	987260	1150	2875	858	0.73(0.65-0.89)	
303.9016	20.164	19.851	19	0.986	201158	25767	940	2350	27		
305.8987	20.155	19.851	18	0.985	259484	34071	1150	2875	30	0.78(0.65-0.89)	

786673

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.264	19.851	85	1.039	845519	110231	940	2350	117		
305.8987	21.264	19.851	85	1.039	1097397	136256	1150	2875	118	0.77(0.65-0.89)	
303.9016	21.737	19.851	113	1.063	171040	20124	940	2350	21		
305.8987	21.737	19.851	113	1.063	198883	22852	1150	2875	20	0.86(0.65-0.89)	
303.9016	23.645	19.851	227	1.156	834964	149841	940	2350	159		a
305.8987	23.645	19.851	227	1.156	1064241	193906	1150	2875	169	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											M
331.9368	21.823	21.716	6	1.018	27283	4319	139	347	31		M
333.9338	21.831	21.716	7	1.018	32455	5109	129	322	40	0.84(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	21.848	21.733	7	1.001	1733583	235645	223	557	1057		a
321.8936	21.848	21.733	7	1.001	2170406	290704	141	352	2062	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.840	21.799	2	1.018	52578	6582	155	387	42		
A Non-2,3,7,8-sub-TCDD											a
319.8965	21.668	20.684	59	0.993	17625	3070	223	557	14		a
321.8936	21.676	20.684	59	0.993	22714	3651	141	352	26	0.78(0.65-0.89)	
319.8965	22.510	20.684	109	1.032	149960	19158	223	557	86		
321.8936	22.485	20.684	108	1.030	197420	24959	141	352	177	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.290	27.251	2	1.273	38454	6459	44	110	147		
353.8970	27.273	27.251	1	1.272	24815	4046	15	37	270	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.306	27.276	2	1.001	300367	46396	97	242	478		M
341.8567	27.306	27.276	2	1.001	191680	29517	71	177	416	1.57(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											M
351.9000	28.763	28.757	0	1.341	46440	6381	44	110	145		
353.8970	28.771	28.757	1	1.342	28008	4544	15	37	303	1.66(1.32-1.78)	M
2,3,4,7,8-PeCDF											
339.8597	28.805	28.791	1	1.001	244436	36383	97	242	375		
341.8567	28.805	28.791	1	1.001	150616	22570	71	177	318	1.62(1.32-1.78)	
A F1 PeCDFs											a
339.8597	24.084	24.634	-33	0.883	2771	554	1	2	554		a
341.8567	24.101	24.634	-32	0.883	1730	349	2	5	175	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQMa
339.8597	25.825	28.173	-141	0.946	122139	21289	97	242	219		M
341.8567	25.825	28.173	-141	0.000			71	177		0.00(1.32-1.78)	
339.8597	25.825	28.173	-141	0.946	122139	21289	97	242	219		M
341.8567	25.825	28.173	-141	0.946	75507	13119	71	177	185	1.62(1.32-1.78)	
339.8597	26.734	28.173	-86	0.980	10475	1450	97	242	15		
341.8567	26.759	28.173	-85	0.981	8471	1080	71	177	15	1.24(1.32-1.78)	
	Empc Correction				6758	935	71	177	13		
339.8597	27.205	28.173	-58	0.997	24506	4814	97	242	50		M
341.8567	27.205	28.173	-58	0.997	15766	3089	71	177	44	1.55(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	27.879	28.173	-18	1.022	82659	12627	97	242	130		
341.8567	27.871	28.173	-18	1.021	51258	7432	71	177	105	1.61(1.32-1.78)	
339.8597	29.150	28.173	58	1.068	49543	6205	97	242	64		
341.8567	29.150	28.173	58	1.068	30729	3938	71	177	55	1.61(1.32-1.78)	
339.8597	30.817	28.173	158	1.129	11059	1608	97	242	17		
341.8567	30.867	28.173	161	1.131	7703	1071	71	177	15	1.44(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											RQM
367.8949	29.571	29.574	0	1.379	28316	4114	4	10	1029		
	Empc Correction				24350	3442	4	10	861		
369.8919	29.588	29.574	1	1.380	15710	2221	3	7	740	1.80(1.32-1.78)	M
1,2,3,7,8-PeCDD											
355.8546	29.613	29.616	0	1.001	36745	5186	26	65	199		
357.8516	29.613	29.616	0	1.001	23193	3064	23	57	133	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	27.694	28.478	-47	0.937	841	241	26	65	9		
357.8516	27.669	28.478	-48	0.936	640	182	23	57	8	1.31(1.32-1.78)	
	Empc Correction				542	155	23	57	0		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.920	34.906	1	0.954	27119	4754	8	20	594		
385.8610	34.903	34.906	0	0.954	45806	9322	25	62	373	0.59(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.920	34.922	0	1.000	404263	77876	126	315	618		
375.8178	34.920	34.922	0	1.000	321114	61250	95	237	645	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.063	35.066	0	0.958	22497	4200	8	20	525		
385.8610	35.063	35.066	0	0.958	42174	8455	25	62	338	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.080	35.082	0	1.000	128747	22463	126	315	178		
375.8178	35.080	35.082	0	1.000	98084	18158	95	237	191	1.31(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.896	35.890	0	0.981	17305	4048	8	20	506		
385.8610	35.896	35.890	0	0.981	36079	7488	25	62	300	0.48(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.905	35.907	0	1.000	36445	7727	126	315	61		M
375.8178	35.913	35.907	0	1.000	29424	5487	95	237	58	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.788	36.782	0	1.006	20316	4766	8	20	596		
385.8610	36.780	36.782	0	1.005	34176	7546	25	62	302	0.59(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.797	36.791	0	1.000	26260	6668	126	315	53		M
375.8178	36.797	36.791	0	1.000	20727	4699	95	237	49	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	33.430	35.009	-95	0.957	24603	4308	126	315	34		
375.8178	33.447	35.009	-94	0.958	18946	3039	95	237	32	1.30(1.05-1.43)	
373.8208	34.297	35.009	-43	0.982	10304	2218	126	315	18		
375.8178	34.314	35.009	-42	0.983	8200	1492	95	237	16	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	36.898	35.009	113	1.057	22472	5249	126	315	42		M
375.8178	36.890	35.009	113	1.056	17599	3968	95	237	42	1.28(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.587	36.581	0		80966	18844	20	50	942		
403.8529	36.587	36.581	0		67471	17193	14	35	1228	1.20(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.107	36.092	1	0.987	24843	6005	20	50	300		
403.8529	36.107	36.092	1	0.987	20782	4995	14	35	357	1.20(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.115	36.109	0	1.000	14019	3195	11	27	290		
391.8127	36.124	36.109	1	1.000	12212	2787	14	35	199	1.15(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.225	36.210	1	0.990	30250	6519	20	50	326		
403.8529	36.225	36.210	1	0.990	23211	4444	14	35	317	1.30(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.233	36.227	0	1.000	16944	3736	11	27	340		
391.8127	36.241	36.227	1	1.000	12868	2755	14	35	197	1.32(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.603	36.597	0	1.014	16279	4014	11	27	365		
391.8127	36.603	36.597	0	1.014	14309	3301	14	35	236	1.14(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.349	35.375	-2	0.976	935	228	11	27	21		
391.8127	35.349	35.375	-2	0.976	1226	259	14	35	19	0.76(1.05-1.43)	
	Empc Correction				754	183	14	35	13		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.601	38.596	0	1.055	13397	3428	20	50	171		
419.8220	38.601	38.596	0	1.055	29685	7870	21	52	375	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.618	38.618	0	1.000	96158	24605	37	92	665		
409.7788	38.618	38.618	0	1.000	92309	23023	28	70	822	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.855	39.850	0	1.089	12549	3463	20	50	173		
419.8220	39.855	39.850	0	1.089	31822	8773	21	52	418	0.39(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.864	39.872	-1	1.000	40609	11150	37	92	301		
409.7788	39.864	39.872	-1	1.000	38865	11157	28	70	398	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.980	39.245	-16	1.010	13643	3852	37	92	104		
409.7788	38.980	39.245	-16	1.010	13886	4037	28	70	144	0.98(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.552	39.547	0	1.081	21127	6529	21	52	311		
437.8140	39.552	39.547	0	1.081	19583	6112	11	27	556	1.08(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.561	39.561	0	1.000	16002	4575	11	27	416		
425.7737	39.561	39.561	0	1.000	15381	4426	6	15	738	1.04(0.88-1.20)	

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.921	39.241	-19	0.984	3738	1014	11	27	92		
425.7737	38.921	39.241	-19	0.984	3422	1021	6	15	170	1.09(0.88-1.20)	
13C-OCDD											M
469.7780	42.042	42.036	0	1.149	32462	8295	12	30	691		
471.7750	42.050	42.036	1	1.149	34602	8057	4	10	2014	0.94(0.76-1.02)	M
OCDF											
441.7428	42.143	42.137	0	1.002	52566	12871	11	27	1170		
443.7399	42.143	42.137	0	1.002	56095	13731	30	75	458	0.94(0.76-1.02)	
OCDD											
457.7377	42.058	42.053	0	1.000	49742	12229	13	32	941		
459.7348	42.058	42.053	0	1.000	53586	12524	15	37	835	0.93(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	80549	11671

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		10.000	80549	11671

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.484	69116	10380	70436	12825	16.0	0.98	RQ
17.484	54235	9875	70436	12825	14.3		Empc Correction
17.939	281154	45390	383250	61627	76.4	0.73	M
18.446	444737	53615	578794	68145	117.6	0.77	
18.867	350179	46885	477599	62212	95.1	0.73	
19.245	510917	76027	689900	101976	138.0	0.74	
19.743	5099293	705019	7019342	987260	1392.8	0.73	
20.164	201158	25767	259484	34071	52.9	0.78	
21.264	845519	110231	1097397	136256	223.3	0.77	
21.737	171040	20124	198883	22852	42.5	0.86	
23.645	834964	149841	1064241	193906	218.3	0.78	a
Signal Totals:							
	8793196	1242774	11839326	1681130			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	20647403	2924409				0.74	RQMa
	20632522	2923904					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2373.0 = (20647403 * 10.000) / (80549 * 1.080)

Empc Amount: 2371.3 = (20632522 * 10.000) / (80549 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	59738	9428

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		10.000	59738	9428

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.668	17625	3070	22714	3651	6.28	0.78	a
22.510	149960	19158	197420	24959	54.1	0.76	
Signal Totals:							
	167585	22228	220134	28610			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	387719	50838				0.76	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 60.356 = (387719 * 10.000) / (59738 * 1.075)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	63269	10505
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	74448	10925

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	68858	10715

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.084	2771	554	1730	349	0.6340	1.60	a
Signal Totals:							
	2771	554	1730	349			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4501	903				1.60	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6340 = (4501 * 10.000) / (68858 * 1.031)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	63269	10505
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	74448	10925

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	68858	10715

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.825	122139	21289	0	0	17.2	0.00	M
25.825	122139	21289	75507	13119	27.8	1.62	Ma
26.734	10475	1450	8471	1080	2.67	1.24	RQ
26.734	10475	1450	6758	935	2.43		Empc Correction
27.205	24506	4814	15766	3089	5.67	1.55	Ma
27.879	82659	12627	51258	7432	18.9	1.61	
29.150	49543	6205	30729	3938	11.3	1.61	
30.817	11059	1608	7703	1071	2.64	1.44	
Signal Totals:							
	422520	69282	187721	29584			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	611954	99011				2.23	RQMa
	610241	98866					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 86.195 = (611954 * 10.000) / (68858 * 1.031)

Empc Amount: 85.953 = (610241 * 10.000) / (68858 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	44026	6335

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		10.000	44026	6335

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
27.694	841	241	640	182	0.3421	1.31	RQ
27.694	841	241	542	155			Empc Correction

Compound is Marked ND

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	72925	14076
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	64671	12655
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	53384	11536
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	54492	12312

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		10.000	61368	12644

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.430	24603	4308	18946	3039	5.89	1.30	
34.297	10304	2218	8200	1492	2.50	1.26	
36.898	22472	5249	17599	3968	5.42	1.28	Ma
Signal Totals:							
	57379	11775	44745	8499			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	102124	20274				1.28	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.811 = (102124 * 10.000) / (61368 * 1.205)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	45625	11000
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	53461	10963
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		10.000	49543	10981

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.349	935	228	1226	259	0.4136	0.76	RQ
35.349	935	228	754	183	0.3233		Empc Correction
Signal Totals:							
	935	228	754	183			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2161	487				0.76	RQ
	1689	411					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.4136 = (2161 * 10.000) / (49543 * 1.055)

Empc Amount: 0.3233 = (1689 * 10.000) / (49543 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	43082	11298
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	44371	12236

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		10.000	43726	11767

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.980	13643	3852	13886	4037	4.58	0.98	
Signal Totals:							
	13643	3852	13886	4037			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	27529	7889				0.98	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.577 = (27529 * 10.000) / (43726 * 1.376)

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	40710	12641

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		10.000	40710	12641

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.921	3738	1014	3422	1021	1.67	1.09	
Signal Totals:							
	3738	1014	3422	1021			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7160	2035				1.09	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.675 = (7160 * 10.000) / (40710 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 17.930 Area = 126754

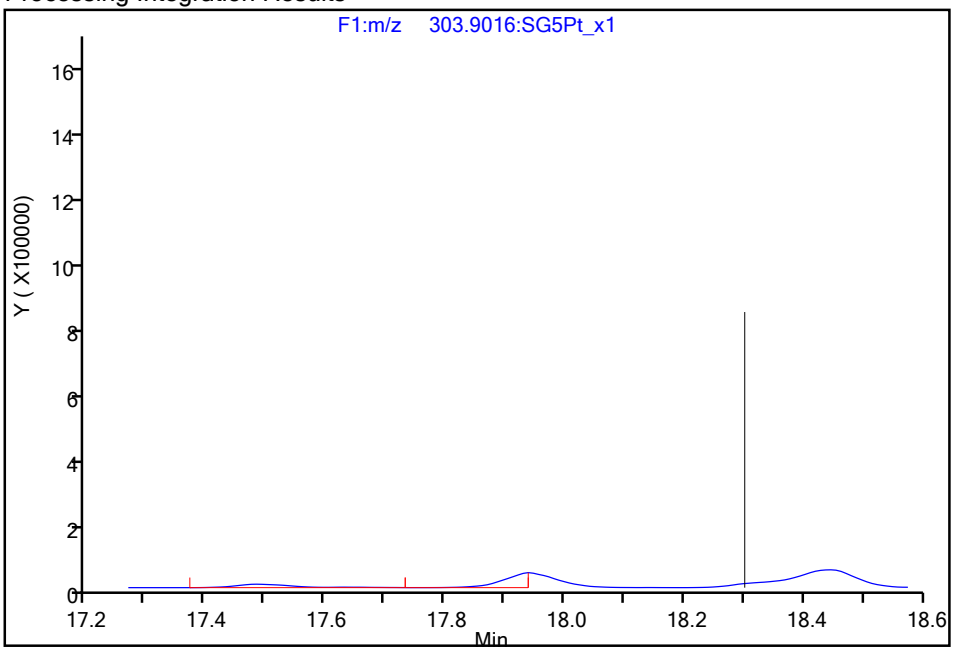

Manual Integration Results

RT = 17.939 Area = 281154 M

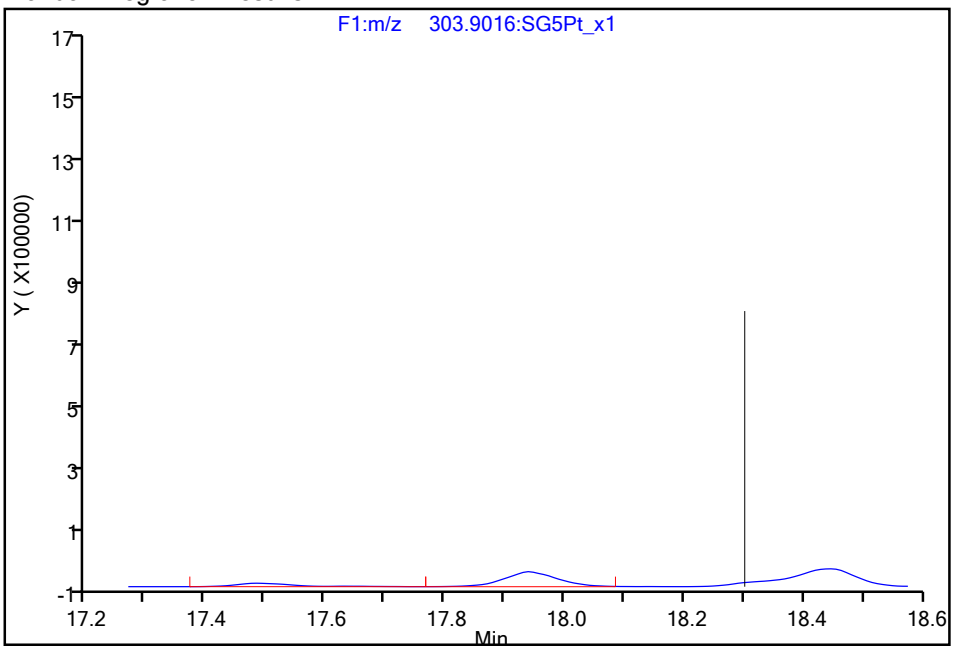

Reviewer: krenns, 25-Aug-2021 15:05:49

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 21.82
Area: 14496
Amount: 3.471308
Amount Units: pg/ul

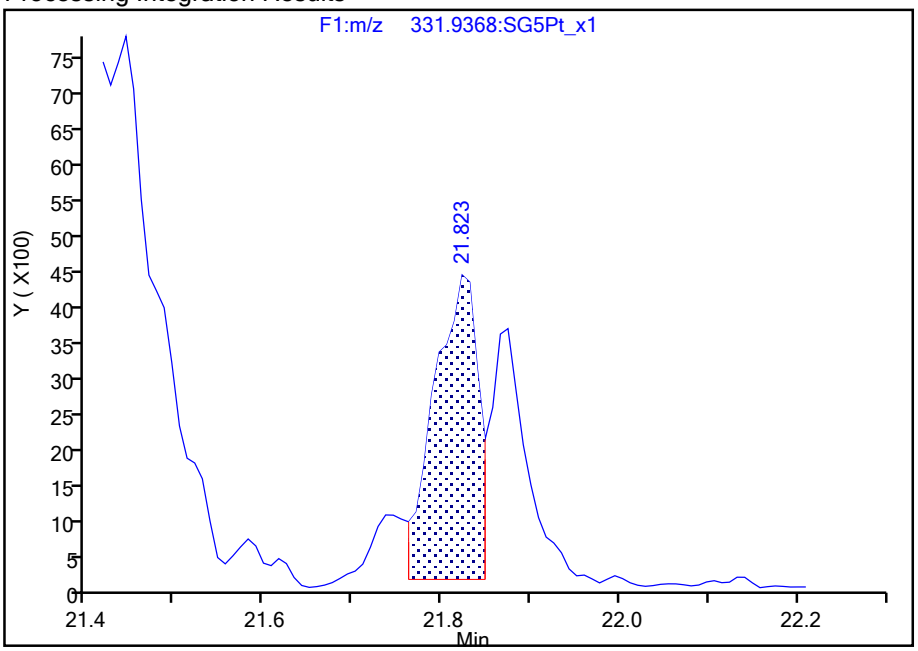

Manual Integration Results

RT: 21.82
Area: 27283
Amount: 4.416711
Amount Units: pg/ul

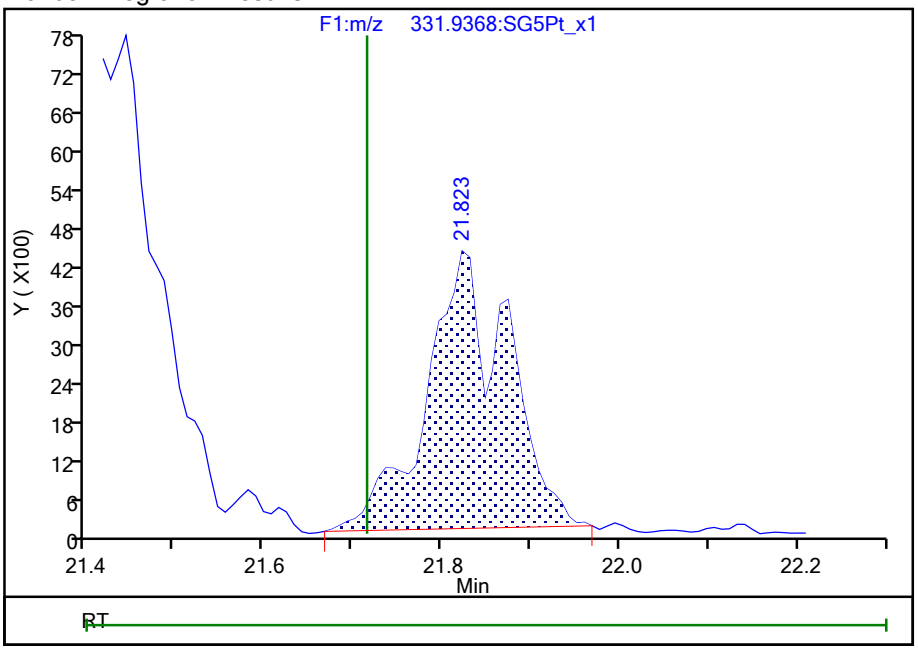

Reviewer: krenns, 25-Aug-2021 15:21:51

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.67
Area: 17625
Amount: 6.279515
Amount Units: pg/ul

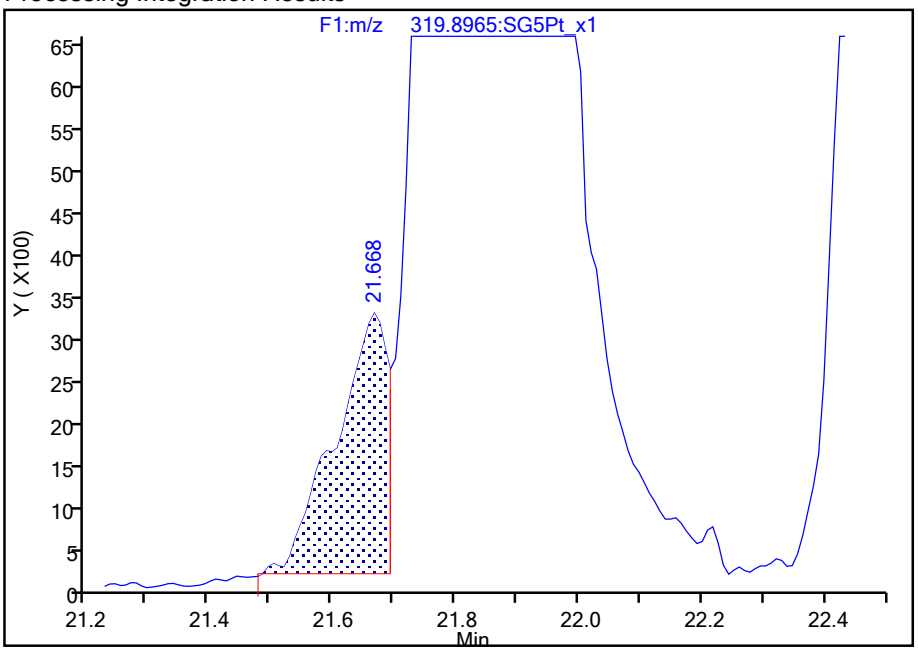

Manual Integration Results

RT: 21.85
Area: 1733583
Amount: 607.7285
Amount Units: pg/ul

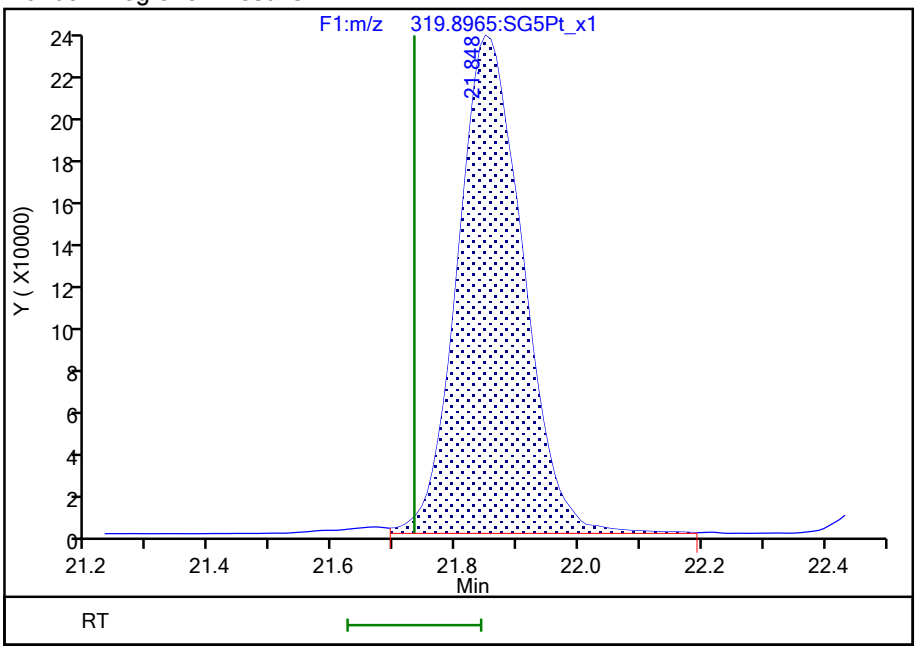

Reviewer: krenns, 25-Aug-2021 15:22:00

Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.31
Area: 324568
Amount: 79.758886
Amount Units: pg/ul

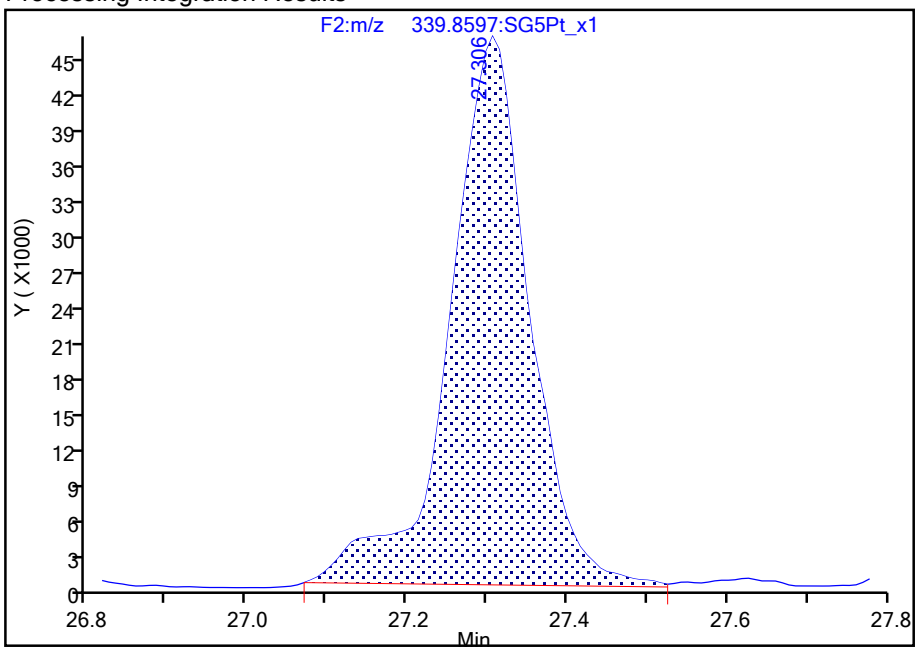

Manual Integration Results

RT: 27.31
Area: 300367
Amount: 73.767775
Amount Units: pg/ul

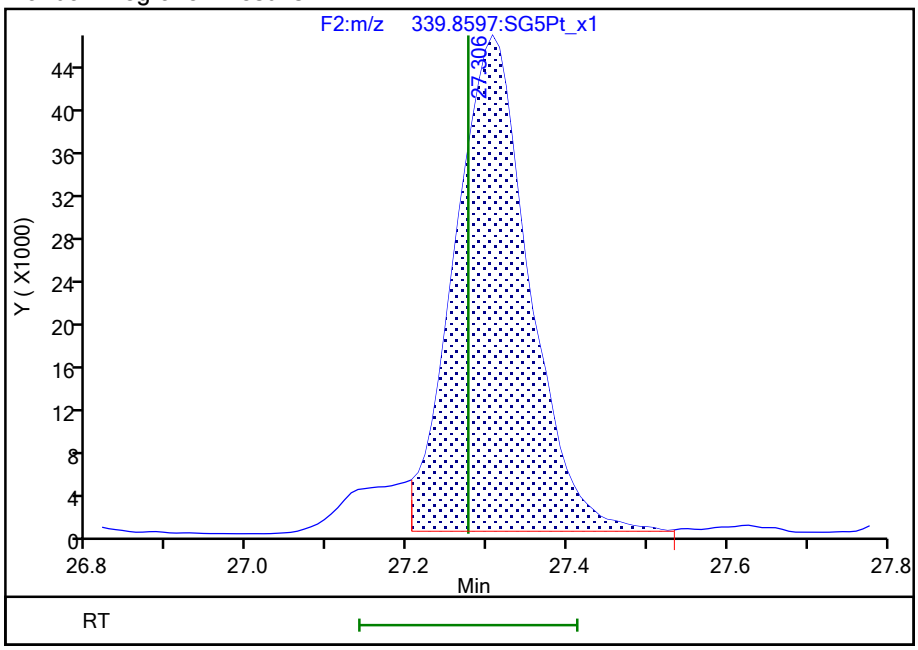

Reviewer: dadunj, 23-Aug-2021 09:39:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.31
Area: 207441
Amount: 79.758886
Amount Units: pg/ul

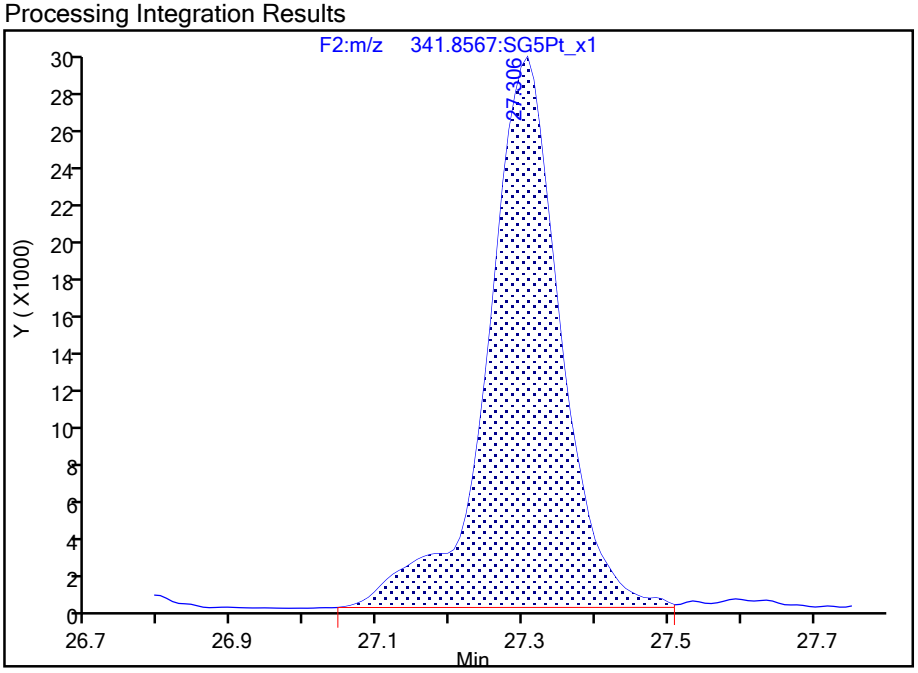

Manual Integration Results

RT: 27.31
Area: 191680
Amount: 73.767775
Amount Units: pg/ul

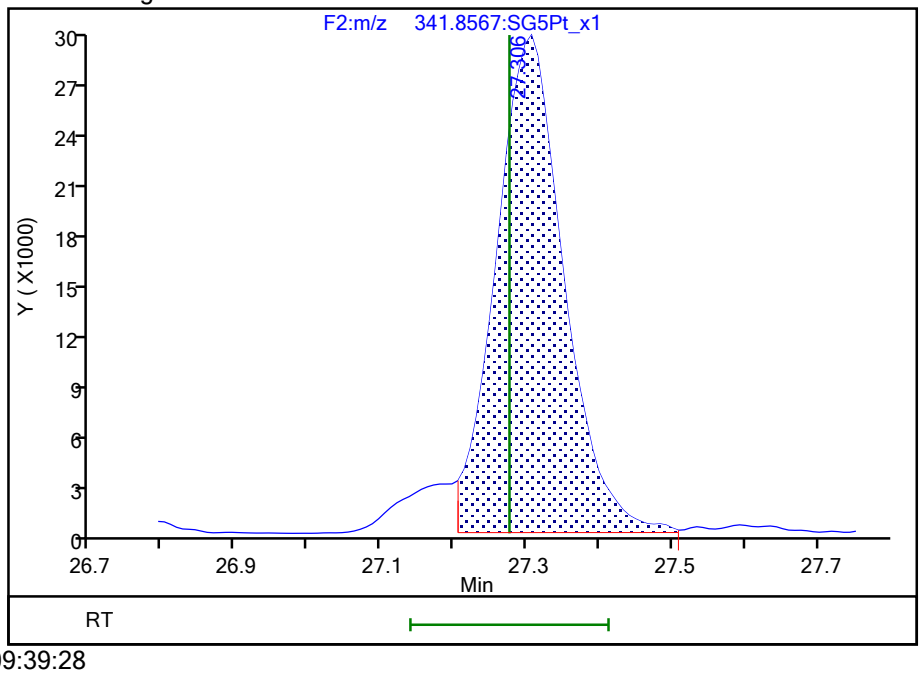

Reviewer: dadunj, 23-Aug-2021 09:39:28
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

786693

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 2

Processing Integration Results

RT: 28.77
Area: 24273
Amount: 4.328418
Amount Units: pg/ul

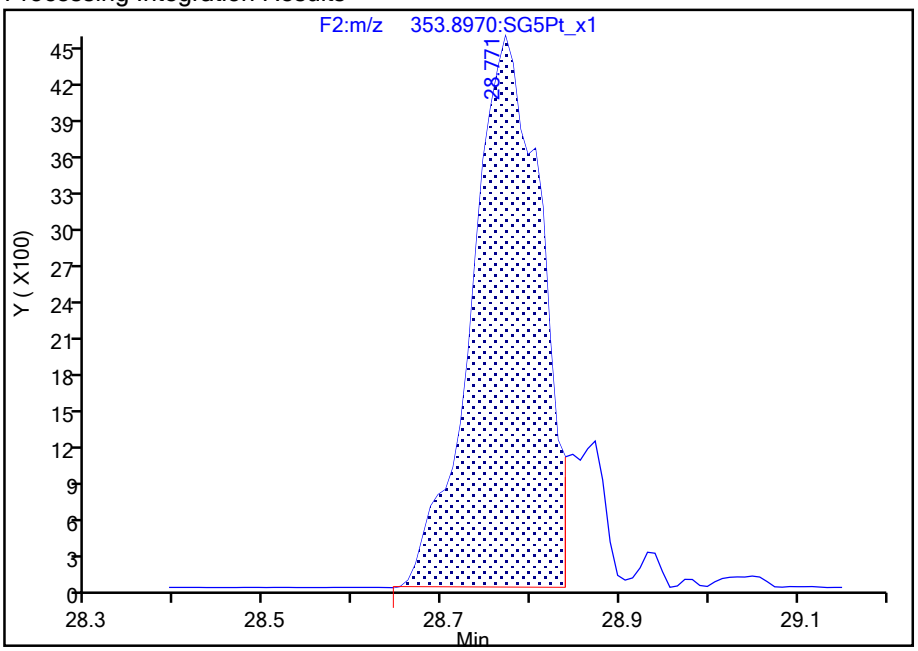

Manual Integration Results

RT: 28.77
Area: 28008
Amount: 4.557042
Amount Units: pg/ul

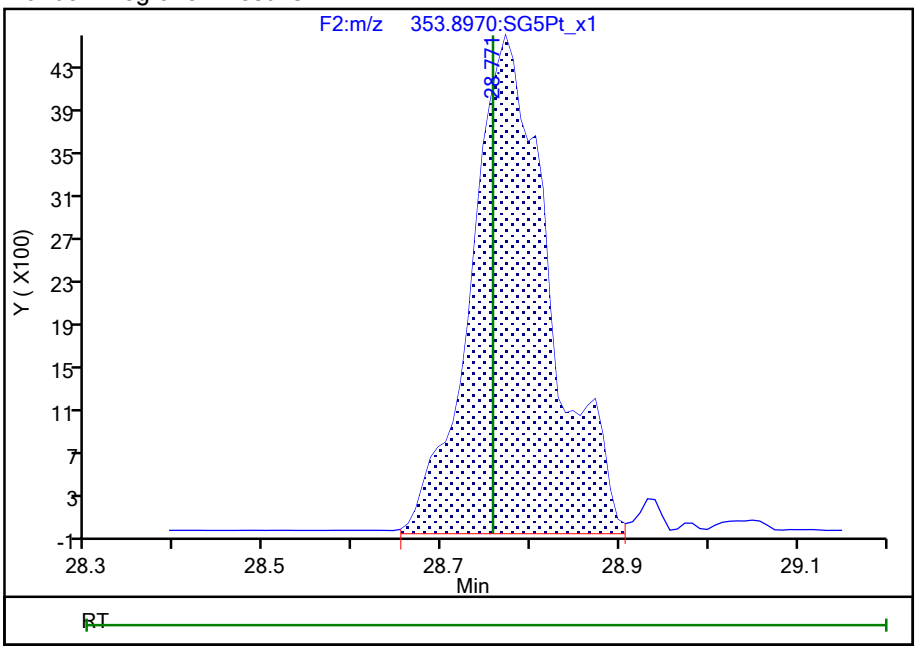

Reviewer: dadunj, 23-Aug-2021 09:42:06

Audit Action: Manually Integrated Audit Reason: Baseline

786694

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Processing Integration Results

RT = 25.825 Area = 124540

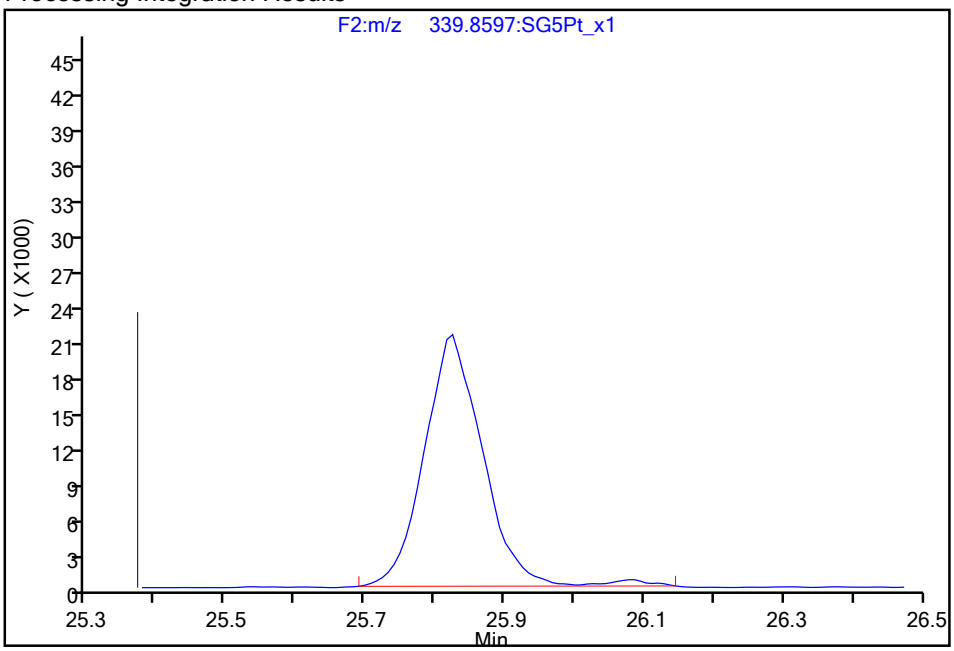

Manual Integration Results

RT = 25.825 Area = 122139 M

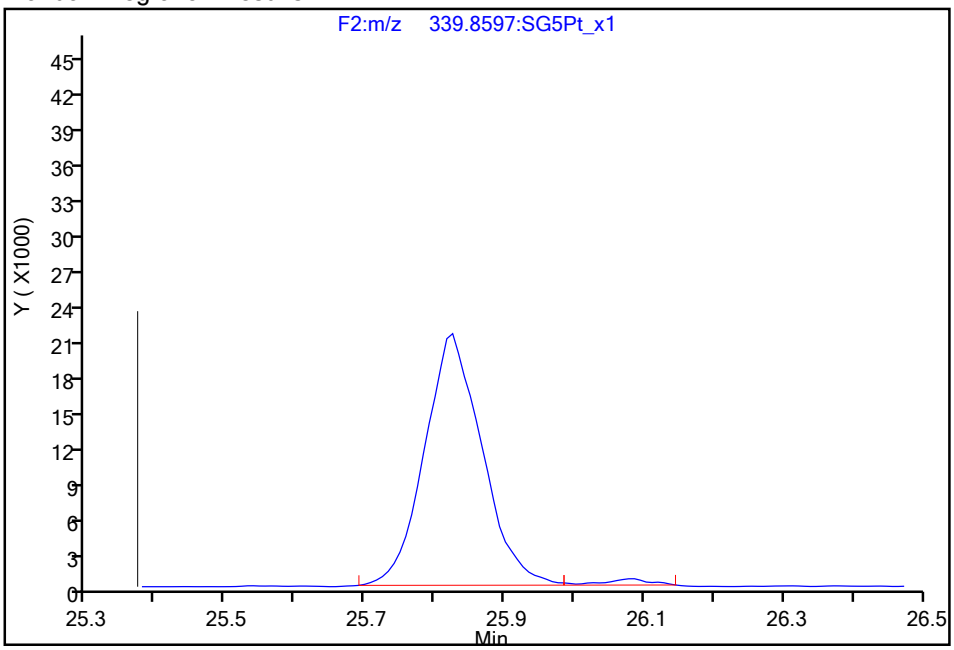

Reviewer: dadunj, 23-Aug-2021 09:39:53

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

786695

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Processing Integration Results

RT = 25.825 Area = 124540

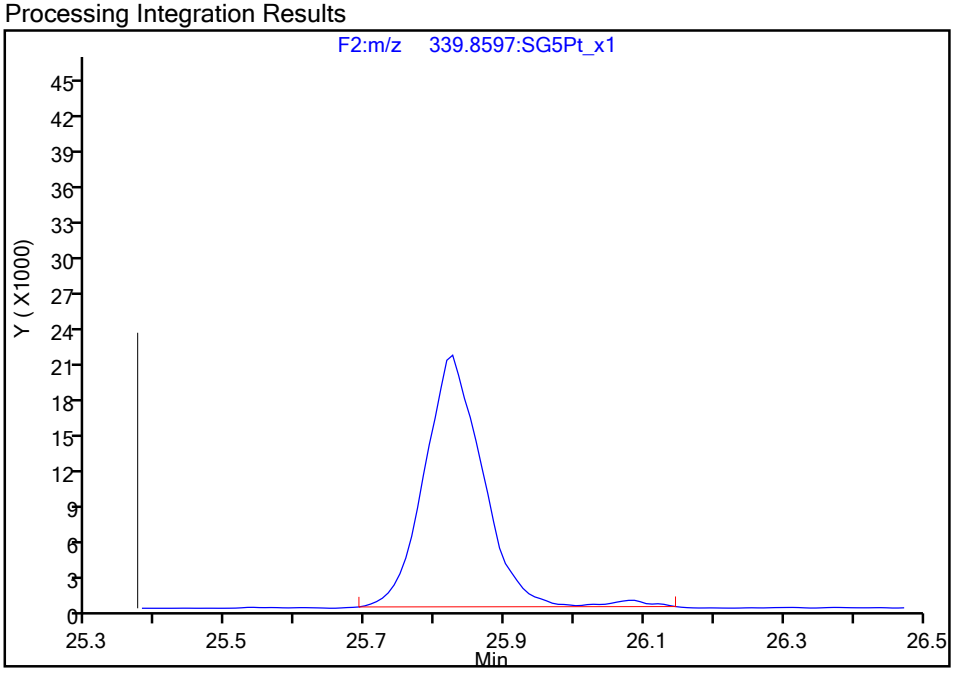

Manual Integration Results

RT = 25.825 Area = 122139 M

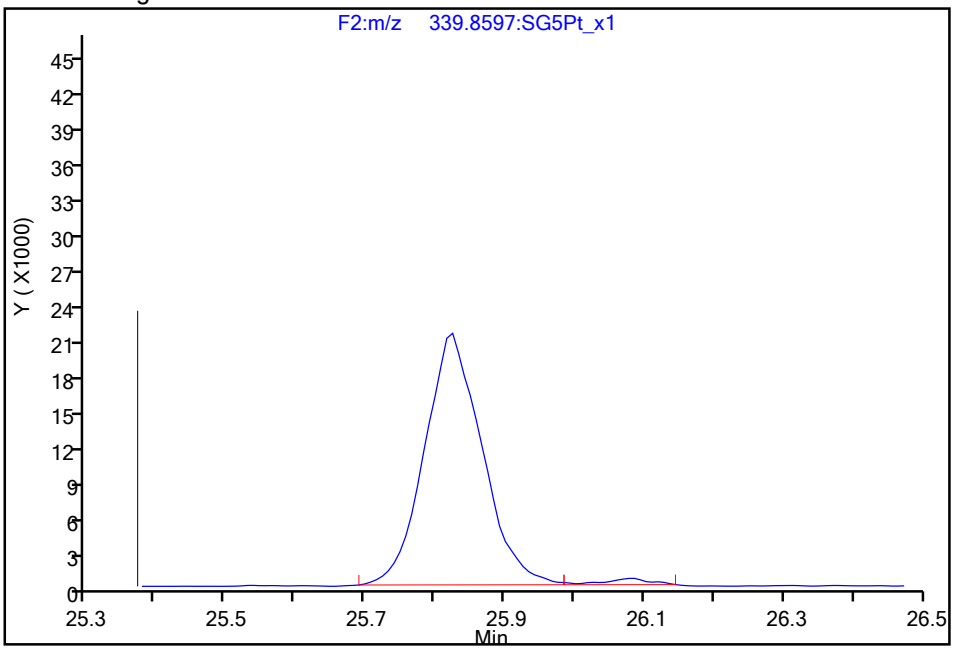

Reviewer: dadunj, 23-Aug-2021 09:39:53

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Not Detected
RT: 25.37- 30.97

Processing Integration Results

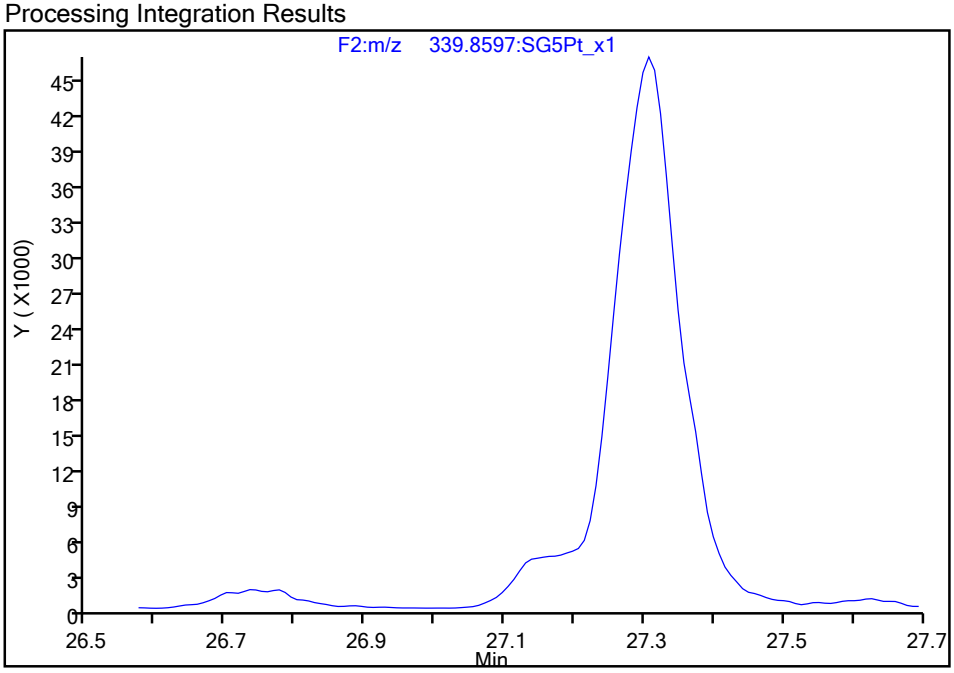

RT = 27.205 Area = 24506 M

Manual Integration Results

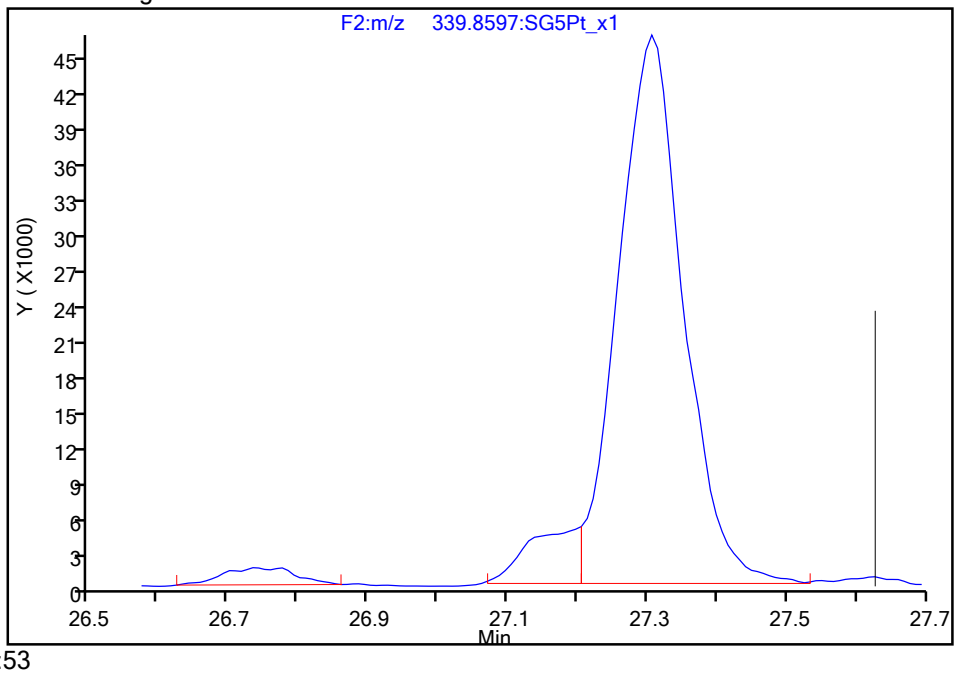

Reviewer: dadunj, 23-Aug-2021 09:39:53
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

786697

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 2

Processing Integration Results

RT: 29.59
Area: 13049
Amount: 3.976893
Amount Units: pg/ul

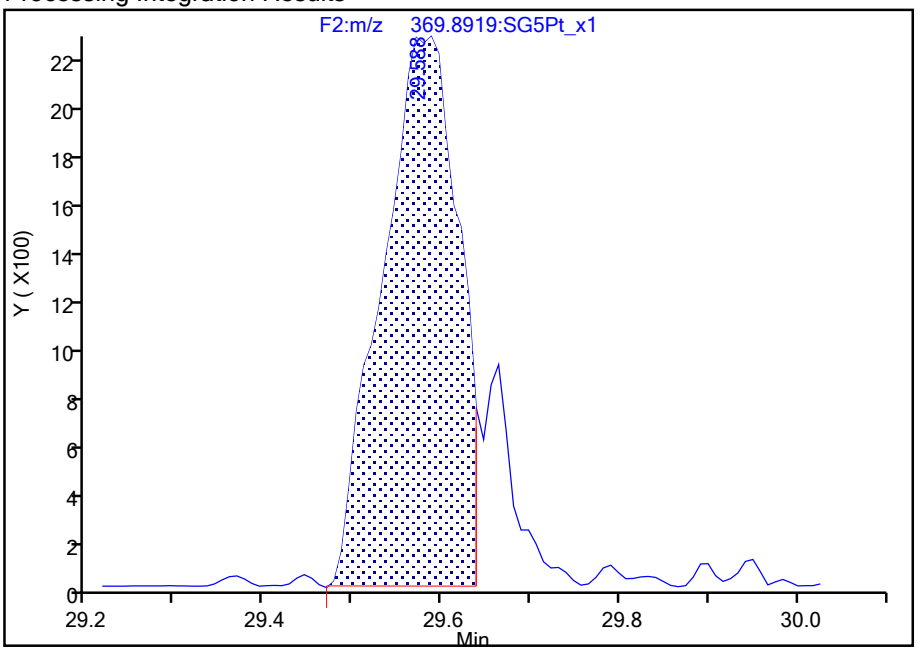

Manual Integration Results

RT: 29.59
Area: 15710
Amount: 4.232725
Amount Units: pg/ul

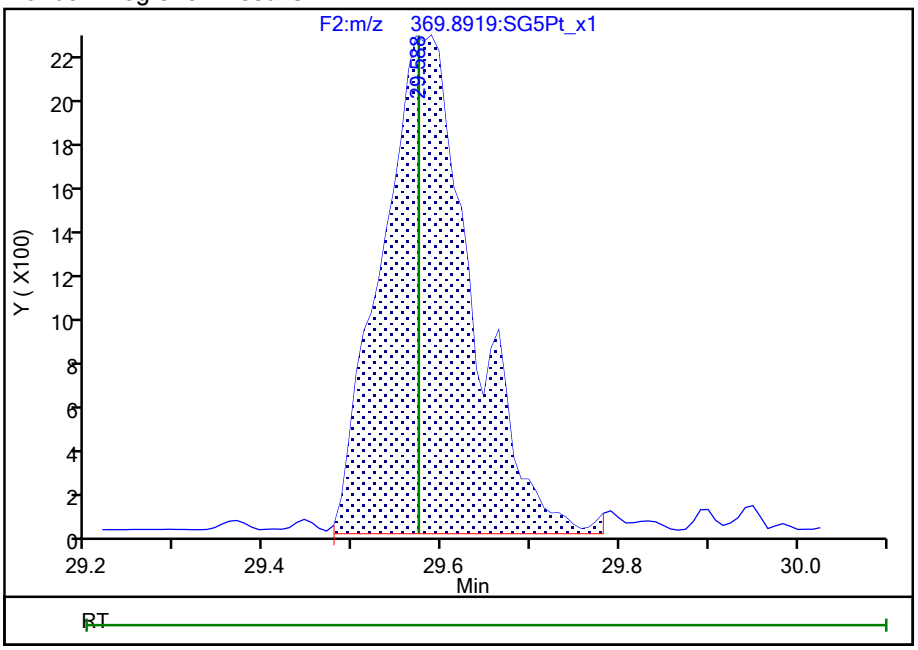

Reviewer: dadunj, 23-Aug-2021 09:42:19

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.90
Area: 42529
Amount: 11.098164
Amount Units: pg/ul

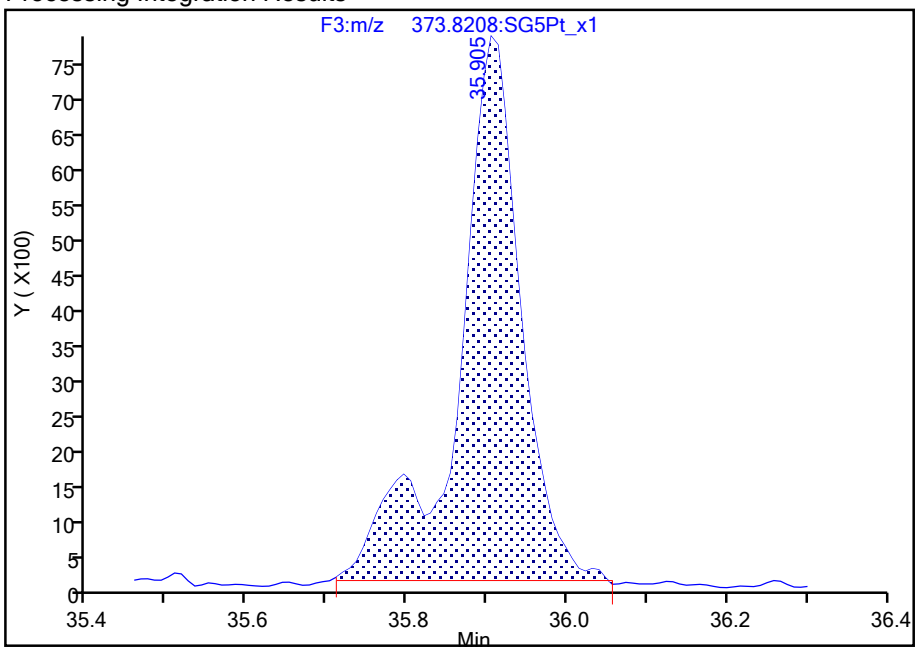

Manual Integration Results

RT: 35.90
Area: 36445
Amount: 10.159756
Amount Units: pg/ul

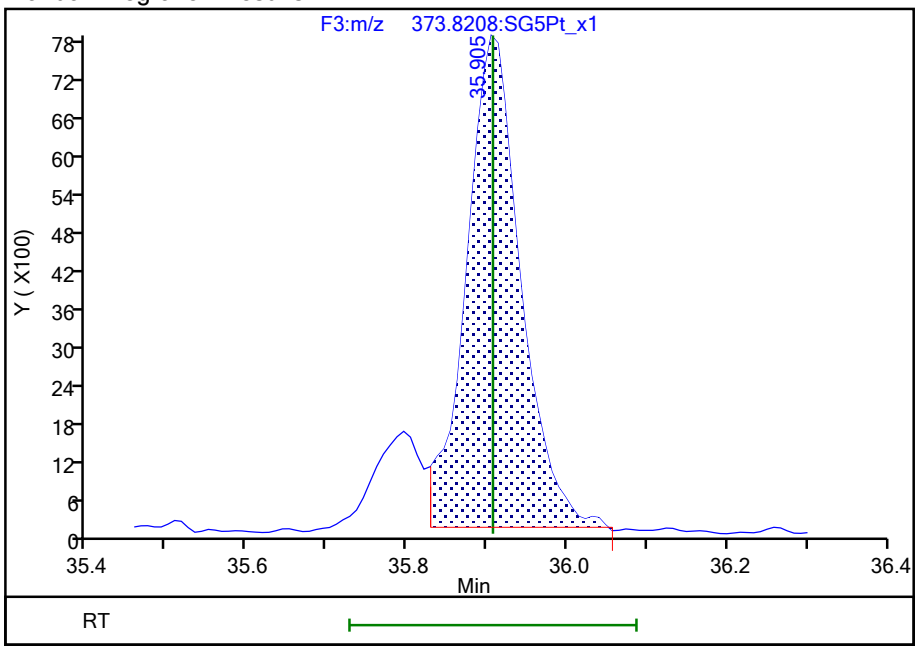

Reviewer: dadunj, 23-Aug-2021 09:40:41

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.80
Area: 48733
Amount: 10.278712
Amount Units: pg/ul

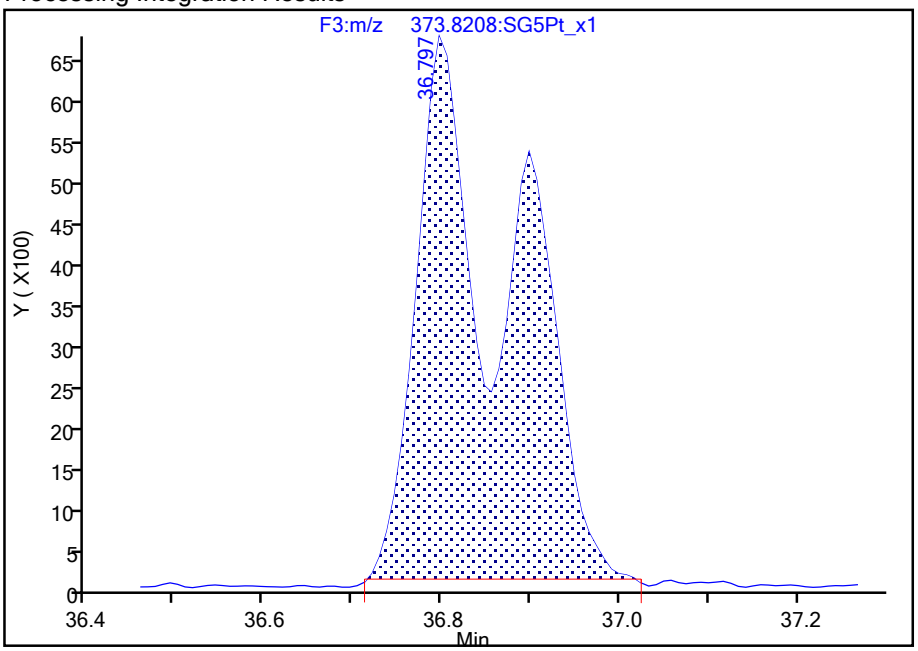

Manual Integration Results

RT: 36.80
Area: 26260
Amount: 6.953151
Amount Units: pg/ul

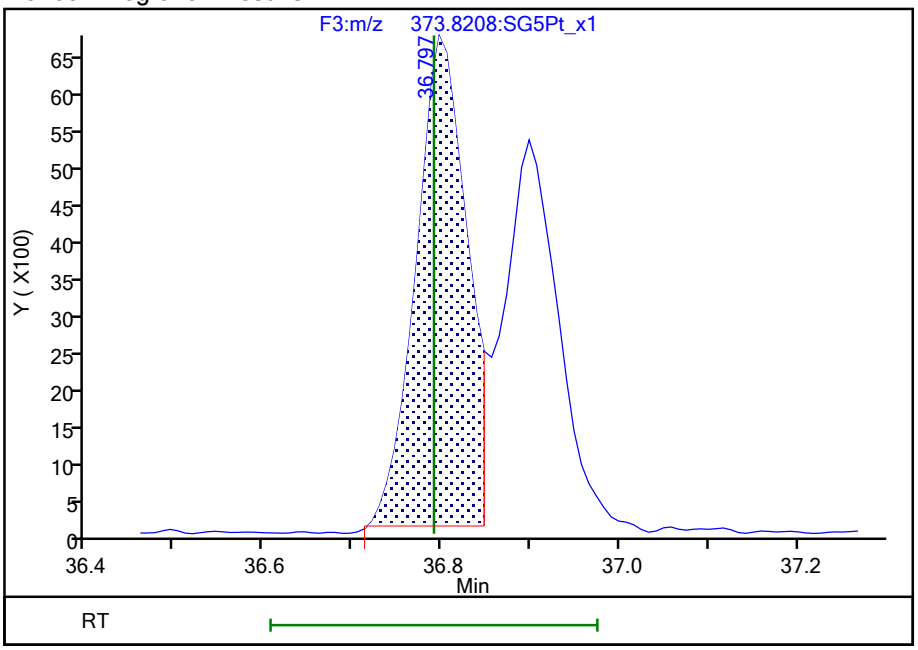

Reviewer: dadunj, 23-Aug-2021 09:40:47

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Not Detected

RT: 33.09- 36.93

Processing Integration Results

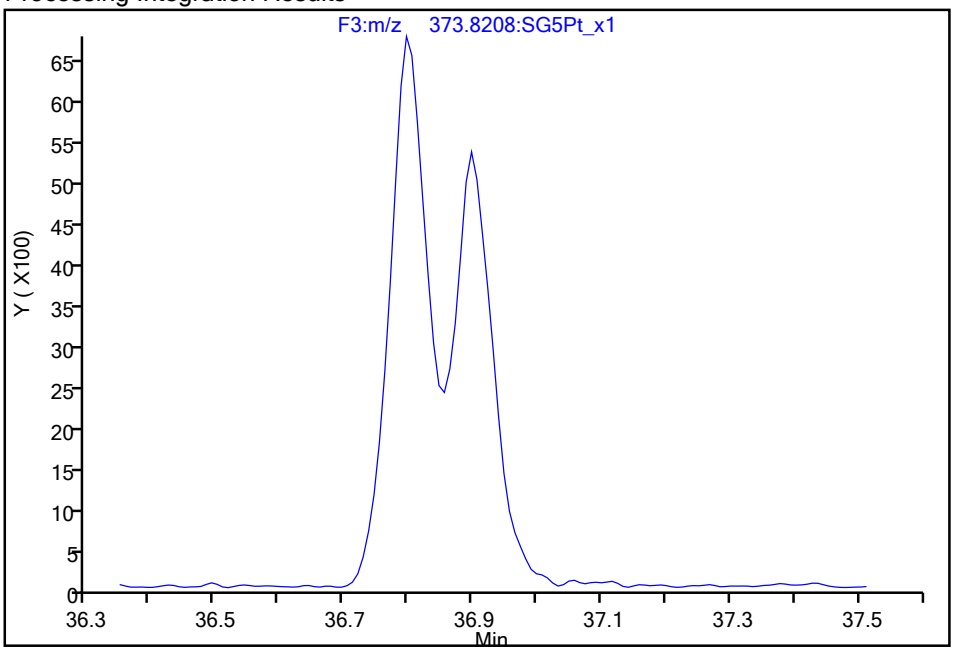

RT = 36.898 Area = 22472 M

Manual Integration Results

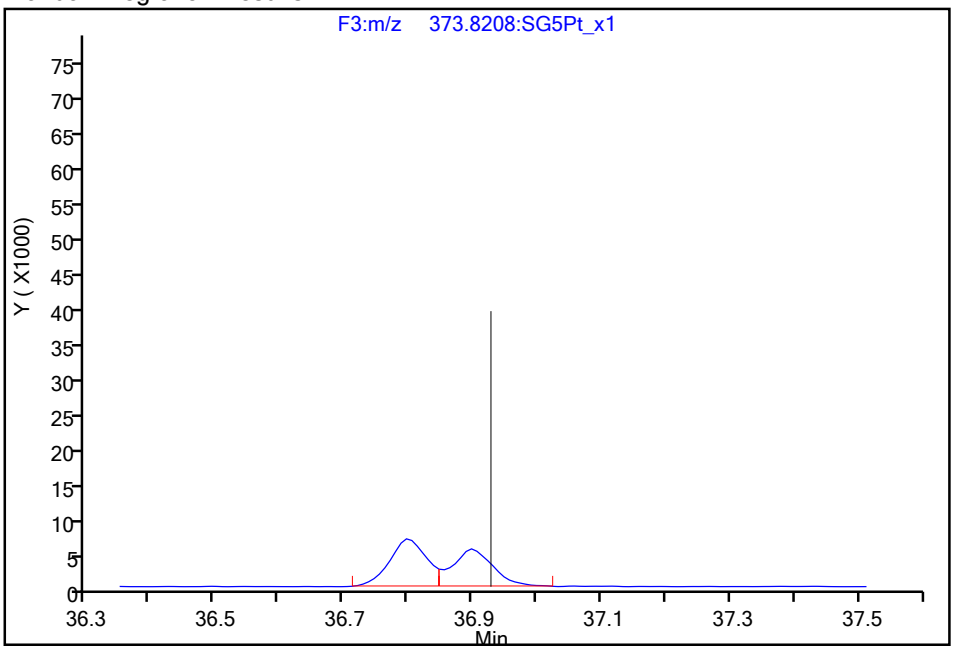

Reviewer: dadunj, 23-Aug-2021 09:40:54

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

786701

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

13C-OCDD, CAS: 114423-97-1

Signal: 2

Processing Integration Results

RT: 42.05
Area: 36345
Amount: 8.511216
Amount Units: pg/ul

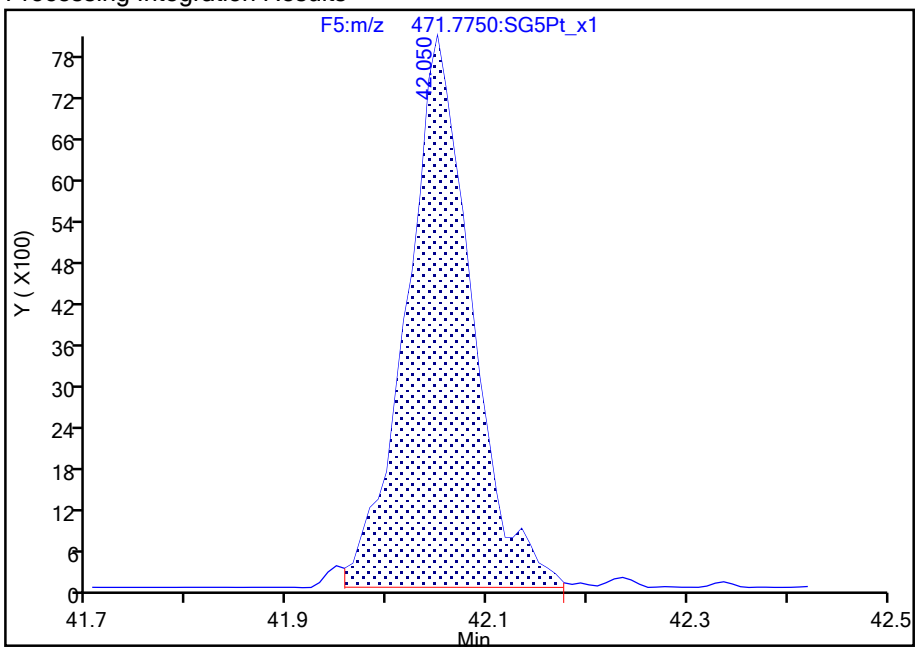

Manual Integration Results

RT: 42.05
Area: 34602
Amount: 8.295612
Amount Units: pg/ul

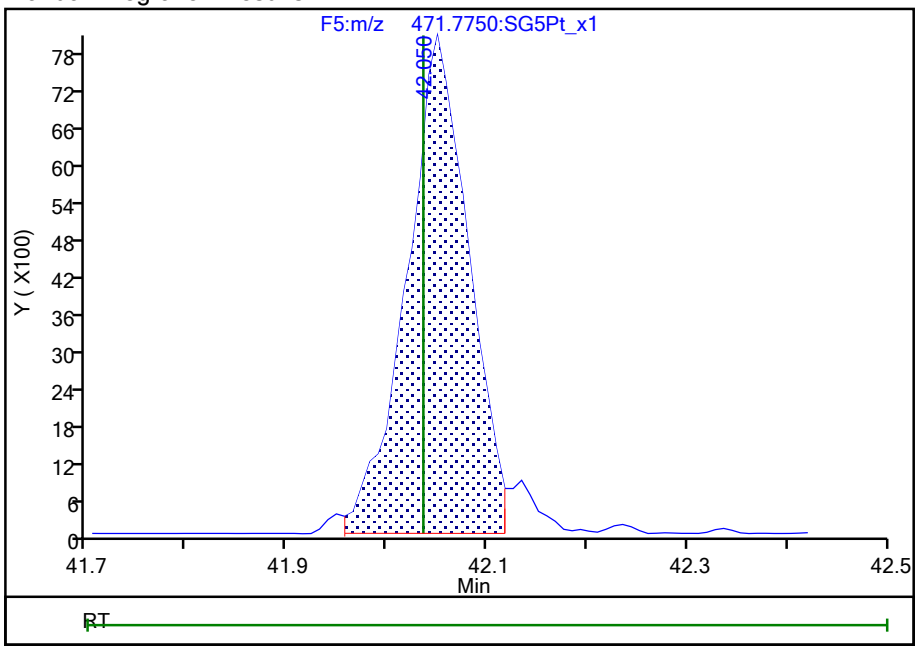

Reviewer: dadunj, 23-Aug-2021 09:41:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

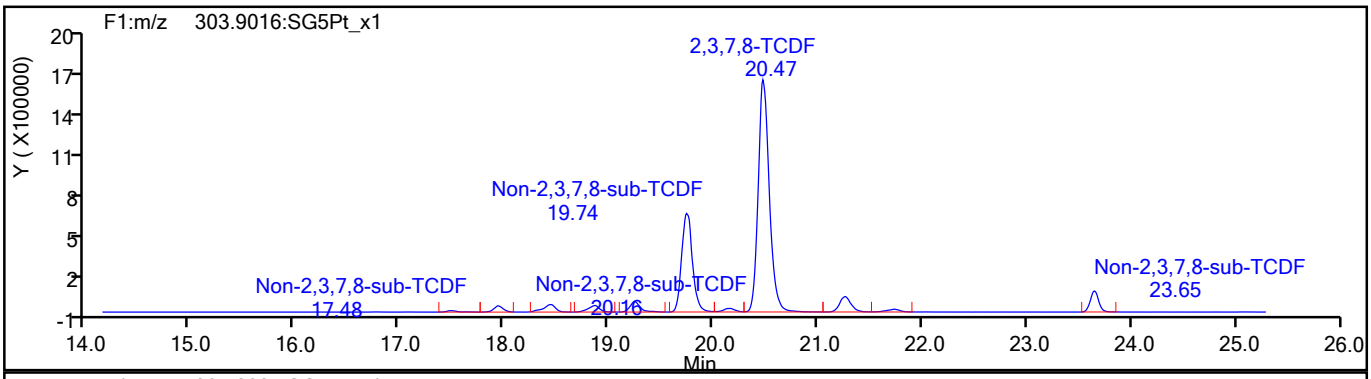

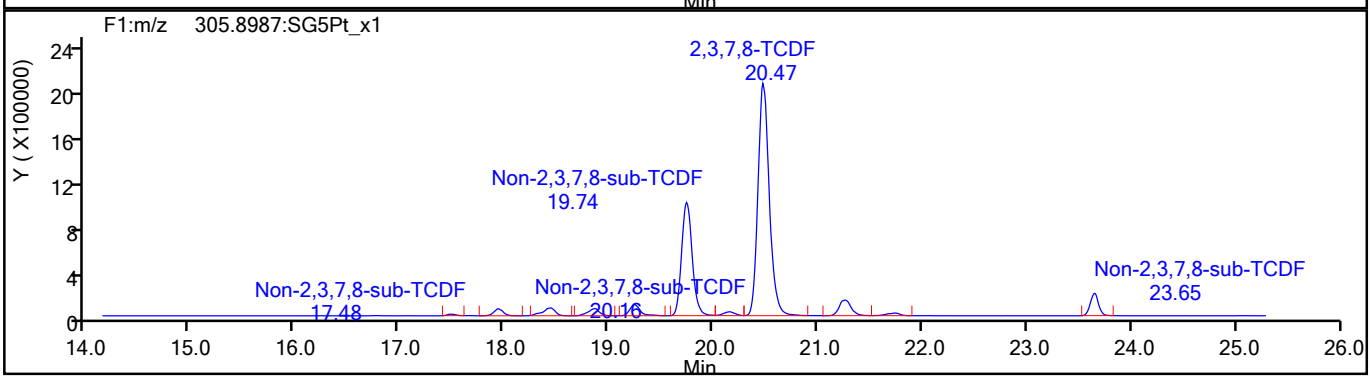

TCDF Standards

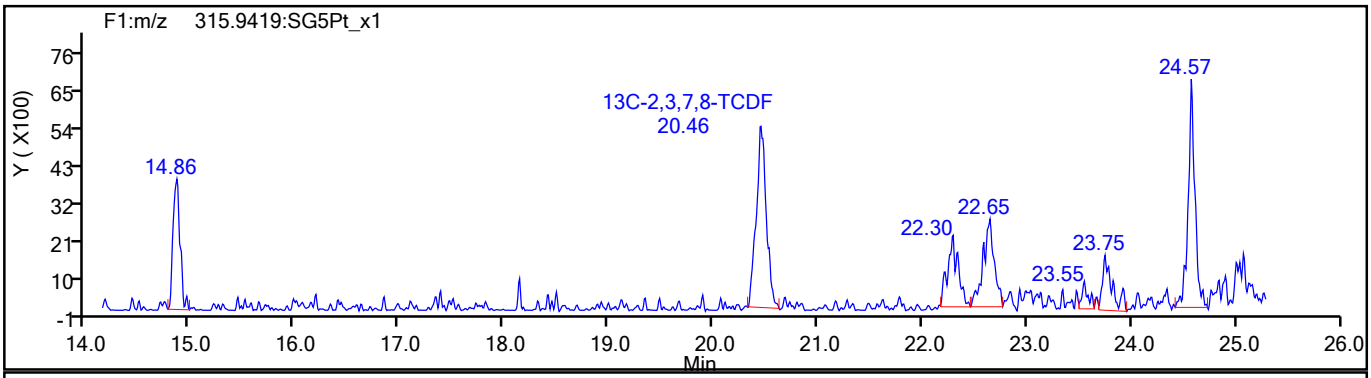

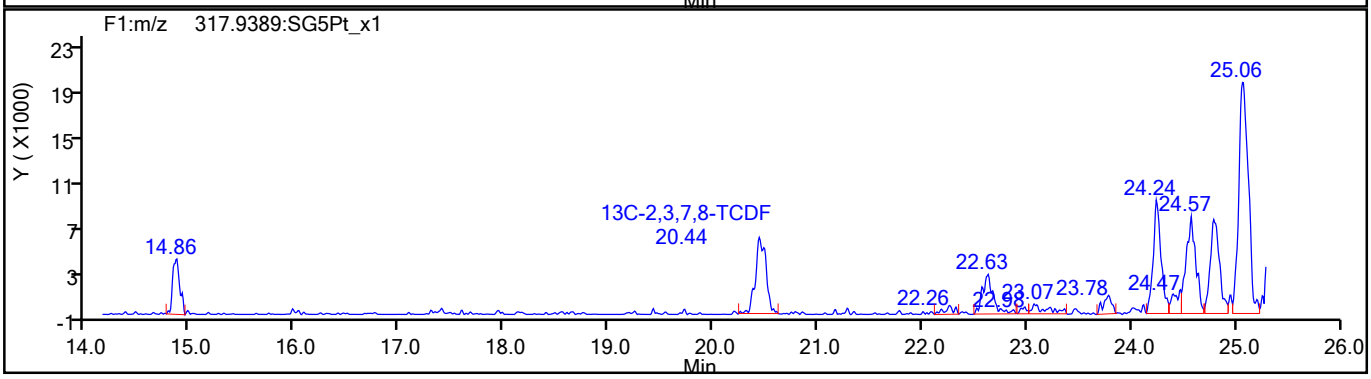

786703

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

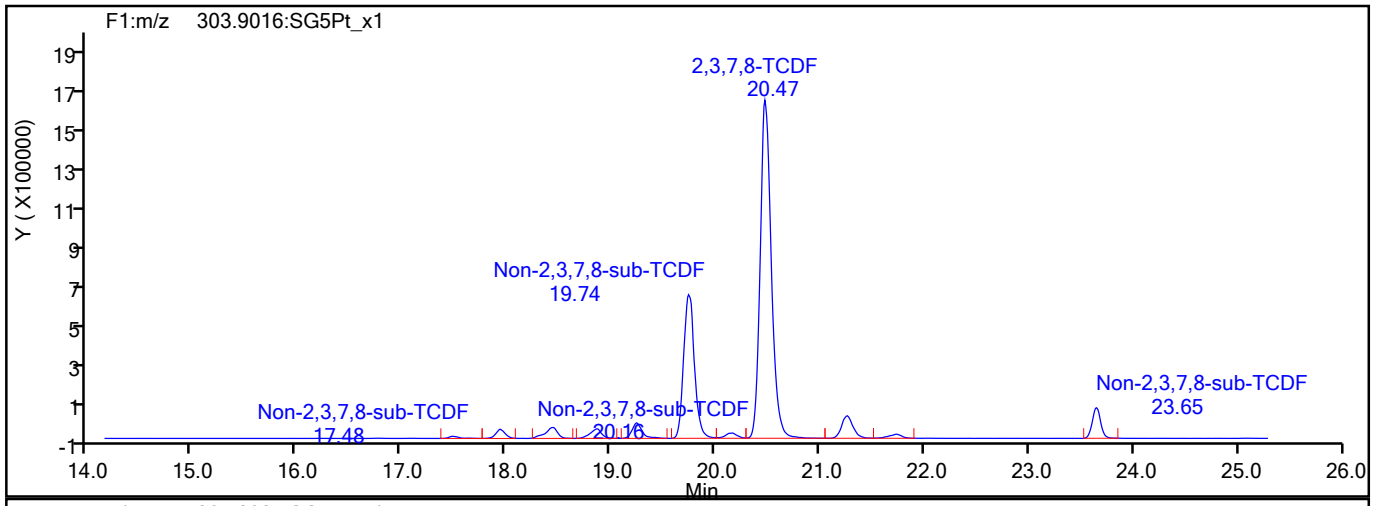

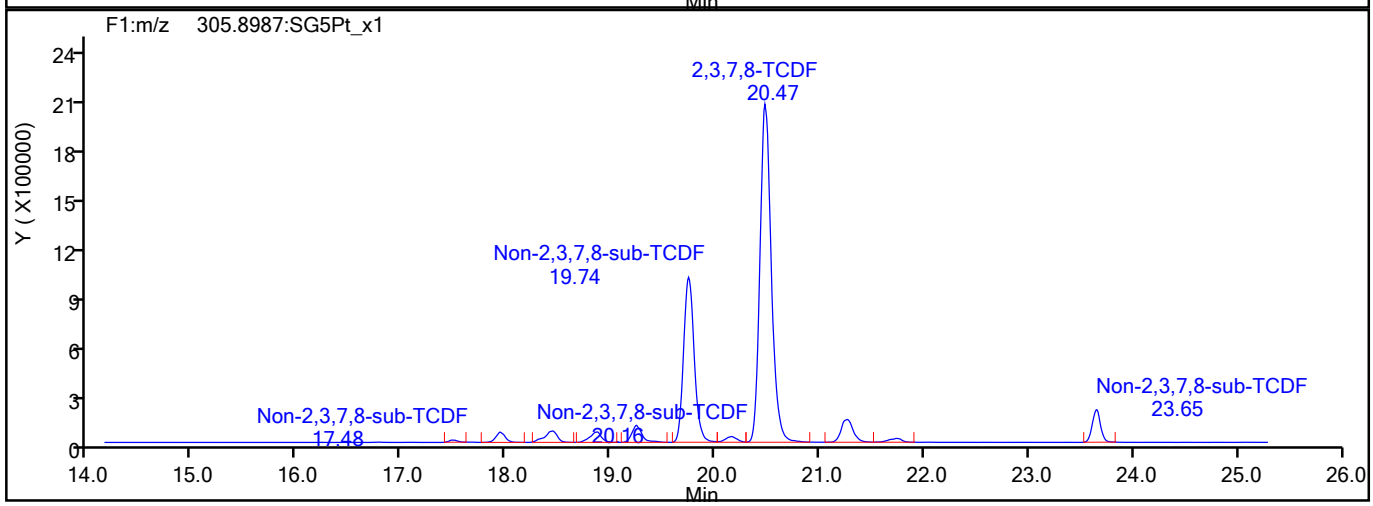

TCDF Interference Mass

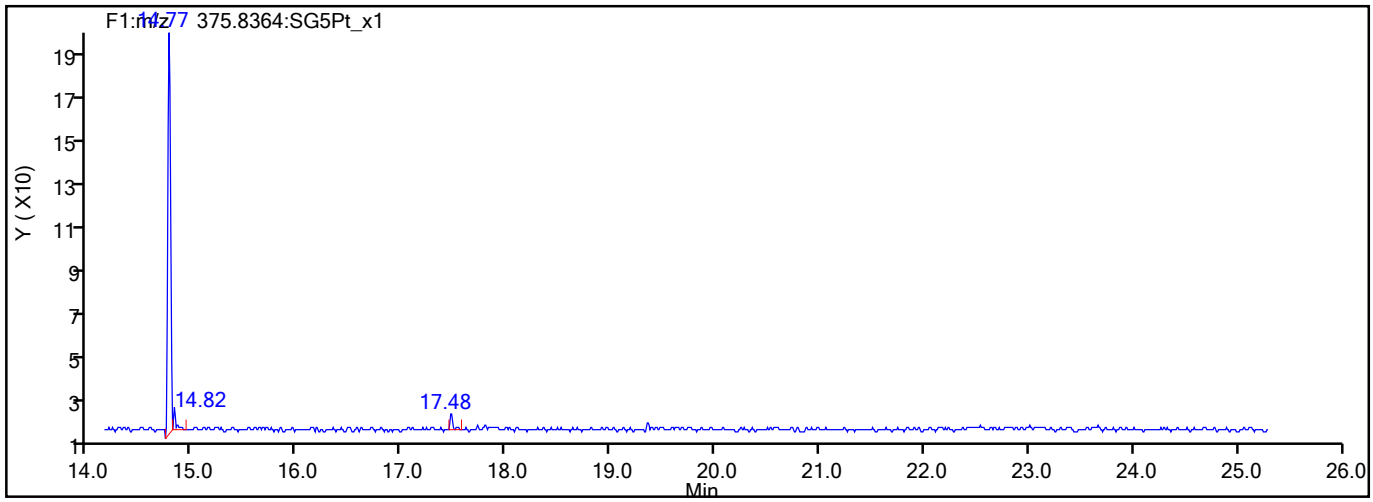

786704

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

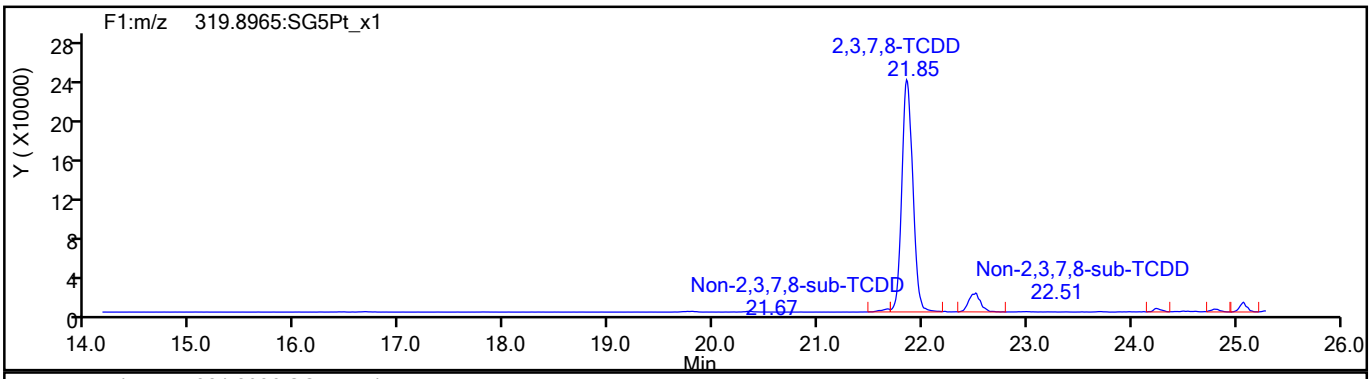

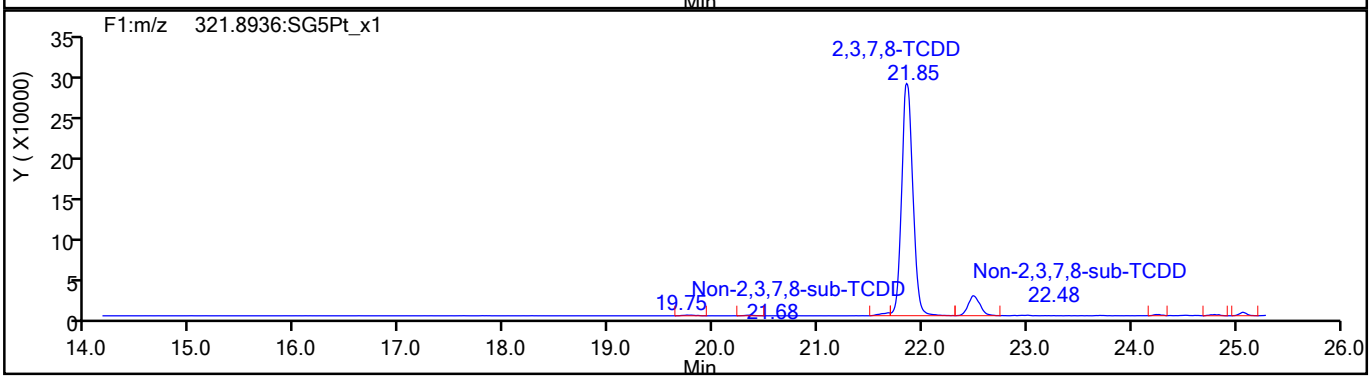

TCDD Standards

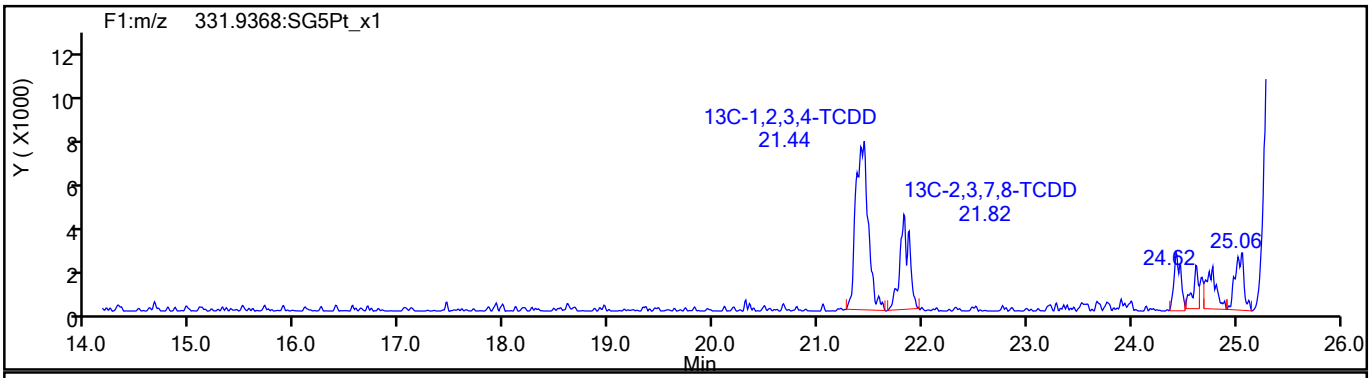

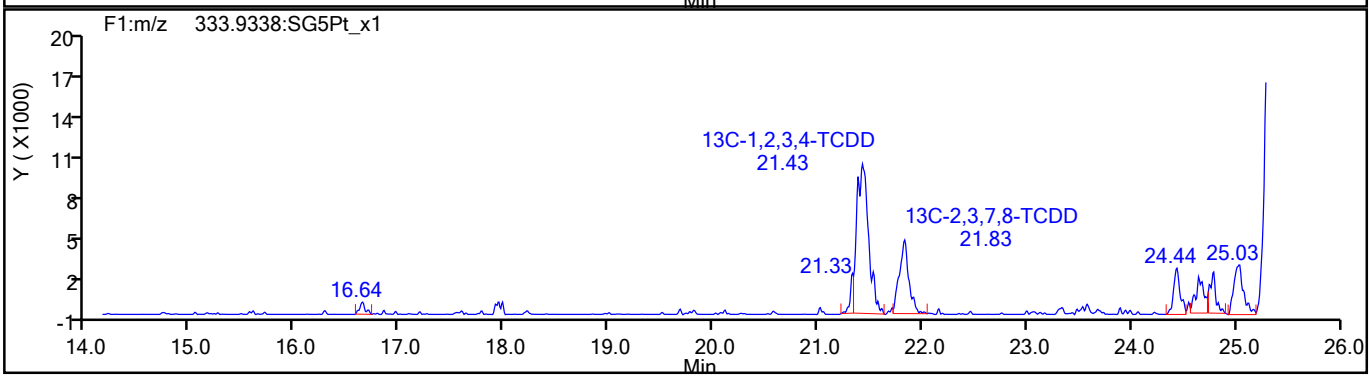

786705

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

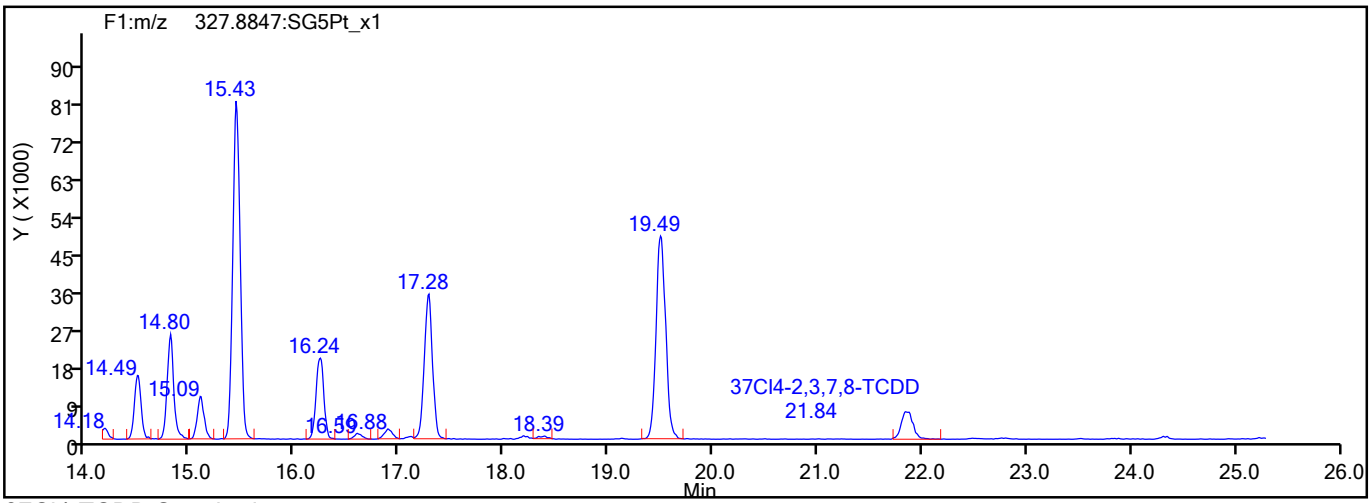

37Cl4-TCDD Standards

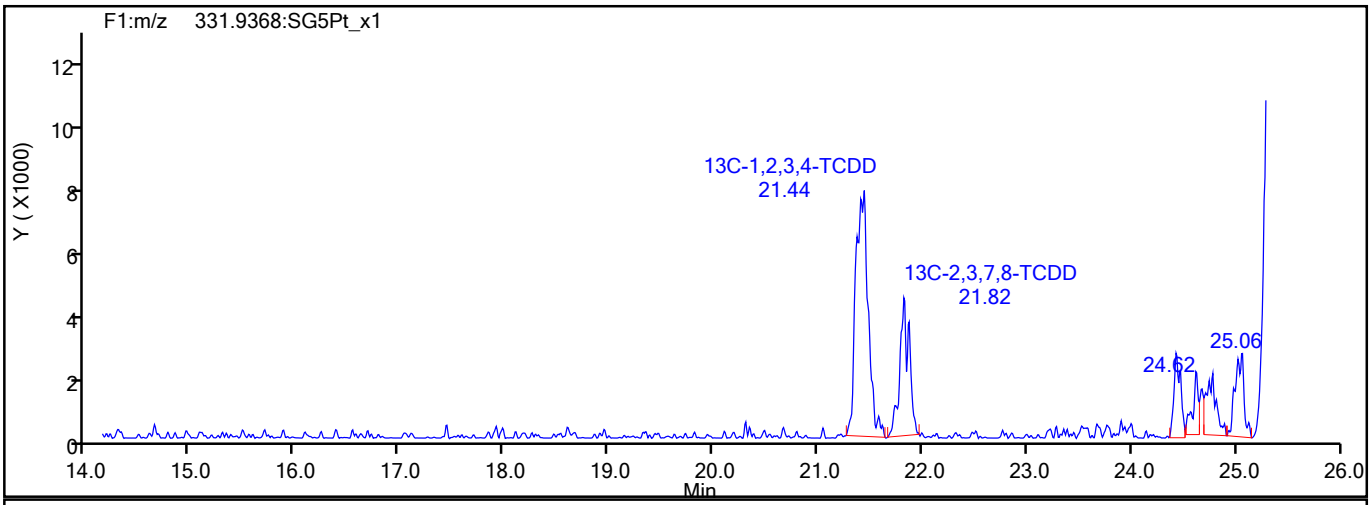

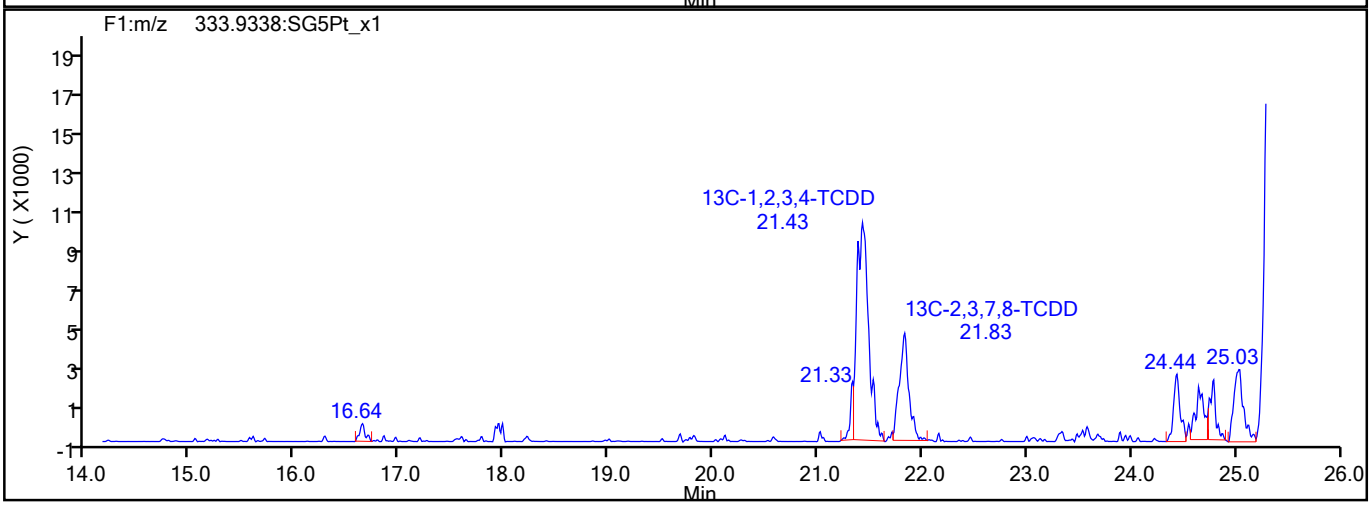

786706

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

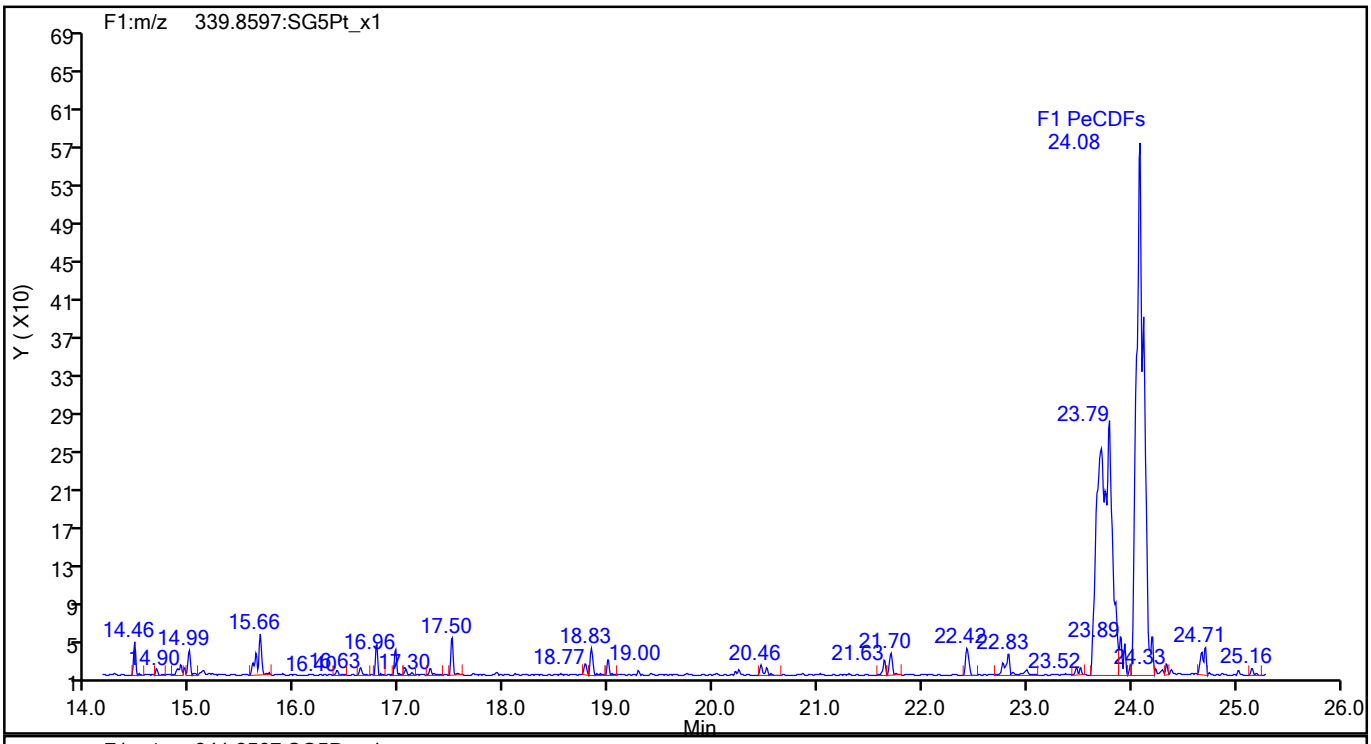

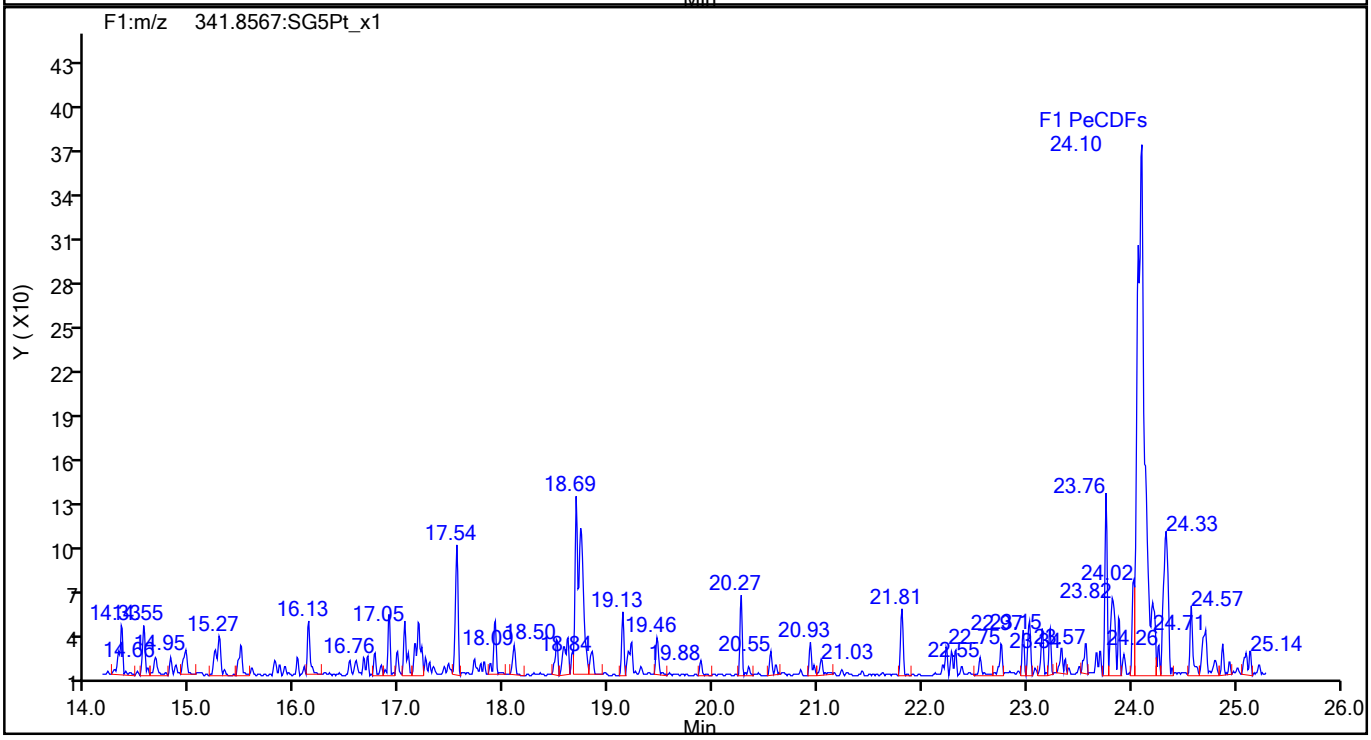

786707

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

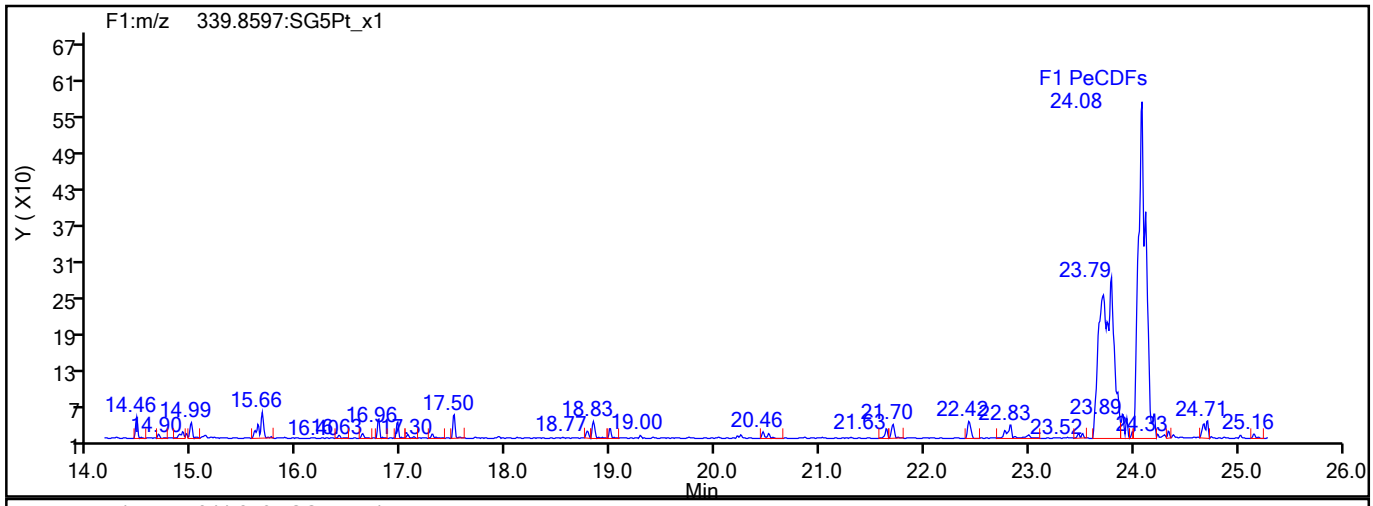

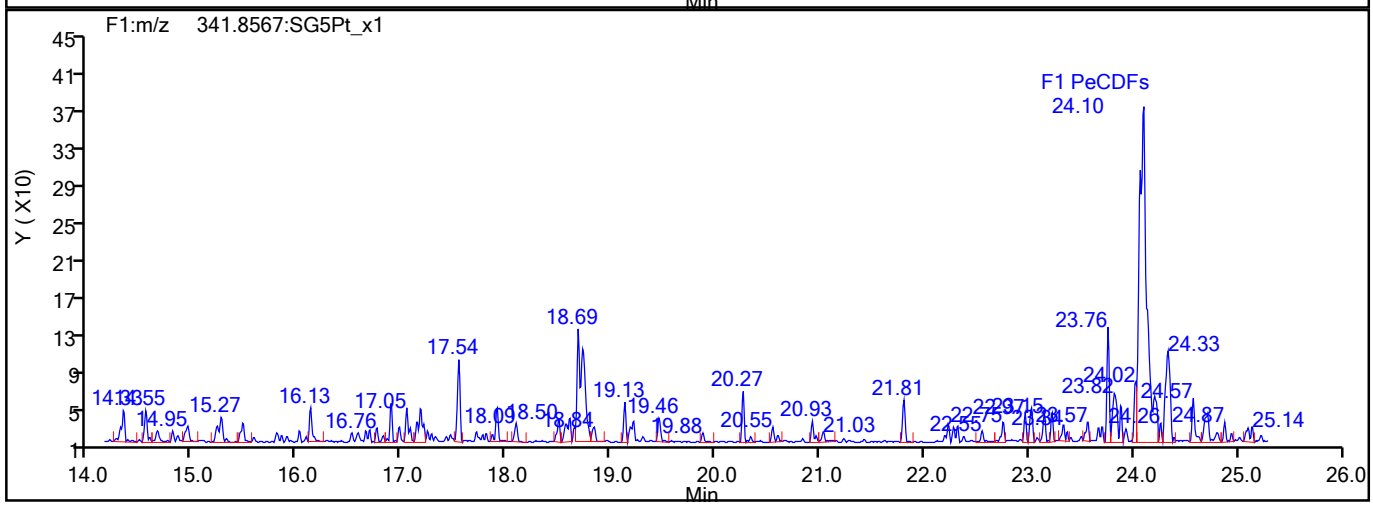

F1 PeCDFs Interference Mass

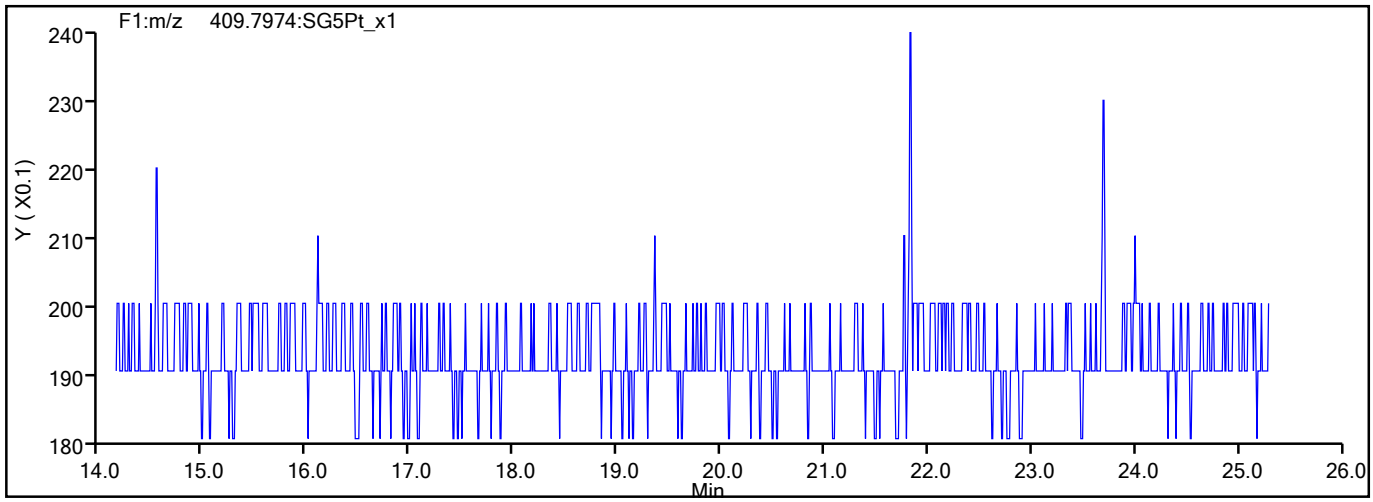

786708

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

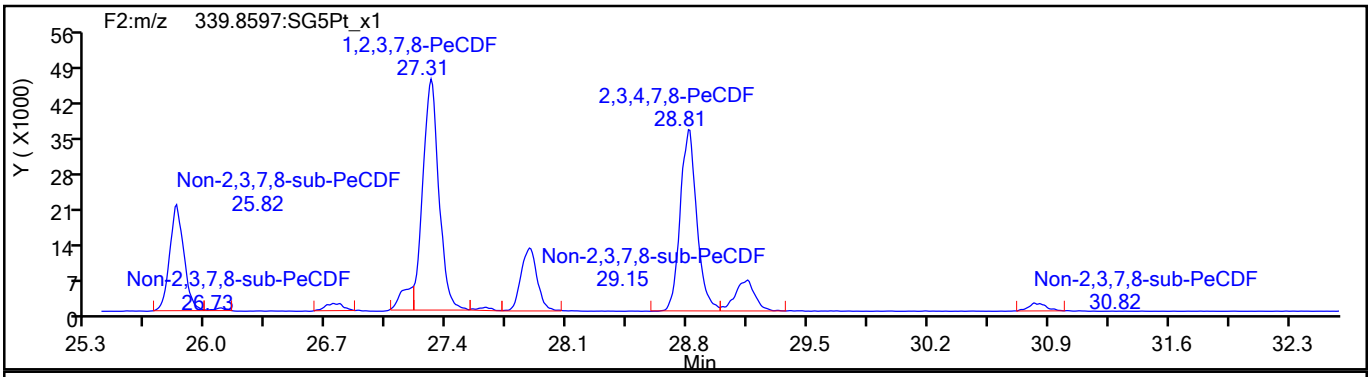

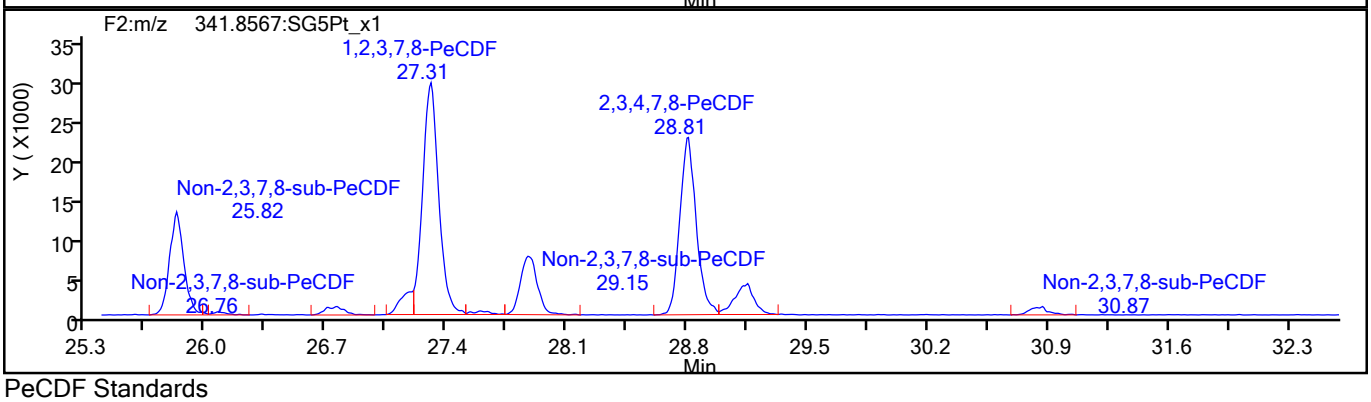

PeCDF Standards

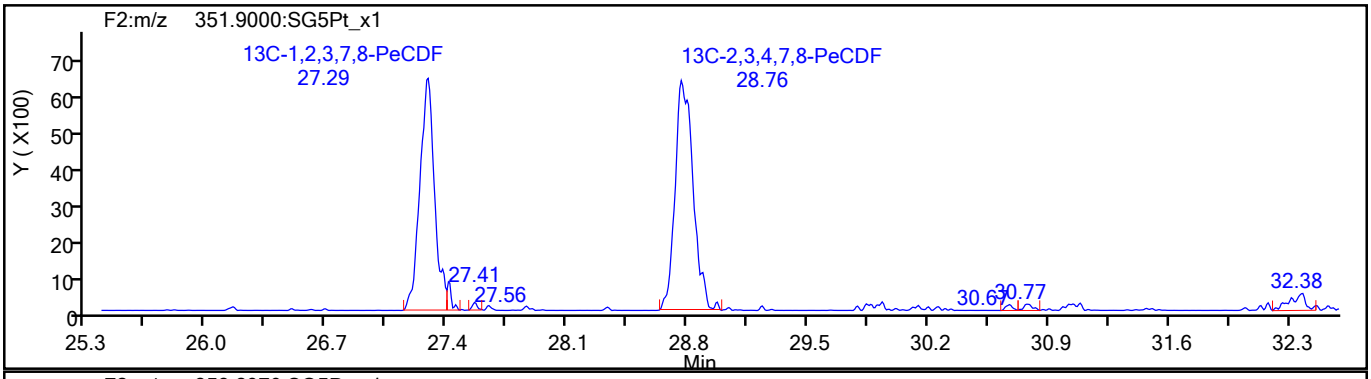

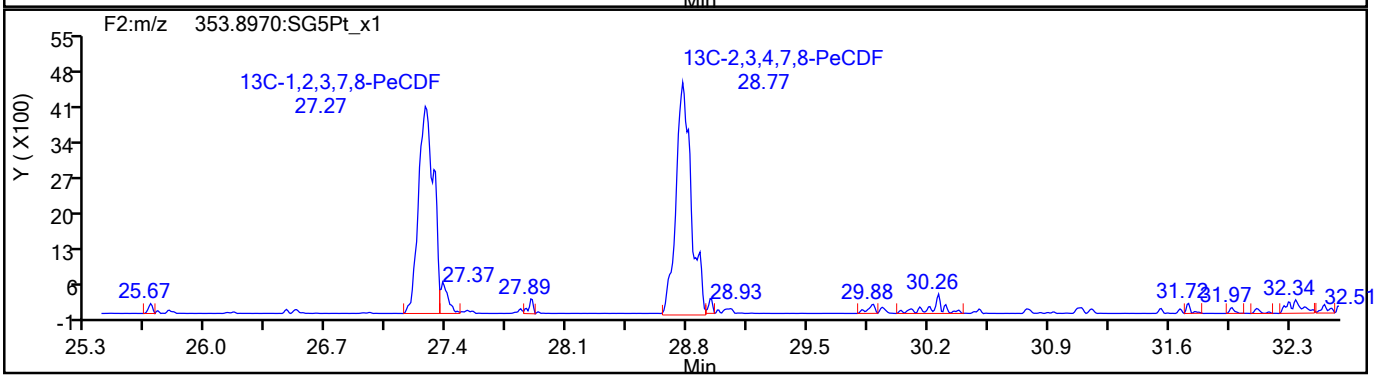

786709

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

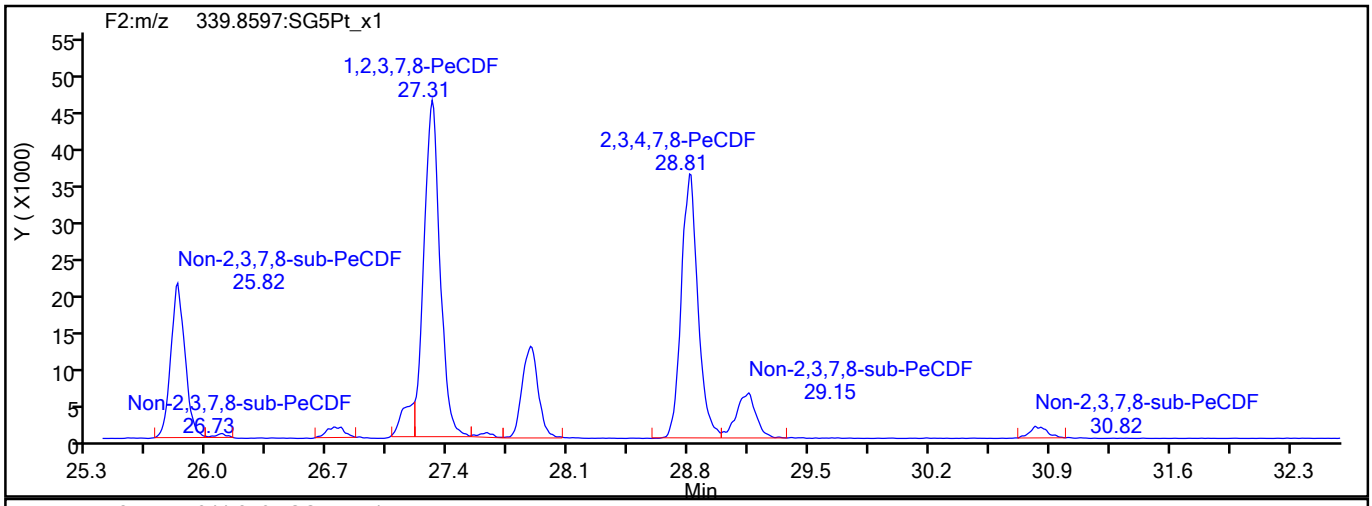

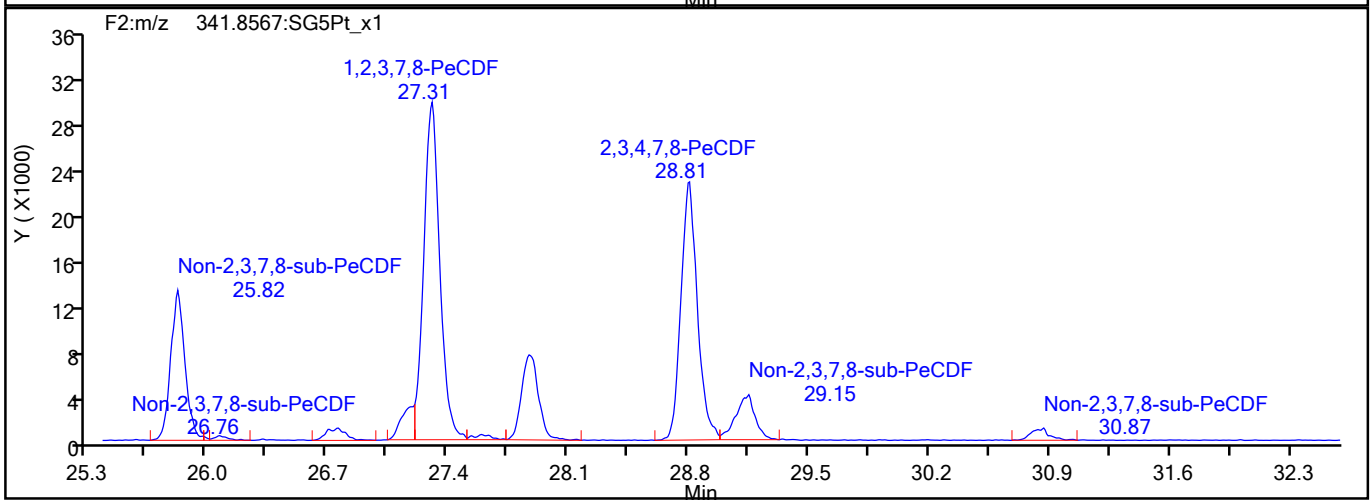

PeCDF Interference Mass

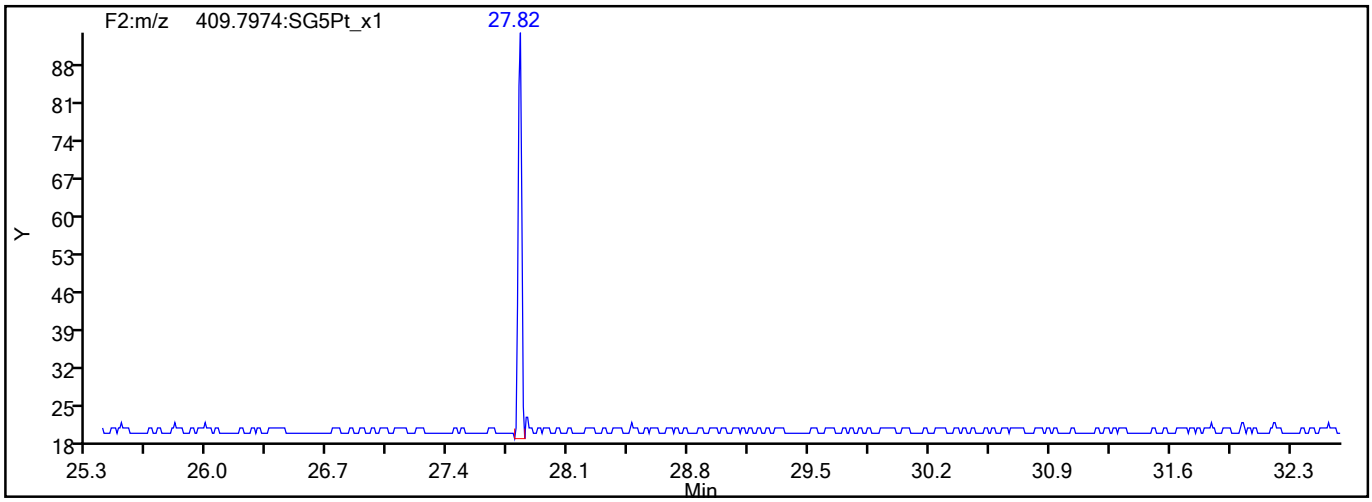

786710

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

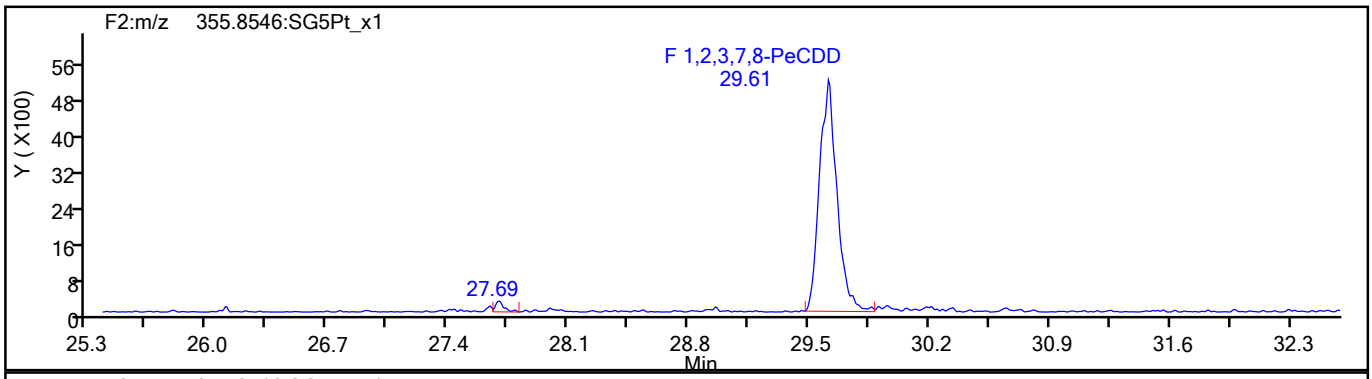

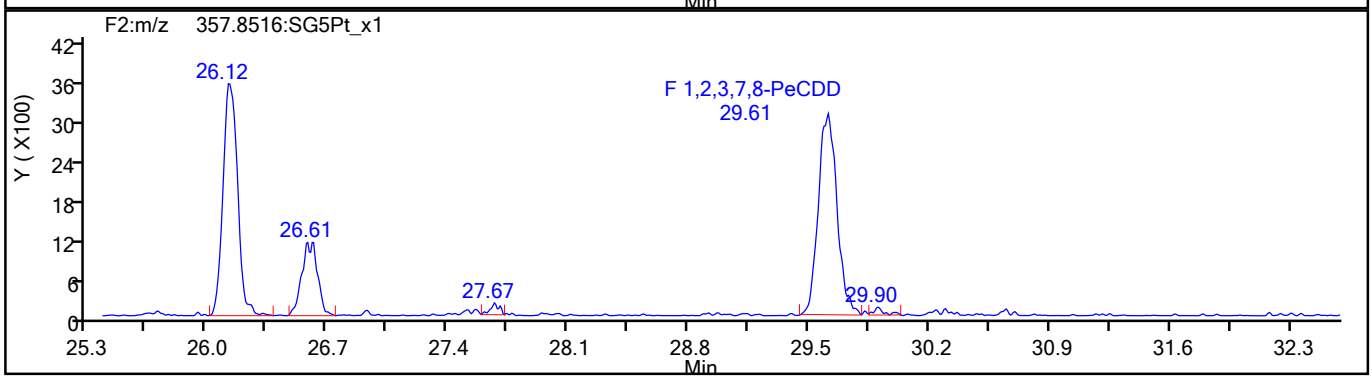

PeCDD Standards

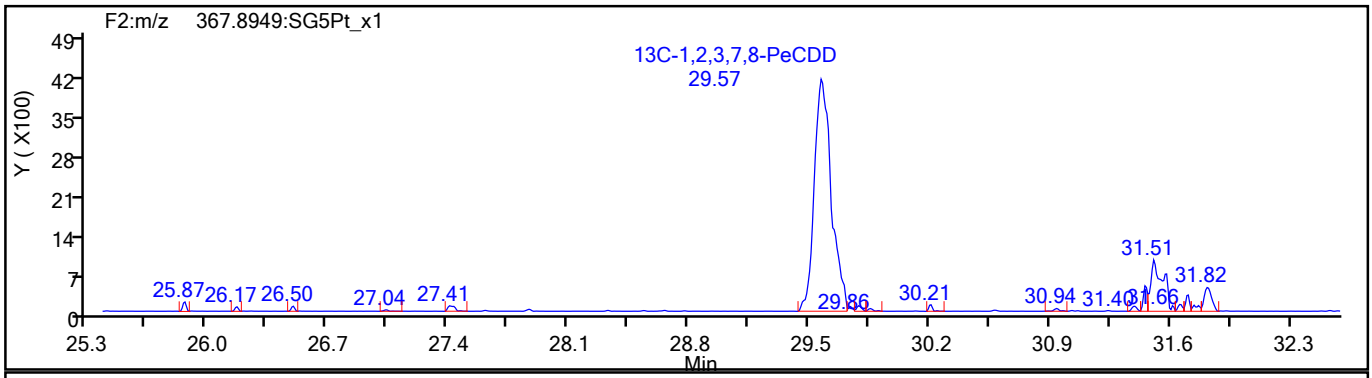

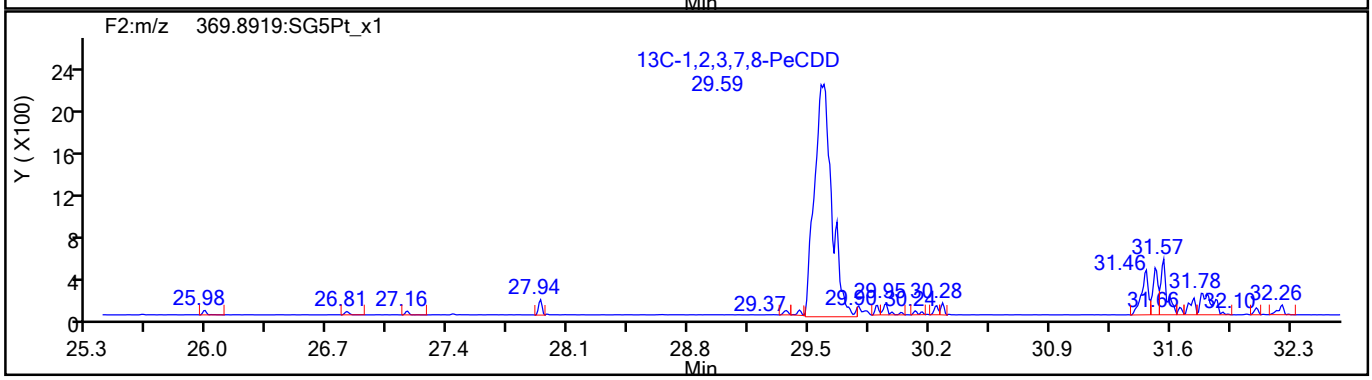

786711

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

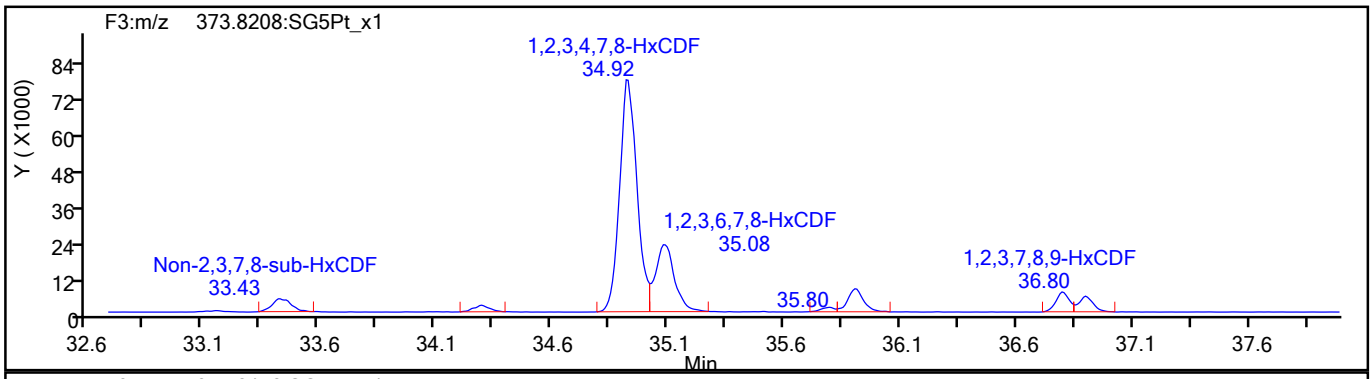

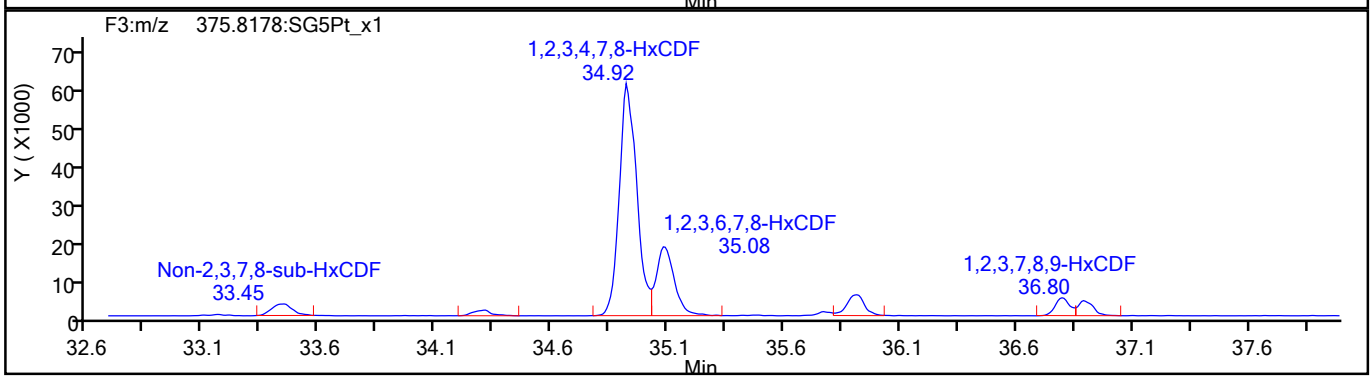

HxCDF Standards

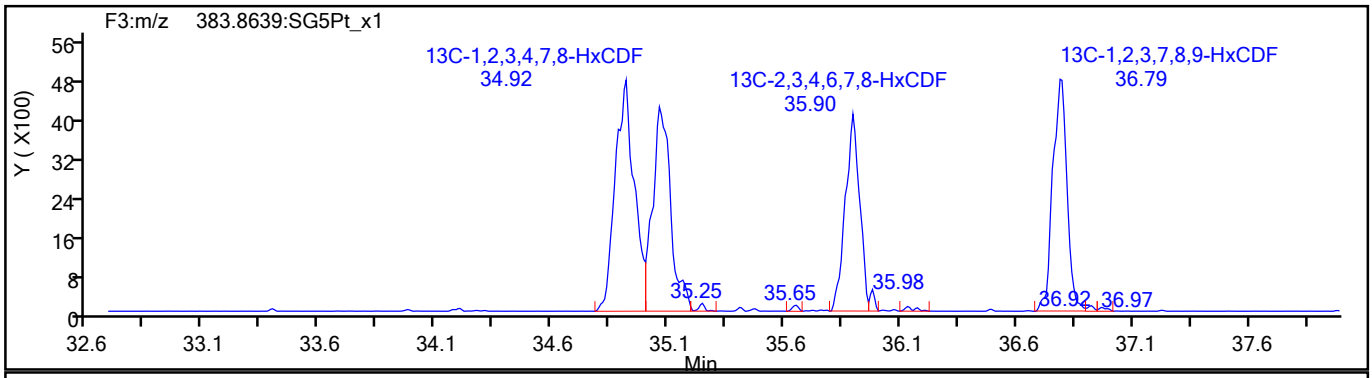

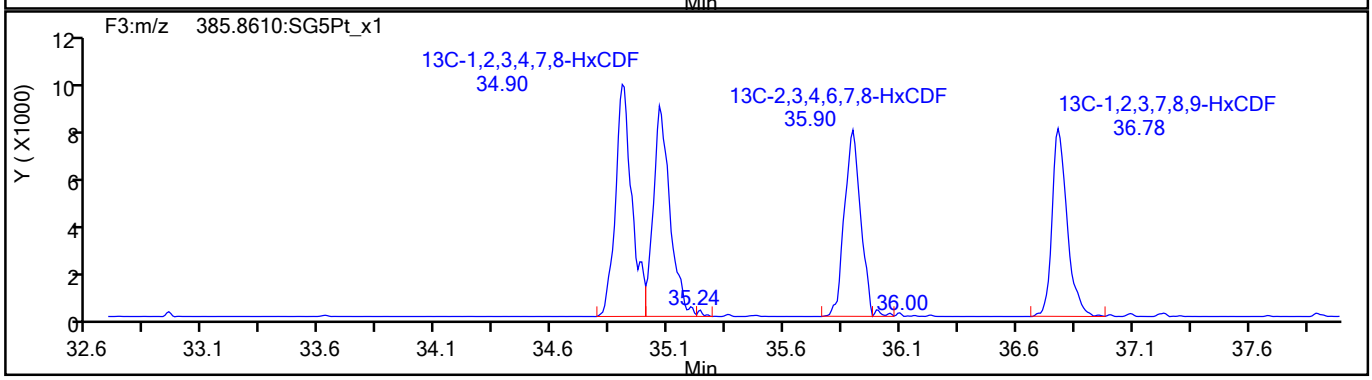

786712

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

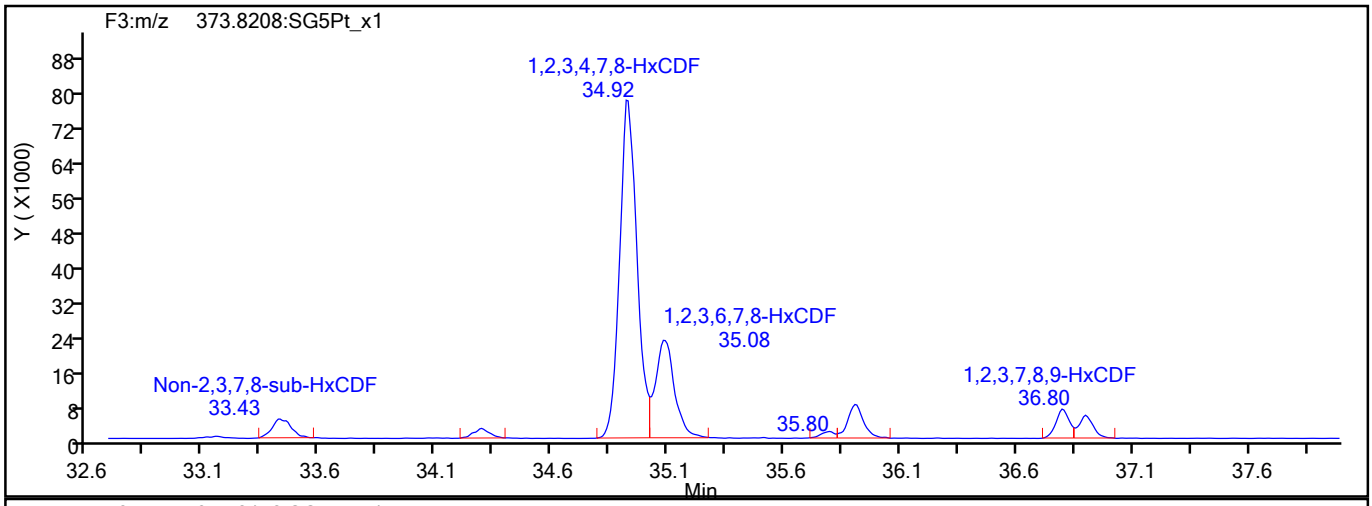

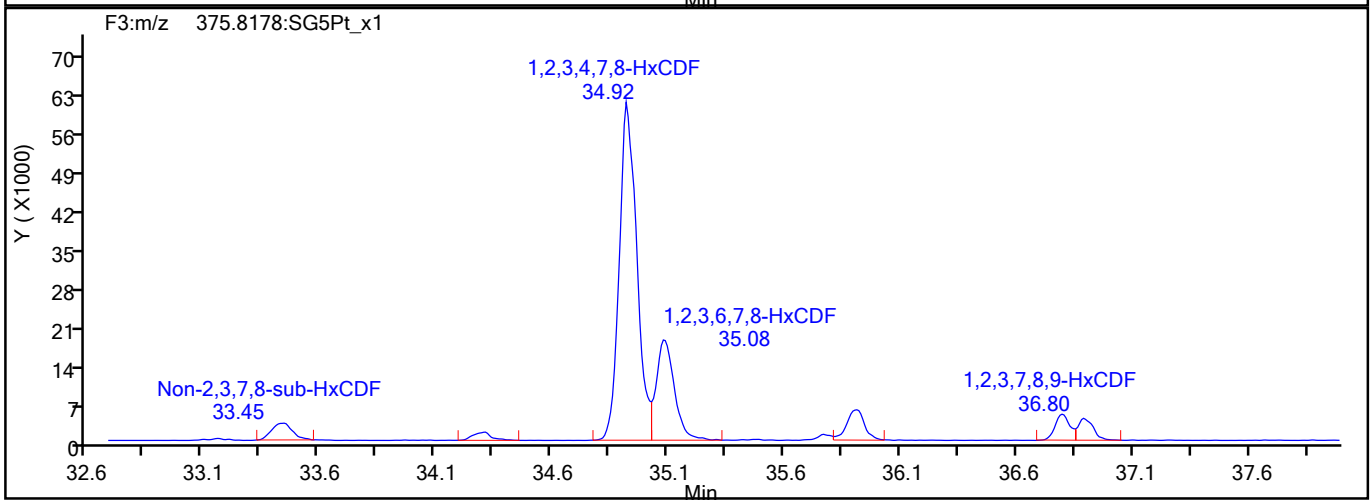

HxCDF Interference Mass

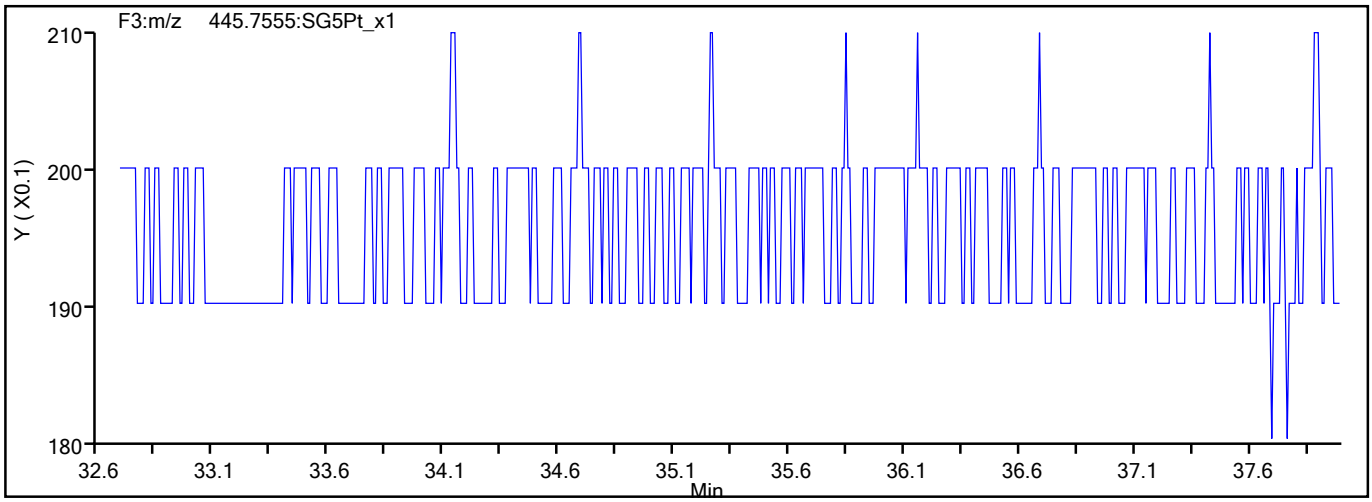

786713

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

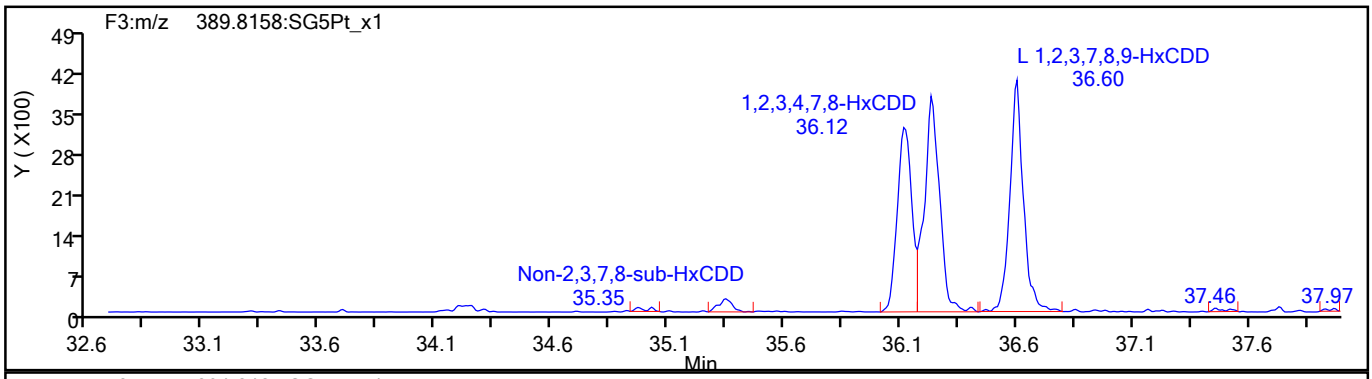

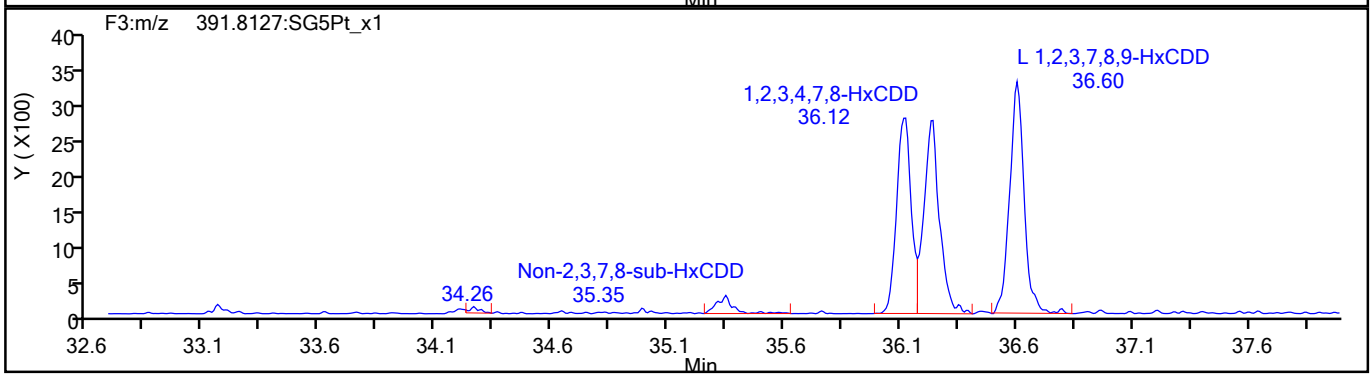

HxCDD Standards

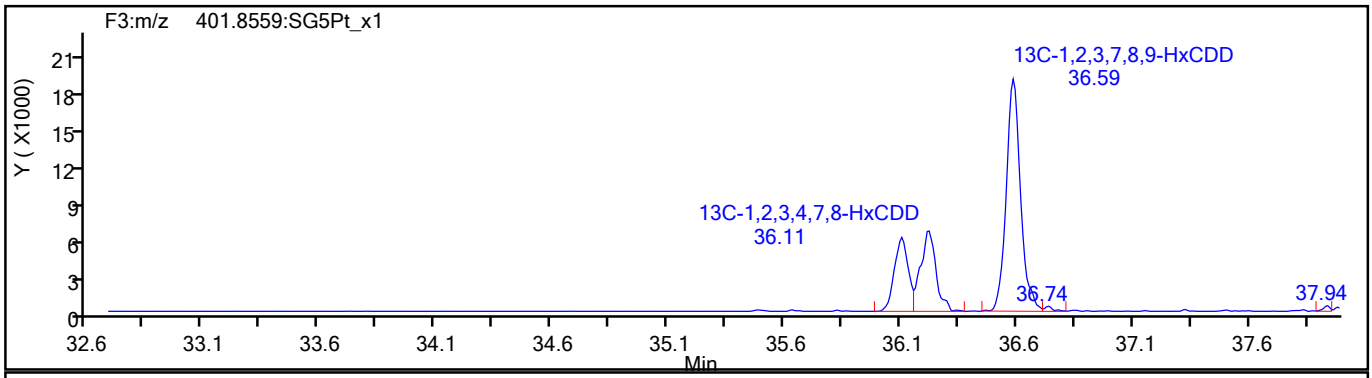

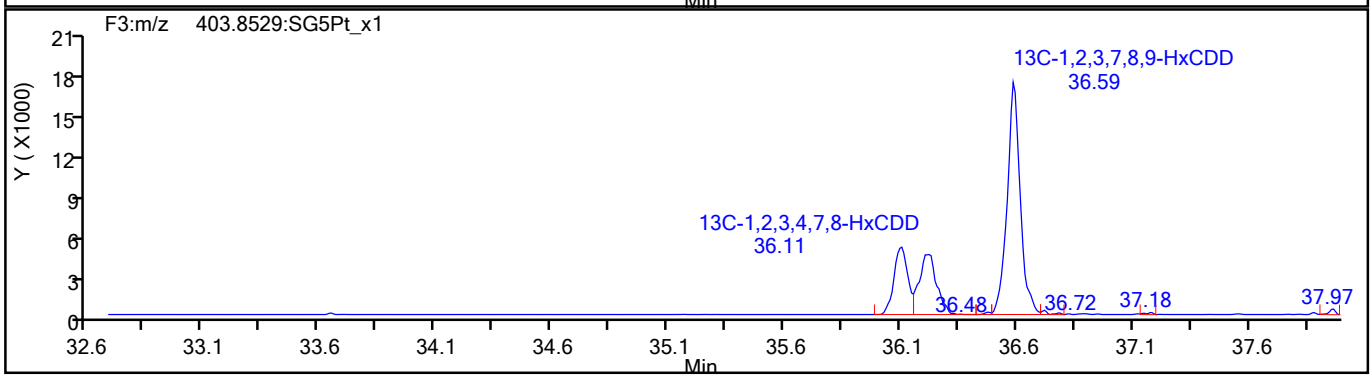

786714

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

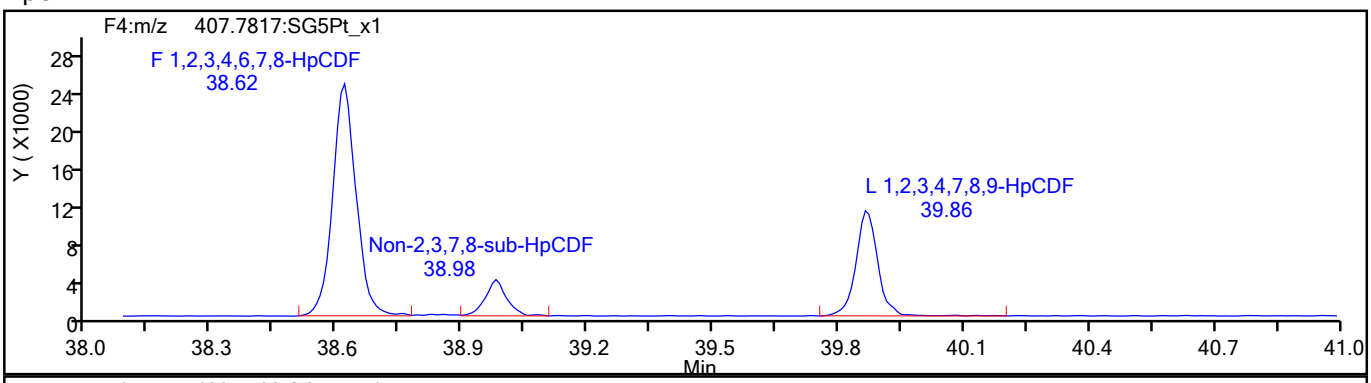

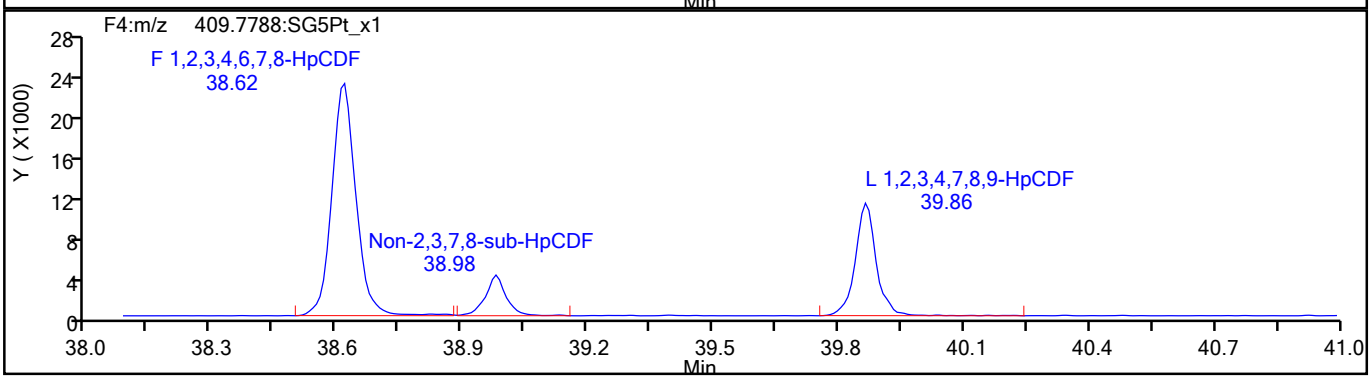

HpCDF Standards

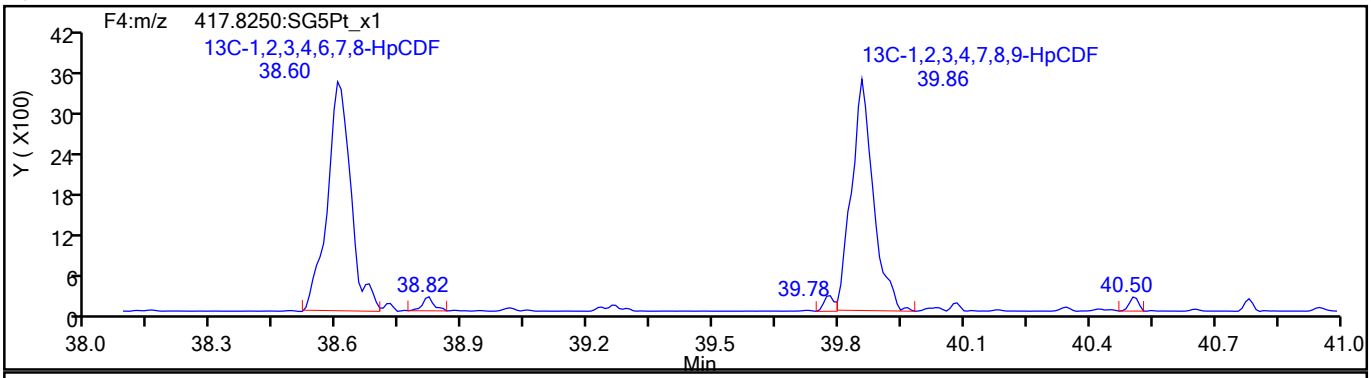

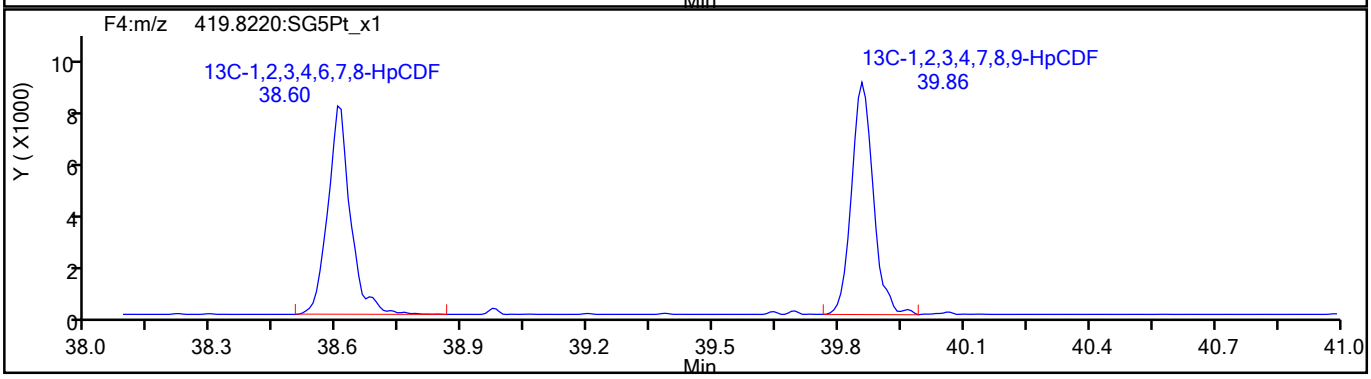

786715

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

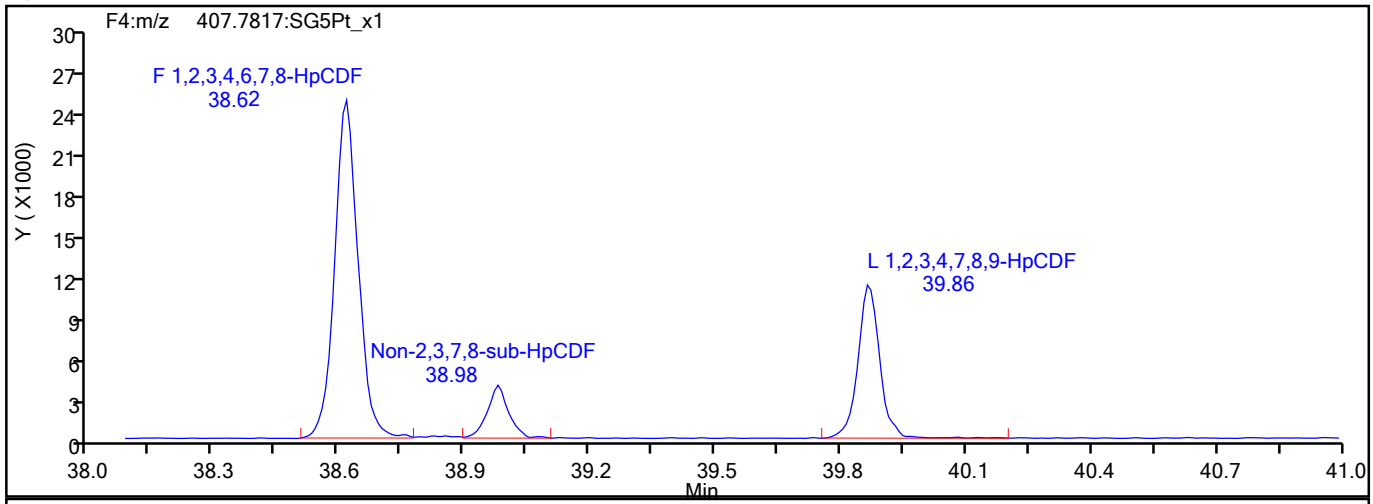

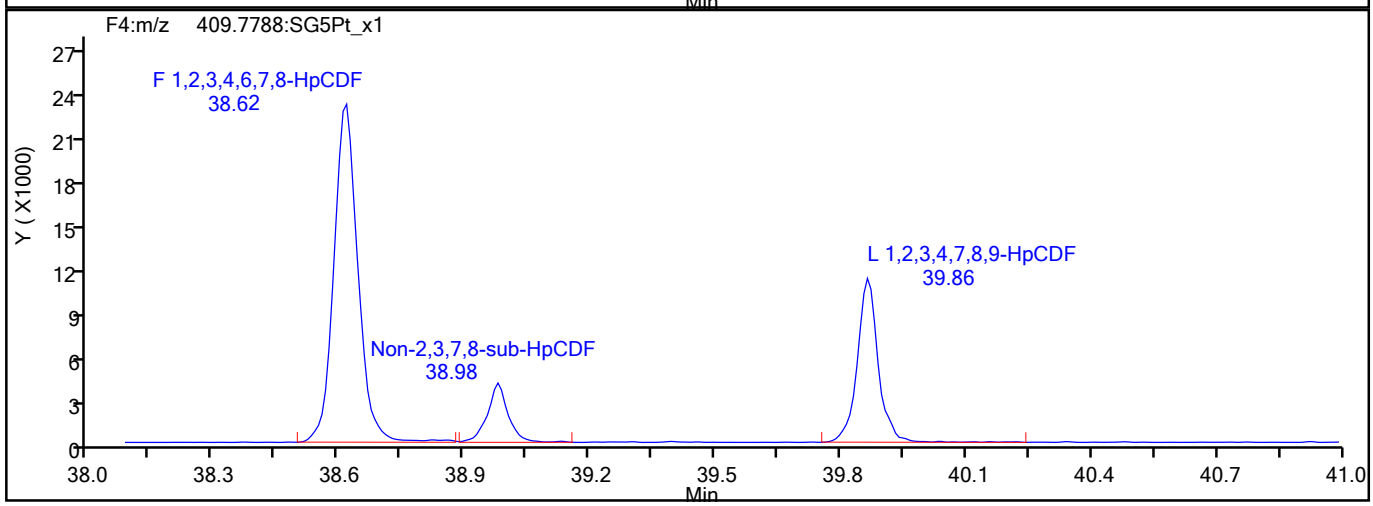

HpCDF Interference Mass

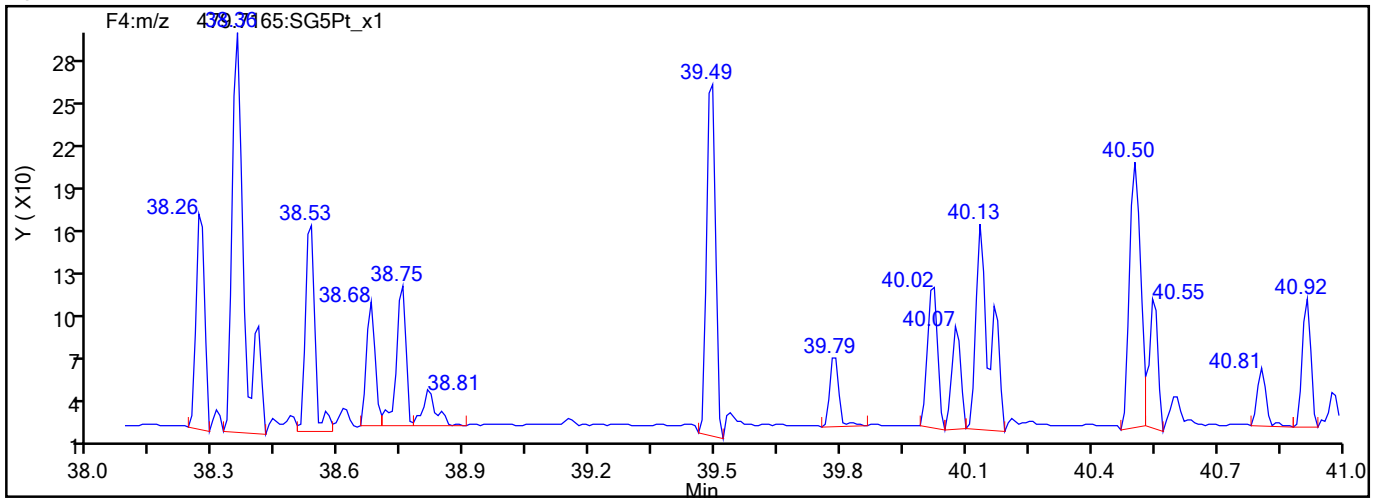

786716

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

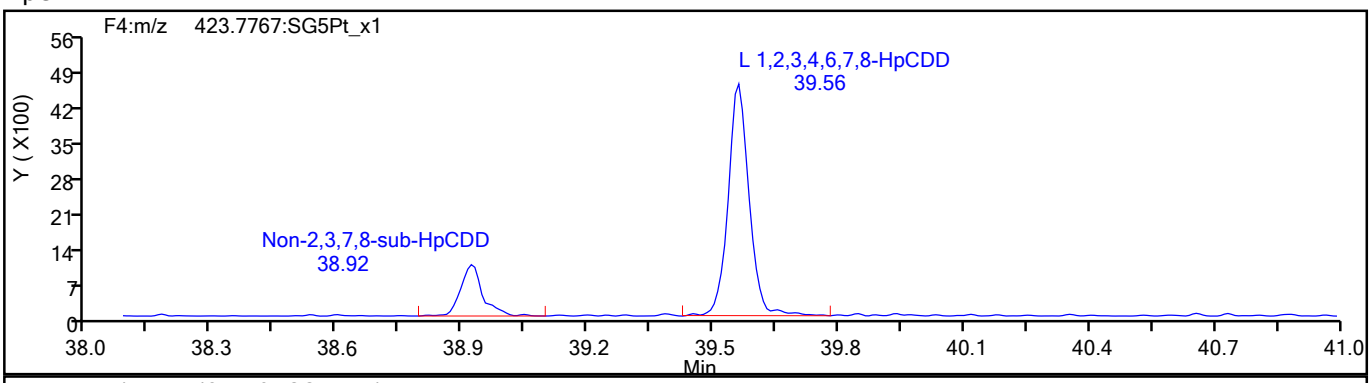

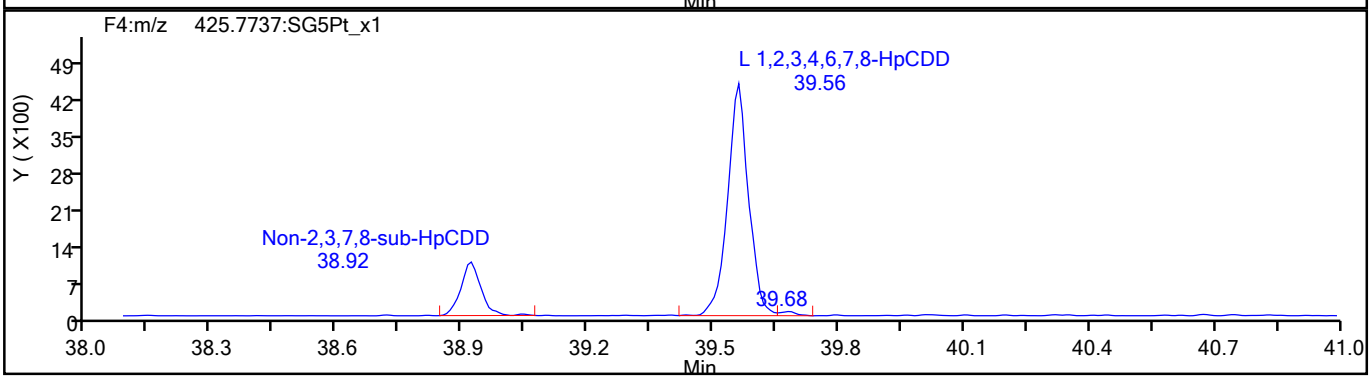

HpCDD Standards

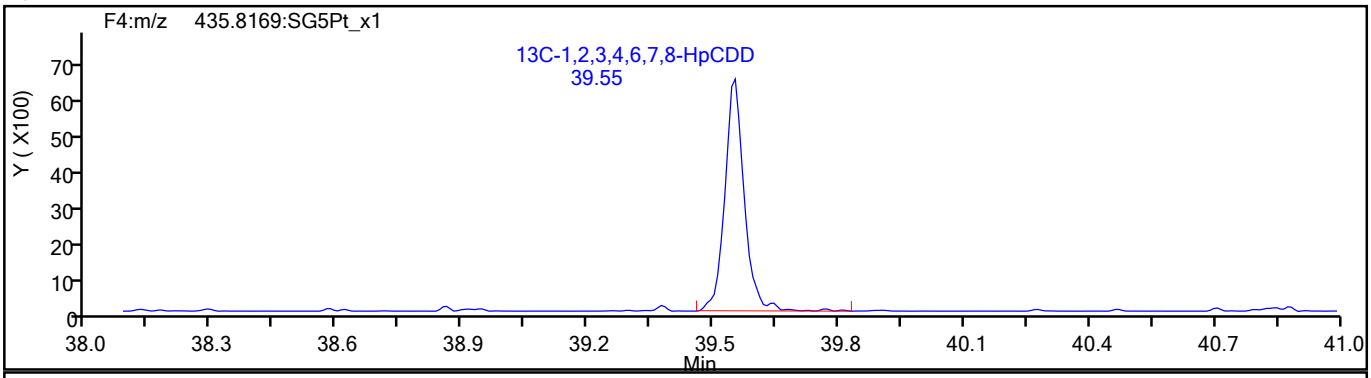

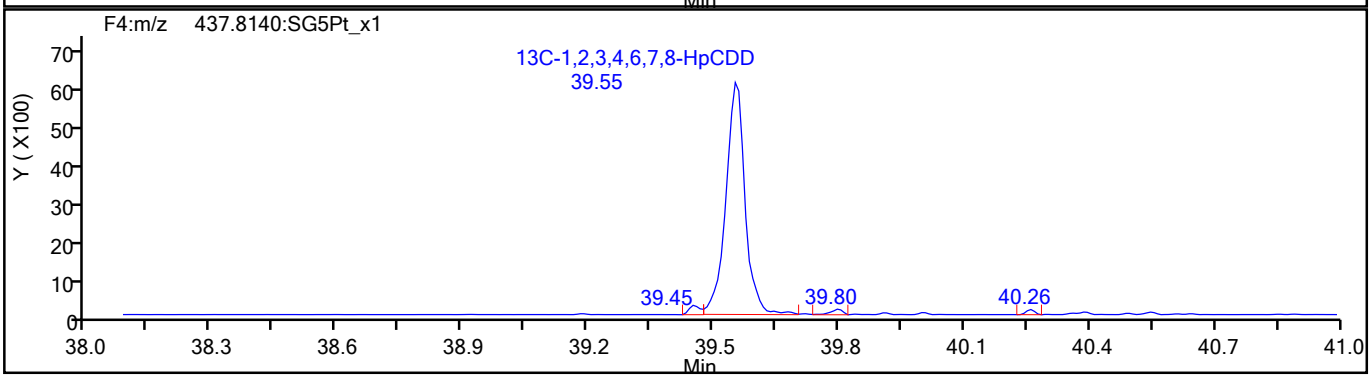

786717

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

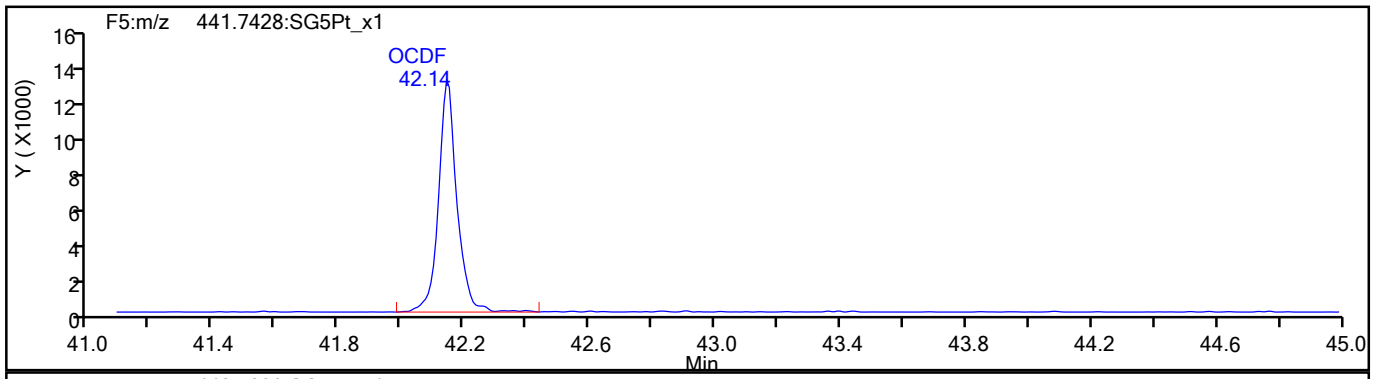

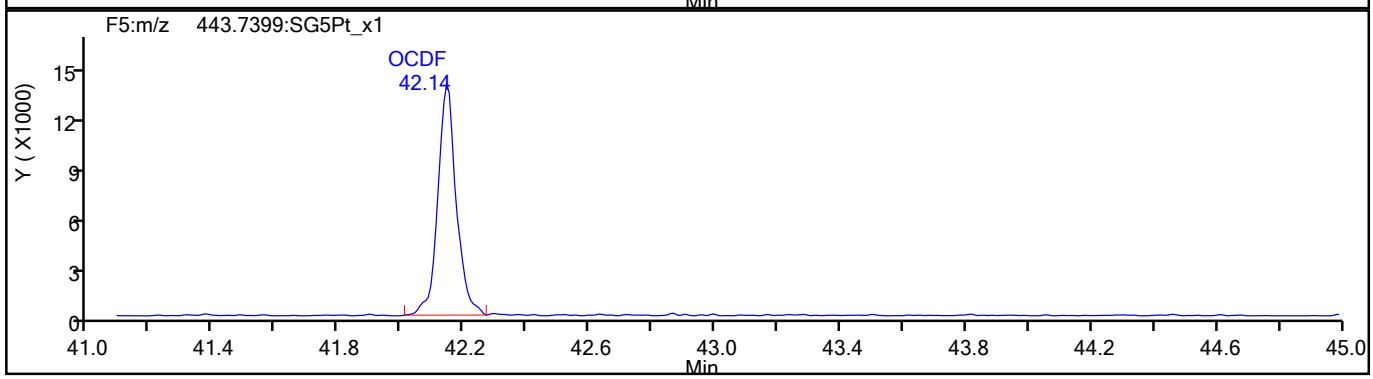

OCDF Standards

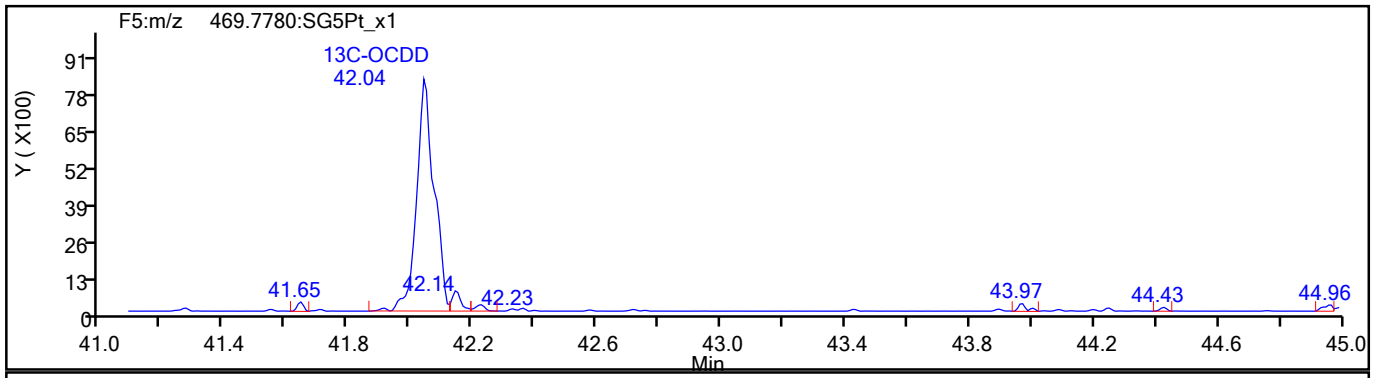

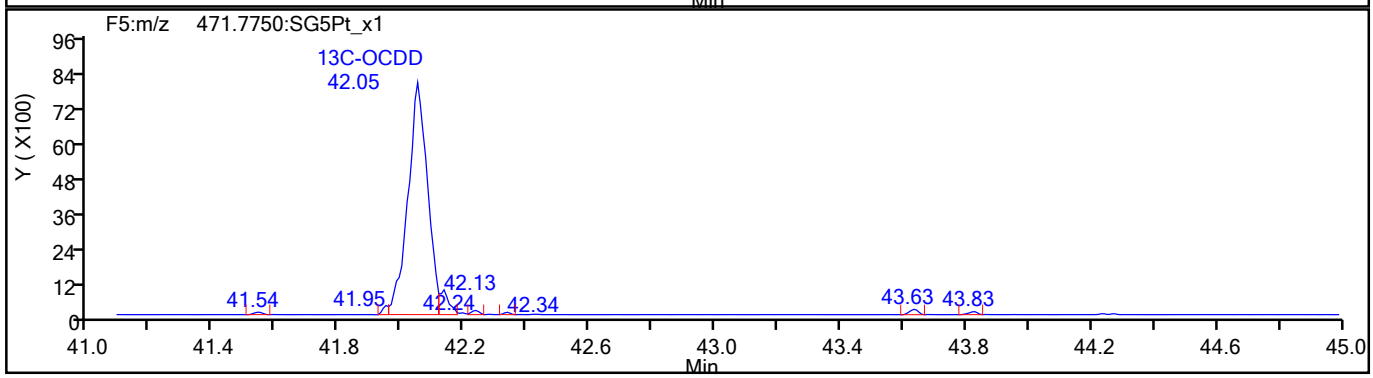

786718

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

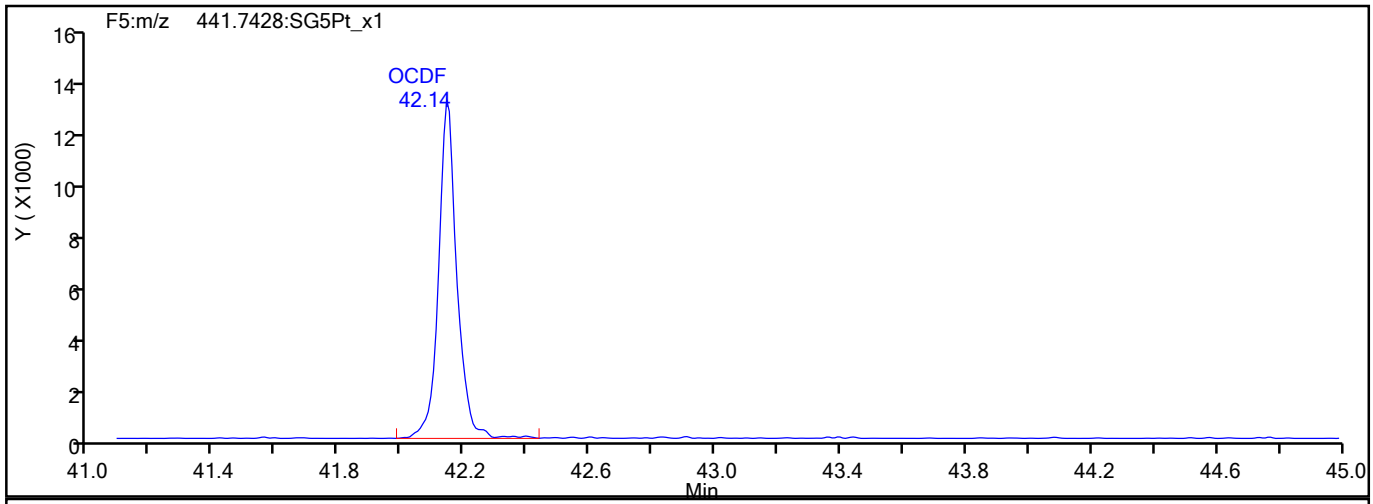

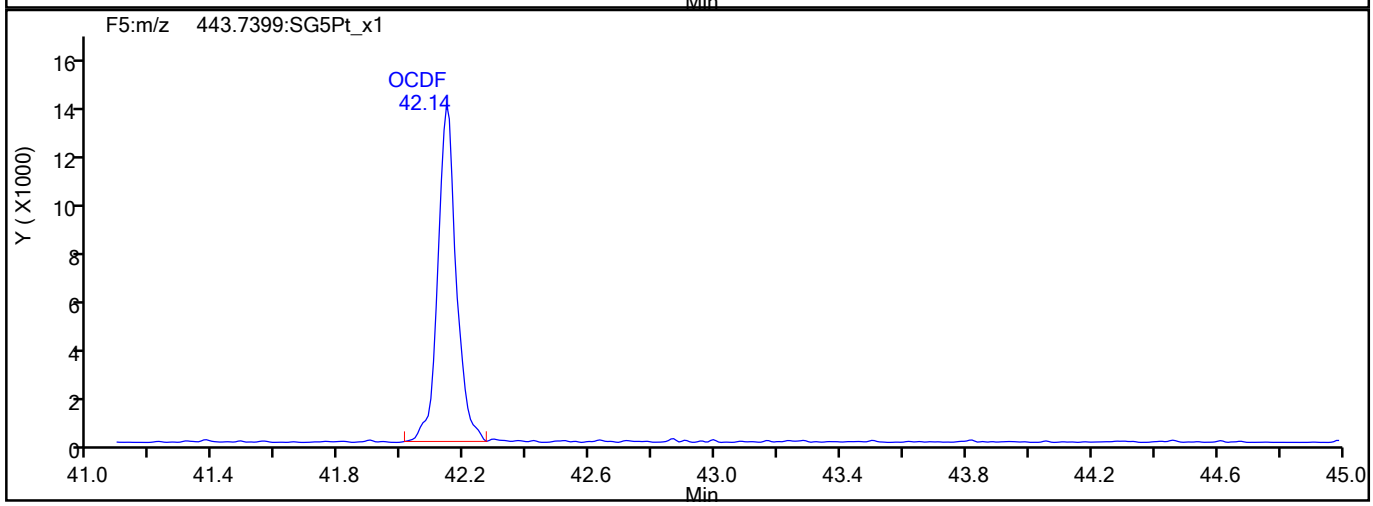

OCDF Interference Mass

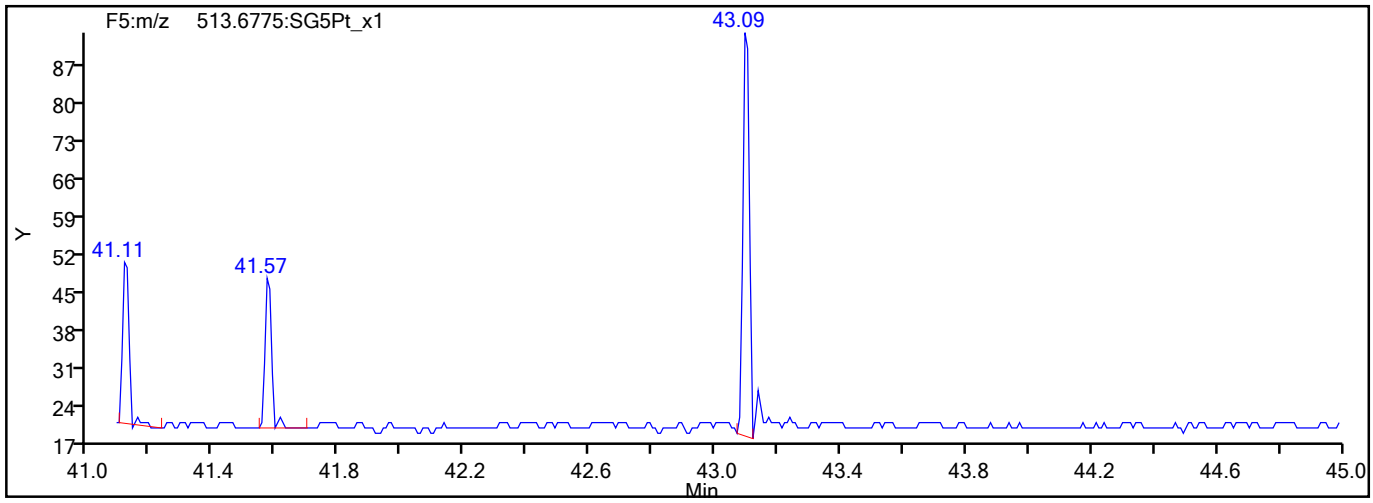

786719

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

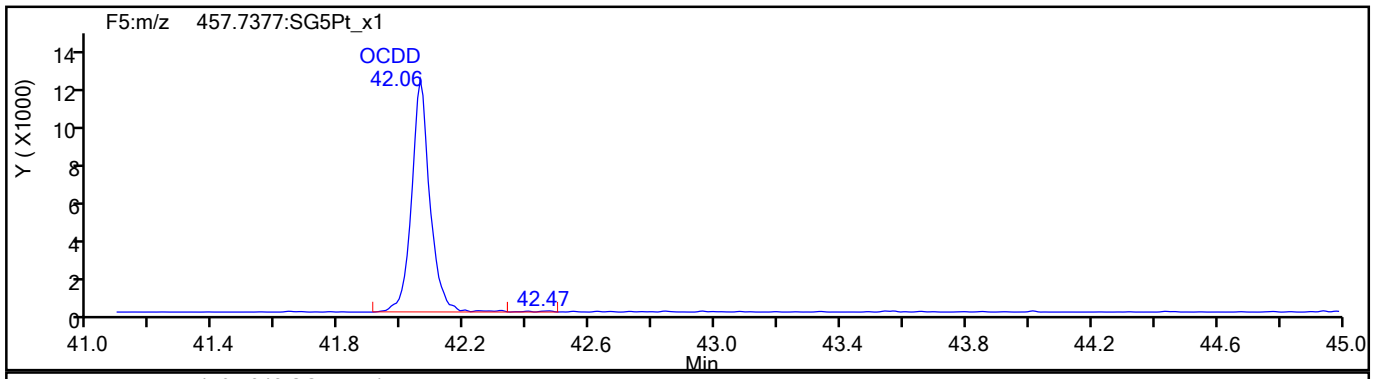

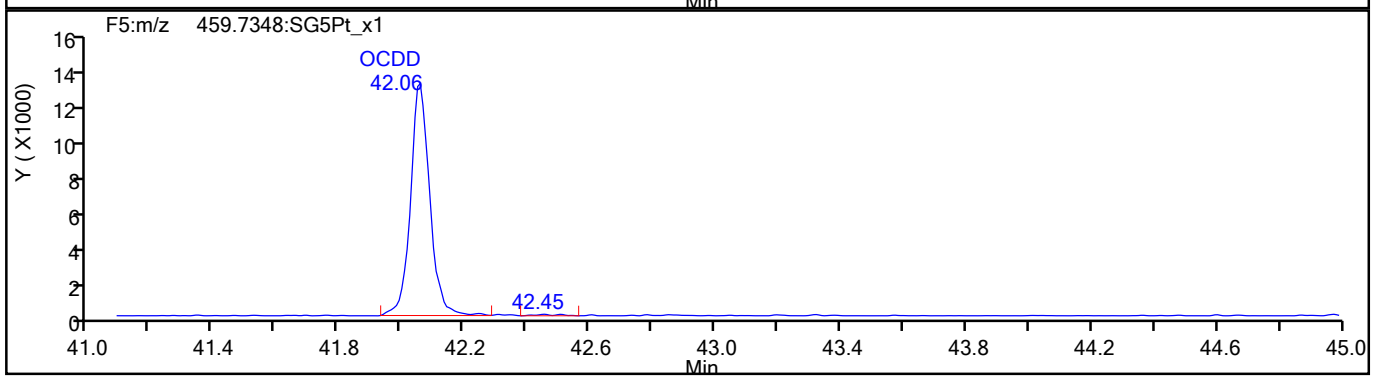

OCDD Standards

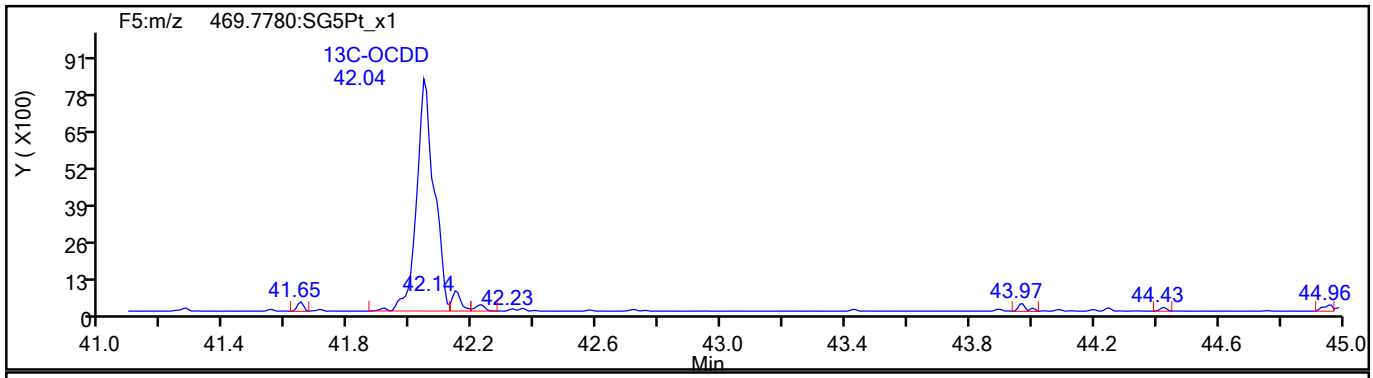

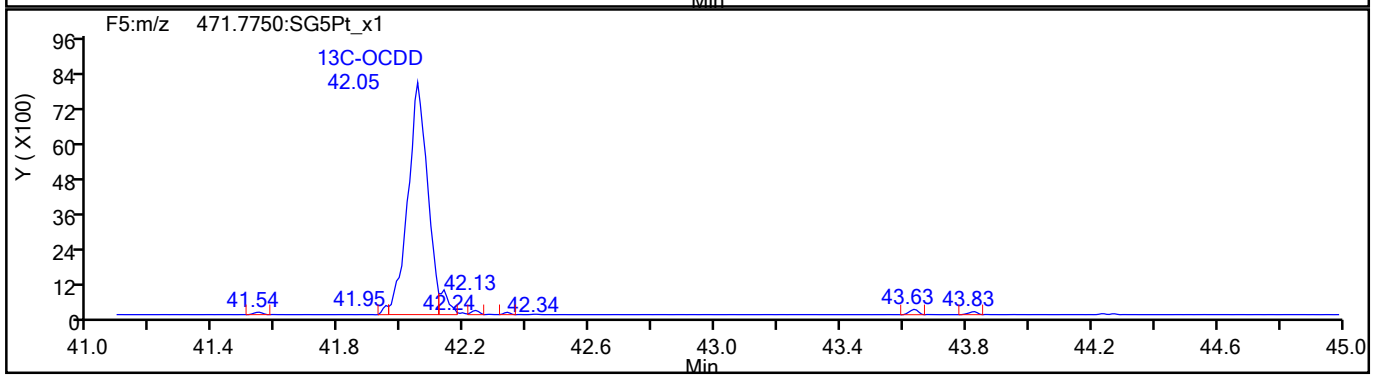

786720

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

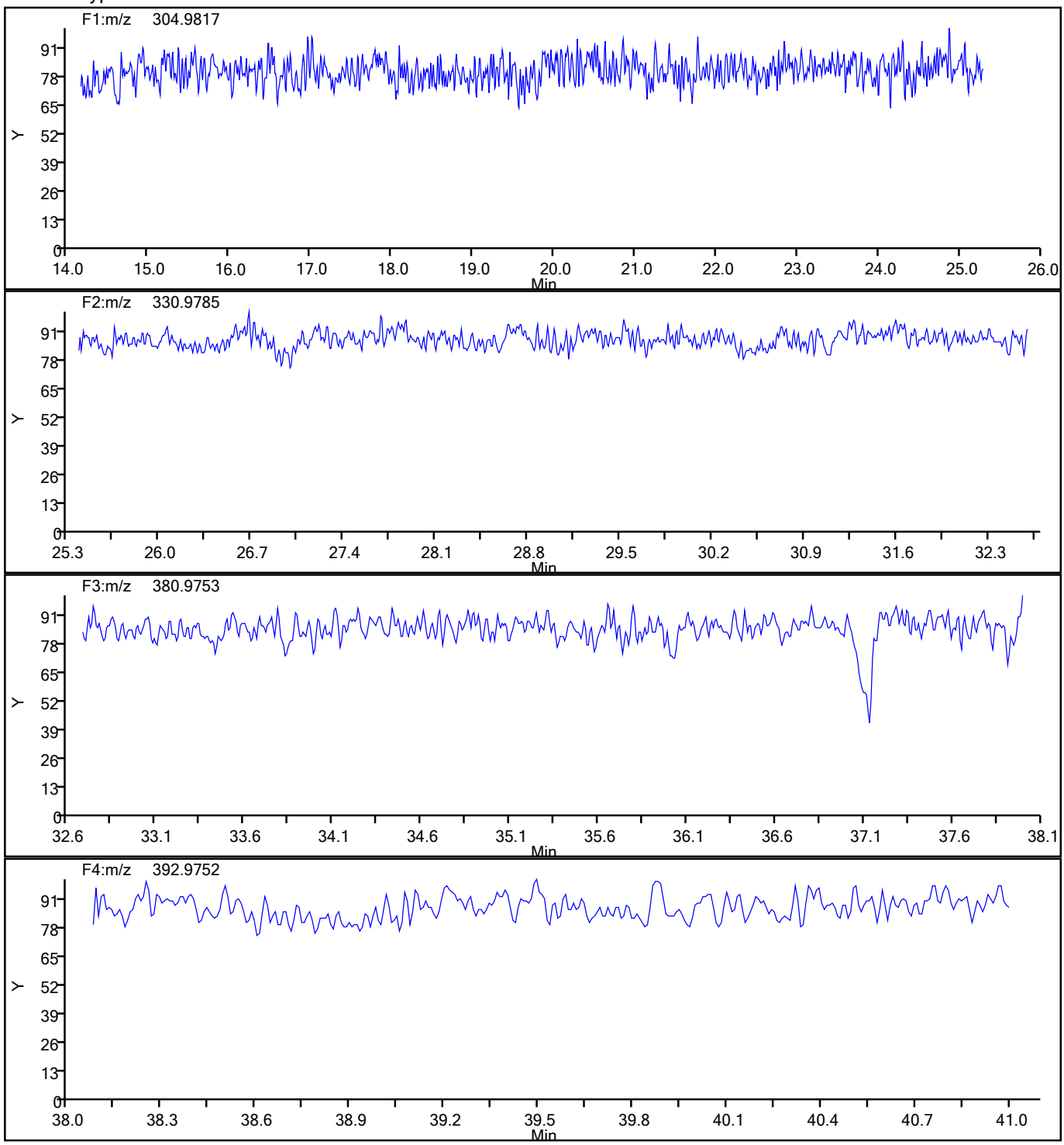

786721

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

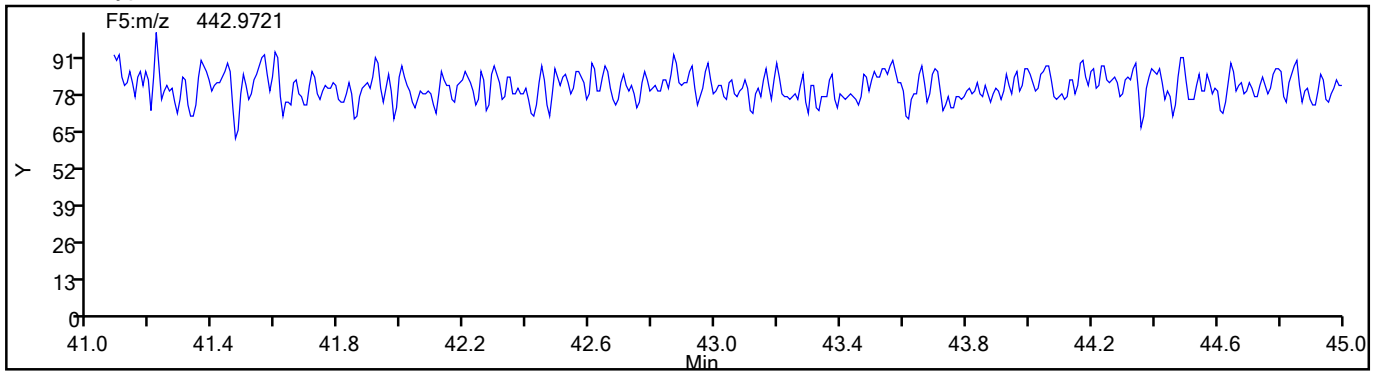

786722

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) MS RA
Lab Sample ID: 320-76888-1 MS RA
Matrix: Sediment
Lab File ID: 25AU2111D2_005.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.30(g)
Date Analyzed: 08/25/2021 11:28
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519650
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	121000		99	99

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	29		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	56		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d
Lims ID: 320-76888-A-1-B MS
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MS
Inject. Date: 25-Aug-2021 11:28:39 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-B MS X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:17:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.357	6847273	0.88	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.687	2646635	0.82	1.3327	2.900	2.900	1.094	1.094	29.00	a
2,3,7,8-TCDF	17.701	882531971	0.79	0.9978	3341.9	3341.9	2.744	2.744	3.3E+005	Ea
D 13C-2,3,7,8-TCDD	16.110	2214123	0.71	0.8749	3.696	3.696	8.075	8.075	36.96	nM
2,3,7,8-TCDD	16.137	136342870	0.79	1.0570	582.6	582.6	2.356	2.356	58258	Ea
$ 37Cl4-2,3,7,8-TCDD	16.151	1328723		0.8648	2.244	2.244	0.2056	0.2056	56.10	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d
Lims ID: 320-76888-A-1-B MS
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MS
Inject. Date: 25-Aug-2021 11:28:39 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-B MS X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:17:11

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.357	16.285	4		3197075	672996	204683	511707	3		M
333.9339	16.357	16.285	4		3650198	767052	202295	505737	4	0.88(0.65-0.89)	M
13C-2,3,7,8-TCDF											a
315.9419	17.687	17.601	5	1.081	1191927	240522	34955	87387	7		a
317.9389	17.660	17.601	3	1.080	1454708	284087	49007	122517	6	0.82(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.701	17.629	4	1.001	389582918	71251385	26379	65947	2701		a
305.8987	17.687	17.629	3	1.000	492949053	90251282	31068	77670	2905	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.110	16.051	3	0.985	918126	196548	204683	511707	1		M
333.9339	16.110	16.051	3	0.985	1295997	234740	202295	505737	1	0.71(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.137	16.079	3	1.002	60108927	13495486	24660	61650	547		a
321.8936	16.137	16.079	3	1.002	76233943	16893308	18305	45762	923	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.151	16.079	4	0.987	1328723	259553	10240	25600	25		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d				
Injection Date:	25-Aug-2021 11:28:39	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 18.58
Area: 683863
Amount: 1.788574
Amount Units: pg/ul

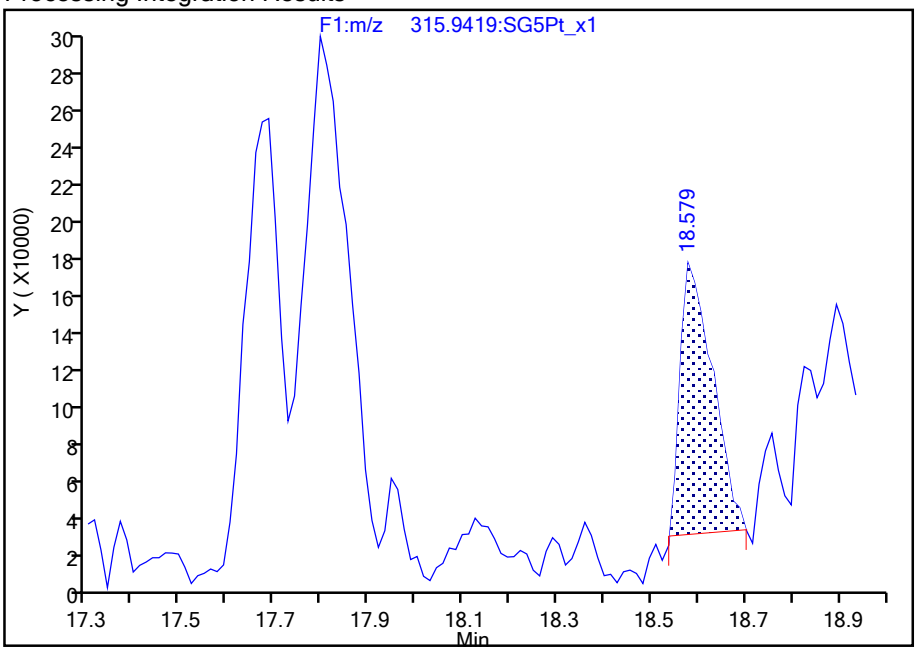

Manual Integration Results

RT: 17.69
Area: 1191927
Amount: 2.900338
Amount Units: pg/ul

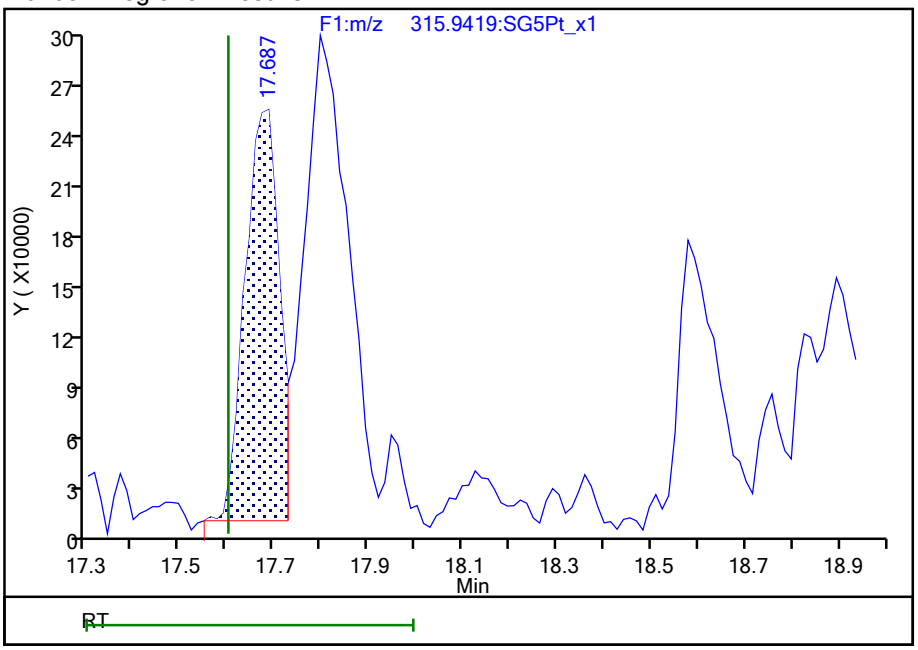

Reviewer: bennettd, 25-Aug-2021 13:16:44

Audit Action: Assigned Compound ID Audit Reason: Wrong peak

786726

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d				
Injection Date:	25-Aug-2021 11:28:39	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.63

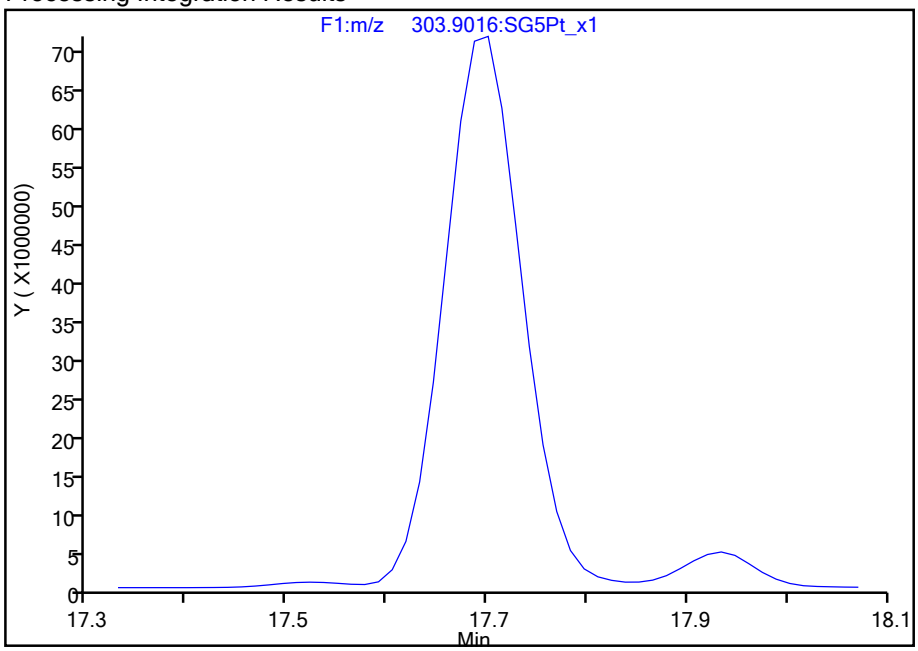

Manual Integration Results

RT: 17.70
Area: 389582918
Amount: 3341.8730
Amount Units: pg/ul

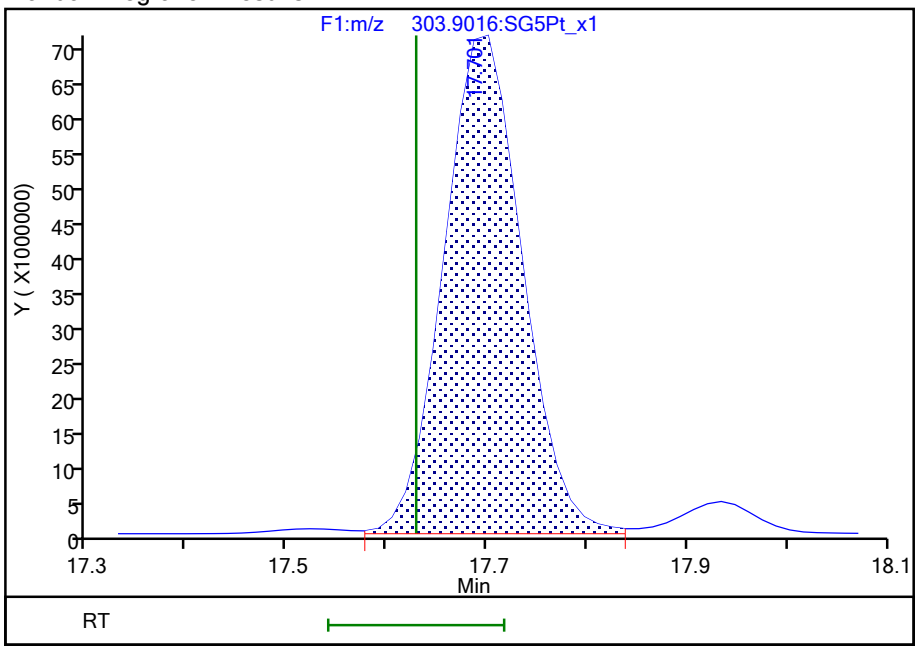

Reviewer: bennettd, 25-Aug-2021 13:17:05
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

786727

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d				
Injection Date:	25-Aug-2021 11:28:39	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

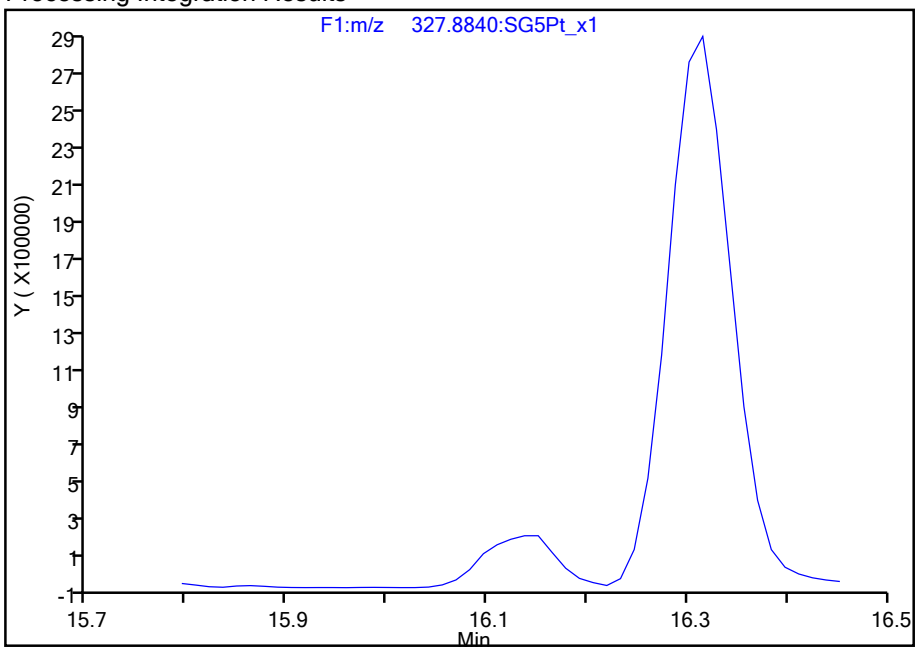

Manual Integration Results

RT: 16.15
Area: 1328723
Amount: 2.243846
Amount Units: pg/ul

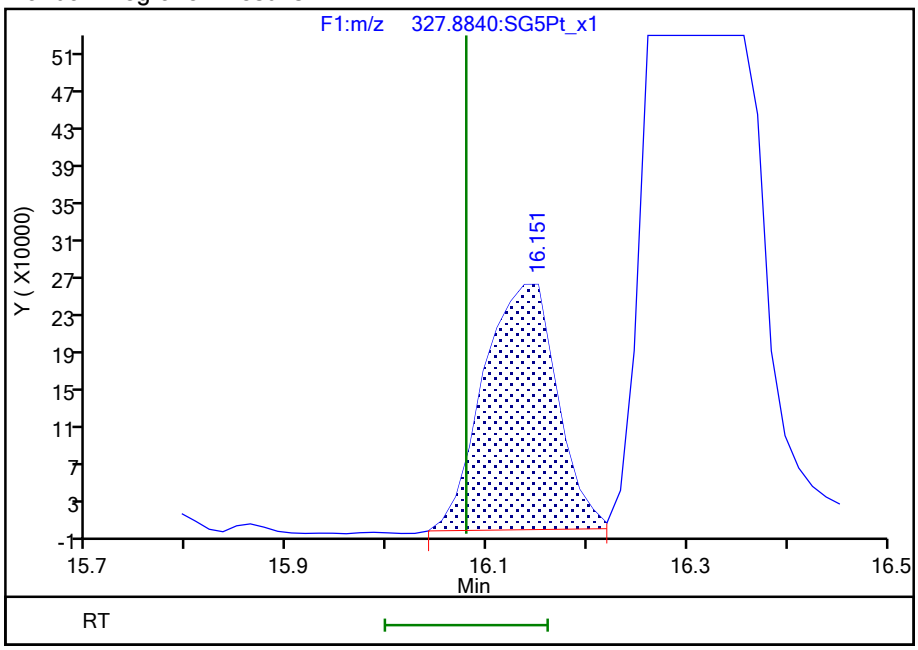

Reviewer: bennettd, 25-Aug-2021 13:16:34
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

786728

Report Date: 25-Aug-2021 13:23:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d		
Injection Date:	25-Aug-2021 11:28:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

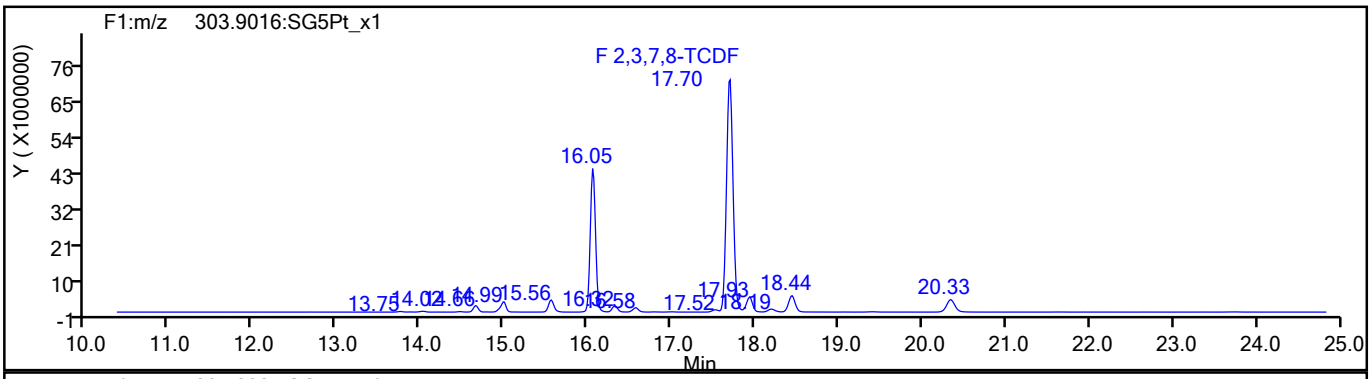

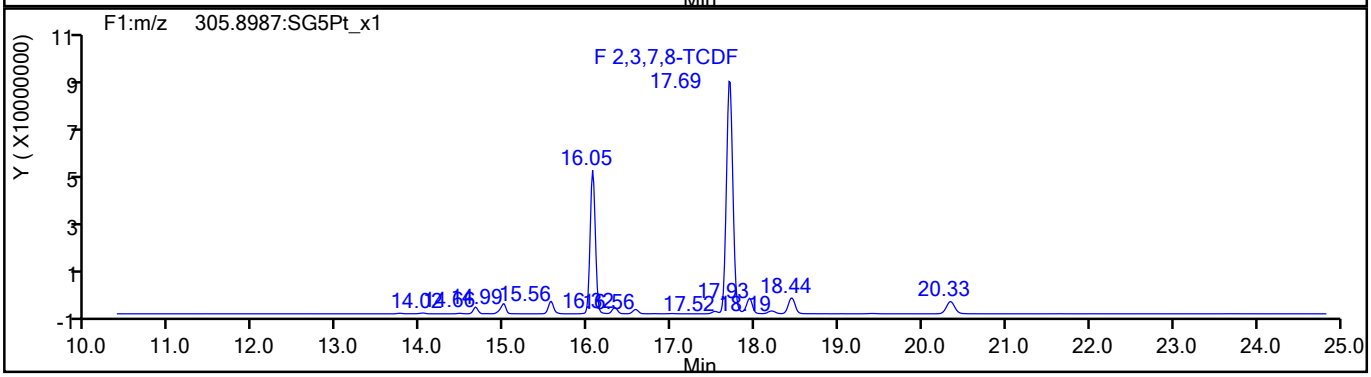

TCDF Standards

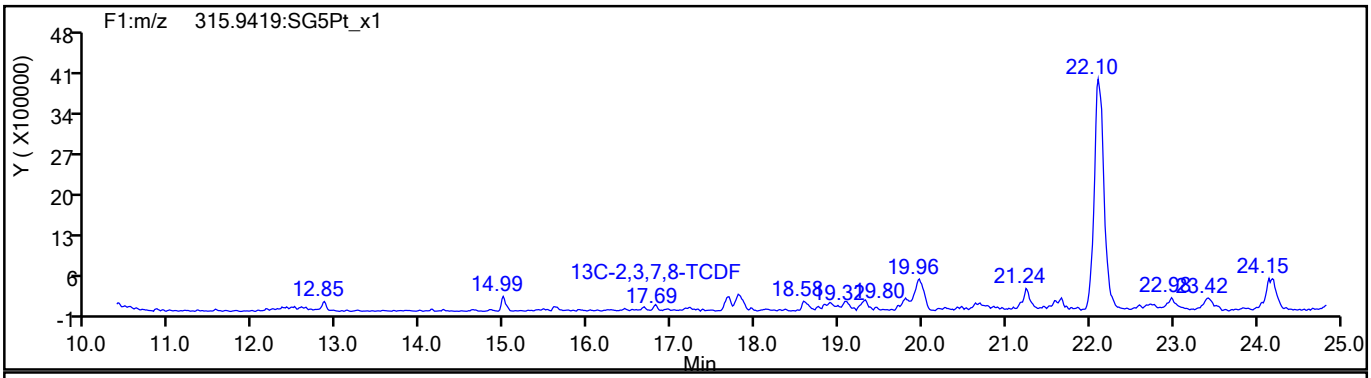

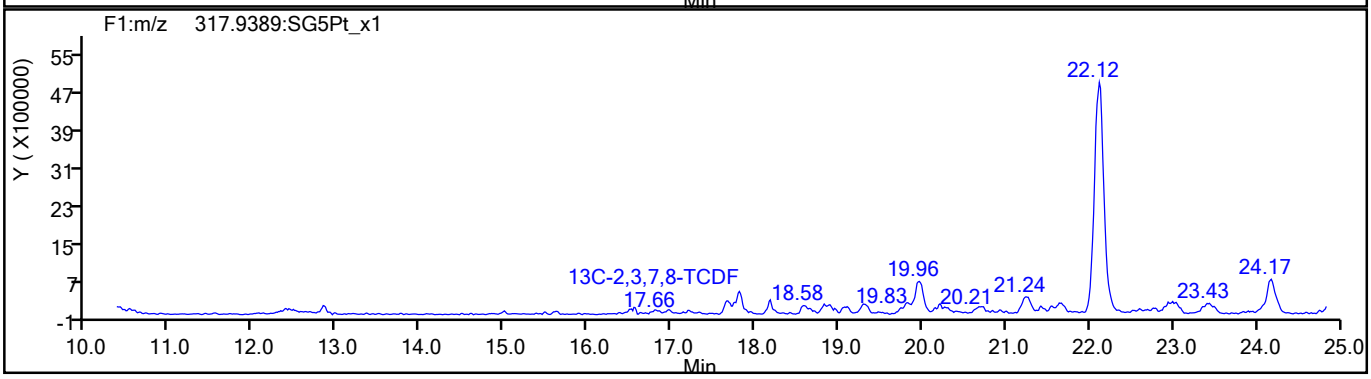

786729

Report Date: 25-Aug-2021 13:23:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d		
Injection Date:	25-Aug-2021 11:28:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

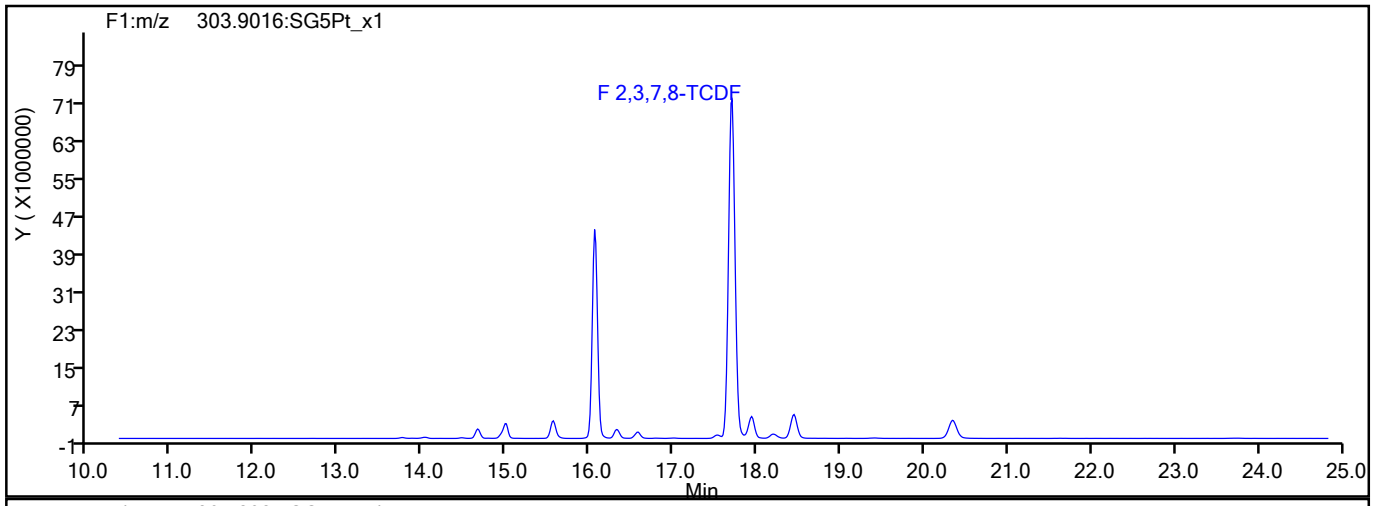

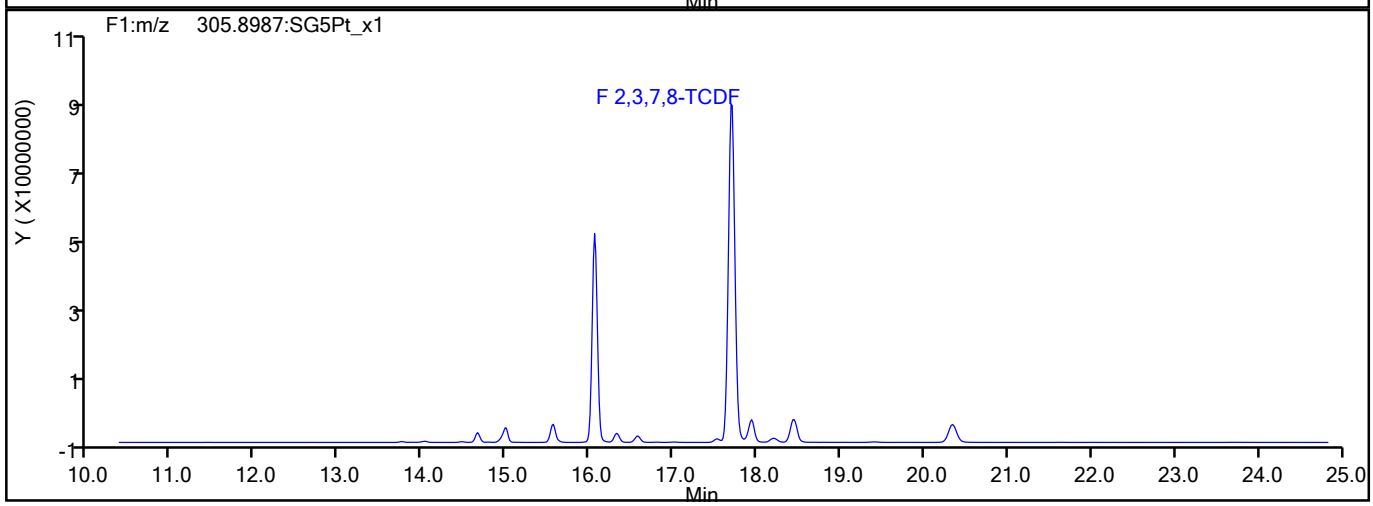

TCDF Interference Mass

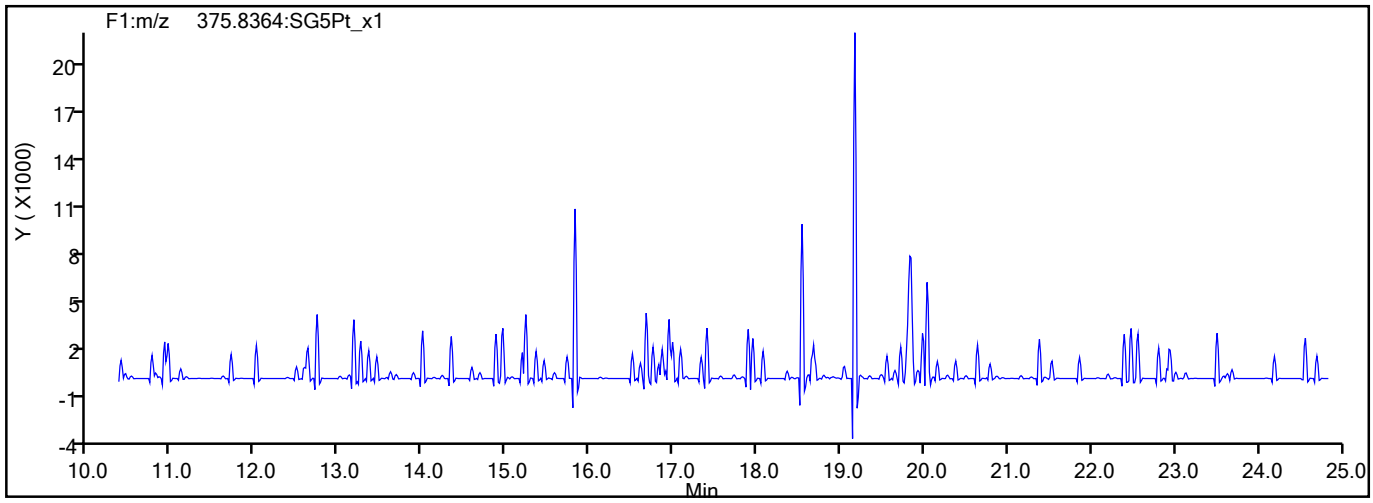

786730

Report Date: 25-Aug-2021 13:23:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d		
Injection Date:	25-Aug-2021 11:28:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

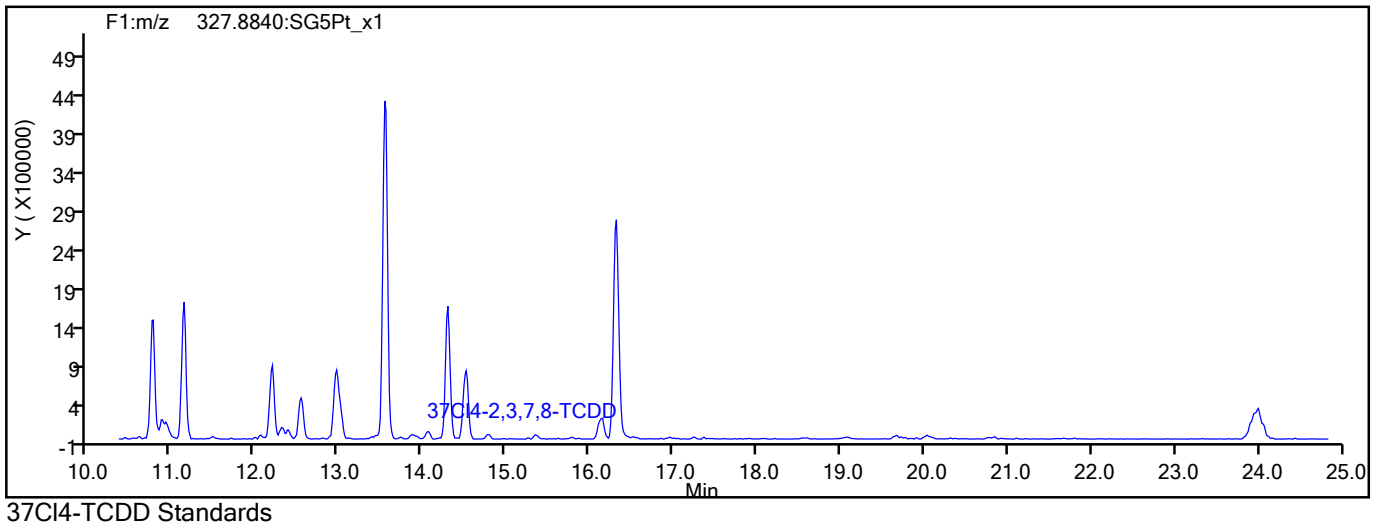

37Cl4-TCDD Standards

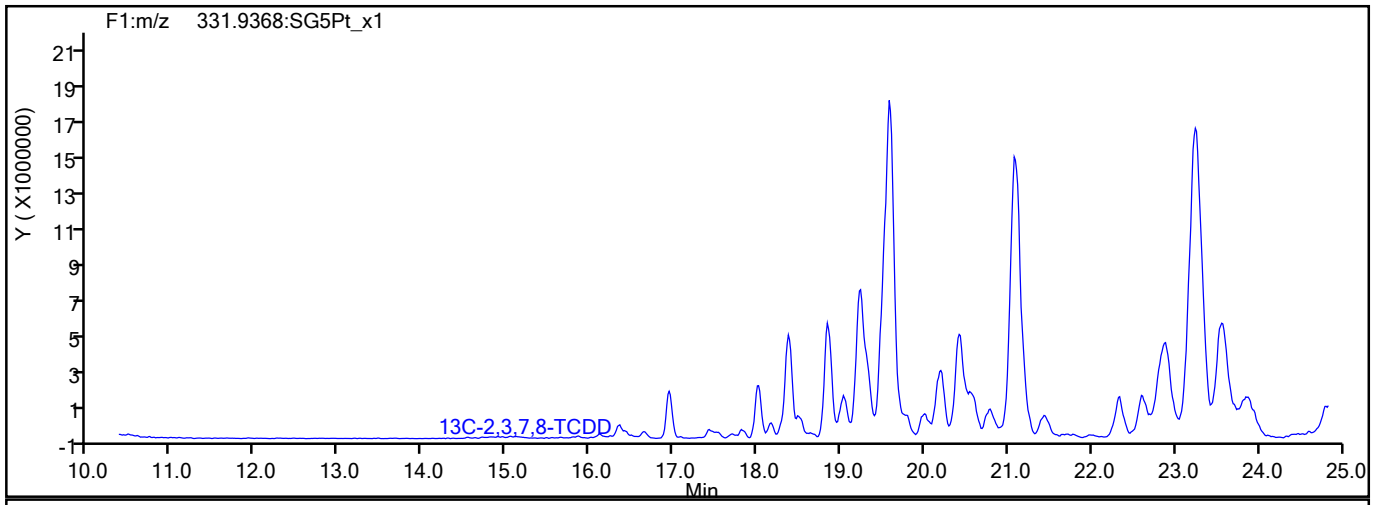

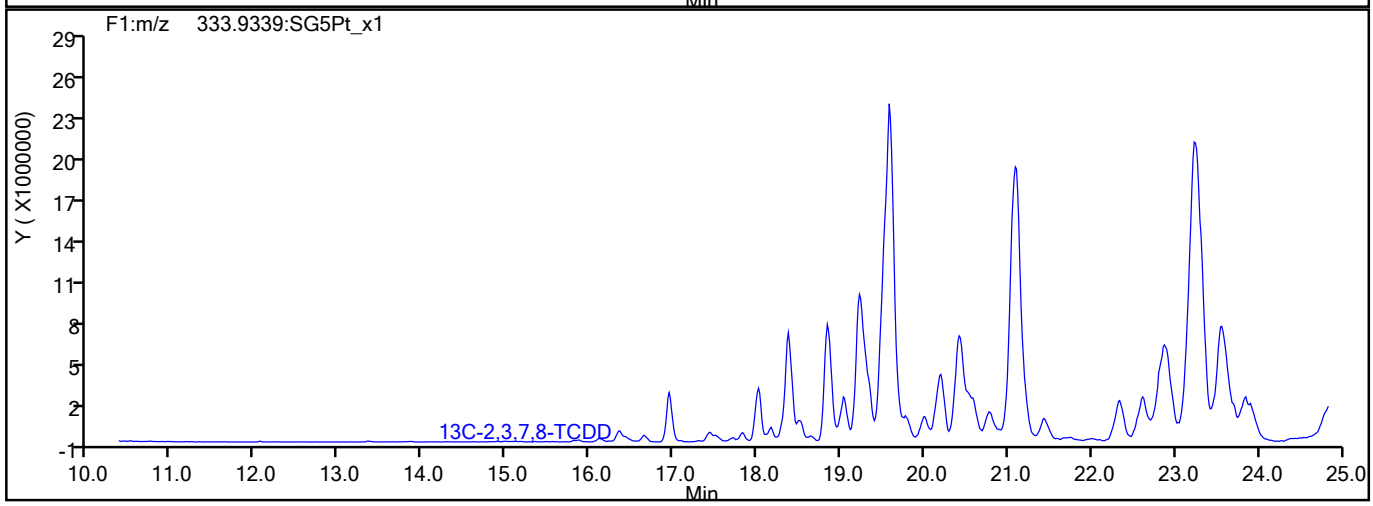

786731

Report Date: 25-Aug-2021 13:23:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d		
Injection Date:	25-Aug-2021 11:28:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

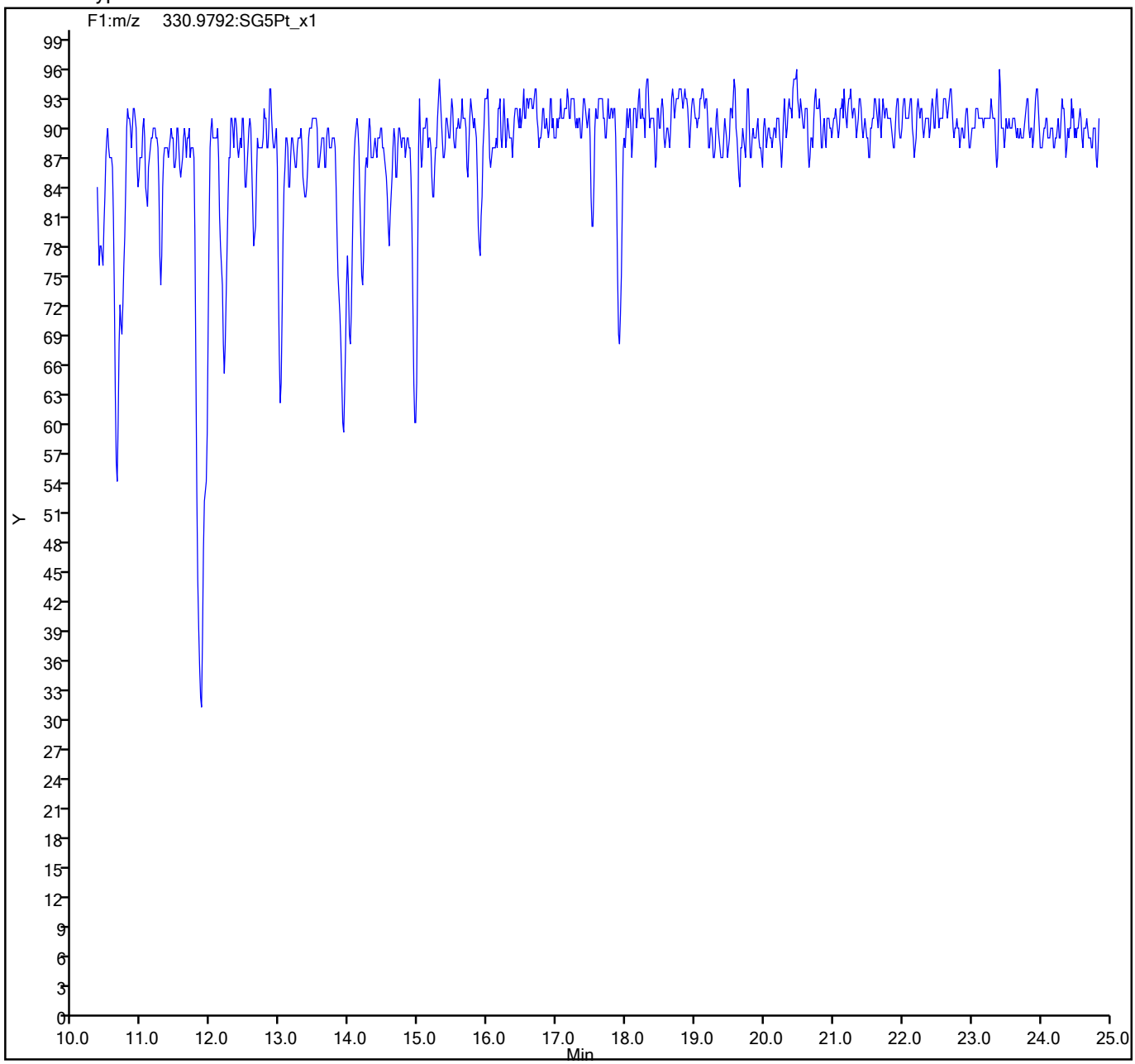

786732

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76769-A-27-B MS
Matrix: Sediment
Lab File ID: 17au21dfs1_41.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.97(g)
Date Analyzed: 08/18/2021 21:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2320		2.6	2.6
40321-76-4	1,2,3,7,8-PeCDD	169		6.6	0.89
57117-41-6	1,2,3,7,8-PeCDF	478		6.6	1.9
57117-31-4	2,3,4,7,8-PeCDF	321		6.6	2.2
39227-28-6	1,2,3,4,7,8-HxCDD	128		6.6	0.81
57653-85-7	1,2,3,6,7,8-HxCDD	154		6.6	0.89
19408-74-3	1,2,3,7,8,9-HxCDD	150		6.6	0.79
70648-26-9	1,2,3,4,7,8-HxCDF	639		6.6	4.4
57117-44-9	1,2,3,6,7,8-HxCDF	277		6.6	4.5
72918-21-9	1,2,3,7,8,9-HxCDF	158		6.6	4.1
60851-34-5	2,3,4,6,7,8-HxCDF	172		6.6	4.1
35822-46-9	1,2,3,4,6,7,8-HpCDD	796		6.6	2.7
67562-39-4	1,2,3,4,6,7,8-HpCDF	291		6.6	1.1
55673-89-7	1,2,3,4,7,8,9-HpCDF	179		6.6	1.1
3268-87-9	OCDD	12800		13	8.1
39001-02-0	OCDF	415		13	0.38
41903-57-5	Total TCDD	2530		2.6	2.6
30402-14-3	Total TCDF	14100		12	12
36088-22-9	Total PeCDD	172		6.6	0.89
30402-15-4	Total PeCDF	1040		6.6	2.0
34465-46-8	Total HxCDD	469		6.6	0.83
55684-94-1	Total HxCDF	1320		6.6	4.2
37871-00-4	Total HpCDD	1620		6.6	2.7
38998-75-3	Total HpCDF	502		6.6	1.1

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76769-A-27-B MS
Matrix: Sediment
Lab File ID: 17au21dfs1_41.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.97(g)
Date Analyzed: 08/18/2021 21:12
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	53		25-164
89059-46-1	13C-2,3,7,8-TCDF	56		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	51		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	53		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	53		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	65		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	58		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	57		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	61		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	65		26-138
114423-97-1	13C-OCDD	63		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	69		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d
Lims ID: 320-76769-A-27-B MS
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MS
Inject. Date: 18-Aug-2021 21:12:00 ALS Bottle#: 0 Worklist Smp#: 38
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-B MS
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:24:31 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: dadunj Date: 20-Aug-2021 09:24:31

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.435	1285392	0.85	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.462	976264	0.79	1.3459	56.4	56.4	0.2710	0.2710	56.43	
2,3,7,8-TCDF	20.497	33551603	0.81	1.0802	3181.6	3181.6	4.717	4.717	31816	E
A Non-2,3,7,8-sub-TCDF	19.878	22628741	0.80	1.0802	2145.8	2145.8	4.717	1275.1	0.00	
S Total TCDF					5327.4	5327.4	4.717	4.717		
D 13C-2,3,7,8-TCDD	21.813	639817	0.77	0.9317	53.4	53.4	0.3224	0.3224	53.43	
2,3,7,8-TCDD	21.839	6037306	0.79	1.0753	877.5	877.5	0.9666	0.9666	8775	E
$ 37Cl4-2,3,7,8-TCDD	21.839	356637		1.0083	27.5	27.5	0.3717	0.3717	68.79	
A Non-2,3,7,8-sub-TCDD	20.707	548533	0.78	1.0753	79.7	79.7	0.9666	69.6	0.00	
S Total TCDD					957.2	957.2	0.9666	0.9666		
D 13C-1,2,3,7,8-PeCDF	27.298	772147	1.56	1.1405	52.7	52.7	0.1152	0.1152	52.67	
1,2,3,7,8-PeCDF	27.306	1475050	1.61	1.0543	181.2	181.2	0.7104	0.7104	362	M
D 13C-2,3,4,7,8-PeCDF	28.805	762679	1.59	1.1253	52.7	52.7	0.1168	0.1168	52.73	
2,3,4,7,8-PeCDF	28.822	934572	1.61	1.0079	121.6	121.6	0.8150	0.8150	243	
A F1 PeCDFs	24.648	4913	1.55	1.0311	0.6798	0.6209	0.0133	0.6209	0.00	RQM
A Non-2,3,7,8-sub-PeCDF	28.125	720923	1.60	1.0311	91.1	91.1	0.7599	35.8	0.00	Ma
S Total PeCDF					394.6	394.5	0.7627	0.7627		RQ
D 13C-1,2,3,7,8-PeCDD	29.614	467497	1.65	0.7165	50.8	50.8	0.0937	0.0937	50.76	
1,2,3,7,8-PeCDD	29.639	312533	1.57	1.0465	63.9	63.9	0.3375	0.3375	128	
A Non-2,3,7,8-sub-PeCDD	28.489	6020	1.55	1.0465	15.5	1.230	0.3375	0.6721	0.00	RQ
S Total PeCDD					79.4	65.1	0.3375	0.3375		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.939	670794	0.54	0.9648	65.1	65.1	0.1813	0.1813	65.14	
1,2,3,4,7,8-HxCDF	34.947	1865218	1.33	1.1474	242.3	242.3	1.661	1.661	485	
D 13C-1,2,3,6,7,8-HxCDF	35.099	667407	0.53	1.0708	58.4	58.4	0.1634	0.1634	58.40	
1,2,3,6,7,8-HxCDF	35.107	853539	1.28	1.2178	105.0	105.0	1.692	1.692	210	
D 13C-2,3,4,6,7,8-HxCDF	35.916	629478	0.53	1.0413	56.6	56.6	0.1680	0.1680	56.64	
2,3,4,6,7,8-HxCDF	35.932	498575	1.34	1.2145	65.2	65.2	1.540	1.540	130	M
D 13C-1,2,3,7,8,9-HxCDF	36.808	551884	0.53	0.9731	53.1	53.1	0.1798	0.1798	53.14	
1,2,3,7,8,9-HxCDF	36.825	409434	1.27	1.2401	59.8	59.8	1.544	1.544	120	M
A Non-2,3,7,8-sub-HxCDF	35.028	203138	1.24	1.2049	27.0	26.8	1.606	11.7	0.00	RQMa
S Total HxCDF					499.4	499.2	1.609	1.609		RQ

786735

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.606	1067227	1.28	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.126	471918	1.23	0.7587	58.3	58.3	0.1549	0.1549	58.28	
1,2,3,4,7,8-HxCDD	36.143	243617	1.23	1.0608	48.7	48.7	0.3088	0.3088	97.33	
D 13C-1,2,3,6,7,8-HxCDD	36.244	509905	1.24	0.8593	55.6	55.6	0.1368	0.1368	55.60	
1,2,3,6,7,8-HxCDD	36.253	294915	1.25	0.9933	58.2	58.2	0.3385	0.3385	116	
1,2,3,7,8,9-HxCDD	36.623	309232	1.25	1.1094	56.8	56.8	0.2991	0.2991	114	
A Non-2,3,7,8-sub-HxCDD	35.394	72457	1.26	1.0545	14.0	14.0	0.3147	7.460	0.00	
S Total HxCDD					177.7	177.7	0.3154	0.3154		
D 13C-1,2,3,4,6,7,8-HpCDF	38.630	471892	0.45	0.7359	60.1	60.1	0.2683	0.2683	60.08	
1,2,3,4,6,7,8-HpCDF	38.638	750577	1.07	1.4421	110.3	110.3	0.4079	0.4079	221	
D 13C-1,2,3,4,7,8,9-HpCDF	39.876	472762	0.44	0.6854	64.6	64.6	0.2881	0.2881	64.63	
1,2,3,4,7,8,9-HpCDF	39.893	420749	1.05	1.3092	68.0	68.0	0.4040	0.4040	136	
A Non-2,3,7,8-sub-HpCDF	39.258	77270	1.07	1.3756	11.9	11.9	0.4049	11.9	0.00	
S Total HpCDF					190.2	190.2	0.4059	0.4059		
D 13C-1,2,3,4,6,7,8-HpCDD	39.573	435689	1.07	0.6745	60.5	60.5	0.2274	0.2274	60.52	
1,2,3,4,6,7,8-HpCDD	39.581	1380590	1.03	1.0503	301.7	301.7	1.022	1.022	603	
A Non-2,3,7,8-sub-HpCDD	39.258	1426012	1.03	1.0503	311.6	311.6	1.022	311.6	0.00	
S Total HpCDD					613.3	613.3	1.022	1.022		
D 13C-OCDD	42.079	732173	0.92	0.5446	126.0	126.0	0.1547	0.1547	62.98	
OCDF	42.172	758219	0.96	1.3168	157.3	157.3	0.1449	0.1449	157	
OCDD	42.079	18820892	0.90	1.0620	4841.0	4841.0	3.087	3.087	4841	E

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 20-Aug-2021 09:24:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d
Lims ID: 320-76769-A-27-B MS
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MS
Inject. Date: 18-Aug-2021 21:12:00 ALS Bottle#: 0 Worklist Smp#: 38
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-B MS
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:24:31 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: dadunj Date: 20-Aug-2021 09:24:31

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.435	21.427	0		589499	84644	122	305	694		
333.9338	21.426	21.427	0		695893	94147	93	232	1012	0.85(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.462	20.401	4	0.955	430998	60116	133	332	452		
317.9389	20.479	20.401	5	0.955	545266	73623	128	320	575	0.79(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.497	20.436	4	1.002	15048221	2062257	1519	3797	1358		
305.8987	20.497	20.436	4	1.002	18503382	2540474	1207	3017	2105	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.520	19.878	-141	0.856	53528	9688	1519	3797	6		
305.8987	17.511	19.878	-142	0.856	71928	13352	1207	3017	11	0.74(0.65-0.89)	
303.9016	17.958	19.878	-115	0.878	182738	29010	1519	3797	19		
305.8987	17.958	19.878	-115	0.878	242894	37627	1207	3017	31	0.75(0.65-0.89)	
303.9016	18.458	19.878	-85	0.902	323635	41525	1519	3797	27		
305.8987	18.449	19.878	-86	0.902	400751	49949	1207	3017	41	0.81(0.65-0.89)	
303.9016	18.879	19.878	-60	0.923	357718	41984	1519	3797	28		
305.8987	18.879	19.878	-60	0.923	450560	52354	1207	3017	43	0.79(0.65-0.89)	
303.9016	19.258	19.878	-37	0.941	781177	109333	1519	3797	72		
305.8987	19.258	19.878	-37	0.941	972560	135413	1207	3017	112	0.80(0.65-0.89)	
303.9016	19.765	19.878	-7	0.966	5989809	857561	1519	3797	565		
305.8987	19.765	19.878	-7	0.966	7456963	1068054	1207	3017	885	0.80(0.65-0.89)	
303.9016	20.178	19.878	18	0.986	170547	22482	1519	3797	15		
305.8987	20.161	19.878	17	0.985	207259	25780	1207	3017	21	0.82(0.65-0.89)	
303.9016	21.263	19.878	83	1.039	1018982	131736	1519	3797	87		
305.8987	21.271	19.878	83	1.040	1272546	166677	1207	3017	138	0.80(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.710	19.878	110	1.061	262140	33384	1519	3797	22		
305.8987	21.693	19.878	109	1.060	334603	40891	1207	3017	34	0.78(0.65-0.89)	
303.9016	23.662	19.878	227	1.156	935181	165577	1519	3797	109		
305.8987	23.662	19.878	227	1.156	1143222	205259	1207	3017	170	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.813	21.743	4	1.018	279288	34597	122	305	284		
333.9338	21.822	21.743	5	1.018	360529	46701	93	232	502	0.77(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	21.839	21.777	4	1.001	2660037	338883	166	415	2041		
321.8936	21.839	21.777	4	1.001	3377269	432824	172	430	2516	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.839	21.849	-1	1.019	356637	46414	268	670	173		
A Non-2,3,7,8-sub-TCDD											
319.8965	19.800	20.707	-54	0.908	7362	1093	166	415	7		
321.8936	19.808	20.707	-54	0.908	10635	1252	172	430	7	0.69(0.65-0.89)	
319.8965	21.641	20.707	56	0.992	22592	4310	166	415	26		
321.8936	21.633	20.707	55	0.992	29102	5169	172	430	30	0.78(0.65-0.89)	
319.8965	22.519	20.707	108	1.032	210357	27025	166	415	163		
321.8936	22.519	20.707	108	1.032	268485	32867	172	430	191	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.298	27.288	1	1.274	470286	69643	53	132	1314		
353.8970	27.298	27.288	1	1.274	301861	44790	41	102	1092	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.306	27.313	0	1.000	910910	136985	198	495	692		M
341.8567	27.306	27.313	0	1.000	564140	83914	145	362	579	1.61(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.805	28.795	1	1.344	468031	64918	53	132	1225		
353.8970	28.797	28.795	0	1.343	294648	39411	41	102	961	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.822	28.820	0	1.001	576363	80767	198	495	408		
341.8567	28.822	28.820	0	1.001	358209	50785	145	362	350	1.61(1.32-1.78)	
A F1 PeCDFs											RQM
339.8597	24.092	24.648	-33	0.883	3452	687	1	2	687		M
	Empc Correction				2986	567	1	2	567		
341.8567	24.084	24.648	-34	0.882	1927	366	5	12	73	1.79(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDF											Ma
339.8597	25.833	28.125	-137	0.946	171191	28472	198	495	144		
341.8567	25.833	28.125	-137	0.946	111985	17746	145	362	122	1.53(1.32-1.78)	
339.8597	26.750	28.125	-82	0.980	17349	1992	198	495	10		
341.8567	26.750	28.125	-82	0.980	10202	1139	145	362	8	1.70(1.32-1.78)	
339.8597	27.197	28.125	-56	0.996	22890	5563	198	495	28		M
341.8567	27.197	28.125	-56	0.996	13720	3681	145	362	25	1.67(1.32-1.78)	
339.8597	27.896	28.125	-14	1.022	127078	19234	198	495	97		
341.8567	27.887	28.125	-14	1.022	77726	12054	145	362	83	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	29.150	28.125	61	1.068	85329	10684	198	495	54		
341.8567	29.159	28.125	62	1.068	51450	6367	145	362	44	1.66(1.32-1.78)	
339.8597	30.877	28.125	165	1.131	19734	2880	198	495	15		
341.8567	30.868	28.125	164	1.131	12269	1802	145	362	12	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.614	29.612	0	1.382	291255	38161	30	75	1272		
369.8919	29.588	29.612	-1	1.380	176242	22707	18	45	1262	1.65(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.639	29.637	0	1.001	191116	24756	33	82	750		
357.8516	29.639	29.637	0	1.001	121417	16038	53	132	303	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.094	28.489	-143	0.881	1661	265	33	82	8		
357.8516	26.153	28.489	-140	0.883	66956	11318	53	132	214	0.02(1.32-1.78)	
	Empc Correction				1071	170	53	132	3		
355.8546	27.441	28.489	-63	0.927	1999	365	33	82	11		
357.8516	27.559	28.489	-56	0.931	5138	697	53	132	13	0.39(1.32-1.78)	
	Empc Correction				1289	235	53	132	4		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.939	34.942	0	0.954	235893	46819	48	120	975		
385.8610	34.939	34.942	0	0.954	434901	79872	114	285	701	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.947	34.959	-1	1.000	1063472	197464	583	1457	339		
375.8178	34.947	34.959	-1	1.000	801746	152253	383	957	398	1.33(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.099	35.111	-1	0.959	231350	39560	48	120	824		
385.8610	35.090	35.111	-1	0.959	436057	77662	114	285	681	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.107	35.119	-1	1.000	479278	86700	583	1457	149		
375.8178	35.107	35.119	-1	1.000	374261	67216	383	957	175	1.28(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.916	35.919	0	0.981	219193	47484	48	120	989		
385.8610	35.916	35.919	0	0.981	410285	81680	114	285	716	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.932	35.936	0	1.000	285516	59341	583	1457	102		M
375.8178	35.924	35.936	-1	1.000	213059	45349	383	957	118	1.34(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.808	36.811	0	1.006	190960	44555	48	120	928		
385.8610	36.808	36.811	0	1.006	360924	81593	114	285	716	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.825	36.828	0	1.000	229450	52916	583	1457	91		M
375.8178	36.825	36.828	0	1.000	179984	42678	383	957	111	1.27(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.448	35.028	-95	0.957	44104	7210	583	1457	12		
375.8178	33.457	35.028	-94	0.958	32016	5402	383	957	14	1.38(1.05-1.43)	
373.8208	34.316	35.028	-43	0.982	21230	3853	583	1457	7		M
375.8178	34.326	35.028	-42	0.000			383	957		0.00(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	35.806	35.028	47	1.025	11258	3199	583	1457	5		M
	Empc Correction				9285	2409	583	1457	4		
375.8178	35.798	35.028	46	1.025	7488	1943	383	957	5	1.50(1.05-1.43)	
373.8208	36.892	35.028	112	1.056	50417	11876	583	1457	20		M
375.8178	36.909	35.028	113	1.056	38598	9430	383	957	25	1.31(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.606	36.609	0		599751	129821	57	142	2278		
403.8529	36.606	36.609	0		467476	101655	52	130	1955	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.126	36.129	0	0.987	260463	60206	57	142	1056		
403.8529	36.118	36.129	-1	0.987	211455	46657	52	130	897	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.143	36.146	0	1.000	134587	31552	54	135	584		
391.8127	36.143	36.146	0	1.000	109030	24358	86	215	283	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.244	36.247	0	0.990	282293	56803	57	142	997		
403.8529	36.244	36.247	0	0.990	227612	47299	52	130	910	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.253	36.264	-1	1.000	163951	32884	54	135	609		
391.8127	36.253	36.264	-1	1.000	130964	26929	86	215	313	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.623	36.626	0	1.014	171782	38447	54	135	712		
391.8127	36.623	36.626	0	1.014	137450	30169	86	215	351	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.257	35.394	-68	0.945	18394	3281	54	135	61		
391.8127	34.249	35.394	-69	0.945	15444	2664	86	215	31	1.19(1.05-1.43)	
389.8158	35.369	35.394	-2	0.976	21990	3803	54	135	70		
391.8127	35.369	35.394	-2	0.976	16629	3184	86	215	37	1.32(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.630	38.626	0	1.055	146475	37313	100	250	373		
419.8220	38.630	38.626	0	1.055	325417	72692	83	207	876	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.638	38.630	0	1.000	388420	92978	135	337	689		
409.7788	38.638	38.630	0	1.000	362157	89678	124	310	723	1.07(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.876	39.880	0	1.089	145347	37888	100	250	379		
419.8220	39.876	39.880	0	1.089	327415	84455	83	207	1018	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.893	39.885	0	1.000	215104	55415	135	337	410		
409.7788	39.884	39.885	0	1.000	205645	53331	124	310	430	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.000	39.258	-15	1.010	39908	10633	135	337	79		
409.7788	39.000	39.258	-15	1.010	37362	9627	124	310	78	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.573	39.569	0	1.081	224868	58400	77	192	758		
437.8140	39.573	39.569	0	1.081	210821	56794	65	162	874	1.07(0.88-1.20)	

Report Date: 20-Aug-2021 09:24:31 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.581	39.582	0	1.000	700458	188080	263	657	715		
425.7737	39.581	39.582	0	1.000	680132	184966	232	580	797	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.941	39.258	-19	0.984	723791	191876	263	657	730		
425.7737	38.941	39.258	-19	0.984	702221	184135	232	580	794	1.03(0.88-1.20)	
13C-OCDD											
469.7780	42.079	42.072	0	1.150	351421	84559	50	125	1691		
471.7750	42.079	42.072	0	1.150	380752	93694	28	70	3346	0.92(0.76-1.02)	
OCDF											
441.7428	42.172	42.165	0	1.002	371663	83035	35	87	2372		
443.7399	42.172	42.165	0	1.002	386556	85503	33	82	2591	0.96(0.76-1.02)	
OCDD											E
457.7377	42.079	42.081	0	1.000	8927540	2153810	564	1410	3819		
459.7348	42.079	42.081	0	1.000	9893352	2397239	605	1512	3962	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	976264	133739

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	976264	133739

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.520	53528	9688	71928	13352	11.9	0.74	
17.958	182738	29010	242894	37627	40.4	0.75	
18.458	323635	41525	400751	49949	68.7	0.81	
18.879	357718	41984	450560	52354	76.6	0.79	
19.258	781177	109333	972560	135413	166.3	0.80	
19.765	5989809	857561	7456963	1068054	1275.1	0.80	
20.178	170547	22482	207259	25780	35.8	0.82	
21.263	1018982	131736	1272546	166677	217.3	0.80	
21.710	262140	33384	334603	40891	56.6	0.78	
23.662	935181	165577	1143222	205259	197.1	0.82	
Signal Totals:							
	10075455	1442280	12553286	1795356			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	22628741	3237636				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2145.8 = (22628741 * 100.000) / (976264 * 1.080)

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	639817	81298

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	639817	81298

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.800	7362	1093	10635	1252	2.62	0.69	
21.641	22592	4310	29102	5169	7.51	0.78	
22.519	210357	27025	268485	32867	69.6	0.78	
Signal Totals:							
	240311	32428	308222	39288			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	548533	71716				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 79.726 = (548533 * 100.000) / (639817 * 1.075)

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	772147	114433
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	762679	104329

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	767413	109381

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.092	3452	687	1927	366	0.6798	1.79	RQM
24.092	2986	567	1927	366	0.6209		Empc Correction
Signal Totals:							
	2986	567	1927	366			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5379	1053				1.79	RQM
	4913	933					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6798 = (5379 * 100.000) / (767413 * 1.031)
Empc Amount: 0.6209 = (4913 * 100.000) / (767413 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	772147	114433
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	762679	104329

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	767413	109381

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.833	171191	28472	111985	17746	35.8	1.53	
26.750	17349	1992	10202	1139	3.48	1.70	
27.197	22890	5563	13720	3681	4.63	1.67	Ma
27.896	127078	19234	77726	12054	25.9	1.63	
29.150	85329	10684	51450	6367	17.3	1.66	
30.877	19734	2880	12269	1802	4.04	1.61	
Signal Totals:							
	443571	68825	277352	42789			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	720923	111614				1.60	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 91.112 = (720923 * 100.000) / (767413 * 1.031)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	467497	60868

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	467497	60868

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.094	1661	265	66956	11318	14.0	0.02	RQ
26.094	1661	265	1071	170	0.5584		Empc Correction
27.441	1999	365	5138	697	1.46	0.39	RQ
27.441	1999	365	1289	235	0.6721		Empc Correction
Signal Totals:							
	3660	630	2360	405			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	75754	12645				0.05	RQ
	6020	1035					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 15.484 = (75754 * 100.000) / (467497 * 1.046)
Empc Amount: 1.230 = (6020 * 100.000) / (467497 * 1.046)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	670794	126691
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	667407	117222
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	629478	129164
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	551884	126148

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	629890	124806

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.448	44104	7210	32016	5402	10.0	1.38	
34.316	21230	3853	0	0	2.80	0.00	M
35.806	11258	3199	7488	1943	2.47	1.50	RQMa
35.806	9285	2409	7488	1943	2.21		Empc Correction
36.892	50417	11876	38598	9430	11.7	1.31	Ma
Signal Totals:							
	125036	25348	78102	16775			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	205111	42913				1.63	RQMa
	203138	42123					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 27.025 = (205111 * 100.000) / (629890 * 1.205)

Empc Amount: 26.765 = (203138 * 100.000) / (629890 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	471918	106863
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	509905	104102
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	490911	105482

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.257	18394	3281	15444	2664	6.54	1.19	
35.369	21990	3803	16629	3184	7.46	1.32	
Signal Totals:							
	40384	7084	32073	5848			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	72457	12932				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.997 = (72457 * 100.000) / (490911 * 1.055)

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	471892	110005
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	472762	122343

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	472327	116174

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
39.000	39908	10633	37362	9627	11.9	1.07	
Signal Totals:							
	39908	10633	37362	9627			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	77270	20260				1.07	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 11.892 = (77270 * 100.000) / (472327 * 1.376)

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Lims ID:	320-76769-A-27-B MS		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 21:12:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	38

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	435689	115194

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	435689	115194

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.941	723791	191876	702221	184135	311.6	1.03	
Signal Totals:							
	723791	191876	702221	184135			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1426012	376011				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 311.626 = (1426012 * 100.000) / (435689 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.31
Area: 933806
Amount: 185.6977
Amount Units: pg/ul

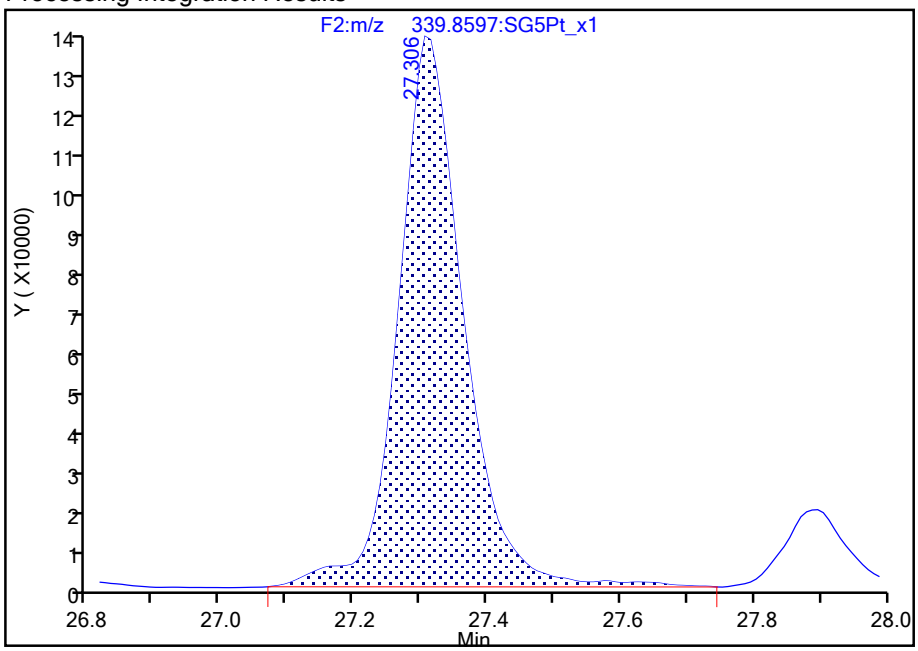

Manual Integration Results

RT: 27.31
Area: 910910
Amount: 181.1998
Amount Units: pg/ul

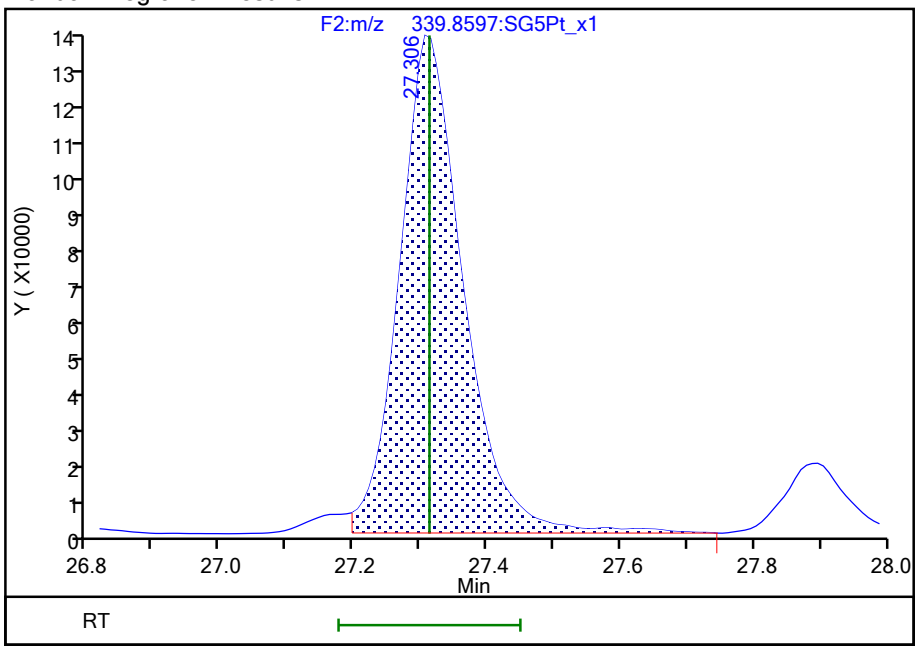

Reviewer: dadunj, 20-Aug-2021 09:21:39

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.31
Area: 577859
Amount: 185.6977
Amount Units: pg/ul

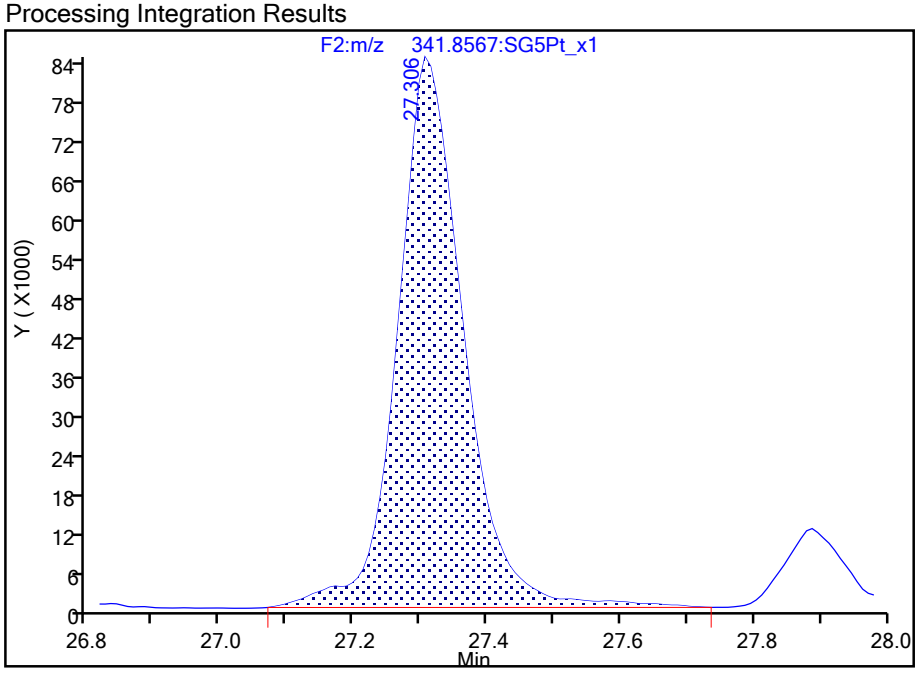

Manual Integration Results

RT: 27.31
Area: 564140
Amount: 181.1998
Amount Units: pg/ul

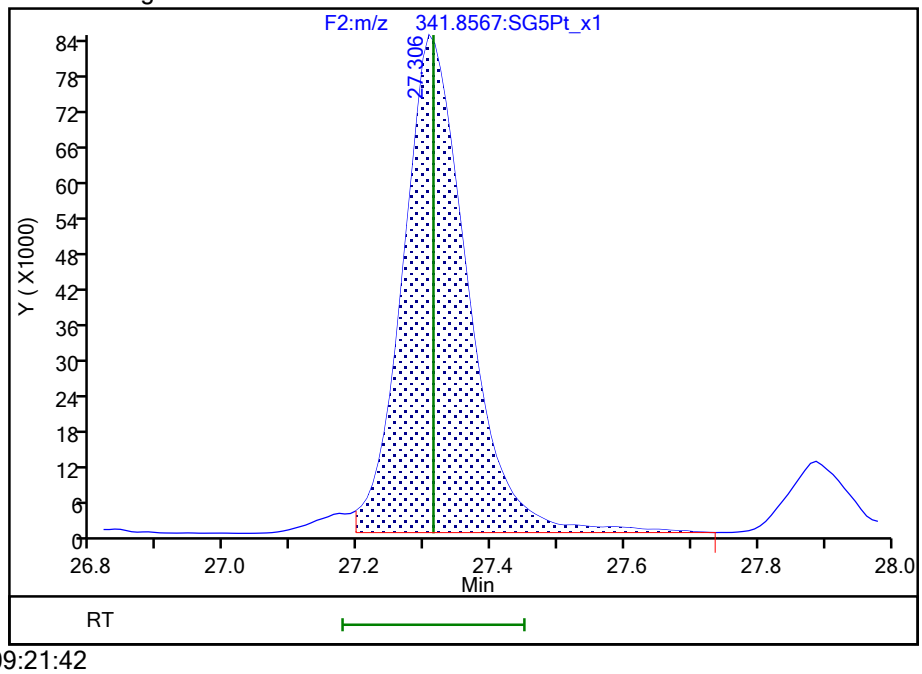

Reviewer: dadunj, 20-Aug-2021 09:21:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

F1 PeCDFs, Signal: 1, m/z: 339.8597, RT: (23.99- 25.30)

Signal: 1

Processing Integration Results

RT = 24.092 Area = 3452

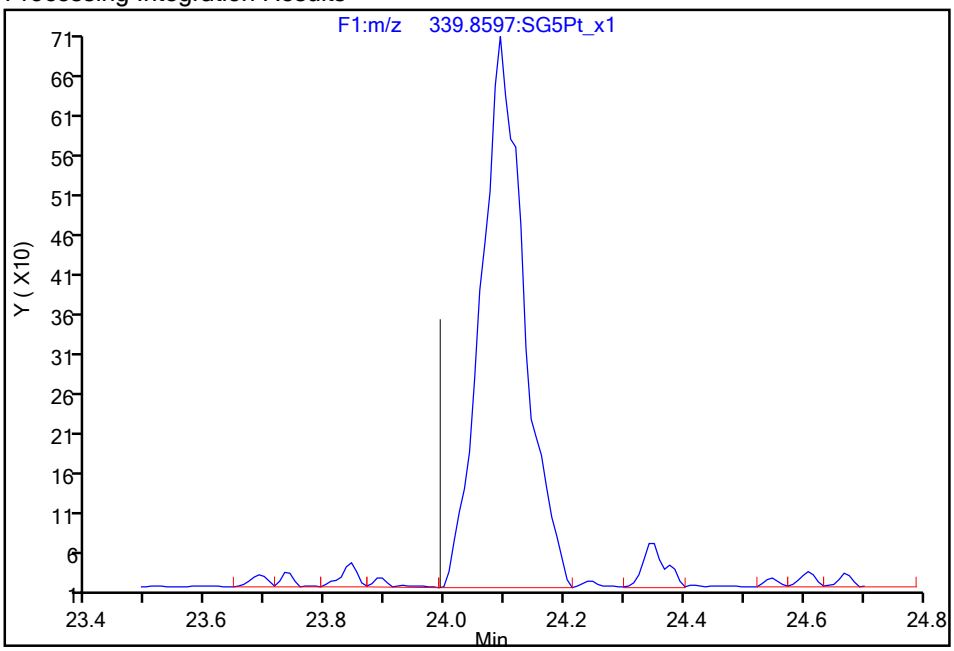

Manual Integration Results

RT = 24.092 Area = 3452

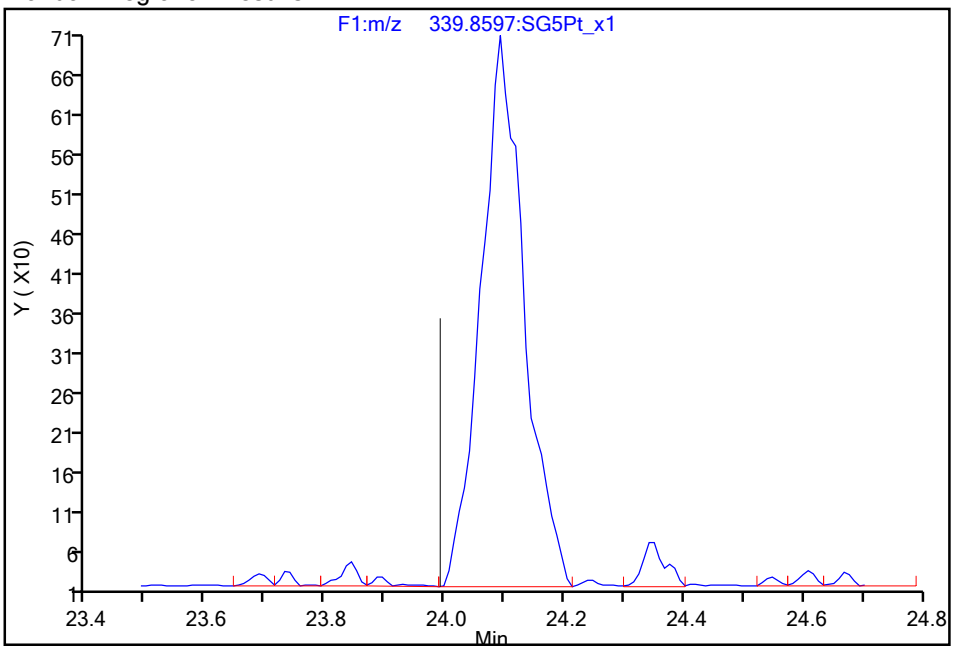

Reviewer: dadunj, 20-Aug-2021 09:21:49

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

F1 PeCDFs, Signal: 2, m/z: 341.8567, RT: (23.99- 25.30)

Signal: 2

Processing Integration Results

RT = 24.084 Area = 1787

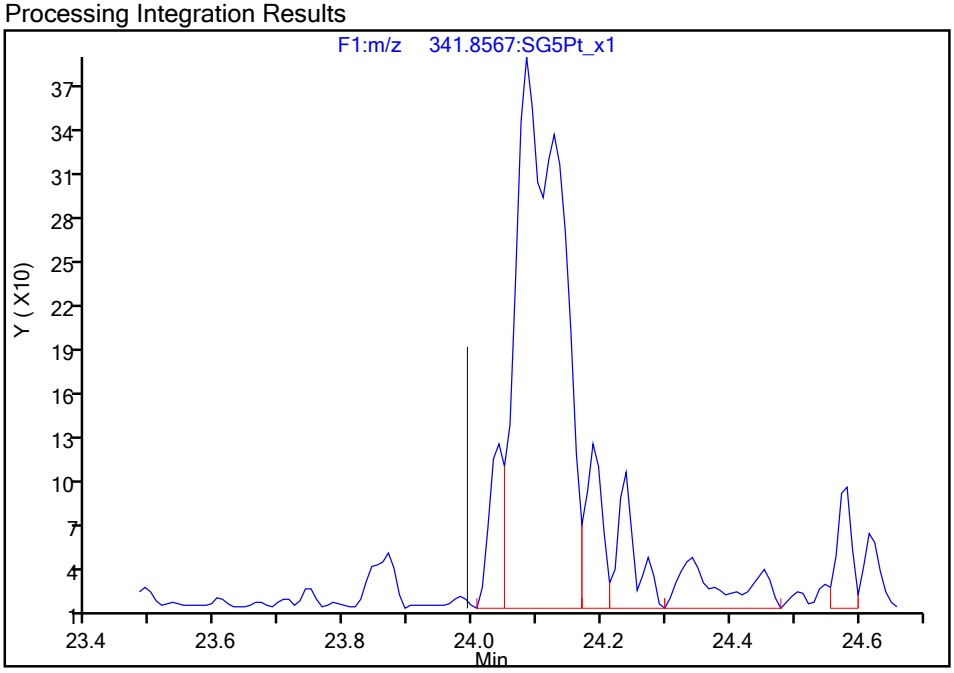

Manual Integration Results

RT = 24.084 Area = 1927 M

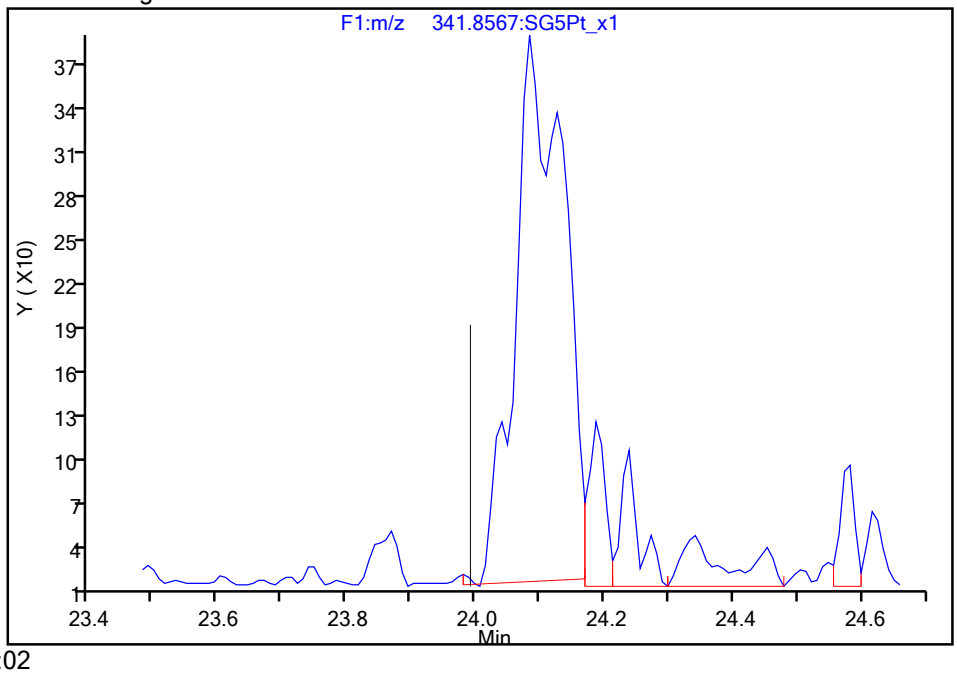

Reviewer: dadunj, 20-Aug-2021 09:22:02

Audit Action: Manually Integrated Audit Reason: Split Peak

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.38- 30.87)

Signal: 1

Not Detected

RT: 25.38- 30.87

Processing Integration Results

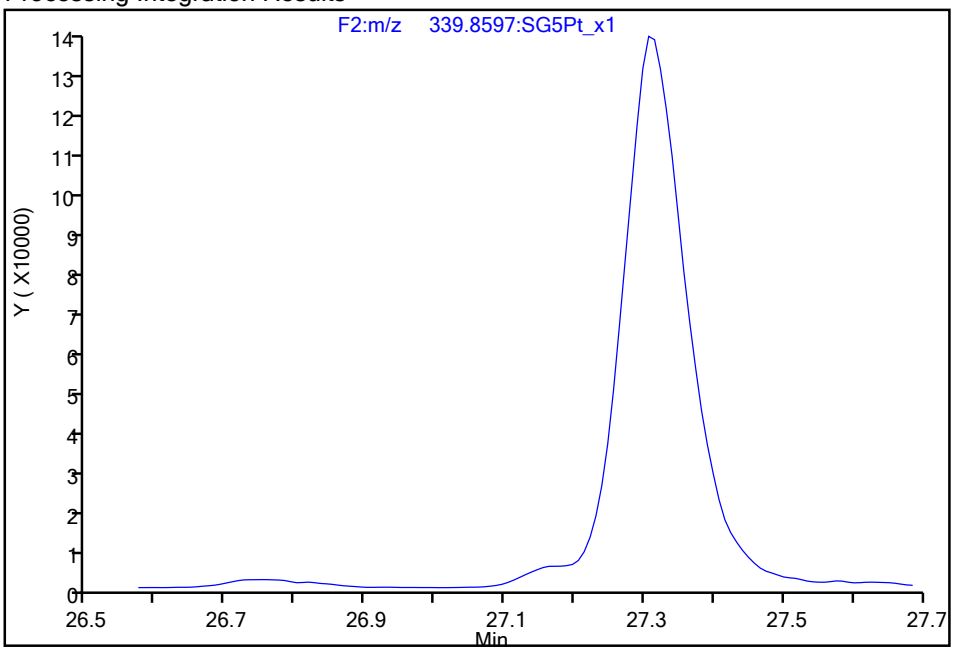

RT = 27.197 Area = 22890 M

Manual Integration Results

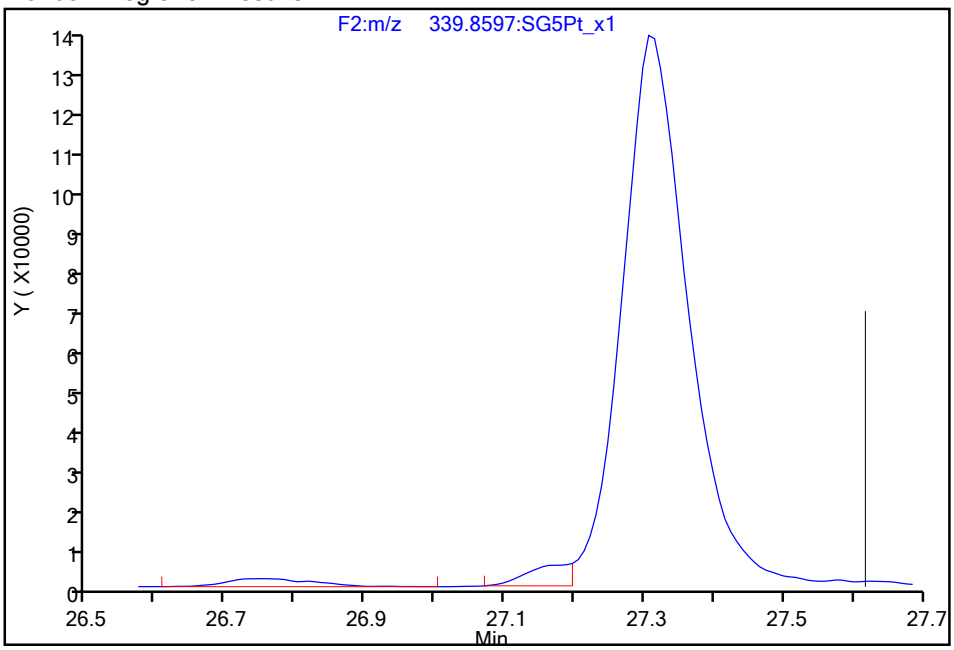

Reviewer: dadunj, 20-Aug-2021 09:22:09

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.93
Area: 296775
Amount: 65.580491
Amount Units: pg/ul

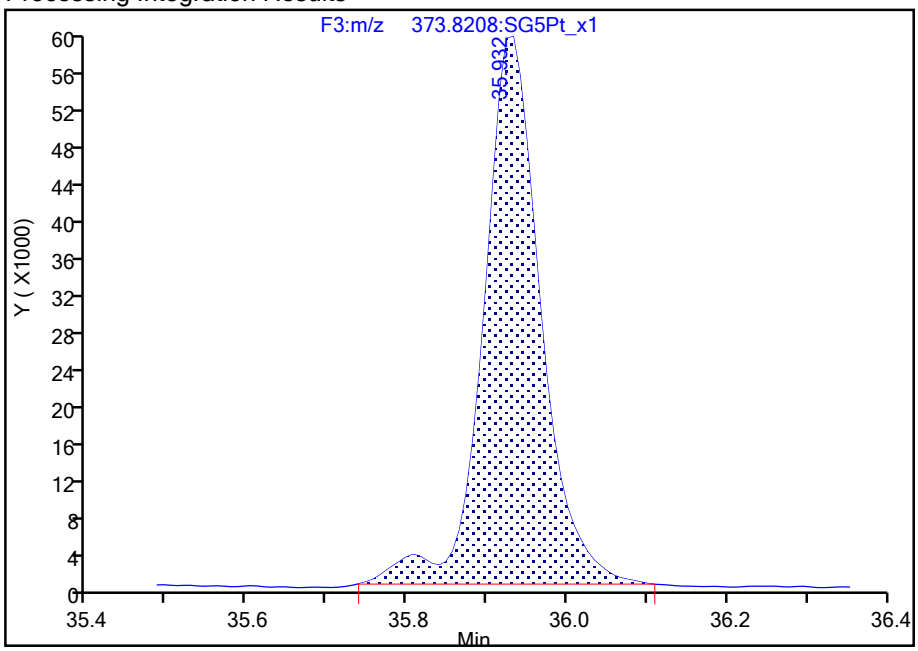

Manual Integration Results

RT: 35.93
Area: 285516
Amount: 65.217369
Amount Units: pg/ul

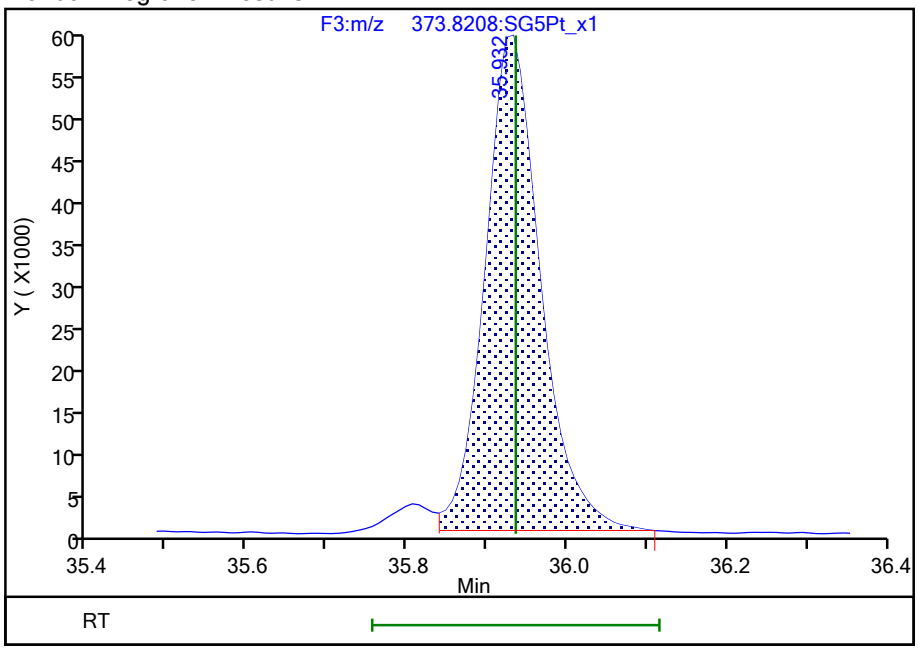

Reviewer: dadunj, 20-Aug-2021 09:22:31

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

786757

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 35.92
Area: 204576
Amount: 65.580491
Amount Units: pg/ul

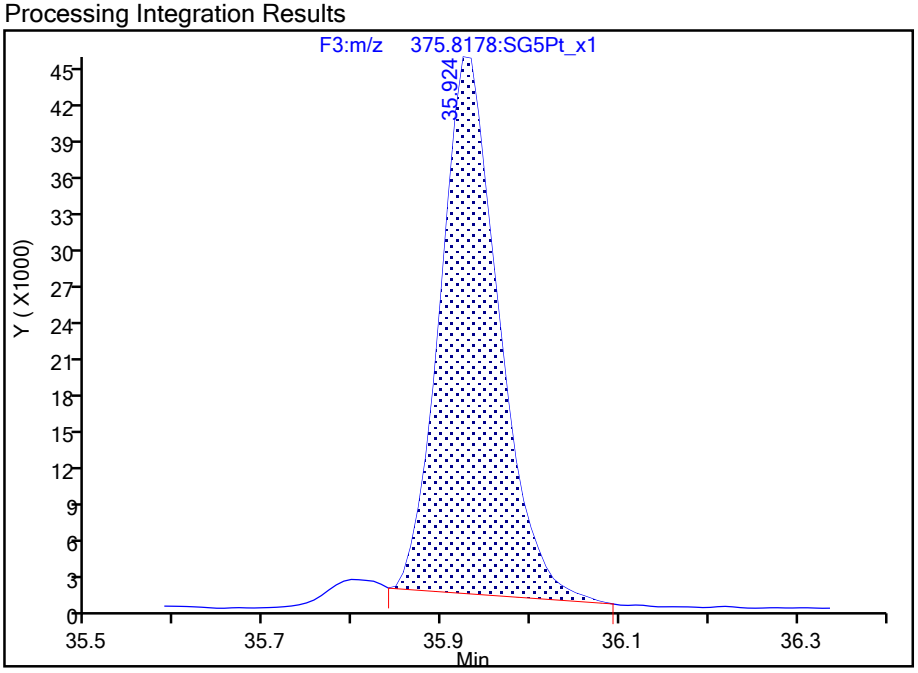

Manual Integration Results

RT: 35.92
Area: 213059
Amount: 65.217369
Amount Units: pg/ul

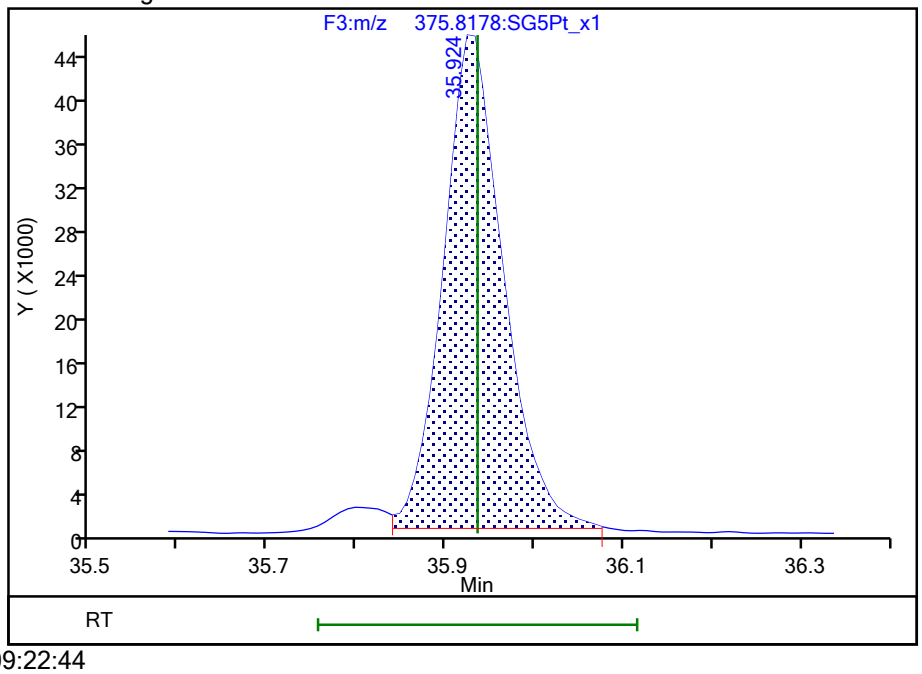

Reviewer: dadunj, 20-Aug-2021 09:22:44

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.82
Area: 279822
Amount: 72.824326
Amount Units: pg/ul

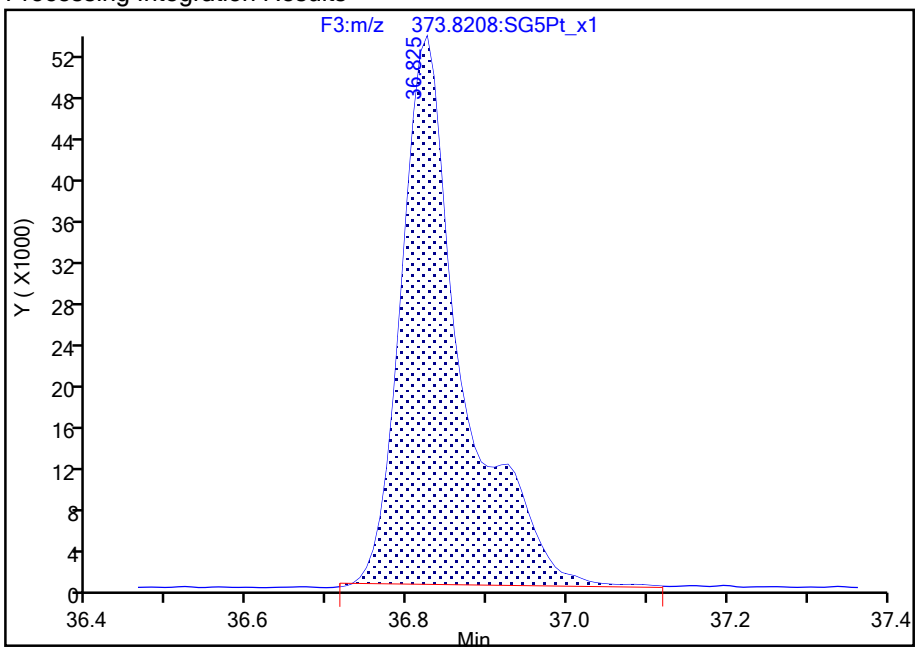

Manual Integration Results

RT: 36.82
Area: 229450
Amount: 59.823630
Amount Units: pg/ul

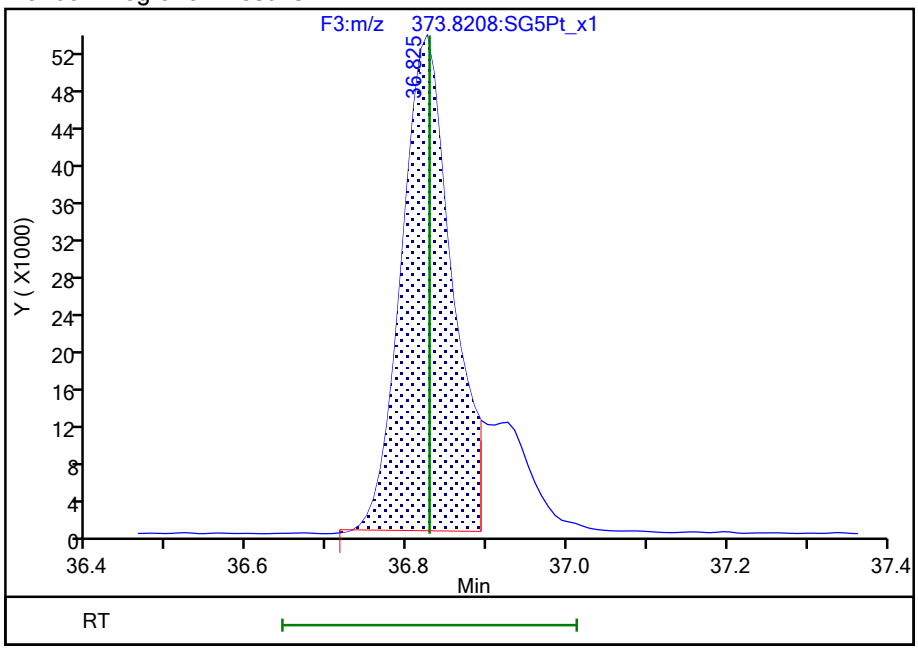

Reviewer: dadunj, 20-Aug-2021 09:23:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.82
Area: 218589
Amount: 72.824326
Amount Units: pg/ul

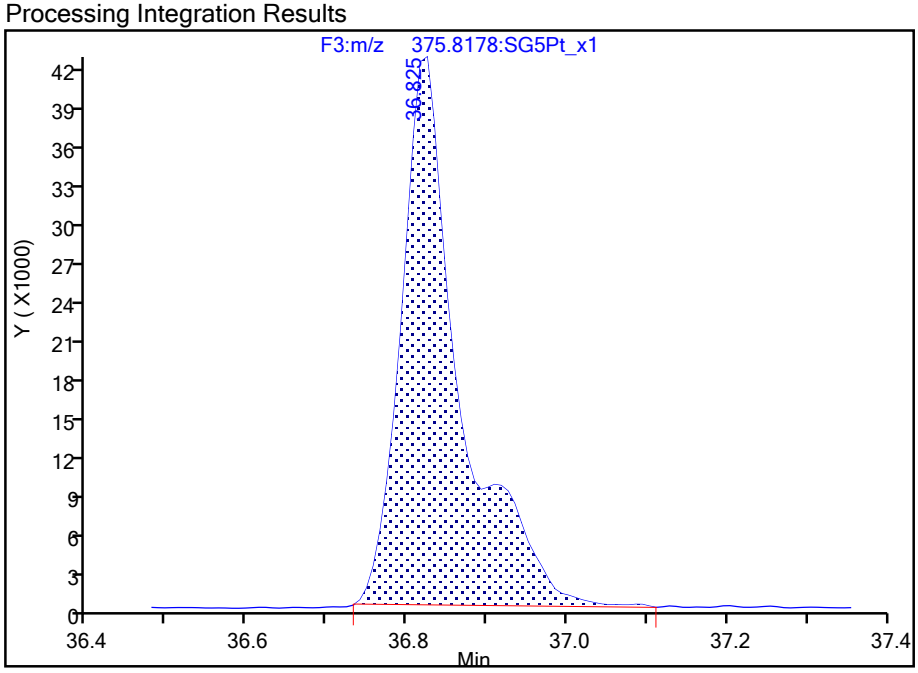

Manual Integration Results

RT: 36.82
Area: 179984
Amount: 59.823630
Amount Units: pg/ul

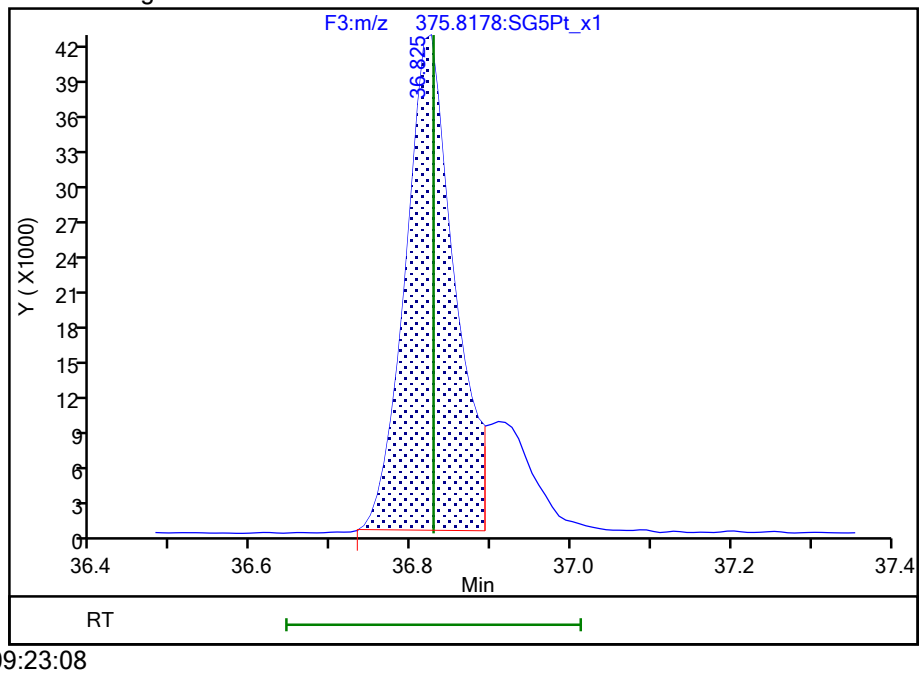

Reviewer: dadunj, 20-Aug-2021 09:23:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

786760

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.11- 36.95)

Signal: 1

Processing Integration Results

Not Detected
RT: 33.11- 36.95

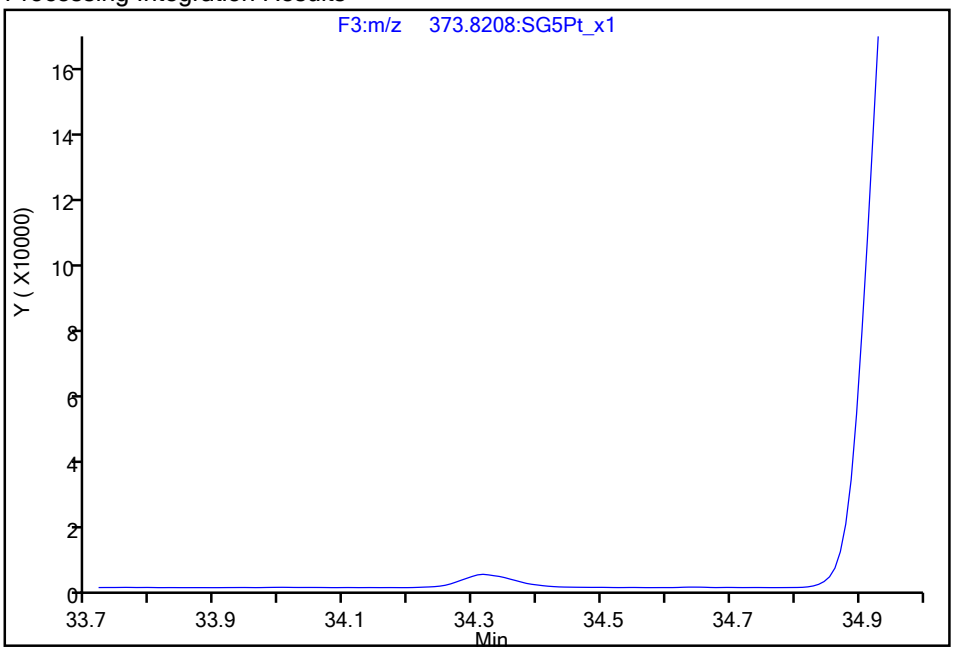

Manual Integration Results

RT = 34.316 Area = 21230 M

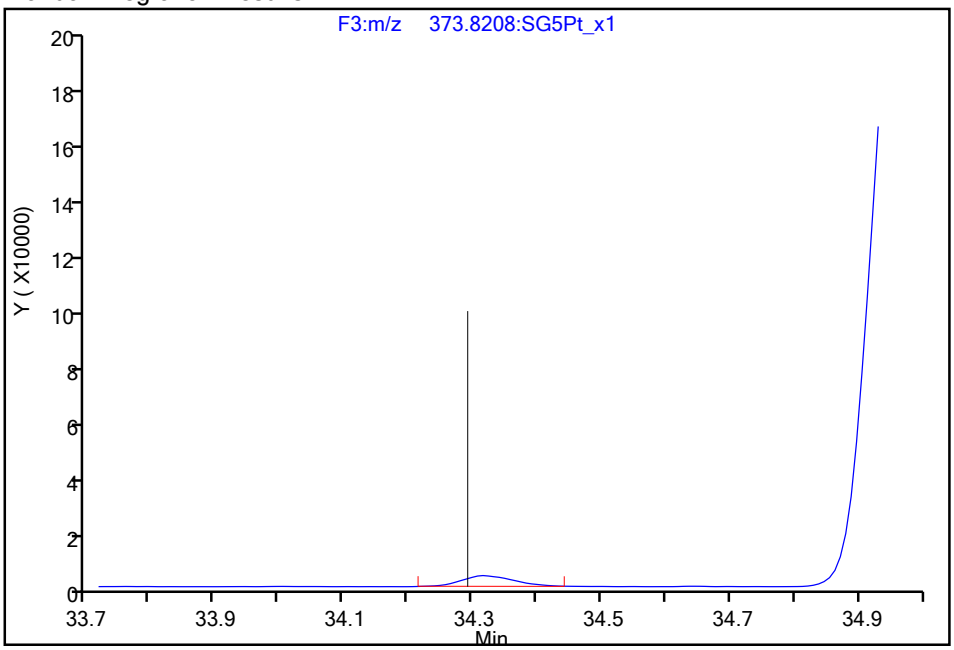

Reviewer: dadunj, 20-Aug-2021 09:23:28

Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.11- 36.95)

Signal: 1

Not Detected
RT: 33.11- 36.95

Processing Integration Results

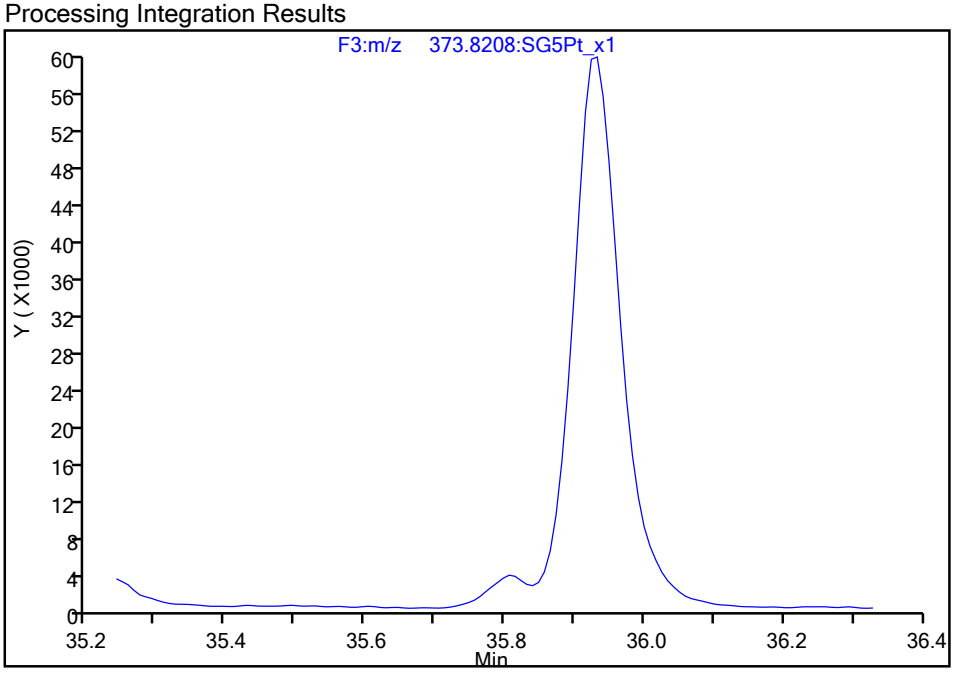

RT = 35.806 Area = 11258 M

Manual Integration Results

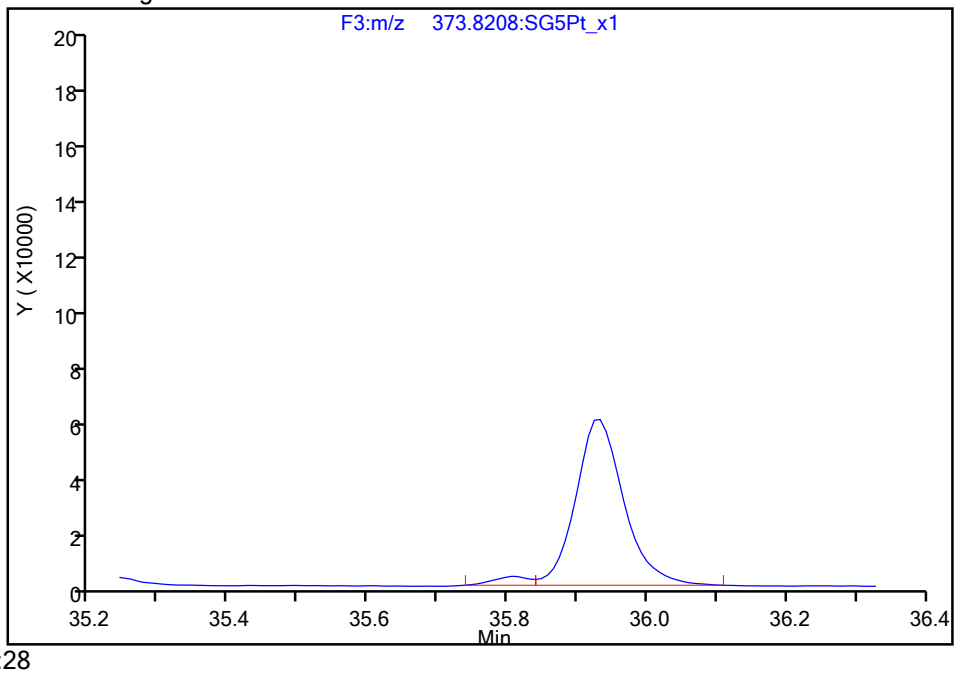

Reviewer: dadunj, 20-Aug-2021 09:23:28
Audit Action: Manually Integrated Audit Reason: Assign Peak

786762

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d				
Injection Date:	18-Aug-2021 21:12:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-B MS				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.11- 36.95)

Signal: 1

Not Detected
RT: 33.11- 36.95

Processing Integration Results

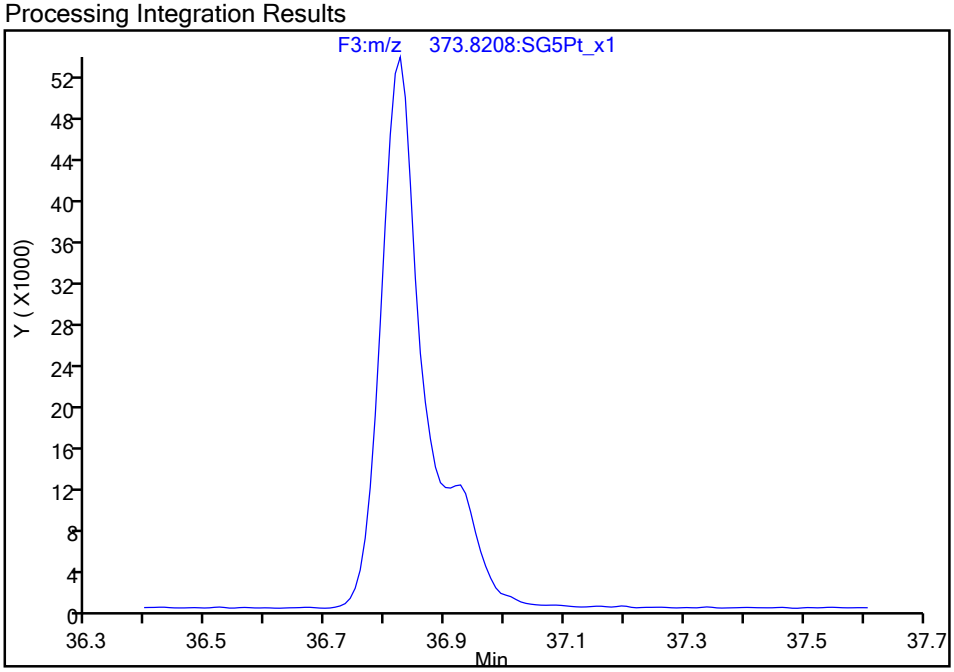

RT = 36.892 Area = 50417 M

Manual Integration Results

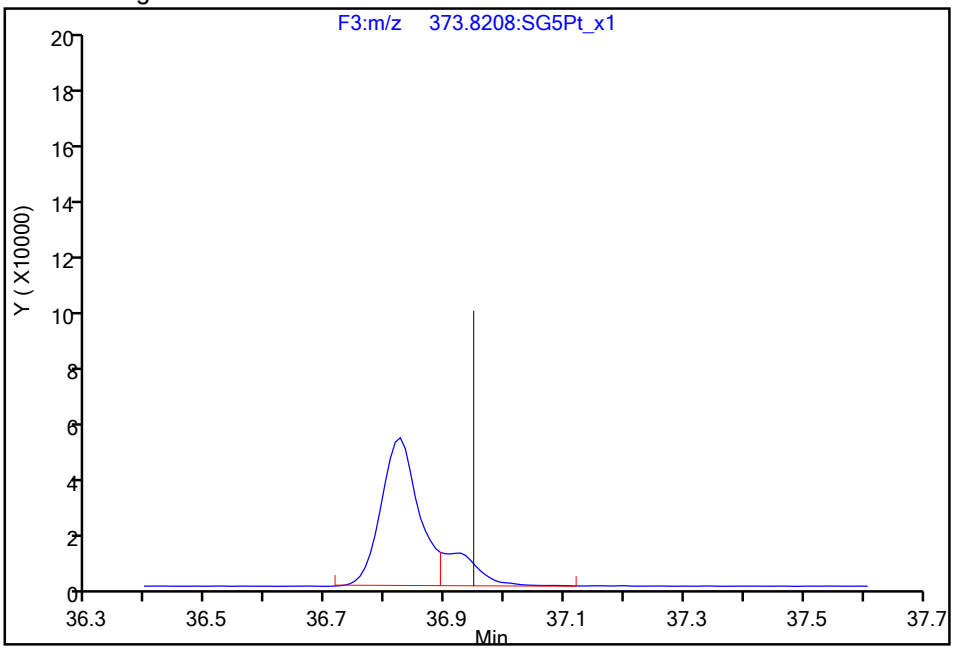

Reviewer: dadunj, 20-Aug-2021 09:23:28
Audit Action: Manually Integrated Audit Reason: Assign Peak

786763

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

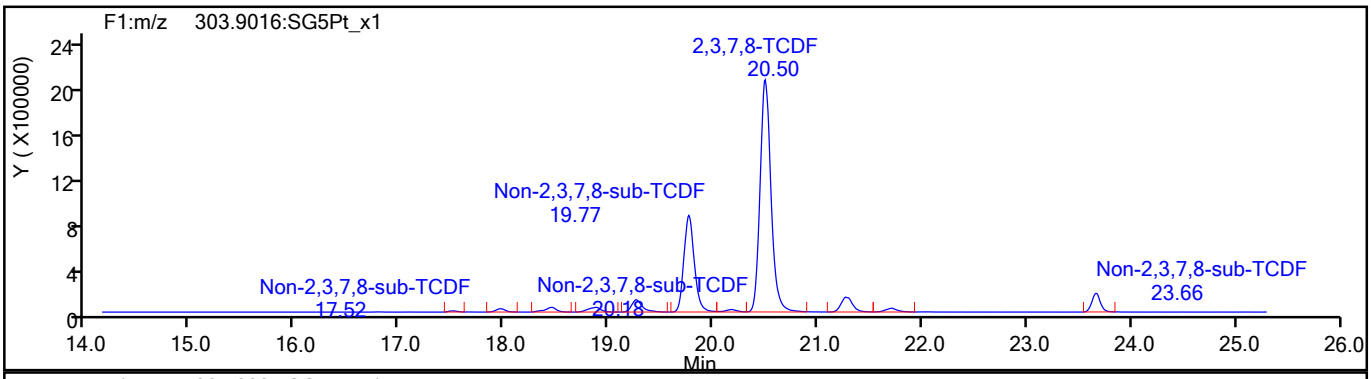

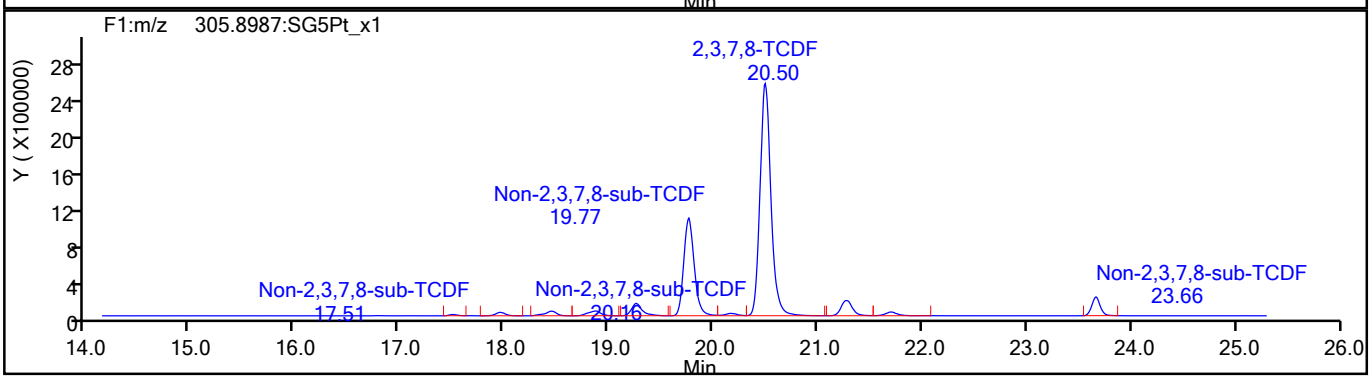

TCDF Standards

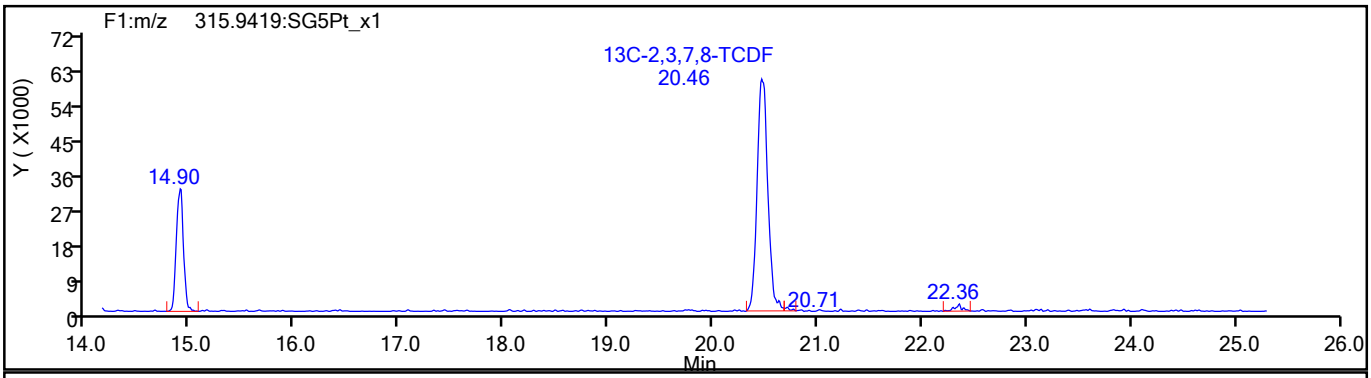

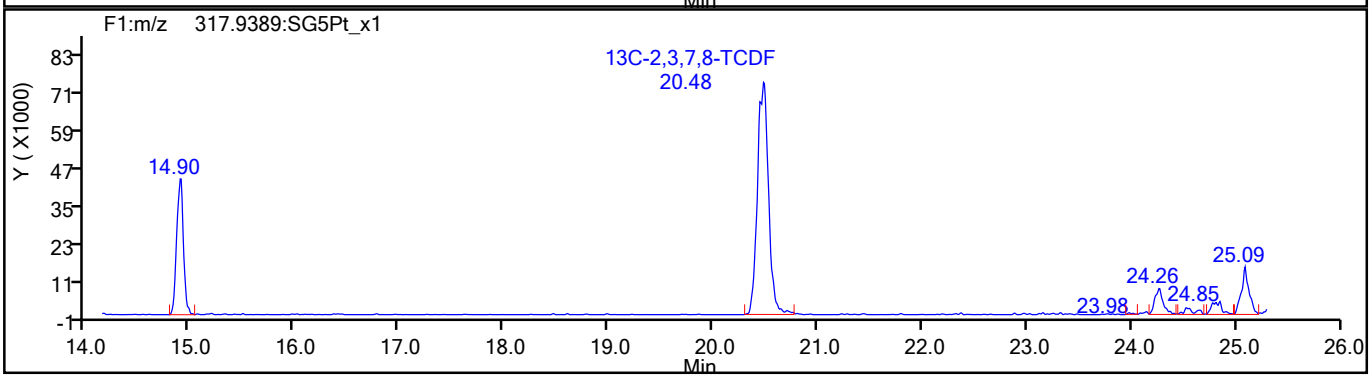

786764

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

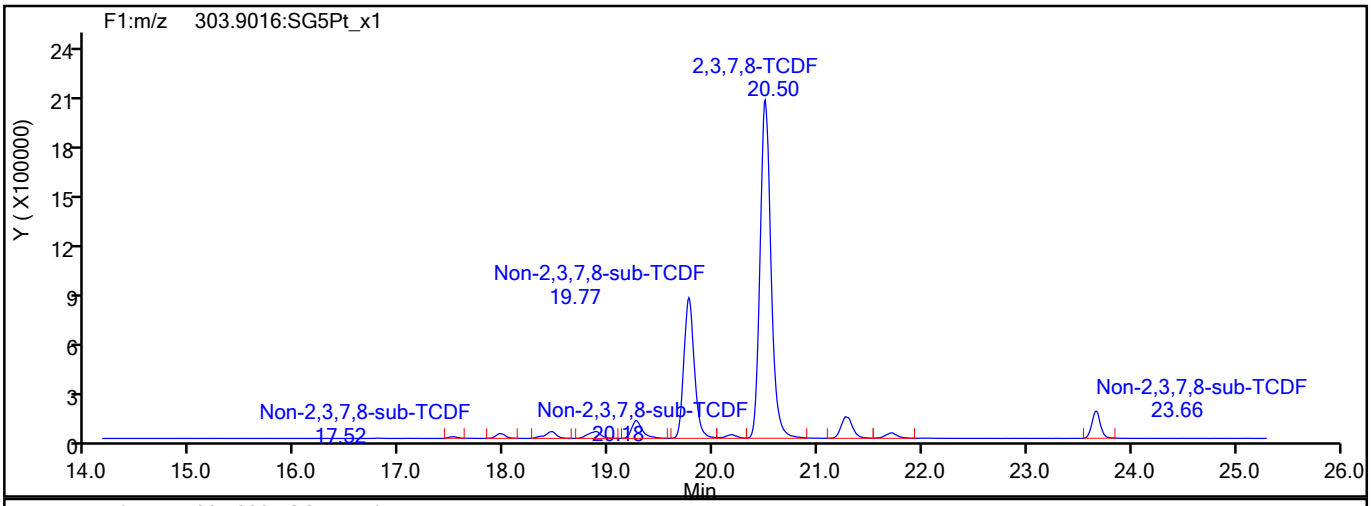

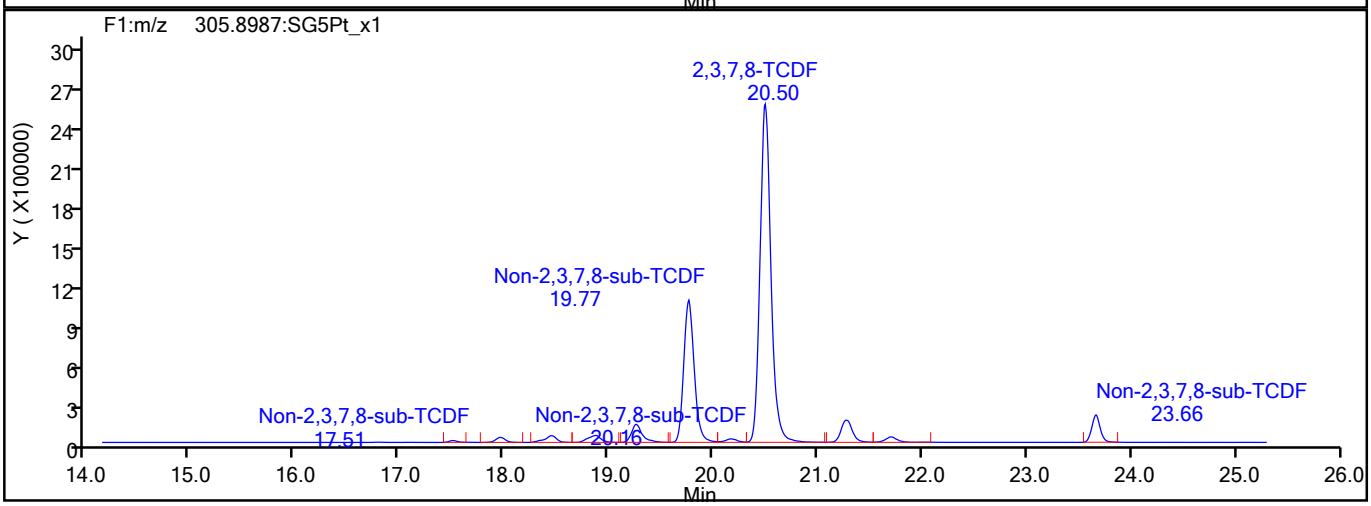

TCDF Interference Mass

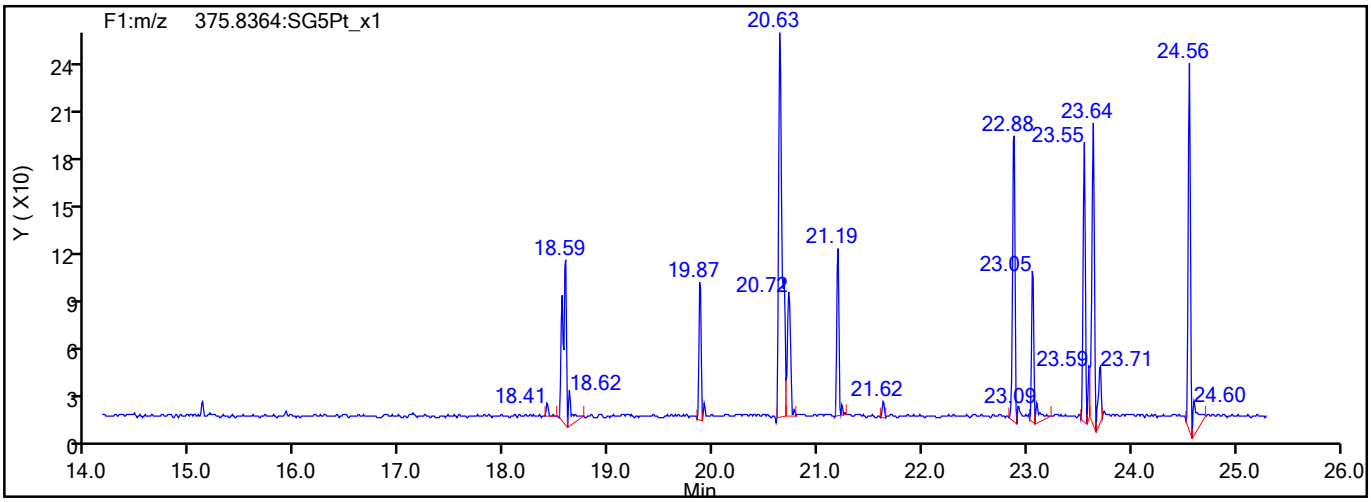

786765

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

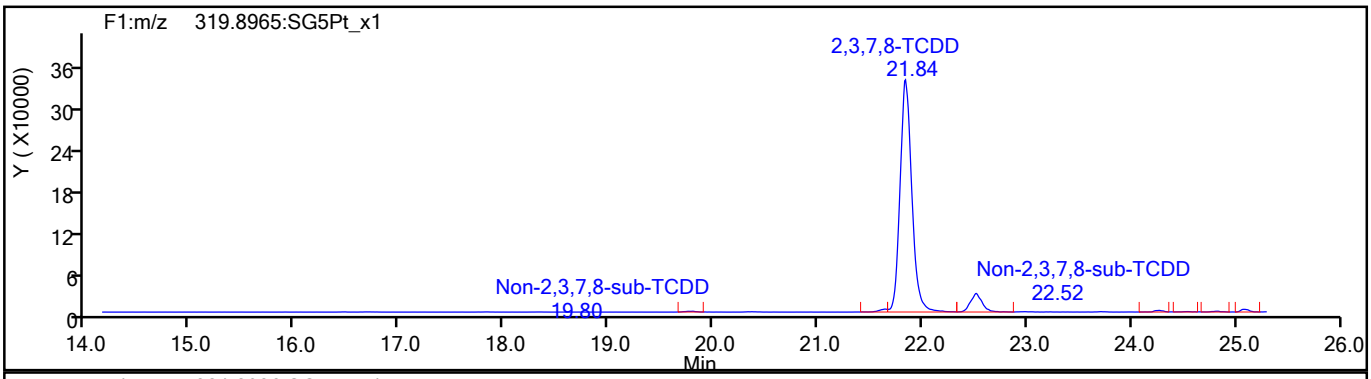

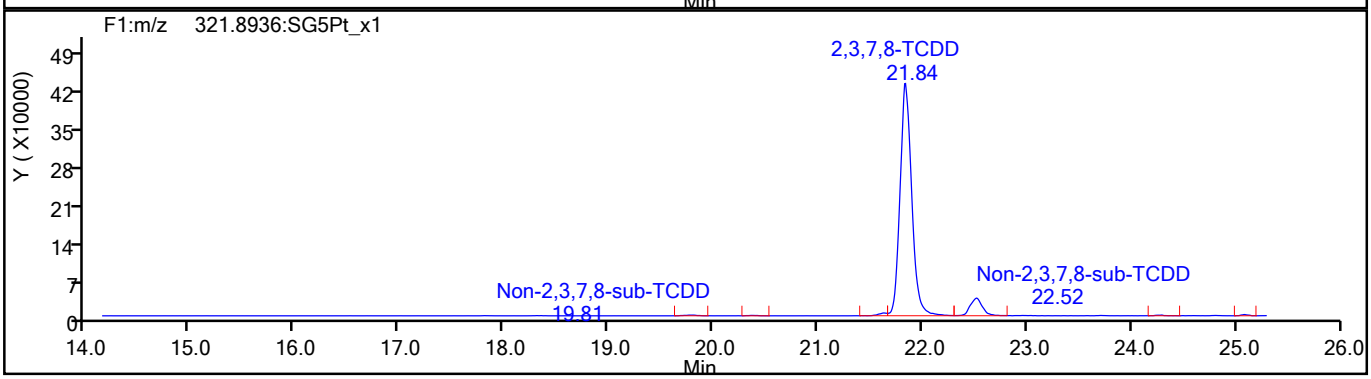

TCDD Standards

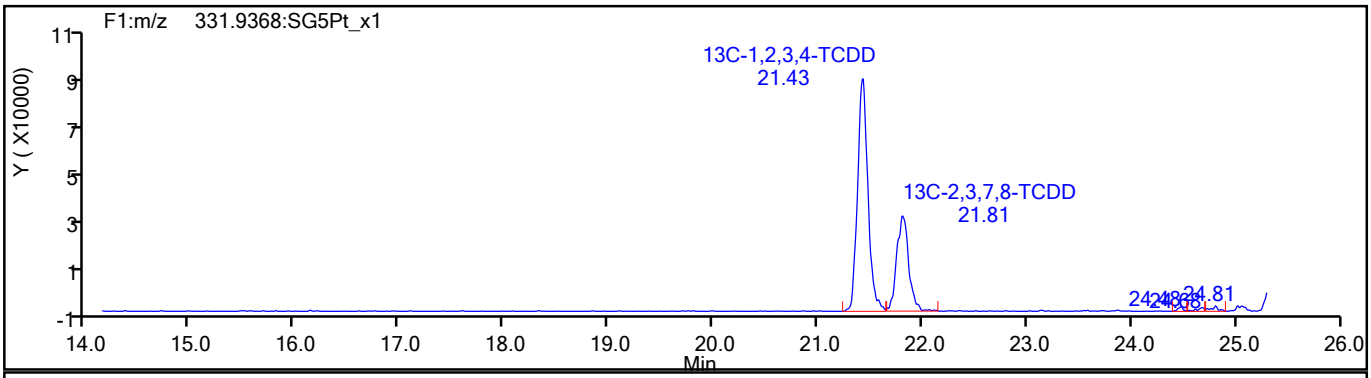

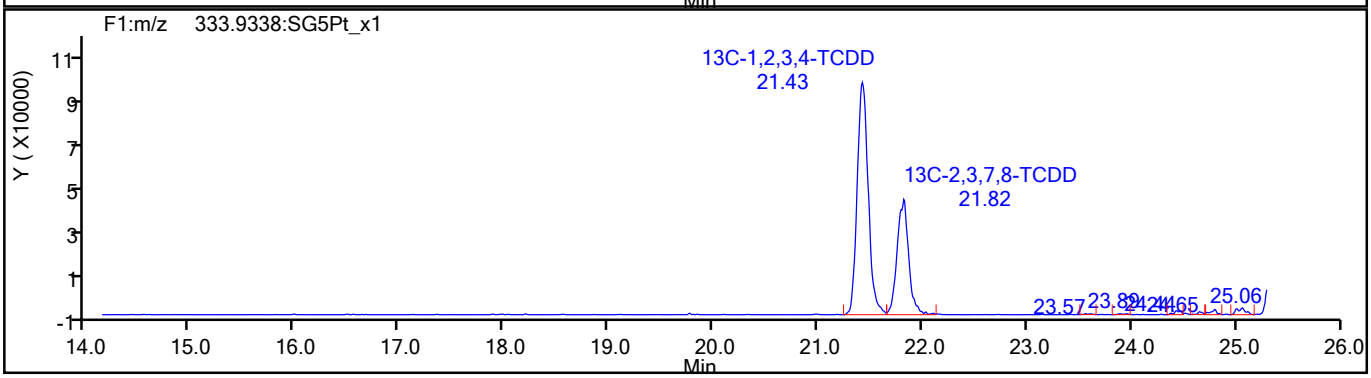

786766

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

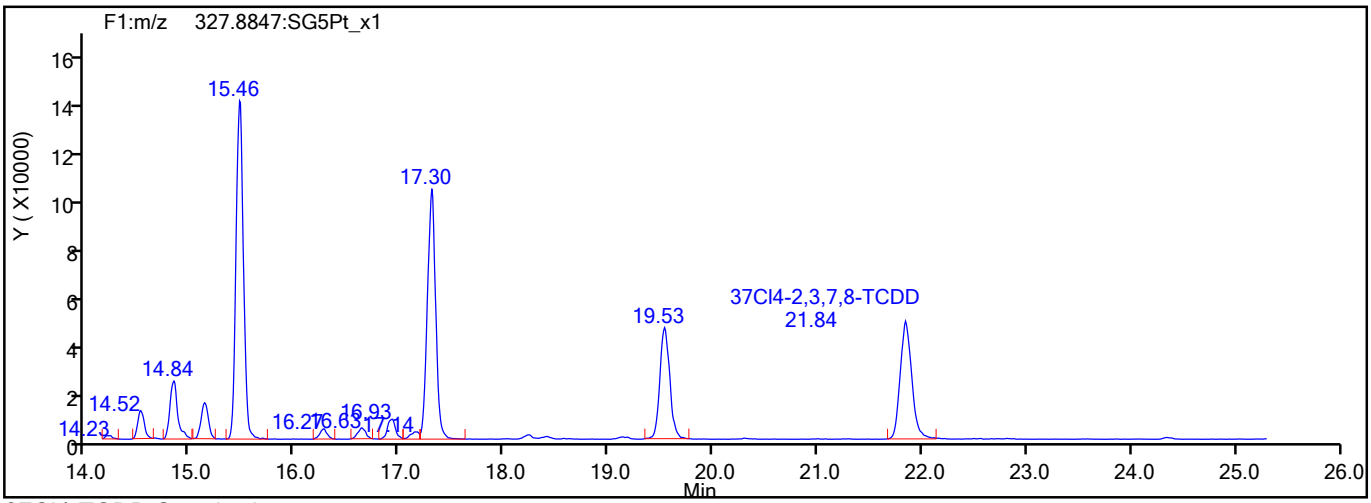

37Cl4-TCDD Standards

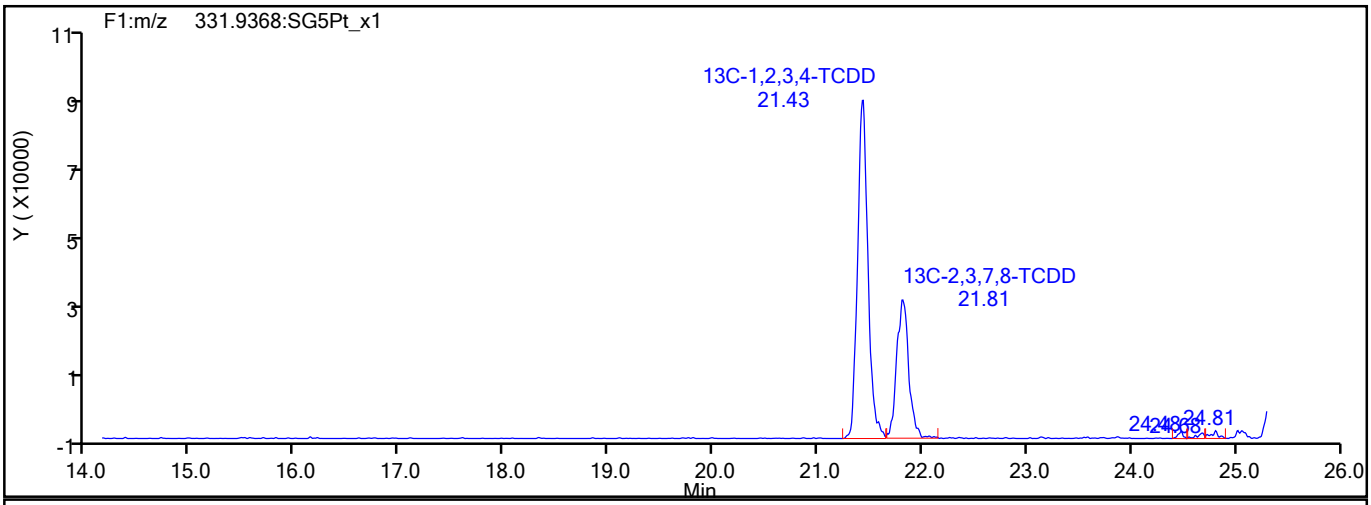

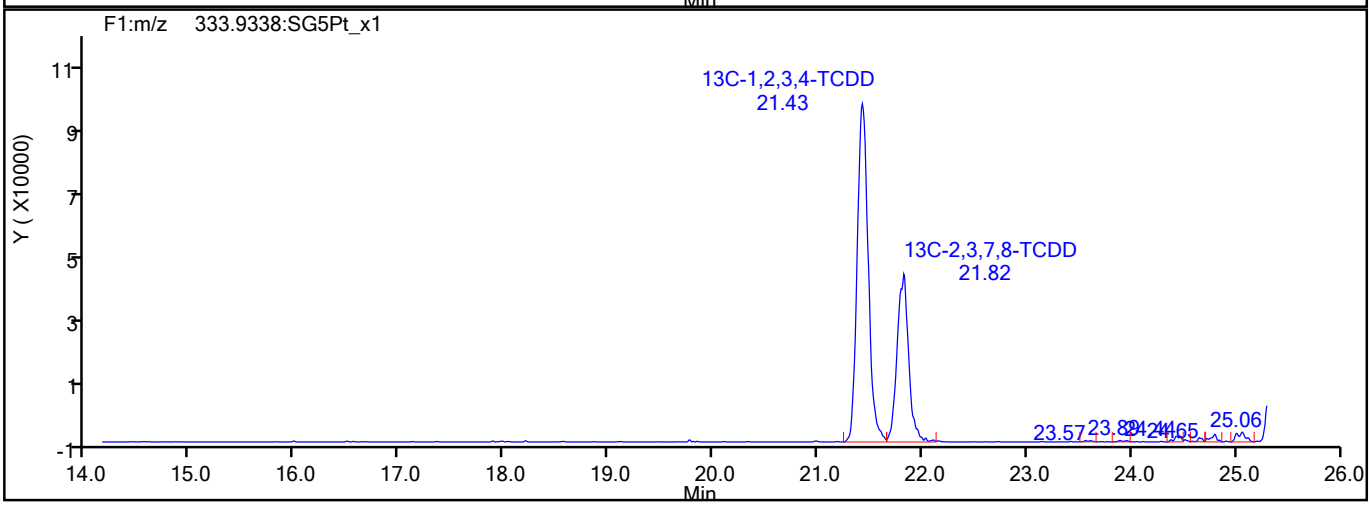

786767

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

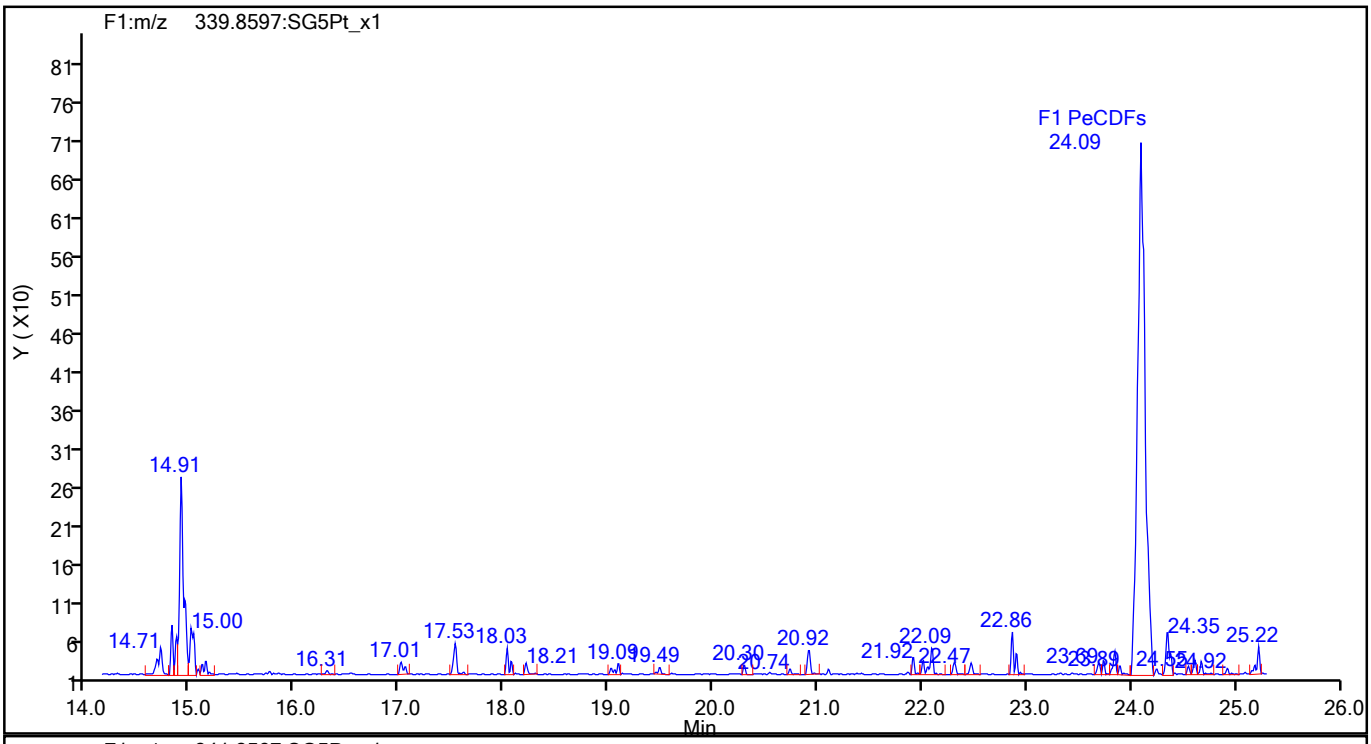

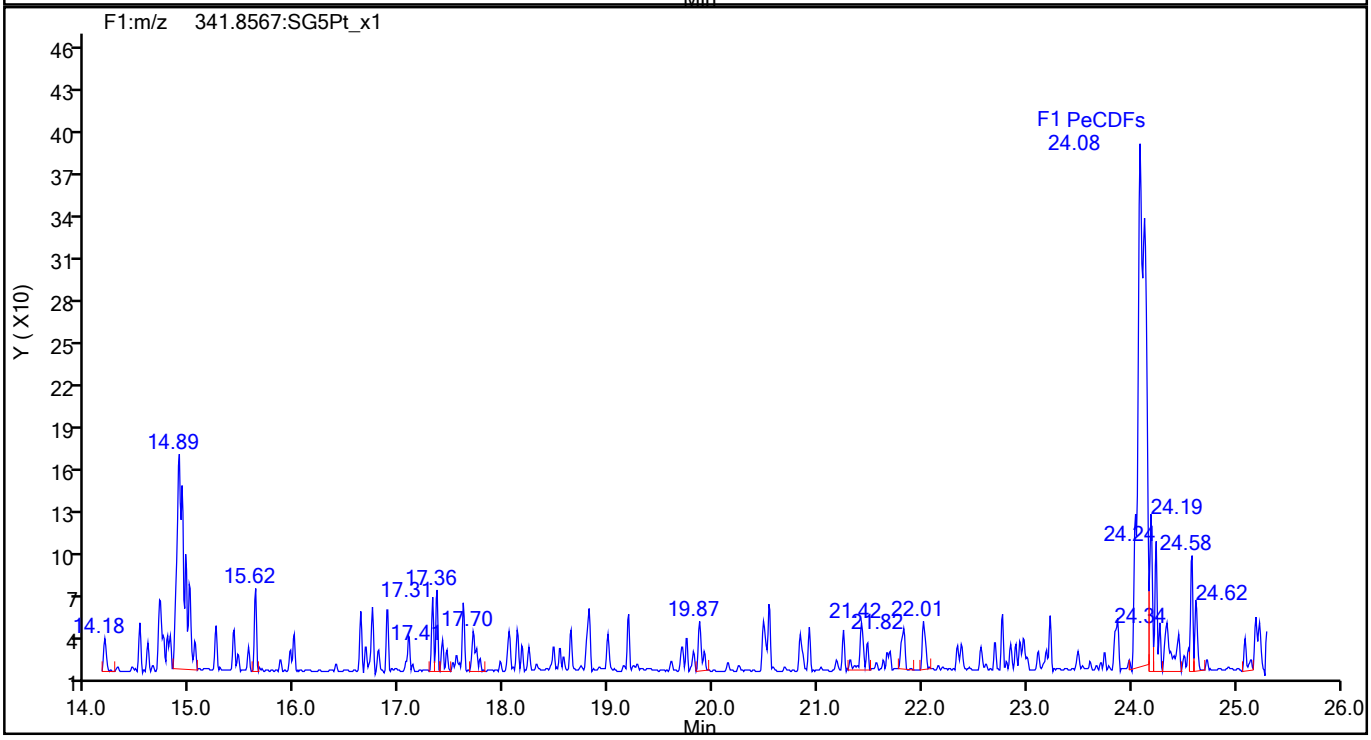

786768

Report Date: 20-Aug-2021 09:24:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

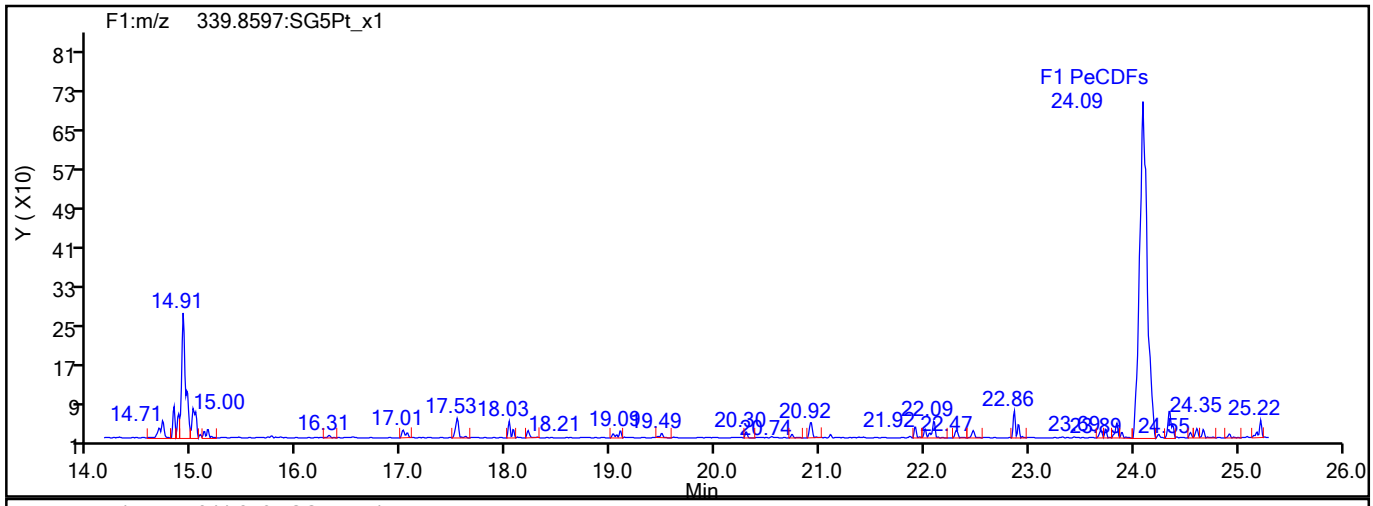

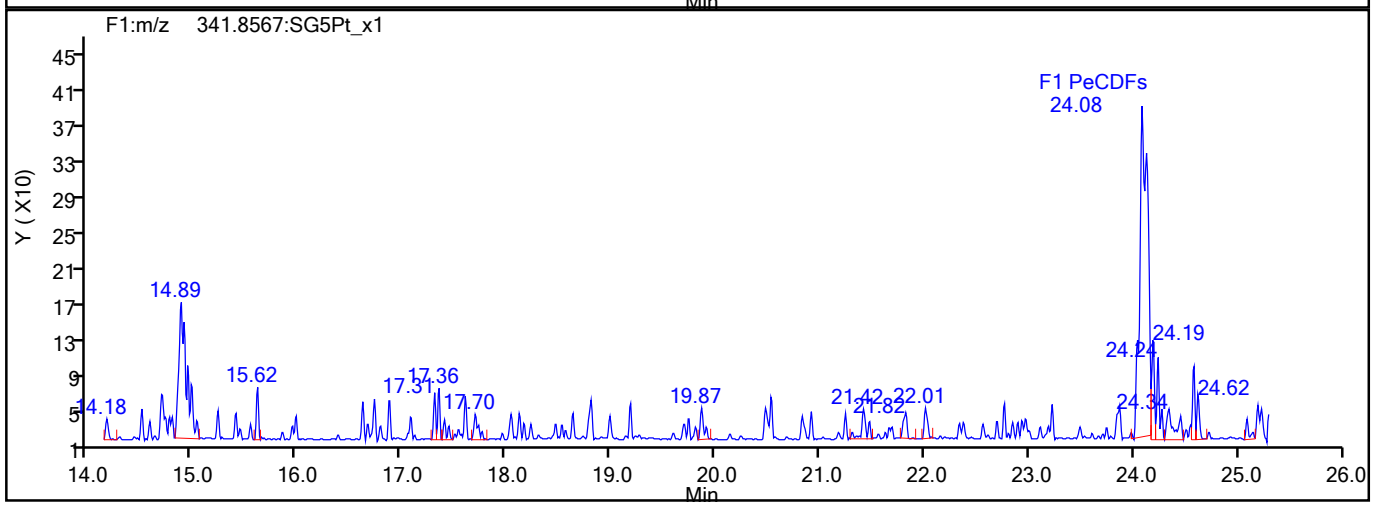

F1 PeCDFs Interference Mass

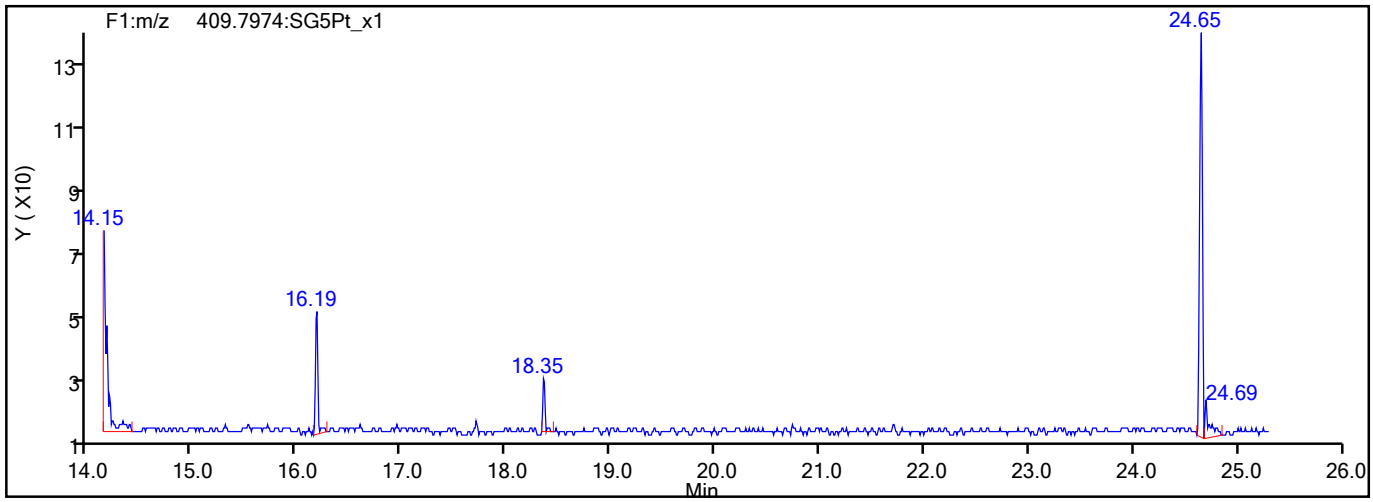

786769

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

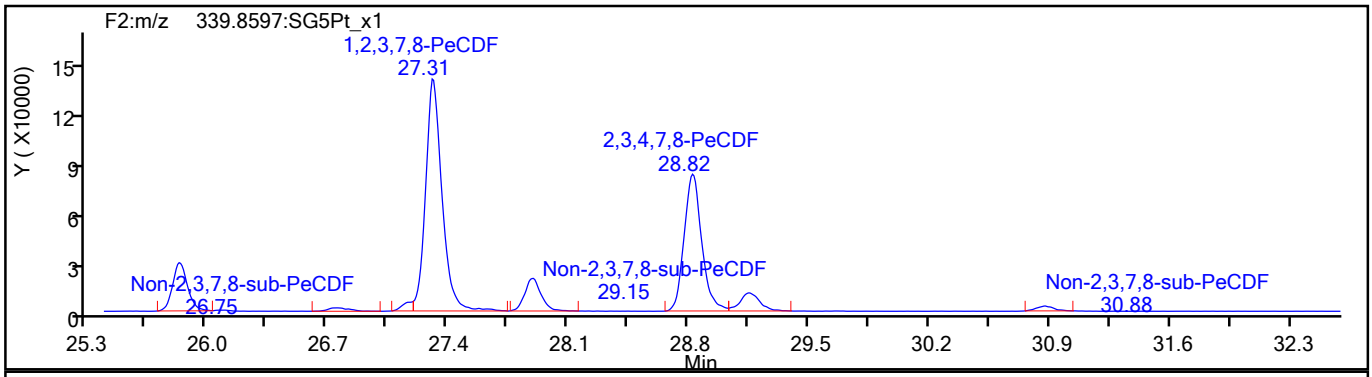

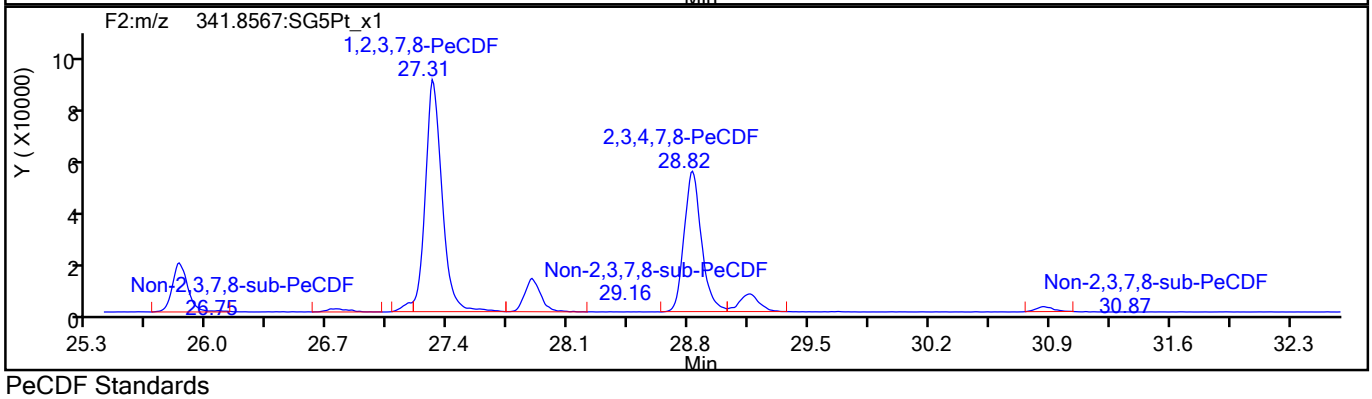

PeCDF Standards

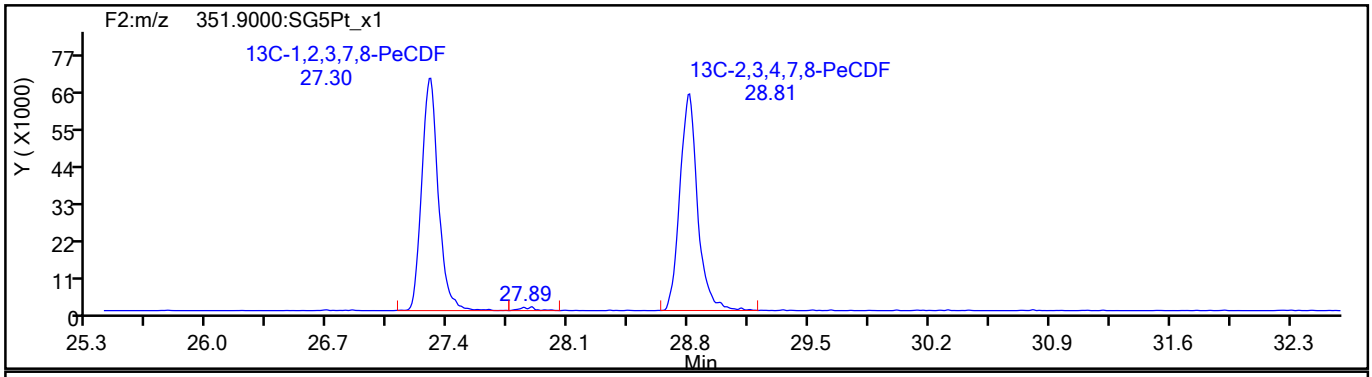

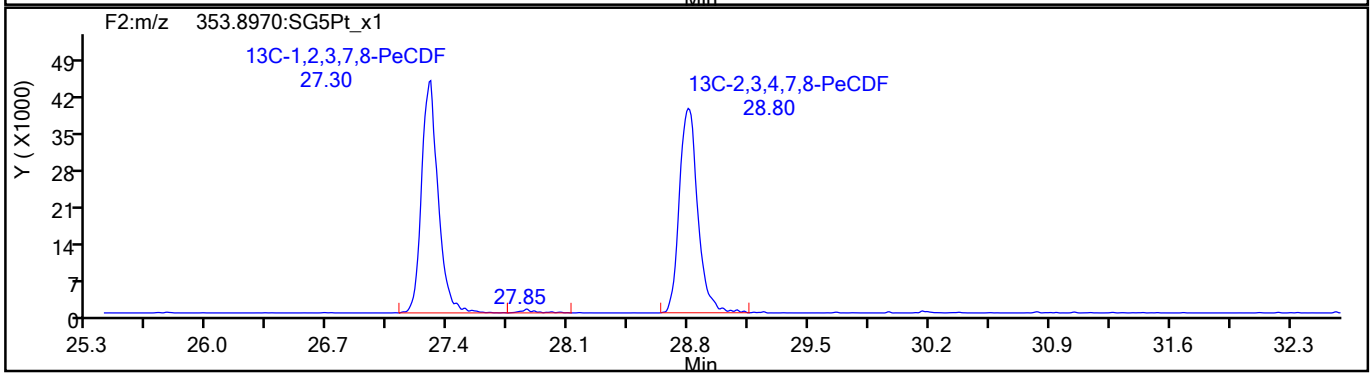

786770

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

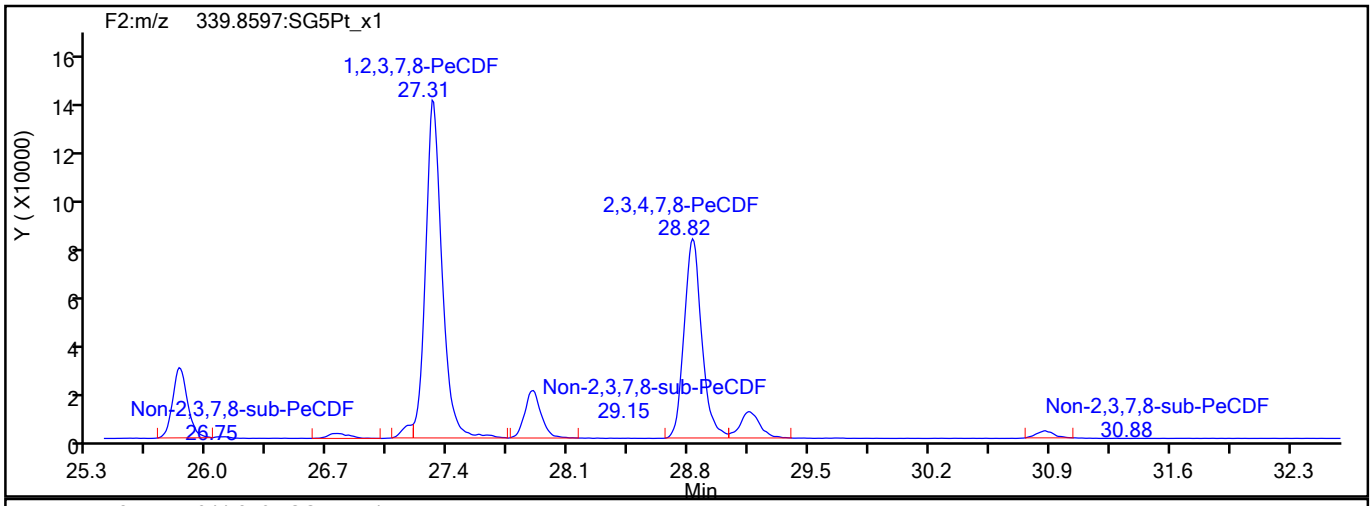

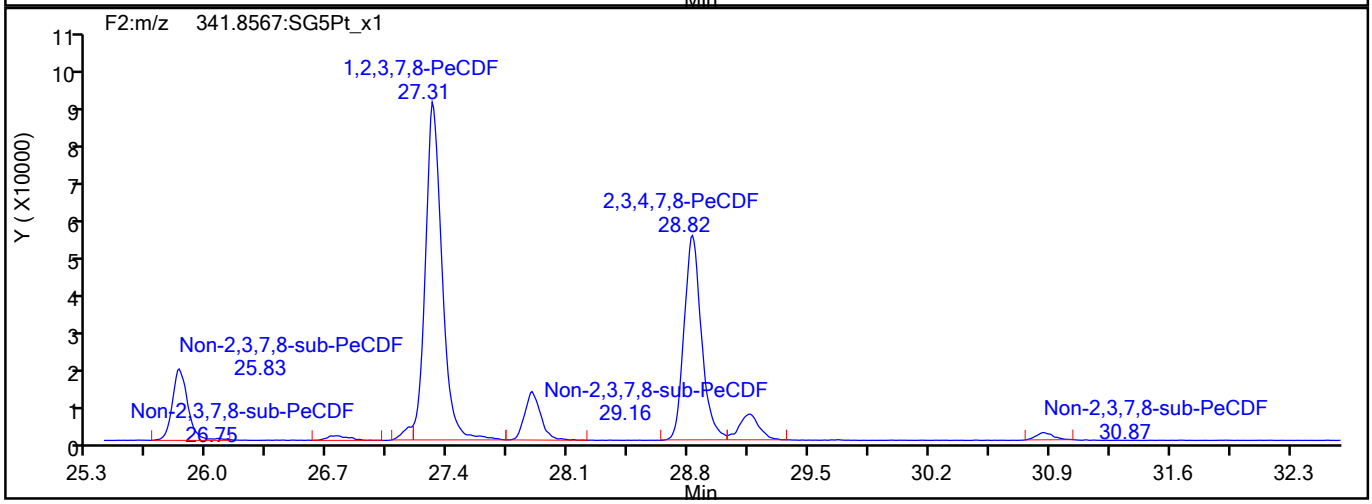

PeCDF Interference Mass

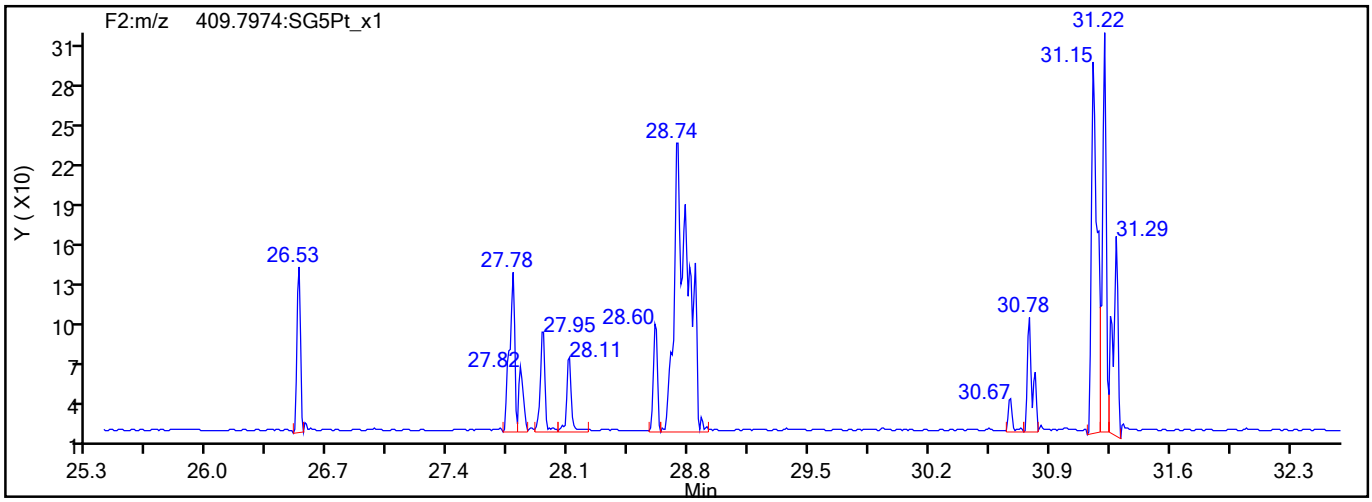

786771

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

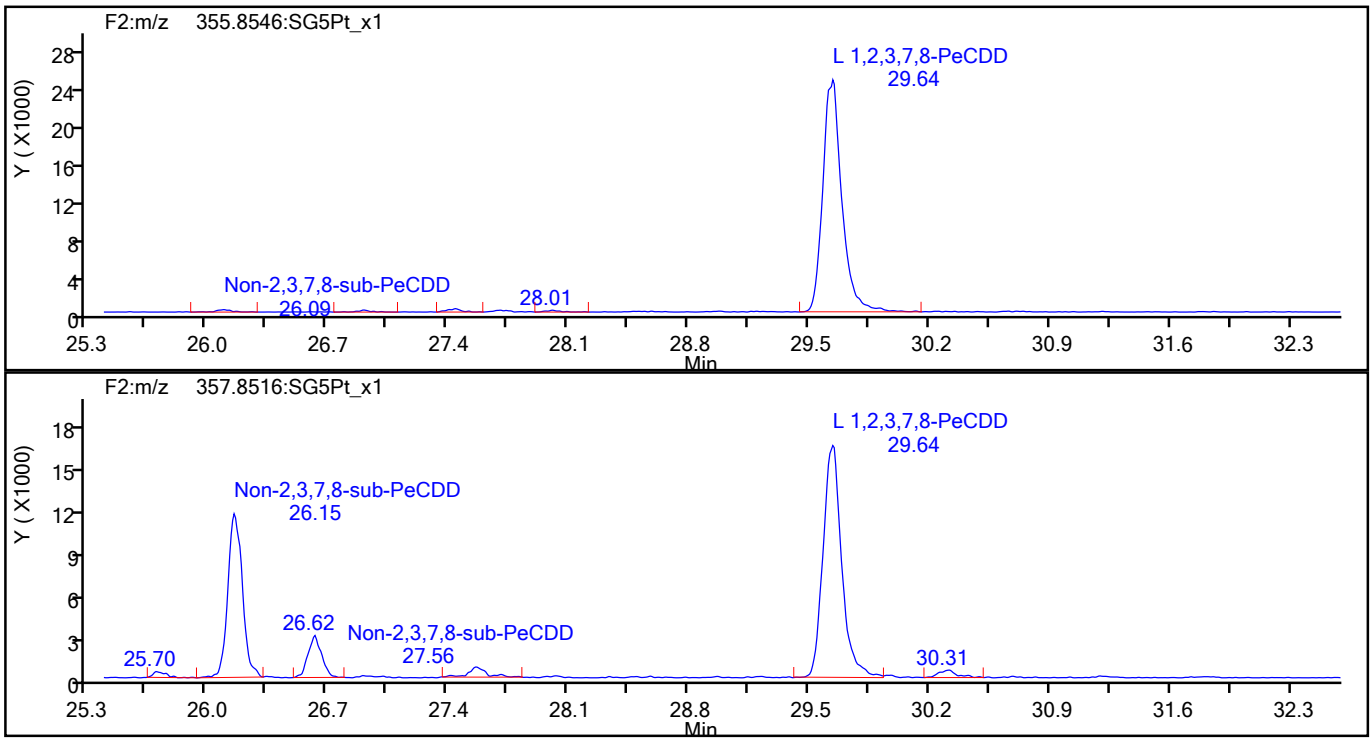

PeCDD Standards

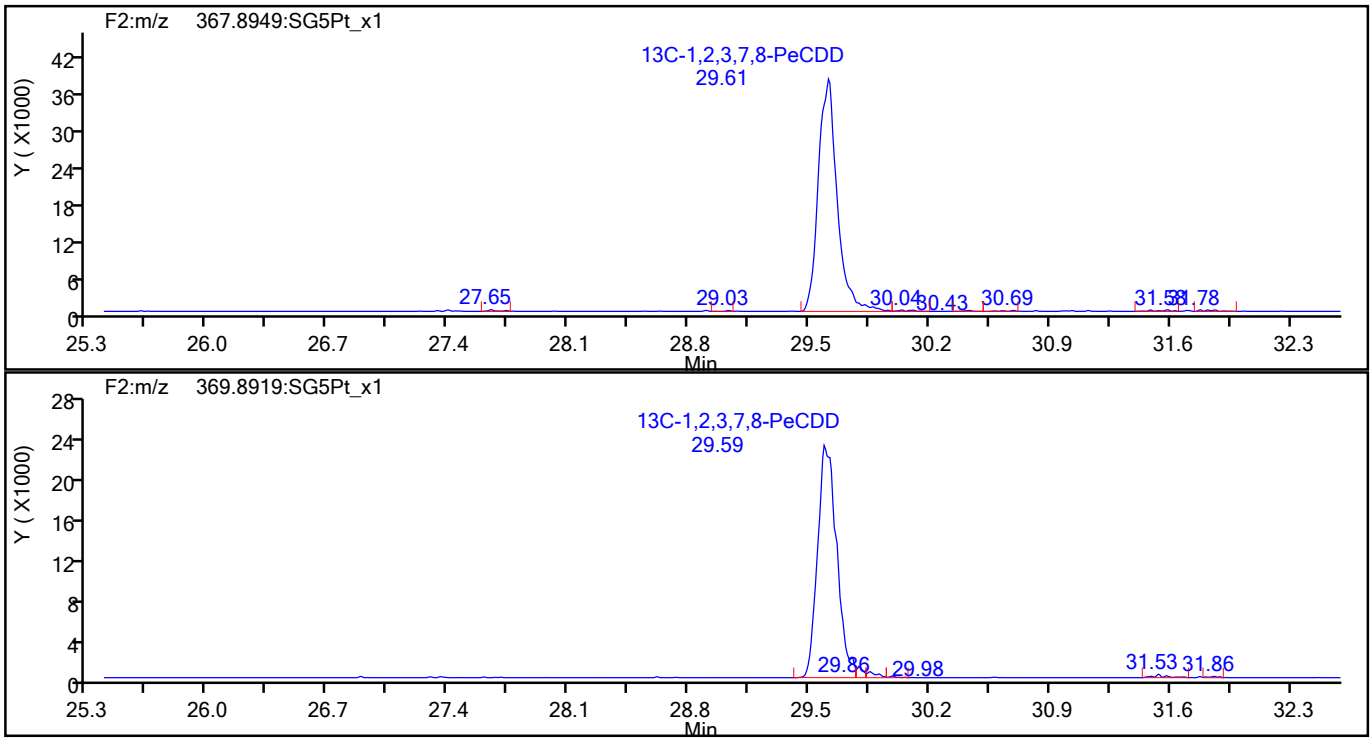

786772

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

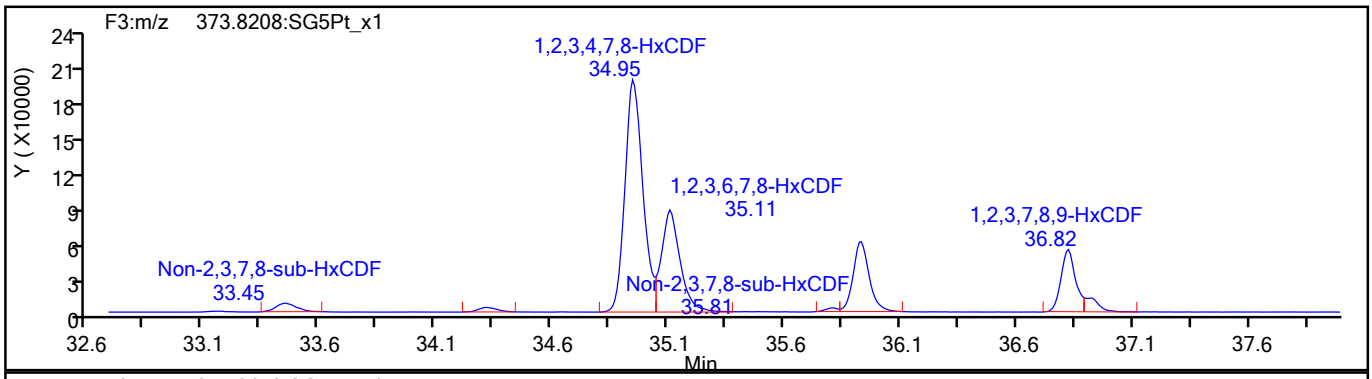

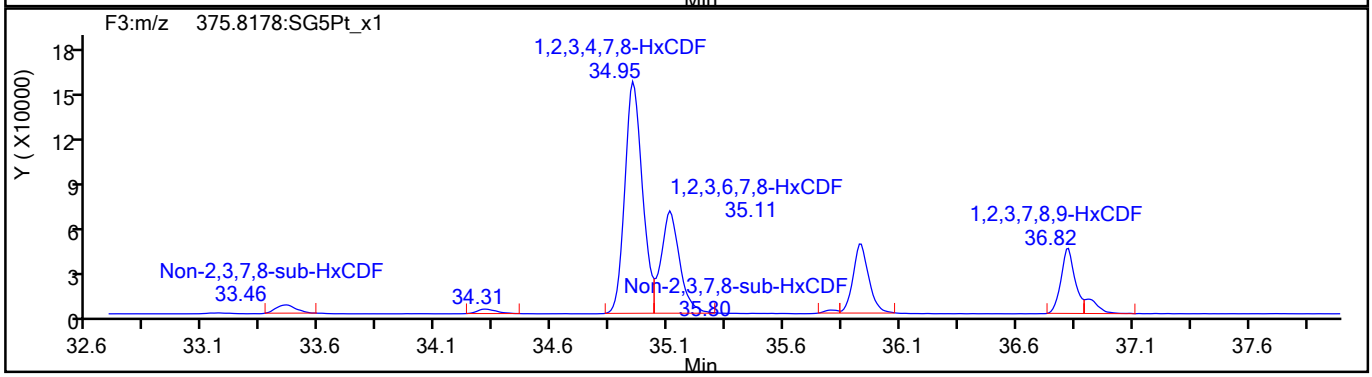

HxCDF Standards

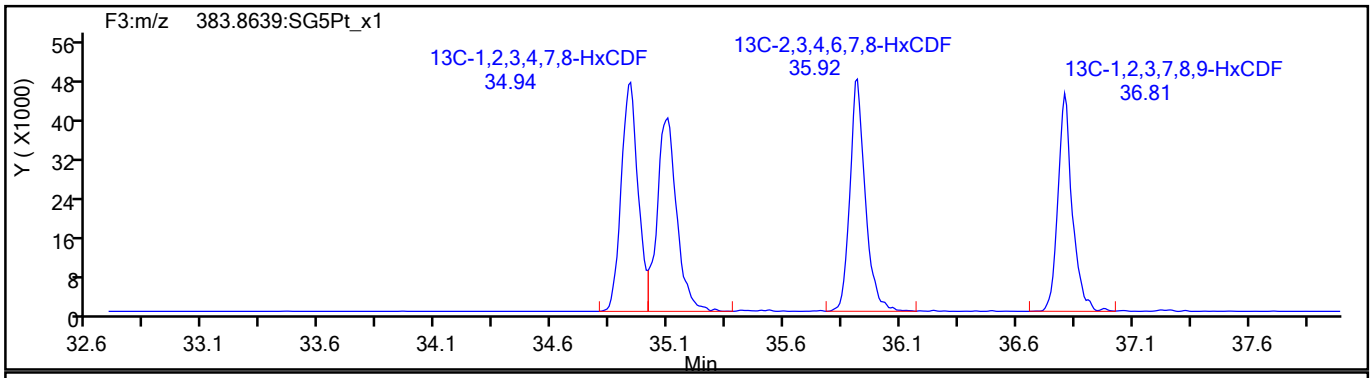

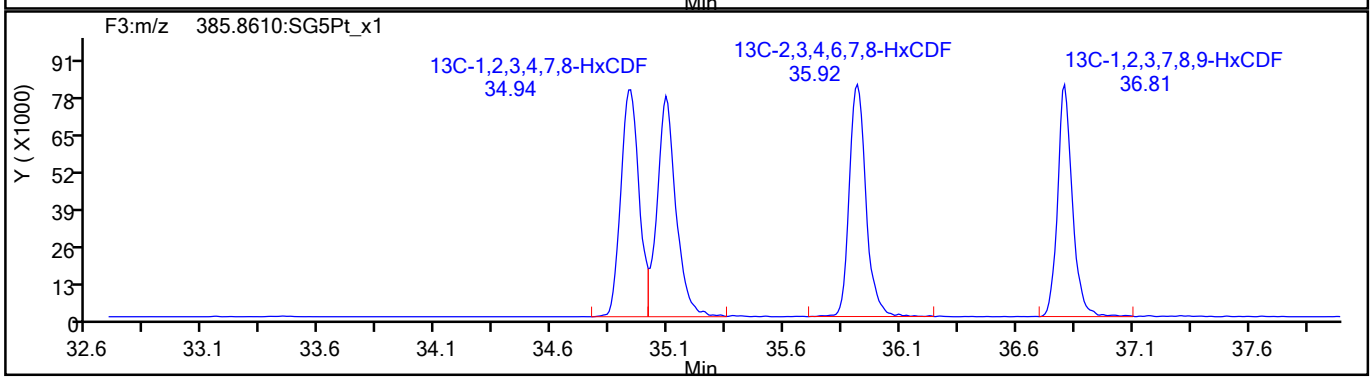

786773

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

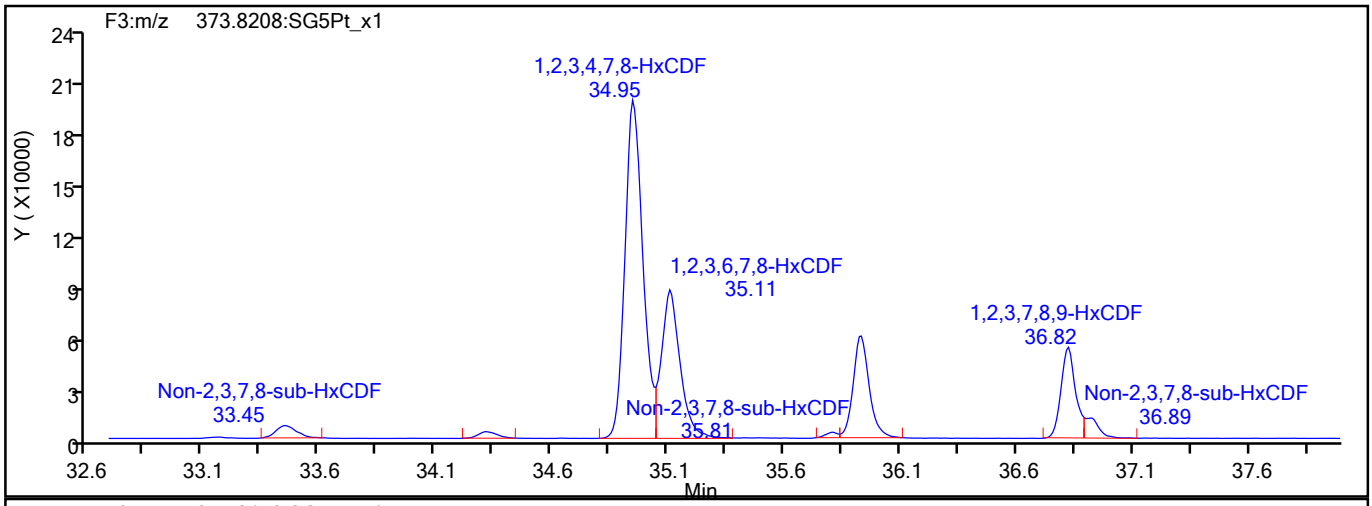

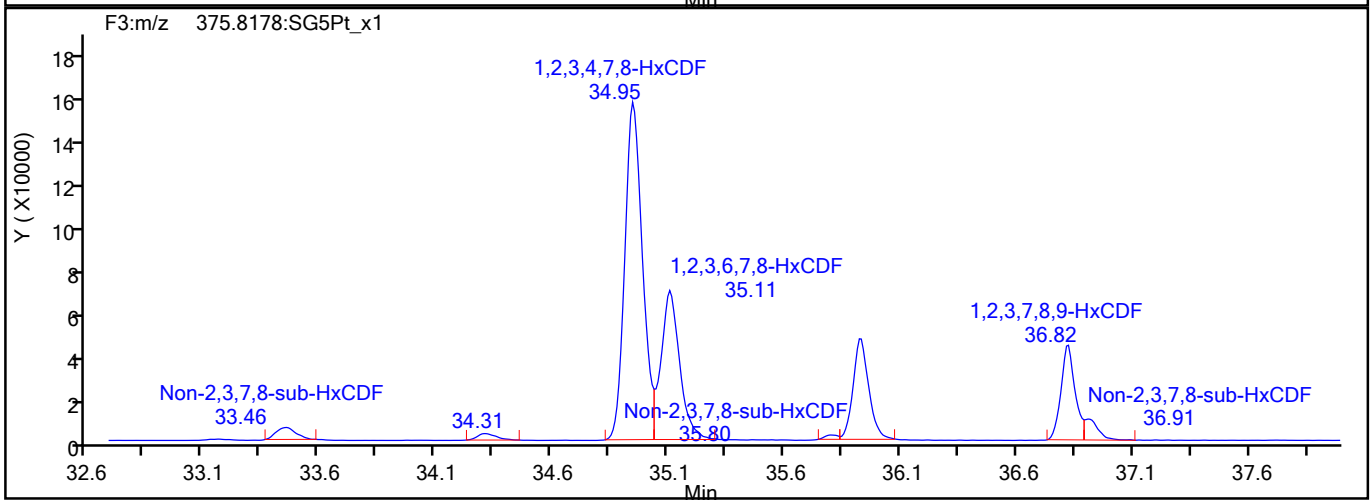

HxCDF Interference Mass

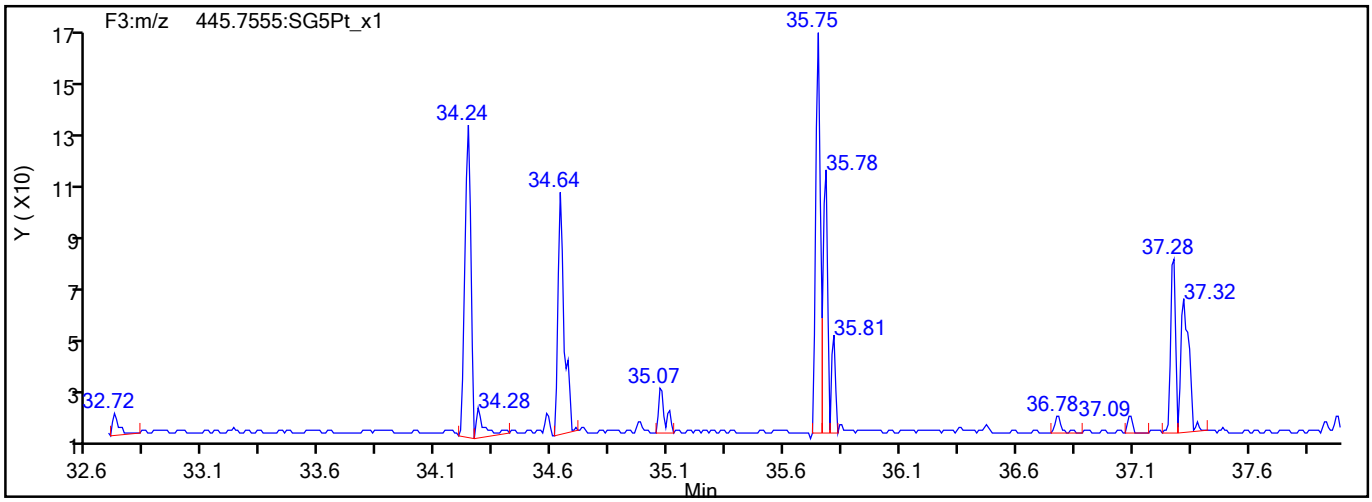

786774

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

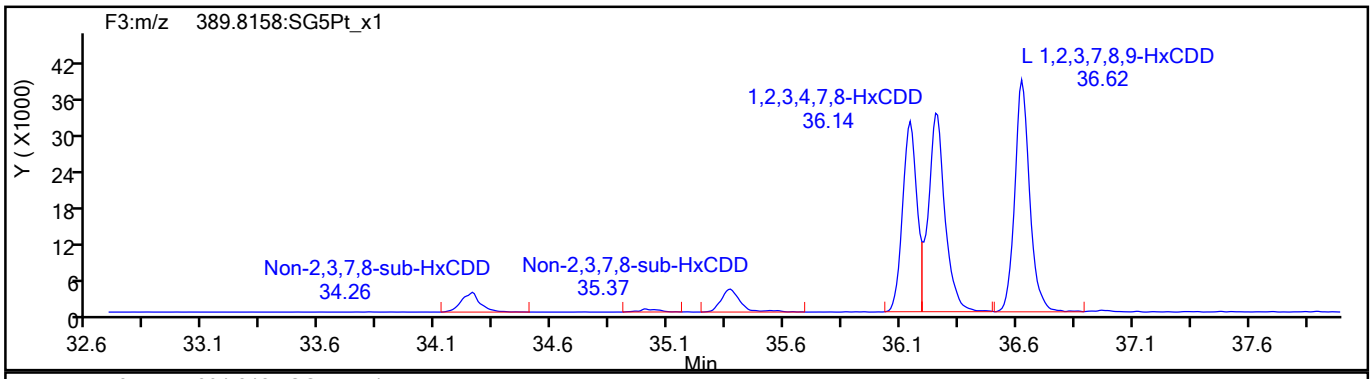

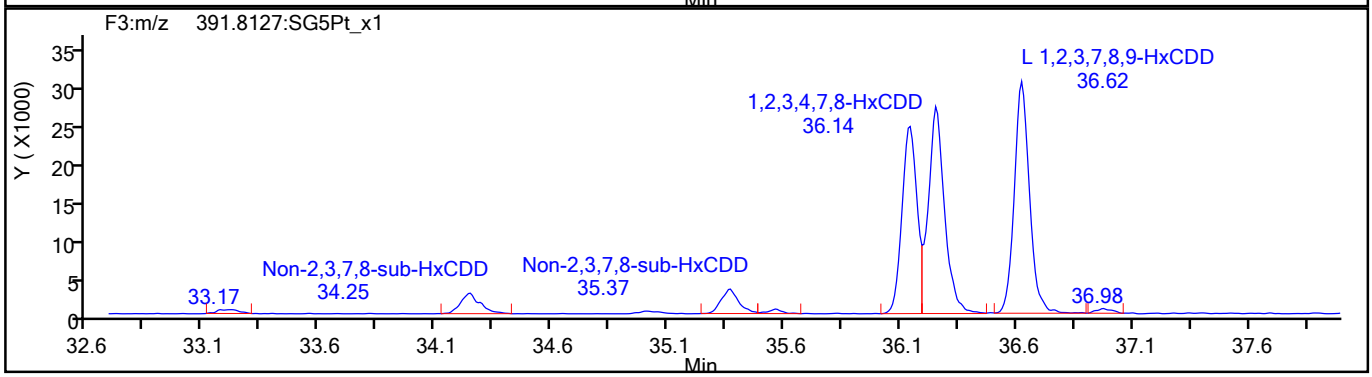

HxCDD Standards

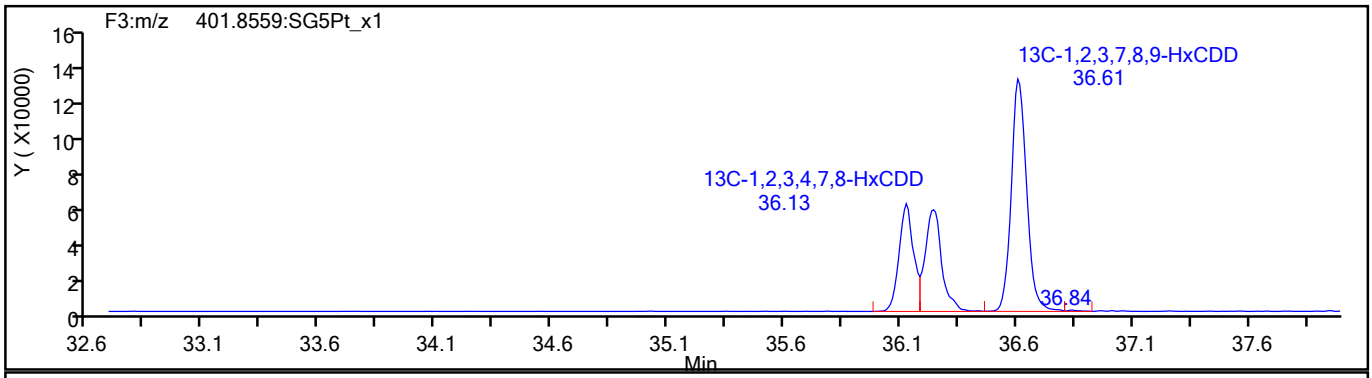

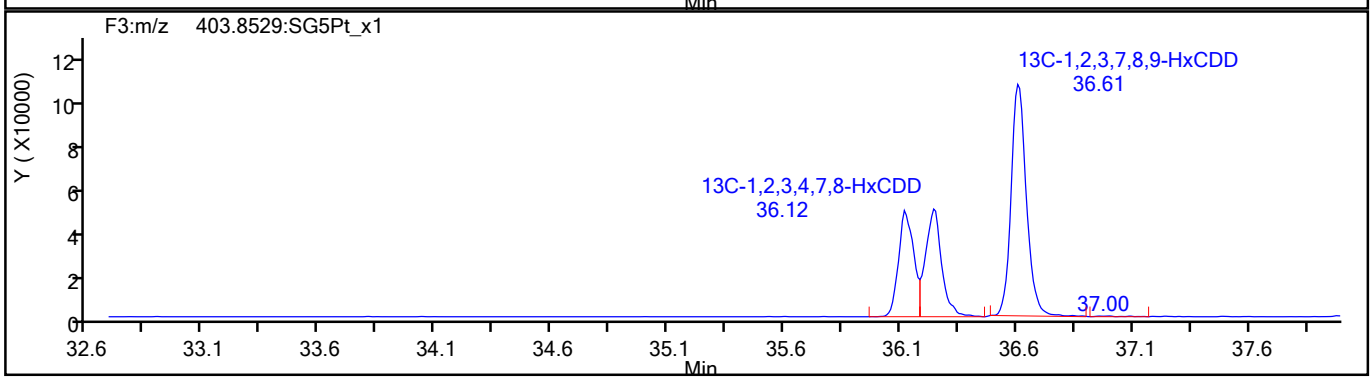

786775

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

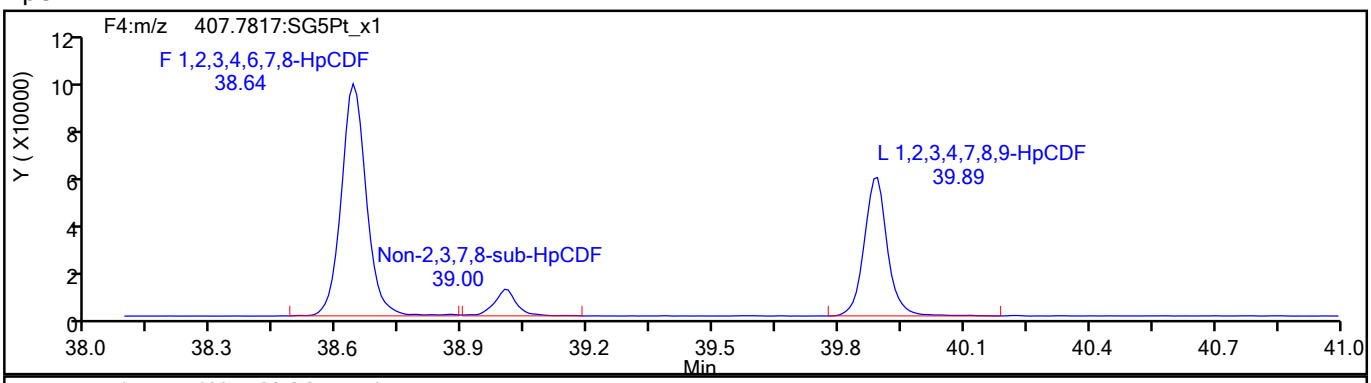

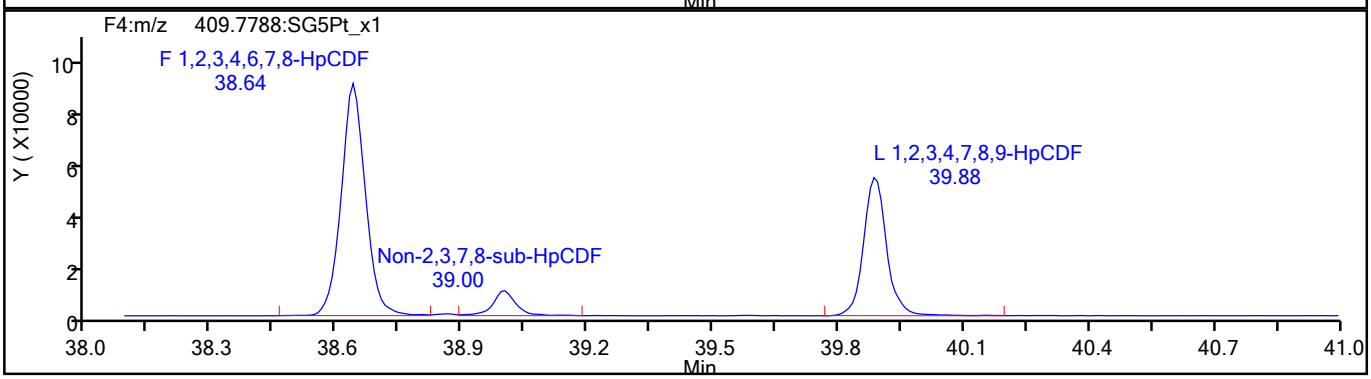

HpCDF Standards

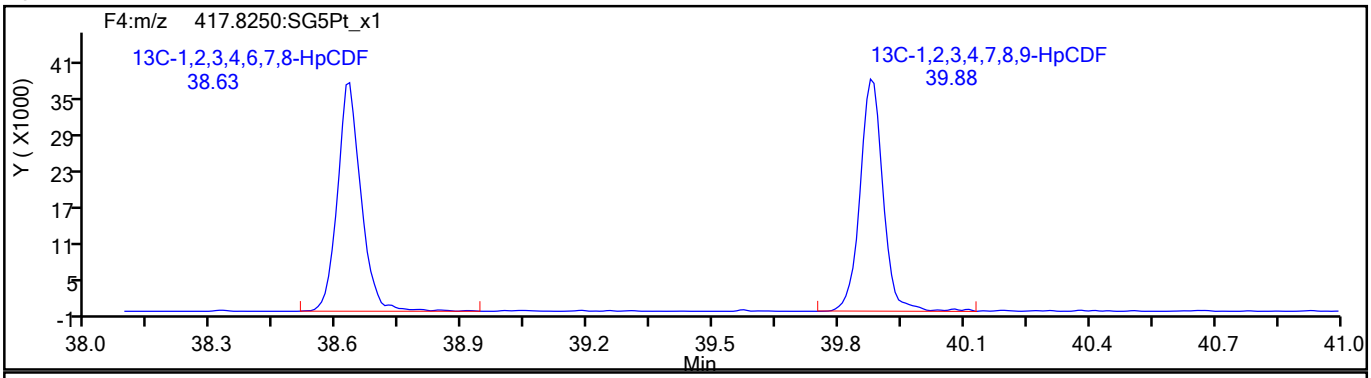

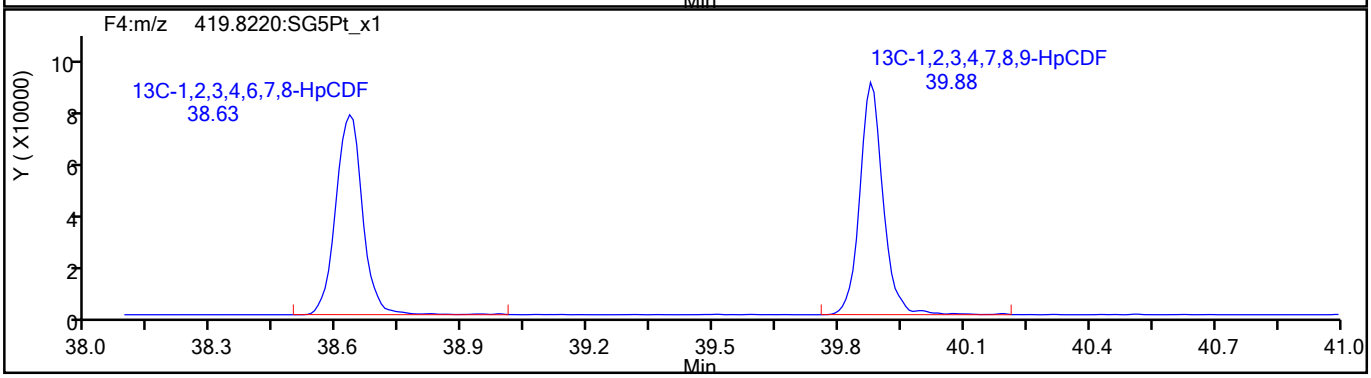

786776

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
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HpCDF

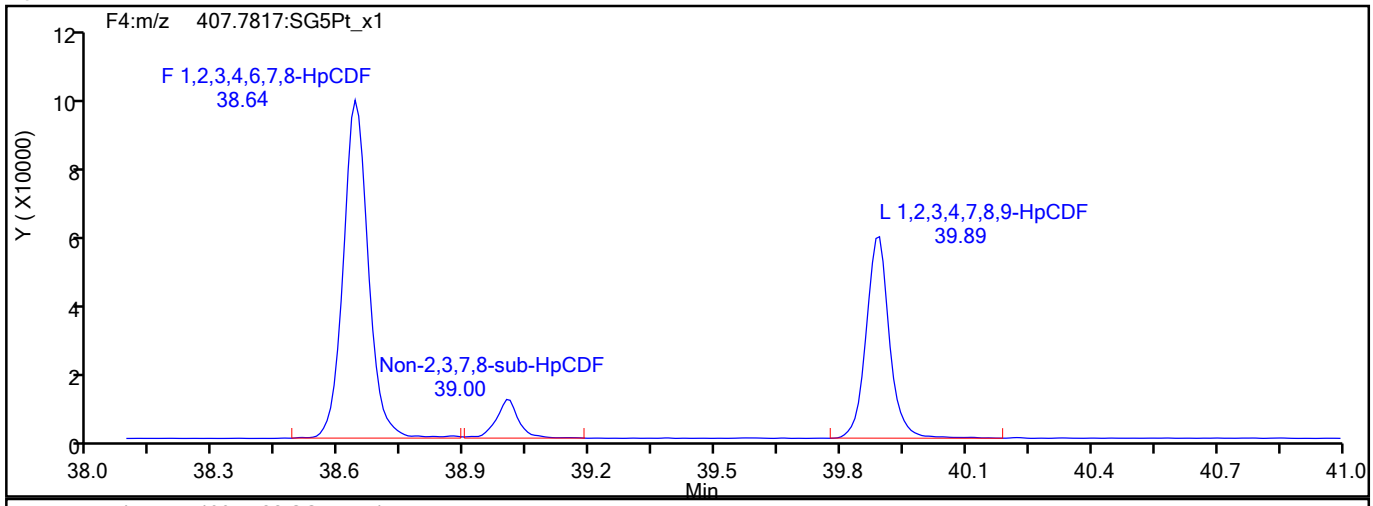

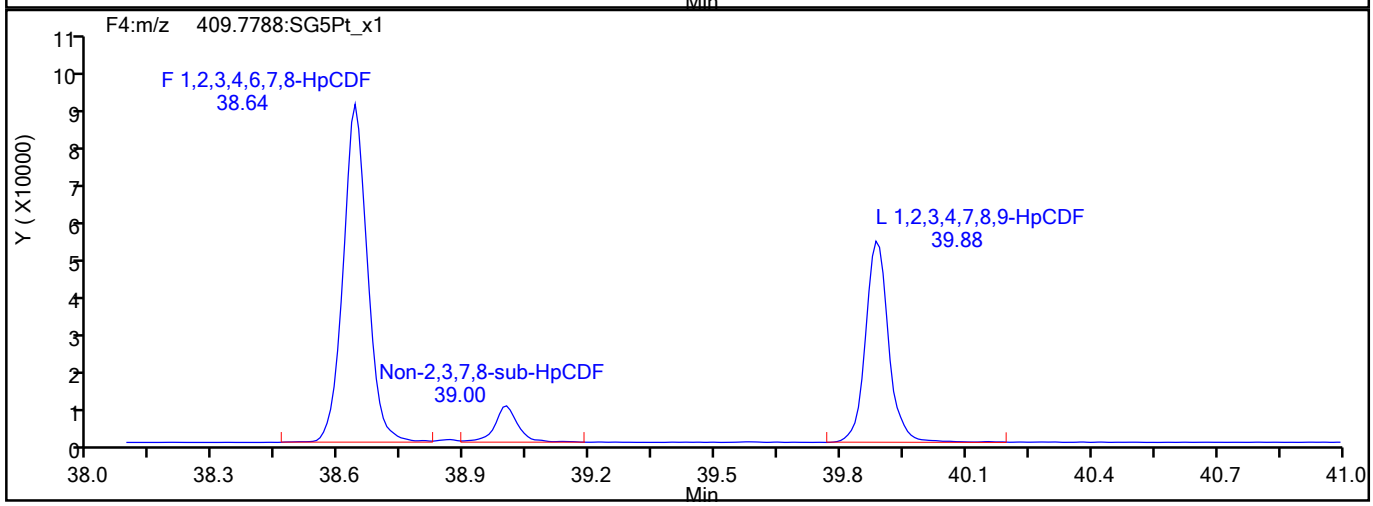

HpCDF Interference Mass

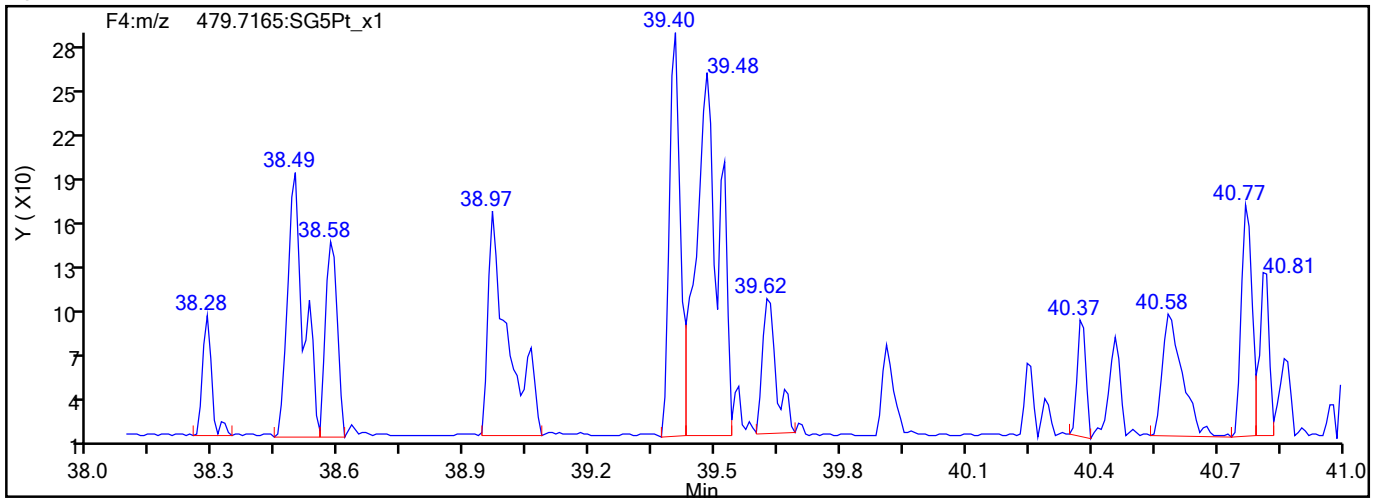

786777

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

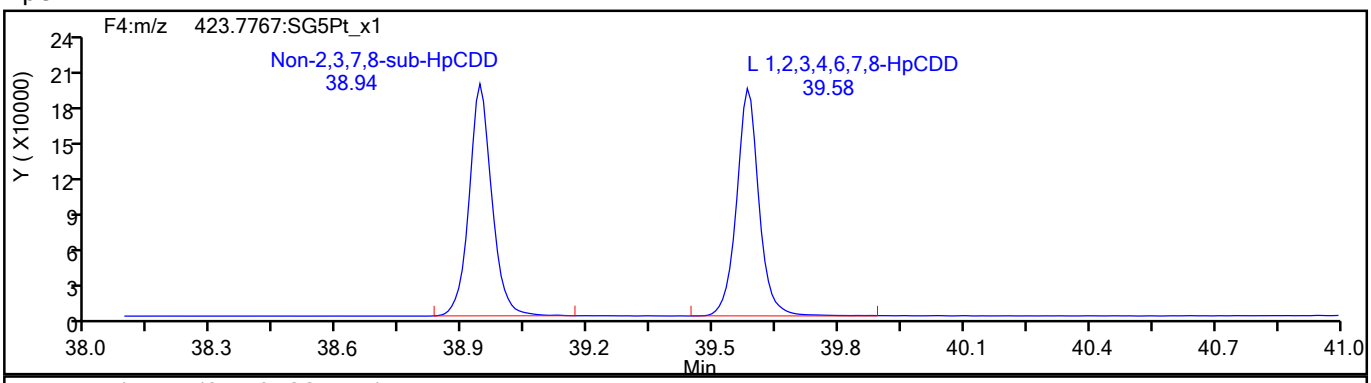

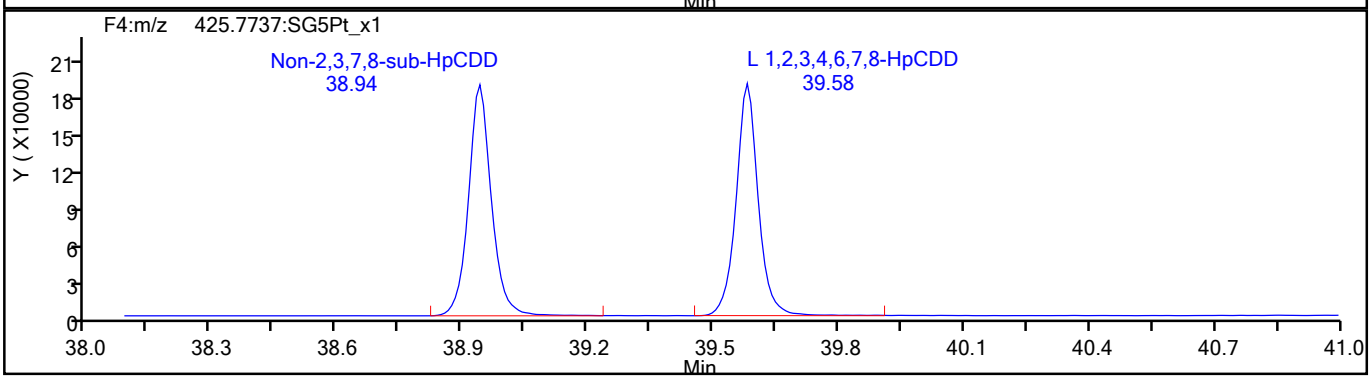

HpCDD Standards

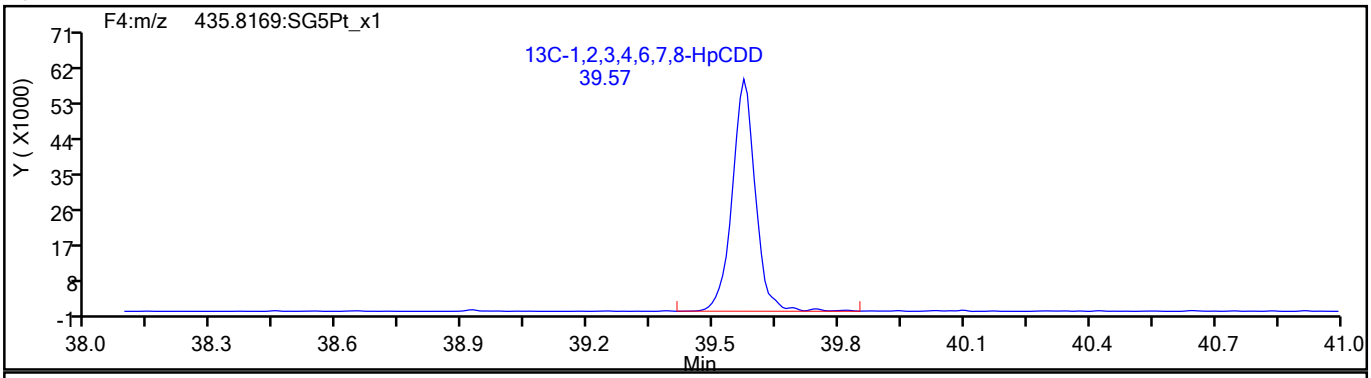

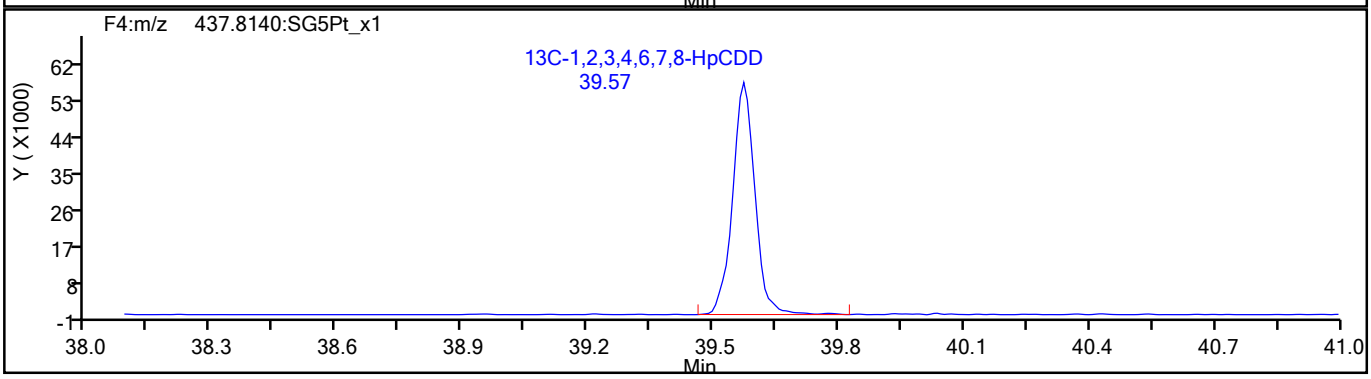

786778

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

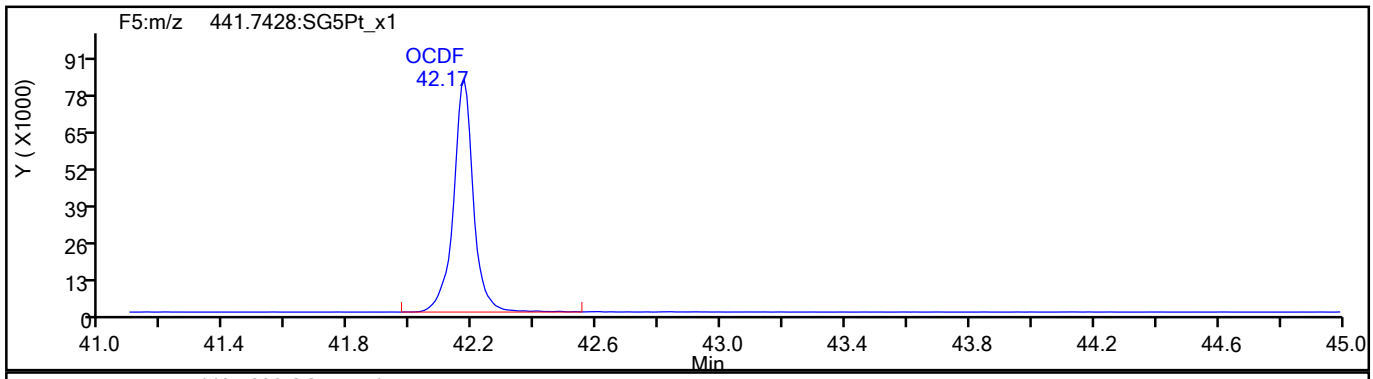

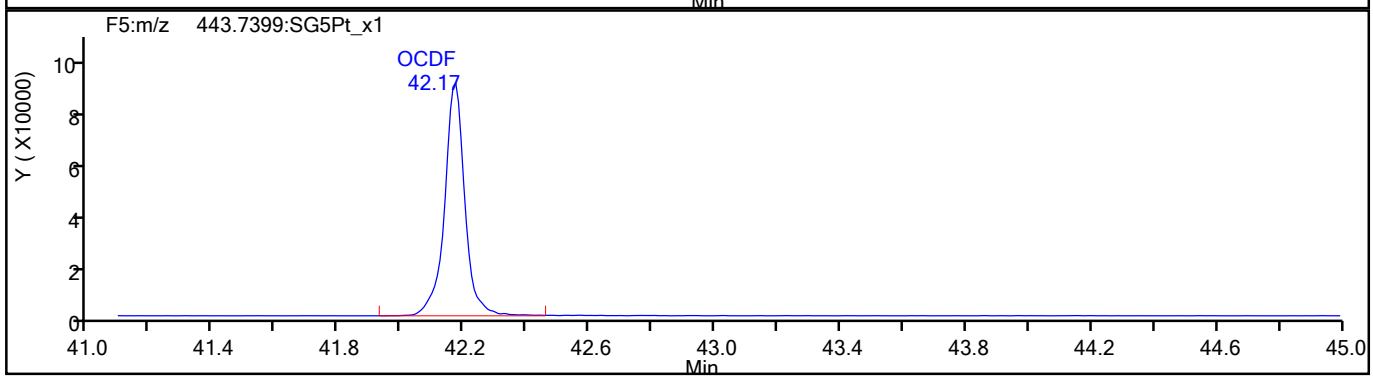

OCDF Standards

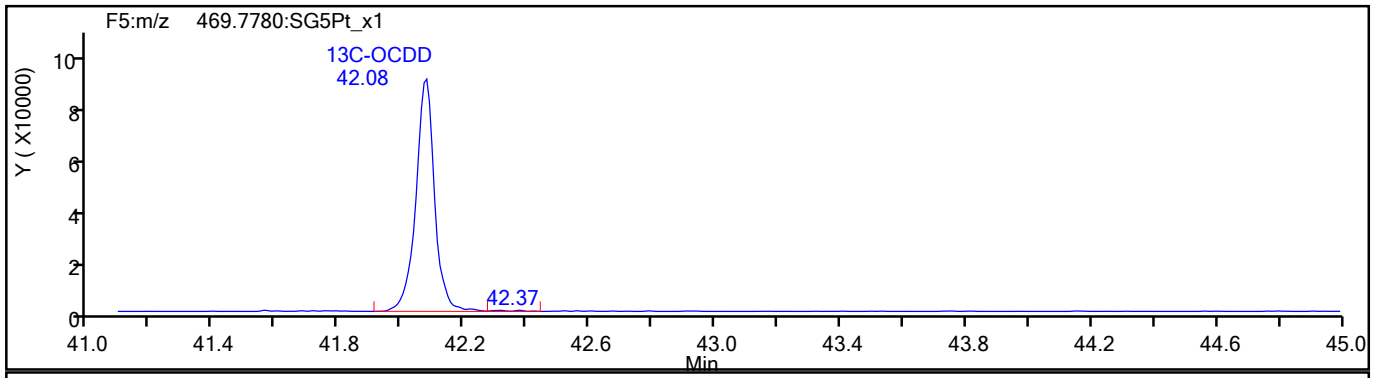

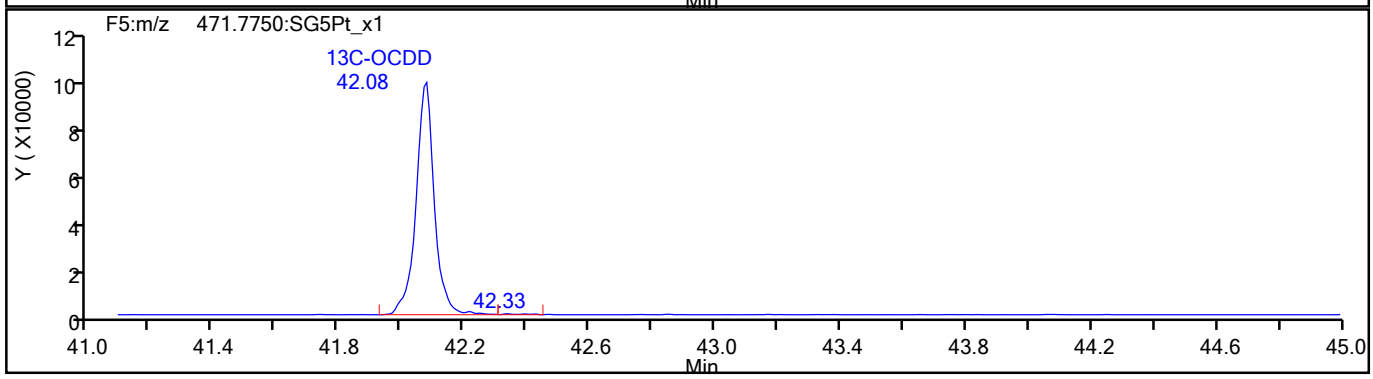

786779

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

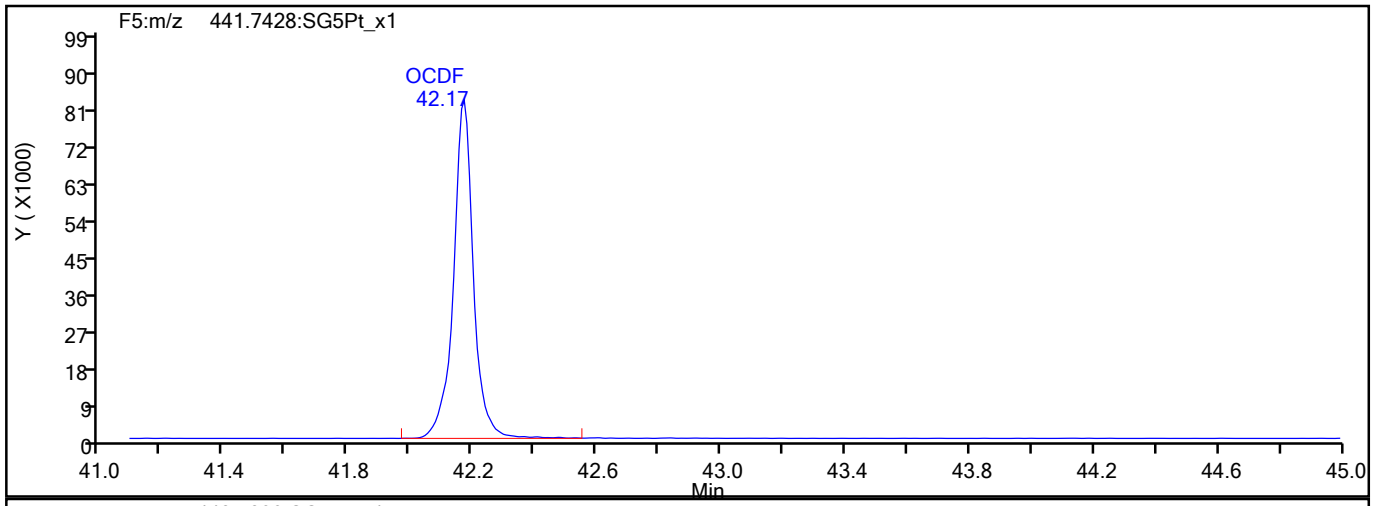

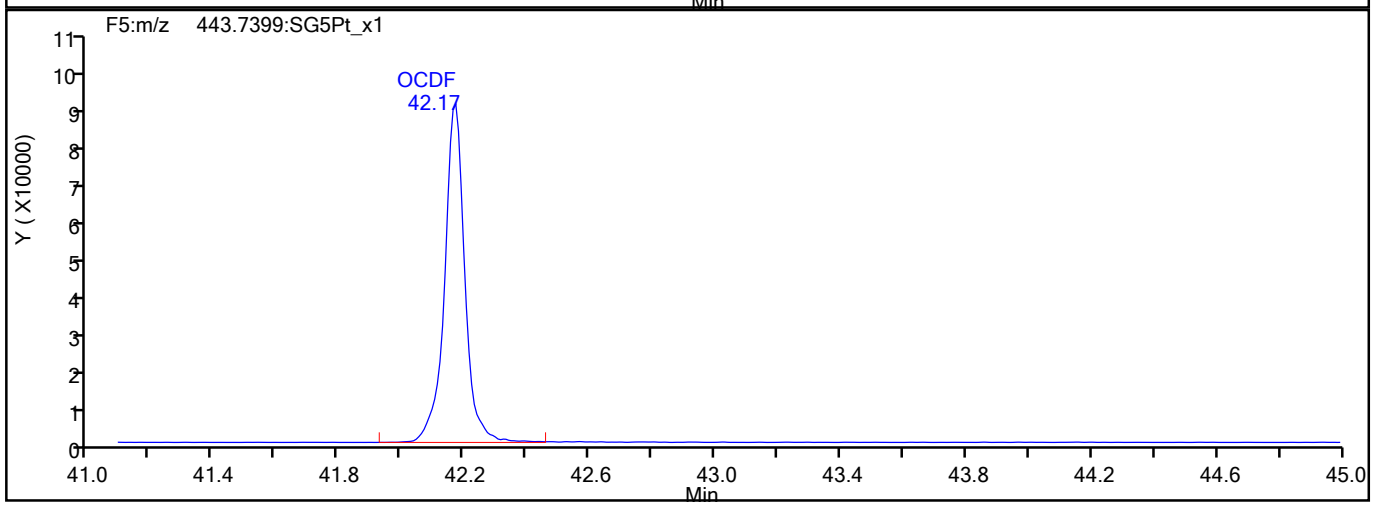

OCDF Interference Mass

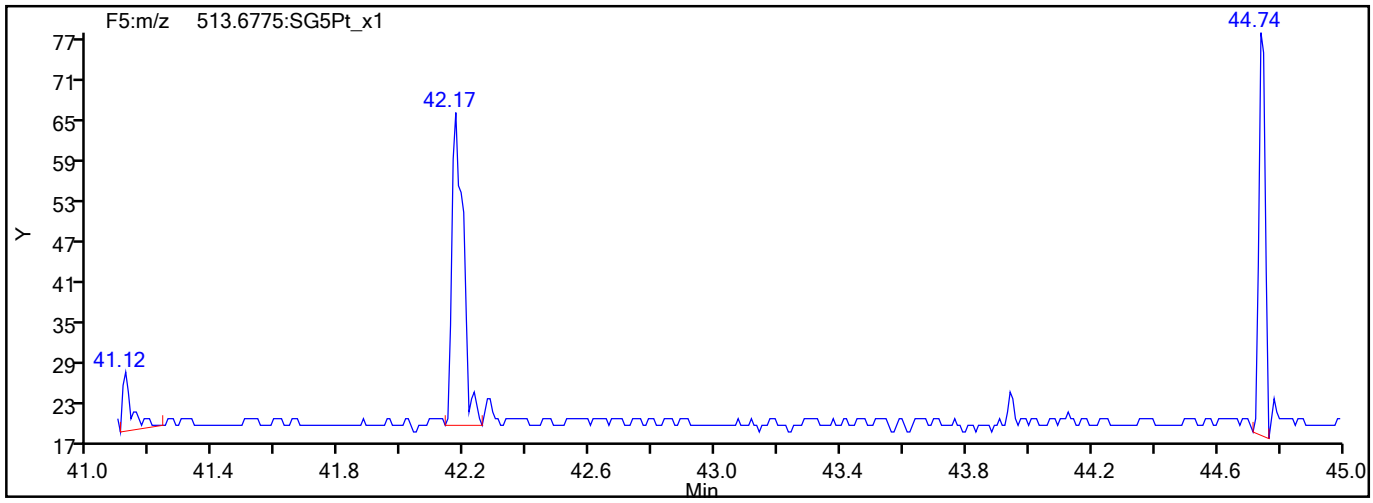

786780

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

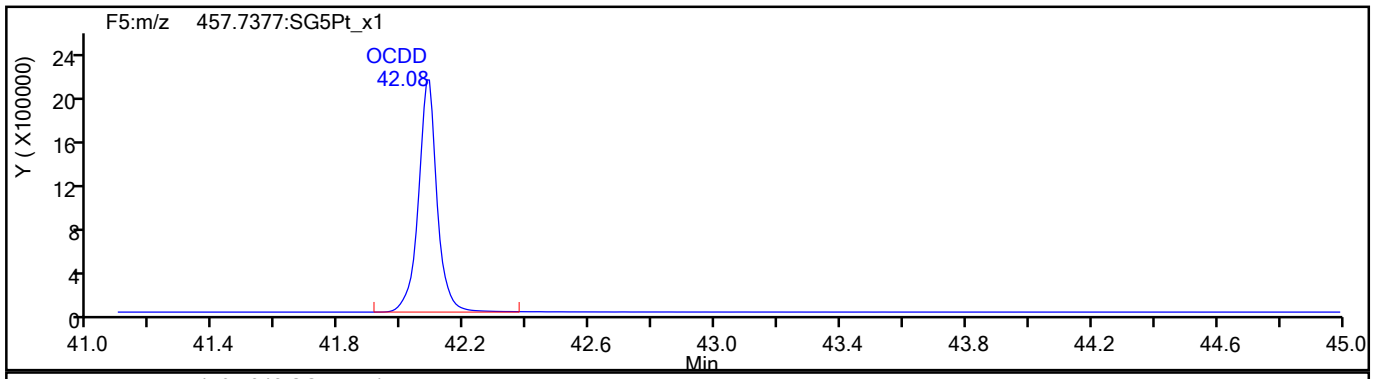

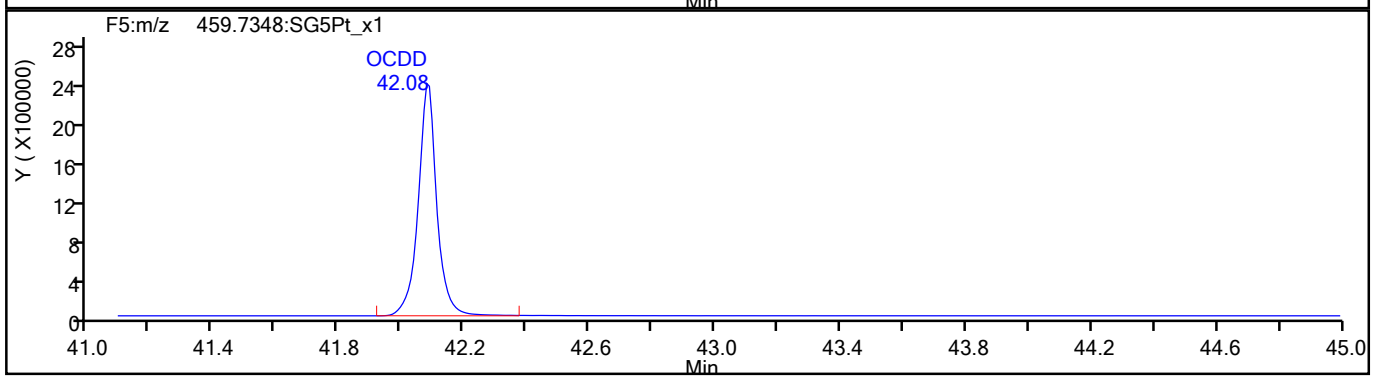

OCDD Standards

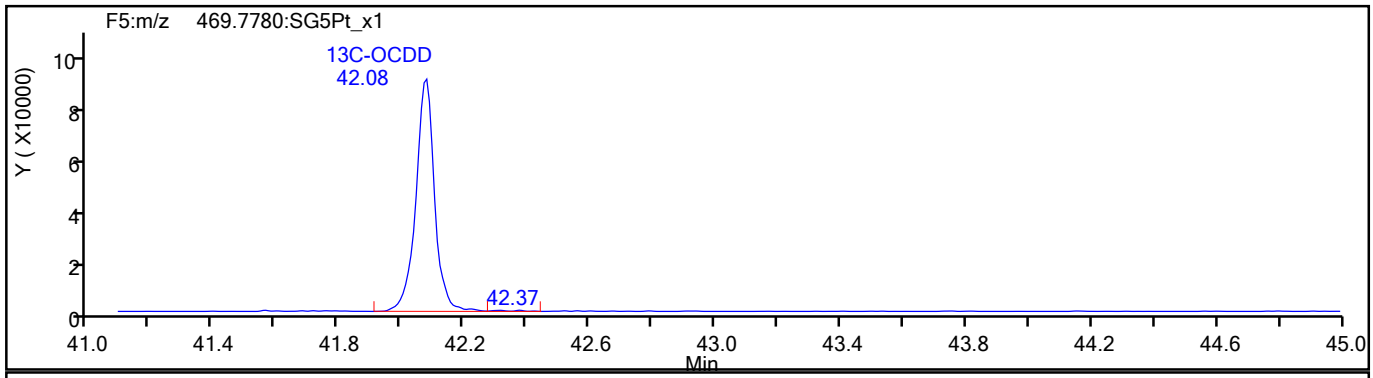

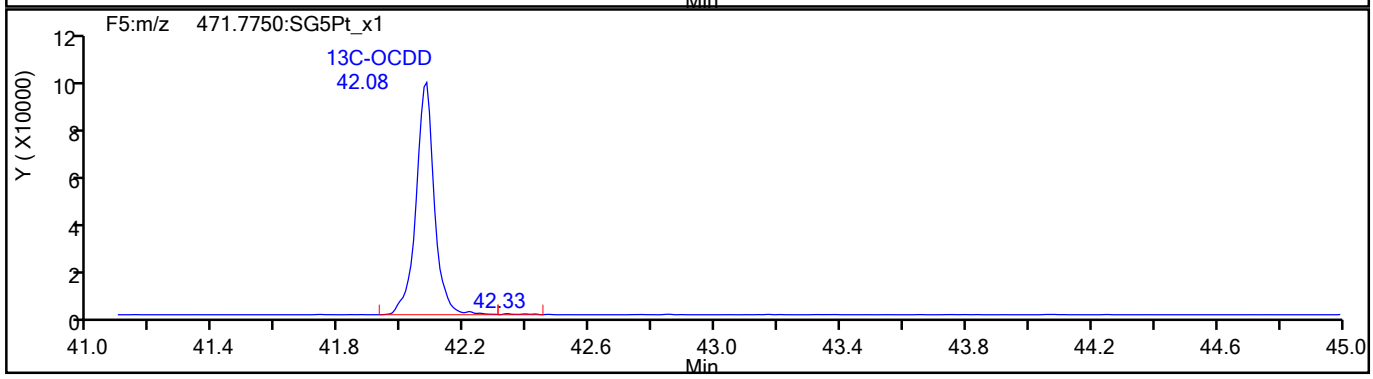

786781

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

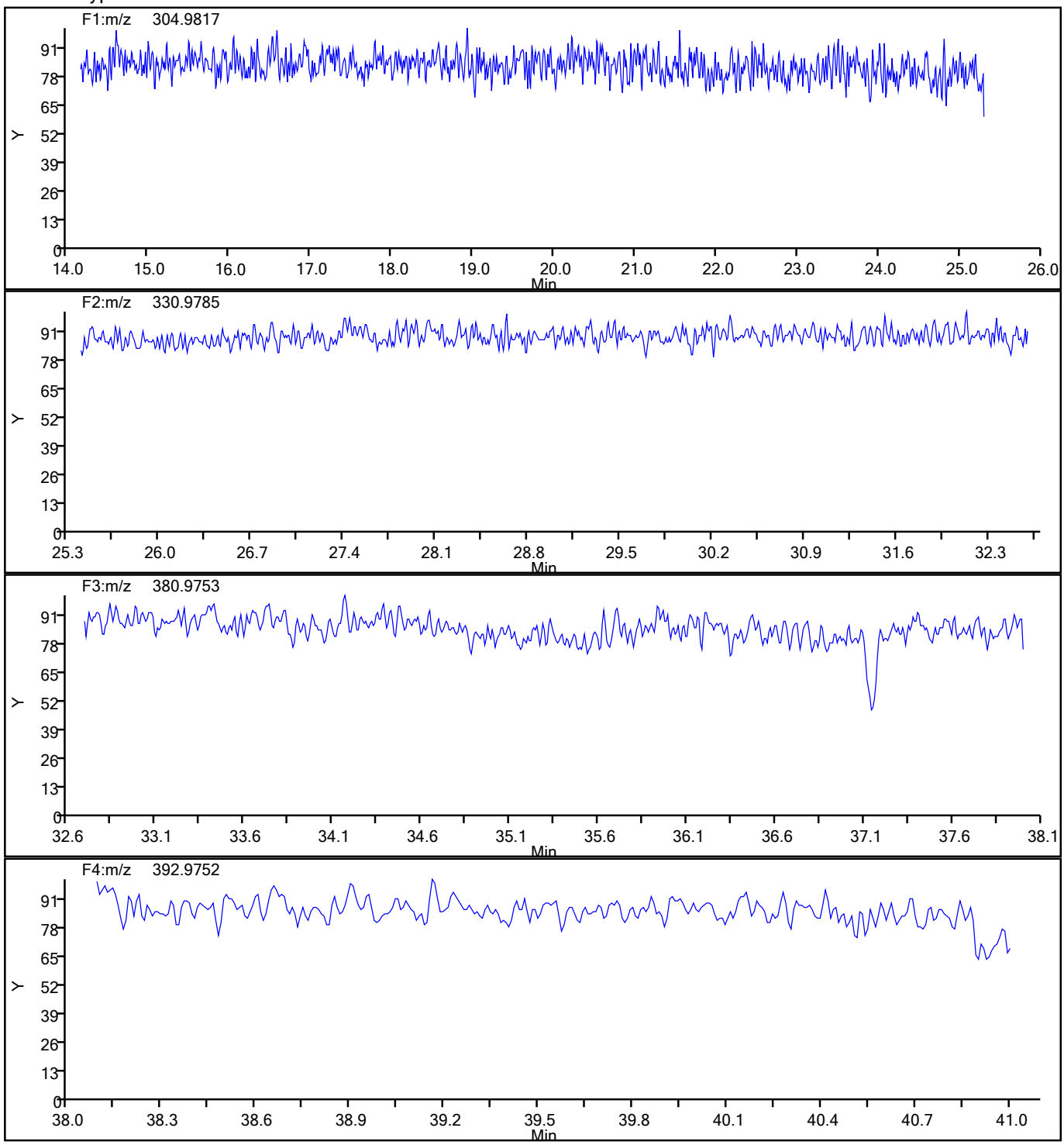

786782

Report Date: 20-Aug-2021 09:24:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_41.d		
Injection Date:	18-Aug-2021 21:12:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	38
Column Type:	DB-5	Column Dia:	0.32 mm

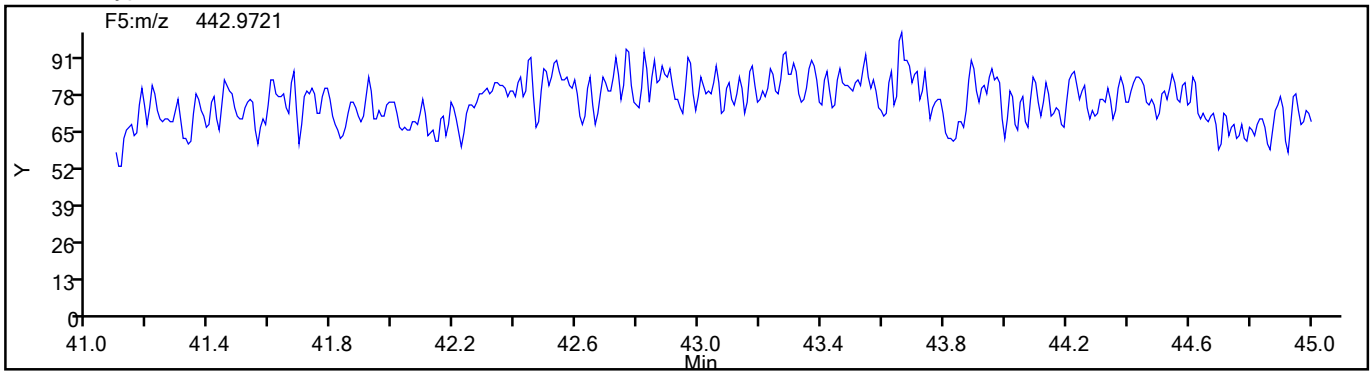

786783

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76769-A-27-B MS RA
Matrix: Sediment
Lab File ID: 24AU2111D2_011.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 9.97(g)
Date Analyzed: 08/24/2021 14:51
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	8400		7.9	7.9

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	65		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	86		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_011.d
Lims ID: 320-76769-A-27-B MS
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MS
Inject. Date: 24-Aug-2021 14:51:57 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 17:06:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.313	37290757	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.629	32417604	0.74	1.3327	65.2	65.2	0.6438	0.6438	65.23	
2,3,7,8-TCDF	17.643	1030151401	0.79	0.9978	3184.7	3184.7	2.981	2.981	31847	E
D 13C-2,3,7,8-TCDD	16.066	18864522	0.74	0.8749	57.8	57.8	10.6	10.6	57.82	
$ 37Cl4-2,3,7,8-TCDD	16.093	11106063		0.8648	34.4	34.4	0.5629	0.5629	86.09	
2,3,7,8-TCDD	16.093	222317338	0.79	1.0570	1115.0	1115.0	4.269	4.269	11150	E
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_011.d
Lims ID: 320-76769-A-27-B MS
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MS
Inject. Date: 24-Aug-2021 14:51:57 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 17:06:39

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.313	16.283	2		16046941	3522783	160725	401812	22		
333.9339	16.299	16.283	1		21243816	4715637	145599	363997	32	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.629	17.613	1	1.081	13742060	2632188	14171	35427	186		
317.9389	17.629	17.613	1	1.081	18675544	3280445	14104	35260	233	0.74(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.643	17.641	0	1.001	453905541	86379332	25457	63642	3393		
305.8987	17.643	17.641	0	1.001	576245860	111179021	44896	112240	2476	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.050	1	0.985	8052220	1858364	160725	401812	12		
333.9339	16.066	16.050	1	0.985	10812302	2455953	145599	363997	17	0.74(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.093	16.063	2	0.987	11106063	2552134	16041	40102	159		
2,3,7,8-TCDD											E
319.8965	16.093	16.077	1	1.002	98104792	22337139	45890	114725	487		
321.8936	16.093	16.077	1	1.002	124212546	28198006	31989	79972	881	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 24-Aug-2021 17:07:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_011.d		
Injection Date:	24-Aug-2021 14:51:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

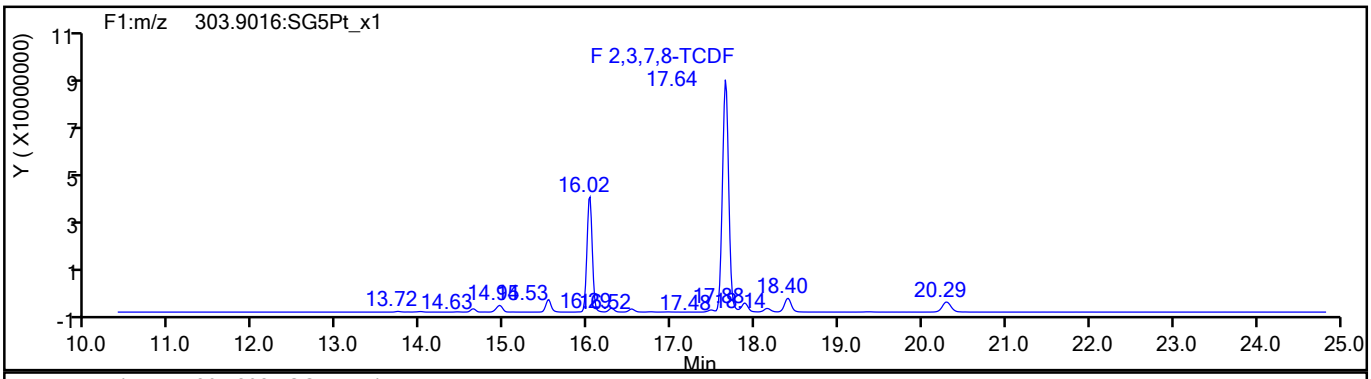

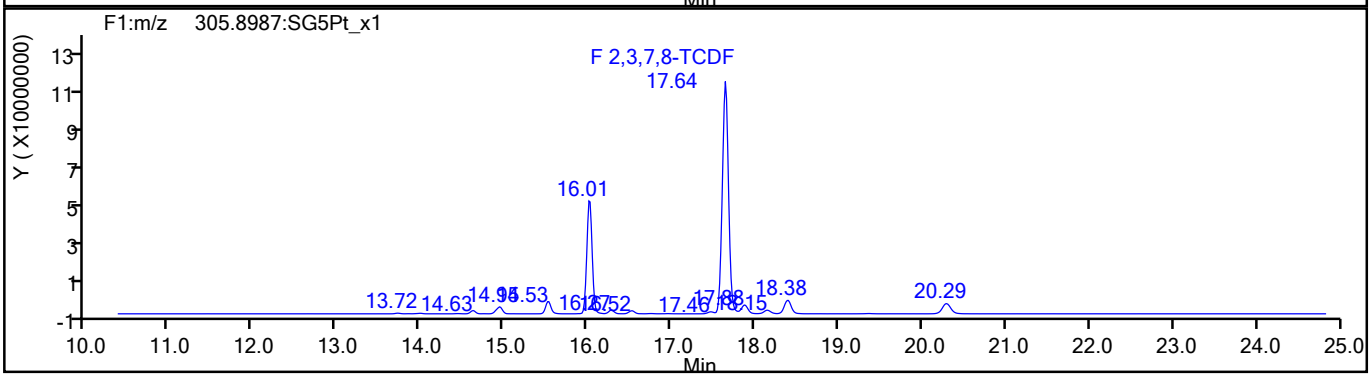

TCDF Standards

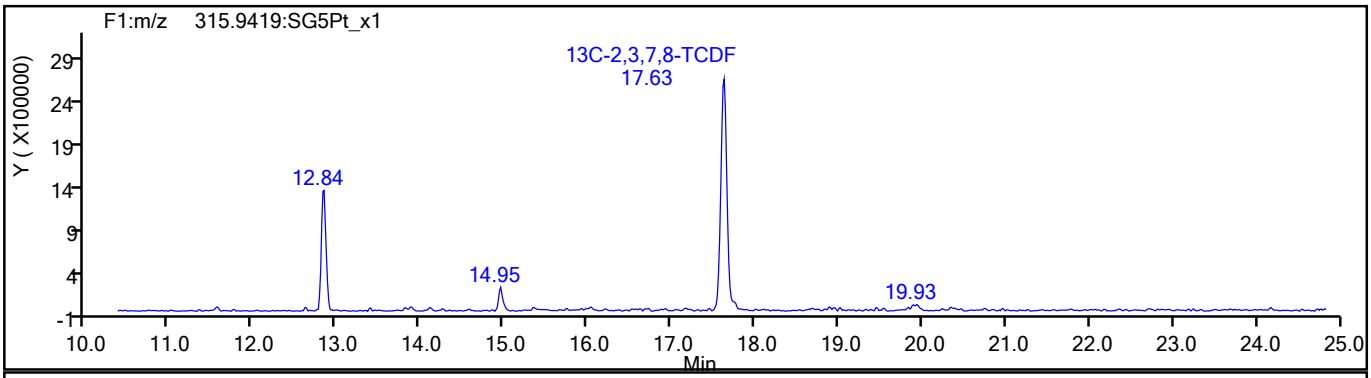

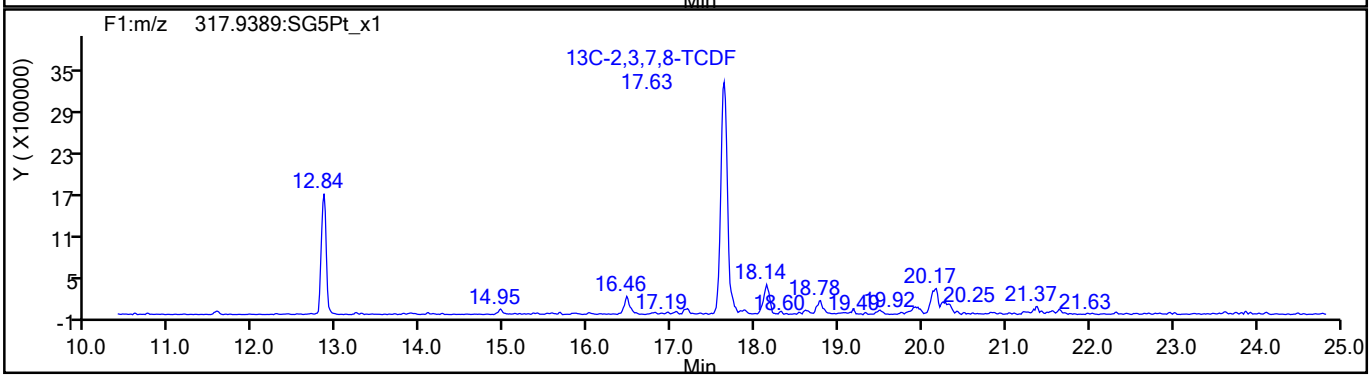

786787

Report Date: 24-Aug-2021 17:07:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_011.d		
Injection Date:	24-Aug-2021 14:51:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

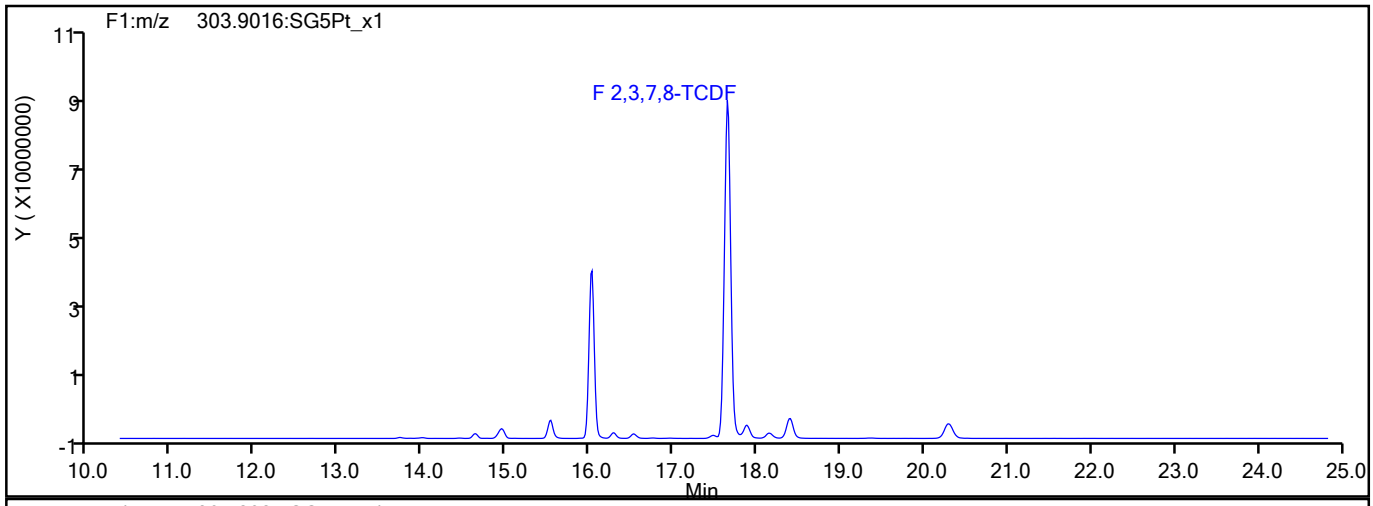

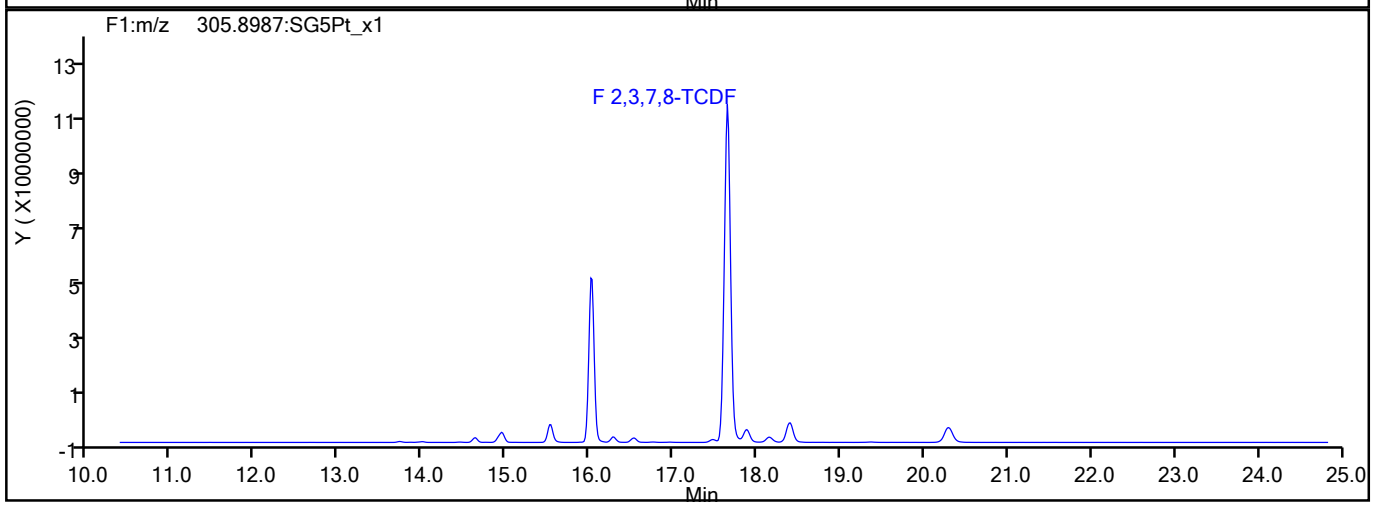

TCDF Interference Mass

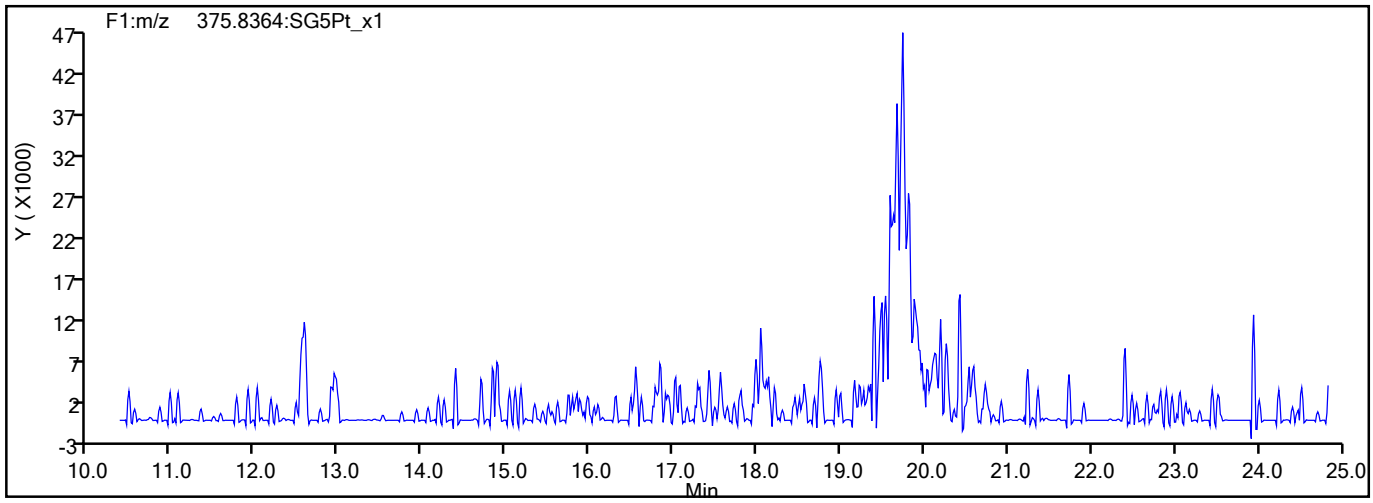

786788

Report Date: 24-Aug-2021 17:07:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_011.d		
Injection Date:	24-Aug-2021 14:51:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

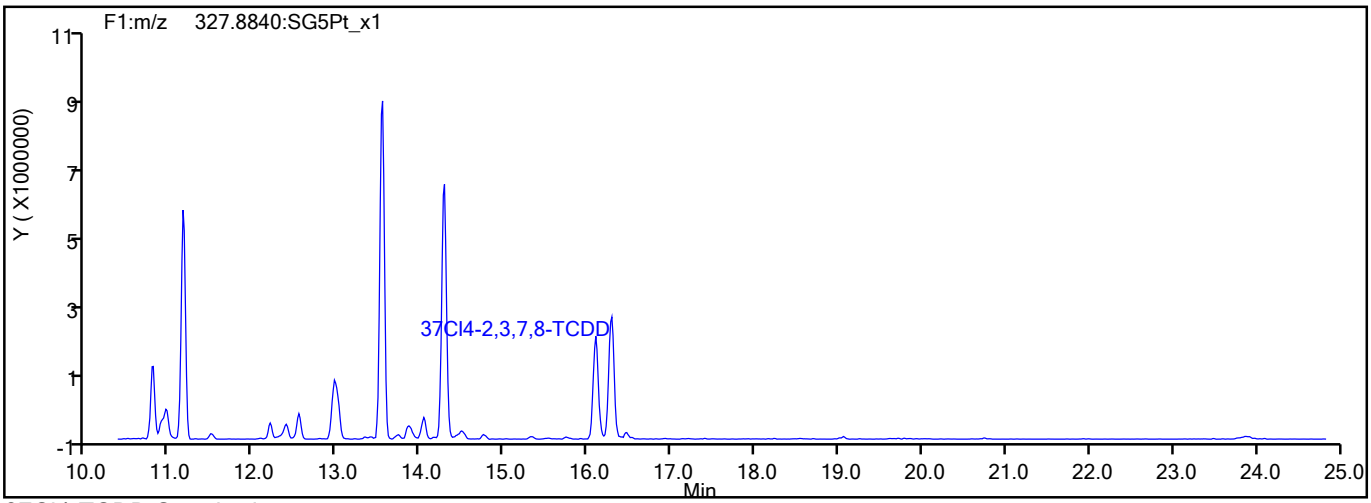

37Cl4-TCDD Standards

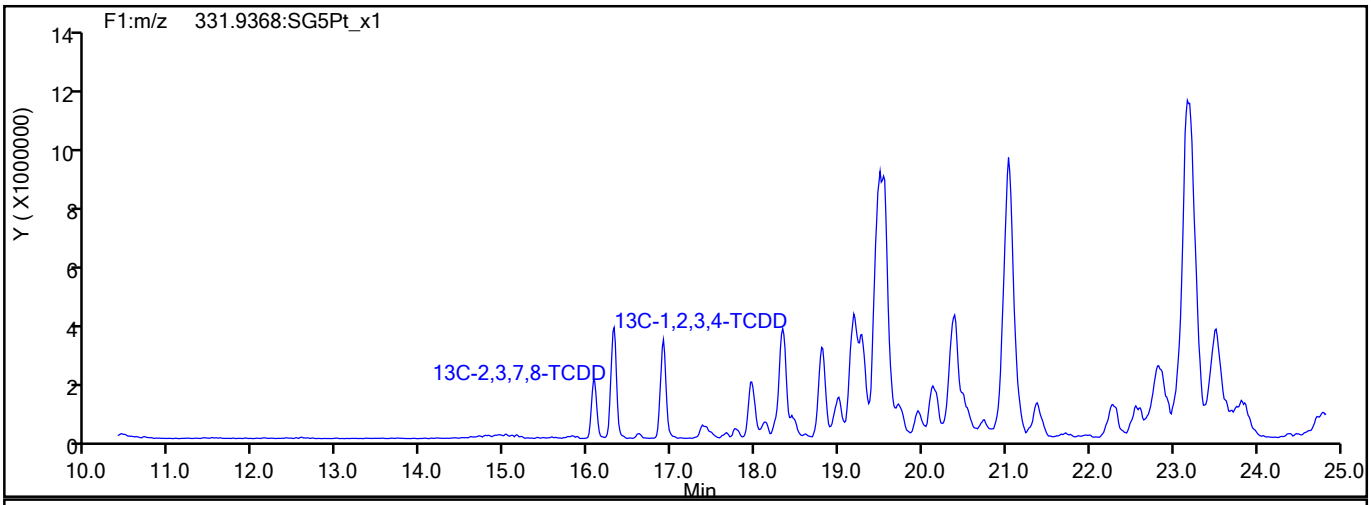

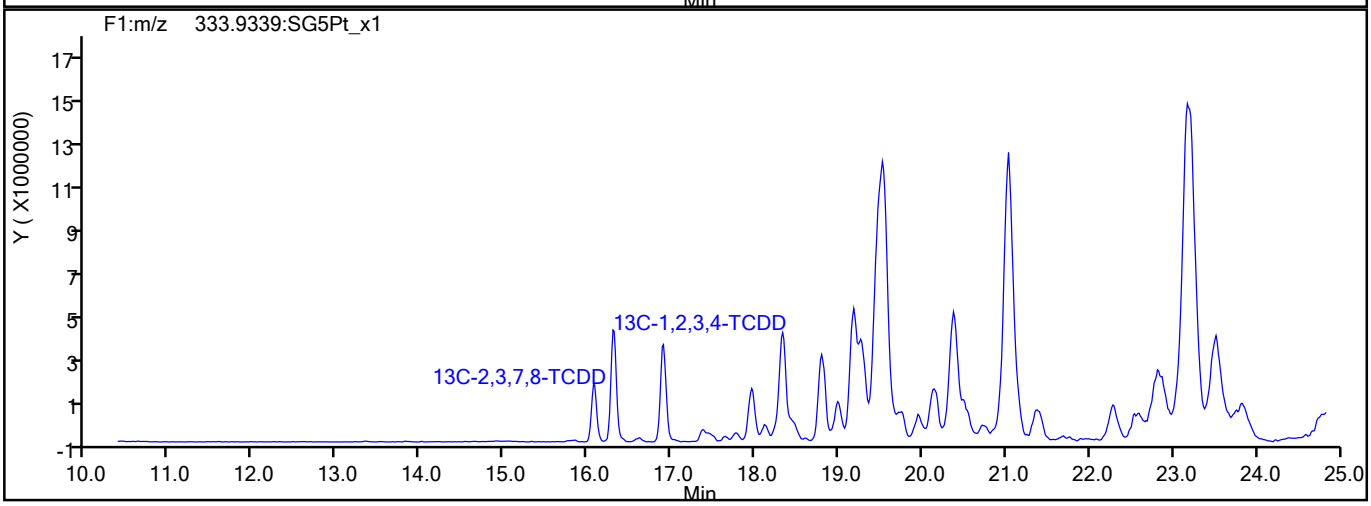

786789

Report Date: 24-Aug-2021 17:07:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_011.d		
Injection Date:	24-Aug-2021 14:51:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

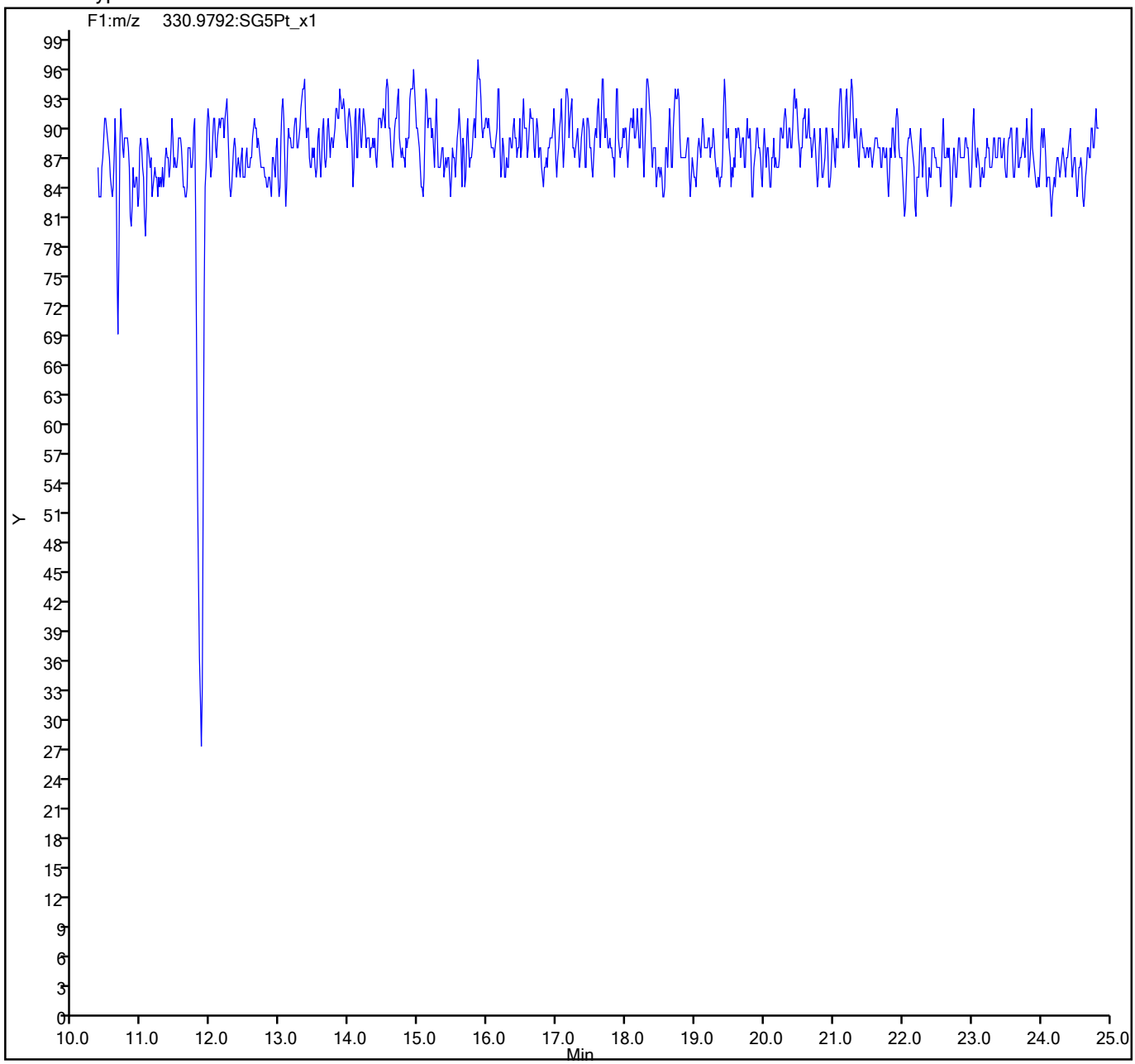

786790

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) MSD
Lab Sample ID: 320-76888-1 MSD
Matrix: Sediment
Lab File ID: 19au21dfs1_23.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.36(g)
Date Analyzed: 08/20/2021 06:21
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	25300		41	41
40321-76-4	1,2,3,7,8-PeCDD	508		90	24
57117-41-6	1,2,3,7,8-PeCDF	2550		90	17
57117-31-4	2,3,4,7,8-PeCDF	2150		90	18
39227-28-6	1,2,3,4,7,8-HxCDD	199		90	4.2
57653-85-7	1,2,3,6,7,8-HxCDD	202		90	4.7
19408-74-3	1,2,3,7,8,9-HxCDD	188		90	4.1
70648-26-9	1,2,3,4,7,8-HxCDF	3640		90	13
57117-44-9	1,2,3,6,7,8-HxCDF	1130		90	14
72918-21-9	1,2,3,7,8,9-HxCDF	238		90	14
60851-34-5	2,3,4,6,7,8-HxCDF	342		90	15
35822-46-9	1,2,3,4,6,7,8-HpCDD	262		90	1.9
67562-39-4	1,2,3,4,6,7,8-HpCDF	1310		90	4.3
55673-89-7	1,2,3,4,7,8,9-HpCDF	474		90	4.5
3268-87-9	OCDD	921		180	3.3
39001-02-0	OCDF	925		180	4.0
41903-57-5	Total TCDD	27600		41	41
30402-14-3	Total TCDF	254000		180	180
36088-22-9	Total PeCDD	508		90	24
30402-15-4	Total PeCDF	7520		90	18
34465-46-8	Total HxCDD	588		90	4.4
55684-94-1	Total HxCDF	5950		90	14
37871-00-4	Total HpCDD	326		90	1.9
38998-75-3	Total HpCDF	1990		90	4.4

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) MSD
Lab Sample ID: 320-76888-1 MSD
Matrix: Sediment
Lab File ID: 19au21dfs1_23.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.36(g)
Date Analyzed: 08/20/2021 06:21
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	40		25-164
89059-46-1	13C-2,3,7,8-TCDF	37		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	38		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	36		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	40		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	37		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	34	q	28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	44		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	37		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	35		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	34		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	38		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	39		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	44		26-138
114423-97-1	13C-OCDD	37	q	17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	123		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d
Lims ID: 320-76888-A-1-C MSD
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MSD
Inject. Date: 20-Aug-2021 06:21:00 ALS Bottle#: 0 Worklist Smp#: 21
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-c msd
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:07:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 16:59:30

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.449	138210	0.78	2.1E+04	10.0	10.0				a
D 13C-2,3,7,8-TCDF	20.470	68524	0.81	1.3459	3.684	3.684	0.7768	0.7768	36.84	
2,3,7,8-TCDF	20.487	28433784	0.84	1.0802	3841.4	3841.4	4.976	4.976	3.8E+005	E
A Non-2,3,7,8-sub-TCDF	19.851	23839604	0.83	1.0802	3220.7	3220.7	4.976	1819.2	0.00	Ma
S Total TCDF					7062.1	7062.1	4.976	4.976		
D 13C-2,3,7,8-TCDD	21.835	51215	0.66	0.9317	3.977	3.977	0.4530	0.4530	39.77	M
2,3,7,8-TCDD	21.870	3874224	0.80	1.0753	703.5	703.5	1.147	1.147	70346	Ea
$ 37Cl4-2,3,7,8-TCDD	21.861	68453		1.0083	4.912	4.912	1.763	1.763	123	M
A Non-2,3,7,8-sub-TCDD	20.684	356920	0.78	1.0753	64.8	64.8	1.147	64.8	0.00	
S Total TCDD					768.3	768.3	1.147	1.147		
D 13C-1,2,3,7,8-PeCDF	27.281	56214	1.55	1.1405	3.566	3.566	0.1095	0.1095	35.66	
1,2,3,7,8-PeCDF	27.315	419855	1.55	1.0543	70.8	70.8	0.4734	0.4734	1417	M
D 13C-2,3,4,7,8-PeCDF	28.788	61827	1.58	1.1253	3.975	3.975	0.1110	0.1110	39.75	
2,3,4,7,8-PeCDF	28.797	372480	1.58	1.0079	59.8	59.8	0.5072	0.5072	1196	
A F1 PeCDFs	24.634	6909	1.39	1.0311	1.135	1.135	0.0184	1.135	0.00	M
A Non-2,3,7,8-sub-PeCDF	28.173	471813	1.55	1.0311	78.1	77.5	0.4899	32.2	0.00	RQ
S Total PeCDF					209.9	209.3	0.4903	0.4903		RQ
D 13C-1,2,3,7,8-PeCDD	29.588	37227	1.51	0.7165	3.759	3.759	0.0399	0.0399	37.59	
1,2,3,7,8-PeCDD	29.613	55102	1.65	1.0465	14.1	14.1	0.6794	0.6794	283	
A Non-2,3,7,8-sub-PeCDD	28.478						0.6794	2.233		RQU
S Total PeCDD					14.1	14.1	0.6794	0.6794		
D 13C-1,2,3,4,7,8-HxCDF	34.920	56995	0.53	0.9648	4.433	4.433	0.0307	0.0307	44.33	
1,2,3,4,7,8-HxCDF	34.920	662470	1.31	1.1474	101.3	101.3	0.3694	0.3694	2026	
D 13C-1,2,3,6,7,8-HxCDF	35.072	52865	0.51	1.0708	3.705	3.705	0.0277	0.0277	37.05	
1,2,3,6,7,8-HxCDF	35.080	201850	1.32	1.2178	31.4	31.4	0.3863	0.3863	627	
D 13C-2,3,4,6,7,8-HxCDF	35.896	47514	0.56	1.0413	3.424	3.424	0.0285	0.0285	34.24	
2,3,4,6,7,8-HxCDF	35.913	54946	1.31	1.2145	9.522	9.522	0.4273	0.4273	190	M
D 13C-1,2,3,7,8,9-HxCDF	36.772	44941	0.48	0.9731	3.466	3.466	0.0305	0.0305	34.66	
1,2,3,7,8,9-HxCDF	36.789	36983	1.29	1.2401	6.636	6.636	0.3791	0.3791	133	M
A Non-2,3,7,8-sub-HxCDF	35.009	102459	1.24	1.2049	17.3	16.8	0.3888	7.987	0.00	RQMa
S Total HxCDF					166.1	165.6	0.3905	0.3905		RQ

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.578	133245	1.23	1.8E+04	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	36.098	37529	1.26	0.7587	3.712	3.712	0.0431	0.0431	37.12	
1,2,3,4,7,8-HxCDD	36.107	22054	1.21	1.0608	5.540	5.540	0.1173	0.1173	111	
D 13C-1,2,3,6,7,8-HxCDD	36.208	38825	1.24	0.8593	3.694	3.391	0.0381	0.0381	36.94	RQ
1,2,3,6,7,8-HxCDD	36.225	23579	1.17	0.9933	5.613	5.613	0.1316	0.1316	112	
1,2,3,7,8,9-HxCDD	36.587	23129	1.15	1.1094	5.224	5.224	0.1149	0.1149	104	
A Non-2,3,7,8-sub-HxCDD	35.375						0.1209	0.5320		RQU
S Total HxCDD					16.4	16.4	0.1213	0.1213		
D 13C-1,2,3,4,6,7,8-HpCDF	38.594	38033	0.45	0.7359	3.878	3.878	0.0382	0.0382	38.78	
1,2,3,4,6,7,8-HpCDF	38.611	199609	1.05	1.4421	36.4	36.4	0.1190	0.1190	728	
D 13C-1,2,3,4,7,8,9-HpCDF	39.831	40572	0.41	0.6854	4.443	4.443	0.0411	0.0411	44.43	
1,2,3,4,7,8,9-HpCDF	39.857	70025	1.04	1.3092	13.2	13.2	0.1243	0.1243	264	
A Non-2,3,7,8-sub-HpCDF	39.245	31032	1.05	1.3756	5.740	5.740	0.1214	5.740	0.00	
S Total HpCDF					55.3	55.3	0.1216	0.1216		
D 13C-1,2,3,4,6,7,8-HpCDD	39.536	33956	1.02	0.6745	3.778	3.778	0.0440	0.0440	37.78	
1,2,3,4,6,7,8-HpCDD	39.553	25965	1.02	1.0503	7.280	7.280	0.0531	0.0531	146	
A Non-2,3,7,8-sub-HpCDD	39.241	6349	1.13	1.0503	1.780	1.780	0.0531	1.780	0.00	
S Total HpCDD					9.061	9.061	0.0531	0.0531		
D 13C-OCDD	42.041	53507	0.89	0.5446	8.025	7.373	0.0601	0.0601	40.12	RQ
OCDF	42.134	98732	0.92	1.3168	25.8	25.8	0.1102	0.1102	258	
OCDD	42.049	79235	0.95	1.0620	25.6	25.6	0.0920	0.0920	256	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d
Lims ID: 320-76888-A-1-C MSD
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MSD
Inject. Date: 20-Aug-2021 06:21:00 ALS Bottle#: 0 Worklist Smp#: 21
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-c msd
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:07:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 16:59:30

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.449	21.395	3		60502	7748	213	532	36		a
333.9338	21.415	21.395	1		77708	10425	94	235	111	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.470	20.365	6	0.954	30577	5056	319	797	16		
317.9389	20.461	20.365	6	0.954	37947	6590	441	1102	15	0.81(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.487	20.408	5	1.001	13021278	1692235	1119	2797	1512		
305.8987	20.487	20.408	5	1.001	15412506	1998792	1385	3462	1443	0.84(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											Ma
303.9016	17.505	19.851	-140	0.855	106502	16483	1119	2797	15		
305.8987	17.497	19.851	-141	0.855	133459	20220	1385	3462	15	0.80(0.65-0.89)	
303.9016	17.961	19.851	-113	0.877	591745	92100	1119	2797	82		
305.8987	17.961	19.851	-113	0.877	722111	112767	1385	3462	81	0.82(0.65-0.89)	
303.9016	18.450	19.851	-84	0.901	731123	82962	1119	2797	74		M
305.8987	18.442	19.851	-84	0.901	853786	99475	1385	3462	72	0.86(0.65-0.89)	
303.9016	18.880	19.851	-58	0.922	455938	62064	1119	2797	55		
305.8987	18.880	19.851	-58	0.922	535530	77917	1385	3462	56	0.85(0.65-0.89)	M
303.9016	19.258	19.851	-35	0.941	603486	85468	1119	2797	76		
305.8987	19.258	19.851	-35	0.941	736111	106921	1385	3462	77	0.82(0.65-0.89)	
303.9016	19.757	19.851	-6	0.965	6089350	847511	1119	2797	757		
305.8987	19.748	19.851	-6	0.965	7375844	1002645	1385	3462	724	0.83(0.65-0.89)	
303.9016	20.178	19.851	20	0.986	289291	39805	1119	2797	36		
305.8987	20.169	19.851	19	0.985	366265	49828	1385	3462	36	0.79(0.65-0.89)	
303.9016	21.269	19.851	85	1.039	909444	118945	1119	2797	106		
305.8987	21.269	19.851	85	1.039	1104797	146602	1385	3462	106	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.741	19.851	113	1.062	162481	19854	1119	2797	18		
305.8987	21.741	19.851	113	1.062	217585	26688	1385	3462	19	0.75(0.65-0.89)	
303.9016	23.650	19.851	227	1.155	838734	147936	1119	2797	132		a
305.8987	23.650	19.851	227	1.155	1016022	177105	1385	3462	128	0.83(0.65-0.89)	
13C-2,3,7,8-TCDD											M
331.9368	21.835	21.716	7	1.018	20413	3804	213	532	18		M
333.9338	21.844	21.716	8	1.018	30802	5313	94	235	57	0.66(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	21.870	21.733	8	1.002	1721088	240273	316	790	760		a
321.8936	21.870	21.733	8	1.002	2153136	290245	134	335	2166	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											M
327.8847	21.861	21.799	4	1.019	68453	9214	1292	3230	7		M
A Non-2,3,7,8-sub-TCDD											
319.8965	22.497	20.684	109	1.030	156488	19243	316	790	61		
321.8936	22.515	20.684	110	1.031	200432	24996	134	335	187	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.281	27.251	2	1.272	34154	5359	48	120	112		
353.8970	27.281	27.251	2	1.272	22060	3697	43	107	86	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.315	27.276	2	1.001	255428	36339	108	270	336		
341.8567	27.306	27.276	2	1.001	164427	23624	73	182	324	1.55(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.788	28.757	2	1.342	37845	5744	48	120	120		
353.8970	28.797	28.757	2	1.343	23982	3099	43	107	72	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.797	28.791	0	1.000	228170	32104	108	270	297		
341.8567	28.805	28.791	1	1.001	144310	20942	73	182	287	1.58(1.32-1.78)	
A F1 PeCDFs											M
339.8597	24.114	24.634	-31	0.884	4024	771	2	5	386		
341.8567	24.096	24.634	-32	0.883	2885	601	5	12	120	1.39(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.841	28.173	-140	0.947	119912	18630	108	270	173		
341.8567	25.833	28.173	-140	0.947	75920	12658	73	182	173	1.58(1.32-1.78)	
339.8597	26.734	28.173	-86	0.980	14944	2070	108	270	19		
341.8567	26.750	28.173	-85	0.981	9505	1272	73	182	17	1.57(1.32-1.78)	
339.8597	27.172	28.173	-60	0.996	24297	5589	108	270	52		
	Empc Correction				20714	4935	108	270	46		
341.8567	27.163	28.173	-60	0.996	13364	3184	73	182	44	1.82(1.32-1.78)	
339.8597	27.887	28.173	-17	1.022	78953	12923	108	270	120		
341.8567	27.879	28.173	-18	1.022	48409	7766	73	182	106	1.63(1.32-1.78)	
339.8597	29.141	28.173	58	1.068	43351	5702	108	270	53		
341.8567	29.141	28.173	58	1.068	25728	3776	73	182	52	1.68(1.32-1.78)	
339.8597	30.859	28.173	161	1.131	13466	1661	108	270	15		
341.8567	30.817	28.173	158	1.130	7547	956	73	182	13	1.78(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	29.588	29.574	1	1.379	22368	3016	18	45	168		
369.8919	29.596	29.574	1	1.380	14859	2118	3	7	706	1.51(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.613	29.616	0	1.001	34290	4663	18	45	259		
357.8516	29.596	29.616	-1	1.000	20812	3125	128	320	24	1.65(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.478	28.478	0	0.963	1176	162	18	45			
357.8516	28.478	28.478	0	0.963	7524	1272	128	320		0.16(1.32-1.78)	
	Empc Correction				758	104	128	320	0		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.920	34.906	1	0.955	19789	4295	13	32	330		
385.8610	34.895	34.906	-1	0.954	37206	7738	26	65	298	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.920	34.922	0	1.000	375459	70118	112	280	626		
375.8178	34.920	34.922	0	1.000	287011	53983	92	230	587	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.072	35.066	0	0.959	17755	3322	13	32	256		
385.8610	35.063	35.066	0	0.959	35110	7518	26	65	289	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.080	35.082	0	1.000	114870	21691	112	280	194		
375.8178	35.080	35.082	0	1.000	86980	15842	92	230	172	1.32(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.896	35.890	0	0.981	17022	3468	13	32	267		
385.8610	35.871	35.890	-1	0.981	30492	6360	26	65	245	0.56(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.913	35.907	0	1.000	31204	6157	112	280	55		M
375.8178	35.905	35.907	0	1.000	23742	5195	92	230	56	1.31(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.772	36.782	-1	1.005	14551	3798	13	32	292		
385.8610	36.780	36.782	0	1.006	30390	7050	26	65	271	0.48(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.789	36.791	0	1.000	20849	5322	112	280	48		
375.8178	36.789	36.791	0	1.000	16134	4109	92	230	45	1.29(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.430	35.009	-95	0.957	27974	4493	112	280	40		
375.8178	33.455	35.009	-93	0.958	20702	3187	92	230	35	1.35(1.05-1.43)	
373.8208	34.289	35.009	-43	0.982	9138	1772	112	280	16		
375.8178	34.272	35.009	-44	0.981	6541	1211	92	230	13	1.40(1.05-1.43)	
373.8208	35.779	35.009	46	1.025	4871	1348	112	280	12		M
375.8178	35.779	35.009	46	1.025	4223	1010	92	230	11	1.15(1.05-1.43)	
373.8208	36.889	35.009	113	1.056	18936	4271	112	280	38		M
	Empc Correction				16059	4028	112	280	36		
375.8178	36.889	35.009	113	1.056	12951	3249	92	230	35	1.46(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.578	36.581	0		73478	17452	29	72	602		
403.8529	36.578	36.581	0		59767	15246	14	35	1089	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.098	36.092	0	0.987	20908	5002	29	72	172		
403.8529	36.098	36.092	0	0.987	16621	4239	14	35	303	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.107	36.109	0	1.000	12061	2852	20	50	143		
391.8127	36.107	36.109	0	1.000	9993	2495	26	65	96	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											RQ
401.8559	36.208	36.210	0	0.990	24960	5055	29	72	174		
	Empc Correction				21492	4642	29	72	160		
403.8529	36.216	36.210	0	0.990	17333	3744	14	35	267	1.44(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.225	36.227	0	1.000	12709	2772	20	50	139		
391.8127	36.225	36.227	0	1.000	10870	2331	26	65	90	1.17(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.587	36.597	-1	1.014	12363	2971	20	50	149		
391.8127	36.587	36.597	-1	1.014	10766	2572	26	65	99	1.15(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											U
389.8158	34.238	35.375	-68	0.946	285	75	20	50	4		
391.8127	34.230	35.375	-69	0.945	1279	205	26	65	8	0.22(1.05-1.43)	
	Empc Correction				229	60	26	65	0		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.594	38.596	0	1.055	11871	3298	22	55	150		
419.8220	38.586	38.596	-1	1.055	26162	7013	15	37	468	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.611	38.618	0	1.000	102272	25855	39	97	663		
409.7788	38.602	38.618	-1	1.000	97337	24500	32	80	766	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.831	39.850	-1	1.089	11895	2988	22	55	136		
419.8220	39.848	39.850	0	1.089	28677	7893	15	37	526	0.41(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.857	39.872	-1	1.001	35702	9875	39	97	253		
409.7788	39.857	39.872	-1	1.001	34323	9081	32	80	284	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.964	39.245	-17	1.010	15859	3968	39	97	102		
409.7788	38.964	39.245	-17	1.010	15173	4339	32	80	136	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.536	39.547	-1	1.081	17168	4282	26	65	165		
437.8140	39.536	39.547	-1	1.081	16788	4687	13	32	361	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.553	39.561	0	1.000	13128	3640	12	30	303		
425.7737	39.553	39.561	0	1.000	12837	3417	8	20	427	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.905	39.241	-20	0.984	3366	1040	12	30	87		
425.7737	38.914	39.241	-20	0.984	2983	835	8	20	104	1.13(0.88-1.20)	
13C-OCDD											RQ
469.7780	42.041	42.036	0	1.149	29922	8735	34	85	257		
	Empc Correction				25196	5349	34	85	157		
471.7750	42.041	42.036	0	1.149	28311	6011	9	22	668	1.06(0.76-1.02)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											
441.7428	42.134	42.137	0	1.002	47366	11244	14	35	803		
443.7399	42.134	42.137	0	1.002	51366	12876	29	72	444	0.92(0.76-1.02)	
OCDD											
457.7377	42.049	42.053	0	1.000	38506	8593	14	35	614		
459.7348	42.049	42.053	0	1.000	40729	9402	15	37	627	0.95(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	68524	11646

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		10.000	68524	11646

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.505	106502	16483	133459	20220	32.4	0.80	
17.961	591745	92100	722111	112767	177.5	0.82	
18.450	731123	82962	853786	99475	214.1	0.86	Ma
18.880	455938	62064	535530	77917	133.9	0.85	M
19.258	603486	85468	736111	106921	181.0	0.82	
19.757	6089350	847511	7375844	1002645	1819.2	0.83	
20.178	289291	39805	366265	49828	88.6	0.79	
21.269	909444	118945	1104797	146602	272.1	0.82	
21.741	162481	19854	217585	26688	51.3	0.75	
23.650	838734	147936	1016022	177105	250.6	0.83	a
Signal Totals:							
	10778094	1513128	13061510	1820168			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23839604	3333296				0.83	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3220.7 = (23839604 * 10.000) / (68524 * 1.080)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	51215	9117

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		10.000	51215	9117

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.497	156488	19243	200432	24996	64.8	0.78	
Signal Totals:							
	156488	19243	200432	24996			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	356920	44239				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 64.808 = (356920 * 10.000) / (51215 * 1.075)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	56214	9056
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	61827	8843

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	59020	8949

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.114	4024	771	2885	601	1.14	1.39	M
Signal Totals:							
	4024	771	2885	601			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6909	1372				1.39	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.135 = (6909 * 10.000) / (59020 * 1.031)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	56214	9056
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	61827	8843

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	59020	8949

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.841	119912	18630	75920	12658	32.2	1.58	
26.734	14944	2070	9505	1272	4.02	1.57	
27.172	24297	5589	13364	3184	6.19	1.82	RQ
27.172	20714	4935	13364	3184	5.60		Empc Correction
27.887	78953	12923	48409	7766	20.9	1.63	
29.141	43351	5702	25728	3776	11.4	1.68	
30.859	13466	1661	7547	956	3.45	1.78	
Signal Totals:							
	291340	45921	180473	29612			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	475396	76187				1.63	RQ
	471813	75533					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 78.122 = (475396 * 10.000) / (59020 * 1.031)
Empc Amount: 77.533 = (471813 * 10.000) / (59020 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	37227	5134

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		10.000	37227	5134

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.194	1176	162	7524	1272	2.23	0.16	RQ
30.194	1176	162	758	104			Empc Correction

Compound is Marked ND

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	56995	12033
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	52865	10840
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	47514	9828
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	44941	10848

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		10.000	50578	10887

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.430	27974	4493	20702	3187	7.99	1.35	
34.289	9138	1772	6541	1211	2.57	1.40	
35.779	4871	1348	4223	1010	1.49	1.15	Ma
36.889	18936	4271	12951	3249	5.23	1.46	RQMa
36.889	16059	4028	12951	3249	4.76		Empc Correction
Signal Totals:							
	58042	11641	44417	8657			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	105336	20541				1.37	RQMa
	102459	20298					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 17.284 = (105336 * 10.000) / (50578 * 1.205)

Empc Amount: 16.812 = (102459 * 10.000) / (50578 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	37529	9241
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	42293	8799
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		10.000	39911	9020

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.238	285	75	1279	205	0.3716	0.22	RQ
34.238	285	75	229	60			Empc Correction
35.332	1383	240	856	180	0.5320	1.62	RQ
35.332	1061	223	856	180			Empc Correction

Compound is Marked ND

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	38033	10311
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	40572	10881

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		10.000	39302	10596

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.964	15859	3968	15173	4339	5.74	1.05	
Signal Totals:							
	15859	3968	15173	4339			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	31032	8307				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 5.740 = (31032 * 10.000) / (39302 * 1.376)

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	33956	8969

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		10.000	33956	8969

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.905	3366	1040	2983	835	1.78	1.13	
Signal Totals:							
	3366	1040	2983	835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6349	1875				1.13	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.780 = (6349 * 10.000) / (33956 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 18.450 Area = 731123

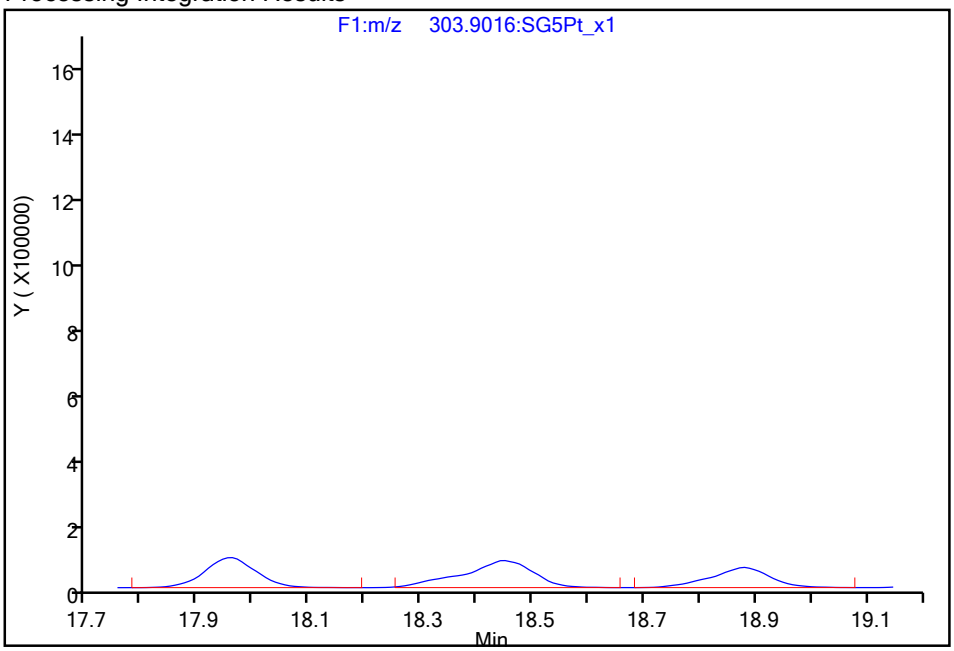

Manual Integration Results

RT = 18.450 Area = 731123

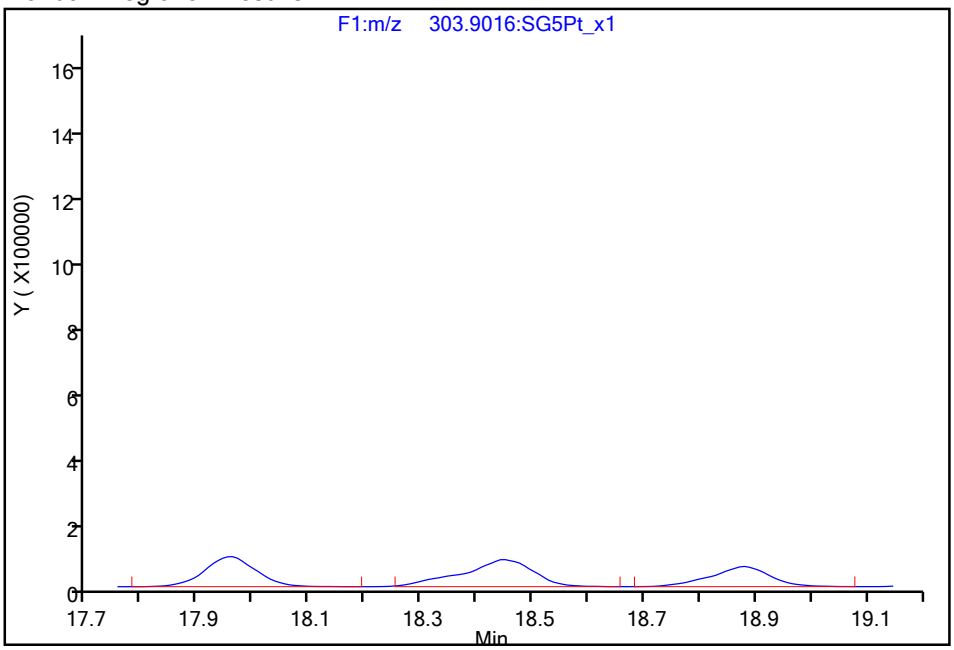

Reviewer: krenns, 25-Aug-2021 15:06:34

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (16.10- 23.60)

Signal: 2

Processing Integration Results

RT = 18.880 Area = 417302

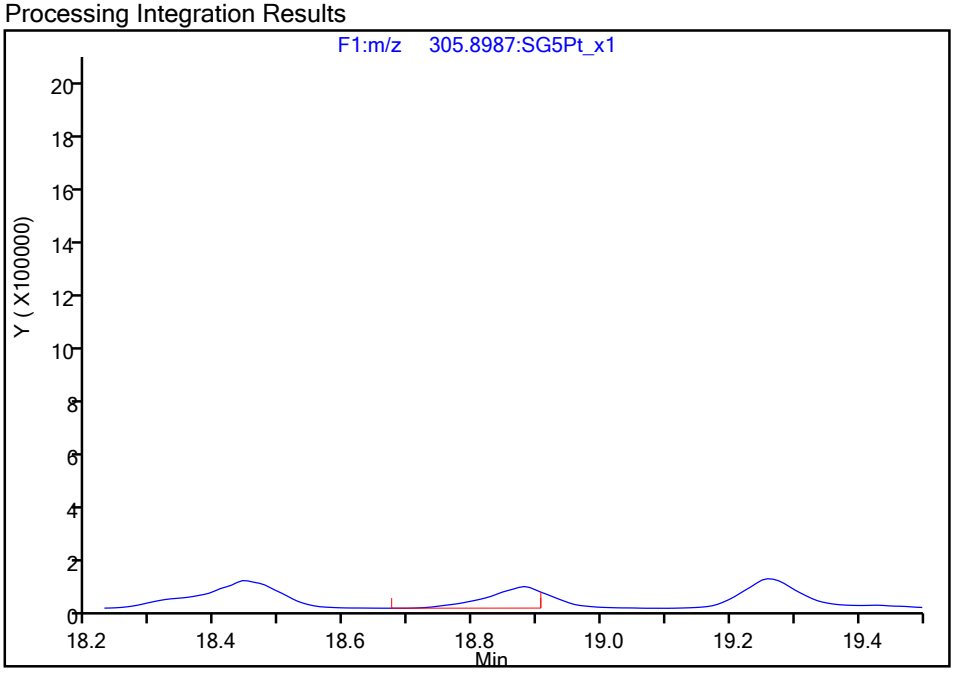

Manual Integration Results

RT = 18.880 Area = 535530 M

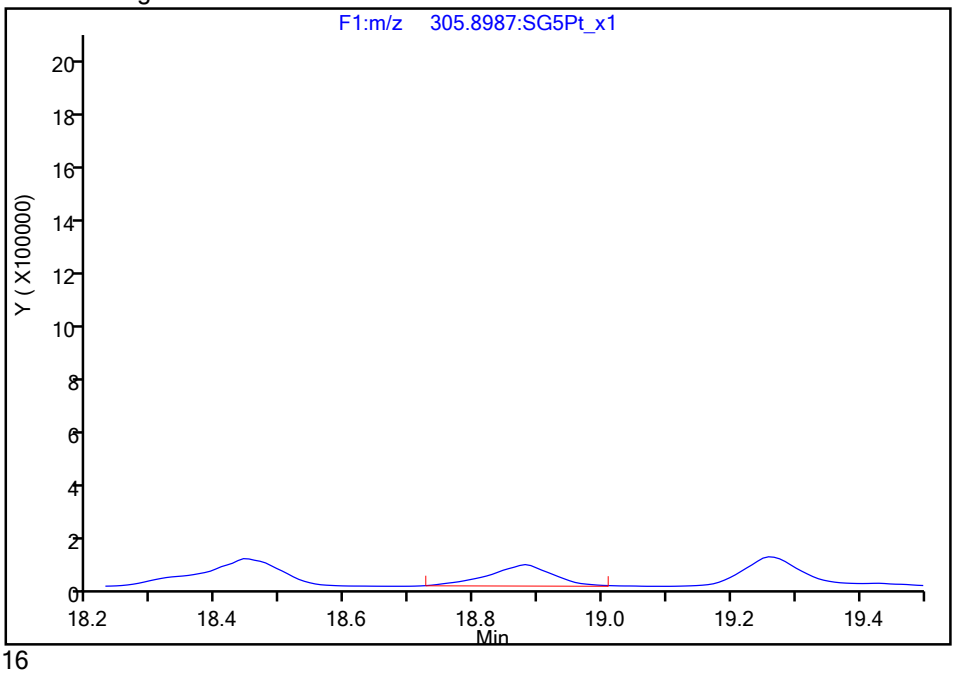

Reviewer: dadunj, 23-Aug-2021 09:43:16

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 21.84
Area: 11899
Amount: 3.316185
Amount Units: pg/ul

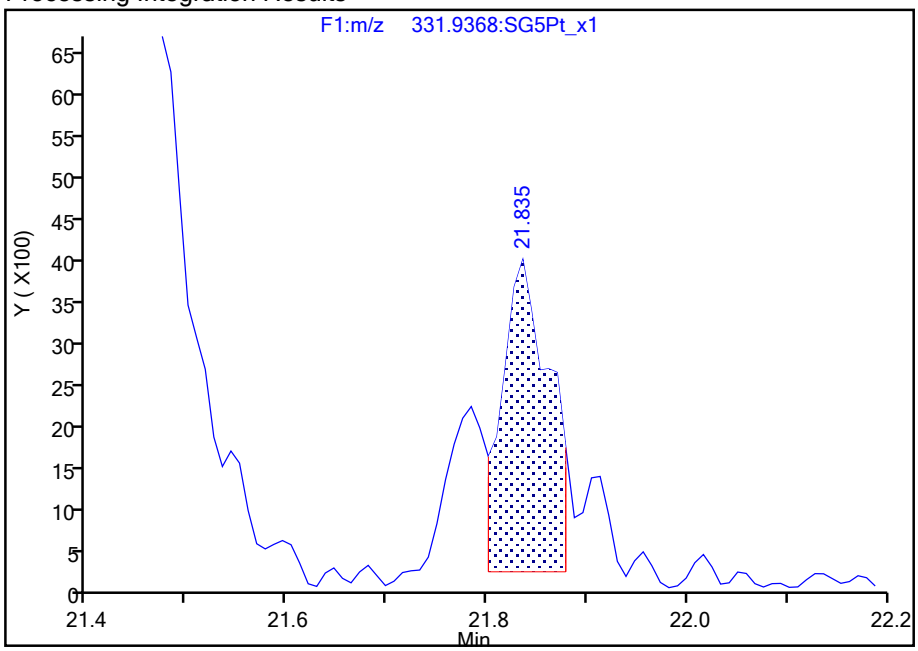

Manual Integration Results

RT: 21.84
Area: 20413
Amount: 3.977387
Amount Units: pg/ul

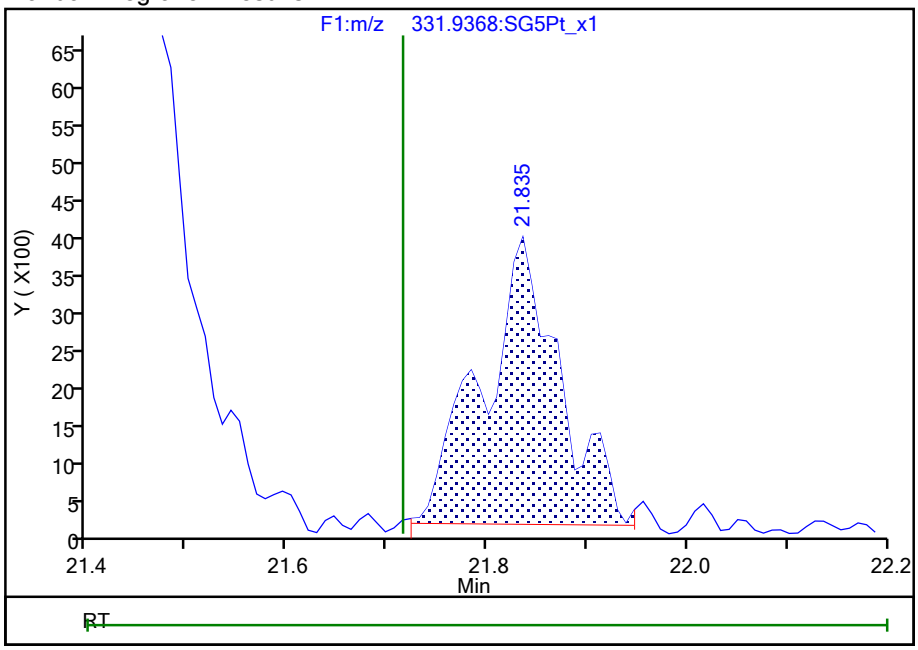

Reviewer: dadunj, 23-Aug-2021 09:45:23

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 21.64
Area: 14080
Amount: 2.916447
Amount Units: pg/ul

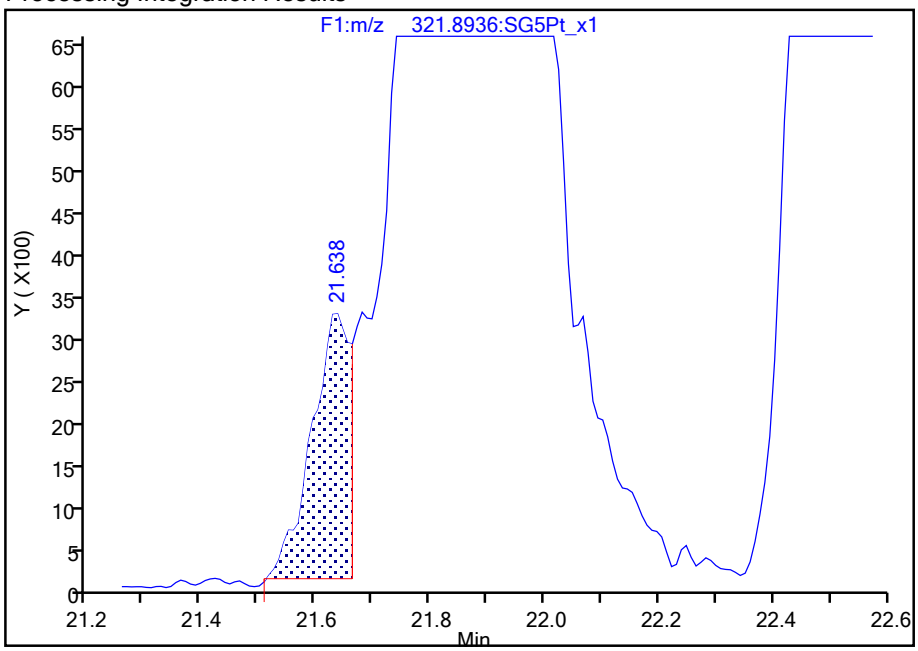

Manual Integration Results

RT: 21.87
Area: 2153136
Amount: 703.4597
Amount Units: pg/ul

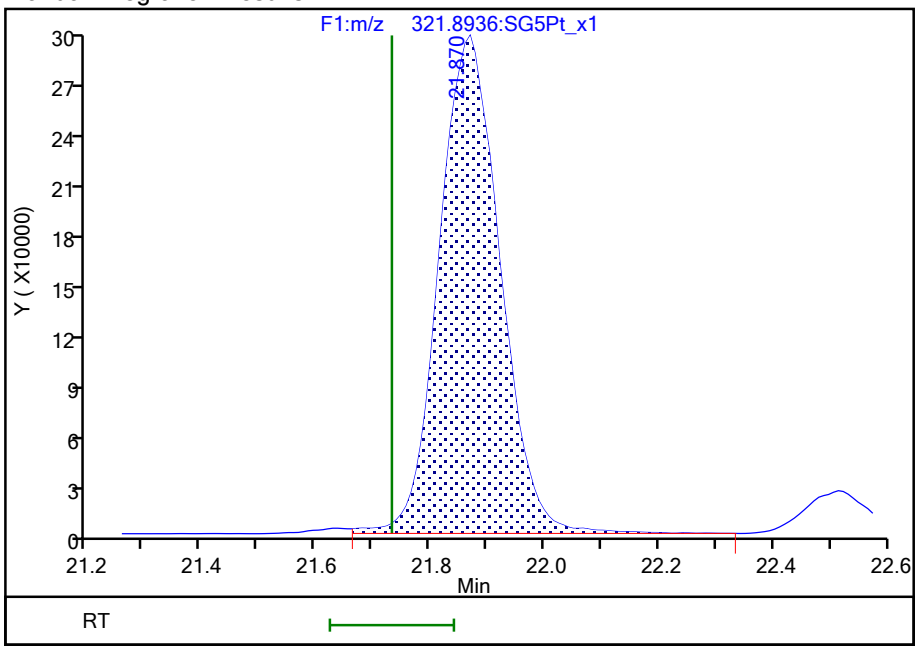

Reviewer: dadunj, 23-Aug-2021 09:45:30

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

RT: 21.66
Area: 16062
Amount: 2.916447
Amount Units: pg/ul

Processing Integration Results

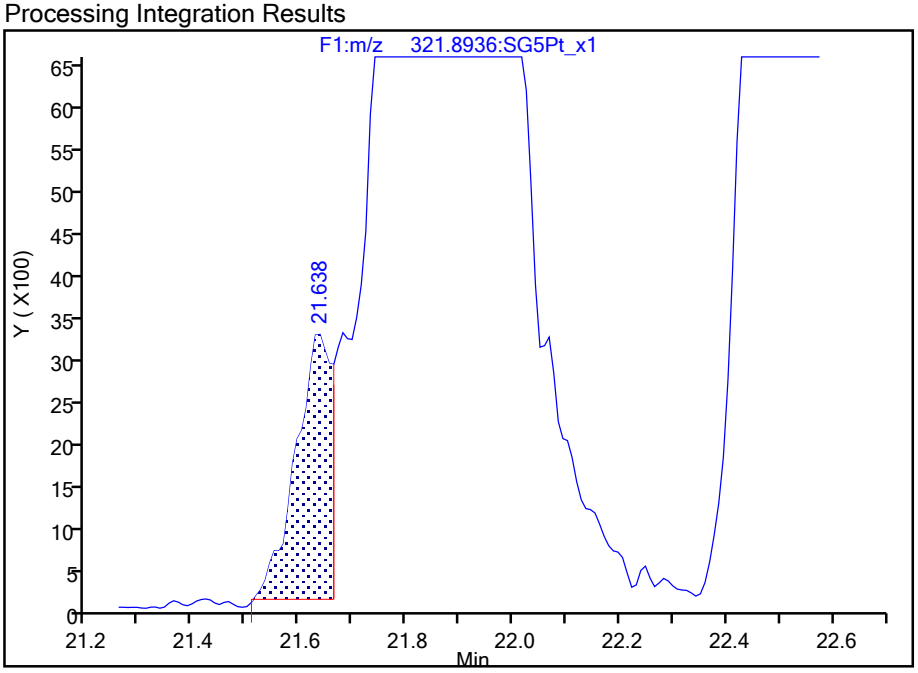

Manual Integration Results

RT: 21.87
Area: 3874224
Amount: 703.4597
Amount Units: pg/ul
Reviewer: dadunj, 23-Aug-2021 09:45:30
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

786814

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.66
Area: 1982
Amount: 2.916447
Amount Units: pg/ul

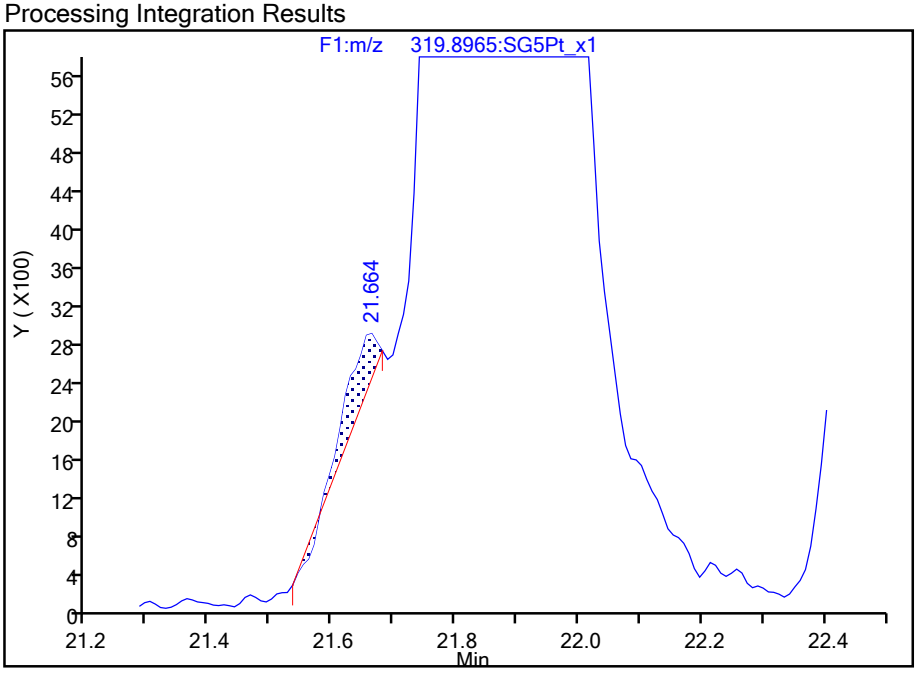

Manual Integration Results

RT: 21.87
Area: 1721088
Amount: 703.4597
Amount Units: pg/ul

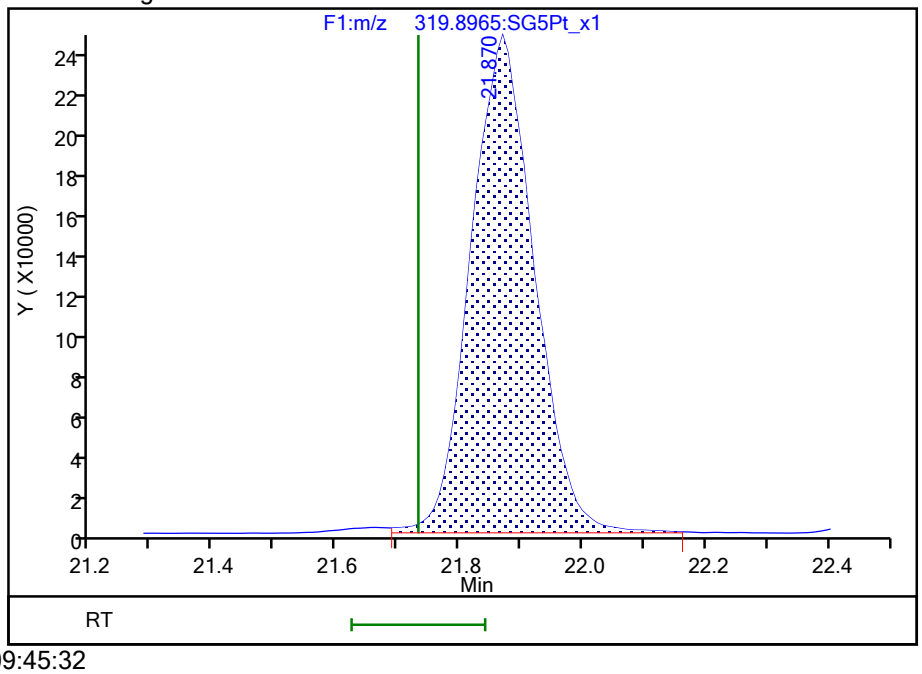

Reviewer: dadunj, 23-Aug-2021 09:45:32
Audit Action: Assigned Compound ID Audit Reason: Baseline

786815

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.80

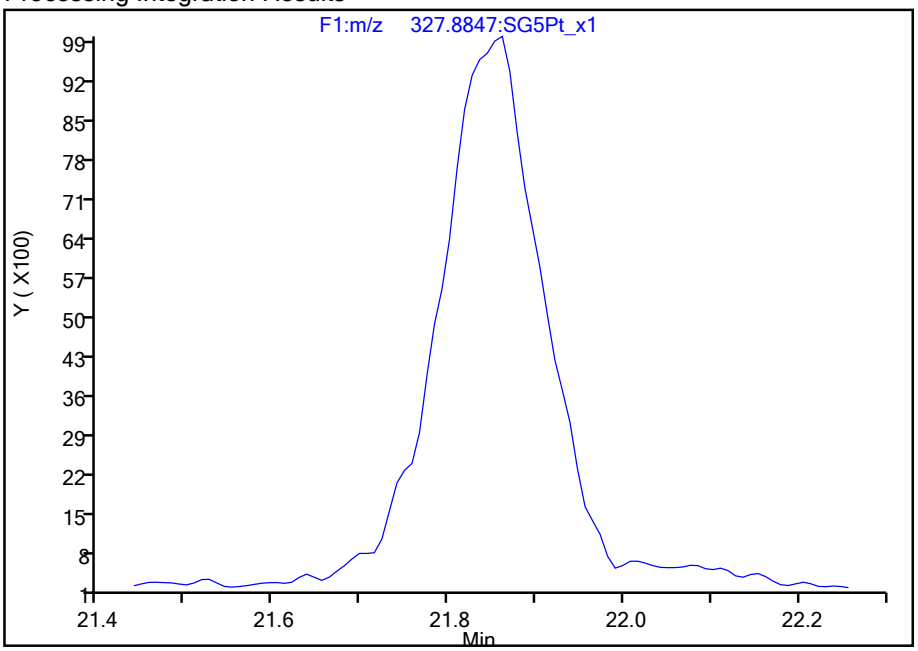

Manual Integration Results

RT: 21.86
Area: 68453
Amount: 4.912080
Amount Units: pg/ul

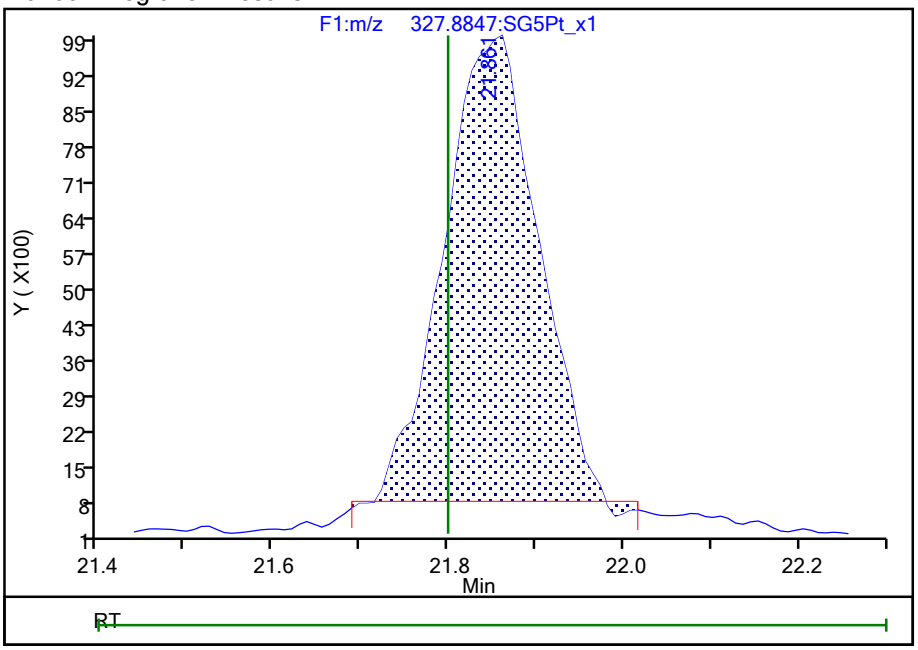

Reviewer: dadunj, 23-Aug-2021 09:45:49
Audit Action: Manually Integrated Audit Reason: Assign Peak

786816

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.31
Area: 167247
Amount: 71.320297
Amount Units: pg/ul

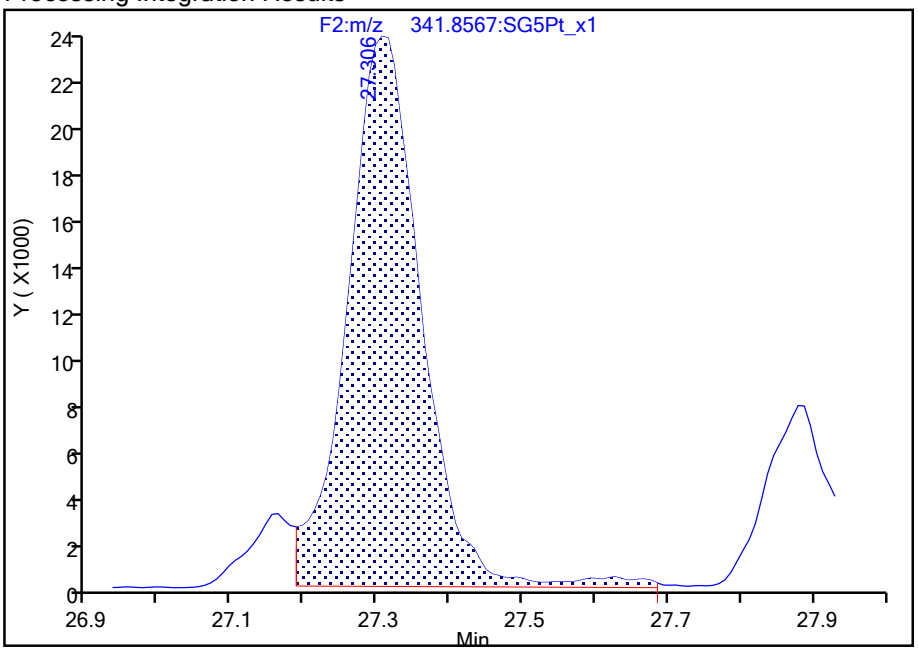

Manual Integration Results

RT: 27.31
Area: 164427
Amount: 70.844462
Amount Units: pg/ul

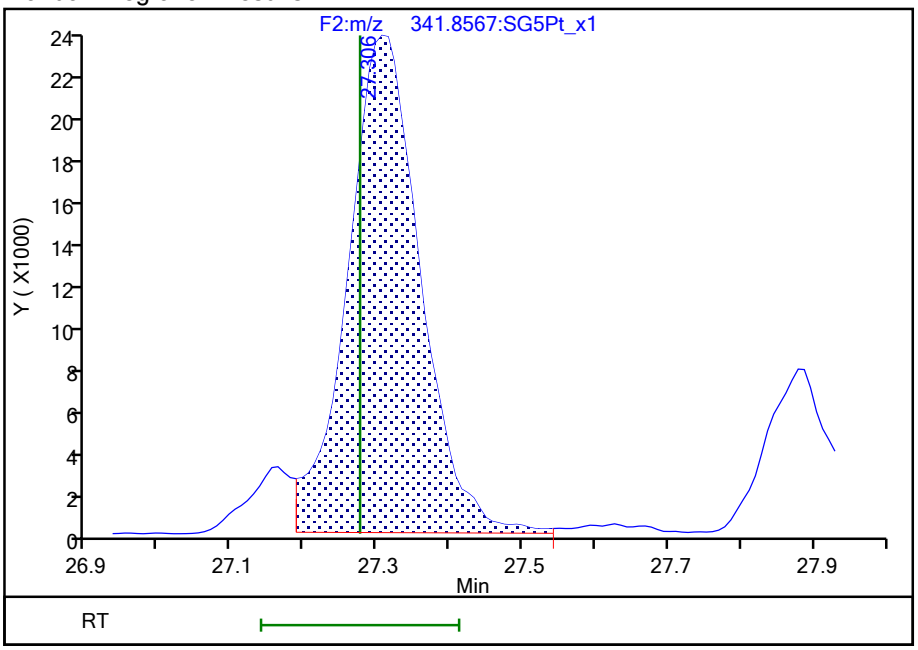

Reviewer: dadunj, 23-Aug-2021 09:46:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

F1 PeCDFs, Signal: 2, m/z: 341.8567, RT: (23.97- 25.29)

Signal: 2

Processing Integration Results

RT = 24.096 Area = 3196

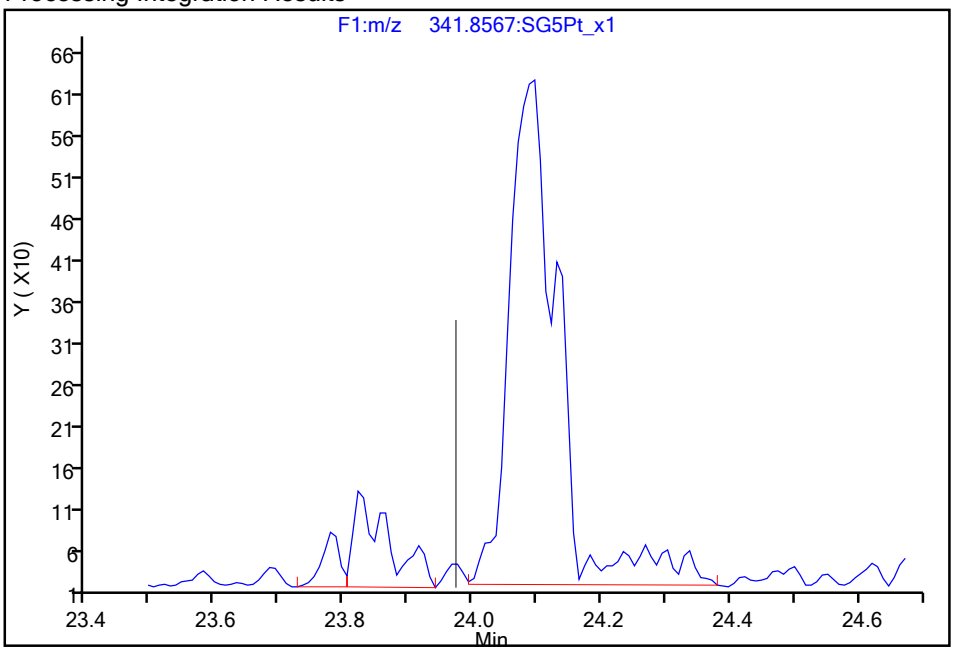

Manual Integration Results

RT = 24.096 Area = 2885 M

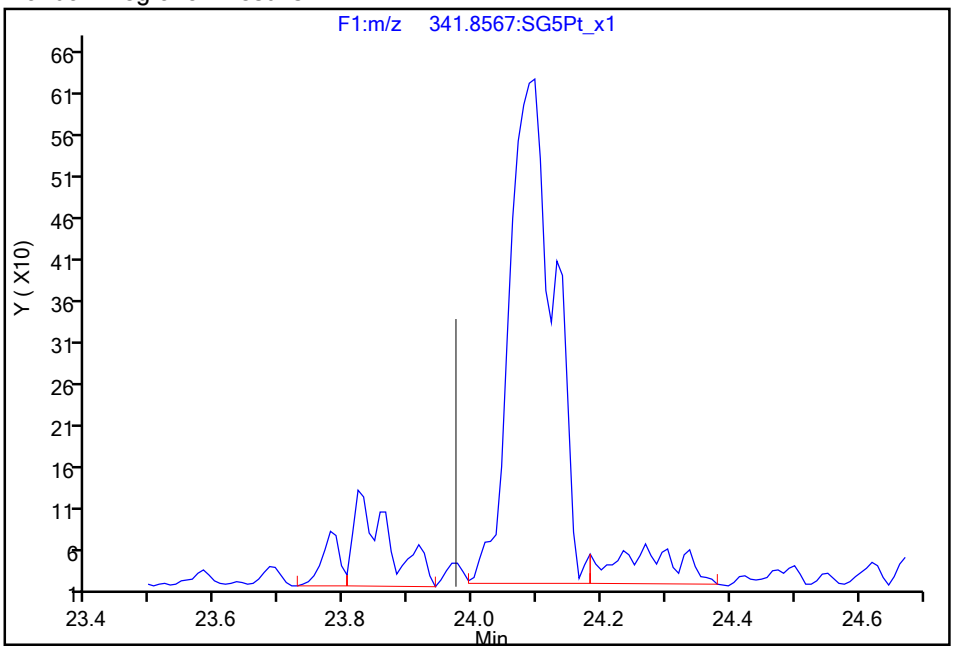

Reviewer: dadunj, 23-Aug-2021 09:46:19

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 35.90
Area: 27971
Amount: 10.323319
Amount Units: pg/ul

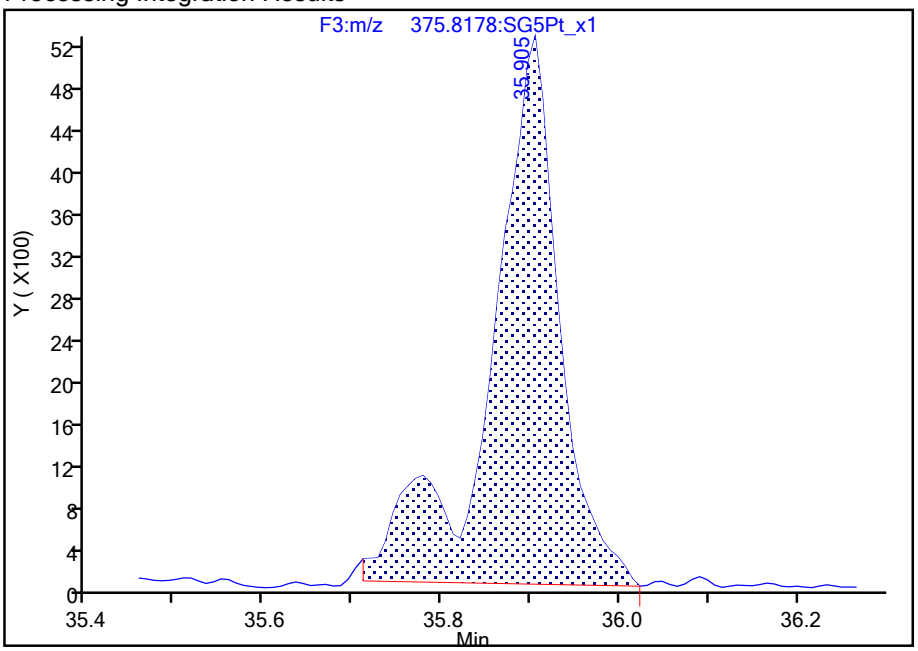

Manual Integration Results

RT: 35.90
Area: 23742
Amount: 9.521992
Amount Units: pg/ul

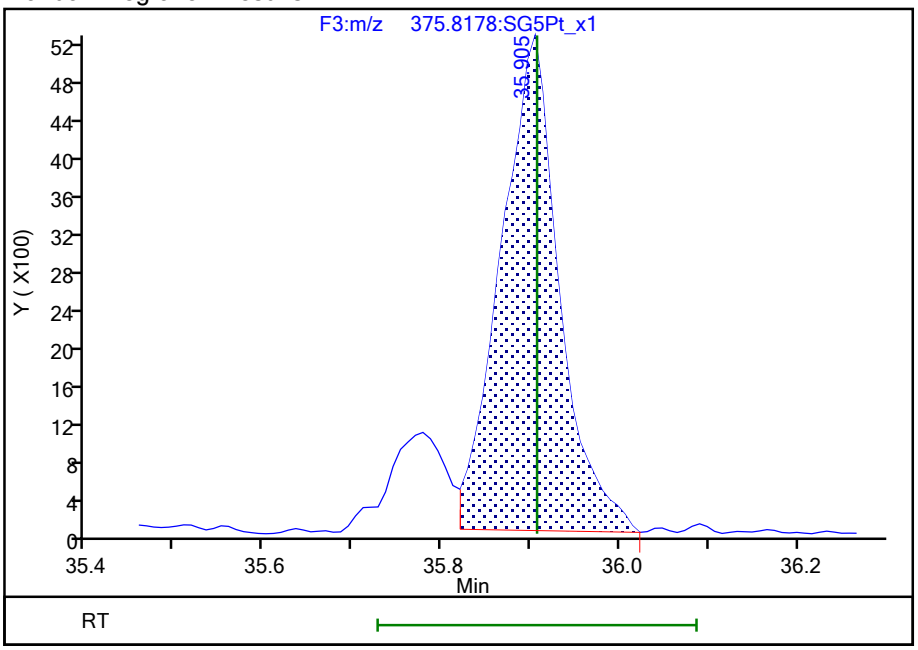

Reviewer: dadunj, 23-Aug-2021 09:46:45

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.91
Area: 31599
Amount: 10.323319
Amount Units: pg/ul

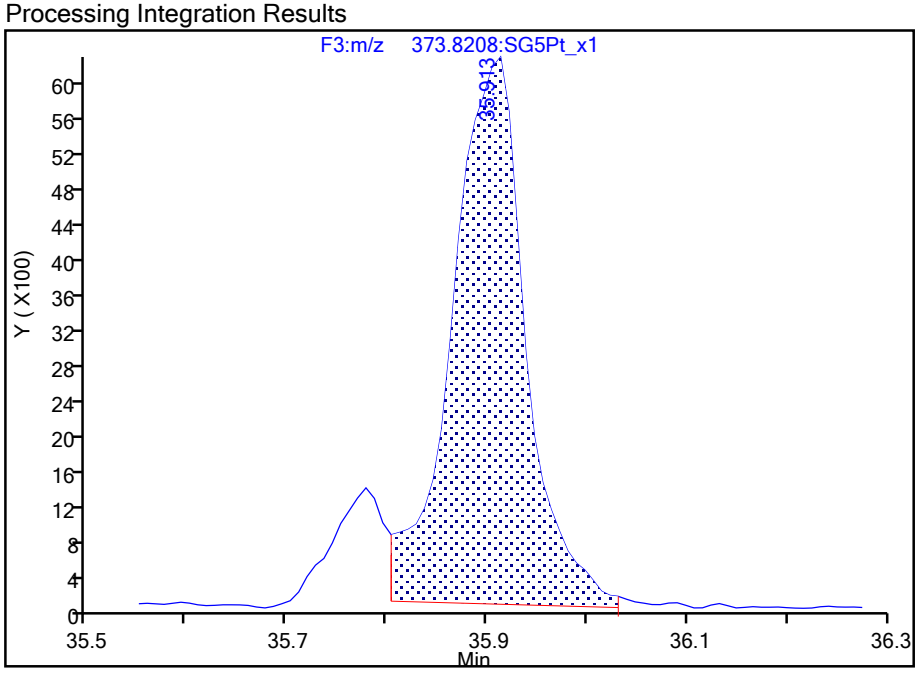

Manual Integration Results

RT: 35.91
Area: 31204
Amount: 9.521992
Amount Units: pg/ul

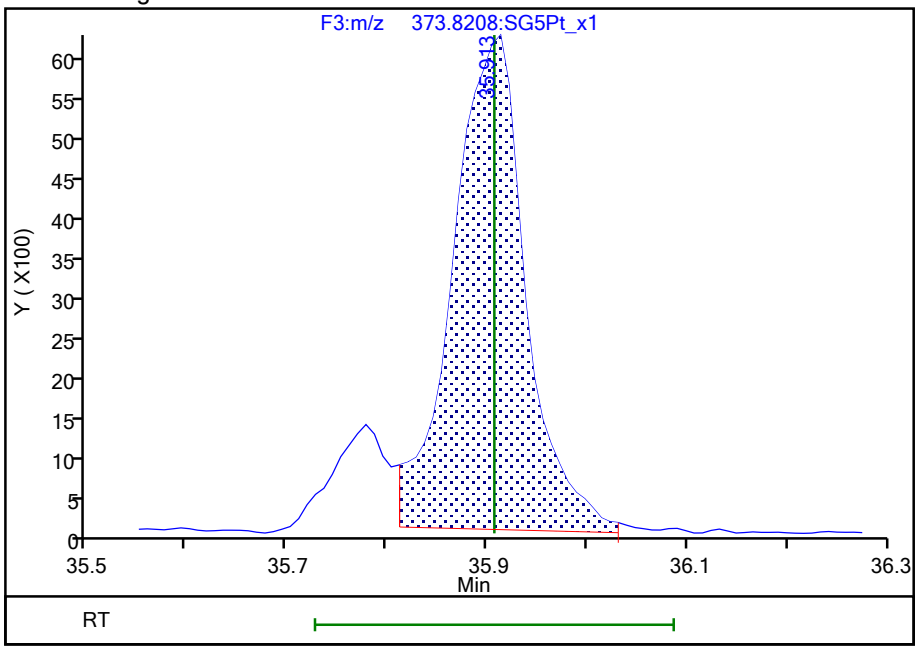

Reviewer: dadunj, 23-Aug-2021 09:46:48

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.79
Area: 29086
Amount: 8.959814
Amount Units: pg/ul

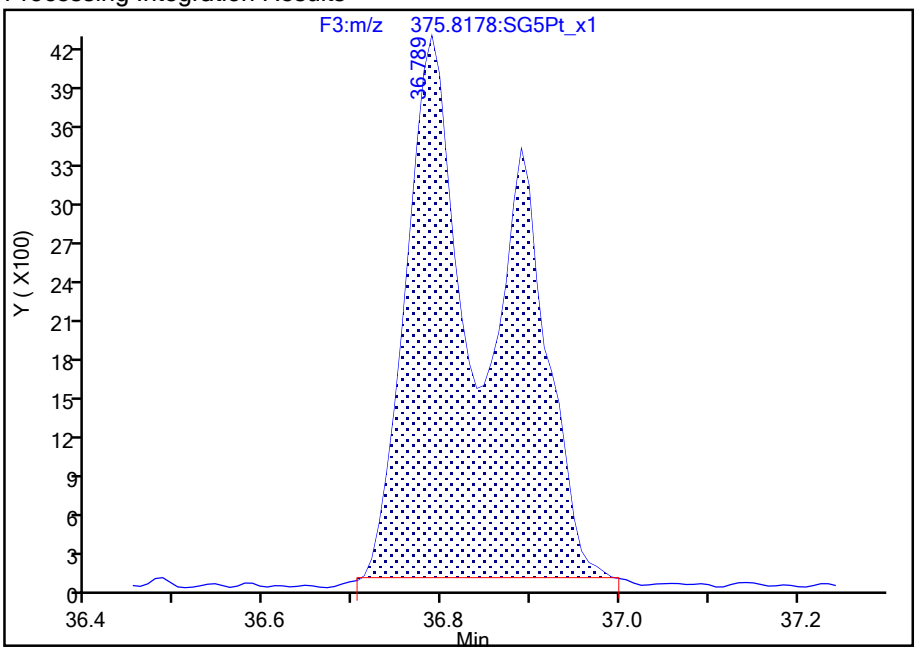

Manual Integration Results

RT: 36.79
Area: 16134
Amount: 6.635842
Amount Units: pg/ul

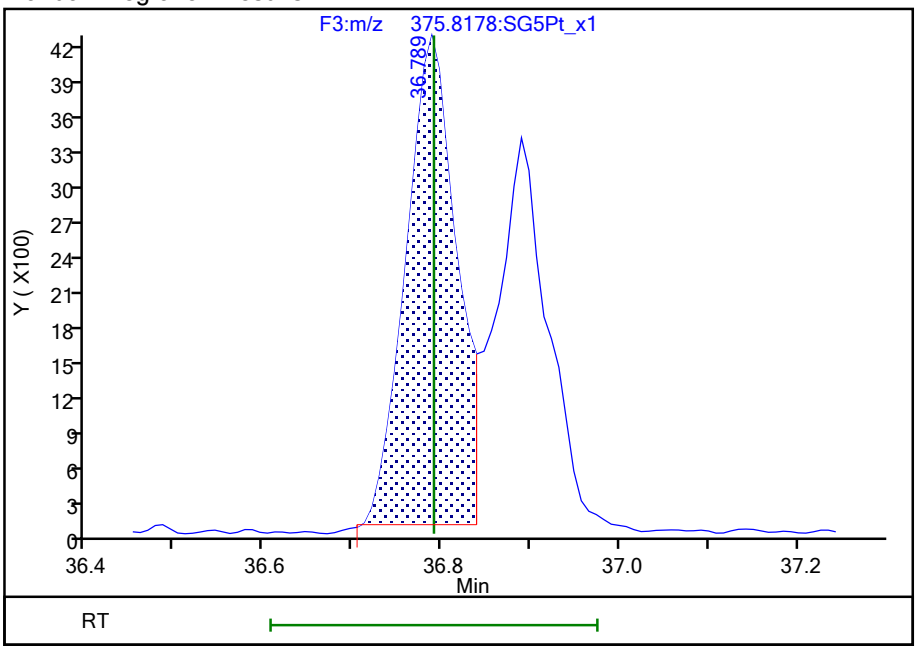

Reviewer: dadunj, 23-Aug-2021 09:46:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 35.779 Area = 4871

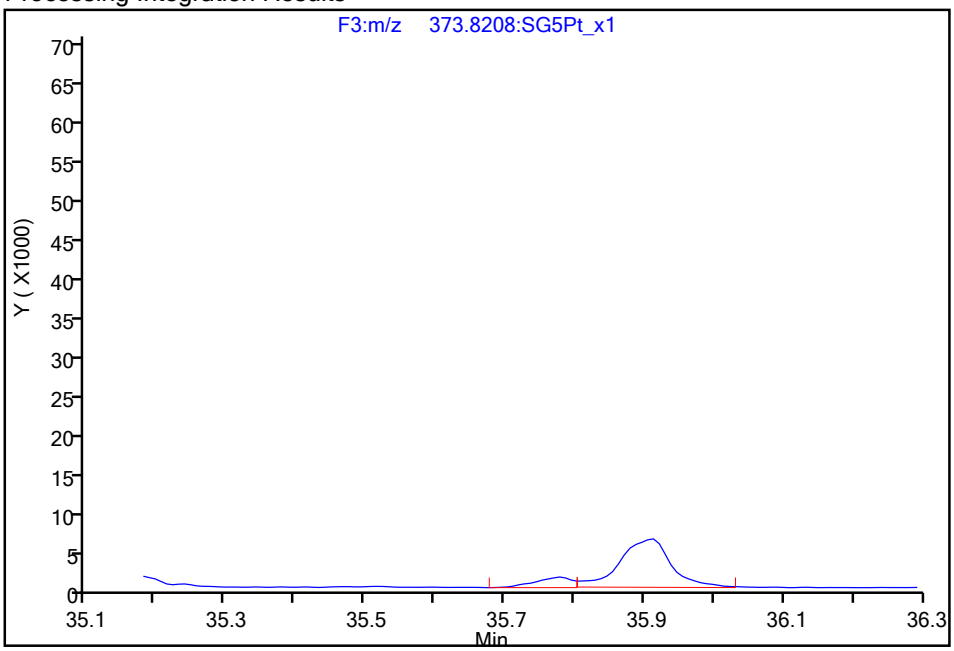

Manual Integration Results

RT = 35.779 Area = 4871

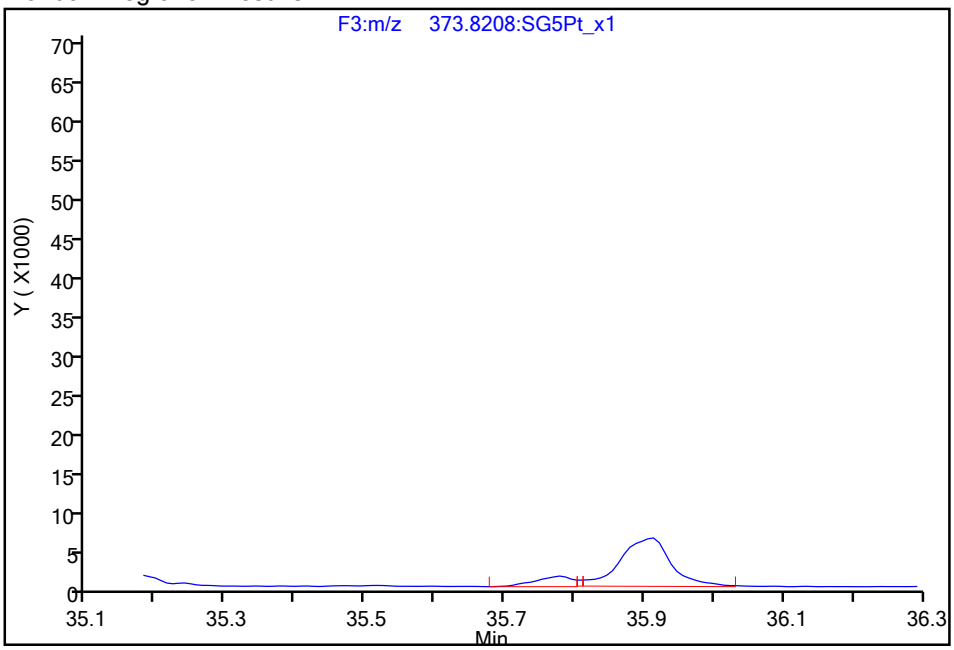

Reviewer: dadunj, 23-Aug-2021 09:47:02

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 36.889 Area = 18936

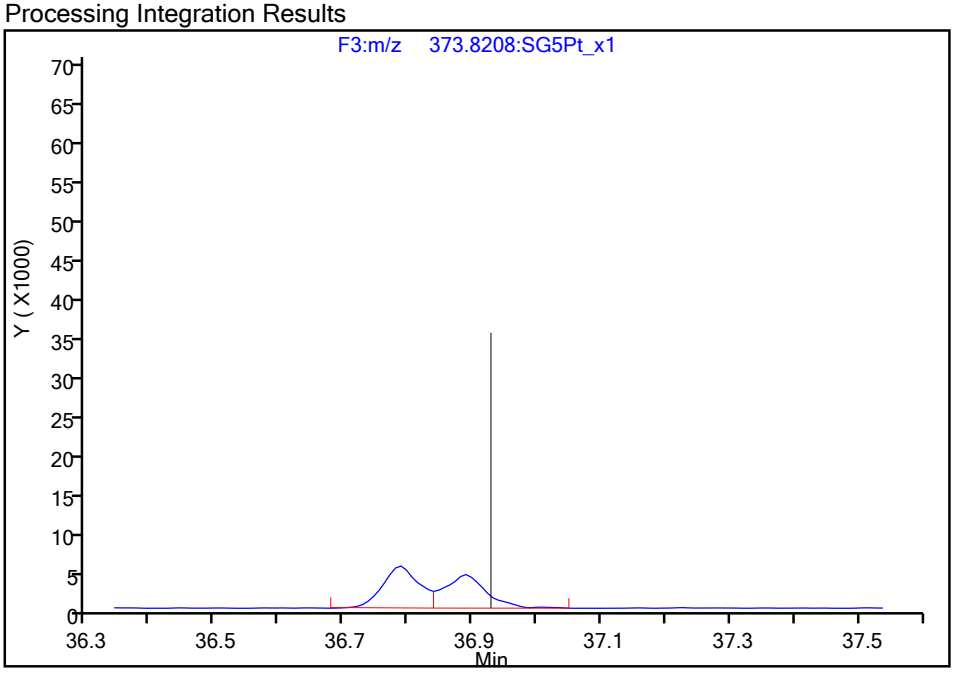

Manual Integration Results

RT = 36.889 Area = 18936

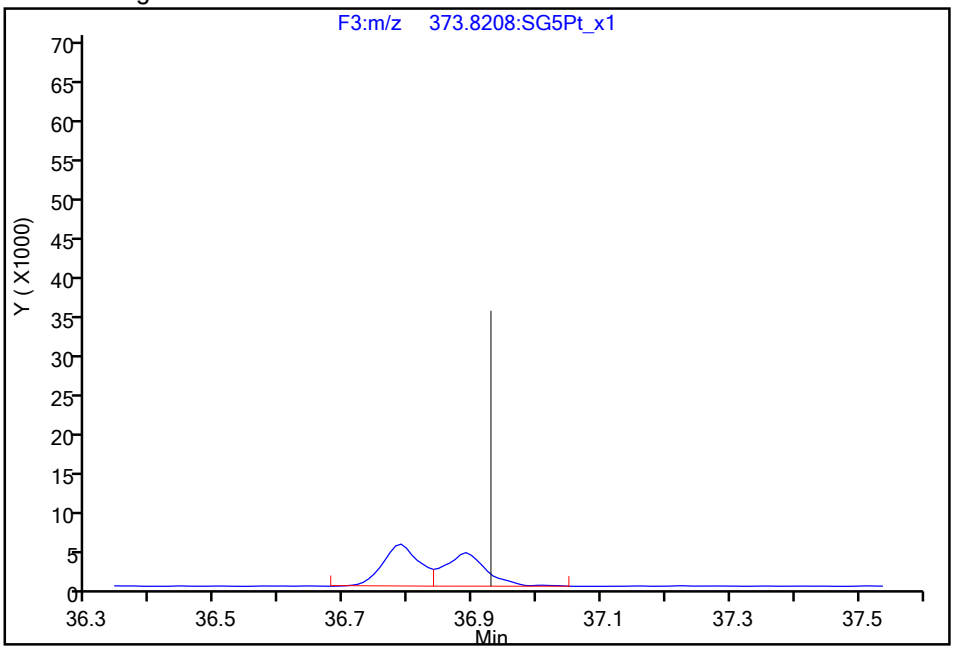

Reviewer: dadunj, 23-Aug-2021 09:47:02

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

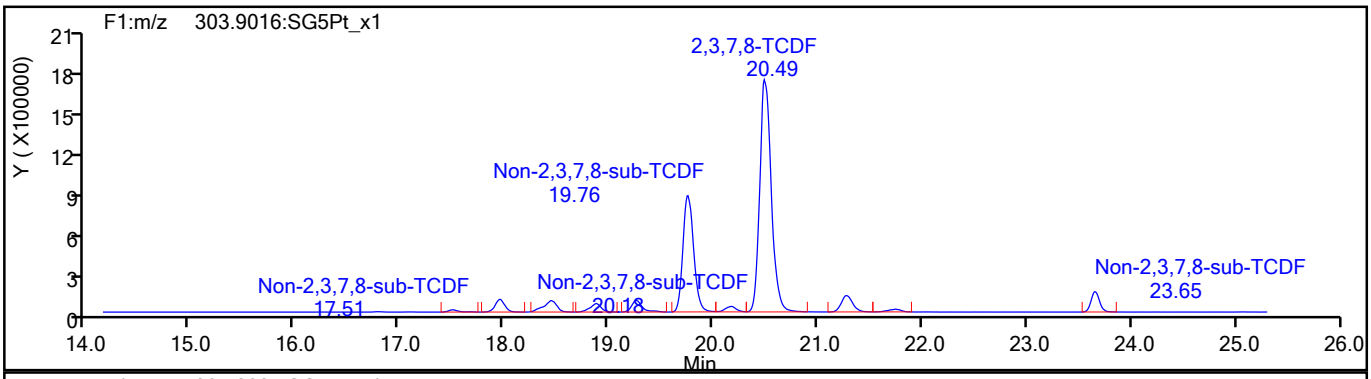

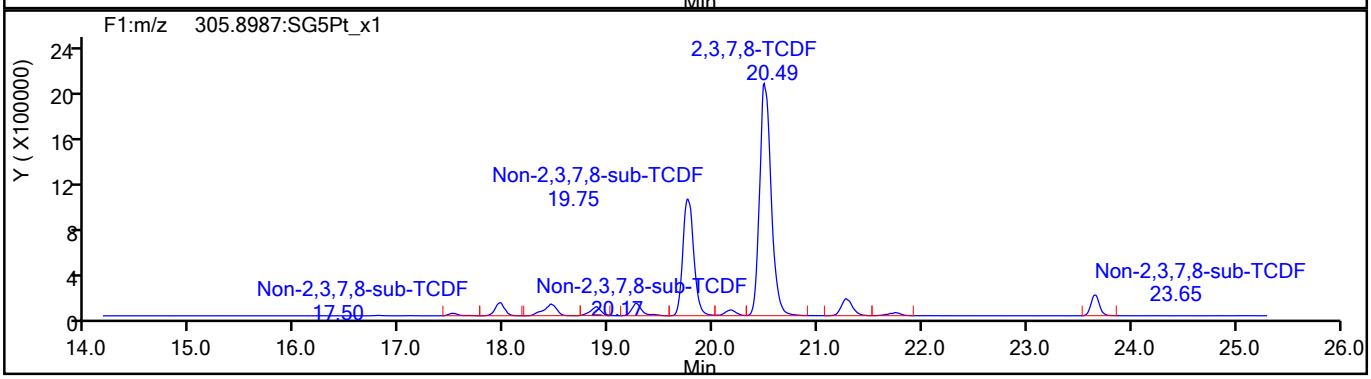

TCDF Standards

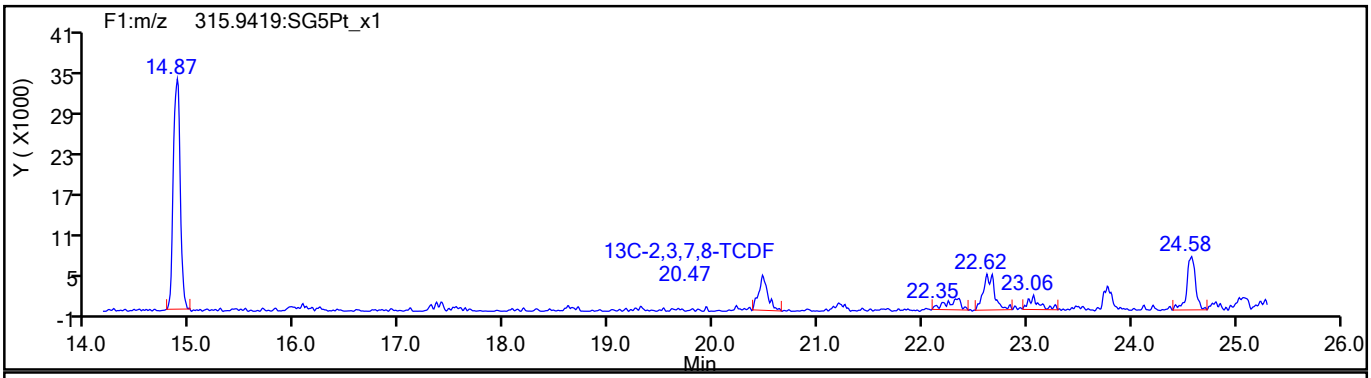

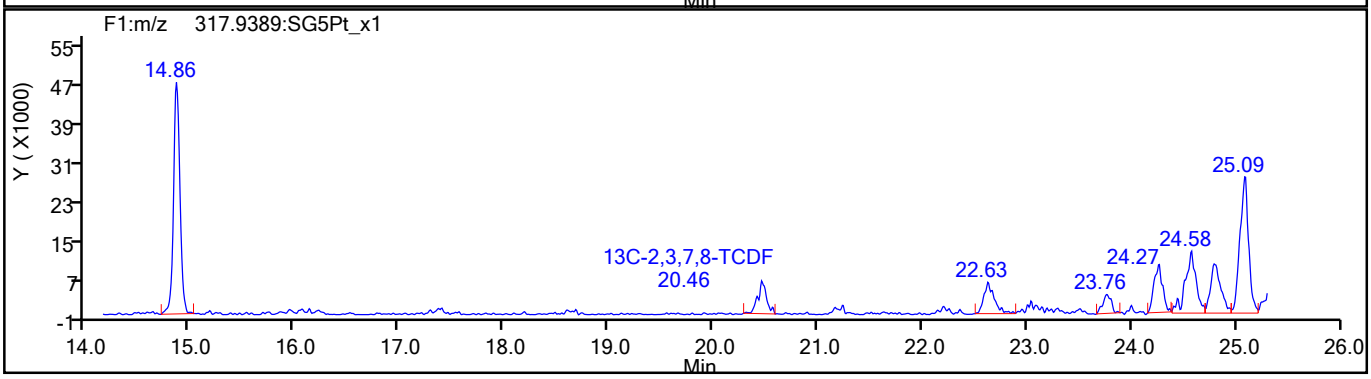

786824

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

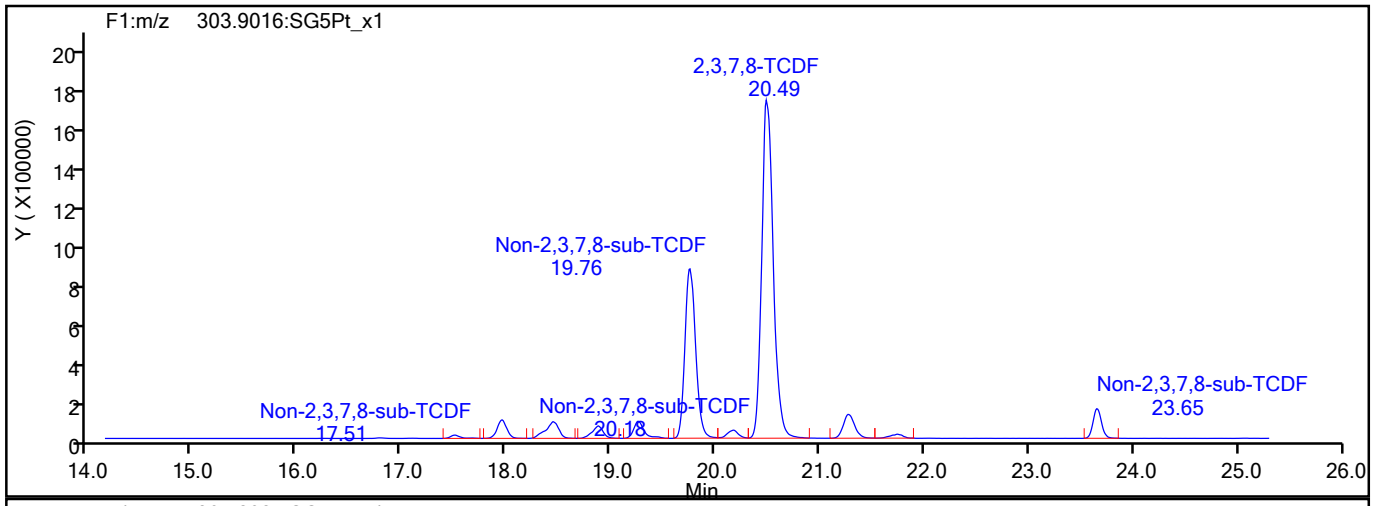

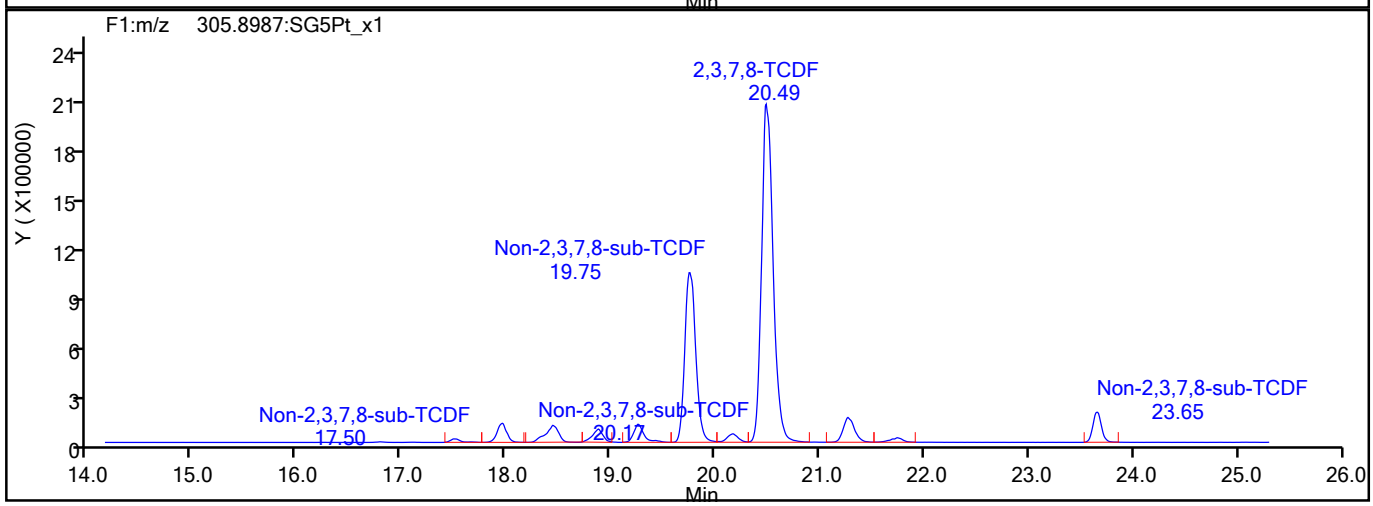

TCDF Interference Mass

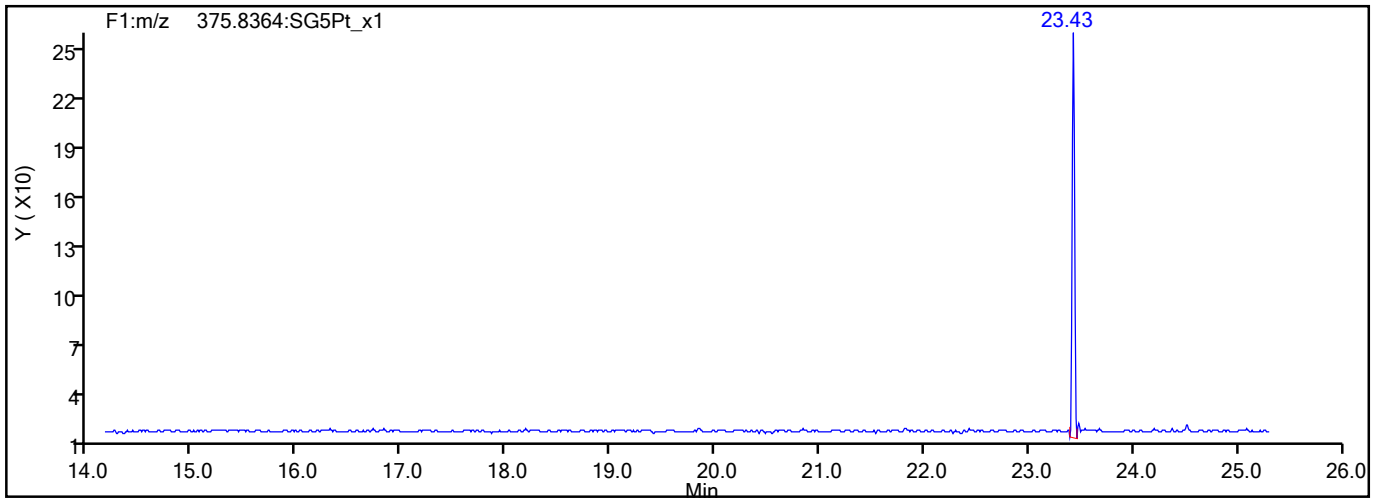

786825

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

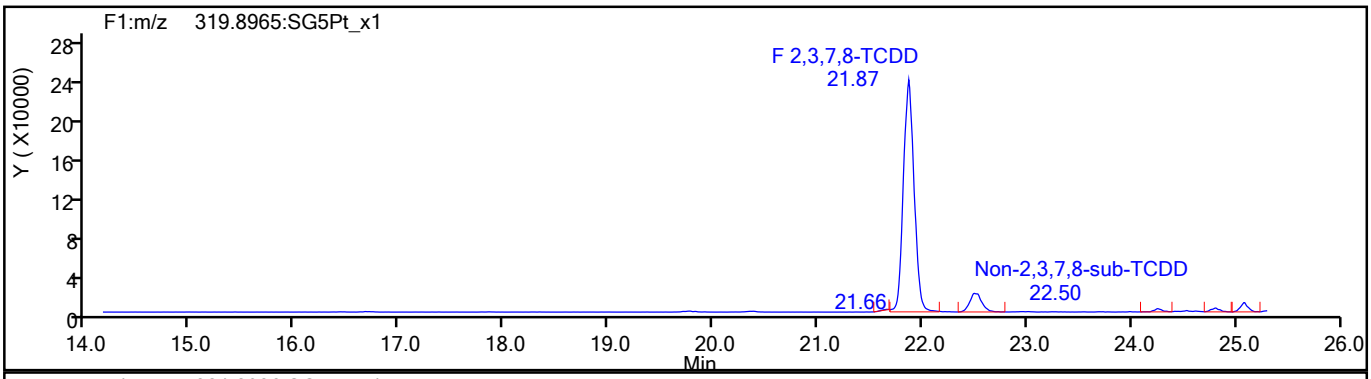

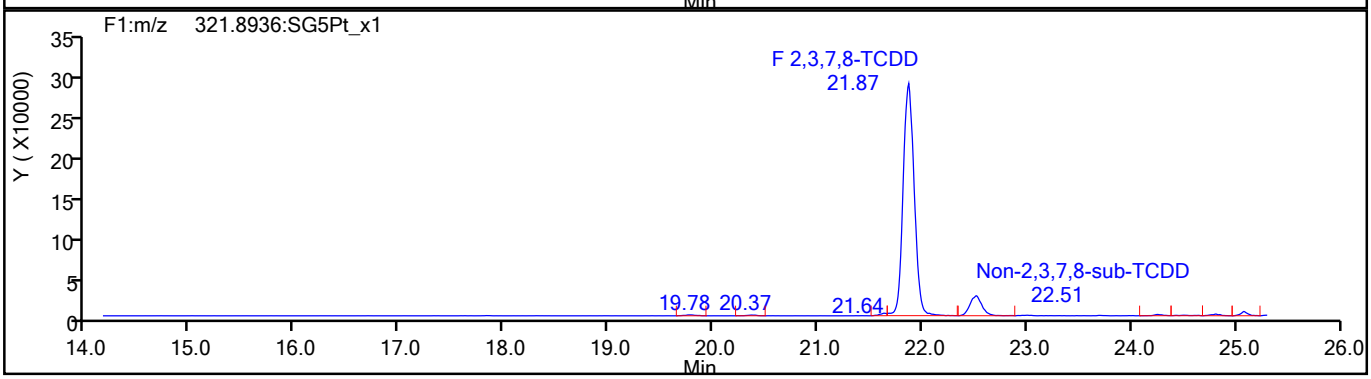

TCDD Standards

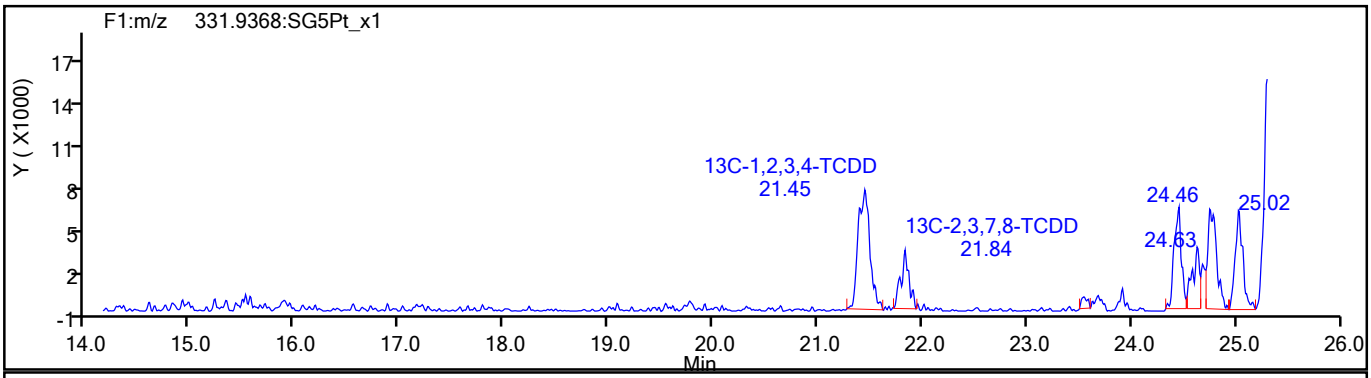

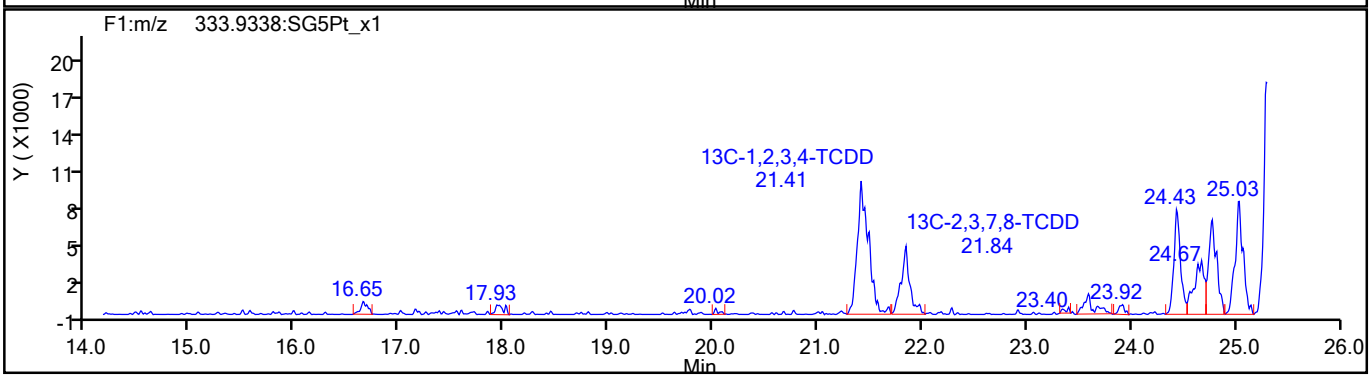

786826

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

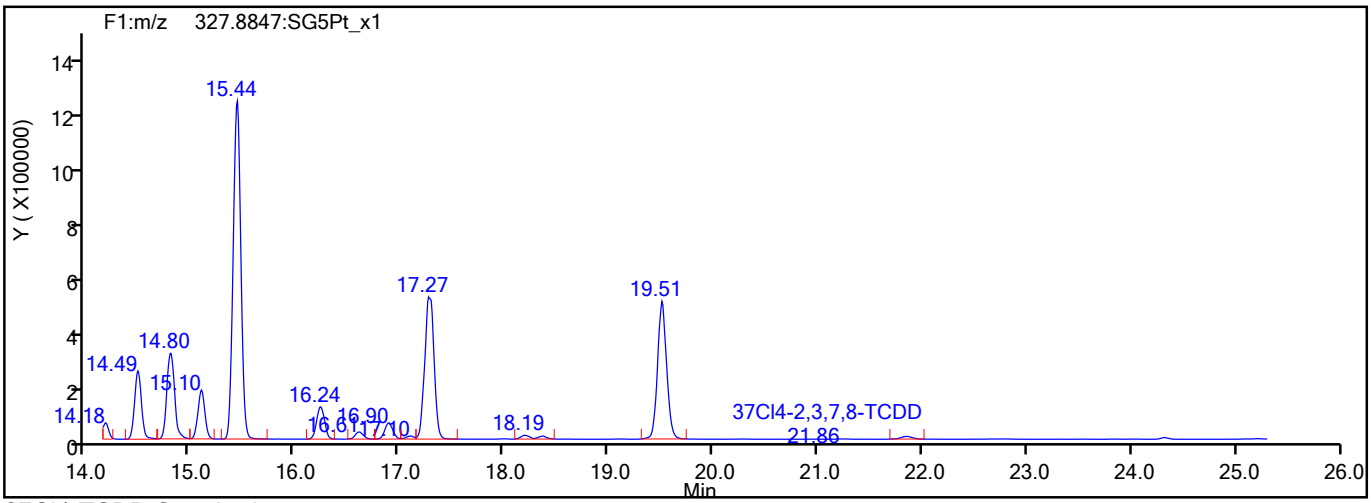

37Cl4-TCDD Standards

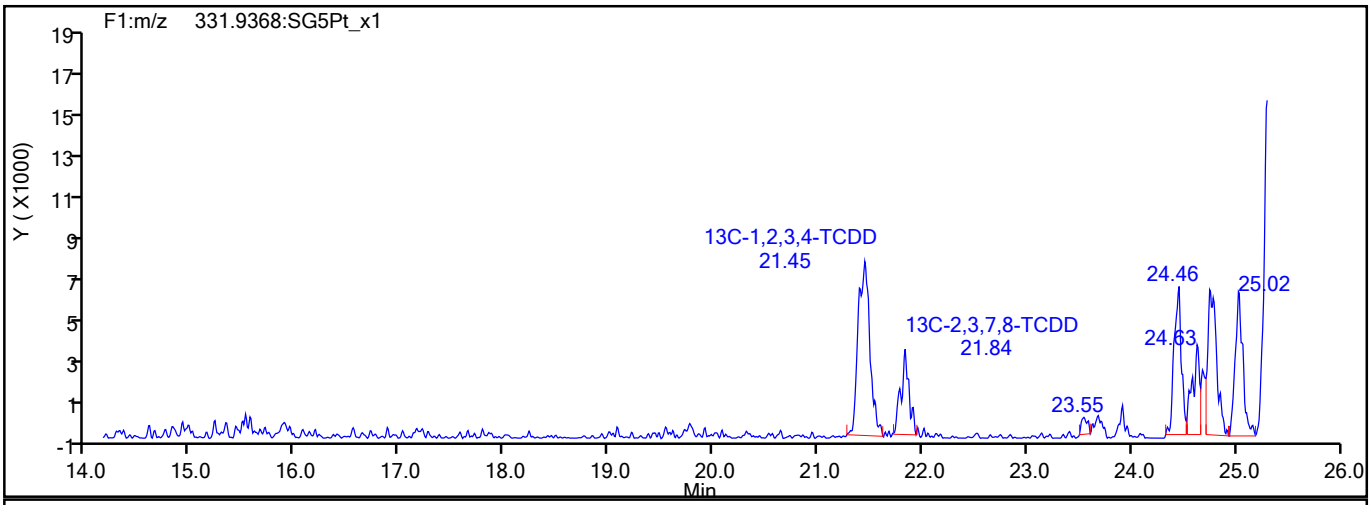

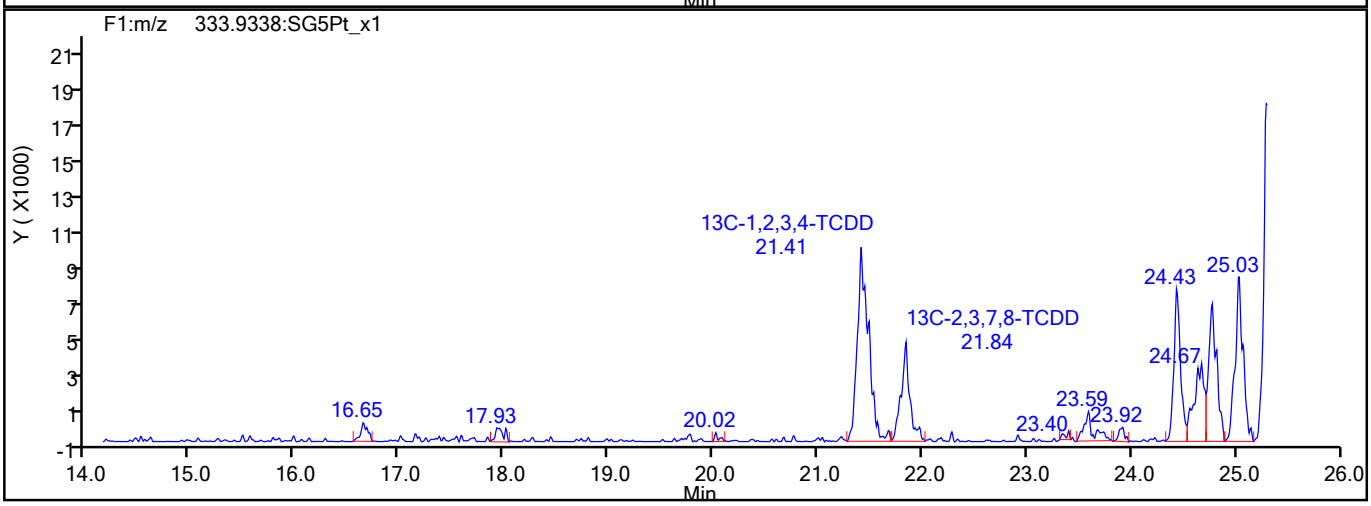

786827

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

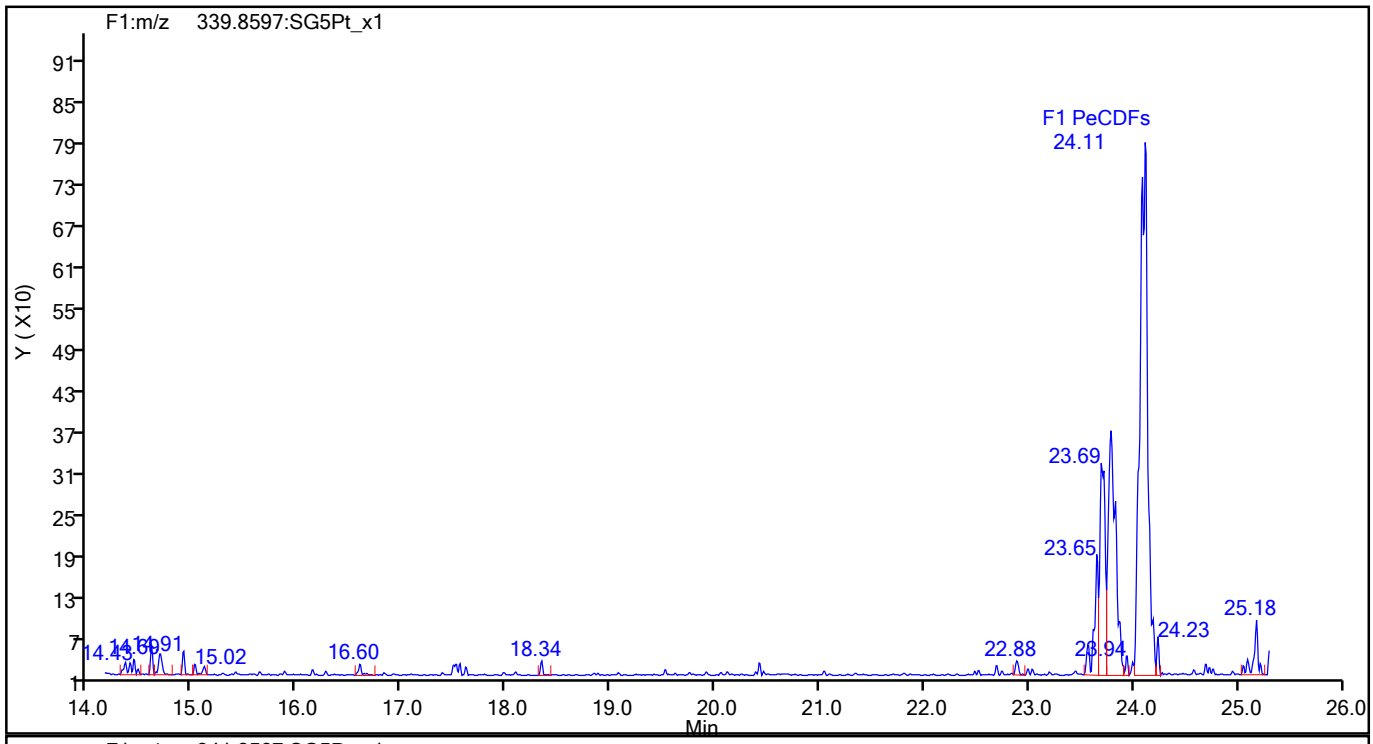

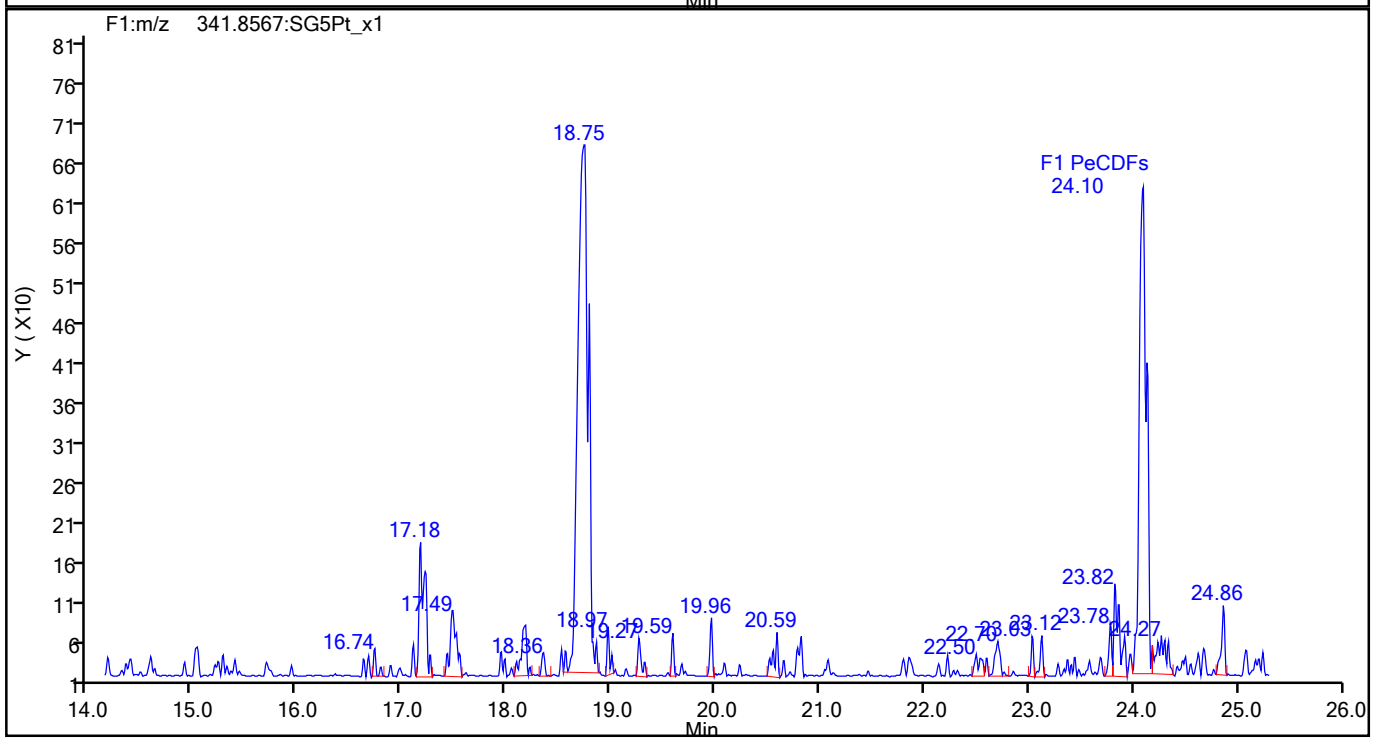

786828

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

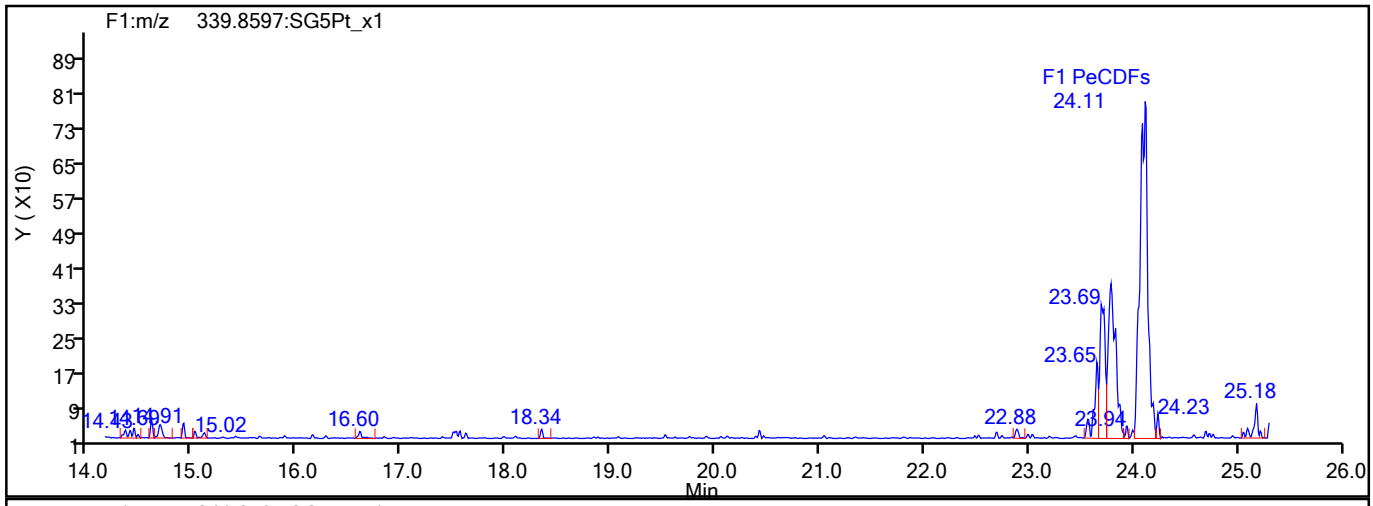

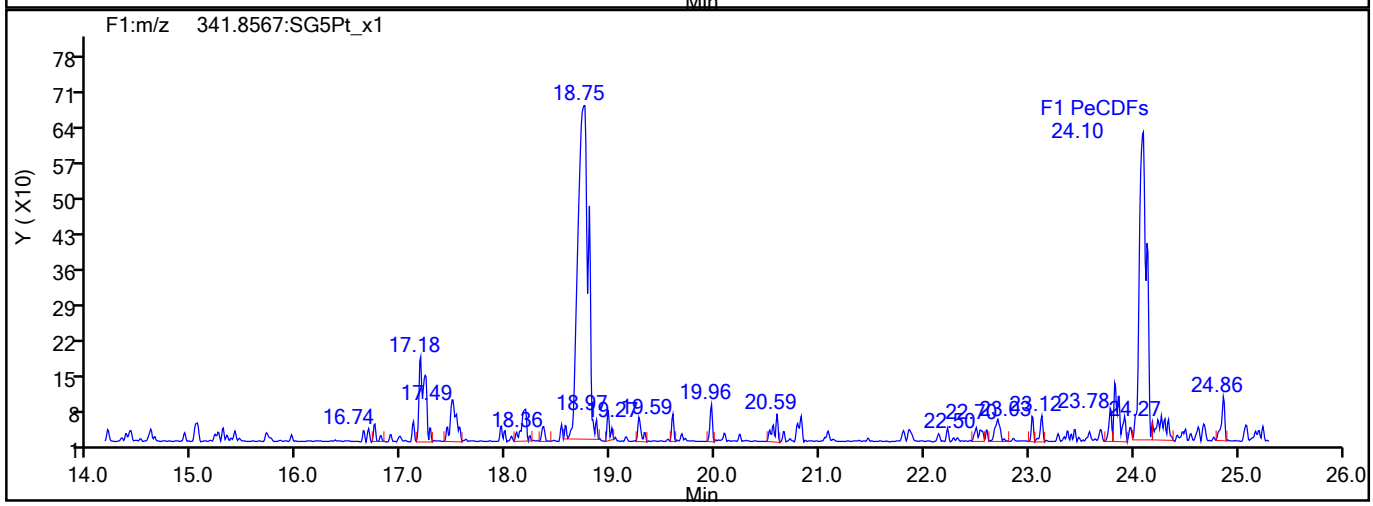

F1 PeCDFs Interference Mass

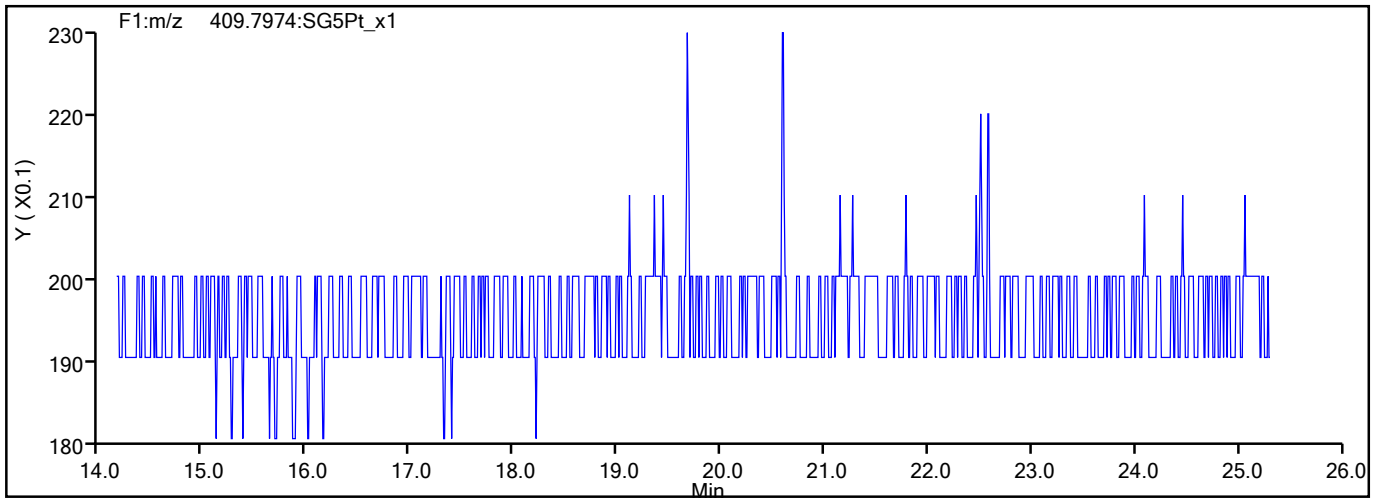

786829

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

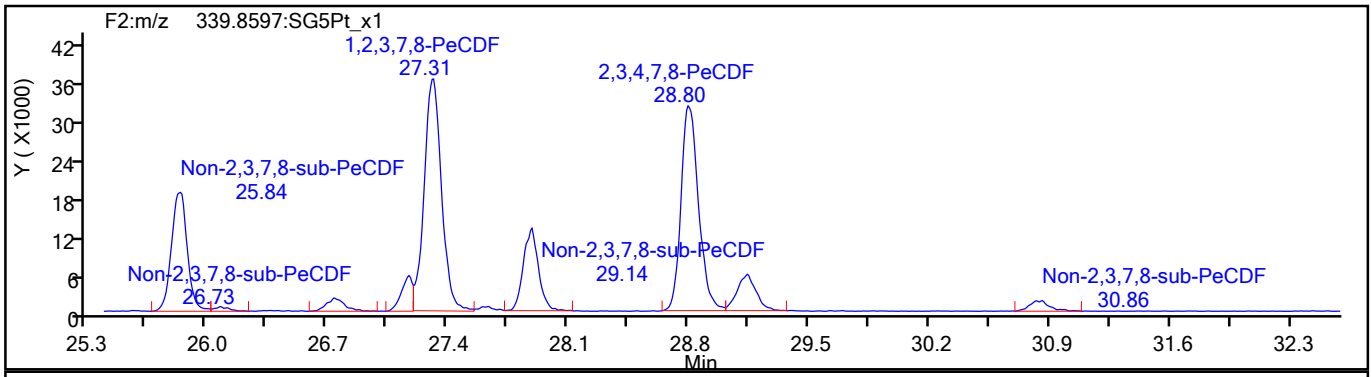

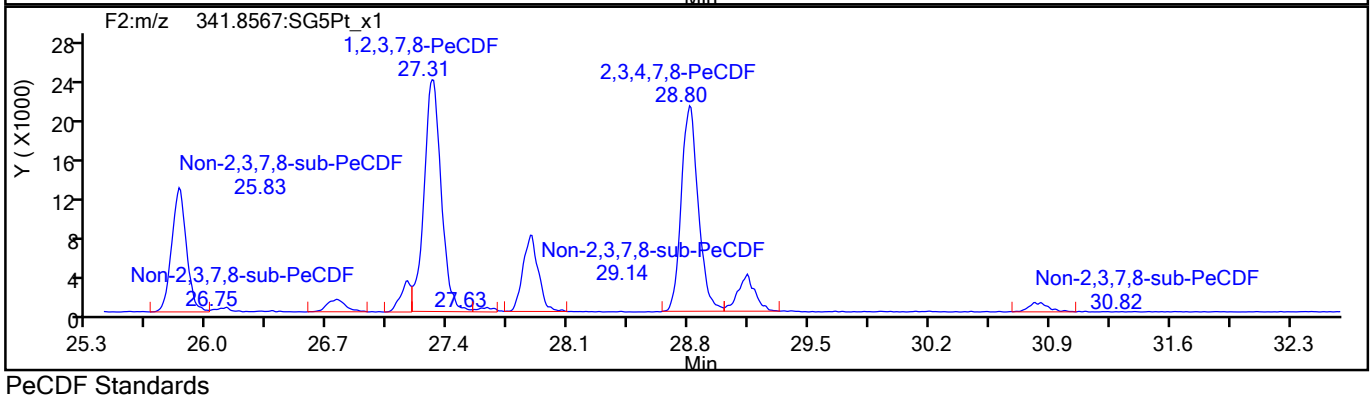

PeCDF Standards

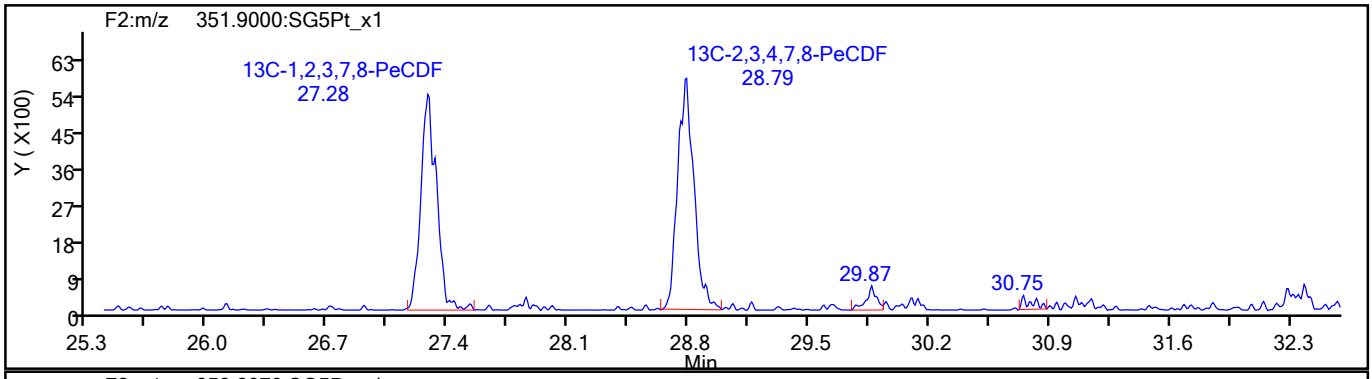

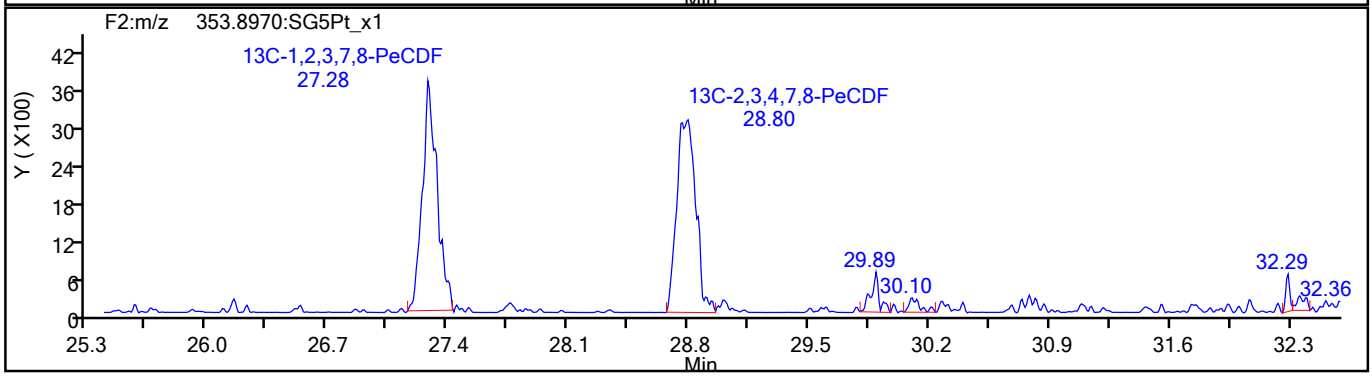

786830

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

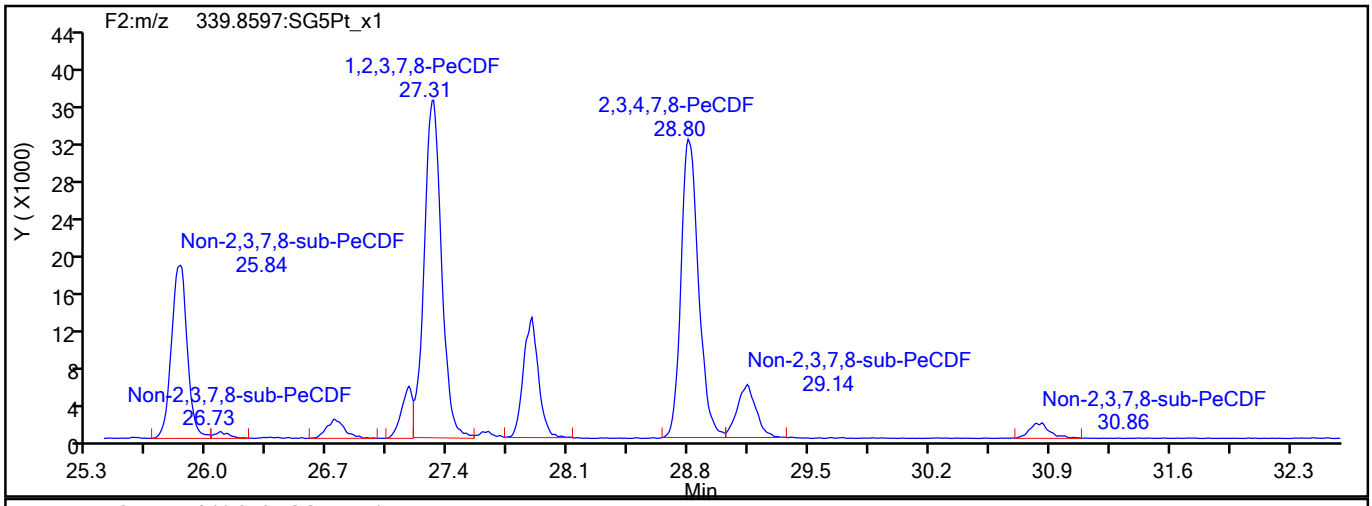

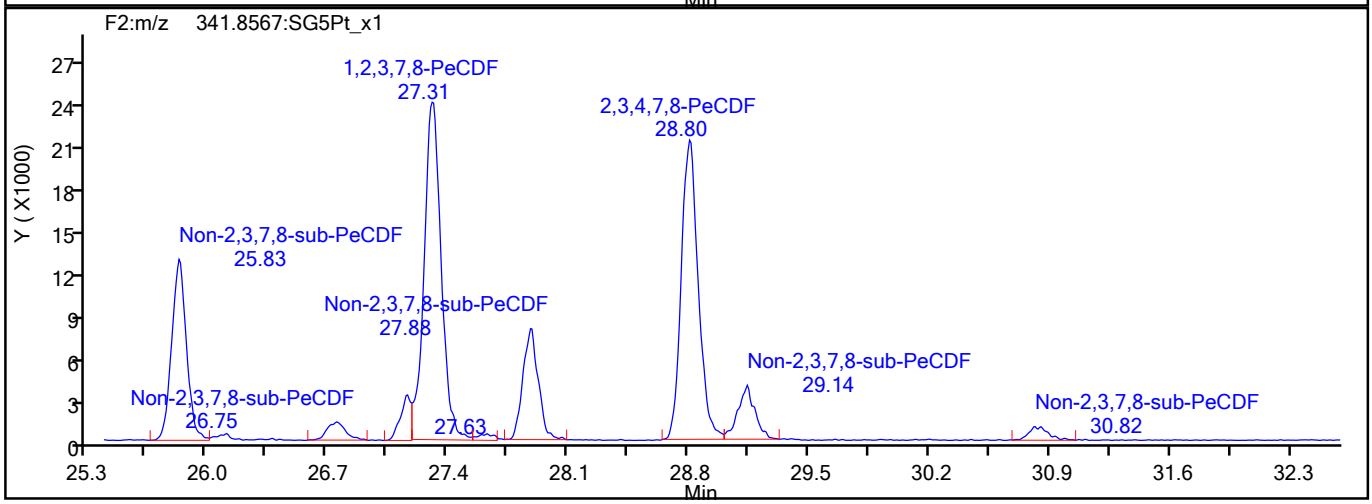

PeCDF Interference Mass

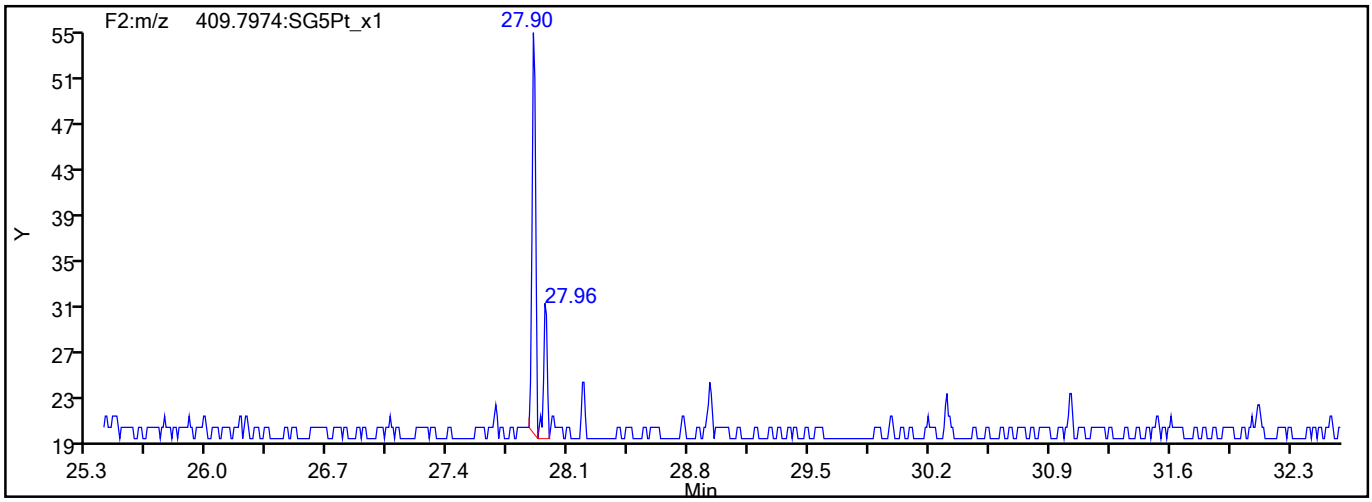

786831

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

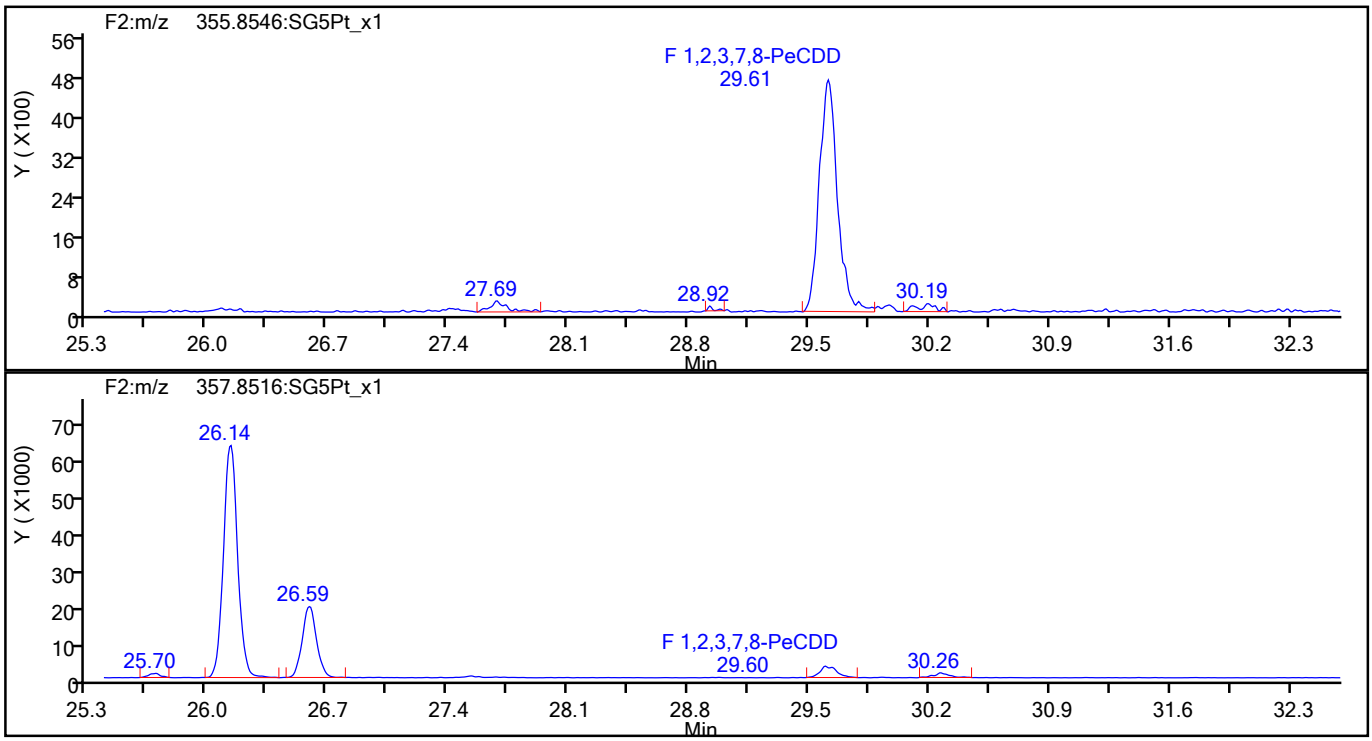

PeCDD Standards

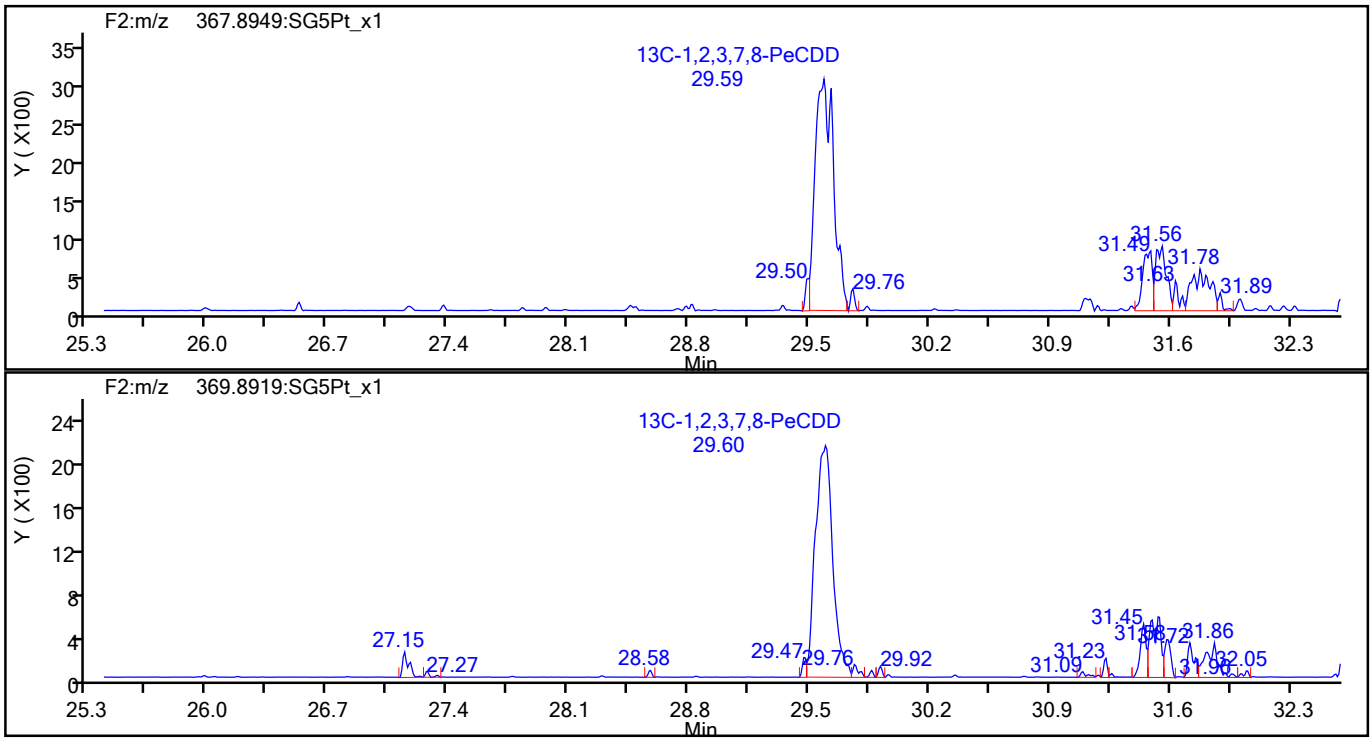

786832

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

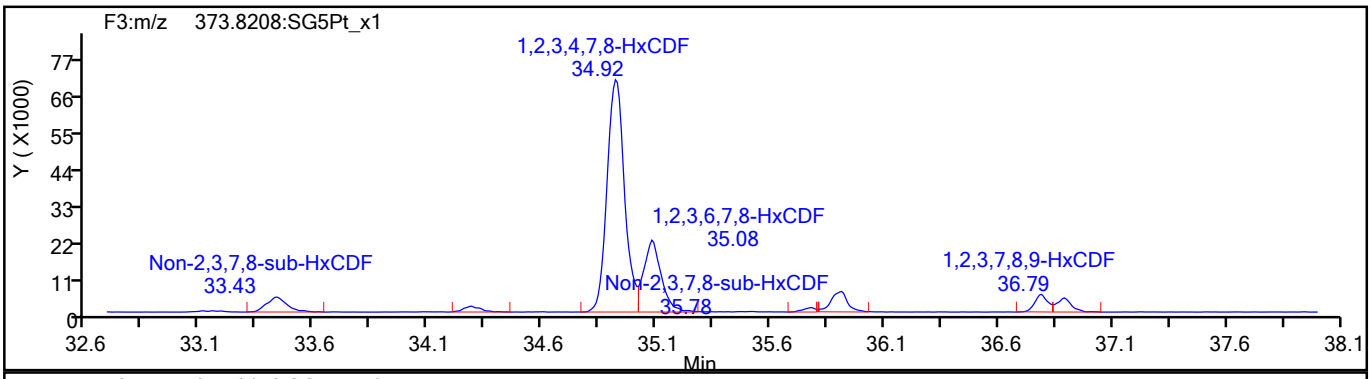

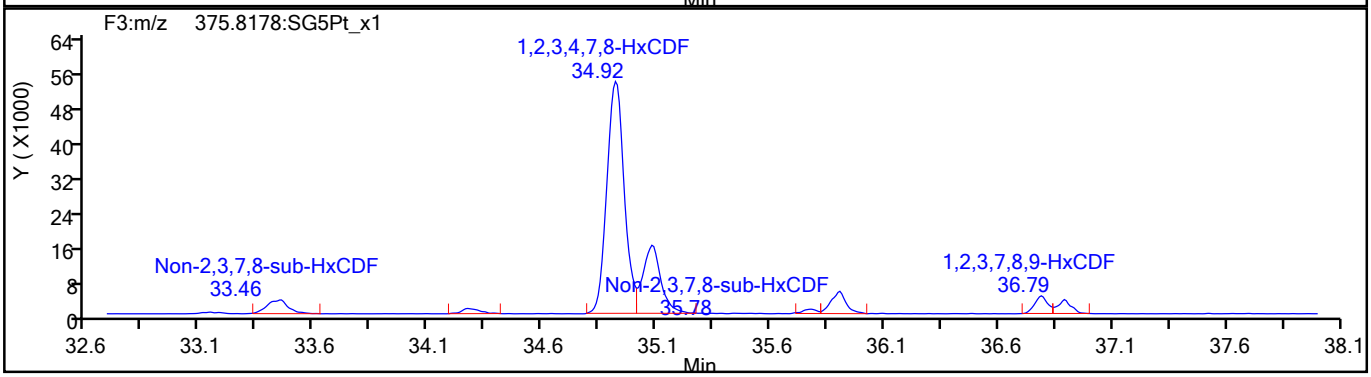

HxCDF Standards

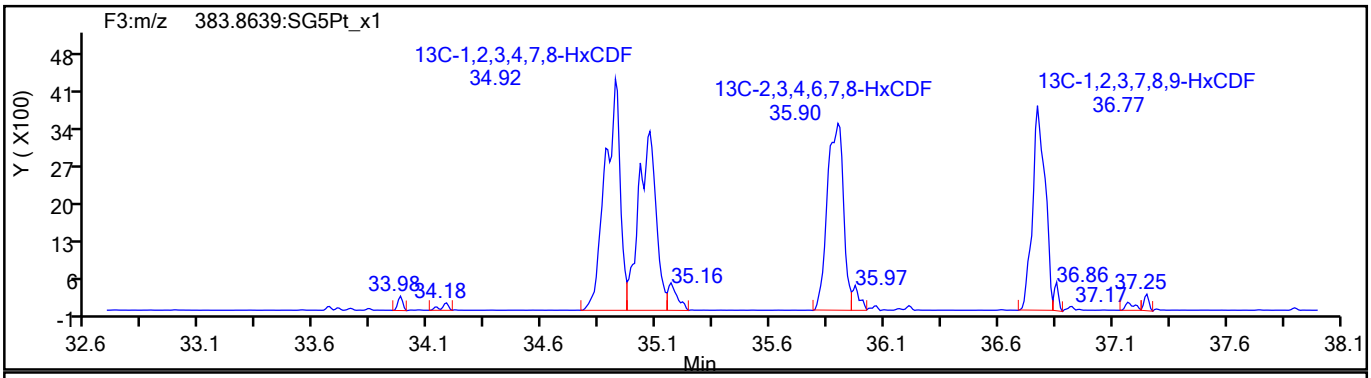

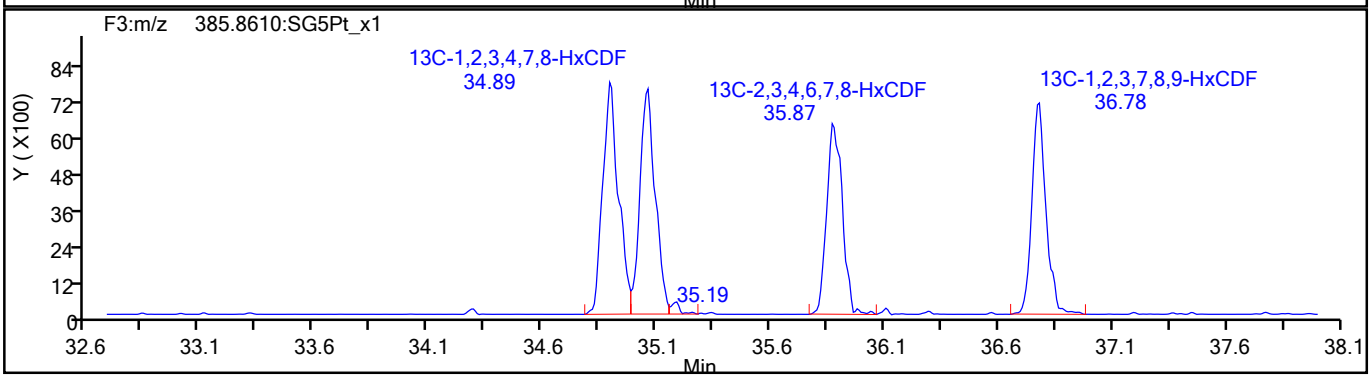

786833

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

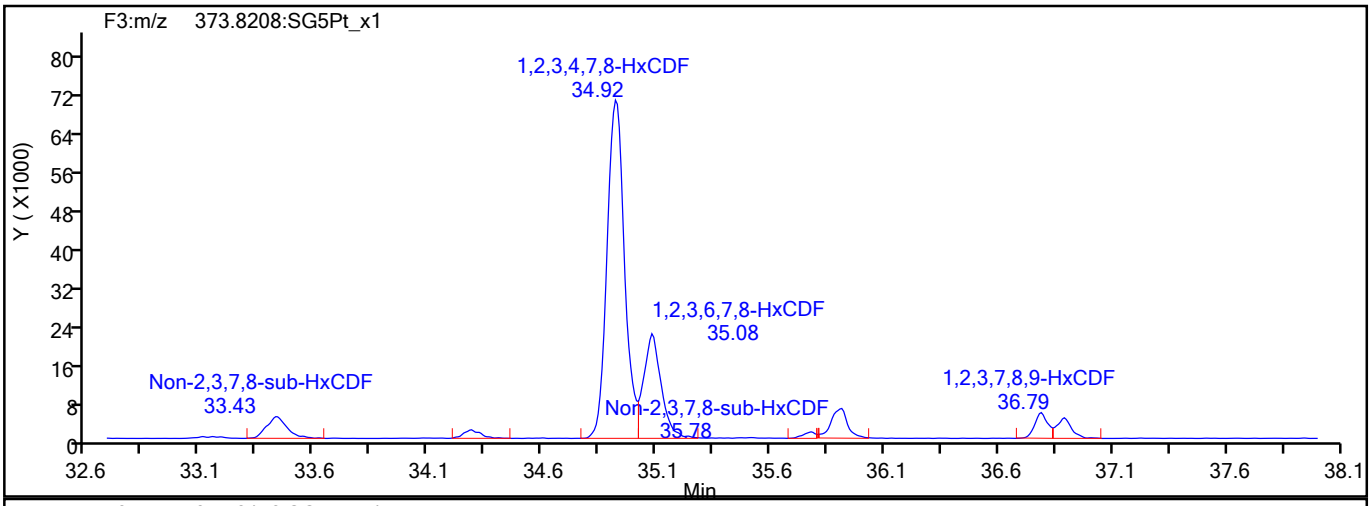

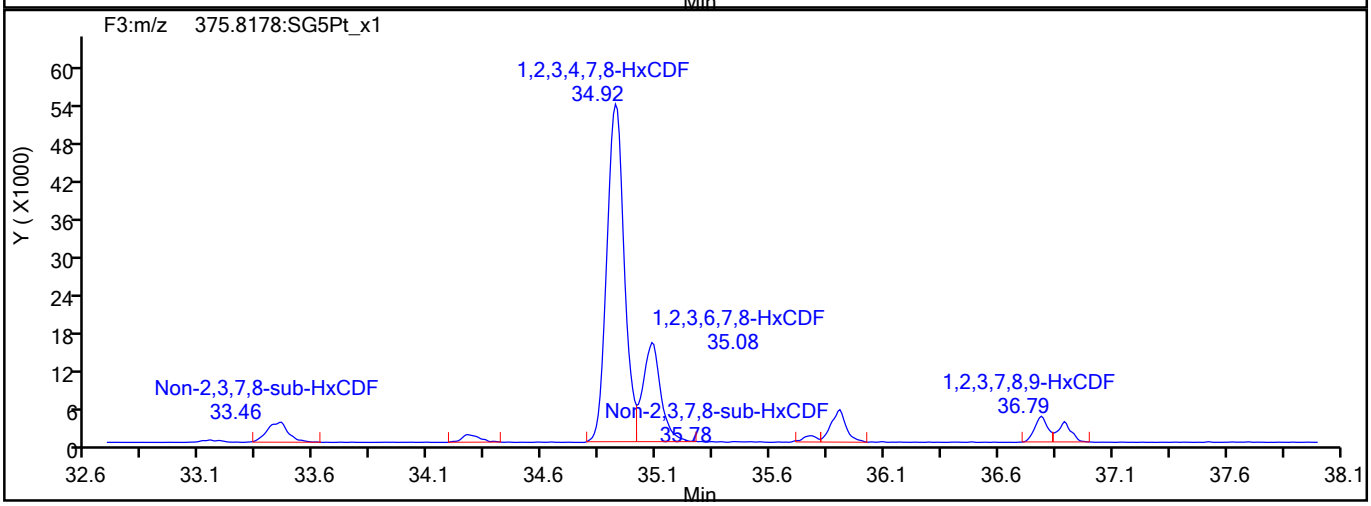

HxCDF Interference Mass

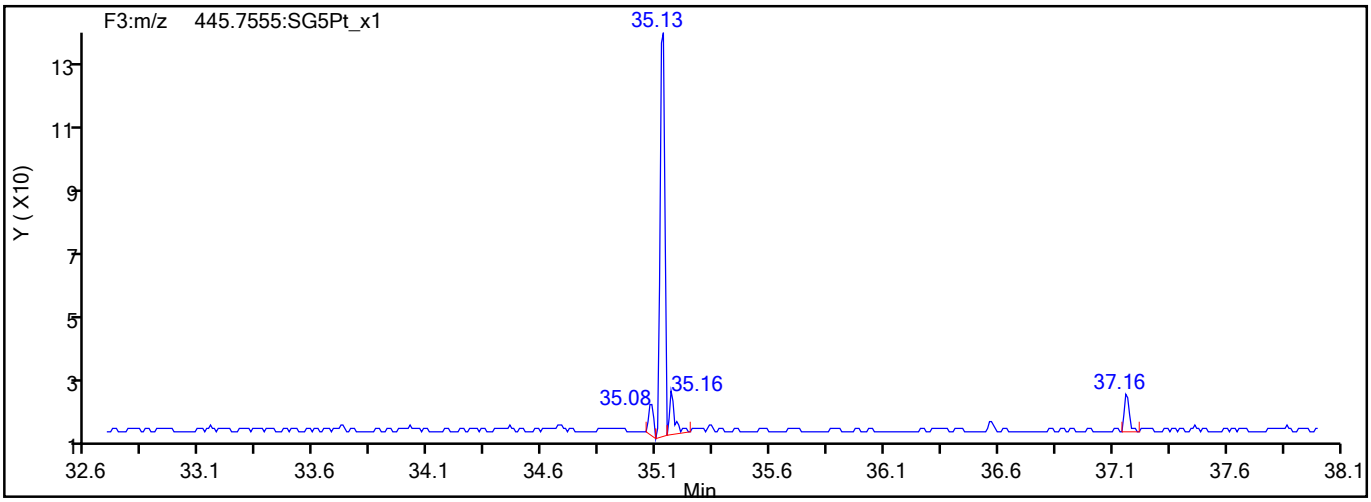

786834

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

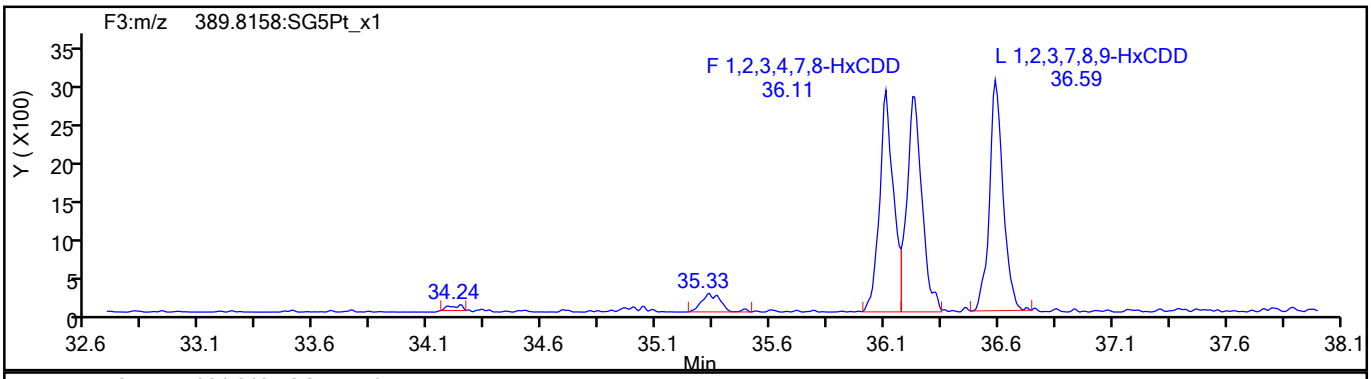

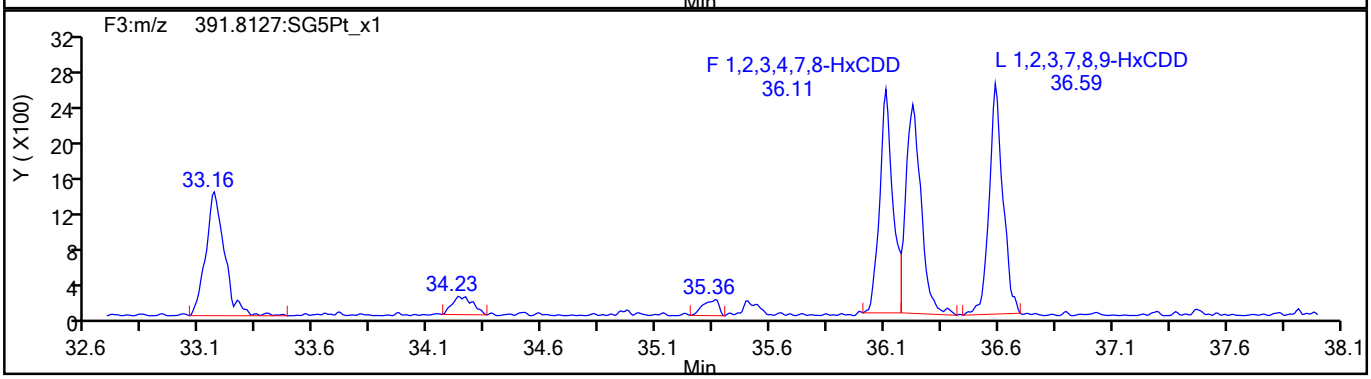

HxCDD Standards

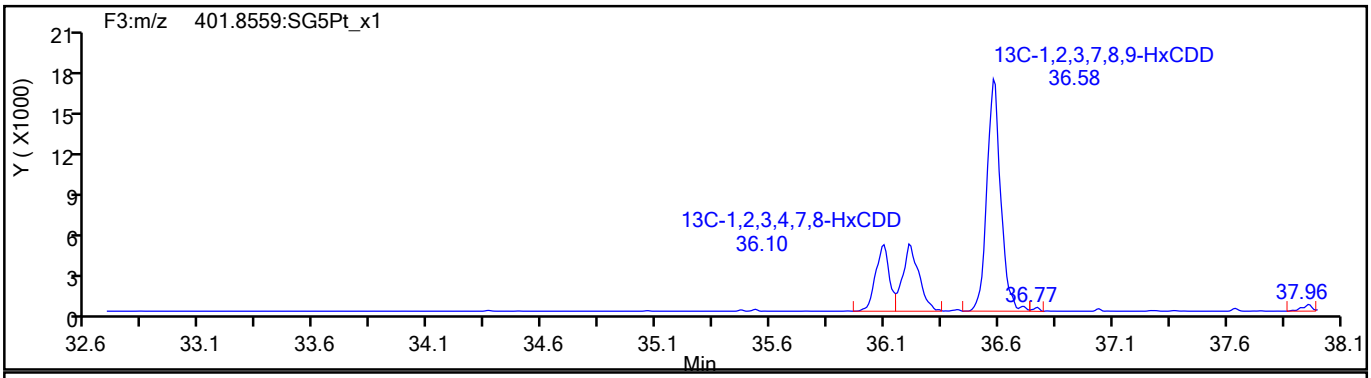

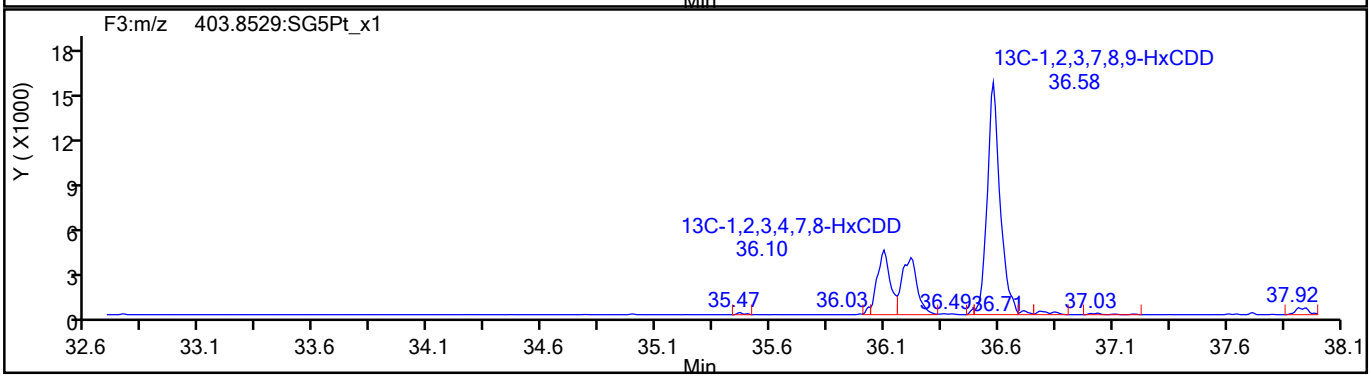

786835

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

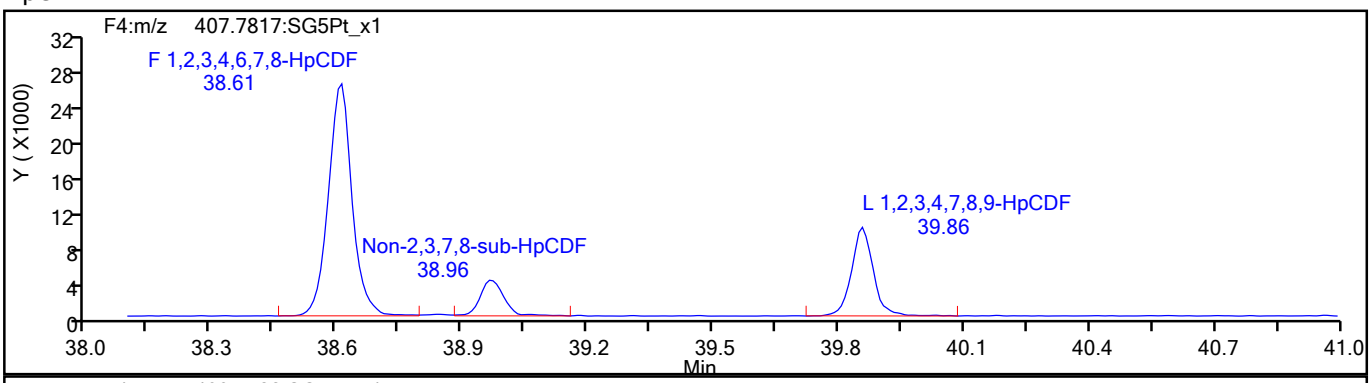

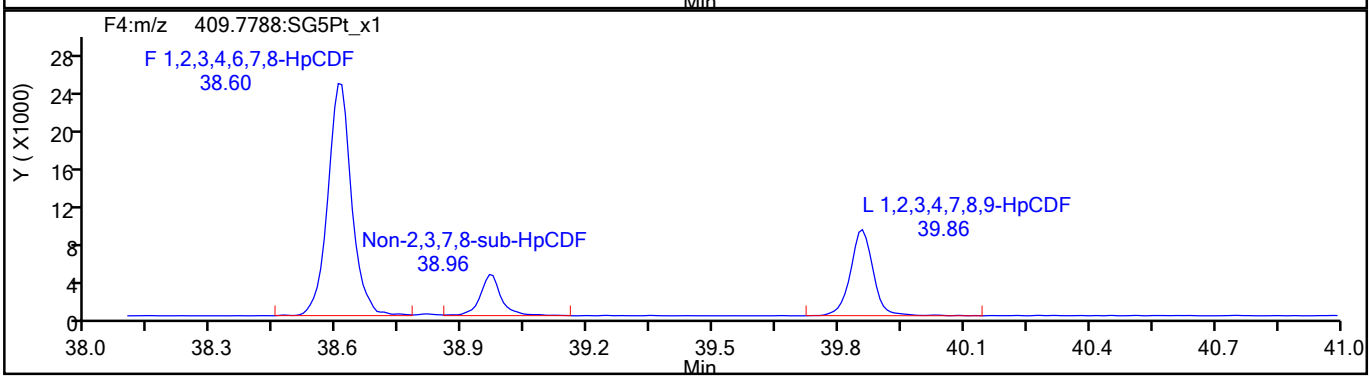

HpCDF Standards

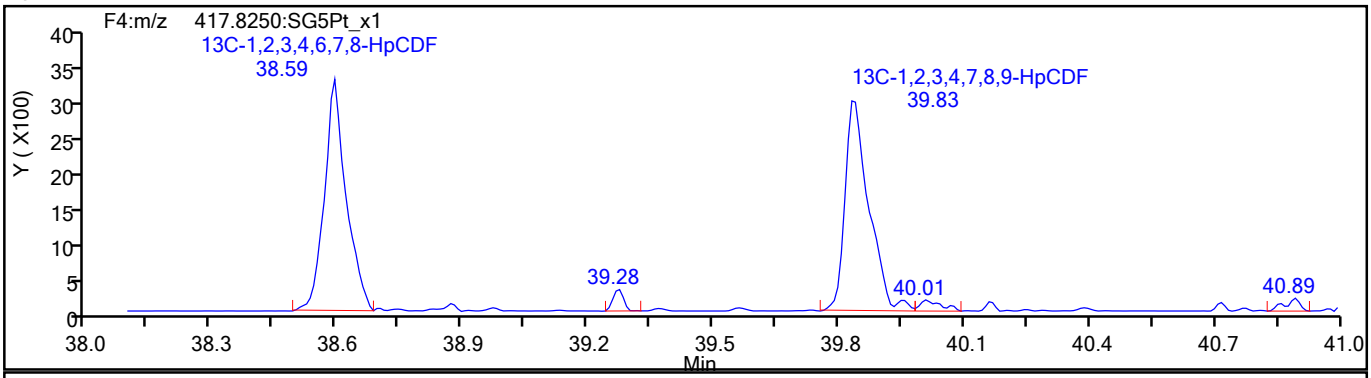

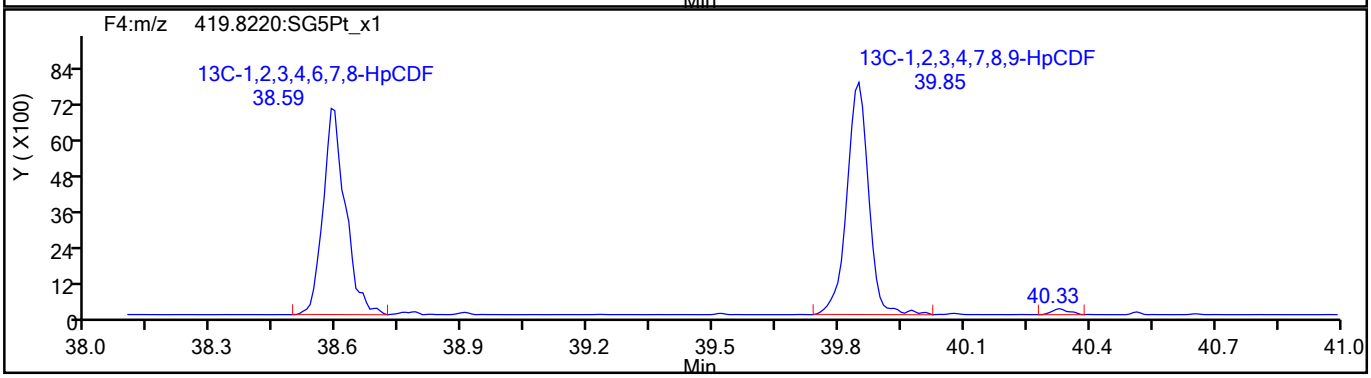

786836

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

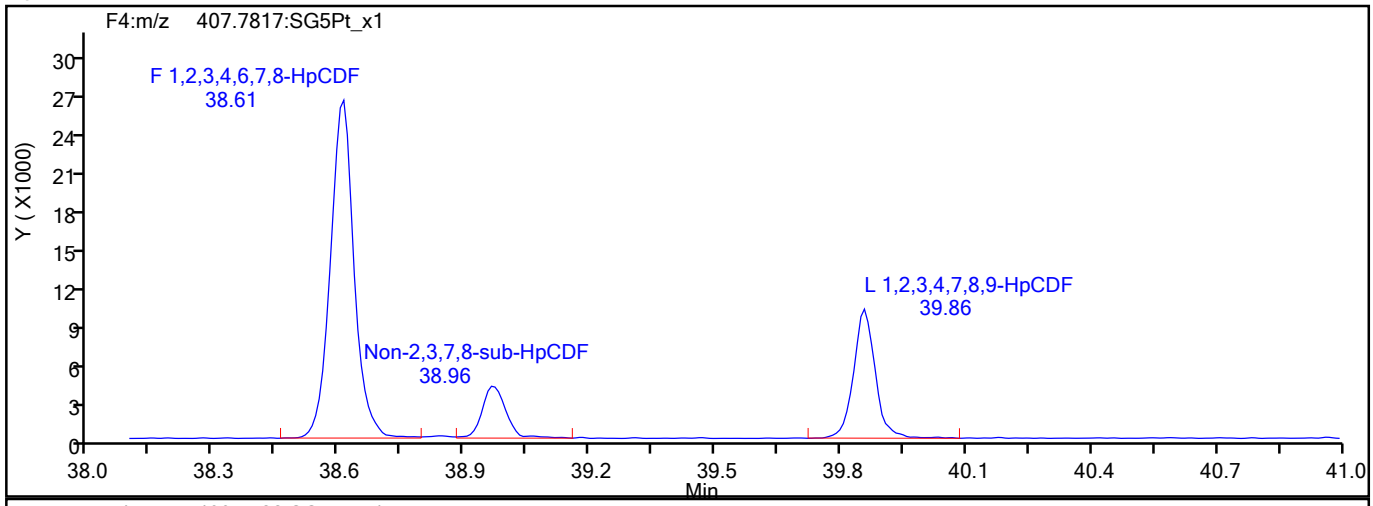

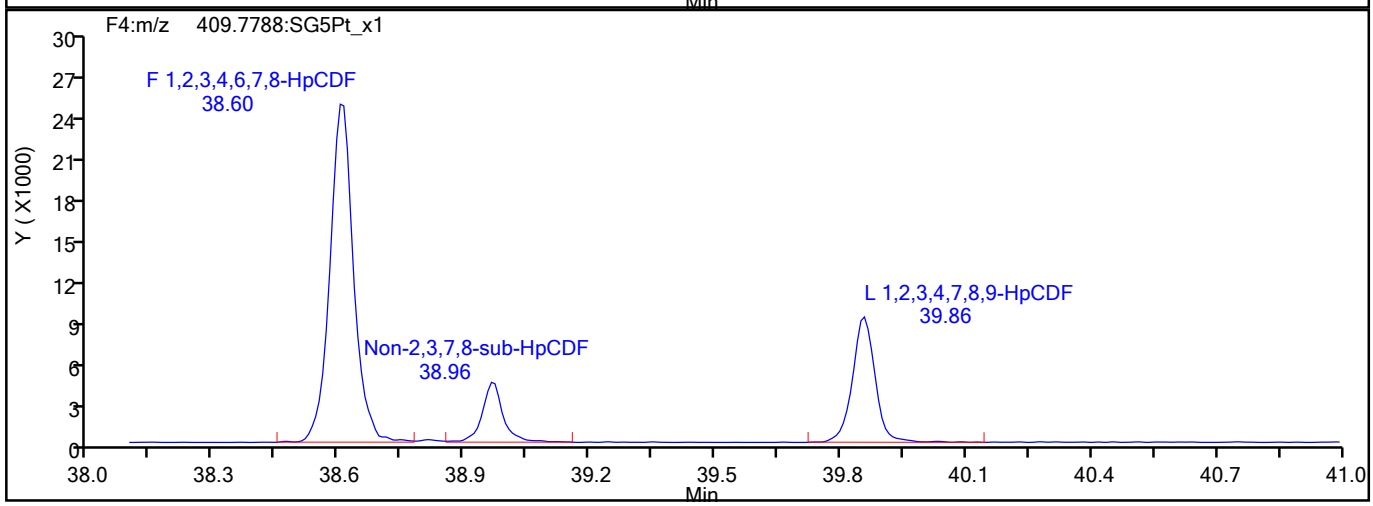

HpCDF Interference Mass

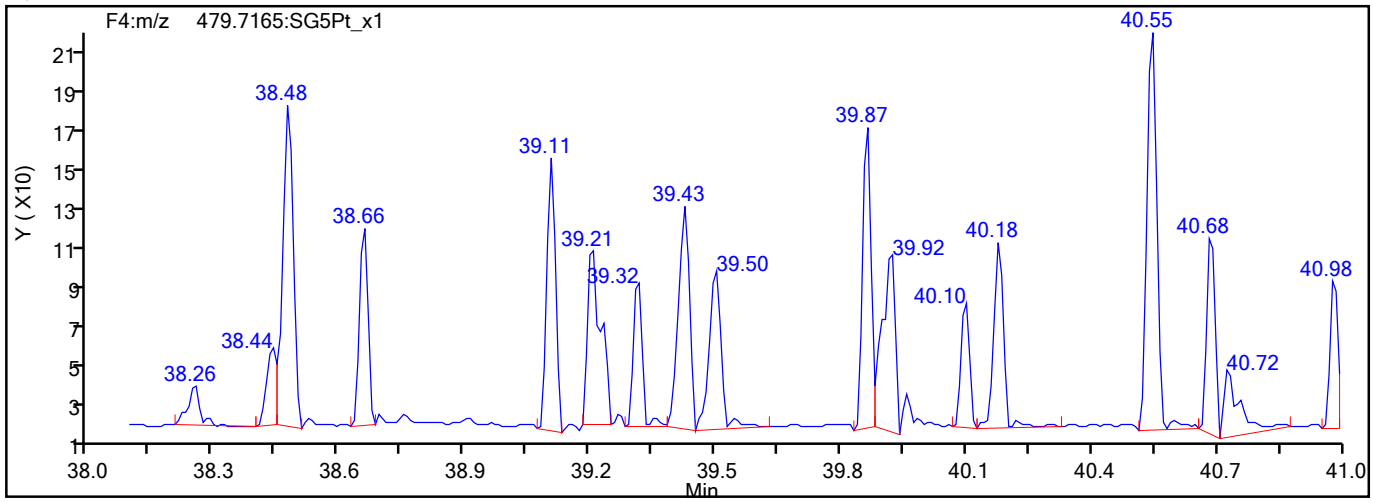

786837

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

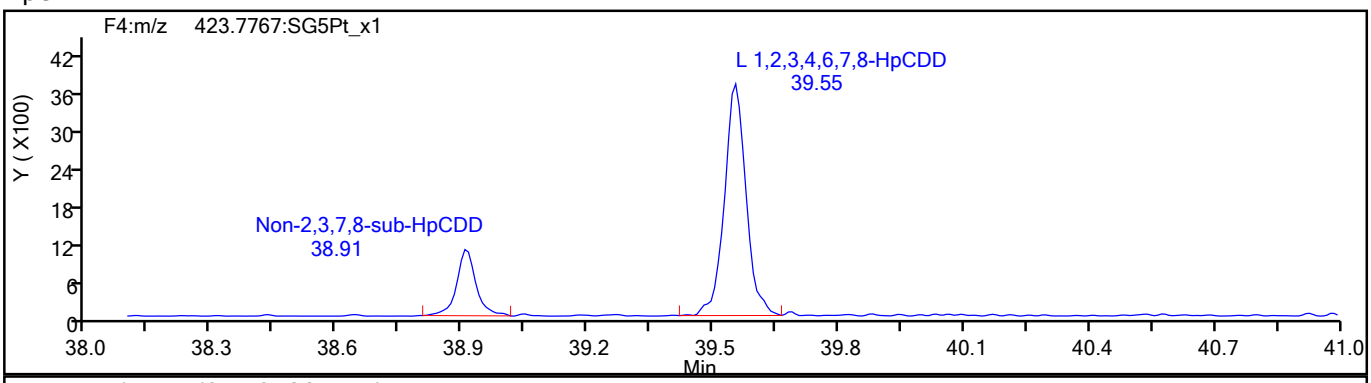

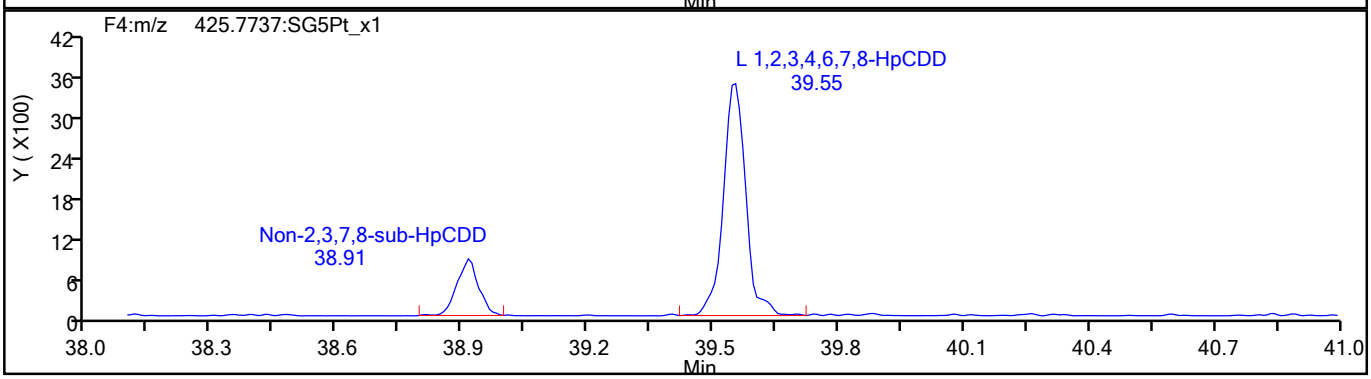

HpCDD Standards

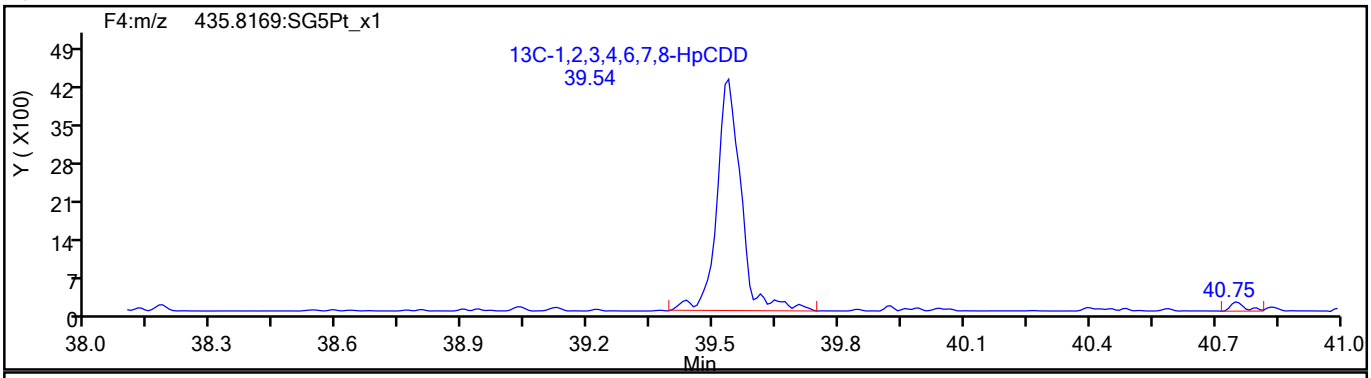

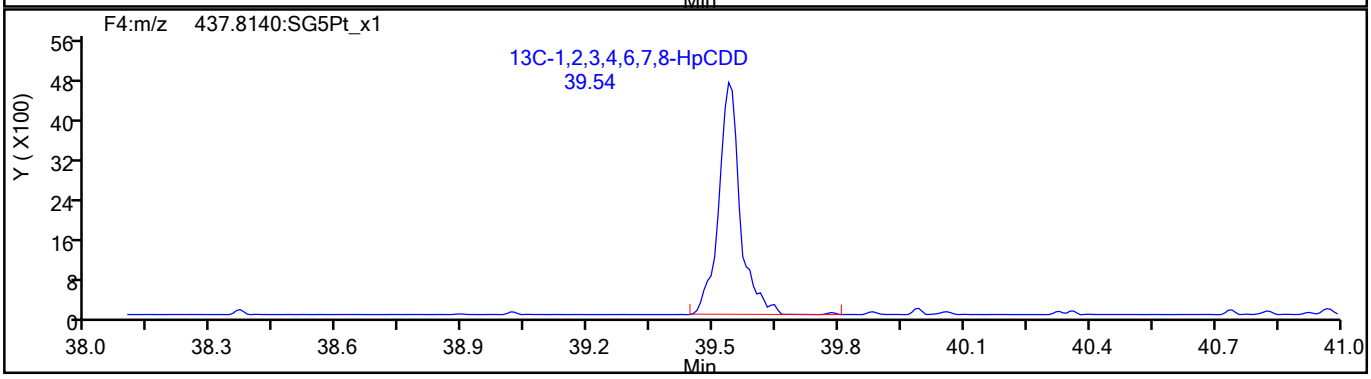

786838

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

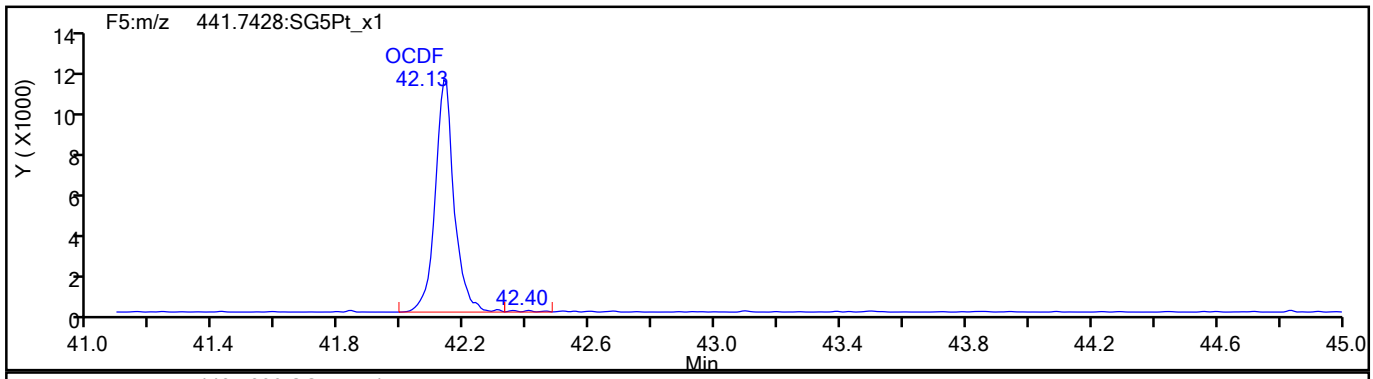

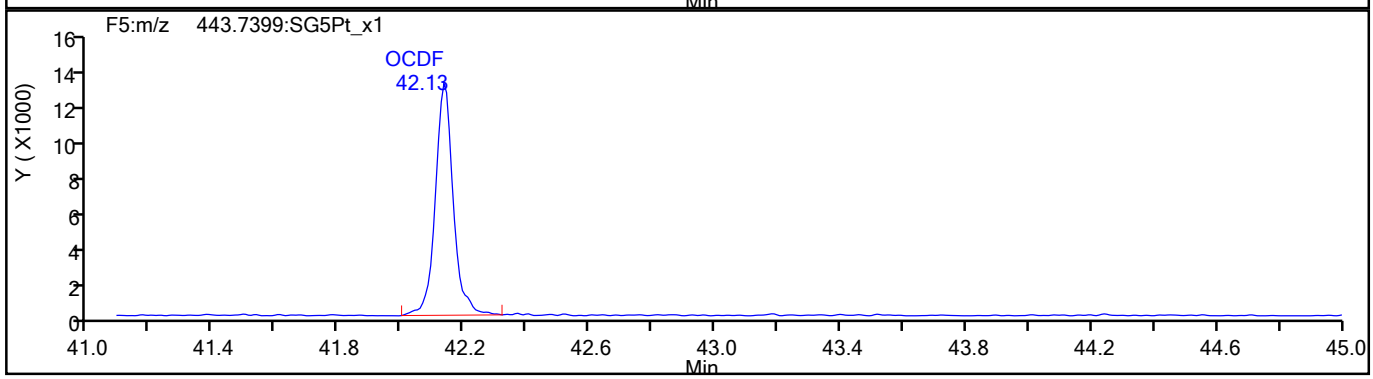

OCDF Standards

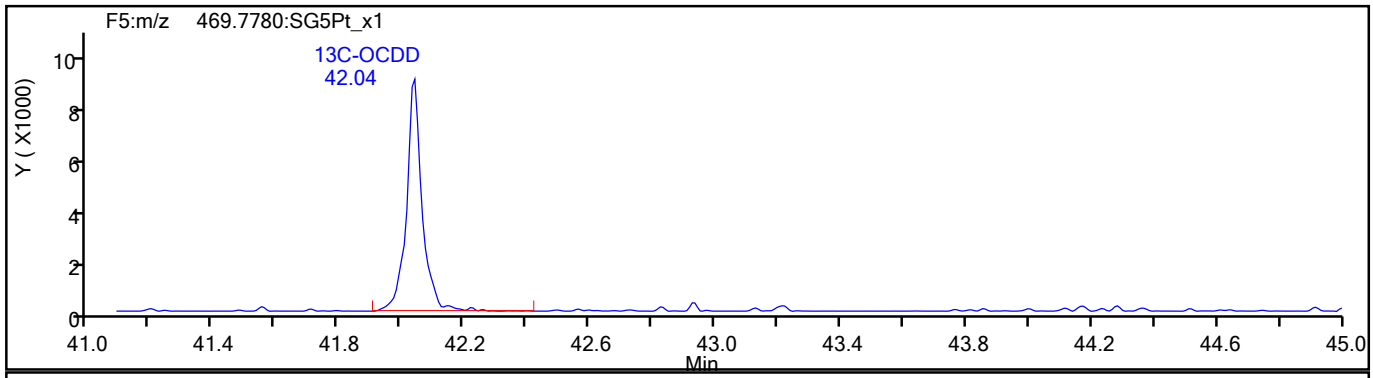

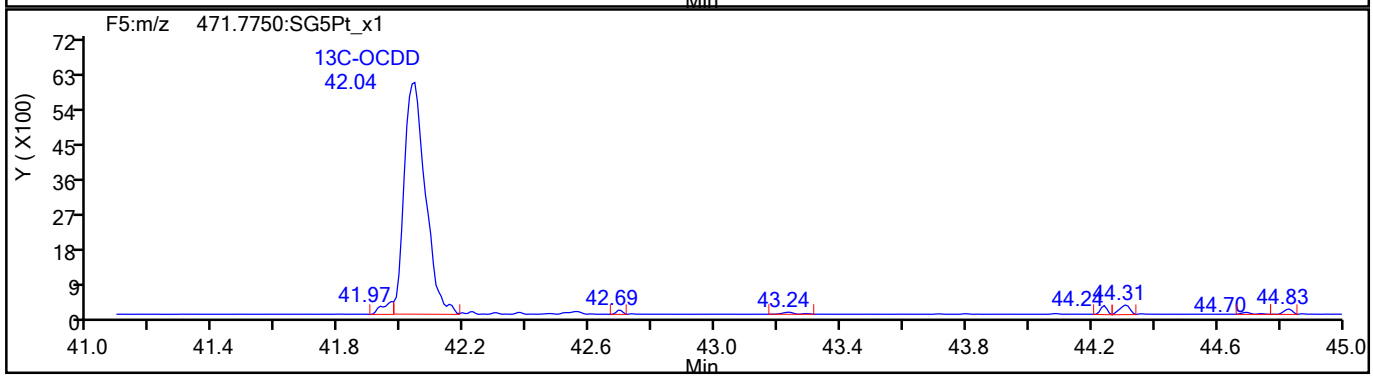

786839

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

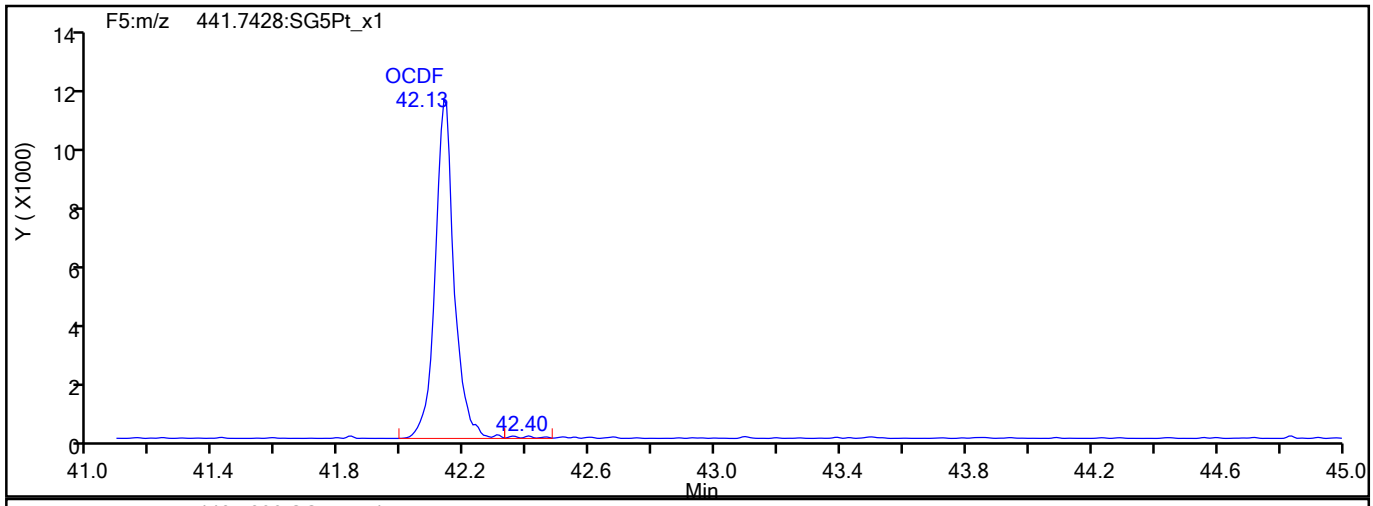

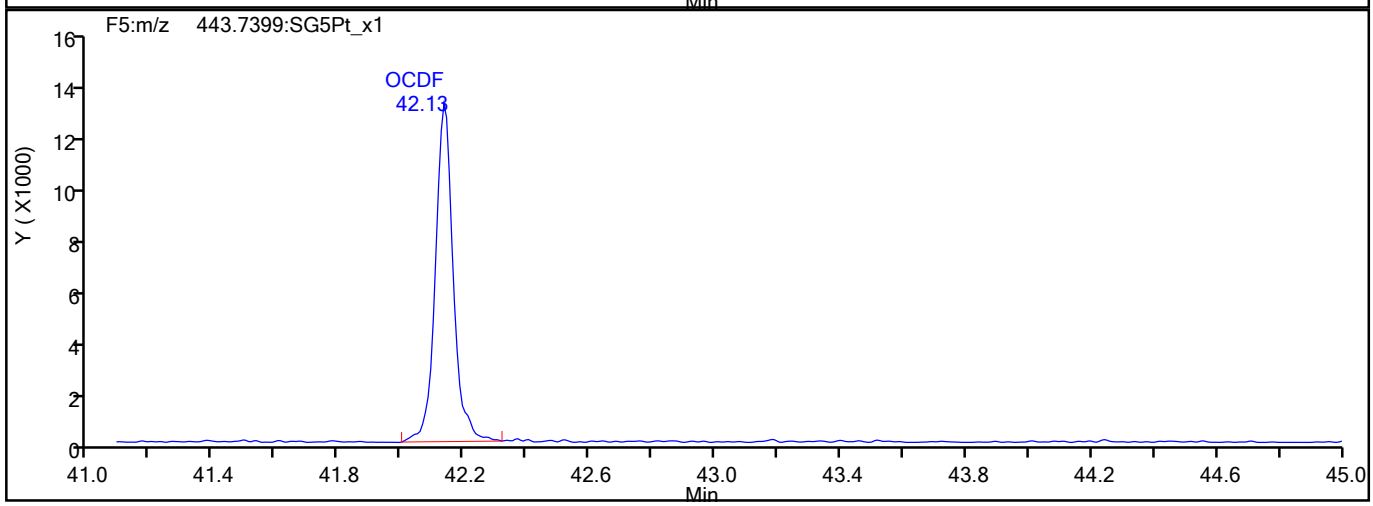

OCDF Interference Mass

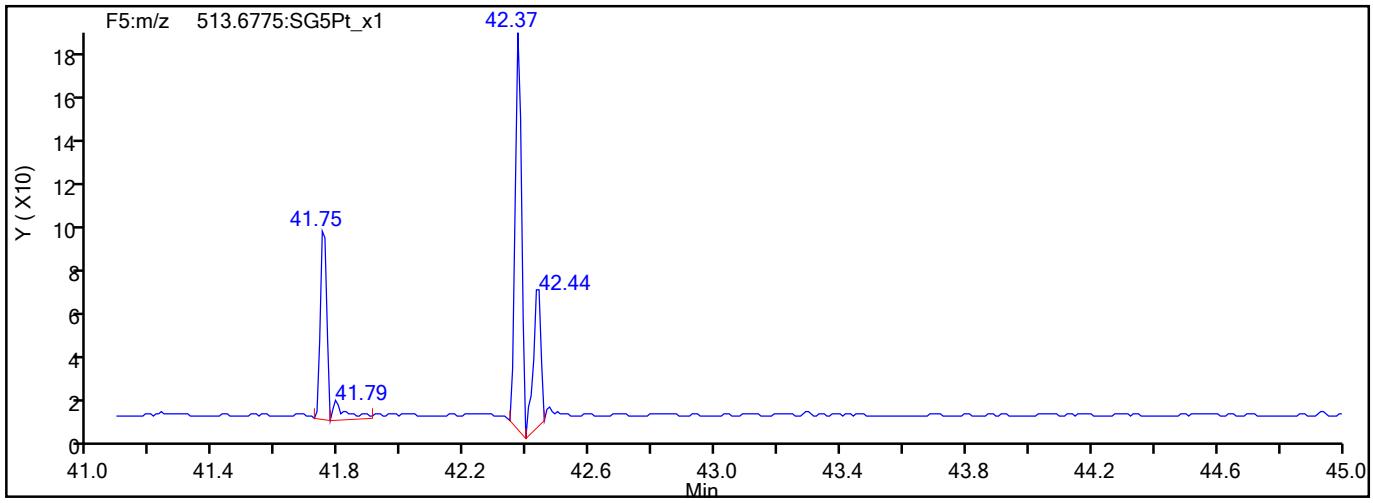

786840

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

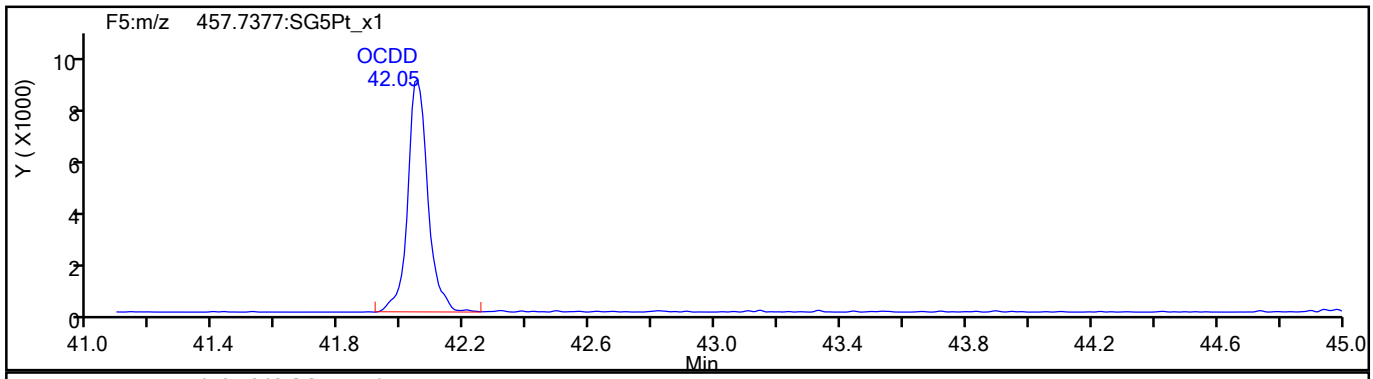

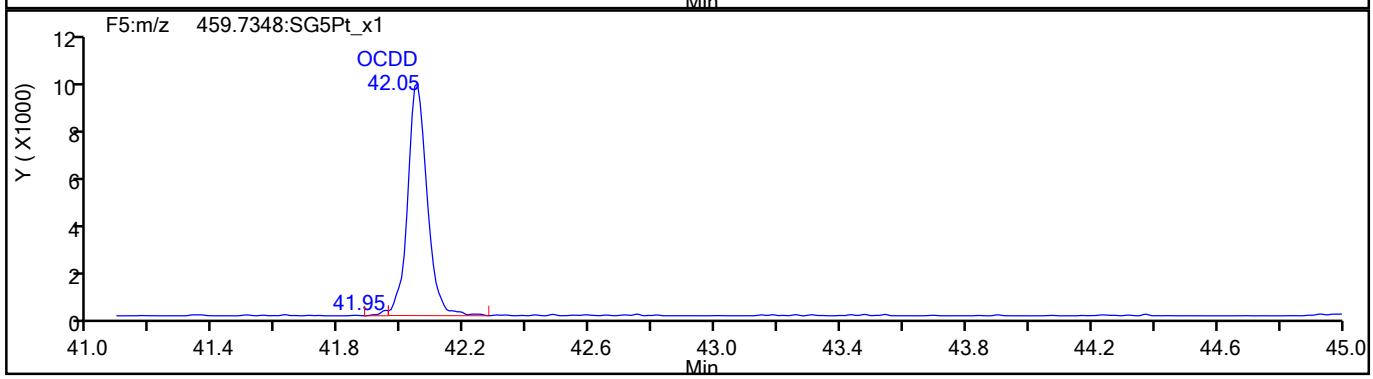

OCDD Standards

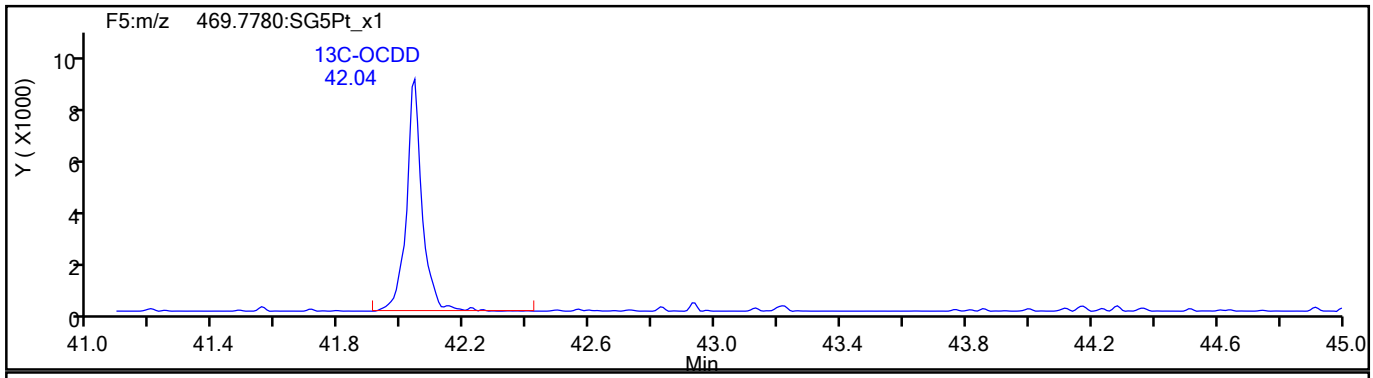

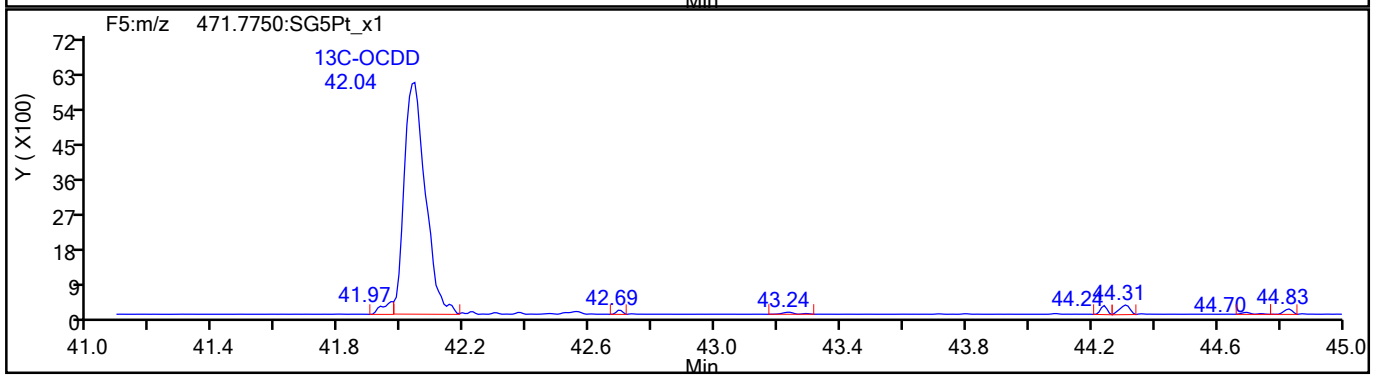

786841

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

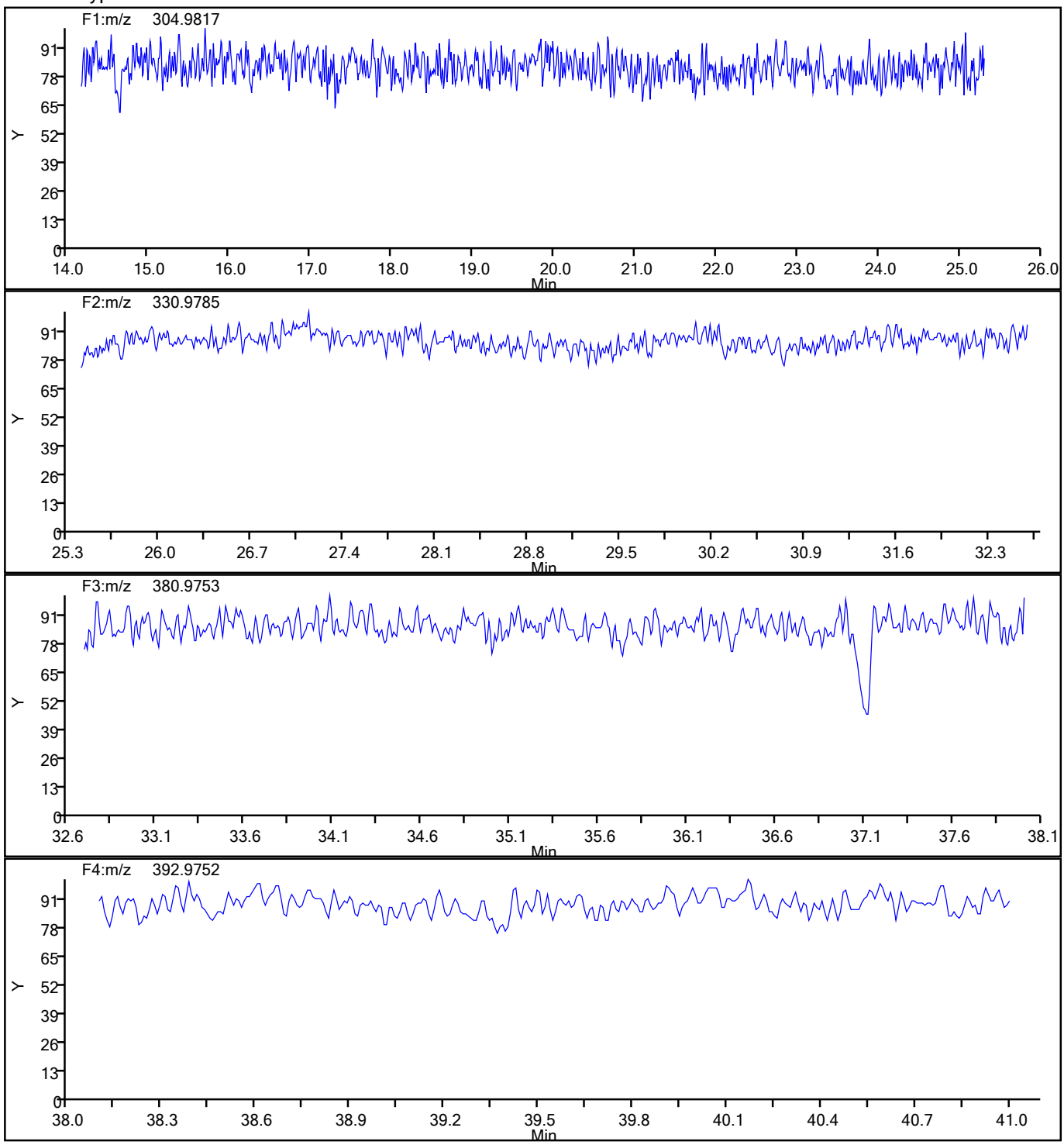

786842

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

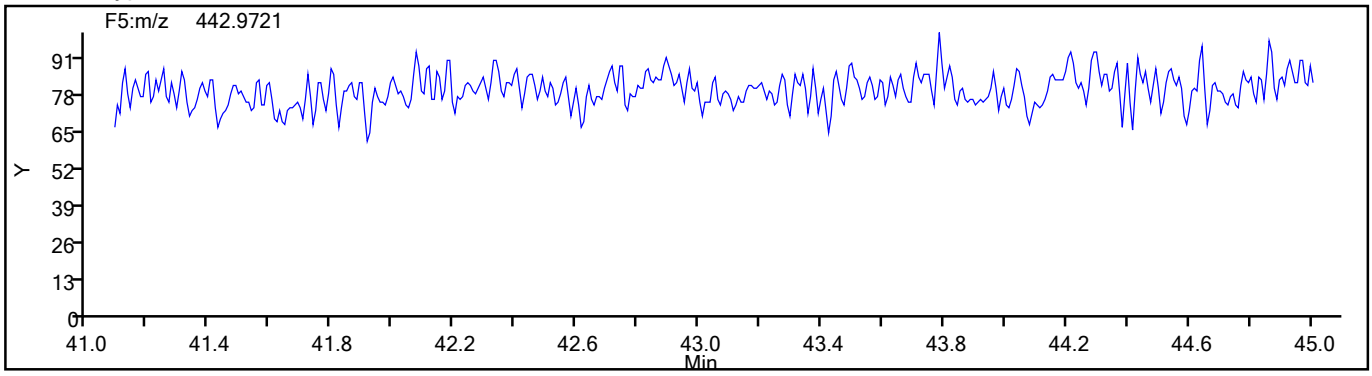

786843

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (0-2) MSD RA
Lab Sample ID: 320-76888-1 MSD RA
Matrix: Sediment
Lab File ID: 25AU2111D2_006.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.36(g)
Date Analyzed: 08/25/2021 12:07
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519650
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	127000		110	110

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	23	*5-	24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	61		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d
Lims ID: 320-76888-A-1-C MSD
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MSD
Inject. Date: 25-Aug-2021 12:07:01 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-C MSD X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:20:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.341	8547708	0.82	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.657	2639901	0.66	1.3327	2.317	2.317	1.261	1.261	23.17	M
2,3,7,8-TCDF	17.671	931284861	0.79	0.9978	3535.5	3535.5	3.082	3.082	3.5E+005	Ea
D 13C-2,3,7,8-TCDD	16.094	2719216	0.78	0.8749	3.636	3.636	9.357	9.357	36.36	nM
2,3,7,8-TCDD	16.121	148296810	0.79	1.0570	516.0	516.0	2.909	2.909	51596	Ea
$ 37Cl4-2,3,7,8-TCDD	16.107	1809354		0.8648	2.448	2.448	1.570	1.570	61.19	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d
Lims ID: 320-76888-A-1-C MSD
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MSD
Inject. Date: 25-Aug-2021 12:07:01 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-C MSD X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:20:59

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.341	16.285	3		3856388	730206	258415	646037	3		M
333.9339	16.341	16.285	3		4691320	1004175	309553	773882	3	0.82(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.657	17.601	3	1.081	1052419	236656	55121	137802	4		M
317.9389	17.657	17.601	3	1.081	1587482	327976	61453	153632	5	0.66(0.65-0.89)	M
2,3,7,8-TCDF											Ea
303.9016	17.671	17.629	3	1.001	411435531	74175810	31598	78995	2347		a
305.8987	17.671	17.629	3	1.001	519849330	94085549	37866	94665	2485	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.094	16.051	3	0.985	1189415	205031	258415	646037	1		M
333.9339	16.107	16.051	3	0.986	1529801	283888	309553	773882	1	0.78(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.121	16.079	3	1.002	65493228	14816597	35528	88820	417		a
321.8936	16.121	16.079	3	1.002	82803582	18212476	24597	61492	740	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											M
327.8840	16.107	16.079	2	0.986	1809354	314916	94219	235547	3		M

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d				
Injection Date:	25-Aug-2021 12:07:01	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.79
Area: 5037434
Amount: 11.149494
Amount Units: pg/ul

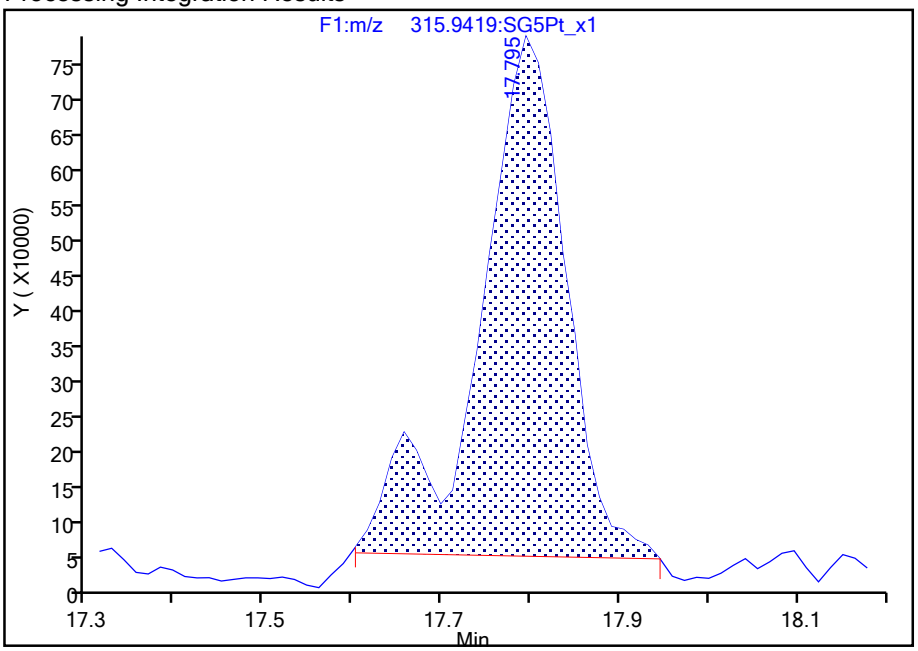

Manual Integration Results

RT: 17.66
Area: 1052419
Amount: 2.317449
Amount Units: pg/ul

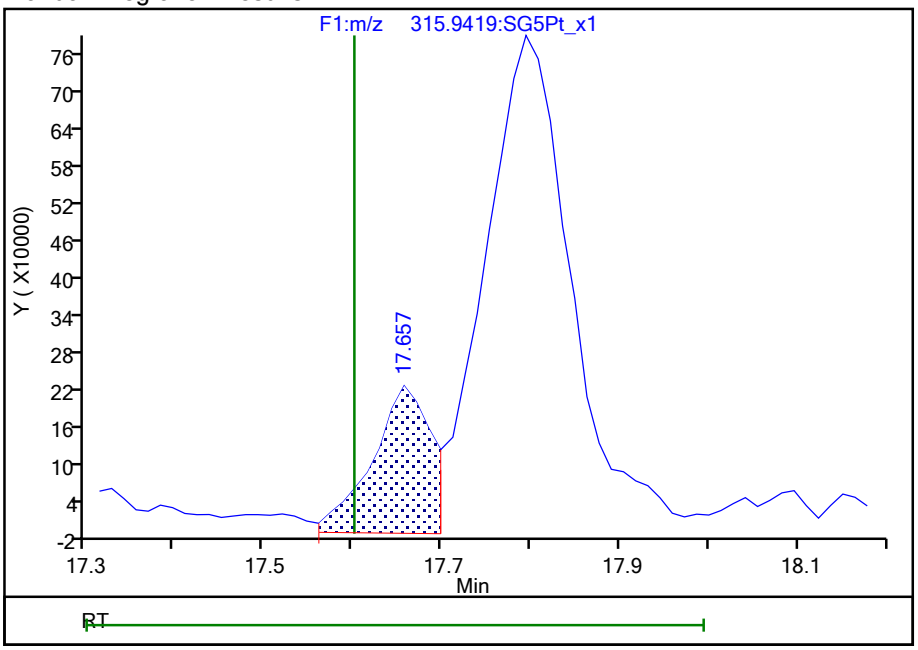

Reviewer: bennettd, 25-Aug-2021 13:22:23

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

786847

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d				
Injection Date:	25-Aug-2021 12:07:01	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.79
Area: 7663413
Amount: 11.149494
Amount Units: pg/ul

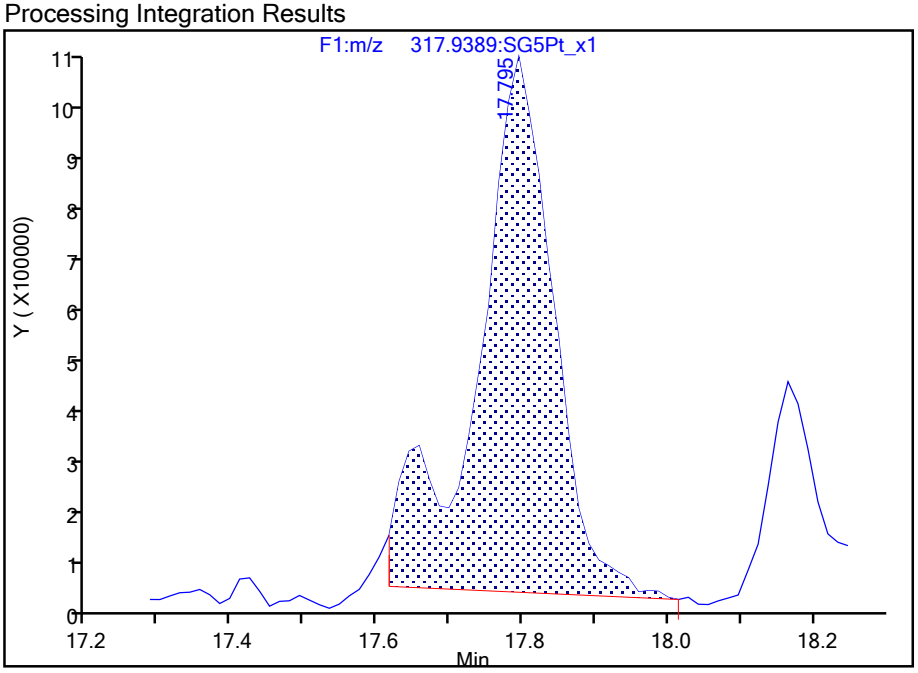

Manual Integration Results

RT: 17.66
Area: 1587482
Amount: 2.317449
Amount Units: pg/ul

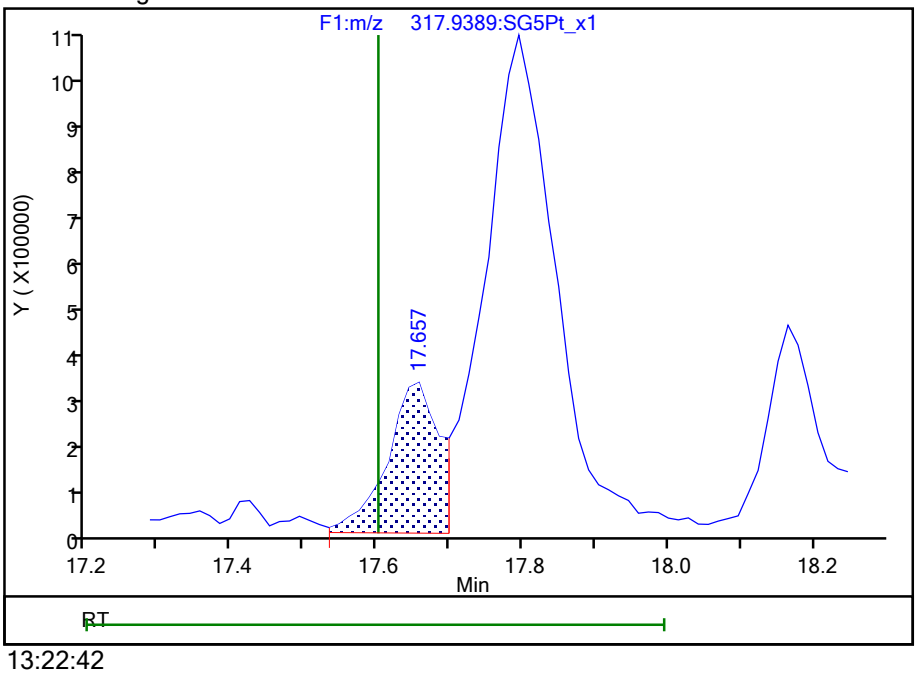

Reviewer: bennettd, 25-Aug-2021 13:22:42
Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

786848

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d				
Injection Date:	25-Aug-2021 12:07:01	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.63

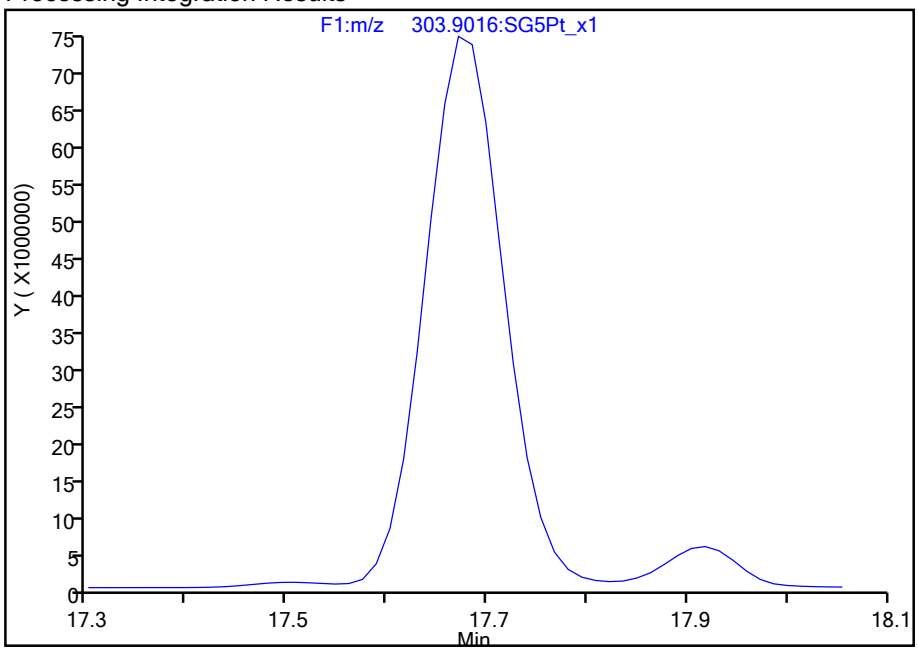

Manual Integration Results

RT: 17.67
Area: 411435531
Amount: 3535.4806
Amount Units: pg/ul

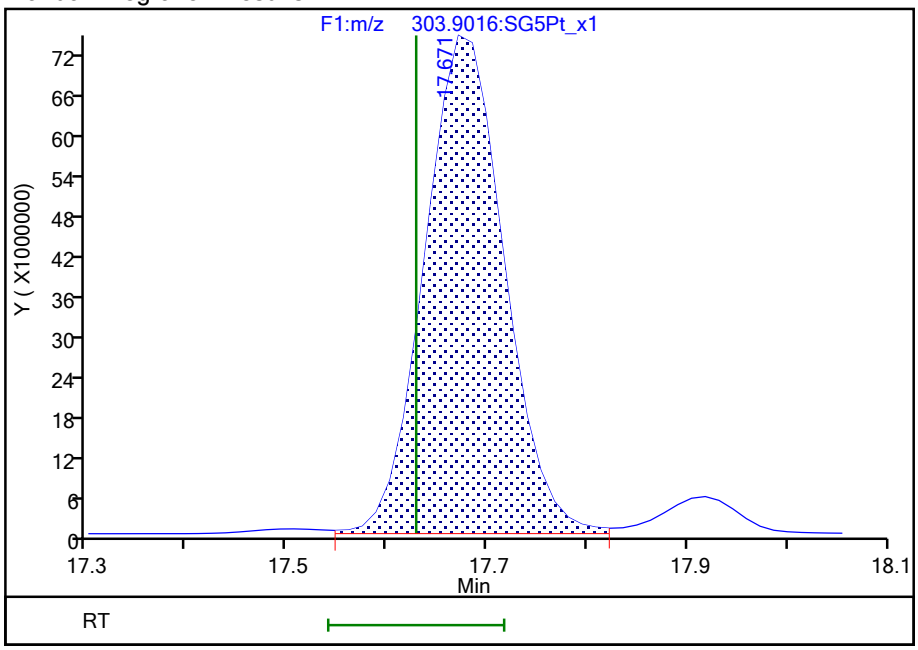

Reviewer: bennettd, 25-Aug-2021 13:22:54
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

786849

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d				
Injection Date:	25-Aug-2021 12:07:01	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

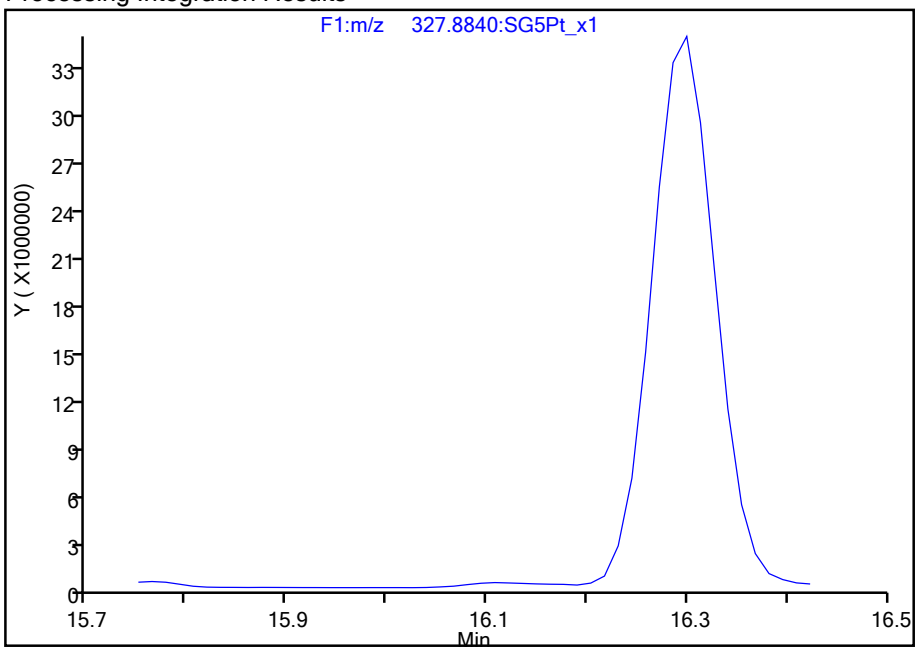

Manual Integration Results

RT: 16.11
Area: 1809354
Amount: 2.447654
Amount Units: pg/ul

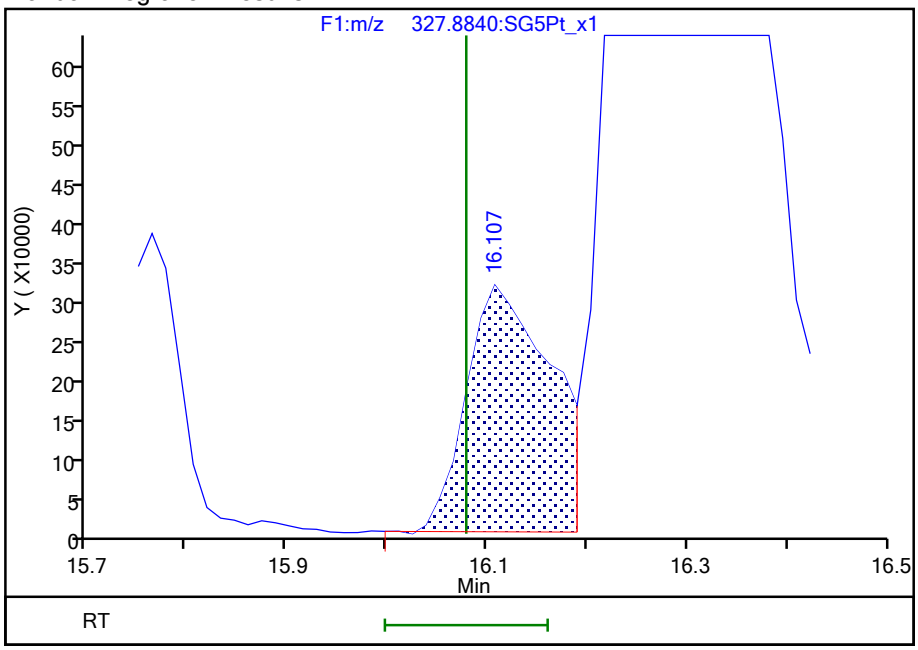

Reviewer: bennettd, 25-Aug-2021 13:21:32
Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

786850

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d		
Injection Date:	25-Aug-2021 12:07:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

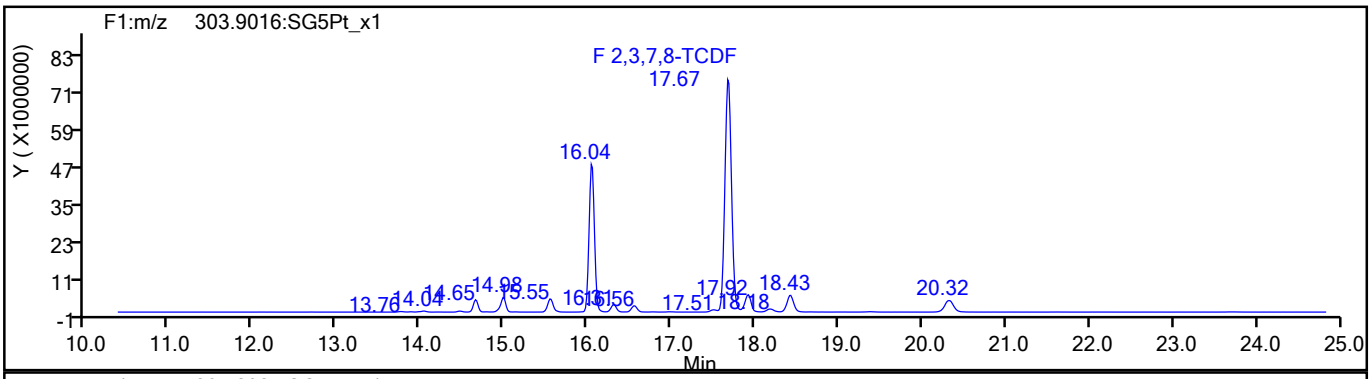

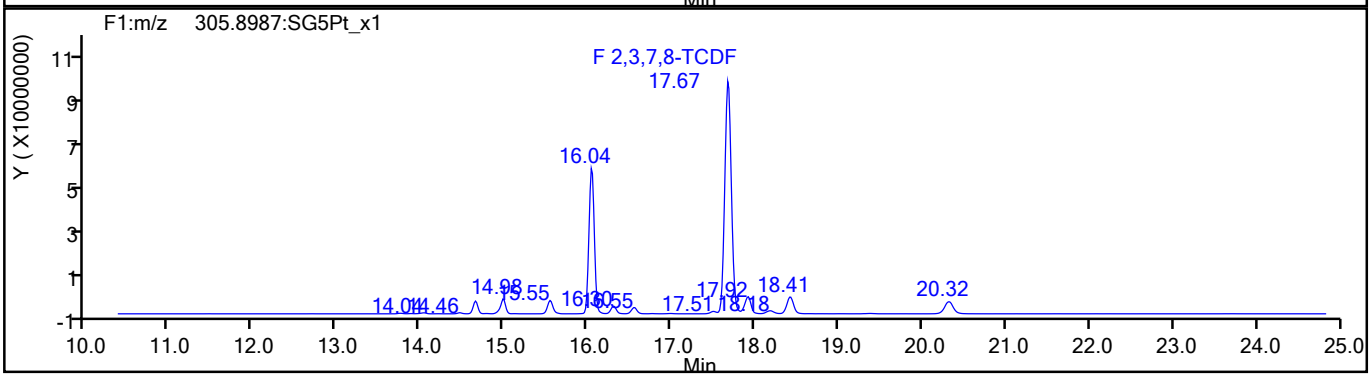

TCDF Standards

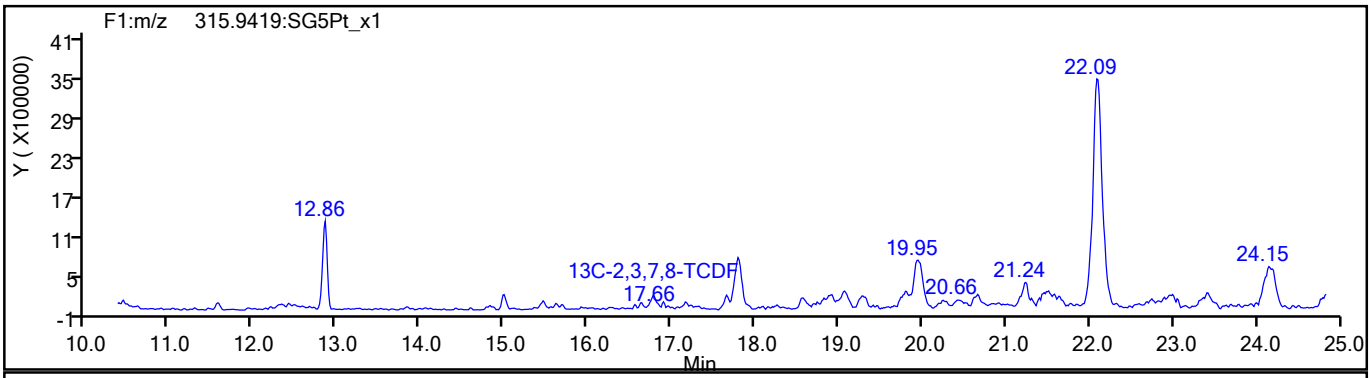

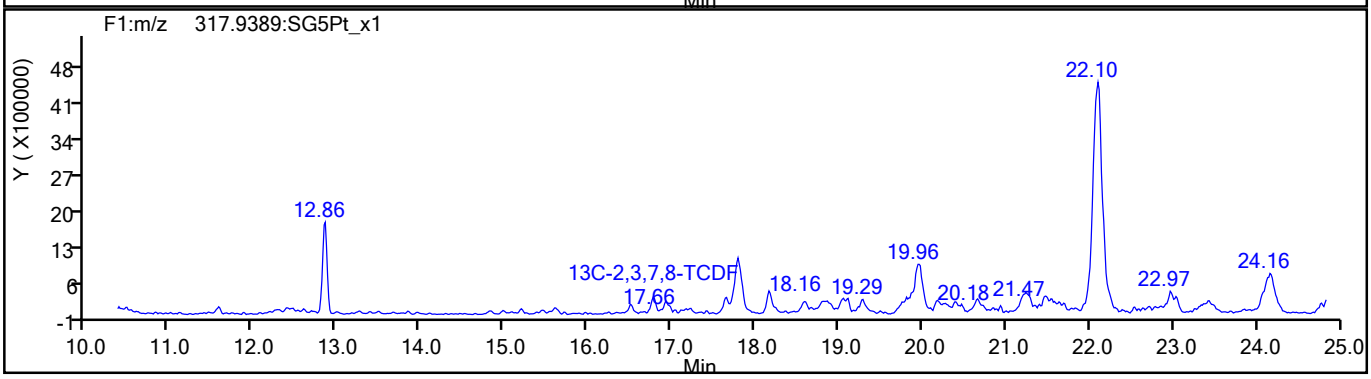

786851

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d		
Injection Date:	25-Aug-2021 12:07:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

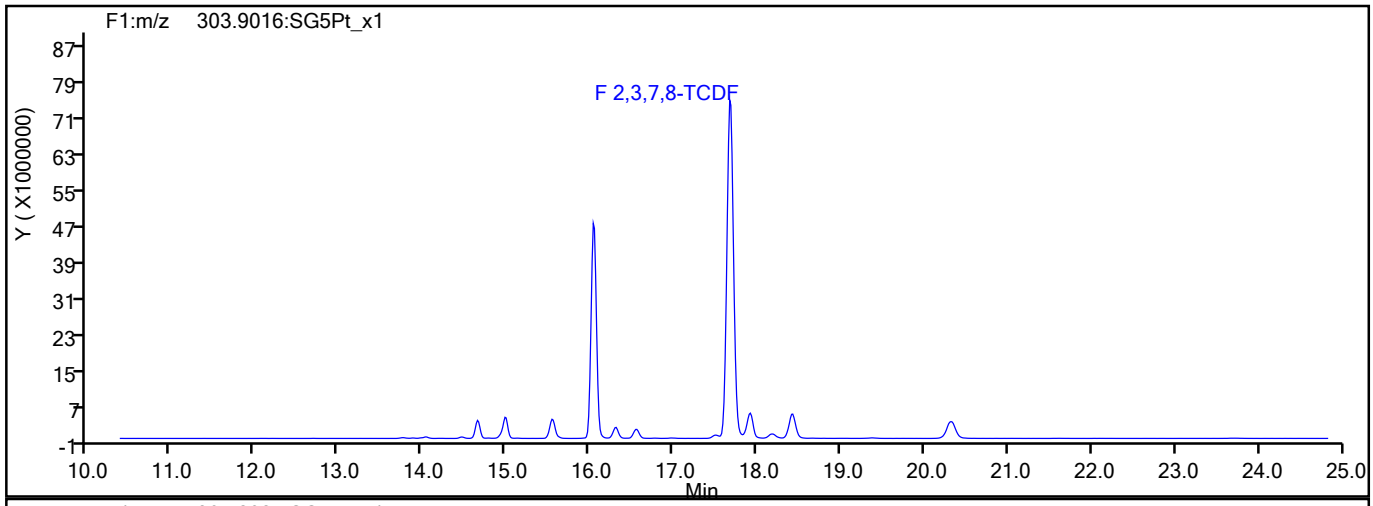

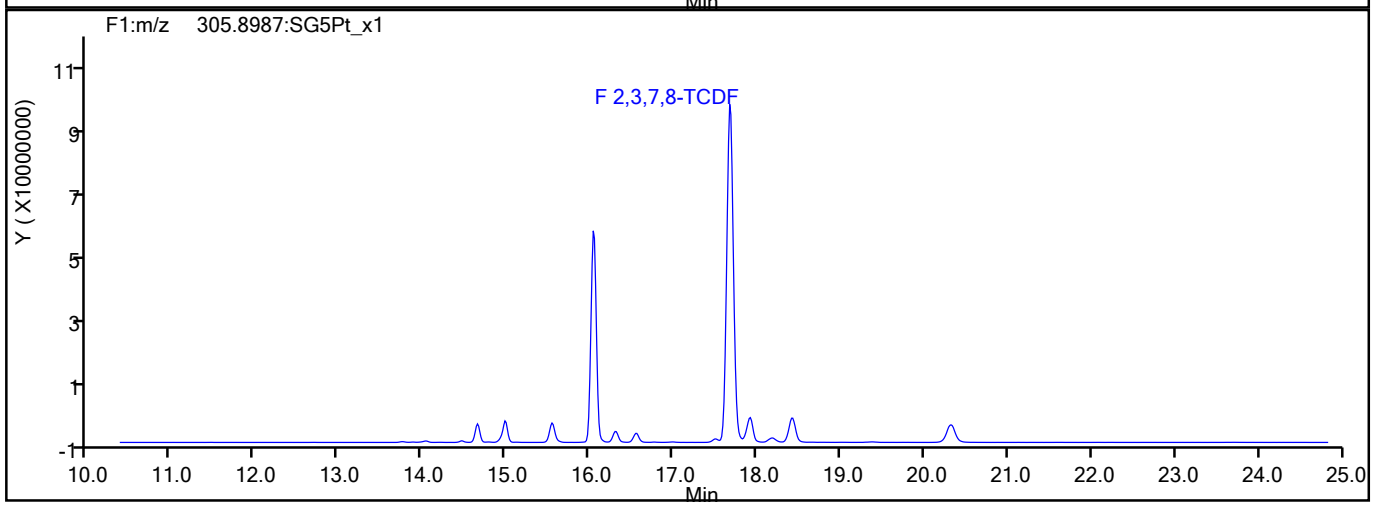

TCDF Interference Mass

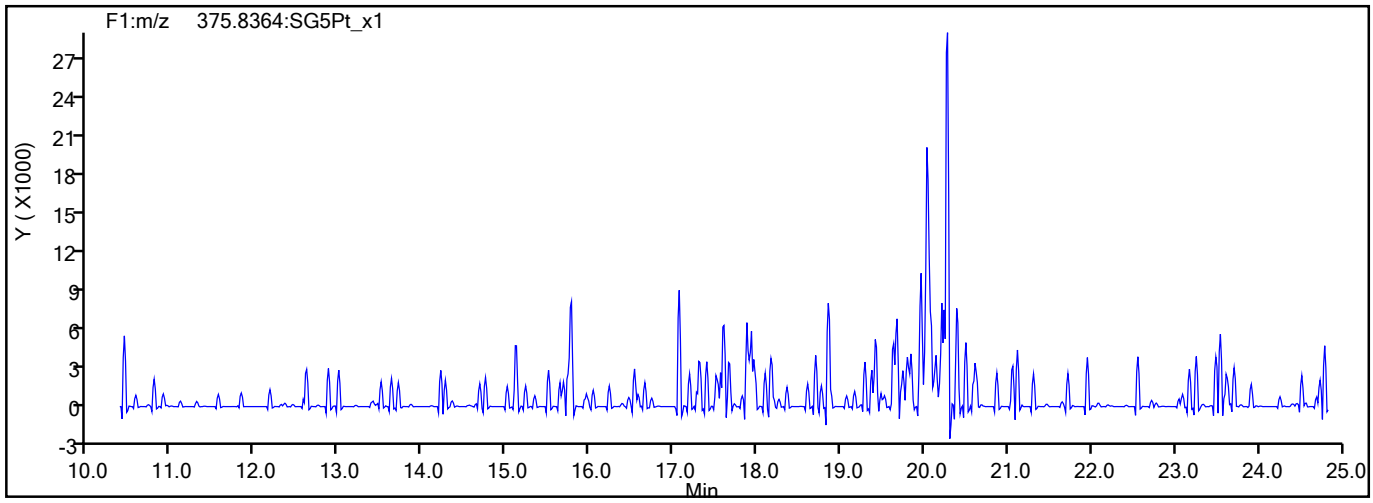

786852

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d		
Injection Date:	25-Aug-2021 12:07:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

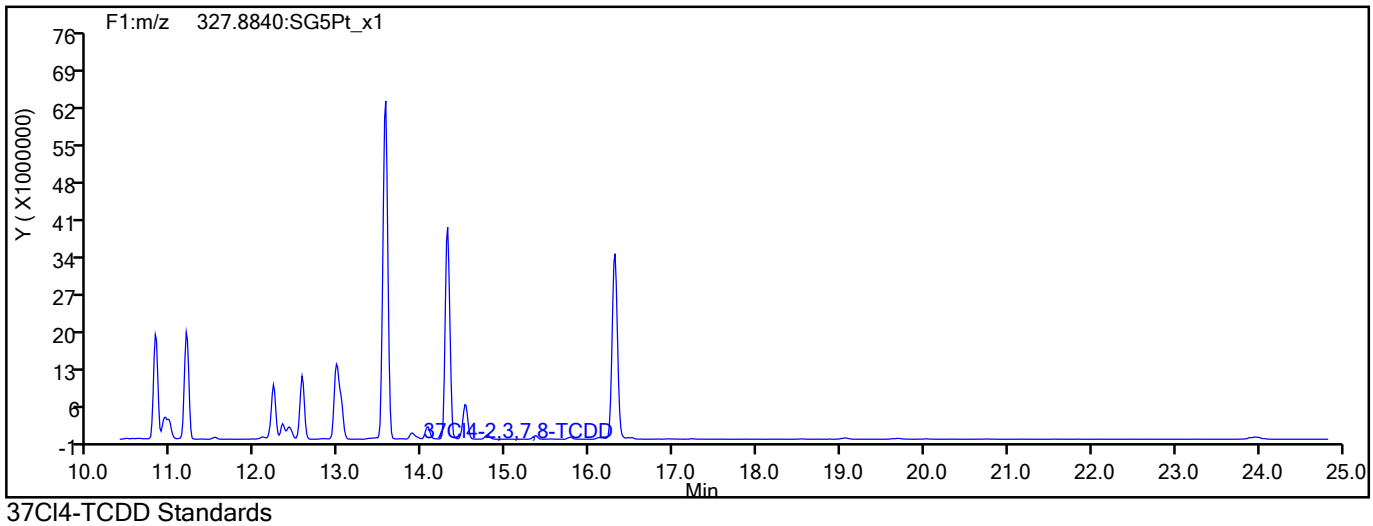

37Cl4-TCDD Standards

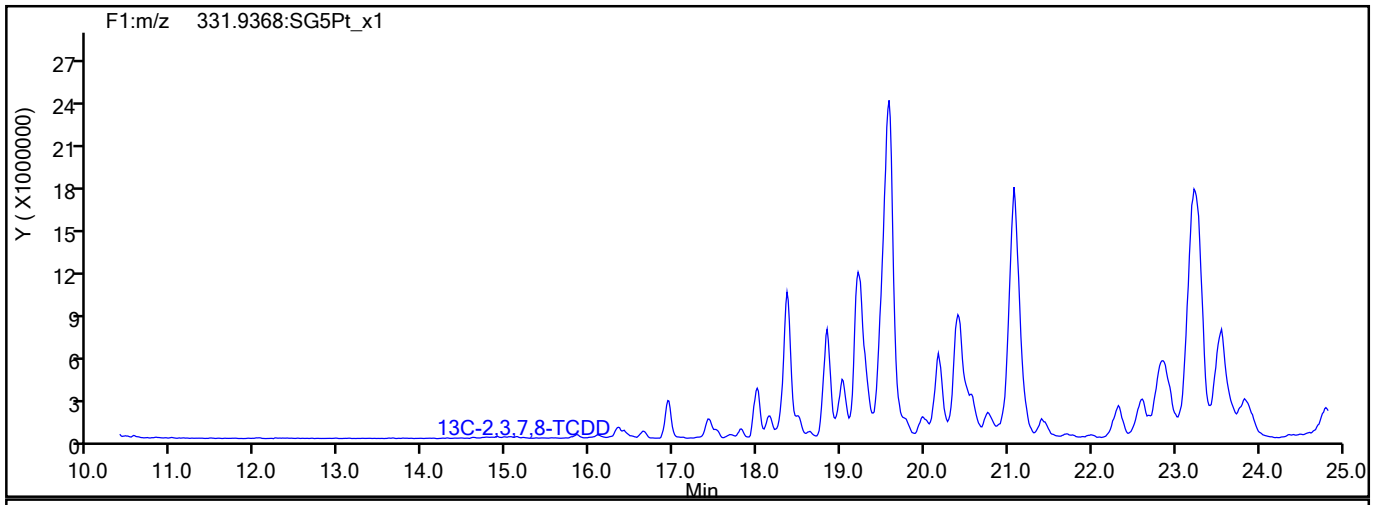

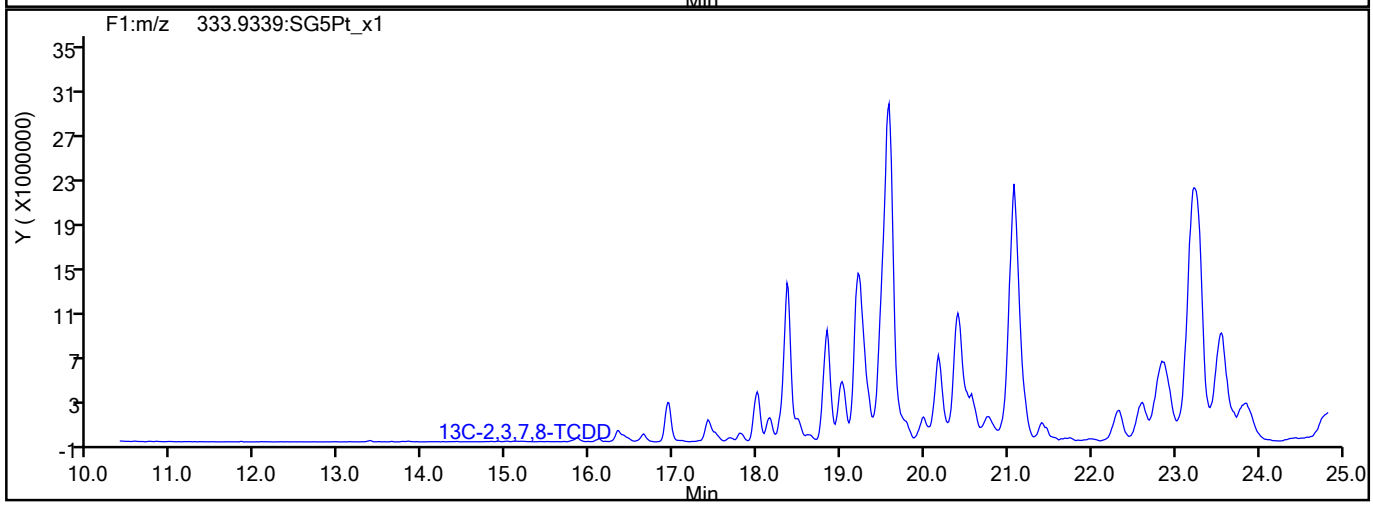

786853

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d		
Injection Date:	25-Aug-2021 12:07:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

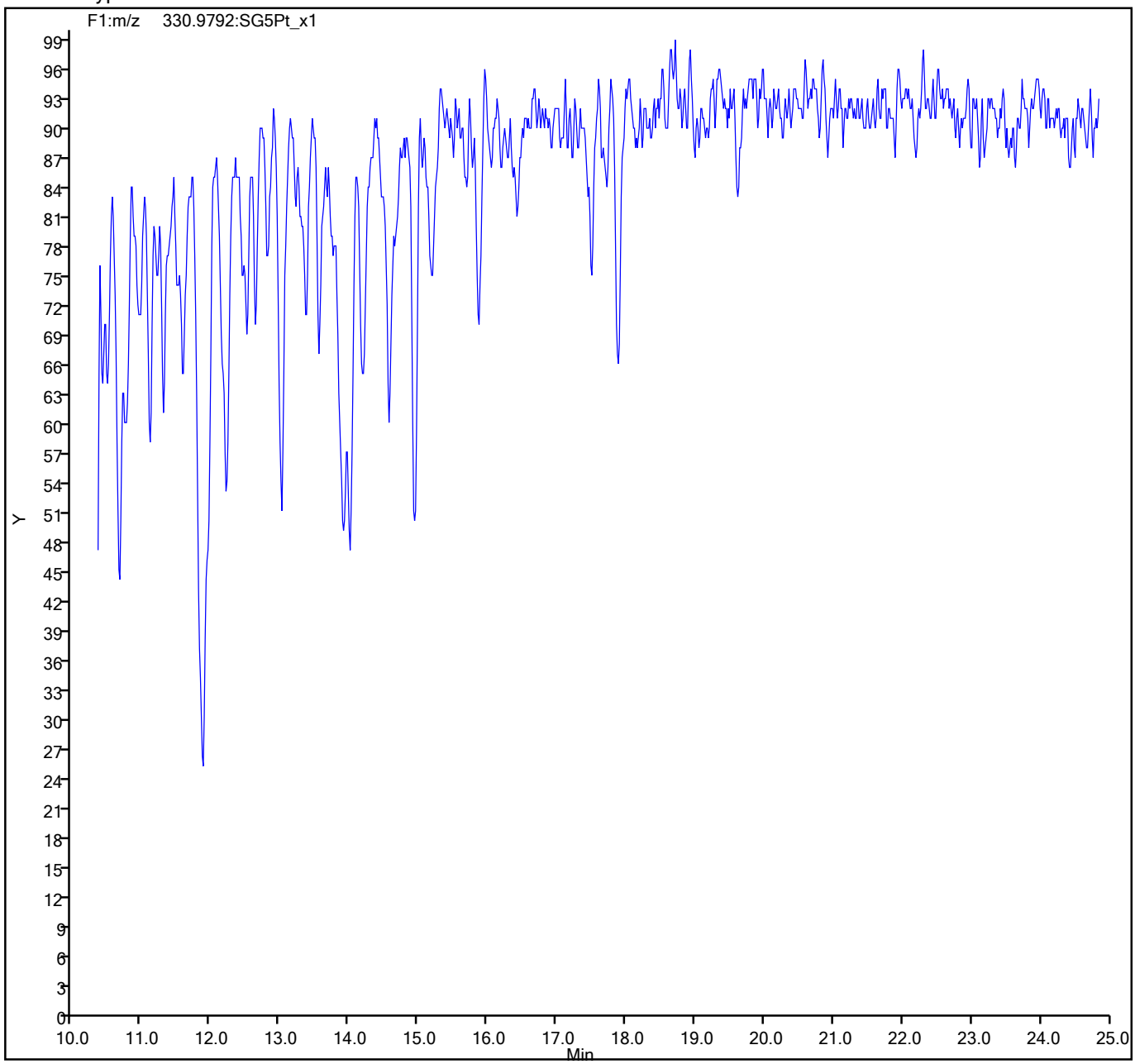

786854

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76769-A-27-C MSD
Matrix: Sediment
Lab File ID: 17au21dfs1_42.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.06(g)
Date Analyzed: 08/18/2021 22:00
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	1820		2.7	2.7
40321-76-4	1,2,3,7,8-PeCDD	163		6.5	0.62
57117-41-6	1,2,3,7,8-PeCDF	426		6.5	2.0
57117-31-4	2,3,4,7,8-PeCDF	280		6.5	1.9
39227-28-6	1,2,3,4,7,8-HxCDD	121		6.5	1.2
57653-85-7	1,2,3,6,7,8-HxCDD	148		6.5	1.5
19408-74-3	1,2,3,7,8,9-HxCDD	131		6.5	1.2
70648-26-9	1,2,3,4,7,8-HxCDF	581		6.5	0.98
57117-44-9	1,2,3,6,7,8-HxCDF	251		6.5	1.0
72918-21-9	1,2,3,7,8,9-HxCDF	159		6.5	0.91
60851-34-5	2,3,4,6,7,8-HxCDF	183		6.5	0.89
35822-46-9	1,2,3,4,6,7,8-HpCDD	204		6.5	0.50
67562-39-4	1,2,3,4,6,7,8-HpCDF	275		6.5	0.94
55673-89-7	1,2,3,4,7,8,9-HpCDF	178		6.5	1.1
3268-87-9	OCDD	1410		13	1.1
39001-02-0	OCDF	353		13	0.55
41903-57-5	Total TCDD	1990		2.7	2.7
30402-14-3	Total TCDF	12300		7.9	7.9
36088-22-9	Total PeCDD	167		6.5	0.62
30402-15-4	Total PeCDF	956		6.5	2.0
34465-46-8	Total HxCDD	415		6.5	1.3
55684-94-1	Total HxCDF	1250		6.5	0.95
37871-00-4	Total HpCDD	297		6.5	0.50
38998-75-3	Total HpCDF	486		6.5	1.0

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76769-A-27-C MSD
Matrix: Sediment
Lab File ID: 17au21dfs1_42.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.06(g)
Date Analyzed: 08/18/2021 22:00
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517461
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	60		25-164
89059-46-1	13C-2,3,7,8-TCDF	61		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	61		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	52		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	60		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	72		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	63		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	69		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	61		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	63		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	60		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	57		26-138
114423-97-1	13C-OCDD	53		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	77		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d
Lims ID: 320-76769-A-27-C MSD
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MSD
Inject. Date: 18-Aug-2021 22:00:00 ALS Bottle#: 0 Worklist Smp#: 39
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-C MSD
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 12:00:19 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1608

First Level Reviewer: krenns Date: 24-Aug-2021 12:00:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.437	1099026	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.473	903886	0.82	1.3459	61.1	61.1	0.2144	0.2144	61.11	
2,3,7,8-TCDF	20.508	27122188	0.88	1.0802	2777.9	2777.9	3.009	3.009	27779	E
A Non-2,3,7,8-sub-TCDF	19.878	18814248	0.88	1.0802	1927.0	1927.0	3.009	1055.3	0.00	
S Total TCDF					4704.8	4704.8	3.009	3.009		
D 13C-2,3,7,8-TCDD	21.815	613876	0.83	0.9317	60.0	60.0	0.4082	0.4082	59.95	
2,3,7,8-TCDD	21.849	4595749	0.78	1.0753	696.2	696.2	1.043	1.043	6962	E
$ 37Cl4-2,3,7,8-TCDD	21.849	340505		1.0083	30.7	30.7	0.1008	0.1008	76.82	
A Non-2,3,7,8-sub-TCDD	20.707	422757	0.79	1.0753	64.0	64.0	1.043	57.7	0.00	
S Total TCDD					760.2	760.2	1.043	1.043		
D 13C-1,2,3,7,8-PeCDF	27.331	654109	1.58	1.1405	52.2	52.2	0.2599	0.2599	52.19	
1,2,3,7,8-PeCDF	27.357	1123807	1.62	1.0543	163.0	163.0	0.7794	0.7794	326	M
D 13C-2,3,4,7,8-PeCDF	28.847	739607	1.55	1.1253	59.8	59.8	0.2634	0.2634	59.80	M
2,3,4,7,8-PeCDF	28.856	798128	1.63	1.0079	107.1	107.1	0.7158	0.7158	214	
A F1 PeCDFs	24.648	5498	1.55	1.0311	0.8683	0.7652	0.0123	0.7652	0.00	RQa
A Non-2,3,7,8-sub-PeCDF	28.125	680089	1.70	1.0311	94.7	94.7	0.7451	41.6	0.00	Ma
S Total PeCDF					365.6	365.5	0.7476	0.7476		RQ
D 13C-1,2,3,7,8-PeCDD	29.638	482832	1.56	0.7165	61.3	61.3	0.3817	0.3817	61.32	
1,2,3,7,8-PeCDD	29.672	314380	1.54	1.0465	62.2	62.2	0.2363	0.2363	124	
A Non-2,3,7,8-sub-PeCDD	28.489	9207	1.55	1.0465	3.836	1.822	0.2363	0.7546	0.00	RQ
S Total PeCDD					66.1	64.0	0.2363	0.2363		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.990	644550	0.57	0.9648	68.8	68.8	0.1285	0.1285	68.84	
1,2,3,4,7,8-HxCDF	35.015	1642380	1.33	1.1474	222.1	222.1	0.3763	0.3763	444	
D 13C-1,2,3,6,7,8-HxCDF	35.150	637909	0.52	1.0708	61.4	61.4	0.1158	0.1158	61.38	
1,2,3,6,7,8-HxCDF	35.167	745835	1.33	1.2178	96.0	96.0	0.3854	0.3854	192	
D 13C-2,3,4,6,7,8-HxCDF	35.975	634196	0.55	1.0413	62.8	62.8	0.1190	0.1190	62.76	
2,3,4,6,7,8-HxCDF	36.000	537812	1.32	1.2145	69.8	69.8	0.3402	0.3402	140	
D 13C-1,2,3,7,8,9-HxCDF	36.859	517638	0.54	0.9731	54.8	54.8	0.1274	0.1274	54.81	
1,2,3,7,8,9-HxCDF	36.875	391257	1.34	1.2401	60.9	60.9	0.3470	0.3470	122	M
A Non-2,3,7,8-sub-HxCDF	35.028	223389	1.24	1.2049	30.6	30.5	0.3612	12.9	0.00	RQMa
S Total HxCDF					479.5	479.3	0.3622	0.3622		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.673	970478	1.24	1.8E+04	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	36.185	528846	1.27	0.7587	71.8	71.8	0.0961	0.0961	71.83	
1,2,3,4,7,8-HxCDD	36.202	260422	1.30	1.0608	46.4	46.4	0.4518	0.4518	92.84	
D 13C-1,2,3,6,7,8-HxCDD	36.286	522225	1.17	0.8593	62.6	62.6	0.0848	0.0848	62.62	
1,2,3,6,7,8-HxCDD	36.320	293874	1.21	0.9933	56.7	56.7	0.5625	0.5625	113	
1,2,3,7,8,9-HxCDD	36.682	292676	1.24	1.1094	50.2	50.2	0.4650	0.4650	100	
A Non-2,3,7,8-sub-HxCDD	35.394	29861	1.38	1.0545	5.388	5.388	0.4892	2.696	0.00	
S Total HxCDD					158.7	158.7	0.4931	0.4931		
D 13C-1,2,3,4,6,7,8-HpCDF	38.697	430857	0.45	0.7359	60.3	60.3	0.1583	0.1583	60.33	
1,2,3,4,6,7,8-HpCDF	38.705	653630	1.09	1.4421	105.2	105.2	0.3599	0.3599	210	
D 13C-1,2,3,4,7,8,9-HpCDF	39.935	377427	0.47	0.6854	56.7	56.7	0.1700	0.1700	56.74	M
1,2,3,4,7,8,9-HpCDF	39.943	337174	1.09	1.3092	68.2	68.2	0.4081	0.4081	136	
A Non-2,3,7,8-sub-HpCDF	39.258	69665	1.04	1.3756	12.5	12.5	0.3828	12.5	0.00	
S Total HpCDF					186.0	186.0	0.3840	0.3840		
D 13C-1,2,3,4,6,7,8-HpCDD	39.632	394976	1.07	0.6745	60.3	60.3	0.2036	0.2036	60.34	
1,2,3,4,6,7,8-HpCDD	39.640	323032	1.01	1.0503	77.9	77.9	0.1904	0.1904	156	
A Non-2,3,7,8-sub-HpCDD	39.258	148570	1.03	1.0503	35.8	35.8	0.1904	35.8	0.00	
S Total HpCDD					113.7	113.7	0.1904	0.1904		
D 13C-OCDD	42.172	555162	0.90	0.5446	105.0	105.0	0.2322	0.2322	52.52	a
OCDF	42.265	493875	0.99	1.3168	135.1	135.1	0.2086	0.2086	135	
OCDD	42.181	1592806	0.89	1.0620	540.3	540.3	0.4390	0.4390	540	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d
Lims ID: 320-76769-A-27-C MSD
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MSD
Inject. Date: 18-Aug-2021 22:00:00 ALS Bottle#: 0 Worklist Smp#: 39
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-C MSD
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 12:00:19 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1608

First Level Reviewer: krenns Date: 24-Aug-2021 12:00:19

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.437	21.427	1		488732	65803	104	260	633		
333.9338	21.437	21.427	1		610294	86692	128	320	677	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.473	20.401	4	0.955	406854	56328	110	275	512		
317.9389	20.465	20.401	4	0.955	497032	67666	66	165	1025	0.82(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.508	20.436	4	1.002	12699667	1647691	871	2177	1892		
305.8987	20.499	20.436	4	1.001	14422521	1854996	741	1852	2503	0.88(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.512	19.878	-142	0.855	59903	11532	871	2177	13		
305.8987	17.512	19.878	-142	0.855	87969	13378	741	1852	18	0.68(0.65-0.89)	
303.9016	17.960	19.878	-115	0.877	235488	37740	871	2177	43		
305.8987	17.960	19.878	-115	0.877	265321	41380	741	1852	56	0.89(0.65-0.89)	
303.9016	18.450	19.878	-86	0.901	424648	52340	871	2177	60		
305.8987	18.450	19.878	-86	0.901	489153	59165	741	1852	80	0.87(0.65-0.89)	
303.9016	18.881	19.878	-60	0.922	415659	52009	871	2177	60		
305.8987	18.881	19.878	-60	0.922	467983	56798	741	1852	77	0.89(0.65-0.89)	
303.9016	19.260	19.878	-37	0.941	697734	93402	871	2177	107		
305.8987	19.260	19.878	-37	0.941	800507	104166	741	1852	141	0.87(0.65-0.89)	
303.9016	19.768	19.878	-7	0.966	4847007	690776	871	2177	793		
305.8987	19.759	19.878	-7	0.965	5456513	755229	741	1852	1019	0.89(0.65-0.89)	
303.9016	20.172	19.878	18	0.985	211702	26369	871	2177	30		
305.8987	20.164	19.878	17	0.985	248104	29813	741	1852	40	0.85(0.65-0.89)	
303.9016	21.282	19.878	84	1.040	899244	121385	871	2177	139		
305.8987	21.282	19.878	84	1.040	1025308	137241	741	1852	185	0.88(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.712	19.878	110	1.061	290250	31240	871	2177	36		
305.8987	21.703	19.878	109	1.060	332068	36212	741	1852	49	0.87(0.65-0.89)	
303.9016	23.664	19.878	227	1.156	728492	132112	871	2177	152		
305.8987	23.664	19.878	227	1.156	831195	151430	741	1852	204	0.88(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.815	21.743	4	1.018	278157	35188	104	260	338		
333.9338	21.832	21.743	5	1.018	335719	41065	128	320	321	0.83(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	21.849	21.777	4	1.002	2016825	237582	203	507	1170		
321.8936	21.849	21.777	4	1.002	2578924	304495	139	347	2191	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.849	21.849	0	1.019	340505	40061	62	155	646		
A Non-2,3,7,8-sub-TCDD											
319.8965	21.635	20.707	56	0.992	18978	3426	203	507	17		
321.8936	21.652	20.707	57	0.993	22908	4083	139	347	29	0.83(0.65-0.89)	
319.8965	22.546	20.707	110	1.034	167198	19106	203	507	94		
321.8936	22.529	20.707	109	1.033	213673	24857	139	347	179	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.331	27.288	3	1.275	400181	54211	122	305	444		
353.8970	27.331	27.288	3	1.275	253928	34268	59	147	581	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.357	27.313	3	1.001	695351	97080	168	420	578		M
341.8567	27.357	27.313	3	1.001	428456	57312	123	307	466	1.62(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											M
351.9000	28.847	28.795	3	1.346	449787	61890	122	305	507		
353.8970	28.839	28.795	3	1.345	289820	38884	59	147	659	1.55(1.32-1.78)	M
2,3,4,7,8-PeCDF											
339.8597	28.856	28.820	2	1.000	494637	69064	168	420	411		
341.8567	28.856	28.820	2	1.000	303491	43476	123	307	353	1.63(1.32-1.78)	
A F1 PeCDFs											RQa
339.8597	24.095	24.648	-33	0.882	3342	636	1	2	636		a
341.8567	24.086	24.648	-34	0.881	2897	610	4	10	153	1.15(1.32-1.78)	
	Empc Correction				2156	410	4	10	103		
A Non-2,3,7,8-sub-PeCDF											Ma
339.8597	25.858	28.125	-136	0.946	187294	29848	168	420	178		
341.8567	25.858	28.125	-136	0.946	111941	19514	123	307	159	1.67(1.32-1.78)	
339.8597	26.759	28.125	-82	0.979	16925	2224	168	420	13		
341.8567	26.759	28.125	-82	0.979	9916	1162	123	307	9	1.71(1.32-1.78)	
339.8597	27.230	28.125	-54	0.996	21297	5268	168	420	31		M
341.8567	27.230	28.125	-54	0.996	12498	2919	123	307	24	1.70(1.32-1.78)	
339.8597	27.929	28.125	-12	1.022	112194	17009	168	420	101		
341.8567	27.937	28.125	-11	1.022	64910	9353	123	307	76	1.73(1.32-1.78)	
339.8597	29.184	28.125	63	1.068	74664	8434	168	420	50		
341.8567	29.175	28.125	63	1.067	43521	5553	123	307	45	1.72(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	30.902	28.125	166	1.131	15816	2053	168	420	12		
341.8567	30.919	28.125	167	1.131	9113	1200	123	307	10	1.74(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.638	29.612	2	1.383	293990	35599	55	137	647		
369.8919	29.630	29.612	1	1.382	188842	23033	112	280	206	1.56(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.672	29.637	2	1.001	190789	23886	32	80	746		
357.8516	29.664	29.637	2	1.001	123591	15506	26	65	596	1.54(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.102	28.489	-143	0.881	2045	311	32	80	10		
357.8516	26.153	28.489	-140	0.882	10968	1742	26	65	67	0.19(1.32-1.78)	
	Empc Correction				1319	200	26	65	8		
355.8546	27.441	28.489	-63	0.926	2247	399	32	80	12		
357.8516	27.449	28.489	-62	0.926	1566	188	26	65	7	1.43(1.32-1.78)	
355.8546	27.744	28.489	-45	0.936	1234	245	32	80	8		
357.8516	27.777	28.489	-43	0.937	1325	229	26	65	9	0.93(1.32-1.78)	
	Empc Correction				796	158	26	65	6		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.990	34.942	3	0.954	234632	34470	44	110	783		
385.8610	34.990	34.942	3	0.954	409918	69065	56	140	1233	0.57(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	35.015	34.959	3	1.001	936643	138978	106	265	1311		
375.8178	35.015	34.959	3	1.001	705737	105677	73	182	1448	1.33(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.150	35.111	2	0.958	218457	33519	44	110	762		
385.8610	35.159	35.111	3	0.959	419452	61714	56	140	1102	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.167	35.119	3	1.000	425542	68906	106	265	650		
375.8178	35.175	35.119	3	1.001	320293	50995	73	182	699	1.33(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.975	35.919	3	0.981	224666	37900	44	110	861		
385.8610	35.975	35.919	3	0.981	409530	70299	56	140	1255	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	36.000	35.936	4	1.001	305688	49616	106	265	468		
375.8178	35.991	35.936	3	1.000	232124	37813	73	182	518	1.32(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.859	36.811	3	1.005	180613	36708	44	110	834		
385.8610	36.859	36.811	3	1.005	337025	67165	56	140	1199	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.875	36.828	3	1.000	223859	46540	106	265	439		M
375.8178	36.875	36.828	3	1.000	167398	34410	73	182	471	1.34(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.289	35.028	-104	0.951	5223	700	106	265	7		
	Empc Correction				4087	742	106	265	7		
375.8178	33.272	35.028	-105	0.951	3296	599	73	182	8	1.58(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	33.551	35.028	-88	0.959	54398	7327	106	265	69		
375.8178	33.534	35.028	-89	0.958	39880	5983	73	182	82	1.36(1.05-1.43)	
373.8208	34.375	35.028	-39	0.982	23068	3849	106	265	36		
375.8178	34.375	35.028	-39	0.982	18893	2883	73	182	39	1.22(1.05-1.43)	
373.8208	36.943	35.028	115	1.056	46805	12820	106	265	121		M
375.8178	36.943	35.028	115	1.056	32962	9895	73	182	136	1.42(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	36.673	36.609	4		537105	110221	29	72	3801		a
403.8529	36.665	36.609	3		433373	91450	30	75	3048	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.185	36.129	3	0.987	295839	57347	29	72	1977		
403.8529	36.193	36.129	4	0.987	233007	48451	30	75	1615	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.202	36.146	3	1.000	147102	29601	116	290	255		
391.8127	36.202	36.146	3	1.000	113320	23311	87	217	268	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.286	36.247	2	0.989	281616	49557	29	72	1709		
403.8529	36.295	36.247	3	0.990	240609	41187	30	75	1373	1.17(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.320	36.264	3	1.001	160685	30290	116	290	261		
391.8127	36.320	36.264	3	1.001	133189	23796	87	217	274	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.682	36.626	3	1.014	162122	34494	116	290	297		
391.8127	36.682	36.626	3	1.014	130554	28031	87	217	322	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.299	35.394	-66	0.945	8575	1403	116	290	12		
391.8127	34.308	35.394	-65	0.945	6367	981	87	217	11	1.35(1.05-1.43)	
389.8158	35.436	35.394	3	0.977	8739	1462	116	290	13		
391.8127	35.436	35.394	3	0.977	6180	1023	87	217	12	1.41(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.697	38.626	4	1.055	133895	30642	46	115	666		
419.8220	38.697	38.626	4	1.055	296962	68961	48	120	1437	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.705	38.630	4	1.000	341198	77775	116	290	670		
409.7788	38.705	38.630	4	1.000	312432	73041	91	227	803	1.09(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											M
417.8250	39.935	39.880	3	1.089	120969	31229	46	115	679		M
419.8220	39.935	39.880	3	1.089	256458	65542	48	120	1365	0.47(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.943	39.885	3	1.000	175722	44236	116	290	381		
409.7788	39.943	39.885	3	1.000	161452	40405	91	227	444	1.09(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.059	39.258	-12	1.009	35468	8026	116	290	69		
409.7788	39.059	39.258	-12	1.009	34197	7570	91	227	83	1.04(0.88-1.20)	

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.632	39.569	4	1.081	204322	52325	65	162	805		
437.8140	39.632	39.569	4	1.081	190654	46173	46	115	1004	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.640	39.582	3	1.000	161941	41681	35	87	1191		
425.7737	39.640	39.582	3	1.000	161091	41237	44	110	937	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.009	39.258	-15	0.984	75230	17861	35	87	510		
425.7737	39.000	39.258	-15	0.984	73340	17284	44	110	393	1.03(0.88-1.20)	
13C-OCDD											a
469.7780	42.172	42.072	6	1.150	263579	58937	65	162	907		a
471.7750	42.172	42.072	6	1.150	291583	68467	37	92	1850	0.90(0.76-1.02)	
OCDF											
441.7428	42.265	42.165	6	1.002	246007	55945	33	82	1695		
443.7399	42.265	42.165	6	1.002	247868	52538	37	92	1420	0.99(0.76-1.02)	
OCDD											
457.7377	42.181	42.081	6	1.000	749612	170910	58	145	2947		
459.7348	42.181	42.081	6	1.000	843194	191671	61	152	3142	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	903886	123994

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	903886	123994

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.512	59903	11532	87969	13378	15.1	0.68	
17.960	235488	37740	265321	41380	51.3	0.89	
18.450	424648	52340	489153	59165	93.6	0.87	
18.881	415659	52009	467983	56798	90.5	0.89	
19.260	697734	93402	800507	104166	153.4	0.87	
19.768	4847007	690776	5456513	755229	1055.3	0.89	
20.172	211702	26369	248104	29813	47.1	0.85	
21.282	899244	121385	1025308	137241	197.1	0.88	
21.712	290250	31240	332068	36212	63.7	0.87	
23.664	728492	132112	831195	151430	159.7	0.88	
Signal Totals:	8810127	1248905	10004121	1384812			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	18814248	2633717				0.88	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1927.0 = (18814248 * 100.000) / (903886 * 1.080)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	613876	76253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	613876	76253

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.635	18978	3426	22908	4083	6.35	0.83	
22.546	167198	19106	213673	24857	57.7	0.78	
Signal Totals:							
	186176	22532	236581	28940			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	422757	51472				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 64.042 = (422757 * 100.000) / (613876 * 1.075)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	654109	88479
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	739607	100774

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	696858	94626

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.095	3342	636	2897	610	0.8683	1.15	RQa
24.095	3342	636	2156	410	0.7652		Empc Correction
Signal Totals:							
	3342	636	2156	410			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6239	1246				1.15	RQa
	5498	1046					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8683 = (6239 * 100.000) / (696858 * 1.031)
Empc Amount: 0.7652 = (5498 * 100.000) / (696858 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	654109	88479
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	739607	100774

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	696858	94626

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.858	187294	29848	111941	19514	41.6	1.67	
26.759	16925	2224	9916	1162	3.74	1.71	
27.230	21297	5268	12498	2919	4.70	1.70	Ma
27.929	112194	17009	64910	9353	24.6	1.73	
29.184	74664	8434	43521	5553	16.4	1.72	
30.902	15816	2053	9113	1200	3.47	1.74	
Signal Totals:							
	428190	64836	251899	39701			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	680089	104537				1.70	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 94.654 = (680089 * 100.000) / (696858 * 1.031)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	482832	58632

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	482832	58632

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.102	2045	311	10968	1742	2.58	0.19	RQ
26.102	2045	311	1319	200	0.6658		Empc Correction
27.441	2247	399	1566	188	0.7546	1.43	
27.744	1234	245	1325	229	0.5064	0.93	RQ
27.744	1234	245	796	158	0.4018		Empc Correction
Signal Totals:							
	5526	955	3681	546			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	19385	3114				0.40	RQ
	9207	1501					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.836 = (19385 * 100.000) / (482832 * 1.046)

Empc Amount: 1.822 = (9207 * 100.000) / (482832 * 1.046)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	644550	103535
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	637909	95233
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	634196	108199
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	517638	103873

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	608573	102710

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.289	5223	700	3296	599	1.16	1.58	RQ
33.289	4087	742	3296	599	1.01		Empc Correction
33.551	54398	7327	39880	5983	12.9	1.36	
34.375	23068	3849	18893	2883	5.72	1.22	
36.943	46805	12820	32962	9895	10.9	1.42	Ma
Signal Totals:							
	128358	24738	95031	19360			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	224525	44056				1.36	RQMa
	223389	44098					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 30.619 = (224525 * 100.000) / (608573 * 1.205)

Empc Amount: 30.464 = (223389 * 100.000) / (608573 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	528846	105798
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	522225	90744
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	525535	98271

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.299	8575	1403	6367	981	2.70	1.35	
35.436	8739	1462	6180	1023	2.69	1.41	
Signal Totals:							
	17314	2865	12547	2004			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	29861	4869				1.38	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 5.388 = (29861 * 100.000) / (525535 * 1.055)

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	430857	99603
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	377427	96771

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	404142	98187

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
39.059	35468	8026	34197	7570	12.5	1.04	
Signal Totals:							
	35468	8026	34197	7570			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	69665	15596				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 12.531 = (69665 * 100.000) / (404142 * 1.376)

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Lims ID:	320-76769-A-27-C MSD		
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Inject. Date:	18-Aug-2021 22:00:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517461	Lims Sample ID:	39

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	394976	98498

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	394976	98498

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
39.009	75230	17861	73340	17284	35.8	1.03	
Signal Totals:							
	75230	17861	73340	17284			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	148570	35145				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 35.814 = (148570 * 100.000) / (394976 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.36
Area: 716651
Amount: 167.8656
Amount Units: pg/ul

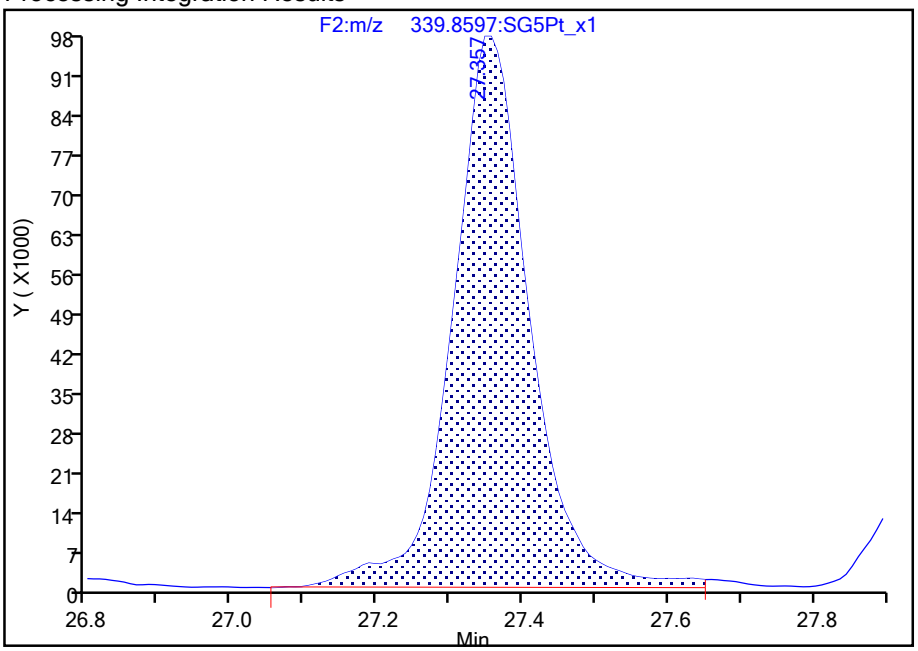

Manual Integration Results

RT: 27.36
Area: 695351
Amount: 162.9644
Amount Units: pg/ul

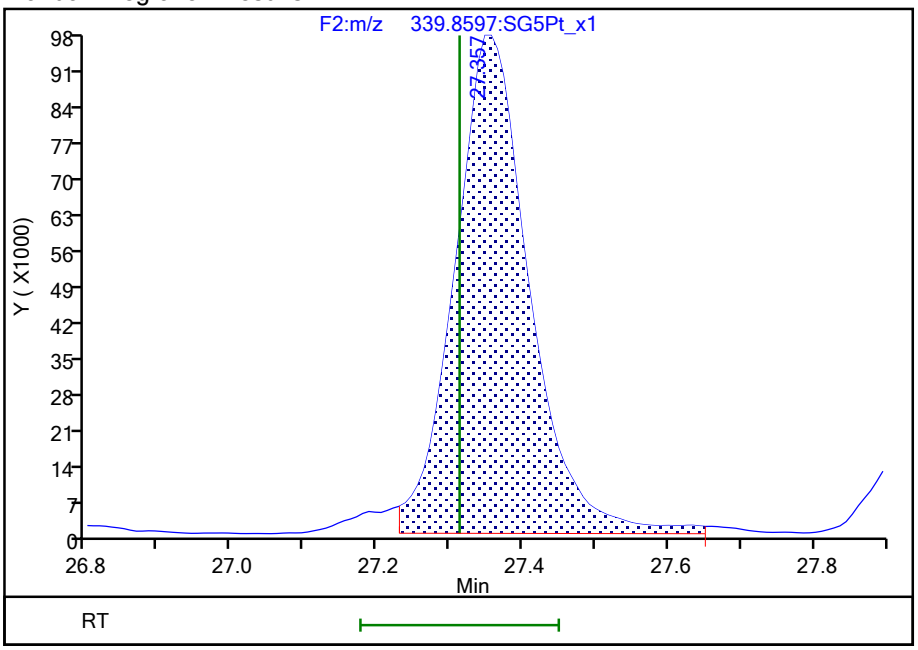

Reviewer: dadunj, 20-Aug-2021 09:25:30

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

786874

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.36
Area: 440955
Amount: 167.8656
Amount Units: pg/ul

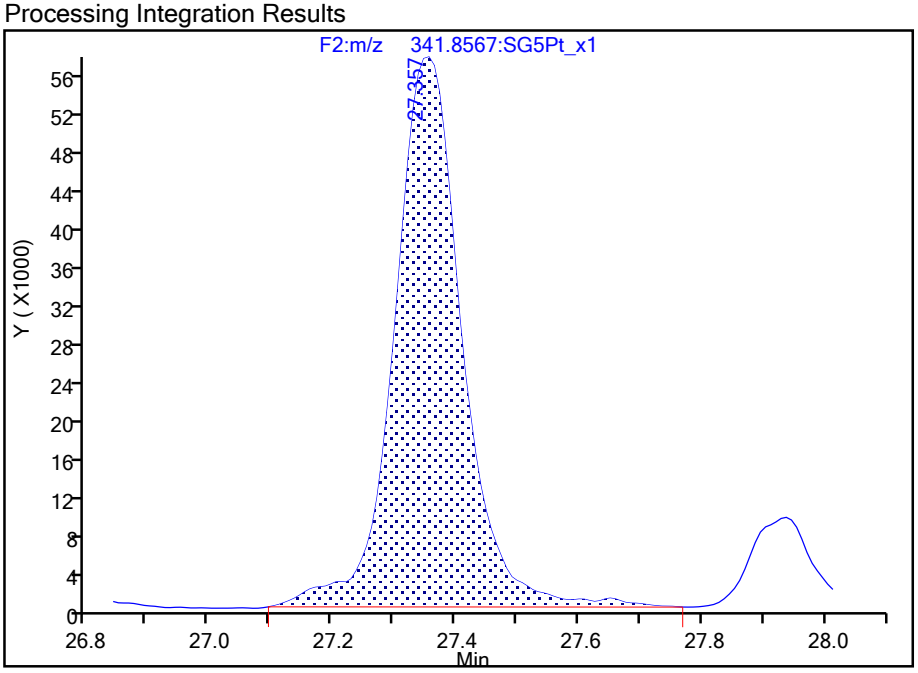

Manual Integration Results

RT: 27.36
Area: 428456
Amount: 162.9644
Amount Units: pg/ul

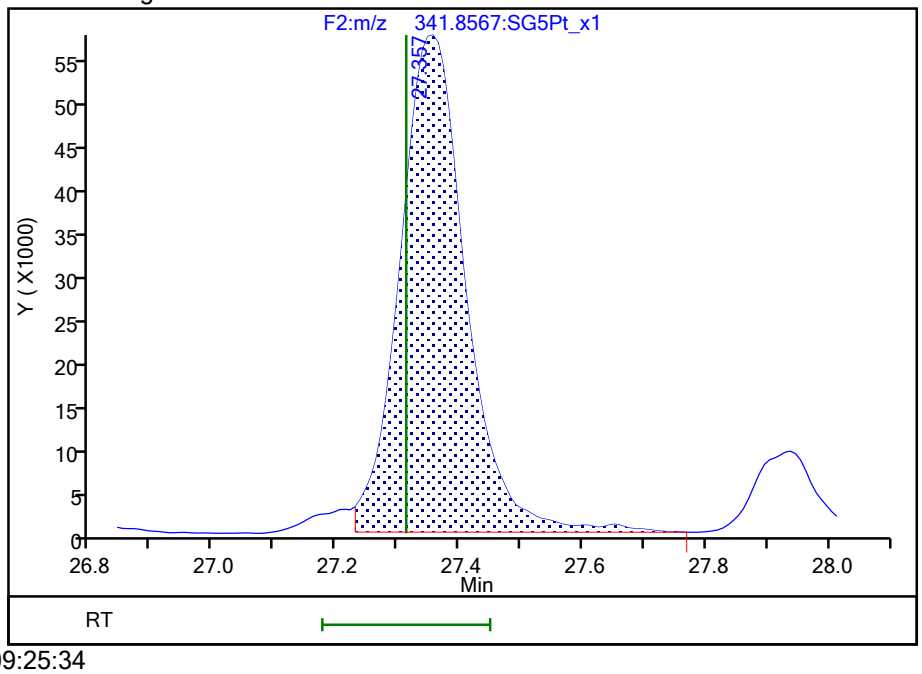

Reviewer: dadunj, 20-Aug-2021 09:25:34
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

786875

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 2

Processing Integration Results

RT: 28.84
Area: 294461
Amount: 60.177134
Amount Units: pg/ul

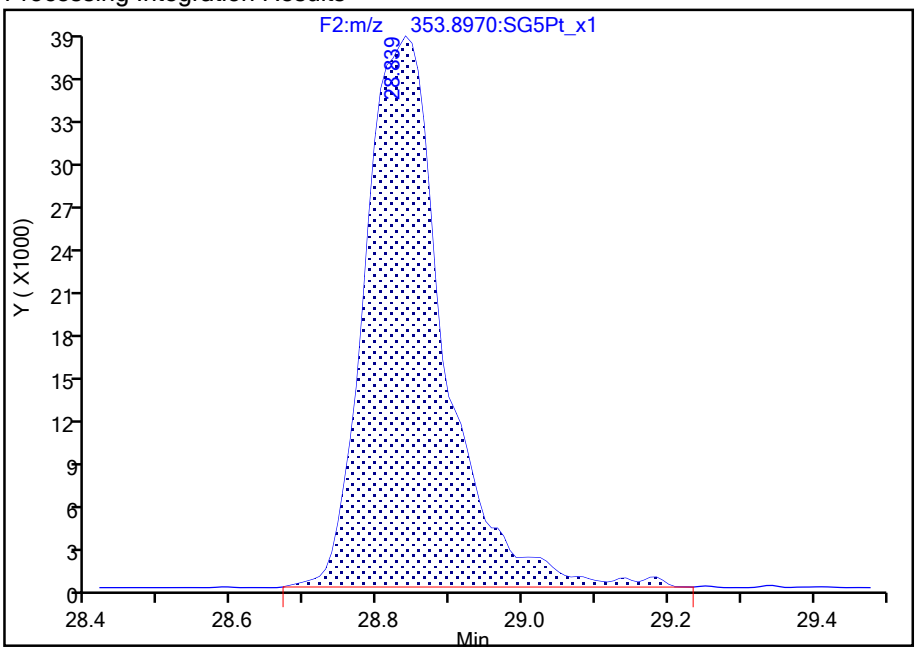

Manual Integration Results

RT: 28.84
Area: 289820
Amount: 59.801880
Amount Units: pg/ul

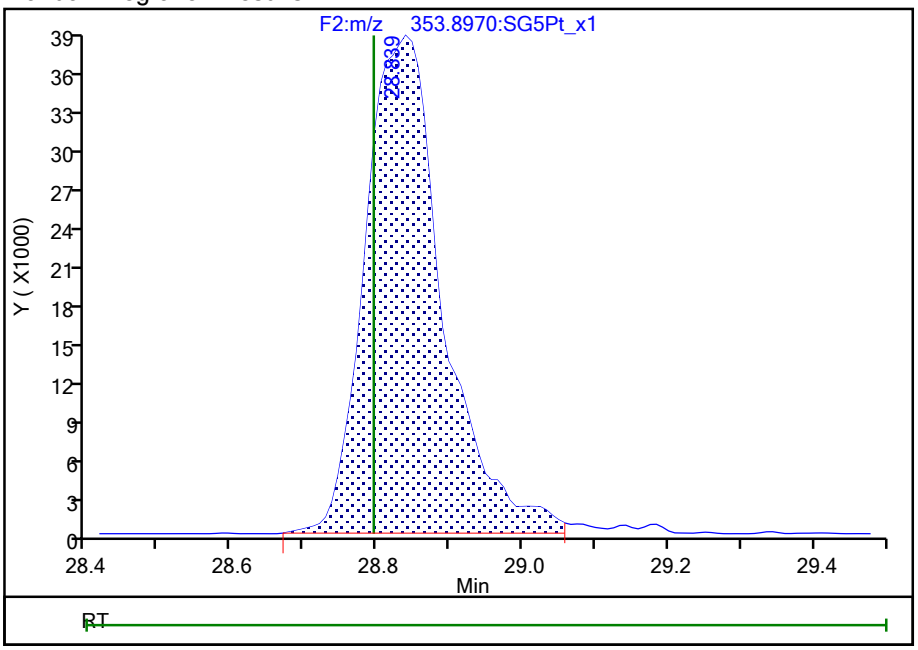

Reviewer: dadunj, 20-Aug-2021 09:26:24

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.38- 30.87)

Signal: 1

Processing Integration Results

Not Detected
RT: 25.38- 30.87

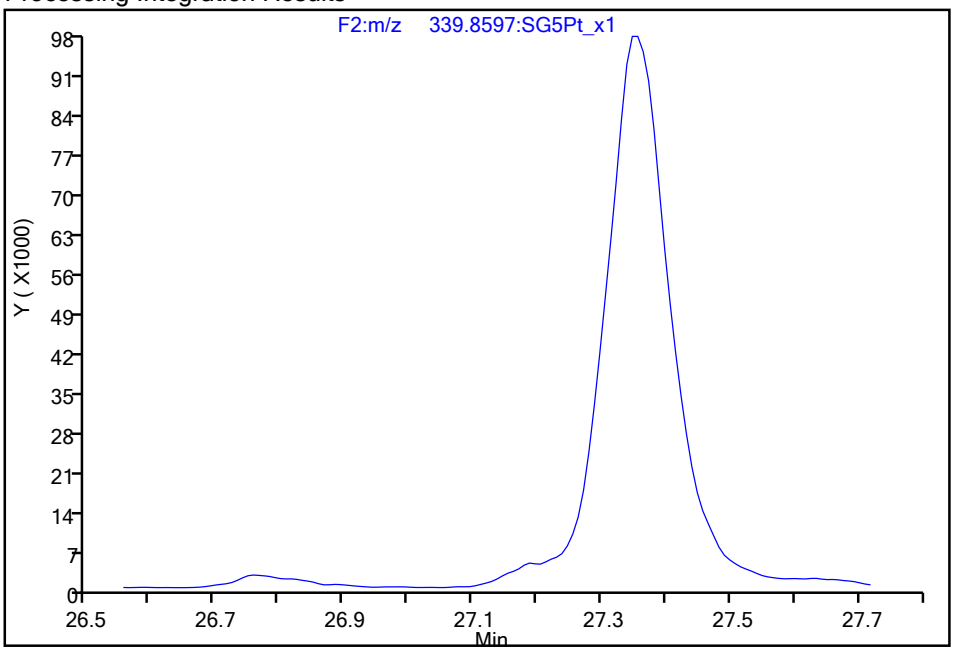

Manual Integration Results

RT = 27.230 Area = 21297 M

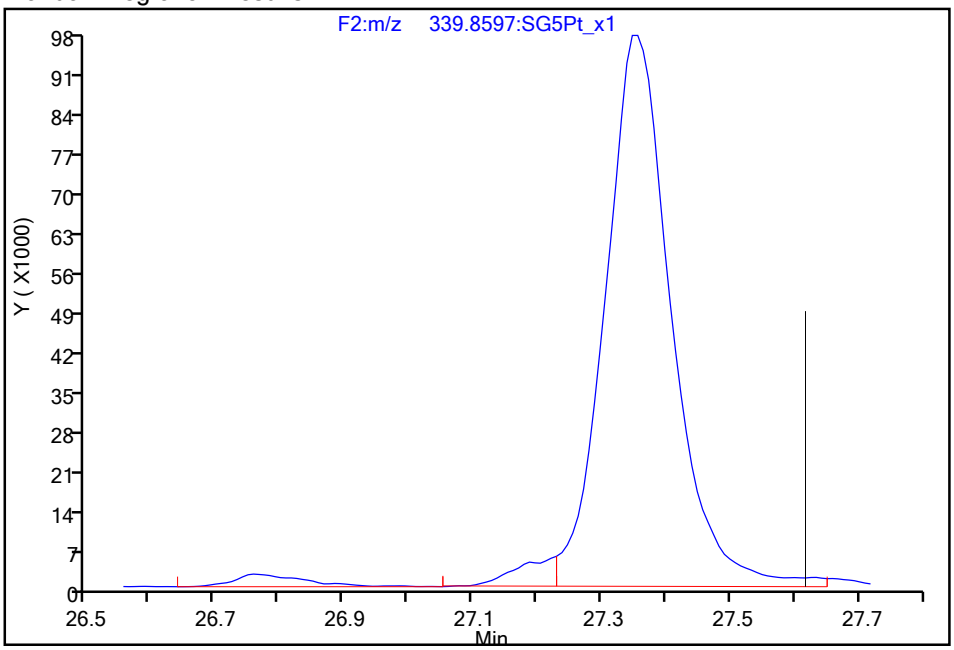

Reviewer: dadunj, 20-Aug-2021 09:26:38

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.88
Area: 270669
Amount: 73.377320
Amount Units: pg/ul

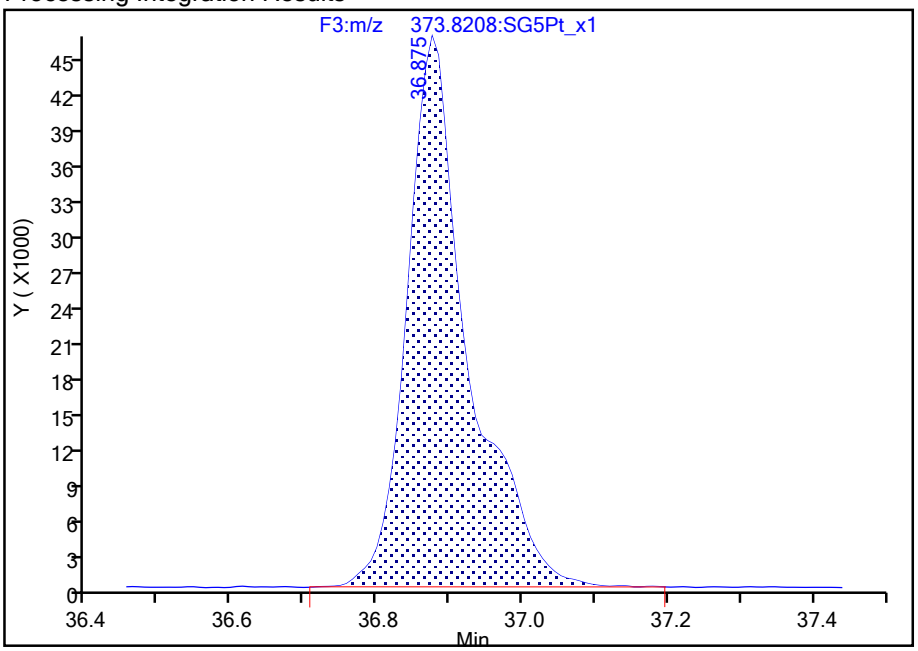

Manual Integration Results

RT: 36.88
Area: 223859
Amount: 60.949849
Amount Units: pg/ul

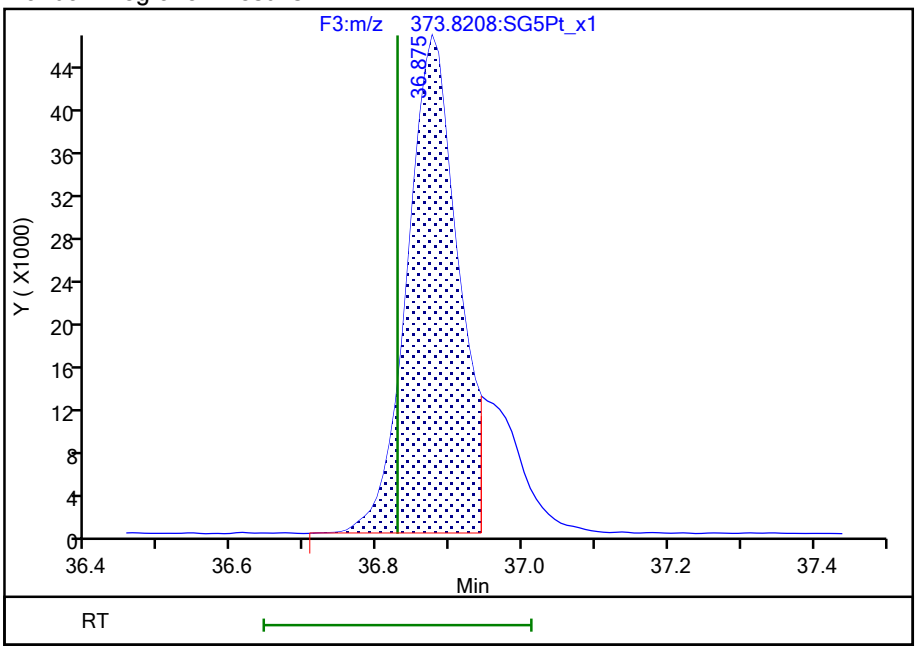

Reviewer: dadunj, 20-Aug-2021 09:27:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.88
Area: 200364
Amount: 73.377320
Amount Units: pg/ul

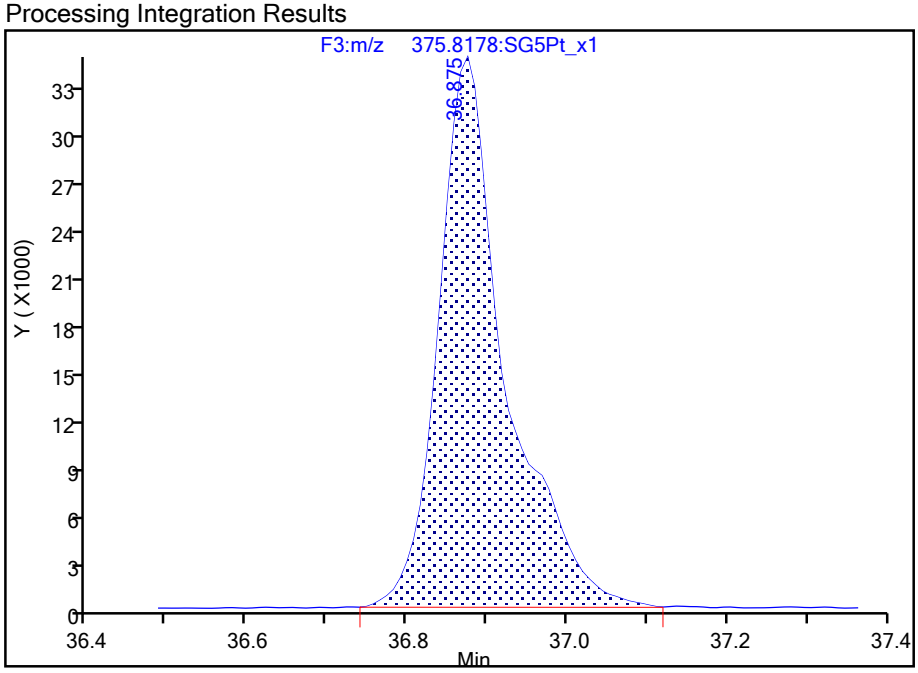

Manual Integration Results

RT: 36.88
Area: 167398
Amount: 60.949849
Amount Units: pg/ul

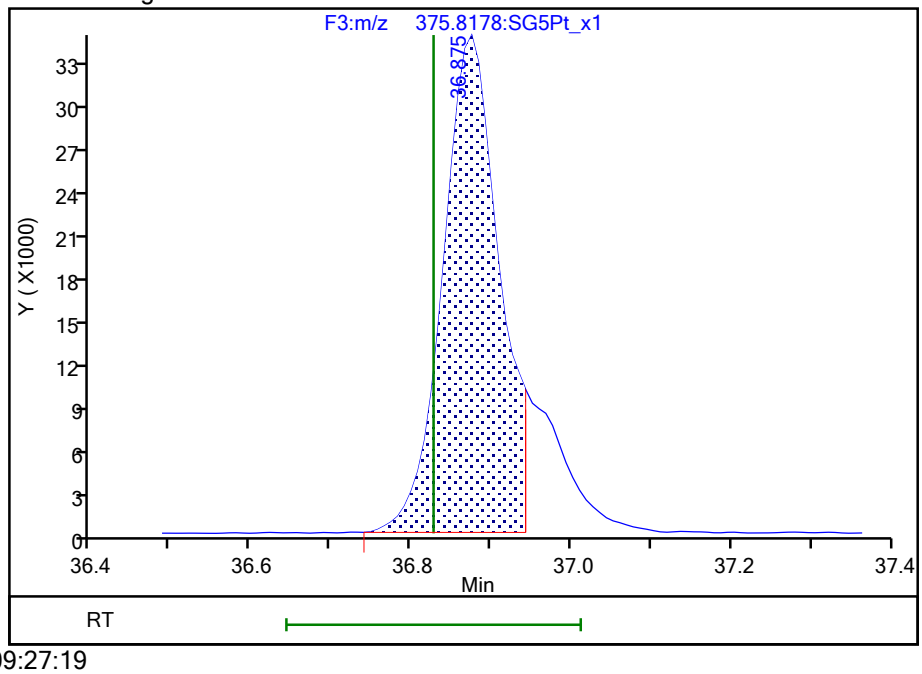

Reviewer: dadunj, 20-Aug-2021 09:27:19

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 24-Aug-2021 12:00:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.11- 36.95)

Signal: 1

Processing Integration Results

Not Detected

RT: 33.11- 36.95

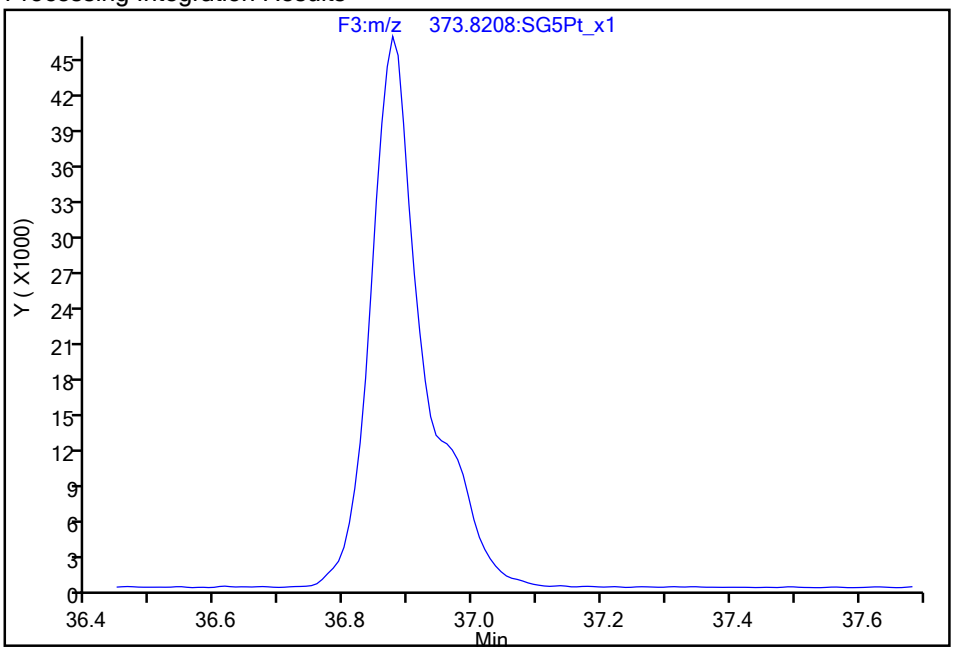

Manual Integration Results

RT = 36.943 Area = 46805 M

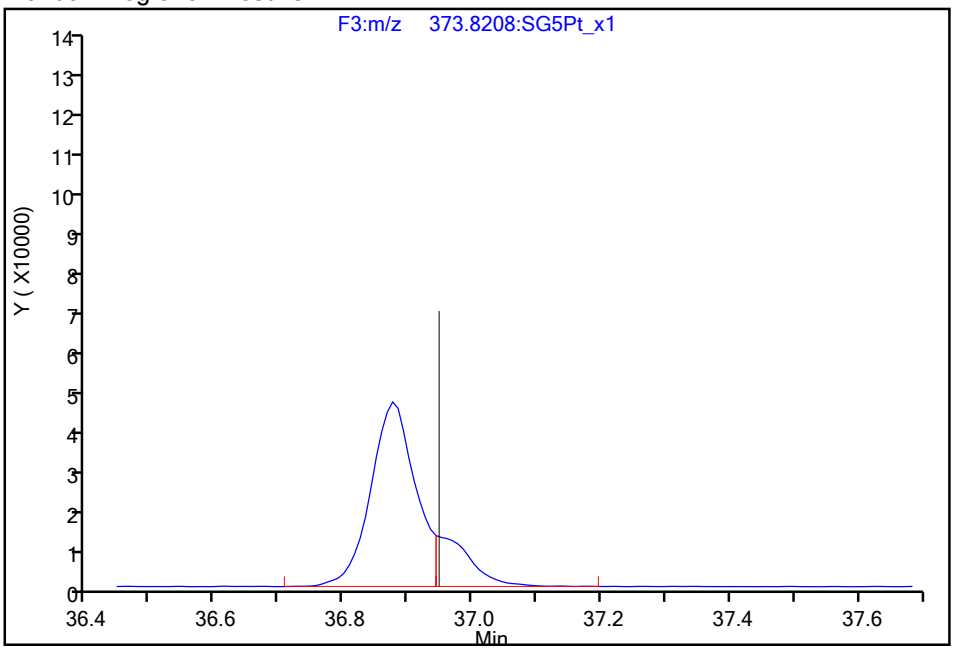

Reviewer: dadunj, 20-Aug-2021 09:27:24

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

786880

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

RT: 39.93
Area: 117547
Amount: 56.229132
Amount Units: pg/ul

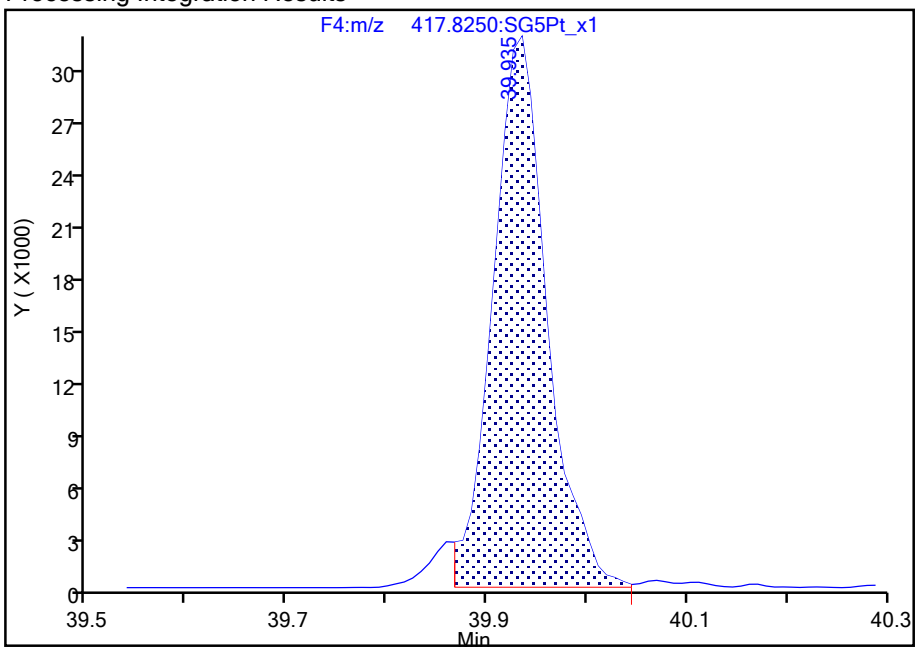

Manual Integration Results

RT: 39.93
Area: 120969
Amount: 56.743606
Amount Units: pg/ul

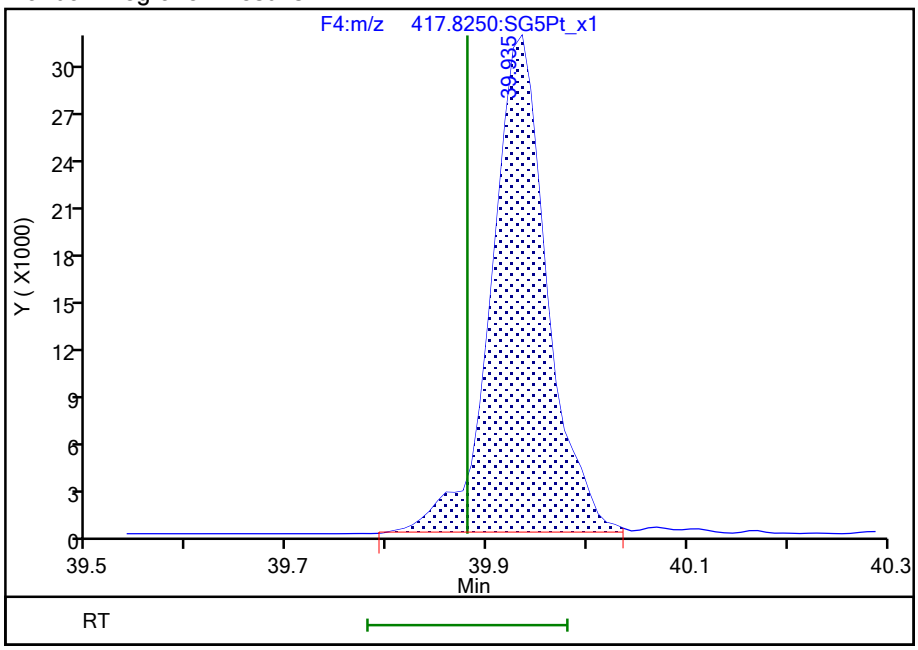

Reviewer: dadunj, 20-Aug-2021 09:28:05

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d				
Injection Date:	18-Aug-2021 22:00:00	Instrument ID:	DFS 1		
Lims ID:	320-76769-A-27-C MSD				
Client ID:	11215702-072221-SS-SJSB076 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	39
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

13C-OCDD, CAS: 114423-97-1

Signal: 1

Processing Integration Results

RT: 42.03
Area: 2474
Amount: 0.646110
Amount Units: pg/ul

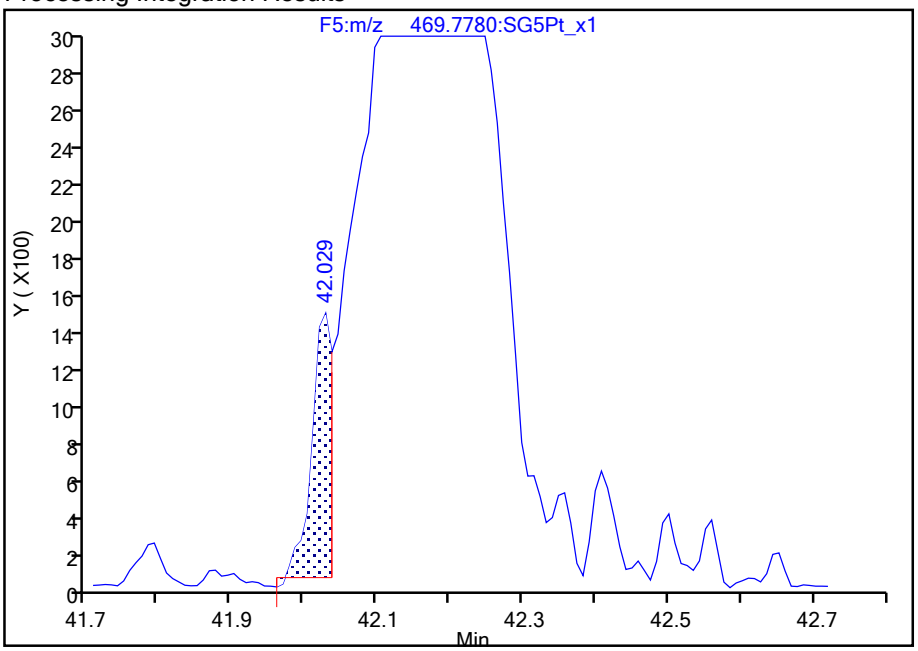

Manual Integration Results

RT: 42.17
Area: 263579
Amount: 105.0353
Amount Units: pg/ul

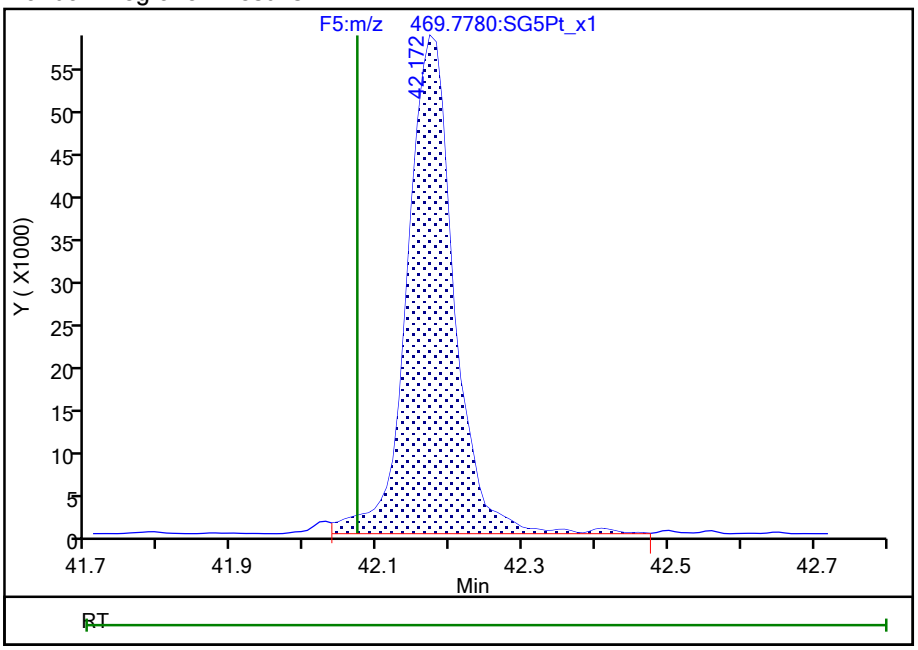

Reviewer: krenns, 24-Aug-2021 12:00:14

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

786882

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

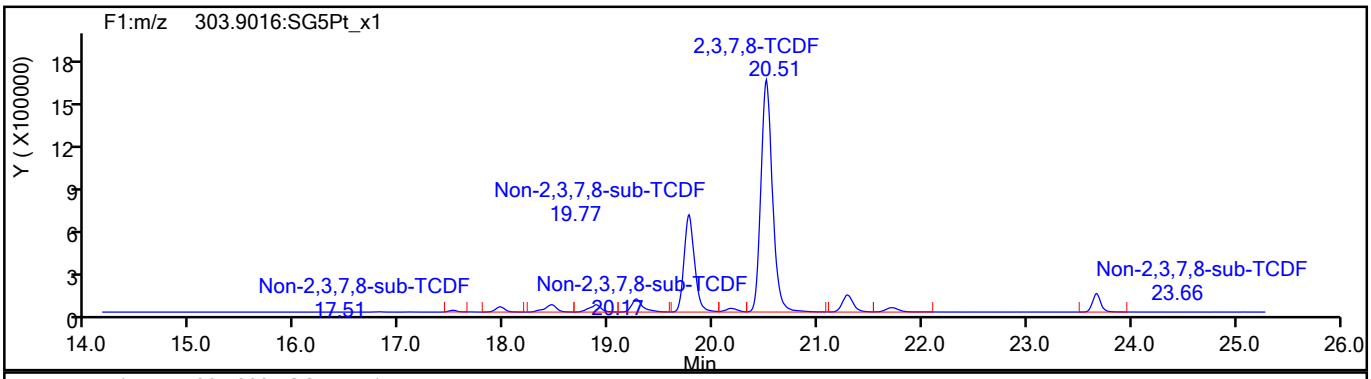

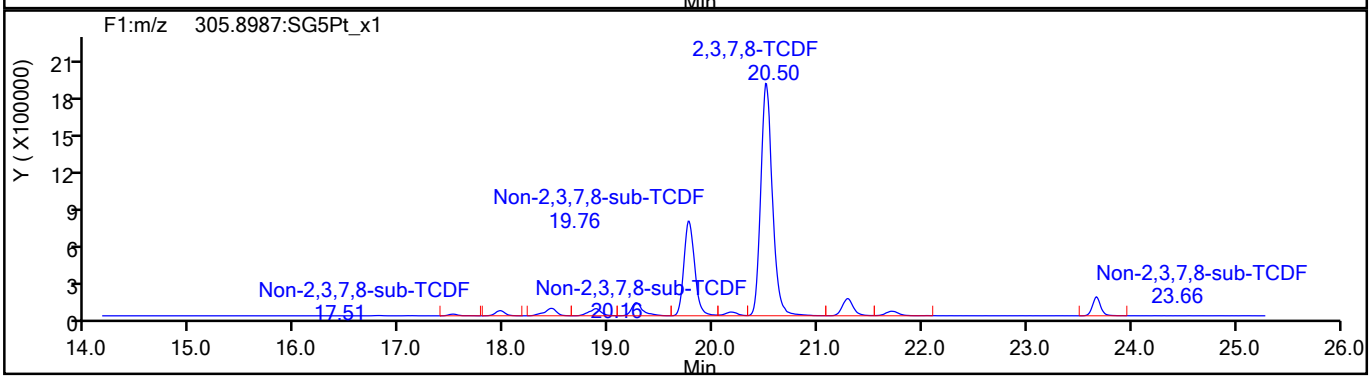

TCDF Standards

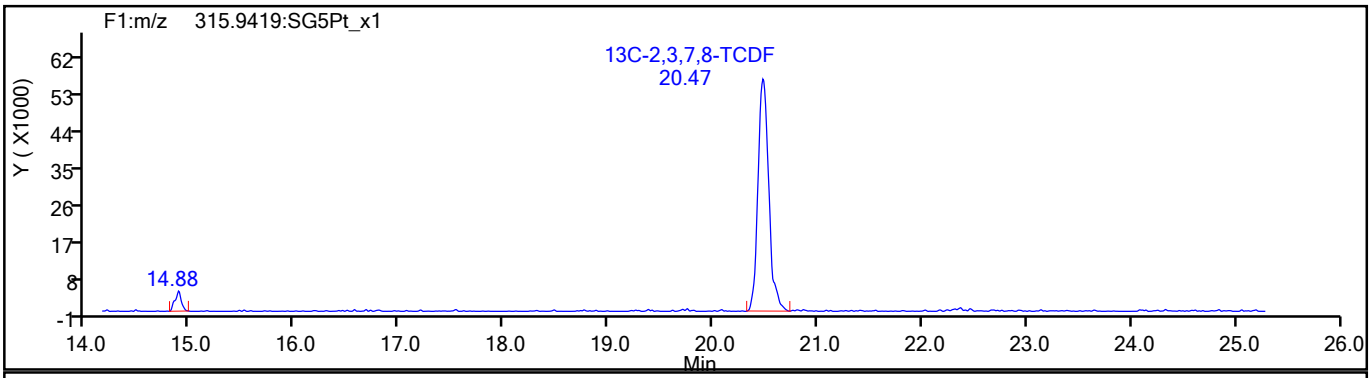

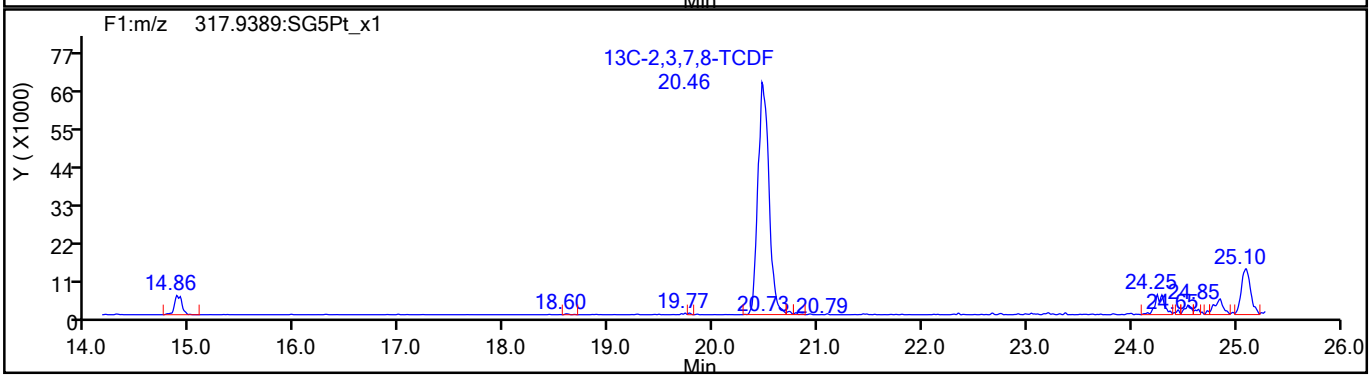

786883

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

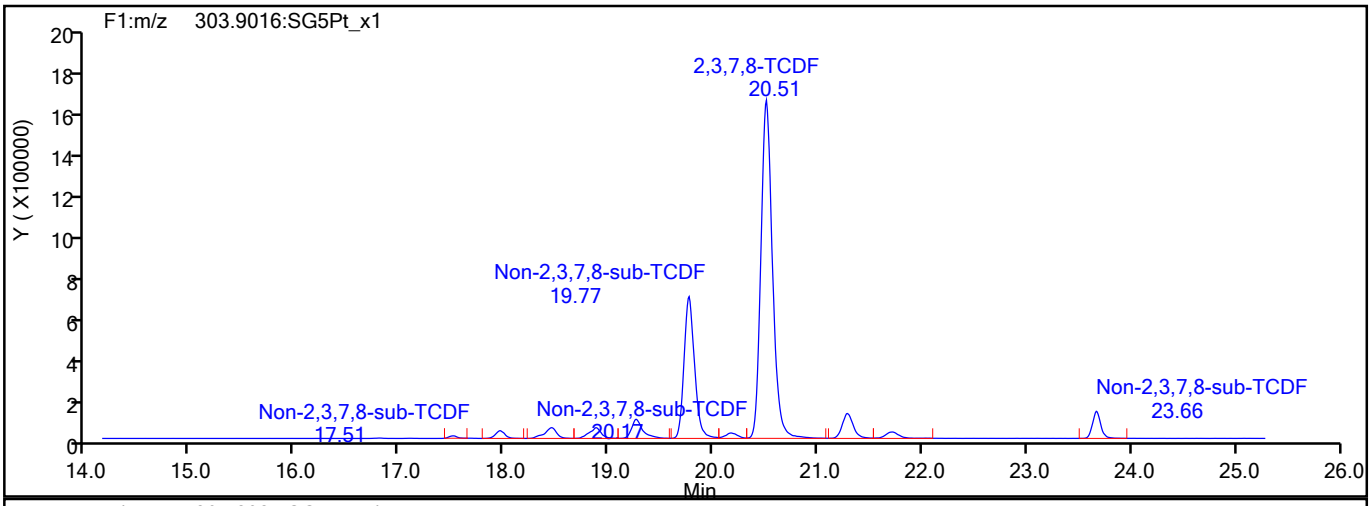

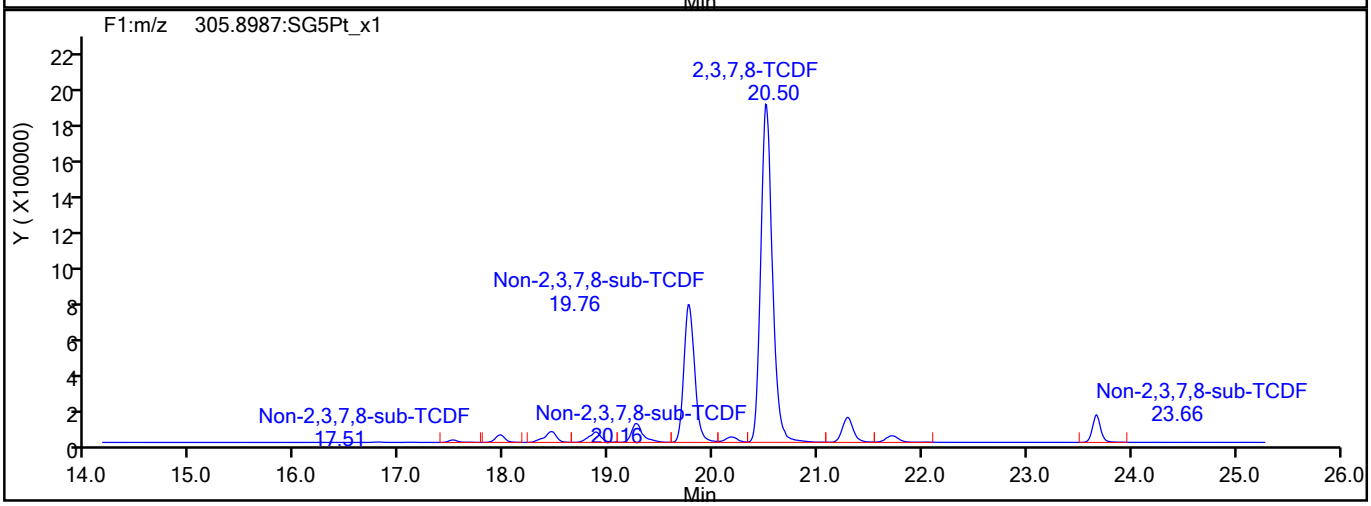

TCDF Interference Mass

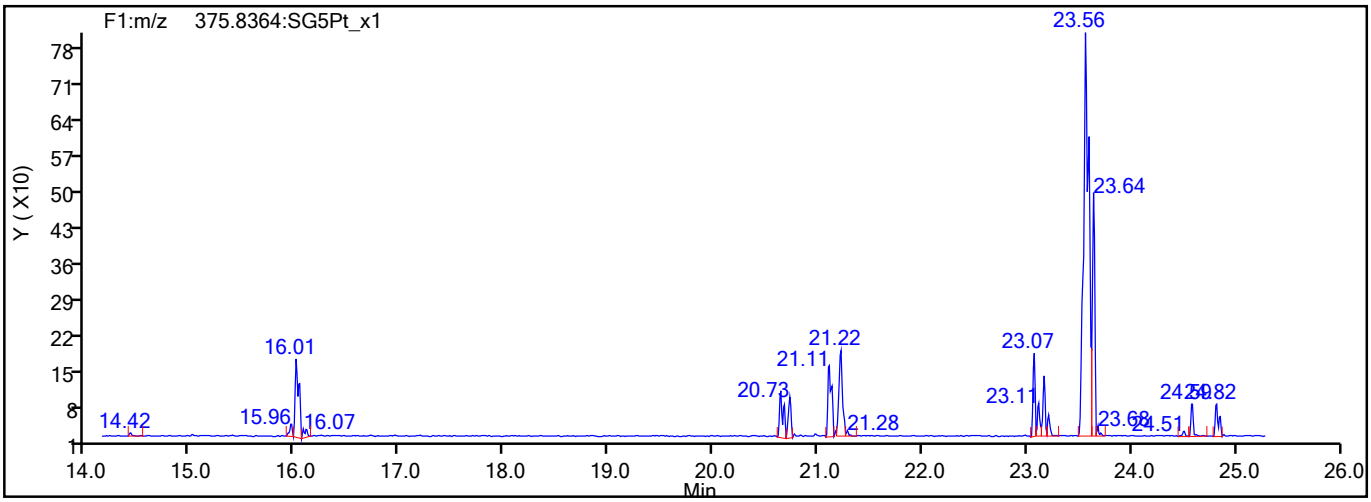

786884

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

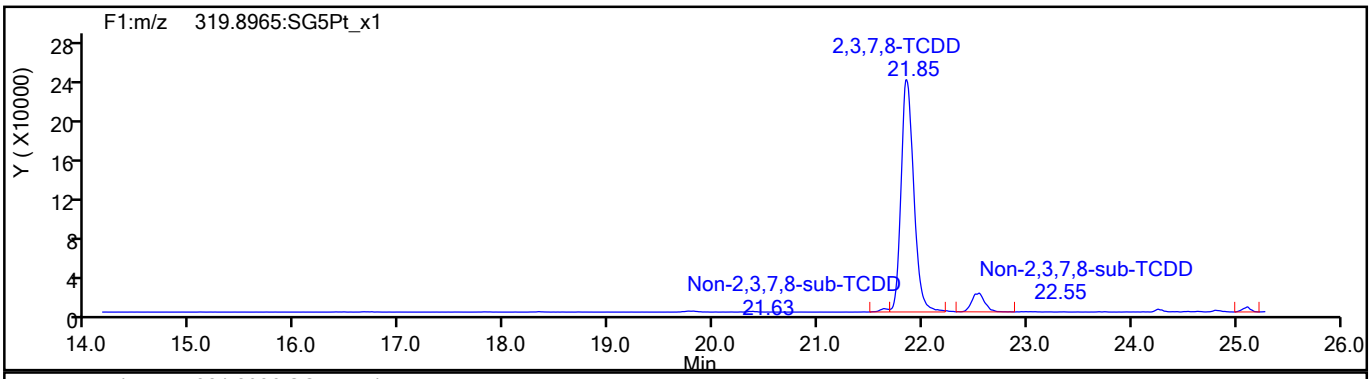

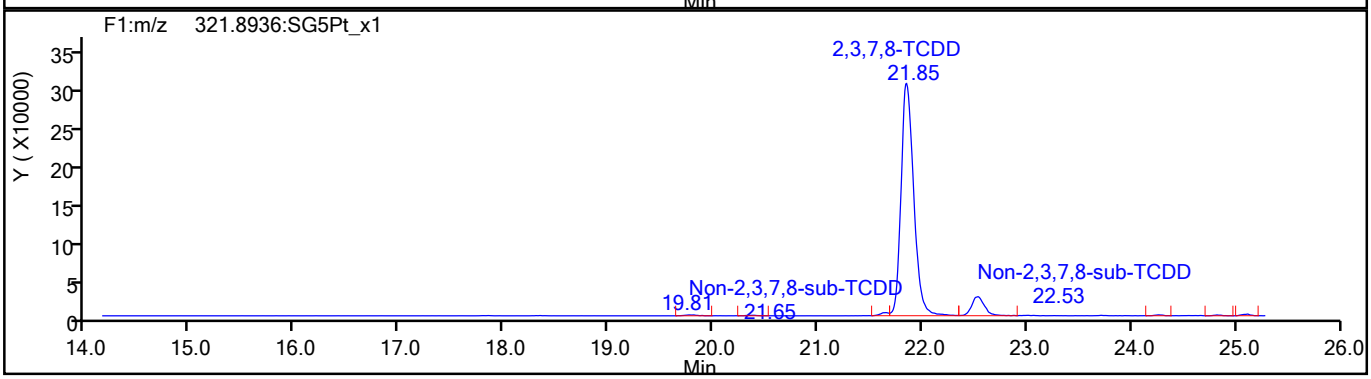

TCDD Standards

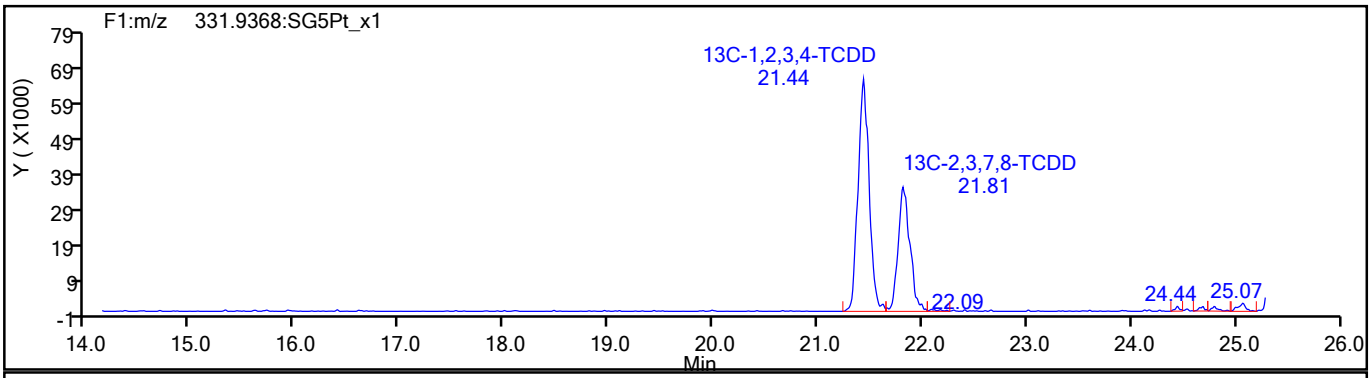

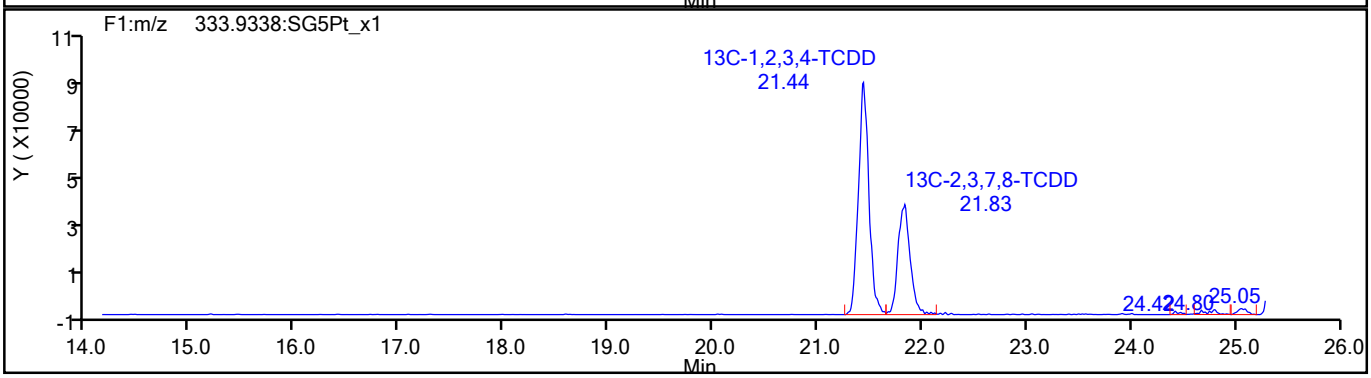

786885

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

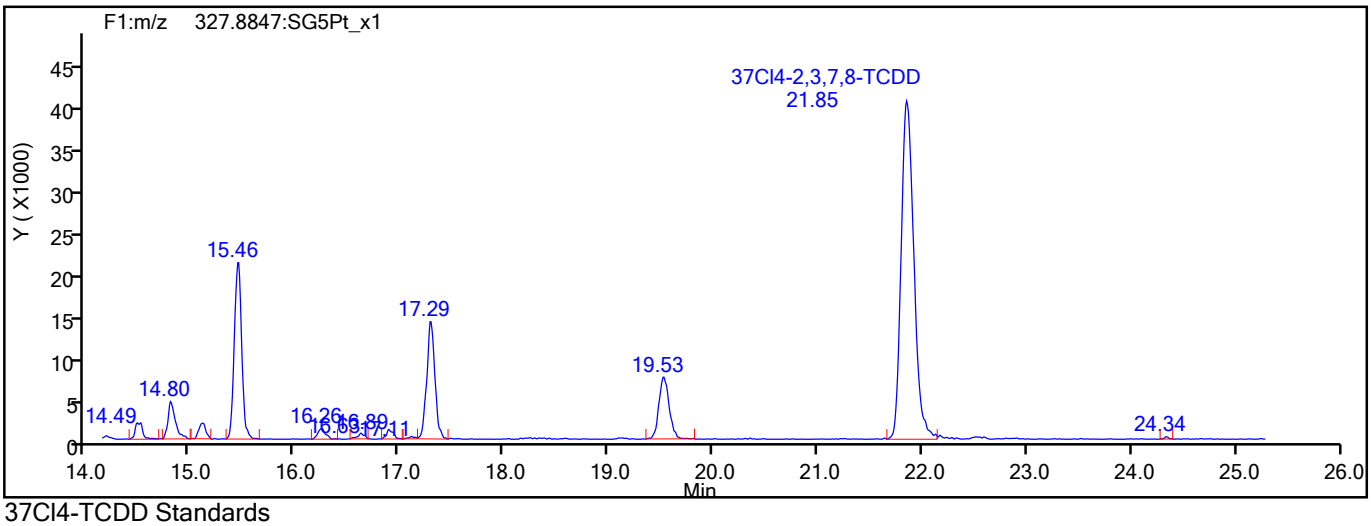

37Cl4-TCDD Standards

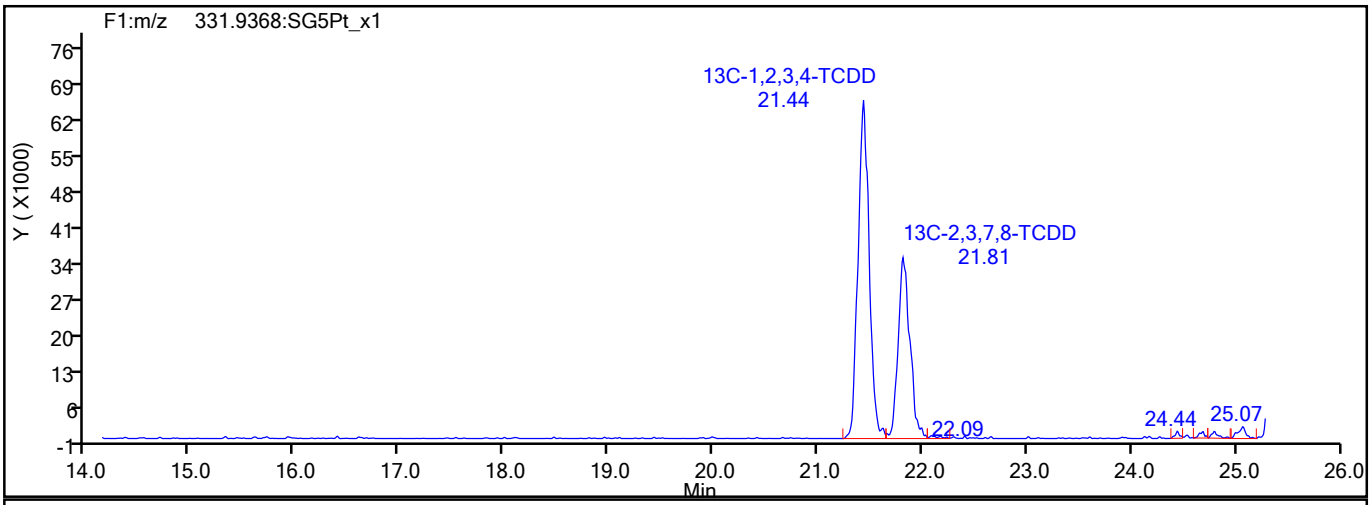

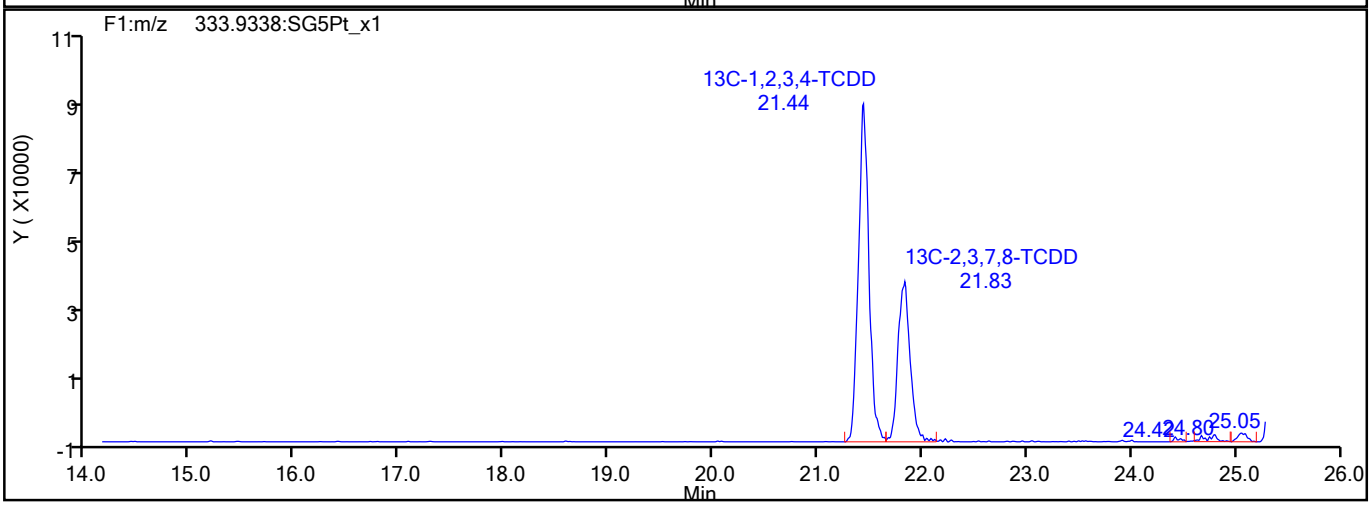

786886

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

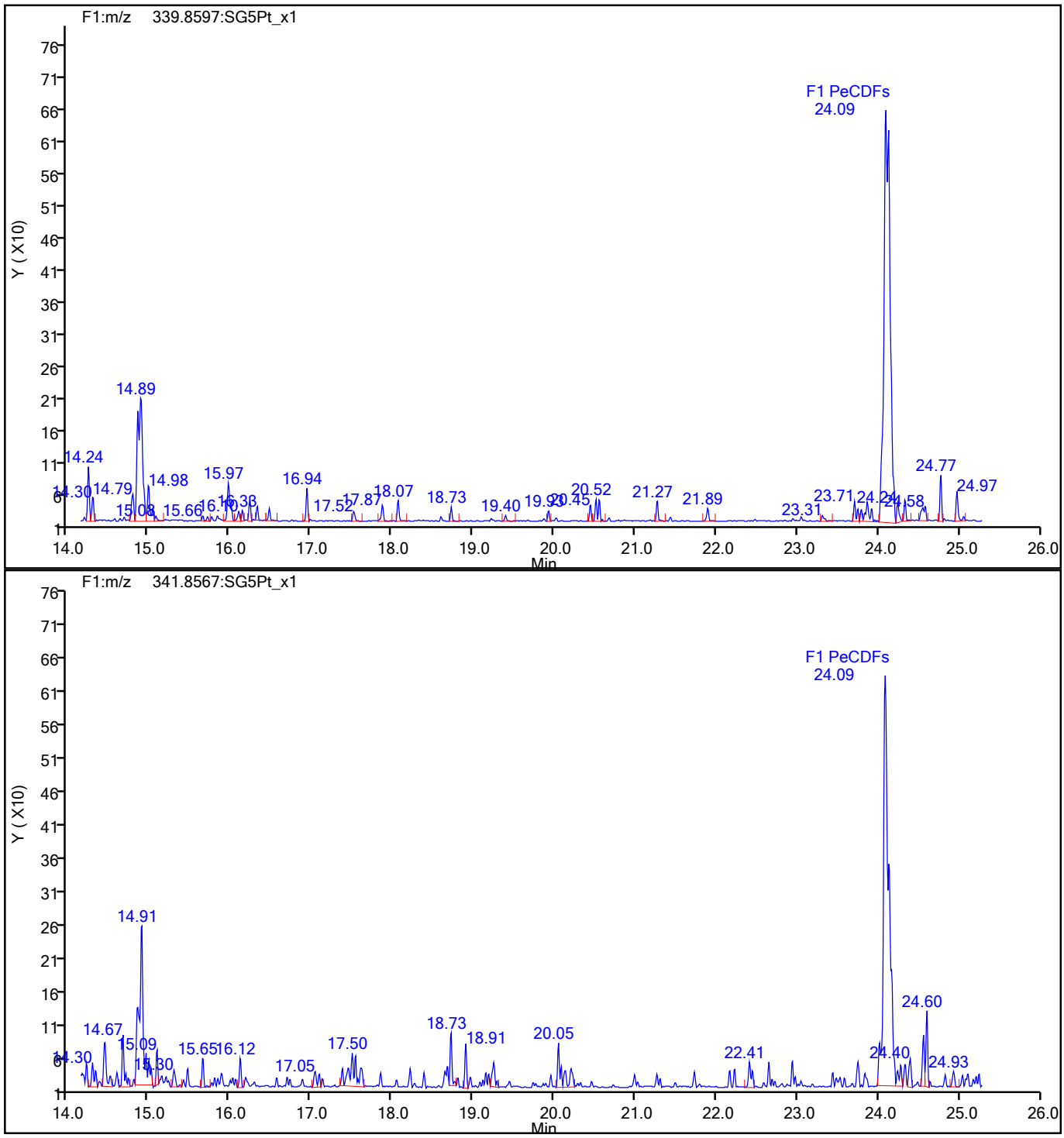

786887

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

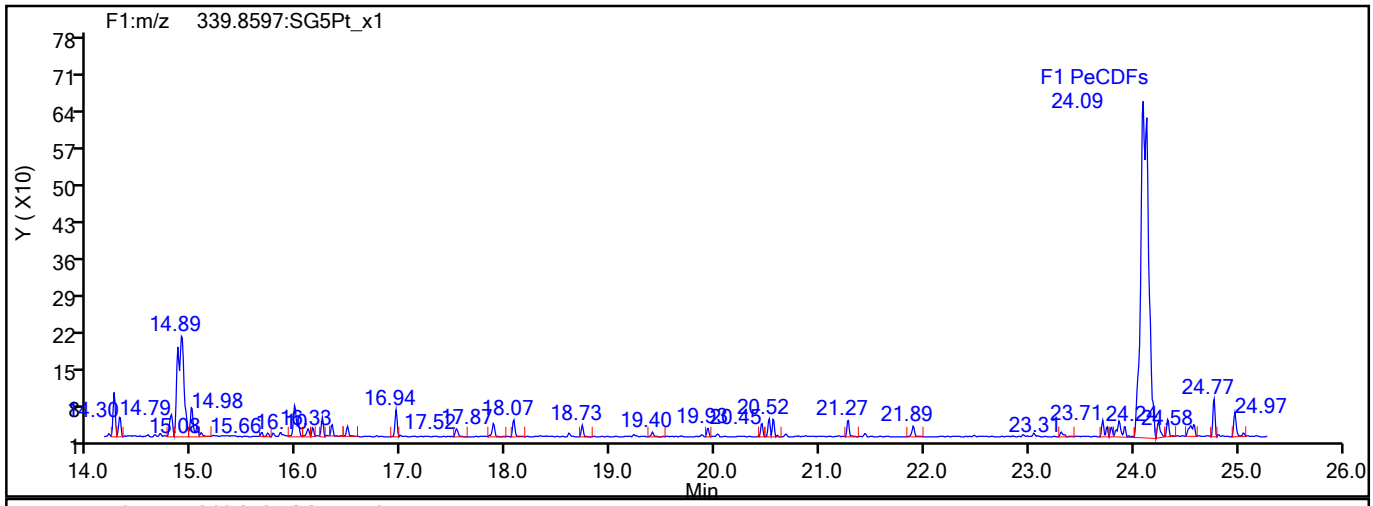

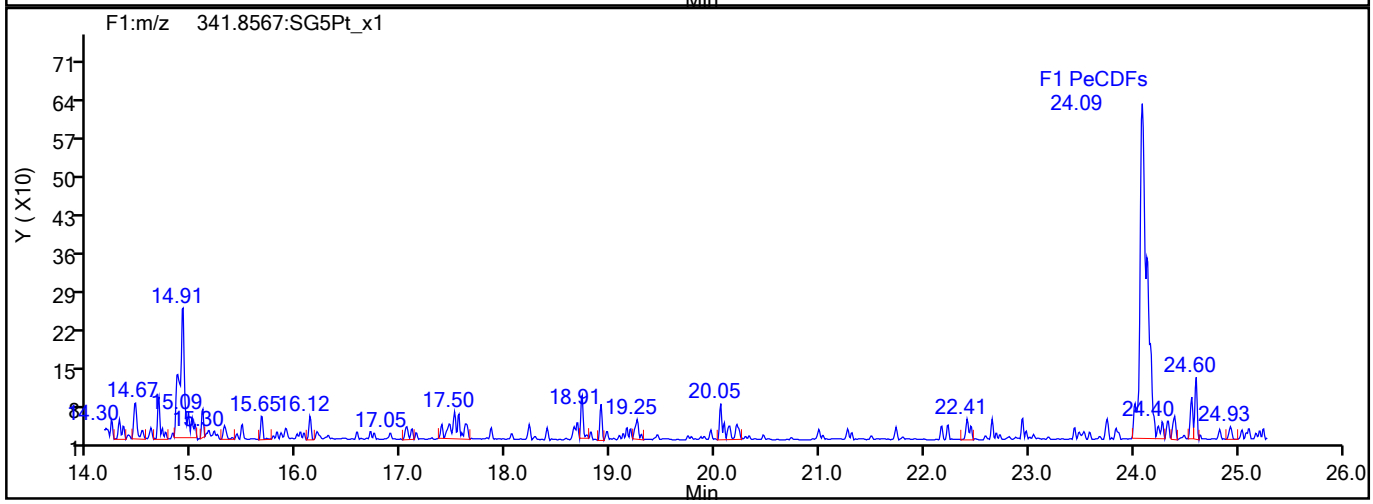

F1 PeCDFs Interference Mass

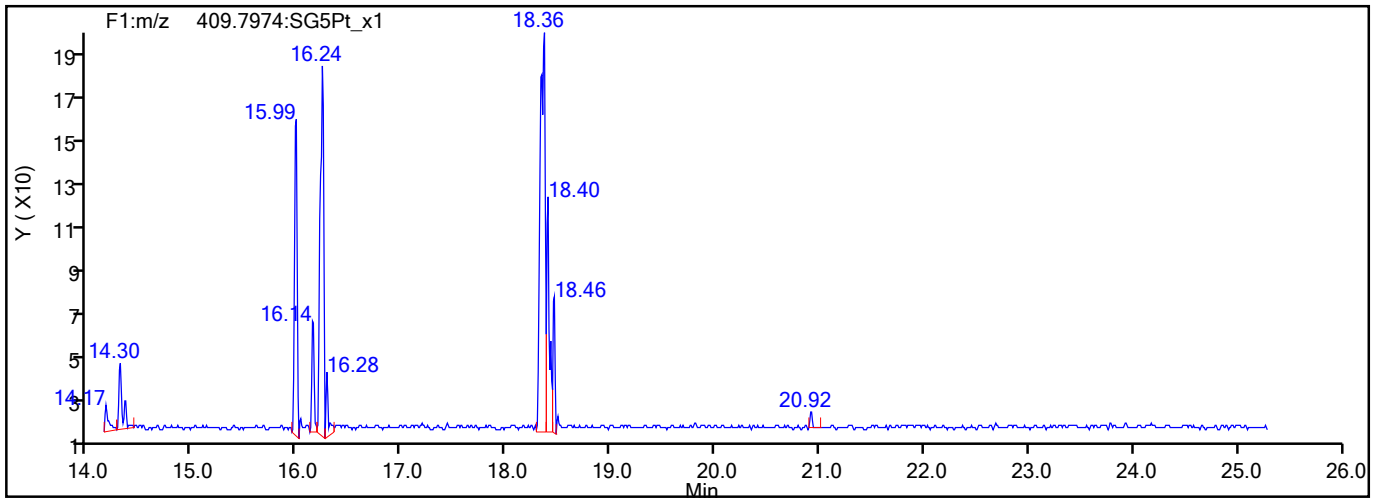

786888

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

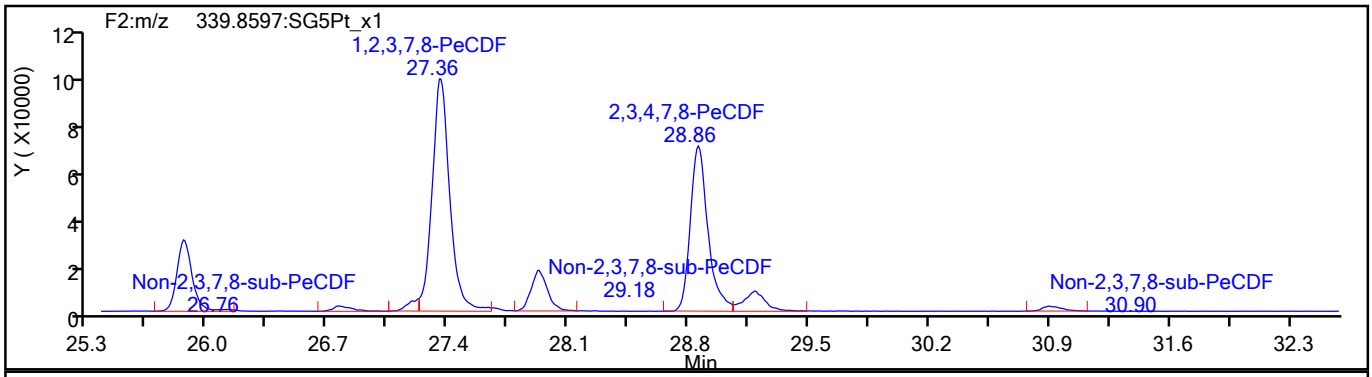

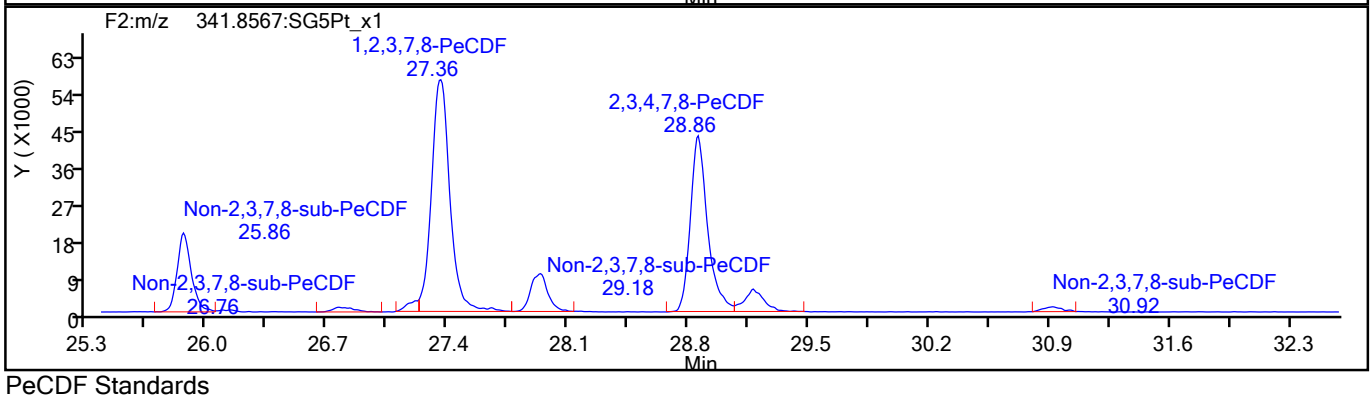

PeCDF Standards

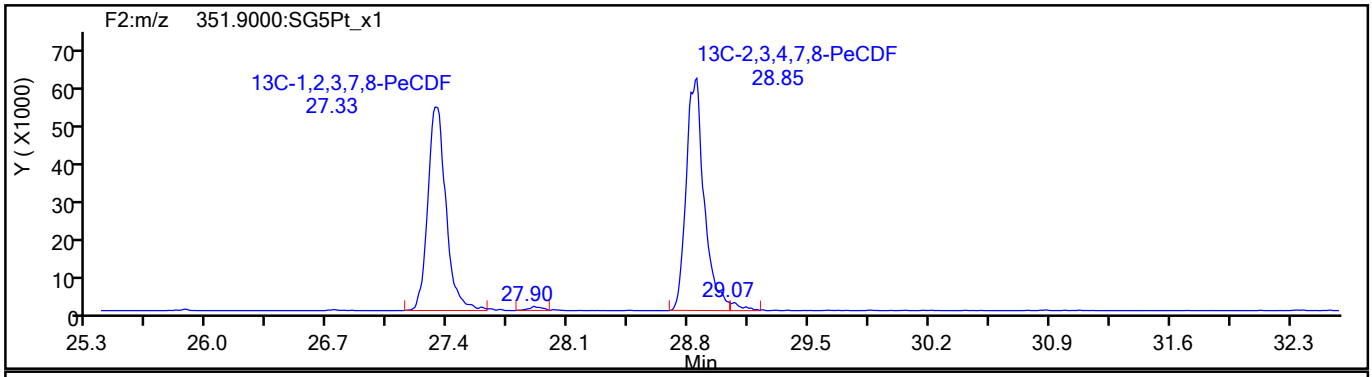

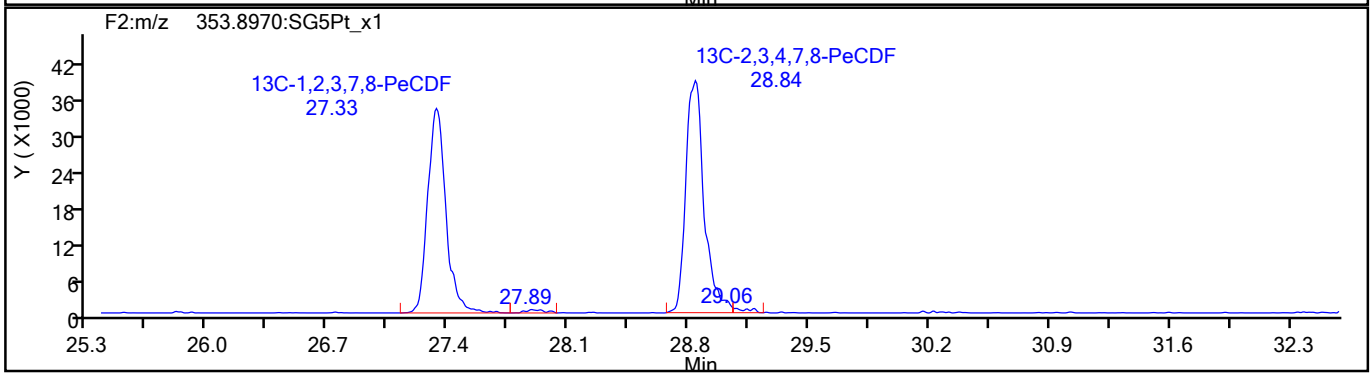

786889

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

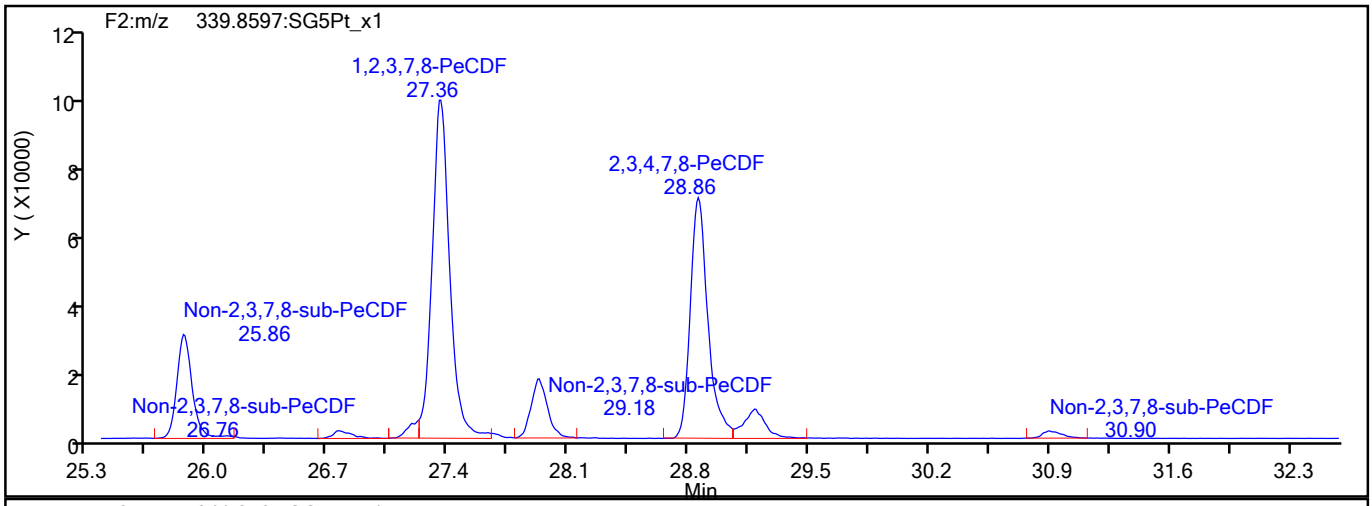

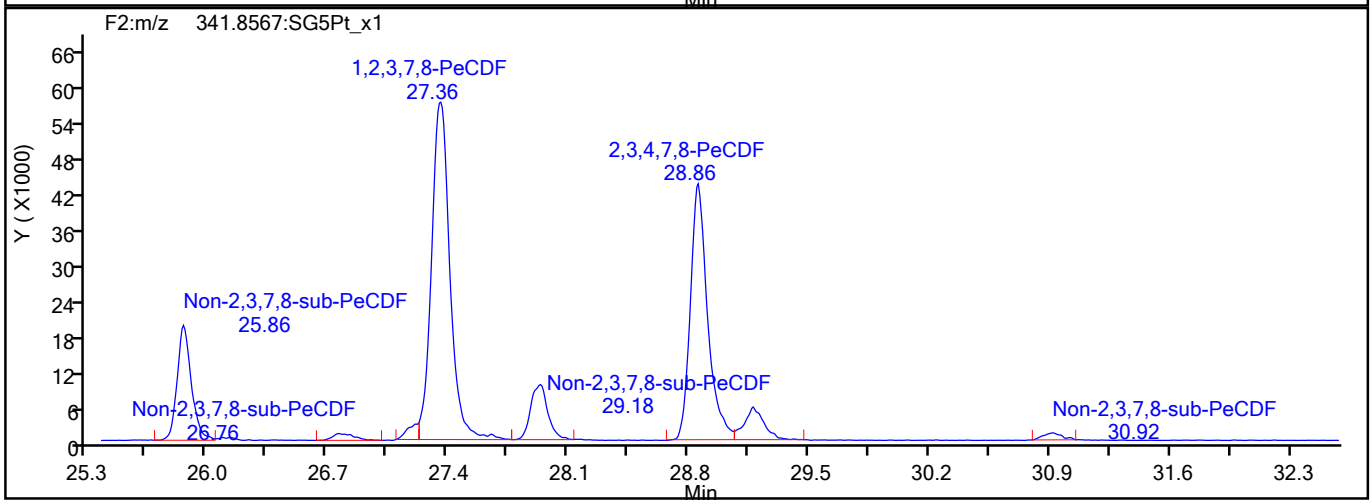

PeCDF Interference Mass

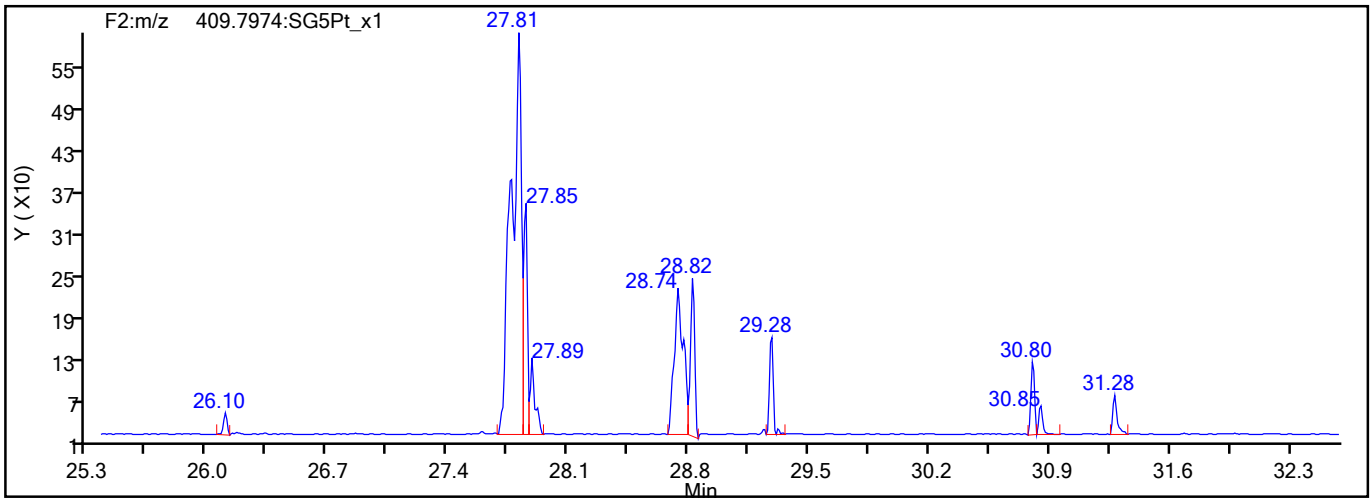

786890

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

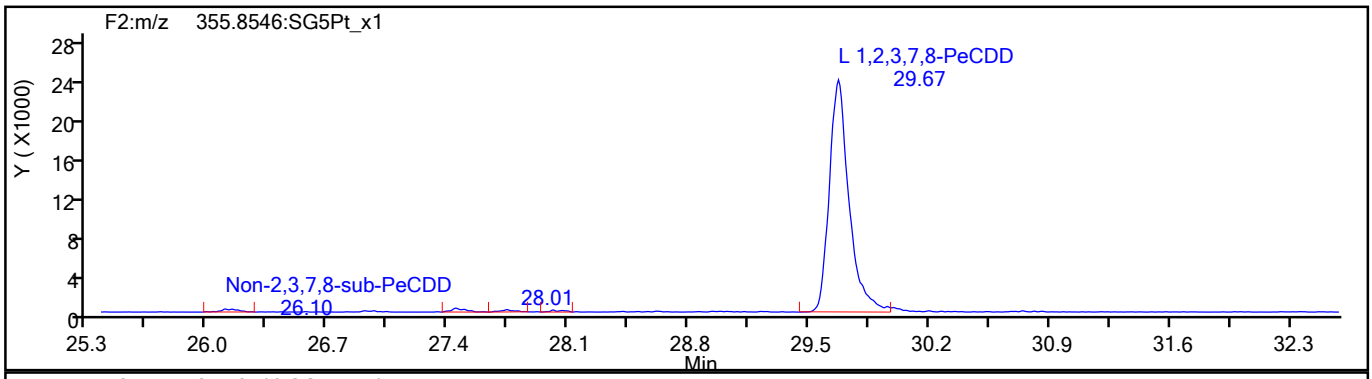

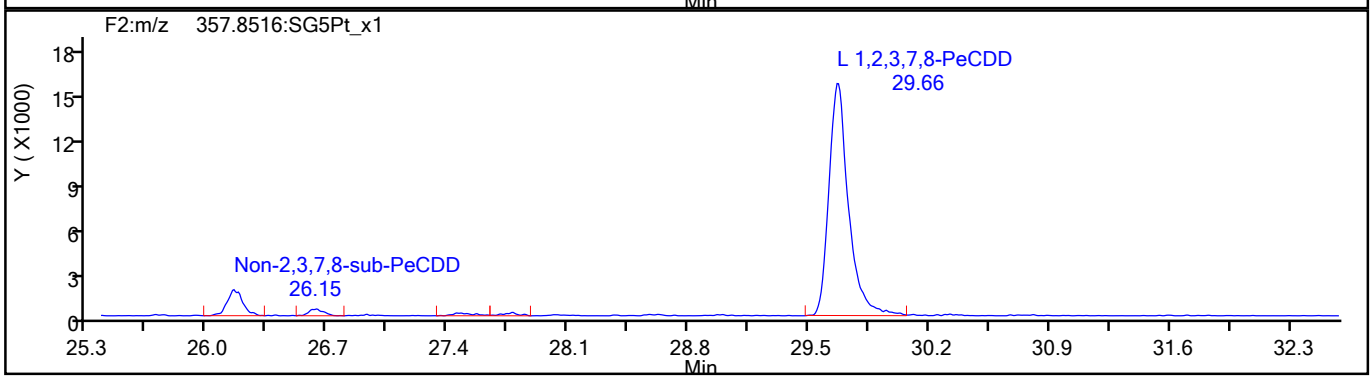

PeCDD Standards

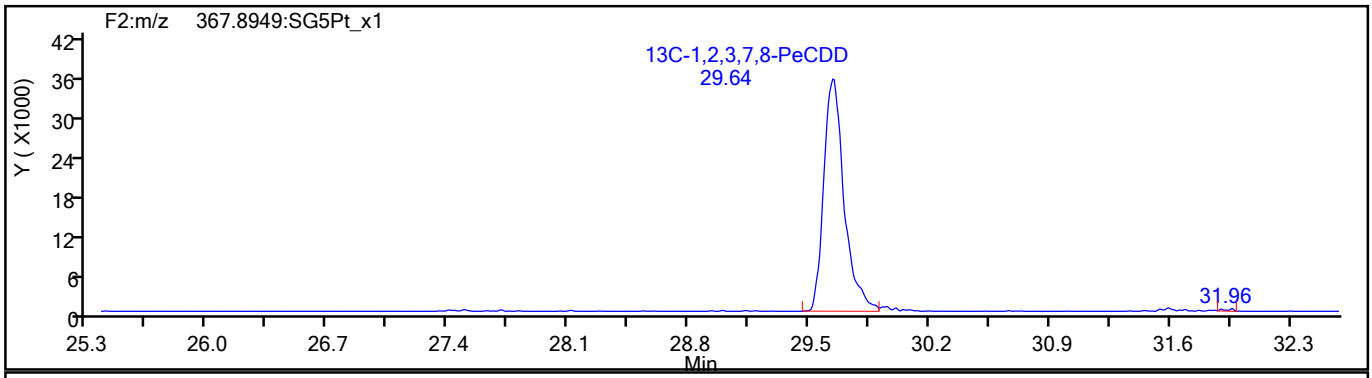

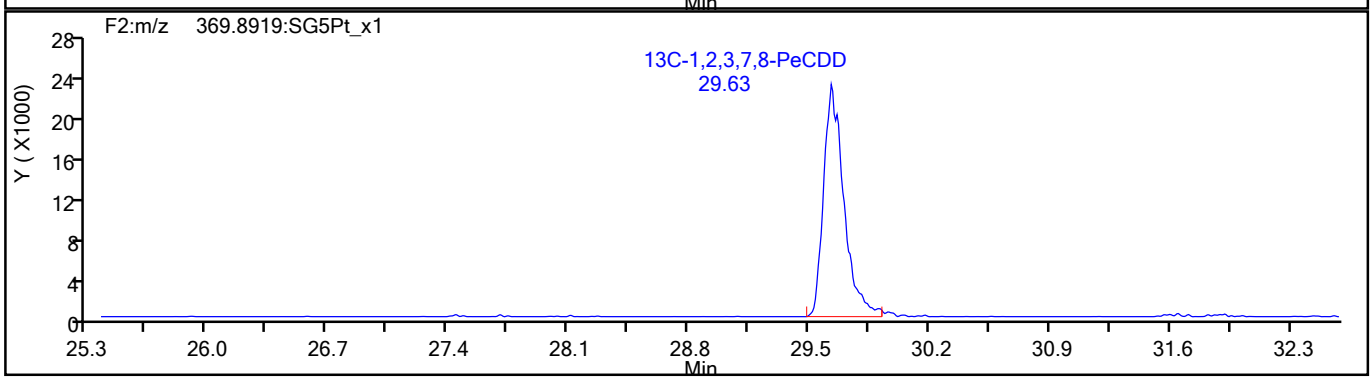

786891

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

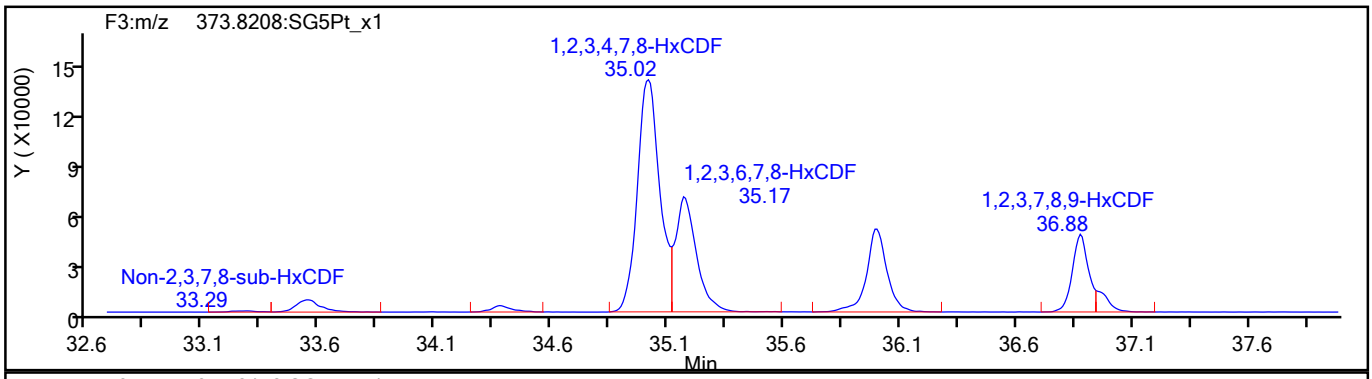

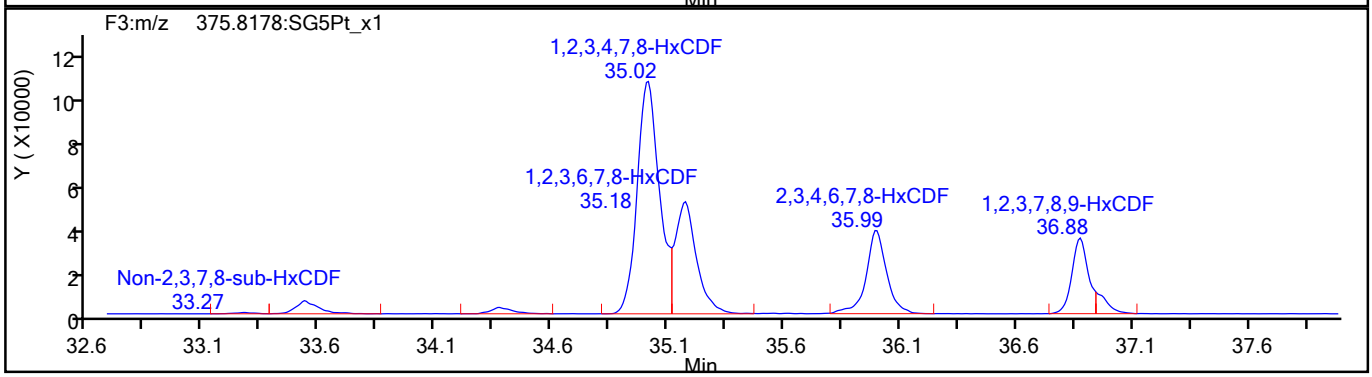

HxCDF Standards

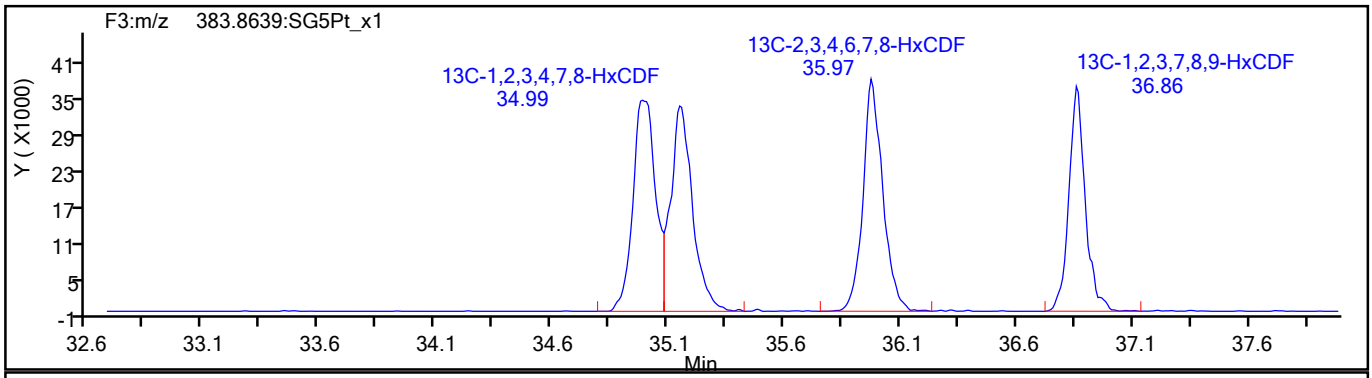

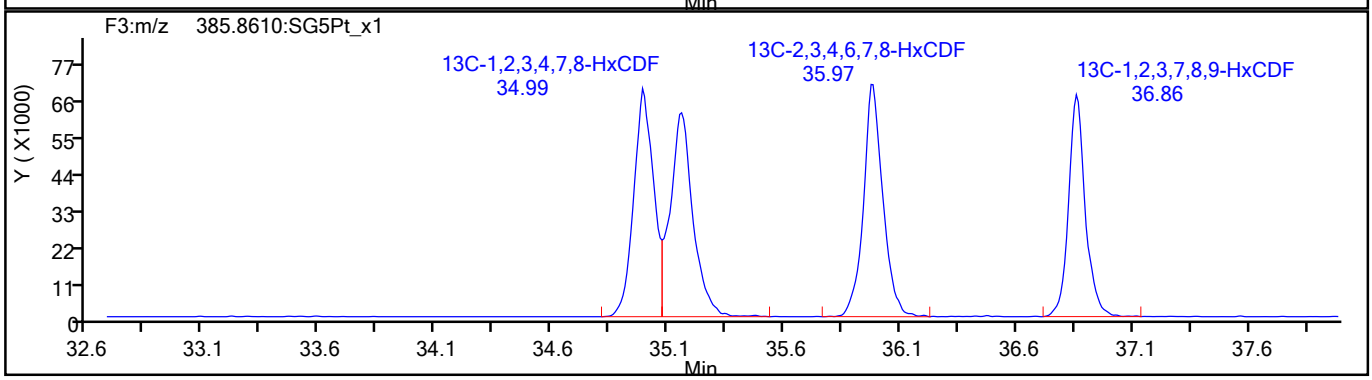

786892

Report Date: 24-Aug-2021 12:00:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
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HxCDF

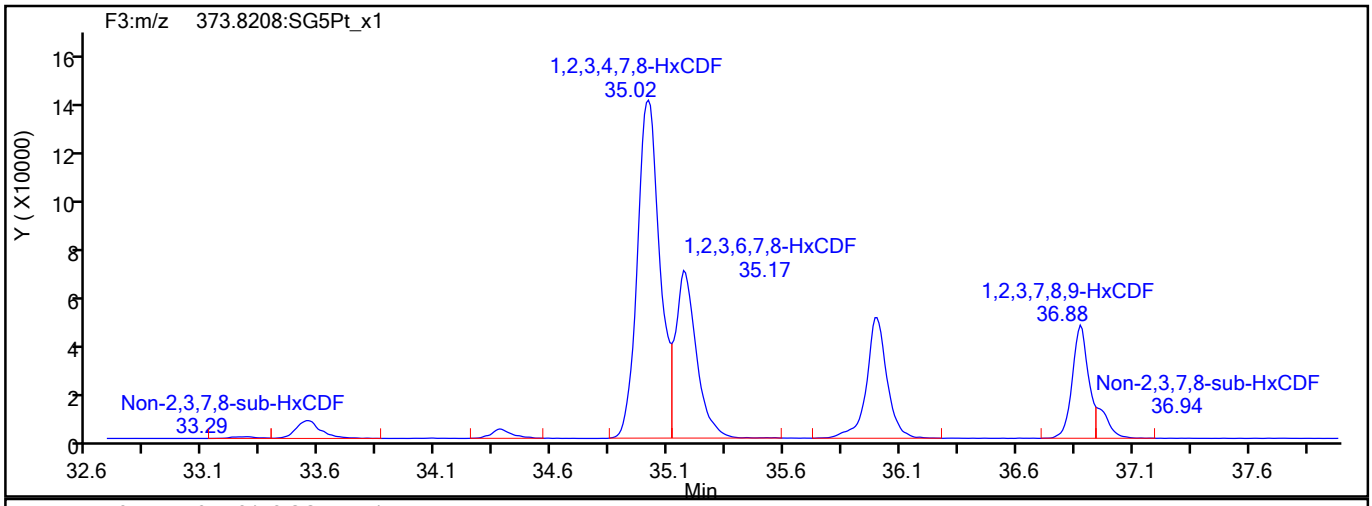

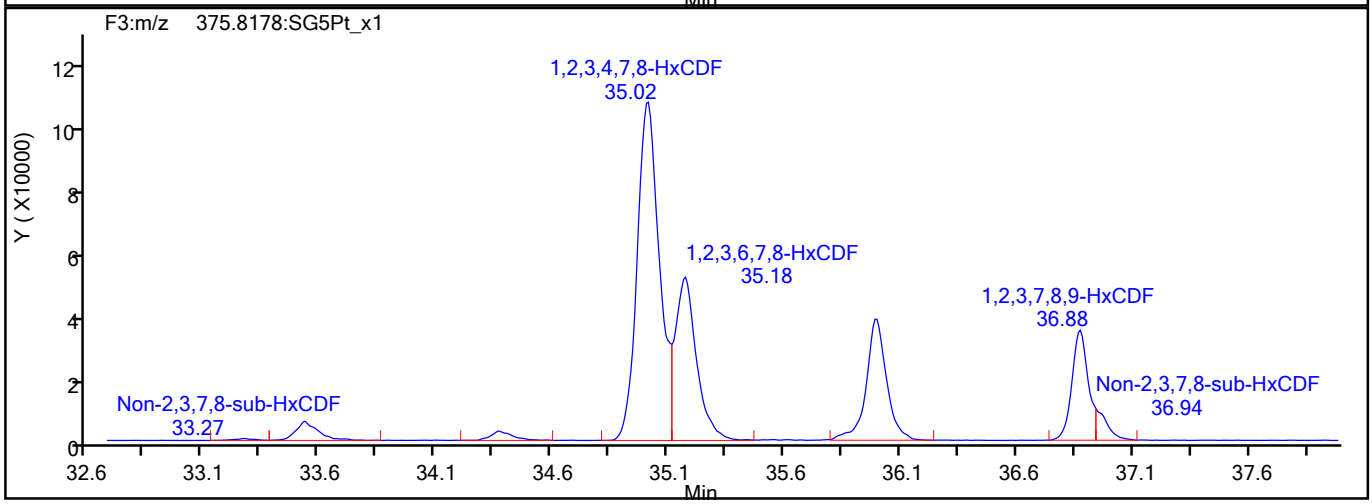

HxCDF Interference Mass

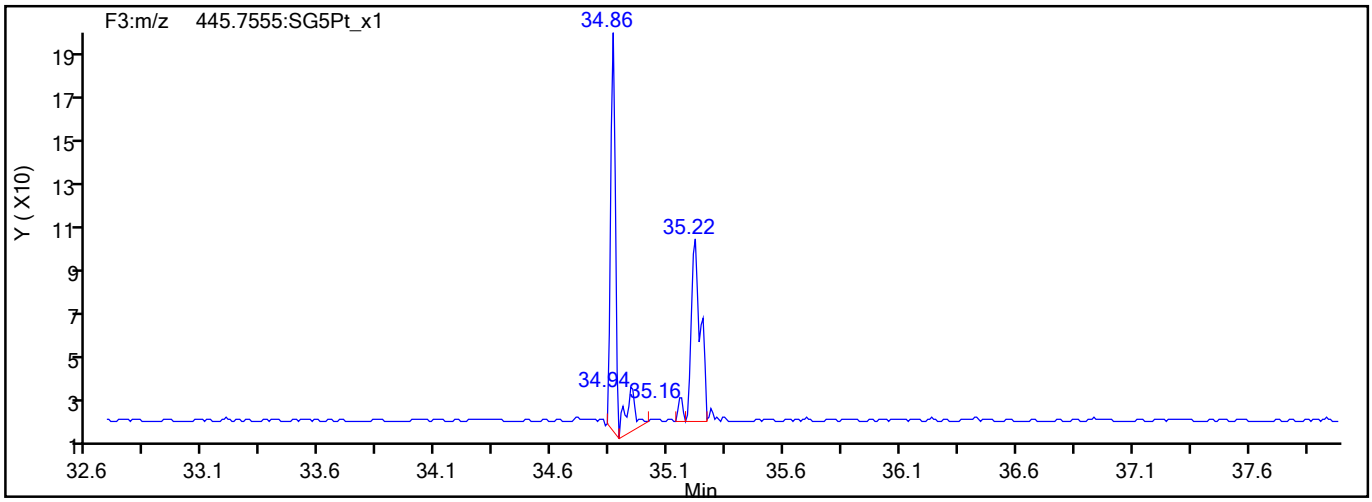

786893

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

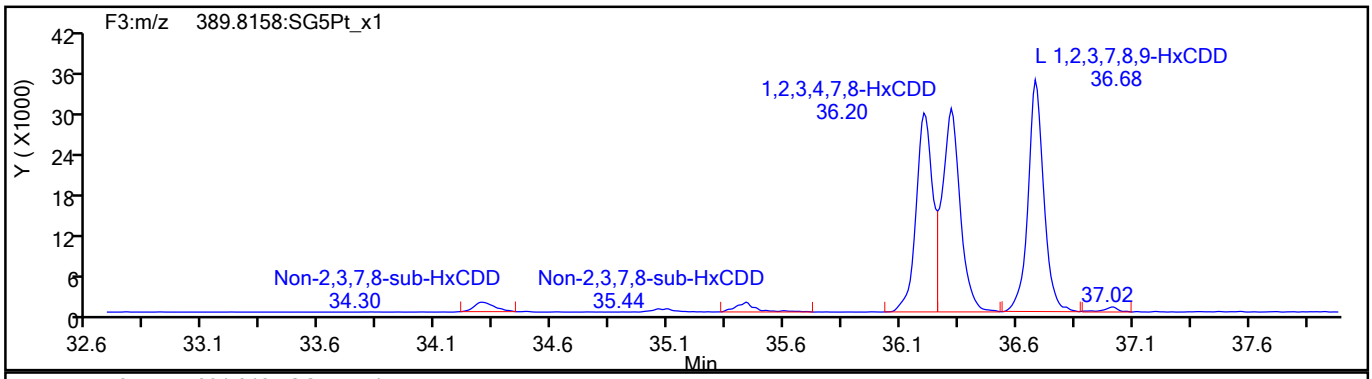

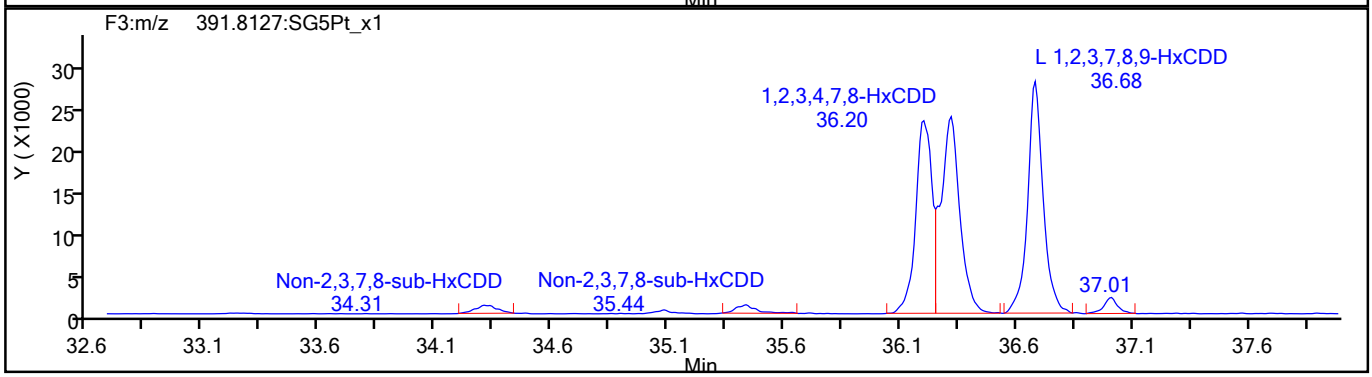

HxCDD Standards

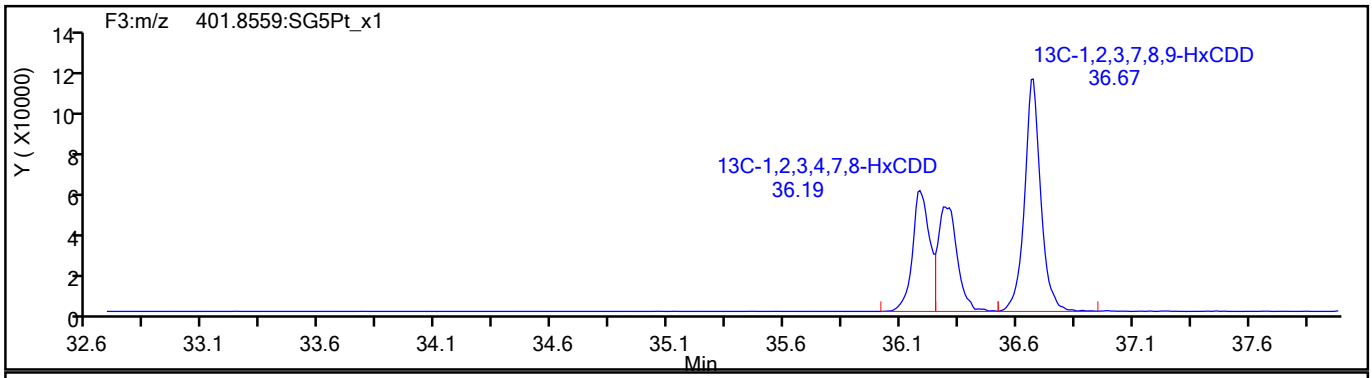

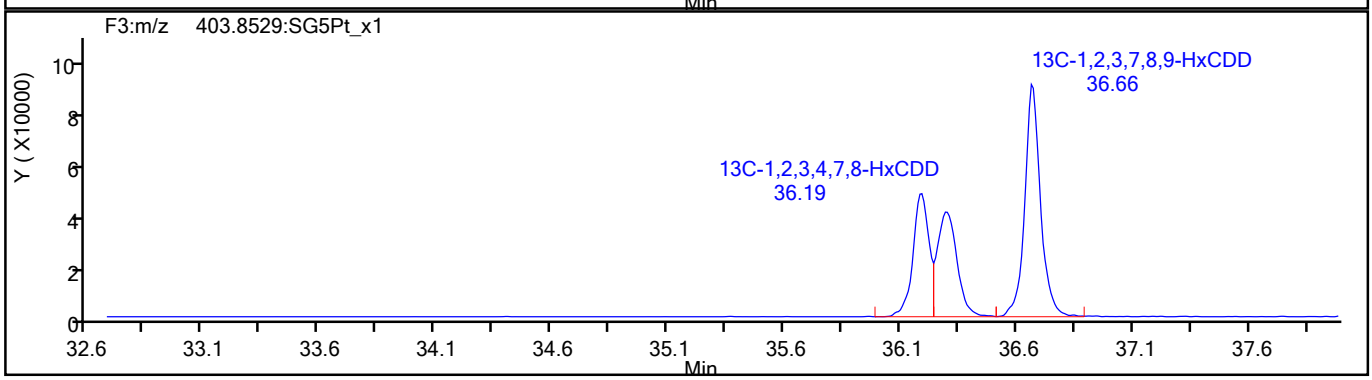

786894

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
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HpCDF

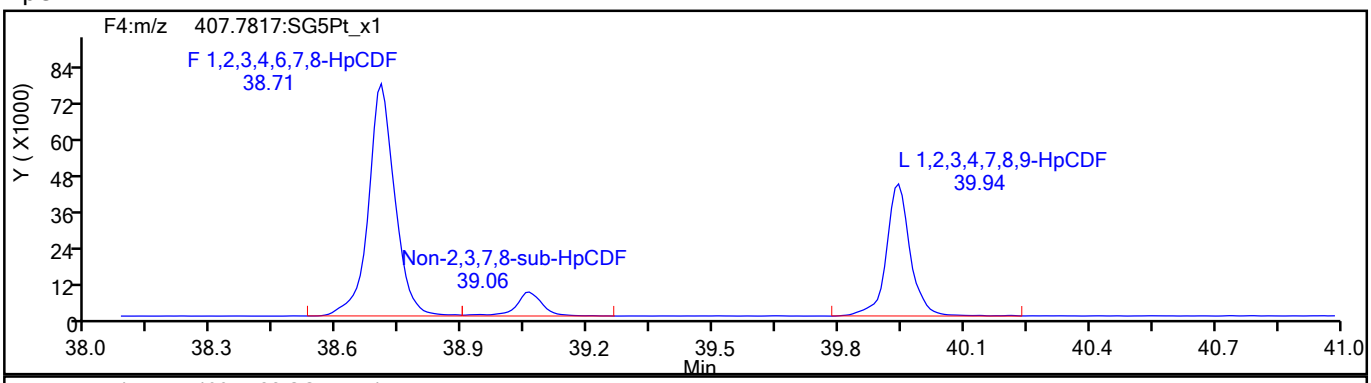

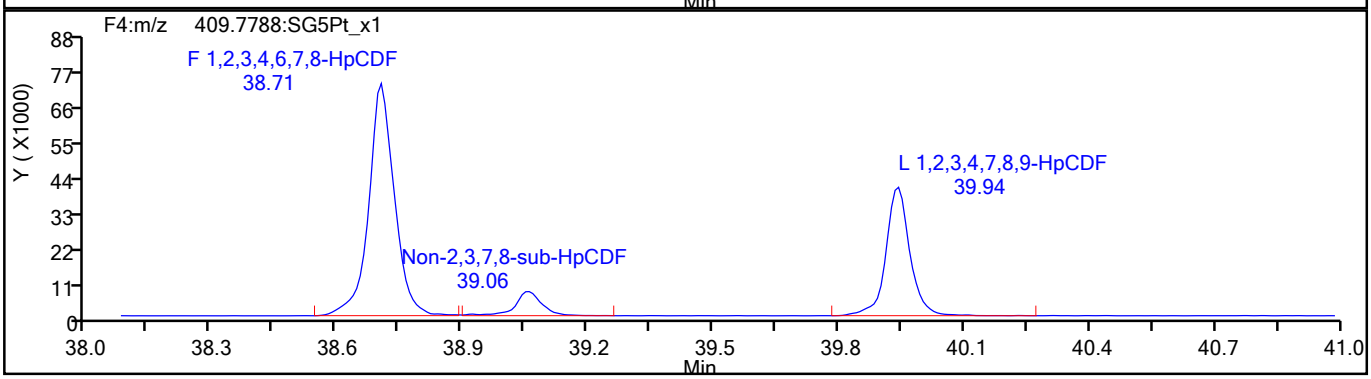

HpCDF Standards

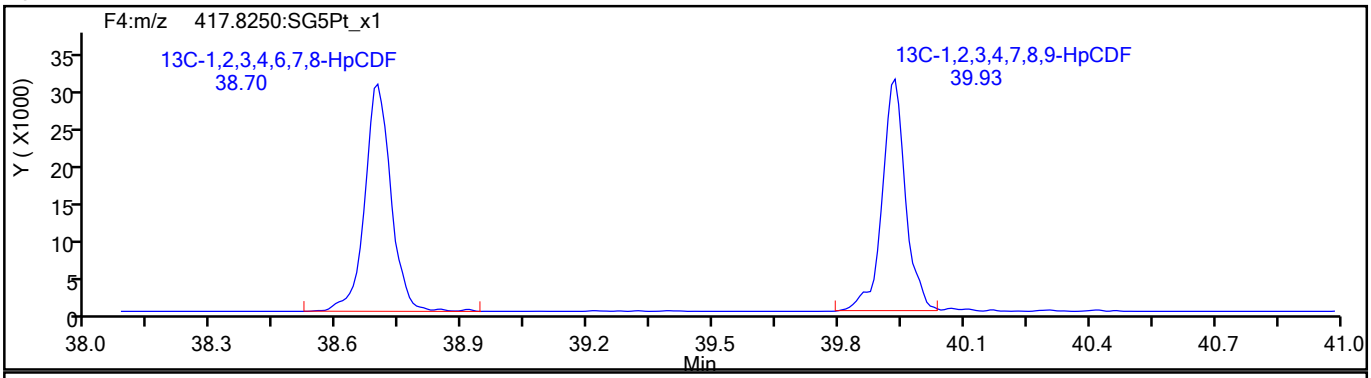

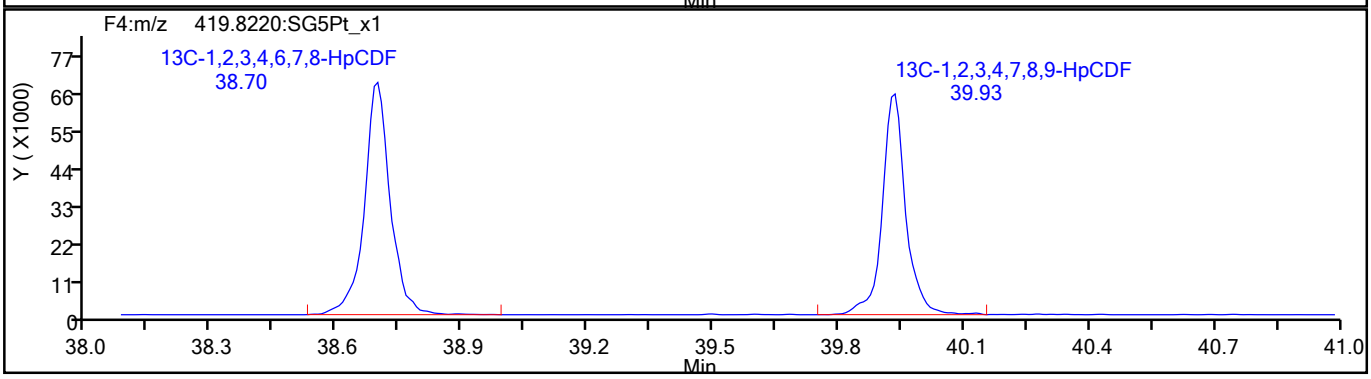

786895

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

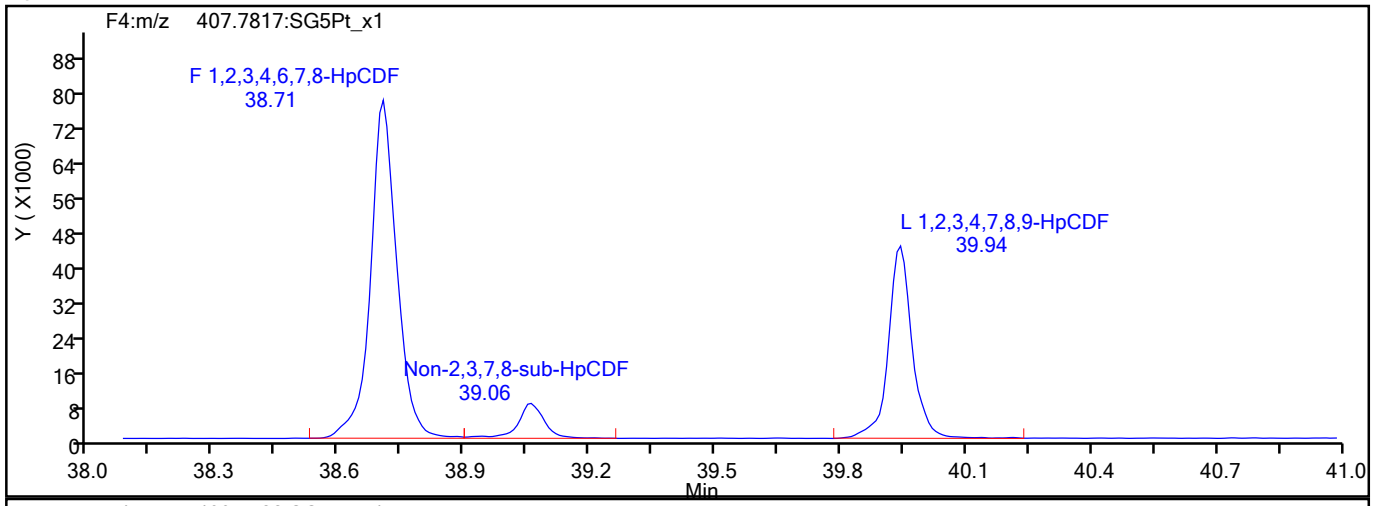

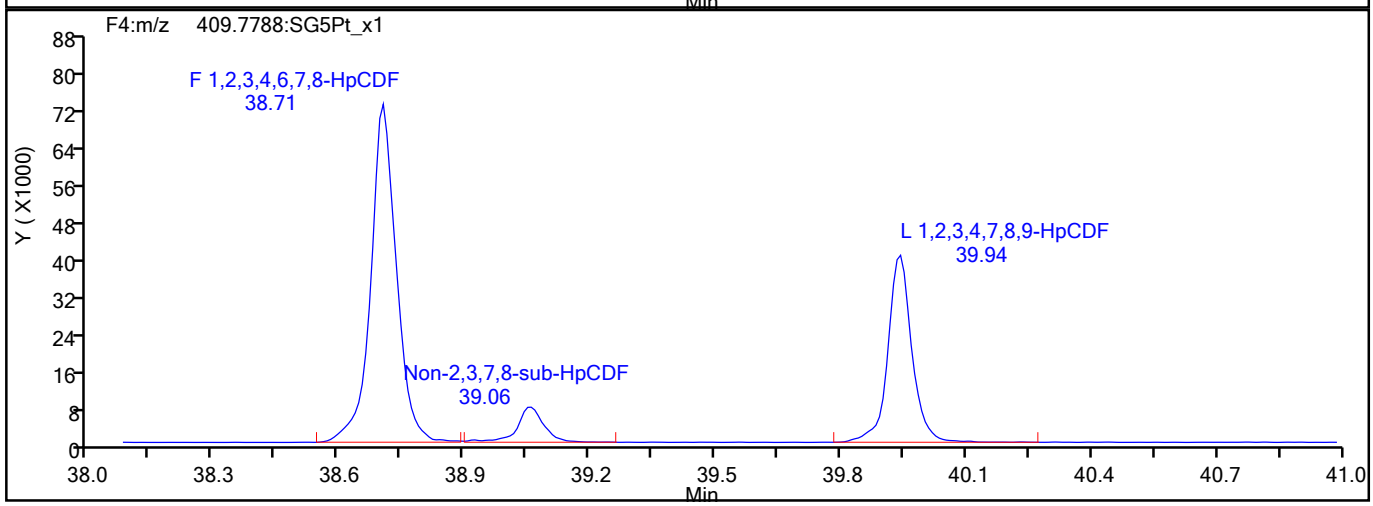

HpCDF Interference Mass

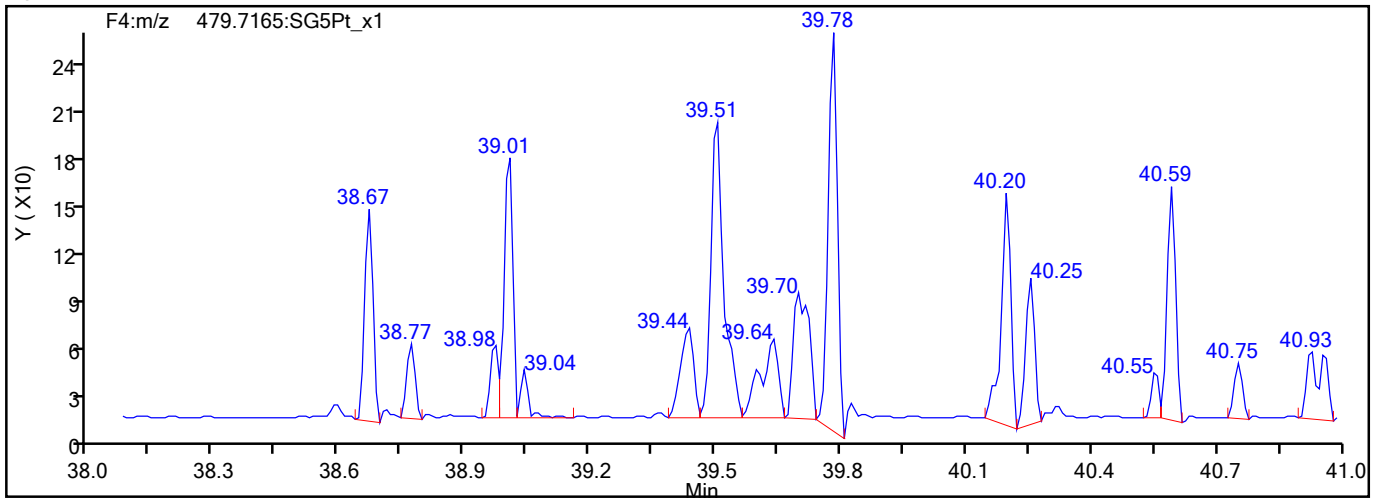

786896

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

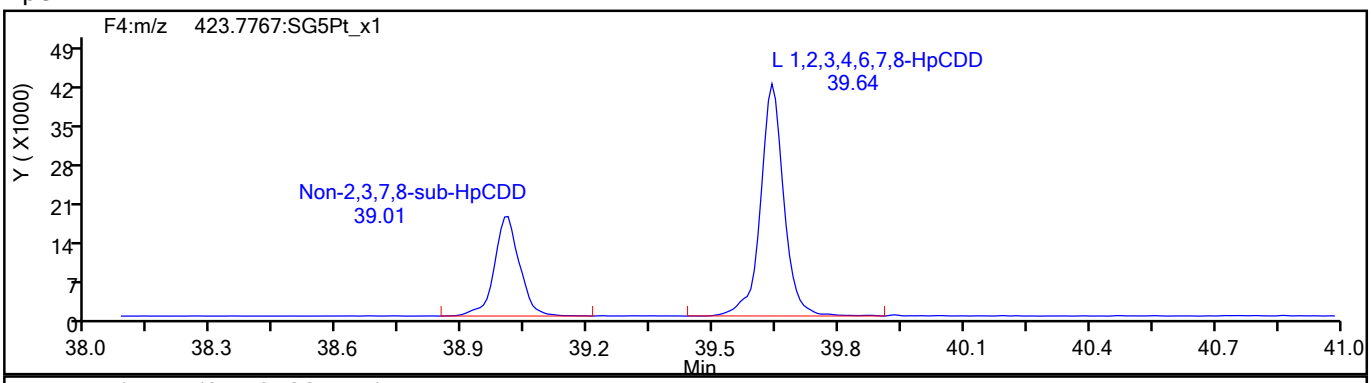

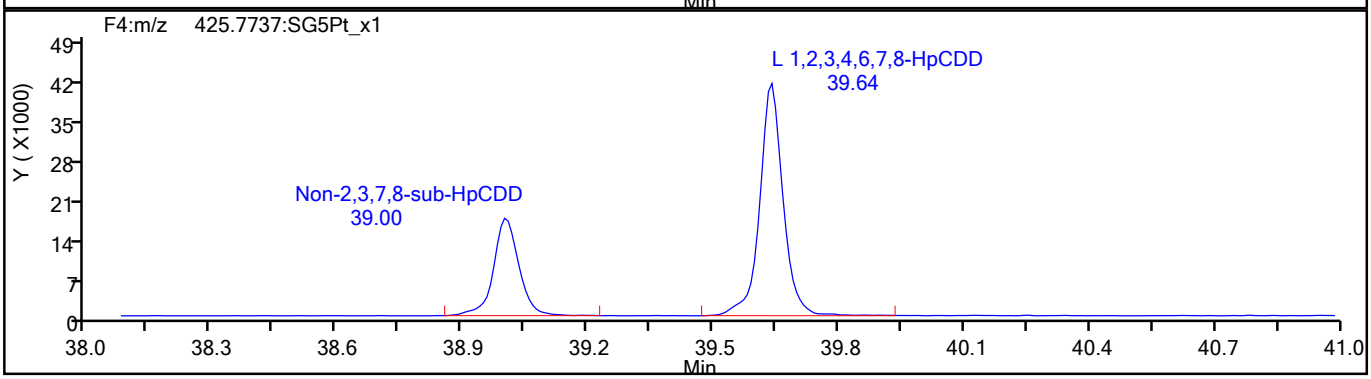

HpCDD Standards

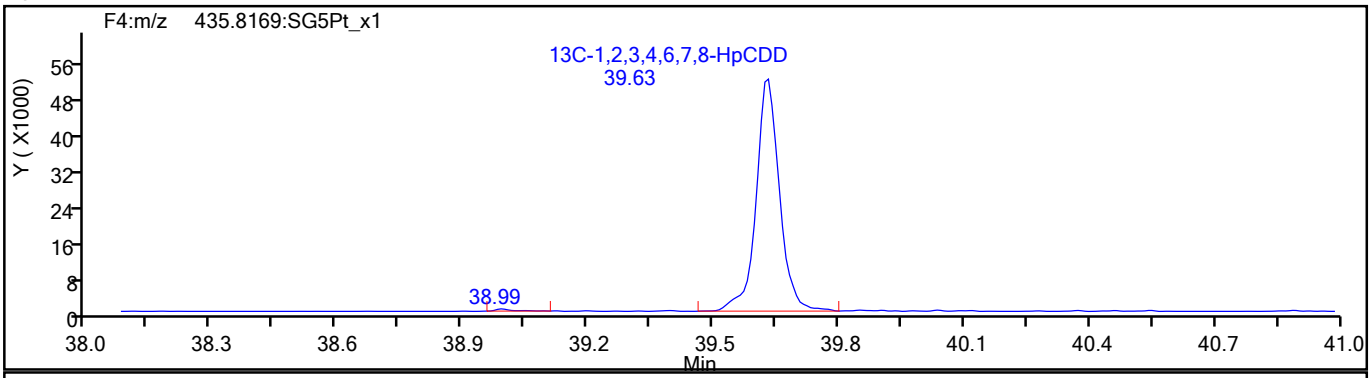

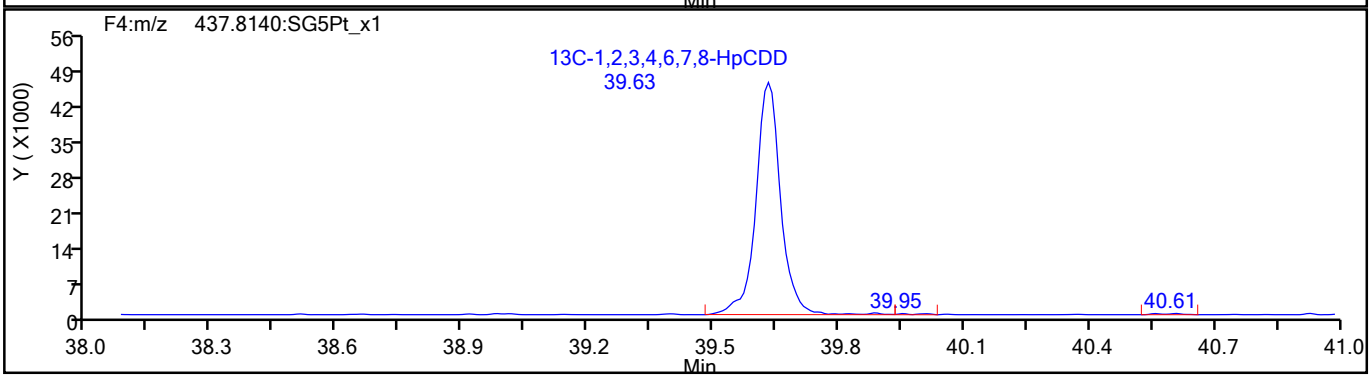

786897

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

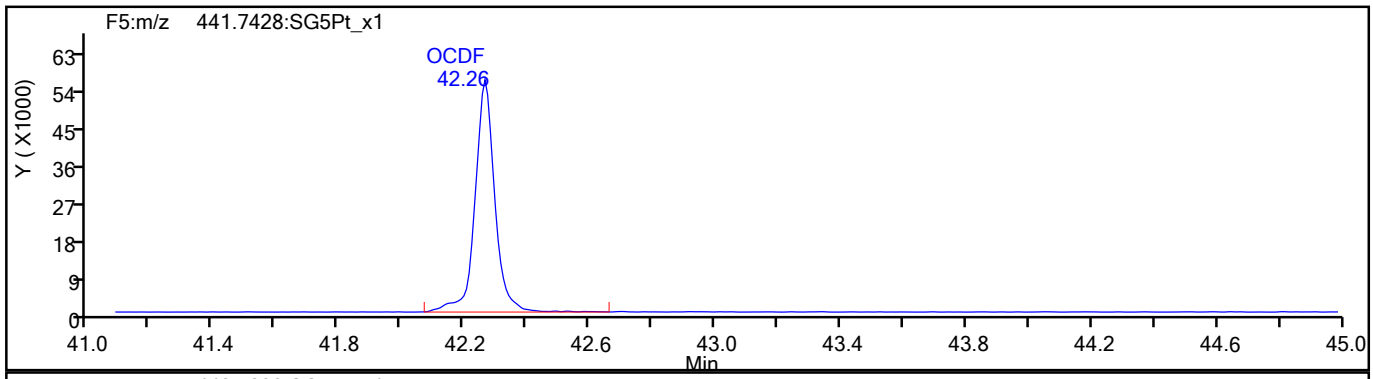

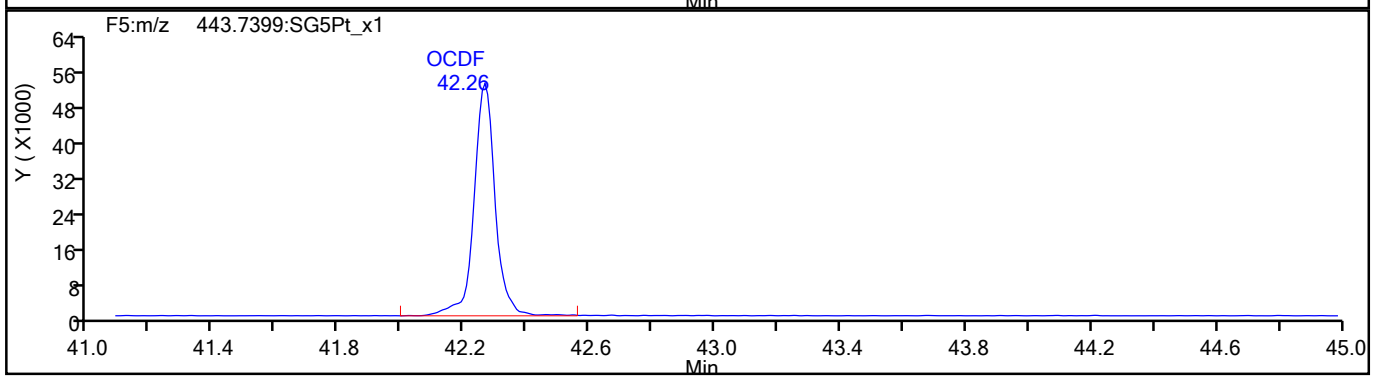

OCDF Standards

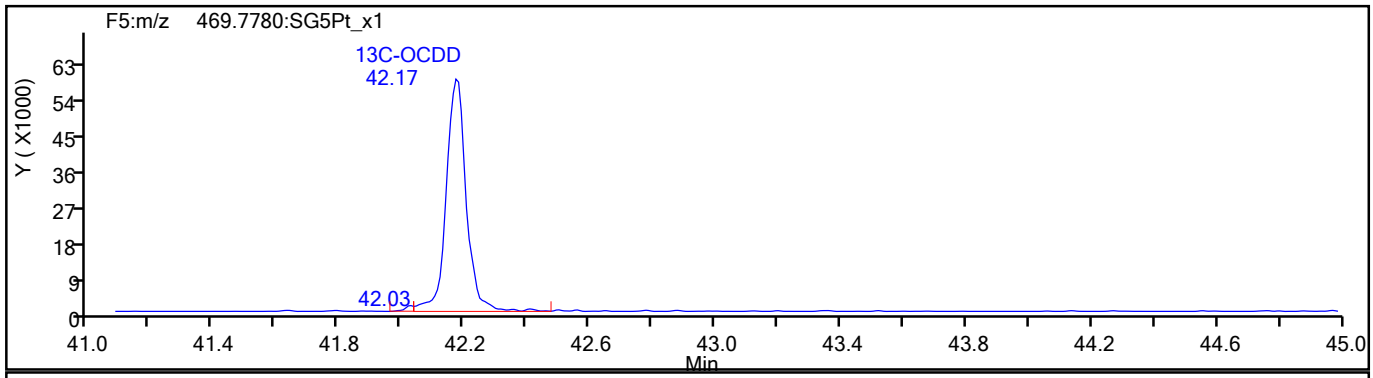

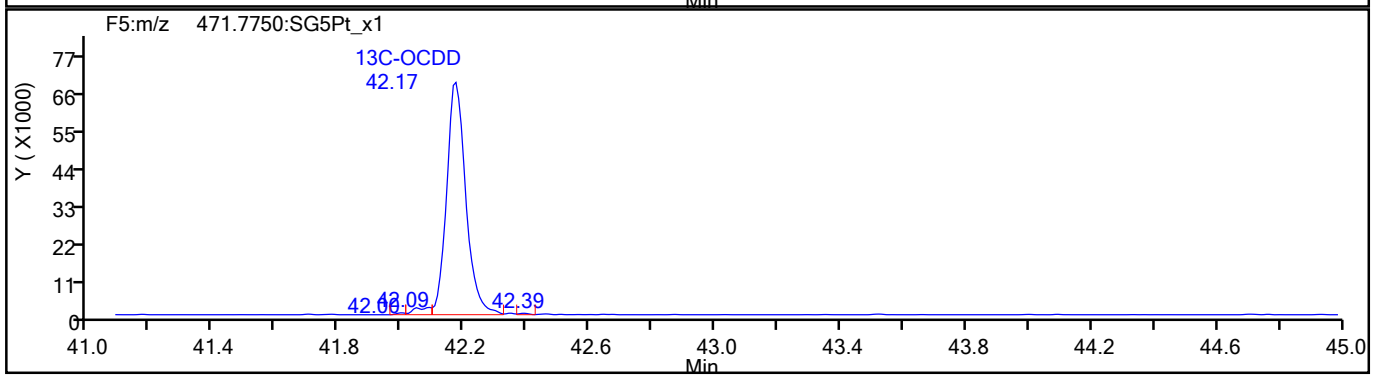

786898

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

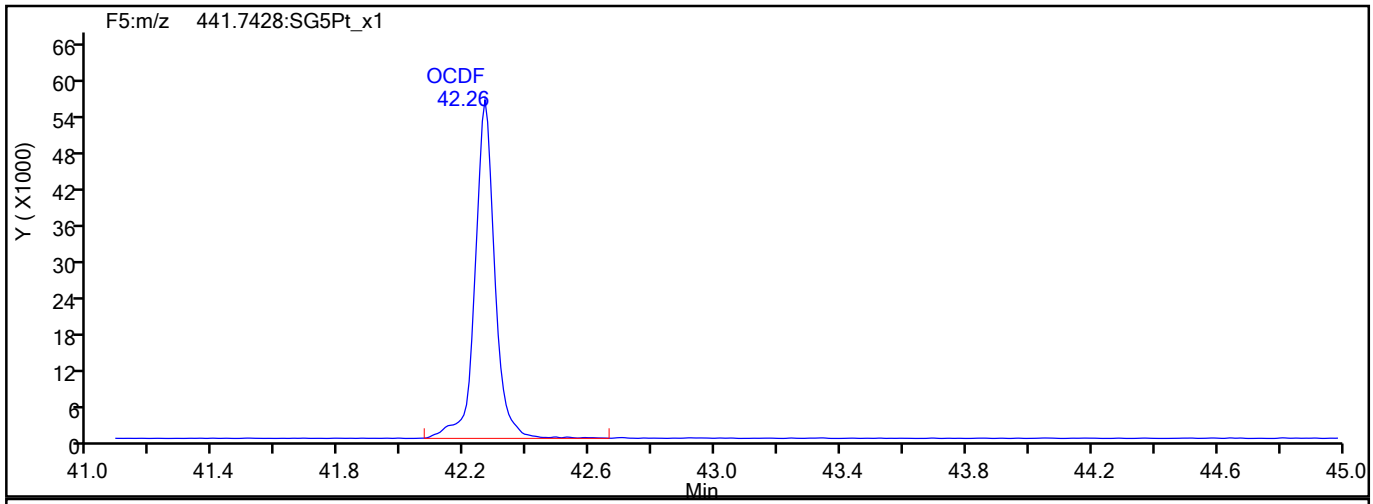

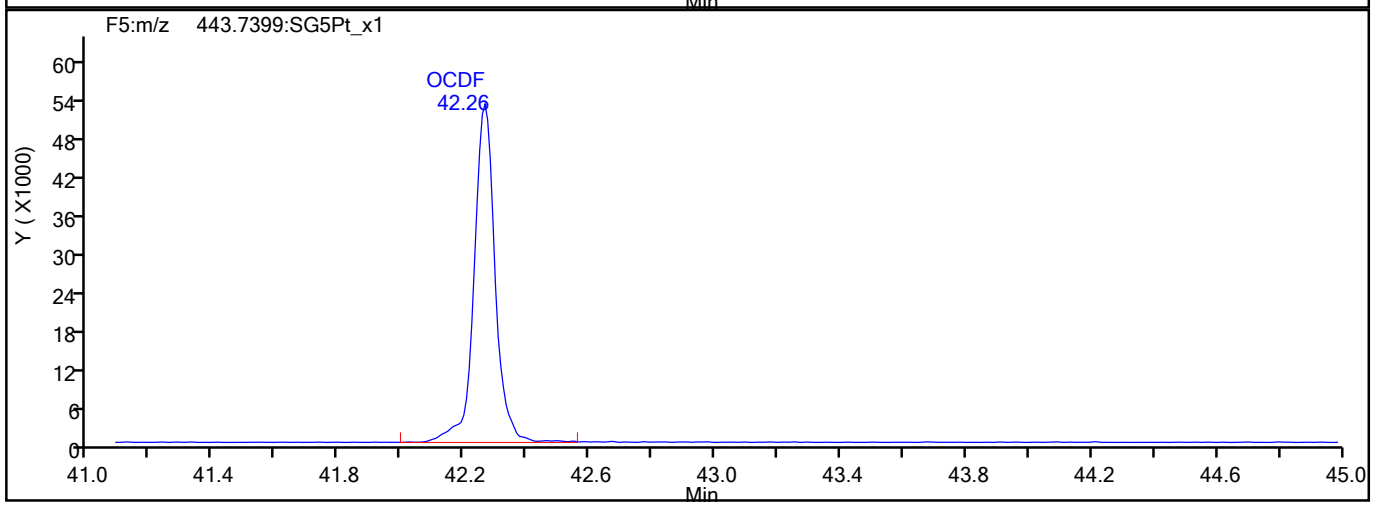

OCDF Interference Mass

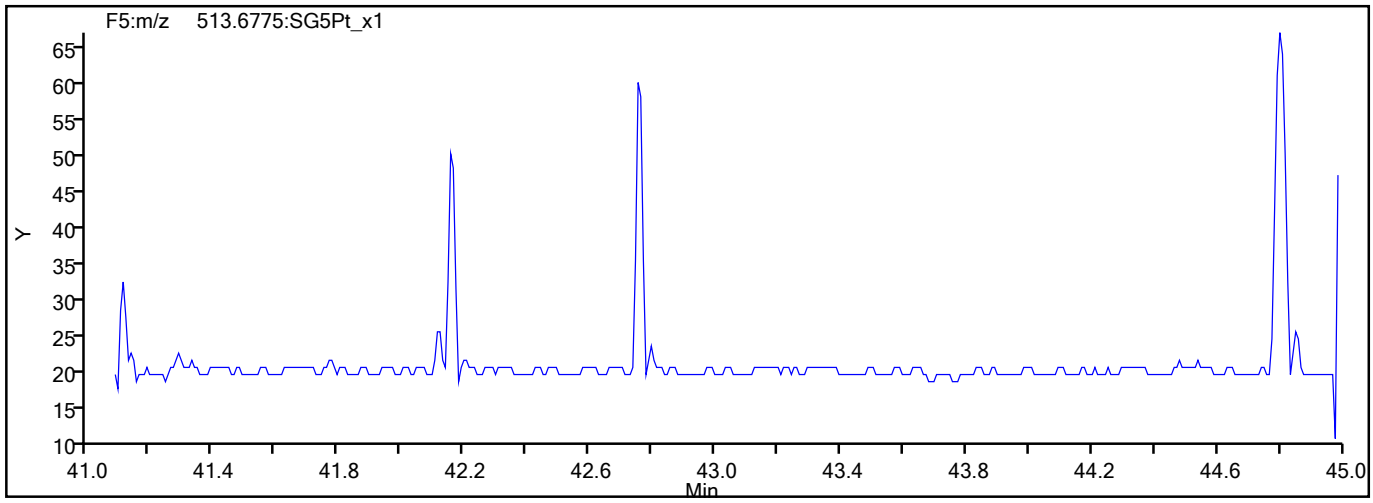

786899

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

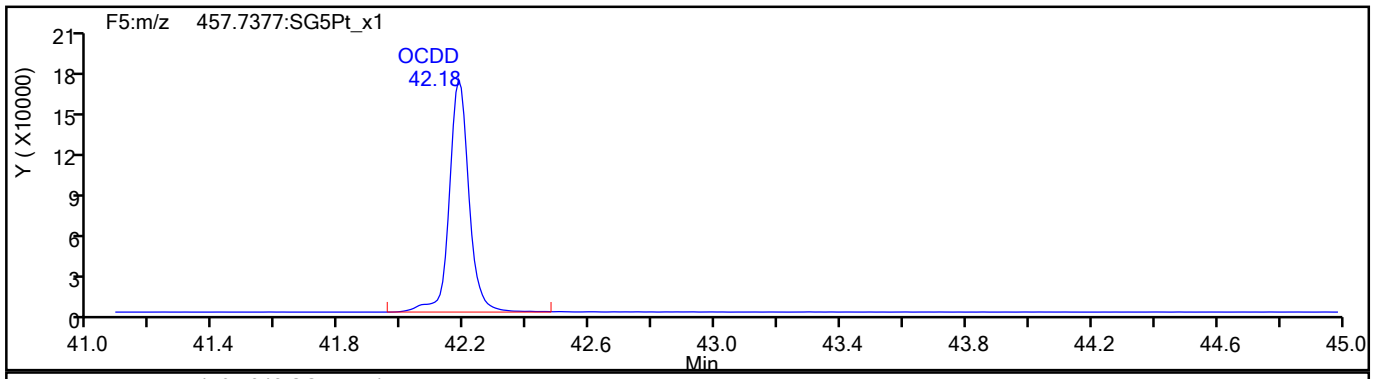

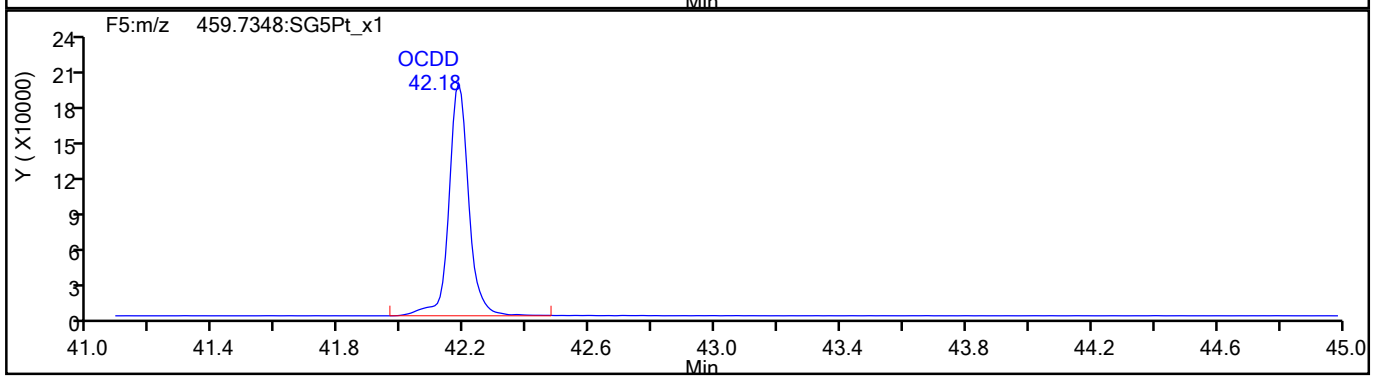

OCDD Standards

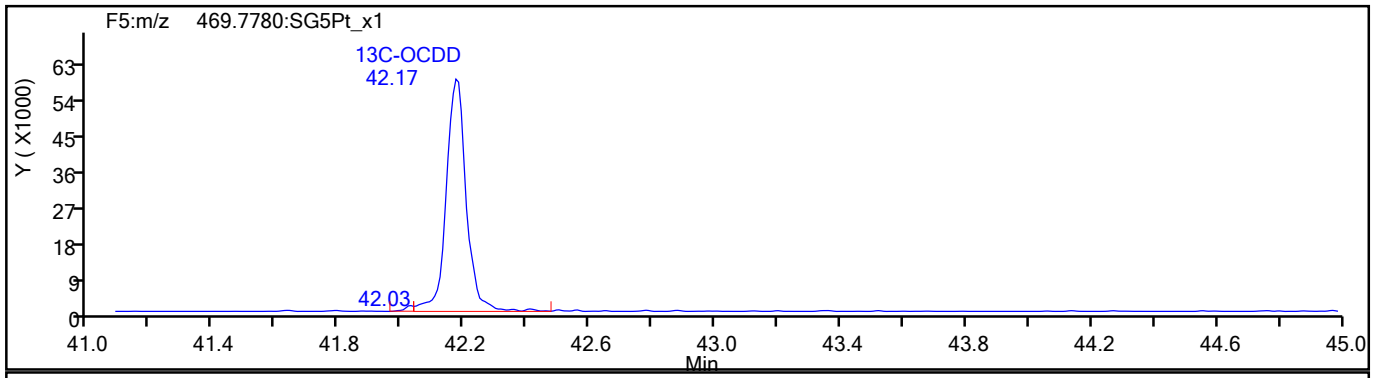

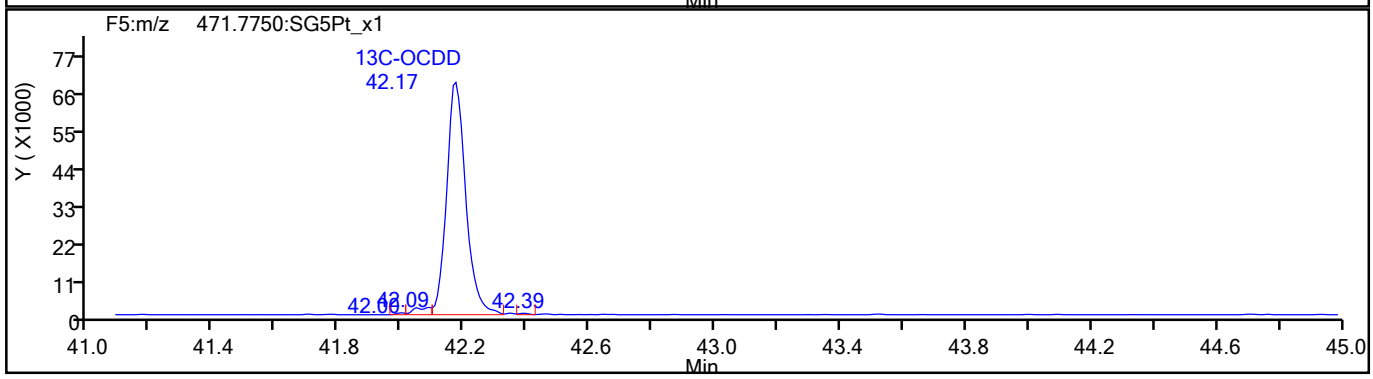

786900

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

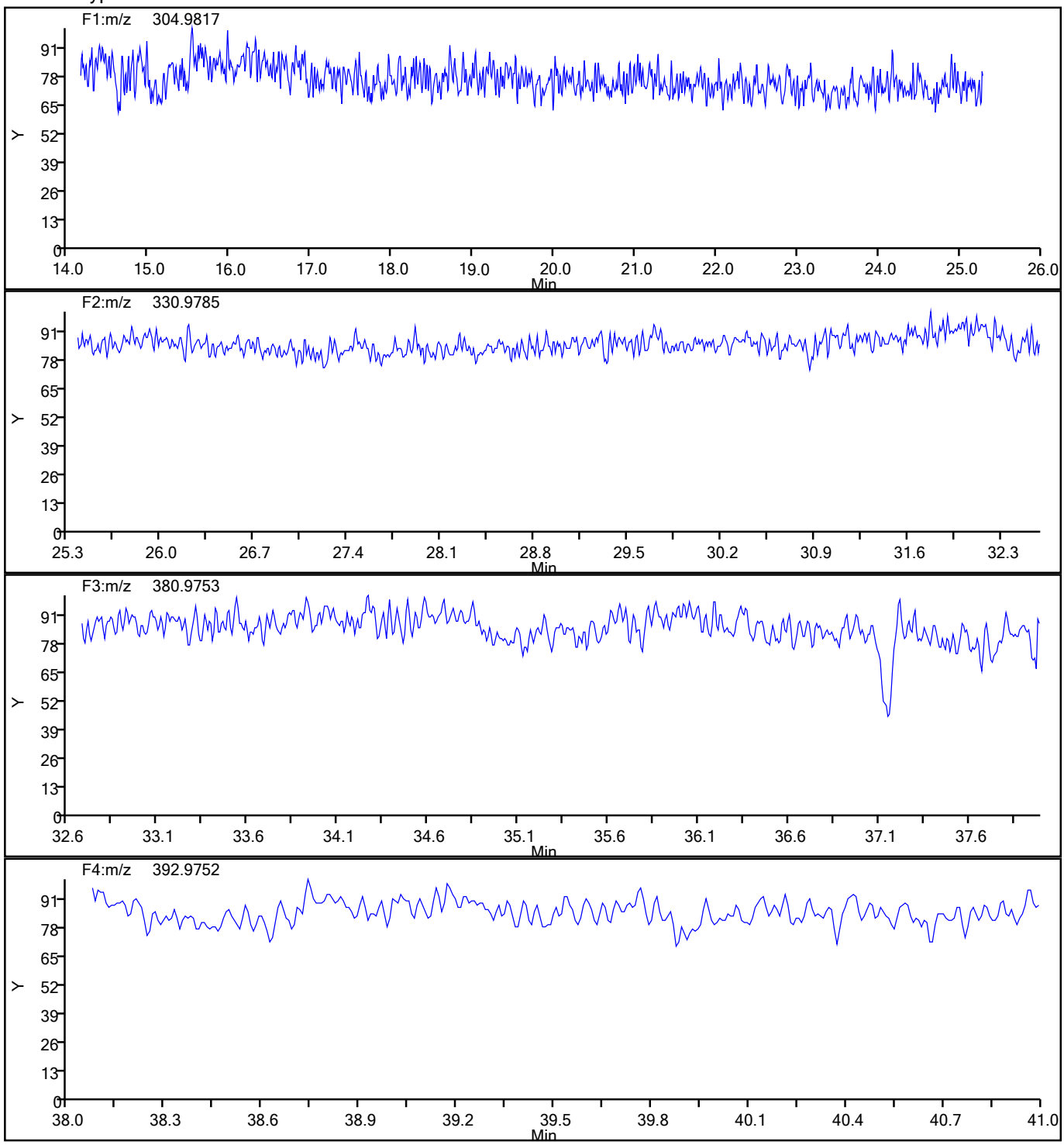

786901

Report Date: 24-Aug-2021 12:00:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_42.d		
Injection Date:	18-Aug-2021 22:00:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	517461	Sample Line#:	39
Column Type:	DB-5	Column Dia:	0.32 mm

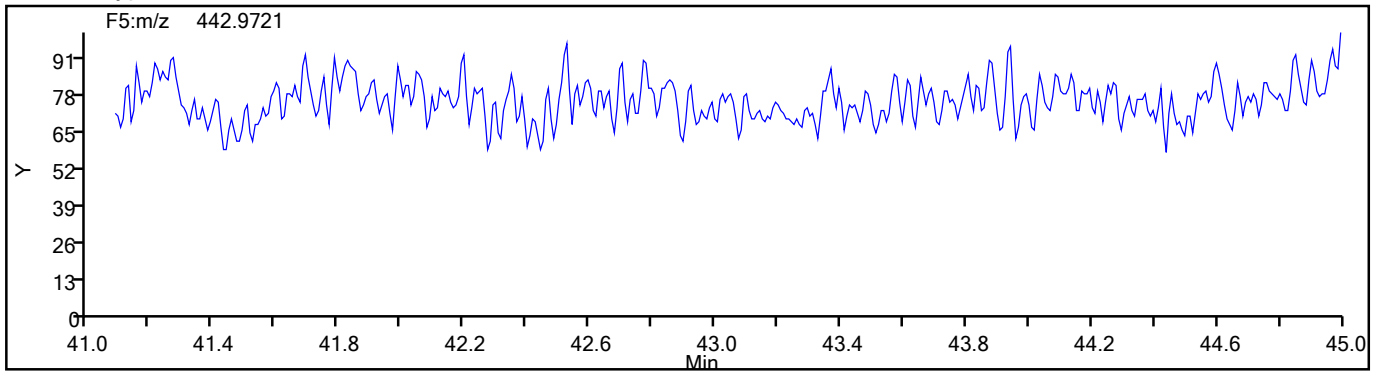

786902

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-1
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76769-A-27-C MSD RA
Matrix: Sediment
Lab File ID: 24AU2111D2_012.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 05:28
Sample wt/vol: 10.06(g)
Date Analyzed: 08/24/2021 15:30
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	6770		4.8	4.8

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	70		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	90		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_012.d
Lims ID: 320-76769-A-27-C MSD
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MSD
Inject. Date: 24-Aug-2021 15:30:14 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 17:07:01

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	22883320	0.80	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	21379841	0.75	1.3327	70.1	70.1	0.7964	0.7964	70.11	
2,3,7,8-TCDF	17.669	552274289	0.78	0.9978	2588.8	2588.8	1.831	1.831	25888	E
D 13C-2,3,7,8-TCDD	16.092	12210461	0.80	0.8749	61.0	61.0	10.7	10.7	60.99	
$ 37Cl4-2,3,7,8-TCDD	16.105	7106630		0.8648	35.9	35.9	0.3340	0.3340	89.78	
2,3,7,8-TCDD	16.105	115079206	0.78	1.0570	891.6	891.6	4.498	4.498	8916	E
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Report Date: 24-Aug-2021 17:07:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_012.d
Lims ID: 320-76769-A-27-C MSD
Client ID: 11215702-072221-SS-SJSB076 (0-2)
Sample Type: MSD
Inject. Date: 24-Aug-2021 15:30:14 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76769-A-27-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 17:07:01

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.283	3		10195097	2341760	88793	221982	26		
333.9339	16.325	16.283	3		12688223	2817688	104370	260925	27	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.613	2	1.081	9128357	1680297	11284	28210	149		
317.9389	17.655	17.613	3	1.081	12251484	1915326	10621	26552	180	0.75(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.669	17.641	2	1.002	242807170	45434681	11637	29092	3904		
305.8987	17.669	17.641	2	1.002	309467119	57763573	14646	36615	3944	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.092	16.050	3	0.986	5416847	1254610	88793	221982	14		
333.9339	16.092	16.050	3	0.986	6793614	1576842	104370	260925	15	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.105	16.063	3	0.987	7106630	1646984	5962	14905	276		
2,3,7,8-TCDD											E
319.8965	16.105	16.077	2	1.001	50486305	11437979	31830	79575	359		
321.8936	16.105	16.077	2	1.001	64592901	14351854	22014	55035	652	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 24-Aug-2021 17:07:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_012.d		
Injection Date:	24-Aug-2021 15:30:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

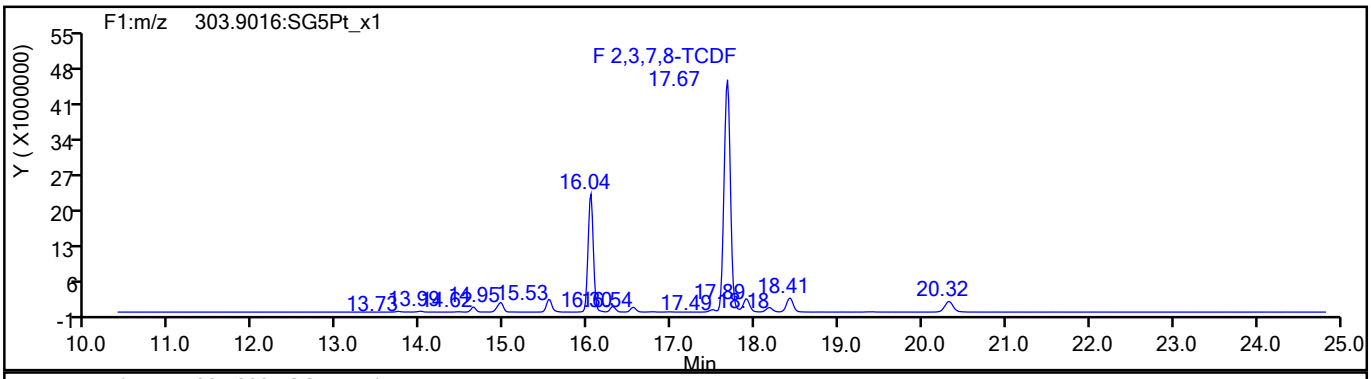

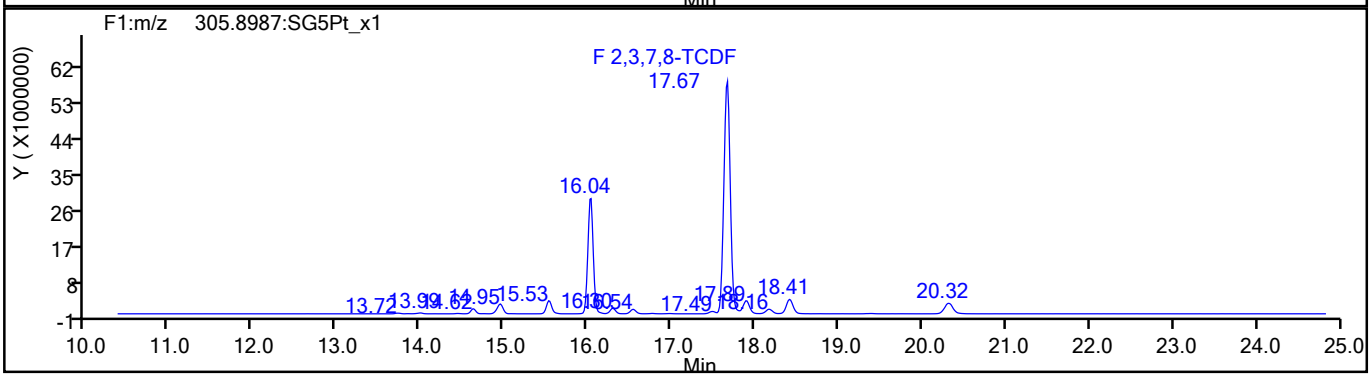

TCDF Standards

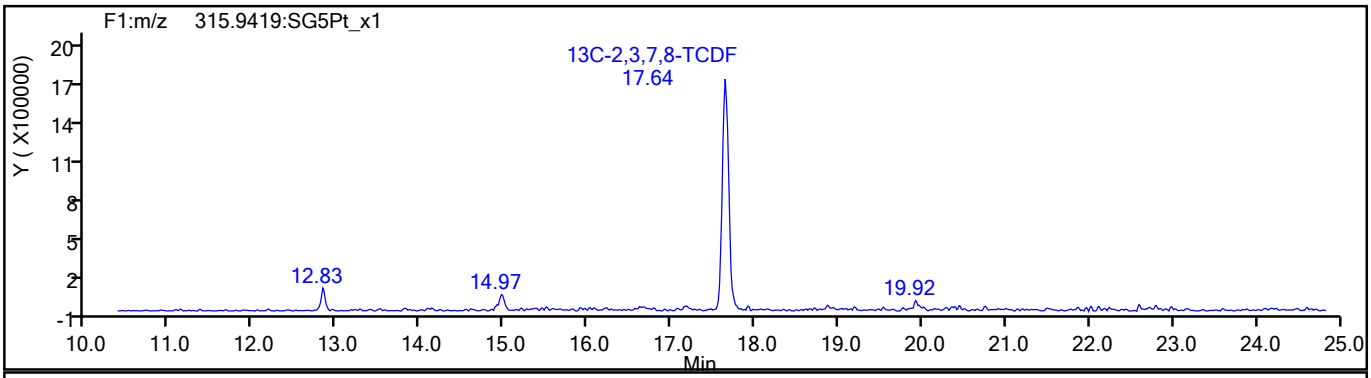

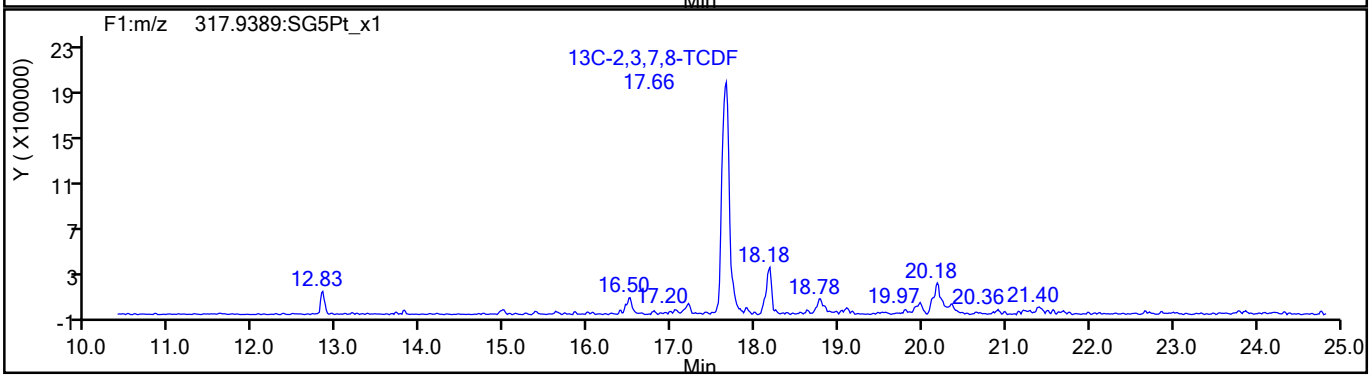

786906

Report Date: 24-Aug-2021 17:07:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_012.d		
Injection Date:	24-Aug-2021 15:30:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

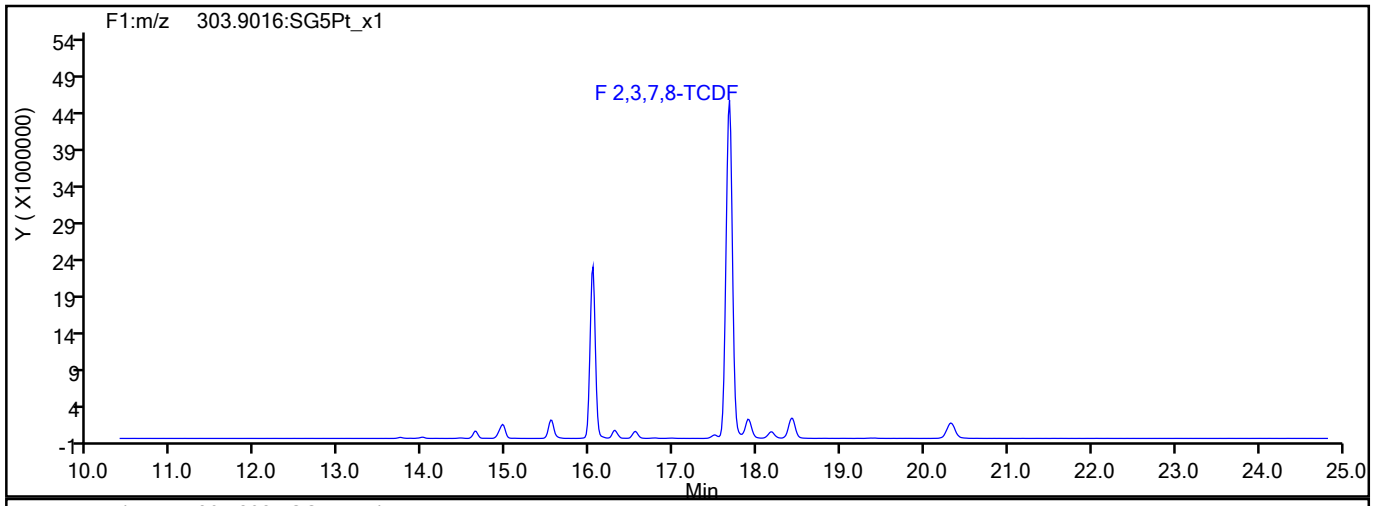

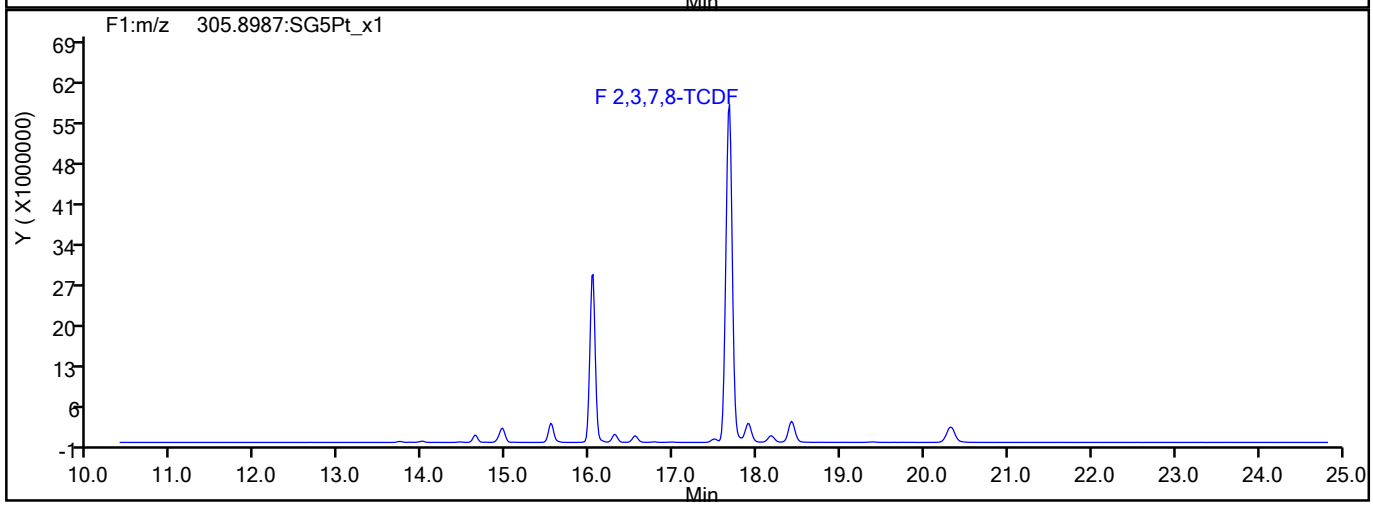

TCDF Interference Mass

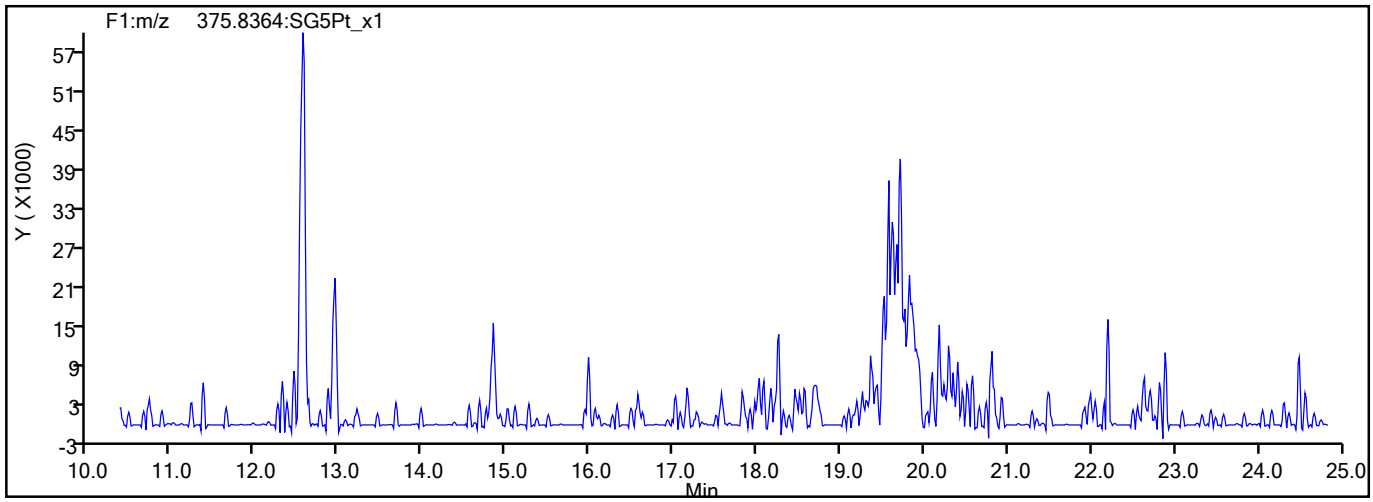

786907

Report Date: 24-Aug-2021 17:07:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_012.d		
Injection Date:	24-Aug-2021 15:30:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

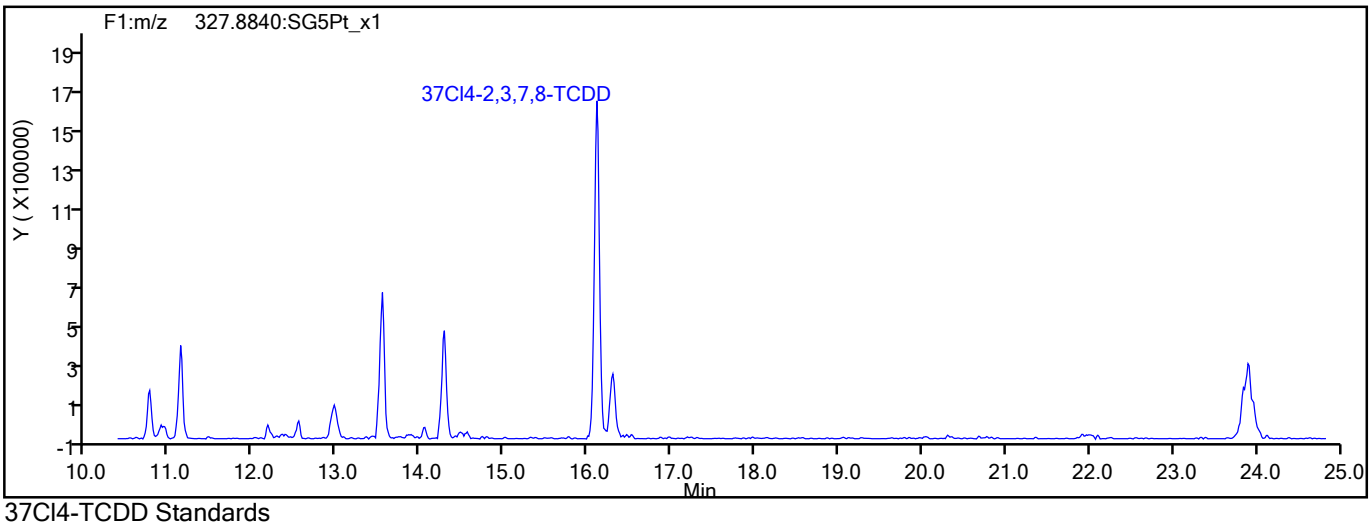

37Cl4-TCDD Standards

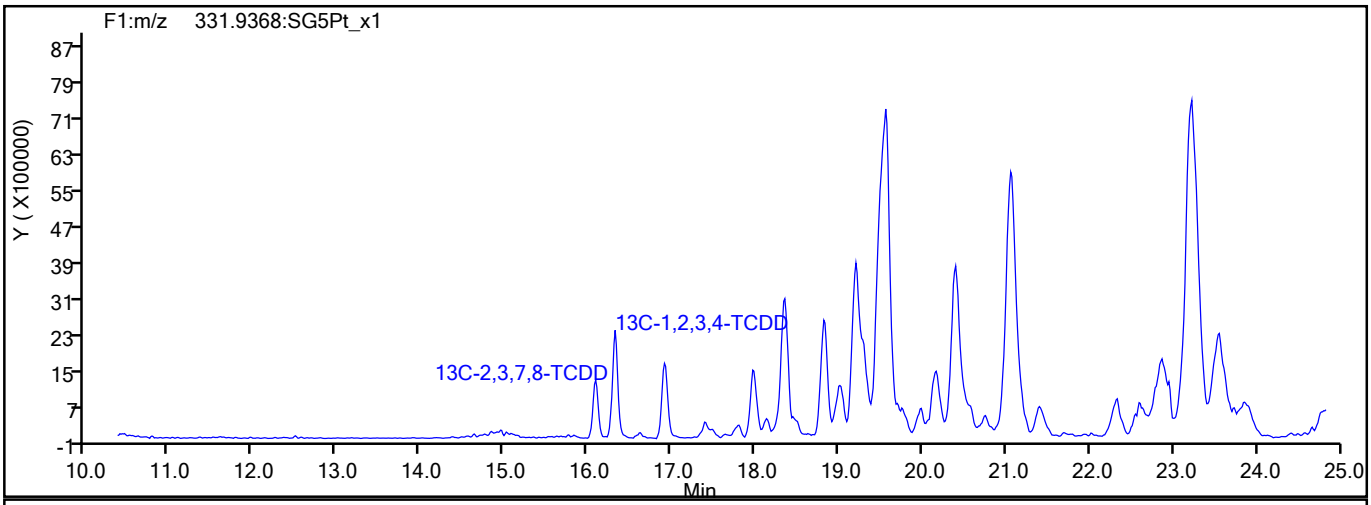

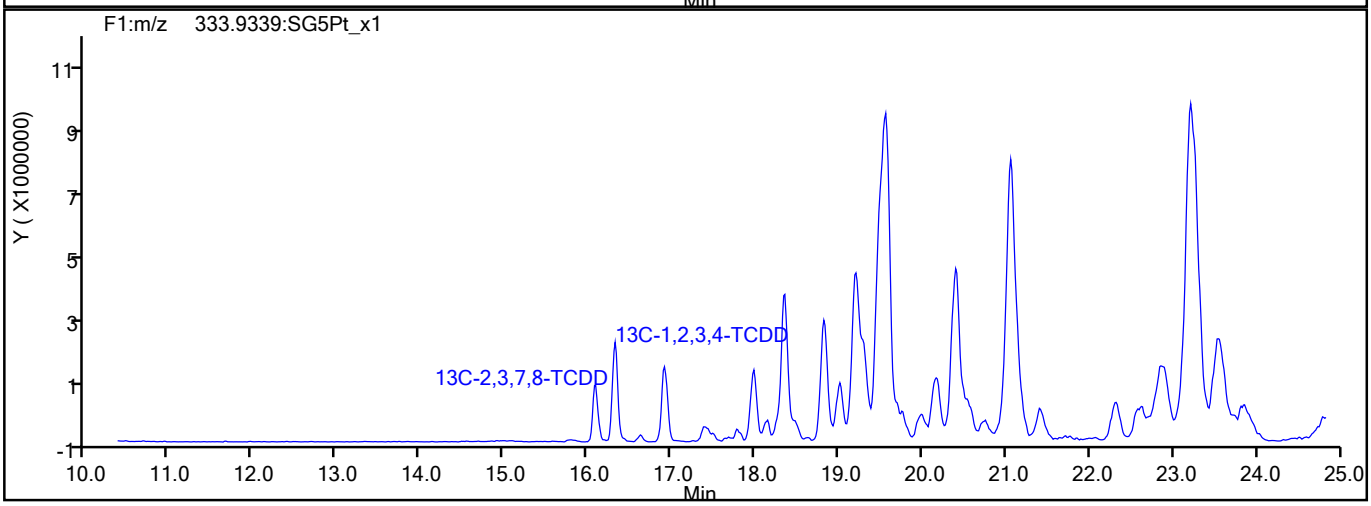

786908

Report Date: 24-Aug-2021 17:07:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_012.d		
Injection Date:	24-Aug-2021 15:30:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072221-SS-SJSB076 (0-2)		
Worklist#:	519438	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

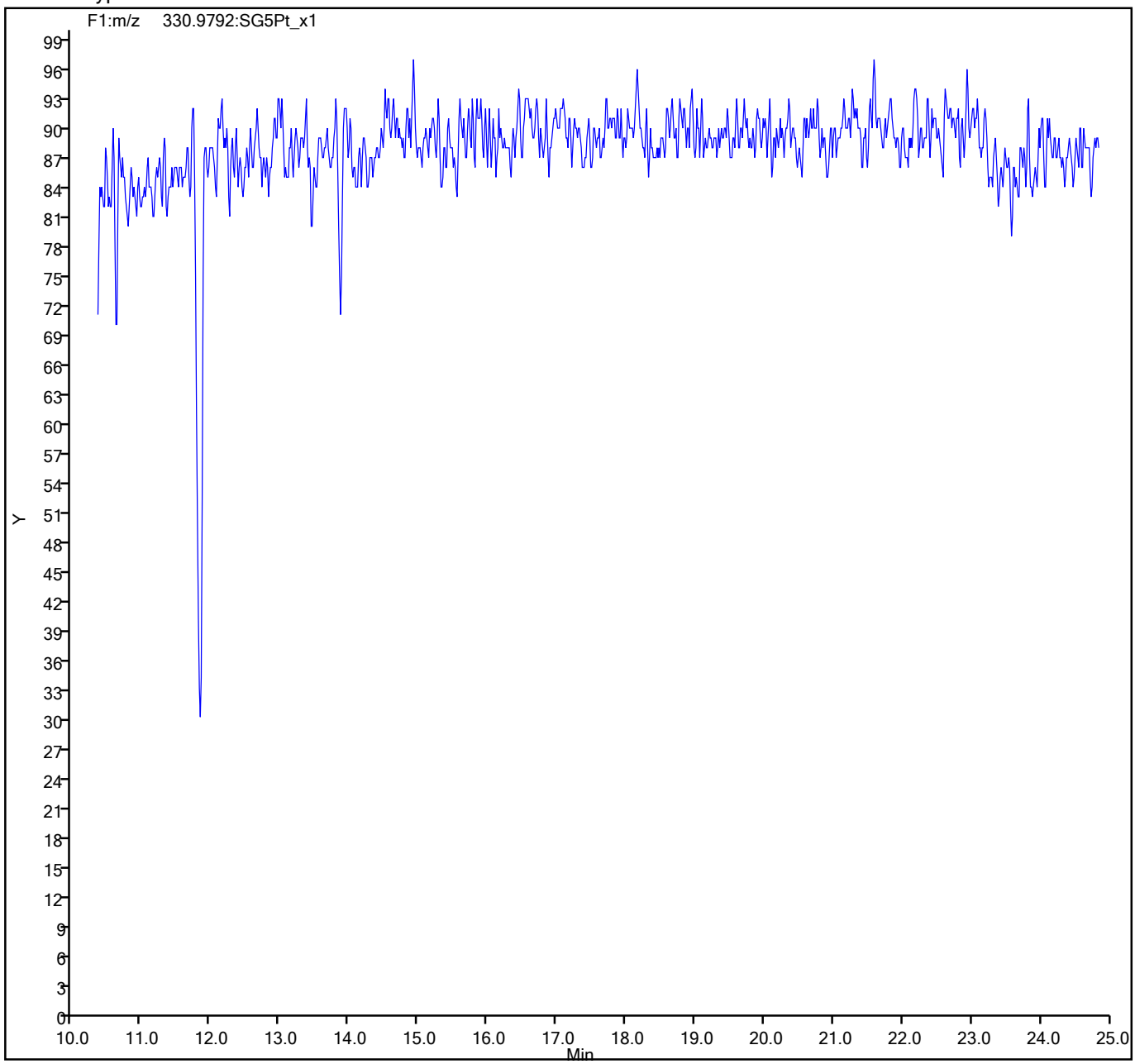

786909

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Start Date: 06/08/2021 12:40

Analysis Batch Number: 496688 End Date: 06/08/2021 19:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-496688/1		06/08/2021 12:40	1	08jn21adfs1_2.d	DB-5 0.32(mm)
IC 320-496688/3		06/08/2021 14:18	1	08jn21adfs1_4.d	DB-5 0.32(mm)
IC 320-496688/4		06/08/2021 15:06	1	08jn21adfs1_5.d	DB-5 0.32(mm)
IC 320-496688/5		06/08/2021 15:54	1	08jn21adfs1_6.d	DB-5 0.32(mm)
IC 320-496688/6		06/08/2021 16:42	1	08jn21adfs1_7.d	DB-5 0.32(mm)
IC 320-496688/7		06/08/2021 17:30	1	08jn21adfs1_8.d	DB-5 0.32(mm)
ICV 320-496688/9		06/08/2021 19:25	1	08jn21adfs1_11.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/17/2021 14:27

Analysis Batch Number: 517196 End Date: 08/18/2021 00:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-517196/1		08/17/2021 14:27	1	17au21dfs1_2.d	DB-5 0.32(mm)
CCV 320-517196/2		08/17/2021 15:14	1	17au21dfs1_3.d	DB-5 0.32(mm)
MB 320-513586/1-A		08/17/2021 17:01	1	17au21dfs1_5.d	DB-5 0.32(mm)
LCS 320-513586/2-A		08/17/2021 17:49	1	17au21dfs1_6.d	DB-5 0.32(mm)
ZZZZZ		08/17/2021 18:37	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 19:24	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 20:12	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 21:00	10		DB-5 0.32(mm)
ZZZZZ		08/17/2021 21:48	5		DB-5 0.32(mm)
ZZZZZ		08/17/2021 22:36	1		DB-5 0.32(mm)
ZZZZZ		08/17/2021 23:24	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 00:12	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/18/2021 13:48

Analysis Batch Number: 517461 End Date: 08/18/2021 23:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-517461/29		08/18/2021 13:48	1	17au21dfs1_32.d	DB-5 0.32(mm)
WDM 320-517461/30		08/18/2021 14:50	1	17au21dfs1_33.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 15:37	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 16:25	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 17:13	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 18:01	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 18:49	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 19:36	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 20:24	1		DB-5 0.32(mm)
320-76769-A-27-B MS		08/18/2021 21:12	1	17au21dfs1_41.d	DB-5 0.32(mm)
320-76769-A-27-C MSD		08/18/2021 22:00	1	17au21dfs1_42.d	DB-5 0.32(mm)
ZZZZZ		08/18/2021 22:48	1		DB-5 0.32(mm)
ZZZZZ		08/18/2021 23:36	1		DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/19/2021 01:32

Analysis Batch Number: 517462 End Date: 08/19/2021 11:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-517462/43		08/19/2021 01:32	1	17au21dfs1_47.d	DB-5 0.32(mm)
WDM 320-517462/44		08/19/2021 02:19	1	17au21dfs1_48.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 03:55	1		DB-5 0.32(mm)
LCS 320-513879/2-A		08/19/2021 04:43	1	17au21dfs1_51.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 05:30	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 06:18	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 07:06	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 07:54	1		DB-5 0.32(mm)
320-76888-6	11215702-072621-BN-SJ SB094 (10-12)	08/19/2021 08:42	1	17au21dfs1_56.d	DB-5 0.32(mm)
320-76888-7	11215702-072621-BN-SJ SB094 (12-14)	08/19/2021 09:30	1	17au21dfs1_57.d	DB-5 0.32(mm)
320-76888-8	11215702-072621-BN-SJ SB094 (14-16)	08/19/2021 10:18	1	17au21dfs1_58.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 11:06	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/19/2021 13:59

Analysis Batch Number: 517891 End Date: 08/19/2021 23:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-517891/1		08/19/2021 13:59	1	19au21dfs1_2.d	DB-5 0.32(mm)
CCV 320-517891/2		08/19/2021 14:46	1	19au21dfs1_3.d	DB-5 0.32(mm)
MB 320-513879/1-A		08/19/2021 16:27	1	19au21dfs1_5.d	DB-5 0.32(mm)
320-76888-13	11215702-072621-BN-DUP-8	08/19/2021 17:15	1	19au21dfs1_6.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 18:03	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 18:51	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 19:39	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 20:27	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 21:15	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 22:02	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 22:50	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 23:38	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/20/2021 01:34

Analysis Batch Number: 518043 End Date: 08/20/2021 09:32

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-518043/15		08/20/2021 01:34	1	19au21dfs1_17.d	DB-5 0.32(mm)
WDM 320-518043/16		08/20/2021 02:21	1	19au21dfs1_18.d	DB-5 0.32(mm)
ZZZZZ		08/20/2021 03:09	1		DB-5 0.32(mm)
320-76888-5	11215702-072621-BN-SJ SB094 (8-10)	08/20/2021 03:57	5	19au21dfs1_20.d	DB-5 0.32(mm)
320-76888-1	11215702-072621-BN-SJ SB094 (0-2)	08/20/2021 04:45	10	19au21dfs1_21.d	DB-5 0.32(mm)
320-76888-1 MS	11215702-072621-BN-SJ SB094 (0-2) MS	08/20/2021 05:33	10	19au21dfs1_22.d	DB-5 0.32(mm)
320-76888-1 MSD	11215702-072621-BN-SJ SB094 (0-2) MSD	08/20/2021 06:21	10	19au21dfs1_23.d	DB-5 0.32(mm)
320-76888-4	11215702-072621-BN-SJ SB094 (6-8)	08/20/2021 07:09	10	19au21dfs1_24.d	DB-5 0.32(mm)
320-76888-2	11215702-072621-BN-SJ SB094 (2-4)	08/20/2021 07:57	10	19au21dfs1_25.d	DB-5 0.32(mm)
ZZZZZ		08/20/2021 08:44	10		DB-5 0.32(mm)
320-76888-3	11215702-072621-BN-SJ SB094 (4-6)	08/20/2021 09:32	10	19au21dfs1_27.d	DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/24/2021 08:28

Analysis Batch Number: 519438 End Date: 08/24/2021 15:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-519438/1		08/24/2021 08:28	1	24AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-519438/2		08/24/2021 09:07	1	24AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/24/2021 09:45	1		DB-225 0.32(mm)
MB 320-513879/1-A RA		08/24/2021 10:23	1	24AU2111D2_004.d	DB-225 0.32(mm)
ZZZZZ		08/24/2021 11:02	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 11:40	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 12:18	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 12:57	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 13:35	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 14:13	1		DB-225 0.32(mm)
320-76769-A-27-B MS RA		08/24/2021 14:51	1	24AU2111D2_011.d	DB-225 0.32(mm)
320-76769-A-27-C MSD RA		08/24/2021 15:30	1	24AU2111D2_012.d	DB-225 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/25/2021 08:48

Analysis Batch Number: 519650 End Date: 08/25/2021 12:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-519650/1		08/25/2021 08:48	1	25AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-519650/2		08/25/2021 09:27	1	25AU2111D2_002.d	DB-225 0.32(mm)
320-76888-1 RA	11215702-072621-BN-SJ SB094 (0-2) RA	08/25/2021 10:50	10	25AU2111D2_004.d	DB-225 0.32(mm)
320-76888-1 MS RA	11215702-072621-BN-SJ SB094 (0-2) MS RA	08/25/2021 11:28	10	25AU2111D2_005.d	DB-225 0.32(mm)
320-76888-1 MSD RA	11215702-072621-BN-SJ SB094 (0-2) MSD RA	08/25/2021 12:07	10	25AU2111D2_006.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/25/2021 12:59

Analysis Batch Number: 519744 End Date: 08/25/2021 23:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-519744/1		08/25/2021 12:59	1	25AU21A11D2_001.d	DB-225 0.32(mm)
CCV 320-519744/2		08/25/2021 13:37	1	25AU21A11D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/25/2021 14:15	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 14:54	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 15:32	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 16:10	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 16:48	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 17:27	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 18:05	1		DB-225 0.32(mm)
320-76888-13 RA	11215702-072621-BN-DUP-8 RA	08/25/2021 18:43	1	25AU21A11D2_010.d	DB-225 0.32(mm)
ZZZZZ		08/25/2021 19:22	1		DB-225 0.32(mm)
ZZZZZ		08/25/2021 20:00	5		DB-225 0.32(mm)
ZZZZZ		08/25/2021 20:38	5		DB-225 0.32(mm)
ZZZZZ		08/25/2021 21:17	5		DB-225 0.32(mm)
ZZZZZ		08/25/2021 21:55	10		DB-225 0.32(mm)
ZZZZZ		08/25/2021 22:33	10		DB-225 0.32(mm)
ZZZZZ		08/25/2021 23:11	10		DB-225 0.32(mm)
ZZZZZ		08/25/2021 23:50	10		DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/26/2021 15:17

Analysis Batch Number: 520145 End Date: 08/27/2021 00:52

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-520145/1		08/26/2021 15:17	1	26AU21A11D2_001 .d	DB-225 0.32(mm)
CCV 320-520145/2		08/26/2021 15:55	1	26AU21A11D2_002 .d	DB-225 0.32(mm)
ZZZZZ		08/26/2021 17:12	1		DB-225 0.32(mm)
ZZZZZ		08/26/2021 19:45	1		DB-225 0.32(mm)
ZZZZZ		08/26/2021 20:23	1		DB-225 0.32(mm)
ZZZZZ		08/26/2021 21:02	1		DB-225 0.32(mm)
320-76888-6 RA	11215702-072621-BN-SJ SB094 (10-12) RA	08/26/2021 22:18	1	26AU21A11D2_012 .d	DB-225 0.32(mm)
320-76888-5 RA	11215702-072621-BN-SJ SB094 (8-10) RA	08/26/2021 22:57	5	26AU21A11D2_013 .d	DB-225 0.32(mm)
320-76888-2 RA	11215702-072621-BN-SJ SB094 (2-4) RA	08/26/2021 23:35	10	26AU21A11D2_014 .d	DB-225 0.32(mm)
320-76888-3 RA	11215702-072621-BN-SJ SB094 (4-6) RA	08/27/2021 00:14	10	26AU21A11D2_015 .d	DB-225 0.32(mm)
320-76888-4 RA	11215702-072621-BN-SJ SB094 (6-8) RA	08/27/2021 00:52	10	26AU21A11D2_016 .d	DB-225 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/27/2021 08:59

Analysis Batch Number: 520438 End Date: 08/27/2021 14:47

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-520438/1		08/27/2021 08:59	1	27AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-520438/2		08/27/2021 09:37	1	27AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/27/2021 10:57	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 11:35	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 12:13	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 12:52	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 13:30	1		DB-225 0.32(mm)
320-76888-7 RA	11215702-072621-BN-SJ SB094 (12-14) RA	08/27/2021 14:08	1	27AU2111D2_009.d	DB-225 0.32(mm)
320-76888-8 RA	11215702-072621-BN-SJ SB094 (14-16) RA	08/27/2021 14:47	1	27AU2111D2_010.d	DB-225 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76888-1

SDG No.:

Batch Number: 513586 Batch Start Date: 08/06/21 05:28 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/13/21 17:05

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-513586/1		HRMS-Sox, 1613B		10 g	20.0 uL	G-1	73	1	1 mL
LCS 320-513586/2		HRMS-Sox, 1613B		10 g	20.0 uL	G-2	7	3	1 mL
320-76769-A-27 MS		HRMS-Sox, 1613B	T	9.97 g	20.0 uL	G-4	39	3	1 mL
320-76769-A-27 MSD		HRMS-Sox, 1613B	T	10.06 g	20.0 uL	G-5	67	1	1 mL
320-76888-A-13	11215702-072621-BN-DUP-8	HRMS-Sox, 1613B	T	10.13 g	20.0 uL	J-6	31	3	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-513586/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-513586/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76769-A-27 MS		HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76769-A-27 MSD		HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76888-A-13	11215702-072621-BN-DUP-8	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76888-1

SDG No.:

Batch Number: 513586 Batch Start Date: 08/06/21 05:28 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/13/21 17:05

Batch Notes	
20% DCM:Hexane ID	DH28_00193 mL
65% DCM:Hexane ID	DH6535_00546
Acid Silica Gel ID	SA5644_00732
Acid Alumina ID	Acid_Alumina_00019
Balance ID	QA-074
Batch Comment	Samples were brought up to 10.0 mL and 20.0 uL was aliquoted for screening.
C14 ID	2414812
Sulfuric Acid Lot Number	2623518
Hexane ID	Hexane_00285
IFB Clean Up	SKV 08/13/21
Na2SO4 ID	SodiumSulfate_00166
Option C Clean Up	GLB 08/13/21
Analyst ID - IDA Reagent Drop	FC 8/6/21 HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	IP 08/06/21
Analyst ID - IS Reagent Drop	SR 08/13/21 DB15270 HRDXNIS_00137 B-1/4 20.0 uL
Analyst ID - IS Reagent Drop Witness	SKV 08/13/21
Analyst ID - SU Reagent Drop	GLB 08/13/21 HD05018 HRDXNSU_00255 B-4/5 1.0 mL
Analyst ID - SU Reagent Drop Witness	FC 08/13/21
Analyst ID - TA Reagent Drop	FC 8/6/21 DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	IP 08/06/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/6/21 11:40
Soxhlet/Soxtherm Start	8/6/21 8:40
Storage Box ID	DXN -266
Toluene ID	Toluene_00110

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76888-1

SDG No.:

Batch Number: 513879 Batch Start Date: 08/06/21 12:57 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/14/21 06:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-513879/1		HRMS-Sox, 1613B		10 g	20.0 uL	C,1	66	1	1 mL
LCS 320-513879/2		HRMS-Sox, 1613B		10 g	20.0 uL	2	39	3	1 mL
320-76888-A-1	11215702-072621-BN-SJSB094 (0-2)	HRMS-Sox, 1613B	T	10.16 g	20.0 uL	4	95	3	1 mL
320-76888-A-1 MS	11215702-072621-BN-SJSB094 (0-2)	HRMS-Sox, 1613B	T	10.30 g	20.0 uL	5	40	1	1 mL
320-76888-A-1 MSD	11215702-072621-BN-SJSB094 (0-2)	HRMS-Sox, 1613B	T	10.36 g	20.0 uL	6	101	3	1 mL
320-76888-A-2	11215702-072621-BN-SJSB094 (2-4)	HRMS-Sox, 1613B	T	9.99 g	20.0 uL	D,1	74	1	1 mL
320-76888-A-3	11215702-072621-BN-SJSB094 (4-6)	HRMS-Sox, 1613B	T	10.42 g	20.0 uL	2	77	3	1 mL
320-76888-A-4	11215702-072621-BN-SJSB094 (6-8)	HRMS-Sox, 1613B	T	10.14 g	20.0 uL	3	94	1	1 mL
320-76888-A-5	11215702-072621-BN-SJSB094 (8-10)	HRMS-Sox, 1613B	T	9.99 g	20.0 uL	4	27	3	1 mL
320-76888-A-6	11215702-072621-BN-SJSB094 (10-12)	HRMS-Sox, 1613B	T	10.20 g	20.0 uL	5	83	1	1 mL
320-76888-A-7	11215702-072621-BN-SJSB094 (12-14)	HRMS-Sox, 1613B	T	10.34 g	20.0 uL	6	105	3	1 mL
320-76888-A-8	11215702-072621-BN-SJSB094 (14-16)	HRMS-Sox, 1613B	T	10.06 g	20.0 uL	E,1	87	1	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-513879/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-513879/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76888-A-1	11215702-072621-BN-SJSB094 (0-2)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76888-A-1 MS	11215702-072621-BN-SJSB094 (0-2)	HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76888-A-1 MSD	11215702-072621-BN-SJSB094 (0-2)	HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76888-A-2	11215702-072621-BN-SJSB094 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76888-1

SDG No.:

Batch Number: 513879 Batch Start Date: 08/06/21 12:57 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/14/21 06:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
320-76888-A-3	11215702-072621-BN-SJSB094 (4-6)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76888-A-4	11215702-072621-BN-SJSB094 (6-8)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76888-A-5	11215702-072621-BN-SJSB094 (8-10)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76888-A-6	11215702-072621-BN-SJSB094 (10-12)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76888-A-7	11215702-072621-BN-SJSB094 (12-14)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76888-A-8	11215702-072621-BN-SJSB094 (14-16)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76888-1

SDG No.:

Batch Number: 513879 Batch Start Date: 08/06/21 12:57 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/14/21 06:30

Batch Notes	
20% DCM:Hexane ID	DH28_00193 mL
65% DCM:Hexane ID	DH6535_00546
Acid Silica Gel ID	SA5644_00732
Acid Alumina ID	Acid_Alumina_00019
Balance ID	QA-0
Sulfuric Acid Lot Number	H2SO400152
Hexane ID	Hexane_00285
IFB Clean Up	GLB 8-14-21
Na2SO4 ID	SodiumSulfate_00166
Analyst ID - IDA Reagent Drop	HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	EMG 8/7/21
Analyst ID - IS Reagent Drop	GLB 8-14-21 DB15270 HRDXNIS00137 B 1/4 20uL
Analyst ID - IS Reagent Drop Witness	HK 8-14-21
Analyst ID - SU Reagent Drop	SR 8/13/21 HD05018 HRDXNSU00255 B 4/5 1.0mL
Analyst ID - SU Reagent Drop Witness	TGL 8-13-21
Analyst ID - TA Reagent Drop	DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	EMG 8/7/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/7/21 10:00
Soxhlet/Soxtherm Start	8/7/21 7:00
Storage Box ID	DXN -267
Toluene ID	Toluene_00110

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

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Sacramento
Dilution Report Form – HRMS Tests

Use this form for documenting dilutions. All dilutions are based on removing sample from the original extract, unless otherwise noted. The final volume for the dilutions listed is the sum of the solvent and the sample.

Attach the completed form to the original bench sheet, for archive with the lot data.

Table 1: How Dilutions Are Made

Dilution required	Amount of Solvent (µL) DXN Methods: 8290, 1613B, TO-9, EPA 23, EPA 0023A; Solvent (tetradecane C_{14}) PCB Methods: 1668A, 1668C; Solvent (dodecane C_{12})	Amount of sample (µl) to be added to solvent
2X	5.0	5.0
5X	8.0	2.0
10X	18.0	2.0
20X	38.0	2.0
25X	48.0	2.0
30X	58.0	2.0
40X	78.0	2.0
50X	98.0	2.0
100X	198.0	2.0

Sample Dilutions Made

Job Number	Sample ID	Dilution Made	Reagent (Solvent)/ IS ID*	Pipette/ Syringe ID	Analyst	Date
320-76888	A-5-A	5X	C14 (2390386)	NA (10µL)	KSS	8/19/21
	A-1-A	10X				
	A-1-B MS	10X				
	A-1-C-MSD	10X				
	A-4-A	10X				
	A-2-A	10X				
	A-3-A	10X				
320-76901	A-1-A	10X				

8/19/21 KS

Log solvents into TALS, use TALS Reagent ID here; if adding IS, also input TALS Reagent ID for IS.

\\Tacorp\corp\QA\QA_Facilities\Sacramento-QA\Document-Management\Forms\Dilutions\QA-DIL-004 HRMS Dilutions.doc
QA-DIL-004 TGT 1/17/2020

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GENERAL CHEMISTRY

786928

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-76888-1

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-072621-BN-SJSB094 (0-2)	320-76888-1
11215702-072621-BN-SJSB094 (2-4)	320-76888-2
11215702-072621-BN-SJSB094 (4-6)	320-76888-3
11215702-072621-BN-SJSB094 (6-8)	320-76888-4
11215702-072621-BN-SJSB094 (8-10)	320-76888-5
11215702-072621-BN-SJSB094 (10-12)	320-76888-6
11215702-072621-BN-SJSB094 (12-14)	320-76888-7
11215702-072621-BN-SJSB094 (14-16)	320-76888-8
11215702-072621-BN-DUP-8	320-76888-13

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76888-1

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76888-1

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/30/2021 12:30 End Date: 07/30/2021 12:30

Lab Sample Id	D/F	Type	Time	Analytes																								
				% Sol	Moist																							
ZZZZZZ			12:30																									
320-76887-A-1 DU	1	T	12:30	X	X																							
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
320-76888-1	1	T	12:30	X	X																							
320-76888-2	1	T	12:30	X	X																							
320-76888-3	1	T	12:30	X	X																							
320-76888-4	1	T	12:30	X	X																							
320-76888-5	1	T	12:30	X	X																							
320-76888-6	1	T	12:30	X	X																							
320-76888-7	1	T	12:30	X	X																							
320-76888-8	1	T	12:30	X	X																							
ZZZZZZ			12:30																									
320-76888-13	1	T	12:30	X	X																							

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76888-1

SDG No.:

Batch Number: 511708 Batch Start Date: 07/30/21 12:30 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/02/21 09:08

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76887-A-1 DU		D 2216	T	2	1.05 g	8.54 g	4.74 g	50.7343124165554 %	49.2656875834446 %
320-76888-A-1	11215702-072621-BN-SJSB094 (0-2)	D 2216	T	12	1.07 g	6.58 g	4.03 g	46.2794918330308 %	53.7205081669692 %
320-76888-A-2	11215702-072621-BN-SJSB094 (2-4)	D 2216	T	13	1.06 g	8.95 g	5.37 g	45.3738910012674 %	54.6261089987326 %
320-76888-A-3	11215702-072621-BN-SJSB094 (4-6)	D 2216	T	14	1.06 g	7.50 g	4.36 g	48.7577639751553 %	51.2422360248447 %
320-76888-A-4	11215702-072621-BN-SJSB094 (6-8)	D 2216	T	15	1.07 g	7.96 g	5.53 g	35.2685050798258 %	64.7314949201742 %
320-76888-A-5	11215702-072621-BN-SJSB094 (8-10)	D 2216	T	16	1.06 g	12.60 g	8.98 g	31.369150779896 %	68.630849220104 %
320-76888-A-6	11215702-072621-BN-SJSB094 (10-12)	D 2216	T	17	1.01 g	7.39 g	5.02 g	37.1473354231975 %	62.8526645768025 %
320-76888-A-7	11215702-072621-BN-SJSB094 (12-14)	D 2216	T	18	1.00 g	10.57 g	7.19 g	35.3187042842215 %	64.6812957157785 %
320-76888-A-8	11215702-072621-BN-SJSB094 (14-16)	D 2216	T	19	1.01 g	11.80 g	7.98 g	35.4031510658017 %	64.5968489341983 %
320-76888-A-13	11215702-072621-BN-DUP-8	D 2216	T	21	1.01 g	9.55 g	6.98 g	30.0936768149883 %	69.9063231850117 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	08/02/2021 08:37
Date and Time Samples out of Desiccator	08/02/2021 09:08
Date samples were placed in the oven	07/30/2021
Oven Temp In	114 Degrees C
Time samples were place in the oven	12:30
Date samples were removed from oven	08/02/2021
Oven Temp Out	113 Degrees C
Time Samples were removed from oven	08:37
Oven ID	Soil Prep #2
Thermometer ID	151969607

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76888-1

SDG No.:

Batch Number: 511708 Batch Start Date: 07/30/21 12:30 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/02/21 09:08

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-76888-1

Batch: 511708
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76887-A-1 DU

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	50.7343124165554	%
Percent Solids	None	1	49.2656875834446	%

Lab Sample ID: 320-76888-A-1

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	46.2794918330308	%
Percent Solids	None	1	53.7205081669692	%

Lab Sample ID: 320-76888-A-2

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	45.3738910012674	%
Percent Solids	None	1	54.6261089987326	%

Lab Sample ID: 320-76888-A-3

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	48.7577639751553	%
Percent Solids	None	1	51.2422360248447	%

Lab Sample ID: 320-76888-A-4

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	35.2685050798258	%
Percent Solids	None	1	64.7314949201742	%

Lab Sample ID: 320-76888-A-5

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	31.369150779896	%
Percent Solids	None	1	68.630849220104	%

Lab Sample ID: 320-76888-A-6

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	37.1473354231975	%
Percent Solids	None	1	62.8526645768025	%

Lab Sample ID: 320-76888-A-7

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	35.3187042842215	%
Percent Solids	None	1	64.6812957157785	%

Lab Sample ID: 320-76888-A-8

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	35.4031510658017	%
Percent Solids	None	1	64.5968489341983	%

General Chemistry Raw Data Report

Job ID: 320-76888-1

Batch: 511708 (Continued)
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76888-A-13

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	30.0936768149883	%
Percent Solids	None	1	69.9063231850117	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P
1.00	1.00	200.00	200.00	8/1/2021	DM	WT-3	P
1.00	1.00	200.00	200.00	08/02/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

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786939

Page 1967 of 1969

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

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Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:	COC No:
Company: GHD Services Inc.			Page: 1 of 2
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:		Job #:
City: Baton Rouge	TAT Requested (days): 15 business days		
State, Zip: LA, 70808			
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested		
Email: janie.smith@ghd.com	WO #:		
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702		
Site: San Jacinto Waste Pits	SSOW#: 11215702 - 2021 - 001		

Analysis Requested

320-76888 Chain of Custody

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072621-BN-SJSB094 (0-2)	7-26-21	1400	G	S	N	Y	X	X	X	1	MS/MSD
(2-4)		1405			N	N	X	X	X	1	
(4-6)		1410			N	N	X	X	X	1	
(6-8)		1415			N	N	X	X	X	1	
(8-10)		1420			N	N	X	X	X	1	
(10-12)		1425			N	N	X	X	X	1	
(12-14)		1430			N	N	X	X	X	1	
(14-16)		1435			N	N	X	X	X	1	
(16-18)		1440			N	N	X	X	X	1	PRIORITY
(18-20)		1445			N	N	X	X	X	1	HOLD
(20-22)		1450			N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:		Method of Shipment: fedex	
Relinquished by: Breanna North	Date/Time: 7-27-21 1500	Company: GHD	Received by: [signature]	Date/Time: 7/29/21 945	Company: EMS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.8°C		

Ver: 01/16/2019

786940

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

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Chain of Custody Record

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:	COC No:
Company: GHD Services Inc.			Page: 2 of 2
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:		Job #:
City: Baton Rouge	TAT Requested (days): 15 business days		
State, Zip: LA, 70808			
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested		
Email: janie.smith@ghd.com	WO #:		
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702		
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001		

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072621-BN-SJSB094(22-24)	7-26-21	1455	G	S	N	N	X	X	X		HOLD
11215702-072621-BN-DUP-8	7-26-21	—	G	S	N	N	X	X	X		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: fed Ex		
Relinquished by: Breanna North	Date/Time: 7-27-21 1500	Company: GHD	Received by:	Date/Time: 7/29/21 945	Company: EMAS
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.8°C		

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-76888-1

Login Number: 76888
List Number: 1
Creator: Gonzales, Justinn

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Job Number: 320-76888-2

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
8/27/2021 2:38 PM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
08/27/2021

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 7/29/2021 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8º C.

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

Method 1613B: Due to the high concentrations of analytes, some of the matrix spike / matrix spike duplicate (MS/MSD) recoveries and RPDs for preparation batch 320-513879 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 1613B: Some of the matrix spike / matrix spike duplicate (MS/MSD) recoveries and RPDs for preparation batch 320-513879 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument DFS 1 exceeded this criteria: (CCV 320-517891/2), (CCV 320-518043/15), (MB 320-513879/1-A), (320-76888-A-1-A), (320-76888-A-1-B MS) and (320-76888-A-1-C MSD). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The method blank for preparation batch 320-513879 contained 2,3,7,8-TCDF above the reporting limit (RL). As discussed, the associated sample(s) were not re-extracted and re-analyzed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Job ID: 320-76888-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072621-BN-SJSB094 (16-18) Lab Sample ID: 320-76888-9

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1.4	q	1.2	0.089	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	2.6	J q B	6.0	0.076	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.33	J q B	6.0	0.064	pg/g	1	☼	1613B	Total/NA
OCDD	45	B	12	0.19	pg/g	1	☼	1613B	Total/NA
Total TCDD	1.4	q	1.2	0.089	pg/g	1	☼	1613B	Total/NA
Total TCDF	9.8	B	1.2	0.067	pg/g	1	☼	1613B	Total/NA
Total HxCDD	2.0	J	6.0	0.10	pg/g	1	☼	1613B	Total/NA
Total HpCDD	8.1	q B	6.0	0.076	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.33	J q B	6.0	0.061	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	6.4	B	1.2	0.38	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-2

Client Sample ID: 11215702-072621-BN-SJSB094 (16-18)

Lab Sample ID: 320-76888-9

Date Collected: 07/26/21 14:40
Matrix: Sediment
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**20.5**		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	**79.5**		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072621-BN-SJSB094 (16-18)

Lab Sample ID: 320-76888-9

Date Collected: 07/26/21 14:40
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 79.5

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**1.4**	**q**	1.2	0.089	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
1,2,3,7,8-PeCDD	ND		6.0	0.11	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
1,2,3,7,8-PeCDF	ND		6.0	0.047	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
2,3,4,7,8-PeCDF	ND		6.0	0.047	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
1,2,3,4,7,8-HxCDD	ND		6.0	0.097	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
1,2,3,6,7,8-HxCDD	ND		6.0	0.11	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
1,2,3,7,8,9-HxCDD	ND		6.0	0.096	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
1,2,3,4,7,8-HxCDF	ND		6.0	0.029	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
1,2,3,6,7,8-HxCDF	ND		6.0	0.030	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
1,2,3,7,8,9-HxCDF	ND		6.0	0.029	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
2,3,4,6,7,8-HxCDF	ND		6.0	0.028	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
1,2,3,4,6,7,8-HpCDD	**2.6**	**J q B**	6.0	0.076	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
1,2,3,4,6,7,8-HpCDF	**0.33**	**J q B**	6.0	0.064	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
1,2,3,4,7,8,9-HpCDF	ND		6.0	0.058	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
OCDD	**45**	**B**	12	0.19	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
OCDF	ND		12	0.11	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
Total TCDD	**1.4**	**q**	1.2	0.089	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
Total TCDF	**9.8**	**B**	1.2	0.067	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
Total PeCDD	ND		6.0	0.26	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
Total PeCDF	ND		6.0	0.14	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
Total HxCDD	**2.0**	**J**	6.0	0.10	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
Total HxCDF	ND		6.0	0.036	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
Total HpCDD	**8.1**	**q B**	6.0	0.076	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1
Total HpCDF	**0.33**	**J q B**	6.0	0.061	pg/g	☼	08/06/21 12:58	08/19/21 11:06	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*41*		*25 - 164*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-2,3,7,8-TCDF	*42*		*24 - 169*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-1,2,3,7,8-PeCDD	*40*		*25 - 181*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-1,2,3,7,8-PeCDF	*40*		*24 - 185*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-2,3,4,7,8-PeCDF	*46*		*21 - 178*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-1,2,3,4,7,8-HxCDD	*51*		*32 - 141*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-1,2,3,6,7,8-HxCDD	*45*		*28 - 130*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-1,2,3,4,7,8-HxCDF	*56*		*26 - 152*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-1,2,3,6,7,8-HxCDF	*49*		*26 - 123*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-1,2,3,7,8,9-HxCDF	*43*		*29 - 147*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-2,3,4,6,7,8-HxCDF	*47*		*28 - 136*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*50*		*23 - 140*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*47*		*28 - 143*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*56*		*26 - 138*	*08/06/21 12:58*	*08/19/21 11:06*	*1*
13C-OCDD	*54*		*17 - 157*	*08/06/21 12:58*	*08/19/21 11:06*	*1*

Client Sample ID: 11215702-072621-BN-SJSB094 (16-18) Lab Sample ID: 320-76888-9

Date Collected: 07/26/21 14:40 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 79.5**

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*51*		*35 - 197*	*08/06/21 12:58*	*08/19/21 11:06*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**6.4**	**B**	1.2	0.38	pg/g	☼	08/06/21 12:58	08/23/21 11:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*42*		*24 - 169*	*08/06/21 12:58*	*08/23/21 11:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*59*		*35 - 197*	*08/06/21 12:58*	*08/23/21 11:27*	*1*

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-2

Client Sample ID: 11215702-072621-BN-SJSB094 (16-18) — Lab Sample ID: 320-76888-9

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**1.4**	**q**	1.2	0.089	pg/g	1	**1.4**	1613B
1,2,3,7,8-PeCDD	ND		6.0	0.11	pg/g	1	0.055	1613B
1,2,3,7,8-PeCDF	ND		6.0	0.047	pg/g	0.03	0.00071	1613B
2,3,4,7,8-PeCDF	ND		6.0	0.047	pg/g	0.3	0.0071	1613B
1,2,3,4,7,8-HxCDD	ND		6.0	0.097	pg/g	0.1	0.0049	1613B
1,2,3,6,7,8-HxCDD	ND		6.0	0.11	pg/g	0.1	0.0055	1613B
1,2,3,7,8,9-HxCDD	ND		6.0	0.096	pg/g	0.1	0.0048	1613B
1,2,3,4,7,8-HxCDF	ND		6.0	0.029	pg/g	0.1	0.0015	1613B
1,2,3,6,7,8-HxCDF	ND		6.0	0.030	pg/g	0.1	0.0015	1613B
1,2,3,7,8,9-HxCDF	ND		6.0	0.029	pg/g	0.1	0.0015	1613B
2,3,4,6,7,8-HxCDF	ND		6.0	0.028	pg/g	0.1	0.0014	1613B
1,2,3,4,6,7,8-HpCDD	**2.6**	**J q B**	6.0	0.076	pg/g	0.01	**0.026**	1613B
1,2,3,4,6,7,8-HpCDF	**0.33**	**J q B**	6.0	0.064	pg/g	0.01	**0.0033**	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.0	0.058	pg/g	0.01	0.00029	1613B
OCDD	**45**	**B**	12	0.19	pg/g	0.0003	**0.014**	1613B
OCDF	ND		12	0.11	pg/g	0.0003	0.000017	1613B
2,3,7,8-TCDF - RA	**6.4**	**B**	1.2	0.38	pg/g	0.1	**0.64**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2.2	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-76888-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-76888-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (35-197)							
320-76888-9	11215702-072621-BN-SJSB094	51							
320-76888-9 - RA	11215702-072621-BN-SJSB094 (16-18)	59							
320-76888-A-1-B MS	Matrix Spike	90							
320-76888-A-1-B MS - RA	Matrix Spike	56							
320-76888-A-1-C MSD	Matrix Spike Duplicate	123							
320-76888-A-1-C MSD - RA	Matrix Spike Duplicate	61							
MB 320-513879/1-A	Method Blank	46							
MB 320-513879/1-A	Method Blank	50							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (31-191)							
LCS 320-513879/2-A	Lab Control Sample	47							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76888-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76888-9	11215702-072621-BN-SJSB094	41	42	40	40	46	51	45	56
320-76888-9 - RA	11215702-072621-BN-SJSB094 (16-18)		42						
320-76888-A-1-B MS	Matrix Spike	44	41	39 q	38	46	41	42	51
320-76888-A-1-B MS - RA	Matrix Spike		29						
320-76888-A-1-C MSD	Matrix Spike Duplicate	40	37	38	36	40	37	34 q	44
320-76888-A-1-C MSD - RA	Matrix Spike Duplicate		23 *5-						
MB 320-513879/1-A	Method Blank	36	36	35	36	40	40	39	47
MB 320-513879/1-A	Method Blank		37						

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76888-9	11215702-072621-BN-SJSB094	49	43	47	50	47	56	54
320-76888-9 - RA	11215702-072621-BN-SJSB094 (16-18)							
320-76888-A-1-B MS	Matrix Spike	41	38	35	41	39	44	41
320-76888-A-1-B MS - RA	Matrix Spike							
320-76888-A-1-C MSD	Matrix Spike Duplicate	37	35	34	38	39	44	37 q
320-76888-A-1-C MSD - RA	Matrix Spike Duplicate							
MB 320-513879/1-A	Method Blank	43	39	38	41	41	42	36
MB 320-513879/1-A	Method Blank							

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-513879/2-A	Lab Control Sample	34	36	34	31	36	37	35	42

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-513879/2-A	Lab Control Sample	37	32	33	36	35	40	39

Isotope Dilution Summary

Client: GHD Services Inc.
Job ID: 320-76888-2
Project/Site: SJRWP Supplemental Design Investigation

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Analysis Batch: 517891

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513879

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.073	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8-PeCDD	ND		5.0	0.067	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8-PeCDF	ND		5.0	0.052	pg/g		08/06/21 12:58	08/19/21 16:27	1
2,3,4,7,8-PeCDF	ND		5.0	0.055	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.042	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.046	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.041	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.021	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.020	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.020	pg/g		08/06/21 12:58	08/19/21 16:27	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.022	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,6,7,8-HpCDD	0.338	J	5.0	0.032	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,6,7,8-HpCDF	0.177	J	5.0	0.038	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.041	pg/g		08/06/21 12:58	08/19/21 16:27	1
OCDD	1.21	J	10	0.029	pg/g		08/06/21 12:58	08/19/21 16:27	1
OCDF	ND		10	0.12	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total TCDD	ND		1.0	0.14	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total TCDF	4.06		1.0	0.047	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total PeCDD	ND		5.0	0.21	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total PeCDF	ND		5.0	0.055	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HxCDD	ND		5.0	0.19	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HxCDF	ND		5.0	0.040	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HpCDD	0.546	J	5.0	0.032	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HpCDF	0.177	J	5.0	0.039	pg/g		08/06/21 12:58	08/19/21 16:27	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*36*		*25 - 164*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,7,8-TCDF	*36*		*24 - 169*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8-PeCDD	*35*		*25 - 181*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8-PeCDF	*36*		*24 - 185*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,4,7,8-PeCDF	*40*		*21 - 178*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,7,8-HxCDD	*40*		*32 - 141*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,6,7,8-HxCDD	*39*		*28 - 130*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,7,8-HxCDF	*47*		*26 - 152*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,6,7,8-HxCDF	*43*		*26 - 123*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8,9-HxCDF	*39*		*29 - 147*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,4,6,7,8-HxCDF	*38*		*28 - 136*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*41*		*23 - 140*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*41*		*28 - 143*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*42*		*26 - 138*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-OCDD	*36*		*17 - 157*	*08/06/21 12:58*	*08/19/21 16:27*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*46*		*35 - 197*	*08/06/21 12:58*	*08/19/21 16:27*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-513879/1-A **Client Sample ID: Method Blank**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519438 **Prep Batch: 513879**

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	2.39		1.0	0.22	pg/g		08/06/21 12:58	08/24/21 10:23	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*37*		*24 - 169*	*08/06/21 12:58*	*08/24/21 10:23*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*50*		*35 - 197*	*08/06/21 12:58*	*08/24/21 10:23*	*1*

Lab Sample ID: LCS 320-513879/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517462 **Prep Batch: 513879**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	22.3		pg/g		111	67 - 158
2,3,7,8-TCDF	20.0	23.1		pg/g		115	75 - 158
1,2,3,7,8-PeCDD	100	113		pg/g		113	70 - 142
1,2,3,7,8-PeCDF	100	117		pg/g		117	80 - 134
2,3,4,7,8-PeCDF	100	109		pg/g		109	68 - 160
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	70 - 164
1,2,3,6,7,8-HxCDD	100	112		pg/g		112	76 - 134
1,2,3,7,8,9-HxCDD	100	109		pg/g		109	64 - 162
1,2,3,4,7,8-HxCDF	100	114		pg/g		114	72 - 134
1,2,3,6,7,8-HxCDF	100	120		pg/g		120	84 - 130
1,2,3,7,8,9-HxCDF	100	118		pg/g		118	78 - 130
2,3,4,6,7,8-HxCDF	100	121		pg/g		121	70 - 156
1,2,3,4,6,7,8-HpCDD	100	111		pg/g		111	70 - 140
1,2,3,4,6,7,8-HpCDF	100	118		pg/g		118	82 - 122
1,2,3,4,7,8,9-HpCDF	100	108		pg/g		108	78 - 138
OCDD	200	232		pg/g		116	78 - 144
OCDF	200	243		pg/g		122	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*34*		*20 - 175*
13C-2,3,7,8-TCDF	*36*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*34*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*31*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*36*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*37*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*35*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*42*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*37*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*32*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*33*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*36*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*35*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*40*		*20 - 186*
13C-OCDD	*39*		*13 - 199*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-513879/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517462 **Prep Batch: 513879**

Surrogate	LCS %Recovery	LCS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	47		31 - 191

Lab Sample ID: 320-76888-A-1-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 518043 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	24000	G E	36.1	22000	G E 4	pg/g	☼	-4439	67 - 158
1,2,3,7,8-PeCDD	290		181	470		pg/g	☼	102	70 - 142
1,2,3,7,8-PeCDF	2200		181	2670	4	pg/g	☼	247	80 - 134
2,3,4,7,8-PeCDF	1600		181	1900	4	pg/g	☼	144	68 - 160
1,2,3,4,7,8-HxCDD	3.6	J	181	196		pg/g	☼	106	70 - 164
1,2,3,6,7,8-HxCDD	7.0	J q	181	203		pg/g	☼	108	76 - 134
1,2,3,7,8,9-HxCDD	5.6	J q	181	201		pg/g	☼	108	64 - 162
1,2,3,4,7,8-HxCDF	3200		181	3130	4	pg/g	☼	-21	72 - 134
1,2,3,6,7,8-HxCDF	740		181	1040	4	pg/g	☼	165	84 - 130
1,2,3,7,8,9-HxCDF	42	J	181	251		pg/g	☼	116	78 - 130
2,3,4,6,7,8-HxCDF	100		181	367		pg/g	☼	148	70 - 156
1,2,3,4,6,7,8-HpCDD	68	J B	181	265		pg/g	☼	109	70 - 140
1,2,3,4,6,7,8-HpCDF	1100	B	181	1100	4	pg/g	☼	14	82 - 122
1,2,3,4,7,8,9-HpCDF	280		181	495		pg/g	☼	118	78 - 138
OCDD	720	B F1	361	1050		pg/g	☼	91	78 - 144
OCDF	460		361	890		pg/g	☼	118	63 - 170

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C-2,3,7,8-TCDD	44		25 - 164
13C-2,3,7,8-TCDF	41		24 - 169
13C-1,2,3,7,8-PeCDD	39	q	25 - 181
13C-1,2,3,7,8-PeCDF	38		24 - 185
13C-2,3,4,7,8-PeCDF	46		21 - 178
13C-1,2,3,4,7,8-HxCDD	41		32 - 141
13C-1,2,3,6,7,8-HxCDD	42		28 - 130
13C-1,2,3,4,7,8-HxCDF	51		26 - 152
13C-1,2,3,6,7,8-HxCDF	41		26 - 123
13C-1,2,3,7,8,9-HxCDF	38		29 - 147
13C-2,3,4,6,7,8-HxCDF	35		28 - 136
13C-1,2,3,4,6,7,8-HpCDD	41		23 - 140
13C-1,2,3,4,6,7,8-HpCDF	39		28 - 143
13C-1,2,3,4,7,8,9-HpCDF	44		26 - 138
13C-OCDD	41		17 - 157

Surrogate	MS %Recovery	MS Qualifier	Limits
37Cl4-2,3,7,8-TCDD	90		35 - 197

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76888-A-1-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 518043 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	24000	G E	35.9	25300	G E 4	pg/g	☼	4754	67 - 158	14	50
1,2,3,7,8-PeCDD	290		180	508		pg/g	☼	124	70 - 142	8	50
1,2,3,7,8-PeCDF	2200		180	2550	4	pg/g	☼	181	80 - 134	5	50
2,3,4,7,8-PeCDF	1600		180	2150	4	pg/g	☼	281	68 - 160	12	50
1,2,3,4,7,8-HxCDD	3.6	J	180	199		pg/g	☼	109	70 - 164	2	50
1,2,3,6,7,8-HxCDD	7.0	J q	180	202		pg/g	☼	108	76 - 134	1	50
1,2,3,7,8,9-HxCDD	5.6	J q	180	188		pg/g	☼	101	64 - 162	7	50
1,2,3,4,7,8-HxCDF	3200		180	3640	4	pg/g	☼	261	72 - 134	15	50
1,2,3,6,7,8-HxCDF	740		180	1130	4	pg/g	☼	214	84 - 130	8	50
1,2,3,7,8,9-HxCDF	42	J	180	238		pg/g	☼	110	78 - 130	5	50
2,3,4,6,7,8-HxCDF	100		180	342		pg/g	☼	134	70 - 156	7	50
1,2,3,4,6,7,8-HpCDD	68	J B	180	262		pg/g	☼	108	70 - 140	1	50
1,2,3,4,6,7,8-HpCDF	1100	B	180	1310	4	pg/g	☼	132	82 - 122	18	50
1,2,3,4,7,8,9-HpCDF	280		180	474		pg/g	☼	107	78 - 138	4	50
OCDD	720	B F1	359	921	F1	pg/g	☼	56	78 - 144	13	50
OCDF	460		359	925		pg/g	☼	128	63 - 170	4	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*40*		*25 - 164*
13C-2,3,7,8-TCDF	*37*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*38*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*36*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*40*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*37*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*34*	*q*	*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*44*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*37*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*35*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*34*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*38*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*39*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*44*		*26 - 138*
13C-OCDD	*37*	*q*	*17 - 157*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*123*		*35 - 197*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: 320-76888-A-1-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519650 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDF - RA	110000	G E B	36.1	121000	G E 4	pg/g	☼	25826	75 - 158

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDF - RA	*29*		*24 - 169*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA (Continued)

Lab Sample ID: 320-76888-A-1-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519650 **Prep Batch: 513879**

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD - RA	*56*		*35 - 197*

Lab Sample ID: 320-76888-A-1-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519650 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	110000	G E B	35.9	127000	G E 4	pg/g	☼	43390	75 - 158	5	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDF - RA	*23*	**5-*	*24 - 169*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD - RA	*61*		*35 - 197*

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-76888-2
Project/Site: SJRWP Supplemental Design Investigation

Specialty Organics

Prep Batch: 513879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-9 - RA	11215702-072621-BN-SJSB094 (16-18)	Total/NA	Sediment	HRMS-Sox	
320-76888-9	11215702-072621-BN-SJSB094 (16-18)	Total/NA	Sediment	HRMS-Sox	
MB 320-513879/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-513879/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-76888-A-1-B MS - RA	Matrix Spike	Total/NA	Sediment	HRMS-Sox	
320-76888-A-1-B MS	Matrix Spike	Total/NA	Sediment	HRMS-Sox	
320-76888-A-1-C MSD - RA	Matrix Spike Duplicate	Total/NA	Sediment	HRMS-Sox	
320-76888-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	HRMS-Sox	

Analysis Batch: 517462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-9	11215702-072621-BN-SJSB094 (16-18)	Total/NA	Sediment	1613B	513879
LCS 320-513879/2-A	Lab Control Sample	Total/NA	Sediment	1613B	513879

Analysis Batch: 517891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-513879/1-A	Method Blank	Total/NA	Sediment	1613B	513879

Analysis Batch: 518043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-A-1-B MS	Matrix Spike	Total/NA	Sediment	1613B	513879
320-76888-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	1613B	513879

Analysis Batch: 518958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-9 - RA	11215702-072621-BN-SJSB094 (16-18)	Total/NA	Sediment	1613B	513879

Analysis Batch: 519438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-513879/1-A	Method Blank	Total/NA	Sediment	1613B	513879

Analysis Batch: 519650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-A-1-B MS - RA	Matrix Spike	Total/NA	Sediment	1613B	513879
320-76888-A-1-C MSD - RA	Matrix Spike Duplicate	Total/NA	Sediment	1613B	513879

General Chemistry

Analysis Batch: 511708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76888-9	11215702-072621-BN-SJSB094 (16-18)	Total/NA	Sediment	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-2

Client Sample ID: 11215702-072621-BN-SJSB094 (16-18)

Lab Sample ID: 320-76888-9

Date Collected: 07/26/21 14:40
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511708	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072621-BN-SJSB094 (16-18)

Lab Sample ID: 320-76888-9

Date Collected: 07/26/21 14:40
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	518958	08/23/21 11:27	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517462	08/19/21 11:06	KSS	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-76888-2
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDD
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDF
1613B	HRMS-Sox	Sediment	OCDD
1613B	HRMS-Sox	Sediment	OCDF
1613B	HRMS-Sox	Sediment	Total HpCDD
1613B	HRMS-Sox	Sediment	Total HpCDF
1613B	HRMS-Sox	Sediment	Total HxCDD
1613B	HRMS-Sox	Sediment	Total HxCDF
1613B	HRMS-Sox	Sediment	Total PeCDD
1613B	HRMS-Sox	Sediment	Total PeCDF
1613B	HRMS-Sox	Sediment	Total TCDD
1613B	HRMS-Sox	Sediment	Total TCDF
D 2216		Sediment	Percent Moisture
D 2216		Sediment	Percent Solids
TEQ		Sediment	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-2

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76888-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76888-9	11215702-072621-BN-SJSB094 (16-18)	Sediment	07/26/21 14:40	07/29/21 09:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

1613B

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 519650

Lab Sample ID: 320-76888-A-1-B MS RA Client Sample ID:

Date Analyzed: 08/25/21 11:28 Lab File ID: 25AU2111D2_005.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.15	Missed Peak	bennettd	08/25/21 13:16
13C-2,3,7,8-TCDF	17.69	Wrong peak	bennettd	08/25/21 13:16
2,3,7,8-TCDF	17.70	Missed Peak	bennettd	08/25/21 13:17

Lab Sample ID: 320-76888-A-1-C MSD RA Client Sample ID:

Date Analyzed: 08/25/21 12:07 Lab File ID: 25AU2111D2_006.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.11	Missed Peak	bennettd	08/25/21 13:21
13C-2,3,7,8-TCDF	17.66	Poor chromatography	bennettd	08/25/21 13:22
2,3,7,8-TCDF	17.67	Missed Peak	bennettd	08/25/21 13:22

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-2

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517462

Lab Sample ID: CCV 320-517462/43 Client Sample ID:

Date Analyzed: 08/19/21 01:32 Lab File ID: 17au21dfs1_47.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.49	Baseline	stephensk	08/19/21 09:20
2,3,7,8-TCDD	21.84	Baseline	stephensk	08/19/21 09:21
13C-1,2,3,7,8-PeCDD	29.61	Baseline	stephensk	08/19/21 09:21

Lab Sample ID: 320-76888-9 Client Sample ID: 11215702-072621-BN-SJSB094 (16-18)

Date Analyzed: 08/19/21 11:06 Lab File ID: 17au21dfs1_59.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/20/21 10:34
1,2,3,7,8-PeCDF		Invalid Compound ID	dadunj	08/20/21 10:34
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/20/21 10:34
2,3,4,7,8-PeCDF		Invalid Compound ID	dadunj	08/20/21 10:34
OCDF		Invalid Compound ID	dadunj	08/20/21 10:35
2,3,7,8-TCDD	21.77	Baseline	dadunj	08/20/21 10:34
1,2,3,4,6,7,8-HpCDF	38.62	Split Peak	dadunj	08/20/21 10:35

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-2

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517891

Lab Sample ID: WDM 320-517891/1 Client Sample ID:

Date Analyzed: 08/19/21 13:59 Lab File ID: 19au21dfs1_2.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,4,7,9-PeCDD	30.78	Peak assignment corrected	stephensk	08/19/21 15:00
1,2,3,8,9-PeCDF	30.94	Peak assignment corrected	stephensk	08/19/21 15:00

Lab Sample ID: CCV 320-517891/2 Client Sample ID:

Date Analyzed: 08/19/21 14:46 Lab File ID: 19au21dfs1_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,4-TCDD	21.35	Peak assignment corrected	stephensk	08/19/21 15:37
2,3,7,8-TCDD	21.75	Baseline	stephensk	08/19/21 15:38

Lab Sample ID: MB 320-513879/1-A Client Sample ID:

Date Analyzed: 08/19/21 16:27 Lab File ID: 19au21dfs1_5.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 08:54
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 08:54
1,2,3,7,8,9-HxCDD		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,4,7,8-PeCDF		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,7,8-TCDD		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,7,8-TCDF	20.42	Baseline	dadunj	08/23/21 08:53
1,2,3,4,6,7,8-HpCDF	38.62	Split Peak	dadunj	08/23/21 08:55
1,2,3,4,6,7,8-HpCDD	39.57	Split Peak	dadunj	08/23/21 08:55
OCDD	42.07	Baseline	dadunj	08/23/21 08:55

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76888-2

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 518043

Lab Sample ID: CCV 320-518043/15 Client Sample ID:

Date Analyzed: 08/20/21 01:34 Lab File ID: 19au21dfs1_17.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,4-TCDD	21.40	Peak assignment corrected	arghestan is	08/20/21 09:08

Lab Sample ID: 320-76888-A-1-B MS Client Sample ID:

Date Analyzed: 08/20/21 05:33 Lab File ID: 19au21dfs1_22.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDD	21.82	Baseline	krenns	08/25/21 15:21
2,3,7,8-TCDD	21.85	Baseline	krenns	08/25/21 15:22
1,2,3,7,8-PeCDF	27.31	Split Peak	dadunj	08/23/21 09:39
13C-2,3,4,7,8-PeCDF	28.76	Baseline	dadunj	08/23/21 09:42
13C-1,2,3,7,8-PeCDD	29.57	Baseline	dadunj	08/23/21 09:42
2,3,4,6,7,8-HxCDF	35.91	Split Peak	dadunj	08/23/21 09:40
1,2,3,7,8,9-HxCDF	36.80	Split Peak	dadunj	08/23/21 09:40
13C-OCDD	42.04	Split Peak	dadunj	08/23/21 09:41

Lab Sample ID: 320-76888-A-1-C MSD Client Sample ID:

Date Analyzed: 08/20/21 06:21 Lab File ID: 19au21dfs1_23.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDD	21.84	Baseline	dadunj	08/23/21 09:45
37Cl4-2,3,7,8-TCDD	21.86	Assign Peak	dadunj	08/23/21 09:45
2,3,7,8-TCDD	21.87	Invalid Compound ID	dadunj	08/23/21 09:45
1,2,3,7,8-PeCDF	27.32	Split Peak	dadunj	08/23/21 09:46
2,3,4,6,7,8-HxCDF	35.91	Split Peak	dadunj	08/23/21 09:46
1,2,3,7,8,9-HxCDF	36.79	Split Peak	dadunj	08/23/21 09:46

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL

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REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL

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REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL

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REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

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REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

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REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL

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REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL

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REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30		CIL, Lot ER09031903		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

786990

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

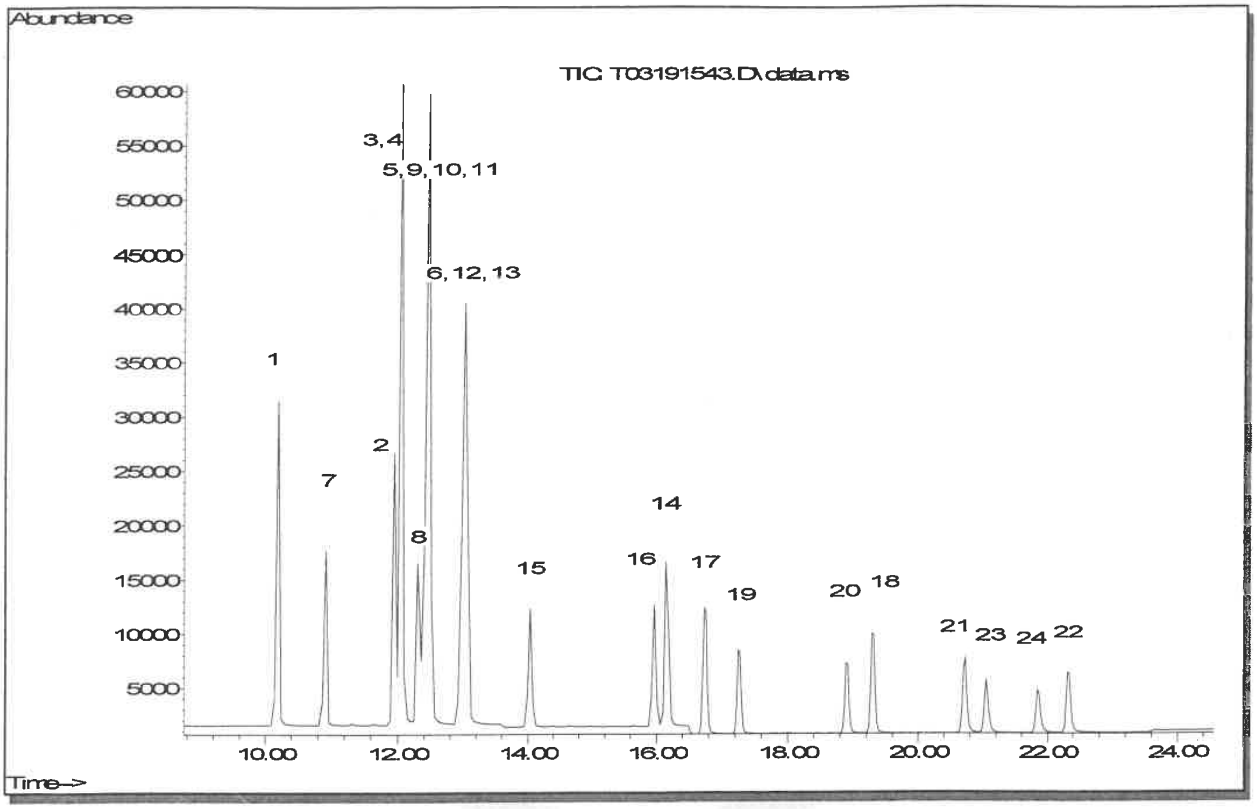

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

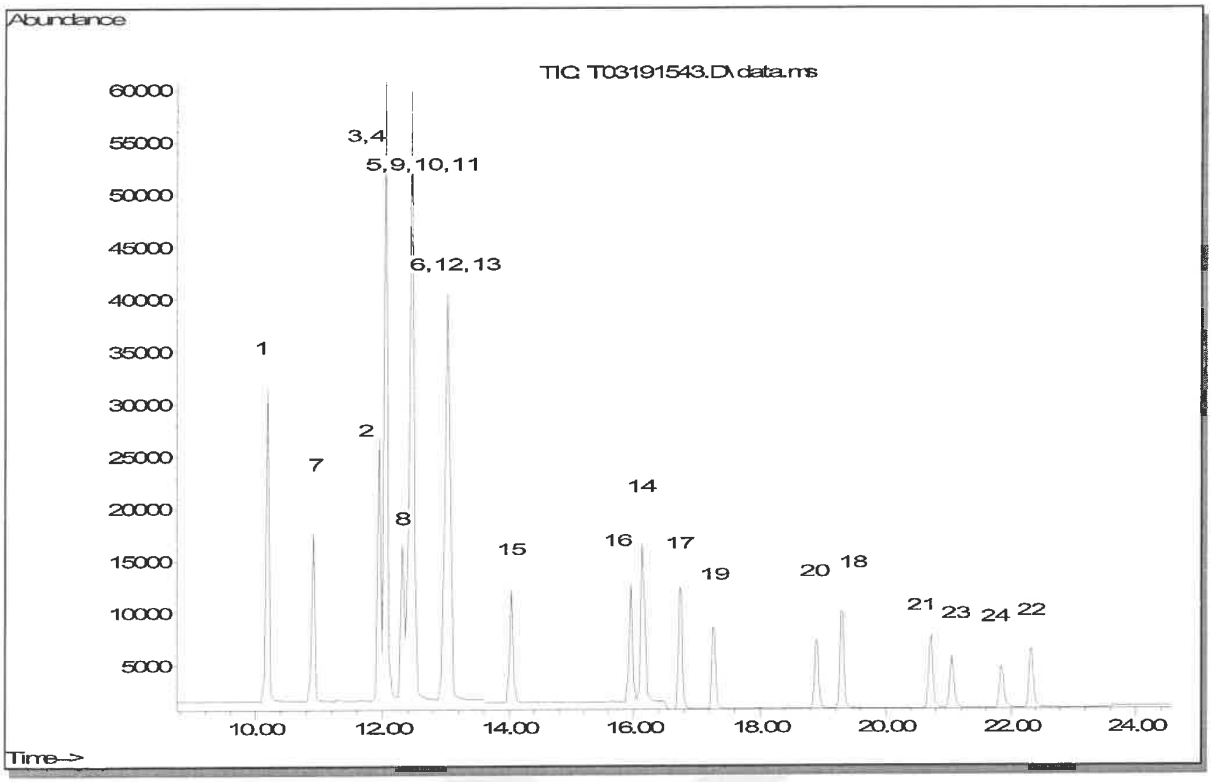

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r: 3/30/20

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

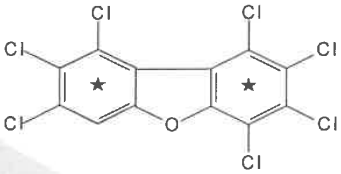

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

787004

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

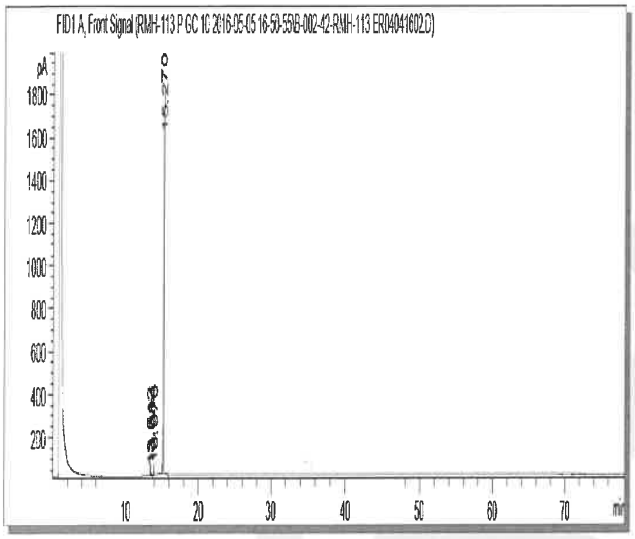

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

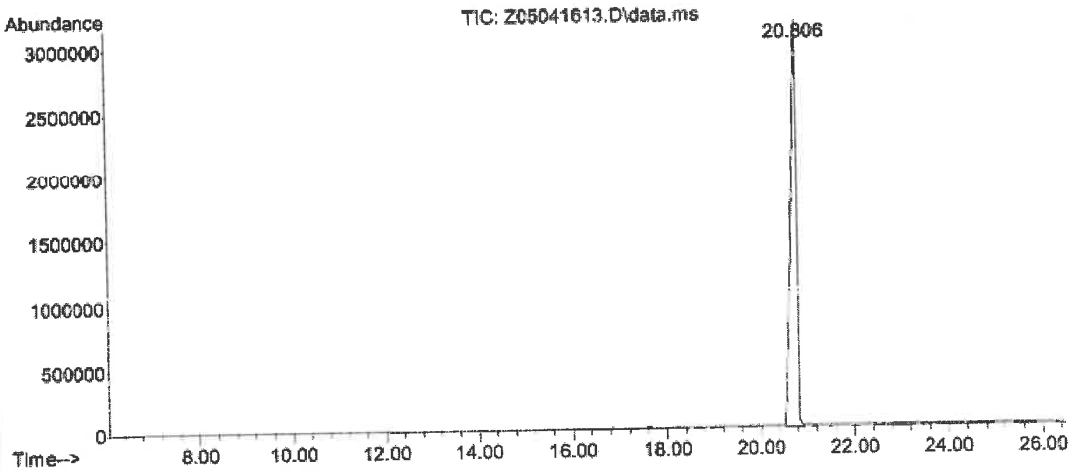

Mass Spectrum

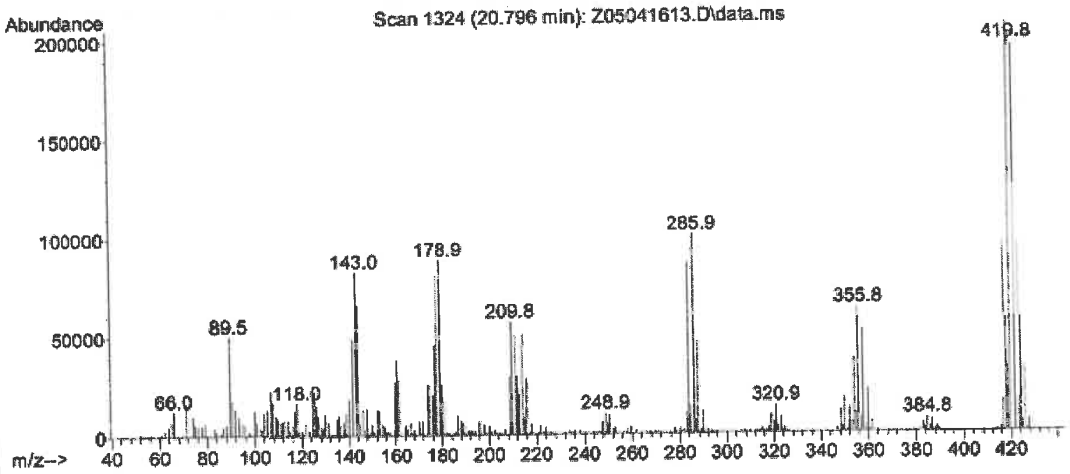

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 SAL

Cerilliant
Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

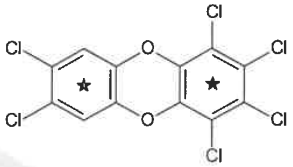

Catalog Number:	ED-946
Solution Lot:	ER04211601
Expiration Date:	June 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

787011

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

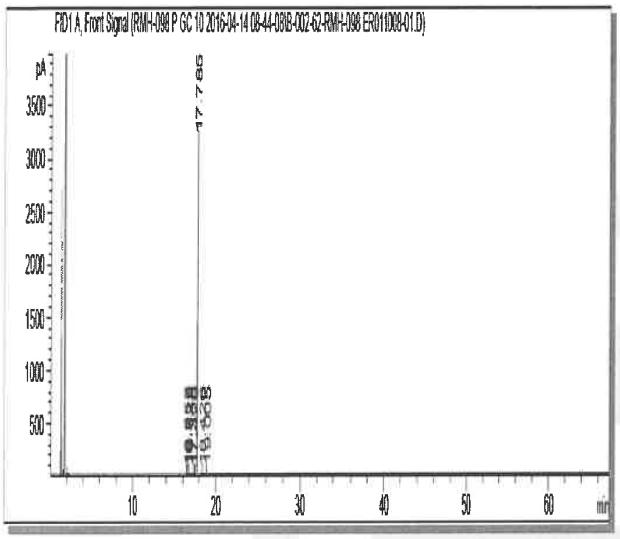

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument:	GC#10
Sample Name:	ER011008-01
Acquired:	April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

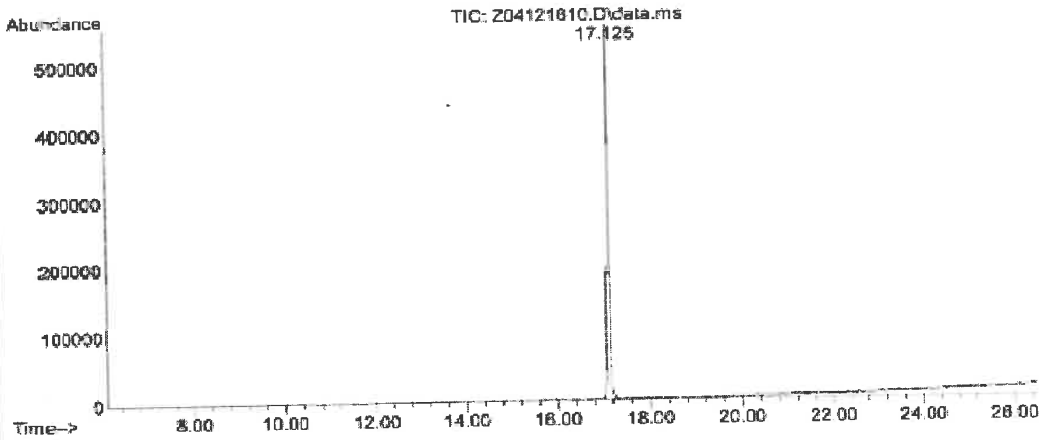

Mass Spectrum

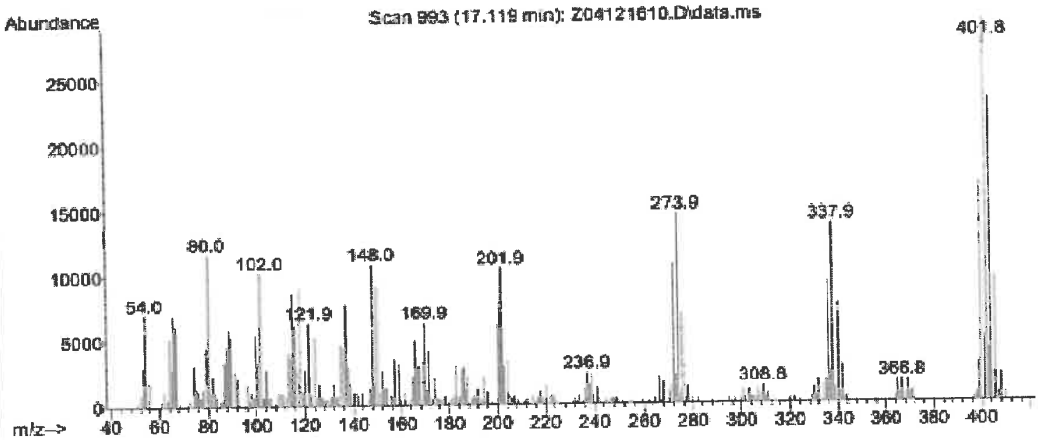

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

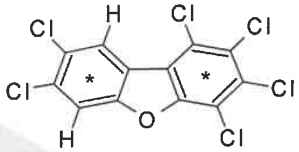

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

787016

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot:	ER11281601

Chemical Formula:	$^{13}C_{12}Cl_6H_2O$
CAS Number:	114423-98-2
Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

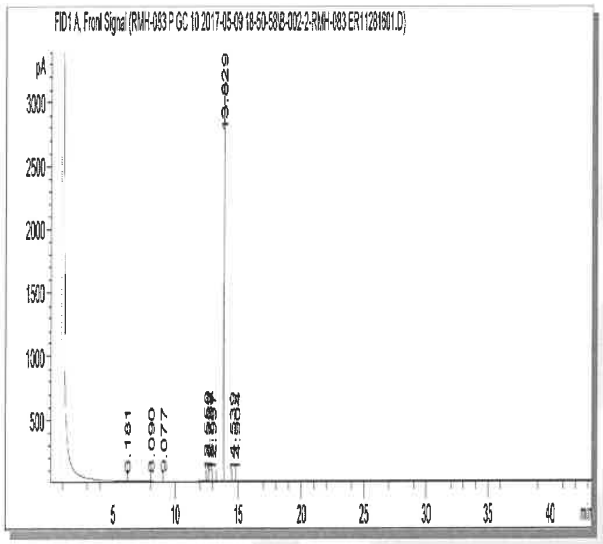

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

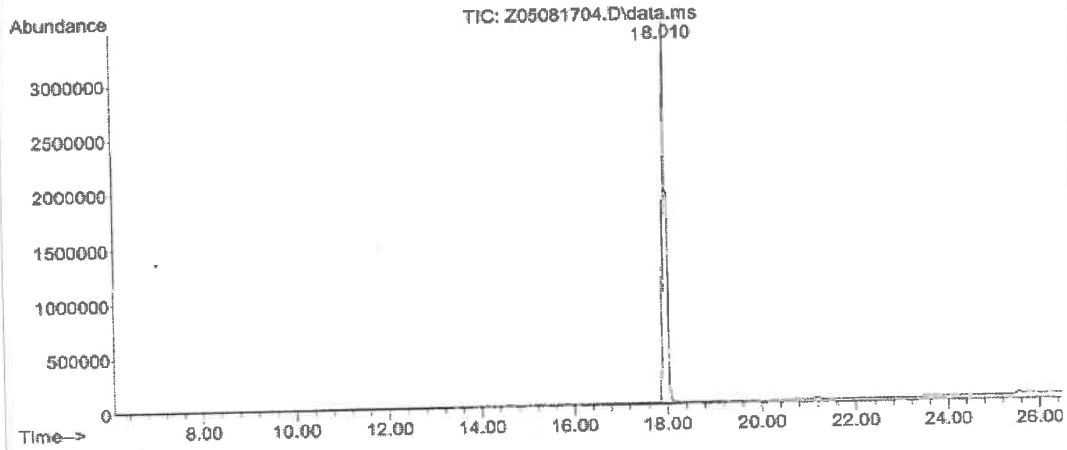

Mass Spectrum

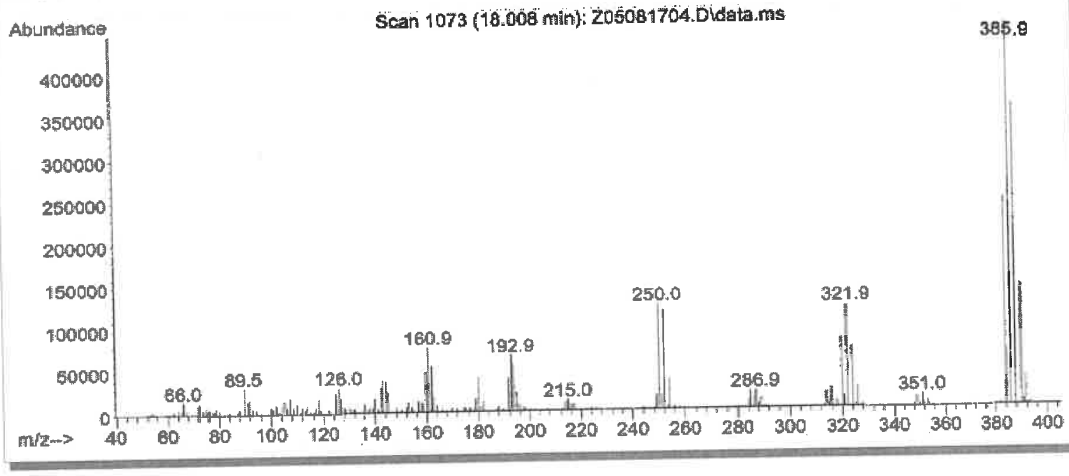

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

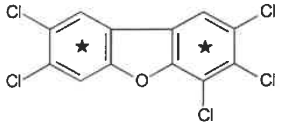

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

787021

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

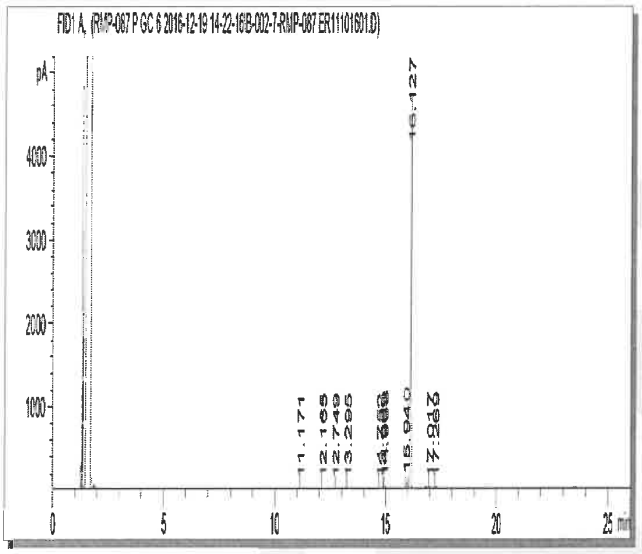

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

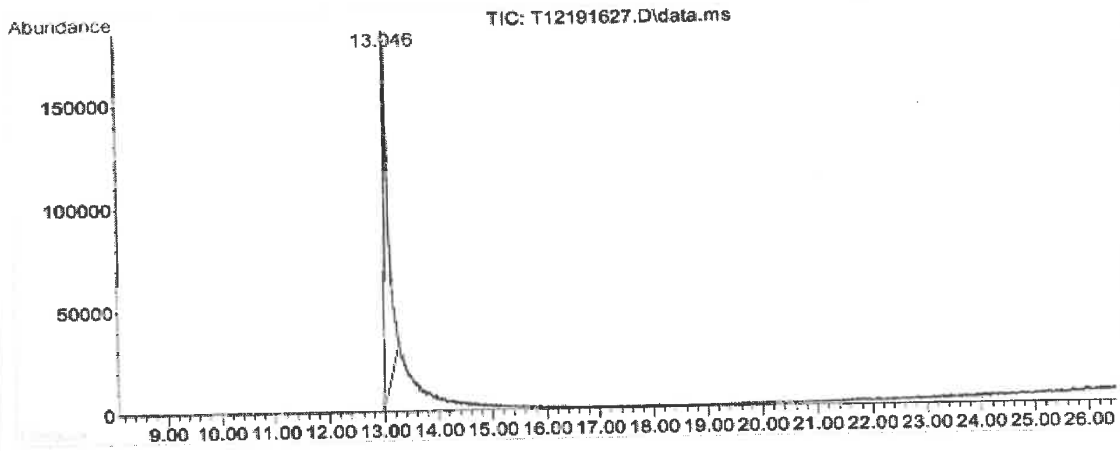

Mass Spectrum

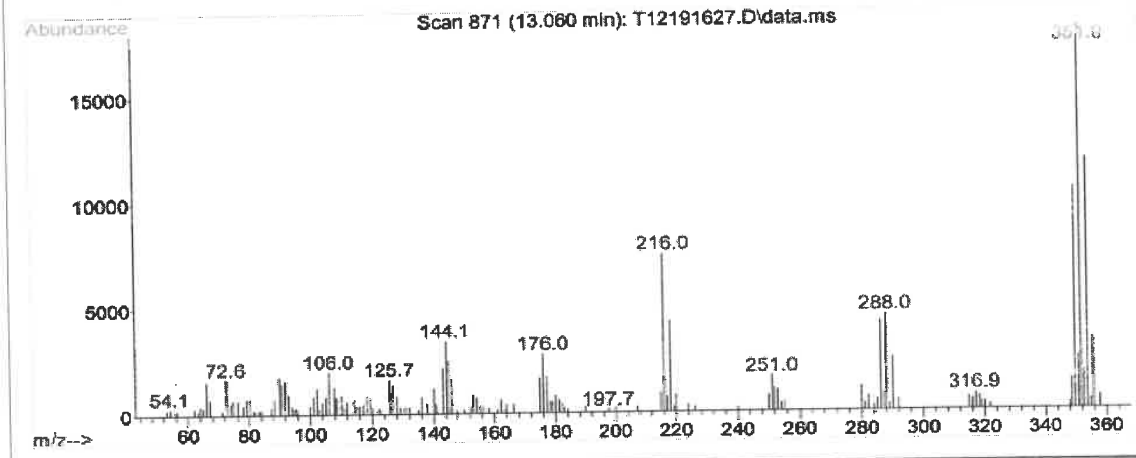

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

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Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

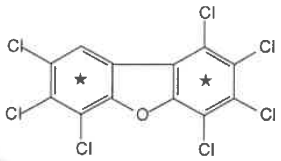

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

787026

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER020507-02

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-84-8
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

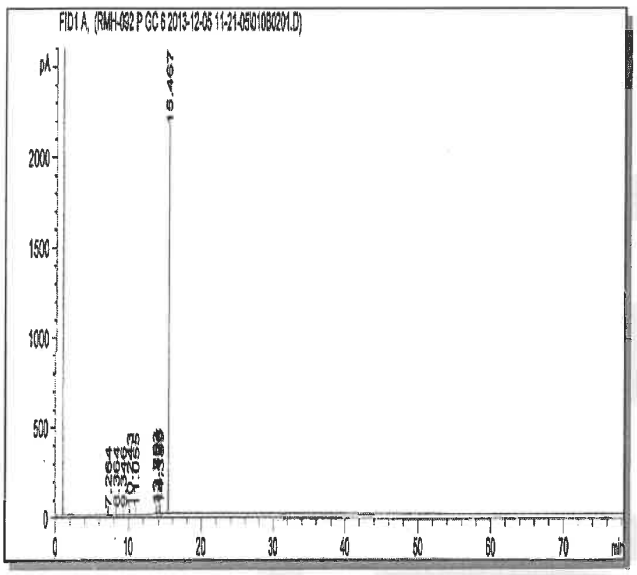

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument:	GC#6
Sample Name:	ER020507-02
Acquired:	December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

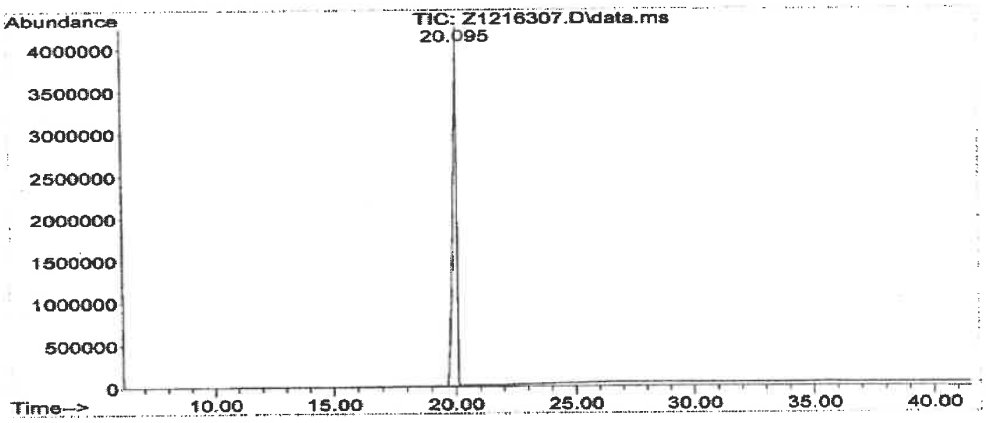

Mass Spectrum

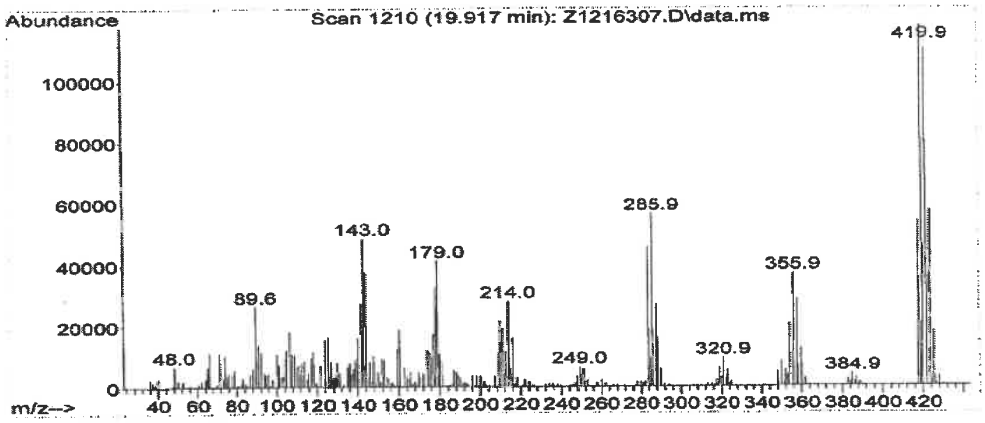

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

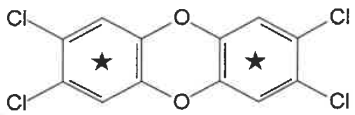

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

787033

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

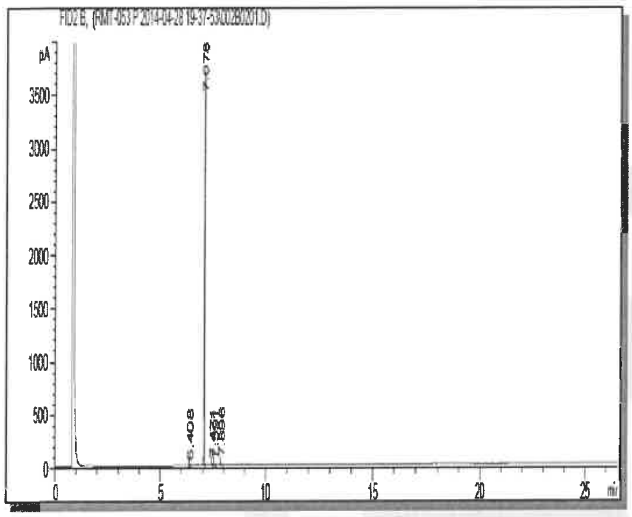

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

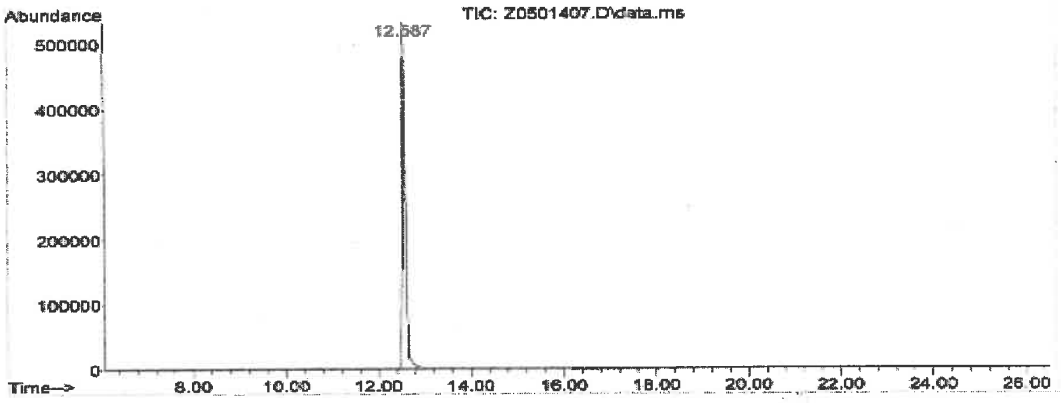

Mass Spectrum

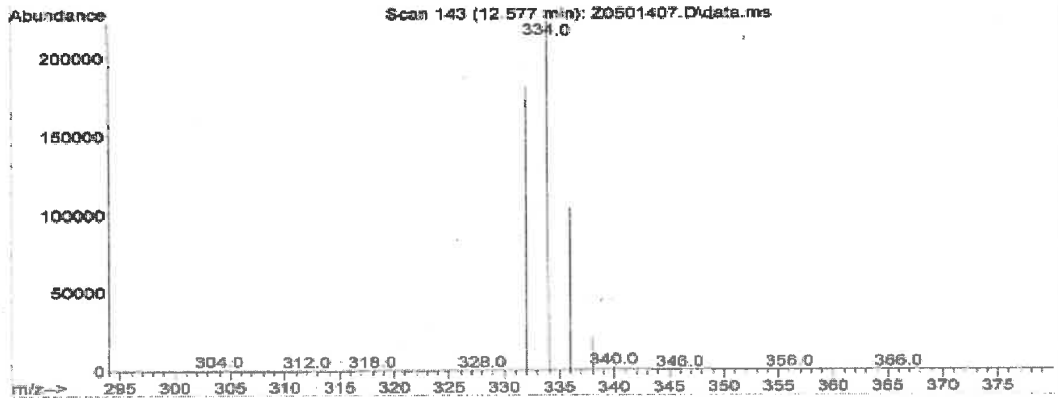

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

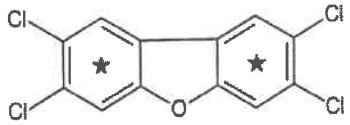

Catalog Number:	EF-904
Solution Lot:	ER09131601
Expiration Date:	September 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

787038

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

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GC/FID

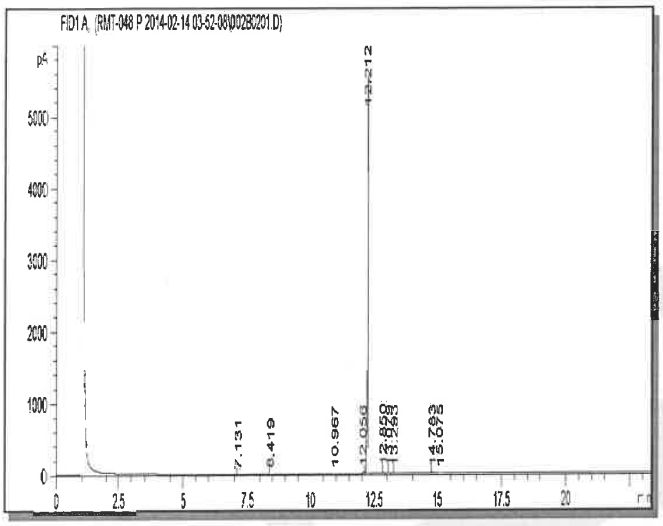

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

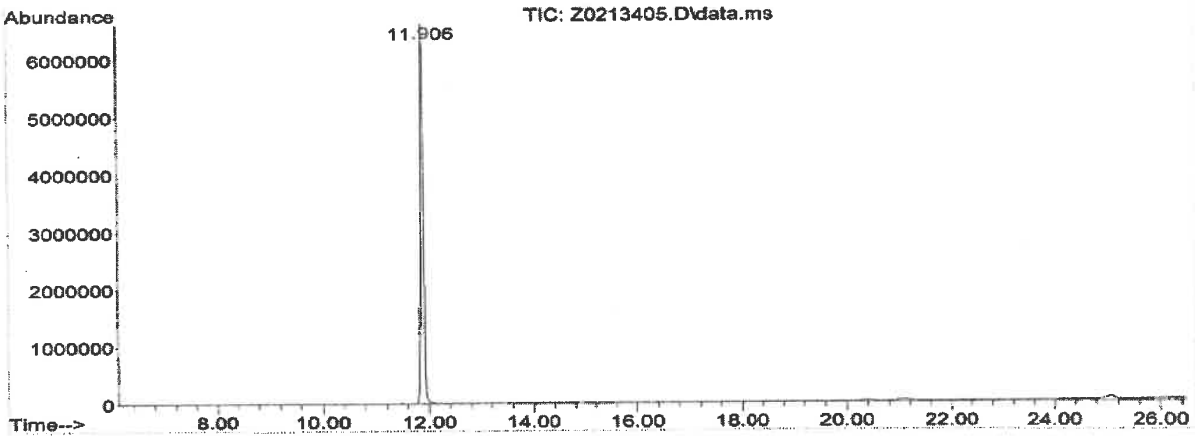

Mass Spectrum

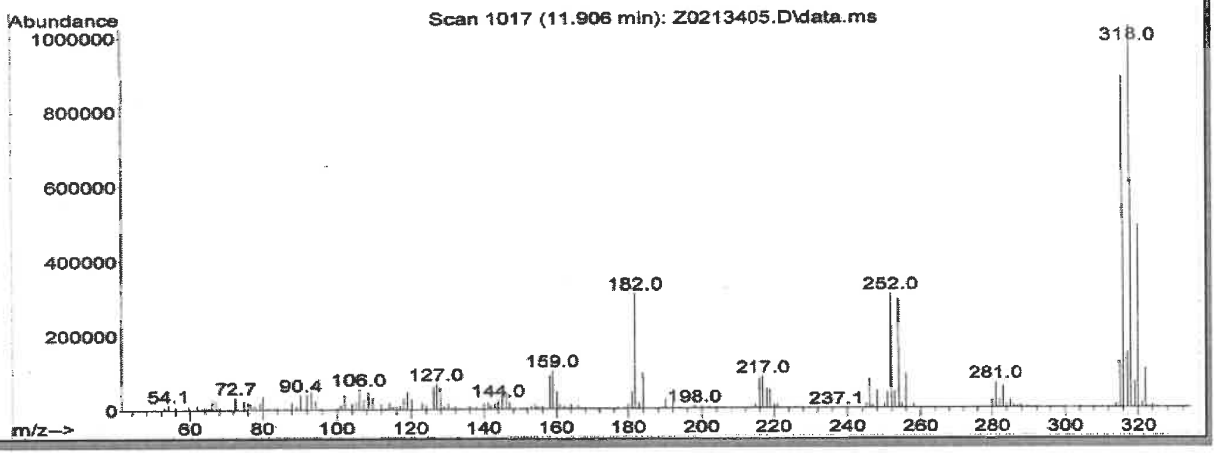

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

Reagent

HRDXNIDA_00443

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

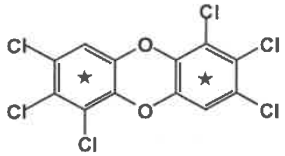

Catalog Number: ED-966
Solution Lot: ER03151801
Expiration Date: March 2028
Solvent: n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

787043

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

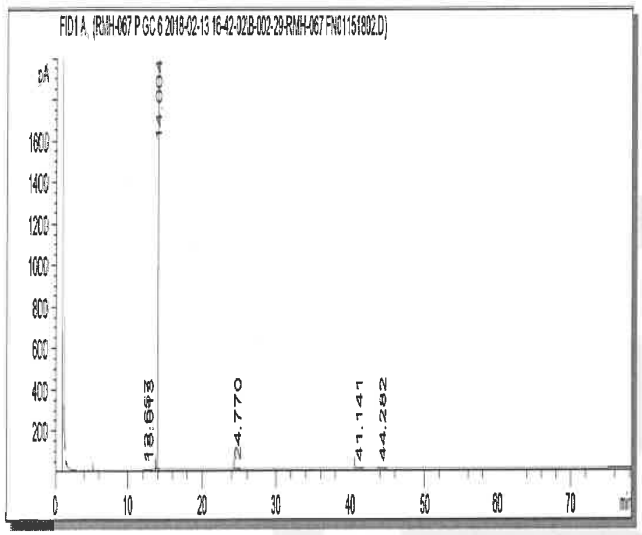

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

```
Compound Name          : 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number             : FN01151802
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Mon Mar 05 10:17:33 2018
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

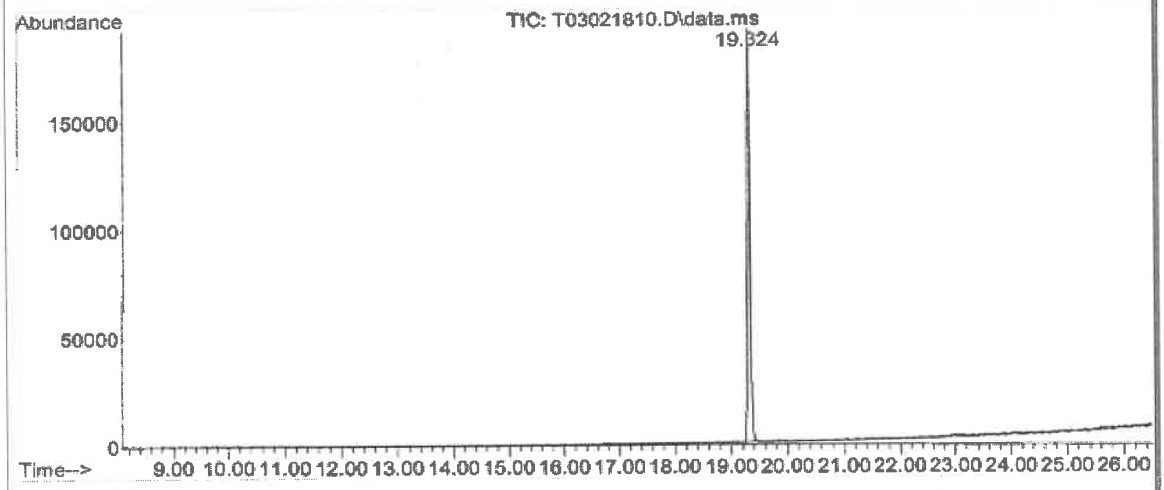

Mass Spectrum

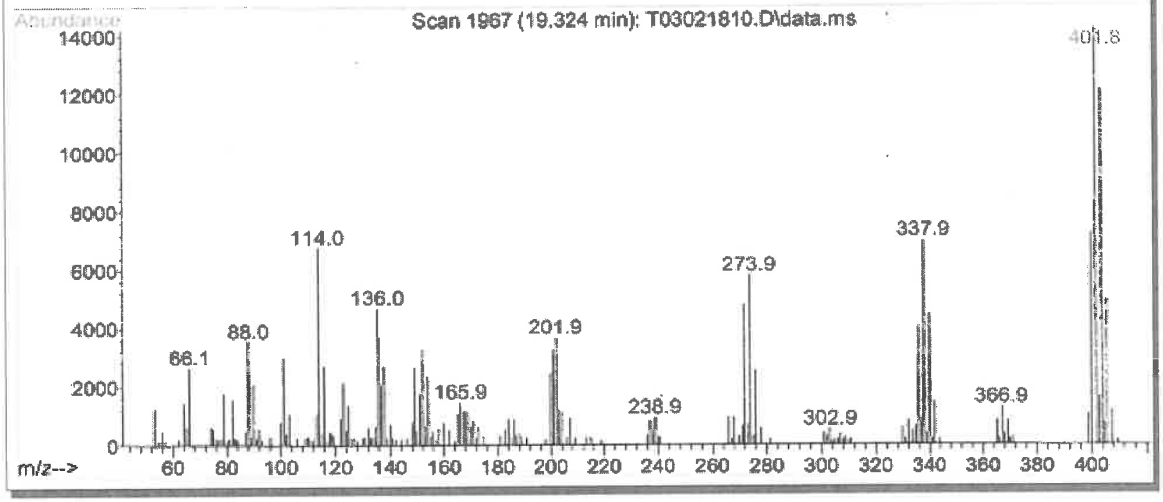

Reagent

HRDXNIDA_00457

r: 1/18/21 SW

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

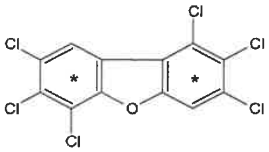

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

787048

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

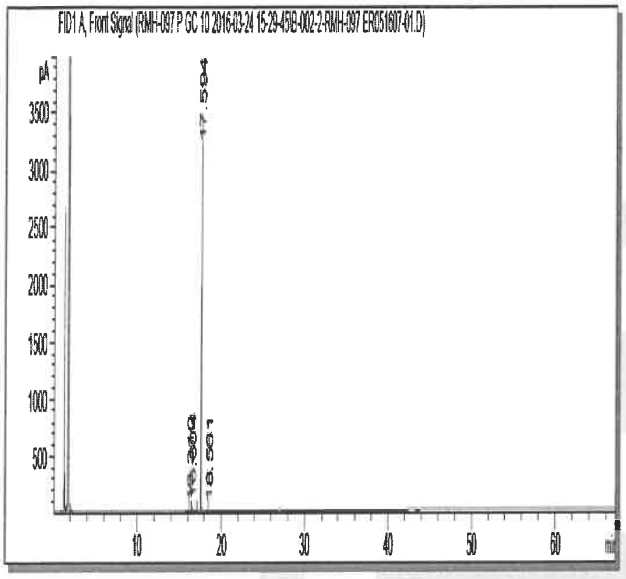

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

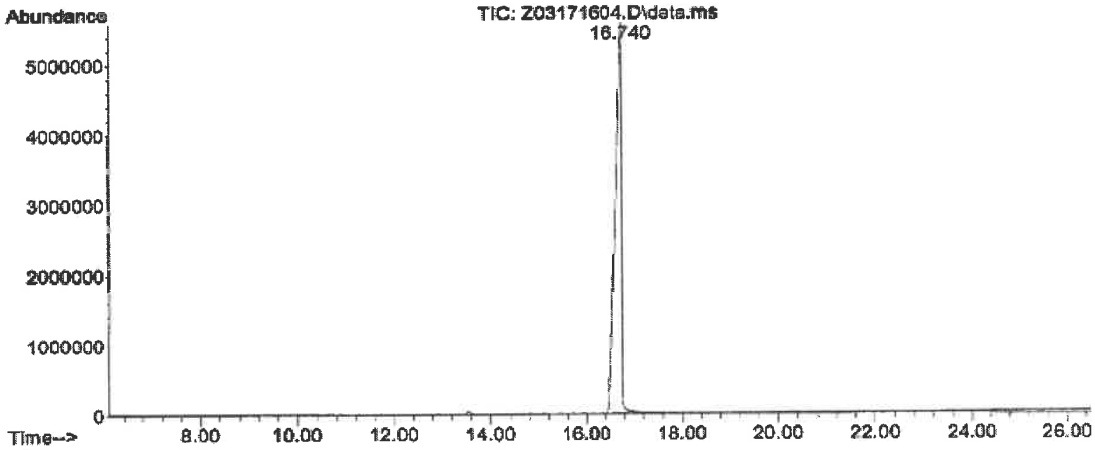

Mass Spectrum

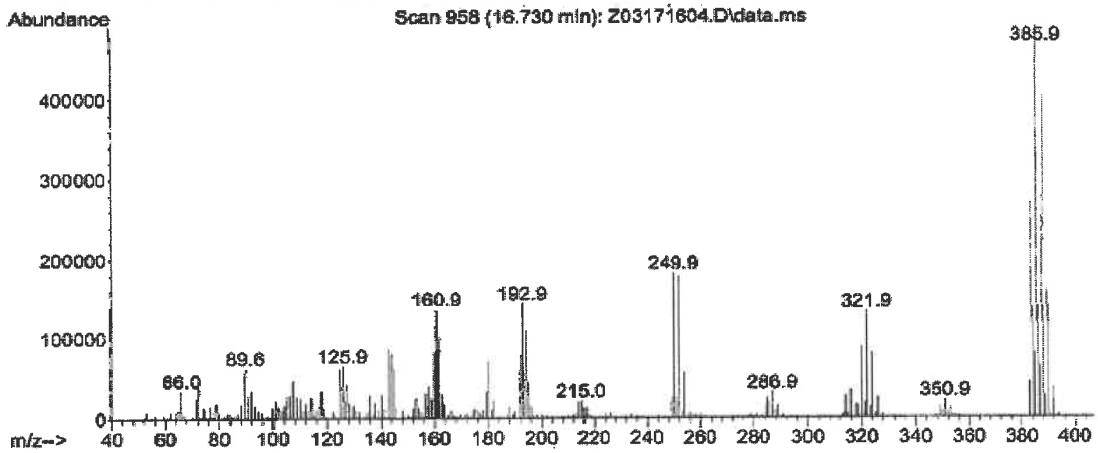

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
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CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

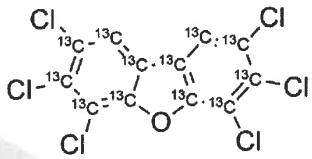

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

787055

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER09051801

Chemical Formula: $^{13}C_{12}H_2Cl_6O$
CAS Number: 116843-05-1
Molecular Weight: 386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

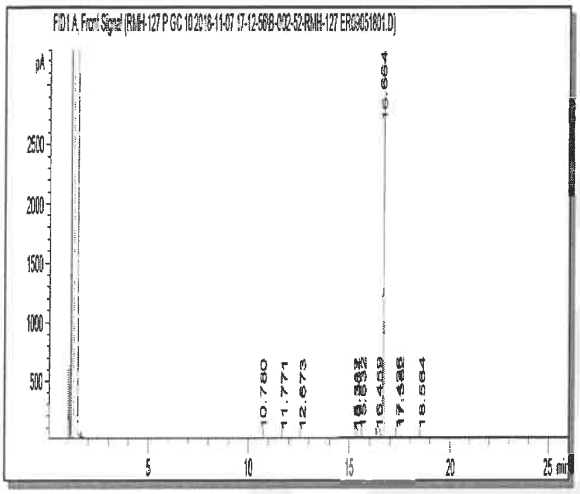

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

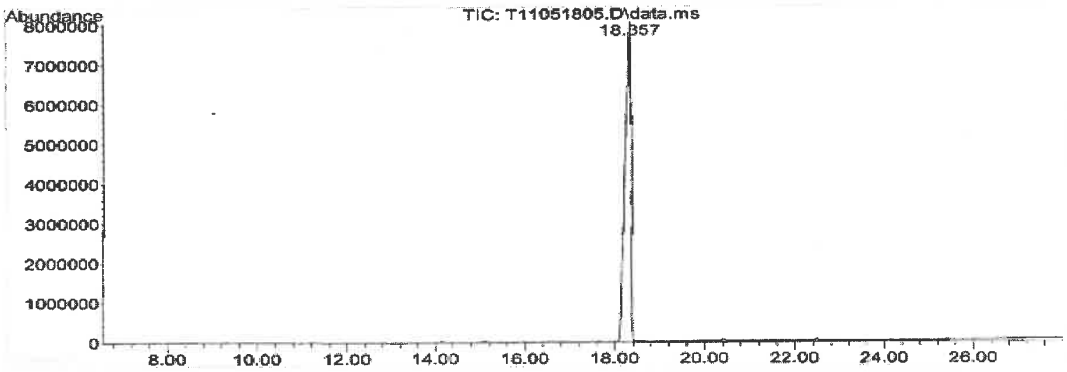

Mass Spectrum

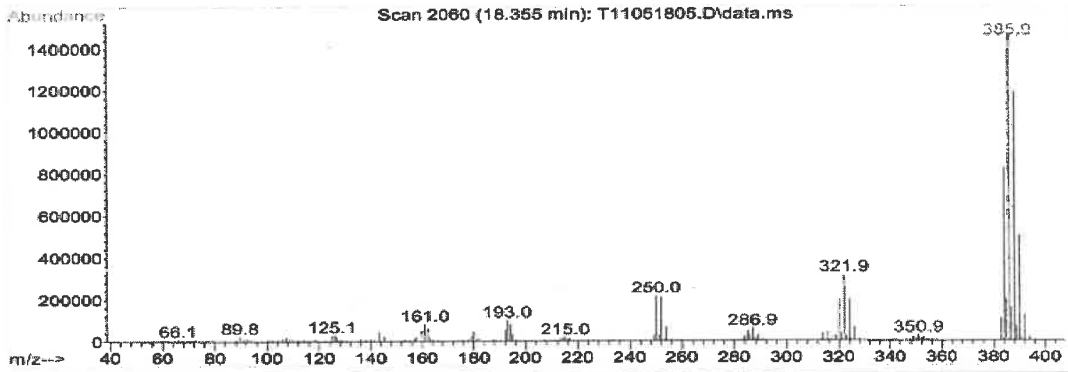

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

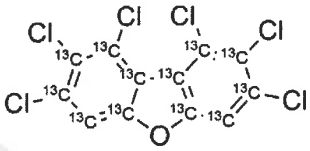

Catalog Number: EF-986
Solution Lot: ER01062016
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

787062

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

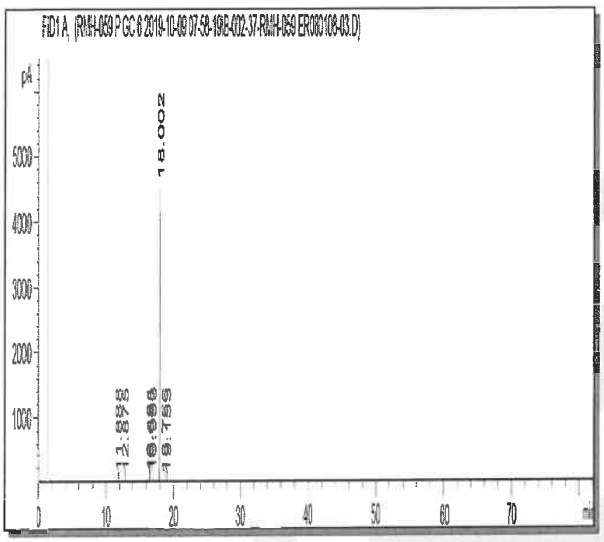

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

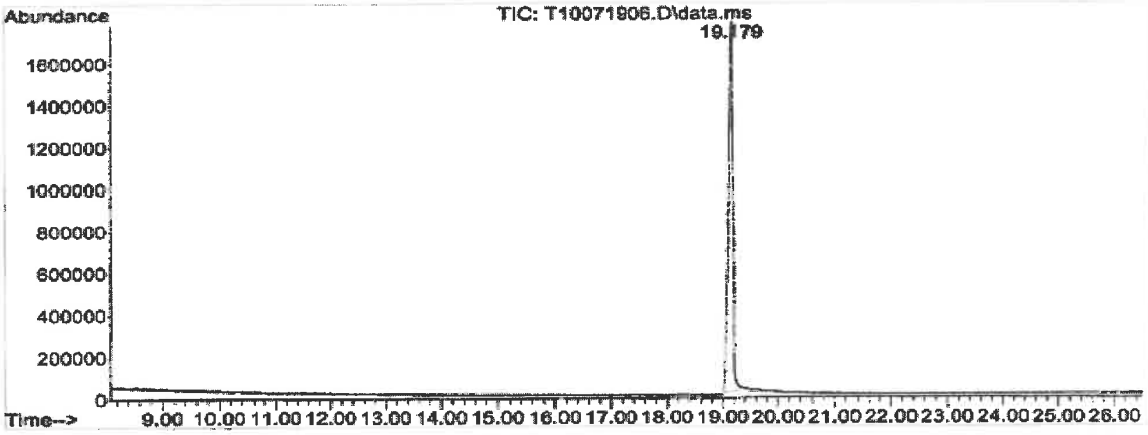

Mass Spectrum

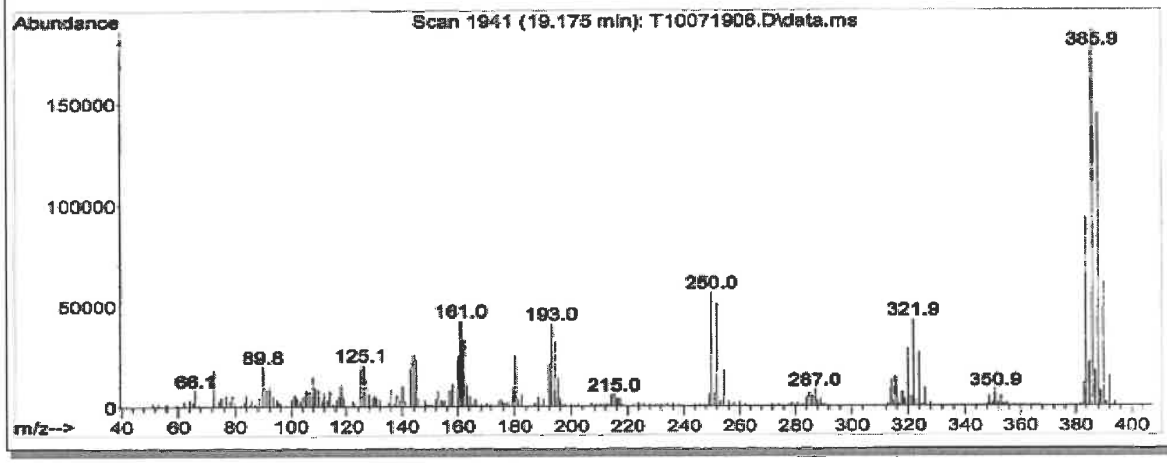

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant® Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

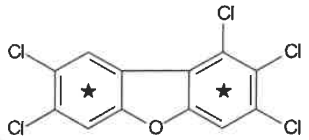

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

787069

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O$
Compound Lot:	ER090110-01	**CAS Number:**	109719-77-9
		Molecular Weight:	352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

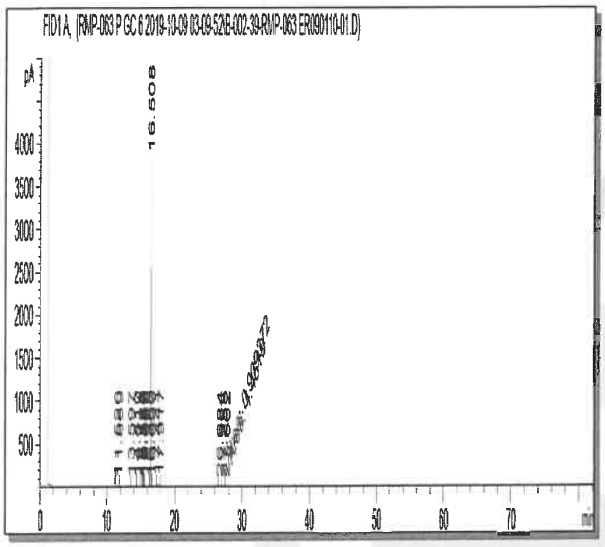

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Sample Name: ER090110-01
Acquired: October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

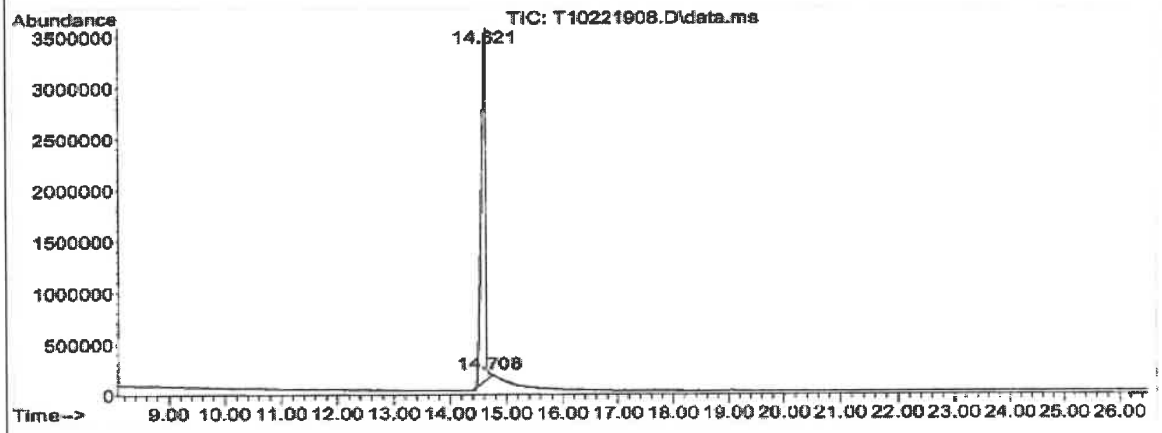

Mass Spectrum

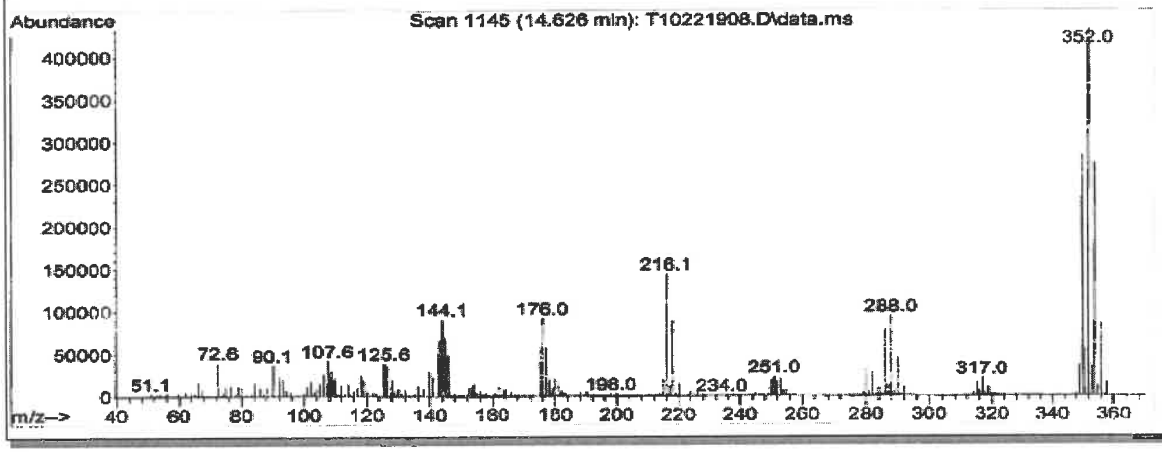

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

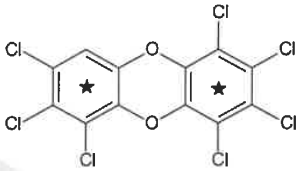

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

787076

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	0.999

Neat Material Data

Compound Name:	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}HCl_7O_2$
Compound Lot:	ER100110-01	**CAS Number:**	109719-83-7
		Molecular Weight:	437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

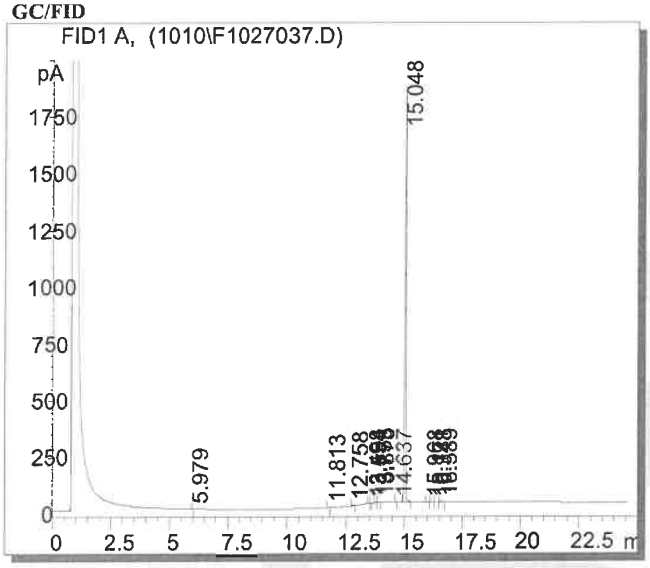

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

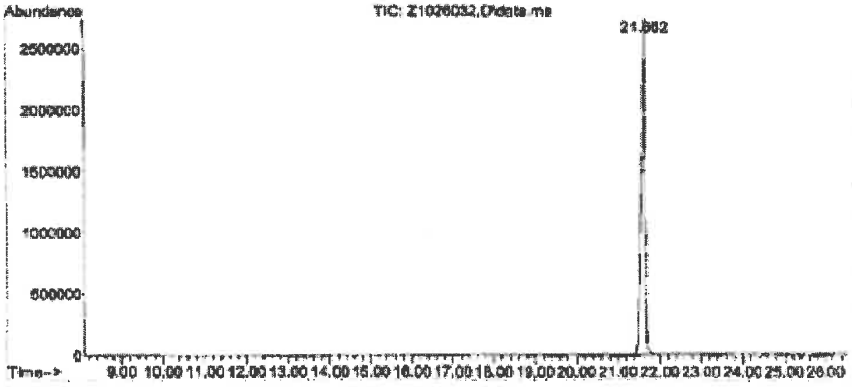

Mass Spectrum

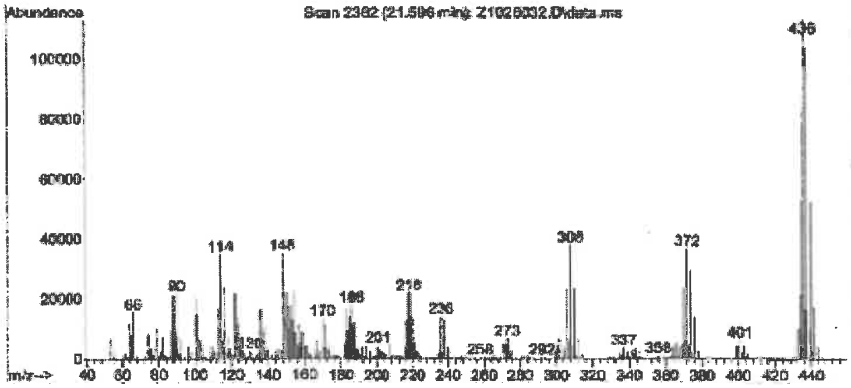

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

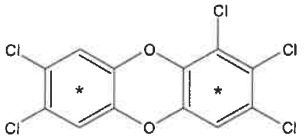

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

787081

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O_2$
Compound Lot:	ER06241403	**CAS Number:**	109719-79-1
		Molecular Weight:	368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

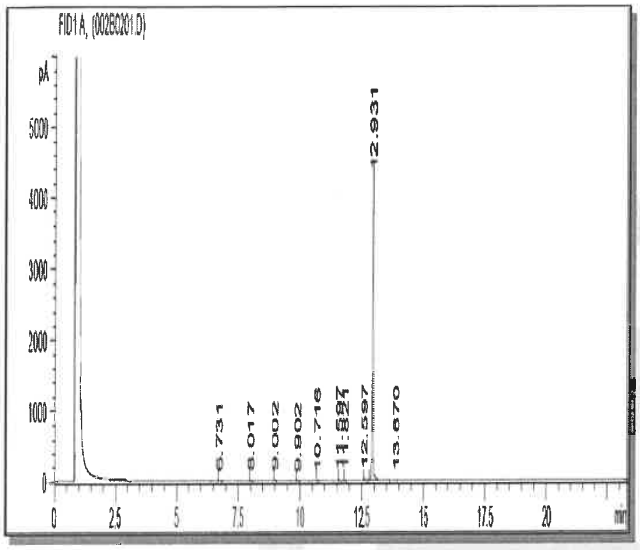

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ECM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

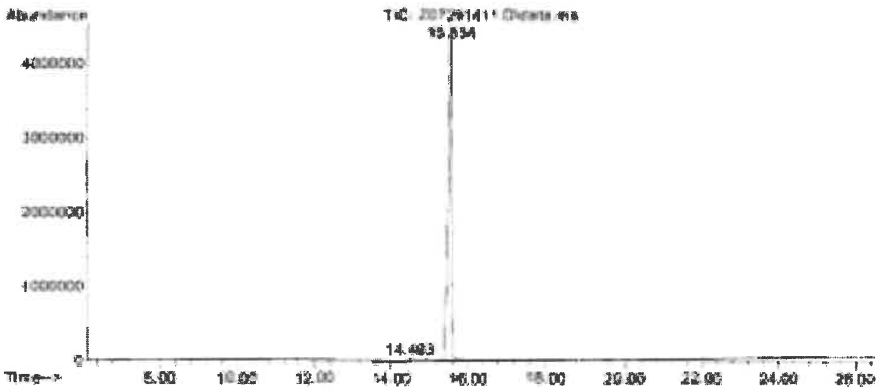

Mass Spectrum

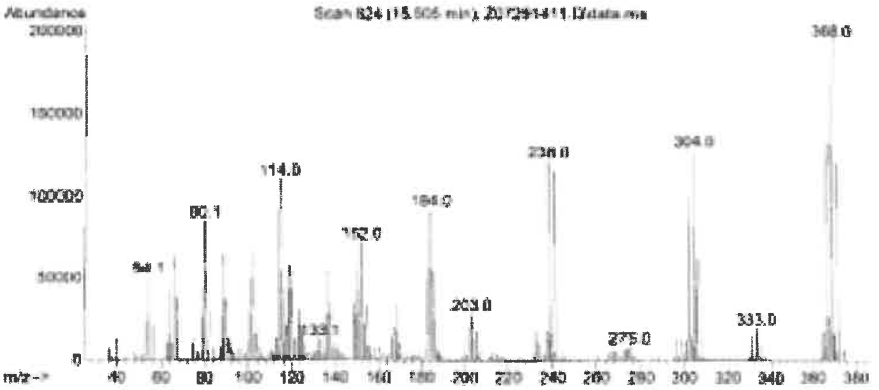

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

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Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

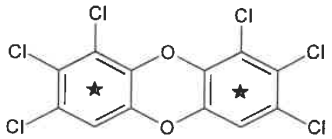

Catalog Number:	ED-996
Solution Lot:	ER08221601
Expiration Date:	September 2026
Solvent:	n-Nonane:Toluene (80:20)
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

787088

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

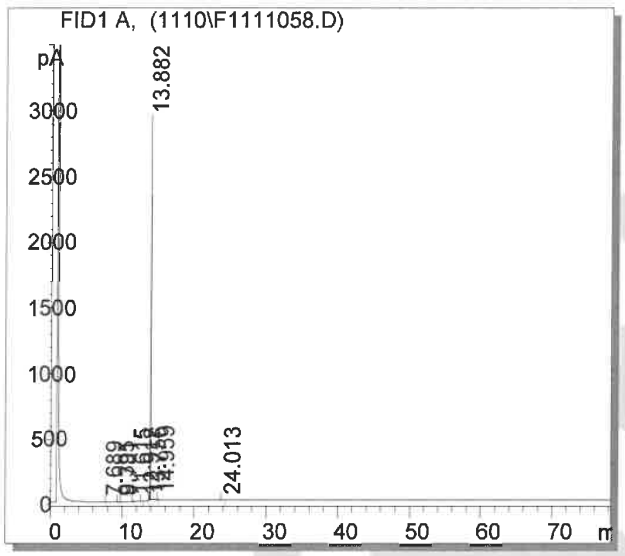

Column:	DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1110\F1111058.D
Instrument:	GC#6
Sample Name:	ER110510-01
Acquired:	November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

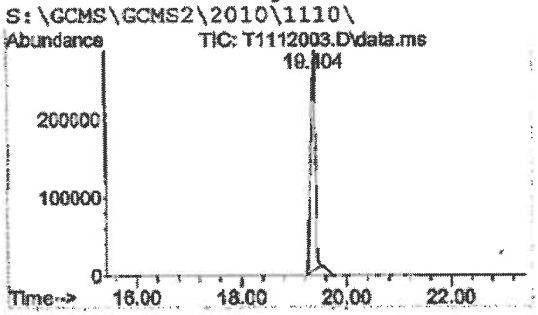

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

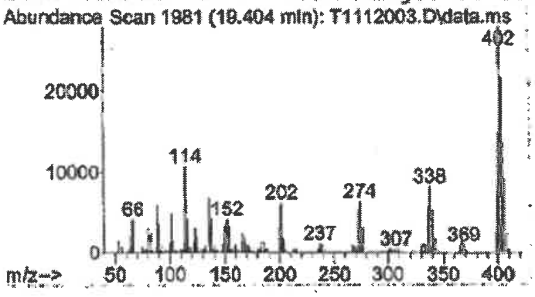

SIM Ion Chromatogram 1

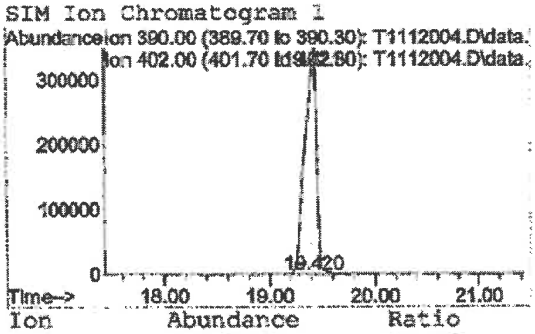

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

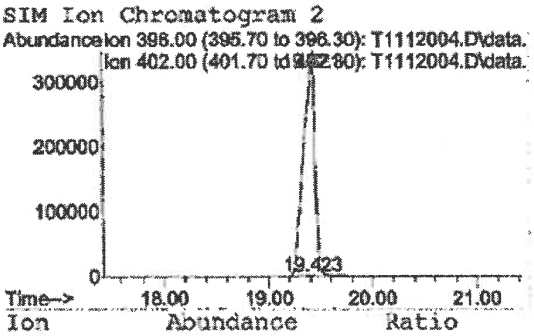

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

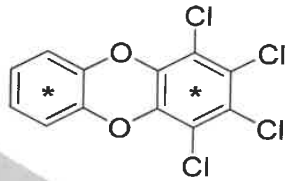

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 13194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

787095

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

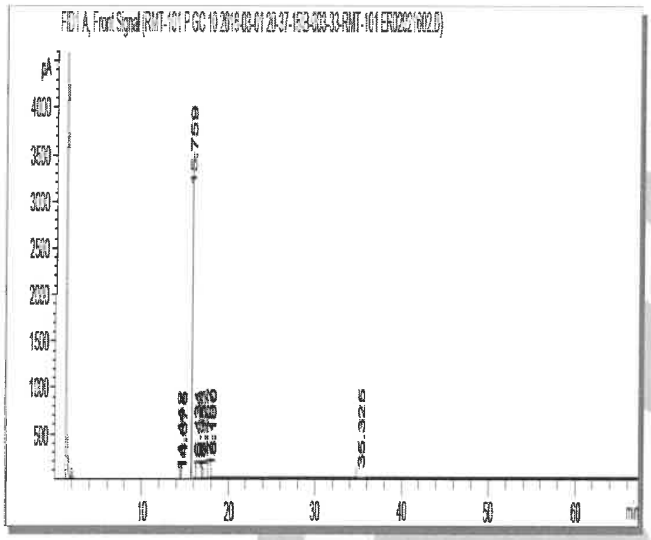

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

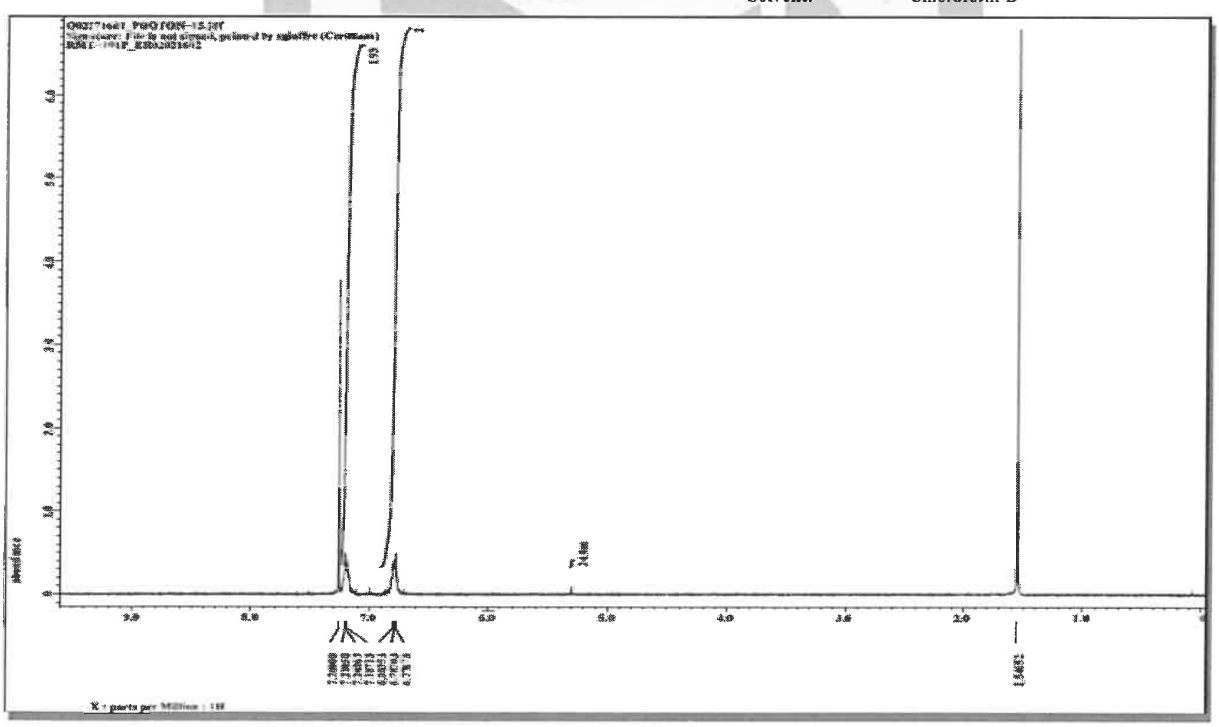

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER02021602
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Fri Feb 19 12:55:12 2016
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

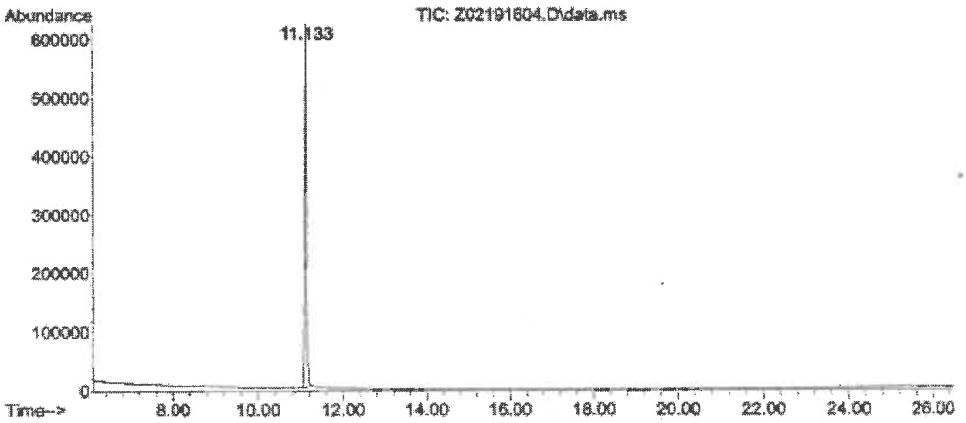

Mass Spectrum

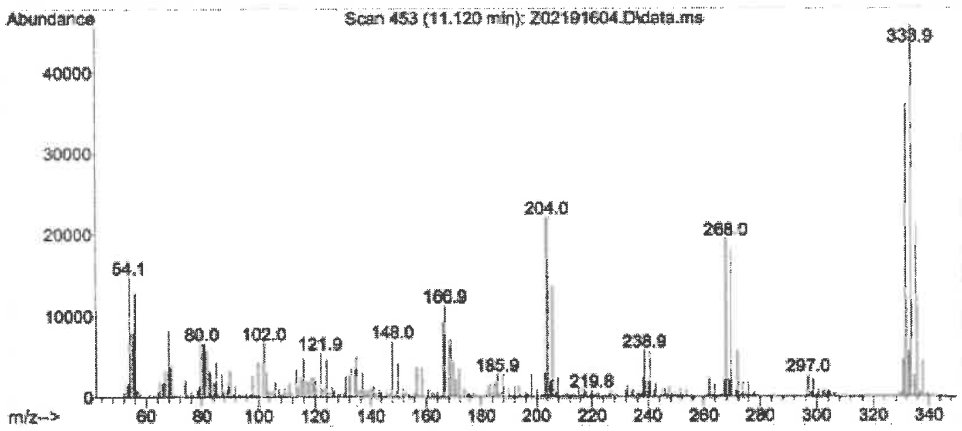

Reagent

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WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

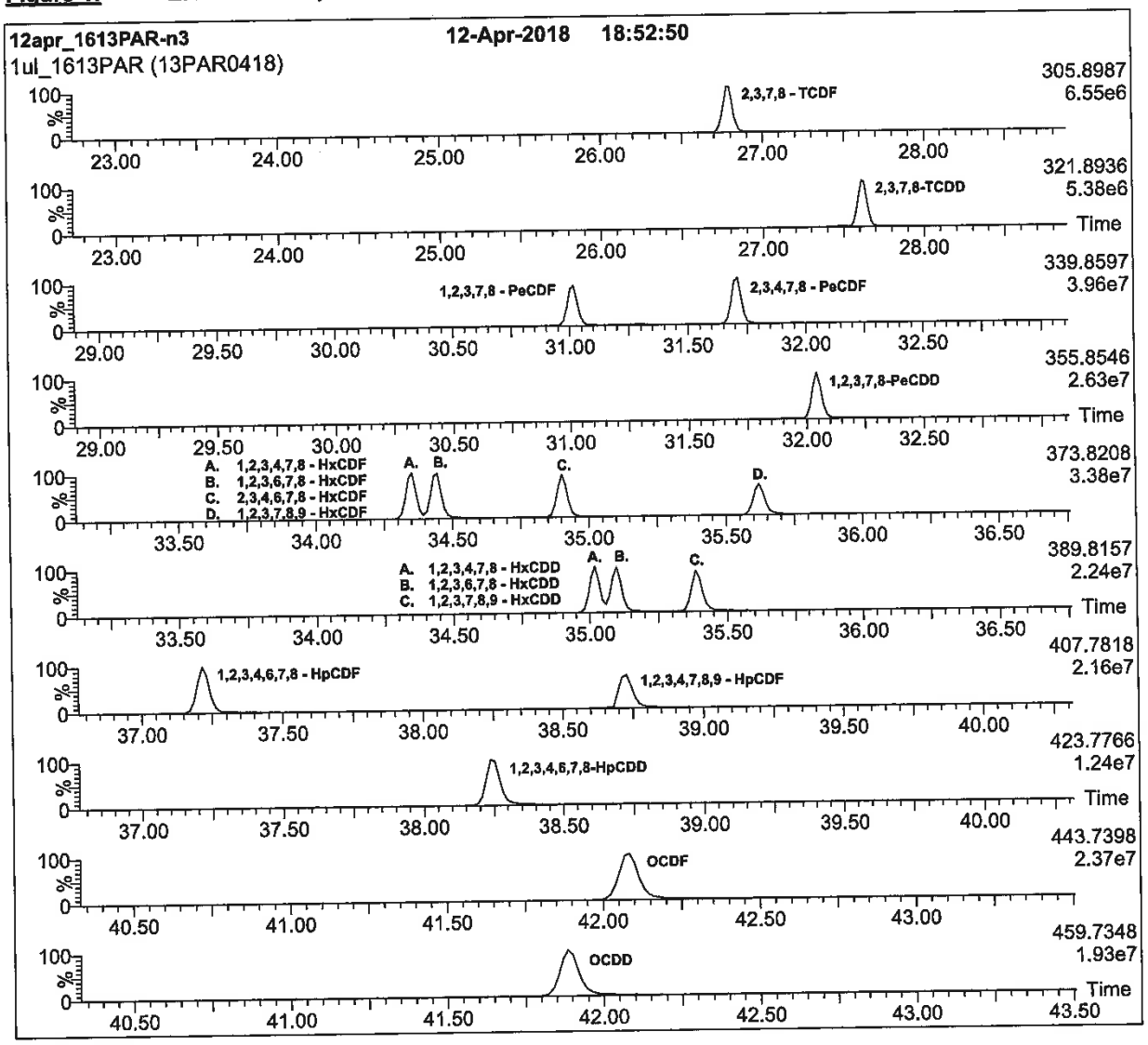

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

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Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number: EDF-7999-10X
Solution Lot: ER02241602
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

787105

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/ECD
Column:	DB-5ms, 30 m x 0.25 mm ID, 0 25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min hold 3 min
Injector Temp:	Cool on-column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397 1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386 6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0 8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0 7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

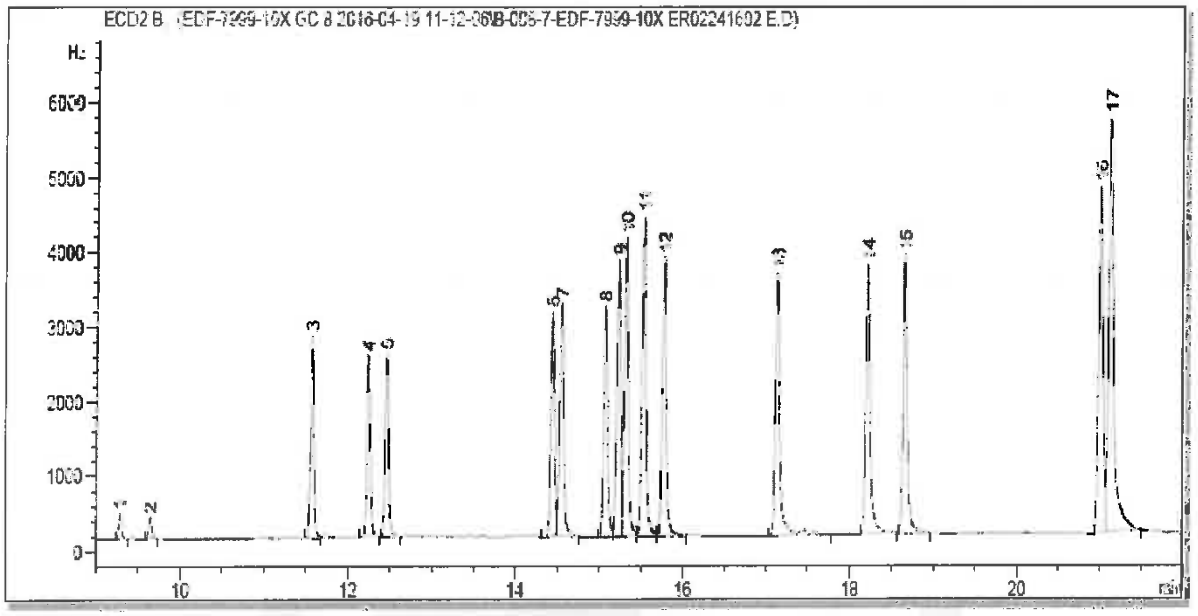

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Method 1613 PAR Stock Solution

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

787110

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

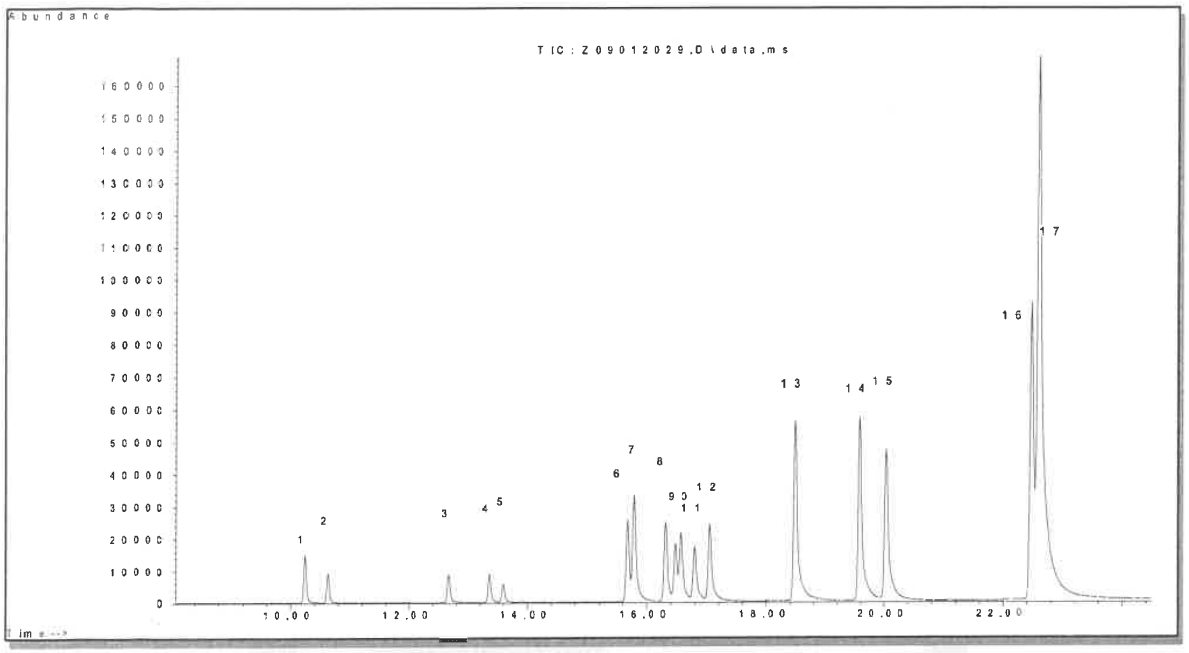

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	37TCDD #	TCDF #
	MB 320-513879/1-A	50	37
	320-76888-A-1-B MS RA	56	29
	320-76888-A-1-C MSD RA	61	23 *5-

	QC LIMITS
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
TCDF = 13C-2,3,7,8-TCDF	24-169

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-513879/2-A	36	34	47	31	36	34	42	37

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-513879/2-A	33	37	35	32	35	36	40	39

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-072621-BN -SJSB094 (16-18) RA	320-76888-9 RA	42	59

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-072621-BN -SJSB094 (16-18)	320-76888-9	42	41	51	40	46	40	56	49
	MB 320-513879/1-A	36	36	46	36	40	35	47	43
	320-76888-A-1-B MS	41	44	90	38	46	39 q	51	41
	320-76888-A-1-C MSD	37	40	123	36	40	38	44	37

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072621-BN -SJSB094 (16-18)	320-76888-9	47	51	45	43	47	50	56	54
	MB 320-513879/1-A	38	40	39	39	41	41	42	36
	320-76888-A-1-B MS	35	41	42	38	39	41	44	41
	320-76888-A-1-C MSD	34	37	34 q	35	39	38	44	37 q

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_51.d

Lab ID: LCS 320-513879/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	22.3	111	67-158	
2,3,7,8-TCDF	20.0	23.1	115	75-158	
1,2,3,7,8-PeCDD	100	113	113	70-142	
1,2,3,7,8-PeCDF	100	117	117	80-134	
2,3,4,7,8-PeCDF	100	109	109	68-160	
1,2,3,4,7,8-HxCDD	100	101	101	70-164	
1,2,3,6,7,8-HxCDD	100	112	112	76-134	
1,2,3,7,8,9-HxCDD	100	109	109	64-162	
1,2,3,4,7,8-HxCDF	100	114	114	72-134	
1,2,3,6,7,8-HxCDF	100	120	120	84-130	
1,2,3,7,8,9-HxCDF	100	118	118	78-130	
2,3,4,6,7,8-HxCDF	100	121	121	70-156	
1,2,3,4,6,7,8-HpCDD	100	111	111	70-140	
1,2,3,4,6,7,8-HpCDF	100	118	118	82-122	
1,2,3,4,7,8,9-HpCDF	100	108	108	78-138	
OCDD	200	232	116	78-144	
OCDF	200	243	122	63-170	
13C-2,3,7,8-TCDD	200	68.6	34	20-175	
13C-2,3,7,8-TCDF	200	71.2	36	22-152	
13C-1,2,3,7,8-PeCDD	200	68.3	34	21-227	
13C-1,2,3,7,8-PeCDF	200	61.5	31	21-192	
13C-2,3,4,7,8-PeCDF	200	72.0	36	13-328	
13C-1,2,3,4,7,8-HxCDD	200	73.9	37	21-193	
13C-1,2,3,6,7,8-HxCDD	200	69.3	35	25-163	
13C-1,2,3,4,7,8-HxCDF	200	83.0	42	19-202	
13C-1,2,3,6,7,8-HxCDF	200	74.3	37	21-159	
13C-1,2,3,7,8,9-HxCDF	200	65.0	32	17-205	
13C-2,3,4,6,7,8-HxCDF	200	66.5	33	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	72.5	36	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	70.5	35	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	80.3	40	20-186	
13C-OCDD	400	155	39	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 19au21dfs1_22.d

Lab ID: 320-76888-A-1-B MS Client ID:

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	36.1	24000	22000	-4439	67-158	G E 4
1,2,3,7,8-PeCDD	181	290	470	102	70-142	
1,2,3,7,8-PeCDF	181	2200	2670	247	80-134	4
2,3,4,7,8-PeCDF	181	1600	1900	144	68-160	4
1,2,3,4,7,8-HxCDD	181	3.6 J	196	106	70-164	
1,2,3,6,7,8-HxCDD	181	7.0 J	203	108	76-134	
1,2,3,7,8,9-HxCDD	181	5.6 J	201	108	64-162	
1,2,3,4,7,8-HxCDF	181	3200	3130	-21	72-134	4
1,2,3,6,7,8-HxCDF	181	740	1040	165	84-130	4
1,2,3,7,8,9-HxCDF	181	42 J	251	116	78-130	
2,3,4,6,7,8-HxCDF	181	100	367	148	70-156	
1,2,3,4,6,7,8-HpCDD	181	68 J	265	109	70-140	
1,2,3,4,6,7,8-HpCDF	181	1100	1100	14	82-122	4
1,2,3,4,7,8,9-HpCDF	181	280	495	118	78-138	
OCDD	361	720	1050	91	78-144	
OCDF	361	460	890	118	63-170	
13C-2,3,7,8-TCDD	361	120	160	44	25-164	
13C-2,3,7,8-TCDF	361	130	149	41	24-169	
13C-1,2,3,7,8-PeCDD	361	120	139	39	25-181	q
13C-1,2,3,7,8-PeCDF	361	130	138	38	24-185	
13C-2,3,4,7,8-PeCDF	361	150	165	46	21-178	
13C-1,2,3,4,7,8-HxCDD	361	160	146	41	32-141	
13C-1,2,3,6,7,8-HxCDD	361	130	152	42	28-130	
13C-1,2,3,4,7,8-HxCDF	361	160	184	51	26-152	
13C-1,2,3,6,7,8-HxCDF	361	150	147	41	26-123	
13C-1,2,3,7,8,9-HxCDF	361	130	136	38	29-147	
13C-2,3,4,6,7,8-HxCDF	361	140	125	35	28-136	
13C-1,2,3,4,6,7,8-HpCDD	361	140	147	41	23-140	
13C-1,2,3,4,6,7,8-HpCDF	361	120	143	39	28-143	
13C-1,2,3,4,7,8,9-HpCDF	361	150	158	44	26-138	
13C-OCDD	723	250	300	41	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2111D2_005.d

Lab ID: 320-76888-A-1-B MS RA Client ID:

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	36.1	110000	121000	25826	75-158	G E 4
13C-2,3,7,8-TCDF	361	130	105	29	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 19au21dfs1_23.d

Lab ID: 320-76888-A-1-C MSD Client ID:

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	35.9	25300	4754	14	50	67-158	G E 4
1,2,3,7,8-PeCDD	180	508	124	8	50	70-142	
1,2,3,7,8-PeCDF	180	2550	181	5	50	80-134	4
2,3,4,7,8-PeCDF	180	2150	281	12	50	68-160	4
1,2,3,4,7,8-HxCDD	180	199	109	2	50	70-164	
1,2,3,6,7,8-HxCDD	180	202	108	1	50	76-134	
1,2,3,7,8,9-HxCDD	180	188	101	7	50	64-162	
1,2,3,4,7,8-HxCDF	180	3640	261	15	50	72-134	4
1,2,3,6,7,8-HxCDF	180	1130	214	8	50	84-130	4
1,2,3,7,8,9-HxCDF	180	238	110	5	50	78-130	
2,3,4,6,7,8-HxCDF	180	342	134	7	50	70-156	
1,2,3,4,6,7,8-HpCDD	180	262	108	1	50	70-140	
1,2,3,4,6,7,8-HpCDF	180	1310	132	18	50	82-122	4
1,2,3,4,7,8,9-HpCDF	180	474	107	4	50	78-138	
OCDD	359	921	56	13	50	78-144	F1
OCDF	359	925	128	4	50	63-170	
13C-2,3,7,8-TCDD	359	143	40			25-164	
13C-2,3,7,8-TCDF	359	132	37			24-169	
13C-1,2,3,7,8-PeCDD	359	135	38			25-181	
13C-1,2,3,7,8-PeCDF	359	128	36			24-185	
13C-2,3,4,7,8-PeCDF	359	143	40			21-178	
13C-1,2,3,4,7,8-HxCDD	359	133	37			32-141	
13C-1,2,3,6,7,8-HxCDD	359	122	34			28-130	q
13C-1,2,3,4,7,8-HxCDF	359	159	44			26-152	
13C-1,2,3,6,7,8-HxCDF	359	133	37			26-123	
13C-1,2,3,7,8,9-HxCDF	359	125	35			29-147	
13C-2,3,4,6,7,8-HxCDF	359	123	34			28-136	
13C-1,2,3,4,6,7,8-HpCDD	359	136	38			23-140	
13C-1,2,3,4,6,7,8-HpCDF	359	139	39			28-143	
13C-1,2,3,4,7,8,9-HpCDF	359	160	44			26-138	
13C-OCDD	719	265	37			17-157	q

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2111D2_006.d

Lab ID: 320-76888-A-1-C MSD RA Client ID:

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDF	35.9	127000	43390	5	50	75-158	G E 4
13C-2,3,7,8-TCDF	359	83.3	23			24-169	*5-

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab File ID: 24AU2111D2_004.d Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Date Extracted: 08/06/2021 12:58

Instrument ID: 11D2 Date Analyzed: 08/24/2021 10:23

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	320-76888-A-1-B MS RA	25AU2111D2_005.d	08/25/2021 11:28
	320-76888-A-1-C MSD RA	25AU2111D2_006.d	08/25/2021 12:07

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab File ID: 19au21dfs1_5.d Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Date Extracted: 08/06/2021 12:58

Instrument ID: DFS 1 Date Analyzed: 08/19/2021 16:27

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
11215702-072621-BN-SJSB094 (16-18)	320-76888-9	17au21dfs1_59.d	08/19/2021 11:06
	320-76888-A-1-B MS	19au21dfs1_22.d	08/20/2021 05:33
	320-76888-A-1-C MSD	19au21dfs1_23.d	08/20/2021 06:21
11215702-072621-BN-SJSB094 (16-18) RA	320-76888-9 RA	23AU2111D2_004.d	08/23/2021 11:27

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-2
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (16-18)
Lab Sample ID: 320-76888-9
Matrix: Sediment
Lab File ID: 17au21dfs1_59.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.51(g)
Date Analyzed: 08/19/2021 11:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 20.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	1.4	q	1.2	0.089
40321-76-4	1,2,3,7,8-PeCDD	ND		6.0	0.11
57117-41-6	1,2,3,7,8-PeCDF	ND		6.0	0.047
57117-31-4	2,3,4,7,8-PeCDF	ND		6.0	0.047
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.0	0.097
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.0	0.11
19408-74-3	1,2,3,7,8,9-HxCDD	ND		6.0	0.096
70648-26-9	1,2,3,4,7,8-HxCDF	ND		6.0	0.029
57117-44-9	1,2,3,6,7,8-HxCDF	ND		6.0	0.030
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.0	0.029
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.0	0.028
35822-46-9	1,2,3,4,6,7,8-HpCDD	2.6	J q B	6.0	0.076
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.33	J q B	6.0	0.064
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.0	0.058
3268-87-9	OCDD	45	B	12	0.19
39001-02-0	OCDF	ND		12	0.11
41903-57-5	Total TCDD	1.4	q	1.2	0.089
30402-14-3	Total TCDF	9.8	B	1.2	0.067
36088-22-9	Total PeCDD	ND		6.0	0.26
30402-15-4	Total PeCDF	ND		6.0	0.14
34465-46-8	Total HxCDD	2.0	J	6.0	0.10
55684-94-1	Total HxCDF	ND		6.0	0.036
37871-00-4	Total HpCDD	8.1	q B	6.0	0.076
38998-75-3	Total HpCDF	0.33	J q B	6.0	0.061

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-2
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (16-18)
Lab Sample ID: 320-76888-9
Matrix: Sediment
Lab File ID: 17au21dfs1_59.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.51(g)
Date Analyzed: 08/19/2021 11:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 20.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	41		25-164
89059-46-1	13C-2,3,7,8-TCDF	42		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	40		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	40		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	46		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	51		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	45		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	56		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	49		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	43		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	47		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	50		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	47		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	56		26-138
114423-97-1	13C-OCDD	54		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	51		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d
Lims ID: 320-76888-A-9-A
Client ID: 11215702-072621-BN-SJSB094 (16-18)
Sample Type: Client
Inject. Date: 19-Aug-2021 11:06:00 ALS Bottle#: 0 Worklist Smp#: 55
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-a-9-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 10:36:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1656

First Level Reviewer: stephensk Date: 19-Aug-2021 14:38:00

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.338	1224813	0.81	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.384	695838	0.84	1.3459	42.2	42.2	0.1368	0.1368	42.21	
2,3,7,8-TCDF	20.427	21609	0.68	1.0802	2.875	2.875	0.0278	0.0278		
A Non-2,3,7,8-sub-TCDF	19.878	9145	0.77	1.0802	1.217	1.217	0.0278	1.217		a
S Total TCDF					4.092	4.092	0.0278	0.0278		
D 13C-2,3,7,8-TCDD	21.717	471825	0.77	0.9317	41.3	41.3	0.2186	0.2186	41.35	
2,3,7,8-TCDD	21.769	3054	0.77	1.0753	0.8680	0.6019	0.0371	0.0371		RQM
$ 37Cl4-2,3,7,8-TCDD	21.769	250985		1.0083	20.3	20.3	0.0246	0.0246	50.81	
A Non-2,3,7,8-sub-TCDD	20.707						0.0371	0.2135		RQMU
S Total TCDD					0.8680	0.6019	0.0371	0.0371		RQ
D 13C-1,2,3,7,8-PeCDF	27.227	558119	1.58	1.1405	40.0	40.0	0.2329	0.2329	39.95	
1,2,3,7,8-PeCDF	27.244						0.0198	0.0198		RQU
D 13C-2,3,4,7,8-PeCDF	28.734	627410	1.56	1.1253	45.5	45.5	0.2360	0.2360	45.52	
2,3,4,7,8-PeCDF	28.760						0.0198	0.0198		RQU
A F1 PeCDFs	24.648						0.008162	0.0151		RQU
A Non-2,3,7,8-sub-PeCDF	28.125						0.0198	0.0573		RQU
S Total PeCDF							0.0573	0.0573		
D 13C-1,2,3,7,8-PeCDD	29.543	348504	1.65	0.7165	39.7	39.7	0.0535	0.0535	39.71	
1,2,3,7,8-PeCDD	29.637						0.0462	0.0462		
A Non-2,3,7,8-sub-PeCDD	28.489						0.0462	0.1083		RQU
S Total PeCDD							0.1083	0.1083		
D 13C-1,2,3,4,7,8-HxCDF	34.908	579215	0.56	0.9648	56.4	56.4	0.2069	0.2069	56.39	
1,2,3,4,7,8-HxCDF	34.933						0.0120	0.0120		U
D 13C-1,2,3,6,7,8-HxCDF	35.059	554484	0.53	1.0708	48.6	48.6	0.1864	0.1864	48.64	
1,2,3,6,7,8-HxCDF	35.119						0.0127	0.0127		
D 13C-2,3,4,6,7,8-HxCDF	35.892	518368	0.51	1.0413	46.8	46.8	0.1917	0.1917	46.76	
2,3,4,6,7,8-HxCDF	35.901						0.0117	0.0117		RQU
D 13C-1,2,3,7,8,9-HxCDF	36.777	441326	0.53	0.9731	42.6	42.6	0.2052	0.2052	42.60	
1,2,3,7,8,9-HxCDF	36.828						0.0123	0.0123		
A Non-2,3,7,8-sub-HxCDF	35.028						0.0121	0.0152		RQU
S Total HxCDF							0.0152	0.0152		

Report Date: 20-Aug-2021 10:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.583	1064525	1.22	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.095	413088	1.31	0.7587	51.1	51.1	0.1579	0.1579	51.15	
1,2,3,4,7,8-HxCDD	36.146						0.0405	0.0405		
D 13C-1,2,3,6,7,8-HxCDD	36.213	414291	1.31	0.8593	45.3	45.3	0.1394	0.1394	45.29	
1,2,3,6,7,8-HxCDD	36.264						0.0470	0.0470		
1,2,3,7,8,9-HxCDD	36.626						0.0403	0.0403		
A Non-2,3,7,8-sub-HxCDD	35.394	3688	1.07	1.0545	0.8454	0.8454	0.0424	0.8454		a
S Total HxCDD					0.8454	0.8454	0.0426	0.0426		
D 13C-1,2,3,4,6,7,8-HpCDF	38.598	371246	0.46	0.7359	47.4	47.4	0.1512	0.1512	47.39	
1,2,3,4,6,7,8-HpCDF	38.623	733	1.04	1.4421	0.1506	0.1369	0.0269	0.0269		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	39.860	407968	0.44	0.6854	55.9	55.9	0.1624	0.1624	55.92	
1,2,3,4,7,8,9-HpCDF	39.885						0.0242	0.0242		
A Non-2,3,7,8-sub-HpCDF	39.258						0.0253	0.0253		
S Total HpCDF					0.1506	0.1369	0.0255	0.0255		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	39.548	360854	1.00	0.6745	50.3	50.3	0.0989	0.0989	50.25	
1,2,3,4,6,7,8-HpCDD	39.565	4061	1.04	1.0503	1.159	1.071	0.0319	0.0319		RQ
A Non-2,3,7,8-sub-HpCDD	39.258	8762	1.05	1.0503	2.312	2.312	0.0319	2.312		
S Total HpCDD					3.471	3.383	0.0319	0.0319		RQ
D 13C-OCDD	42.046	624468	0.93	0.5446	107.7	107.7	0.0975	0.0975	53.85	
OCDF	42.156						0.0440	0.0440		RQU
OCDD	42.054	63029	0.87	1.0620	19.0	19.0	0.0804	0.0804		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d
Lims ID: 320-76888-A-9-A
Client ID: 11215702-072621-BN-SJSB094 (16-18)
Sample Type: Client
Inject. Date: 19-Aug-2021 11:06:00 ALS Bottle#: 0 Worklist Smp#: 55
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-a-9-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 10:36:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1656

First Level Reviewer: stephensk Date: 19-Aug-2021 14:38:00

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.338	21.427	-5		549400	78423	103	257	761		a
333.9338	21.347	21.427	-5		675413	91002	35	87	2600	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.384	20.401	-1	0.955	317546	45389	93	232	488		
317.9389	20.401	20.401	0	0.956	378292	54344	32	80	1698	0.84(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.427	20.436	-1	1.002	8718	1263	4	10	316		
305.8987	20.427	20.436	-1	1.002	12891	1739	8	20	217	0.68(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	19.722	19.878	-9	0.968	3982	623	4	10	156		a
305.8987	19.696	19.878	-11	0.966	5163	776	8	20	97	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.717	21.743	-2	1.018	204533	27006	103	257	262		
333.9338	21.726	21.743	-1	1.018	267292	35582	35	87	1017	0.77(0.65-0.89)	
2,3,7,8-TCDD											RQM
319.8965	21.769	21.777	-1	1.002	1329	225	9	22	25		M
321.8936	21.751	21.777	-2	1.002	3075	467	1	2	467	0.43(0.65-0.89)	M
	Empc Correction				1725	292	1	2	292		
37Cl4-2,3,7,8-TCDD											
327.8847	21.769	21.849	-5	1.020	250985	32260	17	42	1898		
A Non-2,3,7,8-sub-TCDD											MU
319.8965	18.320	20.707	-143	0.844	210	95	9	22	11		
	Empc Correction				17	6	9	22	1		
321.8936	18.286	20.707	-145	0.842	23	8	1	2	8	9.13(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	27.227	27.288	-4	1.276	341831	49828	65	162	767		
353.8970	27.219	27.288	-4	1.276	216288	31477	115	287	274	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											RQU
339.8597	27.313						1	2			
341.8567	27.313						6	15			
13C-2,3,4,7,8-PeCDF											
351.9000	28.734	28.795	-4	1.347	382665	50801	65	162	782		
353.8970	28.718	28.795	-5	1.346	244745	34260	115	287	298	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											RQU
339.8597	28.820						1	2			
341.8567	28.820						6	15			
A F1 PeCDFs											U
339.8597	24.324	24.648	-19	0.893	56	37	1	2	37		
341.8567	24.341	24.648	-18	0.894	275	88	2	5	44	0.20(1.32-1.78)	
	Empc Correction				36	23	2	5	12		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	25.805	28.125	-139	0.948	200	70	1	2	70		
341.8567	25.712	28.125	-144	0.944	150	41	6	15	7	1.33(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.543	29.612	-4	1.384	216831	27654	19	47	1455		
369.8919	29.543	29.612	-4	1.384	131673	17864	7	17	2552	1.65(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.637						8	20			
357.8516	29.637						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.489	28.489	0	0.964	655	86	8	20			
	Empc Correction				240	52	8	20	0		
357.8516	28.489	28.489	0	0.964	155	34	1	2		4.23(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.908	34.942	-2	0.954	206937	37358	65	162	575		
385.8610	34.899	34.942	-3	0.954	372278	71783	123	307	584	0.56(0.43-0.59)	
1,2,3,4,7,8-HxCDF											U
373.8208	34.959						4	10			
375.8178	34.959						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.059	35.111	-3	0.958	192547	35002	65	162	538		
385.8610	35.059	35.111	-3	0.958	361937	61719	123	307	502	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.119						4	10			
375.8178	35.119						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.892	35.919	-2	0.981	175277	35036	65	162	539		
385.8610	35.884	35.919	-2	0.981	343091	70760	123	307	575	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQU
373.8208	35.936						4	10			
375.8178	35.936						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.777	36.811	-2	1.005	152981	35049	65	162	539		
385.8610	36.777	36.811	-2	1.005	288345	63408	123	307	516	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.828						4	10			
375.8178	36.828						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	35.028	35.028	0	1.003	86	36	4	10			
	Empc Correction				53	35	4	10	0		
375.8178	35.028	35.028	0	1.003	43	29	2	5		2.00(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.583	36.609	-2		585389	126859	59	147	2150		
403.8529	36.583	36.609	-2		479136	108568	54	135	2011	1.22(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.095	36.129	-2	0.987	234562	54089	59	147	917		
403.8529	36.095	36.129	-2	0.987	178526	39105	54	135	724	1.31(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.146						8	20			
391.8127	36.146						8	20			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.213	36.247	-2	0.990	234980	48880	59	147	828		
403.8529	36.213	36.247	-2	0.990	179311	36785	54	135	681	1.31(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.264						8	20			
391.8127	36.264						8	20			
1,2,3,7,8,9-HxCDD											
389.8158	36.626						8	20			
391.8127	36.626						8	20			
A Non-2,3,7,8-sub-HxCDD											a
389.8158	34.234	35.394	-69	0.945	1906	349	8	20	44		a
391.8127	34.243	35.394	-69	0.946	1782	315	8	20	39	1.07(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.598	38.626	-2	1.055	116793	29429	49	122	601		
419.8220	38.606	38.626	-1	1.055	254453	60696	56	140	1084	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7817	38.623	38.630	0	1.001	374	115	13	32	9		
409.7788	38.606	38.630	-1	1.000	432	111	1	2	111	0.87(0.88-1.20)	M
	Empc Correction				359	110	1	2	110		
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.860	39.880	-1	1.090	124878	33675	49	122	687		
419.8220	39.852	39.880	-2	1.089	283090	76937	56	140	1374	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885						13	32			
409.7788	39.885						1	2			
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						13	32			
409.7788	39.258						1	2			

Report Date: 20-Aug-2021 10:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.548	39.569	-1	1.081	180830	48429	44	110	1101		
437.8140	39.548	39.569	-1	1.081	180024	47015	19	47	2474	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											RQ
423.7767	39.565	39.582	-1	1.000	2401	640	7	17	91		
	Empc Correction				2070	472	7	17	67		
425.7737	39.557	39.582	-1	1.000	1991	454	6	15	76	1.21(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.917	39.258	-20	0.984	4498	1028	7	17	147		
425.7737	38.926	39.258	-20	0.984	4264	1133	6	15	189	1.05(0.88-1.20)	
13C-OCDD											
469.7780	42.046	42.072	-2	1.149	301247	64670	25	62	2587		
471.7750	42.046	42.072	-2	1.149	323221	80473	25	62	3219	0.93(0.76-1.02)	
OCDF											RQU
441.7428	42.165						2	5			
443.7399	42.165						15	37			
OCDD											
457.7377	42.054	42.081	-2	1.000	29413	6659	10	25	666		
459.7348	42.054	42.081	-2	1.000	33616	7965	15	37	531	0.87(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 10:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Lims ID:	320-76888-A-9-A		
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Inject. Date:	19-Aug-2021 11:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	55

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	695838	99733

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	695838	99733

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.722	3982	623	5163	776	1.22	0.77	a
Signal Totals:							
	3982	623	5163	776			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9145	1399				0.77	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.217 = (9145 * 100.000) / (695838 * 1.080)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 20-Aug-2021 10:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Lims ID:	320-76888-A-9-A		
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Inject. Date:	19-Aug-2021 11:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	55

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	471825	62588

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	471825	62588

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.320	210	95	23	8	0.0459	9.13	RQ
18.320	17	6	23	8	0.007884		Empc Correction
18.741	193	50	239	41	0.0851	0.81	
19.670	977	181	612	187	0.3132	1.60	RQ
19.670	471	143	612	187	0.2135		Empc Correction
20.212	143	46	53	24	0.0386	2.70	RQ
20.212	40	18	53	24	0.0183		Empc Correction
20.410	186	52	103	47	0.0570	1.81	RQ
20.410	79	36	103	47	0.0359		Empc Correction
21.846	365	113	90	65	0.0897	4.06	RQ
21.846	69	50	90	65	0.0313		Empc Correction
22.156	210	54	42	22	0.0497	5.00	RQ
22.156	32	16	42	22	0.0146		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 10:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Lims ID:	320-76888-A-9-A		
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Inject. Date:	19-Aug-2021 11:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	55

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	558119	81305
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	627410	85061

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	592764	83183

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.324	56	37	275	88	0.0542	0.20	RQ
24.324	56	37	36	23	0.0151		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Lims ID:	320-76888-A-9-A		
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Inject. Date:	19-Aug-2021 11:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	55

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	558119	81305
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	627410	85061

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	592764	83183

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.805	200	70	150	41	0.0573	1.33	
27.438	57	14	135	29	0.0314	0.42	RQ
27.438	57	14	36	9	0.0152		Empc Correction
27.825	51	25	207	71	0.0422	0.25	RQ
27.825	51	25	32	16	0.0136		Empc Correction
29.037	72	20	63	37	0.0221	1.14	RQ
29.037	72	20	46	12	0.0193		Empc Correction
30.292	16	7	457	147	0.0774	0.04	RQ
30.292	16	7	10	4	0.004254		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 10:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Lims ID:	320-76888-A-9-A		
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Inject. Date:	19-Aug-2021 11:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	55

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	348504	45518

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	348504	45518

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.174	655	86	155	34	0.2221	4.23	RQ
30.174	240	52	155	34	0.1083		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Lims ID:	320-76888-A-9-A		
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Inject. Date:	19-Aug-2021 11:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	55

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	579215	109141
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	554484	96721
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	518368	105796
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	441326	98457

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	523348	102528

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
35.741	86	36	43	29	0.0205	2.00	RQ
35.741	53	35	43	29	0.0152		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 10:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Lims ID:	320-76888-A-9-A		
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Inject. Date:	19-Aug-2021 11:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	55

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	413088	93194
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	414291	85665
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	413689	89429

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.234	1906	349	1782	315	0.8454	1.07	a
Signal Totals:							
	1906	349	1782	315			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3688	664				1.07	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8454 = (3688 * 100.000) / (413689 * 1.055)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 20-Aug-2021 10:36:46 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Lims ID:	320-76888-A-9-A		
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Inject. Date:	19-Aug-2021 11:06:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	55

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	360854	95444

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	360854	95444

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.917	4498	1028	4264	1133	2.31	1.05	
Signal Totals:							
	4498	1028	4264	1133			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8762	2161				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.312 = (8762 * 100.000) / (360854 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d				
Injection Date:	19-Aug-2021 11:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-9-A	Lab Sample ID:	320-76888-9		
Client ID:	11215702-072621-BN-SJSB094 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	55
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 21.75
Area: 1261
Amount: 0.453313
Amount Units: pg/ul

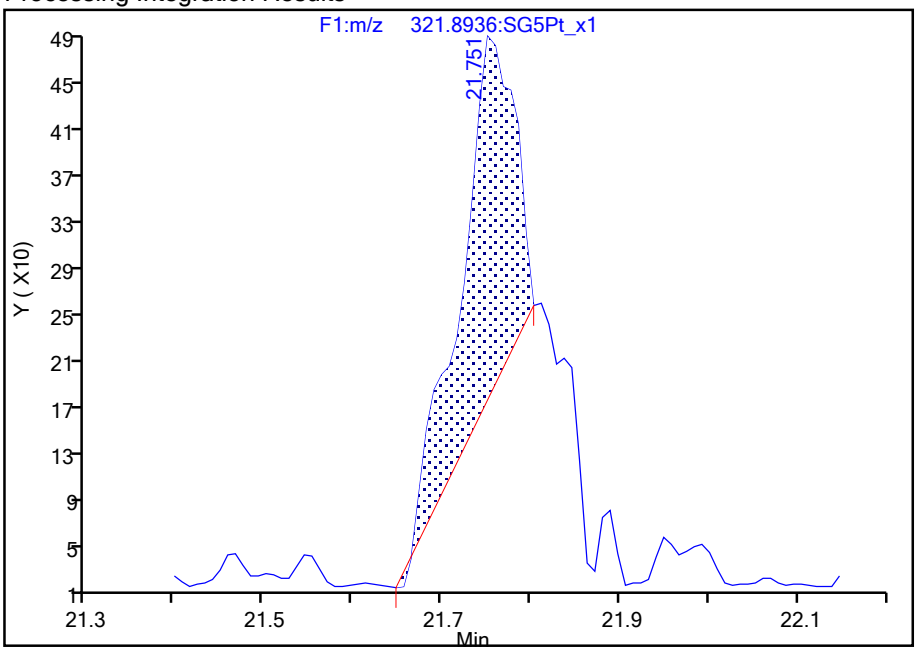

Manual Integration Results

RT: 21.75
Area: 3075
Amount: 0.867997
Amount Units: pg/ul

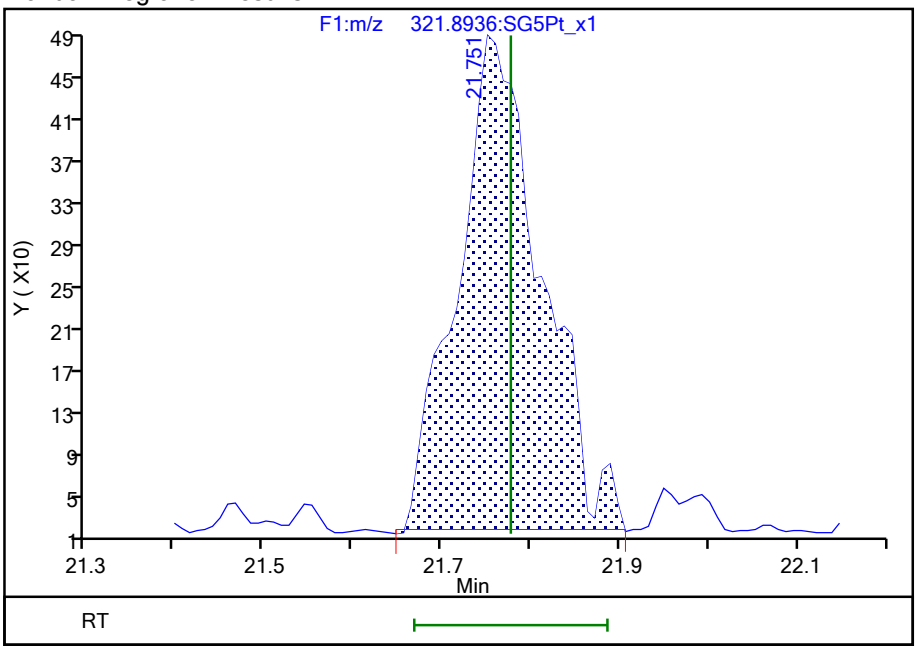

Reviewer: dadunj, 20-Aug-2021 10:34:23

Audit Action: Manually Integrated Audit Reason: Baseline

787144

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d				
Injection Date:	19-Aug-2021 11:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-9-A	Lab Sample ID:	320-76888-9		
Client ID:	11215702-072621-BN-SJSB094 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	55
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.77
Area: 1039
Amount: 0.453313
Amount Units: pg/ul

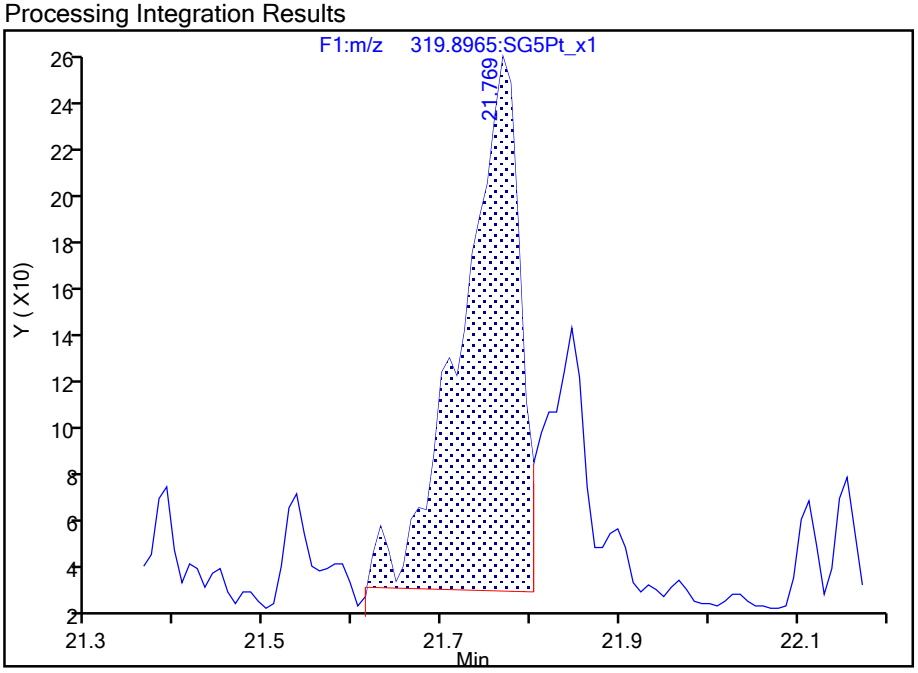

Manual Integration Results

RT: 21.77
Area: 1329
Amount: 0.867997
Amount Units: pg/ul

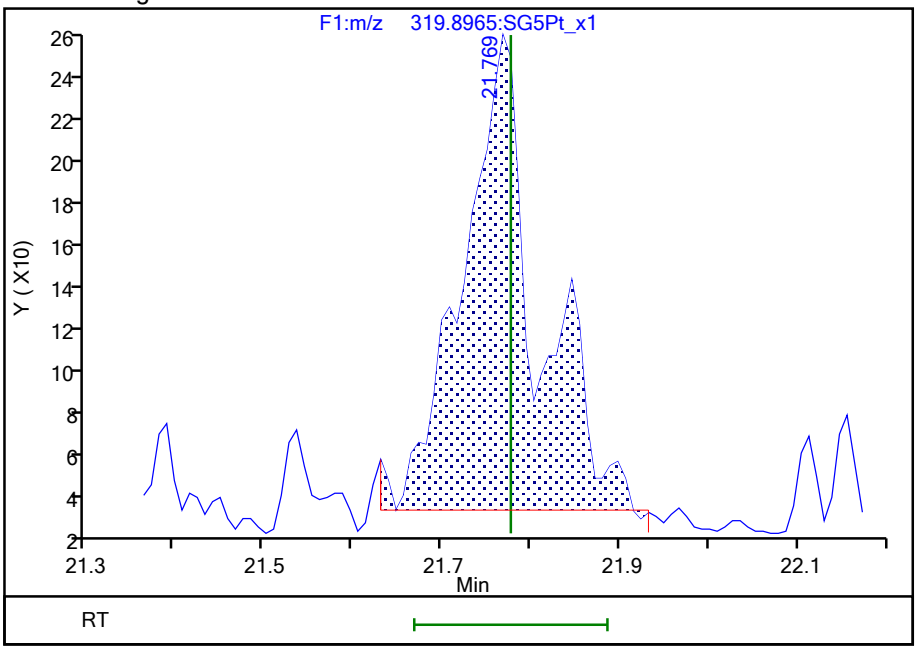

Reviewer: dadunj, 20-Aug-2021 10:34:28

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d				
Injection Date:	19-Aug-2021 11:06:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-9-A	Lab Sample ID:	320-76888-9		
Client ID:	11215702-072621-BN-SJSB094 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	55
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.61
Area: 466
Amount: 0.156903
Amount Units: pg/ul

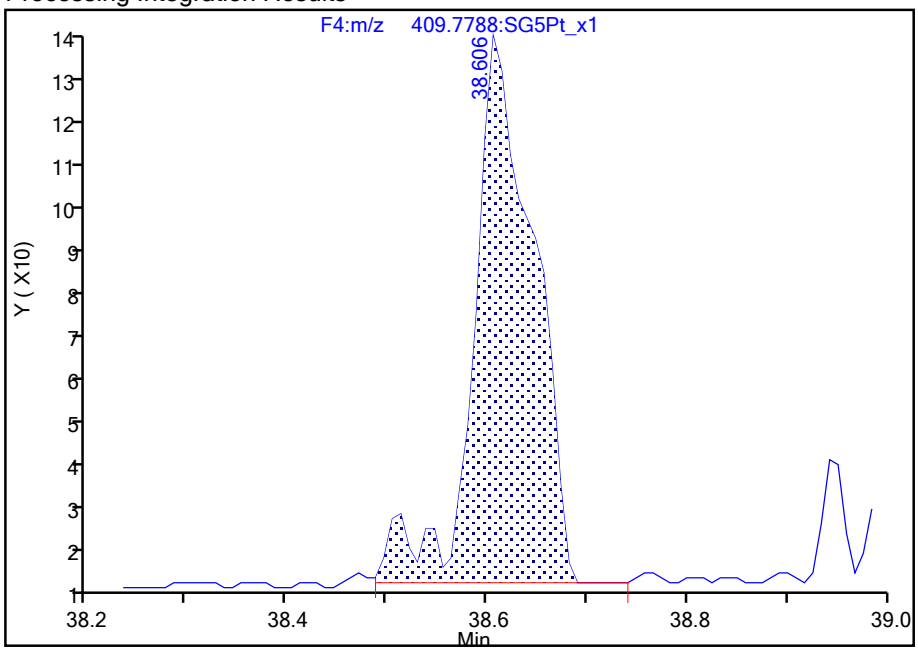

Manual Integration Results

RT: 38.61
Area: 432
Amount: 0.150552
Amount Units: pg/ul

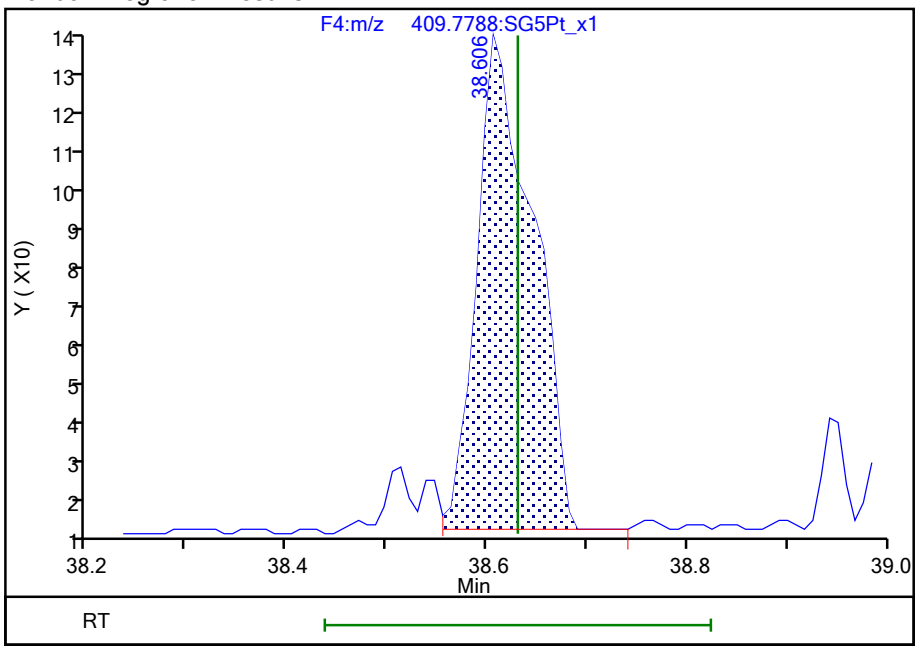

Reviewer: dadunj, 20-Aug-2021 10:35:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

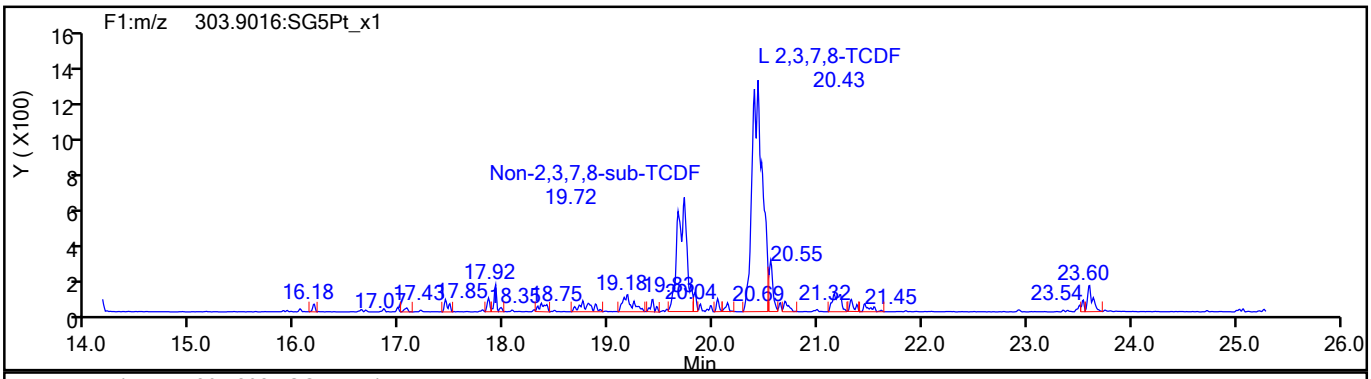

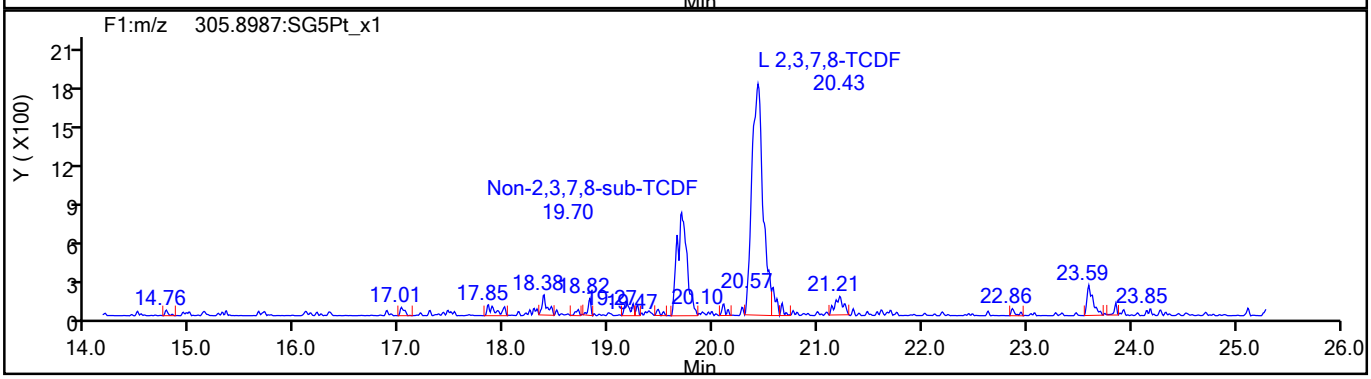

TCDF Standards

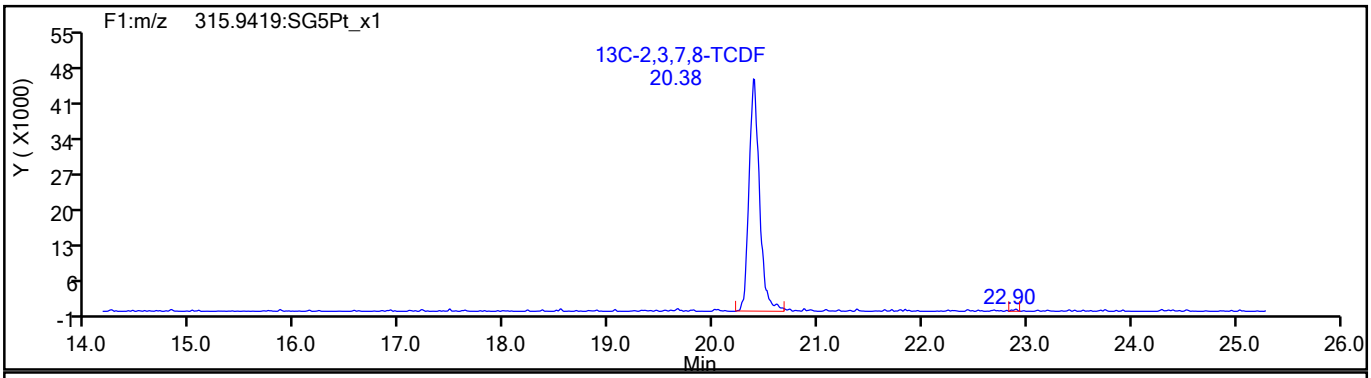

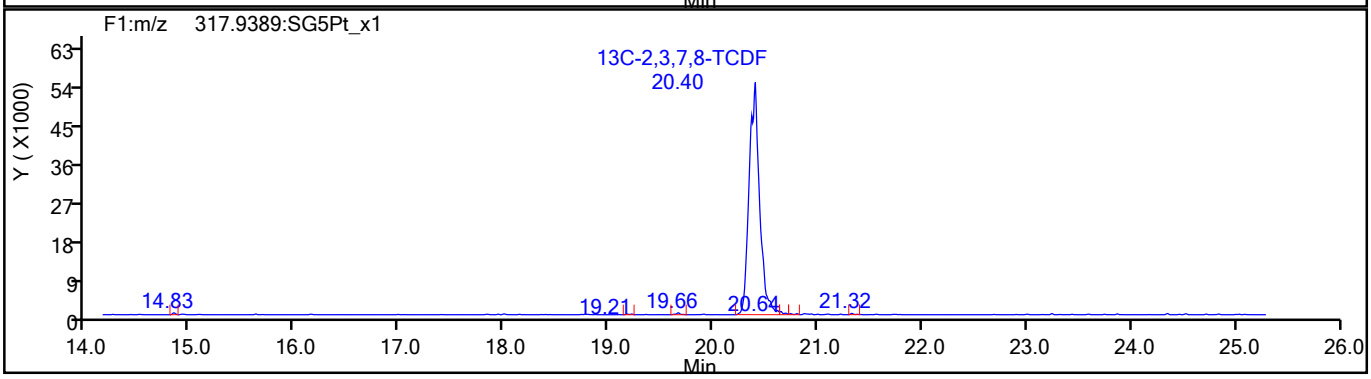

787147

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

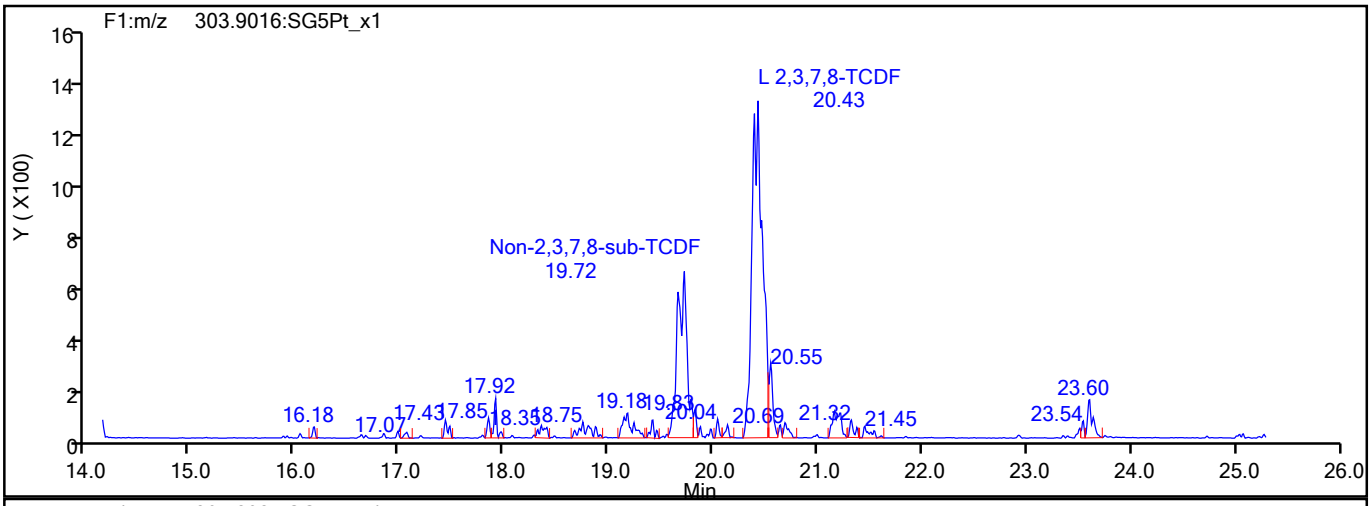

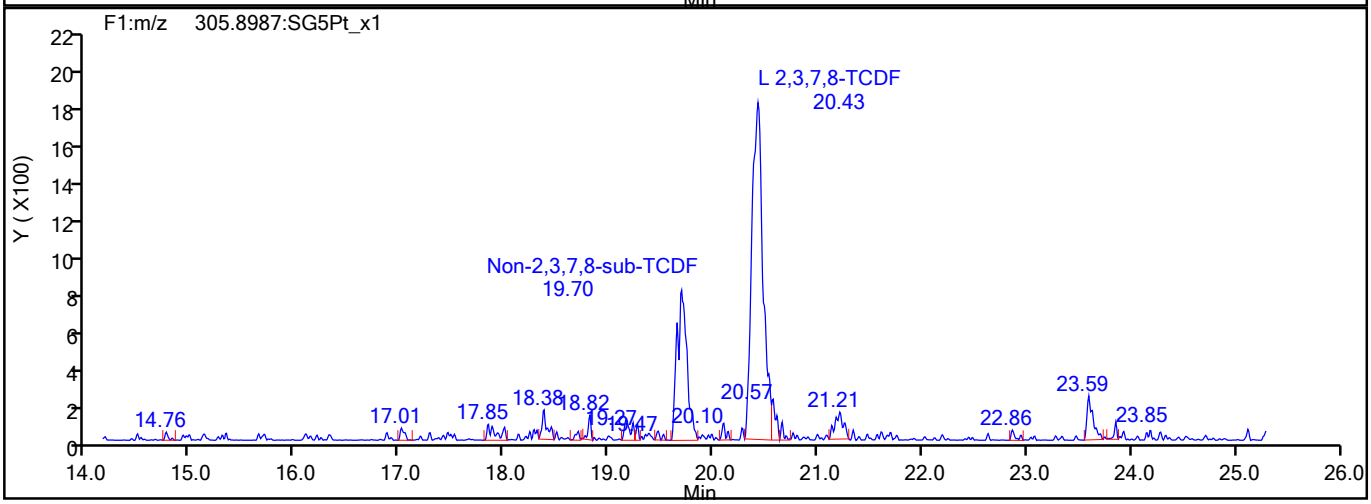

TCDF Interference Mass

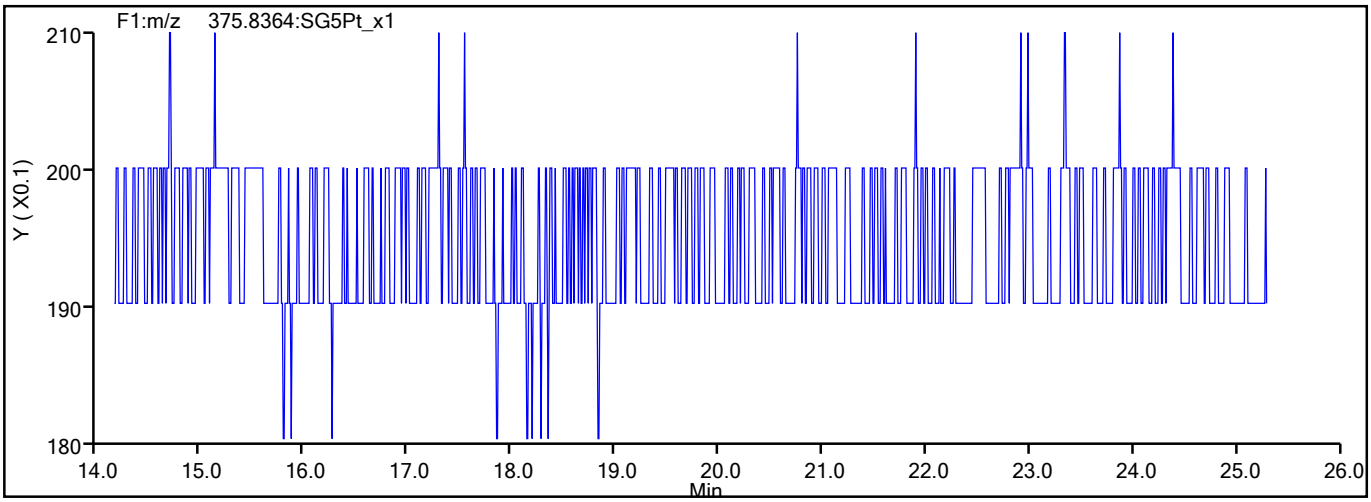

787148

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

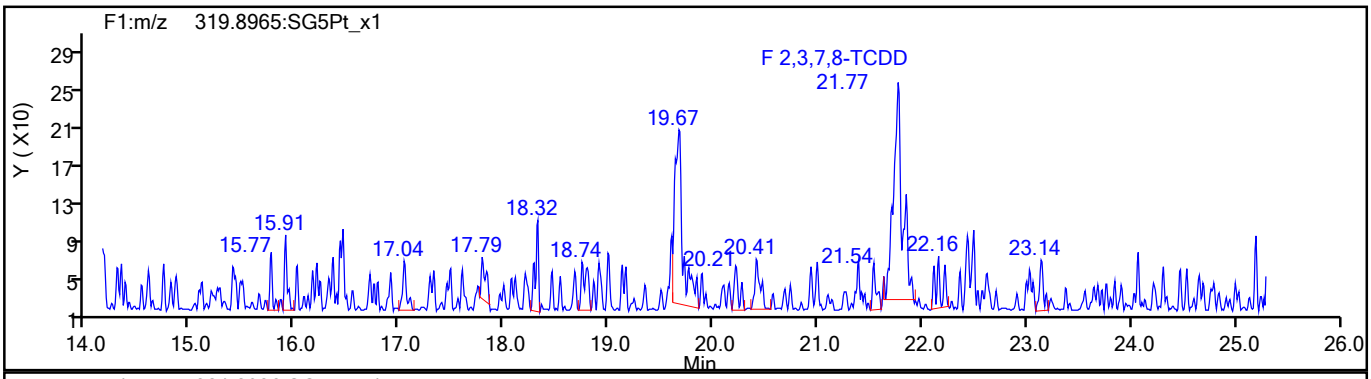

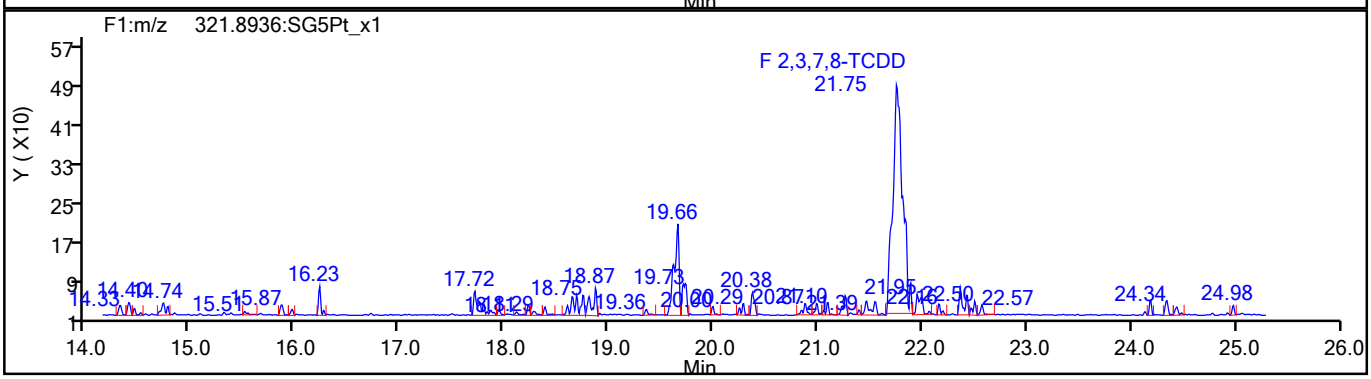

TCDD Standards

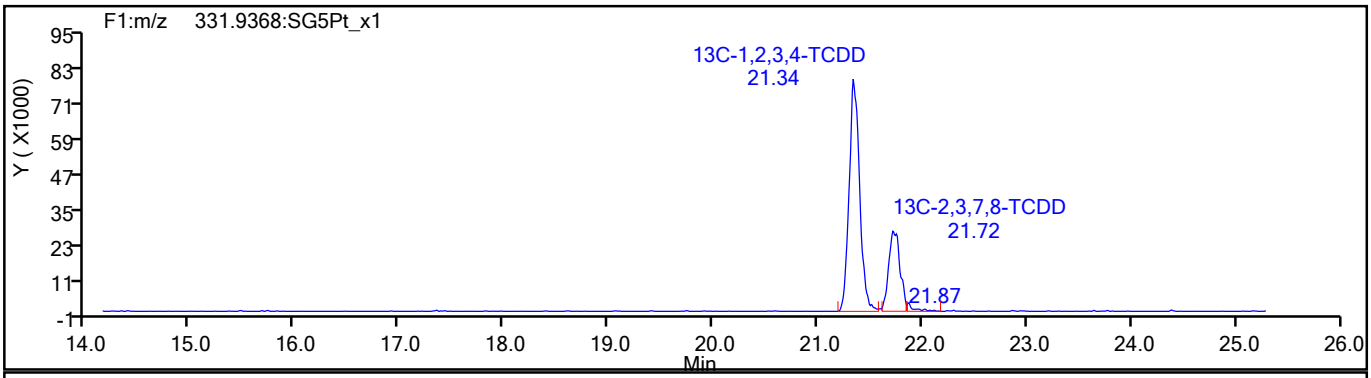

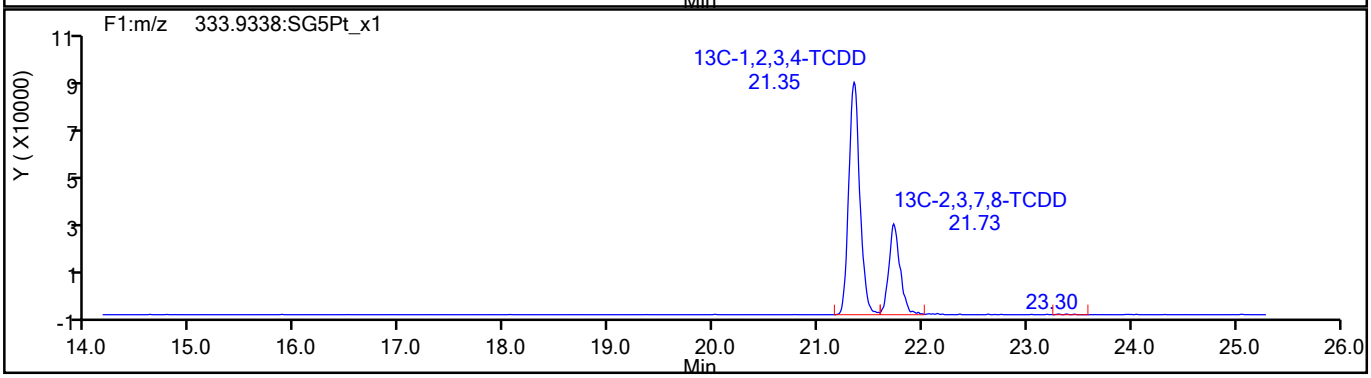

787149

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

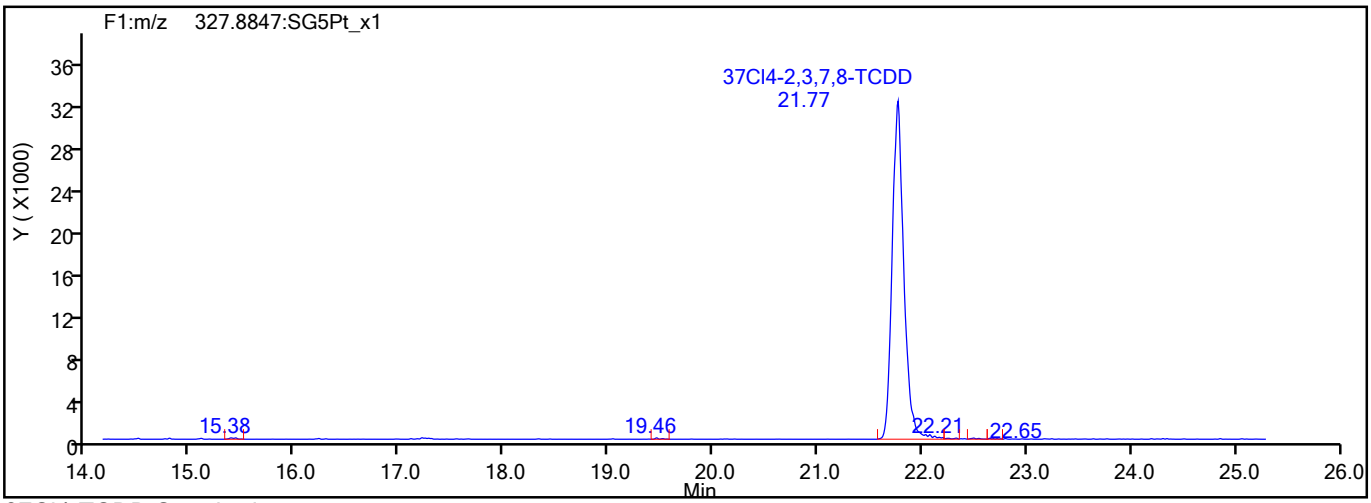

37Cl4-TCDD Standards

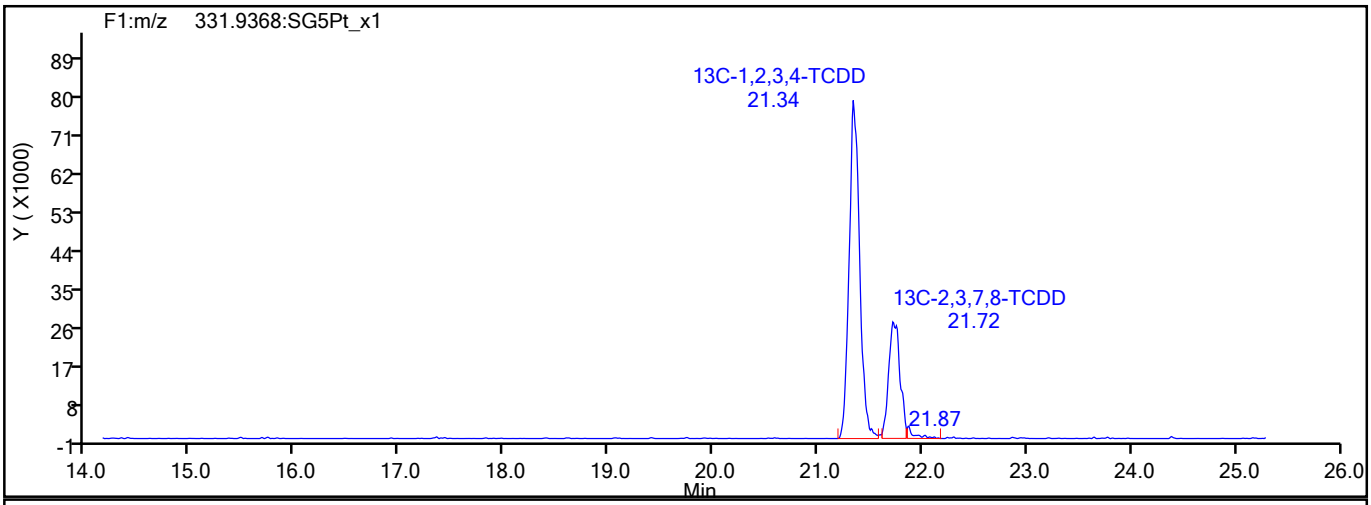

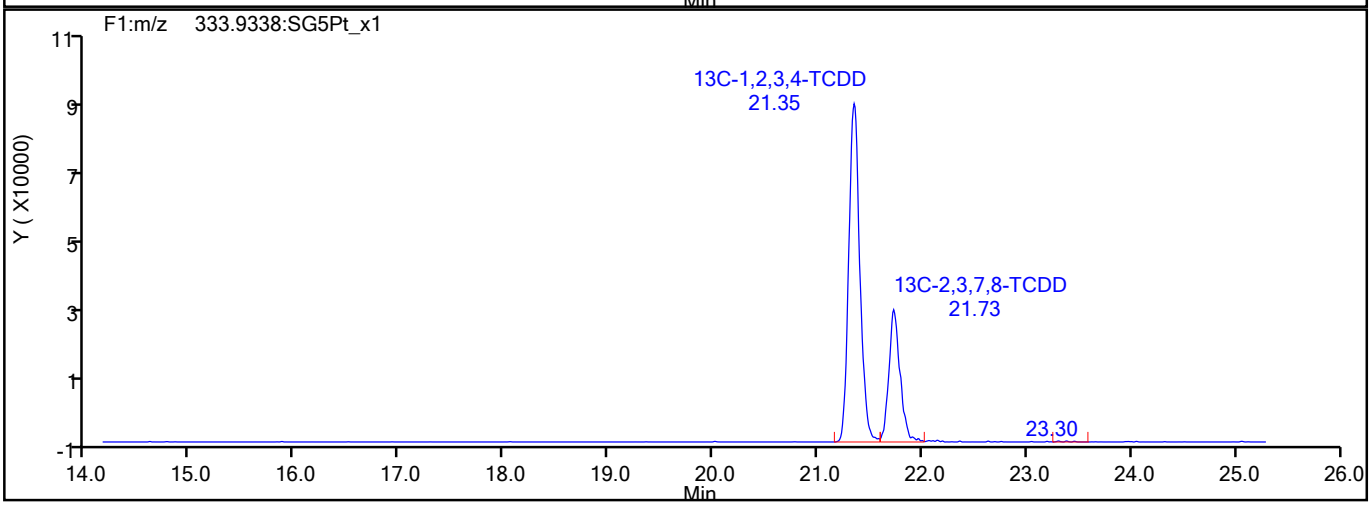

787150

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

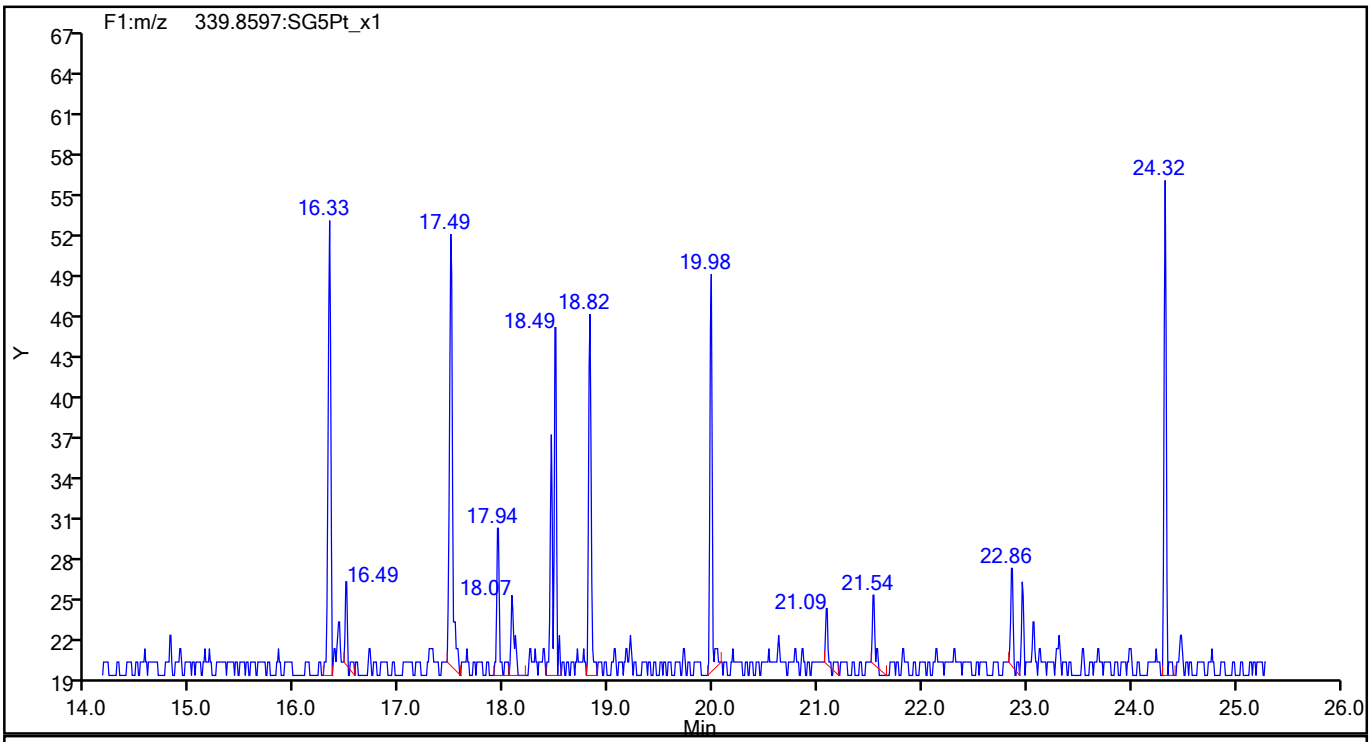

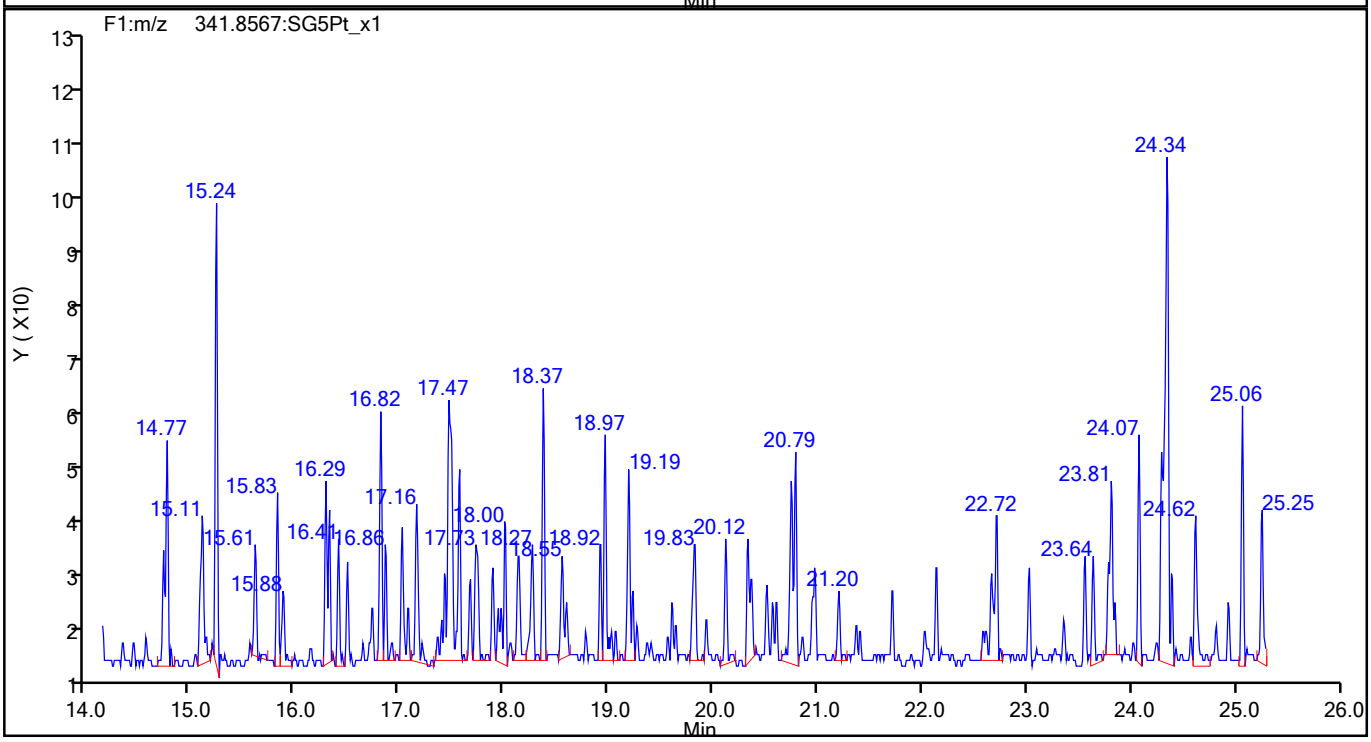

787151

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

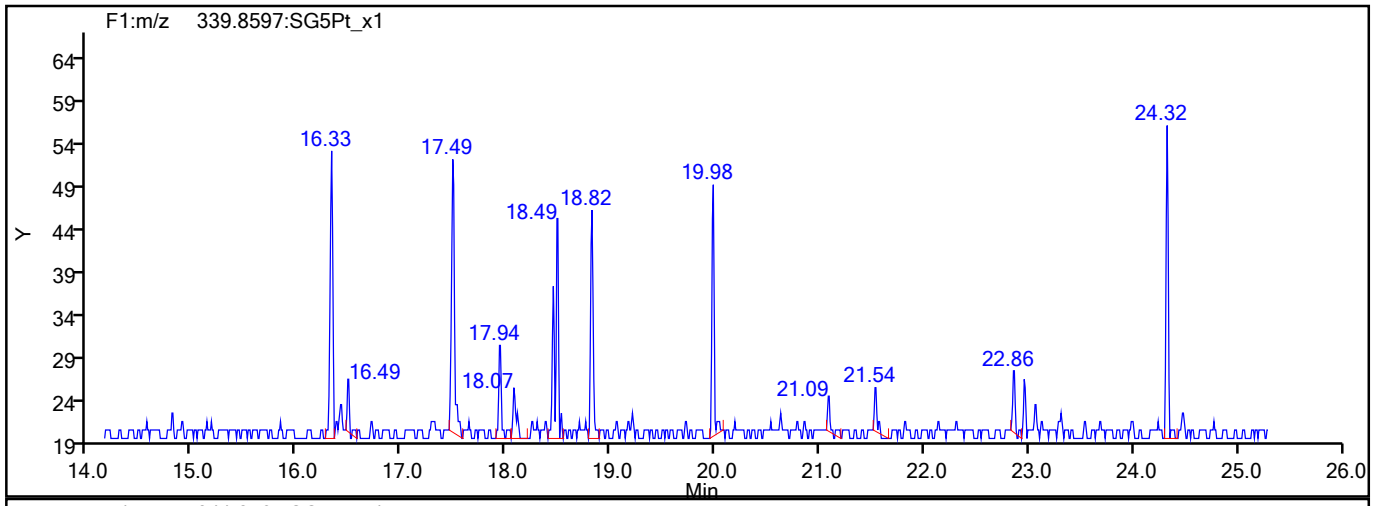

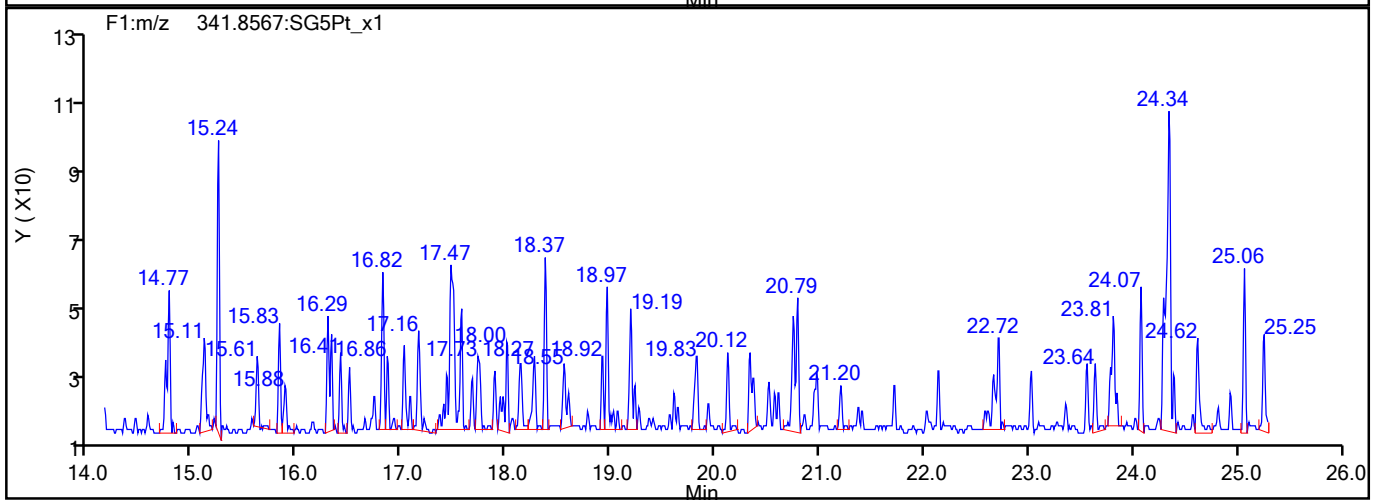

F1 PeCDFs Interference Mass

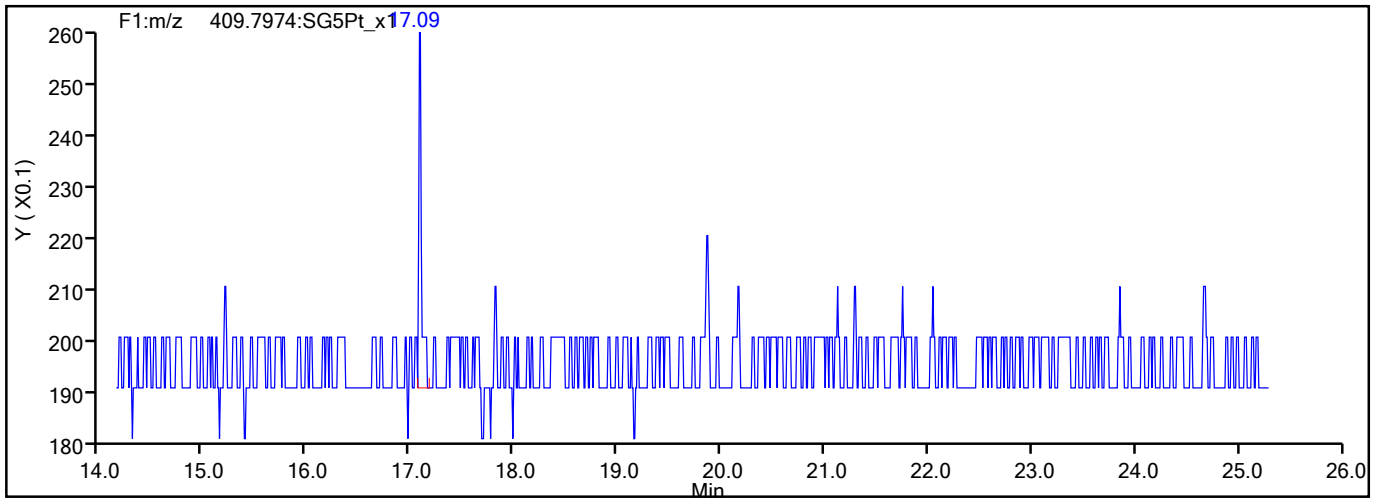

787152

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

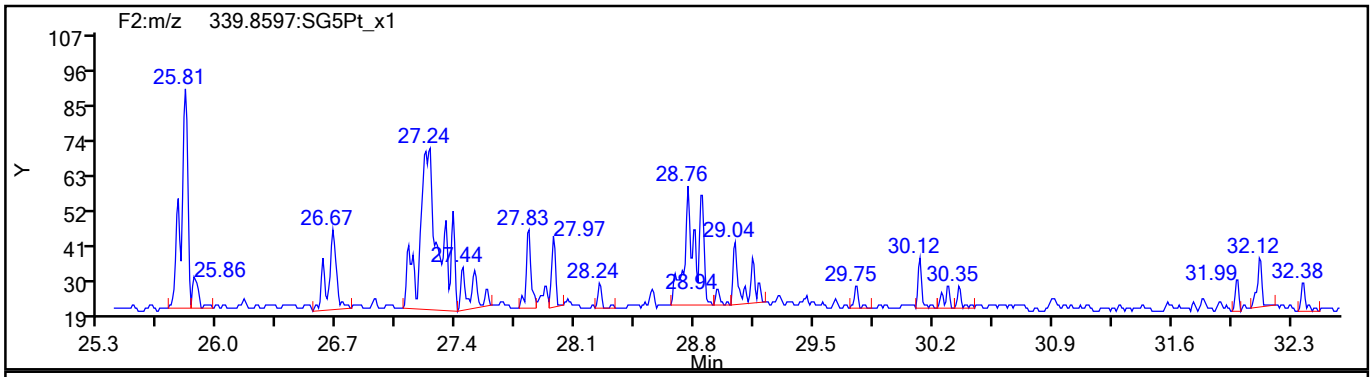

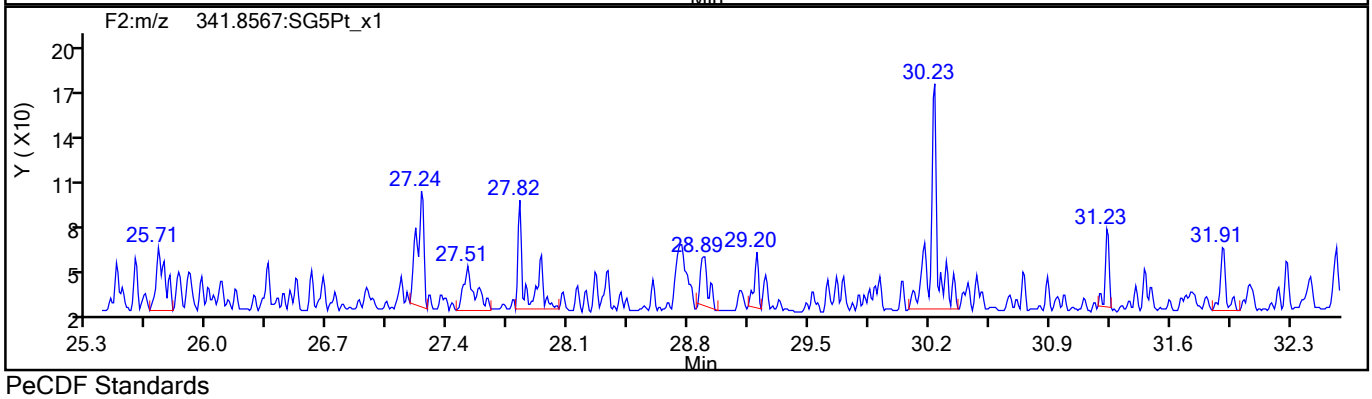

PeCDF Standards

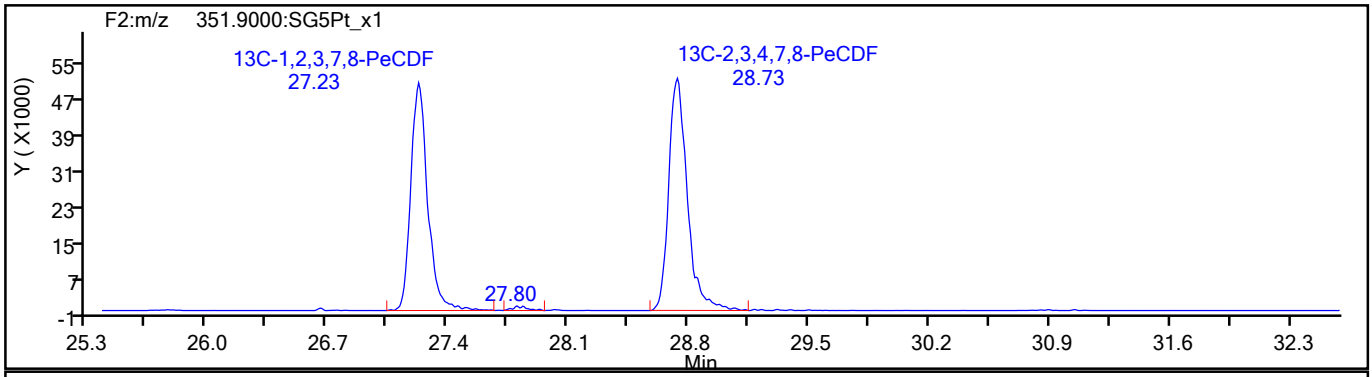

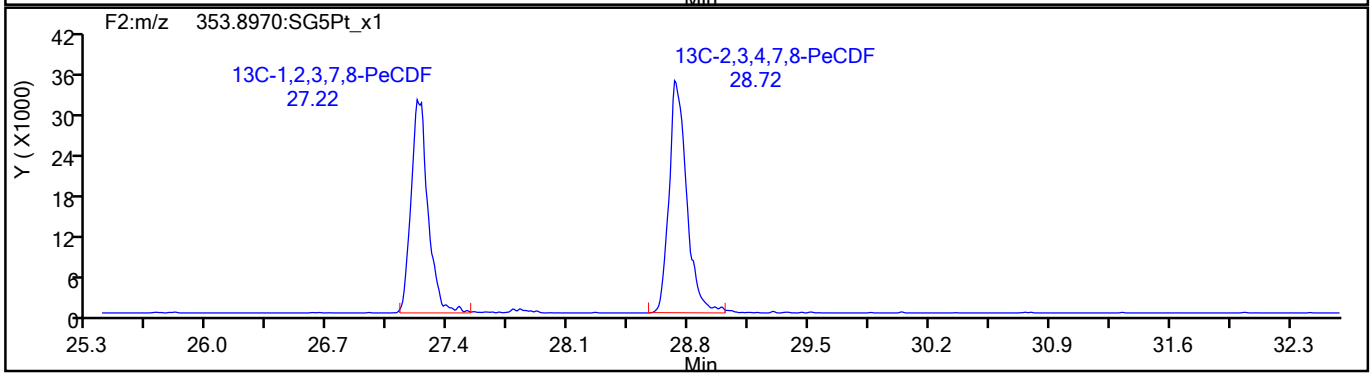

787153

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

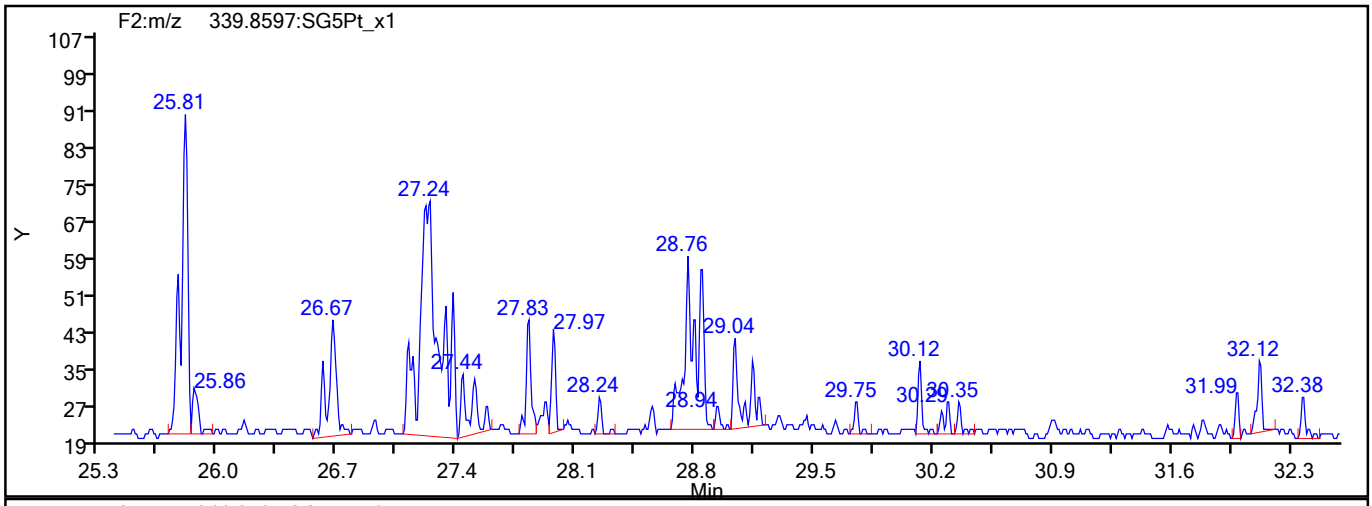

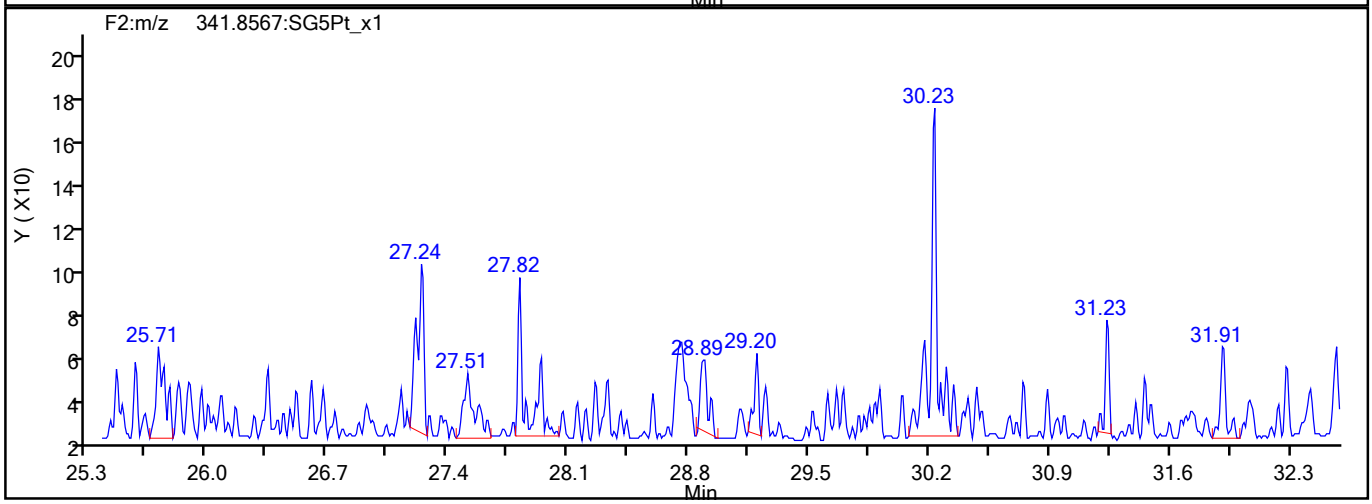

PeCDF Interference Mass

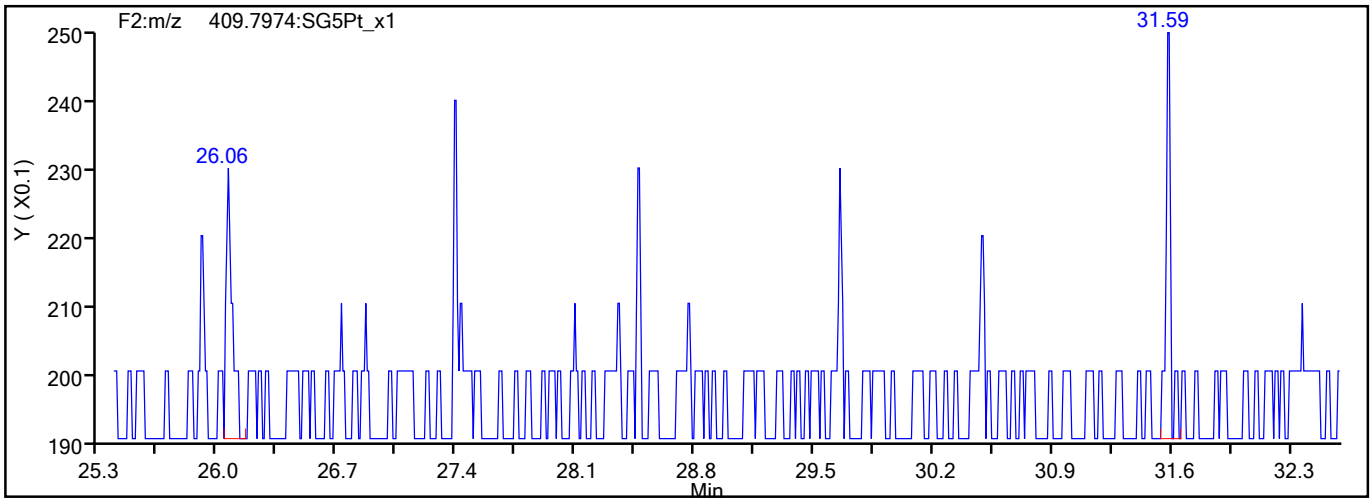

787154

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

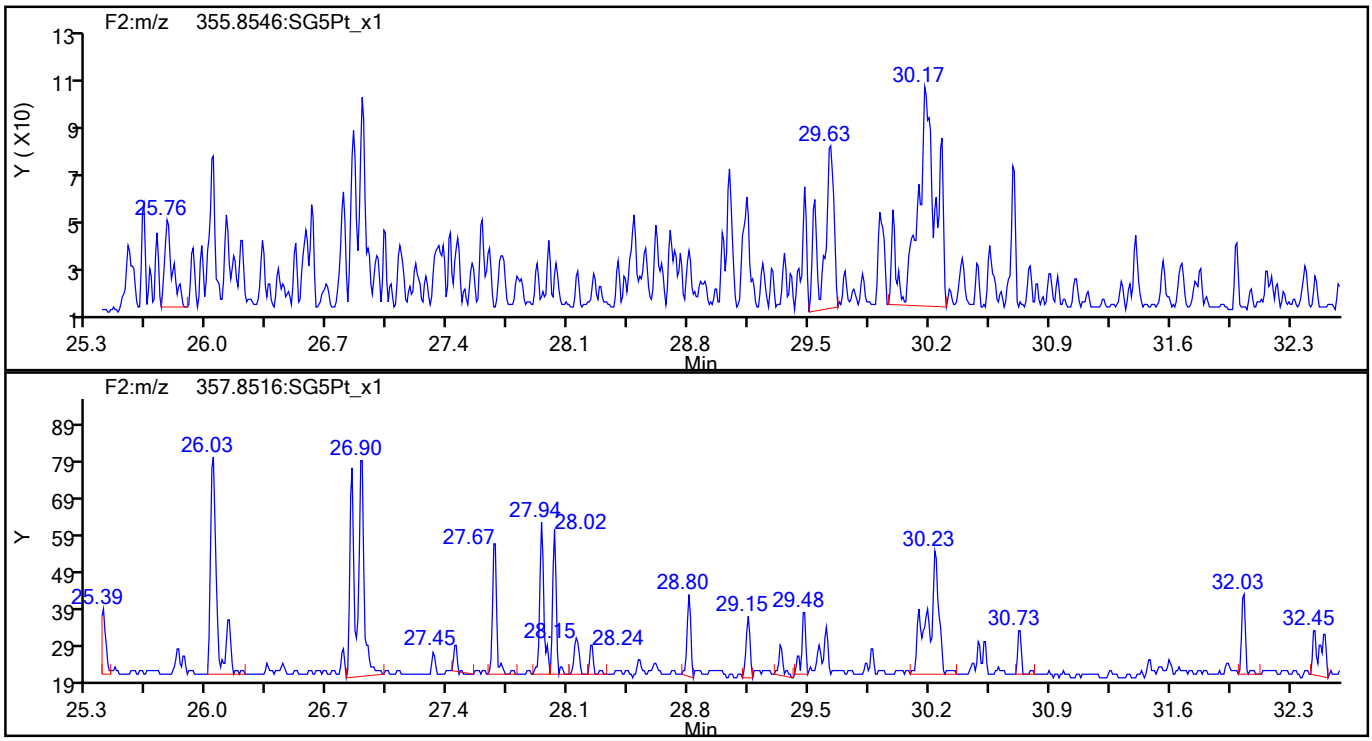

PeCDD Standards

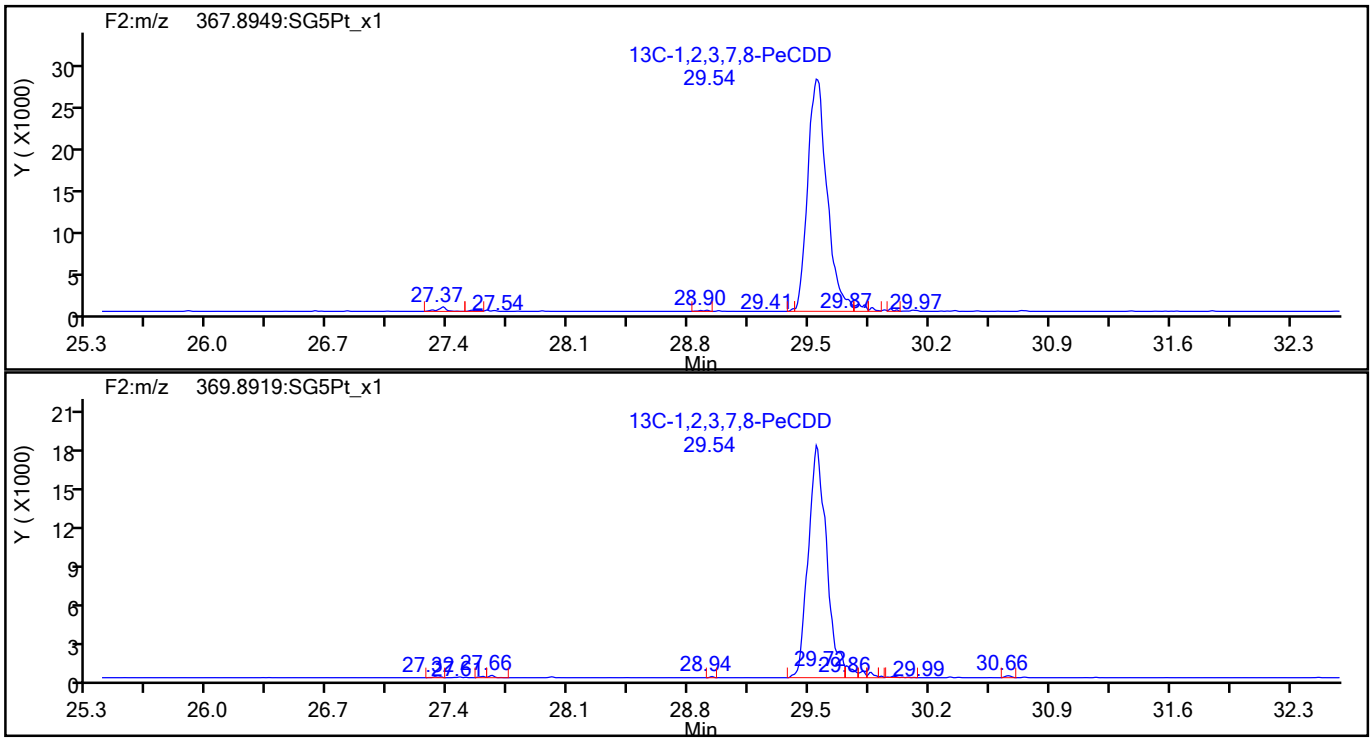

787155

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

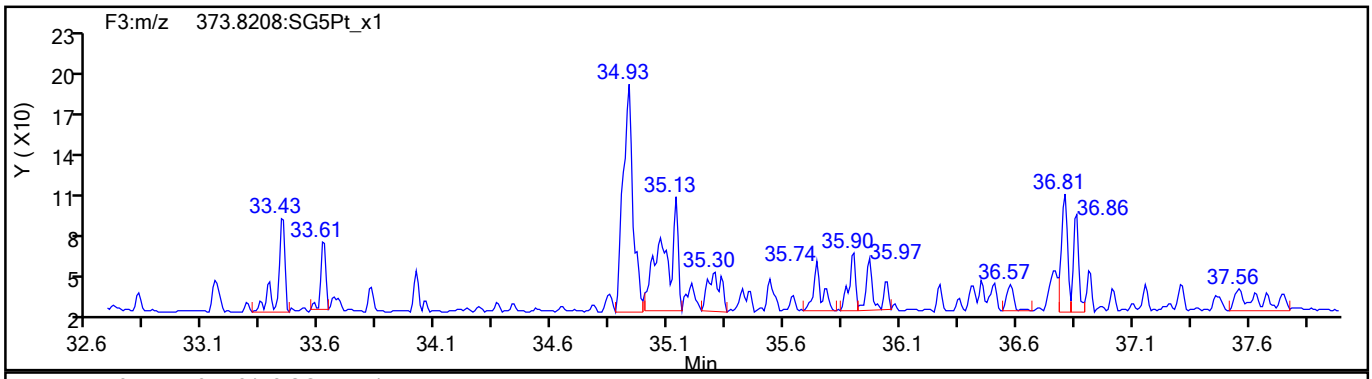

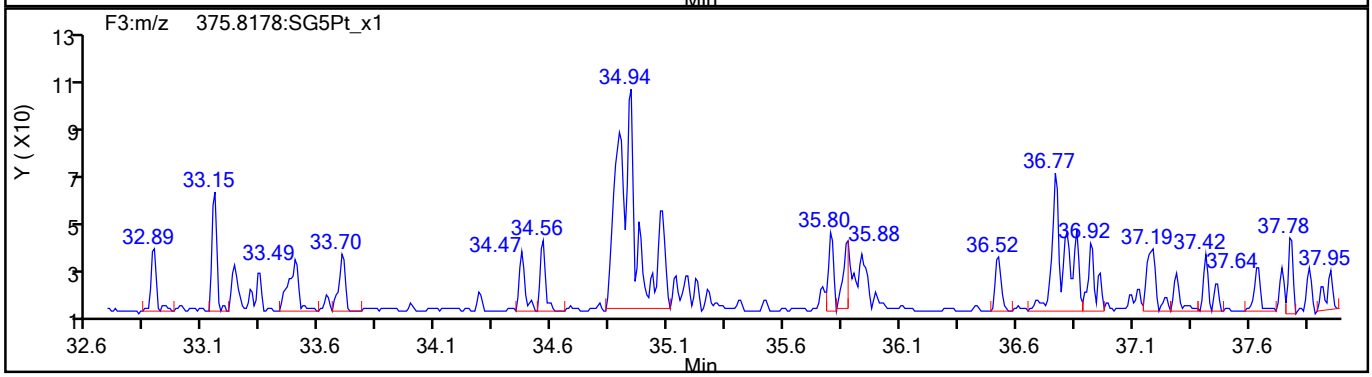

HxCDF Standards

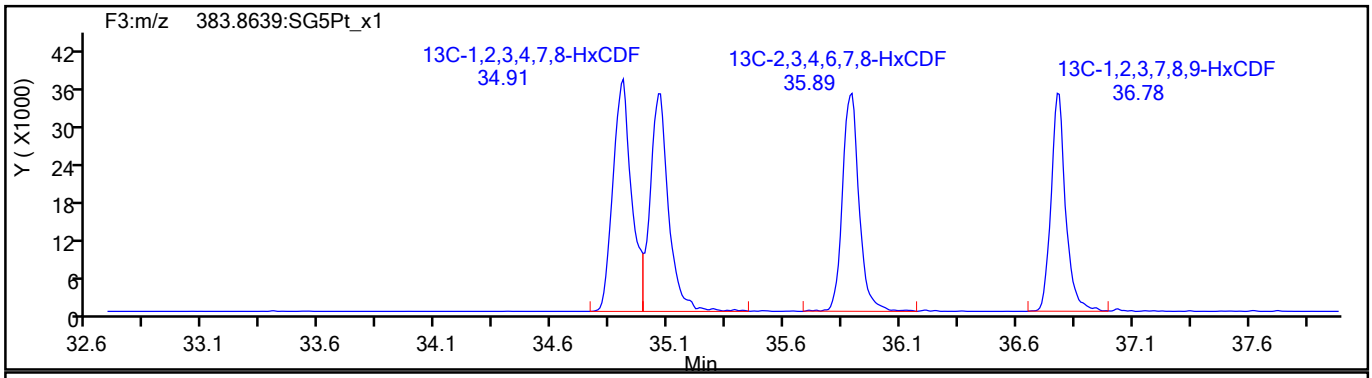

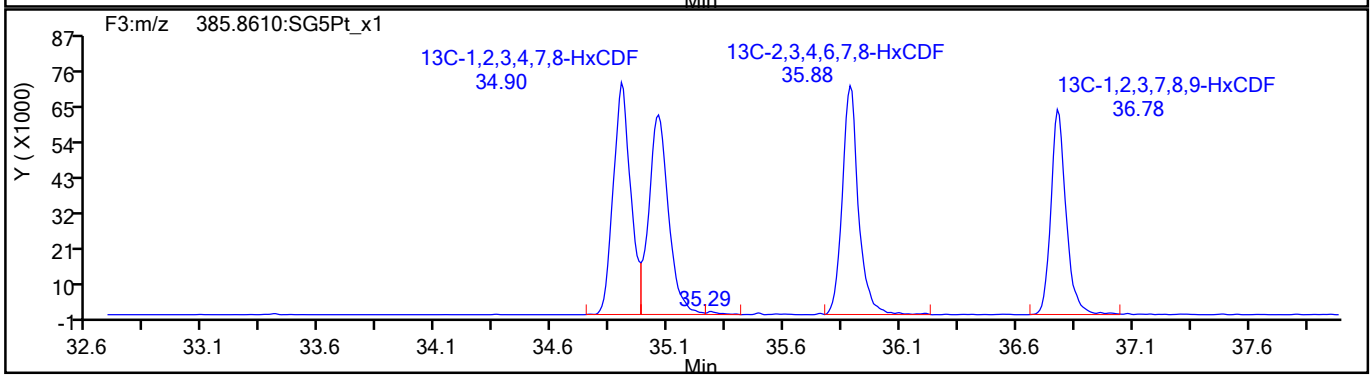

787156

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

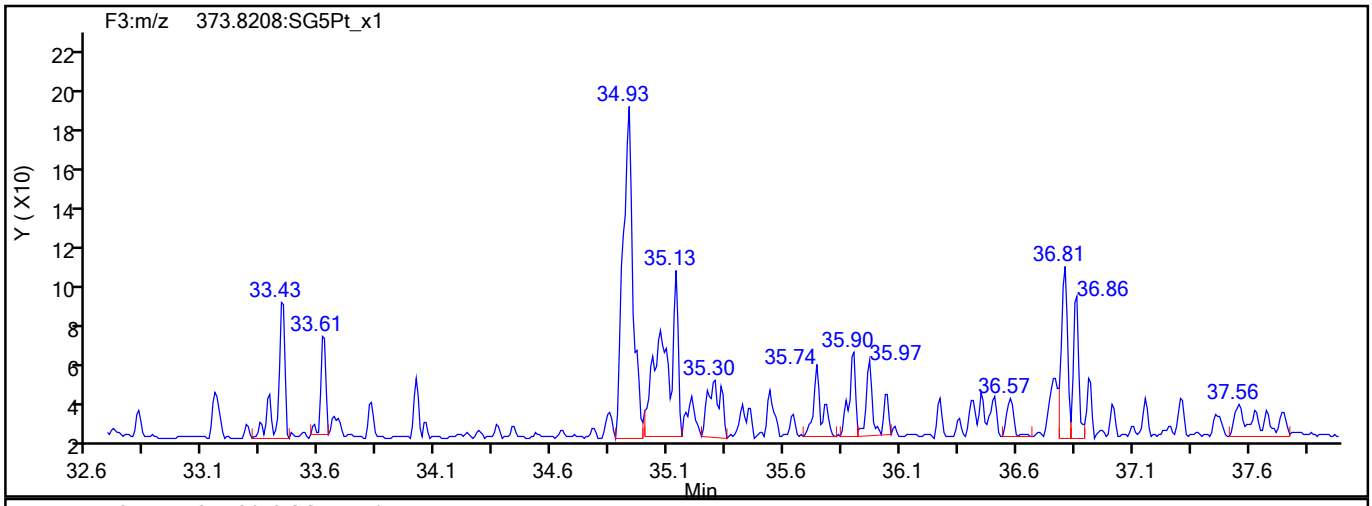

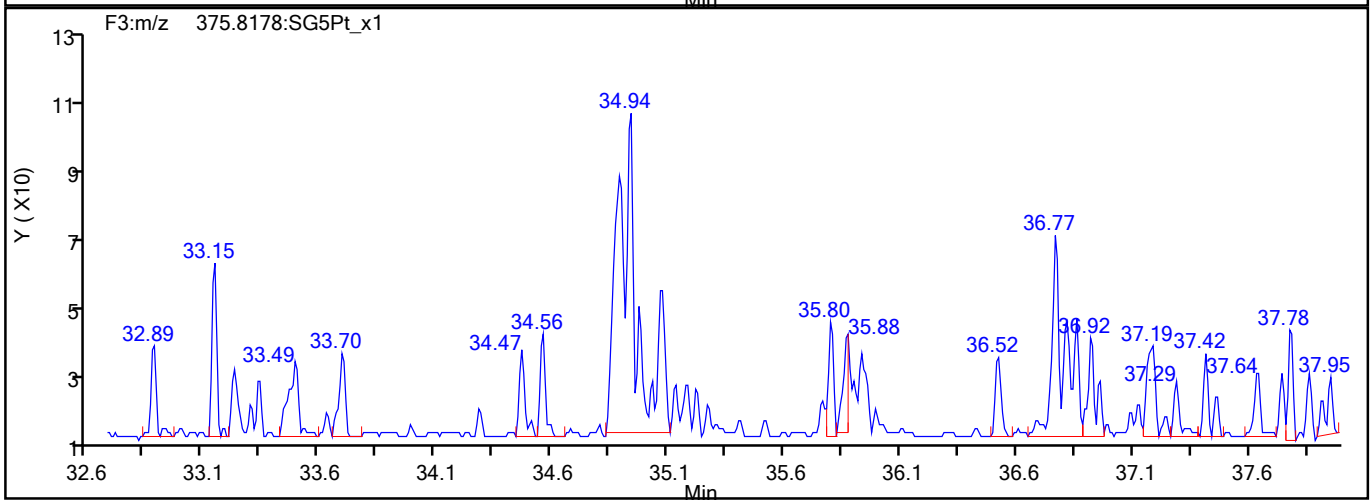

HxCDF Interference Mass

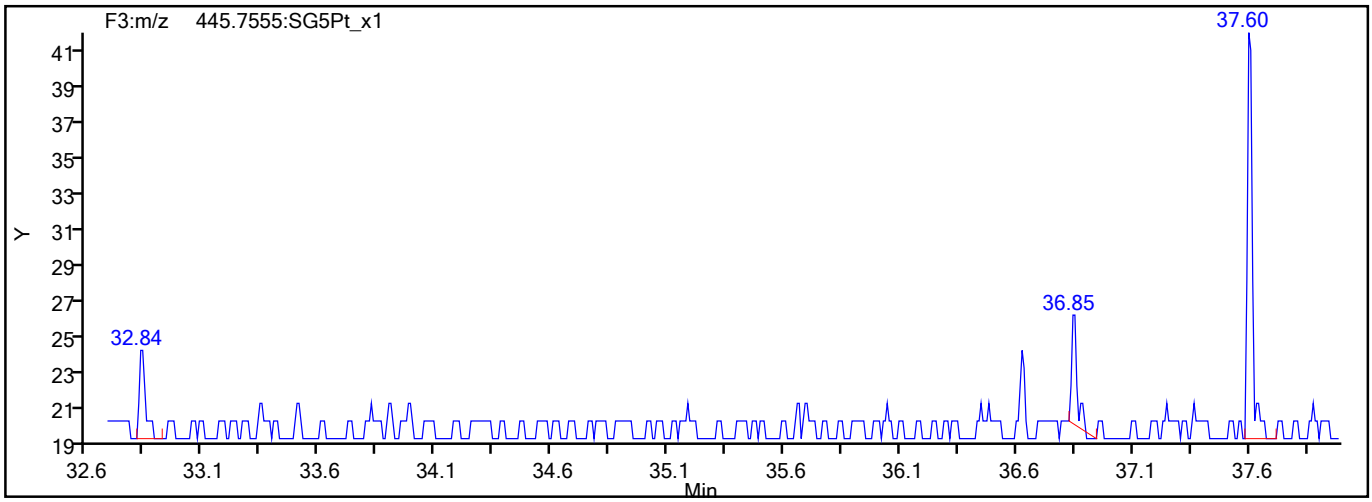

787157

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

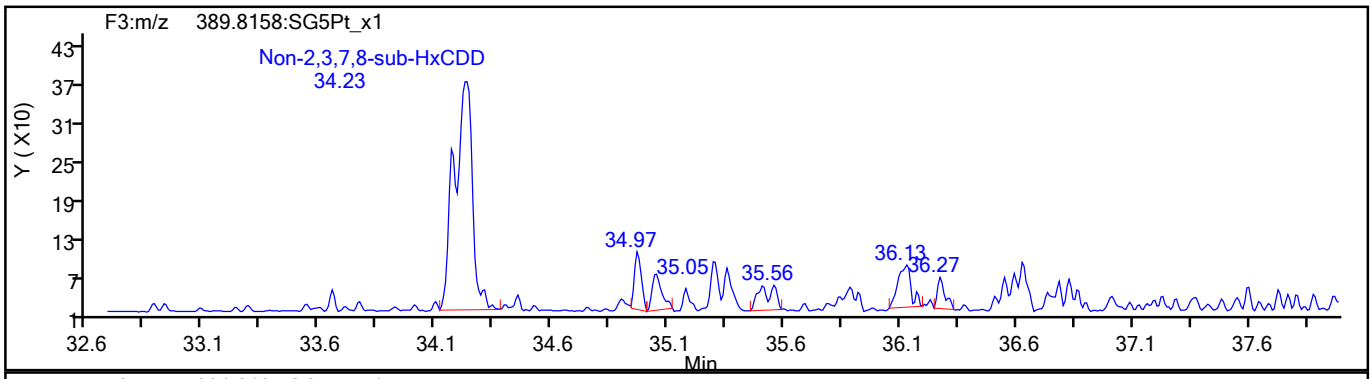

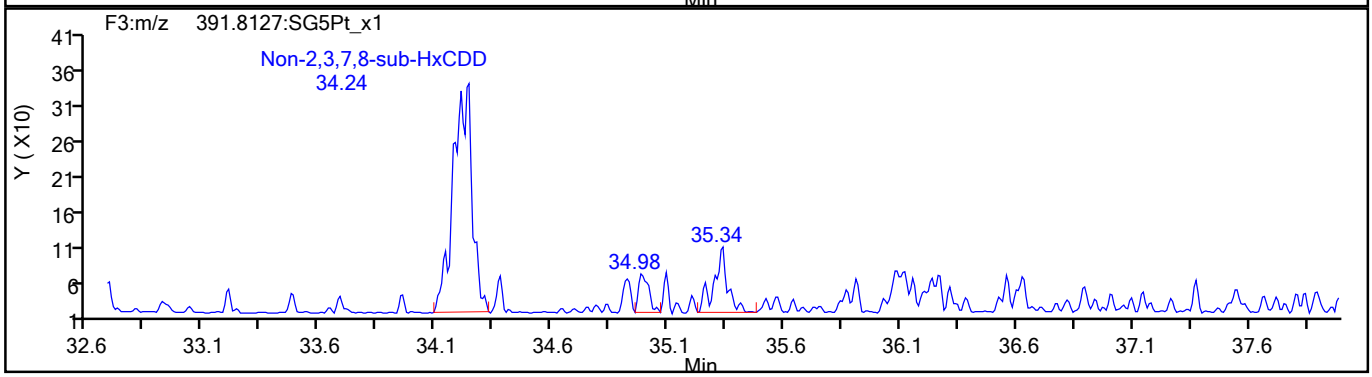

HxCDD Standards

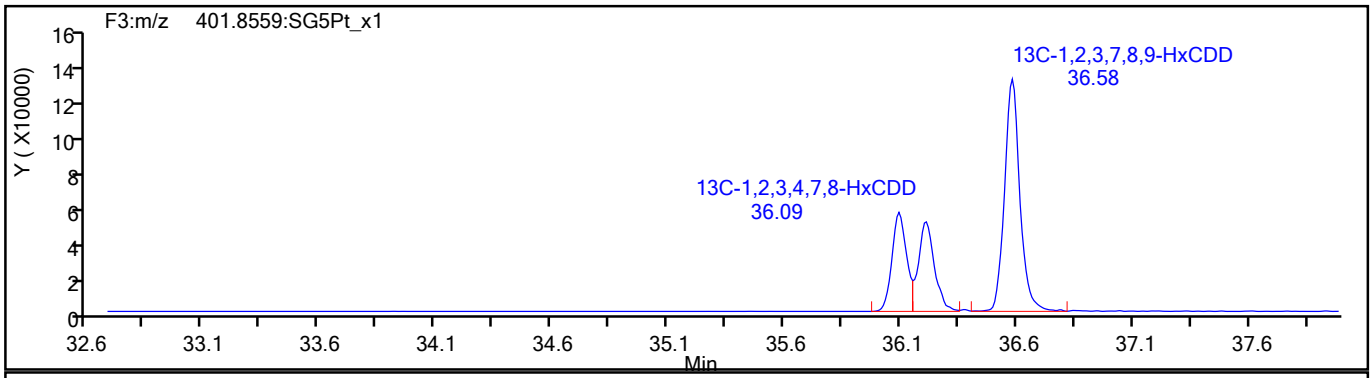

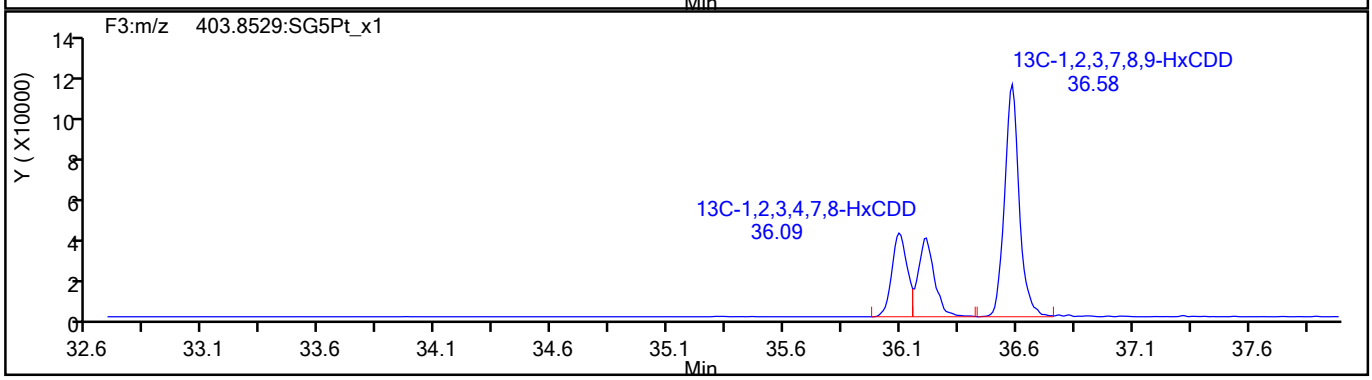

787158

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

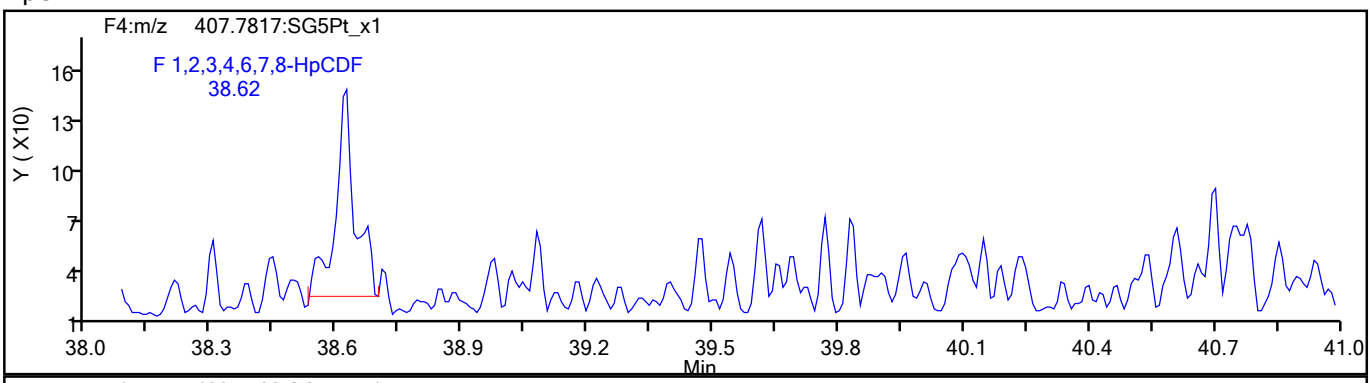

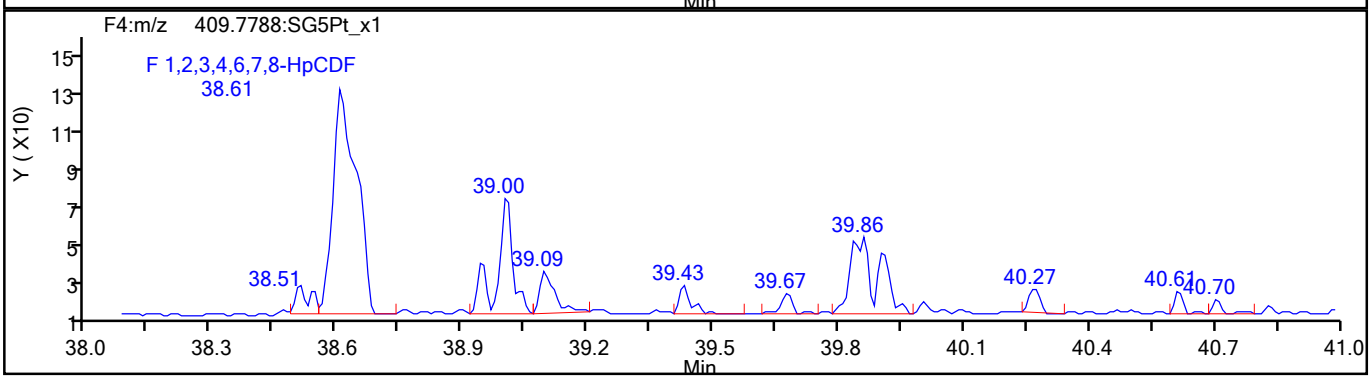

HpCDF Standards

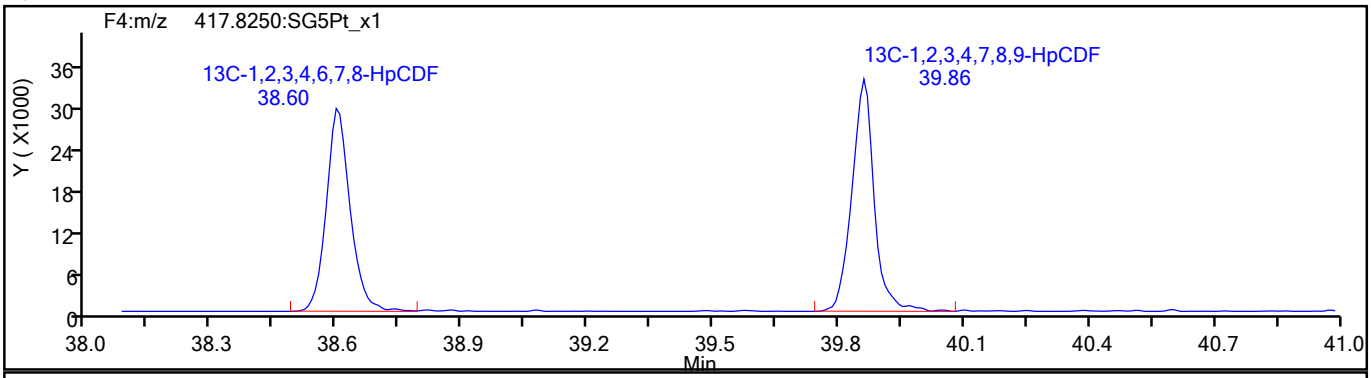

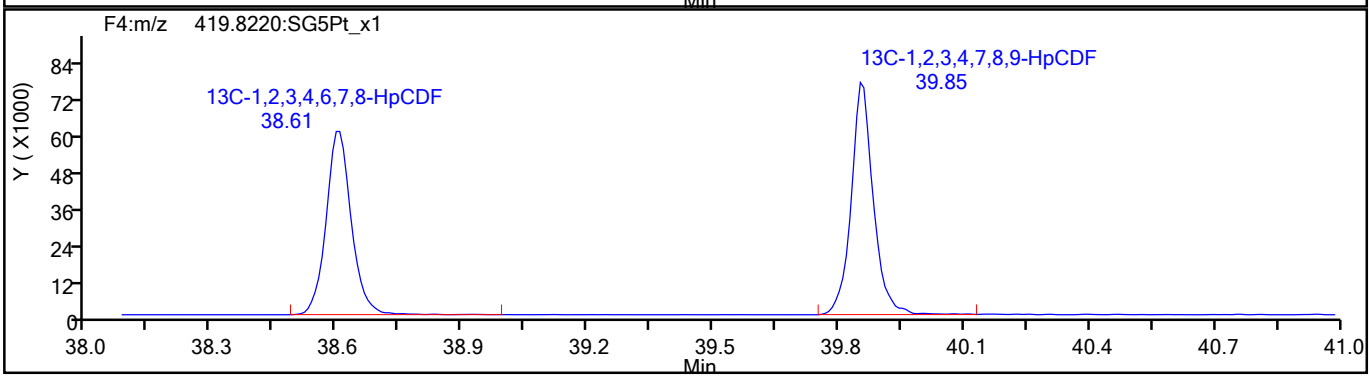

787159

Report Date: 20-Aug-2021 10:36:47 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

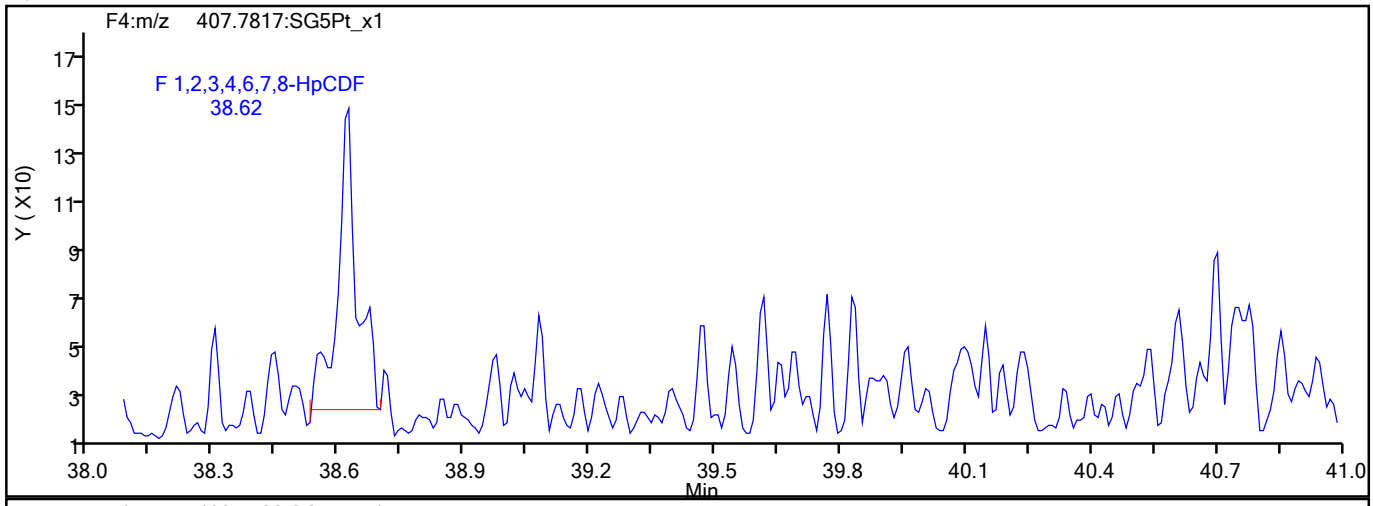

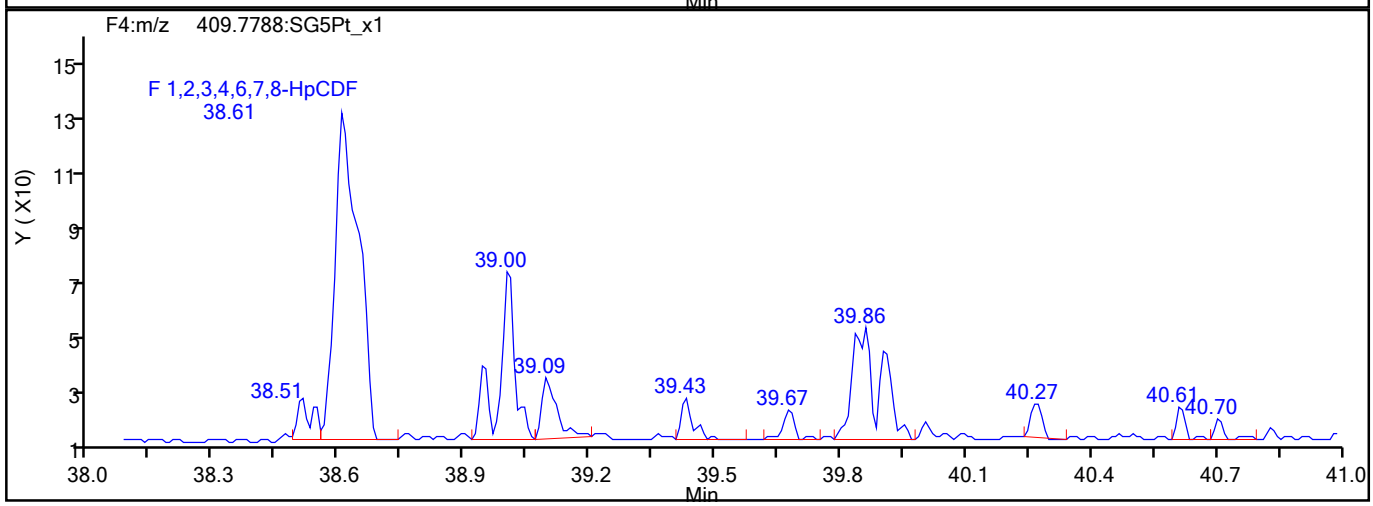

HpCDF Interference Mass

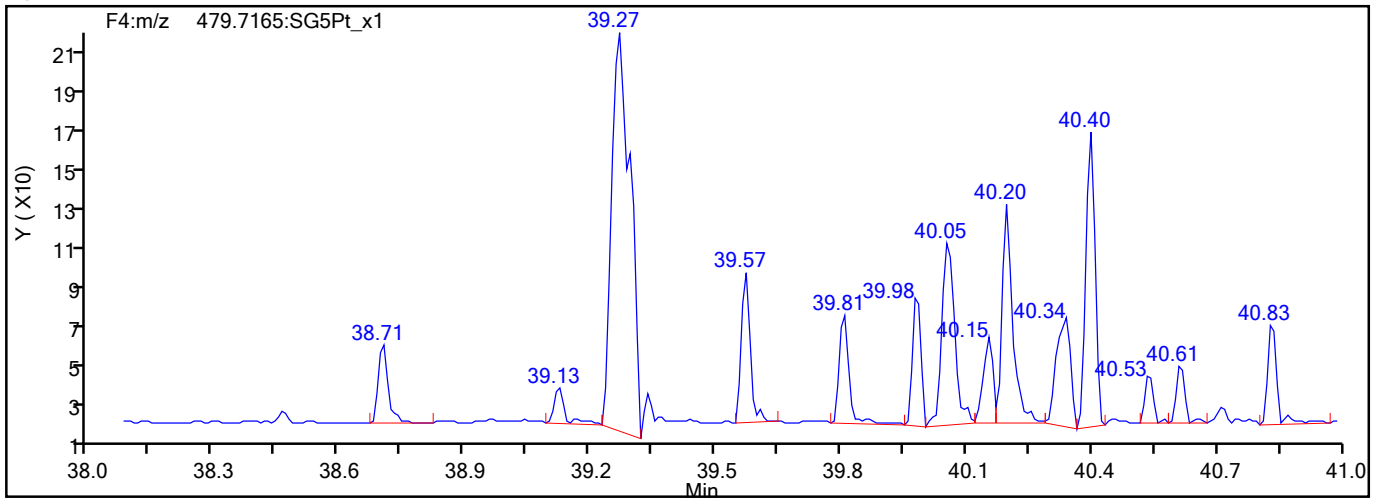

787160

Report Date: 20-Aug-2021 10:36:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

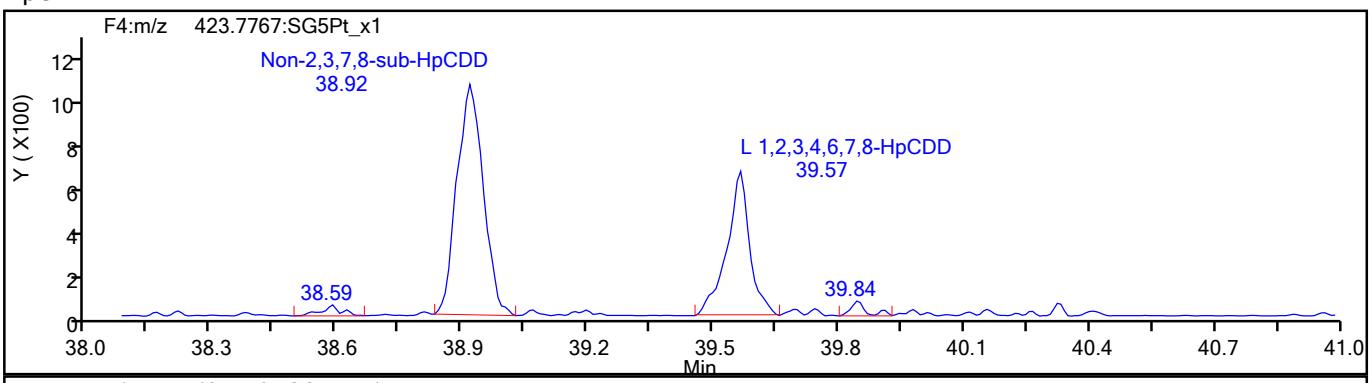

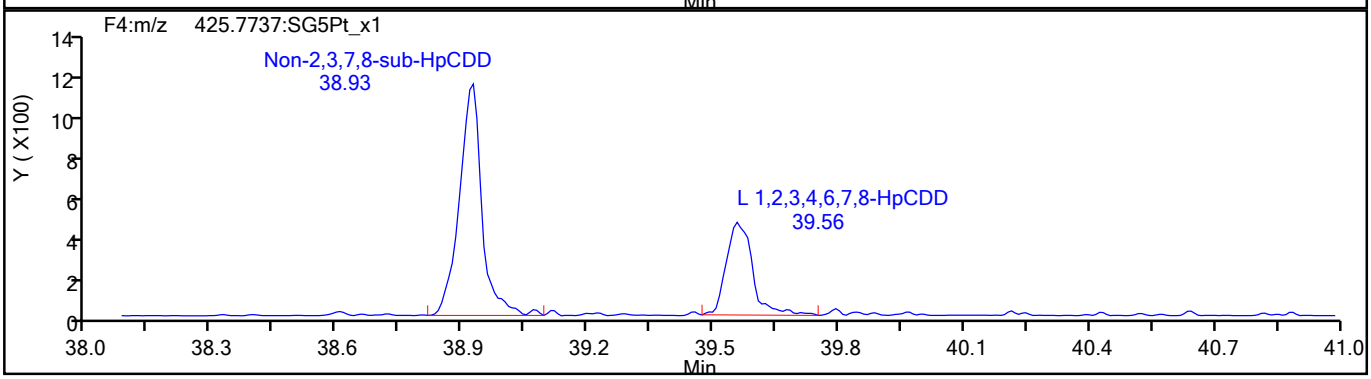

HpCDD Standards

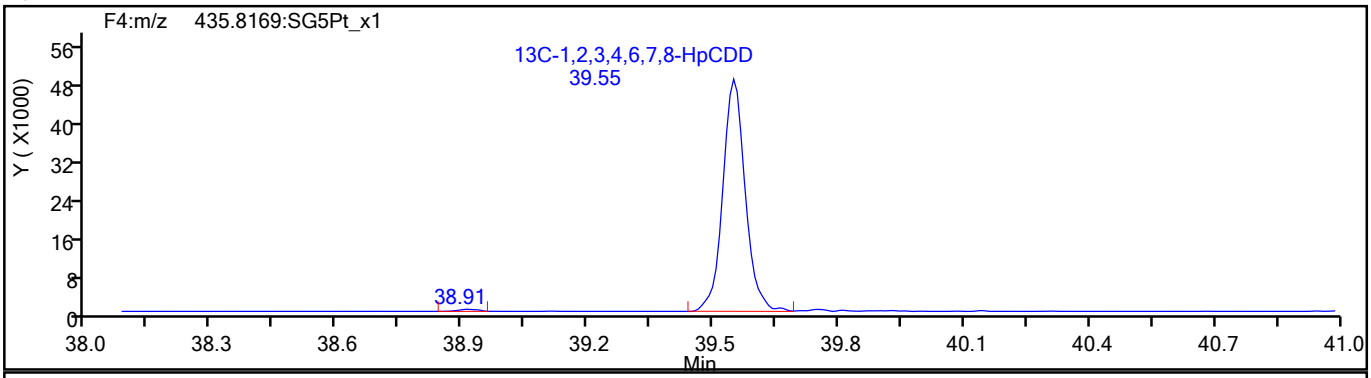

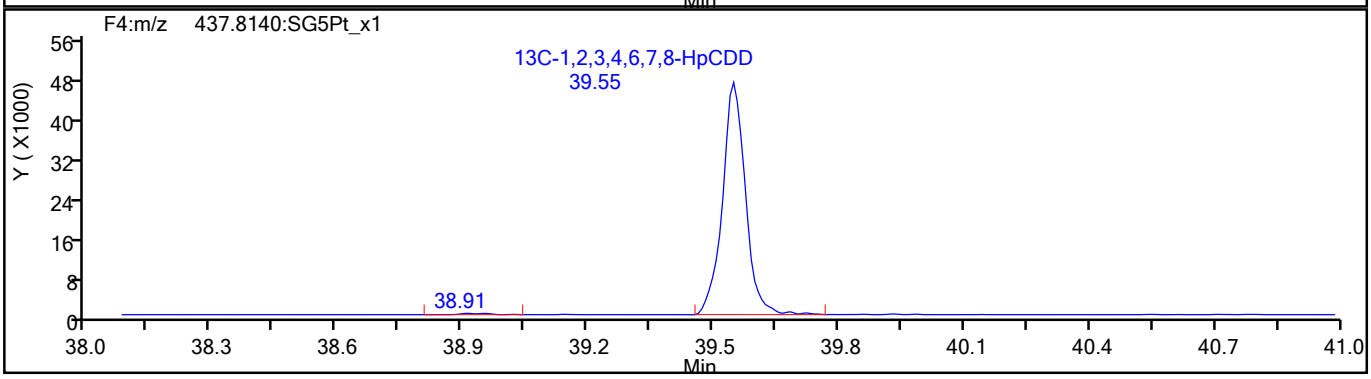

787161

Report Date: 20-Aug-2021 10:36:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

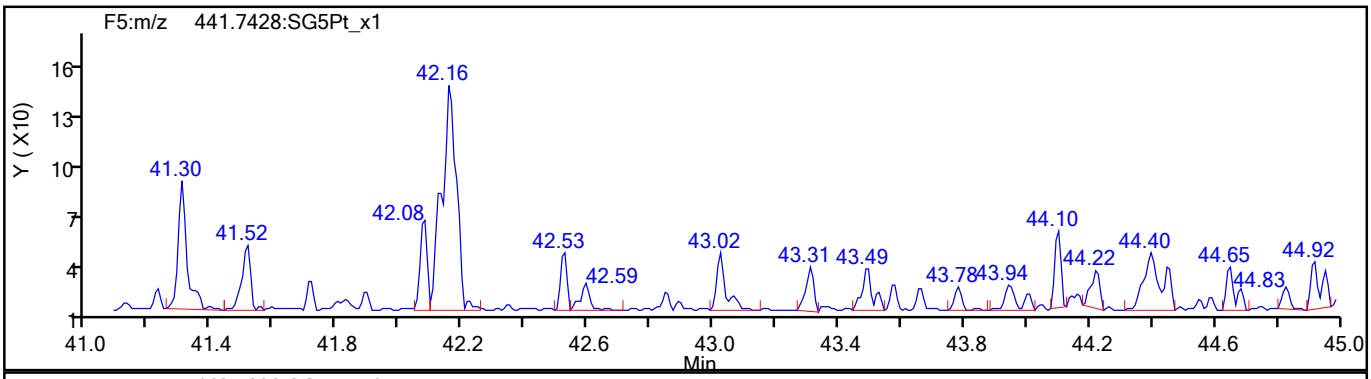

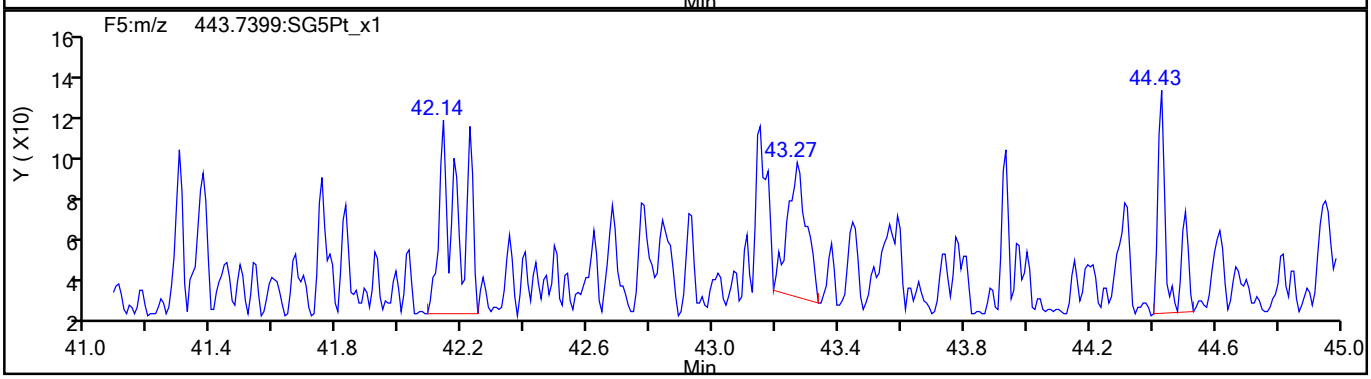

OCDF Standards

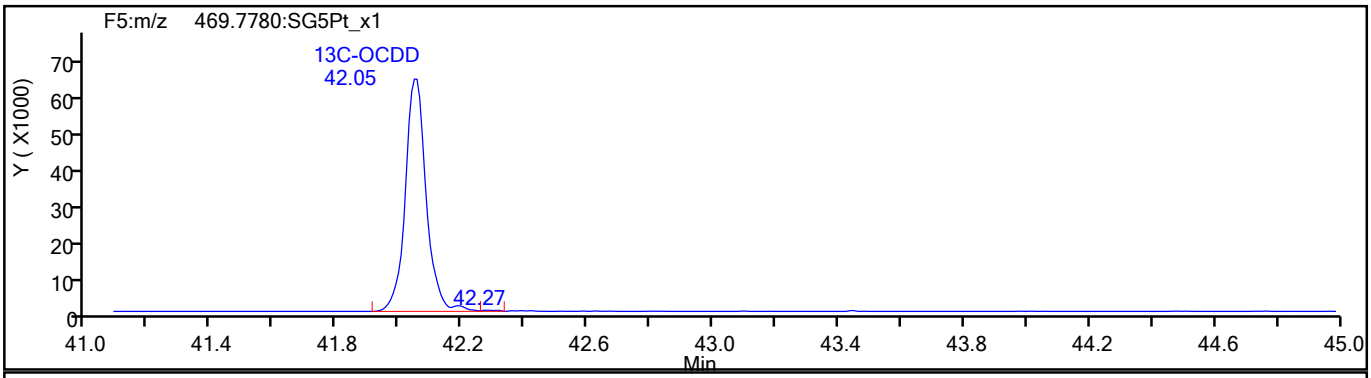

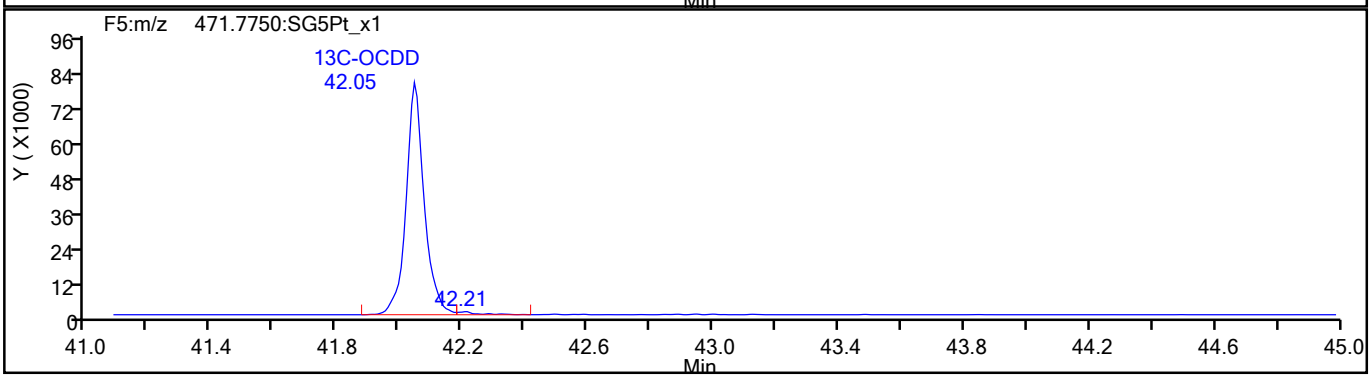

787162

Report Date: 20-Aug-2021 10:36:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

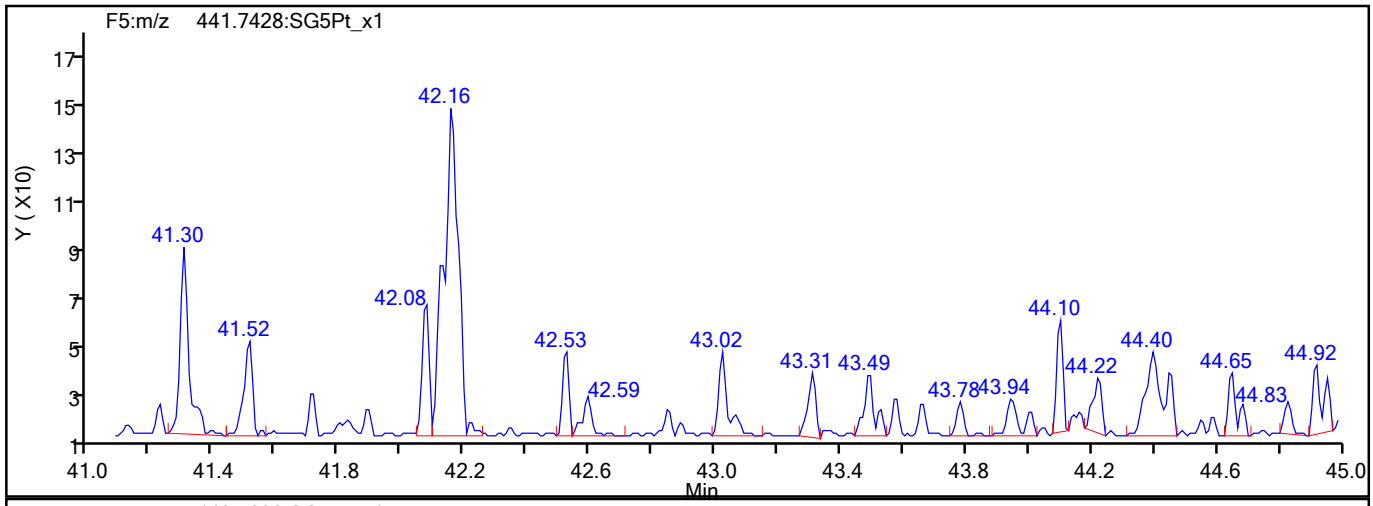

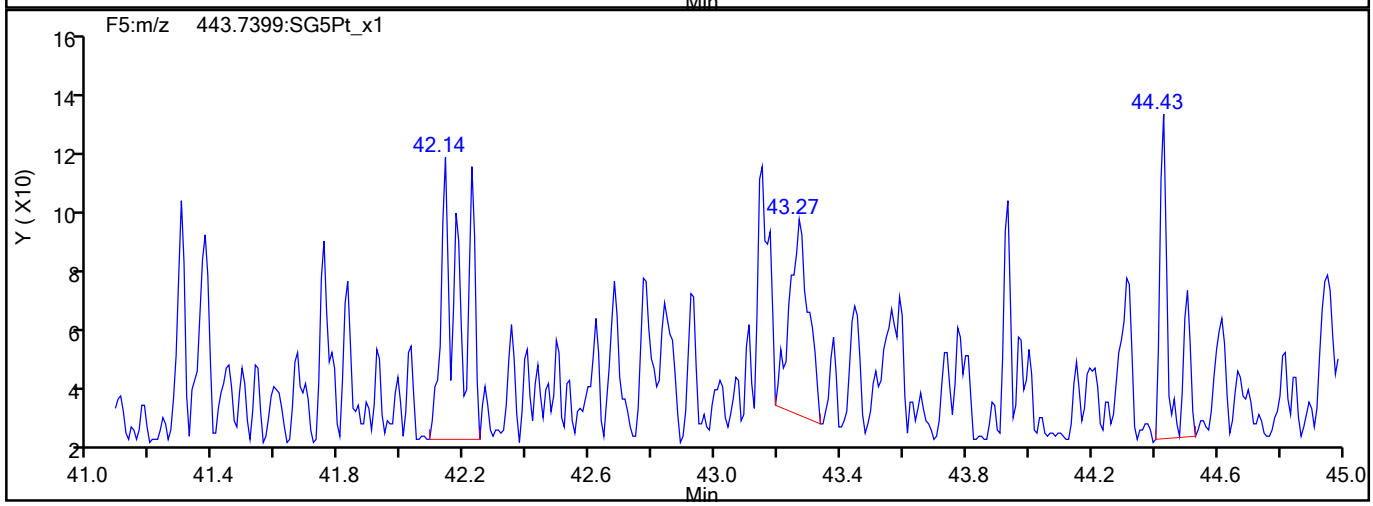

OCDF Interference Mass

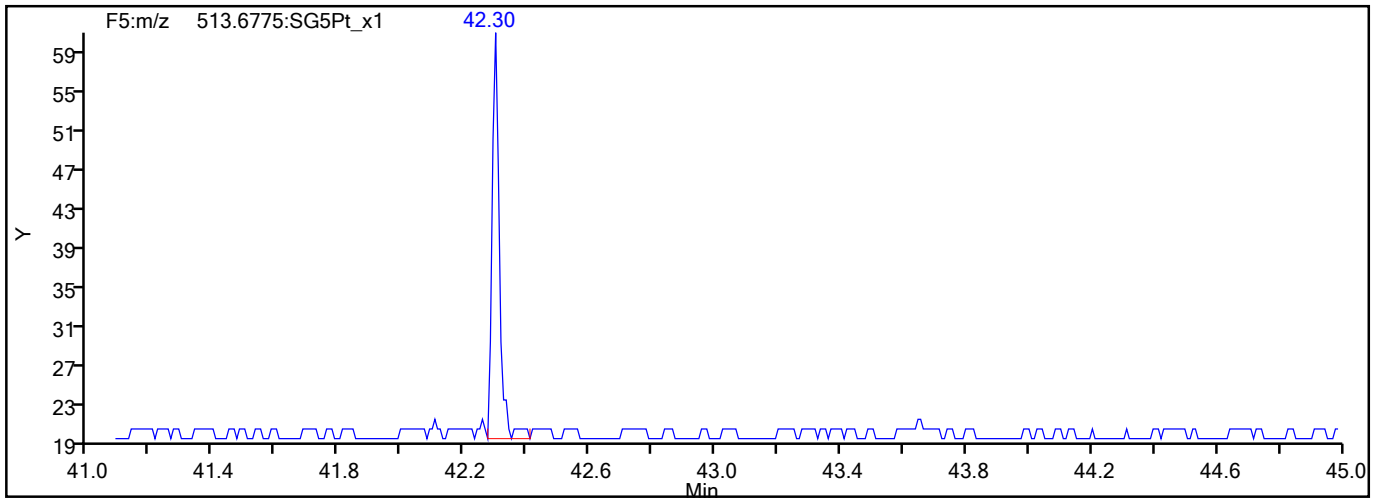

787163

Report Date: 20-Aug-2021 10:36:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

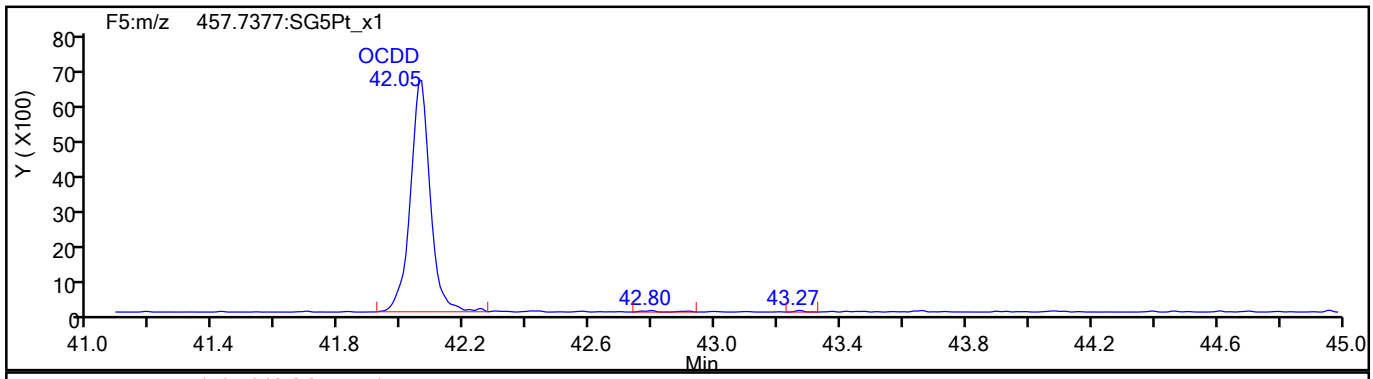

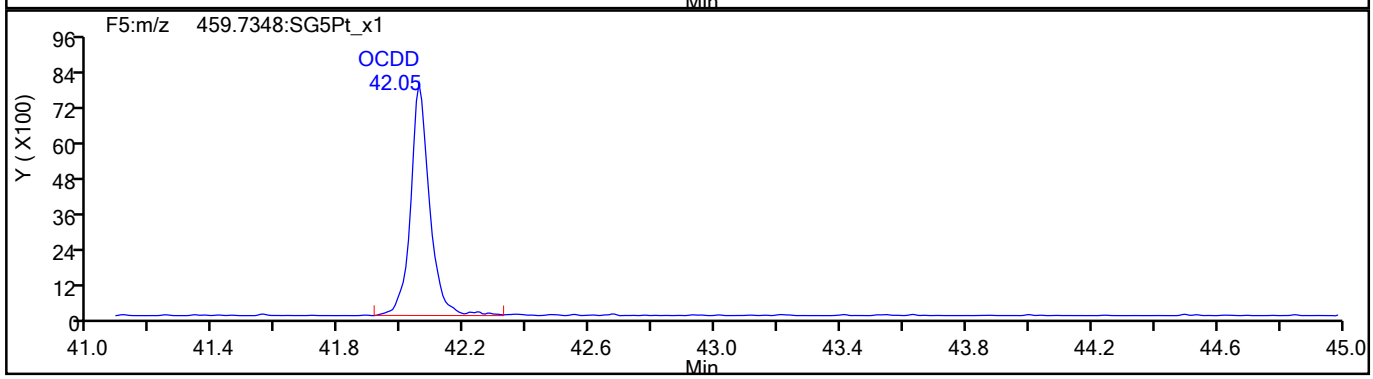

OCDD Standards

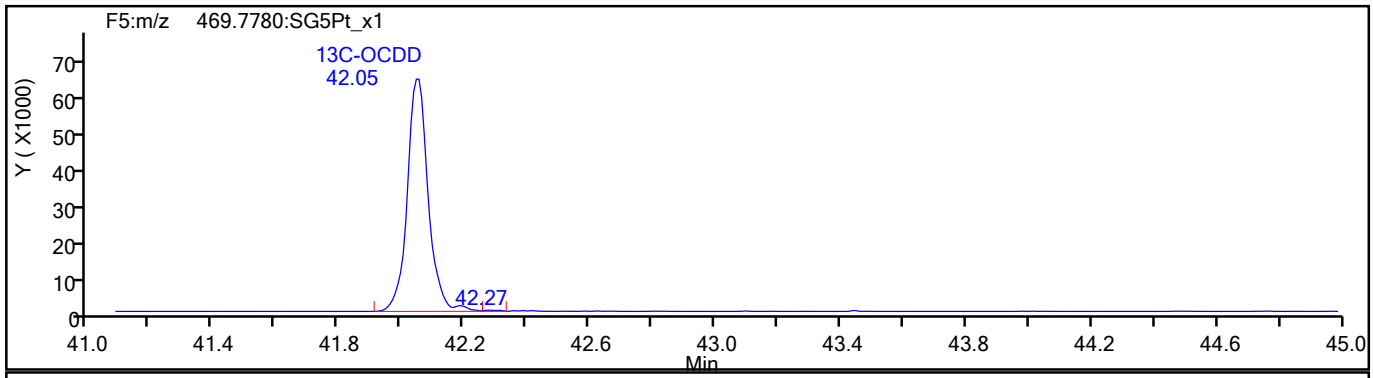

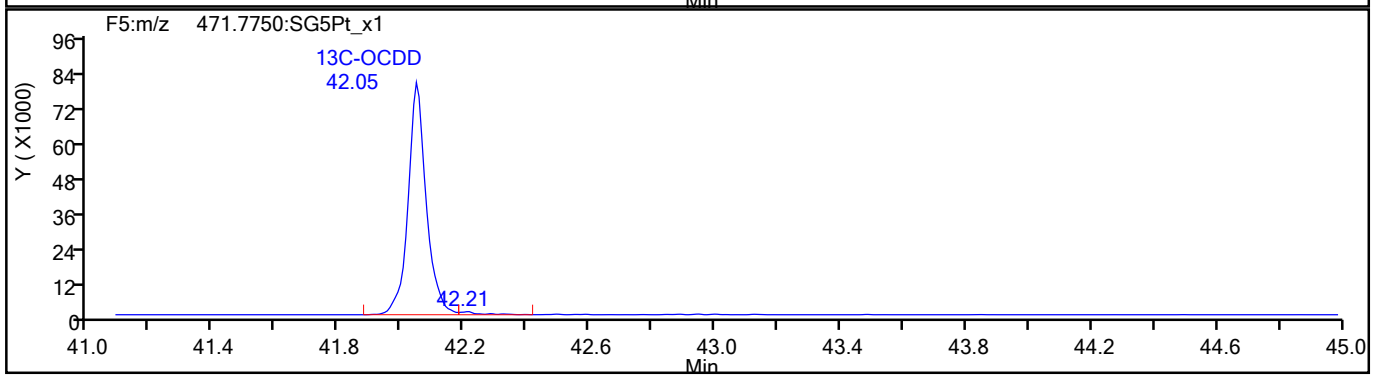

787164

Report Date: 20-Aug-2021 10:36:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

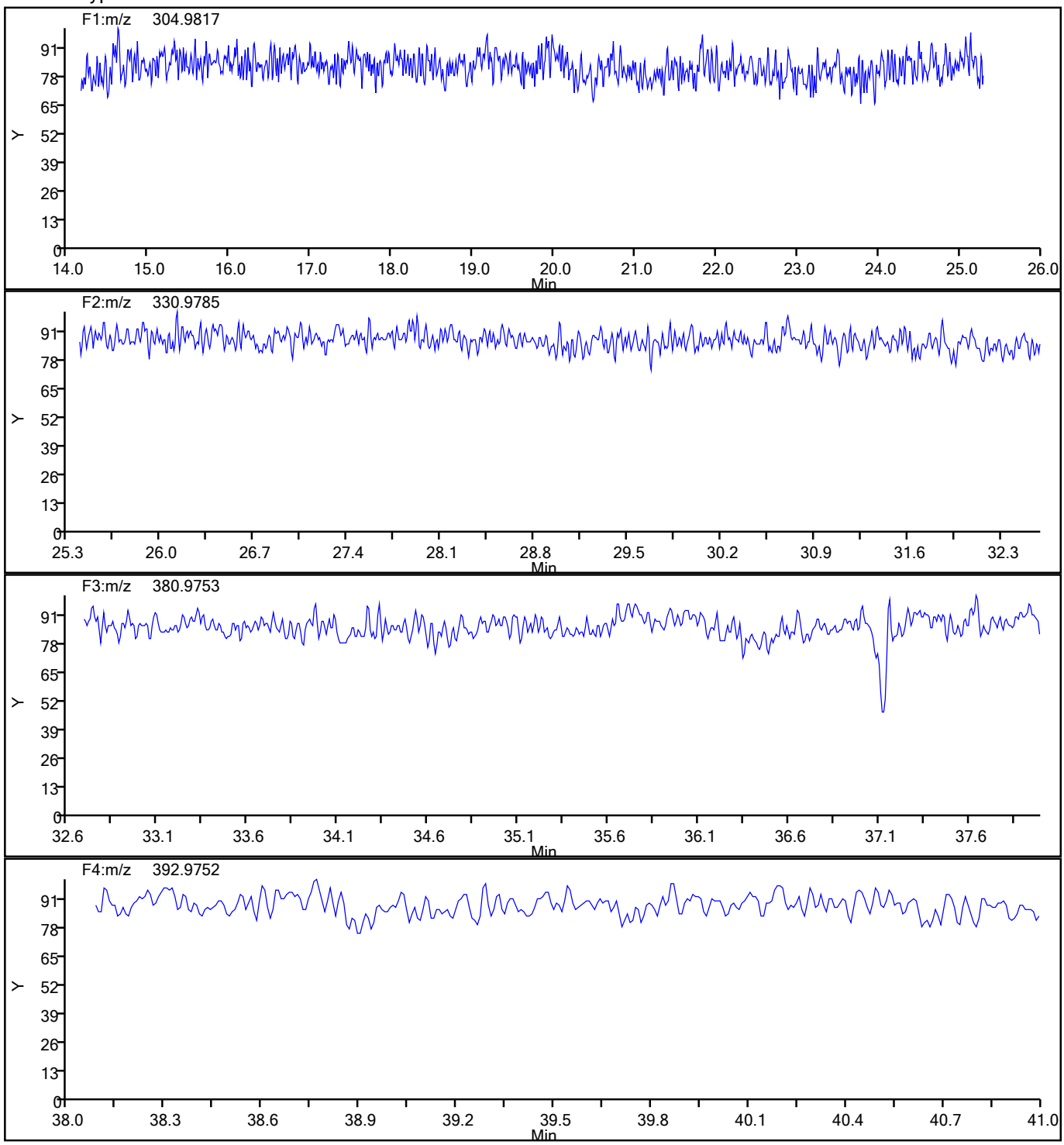

787165

Report Date: 20-Aug-2021 10:36:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_59.d		
Injection Date:	19-Aug-2021 11:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	517462	Sample Line#:	55
Column Type:	DB-5	Column Dia:	0.32 mm

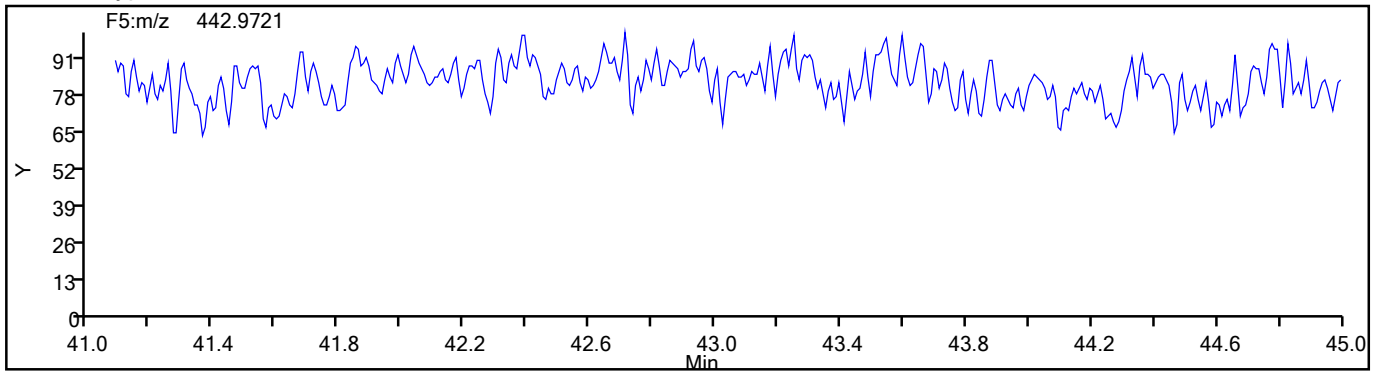

787166

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-2
SDG No.:
Client Sample ID: 11215702-072621-BN-SJSB094 (16-18) RA
Lab Sample ID: 320-76888-9 RA
Matrix: Sediment
Lab File ID: 23AU2111D2_004.d
Analysis Method: 1613B
Date Collected: 07/26/2021 14:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.51(g)
Date Analyzed: 08/23/2021 11:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 20.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518958
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	6.4	B	1.2	0.38

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	42		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	59		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_004.d
Lims ID: 320-76888-A-9-A
Client ID: 11215702-072621-BN-SJSB094 (16-18)
Sample Type: Client
Inject. Date: 23-Aug-2021 11:27:08 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-A-9-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:44:30

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.326	17930329	0.74	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.657	10040990	0.80	1.3327	42.0	42.0	0.4659	0.4659	42.02	
2,3,7,8-TCDF	17.698	269132	0.75	0.9978	2.686	2.686	0.1585	0.1585		
D 13C-2,3,7,8-TCDD	16.107	6741953	0.85	0.8749	43.0	43.0	0.5619	0.5619	42.98	
2,3,7,8-TCDD	16.107	50546	0.77	1.0570	0.9067	0.7093	0.2669	0.2669		RQ
$ 37Cl4-2,3,7,8-TCDD	16.121	3682150		0.8648	23.7	23.7	0.0910	0.0910	59.36	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_004.d
Lims ID: 320-76888-A-9-A
Client ID: 11215702-072621-BN-SJSB094 (16-18)
Sample Type: Client
Inject. Date: 23-Aug-2021 11:27:08 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76888-A-9-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:44:30

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.326	16.312	1		7643668	1624848	4922	12305	330		
333.9339	16.326	16.312	1		10286661	2225031	2648	6620	840	0.74(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.657	17.615	2	1.081	4459950	819455	4389	10972	187		
317.9389	17.643	17.615	2	1.081	5581040	1084932	5173	12932	210	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.698	17.643	3	1.002	115354	20449	373	932	55		
305.8987	17.657	17.643	1	1.000	153778	31978	832	2080	38	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.107	16.065	2	0.987	3094365	681032	4922	12305	138		
333.9339	16.107	16.065	2	0.987	3647588	743862	2648	6620	281	0.85(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.107	16.093	1	1.000	21989	5832	850	2125	7		
321.8936	16.107	16.093	1	1.000	42621	6872	758	1895	9	0.52(0.65-0.89)	
	Empc Correction				28557	7574	758	1895	10		
37Cl4-2,3,7,8-TCDD											
327.8840	16.121	16.093	2	0.987	3682150	751464	1212	3030	620		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_004.d		
Injection Date:	23-Aug-2021 11:27:08	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	518958	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

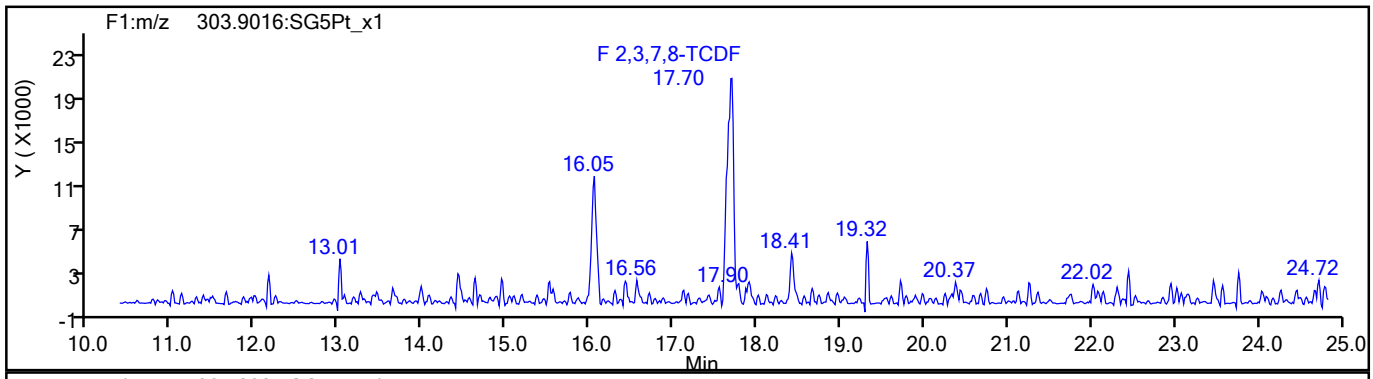

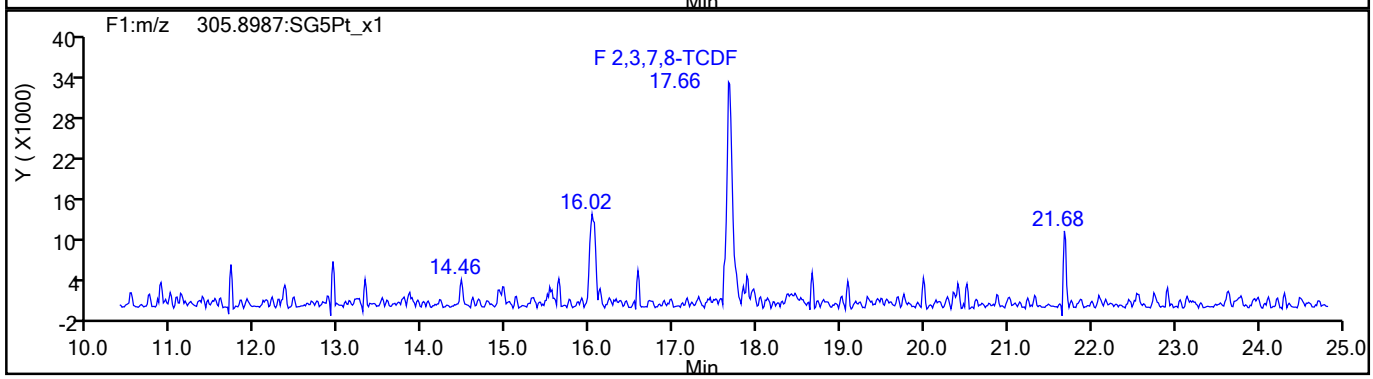

TCDF Standards

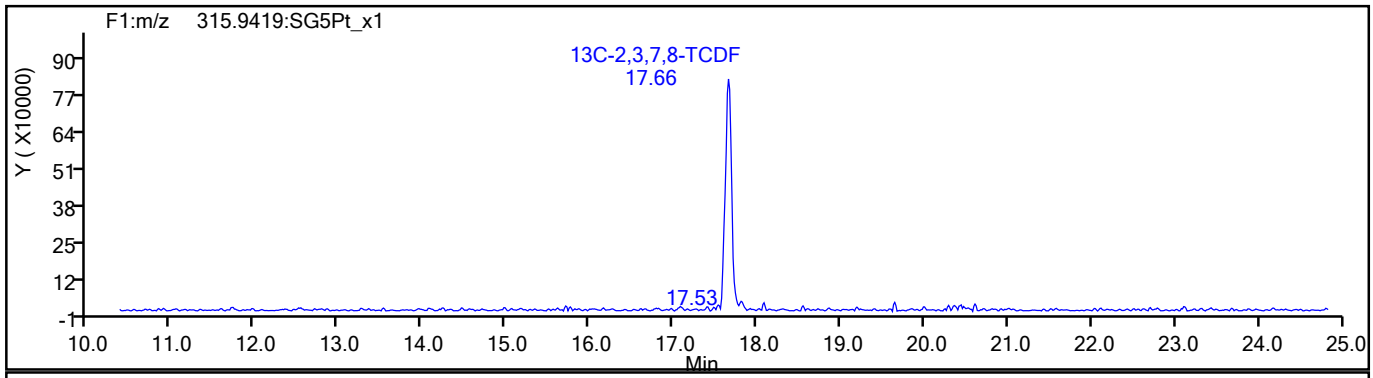

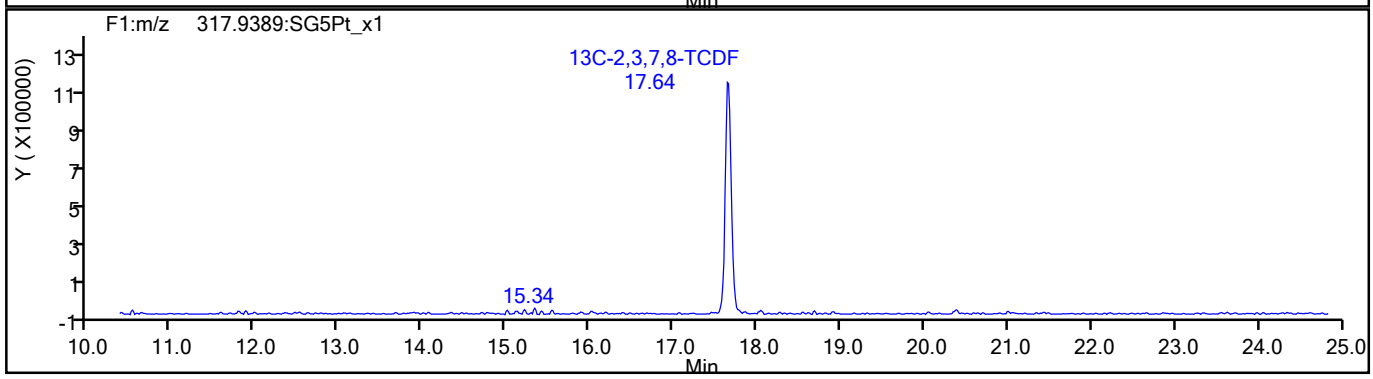

787170

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_004.d		
Injection Date:	23-Aug-2021 11:27:08	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	518958	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

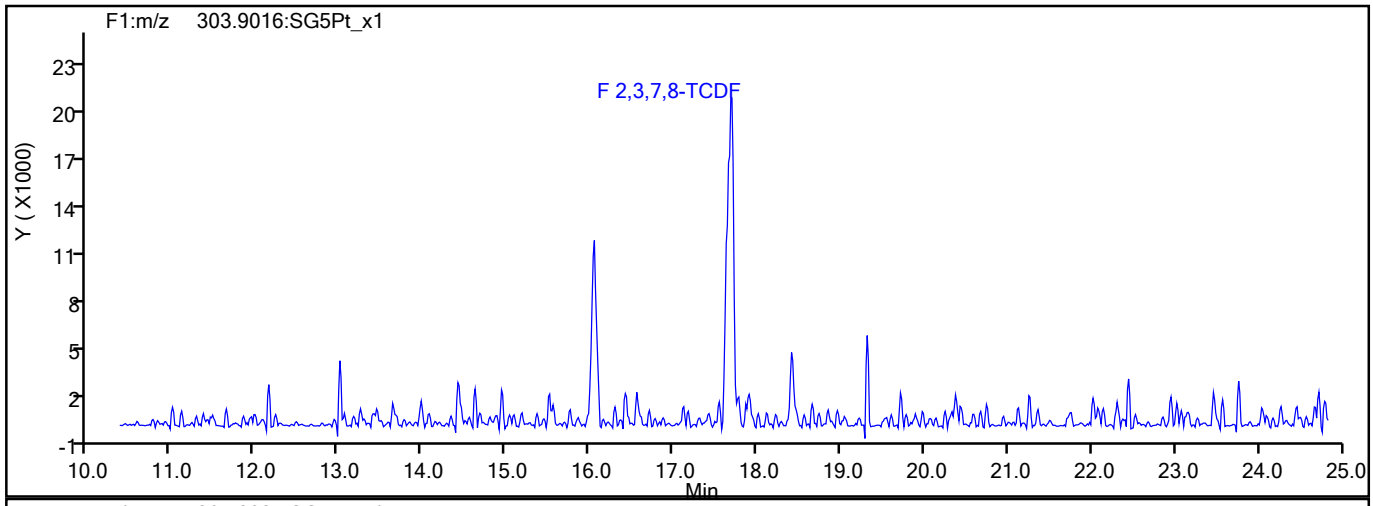

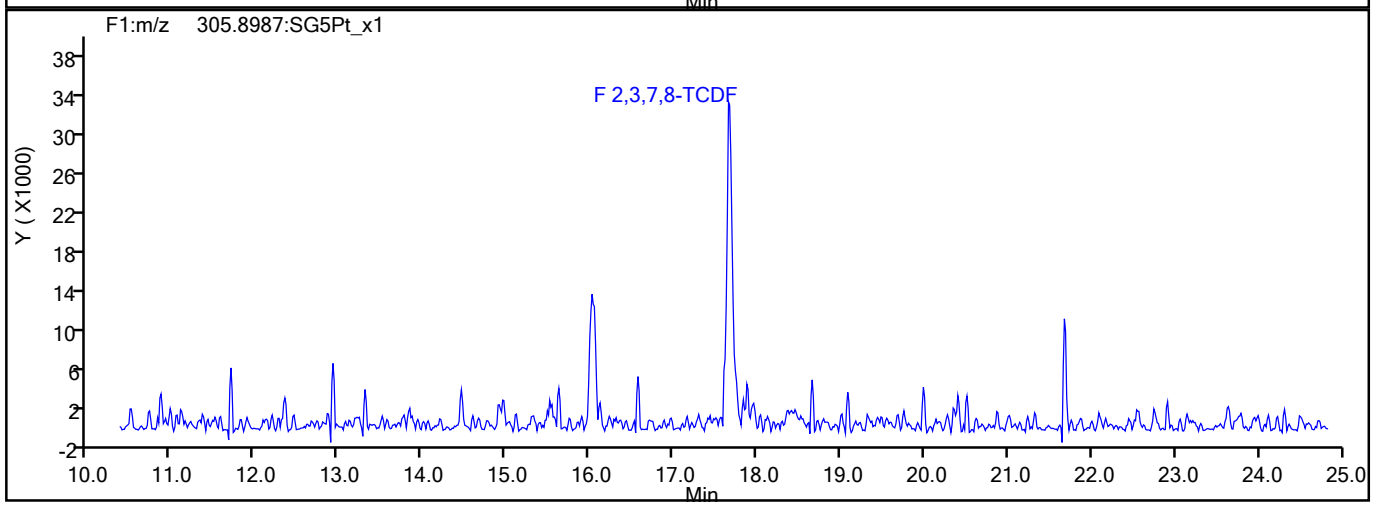

TCDF Interference Mass

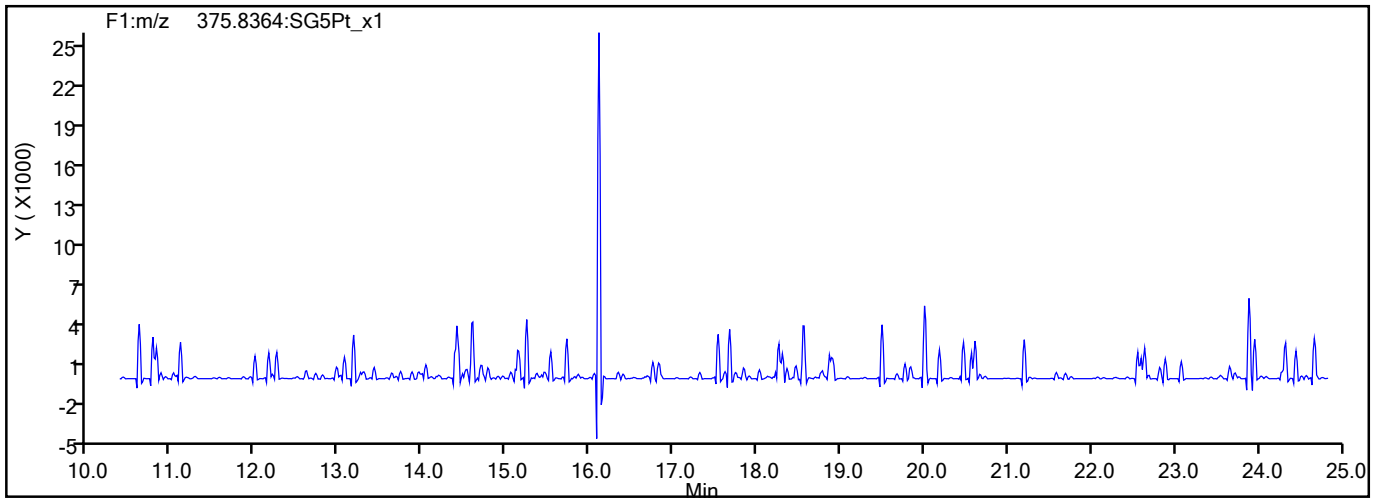

787171

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_004.d		
Injection Date:	23-Aug-2021 11:27:08	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	518958	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

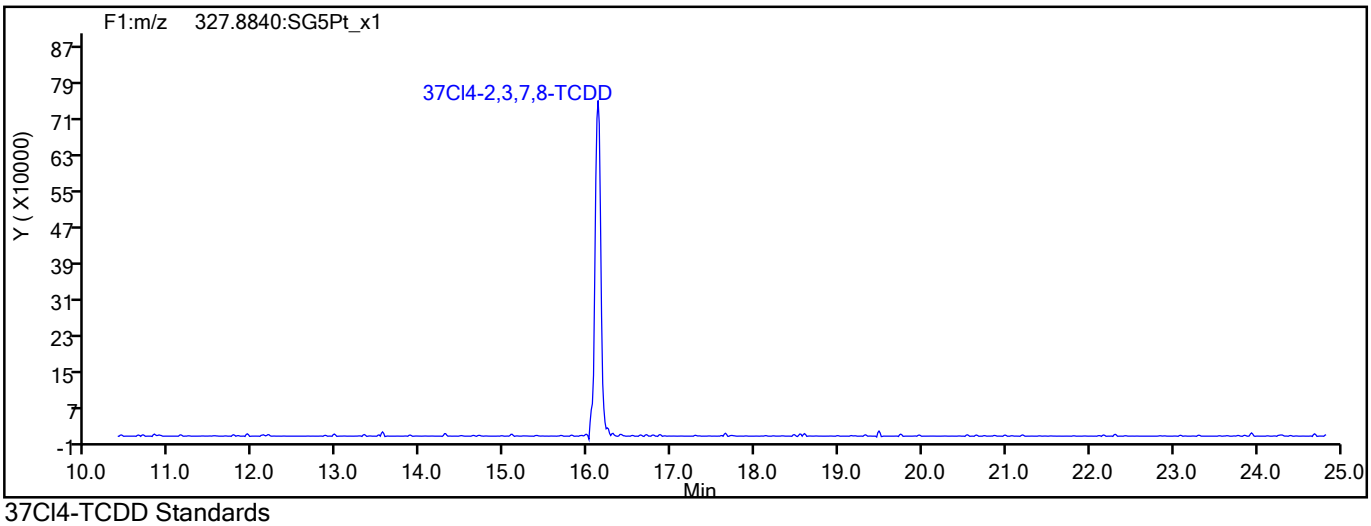

37Cl4-TCDD Standards

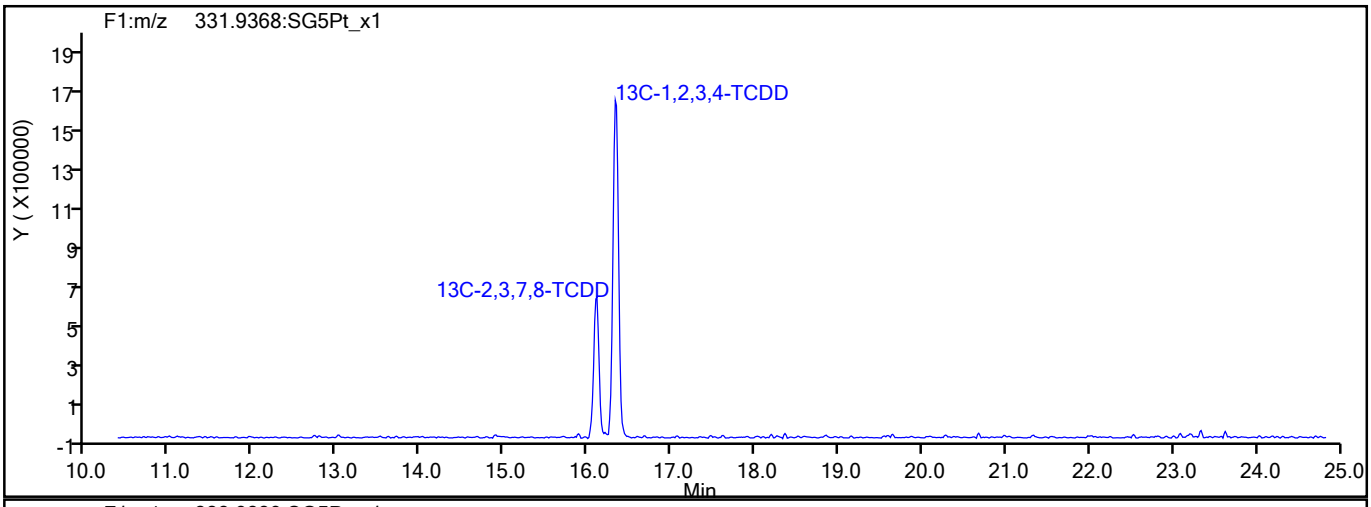

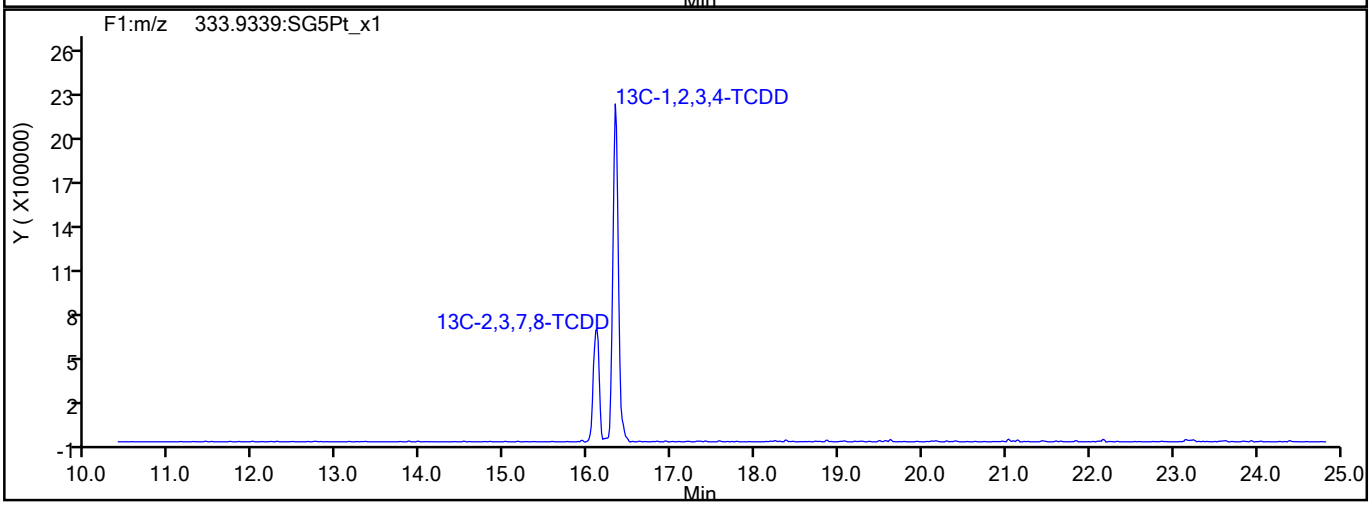

787172

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_004.d		
Injection Date:	23-Aug-2021 11:27:08	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (16-18)		
Worklist#:	518958	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

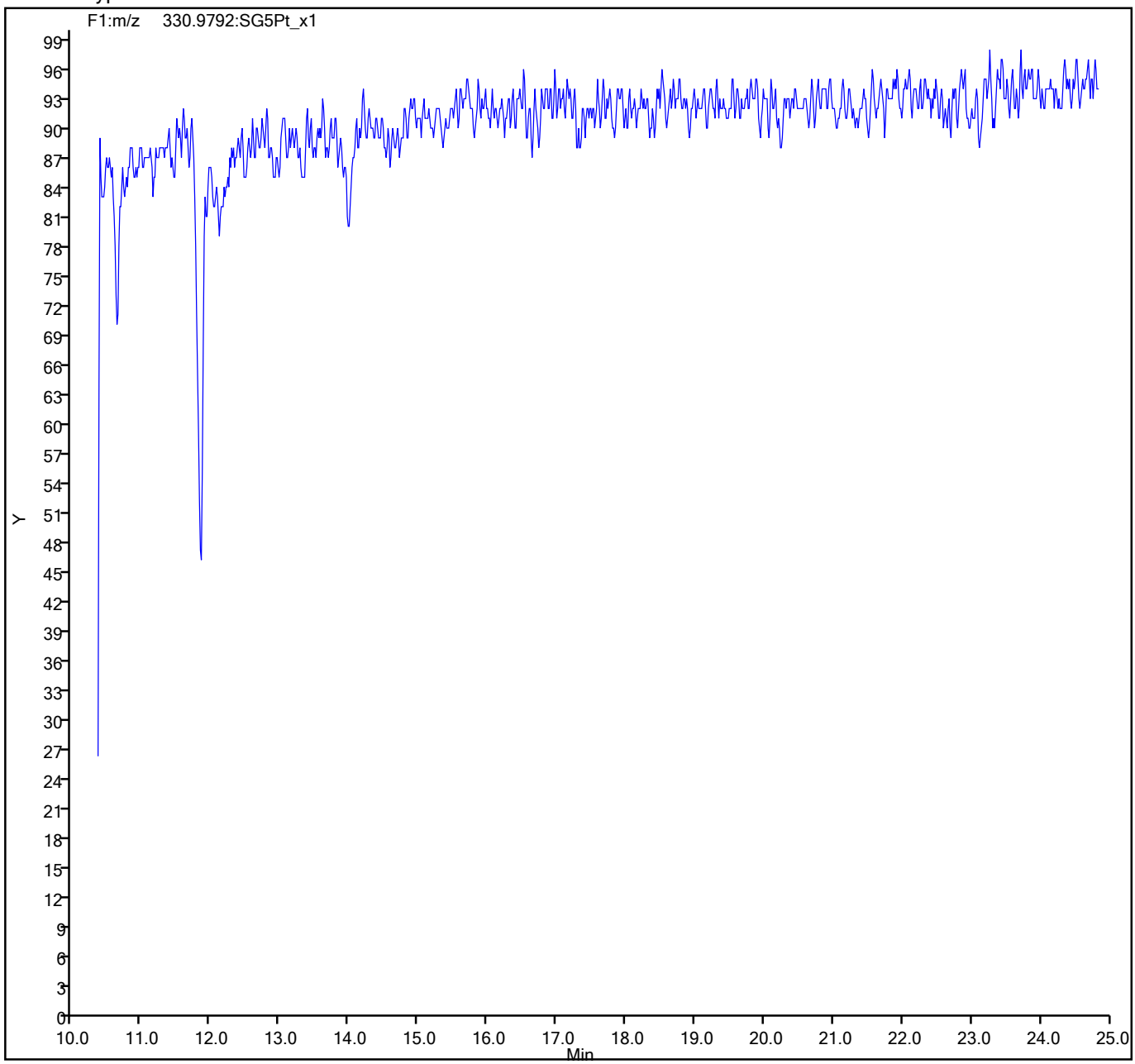

787173

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

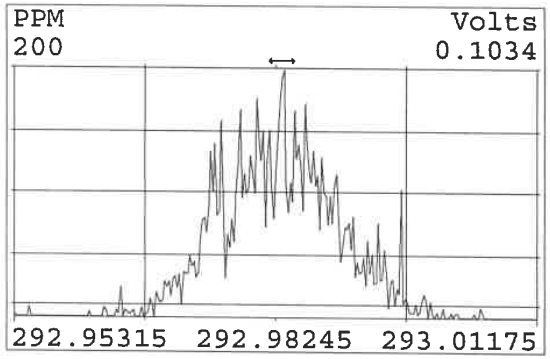

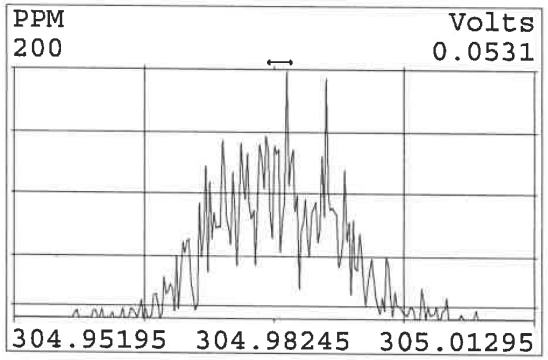

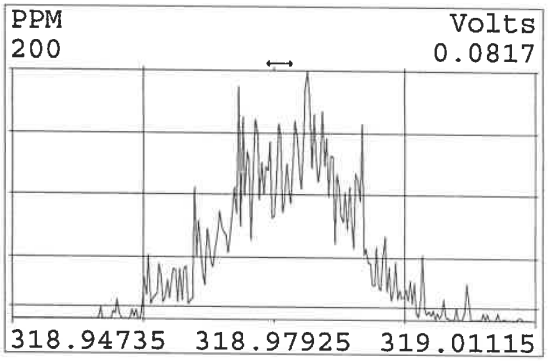

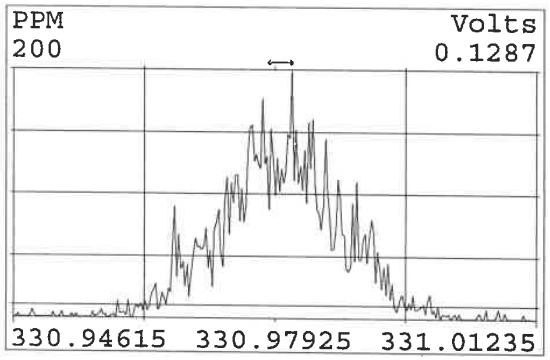

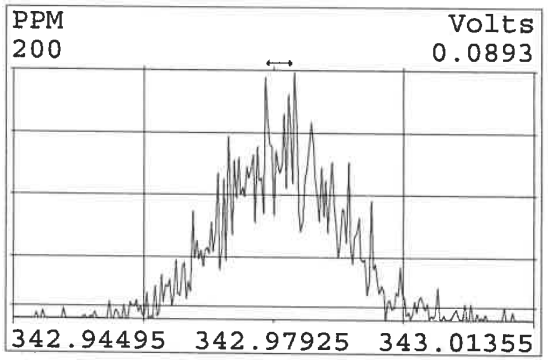

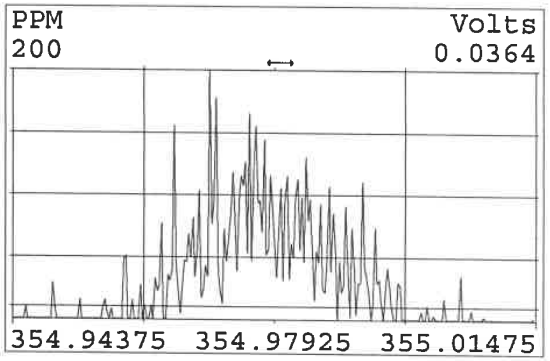

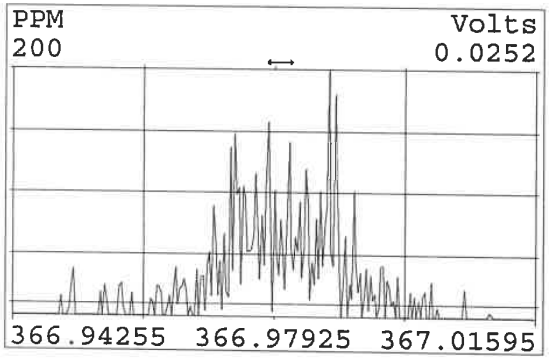

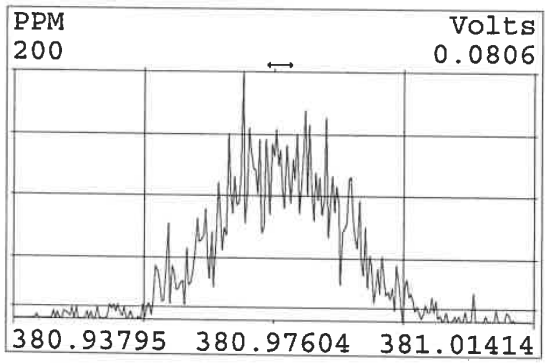

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

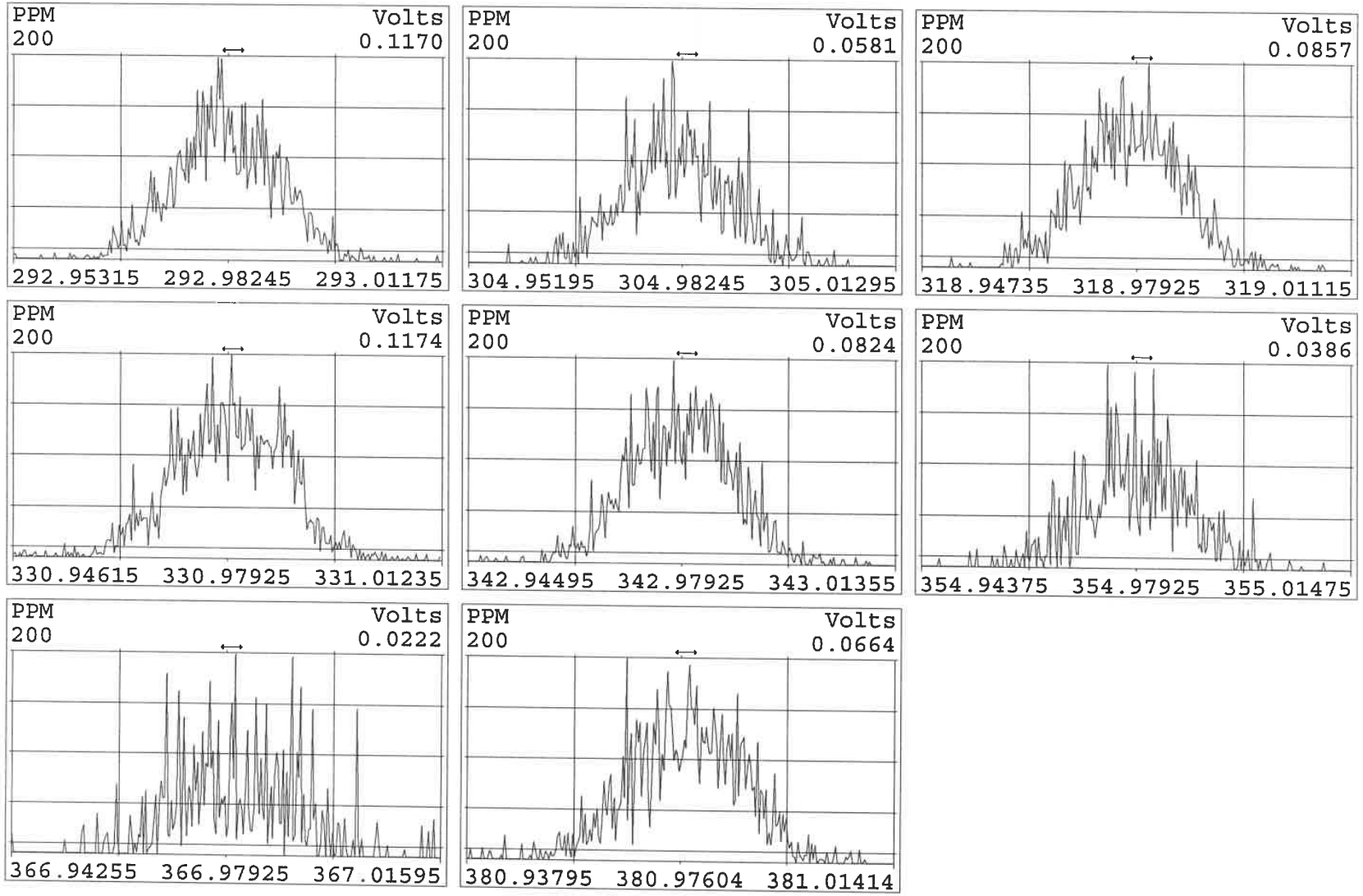

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

787179

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

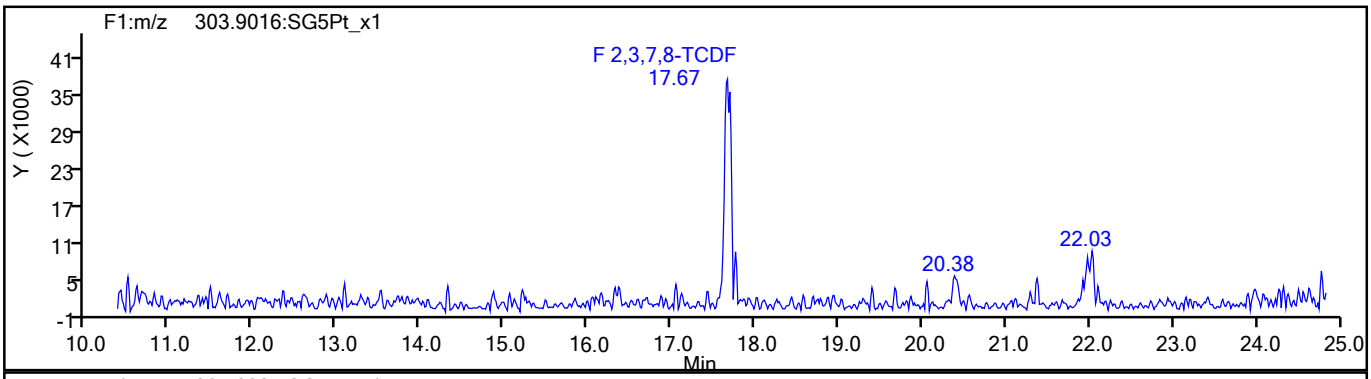

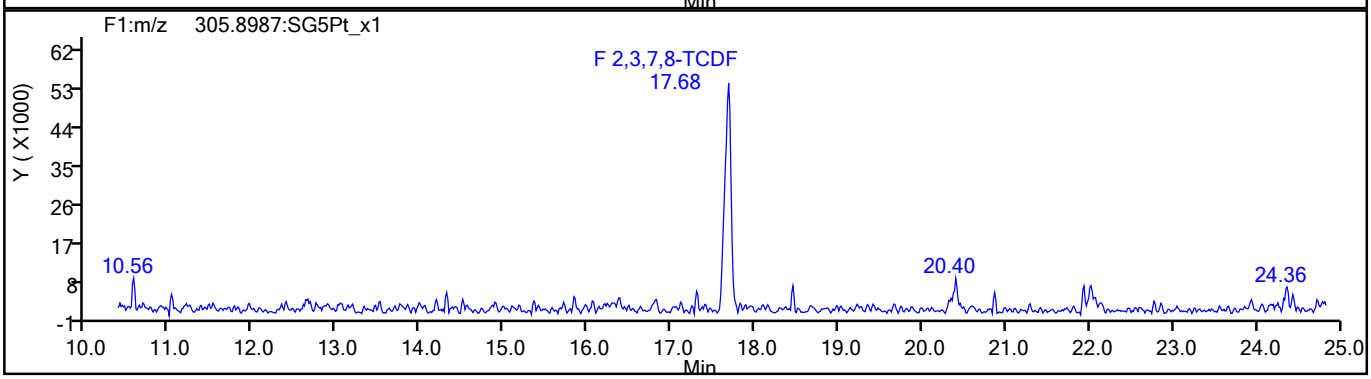

TCDF Standards

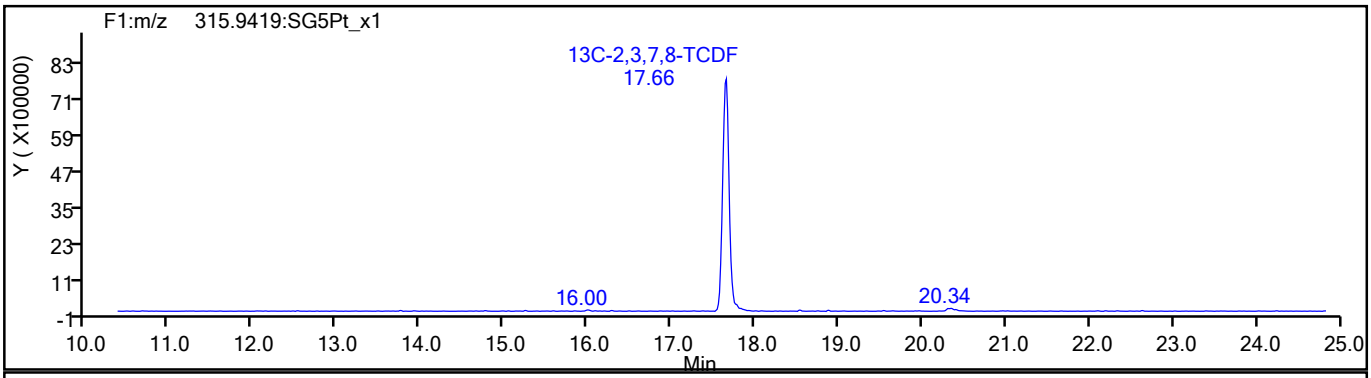

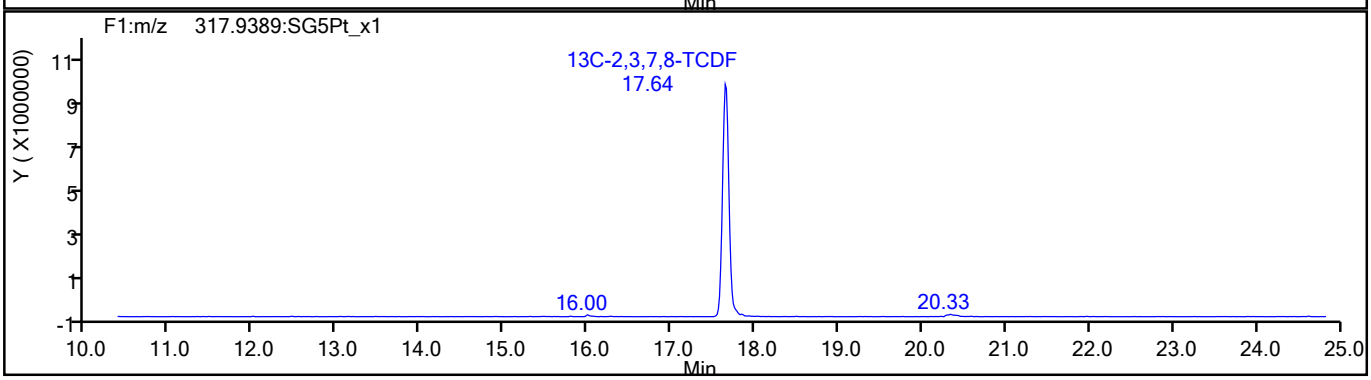

787181

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

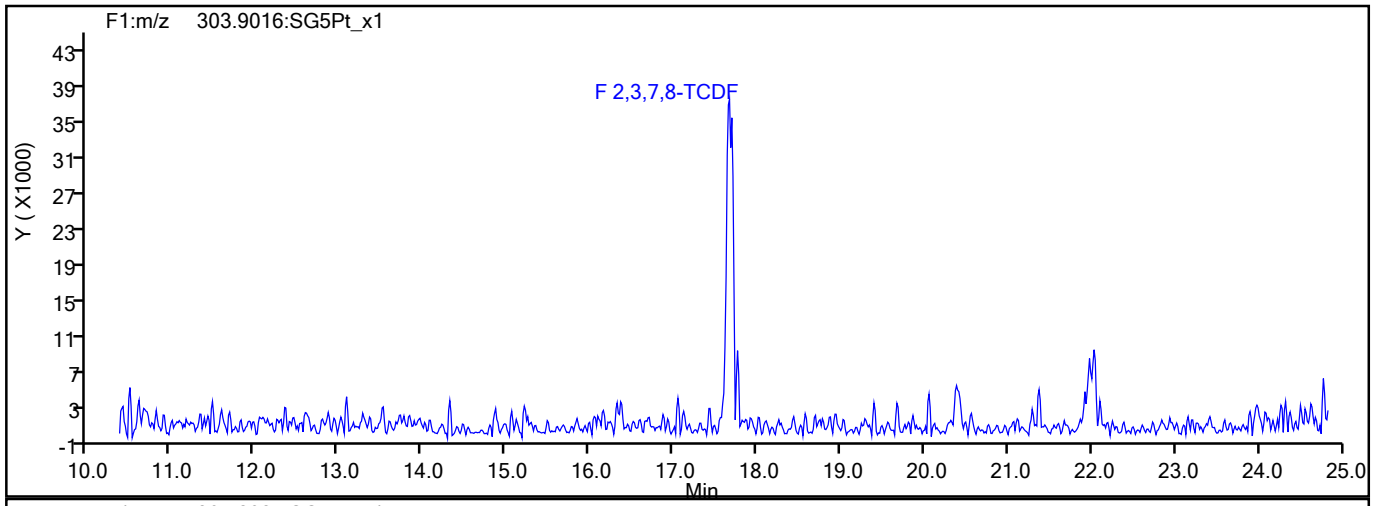

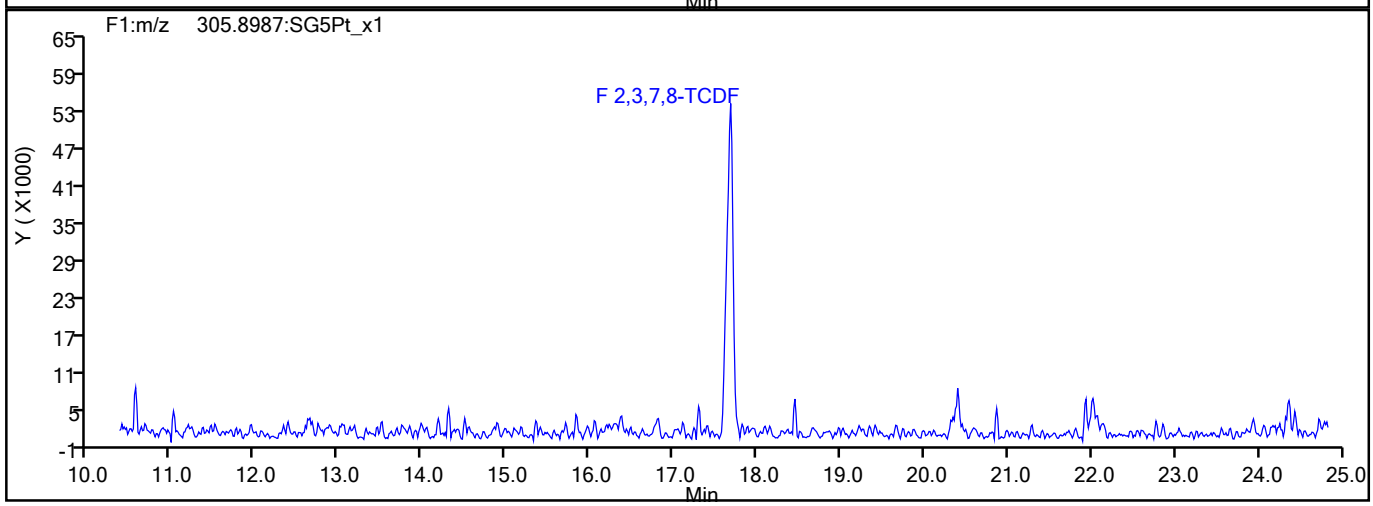

TCDF Interference Mass

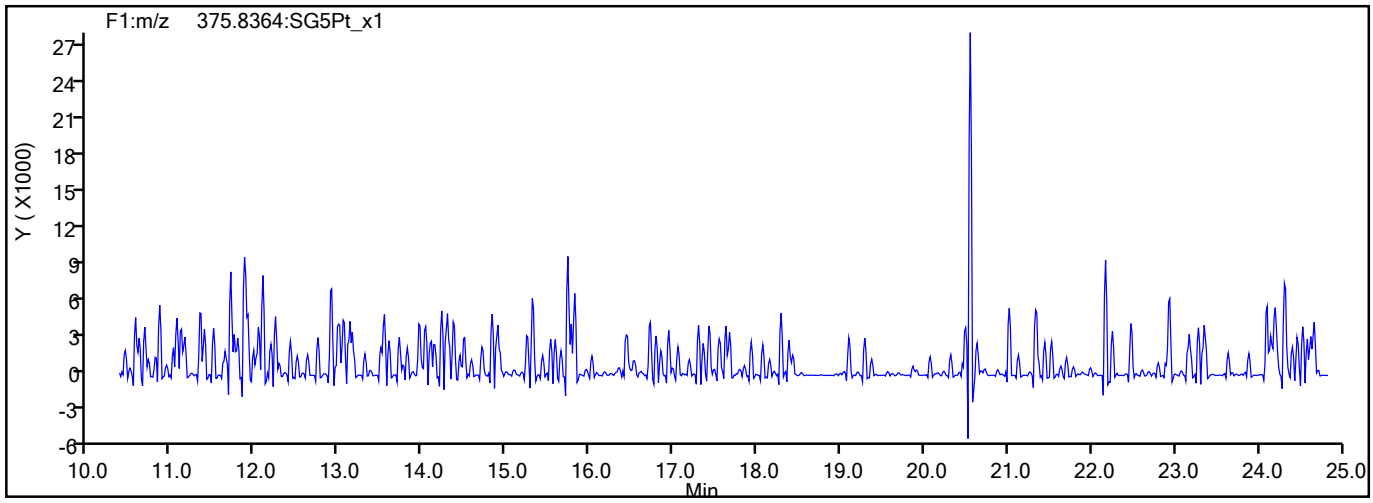

787182

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

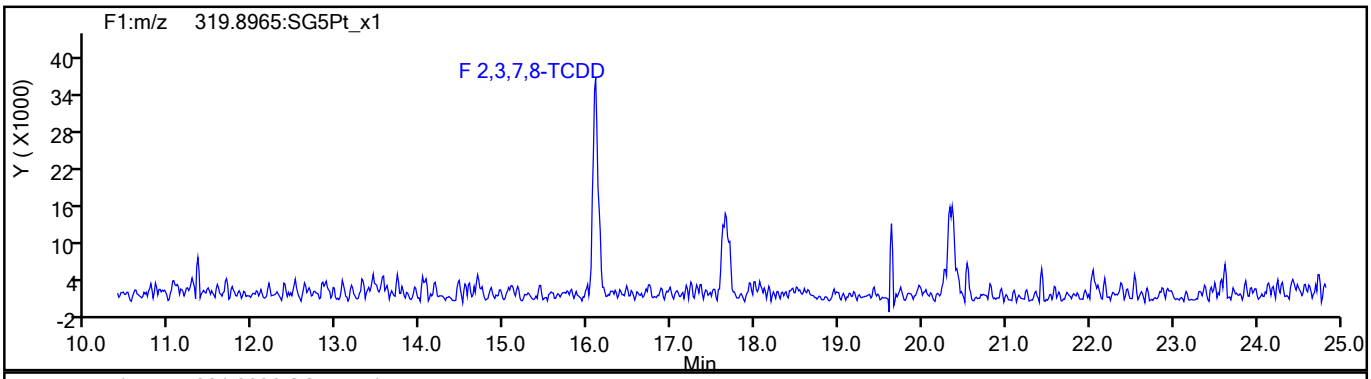

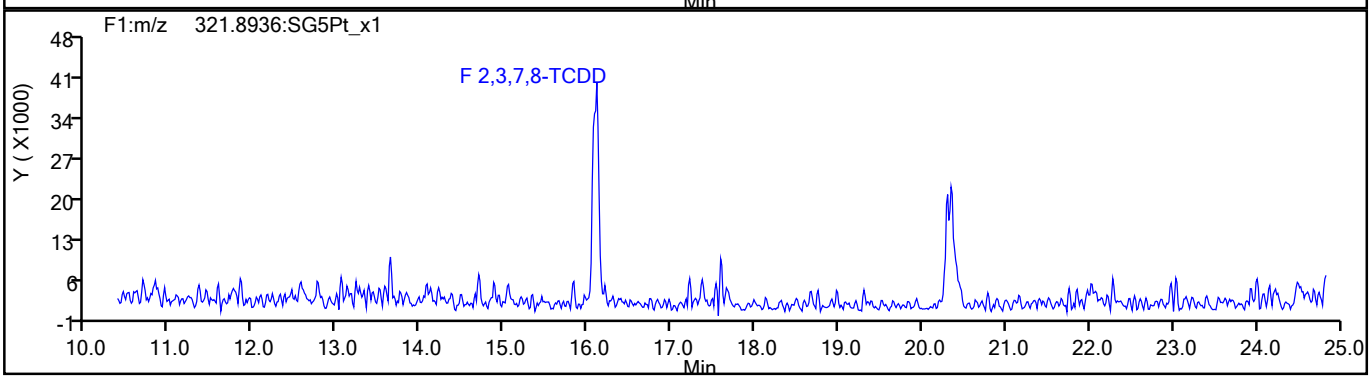

TCDD Standards

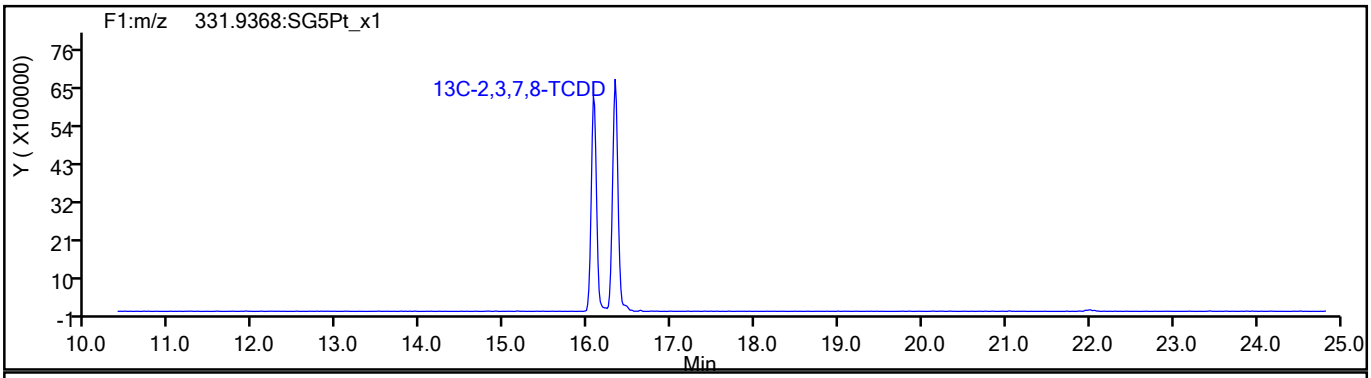

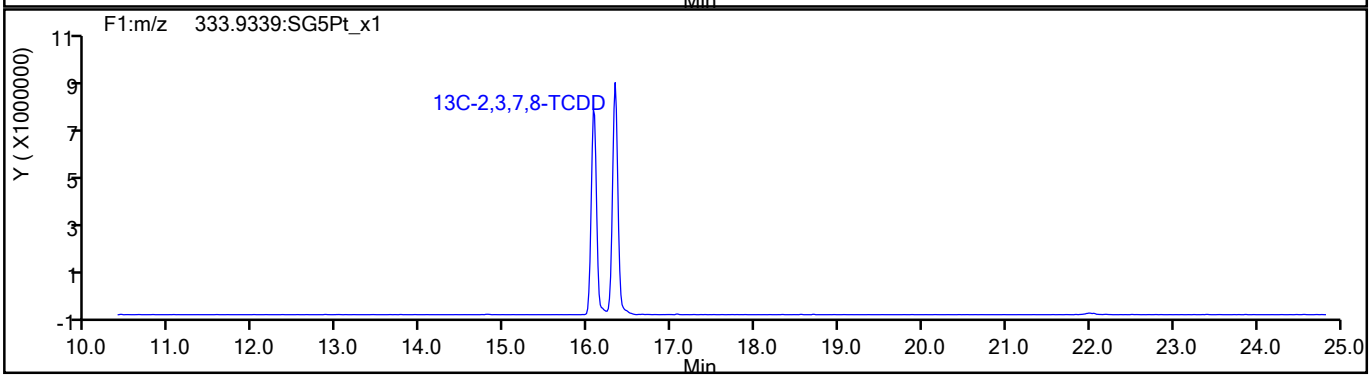

787183

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

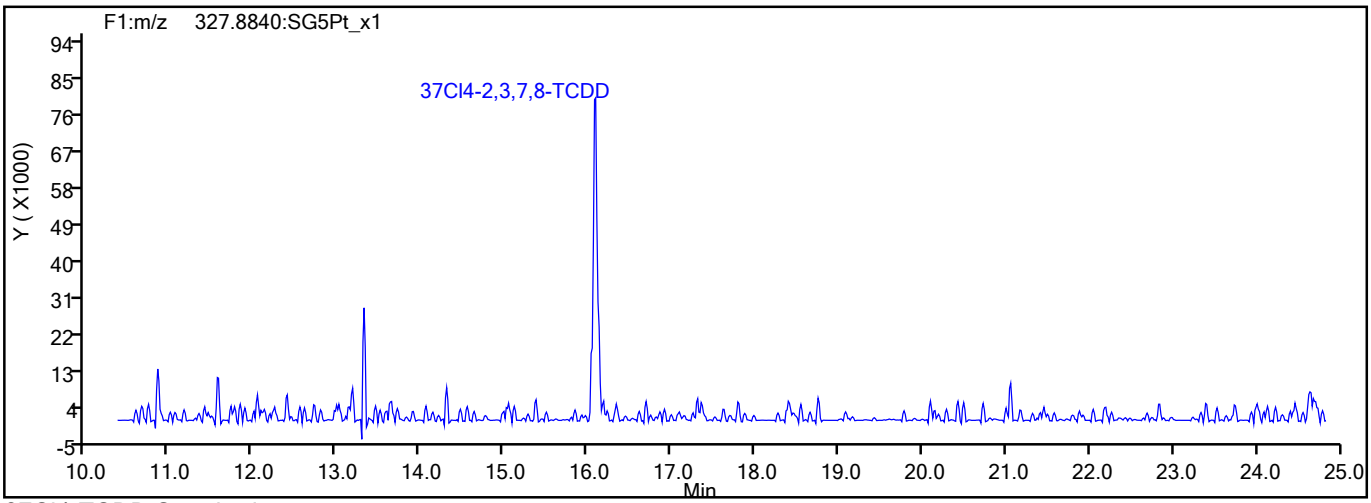

37Cl4-TCDD Standards

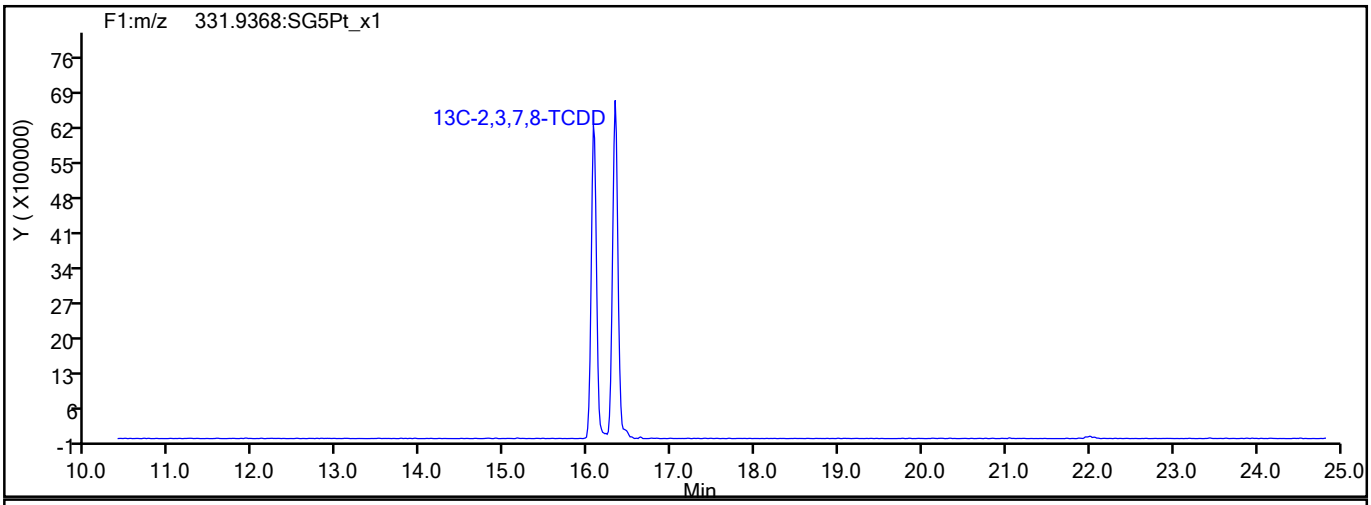

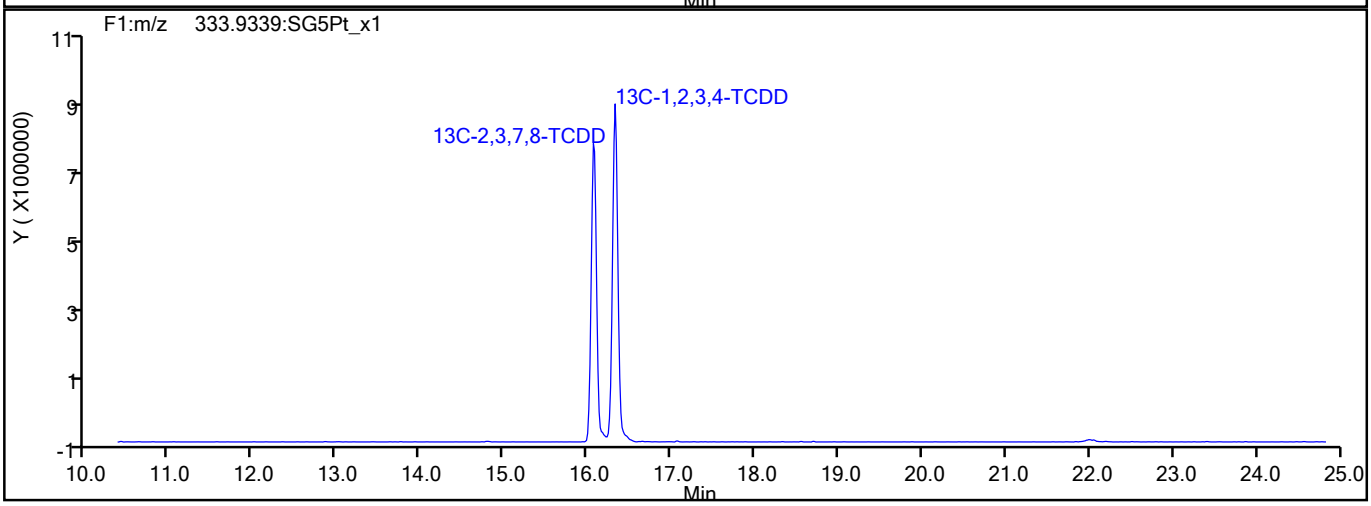

787184

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

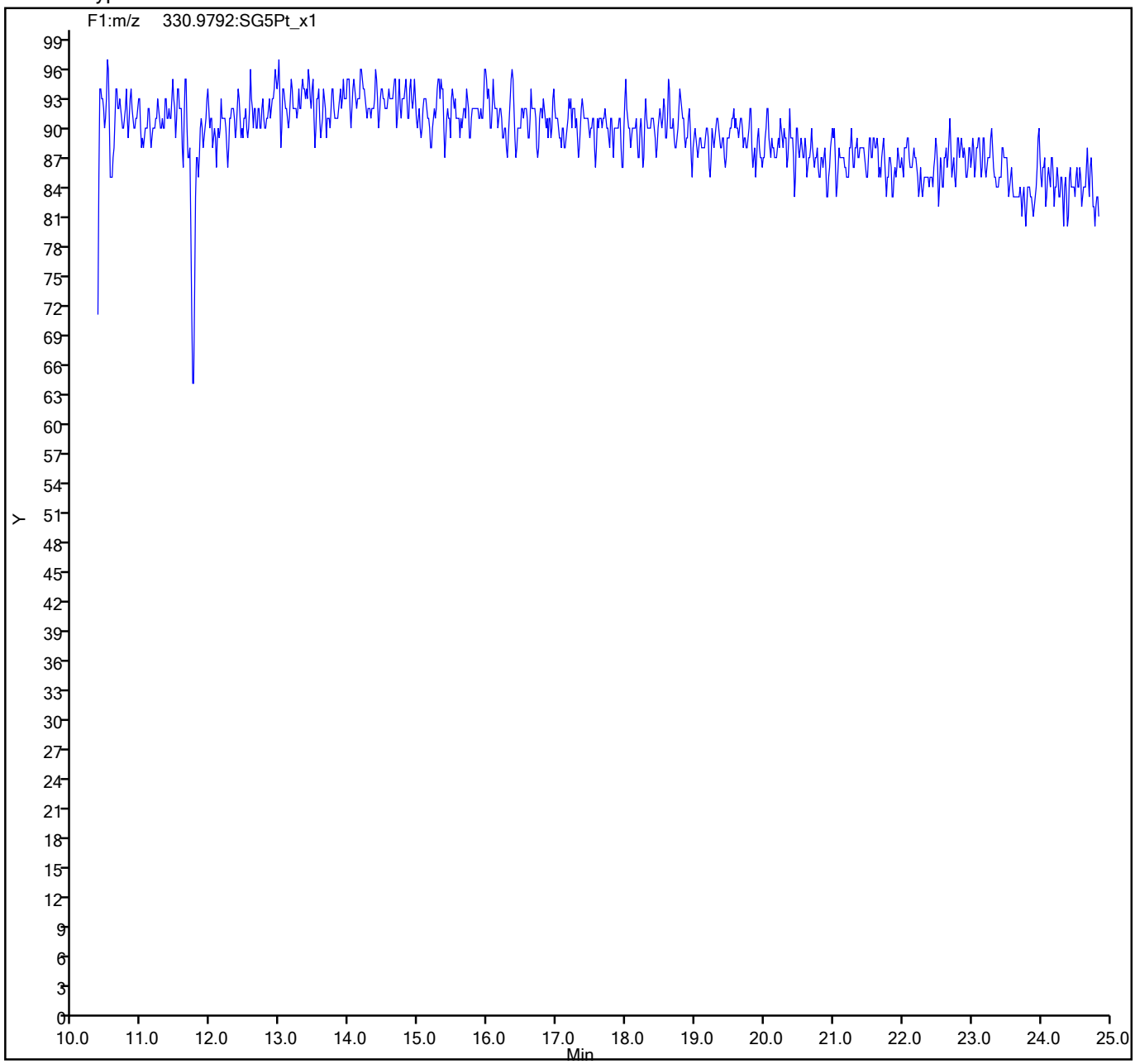

787185

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

787187

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

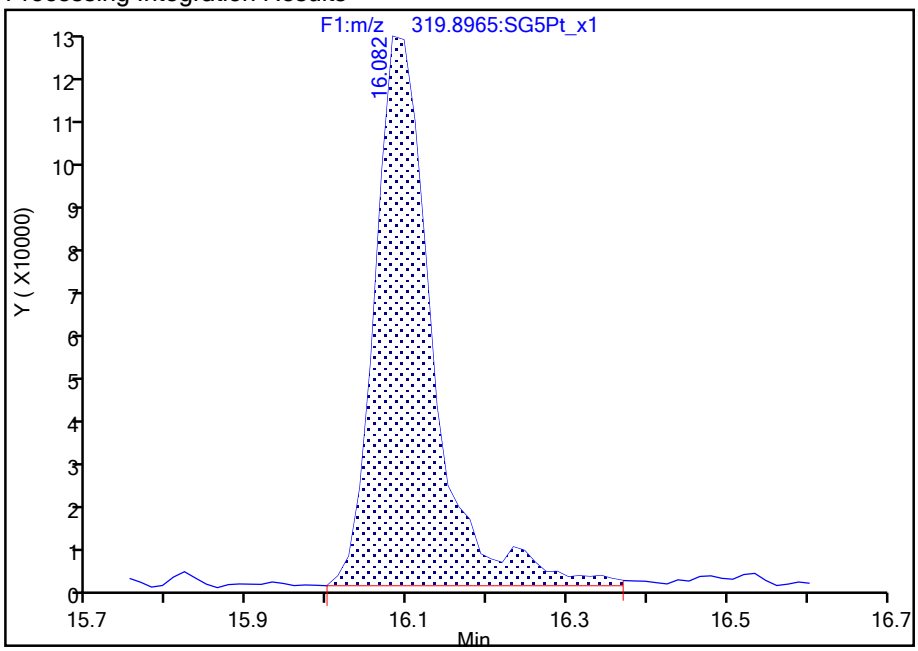

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

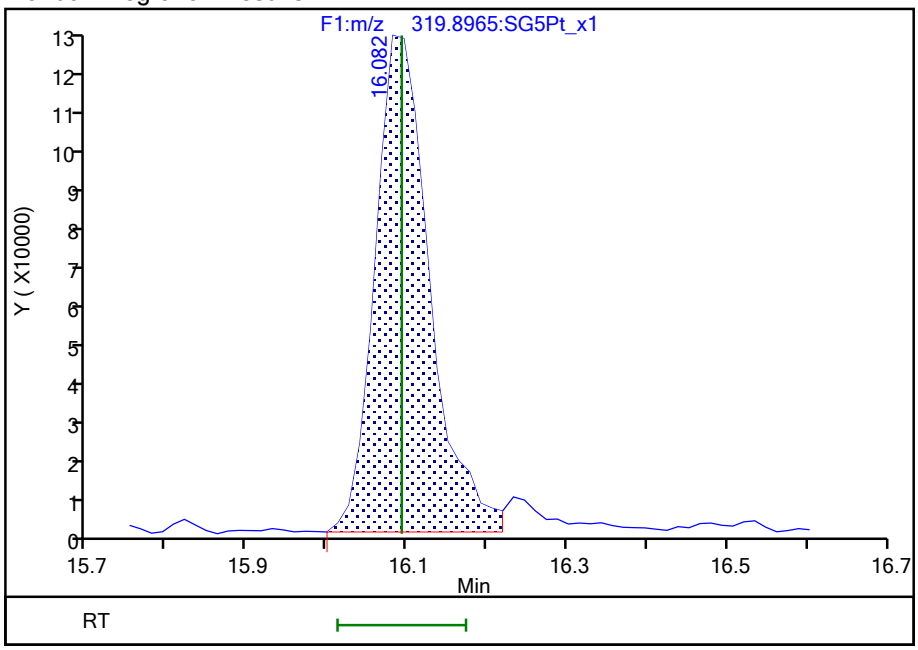

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

787188

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

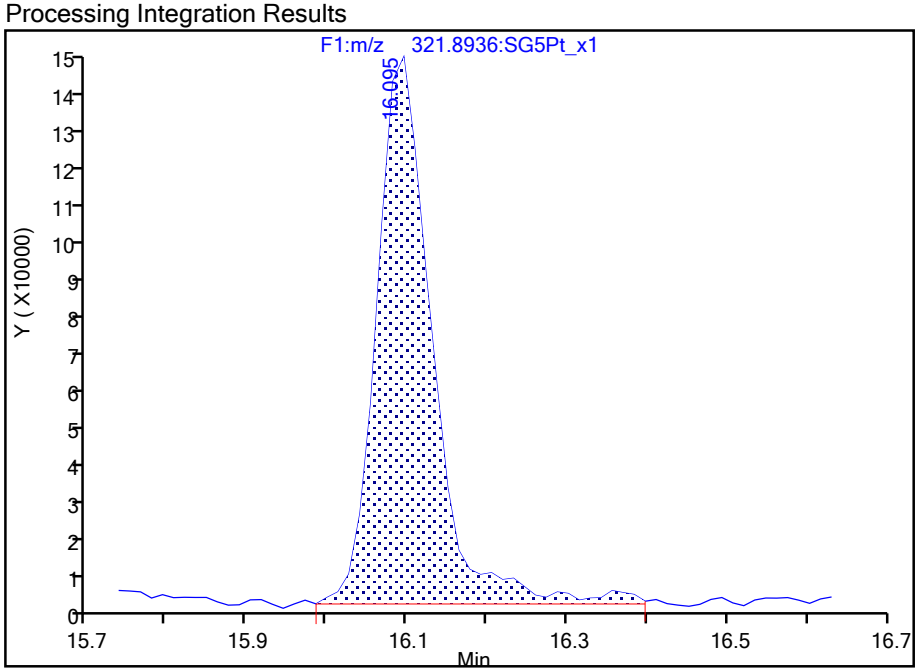

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

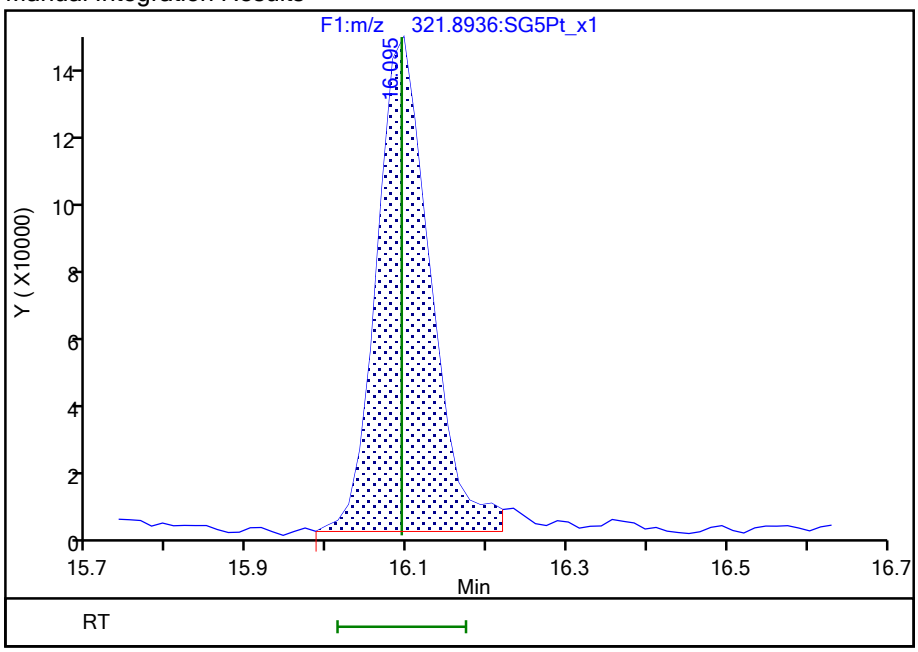

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

787189

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

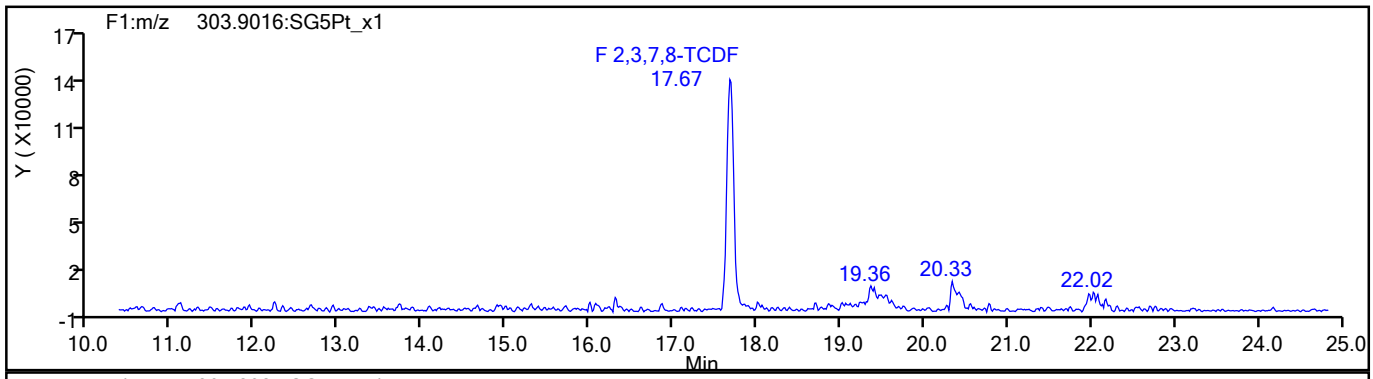

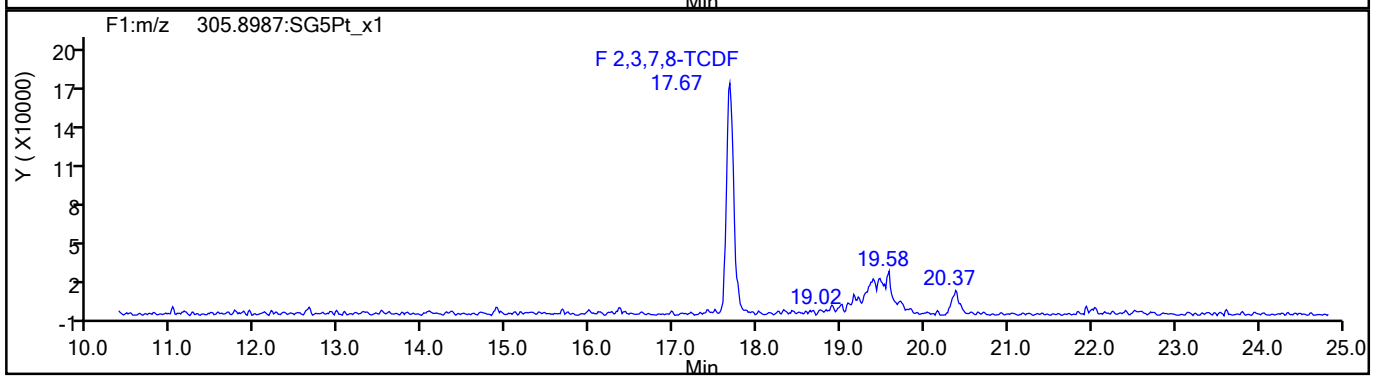

TCDF Standards

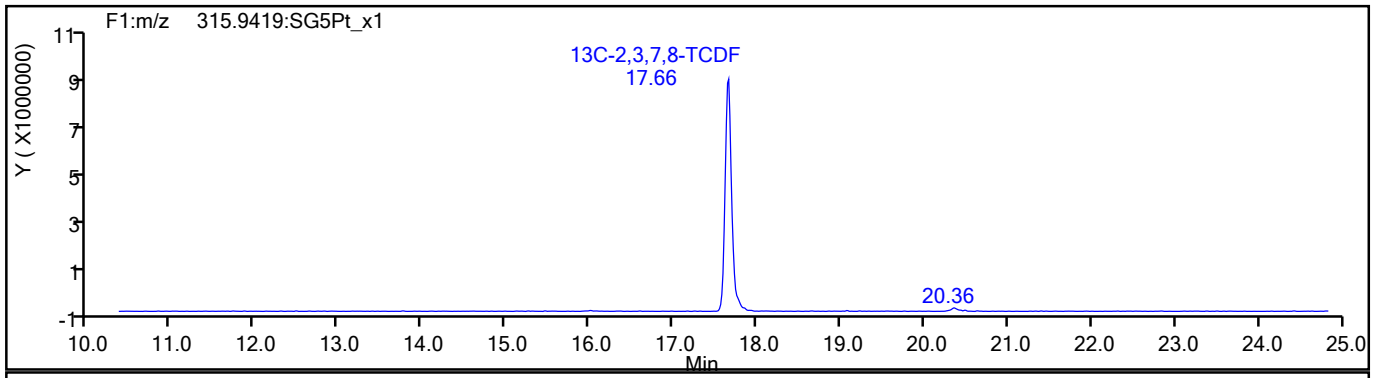

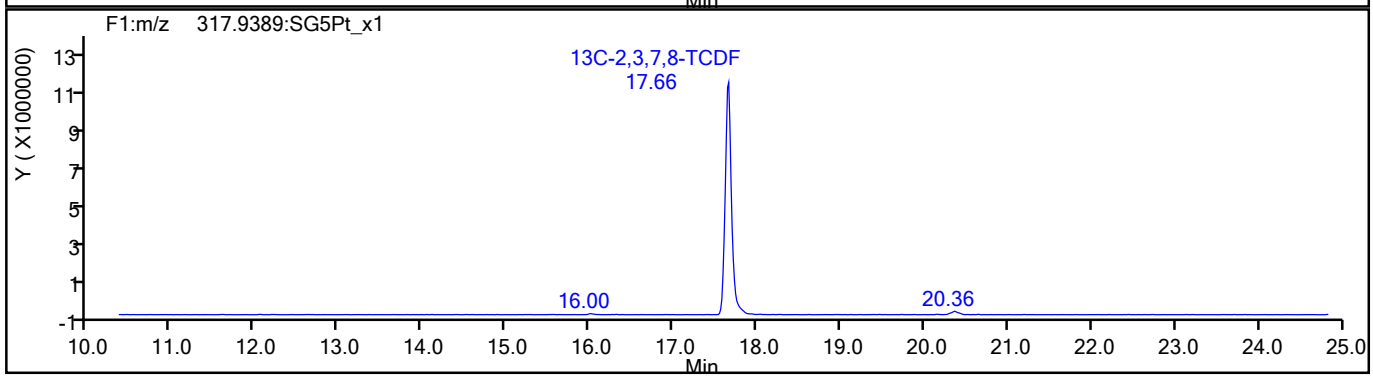

787190

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

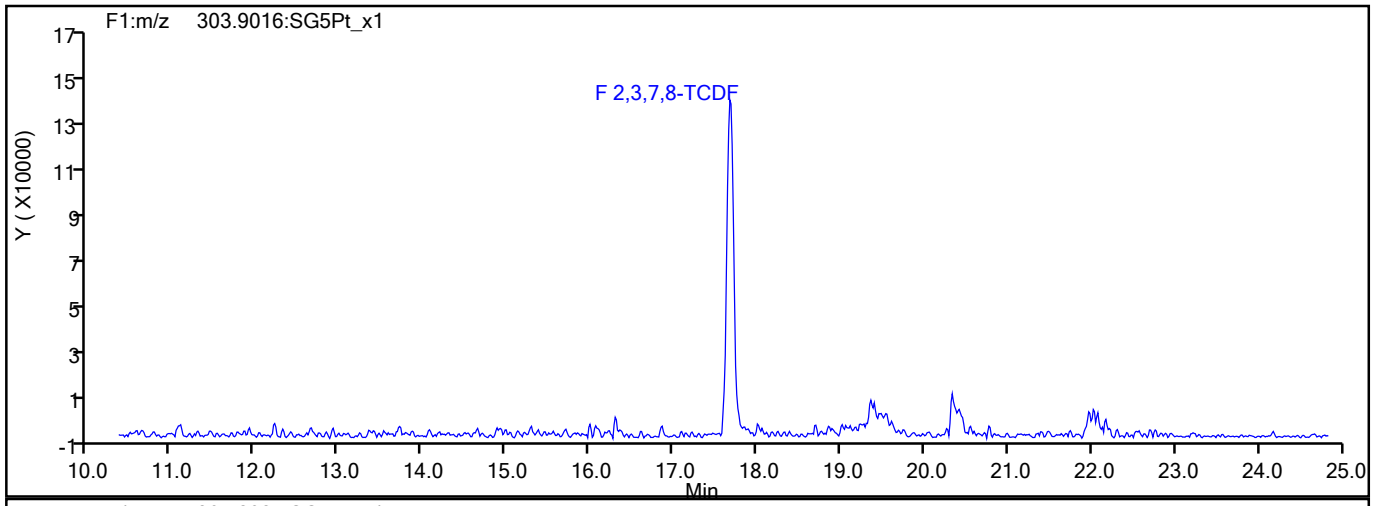

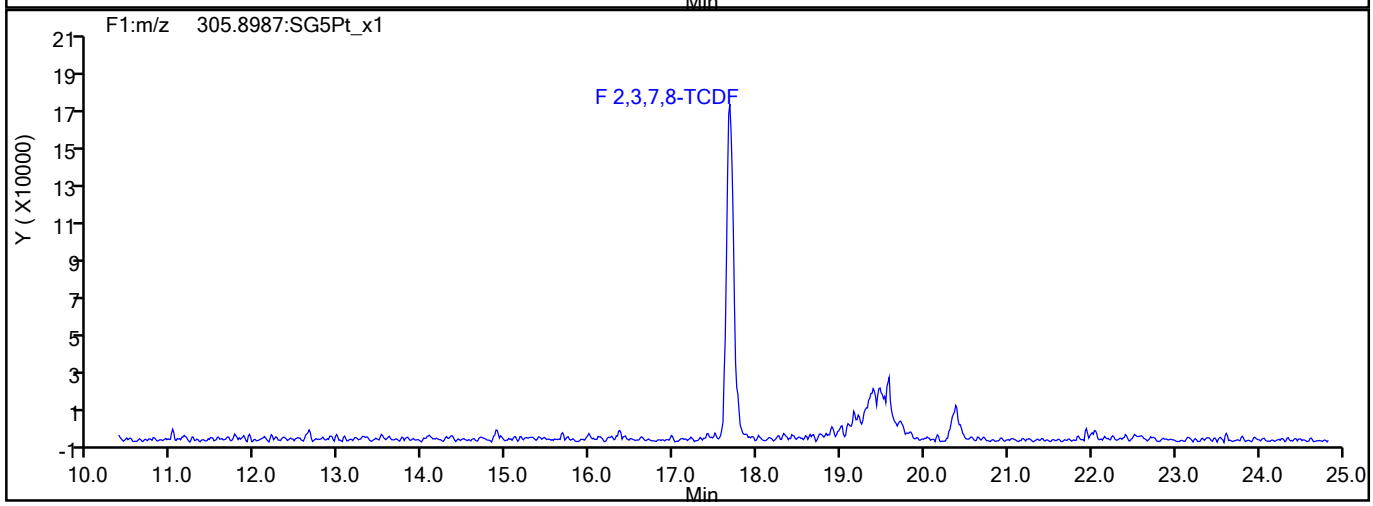

TCDF Interference Mass

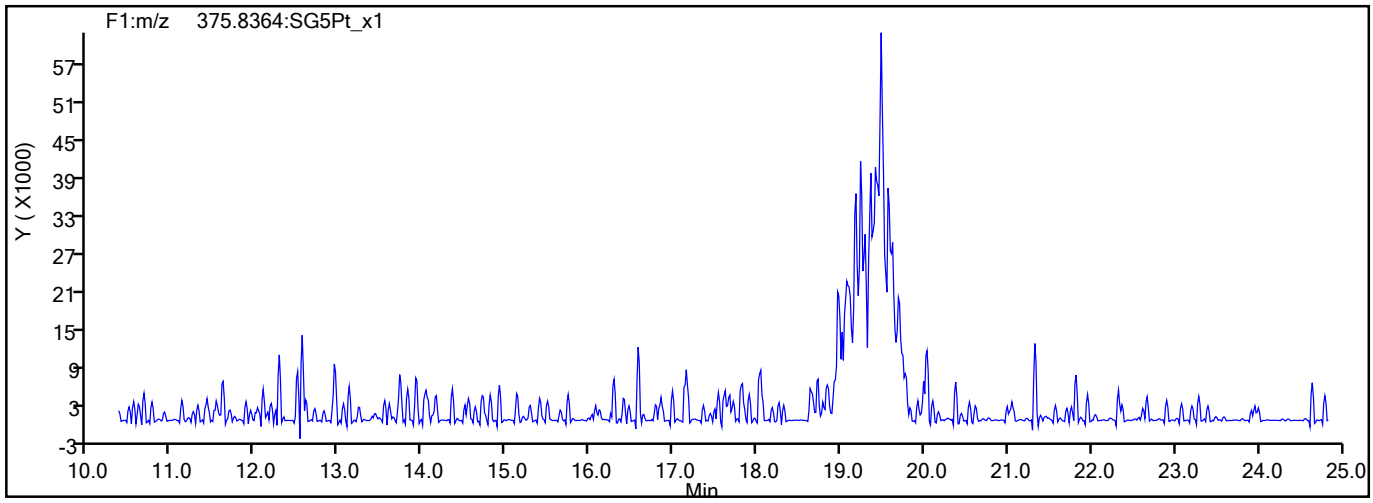

787191

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

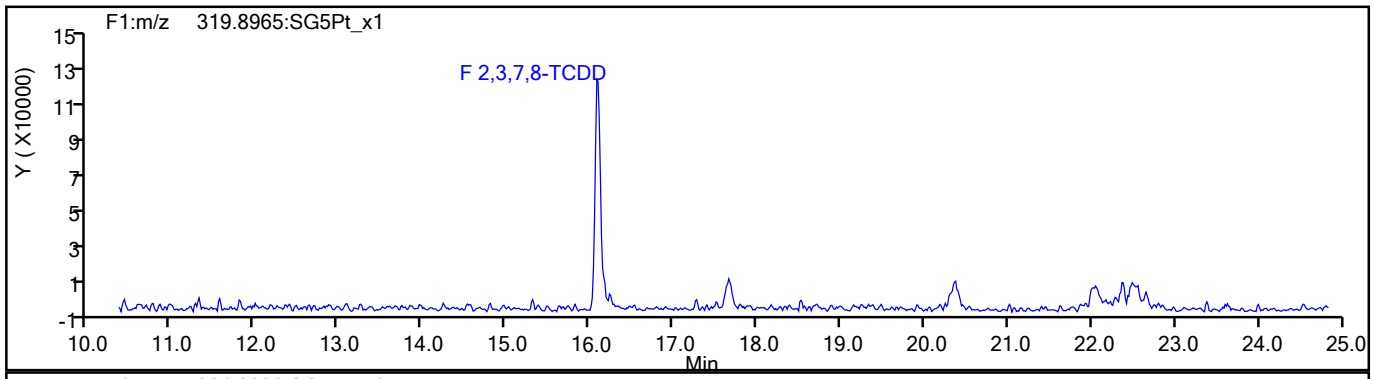

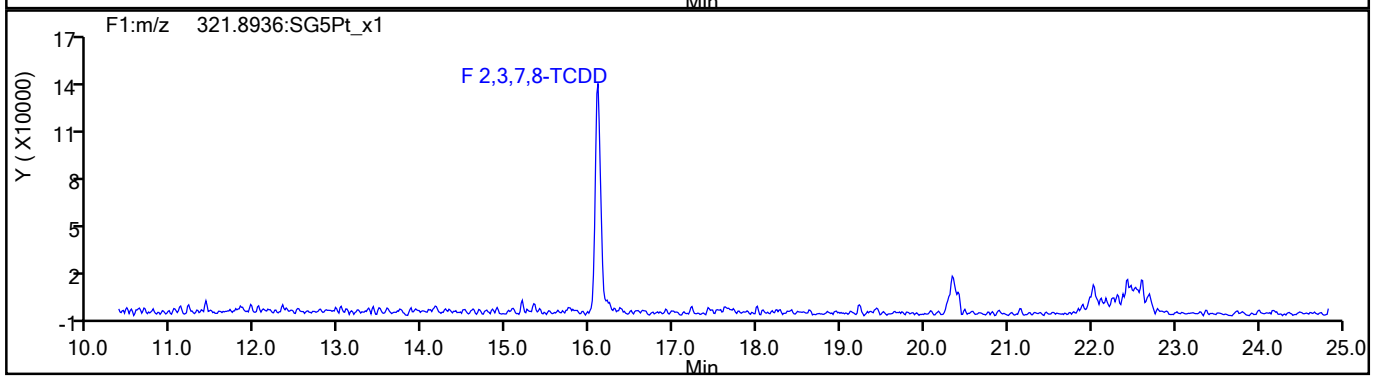

TCDD Standards

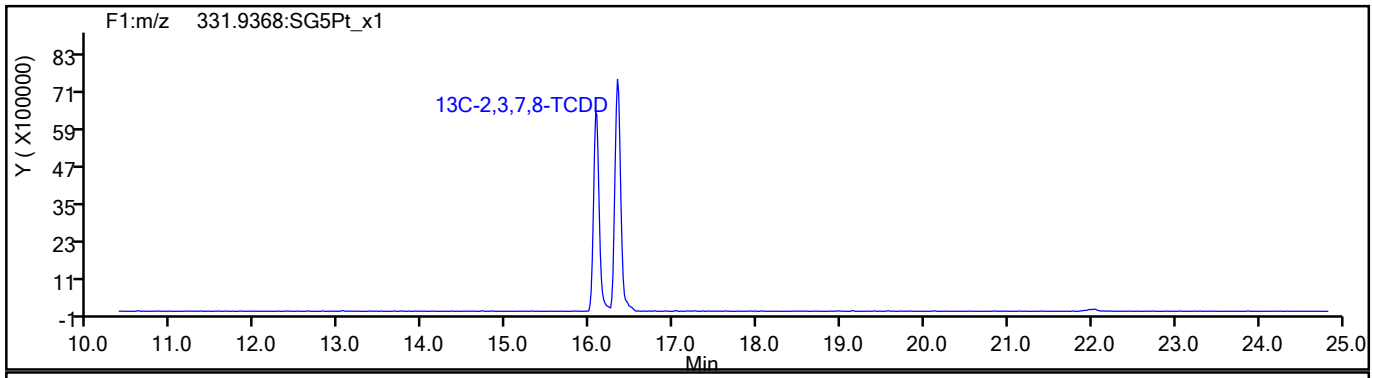

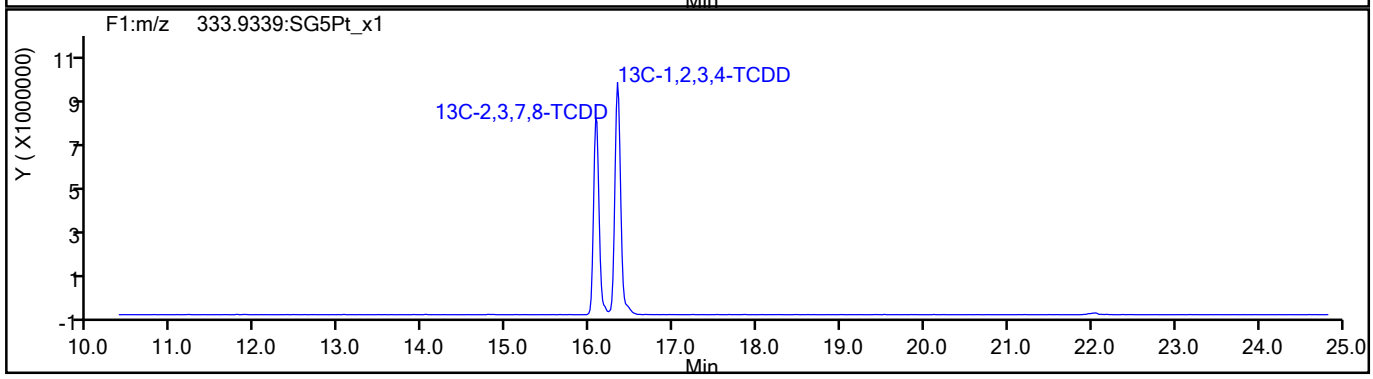

787192

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

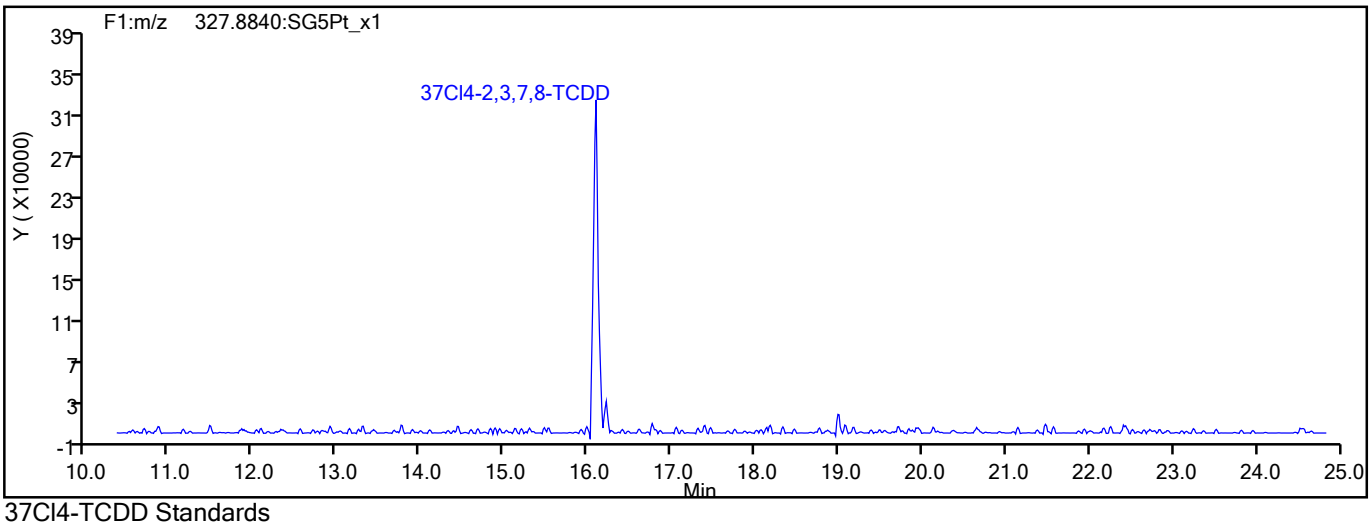

37Cl4-TCDD Standards

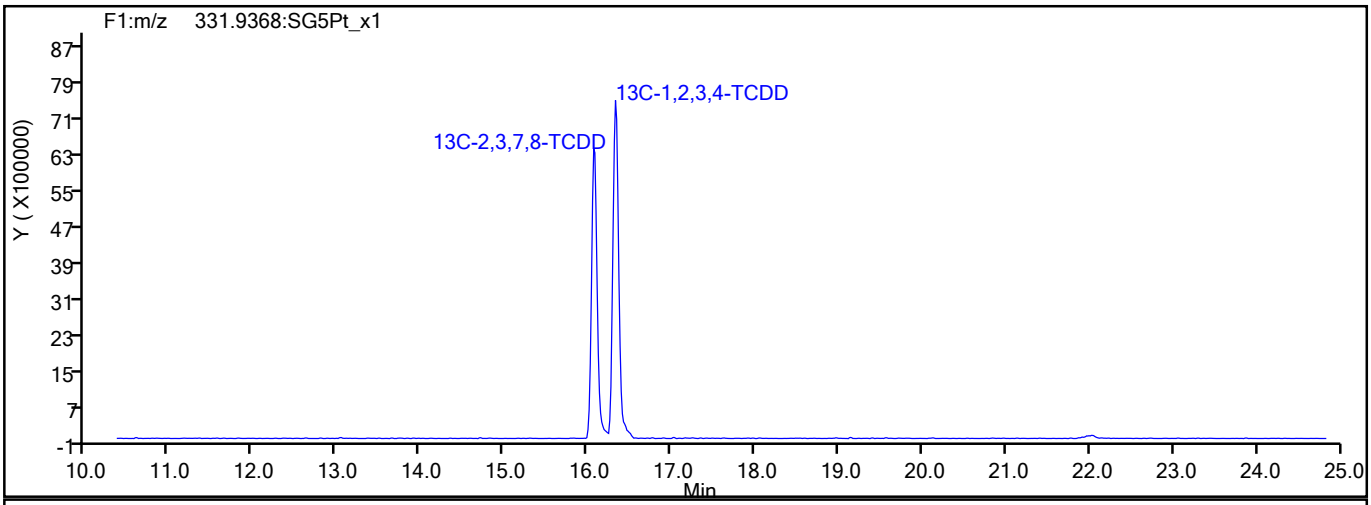

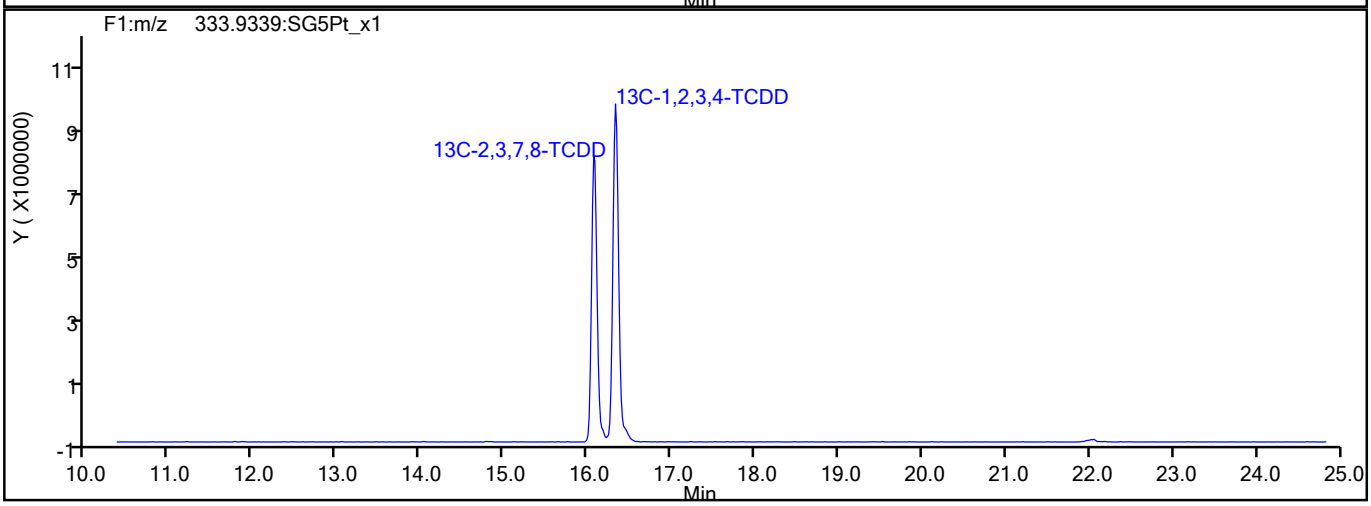

787193

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

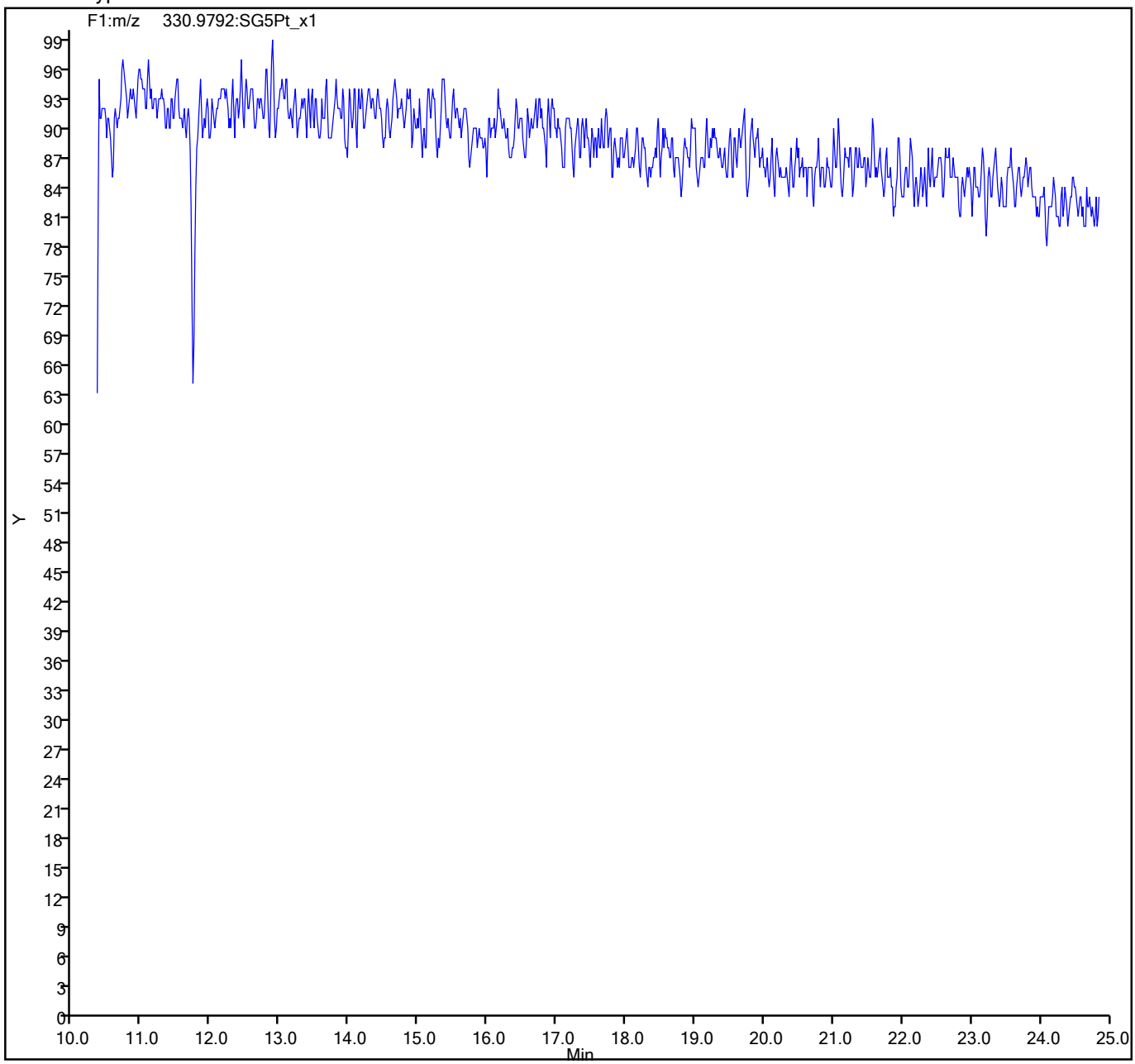

787194

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

787195

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

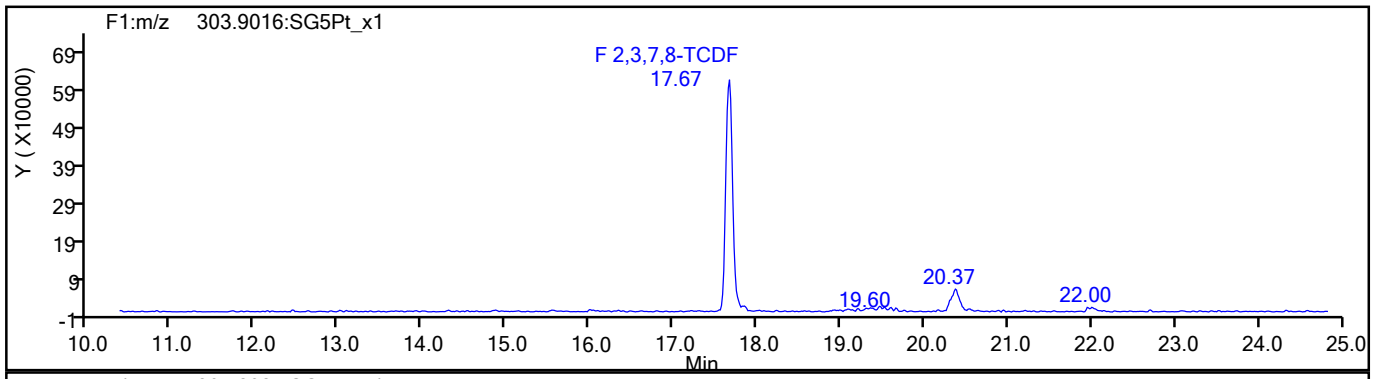

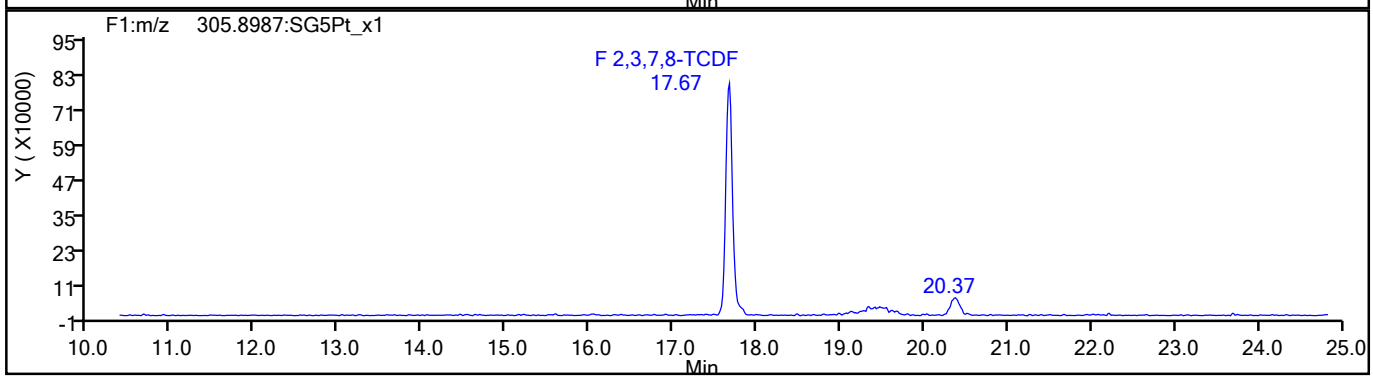

TCDF Standards

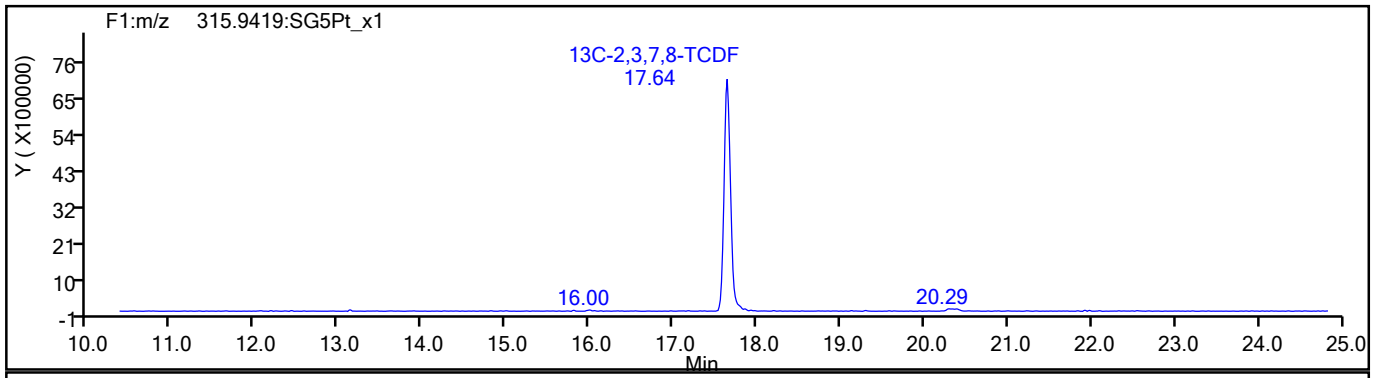

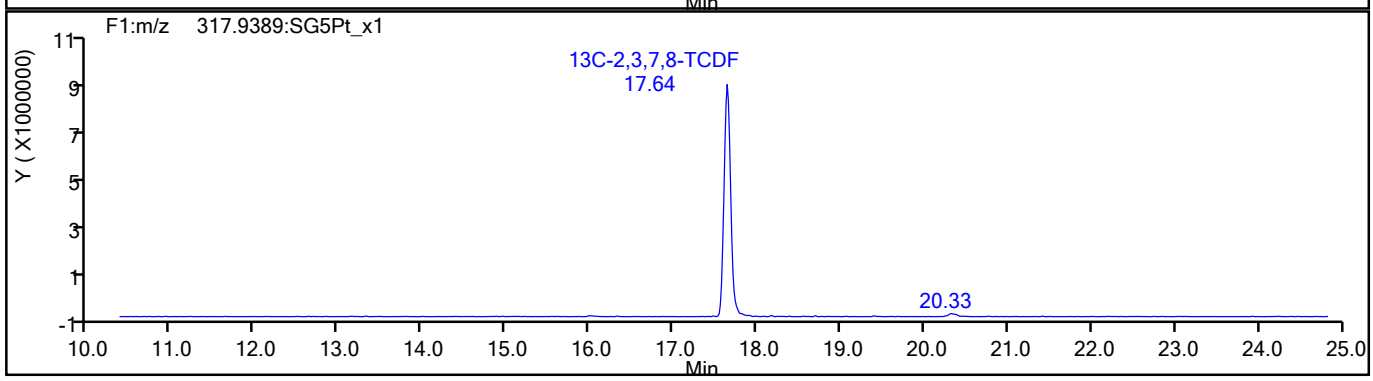

787197

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

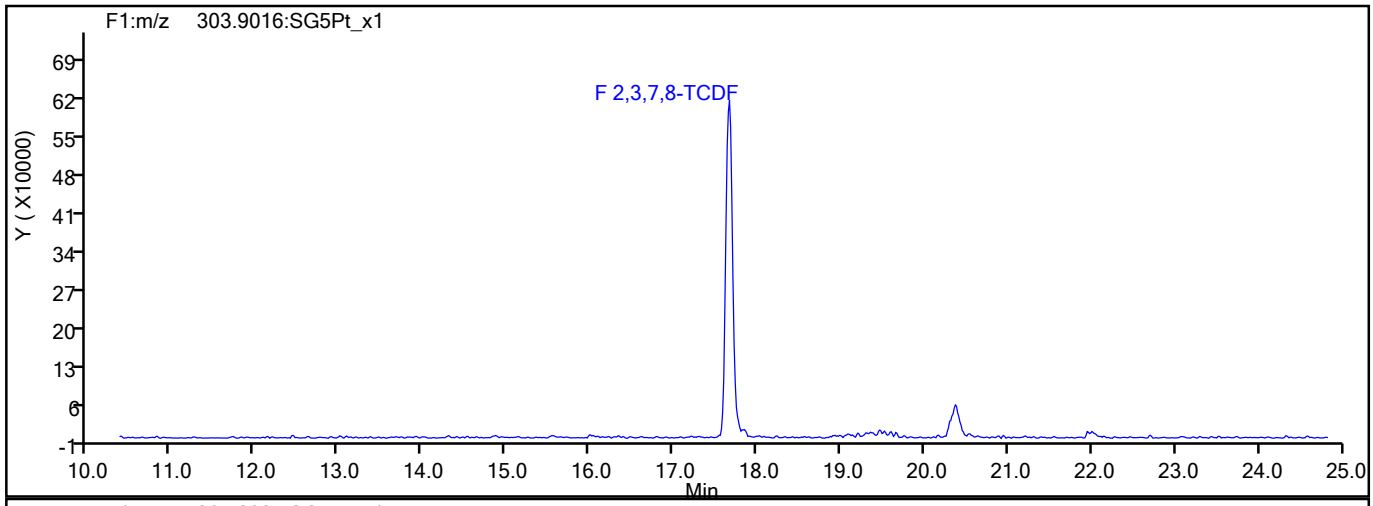

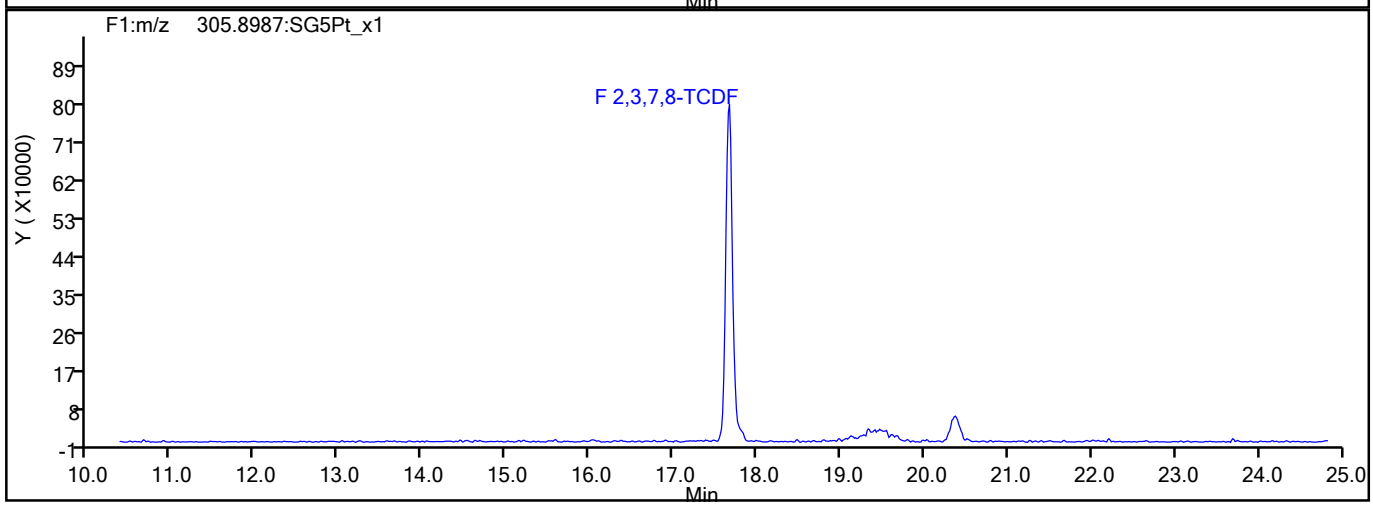

TCDF Interference Mass

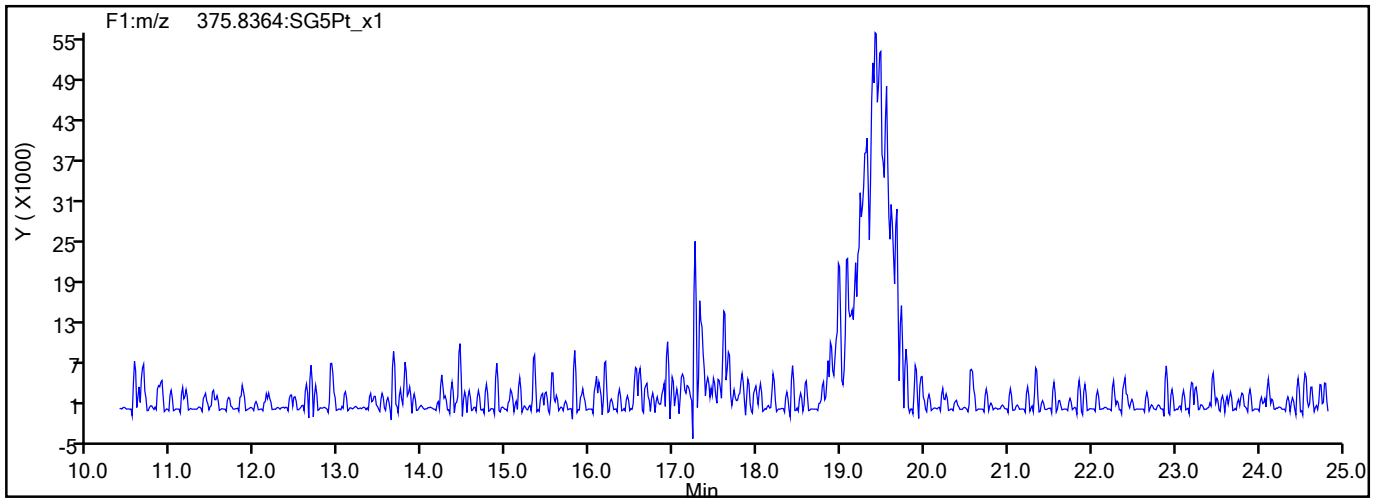

787198

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

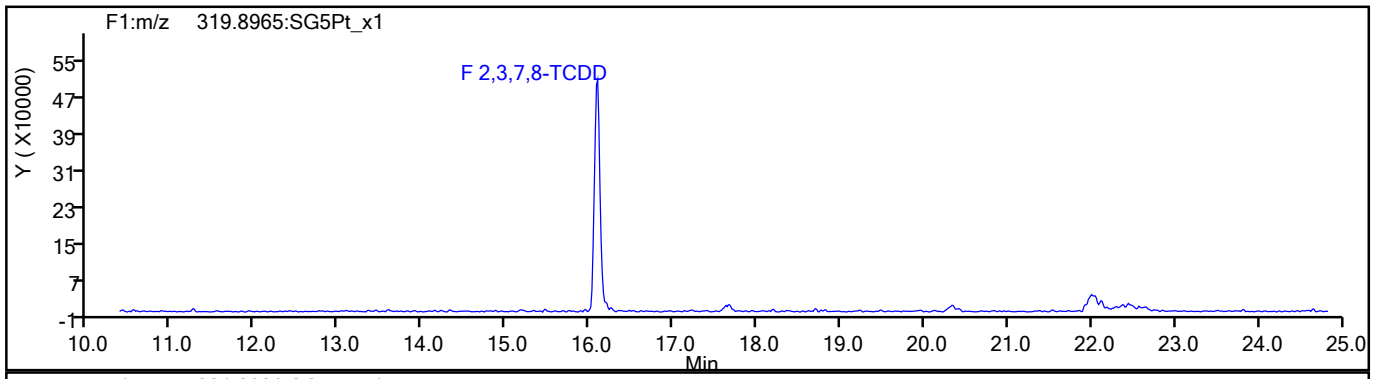

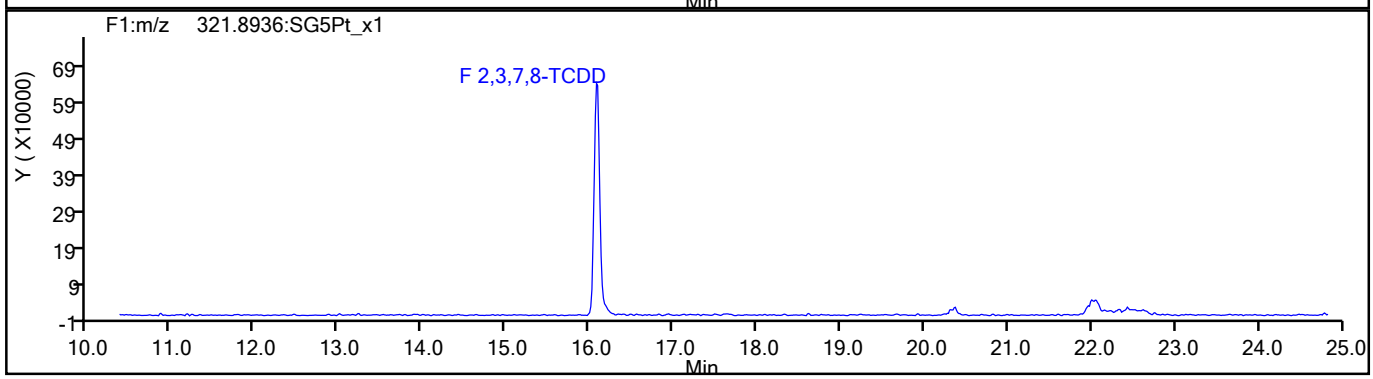

TCDD Standards

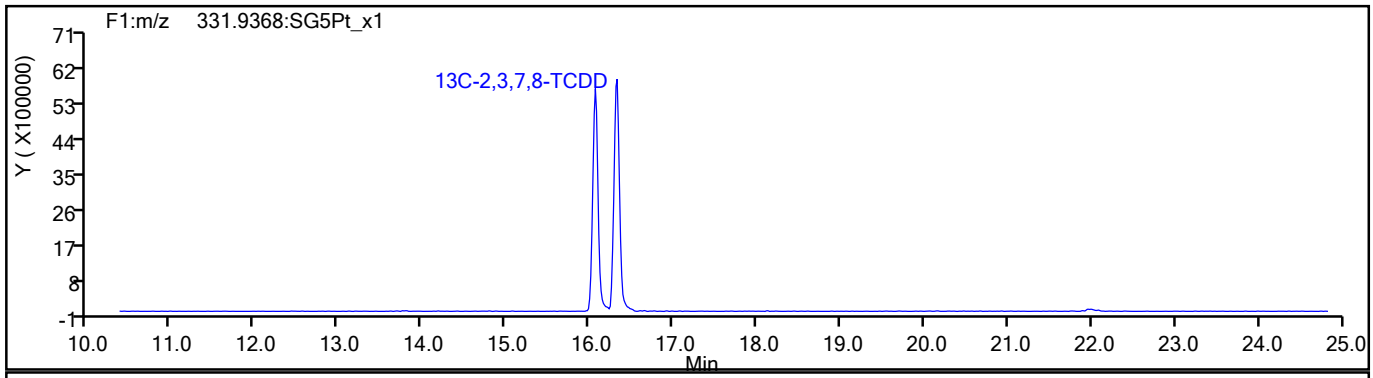

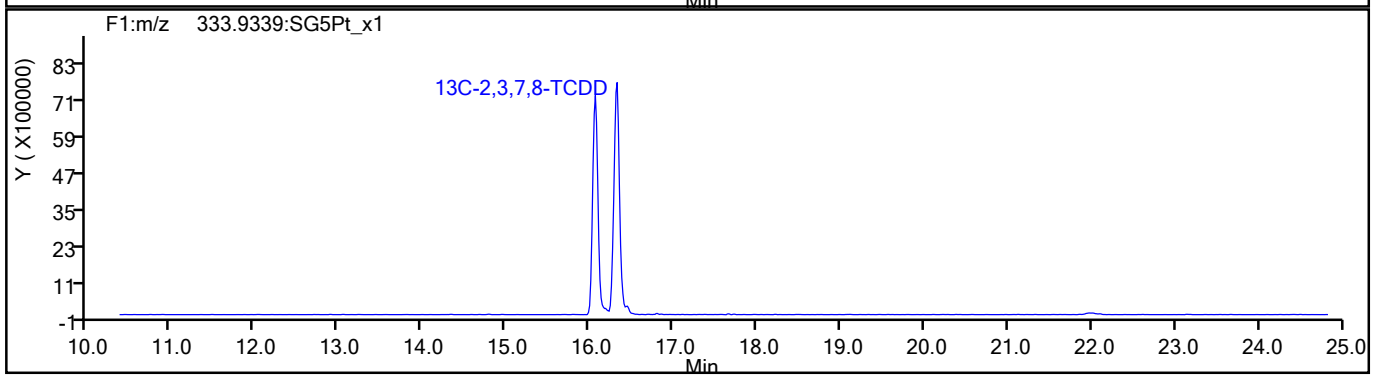

787199

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

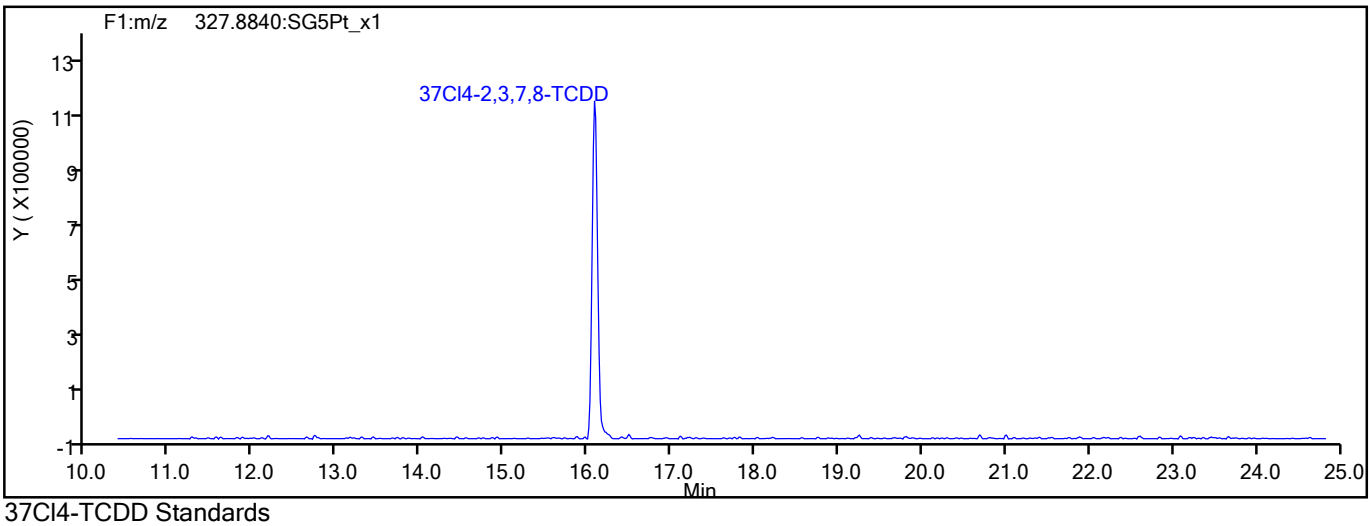

37Cl4-TCDD Standards

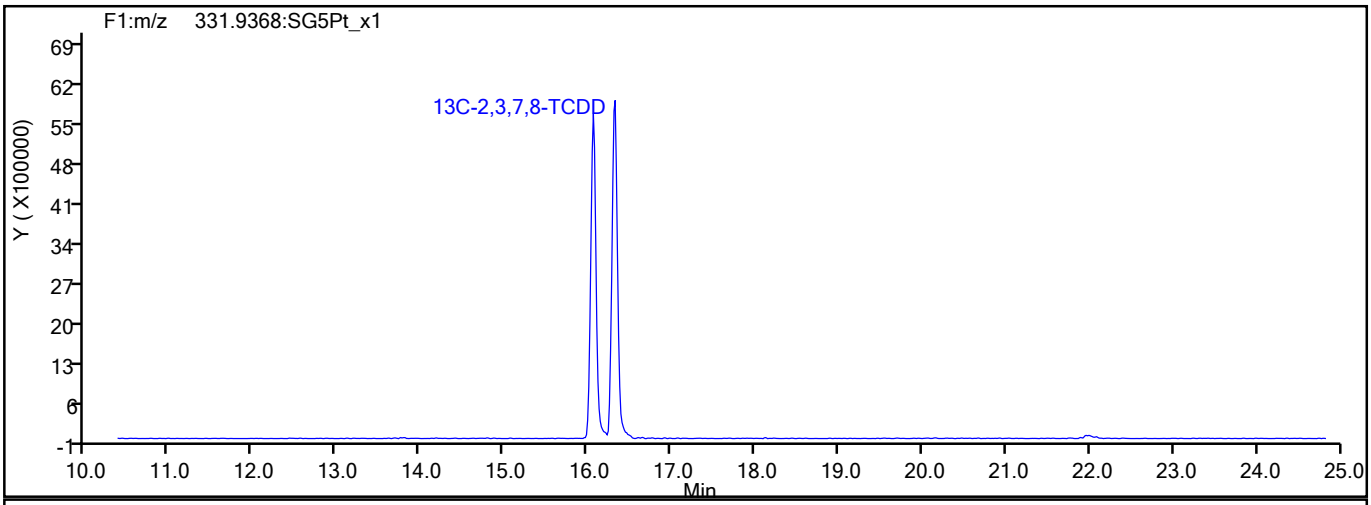

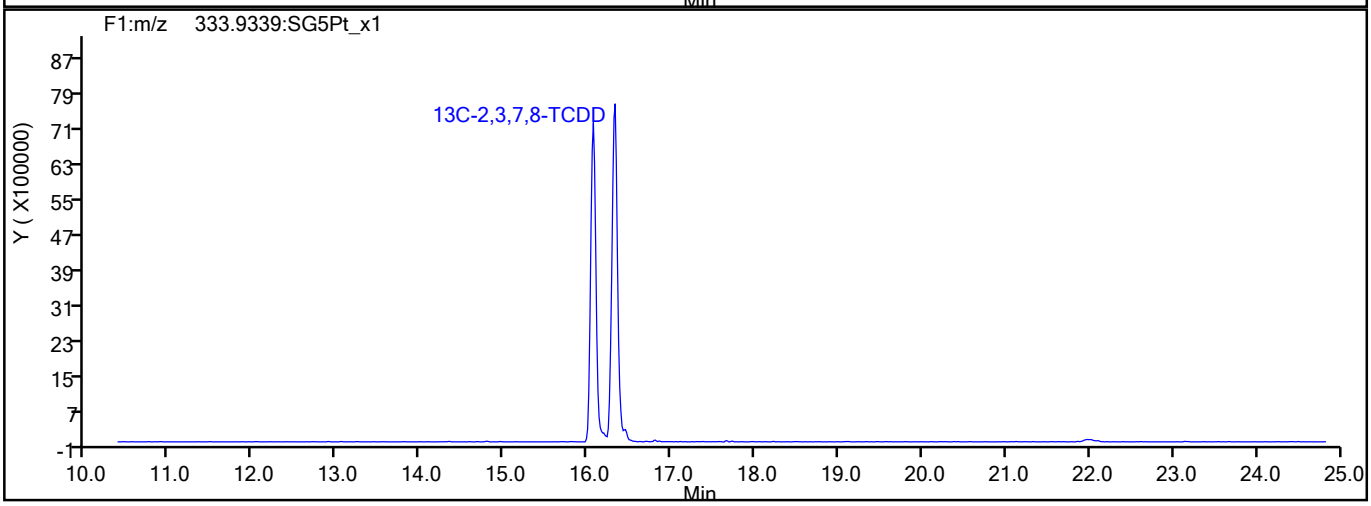

787200

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

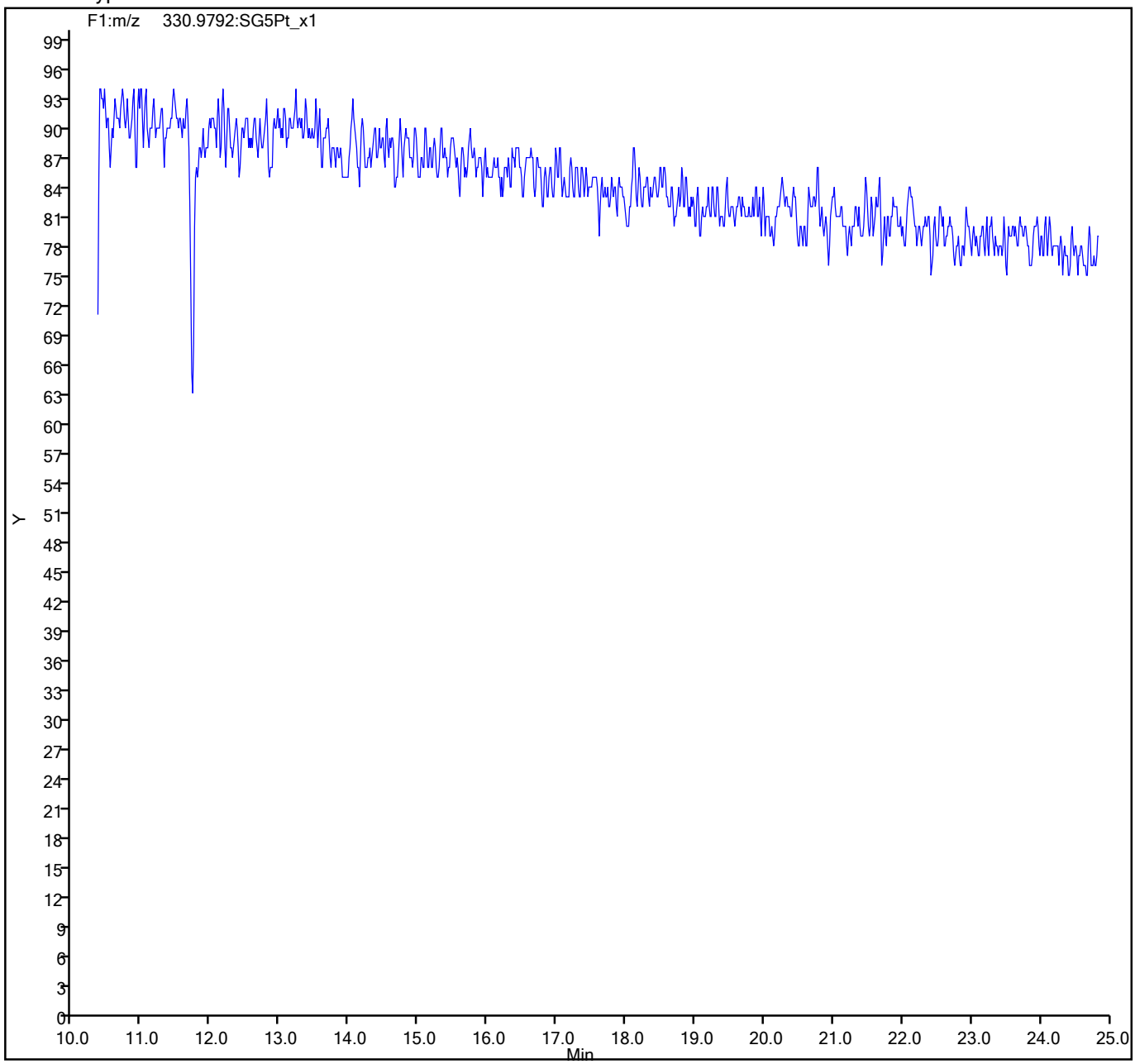

787201

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

787202

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

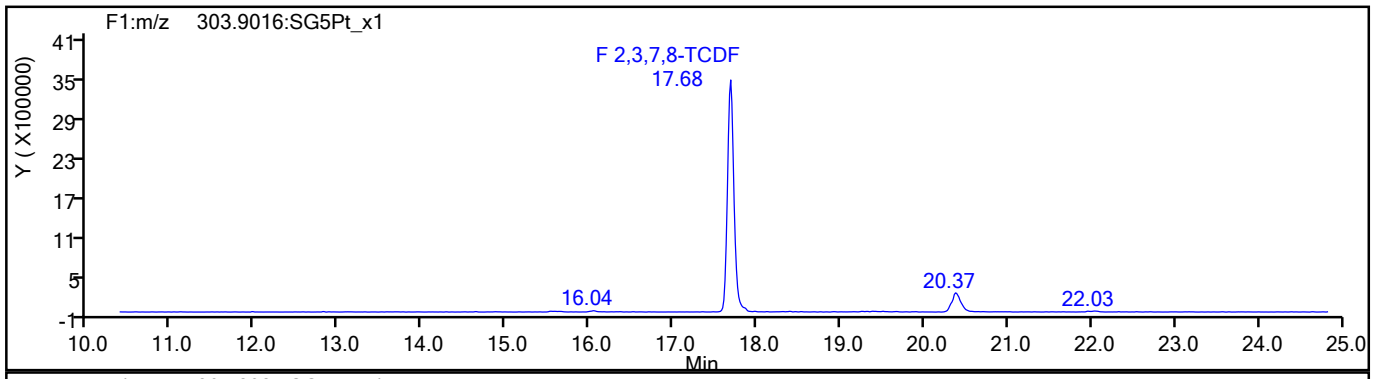

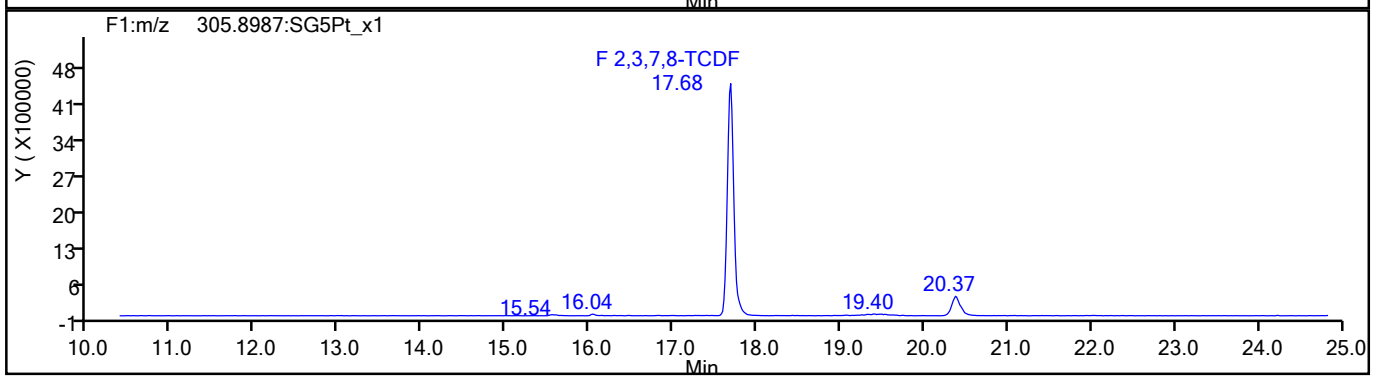

TCDF Standards

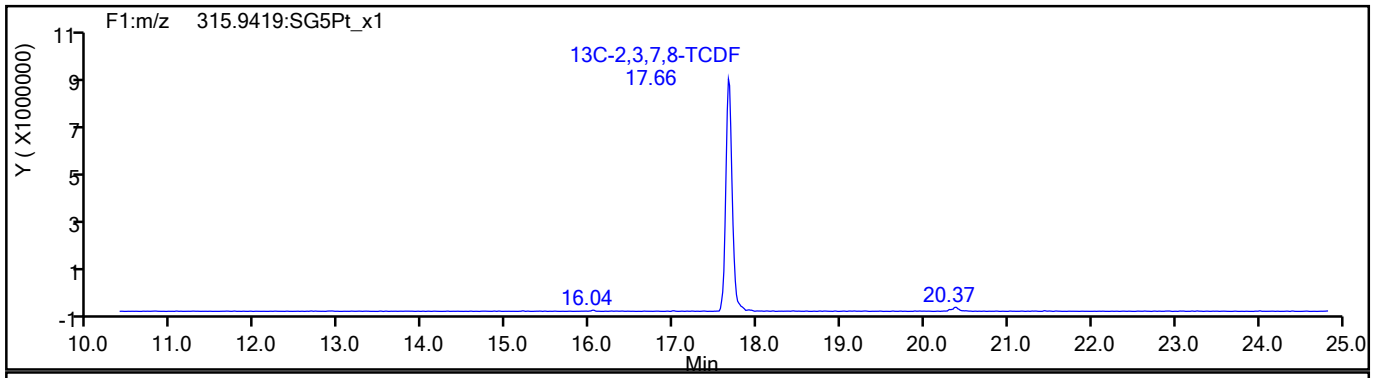

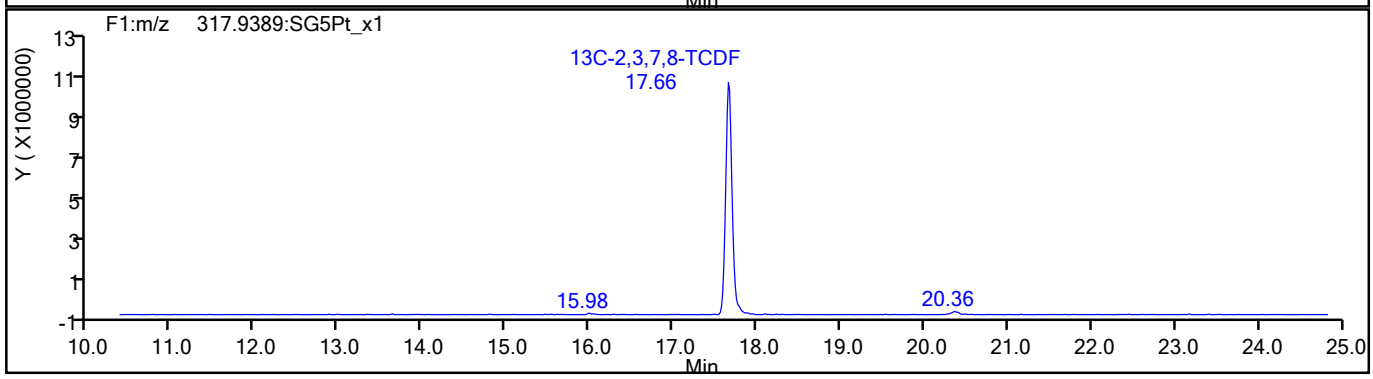

787204

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

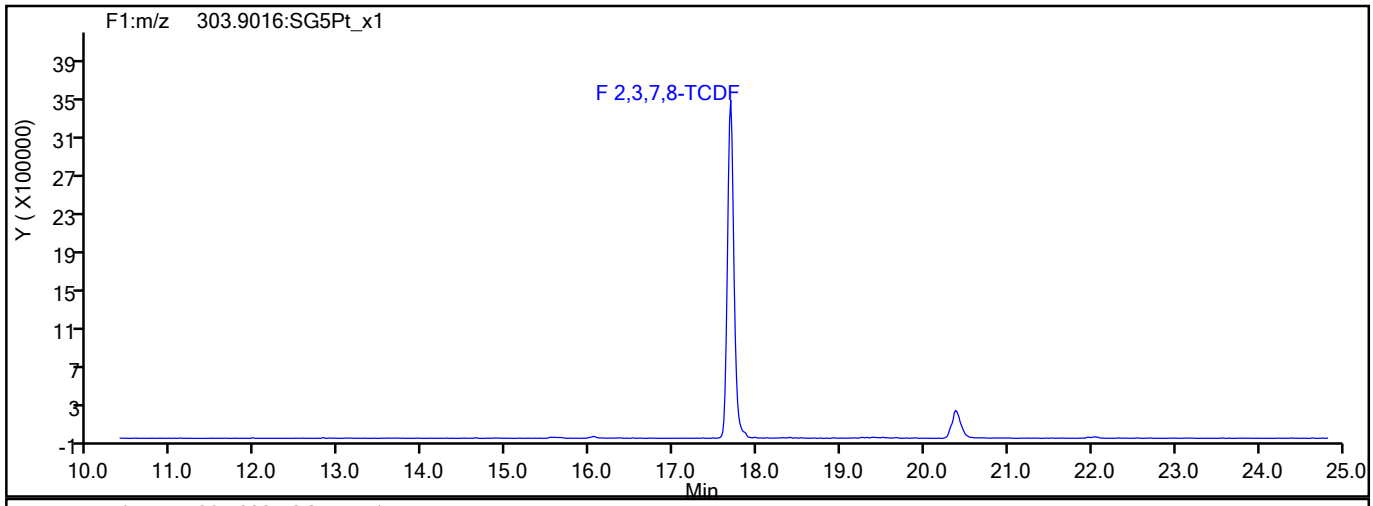

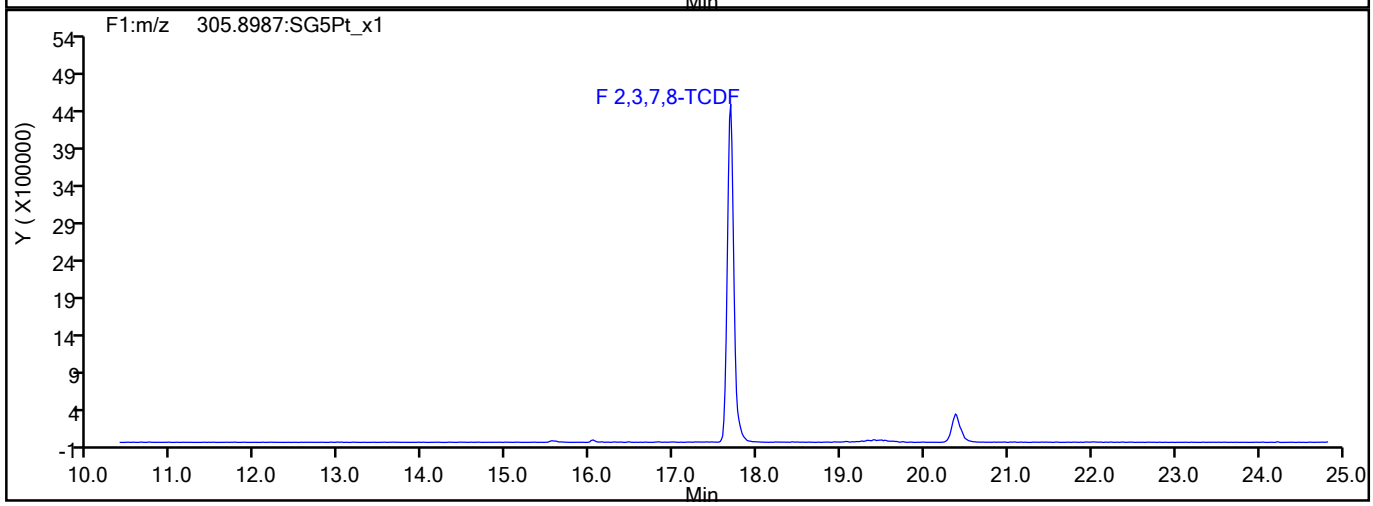

TCDF Interference Mass

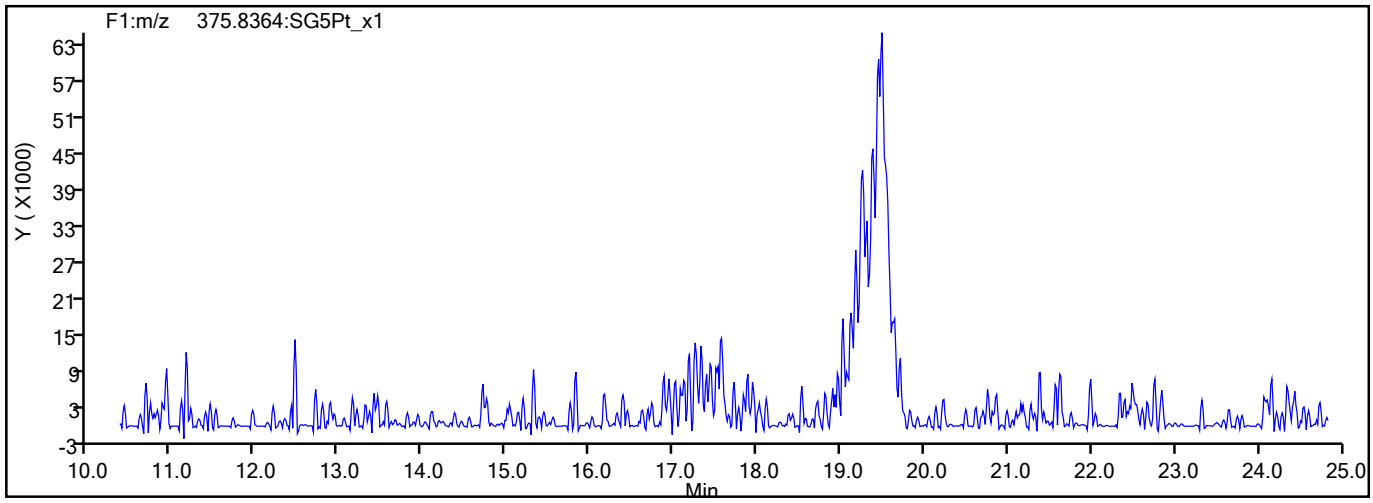

787205

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

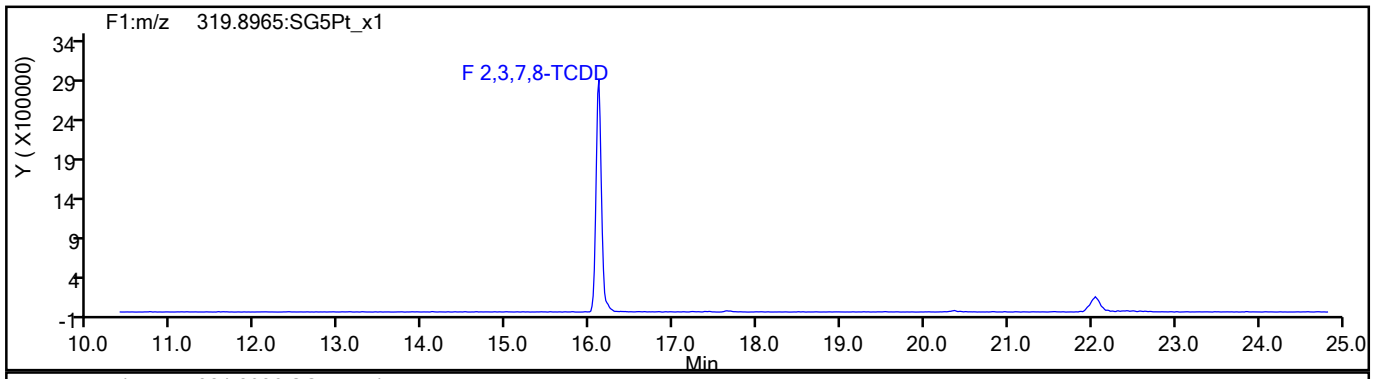

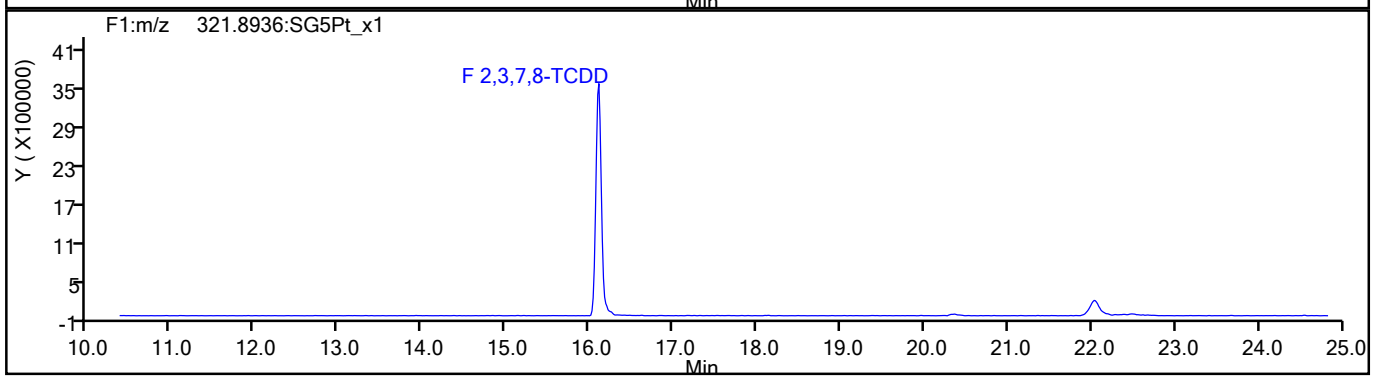

TCDD Standards

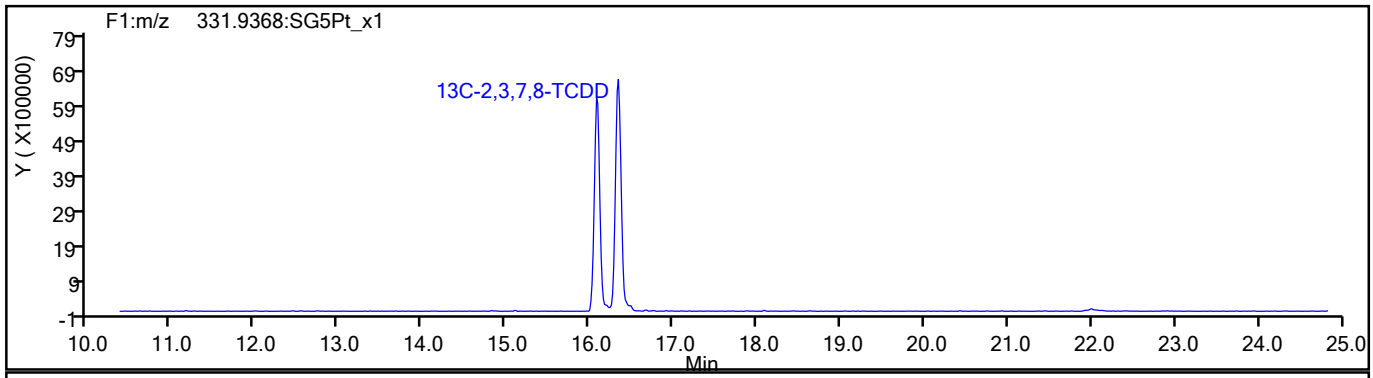

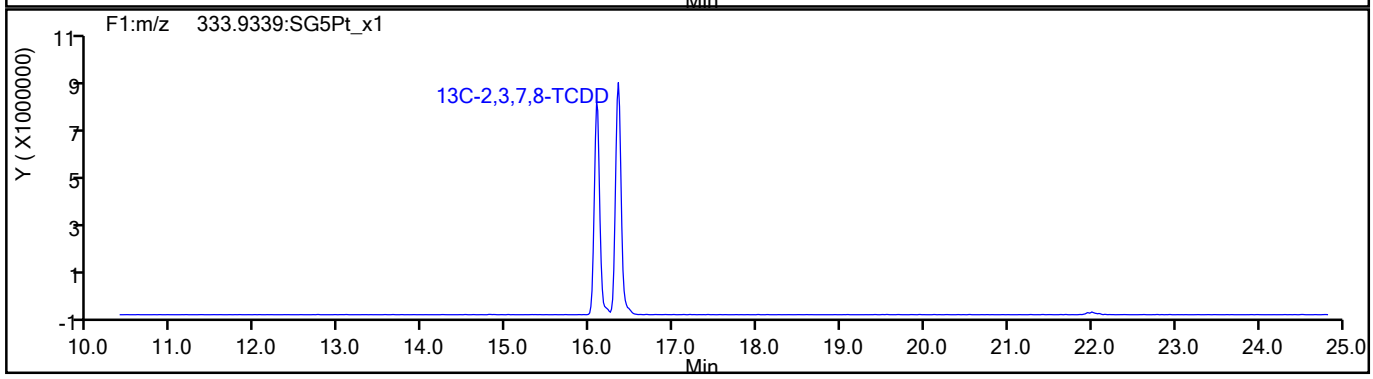

787206

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

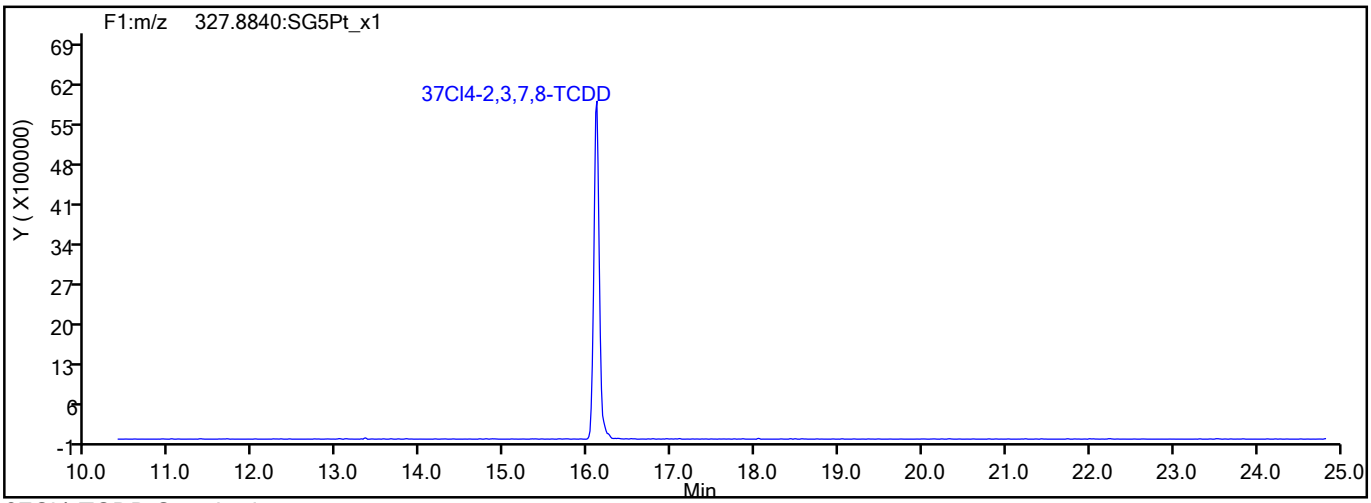

37Cl4-TCDD Standards

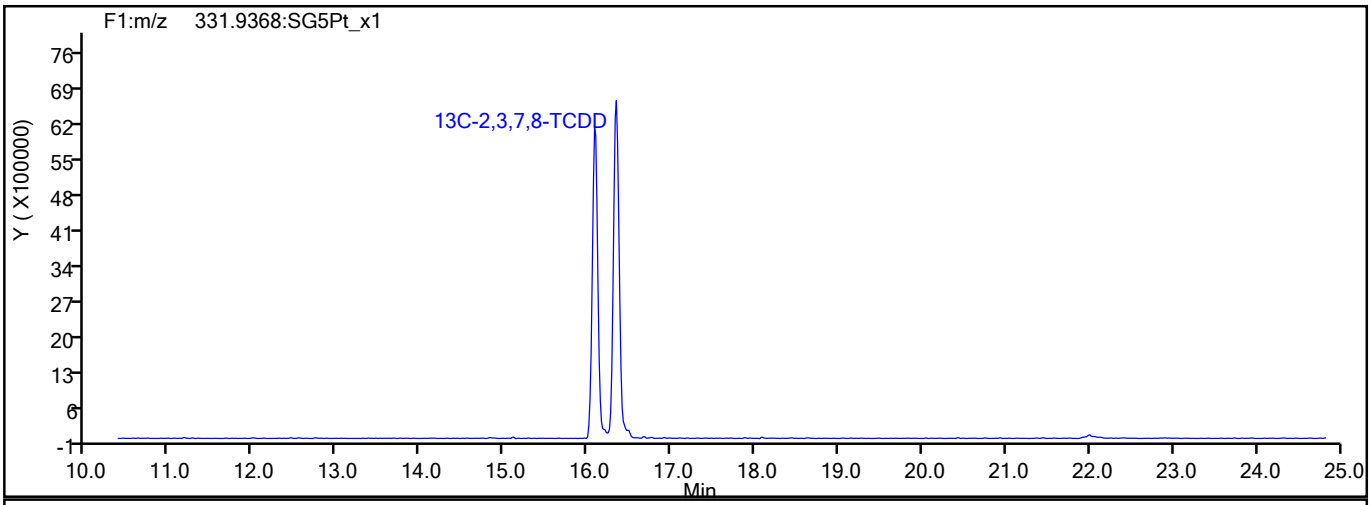

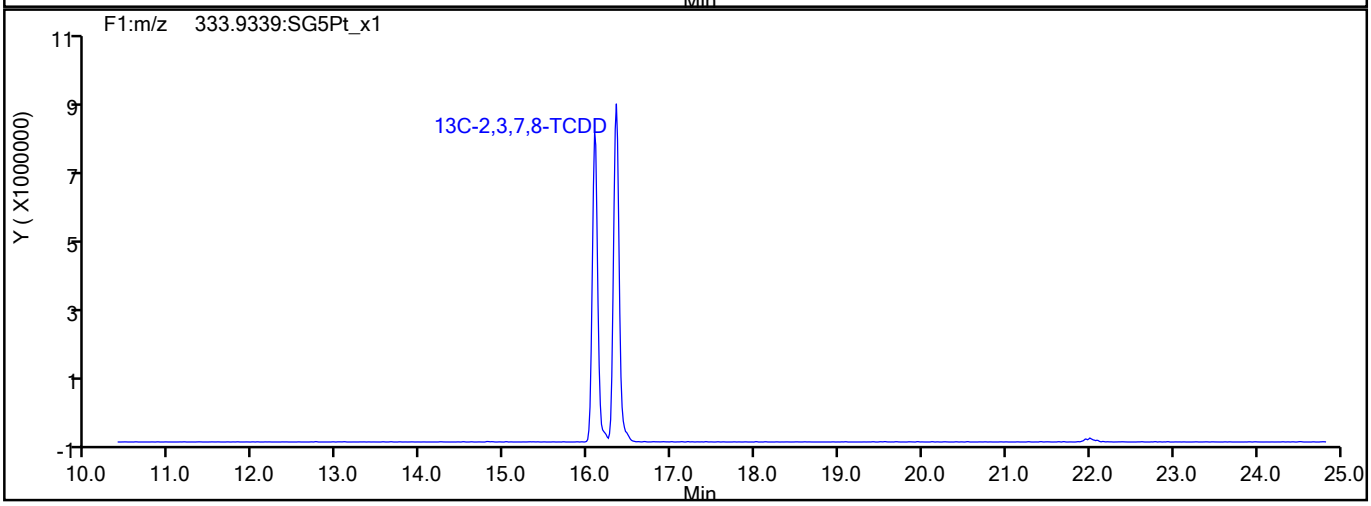

787207

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

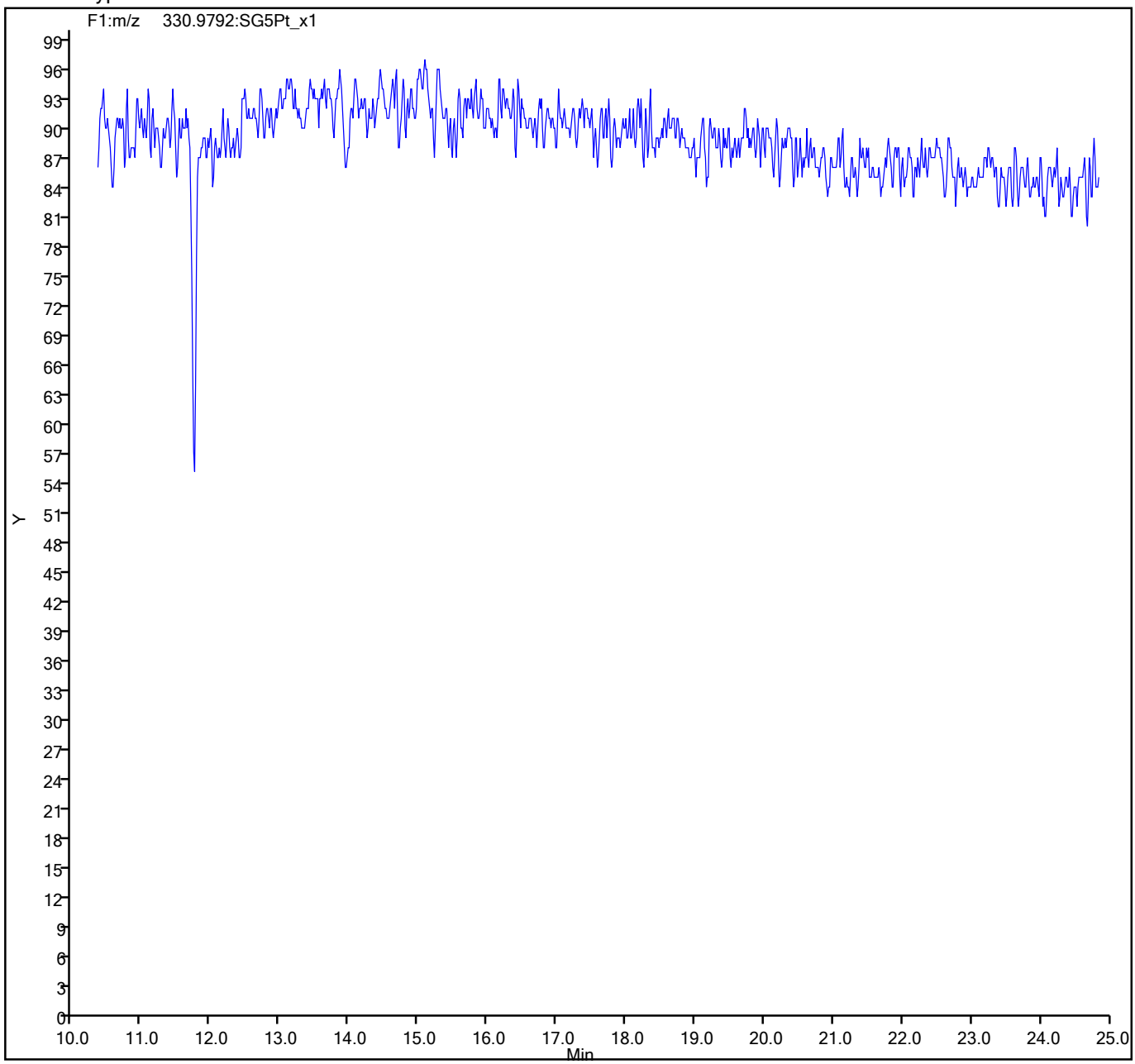

787208

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

787209

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

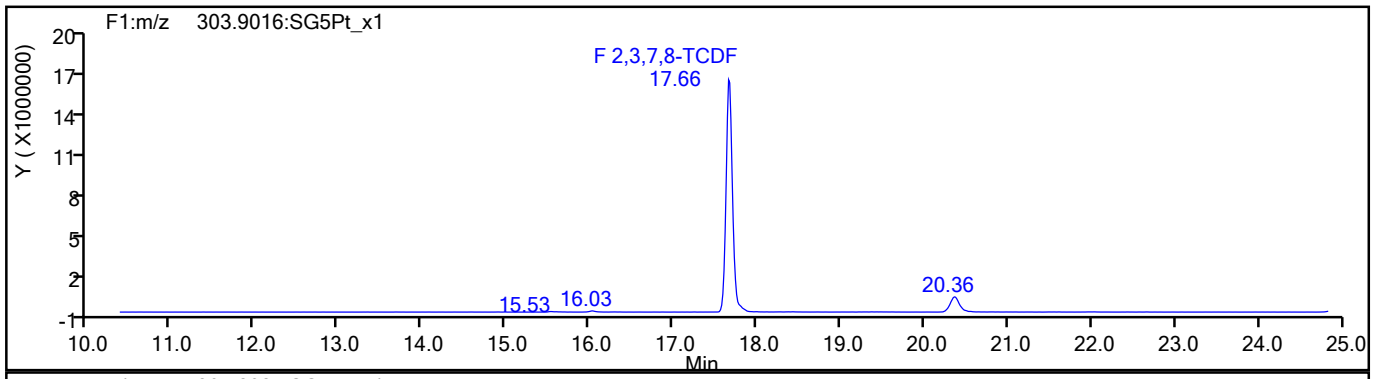

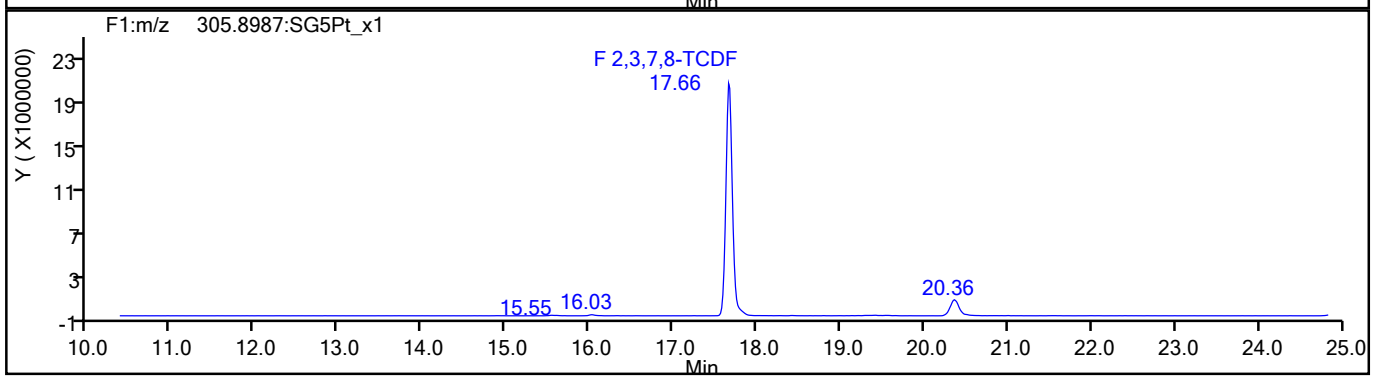

TCDF Standards

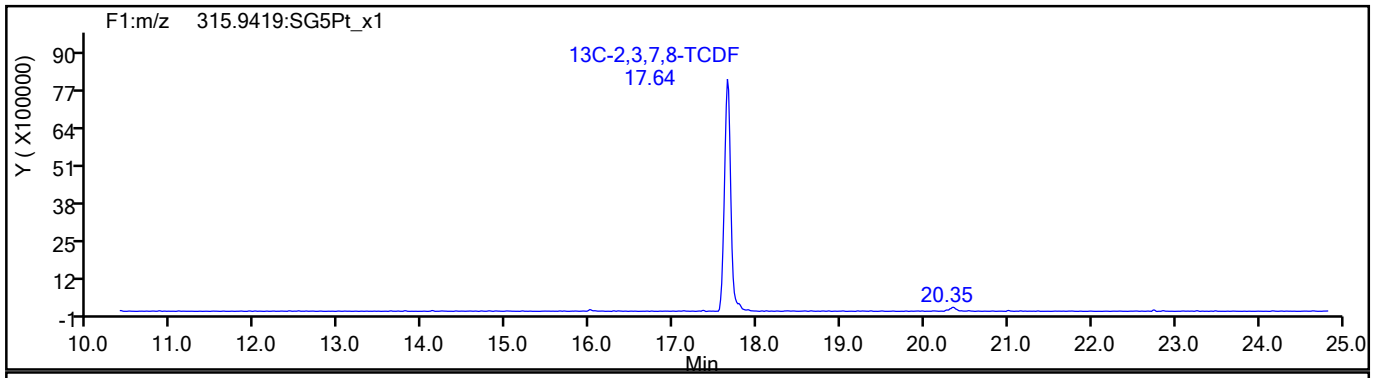

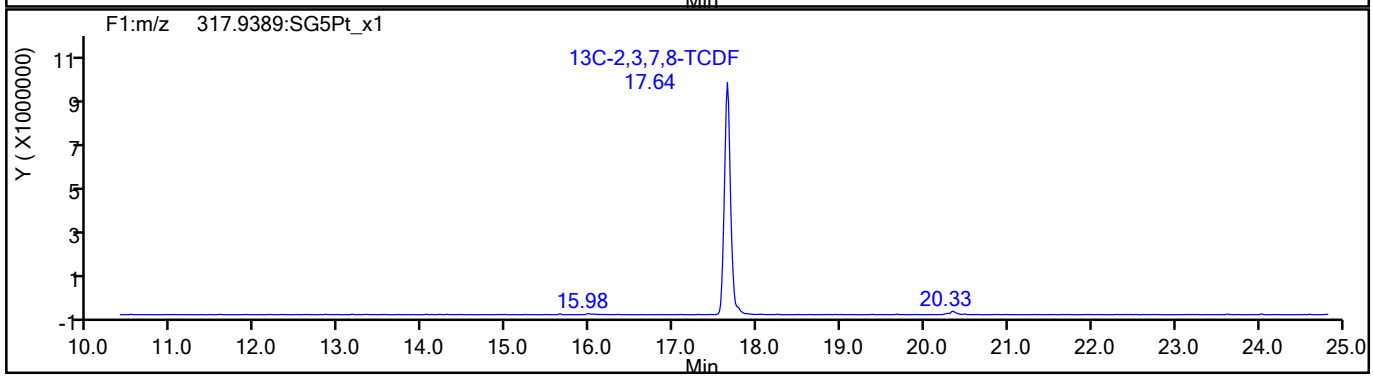

787211

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

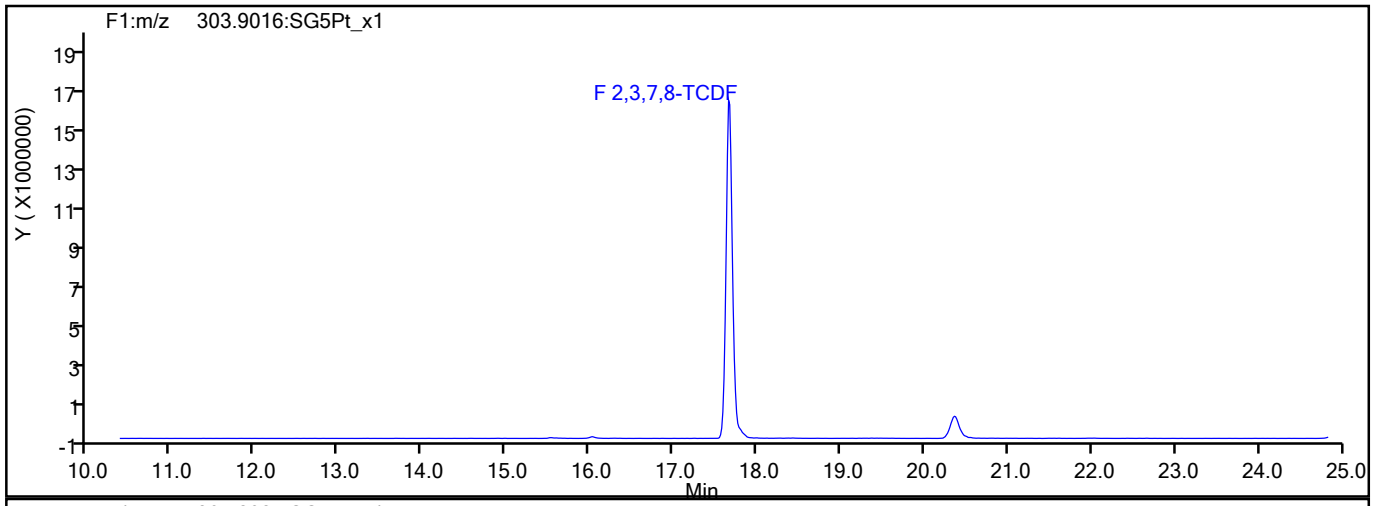

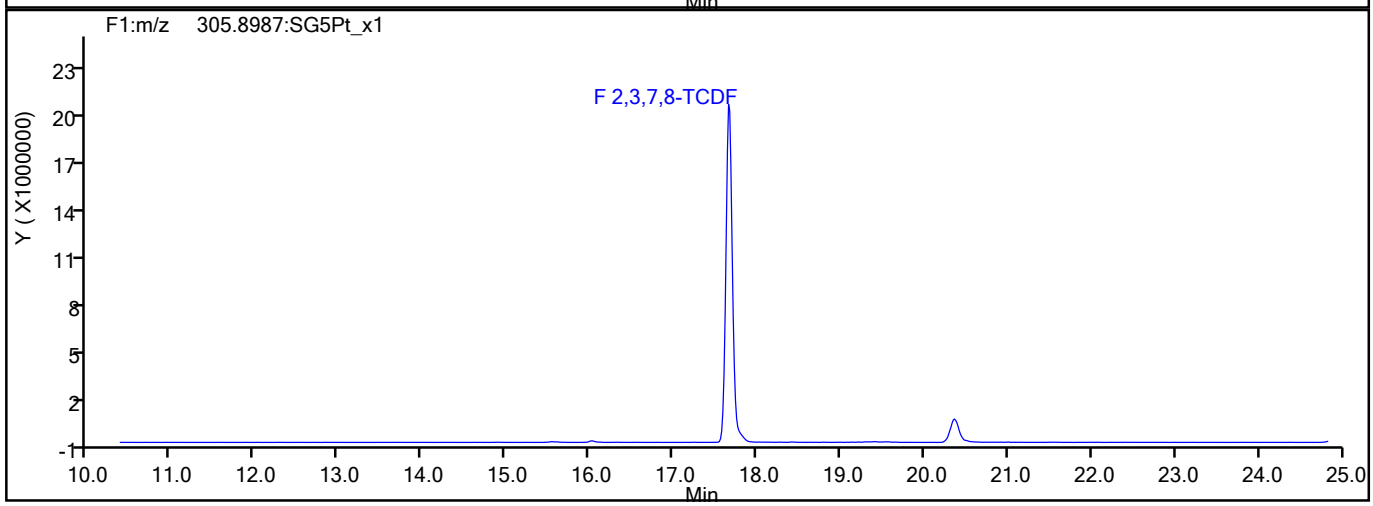

TCDF Interference Mass

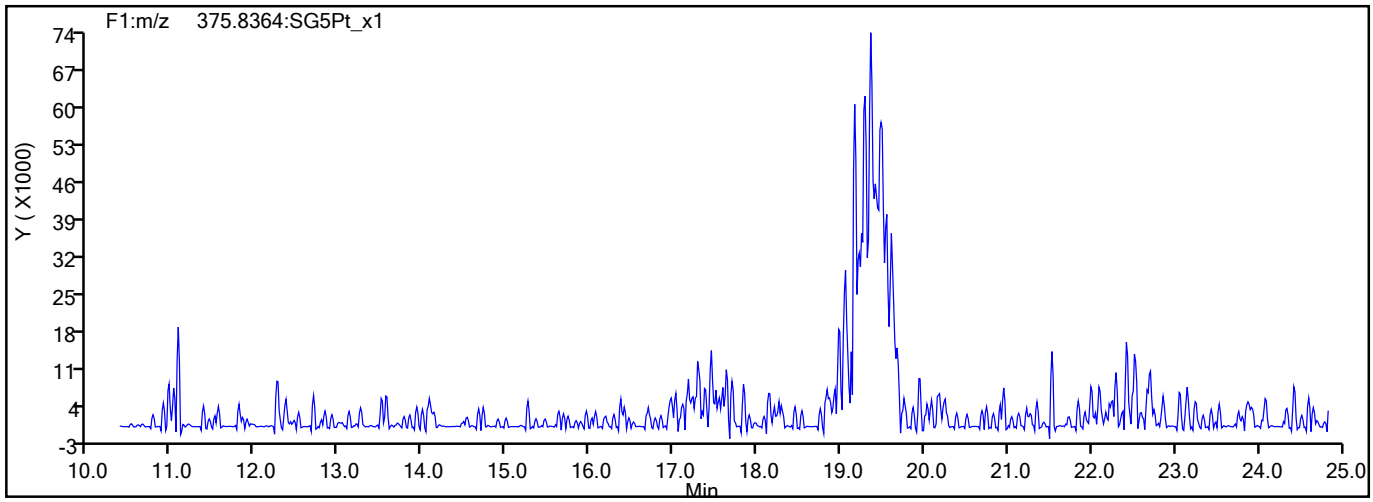

787212

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

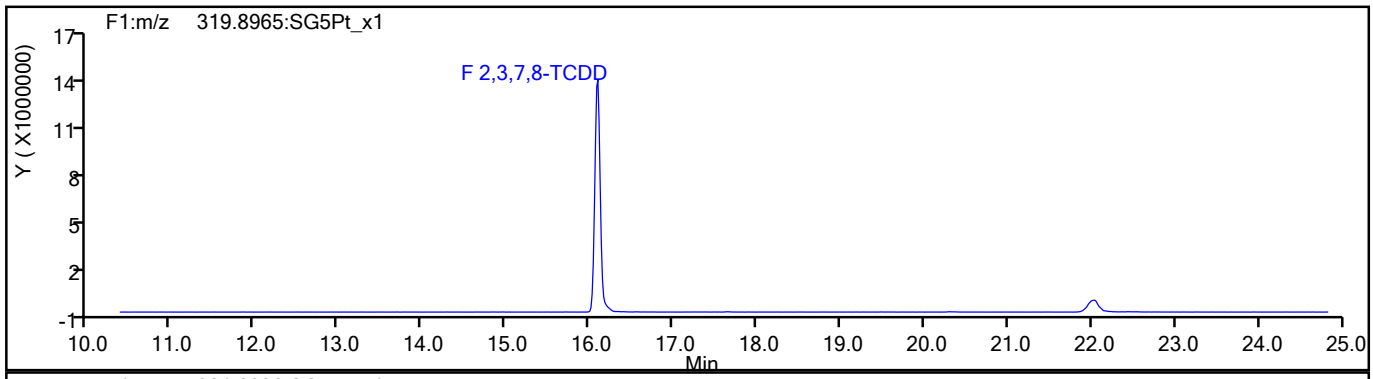

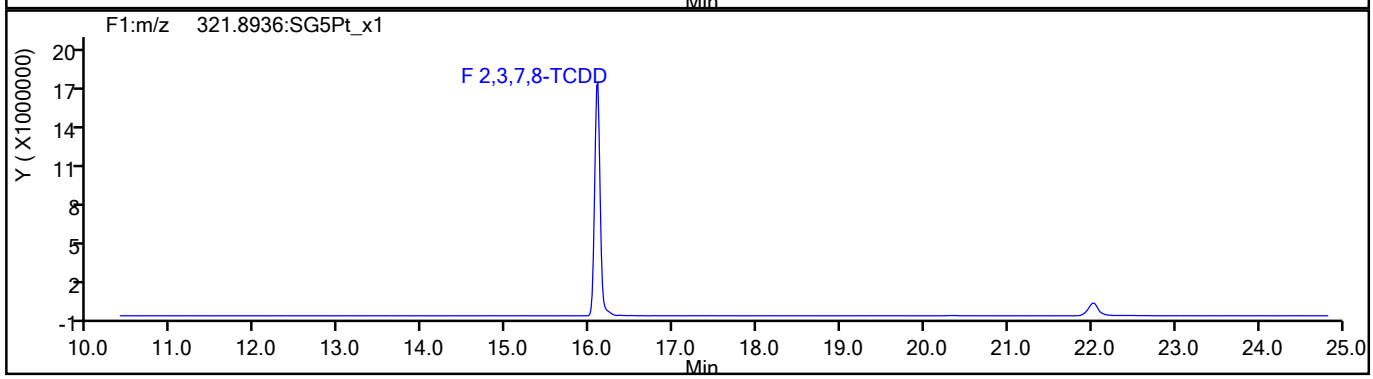

TCDD Standards

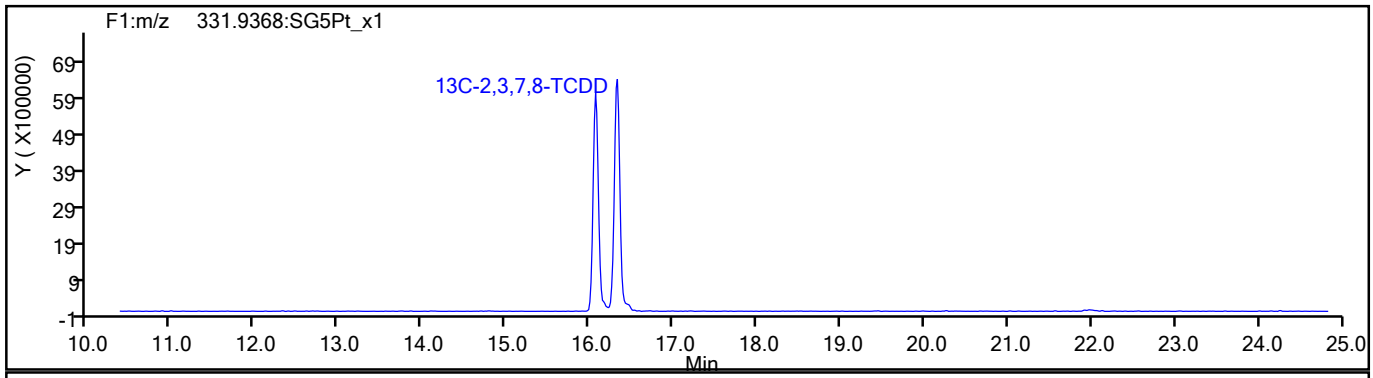

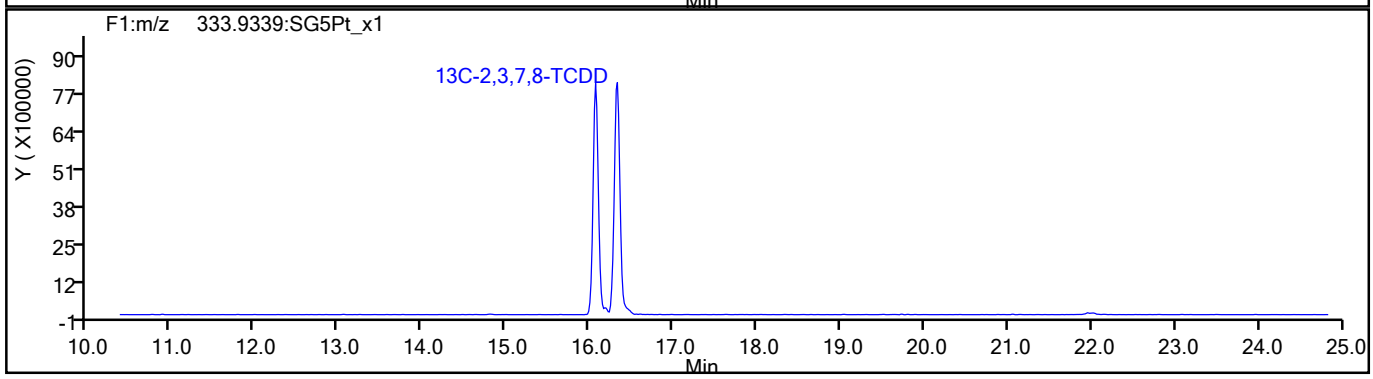

787213

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

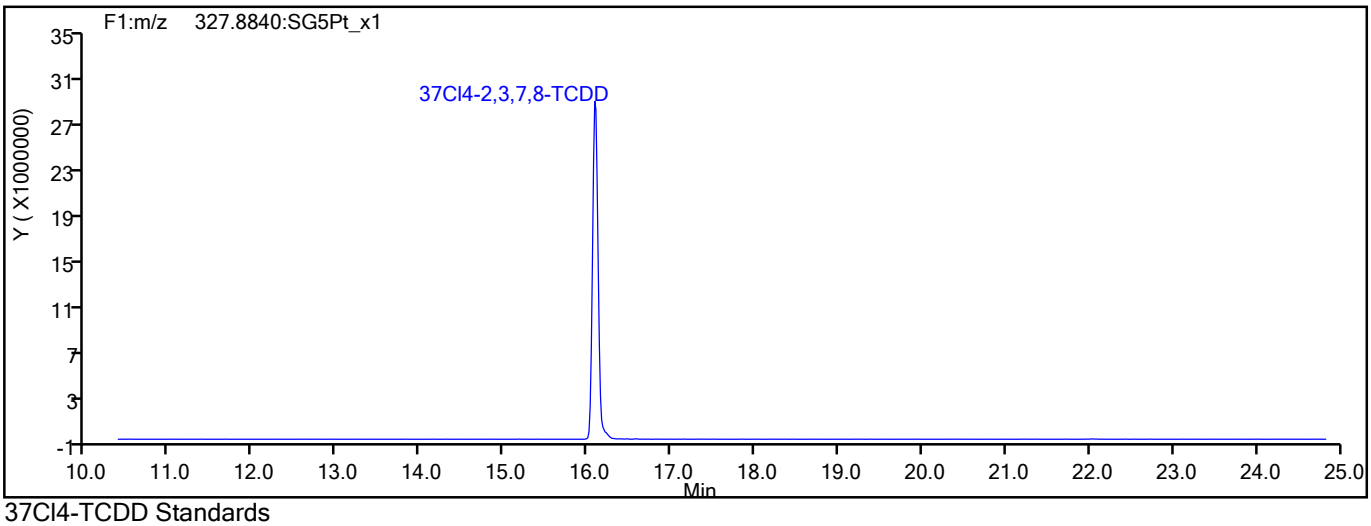

37Cl4-TCDD Standards

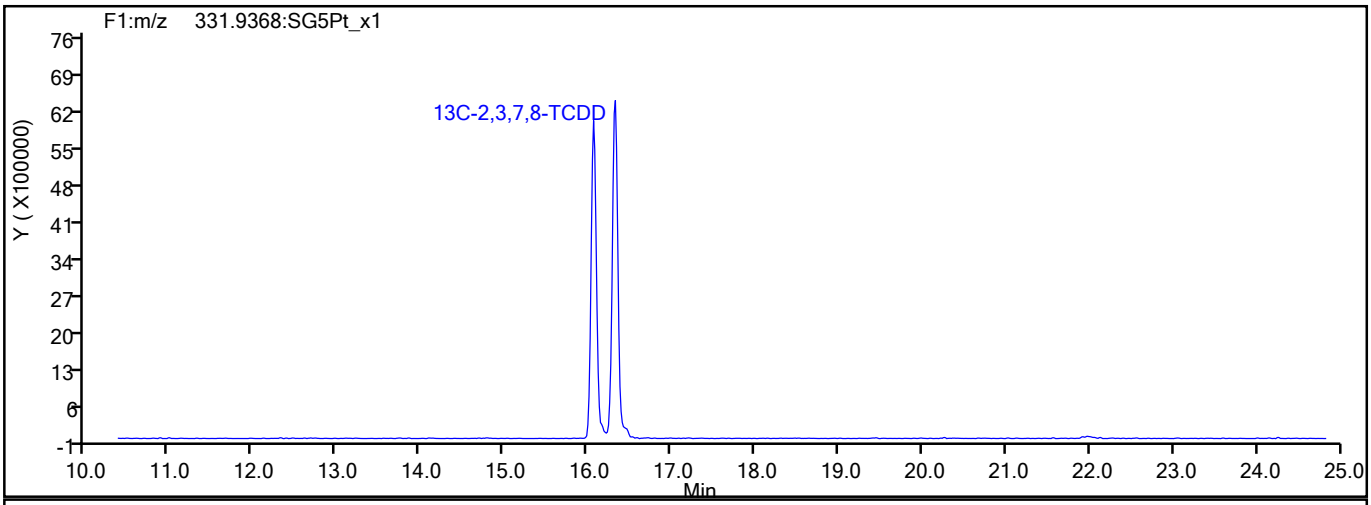

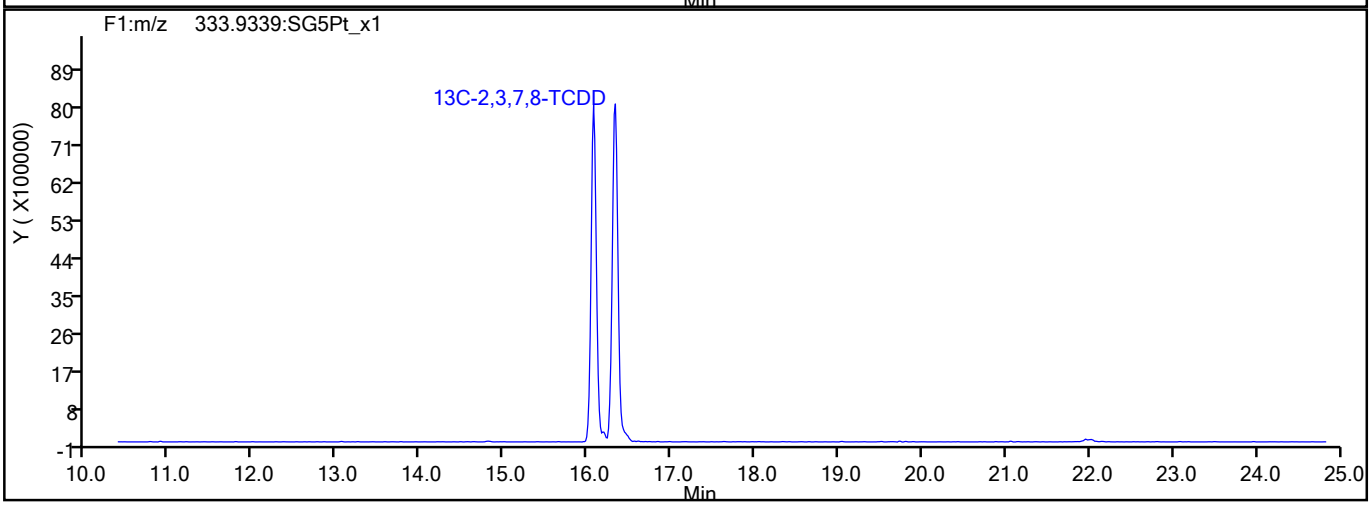

787214

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

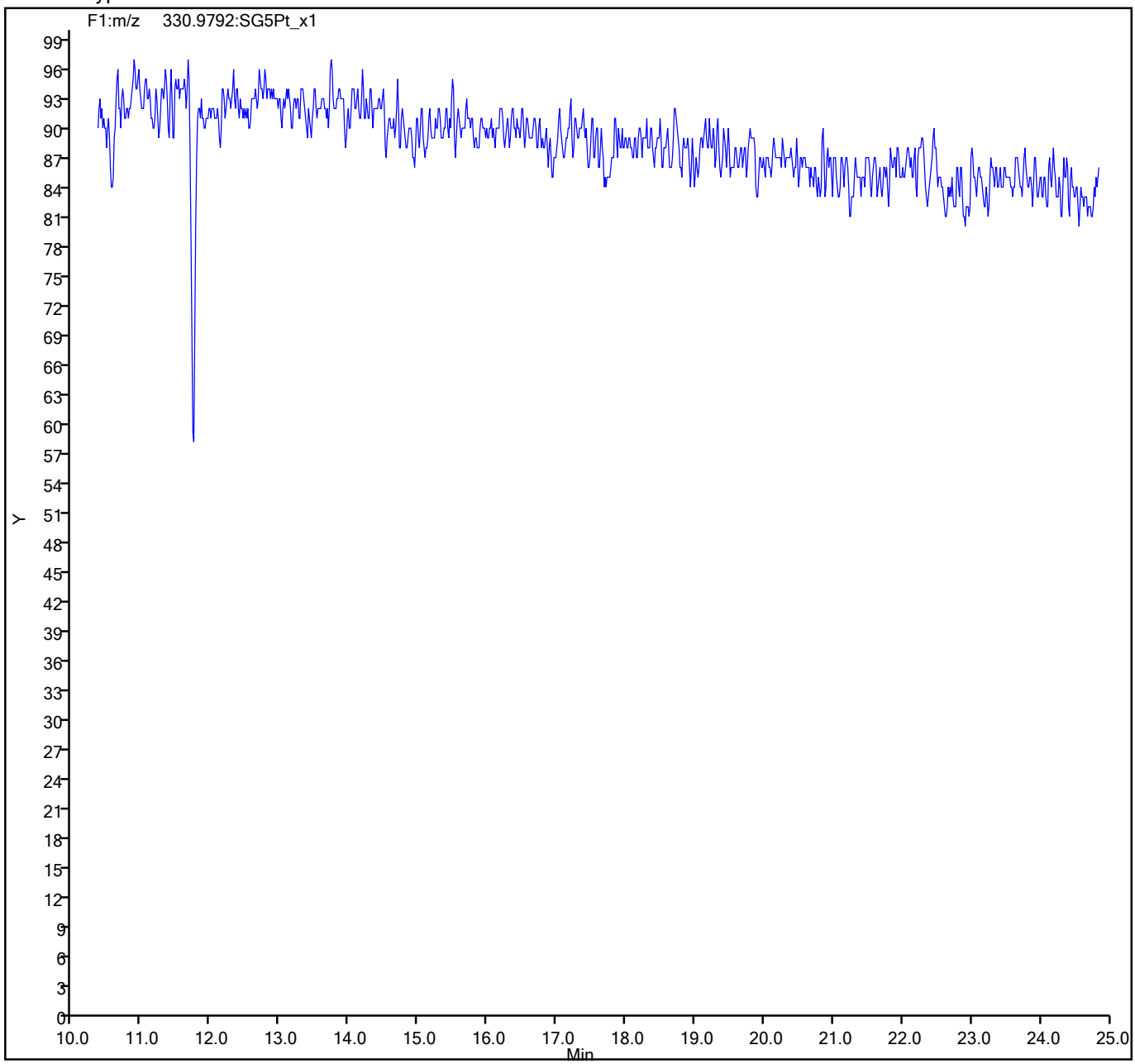

787215

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

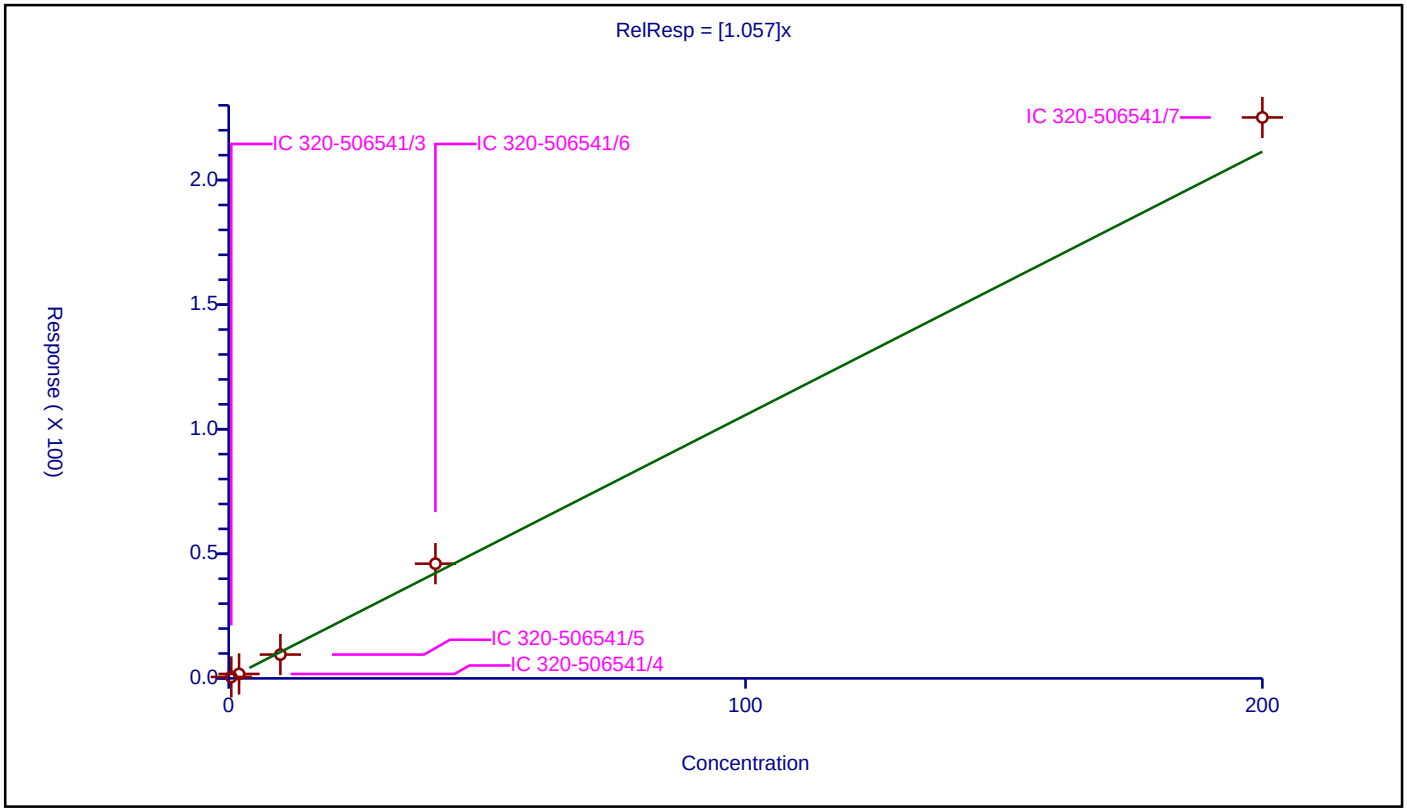

787216

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

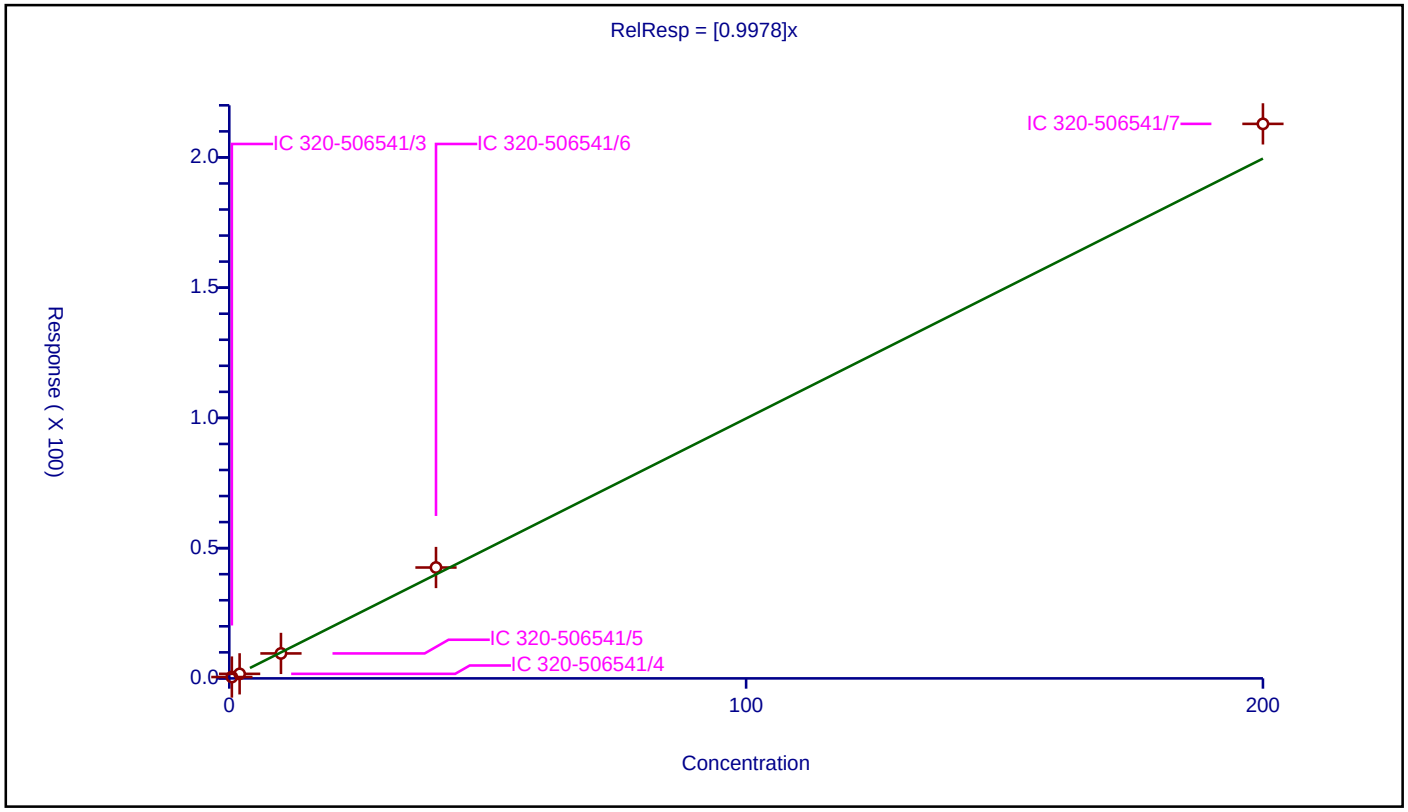

787217

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

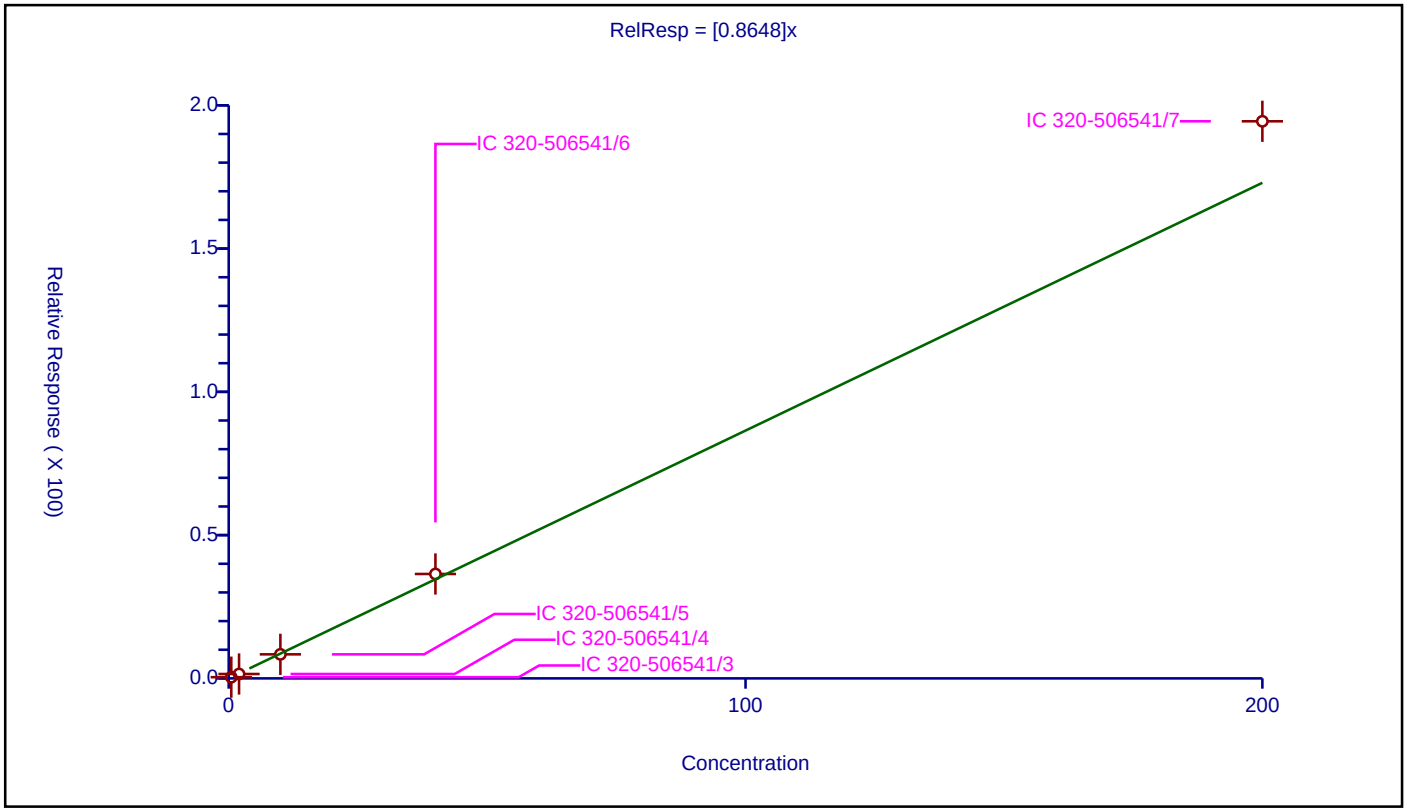

787218

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.2335	0.9635	1.0464	1.1217	1.0358	AveID		1.0802				9.5		20.0			
2,3,7,8-TCDD	1.1335	0.9559	1.0998	1.1237	1.0638	AveID		1.0753				6.7		20.0			
1,2,3,7,8-PeCDF	1.1920	0.9412	1.0373	1.0897	1.0112	AveID		1.0543				8.9		20.0			
2,3,4,7,8-PeCDF	1.1233	0.8984	0.9921	1.0636	0.9619	AveID		1.0079				8.7		20.0			
1,2,3,7,8-PeCDD	1.0719	0.9520	1.0685	1.1015	1.0385	AveID		1.0465				5.5		20.0			
1,2,3,4,7,8-HxCDF	1.2226	1.0072	1.1873	1.2073	1.1126	AveID		1.1474				7.8		20.0			
1,2,3,6,7,8-HxCDF	1.3374	1.0951	1.2359	1.2506	1.1700	AveID		1.2178				7.5		20.0			
2,3,4,6,7,8-HxCDF	1.3135	1.1007	1.2368	1.2623	1.1590	AveID		1.2145				7.0		20.0			
1,2,3,4,7,8-HxCDD	1.1235	0.9702	1.0749	1.1249	1.0104	AveID		1.0608				6.5		20.0			
1,2,3,6,7,8-HxCDD	1.0557	0.8863	1.0416	1.0264	0.9567	AveID		0.9933				7.1		20.0			
1,2,3,7,8,9-HxCDD	1.3093	0.9566	1.1202	1.1079	1.0532	AveID		1.1094				11.6		20.0			
1,2,3,7,8,9-HxCDF	1.3581	1.1239	1.2532	1.2757	1.1897	AveID		1.2401				7.1		20.0			
1,2,3,4,6,7,8-HpCDF	1.5412	1.2896	1.4855	1.5240	1.3700	AveID		1.4421				7.5		20.0			
1,2,3,4,6,7,8-HpCDD	1.1377	0.9531	1.0459	1.0970	1.0178	AveID		1.0503				6.8		20.0			
1,2,3,4,7,8,9-HpCDF	1.4057	1.1770	1.3459	1.3937	1.2235	AveID		1.3092				7.9		20.0			
OCDD	1.1328	0.9954	1.0870	1.1027	0.9920	AveID		1.0620				6.1		20.0			
OCDF	1.3392	1.1863	1.3349	1.3964	1.3271	AveID		1.3168				5.9		20.0			
13C-2,3,7,8-TCDF	1.3569	1.2925	1.2977	1.3484	1.4339	Ave		1.3459				4.2		35.0			
13C-2,3,7,8-TCDD	0.9164	0.8941	0.9478	0.9250	0.9750	Ave		0.9317				3.3		35.0			
13C-1,2,3,7,8-PeCDF	1.0773	1.0923	1.1314	1.1553	1.2461	Ave		1.1405				5.8		35.0			
13C-2,3,4,7,8-PeCDF	1.1109	1.0890	1.0480	1.1277	1.2510	Ave		1.1253				6.8		35.0			
13C-1,2,3,7,8-PeCDD	0.6866	0.6668	0.7308	0.7224	0.7758	Ave		0.7165				5.9		35.0			
13C-1,2,3,4,7,8-HxCDF	0.8656	0.8706	1.1172	0.9651	1.0057	Ave		0.9648				10.8		35.0			
13C-1,2,3,6,7,8-HxCDF	0.9280	0.9536	1.2227	1.0830	1.1668	Ave		1.0708				12.0		35.0			
13C-2,3,4,6,7,8-HxCDF	0.8692	0.9805	1.1292	1.1087	1.1190	Ave		1.0413				10.9		35.0			
13C-1,2,3,4,7,8-HxCDD	0.6435	0.7681	0.8180	0.7773	0.7866	Ave		0.7587				8.8		35.0			
13C-1,2,3,6,7,8-HxCDD	0.7368	0.8783	0.8857	0.9060	0.8896	Ave		0.8593				8.1		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9679	0.9781	1.0054	0.9456	0.9684	Ave		0.9731				2.2		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.7002	0.7170	0.7171	0.7555	0.7898	Ave		0.7359				4.9		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6351	0.6548	0.6640	0.7261	0.6926	Ave		0.6745				5.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6394	0.6623	0.6557	0.7259	0.7437	Ave		0.6854				6.8		35.0			
13C-OCDD	0.5202	0.5165	0.5084	0.5910	0.5871	Ave		0.5446				7.5		35.0			
37Cl4-2,3,7,8-TCDD	0.9654	0.9590	1.0722	1.0074	1.0375	Ave		1.0083				4.8					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	19533	50956	258022	1274052	6137031	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	12122	34971	198062	875630	4286034	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	74934	210335	1114982	5302236	26032333	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	72817	200175	987812	5051373	24861382	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	42943	129872	741897	3351337	16645947	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	46374	155611	1093397	4293581	21902419	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	54388	185321	1245549	4991420	26721257	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	50026	191527	1151149	5157631	25388405	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	31680	132244	724729	3222329	15558498	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	34082	138142	760446	3426727	16661405	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	39595	139741	786511	3436144	17279185	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	57602	195077	1038574	4445357	22553786	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	47287	164108	878086	4243438	21181967	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	31661	110761	572466	2935203	13800004	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	39382	138335	727362	3728415	17812004	2.50	10.0	50.0	200	1000
OCDD		AveID	51642	182470	910980	4803166	22803823	5.00	20.0	100	400	2000
OCDF		AveID	61051	217473	1118740	6082696	30505464	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	3167014	2644389	2465726	2839435	2962515	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	2138853	1829253	1800864	1948011	2014532	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	2514489	2234847	2149791	2432949	2574521	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	2592947	2228025	1991303	2374722	2584740	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	1602476	1364144	1388641	1521254	1602880	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	1517222	1545033	1841825	1778238	1968615	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	1626653	1692336	2015594	1995567	2283961	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	1523436	1740015	1861559	2042874	2190509	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	1127895	1363103	1348471	1432215	1539784	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	1291365	1558668	1460100	1669337	1741498	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	1696557	1735785	1657413	1742331	1895740	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	1227279	1272526	1182209	1392194	1546113	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	1113145	1162117	1094713	1337869	1355803	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	1120663	1175351	1080883	1337573	1455766	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	1823492	1833139	1676139	2177938	2298668	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	11266	39241	203726	848616	4287059	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	08JN21ADFS1_1	Resolution Check	RC 060821A	46			GRB	1.000	
2	08JN21ADFS1_2	WDM HRDXNCP_00042	WDM 060821A	1	Dioxin		GRB	1.000	
3	08JN21ADFS1_3	SB Solvent Blank C-14	SB 060821	3			GRB	1.000	
4	08JN21ADFS1_4	CS-2 HRDXNL2_00032	IC 060821	4	Dioxin		GRB	1.000	
5	08JN21ADFS1_5	CS-3 HRDXNL3_00029	IC 060821A	5	Dioxin		GRB	1.000	
6	08JN21ADFS1_6	CS-4 HRDXNL4_00099	IC 060821B	2	Dioxin		GRB	1.000	
7	08JN21ADFS1_7	CS-5 HRDXNL5_00032	IC 060821C	6	Dioxin		GRB	1.000	
8	08JN21ADFS1_8	CS-6 HRDXNL6_00028	IC 060821D	7	Dioxin		GRB	1.000	
9	08JN21ADFS1_9	Resolution Check	RC 060821B	46			GRB	1.000	
10	08JN21ADFS1_10	SB Solvent Blank C-14	SB 060821A	3			GRB	1.000	
11	08JN21ADFS1_11	ICV HRDXNIC_00047	ICV 060821	8	Dioxin		GRB	1.000	
12	08JN21ADFS1_12	Resolution Check	RC 060821C	46			GRB	1.000	
13	08JN21ADFS1_13	CCV CS-4 HRDXNL4_00099	CCV 060821A	2	Dioxin		GRB	1.000	
14	08JN21ADFS1_14	WDM HRDXNCP_00042	WDM 060821B	1	Dioxin		GRB	1.000	
15	08JN21ADFS1_15	mb 320-482224/1-a RI	mb 320-482224/1-a	10	8290/Solid	100	GRB	20.000	g
16	08JN21ADFS1_16	320-72057-a-23-a mdlv RI (7)	320-72057-a-23-a mdlv	11	8290/Solid		GRB	20.000	g
17	08JN21ADFS1_17	320-72057-a-24-a mdlv RI (8)	320-72057-a-24-a mdlv	12	8290/Solid		GRB	20.000	g
18	08JN21ADFS1_18	320-72057-a-25-a mdlv RI (9)	320-72057-a-25-a mdlv	13	8290/Solid		GRB	20.000	g
19	08JN21ADFS1_19	320-72057-a-26-a loqv RI (10)	320-72057-a-26-a loqv	14	8290/Solid		GRB	20.000	g
20	08JN21ADFS1_20	320-74542-b-3-a	320-74542-b-3-a	15	8290A/Solid	D245	GRB	10.000	g
21	08JN21ADFS1_21	320-74542-b-2-a	320-74542-b-2-a	16	8290A/Solid		GRB	10.000	g
22	08JN21ADFS1_22	320-74542-b-1-a	320-74542-b-1-a	17	8290A/Solid		GRB	10.000	g
23	08JN21ADFS1_23	lcs 320-496101/2-a	lcs 320-496101/2-a	18	8290A/Solid		GRB	10.000	g
24	08JN21ADFS1_24	lcsd 320-496101/3-a	lcsd 320-496101/3-a	19	8290A/Solid		GRB	10.000	g
25	08JN21ADFS1_25	mb 320-496101/1-a	mb 320-496101/1-a	20	8290A/Solid		GRB	10.000	
26	08JN21ADFS1_26	Resolution Check	RC 060821D	46			GRB	1.000	
27	08JN21ADFS1_27	CCV CS-4 HRDXNL4_00099	CCV 060821B	2	Dioxin		GRB	1.000	
28	08JN21ADFS1_28	Resolution Check	RC 060821E	46			GRB	1.000	
29	08JN21ADFS1_29	WDM HRDXNCP_00042	WDM 060821C	1	Dioxin		GRB	1.000	
30	08JN21ADFS1_30	SB Solvent Blank C-14	SB 060821B	3			GRB	1.000	
31	08JN21ADFS1_31	320-74542-b-4-a	320-74542-b-4-a	21	8290A/Solid	D245	GRB	10.000	g
32	08JN21ADFS1_32	320-74542-b-5-a	320-74542-b-5-a	22	8290A/Solid		GRB	10.000	g
33	08JN21ADFS1_33	320-74542-b-6-a	320-74542-b-6-a	23	8290A/Solid		GRB	10.000	g
34	08JN21ADFS1_34	320-74542-b-7-a	320-74542-b-7-a	24	8290A/Solid		GRB	10.000	g
35	08JN21ADFS1_35	320-74542-b-8-a	320-74542-b-8-a	25	8290A/Solid		GRB	10.000	g
36	08JN21ADFS1_36	320-74542-b-9-a	320-74542-b-9-a	26	8290A/Solid		GRB	10.000	g
37	08JN21ADFS1_37	SB Solvent Blank C-14	SB 060821C	3			GRB	1.000	
38	08JN21ADFS1_38	Resolution Check	RC 060821F	46			GRB	1.000	
39	08JN21ADFS1_39	CCV CS-4 HRDXNL4_00099	CCV 060821C	2	Dioxin		GRB	1.000	
40	08JN21ADFS1_40	Resolution Check	RC 060821G	46			GRB	1.000	

LOG FILE ✓'d
06/09/21
GRB

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 12:20
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10809 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10359 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10673 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10724 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10609 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10694 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10161 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10386 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10328 [5%height]

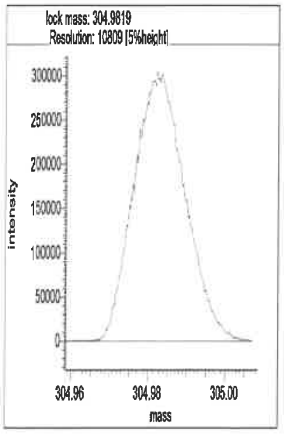

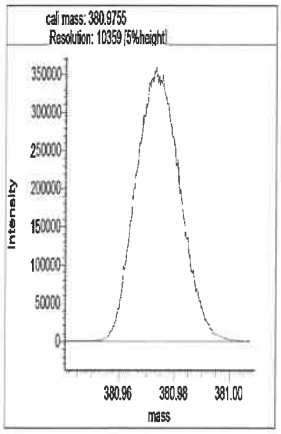

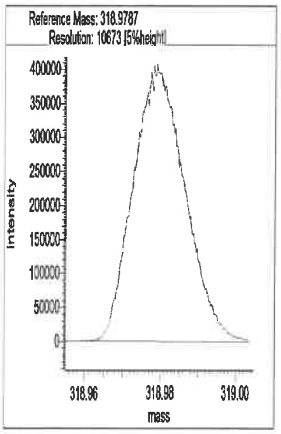

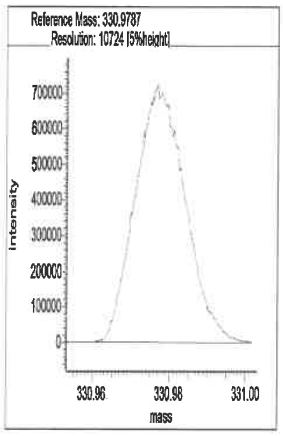

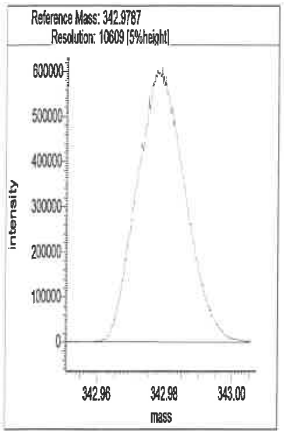

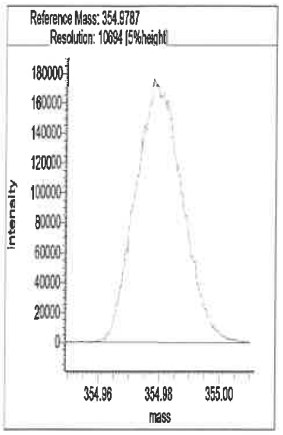

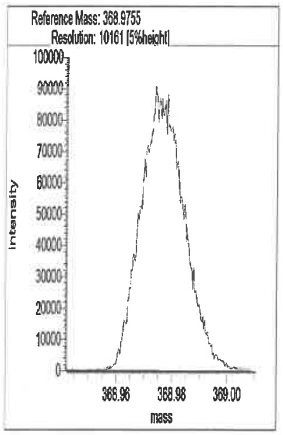

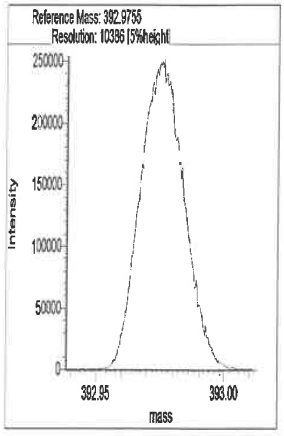

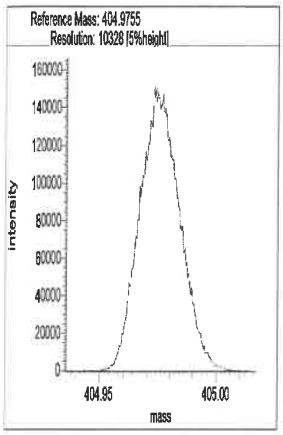

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10749 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10650 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10687 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10661 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10183 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10343 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10397 [5%height]

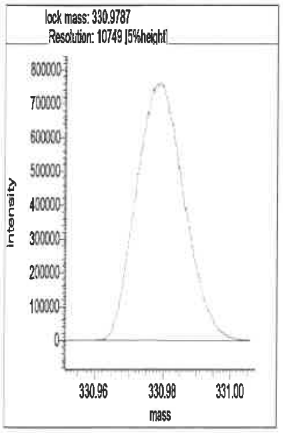

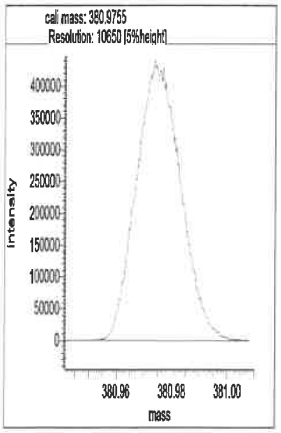

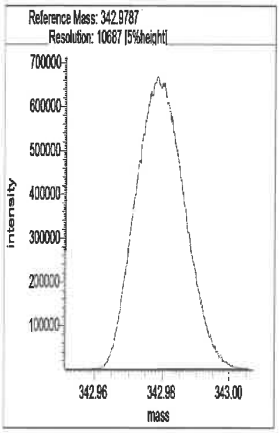

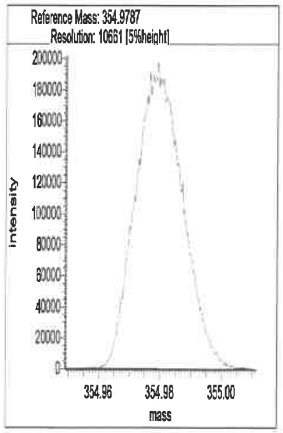

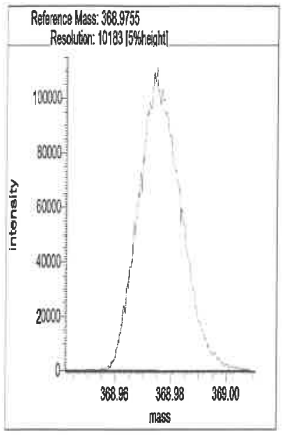

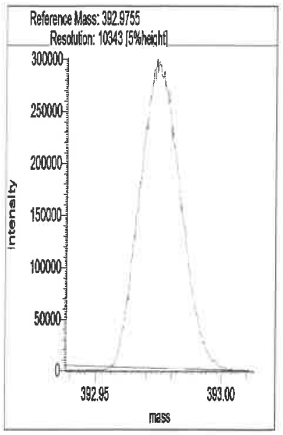

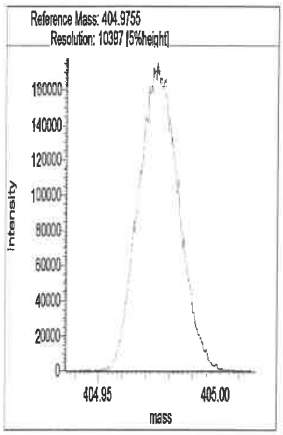

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10665 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10632 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10792 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10868 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10680 [5%height]

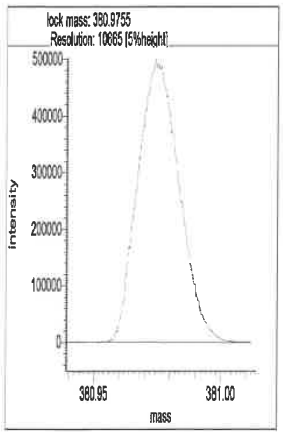

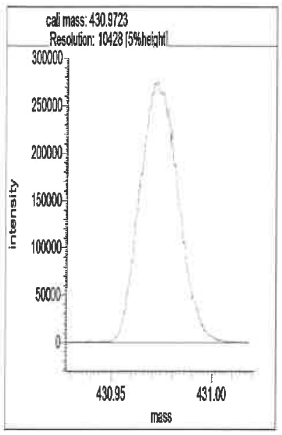

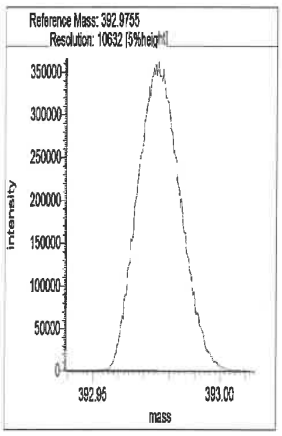

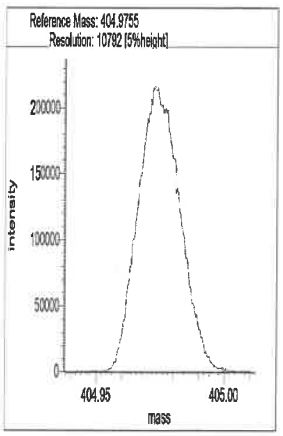

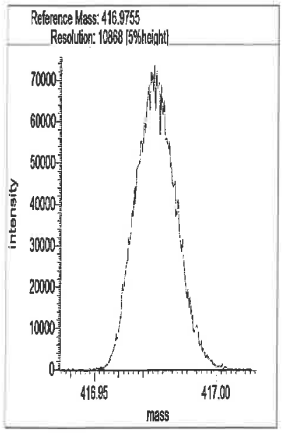

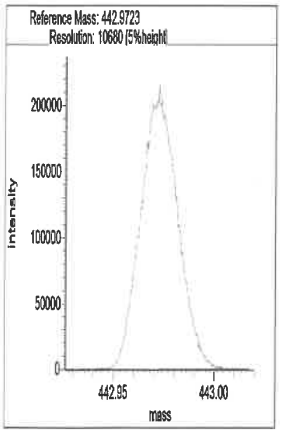

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10780 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10428 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10519 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10746 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10596 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10599 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10334 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10486 [5%height]

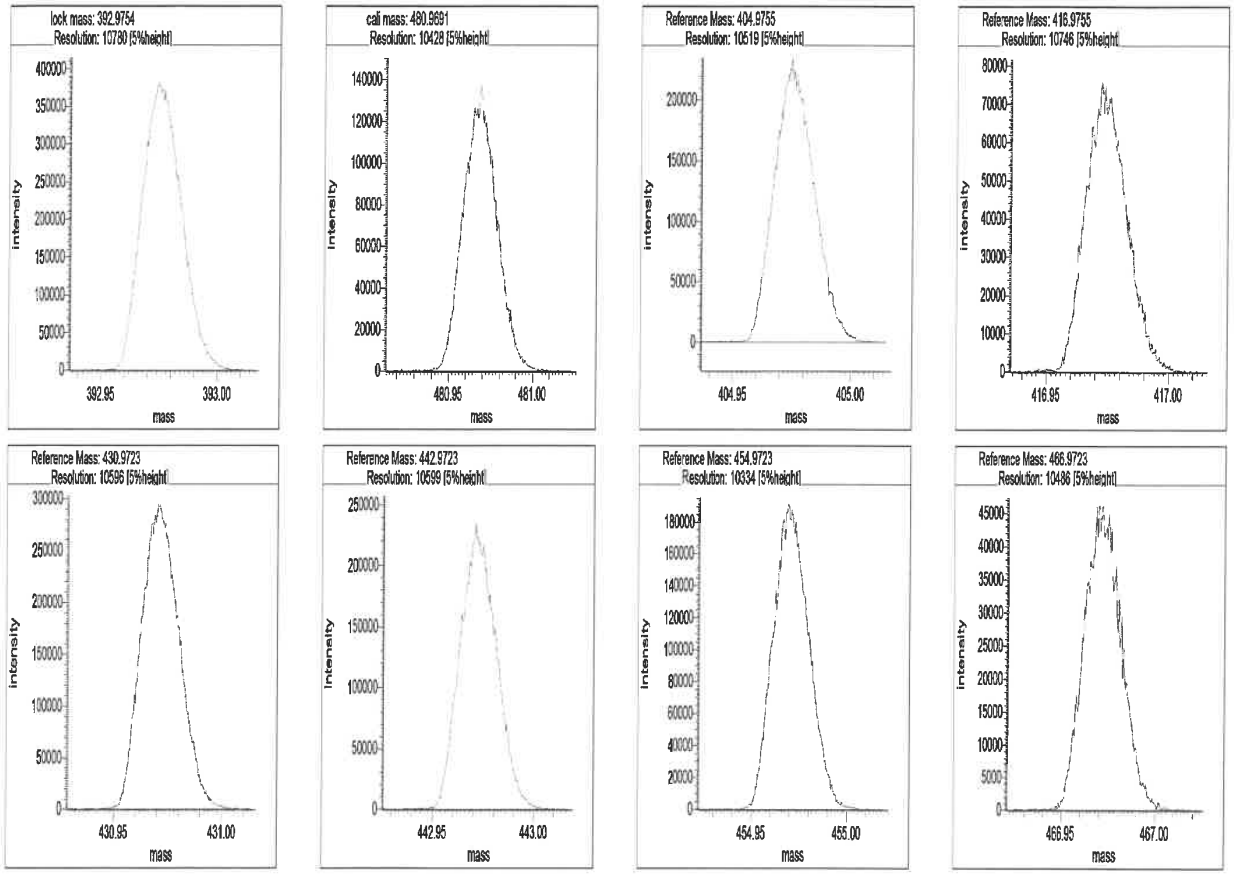

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10812 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10576 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10586 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10905 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10543 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10541 [5%height]

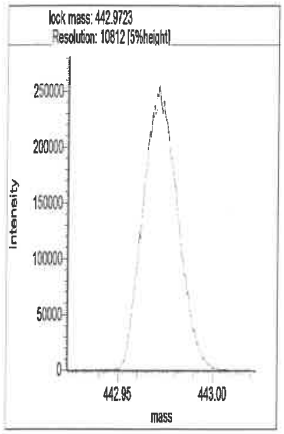
lock mass: 442.9723
Resolution: 10812 [5%height]
Intensity
mass

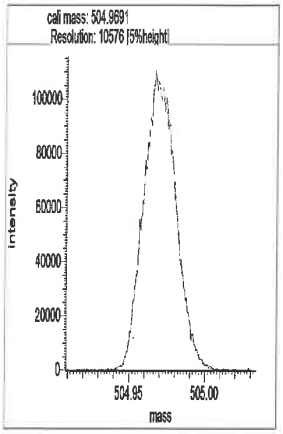
cali mass: 504.9691
Resolution: 10576 [5%height]
Intensity
mass

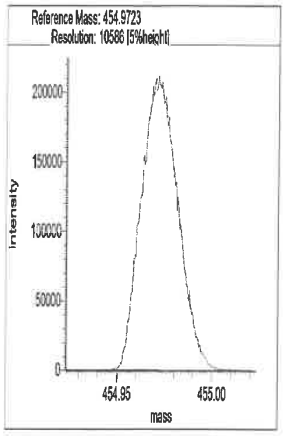
Reference Mass: 454.9723
Resolution: 10566 [5%height]
Intensity
mass

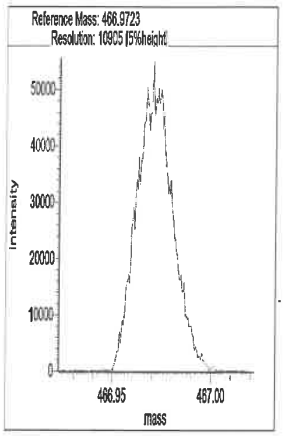
Reference Mass: 466.9723
Resolution: 10905 [5%height]
Intensity
mass

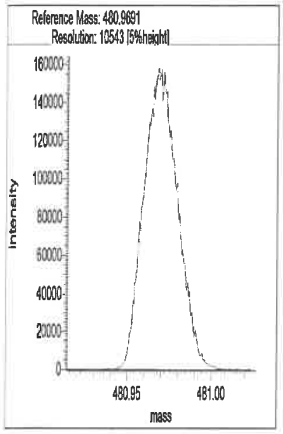
Reference Mass: 480.9691
Resolution: 10543 [5%height]
Intensity
mass

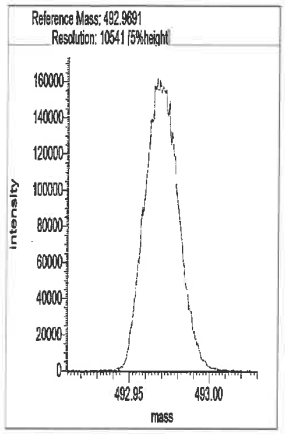
Reference Mass: 492.9691
Resolution: 10541 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 18:18
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11138 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10557 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10815 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11047 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10923 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10964 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10533 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10381 [5%height]

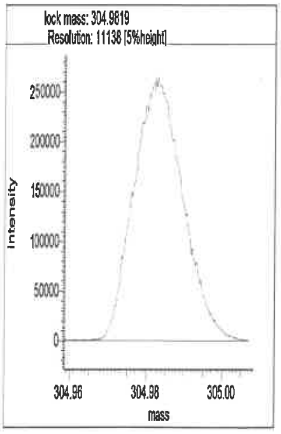

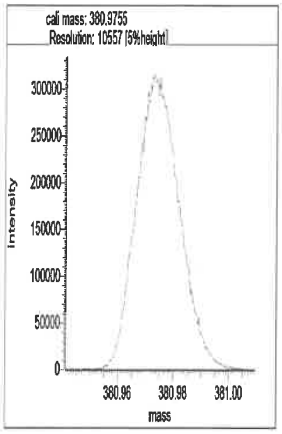

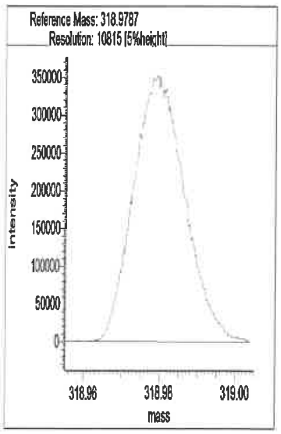

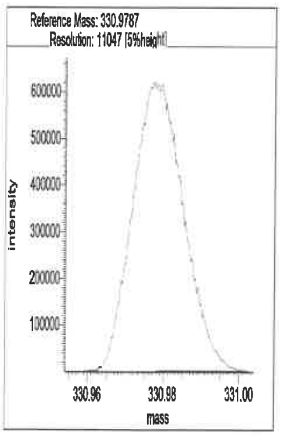

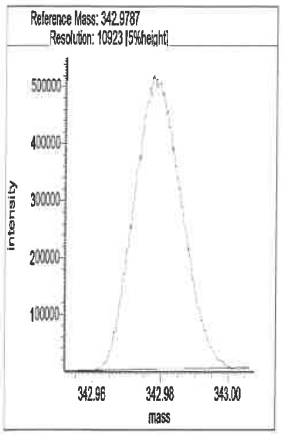

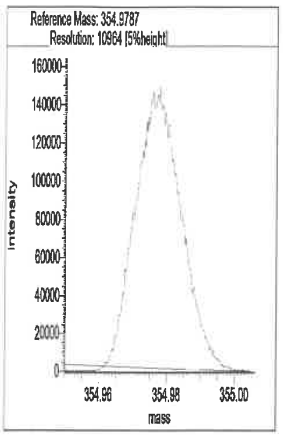

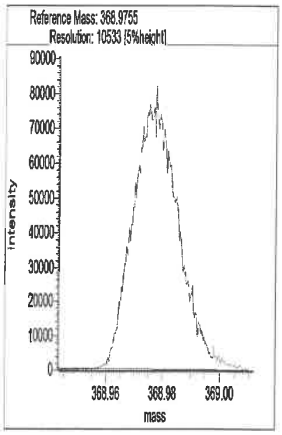

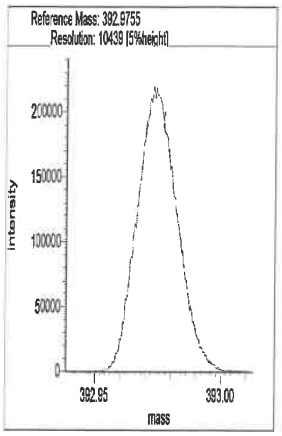

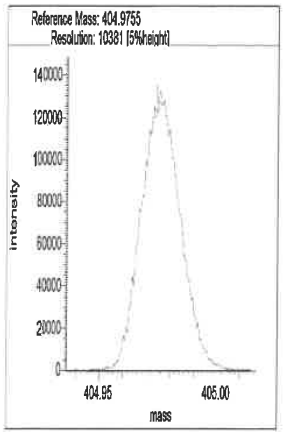

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10931 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10771 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11049 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10941 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10429 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10942 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10794 [5%height]

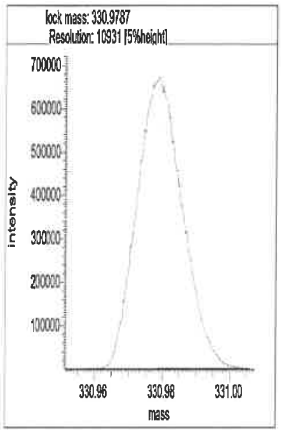

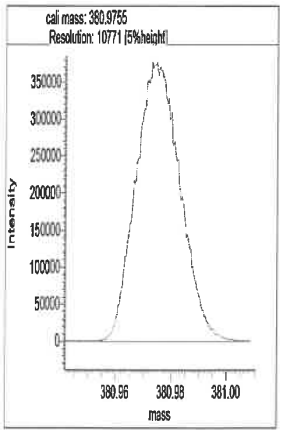

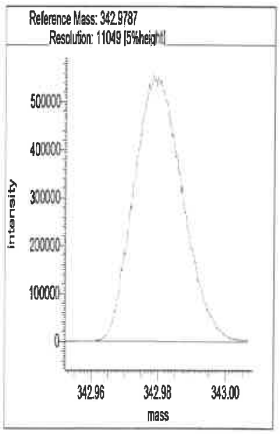

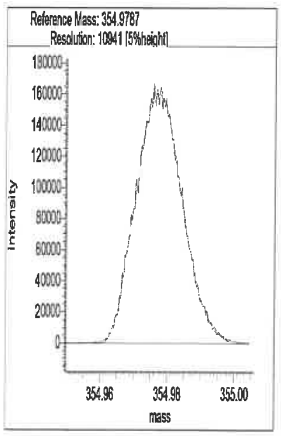

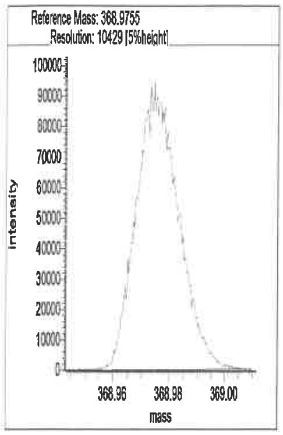

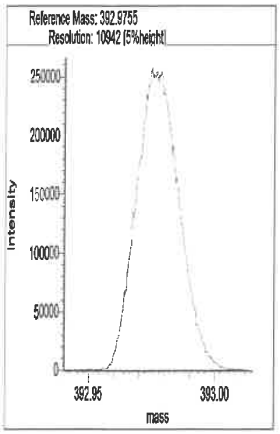

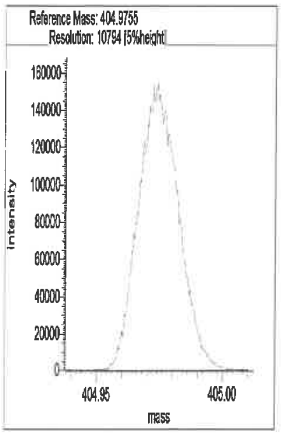

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10885 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10505 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10981 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10838 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11244 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10864 [5%height]

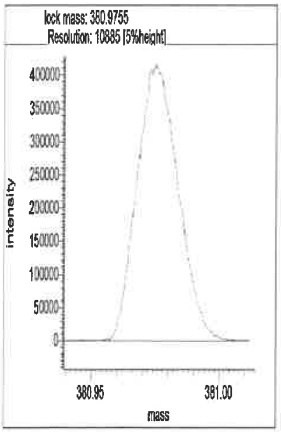

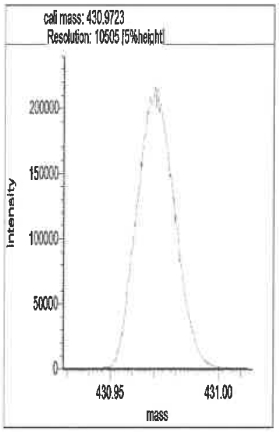

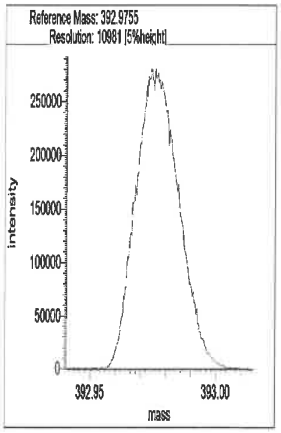

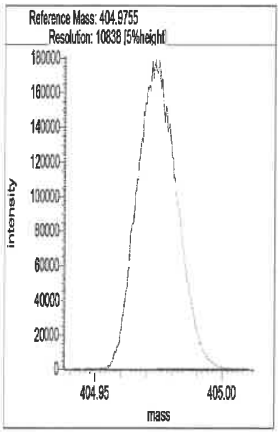

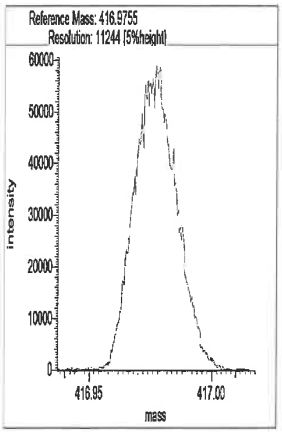

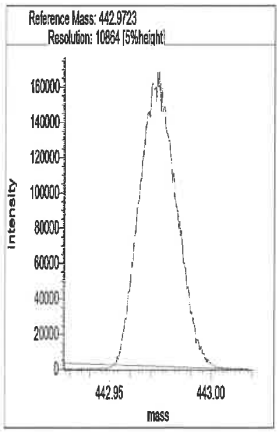

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10912 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10920 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10645 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11021 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10722 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10705 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10886 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11473 [5%height]

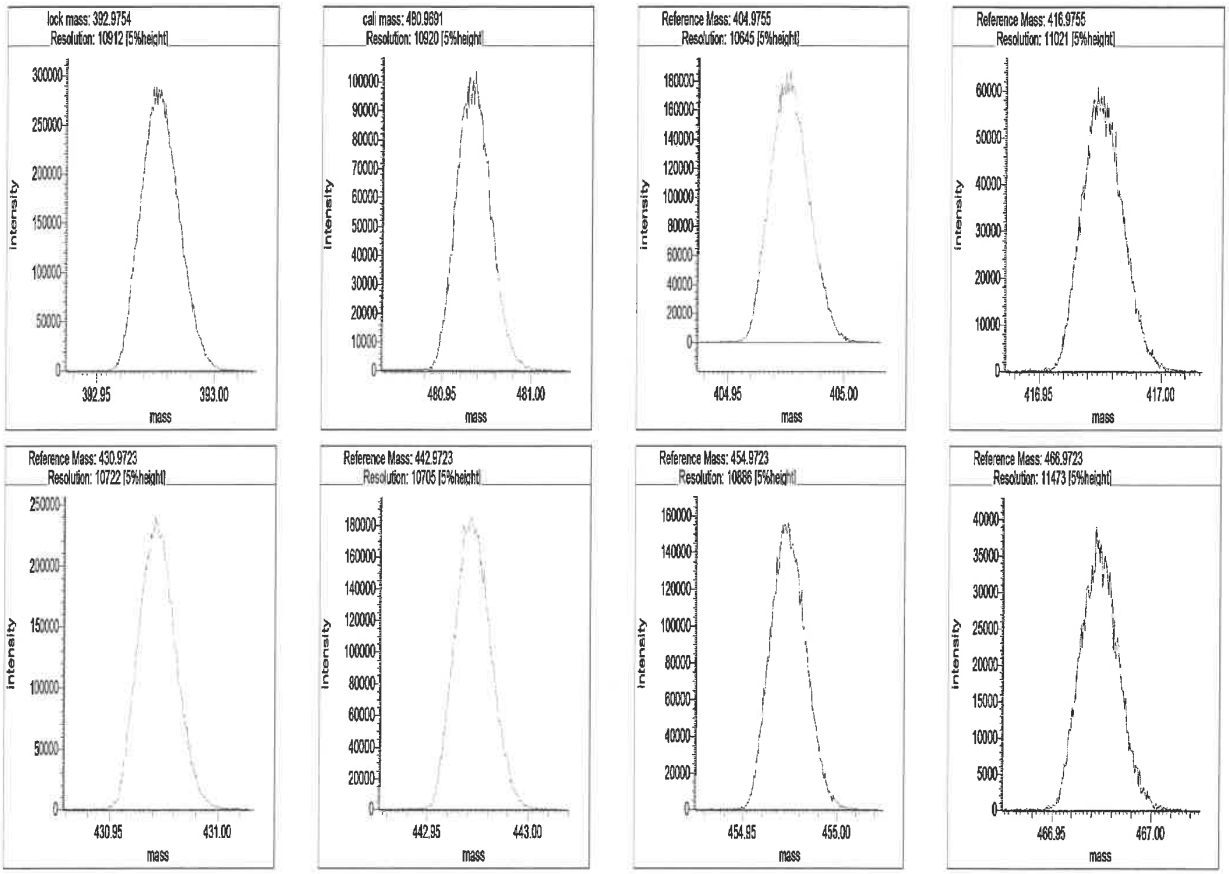

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11094 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10852 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11104 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11145 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10592 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10719 [5%height]

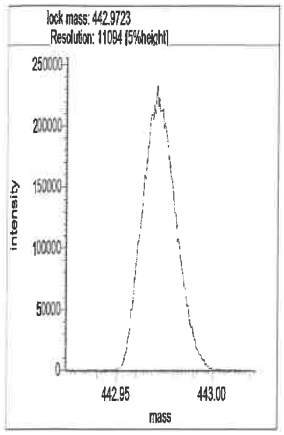
lock mass: 442.9723
Resolution: 11094 [5%height]
Intensity
mass

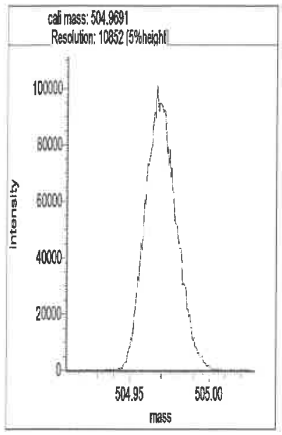
cali mass: 504.9691
Resolution: 10852 [5%height]
Intensity
mass

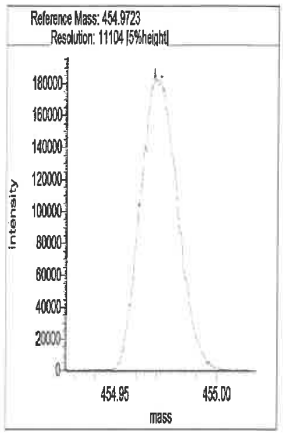
Reference Mass: 454.9723
Resolution: 11104 [5%height]
Intensity
mass

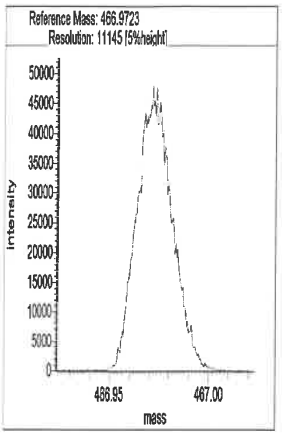
Reference Mass: 466.9723
Resolution: 11145 [5%height]
Intensity
mass

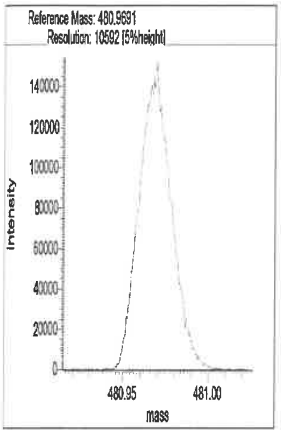
Reference Mass: 480.9691
Resolution: 10592 [5%height]
Intensity
mass

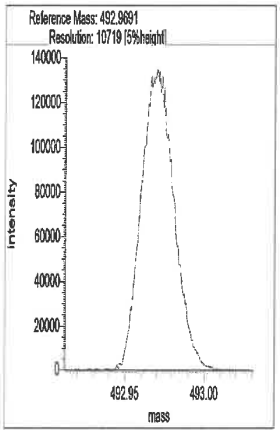
Reference Mass: 492.9691
Resolution: 10719 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 20:13
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11228 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10780 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10868 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10774 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10877 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10591 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10487 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10710 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10243 [5%height]

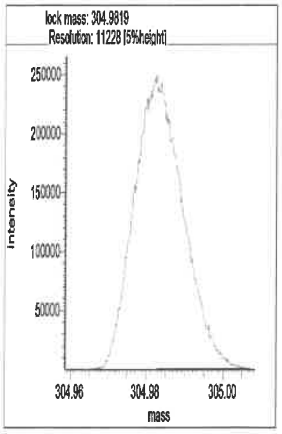

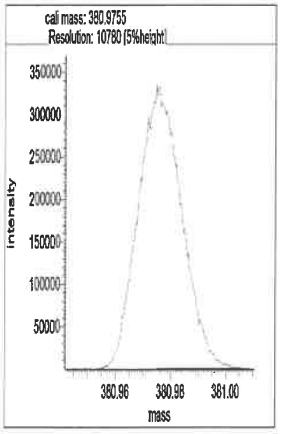

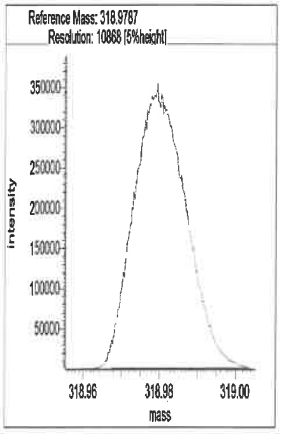

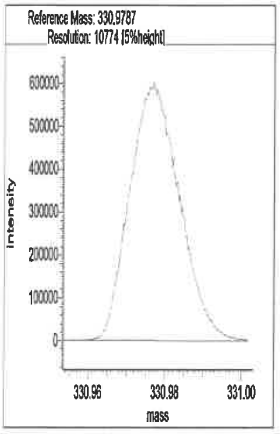

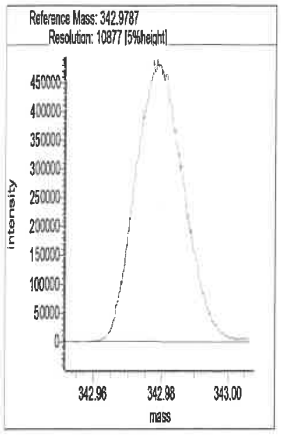

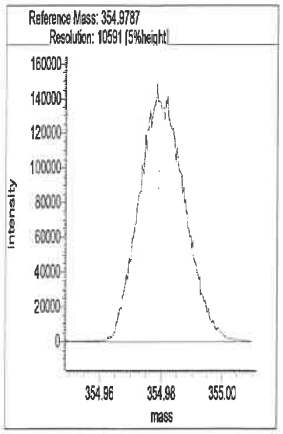

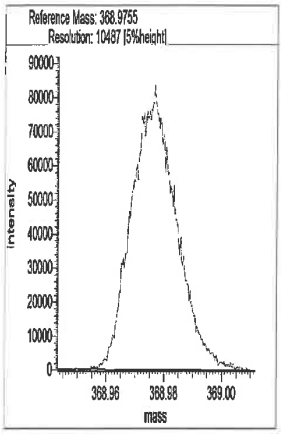

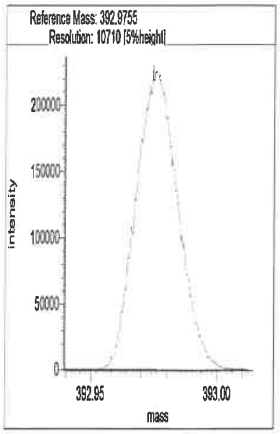

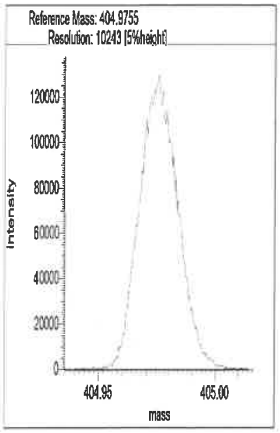

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10867 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10936 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10948 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10910 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10174 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10675 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10514 [5%height]

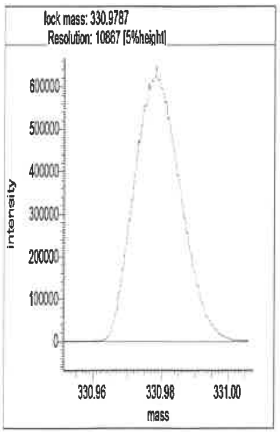

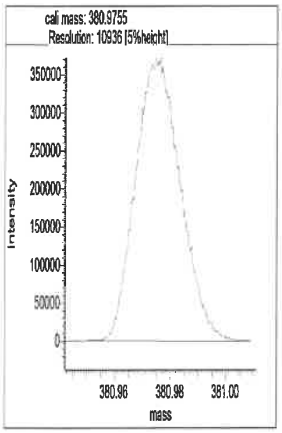

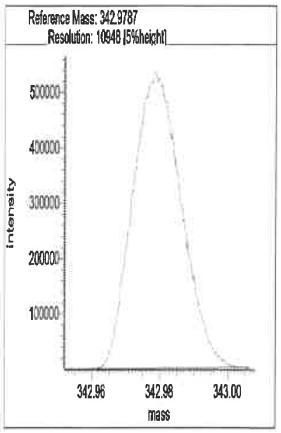

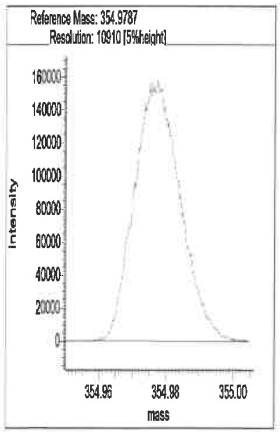

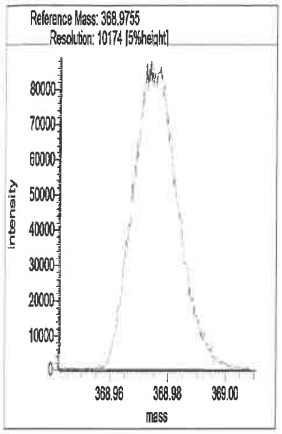

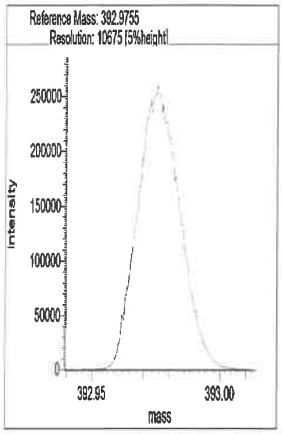

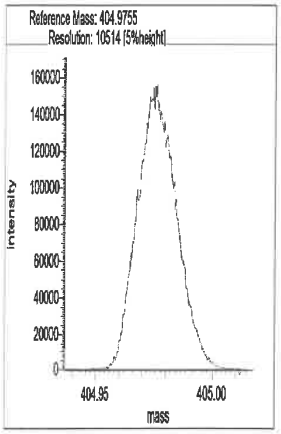

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10898 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10782 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11034 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11134 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10786 [5%height]

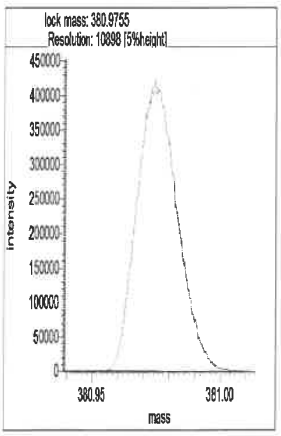

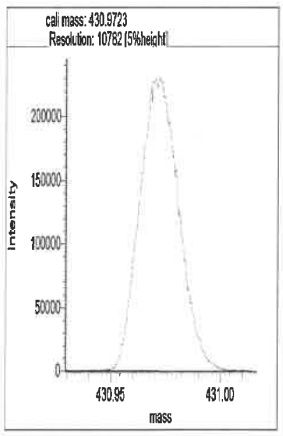

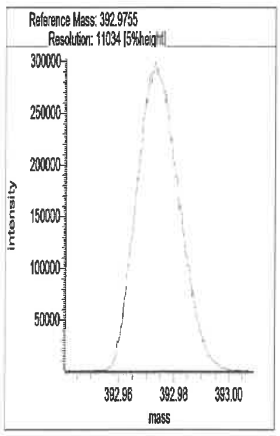

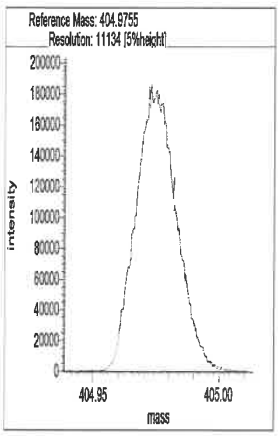

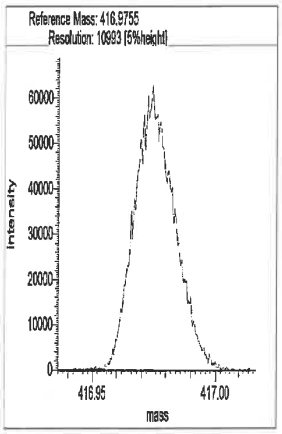

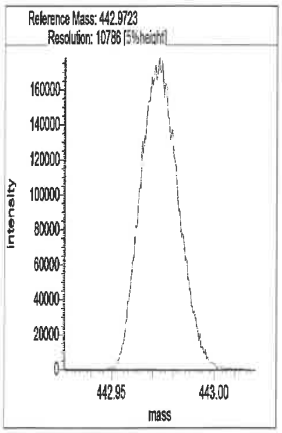

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11155 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10418 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10767 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10954 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10613 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11028 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10950 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10877 [5%height]

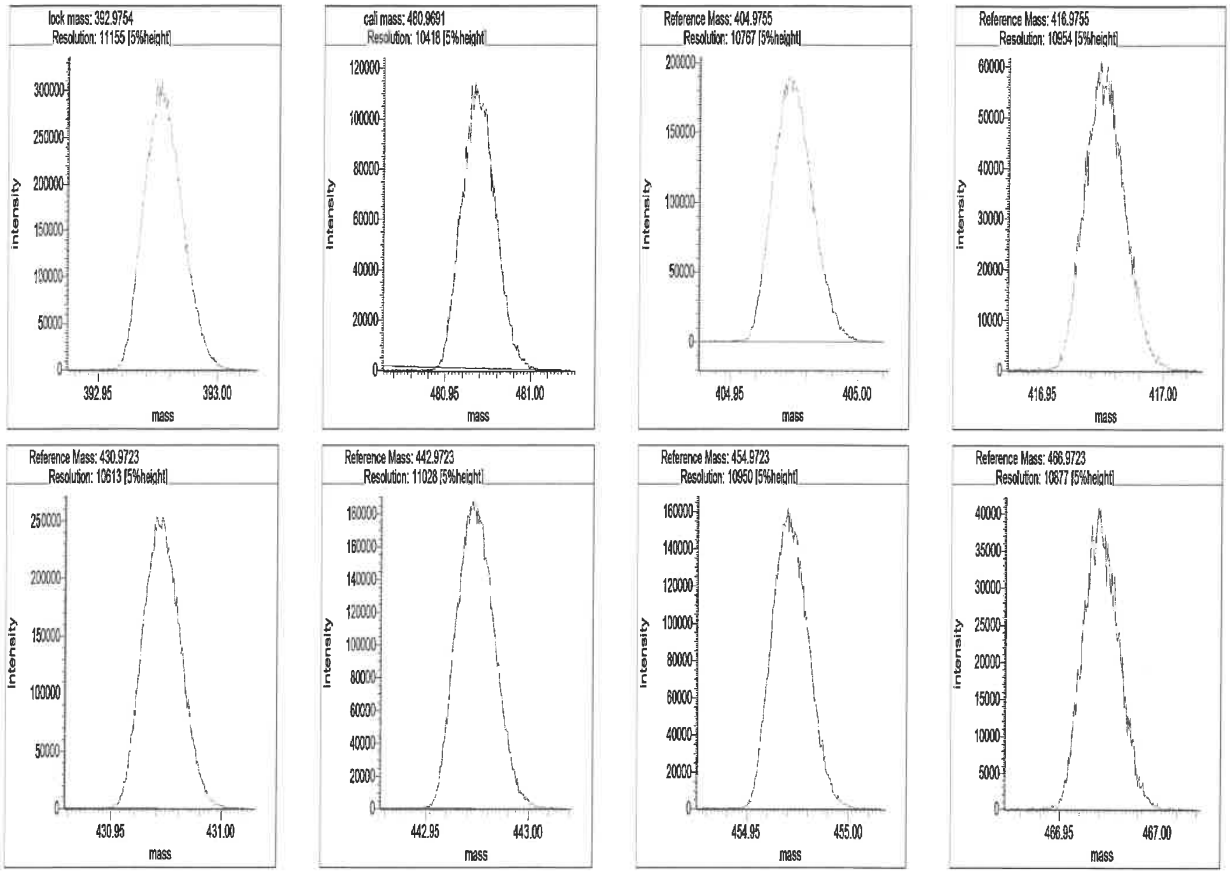

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10985 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10829 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11149 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11382 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11128 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11097 [5%height]

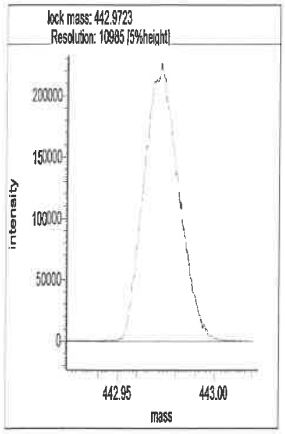
lock mass: 442.9723
Resolution: 10985 [5%height]
intensity
mass

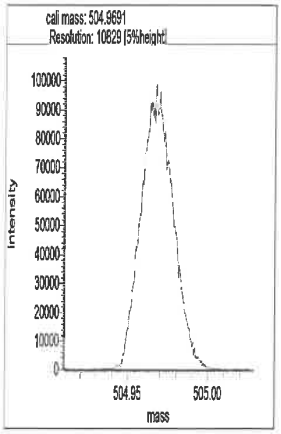
cali mass: 504.9691
Resolution: 10629 [5%height]
intensity
mass

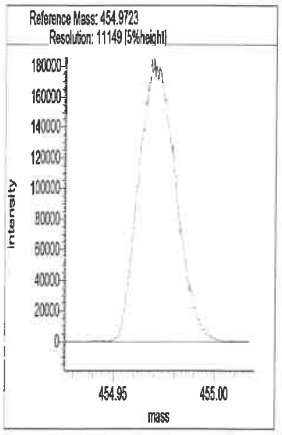
Reference Mass: 454.9723
Resolution: 11149 [5%height]
intensity
mass

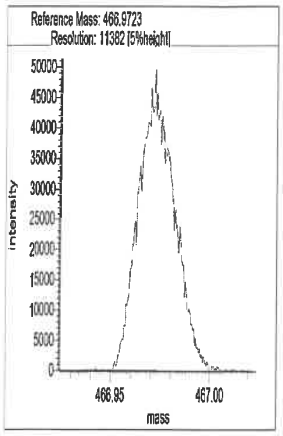
Reference Mass: 466.9723
Resolution: 11382 [5%height]
intensity
mass

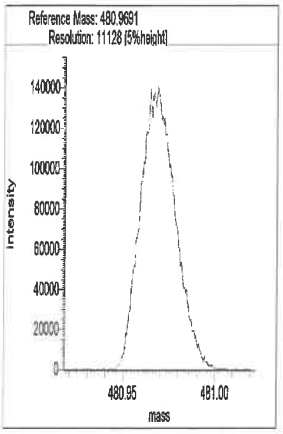
Reference Mass: 480.9691
Resolution: 11128 [5%height]
intensity
mass

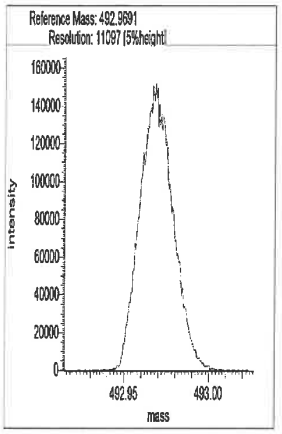
Reference Mass: 492.9691
Resolution: 11097 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.564	2334037	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.628	3167014	0.81	1.3459	100.8	100.8	0.1546	0.1546	101	
2,3,7,8-TCDF	19.662	19533	0.82	1.0802	0.5710	0.5710	0.007637	0.007637	114	
S Total TCDF					0.5710	0.5710	0.007637	0.007637		
D 13C-2,3,7,8-TCDD	20.933	2138853	0.81	0.9317	98.4	98.4	0.1772	0.1772	98.36	
$ 37Cl4-2,3,7,8-TCDD	20.941	11266		1.0083	0.4787	0.4787	0.005933	0.005933	95.74	
2,3,7,8-TCDD	20.967	12122	0.71	1.0753	0.5270	0.5270	0.0223	0.0223	105	
S Total TCDD					0.5270	0.5270	0.0223	0.0223		
D 13C-1,2,3,7,8-PeCDF	26.587	2514489	1.59	1.1405	94.5	94.5	0.3469	0.3469	94.46	
1,2,3,7,8-PeCDF	26.613	74934	1.71	1.0543	2.827	2.827	0.0199	0.0199	113	
D 13C-2,3,4,7,8-PeCDF	28.046	2592947	1.57	1.1253	98.7	98.7	0.3516	0.3516	98.72	
2,3,4,7,8-PeCDF	28.071	72817	1.61	1.0079	2.786	2.786	0.0219	0.0219	111	
S Total PeCDF					5.613	5.613	0.0209	0.0209		
D 13C-1,2,3,7,8-PeCDD	28.830	1602476	1.59	0.7165	95.8	95.8	0.1271	0.1271	95.83	
1,2,3,7,8-PeCDD	28.855	42943	1.72	1.0465	2.561	2.561	0.0215	0.0215	102	
S Total PeCDD					2.561	2.561	0.0215	0.0215		
D 13C-1,2,3,4,7,8-HxCDF	34.406	1517222	0.52	0.9648	89.7	89.7	0.3358	0.3358	89.72	
1,2,3,4,7,8-HxCDF	34.431	46374	1.30	1.1474	2.664	2.664	0.0219	0.0219	107	
D 13C-1,2,3,6,7,8-HxCDF	34.583	1626653	0.54	1.0708	86.7	86.7	0.3026	0.3026	86.67	
1,2,3,6,7,8-HxCDF	34.608	54388	1.19	1.2178	2.746	2.746	0.0201	0.0201	110	
D 13C-2,3,4,6,7,8-HxCDF	35.468	1523436	0.53	1.0413	83.5	83.5	0.3112	0.3112	83.47	
2,3,4,6,7,8-HxCDF	35.485	50026	1.25	1.2145	2.704	2.704	0.0183	0.0183	108	
D 13C-1,2,3,7,8,9-HxCDF	36.404	1696557	0.52	0.9731	99.5	99.5	0.3330	0.3330	99.47	
1,2,3,7,8,9-HxCDF	36.421	57602	1.21	1.2401	2.738	2.738	0.0145	0.0145	110	
S Total HxCDF					10.9	10.9	0.0187	0.0187		
* 13C-1,2,3,7,8,9-HxCDD	36.210	1752780	1.29	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.695	1127895	1.27	0.7587	84.8	84.8	0.2005	0.2005	84.82	
1,2,3,4,7,8-HxCDD	35.712	31680	1.20	1.0608	2.648	2.648	0.0198	0.0198	106	
D 13C-1,2,3,6,7,8-HxCDD	35.822	1291365	1.29	0.8593	85.7	85.7	0.1770	0.1770	85.74	
1,2,3,6,7,8-HxCDD	35.839	34082	1.16	0.9933	2.657	2.657	0.0196	0.0196	106	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.227	39595	1.15	1.1094	2.950	2.950	0.0182	0.0182	118	
S Total HxCDD					8.255	8.255	0.0192	0.0192		
D 13C-1,2,3,4,6,7,8-HpCDF	38.321	1227279	0.46	0.7359	95.1	95.1	0.3550	0.3550	95.14	
1,2,3,4,6,7,8-HpCDF	38.329	47287	1.05	1.4421	2.672	2.672	0.0138	0.0138	107	
D 13C-1,2,3,4,7,8,9-HpCDF	39.611	1120663	0.46	0.6854	93.3	93.3	0.3812	0.3812	93.29	
1,2,3,4,7,8,9-HpCDF	39.619	39382	1.04	1.3092	2.684	2.684	0.0149	0.0149	107	
S Total HpCDF					5.356	5.356	0.0144	0.0144		
D 13C-1,2,3,4,6,7,8-HpCDD	39.307	1113145	1.06	0.6745	94.2	94.2	0.2577	0.2577	94.15	
1,2,3,4,6,7,8-HpCDD	39.316	31661	0.99	1.0503	2.708	2.708	0.0190	0.0190	108	
S Total HpCDD					2.708	2.708	0.0190	0.0190		
D 13C-OCDD	41.797	1823492	0.90	0.5446	191.0	191.0	0.3325	0.3325	95.51	
OCDF	41.890	61051	0.95	1.3168	5.085	5.085	0.0322	0.0322	102	
OCDD	41.805	51642	0.88	1.0620	5.333	5.333	0.0182	0.0182	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.564	20.547	1		1041449	163457	148	370	1104		
333.9338	20.564	20.547	1		1292588	204311	95	237	2151	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.628	19.616	1	0.954	1415927	226149	197	492	1148		
317.9389	19.628	19.616	1	0.954	1751087	282985	109	272	2596	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.662	19.646	1	1.002	8785	1472	3	7	491		
305.8987	19.662	19.646	1	1.002	10748	1598	14	35	114	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.933	20.910	1	1.018	956834	140160	148	370	947		
333.9338	20.924	20.910	1	1.018	1182019	172842	95	237	1819	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.941	20.935	0	1.018	11266	1696	9	22	188		
2,3,7,8-TCDD											
319.8965	20.967	20.939	2	1.002	5046	703	25	62	28		
321.8936	20.950	20.939	1	1.001	7076	1165	5	12	233	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.587	26.560	2	1.293	1544614	271650	354	885	767		
353.8970	26.587	26.560	2	1.293	969875	166951	228	570	732	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.613	26.584	2	1.001	47325	8180	13	32	629		
341.8567	26.596	26.584	1	1.000	27609	5058	24	60	211	1.71(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.046	28.014	2	1.364	1584958	253357	354	885	716		
353.8970	28.037	28.014	1	1.363	1007989	162868	228	570	714	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.071	28.039	2	1.001	44929	7445	13	32	573		
341.8567	28.063	28.039	1	1.001	27888	4385	24	60	183	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.830	28.801	2	1.402	983567	149258	81	202	1843		
369.8919	28.830	28.801	2	1.402	618909	95647	53	132	1805	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.855	28.828	2	1.001	27146	4327	17	42	255		
357.8516	28.863	28.828	2	1.001	15797	2500	5	12	500	1.72(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.406	34.384	1	0.950	521957	103110	186	465	554		
385.8610	34.406	34.384	1	0.950	995265	195967	351	877	558	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.431	34.405	2	1.001	26220	5205	19	47	274		
375.8178	34.431	34.405	2	1.001	20154	4061	11	27	369	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.583	34.562	1	0.955	567371	107545	186	465	578		
385.8610	34.583	34.562	1	0.955	1059282	198264	351	877	565	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.608	34.582	2	1.001	29510	5690	19	47	299		
375.8178	34.600	34.582	1	1.000	24878	4701	11	27	427	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.468	35.444	1	0.980	527302	117266	186	465	630		
385.8610	35.468	35.444	1	0.980	996134	220962	351	877	630	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.485	35.461	1	1.000	27767	6035	19	47	318		
375.8178	35.476	35.461	1	1.000	22259	4941	11	27	449	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.404	36.388	1	1.005	582391	143633	186	465	772		
385.8610	36.404	36.388	1	1.005	1114166	273141	351	877	778	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.421	36.402	1	1.000	31508	7777	19	47	409		
375.8178	36.421	36.402	1	1.000	26094	6045	11	27	550	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.210	36.192	1		987922	232825	142	355	1640		
403.8529	36.210	36.192	1		764858	181339	110	275	1649	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.695	35.680	1	0.986	630506	153231	142	355	1079		
403.8529	35.695	35.680	1	0.986	497389	118761	110	275	1080	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.712	35.695	1	1.000	17291	4375	12	30	365		
391.8127	35.712	35.695	1	1.000	14389	3541	11	27	322	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.822	35.805	1	0.989	727495	166749	142	355	1174		
403.8529	35.822	35.805	1	0.989	563870	125792	110	275	1144	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.839	35.820	1	1.000	18295	4156	12	30	346		
391.8127	35.830	35.820	1	1.000	15787	3353	11	27	305	1.16(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.227	36.208	1	1.015	21159	5138	12	30	428		
391.8127	36.218	36.208	1	1.015	18436	4550	11	27	414	1.15(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.321	38.305	1	1.058	389255	110351	150	375	736		
419.8220	38.321	38.305	1	1.058	838024	240182	283	707	849	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.329	38.317	1	1.000	24164	7010	18	45	389		
409.7788	38.329	38.317	1	1.000	23123	6463	10	25	646	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.611	39.600	1	1.094	351407	112029	150	375	747		
419.8220	39.611	39.600	1	1.094	769256	246420	283	707	871	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.619	39.608	1	1.000	20064	6267	18	45	348		
409.7788	39.628	39.608	1	1.000	19318	5891	10	25	589	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.307	39.293	1	1.086	574080	172930	147	367	1176		
437.8140	39.307	39.293	1	1.086	539065	163690	141	352	1161	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.316	39.301	1	1.000	15770	4799	17	42	282		
425.7737	39.316	39.301	1	1.000	15891	4656	10	25	466	0.99(0.88-1.20)	
13C-OCDD											
469.7780	41.797	41.785	1	1.154	864827	245324	148	370	1658		
471.7750	41.797	41.785	1	1.154	958665	273299	152	380	1798	0.90(0.76-1.02)	
OCDF											
441.7428	41.890	41.875	1	1.002	29681	8172	14	35	584		
443.7399	41.881	41.875	0	1.002	31370	8963	30	75	299	0.95(0.76-1.02)	
OCDD											
457.7377	41.805	41.794	1	1.000	24122	6775	8	20	847		
459.7348	41.805	41.794	1	1.000	27520	7850	12	30	654	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

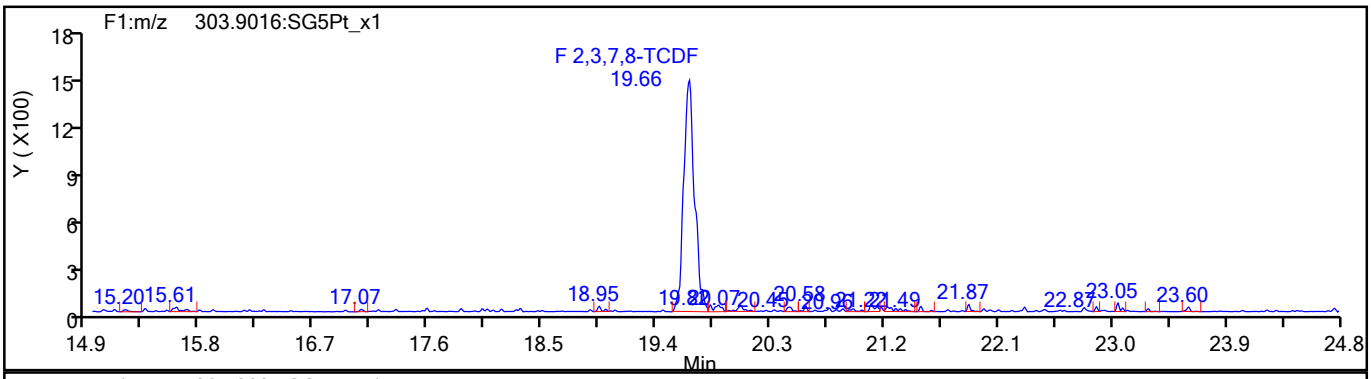

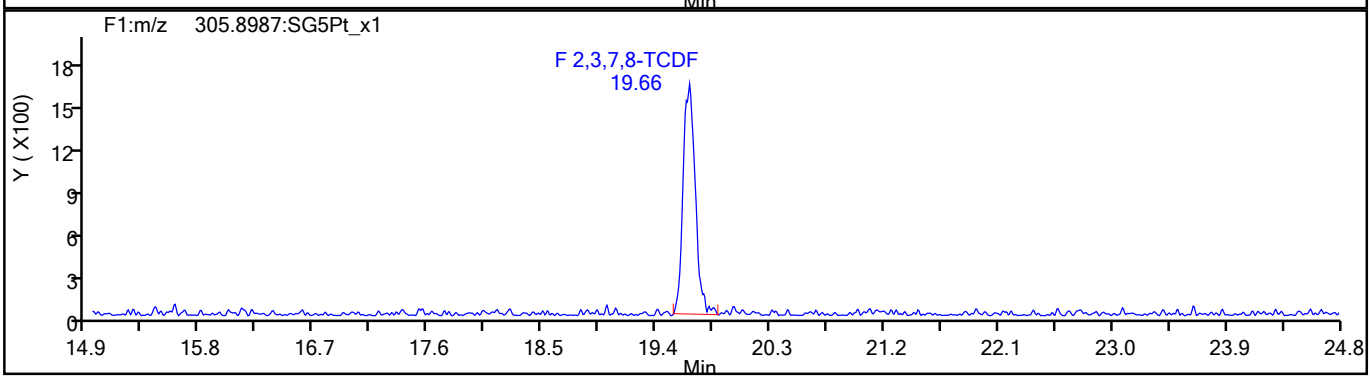

TCDF Standards

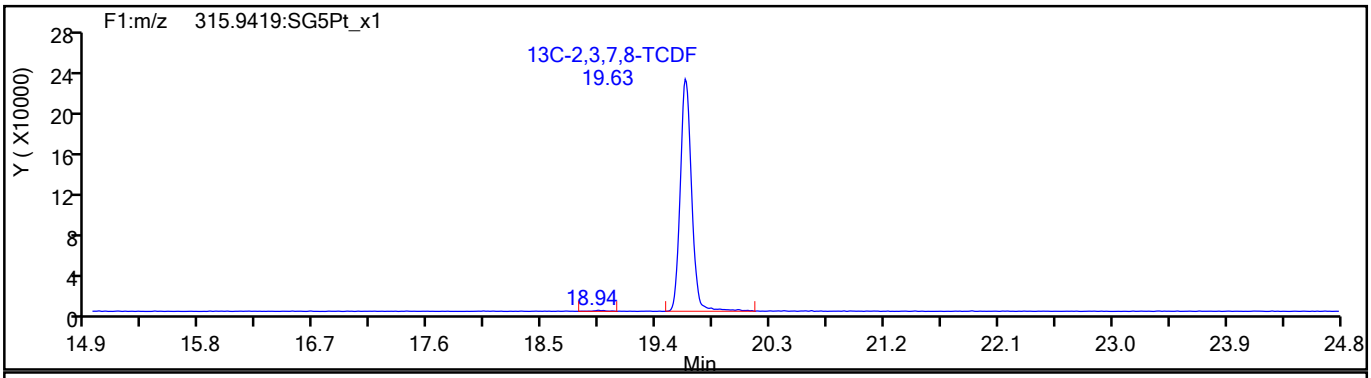

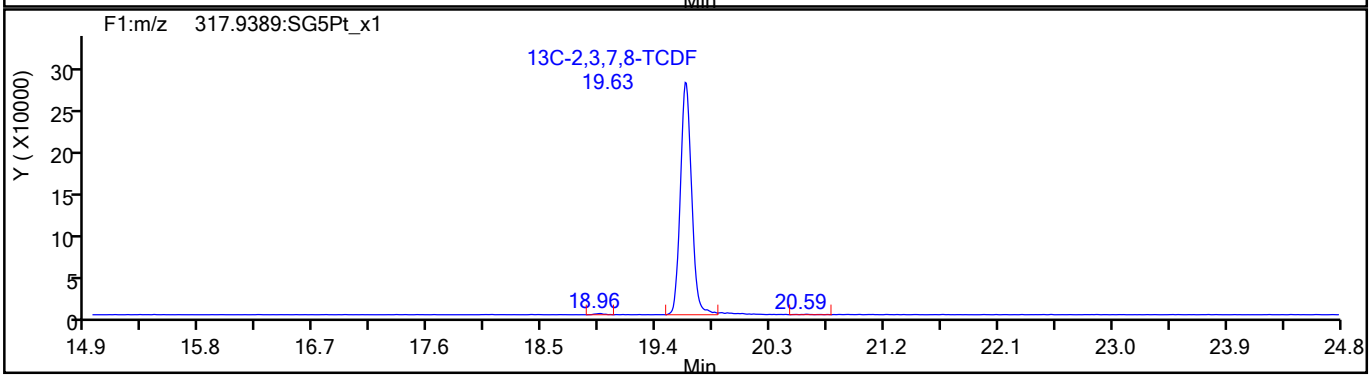

787245

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

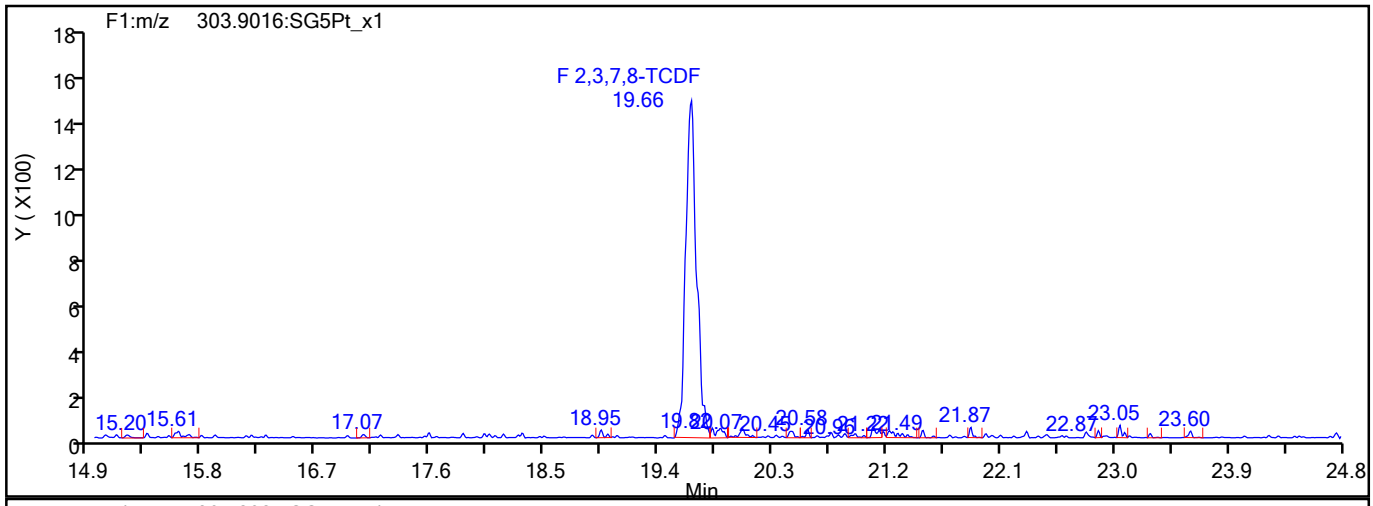

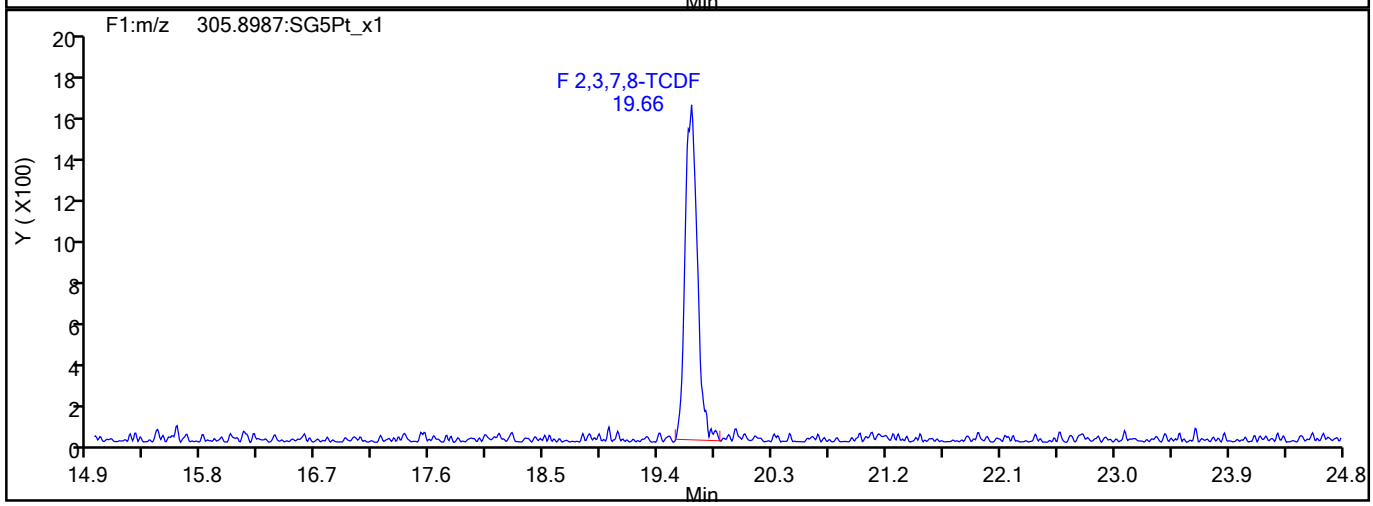

TCDF Interference Mass

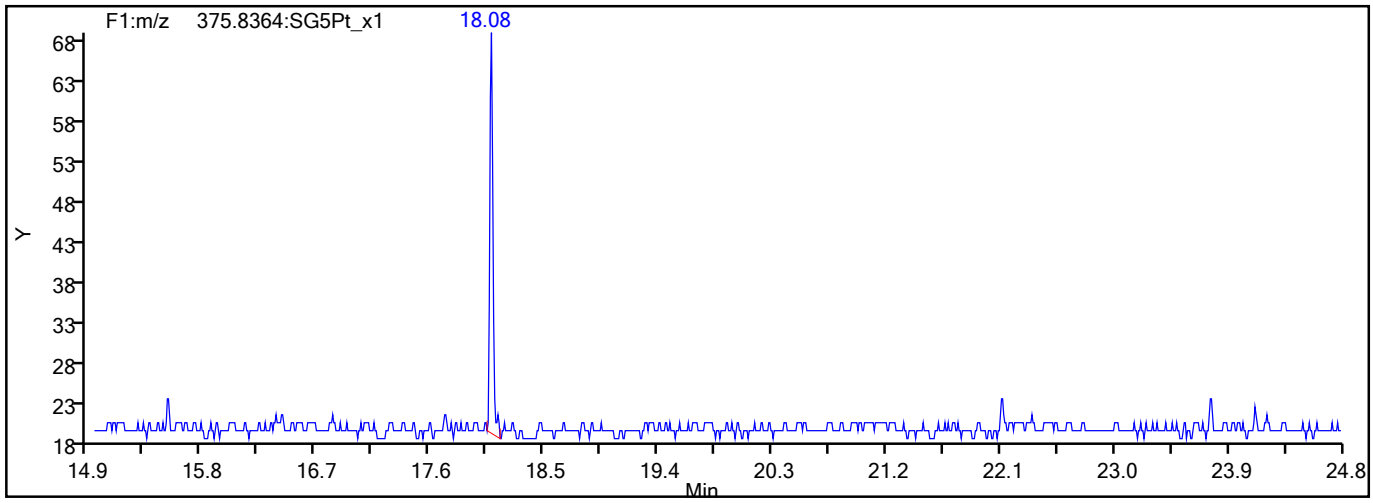

787246

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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TCDD

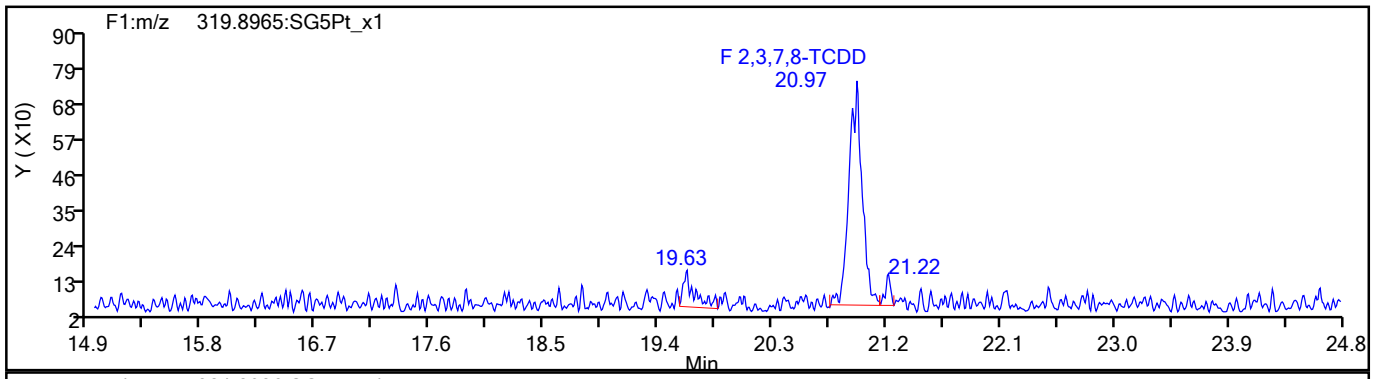

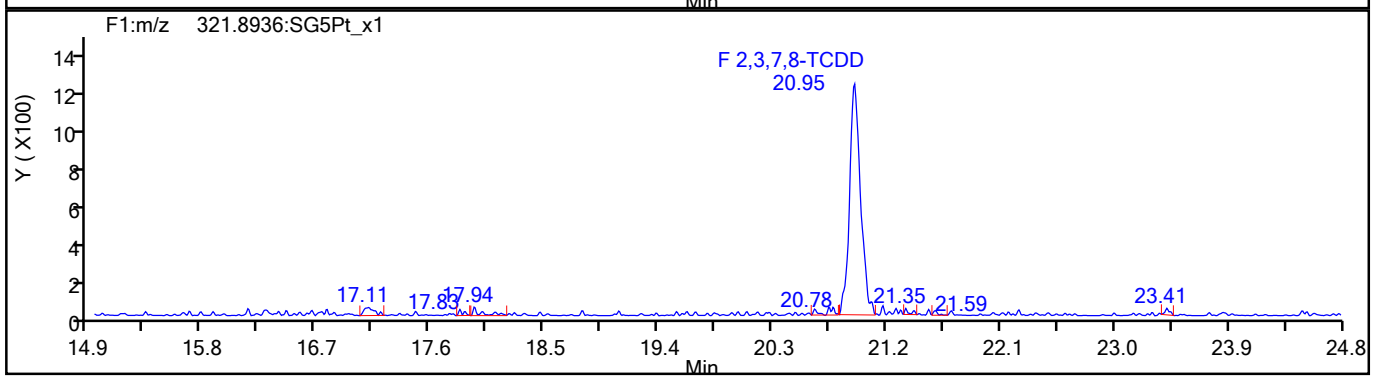

TCDD Standards

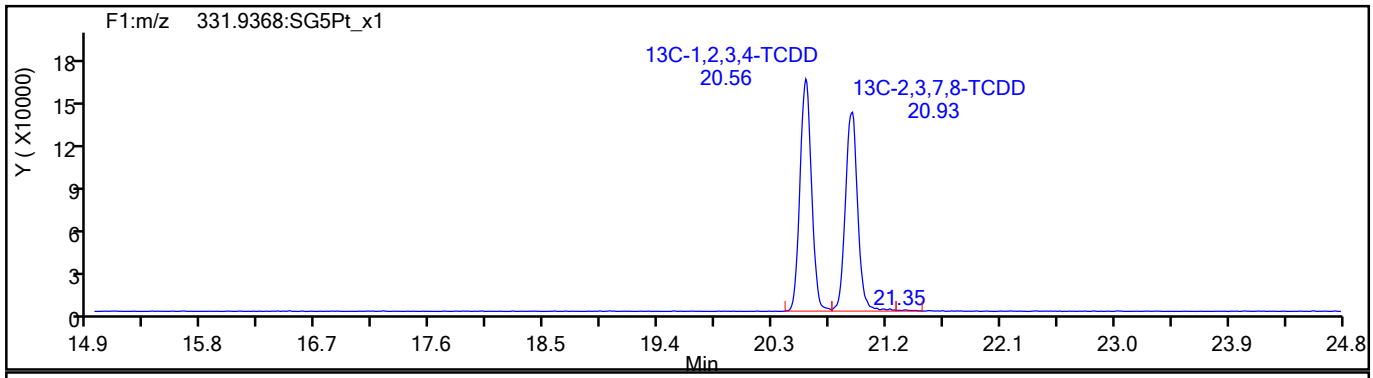

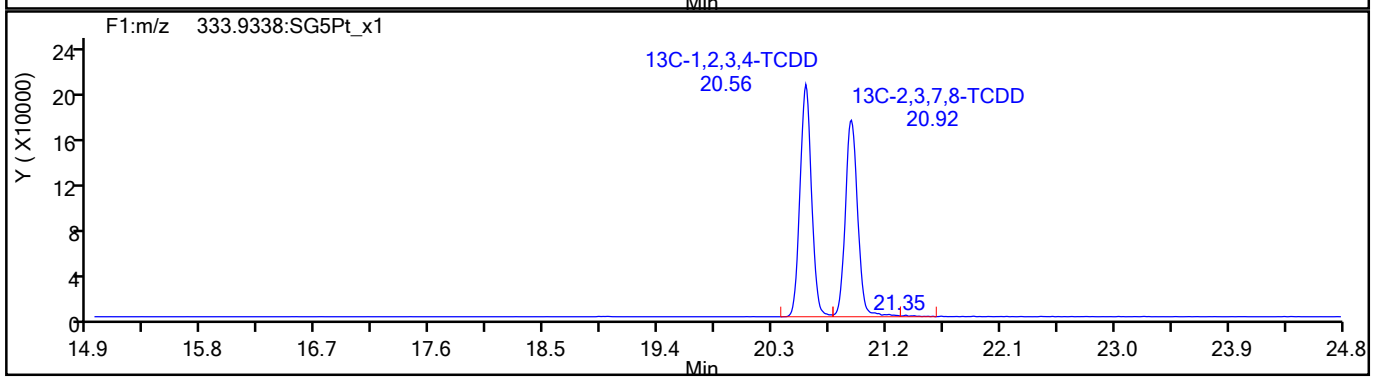

787247

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

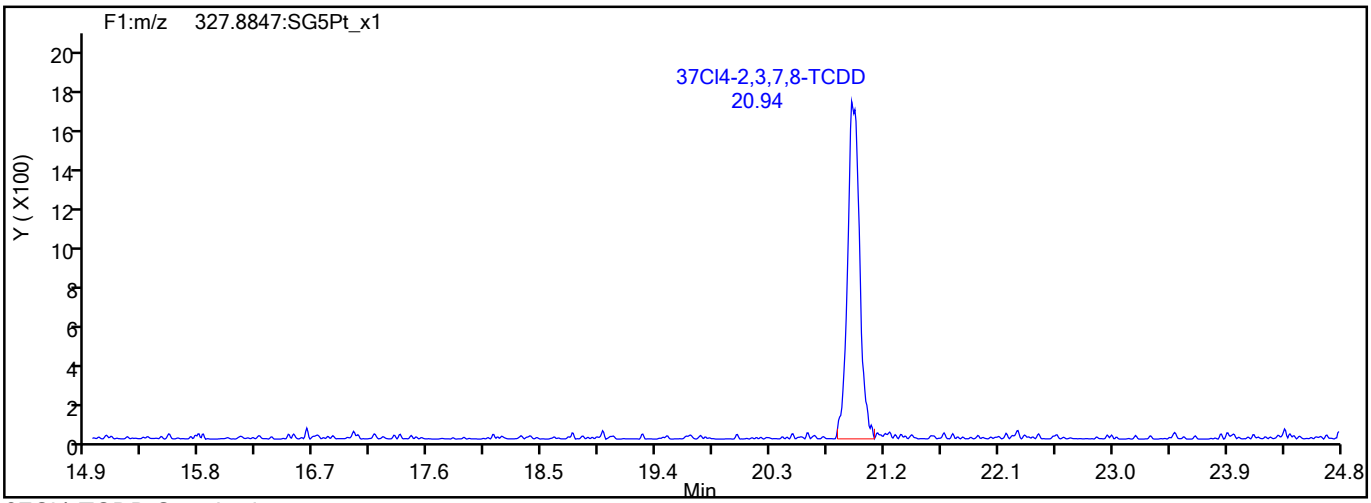

37Cl4-TCDD Standards

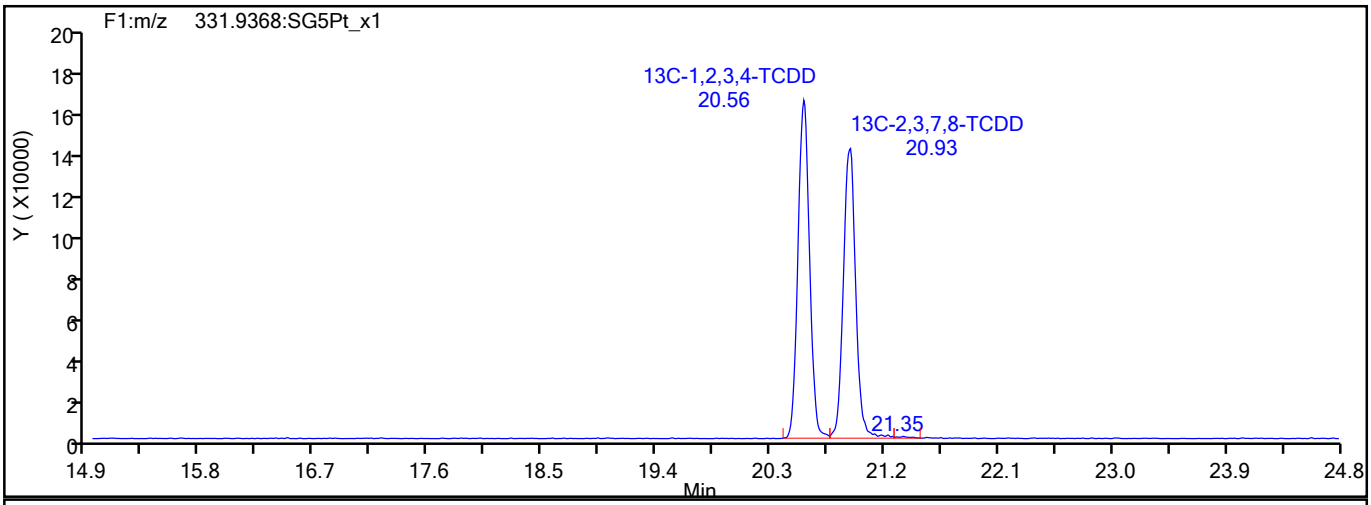

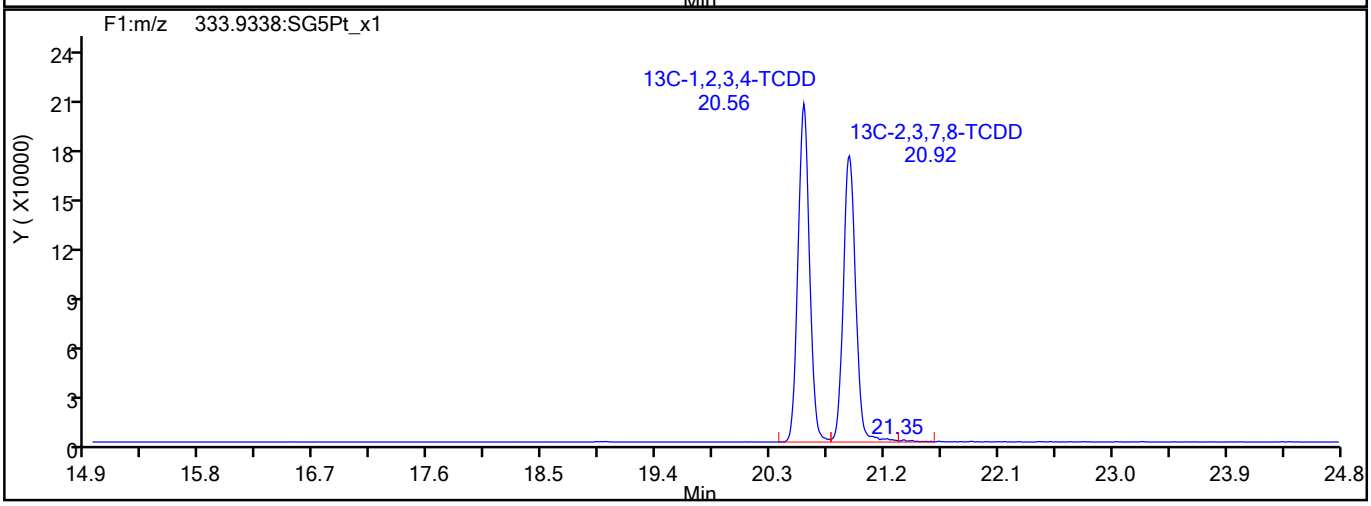

787248

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

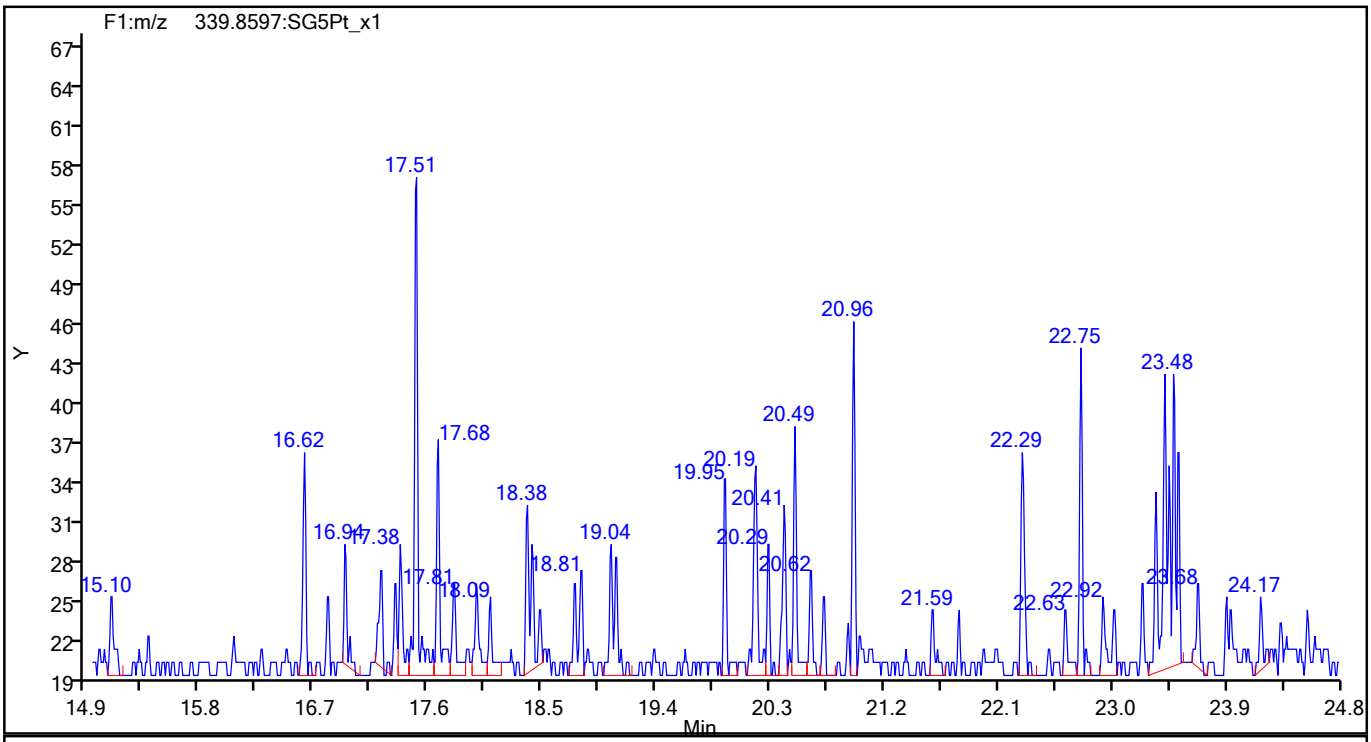

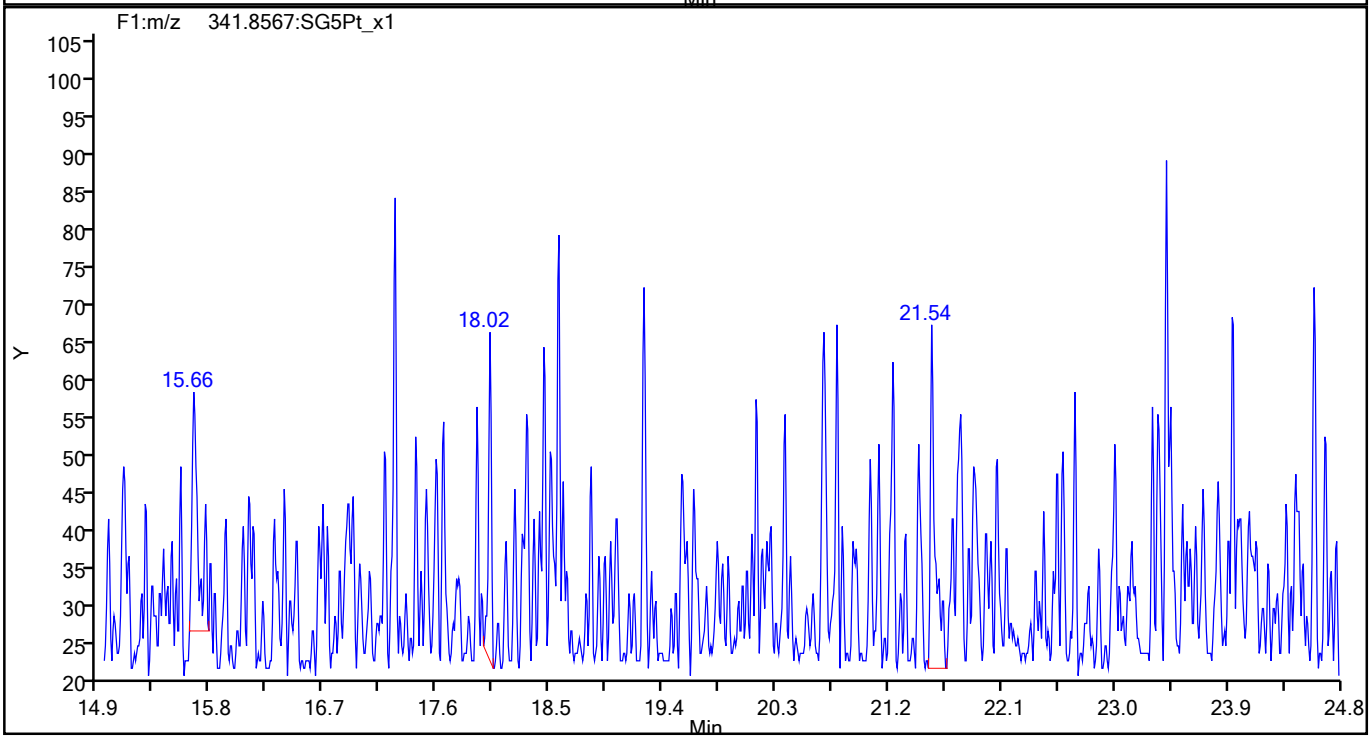

787249

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Eurofins TestAmerica, Sacramento

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F1 PeCDFs

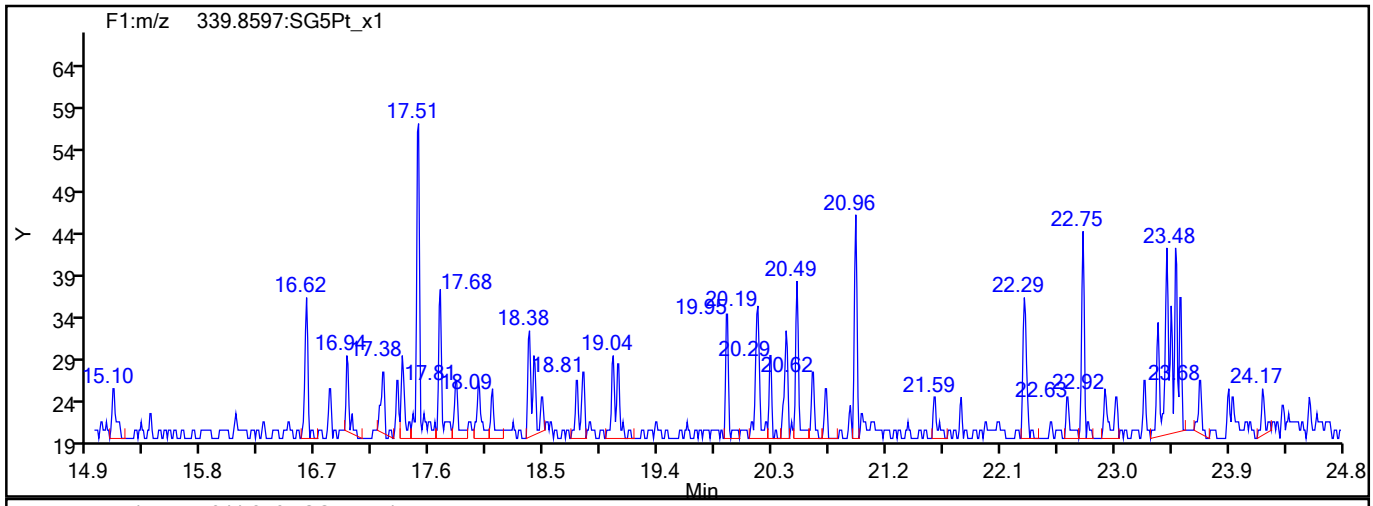

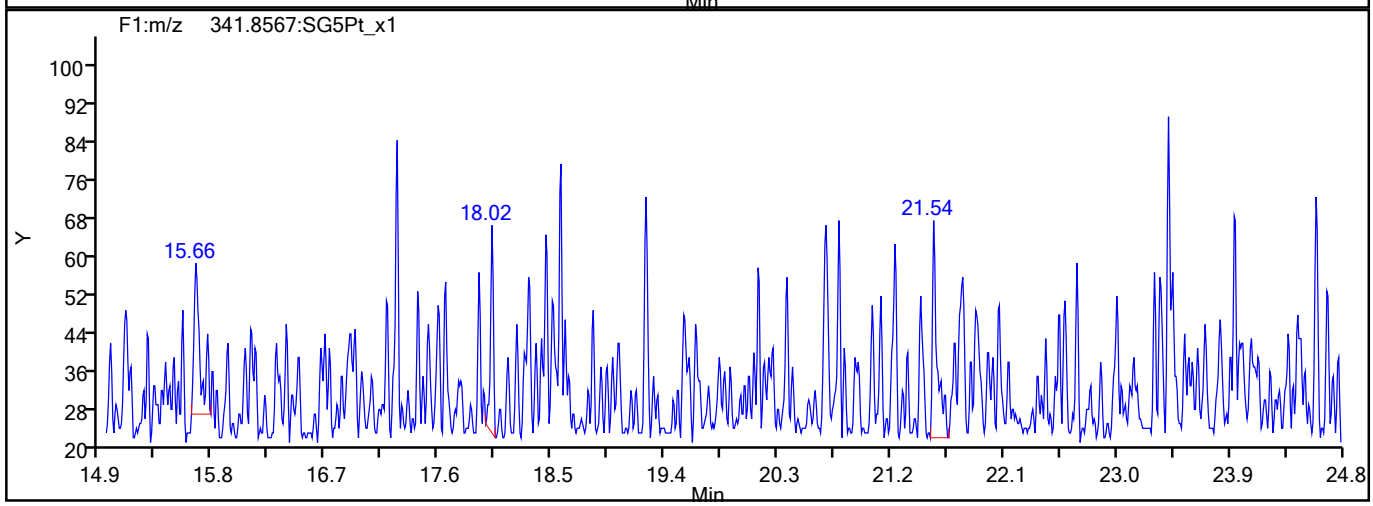

F1 PeCDFs Interference Mass

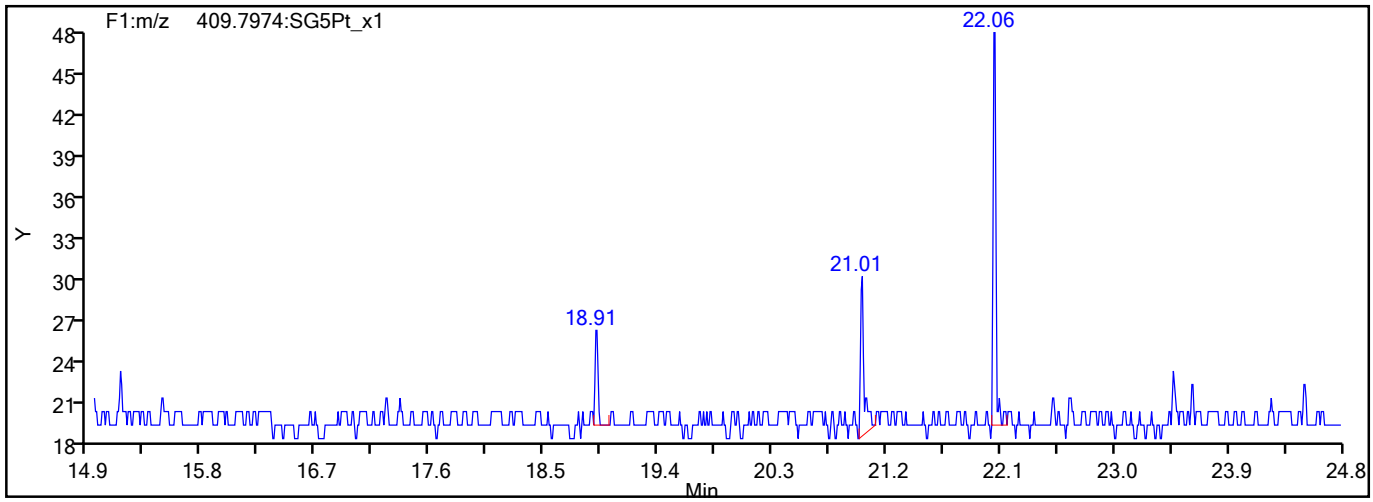

787250

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Eurofins TestAmerica, Sacramento

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PeCDF

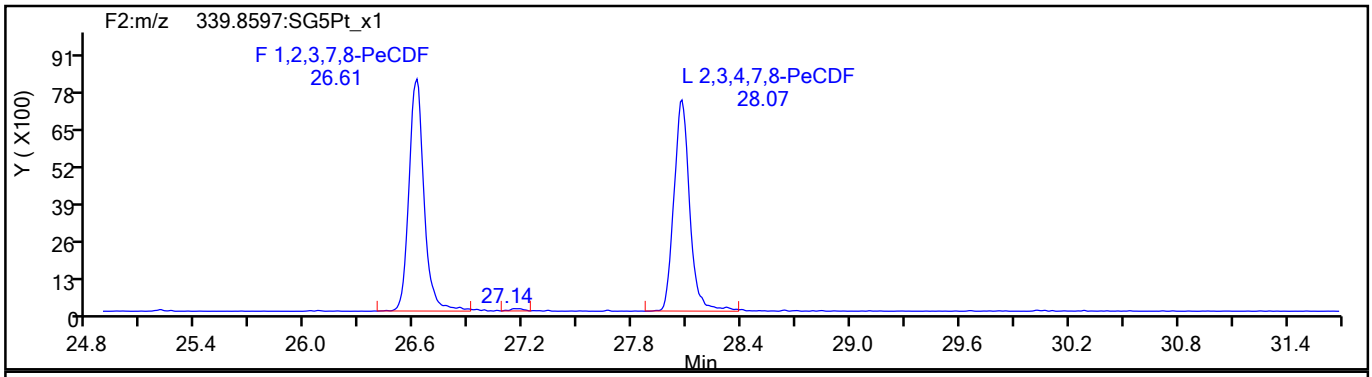

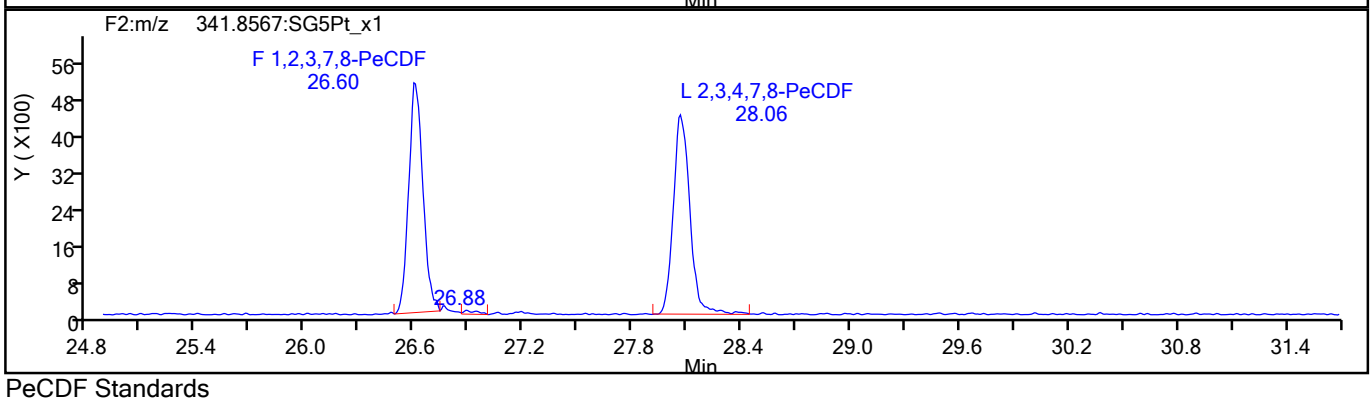

PeCDF Standards

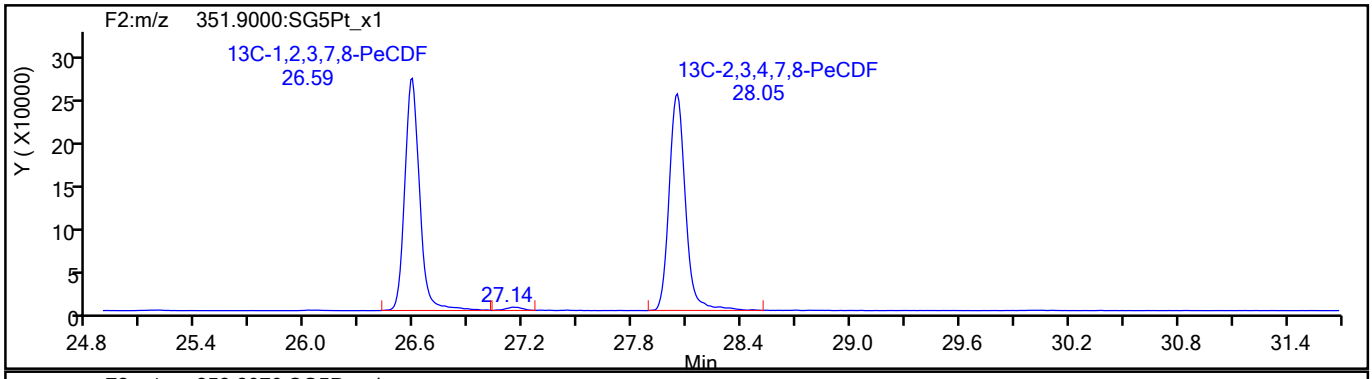

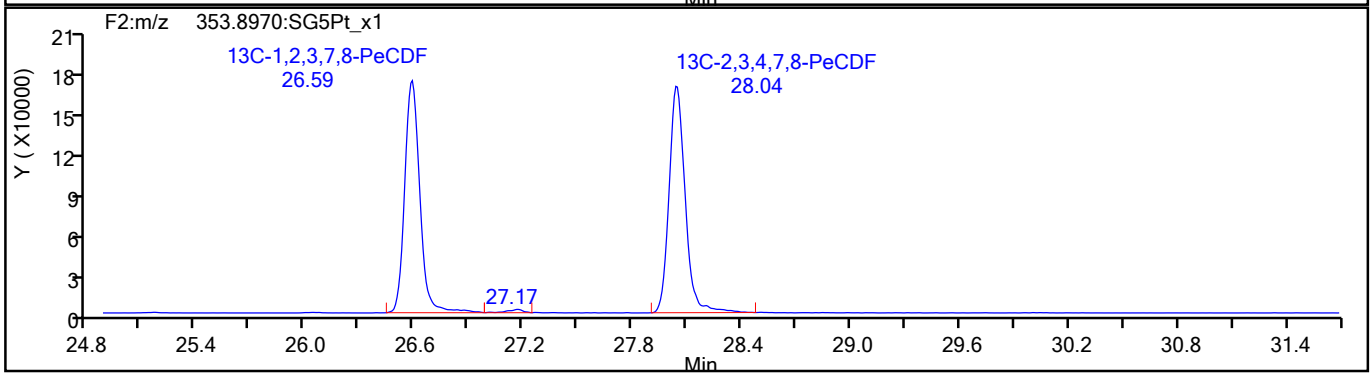

787251

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Eurofins TestAmerica, Sacramento

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PeCDF

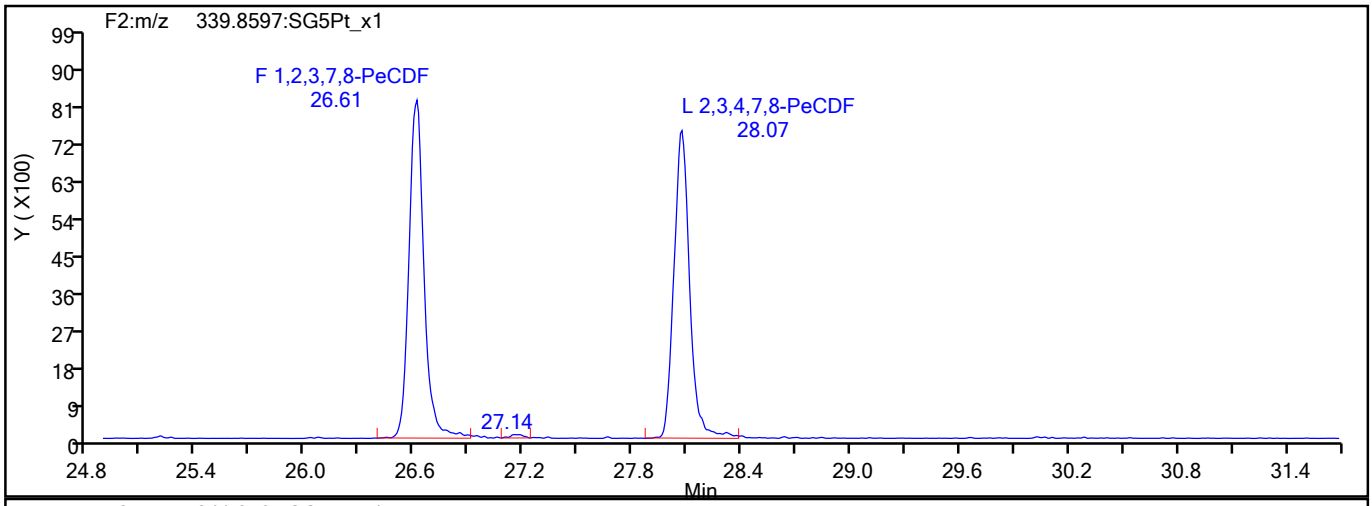

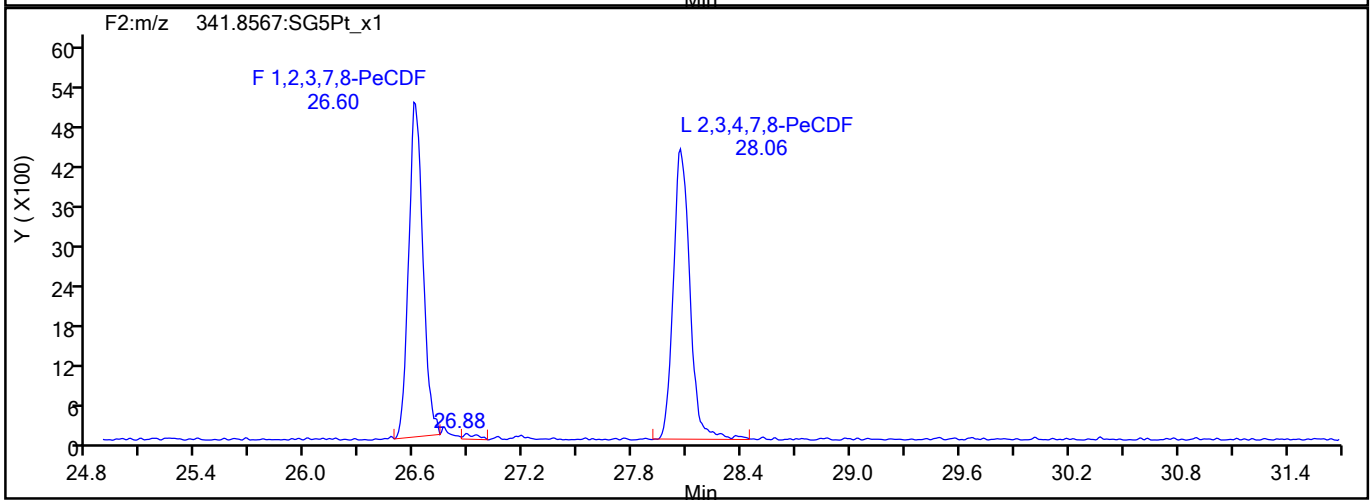

PeCDF Interference Mass

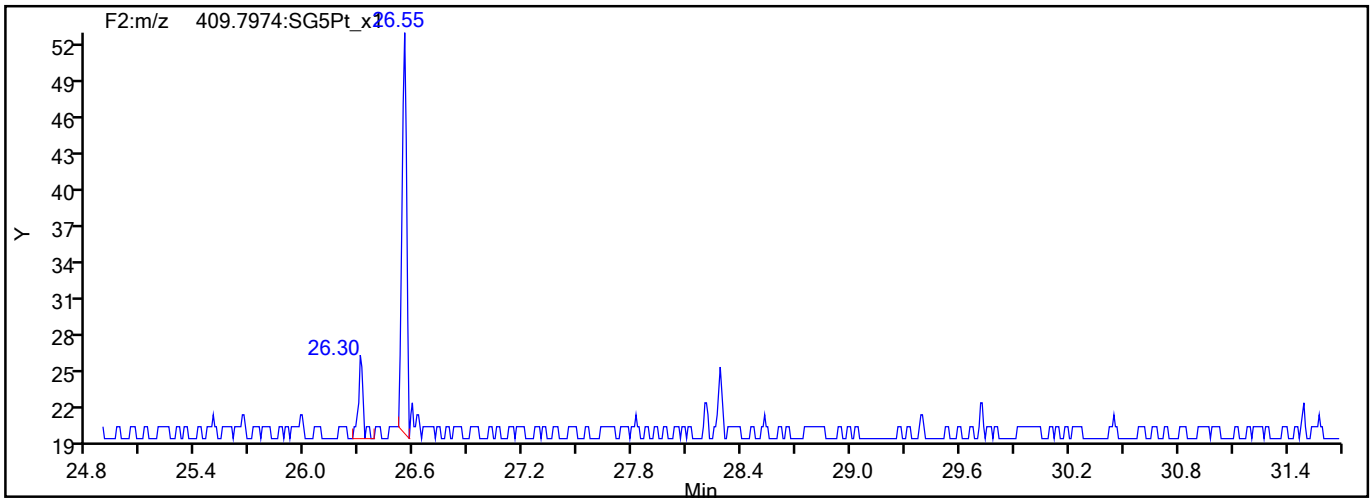

787252

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Eurofins TestAmerica, Sacramento

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PeCDD

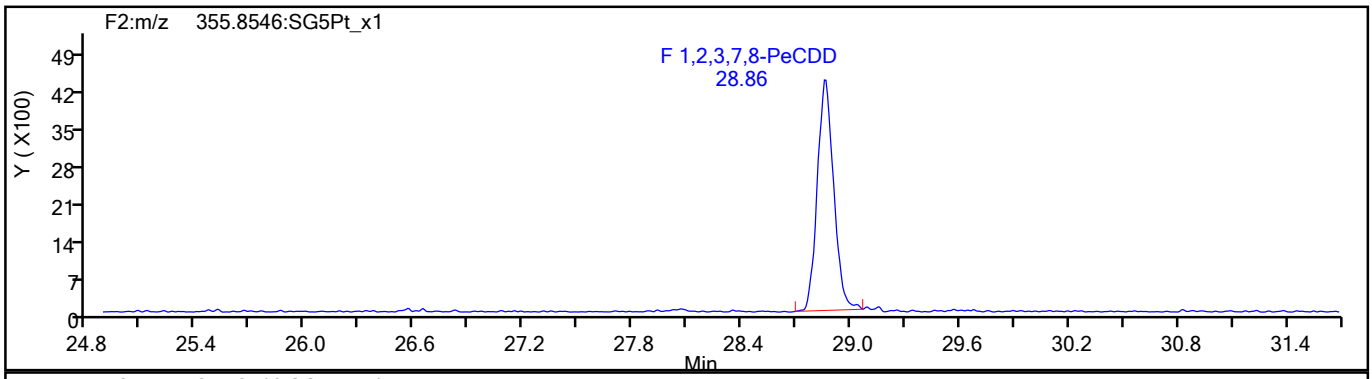

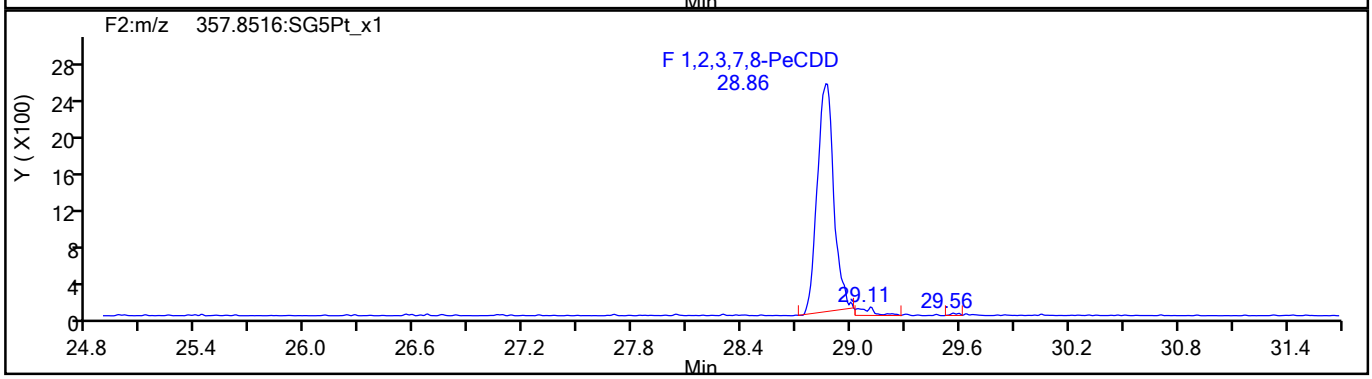

PeCDD Standards

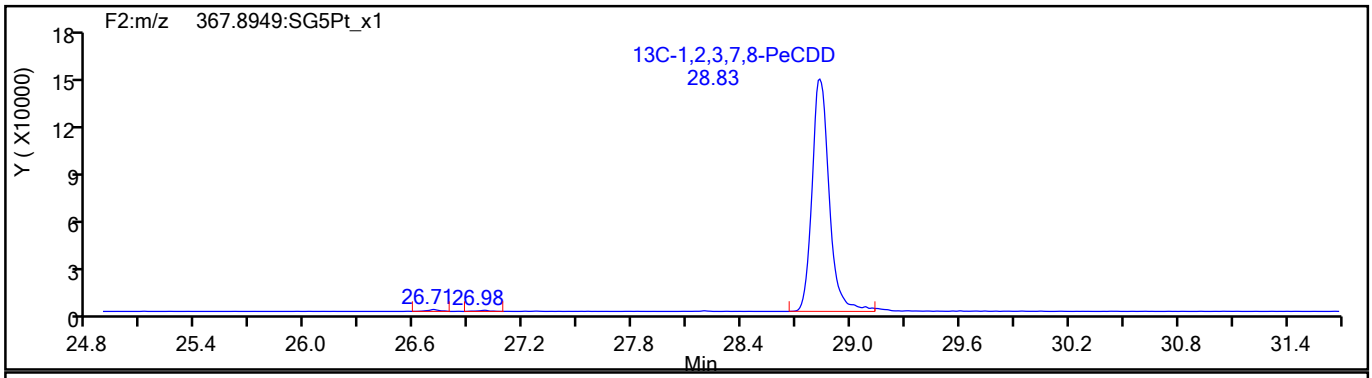

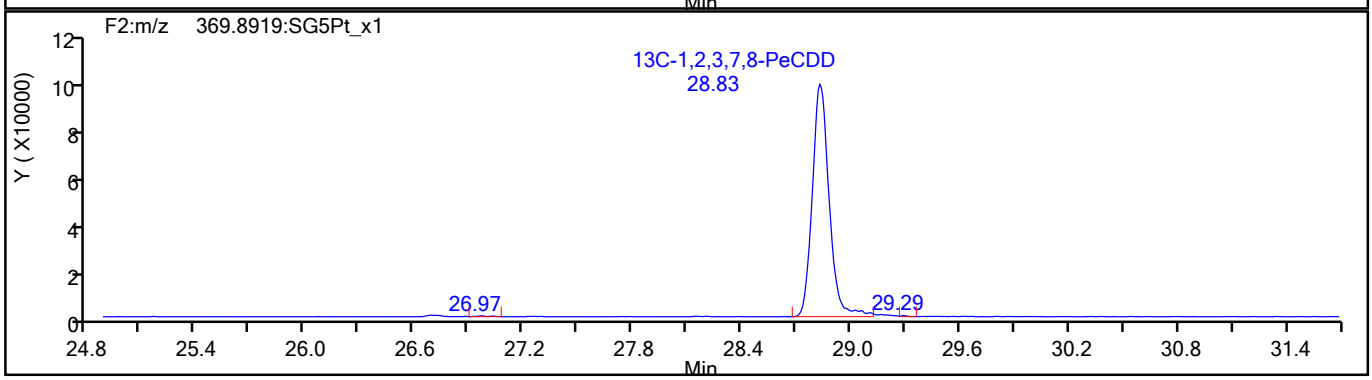

787253

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

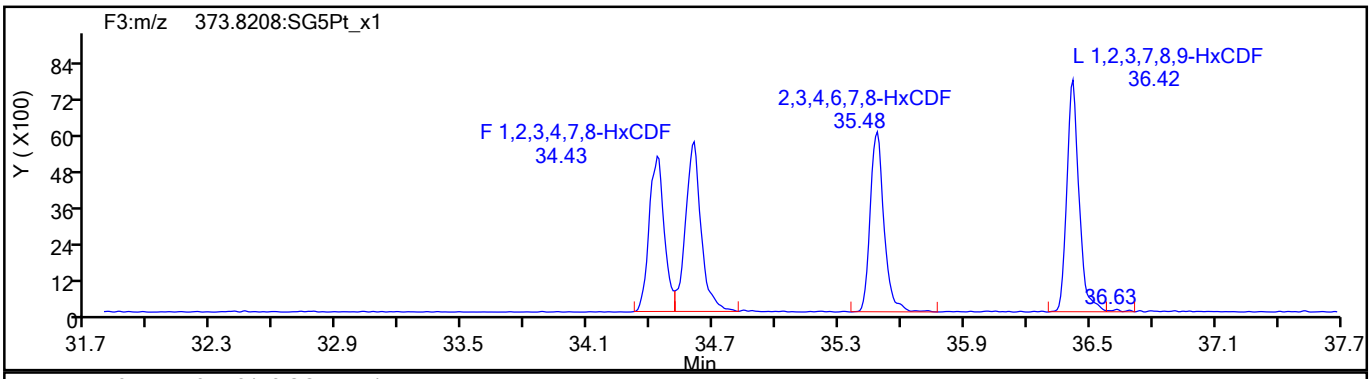

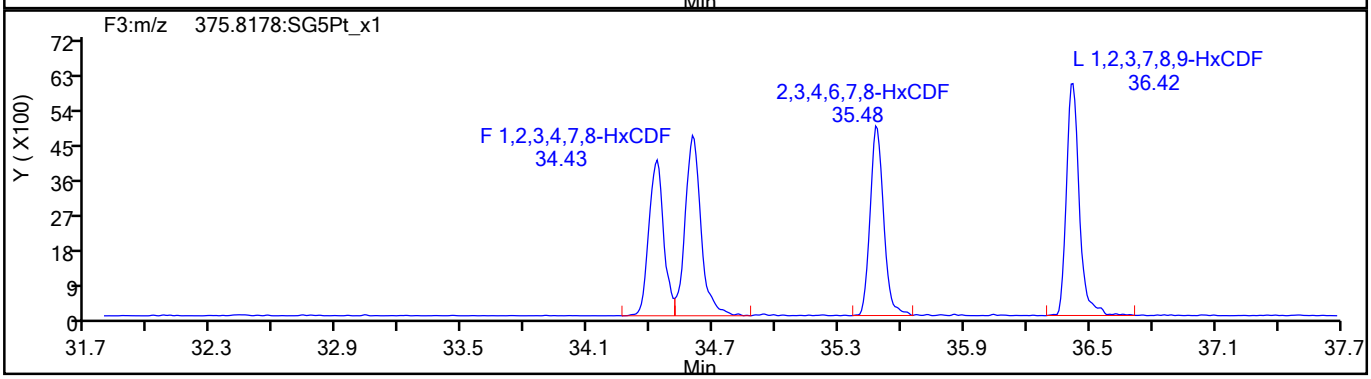

HxCDF Standards

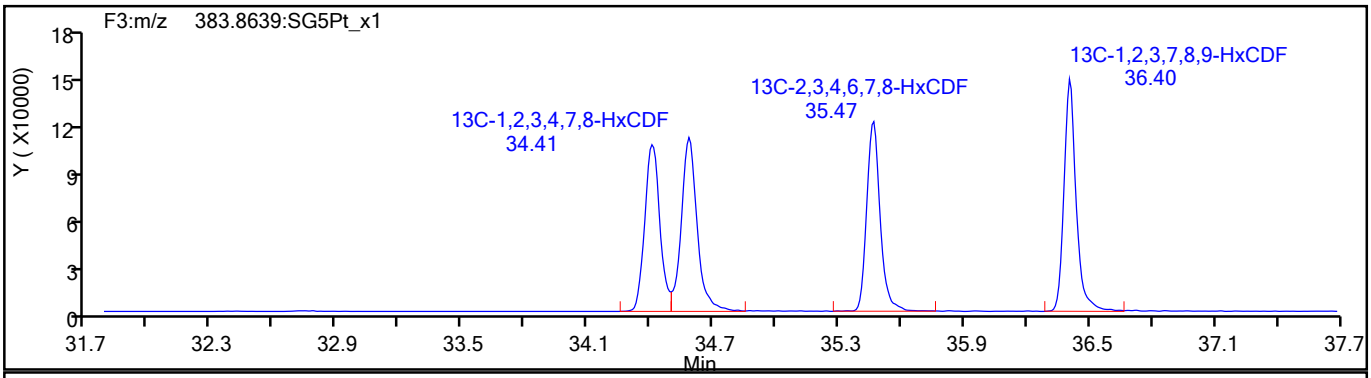

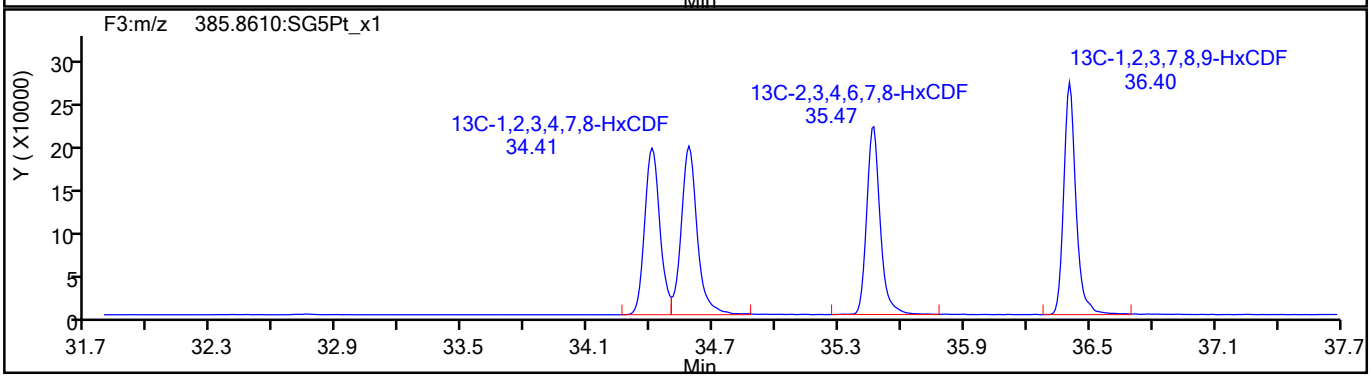

787254

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

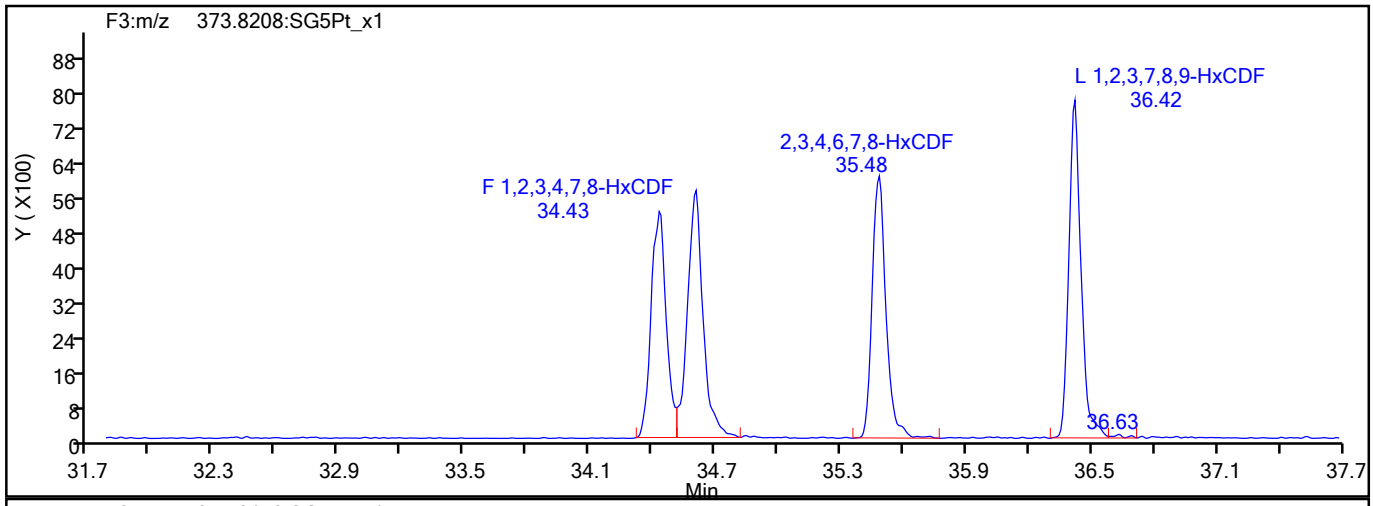

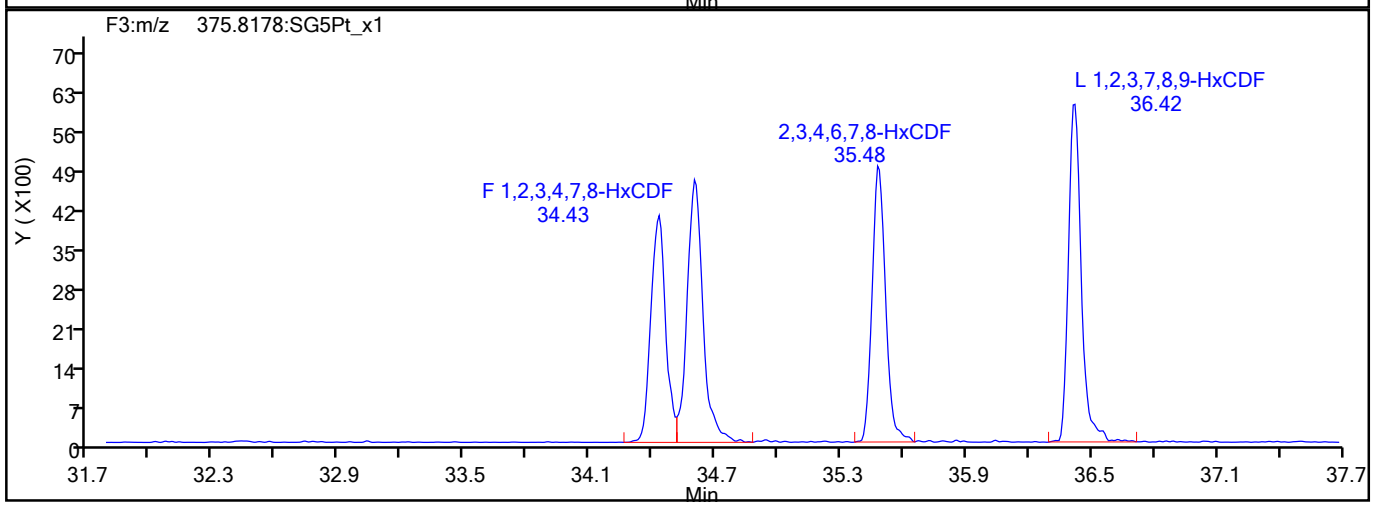

HxCDF Interference Mass

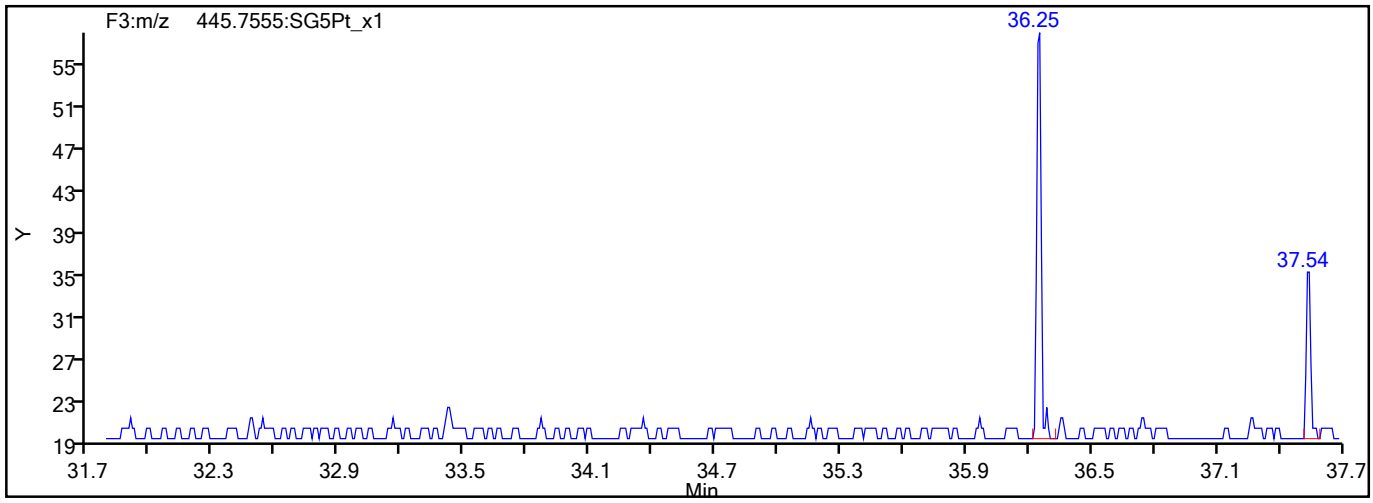

787255

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

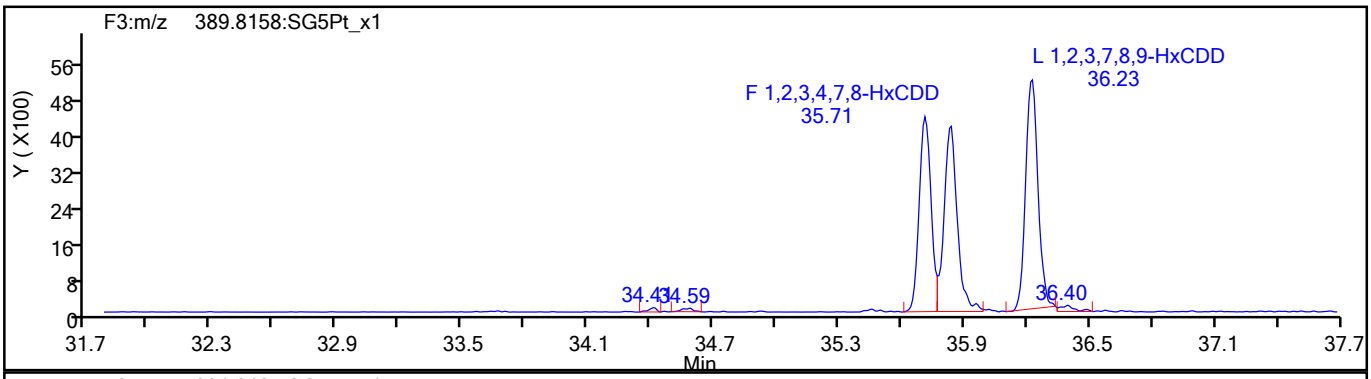

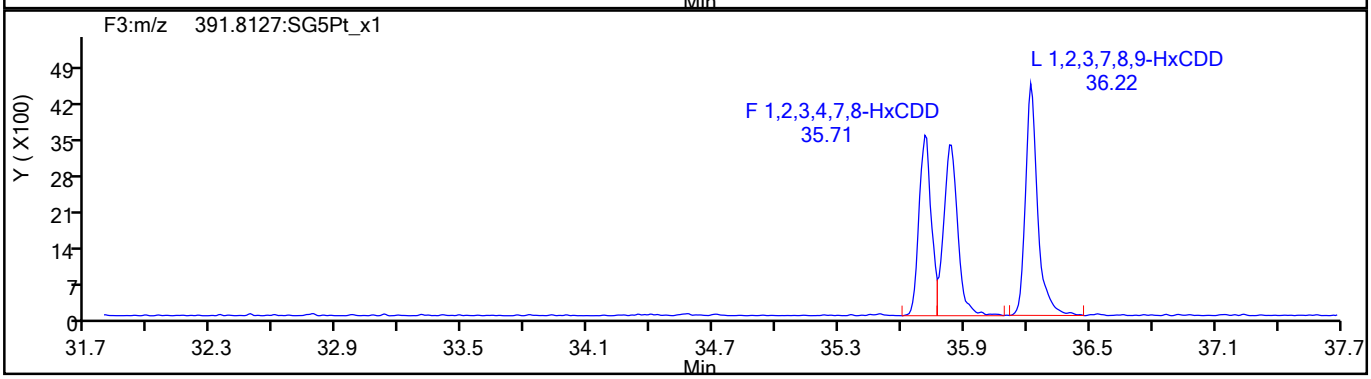

HxCDD Standards

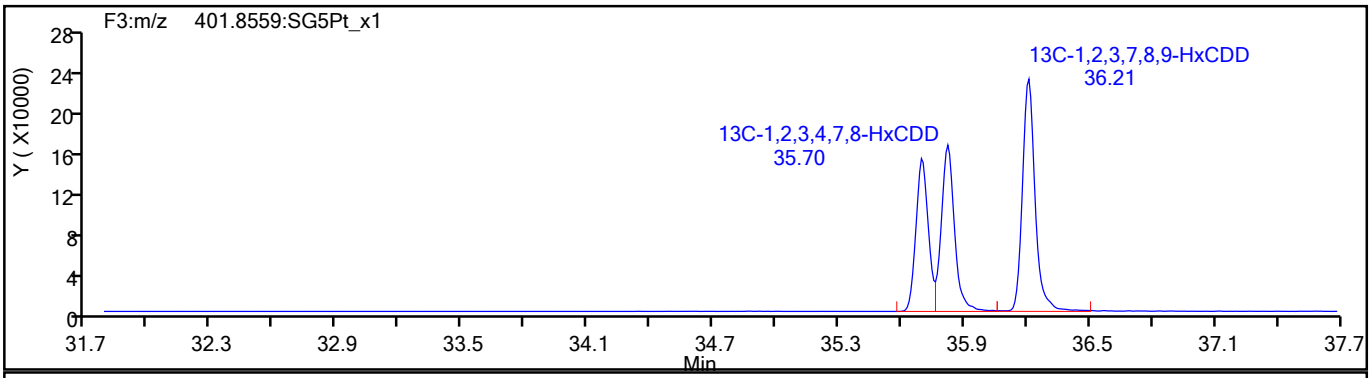

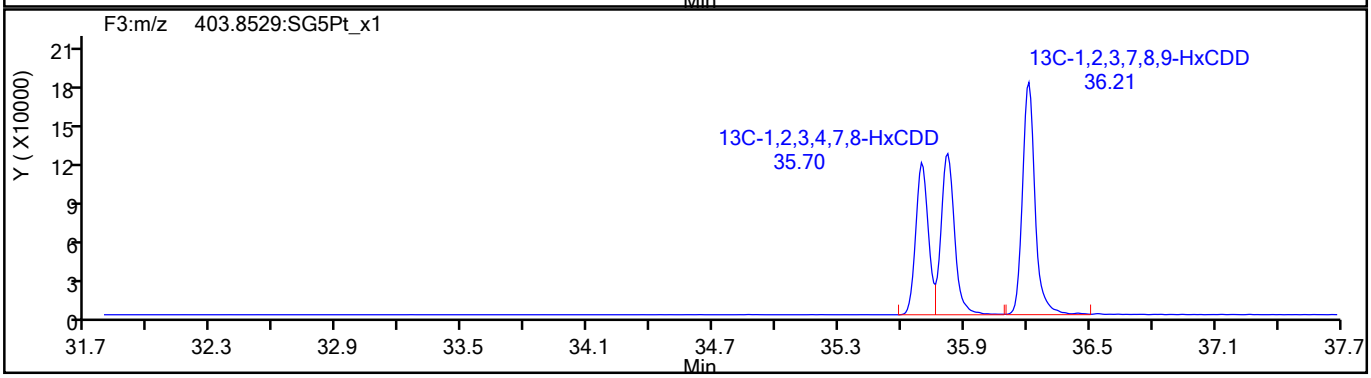

787256

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

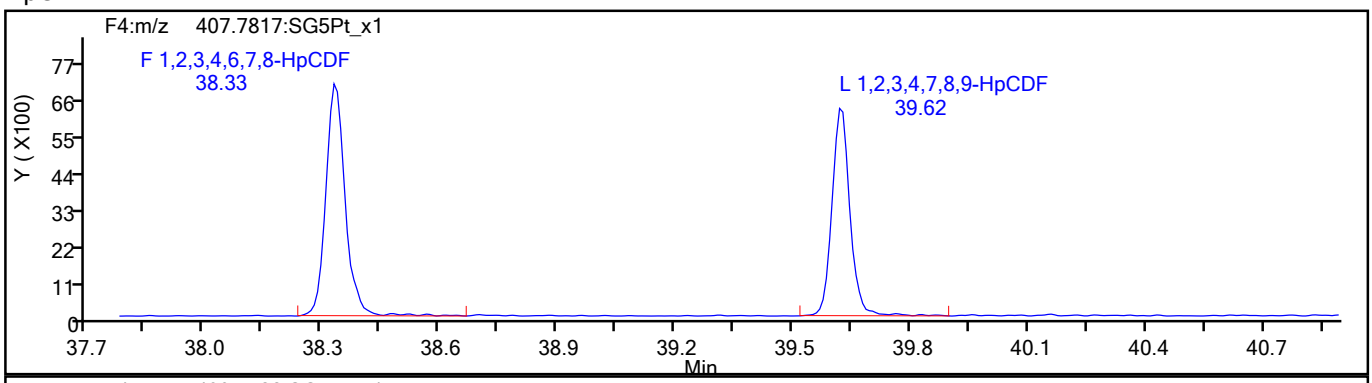

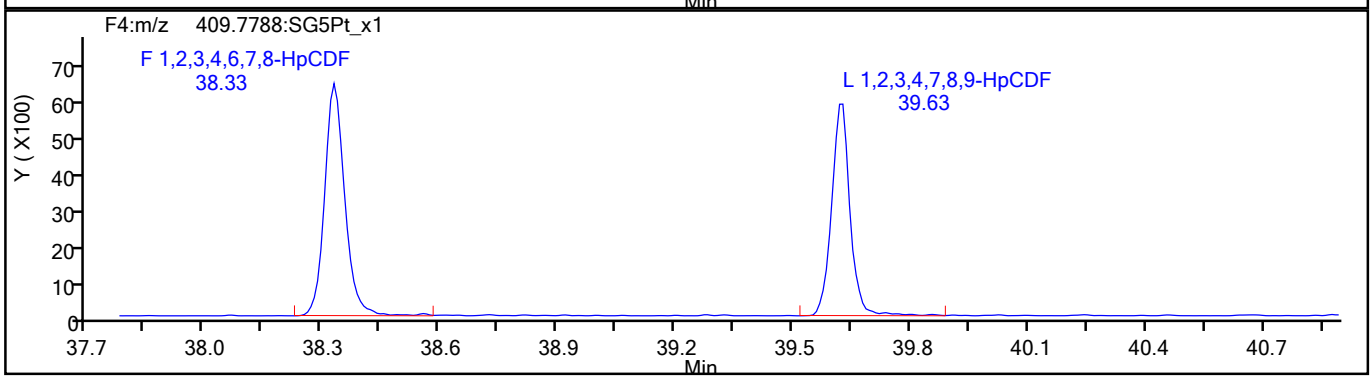

HpCDF Standards

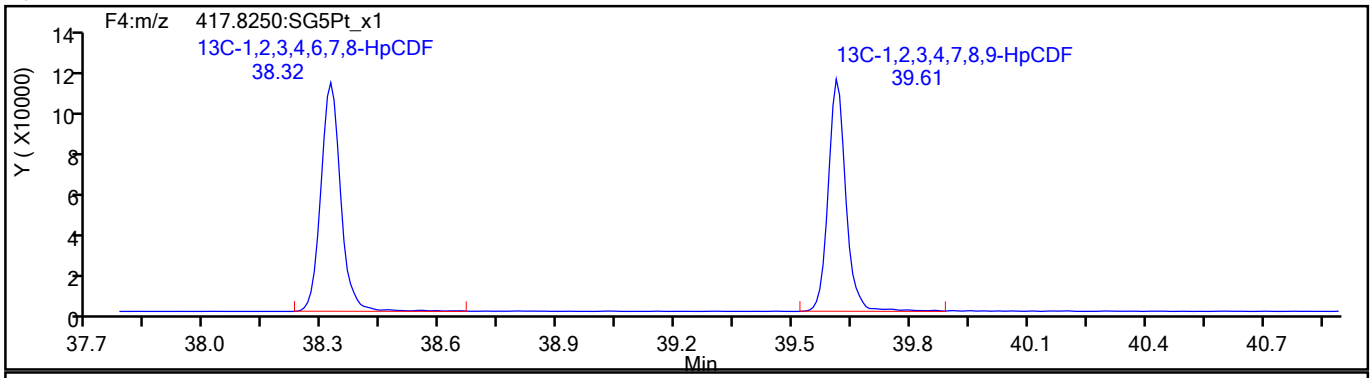

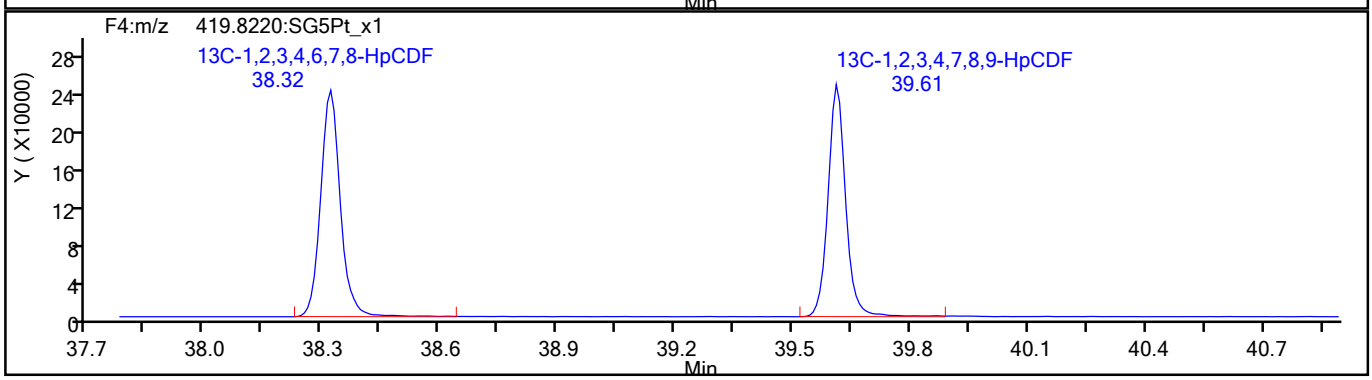

787257

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

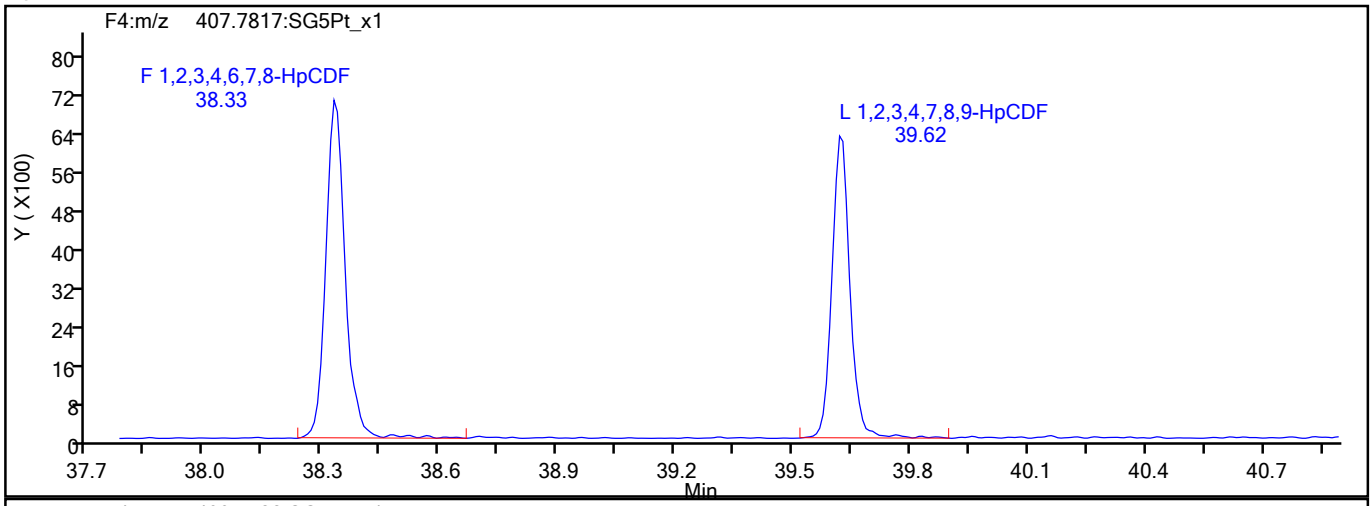

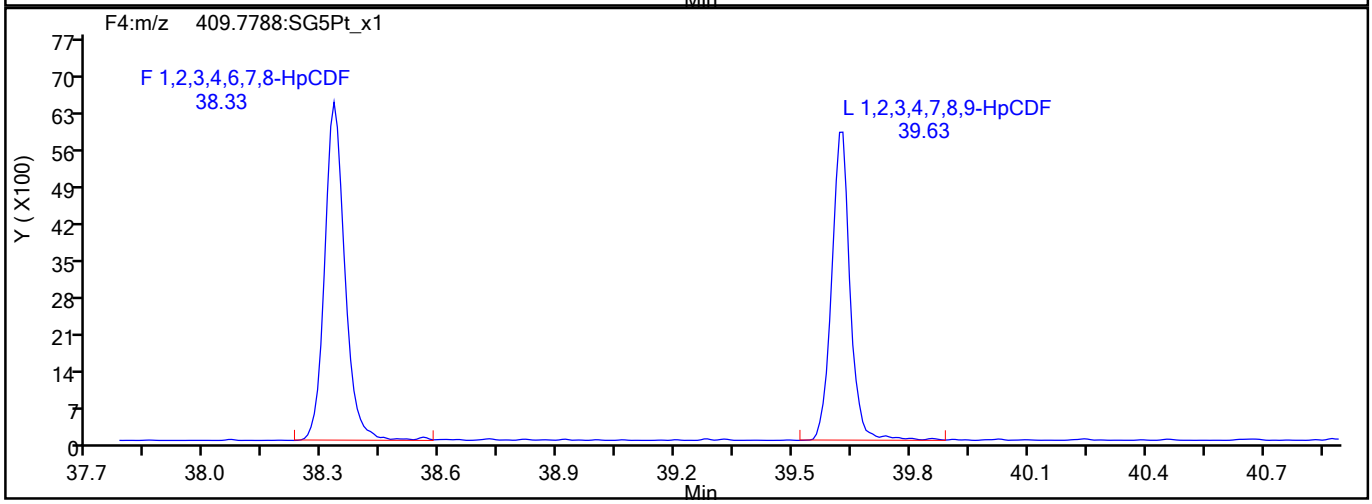

HpCDF Interference Mass

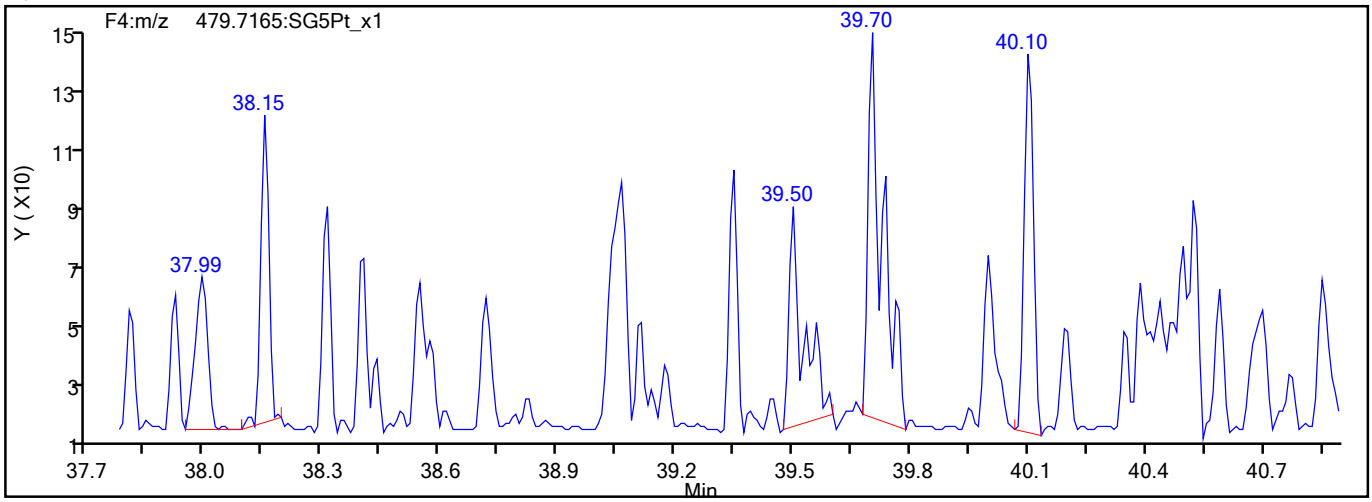

787258

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

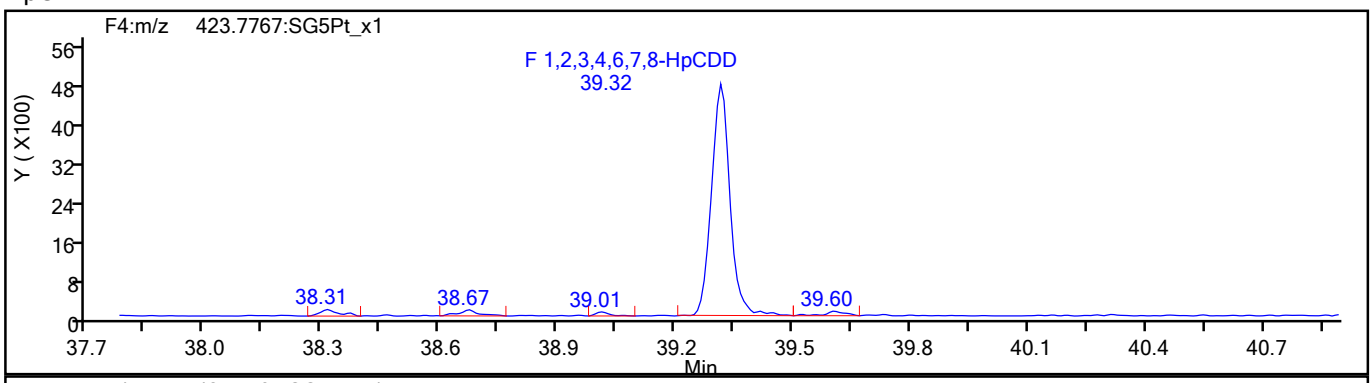

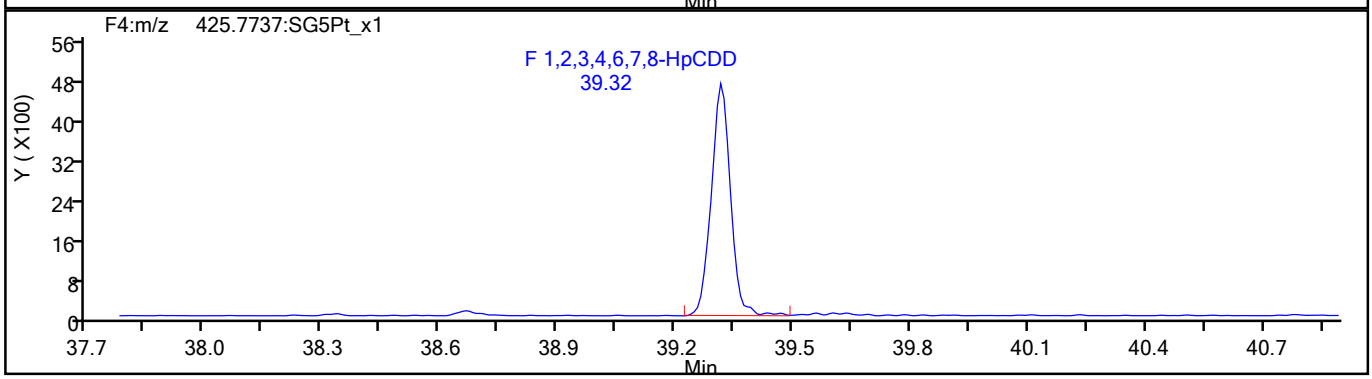

HpCDD Standards

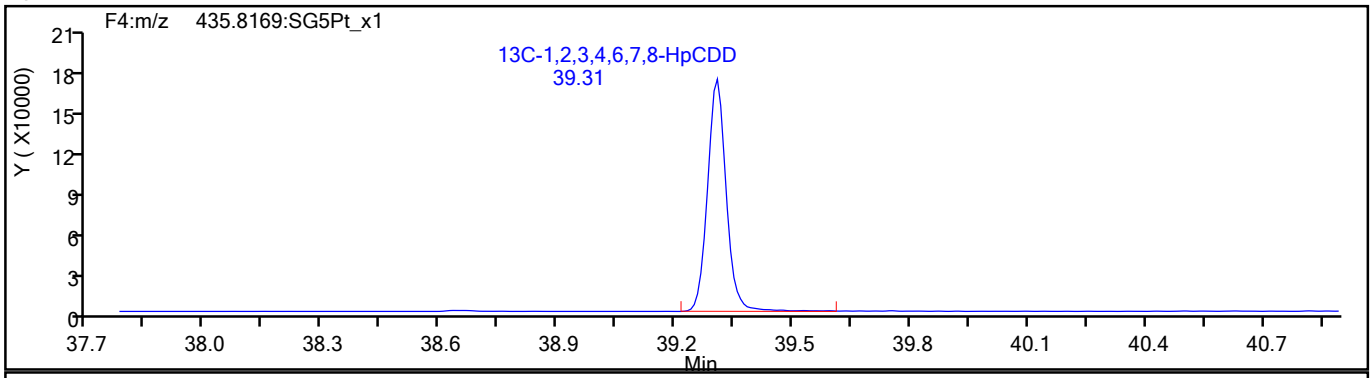

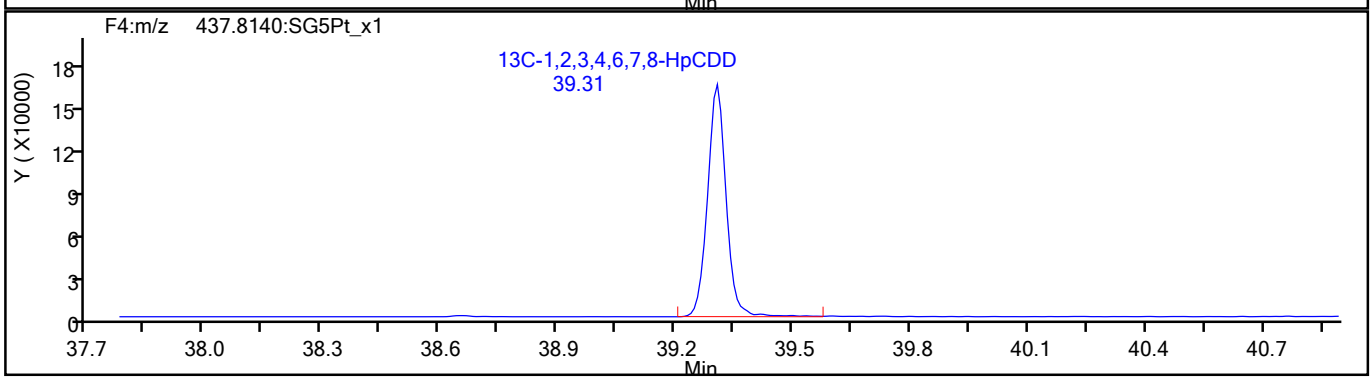

787259

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

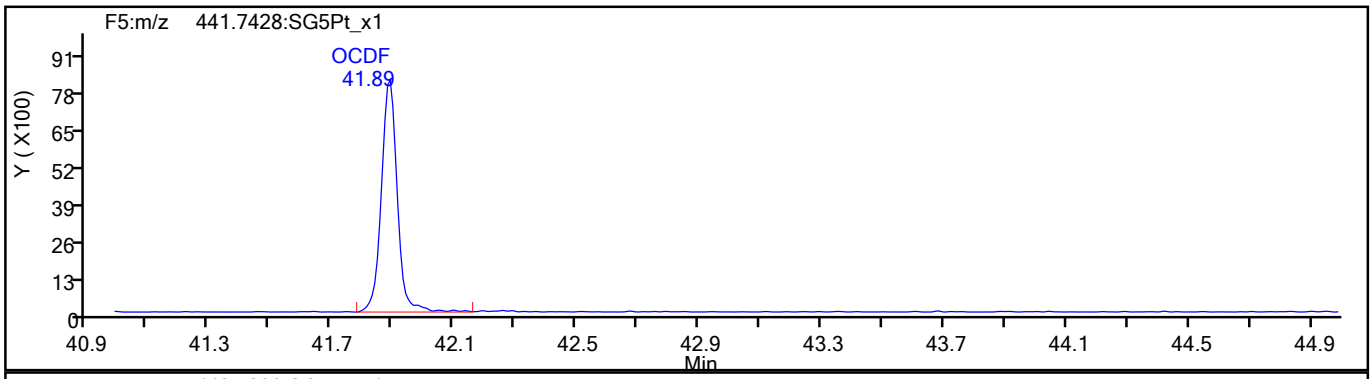

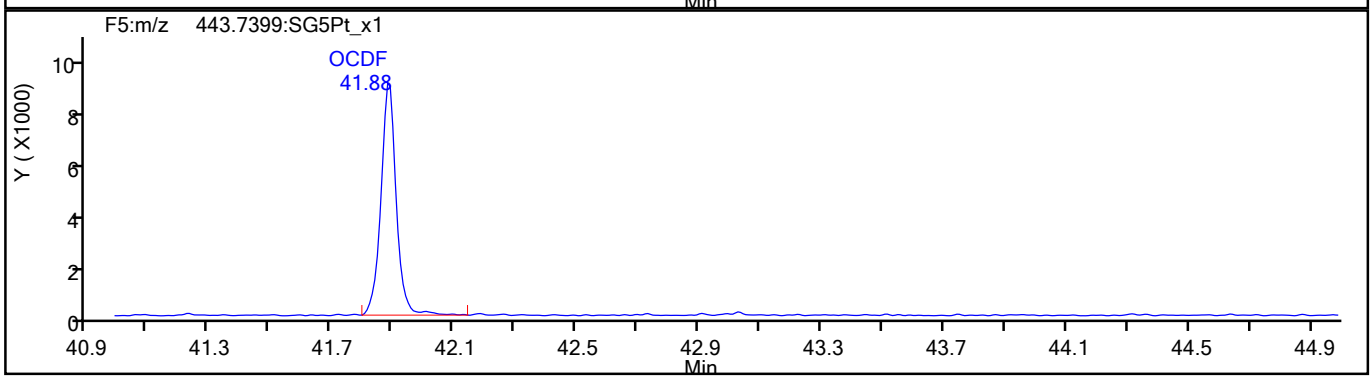

OCDF Standards

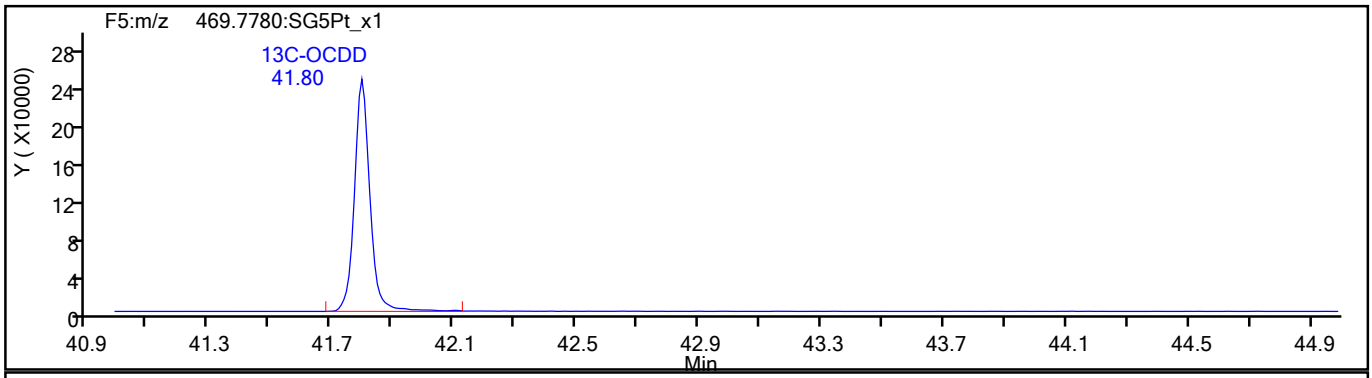

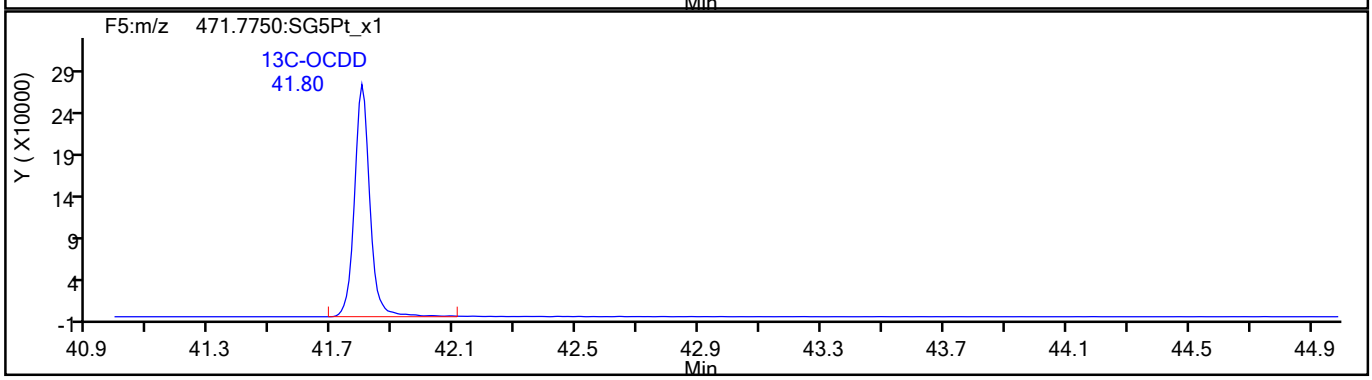

787260

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

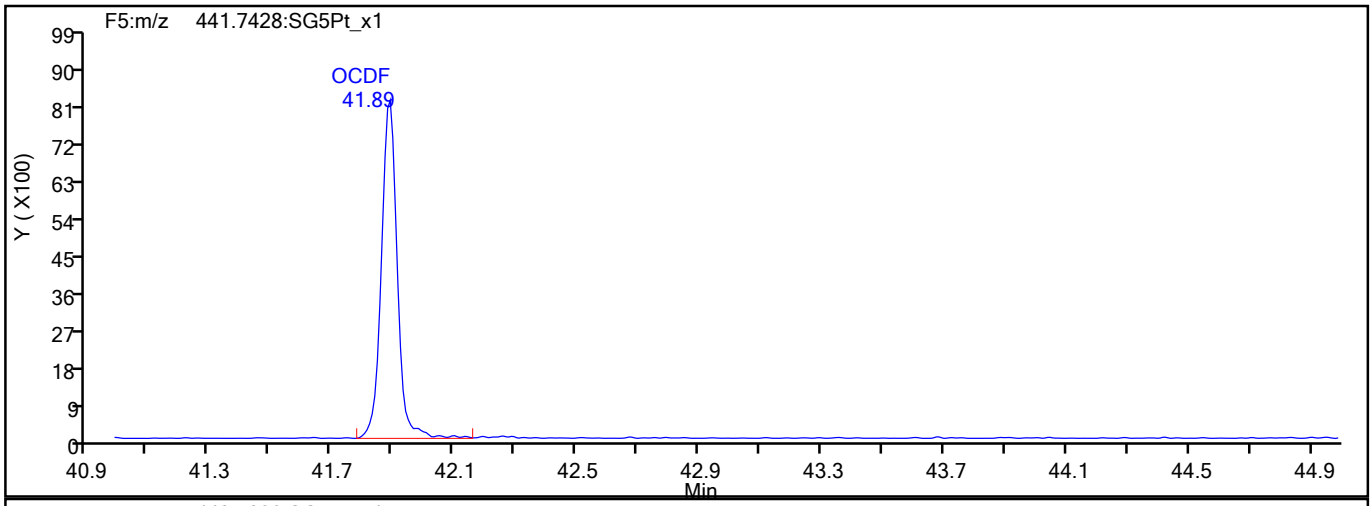

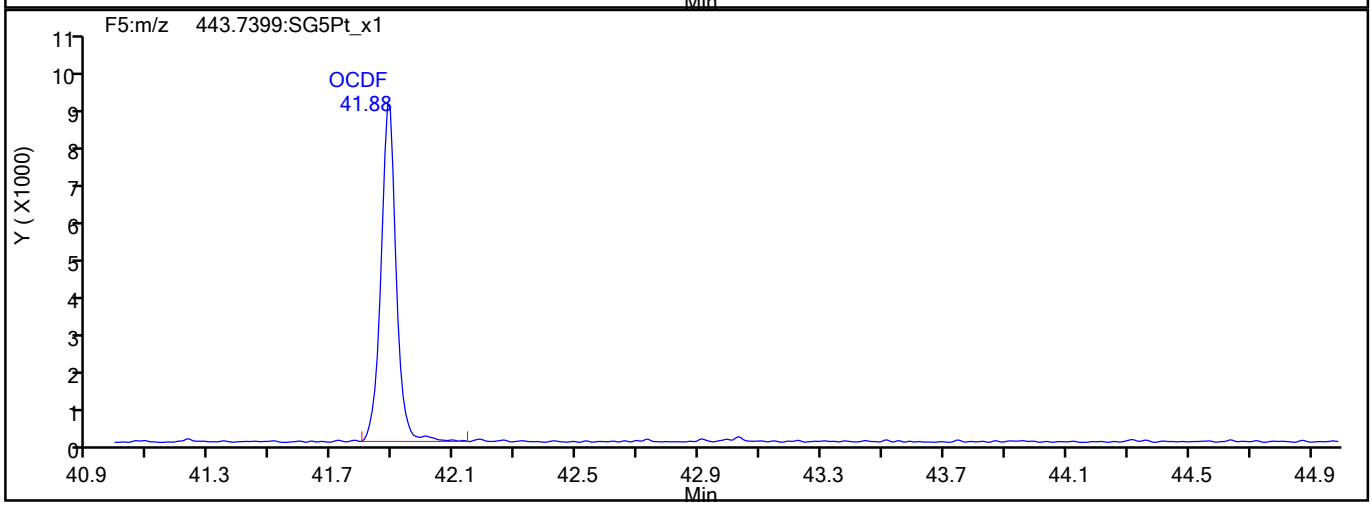

OCDF Interference Mass

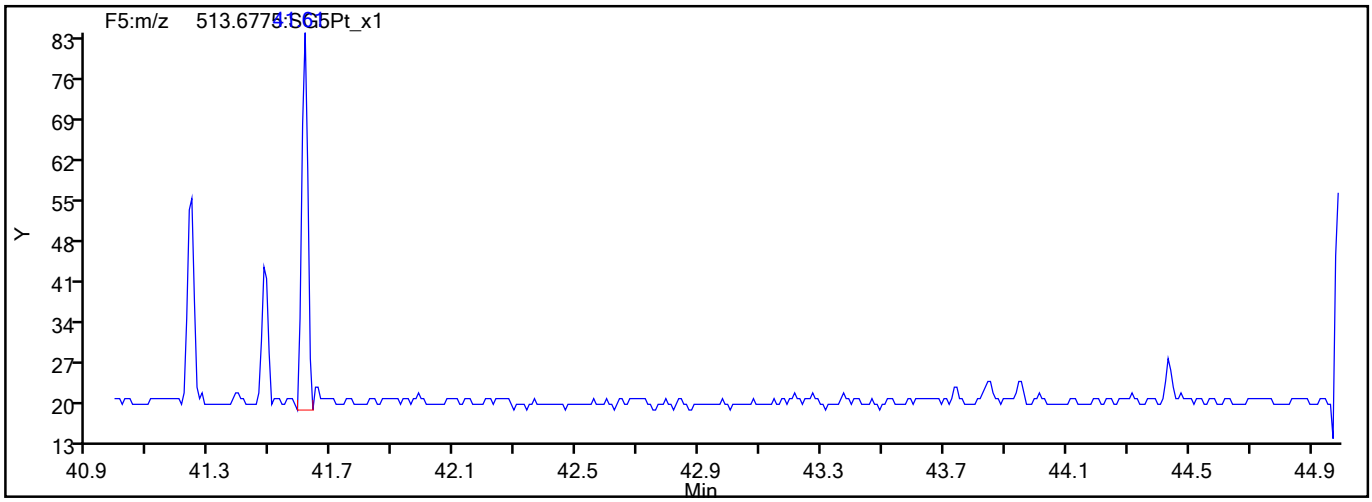

787261

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

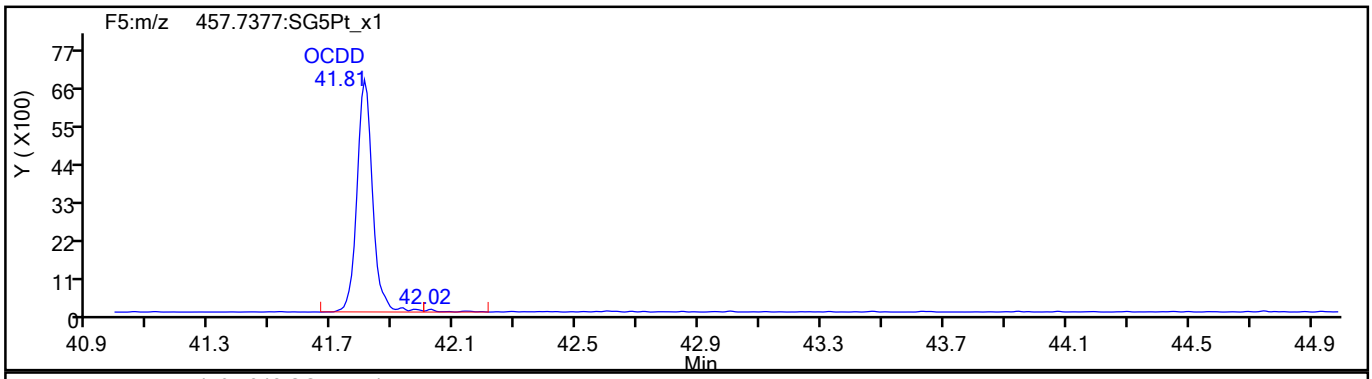

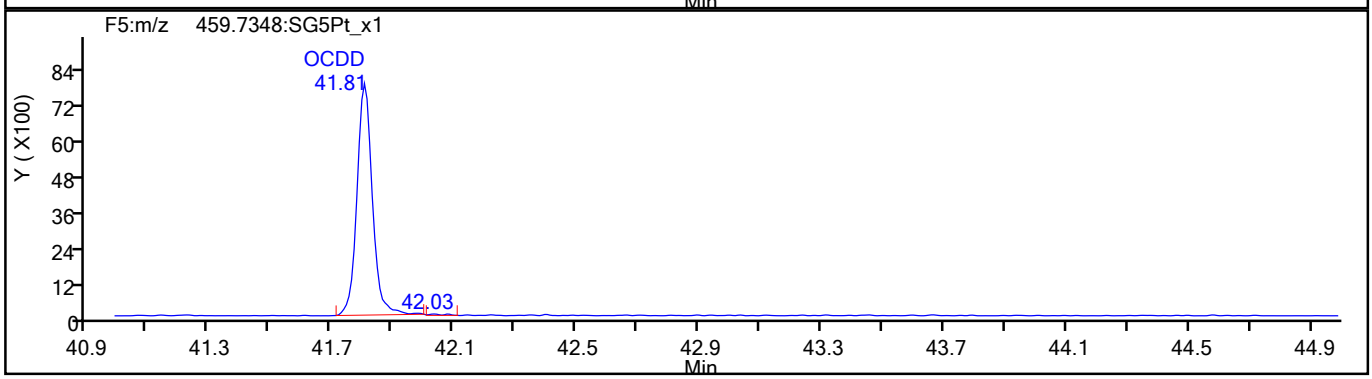

OCDD Standards

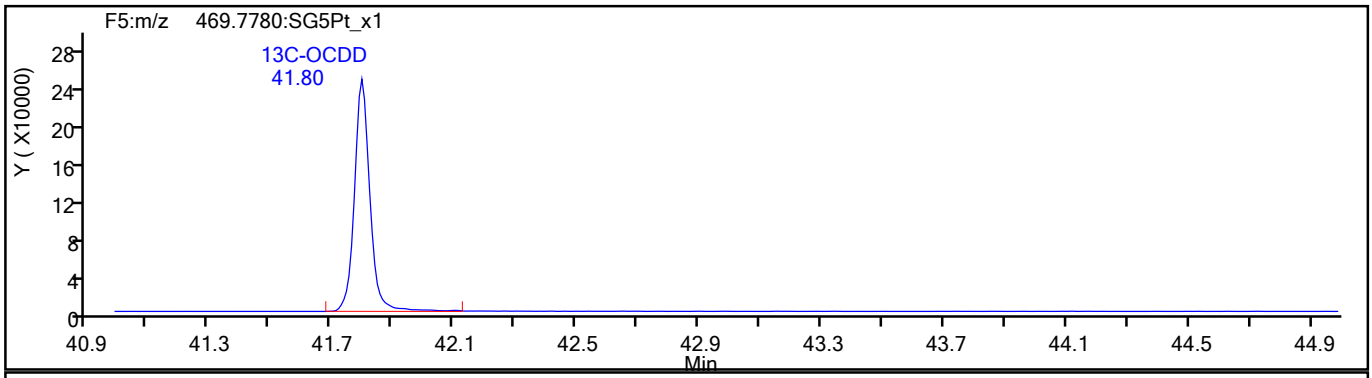

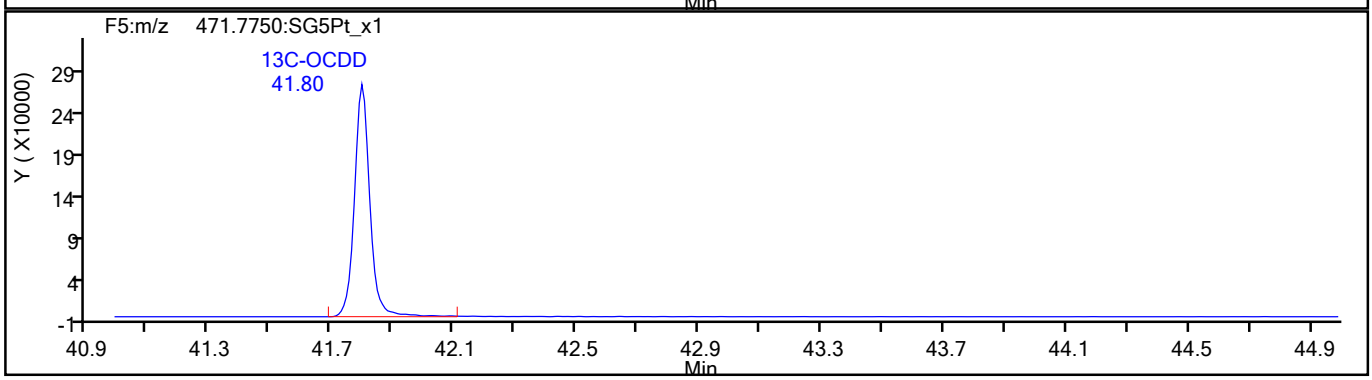

787262

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

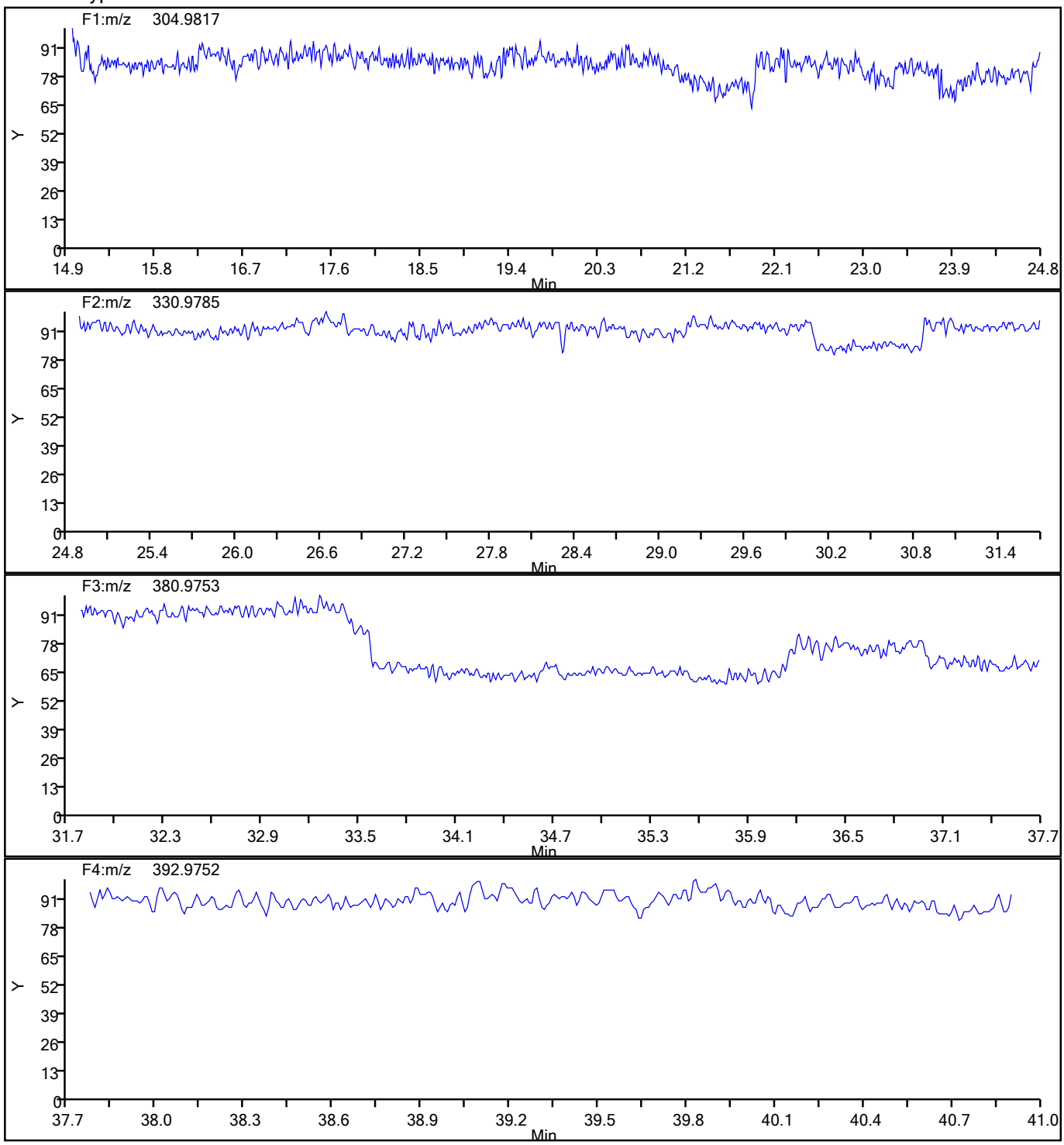

787263

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

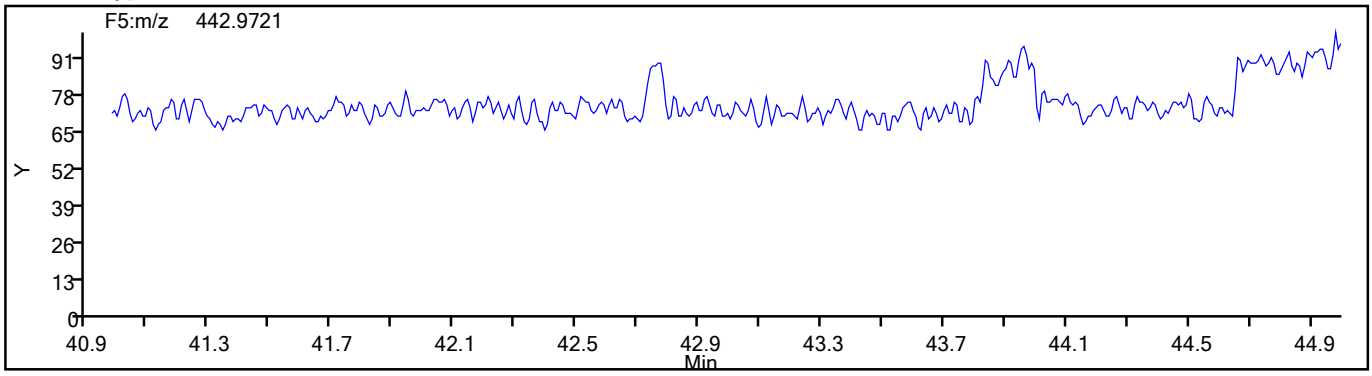

787264

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.534	2045939	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.606	2644389	0.79	1.3459	96.0	96.0	0.2067	0.2067	96.04	
2,3,7,8-TCDF	19.641	50956	0.80	1.0802	1.784	1.784	0.0111	0.0111	89.19	
S Total TCDF					1.784	1.784	0.0111	0.0111		
D 13C-2,3,7,8-TCDD	20.886	1829253	0.79	0.9317	96.0	96.0	0.1871	0.1871	95.97	
$ 37Cl4-2,3,7,8-TCDD	20.929	39241		1.0083	1.902	1.902	0.006151	0.006151	95.11	
2,3,7,8-TCDD	20.929	34971	0.82	1.0753	1.778	1.778	0.0298	0.0298	88.89	
S Total TCDD					1.778	1.778	0.0298	0.0298		
D 13C-1,2,3,7,8-PeCDF	26.541	2234847	1.61	1.1405	95.8	95.8	0.3208	0.3208	95.78	
1,2,3,7,8-PeCDF	26.566	210335	1.55	1.0543	8.927	8.927	0.0325	0.0325	89.27	
D 13C-2,3,4,7,8-PeCDF	27.991	2228025	1.61	1.1253	96.8	96.8	0.3252	0.3252	96.77	
2,3,4,7,8-PeCDF	28.016	200175	1.56	1.0079	8.914	8.914	0.0356	0.0356	89.14	
S Total PeCDF					17.8	17.8	0.0341	0.0341		
D 13C-1,2,3,7,8-PeCDD	28.784	1364144	1.60	0.7165	93.1	93.1	0.1177	0.1177	93.06	
1,2,3,7,8-PeCDD	28.809	129872	1.62	1.0465	9.097	9.097	0.0251	0.0251	90.97	
S Total PeCDD					9.097	9.097	0.0251	0.0251		
D 13C-1,2,3,4,7,8-HxCDF	34.367	1545033	0.52	0.9648	90.2	90.2	0.3810	0.3810	90.23	
1,2,3,4,7,8-HxCDF	34.384	155611	1.20	1.1474	8.778	8.778	0.0522	0.0522	87.78	
D 13C-1,2,3,6,7,8-HxCDF	34.544	1692336	0.52	1.0708	89.1	89.1	0.3433	0.3433	89.05	
1,2,3,6,7,8-HxCDF	34.569	185321	1.24	1.2178	8.992	8.992	0.0483	0.0483	89.92	
D 13C-2,3,4,6,7,8-HxCDF	35.429	1740015	0.54	1.0413	94.2	94.2	0.3530	0.3530	94.16	
2,3,4,6,7,8-HxCDF	35.446	191527	1.25	1.2145	9.063	9.063	0.0405	0.0405	90.63	
D 13C-1,2,3,7,8,9-HxCDF	36.374	1735785	0.52	0.9731	100.5	100.5	0.3778	0.3778	101	
1,2,3,7,8,9-HxCDF	36.390	195077	1.27	1.2401	9.062	9.062	0.0369	0.0369	90.62	
S Total HxCDF					35.9	35.9	0.0445	0.0445		
* 13C-1,2,3,7,8,9-HxCDD	36.180	1774694	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.665	1363103	1.28	0.7587	101.2	101.2	0.1971	0.1971	101	
1,2,3,4,7,8-HxCDD	35.682	132244	1.27	1.0608	9.146	9.146	0.0258	0.0258	91.46	
D 13C-1,2,3,6,7,8-HxCDD	35.792	1558668	1.27	0.8593	102.2	102.2	0.1740	0.1740	102	
1,2,3,6,7,8-HxCDD	35.809	138142	1.21	0.9933	8.922	8.922	0.0262	0.0262	89.22	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.196	139741	1.27	1.1094	8.622	8.622	0.0240	0.0240	86.22	
S Total HxCDD					26.7	26.7	0.0253	0.0253		
D 13C-1,2,3,4,6,7,8-HpCDF	38.291	1272526	0.47	0.7359	97.4	97.4	0.3733	0.3733	97.43	
1,2,3,4,6,7,8-HpCDF	38.308	164108	1.06	1.4421	8.943	8.943	0.0378	0.0378	89.43	
D 13C-1,2,3,4,7,8,9-HpCDF	39.589	1175351	0.46	0.6854	96.6	96.6	0.4008	0.4008	96.63	
1,2,3,4,7,8,9-HpCDF	39.598	138335	1.04	1.3092	8.990	8.990	0.0420	0.0420	89.90	
S Total HpCDF					17.9	17.9	0.0399	0.0399		
D 13C-1,2,3,4,6,7,8-HpCDD	39.286	1162117	1.05	0.6745	97.1	97.1	0.2422	0.2422	97.08	
1,2,3,4,6,7,8-HpCDD	39.294	110761	1.07	1.0503	9.075	9.075	0.0319	0.0319	90.75	
S Total HpCDD					9.075	9.075	0.0319	0.0319		
D 13C-OCDD	41.775	1833139	0.91	0.5446	189.7	189.7	0.2857	0.2857	94.83	
OCDF	41.868	217473	0.91	1.3168	18.0	18.0	0.0452	0.0452	90.09	
OCDD	41.784	182470	0.91	1.0620	18.7	18.7	0.0368	0.0368	93.73	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.534	20.547	-1		908781	140893	128	320	1101		
333.9338	20.542	20.547	0		1137158	181590	97	242	1872	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.606	19.616	-1	0.955	1167638	192853	232	580	831		
317.9389	19.615	19.616	0	0.955	1476751	240851	127	317	1896	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.641	19.646	0	1.002	22722	3787	5	12	757		
305.8987	19.632	19.646	-1	1.001	28234	4422	16	40	276	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.886	20.910	-1	1.017	809102	120100	128	320	938		
333.9338	20.895	20.910	-1	1.018	1020151	151021	97	242	1557	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.929	20.935	0	1.019	39241	6110	8	20	764		
2,3,7,8-TCDD											
319.8965	20.929	20.939	-1	1.002	15743	2433	27	67	90		
321.8936	20.929	20.939	-1	1.002	19228	3031	8	20	379	0.82(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.541	26.560	-1	1.293	1380136	237735	280	700	849		
353.8970	26.549	26.560	-1	1.293	854711	147619	192	480	769	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.566	26.584	-1	1.001	127910	22847	25	62	914		
341.8567	26.566	26.584	-1	1.001	82425	14553	28	70	520	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	27.991	28.014	-1	1.363	1373543	227507	280	700	813		
353.8970	27.991	28.014	-1	1.363	854482	140253	192	480	730	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.016	28.039	-1	1.001	121955	19987	25	62	799		
341.8567	28.016	28.039	-1	1.001	78220	12878	28	70	460	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.784	28.801	-1	1.402	839338	134094	55	137	2438		
369.8919	28.775	28.801	-2	1.401	524806	82953	54	135	1536	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.809	28.828	-1	1.001	80255	12276	18	45	682		
357.8516	28.809	28.828	-1	1.001	49617	7332	5	12	1466	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.367	34.384	-1	0.950	530041	107506	195	487	551		
385.8610	34.367	34.384	-1	0.950	1014992	209541	410	1025	511	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.384	34.405	-1	1.000	84954	17499	46	115	380		
375.8178	34.384	34.405	-1	1.000	70657	14926	30	75	498	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.544	34.562	-1	0.955	582468	111482	195	487	572		
385.8610	34.544	34.562	-1	0.955	1109868	211659	410	1025	516	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.569	34.582	-1	1.001	102510	19443	46	115	423		
375.8178	34.561	34.582	-1	1.000	82811	15785	30	75	526	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.429	35.444	-1	0.979	608469	136128	195	487	698		
385.8610	35.429	35.444	-1	0.979	1131546	250431	410	1025	611	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.446	35.461	-1	1.000	106373	23069	46	115	502		
375.8178	35.446	35.461	-1	1.000	85154	19256	30	75	642	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.374	36.388	-1	1.005	597532	142559	195	487	731		
385.8610	36.374	36.388	-1	1.005	1138253	273050	410	1025	666	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.390	36.402	-1	1.000	109103	26446	46	115	575		
375.8178	36.390	36.402	-1	1.000	85974	20436	30	75	681	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.180	36.192	-1		992912	228100	138	345	1653		
403.8529	36.180	36.192	-1		781782	183211	108	270	1696	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.665	35.680	-1	0.986	765726	187664	138	345	1360		
403.8529	35.665	35.680	-1	0.986	597377	148078	108	270	1371	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.682	35.695	-1	1.000	73908	17289	18	45	961		
391.8127	35.682	35.695	-1	1.000	58336	14382	19	47	757	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.792	35.805	-1	0.989	870562	199612	138	345	1446		
403.8529	35.792	35.805	-1	0.989	688106	154356	108	270	1429	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.809	35.820	-1	1.000	75558	17193	18	45	955		
391.8127	35.809	35.820	-1	1.000	62584	14006	19	47	737	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.196	36.208	-1	1.015	78157	18353	18	45	1020		
391.8127	36.196	36.208	-1	1.015	61584	14405	19	47	758	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.291	38.305	-1	1.058	404086	116332	150	375	776		
419.8220	38.291	38.305	-1	1.058	868440	254106	302	755	841	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.308	38.317	-1	1.000	84325	24268	44	110	552		
409.7788	38.299	38.317	-1	1.000	79783	22737	37	92	615	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.589	39.600	-1	1.094	368476	114509	150	375	763		
419.8220	39.589	39.600	-1	1.094	806875	252758	302	755	837	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	70636	21558	44	110	490		
409.7788	39.598	39.608	-1	1.000	67699	21216	37	92	573	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.286	39.293	0	1.086	594894	185269	137	342	1352		
437.8140	39.286	39.293	0	1.086	567223	172933	132	330	1310	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.294	39.301	0	1.000	57275	17734	30	75	591		
425.7737	39.294	39.301	0	1.000	53486	17016	18	45	945	1.07(0.88-1.20)	
13C-OCDD											
469.7780	41.775	41.785	-1	1.155	873143	243136	128	320	1900		
471.7750	41.775	41.785	-1	1.155	959996	268180	128	320	2095	0.91(0.76-1.02)	
OCDF											
441.7428	41.868	41.875	0	1.002	103359	30074	20	50	1504		
443.7399	41.859	41.875	-1	1.002	114114	32506	41	102	793	0.91(0.76-1.02)	
OCDD											
457.7377	41.784	41.794	-1	1.000	86745	24118	17	42	1419		
459.7348	41.784	41.794	-1	1.000	95725	27065	23	57	1177	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

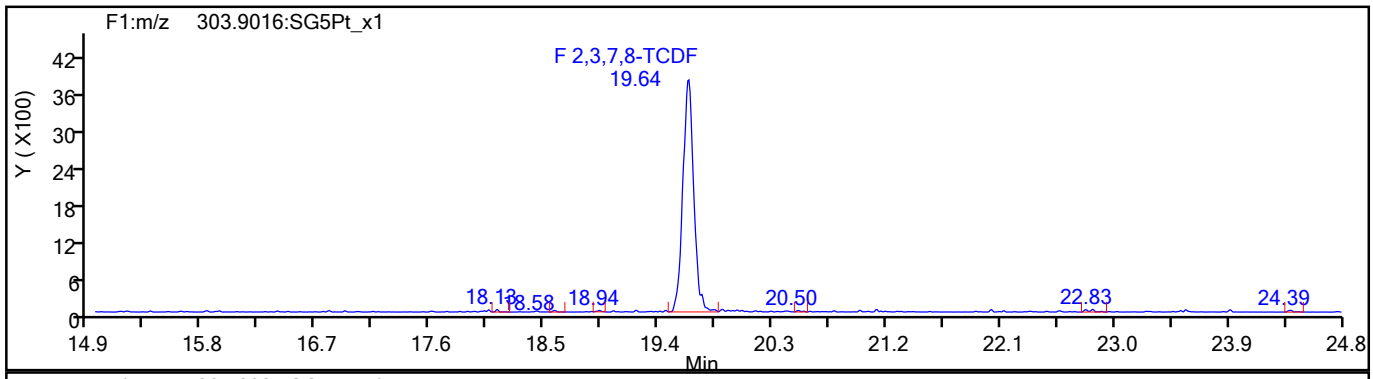

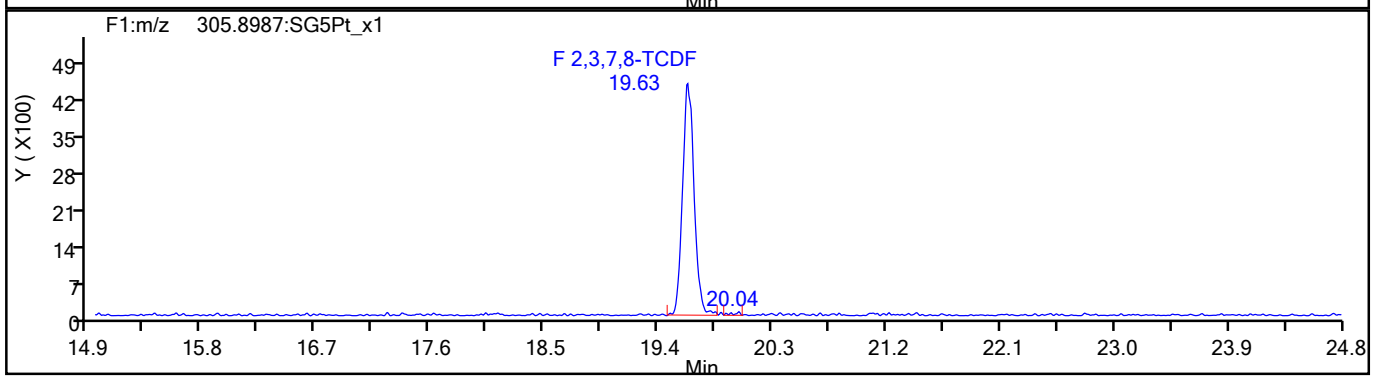

TCDF Standards

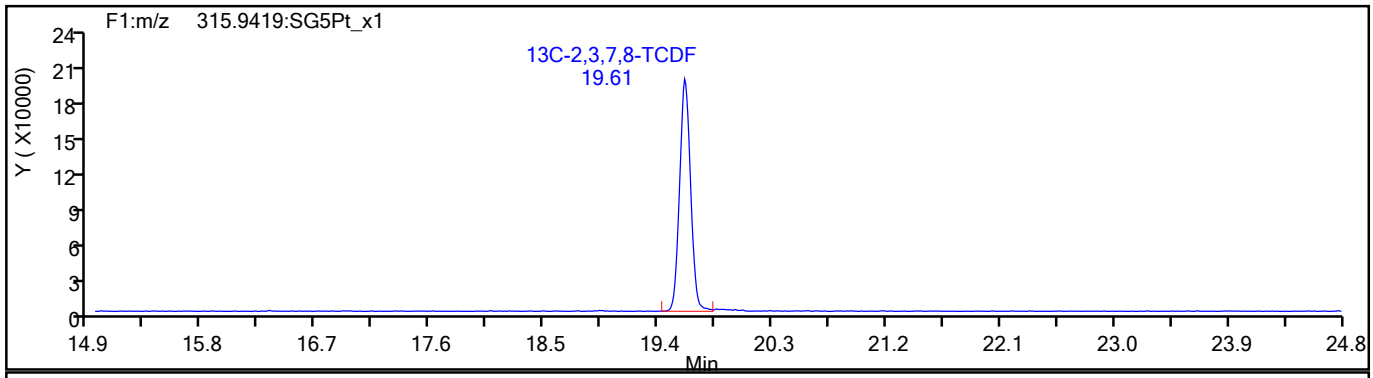

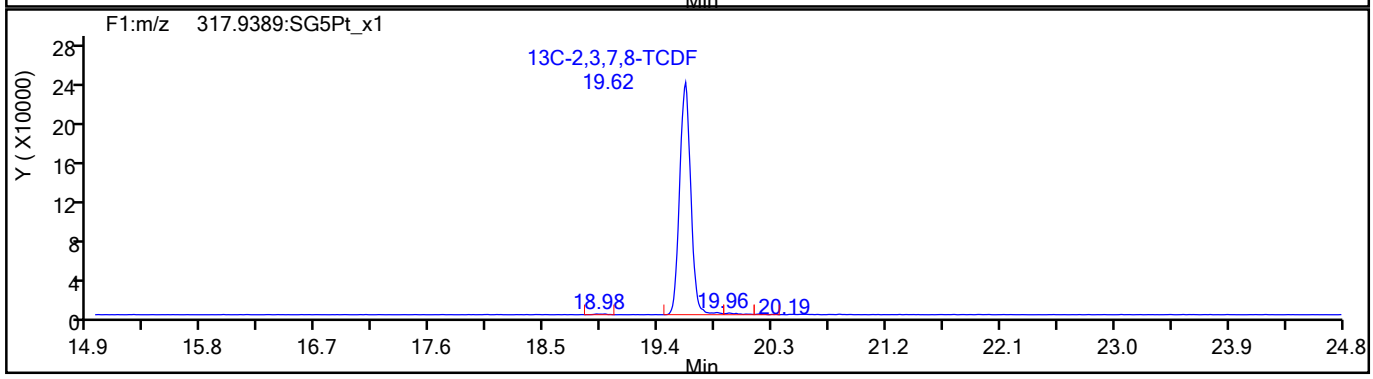

787270

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

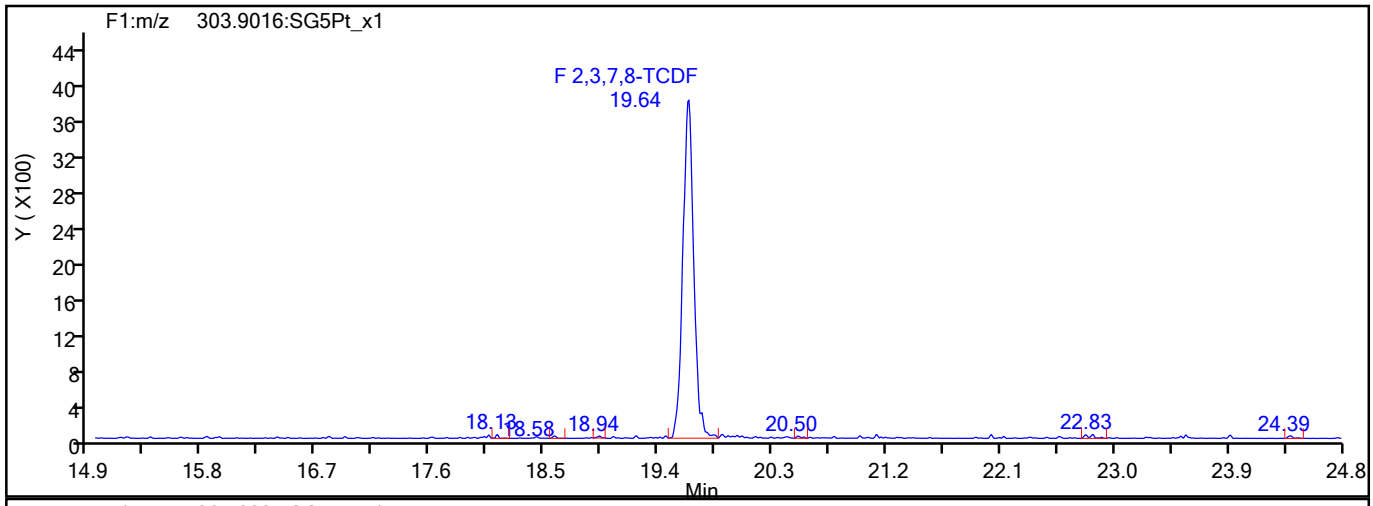

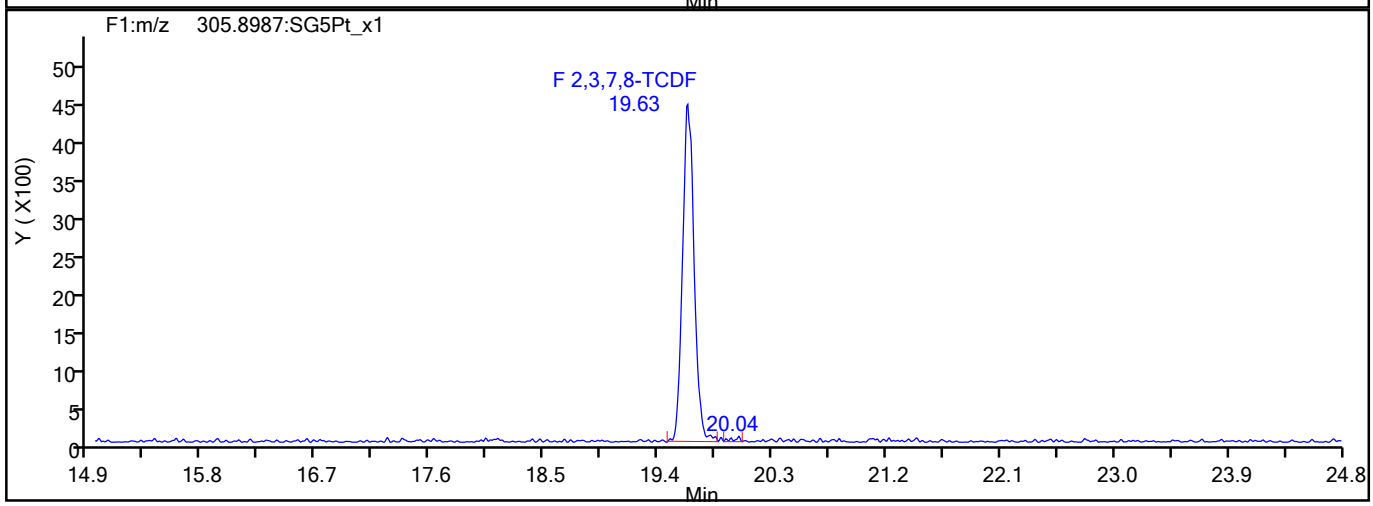

TCDF Interference Mass

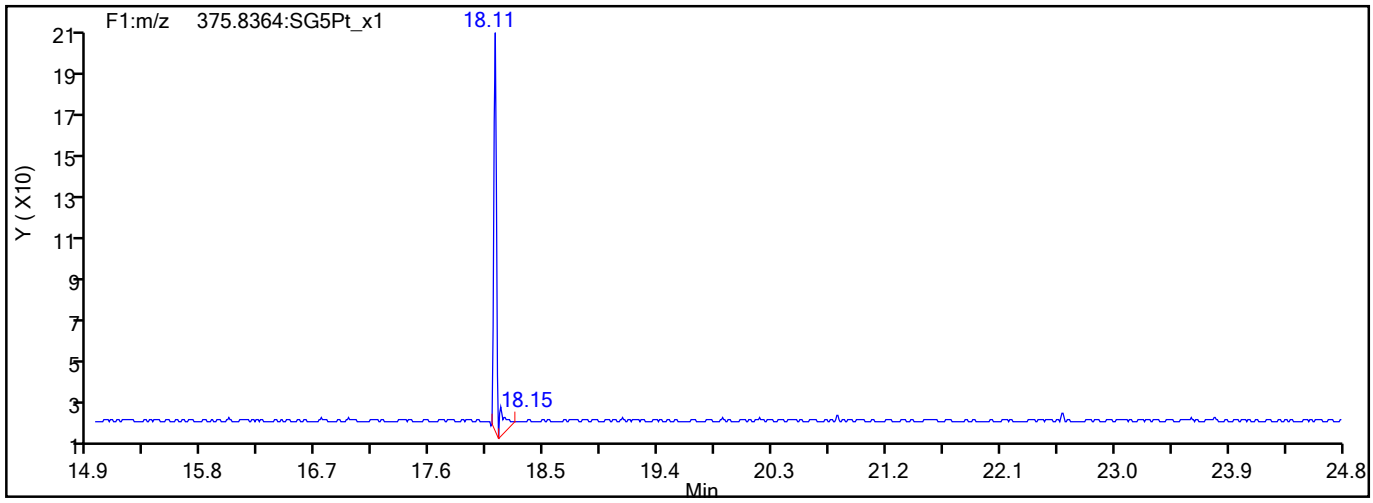

787271

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

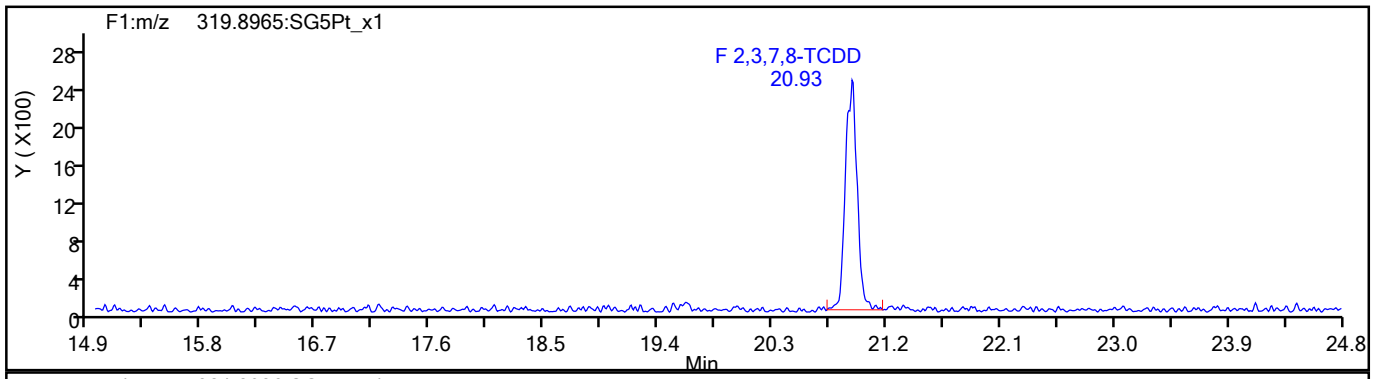

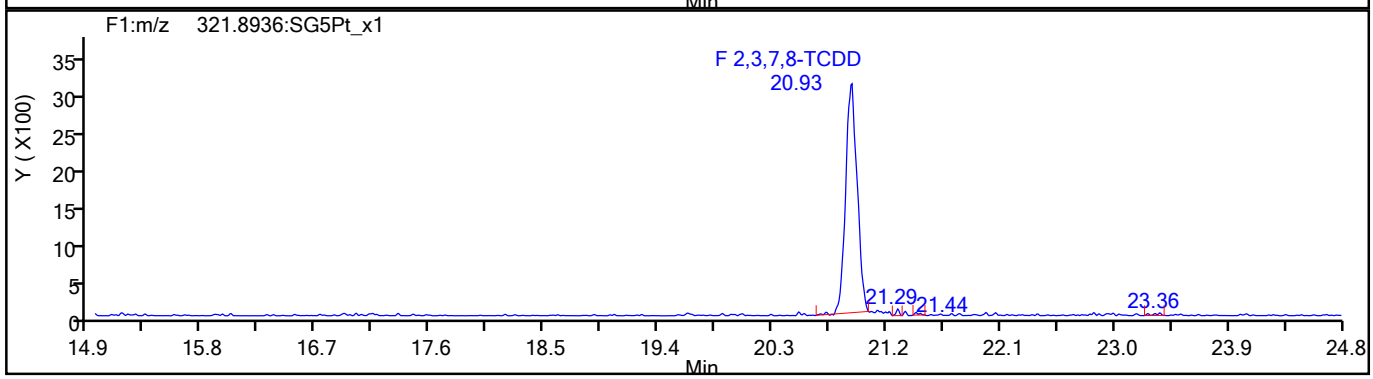

TCDD Standards

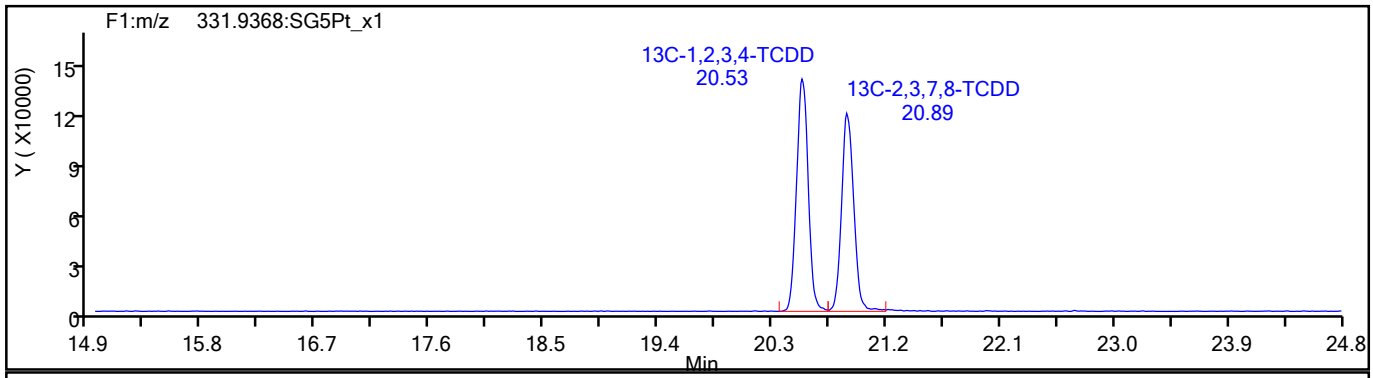

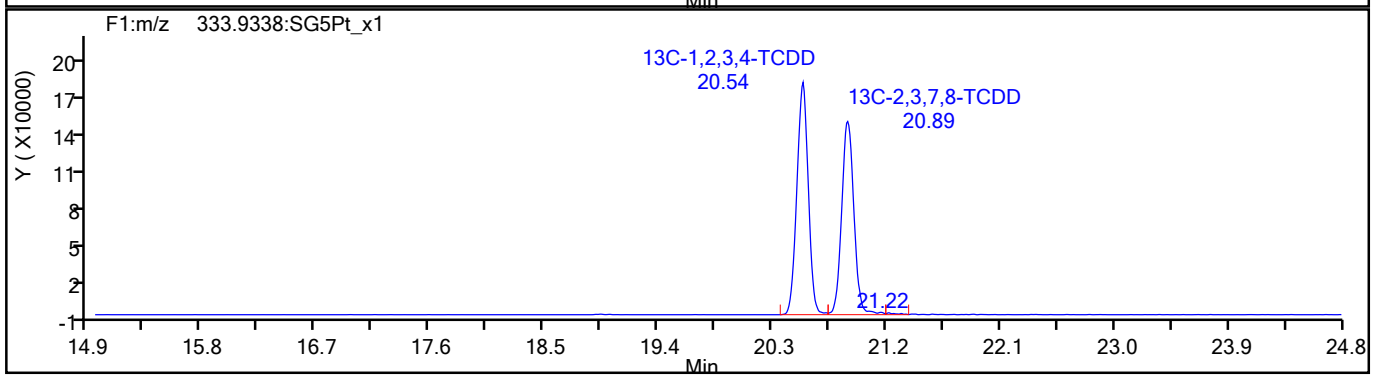

787272

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

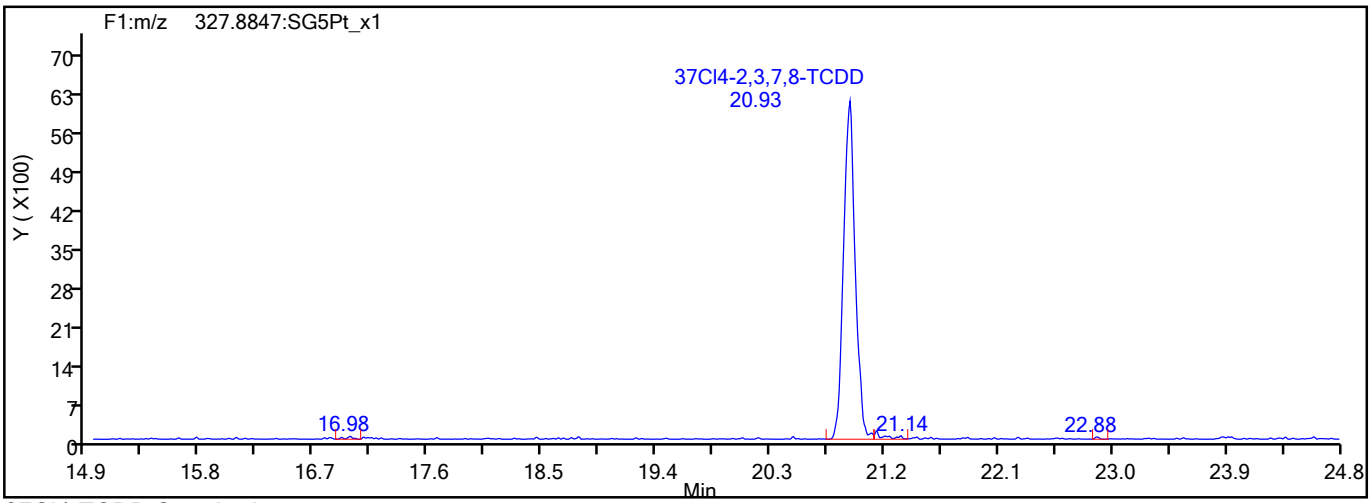

37Cl4-TCDD Standards

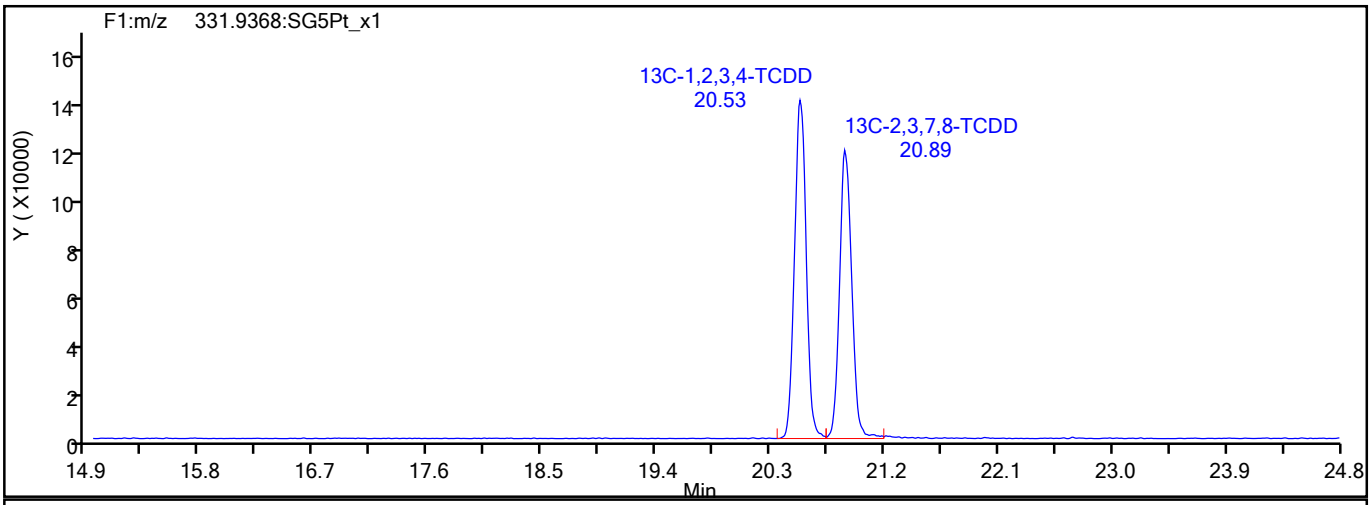

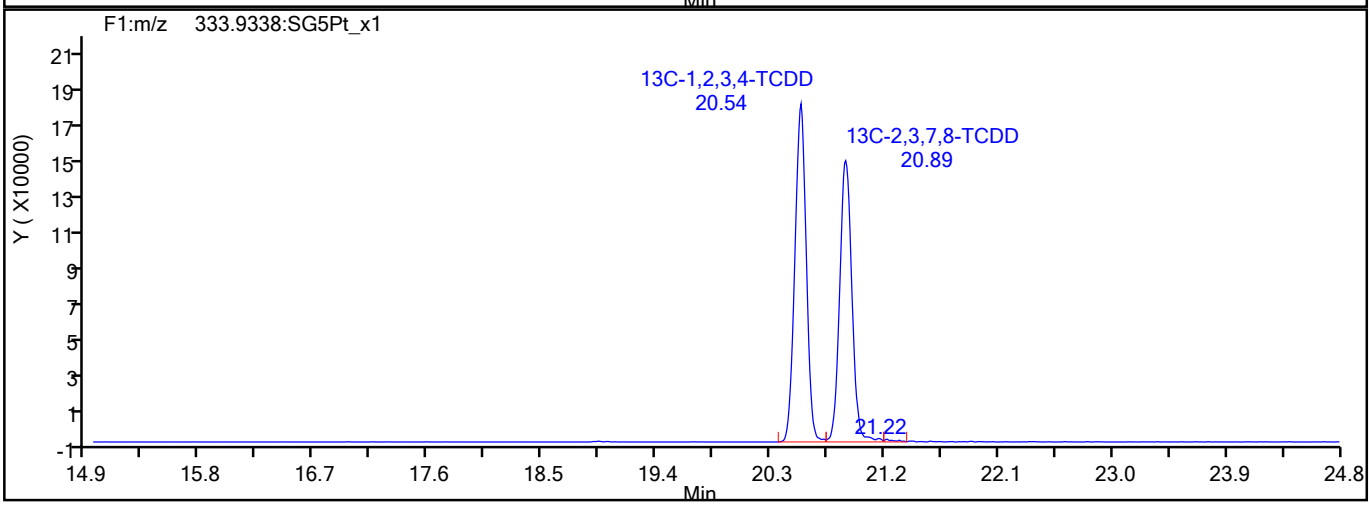

787273

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

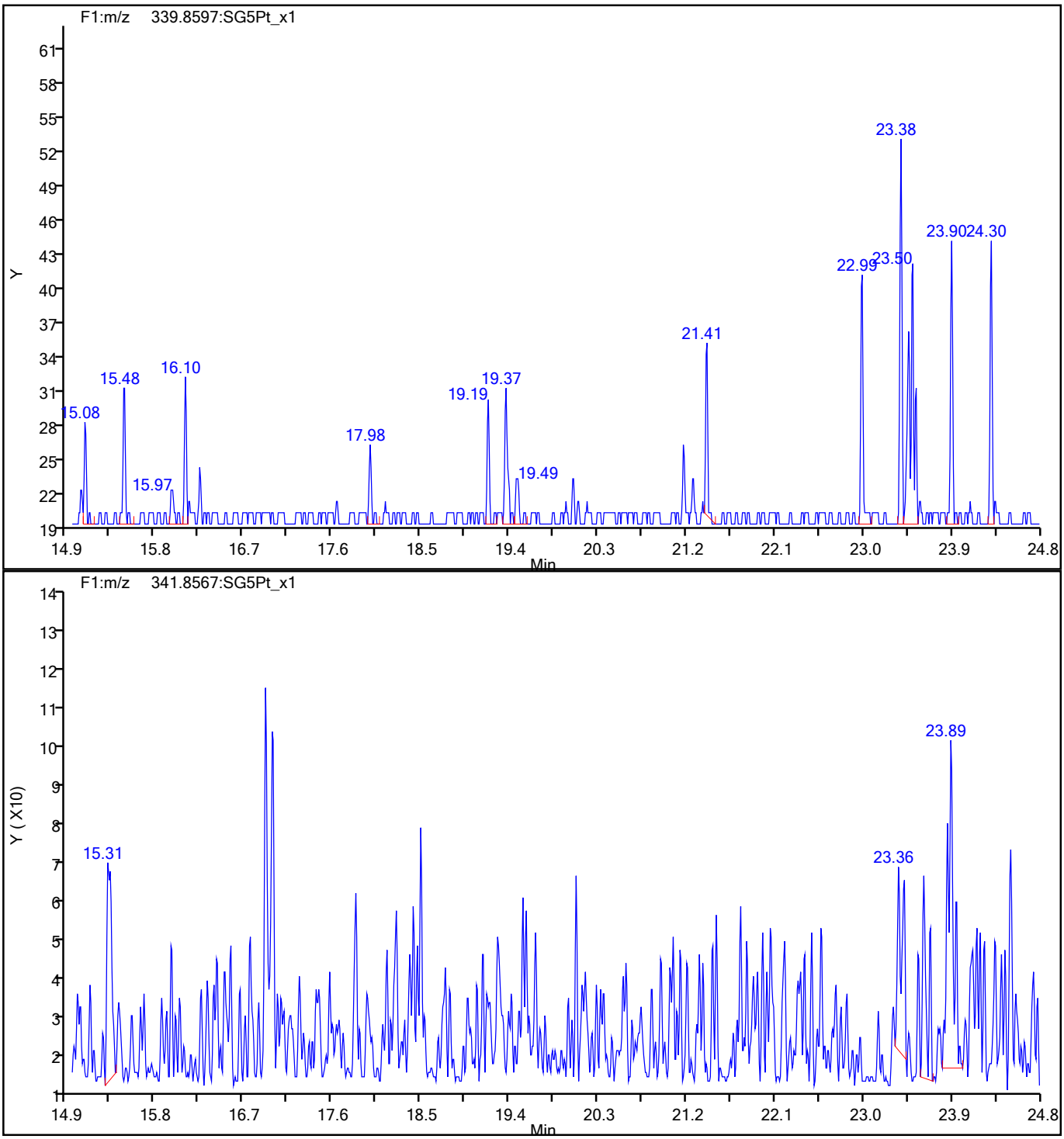

787274

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

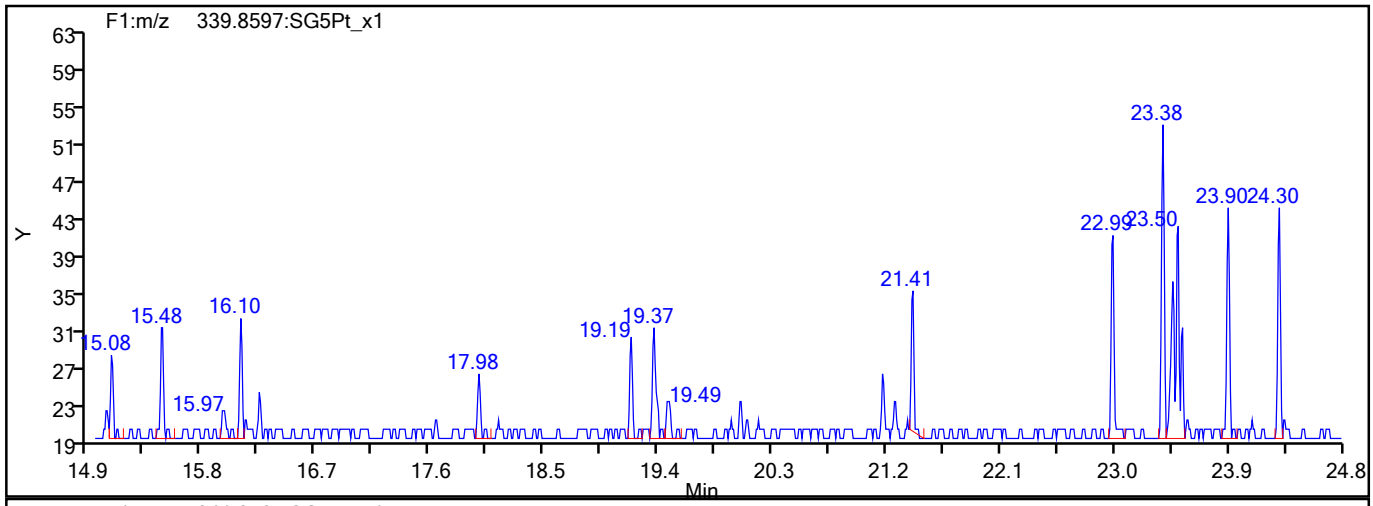

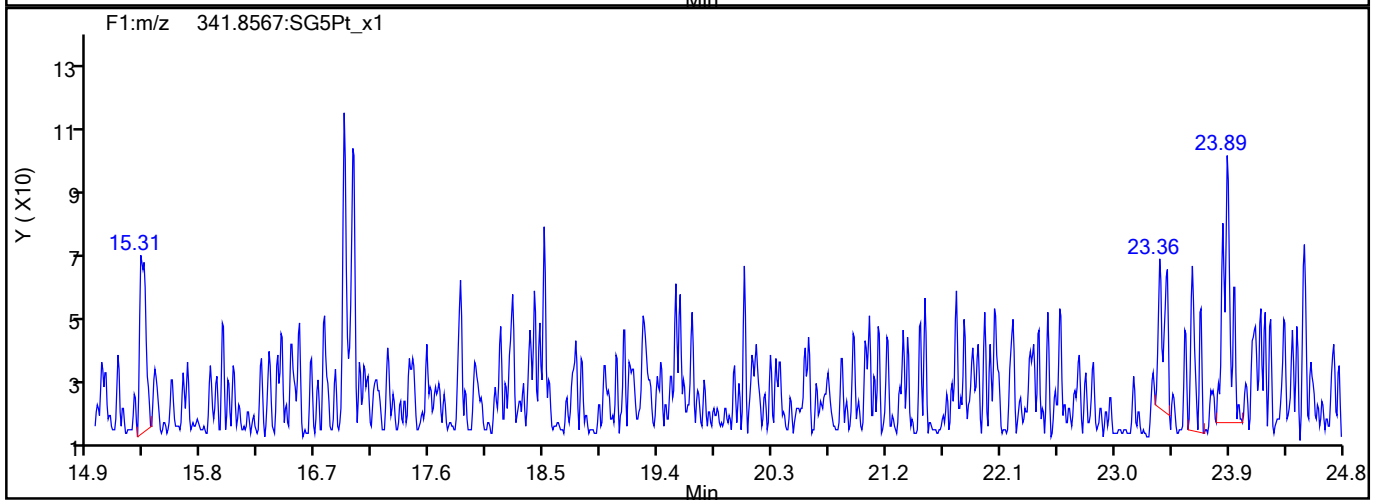

F1 PeCDFs Interference Mass

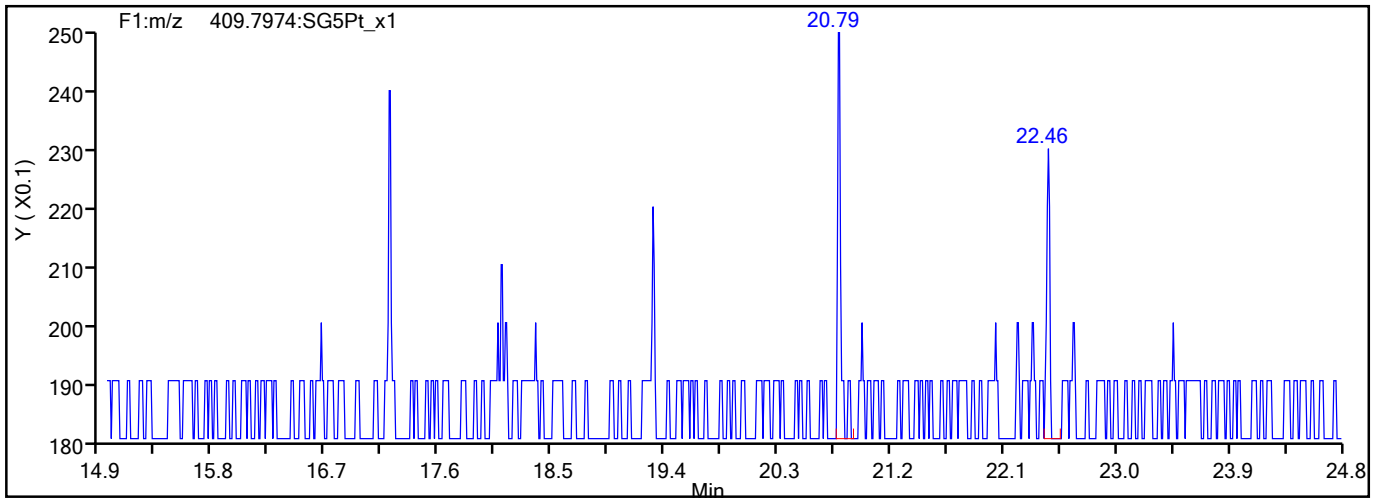

787275

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

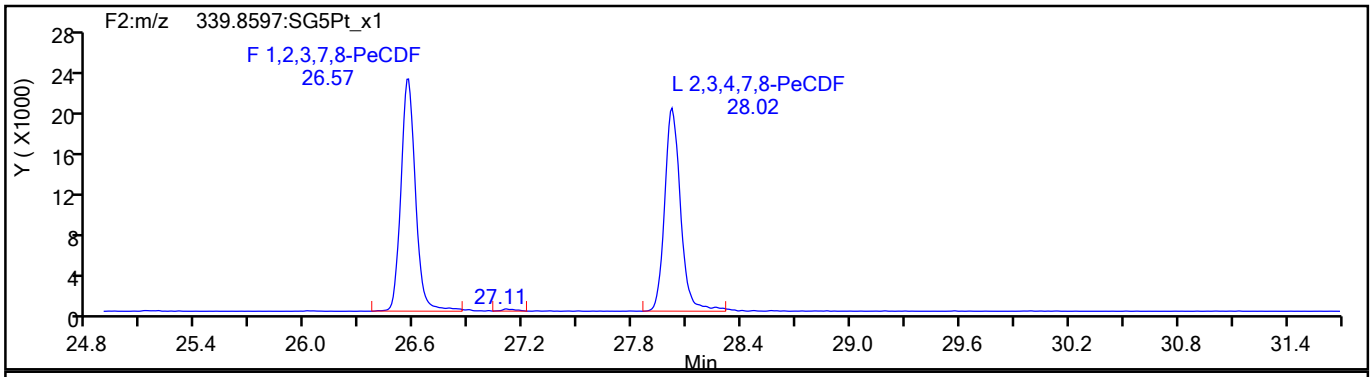

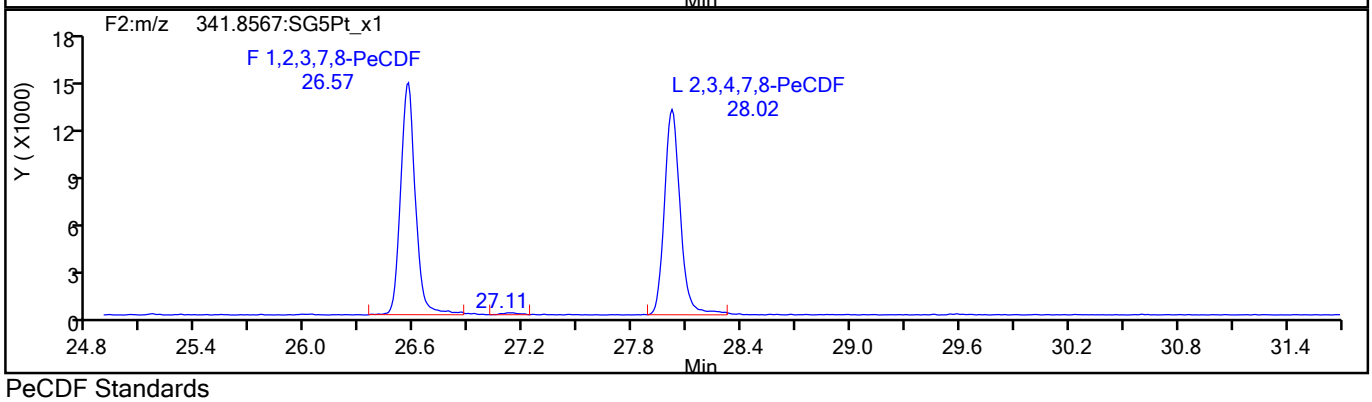

PeCDF Standards

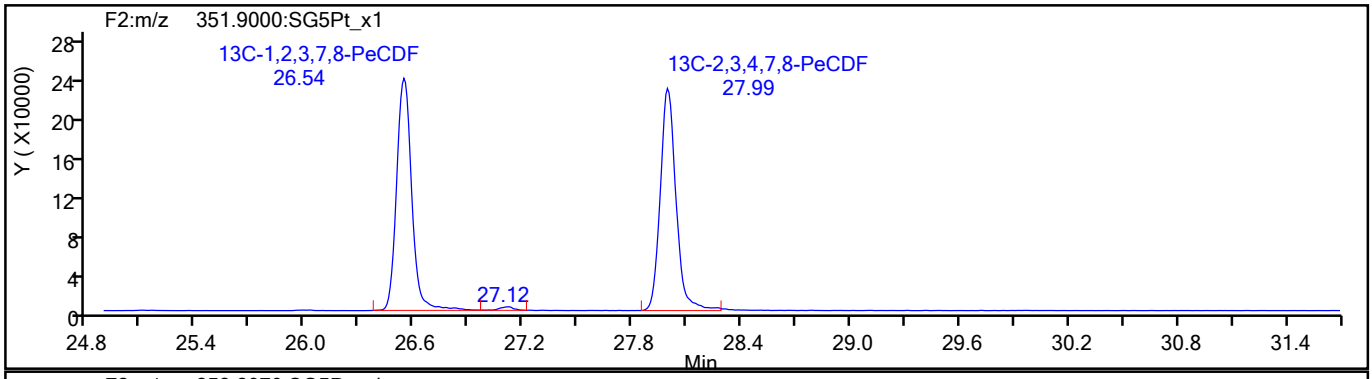

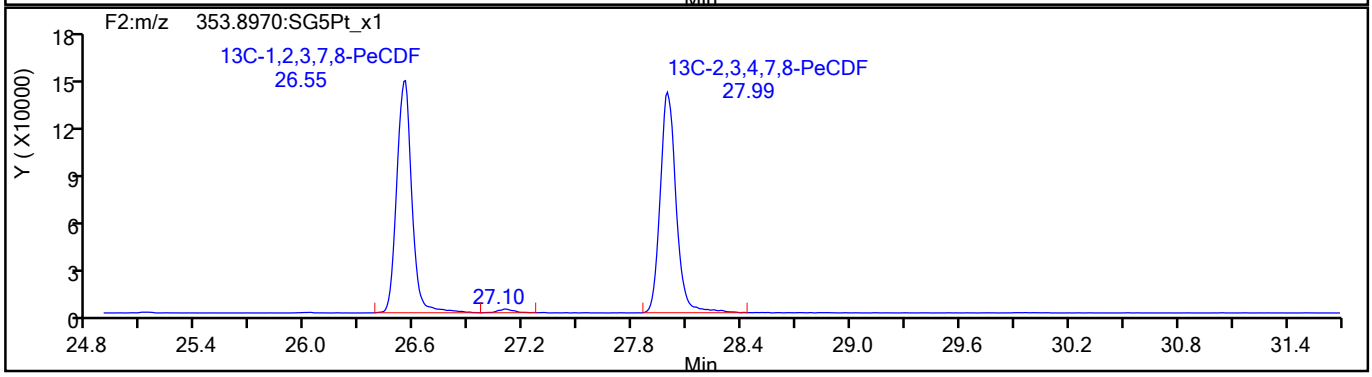

787276

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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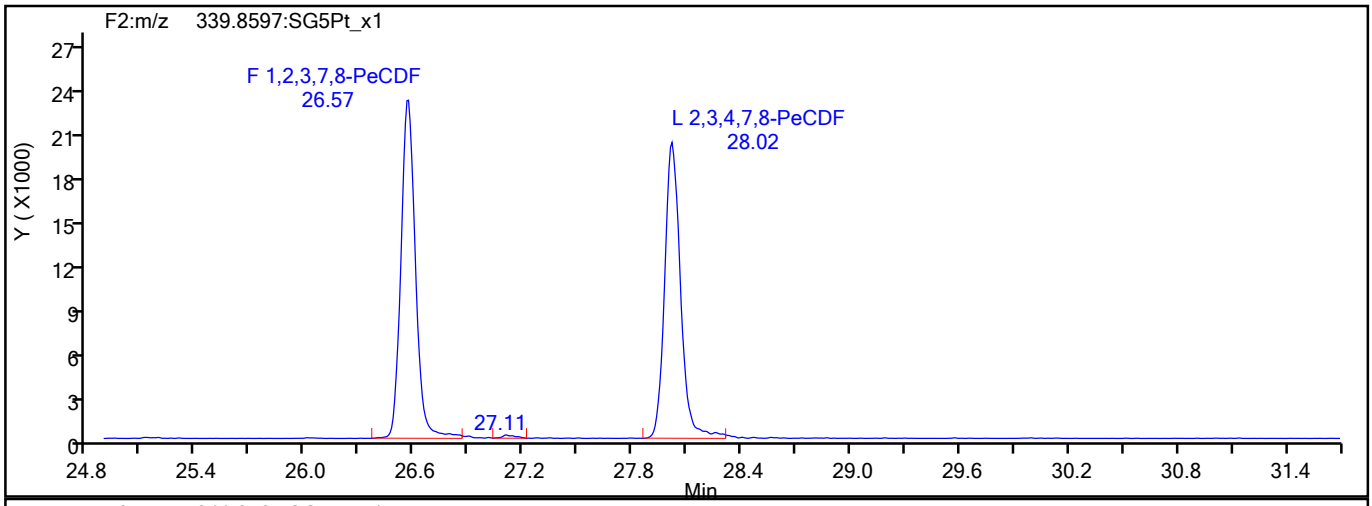

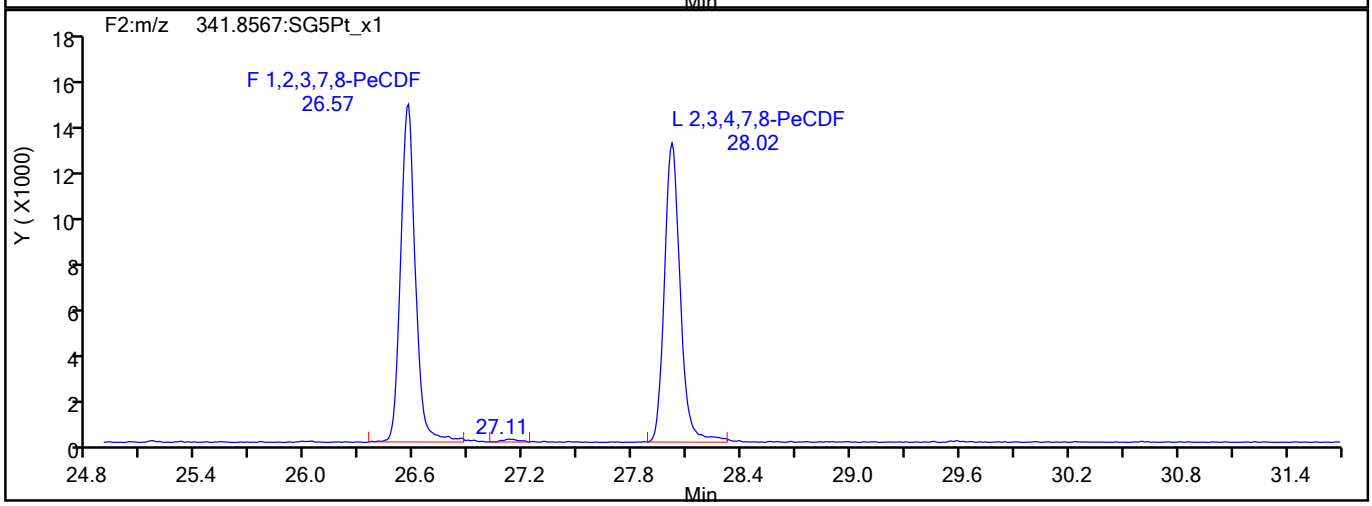

PeCDF Interference Mass

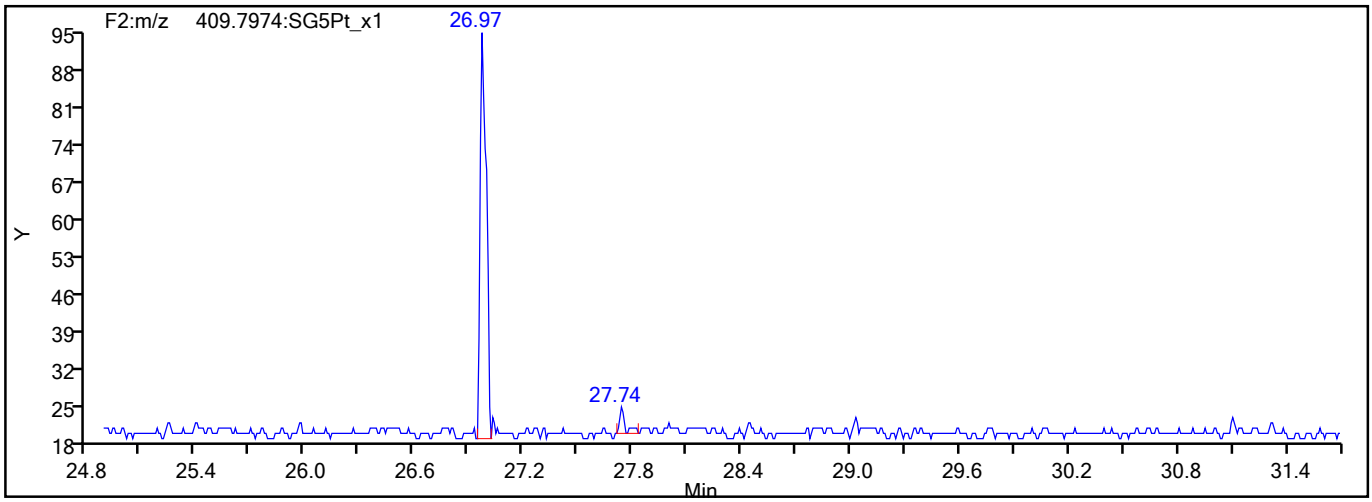

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Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

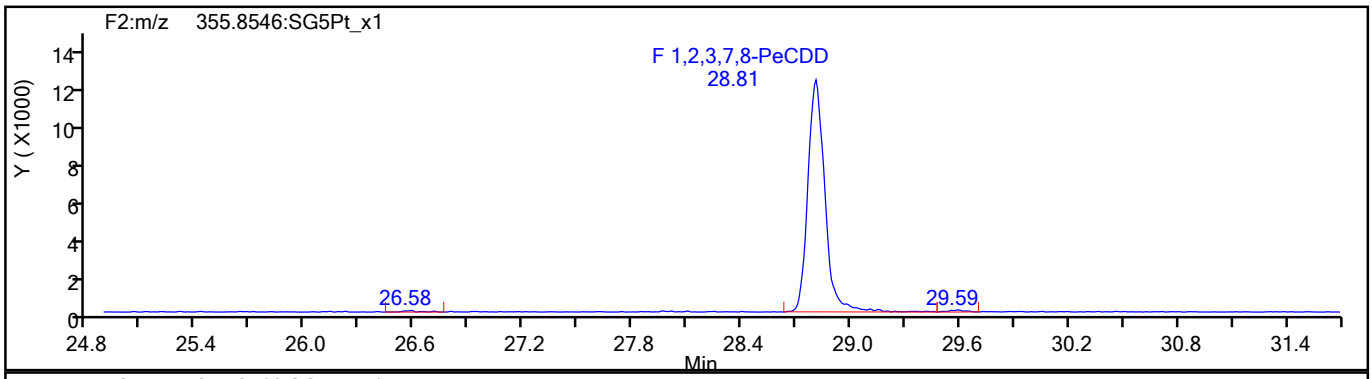

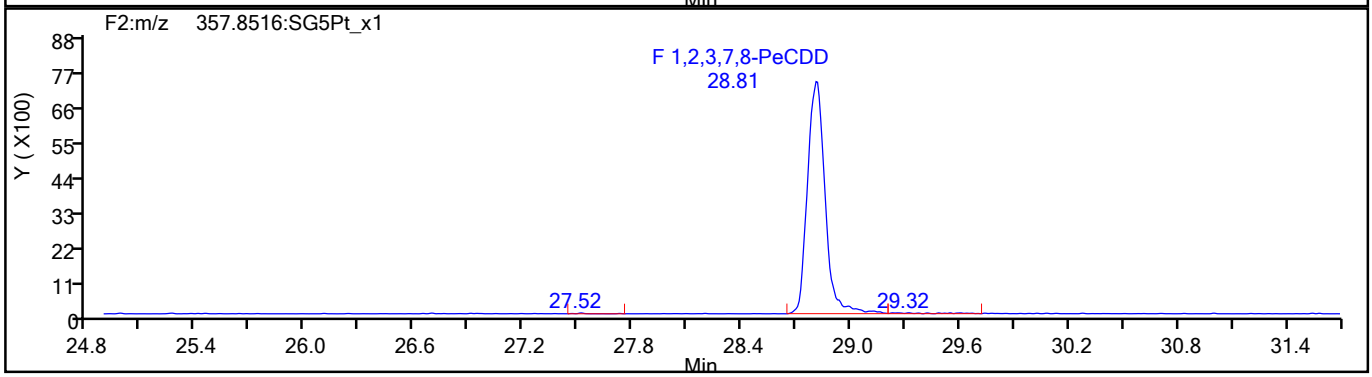

PeCDD Standards

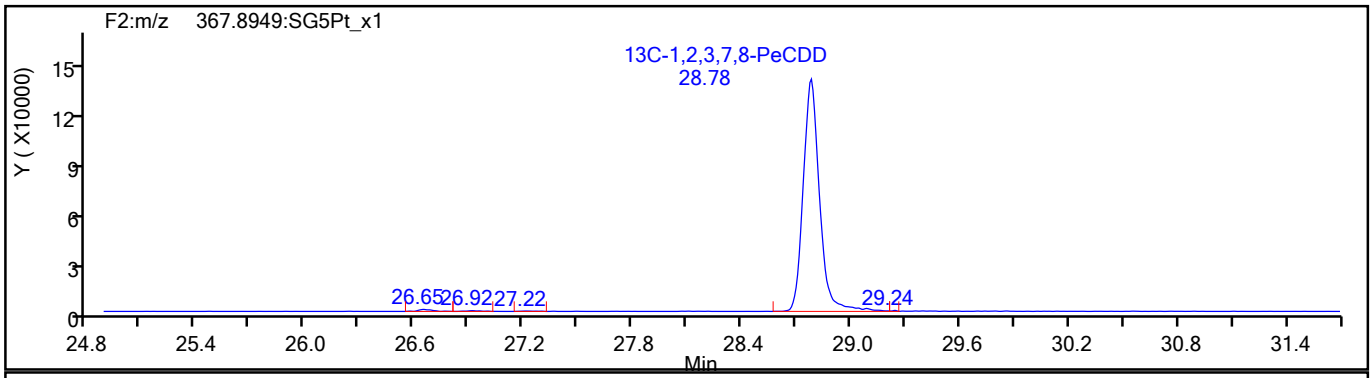

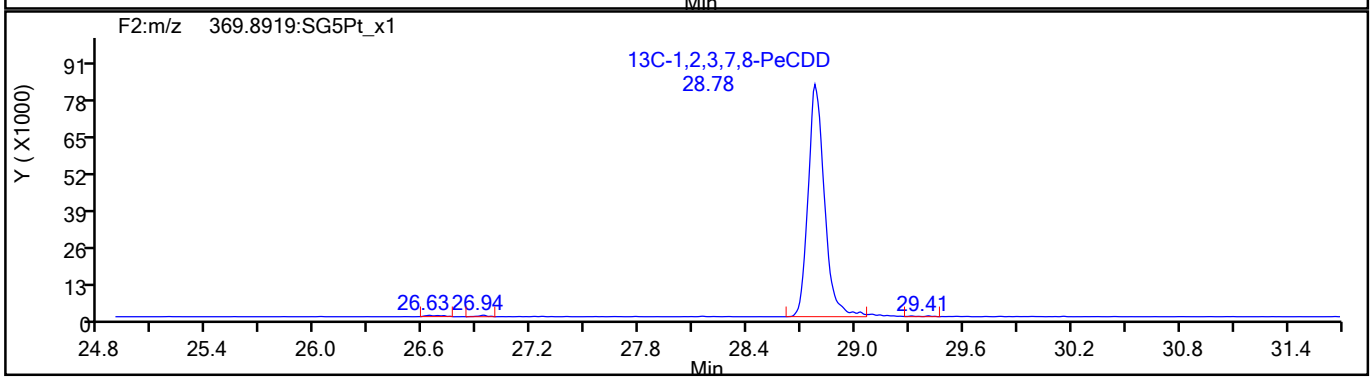

787278

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

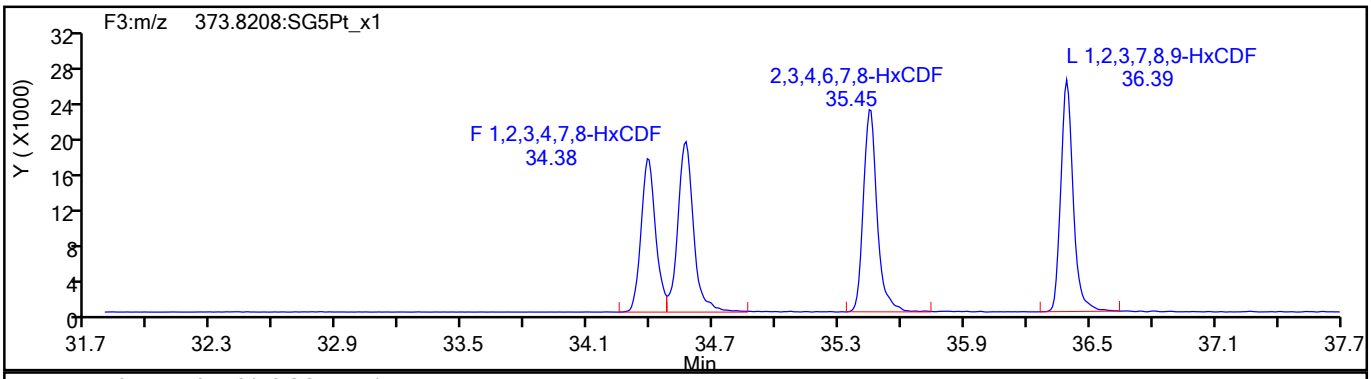

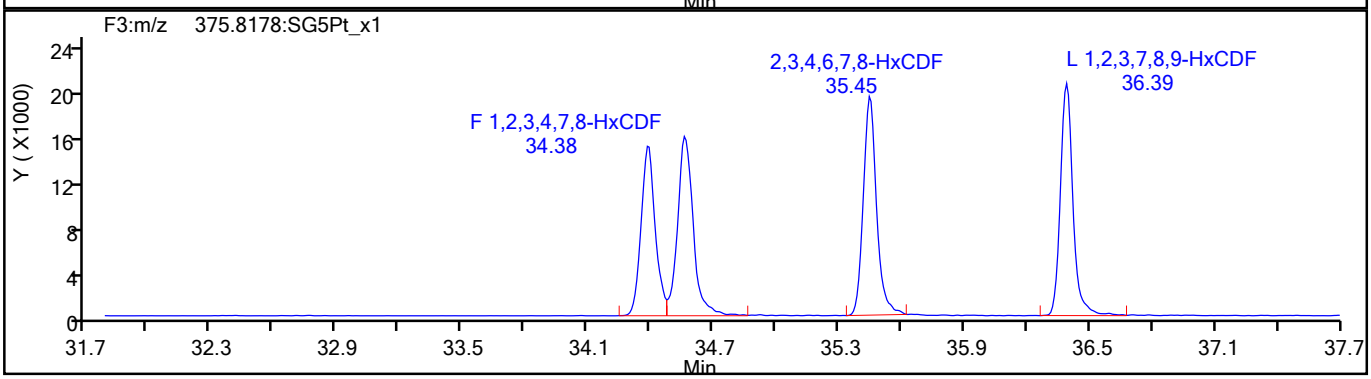

HxCDF Standards

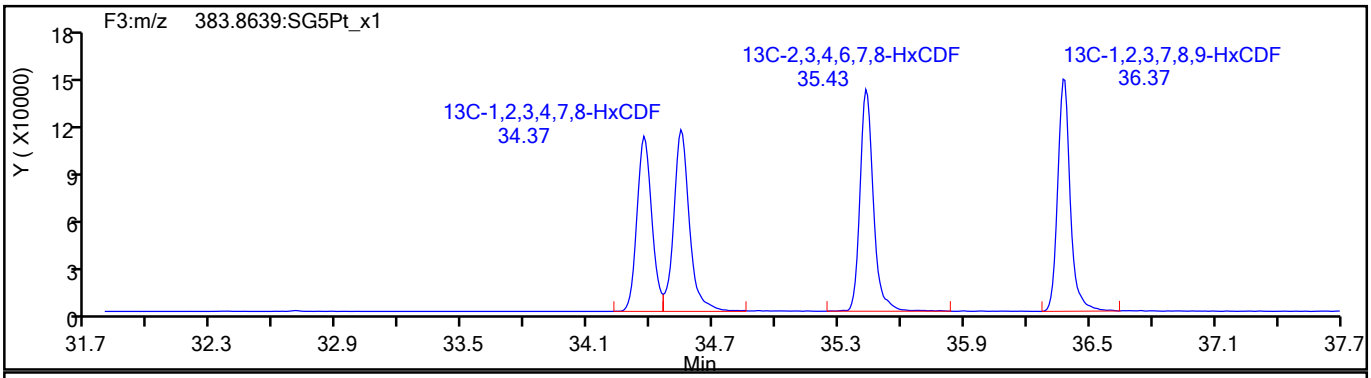

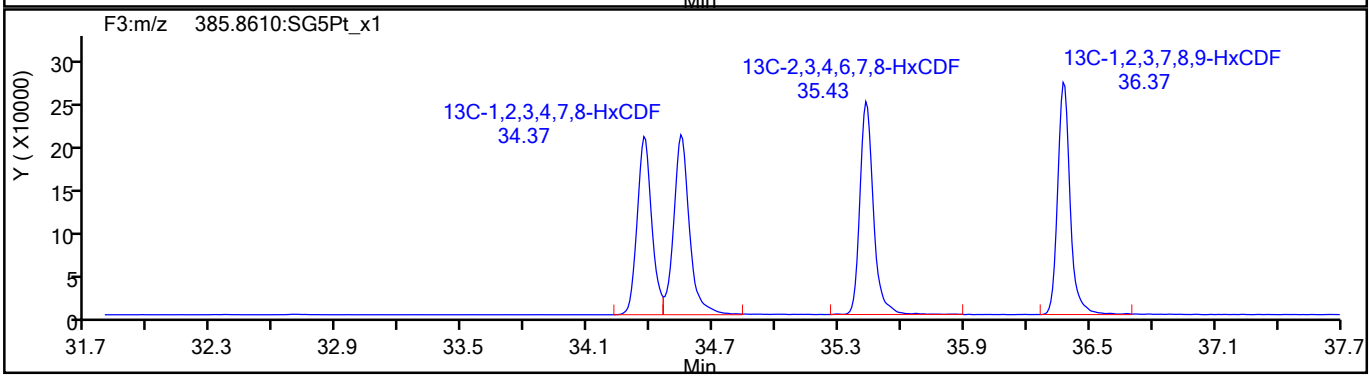

787279

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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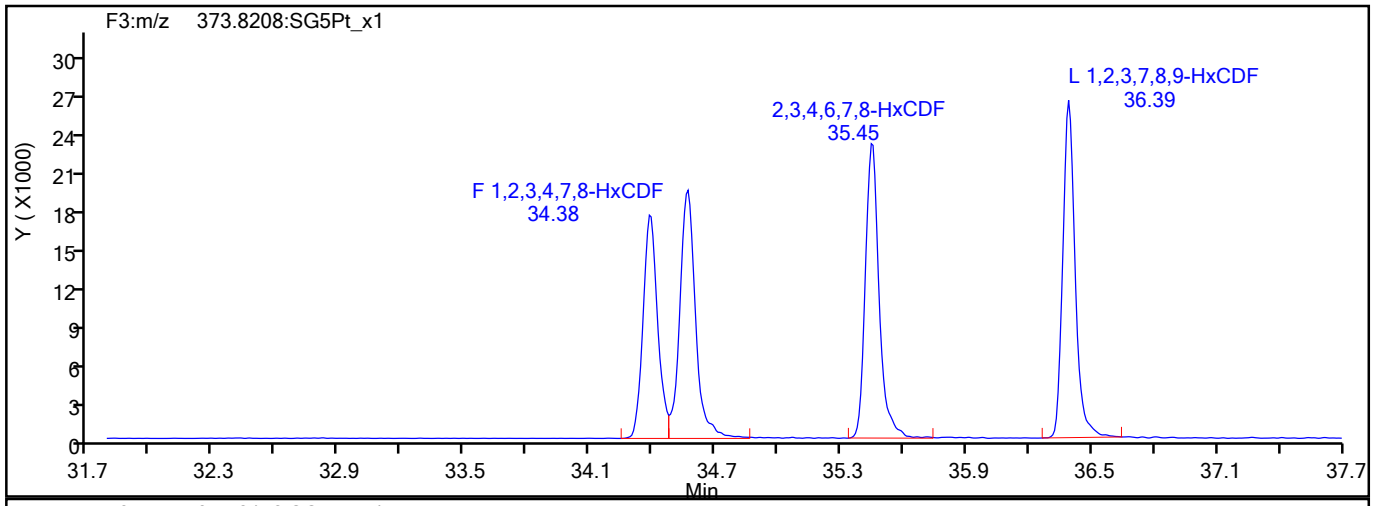

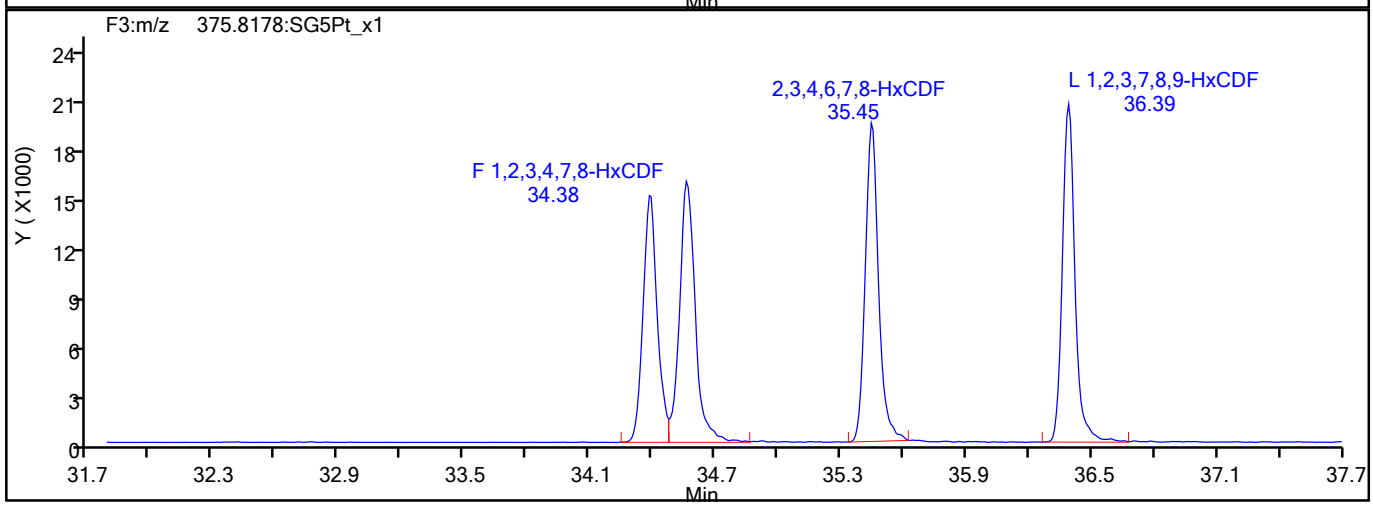

HxCDF Interference Mass

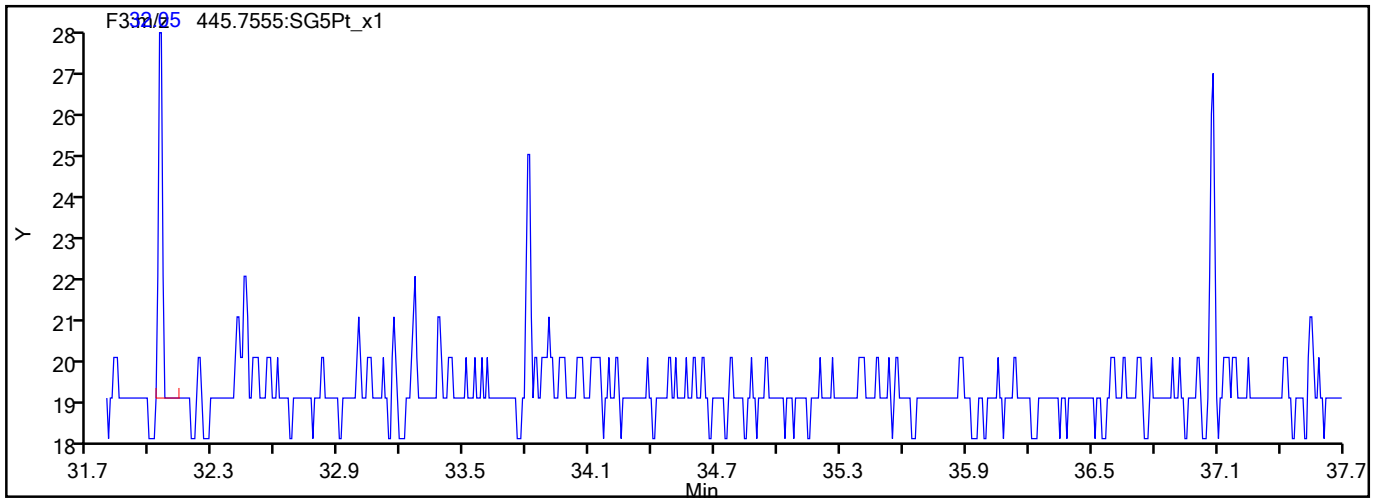

787280

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

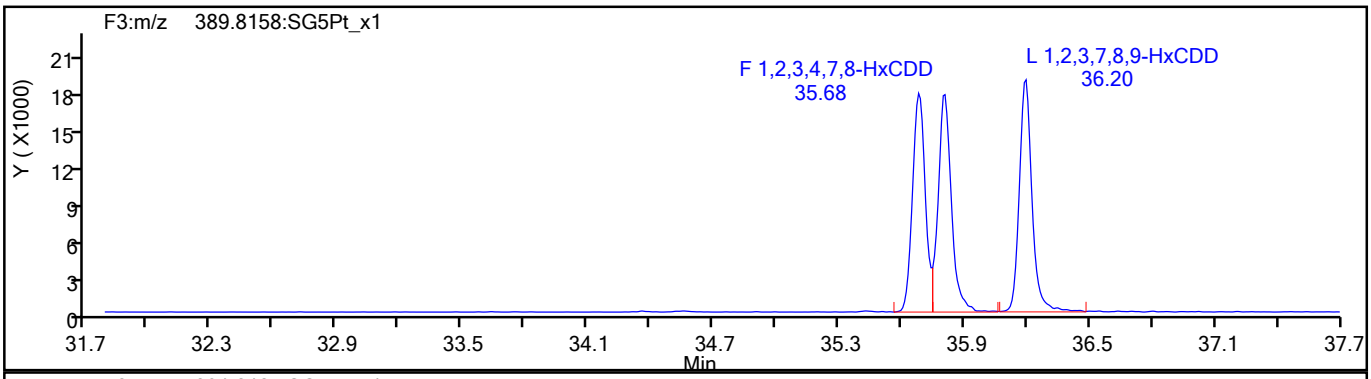

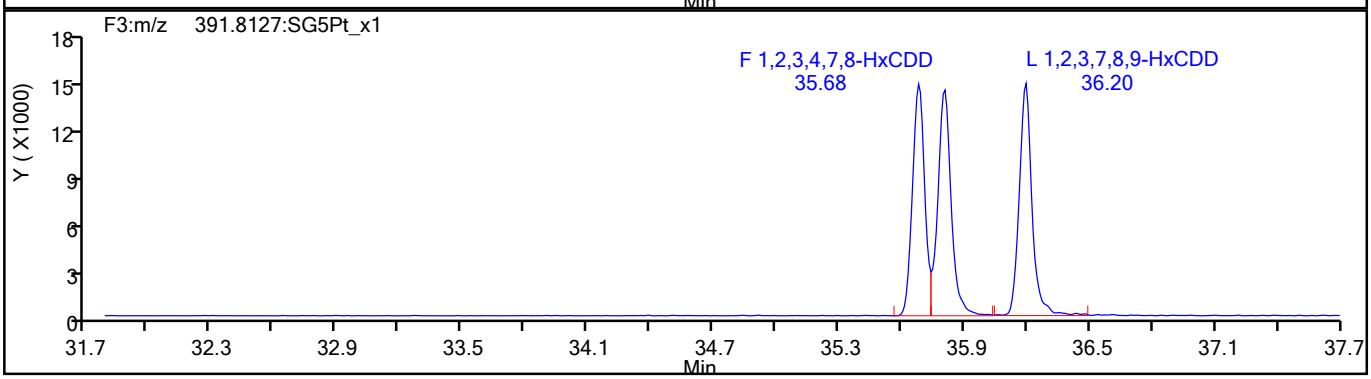

HxCDD Standards

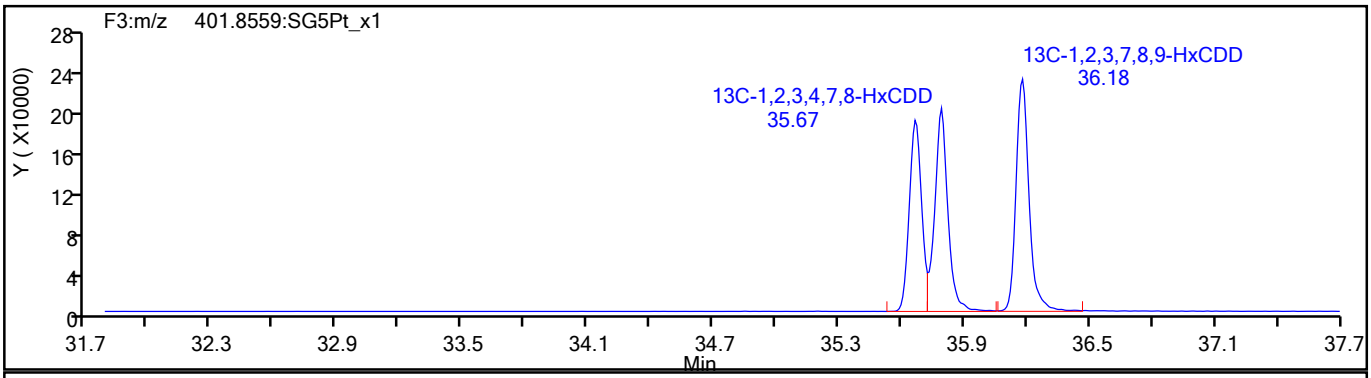

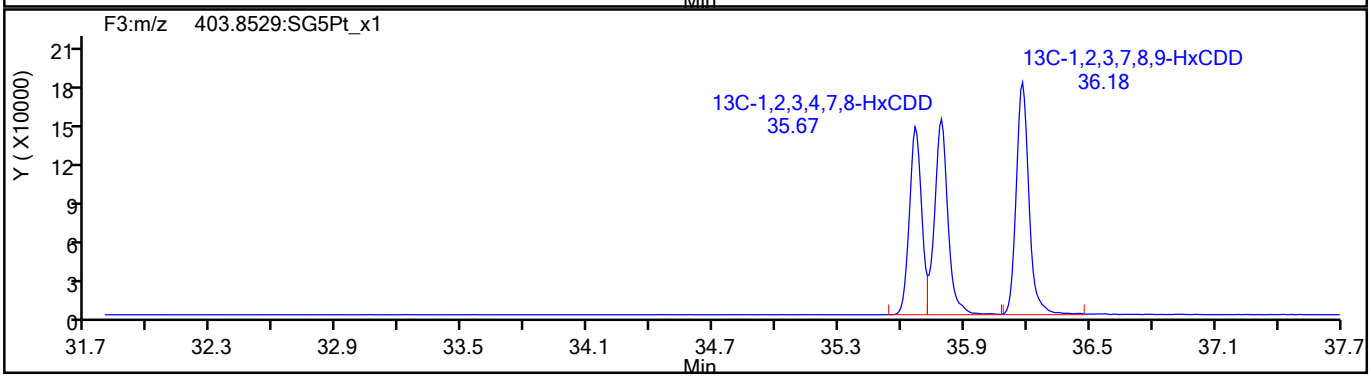

787281

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

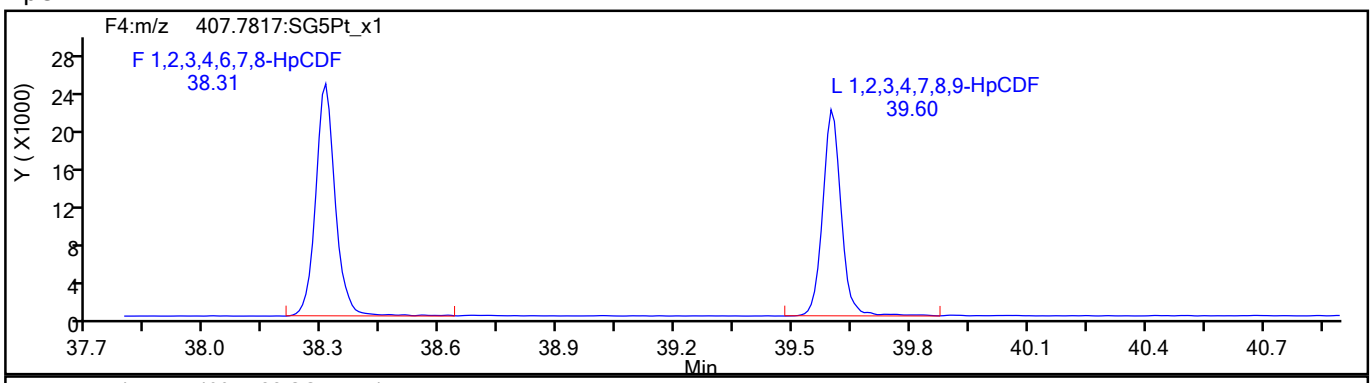

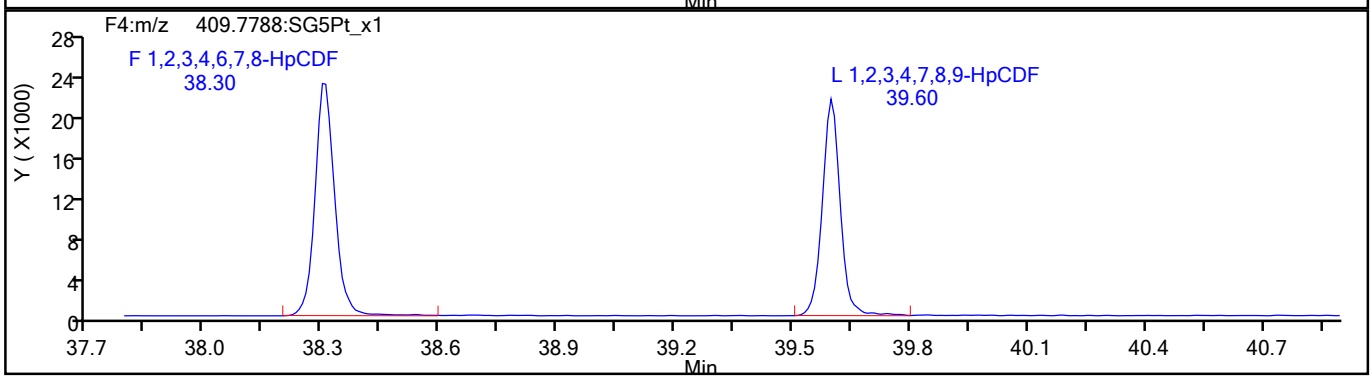

HpCDF Standards

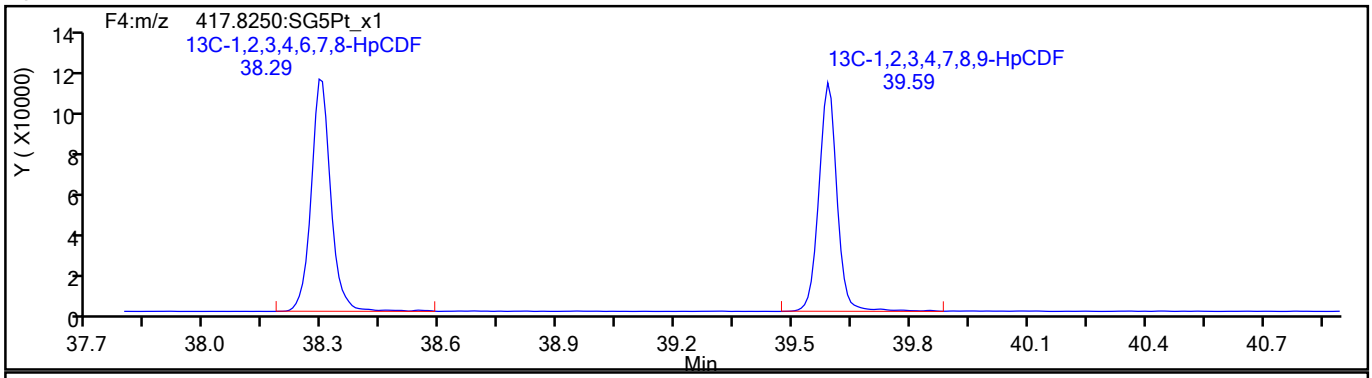

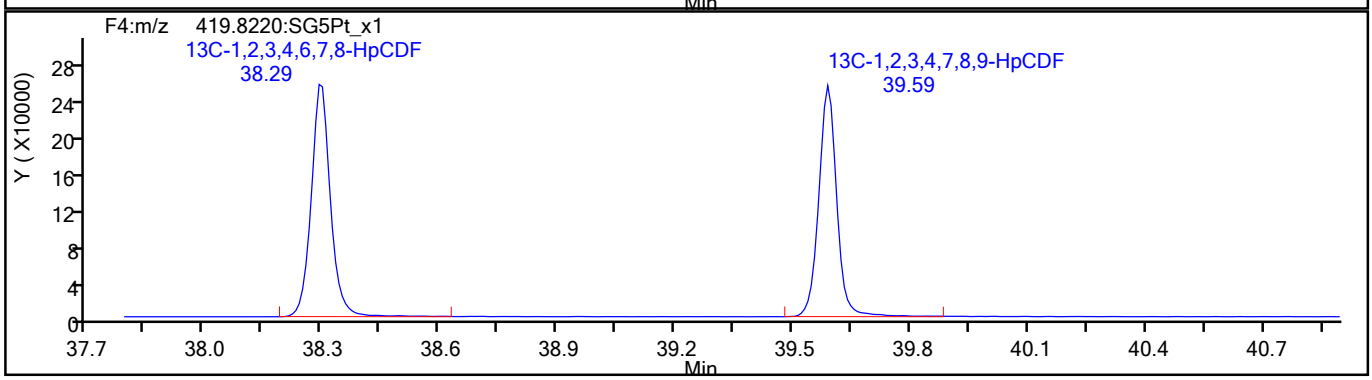

787282

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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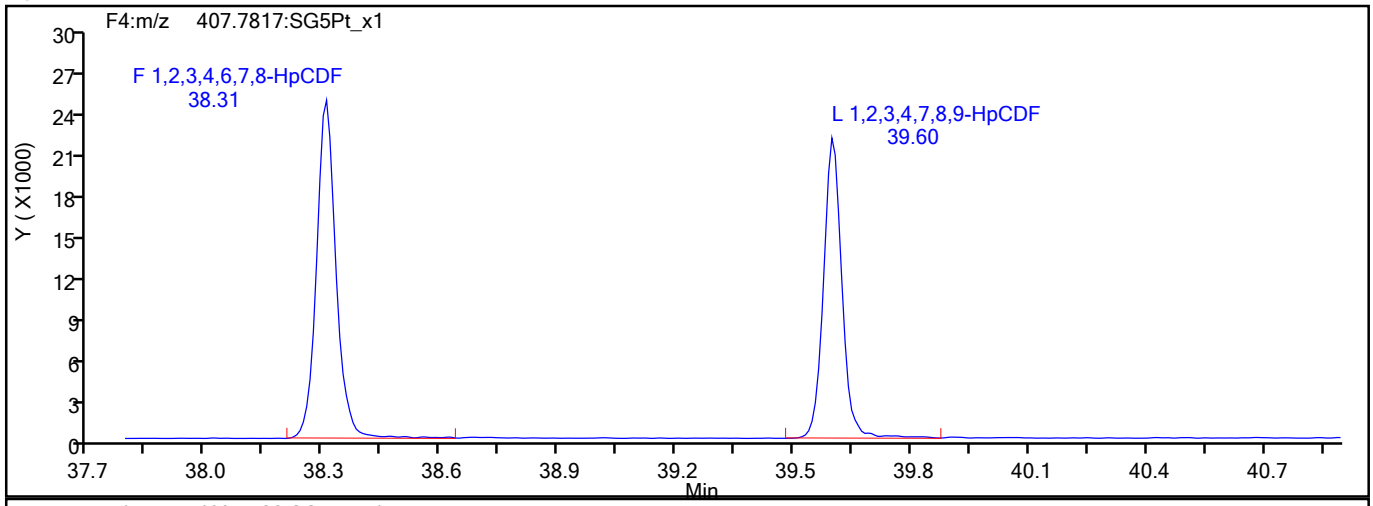

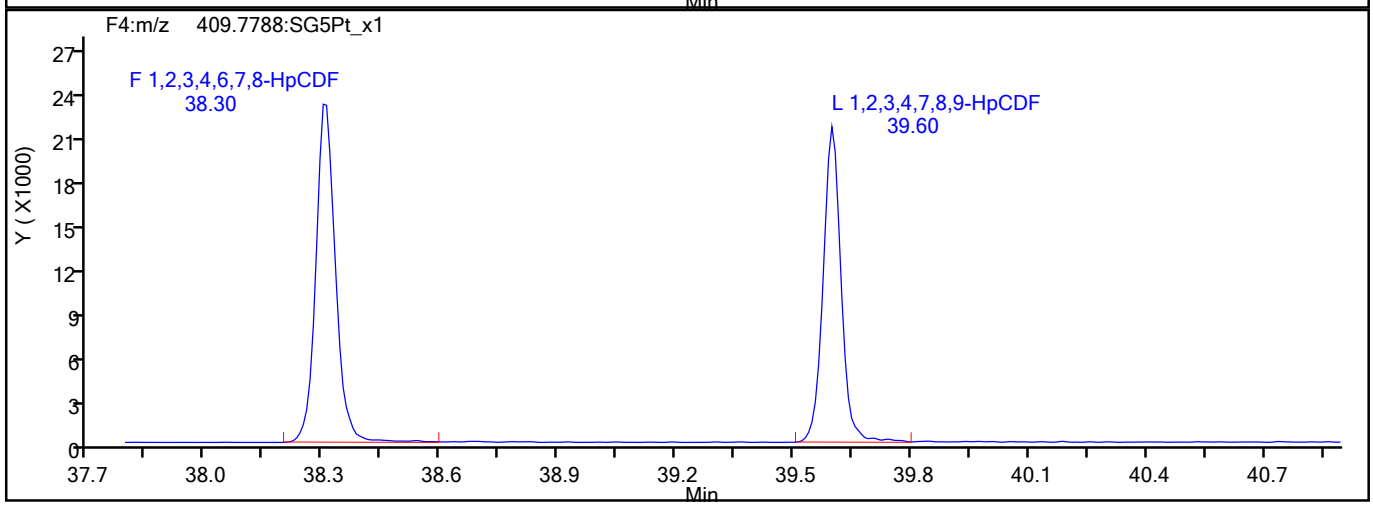

HpCDF Interference Mass

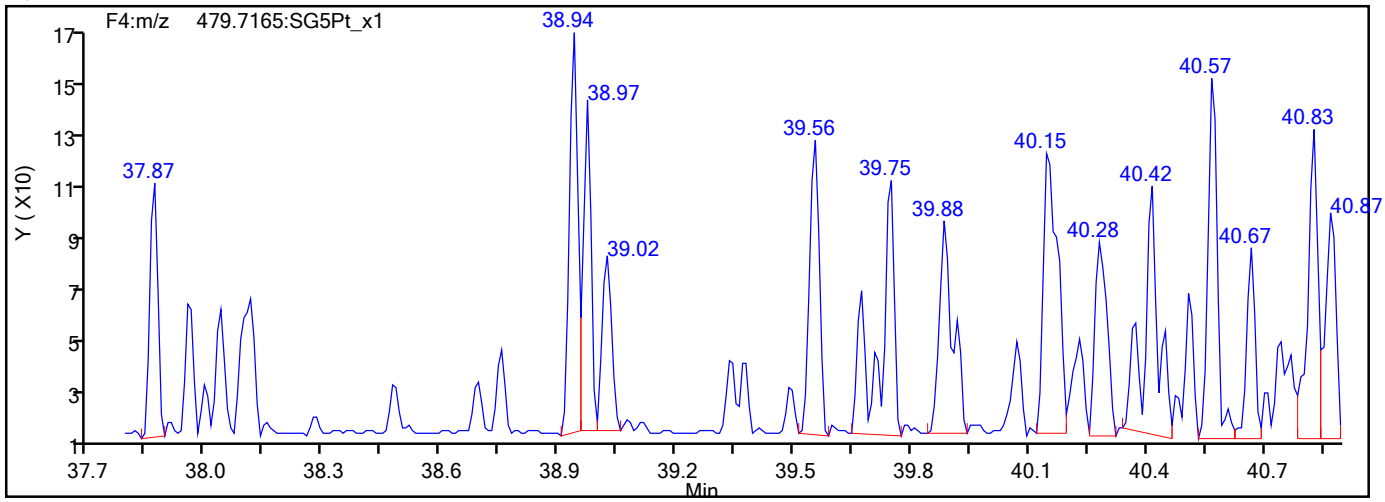

787283

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

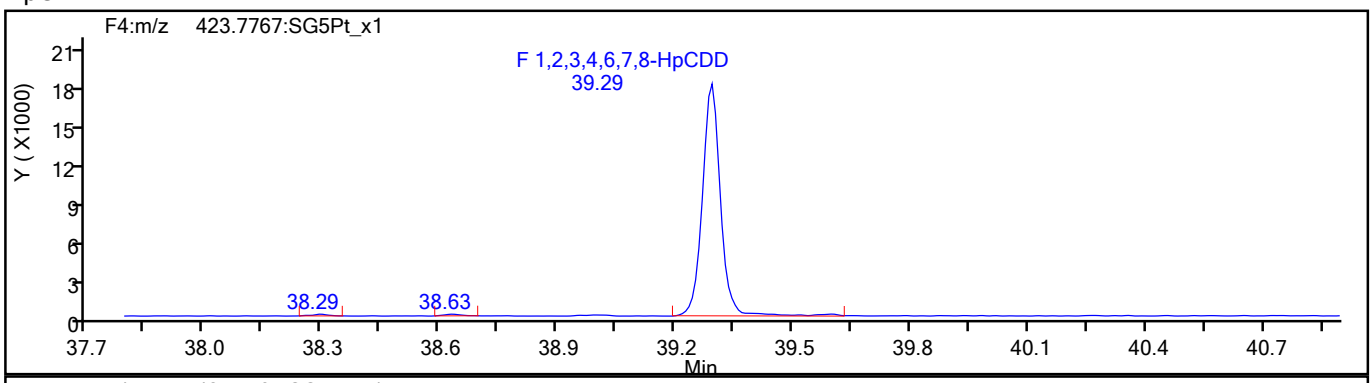

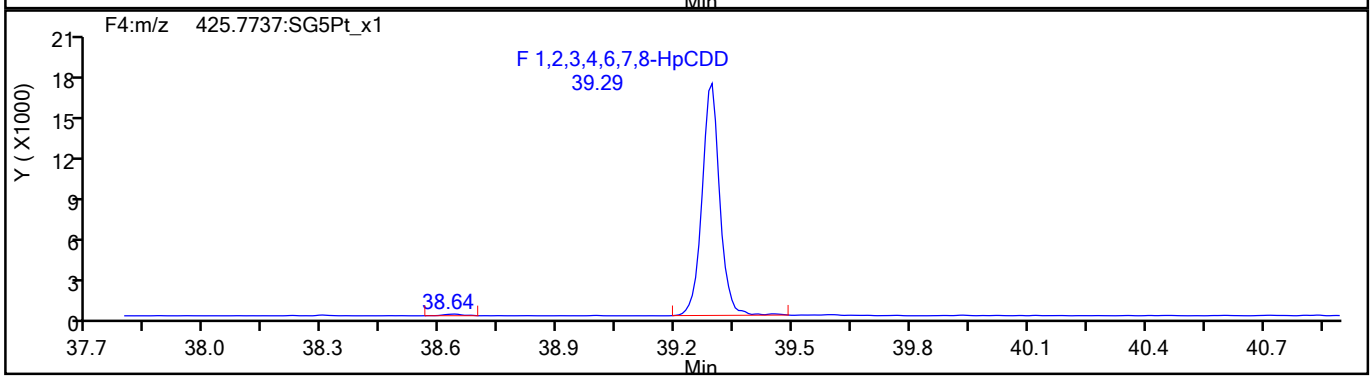

HpCDD Standards

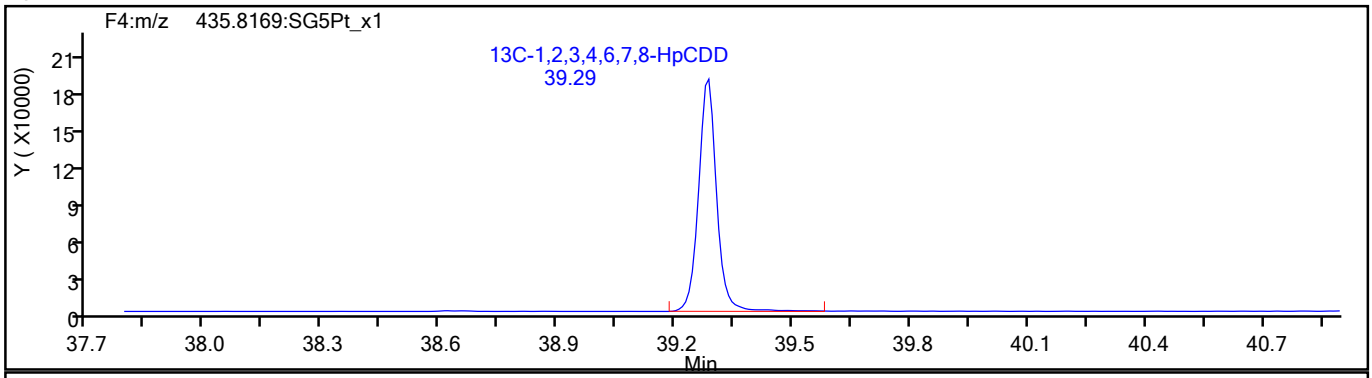

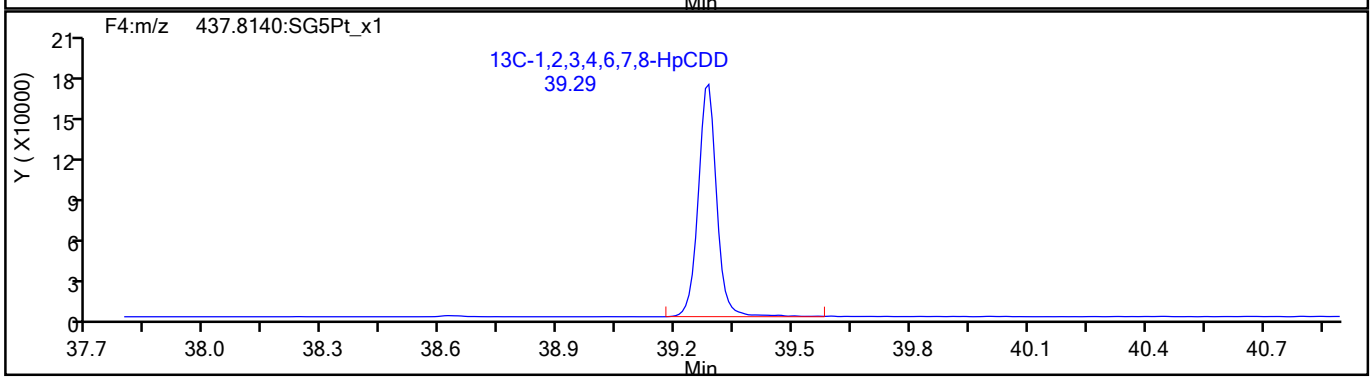

787284

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

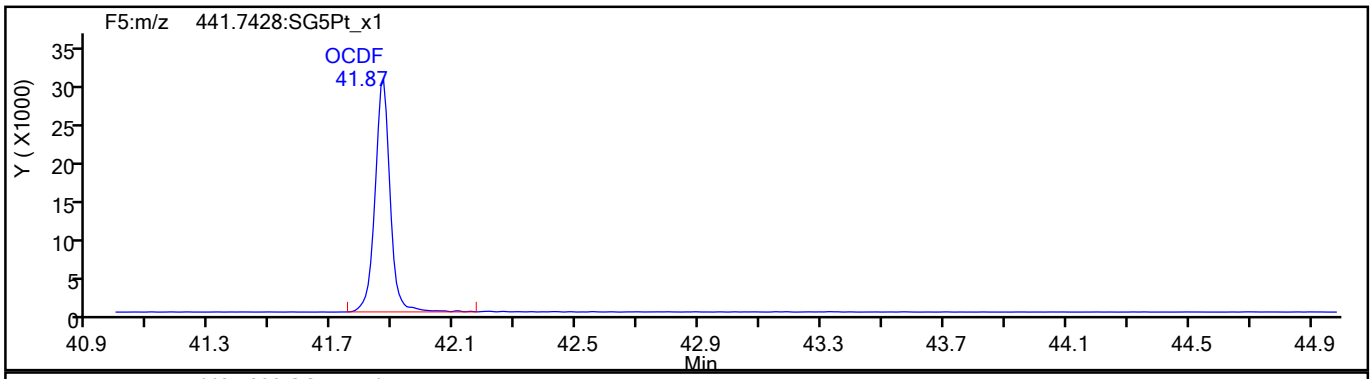

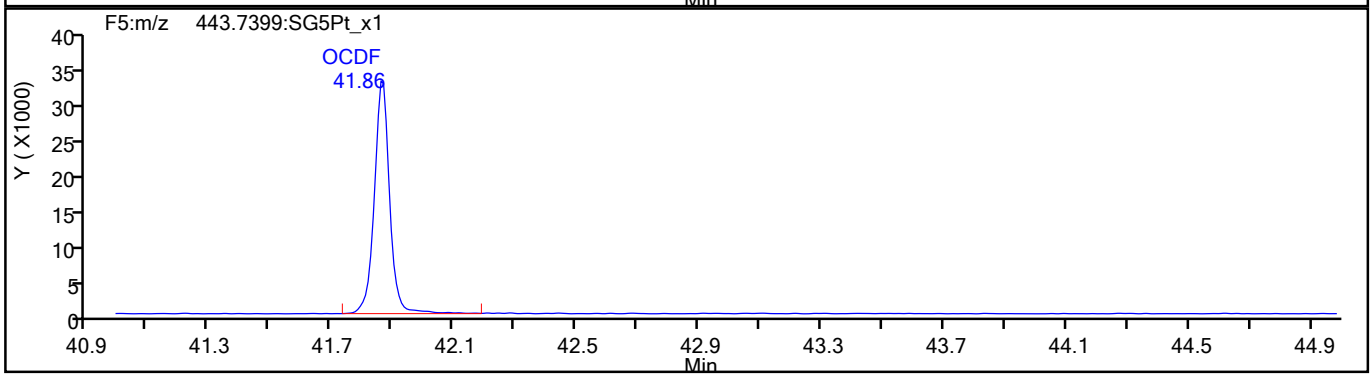

OCDF Standards

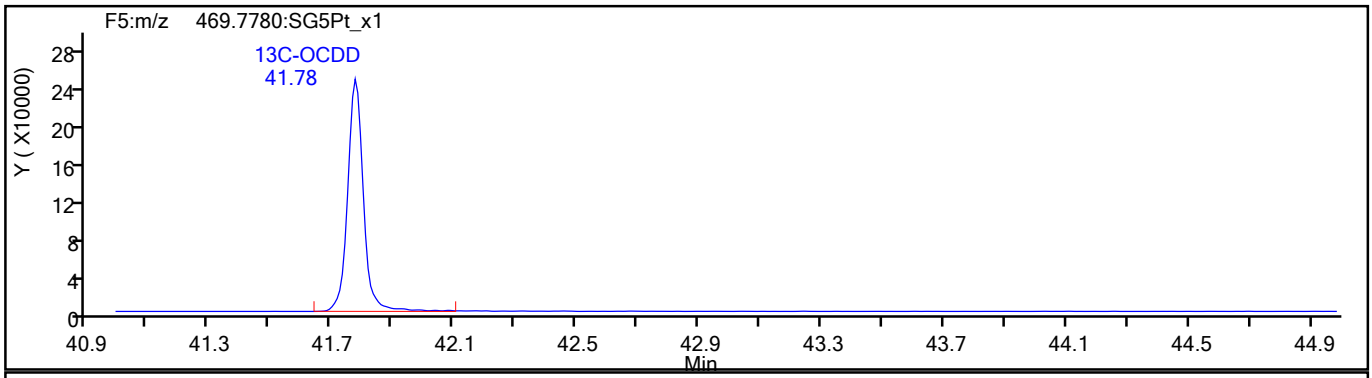

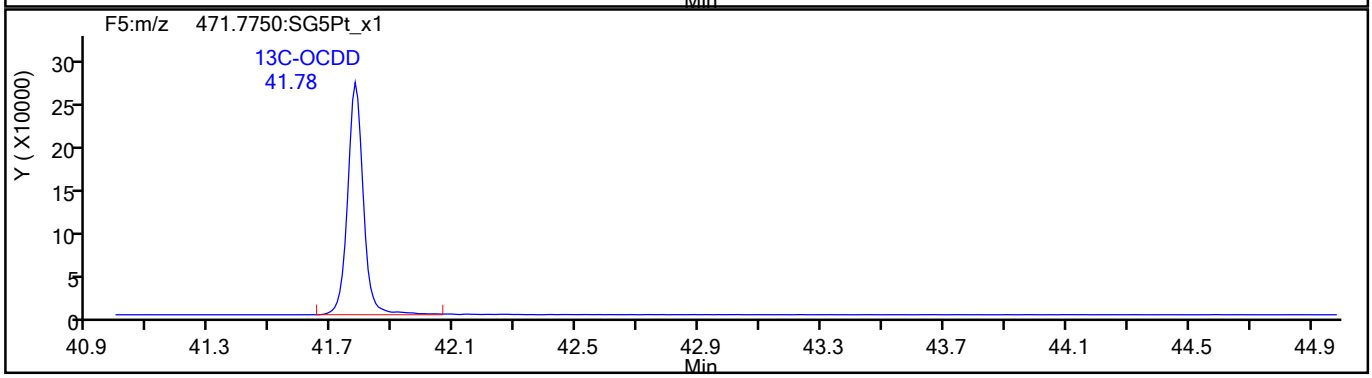

787285

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

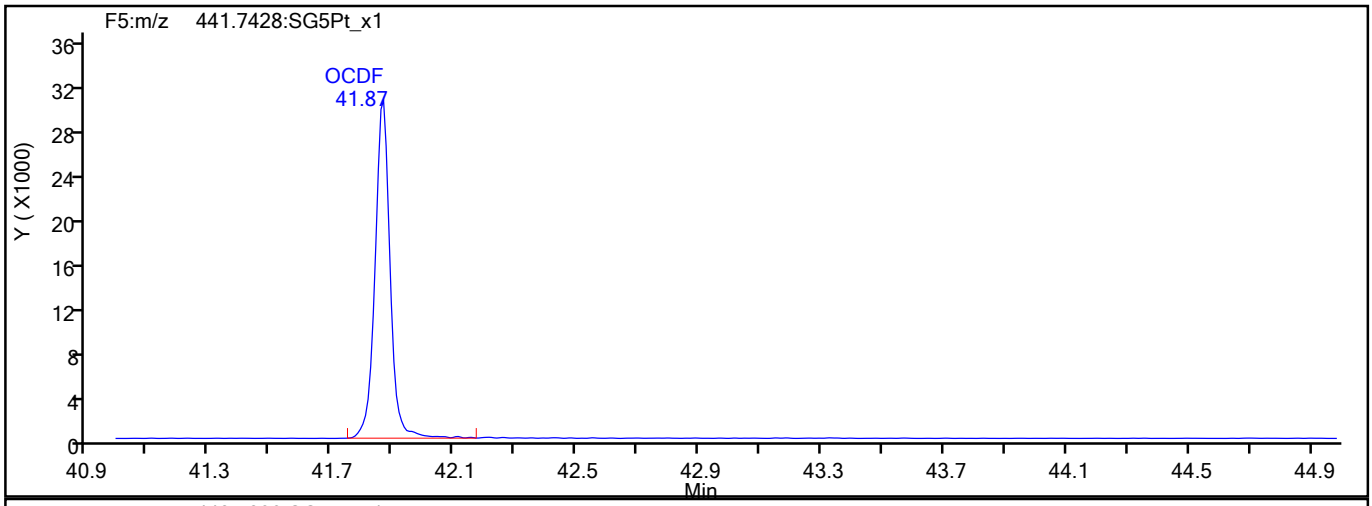

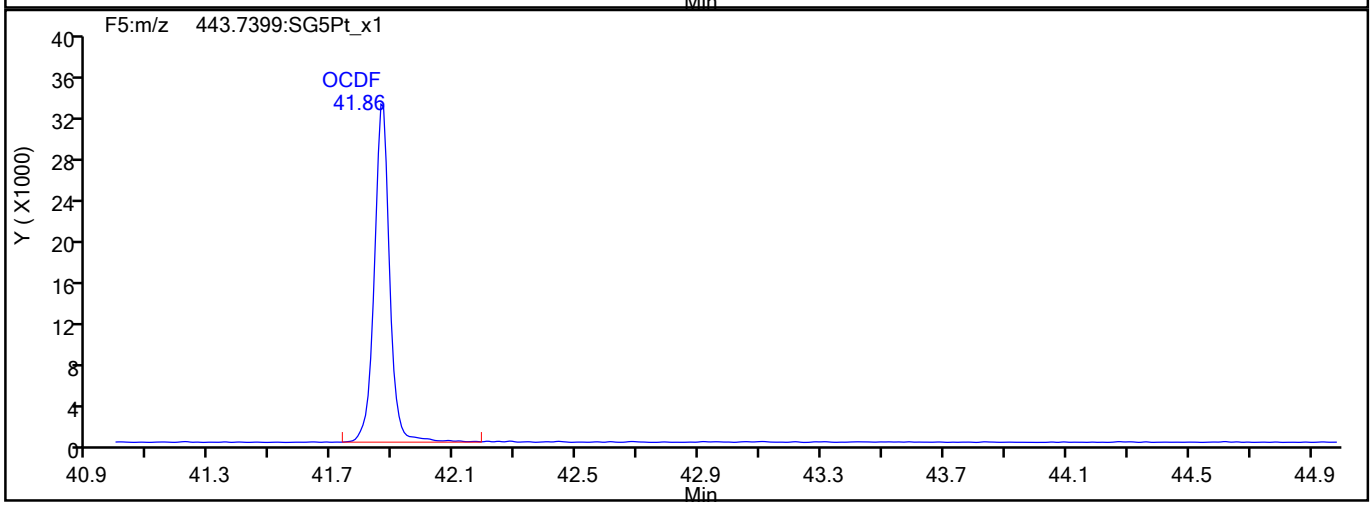

OCDF Interference Mass

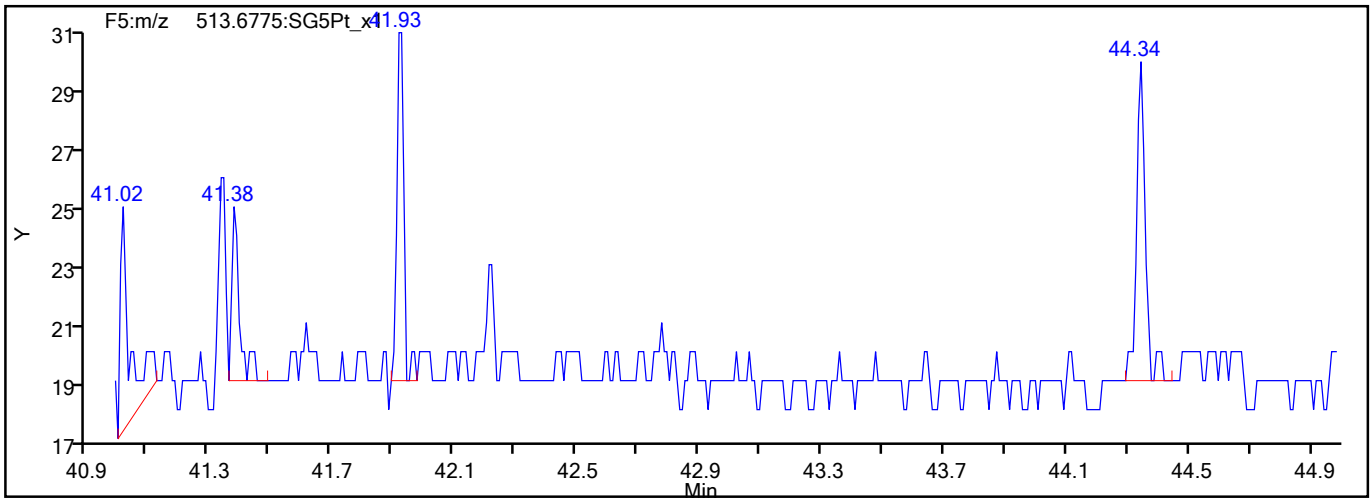

787286

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

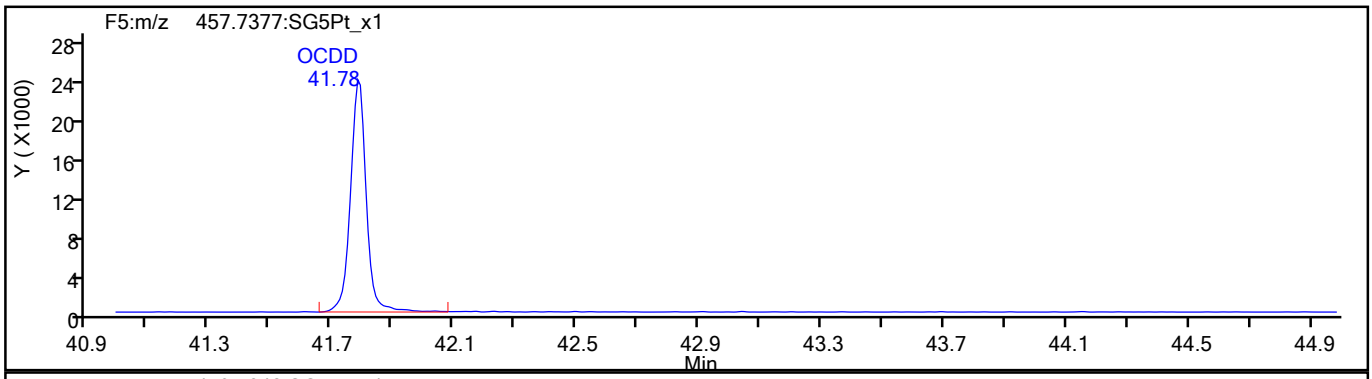

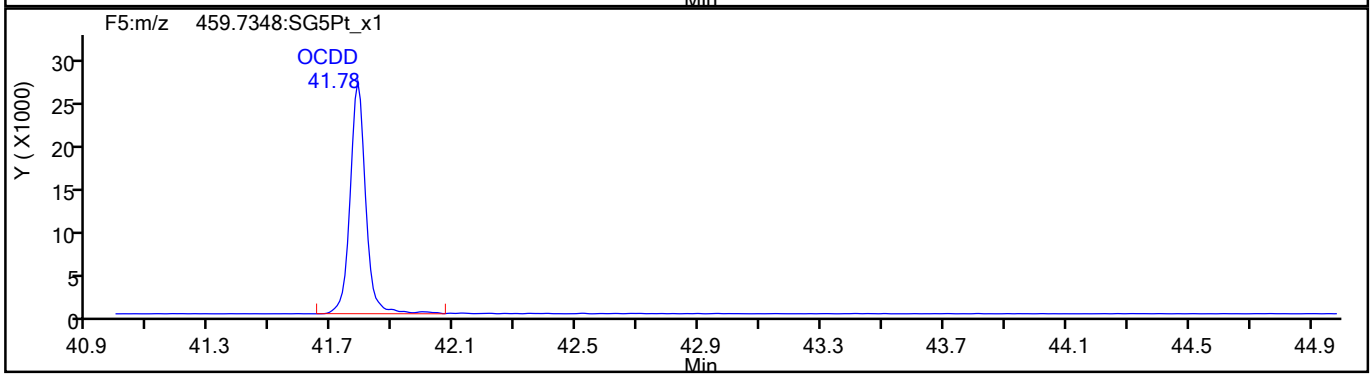

OCDD Standards

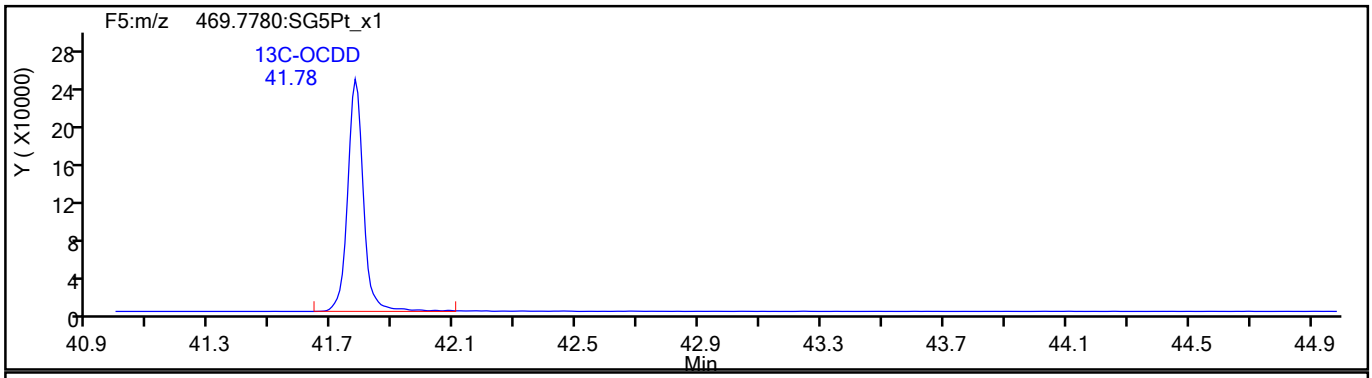

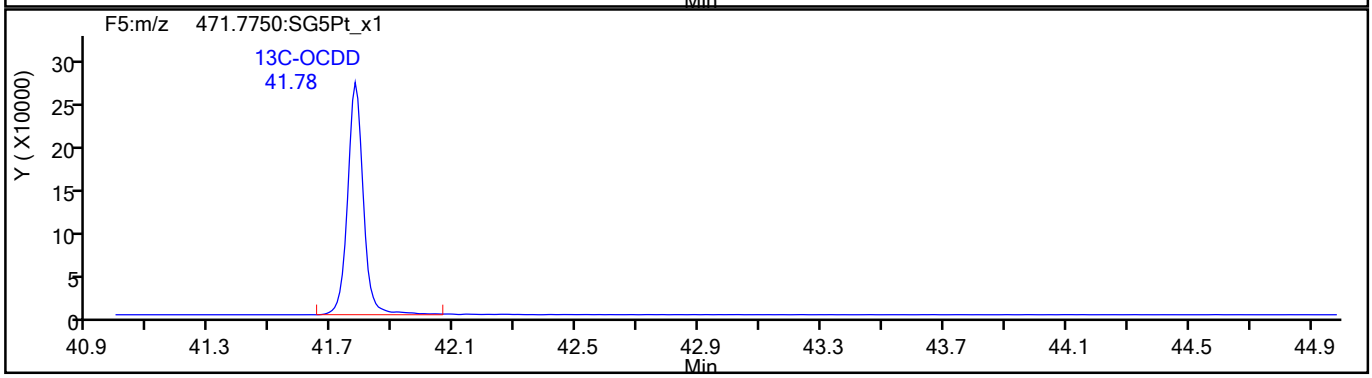

787287

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

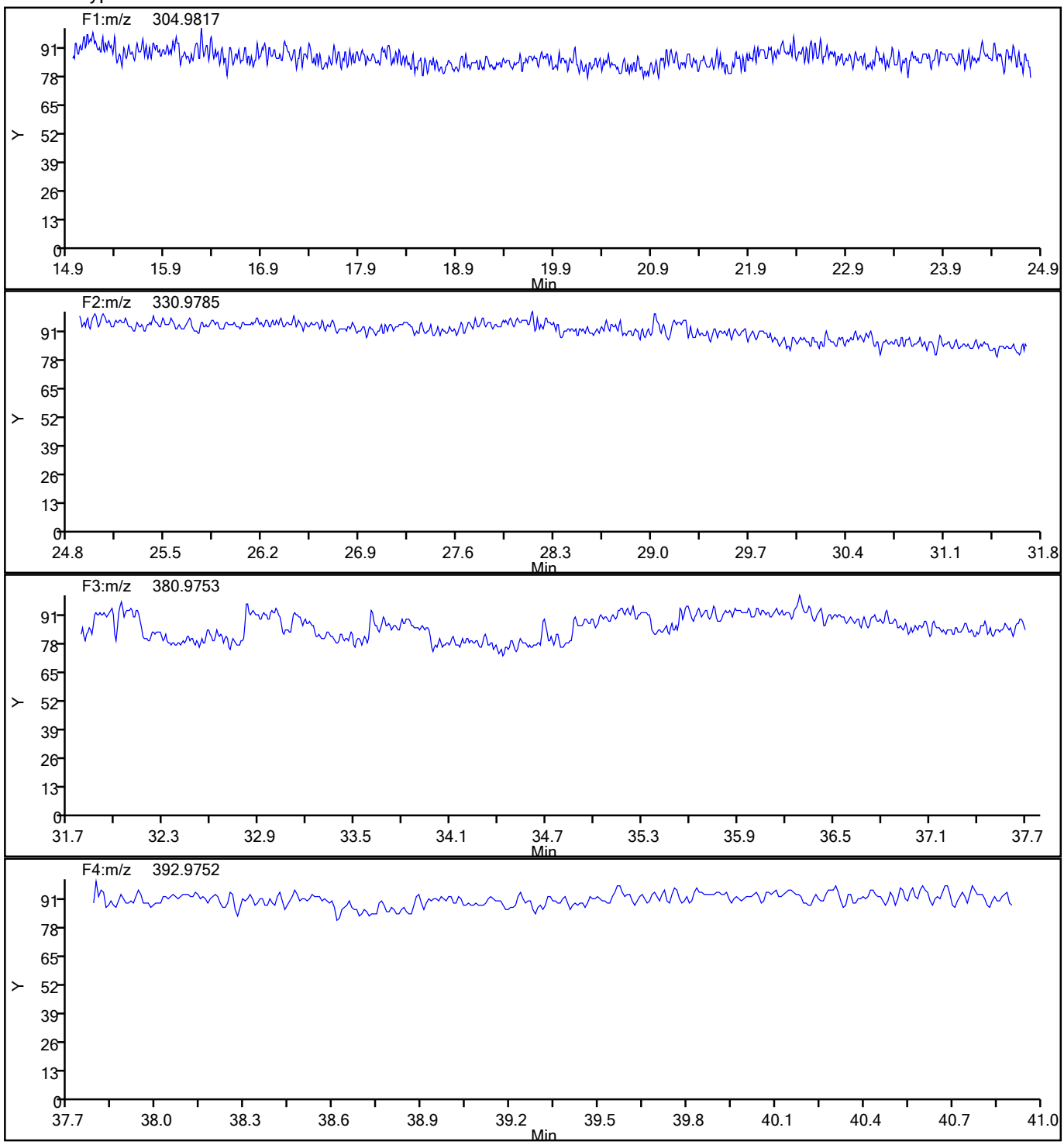

787288

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

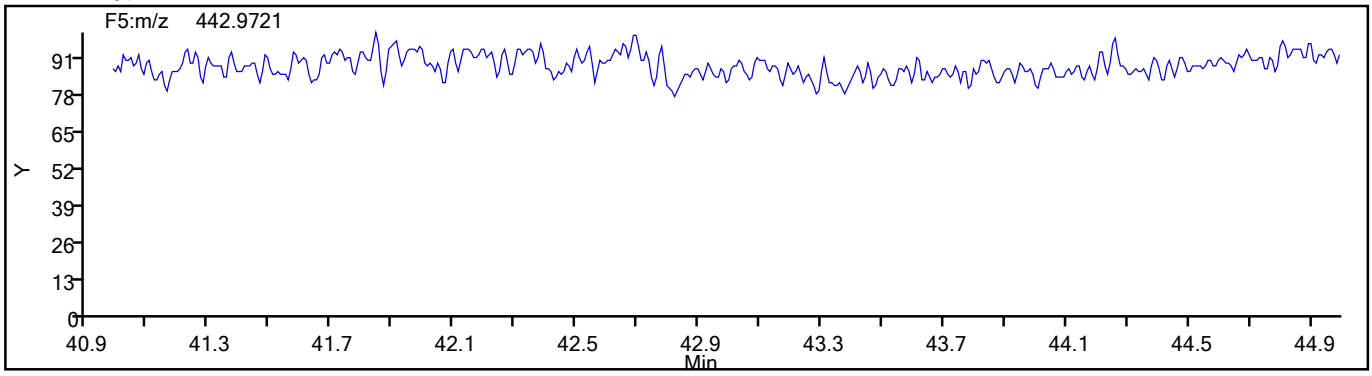

787289

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.546	1900111	0.78	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.619	2465726	0.79	1.3459	96.4	96.4	0.1978	0.1978	96.42	
2,3,7,8-TCDF	19.645	258022	0.78	1.0802	9.687	9.687	0.0168	0.0168	96.87	
S Total TCDF					9.687	9.687	0.0168	0.0168		
D 13C-2,3,7,8-TCDD	20.907	1800864	0.81	0.9317	101.7	101.7	0.1641	0.1641	102	
$ 37Cl4-2,3,7,8-TCDD	20.933	203726		1.0083	10.6	10.6	0.0134	0.0134	106	
2,3,7,8-TCDD	20.924	198062	0.75	1.0753	10.2	10.2	0.0351	0.0351	102	
S Total TCDD					10.2	10.2	0.0351	0.0351		
D 13C-1,2,3,7,8-PeCDF	26.556	2149791	1.60	1.1405	99.2	99.2	0.3269	0.3269	99.20	
1,2,3,7,8-PeCDF	26.573	1114982	1.57	1.0543	49.2	49.2	0.1379	0.1379	98.39	
D 13C-2,3,4,7,8-PeCDF	28.006	1991303	1.58	1.1253	93.1	93.1	0.3313	0.3313	93.13	
2,3,4,7,8-PeCDF	28.031	987812	1.58	1.0079	49.2	49.2	0.1665	0.1665	98.44	
S Total PeCDF					98.4	98.4	0.1522	0.1522		
D 13C-1,2,3,7,8-PeCDD	28.790	1388641	1.58	0.7165	102.0	102.0	0.1629	0.1629	102	
1,2,3,7,8-PeCDD	28.824	741897	1.57	1.0465	51.1	51.1	0.0499	0.0499	102	
S Total PeCDD					51.1	51.1	0.0499	0.0499		
D 13C-1,2,3,4,7,8-HxCDF	34.384	1841825	0.54	0.9648	115.8	115.8	0.3936	0.3936	116	
1,2,3,4,7,8-HxCDF	34.401	1093397	1.25	1.1474	51.7	51.7	0.1928	0.1928	103	
D 13C-1,2,3,6,7,8-HxCDF	34.561	2015594	0.53	1.0708	114.2	114.2	0.3547	0.3547	114	
1,2,3,6,7,8-HxCDF	34.578	1245549	1.24	1.2178	50.7	50.7	0.1720	0.1720	101	
D 13C-2,3,4,6,7,8-HxCDF	35.447	1861559	0.53	1.0413	108.4	108.4	0.3647	0.3647	108	
2,3,4,6,7,8-HxCDF	35.463	1151149	1.26	1.2145	50.9	50.9	0.1650	0.1650	102	
D 13C-1,2,3,7,8,9-HxCDF	36.399	1657413	0.54	0.9731	103.3	103.3	0.3903	0.3903	103	
1,2,3,7,8,9-HxCDF	36.408	1038574	1.24	1.2401	50.5	50.5	0.1718	0.1718	101	
S Total HxCDF					203.9	203.9	0.1754	0.1754		
* 13C-1,2,3,7,8,9-HxCDD	36.197	1648545	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.691	1348471	1.27	0.7587	107.8	107.8	0.2143	0.2143	108	
1,2,3,4,7,8-HxCDD	35.699	724729	1.28	1.0608	50.7	50.7	0.0918	0.0918	101	
D 13C-1,2,3,6,7,8-HxCDD	35.809	1460100	1.24	0.8593	103.1	103.1	0.1892	0.1892	103	
1,2,3,6,7,8-HxCDD	35.826	760446	1.23	0.9933	52.4	52.4	0.0967	0.0967	105	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.214	786511	1.27	1.1094	50.5	50.5	0.0872	0.0872	101	
S Total HxCDD					153.6	153.6	0.0919	0.0919		
D 13C-1,2,3,4,6,7,8-HpCDF	38.316	1182209	0.45	0.7359	97.4	97.4	0.3866	0.3866	97.44	
1,2,3,4,6,7,8-HpCDF	38.324	878086	1.05	1.4421	51.5	51.5	0.1699	0.1699	103	
D 13C-1,2,3,4,7,8,9-HpCDF	39.614	1080883	0.46	0.6854	95.7	95.7	0.4151	0.4151	95.66	
1,2,3,4,7,8,9-HpCDF	39.622	727362	1.05	1.3092	51.4	51.4	0.1875	0.1875	103	
S Total HpCDF					102.9	102.9	0.1787	0.1787		
D 13C-1,2,3,4,6,7,8-HpCDD	39.302	1094713	1.07	0.6745	98.4	98.4	0.2448	0.2448	98.45	
1,2,3,4,6,7,8-HpCDD	39.310	572466	1.05	1.0503	49.8	49.8	0.1044	0.1044	99.58	
S Total HpCDD					49.8	49.8	0.1044	0.1044		
D 13C-OCDD	41.794	1676139	0.90	0.5446	186.7	186.7	0.2845	0.2845	93.34	
OCDF	41.887	1118740	0.90	1.3168	101.4	101.4	0.1189	0.1189	101	
OCDD	41.803	910980	0.89	1.0620	102.4	102.4	0.1082	0.1082	102	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.546	20.547	0		832498	129736	116	290	1118		
333.9338	20.546	20.547	0		1067613	165878	65	162	2552	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.619	19.616	0	0.955	1091704	180342	213	532	847		
317.9389	19.619	19.616	0	0.955	1374022	217372	102	255	2131	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.645	19.646	0	1.001	113254	18239	10	25	1824		
305.8987	19.645	19.646	0	1.001	144768	23858	19	47	1256	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.907	20.910	0	1.018	803279	117913	116	290	1016		
333.9338	20.907	20.910	0	1.018	997585	152094	65	162	2340	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.933	20.935	0	1.019	203726	29833	16	40	1865		
2,3,7,8-TCDD											
319.8965	20.924	20.939	-1	1.001	85173	13080	31	77	422		
321.8936	20.941	20.939	0	1.002	112889	16258	10	25	1626	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.556	26.560	0	1.292	1323851	238814	266	665	898		
353.8970	26.556	26.560	0	1.292	825940	146442	175	437	837	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.573	26.584	-1	1.001	680306	120693	132	330	914		
341.8567	26.573	26.584	-1	1.001	434676	76404	92	230	830	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.006	28.014	0	1.363	1219332	203015	266	665	763		
353.8970	28.006	28.014	0	1.363	771971	130766	175	437	747	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.031	28.039	0	1.001	604266	98138	132	330	743		
341.8567	28.031	28.039	0	1.001	383546	62644	92	230	681	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.790	28.801	-1	1.401	851334	132655	82	205	1618		
369.8919	28.790	28.801	-1	1.401	537307	81623	56	140	1458	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.824	28.828	0	1.001	452903	70092	31	77	2261		
357.8516	28.824	28.828	0	1.001	288994	44853	14	35	3204	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.384	34.384	0	0.950	645542	131022	198	495	662		
385.8610	34.384	34.384	0	0.950	1196283	248690	400	1000	622	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.401	34.405	0	1.000	607111	119877	181	452	662		
375.8178	34.401	34.405	0	1.000	486286	95304	155	387	615	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.561	34.562	0	0.955	696119	139607	198	495	705		
385.8610	34.561	34.562	0	0.955	1319475	261396	400	1000	653	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.578	34.582	0	1.000	690624	134257	181	452	742		
375.8178	34.578	34.582	0	1.000	554925	106932	155	387	690	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.447	35.444	0	0.979	648311	145832	198	495	737		
385.8610	35.447	35.444	0	0.979	1213248	273234	400	1000	683	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.463	35.461	0	1.000	640849	139500	181	452	771		
375.8178	35.463	35.461	0	1.000	510300	111840	155	387	722	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.399	36.388	1	1.006	579583	134604	198	495	680		
385.8610	36.399	36.388	1	1.006	1077830	259553	400	1000	649	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.408	36.402	0	1.000	575769	139453	181	452	770		
375.8178	36.408	36.402	0	1.000	462805	111702	155	387	721	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.197	36.192	0		918631	219913	146	365	1506		
403.8529	36.197	36.192	0		729914	173739	110	275	1579	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.691	35.680	1	0.986	754120	185149	146	365	1268		
403.8529	35.691	35.680	1	0.986	594351	145418	110	275	1322	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.699	35.695	0	1.000	407415	100236	71	177	1412		
391.8127	35.699	35.695	0	1.000	317314	80745	58	145	1392	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.809	35.805	0	0.989	809032	182963	146	365	1253		
403.8529	35.809	35.805	0	0.989	651068	152224	110	275	1384	1.24(1.05-1.43)	

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.826	35.820	0	1.000	419224	96522	71	177	1359		
391.8127	35.826	35.820	0	1.000	341222	77256	58	145	1332	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.214	36.208	0	1.015	440686	104923	71	177	1478		
391.8127	36.214	36.208	0	1.015	345825	82846	58	145	1428	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.316	38.305	1	1.059	366846	105531	154	385	685		
419.8220	38.316	38.305	1	1.059	815363	231224	294	735	786	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.324	38.317	0	1.000	449936	128816	169	422	762		
409.7788	38.324	38.317	0	1.000	428150	123728	161	402	768	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.614	39.600	1	1.094	340338	106309	154	385	690		
419.8220	39.606	39.600	0	1.094	740545	229697	294	735	781	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.622	39.608	1	1.000	372140	117961	169	422	698		
409.7788	39.622	39.608	1	1.000	355222	111585	161	402	693	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.302	39.293	1	1.086	567057	176920	136	340	1301		
437.8140	39.302	39.293	1	1.086	527656	171361	124	310	1382	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.310	39.301	1	1.000	293602	91347	77	192	1186		
425.7737	39.310	39.301	1	1.000	278864	87962	76	190	1157	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.794	41.785	1	1.155	795323	226496	132	330	1716		
471.7750	41.794	41.785	1	1.155	880816	252365	112	280	2253	0.90(0.76-1.02)	
OCDF											
441.7428	41.887	41.875	1	1.002	530577	155278	73	182	2127		
443.7399	41.887	41.875	1	1.002	588163	168537	77	192	2189	0.90(0.76-1.02)	
OCDD											
457.7377	41.803	41.794	1	1.000	427984	122796	54	135	2274		
459.7348	41.803	41.794	1	1.000	482996	140394	56	140	2507	0.89(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

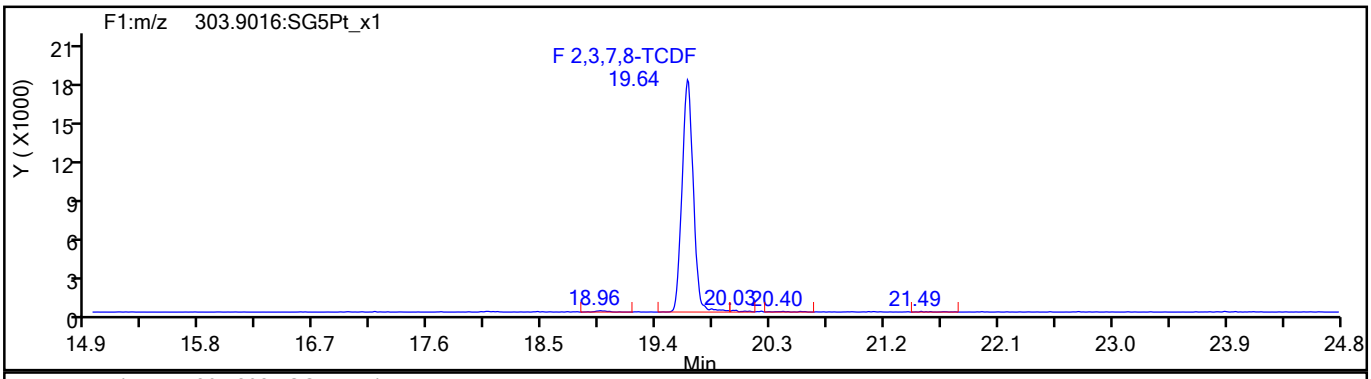

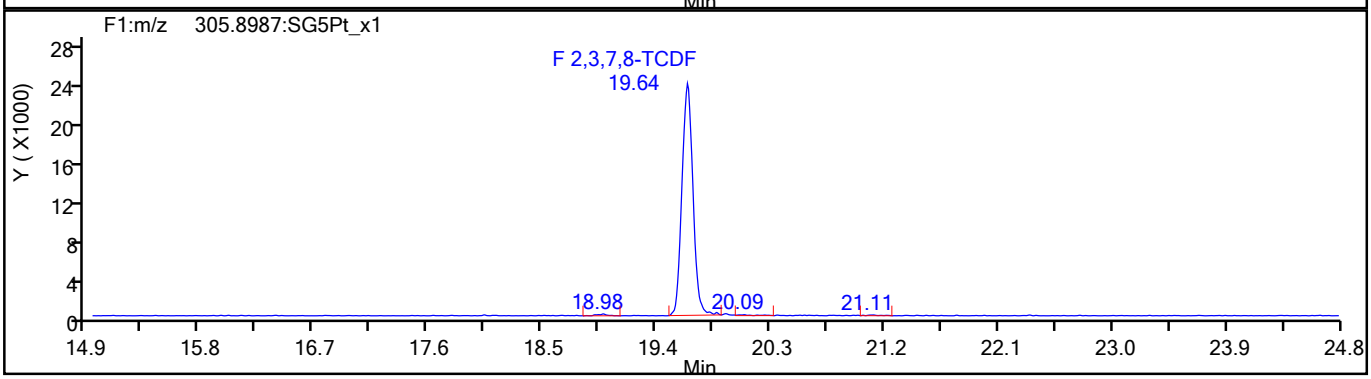

TCDF Standards

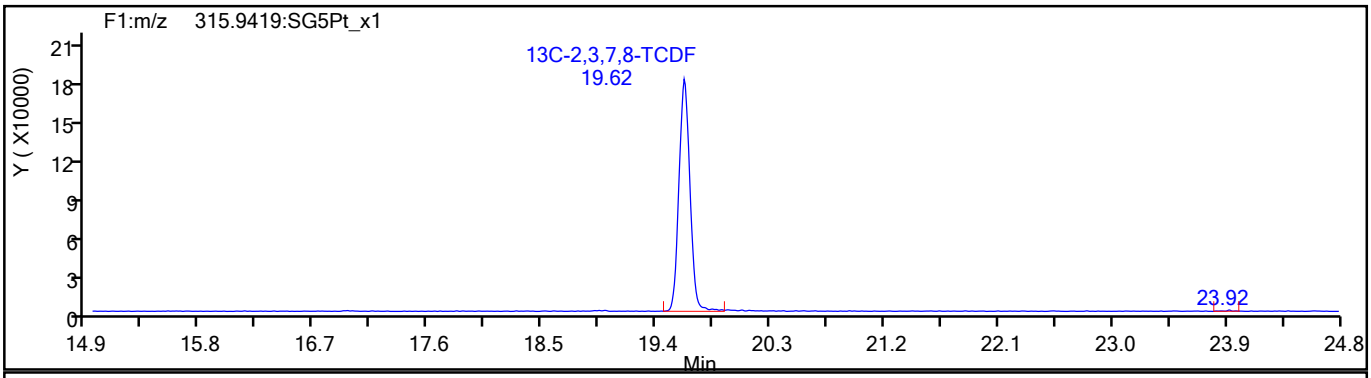

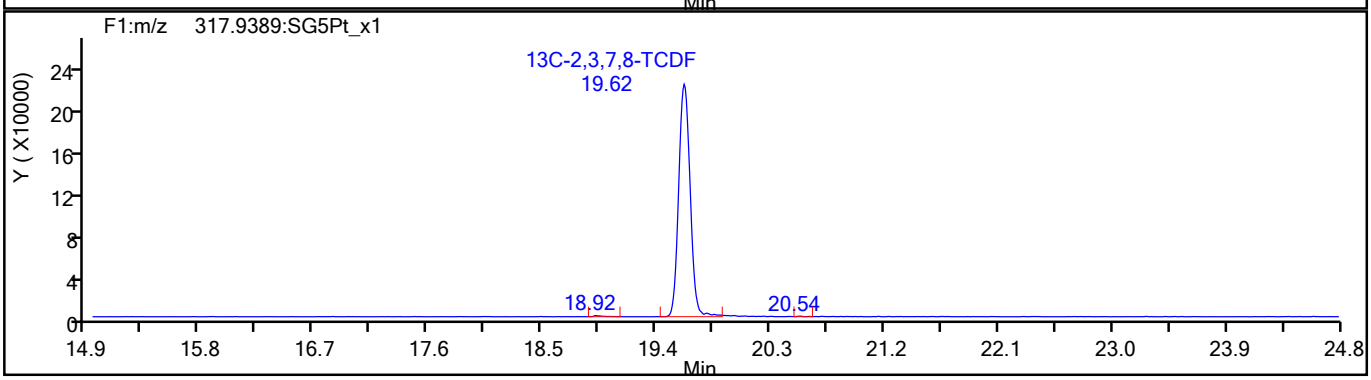

787295

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

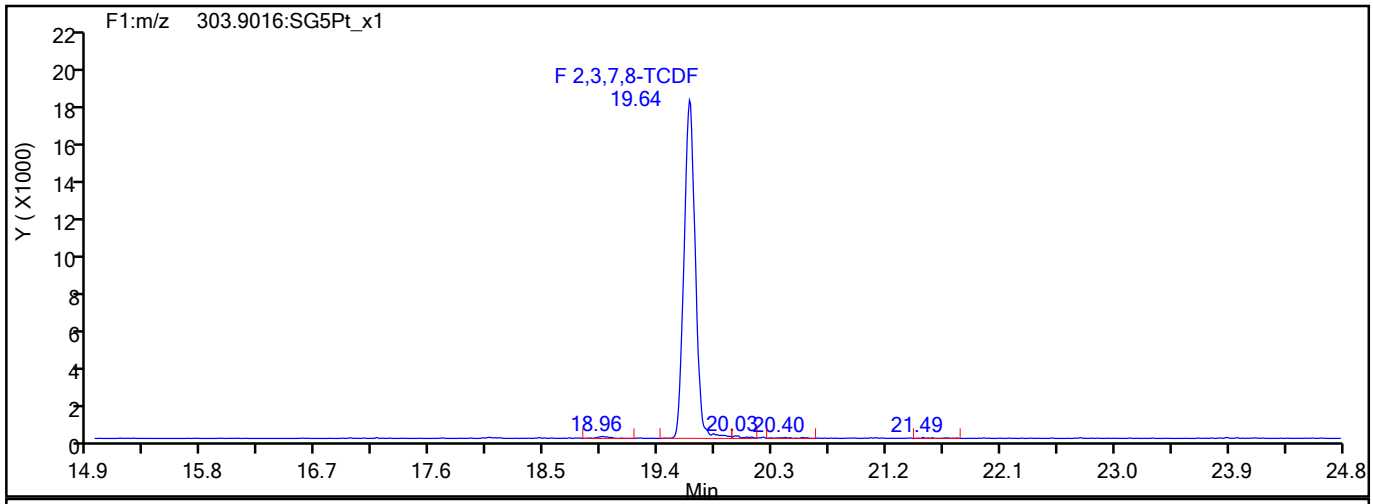

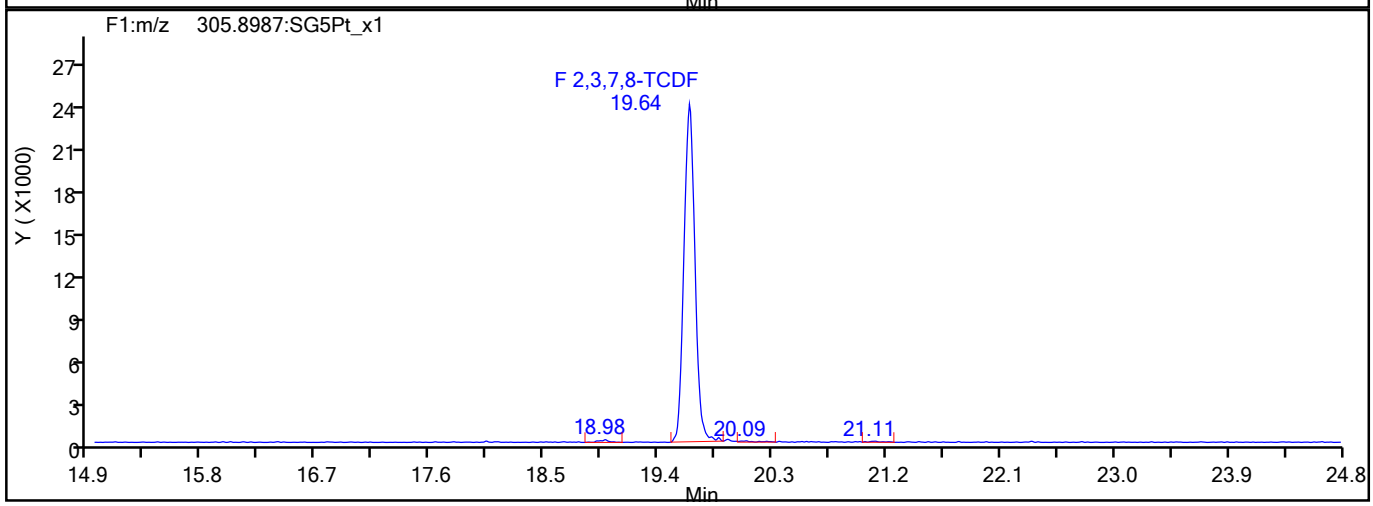

TCDF Interference Mass

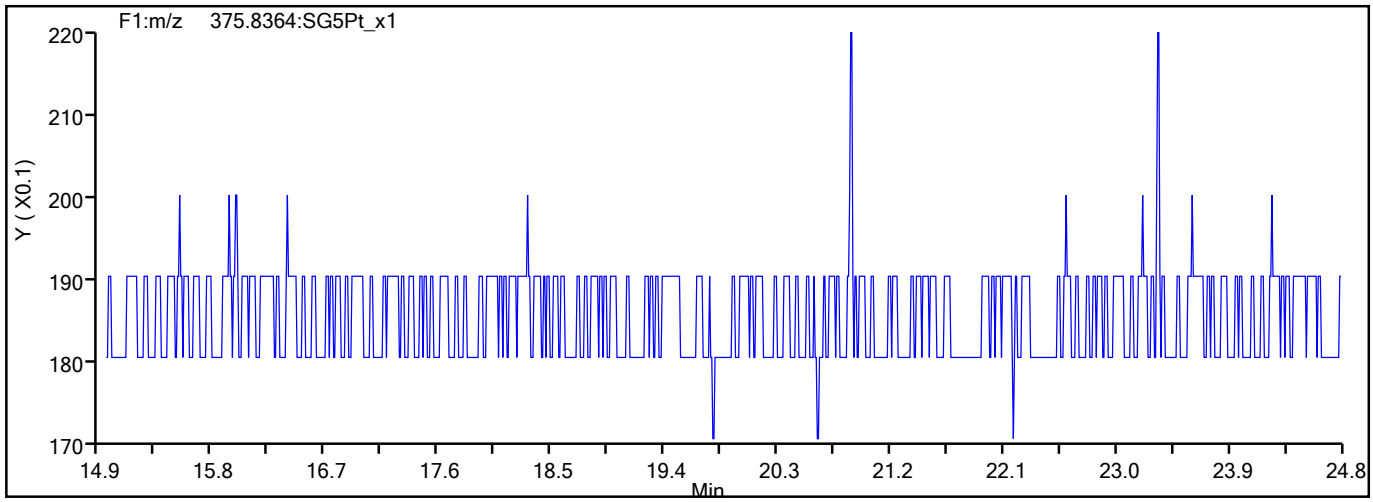

787296

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

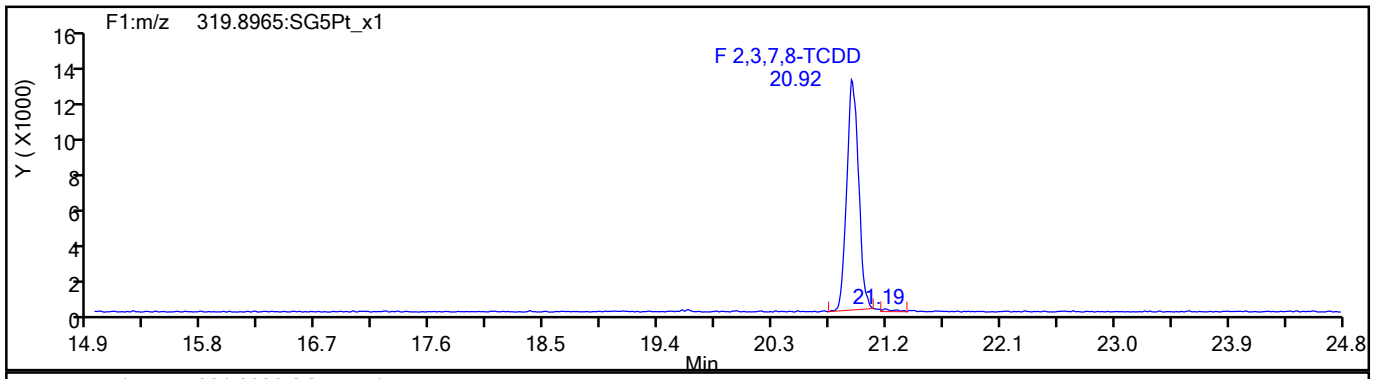

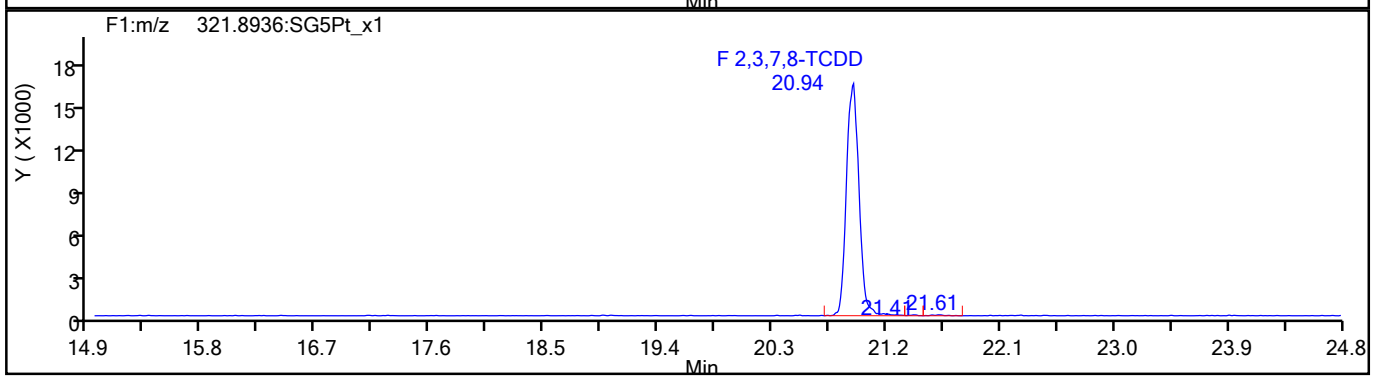

TCDD Standards

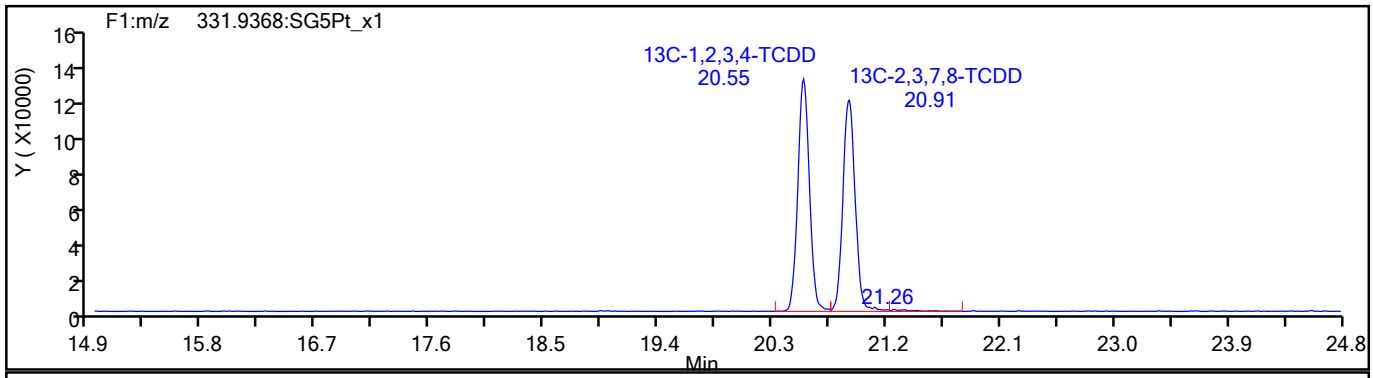

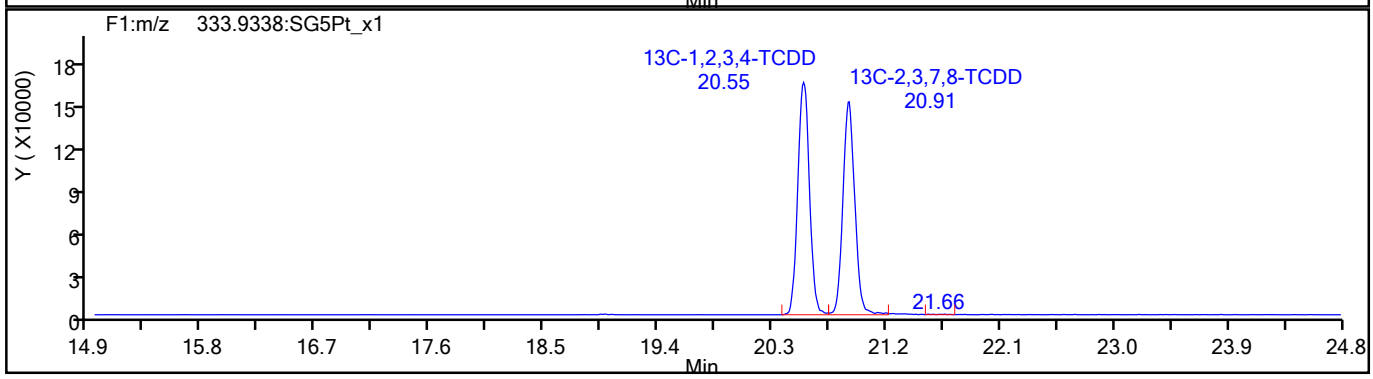

787297

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

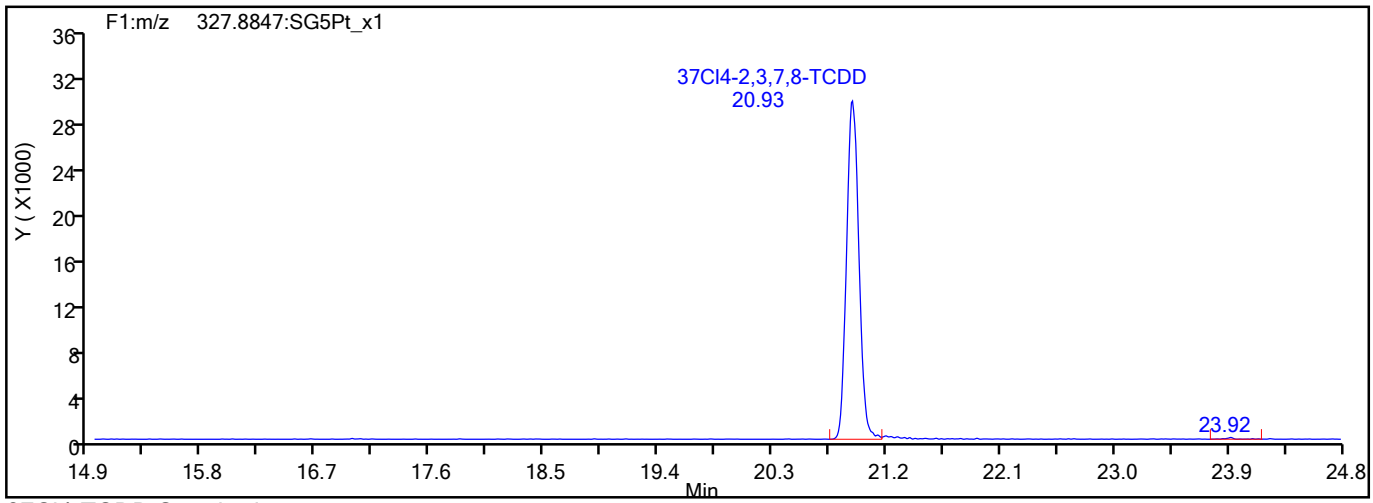

37Cl4-TCDD Standards

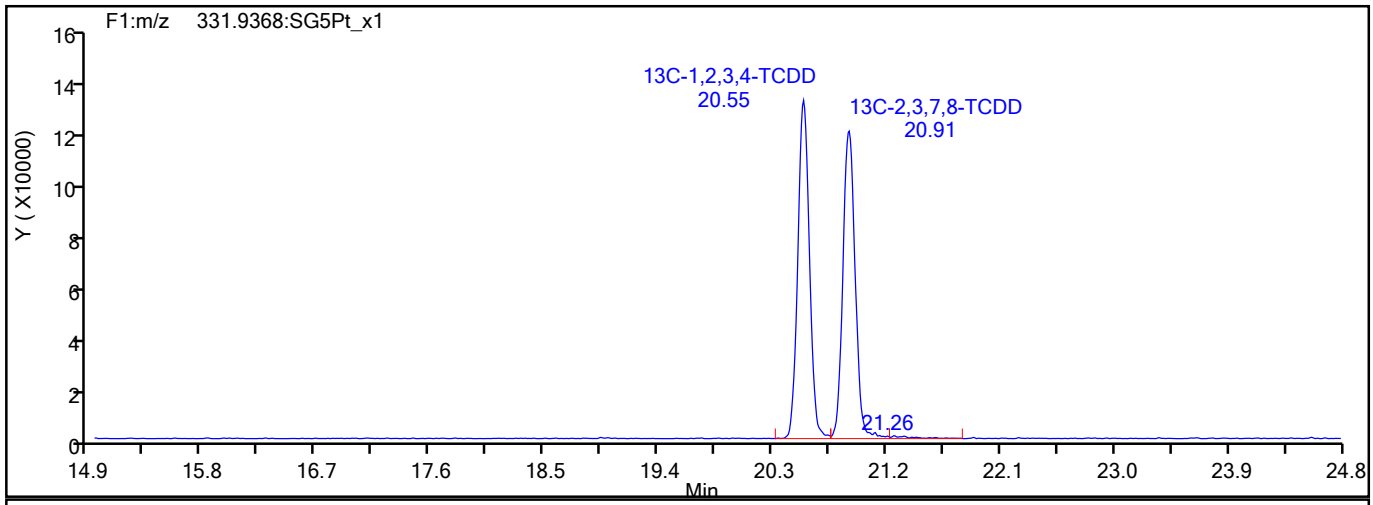

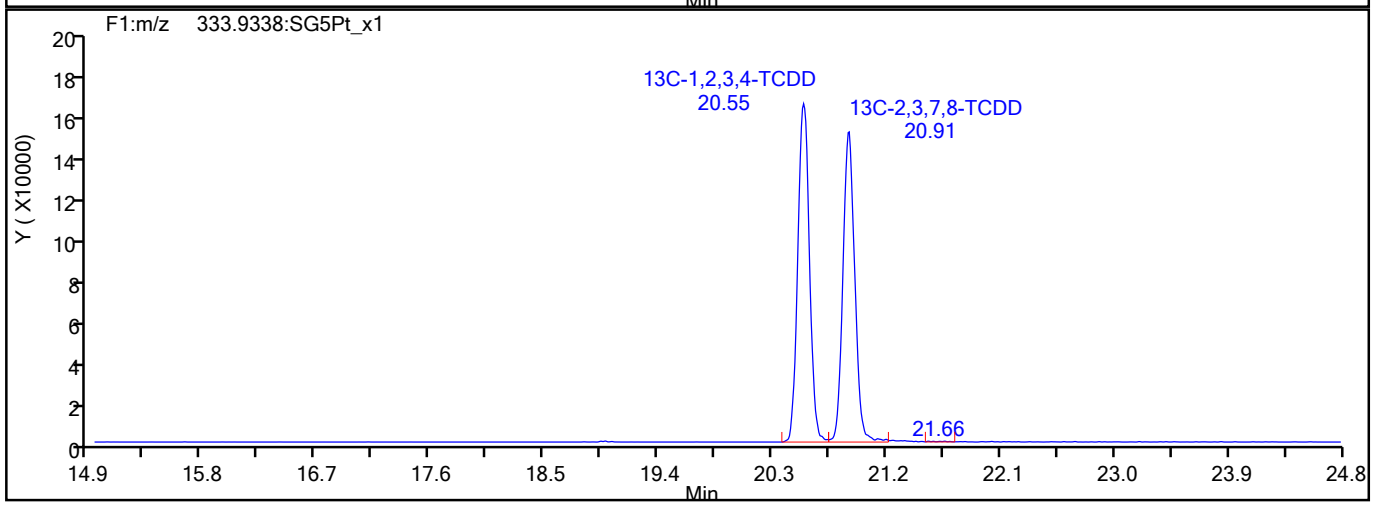

787298

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

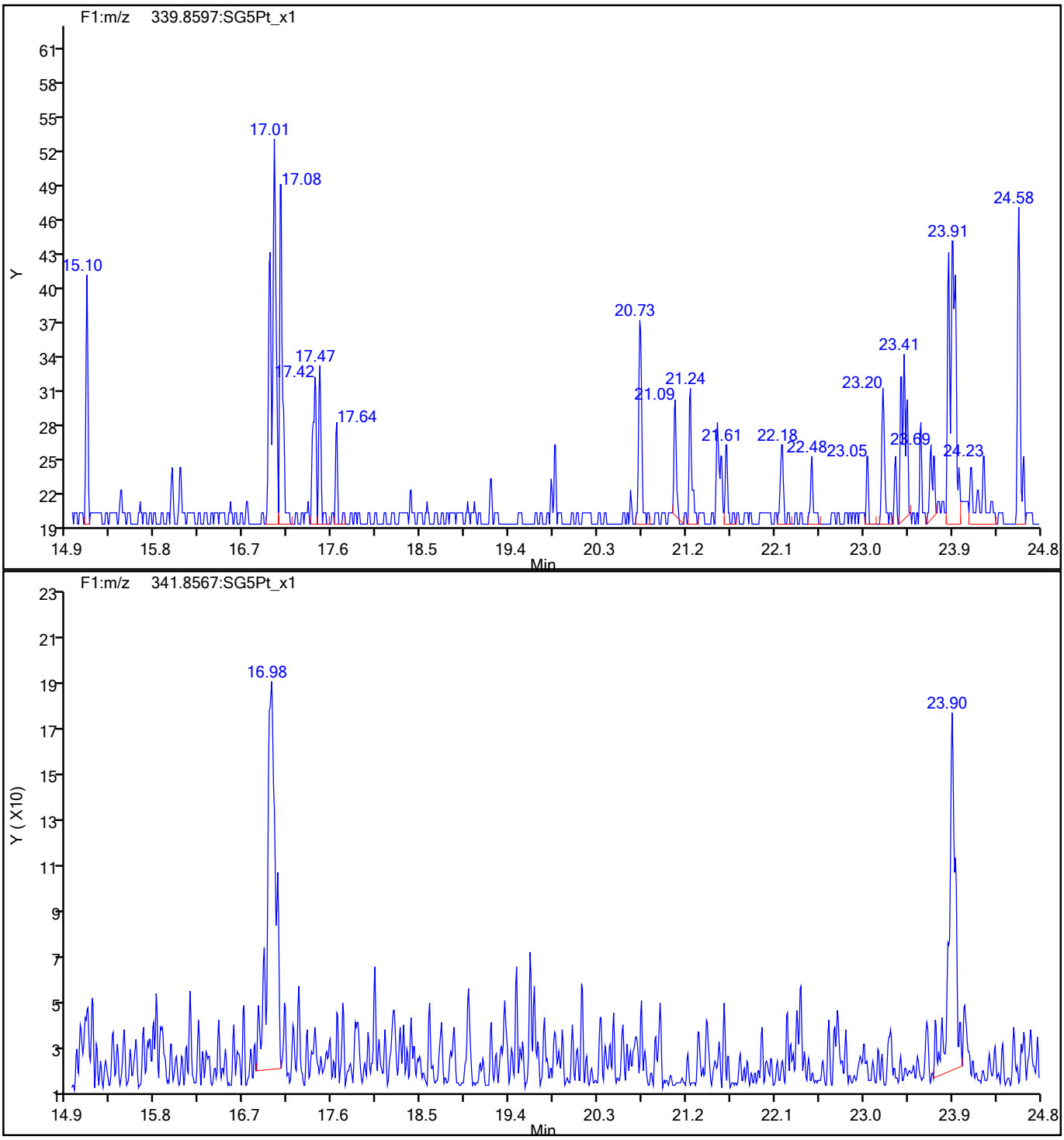

787299

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

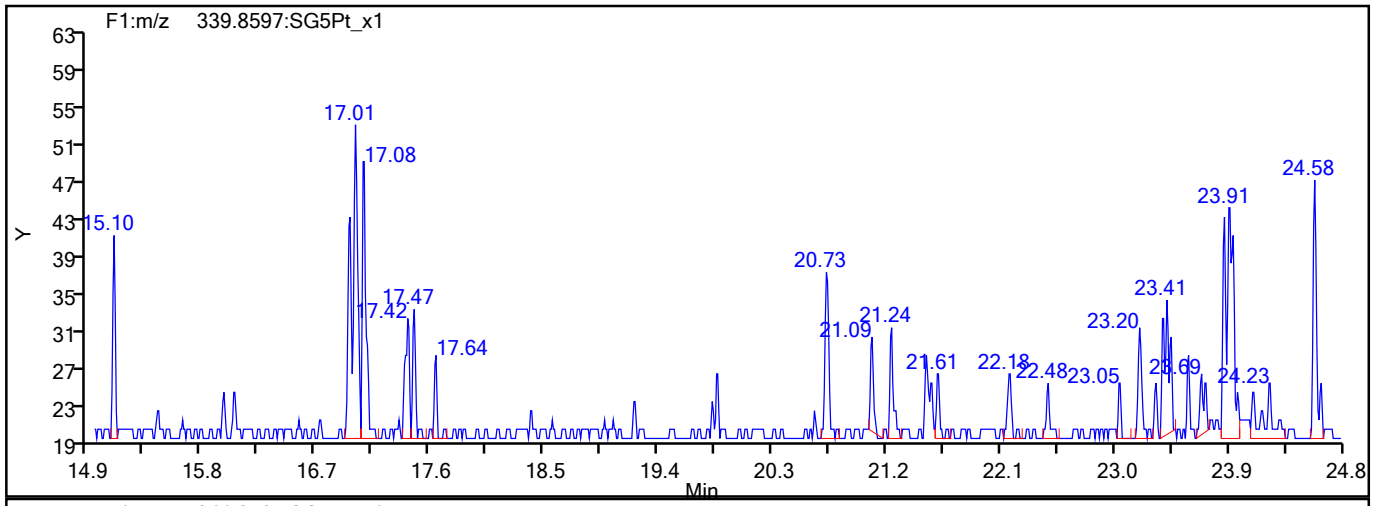

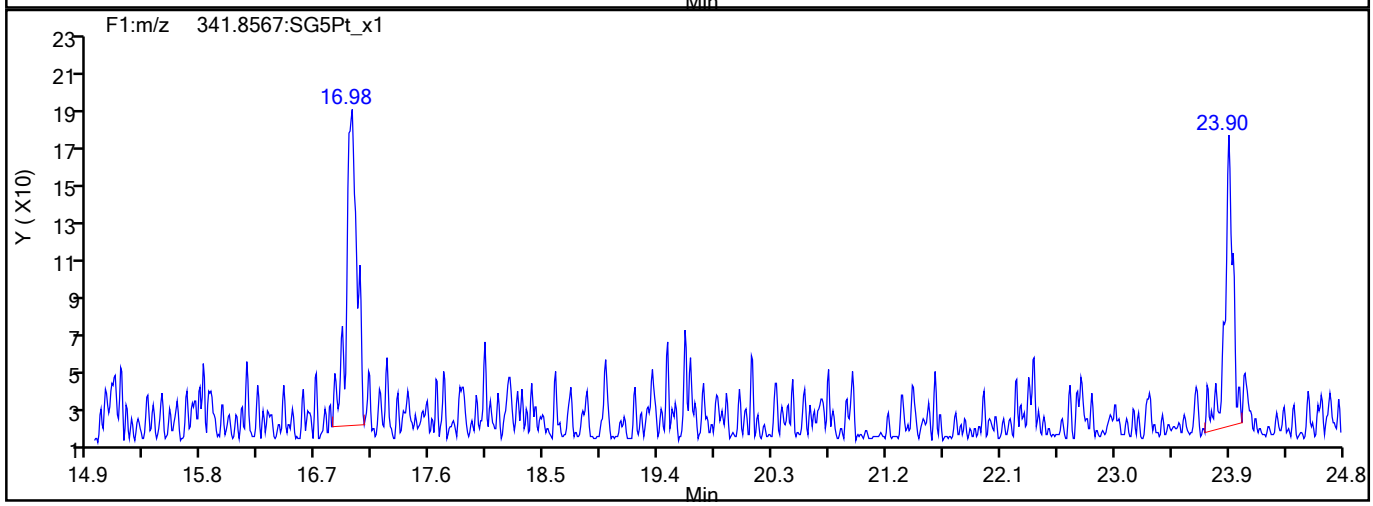

F1 PeCDFs Interference Mass

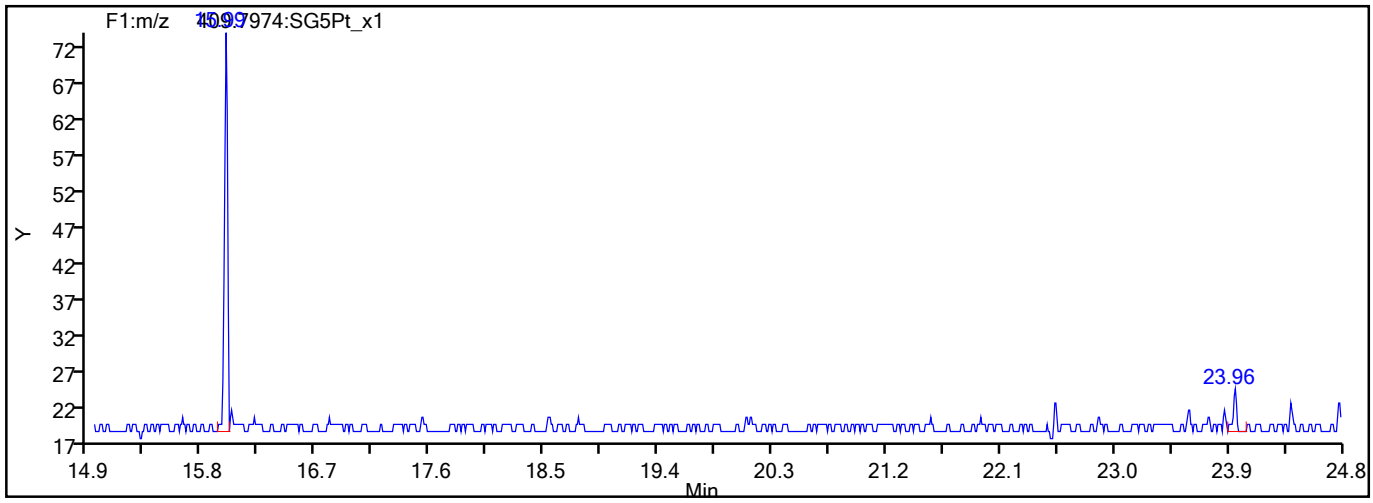

787300

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

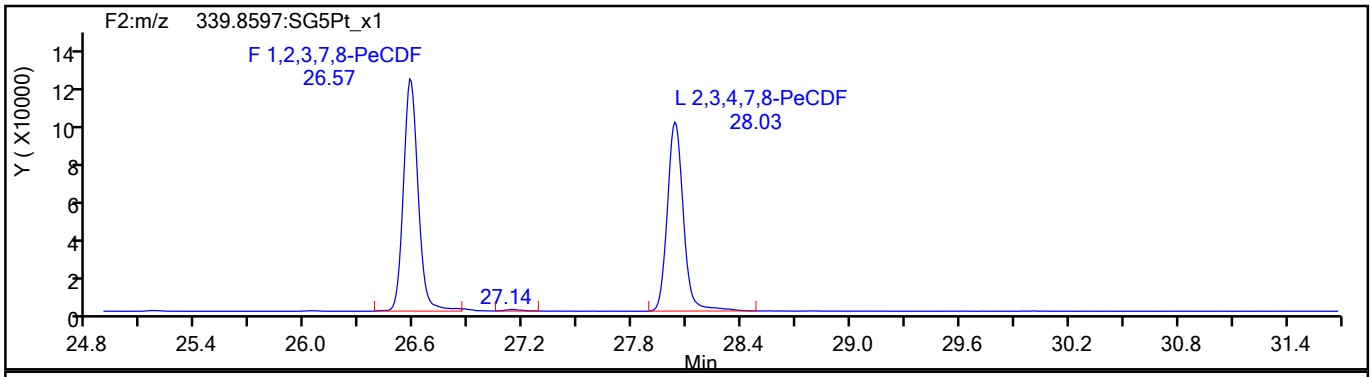

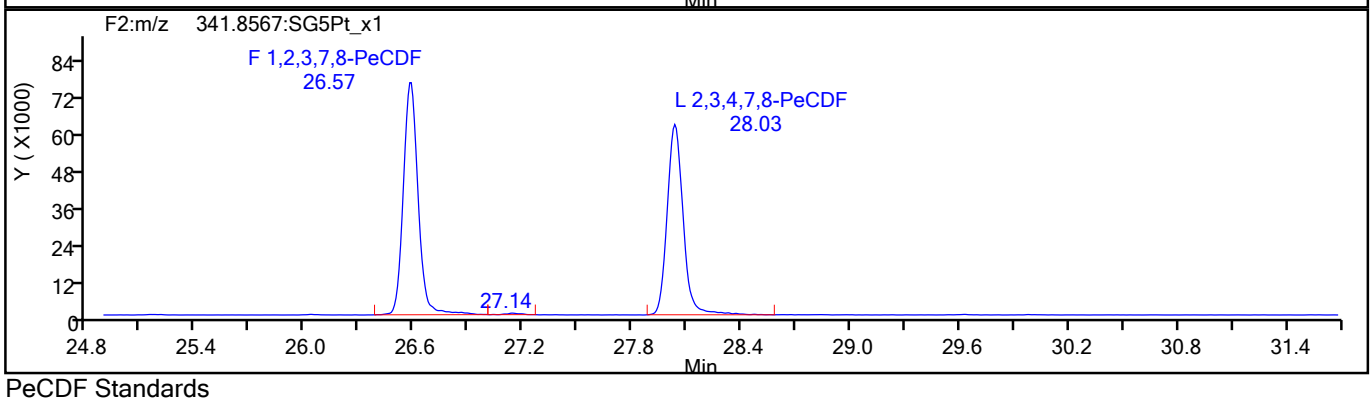

PeCDF Standards

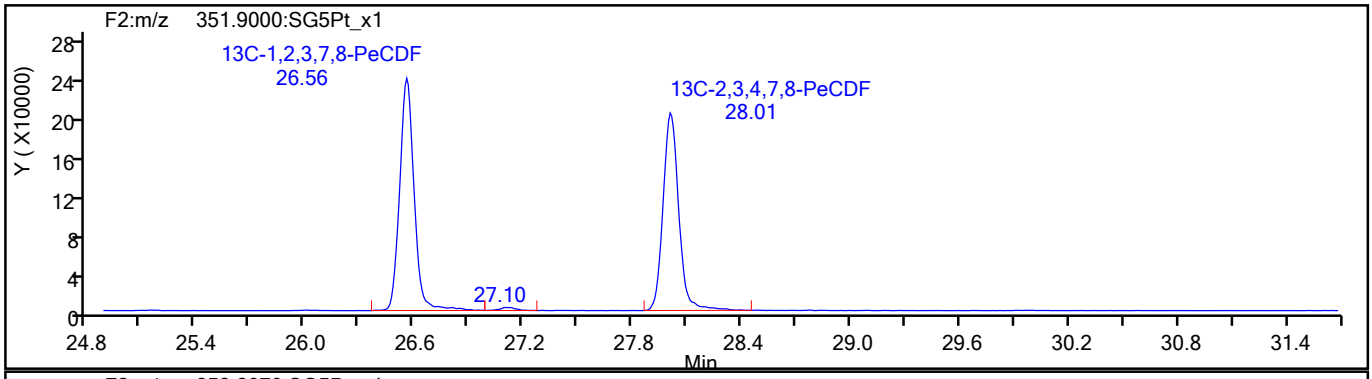

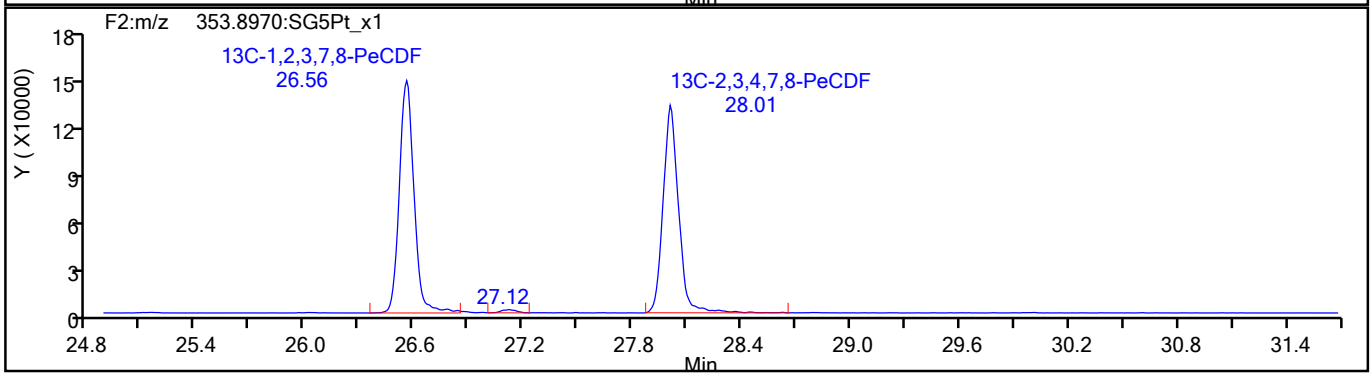

787301

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

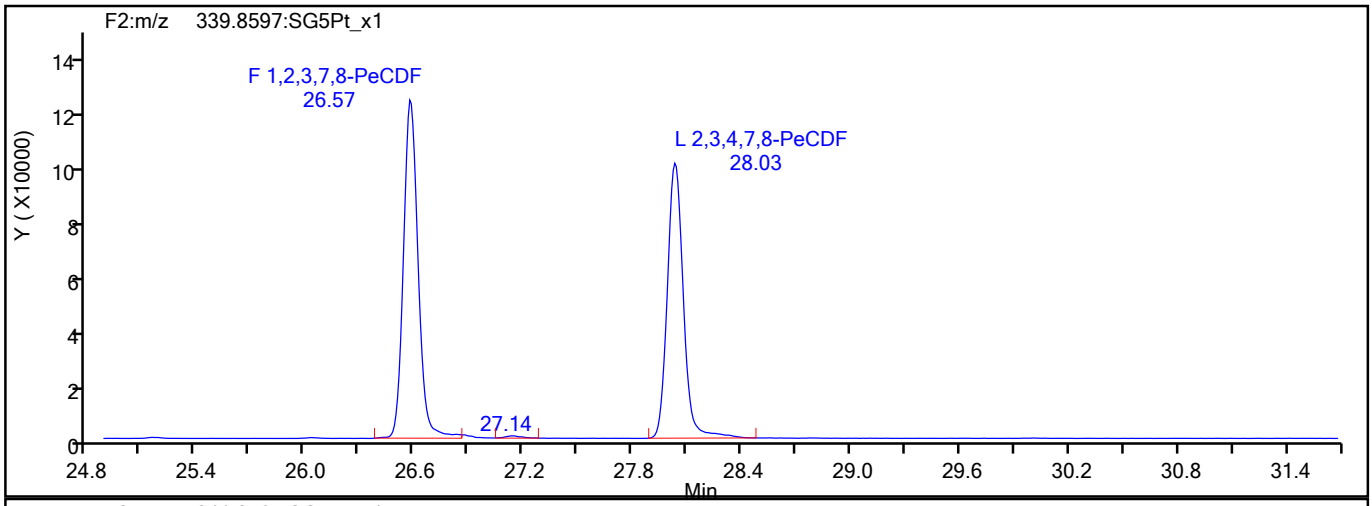

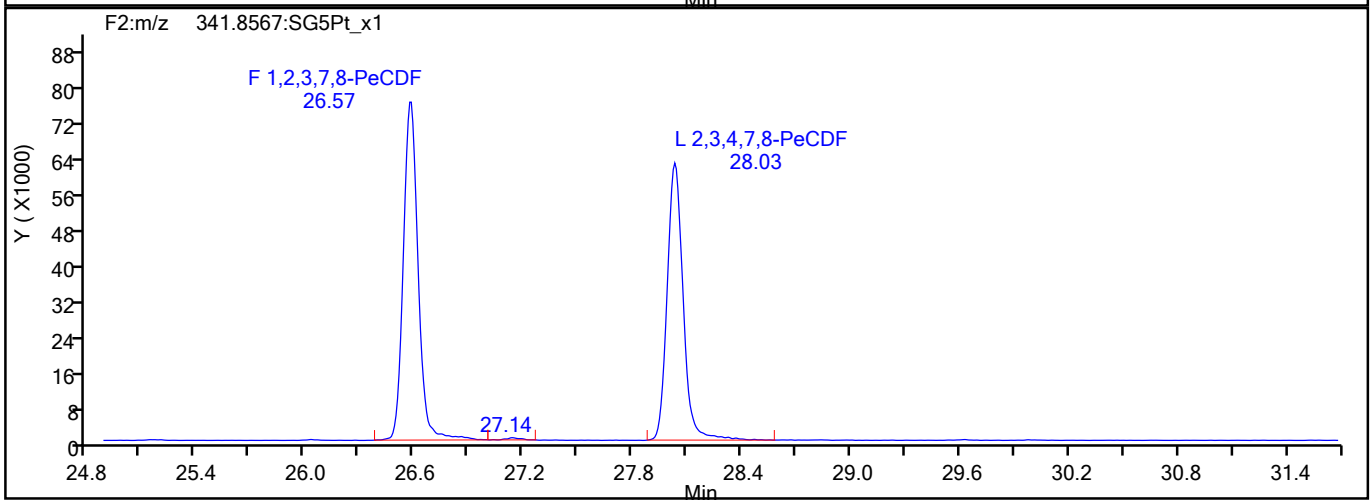

PeCDF Interference Mass

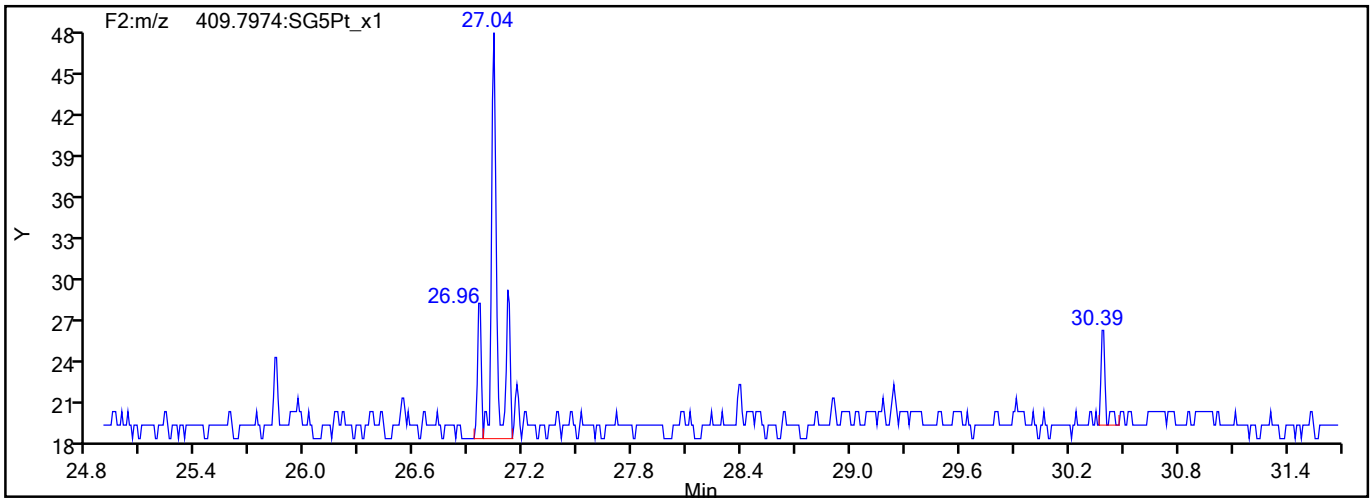

787302

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

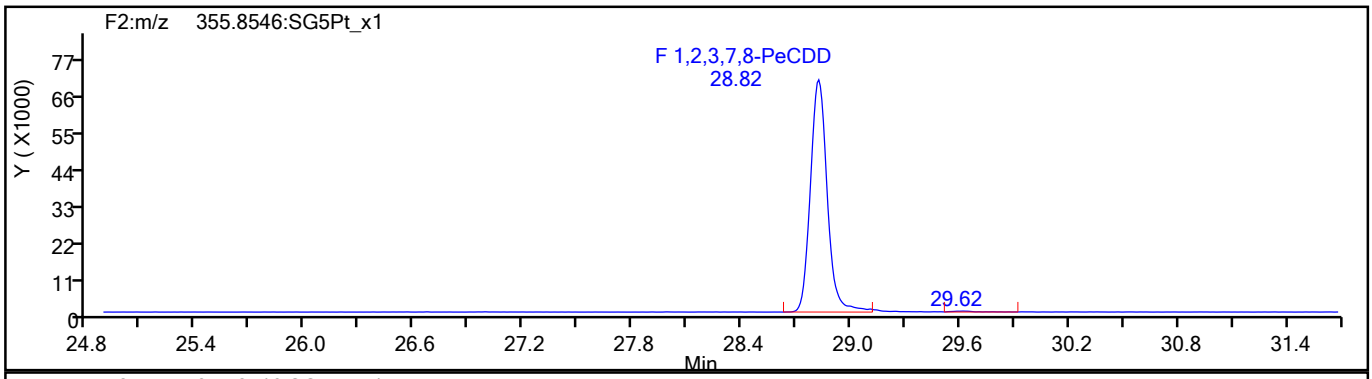

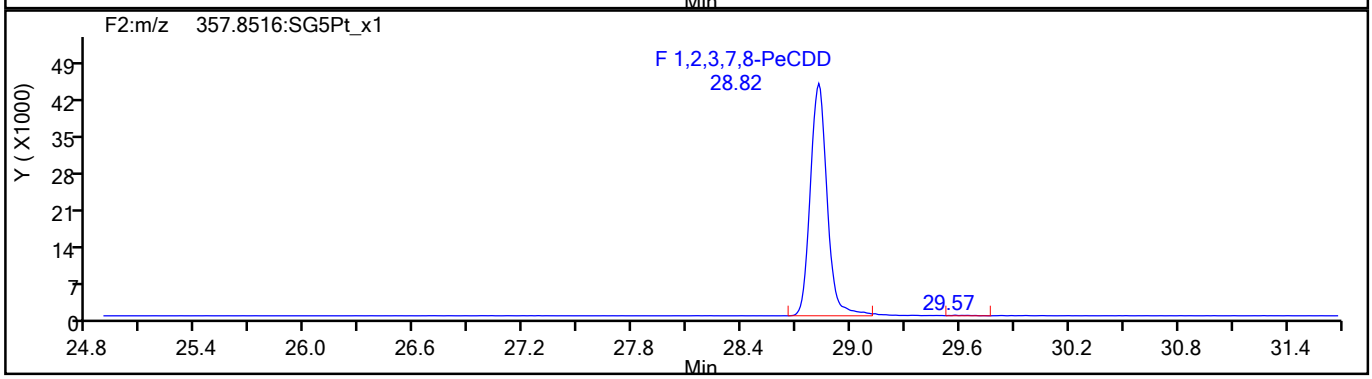

PeCDD Standards

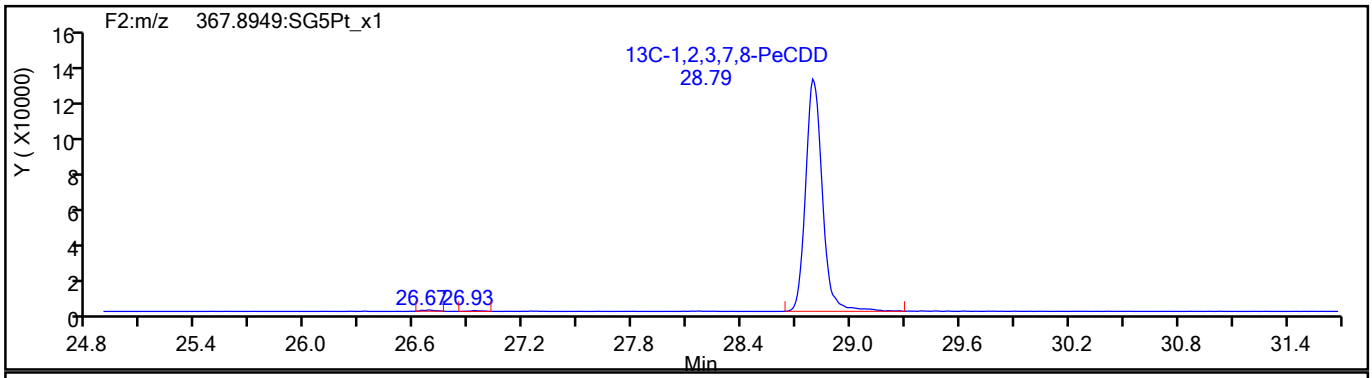

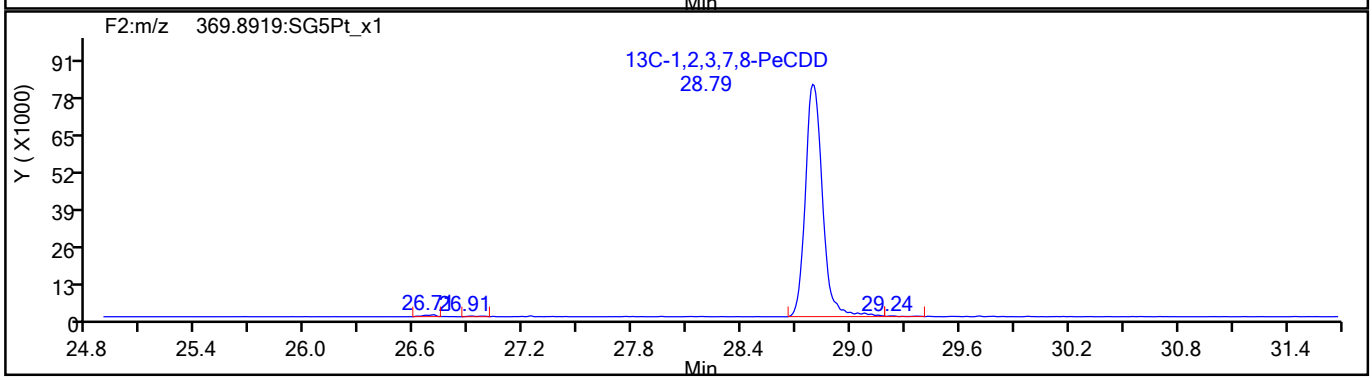

787303

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

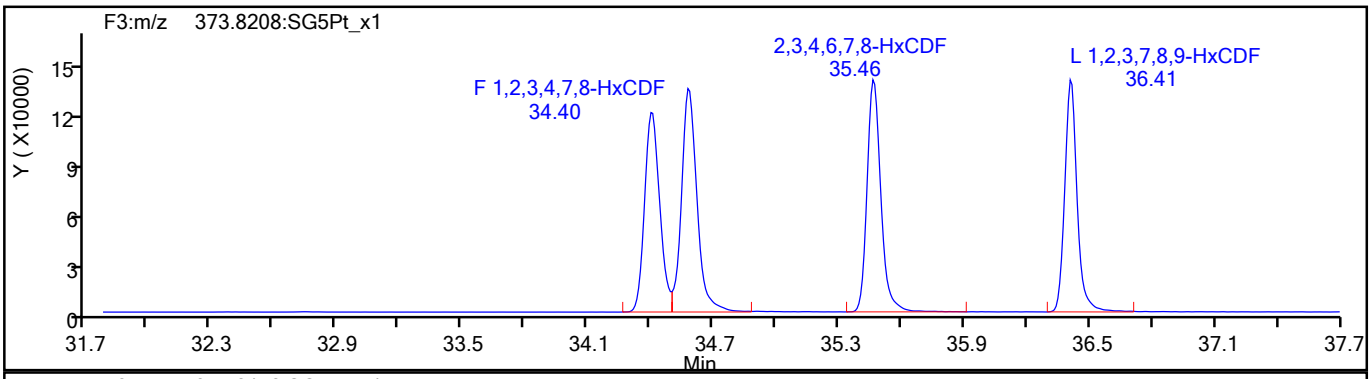

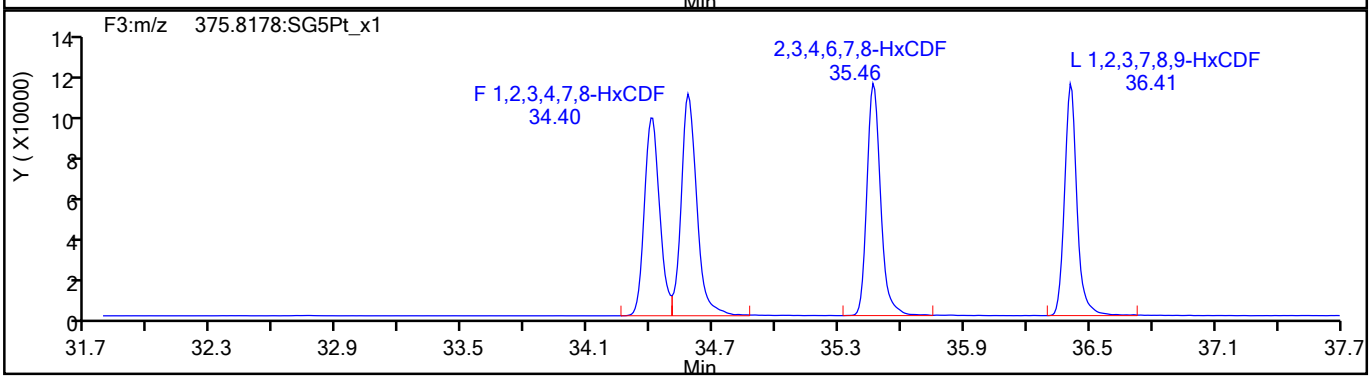

HxCDF Standards

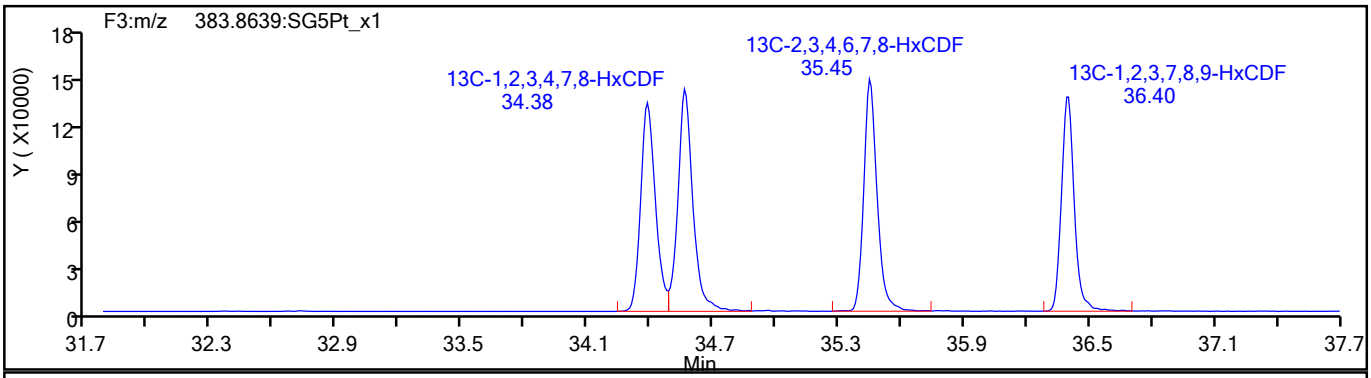

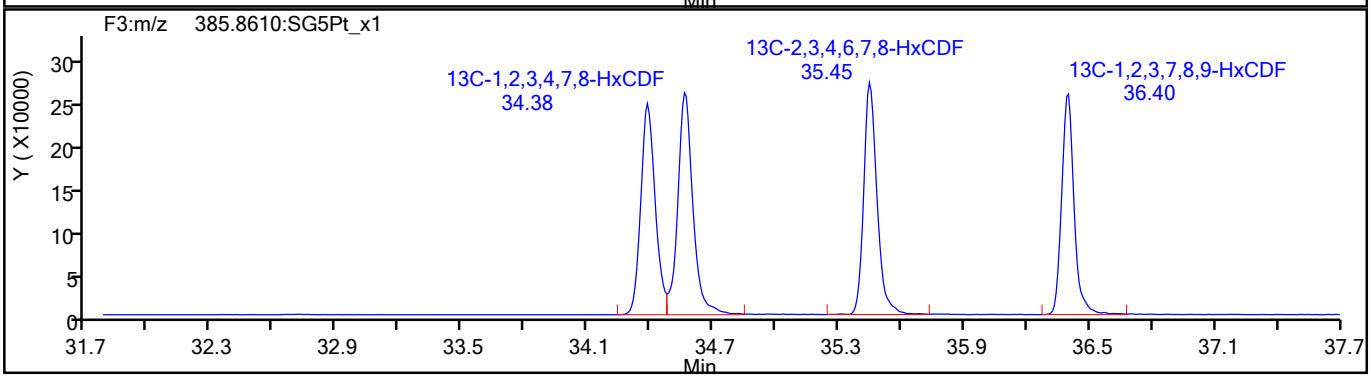

787304

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

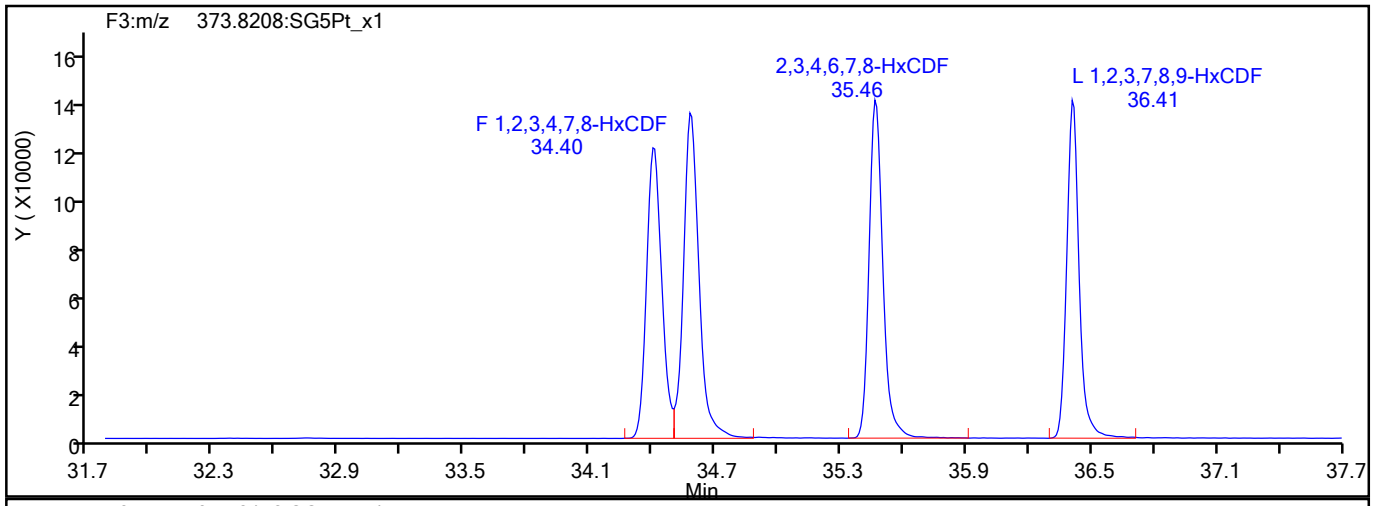

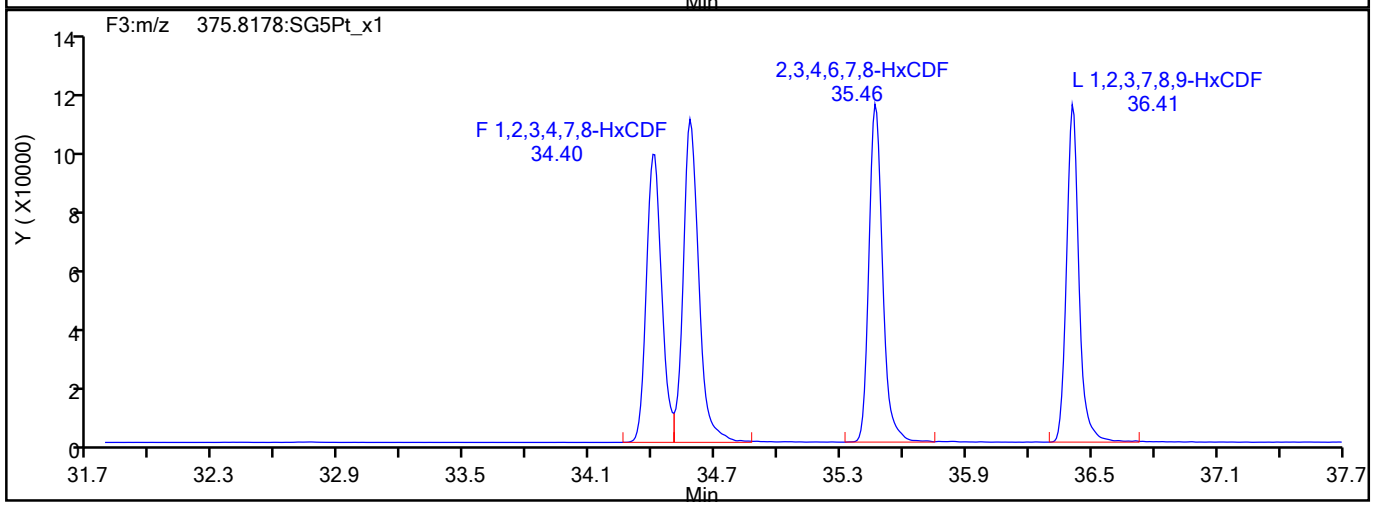

HxCDF Interference Mass

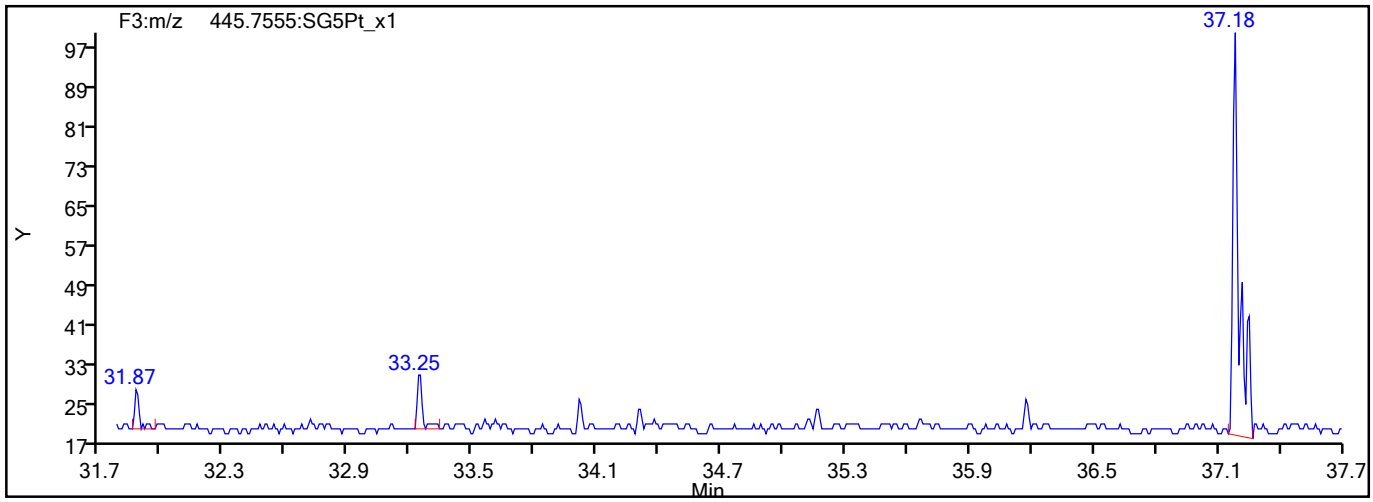

787305

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

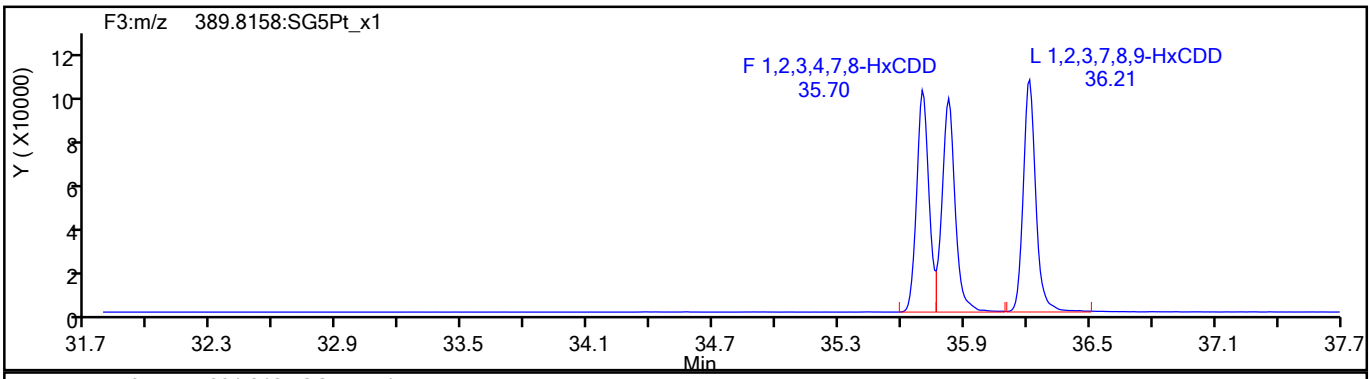

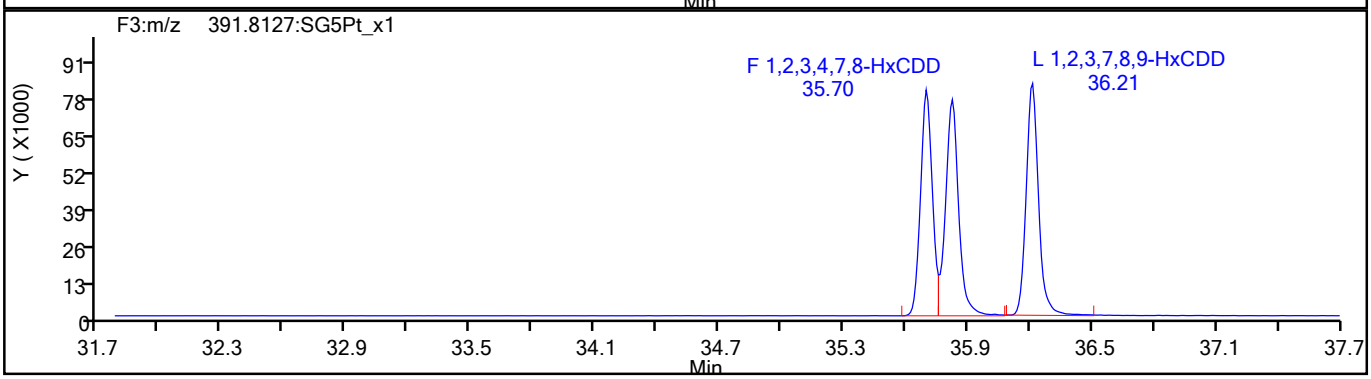

HxCDD Standards

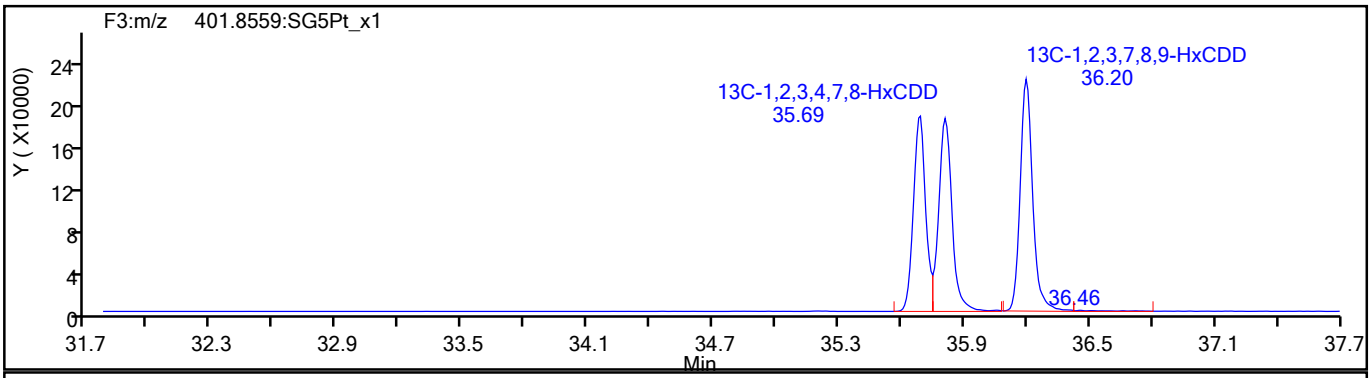

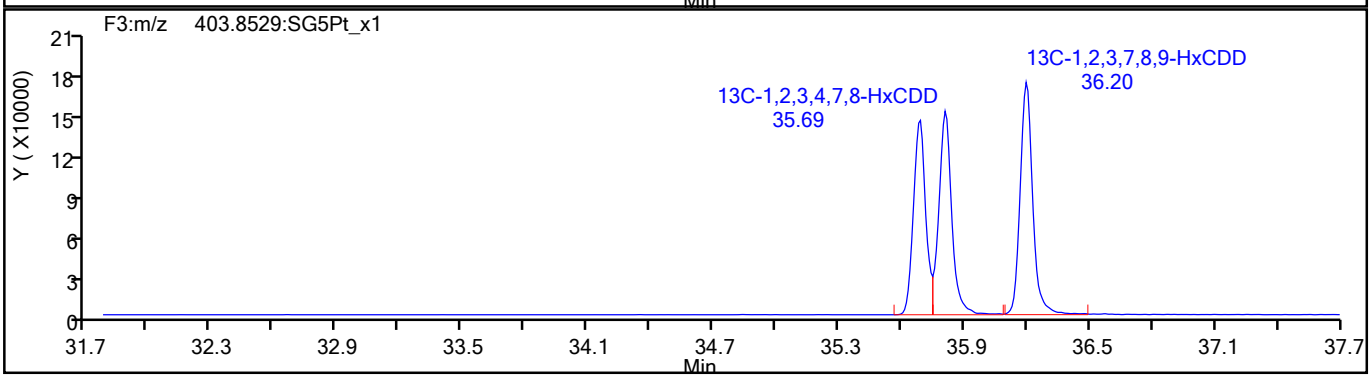

787306

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

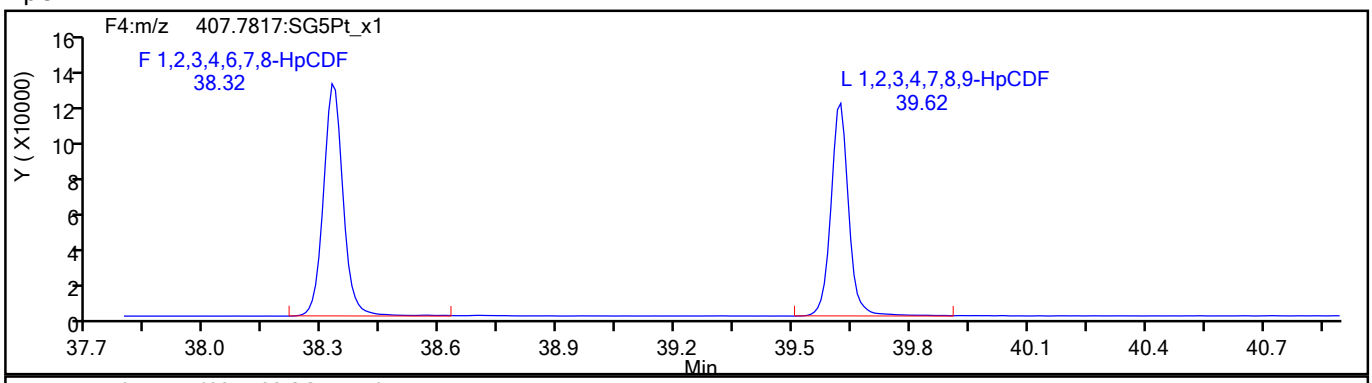

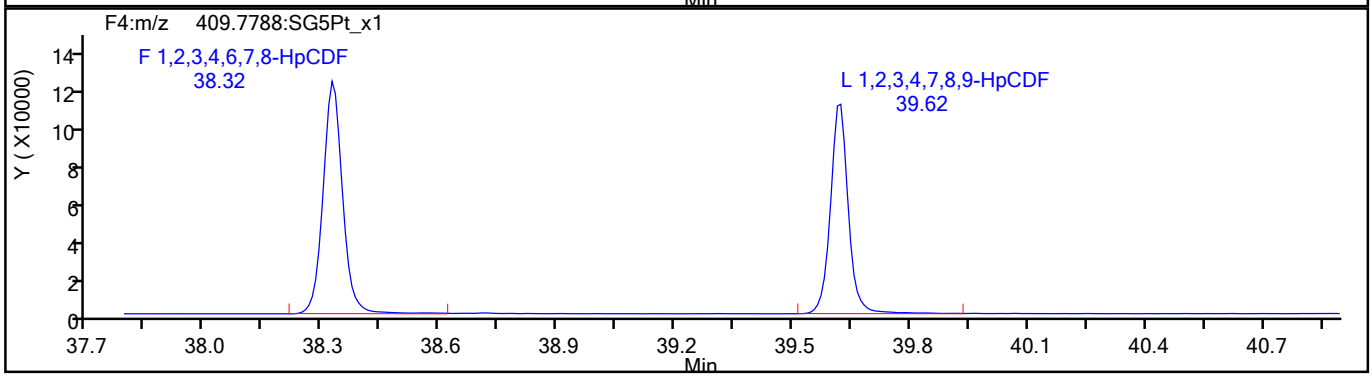

HpCDF Standards

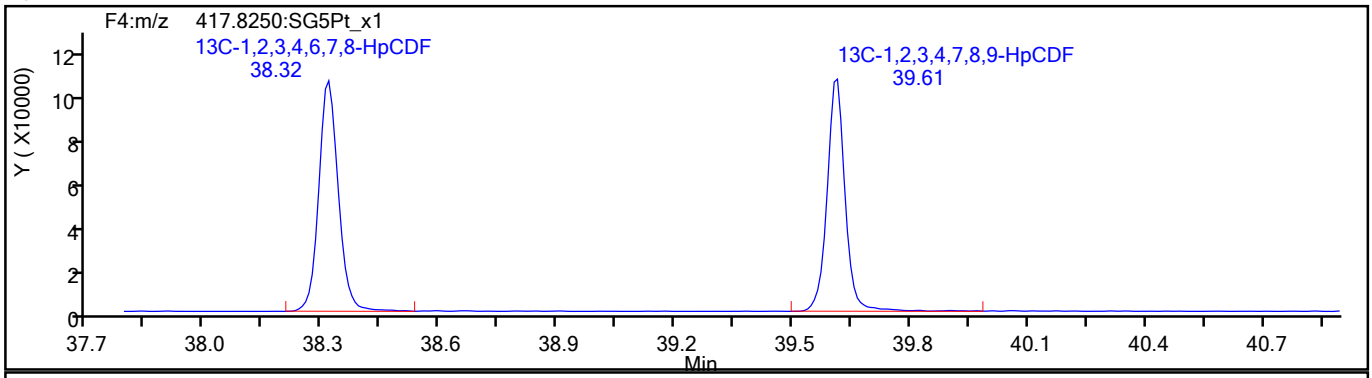

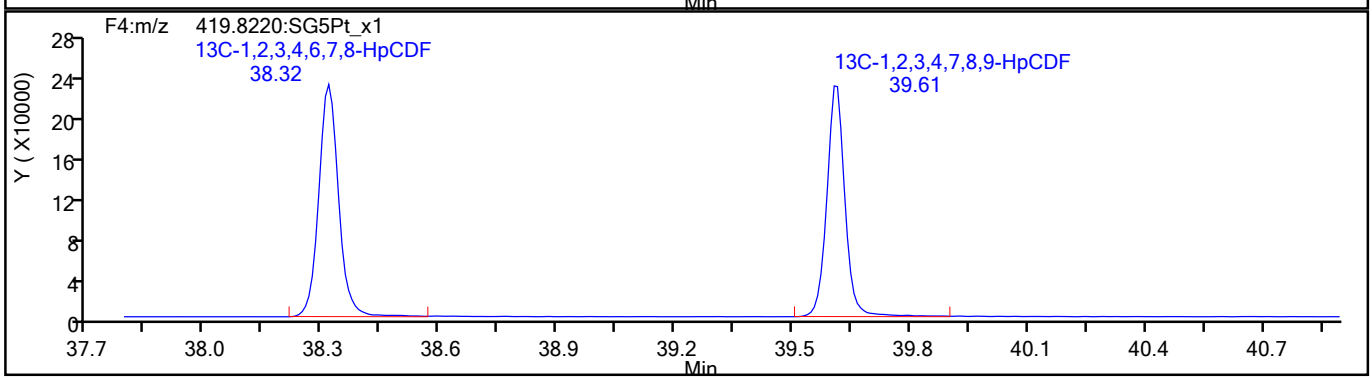

787307

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

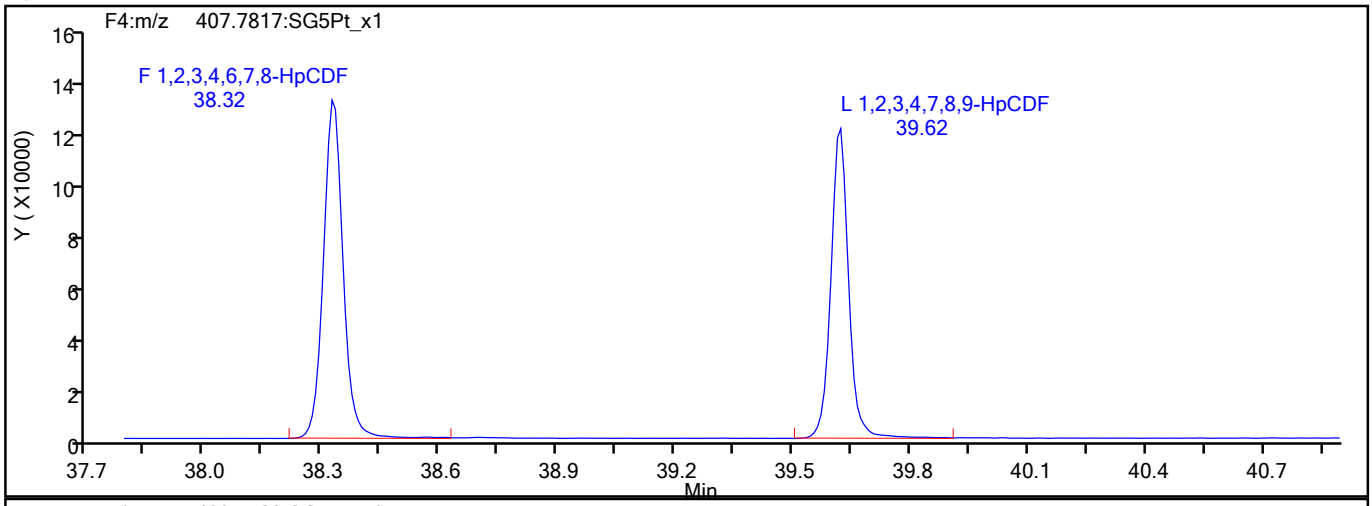

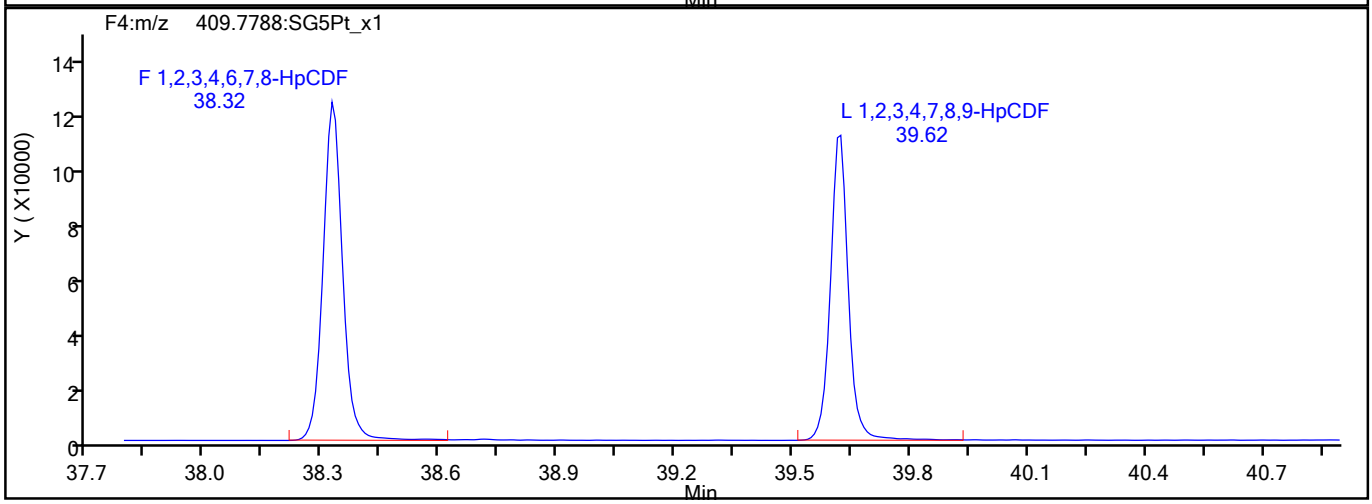

HpCDF Interference Mass

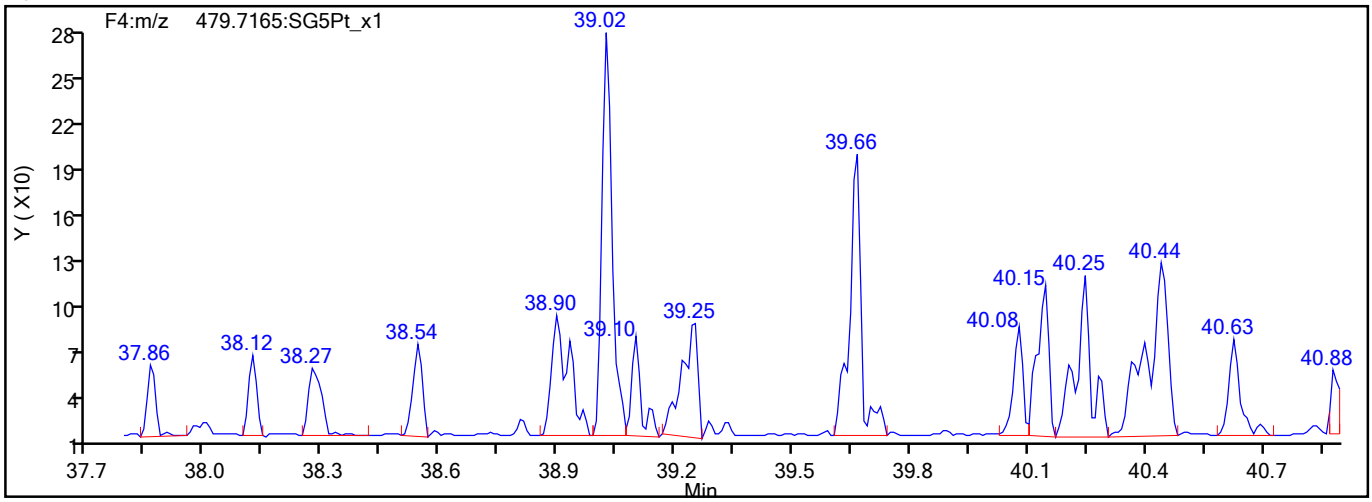

787308

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

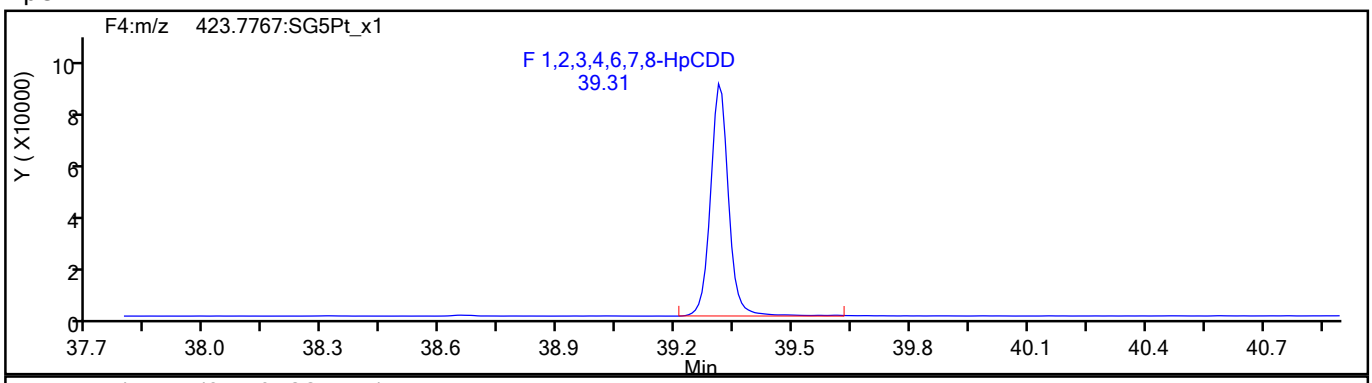

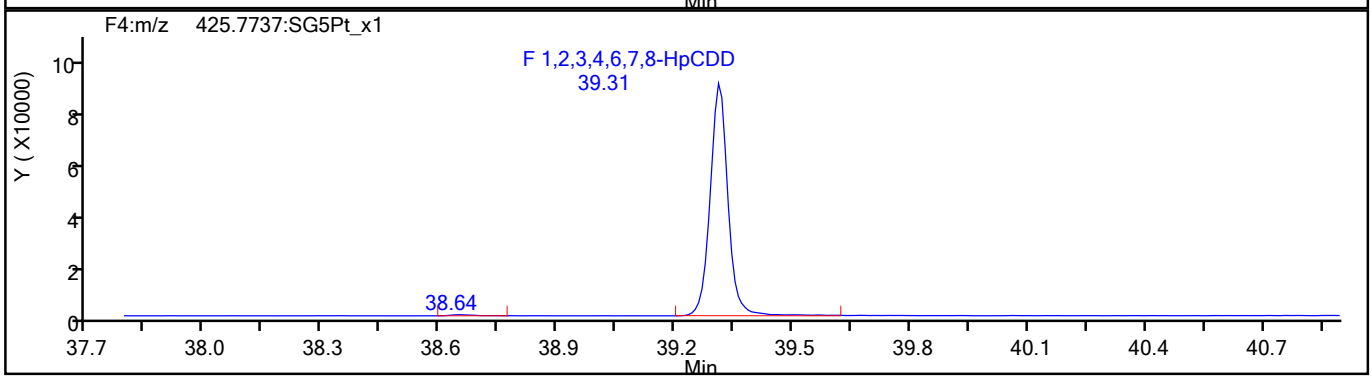

HpCDD Standards

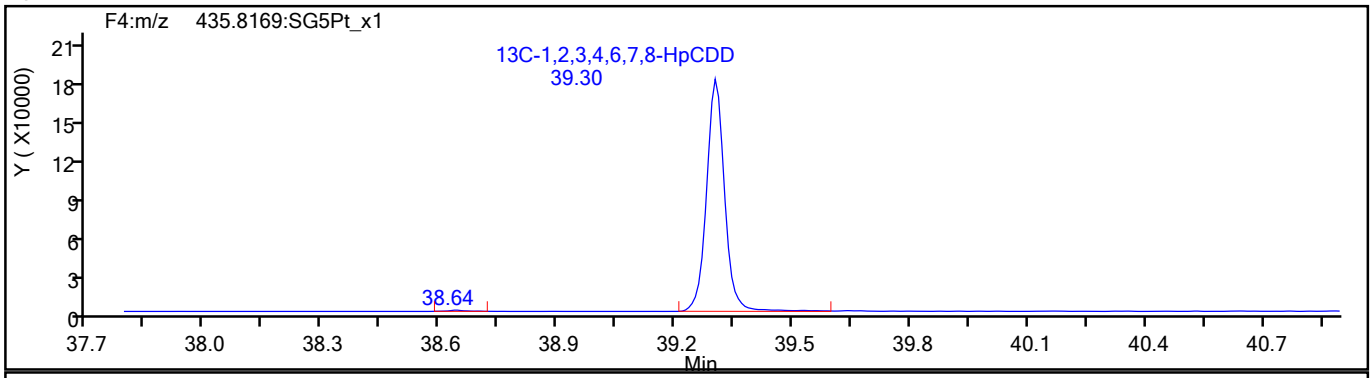

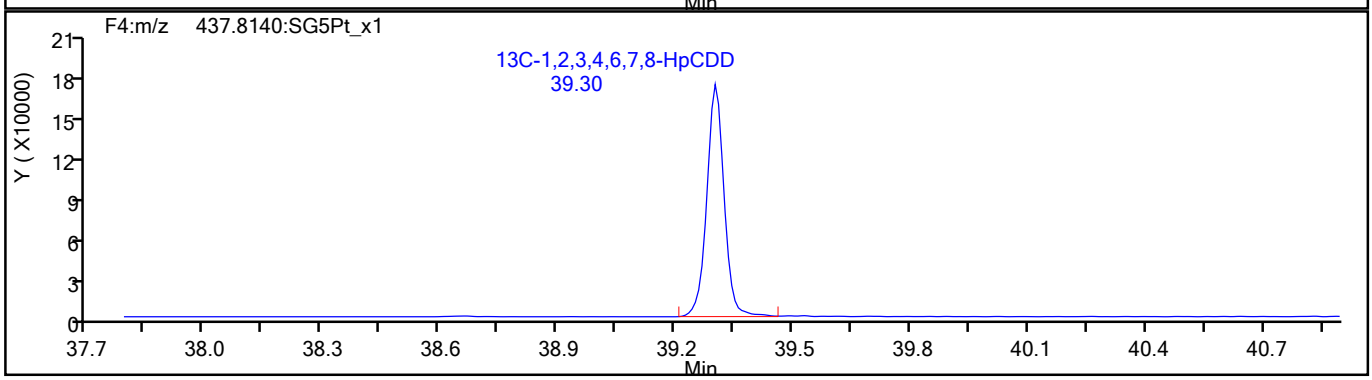

787309

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

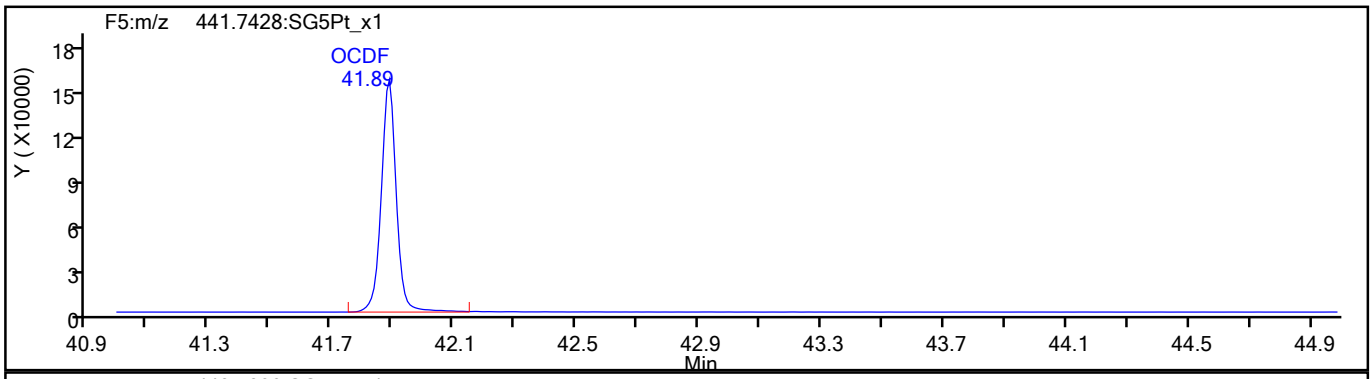

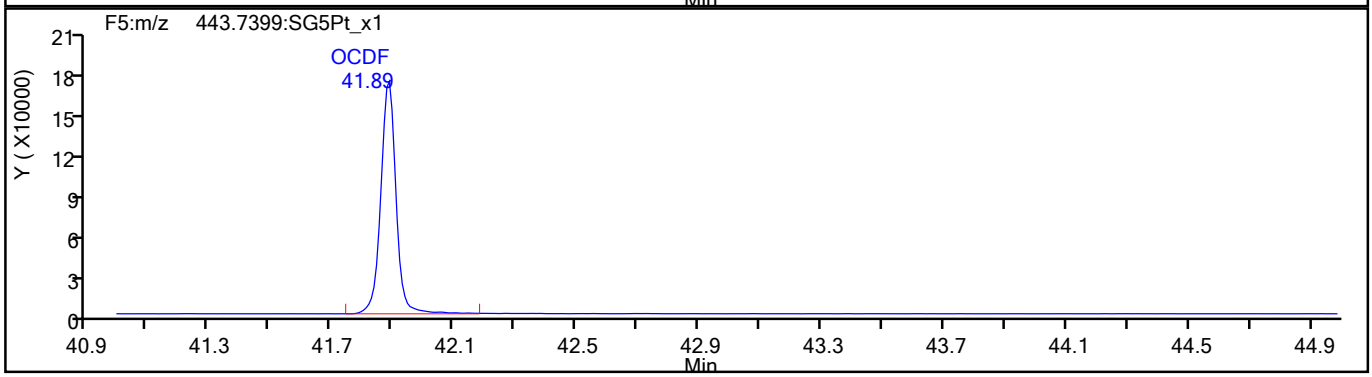

OCDF Standards

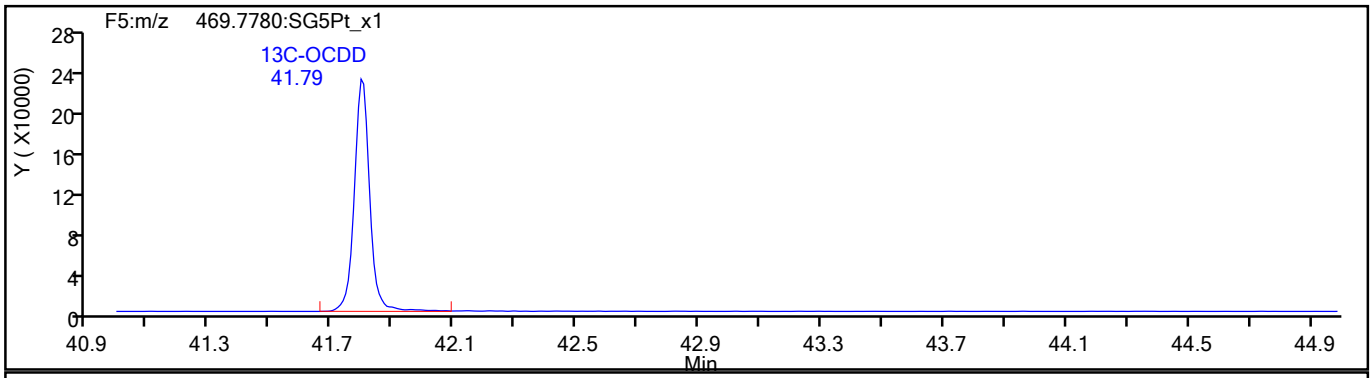

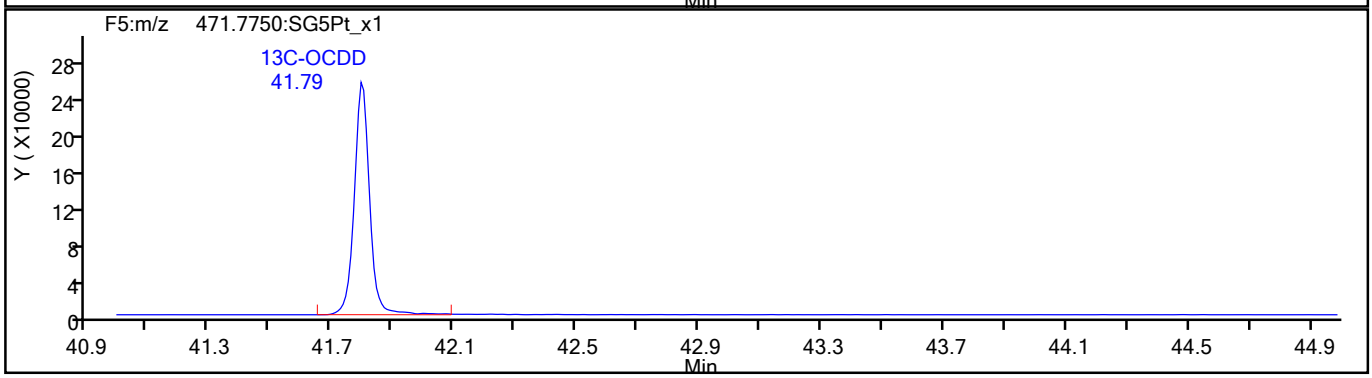

787310

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

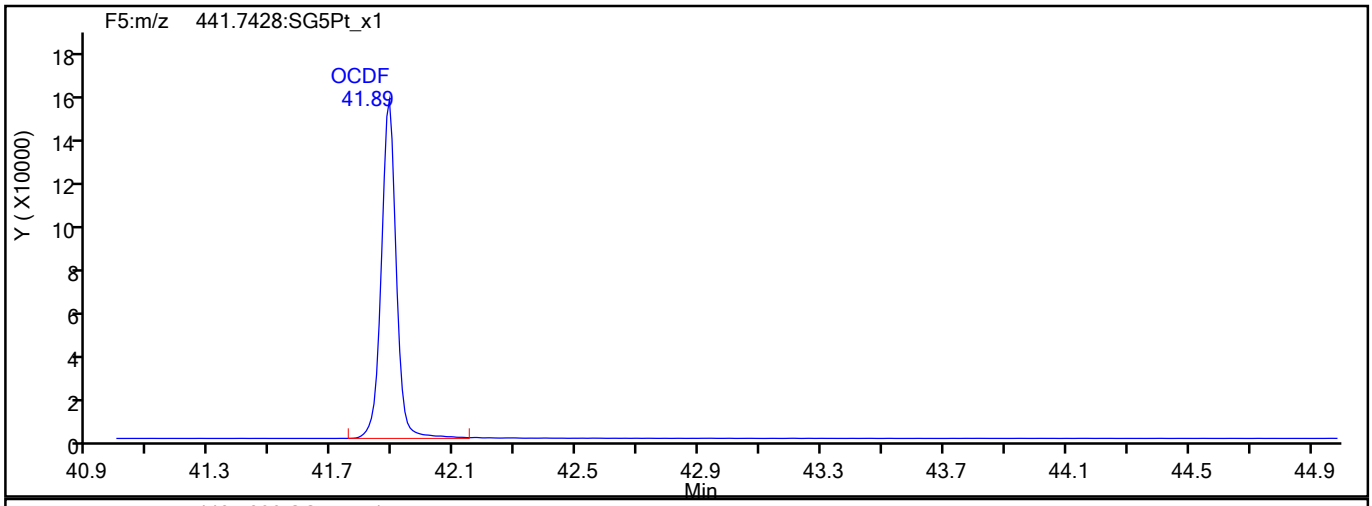

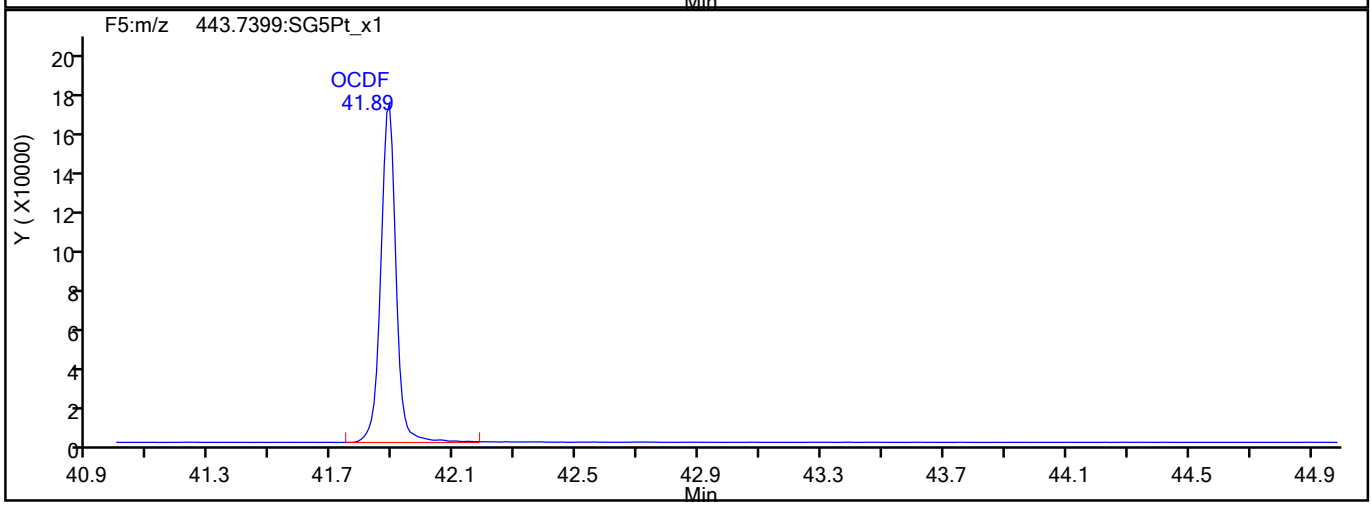

OCDF Interference Mass

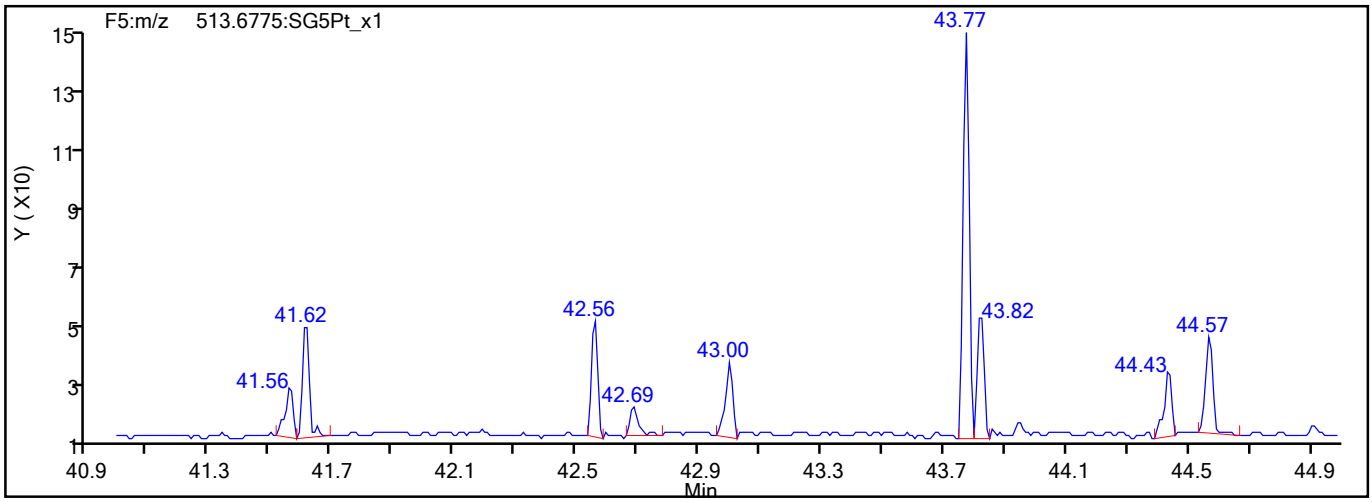

787311

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

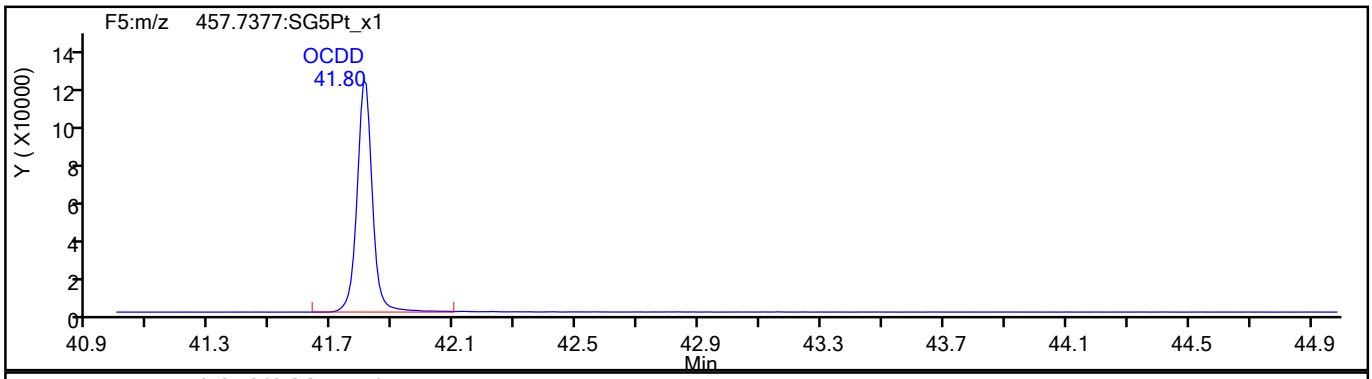

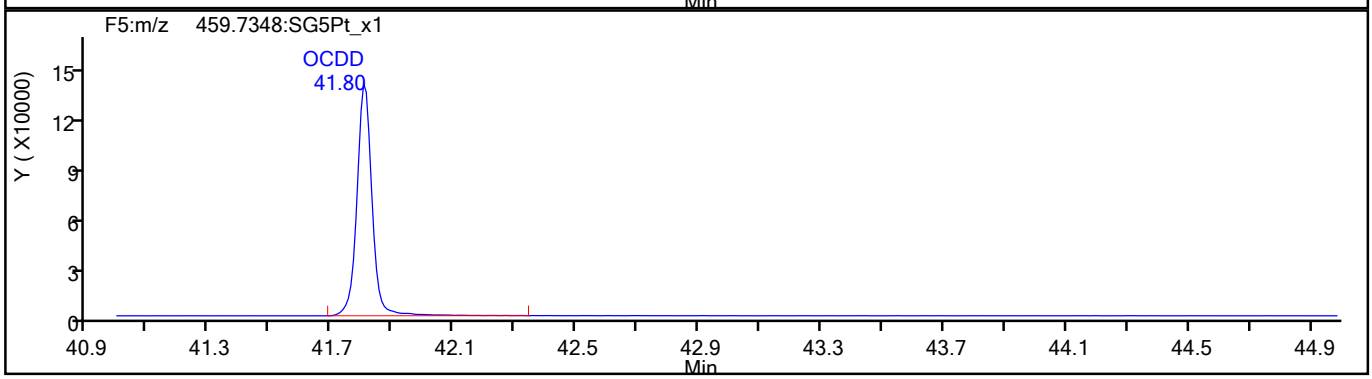

OCDD Standards

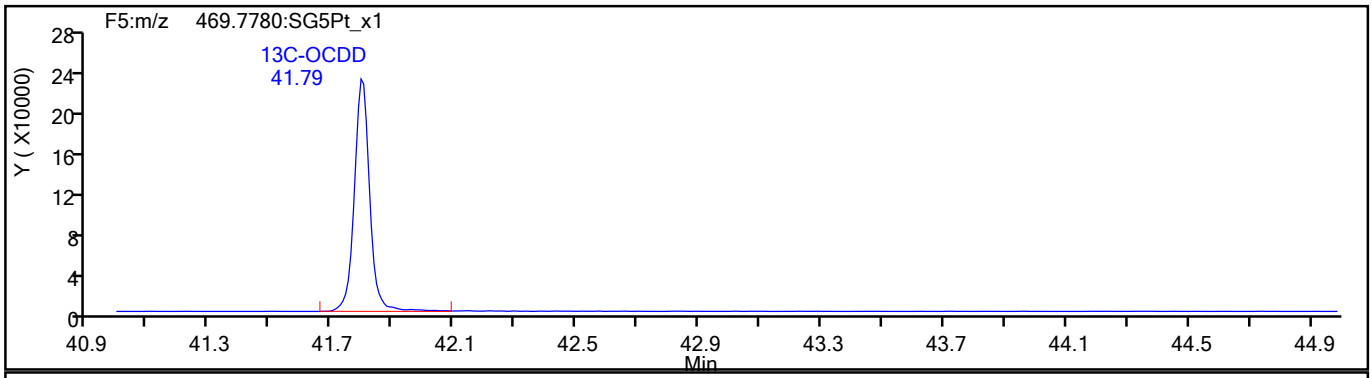

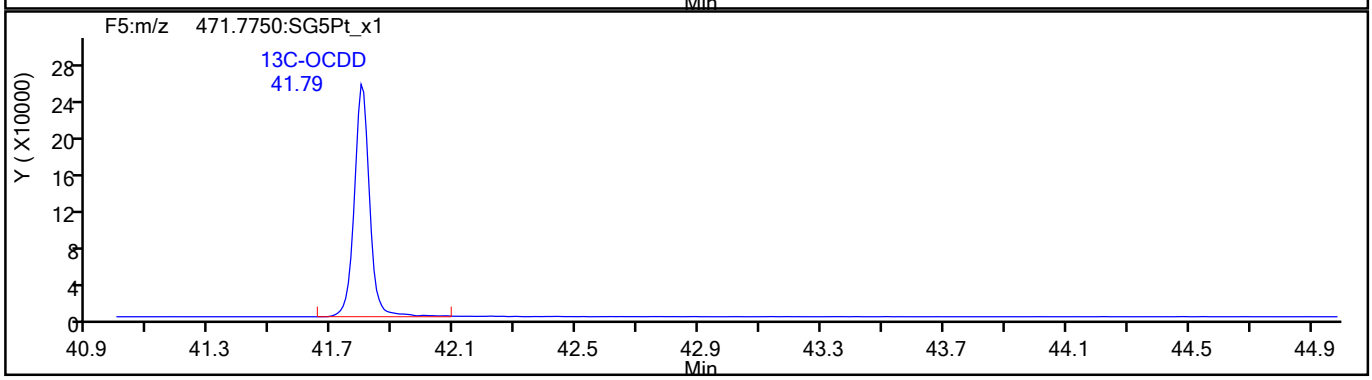

787312

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

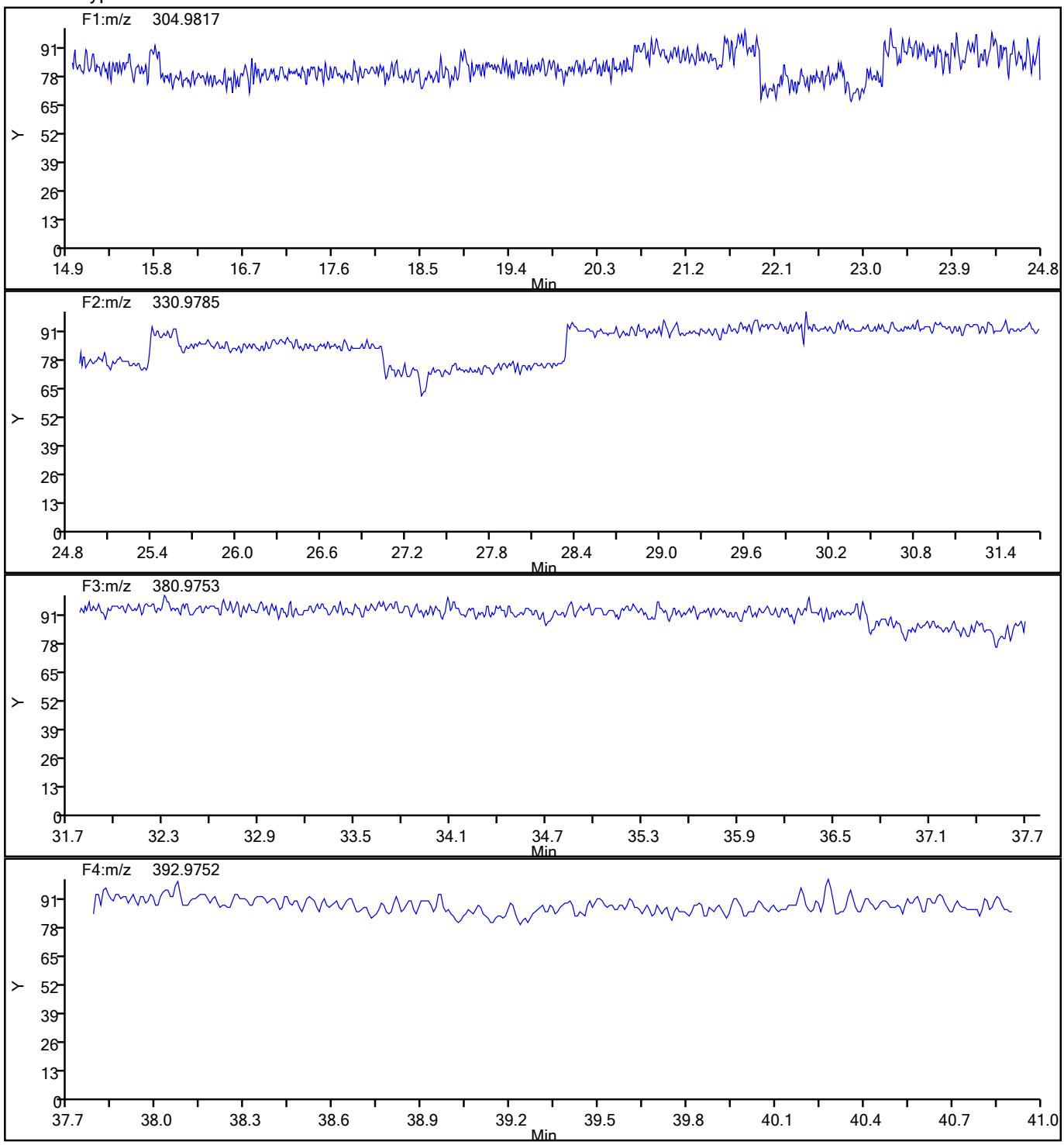

787313

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

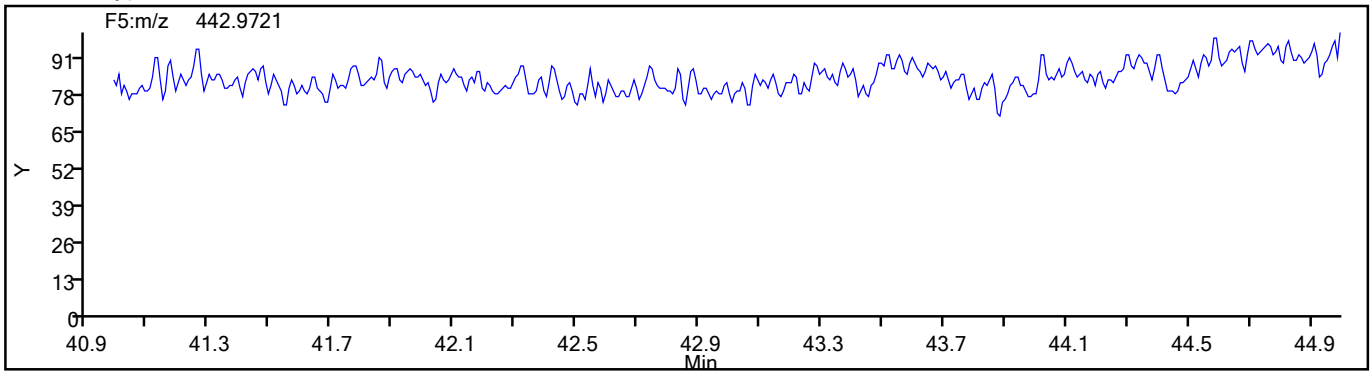

787314

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.548	2105852	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.612	2839435	0.79	1.3459	100.2	100.2	0.1786	0.1786	100	
2,3,7,8-TCDF	19.638	1274052	0.79	1.0802	41.5	41.5	0.0460	0.0460	104	
S Total TCDF					41.5	41.5	0.0460	0.0460		
D 13C-2,3,7,8-TCDD	20.909	1948011	0.81	0.9317	99.3	99.3	0.1662	0.1662	99.29	
$ 37Cl4-2,3,7,8-TCDD	20.935	848616		1.0083	40.0	40.0	0.0168	0.0168	99.92	
2,3,7,8-TCDD	20.935	875630	0.79	1.0753	41.8	41.8	0.0546	0.0546	105	
S Total TCDD					41.8	41.8	0.0546	0.0546		
D 13C-1,2,3,7,8-PeCDF	26.564	2432949	1.58	1.1405	101.3	101.3	0.3082	0.3082	101	
1,2,3,7,8-PeCDF	26.589	5302236	1.57	1.0543	206.7	206.7	0.5886	0.5886	103	
D 13C-2,3,4,7,8-PeCDF	28.023	2374722	1.60	1.1253	100.2	100.2	0.3123	0.3123	100	
2,3,4,7,8-PeCDF	28.048	5051373	1.58	1.0079	211.1	211.1	0.6756	0.6756	106	
S Total PeCDF					417.8	417.8	0.6321	0.6321		
D 13C-1,2,3,7,8-PeCDD	28.806	1521254	1.60	0.7165	100.8	100.8	0.1214	0.1214	101	
1,2,3,7,8-PeCDD	28.832	3351337	1.58	1.0465	210.5	210.5	0.1088	0.1088	105	
S Total PeCDD					210.5	210.5	0.1088	0.1088		
D 13C-1,2,3,4,7,8-HxCDF	34.391	1778238	0.53	0.9648	100.0	100.0	0.3266	0.3266	100	
1,2,3,4,7,8-HxCDF	34.407	4293581	1.24	1.1474	210.4	210.4	0.7958	0.7958	105	
D 13C-1,2,3,6,7,8-HxCDF	34.568	1995567	0.54	1.0708	101.1	101.1	0.2943	0.2943	101	
1,2,3,6,7,8-HxCDF	34.584	4991420	1.25	1.2178	205.4	205.4	0.6778	0.6778	103	
D 13C-2,3,4,6,7,8-HxCDF	35.444	2042874	0.53	1.0413	106.5	106.5	0.3026	0.3026	106	
2,3,4,6,7,8-HxCDF	35.461	5157631	1.25	1.2145	207.9	207.9	0.5811	0.5811	104	
D 13C-1,2,3,7,8,9-HxCDF	36.388	1742331	0.52	0.9731	97.2	97.2	0.3238	0.3238	97.17	
1,2,3,7,8,9-HxCDF	36.397	4445357	1.26	1.2401	205.7	205.7	0.6020	0.6020	103	
S Total HxCDF					829.5	829.5	0.6642	0.6642		
* 13C-1,2,3,7,8,9-HxCDD	36.194	1842630	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.680	1432215	1.28	0.7587	102.4	102.4	0.1598	0.1598	102	
1,2,3,4,7,8-HxCDD	35.697	3222329	1.26	1.0608	212.1	212.1	0.2911	0.2911	106	
D 13C-1,2,3,6,7,8-HxCDD	35.806	1669337	1.24	0.8593	105.4	105.4	0.1411	0.1411	105	
1,2,3,6,7,8-HxCDD	35.815	3426727	1.26	0.9933	206.7	206.7	0.2773	0.2773	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.203	3436144	1.26	1.1094	199.7	199.7	0.2625	0.2625	99.86	
S Total HxCDD					618.5	618.5	0.2770	0.2770		
D 13C-1,2,3,4,6,7,8-HpCDF	38.305	1392194	0.46	0.7359	102.7	102.7	0.3327	0.3327	103	
1,2,3,4,6,7,8-HpCDF	38.314	4243438	1.05	1.4421	211.4	211.4	0.6211	0.6211	106	
D 13C-1,2,3,4,7,8,9-HpCDF	39.595	1337573	0.45	0.6854	105.9	105.9	0.3573	0.3573	106	
1,2,3,4,7,8,9-HpCDF	39.603	3728415	1.05	1.3092	212.9	212.9	0.6974	0.6974	106	
S Total HpCDF					424.3	424.3	0.6592	0.6592		
D 13C-1,2,3,4,6,7,8-HpCDD	39.291	1337869	1.09	0.6745	107.6	107.6	0.2398	0.2398	108	
1,2,3,4,6,7,8-HpCDD	39.300	2935203	1.04	1.0503	208.9	208.9	0.3525	0.3525	104	
S Total HpCDD					208.9	208.9	0.3525	0.3525		
D 13C-OCDD	41.782	2177938	0.90	0.5446	217.0	217.0	0.3019	0.3019	109	
OCDF	41.866	6082696	0.91	1.3168	424.2	424.2	0.3916	0.3916	106	
OCDD	41.790	4803166	0.89	1.0620	415.3	415.3	0.3872	0.3872	104	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.548	20.547	0		944131	150571	127	317	1186		
333.9338	20.548	20.547	0		1161721	185169	81	202	2286	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.612	19.616	0	0.954	1253649	203983	215	537	949		
317.9389	19.621	19.616	0	0.955	1585786	258903	108	270	2397	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.638	19.646	0	1.001	561539	89311	44	110	2030		
305.8987	19.638	19.646	0	1.001	712513	111913	48	120	2332	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.909	20.910	0	1.018	869542	131887	127	317	1038		
333.9338	20.909	20.910	0	1.018	1078469	161266	81	202	1991	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.935	20.935	0	1.019	848616	126683	23	57	5508		
2,3,7,8-TCDD											
319.8965	20.935	20.939	0	1.001	385954	58537	36	90	1626		
321.8936	20.935	20.939	0	1.001	489676	72800	33	82	2206	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.564	26.560	0	1.293	1489826	258263	302	755	855		
353.8970	26.564	26.560	0	1.293	943123	164307	170	425	967	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.589	26.584	0	1.001	3241988	556504	638	1595	872		
341.8567	26.589	26.584	0	1.001	2060248	355863	411	1027	866	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.023	28.014	1	1.364	1460304	235761	302	755	781		
353.8970	28.023	28.014	1	1.364	914418	149333	170	425	878	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.048	28.039	1	1.001	3094556	515182	638	1595	807		
341.8567	28.048	28.039	1	1.001	1956817	323488	411	1027	787	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.806	28.801	0	1.402	936578	147383	82	205	1797		
369.8919	28.806	28.801	0	1.402	584676	95987	35	87	2742	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.832	28.828	0	1.001	2051590	320770	72	180	4455		
357.8516	28.832	28.828	0	1.001	1299747	208335	39	97	5342	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.391	34.384	0	0.950	617675	123602	191	477	647		
385.8610	34.382	34.384	0	0.950	1160563	234726	378	945	621	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.407	34.405	0	1.000	2381065	482843	745	1862	648		
375.8178	34.407	34.405	0	1.000	1912516	389022	564	1410	690	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.568	34.562	0	0.955	696940	140400	191	477	735		
385.8610	34.568	34.562	0	0.955	1298627	255987	378	945	677	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.584	34.582	0	1.000	2775629	556827	745	1862	747		
375.8178	34.584	34.582	0	1.000	2215791	440544	564	1410	781	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.444	35.444	0	0.979	707399	160237	191	477	839		
385.8610	35.444	35.444	0	0.979	1335475	303406	378	945	803	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.461	35.461	0	1.000	2866027	647502	745	1862	869		
375.8178	35.461	35.461	0	1.000	2291604	520419	564	1410	923	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.388	36.388	0	1.005	598306	148820	191	477	779		
385.8610	36.388	36.388	0	1.005	1144025	289476	378	945	766	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.397	36.402	0	1.000	2476452	605954	745	1862	813		
375.8178	36.397	36.402	0	1.000	1968905	483719	564	1410	858	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.194	36.192	0		1026134	250783	116	290	2162		
403.8529	36.186	36.192	0		816496	200495	103	257	1947	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.680	35.680	0	0.986	804332	193336	116	290	1667		
403.8529	35.680	35.680	0	0.986	627883	151493	103	257	1471	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.697	35.695	0	1.000	1795969	436602	241	602	1812		
391.8127	35.697	35.695	0	1.000	1426360	347066	185	462	1876	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.806	35.805	0	0.989	925744	214247	116	290	1847		
403.8529	35.806	35.805	0	0.989	743593	172424	103	257	1674	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.815	35.820	0	1.000	1911971	434863	241	602	1804		
391.8127	35.815	35.820	0	1.000	1514756	347831	185	462	1880	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.203	36.208	0	1.015	1913013	474198	241	602	1968		
391.8127	36.203	36.208	0	1.015	1523131	377483	185	462	2040	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.305	38.305	0	1.058	436356	136587	154	385	887		
419.8220	38.305	38.305	0	1.058	955838	295474	288	720	1026	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.314	38.317	0	1.000	2176116	664265	789	1972	842		
409.7788	38.314	38.317	0	1.000	2067322	632606	759	1897	833	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.595	39.600	0	1.094	416057	129213	154	385	839		
419.8220	39.595	39.600	0	1.094	921516	294690	288	720	1023	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.603	39.608	0	1.000	1911190	607125	789	1972	769		
409.7788	39.603	39.608	0	1.000	1817225	579552	759	1897	764	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.291	39.293	0	1.086	696483	219725	150	375	1465		
437.8140	39.291	39.293	0	1.086	641386	202177	142	355	1424	1.09(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.300	39.301	0	1.000	1499524	478443	315	787	1519		
425.7737	39.300	39.301	0	1.000	1435679	451932	310	775	1458	1.04(0.88-1.20)	
13C-OCDD											
469.7780	41.782	41.785	0	1.154	1033665	317462	144	360	2205		
471.7750	41.782	41.785	0	1.154	1144273	352280	153	382	2302	0.90(0.76-1.02)	
OCDF											
441.7428	41.866	41.875	-1	1.002	2905097	900371	326	815	2762		
443.7399	41.866	41.875	-1	1.002	3177599	981356	365	912	2689	0.91(0.76-1.02)	
OCDD											
457.7377	41.790	41.794	0	1.000	2268006	705330	257	642	2744		
459.7348	41.790	41.794	0	1.000	2535160	785518	294	735	2672	0.89(0.76-1.02)	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

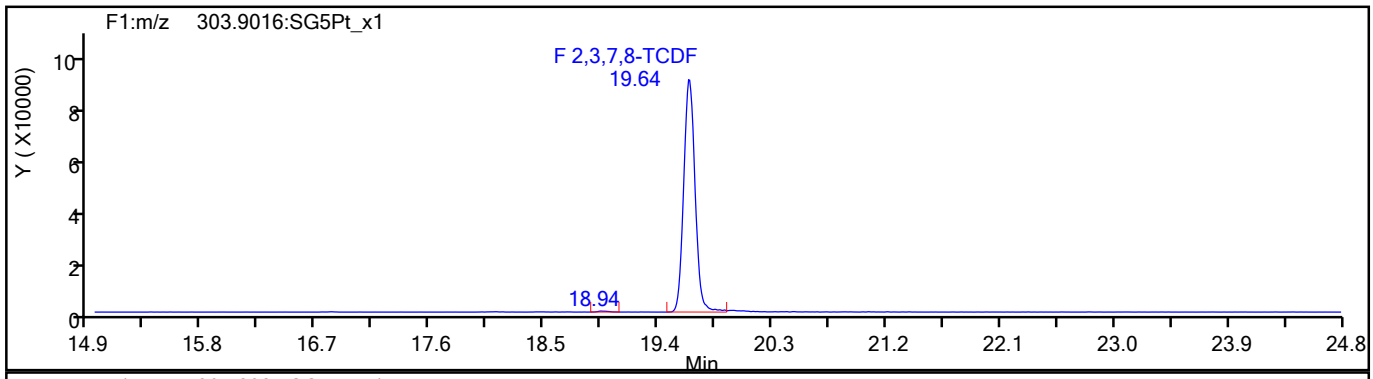

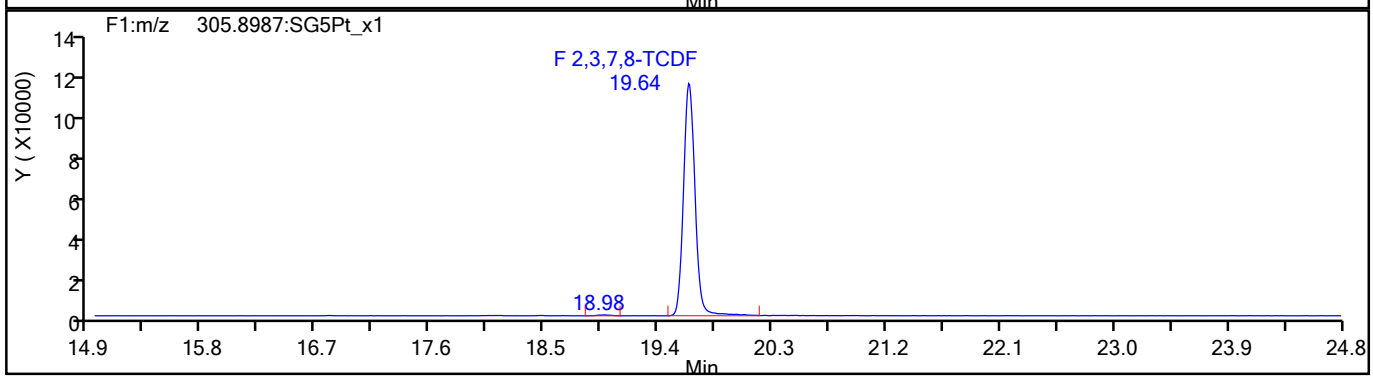

TCDF Standards

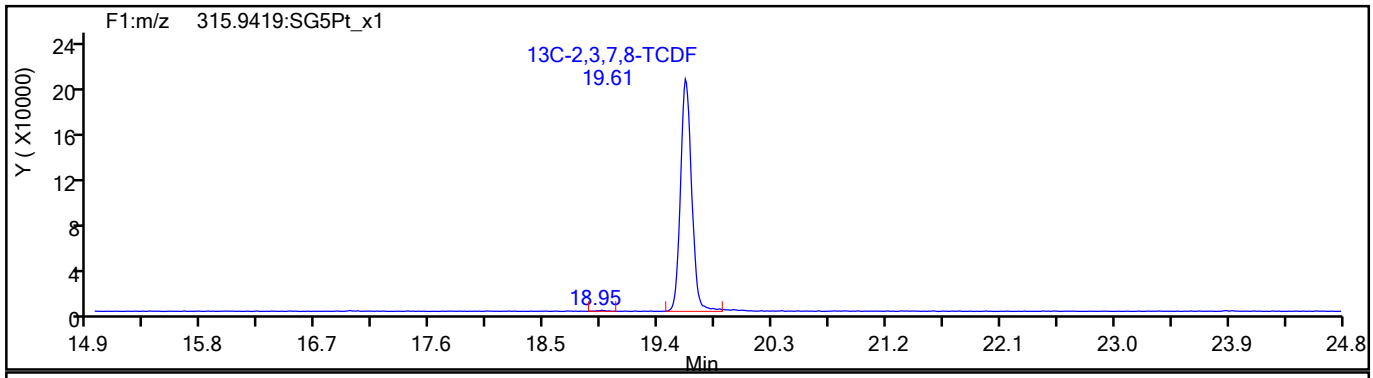

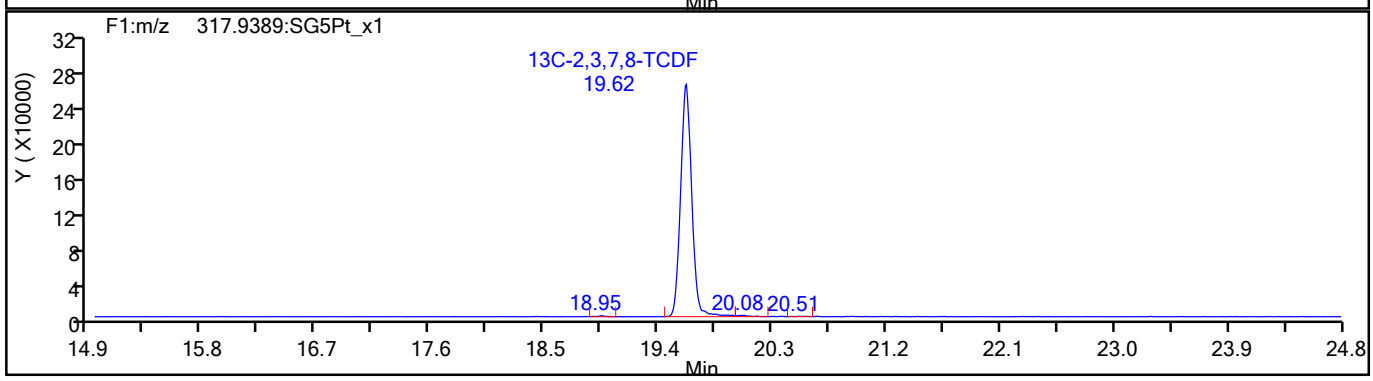

787320

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

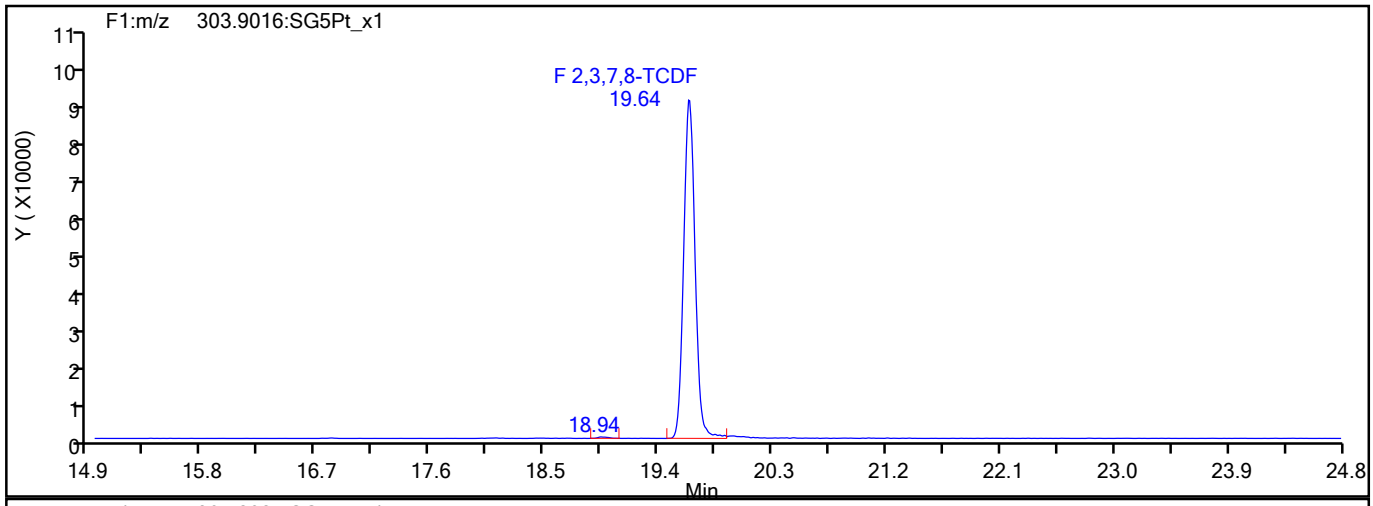

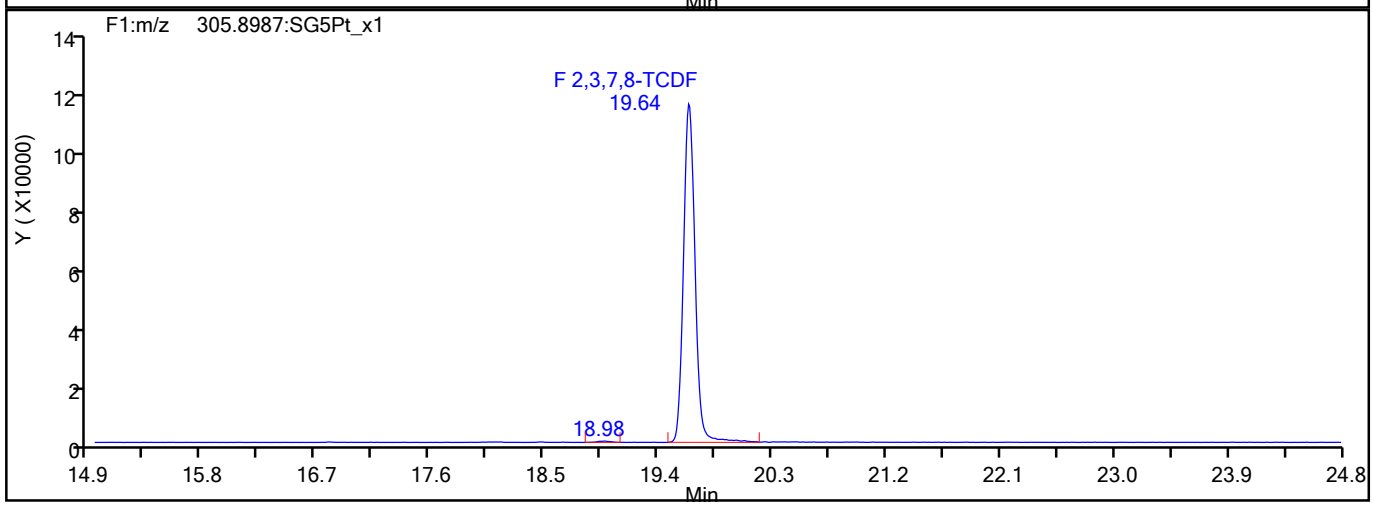

TCDF Interference Mass

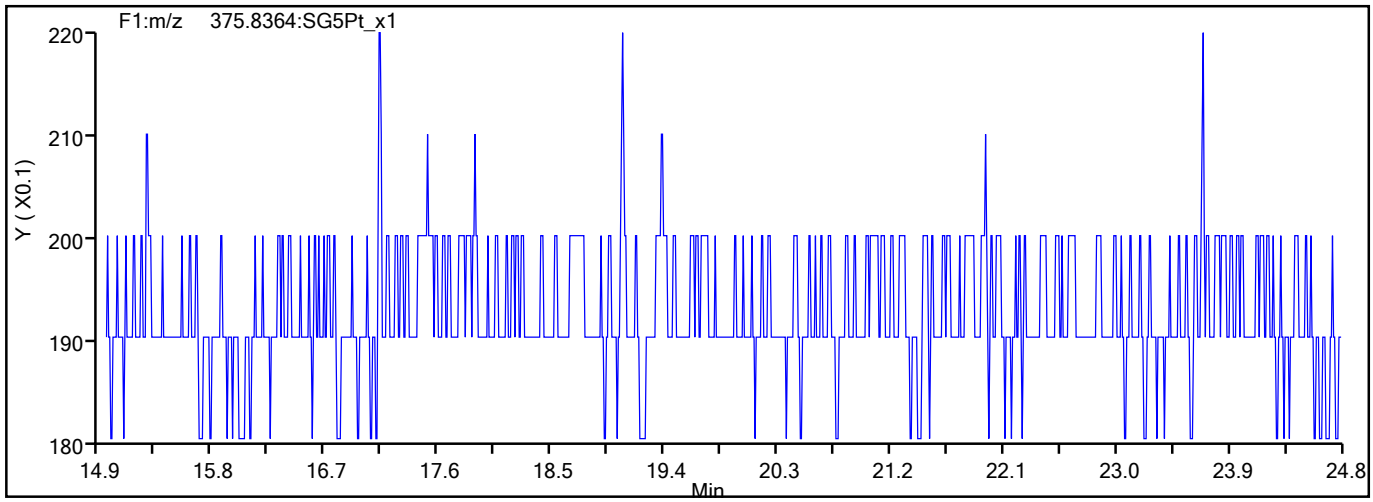

787321

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

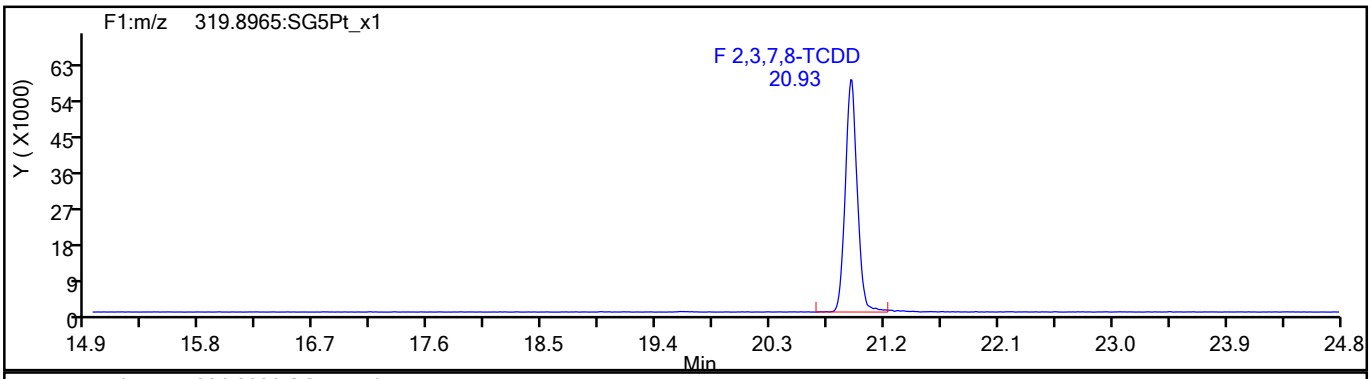

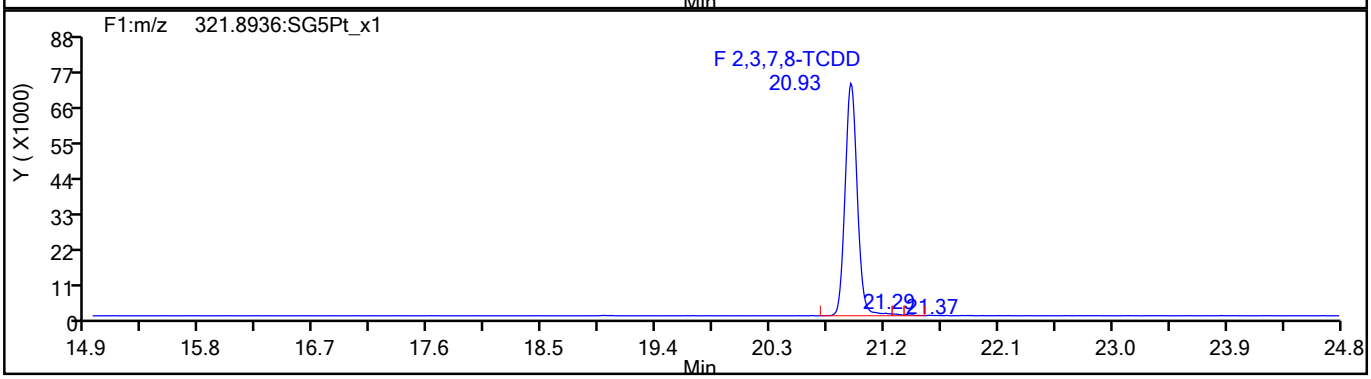

TCDD Standards

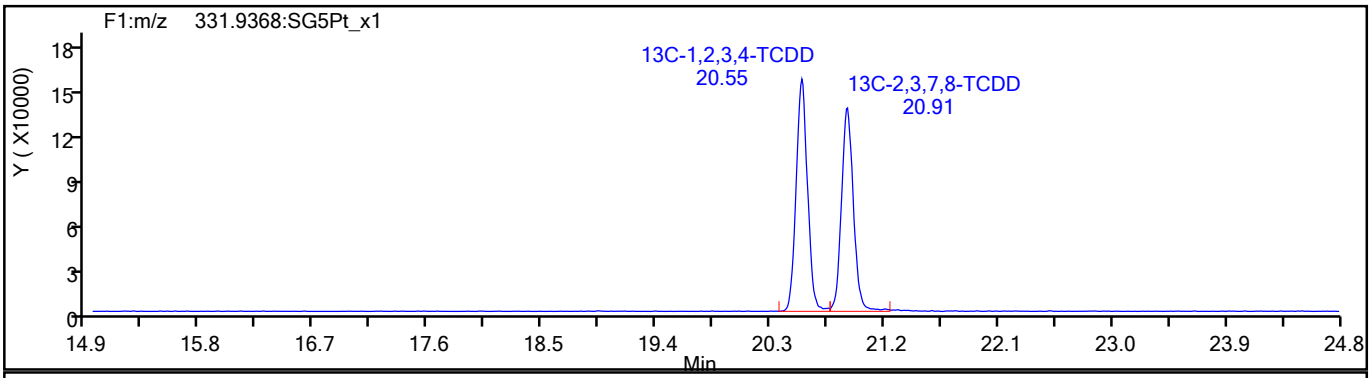

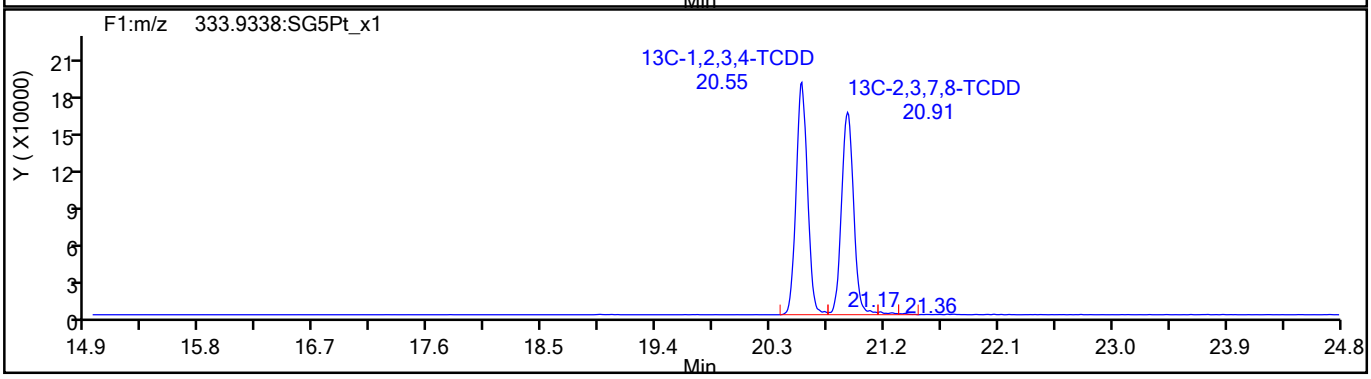

787322

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

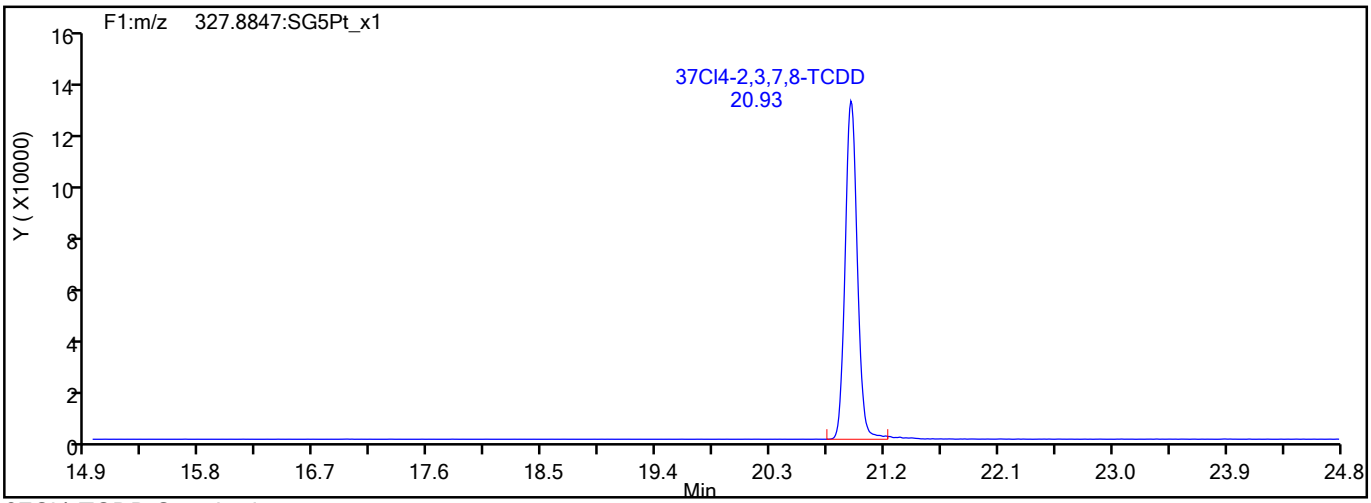

37Cl4-TCDD Standards

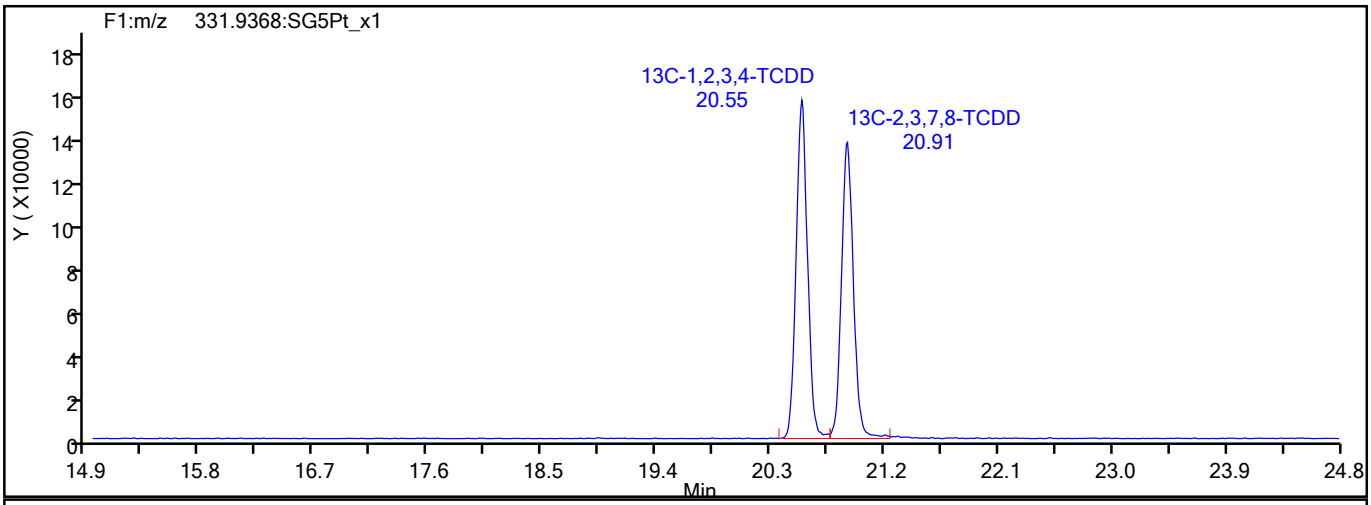

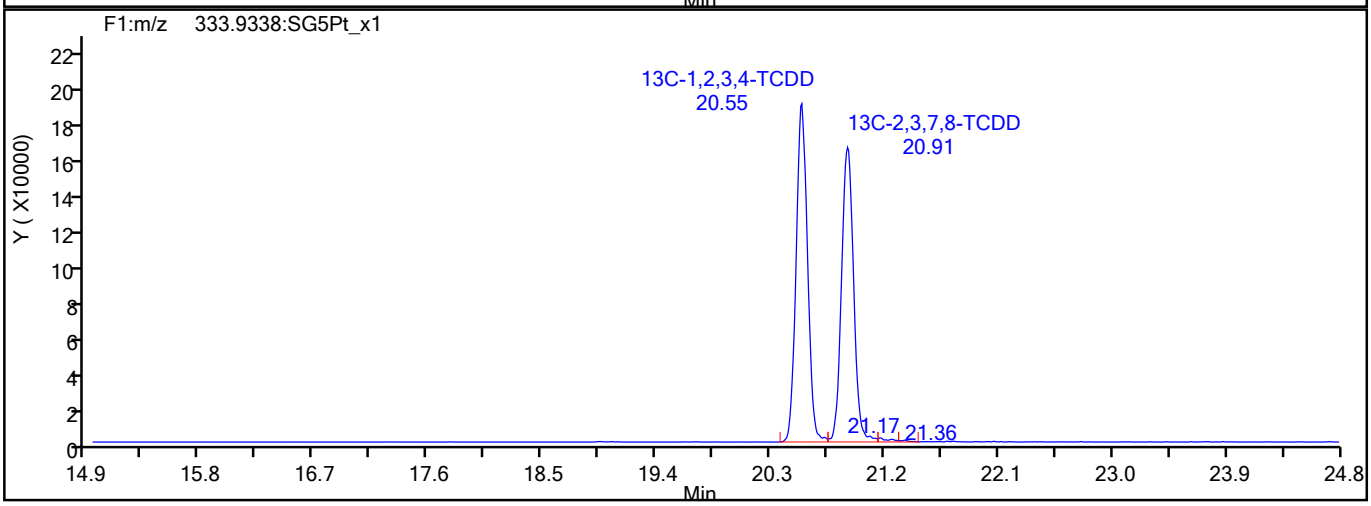

787323

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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F1 PeCDFs

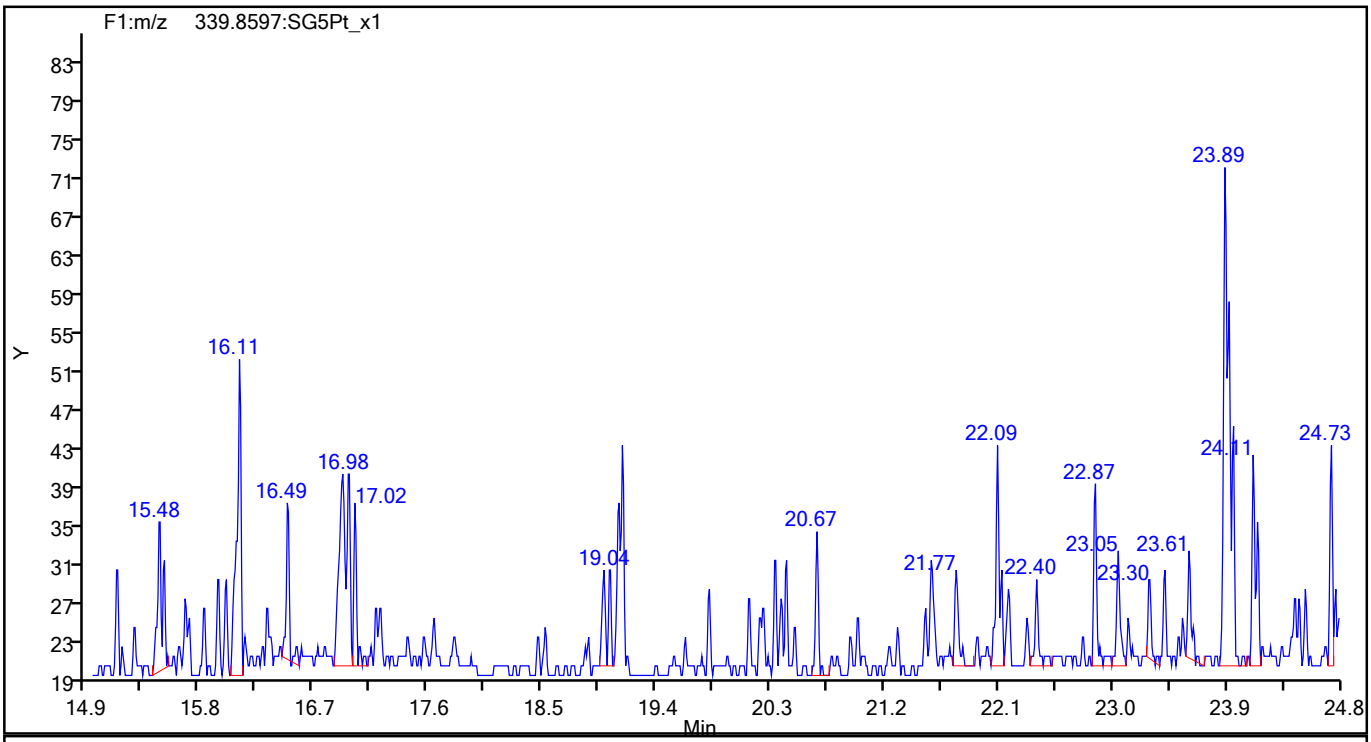

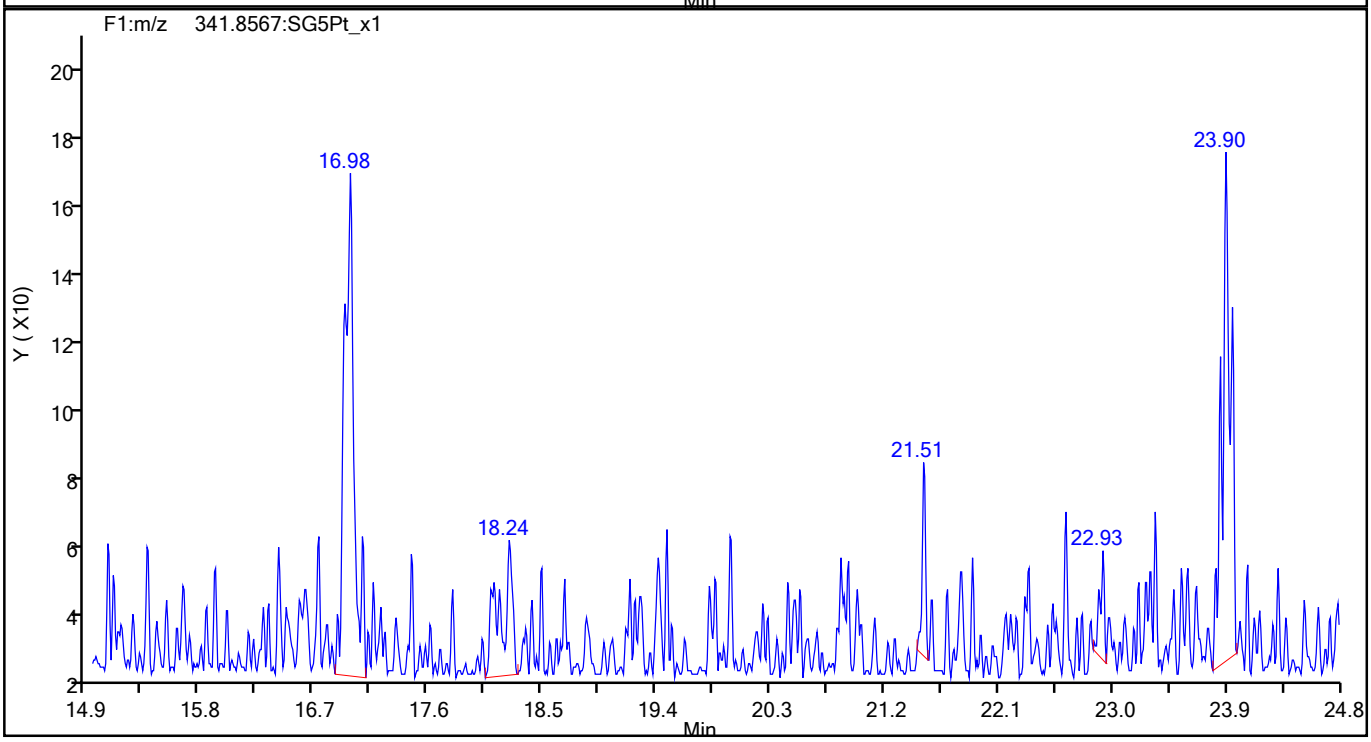

787324

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

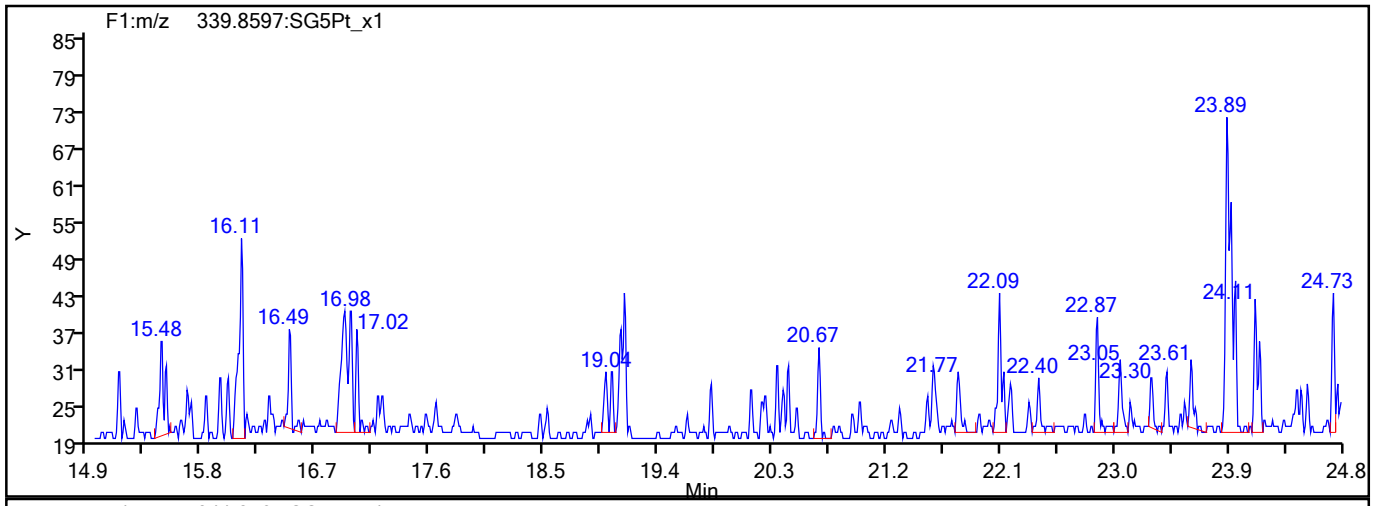

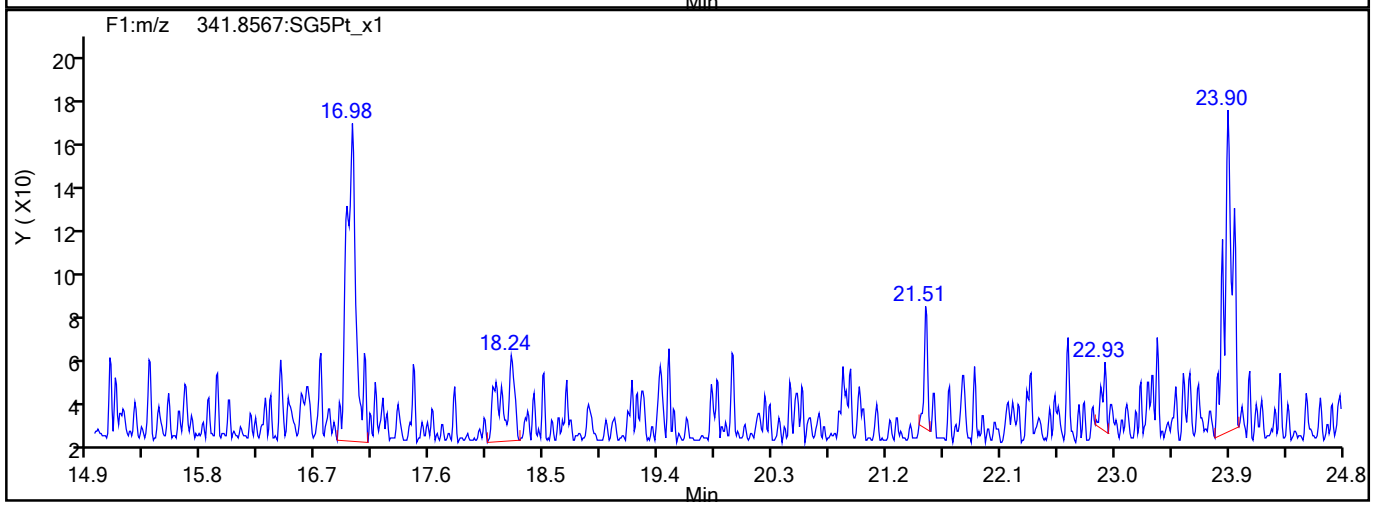

F1 PeCDFs Interference Mass

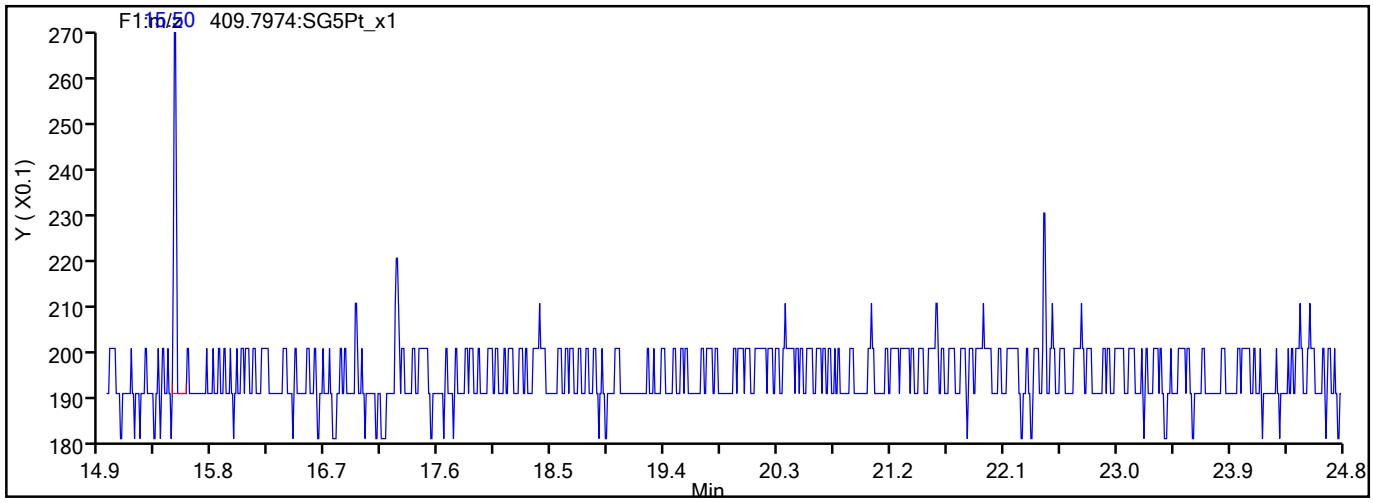

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Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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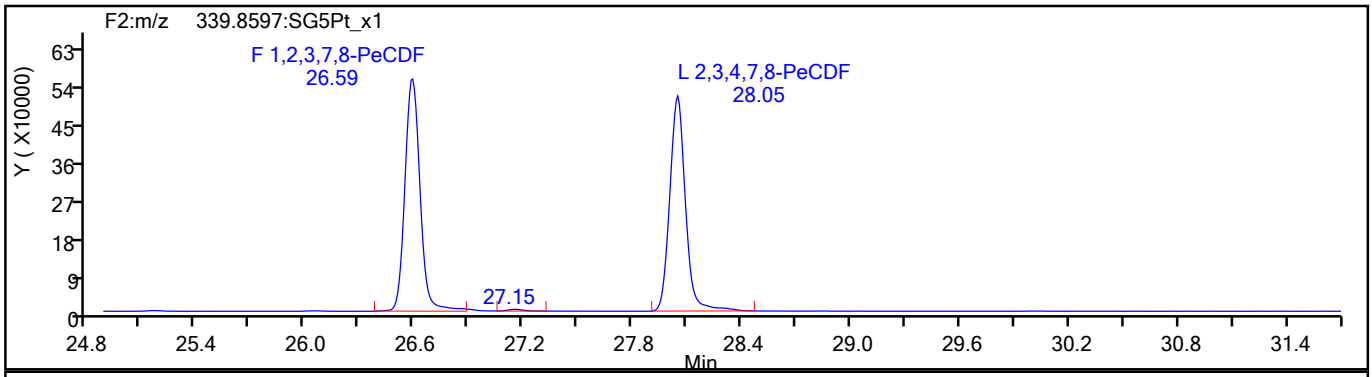

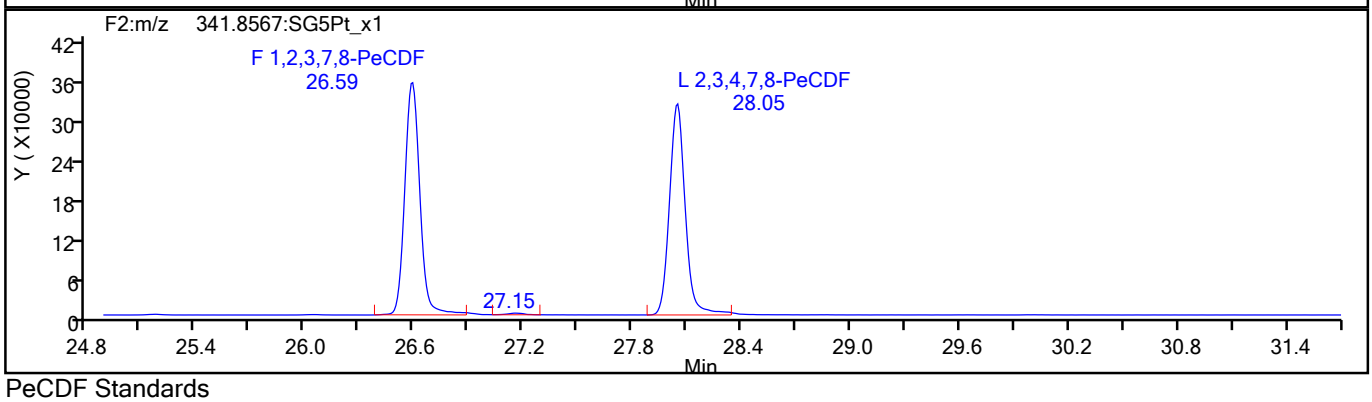

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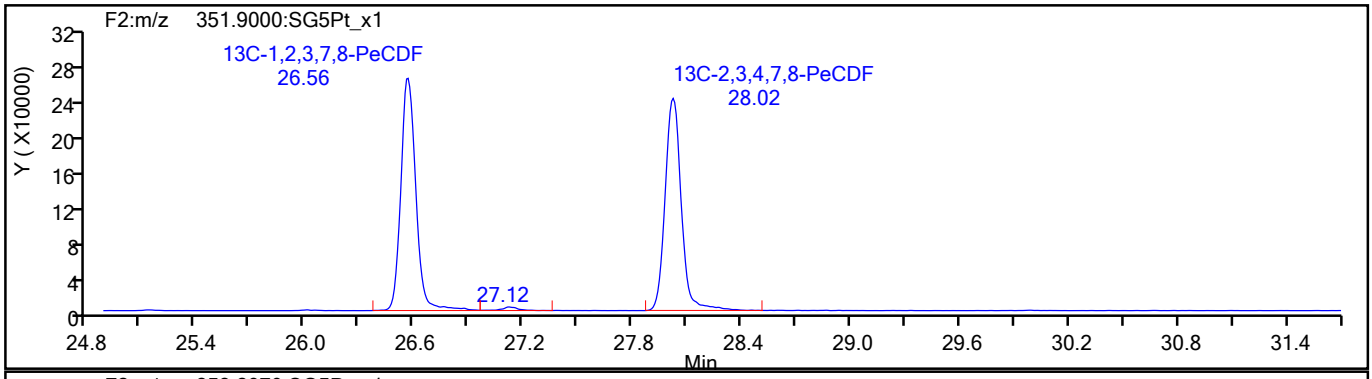

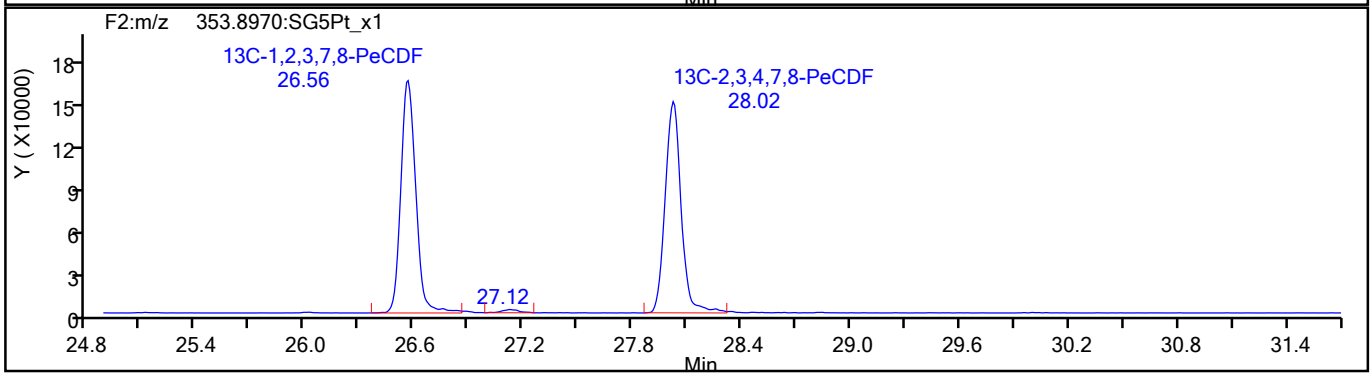

787326

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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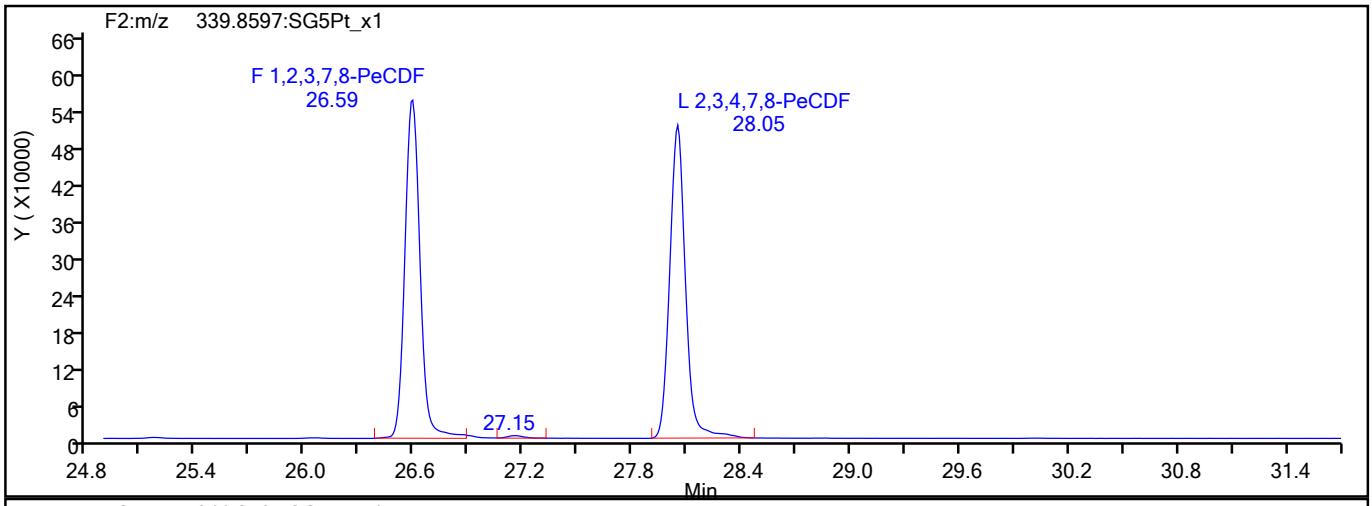

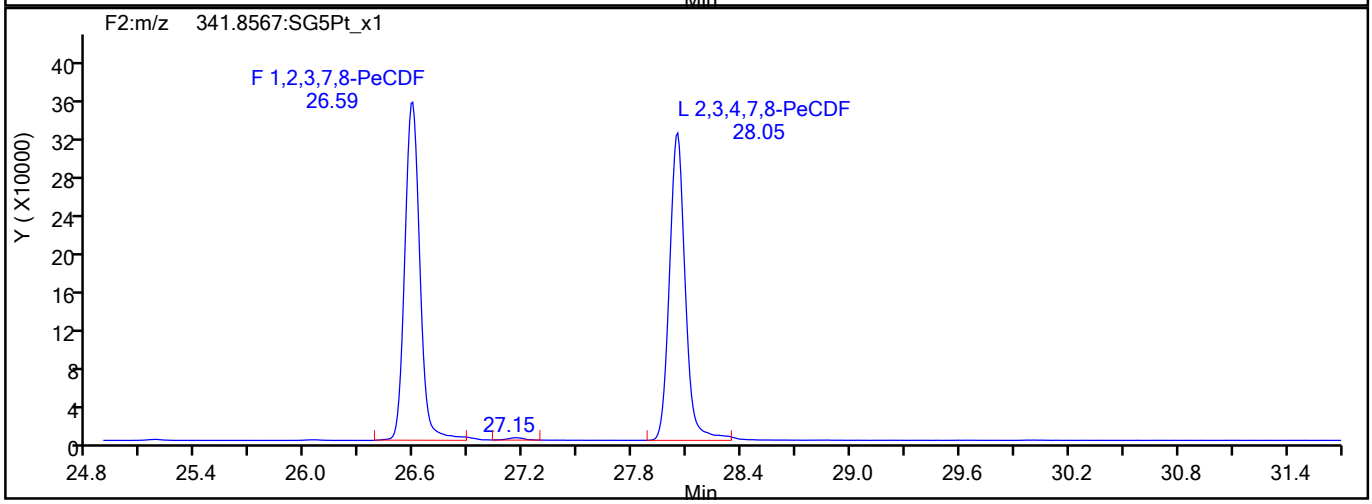

PeCDF Interference Mass

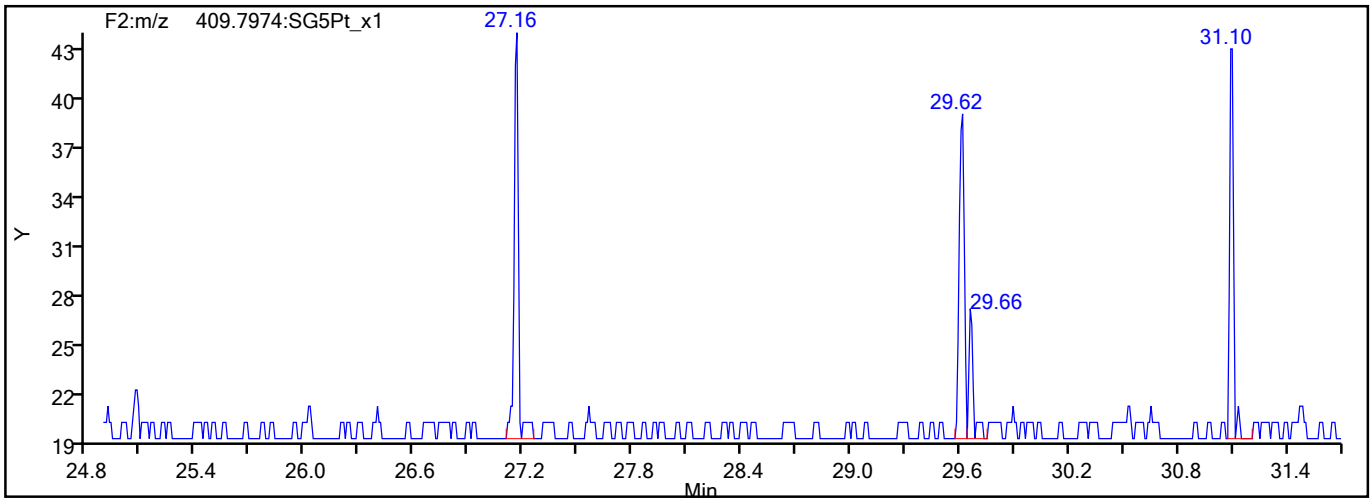

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Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

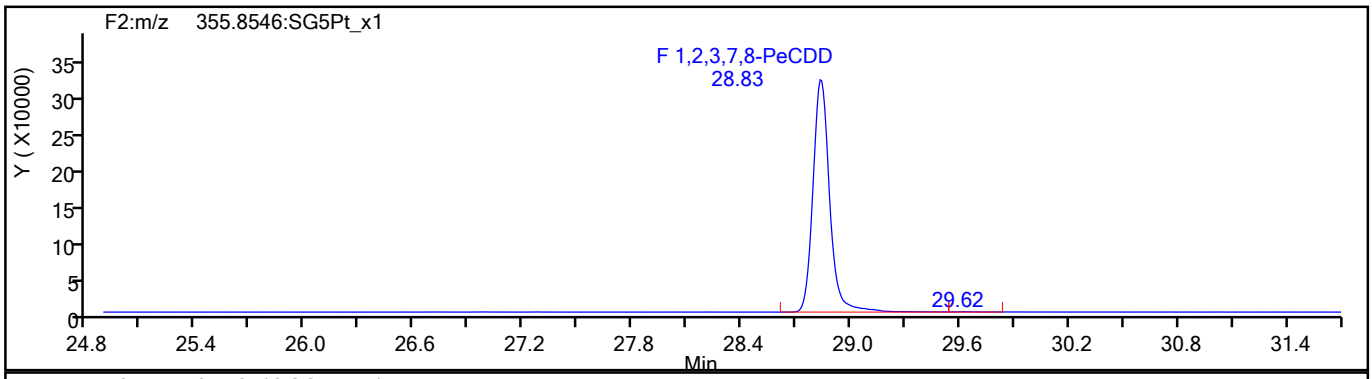

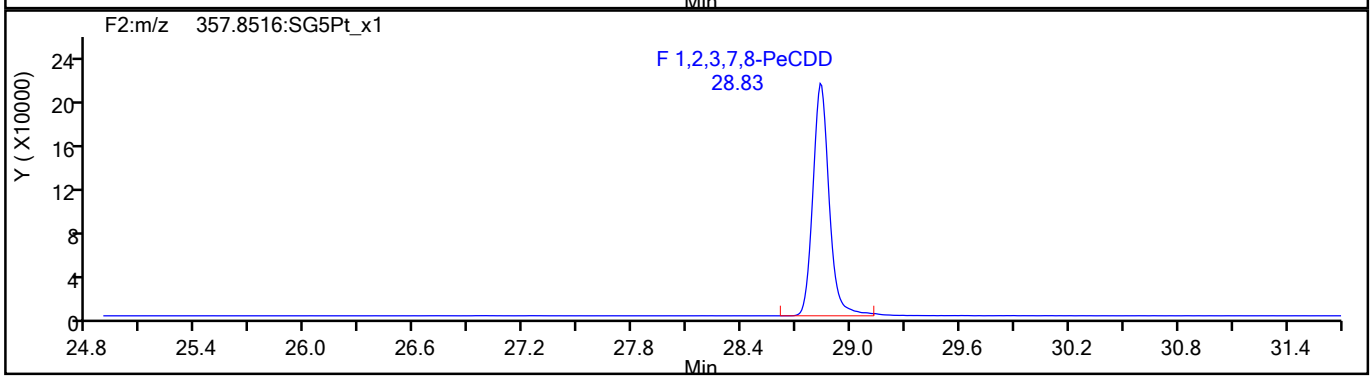

PeCDD Standards

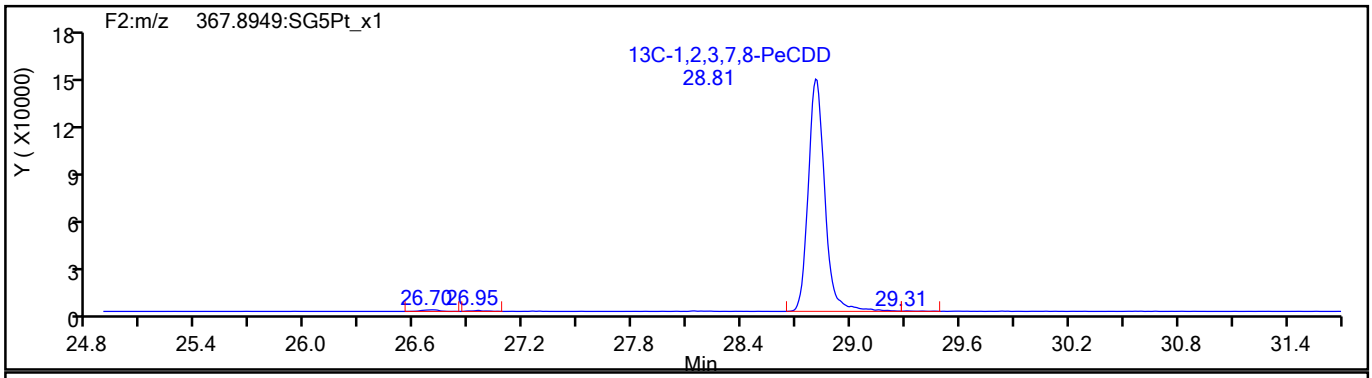

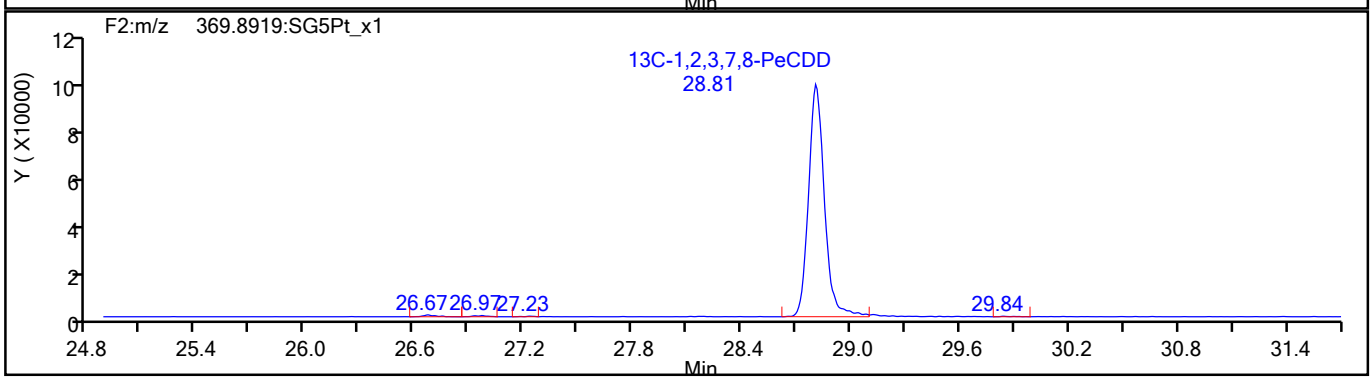

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Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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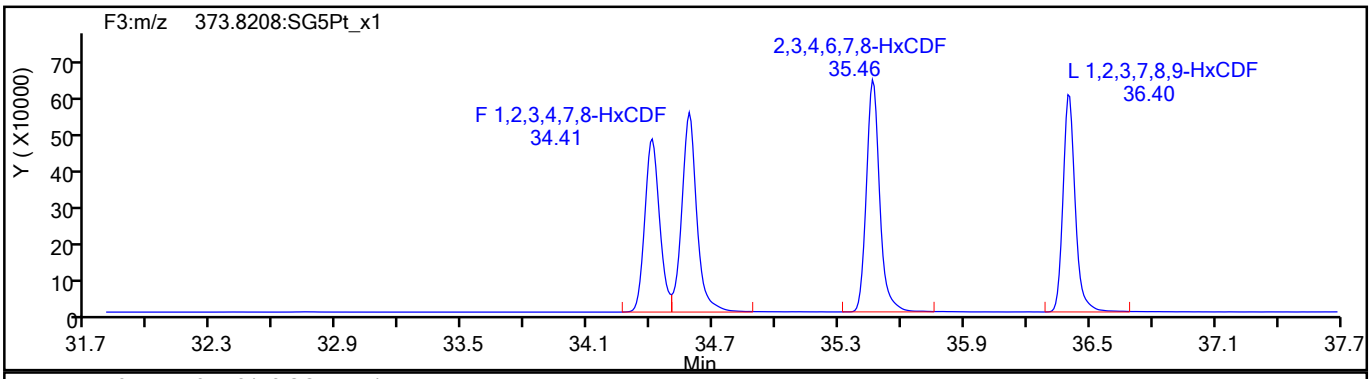

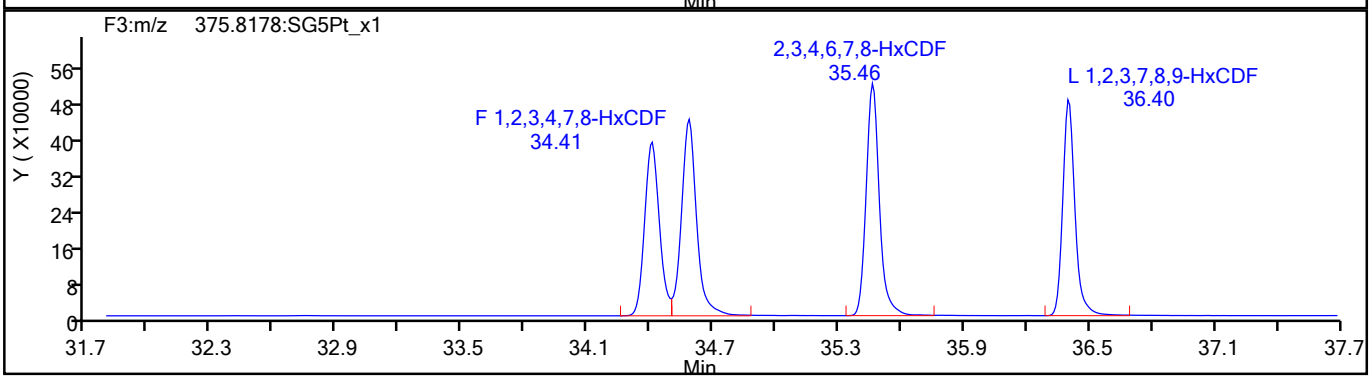

HxCDF Standards

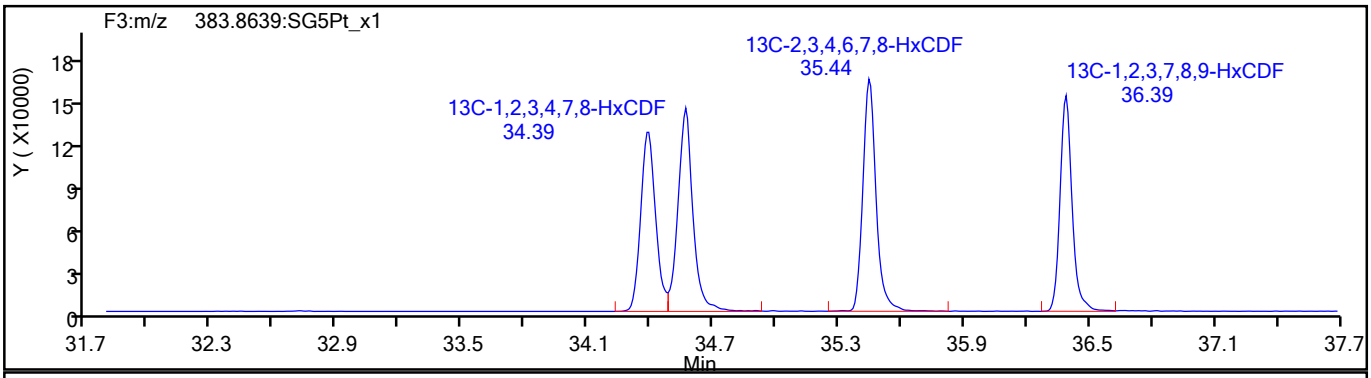

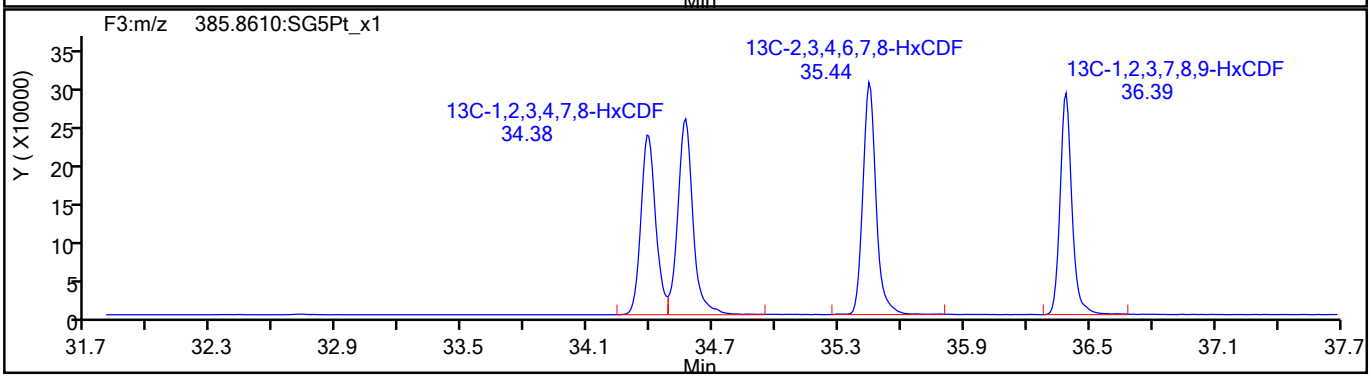

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Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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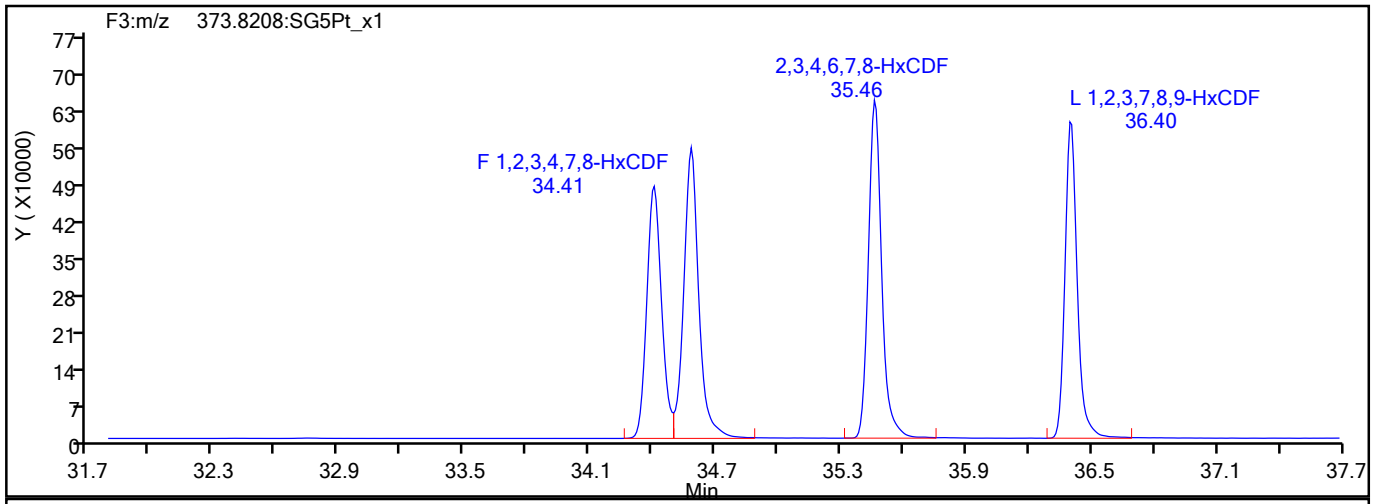

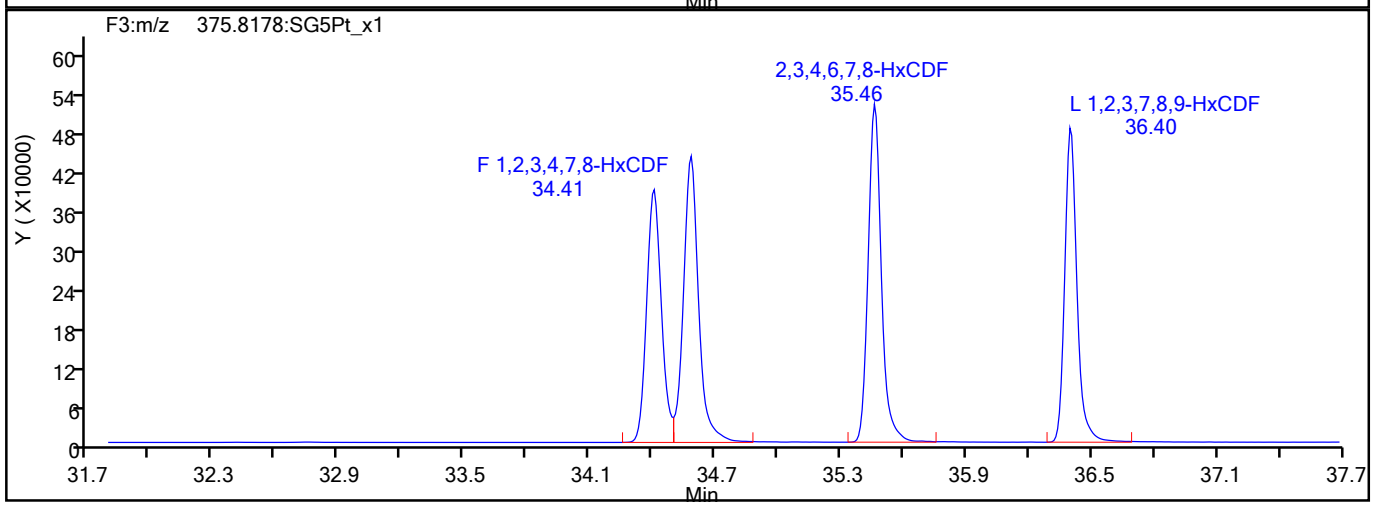

HxCDF Interference Mass

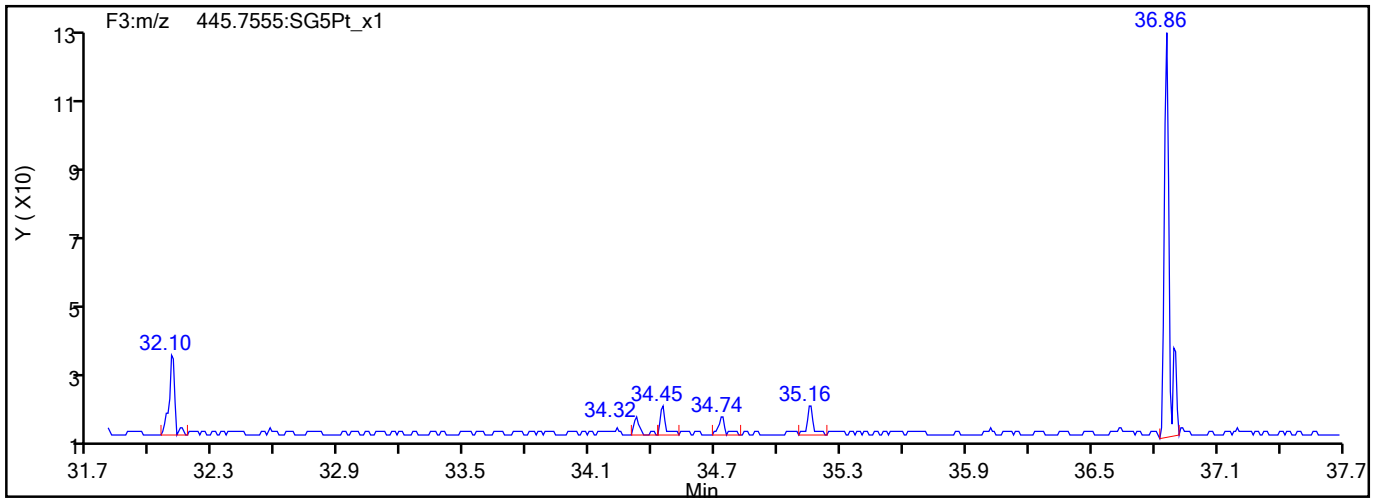

787330

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

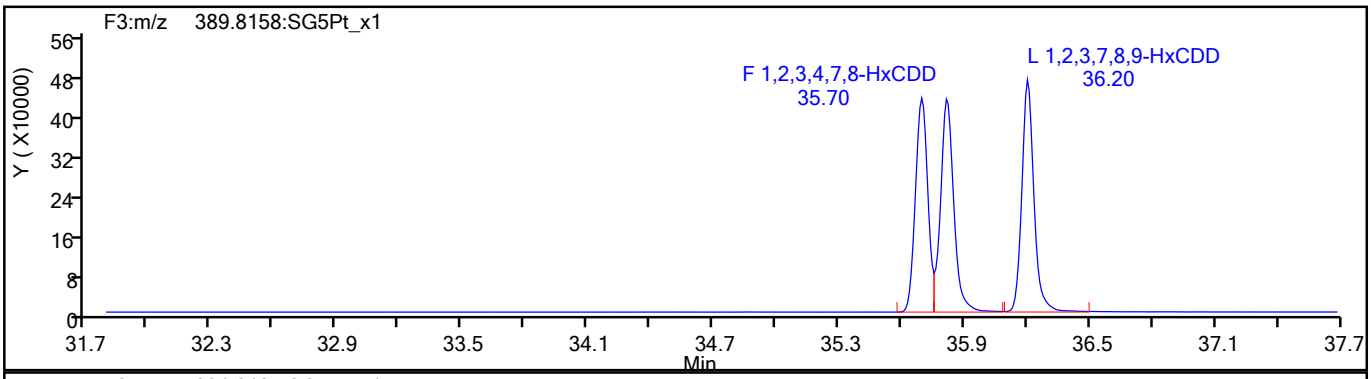

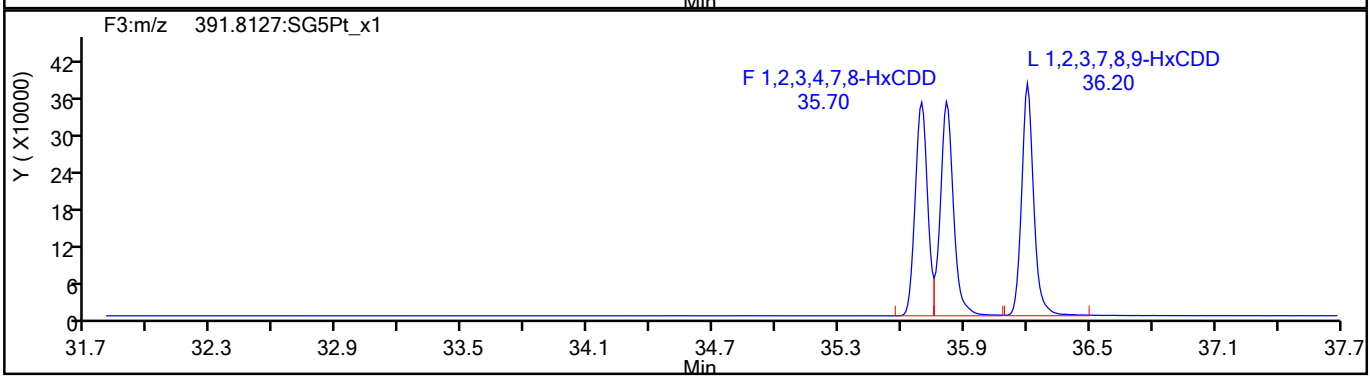

HxCDD Standards

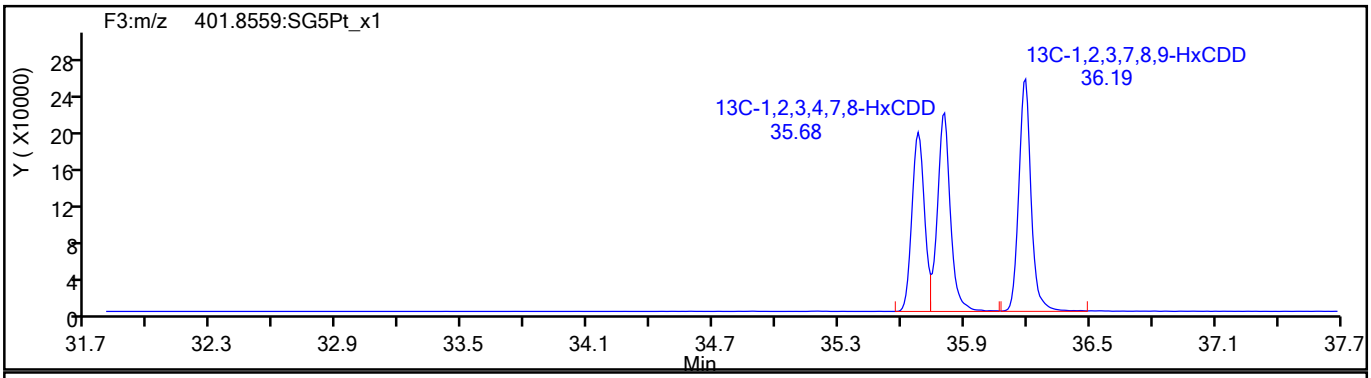

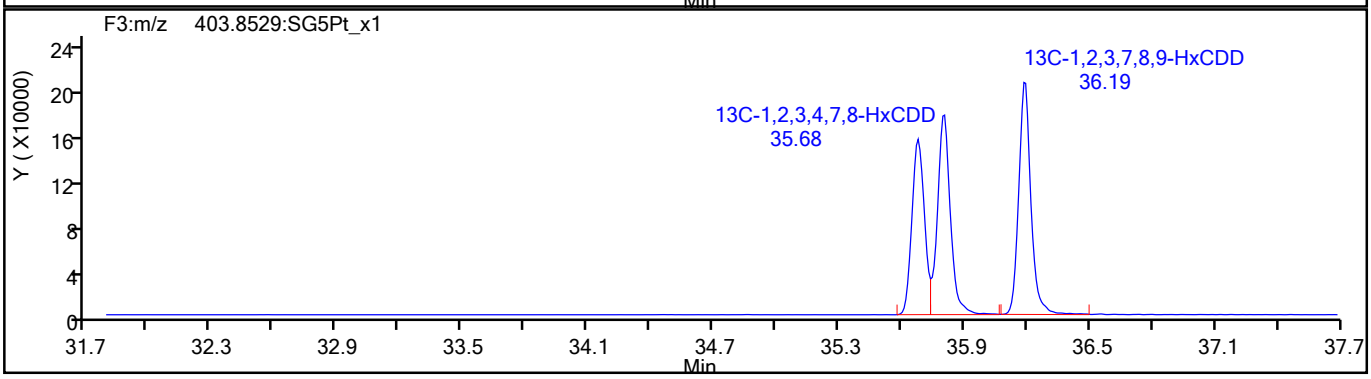

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Eurofins TestAmerica, Sacramento

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HpCDF

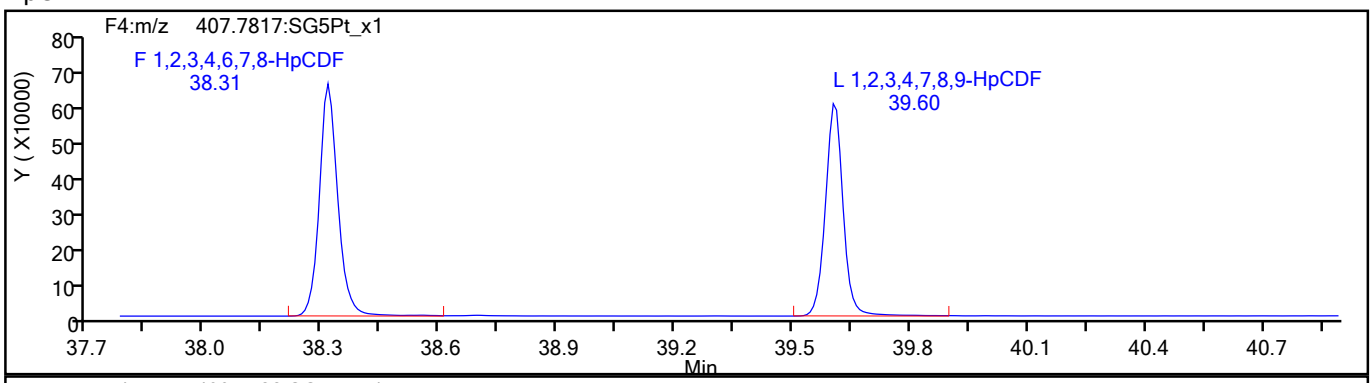

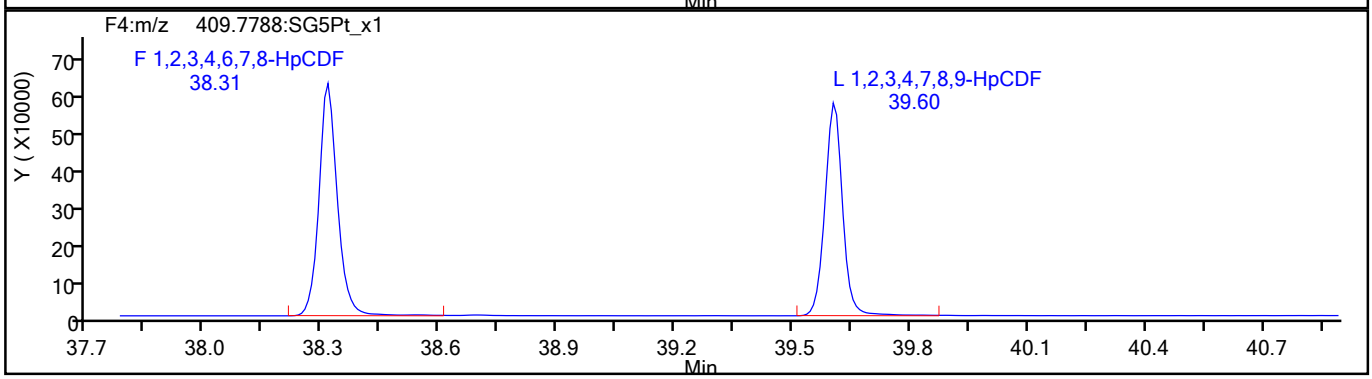

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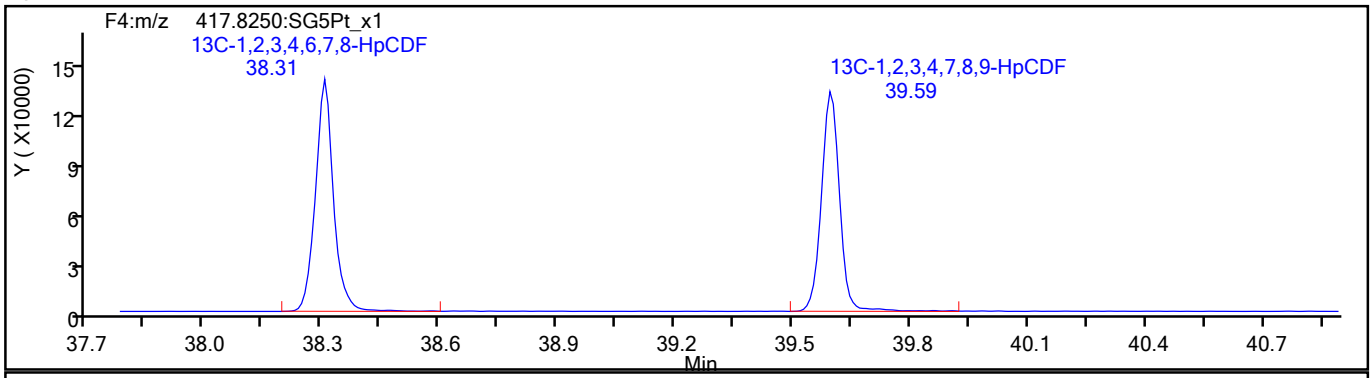

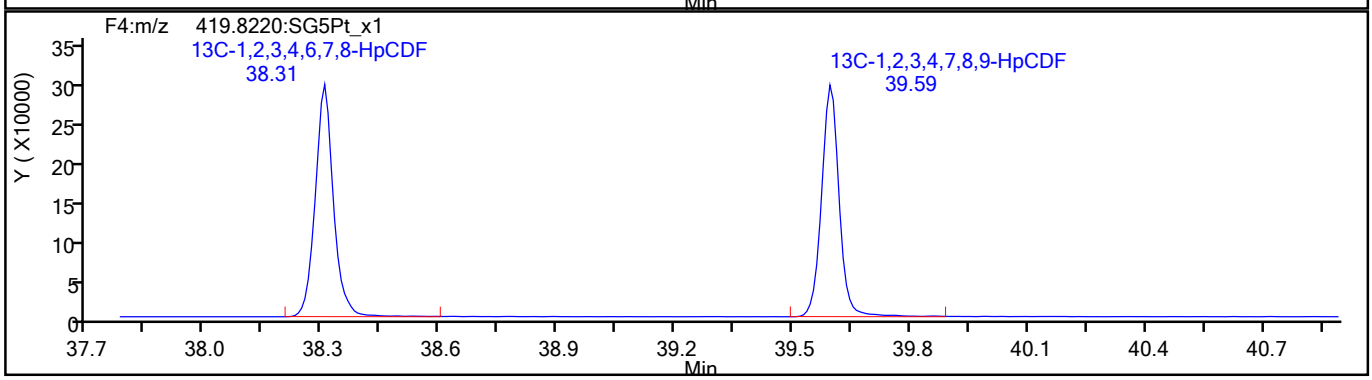

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Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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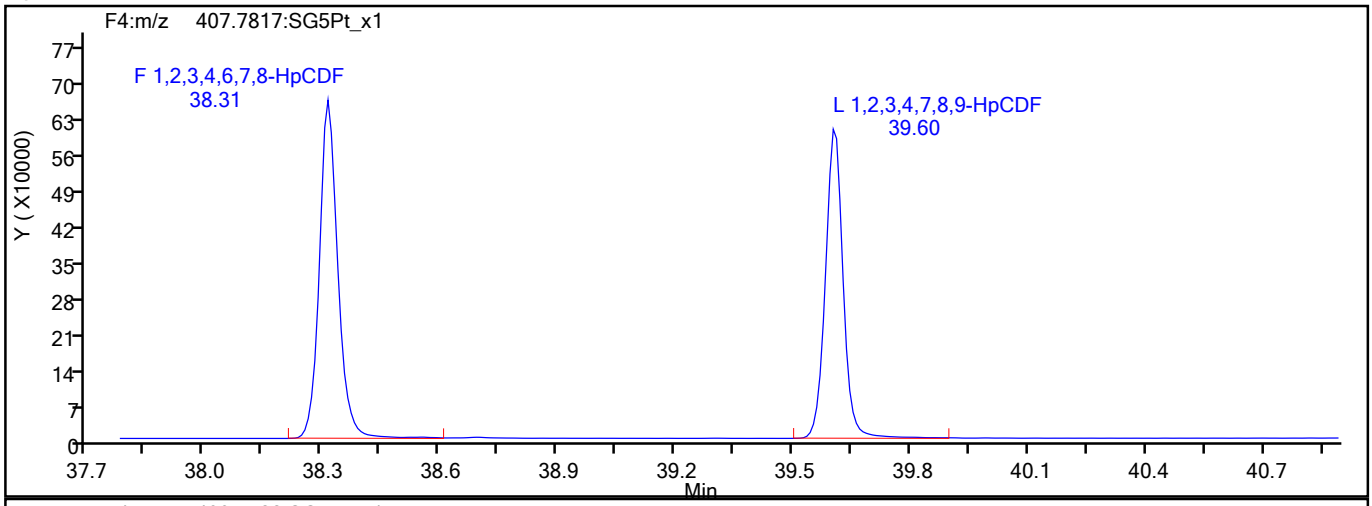

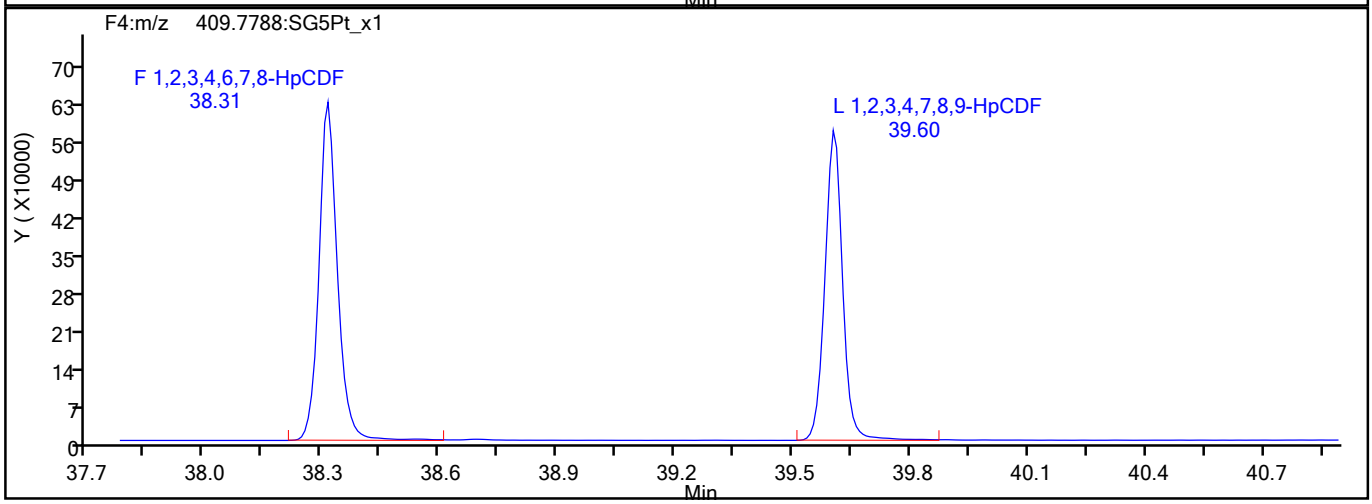

HpCDF Interference Mass

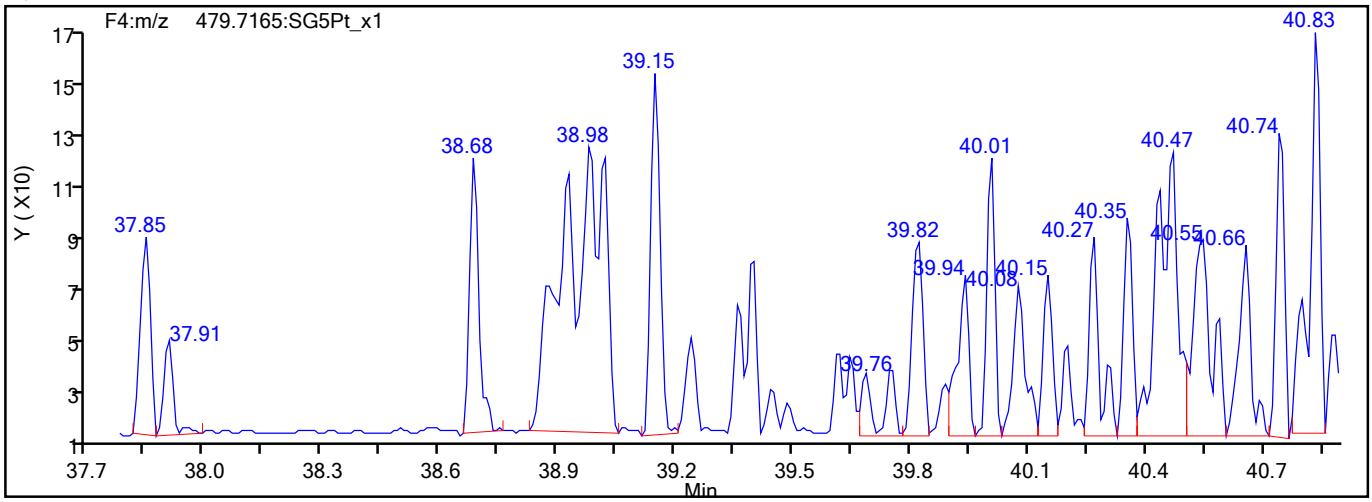

787333

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Eurofins TestAmerica, Sacramento

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HpCDD

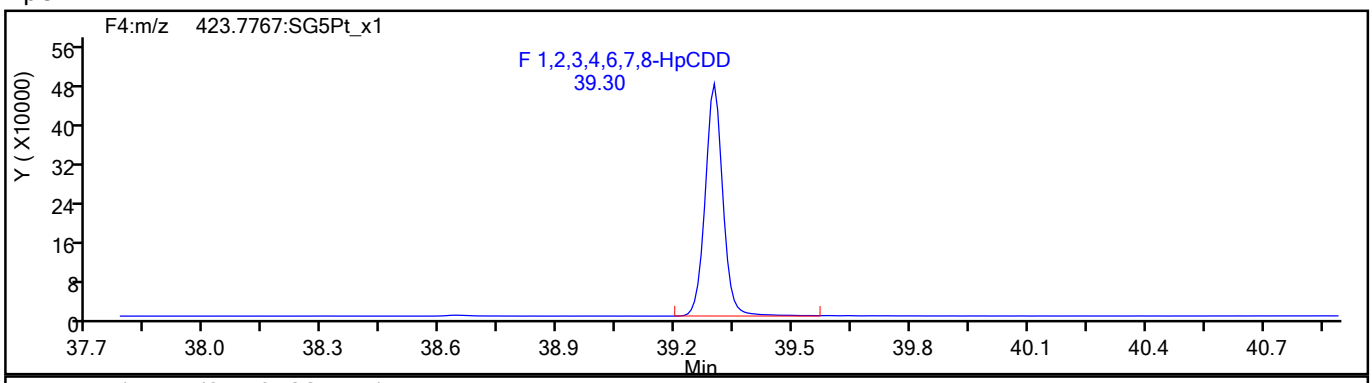

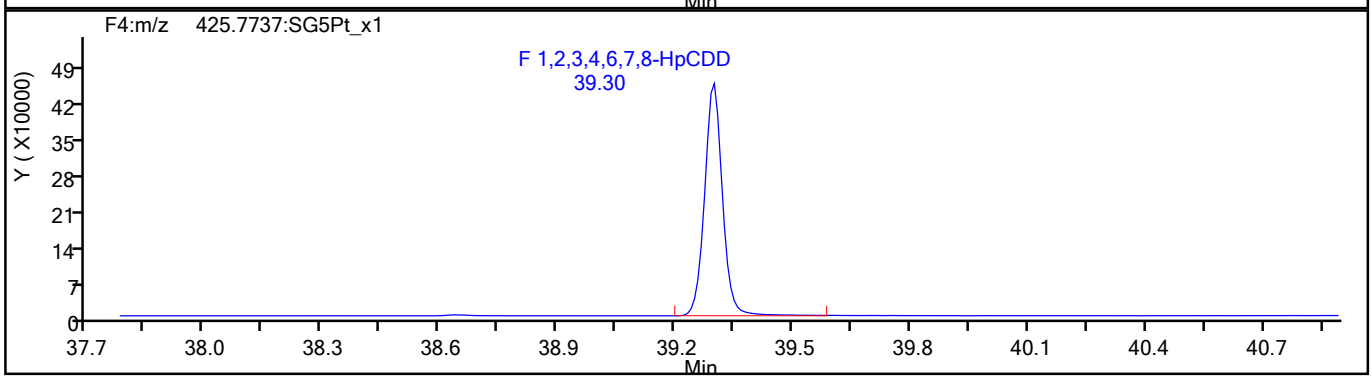

HpCDD Standards

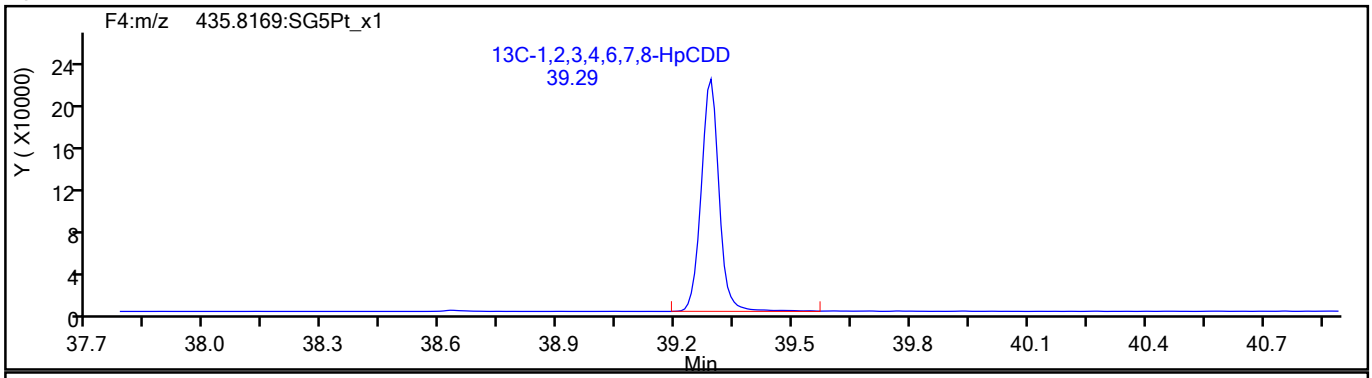

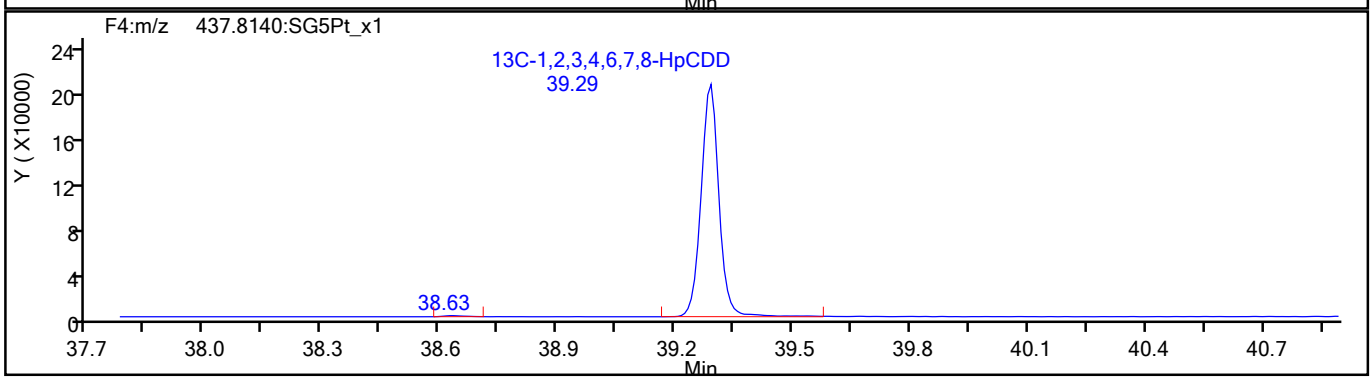

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Eurofins TestAmerica, Sacramento

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OCDF

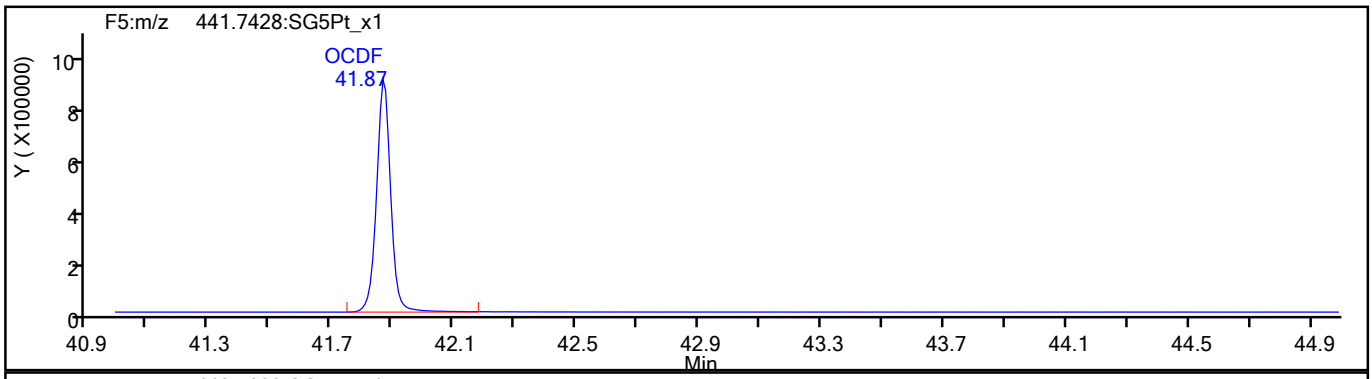

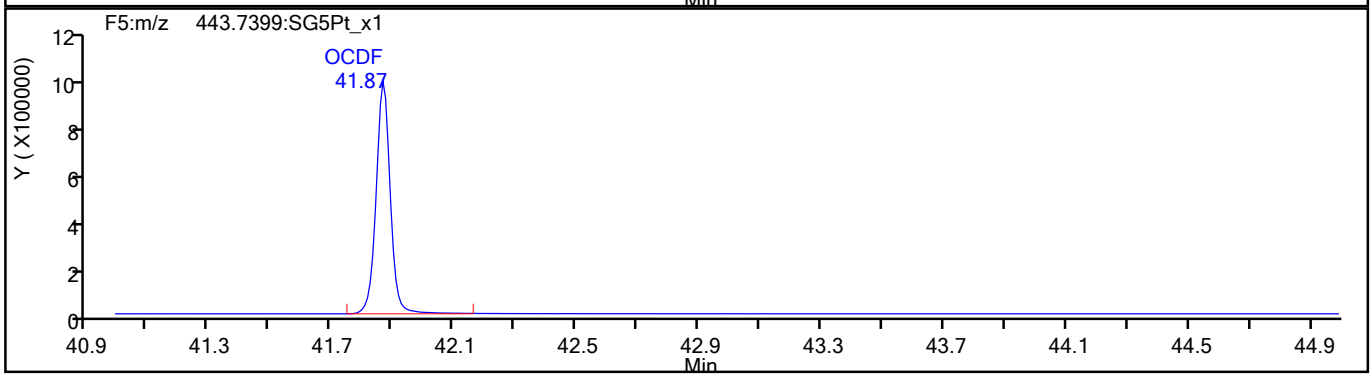

OCDF Standards

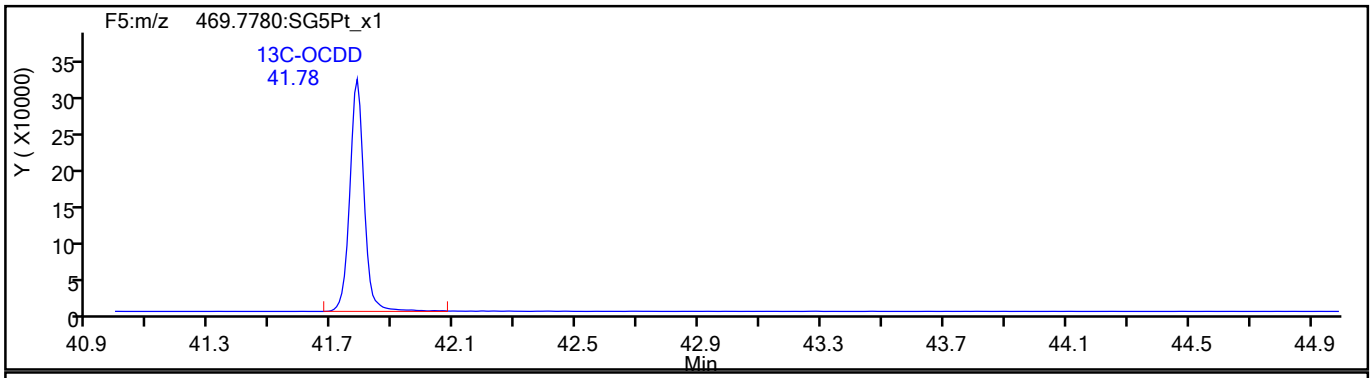

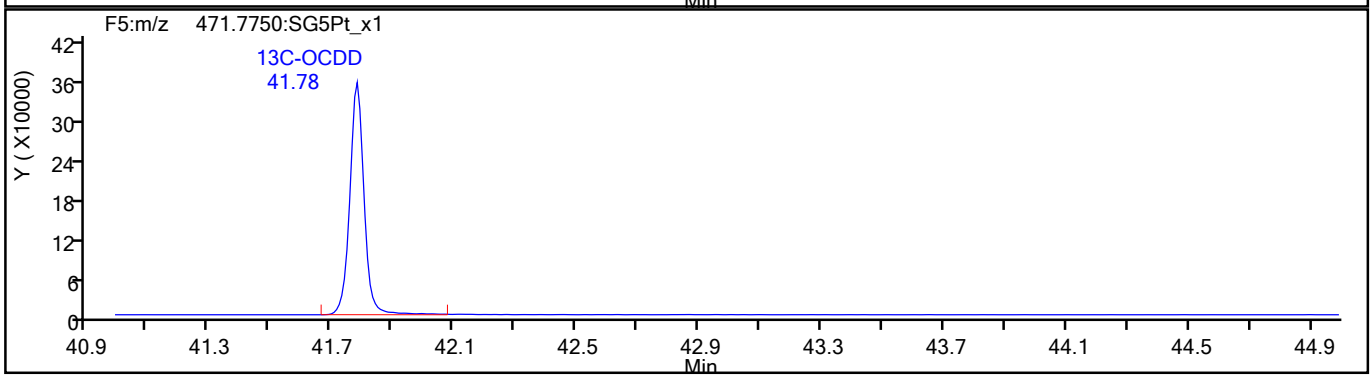

787335

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

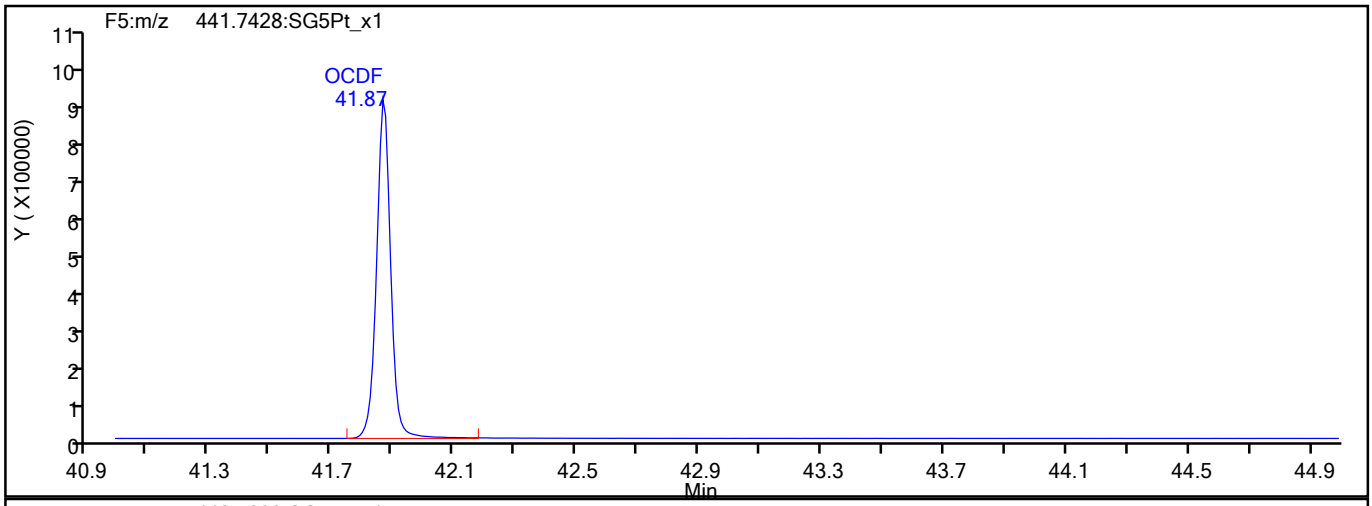

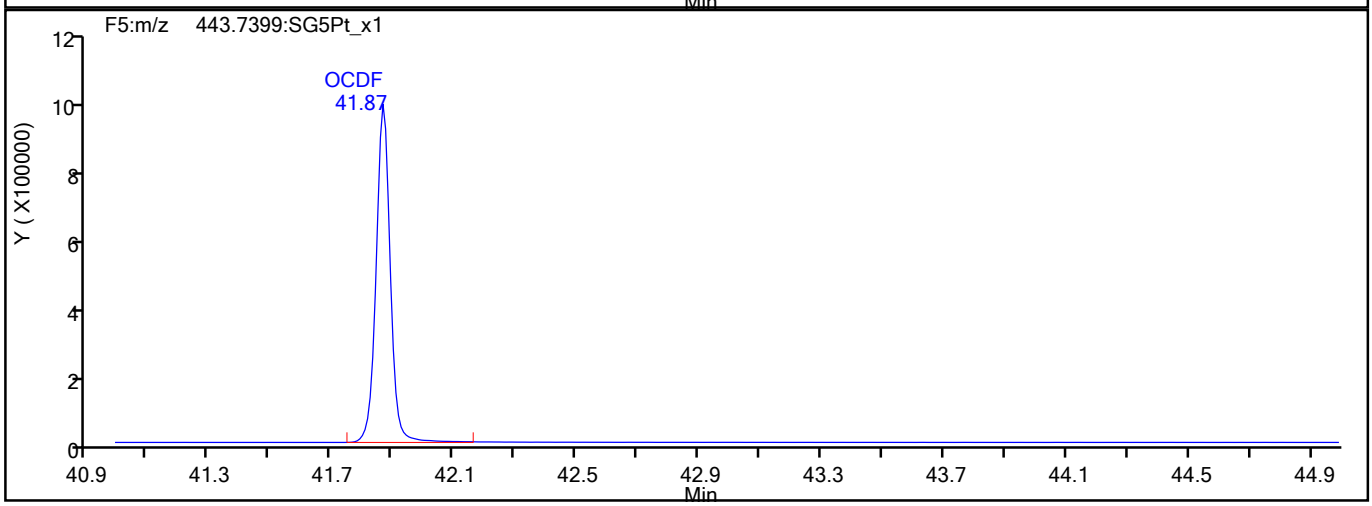

OCDF Interference Mass

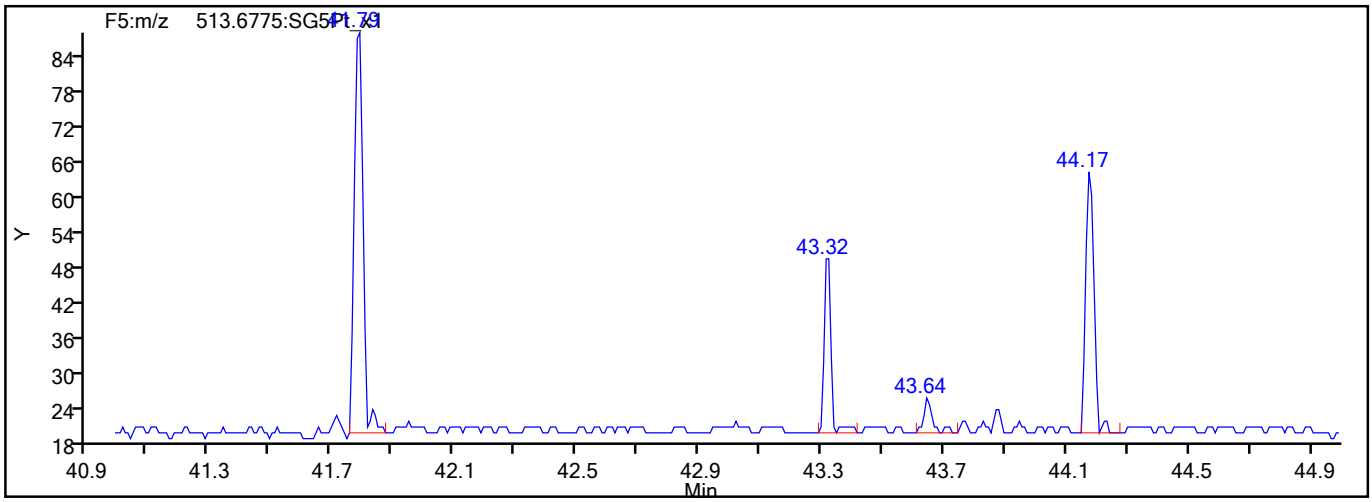

787336

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

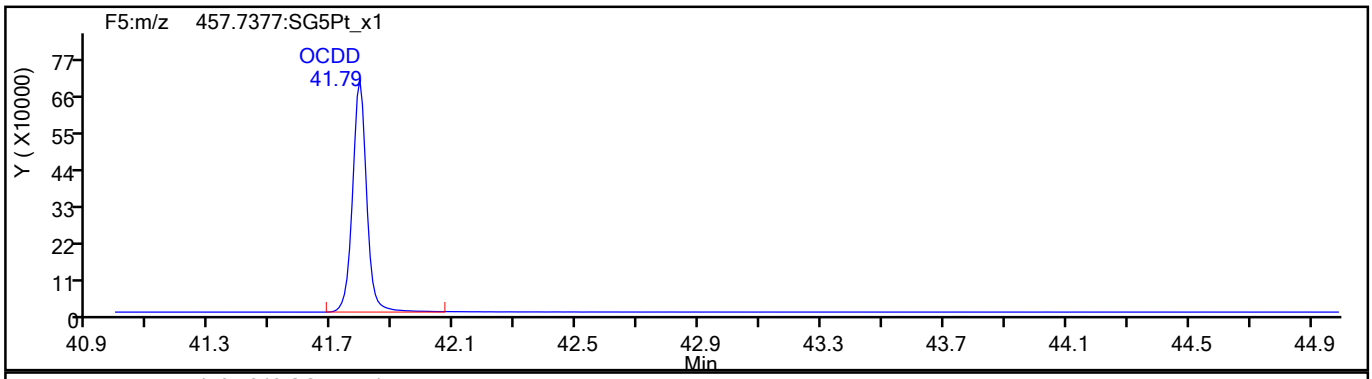

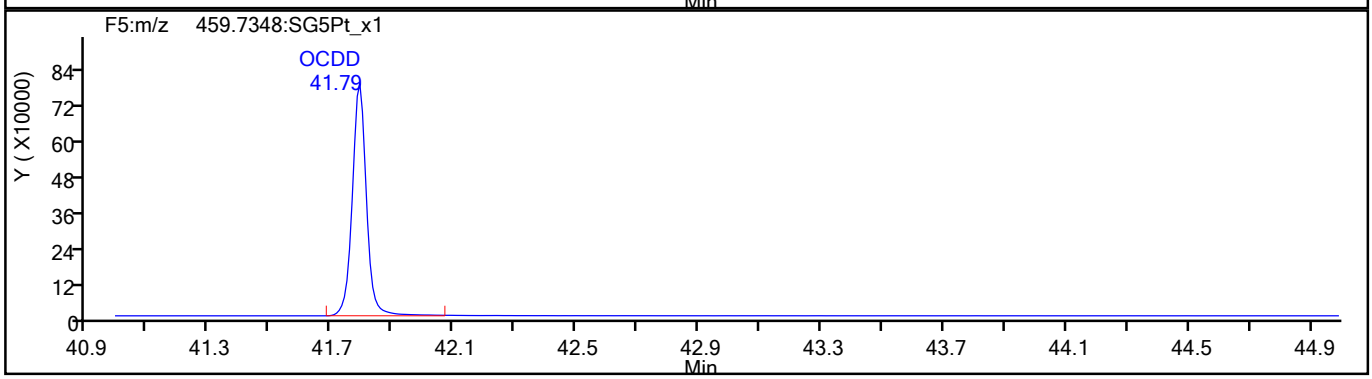

OCDD Standards

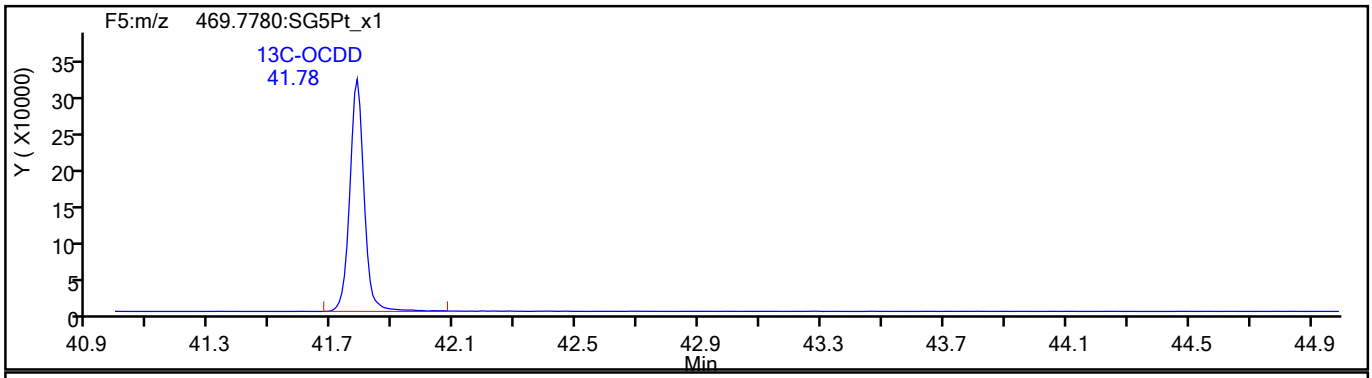

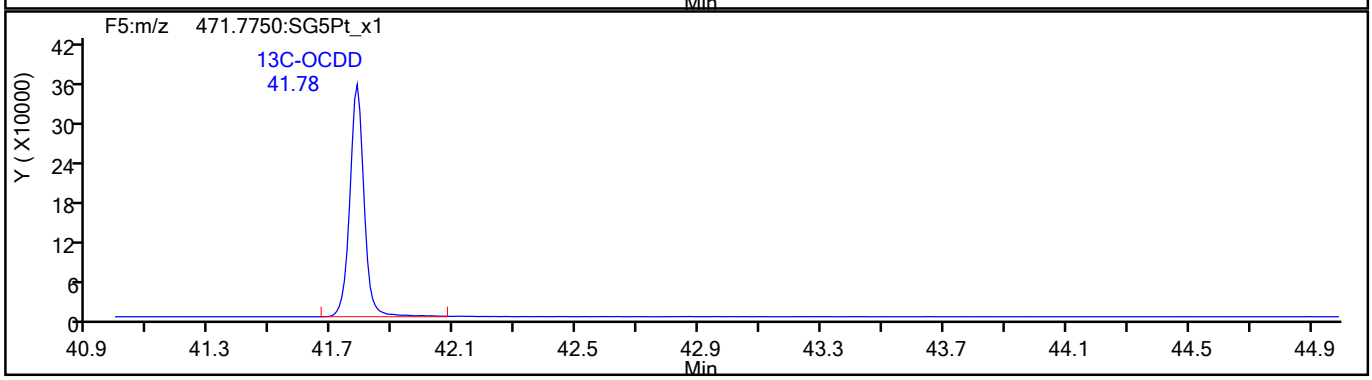

787337

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

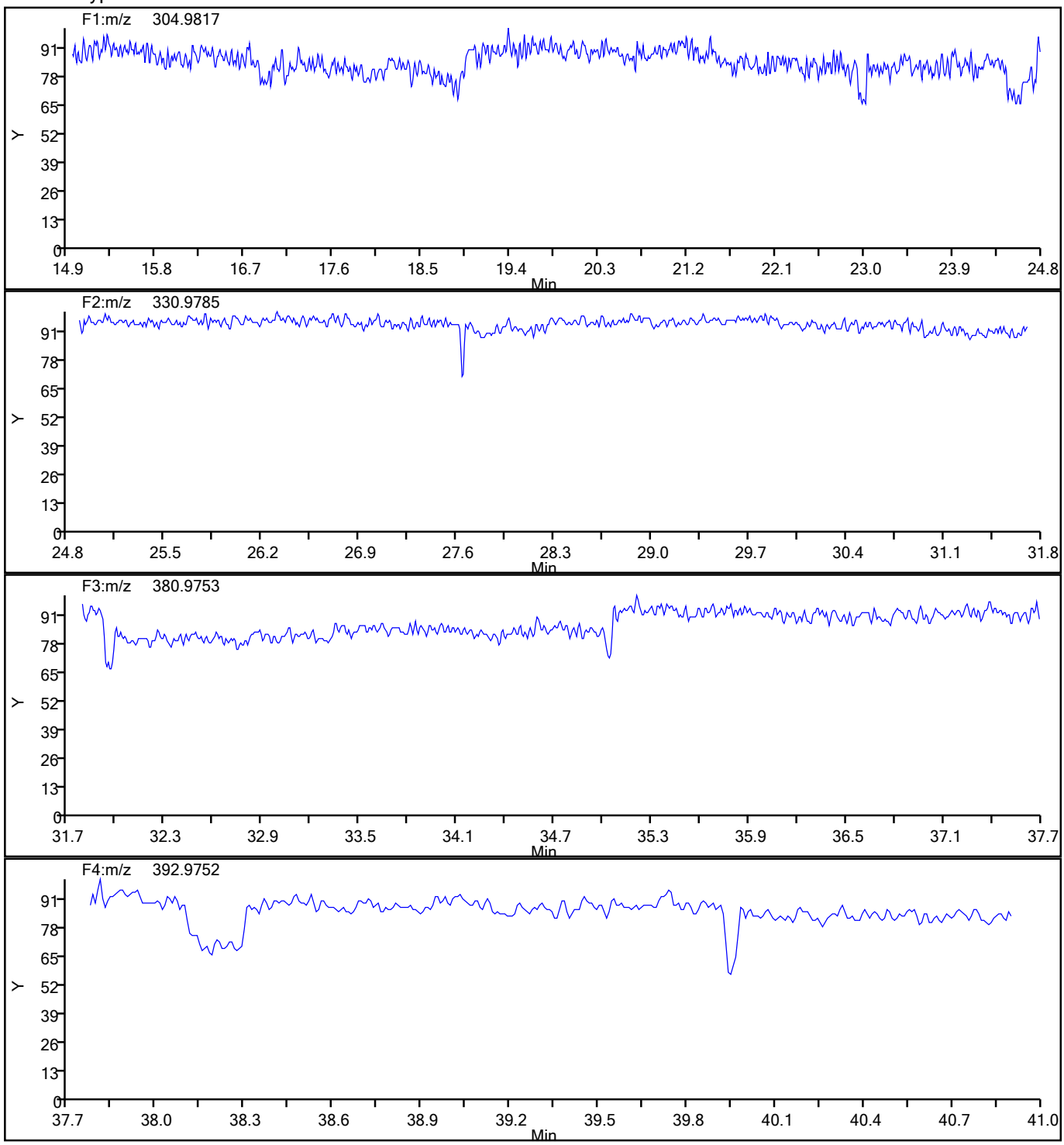

787338

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

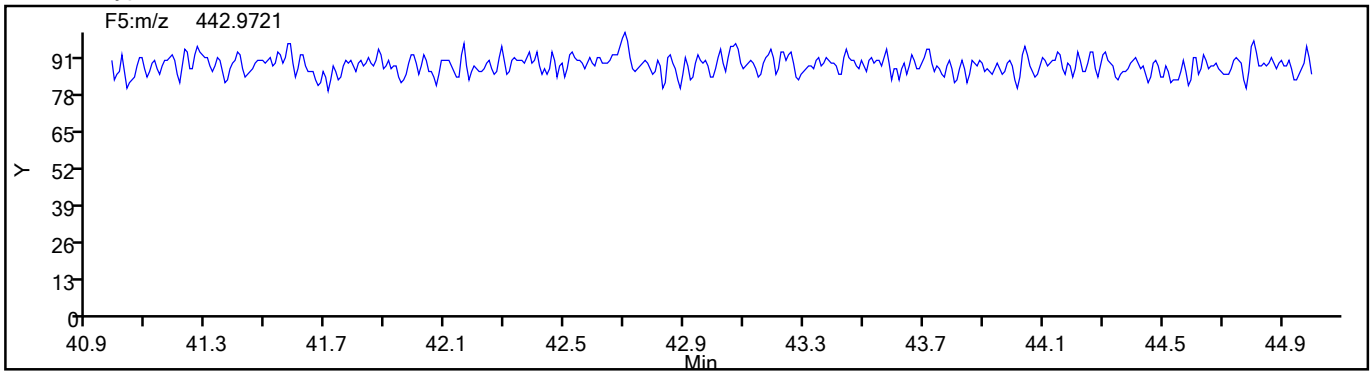

787339

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.544	2066088	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.616	2962515	0.80	1.3459	106.5	106.5	0.1844	0.1844	107	
2,3,7,8-TCDF	19.642	6137031	0.79	1.0802	191.8	191.8	0.1493	0.1493	95.89	
S Total TCDF					191.8	191.8	0.1493	0.1493		
D 13C-2,3,7,8-TCDD	20.913	2014532	0.80	0.9317	104.7	104.7	0.1455	0.1455	105	
$ 37Cl4-2,3,7,8-TCDD	20.939	4287059		1.0083	205.8	205.8	0.0958	0.0958	103	
2,3,7,8-TCDD	20.939	4286034	0.79	1.0753	197.8	197.8	0.1041	0.1041	98.92	
S Total TCDD					197.8	197.8	0.1041	0.1041		
D 13C-1,2,3,7,8-PeCDF	26.552	2574521	1.60	1.1405	109.3	109.3	0.2956	0.2956	109	
1,2,3,7,8-PeCDF	26.578	26032333	1.55	1.0543	959.1	959.1	2.101	2.101	95.91	
D 13C-2,3,4,7,8-PeCDF	28.002	2584740	1.63	1.1253	111.2	111.2	0.2996	0.2996	111	
2,3,4,7,8-PeCDF	28.028	24861382	1.54	1.0079	954.4	954.4	2.393	2.393	95.44	
S Total PeCDF					1913.5	1913.5	2.247	2.247		
D 13C-1,2,3,7,8-PeCDD	28.795	1602880	1.57	0.7165	108.3	108.3	0.1169	0.1169	108	
1,2,3,7,8-PeCDD	28.820	16645947	1.55	1.0465	992.4	992.4	0.3154	0.3154	99.24	
S Total PeCDD					992.4	992.4	0.3154	0.3154		
D 13C-1,2,3,4,7,8-HxCDF	34.370	1968615	0.53	0.9648	104.2	104.2	0.2764	0.2764	104	
1,2,3,4,7,8-HxCDF	34.404	21902419	1.26	1.1474	969.7	969.7	2.964	2.964	96.97	
D 13C-1,2,3,6,7,8-HxCDF	34.555	2283961	0.53	1.0708	109.0	109.0	0.2490	0.2490	109	
1,2,3,6,7,8-HxCDF	34.572	26721257	1.24	1.2178	960.7	960.7	2.280	2.280	96.07	
D 13C-2,3,4,6,7,8-HxCDF	35.432	2190509	0.53	1.0413	107.5	107.5	0.2561	0.2561	107	
2,3,4,6,7,8-HxCDF	35.449	25388405	1.26	1.2145	954.3	954.3	2.195	2.195	95.43	
D 13C-1,2,3,7,8,9-HxCDF	36.376	1895740	0.54	0.9731	99.5	99.5	0.2741	0.2741	99.52	
1,2,3,7,8,9-HxCDF	36.393	22553786	1.25	1.2401	959.4	959.4	2.206	2.206	95.94	
S Total HxCDF					3844.1	3844.1	2.411	2.411		
* 13C-1,2,3,7,8,9-HxCDD	36.182	1957513	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.668	1539784	1.30	0.7587	103.7	103.7	0.1260	0.1260	104	
1,2,3,4,7,8-HxCDD	35.685	15558498	1.24	1.0608	952.5	952.5	0.9710	0.9710	95.25	
D 13C-1,2,3,6,7,8-HxCDD	35.794	1741498	1.29	0.8593	103.5	103.5	0.1112	0.1112	104	
1,2,3,6,7,8-HxCDD	35.811	16661405	1.25	0.9933	963.1	963.1	0.9604	0.9604	96.31	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.198	17279185	1.24	1.1094	949.3	949.3	0.8929	0.8929	94.93	
S Total HxCDD					2865.0	2865.0	0.9414	0.9414		
D 13C-1,2,3,4,6,7,8-HpCDF	38.292	1546113	0.45	0.7359	107.3	107.3	0.2883	0.2883	107	
1,2,3,4,6,7,8-HpCDF	38.309	21181967	1.05	1.4421	950.0	950.0	2.277	2.277	95.00	
D 13C-1,2,3,4,7,8,9-HpCDF	39.591	1455766	0.46	0.6854	108.5	108.5	0.3095	0.3095	109	
1,2,3,4,7,8,9-HpCDF	39.600	17812004	1.04	1.3092	934.6	934.6	2.410	2.410	93.46	
S Total HpCDF					1884.6	1884.6	2.344	2.344		
D 13C-1,2,3,4,6,7,8-HpCDD	39.279	1355803	1.07	0.6745	102.7	102.7	0.1997	0.1997	103	
1,2,3,4,6,7,8-HpCDD	39.287	13800004	1.05	1.0503	969.1	969.1	1.263	1.263	96.91	
S Total HpCDD					969.1	969.1	1.263	1.263		
D 13C-OCDD	41.778	2298668	0.91	0.5446	215.6	215.6	0.2297	0.2297	108	
OCDF	41.862	30505464	0.91	1.3168	2015.6	2015.6	1.318	1.318	101	
OCDD	41.786	22803823	0.89	1.0620	1868.3	1868.3	1.408	1.408	93.41	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.544	20.547	0		920603	150087	115	287	1305		
333.9338	20.544	20.547	0		1145485	178229	63	157	2829	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.616	19.616	0	0.955	1315625	222528	203	507	1096		
317.9389	19.625	19.616	1	0.955	1646890	273662	123	307	2225	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.642	19.646	0	1.001	2713655	446561	138	345	3236		
305.8987	19.642	19.646	0	1.001	3423376	567597	182	455	3119	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.913	20.910	0	1.018	893612	134635	115	287	1171		
333.9338	20.913	20.910	0	1.018	1120920	170916	63	157	2713	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.939	20.935	0	1.019	4287059	670067	127	317	5276		
2,3,7,8-TCDD											
319.8965	20.939	20.939	0	1.001	1891754	292983	63	157	4651		
321.8936	20.939	20.939	0	1.001	2394280	370217	74	185	5003	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.552	26.560	0	1.292	1583459	282119	248	620	1138		
353.8970	26.552	26.560	0	1.292	991062	177690	195	487	911	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.578	26.584	0	1.001	15809872	2840843	2484	6210	1144		
341.8567	26.578	26.584	0	1.001	10222461	1821485	1590	3975	1146	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.002	28.014	-1	1.363	1602860	260320	248	620	1050		
353.8970	28.002	28.014	-1	1.363	981880	162024	195	487	831	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.028	28.039	-1	1.001	15085675	2478093	2484	6210	998		
341.8567	28.028	28.039	-1	1.001	9775707	1618127	1590	3975	1018	1.54(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.795	28.801	0	1.402	978472	153717	62	155	2479		
369.8919	28.795	28.801	0	1.402	624408	97747	48	120	2036	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.820	28.828	0	1.001	10130500	1566899	211	527	7426		
357.8516	28.820	28.828	0	1.001	6515447	1012500	121	302	8368	1.55(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.370	34.384	-1	0.950	681535	131177	206	515	637		
385.8610	34.370	34.384	-1	0.950	1287080	241920	293	732	826	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.404	34.405	0	1.001	12221224	2429393	2850	7125	852		
375.8178	34.404	34.405	0	1.001	9681195	1938109	2226	5565	871	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.555	34.562	0	0.955	787279	159086	206	515	772		
385.8610	34.555	34.562	0	0.955	1496682	297889	293	732	1017	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.572	34.582	-1	1.000	14789206	2955884	2850	7125	1037		
375.8178	34.572	34.582	-1	1.000	11932051	2355841	2226	5565	1058	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.432	35.444	-1	0.979	755749	165004	206	515	801		
385.8610	35.432	35.444	-1	0.979	1434760	311089	293	732	1062	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.449	35.461	-1	1.000	14140079	3143736	2850	7125	1103		
375.8178	35.449	35.461	-1	1.000	11248326	2509936	2226	5565	1128	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.376	36.388	-1	1.005	661276	161798	206	515	785		
385.8610	36.376	36.388	-1	1.005	1234464	302164	293	732	1031	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.393	36.402	-1	1.000	12520528	3053286	2850	7125	1071		
375.8178	36.393	36.402	-1	1.000	10033258	2435227	2226	5565	1094	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.182	36.192	-1		1094886	260943	101	252	2584		
403.8529	36.182	36.192	-1		862627	206665	78	195	2650	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.668	35.680	-1	0.986	871516	210376	101	252	2083		
403.8529	35.668	35.680	-1	0.986	668268	161161	78	195	2066	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.685	35.695	-1	1.000	8624435	2104573	873	2182	2411		
391.8127	35.685	35.695	-1	1.000	6934063	1696812	658	1645	2579	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.794	35.805	-1	0.989	980230	223296	101	252	2211		
403.8529	35.794	35.805	-1	0.989	761268	177860	78	195	2280	1.29(1.05-1.43)	

Report Date: 09-Jun-2021 08:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.811	35.820	-1	1.000	9246987	2090881	873	2182	2395		
391.8127	35.811	35.820	-1	1.000	7414418	1678531	658	1645	2551	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.198	36.208	-1	1.015	9564246	2295203	873	2182	2629		
391.8127	36.198	36.208	-1	1.015	7714939	1845750	658	1645	2805	1.24(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.292	38.305	-1	1.058	482843	137759	141	352	977		
419.8220	38.292	38.305	-1	1.058	1063270	304088	256	640	1188	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	10831802	3065791	3002	7505	1021		
409.7788	38.309	38.317	0	1.000	10350165	2906390	2802	7005	1037	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.591	39.600	-1	1.094	458518	146875	141	352	1042		
419.8220	39.591	39.600	-1	1.094	997248	313009	256	640	1223	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.600	39.608	-1	1.000	9086557	2852631	3002	7505	950		
409.7788	39.600	39.608	-1	1.000	8725447	2728020	2802	7005	974	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.279	39.293	-1	1.086	700550	219811	138	345	1593		
437.8140	39.279	39.293	-1	1.086	655253	202475	114	285	1776	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.287	39.301	-1	1.000	7071387	2141109	1133	2832	1890		
425.7737	39.287	39.301	-1	1.000	6728617	2063900	1107	2767	1864	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.778	41.785	0	1.155	1096060	330168	115	287	2871		
471.7750	41.778	41.785	0	1.155	1202608	365220	119	297	3069	0.91(0.76-1.02)	
OCDF											
441.7428	41.862	41.875	-1	1.002	14551716	4304688	1153	2882	3733		
443.7399	41.862	41.875	-1	1.002	15953748	4798066	1261	3152	3805	0.91(0.76-1.02)	
OCDD											
457.7377	41.786	41.794	0	1.000	10735225	3226535	983	2457	3282		
459.7348	41.786	41.794	0	1.000	12068598	3663774	1097	2742	3340	0.89(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

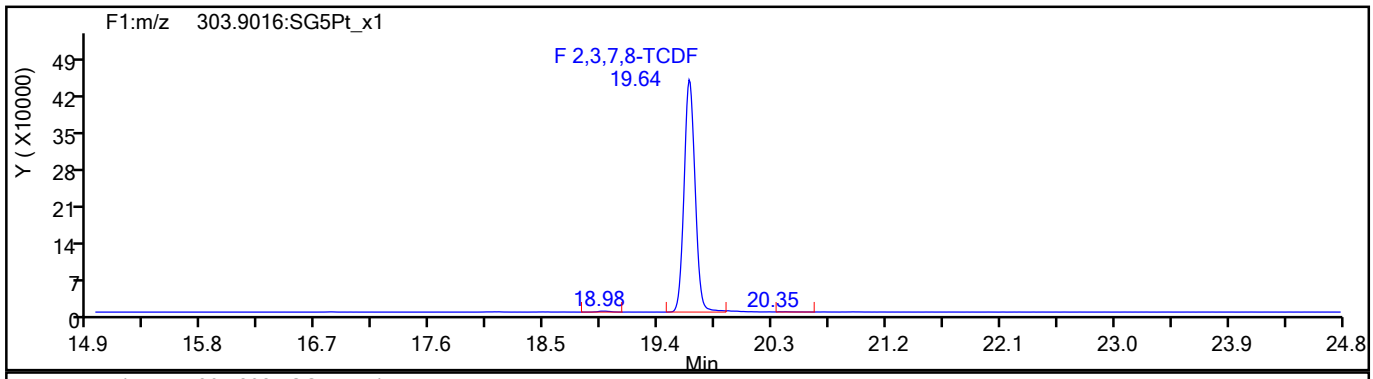

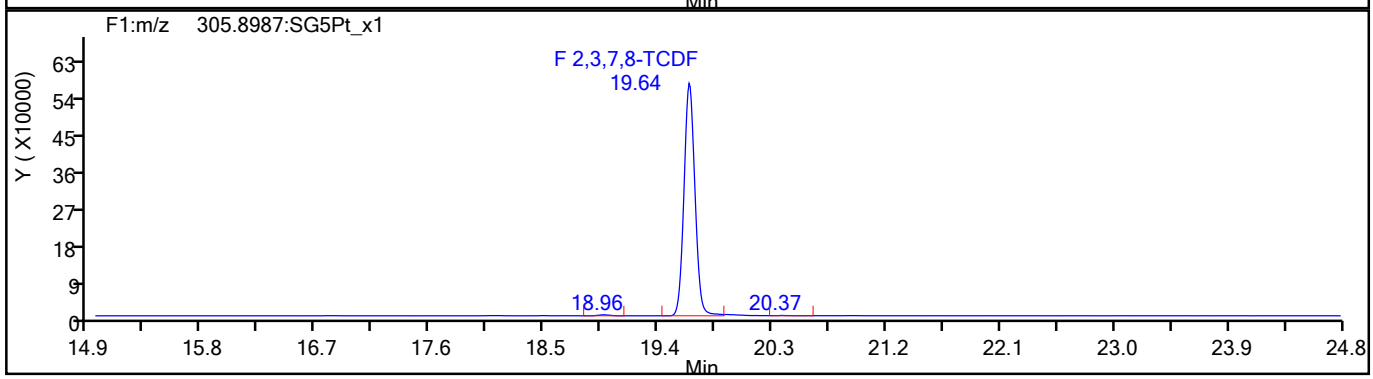

TCDF Standards

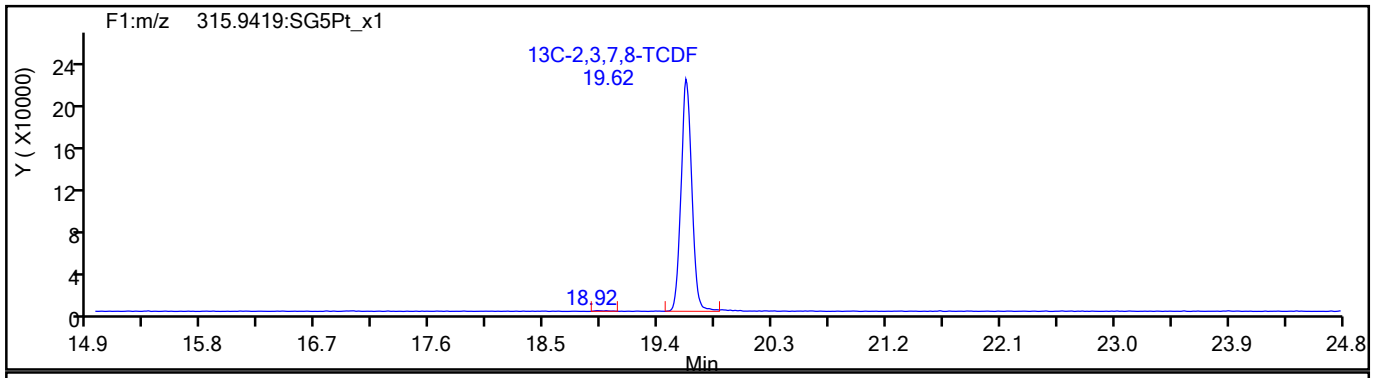

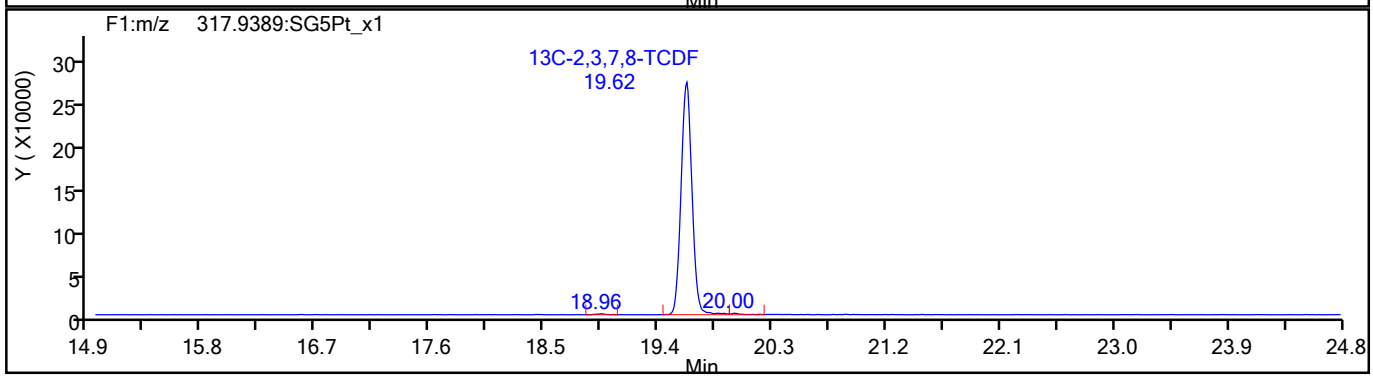

787345

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

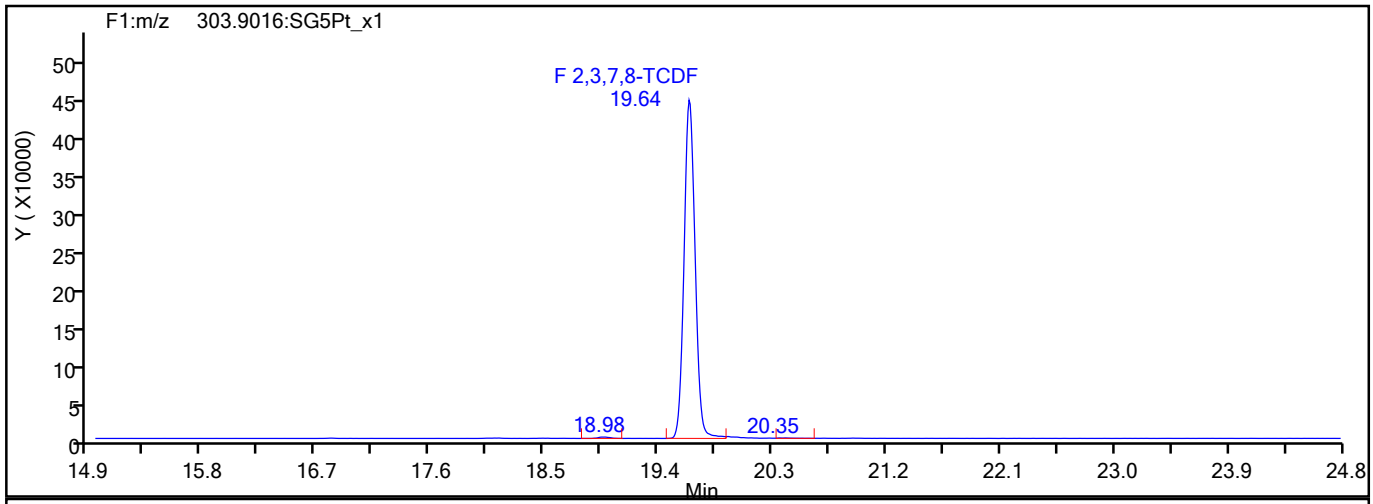

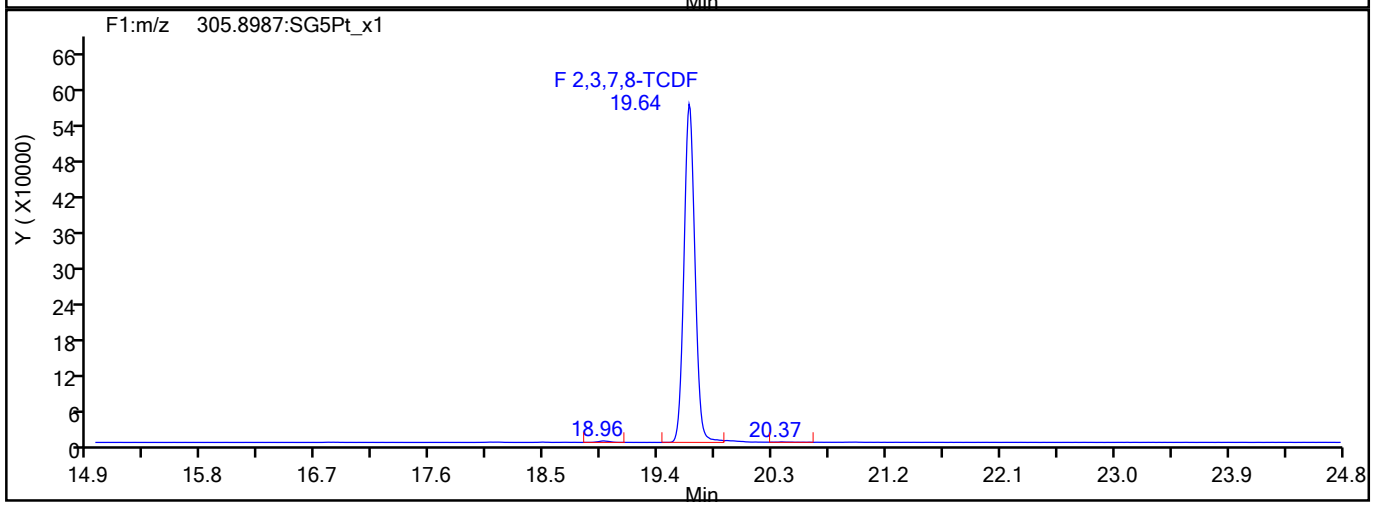

TCDF Interference Mass

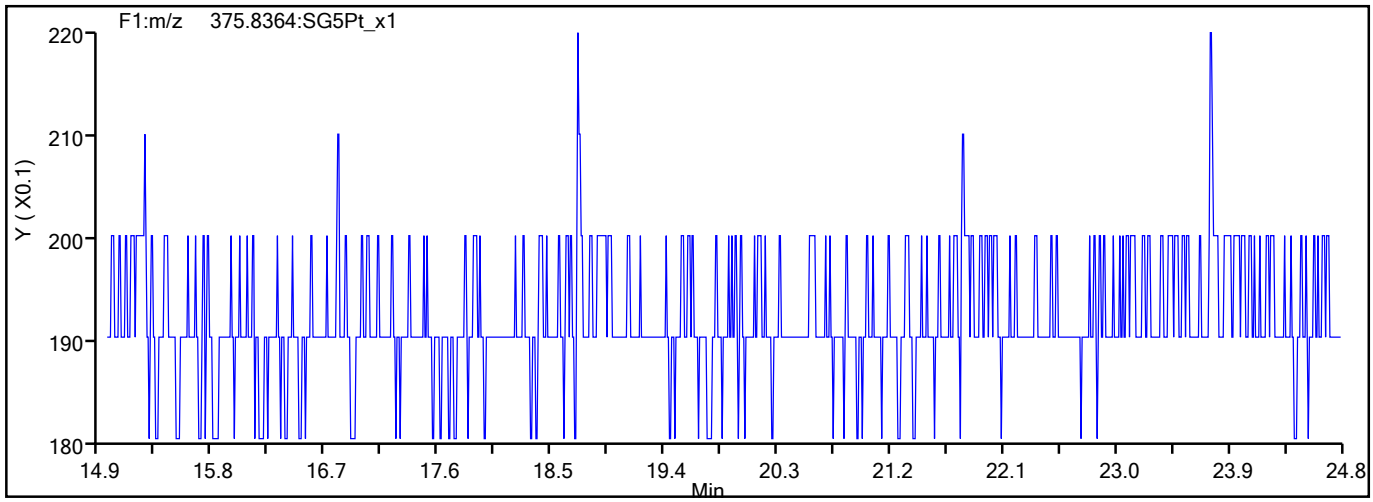

787346

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

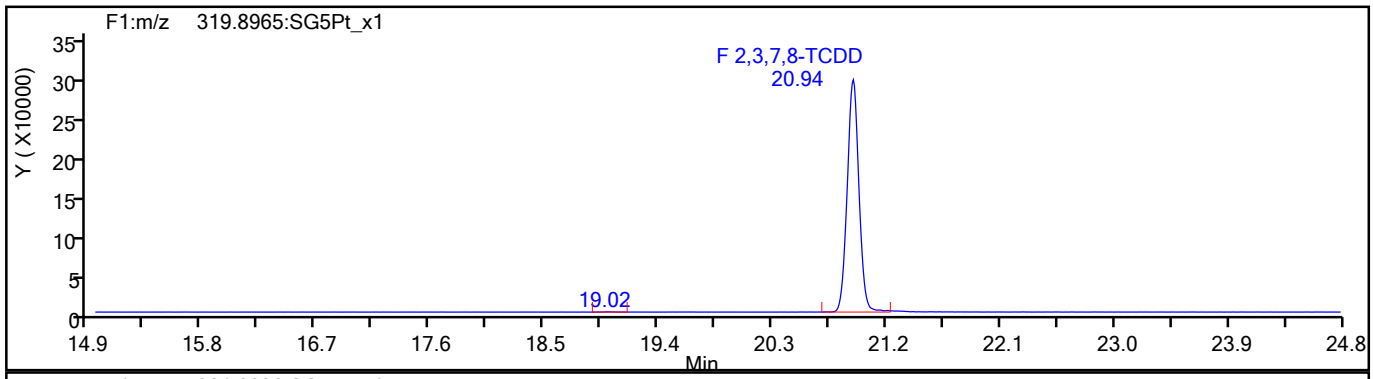

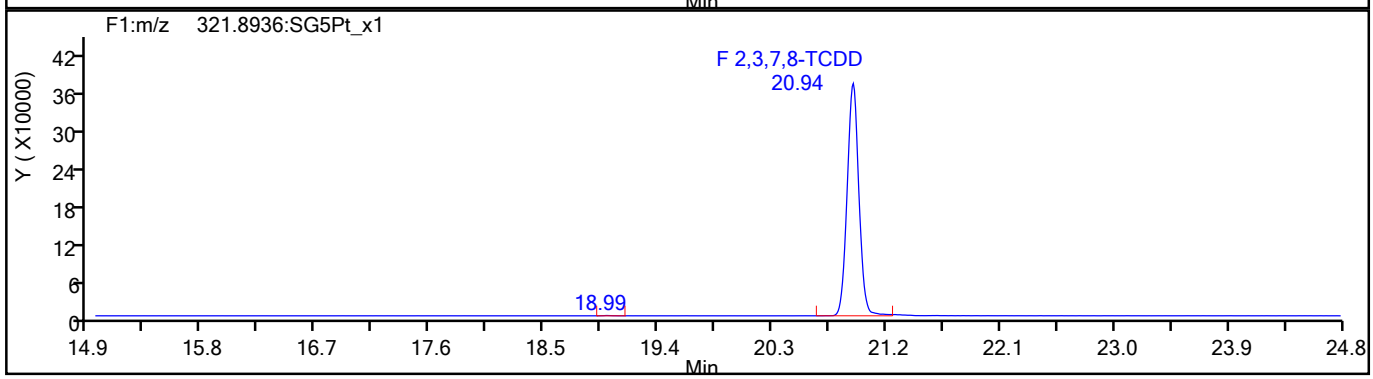

TCDD Standards

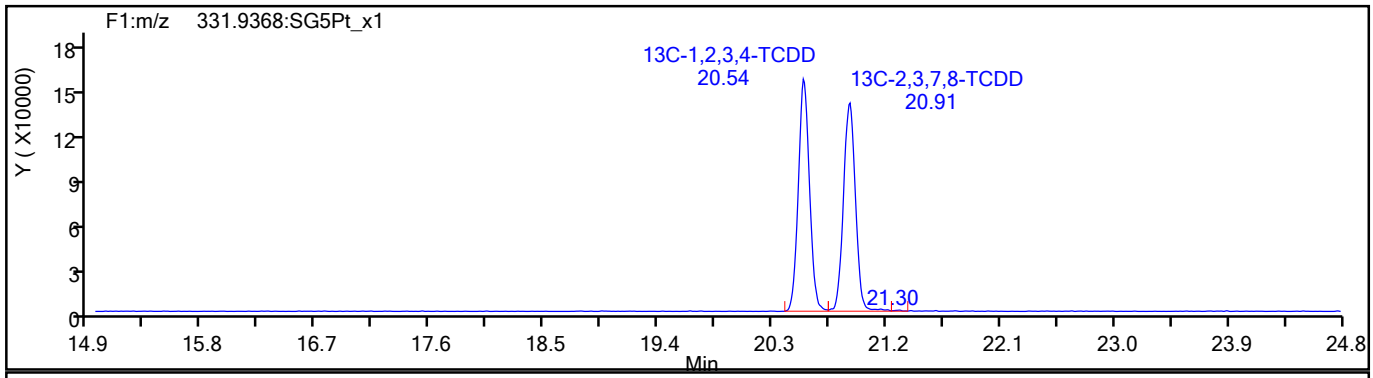

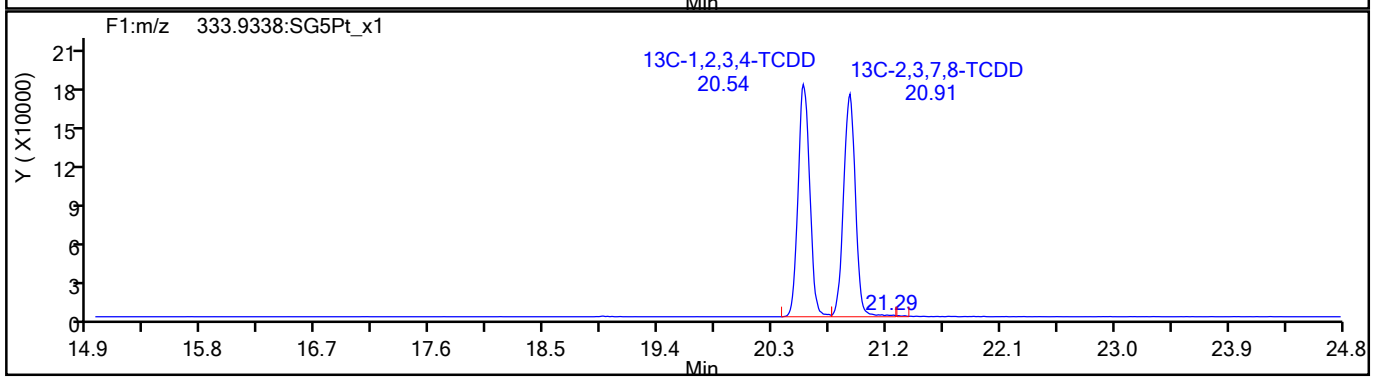

787347

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

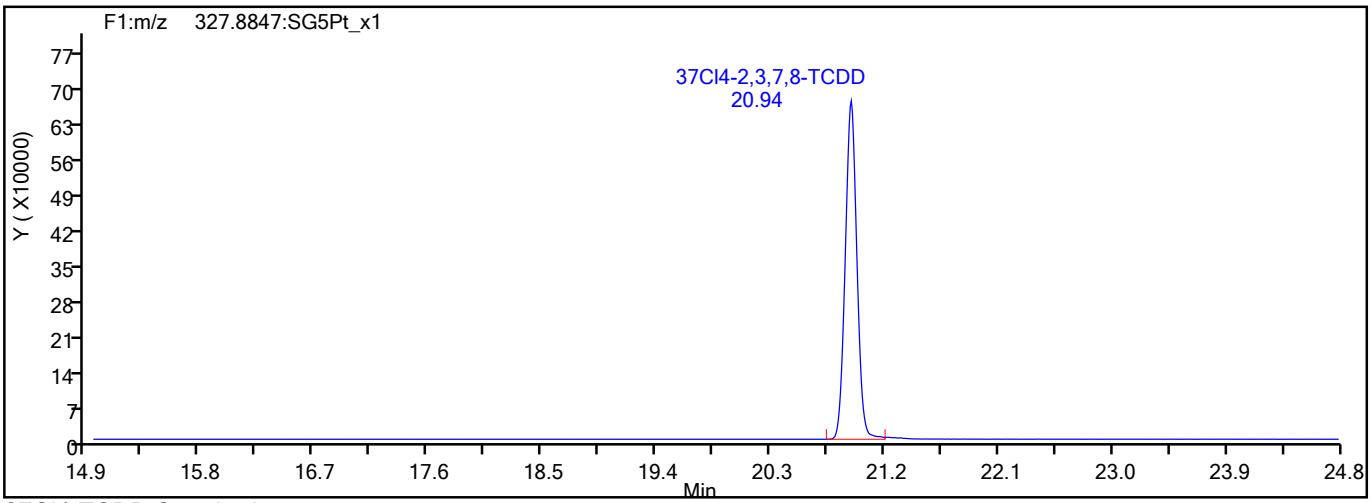

37Cl4-TCDD Standards

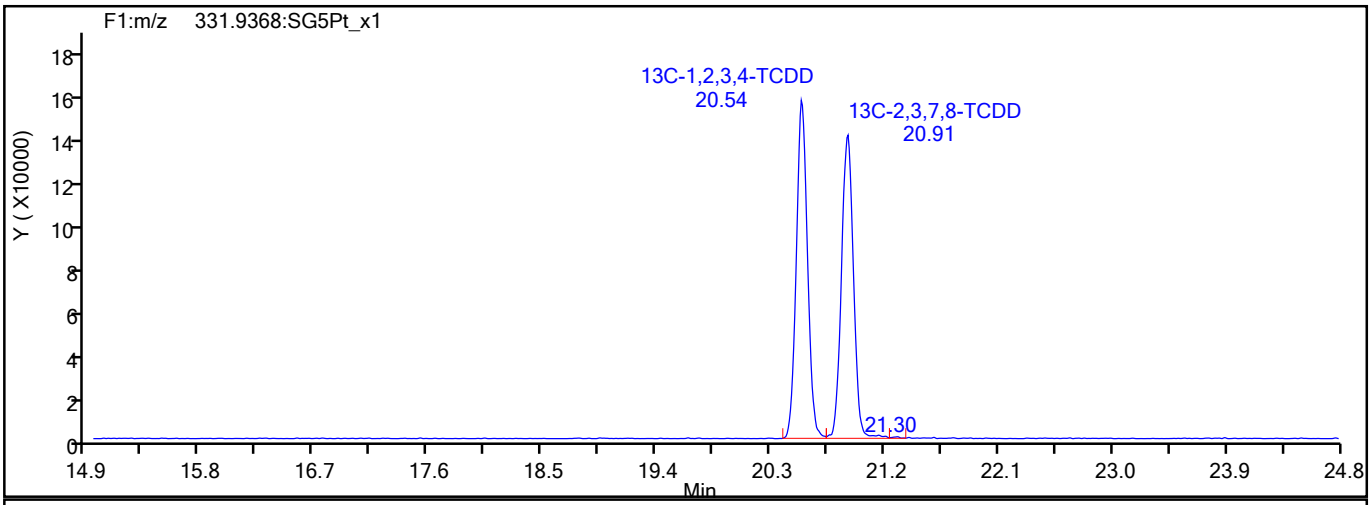

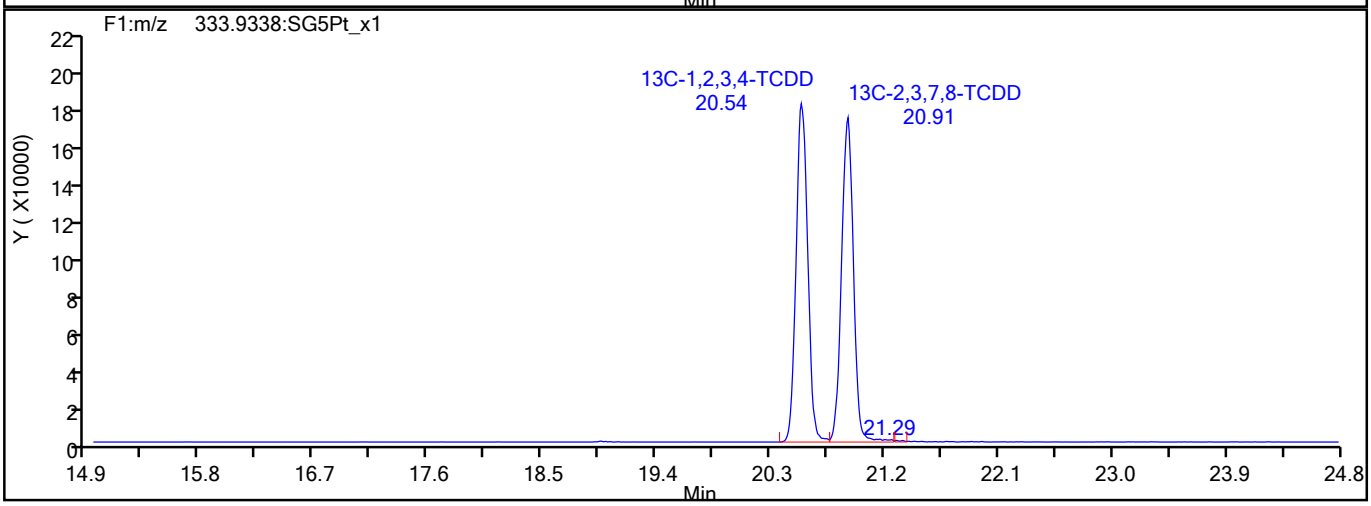

787348

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

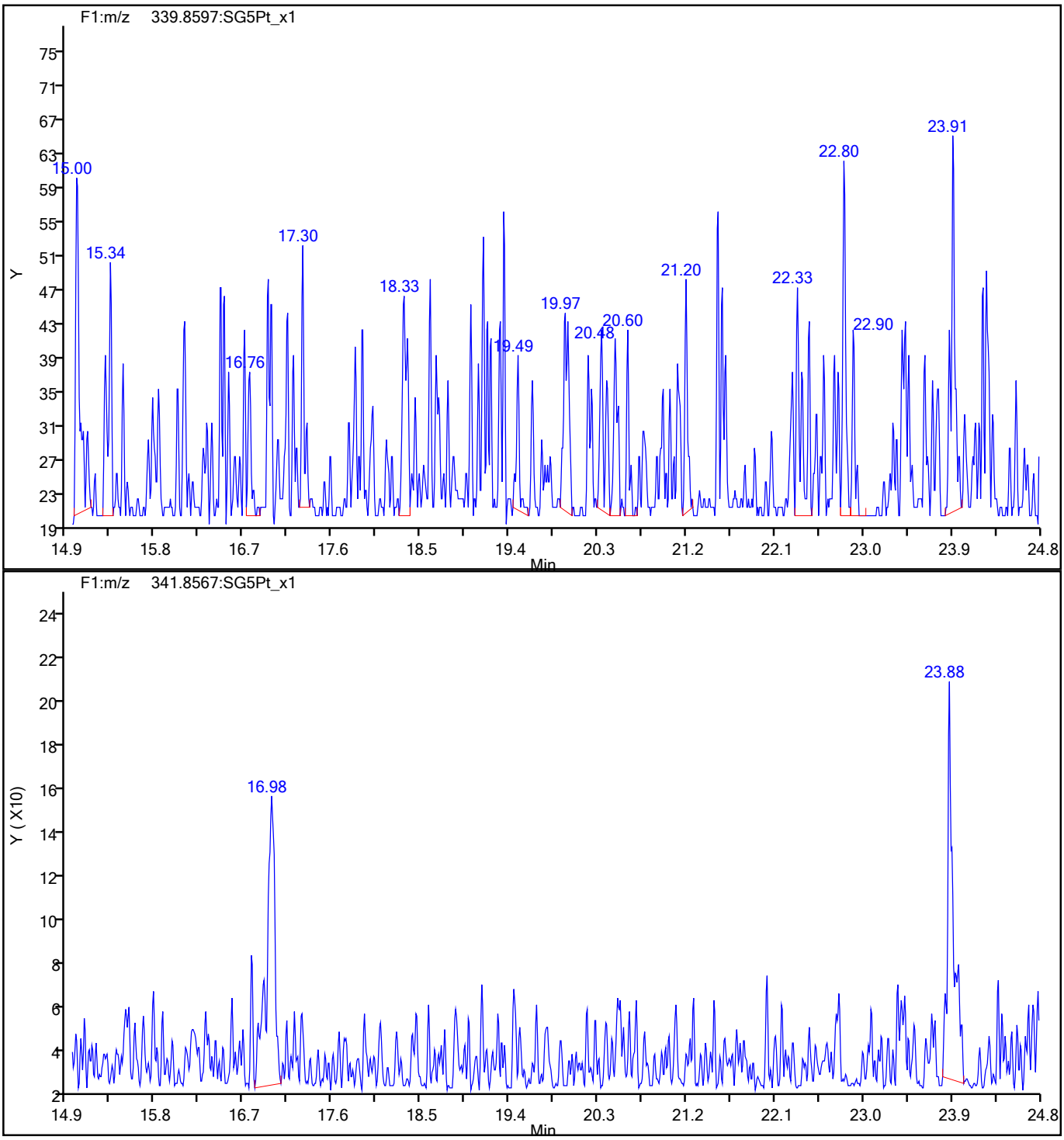

787349

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

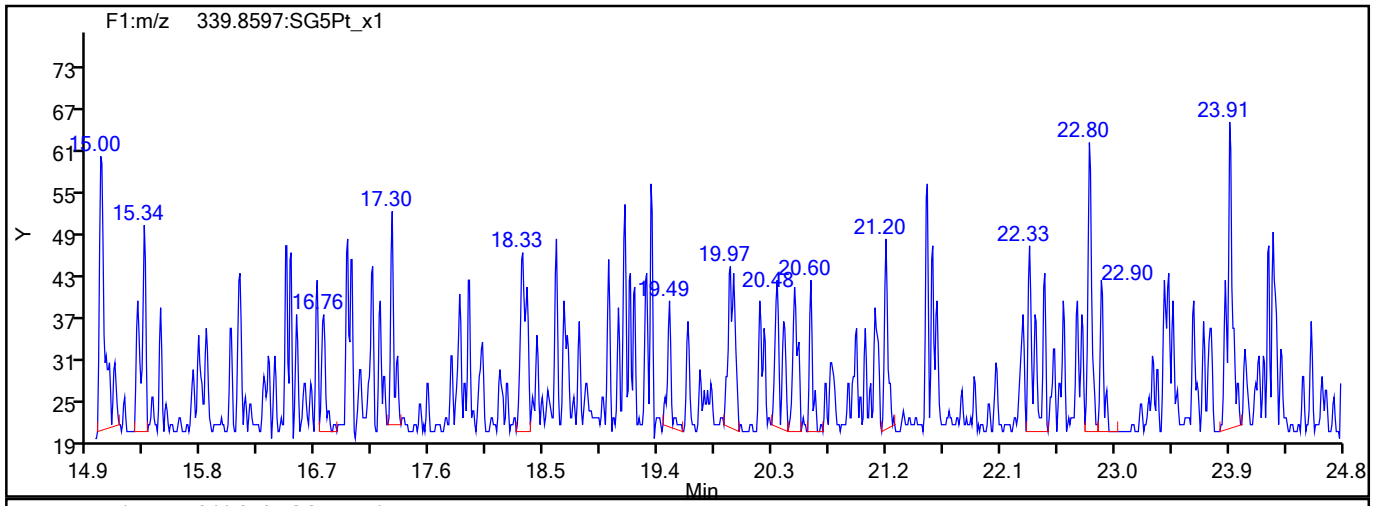

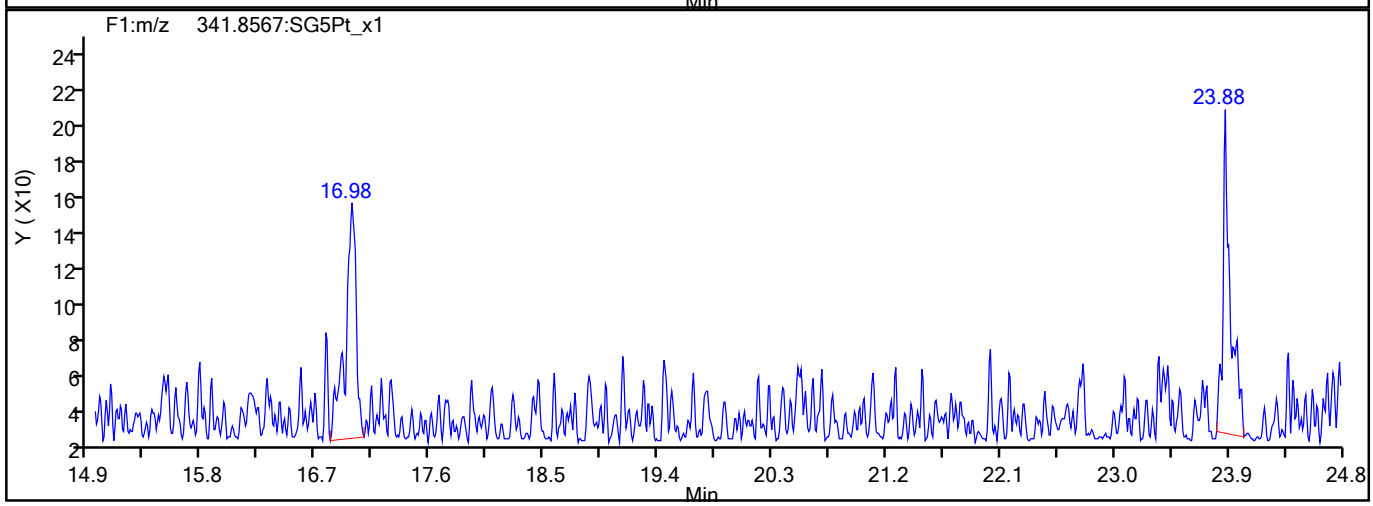

F1 PeCDFs Interference Mass

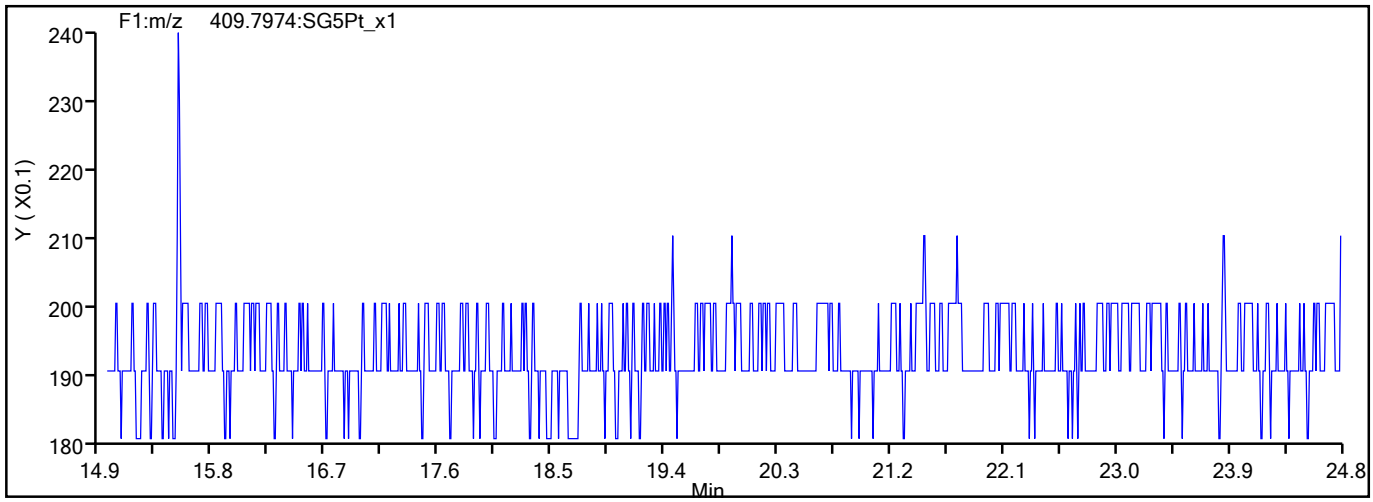

787350

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

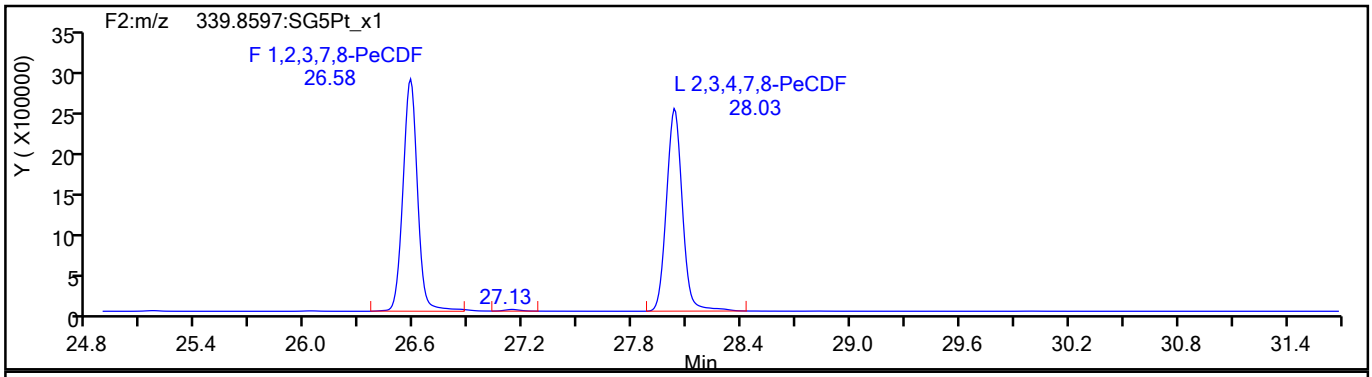

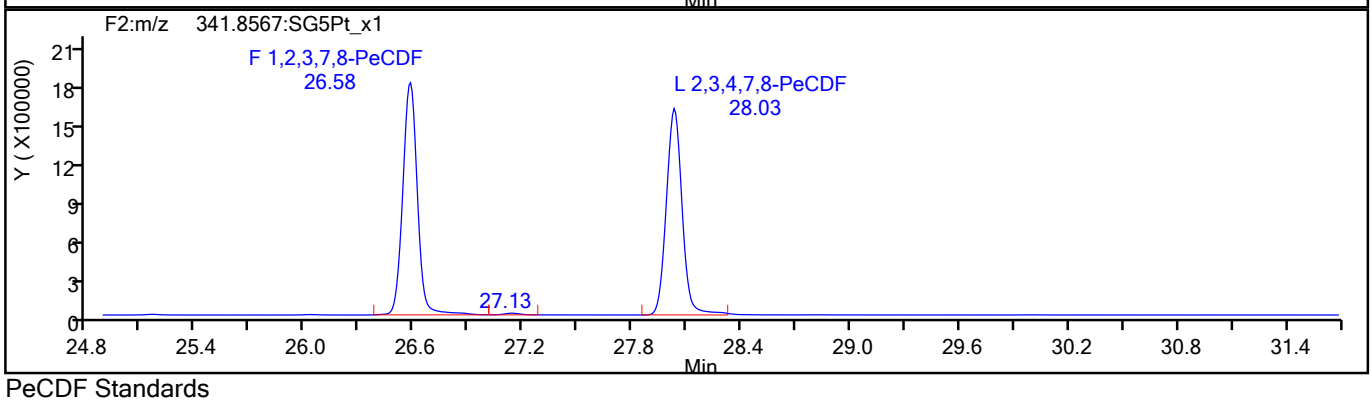

PeCDF Standards

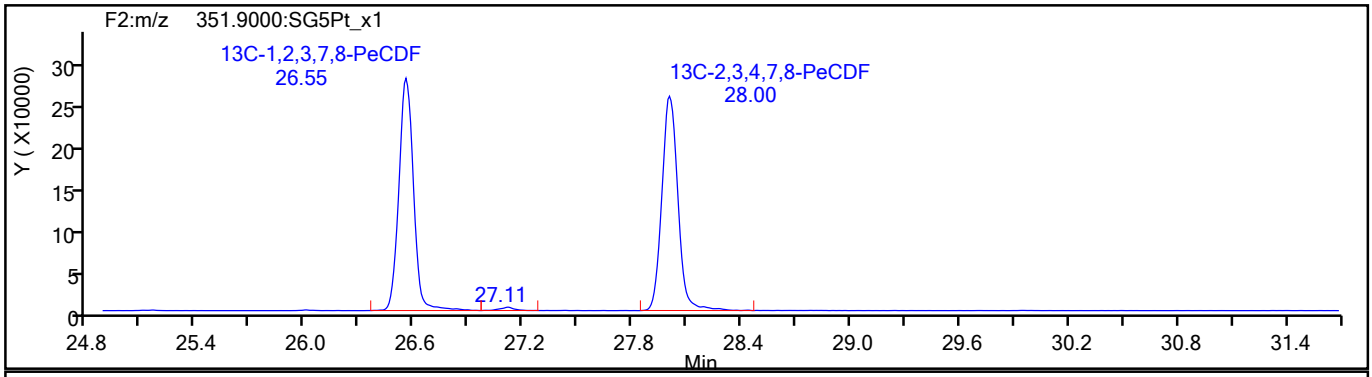

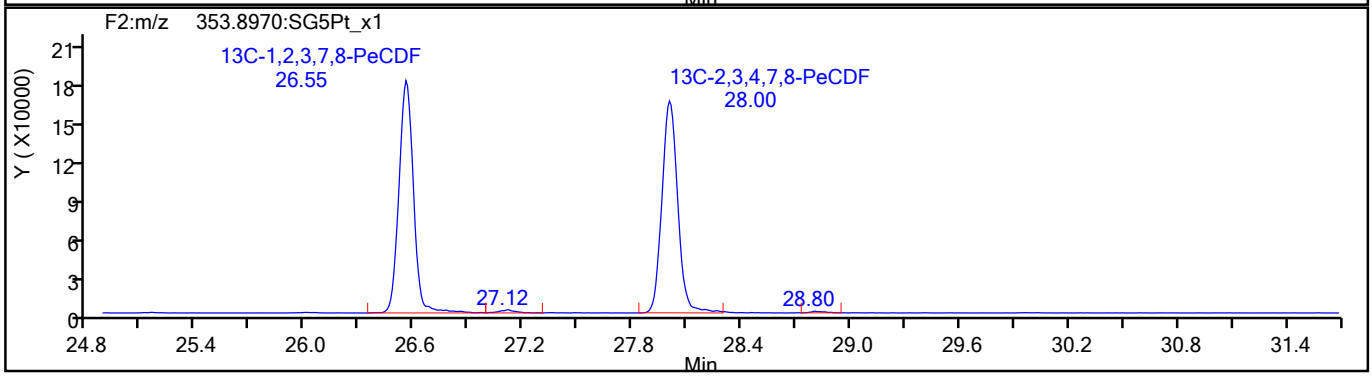

787351

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

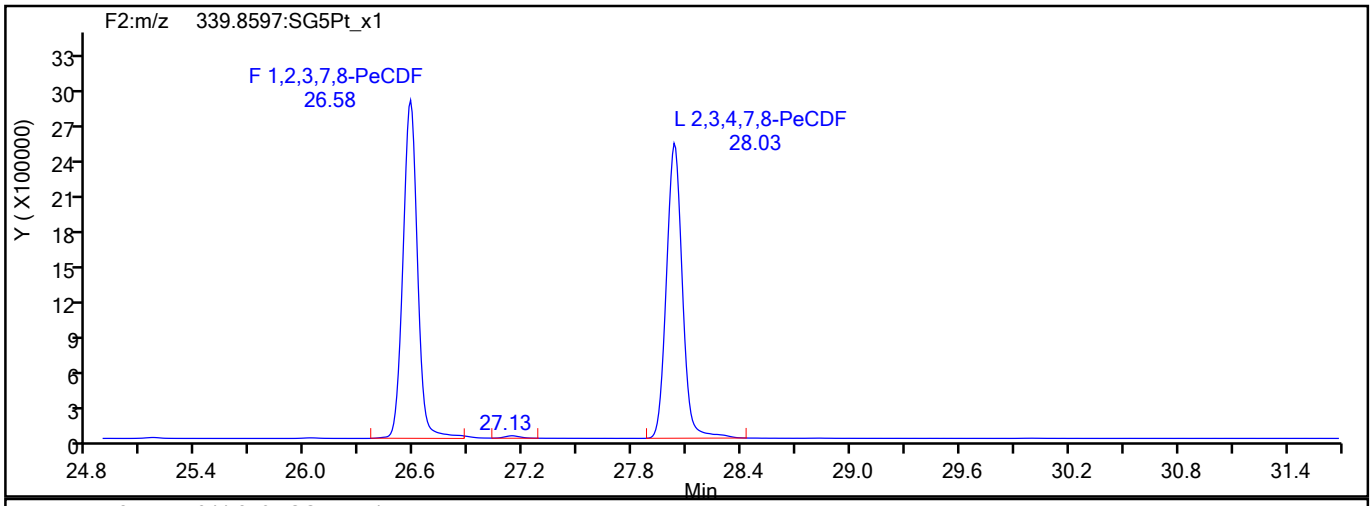

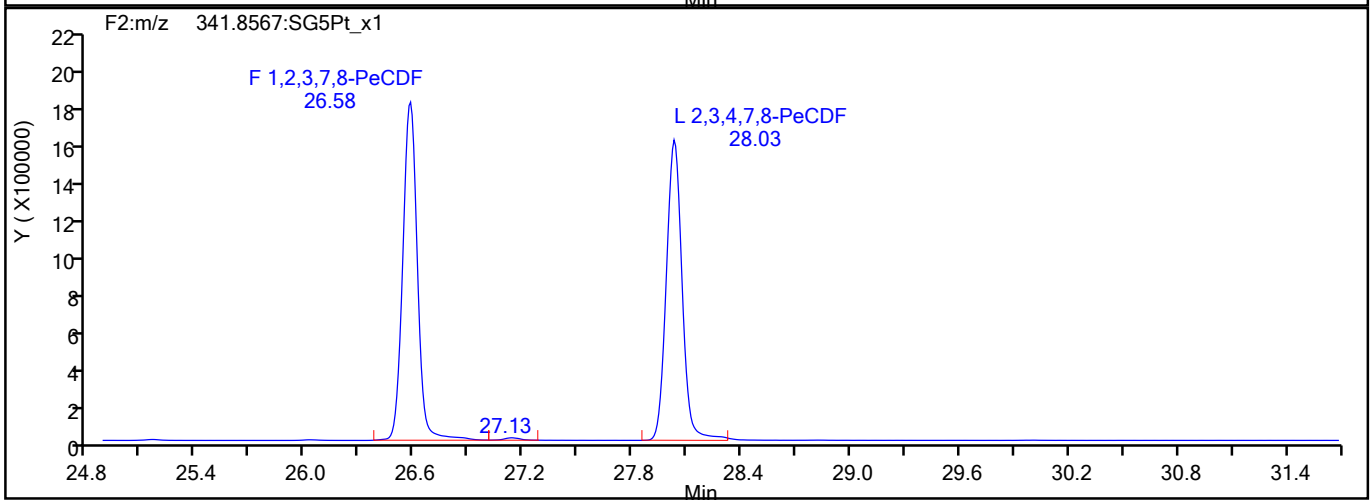

PeCDF Interference Mass

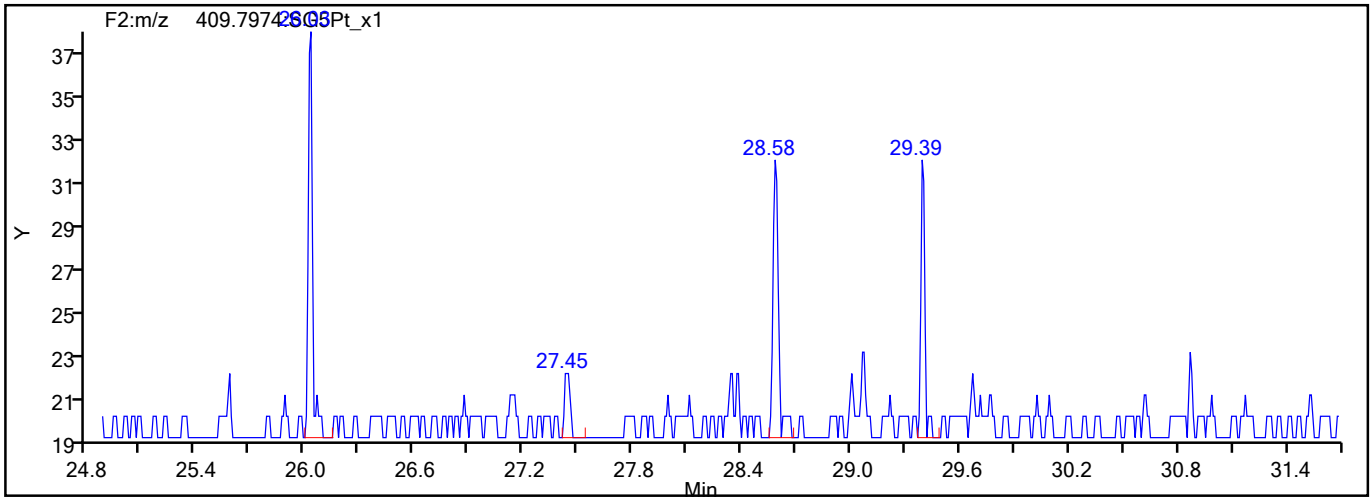

787352

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

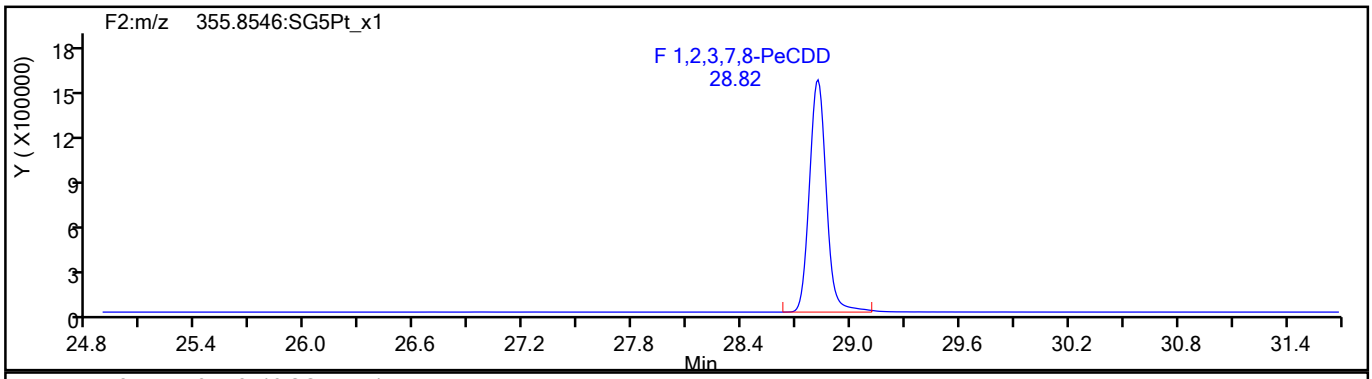

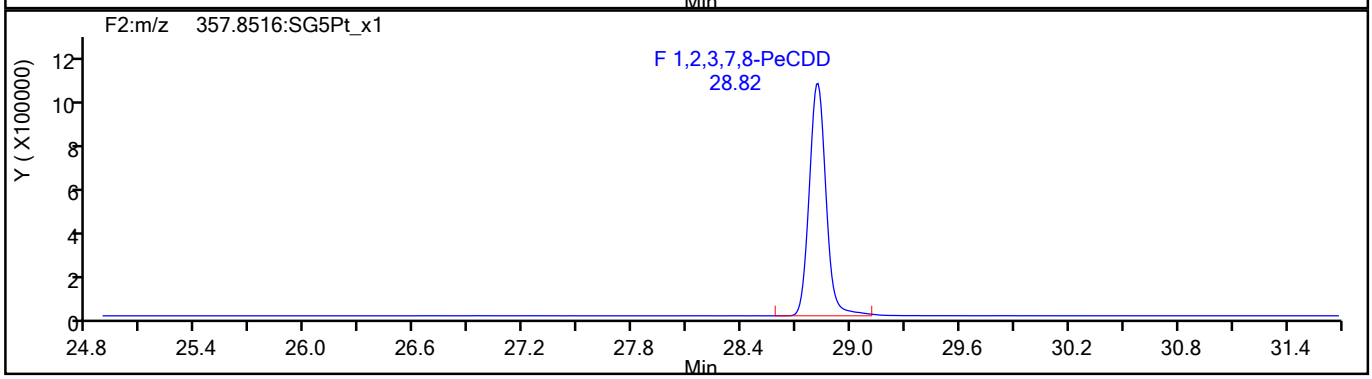

PeCDD Standards

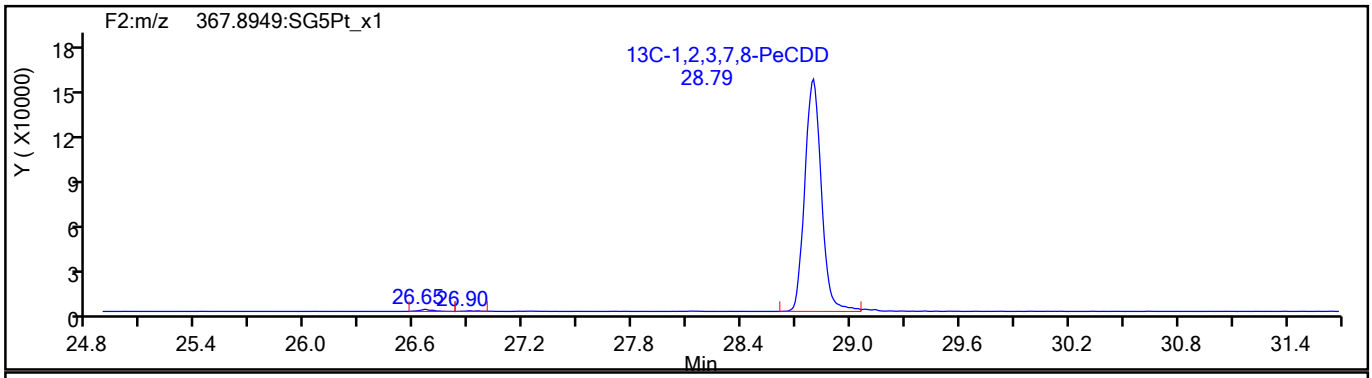

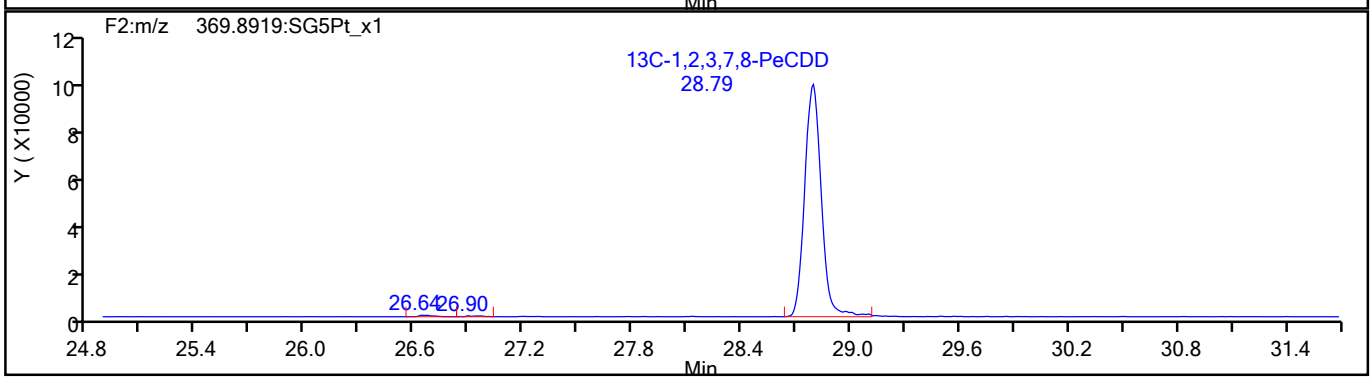

787353

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

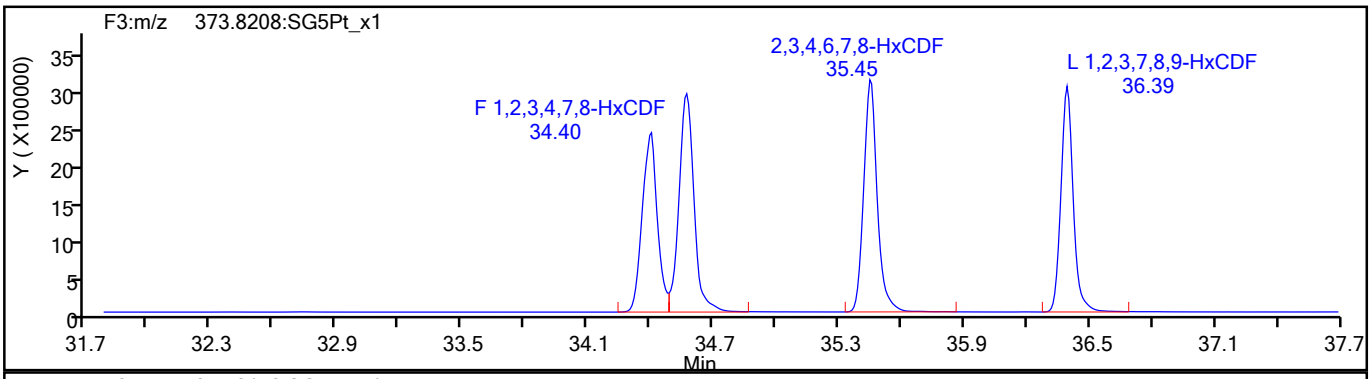

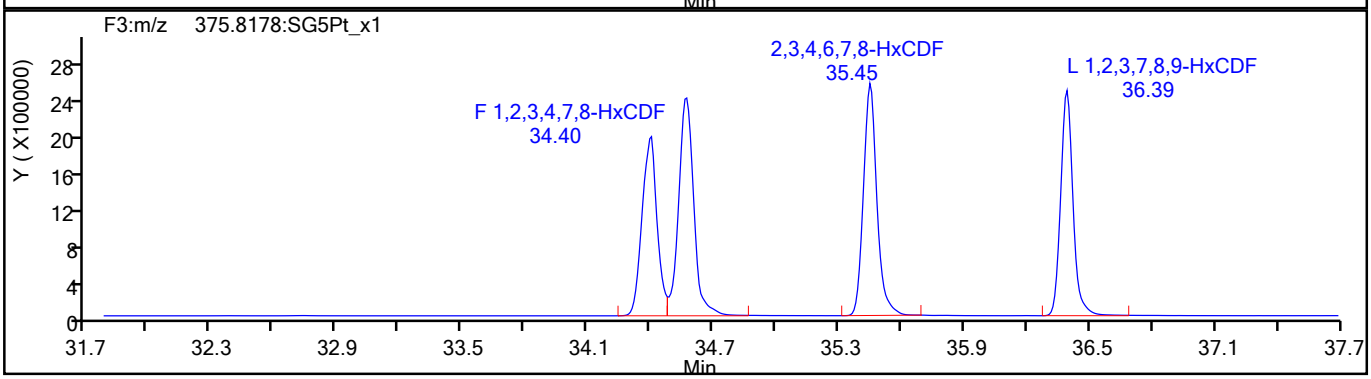

HxCDF Standards

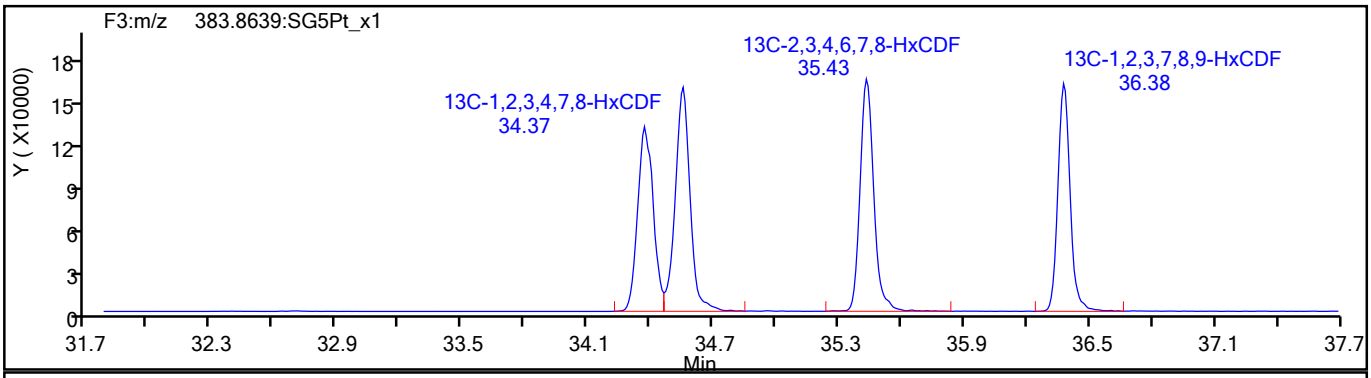

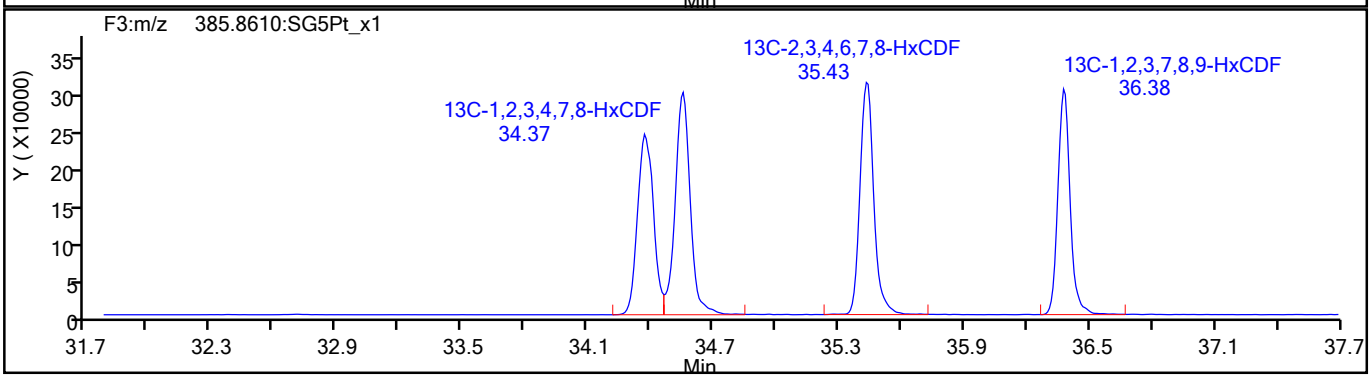

787354

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

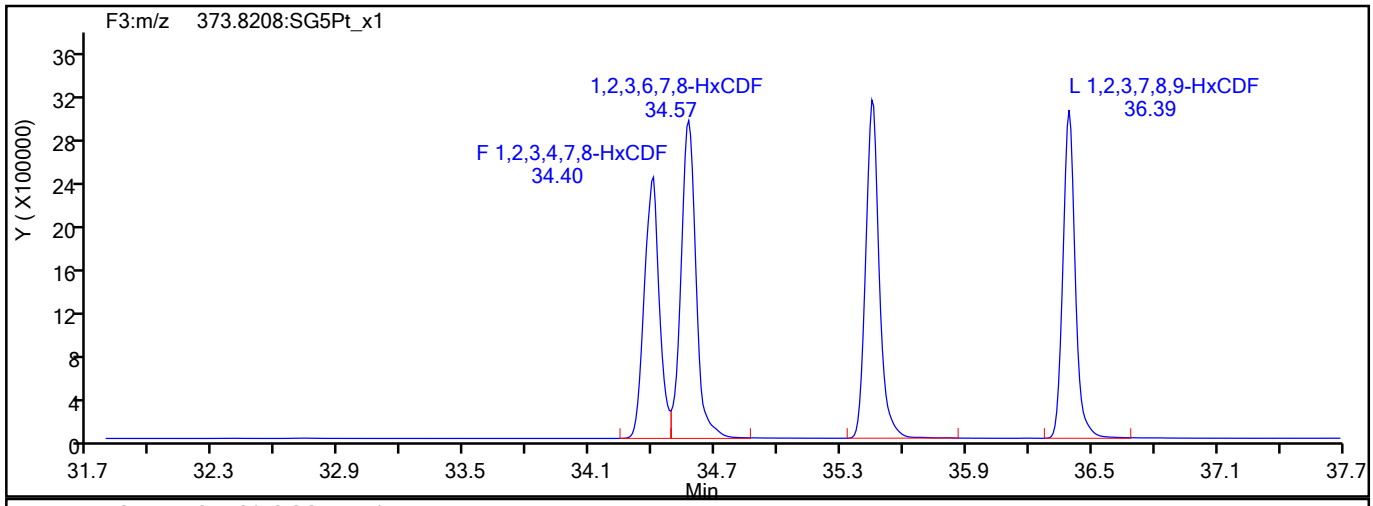

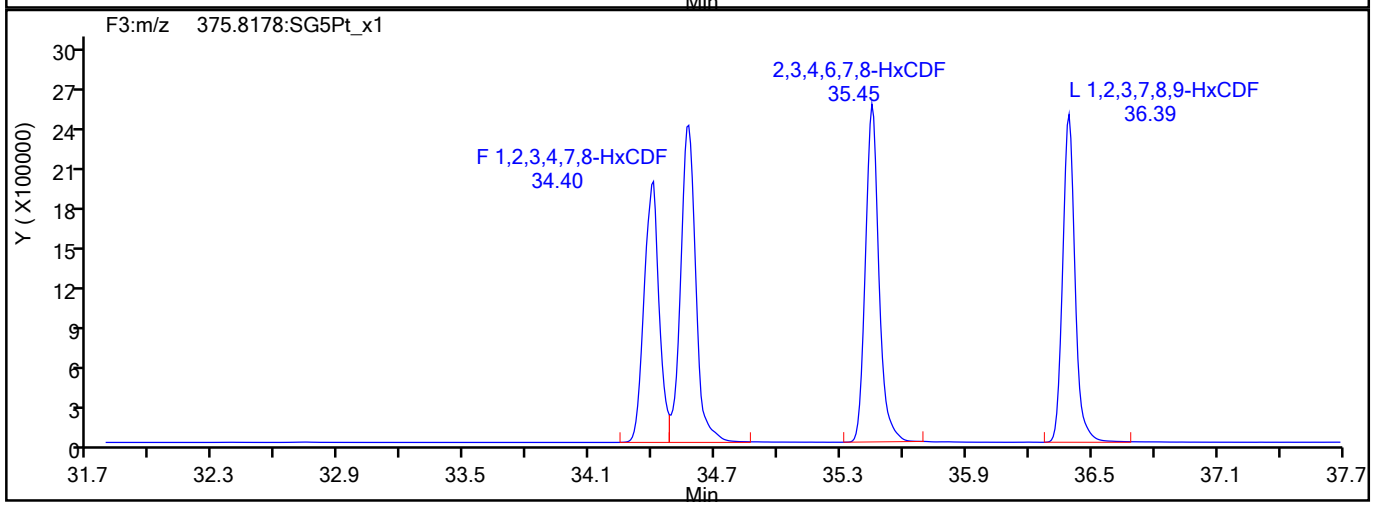

HxCDF Interference Mass

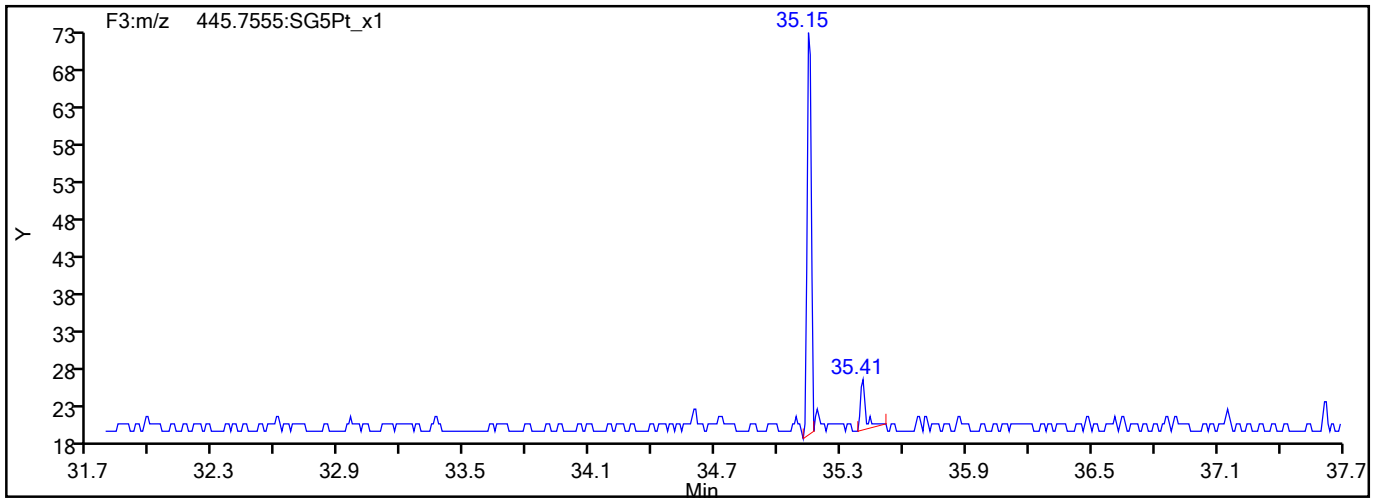

787355

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

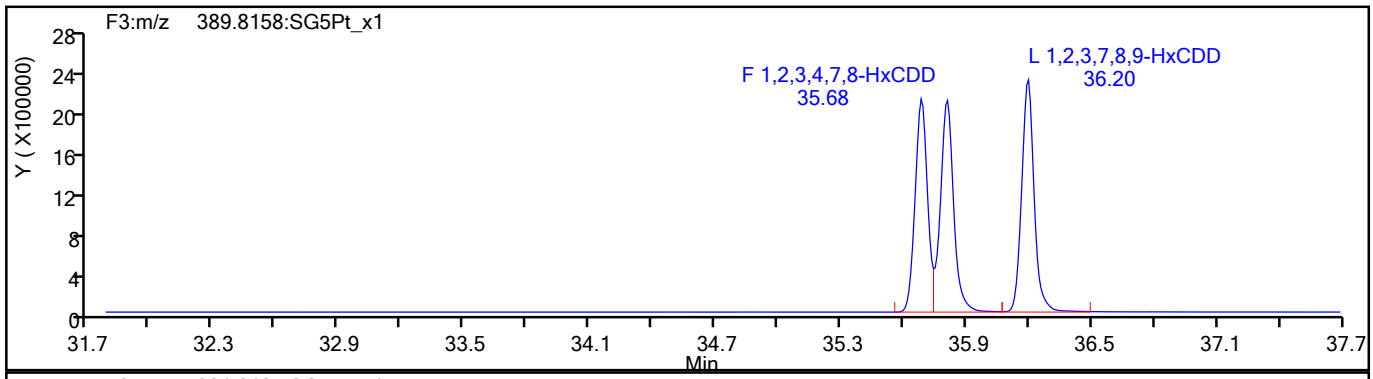

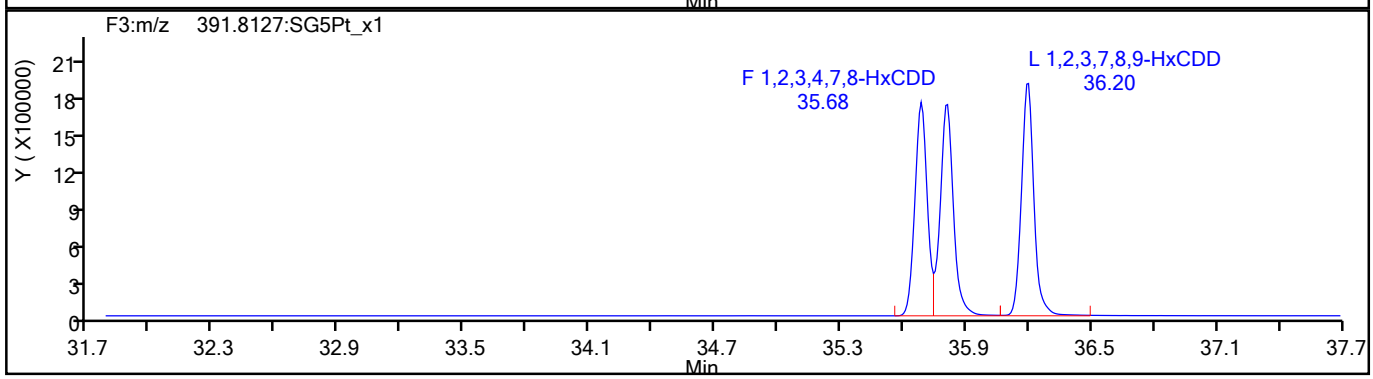

HxCDD Standards

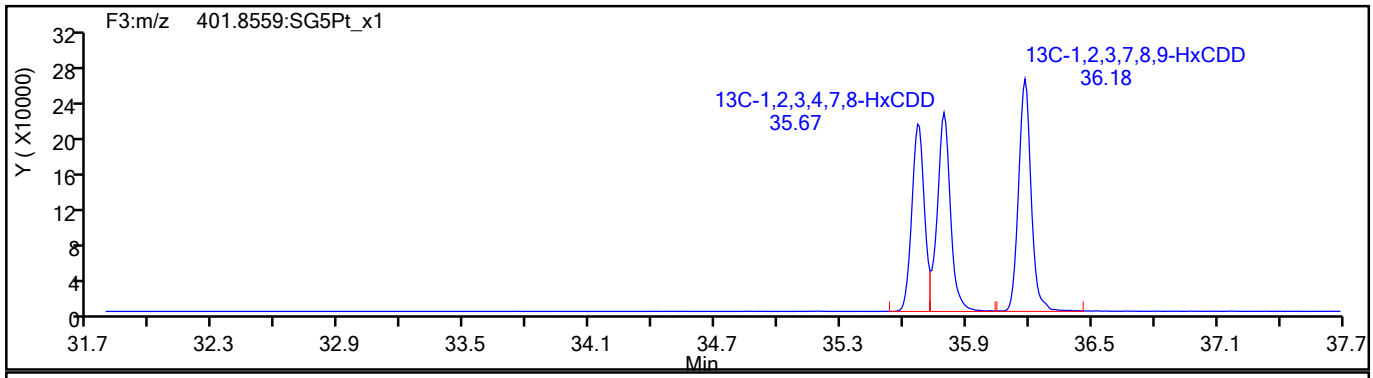

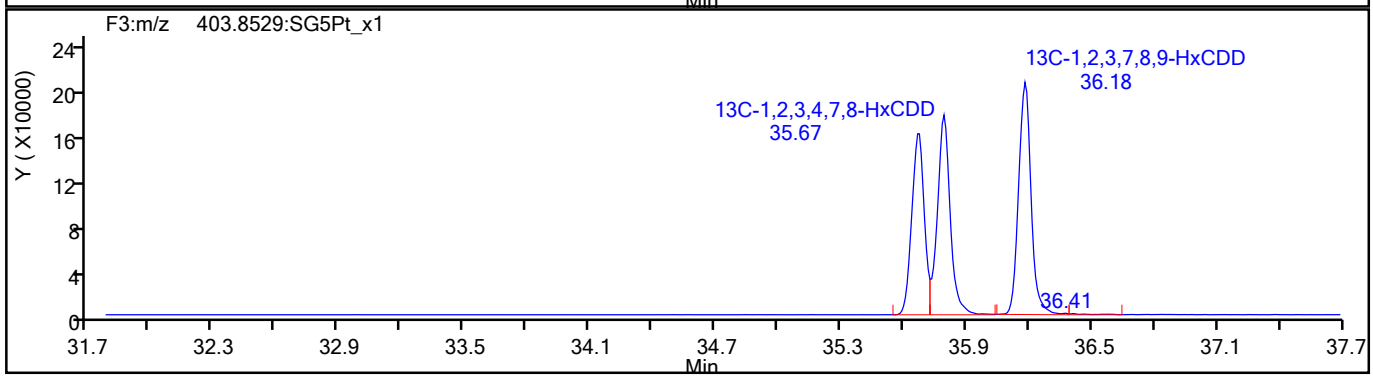

787356

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

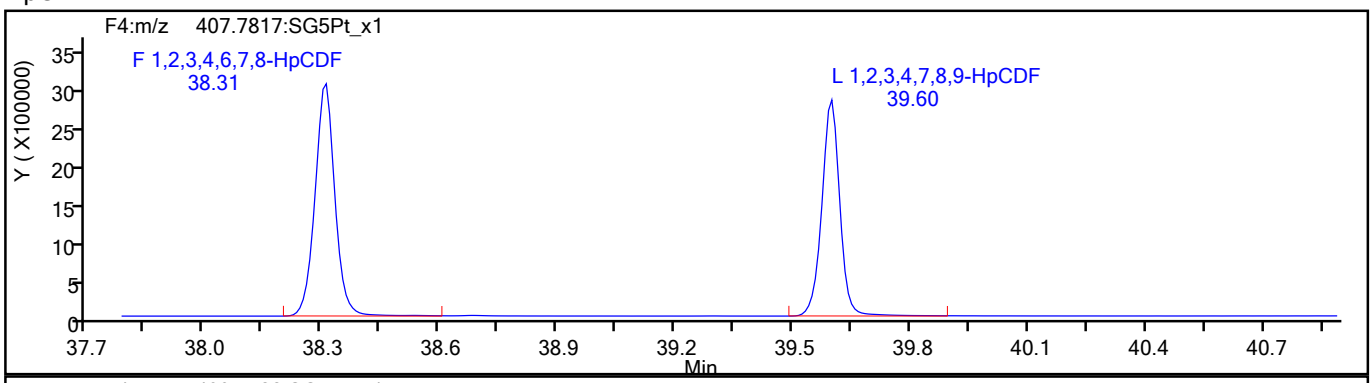

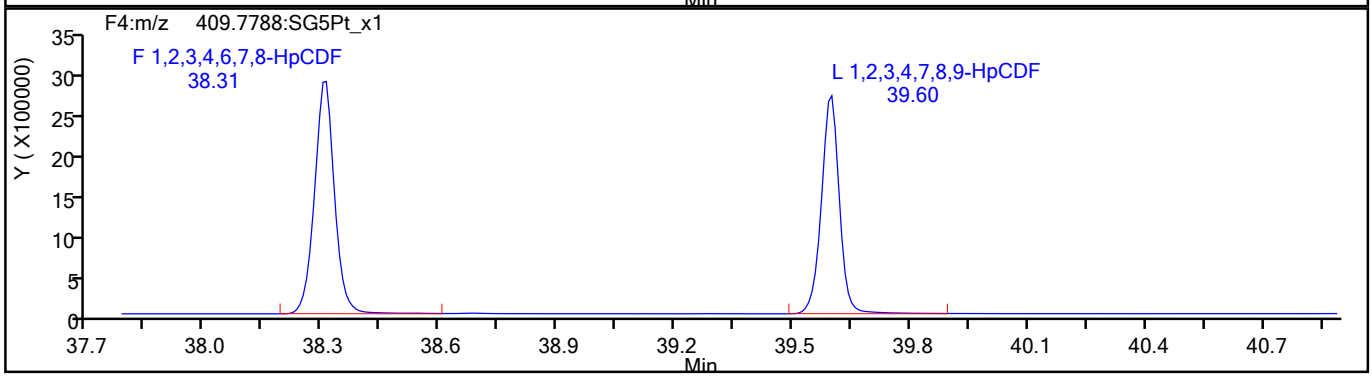

HpCDF Standards

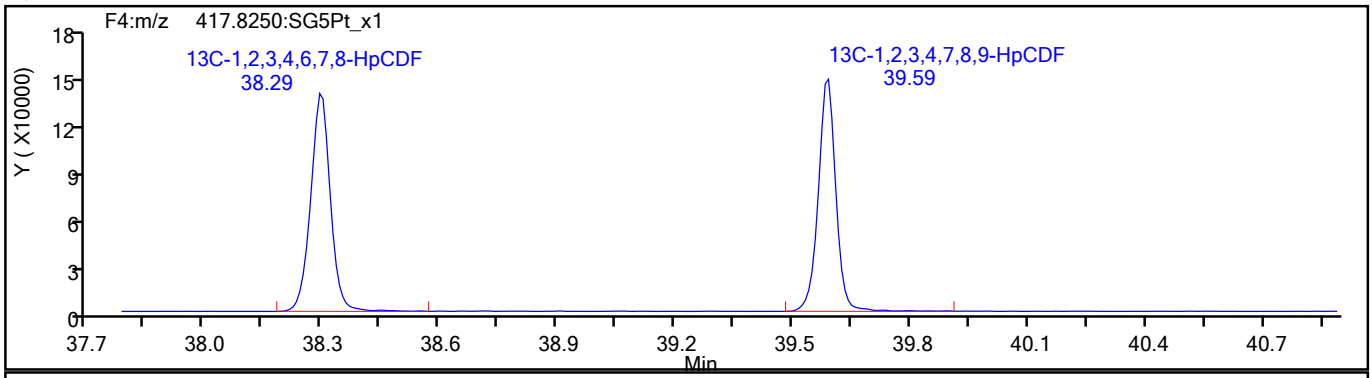

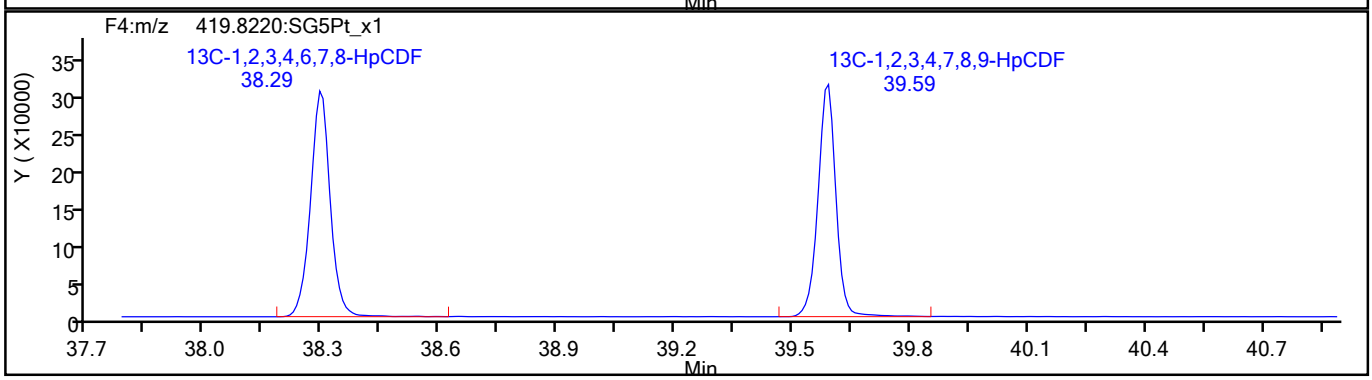

787357

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

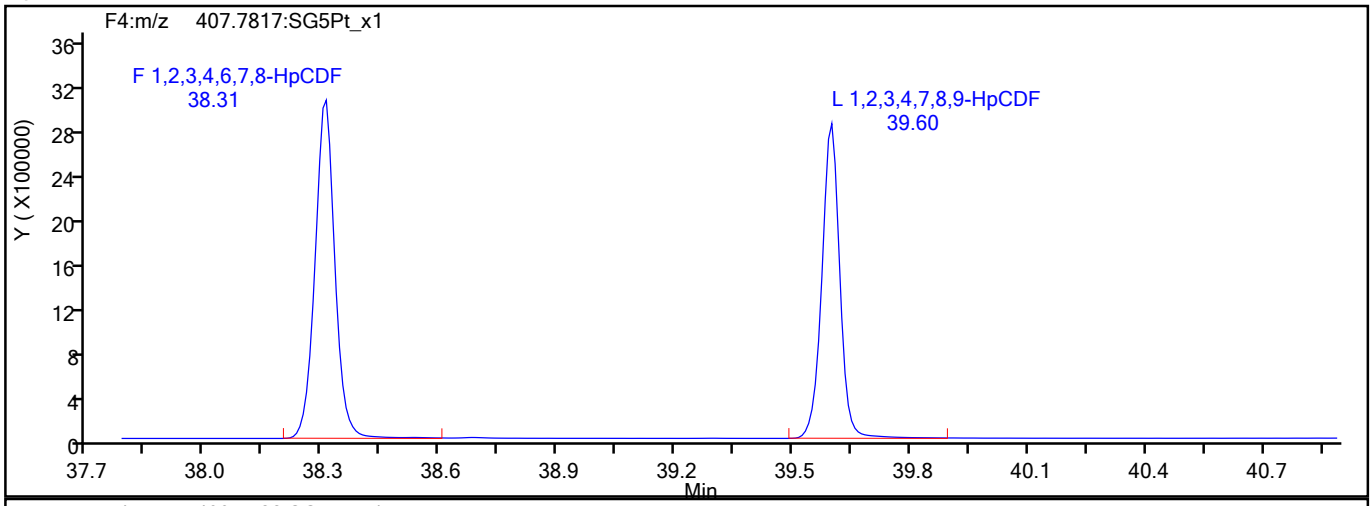

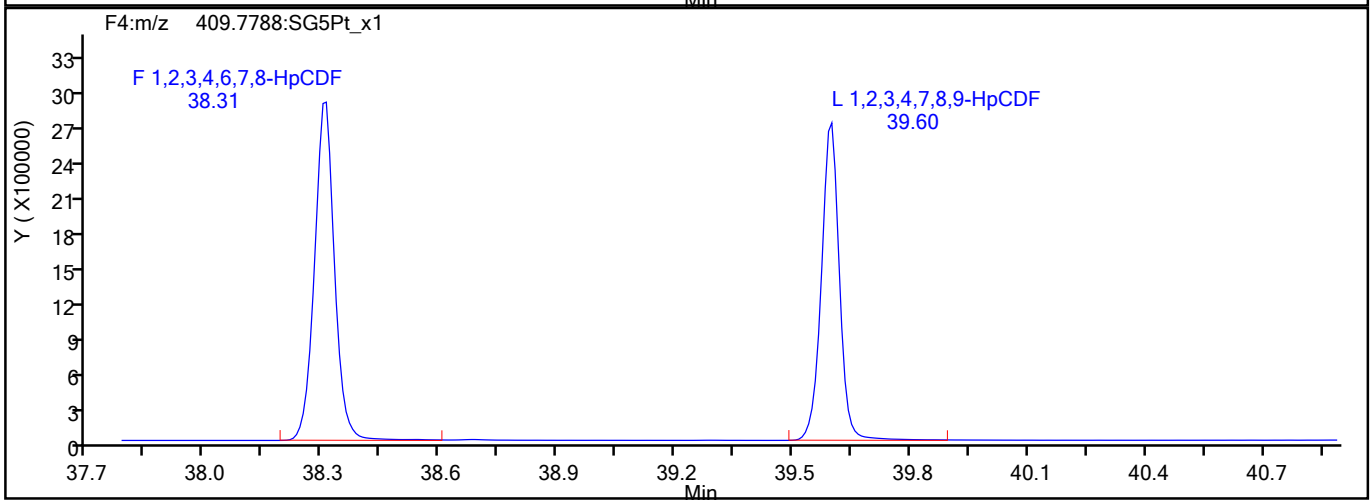

HpCDF Interference Mass

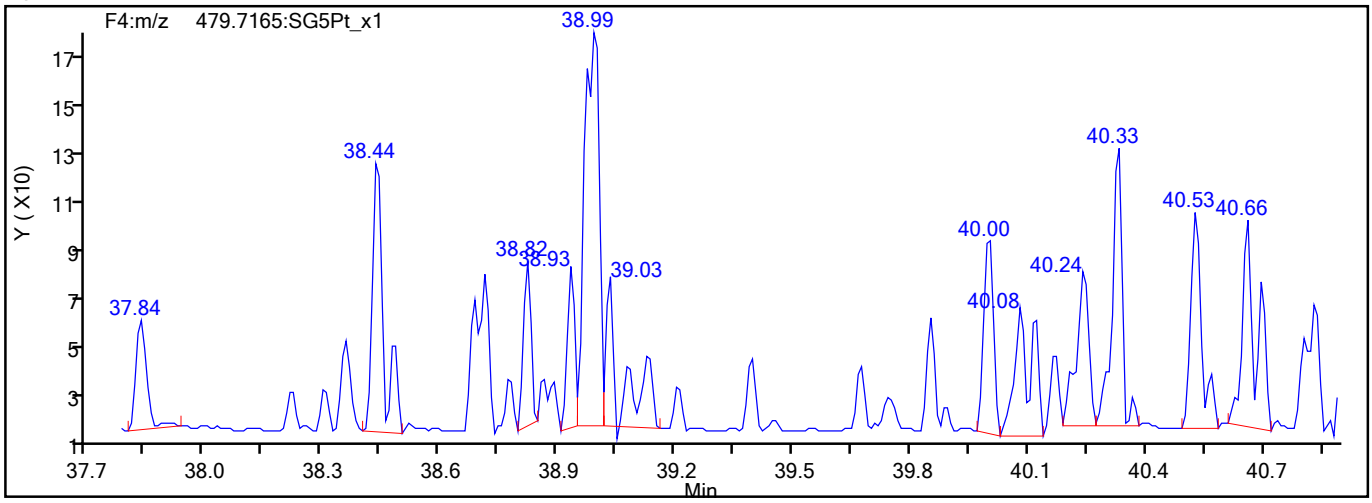

787358

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

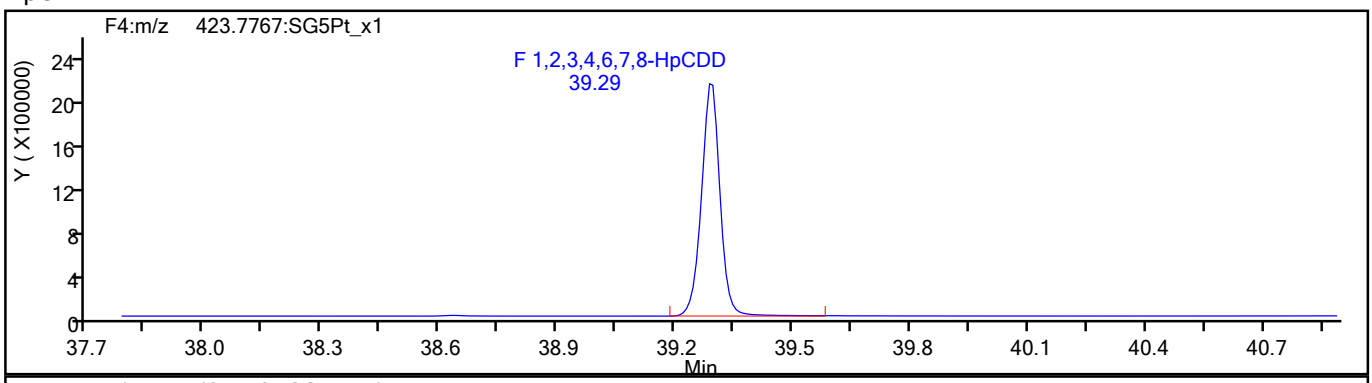

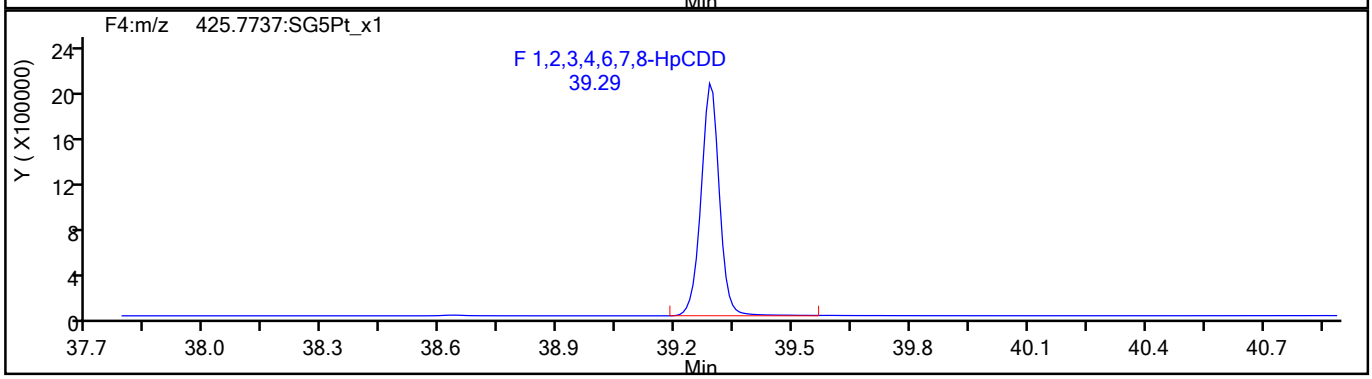

HpCDD Standards

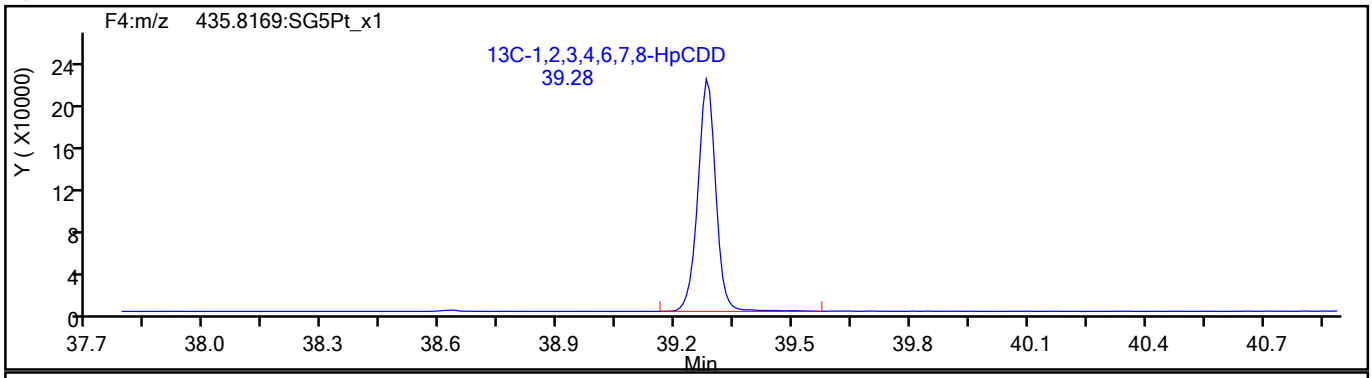

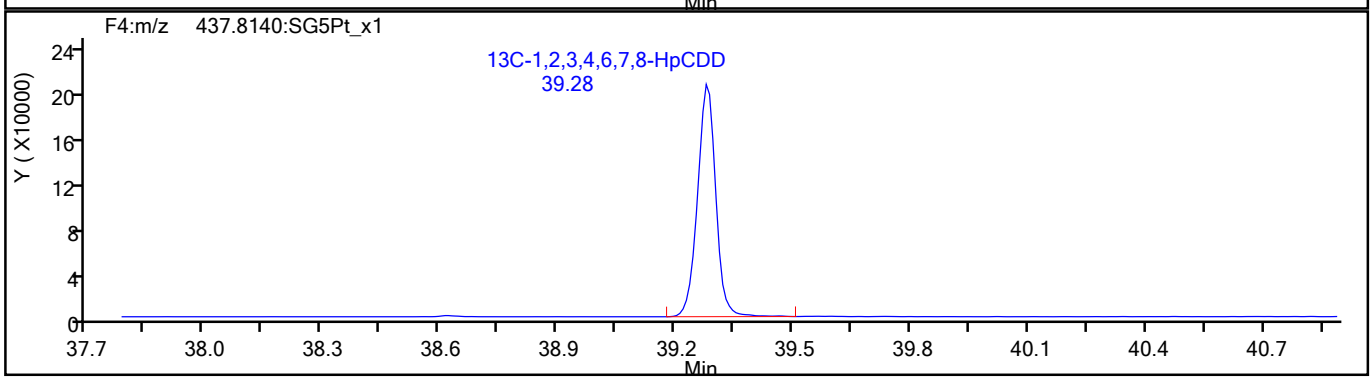

787359

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

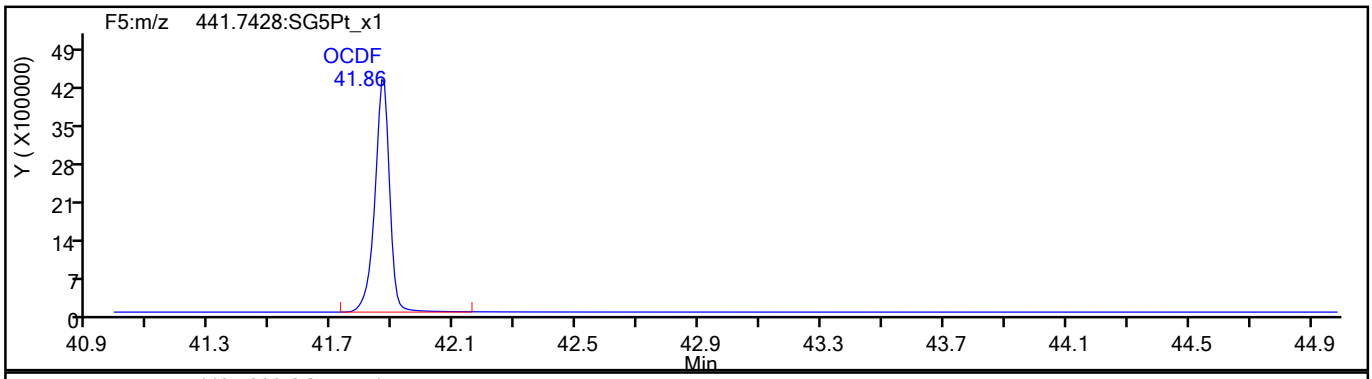

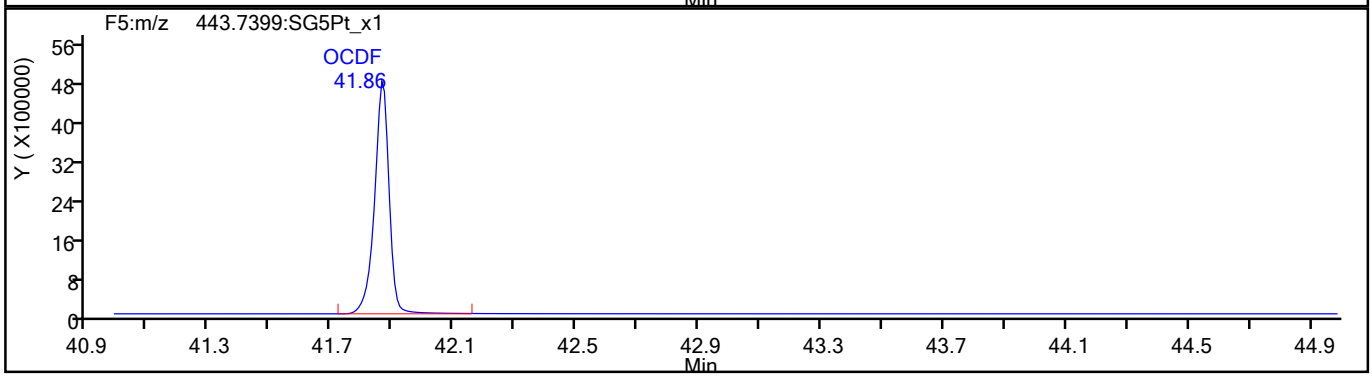

OCDF Standards

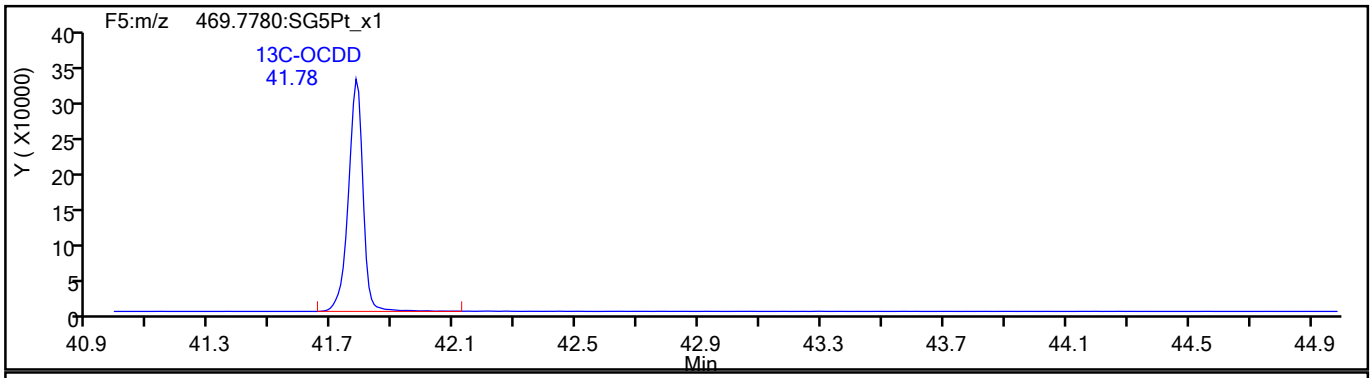

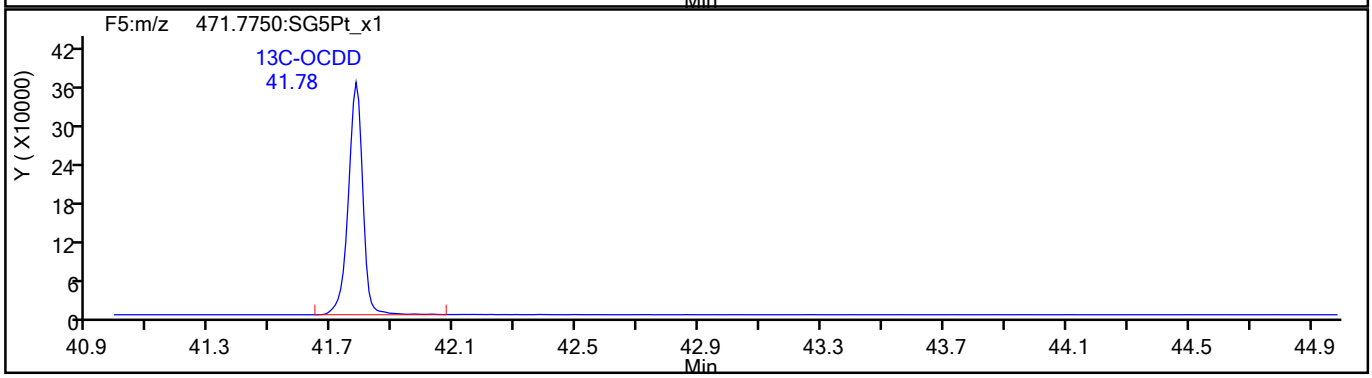

787360

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

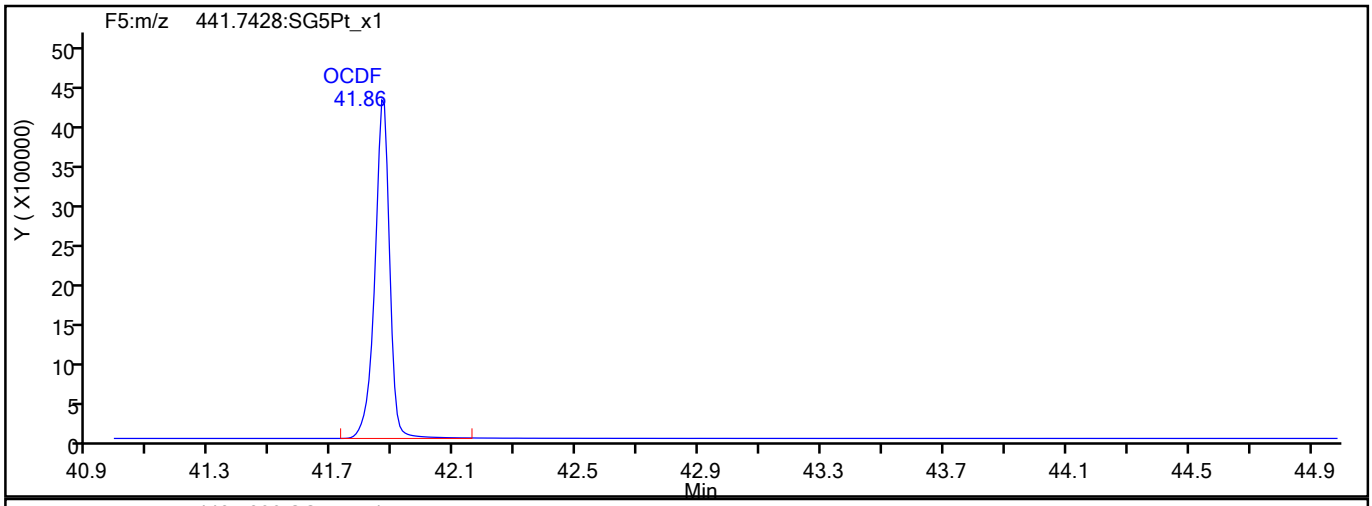

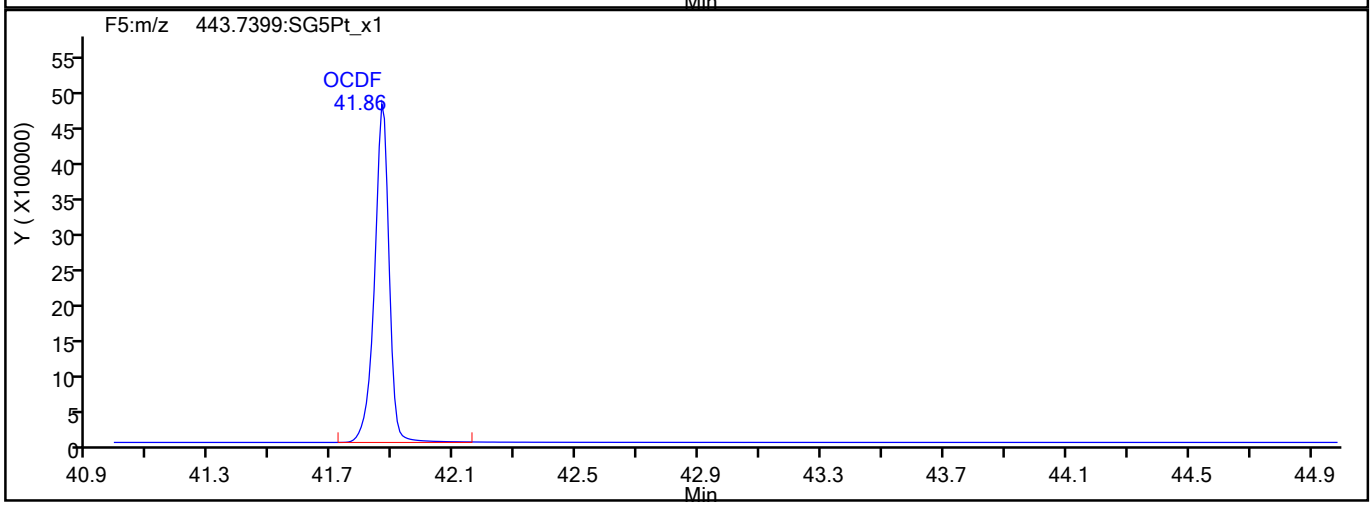

OCDF Interference Mass

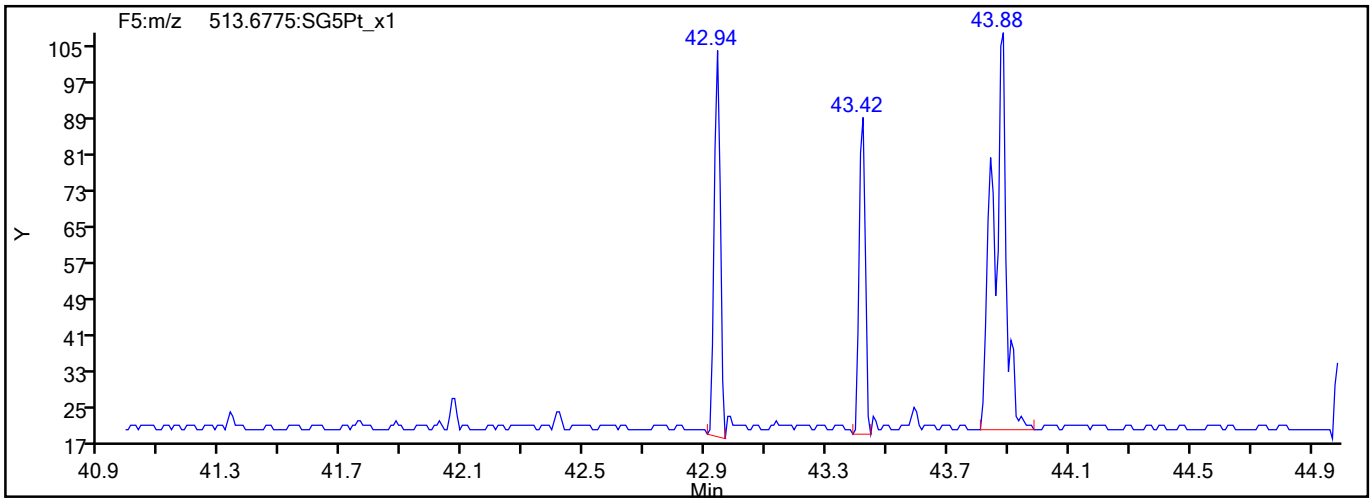

787361

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

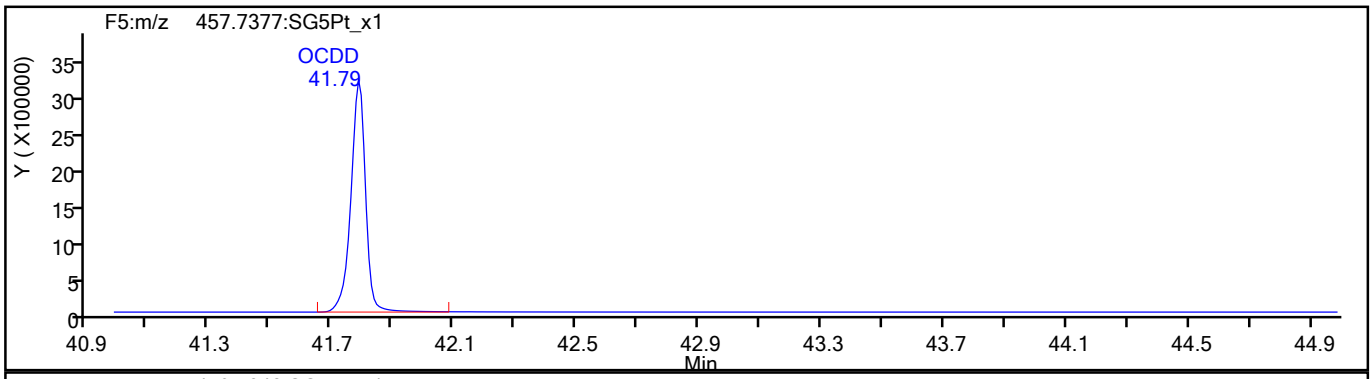

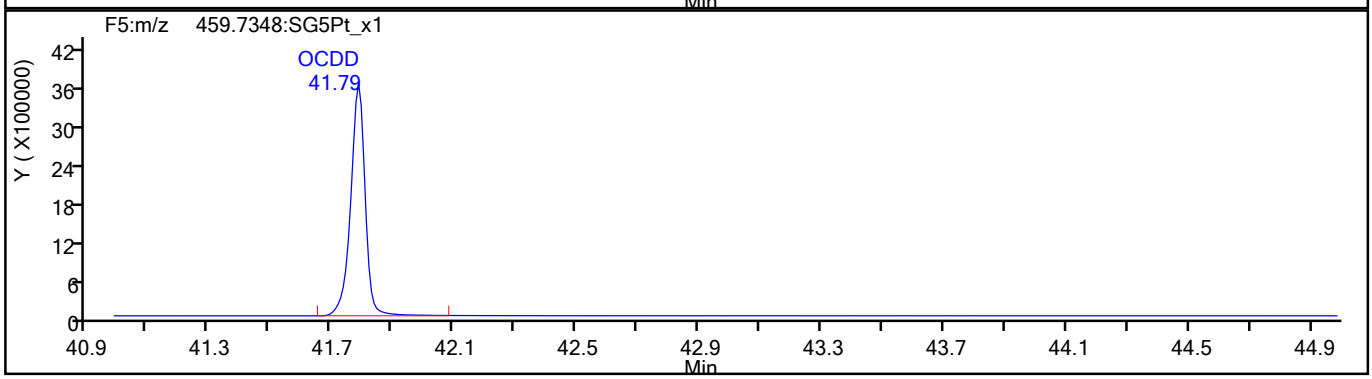

OCDD Standards

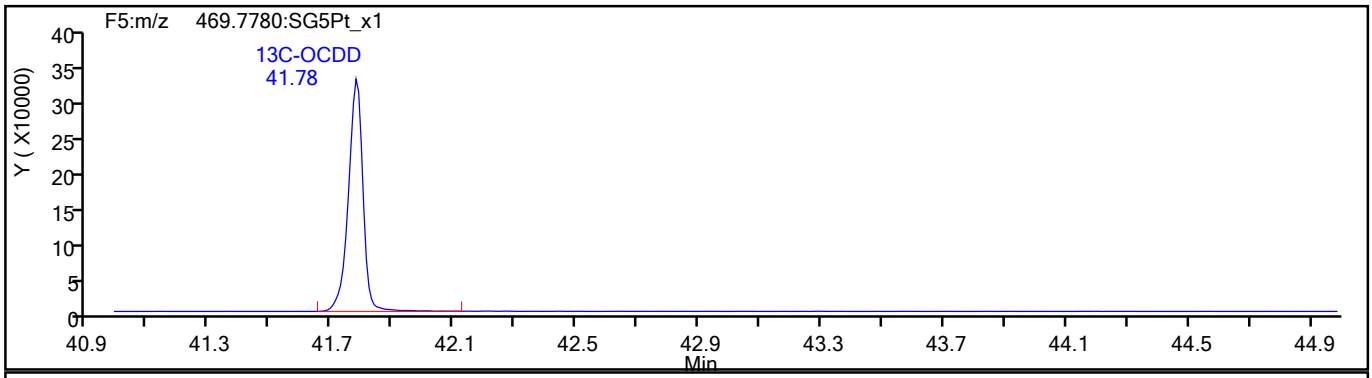

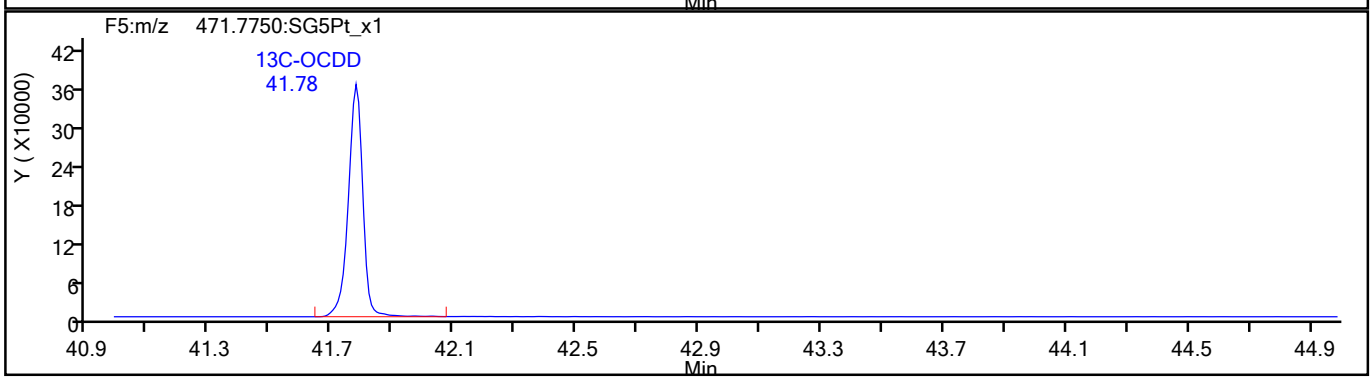

787362

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

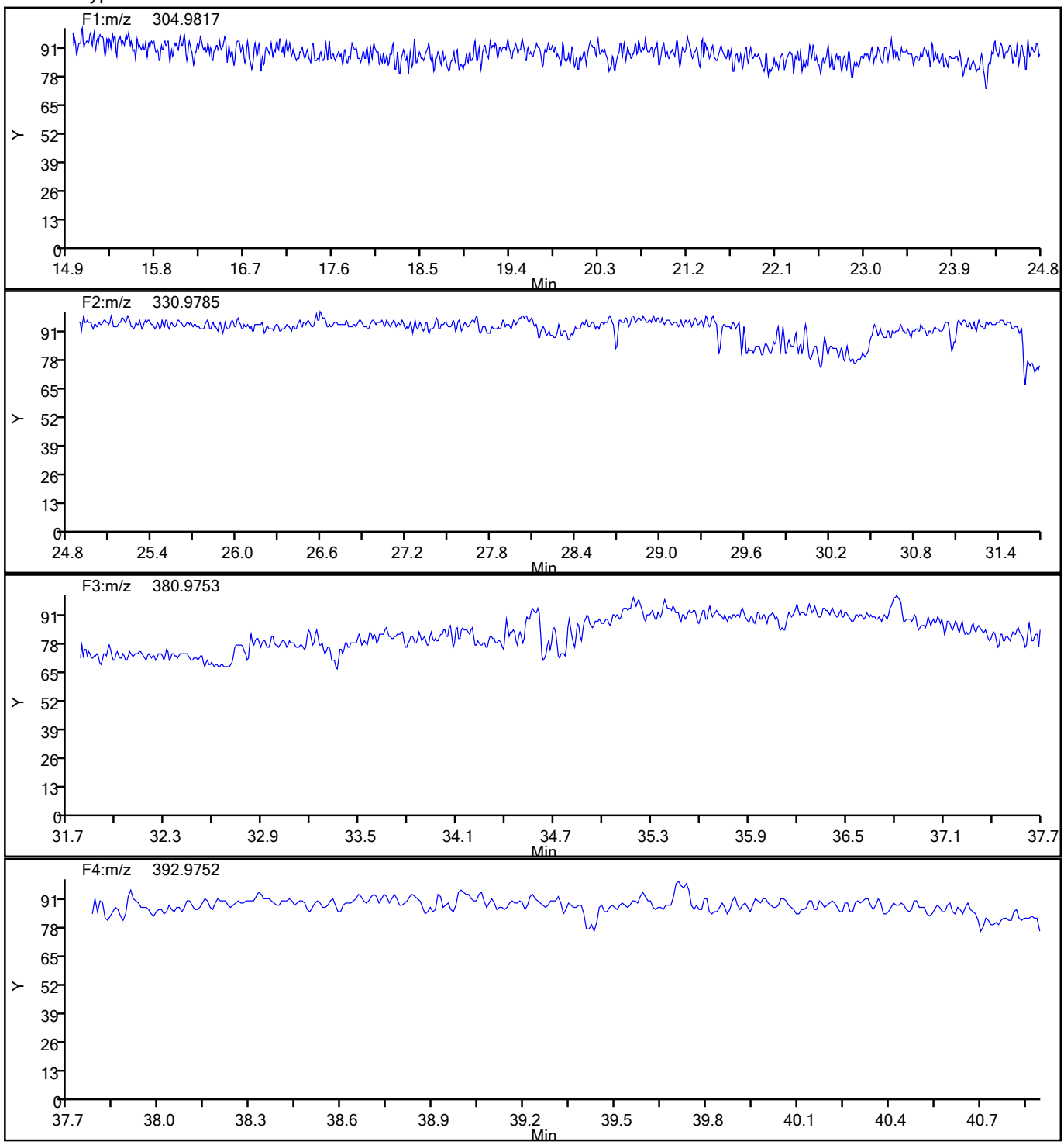

787363

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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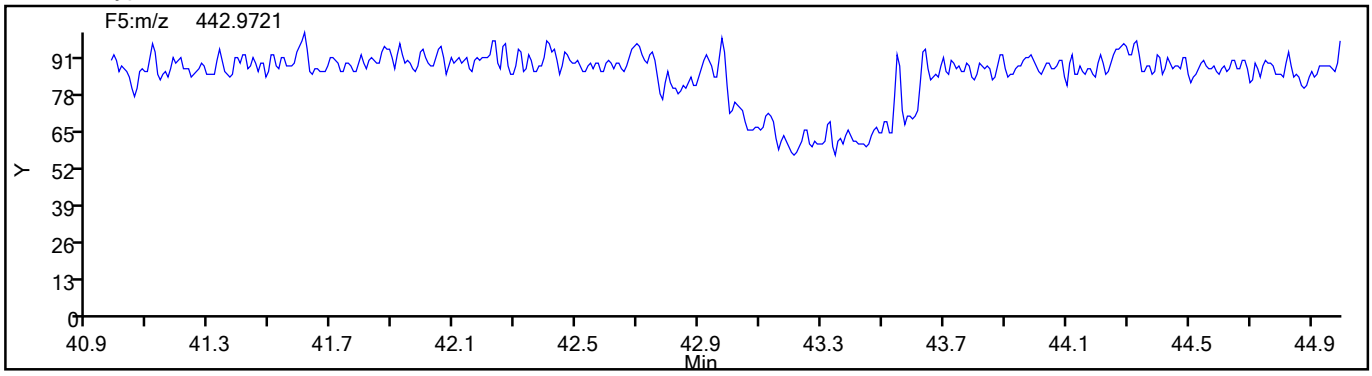

787364

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.05

Error Coefficients

Standard Error:	7060000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.844284	100.0	1113145.0	1.137713	Y
2	IC 320-496688/4	10.0	9.530968	100.0	1162117.0	0.953097	Y
3	IC 320-496688/5	50.0	52.293706	100.0	1094713.0	1.045874	Y
4	IC 320-496688/6	200.0	219.393902	100.0	1337869.0	1.09697	Y
5	IC 320-496688/7	1000.0	1017.847283	100.0	1355803.0	1.017847	Y

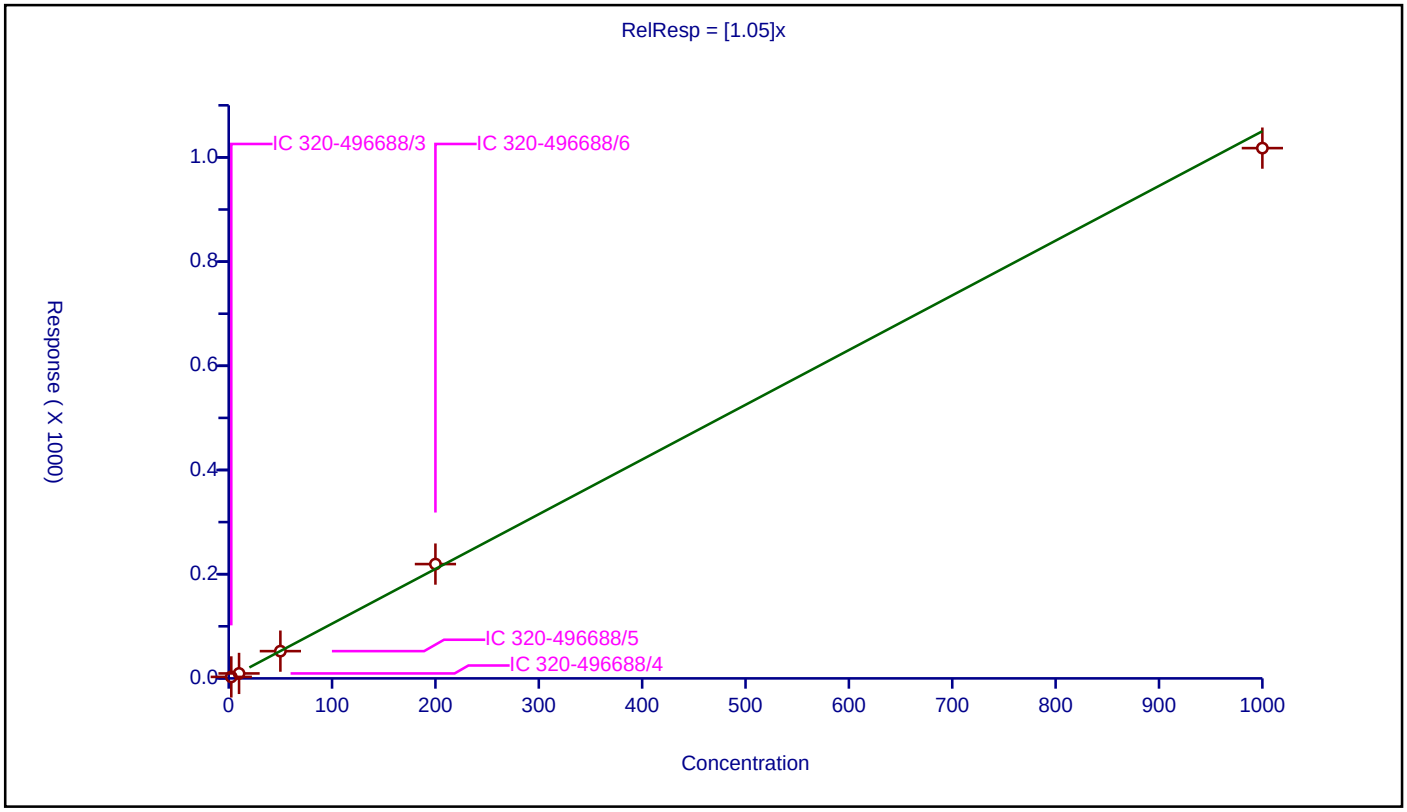

787365

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.442

Error Coefficients

Standard Error:	10800000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.852995	100.0	1227279.0	1.541198	Y
2	IC 320-496688/4	10.0	12.896239	100.0	1272526.0	1.289624	Y
3	IC 320-496688/5	50.0	74.275022	100.0	1182209.0	1.4855	Y
4	IC 320-496688/6	200.0	304.802204	100.0	1392194.0	1.524011	Y
5	IC 320-496688/7	1000.0	1370.014158	100.0	1546113.0	1.370014	Y

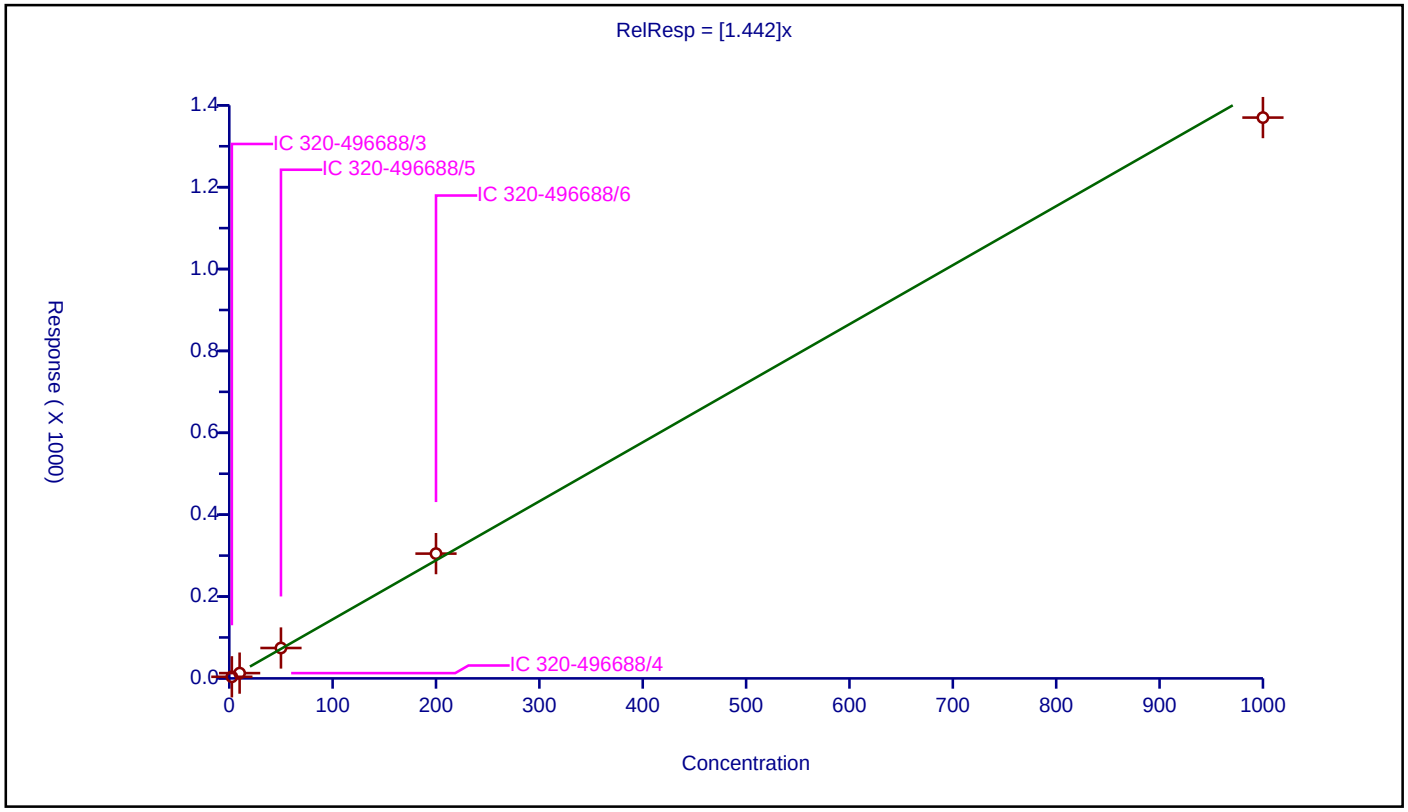

787366

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.309

Error Coefficients

Standard Error:	9110000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.51417	100.0	1120663.0	1.405668	Y
2	IC 320-496688/4	10.0	11.769676	100.0	1175351.0	1.176968	Y
3	IC 320-496688/5	50.0	67.293315	100.0	1080883.0	1.345866	Y
4	IC 320-496688/6	200.0	278.744786	100.0	1337573.0	1.393724	Y
5	IC 320-496688/7	1000.0	1223.548565	100.0	1455766.0	1.223549	Y

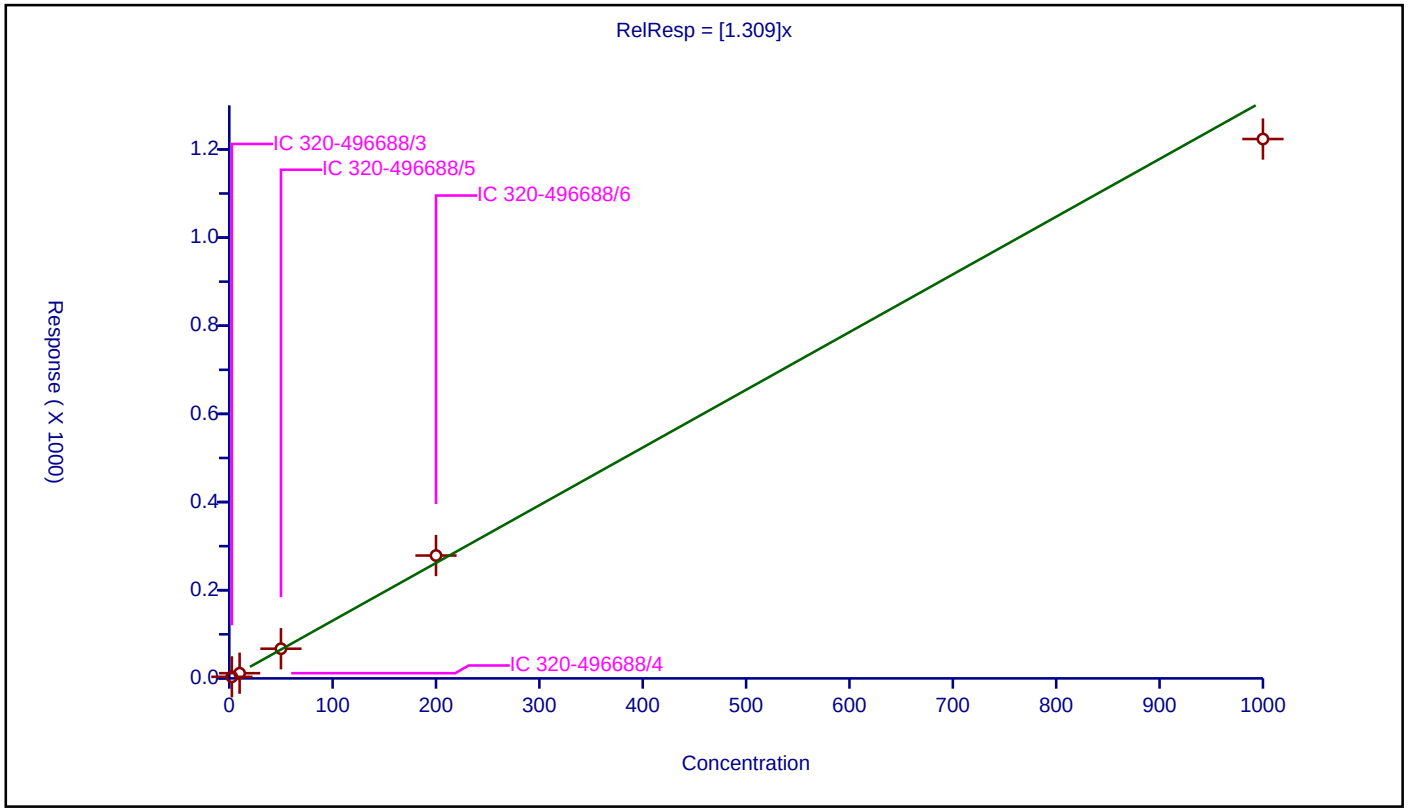

787367

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	7950000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808772	100.0	1127895.0	1.123509	Y
2	IC 320-496688/4	10.0	9.701688	100.0	1363103.0	0.970169	Y
3	IC 320-496688/5	50.0	53.7445	100.0	1348471.0	1.07489	Y
4	IC 320-496688/6	200.0	224.989195	100.0	1432215.0	1.124946	Y
5	IC 320-496688/7	1000.0	1010.433801	100.0	1539784.0	1.010434	Y

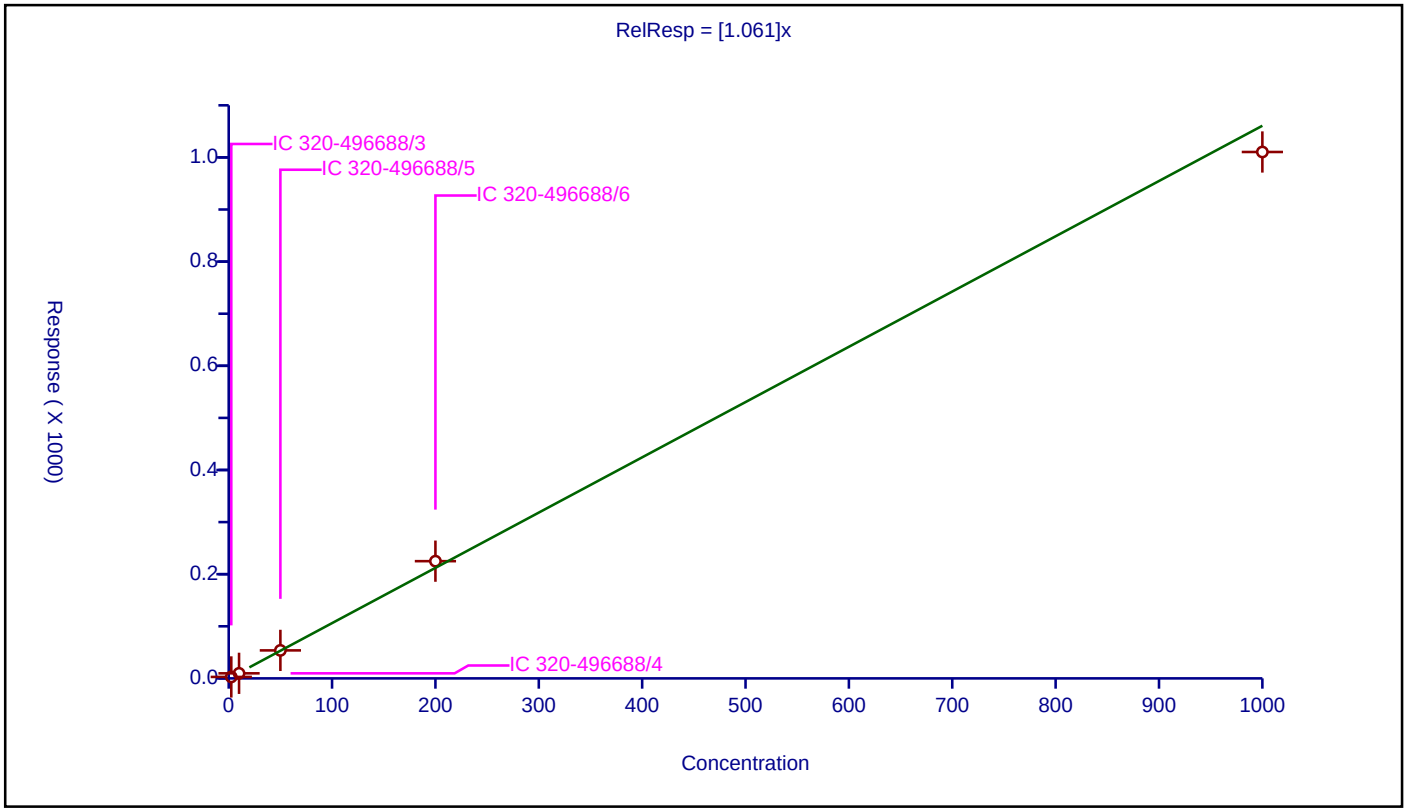

787368

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.147

Error Coefficients

Standard Error:	11200000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.056507	100.0	1517222.0	1.222603	Y
2	IC 320-496688/4	10.0	10.071694	100.0	1545033.0	1.007169	Y
3	IC 320-496688/5	50.0	59.364869	100.0	1841825.0	1.187297	Y
4	IC 320-496688/6	200.0	241.451426	100.0	1778238.0	1.207257	Y
5	IC 320-496688/7	1000.0	1112.580113	100.0	1968615.0	1.11258	Y

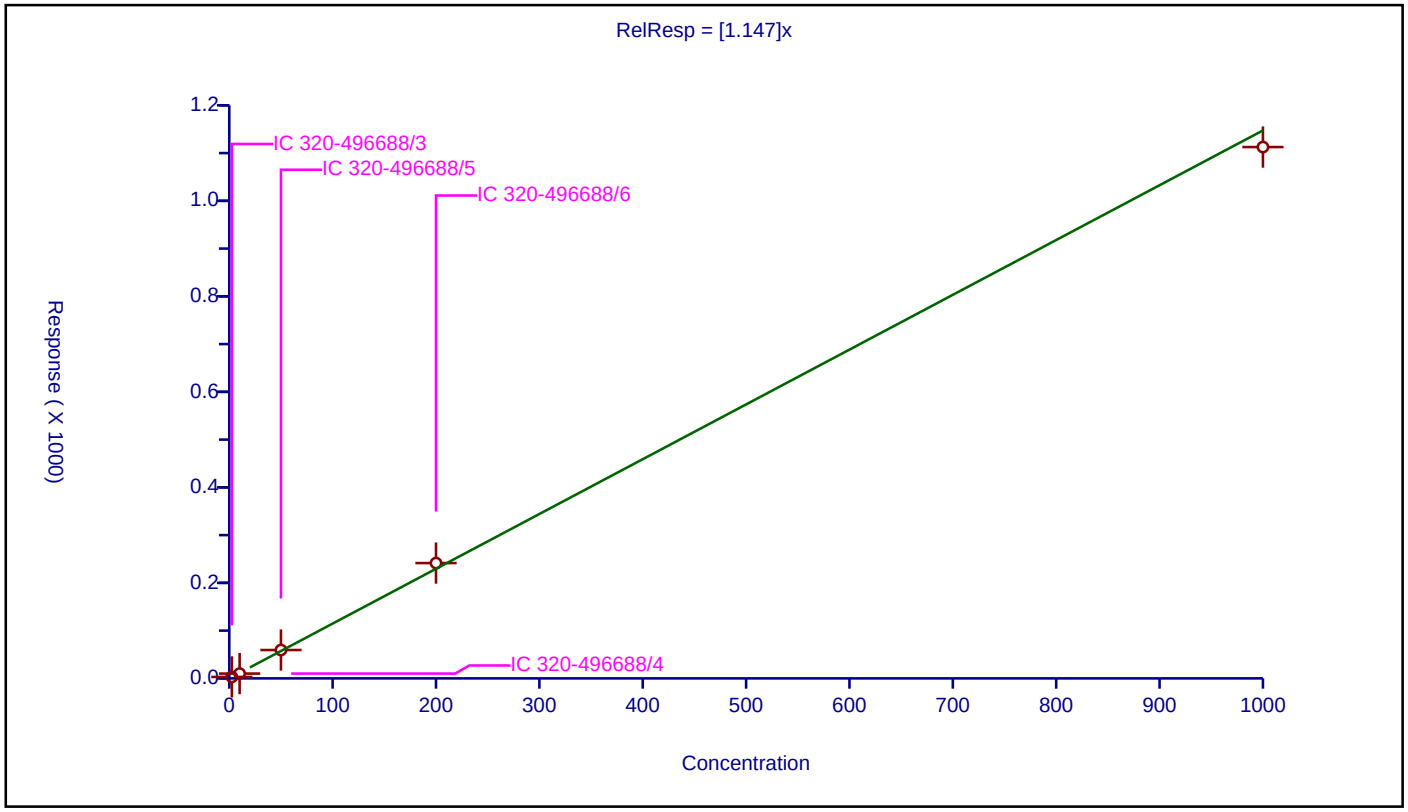

787369

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9933

Error Coefficients

Standard Error:	8510000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.639223	100.0	1291365.0	1.055689	Y
2	IC 320-496688/4	10.0	8.862824	100.0	1558668.0	0.886282	Y
3	IC 320-496688/5	50.0	52.081775	100.0	1460100.0	1.041636	Y
4	IC 320-496688/6	200.0	205.274729	100.0	1669337.0	1.026374	Y
5	IC 320-496688/7	1000.0	956.728345	100.0	1741498.0	0.956728	Y

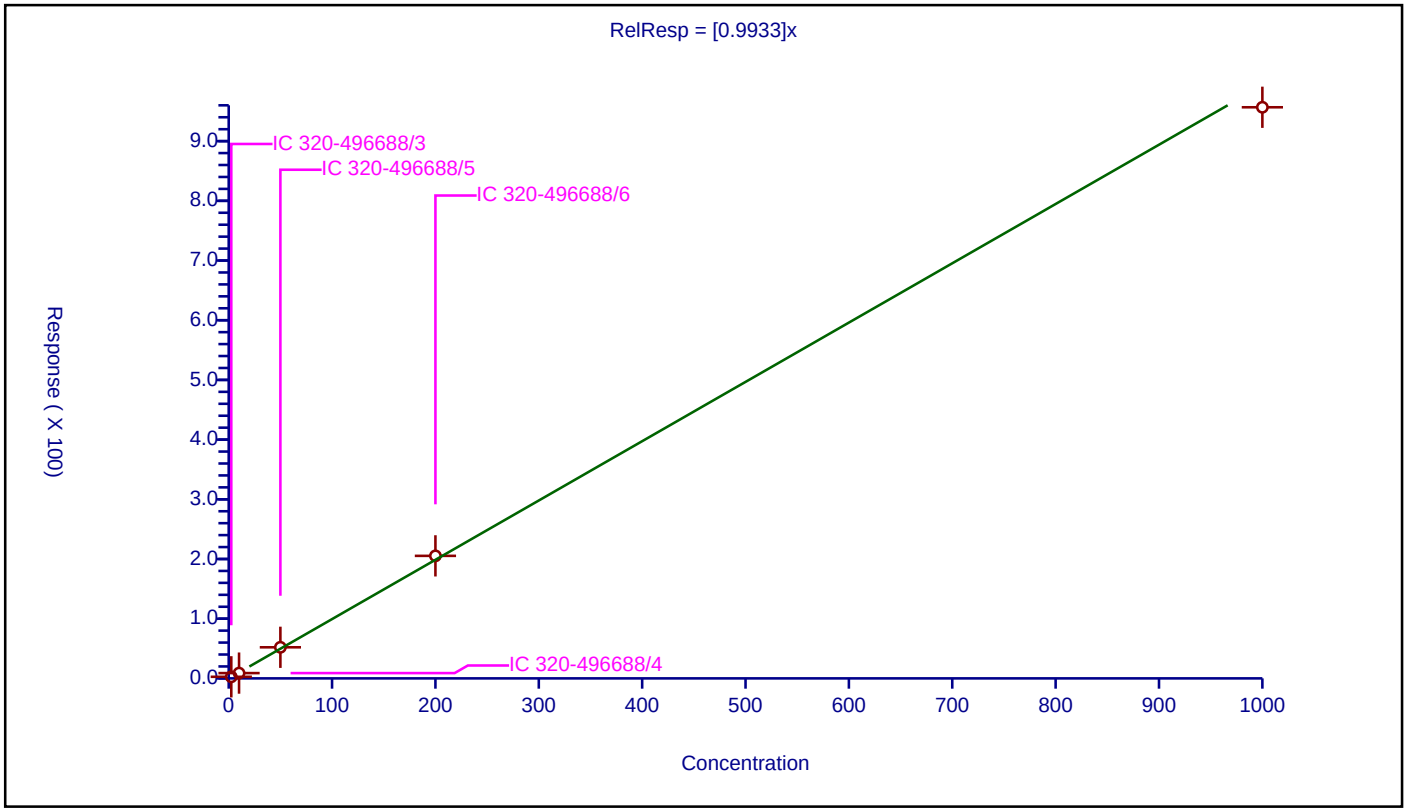

787370

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.218

Error Coefficients

Standard Error:	13600000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.343553	100.0	1626653.0	1.337421	Y
2	IC 320-496688/4	10.0	10.950603	100.0	1692336.0	1.09506	Y
3	IC 320-496688/5	50.0	61.795629	100.0	2015594.0	1.235913	Y
4	IC 320-496688/6	200.0	250.125403	100.0	1995567.0	1.250627	Y
5	IC 320-496688/7	1000.0	1169.95242	100.0	2283961.0	1.169952	Y

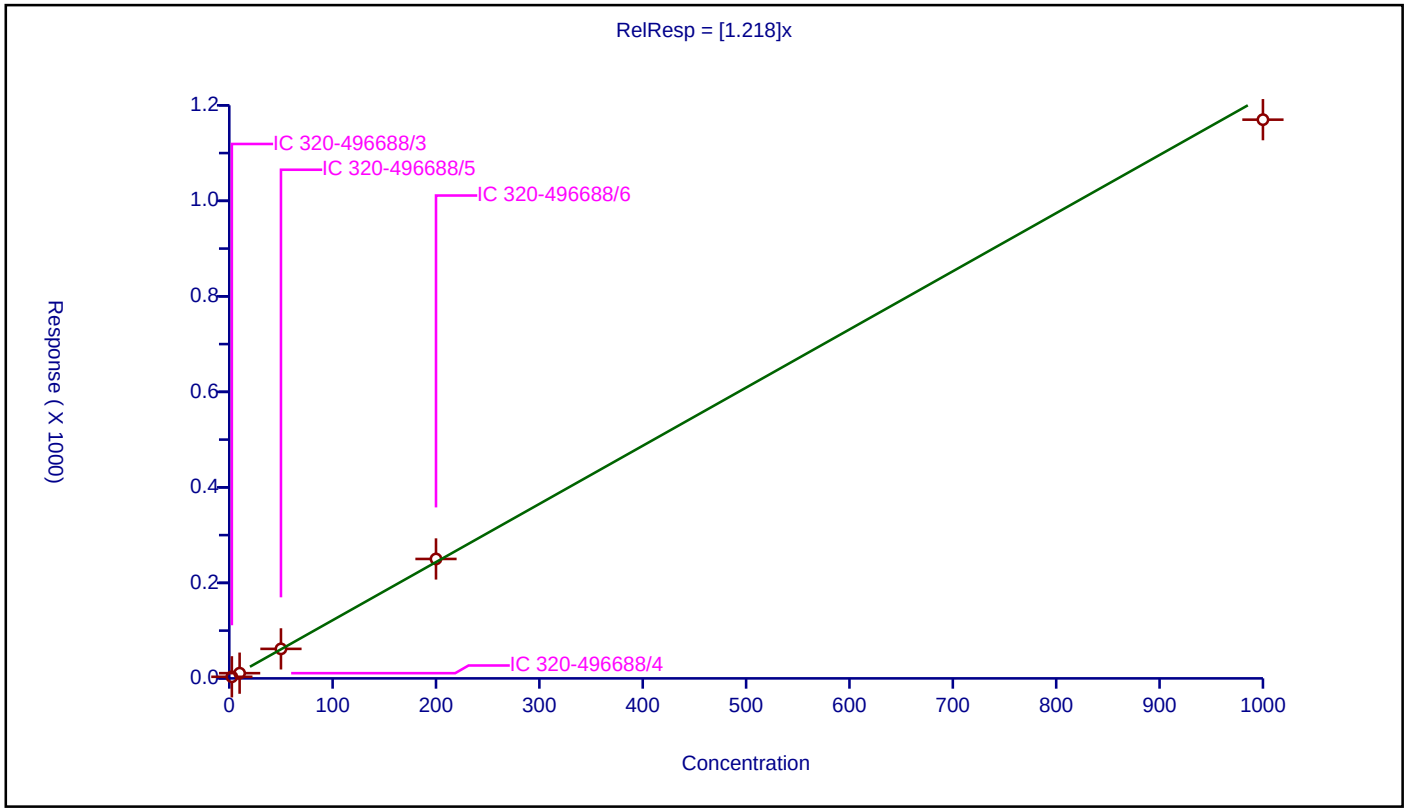

787371

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.184

Error Coefficients

Standard Error:	8820000
Relative Standard Error:	11.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.510522	100.0	1127895.0	1.404209	Y
2	IC 320-496688/4	10.0	10.251683	100.0	1363103.0	1.025168	Y
3	IC 320-496688/5	50.0	58.326134	100.0	1348471.0	1.166523	Y
4	IC 320-496688/6	200.0	239.918169	100.0	1432215.0	1.199591	Y
5	IC 320-496688/7	1000.0	1122.182397	100.0	1539784.0	1.122182	Y

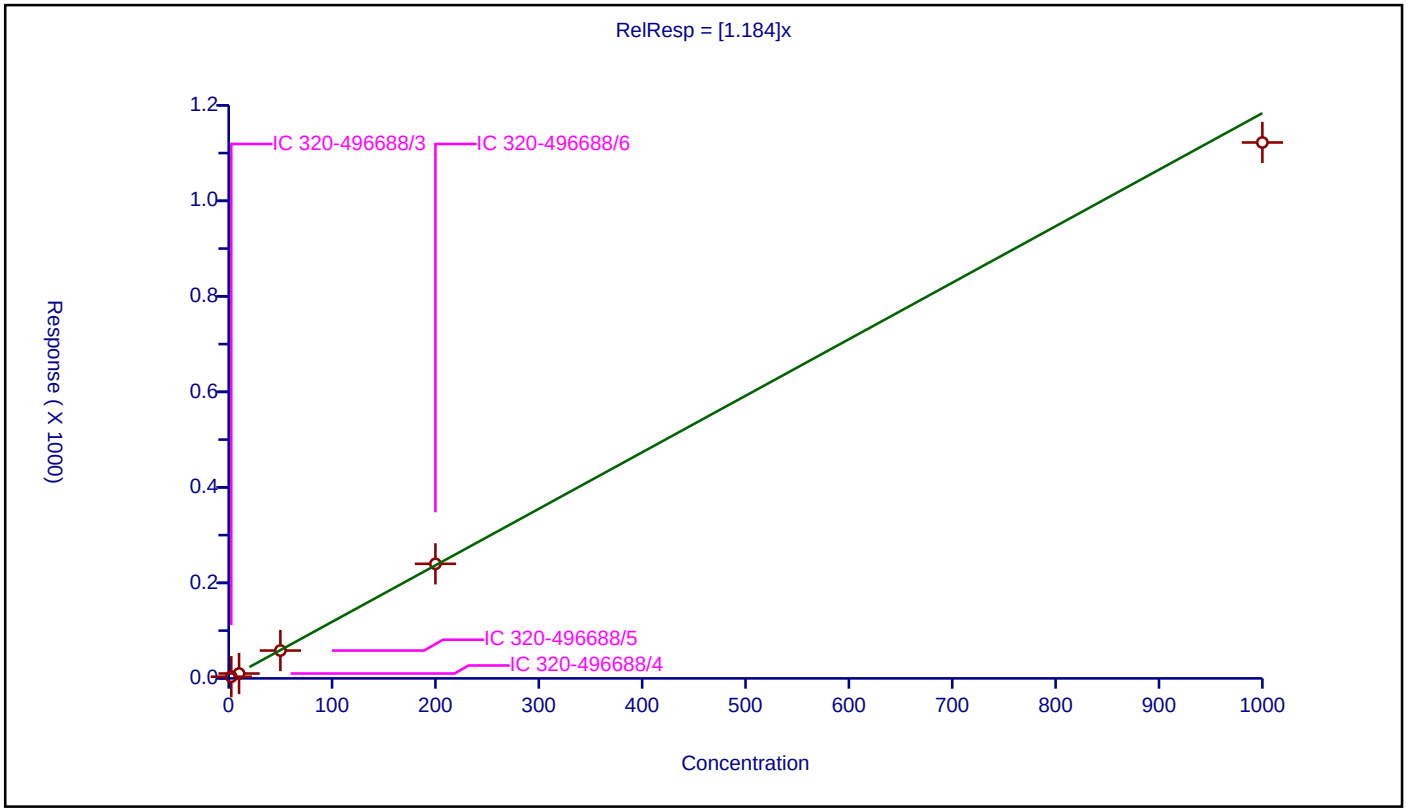

787372

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.24

Error Coefficients

Standard Error:	11500000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.395229	100.0	1696557.0	1.358092	Y
2	IC 320-496688/4	10.0	11.238546	100.0	1735785.0	1.123855	Y
3	IC 320-496688/5	50.0	62.662354	100.0	1657413.0	1.253247	Y
4	IC 320-496688/6	200.0	255.13849	100.0	1742331.0	1.275692	Y
5	IC 320-496688/7	1000.0	1189.708821	100.0	1895740.0	1.189709	Y

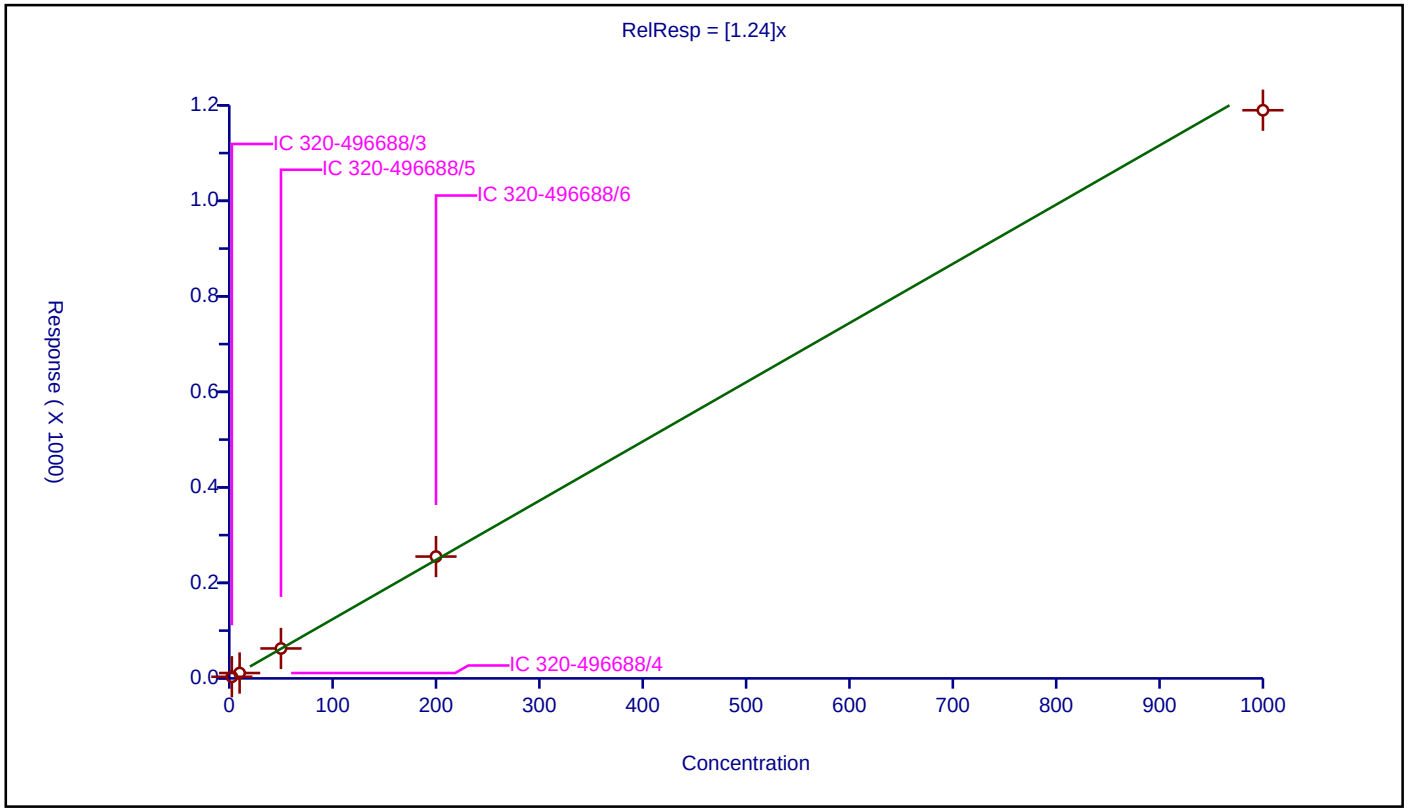

787373

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.046

Error Coefficients

Standard Error:	8500000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.679791	100.0	1602476.0	1.071916	Y
2	IC 320-496688/4	10.0	9.520403	100.0	1364144.0	0.95204	Y
3	IC 320-496688/5	50.0	53.426119	100.0	1388641.0	1.068522	Y
4	IC 320-496688/6	200.0	220.300949	100.0	1521254.0	1.101505	Y
5	IC 320-496688/7	1000.0	1038.502383	100.0	1602880.0	1.038502	Y

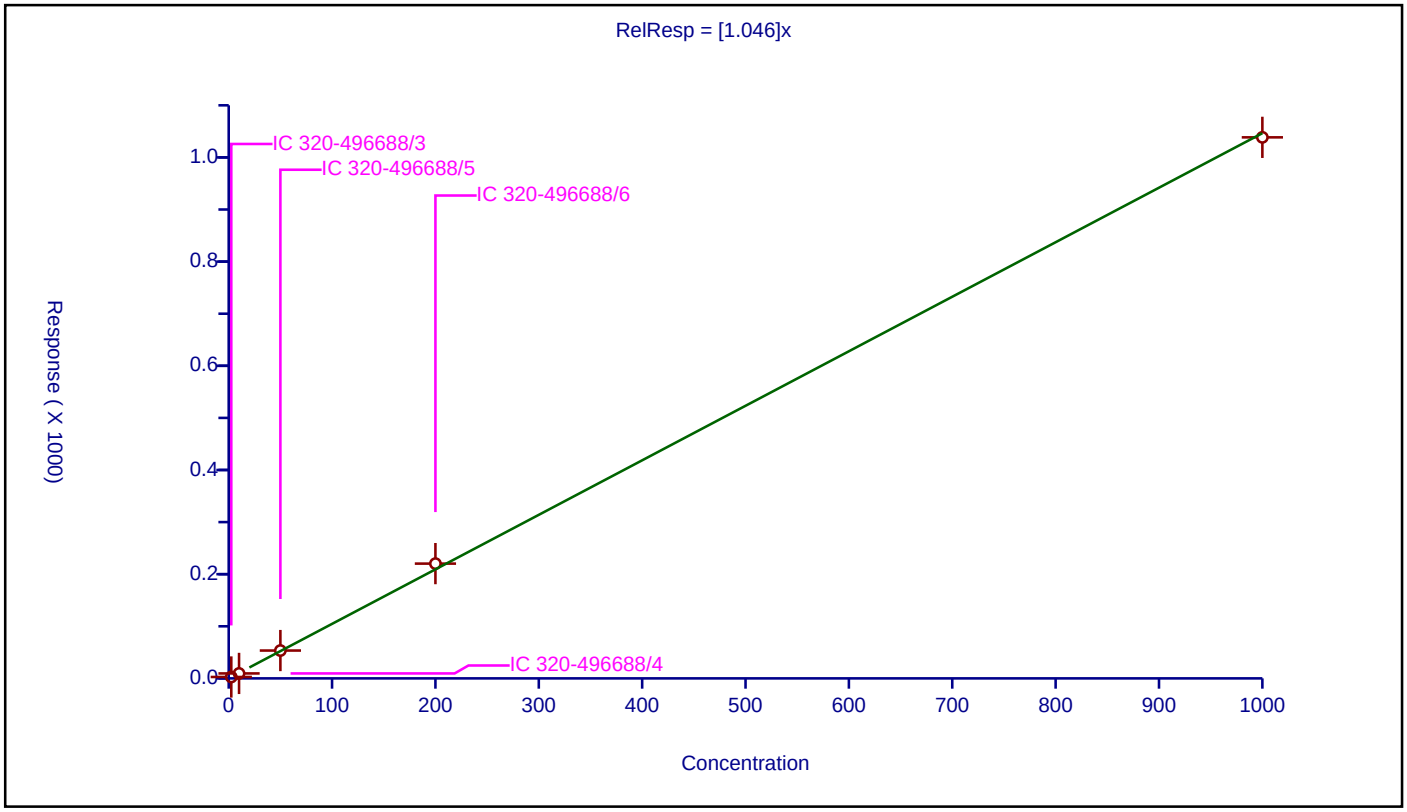

787374

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.054

Error Coefficients

Standard Error:	13300000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.980089	100.0	2514489.0	1.192035	Y
2	IC 320-496688/4	10.0	9.411606	100.0	2234847.0	0.941161	Y
3	IC 320-496688/5	50.0	51.86467	100.0	2149791.0	1.037293	Y
4	IC 320-496688/6	200.0	217.934531	100.0	2432949.0	1.089673	Y
5	IC 320-496688/7	1000.0	1011.152482	100.0	2574521.0	1.011152	Y

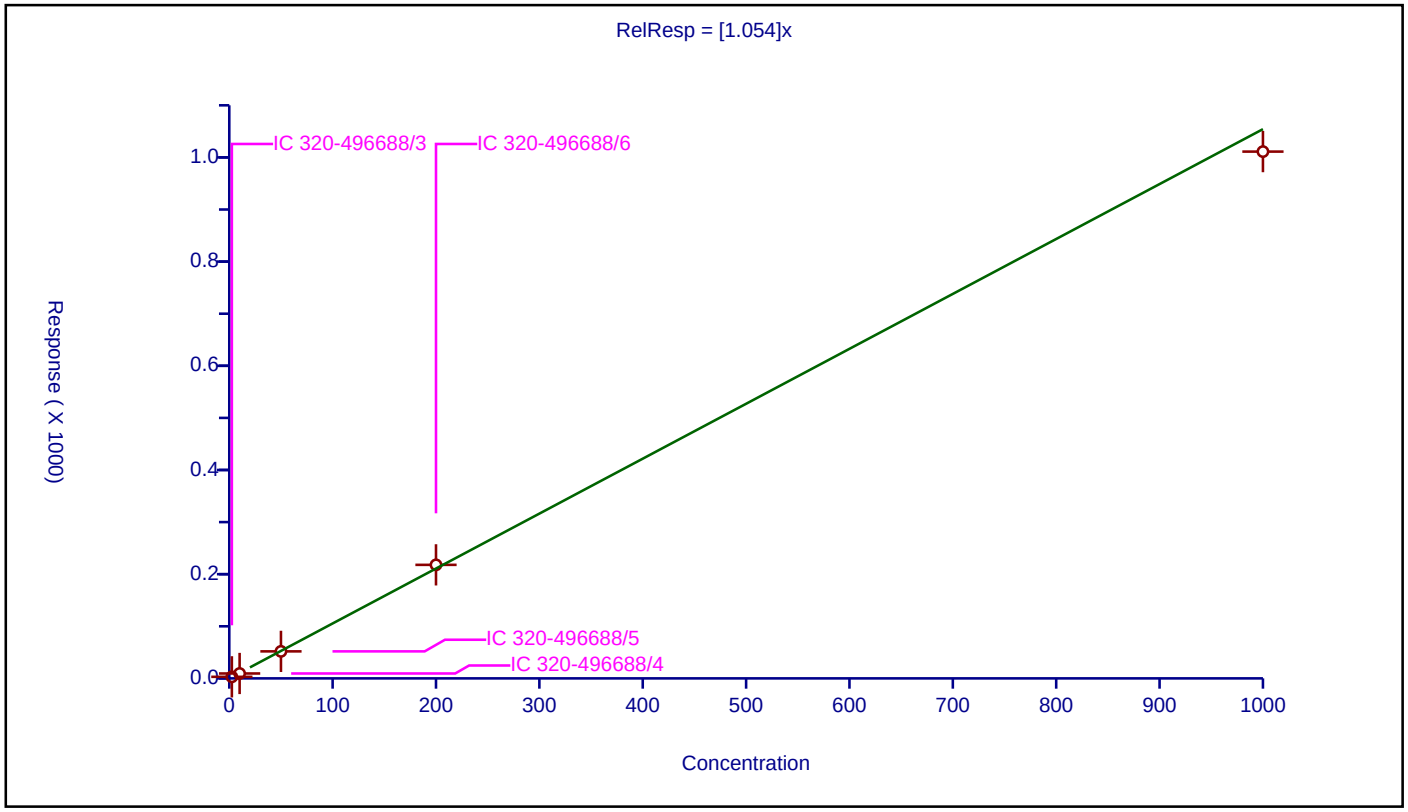

787375

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.214

Error Coefficients

Standard Error:	13000000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.283761	100.0	1523436.0	1.313504	Y
2	IC 320-496688/4	10.0	11.007204	100.0	1740015.0	1.10072	Y
3	IC 320-496688/5	50.0	61.8379	100.0	1861559.0	1.236758	Y
4	IC 320-496688/6	200.0	252.469364	100.0	2042874.0	1.262347	Y
5	IC 320-496688/7	1000.0	1159.01852	100.0	2190509.0	1.159019	Y

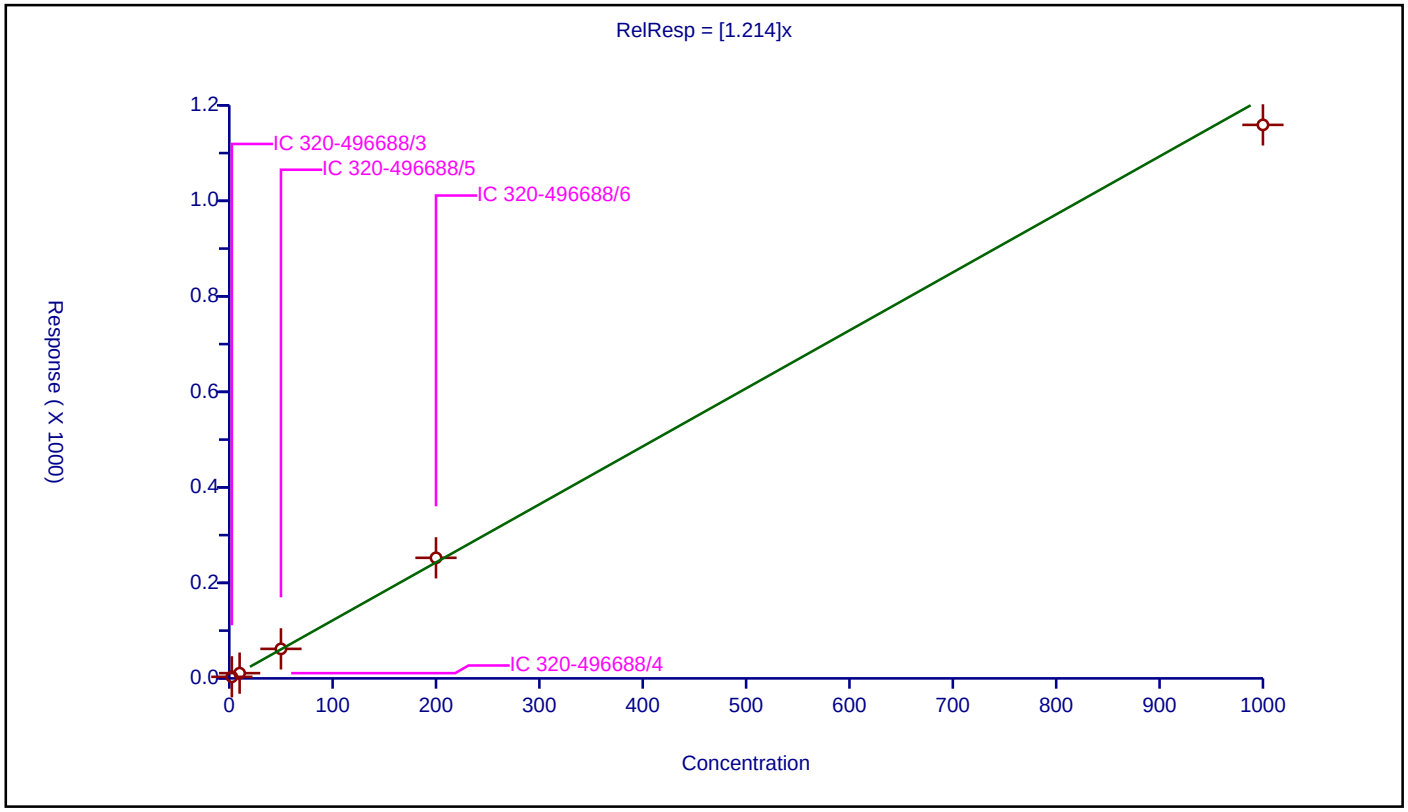

787376

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	12700000
Relative Standard Error:	8.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808272	100.0	2592947.0	1.123309	Y
2	IC 320-496688/4	10.0	8.984414	100.0	2228025.0	0.898441	Y
3	IC 320-496688/5	50.0	49.606313	100.0	1991303.0	0.992126	Y
4	IC 320-496688/6	200.0	212.714288	100.0	2374722.0	1.063571	Y
5	IC 320-496688/7	1000.0	961.852333	100.0	2584740.0	0.961852	Y

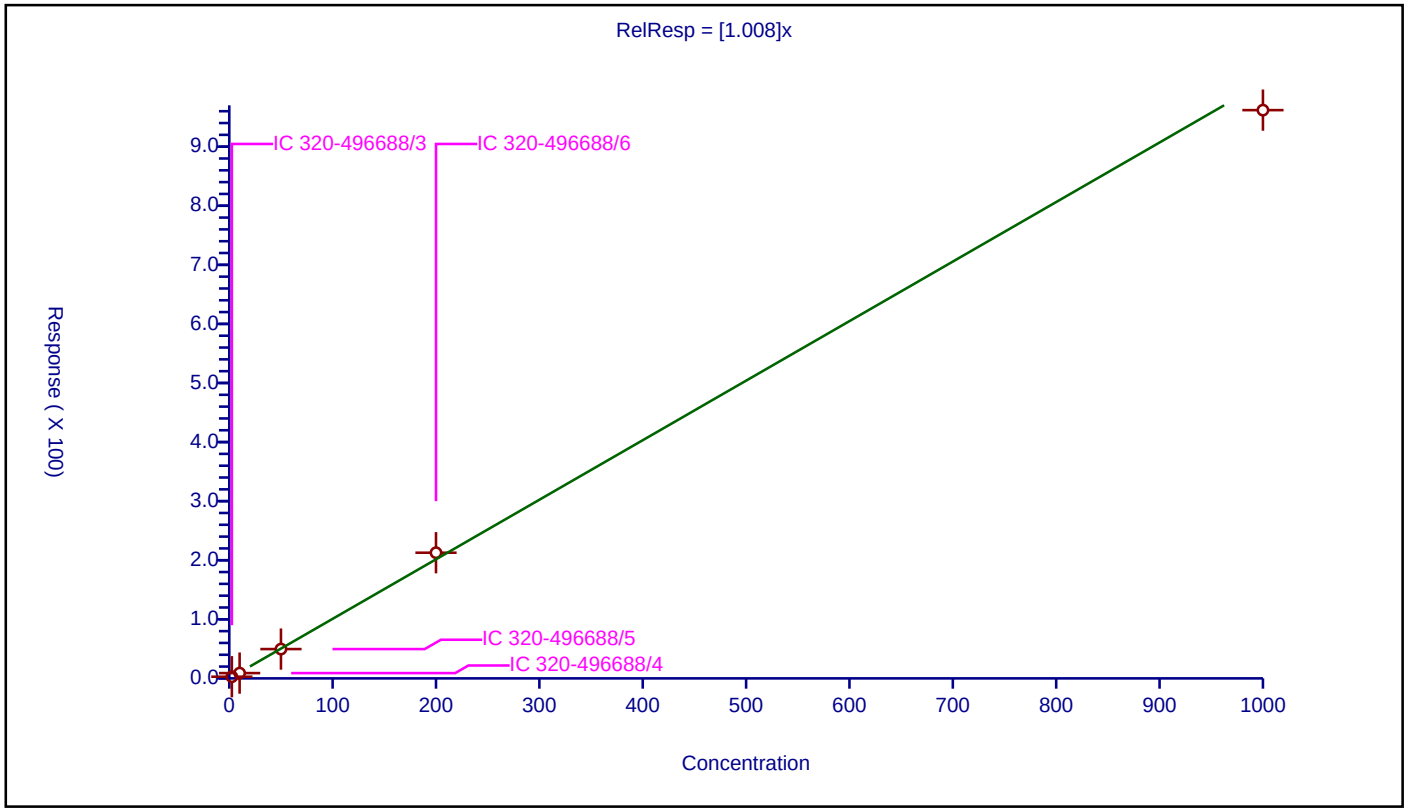

787377

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.075

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.566752	100.0	2138853.0	1.133505	Y
2	IC 320-496688/4	2.0	1.911764	100.0	1829253.0	0.955882	Y
3	IC 320-496688/5	10.0	10.998165	100.0	1800864.0	1.099817	Y
4	IC 320-496688/6	40.0	44.949952	100.0	1948011.0	1.123749	Y
5	IC 320-496688/7	200.0	212.755816	100.0	2014532.0	1.063779	Y

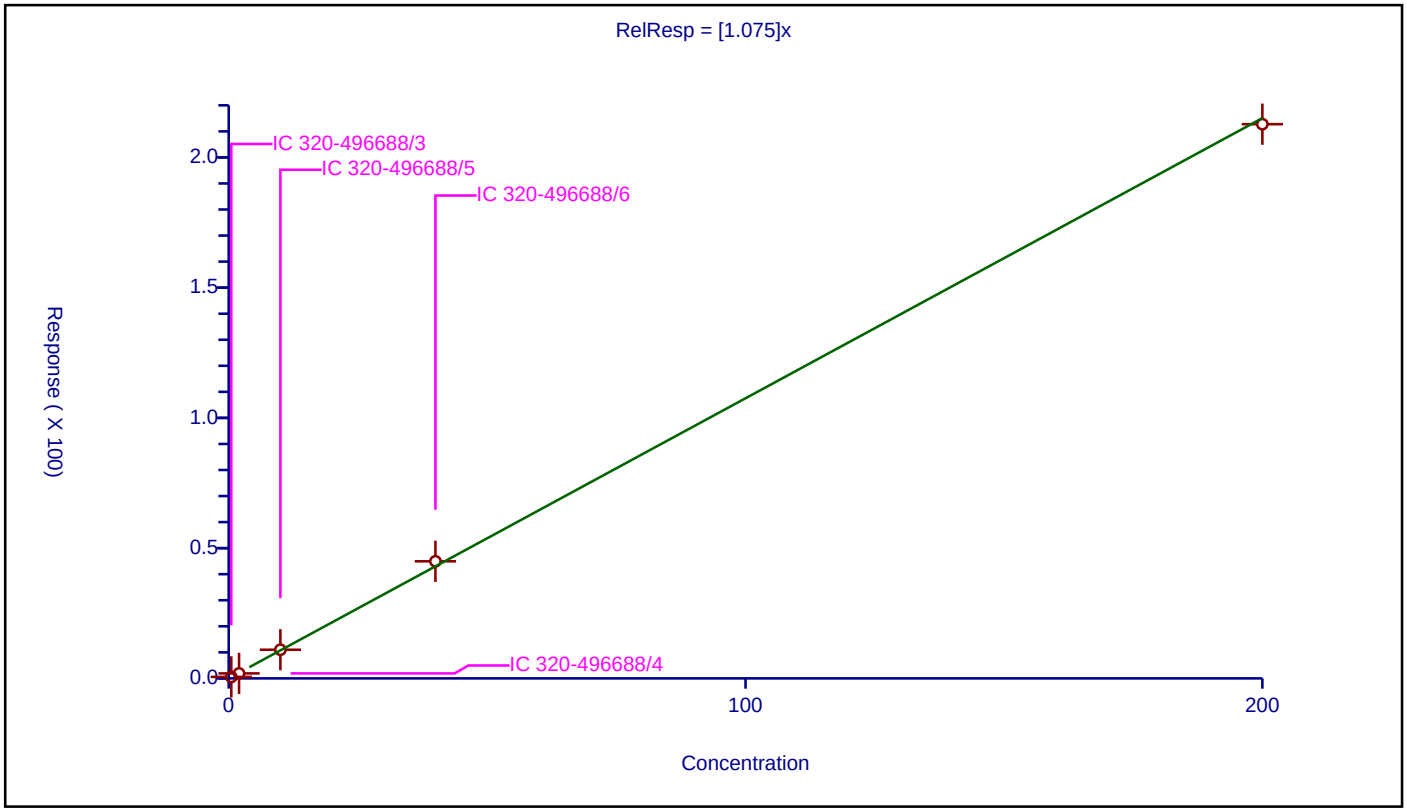

787378

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.08

Error Coefficients

Standard Error:	3140000
Relative Standard Error:	9.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.616764	100.0	3167014.0	1.233528	Y
2	IC 320-496688/4	2.0	1.926948	100.0	2644389.0	0.963474	Y
3	IC 320-496688/5	10.0	10.464342	100.0	2465726.0	1.046434	Y
4	IC 320-496688/6	40.0	44.869913	100.0	2839435.0	1.121748	Y
5	IC 320-496688/7	200.0	207.156116	100.0	2962515.0	1.035781	Y

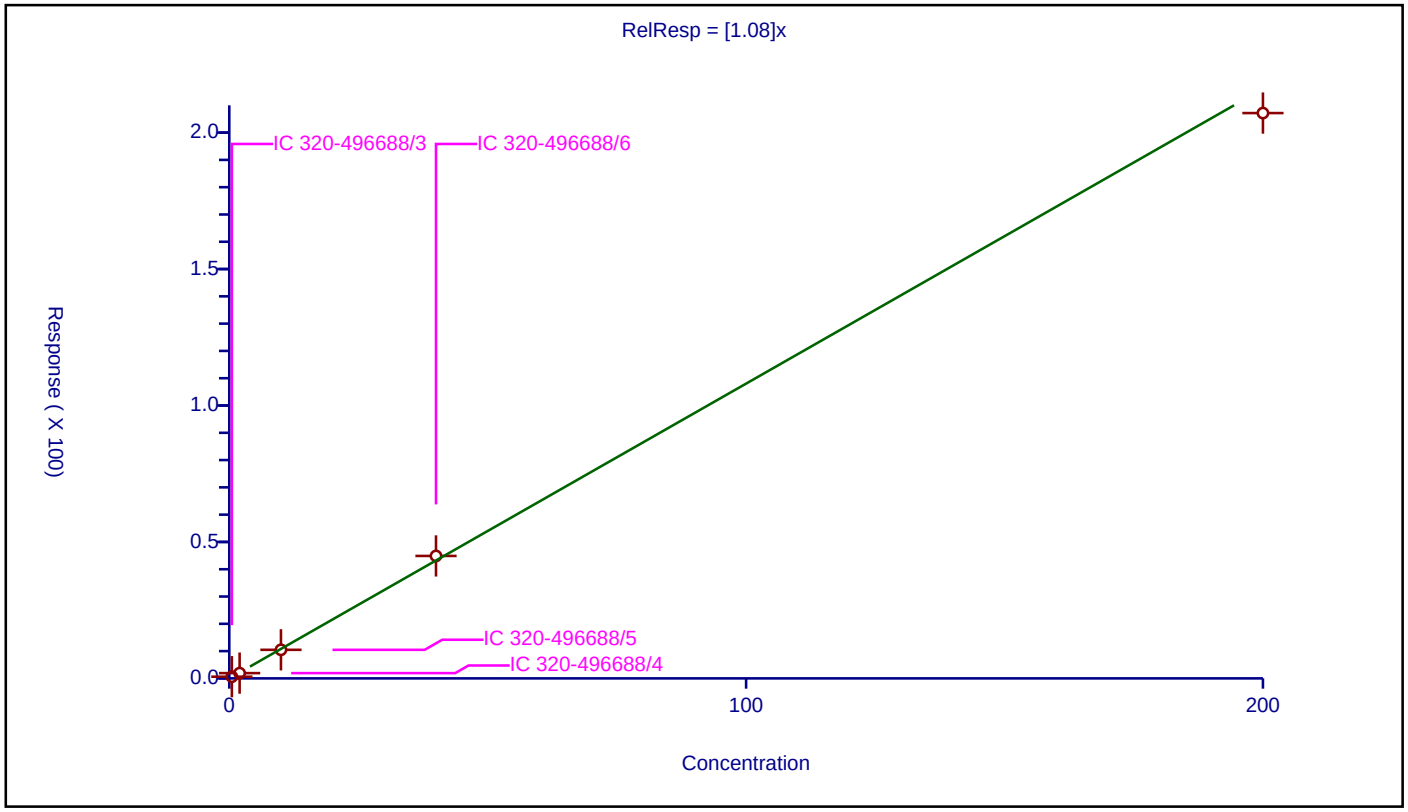

787379

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.482683	100.0	2334037.0	0.965366	Y
2	IC 320-496688/4	2.0	1.917995	100.0	2045939.0	0.958997	Y
3	IC 320-496688/5	10.0	10.721795	100.0	1900111.0	1.072179	Y
4	IC 320-496688/6	40.0	40.297989	100.0	2105852.0	1.00745	Y
5	IC 320-496688/7	200.0	207.496438	100.0	2066088.0	1.037482	Y

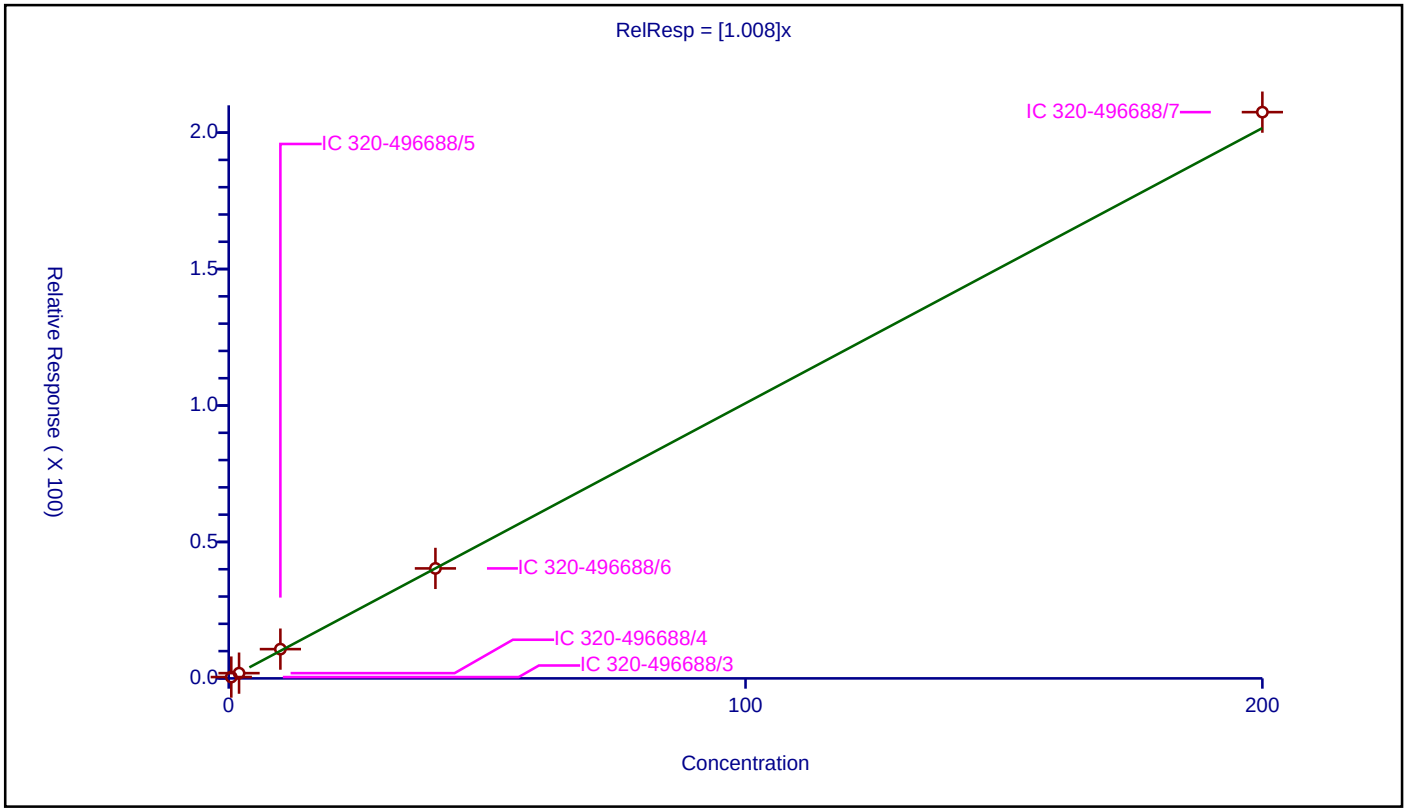

787380

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.062

Error Coefficients

Standard Error:	11700000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	5.664077	200.0	1823492.0	1.132815	Y
2	IC 320-496688/4	20.0	19.907928	200.0	1833139.0	0.995396	Y
3	IC 320-496688/5	100.0	108.699815	200.0	1676139.0	1.086998	Y
4	IC 320-496688/6	400.0	441.074631	200.0	2177938.0	1.102687	Y
5	IC 320-496688/7	2000.0	1984.090177	200.0	2298668.0	0.992045	Y

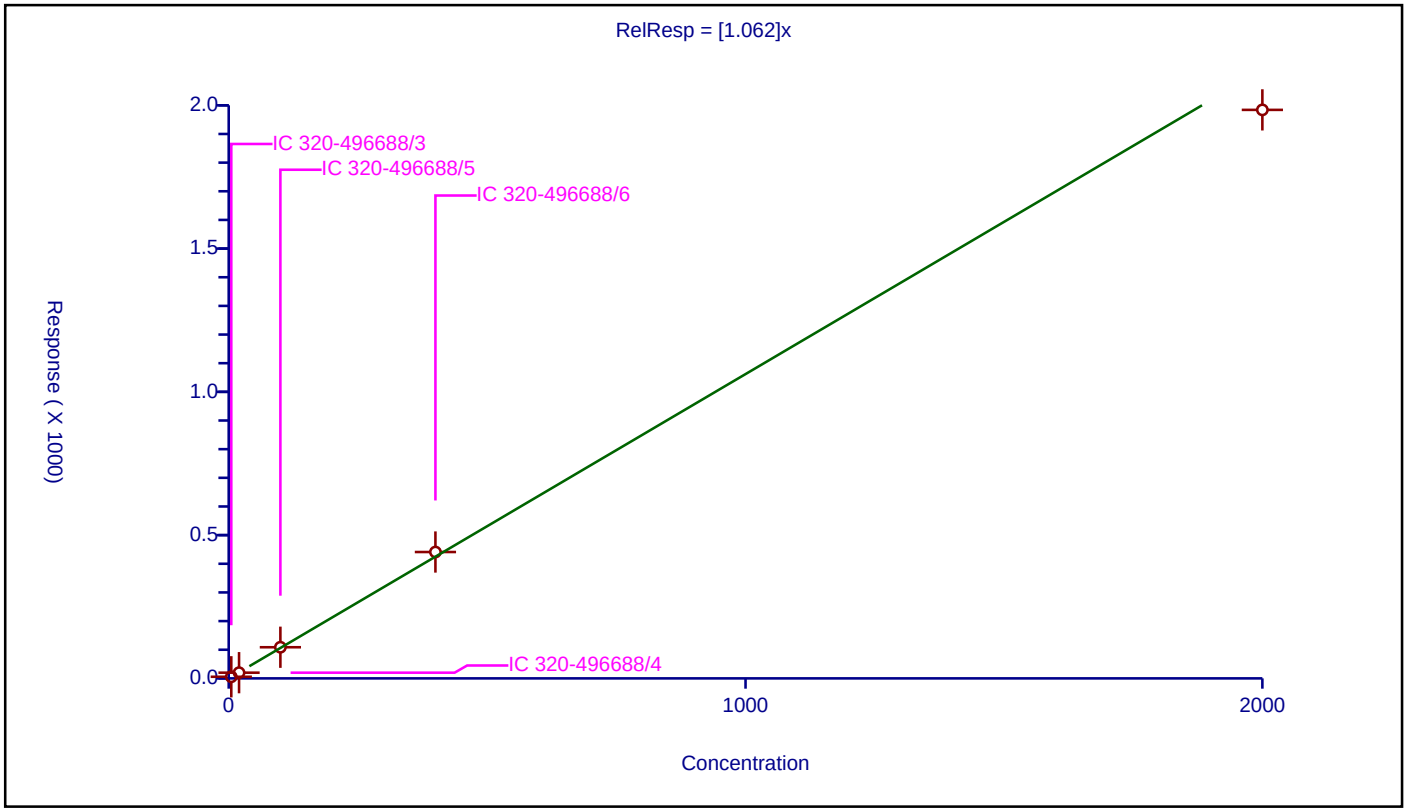

787381

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	15600000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	6.696054	200.0	1823492.0	1.339211	Y
2	IC 320-496688/4	20.0	23.726842	200.0	1833139.0	1.186342	Y
3	IC 320-496688/5	100.0	133.490122	200.0	1676139.0	1.334901	Y
4	IC 320-496688/6	400.0	558.573844	200.0	2177938.0	1.396435	Y
5	IC 320-496688/7	2000.0	2654.186163	200.0	2298668.0	1.327093	Y

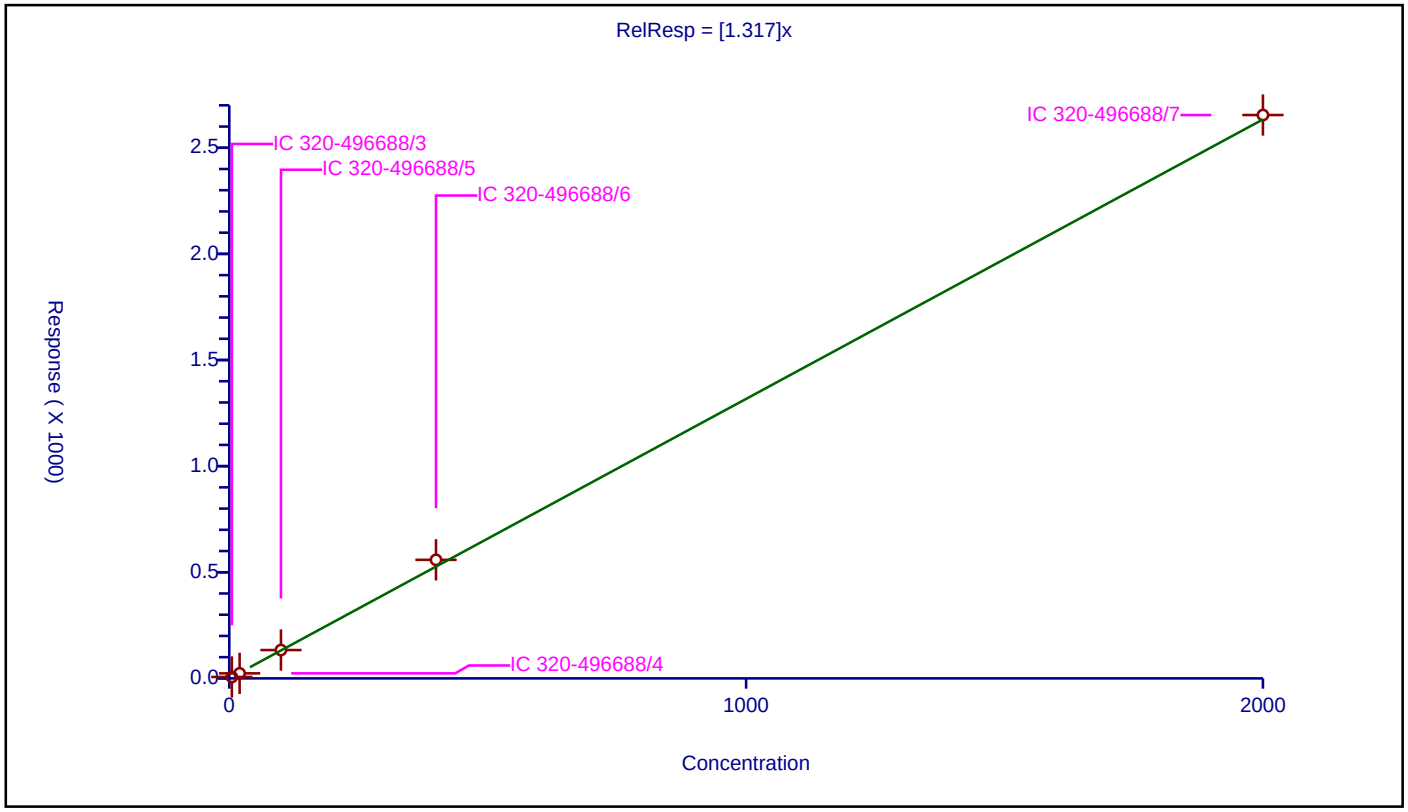

787382

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID (1): WDM 320-496688/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 06/08/2021 12:40

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	20.95	13

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d				
Injection Date:	08-Jun-2021 12:40:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 7095
H (Peak Height) = 55991

%R = 13 <= 25
Passed

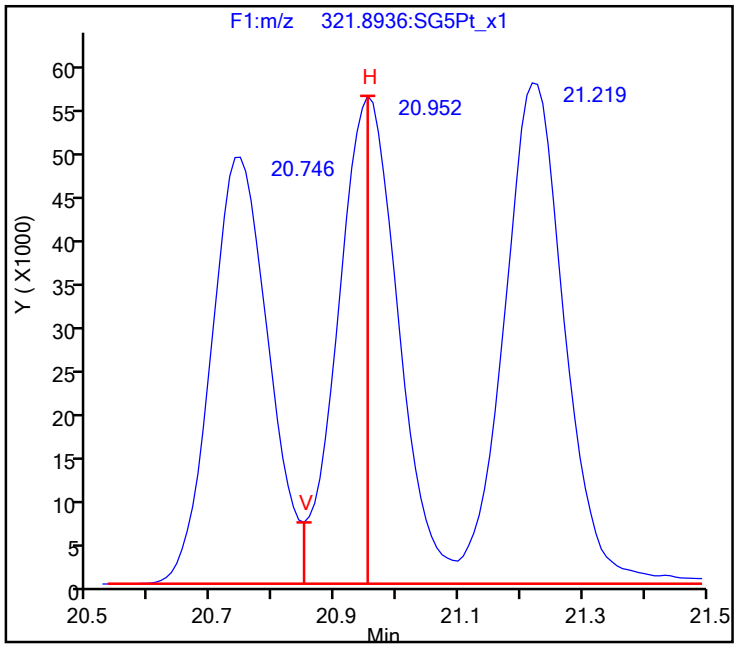

787384

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

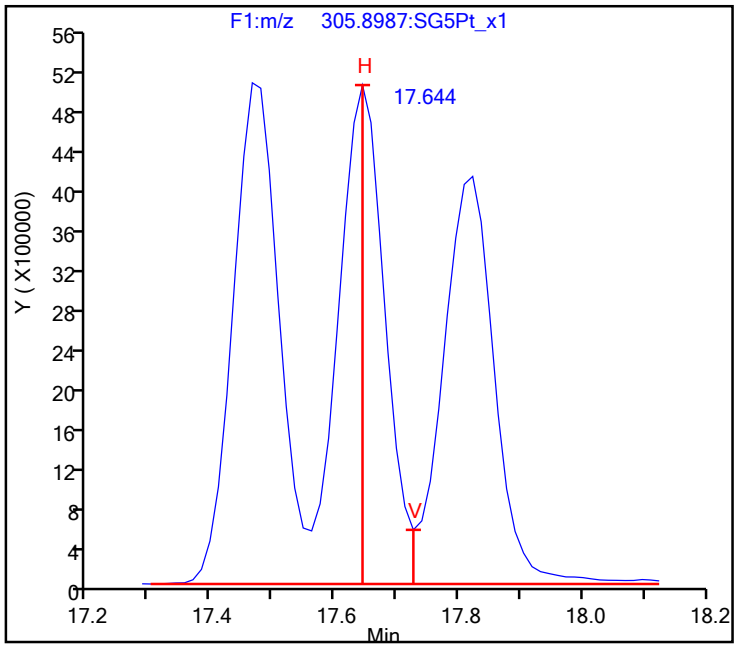

787386

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID (1): WDM 320-517462/44 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/19/2021 02:19

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.78	21

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d				
Injection Date:	19-Aug-2021 02:19:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	44
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 5301
H (Peak Height) = 24781

%R = 21 <= 25
Passed

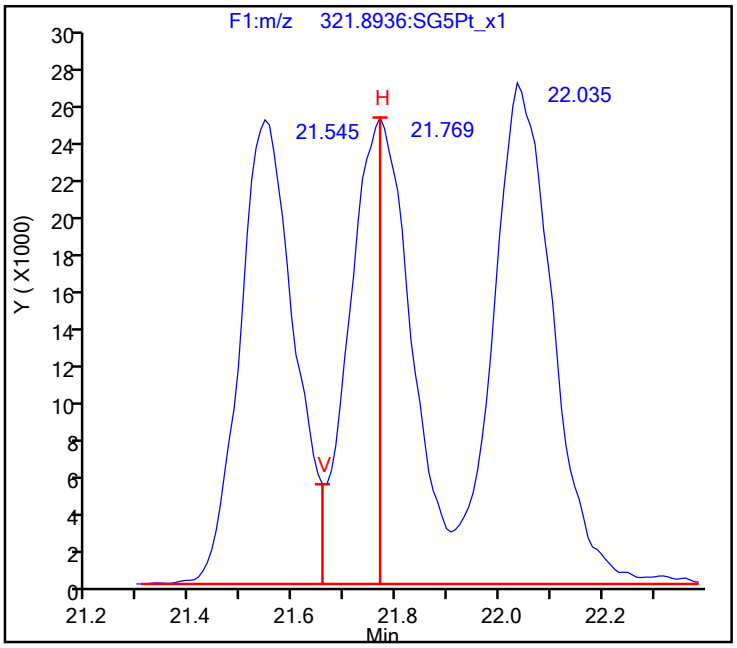

787388

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID (1): WDM 320-517891/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/19/2021 13:59

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.84	22

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d				
Injection Date:	19-Aug-2021 13:59:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 916
H (Peak Height) = 4212

%R = 22 <= 25
Passed

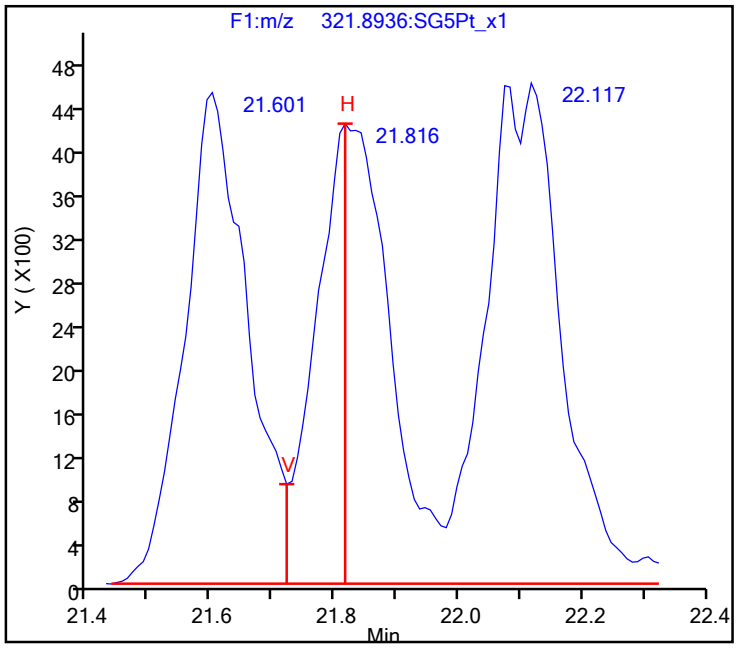

787390

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID (1): WDM 320-518043/16 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/20/2021 02:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.73	20

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d				
Injection Date:	20-Aug-2021 02:21:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 5211
H (Peak Height) = 25746

%R = 20 <= 25
Passed

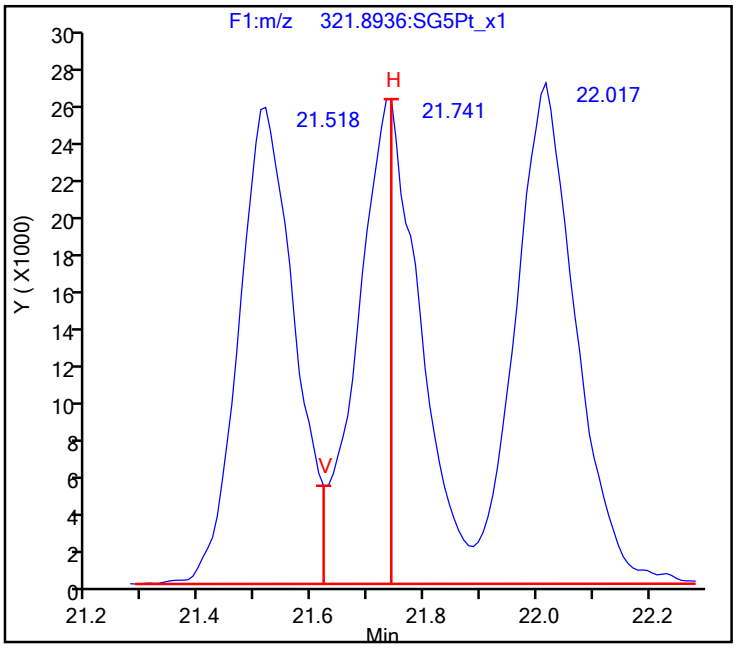

787392

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID (1): CPS 320-518958/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/23/2021 09:32

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.67	13

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d				
Injection Date:	23-Aug-2021 09:32:15	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 147170
H (Peak Height) = 1128470

%R = 13 <= 25
Passed

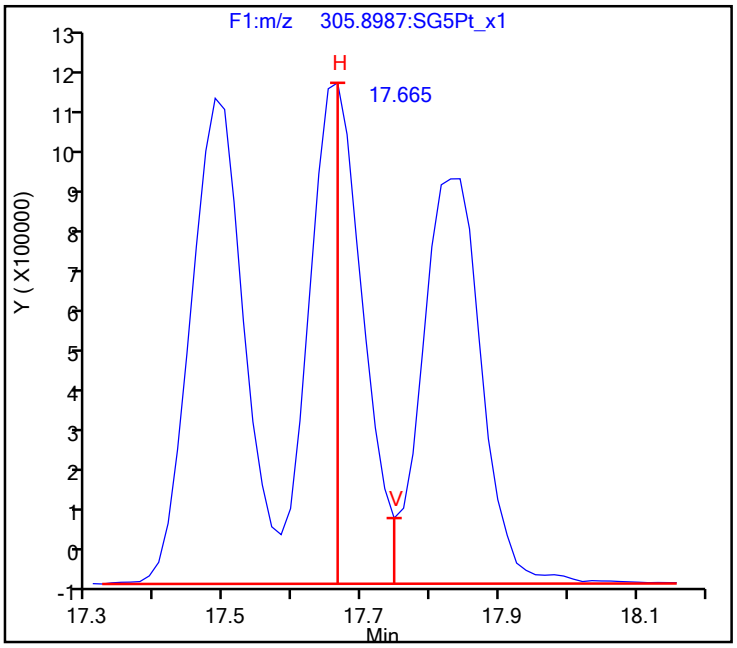

787394

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID (1): CPS 320-519438/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/24/2021 08:28

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	13

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d				
Injection Date:	24-Aug-2021 08:28:58	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 298756
H (Peak Height) = 2238451

%R = 13 <= 25
Passed

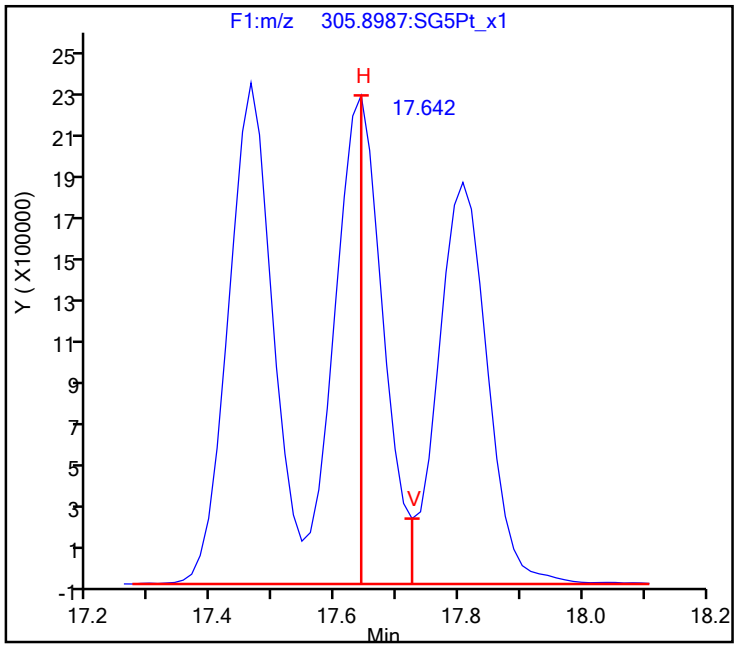

787396

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d				
Injection Date:	24-Aug-2021 08:28:58	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID (1): CPS 320-519650/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 08:48

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.63	11

Report Date: 25-Aug-2021 13:23:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d				
Injection Date:	25-Aug-2021 08:48:55	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 334173
H (Peak Height) = 2977162

%R = 11 <= 25
Passed

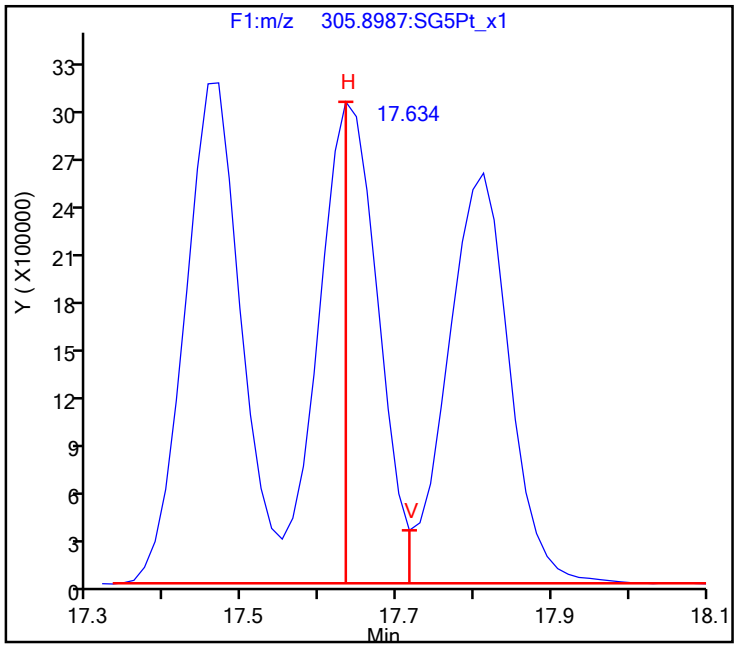

787399

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d				
Injection Date:	25-Aug-2021 08:48:55	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

787402

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

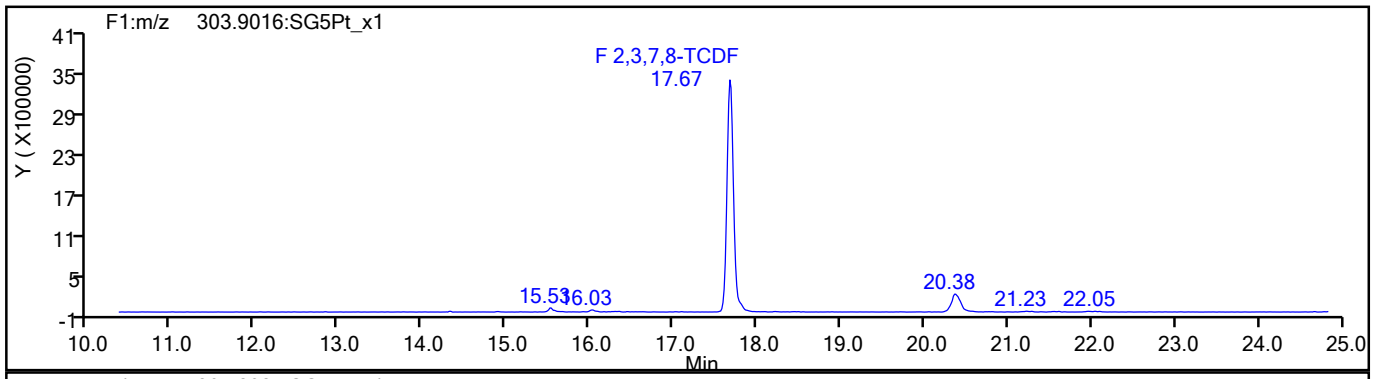

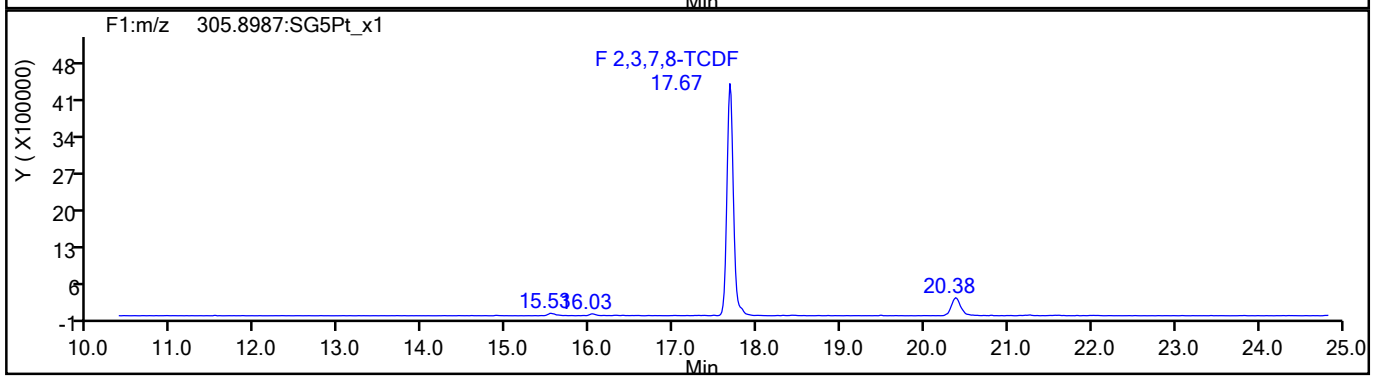

TCDF Standards

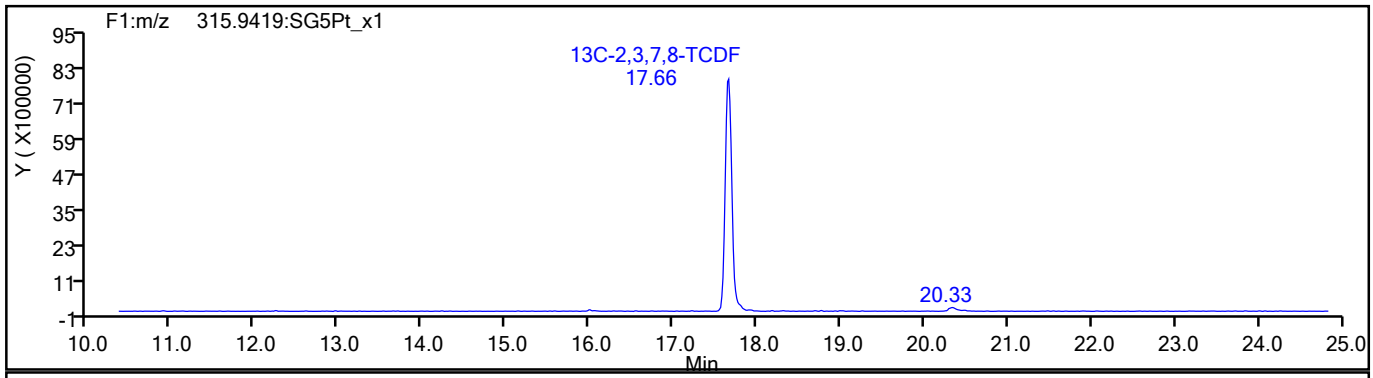

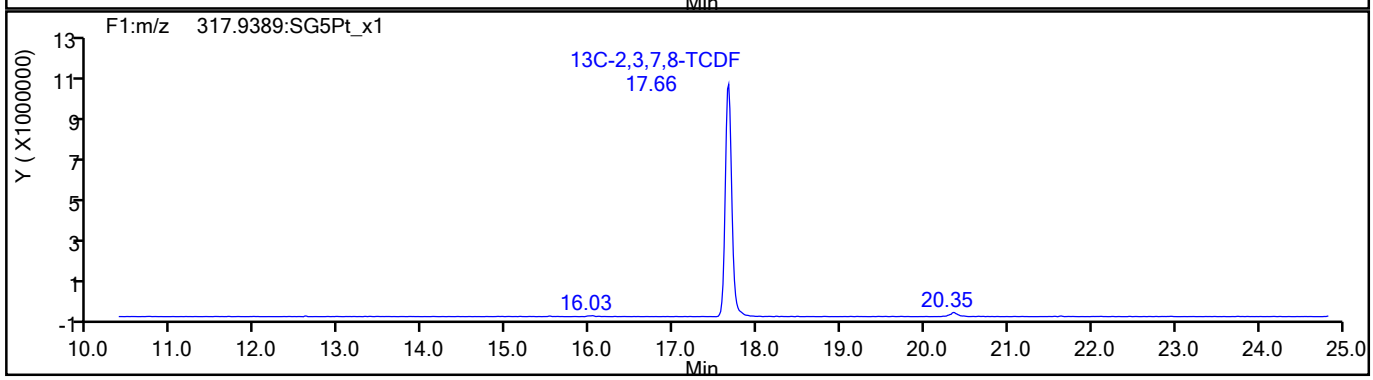

787404

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

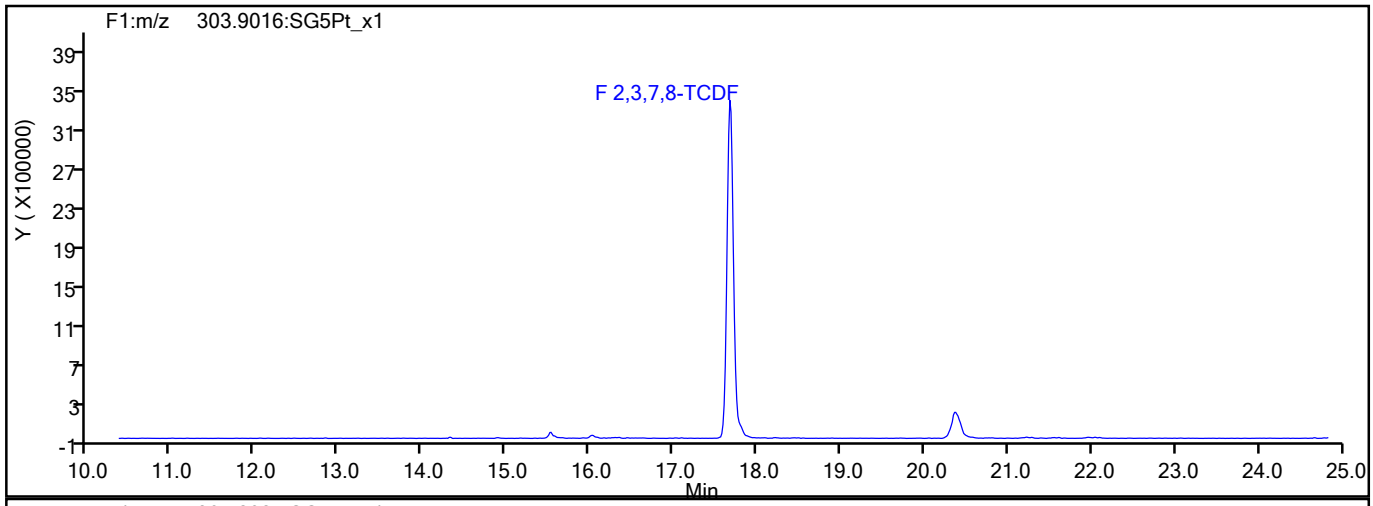

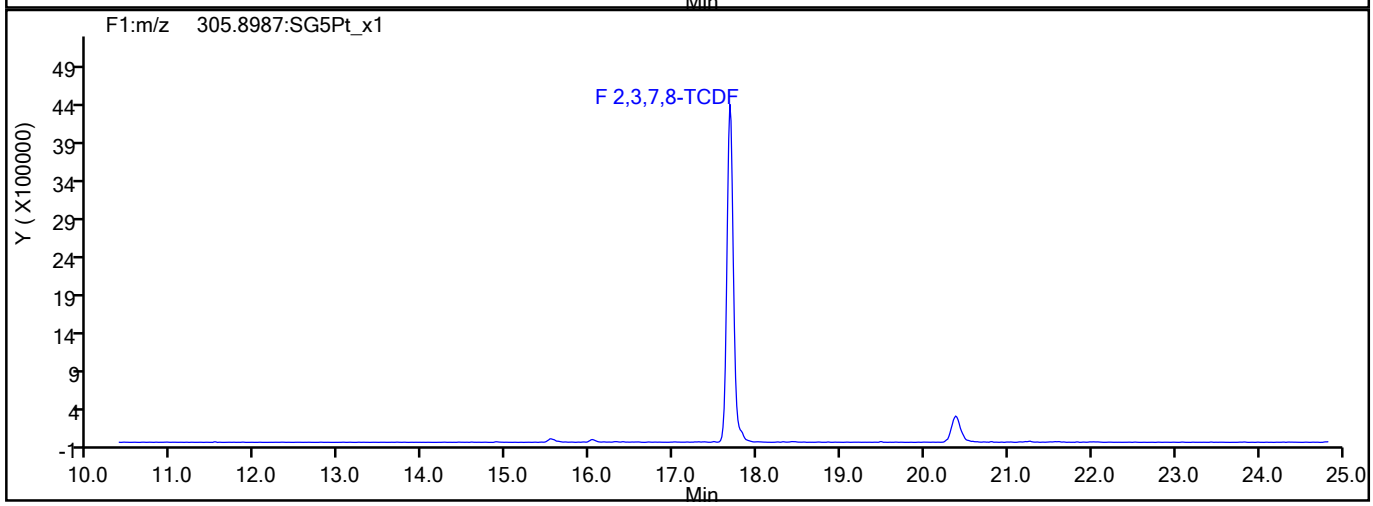

TCDF Interference Mass

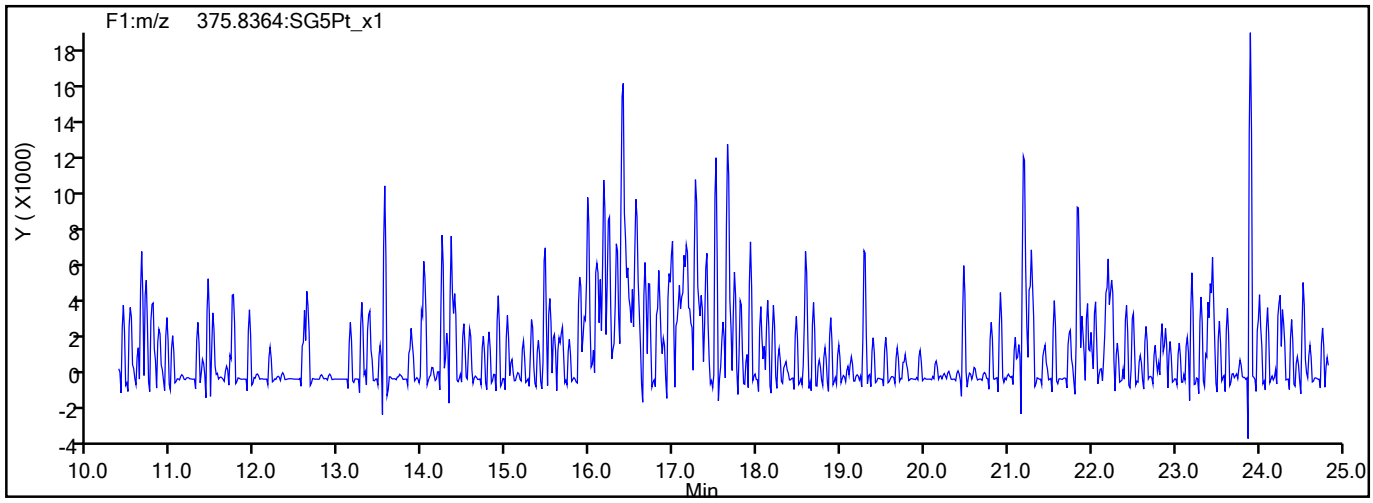

787405

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

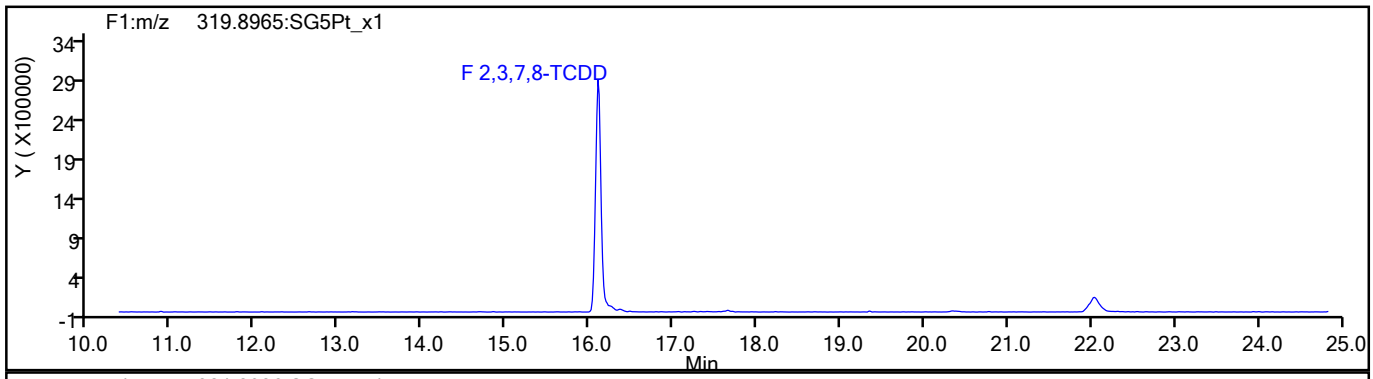

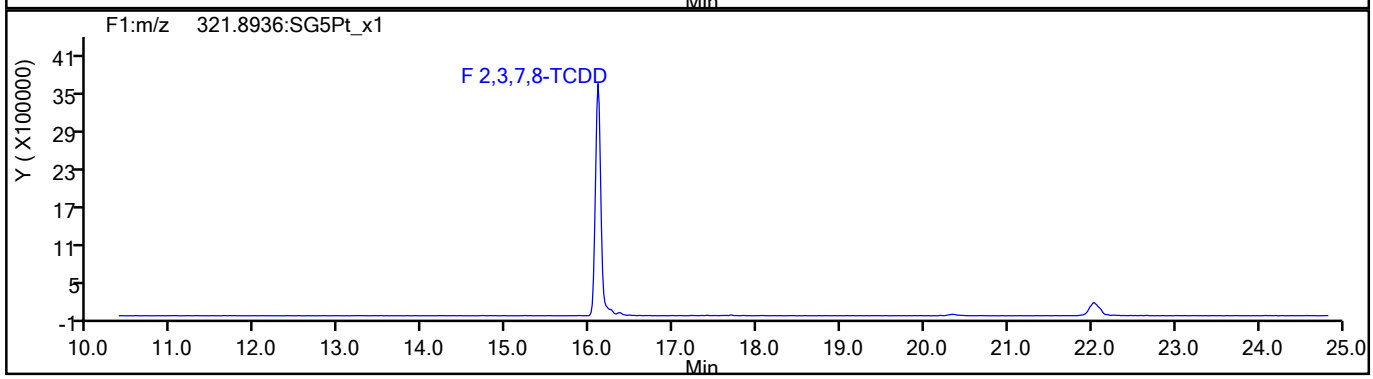

TCDD Standards

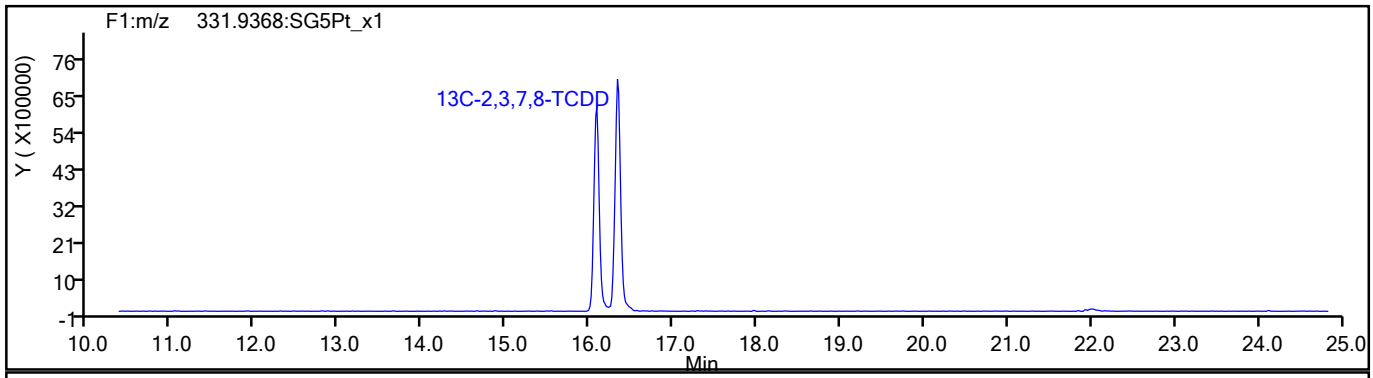

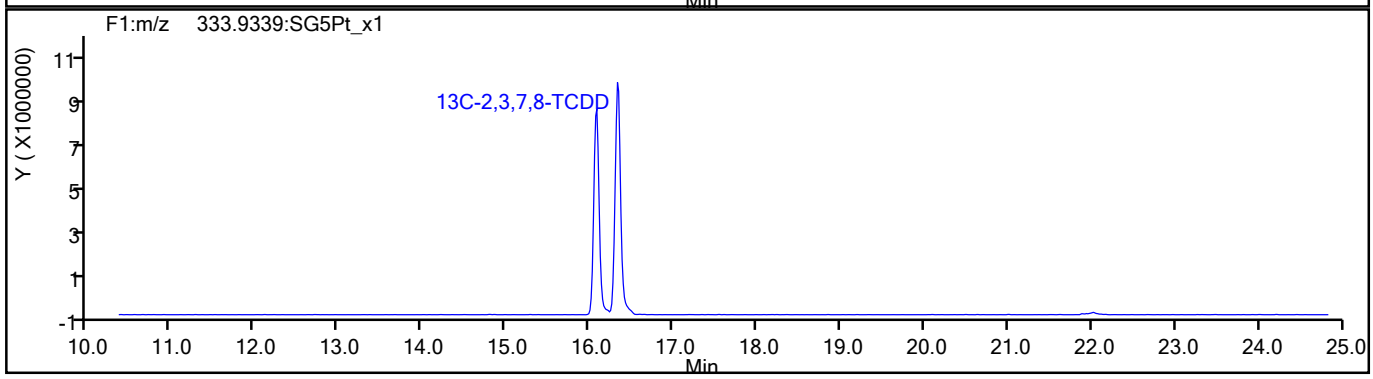

787406

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

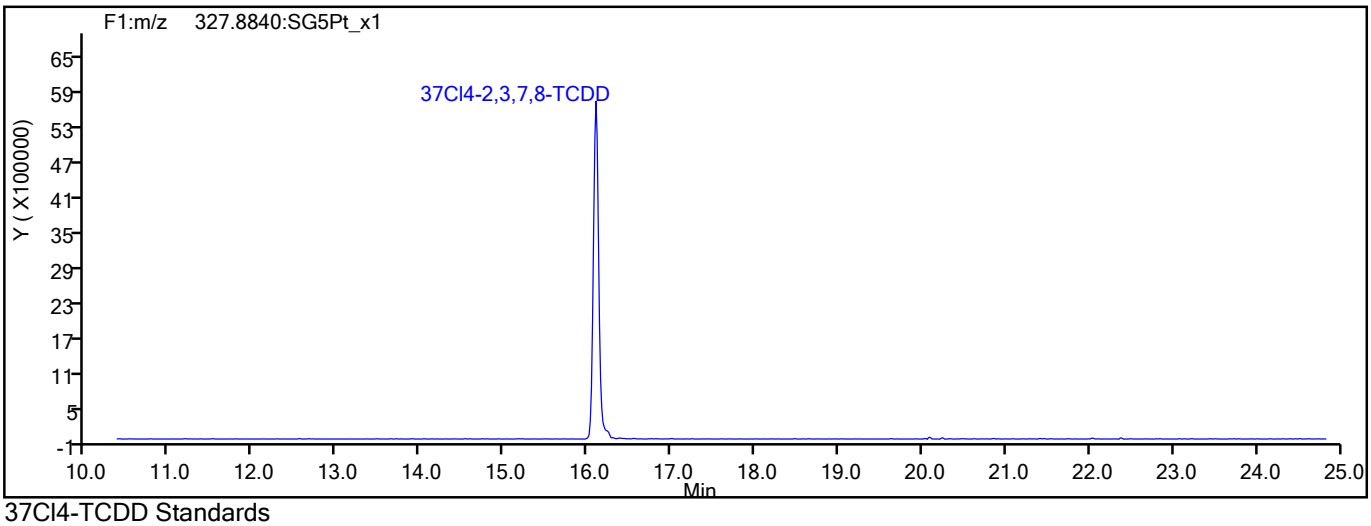

37Cl4-TCDD Standards

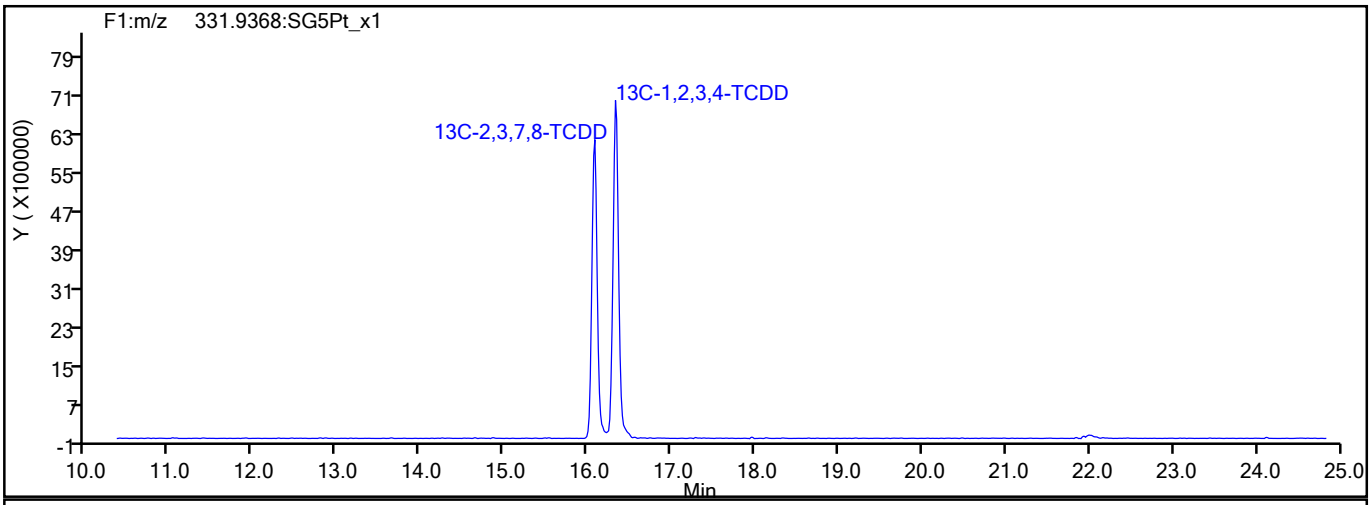

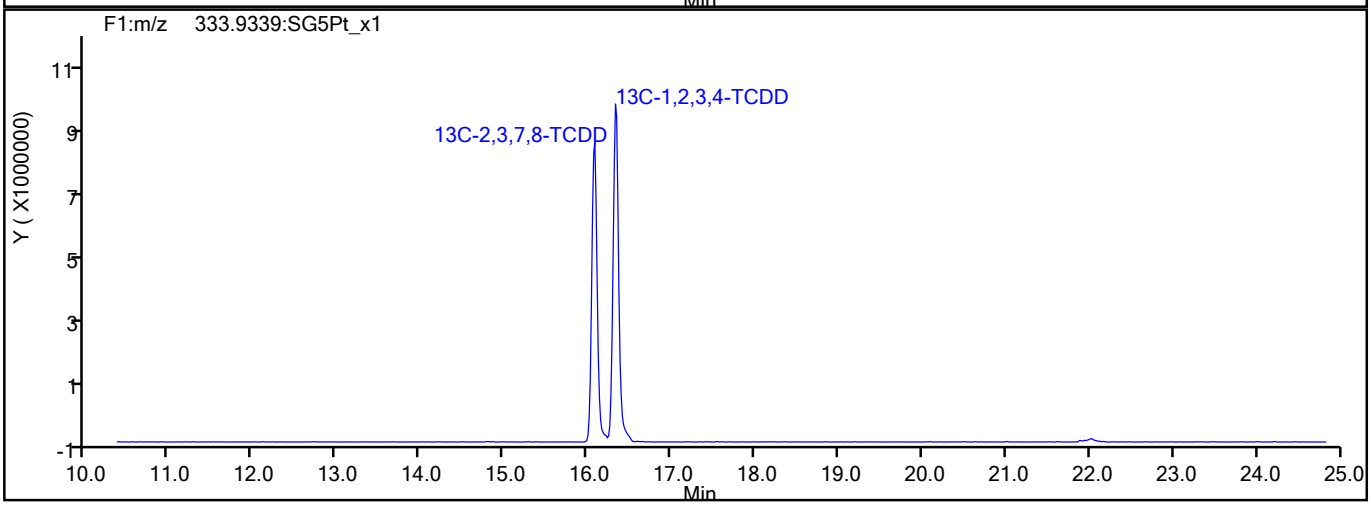

787407

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

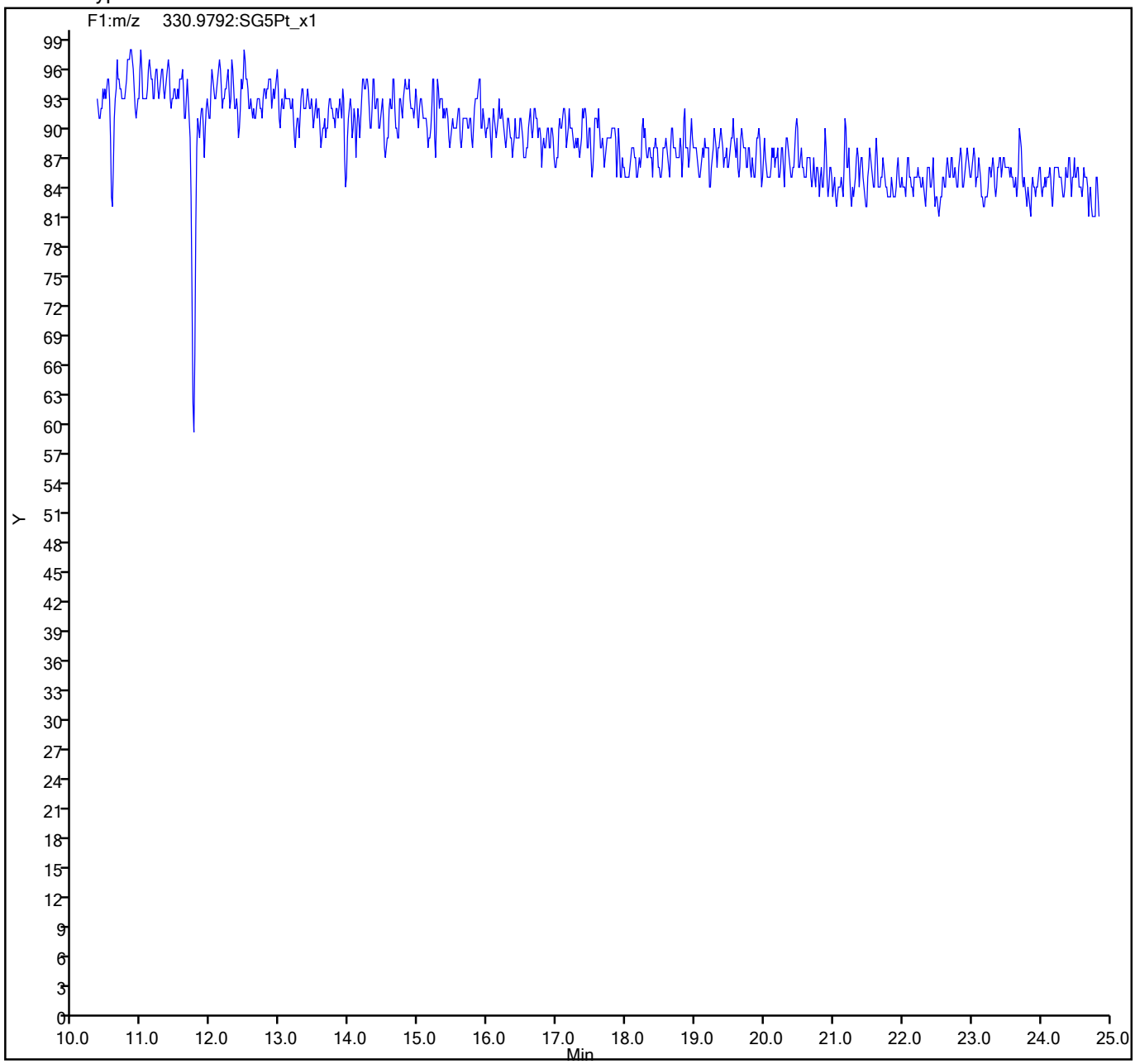

787408

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID: CCV 320-518958/2 Calibration Date: 08/23/2021 10:10

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 23AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.038		9.82	10.0	98	78-129
2,3,7,8-TCDF	AveID	0.998	1.004		10.1	10.0	101	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9441		108	100	108	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.458		109	100	109	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8997		10.4	10.0	104	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
23AU2111D2	1	CPS 082321	CPS HRDXNCP_00044				1.00000	
23AU2111D2	2	CCV 082321	CCV CS-4 HRDXNL4_00100				1.00000	
23AU2111D2	3	SB 082321	Solvent Blank C-14				1.00000	
23AU2111D2	4	320-513879	320-76888-A-9-A	20	1613B/Solid	D267	10.00000	g
23AU2111D2	5	320-512871	320-76788-A-21-A	20	1613B/Solid	D265	10.00000	g
23AU2111D2	6	320-513585	320-76769-A-20-A	20	1613B/Solid	D265	10.00000	g
23AU2111D2	7	320-513585	320-76769-A-1-A X5	20	1613B/Solid		10.00000	g
23AU2111D2	8	320-513585	320-76769-A-1-B MS X5	20	1613B/Solid		10.00000	g
23AU2111D2	9	320-513585	320-76769-A-1-C MSD X5	20	1613B/Solid		10.00000	g
23AU2111D2	10						1.00000	
23AU2111D2	11						1.00000	
23AU2111D2	12						1.00000	
23AU2111D2	13						1.00000	
23AU2111D2	14						1.00000	
23AU2111D2	15		KSS 08-23-21				1.00000	
23AU2111D2	16						1.00000	

LOGFILE CHECKED
DB 8/23/21

Peak Locate Examination:23-AUG-2021:09:31 File:23AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

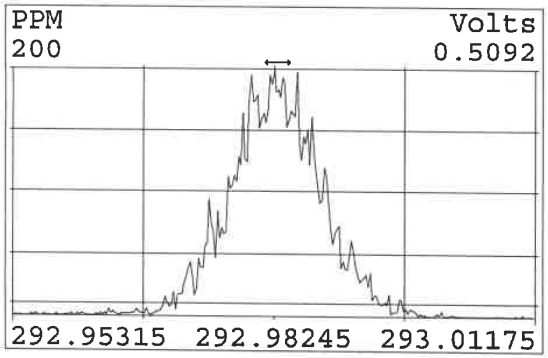

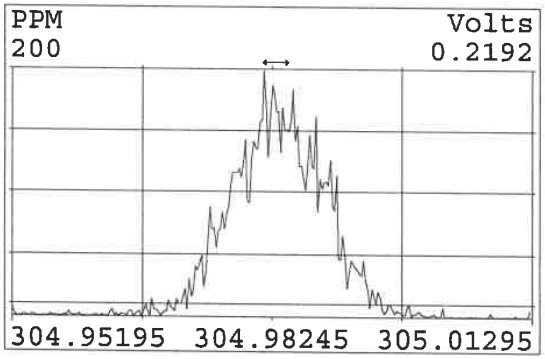

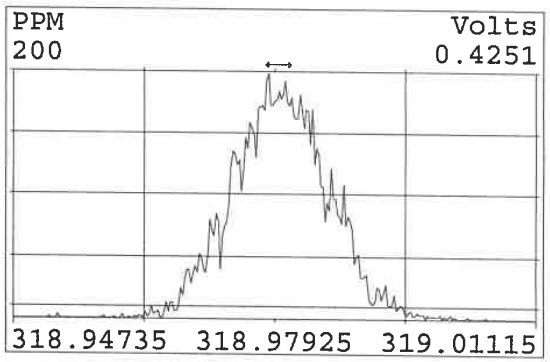

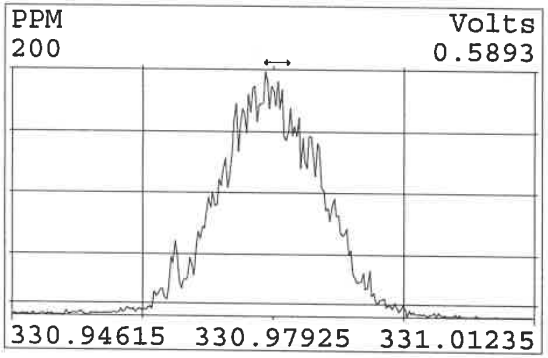

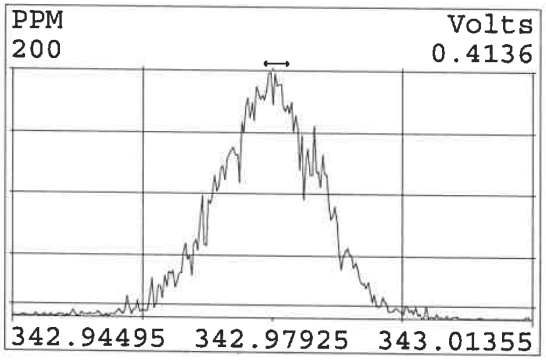

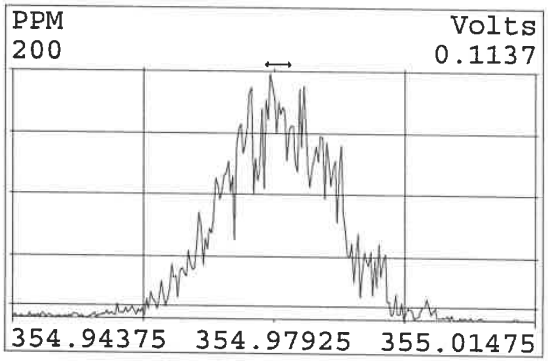

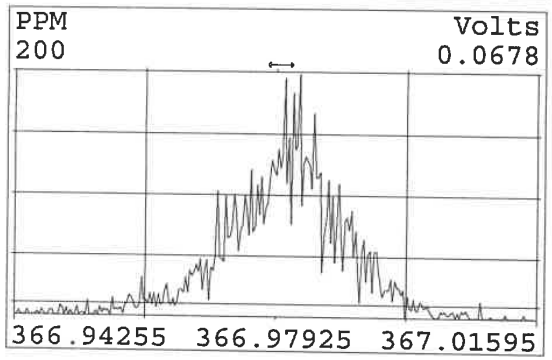

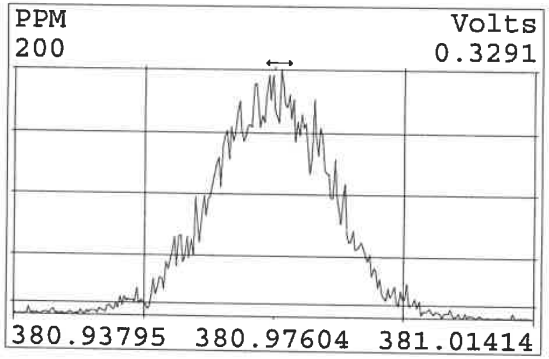

787411

Peak Locate Examination:23-AUG-2021:15:21 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

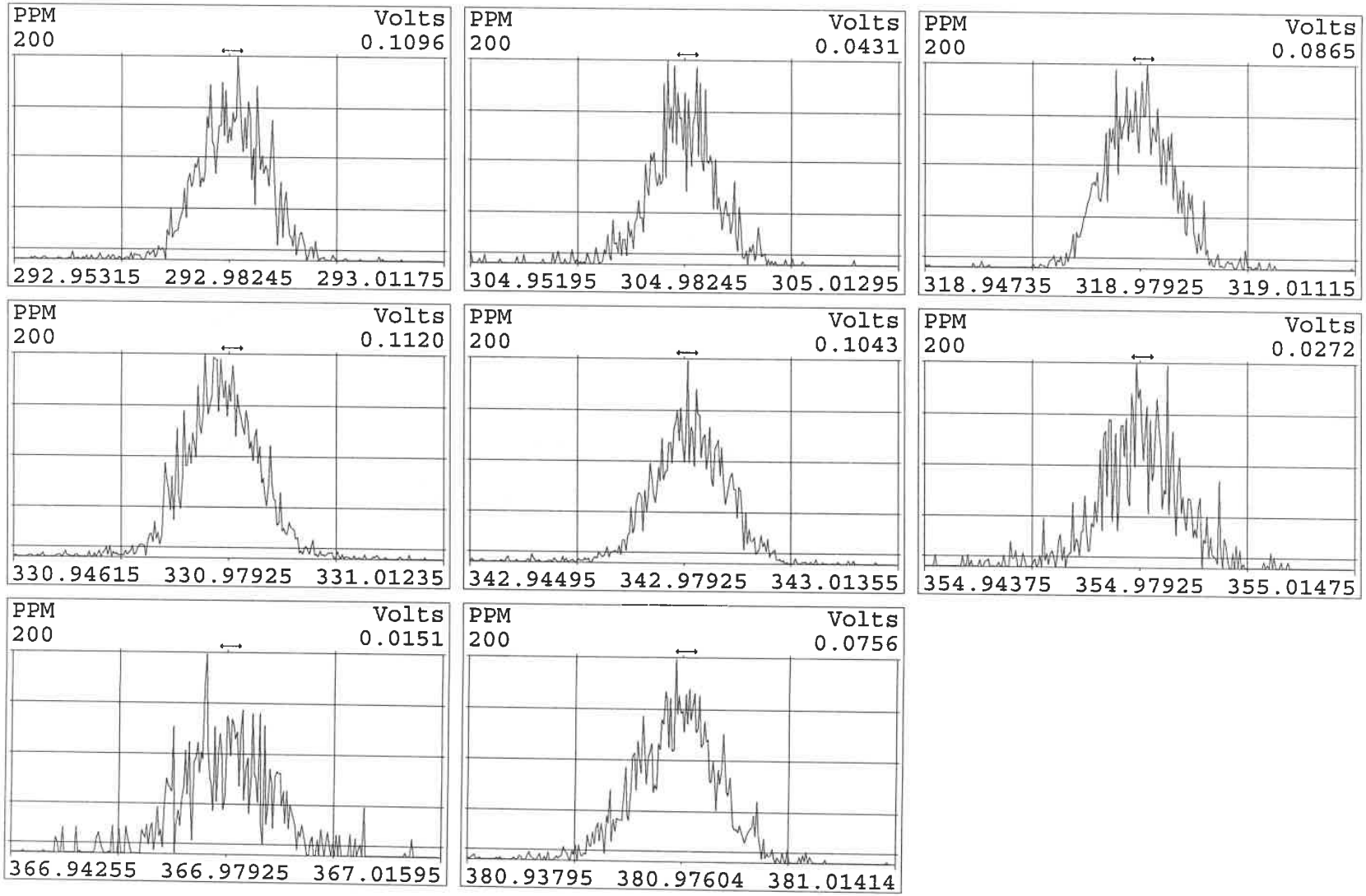

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2021 10:10:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:43:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.312	16971560	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	24750130	0.83	1.3327	109.4	109.4	0.6226	0.6226	109	
2,3,7,8-TCDF	17.643	2483909	0.79	0.9978	10.1	10.1	0.0976	0.0976	101	
D 13C-2,3,7,8-TCDD	16.065	16022399	0.78	0.8749	107.9	107.9	0.9142	0.9142	108	
2,3,7,8-TCDD	16.093	1663816	0.82	1.0570	9.824	9.824	0.1305	0.1305	98.24	
$ 37Cl4-2,3,7,8-TCDD	16.093	1526894		0.8648	10.4	10.4	0.1464	0.1464	104	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

787413

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 23-Aug-2021 10:10:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:43:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.312	16.312	0		7313306	1607766	7398	18495	217		
333.9339	16.298	16.312	-1		9658254	2138046	4587	11467	466	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.080	11243672	2122892	6842	17105	310		
317.9389	17.629	17.615	1	1.081	13506458	2501128	5591	13977	447	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.643	0	1.002	1095594	194388	644	1610	302		
305.8987	17.656	17.643	1	1.002	1388315	256841	1157	2892	222	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	0.985	7024679	1536870	7398	18495	208		
333.9339	16.065	16.065	0	0.985	8997720	1912819	4587	11467	417	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.093	0	1.002	751350	174426	1159	2897	150		
321.8936	16.093	16.093	0	1.002	912466	213269	744	1860	287	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.093	16.093	0	0.987	1526894	322057	1897	4742	170		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

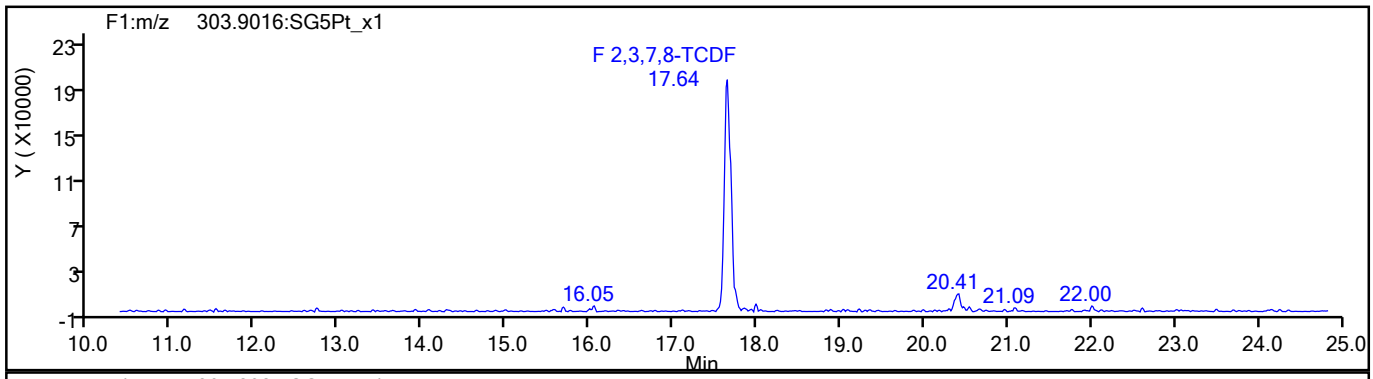

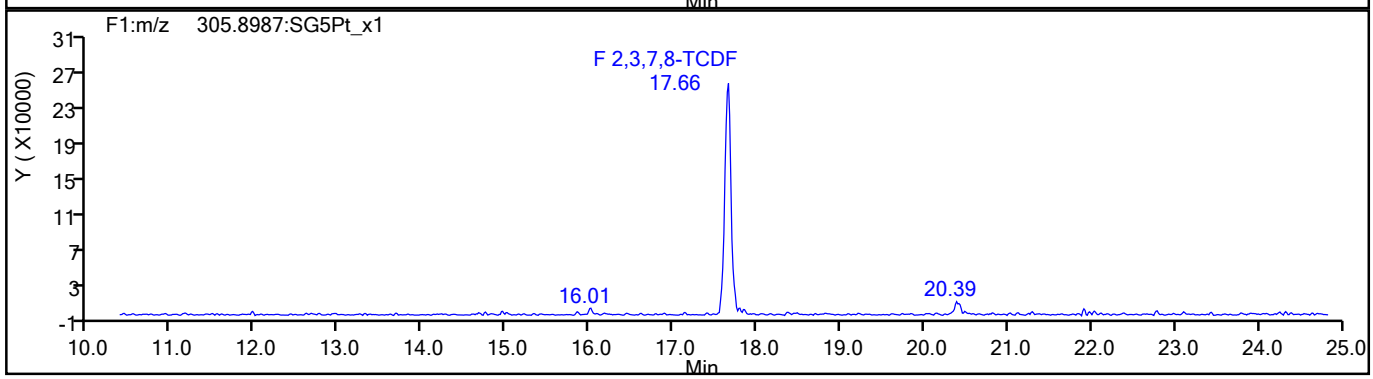

TCDF Standards

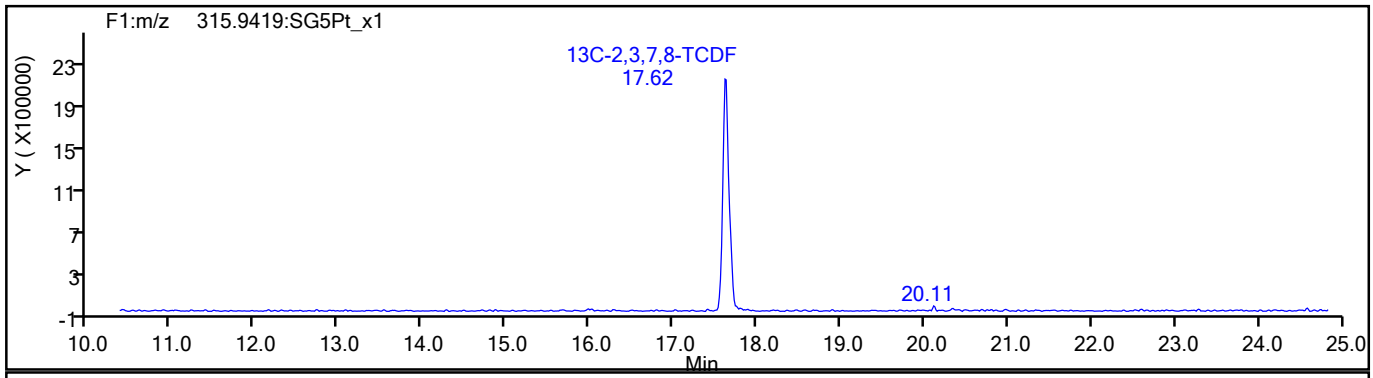

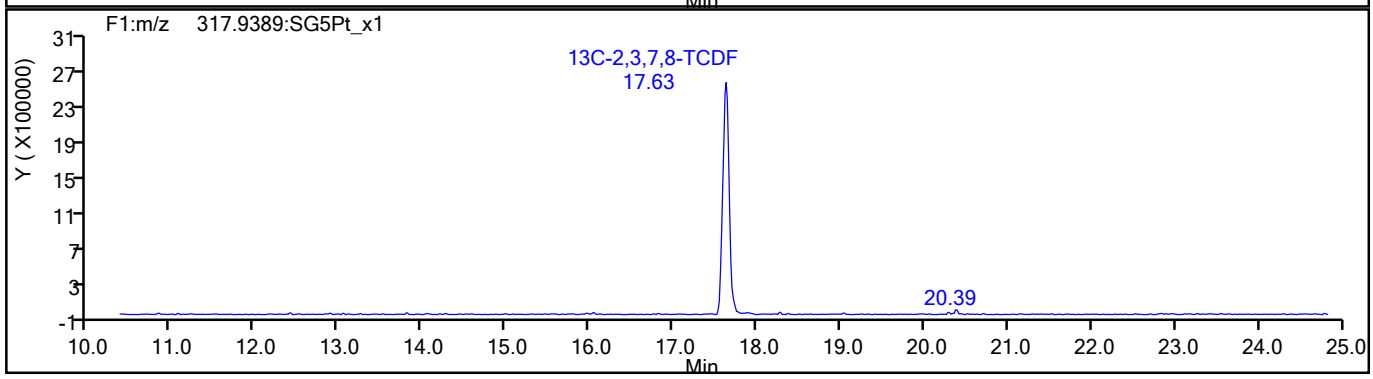

787415

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

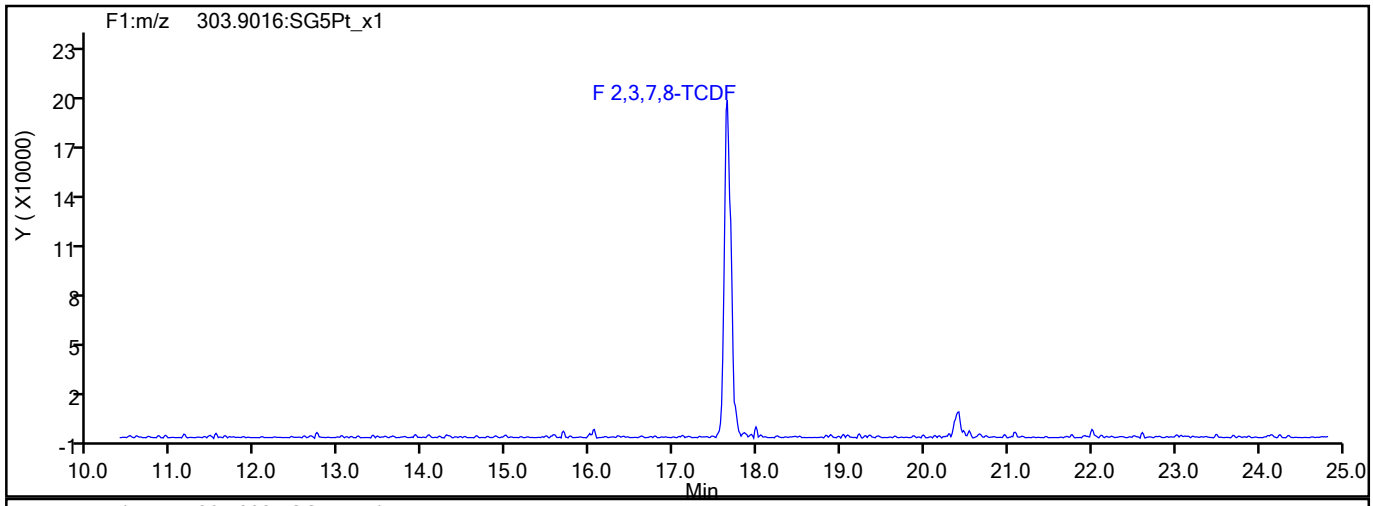

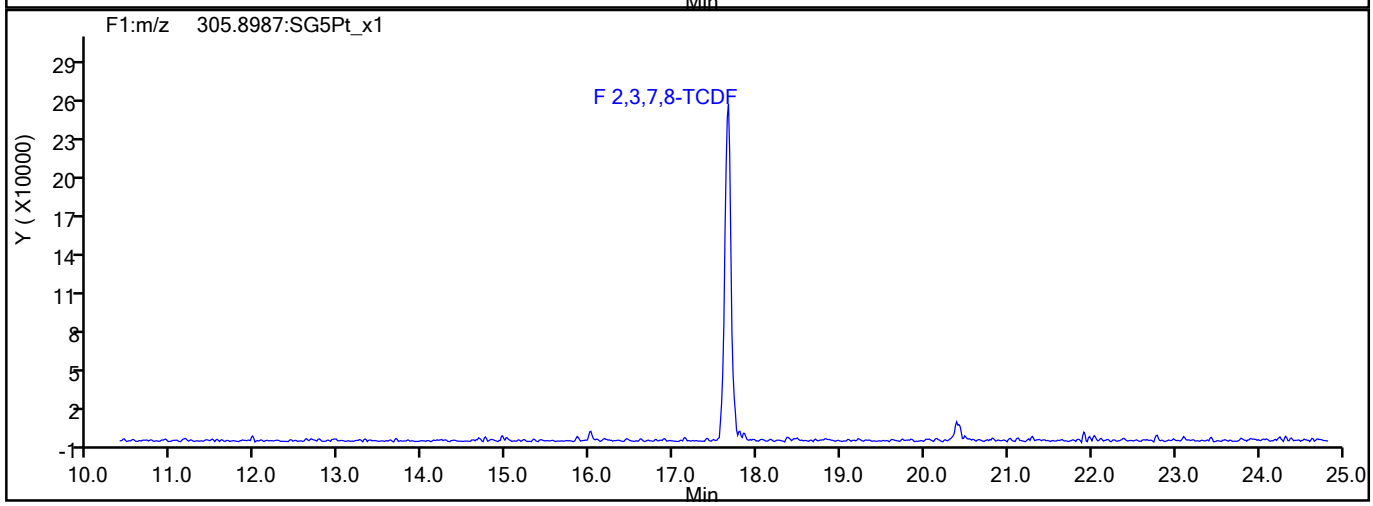

TCDF Interference Mass

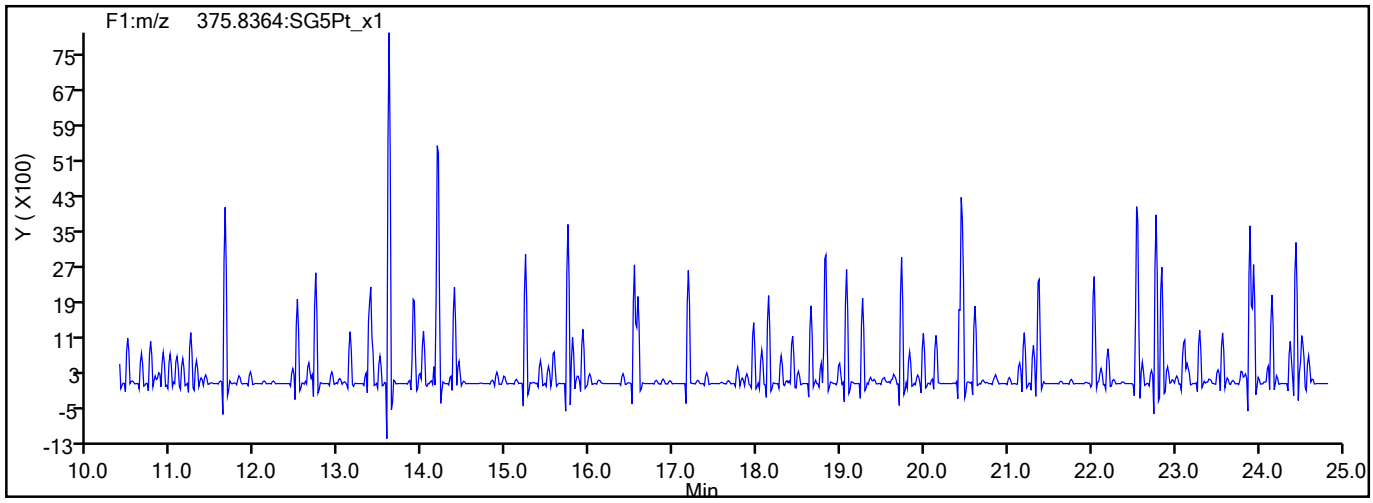

787416

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

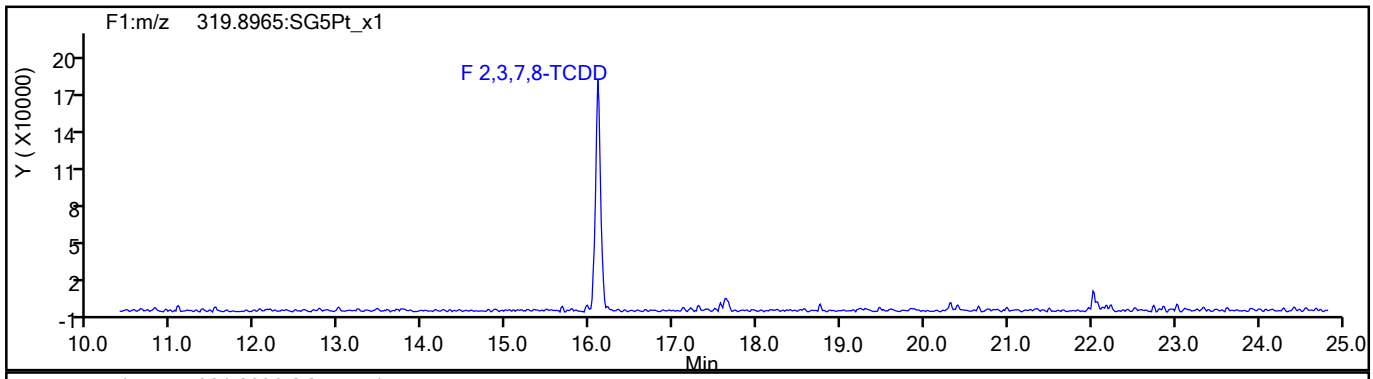

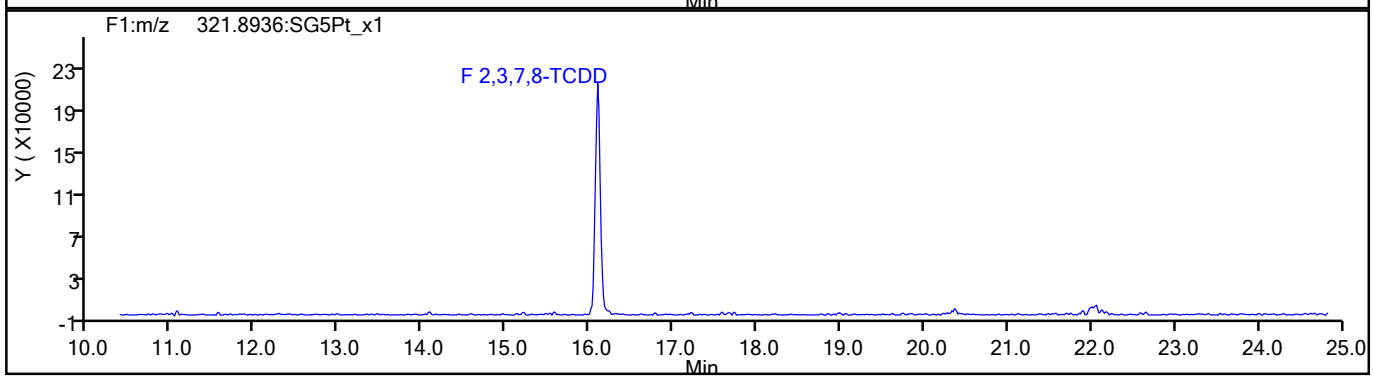

TCDD Standards

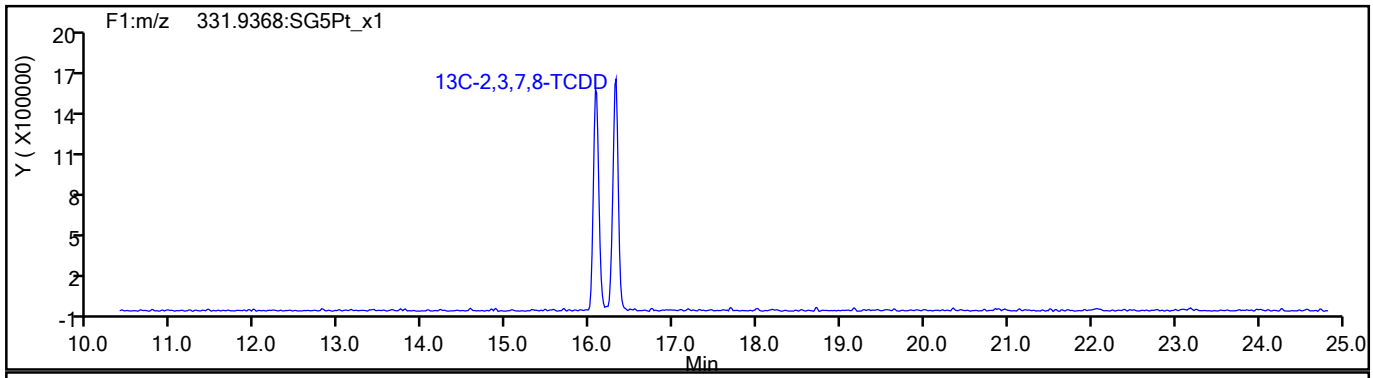

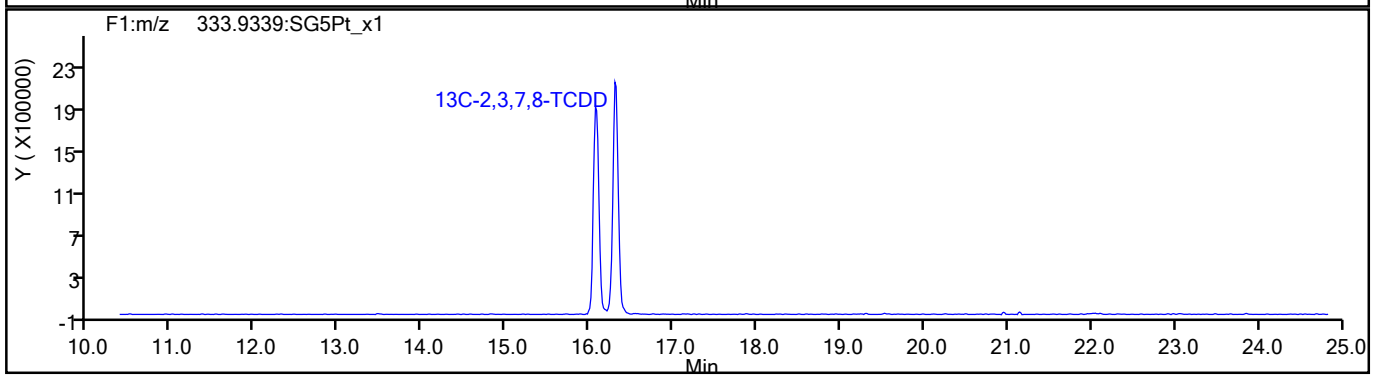

787417

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

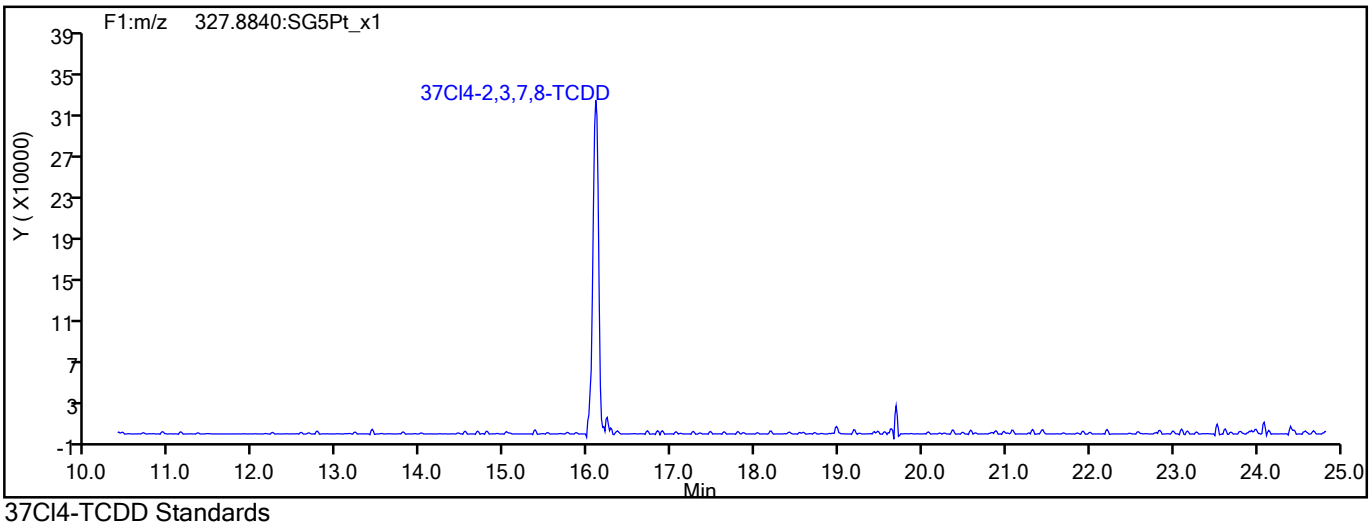

37Cl4-TCDD Standards

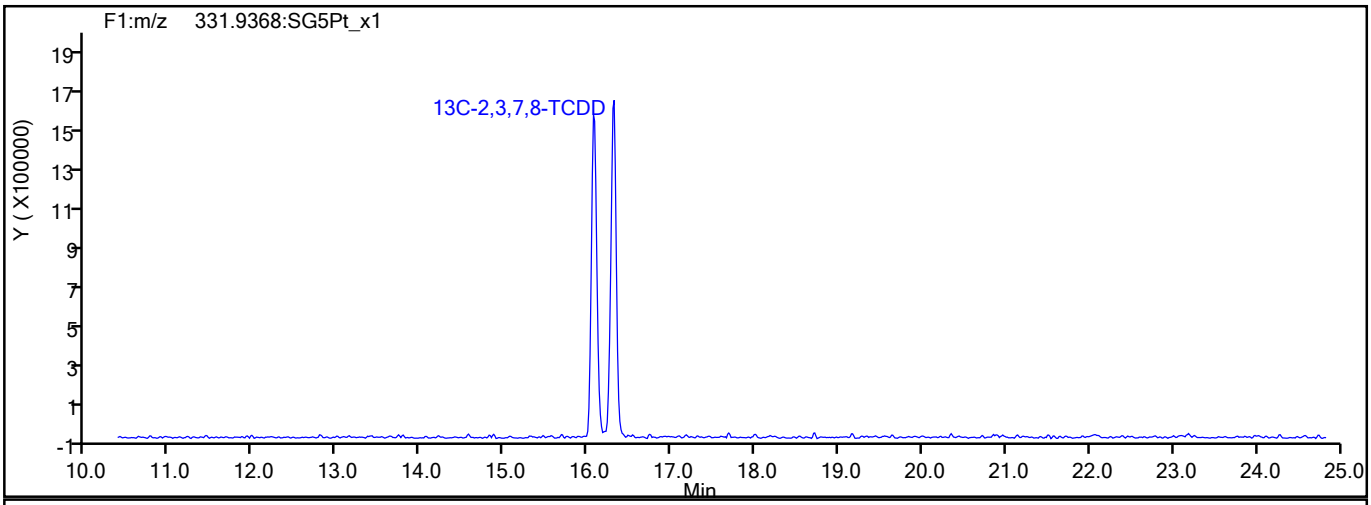

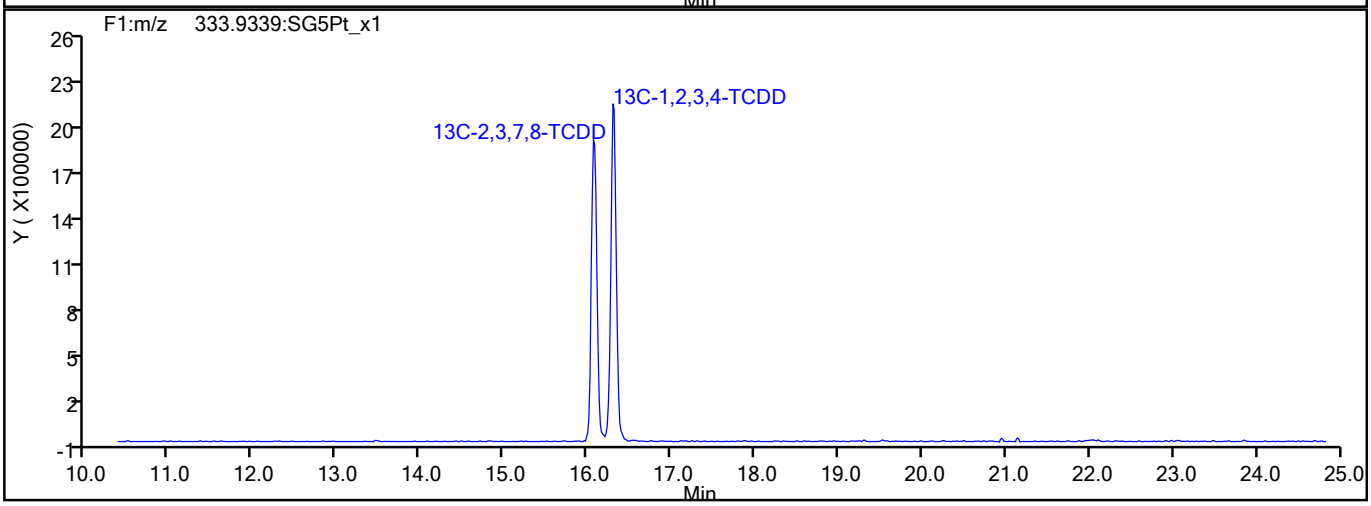

787418

Report Date: 23-Aug-2021 15:56:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_002.d		
Injection Date:	23-Aug-2021 10:10:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

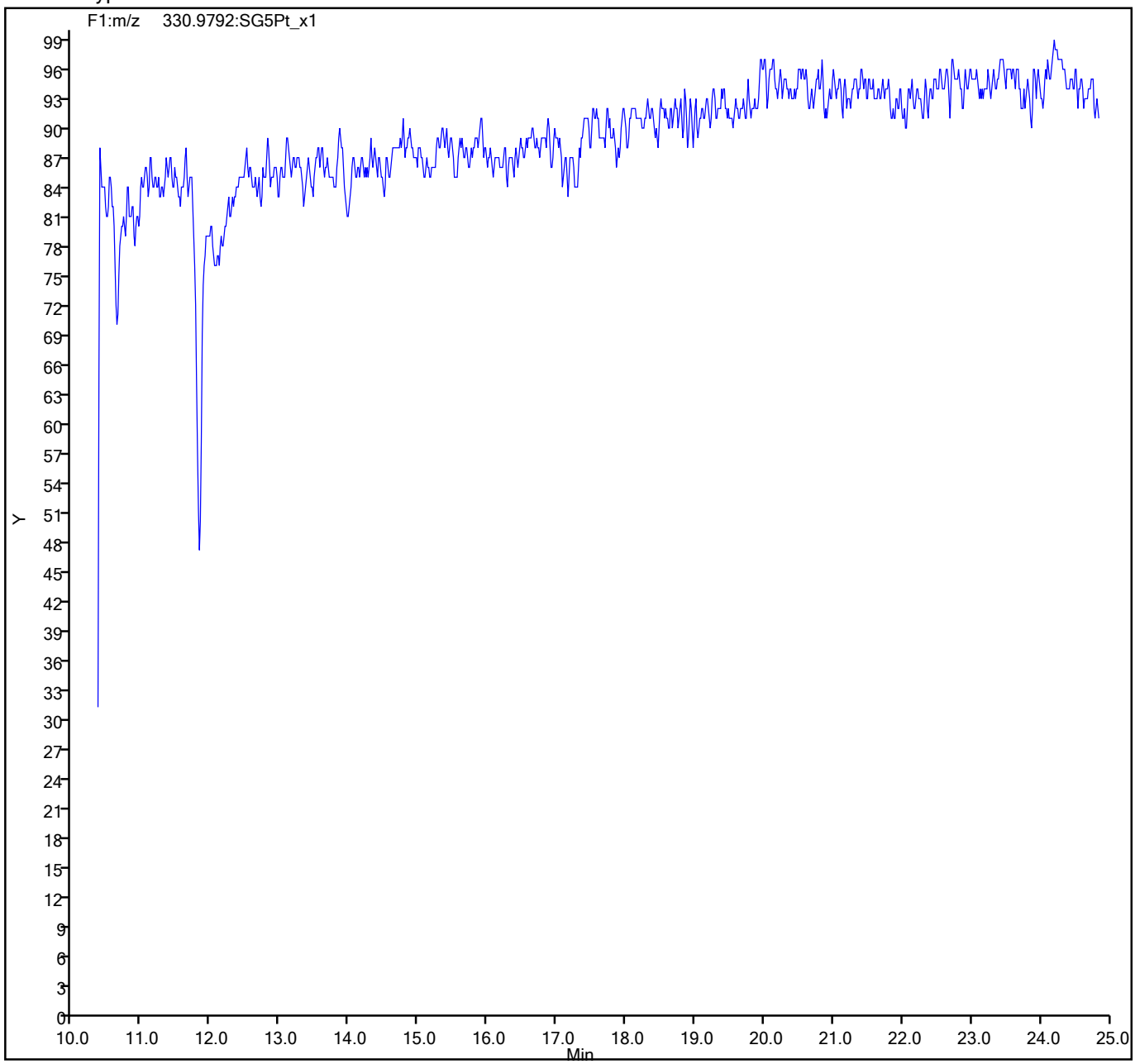

787419

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID: CCV 320-519438/2 Calibration Date: 08/24/2021 09:07

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 24AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.028		9.73	10.0	97	78-129
2,3,7,8-TCDF	AveID	0.998	0.9203		9.22	10.0	92	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9731		111	100	111	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.568		118	100	118	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9663		11.2	10.0	112	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
24AU2111D2	1	CPS 082421	CPS HRDXNCP_00044				1.00000	
24AU2111D2	2	CCV 082421	CCV CS-4 HRDXNL4_00100				1.00000	
24AU2111D2	3	SB 082421	Solvent Blank C-14				1.00000	
24AU2111D2	4	320-513879	MB 320-513879/1-A	20	1613B/Solid	D267	10.00000	g
24AU2111D2	5	320-513585	320-76769-A-18-A	20	1613B/Solid	D265	10.00000	g
24AU2111D2	6	320-513585	320-76769-A-2-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	7	320-513585	320-76769-A-14-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	8	320-513585	320-76769-A-26-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	9	320-513585	320-76769-A-28-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	10	320-513586	320-76769-A-27-A	20	1613B/Solid	D266	10.00000	g
24AU2111D2	11	320-513586	320-76769-A-27-B MS	20	1613B/Solid		10.00000	g
24AU2111D2	12	320-513586	320-76769-A-27-C MSD	20	1613B/Solid		10.00000	g
24AU2111D2	13						1.00000	
24AU2111D2	14						1.00000	
24AU2111D2	15						1.00000	
24AU2111D2	16						1.00000	
24AU2111D2	17						1.00000	
24AU2111D2	18		KSS 08-24-21				1.00000	
24AU2111D2	19						1.00000	

LOGFILE CHECKED
DB 8/24/21

Peak Locate Examination:24-AUG-2021:08:27 File:24AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

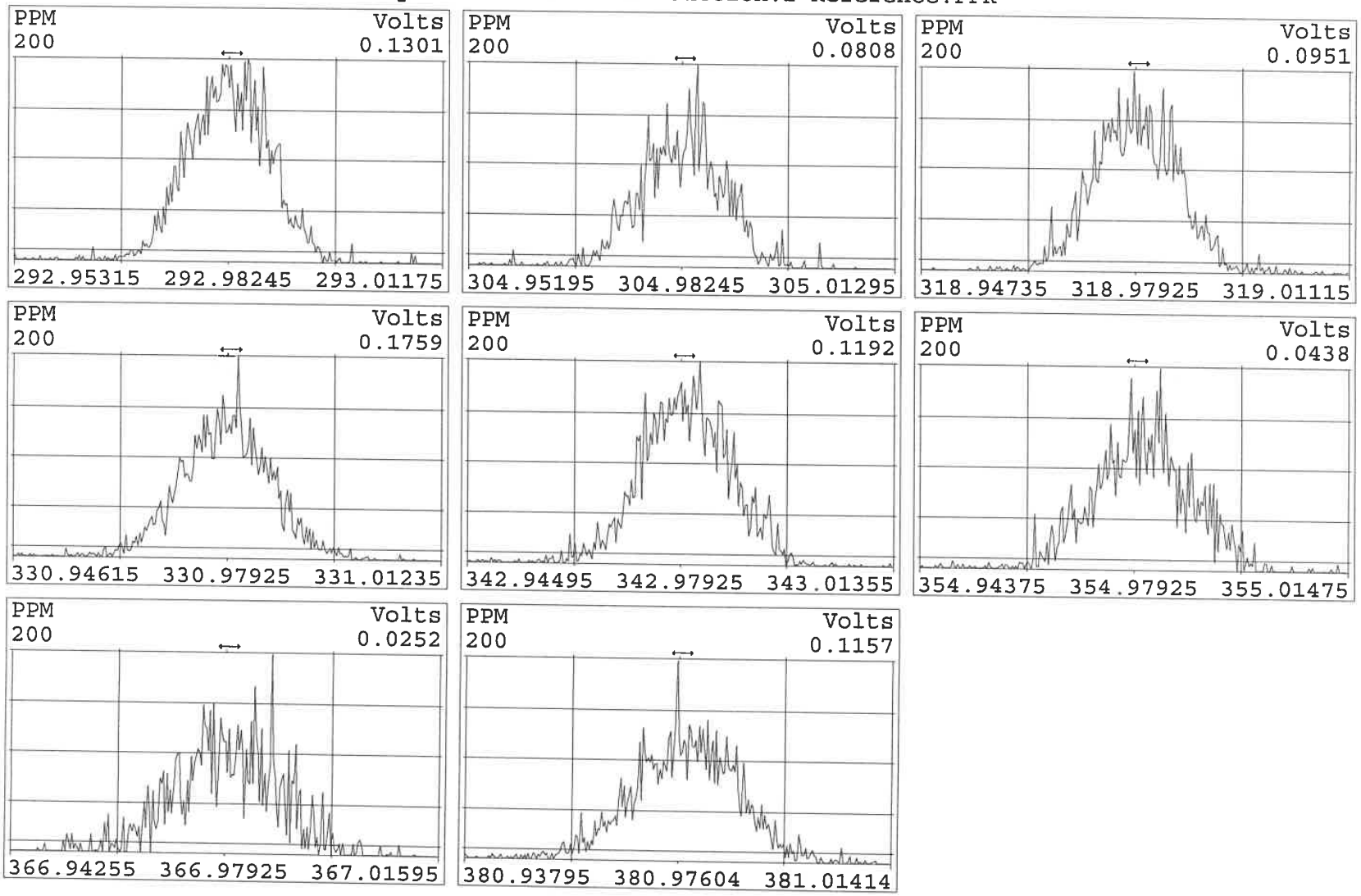

Peak Locate Examination:24-AUG-2021:16:14 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

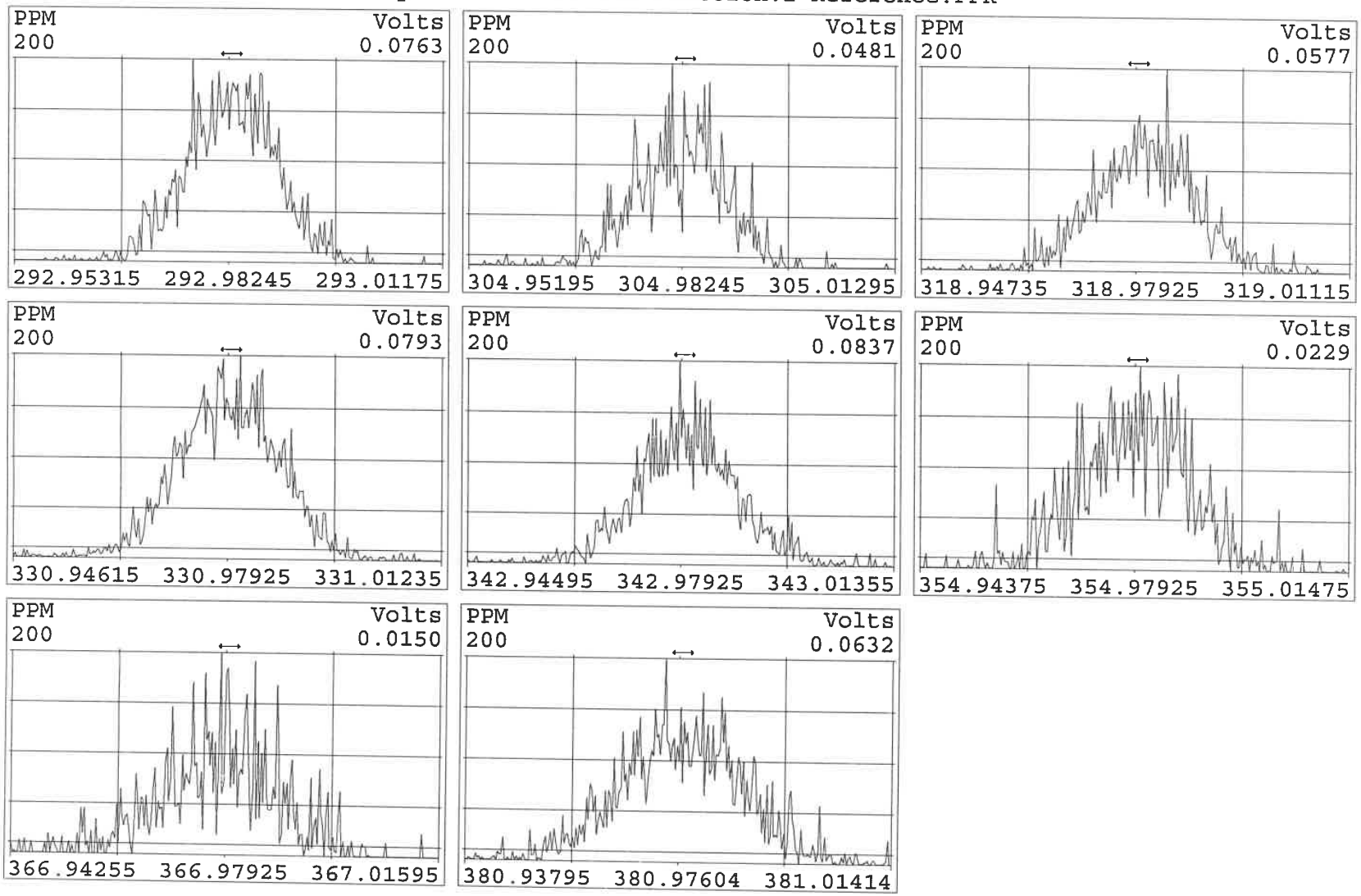

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 09:07:16 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:42

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.283	33559774	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	52629254	0.80	1.3327	117.7	117.7	0.2512	0.2512	118	
2,3,7,8-TCDF	17.641	4843376	0.77	0.9978	9.223	9.223	0.0442	0.0442	92.23	
D 13C-2,3,7,8-TCDD	16.050	32656269	0.76	0.8749	111.2	111.2	0.4262	0.4262	111	
$ 37Cl4-2,3,7,8-TCDD	16.063	3242735		0.8648	11.2	11.2	0.0810	0.0810	112	
2,3,7,8-TCDD	16.077	3357078	0.83	1.0570	9.726	9.726	0.0680	0.0680	97.26	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 09:07:16 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:42

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.283	16.283	0		14514242	3109306	5198	12995	598		
333.9339	16.283	16.283	0		19045532	4067992	5508	13770	739	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.613	0	1.082	23419943	4217062	5707	14267	739		
317.9389	17.599	17.613	-1	1.081	29209311	5613115	3903	9757	1438	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.641	17.641	0	1.002	2101458	376732	657	1642	573		
305.8987	17.627	17.641	-1	1.001	2741918	507422	1079	2697	470	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.050	16.050	0	0.986	14062884	3232967	5198	12995	622		
333.9339	16.050	16.050	0	0.986	18593385	4326423	5508	13770	785	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.063	16.063	0	0.987	3242735	728649	2011	5027	362		
2,3,7,8-TCDD											
319.8965	16.077	16.077	0	1.002	1524098	338203	902	2255	375		
321.8936	16.077	16.077	0	1.002	1832980	395830	1270	3175	312	0.83(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

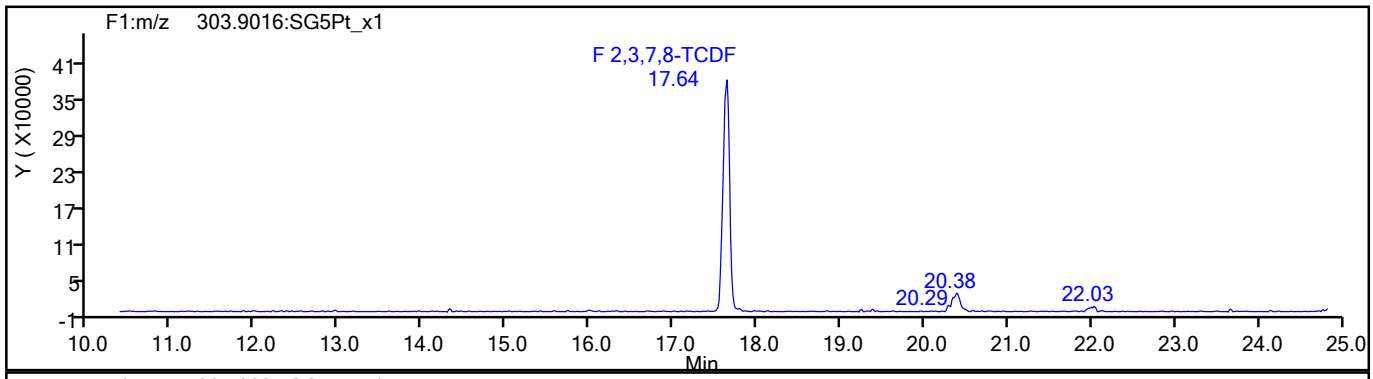

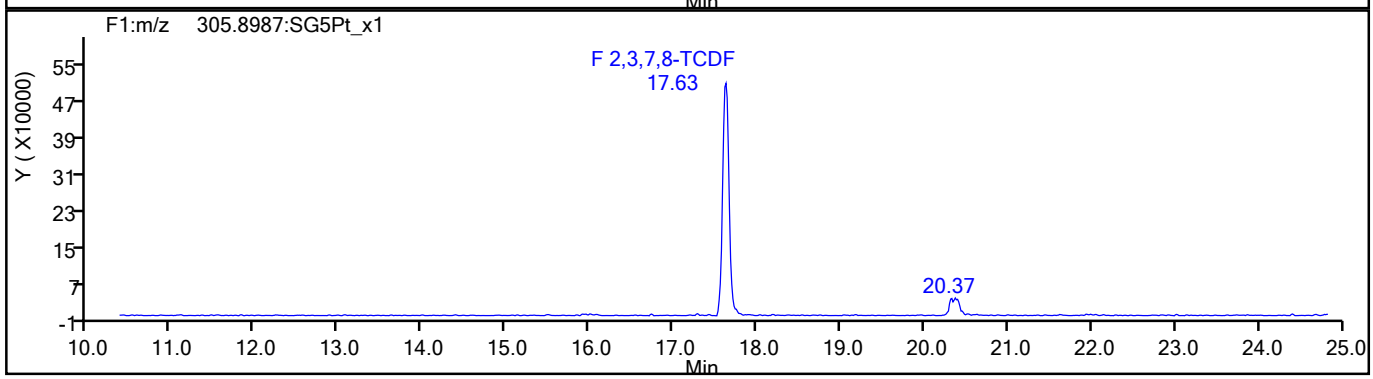

TCDF Standards

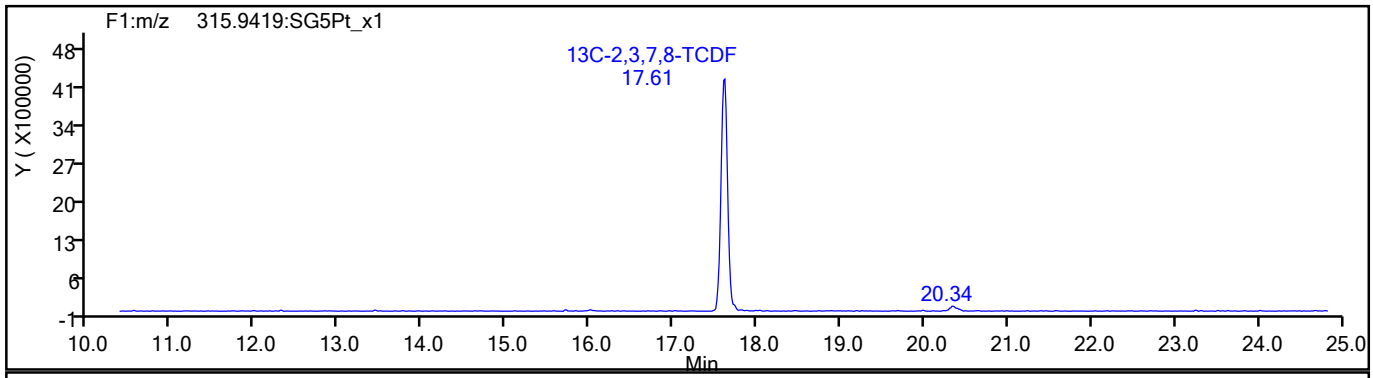

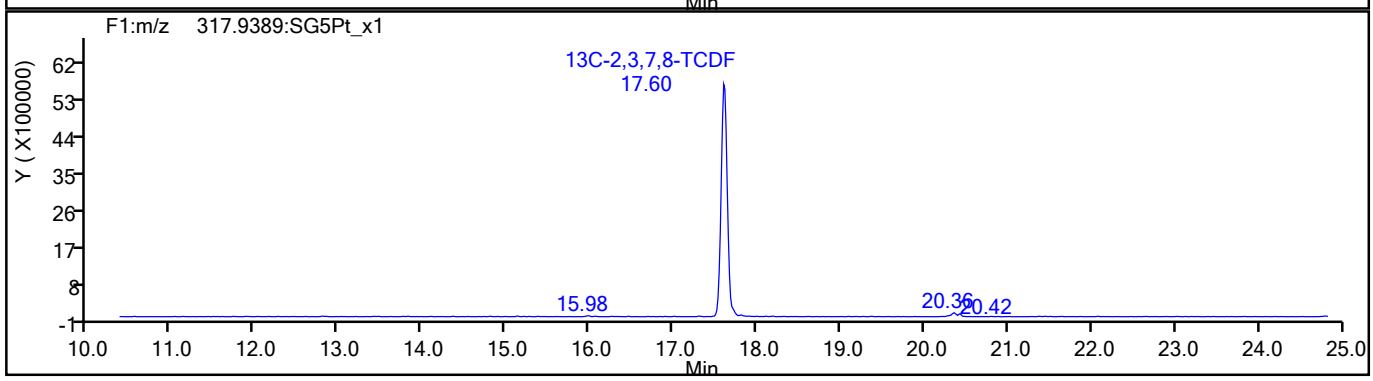

787426

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

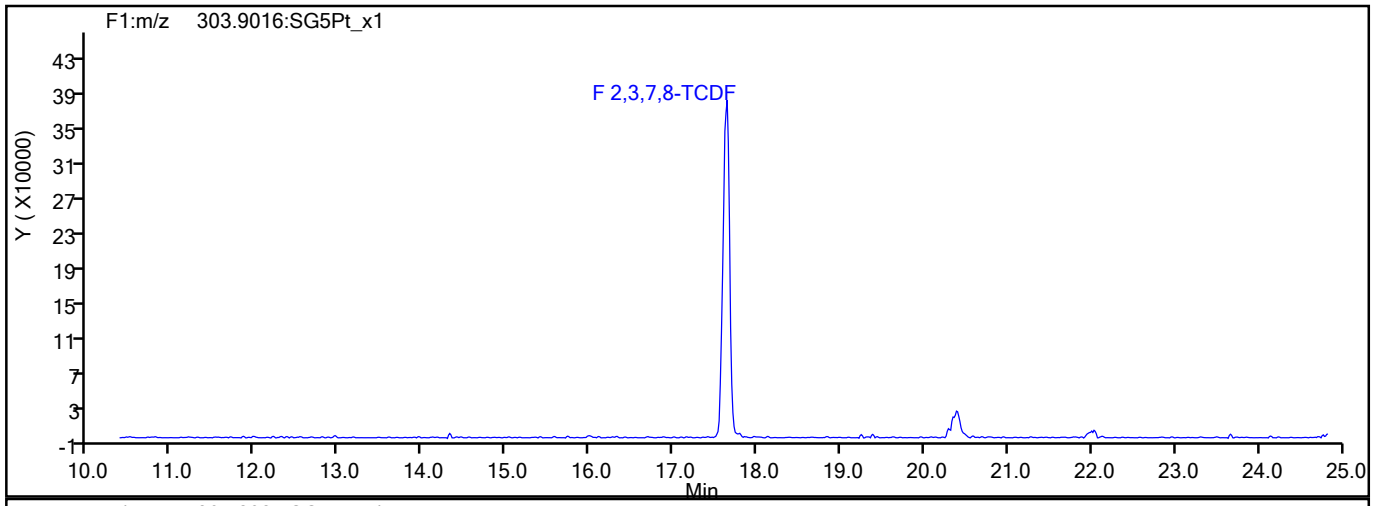

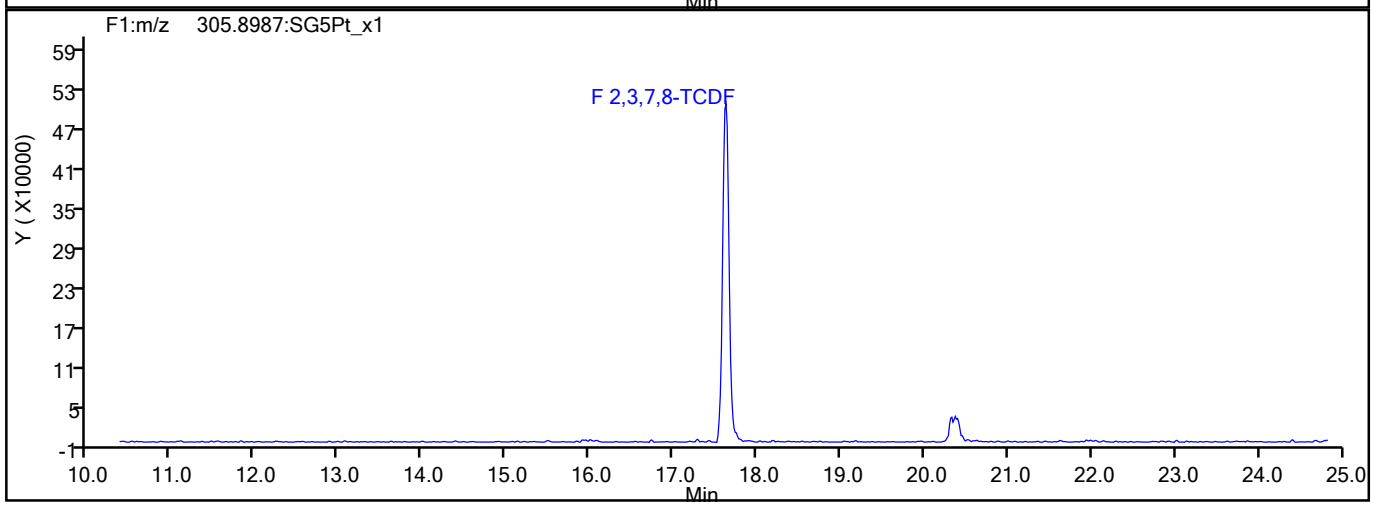

TCDF Interference Mass

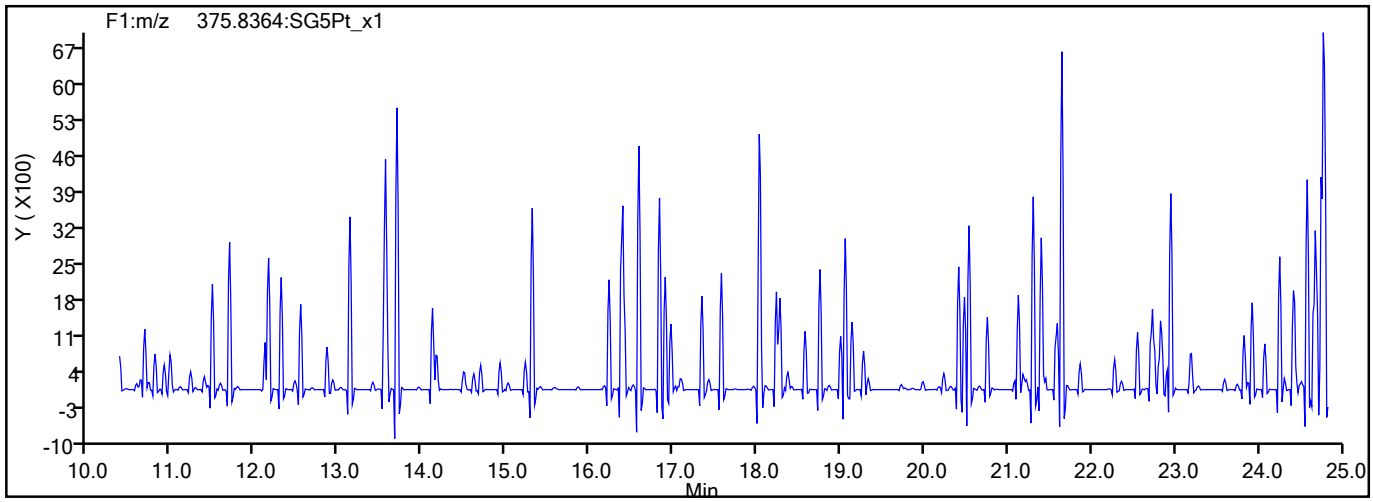

787427

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

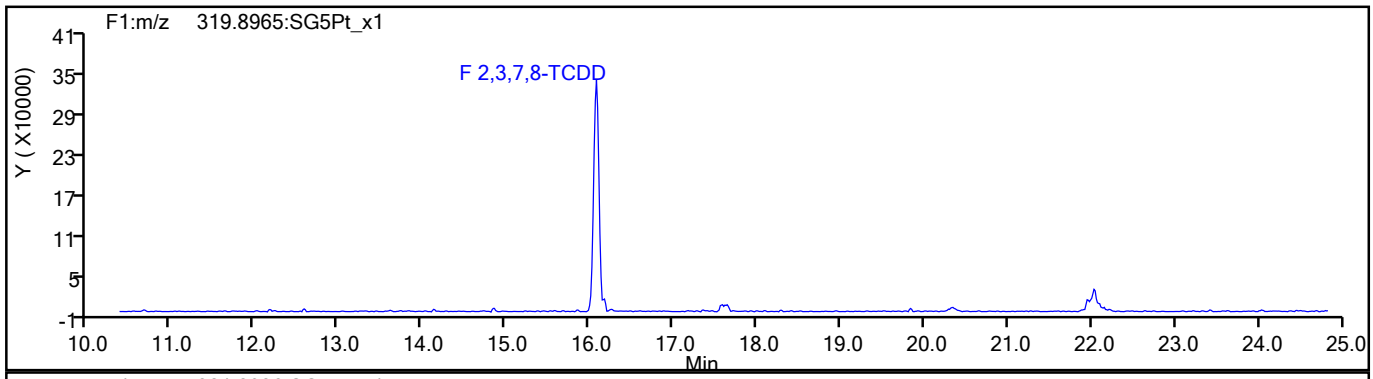

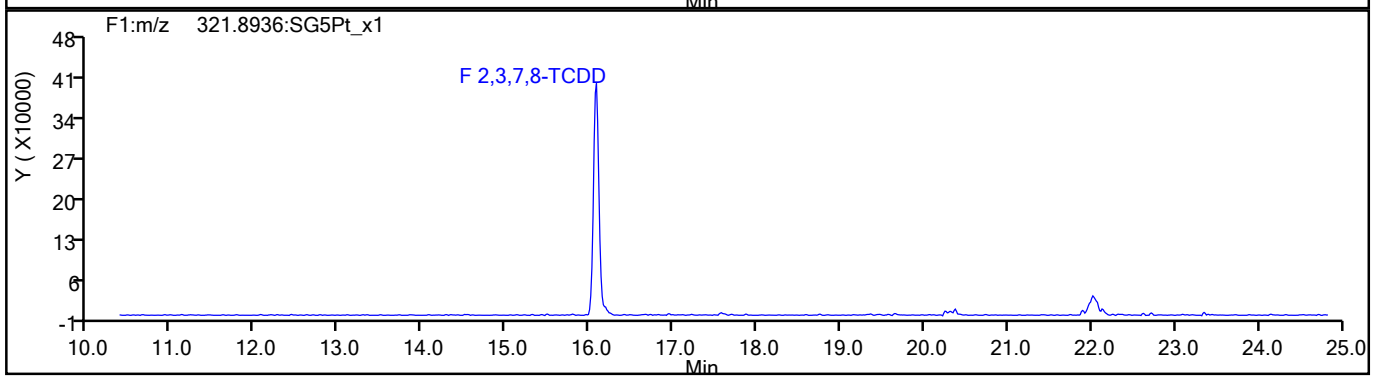

TCDD Standards

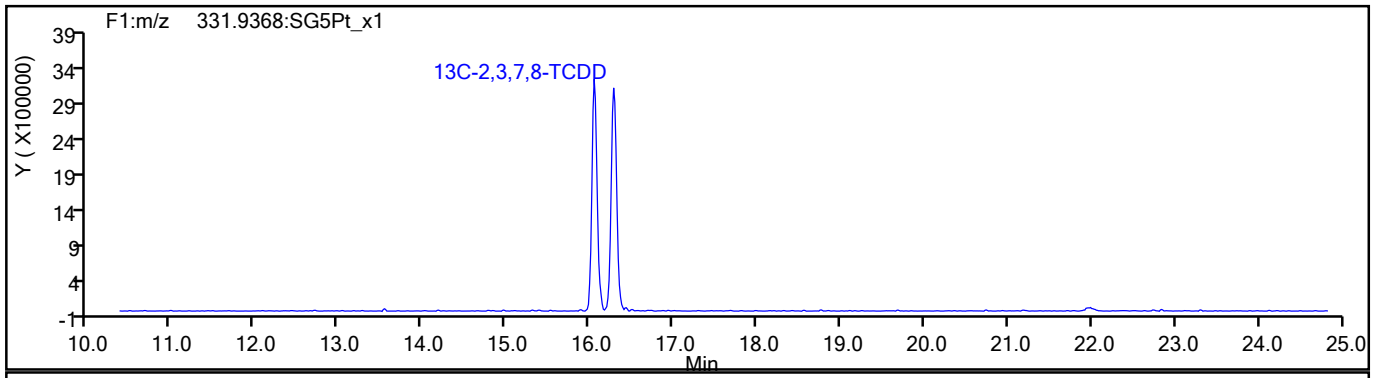

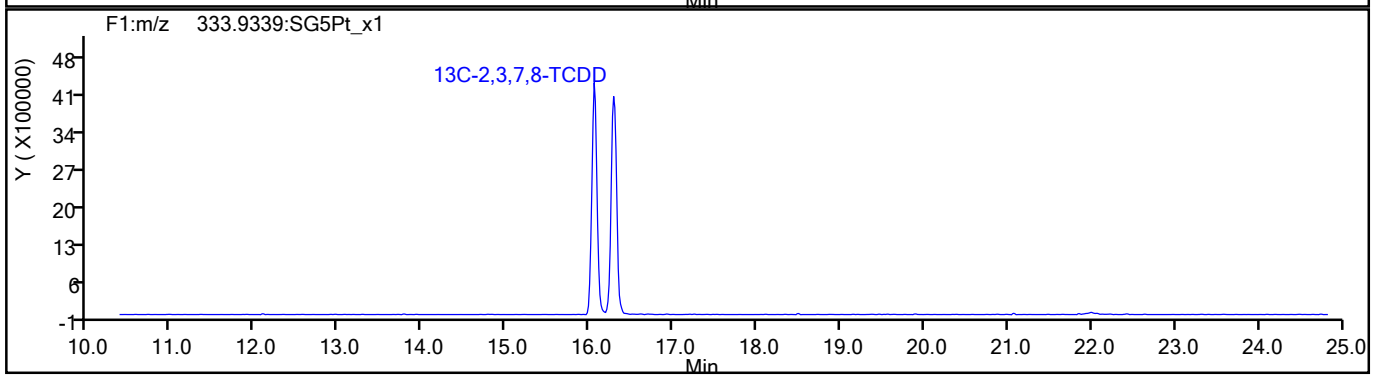

787428

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

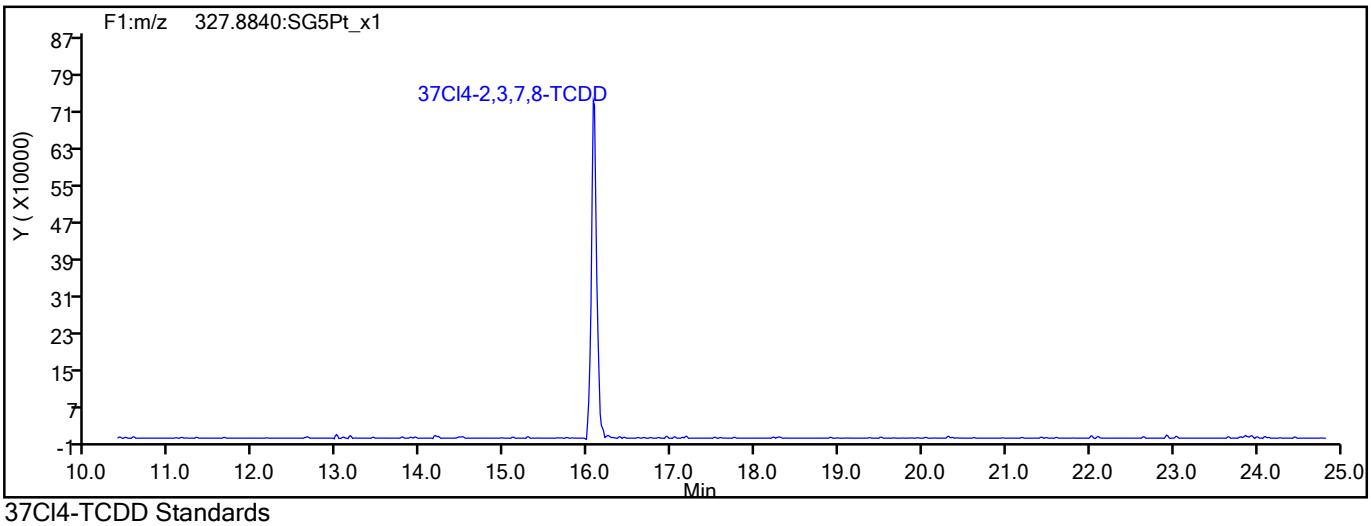

37Cl4-TCDD Standards

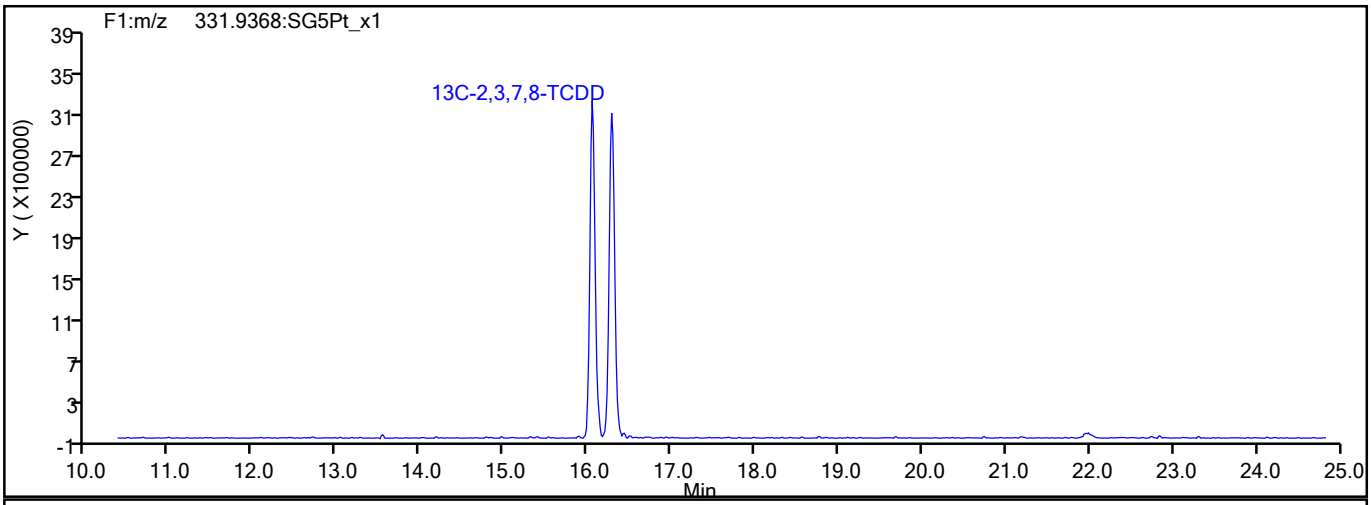

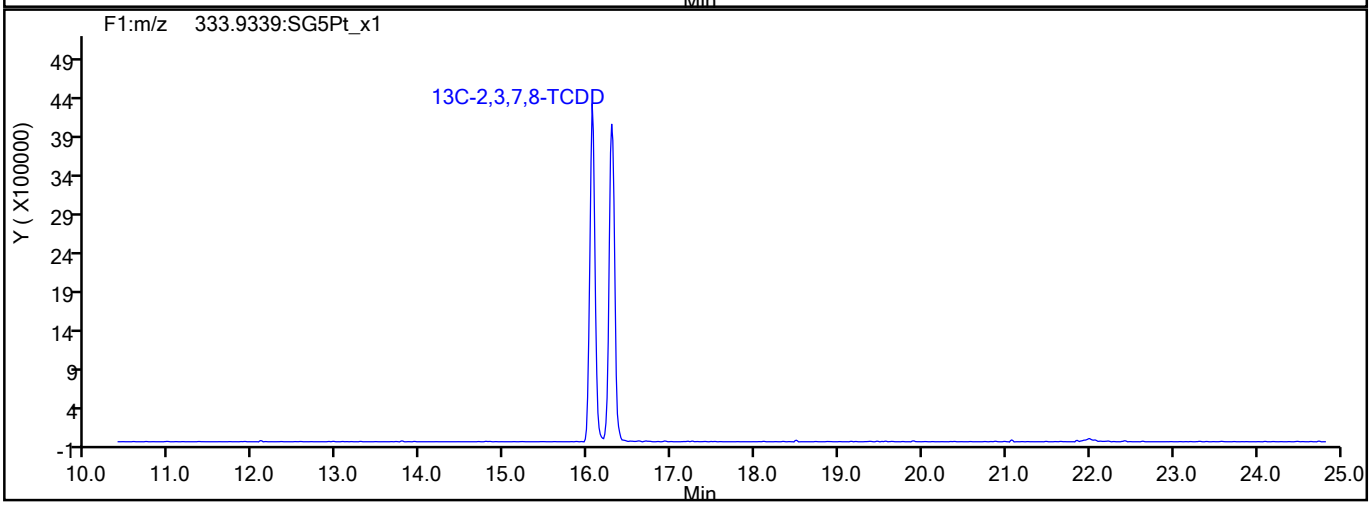

787429

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

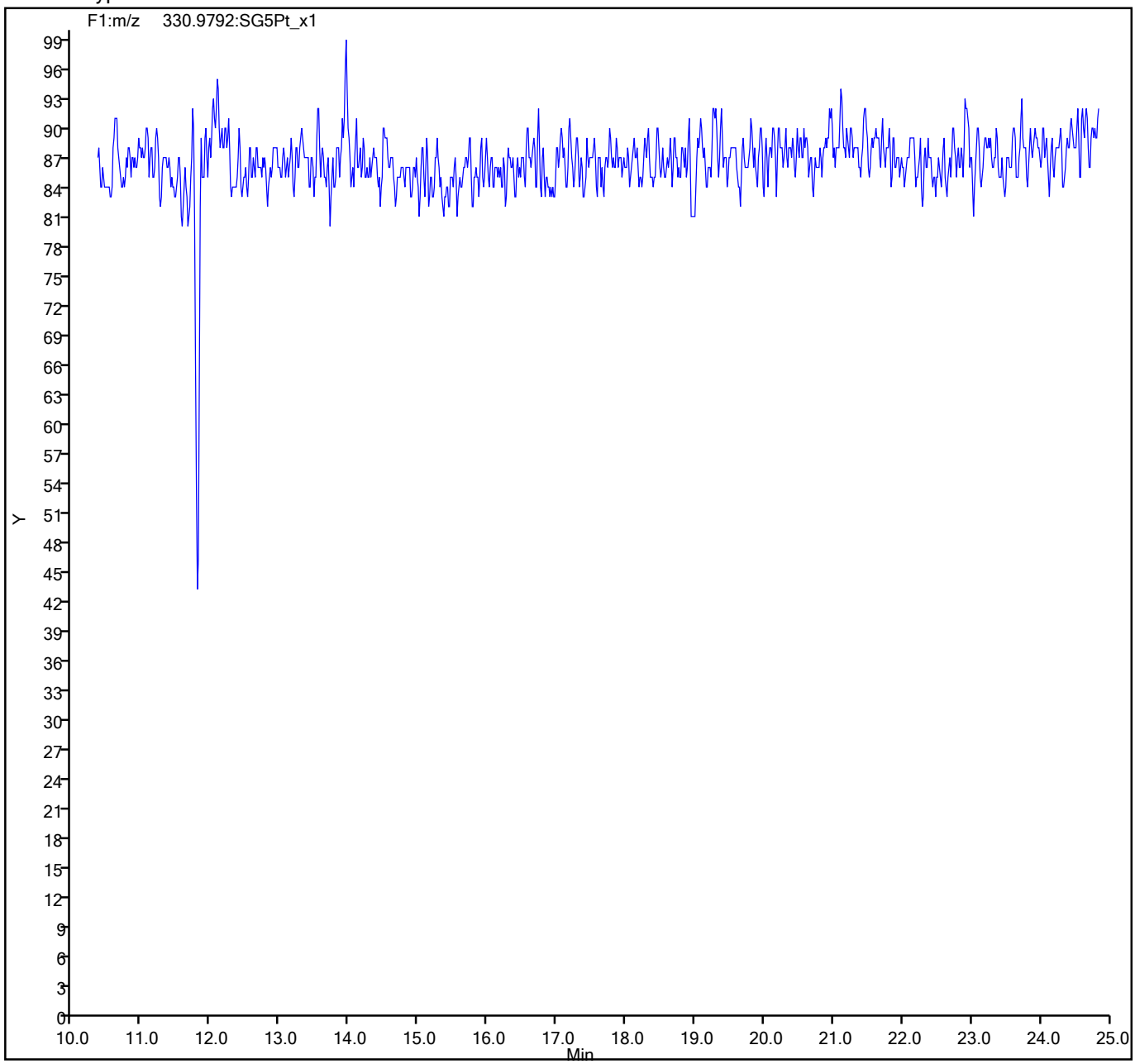

787430

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID: CCV 320-519650/2 Calibration Date: 08/25/2021 09:27

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 25AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.067		10.1	10.0	101	78-129
2,3,7,8-TCDF	AveID	0.998	0.9412		9.43	10.0	94	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9516		109	100	109	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.537		115	100	115	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9365		10.8	10.0	108	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
25AU2111D2	1	CPS 082521	CPS HRDXNCP_00044				1.00000	
25AU2111D2	2	CCV 082521	CCV CS-4 HRDXNL4_00100				1.00000	
25AU2111D2	3	SB 082521	Solvent Blank C-14				1.00000	
25AU2111D2	4	320-513879	320-76888-A-1-A X10	20	1613B/Solid	D267	10.00000	g
25AU2111D2	5	320-513879	320-76888-A-1-B MS X10	20	1613B/Solid		10.00000	g
25AU2111D2	6	320-513879	320-76888-A-1-C MSD X10	20	1613B/Solid		10.00000	g
25AU2111D2	7						1.00000	
25AU2111D2	8						1.00000	
25AU2111D2	9						1.00000	
25AU2111D2	10						1.00000	
25AU2111D2	11						1.00000	
25AU2111D2	12		DB 08-25-21				1.00000	
25AU2111D2	13						1.00000	

RUNLOG CHECKED
DB 8/25/21

Peak Locate Examination:25-AUG-2021:08:48 File:25AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

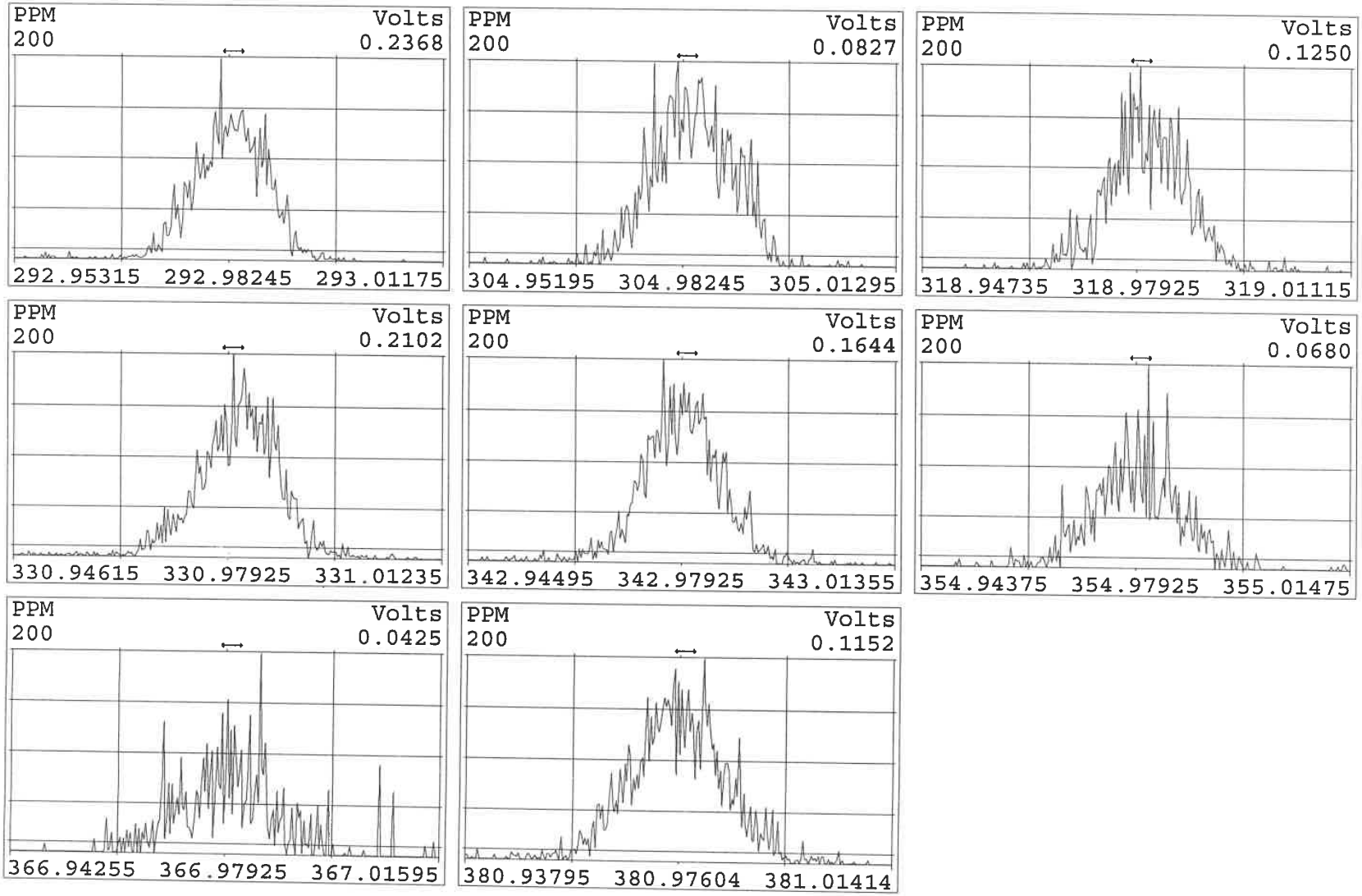

Peak Locate Examination:25-AUG-2021:12:49 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

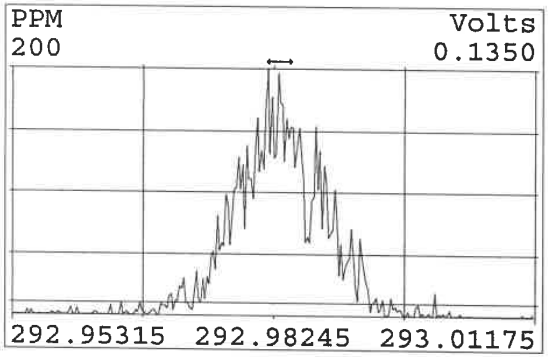

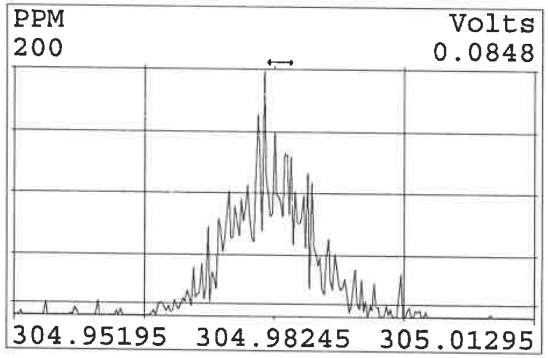

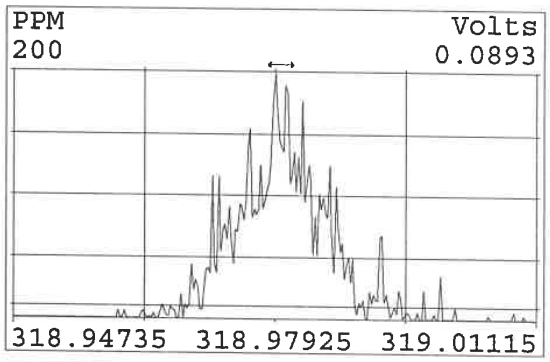

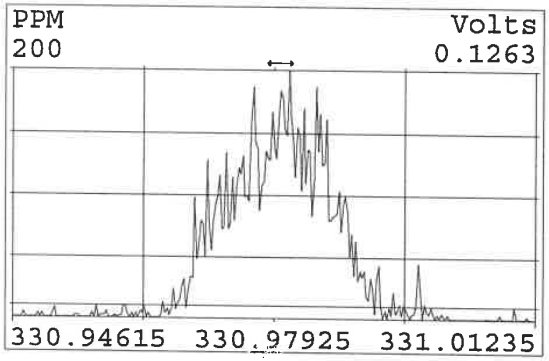

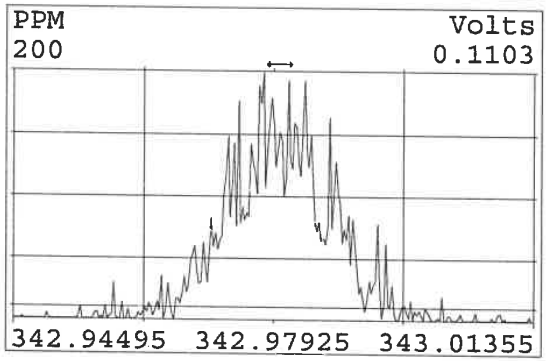

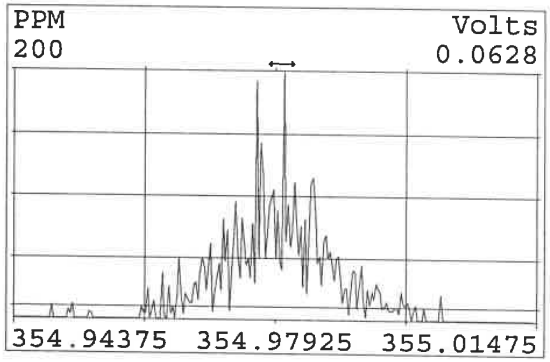

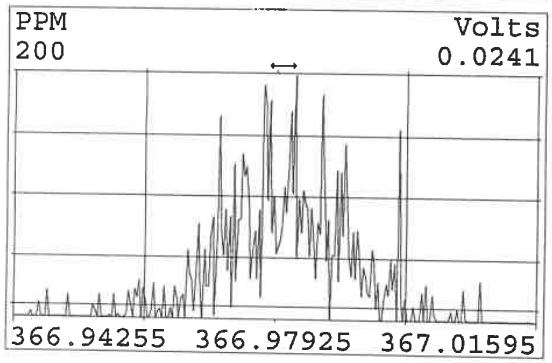

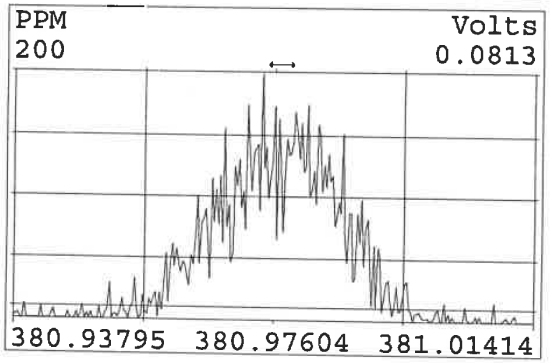

787434

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 09:27:12 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:08:24

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.285	41505218	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.601	63810084	0.80	1.3327	115.4	115.4	0.2725	0.2725	115	
2,3,7,8-TCDF	17.629	6005659	0.76	0.9978	9.432	9.432	0.0437	0.0437	94.32	
D 13C-2,3,7,8-TCDD	16.051	39498195	0.78	0.8749	108.8	108.8	0.4121	0.4121	109	
2,3,7,8-TCDD	16.079	4212727	0.79	1.0570	10.1	10.1	0.0500	0.0500	101	
$ 37Cl4-2,3,7,8-TCDD	16.079	3887170		0.8648	10.8	10.8	0.0505	0.0505	108	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

787435

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 09:27:12 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:08:24

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.285	16.285	0		18219819	4161833	6361	15902	654		
333.9339	16.285	16.285	0		23285399	5071465	6956	17390	729	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.601	17.601	0	1.081	28324668	5203466	6186	15465	841		
317.9389	17.601	17.601	0	1.081	35485416	6670555	7229	18072	923	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.629	0	1.002	2584414	460518	959	2397	480		
305.8987	17.629	17.629	0	1.002	3421245	616042	1110	2775	555	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.051	16.051	0	0.986	17309487	3706712	6361	15902	583		
333.9339	16.065	16.051	1	0.987	22188708	4844866	6956	17390	697	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.079	16.079	0	1.002	1858384	420124	841	2102	500		
321.8936	16.065	16.079	-1	1.001	2354343	486411	965	2412	504	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.079	16.079	0	0.987	3887170	870116	1612	4030	540		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

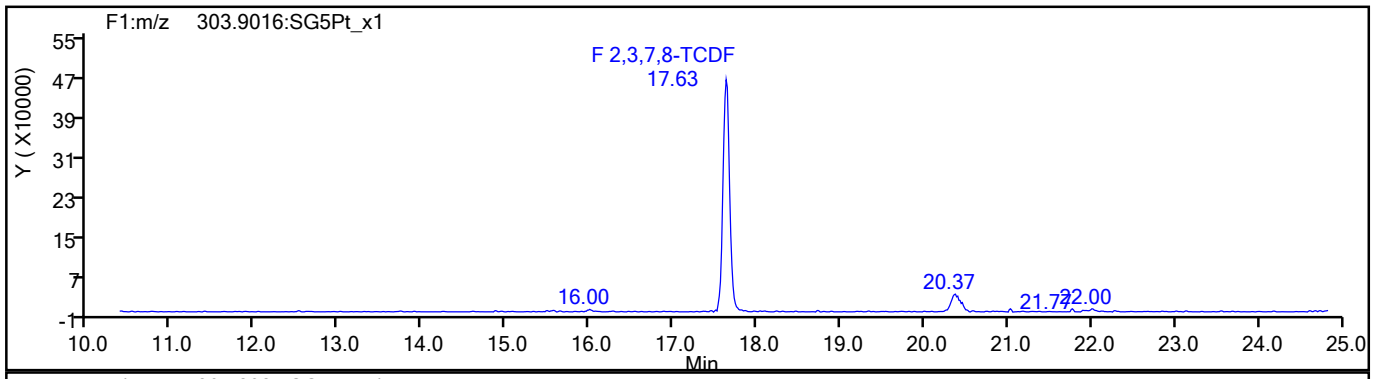

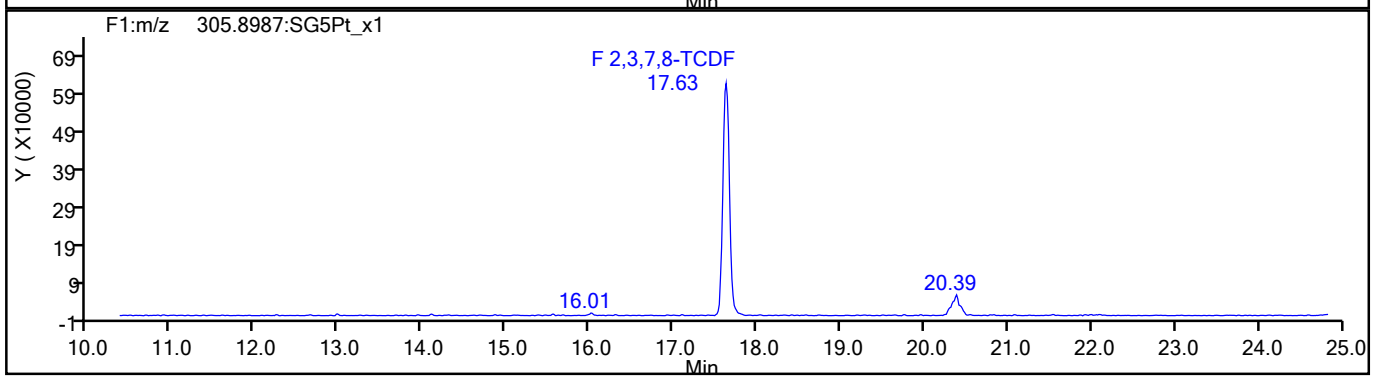

TCDF Standards

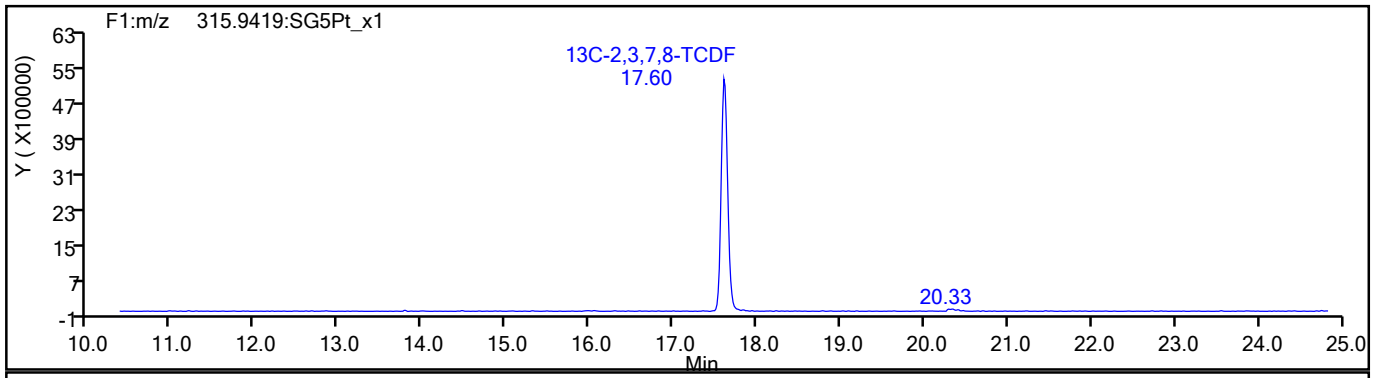

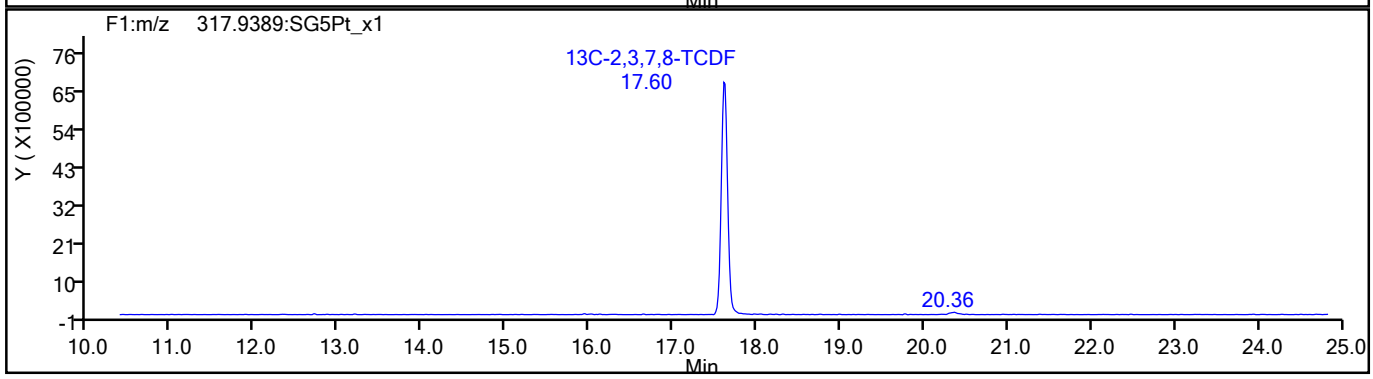

787437

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

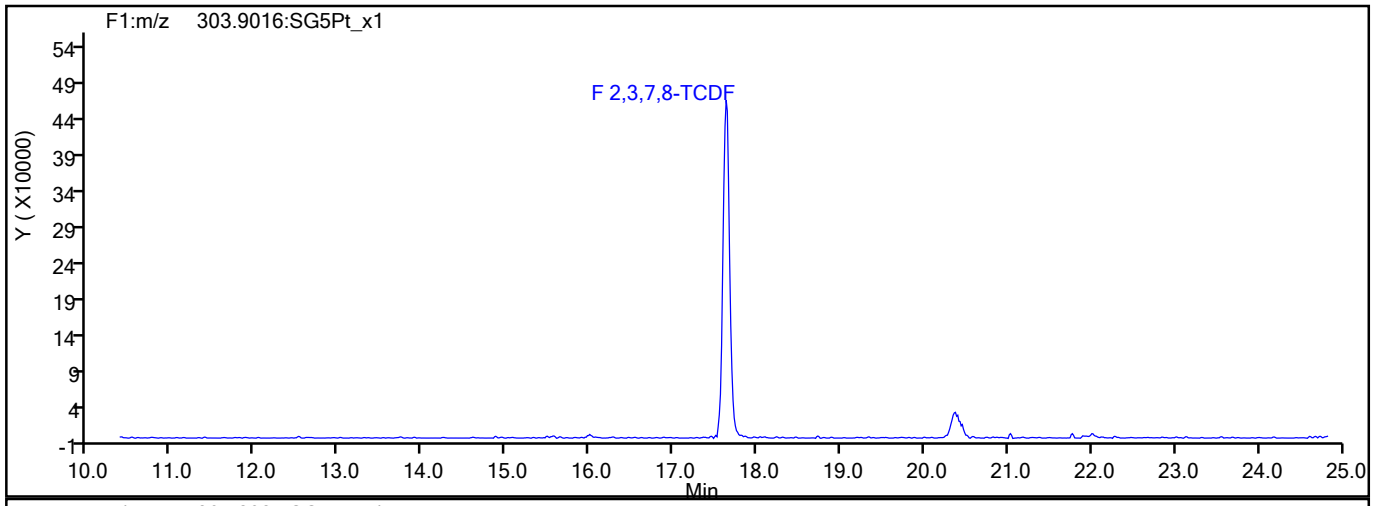

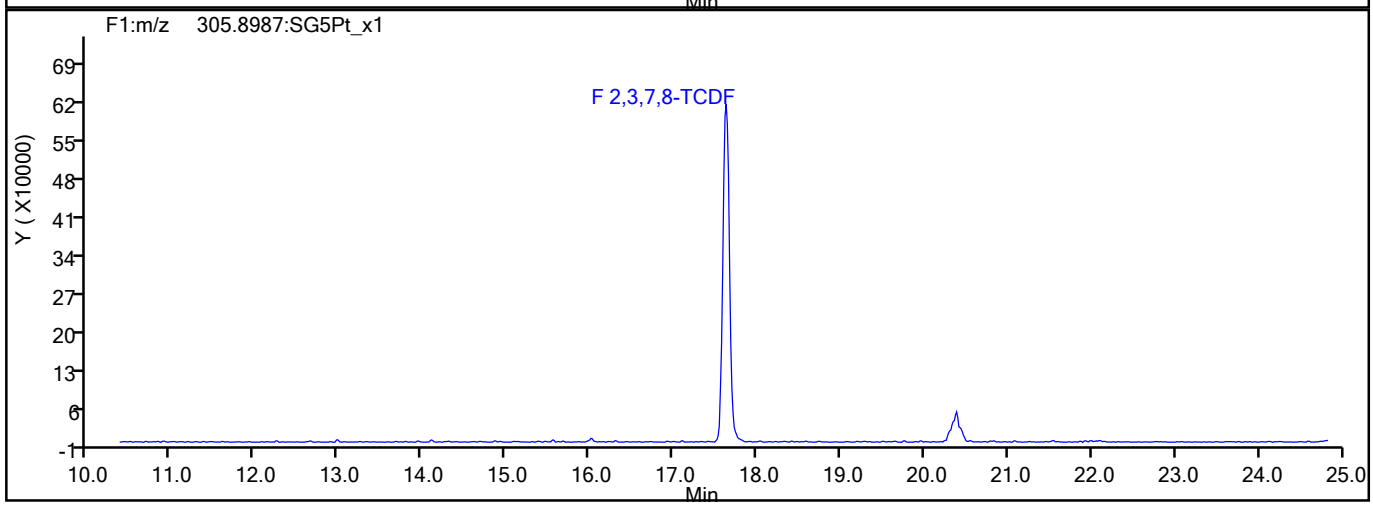

TCDF Interference Mass

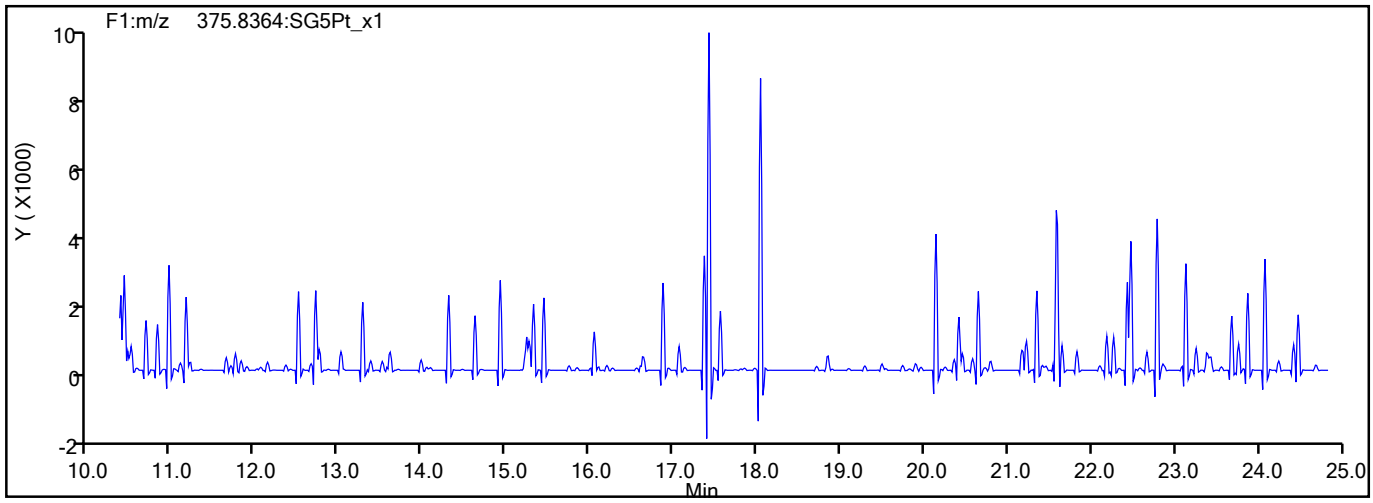

787438

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

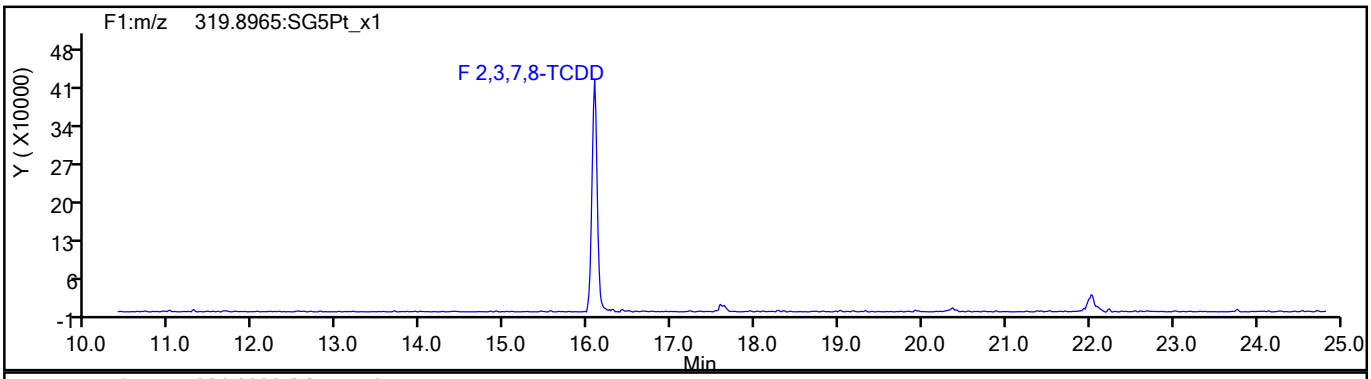

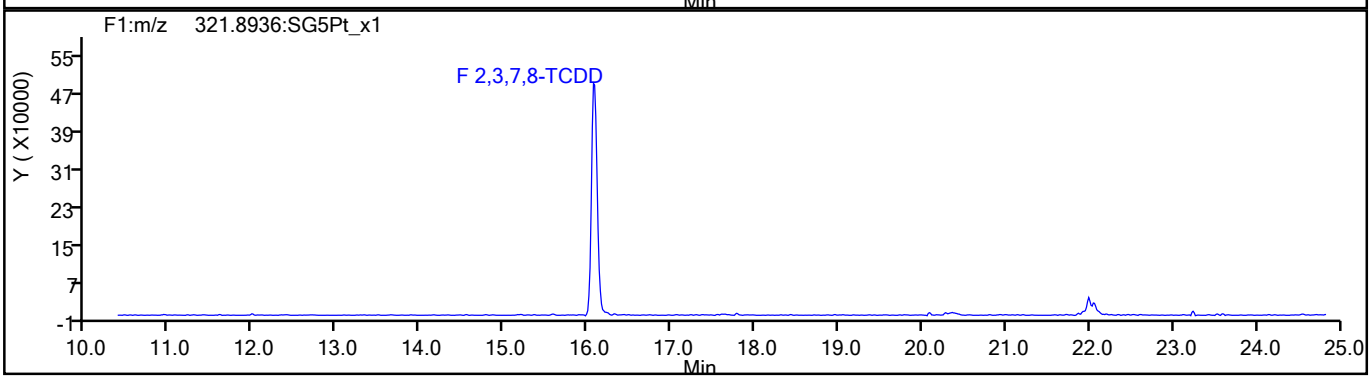

TCDD Standards

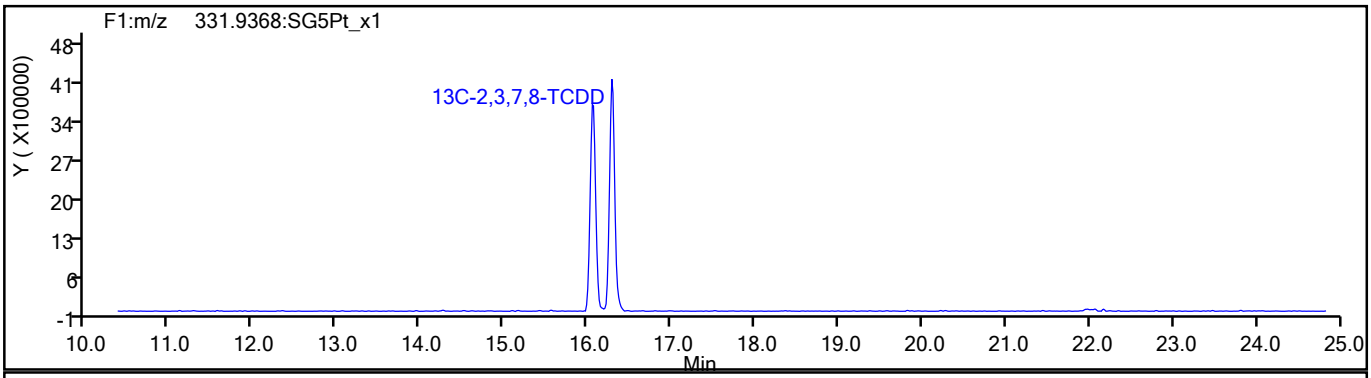

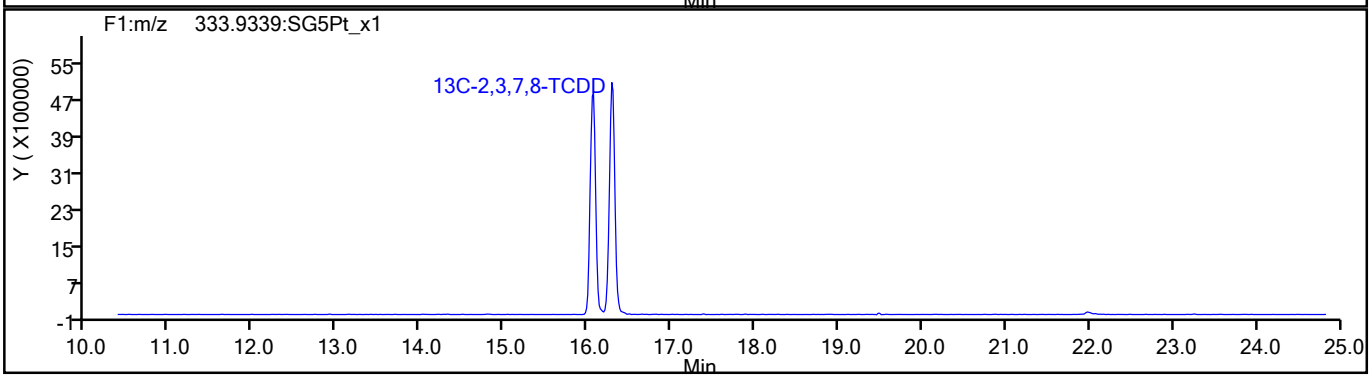

787439

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

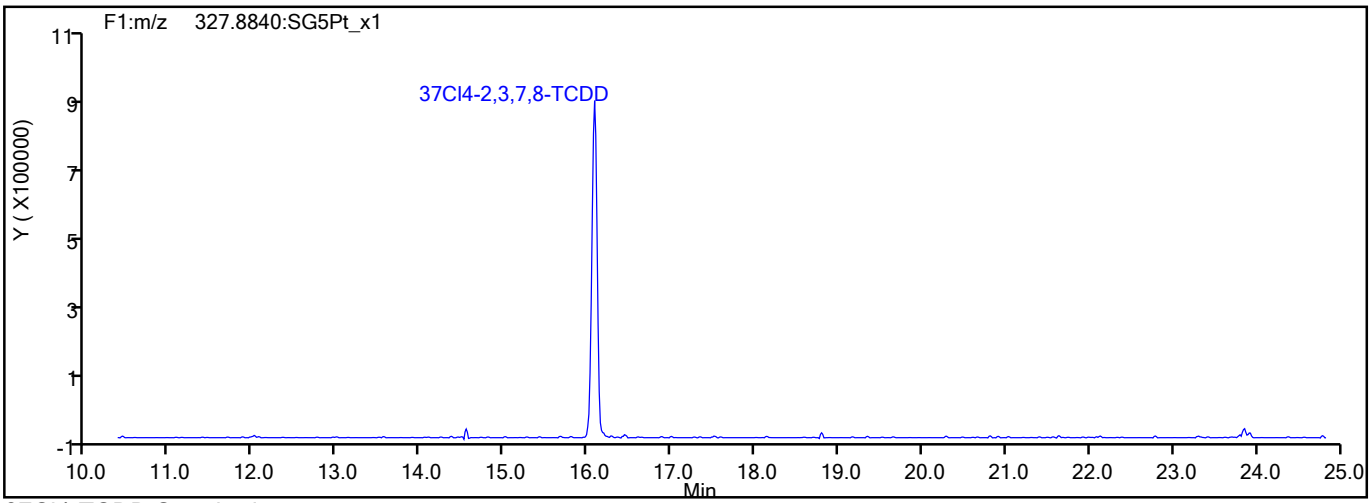

37Cl4-TCDD Standards

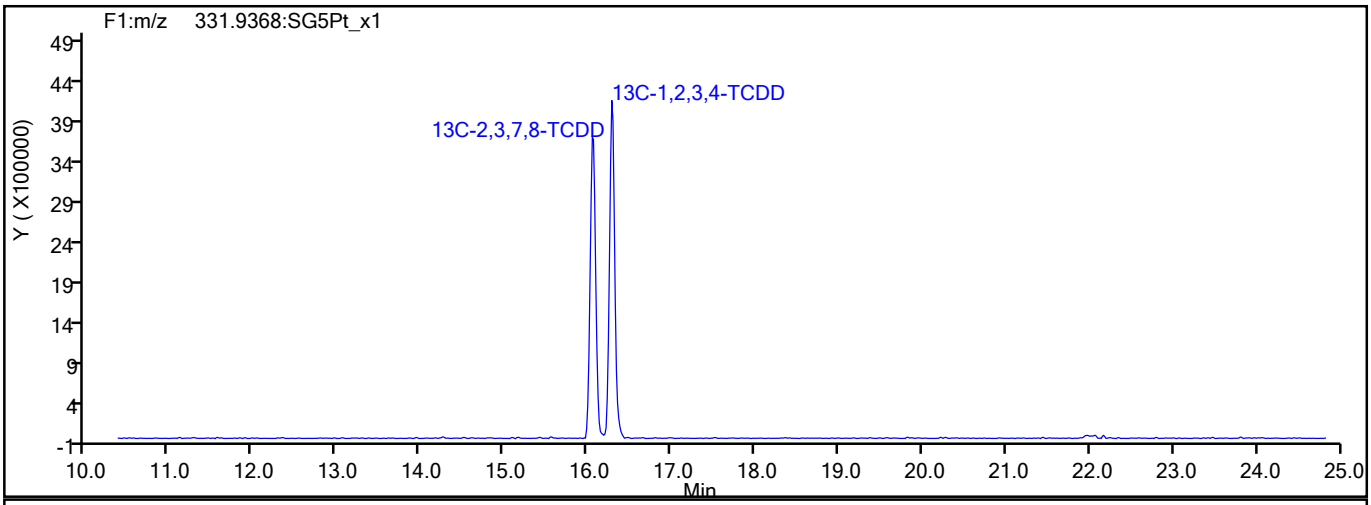

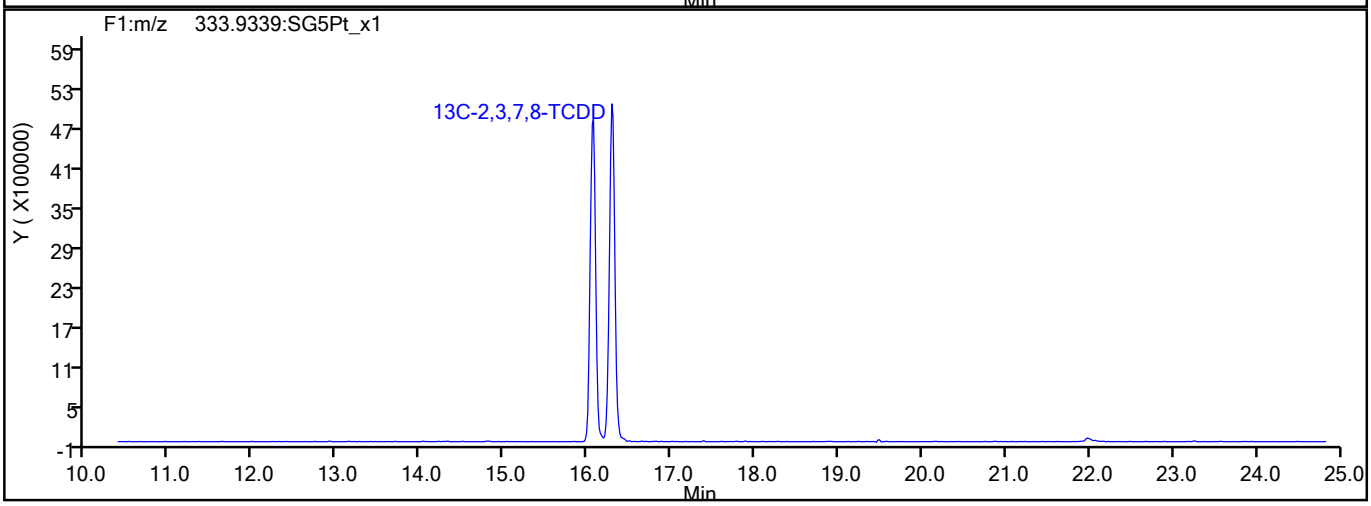

787440

Report Date: 25-Aug-2021 13:23:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_002.d		
Injection Date:	25-Aug-2021 09:27:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

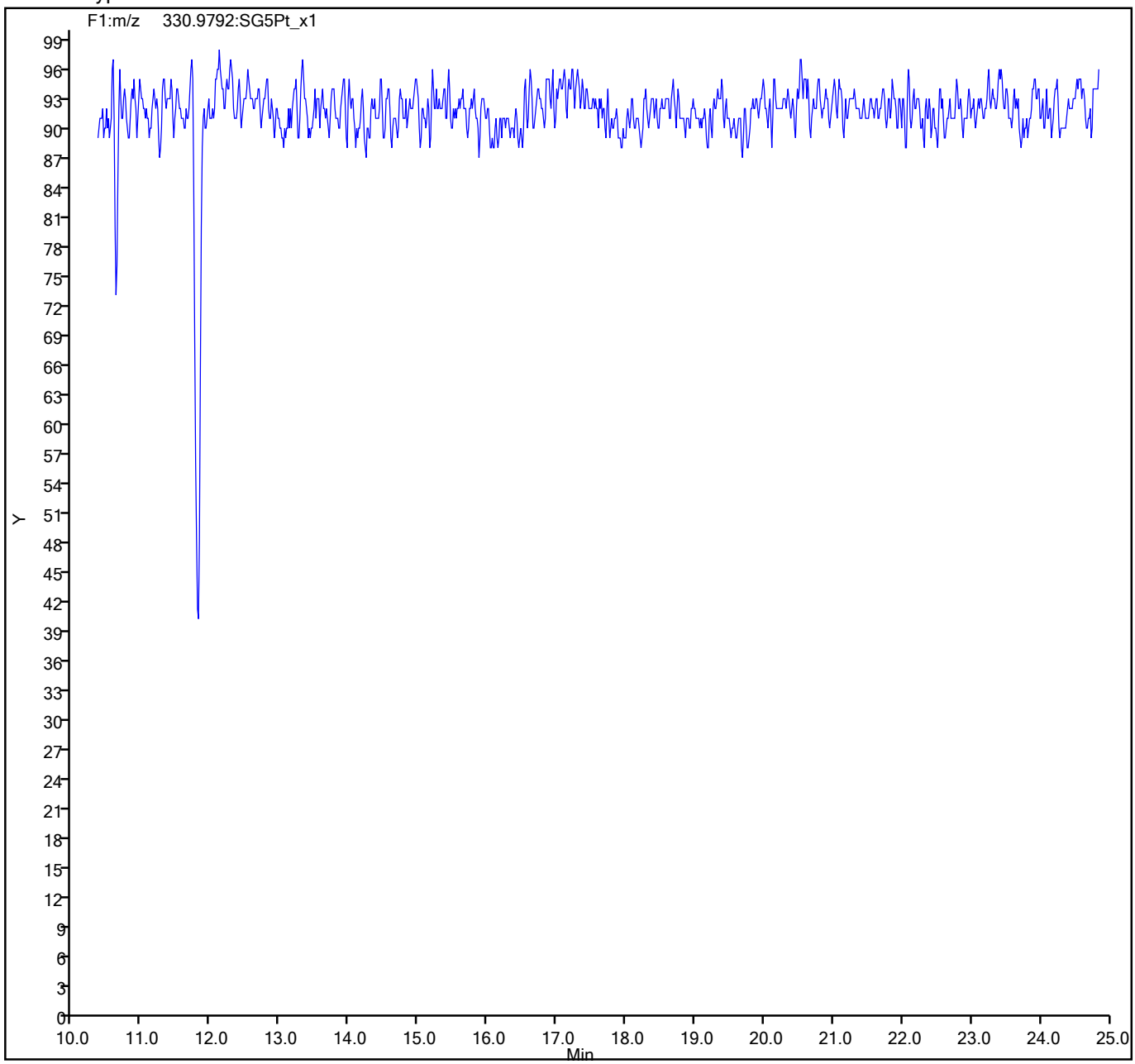

787441

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID: ICV 320-496688/9 Calibration Date: 06/08/2021 19:25

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 08jn21adfs1_11.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.086		40.2	40.0	101	70-130
2,3,7,8-TCDD	AveID	1.075	1.121		41.7	40.0	104	70-130
1,2,3,7,8-PeCDF	AveID	1.054	1.024		194	200	97	70-130
2,3,4,7,8-PeCDF	AveID	1.008	1.118		222	200	111	70-130
1,2,3,7,8-PeCDD	AveID	1.046	1.030		197	200	98	70-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.173		204	200	102	70-130
1,2,3,6,7,8-HxCDF	AveID	1.218	1.270		209	200	104	70-130
2,3,4,6,7,8-HxCDF	AveID	1.214	1.289		212	200	106	70-130
1,2,3,4,7,8-HxCDD	AveID	1.061	1.071		202	200	101	70-130
1,2,3,6,7,8-HxCDD	AveID	0.9933	1.055		212	200	106	70-130
1,2,3,7,8,9-HxCDD	AveID	1.109	1.001		180	200	90	70-130
1,2,3,7,8,9-HxCDF	AveID	1.240	1.220		197	200	98	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.505		209	200	104	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.076		205	200	102	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.299		198	200	99	70-130
OCDD	AveID	1.062	1.116		420	400	105	70-130
OCDF	AveID	1.317	1.367		415	400	104	70-130
13C-2,3,7,8-TCDF	Ave	1.346	1.311		97.4	100	97	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9331		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.095		96.0	100	96	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.137		101	100	101	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7038		98.2	100	98	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.080		112	100	112	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.244		116	100	116	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.134		109	100	109	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8428		111	100	111	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9479		110	100	110	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9309		95.7	100	96	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7732		105	100	105	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7344		109	100	109	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7385		108	100	108	77-129
13C-OCDD	Ave	0.5446	0.5501		202	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.000		39.7	40.0	99	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.559	1125768	0.79	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.623	1476391	0.81	1.3459	97.4	97.4	0.3116	0.3116	97.44	
2,3,7,8-TCDF	19.648	641186	0.78	1.0802	40.2	40.2	0.0827	0.0827	101	
A Non-2,3,7,8-sub-TCDF	19.213	10768	0.77	1.0802	0.7248	0.6752	0.0827	0.3523		RQ
S Total TCDF					40.9	40.9	0.0827	0.0827		RQ
D 13C-2,3,7,8-TCDD	20.928	1050504	0.81	0.9317	100.2	100.2	0.3032	0.3032	100	
$ 37Cl4-2,3,7,8-TCDD	20.946	450121		1.0083	39.7	39.7	0.0185	0.0185	99.14	
2,3,7,8-TCDD	20.946	471118	0.76	1.0753	41.7	41.7	0.1073	0.1073	104	
A Non-2,3,7,8-sub-TCDD	20.025	9415	0.75	1.0753	0.8334	0.8334	0.1073	0.8334		
S Total TCDD					42.5	42.5	0.1073	0.1073		
D 13C-1,2,3,7,8-PeCDF	26.596	1232285	1.59	1.1405	96.0	96.0	0.3457	0.3457	95.98	
1,2,3,7,8-PeCDF	26.612	2524406	1.56	1.0543	194.3	194.3	0.8579	0.8579	97.16	
D 13C-2,3,4,7,8-PeCDF	28.053	1280265	1.57	1.1253	101.1	101.1	0.3504	0.3504	101	
2,3,4,7,8-PeCDF	28.079	2861521	1.56	1.0079	221.8	221.8	0.9445	0.9445	111	
A F1 PeCDFs	24.098						0.0158	0.0158		
A Non-2,3,7,8-sub-PeCDF	27.473	63446	1.59	1.0311	4.898	4.898	0.8996	4.898		
S Total PeCDF					421.0	421.0	0.9012	0.9012		
D 13C-1,2,3,7,8-PeCDD	28.846	792316	1.60	0.7165	98.2	98.2	0.1154	0.1154	98.23	
1,2,3,7,8-PeCDD	28.871	1631677	1.56	1.0465	196.8	196.8	0.1550	0.1550	98.39	
A Non-2,3,7,8-sub-PeCDD	27.656						0.1550	0.1550		n
S Total PeCDD					196.8	196.8	0.1550	0.1550		
D 13C-1,2,3,4,7,8-HxCDF	34.420	999392	0.53	0.9648	111.9	111.9	0.3215	0.3215	112	
1,2,3,4,7,8-HxCDF	34.437	2343900	1.24	1.1474	204.4	204.4	0.8372	0.8372	102	
D 13C-1,2,3,6,7,8-HxCDF	34.597	1151145	0.54	1.0708	116.1	116.1	0.2896	0.2896	116	
1,2,3,6,7,8-HxCDF	34.614	2923094	1.25	1.2178	208.5	208.5	0.6918	0.6918	104	
D 13C-2,3,4,6,7,8-HxCDF	35.473	1049318	0.52	1.0413	108.9	108.9	0.2978	0.2978	109	
2,3,4,6,7,8-HxCDF	35.490	2704850	1.25	1.2145	212.3	212.3	0.6697	0.6697	106	
D 13C-1,2,3,7,8,9-HxCDF	36.409	861729	0.52	0.9731	95.7	95.7	0.3187	0.3187	95.67	
1,2,3,7,8,9-HxCDF	36.425	2103282	1.26	1.2401	196.8	196.8	0.7295	0.7295	98.41	
A Non-2,3,7,8-sub-HxCDF	34.470						0.7275	0.7275		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					822.0	822.0	0.7320	0.7320		
* 13C-1,2,3,7,8,9-HxCDD	36.215	925657	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.709	780111	1.25	0.7587	111.1	111.1	0.1965	0.1965	111	
1,2,3,4,7,8-HxCDD	35.726	1671580	1.25	1.0608	202.0	202.0	0.2912	0.2912	101	
D 13C-1,2,3,6,7,8-HxCDD	35.827	877428	1.29	0.8593	110.3	110.3	0.1735	0.1735	110	
1,2,3,6,7,8-HxCDD	35.844	1852033	1.25	0.9933	212.5	212.5	0.2936	0.2936	106	
1,2,3,7,8,9-HxCDD	36.232	1658680	1.25	1.1094	180.4	180.4	0.2704	0.2704	90.20	
A Non-2,3,7,8-sub-HxCDD	34.896						0.2845	0.2845		
S Total HxCDD					594.9	594.9	0.2851	0.2851		
D 13C-1,2,3,4,6,7,8-HpCDF	38.325	715749	0.46	0.7359	105.1	105.1	0.4232	0.4232	105	
1,2,3,4,6,7,8-HpCDF	38.334	2154882	1.05	1.4421	208.8	208.8	0.7056	0.7056	104	
D 13C-1,2,3,4,7,8,9-HpCDF	39.615	683594	0.46	0.6854	107.8	107.8	0.4545	0.4545	108	
1,2,3,4,7,8,9-HpCDF	39.623	1775948	1.06	1.3092	198.4	198.4	0.7773	0.7773	99.22	
A Non-2,3,7,8-sub-HpCDF	38.954						0.7397	0.7397		
S Total HpCDF					407.2	407.2	0.7415	0.7415		
D 13C-1,2,3,4,6,7,8-HpCDD	39.311	679765	1.07	0.6745	108.9	108.9	0.3101	0.3101	109	
1,2,3,4,6,7,8-HpCDD	39.320	1462615	1.05	1.0503	204.9	204.9	0.4465	0.4465	102	
A Non-2,3,7,8-sub-HpCDD	38.962						0.4465	0.4465		n
S Total HpCDD					204.9	204.9	0.4465	0.4465		
D 13C-OCDD	41.801	1018443	0.90	0.5446	202.0	202.0	0.2655	0.2655	101	
OCDF	41.885	2784055	0.91	1.3168	415.2	415.2	0.4728	0.4728	104	
OCDD	41.809	2272994	0.89	1.0620	420.3	420.3	0.4613	0.4613	105	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.559	20.544	1		497786	76231	115	287	663		
333.9338	20.550	20.544	0		627982	95455	79	197	1208	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.623	19.630	0	0.954	658944	105750	176	440	601		
317.9389	19.623	19.630	0	0.954	817447	135001	112	280	1205	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.648	19.673	-1	1.001	281905	45248	31	77	1460		
305.8987	19.648	19.673	-1	1.001	359281	56056	55	137	1019	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.489	19.213	-43	0.942	2444	489	31	77	16		
305.8987	18.489	19.213	-43	0.942	3965	647	55	137	12	0.62(0.65-0.89)	
	Empc Correction				3174	635	55	137	12		
303.9016	18.961	19.213	-15	0.966	2103	355	31	77	11		
305.8987	18.961	19.213	-15	0.966	3047	540	55	137	10	0.69(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.928	20.918	1	1.018	469892	68601	115	287	597		
333.9338	20.920	20.918	0	1.018	580612	84734	79	197	1073	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.946	20.939	0	1.019	450121	64795	13	32	4984		
2,3,7,8-TCDD											
319.8965	20.946	20.952	0	1.001	203710	30841	43	107	717		
321.8936	20.946	20.952	0	1.001	267408	39251	28	70	1402	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											

787445

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	20.748	20.025	43	0.991	4027	748	43	107	17		
321.8936	20.748	20.025	43	0.991	5388	912	28	70	33	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.596	26.552	3	1.294	756622	134257	176	440	763		
353.8970	26.596	26.552	3	1.294	475663	85437	95	237	899	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.612	26.578	2	1.001	1538811	266495	482	1205	553		
341.8567	26.612	26.578	2	1.001	985595	170105	313	782	543	1.56(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.053	28.002	3	1.365	781677	129402	176	440	735		
353.8970	28.062	28.002	4	1.365	498588	79335	95	237	835	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.079	28.028	3	1.001	1744490	280566	482	1205	582		
341.8567	28.079	28.028	3	1.001	1117031	182233	313	782	582	1.56(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.098						3	7			
341.8567	24.098						11	27			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.186	27.473	-17	1.022	38961	6595	482	1205	14		
341.8567	27.177	27.473	-18	1.022	24485	4217	313	782	13	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.846	28.795	3	1.403	487930	72898	31	77	2352		
369.8919	28.846	28.795	3	1.403	304386	45466	26	65	1749	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.871	28.820	3	1.001	995242	153111	50	125	3062		
357.8516	28.871	28.820	3	1.001	636435	96130	27	67	3560	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.214	27.656	33	0.978	1514	293	50	125	6		
357.8516	28.197	27.656	32	0.978	953	151	27	67	6	1.59(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.420	34.370	3	0.950	347982	68430	100	250	684		
385.8610	34.411	34.370	2	0.950	651410	129057	179	447	721	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.437	34.404	2	1.000	1299118	260435	435	1087	599		
375.8178	34.437	34.404	2	1.000	1044782	207176	324	810	639	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.597	34.555	2	0.955	402116	75630	100	250	756		
385.8610	34.597	34.555	2	0.955	749029	149555	179	447	836	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.614	34.572	2	1.000	1625084	318250	435	1087	732		
375.8178	34.614	34.572	2	1.000	1298010	254878	324	810	787	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.473	35.432	2	0.980	359196	80141	100	250	801		
385.8610	35.473	35.432	2	0.980	690122	153108	179	447	855	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.490	35.449	2	1.000	1504442	338765	435	1087	779		
375.8178	35.490	35.449	2	1.000	1200408	271192	324	810	837	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.409	36.376	2	1.005	295983	71192	100	250	712		
385.8610	36.409	36.376	2	1.005	565746	138504	179	447	774	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.425	36.393	2	1.000	1172455	286668	435	1087	659		
375.8178	36.425	36.393	2	1.000	930827	227290	324	810	702	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						435	1087			
375.8178	34.470						324	810			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.215	36.182	2		517474	125327	80	200	1567		
403.8529	36.215	36.182	2		408183	99401	54	135	1841	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.709	35.668	2	0.986	434094	107490	80	200	1344		
403.8529	35.709	35.668	2	0.986	346017	85806	54	135	1589	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.726	35.685	2	1.000	928783	231750	132	330	1756		
391.8127	35.726	35.685	2	1.000	742797	185332	107	267	1732	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.827	35.794	2	0.989	493784	113946	80	200	1424		
403.8529	35.827	35.794	2	0.989	383644	90754	54	135	1681	1.29(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	35.844	35.811	2	1.000	1030480	241468	132	330	1829		
391.8127	35.844	35.811	2	1.000	821553	192627	107	267	1800	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.232	36.198	2	1.015	920944	222717	132	330	1687		
391.8127	36.223	36.198	1	1.014	737736	175856	107	267	1644	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.896						132	330			
391.8127	34.896						107	267			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.325	38.292	2	1.058	225843	65327	102	255	640		
419.8220	38.325	38.292	2	1.058	489906	143703	178	445	807	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.334	38.309	1	1.000	1104308	315033	437	1092	721		
409.7788	38.334	38.309	1	1.000	1050574	298985	414	1035	722	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.615	39.591	1	1.094	215253	65848	102	255	646		
419.8220	39.615	39.591	1	1.094	468341	143162	178	445	804	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.623	39.598	1	1.000	914515	283964	437	1092	650		
409.7788	39.623	39.598	1	1.000	861433	268143	414	1035	648	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						437	1092			
409.7788	38.954						414	1035			

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.311	39.279	2	1.086	351100	106957	105	262	1019		
437.8140	39.311	39.279	2	1.086	328665	103097	83	207	1242	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.320	39.295	1	1.000	749316	235728	209	522	1128		
425.7737	39.320	39.295	1	1.000	713299	221333	185	462	1196	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.662	38.962	-18	0.983	5341	1580	209	522	8		
425.7737	38.662	38.962	-18	0.983	5423	1624	185	462	9	0.98(0.88-1.20)	
13C-OCDD											
469.7780	41.801	41.778	1	1.154	483015	136908	66	165	2074		
471.7750	41.801	41.778	1	1.154	535428	149653	64	160	2338	0.90(0.76-1.02)	
OCDF											
441.7428	41.885	41.862	1	1.002	1324086	386680	165	412	2344		
443.7399	41.885	41.862	1	1.002	1459969	425131	192	480	2214	0.91(0.76-1.02)	
OCDD											
457.7377	41.809	41.786	1	1.000	1072812	307543	147	367	2092		
459.7348	41.809	41.786	1	1.000	1200182	343135	134	335	2561	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1476391	240751

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1476391	240751

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.489	2444	489	3965	647	0.4019	0.62	RQ
18.489	2444	489	3174	635	0.3523		Empc Correction
18.961	2103	355	3047	540	0.3229	0.69	n
Signal Totals:							
	4547	844	6221	1175			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11559	2031				0.65	RQ
	10768	2019					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7248 = (11559 * 100.000) / (1476391 * 1.080)
Empc Amount: 0.6752 = (10768 * 100.000) / (1476391 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDD, RT: 20.025

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	1050504	153335

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	1050504	153335

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
20.748	4027	748	5388	912	0.8334	0.75	
Signal Totals:							
	4027	748	5388	912			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9415	1660				0.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8334 = (9415 * 100.000) / (1050504 * 1.075)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1232285	219694
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1280265	208737

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1256275	214215

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.186	38961	6595	24485	4217	4.90	1.59	
Signal Totals:							
	38961	6595	24485	4217			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63446	10812				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.898 = (63446 * 100.000) / (1256275 * 1.031)

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

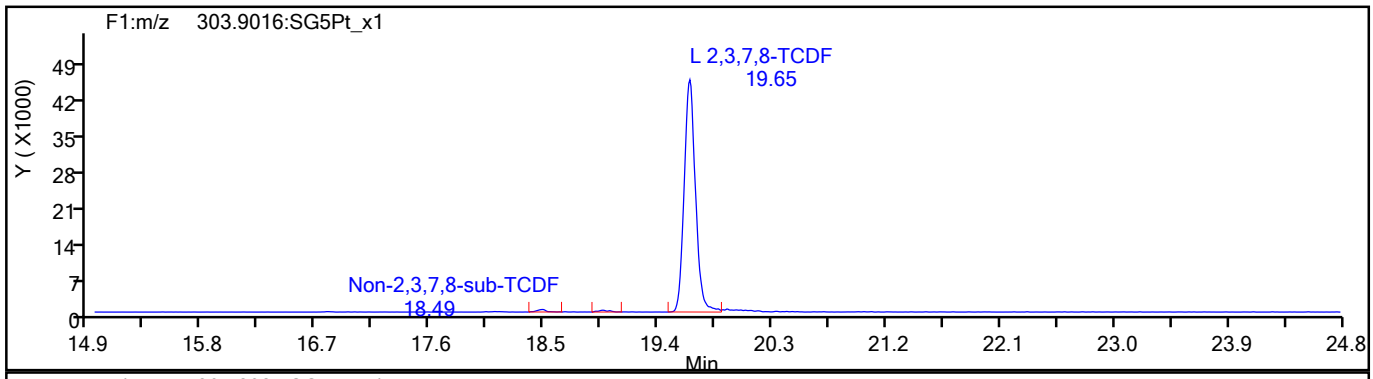

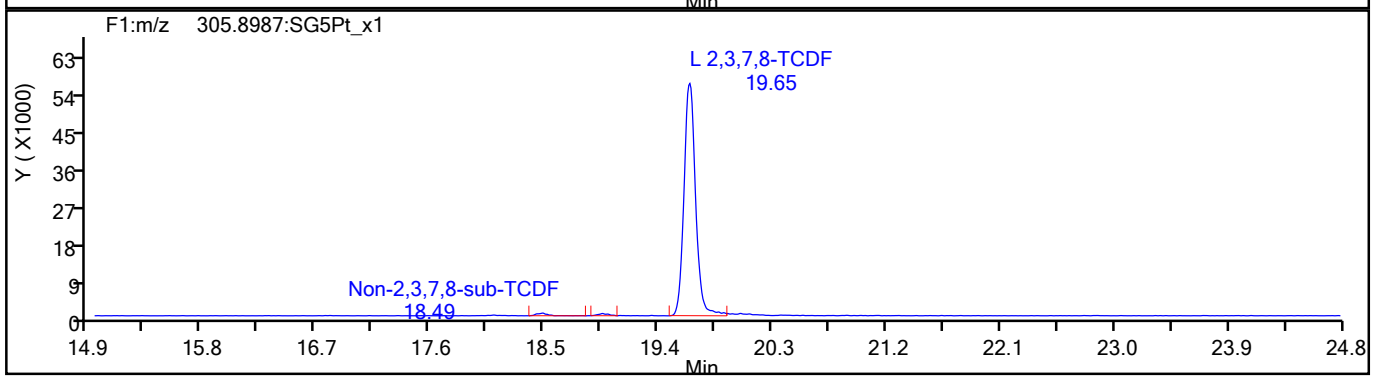

TCDF Standards

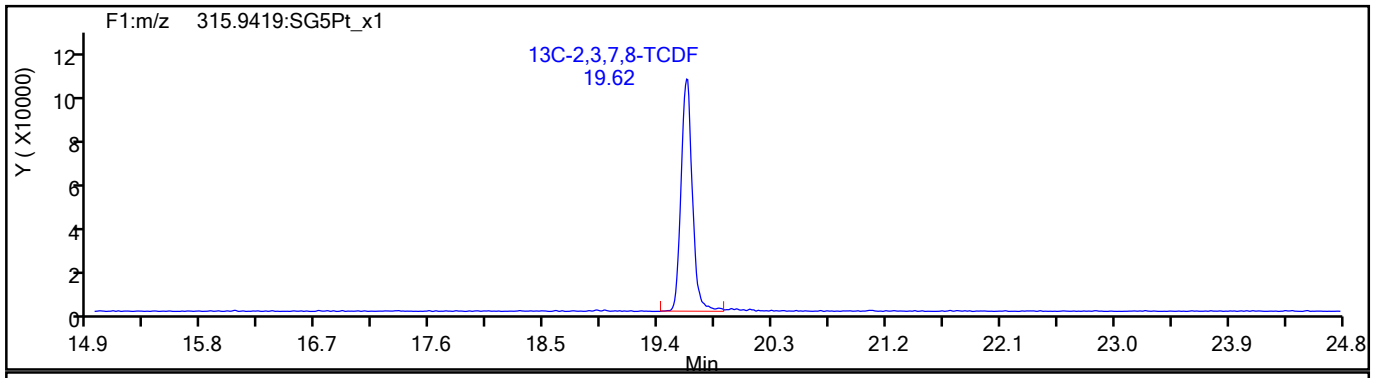

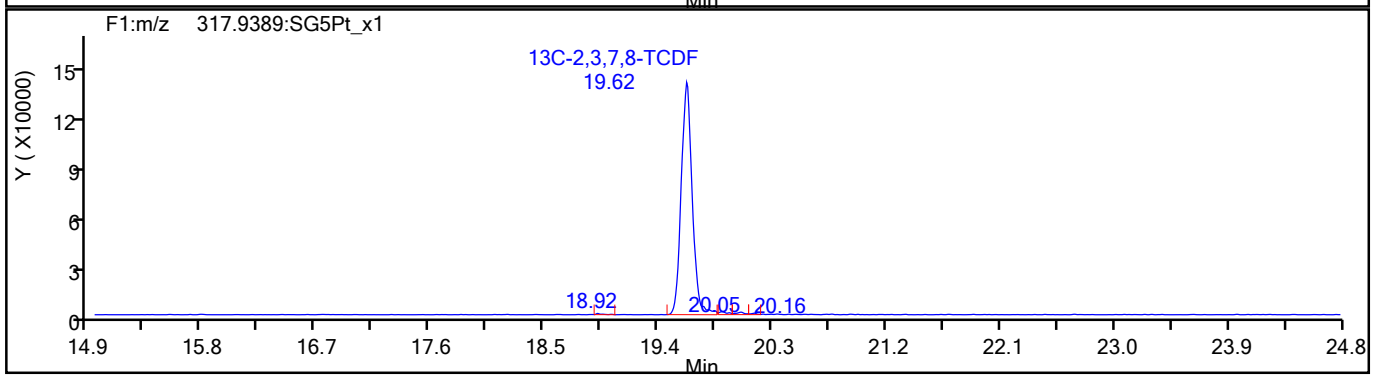

787452

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

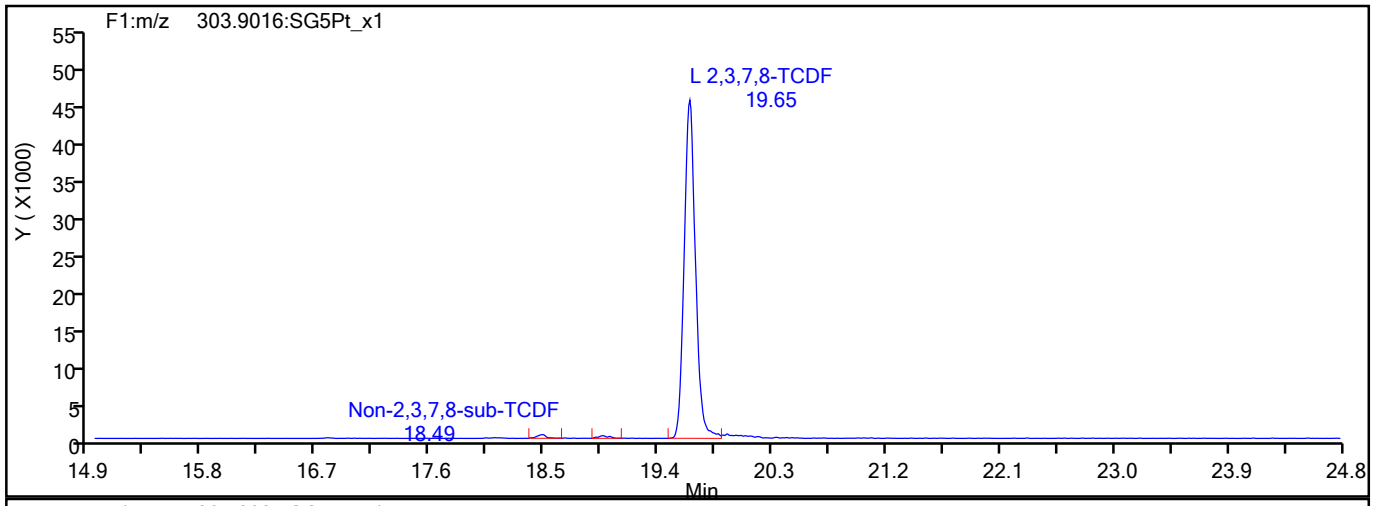

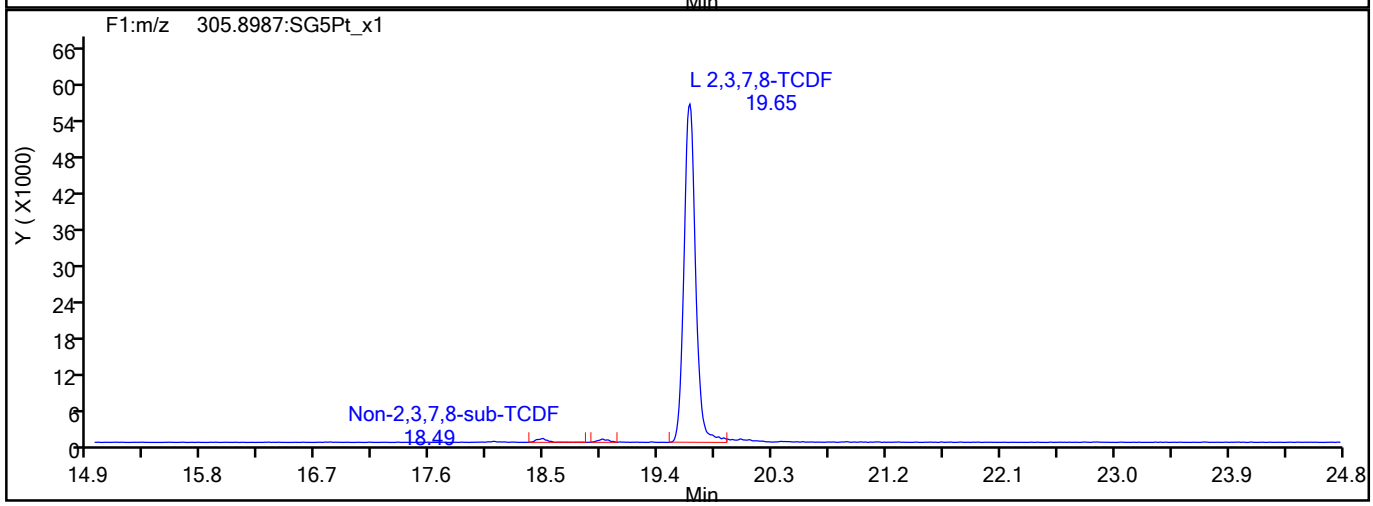

TCDF Interference Mass

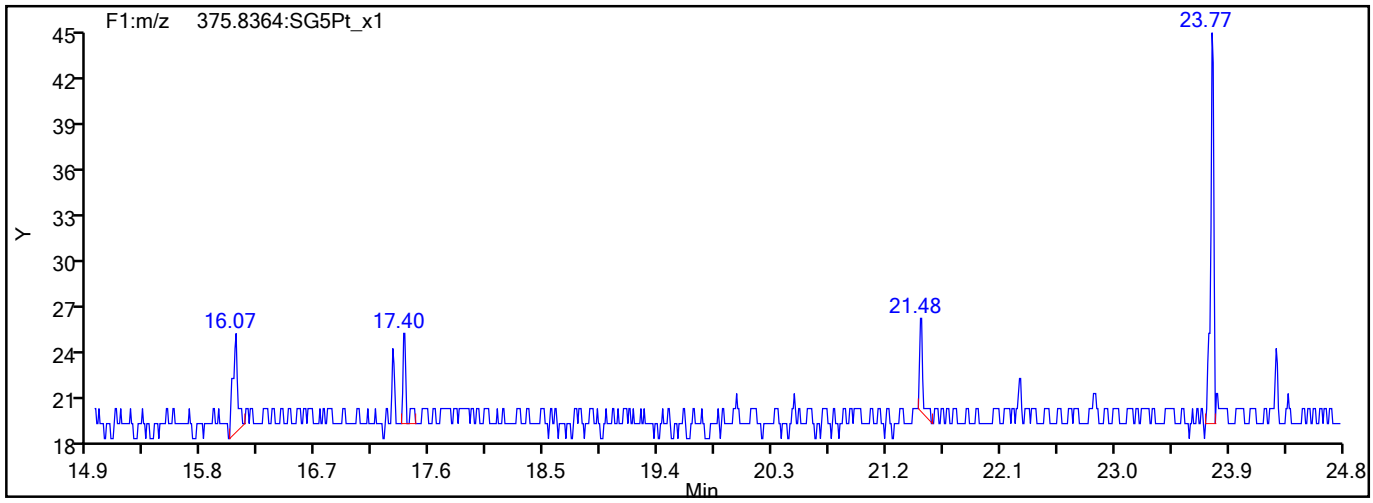

787453

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

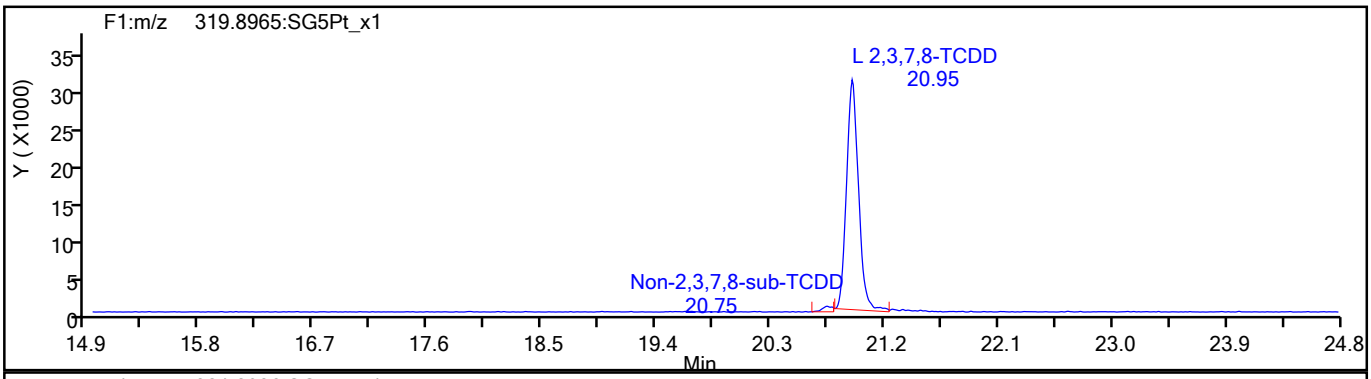

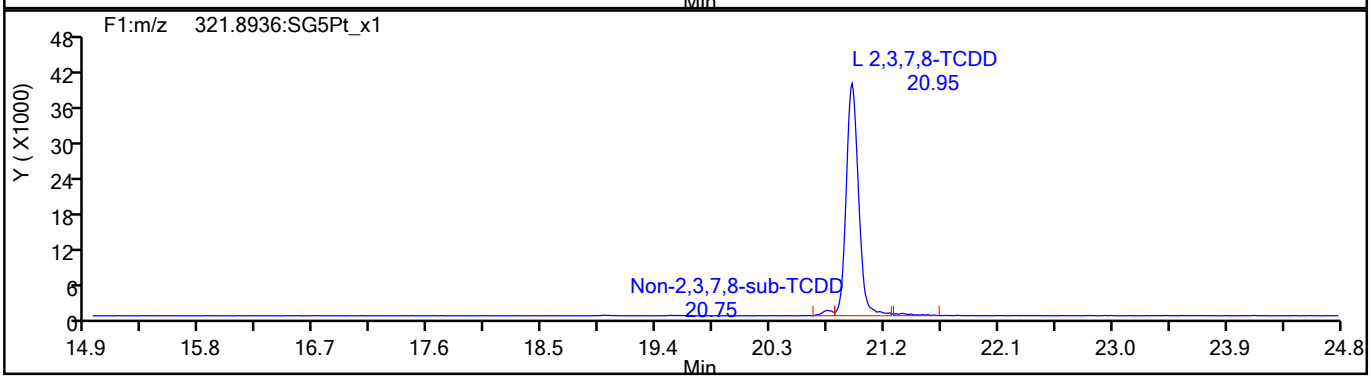

TCDD Standards

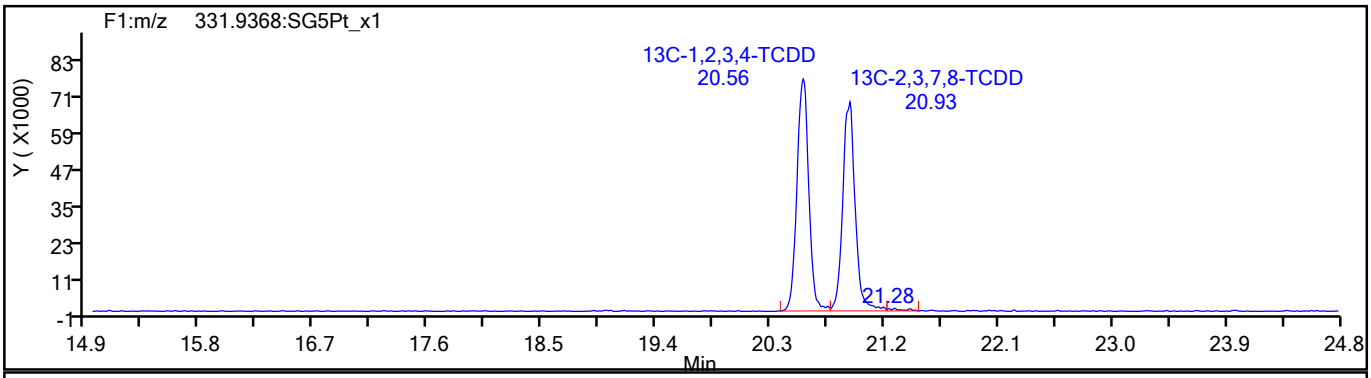

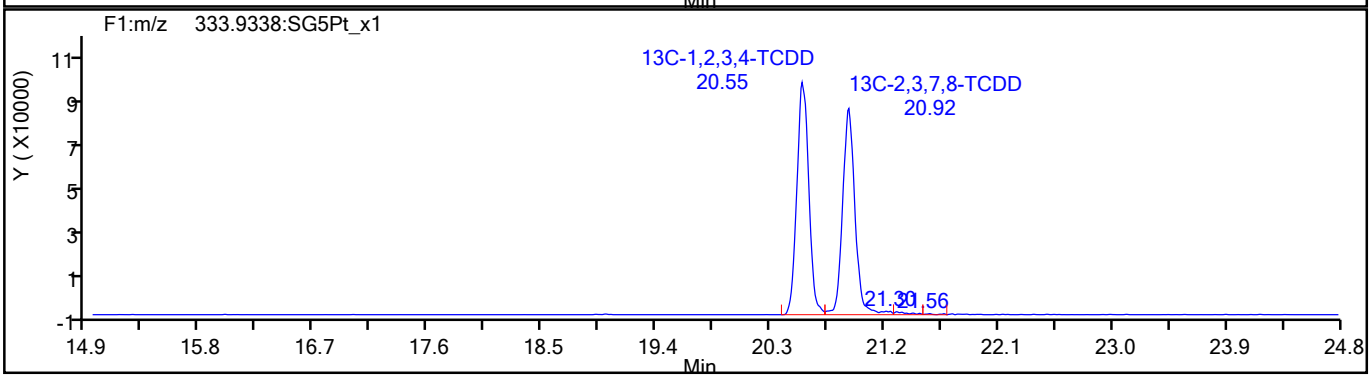

787454

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

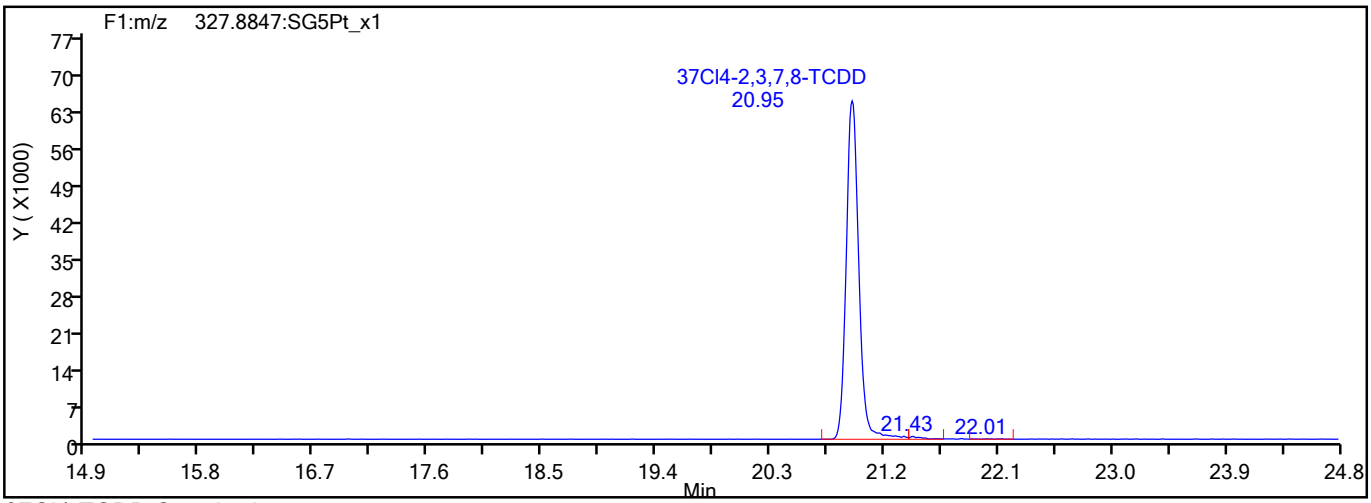

37Cl4-TCDD Standards

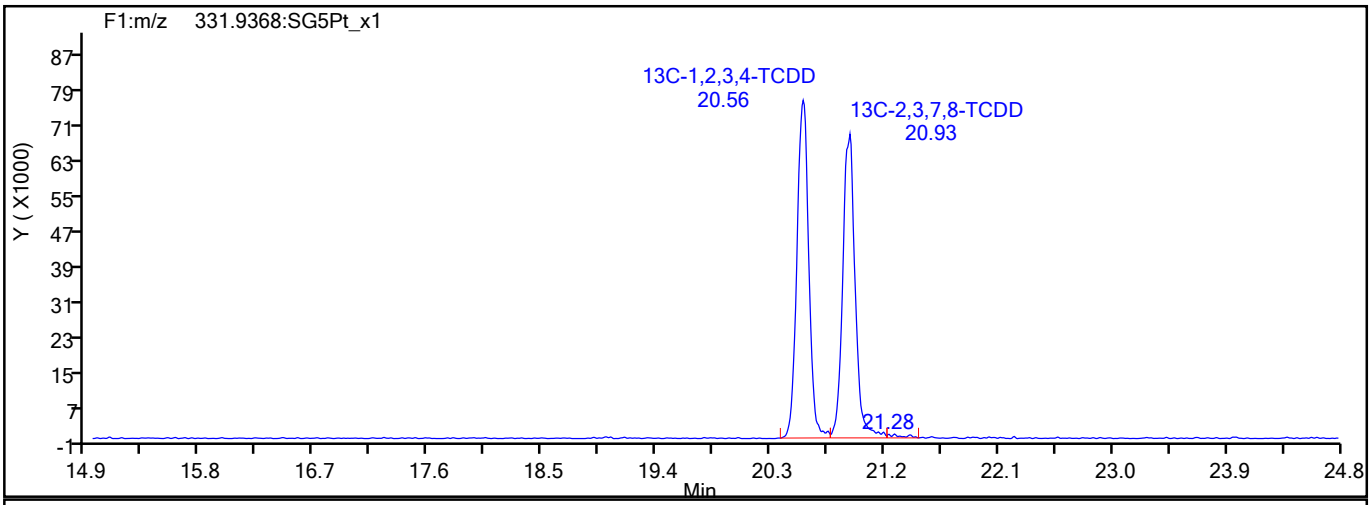

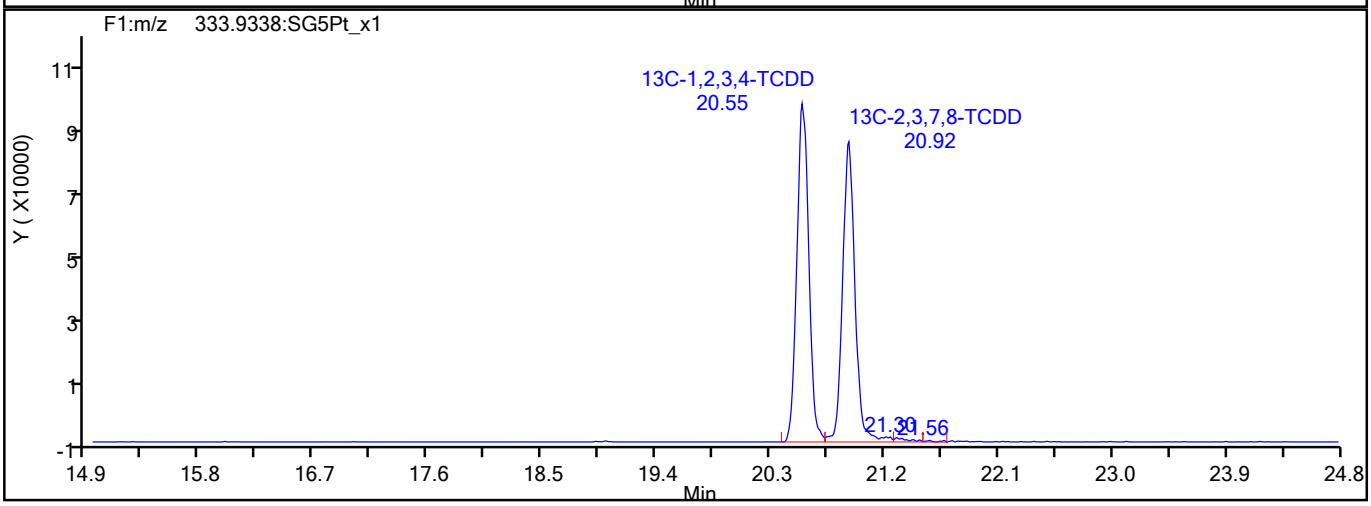

787455

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

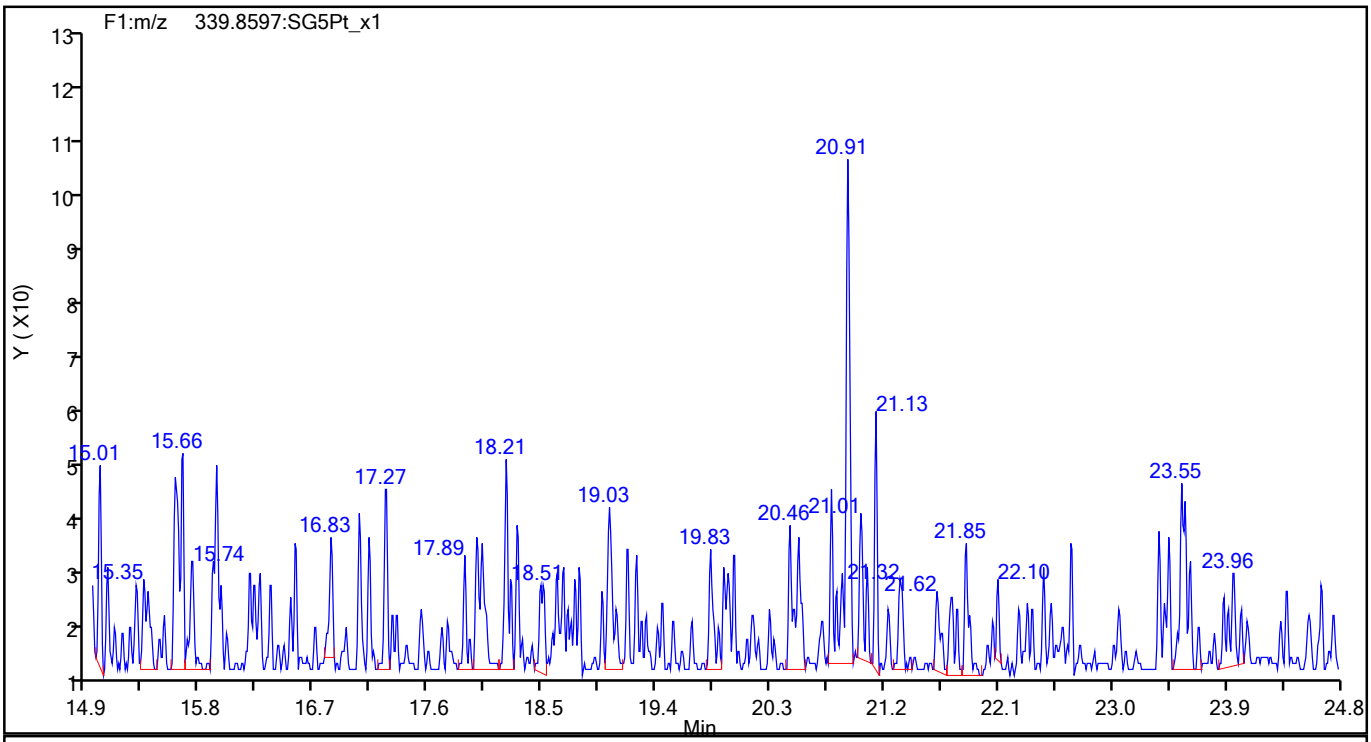

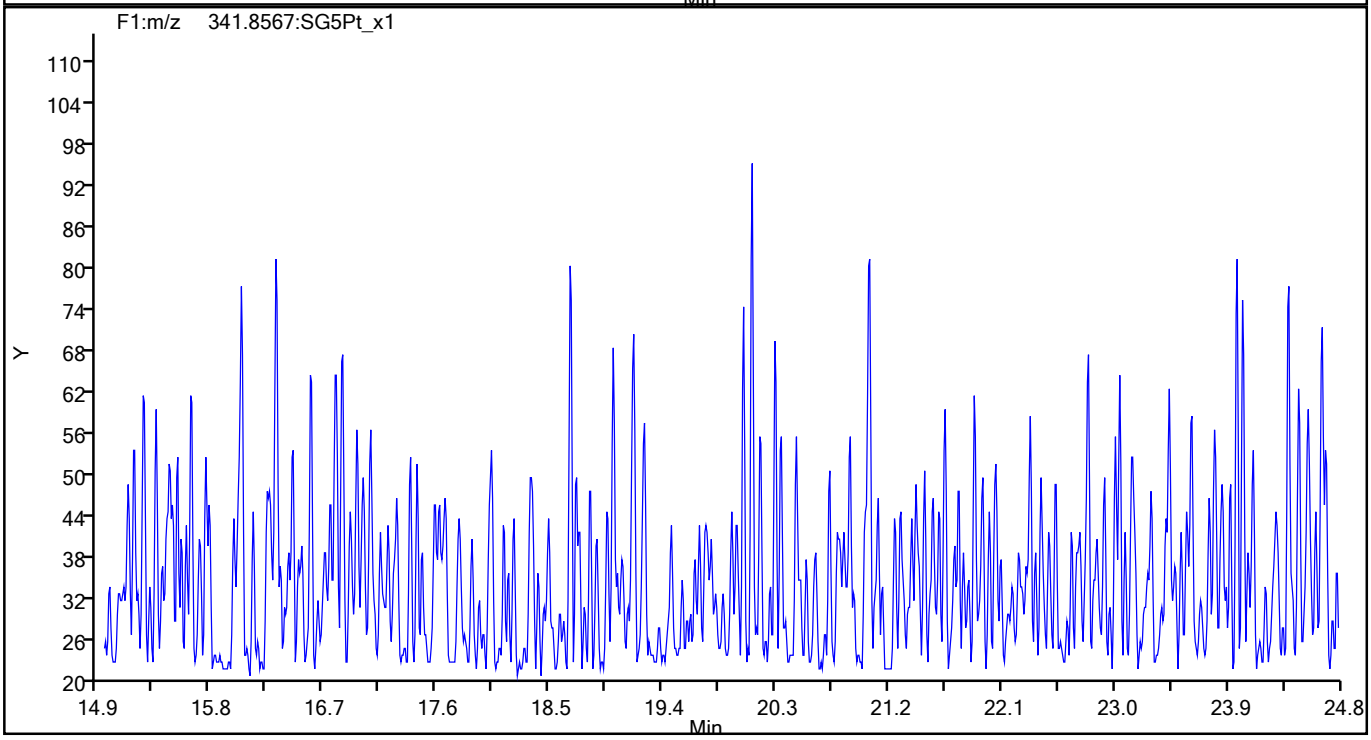

787456

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

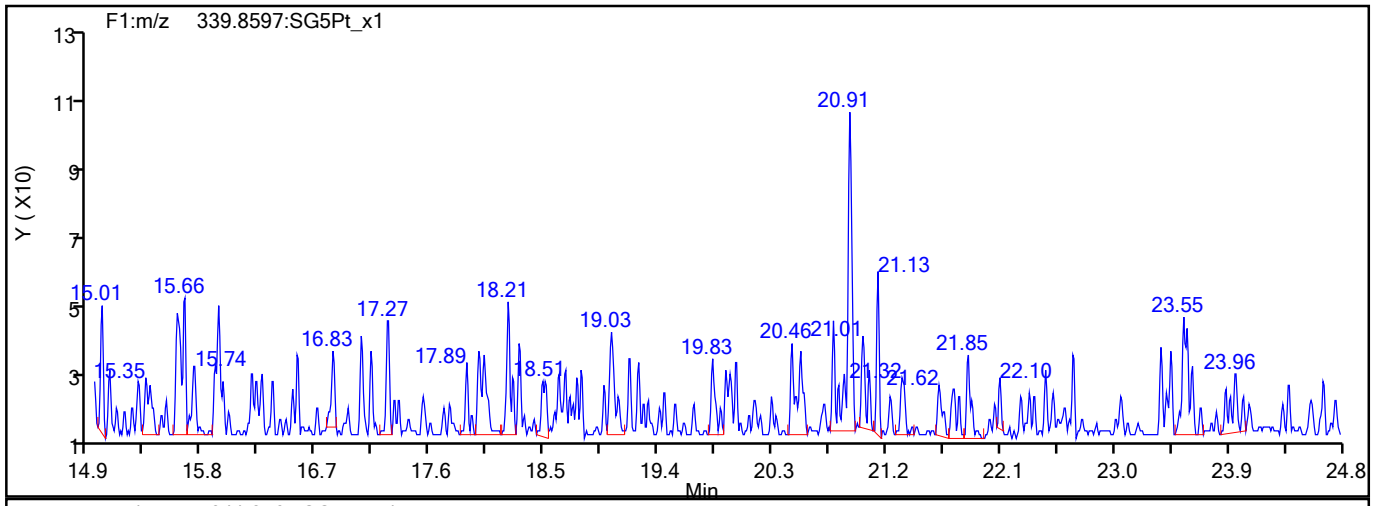

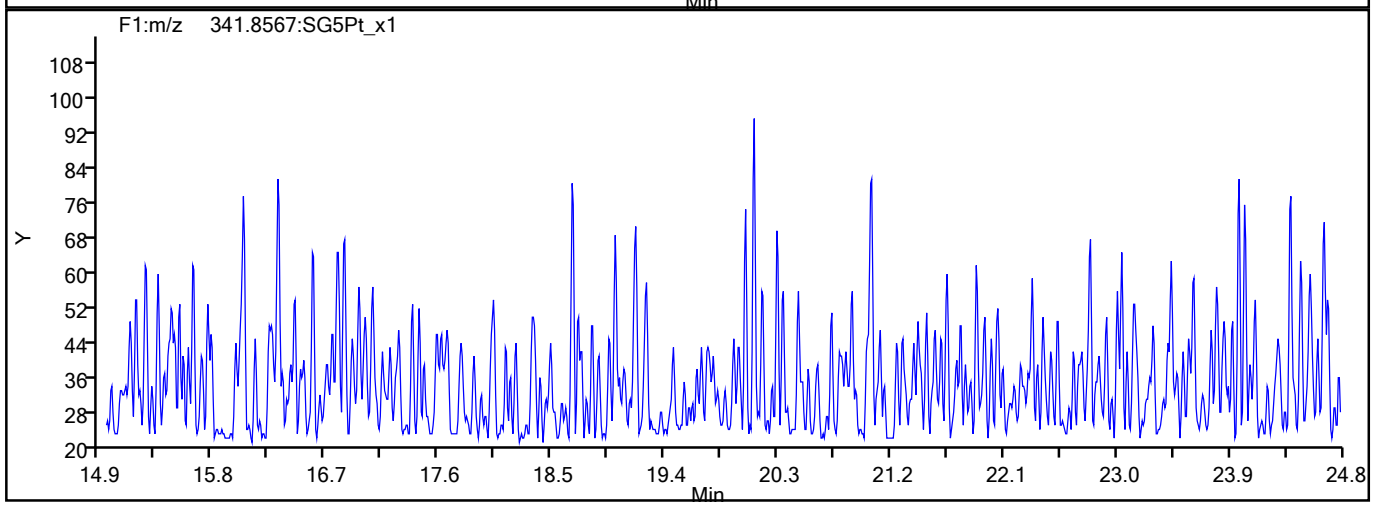

F1 PeCDFs Interference Mass

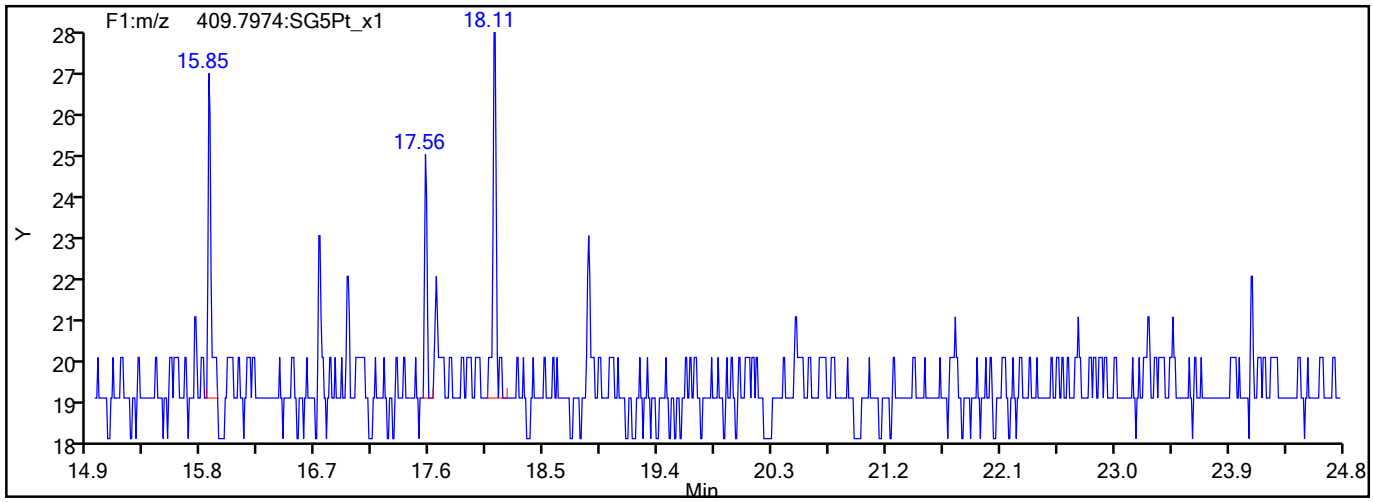

787457

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

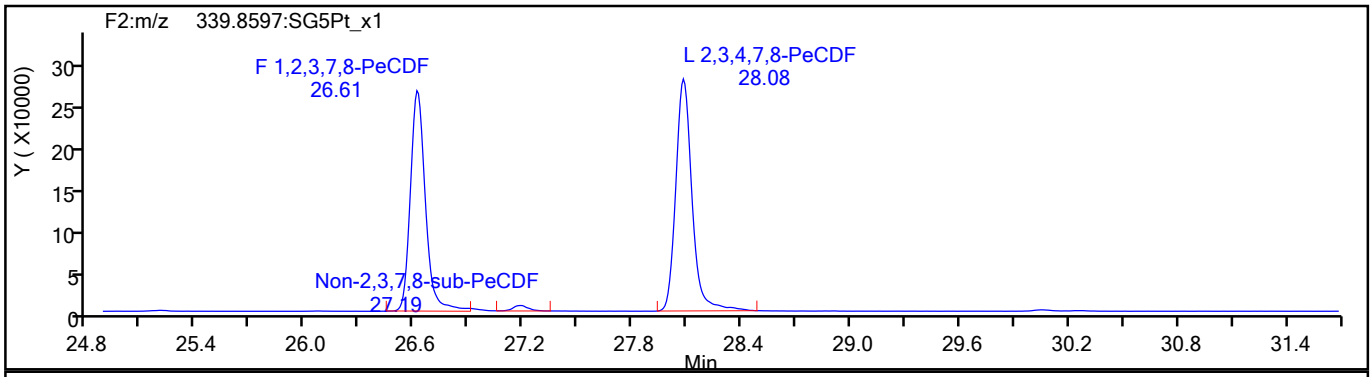

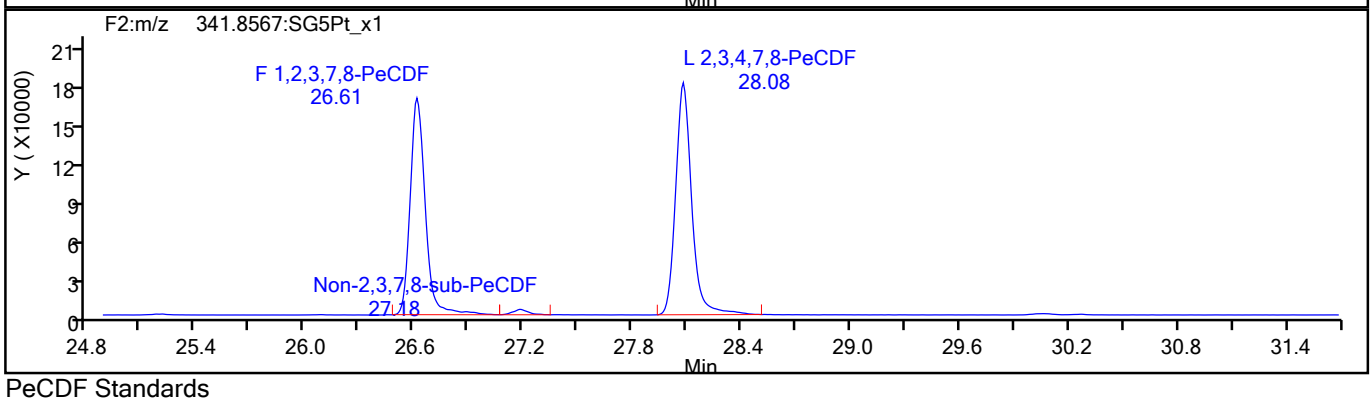

PeCDF Standards

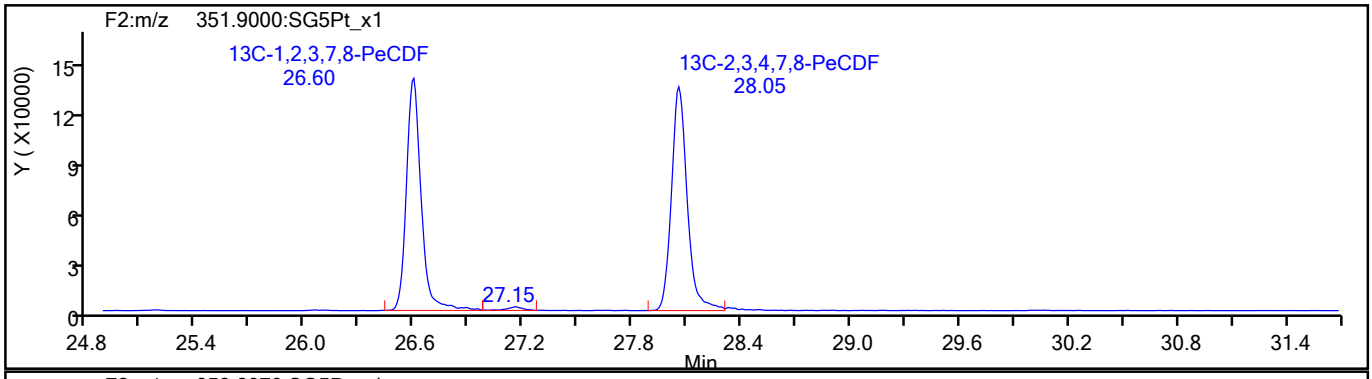

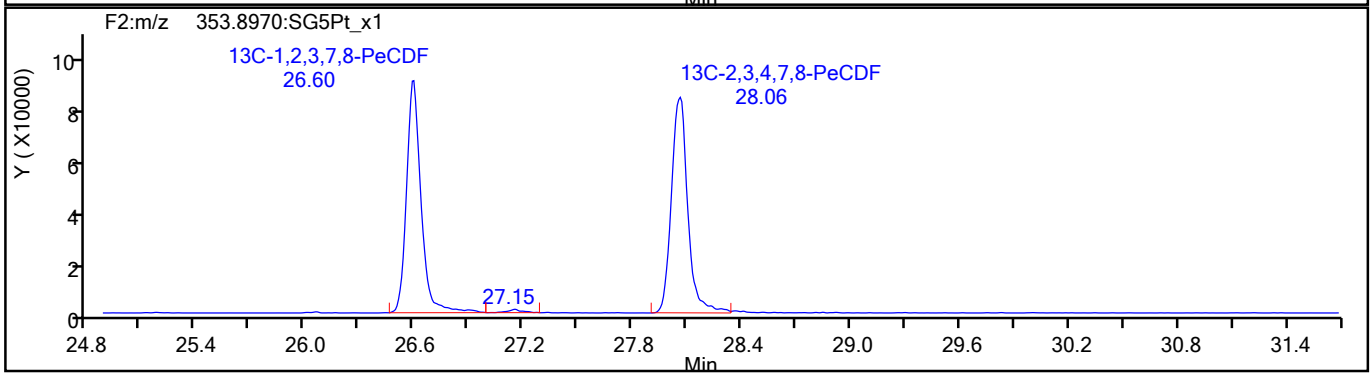

787458

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

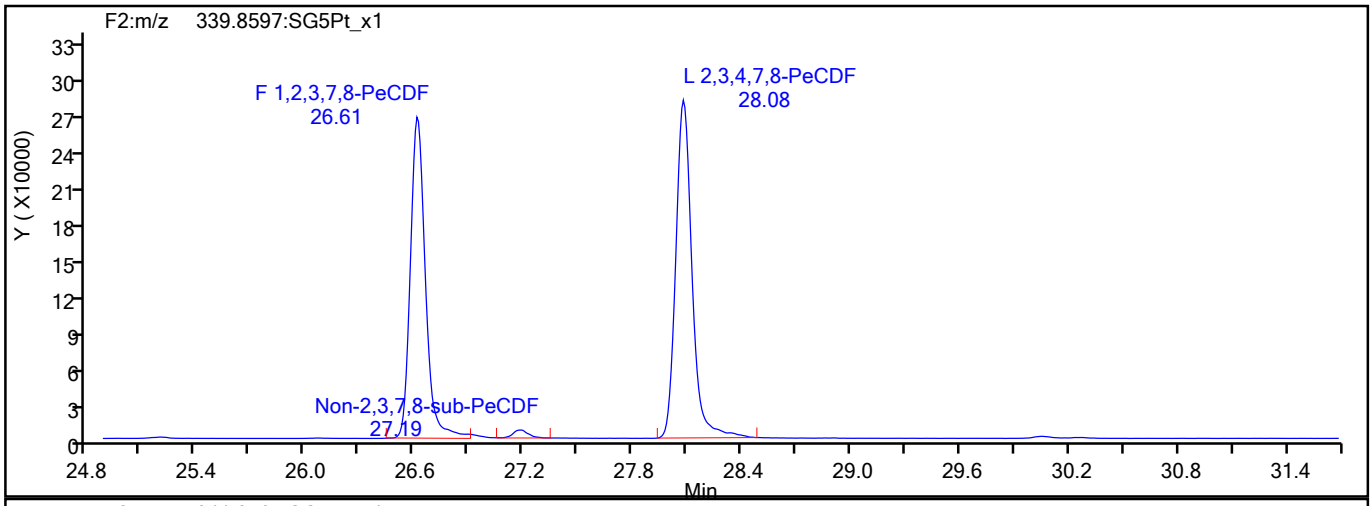

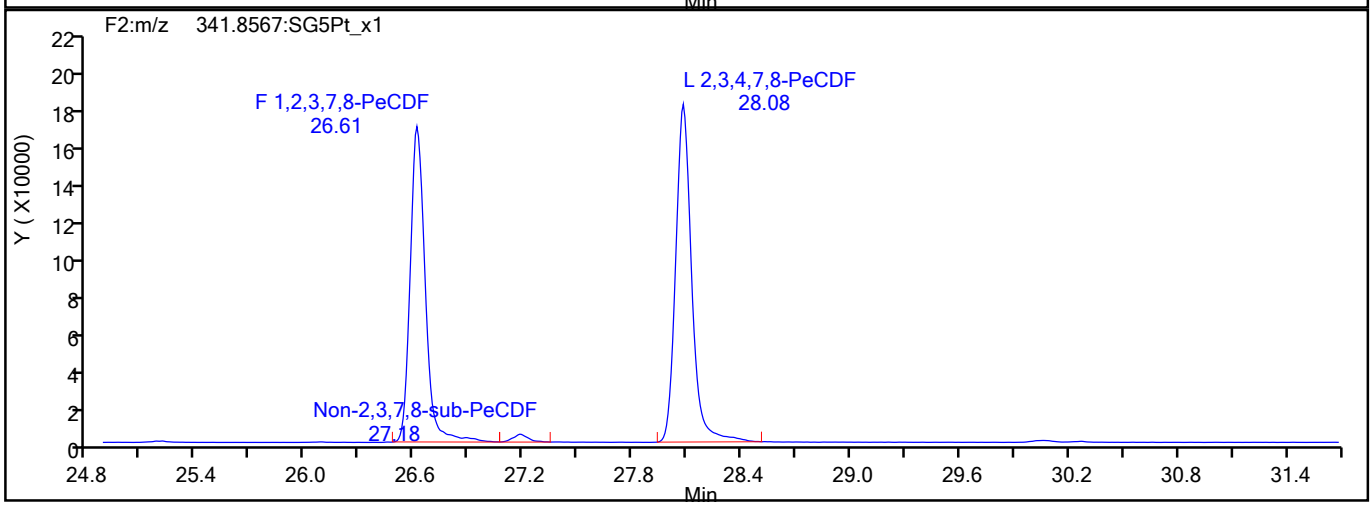

PeCDF Interference Mass

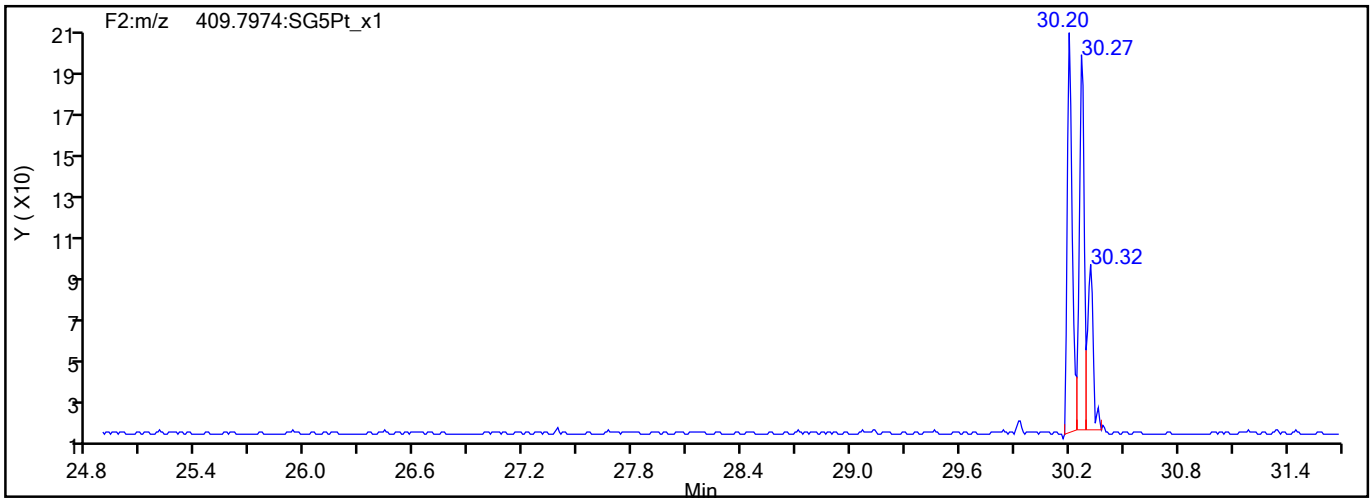

787459

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

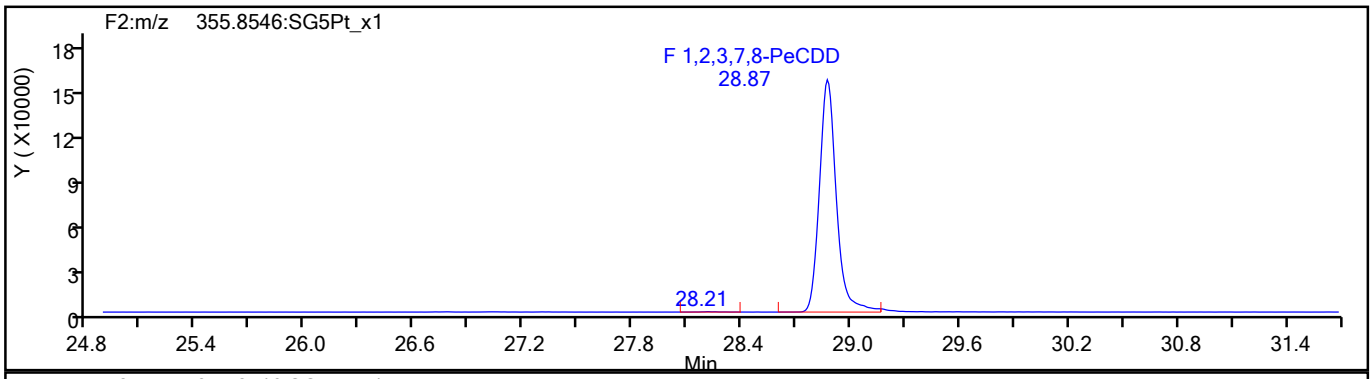

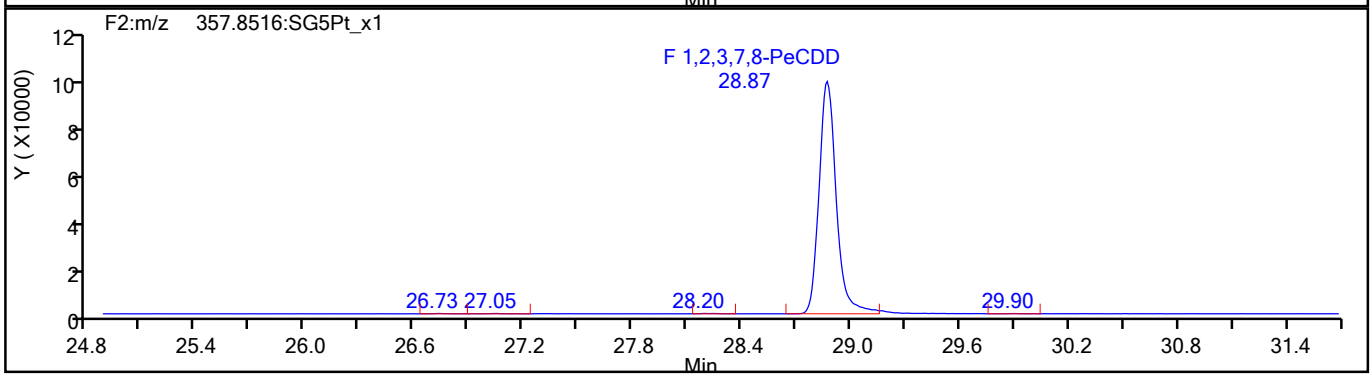

PeCDD Standards

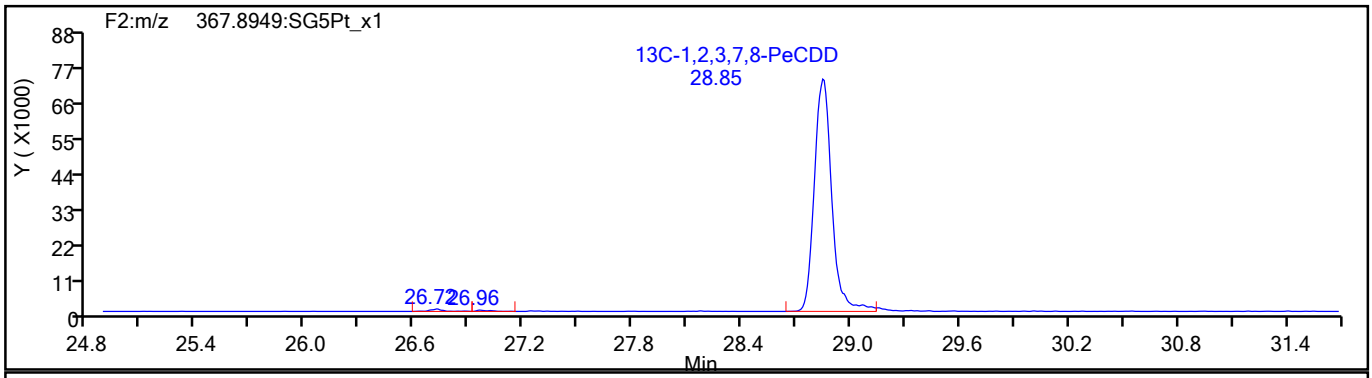

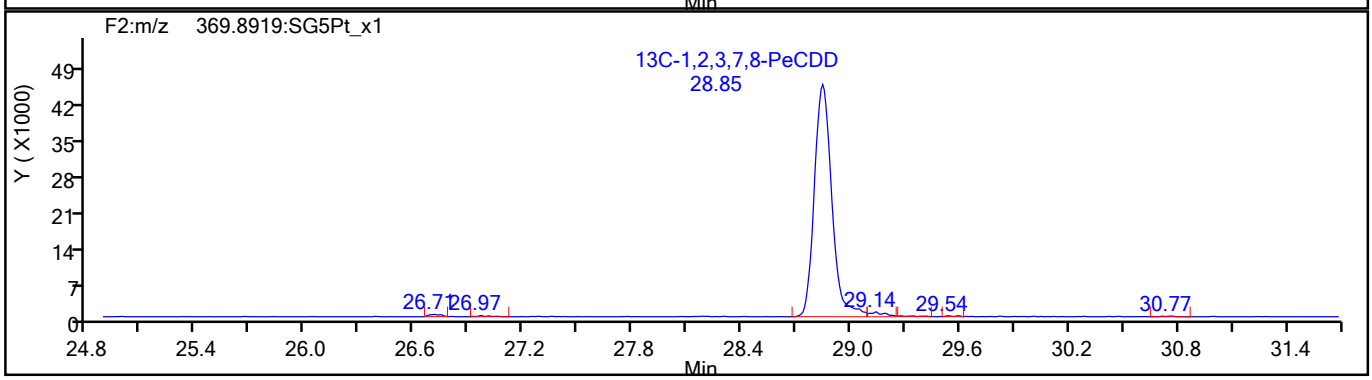

787460

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

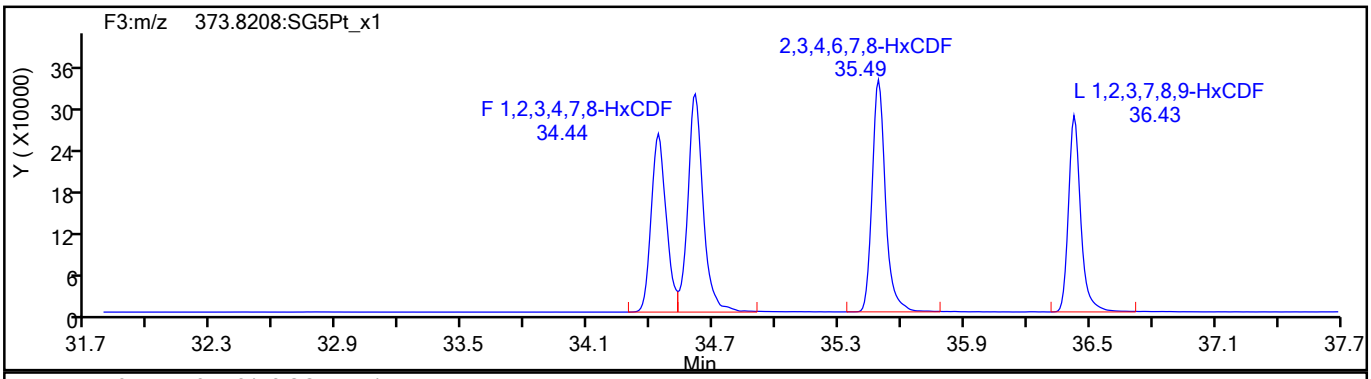

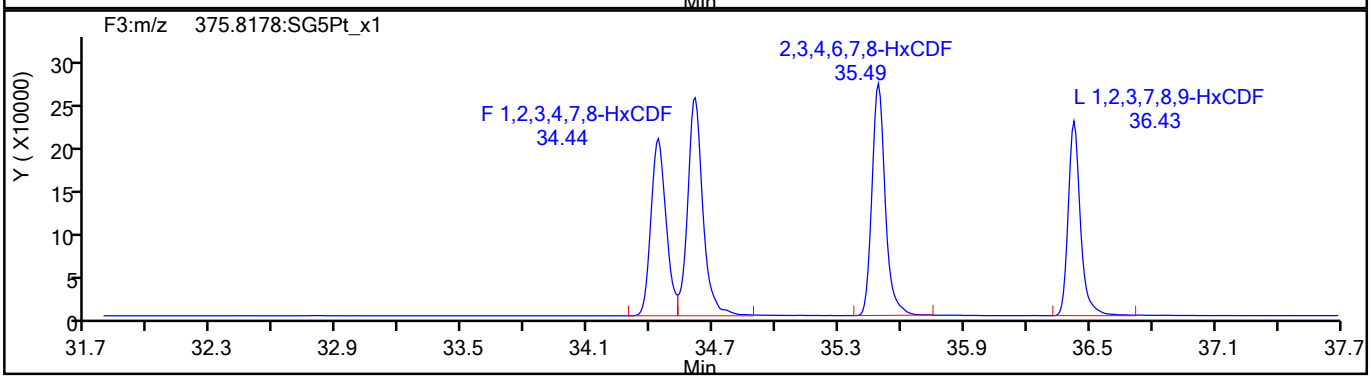

HxCDF Standards

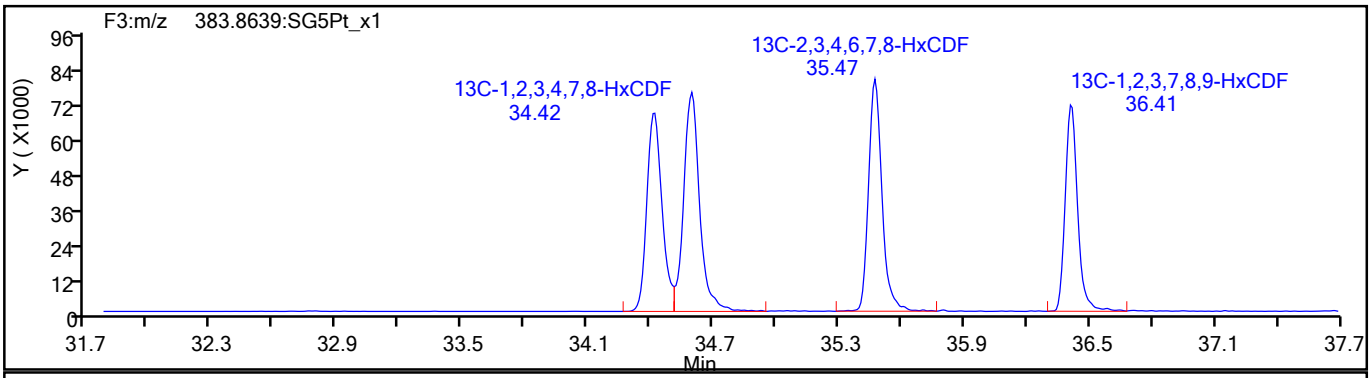

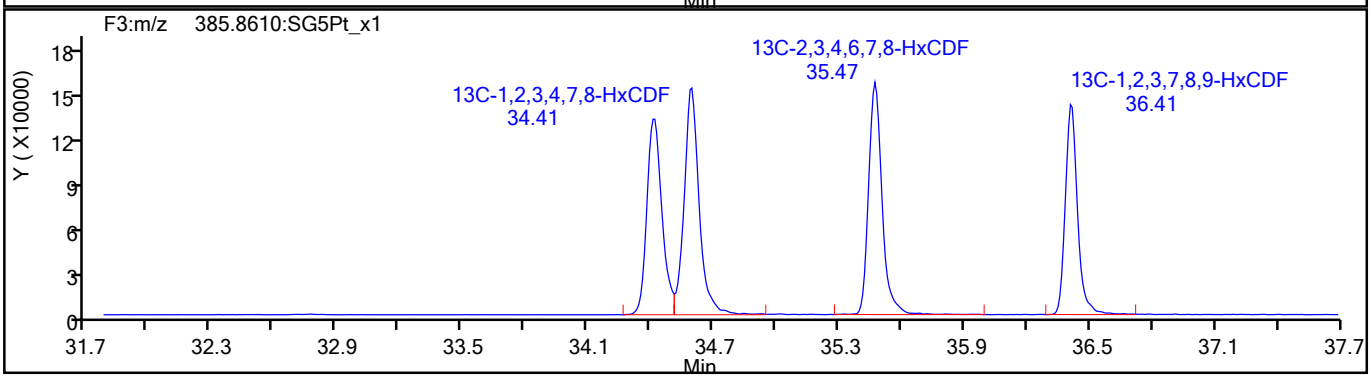

787461

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

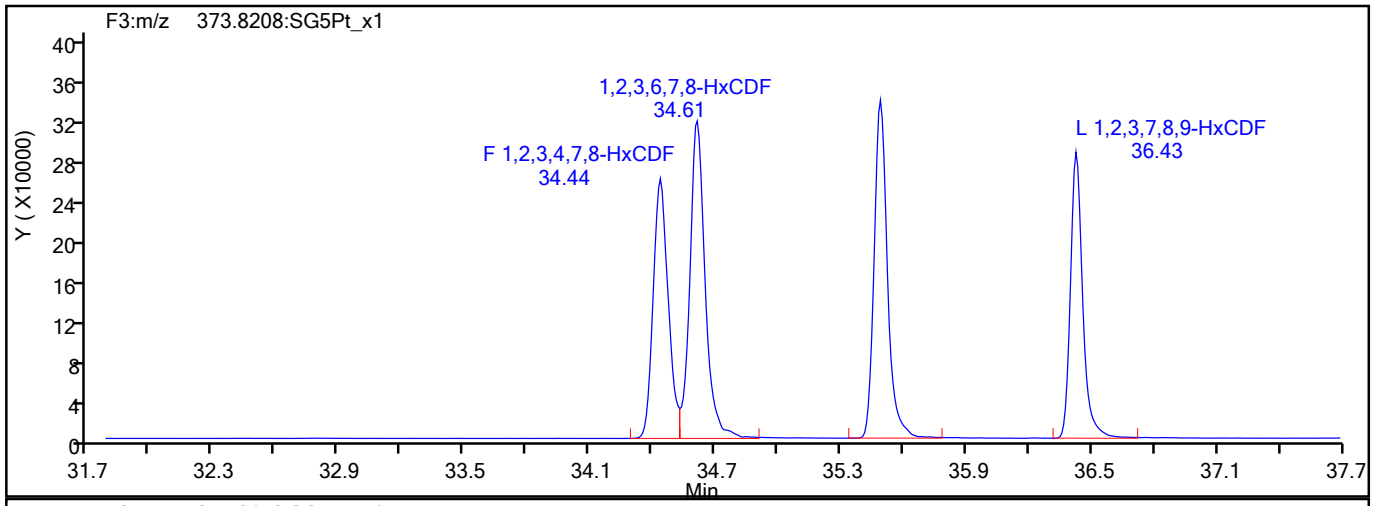

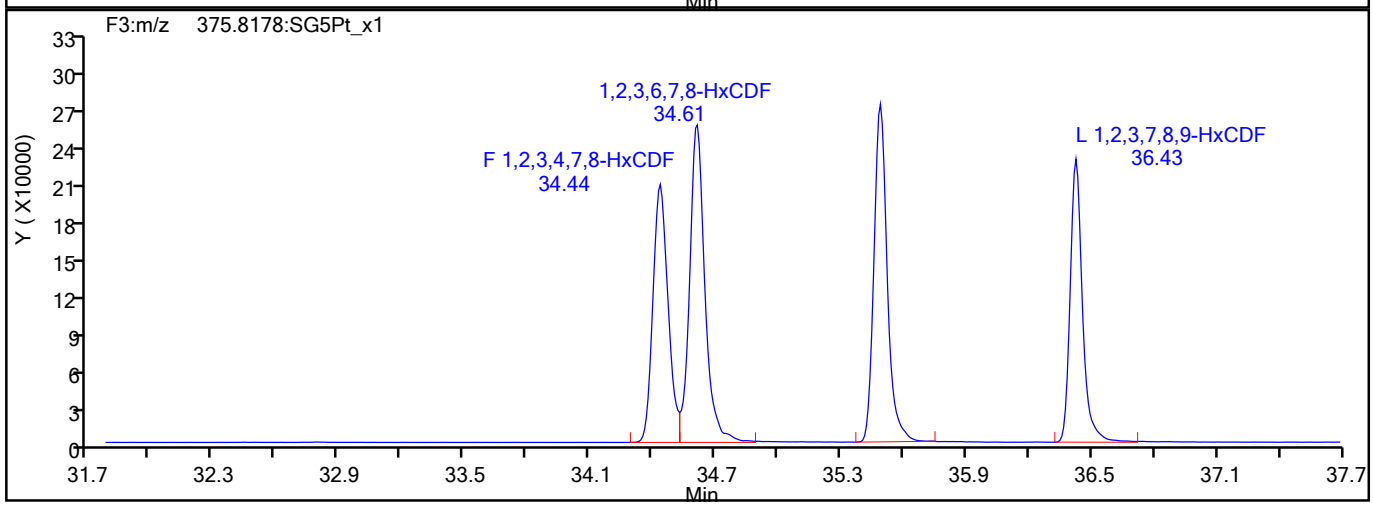

HxCDF Interference Mass

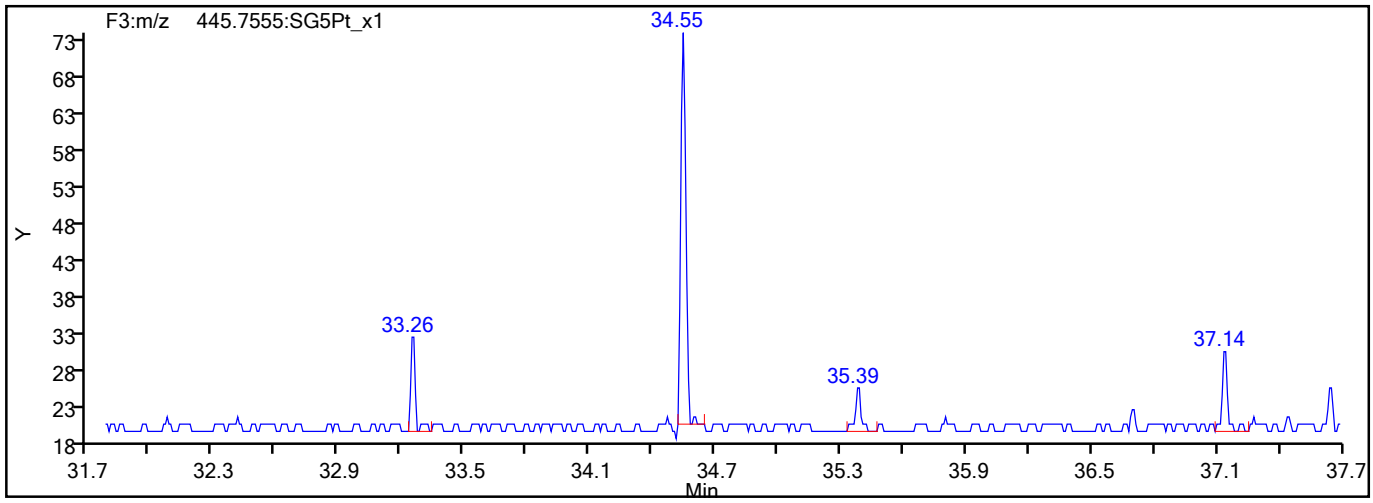

787462

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

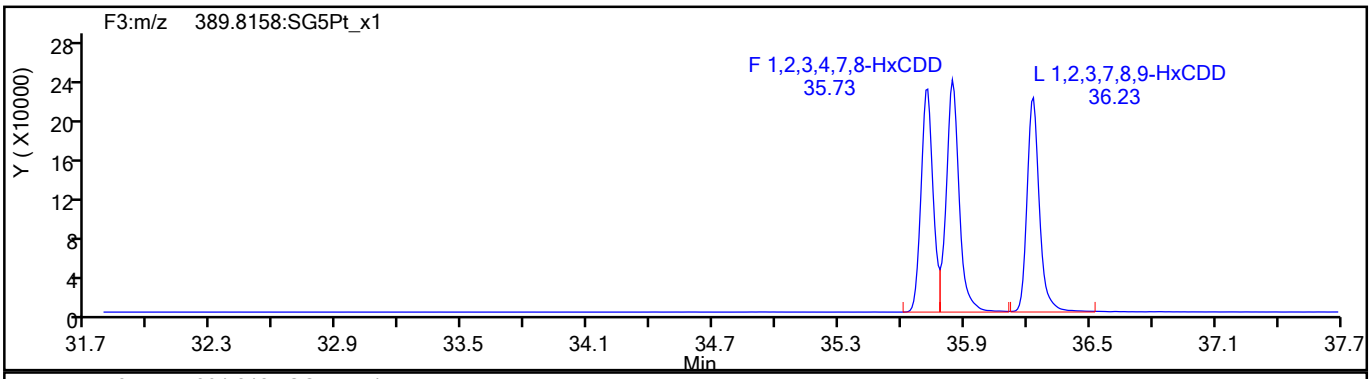

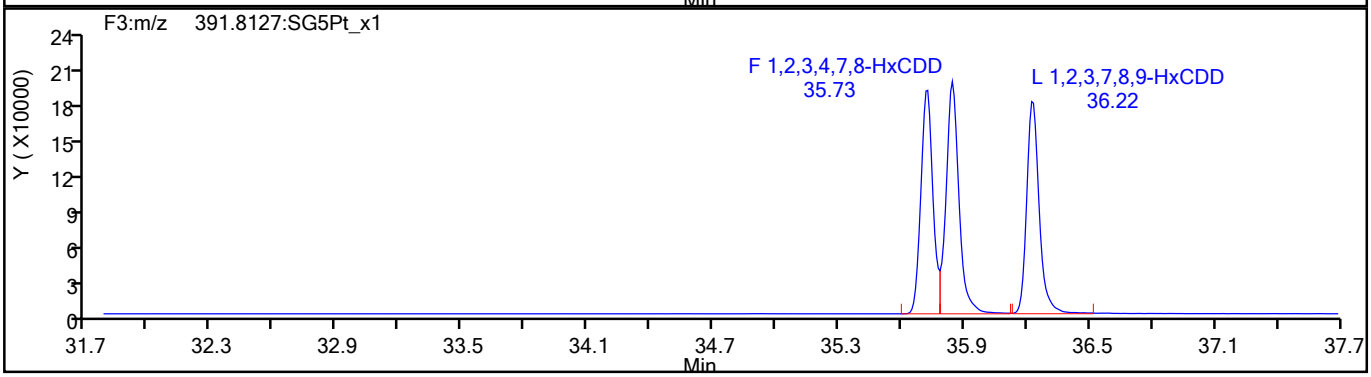

HxCDD Standards

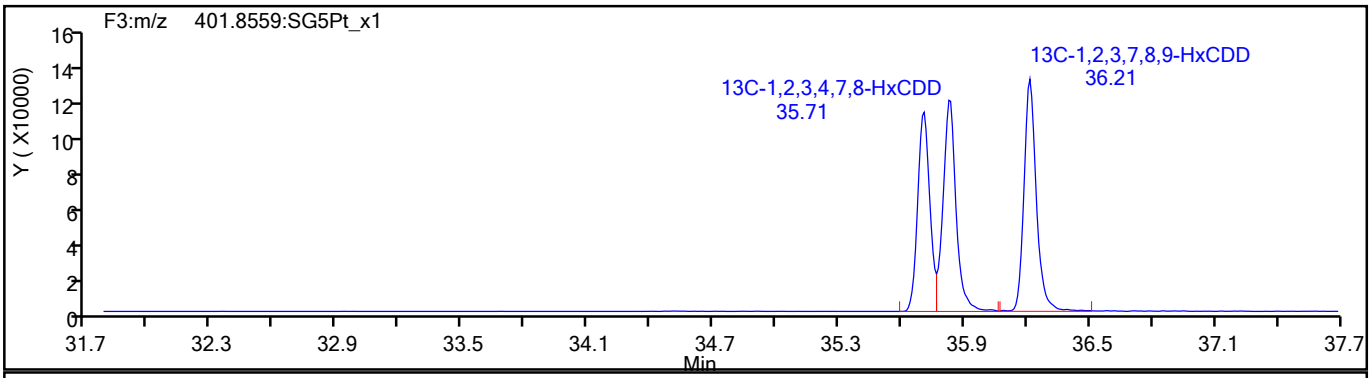

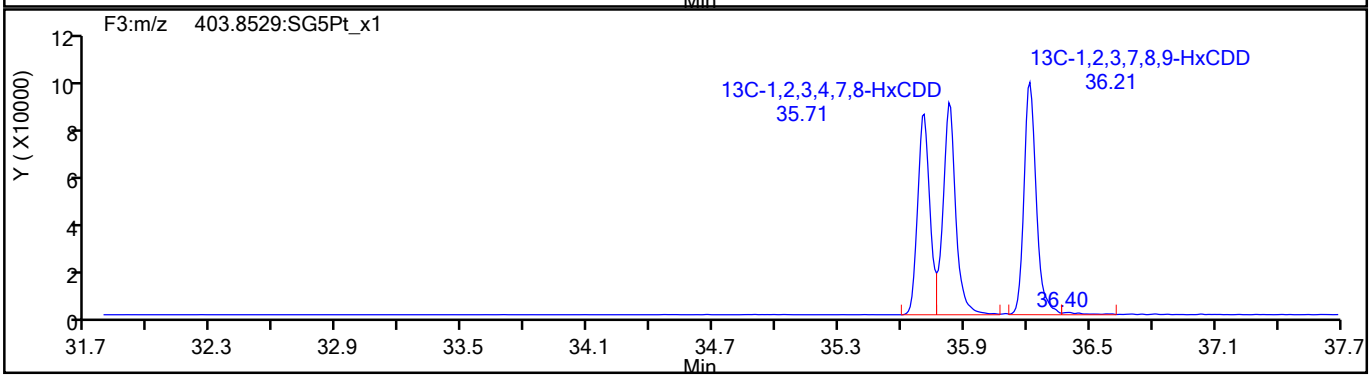

787463

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

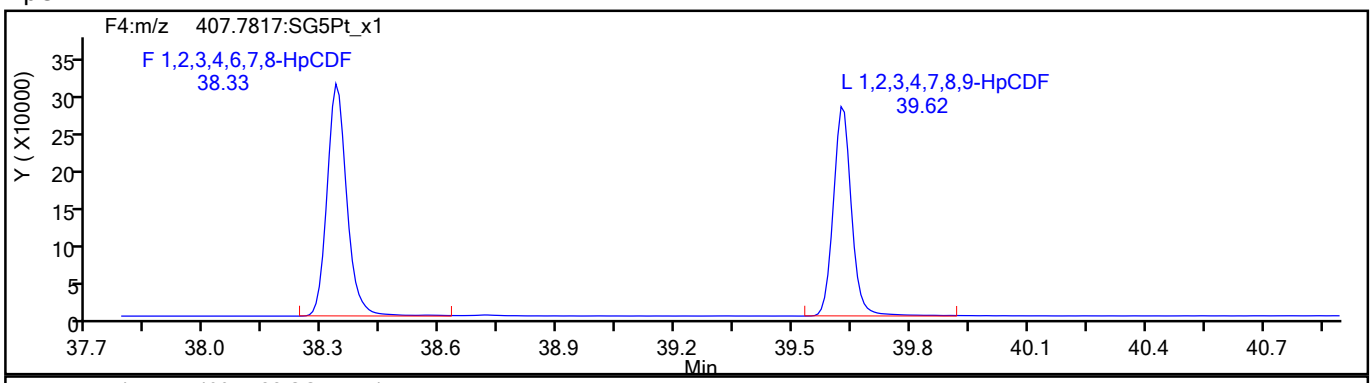

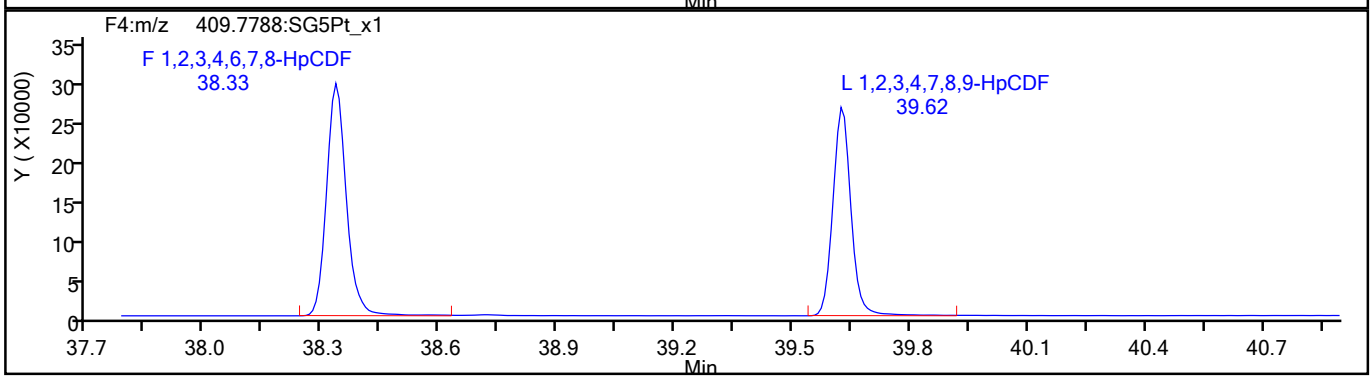

HpCDF Standards

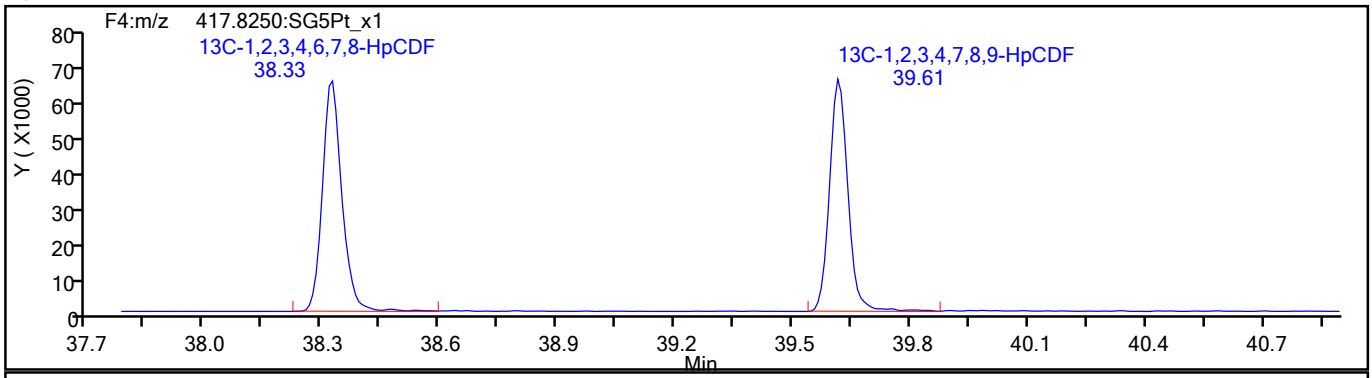

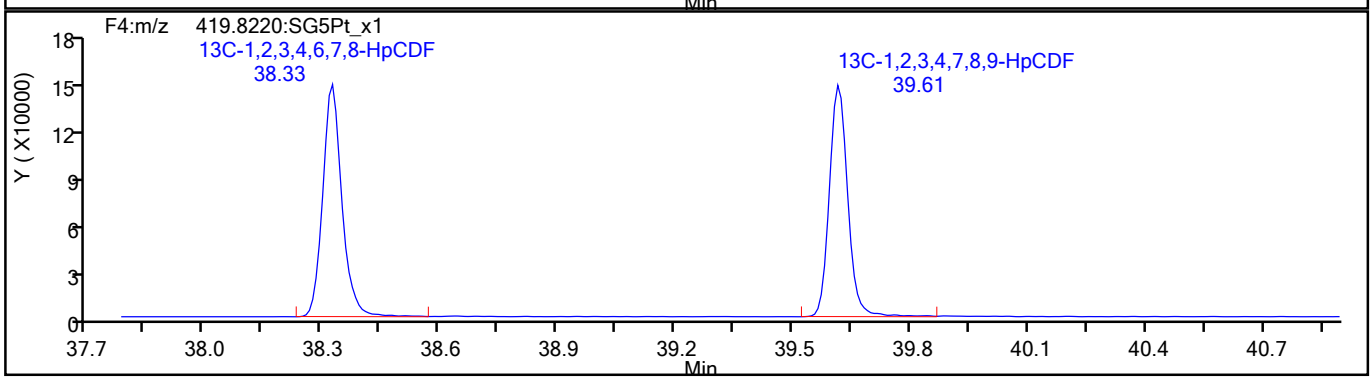

787464

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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HpCDF

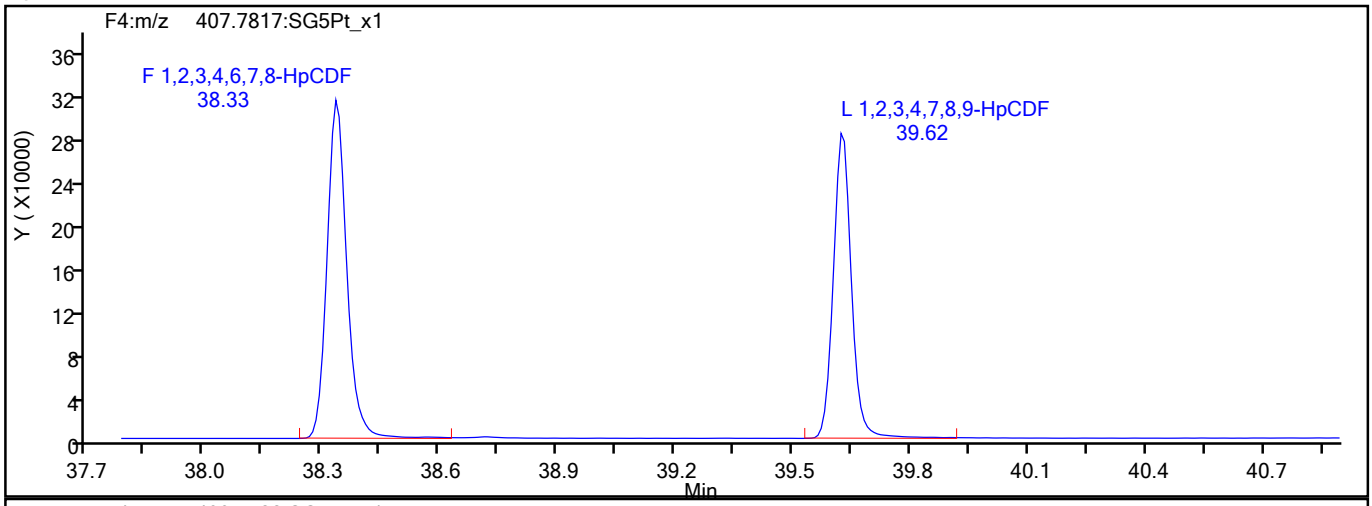

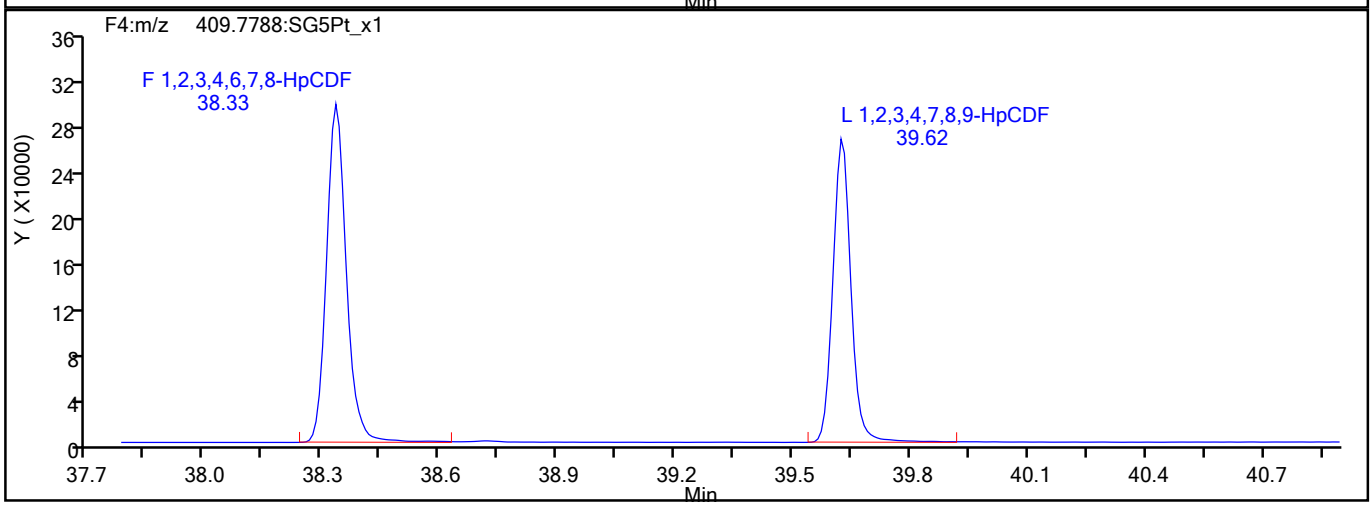

HpCDF Interference Mass

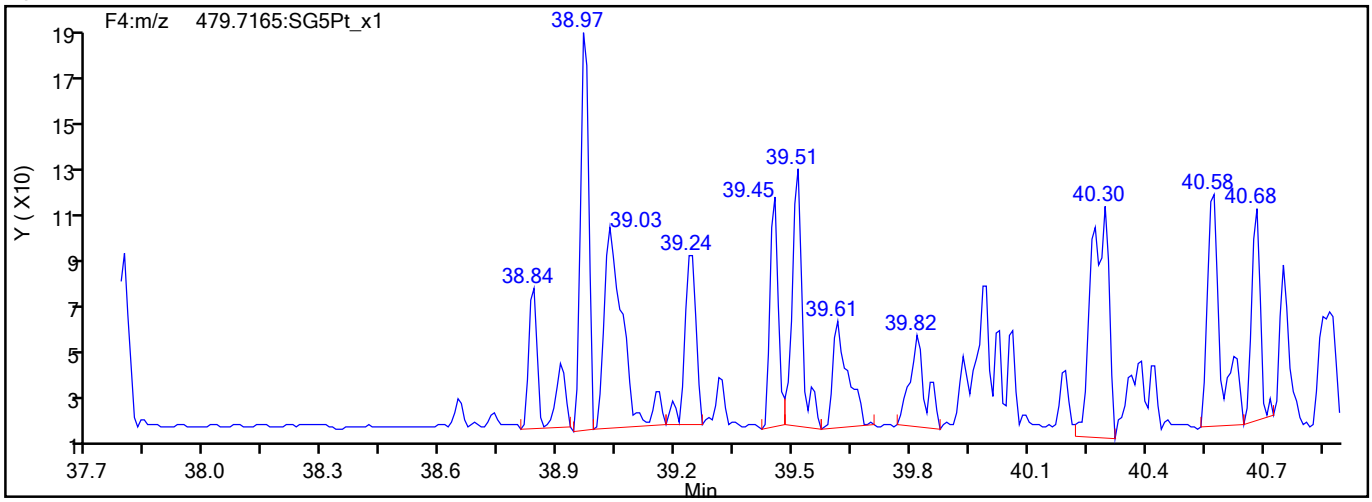

787465

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

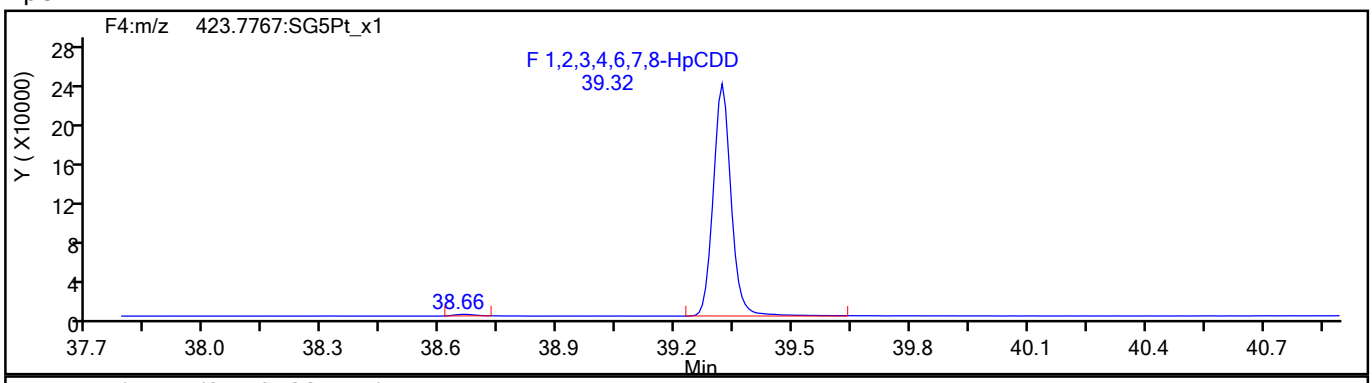

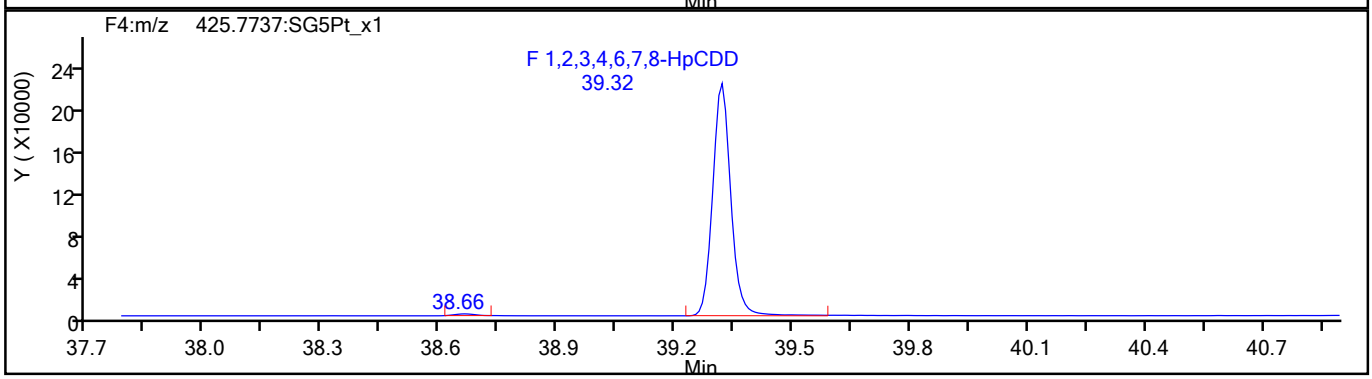

HpCDD Standards

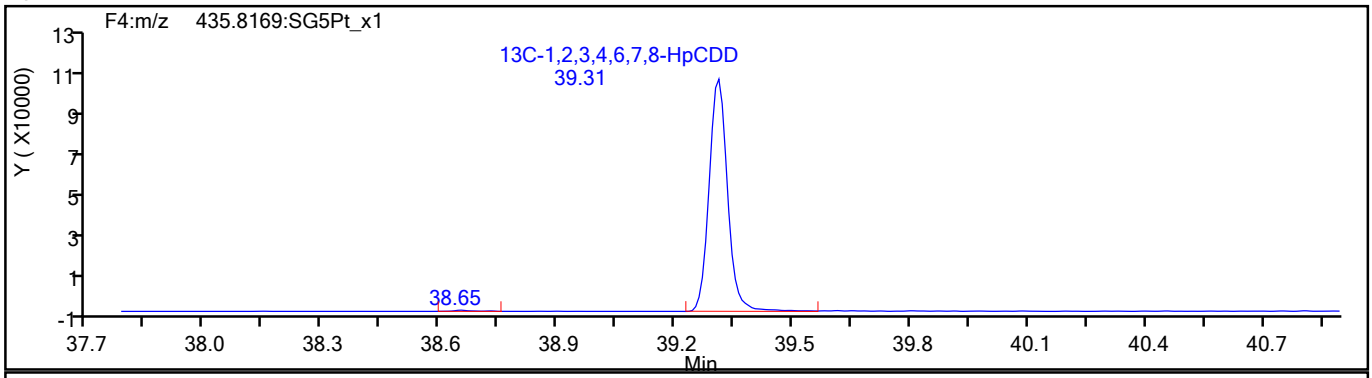

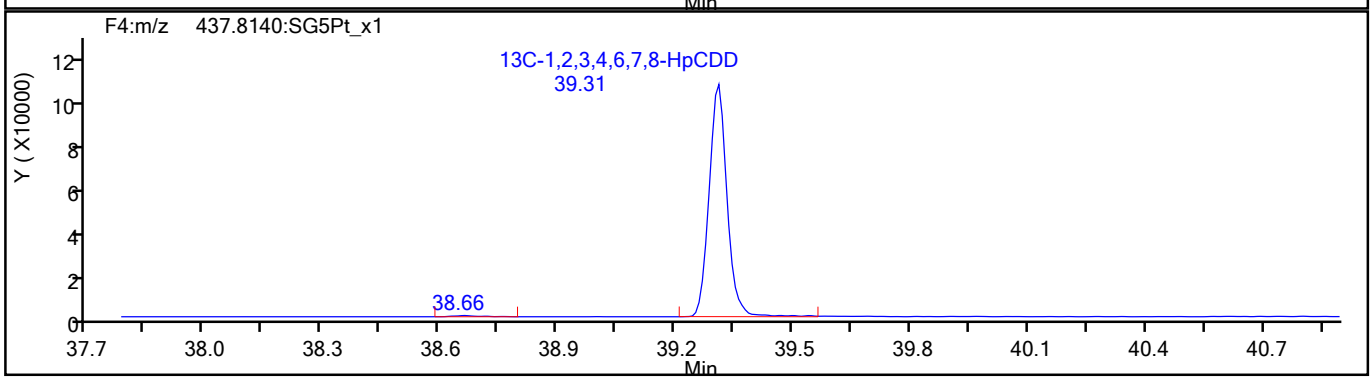

787466

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

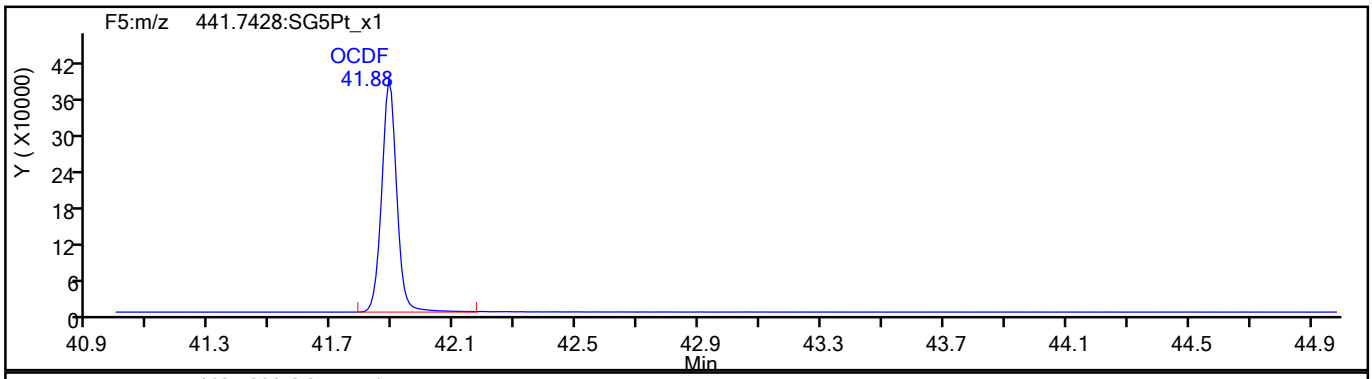

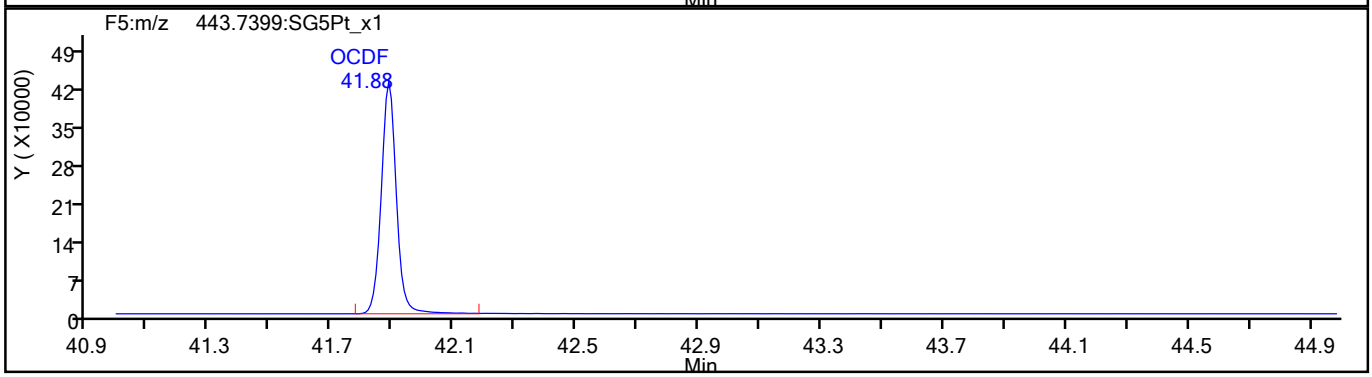

OCDF Standards

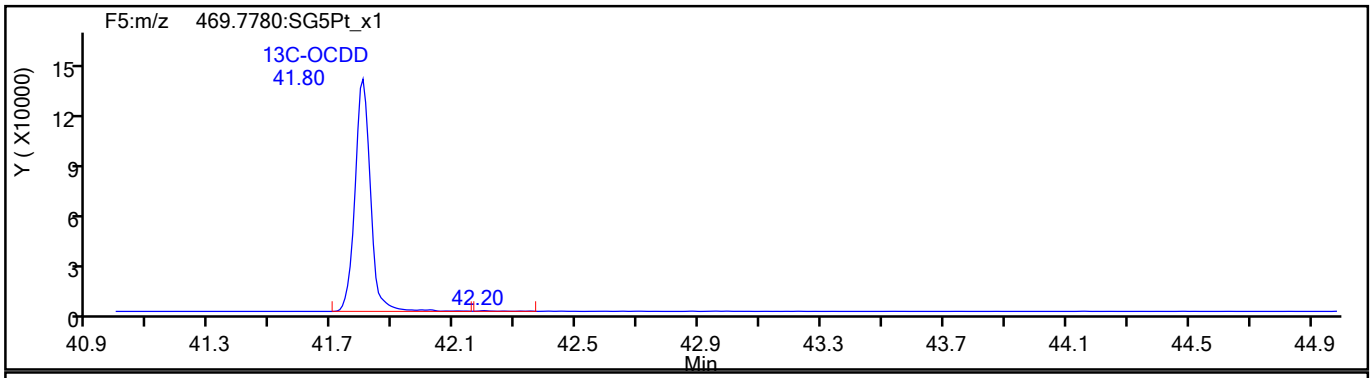

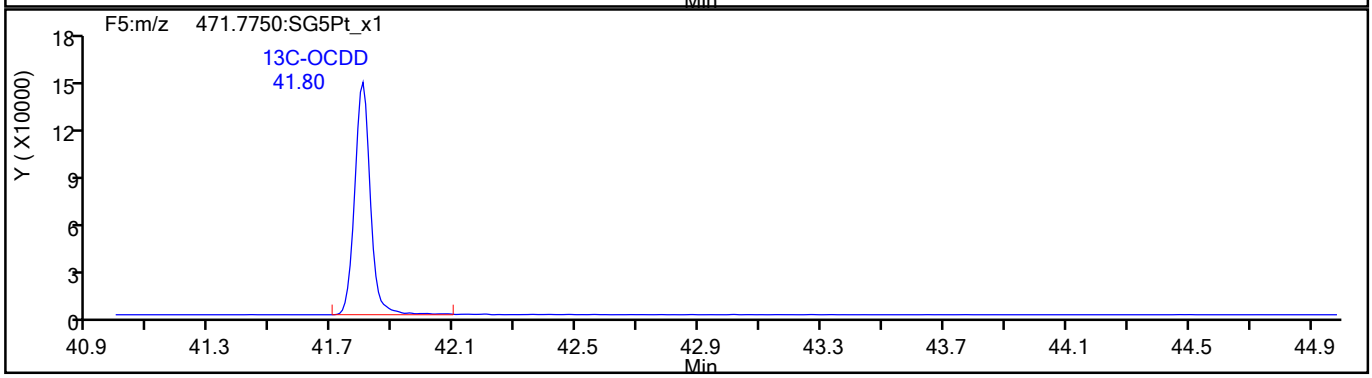

787467

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

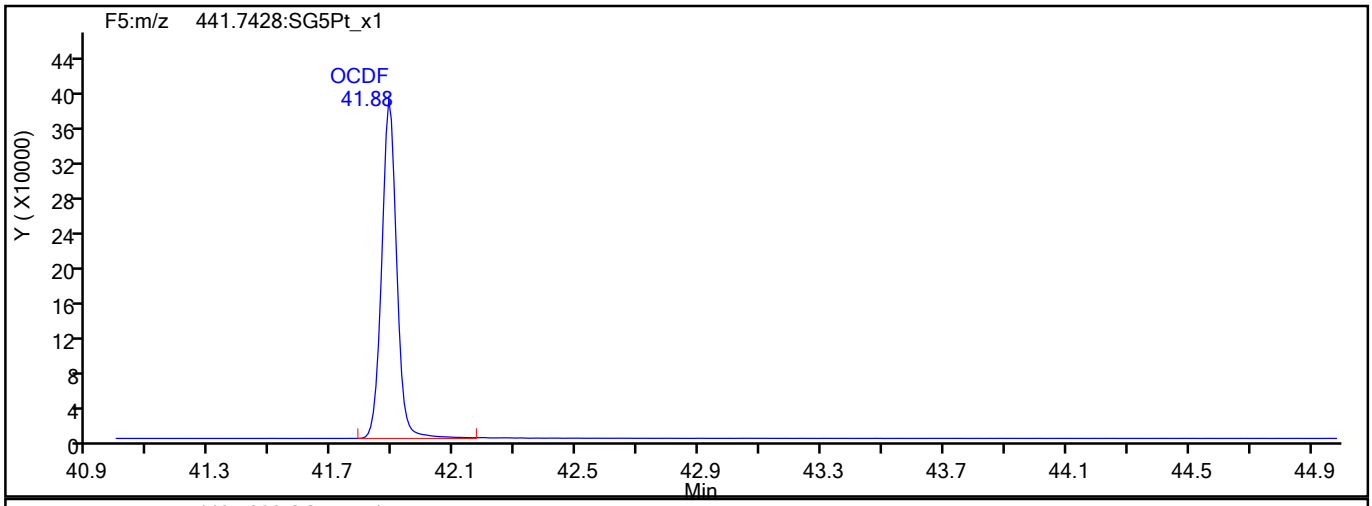

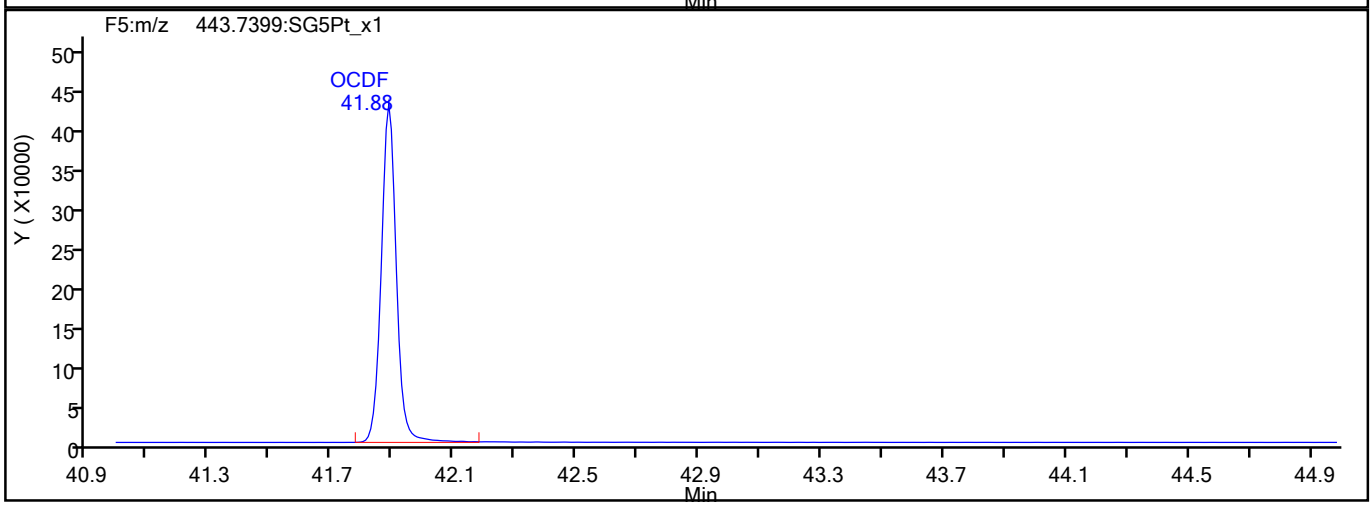

OCDF Interference Mass

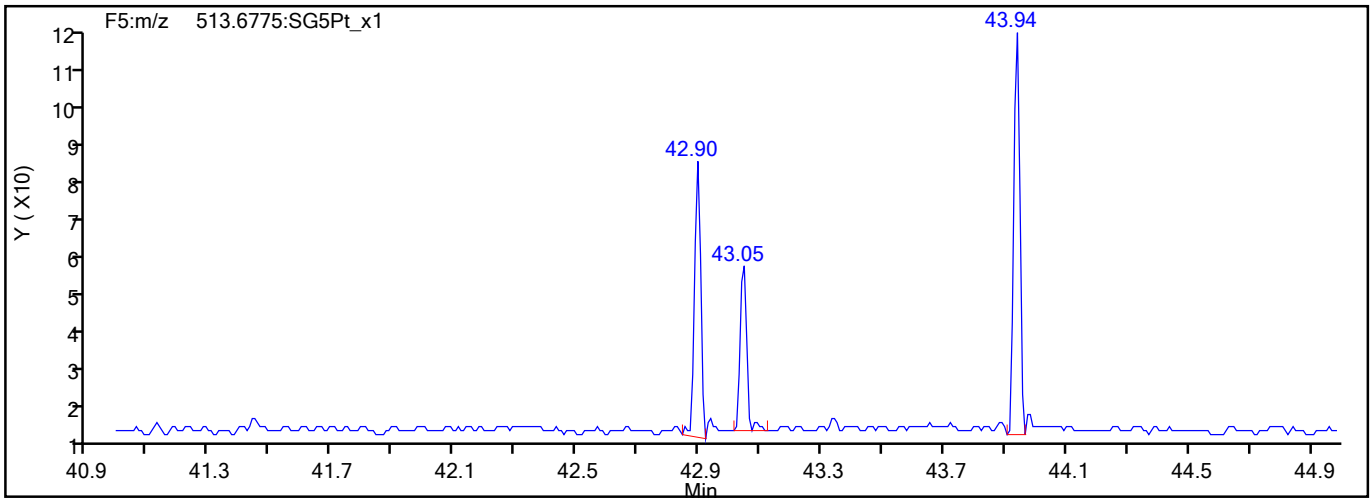

787468

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

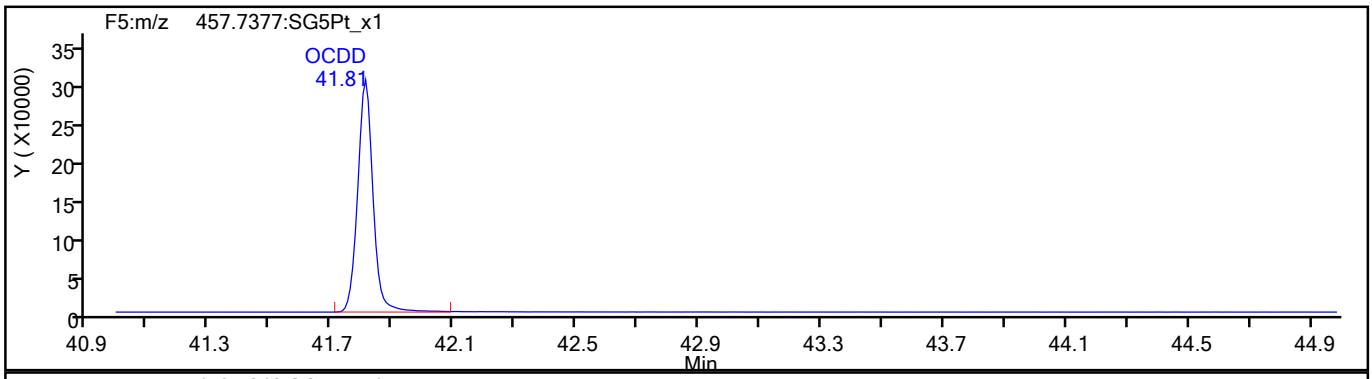

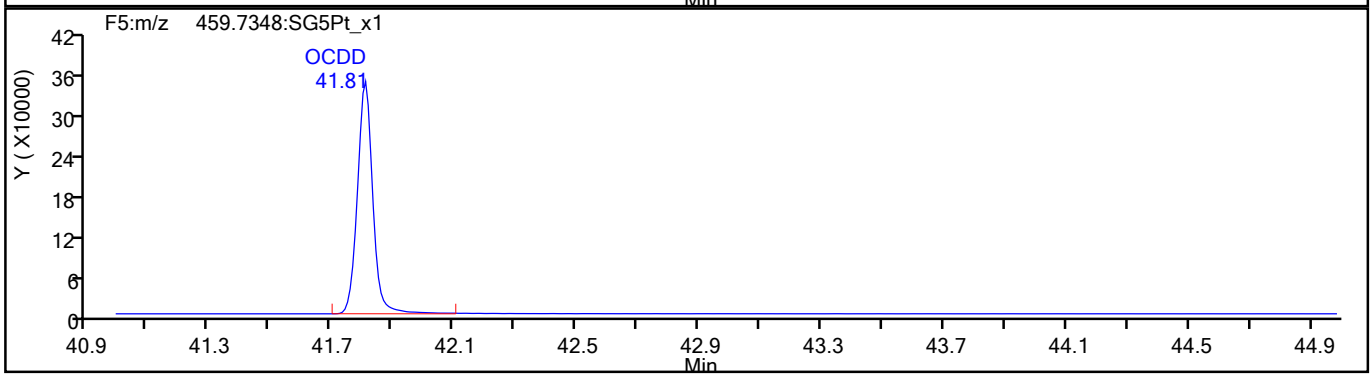

OCDD Standards

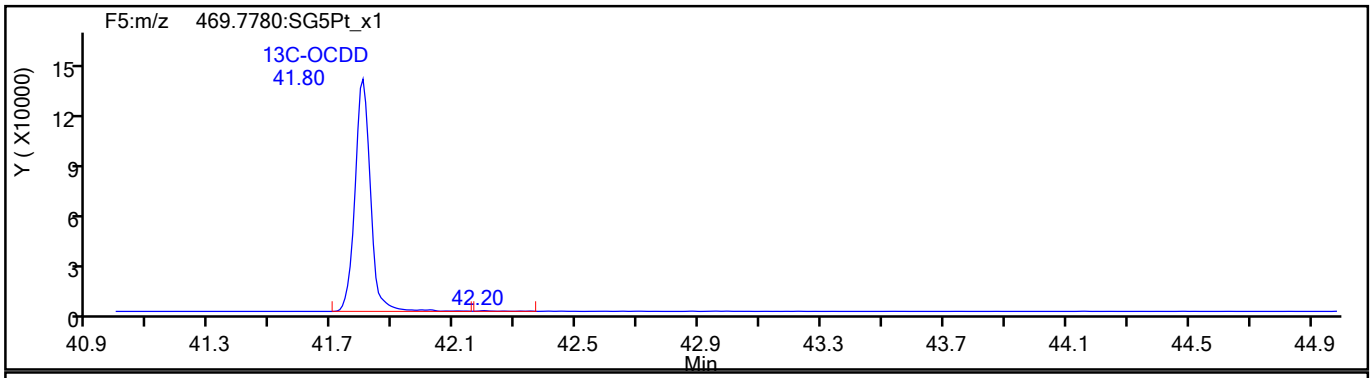

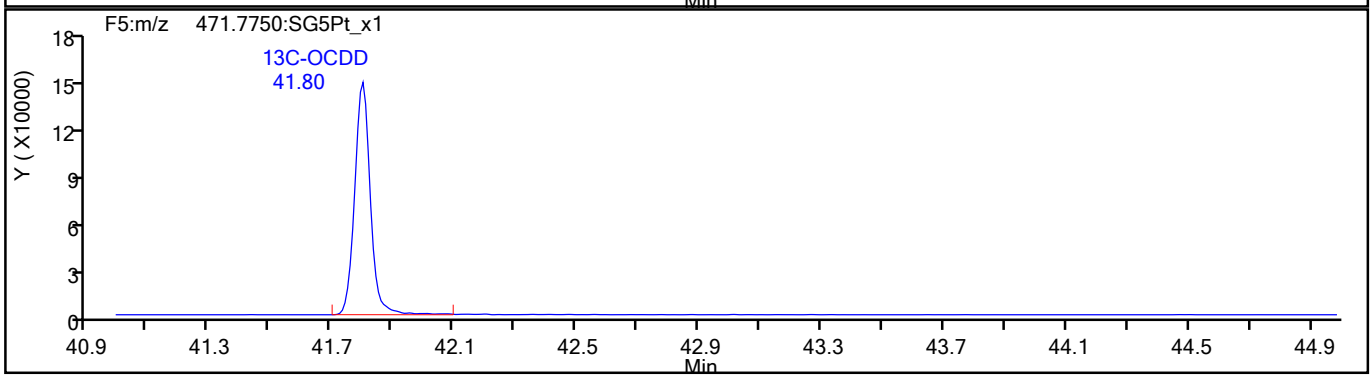

787469

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

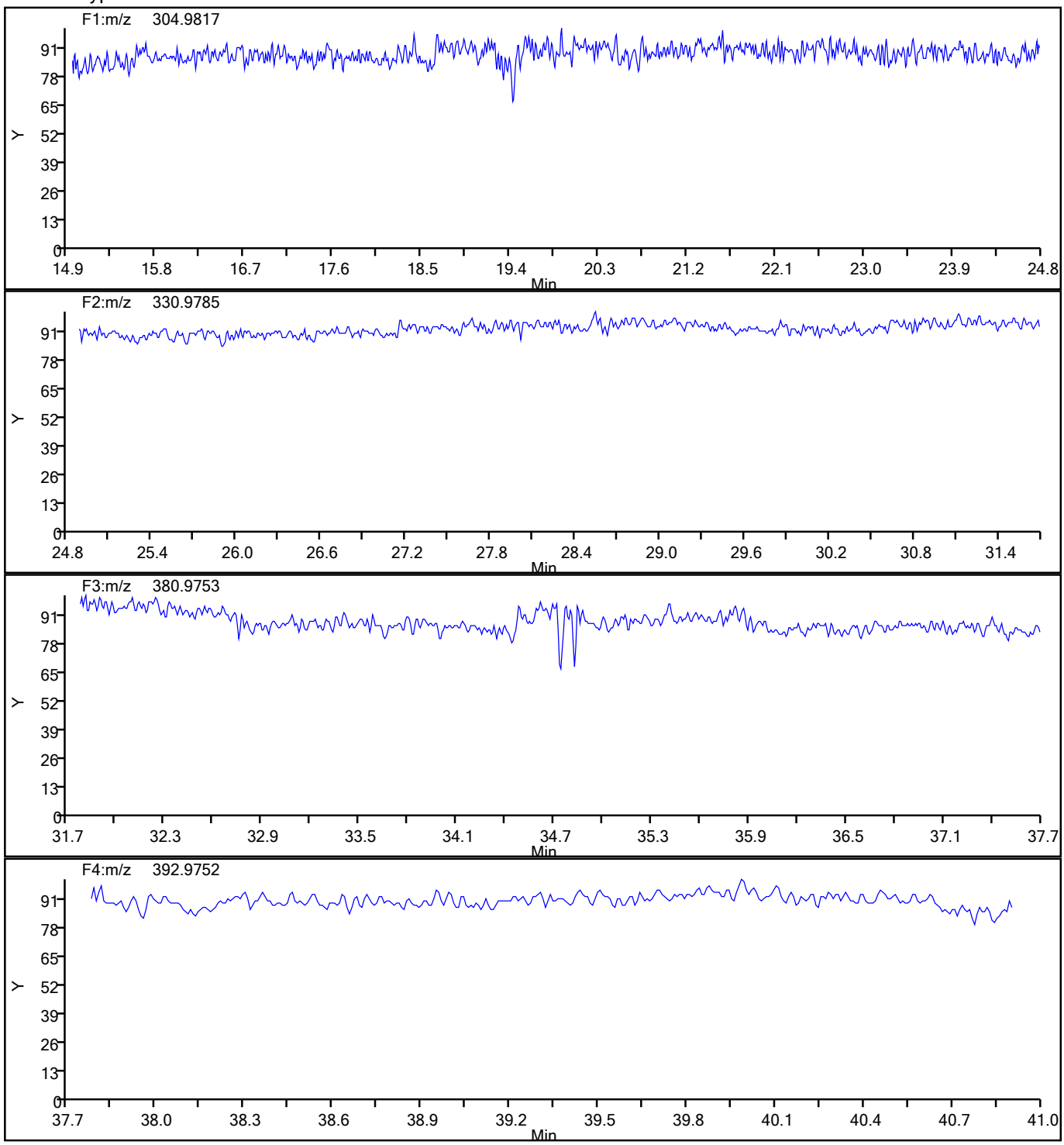

787470

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

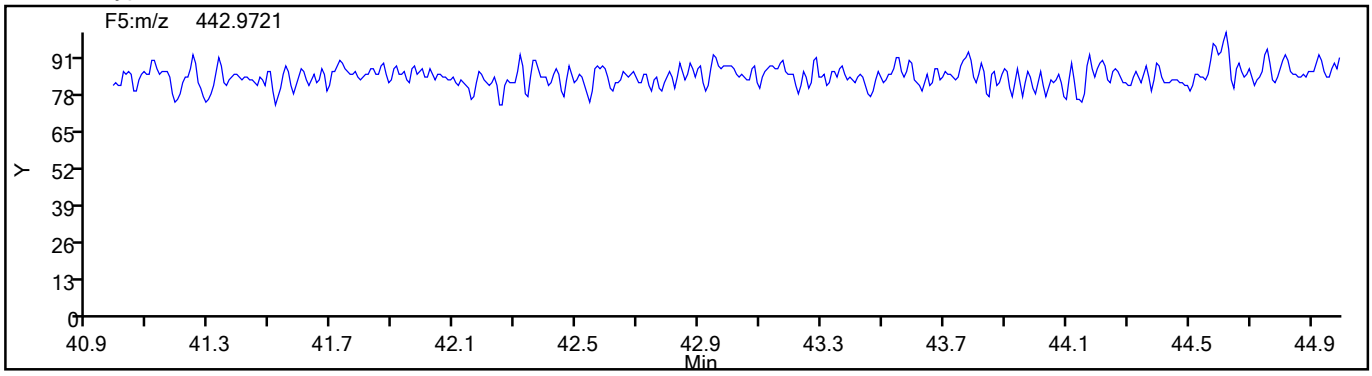

787471

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID: CCV 320-517462/43 Calibration Date: 08/19/2021 01:32

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_47.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.245		11.5	10.0	115	84-120
2,3,7,8-TCDD	AveID	1.075	1.091		10.1	10.0	101	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.086		51.5	50.0	103	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9679		48.0	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.034		49.4	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.177		51.3	50.0	103	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.349		55.4	50.0	111	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.333		54.9	50.0	110	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9806		46.2	50.0	92	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9110		45.9	50.0	92	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.012		45.6	50.0	91	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.321		53.3	50.0	107	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.388		48.1	50.0	96	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.035		49.3	50.0	99	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.305		49.8	50.0	100	86-116
OCDD	AveID	1.062	1.020		96.0	100	96	79-126
OCDF	AveID	1.317	1.321		100	100	100	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.297		96.4	100	96	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9349		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.121		98.3	100	98	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.082		96.1	100	96	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6859		95.7	100	96	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.092		113	100	113	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.016		94.9	100	95	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	0.9659		92.8	100	93	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8144		107	100	107	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9636		112	100	112	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9078		93.3	100	93	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7453		101	100	101	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7361		109	100	109	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.6807		99.3	100	99	77-129
13C-OCDD	Ave	0.5446	0.6101		224	200	112	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	0.9902		9.82	10.0	98	79-127

31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A b.i. NU	12	1613B/Solid	D266	KSS	10.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	10.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	10.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	10.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A bad inj.	27	1613B/Solid		KSS	10.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	10.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	10.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	10.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A needs 20x	31 } matrix	1613B/Solid		KSS	10.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32 }	1613B/Solid		KSS	10.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	
47	17AU21DFS1_47	CCV CS-4 HRDXNL4_00100	CCV 081721C	2	Dioxin		KSS	1.000	
48	17AU21DFS1_48	WDM HRDXNCP_00044	WDM 081721C	1	Dioxin		KSS	1.000	
49	17AU21DFS1_49	SB Solvent Blank C14	SB 081721F	3	Dioxin		KSS	1.000	
50	17AU21DFS1_50	mb 320-513879/1-a	mb 320-513879/1-a	33	1613B/Solid	D267	KSS	10.000	g
51	17AU21DFS1_51	lcs 320-513879/2-a	lcs 320-513879/2-a	34	1613B/Solid		KSS	10.000	g
52	17AU21DFS1_52	320-76901-a-2-a	320-76901-a-2-a	35	1613B/Solid		KSS	10.000	g
53	17AU21DFS1_53	320-76901-a-2-b ms	320-76901-a-2-b ms	36	1613B/Solid		KSS	10.000	g
54	17AU21DFS1_54	320-76901-a-2-c msd	320-76901-a-2-c msd	37	1613B/Solid		KSS	10.000	g
55	17AU21DFS1_55	320-76769-a-4-b	320-76769-a-4-b	38	1613B/Solid		KSS	10.000	g
56	17AU21DFS1_56	320-76888-a-6-a	320-76888-a-6-a	39	1613B/Solid		KSS	10.000	g
57	17AU21DFS1_57	320-76888-a-7-a	320-76888-a-7-a	40	1613B/Solid		KSS	10.000	g
58	17AU21DFS1_58	320-76888-a-8-a	320-76888-a-8-a	41	1613B/Solid		KSS	10.000	g
59	17AU21DFS1_59	320-76888-a-9-a	320-76888-a-9-a	42	1613B/Solid		KSS	10.000	g
60	17AU21DFS1_60	SB Solvent Blank C14	SB 081721G	3	Dioxin		KSS	1.000	
61	17AU21DFS1_61	Resolution Check	RC 081721D	46			KSS	1.000	

LOGFILE CHECKED)
DB 8/18/21

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

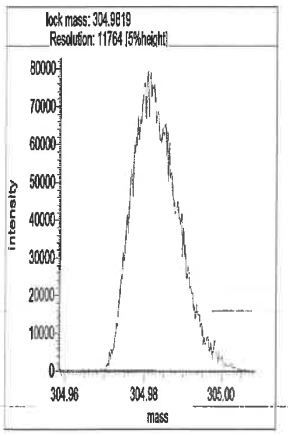

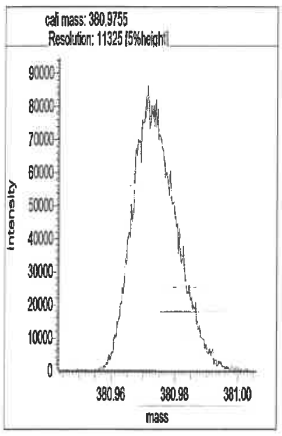

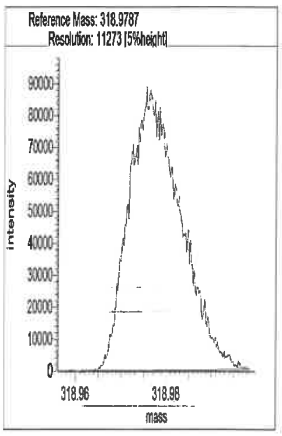

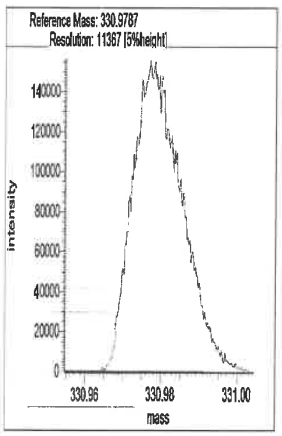

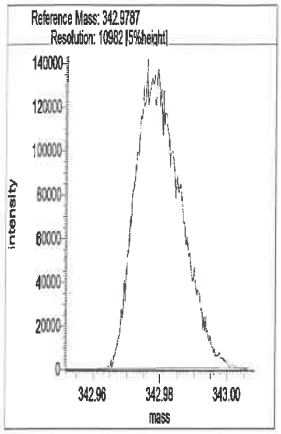

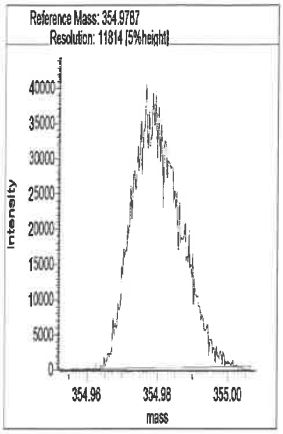

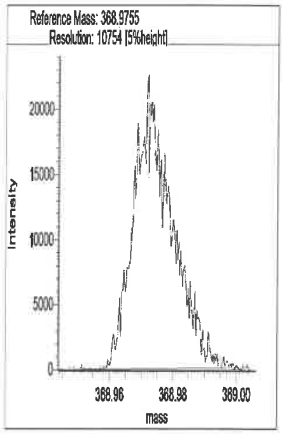

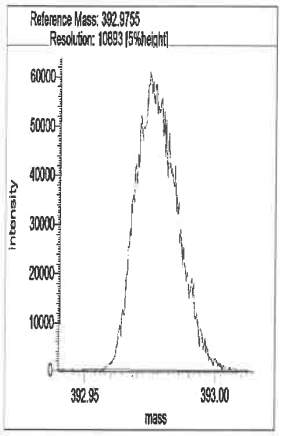

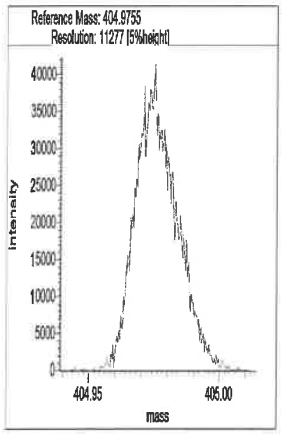

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

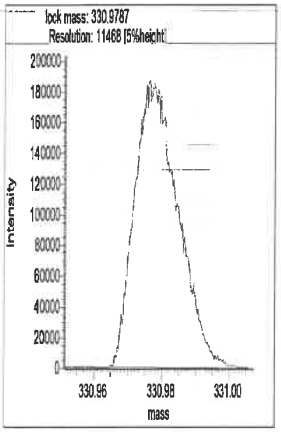

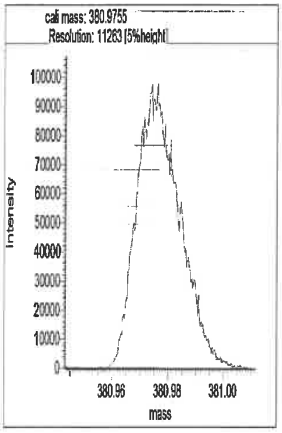

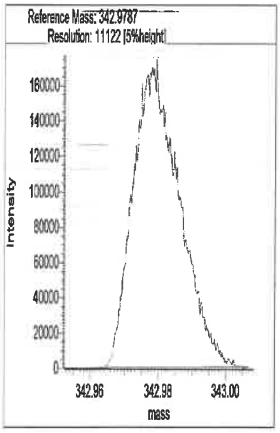

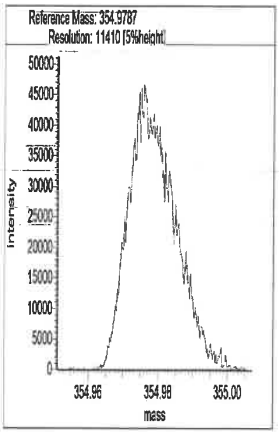

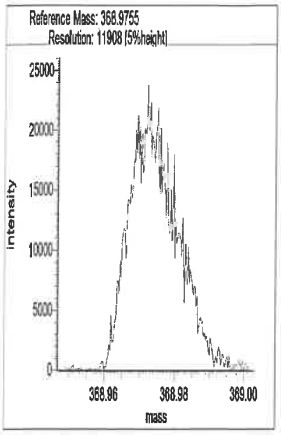

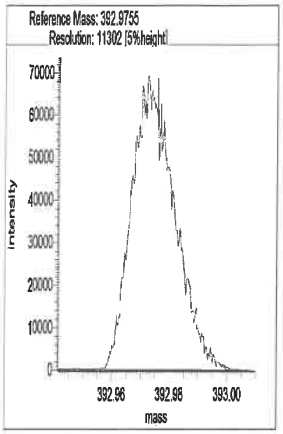

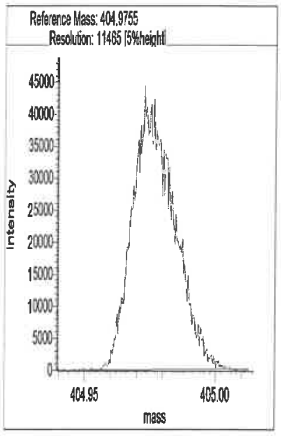

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

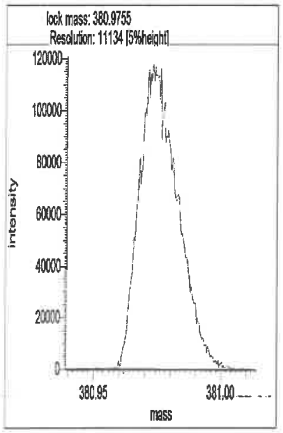

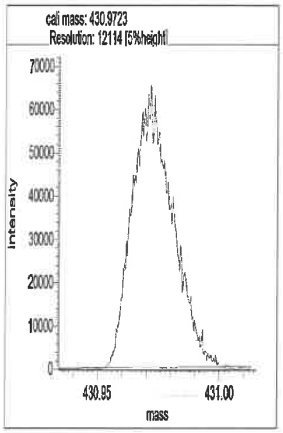

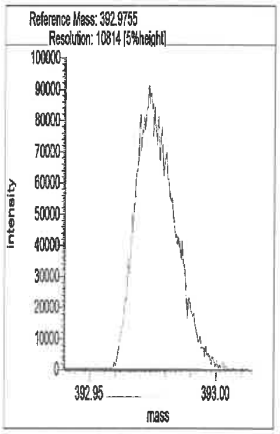

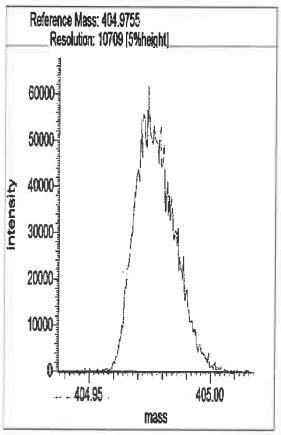

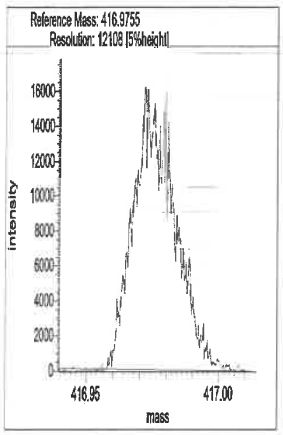

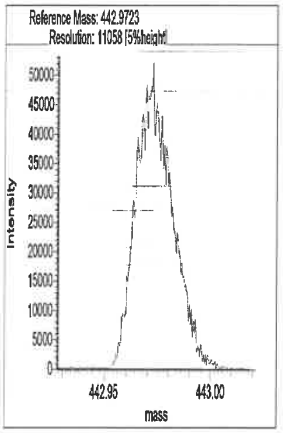

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

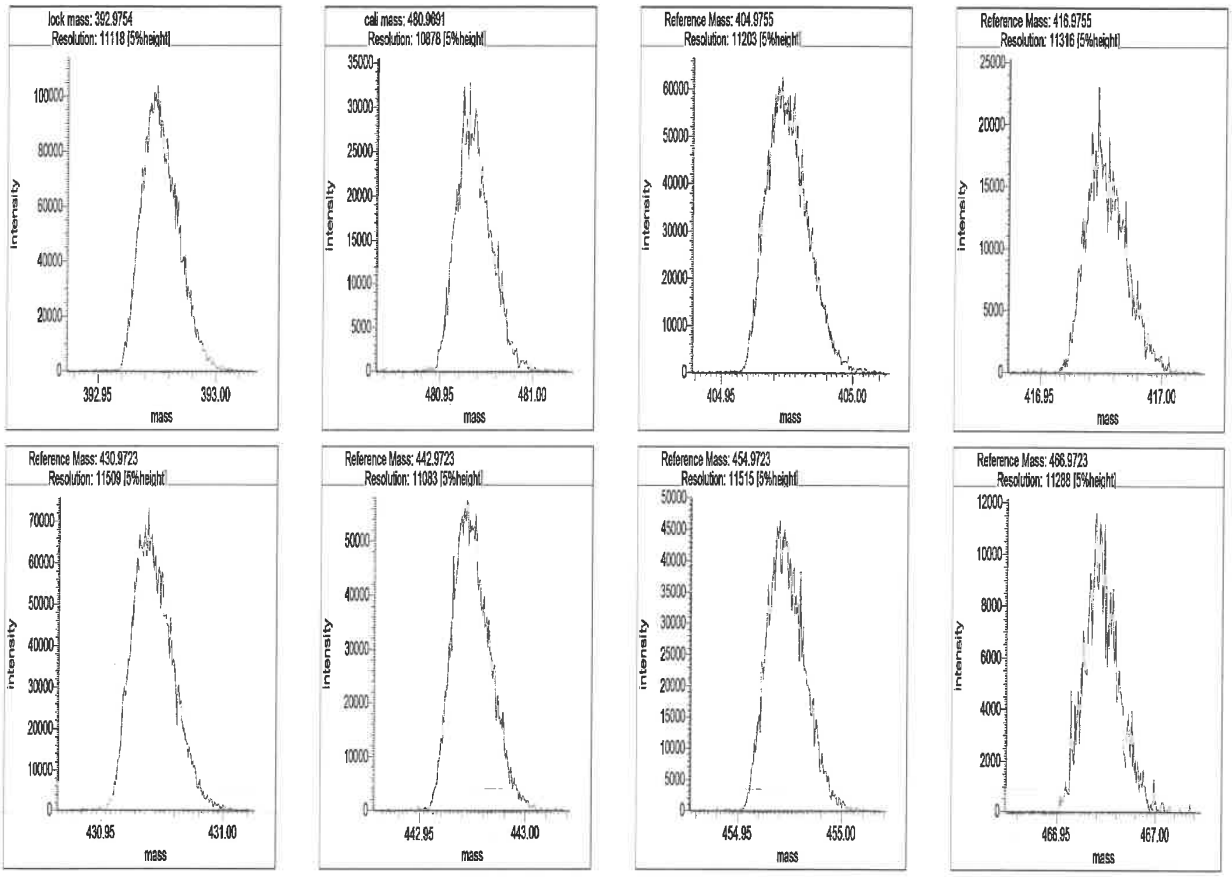

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

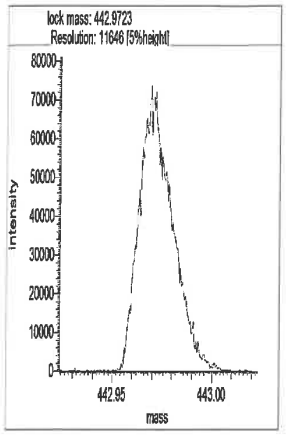
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

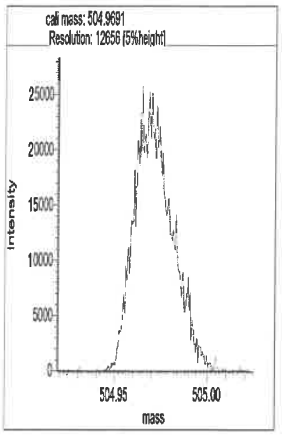
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

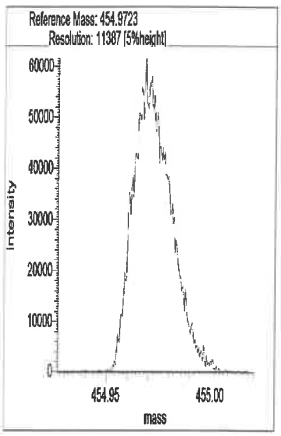
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

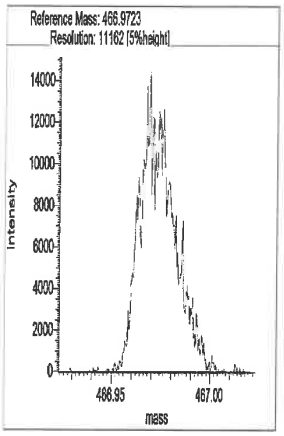
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

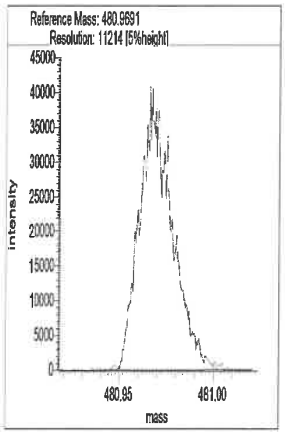
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

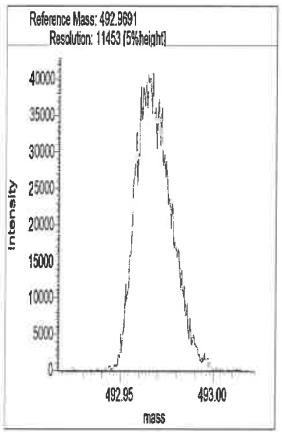
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 01:12
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10755 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10064 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11004 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10862 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10493 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11020 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10113 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10231 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9724 [5%height] ✓ ok 8/19/21

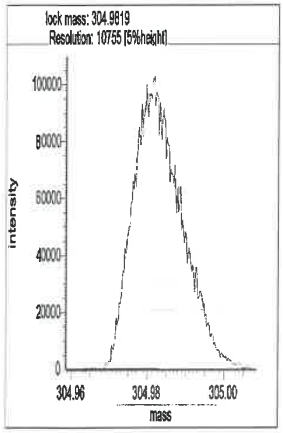

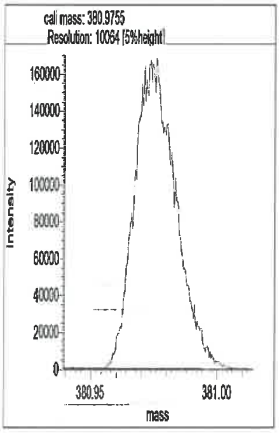

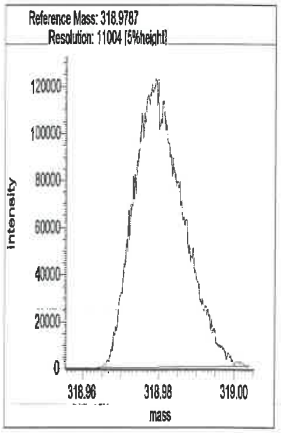

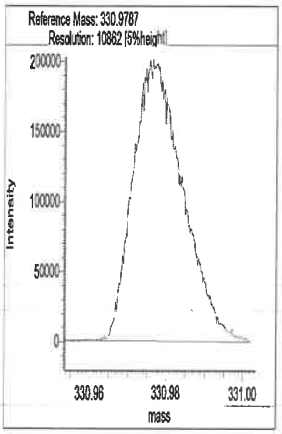

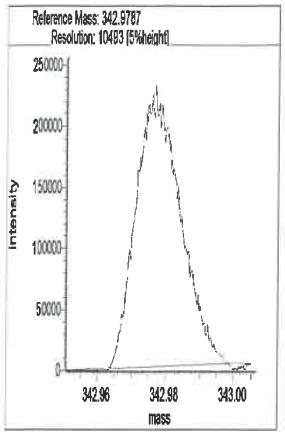

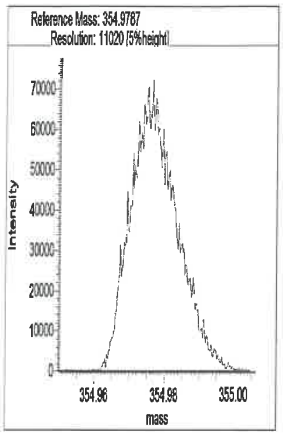

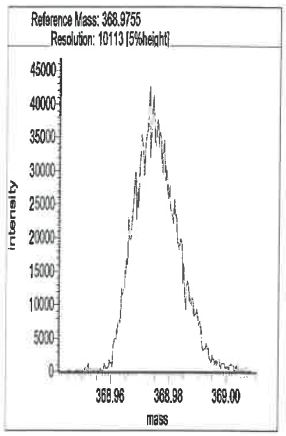

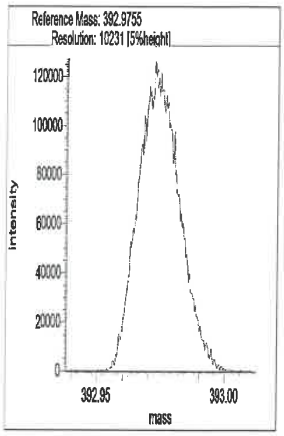

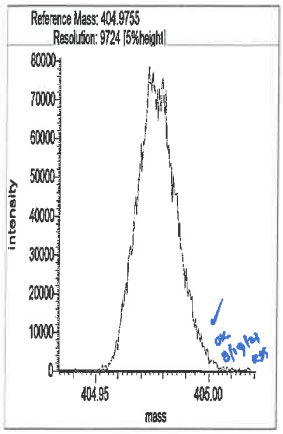

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10868 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10796 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10893 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11154 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10747 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10242 [5%height]

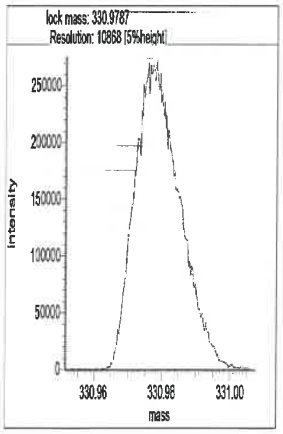

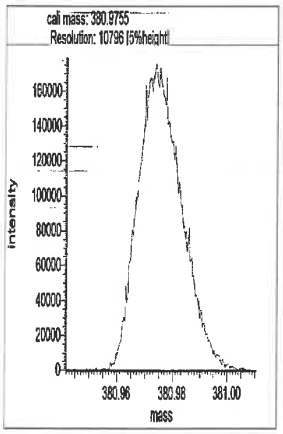

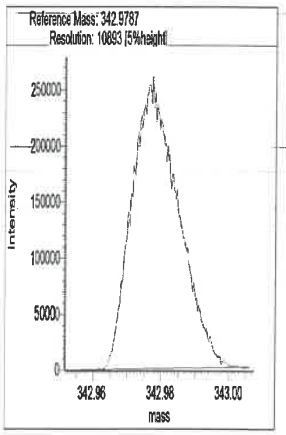

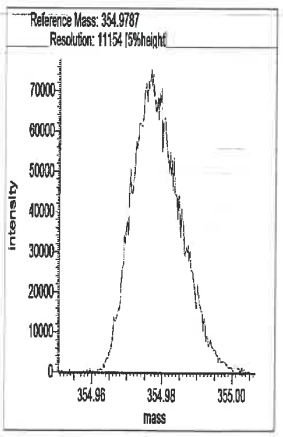

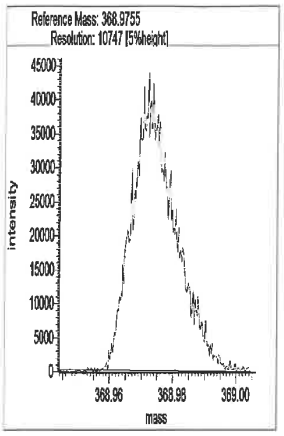

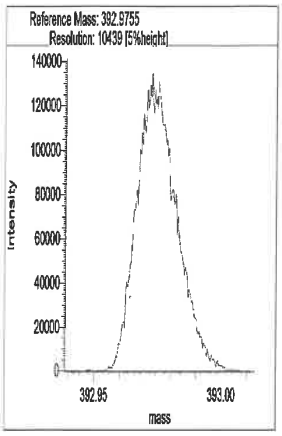

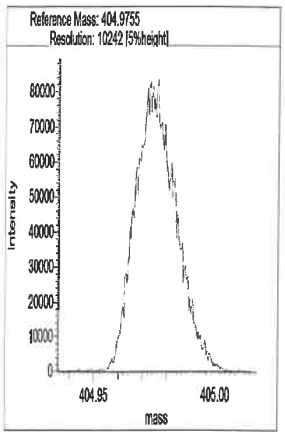

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11012 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10577 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11026 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10658 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11077 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10816 [5%height]

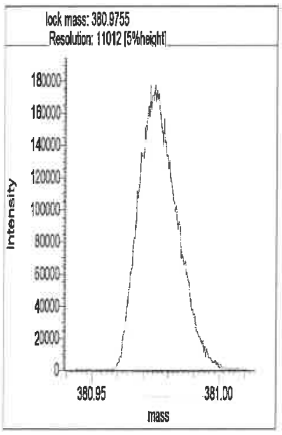

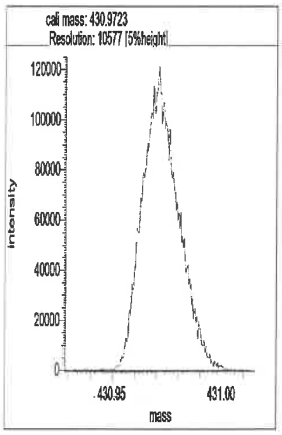

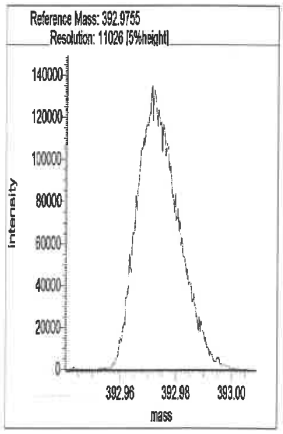

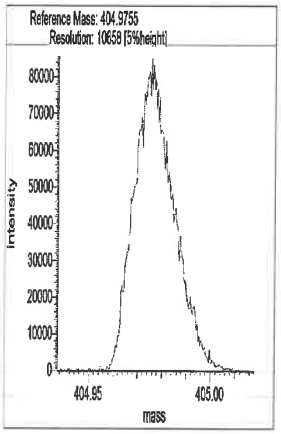

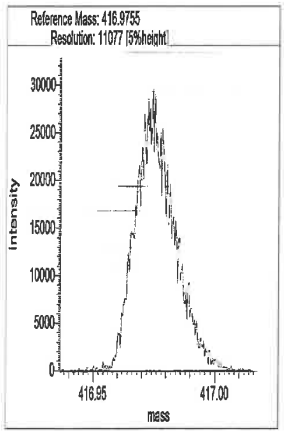

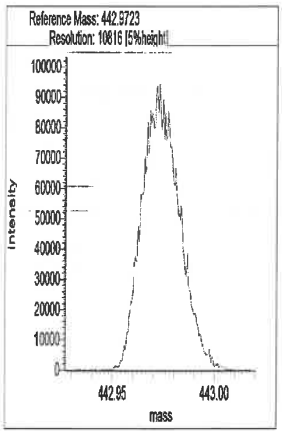

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11599 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10409 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11028 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11067 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10523 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10883 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10838 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11180 [5%height]

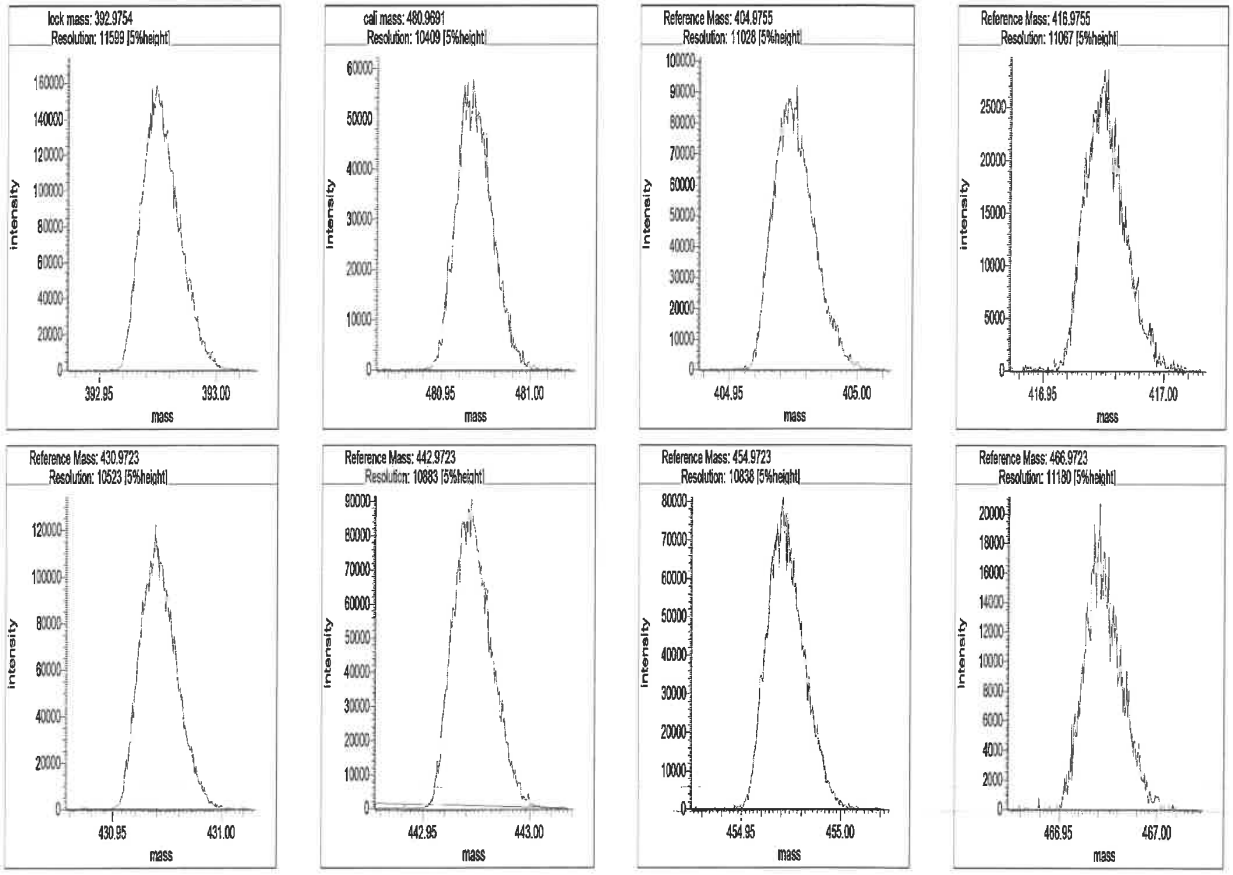

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11216 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10772 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11002 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11259 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10778 [5%height]

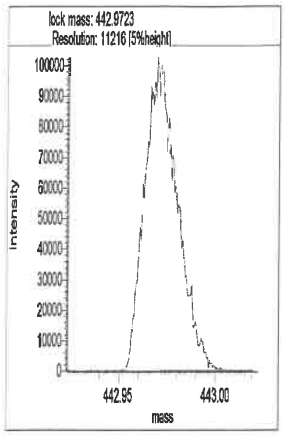
lock mass: 442.9723
Resolution: 11216 [5%height]
Intensity
mass

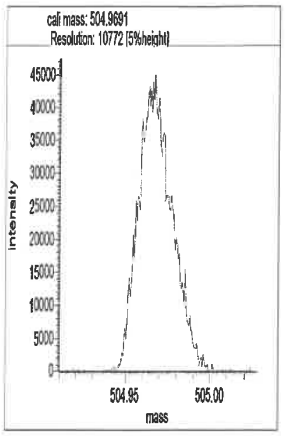
cali mass: 504.9691
Resolution: 10772 [5%height]
Intensity
mass

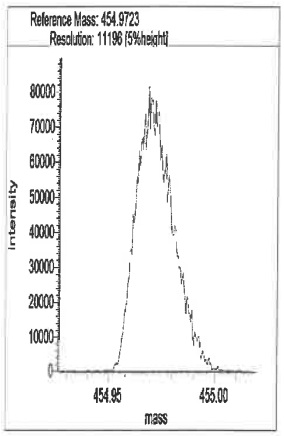
Reference Mass: 454.9723
Resolution: 11196 [5%height]
Intensity
mass

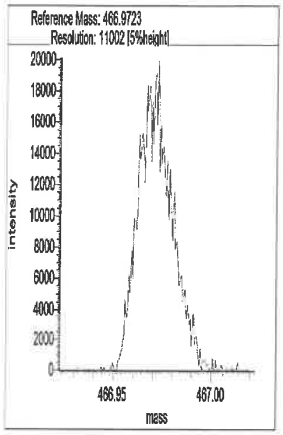
Reference Mass: 466.9723
Resolution: 11002 [5%height]
Intensity
mass

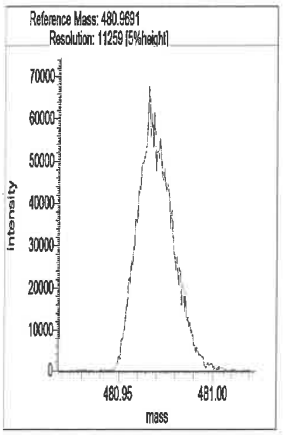
Reference Mass: 480.9691
Resolution: 11259 [5%height]
Intensity
mass

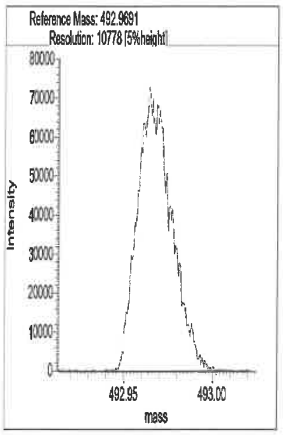
Reference Mass: 492.9691
Resolution: 10778 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 12:47
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11862 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10668 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11408 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11603 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11057 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11275 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11232 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10101 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9688 [5%height] ✓ 8/19/21 KCF

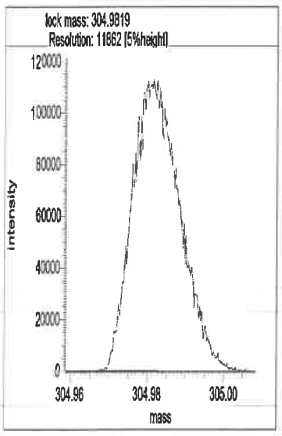

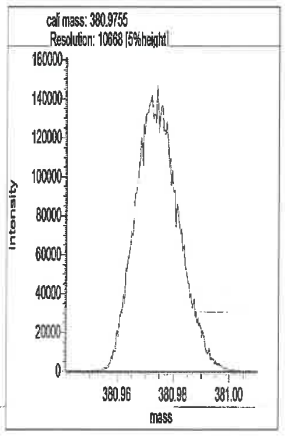

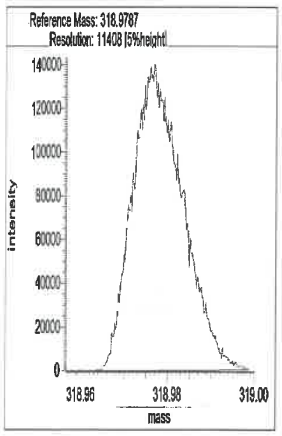

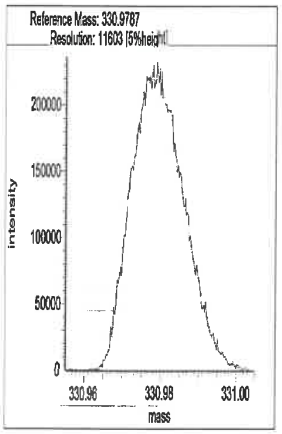

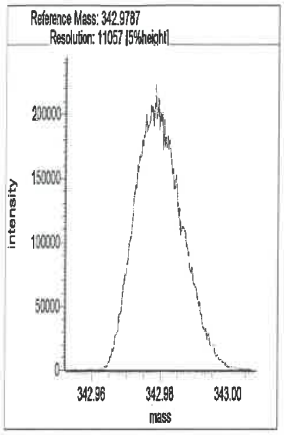

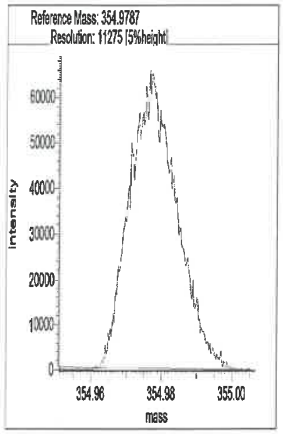

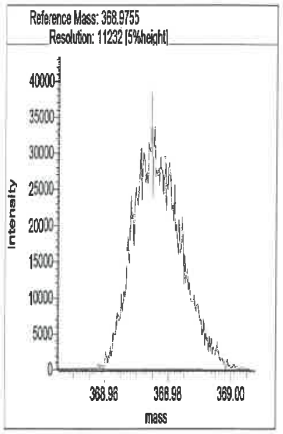

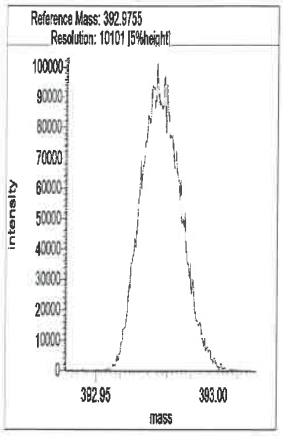

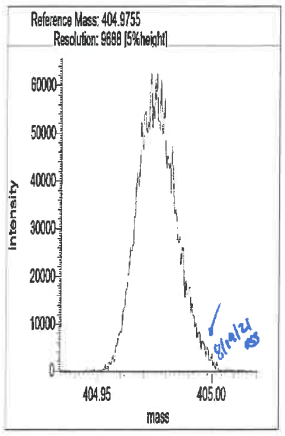

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11409 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11096 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11275 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10877 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10816 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11177 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10770 [5%height]

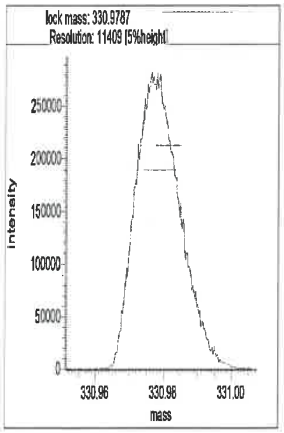

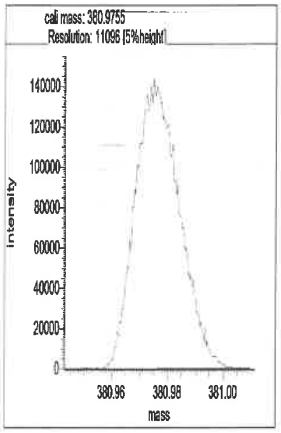

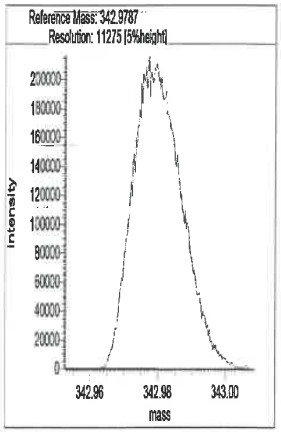

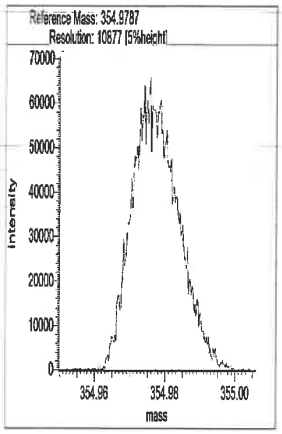

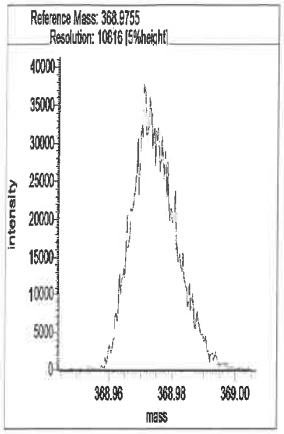

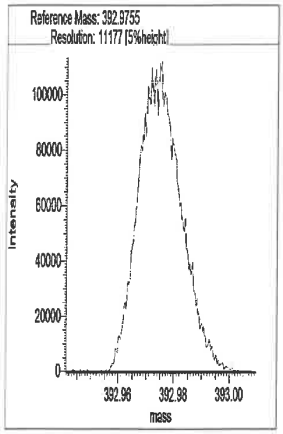

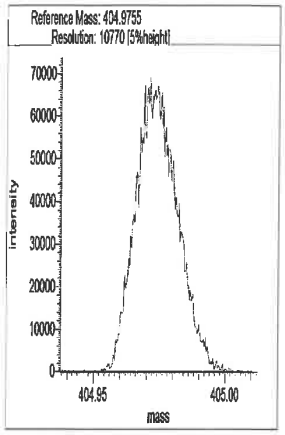

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11068 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11154 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11414 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11295 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10788 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10614 [5%height]

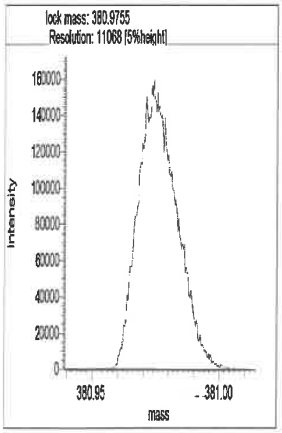

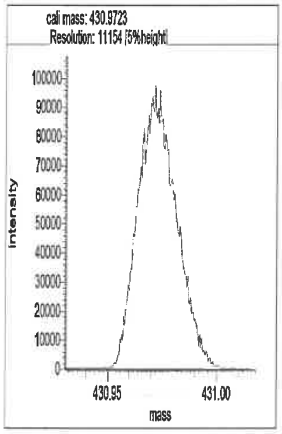

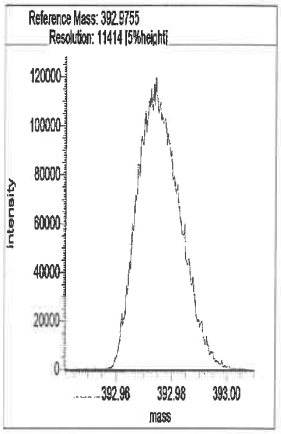

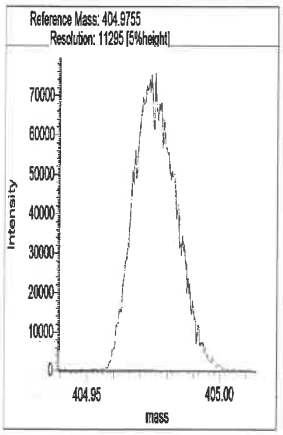

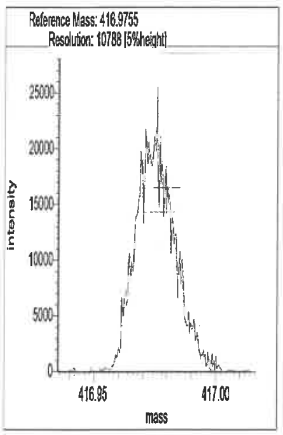

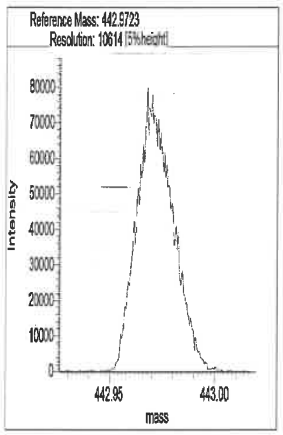

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11418 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11823 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11599 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11335 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10811 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11056 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10732 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10827 [5%height]

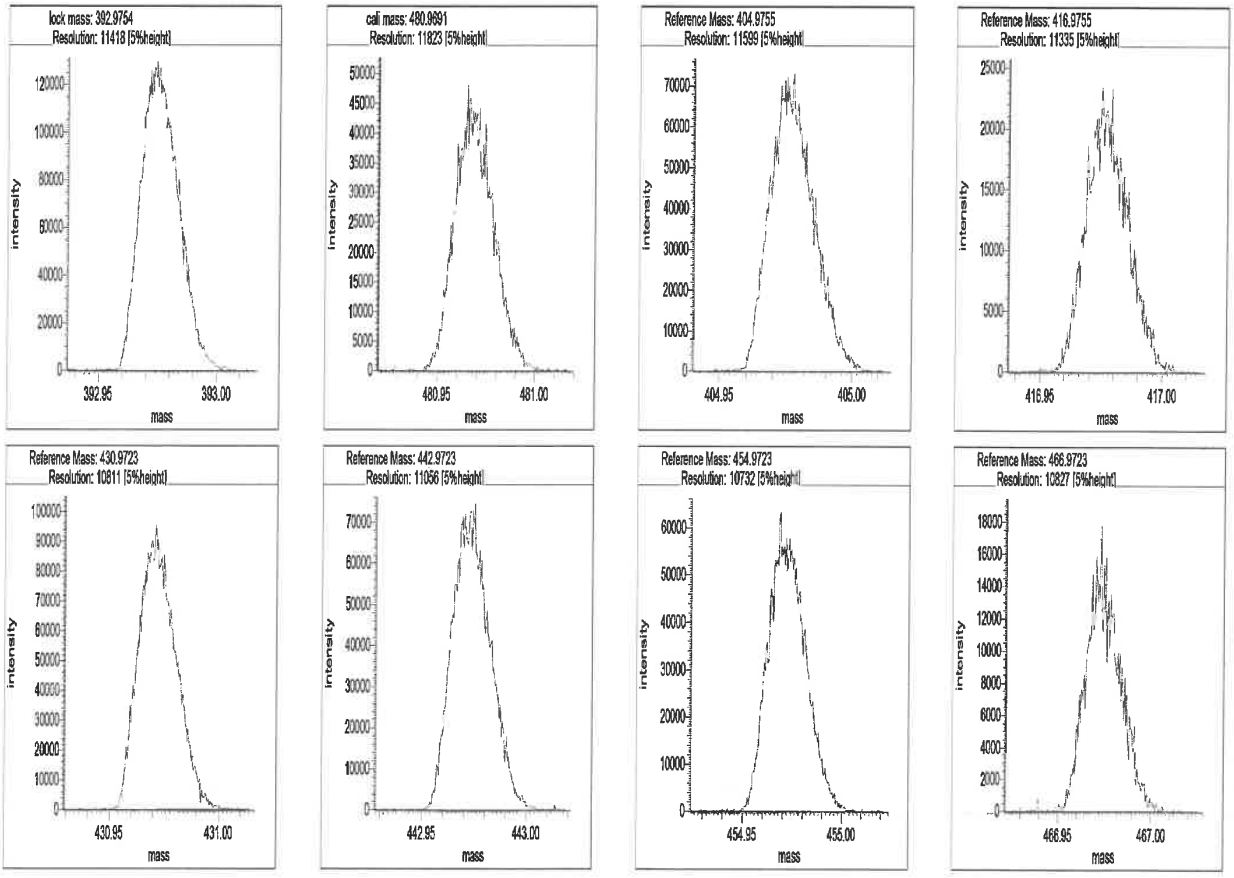

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11579 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11377 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11119 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12204 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10698 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10928 [5%height]

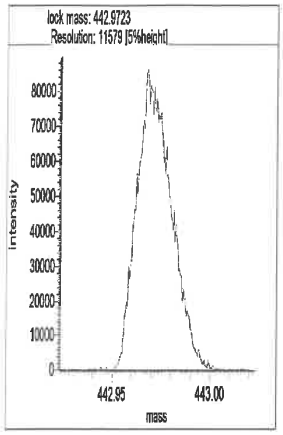
lock mass: 442.9723
Resolution: 11579 [5%height]
Intensity
mass

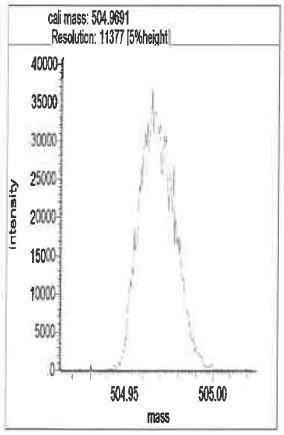
cali mass: 504.9691
Resolution: 11377 [5%height]
Intensity
mass

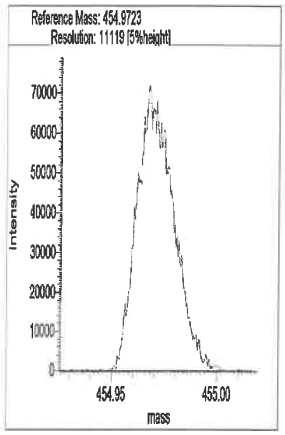
Reference Mass: 454.9723
Resolution: 11119 [5%height]
Intensity
mass

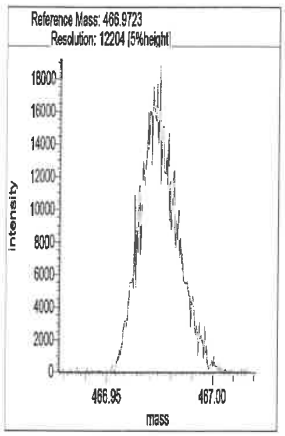
Reference Mass: 466.9723
Resolution: 12204 [5%height]
Intensity
mass

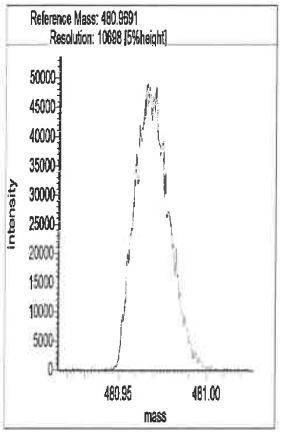
Reference Mass: 480.9691
Resolution: 10628 [5%height]
Intensity
mass

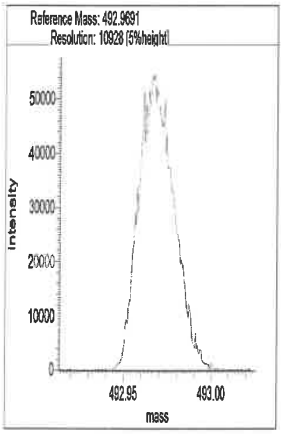
Reference Mass: 492.9691
Resolution: 10928 [5%height]
Intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 01:32:00 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:22:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.427	984489	0.83	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.464	1276686	0.81	1.3459	96.4	96.4	0.2841	0.2841	96.35	
2,3,7,8-TCDF	20.490	158938	0.88	1.0802	11.5	11.5	0.1590	0.1590	115	M
A Non-2,3,7,8-sub-TCDF	19.946						0.1590	0.1590		
S Total TCDF					11.5	11.5	0.1590	0.1590		
D 13C-2,3,7,8-TCDD	21.806	920353	0.75	0.9317	100.3	100.3	0.5973	0.5973	100	
2,3,7,8-TCDD	21.840	100432	0.75	1.0753	10.1	10.1	0.0654	0.0654	101	M
$ 37Cl4-2,3,7,8-TCDD	21.849	97480		1.0083	9.820	9.820	0.0128	0.0128	98.20	
A Non-2,3,7,8-sub-TCDD	20.781						0.0654	0.0654		
S Total TCDD					10.1	10.1	0.0654	0.0654		
D 13C-1,2,3,7,8-PeCDF	27.288	1103721	1.59	1.1405	98.3	98.3	0.2569	0.2569	98.30	
1,2,3,7,8-PeCDF	27.313	599354	1.65	1.0543	51.5	51.5	0.1124	0.1124	103	
D 13C-2,3,4,7,8-PeCDF	28.795	1065050	1.63	1.1253	96.1	96.1	0.2604	0.2604	96.13	
2,3,4,7,8-PeCDF	28.820	515414	1.63	1.0079	48.0	48.0	0.1284	0.1284	96.03	
A F1 PeCDFs	24.697	361	1.55	1.0311	0.0544	0.0323	0.004263	0.0291	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.194	6323	1.61	1.0311	0.5655	0.5655	0.1200	0.5655	0.00	
S Total PeCDF					100.1	100.1	0.1204	0.1204		RQ
D 13C-1,2,3,7,8-PeCDD	29.612	675256	1.54	0.7165	95.7	95.7	0.2875	0.2875	95.73	M
1,2,3,7,8-PeCDD	29.637	349091	1.55	1.0465	49.4	49.4	0.2994	0.2994	98.80	
A Non-2,3,7,8-sub-PeCDD	28.489						0.2994	0.2994		
S Total PeCDD					49.4	49.4	0.2994	0.2994		
D 13C-1,2,3,4,7,8-HxCDF	34.942	961464	0.54	0.9648	113.2	113.2	0.2217	0.2217	113	
1,2,3,4,7,8-HxCDF	34.959	565917	1.34	1.1474	51.3	51.3	0.1626	0.1626	103	
D 13C-1,2,3,6,7,8-HxCDF	35.111	894964	0.54	1.0708	94.9	94.9	0.1997	0.1997	94.92	
1,2,3,6,7,8-HxCDF	35.119	603750	1.33	1.2178	55.4	55.4	0.1845	0.1845	111	
D 13C-2,3,4,6,7,8-HxCDF	35.919	850492	0.53	1.0413	92.8	92.8	0.2054	0.2054	92.76	
2,3,4,6,7,8-HxCDF	35.936	566662	1.32	1.2145	54.9	54.9	0.1693	0.1693	110	
D 13C-1,2,3,7,8,9-HxCDF	36.811	799349	0.53	0.9731	93.3	93.3	0.2198	0.2198	93.29	
1,2,3,7,8,9-HxCDF	36.828	528030	1.35	1.2401	53.3	53.3	0.1512	0.1512	107	
A Non-2,3,7,8-sub-HxCDF	35.107						0.1659	0.1659		
S Total HxCDF					214.8	214.8	0.1669	0.1669		

787489

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.609	880537	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.129	717142	1.25	0.7587	107.3	107.3	0.1846	0.1846	107	
1,2,3,4,7,8-HxCDD	36.146	351624	1.23	1.0608	46.2	46.2	0.0806	0.0806	92.44	
D 13C-1,2,3,6,7,8-HxCDD	36.247	848519	1.22	0.8593	112.1	112.1	0.1630	0.1630	112	
1,2,3,6,7,8-HxCDD	36.264	386501	1.24	0.9933	45.9	45.9	0.0800	0.0800	91.71	
1,2,3,7,8,9-HxCDD	36.626	395938	1.20	1.1094	45.6	45.6	0.0743	0.0743	91.18	
A Non-2,3,7,8-sub-HxCDD	35.460						0.0781	0.0781		
S Total HxCDD					137.7	137.7	0.0783	0.0783		
D 13C-1,2,3,4,6,7,8-HpCDF	38.626	656274	0.44	0.7359	101.3	101.3	0.2851	0.2851	101	
1,2,3,4,6,7,8-HpCDF	38.634	455320	1.06	1.4421	48.1	48.1	0.1685	0.1685	96.22	
D 13C-1,2,3,4,7,8,9-HpCDF	39.880	599385	0.45	0.6854	99.3	99.3	0.3061	0.3061	99.32	
1,2,3,4,7,8,9-HpCDF	39.888	390971	1.08	1.3092	49.8	49.8	0.1885	0.1885	99.65	
A Non-2,3,7,8-sub-HpCDF	39.288						0.1780	0.1780		
S Total HpCDF					97.9	97.9	0.1785	0.1785		
D 13C-1,2,3,4,6,7,8-HpCDD	39.569	648199	1.06	0.6745	109.1	109.1	0.2831	0.2831	109	
1,2,3,4,6,7,8-HpCDD	39.577	335357	1.04	1.0503	49.3	49.3	0.1045	0.1045	98.52	
A Non-2,3,7,8-sub-HpCDD	39.288	3567	1.04	1.0503	0.5786	0.5239	0.1045	0.5239	0.00	RQ
S Total HpCDD					49.8	49.8	0.1045	0.1045		RQ
D 13C-OCDD	42.072	1074471	0.91	0.5446	224.1	224.1	0.2244	0.2244	112	
OCDF	42.165	709884	0.97	1.3168	100.3	100.3	0.1011	0.1011	100	
OCDD	42.081	547805	0.90	1.0620	96.0	96.0	0.1077	0.1077	96.02	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 01:32:00 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:22:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.427	21.427	0		445977	61730	165	412	374		
333.9338	21.444	21.427	1		538512	70339	129	322	545	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.464	20.464	0	0.955	572920	76535	109	272	702		
317.9389	20.464	20.464	0	0.955	703766	101095	93	232	1087	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.490	20.490	0	1.001	74325	10071	54	135	187		M
305.8987	20.490	20.490	0	1.001	84613	12394	68	170	182	0.88(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	19.946						54	135			
305.8987	19.946						68	170			
13C-2,3,7,8-TCDD											
331.9368	21.806	21.806	0	1.018	395703	49232	165	412	298		
333.9338	21.806	21.806	0	1.018	524650	67347	129	322	522	0.75(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.840	21.840	0	1.002	43022	5107	20	50	255		M
321.8936	21.840	21.840	0	1.002	57410	7402	13	32	569	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.849	21.849	0	1.020	97480	12477	7	17	1782		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.781						20	50			
321.8936	20.781						13	32			
13C-1,2,3,7,8-PeCDF											
351.9000	27.288	27.288	0	1.274	677865	102468	92	230	1114		
353.8970	27.279	27.288	-1	1.273	425856	63812	63	157	1013	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.313	27.313	0	1.001	373055	54148	41	102	1321		
341.8567	27.313	27.313	0	1.001	226299	33164	38	95	873	1.65(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.795	28.795	0	1.344	659478	94038	92	230	1022		
353.8970	28.795	28.795	0	1.344	405572	58215	63	157	924	1.63(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.820	28.820	0	1.001	319323	44133	41	102	1076		
341.8567	28.820	28.820	0	1.001	196091	26521	38	95	698	1.63(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.267	24.697	-26	0.889	22	14	1	2	14		
341.8567	24.250	24.697	-27	0.889	64	21	2	5	11	0.34(1.32-1.78)	
	Empc Correction				14	9	2	5	5		
339.8597	24.379	24.697	-19	0.893	198	49	1	2	49		
341.8567	24.379	24.697	-19	0.893	324	81	2	5	41	0.61(1.32-1.78)	
	Empc Correction				127	31	2	5	16		
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.894	28.194	-18	1.022	3897	465	41	102	11		
341.8567	27.877	28.194	-19	1.022	2426	361	38	95	10	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											M
367.8949	29.612	29.612	0	1.382	408922	48749	62	155	786		
369.8919	29.628	29.612	1	1.383	266334	33288	47	117	708	1.54(1.32-1.78)	M
1,2,3,7,8-PeCDD											
355.8546	29.637	29.637	0	1.001	212257	27310	81	202	337		
357.8516	29.637	29.637	0	1.001	136834	17949	22	55	816	1.55(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						81	202			
357.8516	28.489						22	55			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.942	34.942	0	0.954	336469	68825	57	142	1207		
385.8610	34.942	34.942	0	0.954	624995	114454	111	277	1031	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.959	34.959	0	1.000	323795	64220	78	195	823		
375.8178	34.959	34.959	0	1.000	242122	47319	59	147	802	1.34(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.111	35.111	0	0.959	313436	52098	57	142	914		
385.8610	35.111	35.111	0	0.959	581528	100114	111	277	902	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.119	35.119	0	1.000	344594	62612	78	195	803		
375.8178	35.119	35.119	0	1.000	259156	47352	59	147	803	1.33(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.919	35.919	0	0.981	293056	57881	57	142	1015		
385.8610	35.919	35.919	0	0.981	557436	108473	111	277	977	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.936	35.936	0	1.000	321979	63834	78	195	818		
375.8178	35.936	35.936	0	1.000	244683	48323	59	147	819	1.32(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.811	36.811	0	1.006	276711	60371	57	142	1059		
385.8610	36.811	36.811	0	1.006	522638	121974	111	277	1099	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.828	36.828	0	1.000	302880	64959	78	195	833		
375.8178	36.828	36.828	0	1.000	225150	48893	59	147	829	1.35(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.107						78	195			
375.8178	35.107						59	147			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.609	36.609	0		486696	109333	53	132	2063		
403.8529	36.617	36.609	1		393841	87046	57	142	1527	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.129	36.129	0	0.987	398284	87752	53	132	1656		
403.8529	36.129	36.129	0	0.987	318858	70052	57	142	1229	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.146	36.146	0	1.000	194100	42368	32	80	1324		
391.8127	36.146	36.146	0	1.000	157524	35287	22	55	1604	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.247	36.247	0	0.990	466694	92606	53	132	1747		
403.8529	36.247	36.247	0	0.990	381825	77360	57	142	1357	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.264	36.264	0	1.000	214301	44193	32	80	1381		
391.8127	36.255	36.264	-1	1.000	172200	36180	22	55	1645	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.626	36.626	0	1.014	215900	47500	32	80	1484		
391.8127	36.626	36.626	0	1.014	180038	40127	22	55	1824	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.460						32	80			
391.8127	35.460						22	55			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.626	38.626	0	1.055	200757	51554	47	117	1097		
419.8220	38.626	38.626	0	1.055	455517	113911	118	295	965	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.634	38.634	0	1.000	234238	59520	82	205	726		
409.7788	38.634	38.634	0	1.000	221082	55709	79	197	705	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.880	39.880	0	1.089	186100	51202	47	117	1089		
419.8220	39.880	39.880	0	1.089	413285	111683	118	295	946	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.888	39.888	0	1.000	203424	55186	82	205	673		
409.7788	39.888	39.888	0	1.000	187547	51038	79	197	646	1.08(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.288						82	205			
409.7788	39.288						79	197			

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.569	39.569	0	1.081	333648	91786	80	200	1147		
437.8140	39.569	39.569	0	1.081	314551	90360	70	175	1291	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.577	39.577	0	1.000	170747	48038	40	100	1201		
425.7737	39.577	39.577	0	1.000	164610	46442	40	100	1161	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.946	39.288	-21	0.984	2190	476	40	100	12		
	Empc Correction				1818	545	40	100	14		
425.7737	38.946	39.288	-21	0.984	1749	525	40	100	13	1.25(0.88-1.20)	
13C-OCDD											
469.7780	42.072	42.072	0	1.149	513322	127575	59	147	2162		
471.7750	42.064	42.072	-1	1.149	561149	138295	37	92	3738	0.91(0.76-1.02)	
OCDF											
441.7428	42.165	42.165	0	1.002	349557	84896	33	82	2573		
443.7399	42.165	42.165	0	1.002	360327	89931	38	95	2367	0.97(0.76-1.02)	
OCDD											
457.7377	42.081	42.081	0	1.000	259339	62403	31	77	2013		
459.7348	42.072	42.081	-1	1.000	288466	70332	30	75	2344	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.697

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1103721	166280
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1065050	152253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1084385	159266

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.267	22	14	64	21	0.007692	0.34	RQ
24.267	22	14	14	9	0.003220		Empc Correction
24.379	198	49	324	81	0.0467	0.61	RQ
24.379	198	49	127	31	0.0291		Empc Correction
Signal Totals:							
	220	63	141	40			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	608	165				0.57	RQ
	361	103					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0544 = (608 * 100.000) / (1084385 * 1.031)
Empc Amount: 0.0323 = (361 * 100.000) / (1084385 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.194

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1103721	166280
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1065050	152253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1084385	159266

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.894	3897	465	2426	361	0.5655	1.61	n
Signal Totals:							
	3897	465	2426	361			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6323	826				1.61	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5655 = (6323 * 100.000) / (1084385 * 1.031)

QC Flag Legend

Processing Flags
n - Failed Sig-To-Noise Test

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.288

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	648199	182146

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	648199	182146

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.946	2190	476	1749	525	0.5786	1.25	RQ
38.946	1818	545	1749	525	0.5239		Empc Correction
Signal Totals:							
	1818	545	1749	525			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3939	1001				1.25	RQ
	3567	1070					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5786 = (3939 * 100.000) / (648199 * 1.050)
Empc Amount: 0.5239 = (3567 * 100.000) / (648199 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.49
Area: 70726
Amount: 11.264064
Amount Units: pg/ul

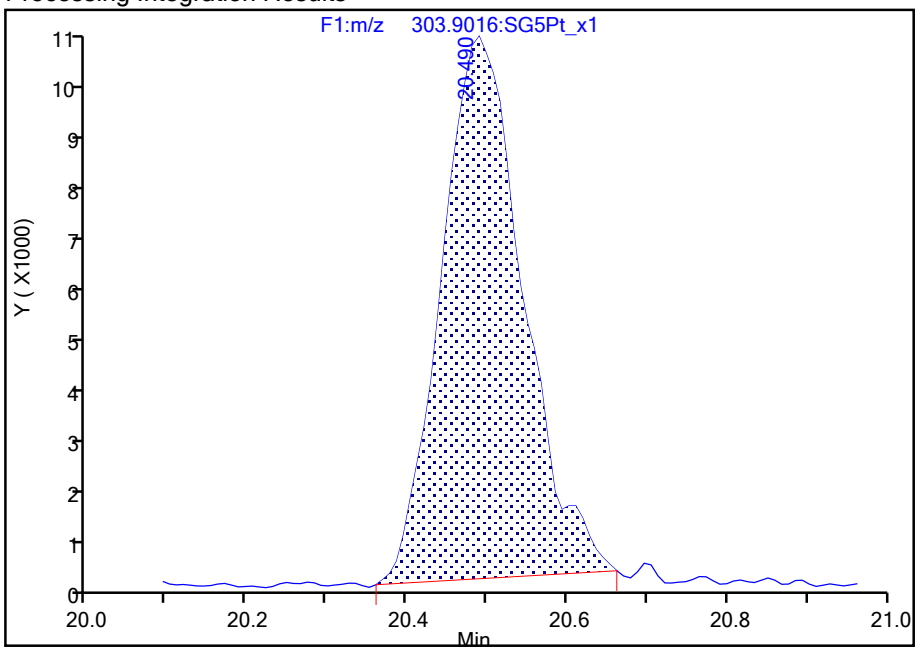

Manual Integration Results

RT: 20.49
Area: 74325
Amount: 11.525037
Amount Units: pg/ul

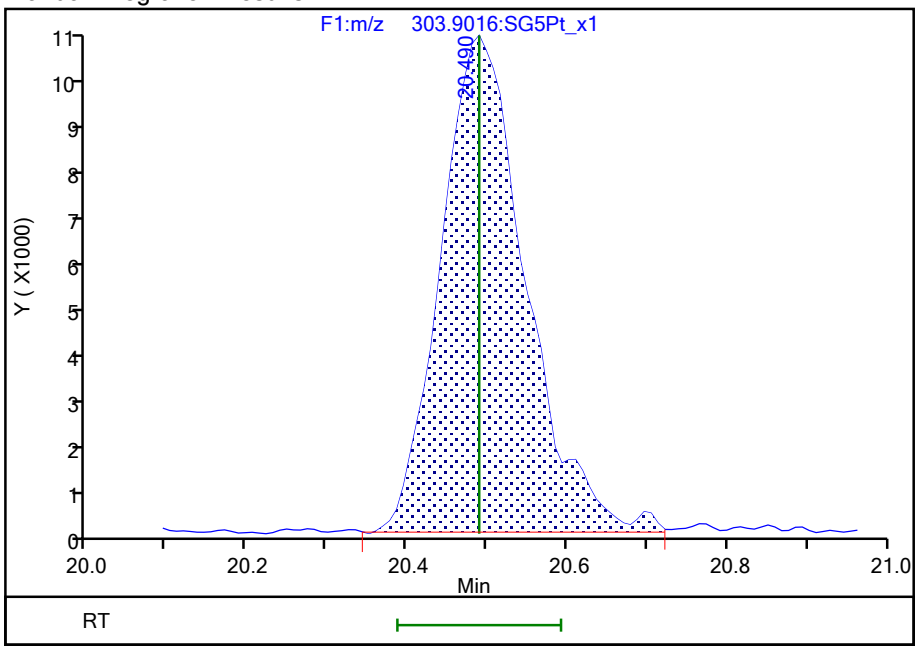

Reviewer: stephensk, 19-Aug-2021 09:20:42

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.84
Area: 41863
Amount: 10.030634
Amount Units: pg/ul

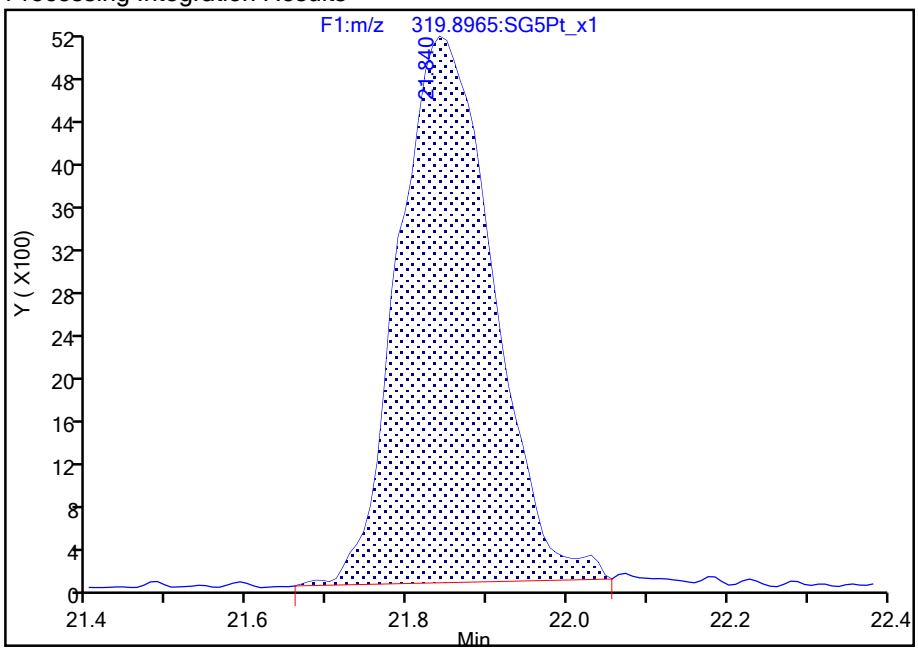

Manual Integration Results

RT: 21.84
Area: 43022
Amount: 10.147741
Amount Units: pg/ul

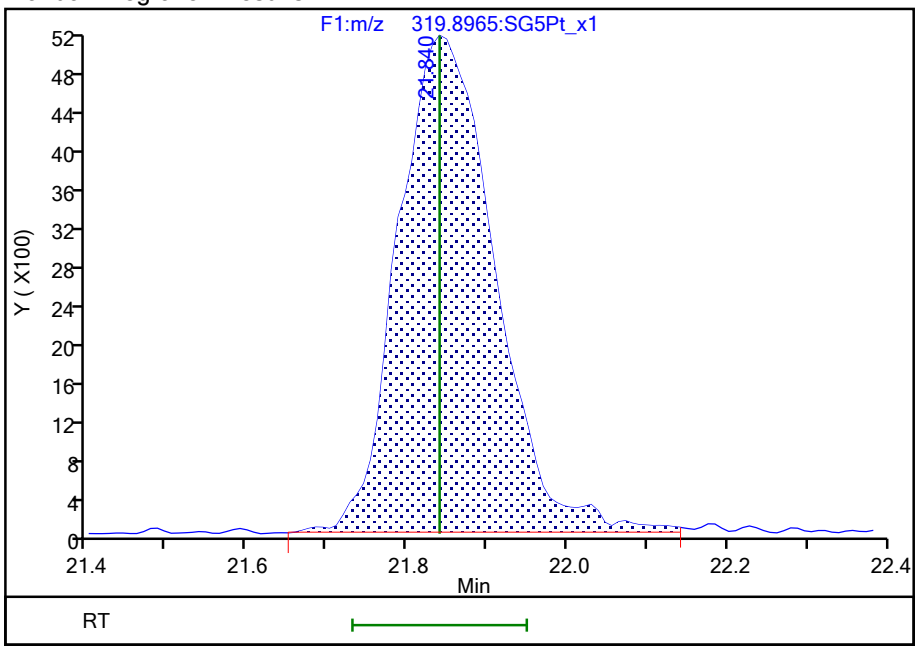

Reviewer: stephensk, 19-Aug-2021 09:21:00

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 2

Processing Integration Results

RT: 29.63
Area: 252502
Amount: 93.771696
Amount Units: pg/ul

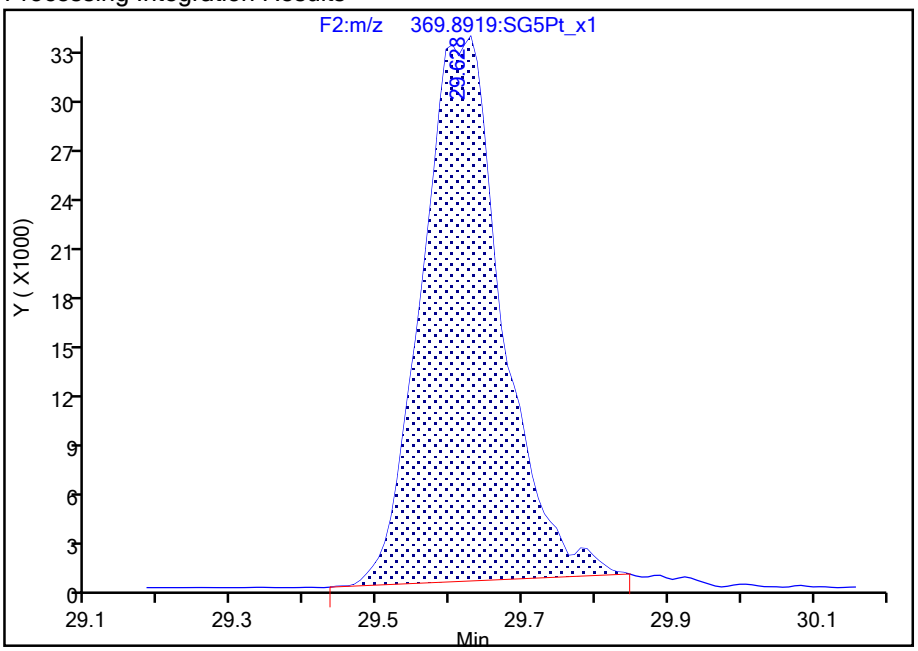

Manual Integration Results

RT: 29.63
Area: 266334
Amount: 95.732693
Amount Units: pg/ul

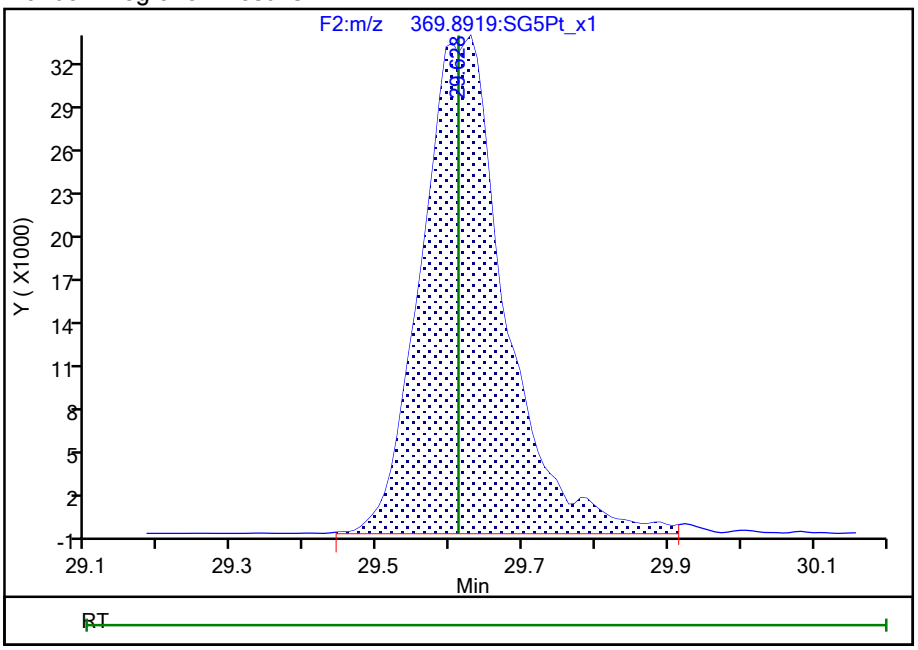

Reviewer: stephensk, 19-Aug-2021 09:21:19

Audit Action: Manually Integrated Audit Reason: Baseline

787500

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

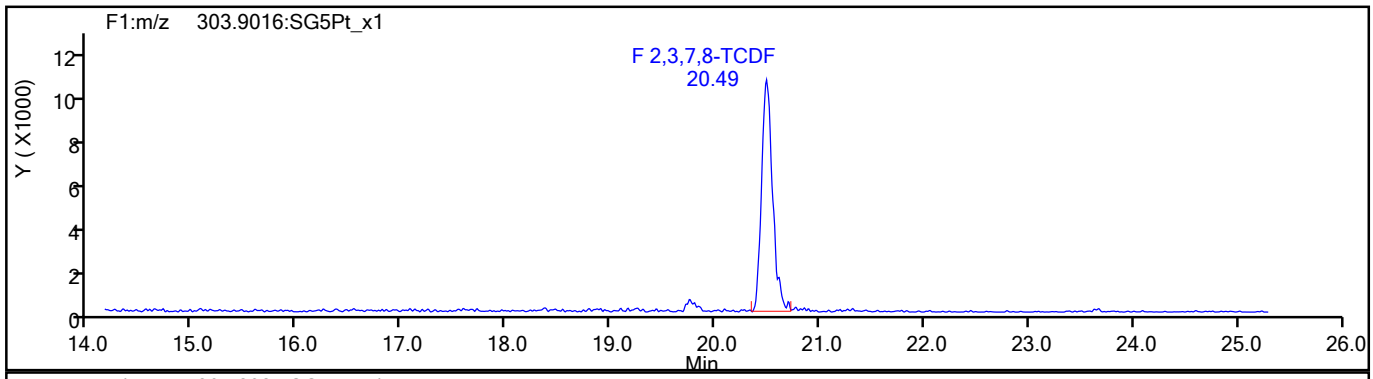

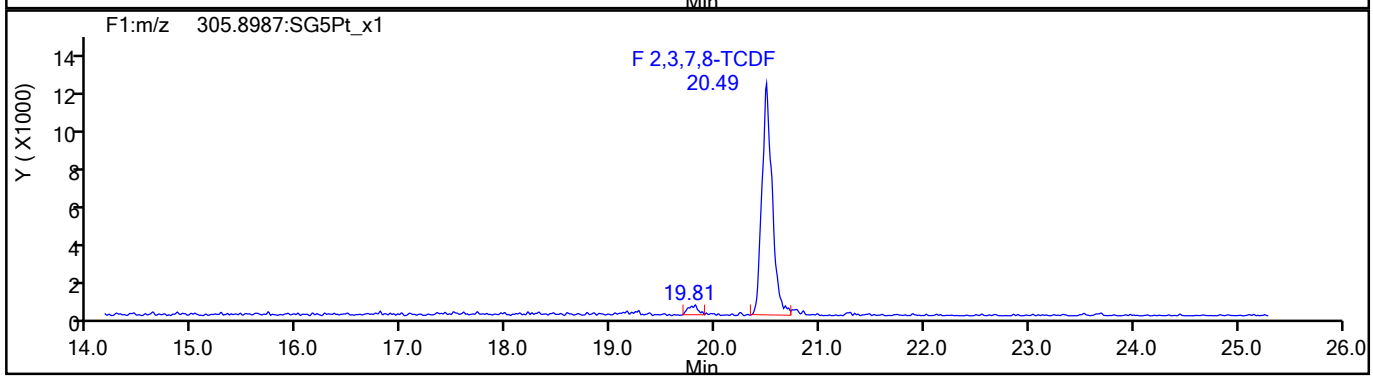

TCDF Standards

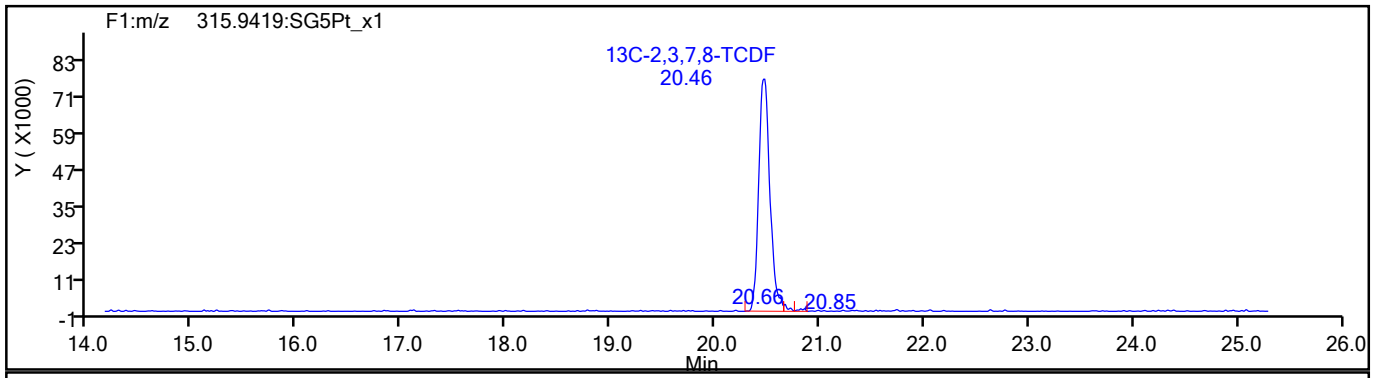

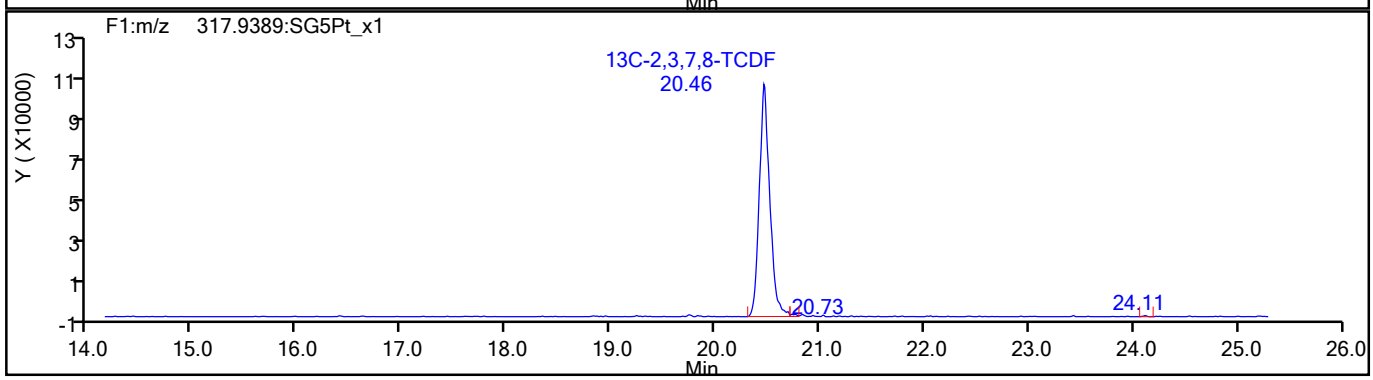

787501

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

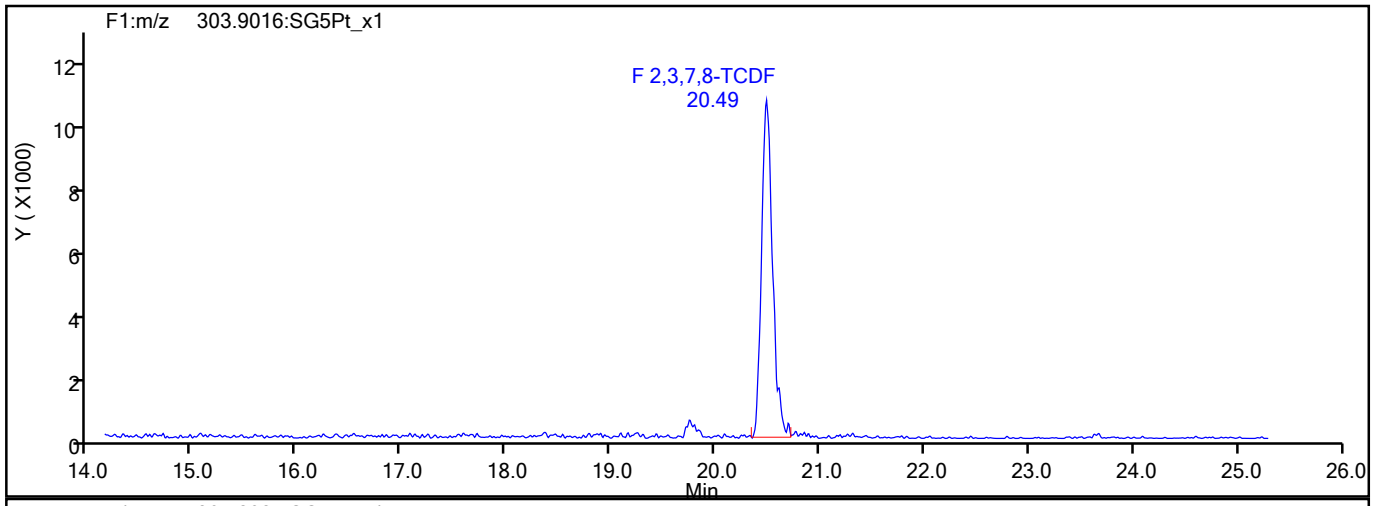

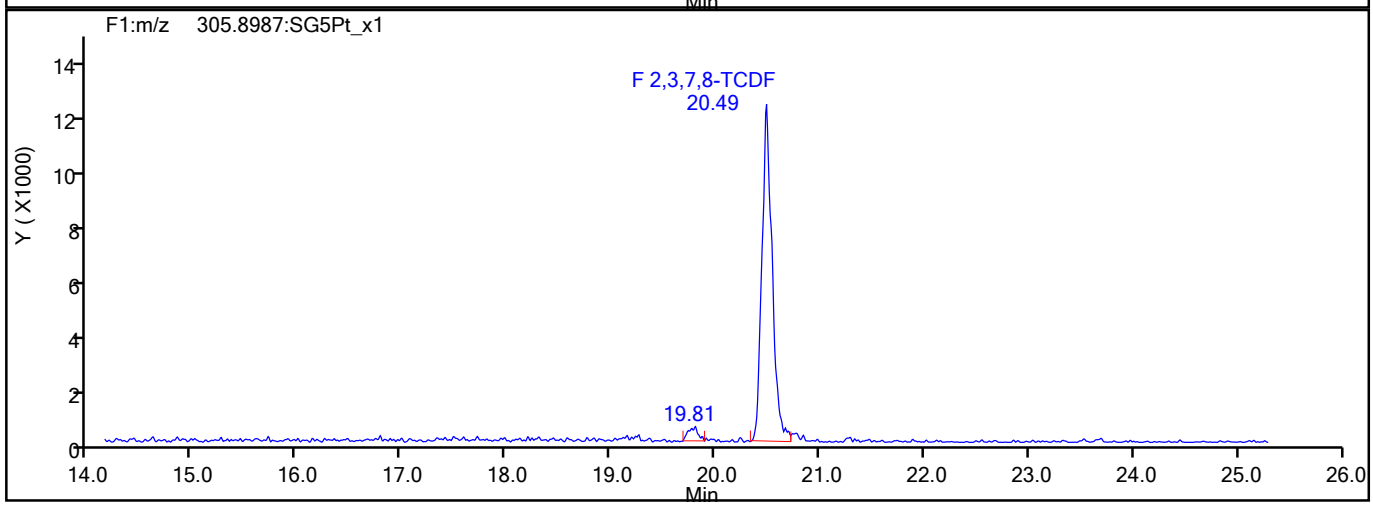

TCDF Interference Mass

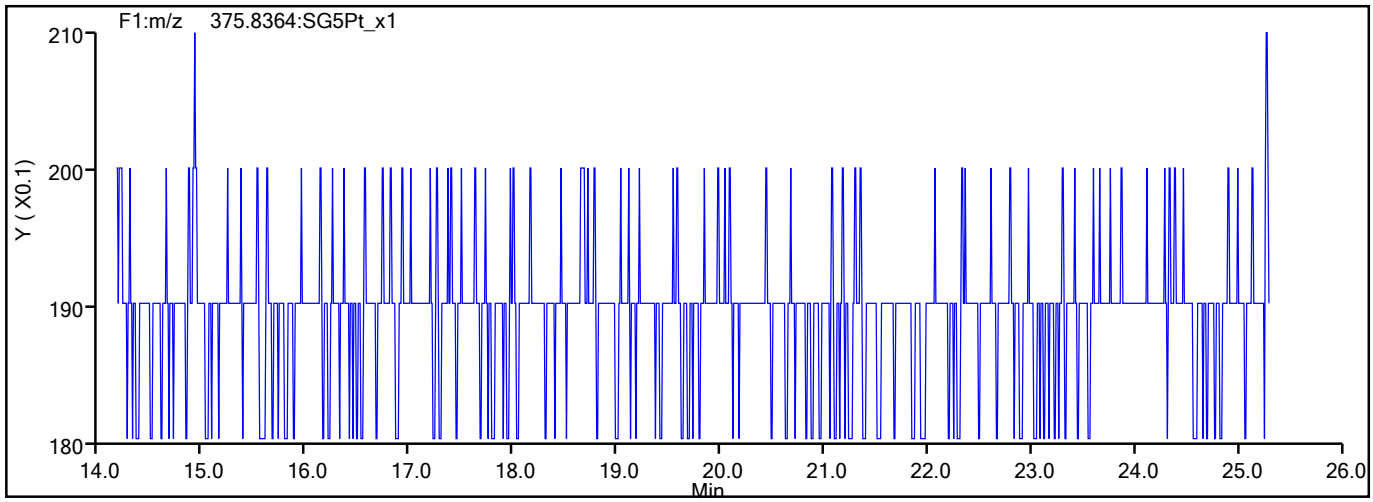

787502

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

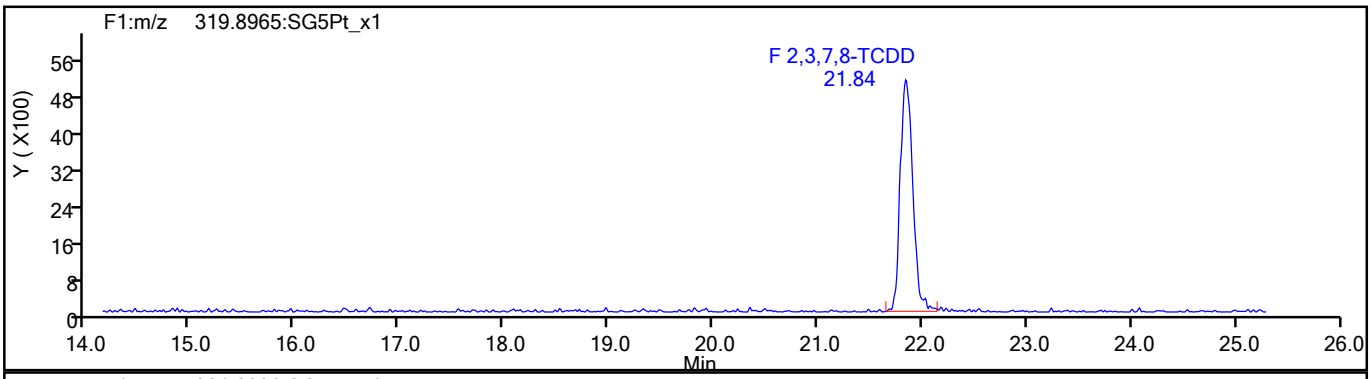

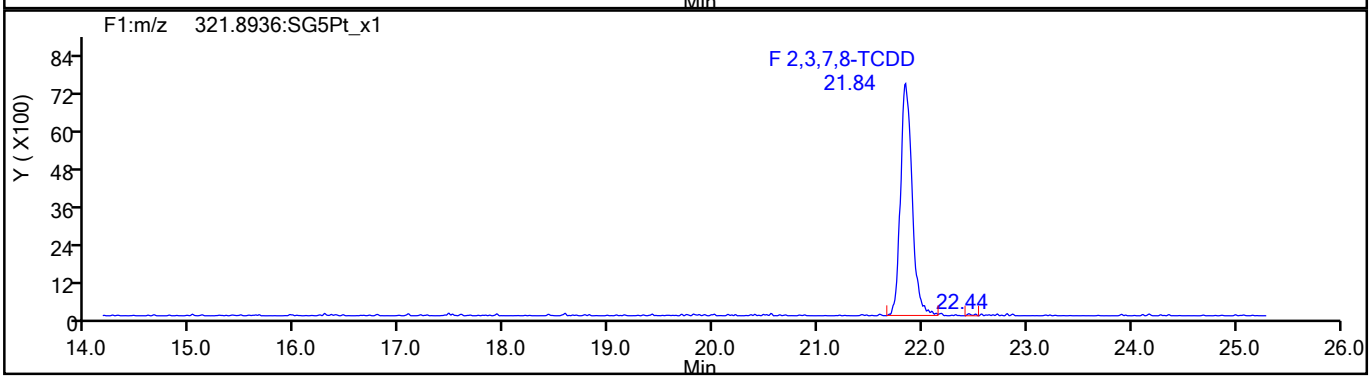

TCDD Standards

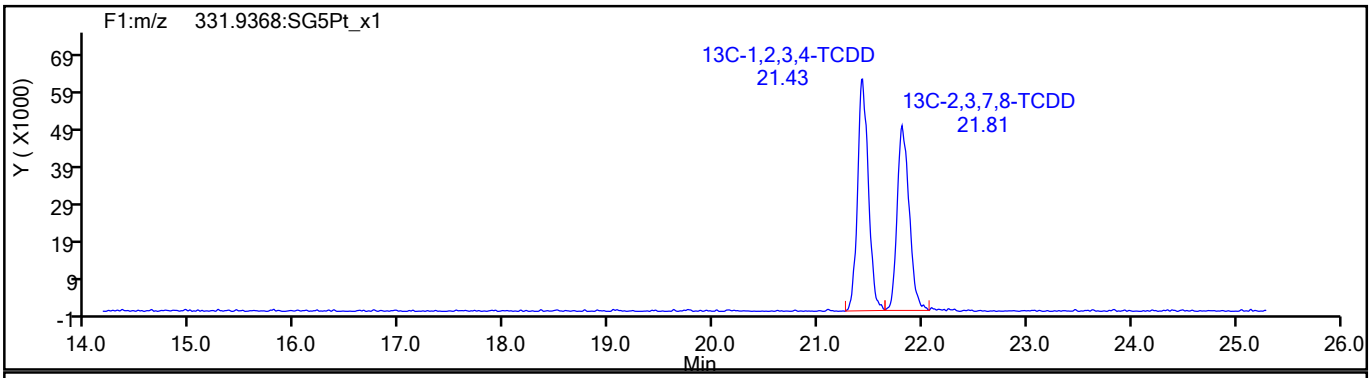

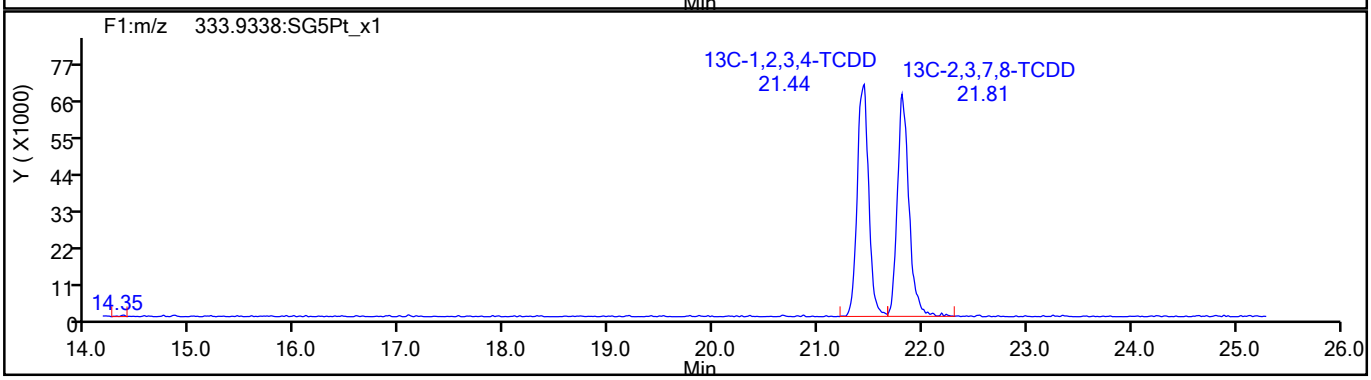

787503

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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37Cl4-TCDD

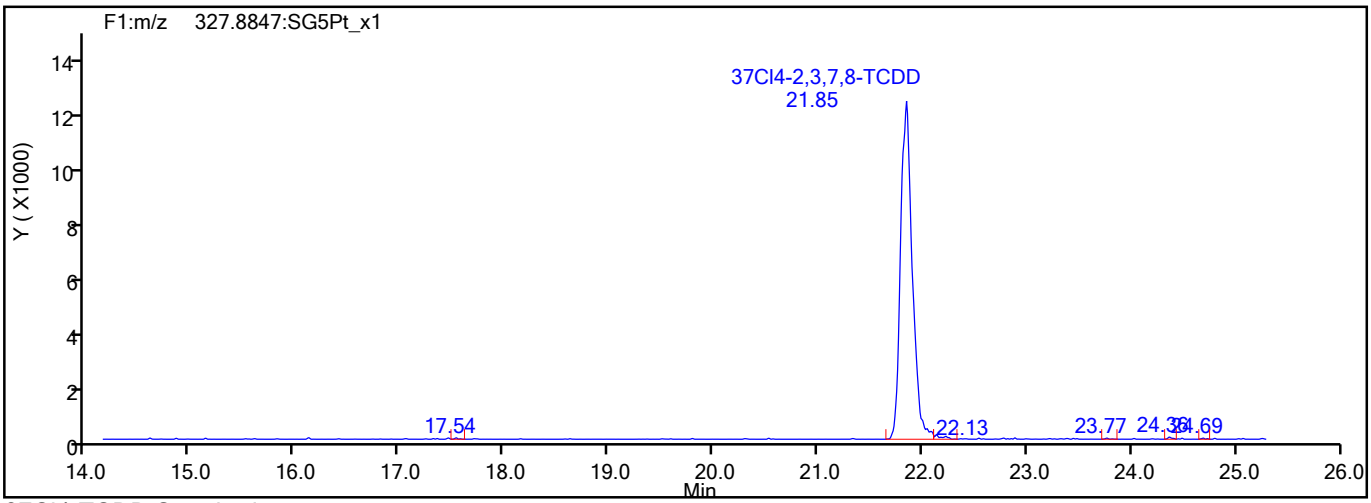

37Cl4-TCDD Standards

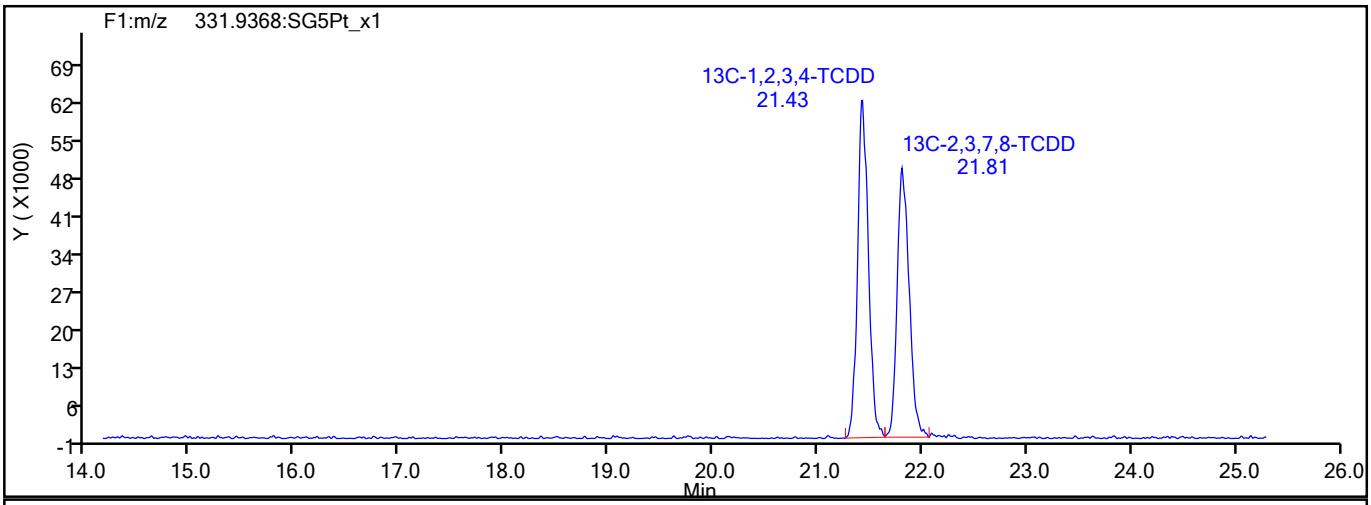

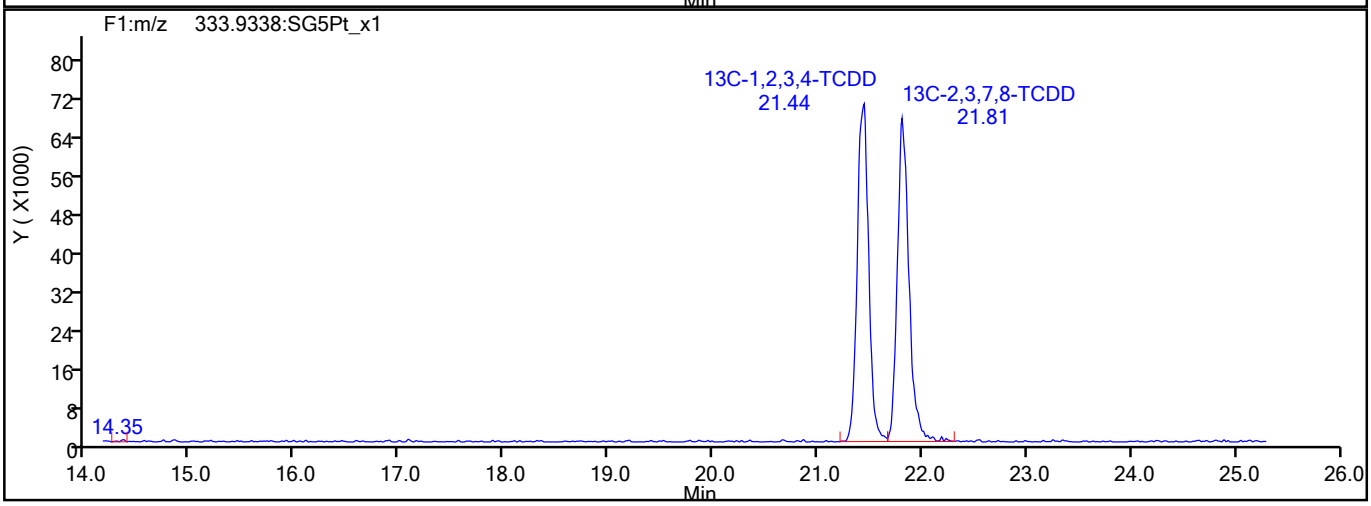

787504

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

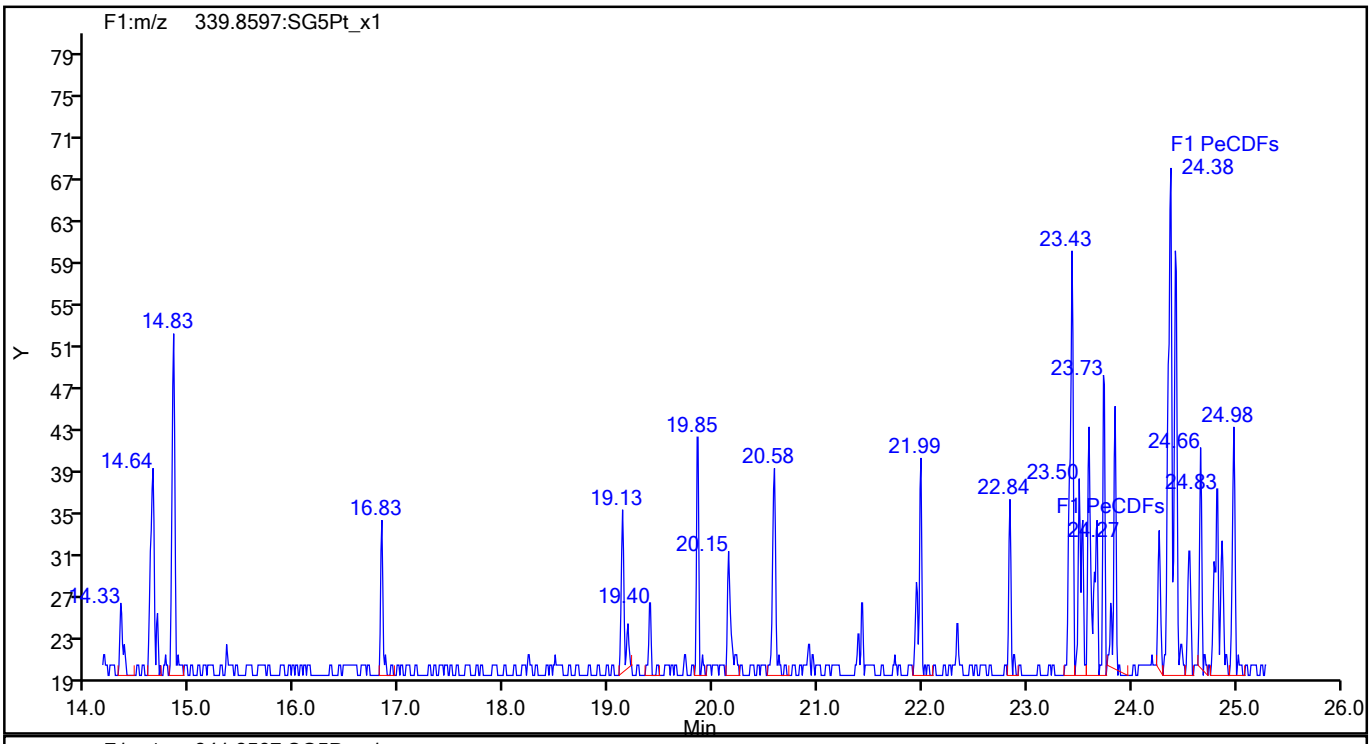

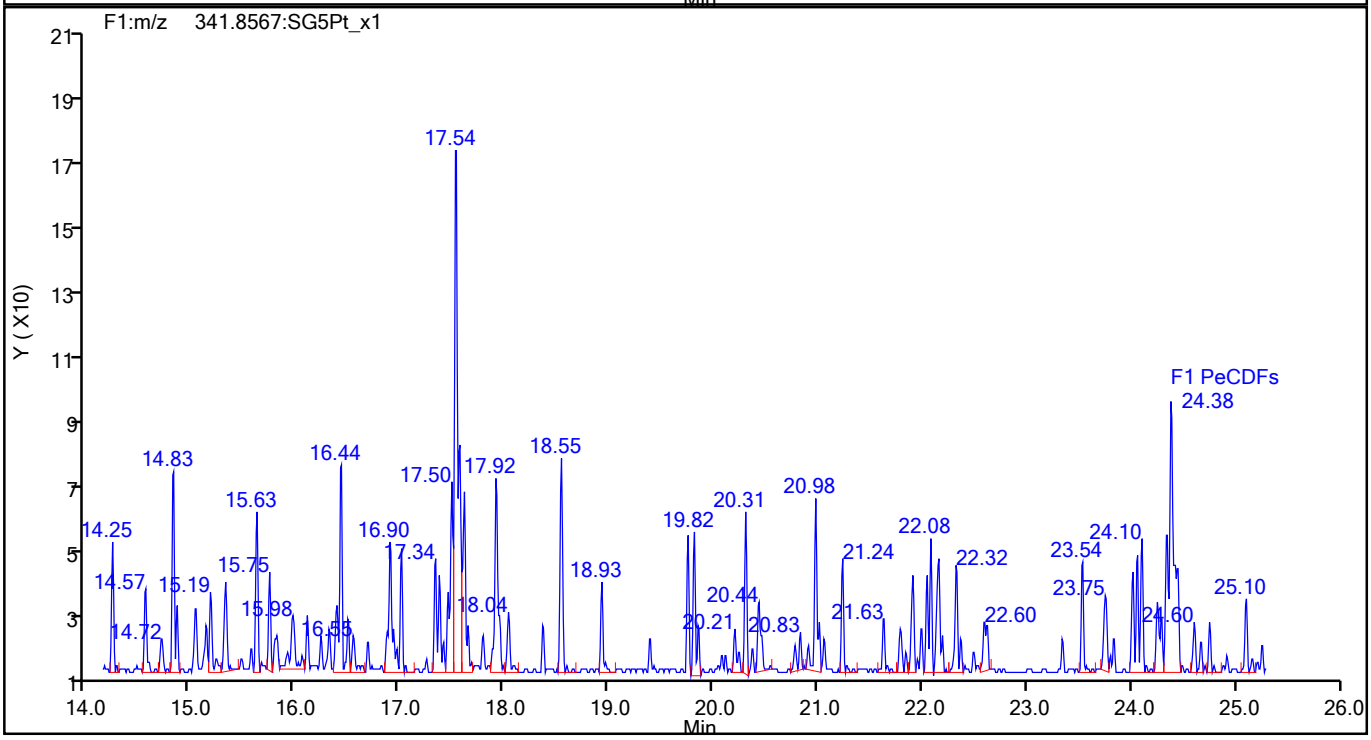

787505

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

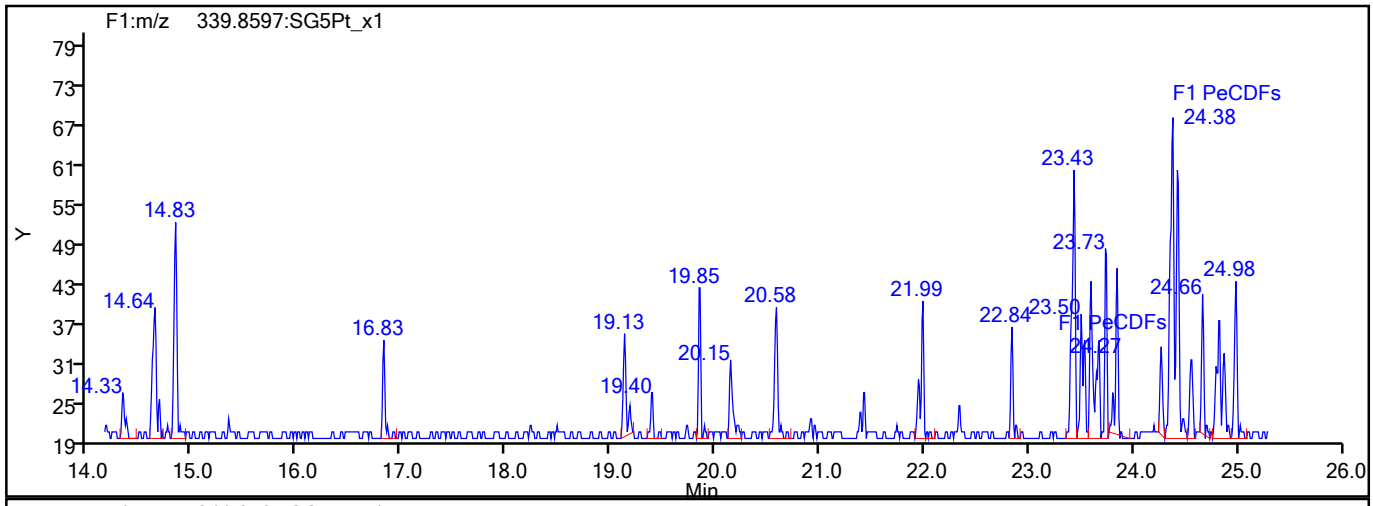

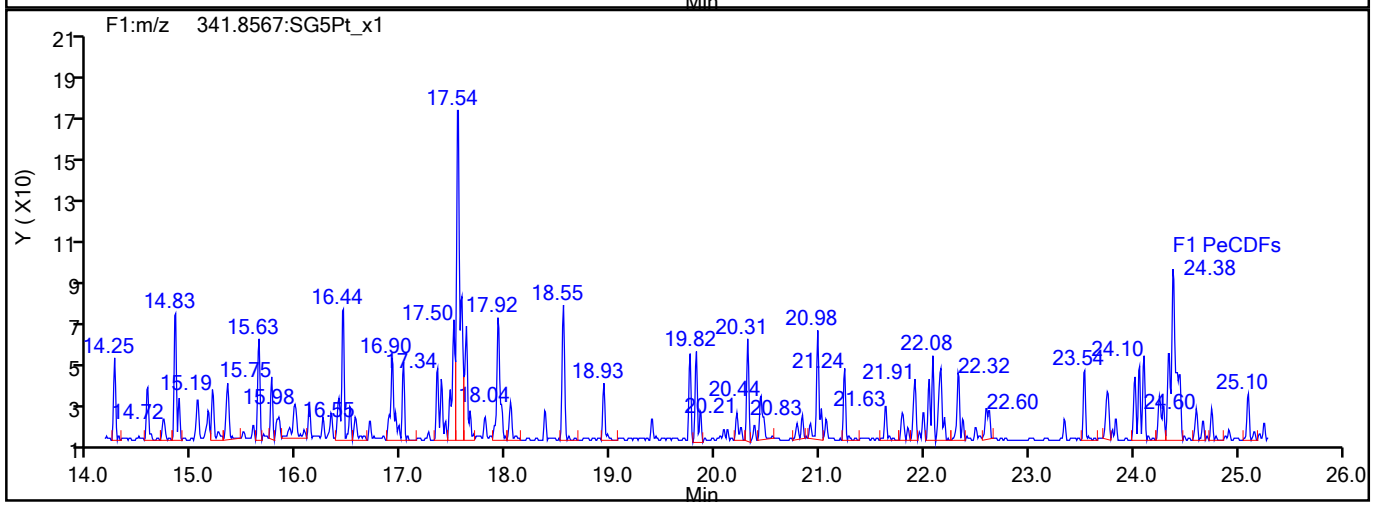

F1 PeCDFs Interference Mass

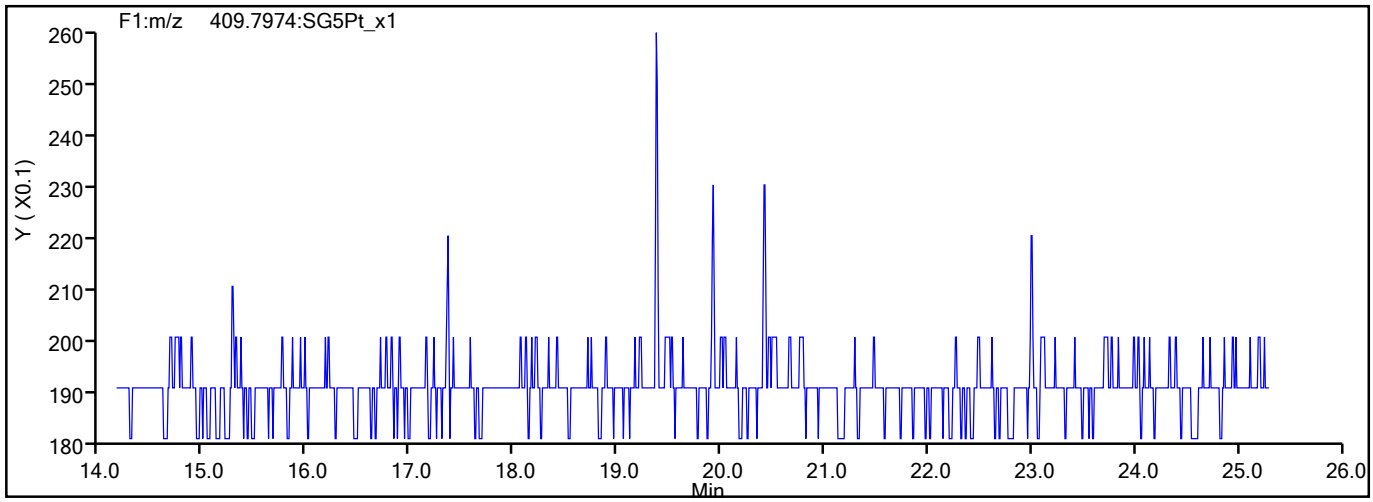

787506

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

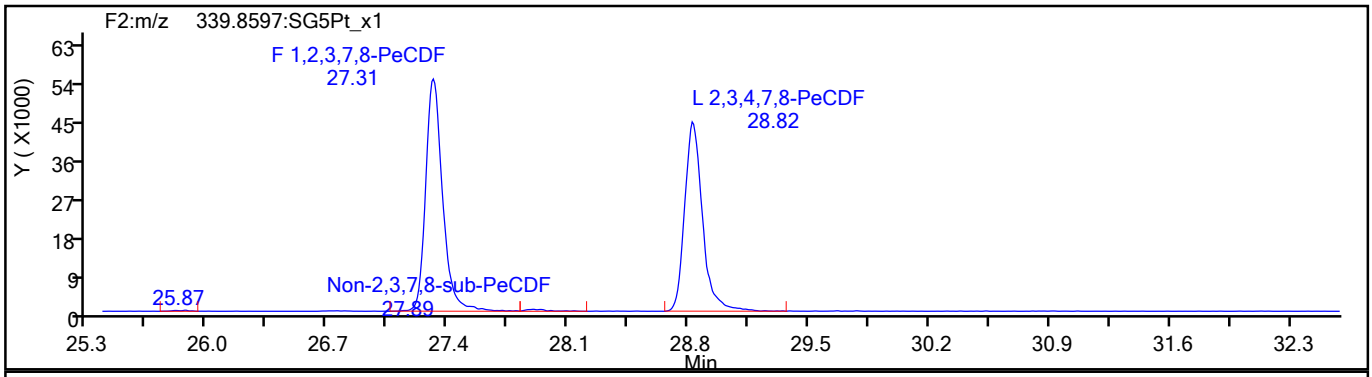

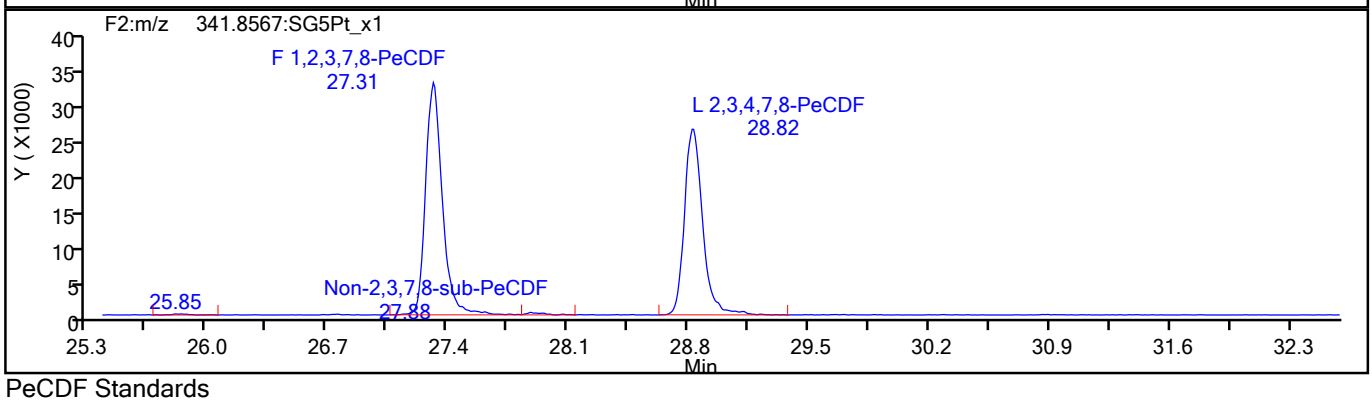

PeCDF Standards

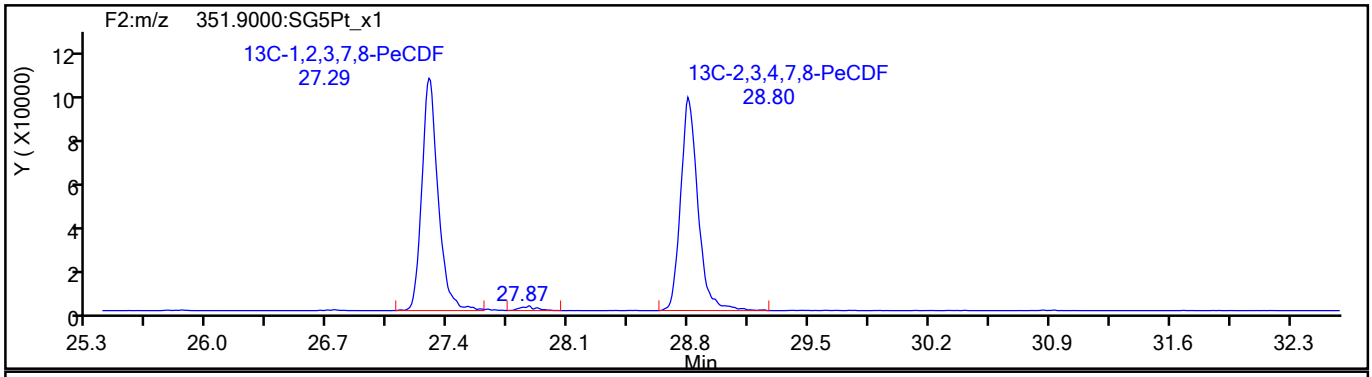

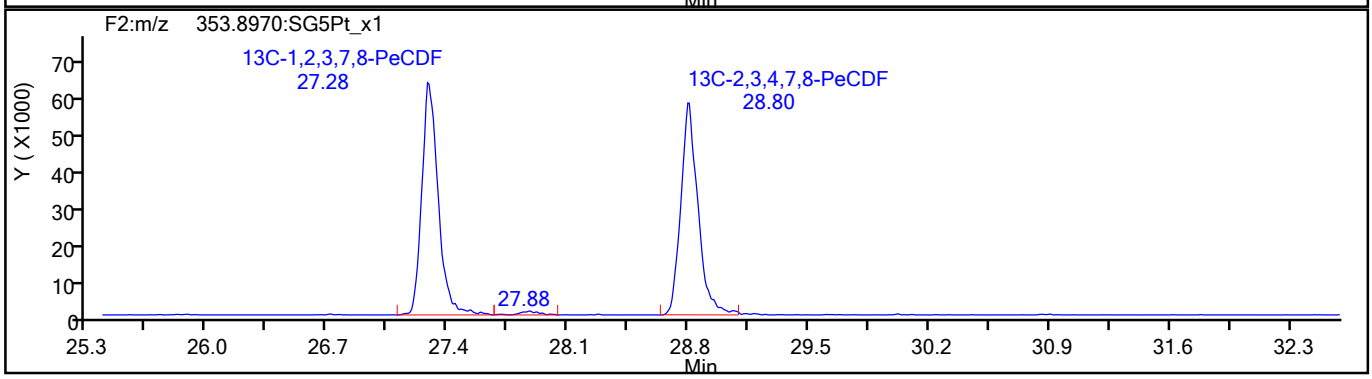

787507

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

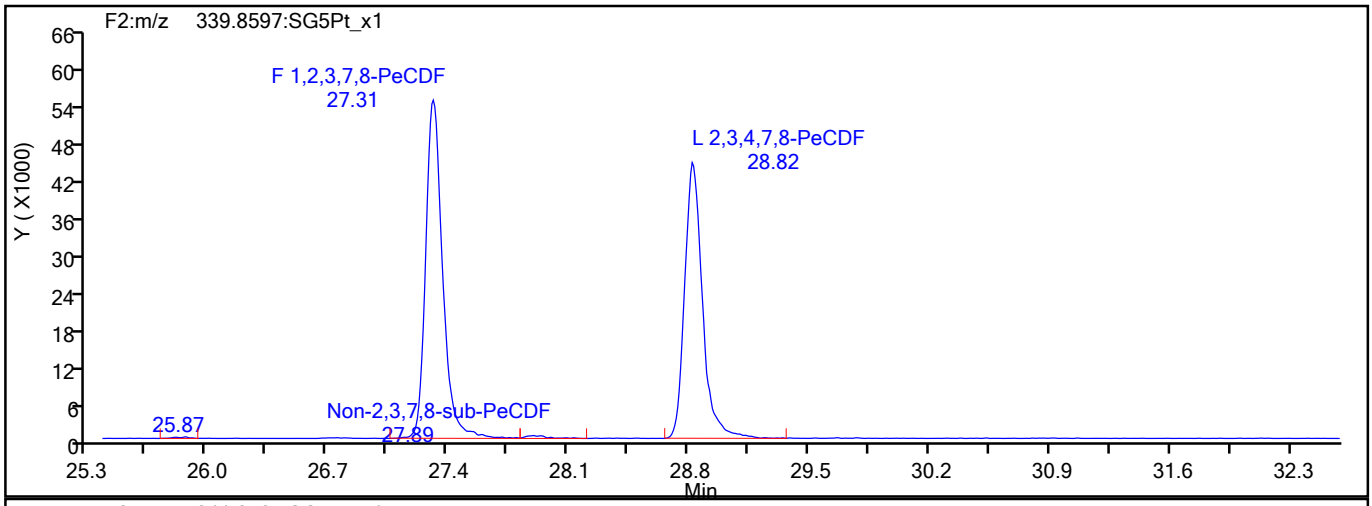

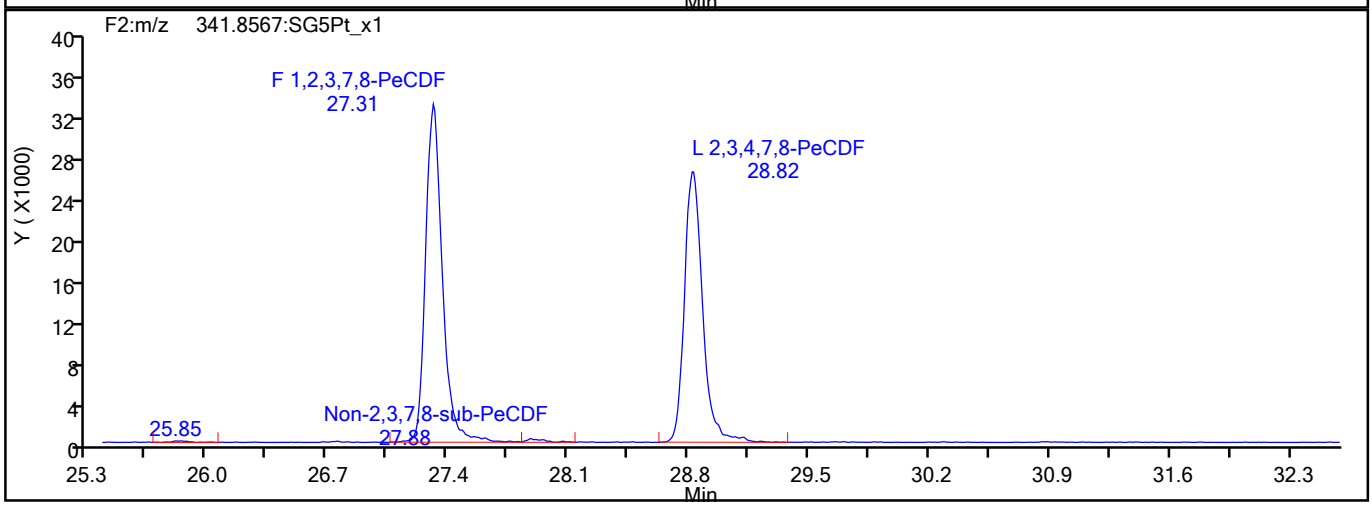

PeCDF Interference Mass

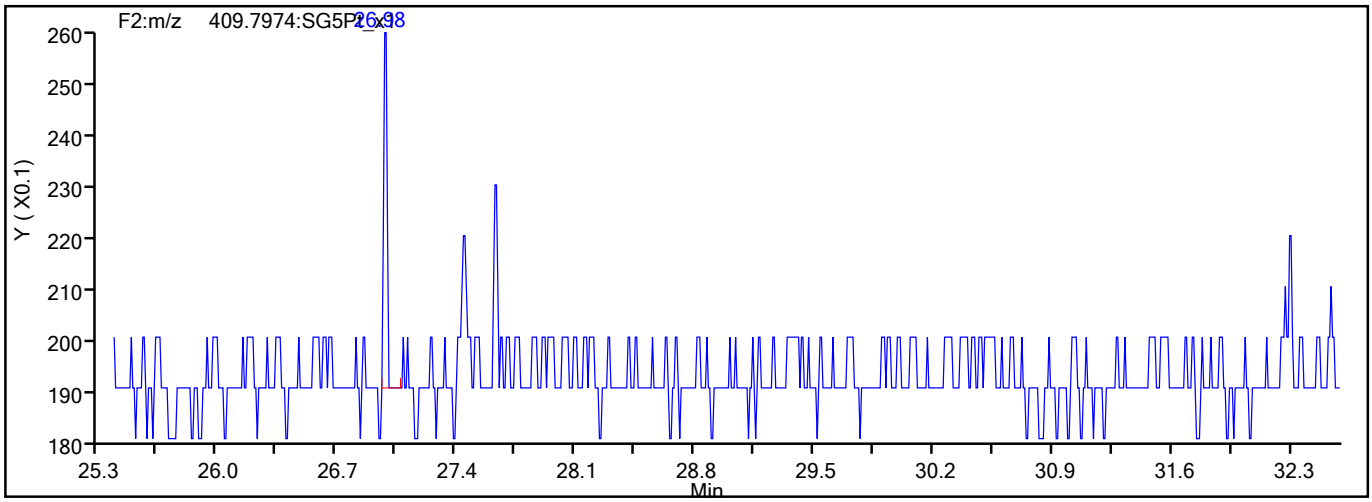

787508

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

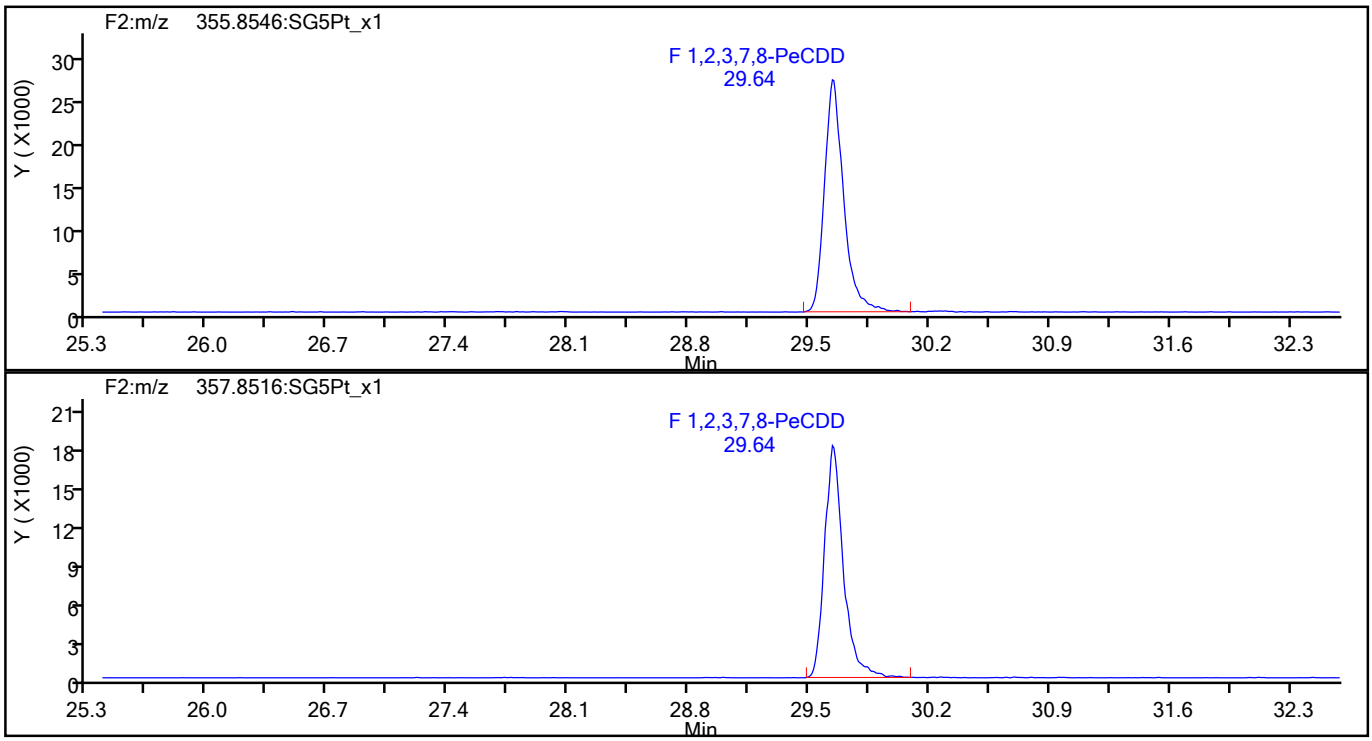

PeCDD Standards

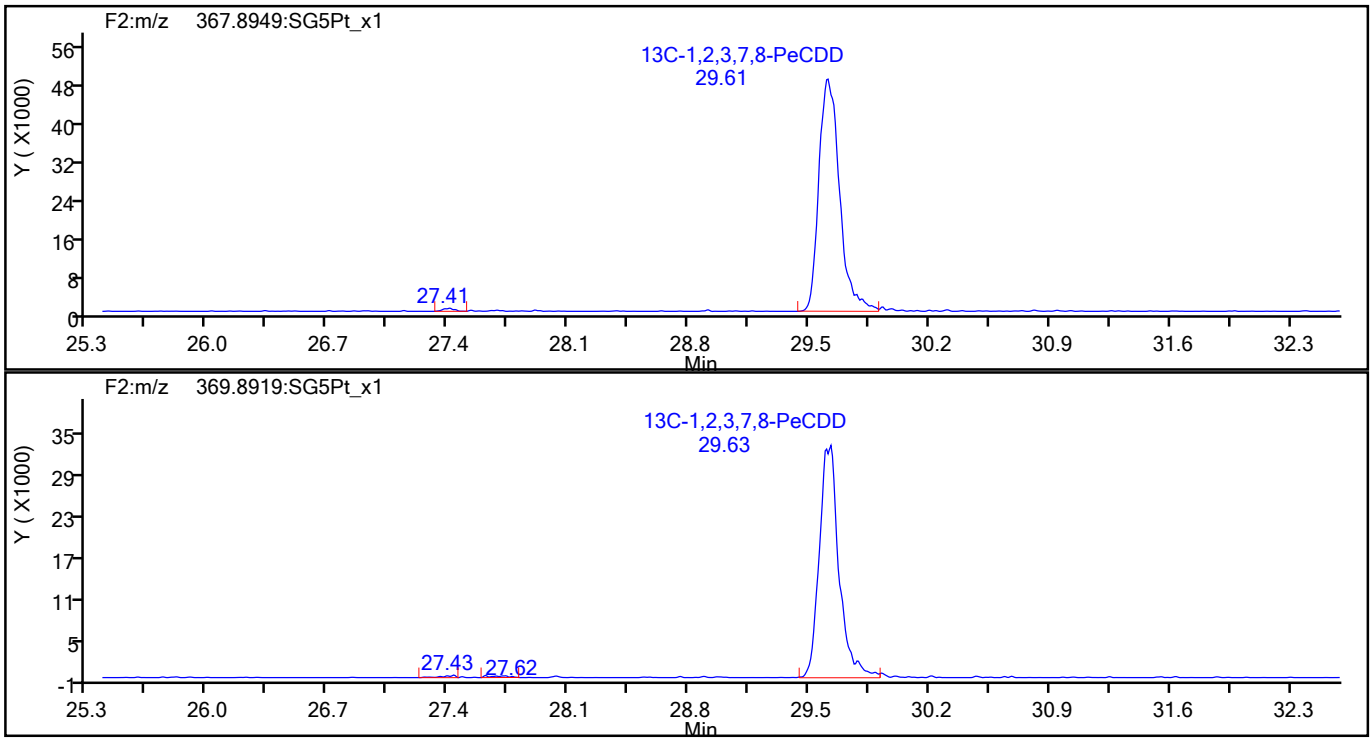

787509

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

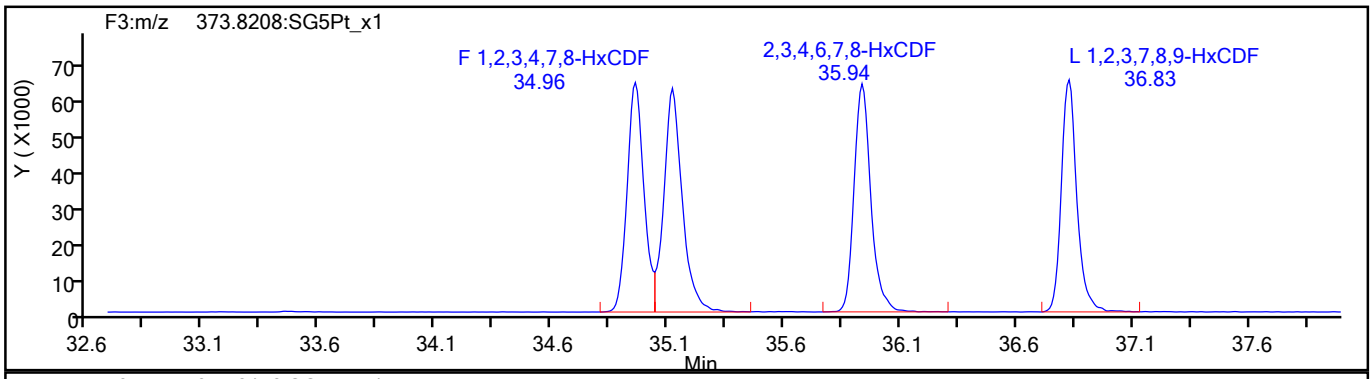

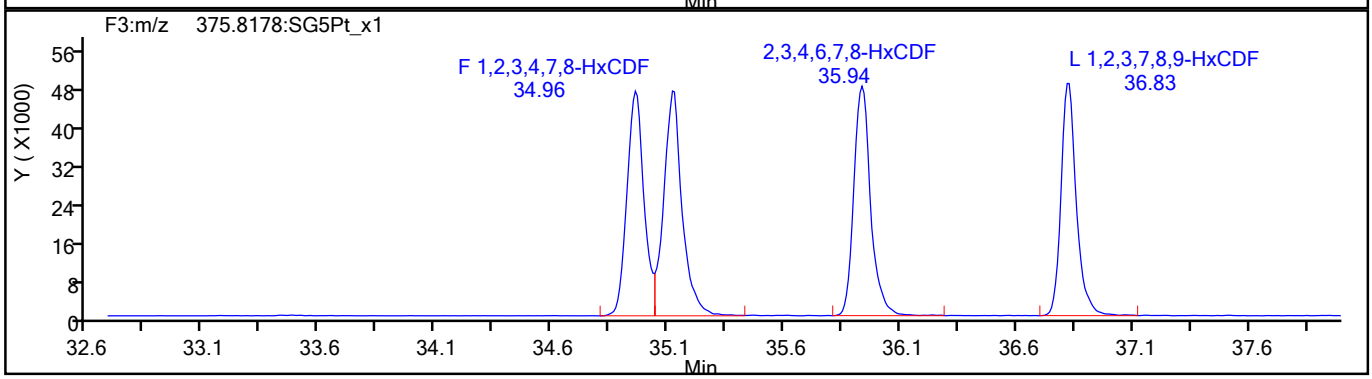

HxCDF Standards

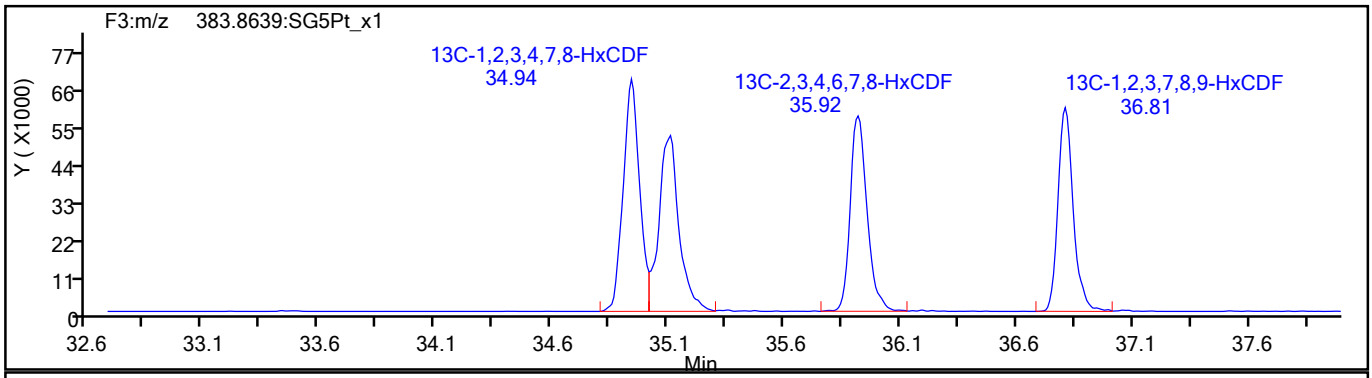

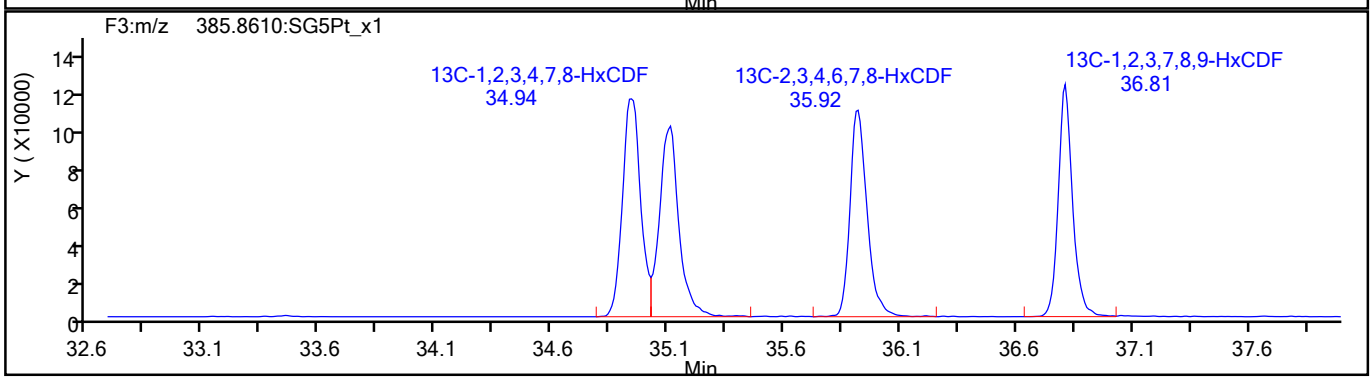

787510

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

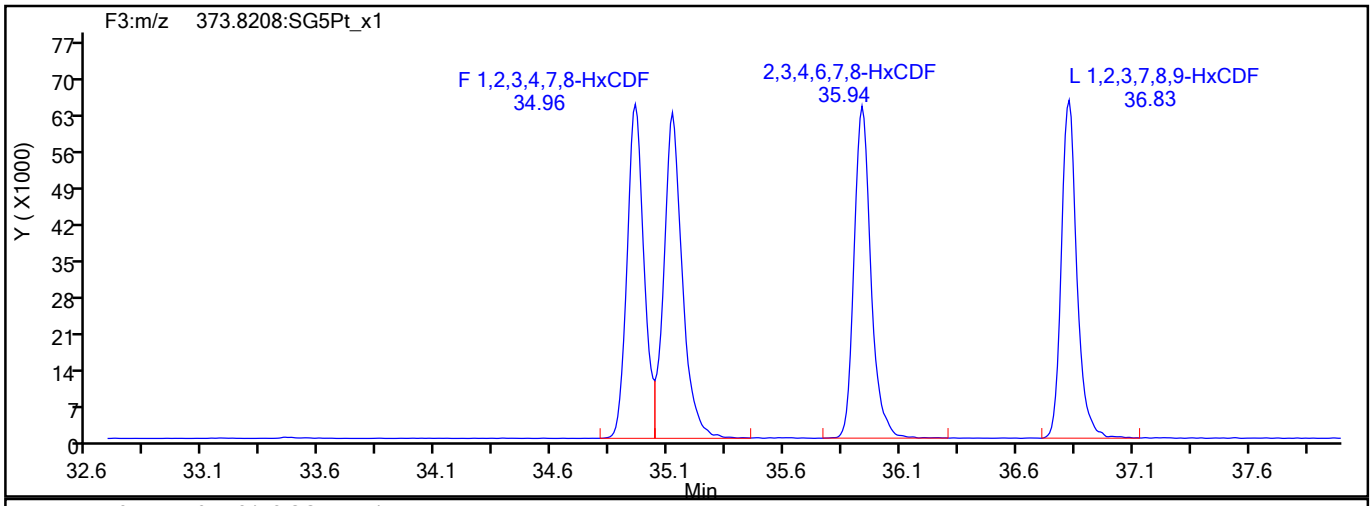

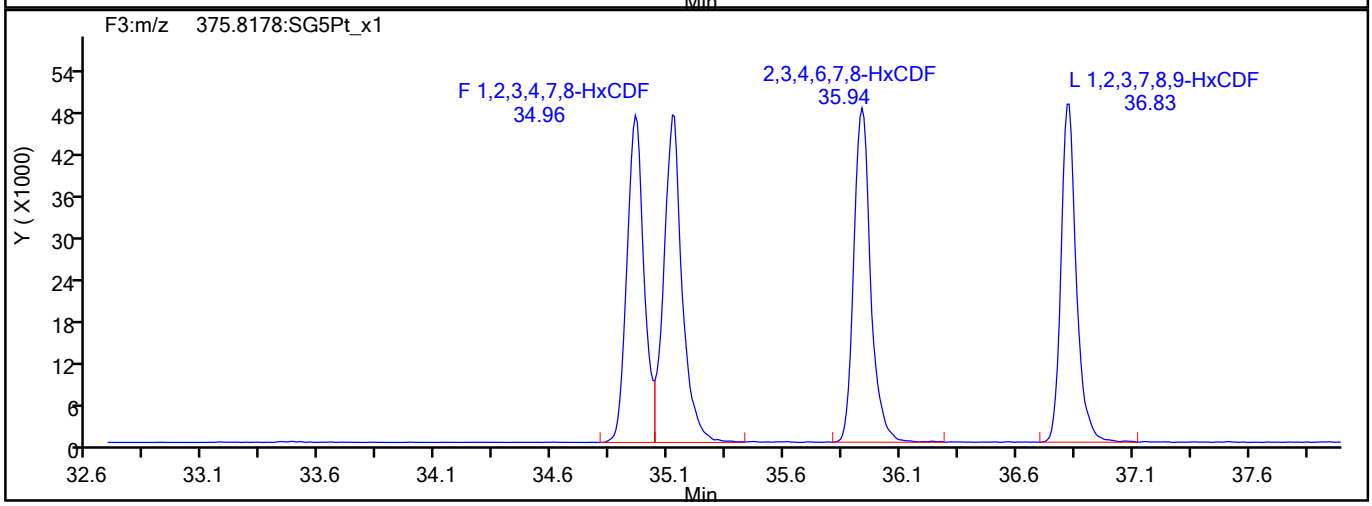

HxCDF Interference Mass

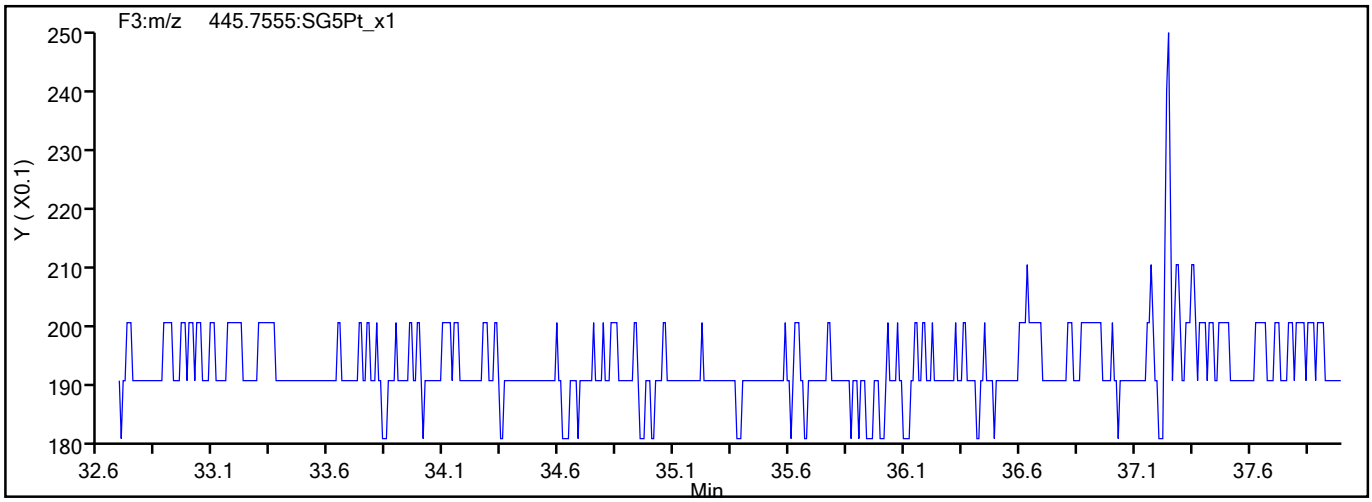

787511

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

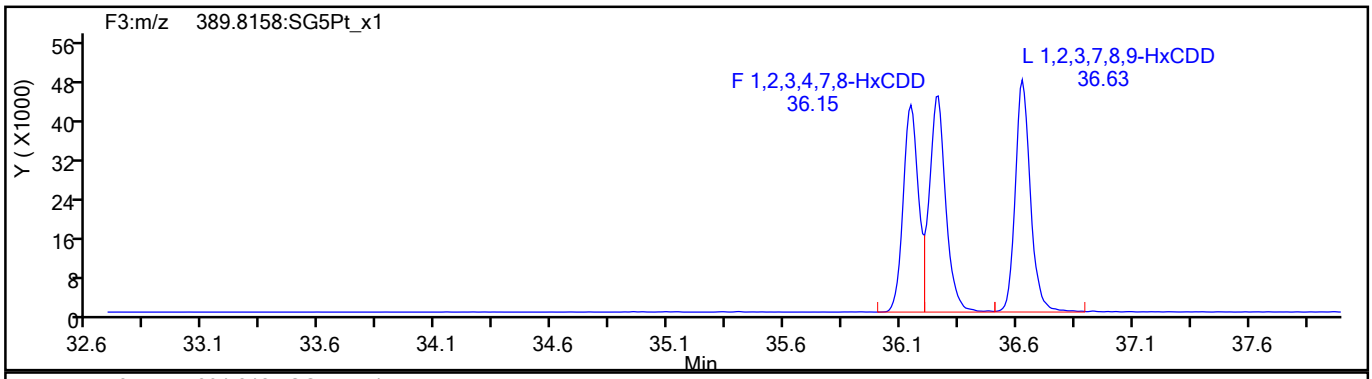

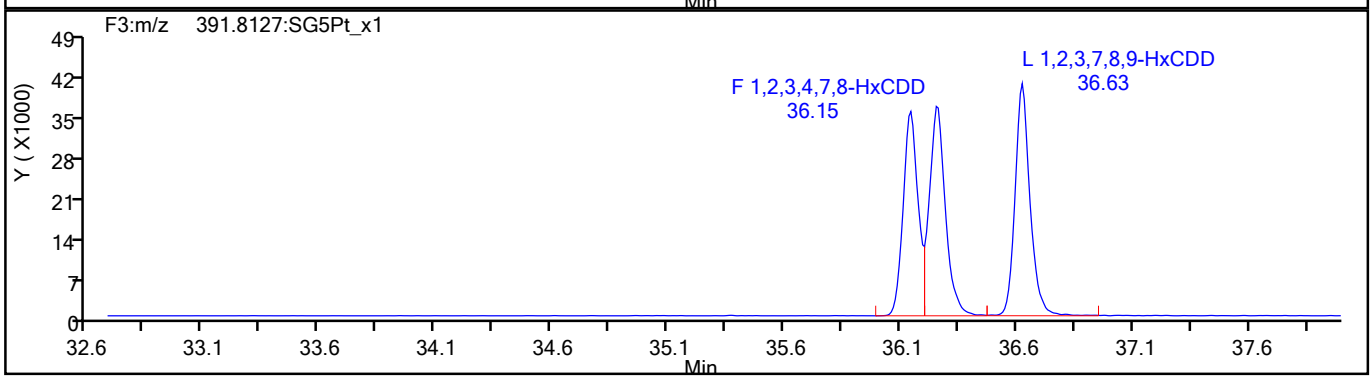

HxCDD Standards

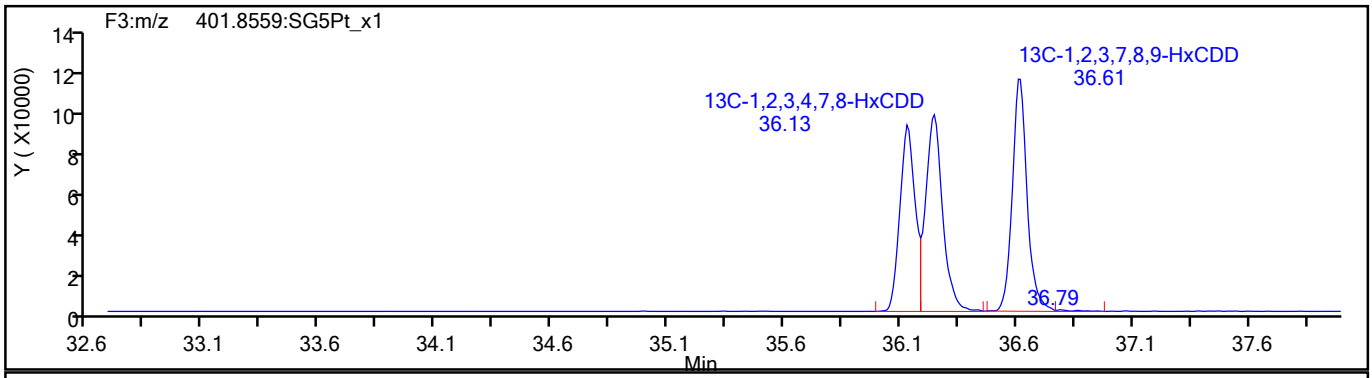

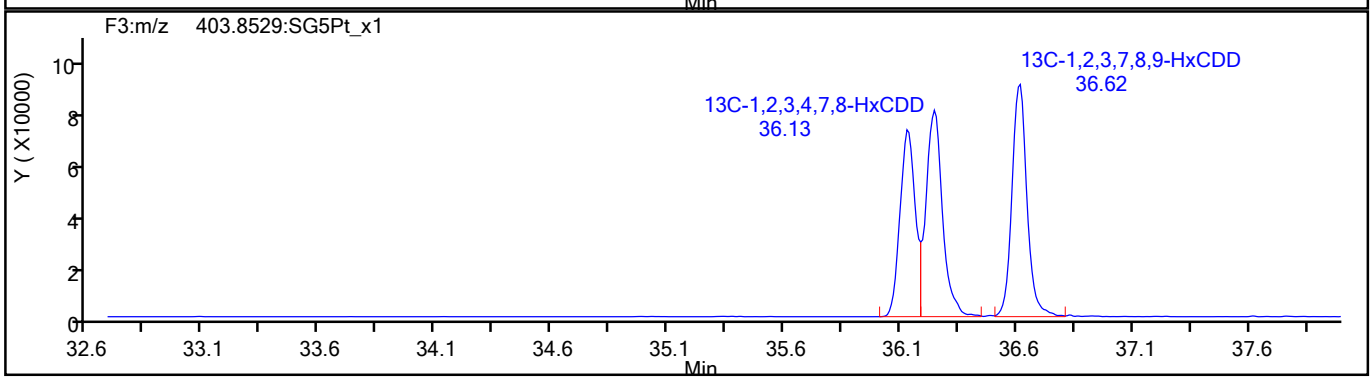

787512

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

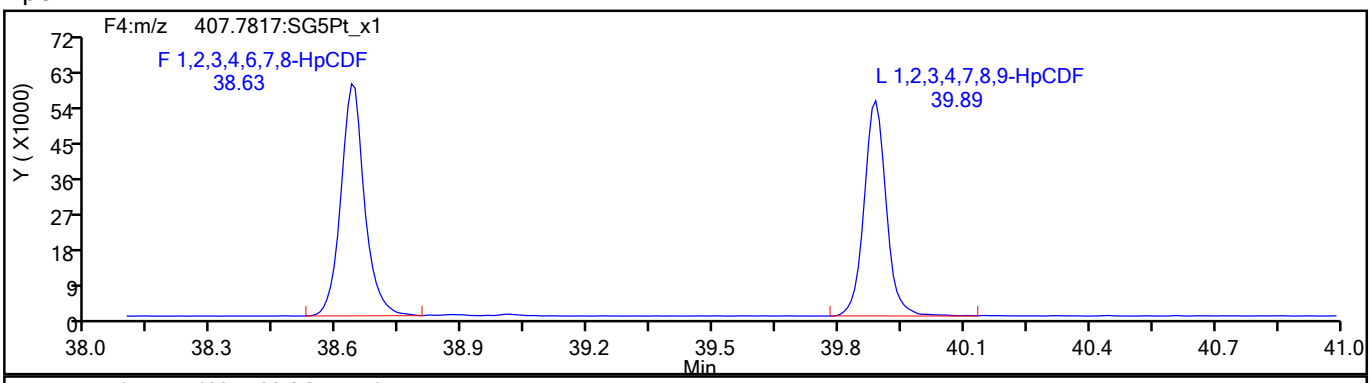

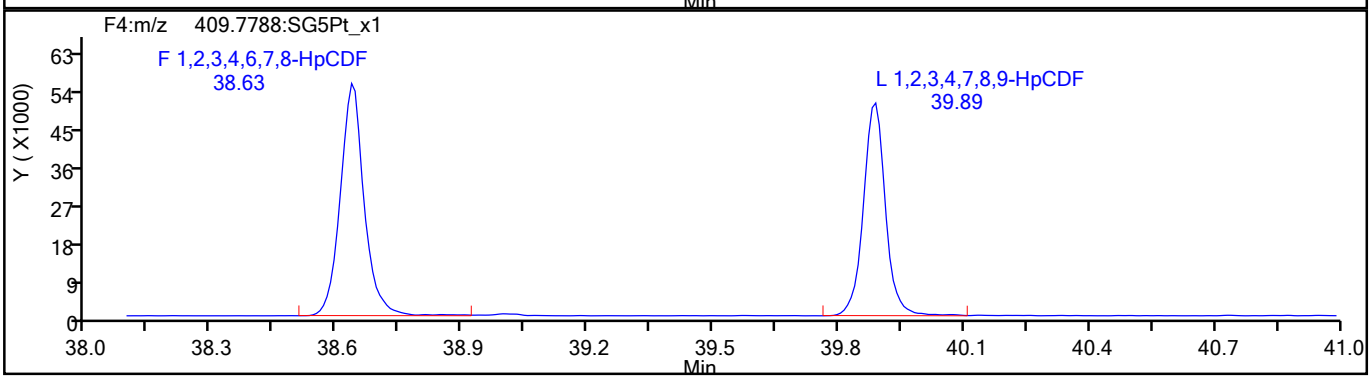

HpCDF Standards

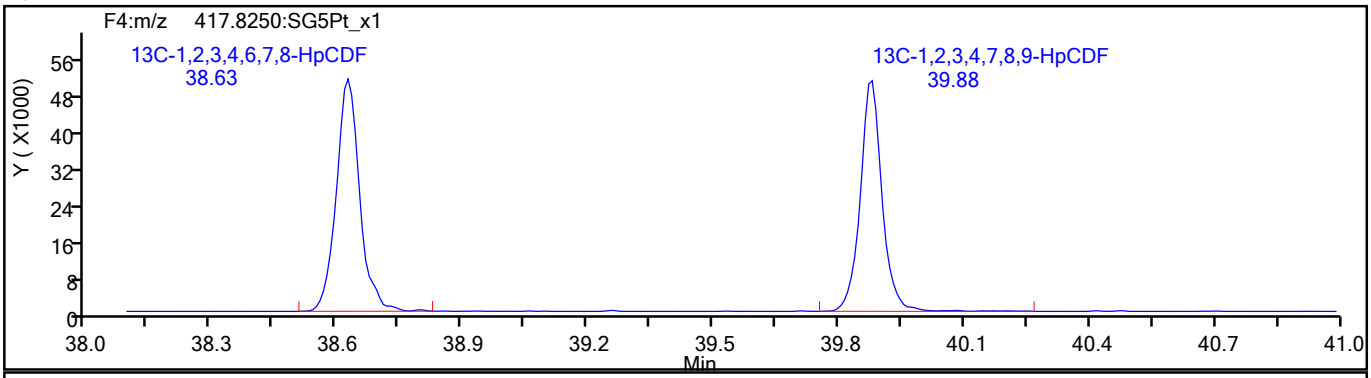

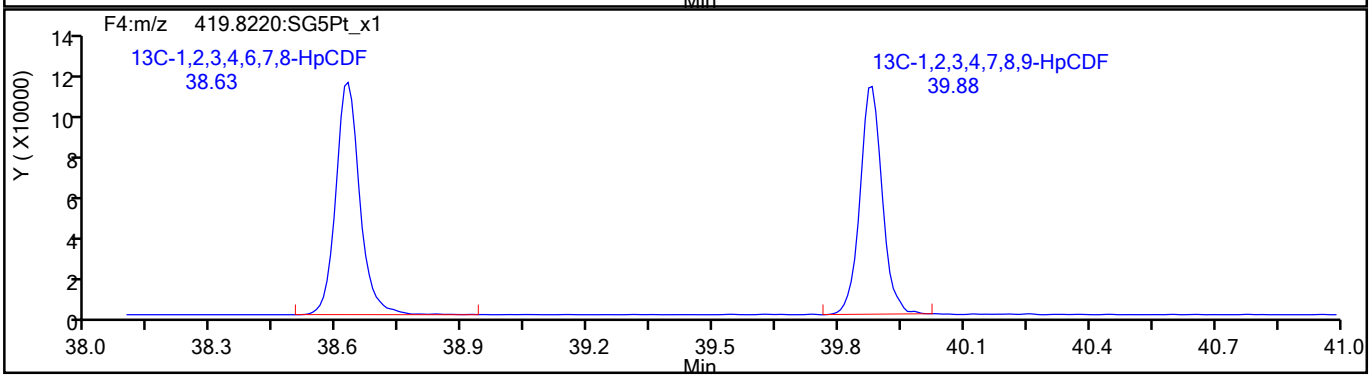

787513

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
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HpCDF

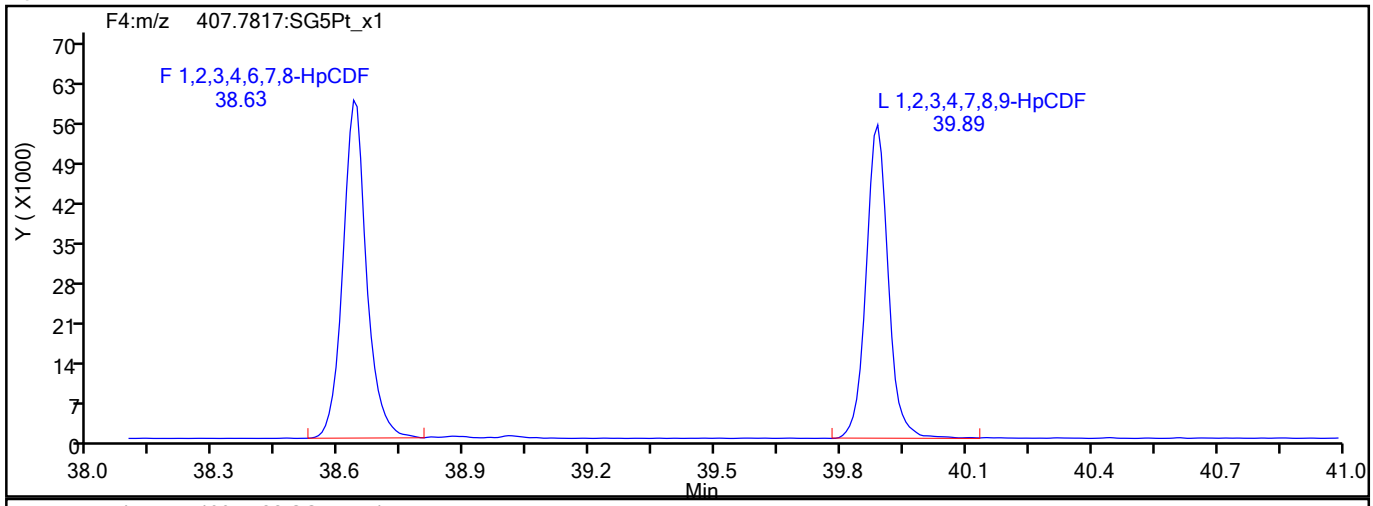

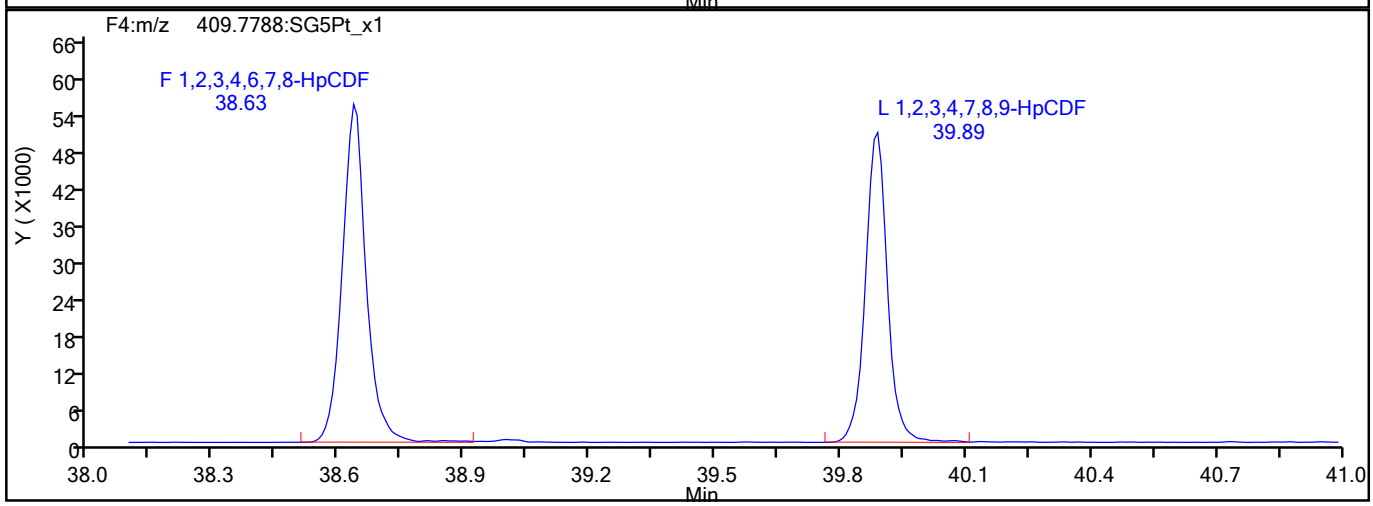

HpCDF Interference Mass

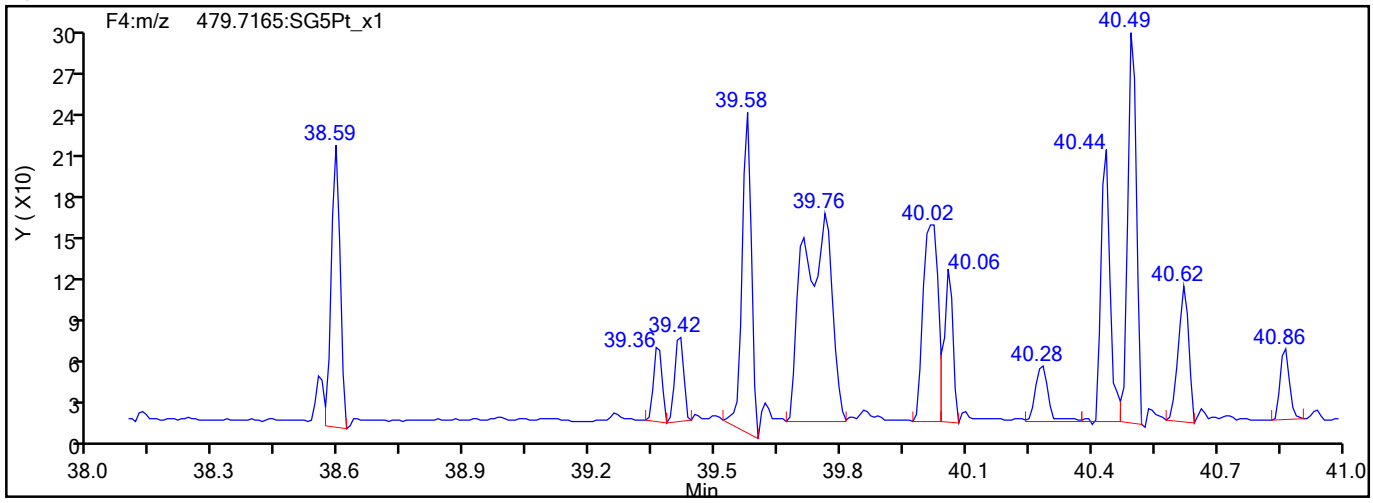

787514

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

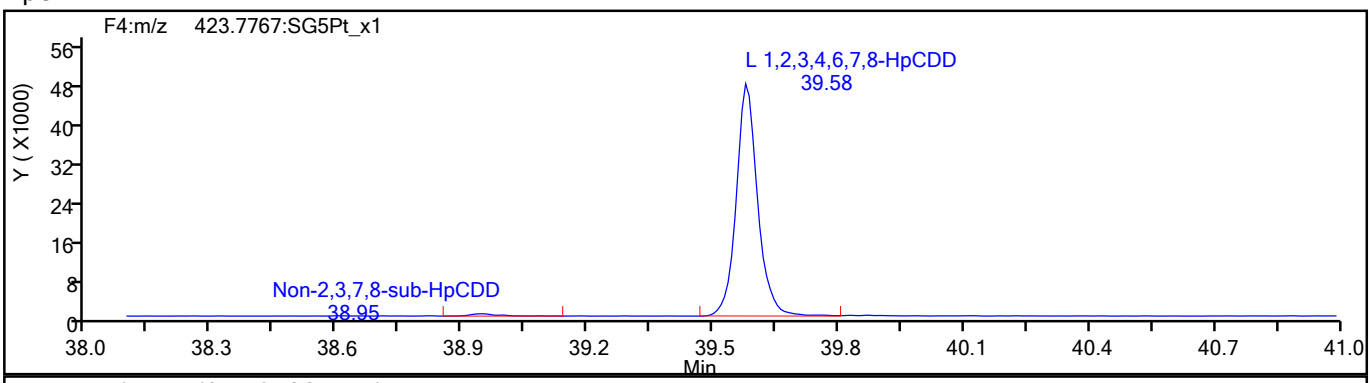

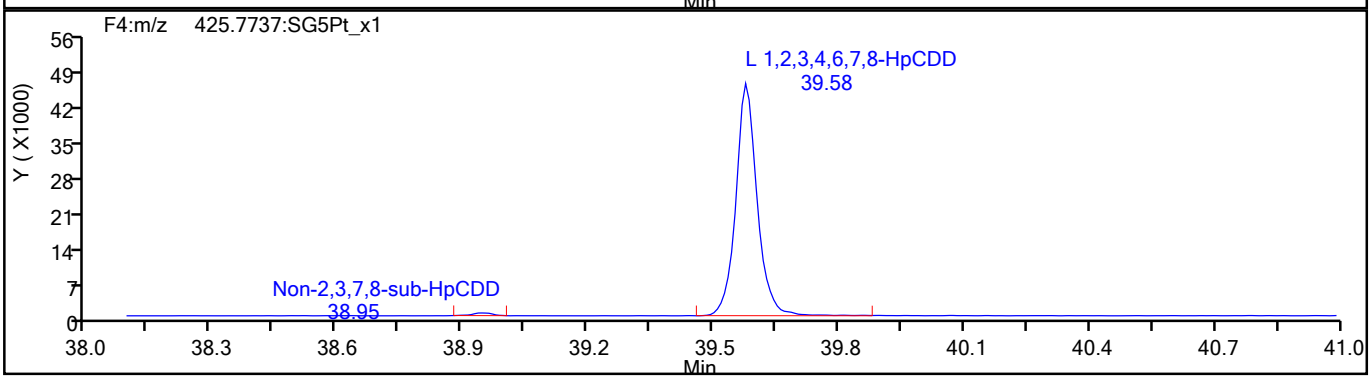

HpCDD Standards

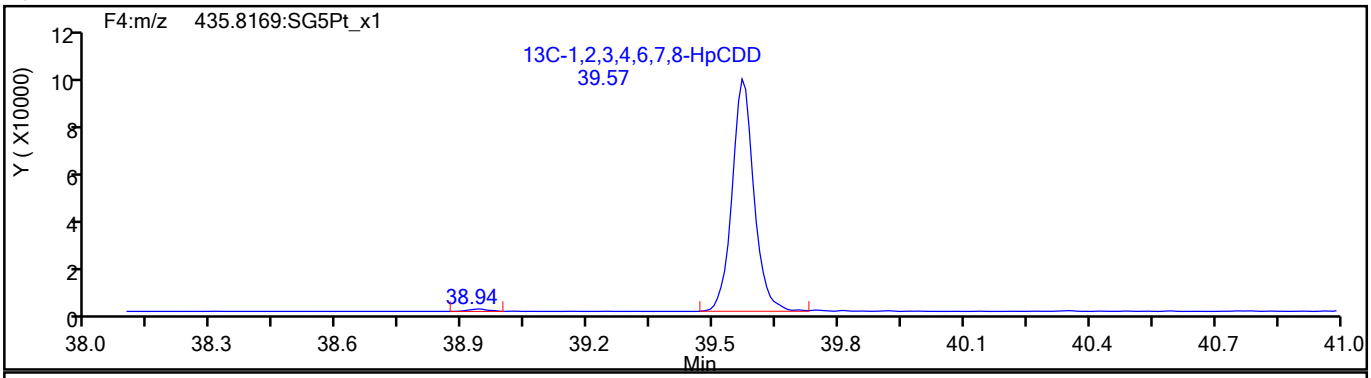

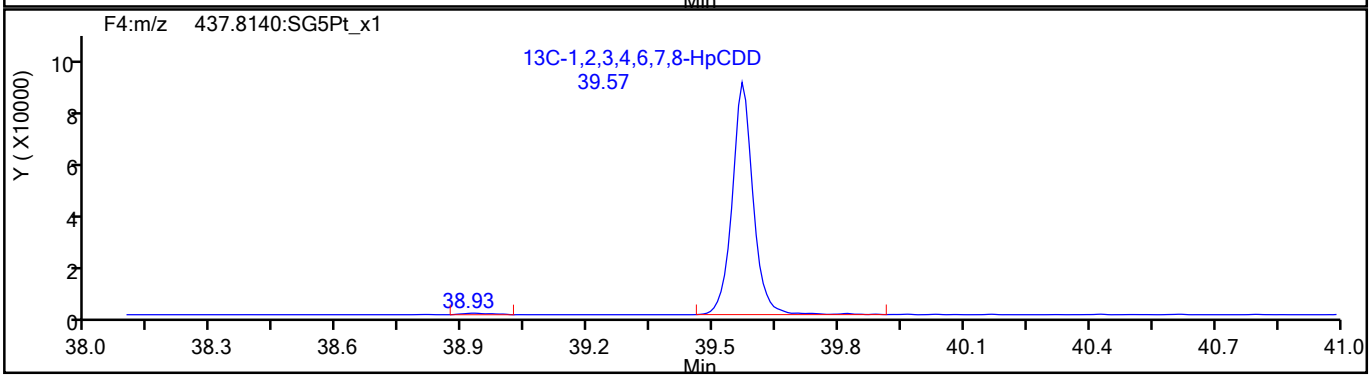

787515

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

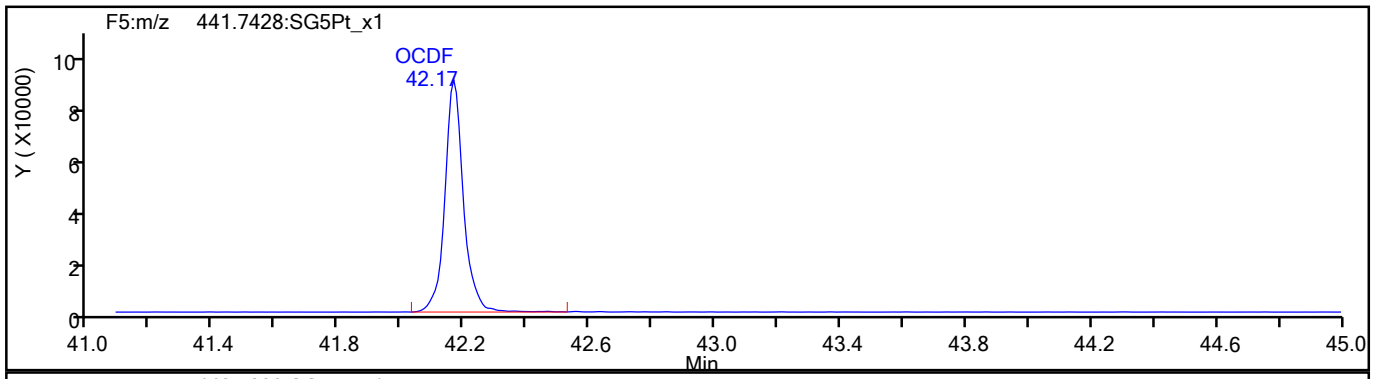

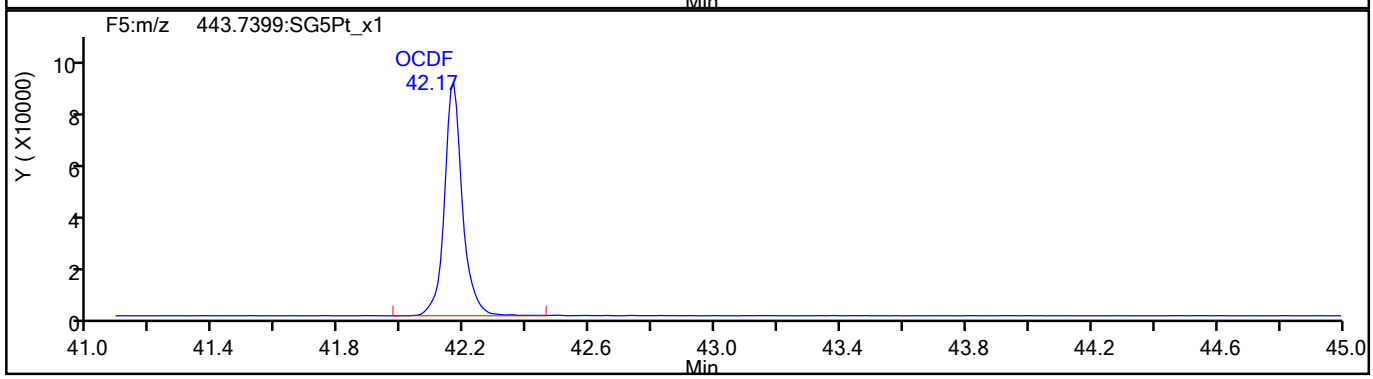

OCDF Standards

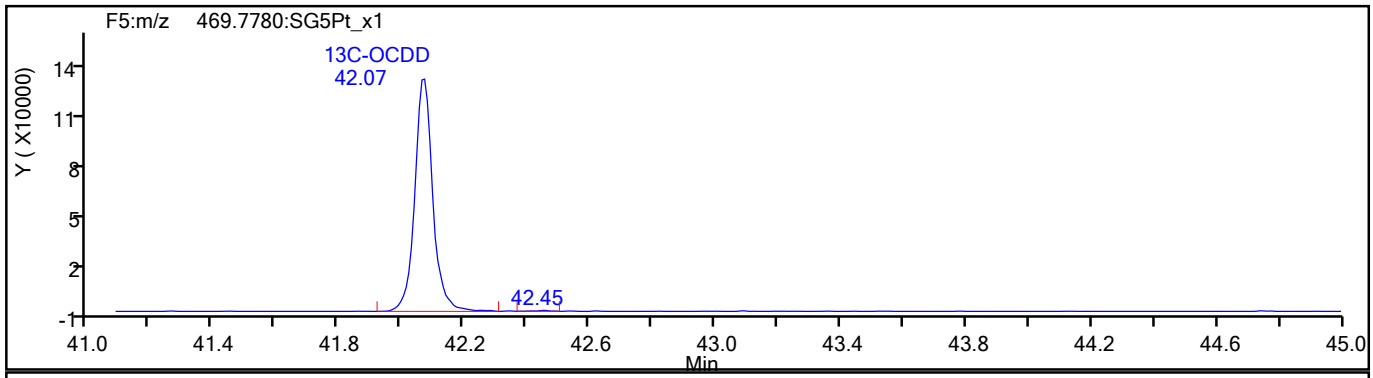

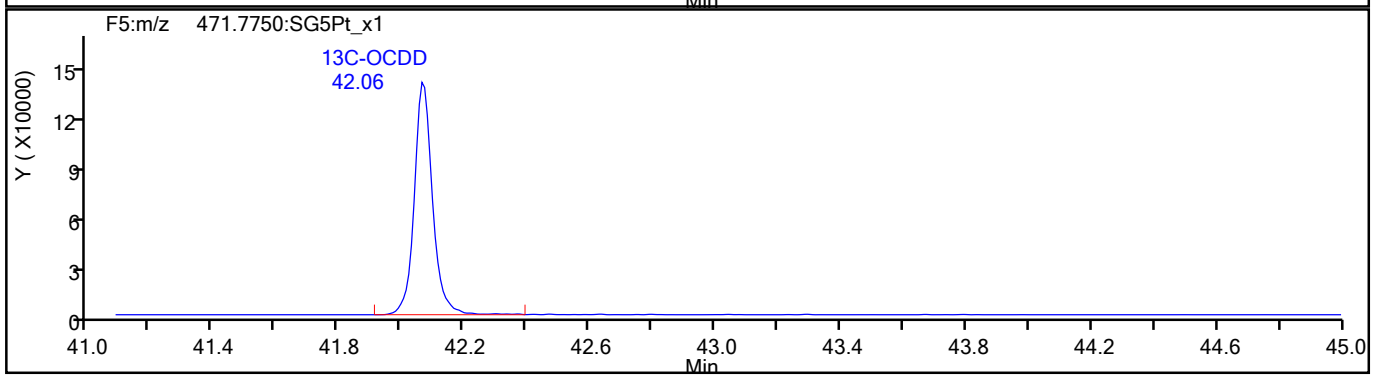

787516

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

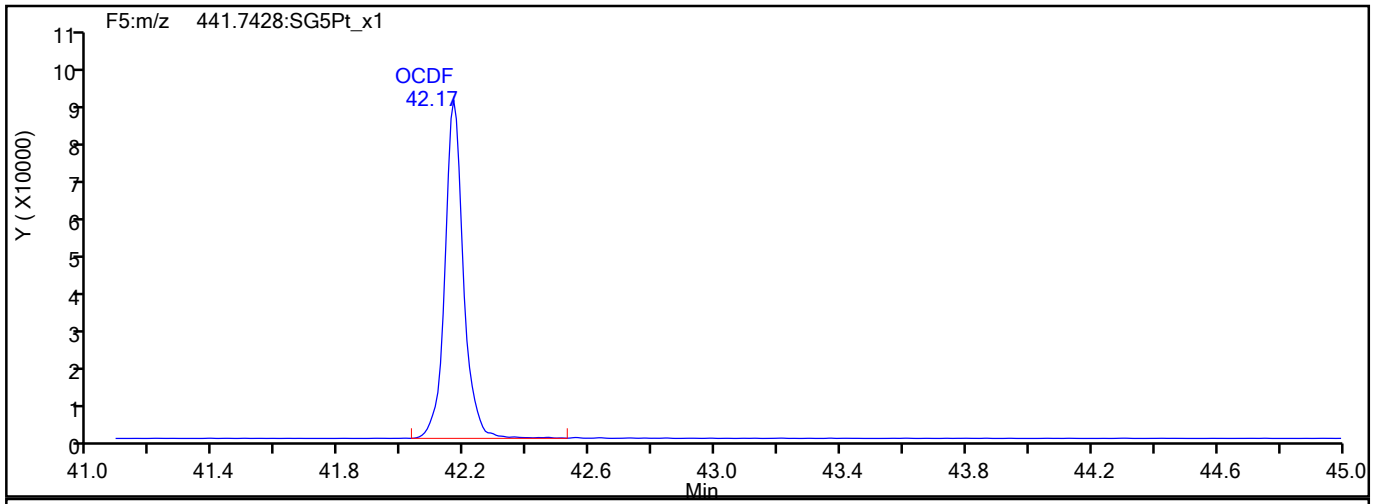

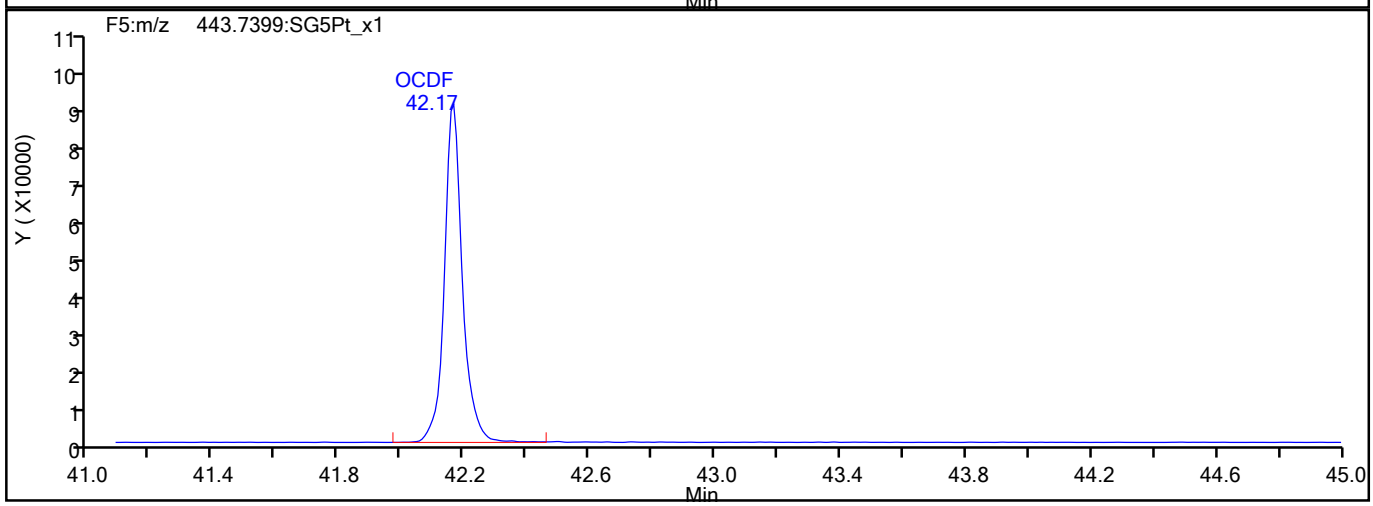

OCDF Interference Mass

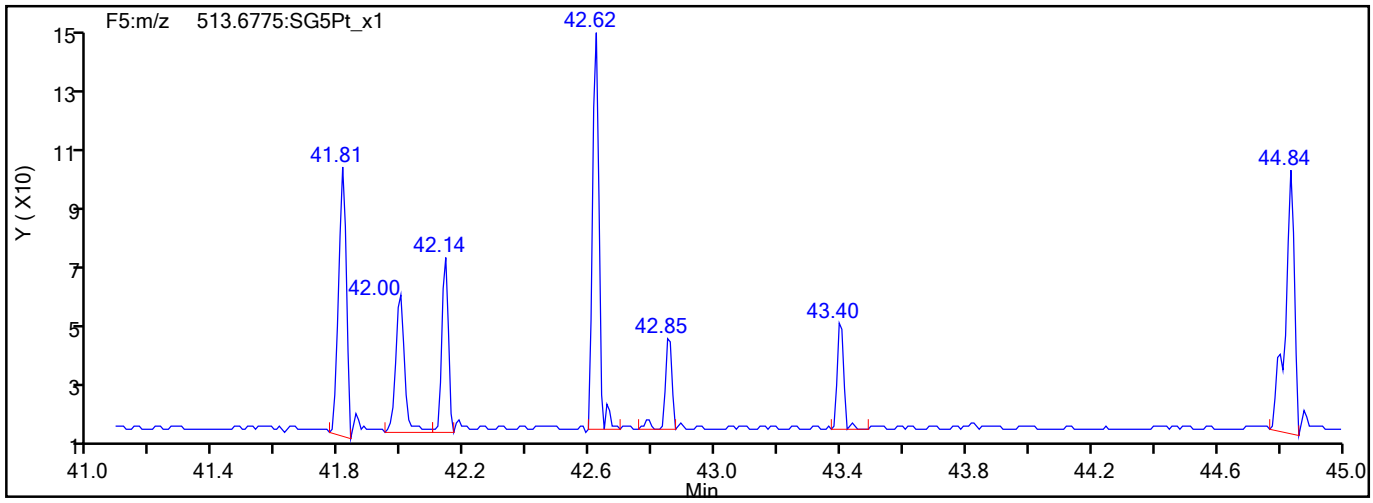

787517

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

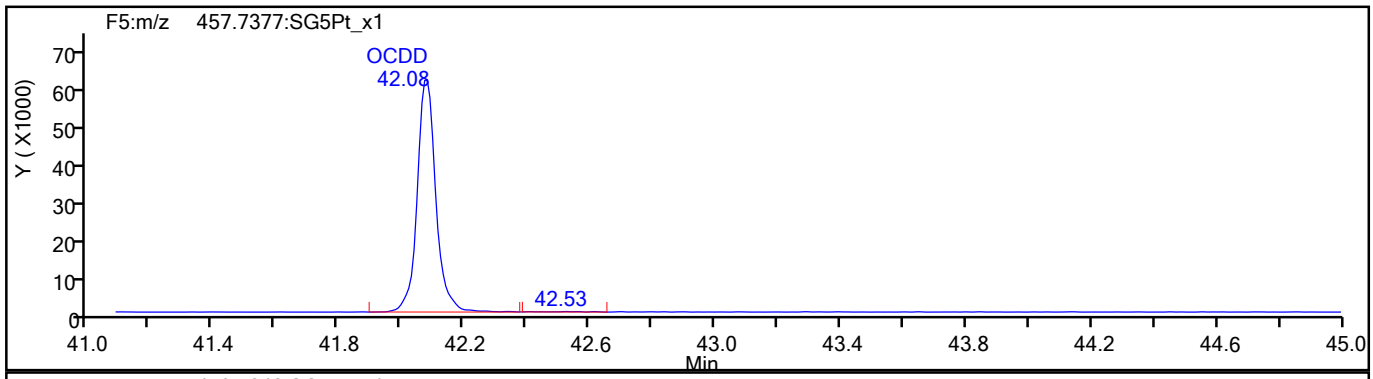

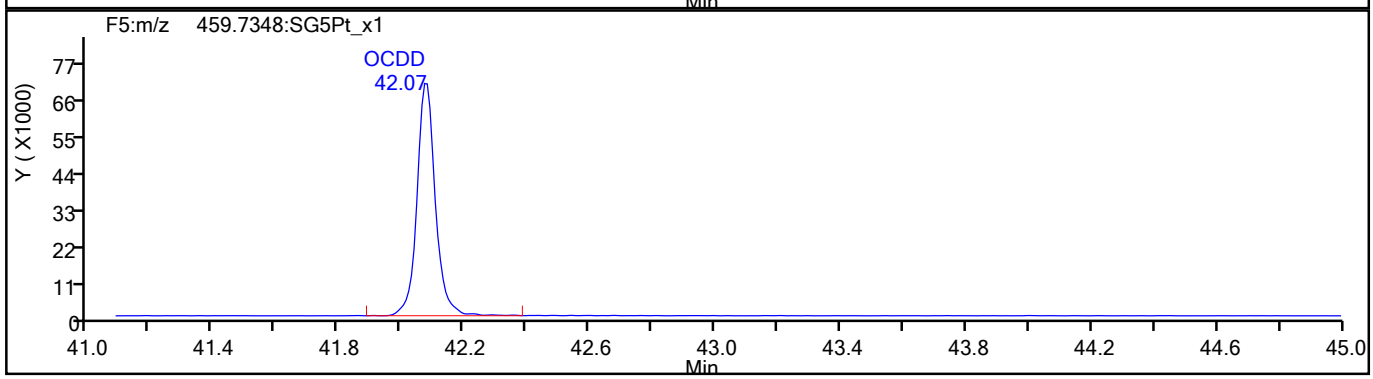

OCDD Standards

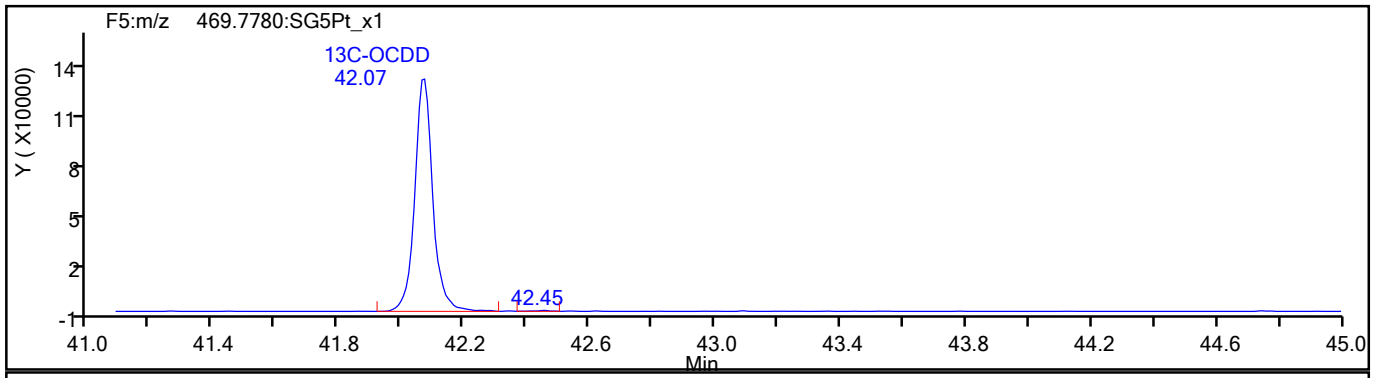

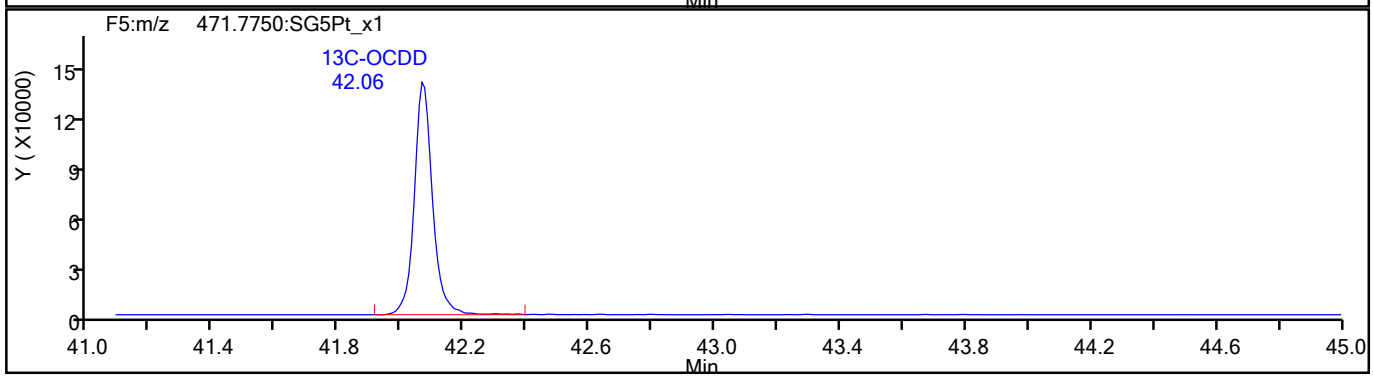

787518

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

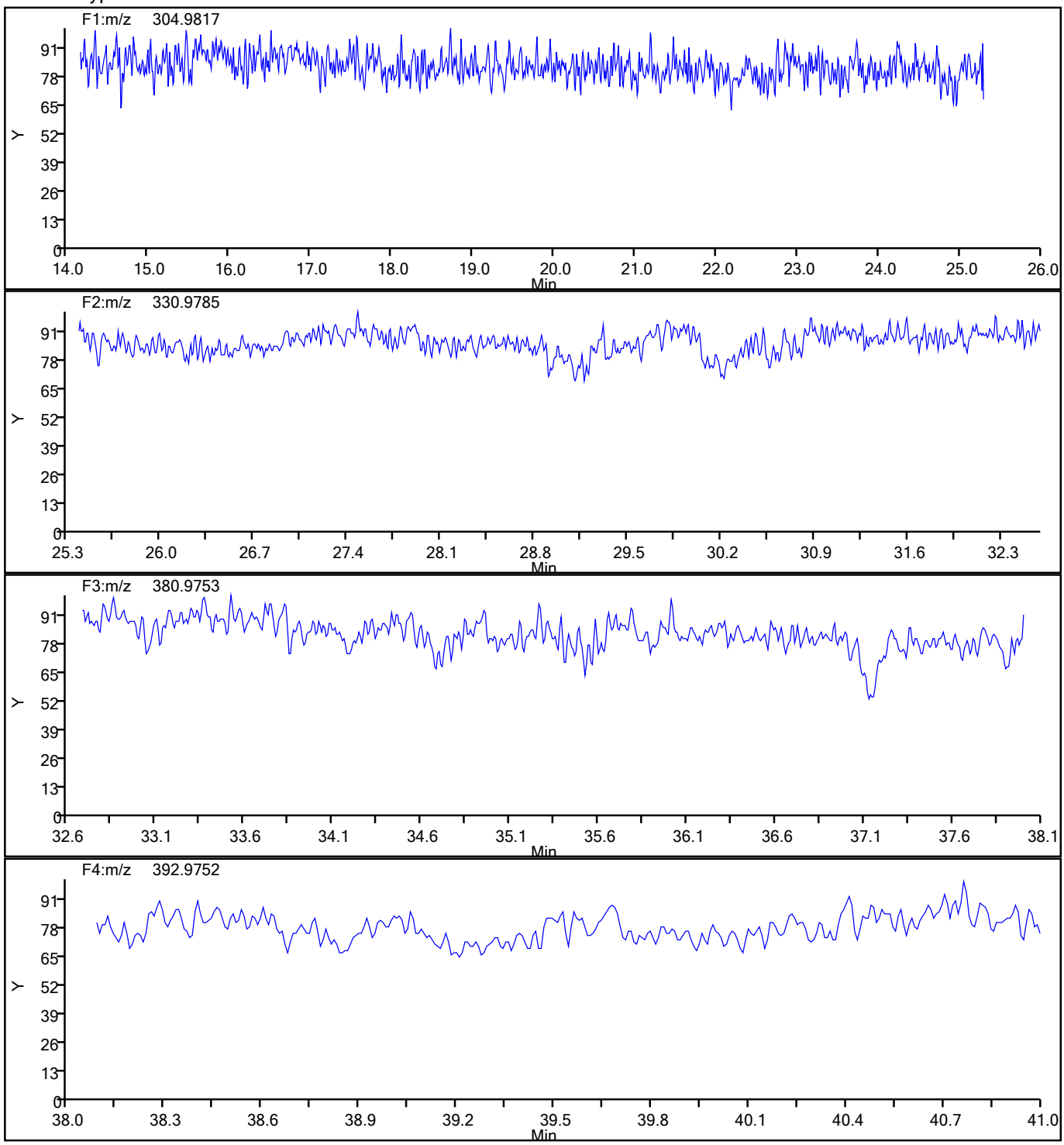

787519

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

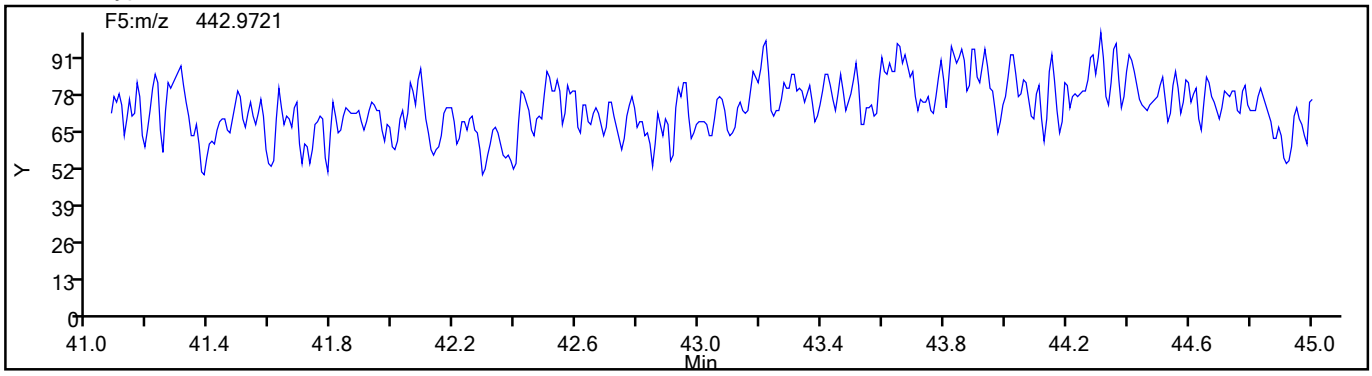

787520

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID: CCV 320-517891/2 Calibration Date: 08/19/2021 14:46

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 19au21dfs1_3.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.050		9.72	10.0	97	84-120
2,3,7,8-TCDD	AveID	1.075	1.033		9.60	10.0	96	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.077		51.1	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9629		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.051		50.2	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.164		50.7	50.0	101	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.285		52.8	50.0	106	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.306		53.7	50.0	107	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9728		45.9	50.0	92	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9017		45.4	50.0	91	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.036		46.7	50.0	93	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.311		52.8	50.0	106	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.348		46.7	50.0	93	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.013		48.2	50.0	96	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.260		48.1	50.0	96	86-116
OCDD	AveID	1.062	1.013		95.4	100	95	79-126
OCDF	AveID	1.317	1.434		109	100	109	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.419		105	100	105	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9767		105	100	105	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	0.996		87.4	100	87	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.099		97.7	100	98	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6618		92.4	100	92	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.074		111	100	111	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.086		101	100	101	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.008		96.8	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7840		103	100	103	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9106		106	100	106	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9343		96.0	100	96	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7901		107	100	107	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7627		113	100	113	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7751		113	100	113	77-129
13C-OCDD	Ave	0.5446	0.6405		235	200	118	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.001		9.93	10.0	99	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	19AU21DFS1_1	Resolution Check	RC 081921	46			KSS	1.000	
2	19AU21DFS1_2	WDM HRDXNCP_00044	WDM 081921	1	Dioxin		KSS	1.000	
3	19AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081921	2	Dioxin		KSS	1.000	
4	19AU21DFS1_4	SB Solvent Blank C14	SB 081921	3	Dioxin		KSS	1.000	
5	19AU21DFS1_5	mb 320-513879/1-a RI	mb 320-513879/1-a	4	1613B/Solid	D267	KSS	10.000	g
6	19AU21DFS1_6	320-76888-a-13-a RI	320-76888-a-13-a	5	1613B/Solid	D266	KSS	10.000	g
7	19AU21DFS1_7	320-76901-a-3-a	320-76901-a-3-a	6	1613B/Solid	D267	KSS	10.000	g
8	19AU21DFS1_8	320-76901-a-4-a	320-76901-a-4-a	7	1613B/Solid		KSS	10.000	g
9	19AU21DFS1_9	320-76901-a-5-a	320-76901-a-5-a	8	1613B/Solid		KSS	10.000	g
10	19AU21DFS1_10	320-76901-a-6-a	320-76901-a-6-a	9	1613B/Solid		KSS	10.000	g
11	19AU21DFS1_11	320-76901-a-7-a	320-76901-a-7-a	10	1613B/Solid		KSS	10.000	g
12	19AU21DFS1_12	320-76901-a-8-a	320-76901-a-8-a	11	1613B/Solid		KSS	10.000	g
13	19AU21DFS1_13	320-76901-a-9-a	320-76901-a-9-a	12	1613B/Solid		KSS	10.000	g
14	19AU21DFS1_14	320-76901-a-13-a	320-76901-a-13-a	13	1613B/Solid		KSS	10.000	g
15	19AU21DFS1_15	SB Solvent Blank C14	SB 081921A	3	Dioxin		KSS	1.000	
16	19AU21DFS1_16	Resolution Check	RC 081921A	46			KSS	1.000	
17	19AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081921A	2	Dioxin		KSS	1.000	
18	19AU21DFS1_18	WDM HRDXNCP_00044	WDM 081921A	1	Dioxin		KSS	1.000	
19	19AU21DFS1_19	SB Solvent Blank C14	SB 081921B	3	Dioxin		KSS	1.000	
20	19AU21DFS1_20	320-76888-a-5-a 5X	320-76888-a-5-a	14	1613B/Solid	D267	KSS	10.000	g
21	19AU21DFS1_21	320-76888-a-1-a 10X	320-76888-a-1-a	15	1613B/Solid		KSS	10.000	g
22	19AU21DFS1_22	320-76888-a-1-b ms 10X	320-76888-a-1-b ms	16	1613B/Solid		KSS	10.000	g
23	19AU21DFS1_23	320-76888-a-1-c msd 10X	320-76888-a-1-c msd	17	1613B/Solid		KSS	10.000	g
24	19AU21DFS1_24	320-76888-a-4-a 10X	320-76888-a-4-a	18	1613B/Solid		KSS	10.000	g
25	19AU21DFS1_25	320-76888-a-2-a 10X	320-76888-a-2-a	19	1613B/Solid		KSS	10.000	g
26	19AU21DFS1_26	320-76901-a-1-a 10X	320-76901-a-1-a	20	1613B/Solid		KSS	10.000	g
27	19AU21DFS1_27	320-76888-a-3-a 10X	320-76888-a-3-a	21	1613B/Solid		KSS	10.000	g
28	19AU21DFS1_28	SB Solvent Blank C14	SB 081921C	3	Dioxin		KSS	1.000	
29	19AU21DFS1_29	SB Solvent Blank C14	SB 081921D	3	Dioxin		KSS	1.000	
30	19AU21DFS1_30	Resolution Check	RC 081921B	46			KSS	1.000	

Logfile ✓'d
8/21/21
KSS

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 13:39
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11552 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10549 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11385 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11272 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11335 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11001 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11059 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10420 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10449 [5%height]

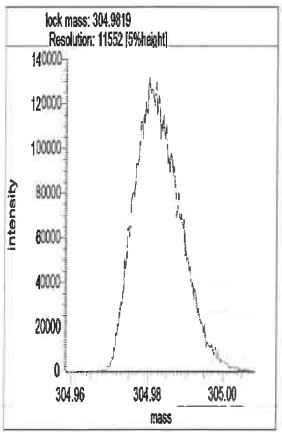

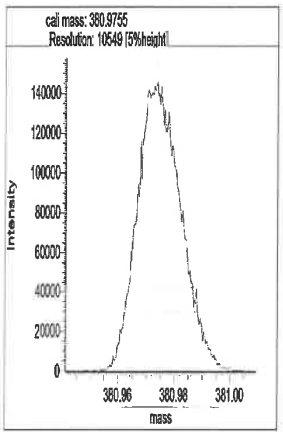

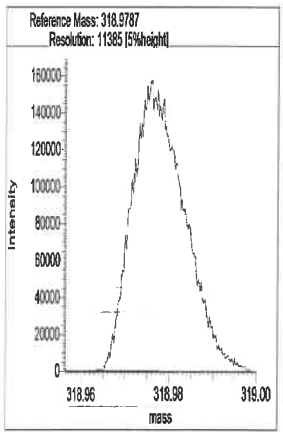

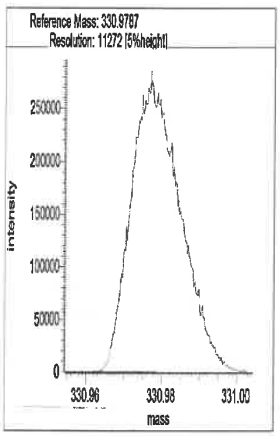

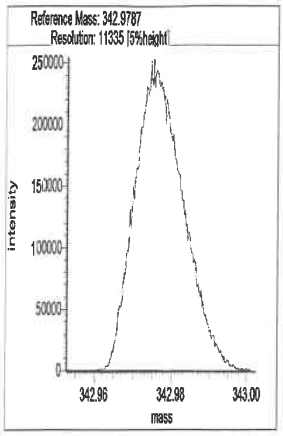

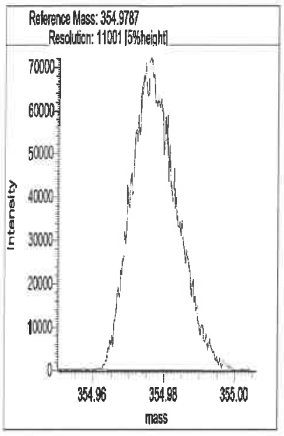

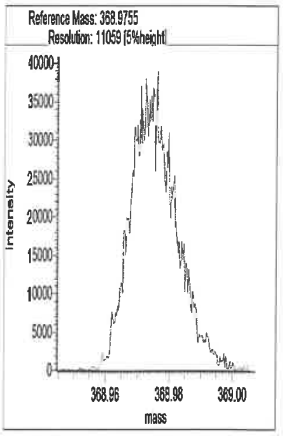

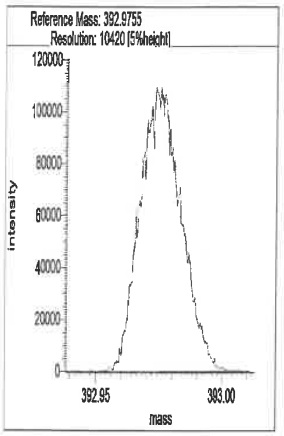

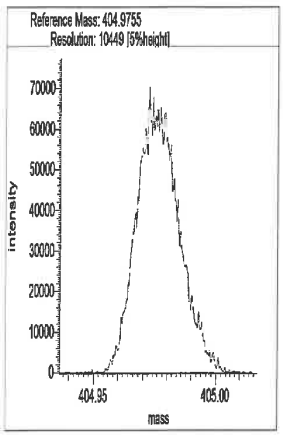

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11485 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10793 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11226 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11398 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10683 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10785 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10698 [5%height]

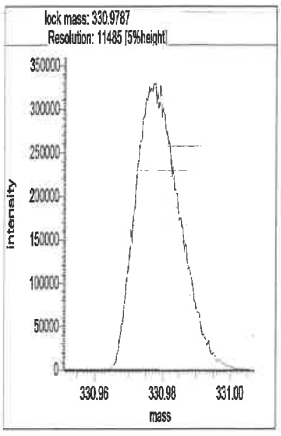

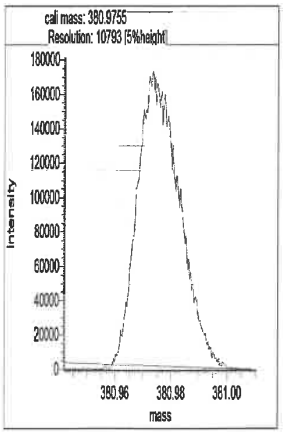

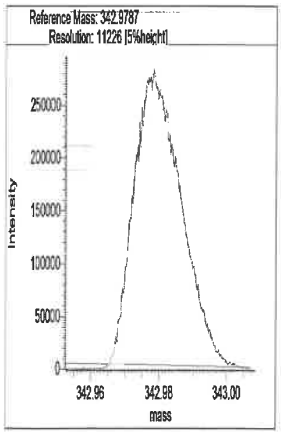

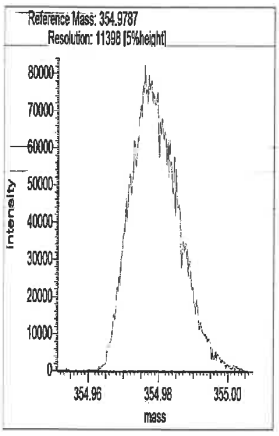

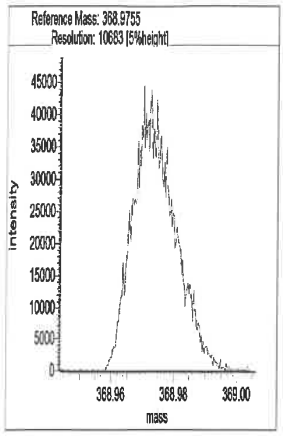

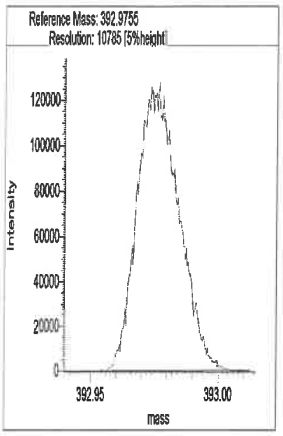

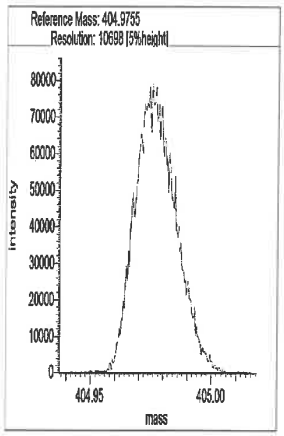

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11415 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10771 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11020 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11042 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12007 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10745 [5%height]

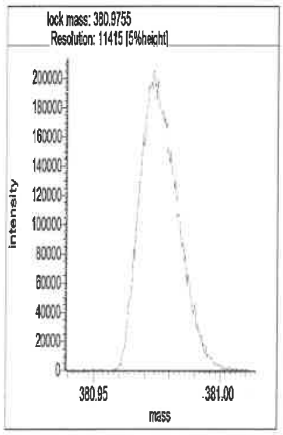

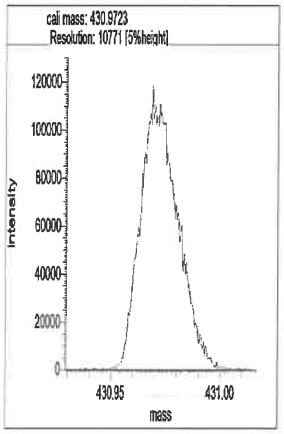

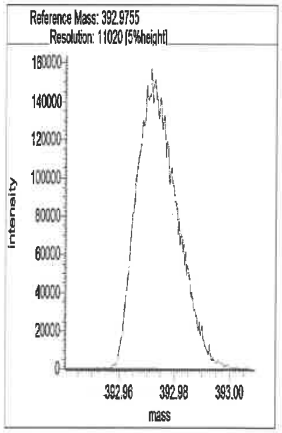

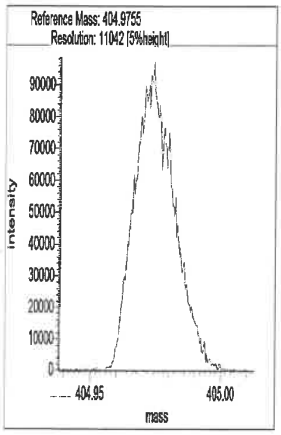

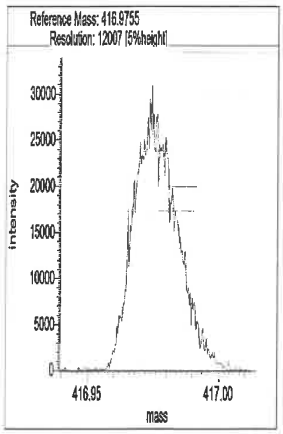

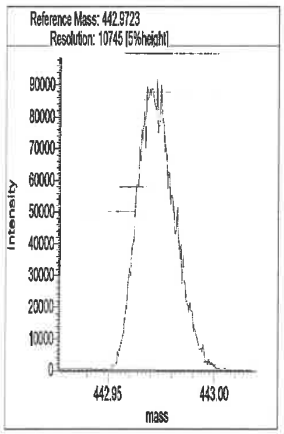

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11386 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10623 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11300 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10989 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11023 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10728 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10731 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10778 [5%height]

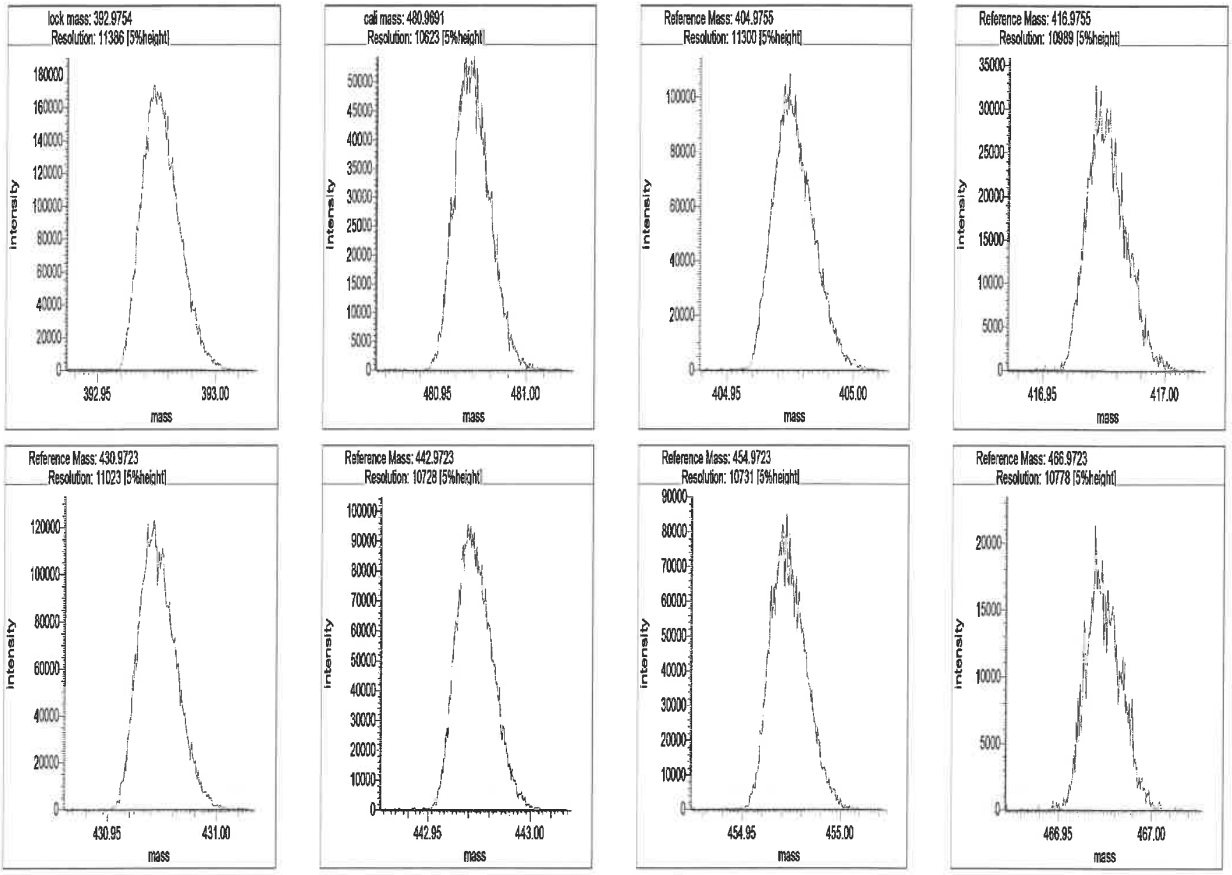

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11445 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11134 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11159 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10809 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11068 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10706 [5%height]

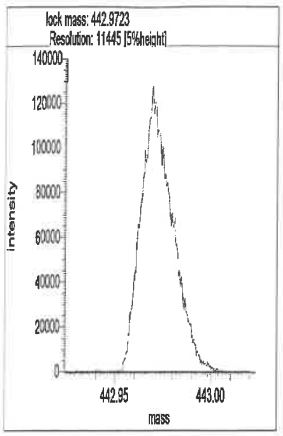
lock mass: 442.9723
Resolution: 11445 [5%height]
Intensity
mass

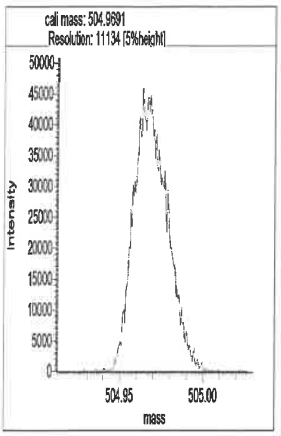
cali mass: 504.9691
Resolution: 11134 [5%height]
Intensity
mass

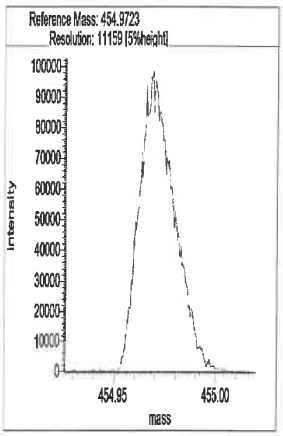
Reference Mass: 454.9723
Resolution: 11159 [5%height]
Intensity
mass

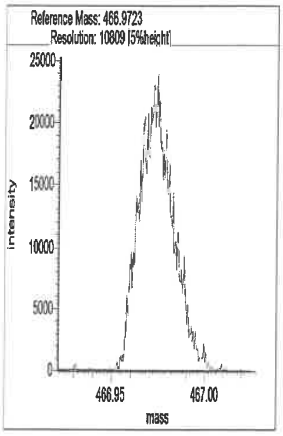
Reference Mass: 466.9723
Resolution: 10809 [5%height]
Intensity
mass

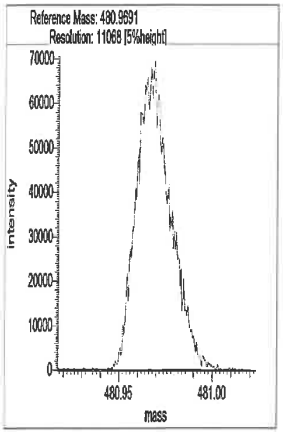
Reference Mass: 480.9691
Resolution: 11068 [5%height]
Intensity
mass

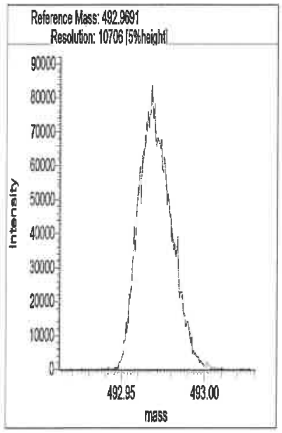
Reference Mass: 492.9691
Resolution: 10706 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 01:14
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10904 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10388 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10733 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10622 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10608 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10712 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10070 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9982 [5%height] ✓ DK 8/21/21
Ref. mass 404.9755 [m/z] Resolution: 10023 [5%height]

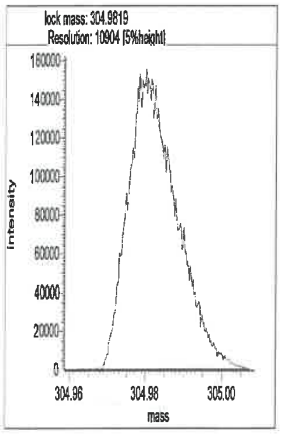

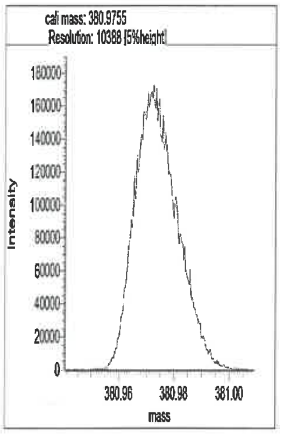

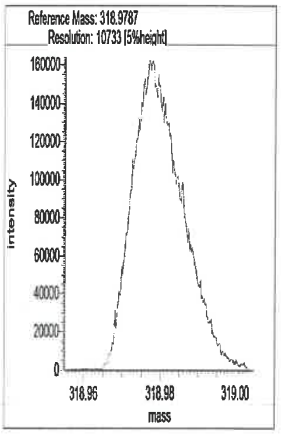

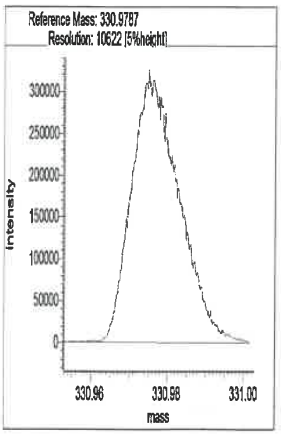

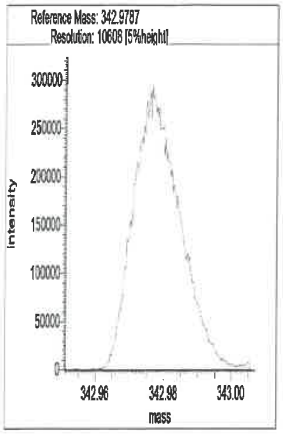

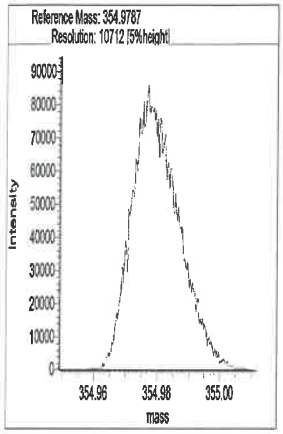

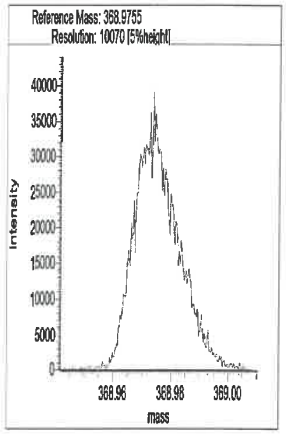

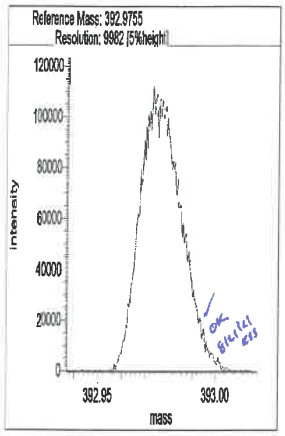

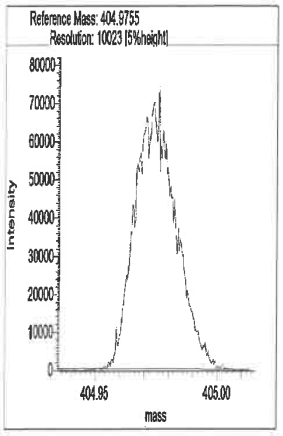

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10787 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10782 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11025 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11013 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10635 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10603 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10396 [5%height]

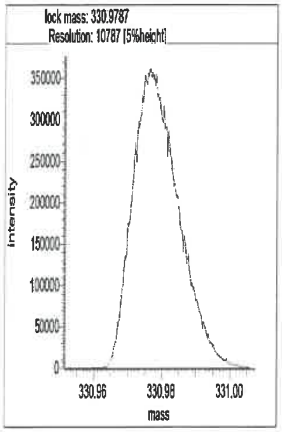

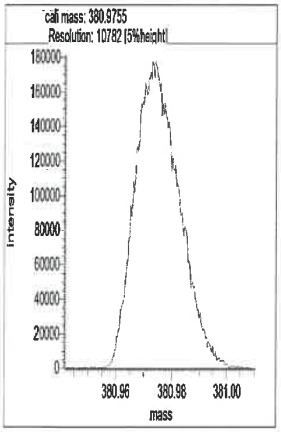

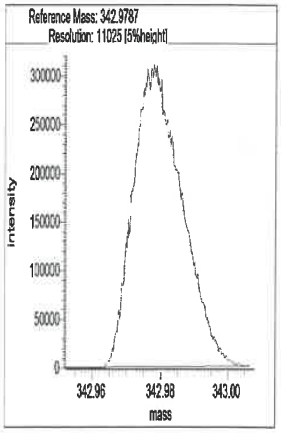

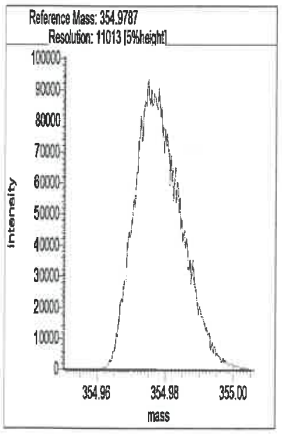

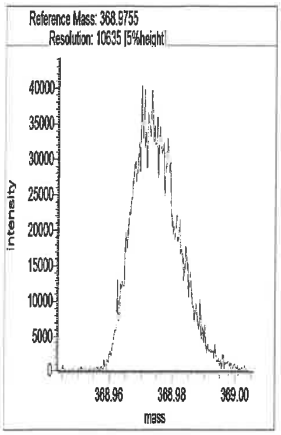

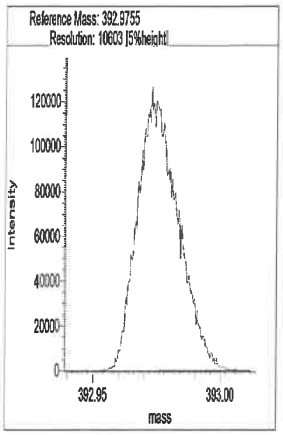

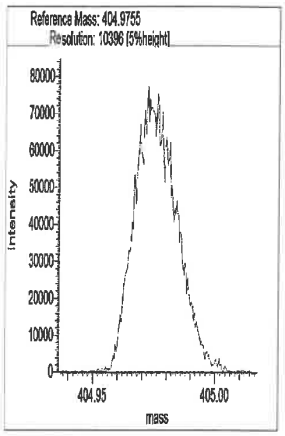

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11029 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10564 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10871 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10418 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11260 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10446 [5%height]

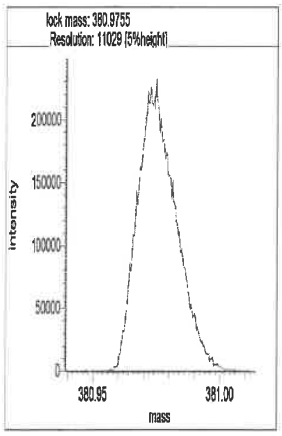

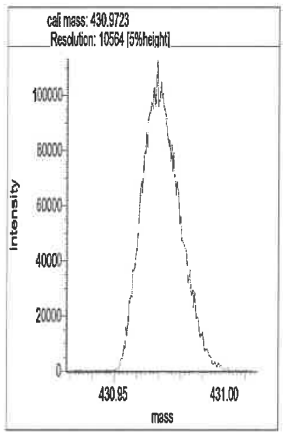

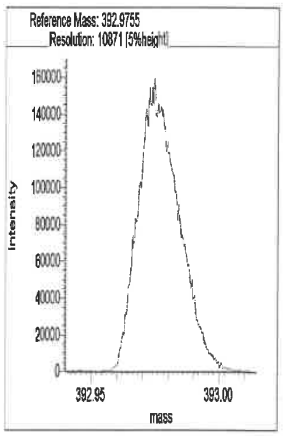

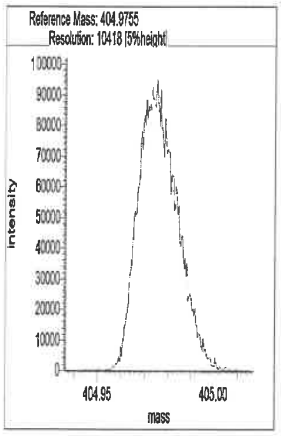

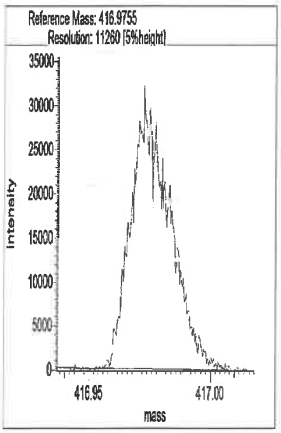

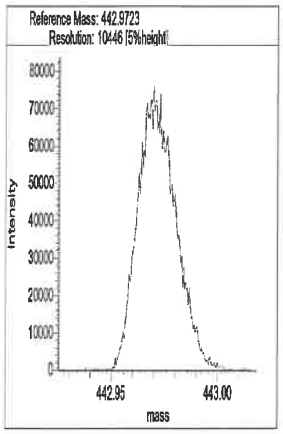

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10922 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10352 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10773 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12243 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10710 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11096 [5%height]

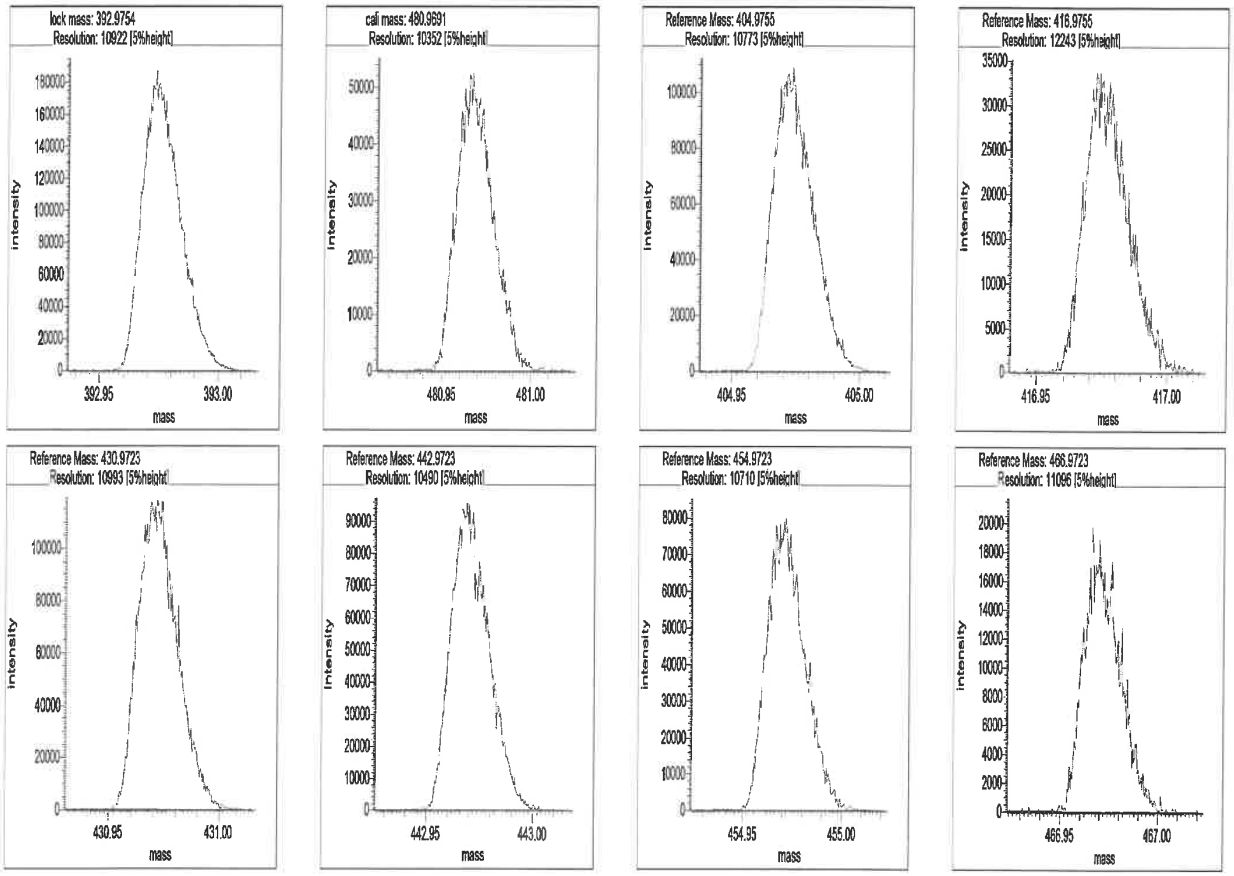

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11165 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10856 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11100 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10488 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11155 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10611 [5%height]

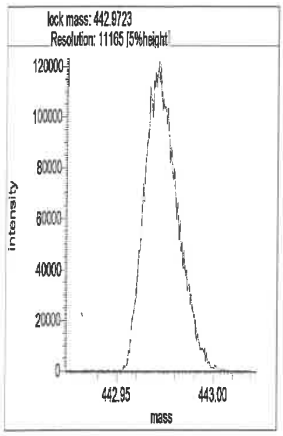
lock mass: 442.9723
Resolution: 11165 [5%height]
intensity
mass

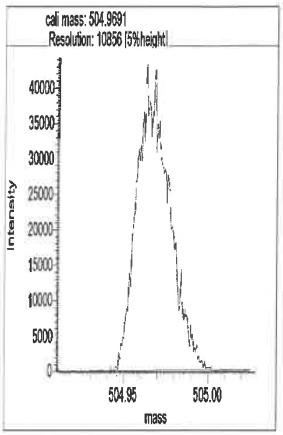
cali mass: 504.9691
Resolution: 10856 [5%height]
intensity
mass

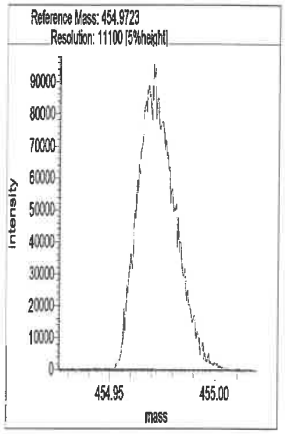
Reference Mass: 454.9723
Resolution: 11100 [5%height]
intensity
mass

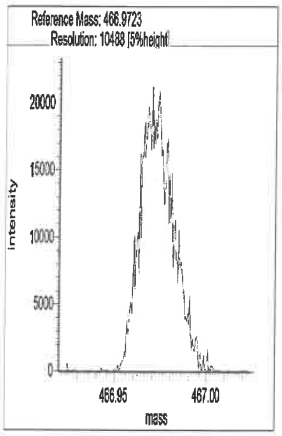
Reference Mass: 466.9723
Resolution: 10488 [5%height]
intensity
mass

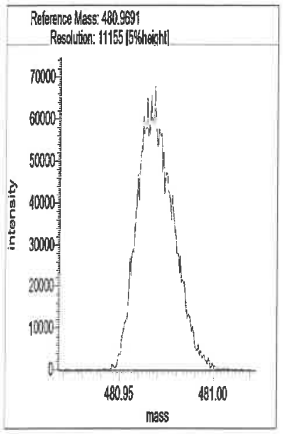
Reference Mass: 480.9691
Resolution: 11155 [5%height]
intensity
mass

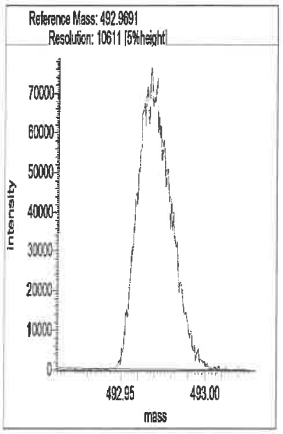
Reference Mass: 492.9691
Resolution: 10611 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 11:56
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10511 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10099 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 10342 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 10503 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 27776 [5%height] ? software glitch. [illegible]

Ref. mass 368.9755 [m/z] Resolution: 10394 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 9749 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9682 [5%height]

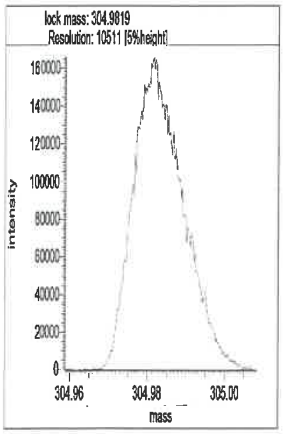

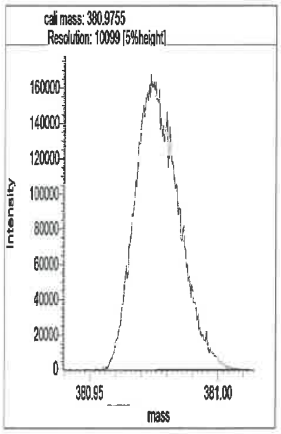

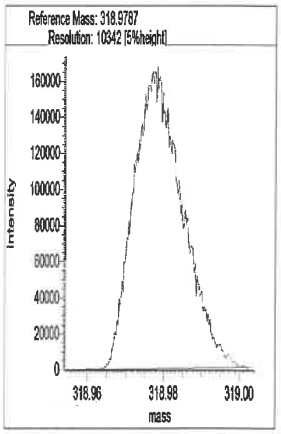

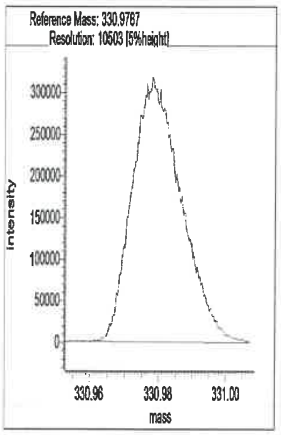

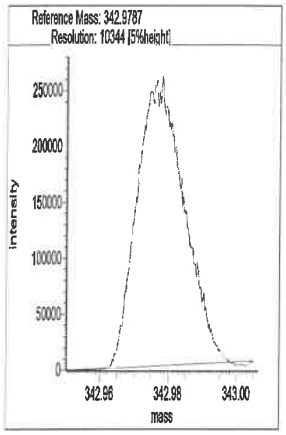

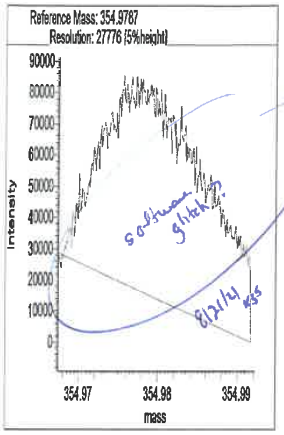

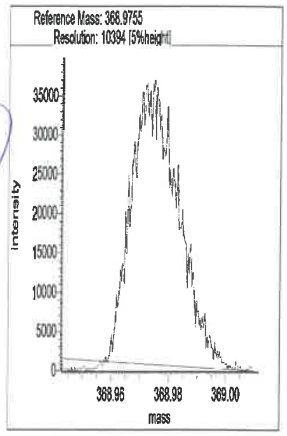

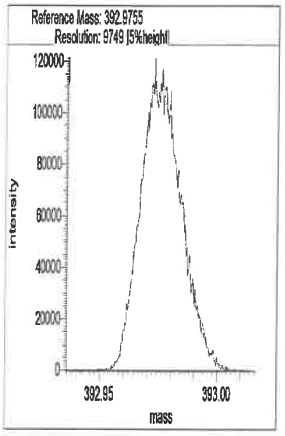

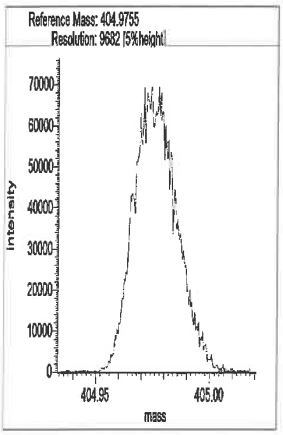

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10733 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10393 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10683 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10545 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10150 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10185 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10040 [5%height]

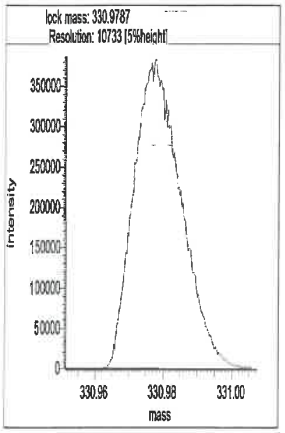

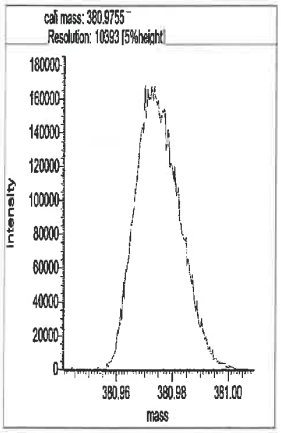

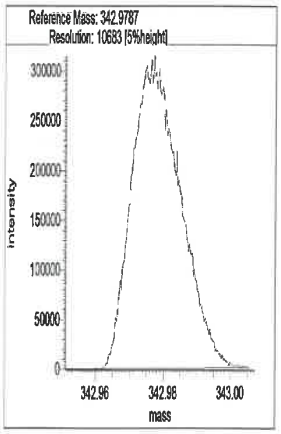

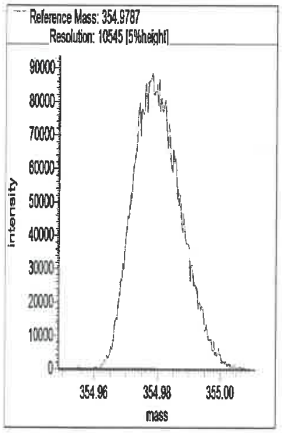

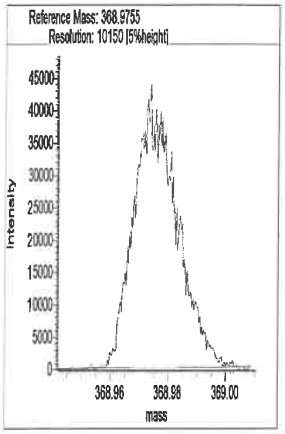

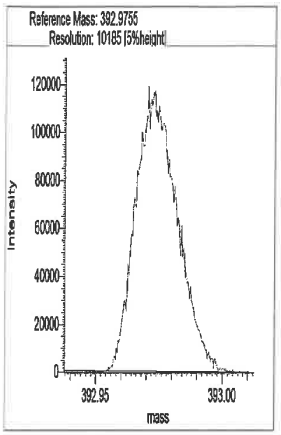

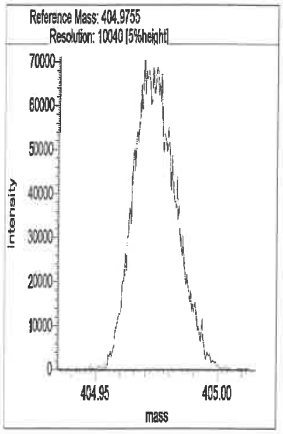

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10536 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10403 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10410 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10419 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10244 [5%height]

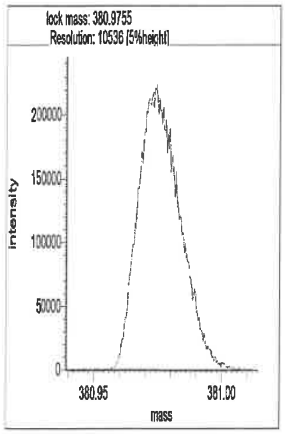

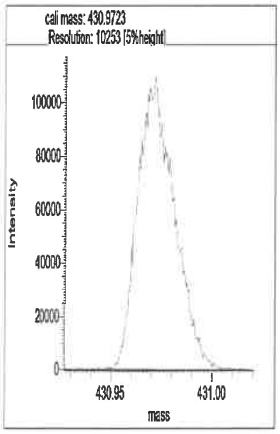

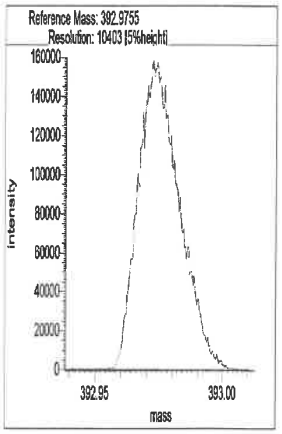

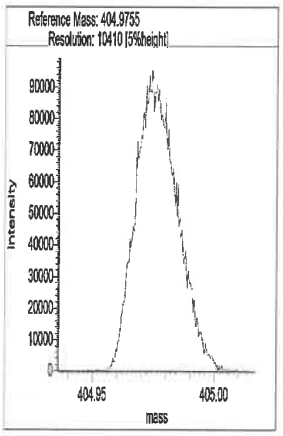

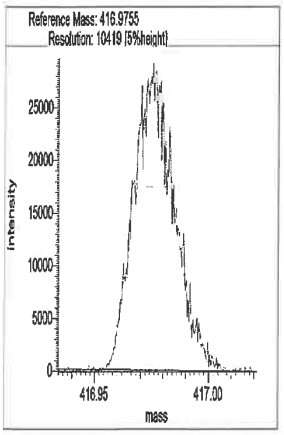

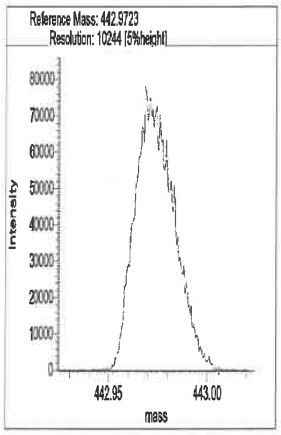

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10914 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 9523 [5%height] ✓ OK 8/21/21 KD

Ref. mass 404.9755 [m/z] Resolution: 10727 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10613 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10522 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10235 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10314 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10509 [5%height]

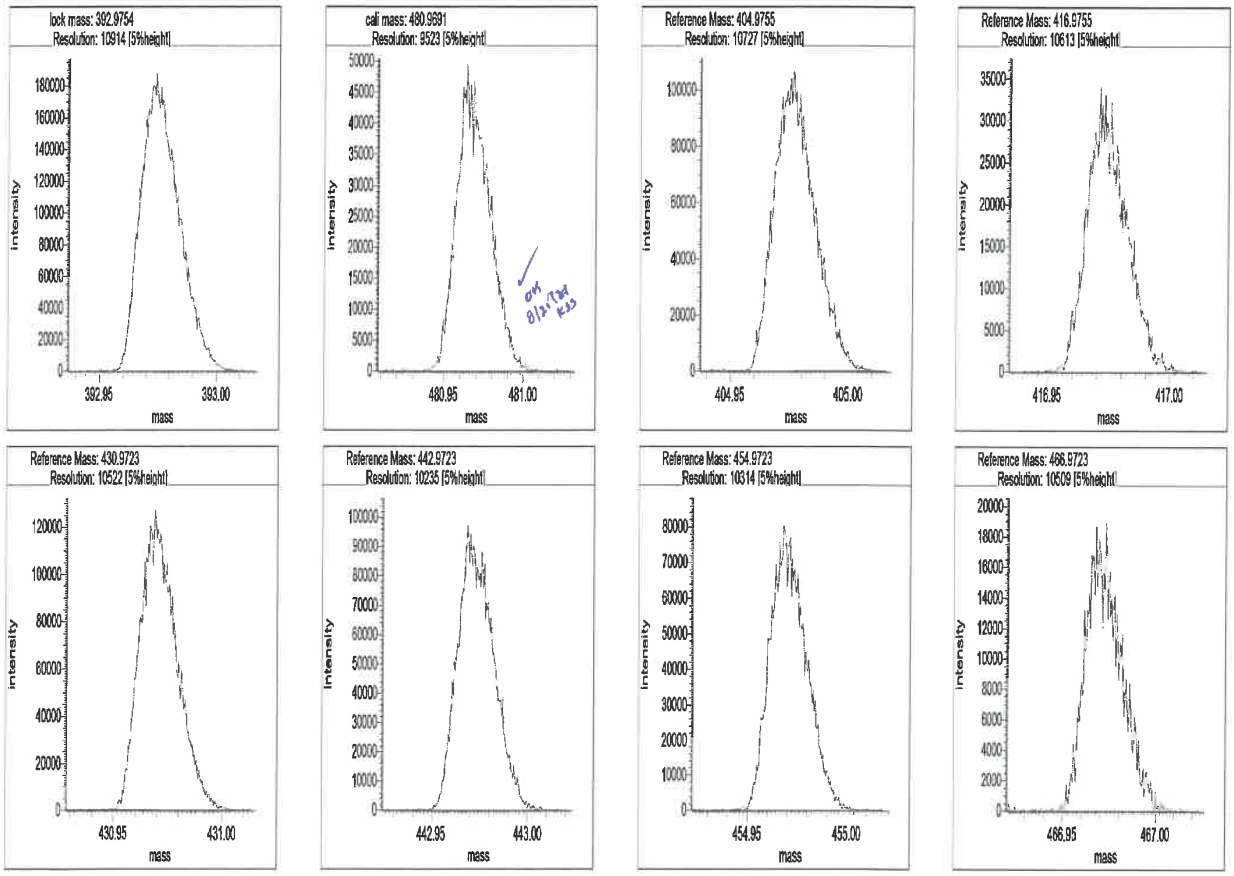

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10927 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10443 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10654 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11221 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10354 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10748 [5%height]

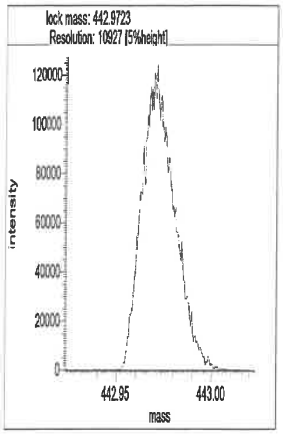
lock mass: 442.9723
Resolution: 10927 [5%height]
intensity
mass

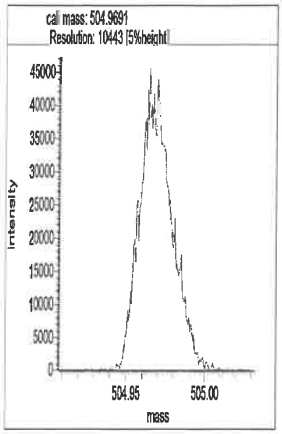
cali mass: 504.9691
Resolution: 10443 [5%height]
intensity
mass

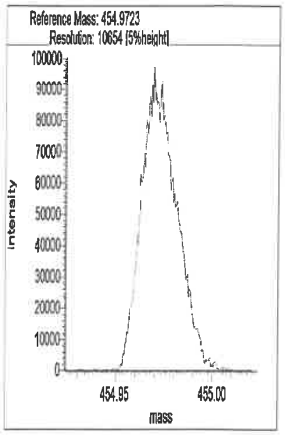
Reference Mass: 454.9723
Resolution: 10654 [5%height]
intensity
mass

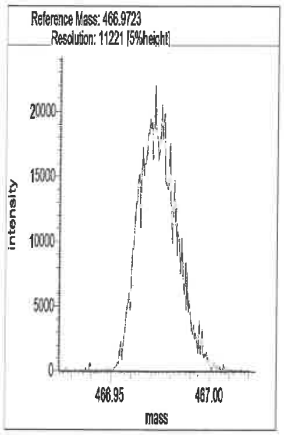
Reference Mass: 466.9723
Resolution: 11221 [5%height]
intensity
mass

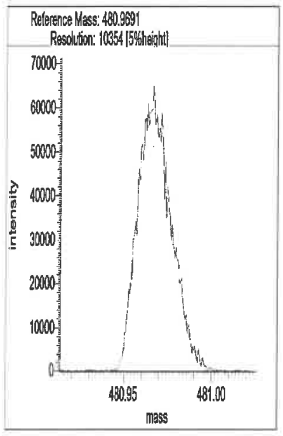
Reference Mass: 480.9691
Resolution: 10354 [5%height]
intensity
mass

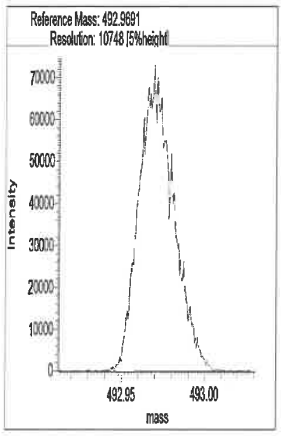
Reference Mass: 492.9691
Resolution: 10748 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 14:46:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:38:43

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.350	880144	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.395	1248688	0.81	1.3459	105.4	105.4	0.3439	0.3439	105	
2,3,7,8-TCDF	20.421	131092	0.83	1.0802	9.719	9.719	0.0187	0.0187	97.19	
A Non-2,3,7,8-sub-TCDF	19.885	2548	0.77	1.0802	0.2183	0.1889	0.0187	0.0708	0.00	RQ
S Total TCDF					9.937	9.908	0.0187	0.0187		RQ
D 13C-2,3,7,8-TCDD	21.746	859664	0.80	0.9317	104.8	104.8	0.2310	0.2310	105	
2,3,7,8-TCDD	21.754	88765	0.76	1.0753	9.602	9.602	0.0289	0.0289	96.02	M
$ 37Cl4-2,3,7,8-TCDD	21.772	88098		1.0083	9.927	9.927	0.0148	0.0148	99.27	
A Non-2,3,7,8-sub-TCDD	20.727						0.0289	0.0289		
S Total TCDD					9.602	9.602	0.0289	0.0289		
D 13C-1,2,3,7,8-PeCDF	27.246	876942	1.58	1.1405	87.4	87.4	0.2980	0.2980	87.36	
1,2,3,7,8-PeCDF	27.263	472088	1.57	1.0543	51.1	51.1	0.1254	0.1254	102	
D 13C-2,3,4,7,8-PeCDF	28.762	967288	1.58	1.1253	97.7	97.7	0.3020	0.3020	97.66	
2,3,4,7,8-PeCDF	28.787	465705	1.60	1.0079	47.8	47.8	0.1325	0.1325	95.54	
A F1 PeCDFs	24.666	72	1.55	1.0311	0.0354	0.007573	0.007281	0.007281	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.176	3649	1.55	1.0311	0.4206	0.3838	0.1289	0.3838	0.00	RQ
S Total PeCDF					99.3	99.2	0.1289	0.1289		RQ
D 13C-1,2,3,7,8-PeCDD	29.570	582520	1.58	0.7165	92.4	92.4	0.1287	0.1287	92.38	
1,2,3,7,8-PeCDD	29.595	305999	1.58	1.0465	50.2	50.2	0.2556	0.2556	100	
A Non-2,3,7,8-sub-PeCDD	28.536						0.2556	0.2556		
S Total PeCDD					50.2	50.2	0.2556	0.2556		
D 13C-1,2,3,4,7,8-HxCDF	34.922	857555	0.54	0.9648	111.3	111.3	0.3425	0.3425	111	
1,2,3,4,7,8-HxCDF	34.938	499173	1.30	1.1474	50.7	50.7	0.1885	0.1885	101	
D 13C-1,2,3,6,7,8-HxCDF	35.073	867107	0.50	1.0708	101.4	101.4	0.3086	0.3086	101	
1,2,3,6,7,8-HxCDF	35.099	557239	1.26	1.2178	52.8	52.8	0.1873	0.1873	106	
D 13C-2,3,4,6,7,8-HxCDF	35.899	805042	0.53	1.0413	96.8	96.8	0.3173	0.3173	96.79	
2,3,4,6,7,8-HxCDF	35.916	525498	1.33	1.2145	53.7	53.7	0.1797	0.1797	107	
D 13C-1,2,3,7,8,9-HxCDF	36.800	746273	0.55	0.9731	96.0	96.0	0.3396	0.3396	96.01	
1,2,3,7,8,9-HxCDF	36.808	489075	1.31	1.2401	52.8	52.8	0.1691	0.1691	106	
A Non-2,3,7,8-sub-HxCDF	35.073						0.1808	0.1808		

787538

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					210.1	210.1	0.1812	0.1812		
* 13C-1,2,3,7,8,9-HxCDD	36.598	798781	1.28	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.109	626230	1.27	0.7587	103.3	103.3	0.1789	0.1789	103	
1,2,3,4,7,8-HxCDD	36.126	304605	1.24	1.0608	45.9	45.9	0.0786	0.0786	91.71	
D 13C-1,2,3,6,7,8-HxCDD	36.227	727407	1.24	0.8593	106.0	106.0	0.1580	0.1580	106	
1,2,3,6,7,8-HxCDD	36.244	327966	1.26	0.9933	45.4	45.4	0.0820	0.0820	90.78	
1,2,3,7,8,9-HxCDD	36.606	350583	1.24	1.1094	46.7	46.7	0.0743	0.0743	93.38	
A Non-2,3,7,8-sub-HxCDD	35.427						0.0781	0.0781		
S Total HxCDD					137.9	137.9	0.0783	0.0783		
D 13C-1,2,3,4,6,7,8-HpCDF	38.614	631083	0.46	0.7359	107.4	107.4	0.3595	0.3595	107	
1,2,3,4,6,7,8-HpCDF	38.622	425207	1.05	1.4421	46.7	46.7	0.1807	0.1807	93.45	
D 13C-1,2,3,4,7,8,9-HpCDF	39.869	619112	0.44	0.6854	113.1	113.1	0.3861	0.3861	113	
1,2,3,4,7,8,9-HpCDF	39.877	390127	1.03	1.3092	48.1	48.1	0.1991	0.1991	96.27	
A Non-2,3,7,8-sub-HpCDF	39.253						0.1894	0.1894		
S Total HpCDF					94.9	94.9	0.1899	0.1899		
D 13C-1,2,3,4,6,7,8-HpCDD	39.557	609233	1.02	0.6745	113.1	113.1	0.2887	0.2887	113	
1,2,3,4,6,7,8-HpCDD	39.574	308551	1.04	1.0503	48.2	48.2	0.1086	0.1086	96.44	
A Non-2,3,7,8-sub-HpCDD	39.253	2712	1.04	1.0503	0.4815	0.4238	0.1086	0.4238	0.00	RQ
S Total HpCDD					48.7	48.6	0.1086	0.1086		RQ
D 13C-OCDD	42.064	1023273	0.90	0.5446	235.2	235.2	0.2892	0.2892	118	
OCDF	42.157	733525	0.95	1.3168	108.9	108.9	0.1126	0.1126	109	
OCDD	42.073	518459	0.87	1.0620	95.4	95.4	0.1218	0.1218	95.42	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 14:46:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:38:43

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.350	21.350	0		392365	50129	68	170	737		a
333.9338	21.359	21.350	1		487779	63734	30	75	2124	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.395	20.395	0	0.955	557813	78278	117	292	669		
317.9389	20.387	20.395	-1	0.955	690875	94571	94	235	1006	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.421	20.421	0	1.001	59271	8014	5	12	1603		
305.8987	20.421	20.421	0	1.001	71821	9716	9	22	1080	0.83(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.717	19.885	-70	0.918	165	55	5	12	11		
305.8987	18.760	19.885	-67	0.920	328	106	9	22	12	0.50(0.65-0.89)	
	Empc Correction				214	71	9	22	8		
303.9016	19.724	19.885	-10	0.967	539	104	5	12	21		
	Empc Correction				415	97	5	12	19		
305.8987	19.689	19.885	-12	0.965	540	127	9	22	14	1.00(0.65-0.89)	
303.9016	20.696	19.885	49	1.015	334	82	5	12	16		
305.8987	20.696	19.885	49	1.015	398	183	9	22	20	0.84(0.65-0.89)	
303.9016	20.808	19.885	55	1.020	210	86	5	12	17		
305.8987	20.757	19.885	52	1.018	431	109	9	22	12	0.49(0.65-0.89)	
	Empc Correction				272	111	9	22	12		
13C-2,3,7,8-TCDD											
331.9368	21.746	21.746	0	1.019	380761	50135	68	170	737		
333.9338	21.737	21.746	-1	1.018	478903	62607	30	75	2087	0.80(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.754	21.754	0	1.000	38393	4783	10	25	478		M
321.8936	21.772	21.754	1	1.001	50372	6262	4	10	1566	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											
327.8847	21.772	21.772	0	1.020	88098	11715	7	17	1674		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.727						10	25			
321.8936	20.727						4	10			
13C-1,2,3,7,8-PeCDF											
351.9000	27.246	27.246	0	1.276	537093	80730	85	212	950		
353.8970	27.246	27.246	0	1.276	339849	53122	70	175	759	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.263	27.263	0	1.001	288515	42689	34	85	1256		
341.8567	27.263	27.263	0	1.001	183573	26170	37	92	707	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.762	28.762	0	1.347	592788	80849	85	212	951		
353.8970	28.753	28.762	-1	1.347	374500	51726	70	175	739	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.787	28.787	0	1.001	286668	39229	34	85	1154		
341.8567	28.787	28.787	0	1.001	179037	24246	37	92	655	1.60(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.352	24.666	-19	0.894	30	12	1	2	12		
341.8567	24.343	24.666	-19	0.893	194	92	3	7	31	0.15(1.32-1.78)	
	Empc Correction				19	7	3	7	2		
339.8597	25.005	24.666	20	0.918	14	8	1	2	8		
341.8567	25.023	24.666	21	0.918	99	47	3	7	16	0.14(1.32-1.78)	
	Empc Correction				9	5	3	7	2		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.869	28.176	-18	1.023	2568	448	34	85	13		
	Empc Correction				2218	396	34	85	12		
341.8567	27.877	28.176	-18	1.023	1431	256	37	92	7	1.79(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.570	29.570	0	1.385	356741	48302	23	57	2100		
369.8919	29.562	29.570	-1	1.385	225779	30199	19	47	1589	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.595	29.595	0	1.001	187317	23303	59	147	395		
357.8516	29.604	29.595	1	1.001	118682	15295	25	62	612	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.536						59	147			
357.8516	28.536						25	62			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.922	34.922	0	0.954	301743	58450	70	175	835		
385.8610	34.922	34.922	0	0.954	555812	106606	161	402	662	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.938	34.938	0	1.000	282106	53539	84	210	637		
375.8178	34.930	34.938	-1	1.000	217067	41553	59	147	704	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.073	35.073	0	0.958	289842	54372	70	175	777		
385.8610	35.082	35.073	1	0.959	577265	102104	161	402	634	0.50(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDF											
373.8208	35.099	35.099	0	1.001	311153	56921	84	210	678		
375.8178	35.099	35.099	0	1.001	246086	45717	59	147	775	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.899	35.899	0	0.981	279239	55912	70	175	799		
385.8610	35.899	35.899	0	0.981	525803	107690	161	402	669	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.916	35.916	0	1.000	300256	62548	84	210	745		
375.8178	35.916	35.916	0	1.000	225242	47171	59	147	800	1.33(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.800	36.800	0	1.006	263890	60577	70	175	865		
385.8610	36.791	36.800	-1	1.005	482383	109655	161	402	681	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.808	36.808	0	1.000	276925	62991	84	210	750		
375.8178	36.808	36.808	0	1.000	212150	48219	59	147	817	1.31(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						84	210			
375.8178	35.073						59	147			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.598	36.598	0		447919	95381	56	140	1703		
403.8529	36.598	36.598	0		350862	79228	39	97	2031	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.109	36.109	0	0.987	350834	84152	56	140	1503		
403.8529	36.109	36.109	0	0.987	275396	65709	39	97	1685	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.126	36.126	0	1.000	168355	39063	26	65	1502		
391.8127	36.126	36.126	0	1.000	136250	30911	24	60	1288	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.227	36.227	0	0.990	402538	84276	56	140	1505		
403.8529	36.227	36.227	0	0.990	324869	69268	39	97	1776	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.244	36.244	0	1.000	182565	37967	26	65	1460		
391.8127	36.236	36.244	-1	1.000	145401	30482	24	60	1270	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.606	36.606	0	1.014	194341	42531	26	65	1636		
391.8127	36.606	36.606	0	1.014	156242	33894	24	60	1412	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.427						26	65			
391.8127	35.427						24	60			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.614	38.614	0	1.055	199982	53427	62	155	862		
419.8220	38.614	38.614	0	1.055	431101	110427	123	307	898	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.622	38.622	0	1.000	218080	55878	91	227	614		
409.7788	38.622	38.622	0	1.000	207127	52397	80	200	655	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.869	39.869	0	1.089	188242	48045	62	155	775		
419.8220	39.869	39.869	0	1.089	430870	115800	123	307	941	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.877	39.877	0	1.000	198124	52467	91	227	577		
409.7788	39.877	39.877	0	1.000	192003	50350	80	200	629	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						91	227			
409.7788	39.253						80	200			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.557	39.557	0	1.081	307328	83776	71	177	1180		
437.8140	39.557	39.557	0	1.081	301905	84577	65	162	1301	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.574	39.574	0	1.000	157219	41341	38	95	1088		
425.7737	39.574	39.574	0	1.000	151332	41049	39	97	1053	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.950	39.253	-18	0.985	1383	343	38	95	9		
425.7737	38.925	39.253	-20	0.984	1698	522	39	97	13	0.81(0.88-1.20)	
	Empc Correction				1329	329	39	97	8		
13C-OCDD											
469.7780	42.064	42.064	0	1.149	483730	114644	56	140	2047		
471.7750	42.064	42.064	0	1.149	539543	128072	54	135	2372	0.90(0.76-1.02)	
OCDF											
441.7428	42.157	42.157	0	1.002	357311	85331	29	72	2942		
443.7399	42.157	42.157	0	1.002	376214	89559	43	107	2083	0.95(0.76-1.02)	
OCDD											
457.7377	42.073	42.073	0	1.000	241071	58376	32	80	1824		
459.7348	42.073	42.073	0	1.000	277388	67400	31	77	2174	0.87(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	19-Aug-2021 14:46:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1248688	172849

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1248688	172849

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.717	165	55	328	106	0.0366	0.50	RQ
18.717	165	55	214	71	0.0281		Empc Correction
19.724	539	104	540	127	0.0800	1.00	RQ
19.724	415	97	540	127	0.0708		Empc Correction
20.696	334	82	398	183	0.0543	0.84	
20.808	210	86	431	109	0.0475	0.49	RQ
20.808	210	86	272	111	0.0357		Empc Correction
Signal Totals:							
	1124	320	1424	492			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2945	852				0.74	RQ
	2548	812					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.2183 = (2945 * 100.000) / (1248688 * 1.080)

Empc Amount: 0.1889 = (2548 * 100.000) / (1248688 * 1.080)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 14:46:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.666

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	876942	133852
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	967288	132575

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	922115	133213

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.352	30	12	194	92	0.0236	0.15	RQ
24.352	30	12	19	7	0.005154		Empc Correction
25.005	14	8	99	47	0.0119	0.14	RnQ
25.005	14	8	9	5	0.002419		Empc Correction
Signal Totals:							
	44	20	28	12			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	337	159				0.15	RQ
	72	32					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0354 = (337 * 100.000) / (922115 * 1.031)
Empc Amount: 0.007573 = (72 * 100.000) / (922115 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 14:46:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	876942	133852
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	967288	132575

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	922115	133213

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.869	2568	448	1431	256	0.4206	1.79	RnQ
27.869	2218	396	1431	256	0.3838		Empc Correction
Signal Totals:							
	2218	396	1431	256			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3999	704				1.79	RQ
	3649	652					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4206 = (3999 * 100.000) / (922115 * 1.031)
Empc Amount: 0.3838 = (3649 * 100.000) / (922115 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

787546

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	19-Aug-2021 14:46:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-HpCDD, RT: 39.253

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	609233	168353

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	609233	168353

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.950	1383	343	1698	522	0.4815	0.81	RnQ
38.950	1383	343	1329	329	0.4238		Empc Correction
Signal Totals:							
	1383	343	1329	329			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3081	865				0.81	RQ
	2712	672					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4815 = (3081 * 100.000) / (609233 * 1.050)
Empc Amount: 0.4238 = (2712 * 100.000) / (609233 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d				
Injection Date:	19-Aug-2021 14:46:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Not Detected
Expected RT: 21.35

Processing Integration Results

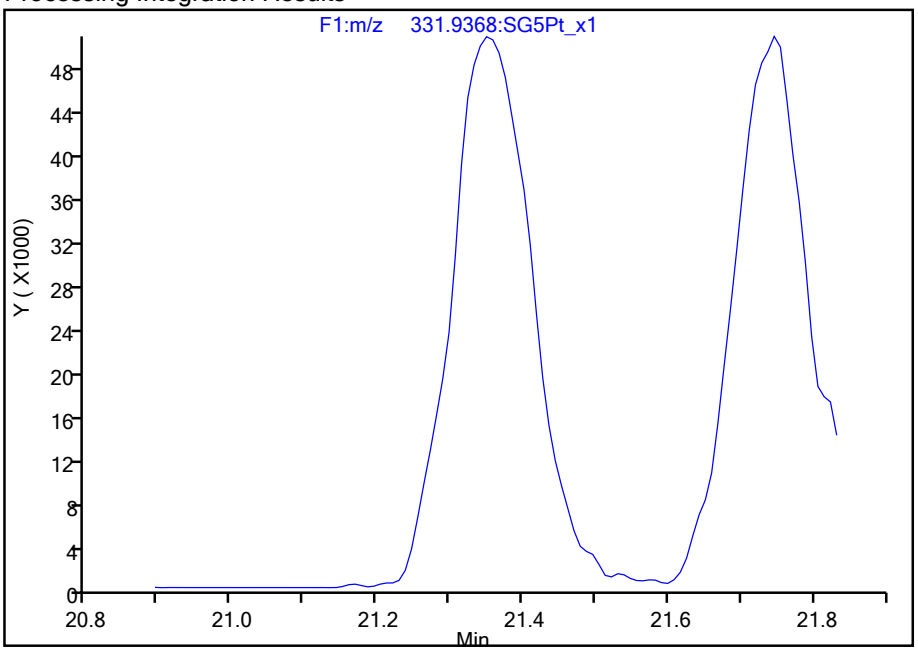

Manual Integration Results

RT: 21.35
Area: 392365
Amount: 100.0000
Amount Units: pg/ul

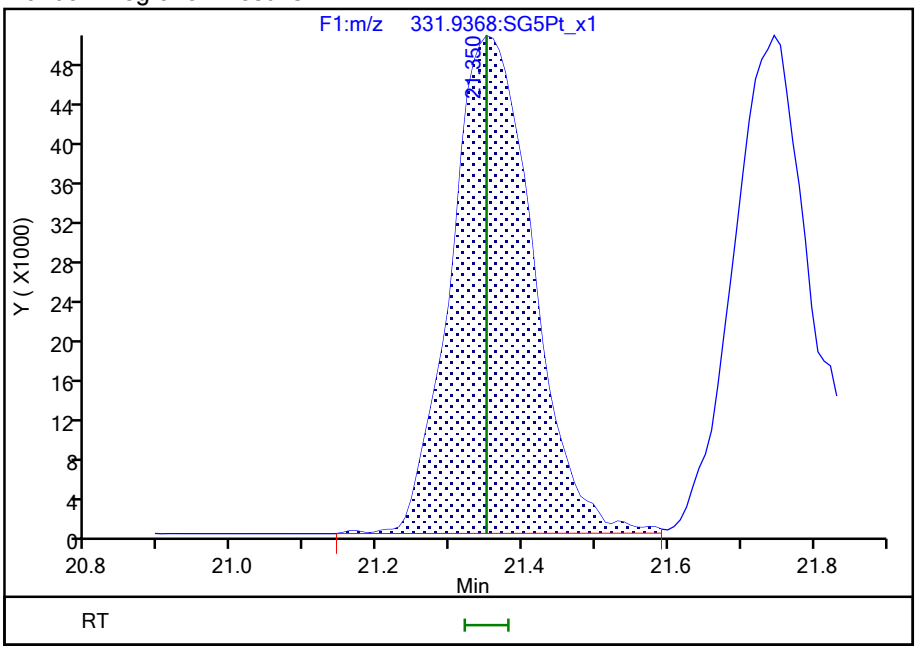

Reviewer: stephensk, 19-Aug-2021 15:37:52
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

787548

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d				
Injection Date:	19-Aug-2021 14:46:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.75
Area: 36392
Amount: 9.385610
Amount Units: pg/ul

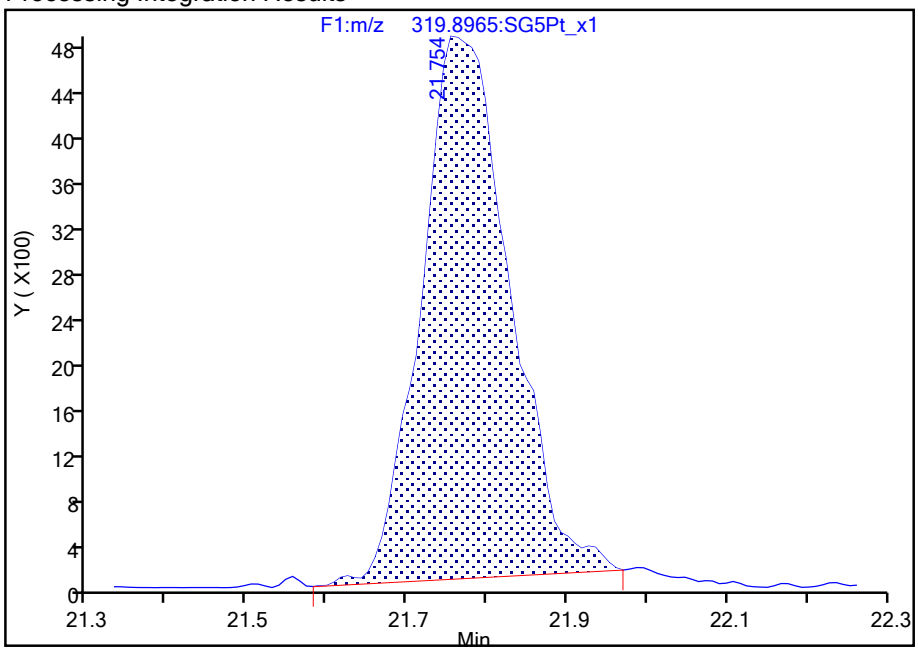

Manual Integration Results

RT: 21.75
Area: 38393
Amount: 9.602066
Amount Units: pg/ul

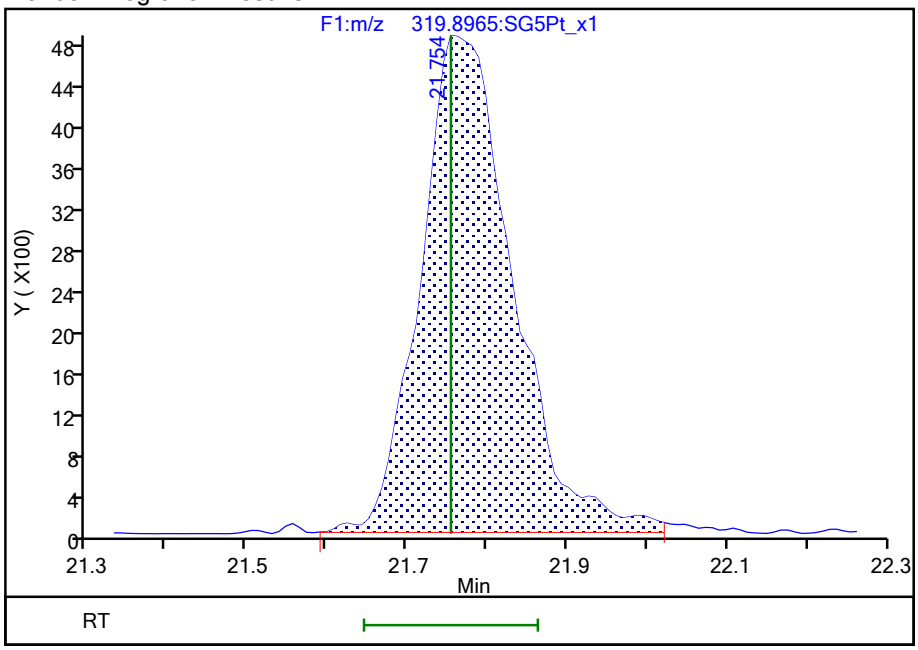

Reviewer: stephensk, 19-Aug-2021 15:38:12

Audit Action: Manually Integrated Audit Reason: Baseline

787549

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

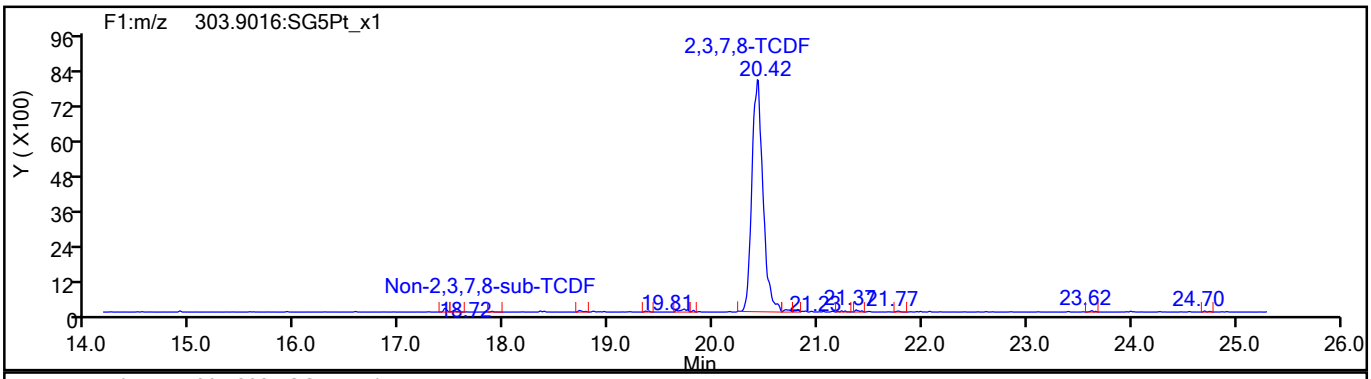

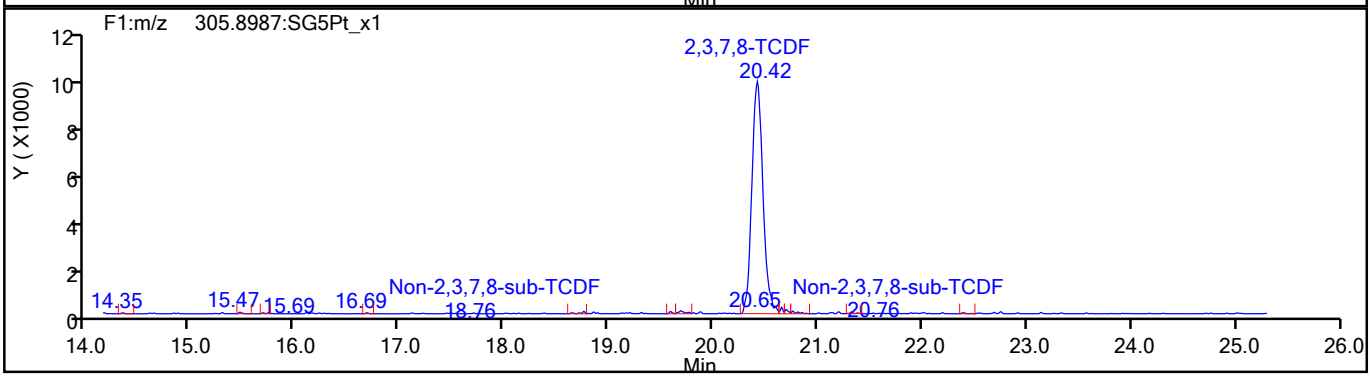

TCDF Standards

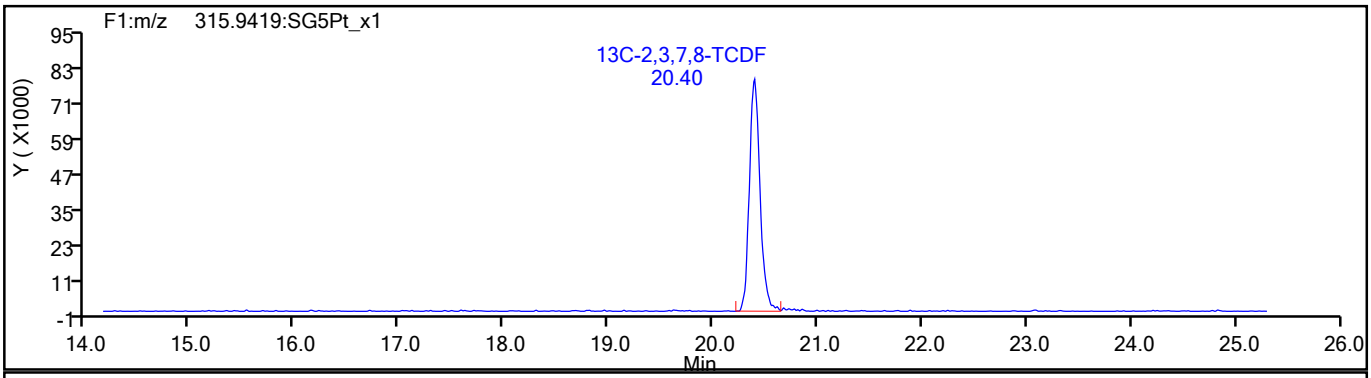

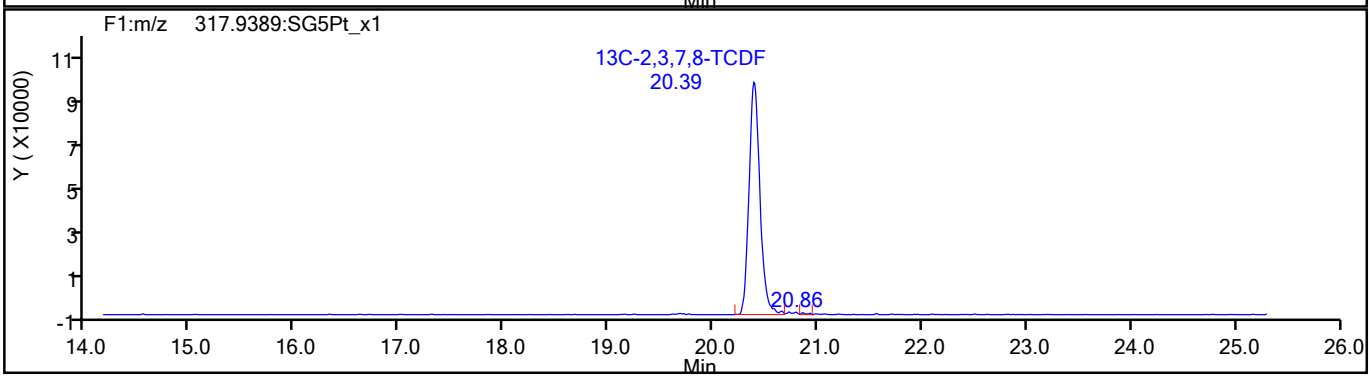

787550

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

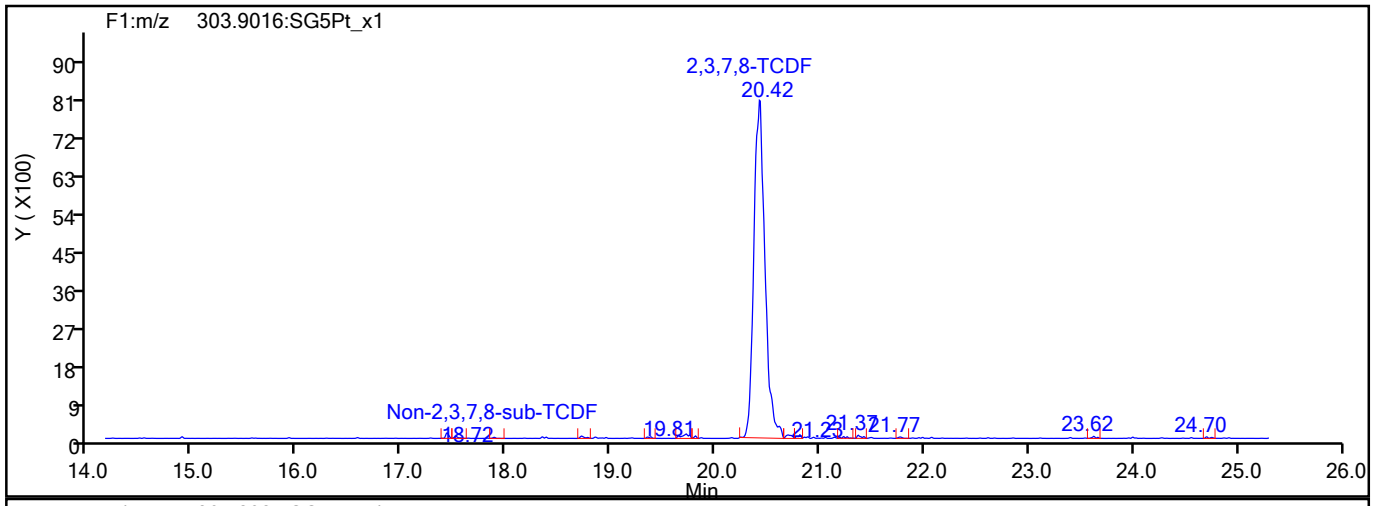

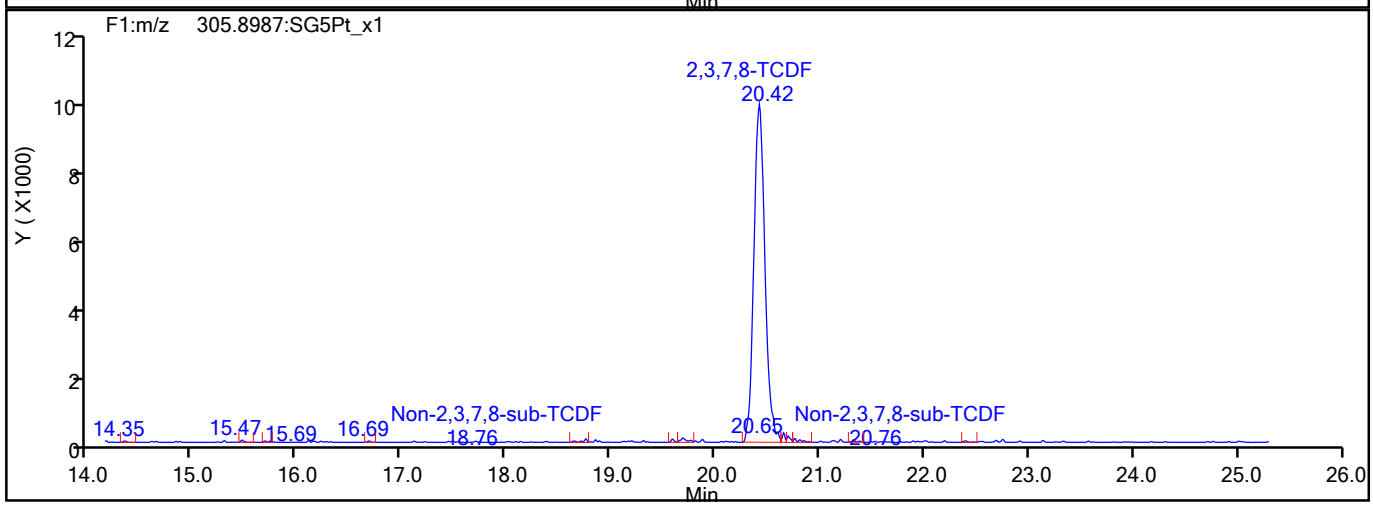

TCDF Interference Mass

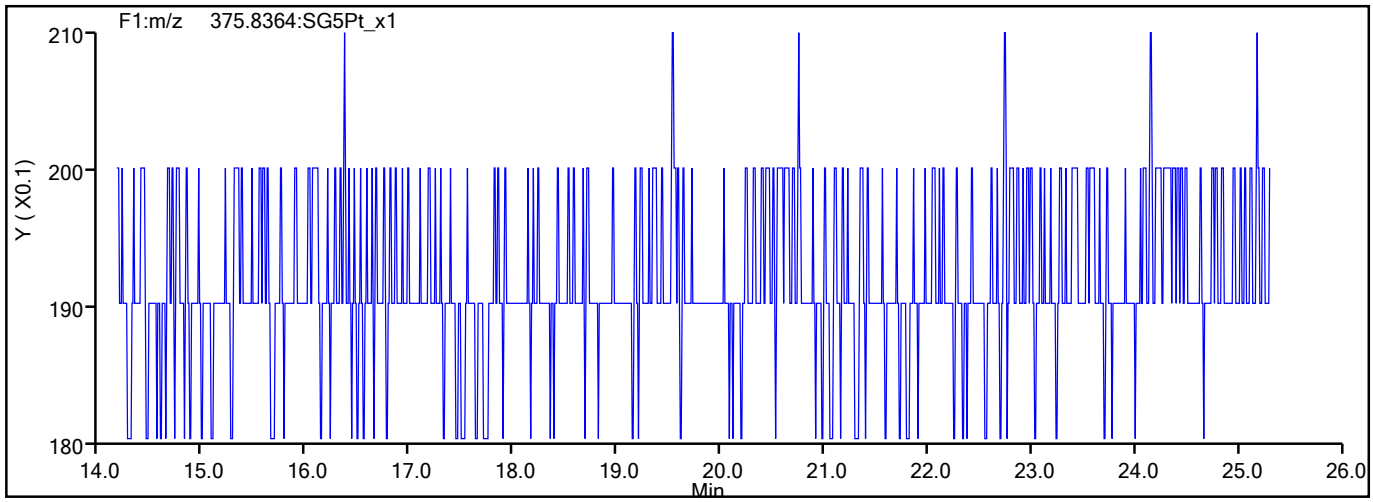

787551

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

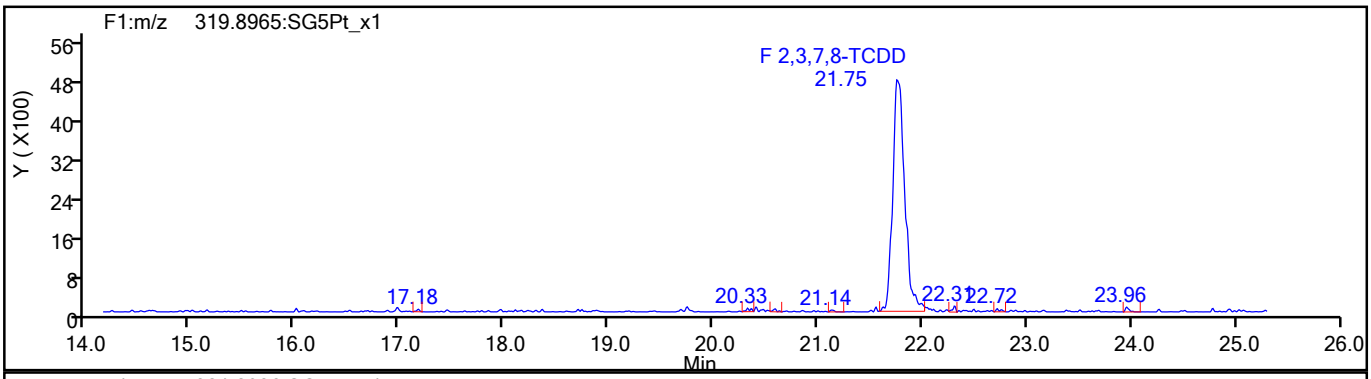

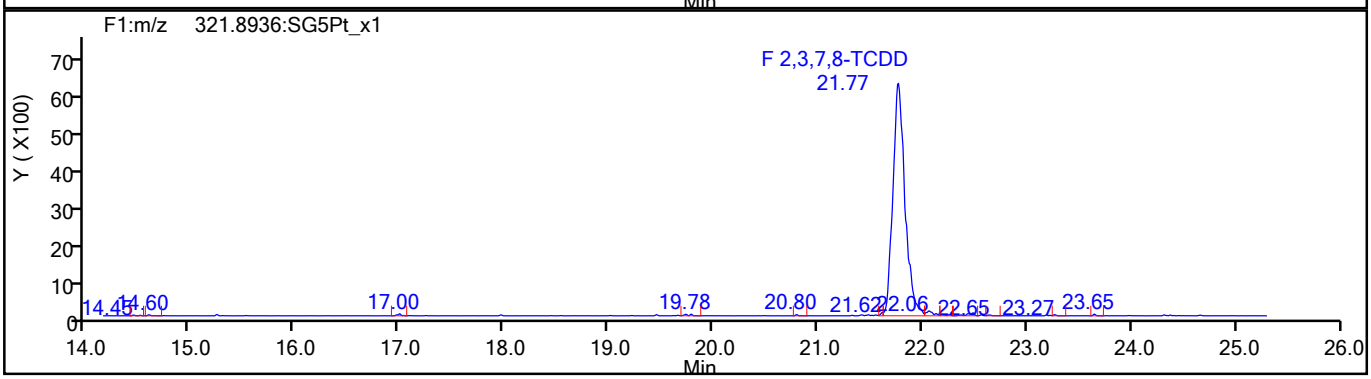

TCDD Standards

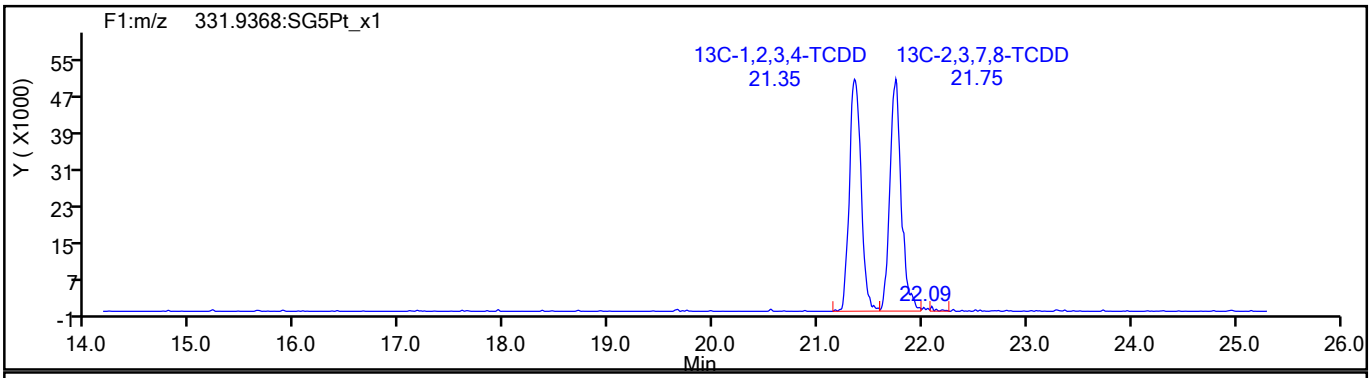

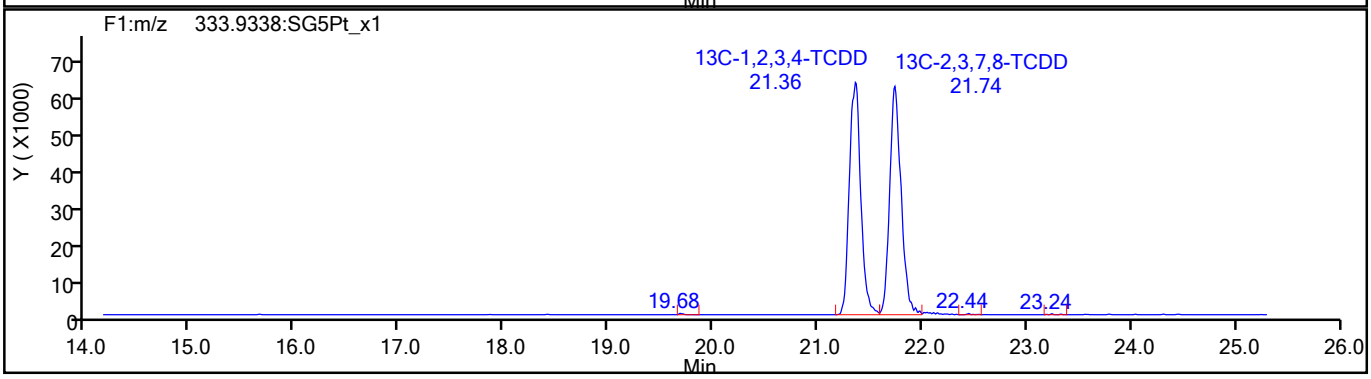

787552

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

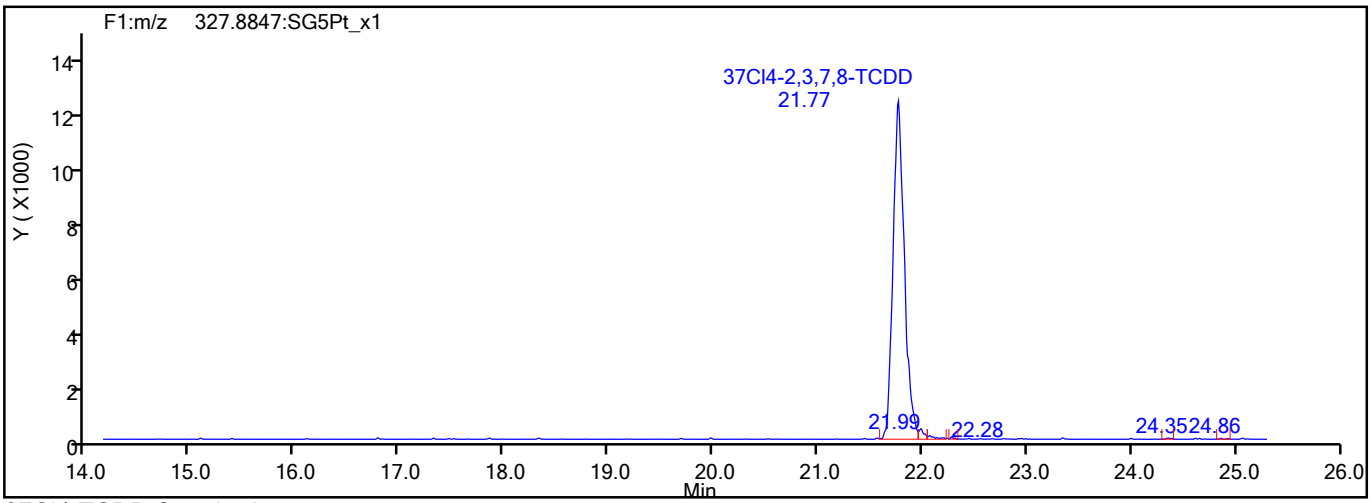

37Cl4-TCDD Standards

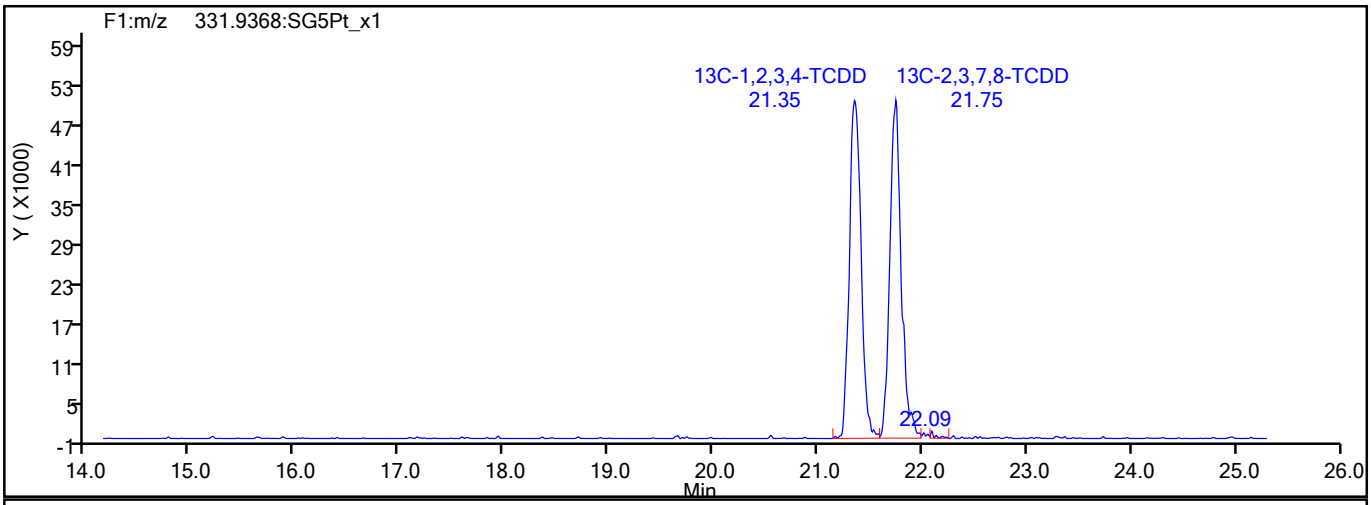

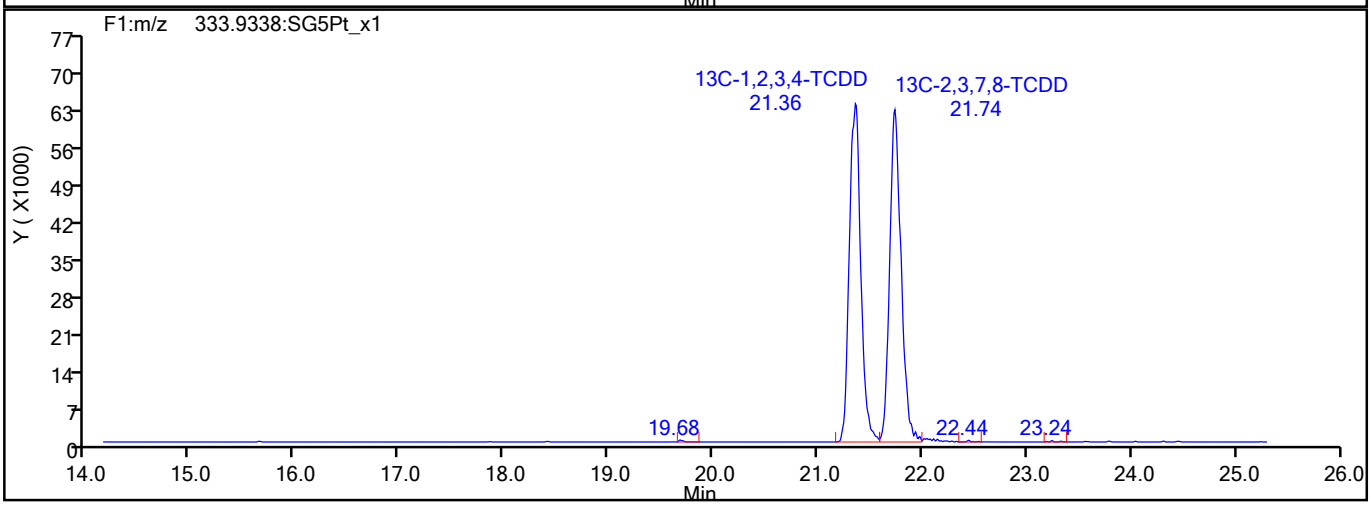

787553

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

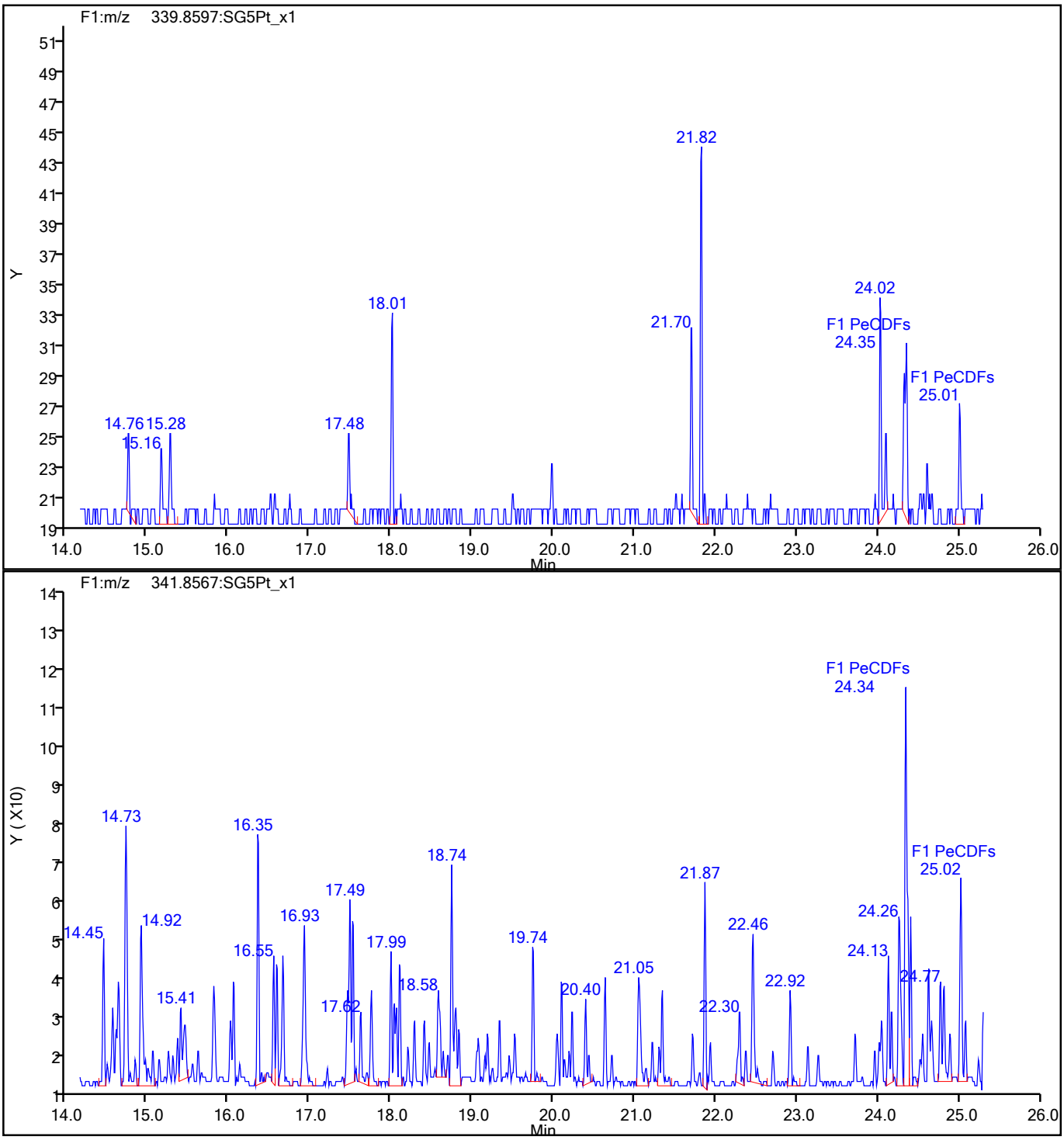

787554

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

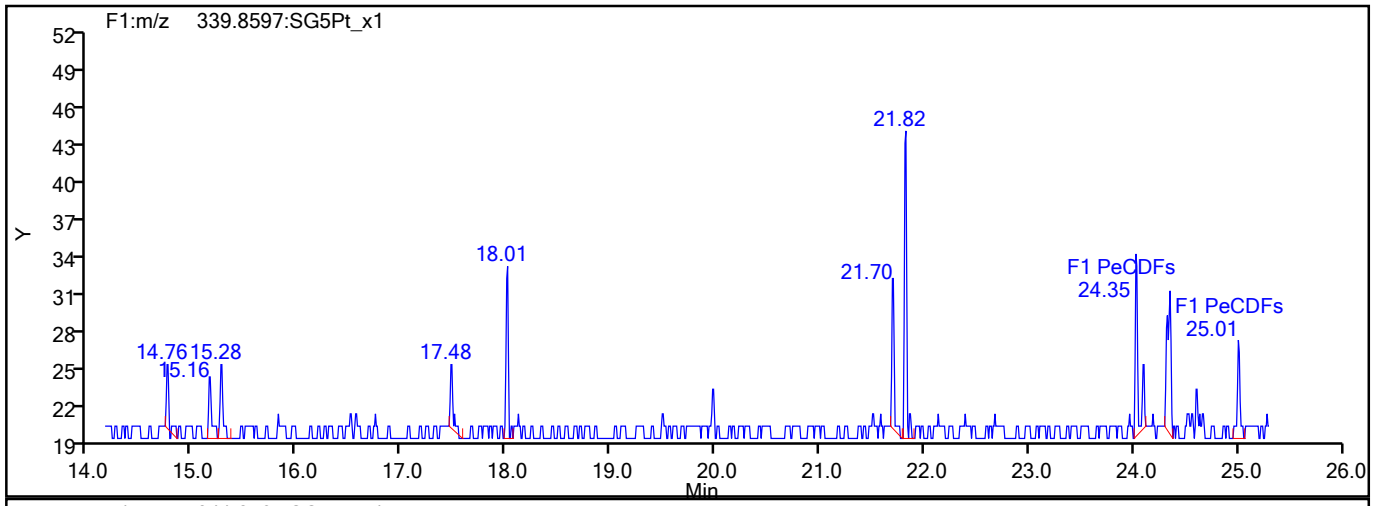

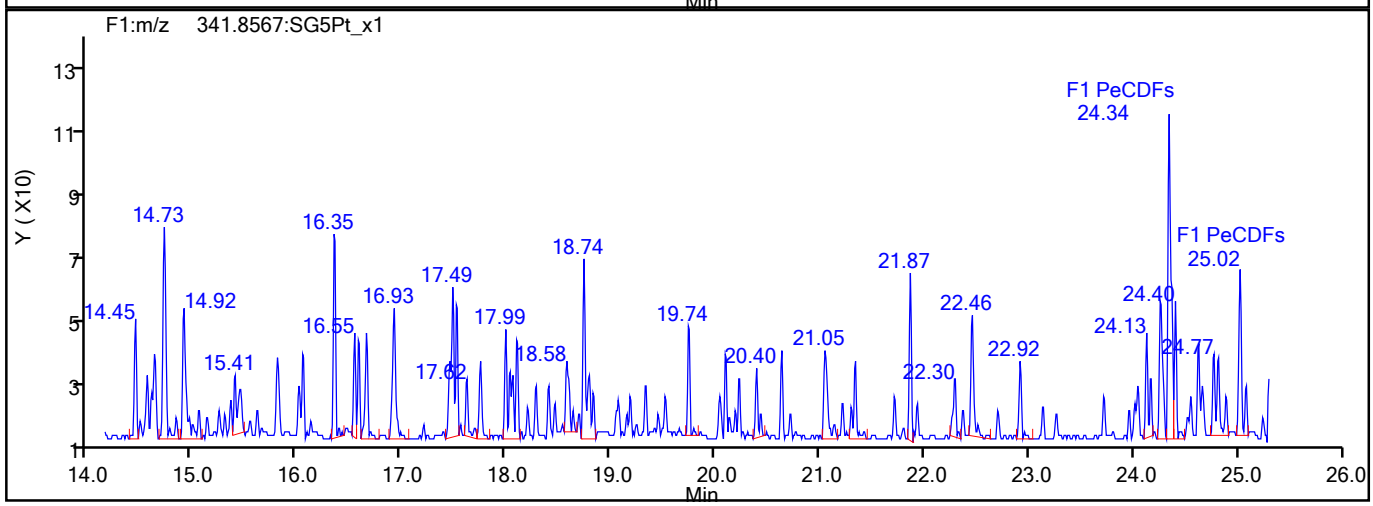

F1 PeCDFs Interference Mass

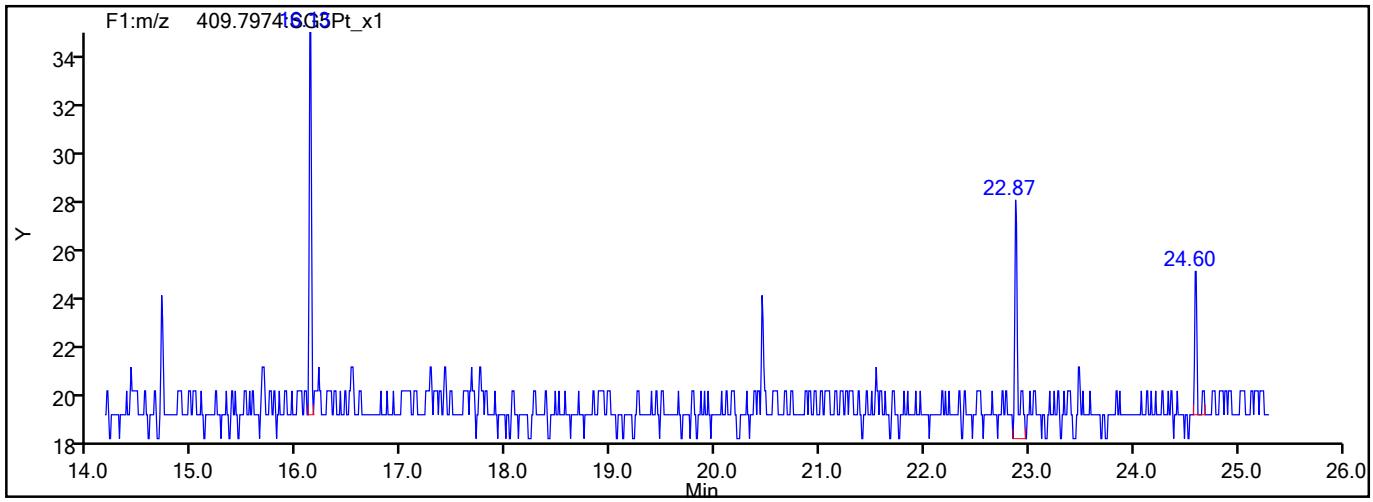

787555

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

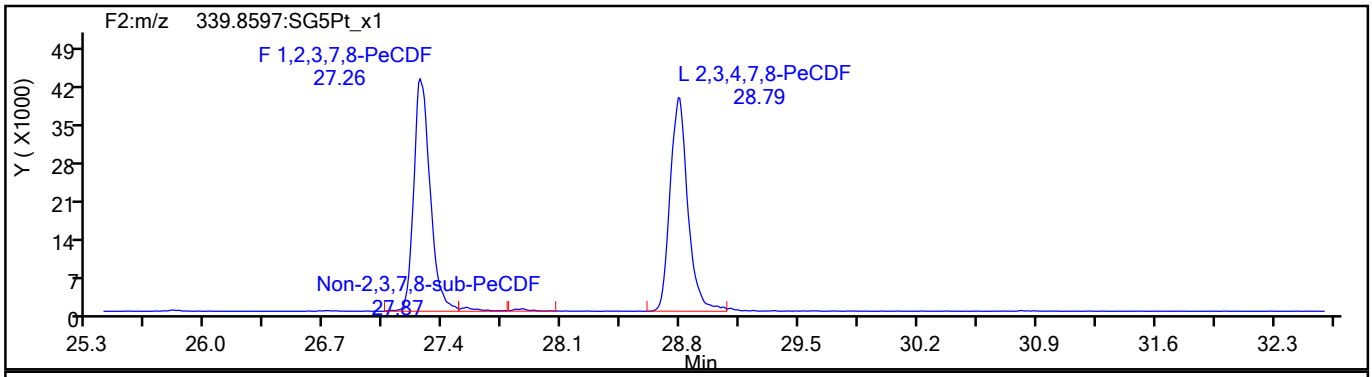

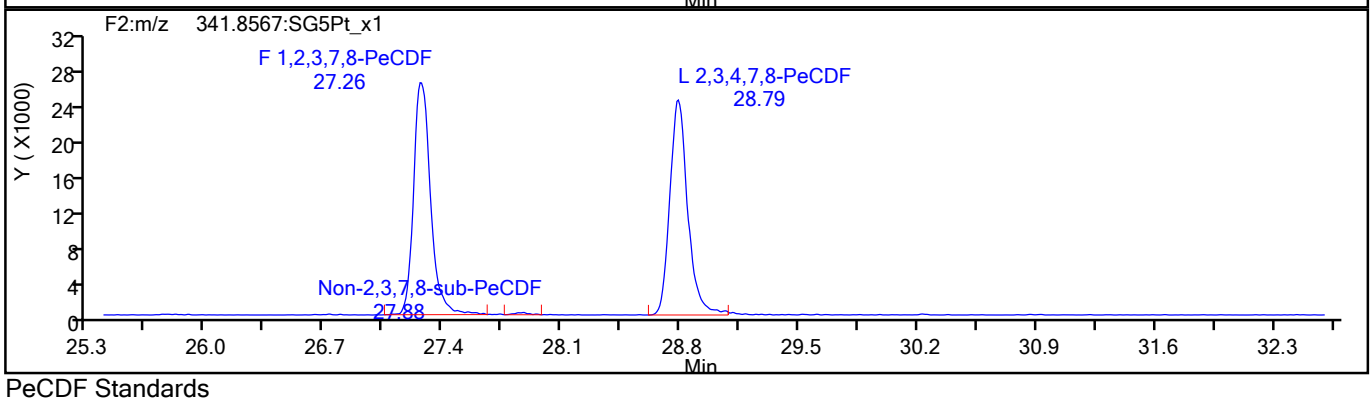

PeCDF Standards

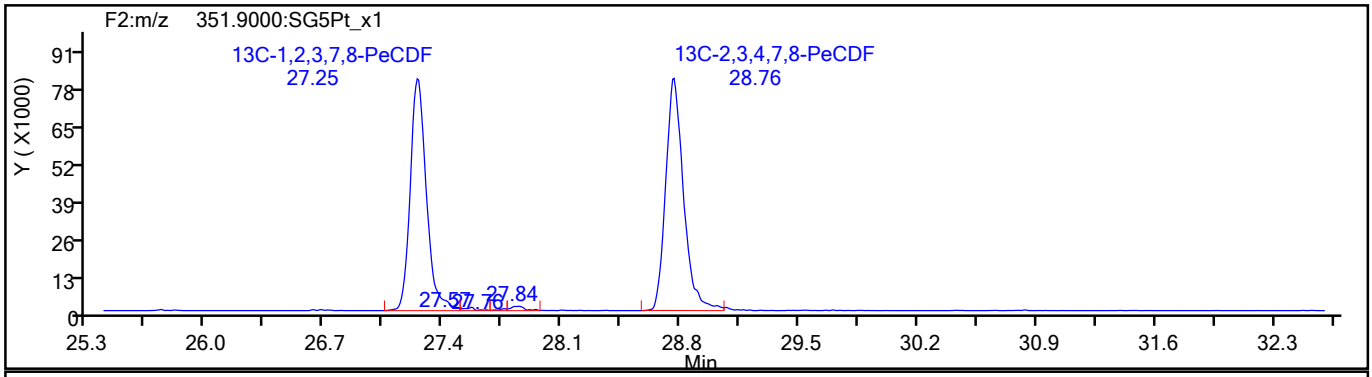

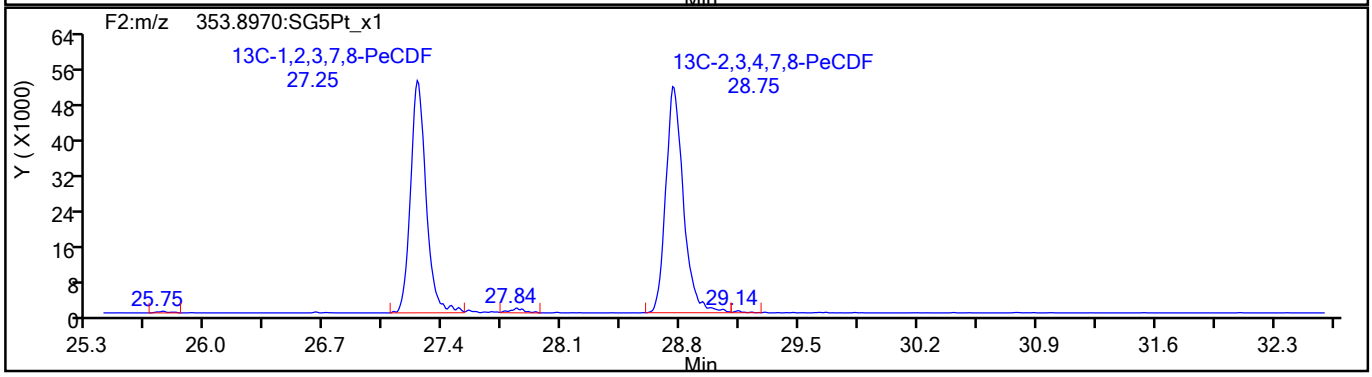

787556

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

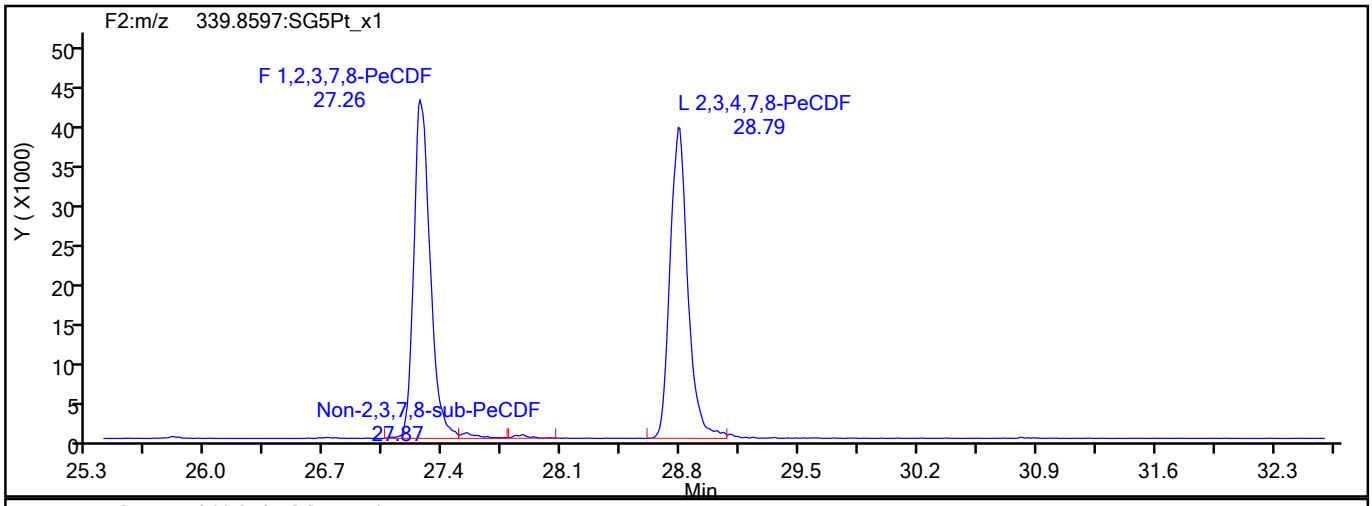

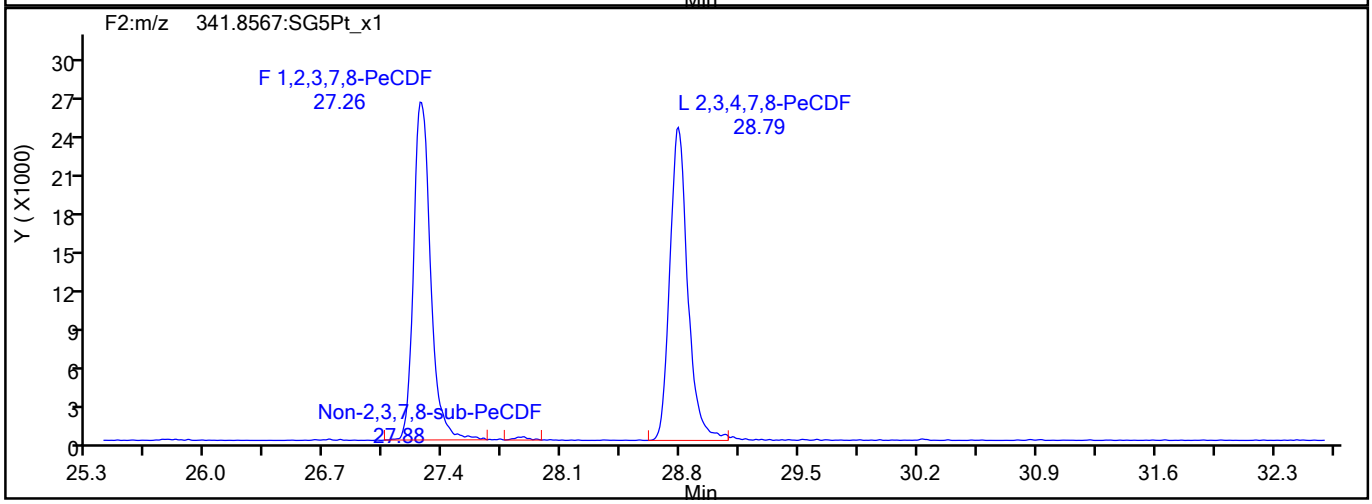

PeCDF Interference Mass

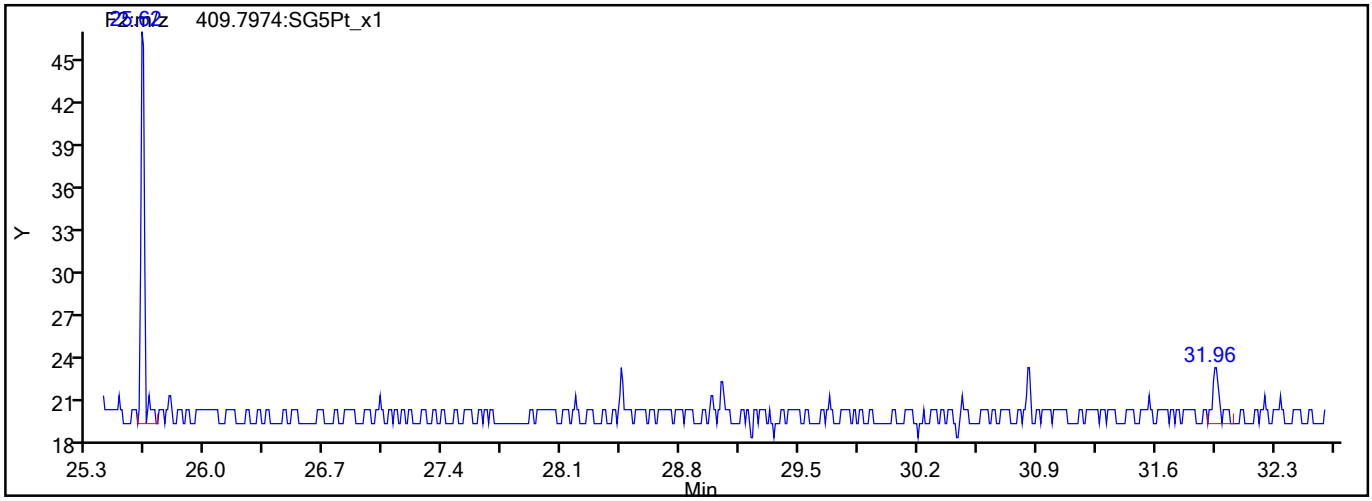

787557

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

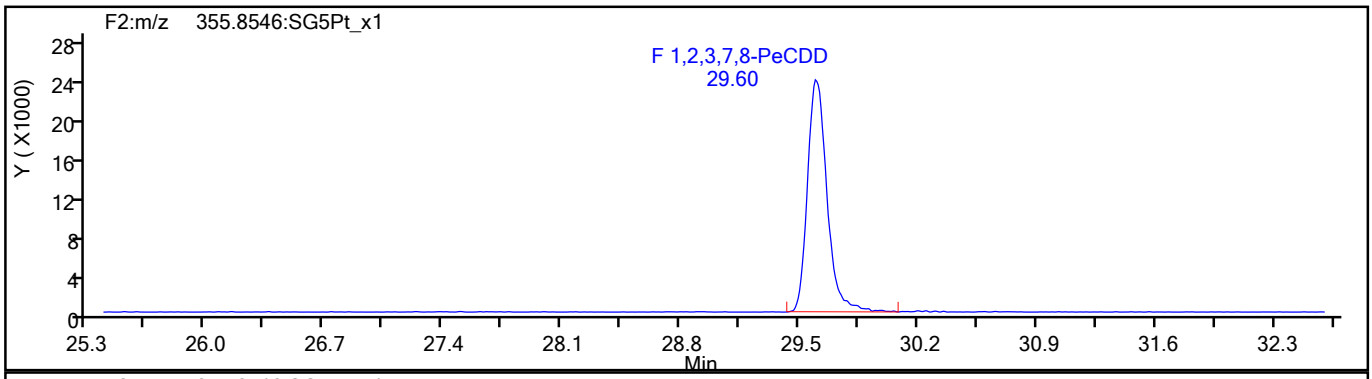

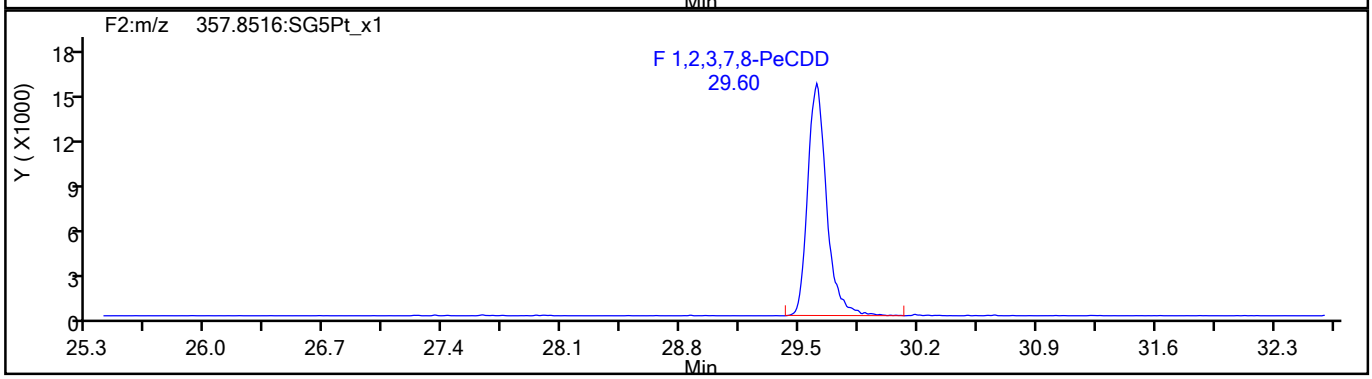

PeCDD Standards

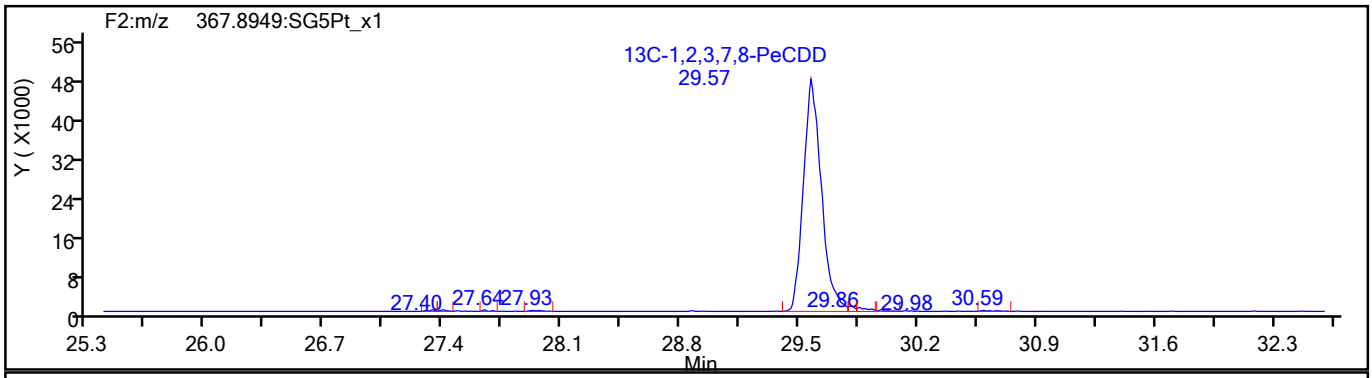

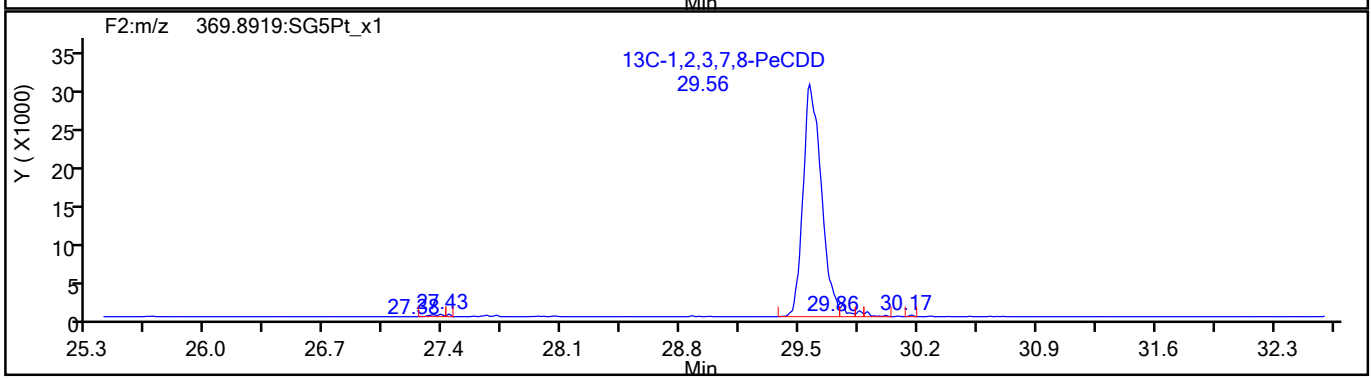

787558

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

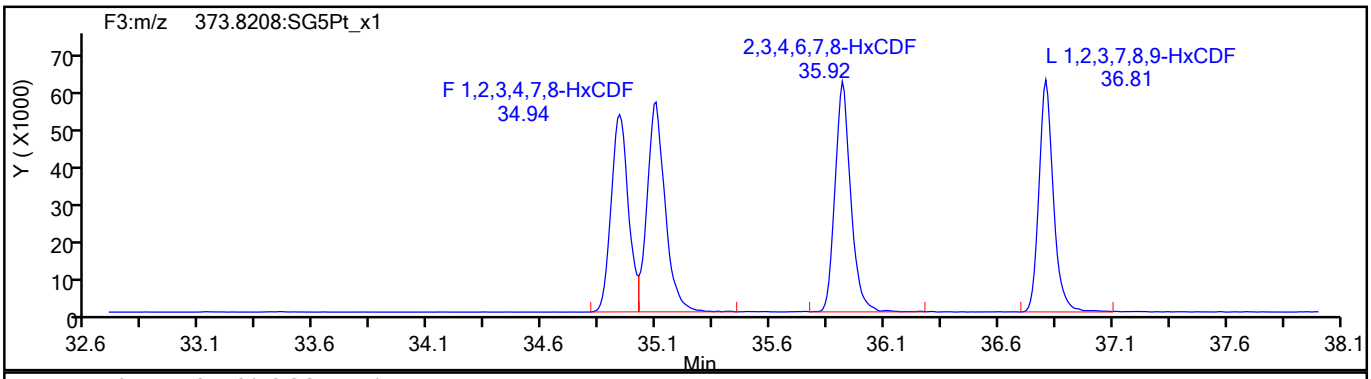

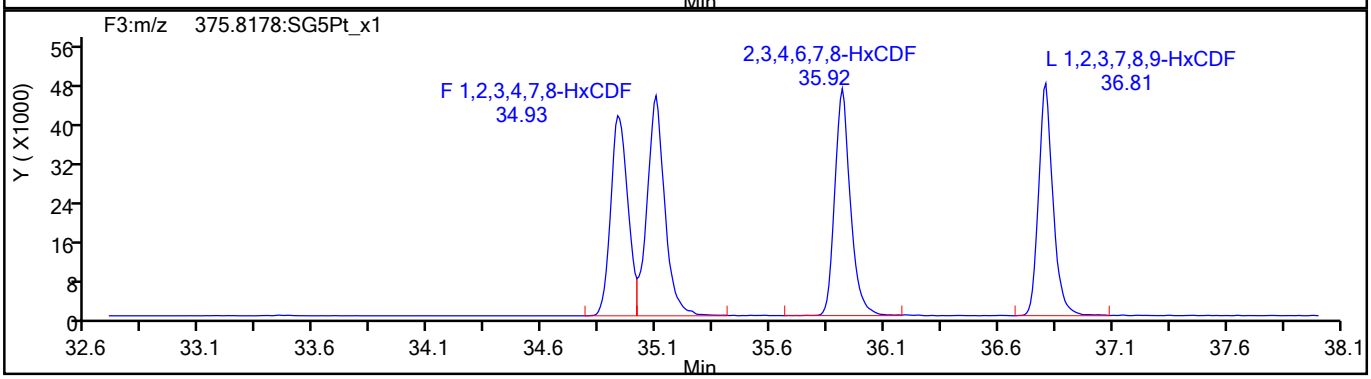

HxCDF Standards

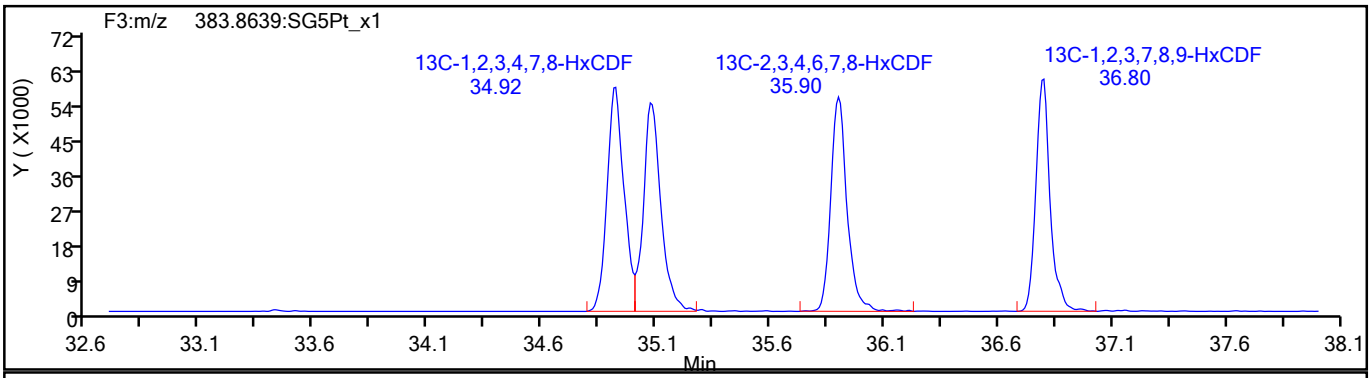

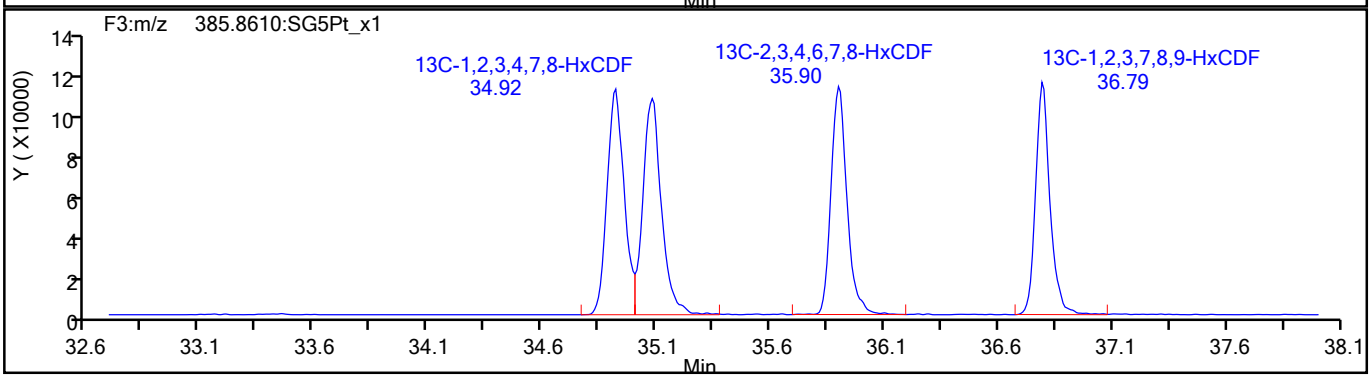

787559

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

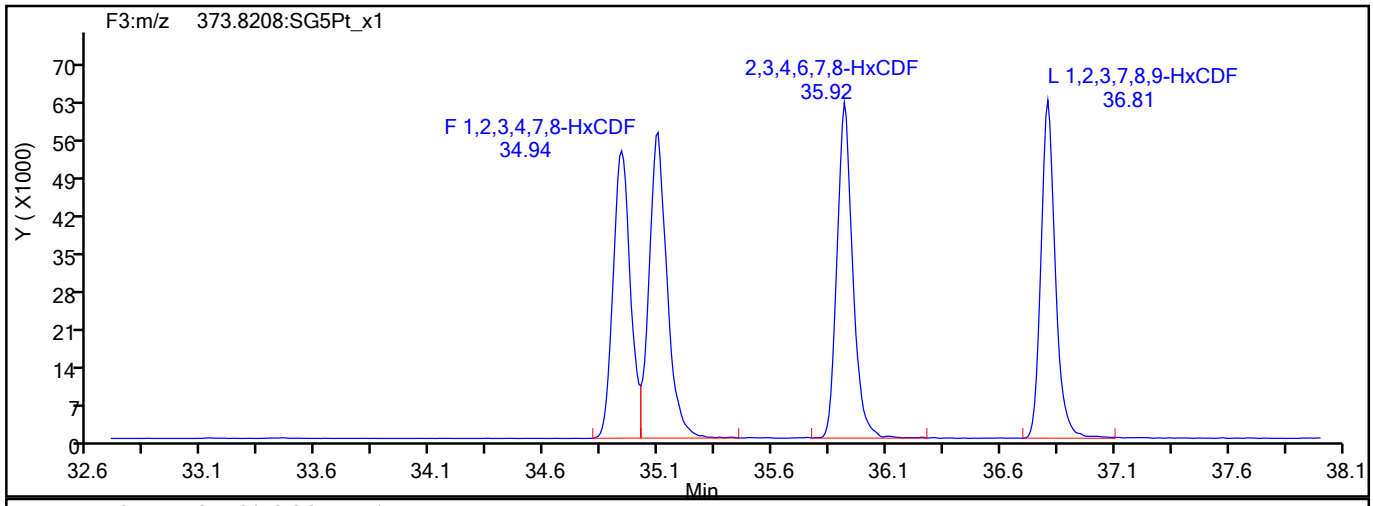

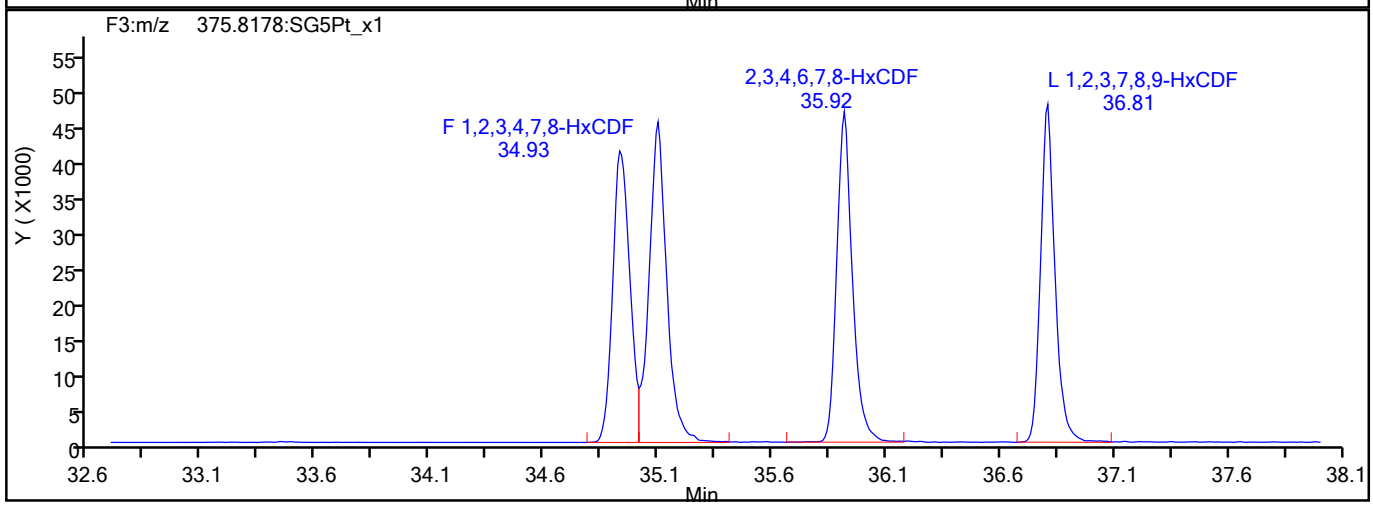

HxCDF Interference Mass

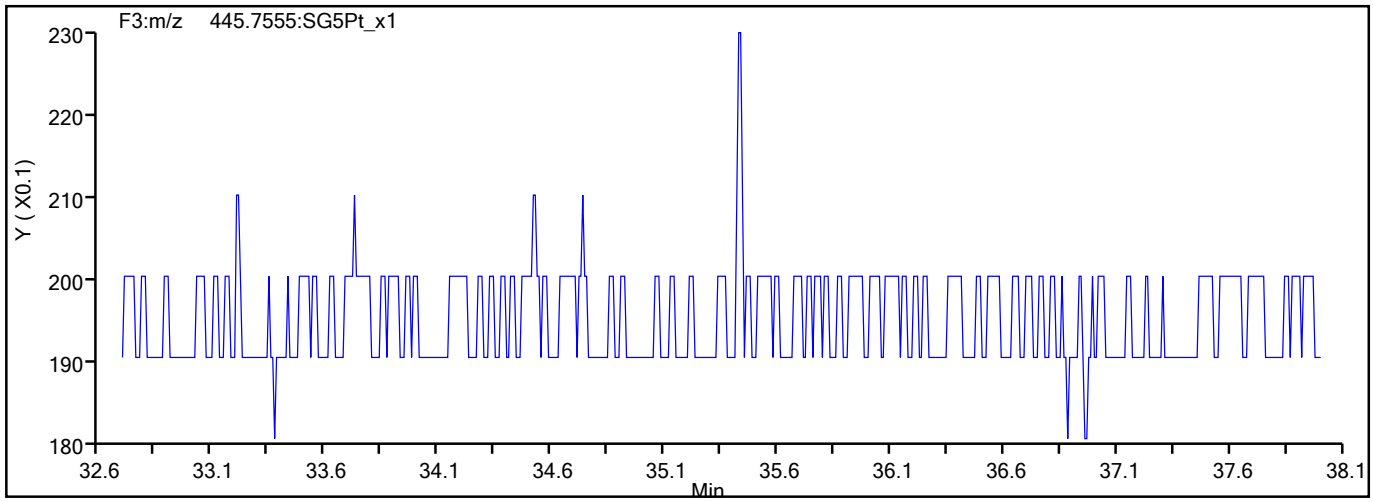

787560

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

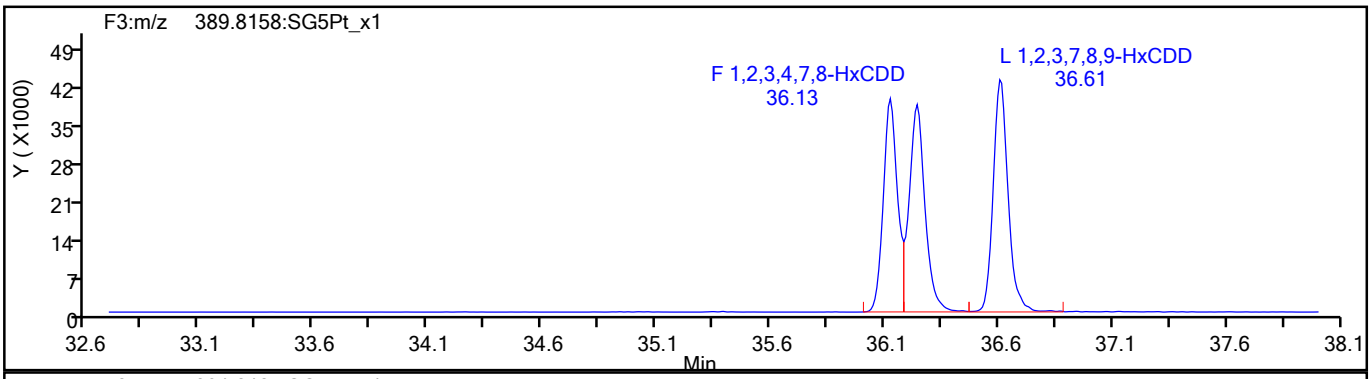

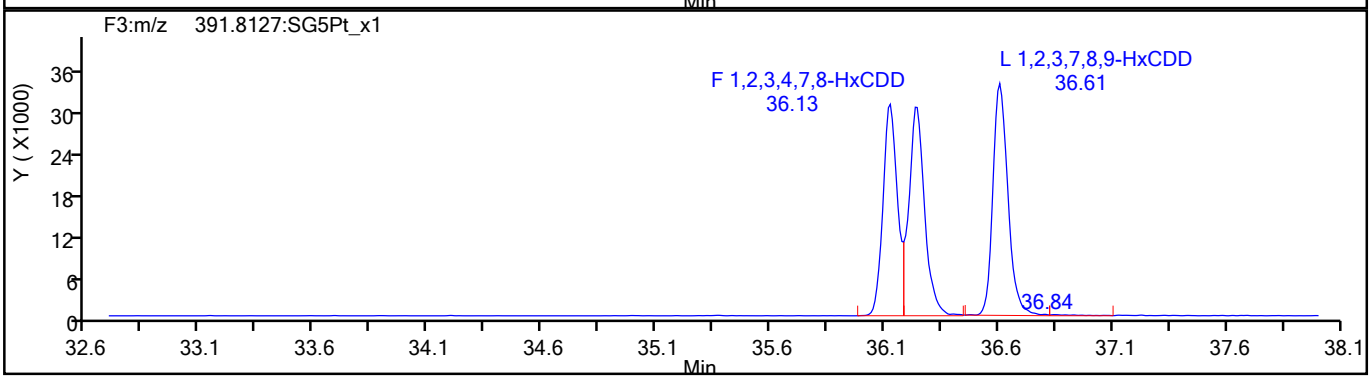

HxCDD Standards

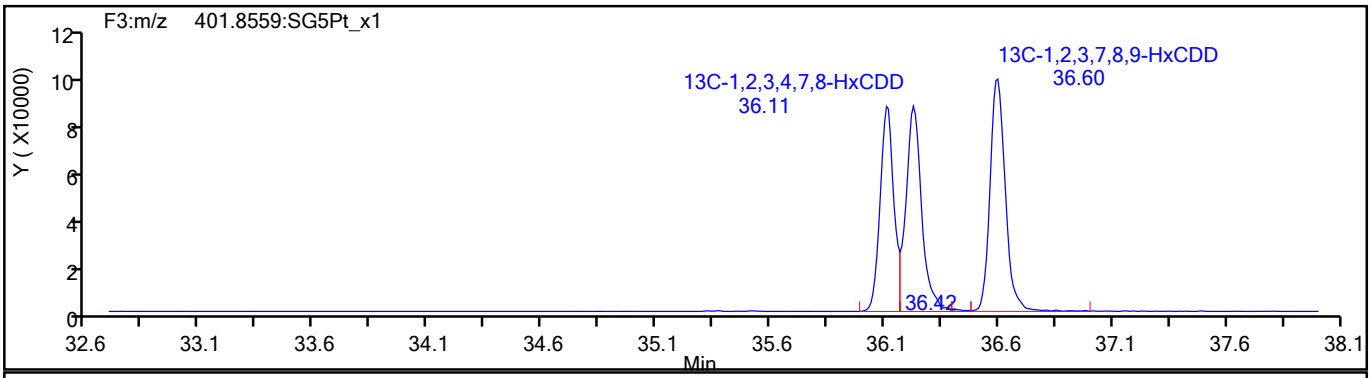

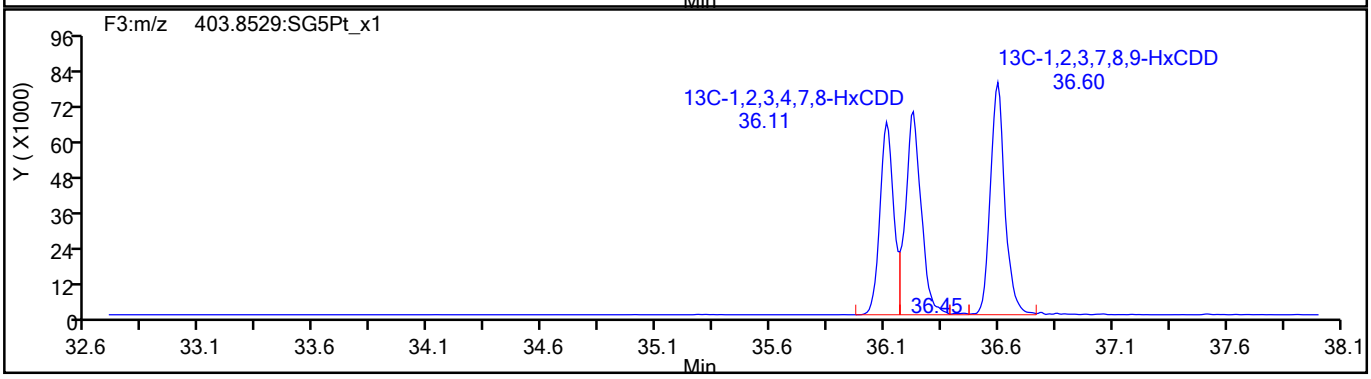

787561

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

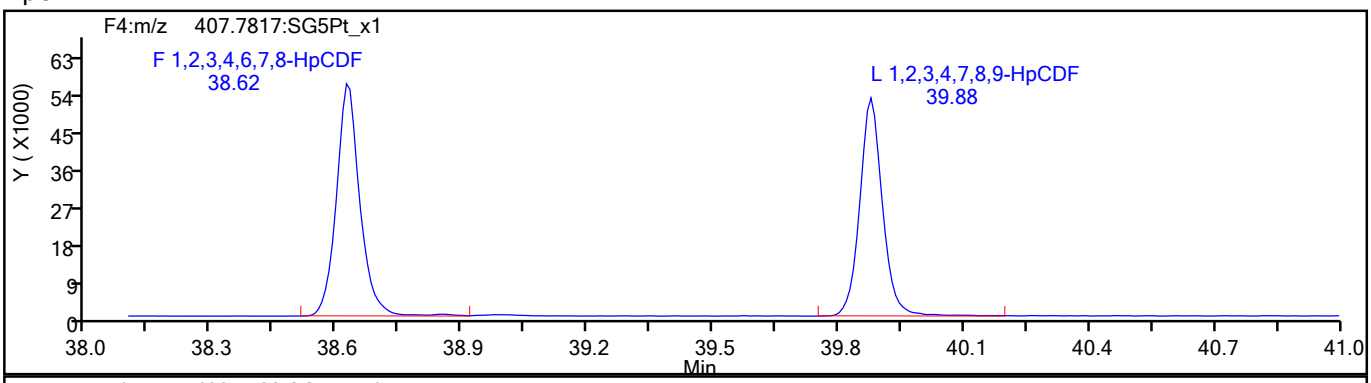

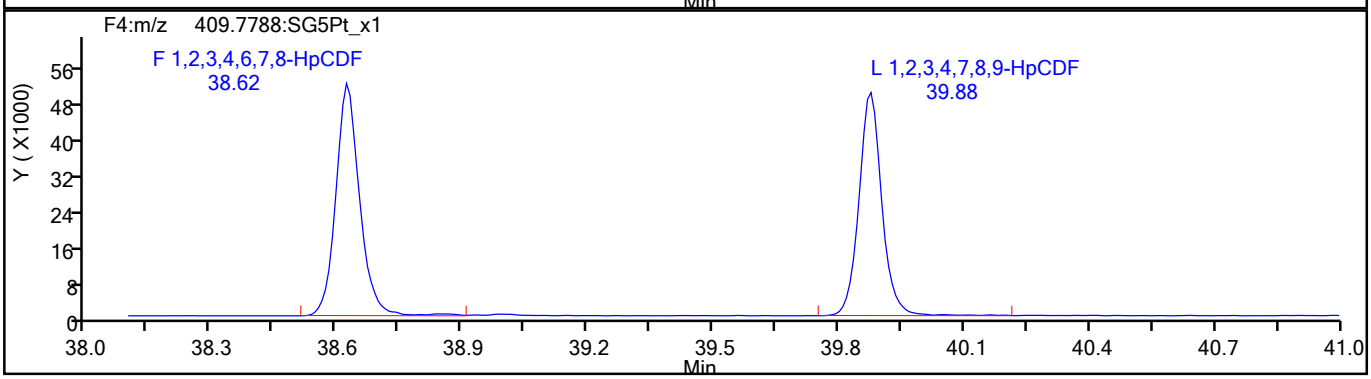

HpCDF Standards

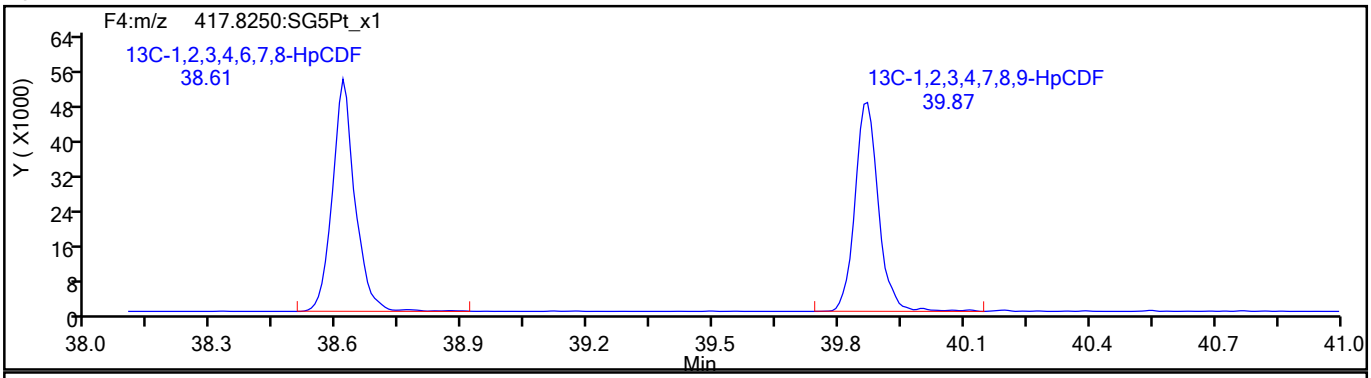

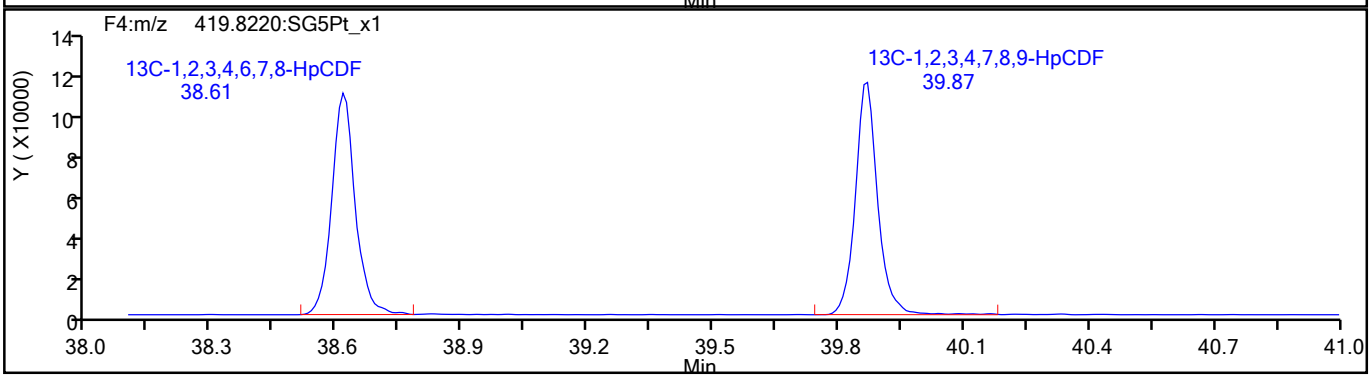

787562

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

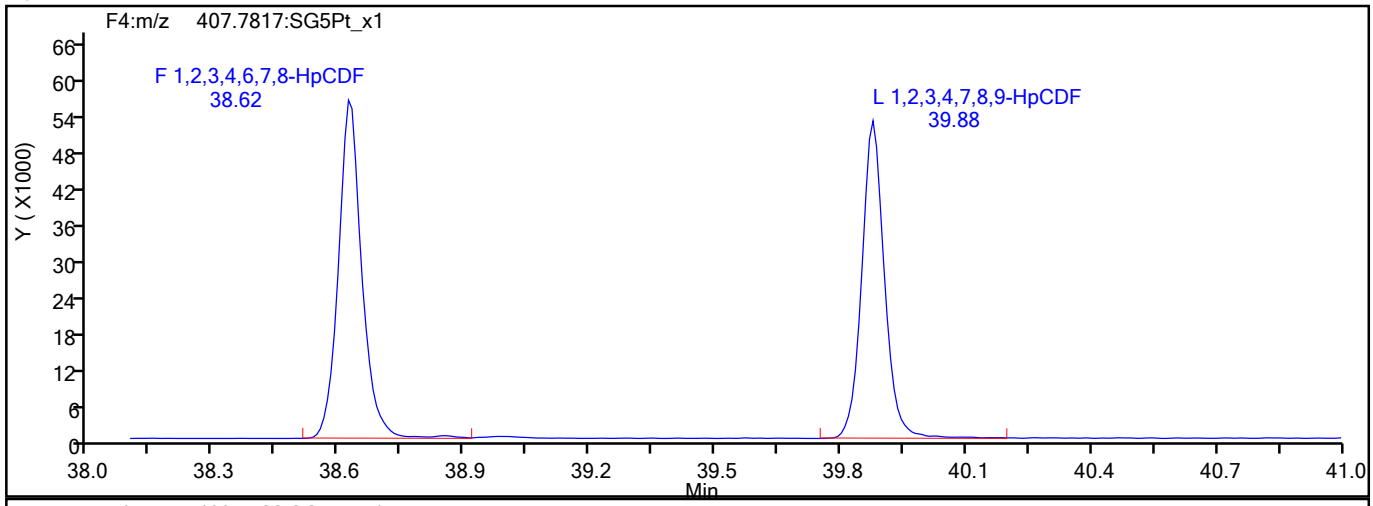

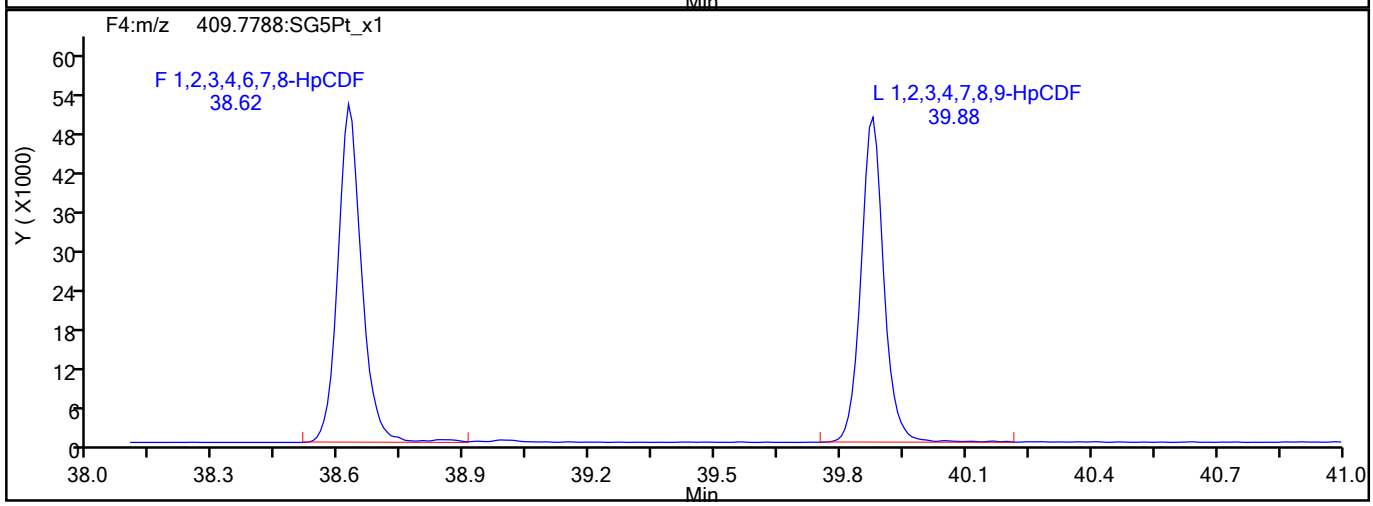

HpCDF Interference Mass

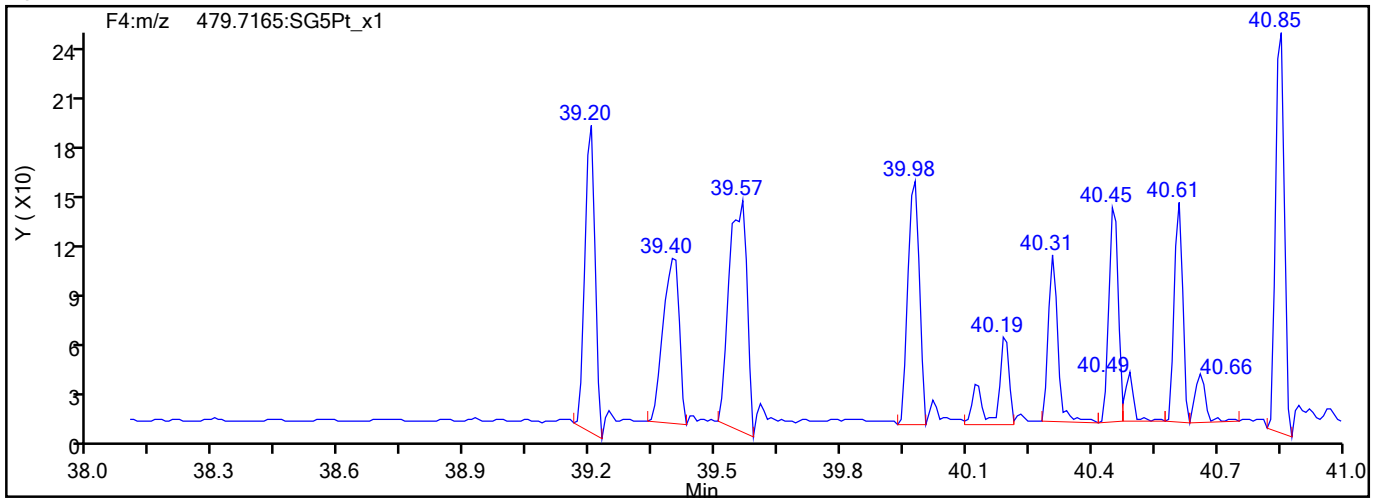

787563

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

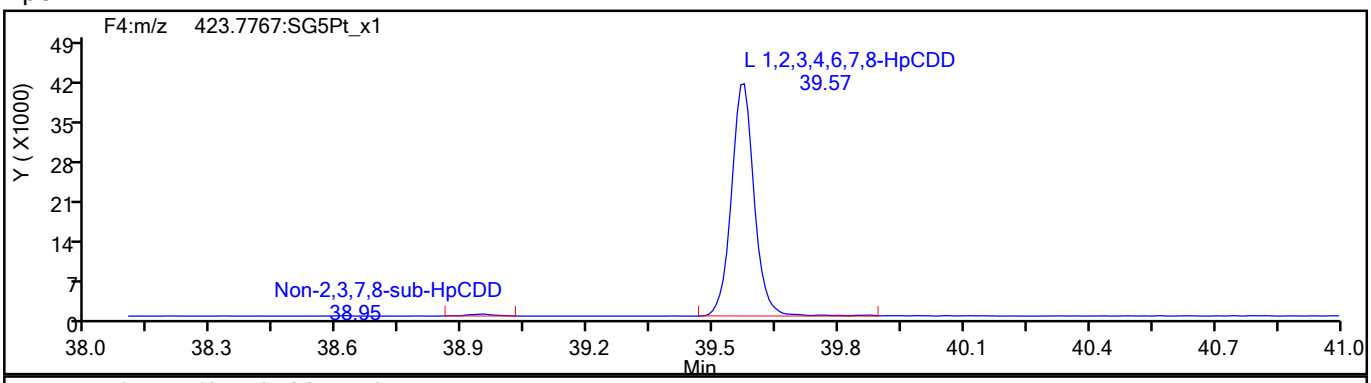

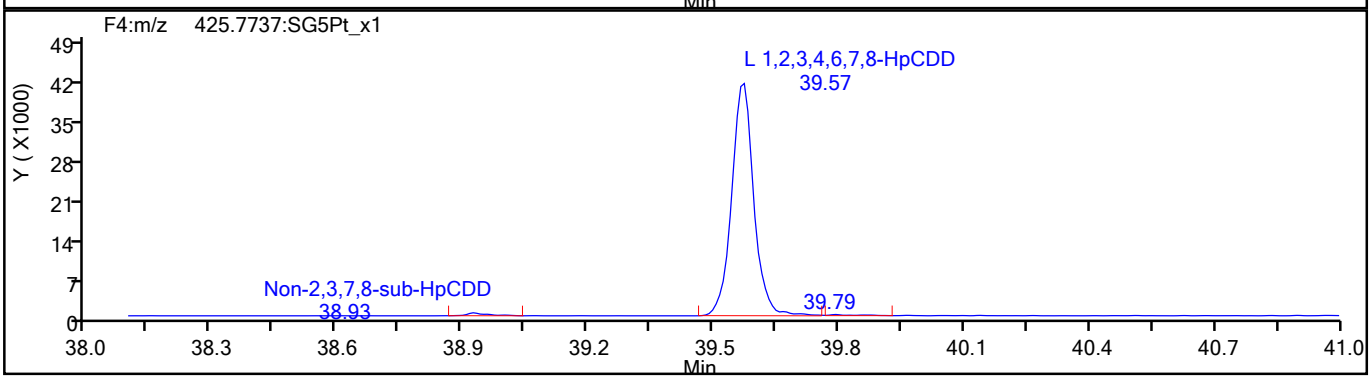

HpCDD Standards

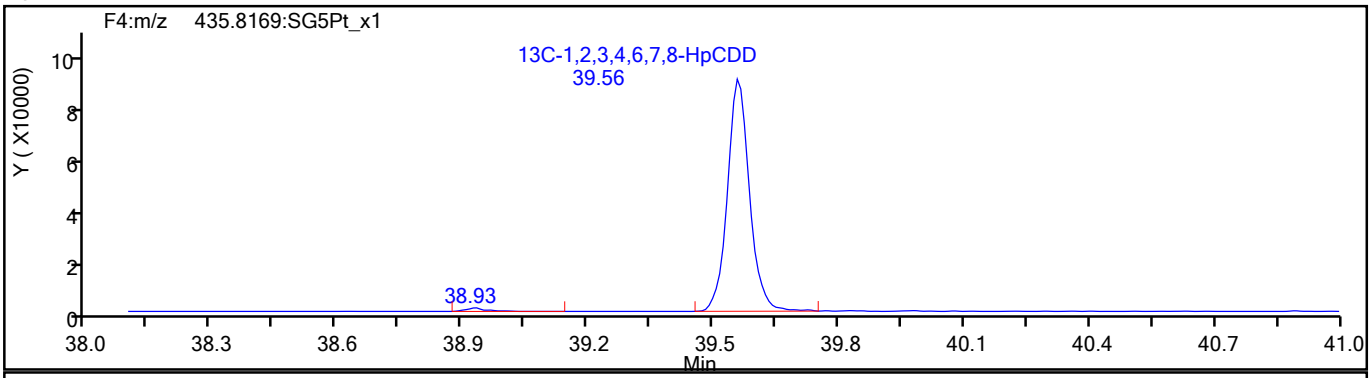

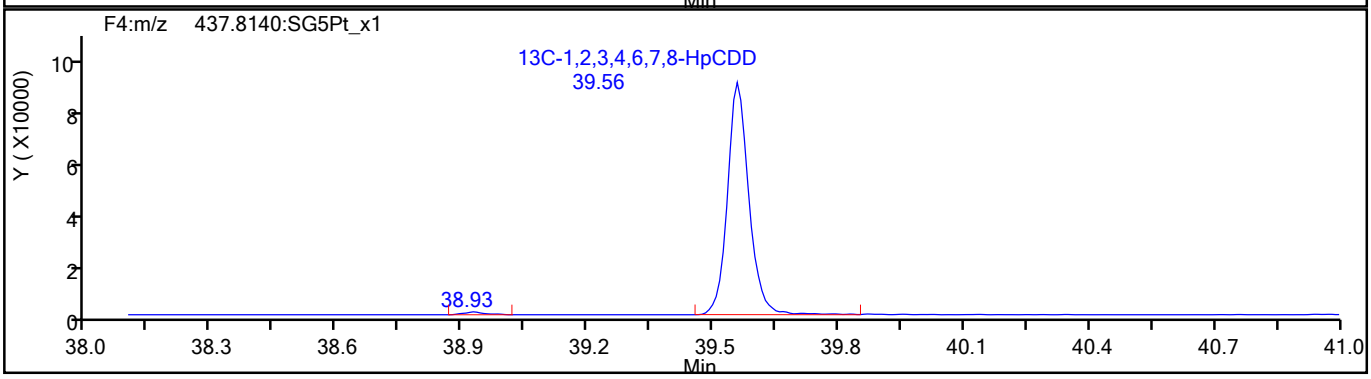

787564

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

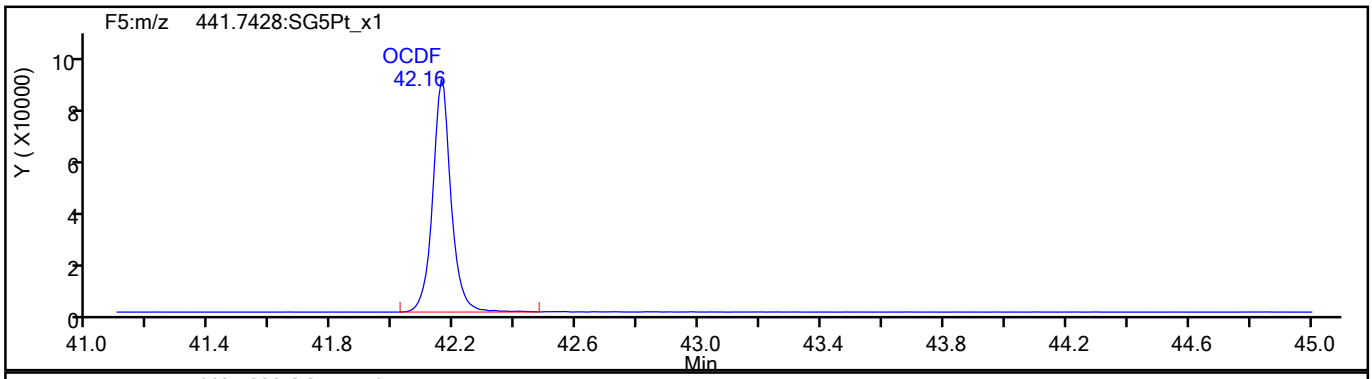

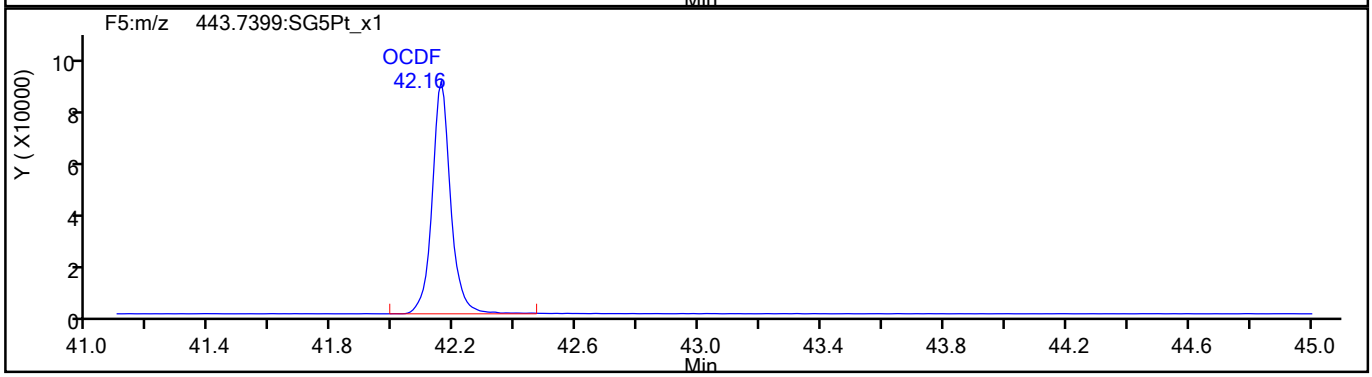

OCDF Standards

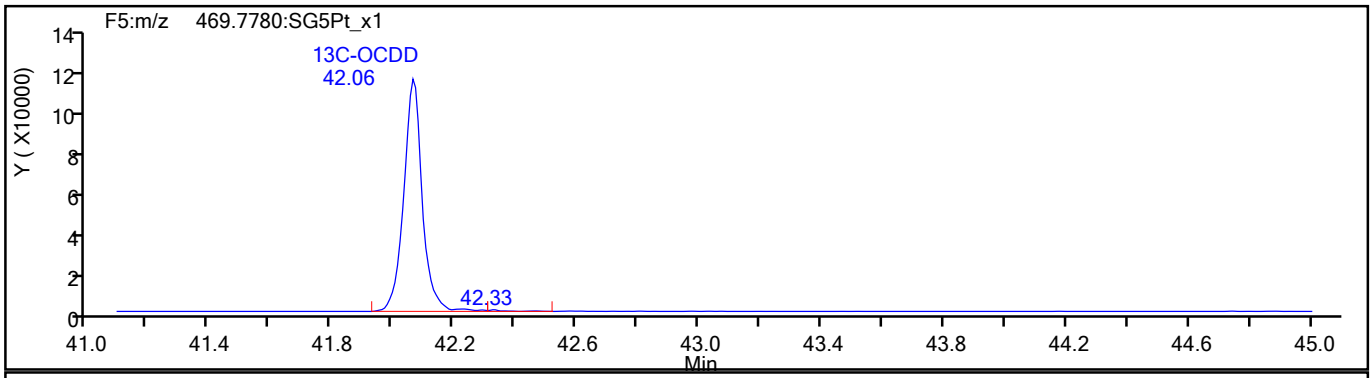

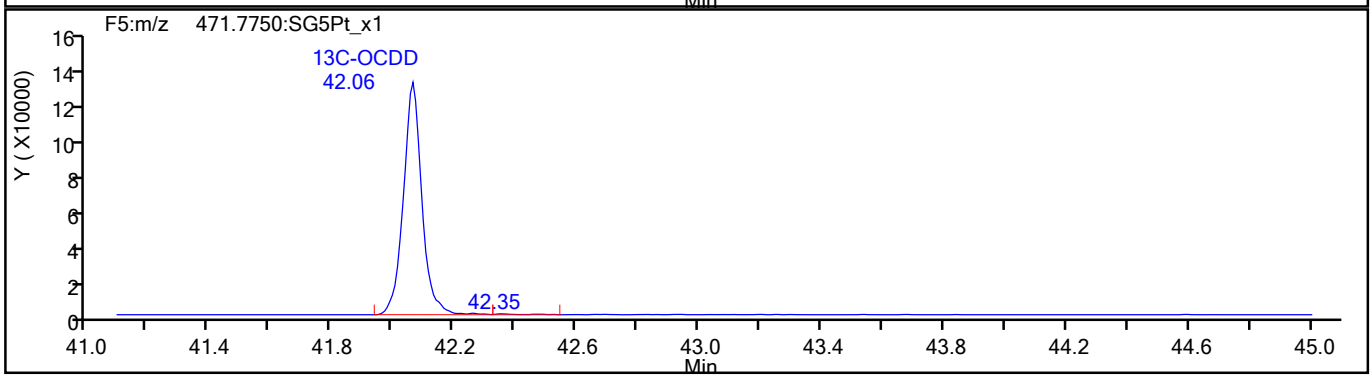

787565

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

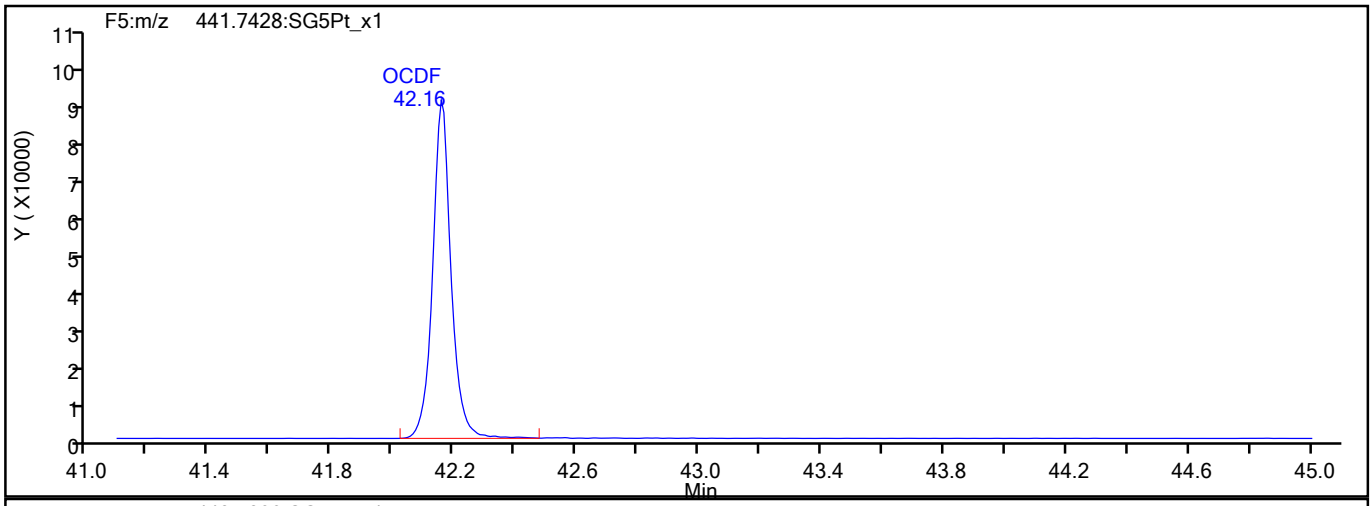

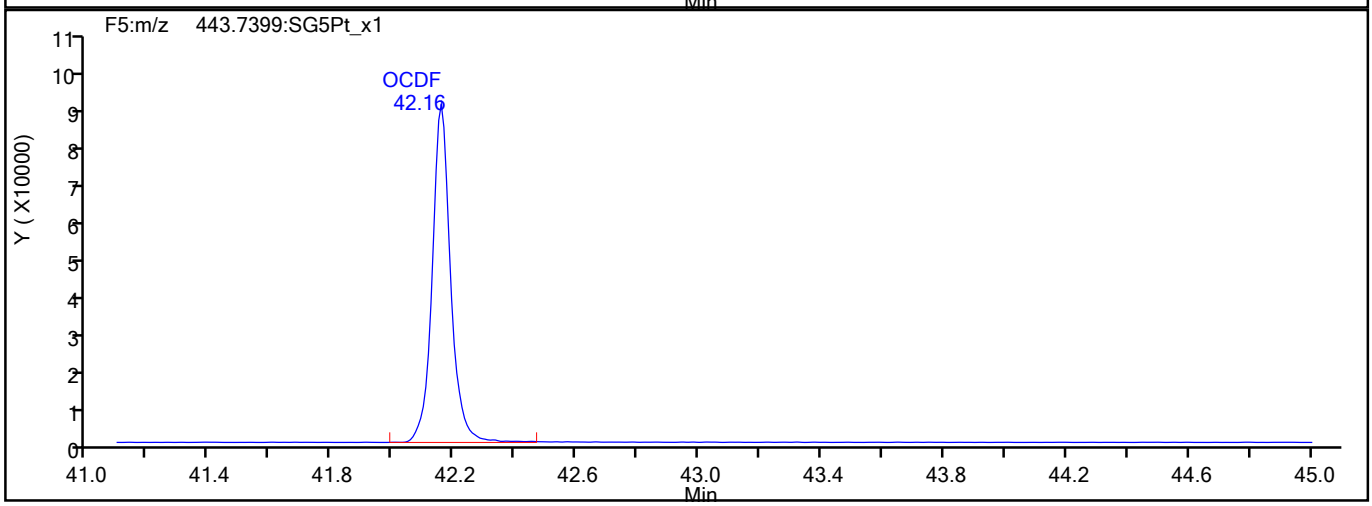

OCDF Interference Mass

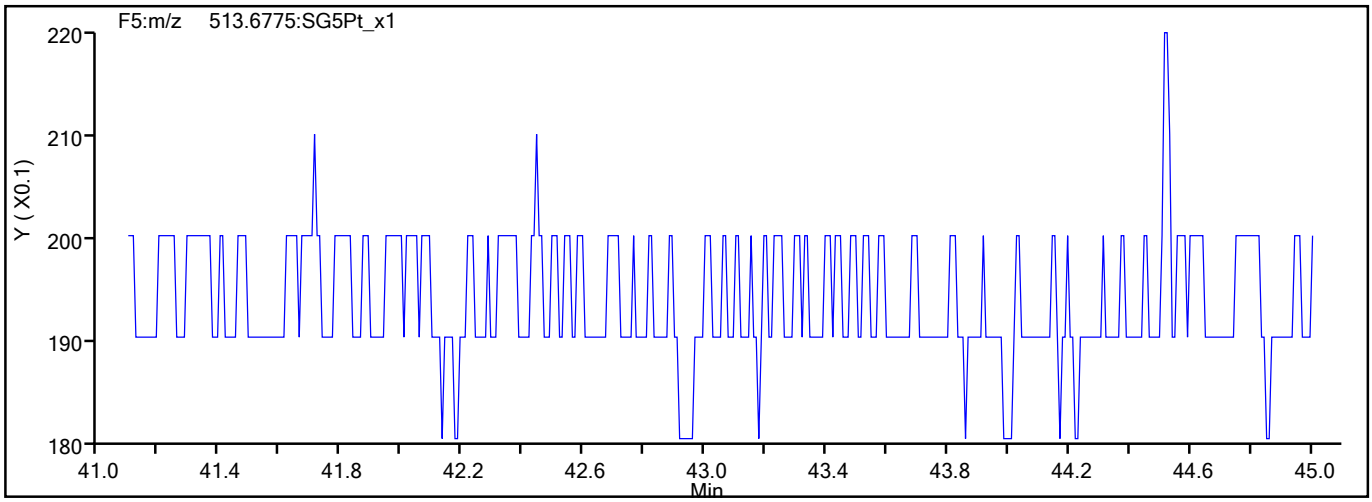

787566

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

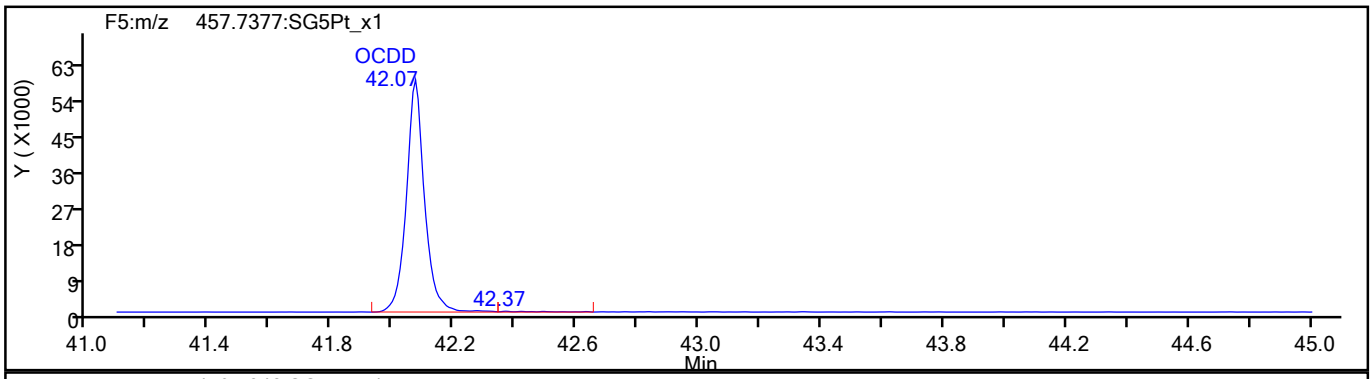

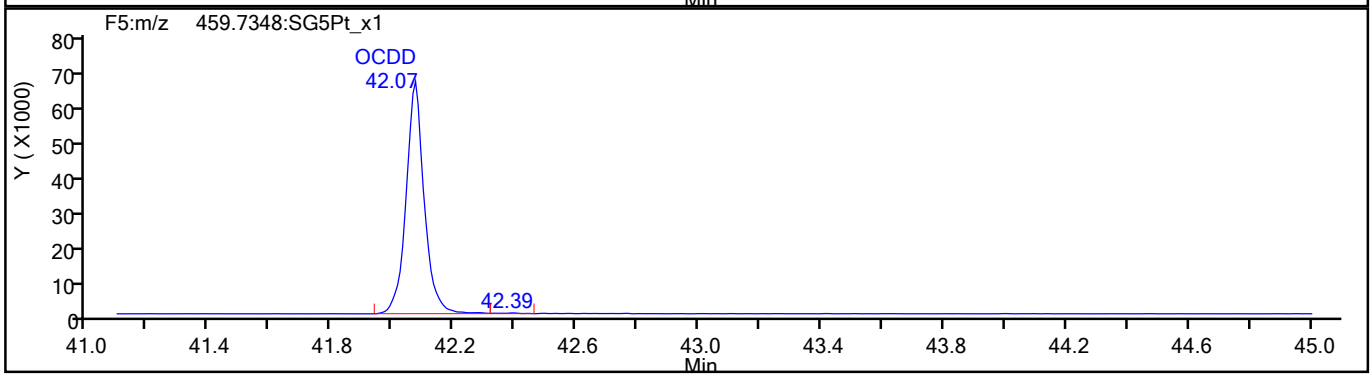

OCDD Standards

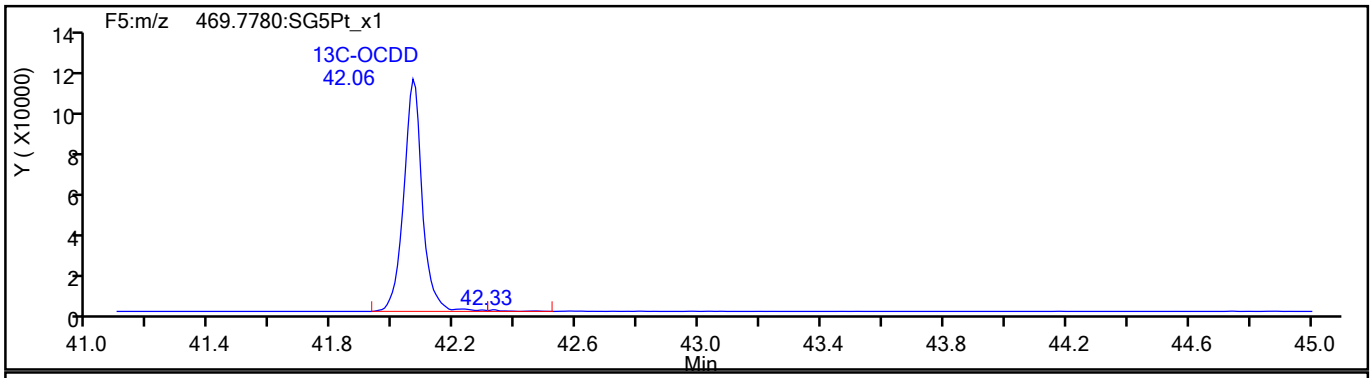

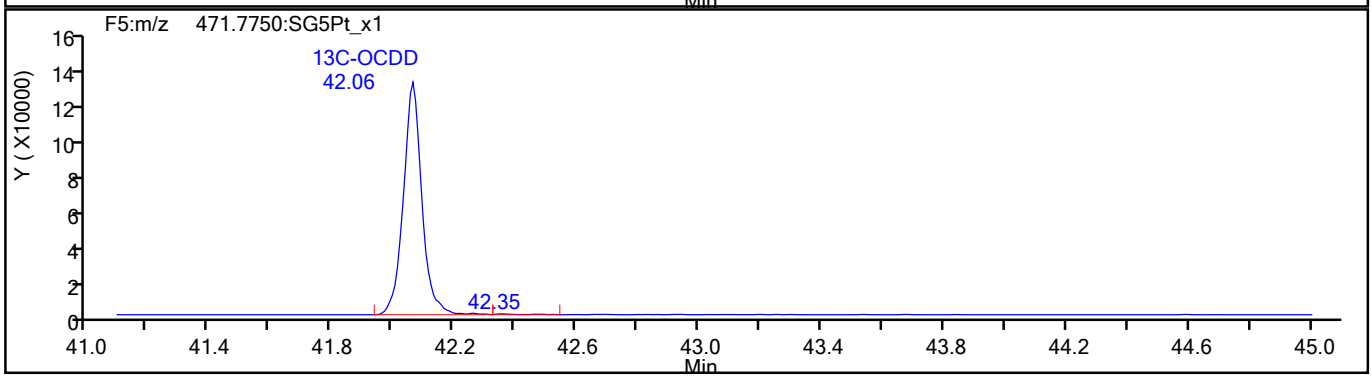

787567

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

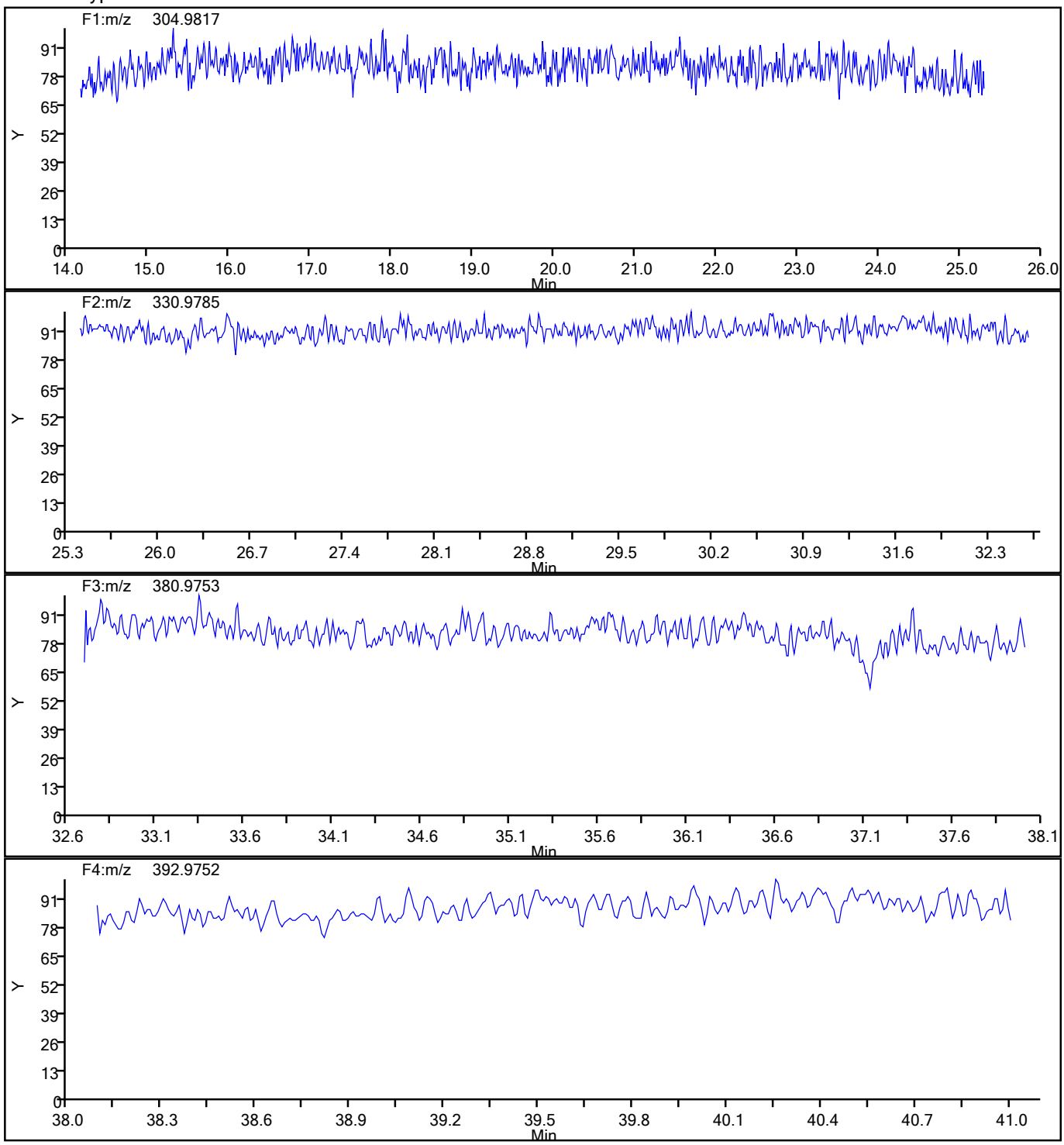

787568

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

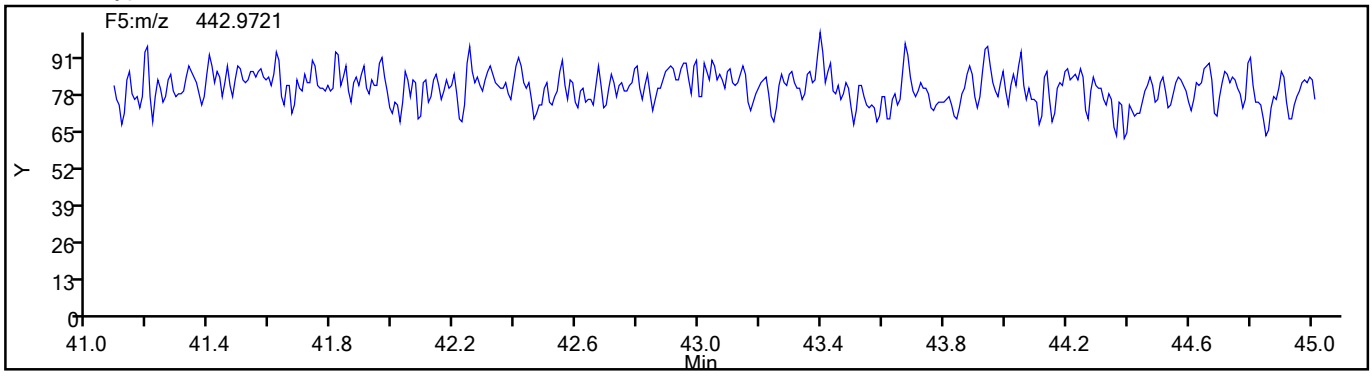

787569

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Lab Sample ID: CCV 320-518043/15 Calibration Date: 08/20/2021 01:34

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 19au21dfs1_17.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.048		9.71	10.0	97	84-120
2,3,7,8-TCDD	AveID	1.075	1.025		9.54	10.0	95	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.061		50.3	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9636		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.060		50.7	50.0	101	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.159		50.5	50.0	101	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.243		51.0	50.0	102	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.301		53.5	50.0	107	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9540		45.0	50.0	90	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9885		49.8	50.0	100	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.141		51.4	50.0	103	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.300		52.4	50.0	105	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.388		48.1	50.0	96	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.034		49.2	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.281		48.9	50.0	98	86-116
OCDD	AveID	1.062	1.054		99.3	100	99	79-126
OCDF	AveID	1.317	1.471		112	100	112	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.409		105	100	105	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9327		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.157		101	100	101	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.165		103	100	103	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6996		97.6	100	98	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.060		110	100	110	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.105		103	100	103	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.008		96.8	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8016		106	100	106	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.8667		101	100	101	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.116		115	100	115	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.9098		124	100	124	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.6899		102	100	102	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7820		114	100	114	77-129
13C-OCDD	Ave	0.5446	0.6551		241	200	120	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	0.9918		9.84	10.0	98	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	19AU21DFS1_1	Resolution Check	RC 081921	46			KSS	1.000	
2	19AU21DFS1_2	WDM HRDXNCP_00044	WDM 081921	1	Dioxin		KSS	1.000	
3	19AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081921	2	Dioxin		KSS	1.000	
4	19AU21DFS1_4	SB Solvent Blank C14	SB 081921	3	Dioxin		KSS	1.000	
5	19AU21DFS1_5	mb 320-513879/1-a RI	mb 320-513879/1-a	4	1613B/Solid	D267	KSS	10.000	g
6	19AU21DFS1_6	320-76888-a-13-a RI	320-76888-a-13-a	5	1613B/Solid	D266	KSS	10.000	g
7	19AU21DFS1_7	320-76901-a-3-a	320-76901-a-3-a	6	1613B/Solid	D267	KSS	10.000	g
8	19AU21DFS1_8	320-76901-a-4-a	320-76901-a-4-a	7	1613B/Solid		KSS	10.000	g
9	19AU21DFS1_9	320-76901-a-5-a	320-76901-a-5-a	8	1613B/Solid		KSS	10.000	g
10	19AU21DFS1_10	320-76901-a-6-a	320-76901-a-6-a	9	1613B/Solid		KSS	10.000	g
11	19AU21DFS1_11	320-76901-a-7-a	320-76901-a-7-a	10	1613B/Solid		KSS	10.000	g
12	19AU21DFS1_12	320-76901-a-8-a	320-76901-a-8-a	11	1613B/Solid		KSS	10.000	g
13	19AU21DFS1_13	320-76901-a-9-a	320-76901-a-9-a	12	1613B/Solid		KSS	10.000	g
14	19AU21DFS1_14	320-76901-a-13-a	320-76901-a-13-a	13	1613B/Solid		KSS	10.000	g
15	19AU21DFS1_15	SB Solvent Blank C14	SB 081921A	3	Dioxin		KSS	1.000	
16	19AU21DFS1_16	Resolution Check	RC 081921A	46			KSS	1.000	
17	19AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081921A	2	Dioxin		KSS	1.000	
18	19AU21DFS1_18	WDM HRDXNCP_00044	WDM 081921A	1	Dioxin		KSS	1.000	
19	19AU21DFS1_19	SB Solvent Blank C14	SB 081921B	3	Dioxin		KSS	1.000	
20	19AU21DFS1_20	320-76888-a-5-a 5X	320-76888-a-5-a	14	1613B/Solid	D267	KSS	10.000	g
21	19AU21DFS1_21	320-76888-a-1-a 10X	320-76888-a-1-a	15	1613B/Solid		KSS	10.000	g
22	19AU21DFS1_22	320-76888-a-1-b ms 10X	320-76888-a-1-b ms	16	1613B/Solid		KSS	10.000	g
23	19AU21DFS1_23	320-76888-a-1-c msd 10X	320-76888-a-1-c msd	17	1613B/Solid		KSS	10.000	g
24	19AU21DFS1_24	320-76888-a-4-a 10X	320-76888-a-4-a	18	1613B/Solid		KSS	10.000	g
25	19AU21DFS1_25	320-76888-a-2-a 10X	320-76888-a-2-a	19	1613B/Solid		KSS	10.000	g
26	19AU21DFS1_26	320-76901-a-1-a 10X	320-76901-a-1-a	20	1613B/Solid		KSS	10.000	g
27	19AU21DFS1_27	320-76888-a-3-a 10X	320-76888-a-3-a	21	1613B/Solid		KSS	10.000	g
28	19AU21DFS1_28	SB Solvent Blank C14	SB 081921C	3	Dioxin		KSS	1.000	
29	19AU21DFS1_29	SB Solvent Blank C14	SB 081921D	3	Dioxin		KSS	1.000	
30	19AU21DFS1_30	Resolution Check	RC 081921B	46			KSS	1.000	

Logfile ✓'d
8/21/21
KSS

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 13:39
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11552 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10549 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11385 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11272 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11335 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11001 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11059 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10420 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10449 [5%height]

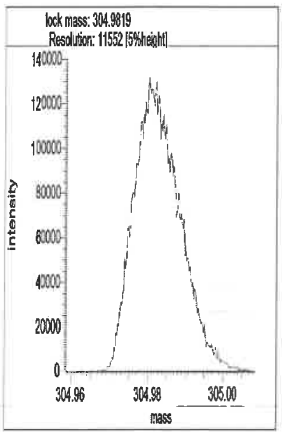

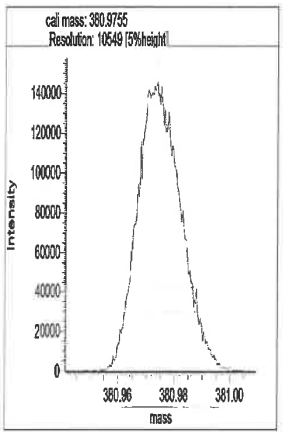

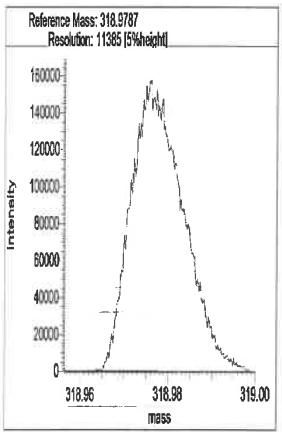

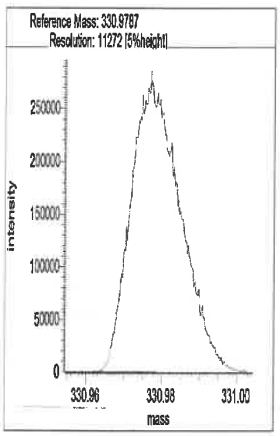

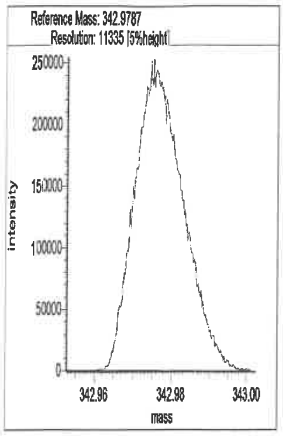

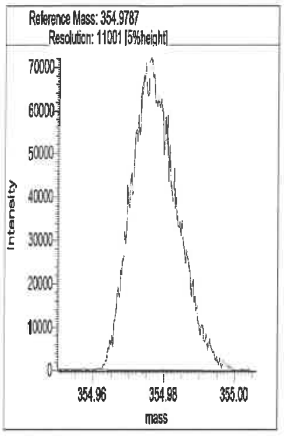

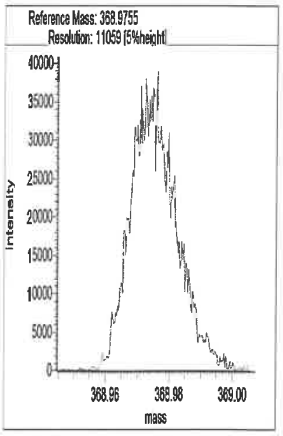

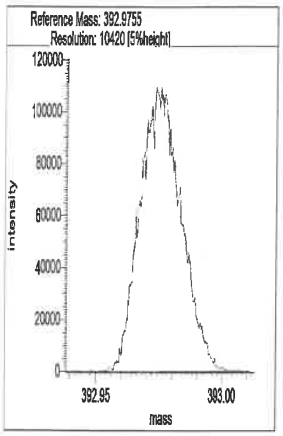

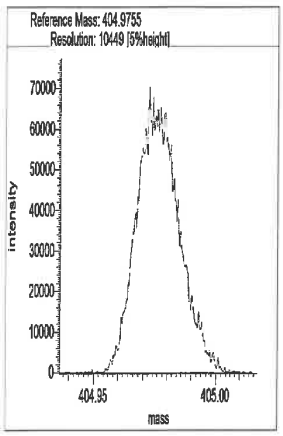

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11485 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10793 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11226 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11398 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10683 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10785 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10698 [5%height]

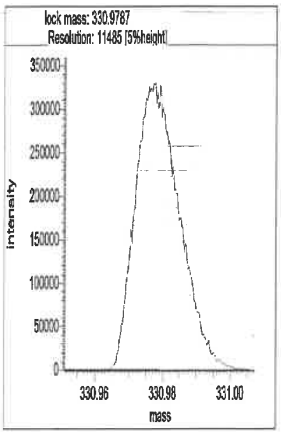

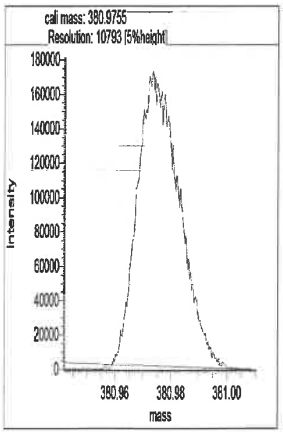

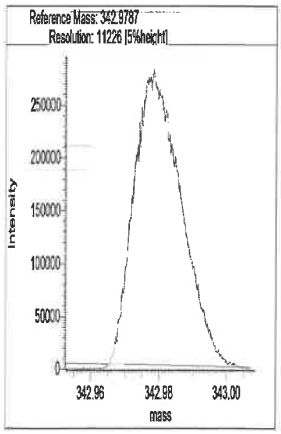

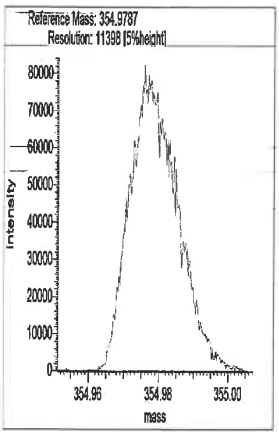

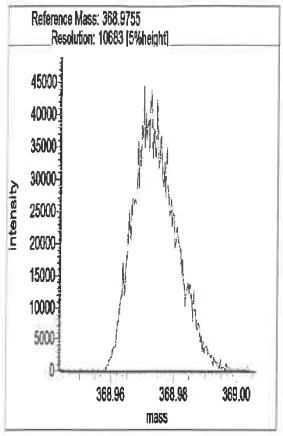

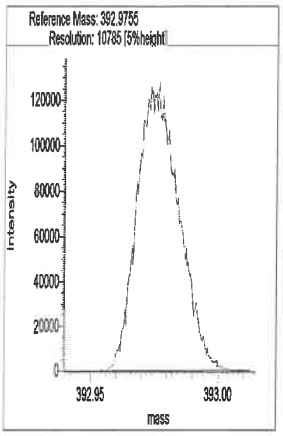

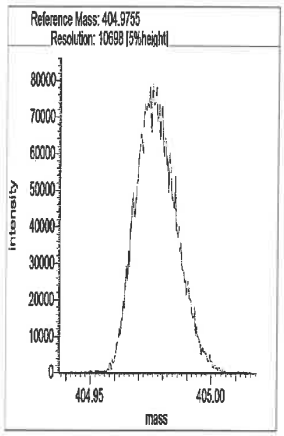

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11415 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10771 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11020 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11042 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12007 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10745 [5%height]

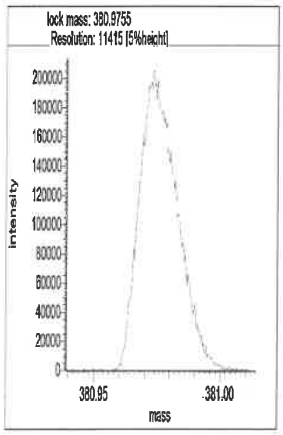

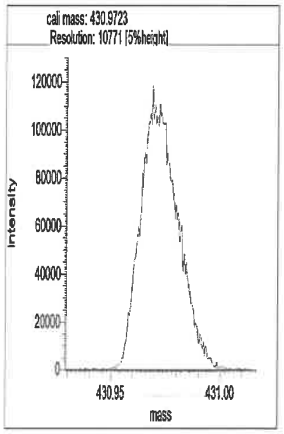

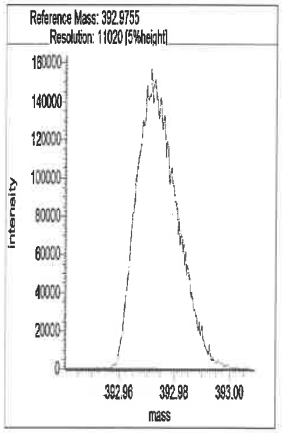

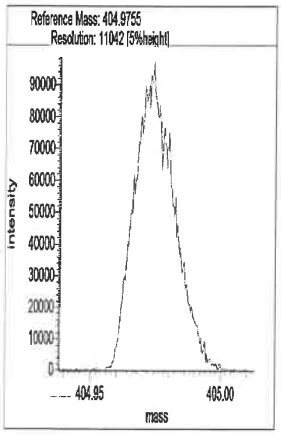

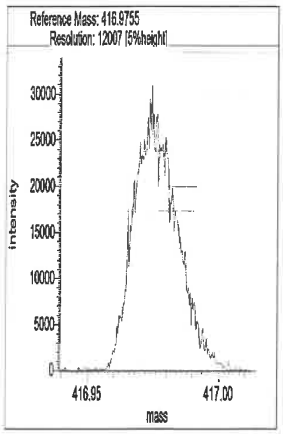

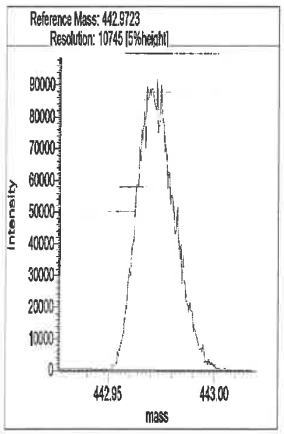

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11386 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10623 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11300 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10989 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11023 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10728 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10731 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10778 [5%height]

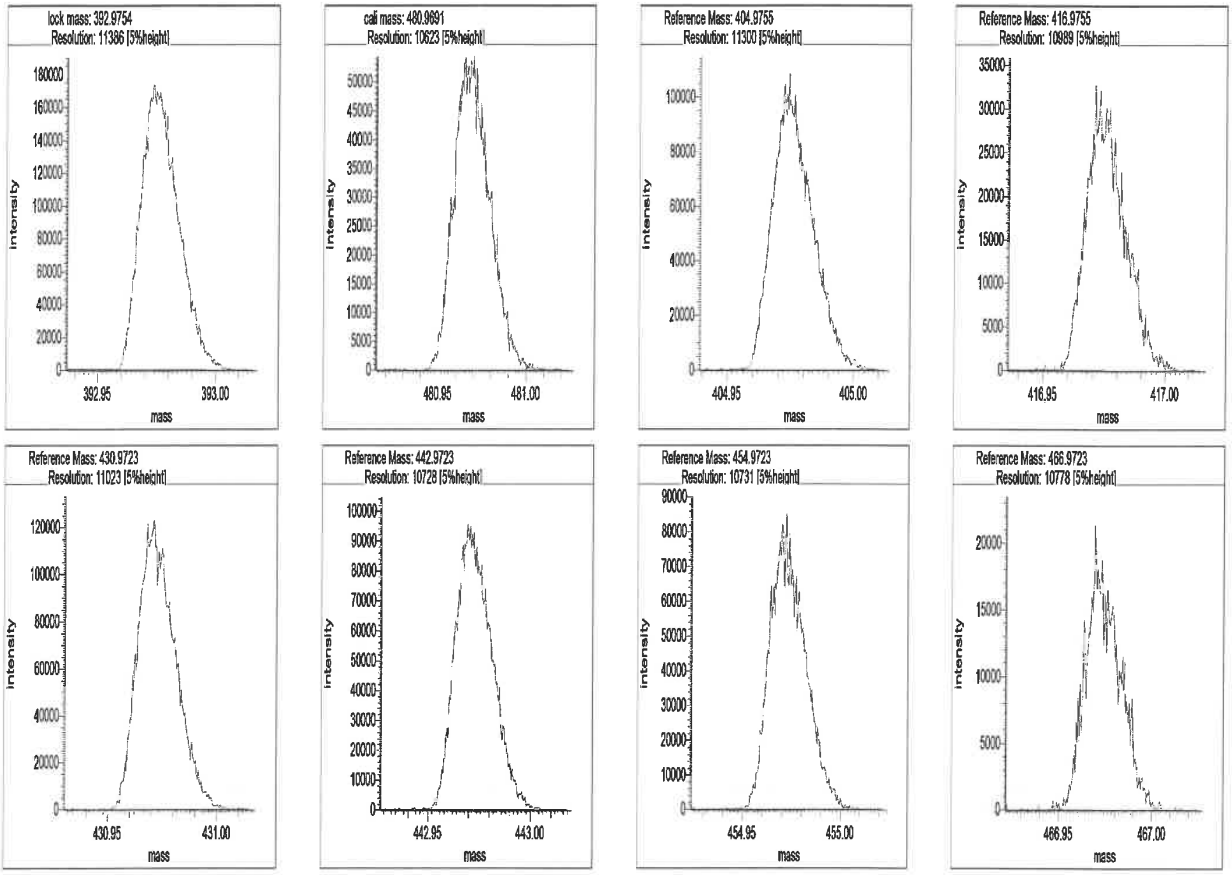

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11445 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11134 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11159 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10809 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11068 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10706 [5%height]

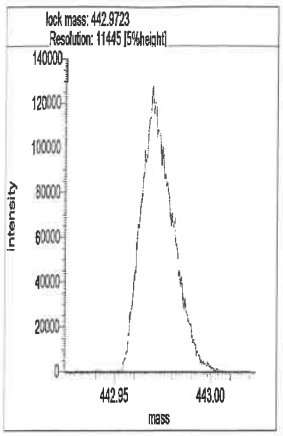
lock mass: 442.9723
Resolution: 11445 [5%height]
Intensity
mass

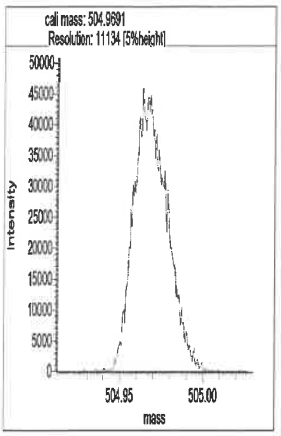
cali mass: 504.9691
Resolution: 11134 [5%height]
Intensity
mass

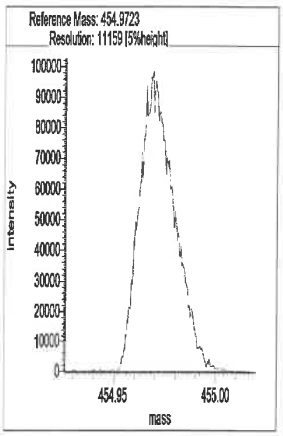
Reference Mass: 454.9723
Resolution: 11159 [5%height]
Intensity
mass

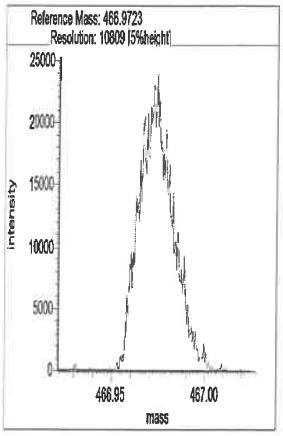
Reference Mass: 466.9723
Resolution: 10809 [5%height]
Intensity
mass

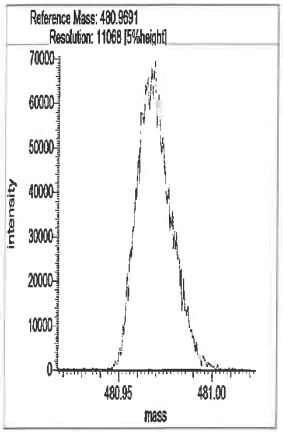
Reference Mass: 480.9691
Resolution: 11068 [5%height]
Intensity
mass

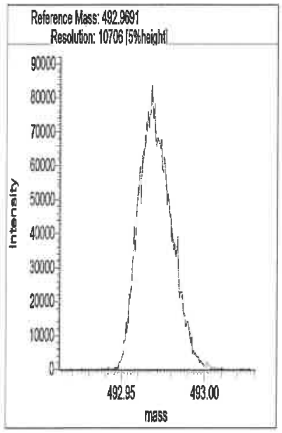
Reference Mass: 492.9691
Resolution: 10706 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 01:14
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10904 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10388 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10733 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10622 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10608 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10712 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10070 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9982 [5%height] ✓ DK 8/21/21
Ref. mass 404.9755 [m/z] Resolution: 10023 [5%height]

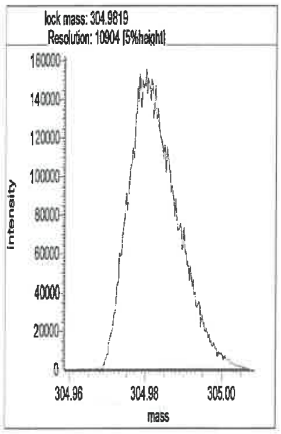

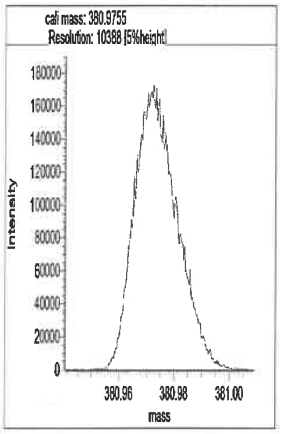

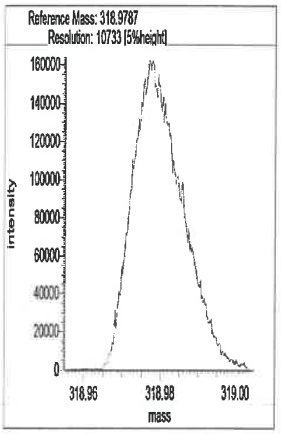

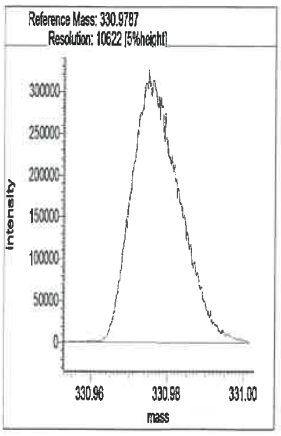

787577

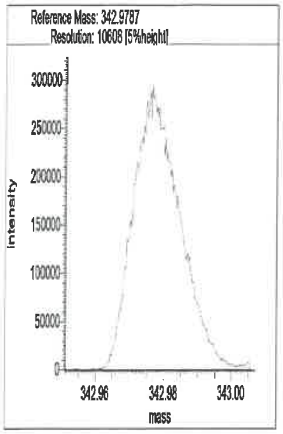

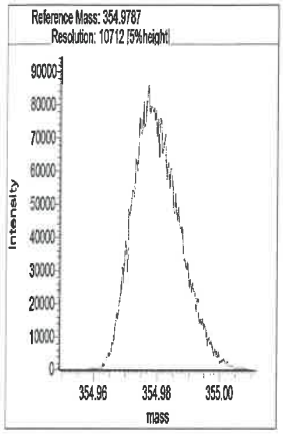

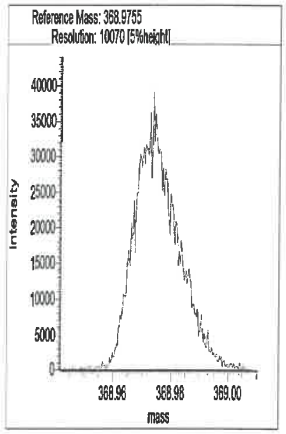

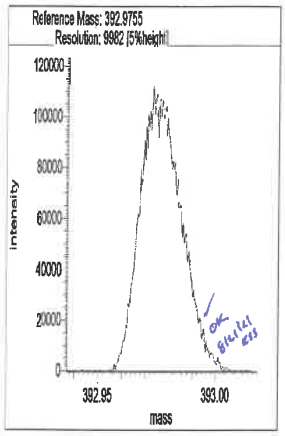

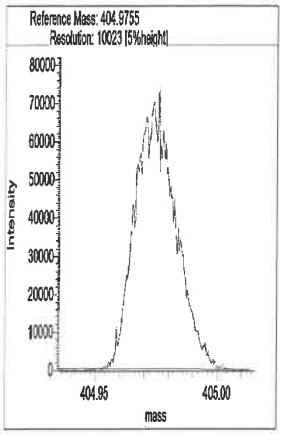

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10787 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10782 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11025 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11013 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10635 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10603 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10396 [5%height]

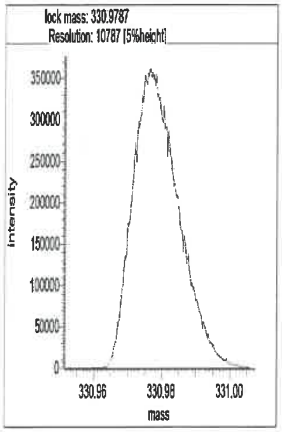

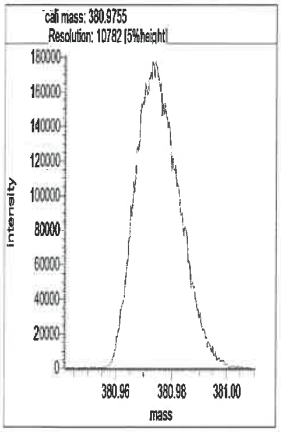

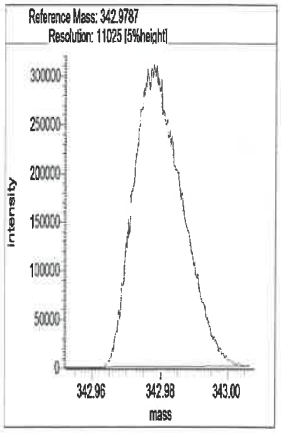

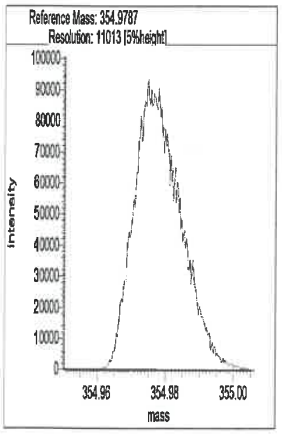

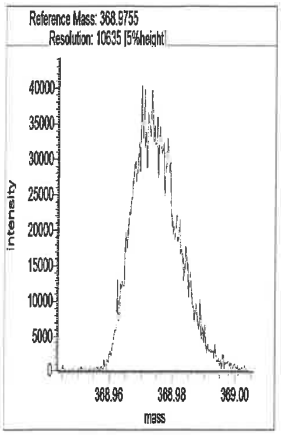

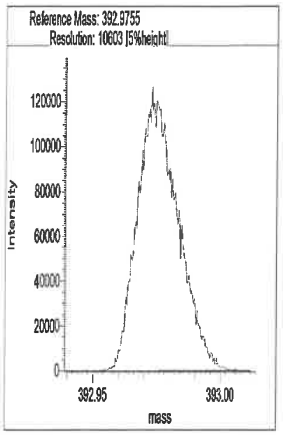

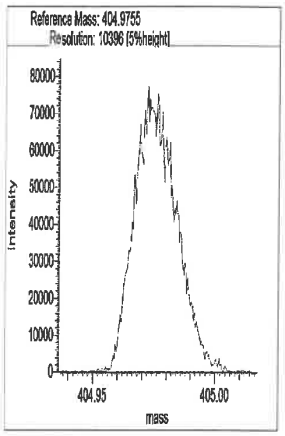

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11029 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10564 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10871 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10418 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11260 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10446 [5%height]

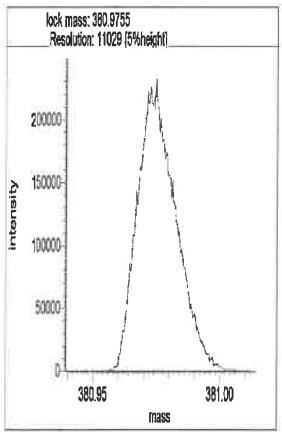

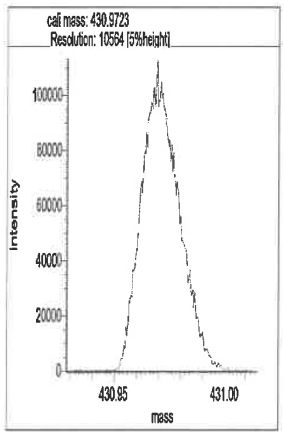

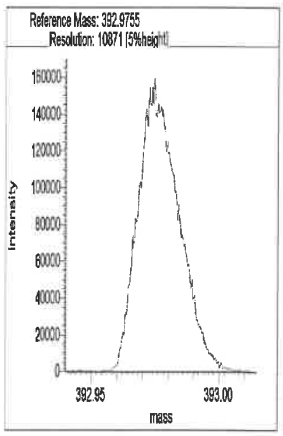

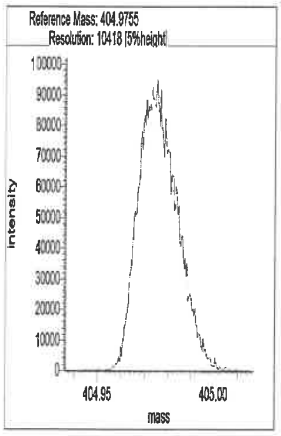

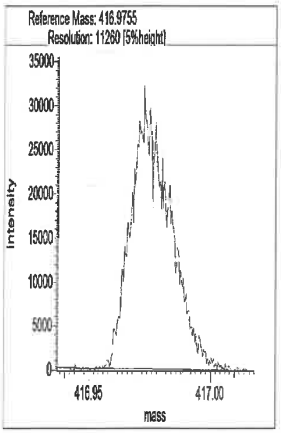

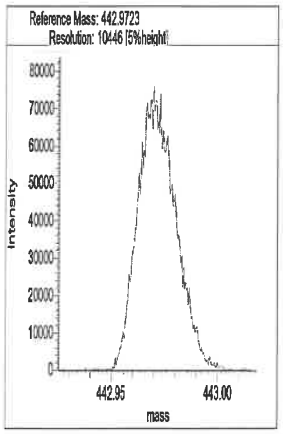

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10922 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10352 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10773 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12243 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10710 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11096 [5%height]

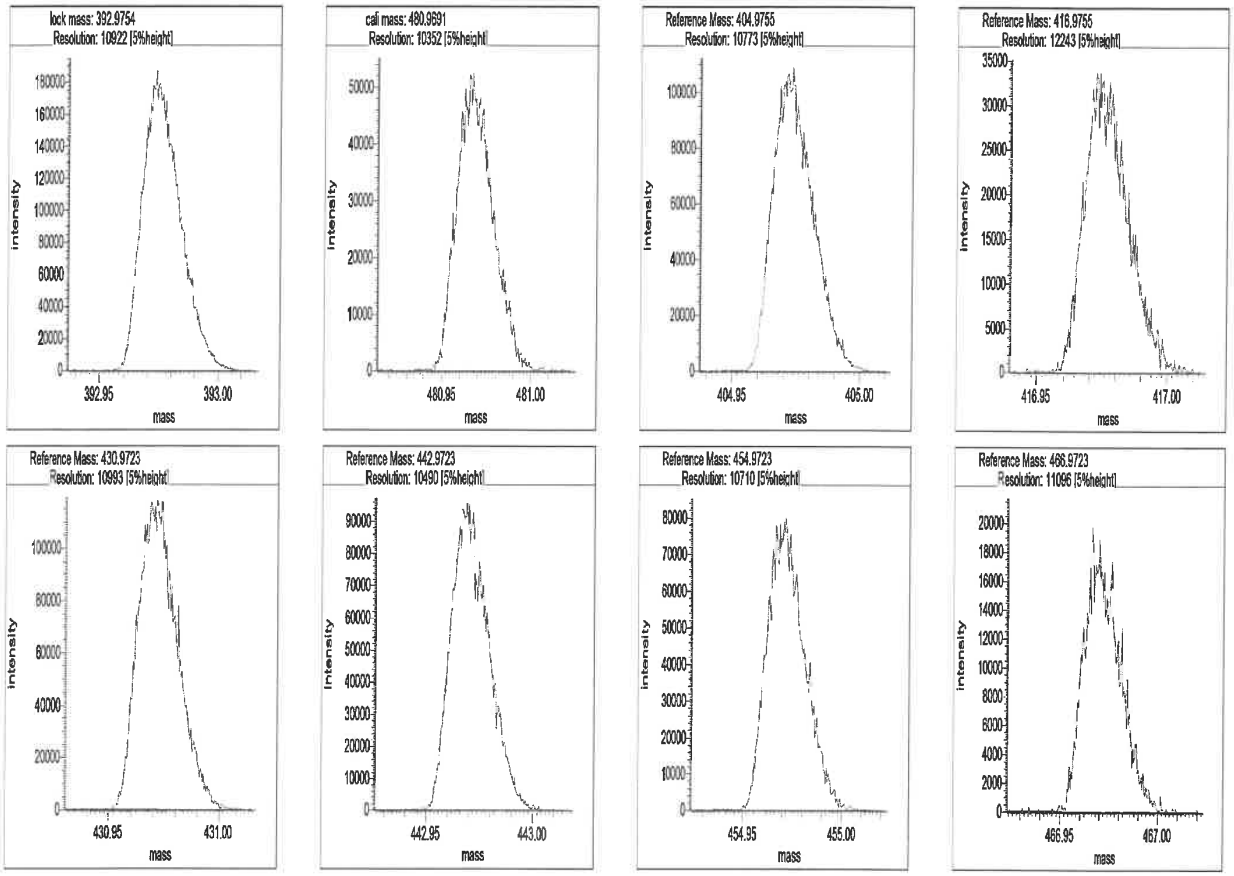

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11165 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10856 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11100 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10488 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11155 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10611 [5%height]

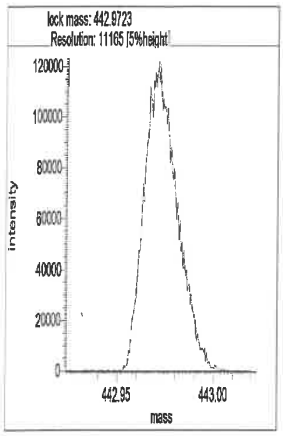
lock mass: 442.9723
Resolution: 11165 [5%height]
intensity
mass

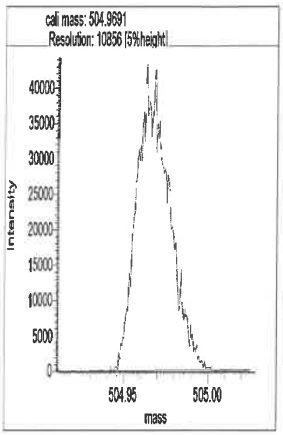
cali mass: 504.9691
Resolution: 10856 [5%height]
intensity
mass

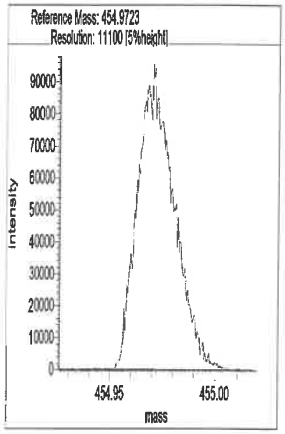
Reference Mass: 454.9723
Resolution: 11100 [5%height]
intensity
mass

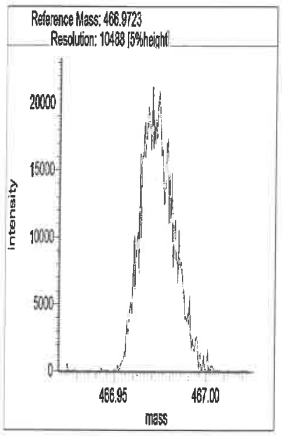
Reference Mass: 466.9723
Resolution: 10488 [5%height]
intensity
mass

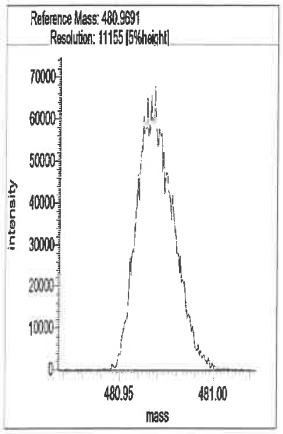
Reference Mass: 480.9691
Resolution: 11155 [5%height]
intensity
mass

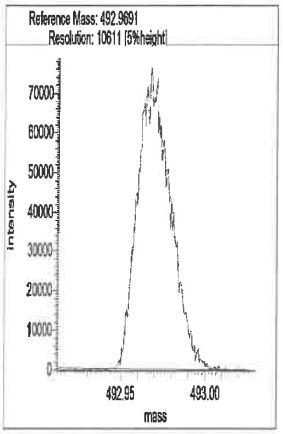
Reference Mass: 492.9691
Resolution: 10611 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 11:56
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10511 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10099 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 10342 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 10503 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10344 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 27776 [5%height] ? software glitch. [illegible]

Ref. mass 368.9755 [m/z] Resolution: 10394 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 9749 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9682 [5%height]

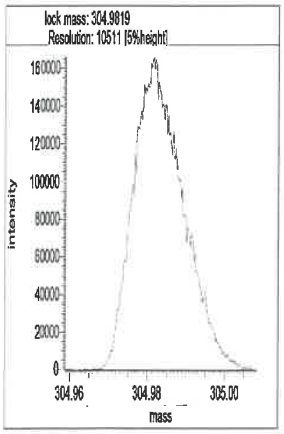

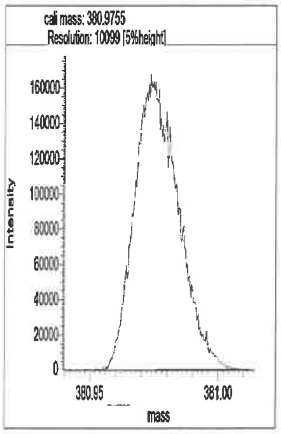

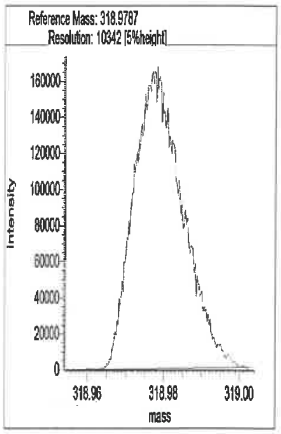

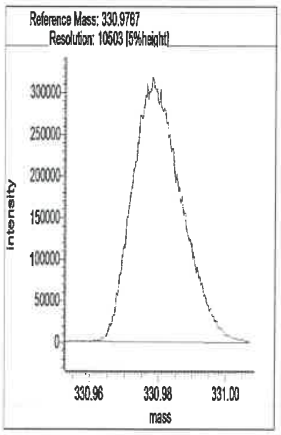

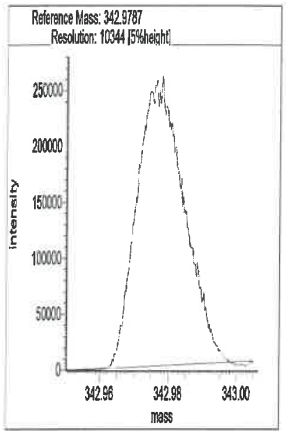

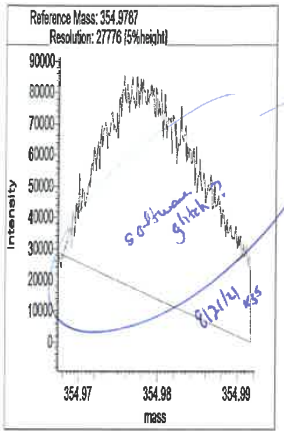

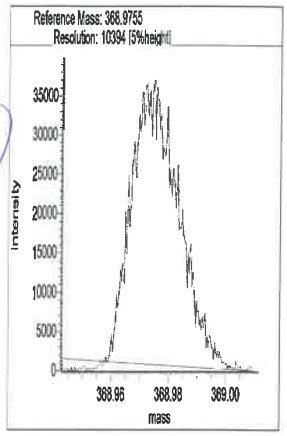

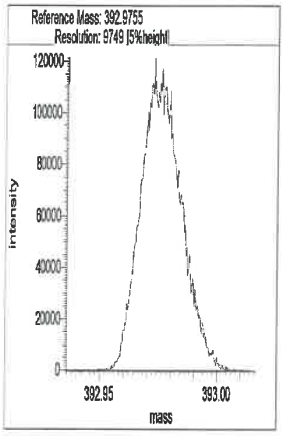

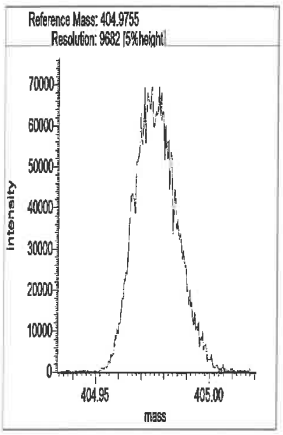

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10733 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10393 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10683 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10545 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10150 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10185 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10040 [5%height]

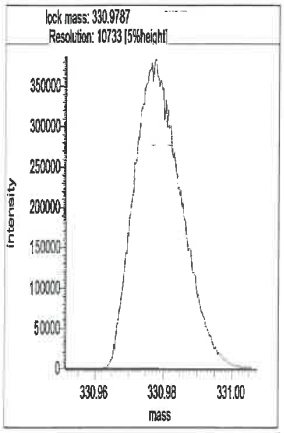

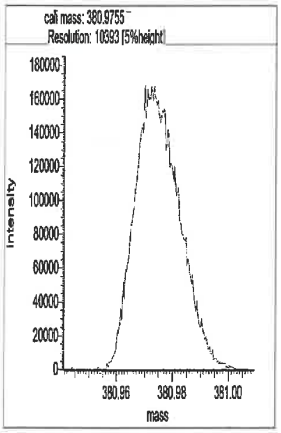

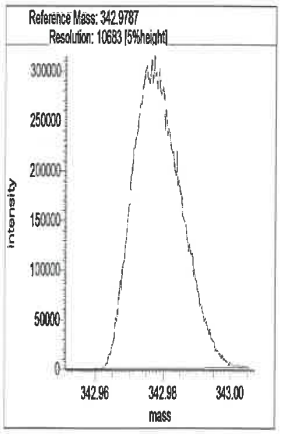

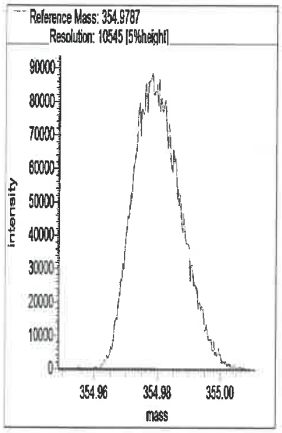

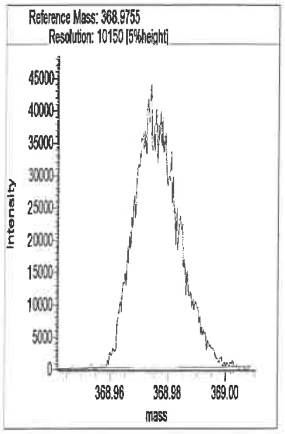

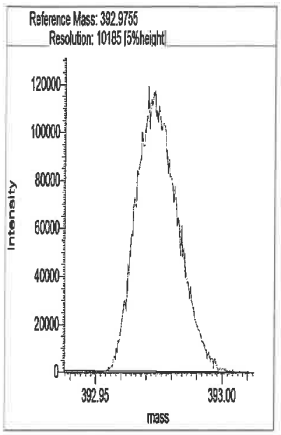

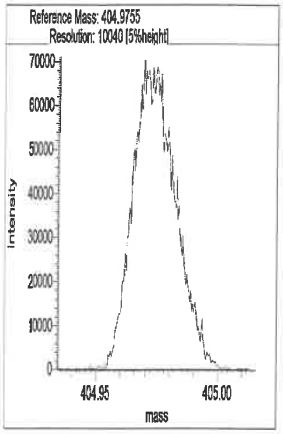

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10536 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10403 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10410 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10419 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10244 [5%height]

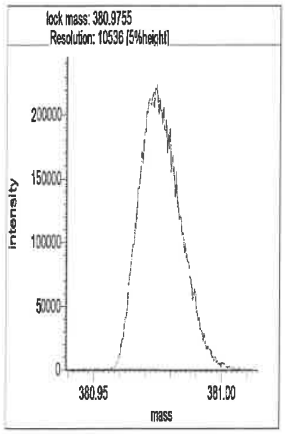

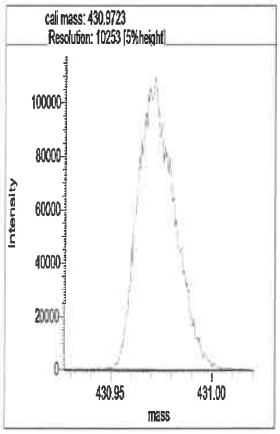

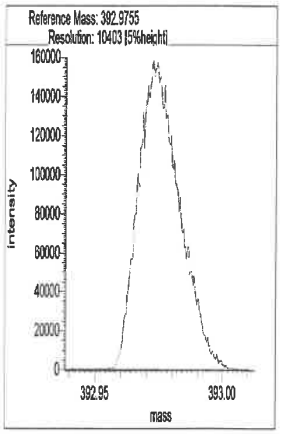

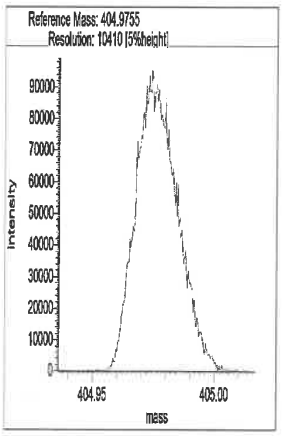

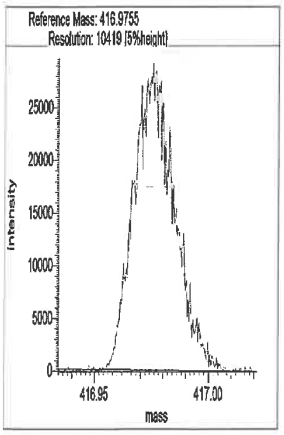

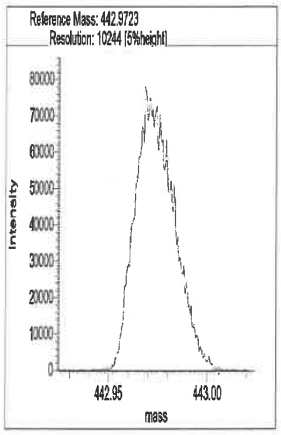

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10914 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 9523 [5%height] ✓ OK 8/21/21 KD

Ref. mass 404.9755 [m/z] Resolution: 10727 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10613 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10522 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10235 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10314 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10509 [5%height]

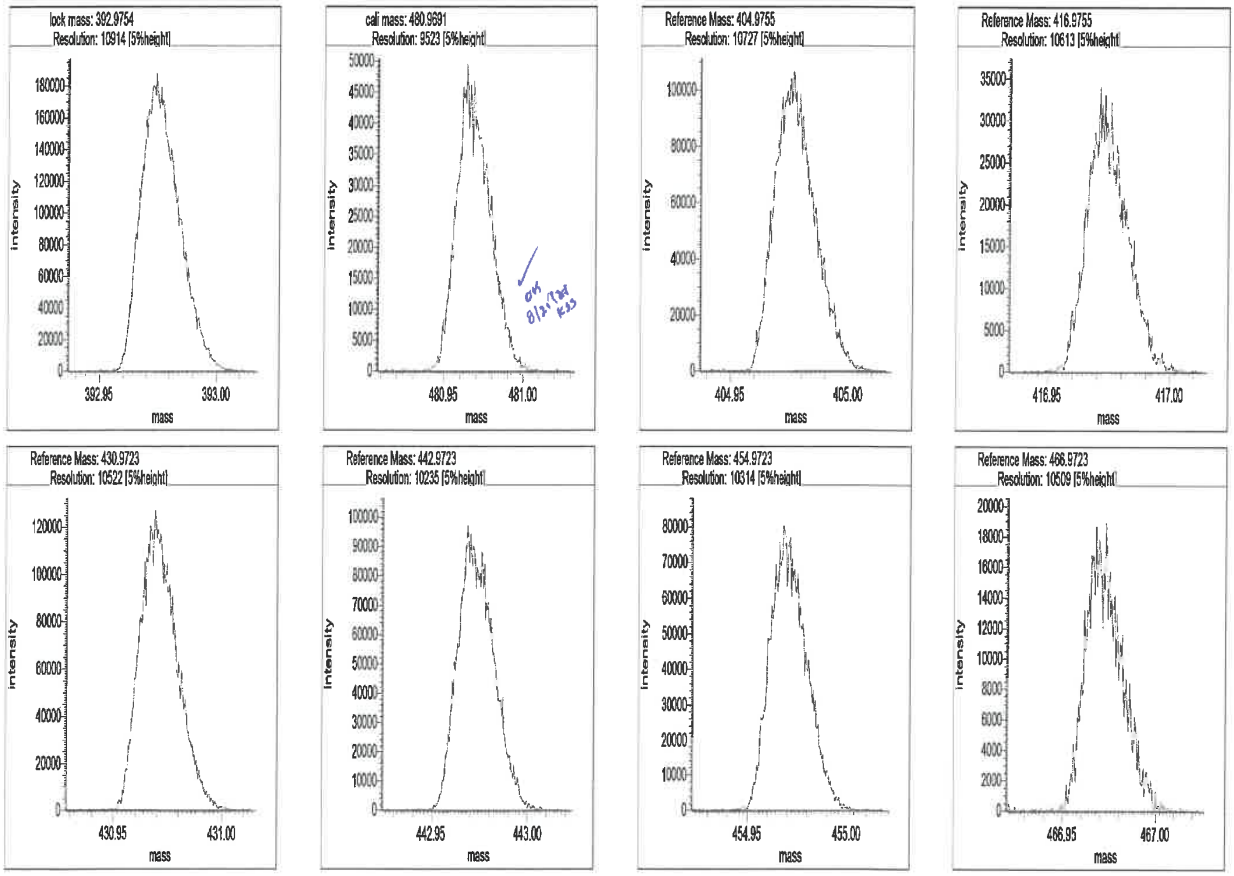

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10927 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10443 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10654 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11221 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10354 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10748 [5%height]

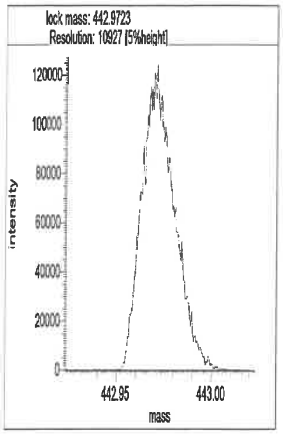
lock mass: 442.9723
Resolution: 10927 [5%height]
intensity
mass

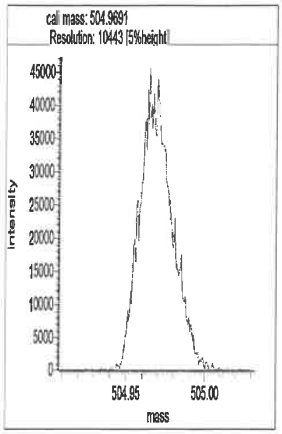
cali mass: 504.9691
Resolution: 10443 [5%height]
intensity
mass

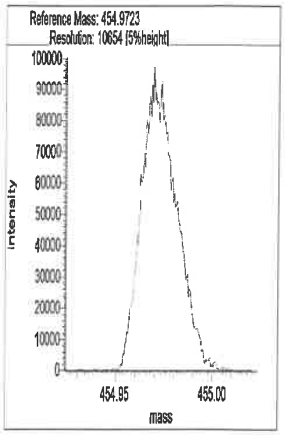
Reference Mass: 454.9723
Resolution: 10654 [5%height]
intensity
mass

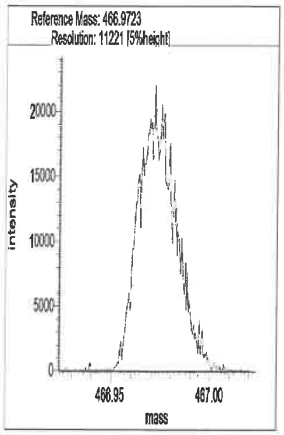
Reference Mass: 466.9723
Resolution: 11221 [5%height]
intensity
mass

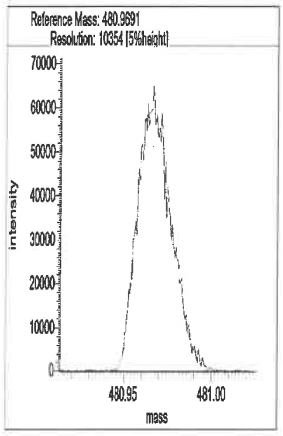
Reference Mass: 480.9691
Resolution: 10354 [5%height]
intensity
mass

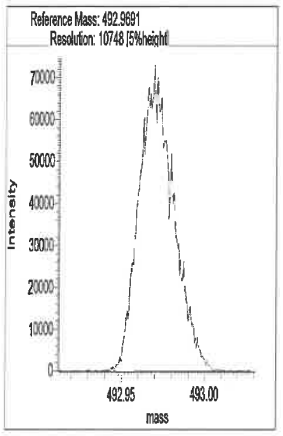
Reference Mass: 492.9691
Resolution: 10748 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 20-Aug-2021 01:34:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:09:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.395	870777	0.77	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.432	1227122	0.85	1.3459	104.7	104.7	0.2055	0.2055	105	
2,3,7,8-TCDF	20.458	128655	0.70	1.0802	9.706	9.706	0.0217	0.0217	97.06	
A Non-2,3,7,8-sub-TCDF	19.885	2870	0.77	1.0802	0.2742	0.2165	0.0217	0.0967	0.00	RQ
S Total TCDF					9.980	9.922	0.0217	0.0217		RQ
D 13C-2,3,7,8-TCDD	21.782	812184	0.79	0.9317	100.1	100.1	0.1327	0.1327	100	
2,3,7,8-TCDD	21.799	83283	0.83	1.0753	9.536	9.536	0.0291	0.0291	95.36	
$ 37Cl4-2,3,7,8-TCDD	21.799	86367		1.0083	9.837	9.837	0.008068	0.008068	98.37	
A Non-2,3,7,8-sub-TCDD	20.727	1705	0.77	1.0753	0.2671	0.1952	0.0291	0.0876	0.00	RQ
S Total TCDD					9.803	9.731	0.0291	0.0291		RQ
D 13C-1,2,3,7,8-PeCDF	27.251	1007111	1.60	1.1405	101.4	101.4	0.2068	0.2068	101	
1,2,3,7,8-PeCDF	27.276	534435	1.55	1.0543	50.3	50.3	0.1177	0.1177	101	
D 13C-2,3,4,7,8-PeCDF	28.757	1014118	1.65	1.1253	103.5	103.5	0.2096	0.2096	103	
2,3,4,7,8-PeCDF	28.791	488593	1.55	1.0079	47.8	47.8	0.1348	0.1348	95.61	
A F1 PeCDFs	24.666						0.003311	0.003311		
A Non-2,3,7,8-sub-PeCDF	28.176	4461	1.55	1.0311	0.4954	0.4281	0.1258	0.4281	0.00	RQ
S Total PeCDF					98.6	98.6	0.1263	0.1263		RQ
D 13C-1,2,3,7,8-PeCDD	29.574	609217	1.61	0.7165	97.6	97.6	0.0965	0.0965	97.65	
1,2,3,7,8-PeCDD	29.616	322963	1.59	1.0465	50.7	50.7	0.3115	0.3115	101	
A Non-2,3,7,8-sub-PeCDD	28.536						0.3115	0.3115		
S Total PeCDD					50.7	50.7	0.3115	0.3115		
D 13C-1,2,3,4,7,8-HxCDF	34.906	957306	0.54	0.9648	109.9	109.9	0.3367	0.3367	110	
1,2,3,4,7,8-HxCDF	34.922	554867	1.23	1.1474	50.5	50.5	0.2017	0.2017	101	
D 13C-1,2,3,6,7,8-HxCDF	35.066	997413	0.54	1.0708	103.2	103.2	0.3034	0.3034	103	
1,2,3,6,7,8-HxCDF	35.082	619855	1.26	1.2178	51.0	51.0	0.1914	0.1914	102	
D 13C-2,3,4,6,7,8-HxCDF	35.890	910006	0.53	1.0413	96.8	96.8	0.3120	0.3120	96.79	
2,3,4,6,7,8-HxCDF	35.907	591761	1.24	1.2145	53.5	53.5	0.1763	0.1763	107	
D 13C-1,2,3,7,8,9-HxCDF	36.782	1007667	0.55	0.9731	114.7	114.7	0.3339	0.3339	115	
1,2,3,7,8,9-HxCDF	36.791	654973	1.28	1.2401	52.4	52.4	0.1413	0.1413	105	
A Non-2,3,7,8-sub-HxCDF	35.073						0.1748	0.1748		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					207.5	207.5	0.1777	0.1777		
* 13C-1,2,3,7,8,9-HxCDD	36.581	902938	1.25	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.092	723760	1.28	0.7587	105.7	105.7	0.2345	0.2345	106	
1,2,3,4,7,8-HxCDD	36.109	345231	1.23	1.0608	45.0	45.0	0.0877	0.0877	89.93	
D 13C-1,2,3,6,7,8-HxCDD	36.210	782596	1.27	0.8593	100.9	100.9	0.2070	0.2070	101	
1,2,3,6,7,8-HxCDD	36.227	386782	1.25	0.9933	49.8	49.8	0.0944	0.0944	99.51	
1,2,3,7,8,9-HxCDD	36.597	429511	1.25	1.1094	51.4	51.4	0.0842	0.0842	103	
A Non-2,3,7,8-sub-HxCDD	35.427						0.0886	0.0886		
S Total HxCDD					146.1	146.1	0.0888	0.0888		
D 13C-1,2,3,4,6,7,8-HpCDF	38.596	821510	0.47	0.7359	123.6	123.6	0.3385	0.3385	124	
1,2,3,4,6,7,8-HpCDF	38.613	569968	1.06	1.4421	48.1	48.1	0.1682	0.1682	96.22	
D 13C-1,2,3,4,7,8,9-HpCDF	39.850	706137	0.47	0.6854	114.1	114.1	0.3635	0.3635	114	
1,2,3,4,7,8,9-HpCDF	39.859	452390	1.04	1.3092	48.9	48.9	0.1894	0.1894	97.87	
A Non-2,3,7,8-sub-HpCDF	39.253						0.1782	0.1782		
S Total HpCDF					97.0	97.0	0.1788	0.1788		
D 13C-1,2,3,4,6,7,8-HpCDD	39.547	622968	1.07	0.6745	102.3	102.3	0.3007	0.3007	102	
1,2,3,4,6,7,8-HpCDD	39.556	322055	1.03	1.0503	49.2	49.2	0.1146	0.1146	98.44	
A Non-2,3,7,8-sub-HpCDD	39.253	3653	0.97	1.0503	0.5583	0.5583	0.1146	0.5583	0.00	
S Total HpCDD					49.8	49.8	0.1146	0.1146		
D 13C-OCDD	42.036	1182987	0.89	0.5446	240.6	240.6	0.2013	0.2013	120	
OCDF	42.137	870176	0.93	1.3168	111.7	111.7	0.1096	0.1096	112	
OCDD	42.053	623449	0.91	1.0620	99.3	99.3	0.0862	0.0862	99.25	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 20-Aug-2021 01:34:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:09:19

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.395	21.395	0		378196	54432	46	115	1183		a
333.9338	21.395	21.395	0		492581	68496	15	37	4566	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.432	20.432	0	0.955	563293	79642	82	205	971		
317.9389	20.432	20.432	0	0.955	663829	90836	54	135	1682	0.85(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.458	20.458	0	1.001	52907	7930	3	7	2643		
305.8987	20.449	20.458	-1	1.001	75748	10580	13	32	814	0.70(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.254	19.885	-38	0.942	158	58	3	7	19		
305.8987	19.202	19.885	-41	0.940	283	105	13	32	8	0.56(0.65-0.89)	
	Empc Correction				205	75	13	32	6		
303.9016	19.727	19.885	-9	0.965	558	160	3	7	53		
305.8987	19.727	19.885	-9	0.965	1084	193	13	32	15	0.51(0.65-0.89)	
	Empc Correction				724	207	13	32	16		
303.9016	20.733	19.885	51	1.015	533	92	3	7	31		
305.8987	20.741	19.885	51	1.015	1018	140	13	32	11	0.52(0.65-0.89)	
	Empc Correction				692	119	13	32	9		
13C-2,3,7,8-TCDD											
331.9368	21.782	21.782	0	1.018	359415	45756	46	115	995		
333.9338	21.774	21.782	-1	1.018	452769	56603	15	37	3774	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.799	21.799	0	1.001	37679	5159	11	27	469		
321.8936	21.817	21.799	1	1.002	45604	5681	2	5	2841	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.799	21.799	0	1.019	86367	10928	4	10	2732		

787589

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	19.727	20.727	-60	0.906	309	131	11	27	12		
	Empc Correction				36	20	11	27	2		
321.8936	19.753	20.727	-58	0.907	48	26	2	5	13	6.44(0.65-0.89)	
319.8965	20.380	20.727	-21	0.936	408	89	11	27	8		
	Empc Correction				53	28	11	27	3		
321.8936	20.363	20.727	-22	0.935	70	37	2	5	19	5.83(0.65-0.89)	
319.8965	22.014	20.727	77	1.011	354	122	11	27	11		
321.8936	22.092	20.727	82	1.014	411	123	2	5	62	0.86(0.65-0.89)	
319.8965	22.118	20.727	83	1.015	322	96	11	27	9		
321.8936	22.092	20.727	82	1.014	411	123	2	5	62	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.251	27.251	0	1.274	619620	94605	72	180	1314		
353.8970	27.259	27.251	1	1.274	387491	58543	44	110	1331	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.276	27.276	0	1.001	325227	47467	43	107	1104		
341.8567	27.276	27.276	0	1.001	209208	30740	33	82	932	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.757	28.757	0	1.344	630965	86581	72	180	1203		
353.8970	28.766	28.757	1	1.344	383153	53222	44	110	1210	1.65(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.791	28.791	0	1.001	296979	39367	43	107	916		
341.8567	28.791	28.791	0	1.001	191614	26294	33	82	797	1.55(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.666						1	2			
341.8567	24.666						1	2			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.882	28.176	-18	1.023	2712	384	43	107	9		
341.8567	27.857	28.176	-19	1.022	2450	331	33	82	10	1.11(1.32-1.78)	
	Empc Correction				1749	247	33	82	7		
13C-1,2,3,7,8-PeCDD											
367.8949	29.574	29.574	0	1.382	375736	50925	22	55	2315		
369.8919	29.574	29.574	0	1.382	233481	32502	12	30	2709	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616	29.616	0	1.001	198400	24604	104	260	237		
357.8516	29.616	29.616	0	1.001	124563	16634	5	12	3327	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.536						104	260			
357.8516	28.536						5	12			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.906	34.906	0	0.954	335150	62206	104	260	598		
385.8610	34.906	34.906	0	0.954	622156	117085	157	392	746	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.922	34.922	0	1.000	306264	56530	98	245	577		
375.8178	34.931	34.922	1	1.001	248603	46439	68	170	683	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.066	35.066	0	0.959	349001	62636	104	260	602		
385.8610	35.066	35.066	0	0.959	648412	115434	157	392	735	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.082	35.082	0	1.000	345877	63685	98	245	650		
375.8178	35.082	35.082	0	1.000	273978	49689	68	170	731	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.890	35.890	0	0.981	315886	69314	104	260	666		
385.8610	35.890	35.890	0	0.981	594120	124533	157	392	793	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.907	35.907	0	1.000	327418	70468	98	245	719		
375.8178	35.907	35.907	0	1.000	264343	55699	68	170	819	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.782	36.782	0	1.006	355986	85136	104	260	819		
385.8610	36.782	36.782	0	1.006	651681	151674	157	392	966	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791	36.791	0	1.000	367965	84048	98	245	858		
375.8178	36.791	36.791	0	1.000	287008	65537	68	170	964	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						98	245			
375.8178	35.073						68	170			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.581	36.581	0		500778	110918	96	240	1155		
403.8529	36.589	36.581	1		402160	89771	47	117	1910	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.092	36.092	0	0.987	406606	94681	96	240	986		
403.8529	36.092	36.092	0	0.987	317154	74046	47	117	1575	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.109	36.109	0	1.000	190473	44726	32	80	1398		
391.8127	36.117	36.109	1	1.001	154758	35613	31	77	1149	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.210	36.210	0	0.990	437873	93109	96	240	970		
403.8529	36.210	36.210	0	0.990	344723	74267	47	117	1580	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.227	36.227	0	1.000	214850	43622	32	80	1363		
391.8127	36.227	36.227	0	1.000	171932	35324	31	77	1139	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.597	36.597	0	1.014	238372	51108	32	80	1597		
391.8127	36.597	36.597	0	1.014	191139	41299	31	77	1332	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.427						32	80			
391.8127	35.427						31	77			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.596	38.596	0	1.055	262759	61898	82	205	755		
419.8220	38.596	38.596	0	1.055	558751	138925	118	295	1177	0.47(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											
407.7817	38.613	38.613	0	1.000	292766	74037	102	255	726		
409.7788	38.605	38.613	-1	1.000	277202	69784	93	232	750	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.850	39.850	0	1.089	225724	63173	82	205	770		
419.8220	39.850	39.850	0	1.089	480413	133267	118	295	1129	0.47(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.859	39.859	0	1.000	230887	65916	102	255	646		
409.7788	39.859	39.859	0	1.000	221503	62046	93	232	667	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						102	255			
409.7788	39.253						93	232			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.547	39.547	0	1.081	322605	89433	92	230	972		
437.8140	39.547	39.547	0	1.081	300363	82619	71	177	1164	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.556	39.556	0	1.000	163232	44143	41	102	1077		
425.7737	39.547	39.556	-1	1.000	158823	43134	42	105	1027	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.916	39.253	-20	0.984	1800	475	41	102	12		
425.7737	38.916	39.253	-20	0.984	1853	453	42	105	11	0.97(0.88-1.20)	
13C-OCDD											
469.7780	42.036	42.036	0	1.149	557785	137107	35	87	3917		
471.7750	42.036	42.036	0	1.149	625202	146861	53	132	2771	0.89(0.76-1.02)	
OCDF											
441.7428	42.137	42.137	0	1.002	419758	104739	35	87	2993		
443.7399	42.137	42.137	0	1.002	450418	110462	47	117	2350	0.93(0.76-1.02)	
OCDD											
457.7377	42.053	42.053	0	1.000	297170	72135	25	62	2885		
459.7348	42.053	42.053	0	1.000	326279	80759	27	67	2991	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1227122	170478

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1227122	170478

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.254	158	58	283	105	0.0333	0.56	RnQ
19.254	158	58	205	75	0.0274		Empc Correction
19.727	558	160	1084	193	0.1239	0.51	RQ
19.727	558	160	724	207	0.0967		Empc Correction
20.733	533	92	1018	140	0.1170	0.52	RQ
20.733	533	92	692	119	0.0924		Empc Correction
Signal Totals:							
	1249	310	1621	401			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3634	748				0.52	RQ
	2870	711					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2742 = (3634 * 100.000) / (1227122 * 1.080)
Empc Amount: 0.2165 = (2870 * 100.000) / (1227122 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDD, RT: 20.727

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	812184	102359

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	812184	102359

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.727	309	131	48	26	0.0409	6.44	RQ
19.727	36	20	48	26	0.009618		Empc Correction
20.380	408	89	70	37	0.0547	5.83	RnQ
20.380	53	28	70	37	0.0141		Empc Correction
22.014	354	122	411	123	0.0876	0.86	
22.118	322	96	411	123	0.0839	0.78	n
Signal Totals:							
	765	266	940	309			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2333	747				1.48	RQ
	1705	575					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2671 = (2333 * 100.000) / (812184 * 1.075)
Empc Amount: 0.1952 = (1705 * 100.000) / (812184 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1007111	153148
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1014118	139803

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1010614	146475

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.882	2712	384	2450	331	0.4954	1.11	RnQ
27.882	2712	384	1749	247	0.4281		Empc Correction
Signal Totals:							
	2712	384	1749	247			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5162	715				1.11	RQ
	4461	631					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4954 = (5162 * 100.000) / (1010614 * 1.031)
Empc Amount: 0.4281 = (4461 * 100.000) / (1010614 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.253

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	622968	172052

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	622968	172052

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.916	1800	475	1853	453	0.5583	0.97	
Signal Totals:							
	1800	475	1853	453			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3653	928				0.97	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5583 = (3653 * 100.000) / (622968 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d				
Injection Date:	20-Aug-2021 01:34:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Not Detected
Expected RT: 21.40

Processing Integration Results

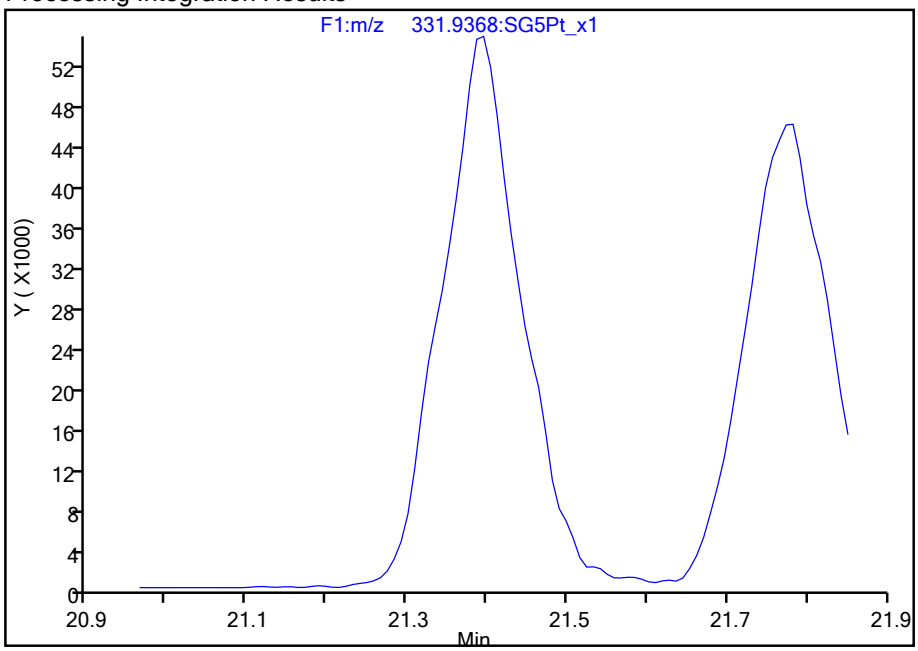

Manual Integration Results

RT: 21.40
Area: 378196
Amount: 100.0000
Amount Units: pg/ul

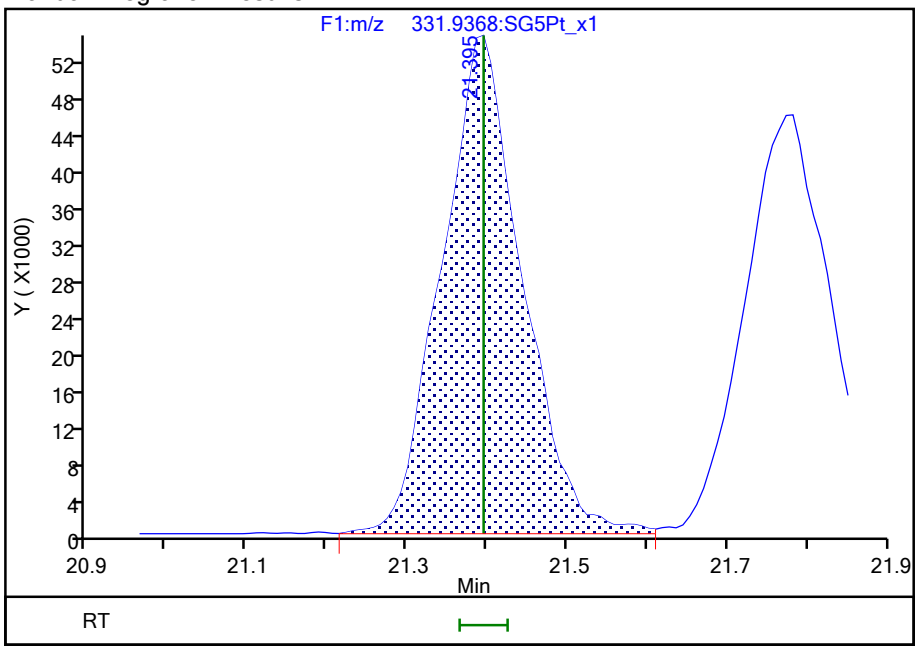

Reviewer: arghestanis, 20-Aug-2021 09:08:31
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

787597

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

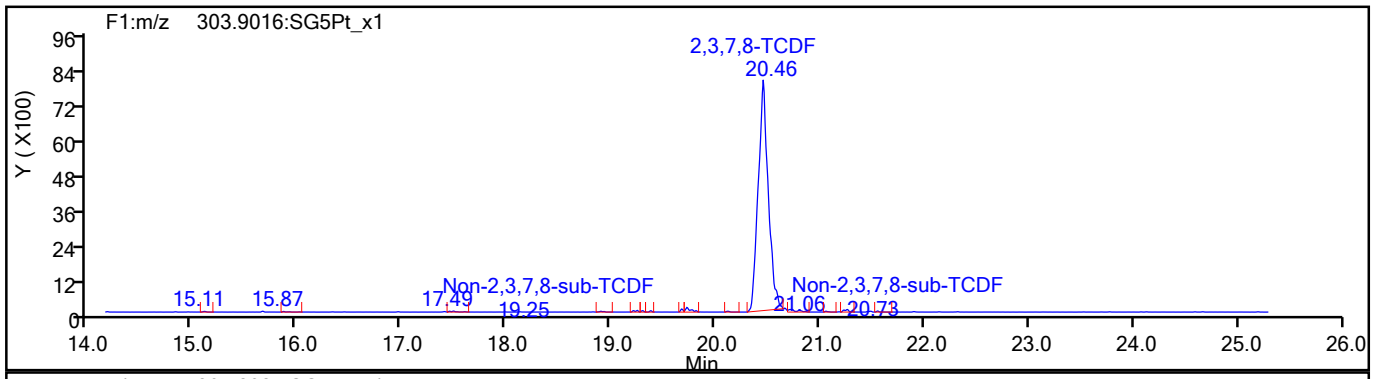

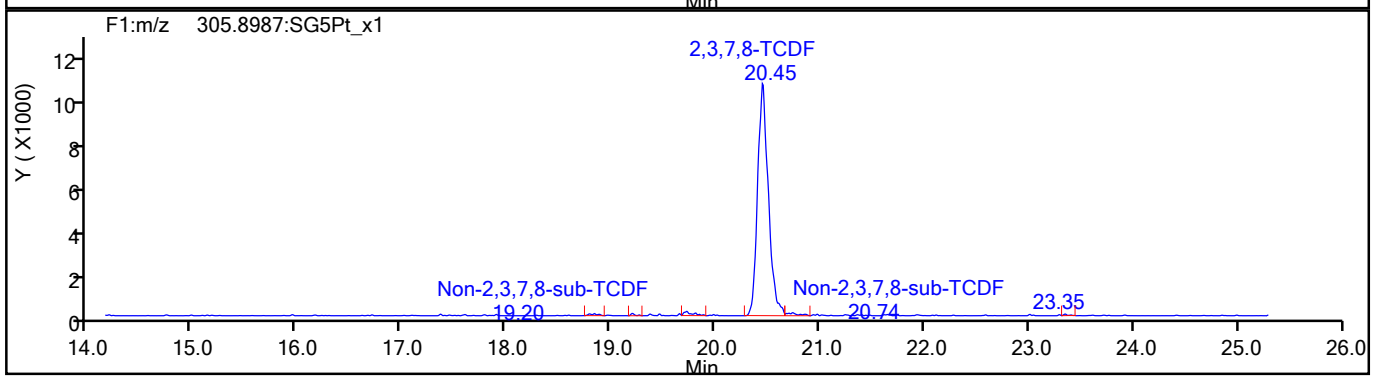

TCDF Standards

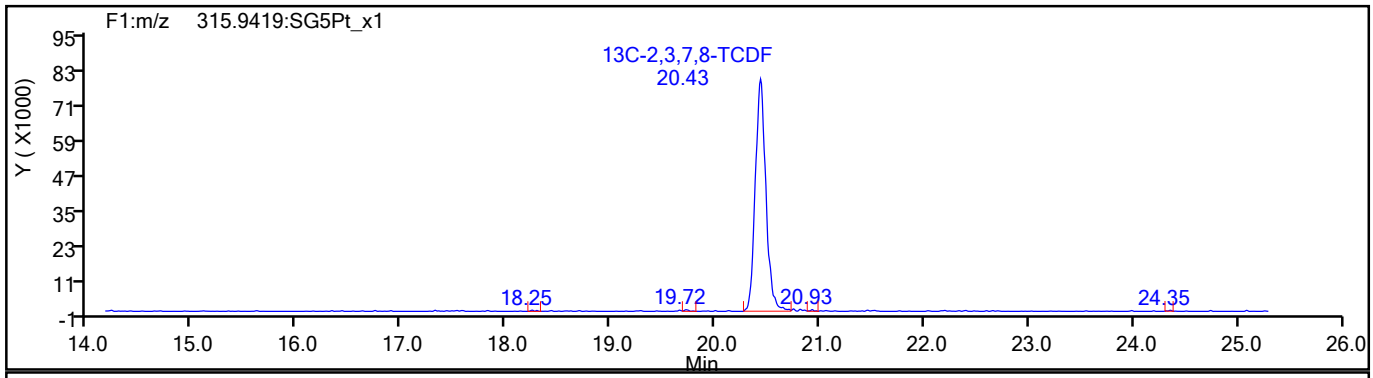

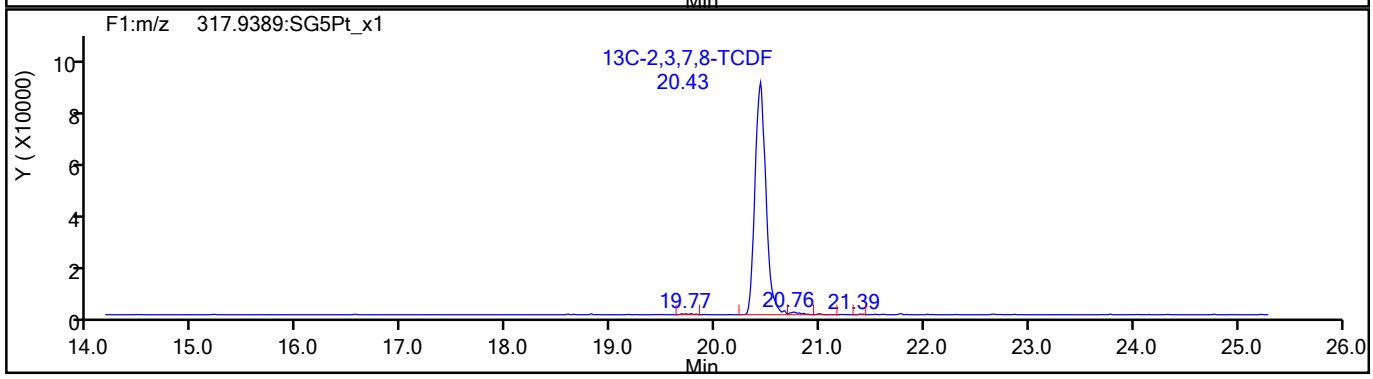

787598

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

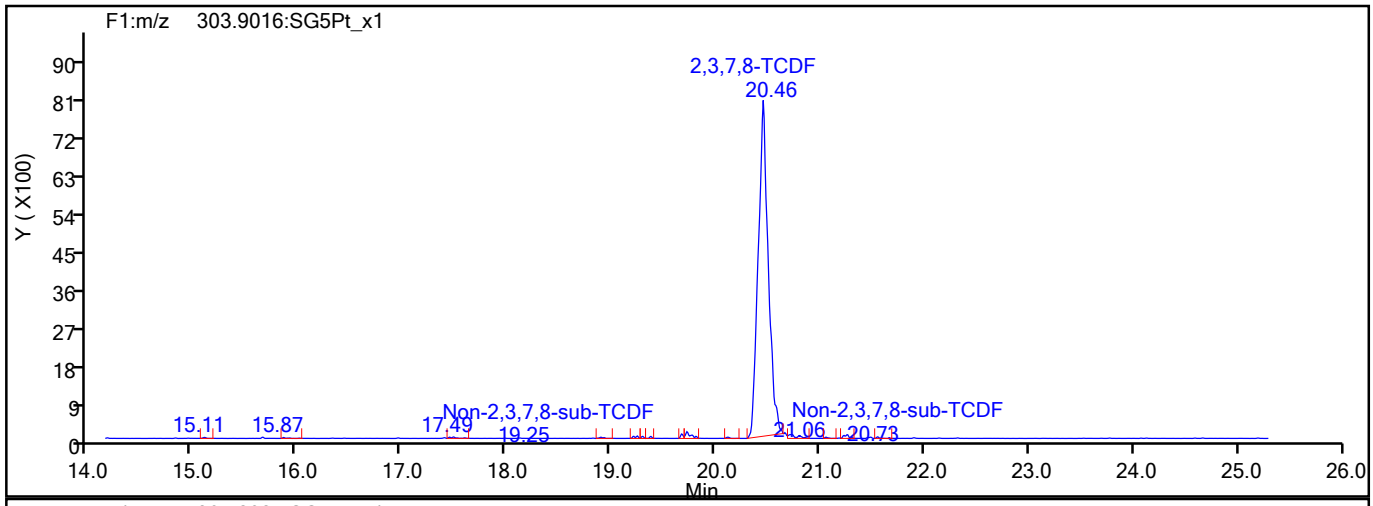

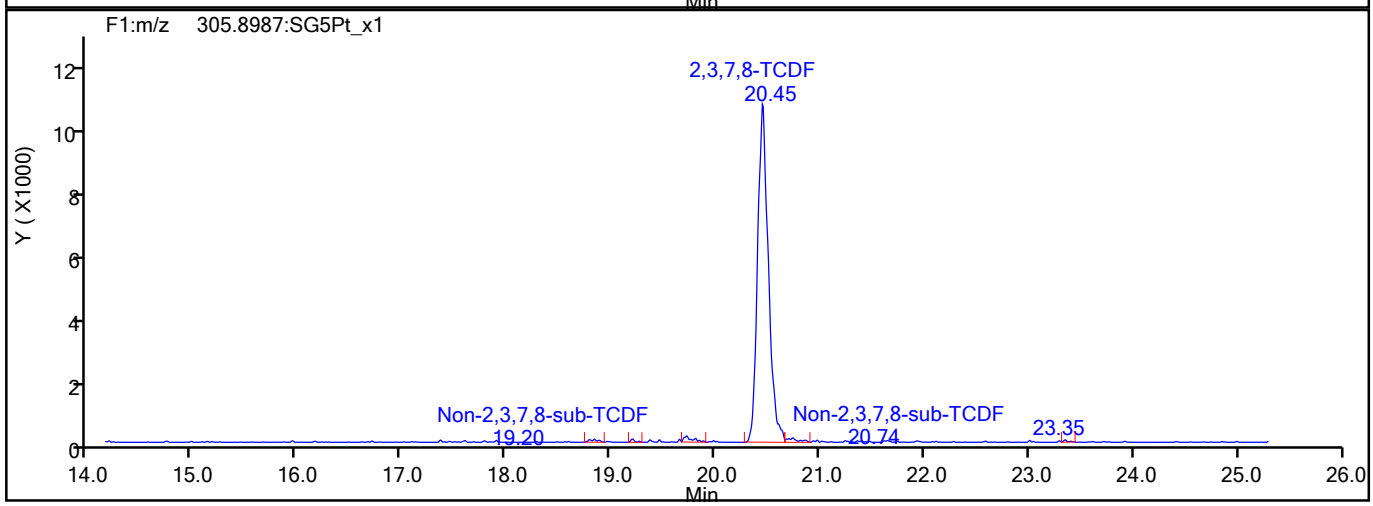

TCDF Interference Mass

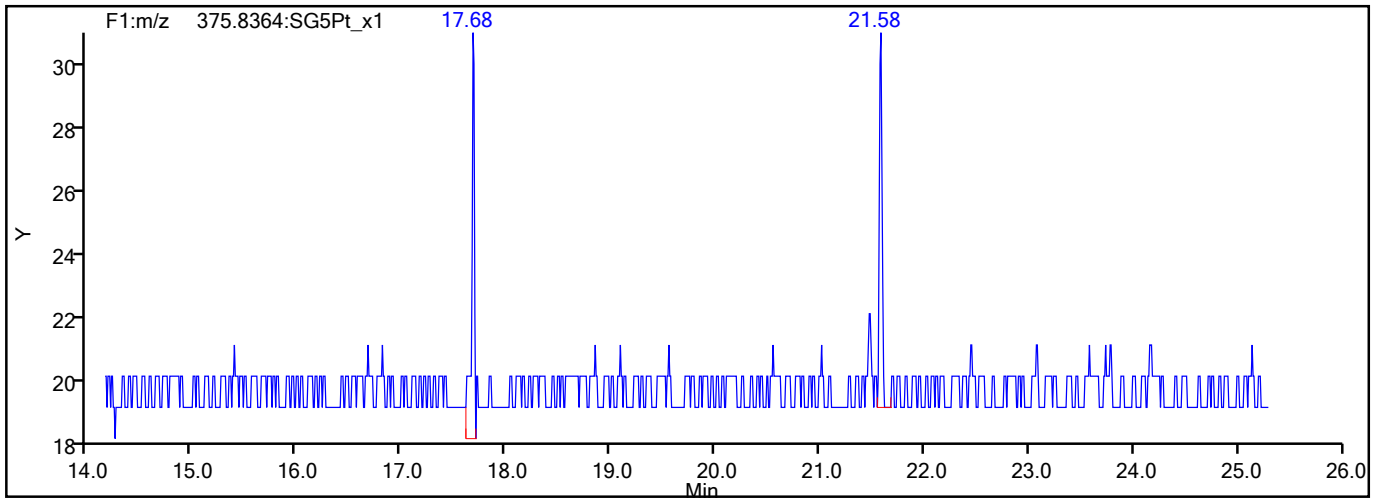

787599

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

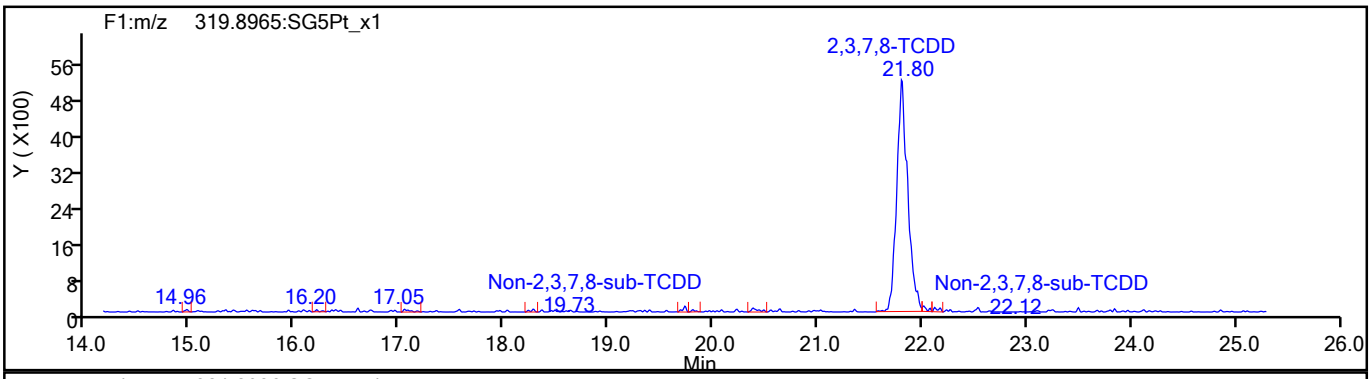

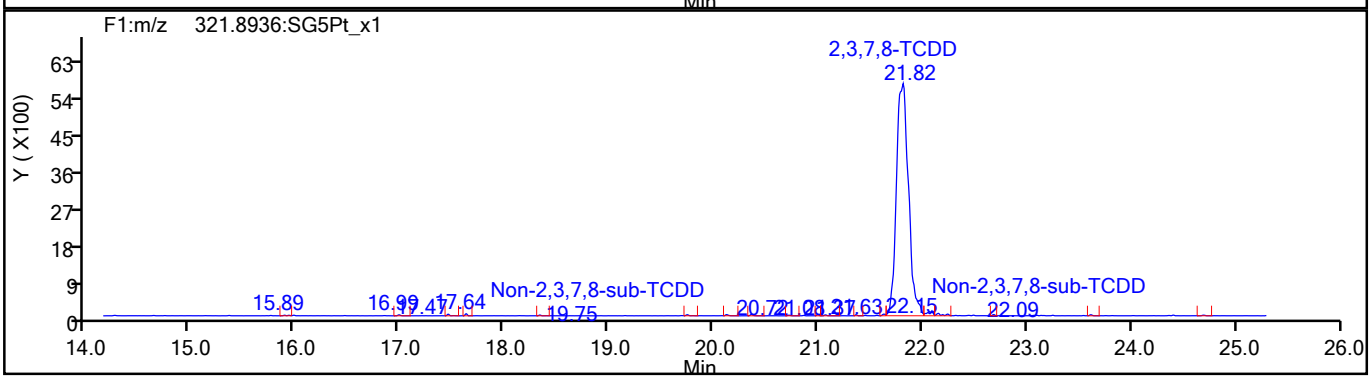

TCDD Standards

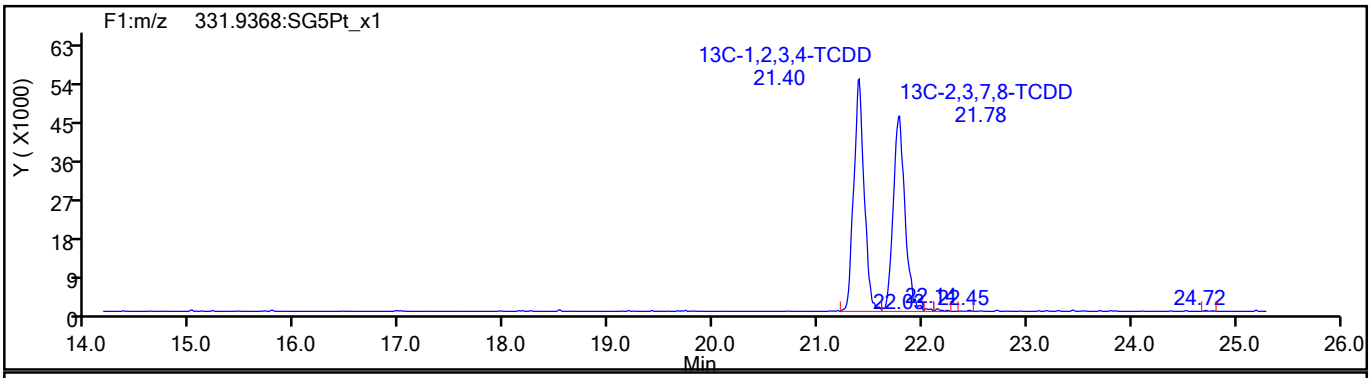

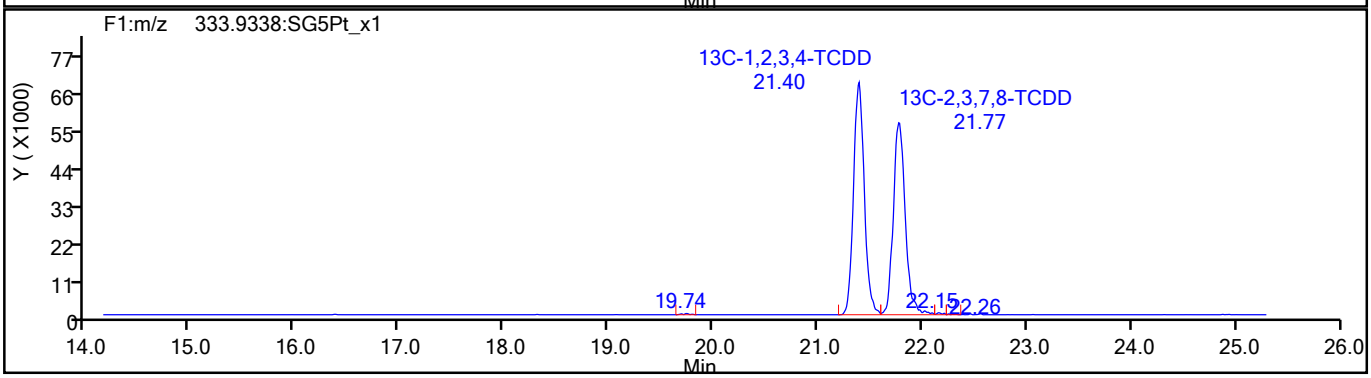

787600

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

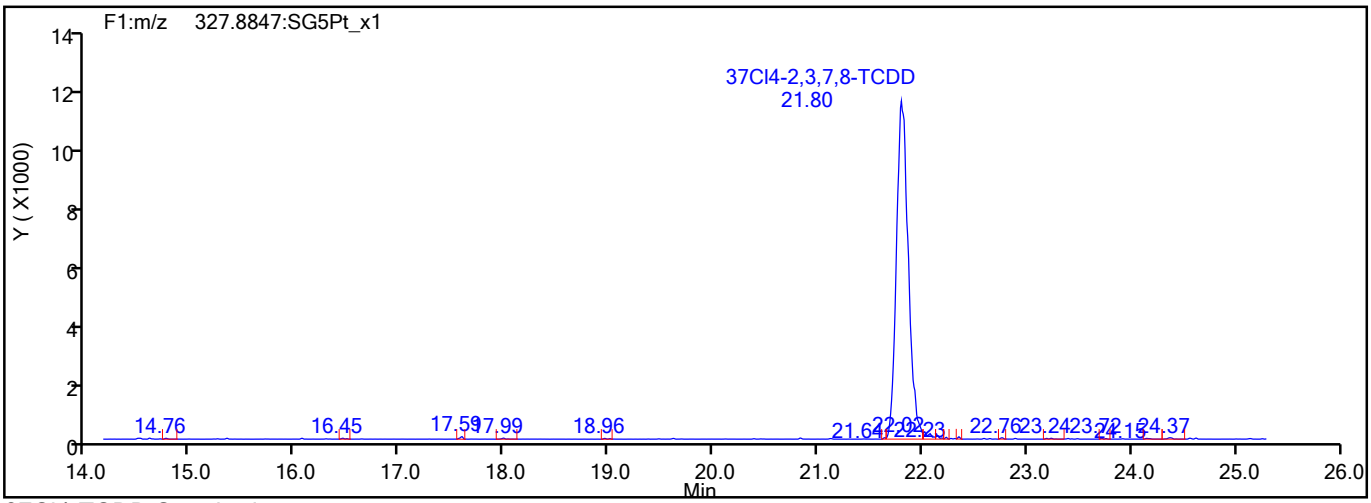

37Cl4-TCDD Standards

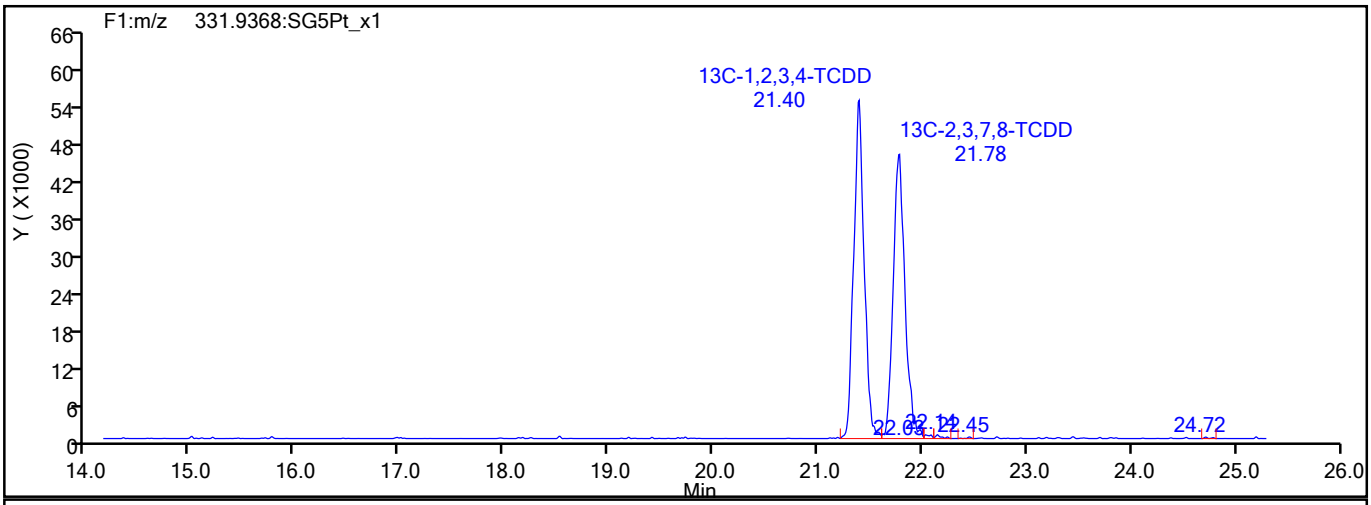

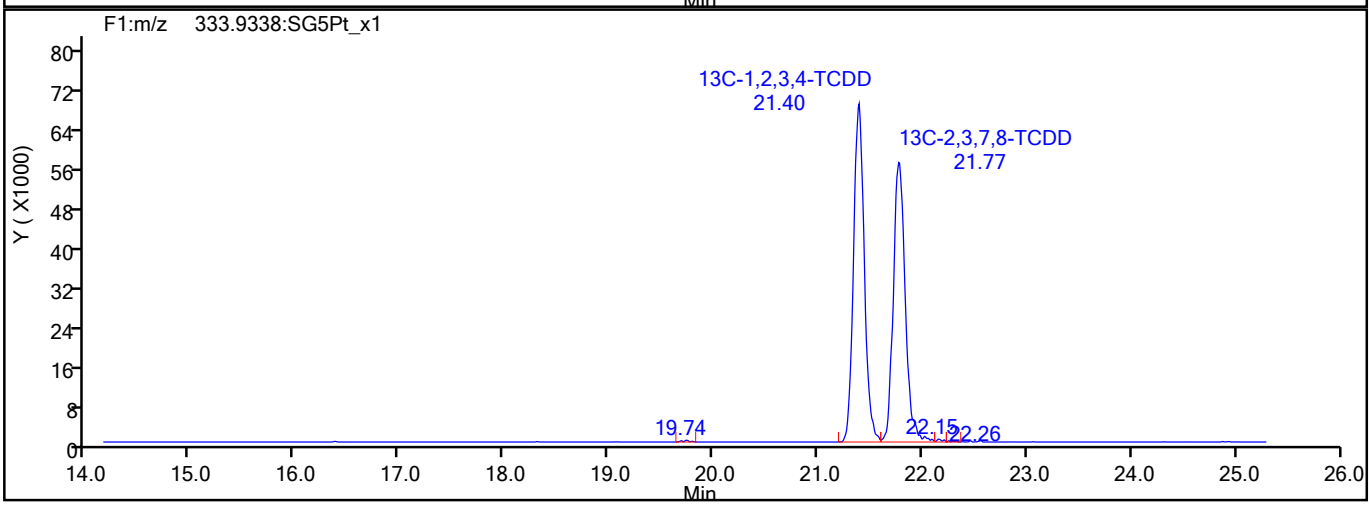

787601

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

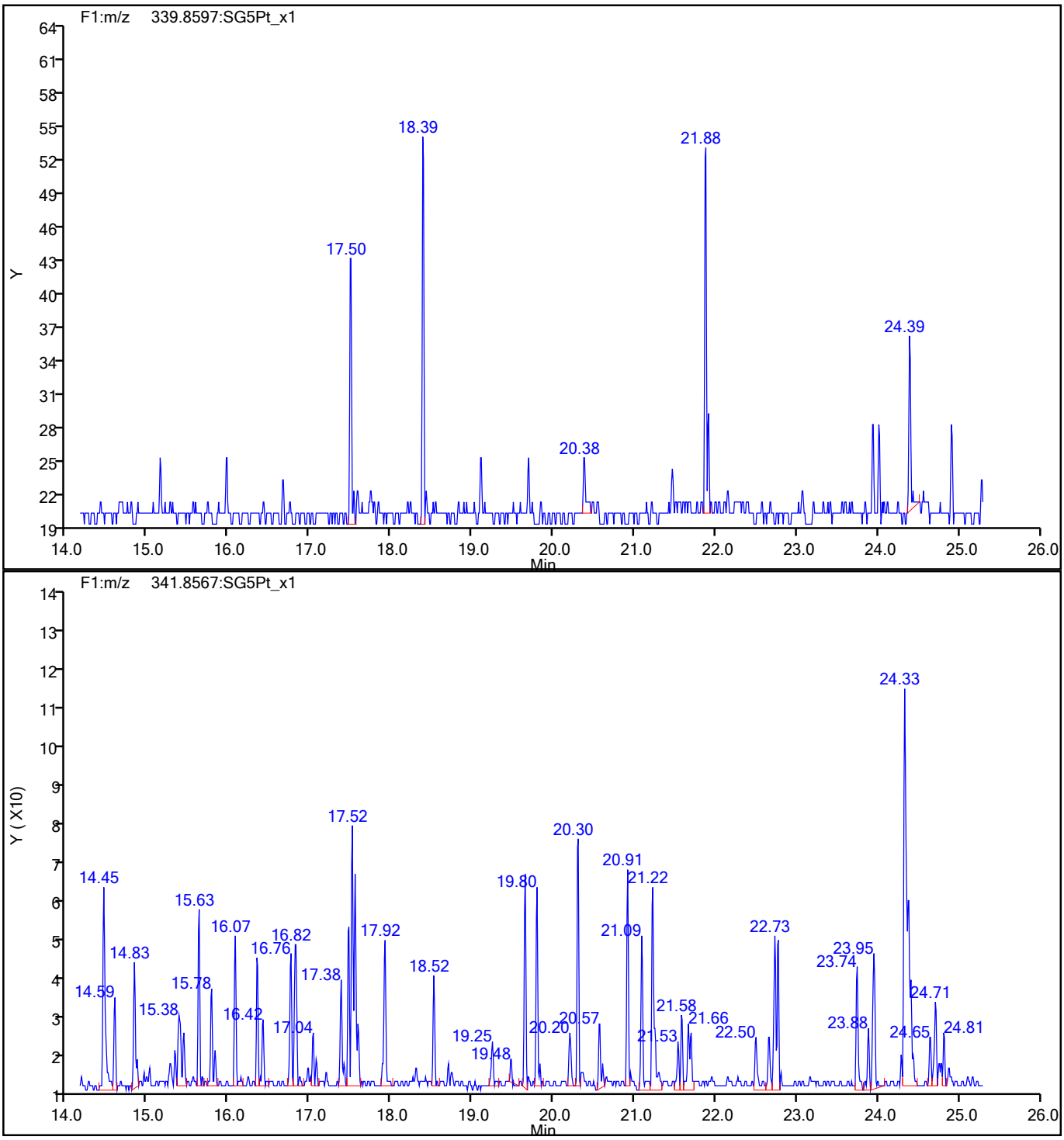

787602

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

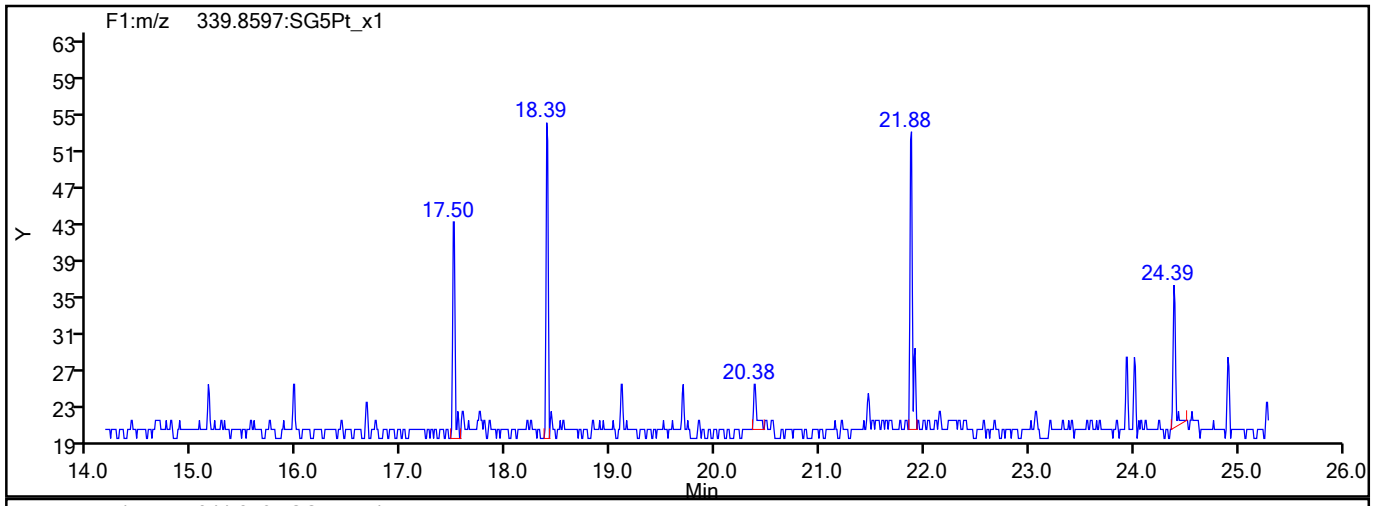

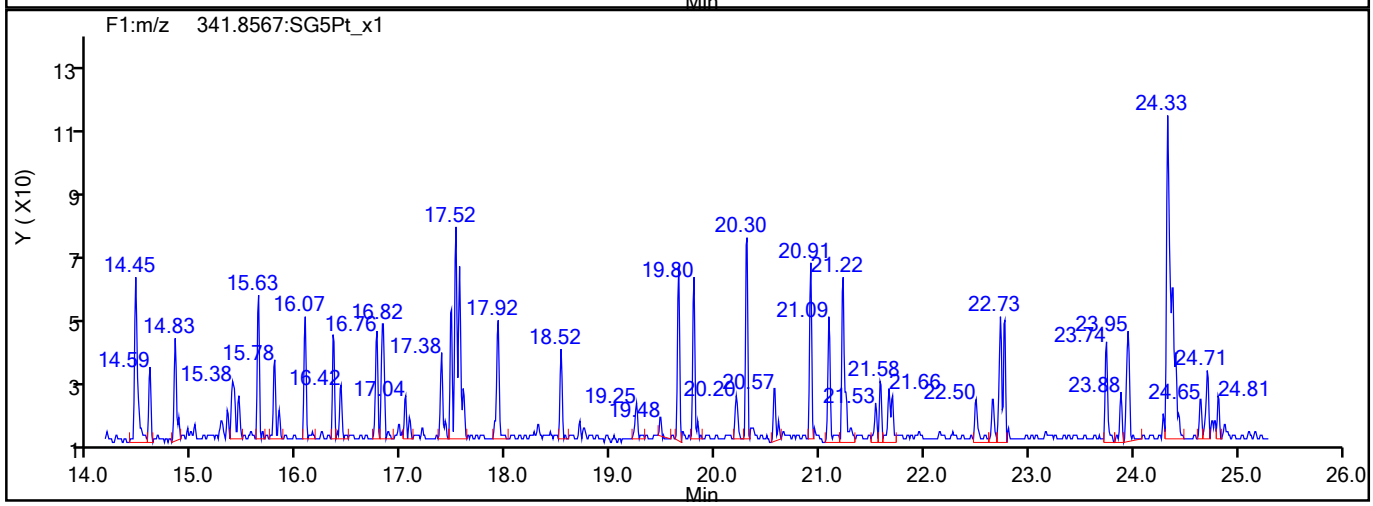

F1 PeCDFs Interference Mass

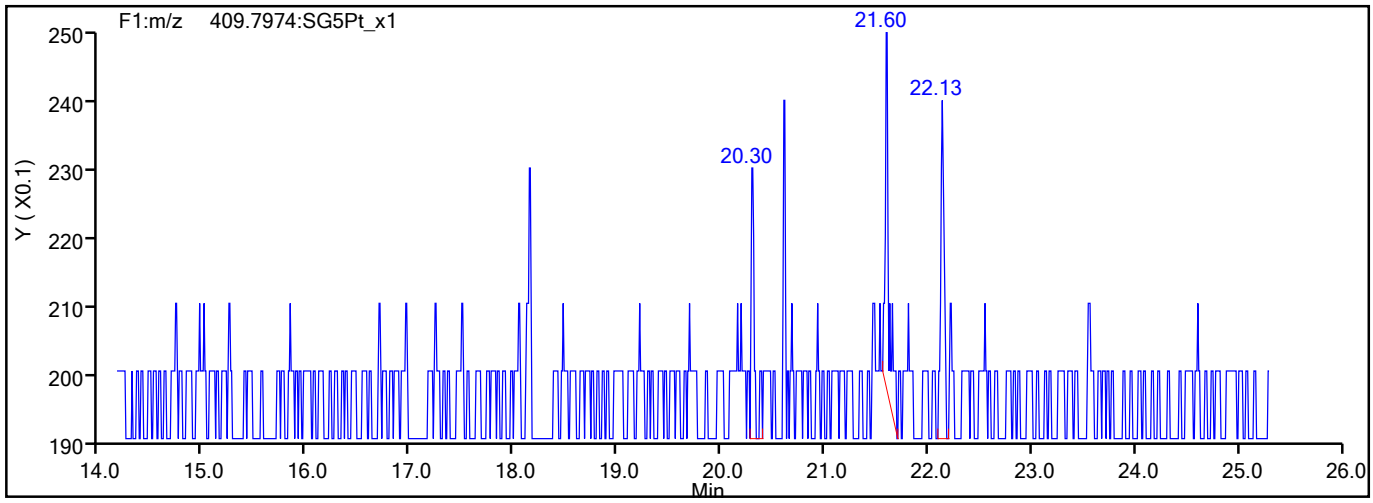

787603

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

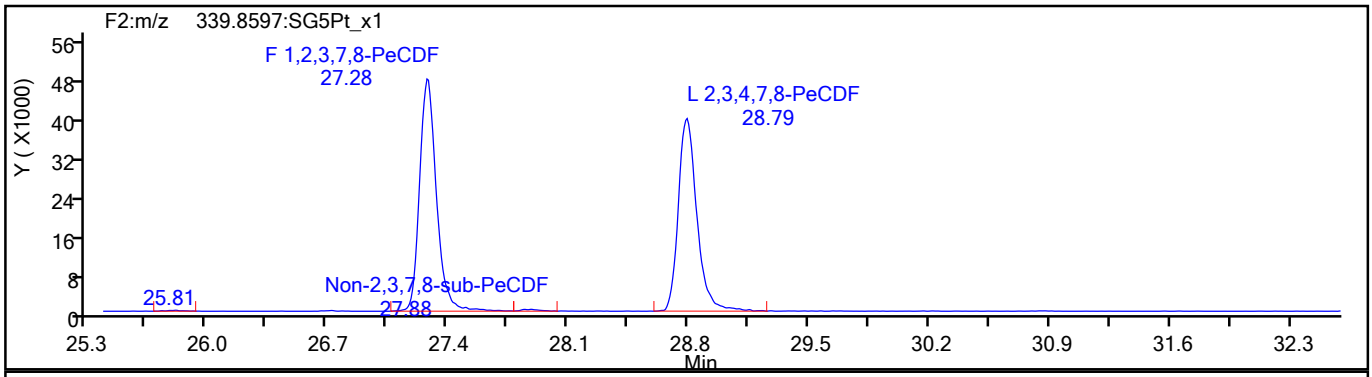

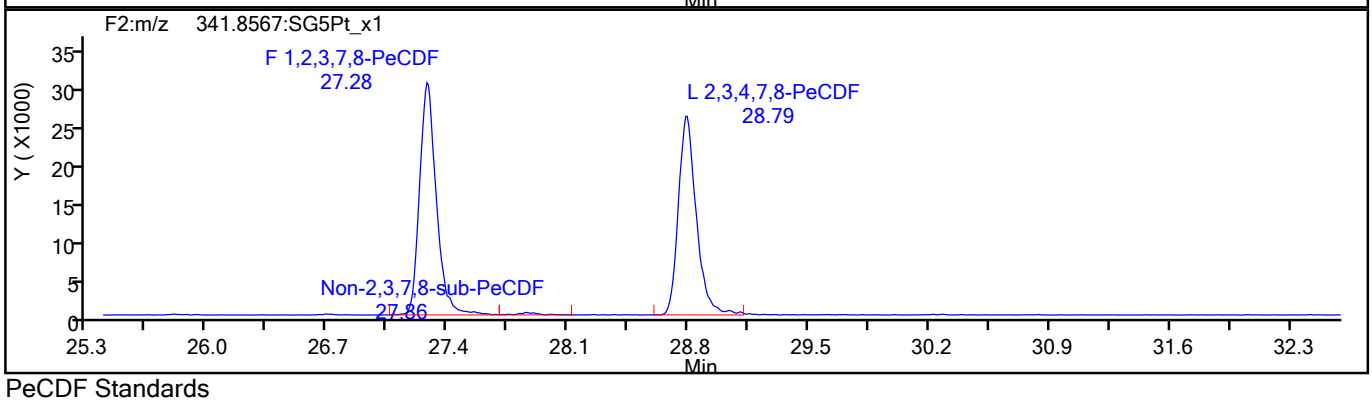

PeCDF Standards

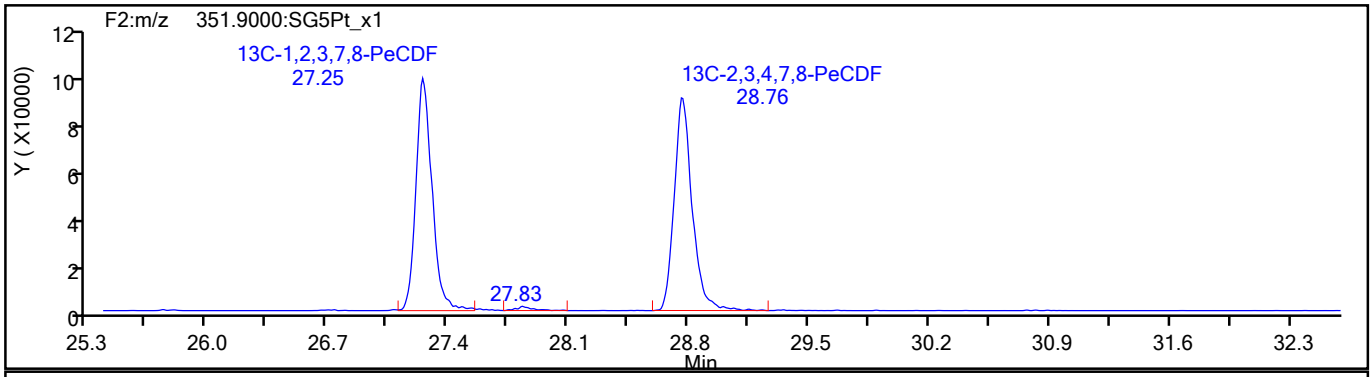

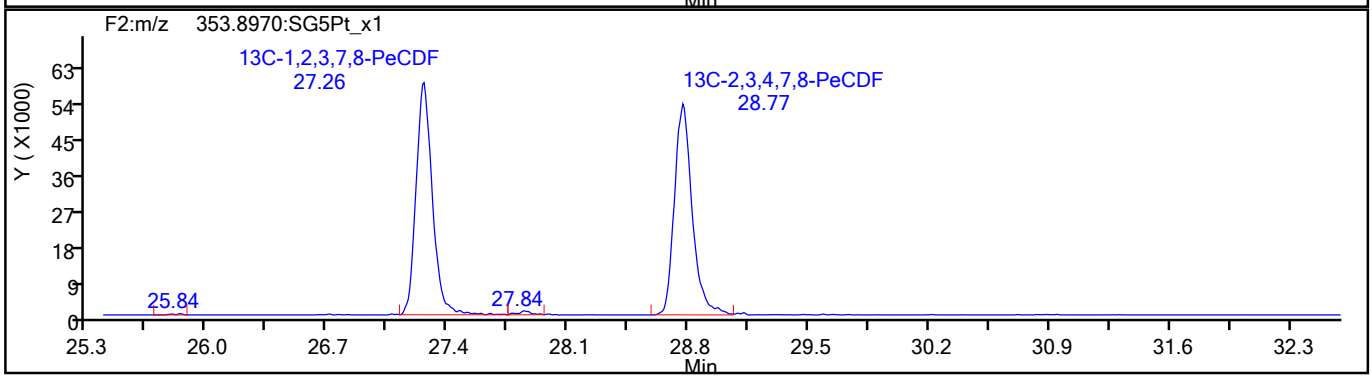

787604

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
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PeCDF

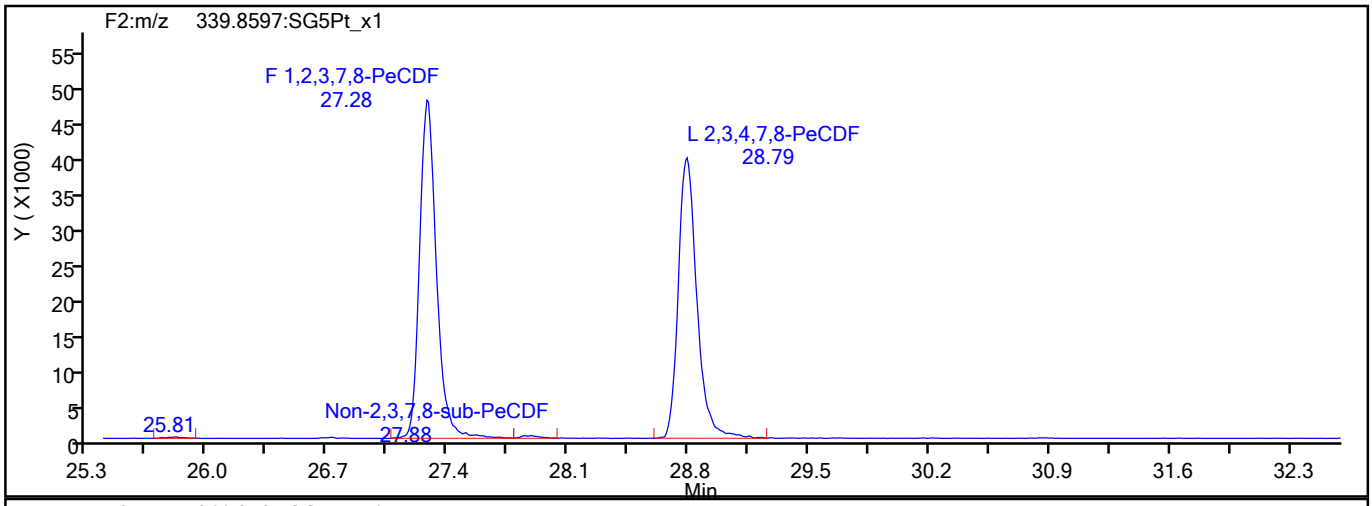

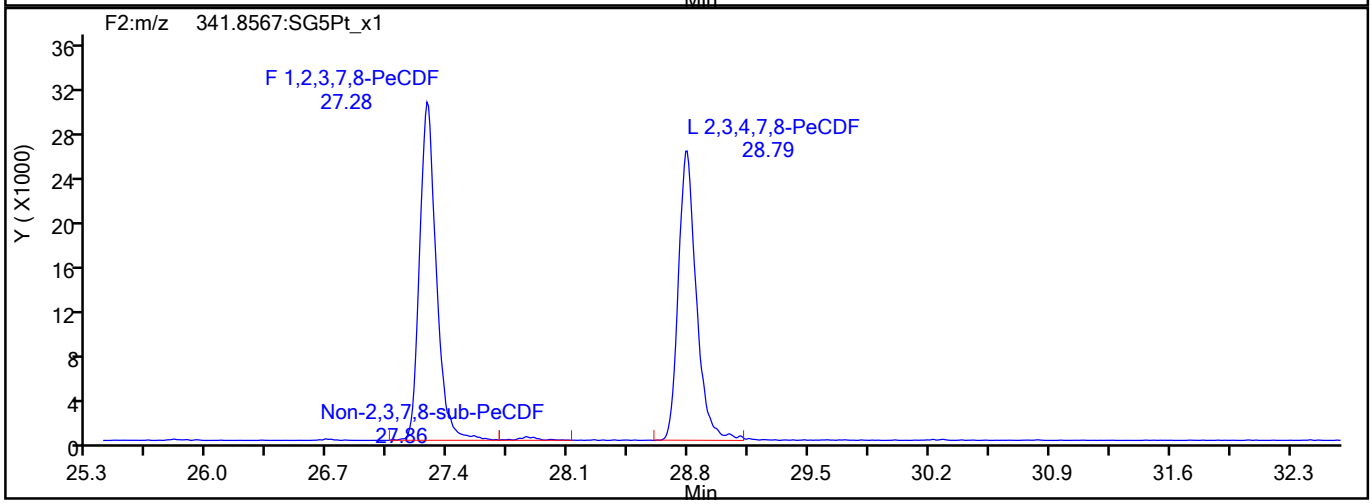

PeCDF Interference Mass

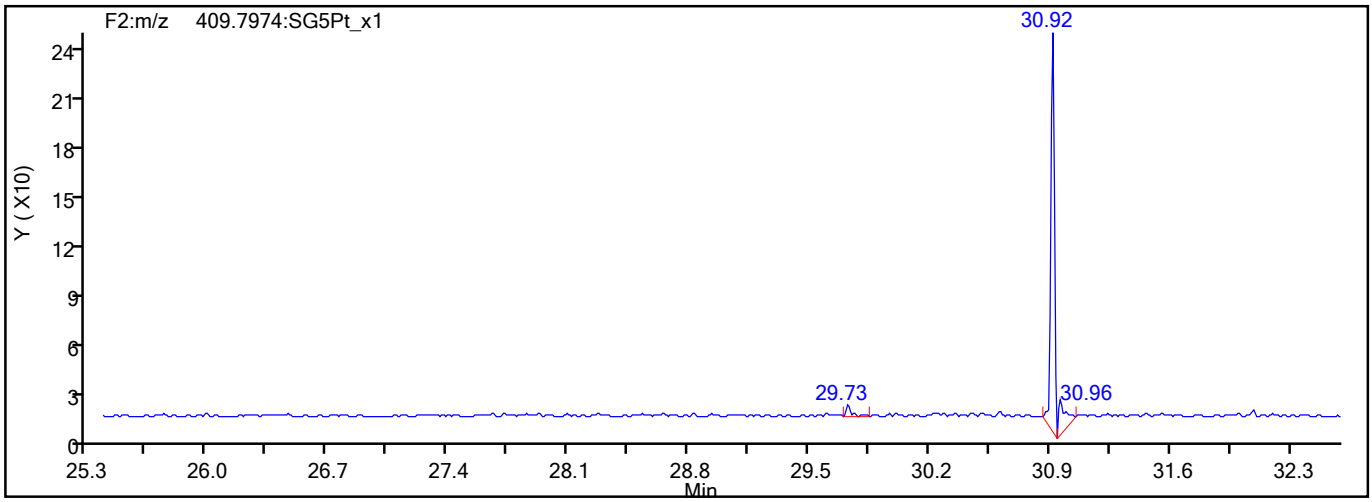

787605

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

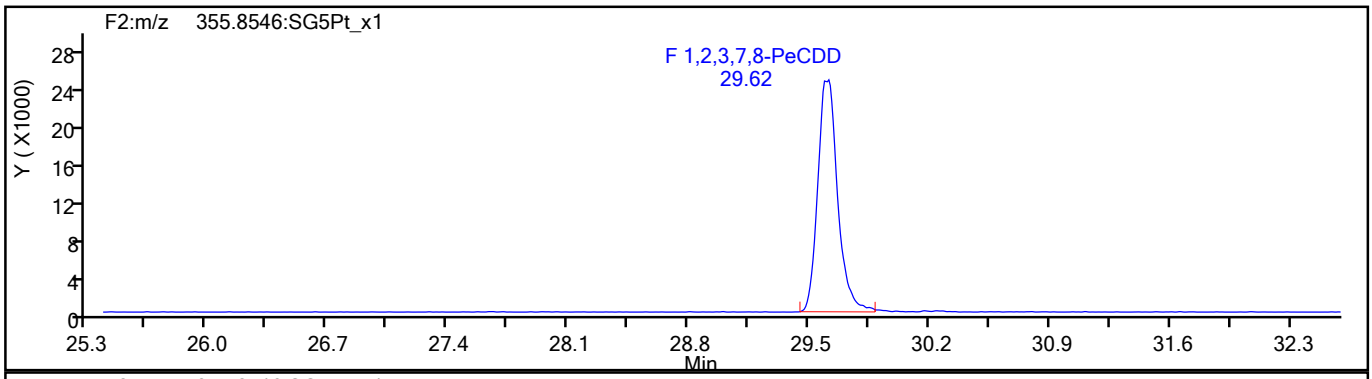

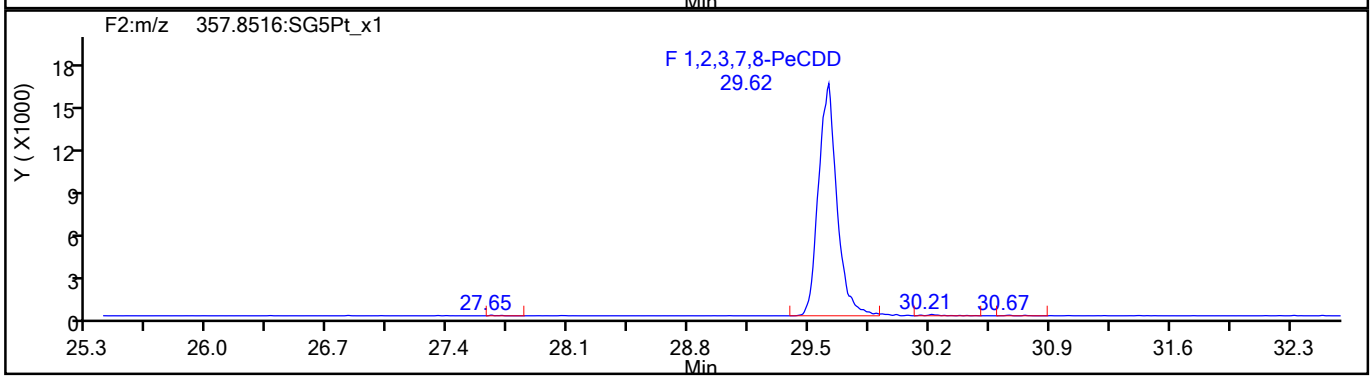

PeCDD Standards

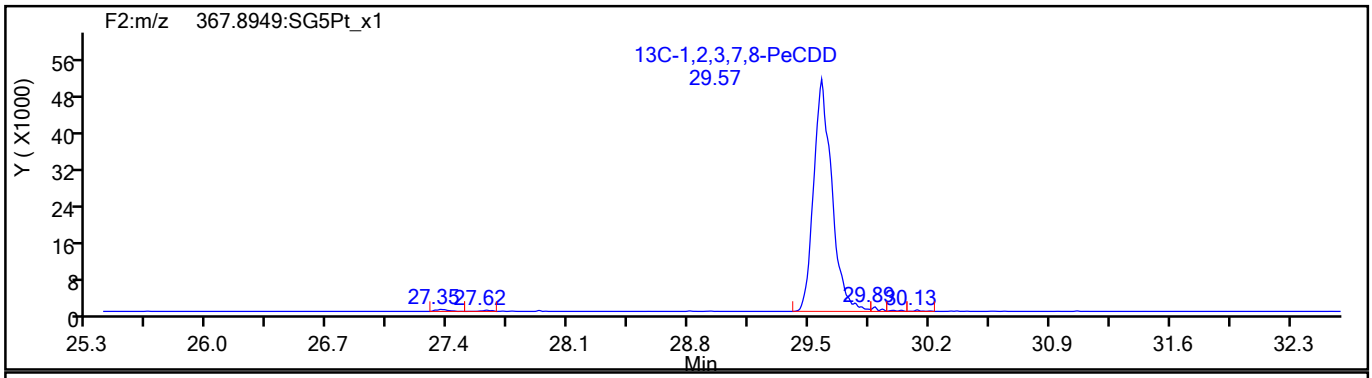

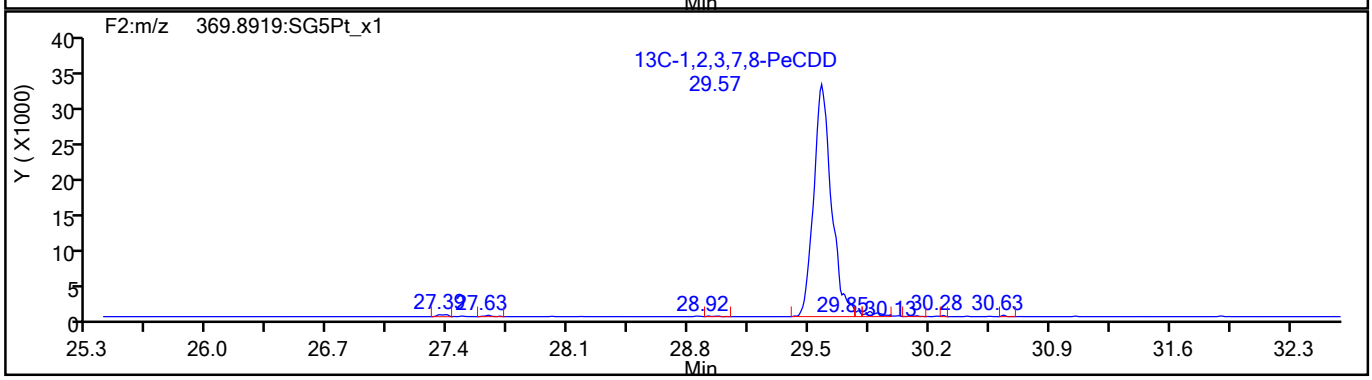

787606

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

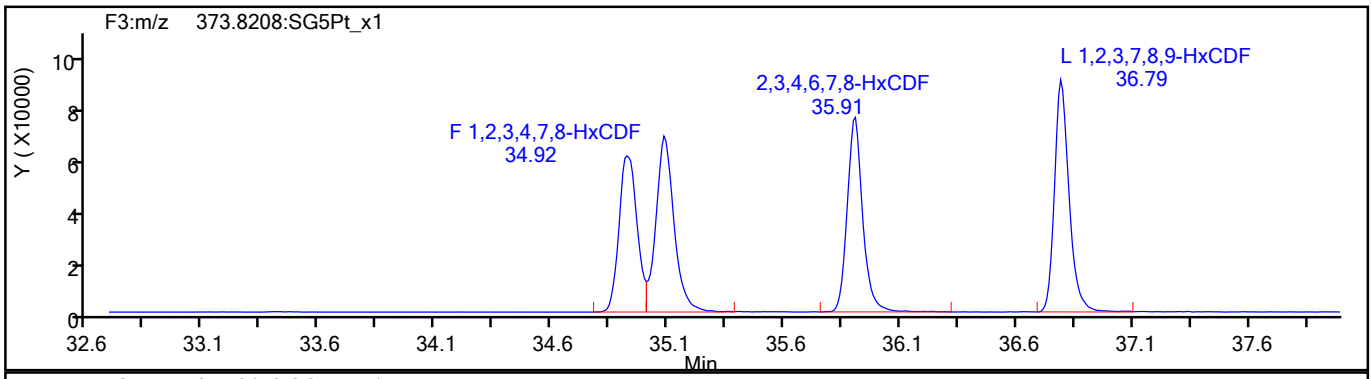

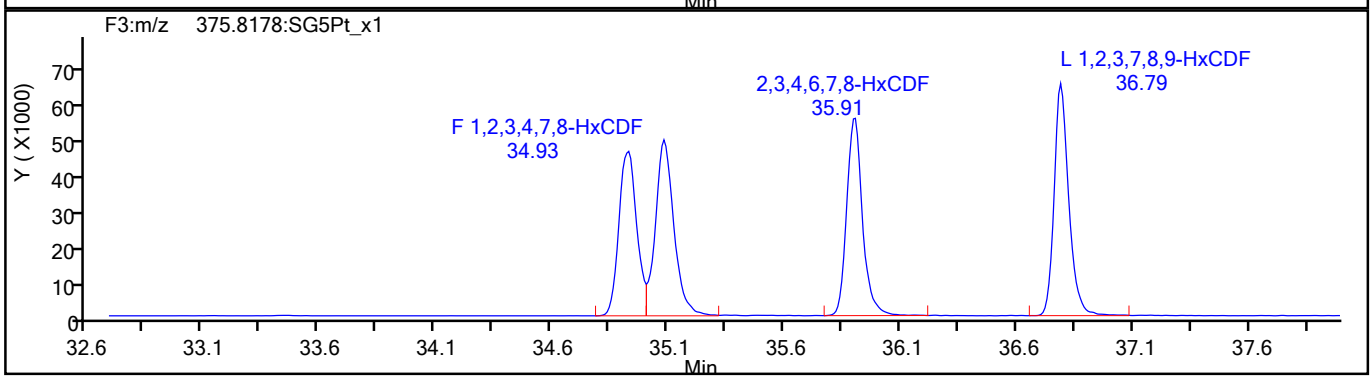

HxCDF Standards

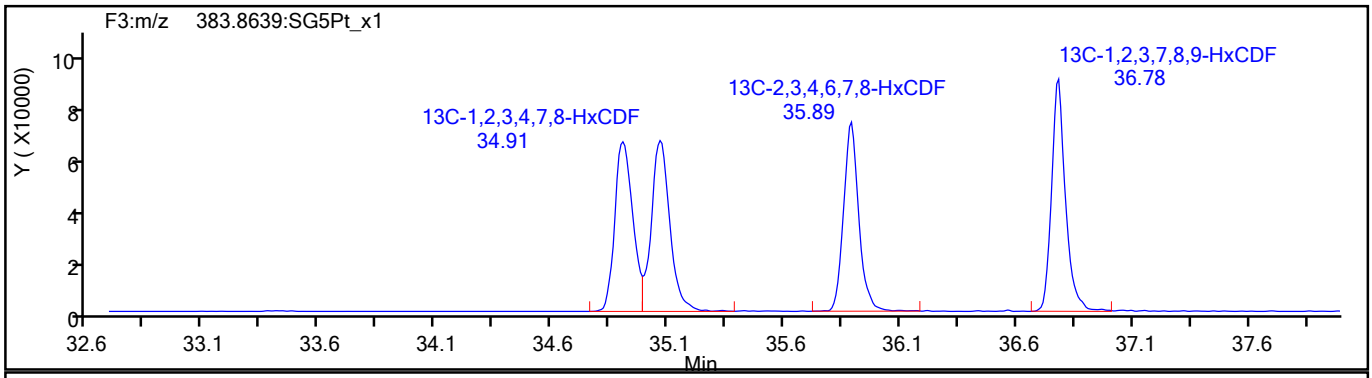

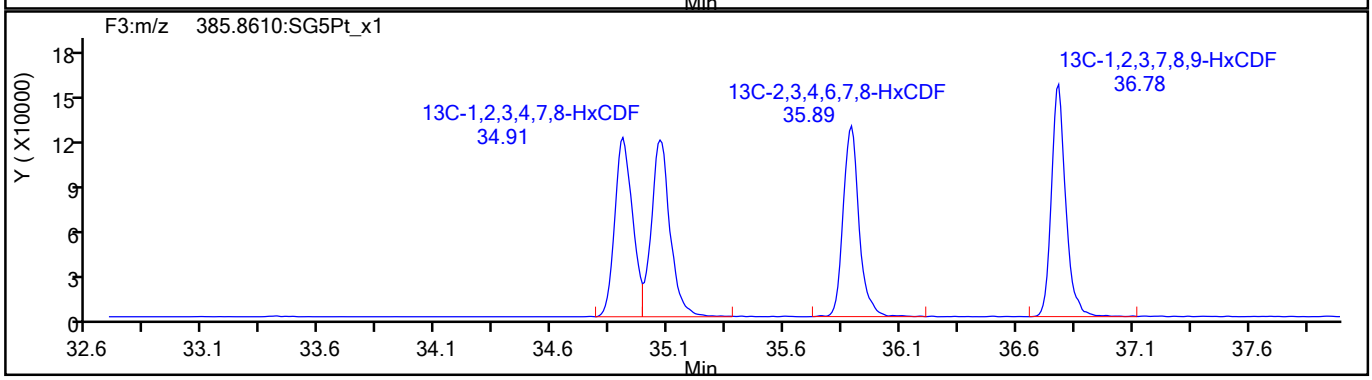

787607

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

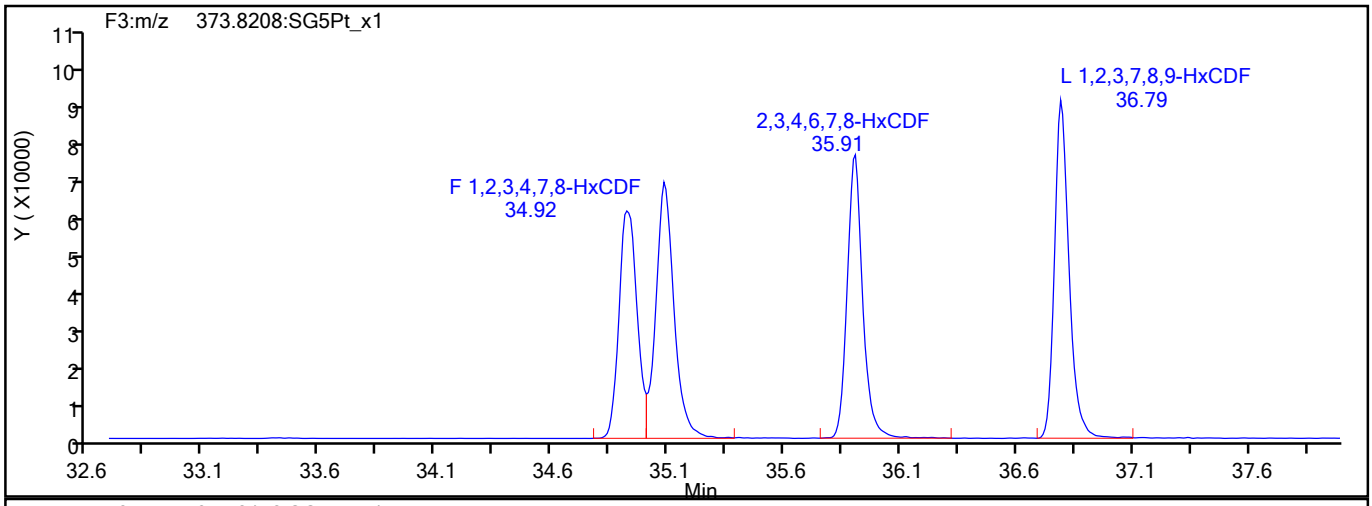

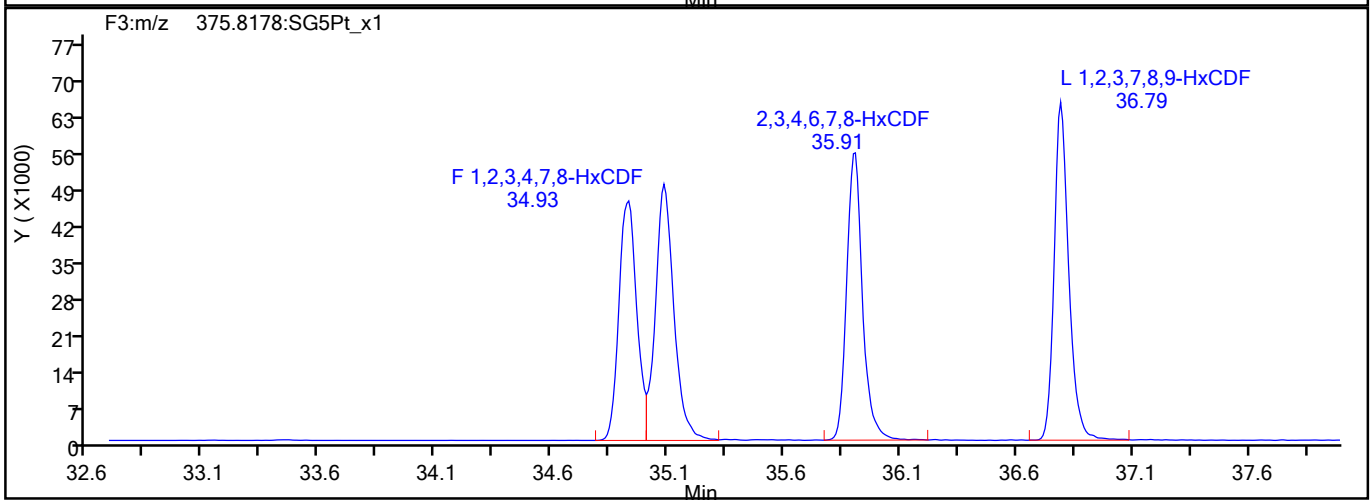

HxCDF Interference Mass

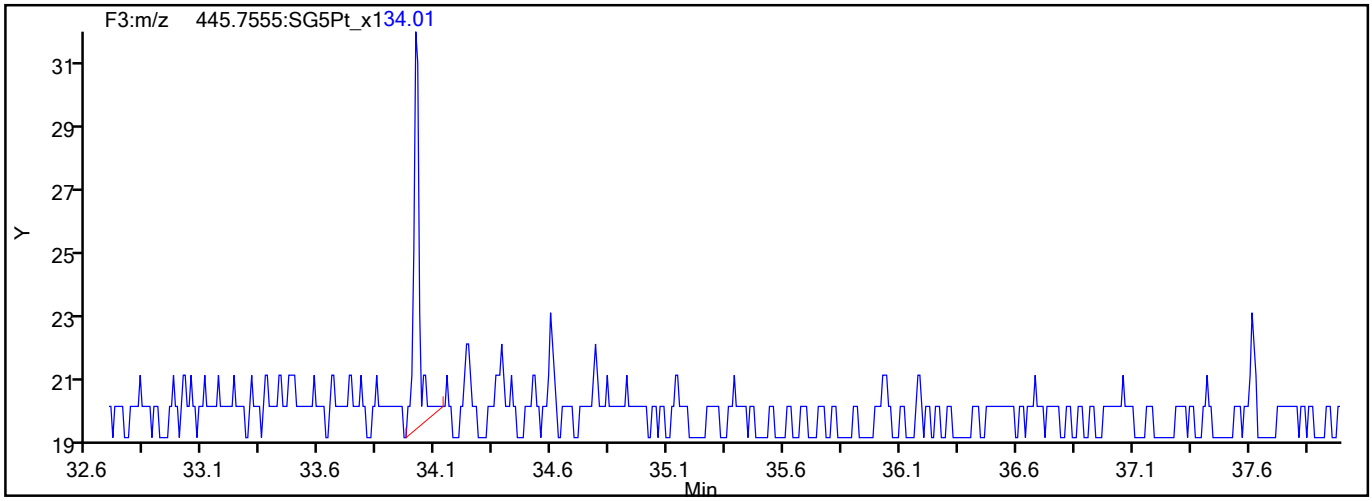

787608

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

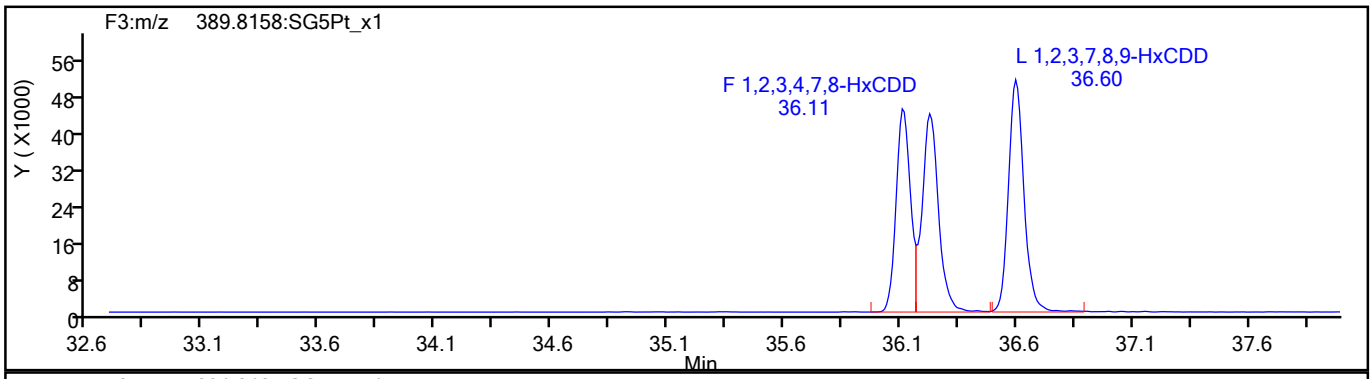

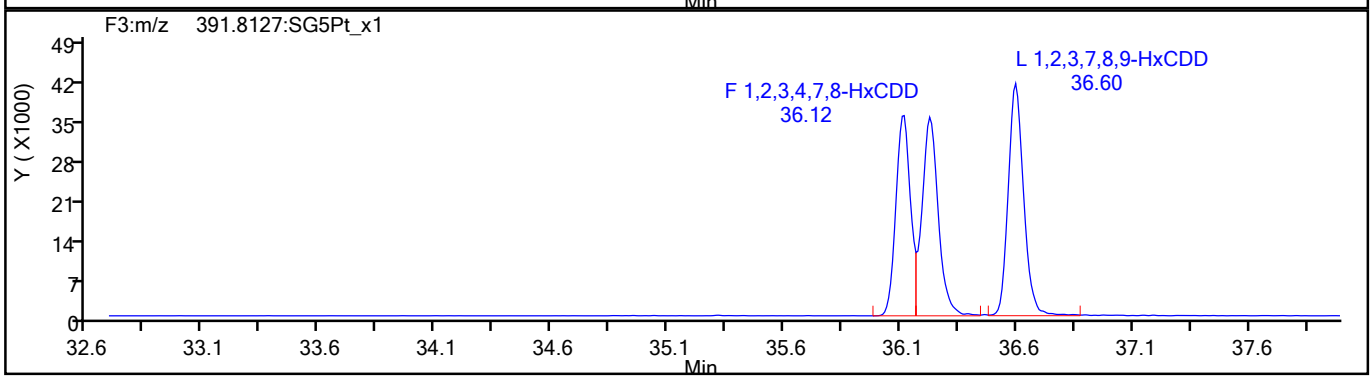

HxCDD Standards

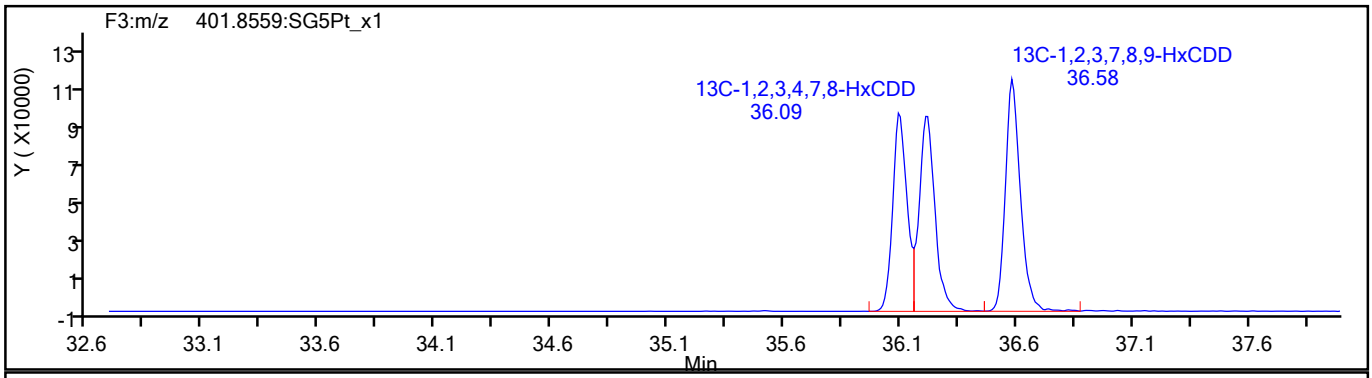

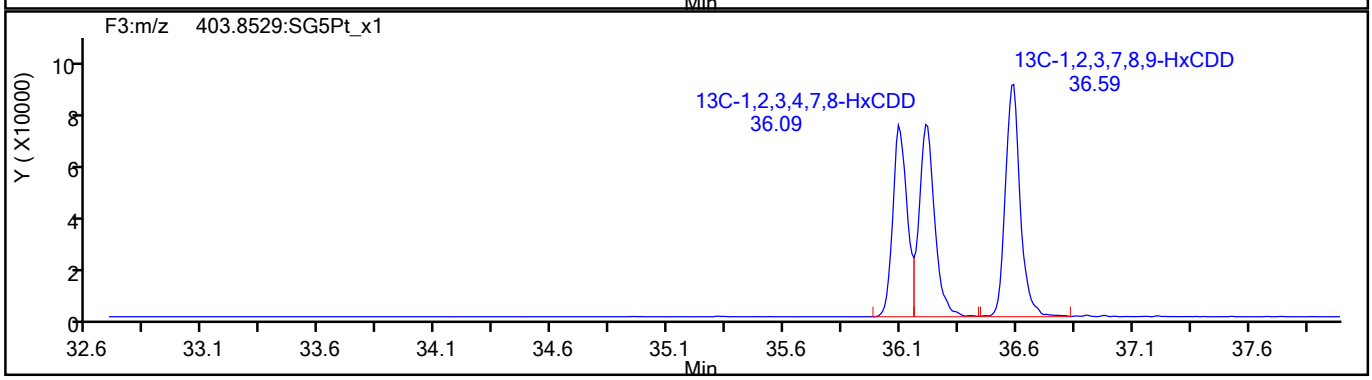

787609

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

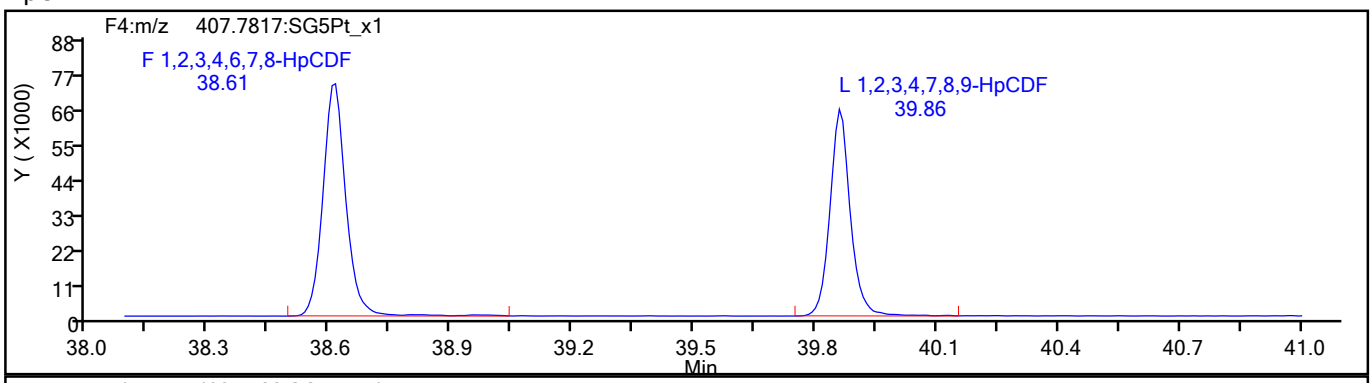

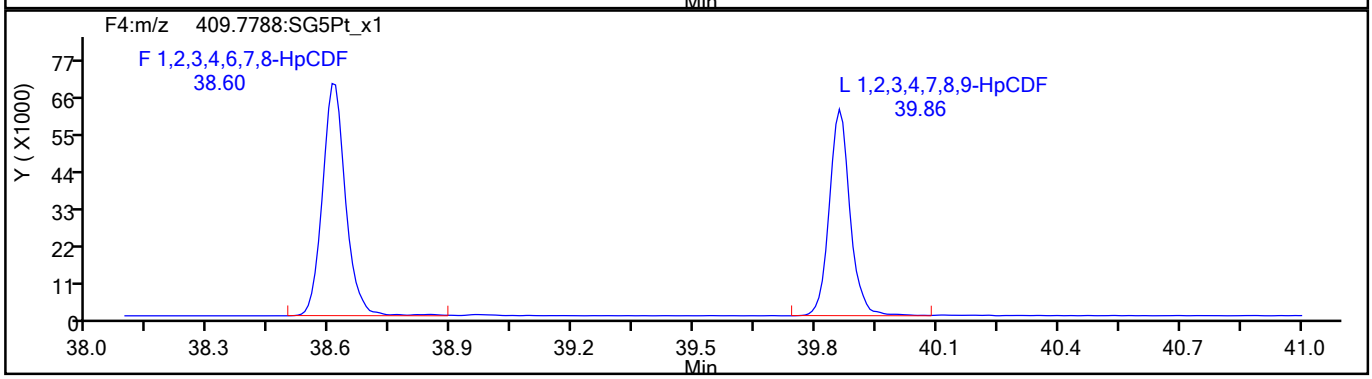

HpCDF Standards

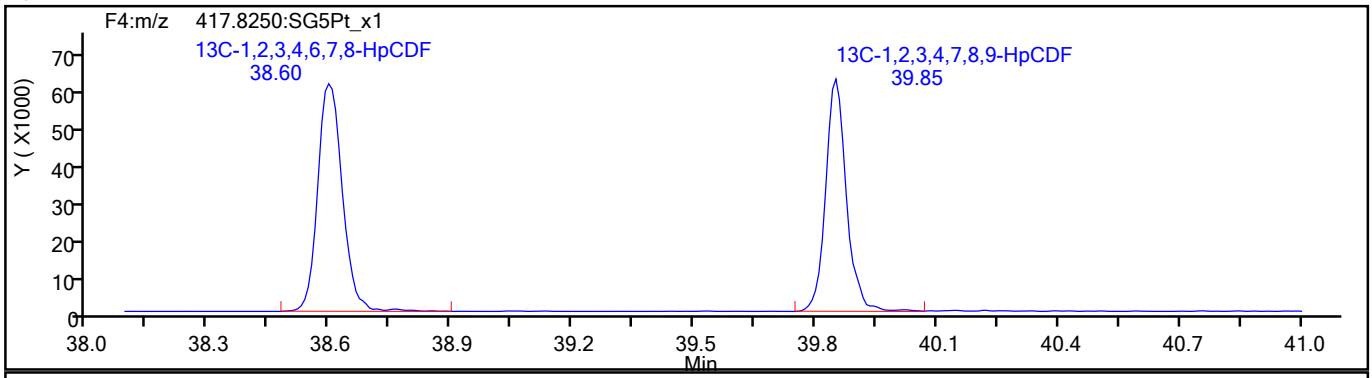

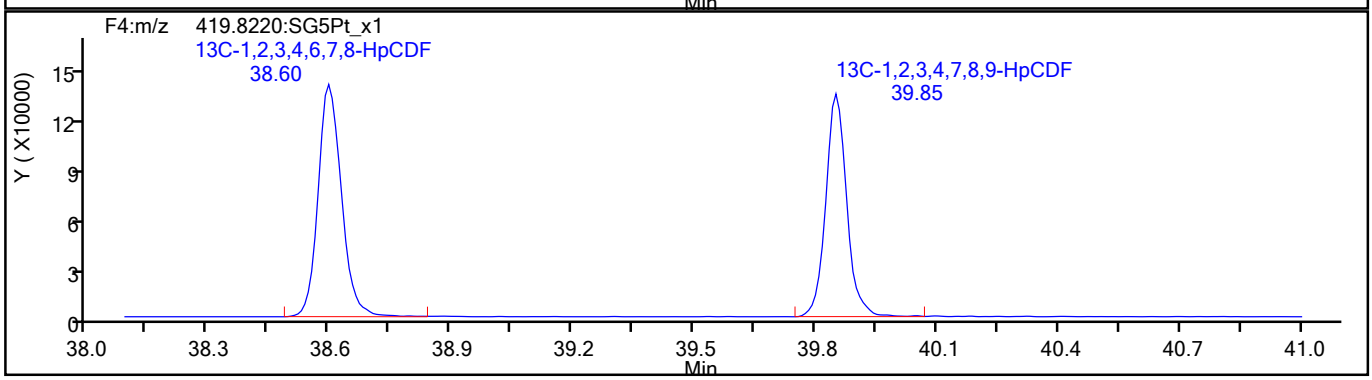

787610

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

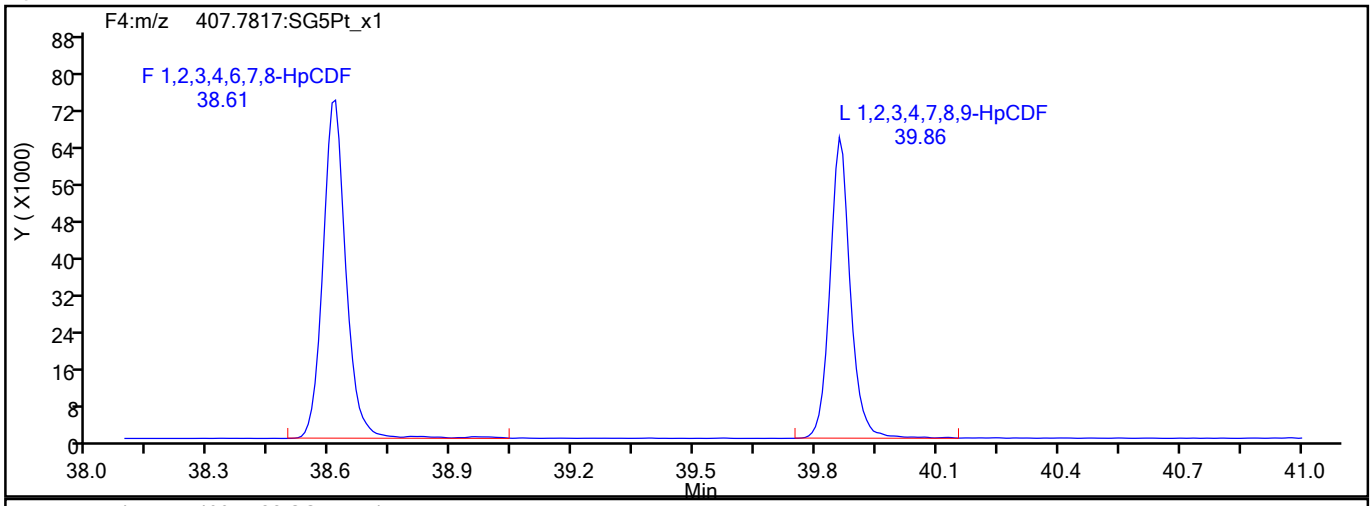

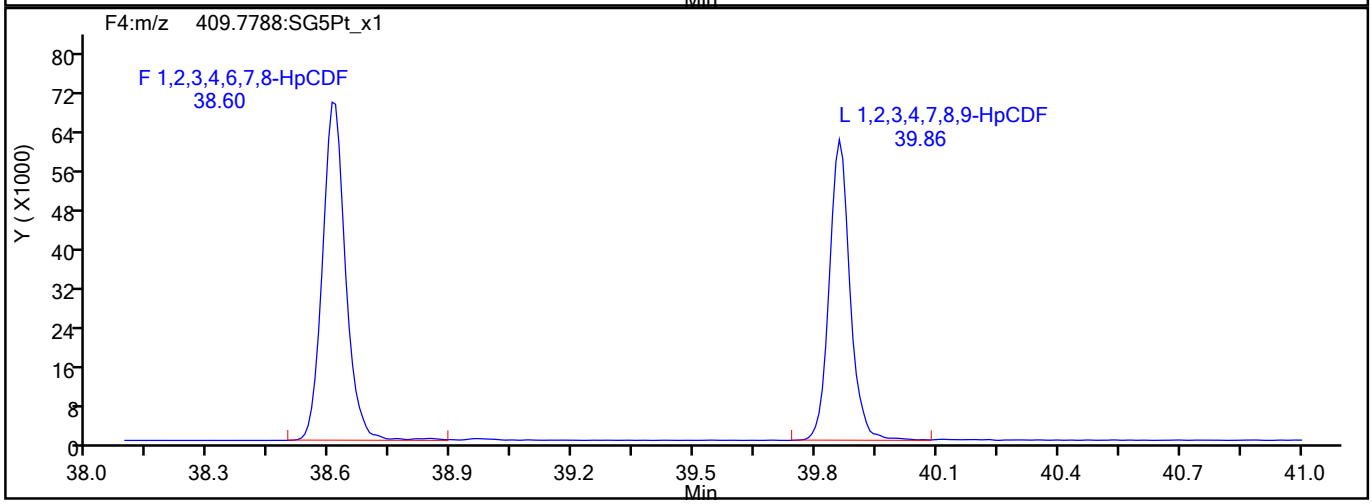

HpCDF Interference Mass

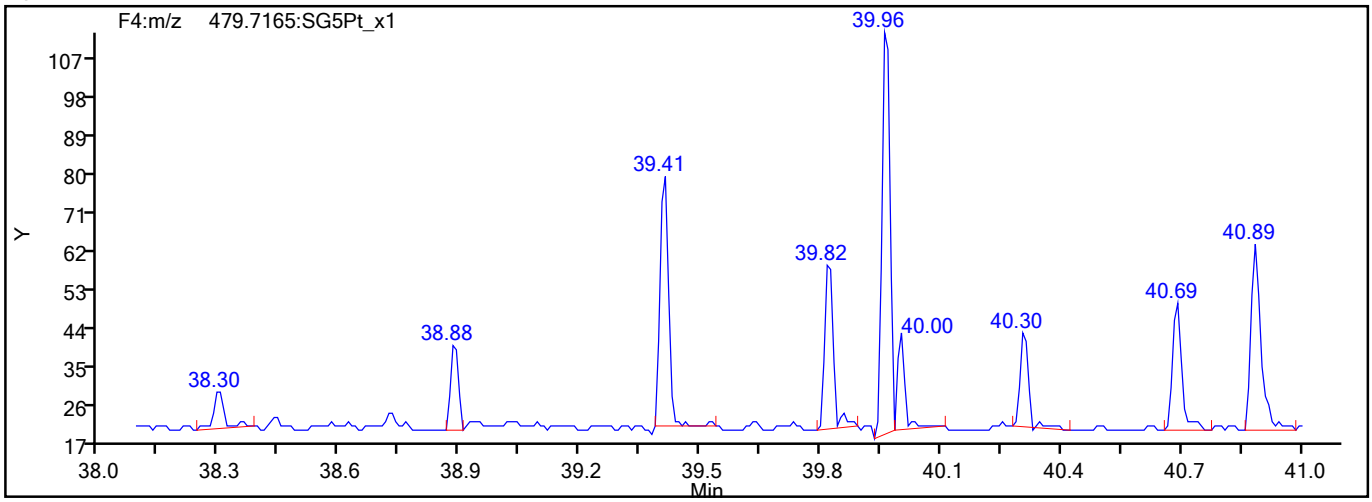

787611

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

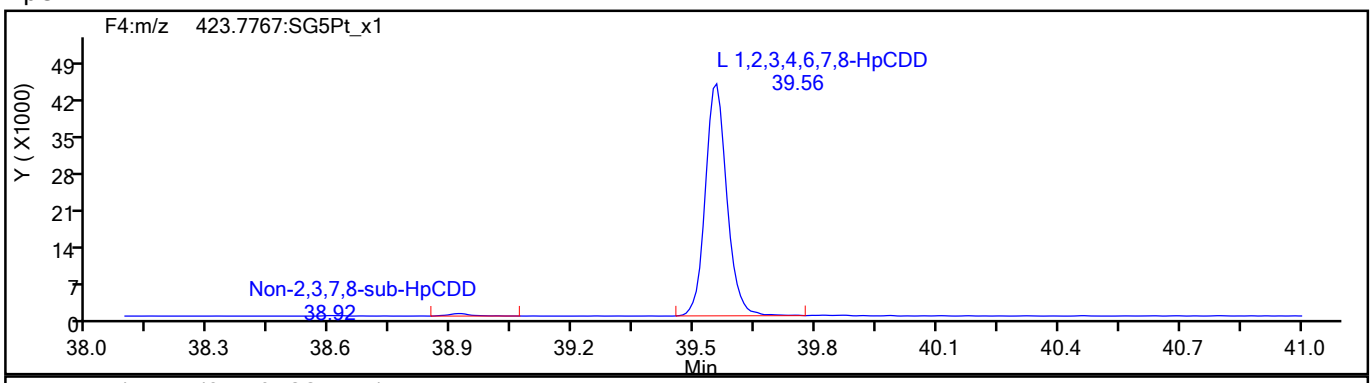

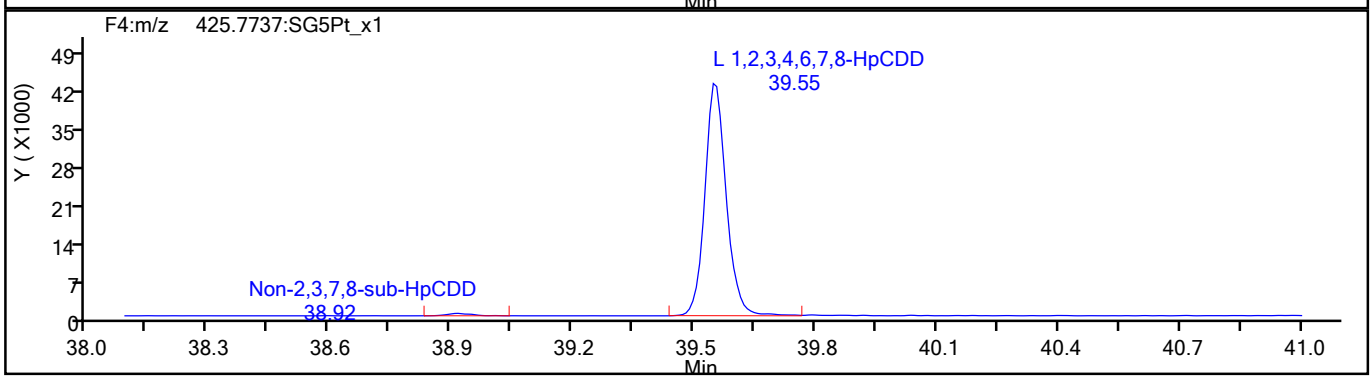

HpCDD Standards

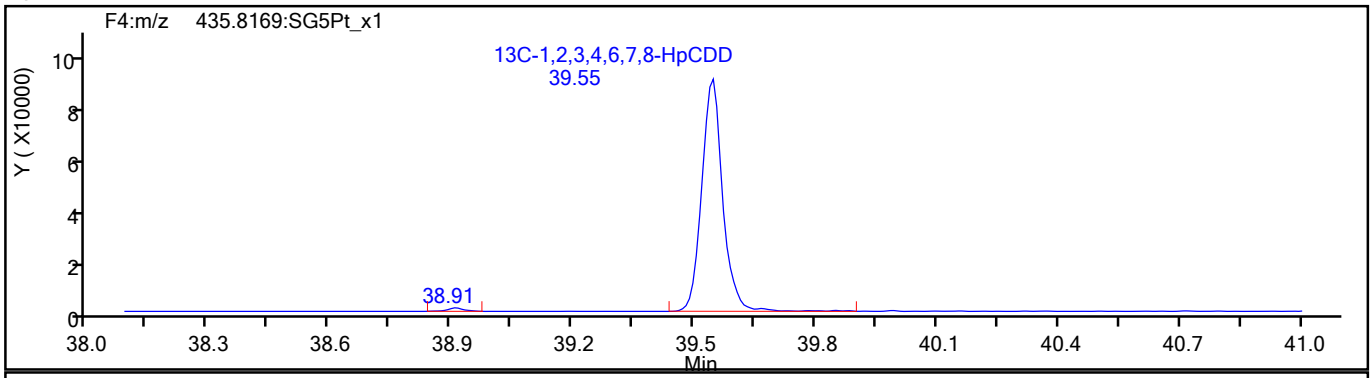

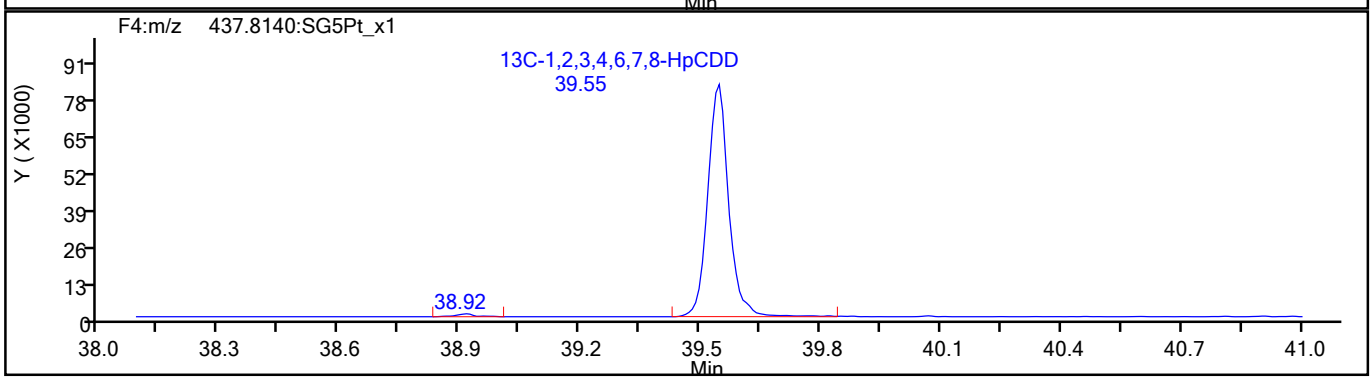

787612

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

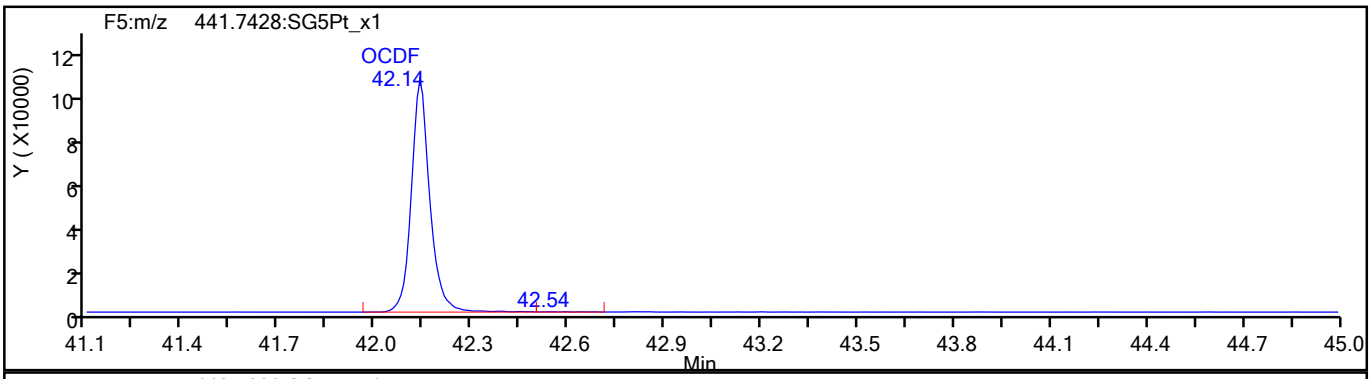

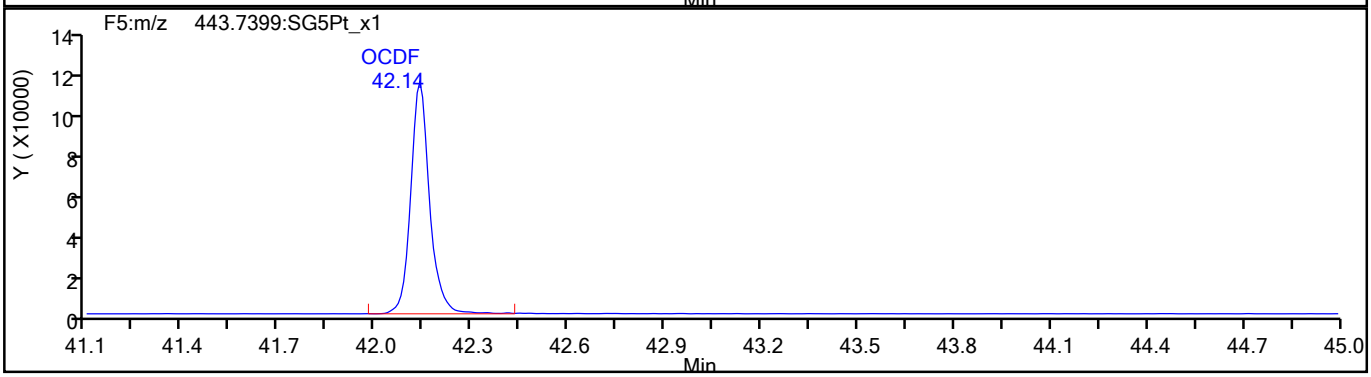

OCDF Standards

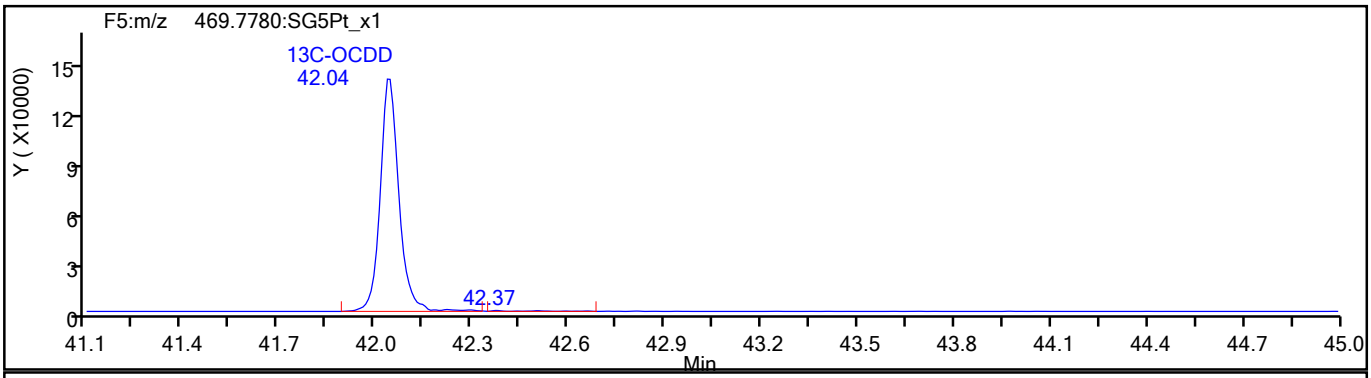

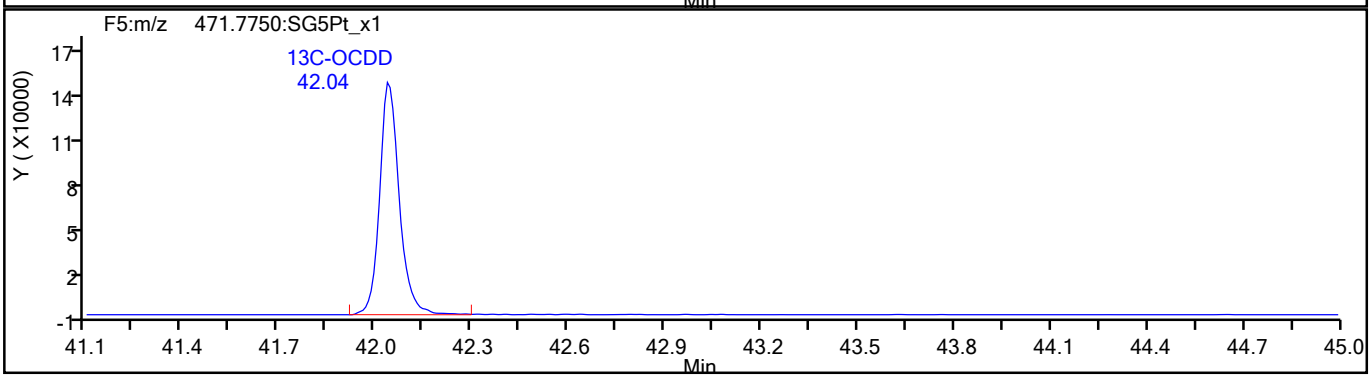

787613

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

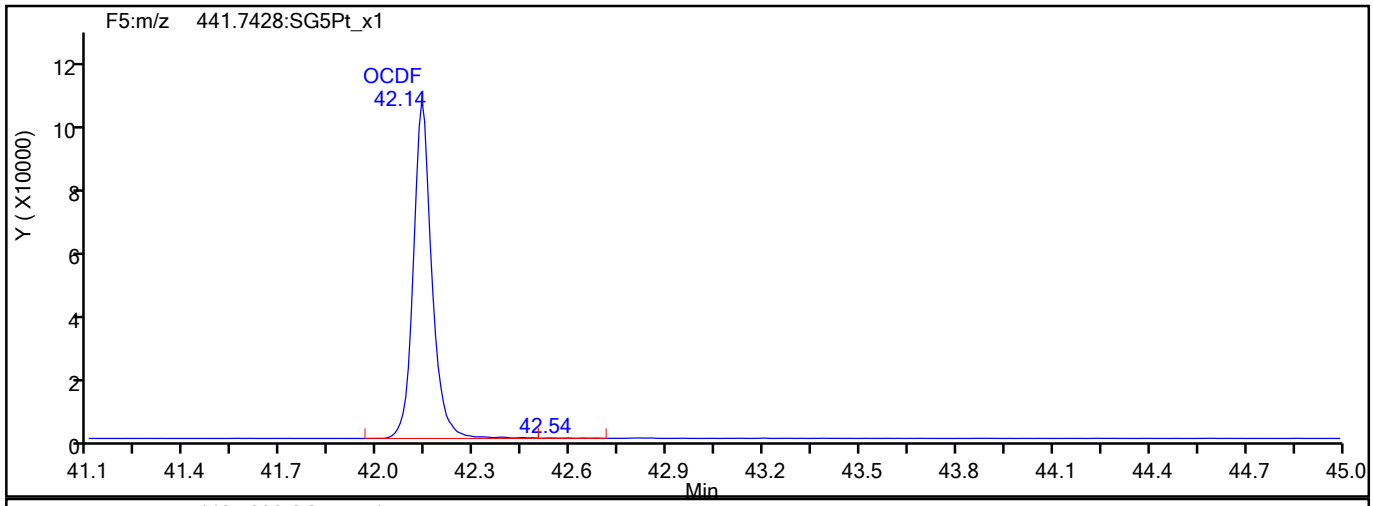

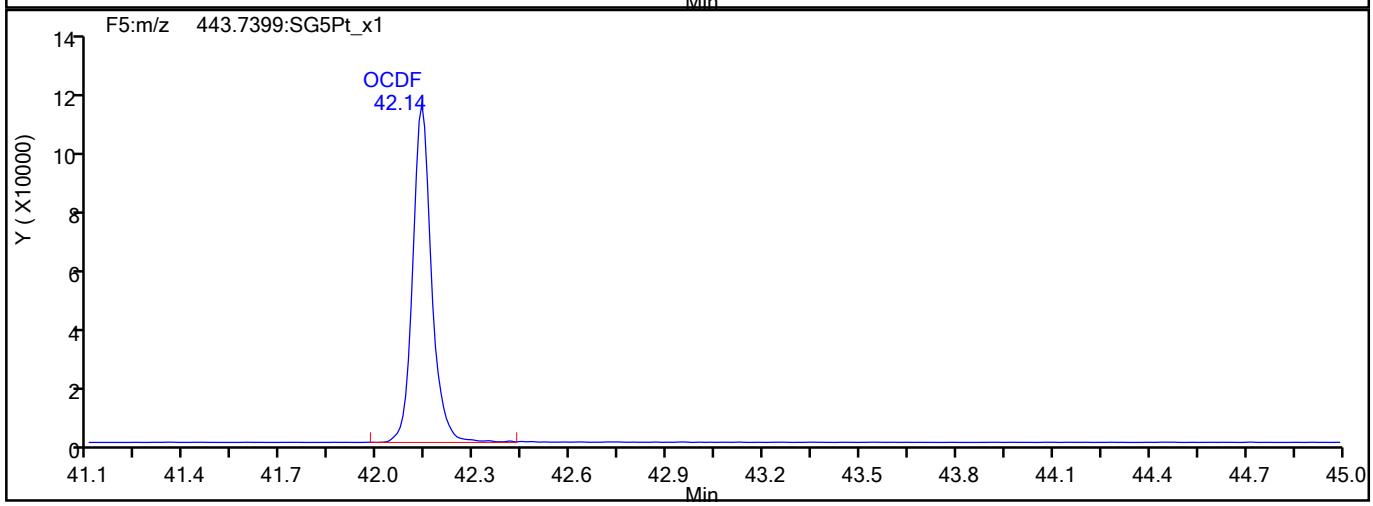

OCDF Interference Mass

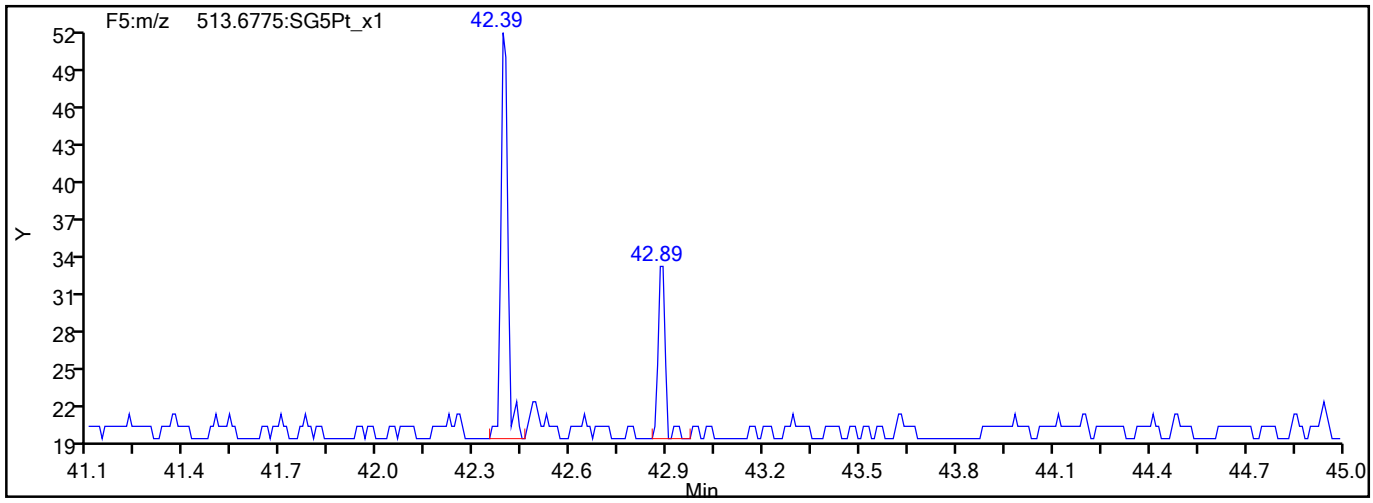

787614

Report Date: 21-Aug-2021 17:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

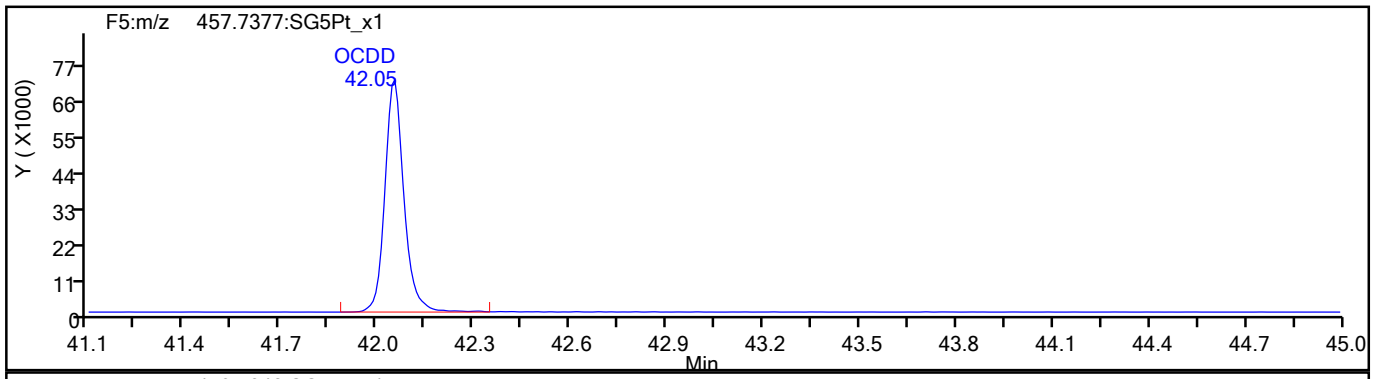

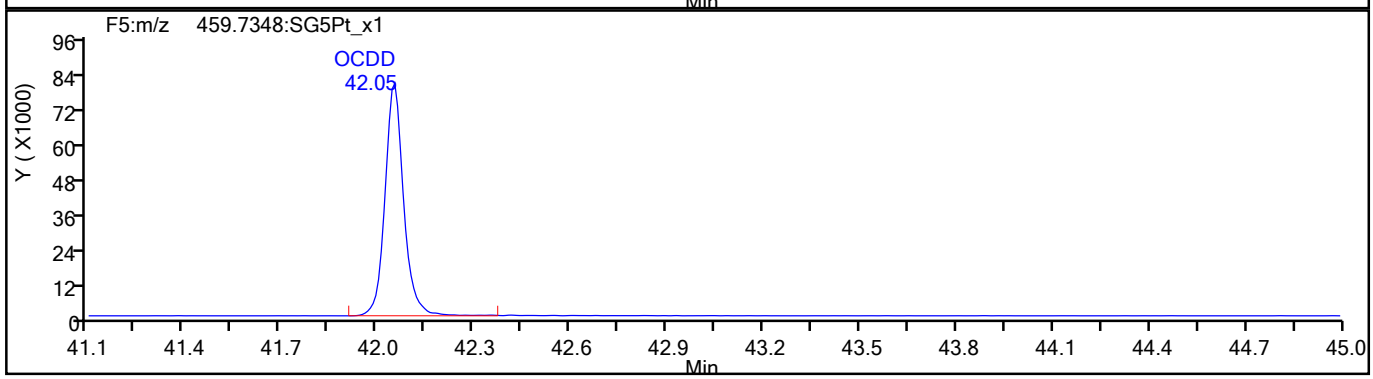

OCDD Standards

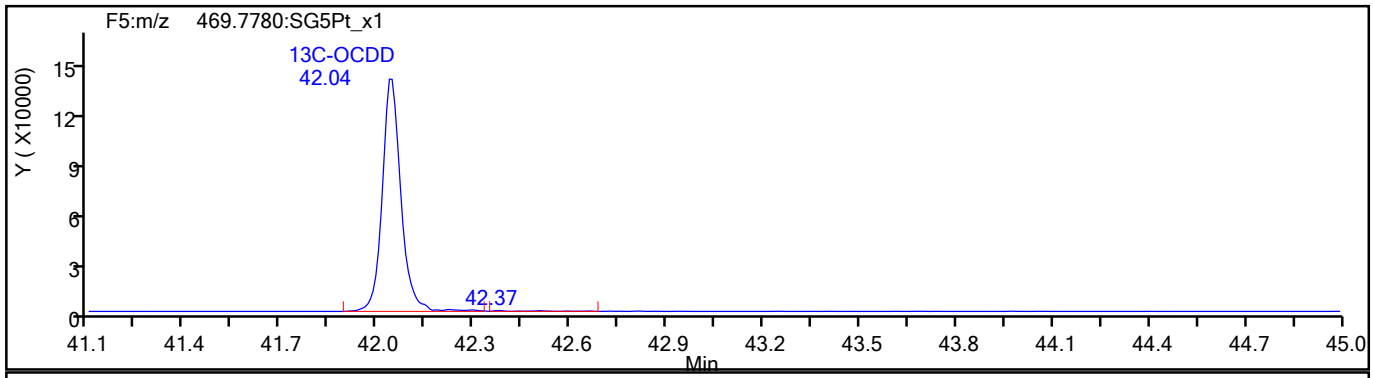

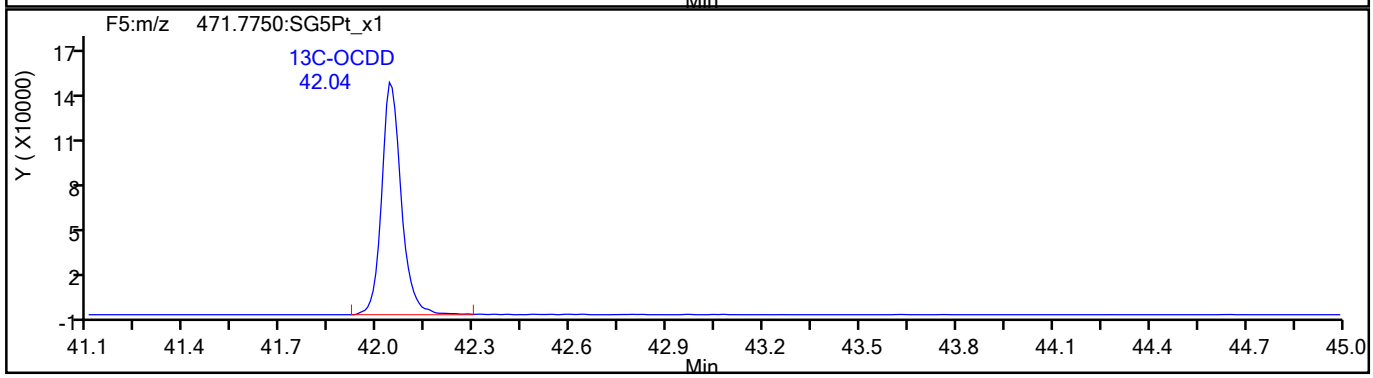

787615

Report Date: 21-Aug-2021 17:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

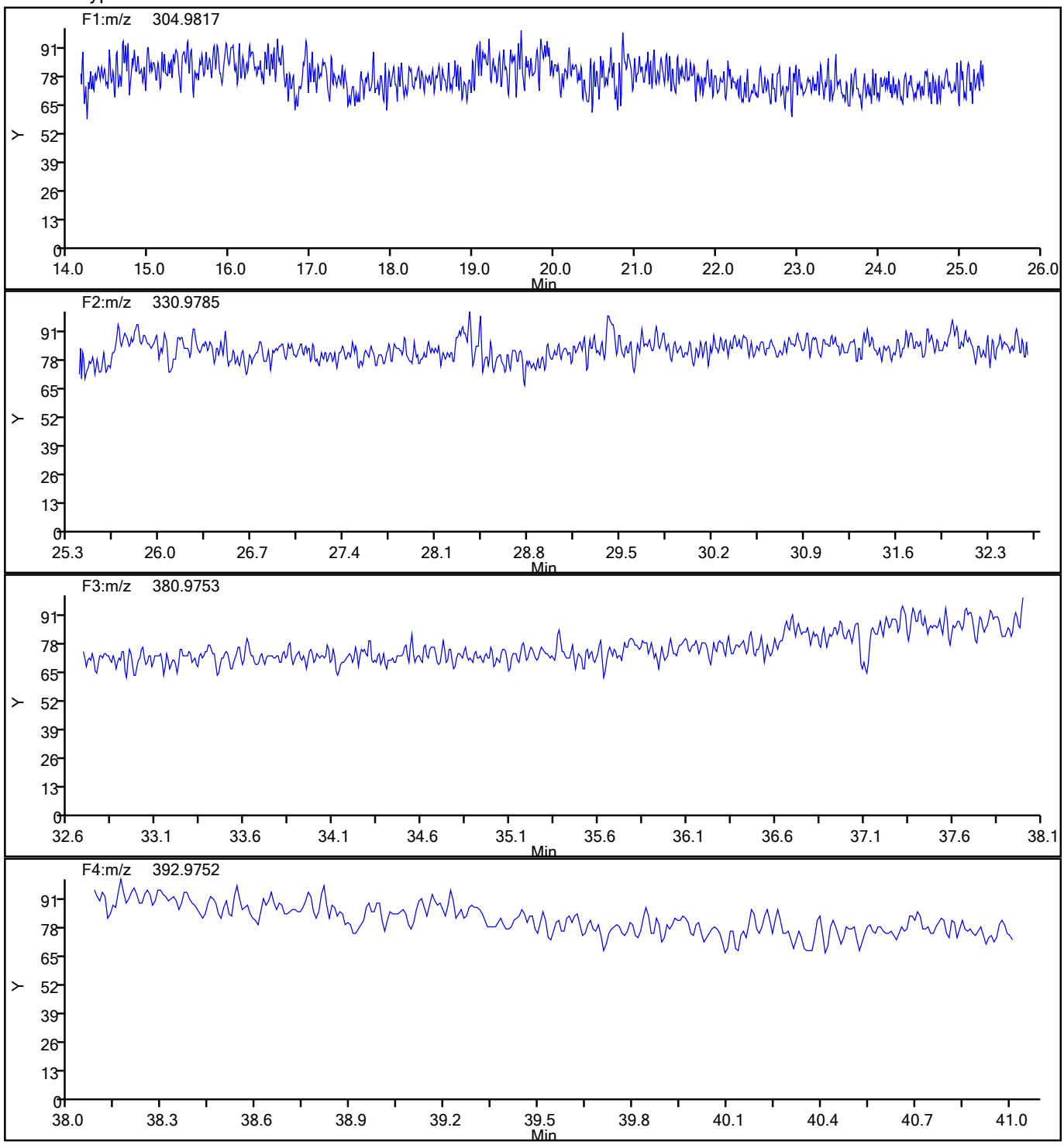

787616

Report Date: 21-Aug-2021 17:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

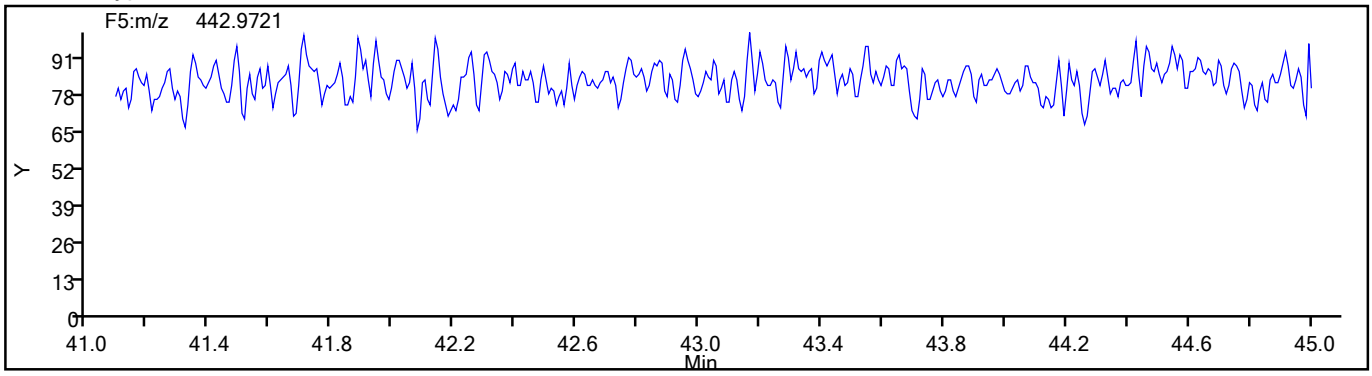

787617

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

787618

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

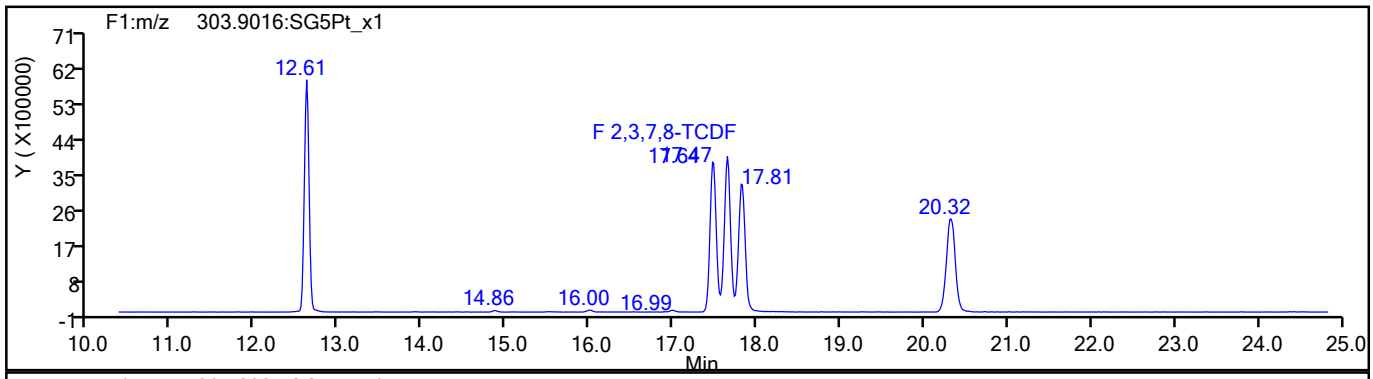

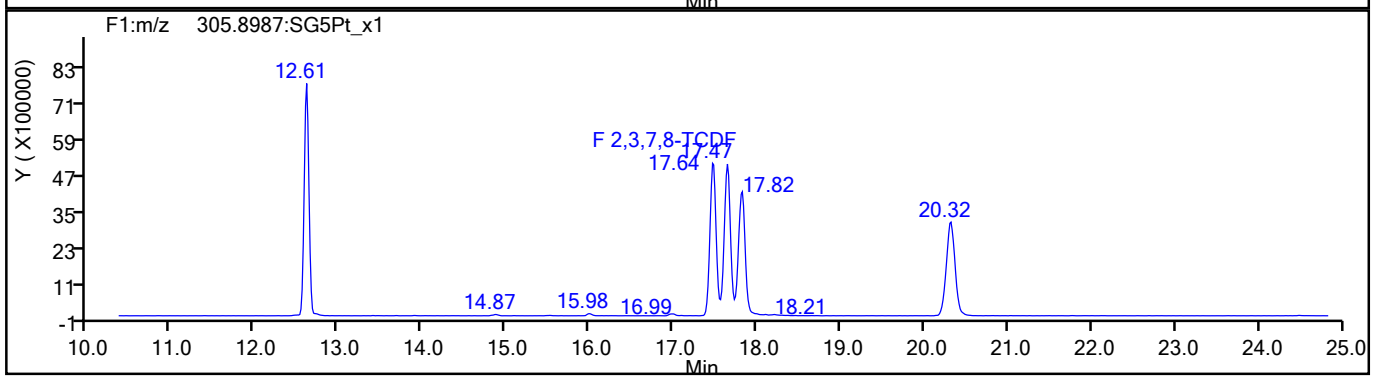

TCDF Standards

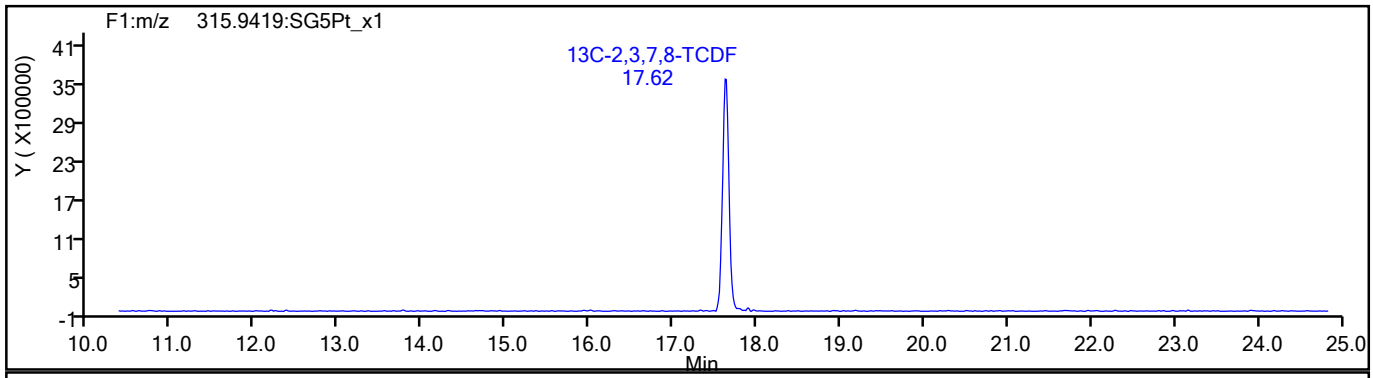

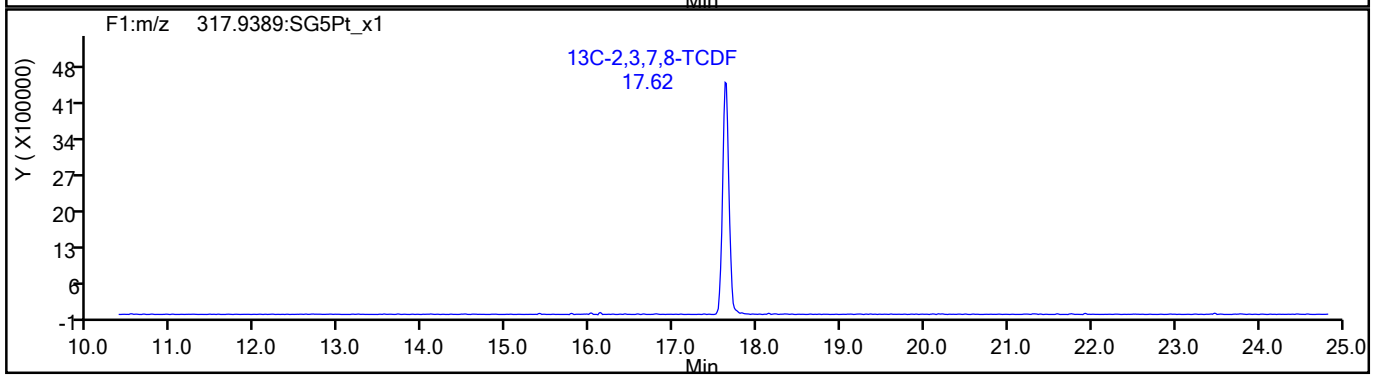

787620

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

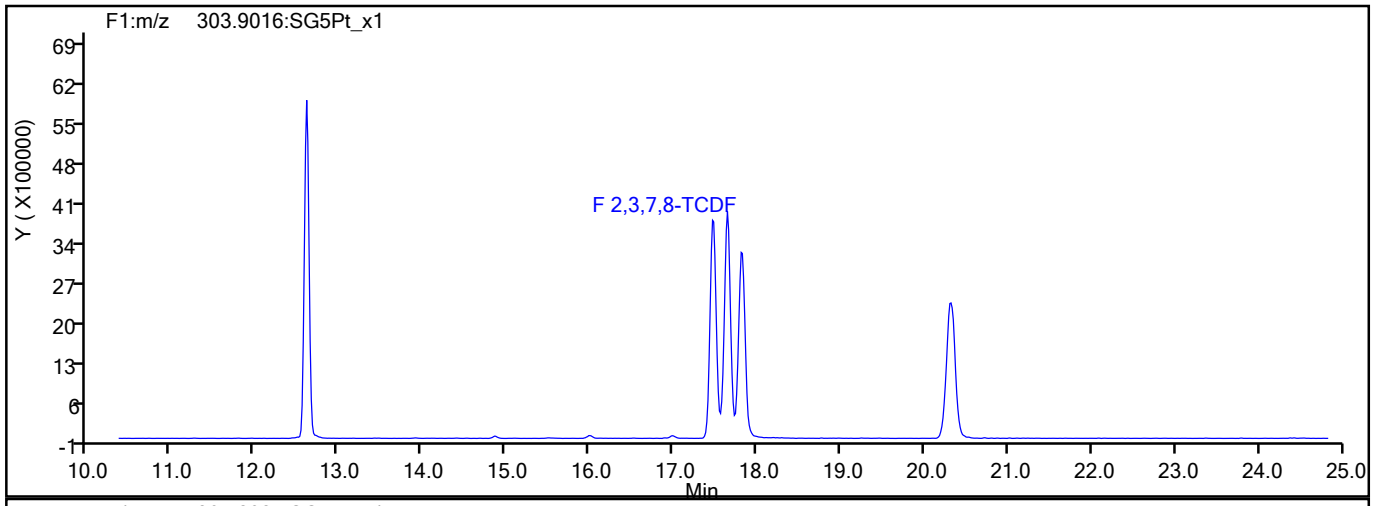

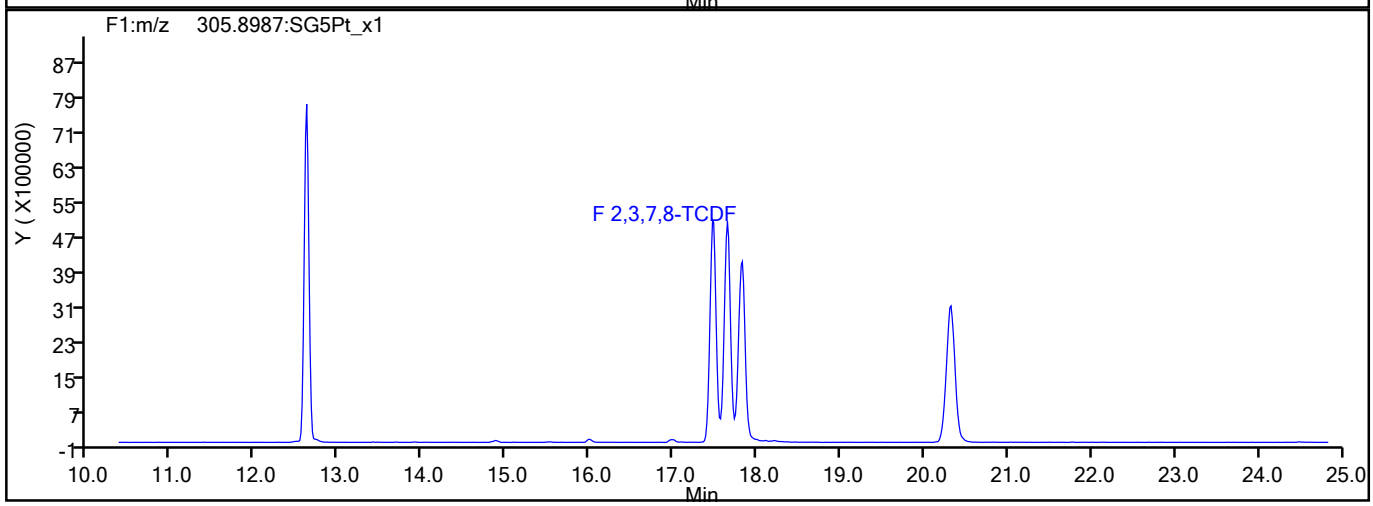

TCDF Interference Mass

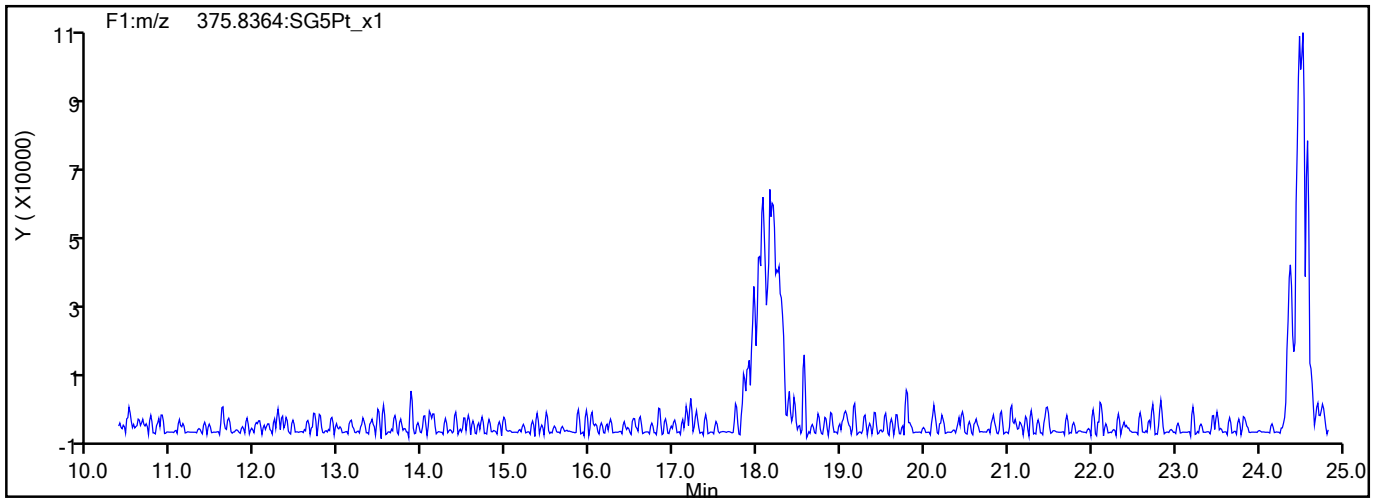

787621

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

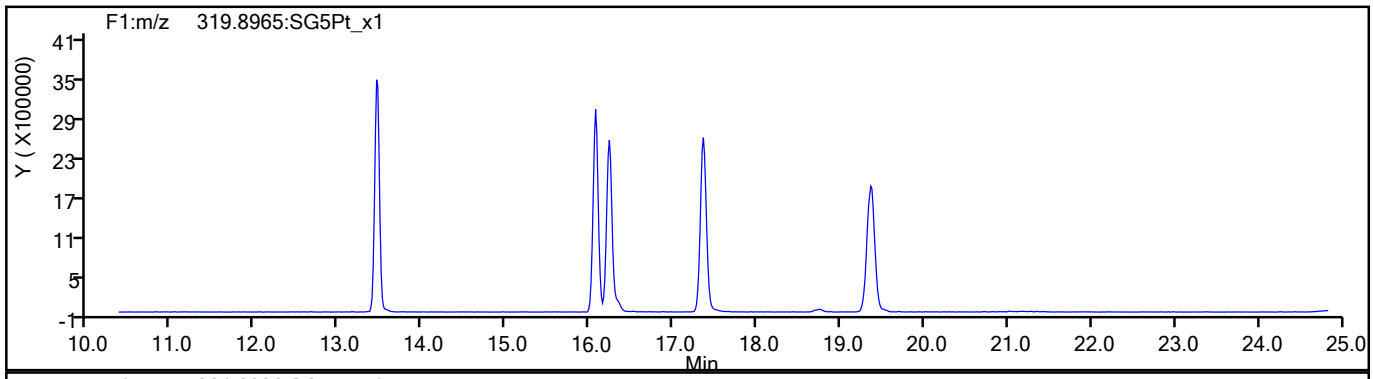

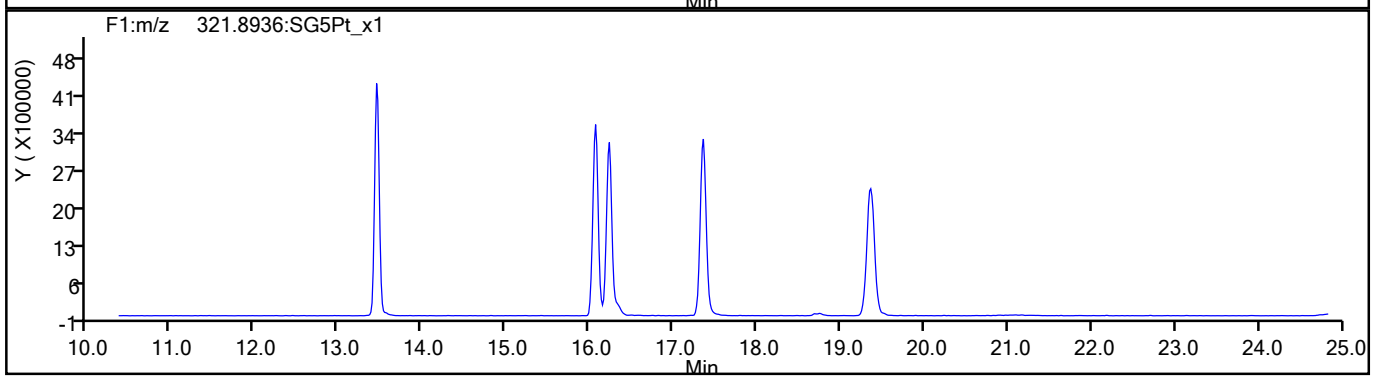

TCDD Standards

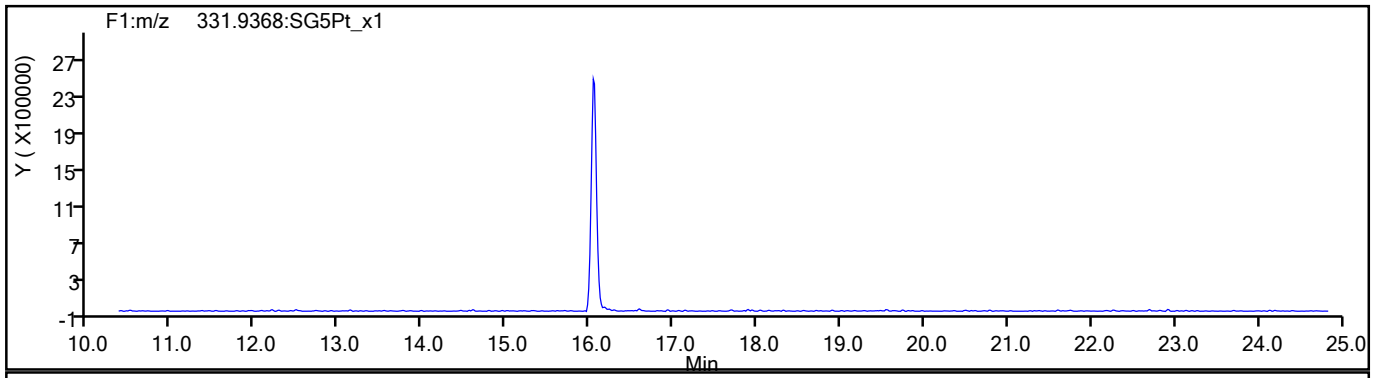

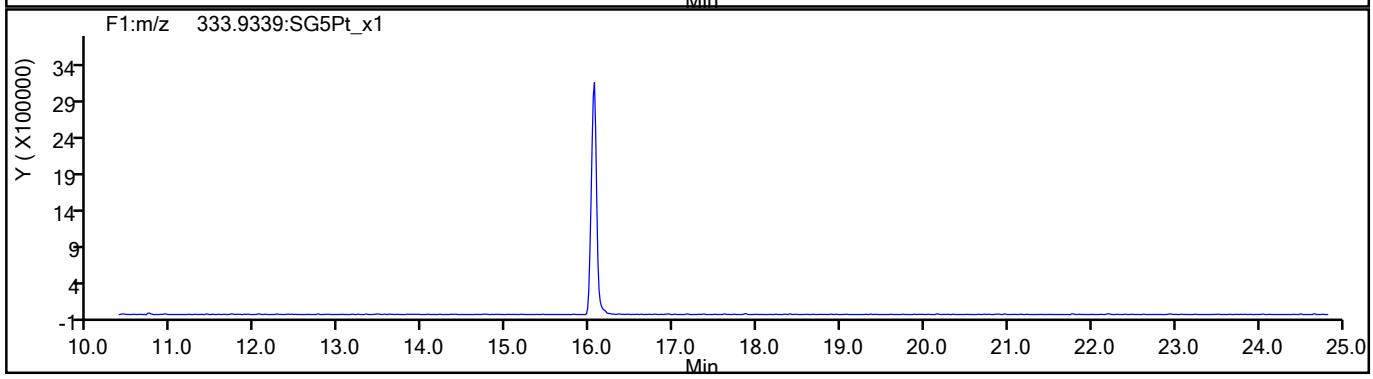

787622

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

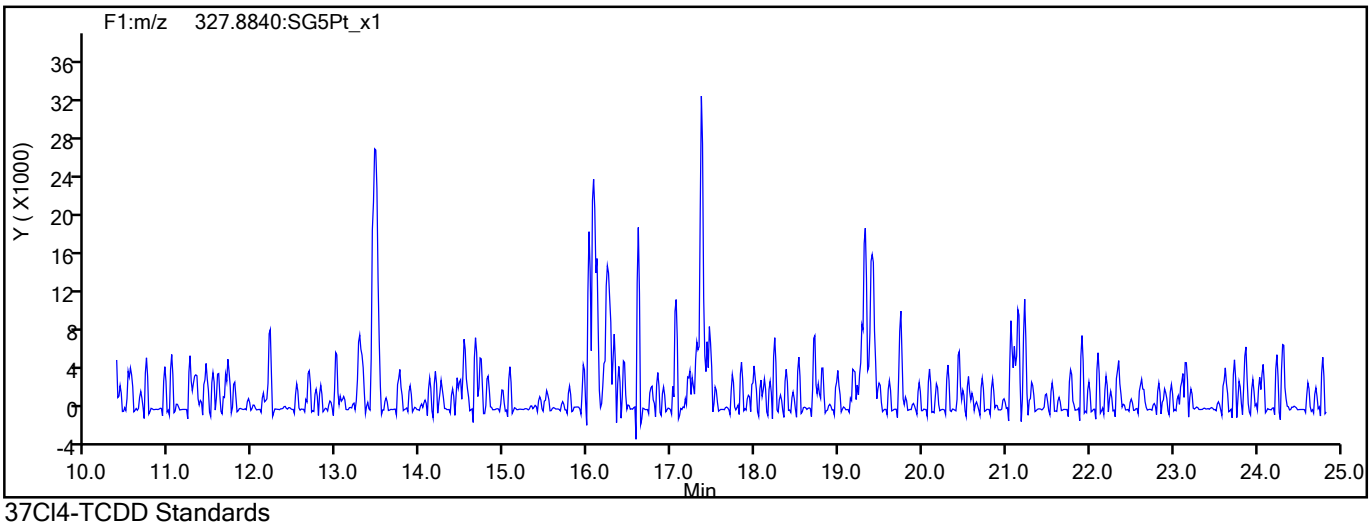

37Cl4-TCDD Standards

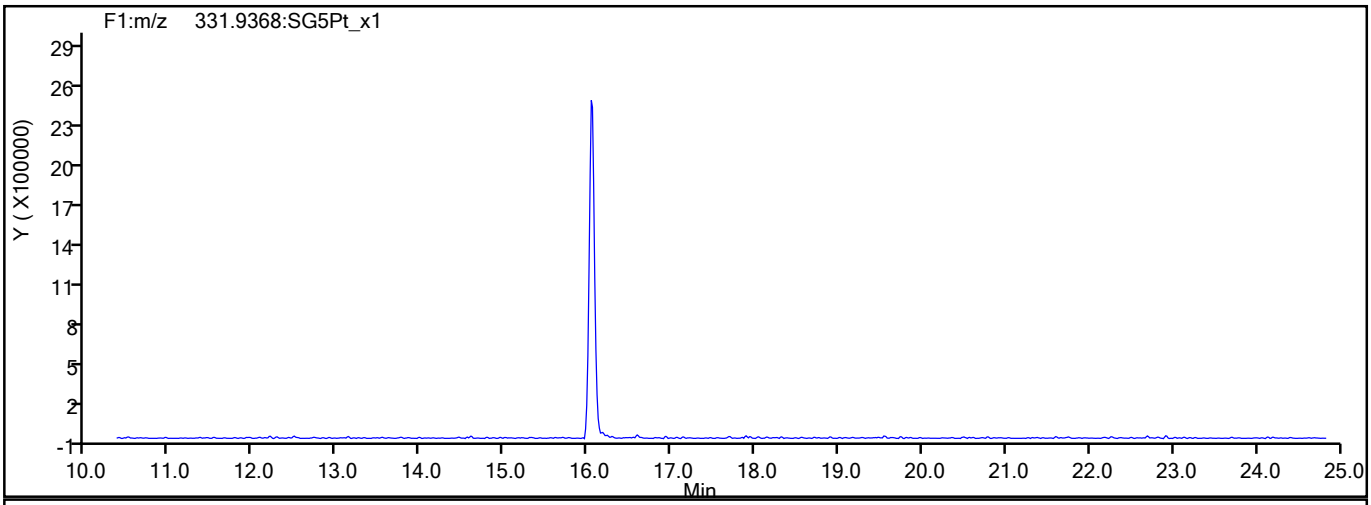

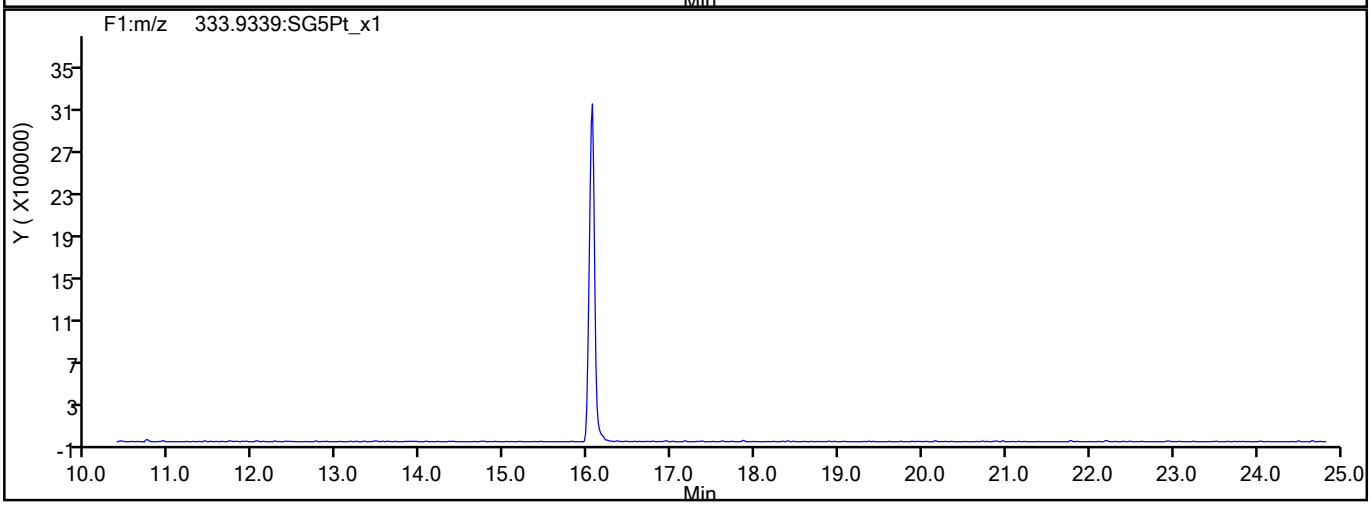

787623

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

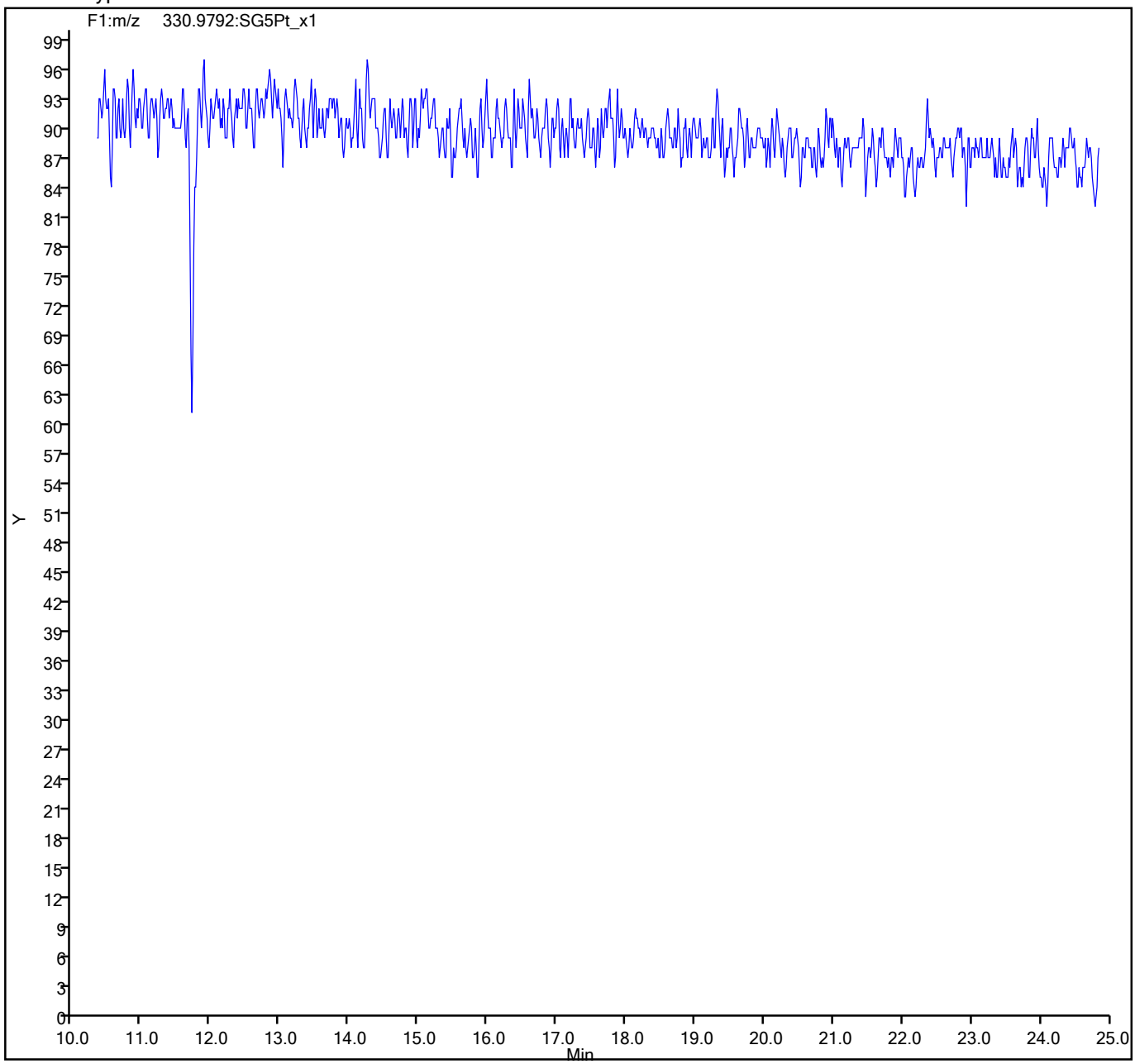

787624

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 23-Aug-2021 09:32:15 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:43:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.637	9601063	0.85	1.3327					0.00	
2,3,7,8-TCDF	17.665	11045352	0.82	0.9978	46.1	46.1	0.1927	0.1927		
D 13C-2,3,7,8-TCDD	16.087	6481328	0.76	0.8749					0.00	
2,3,7,8-TCDD	16.101	6949267	0.78	1.0570	40.6	40.6	0.2121	0.2121		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 23-Aug-2021 09:32:15 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 15:56:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1643

First Level Reviewer: bennettd Date: 23-Aug-2021 15:43:19

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.637	17.637	0	1.000	4407572	855495	7388	18470	116		
317.9389	17.637	17.637	0	1.000	5193491	1011684	5445	13612	186	0.85(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.665	17.665	0	1.002	4971101	886156	1668	4170	531		
305.8987	17.665	17.665	0	1.002	6074251	1128635	1922	4805	587	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.087	16.087	0	1.000	2800293	587194	6878	17195	85		
333.9339	16.087	16.087	0	1.000	3681035	811326	2649	6622	306	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.101	16.101	0	1.001	3034454	677456	1907	4767	355		
321.8936	16.101	16.101	0	1.001	3914813	870353	1228	3070	709	0.78(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

787626

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d		
Injection Date:	23-Aug-2021 09:32:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

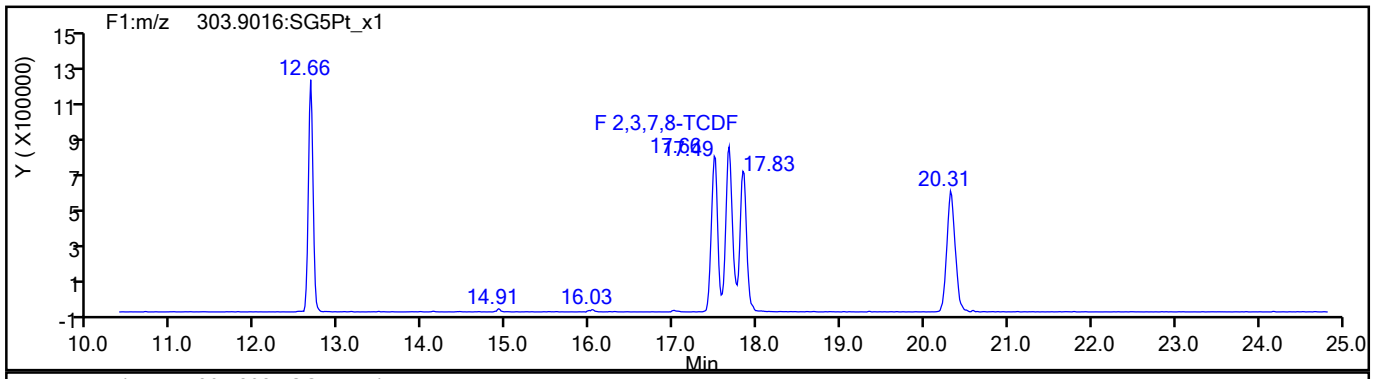

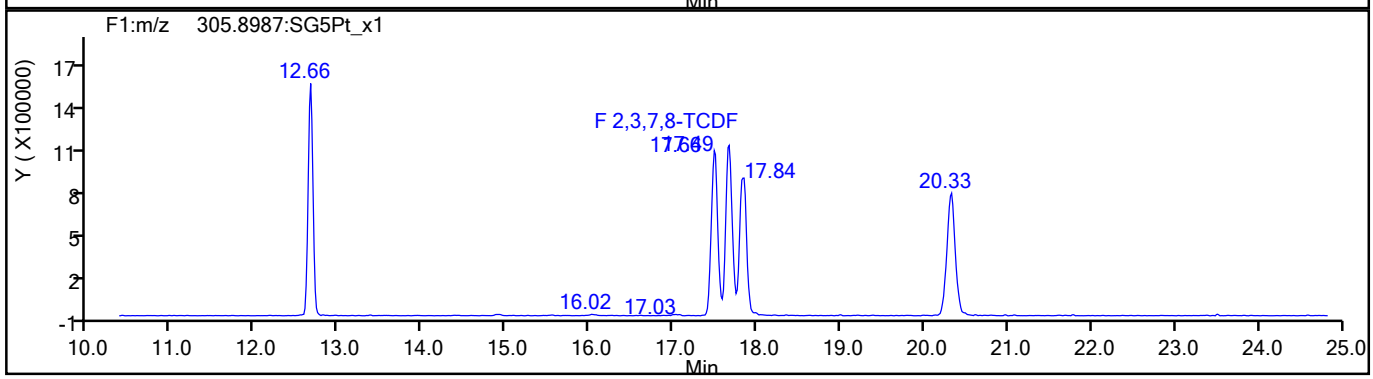

TCDF Standards

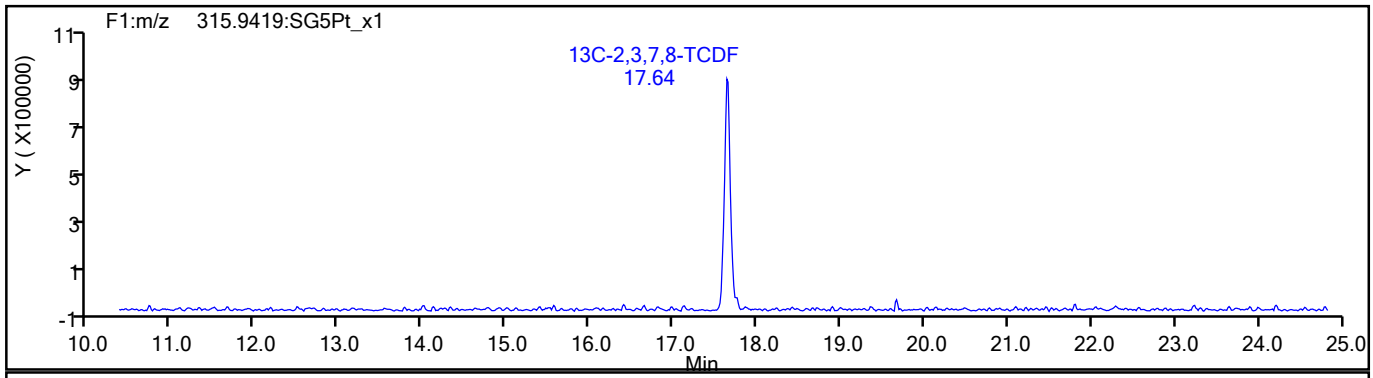

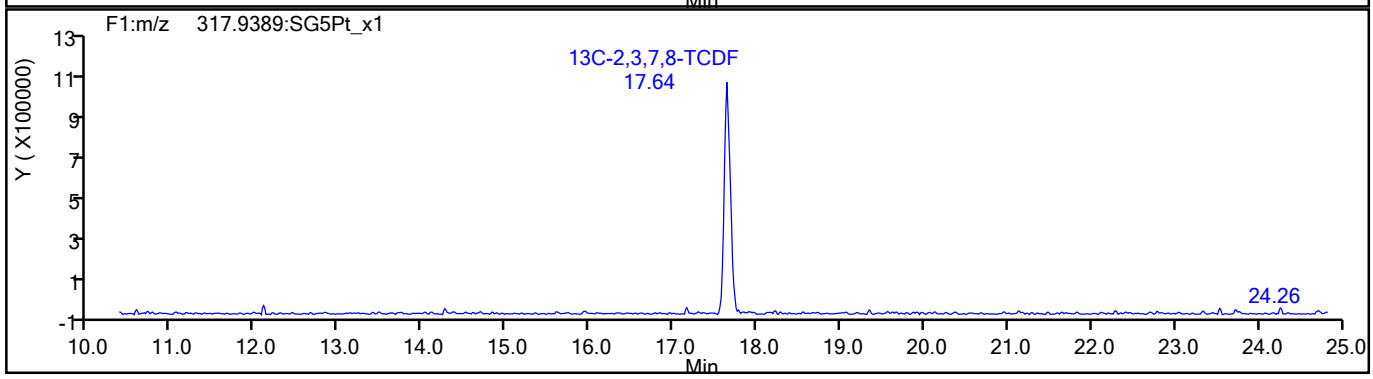

787627

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d		
Injection Date:	23-Aug-2021 09:32:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

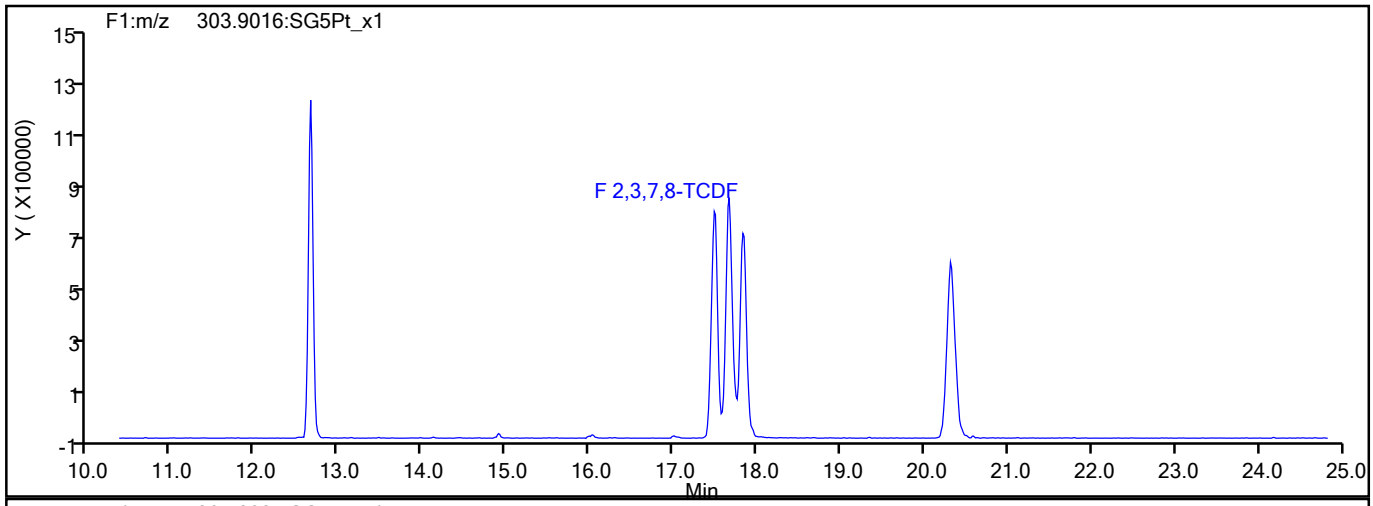

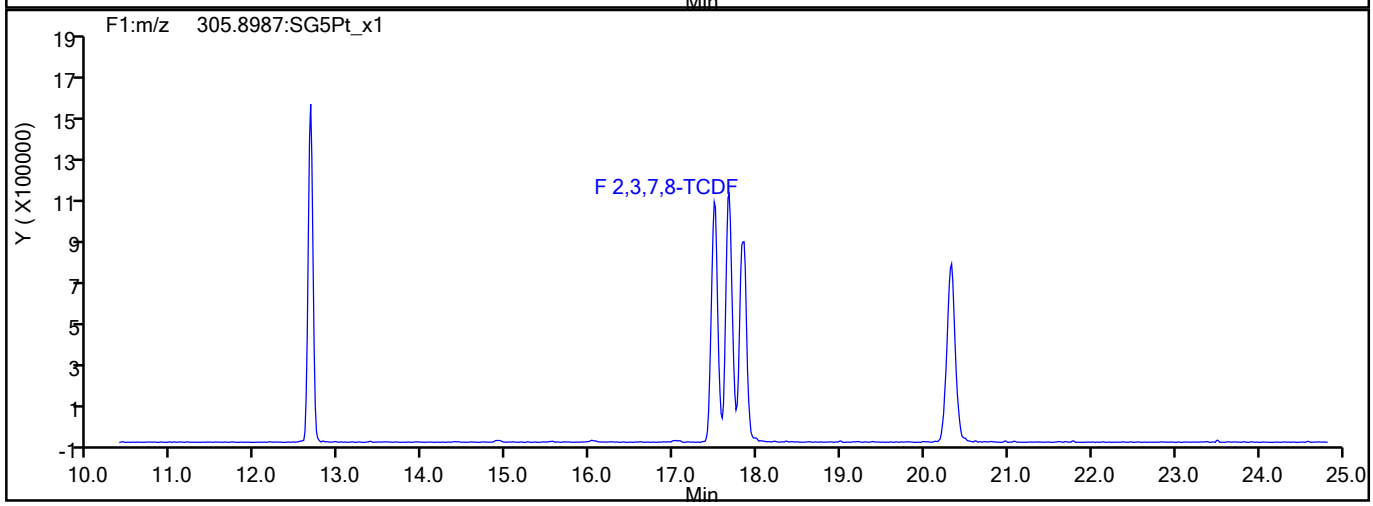

TCDF Interference Mass

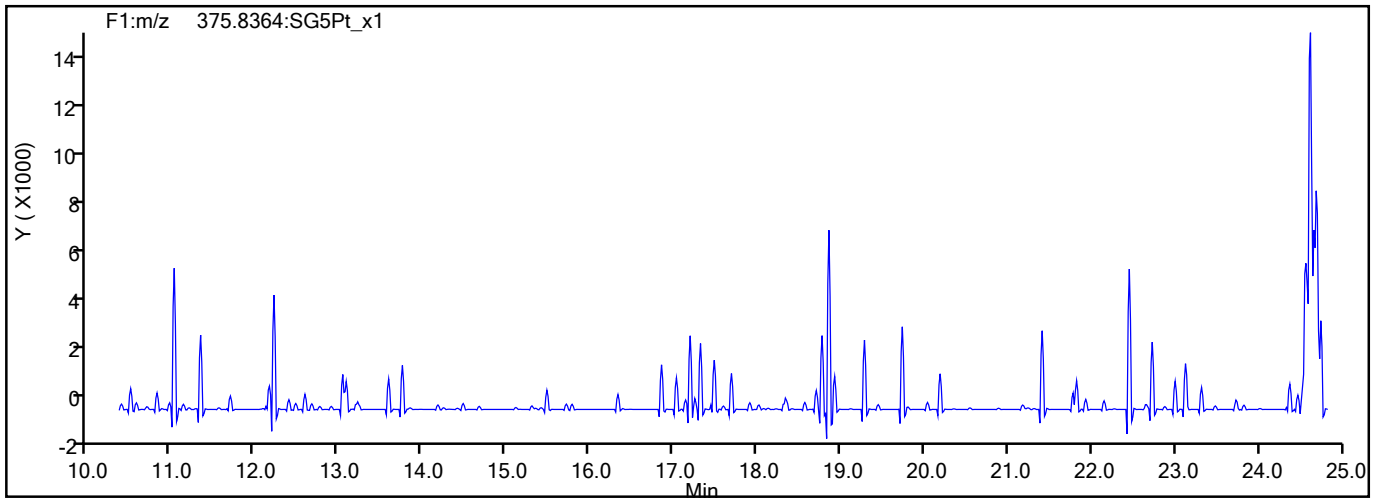

787628

Report Date: 23-Aug-2021 15:56:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210823-125551.b\23AU2111D2_001.d		
Injection Date:	23-Aug-2021 09:32:15	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518958	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

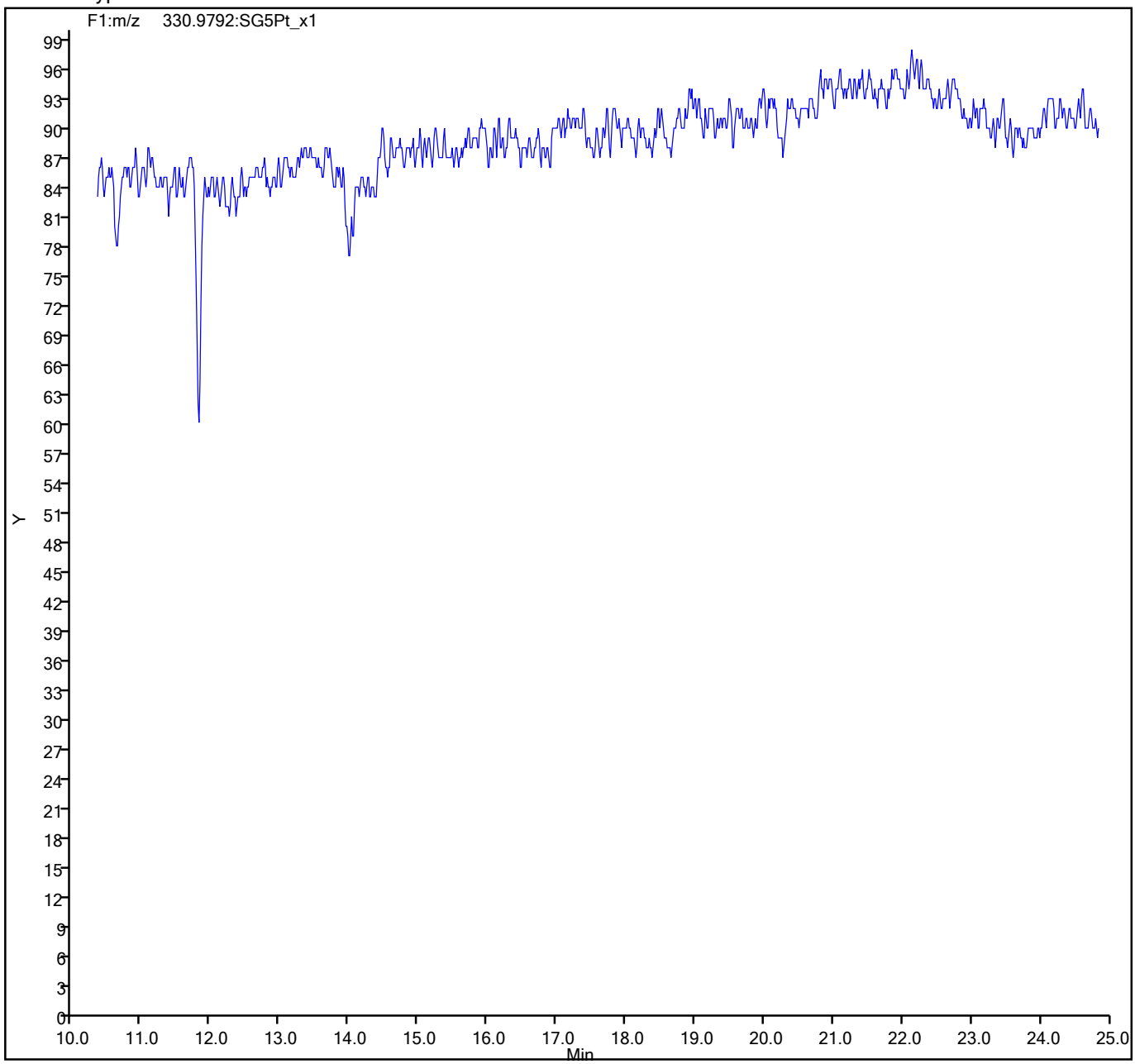

787629

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 08:28:58 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:02

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.615	20166287	0.80	1.3327					0.00	
2,3,7,8-TCDF	17.642	21336126	0.77	0.9978	42.4	42.4	0.0930	0.0930		
D 13C-2,3,7,8-TCDD	16.065	11857898	0.79	0.8749					0.00	
2,3,7,8-TCDD	16.092	14178098	0.79	1.0570	45.2	45.2	0.1126	0.1126		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 08:28:58 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:02

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.000	8953190	1656694	4027	10067	411		
317.9389	17.615	17.615	0	1.000	11213097	2115870	3038	7595	696	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.642	17.642	0	1.002	9272598	1746650	1553	3882	1125		
305.8987	17.642	17.642	0	1.002	12063528	2238983	1948	4870	1149	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	1.000	5225809	1131264	4006	10015	282		
333.9339	16.065	16.065	0	1.000	6632089	1437296	1641	4102	876	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.092	16.092	0	1.002	6258759	1439127	1606	4015	896		
321.8936	16.078	16.092	-1	1.001	7919339	1769891	1451	3627	1220	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

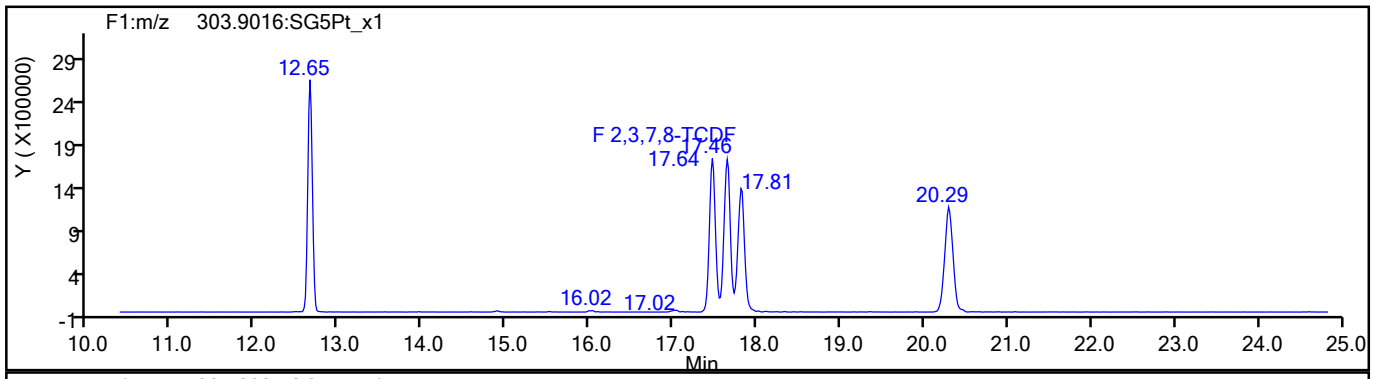

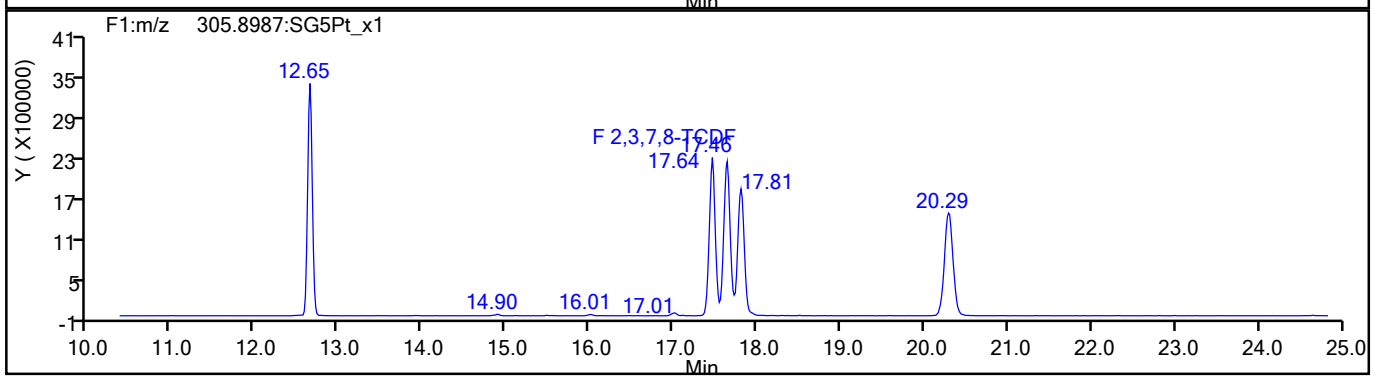

TCDF Standards

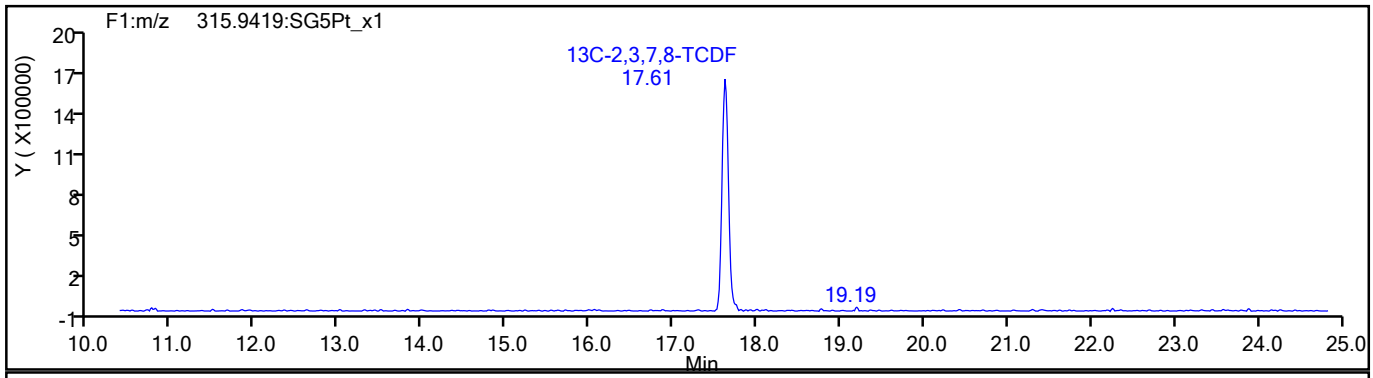

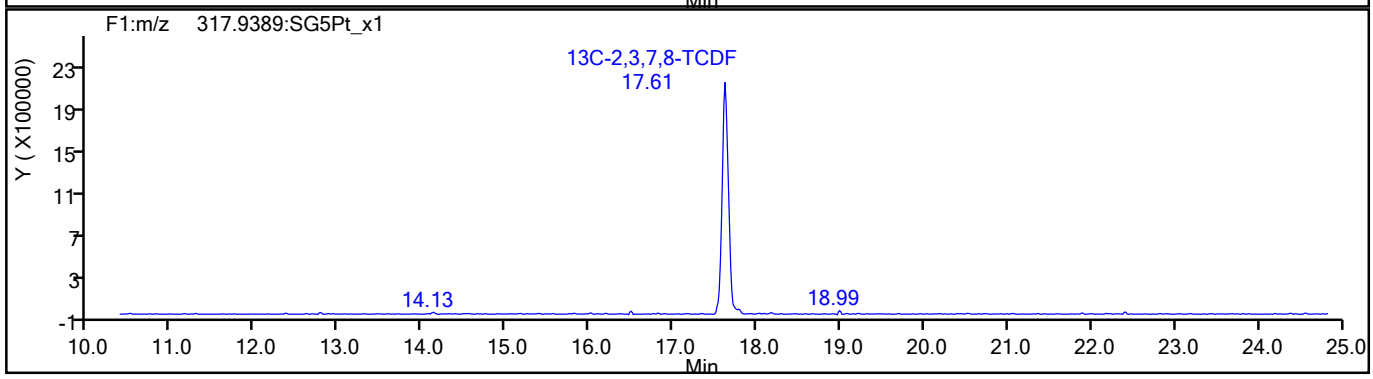

787632

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

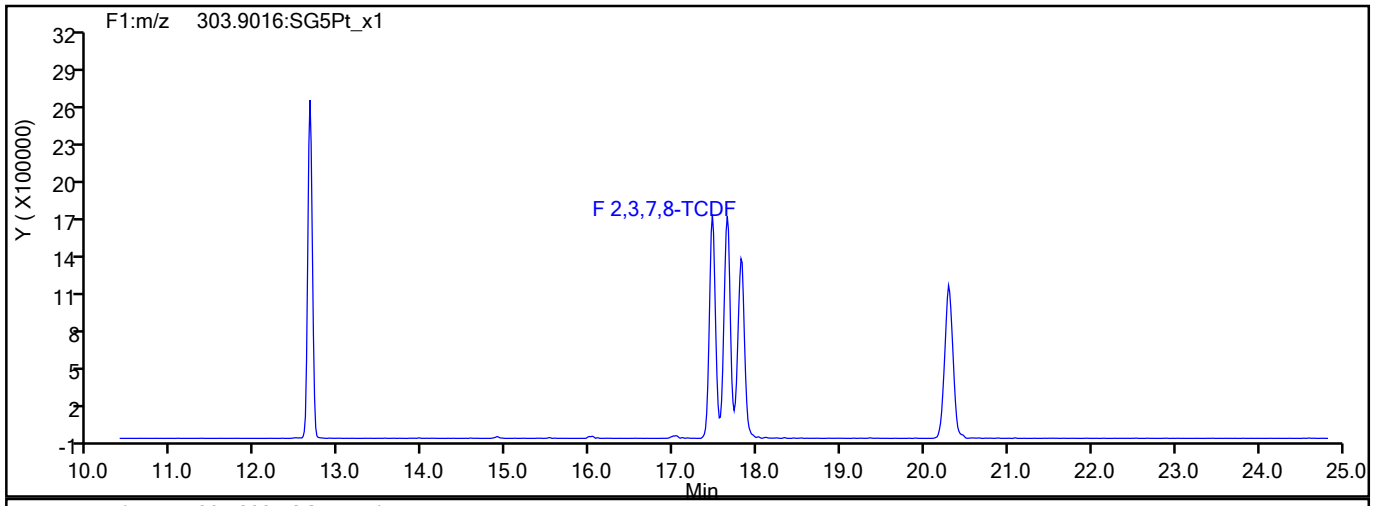

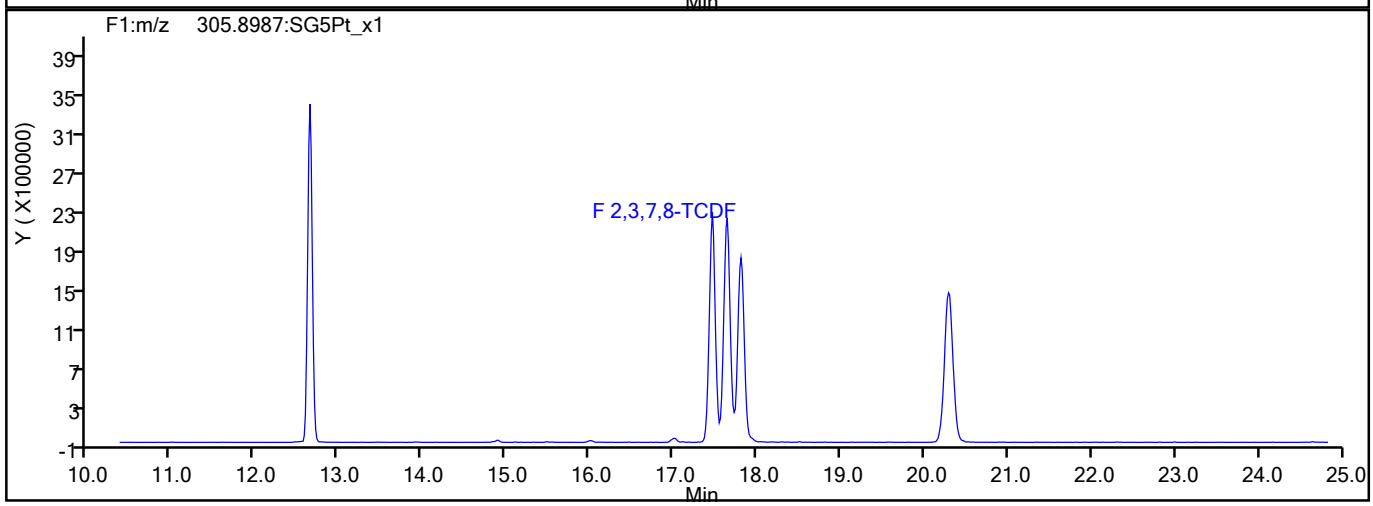

TCDF Interference Mass

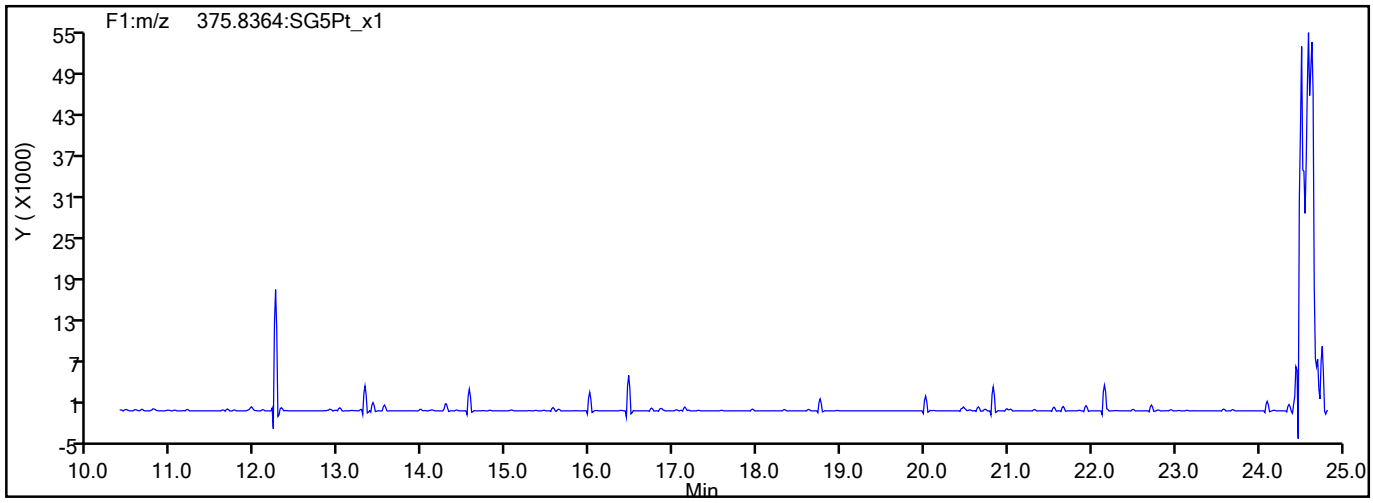

787633

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

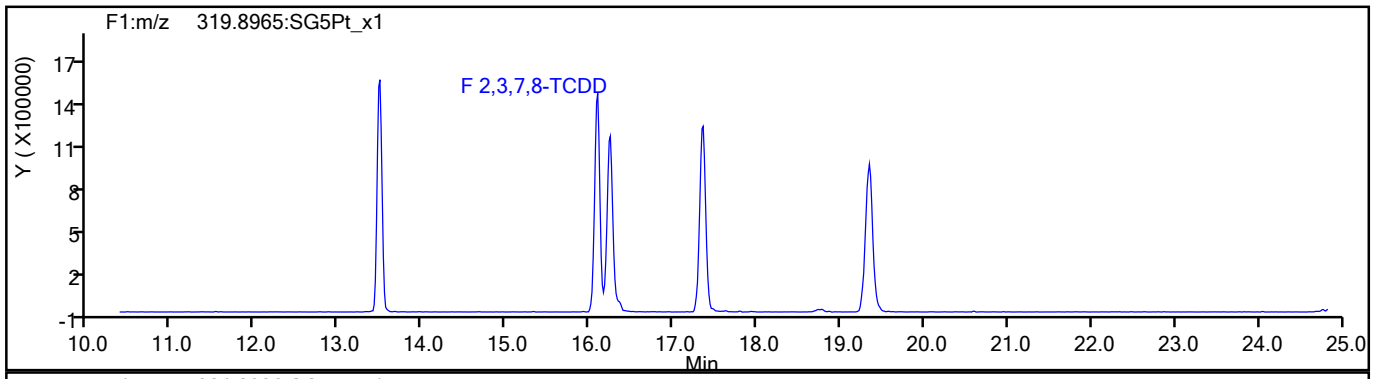

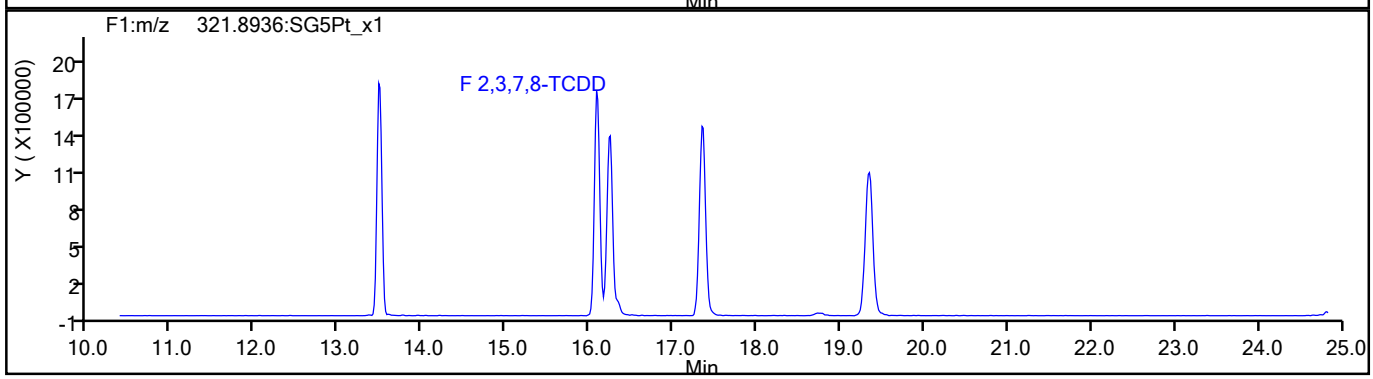

TCDD Standards

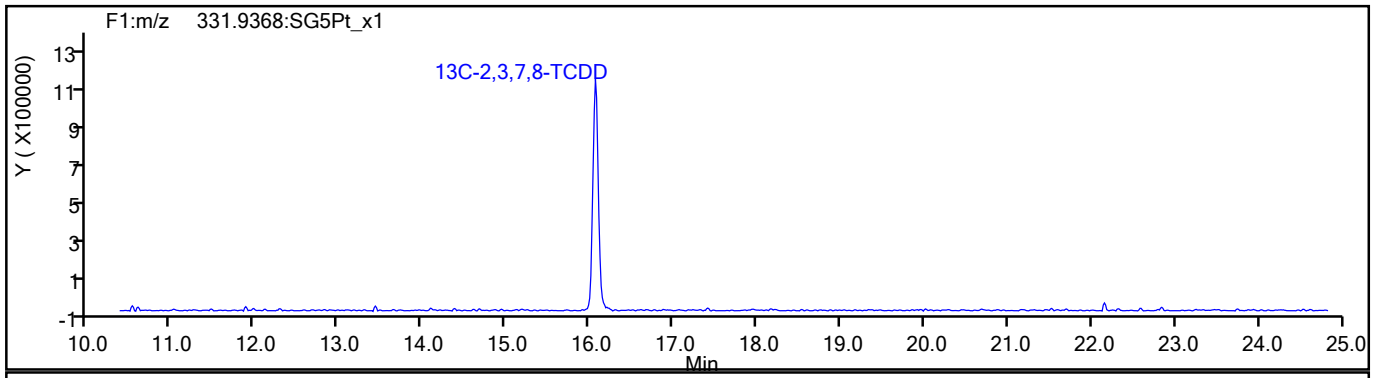

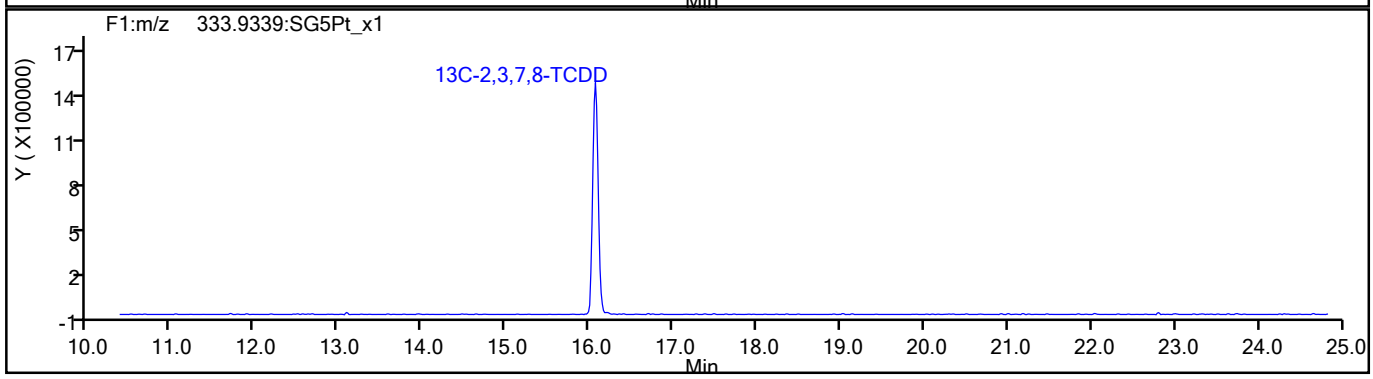

787634

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

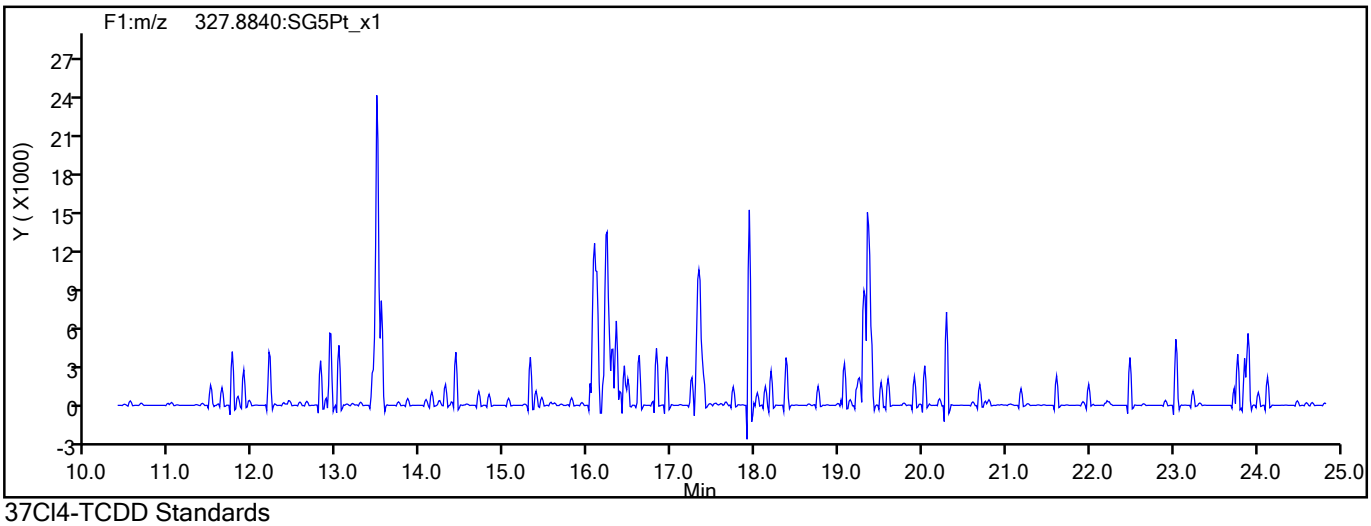

37Cl4-TCDD Standards

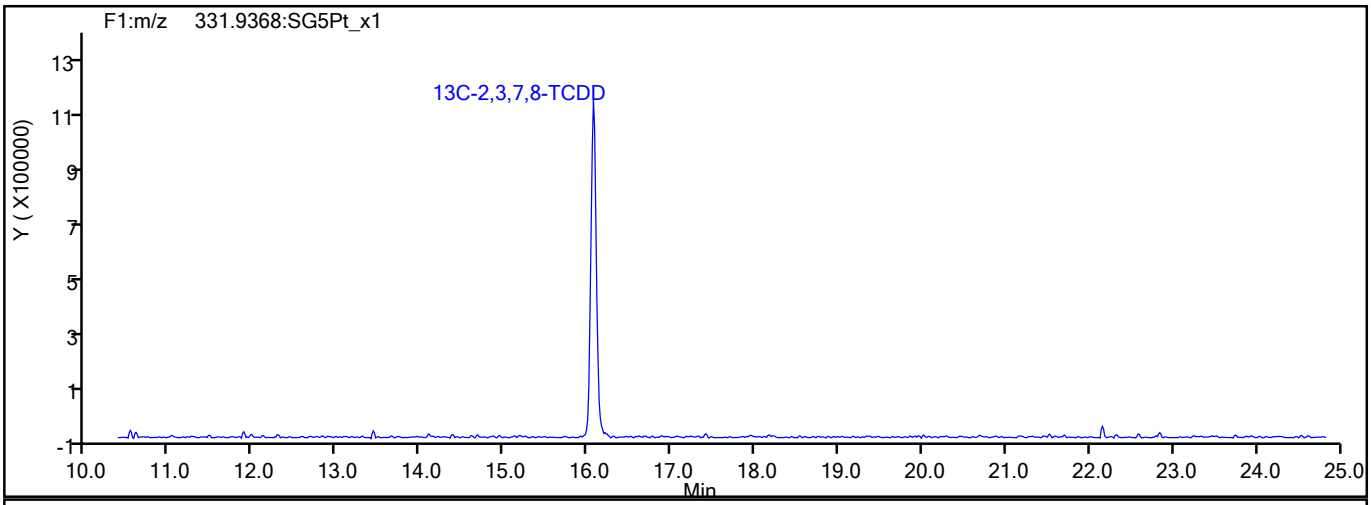

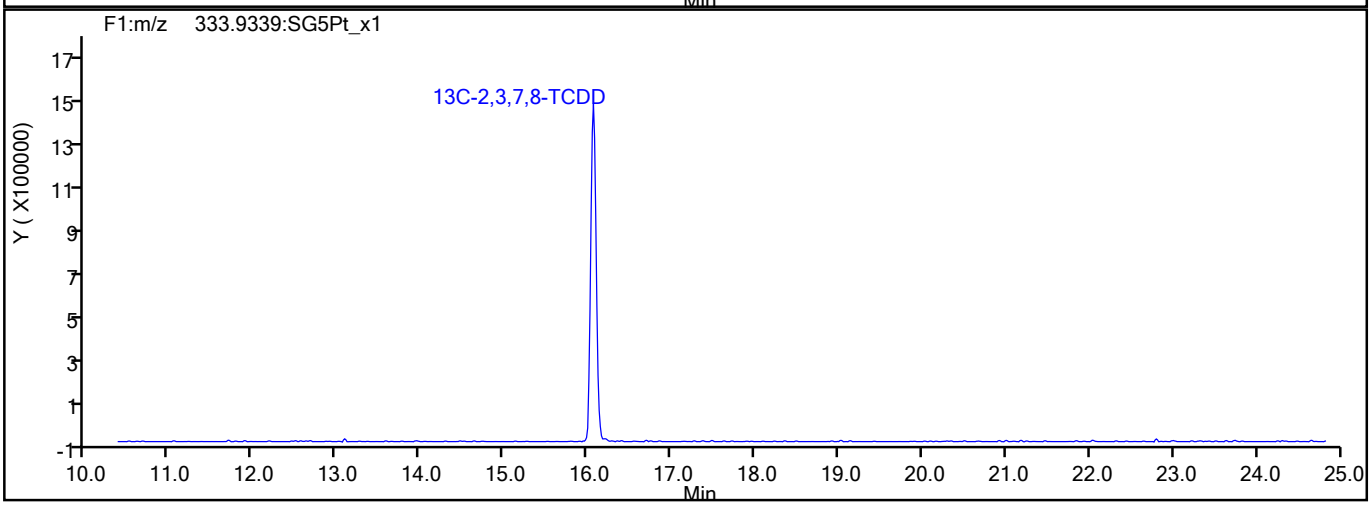

787635

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

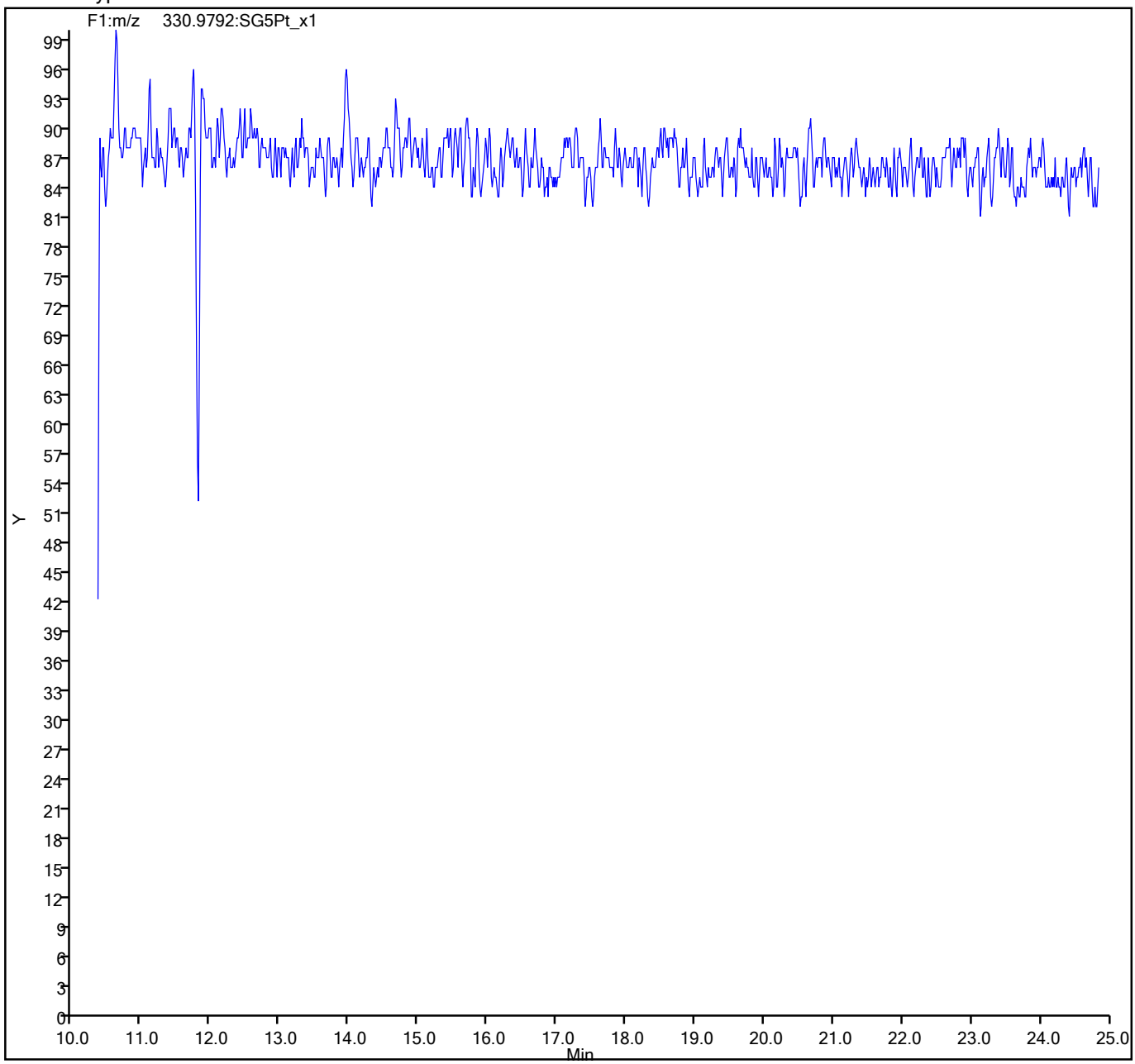

787636

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 08:48:55 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:07:58

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.620	27354850	0.80	1.3327					0.00	
2,3,7,8-TCDF	17.634	28239846	0.79	0.9978	41.4	41.4	0.0895	0.0895		
D 13C-2,3,7,8-TCDD	16.070	15199563	0.71	0.8749					0.00	
2,3,7,8-TCDD	16.084	18529027	0.79	1.0570	46.1	46.1	0.0939	0.0939		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

787637

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 25-Aug-2021 08:48:55 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:07:58

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.620	17.620	0	1.000	12156891	2249102	3968	9920	567		
317.9389	17.620	17.620	0	1.000	15197959	2989621	4477	11192	668	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.634	17.634	0	1.001	12470724	2311945	2087	5217	1108		
305.8987	17.634	17.634	0	1.001	15769122	2977863	2593	6482	1148	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.070	16.070	0	1.000	6313938	1304830	4828	12070	270		
333.9339	16.056	16.070	-1	1.000	8885625	2042860	2726	6815	749	0.71(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.084	16.084	0	1.001	8201624	1837071	1687	4217	1089		
321.8936	16.084	16.084	0	1.001	10327403	2337477	1635	4087	1430	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 25-Aug-2021 13:23:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

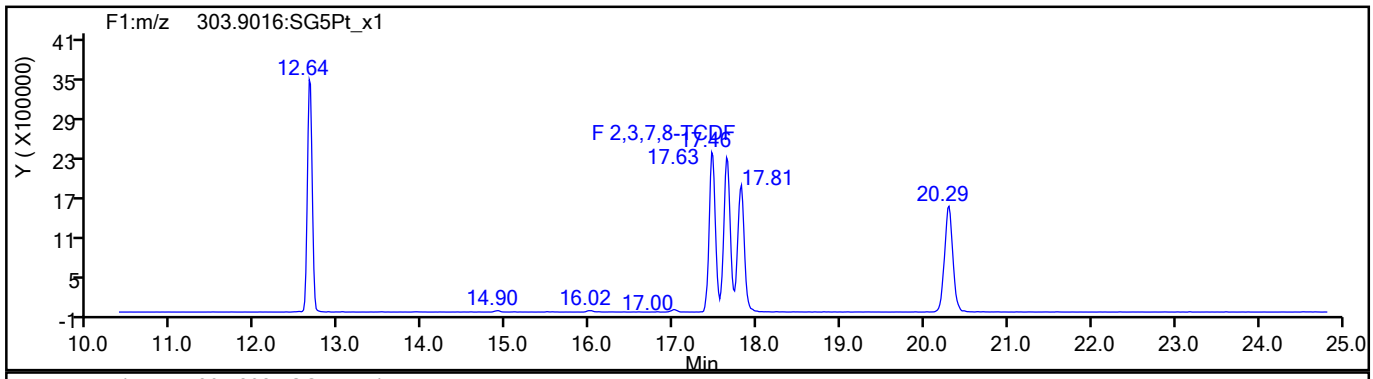

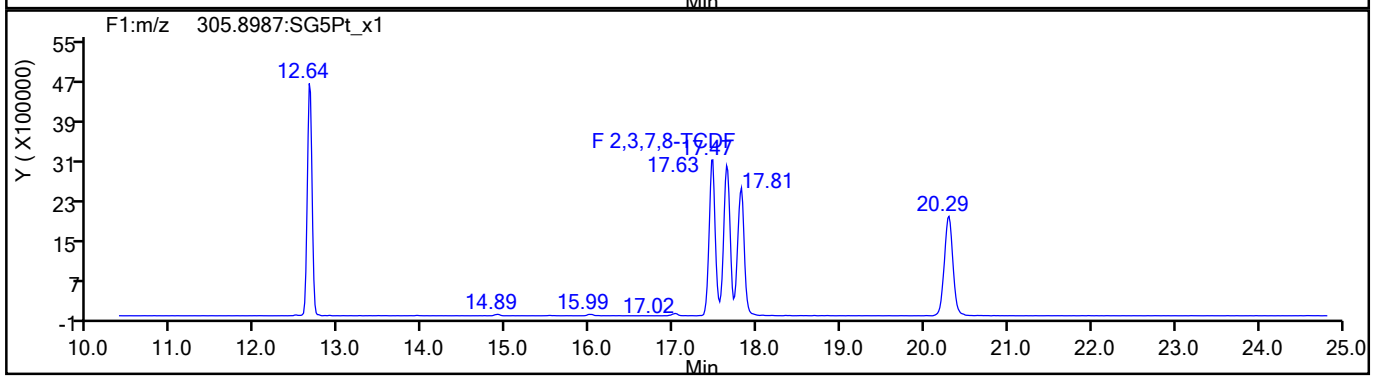

TCDF Standards

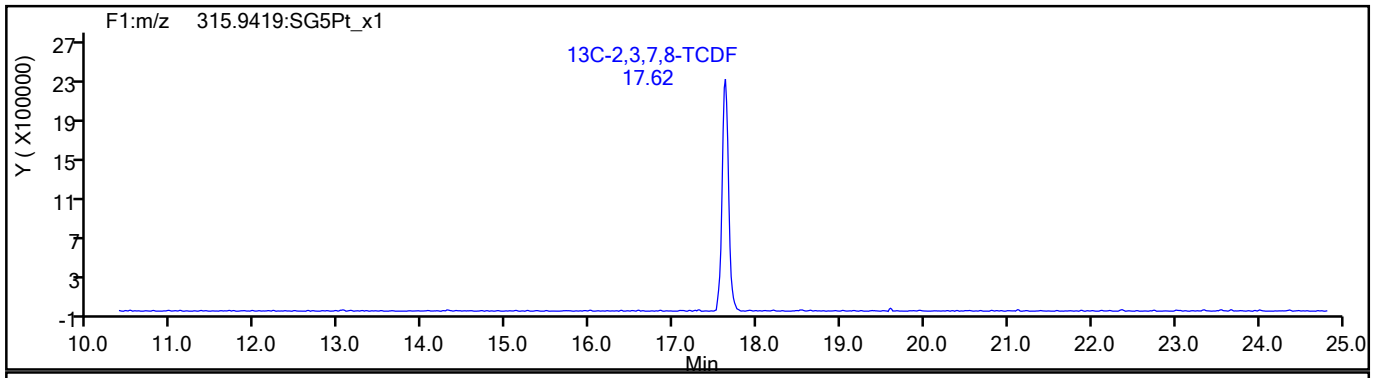

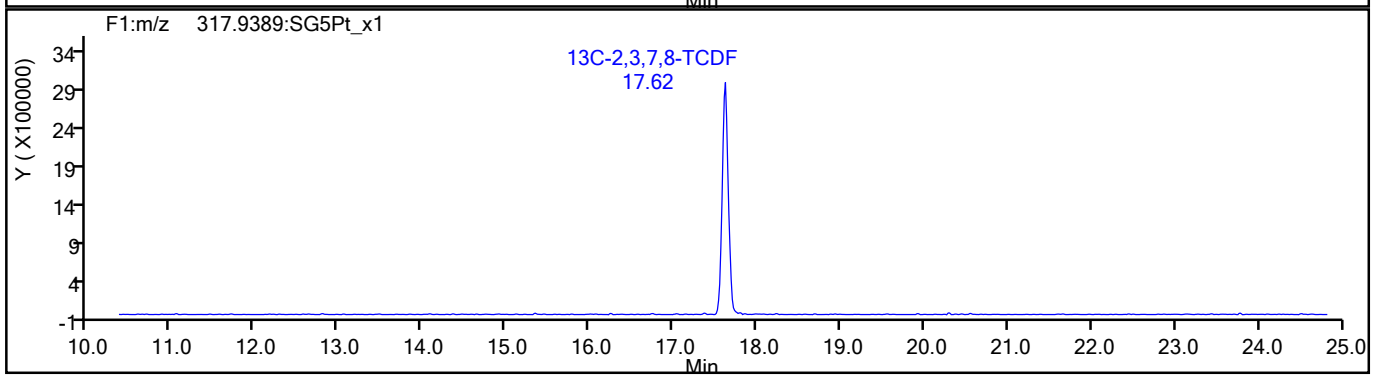

787639

Report Date: 25-Aug-2021 13:23:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

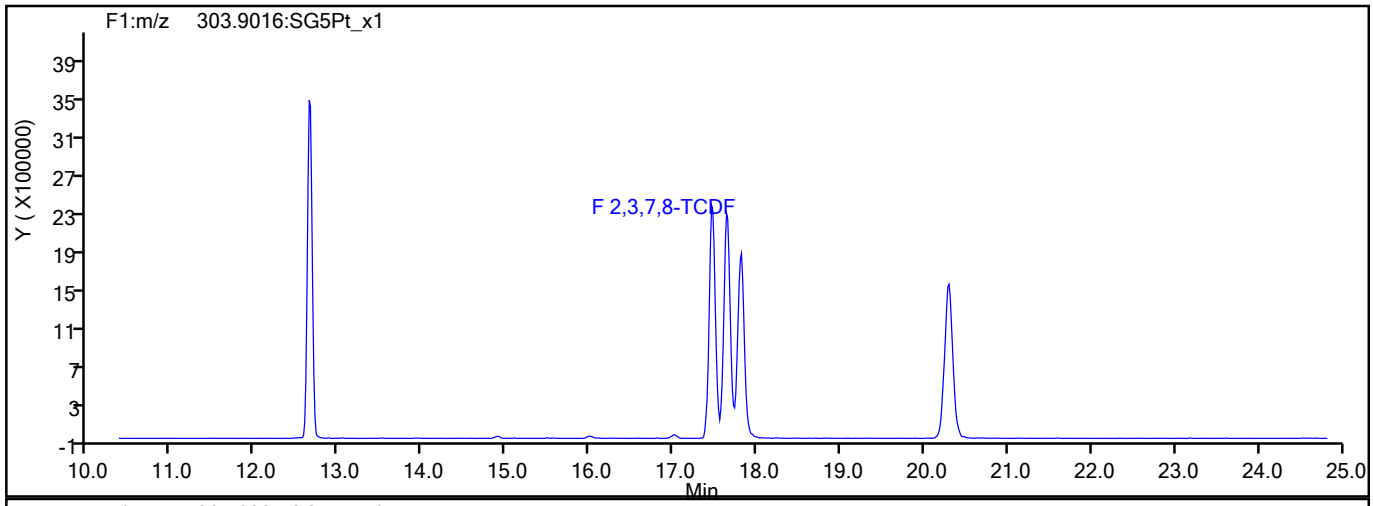

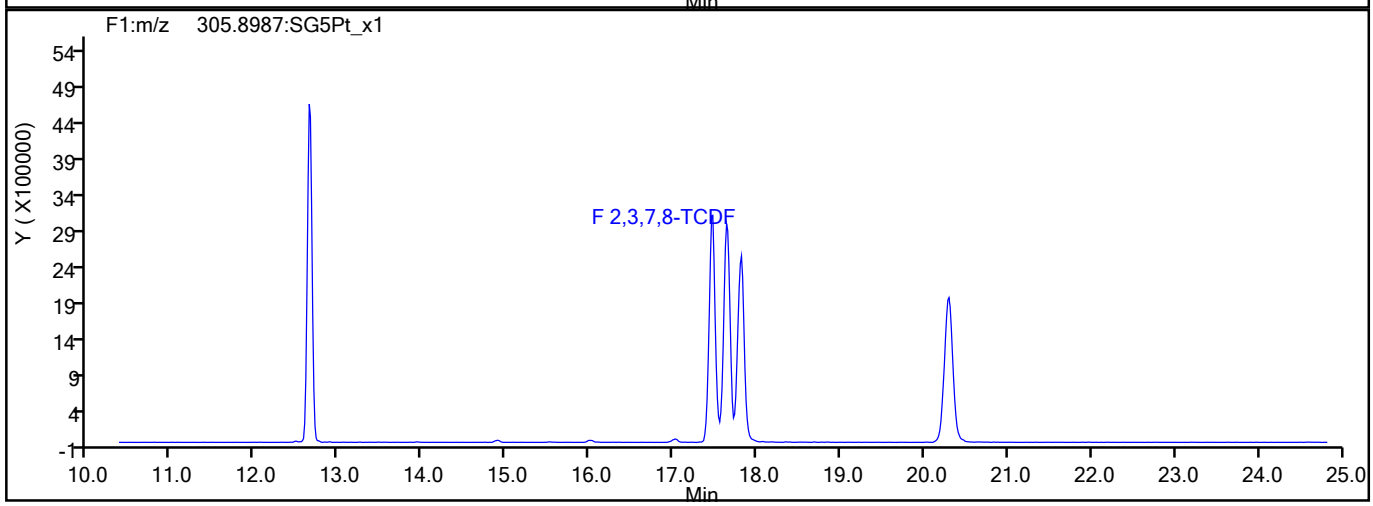

TCDF Interference Mass

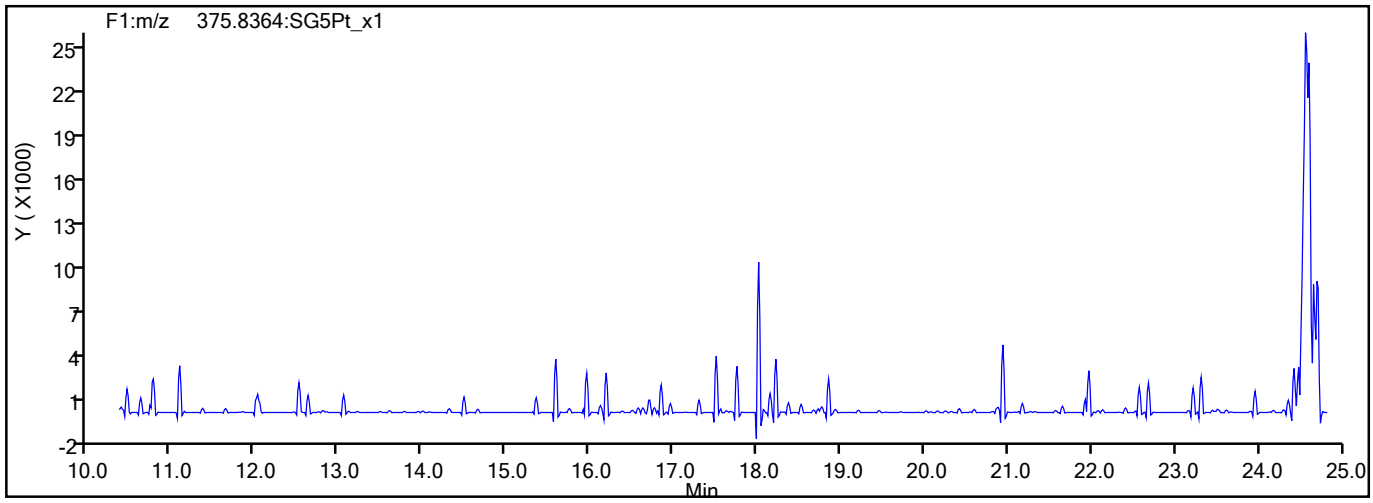

787640

Report Date: 25-Aug-2021 13:23:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

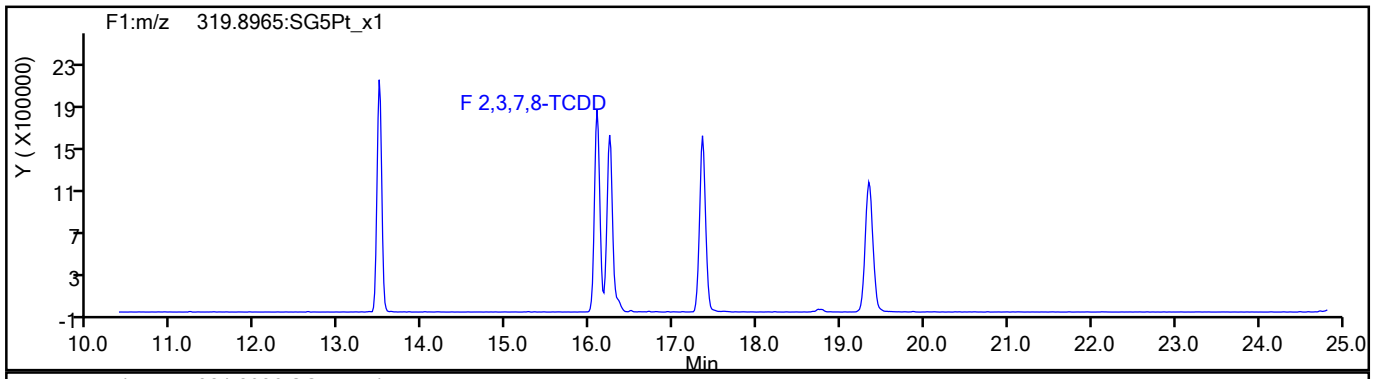

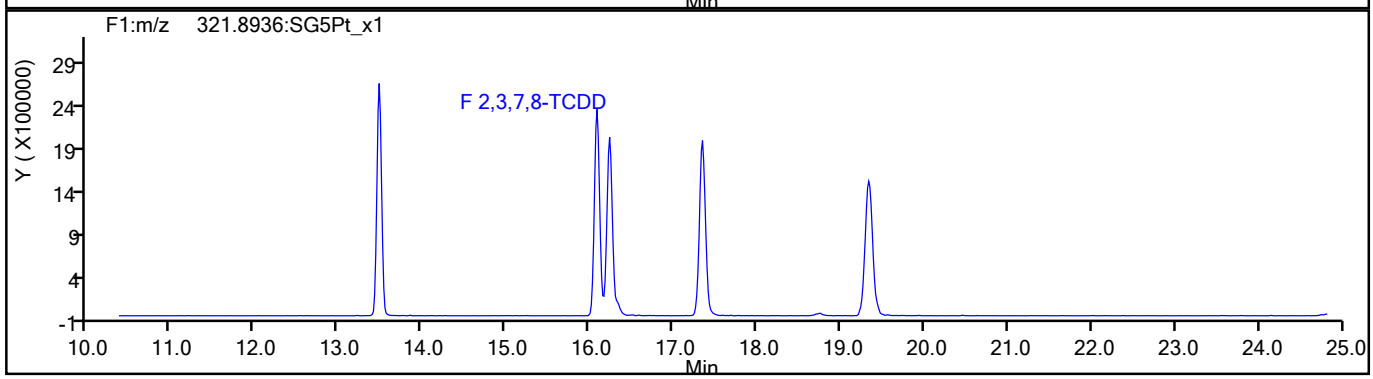

TCDD Standards

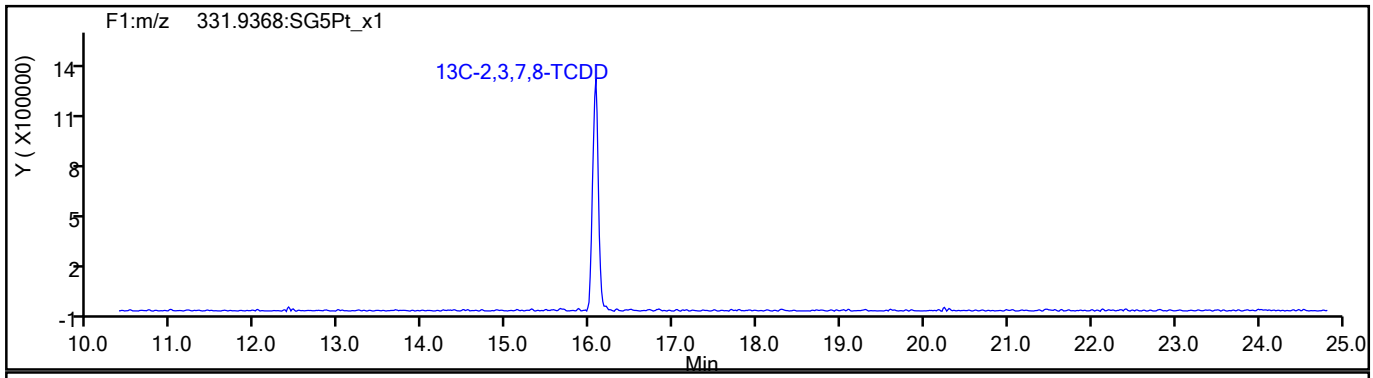

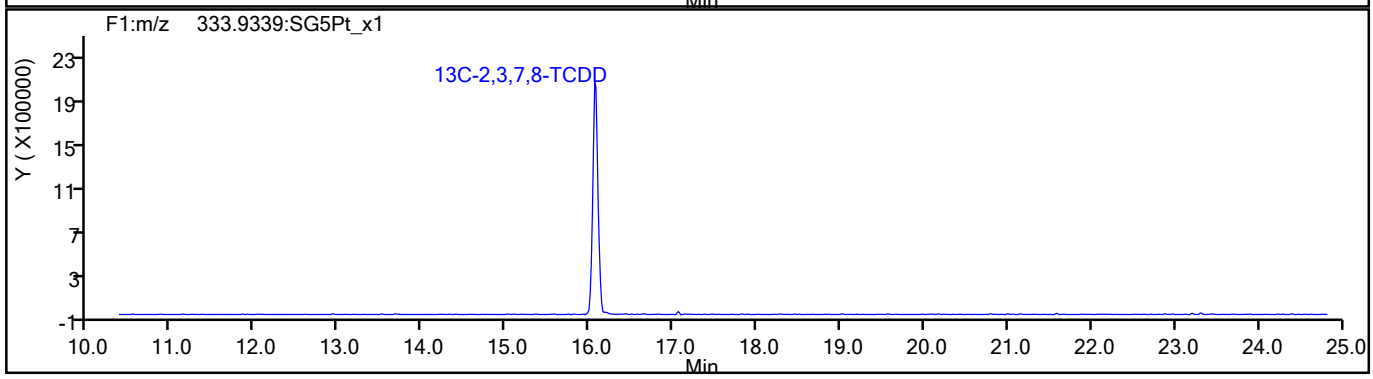

787641

Report Date: 25-Aug-2021 13:23:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

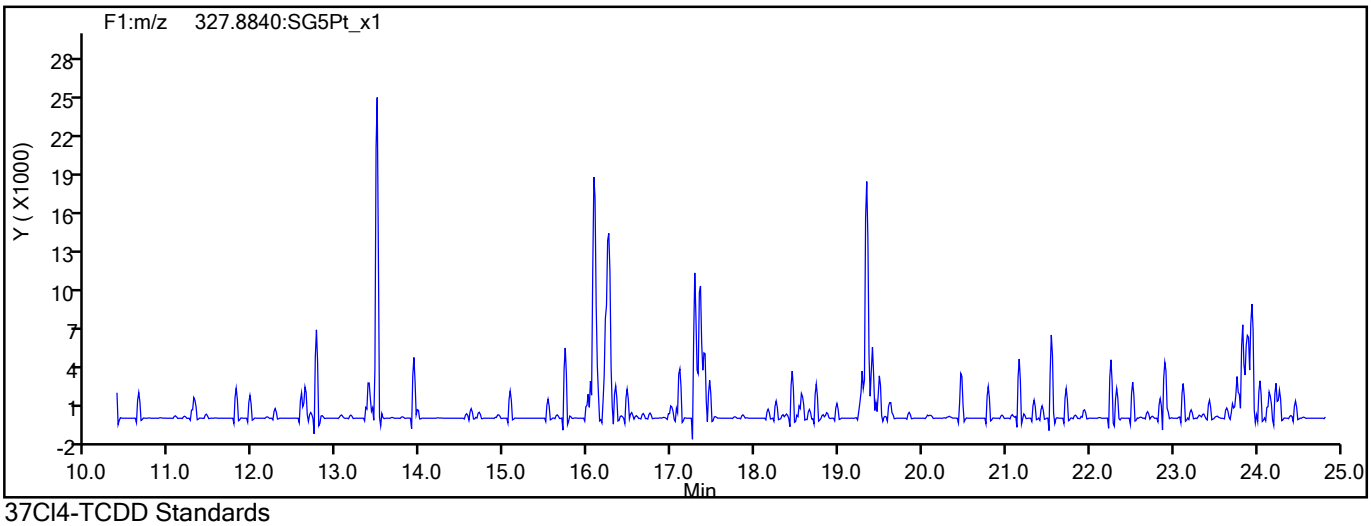

37Cl4-TCDD Standards

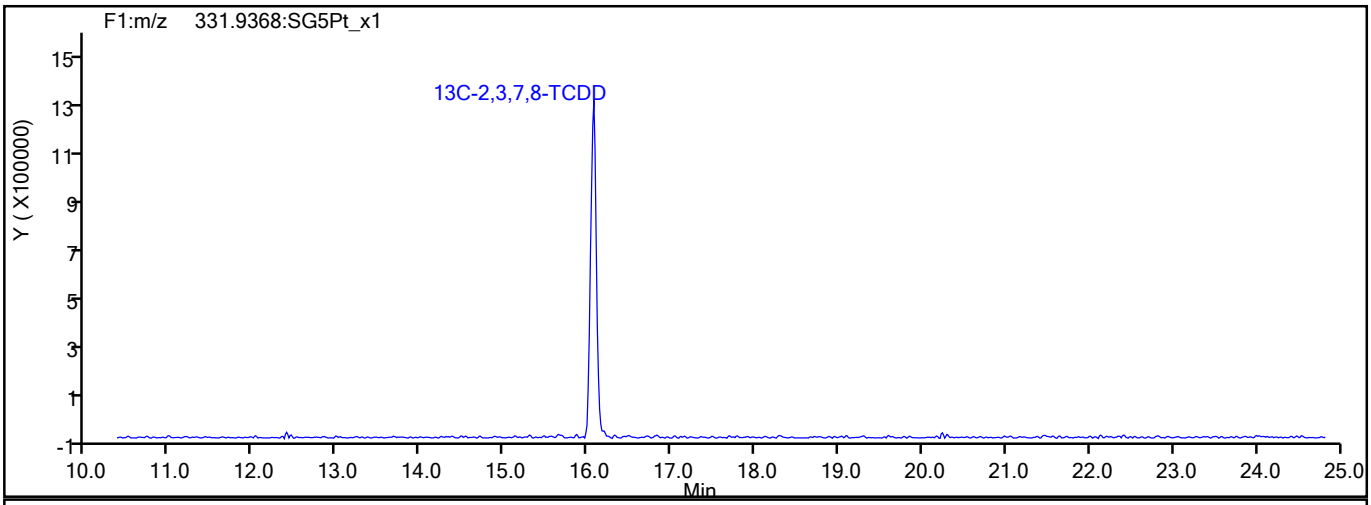

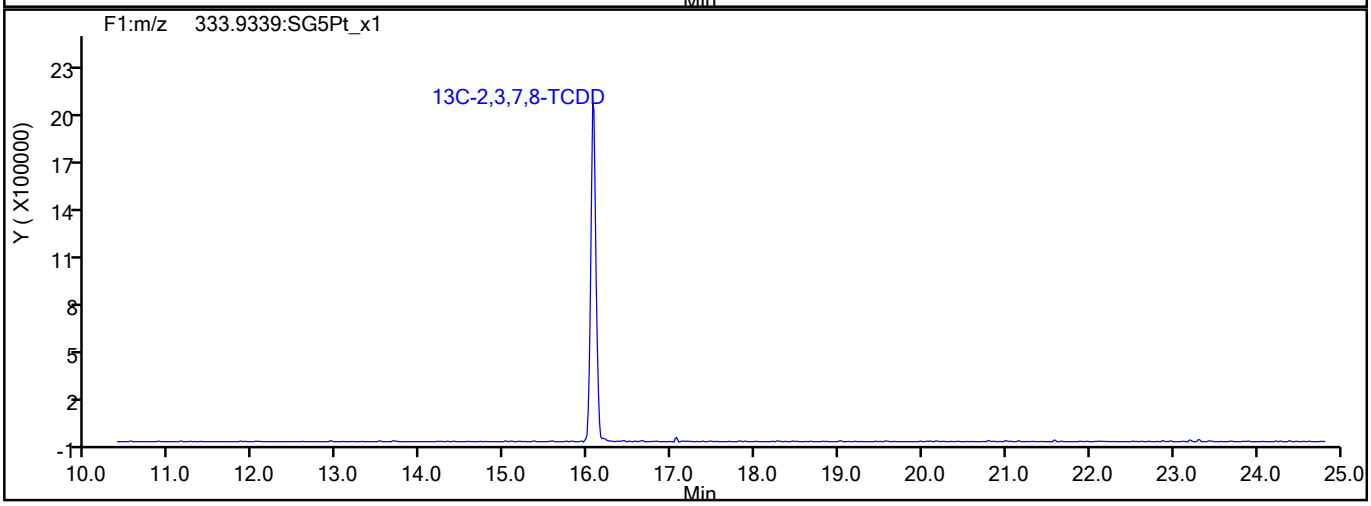

787642

Report Date: 25-Aug-2021 13:23:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_001.d		
Injection Date:	25-Aug-2021 08:48:55	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519650	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

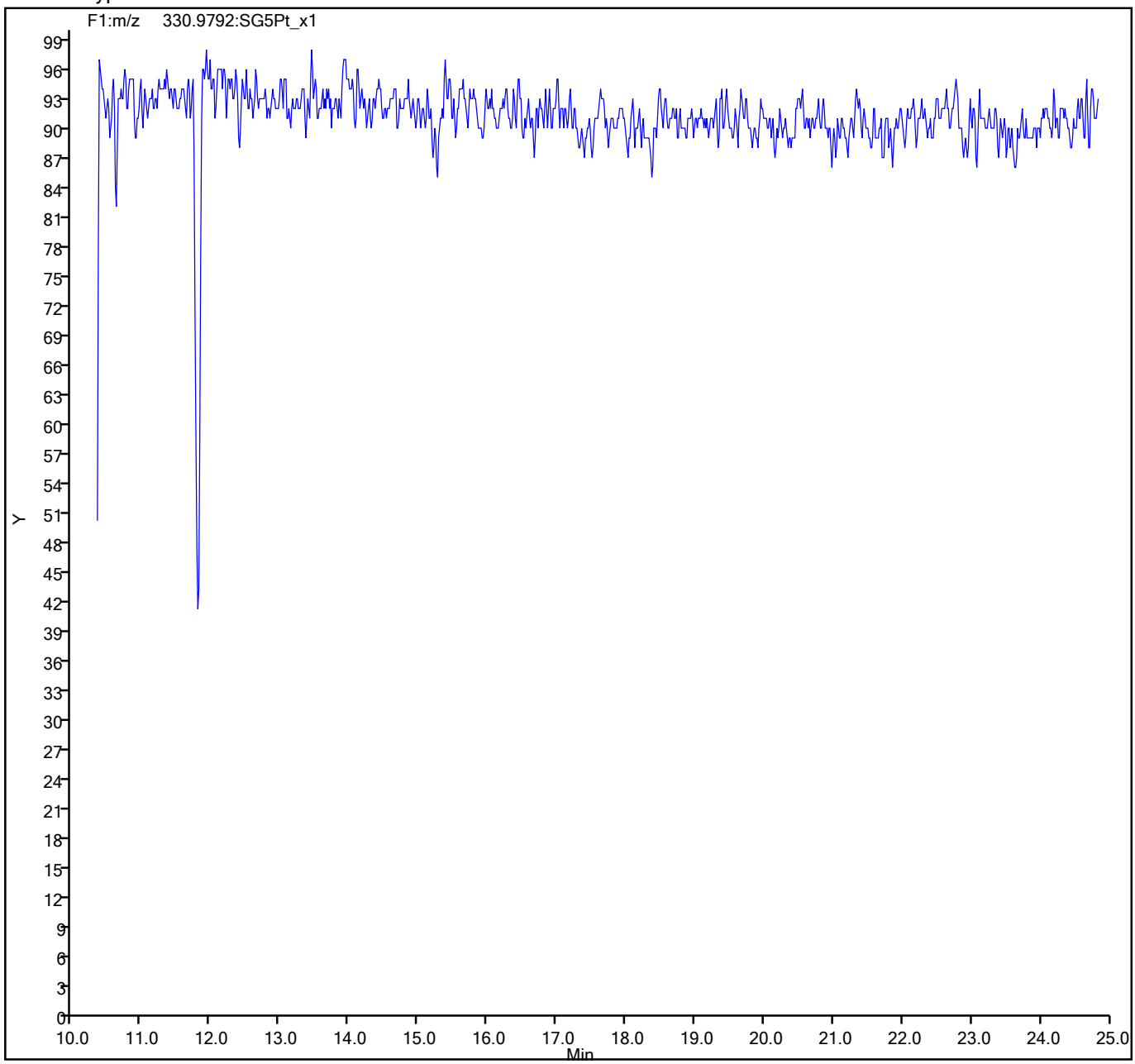

787643

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	19.630	956054	0.80	1.3459					0.00	
2,3,7,8-TCDF	19.673	1998250	0.78	1.0802	77.4	77.4	0.2129	0.2129		
A Non-2,3,7,8-sub-TCDF	19.213	12503	0.80	1.0802	0.4843	0.4843	0.2129	0.4843		
S Total TCDF					77.9	77.9	0.2129	0.2129		
D 13C-2,3,7,8-TCDD	20.918	596833	0.84	0.9317					0.00	
2,3,7,8-TCDD	20.952	682873	0.80	1.0753	42.6	42.6	0.1742	0.1742		
A Non-2,3,7,8-sub-TCDD	20.025						0.1742	0.1742		
S Total TCDD					42.6	42.6	0.1742	0.1742		
A F1 PeCDFs	24.098						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	27.473	14452	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	27.656						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	34.470						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	34.896	7360	1.11	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.309	643675	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.598	537364	1.05	1.3092						
A Non-2,3,7,8-sub-HpCDF	38.954						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.295	435480	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	38.962						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.592	1199920	0.78							
1,3,6,8-TCDD	17.122	706482	0.80							
2,3,4,7-TCDF	19.673	1998250	0.78							
1,2,3,7-TCDD	20.746	567957	0.79							
1,2,3,9-TCDF	21.124	860286	0.78							
1,2,3,9-TCDD	21.227	705730	0.80							
1,2,8,9-TCDF	22.833	906629	0.79							

787644

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	22.927	290535								
1,3,4,6,8-PeCDF	23.417	833719	1.57							
1,2,4,7,9-PeCDD	25.443	580592	1.56							
1,2,3,8,9-PeCDD	29.870	532099	1.58							
1,2,3,8,9-PeCDF	30.030	680377	1.58							
1,2,3,4,6,8-HxCDF	32.430	811785	1.23							
1,2,4,6,7,9-HxCDD	33.644	577087	1.25							
1,2,3,4,6,7-HxCDD	36.148	580699	1.24							
1,2,3,4,8,9-HxCDF	36.510	710754	1.25							
1,2,3,4,6,7,9-HpCDD	38.629	486479	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	19.630	19.630	0	1.000	423520	68874	224	560	307		
317.9389	19.639	19.630	1	1.000	532534	85912	93	232	924	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.673	19.646	2	1.002	874984	129163	148	370	873		
305.8987	19.673	19.646	2	1.002	1123266	166698	208	520	801	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	23.417	19.213	252	1.193	5547	1019	148	370	7		
305.8987	23.417	19.213	252	1.193	6956	1132	208	520	5	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.918	20.918	0	1.000	272607	40247	106	265	380		
333.9338	20.927	20.918	1	1.000	324226	50518	46	115	1098	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	20.952	20.939	1	1.002	302613	44836	90	225	498		
321.8936	20.952	20.939	1	1.002	380260	55991	80	200	700	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.025						90	225			
321.8936	20.025						80	200			
A F1 PeCDFs											
339.8597	24.098						6	15			
341.8567	24.098						22	55			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.114	27.473	-141	1.000	1272	231	55	137	4		
341.8567	25.123	27.473	-141	1.000	842	169	40	100	4	1.51(1.32-1.78)	
339.8597	26.033	27.473	-86	1.000	1834	347	55	137	6		
341.8567	26.067	27.473	-84	1.000	1408	247	40	100	6	1.30(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	26.623	27.473	-51	1.000	3412	452	55	137	8		
341.8567	26.606	27.473	-52	1.000	2424	350	40	100	9	1.41(1.32-1.78)	
339.8597	27.205	27.473	-16	1.000	2495	380	55	137	7		
341.8567	27.188	27.473	-17	1.000	1367	235	40	100	6	1.83(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	27.656						71	177			
357.8516	27.656						35	87			
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						89	222			
375.8178	34.470						66	165			
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.875	34.896	-1	1.000	3879	711	57	142	12		
391.8127	34.866	34.896	-2	1.000	3481	707	48	120	15	1.11(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	330574	91984	132	330	697		
409.7788	38.309	38.317	0	1.000	313101	85674	117	292	732	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	275340	83564	132	330	633		
409.7788	39.598	39.608	-1	1.000	262024	79894	117	292	683	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						132	330			
409.7788	38.954						117	292			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.295	39.301	0	1.000	225083	68745	95	237	724		
425.7737	39.295	39.301	0	1.000	210397	63713	87	217	732	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.962						95	237			
425.7737	38.962						87	217			
1,3,6,8-TCDF											
303.9016	15.592	15.592	0		526894	111834	148	370	756		
305.8987	15.583	15.592	-1		673026	142703	208	520	686	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.122	17.122	0		313043	59426	90	225	660		
321.8936	17.122	17.122	0		393439	76022	80	200	950	0.80(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	19.673	19.673	0		874984	129163	148	370	873		
305.8987	19.673	19.673	0		1123266	166698	208	520	801	0.78(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	20.746	20.746	0		250988	38559	90	225	428		
321.8936	20.746	20.746	0		316969	48950	80	200	612	0.79(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.124	21.124	0		377767	55151	148	370	373		
305.8987	21.124	21.124	0		482519	70000	208	520	337	0.78(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	21.227	21.227	0		313060	44546	90	225	495		
321.8936	21.219	21.227	-1		392670	57474	80	200	718	0.80(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	22.833	22.833	0		399193	52133	148	370	352		
305.8987	22.833	22.833	0		507436	68524	208	520	329	0.79(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	22.927	22.927	0		290535	38894	90	225	432		
1,3,4,6,8-PeCDF											
339.8597	23.417	23.417	0		509034	87286	6	15	14548		
341.8567	23.417	23.417	0		324685	55380	22	55	2517	1.57(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	25.443	25.443	0		354036	58724	71	177	827		
357.8516	25.443	25.443	0		226556	37367	35	87	1068	1.56(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	29.870	29.870	0		325767	47119	71	177	664		
357.8516	29.870	29.870	0		206332	29856	35	87	853	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.030	30.030	0		416382	57063	55	137	1038		
341.8567	30.030	30.030	0		263995	36391	40	100	910	1.58(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	32.430	32.430	0		447956	61361	89	222	689		
375.8178	32.421	32.430	-1		363829	50870	66	165	771	1.23(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	33.644	33.644	0		320872	55052	57	142	966		
391.8127	33.644	33.644	0		256215	45045	48	120	938	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.148	36.148	0		321739	75271	57	142	1321		
391.8127	36.148	36.148	0		258960	61340	48	120	1278	1.24(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.510	36.510	0		394836	96545	89	222	1085		
375.8178	36.510	36.510	0		315918	78144	66	165	1184	1.25(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.629	38.629	0		248662	72309	95	237	761		
425.7737	38.629	38.629	0		237817	69783	87	217	802	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	956054	154786

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	956054	154786

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
23.417	5547	1019	6956	1132	0.4843	0.80	
Signal Totals:							
	5547	1019	6956	1132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12503	2151				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4843 = (12503 * 40.000) / (956054 * 1.080)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.114	1272	231	842	169		1.51	
26.033	1834	347	1408	247		1.30	R
26.623	3412	452	2424	350		1.41	
27.205	2495	380	1367	235		1.83	R
Signal Totals:							
	9013	1410	6041	1001			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15054	2411				1.49	RQ
	14452	2371					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (15054 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (14452 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 34.896

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.875	3879	711	3481	707		1.11	
Signal Totals:							
	3879	711	3481	707			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7360	1418				1.11	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (7360 * 0.0) / (0 * 0.000)

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

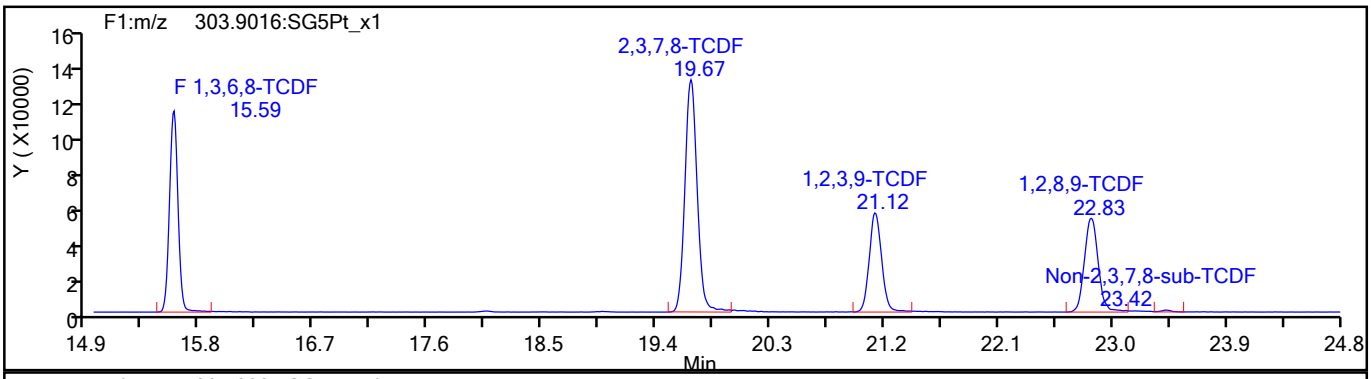

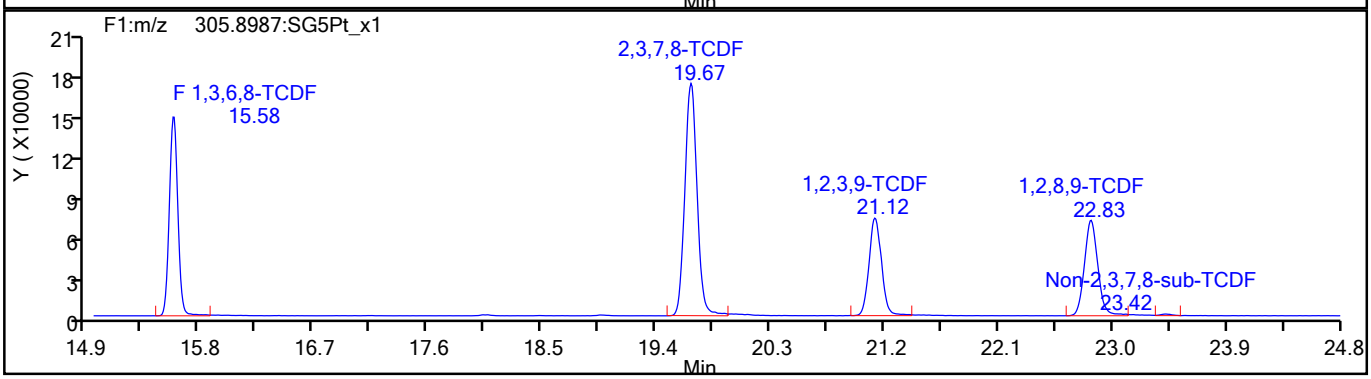

TCDF Standards

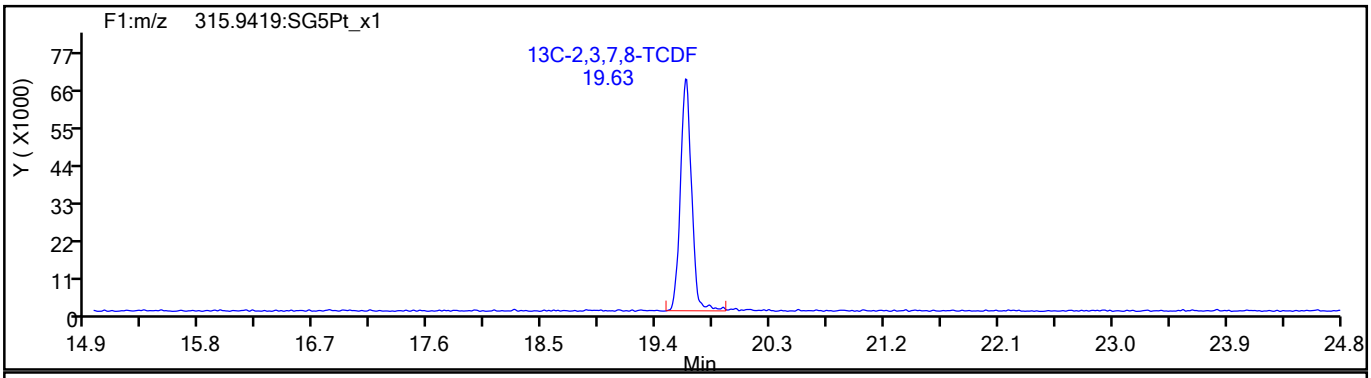

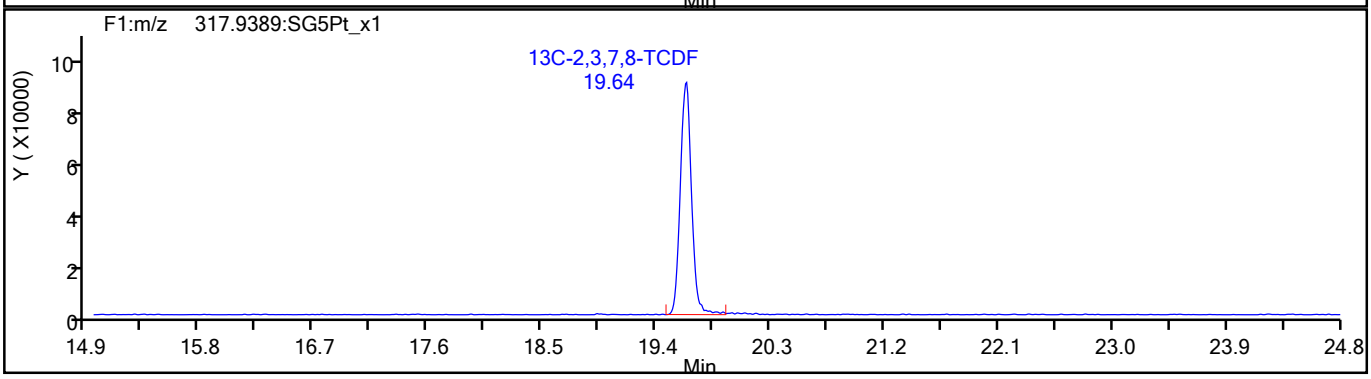

787652

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

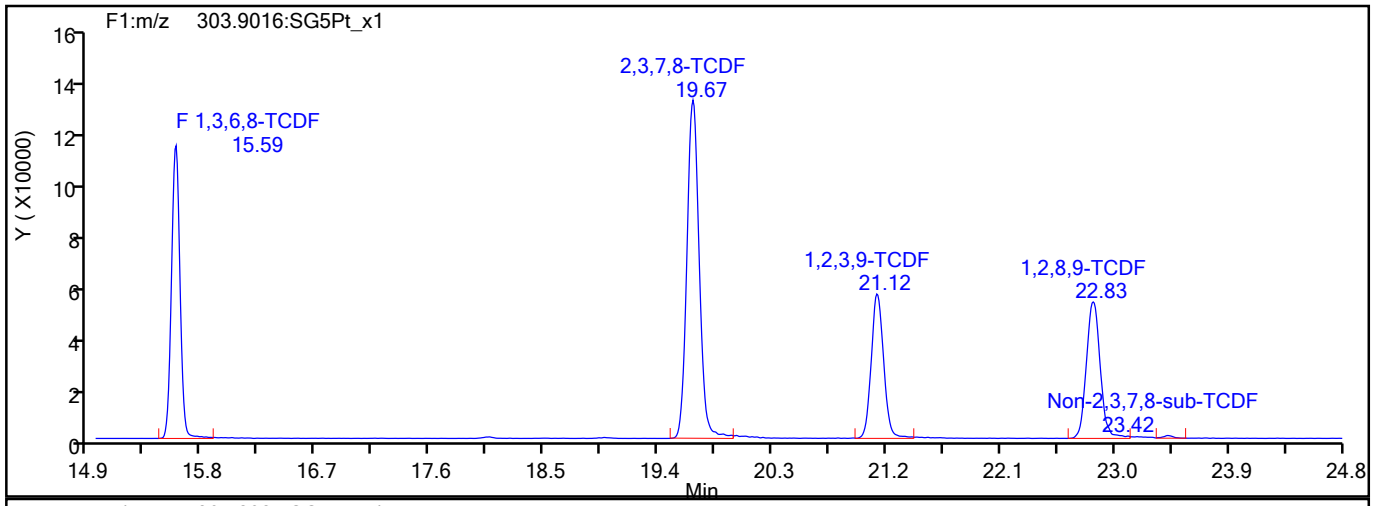

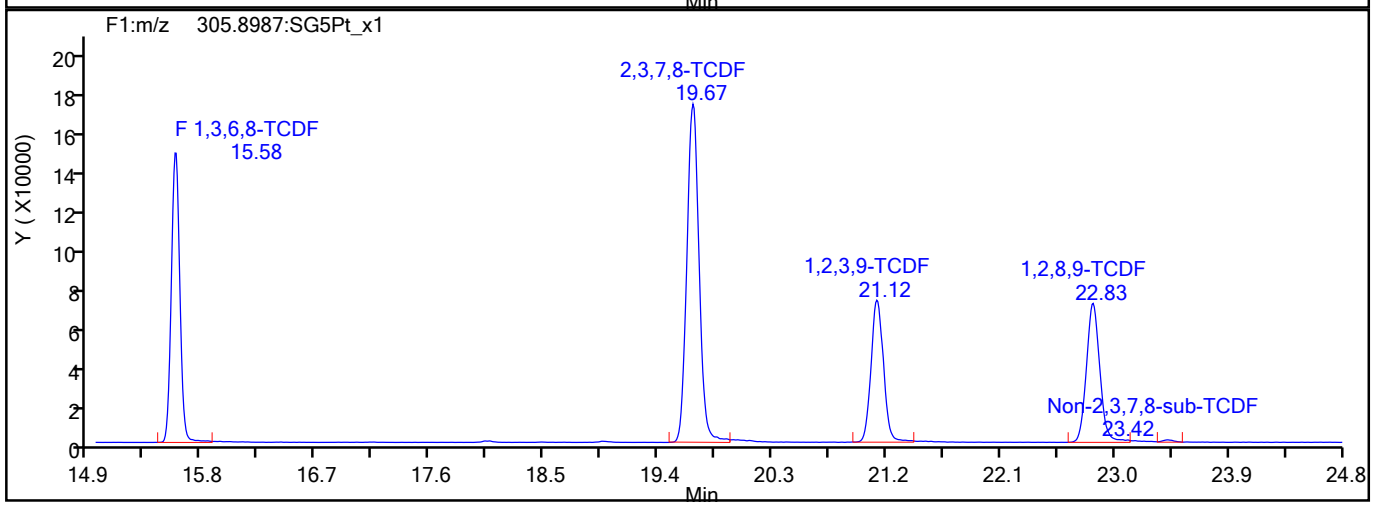

TCDF Interference Mass

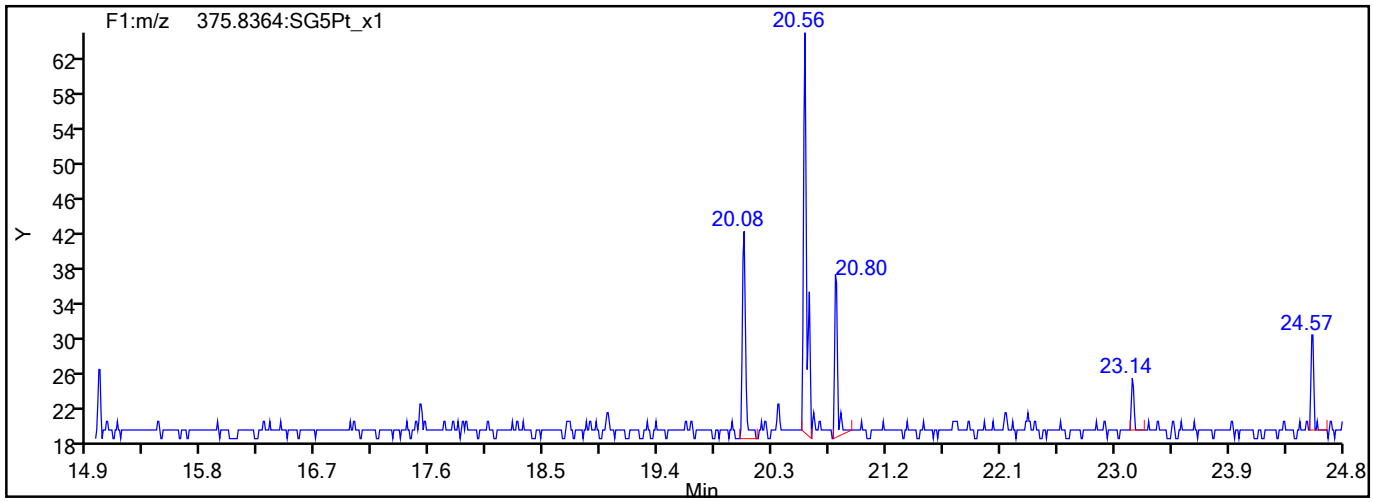

787653

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

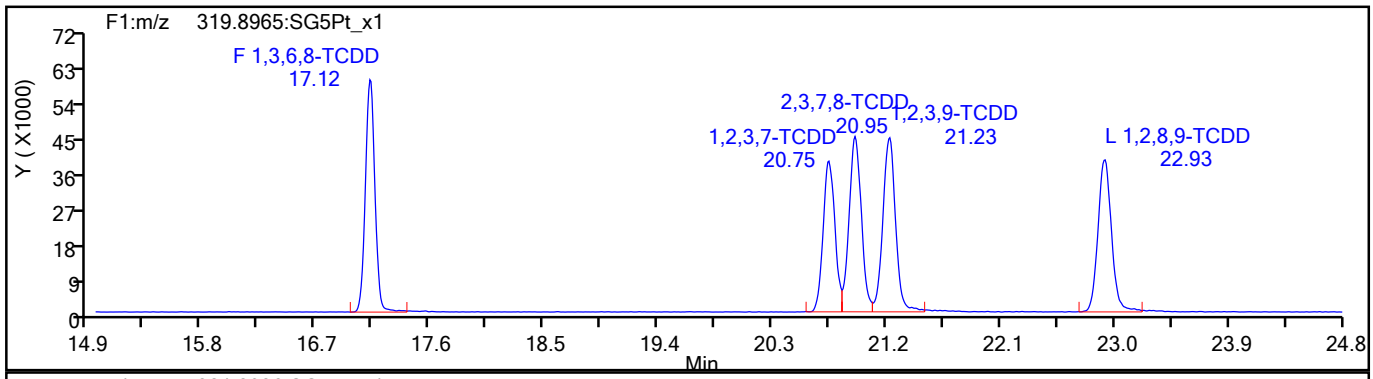

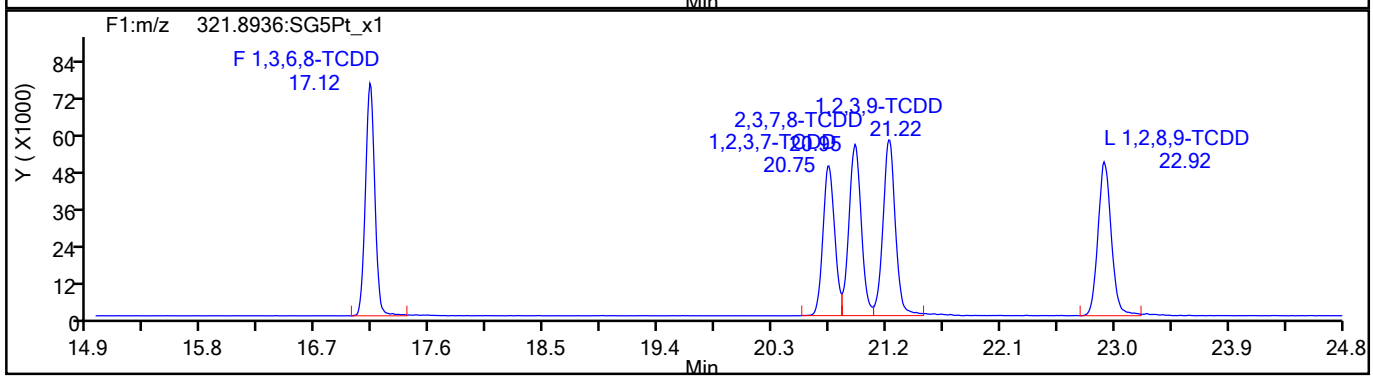

TCDD Standards

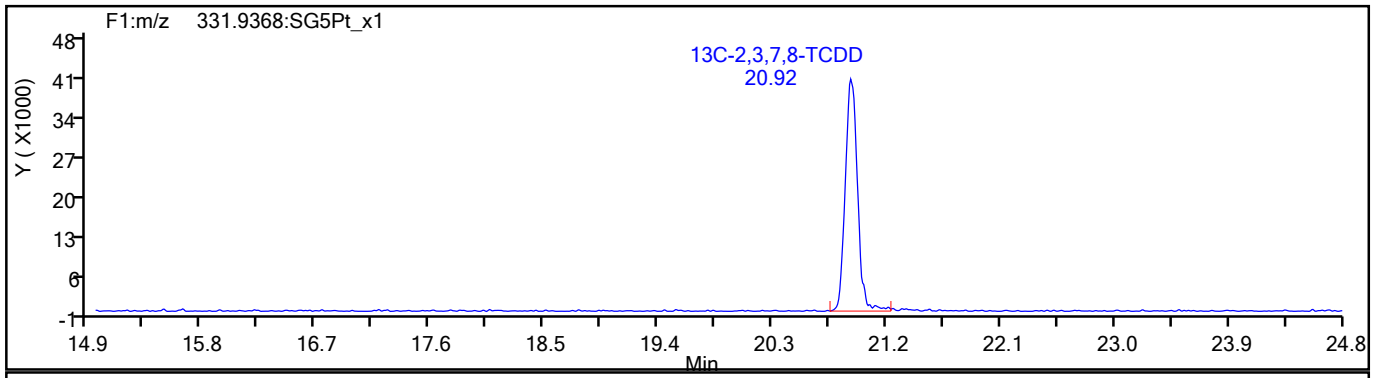

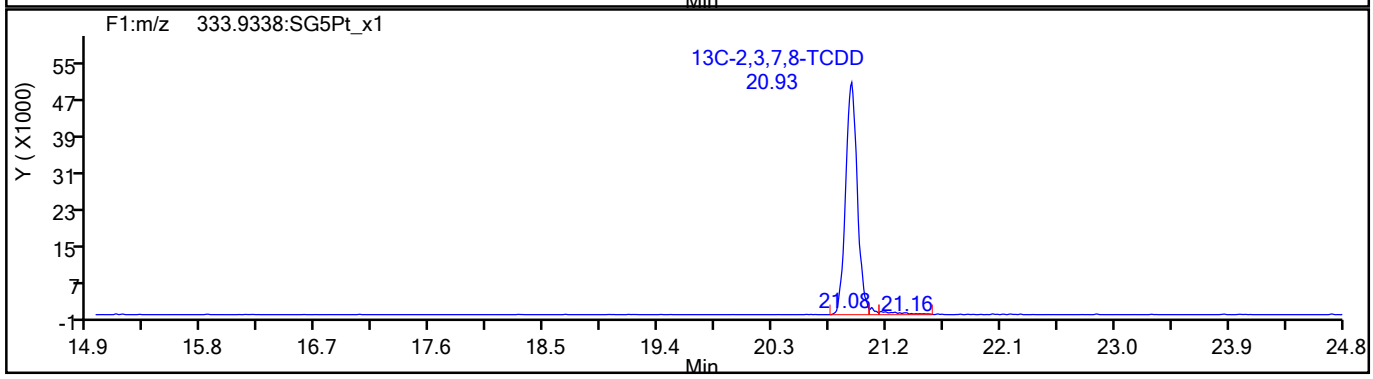

787654

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

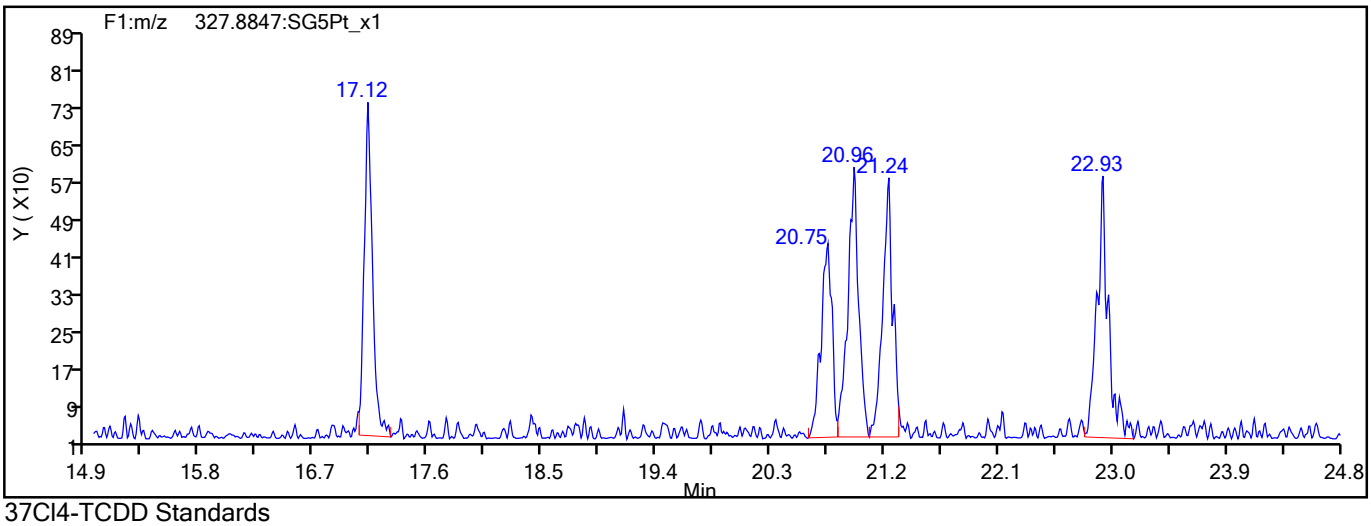

37Cl4-TCDD Standards

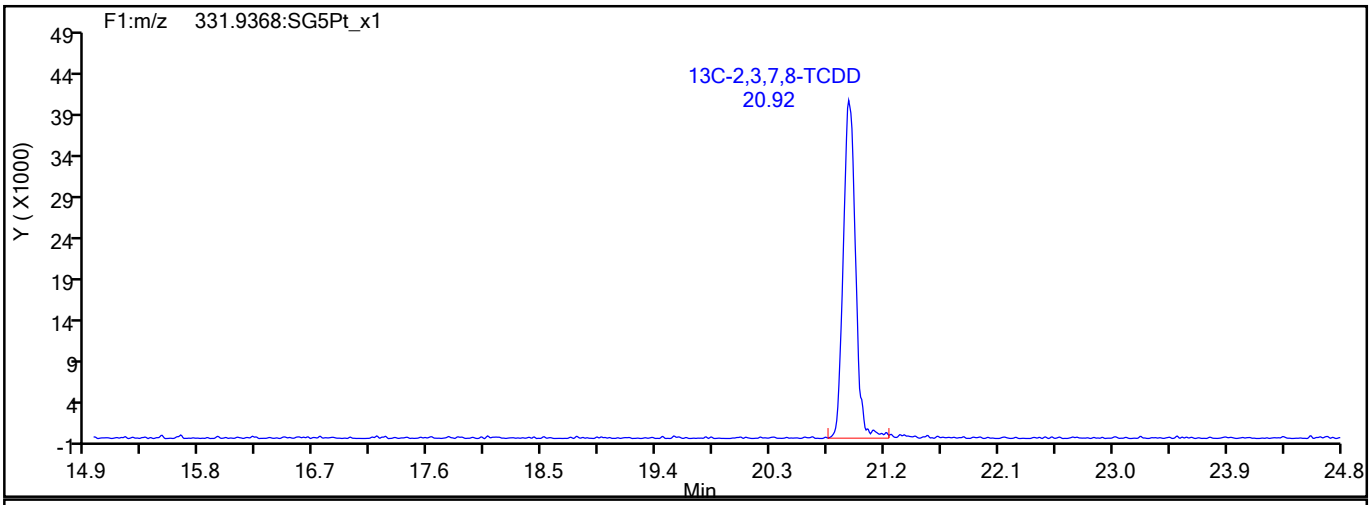

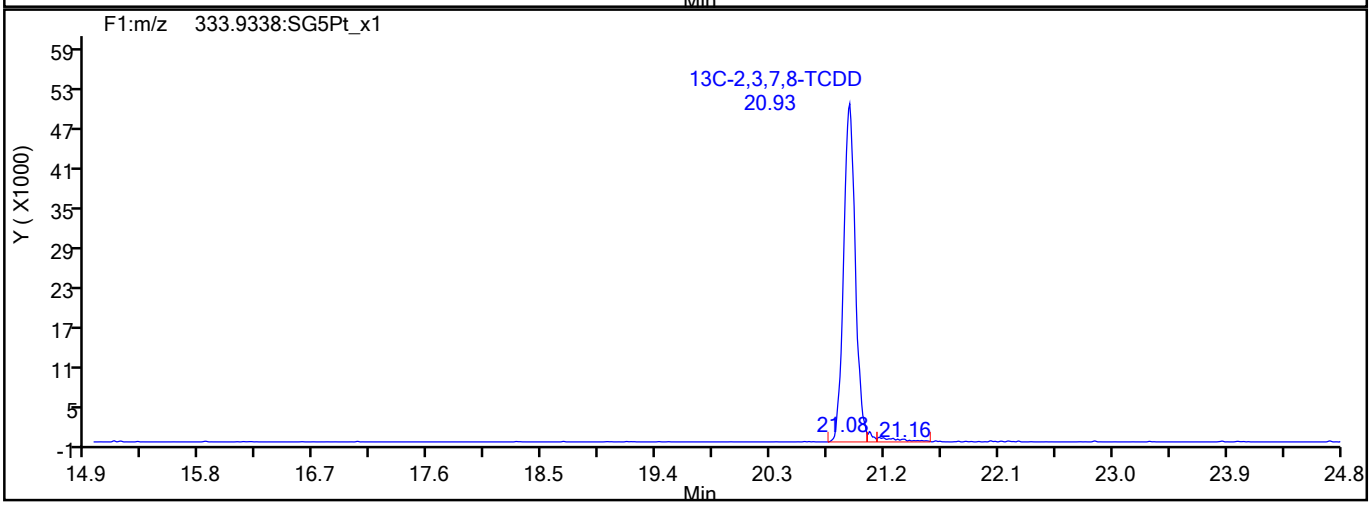

787655

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

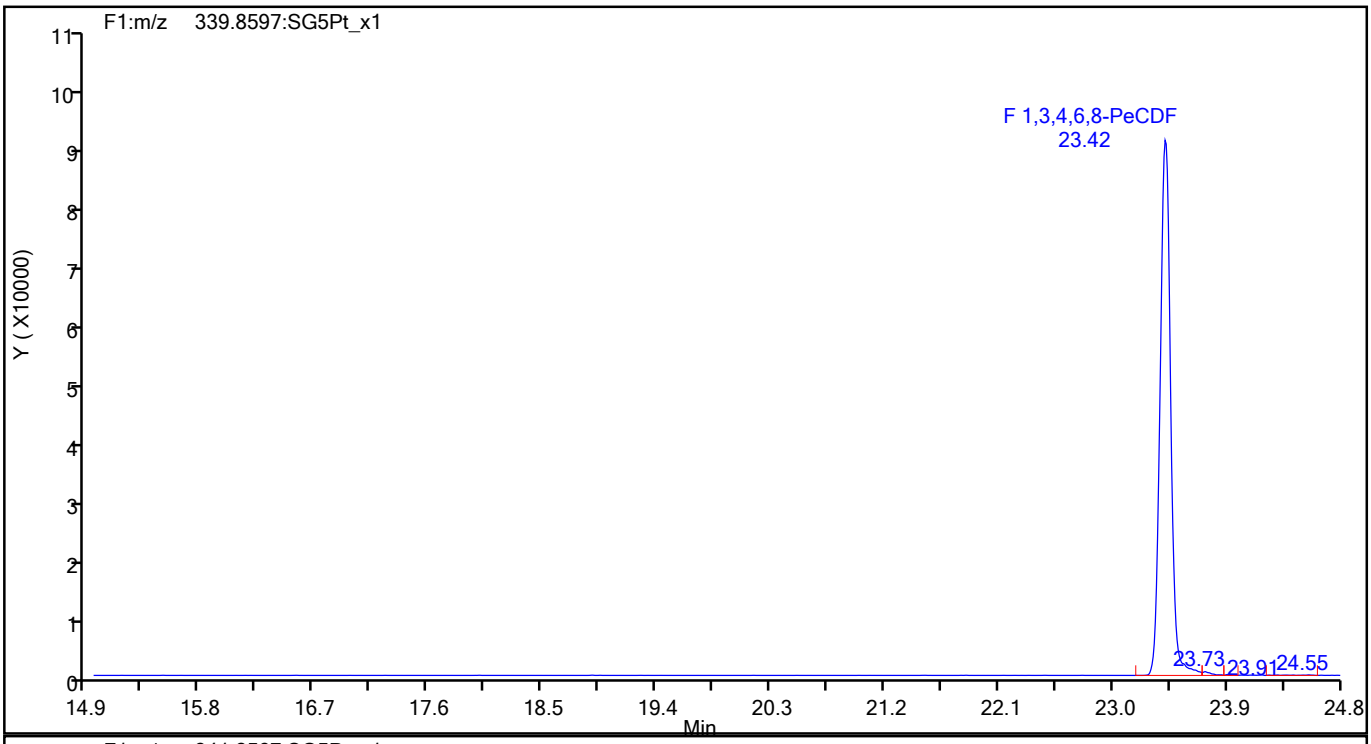

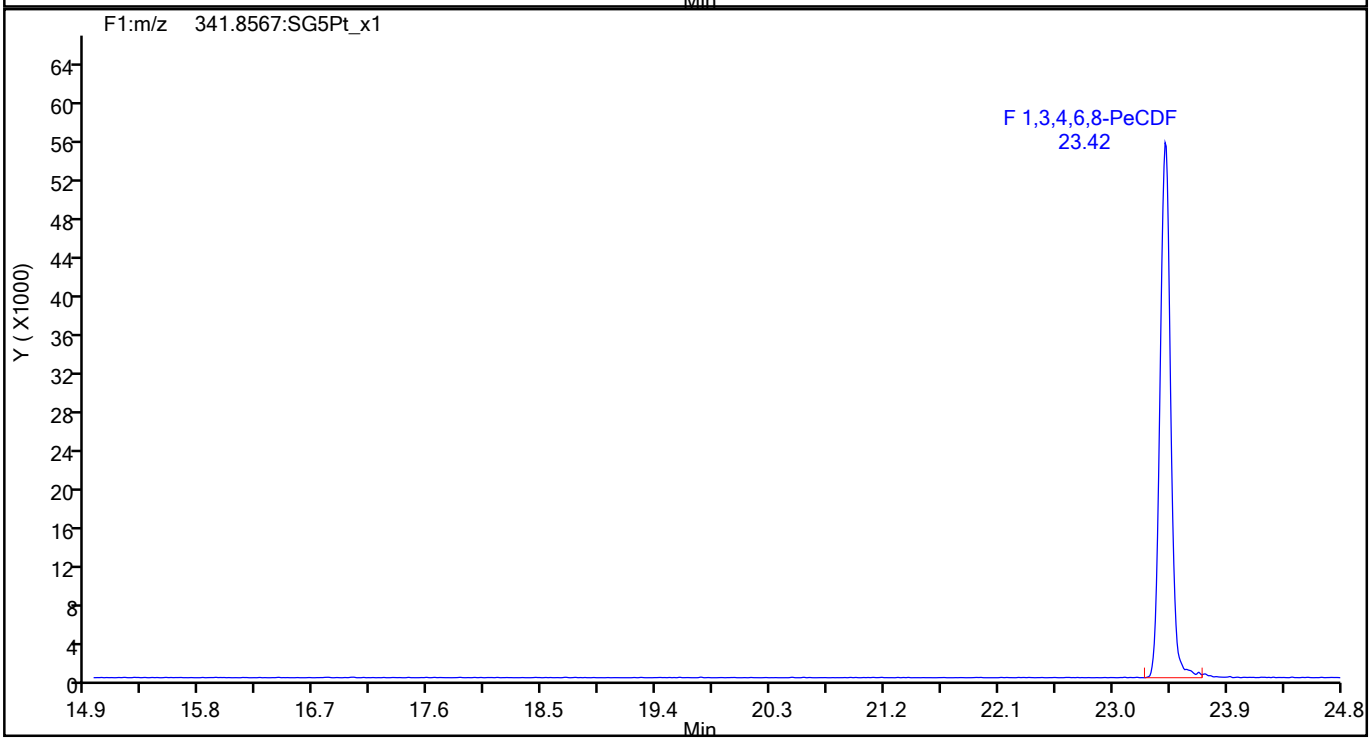

787656

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

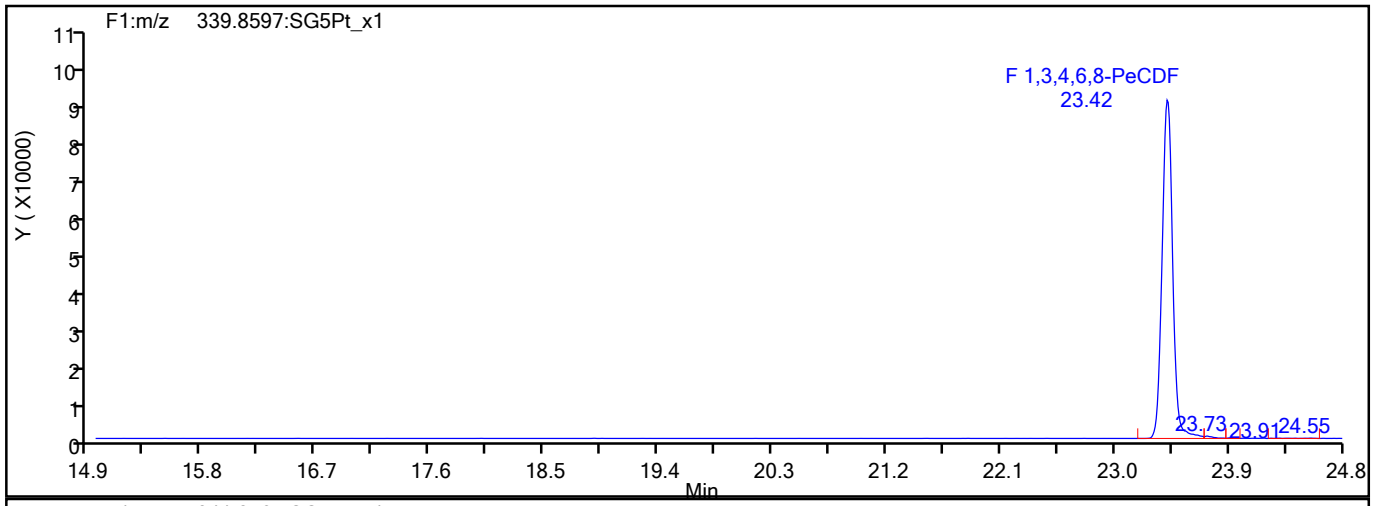

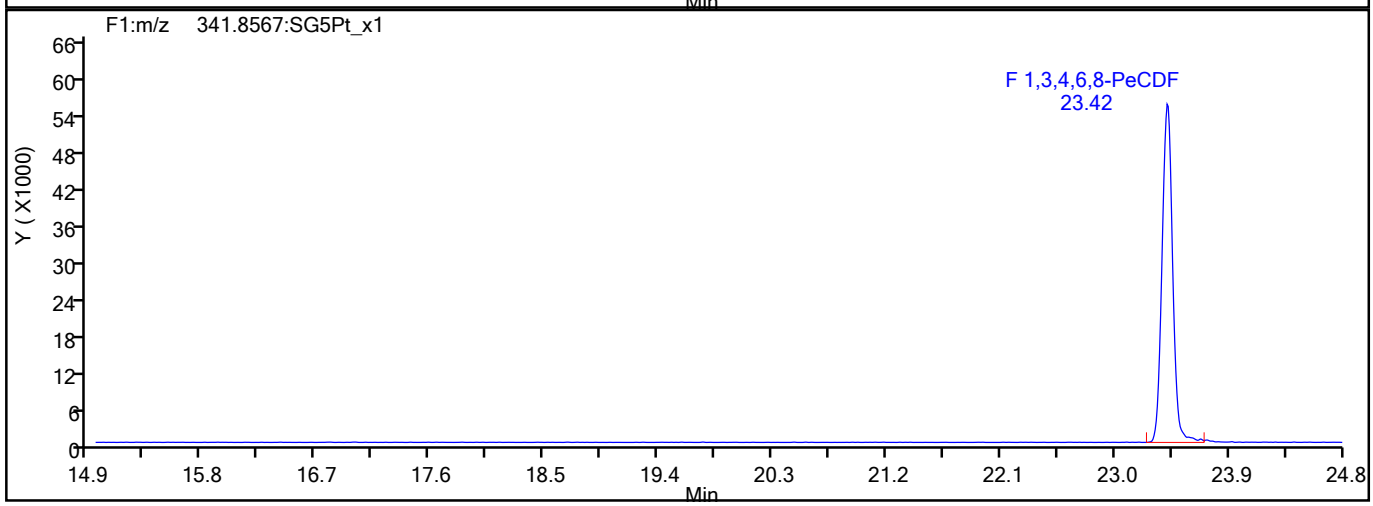

F1 PeCDFs Interference Mass

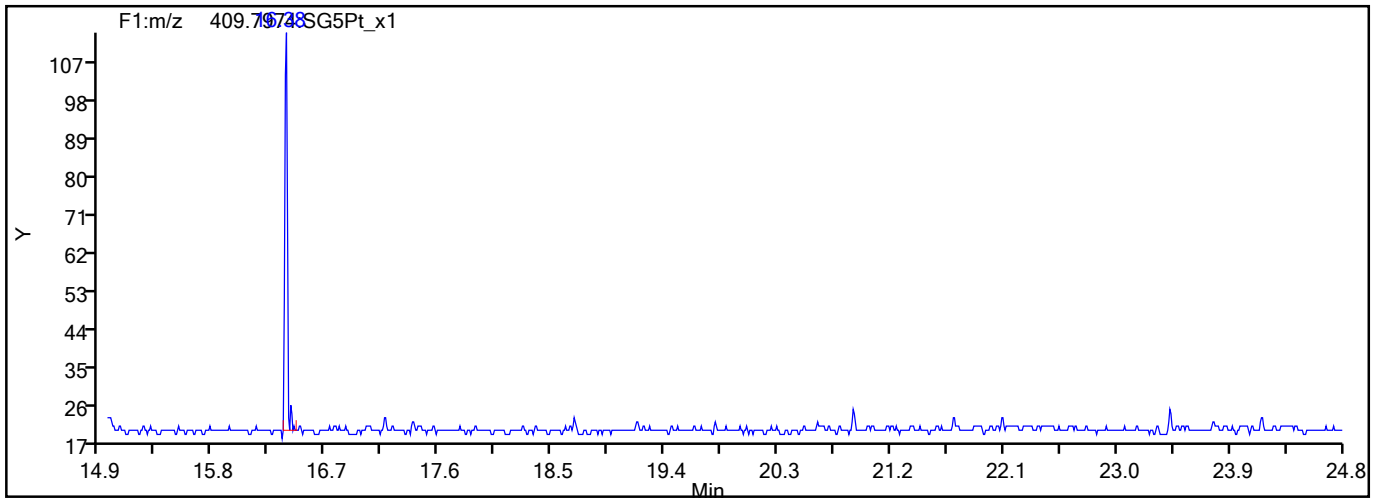

787657

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

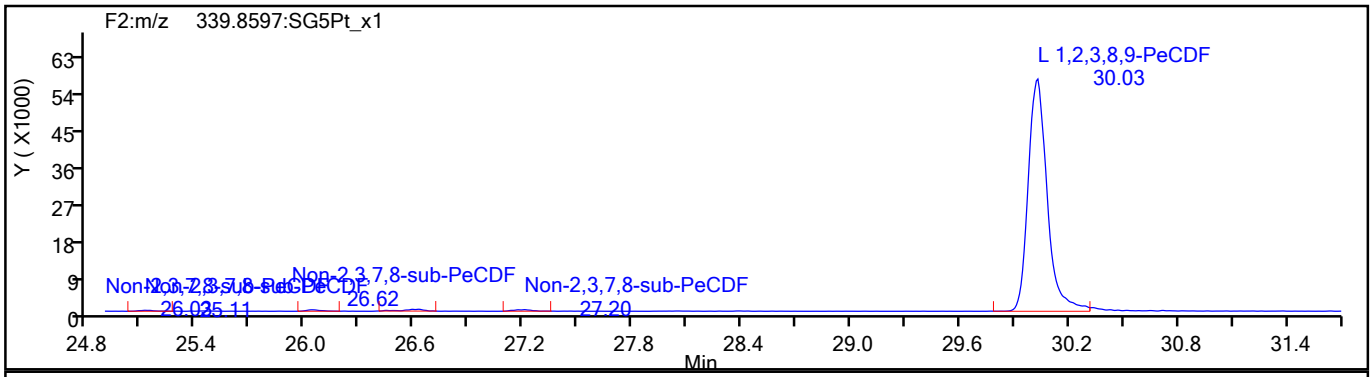

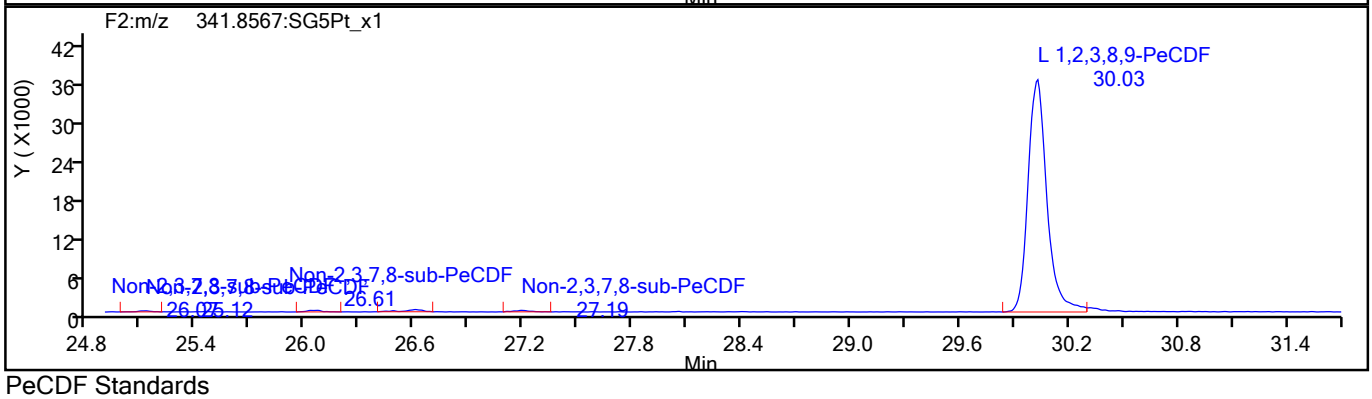

PeCDF Standards

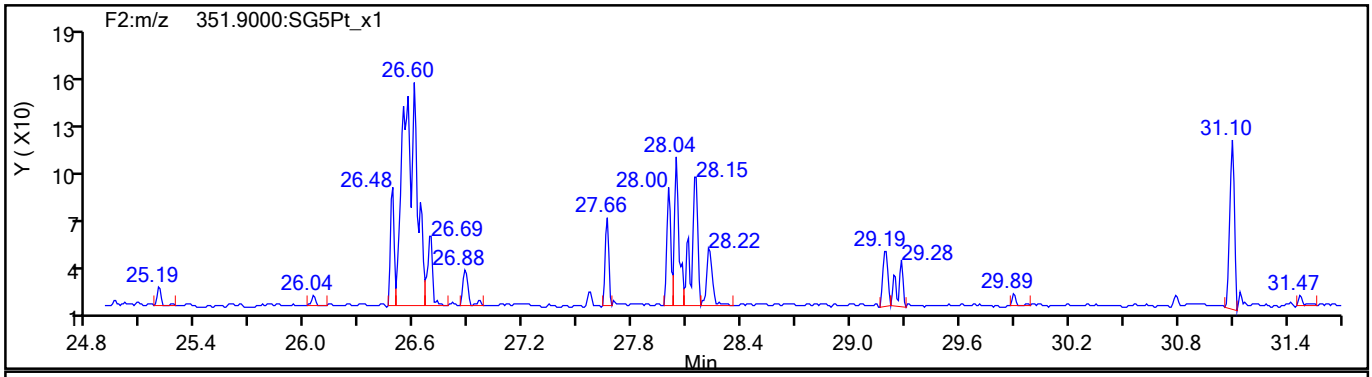

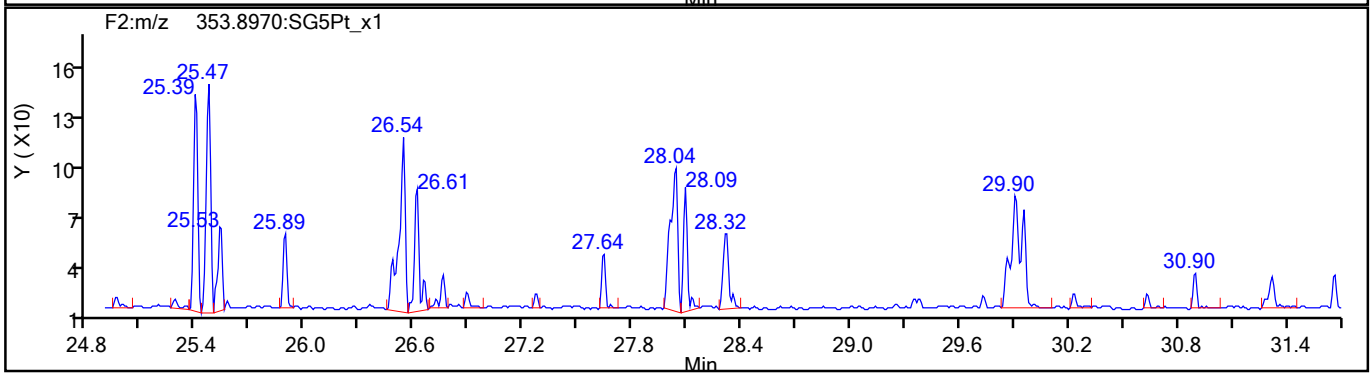

787658

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

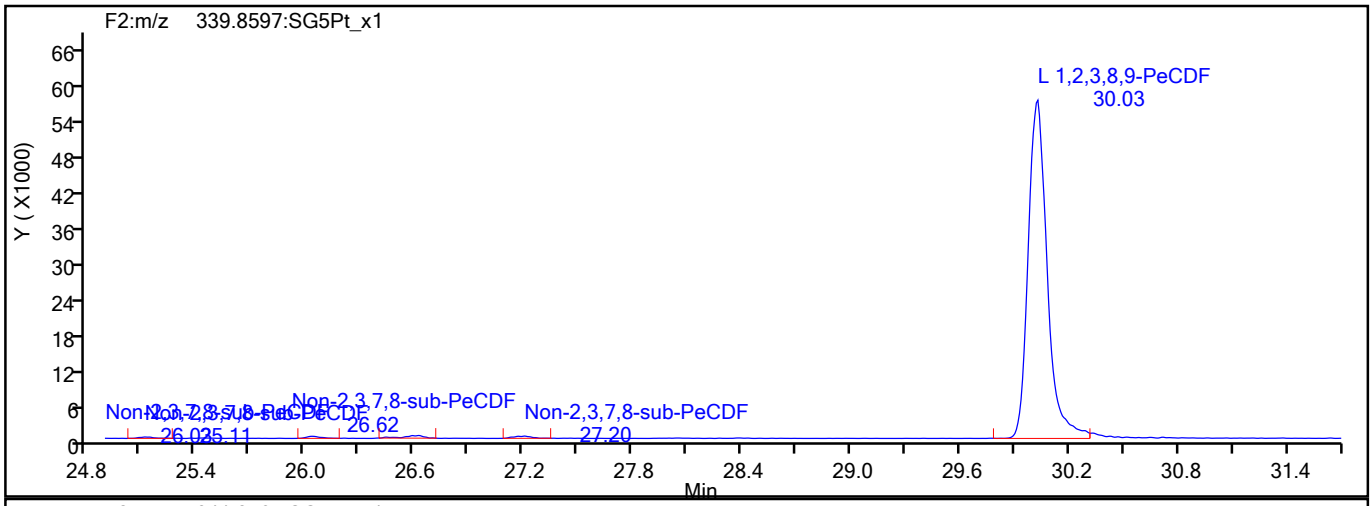

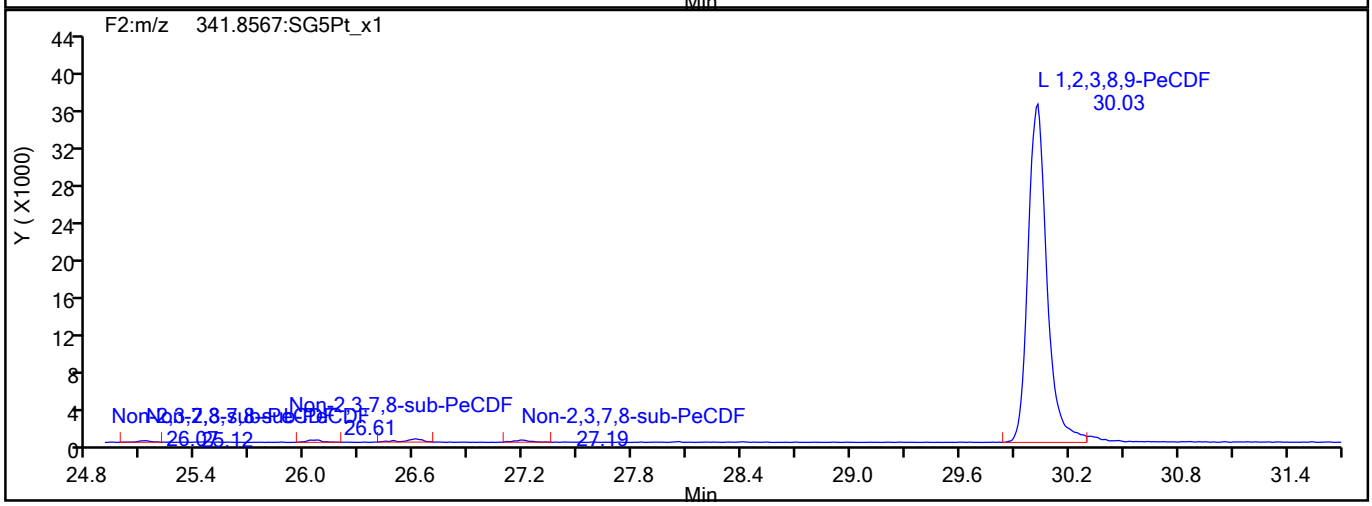

PeCDF Interference Mass

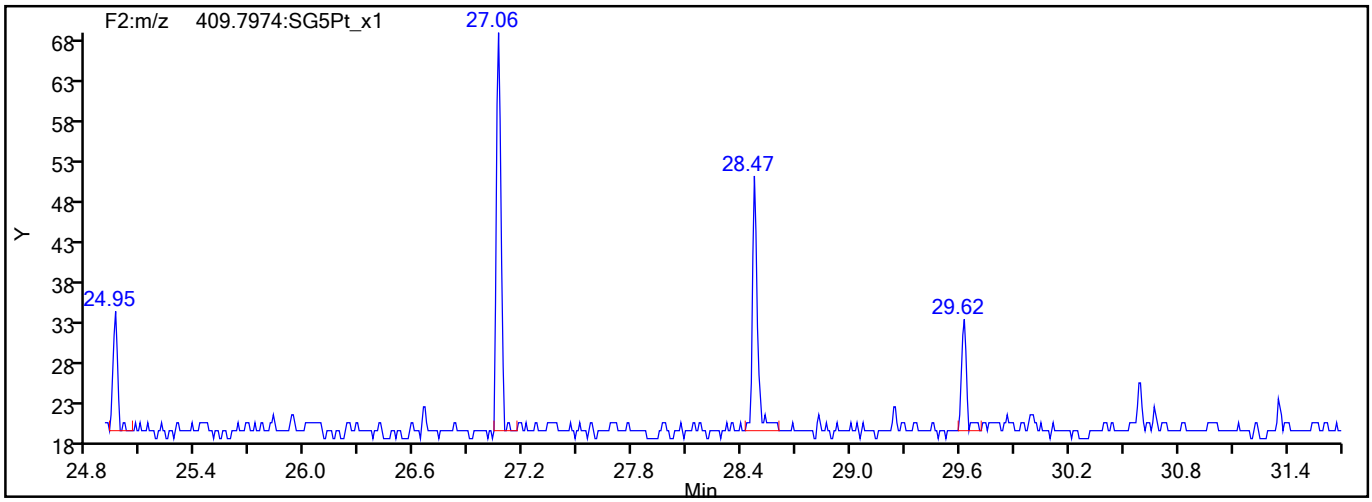

787659

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

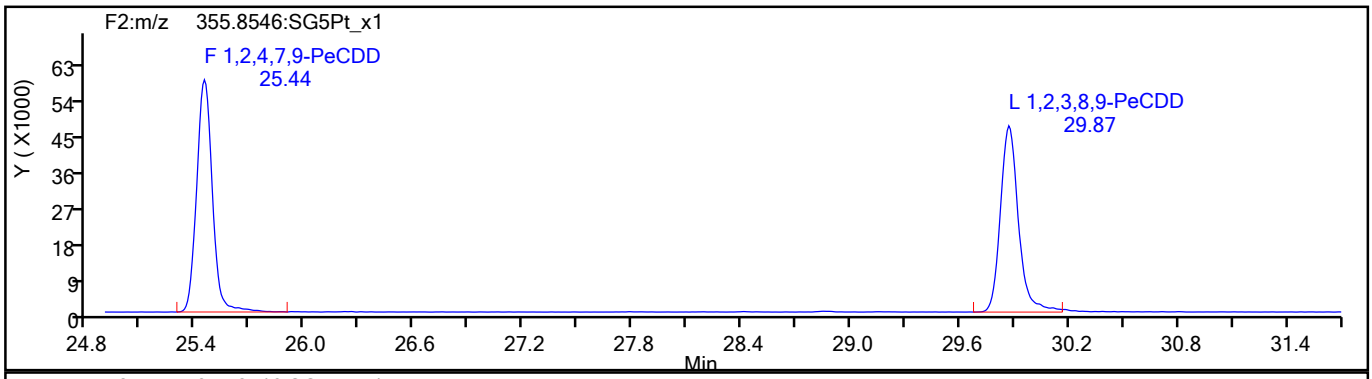

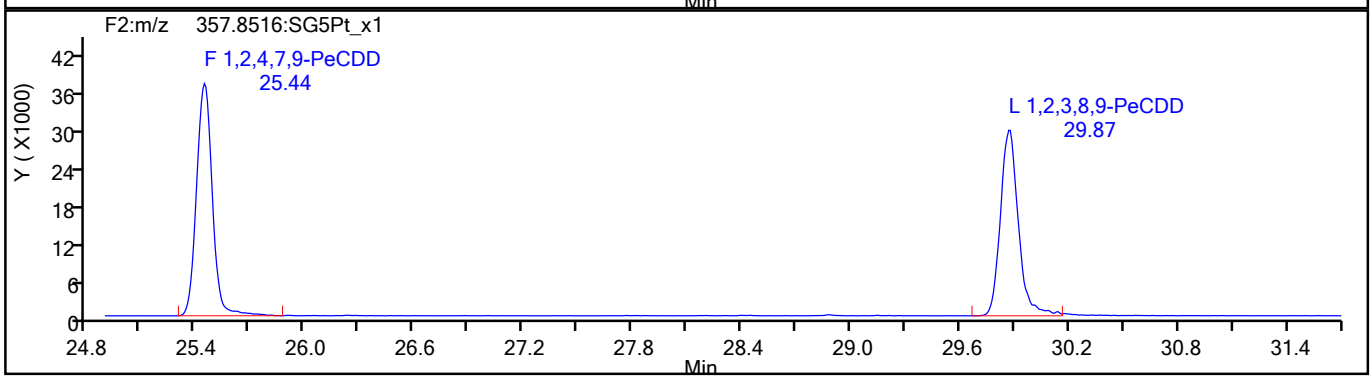

PeCDD Standards

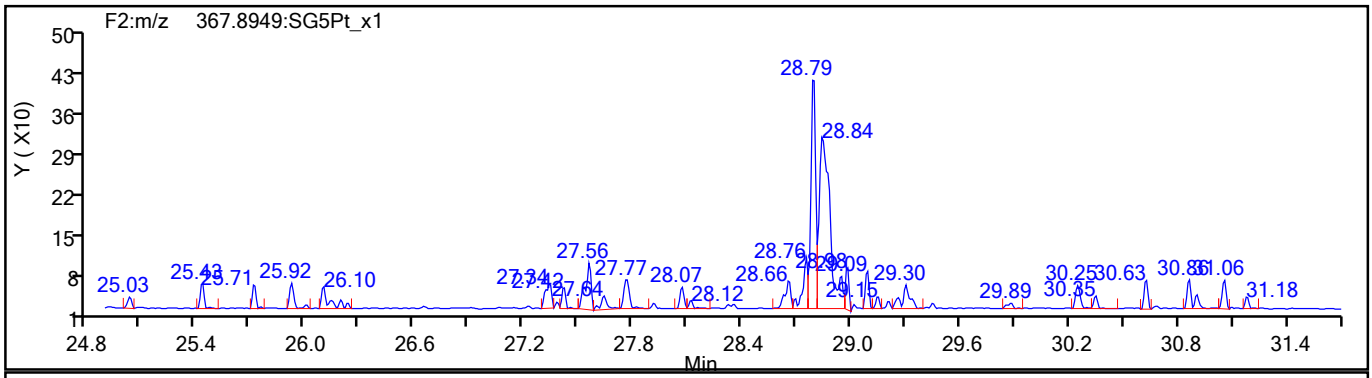

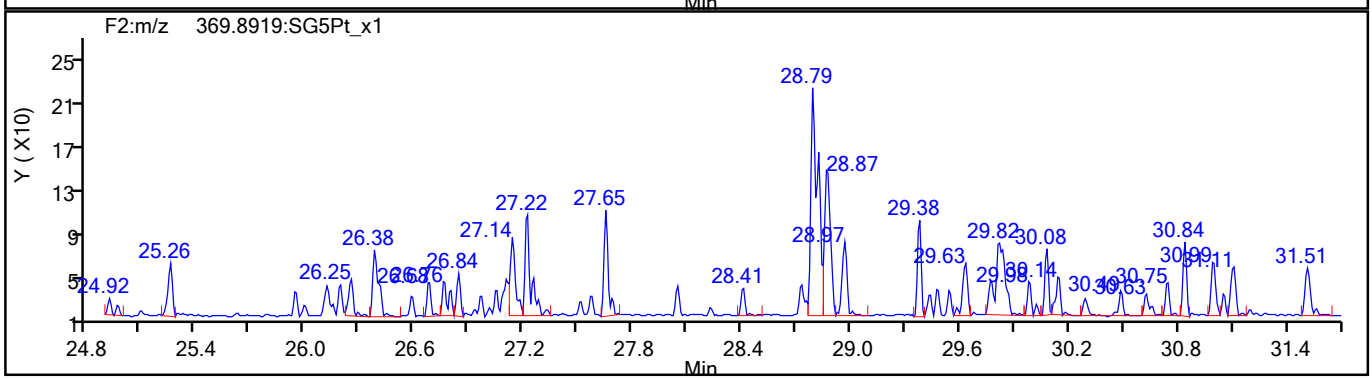

787660

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

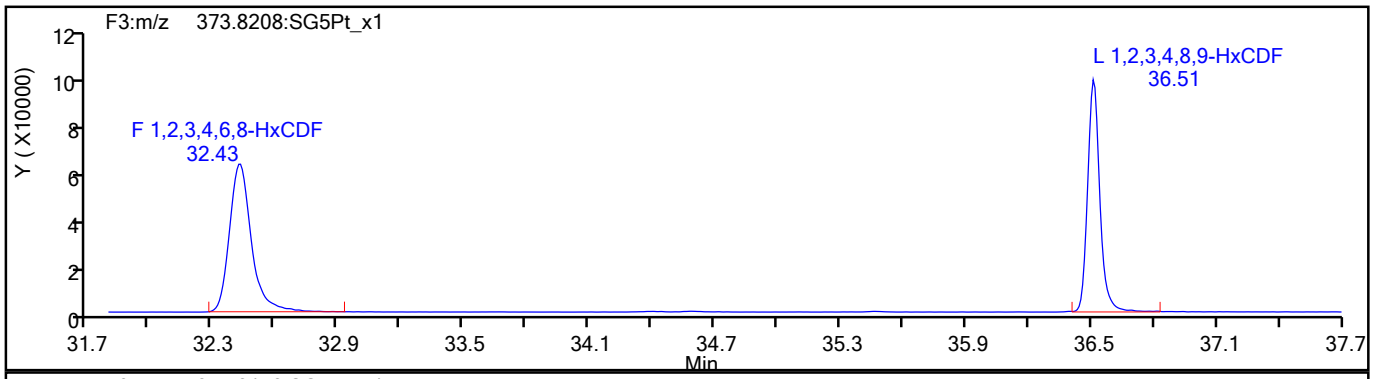

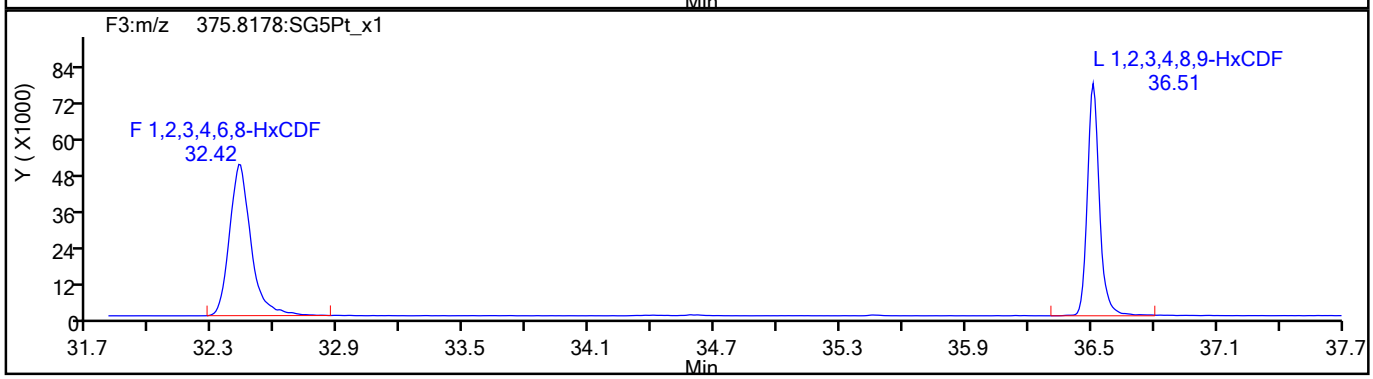

HxCDF Standards

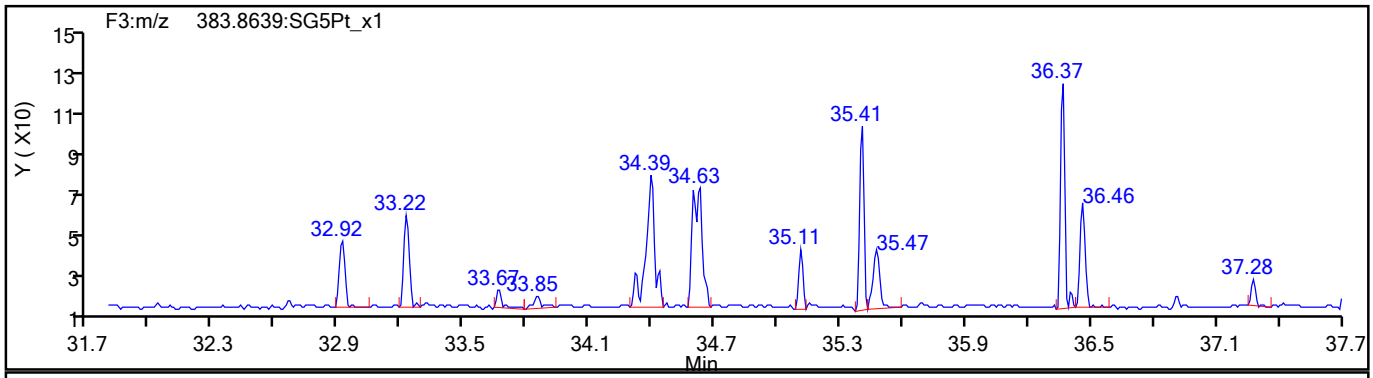

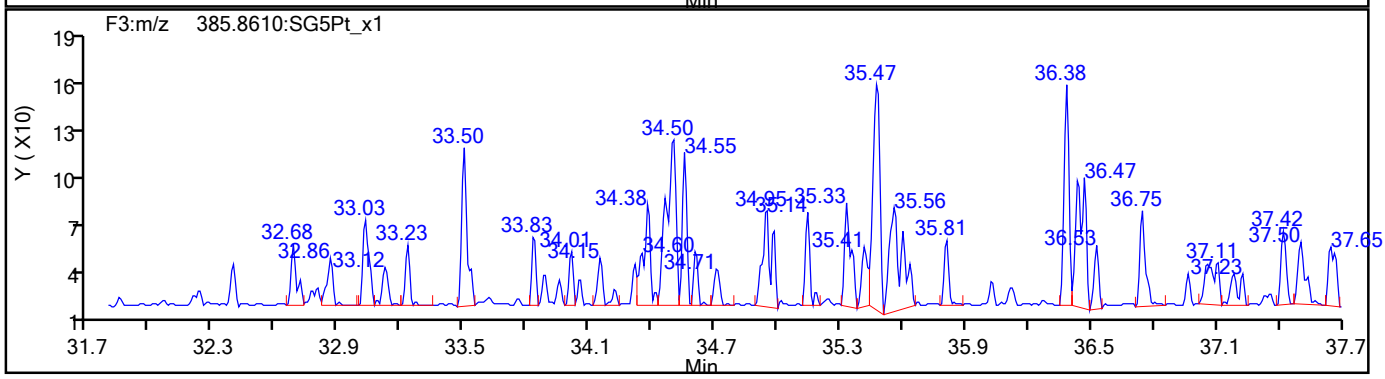

787661

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

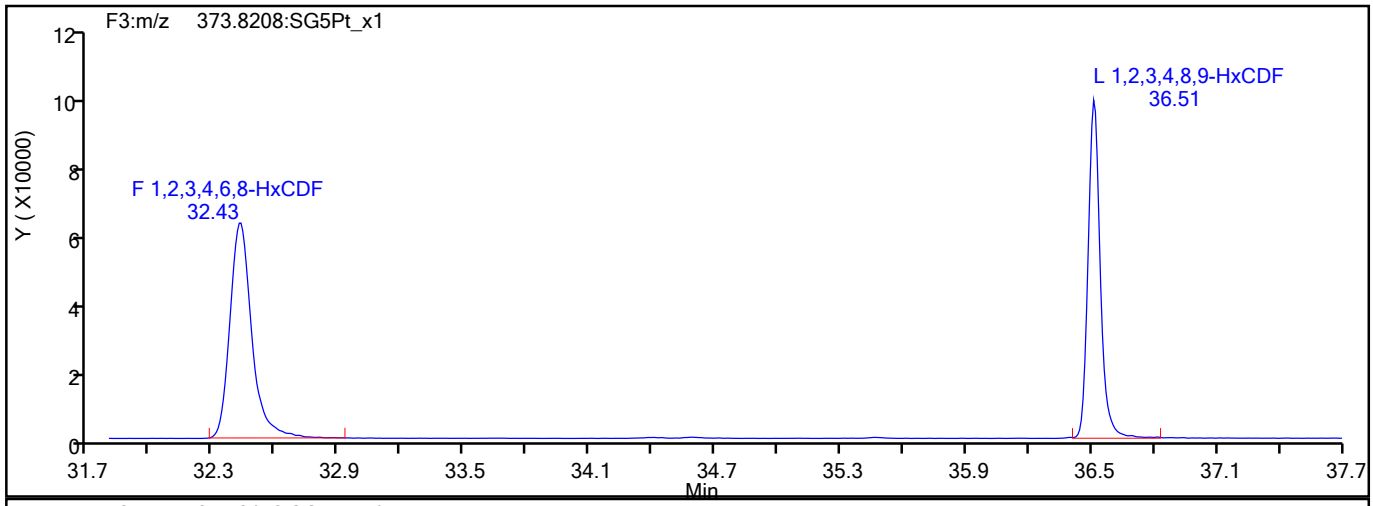

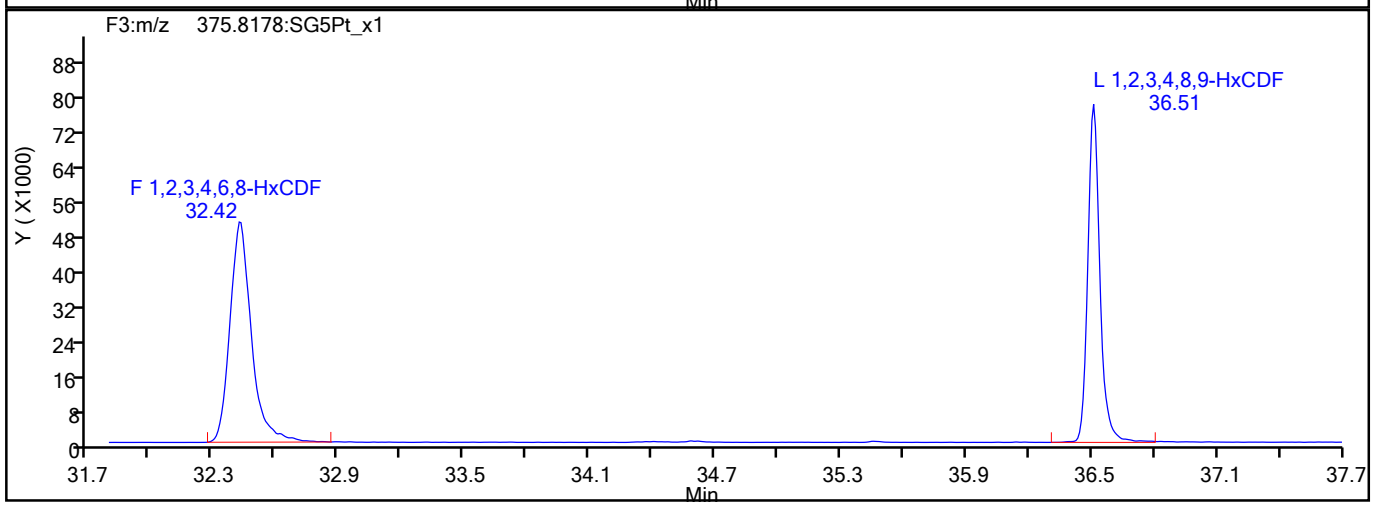

HxCDF Interference Mass

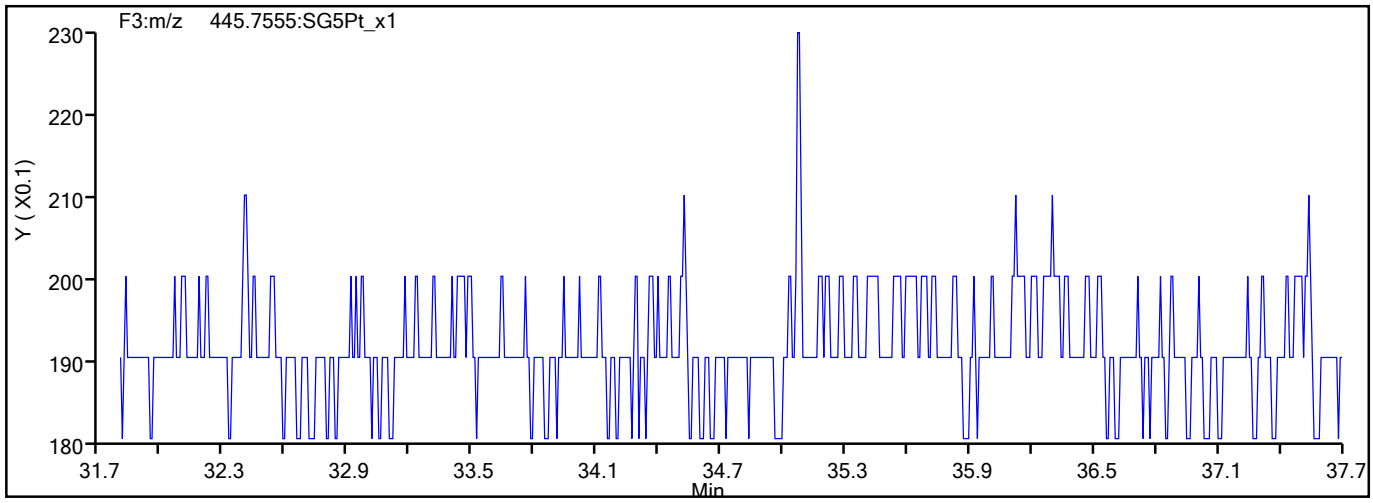

787662

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

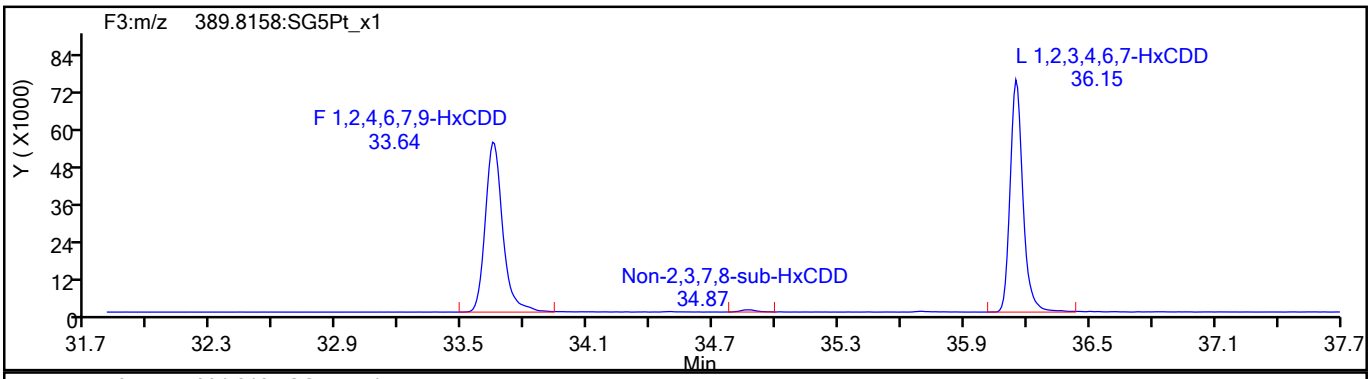

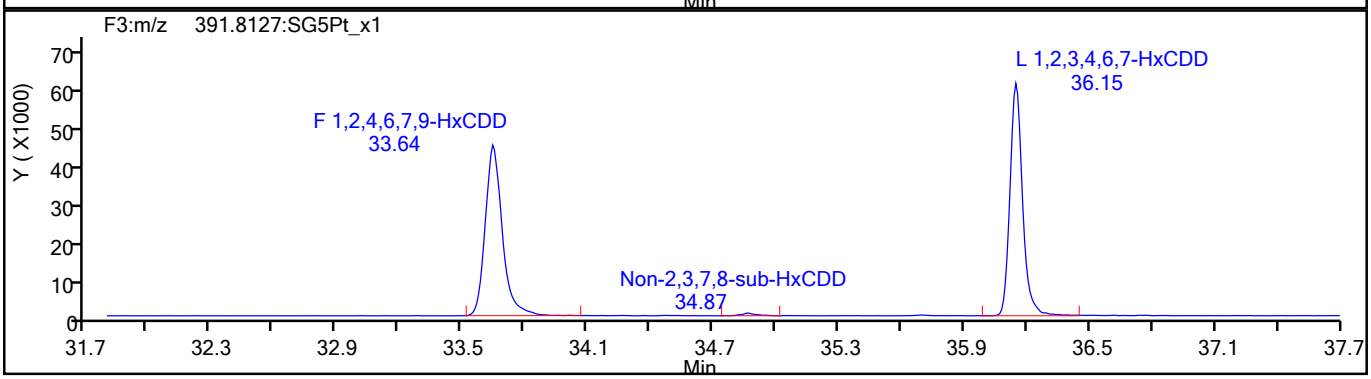

HxCDD Standards

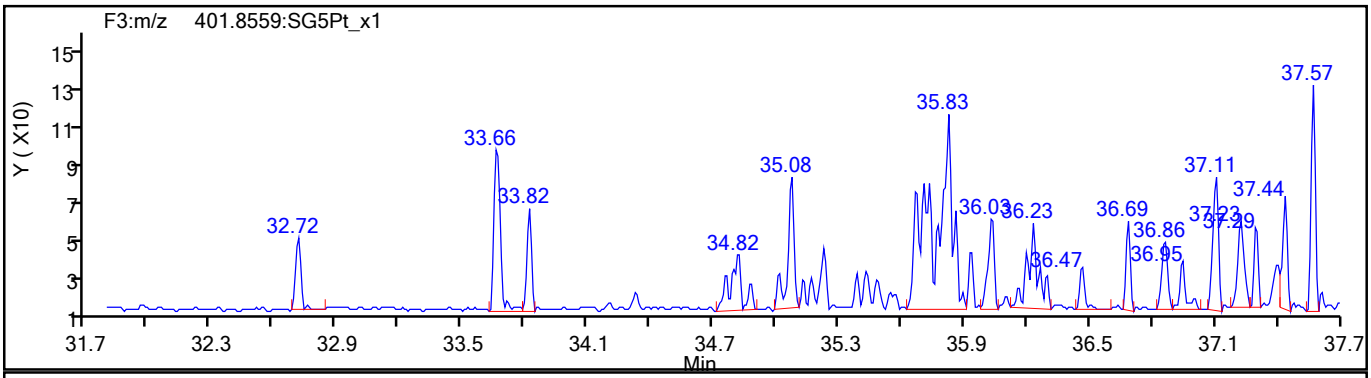

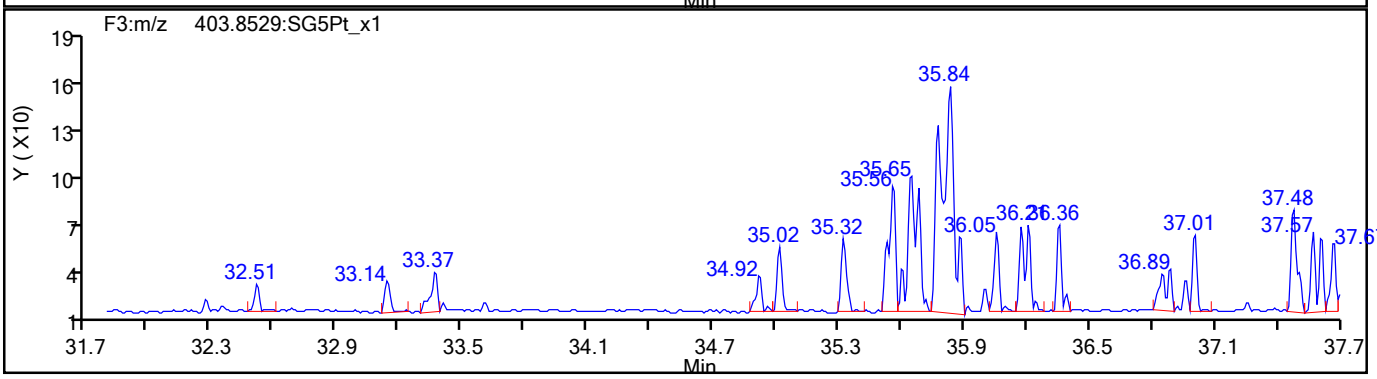

787663

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

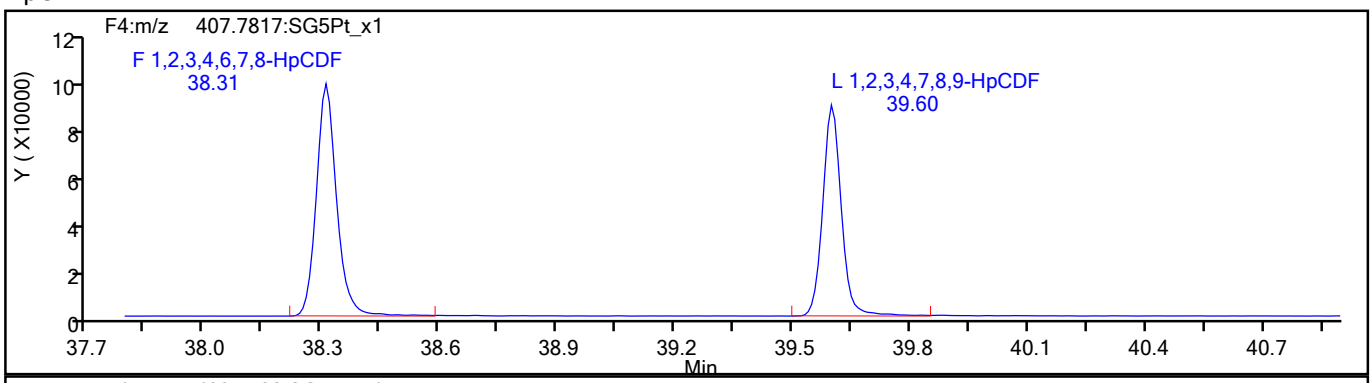

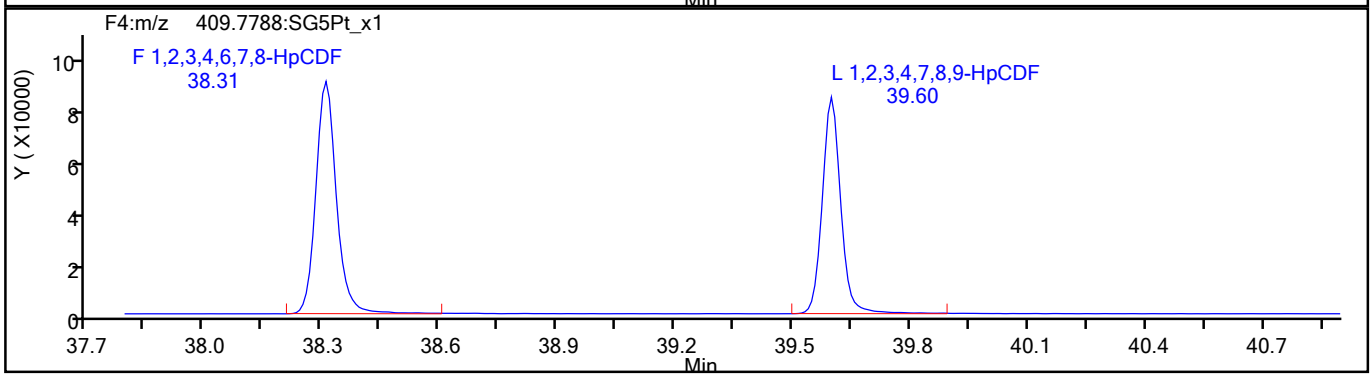

HpCDF Standards

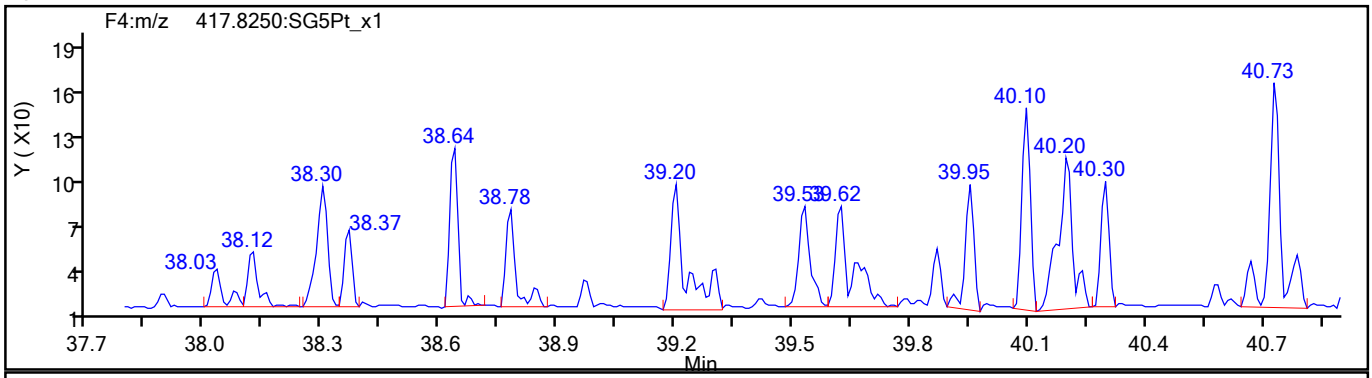

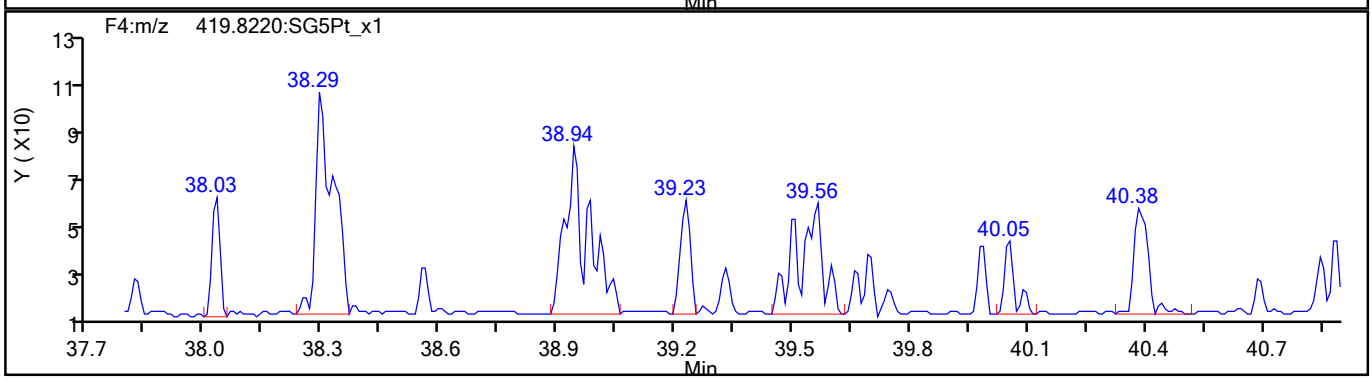

787664

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

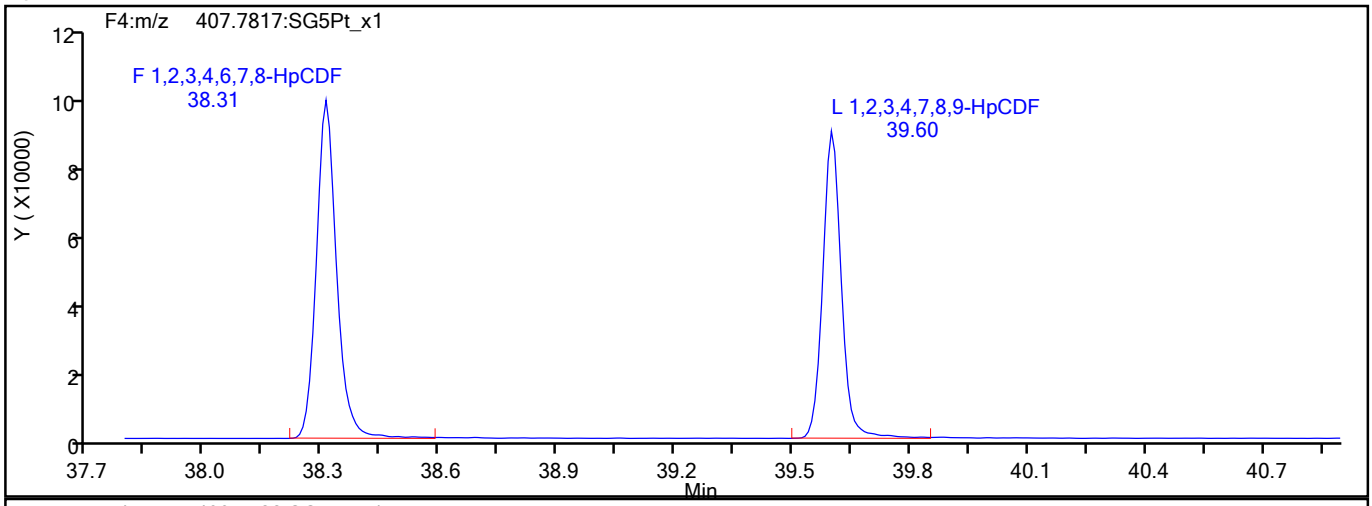

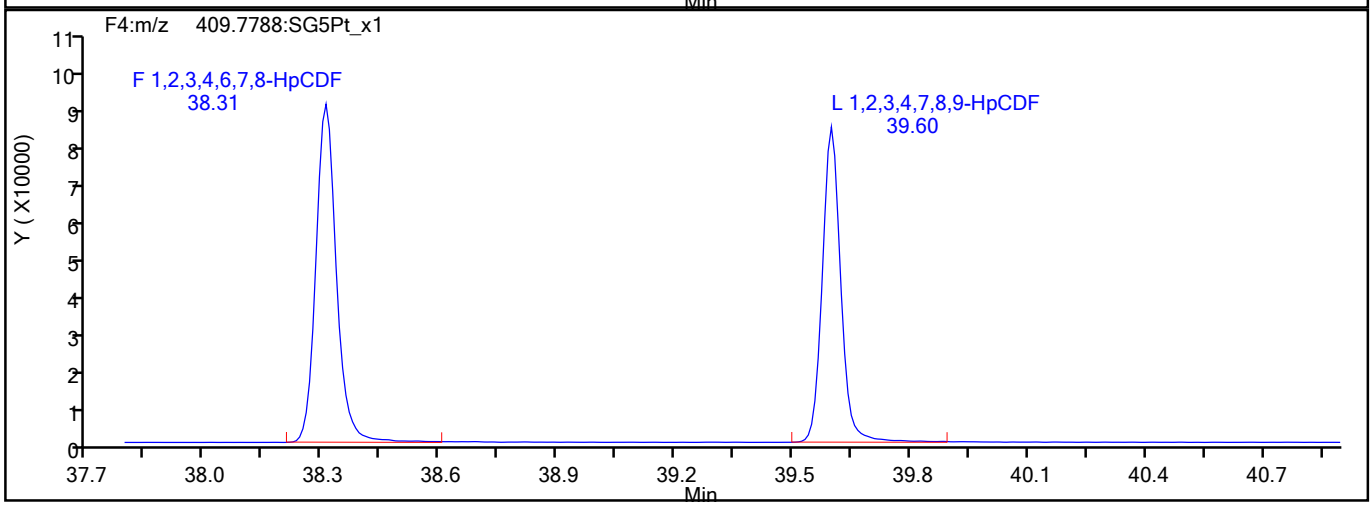

HpCDF Interference Mass

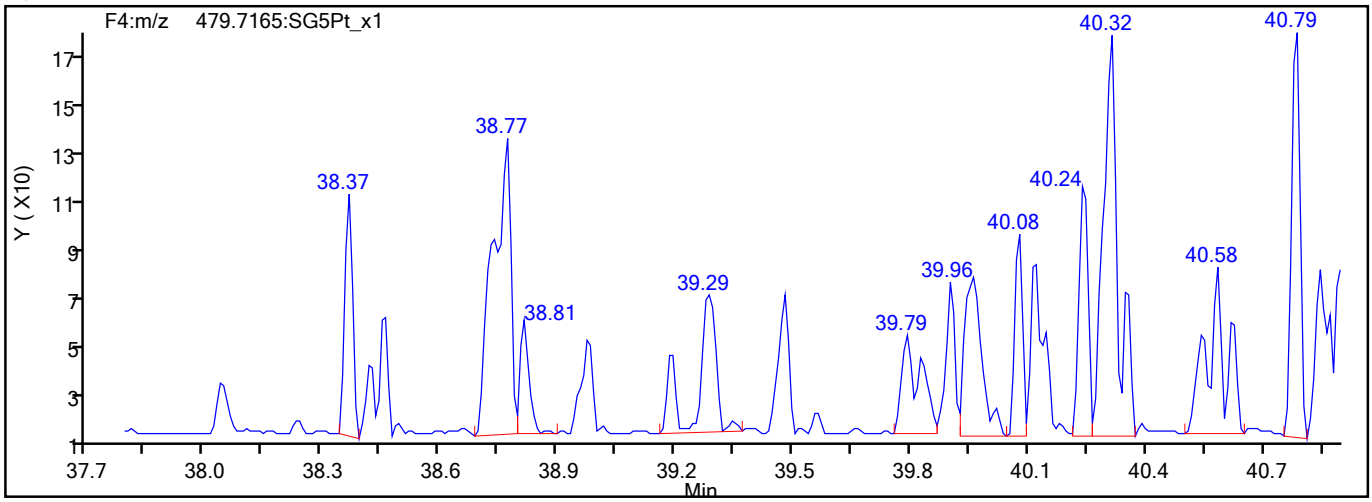

787665

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
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HpCDD

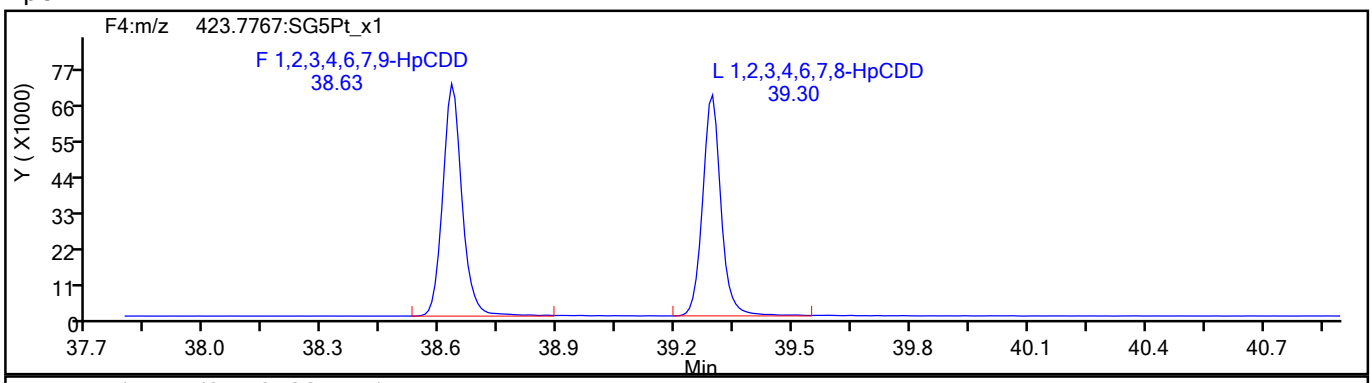

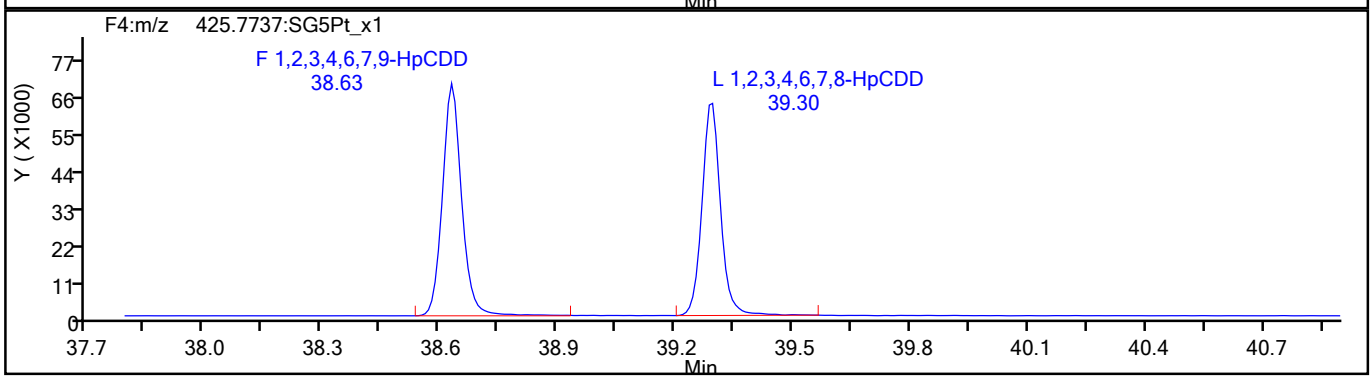

HpCDD Standards

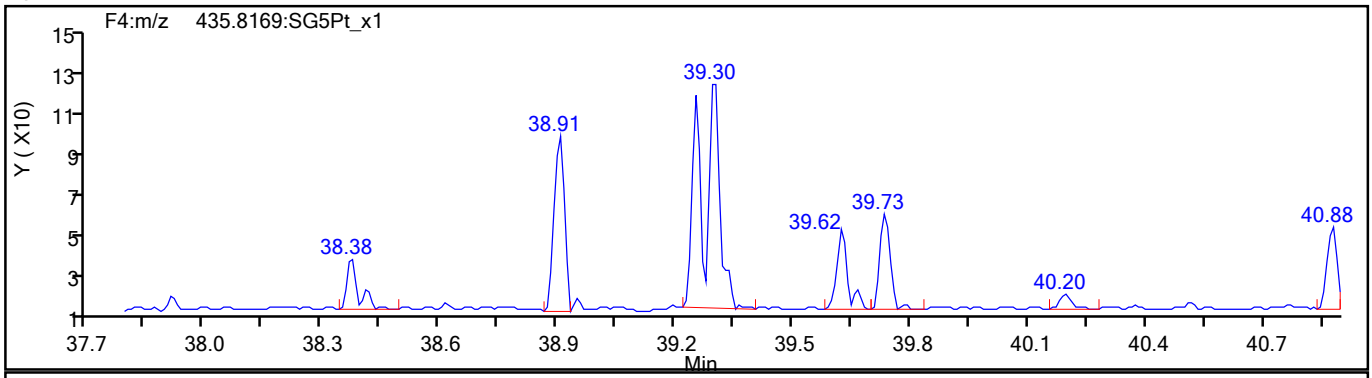

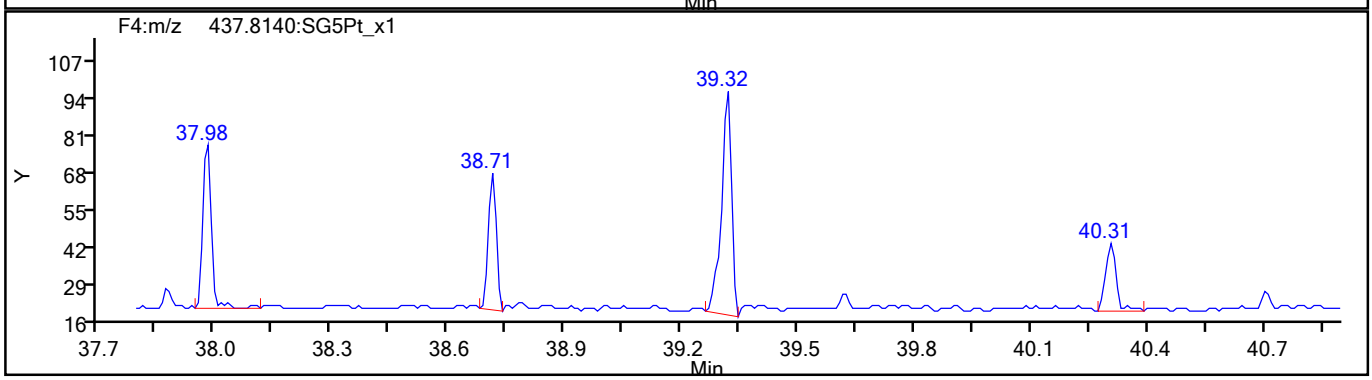

787666

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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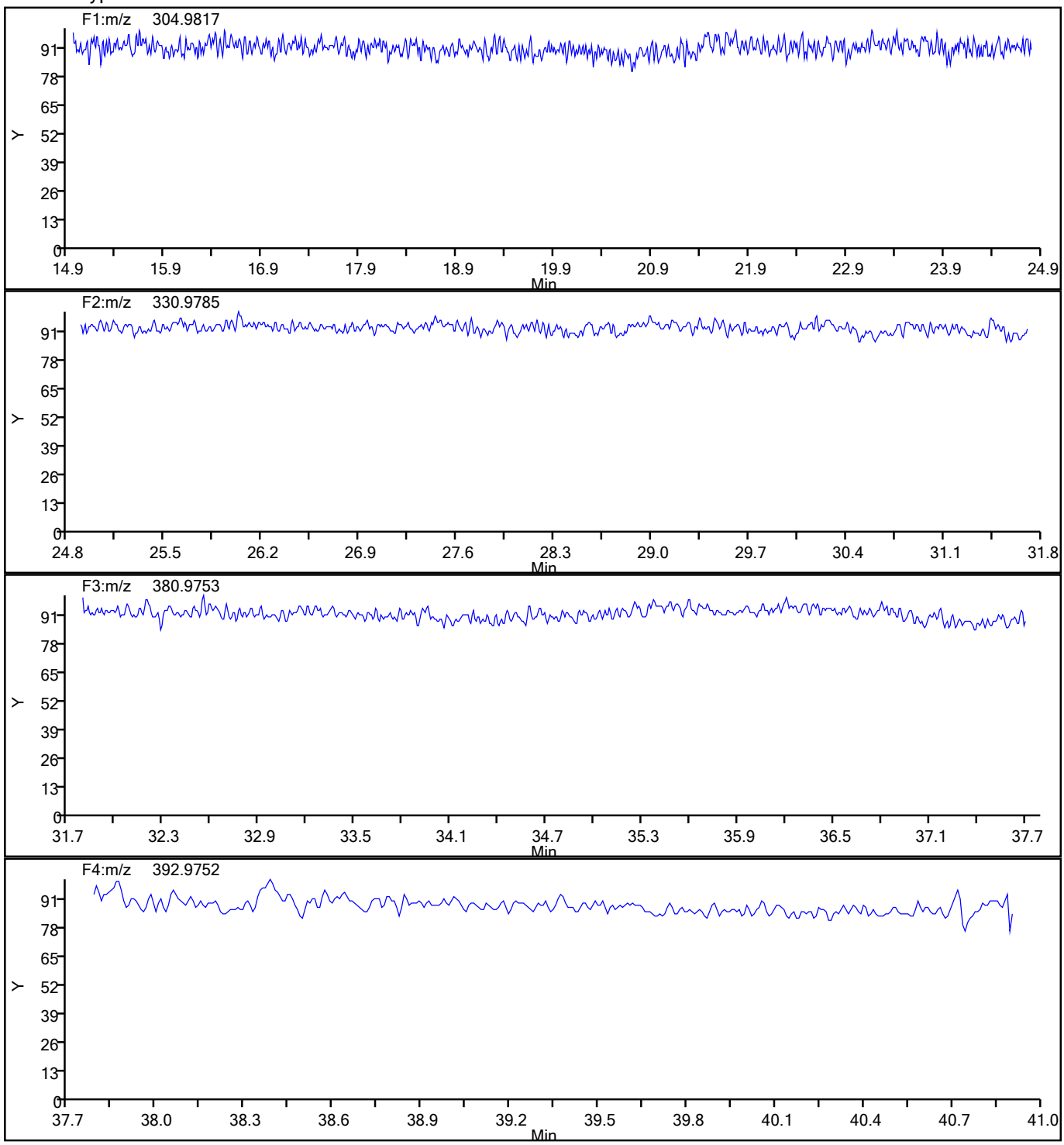

787667

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

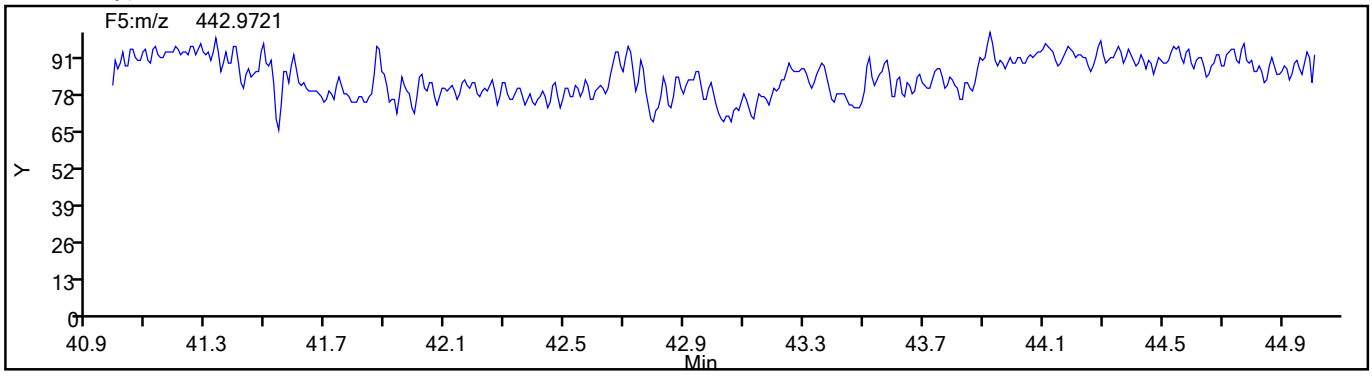

787668

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 02:19:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:24:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.401	485361	0.82	1.3459					0.00	
2,3,7,8-TCDF	20.436	1188413	0.84	1.0802	90.7	90.7	0.2813	0.2813		
A Non-2,3,7,8-sub-TCDF	19.878	19901	0.77	1.0802	1.727	1.518	0.2813	0.7822		RQ
S Total TCDF					92.4	92.2	0.2813	0.2813		RQ
D 13C-2,3,7,8-TCDD	21.743	329600	0.81	0.9317					0.00	
2,3,7,8-TCDD	21.777	370047	0.80	1.0753	41.8	41.8	0.1249	0.1249		
A Non-2,3,7,8-sub-TCDD	20.707	3685	0.77	1.0753	0.5012	0.4159	0.1249	0.4159		RQ
S Total TCDD					42.3	42.2	0.1249	0.1249		RQ
A F1 PeCDFs	24.648	904	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.125						0.0	0.0		
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.489	1055	1.45	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.028	10297	1.24	0.0000						RQ
S Total HxCDF										RQ
A Non-2,3,7,8-sub-HxCDD	35.394	4006	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.630	364225	1.07	1.4421						
1,2,3,4,7,8,9-HpCDF	39.885	322997	1.06	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.258						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.582	244067	1.05	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.258						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.156	689898	0.82							
1,3,6,8-TCDD	17.754	384589	0.80							
2,3,4,7-TCDF	20.436	1190538	0.84							
1,2,3,7-TCDD	21.545	321799	0.78							
1,2,3,9-TCDF	21.958	518792	0.84							
1,2,3,9-TCDD	22.035	386037	0.78							
1,2,8,9-TCDF	23.600	554349	0.82							

787669

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.660	159041								
1,3,4,6,8-PeCDF	24.022	462305	1.58							
1,2,3,8,9-PeCDD	26.056	316607	1.54							
1,2,4,7,9-PeCDD	30.652	304812	1.54							
1,2,3,8,9-PeCDF	30.838	407641	1.63							
1,2,3,4,6,8-HxCDF	33.138	482293	1.31							
1,2,4,6,7,9-HxCDD	34.224	313209	1.25							
1,2,3,4,6,7-HxCDD	36.564	309337	1.23							
1,2,3,4,8,9-HxCDF	36.918	413489	1.31							
1,2,3,4,6,7,9-HpCDD	38.934	270894	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 02:19:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:24:20

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.401	20.401	0	1.000	219196	29055	85	212	342		
317.9389	20.393	20.401	-1	1.000	266165	33471	26	65	1287	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.436	20.436	0	1.002	544208	70535	85	212	830		
305.8987	20.436	20.436	0	1.002	644205	86812	105	262	827	0.84(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.713	19.878	-10	0.966	6415	874	85	212	10		
	Empc Correction				4460	790	85	212	9		
305.8987	19.678	19.878	-12	0.965	5793	1027	105	262	10	1.11(0.65-0.89)	
303.9016	24.013	19.878	248	1.177	4973	730	85	212	9		
	Empc Correction				4197	736	85	212	9		
305.8987	24.004	19.878	247	1.177	5451	956	105	262	9	0.91(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.743	21.743	0	1.000	147378	19307	97	242	199		
333.9338	21.734	21.743	-1	1.000	182222	24457	55	137	445	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.777	21.777	0	1.002	164836	19708	37	92	533		
321.8936	21.769	21.777	-1	1.001	205211	24772	22	55	1126	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.396	20.707	101	1.030	2359	261	37	92	7		
	Empc Correction				1603	201	37	92	5		
321.8936	22.457	20.707	105	1.033	2082	262	22	55	12	1.13(0.65-0.89)	
A F1 PeCDFs											RQ
339.8597	24.434	24.648	-13	1.000	323	113	8	20	14		
341.8567	24.486	24.648	-10	1.000	477	79	7	17	11	0.68(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	24.873	24.648	14	1.000	227	52	8	20	7		
341.8567	24.890	24.648	15	1.000	236	71	7	17	10	0.96(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.125						28	70			
341.8567	28.125						115	287			
A Non-2,3,7,8-sub-PeCDD											
355.8546	26.898	28.489	-95	1.000	625	122	24	60	5		
357.8516	26.856	28.489	-98	1.000	430	72	13	32	6	1.45(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	34.973	35.028	-3	1.000	2250	338	67	167	5		
375.8178	34.956	35.028	-4	1.000	1567	325	45	112	7	1.44(1.05-1.43)	
373.8208	35.116	35.028	5	1.000	3879	551	67	167	8		
375.8178	35.125	35.028	6	1.000	2908	527	45	112	12	1.33(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.344	35.394	-3	1.000	2218	414	33	82	13		
391.8127	35.335	35.394	-4	1.000	2261	396	31	77	13	0.98(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.630	38.630	0	1.000	188441	47249	63	157	750		
409.7788	38.630	38.630	0	1.000	175784	44386	54	135	822	1.07(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885	39.885	0	1.000	166495	43364	63	157	688		
409.7788	39.877	39.885	-1	1.000	156502	41246	54	135	764	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						63	157			
409.7788	39.258						54	135			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.582	39.582	0	1.000	125253	34507	41	102	842		
425.7737	39.573	39.582	-1	1.000	118814	33009	40	100	825	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.258						41	102			
425.7737	39.258						40	100			
1,3,6,8-TCDF											
303.9016	16.156	16.156	0		310778	57406	85	212	675		
305.8987	16.148	16.156	-1		379120	70718	105	262	674	0.82(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.754	17.754	0		170993	27785	37	92	751		
321.8936	17.754	17.754	0		213596	36009	22	55	1637	0.80(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.436	20.436	0		545121	70571	85	212	830		
305.8987	20.436	20.436	0		645417	86859	105	262	827	0.84(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.545	21.545	0		141111	18226	37	92	493		
321.8936	21.545	21.545	0		180688	24656	22	55	1121	0.78(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.958	21.958	0		236345	29756	85	212	350		
305.8987	21.949	21.958	-1		282447	37233	105	262	355	0.84(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,9-TCDD											
319.8965	22.035	22.035	0		168553	20335	37	92	550		
321.8936	22.035	22.035	0		217484	26622	22	55	1210	0.78(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.600	23.600	0		249931	41792	85	212	492		
305.8987	23.609	23.600	1		304418	49051	105	262	467	0.82(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.660	23.660	0		159041	26777	37	92	724		
1,3,4,6,8-PeCDF											
339.8597	24.022	24.022	0		282879	51764	8	20	6471		
341.8567	24.022	24.022	0		179426	33084	7	17	4726	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.056	26.056	0		191787	27480	24	60	1145		
357.8516	26.056	26.056	0		124820	18312	13	32	1409	1.54(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.652	30.652	0		184760	22522	24	60	938		
357.8516	30.661	30.652	1		120052	14042	13	32	1080	1.54(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.838	30.838	0		252442	29783	28	70	1064		
341.8567	30.846	30.838	1		155199	17958	115	287	156	1.63(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.138	33.138	0		273839	36209	67	167	540		
375.8178	33.138	33.138	0		208454	28574	45	112	635	1.31(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.224	34.224	0		173942	30009	33	82	909		
391.8127	34.224	34.224	0		139267	24561	31	77	792	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.564	36.564	0		170654	37355	33	82	1132		
391.8127	36.556	36.564	-1		138683	30201	31	77	974	1.23(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.918	36.918	0		234506	51404	67	167	767		
375.8178	36.918	36.918	0		178983	40201	45	112	893	1.31(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.934	38.934	0		137960	35037	41	102	855		
425.7737	38.934	38.934	0		132934	34741	40	100	869	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 02:19:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 44

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	485361	62526

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	485361	62526

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.713	6415	874	5793	1027	0.9314	1.11	RQ
19.713	4460	790	5793	1027	0.7822		Empc Correction
24.013	4973	730	5451	956	0.7953	0.91	RQ
24.013	4197	736	5451	956	0.7361		Empc Correction
Signal Totals:							
	8657	1526	11244	1983			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	22632	3587				1.01	RQ
	19901	3509					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.727 = (22632 * 40.000) / (485361 * 1.080)
Empc Amount: 1.518 = (19901 * 40.000) / (485361 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 02:19:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 44

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	40.000	329600	43764

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		40.000	329600	43764

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.396	2359	261	2082	262	0.5012	1.13	RQ
22.396	1603	201	2082	262	0.4159		Empc Correction
Signal Totals:							
	1603	201	2082	262			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4441	523				1.13	RQ
	3685	463					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5012 = (4441 * 40.000) / (329600 * 1.075)
Empc Amount: 0.4159 = (3685 * 40.000) / (329600 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.434	323	113	477	79		0.68	R
24.873	227	52	236	71		0.96	R
Signal Totals:							
	550	165	713	150			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1263	315				0.77	RQ
	904	270					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1263 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (904 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.898	625	122	430	72		1.45	
Signal Totals:							
	625	122	430	72			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1055	194				1.45	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (1055 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 02:19:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 44

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
34.973	2250	338	1567	325		1.44	R
35.116	3879	551	2908	527		1.33	
Signal Totals:							
	6129	889	4475	852			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10604	1741				1.37	RQ
	10297	1806					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (10604 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (10297 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 02:19:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 44

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.344	2218	414	2261	396		0.98	R
Signal Totals:							
	2218	414	2261	396			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4479	810				0.98	RQ
	4006	747					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4479 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (4006 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

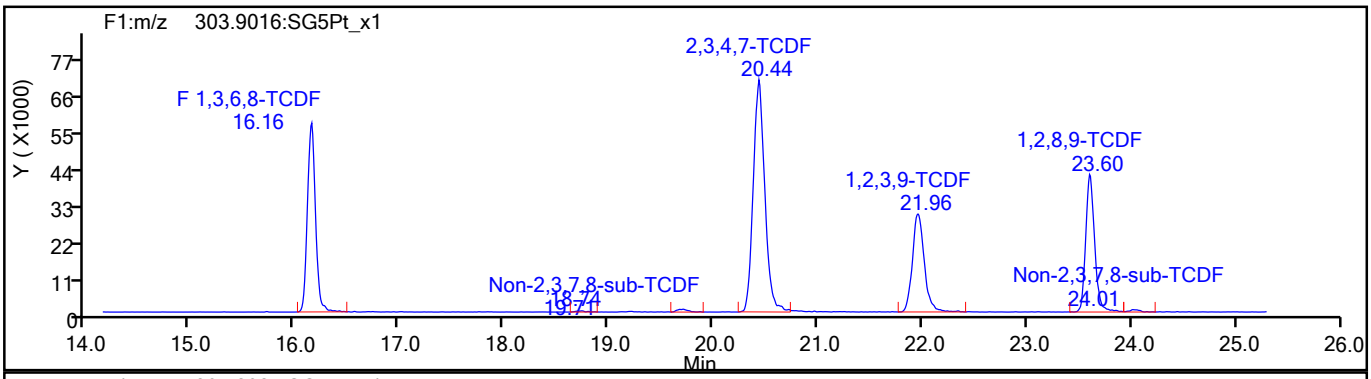

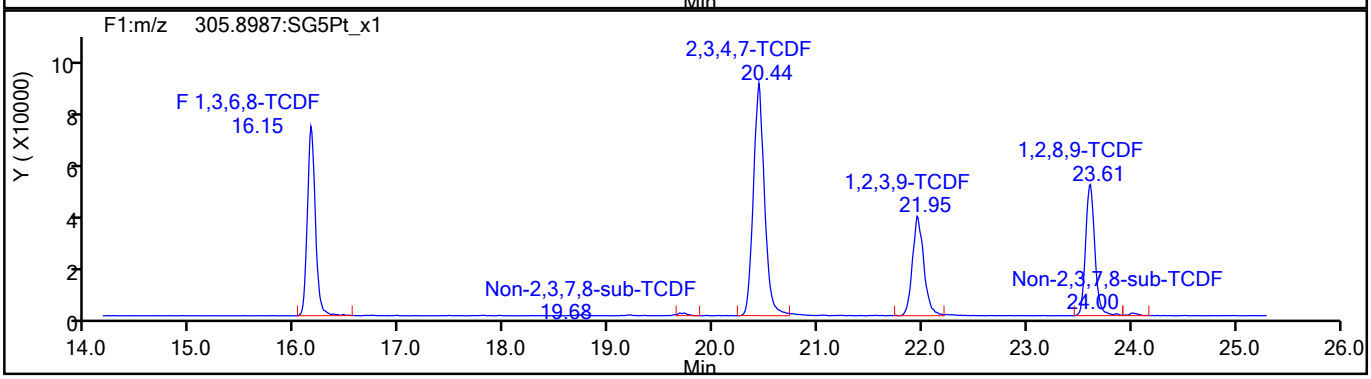

TCDF Standards

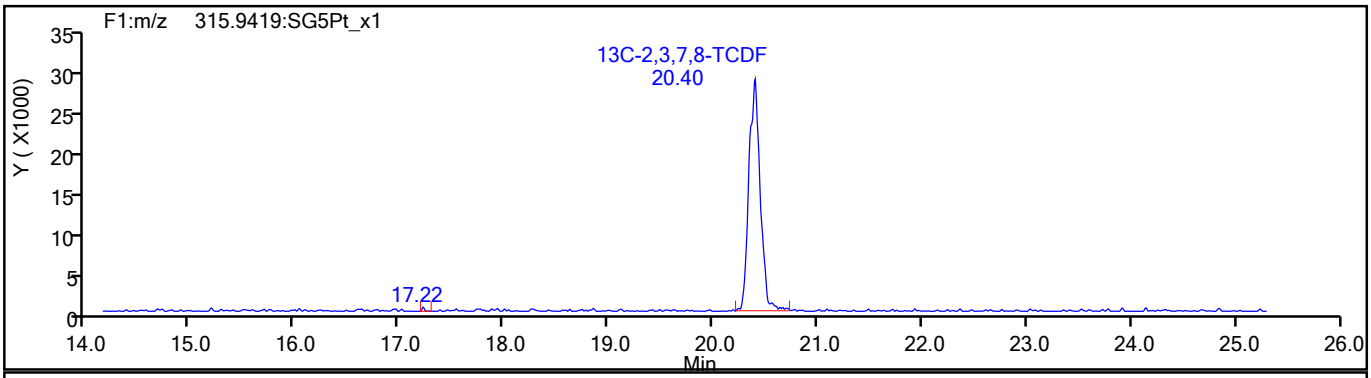

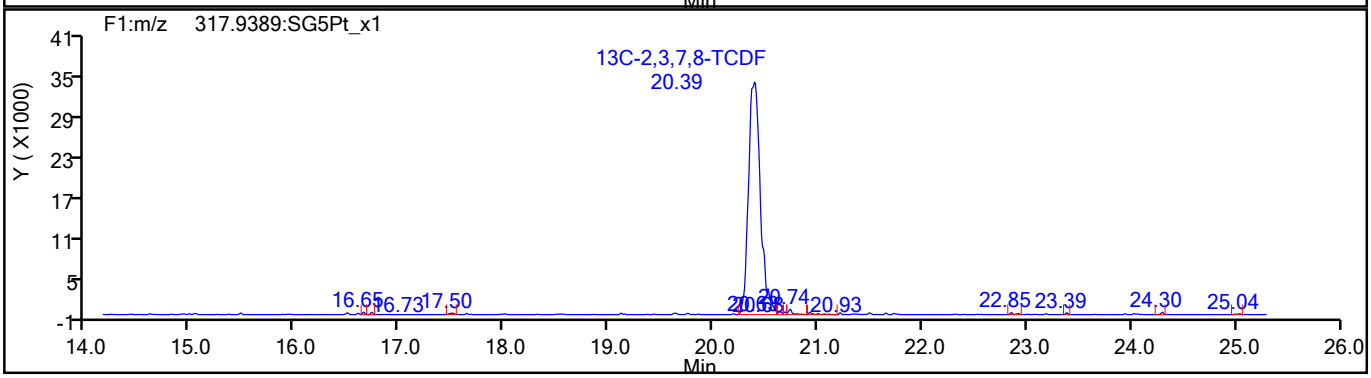

787680

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

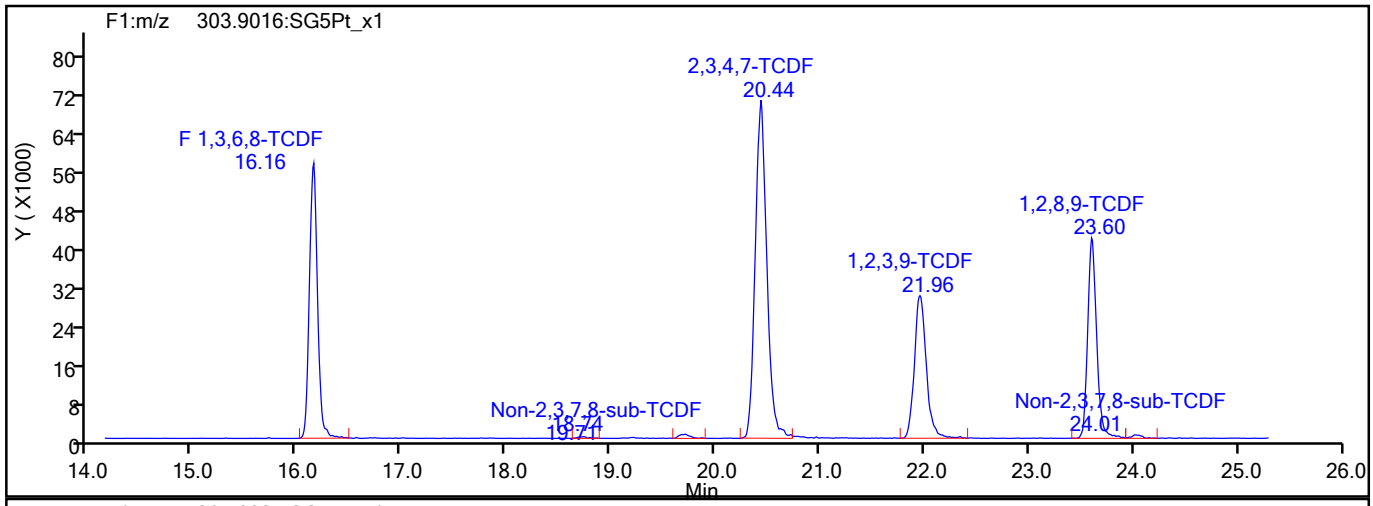

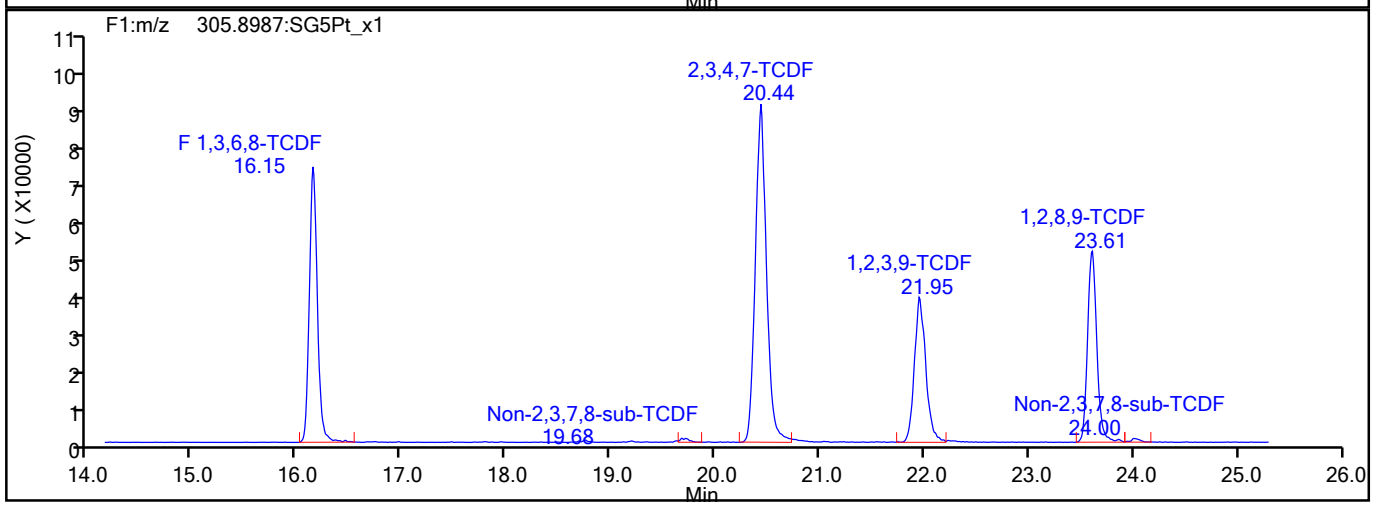

TCDF Interference Mass

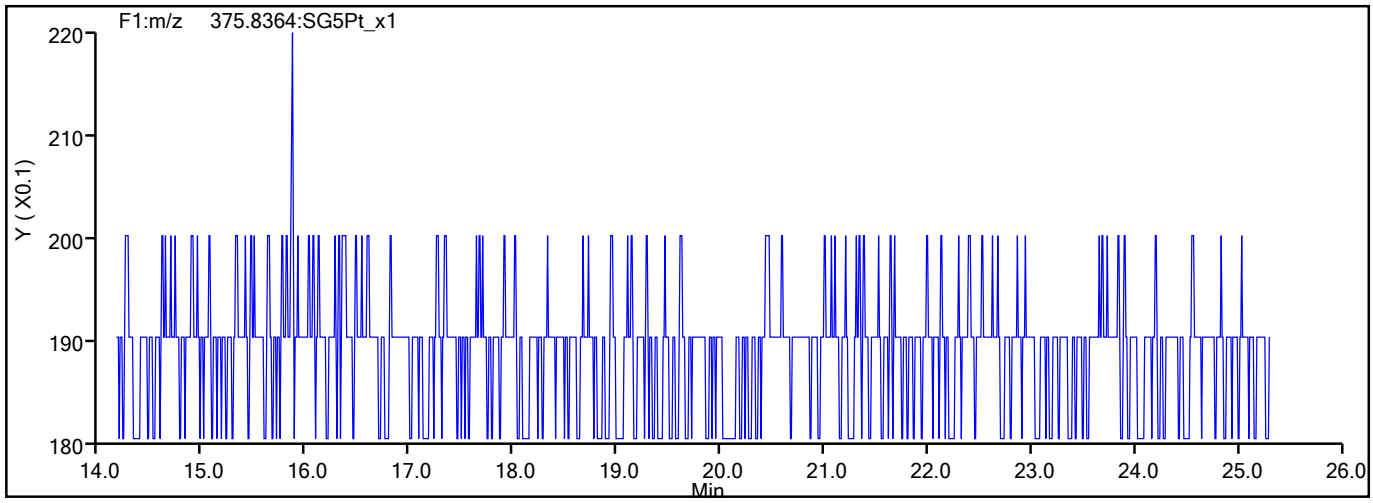

787681

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

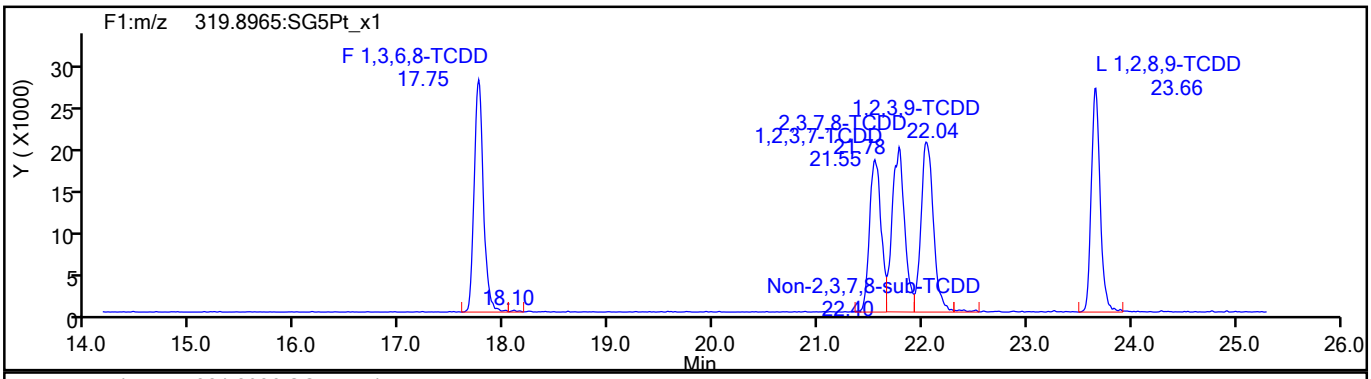

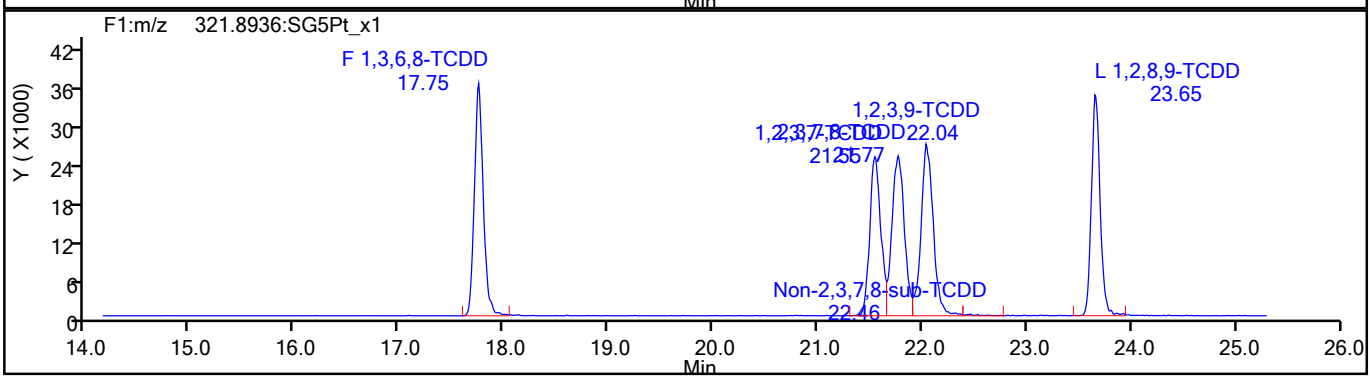

TCDD Standards

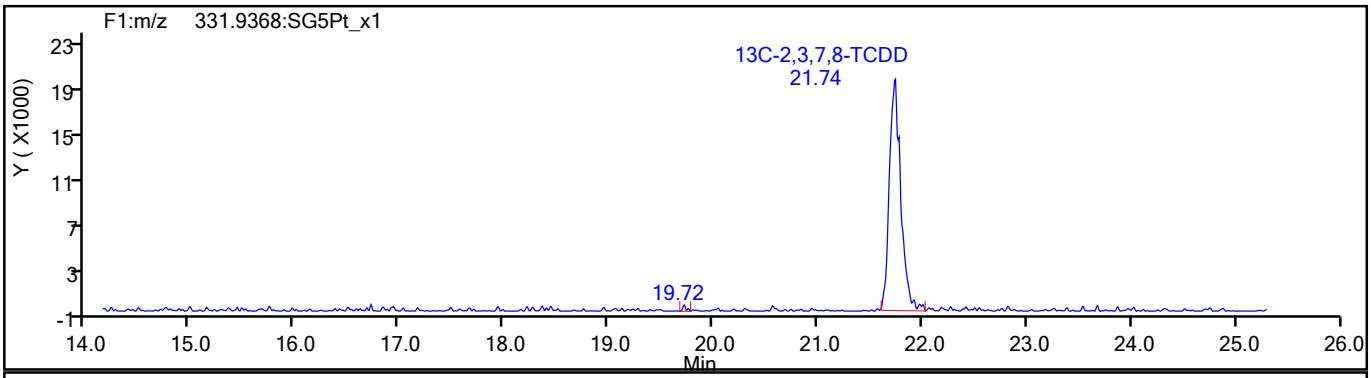

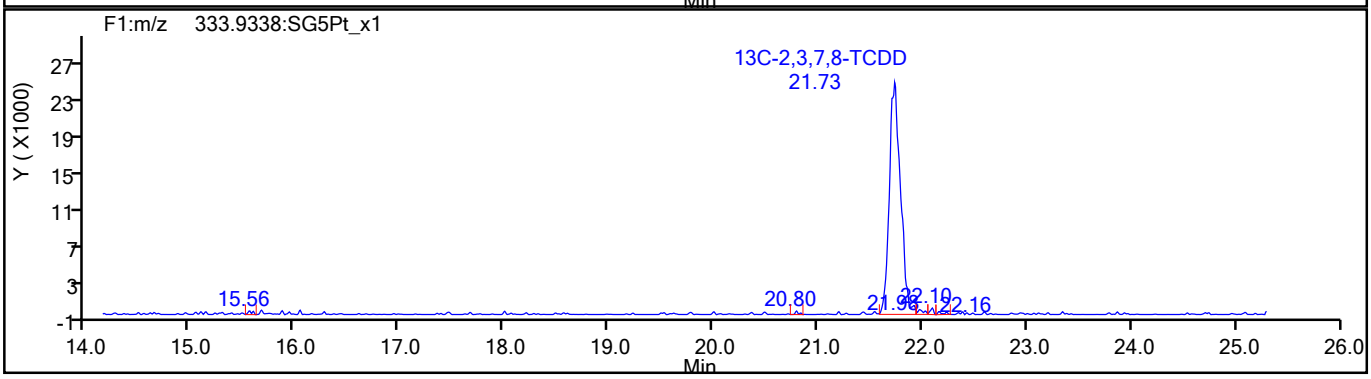

787682

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

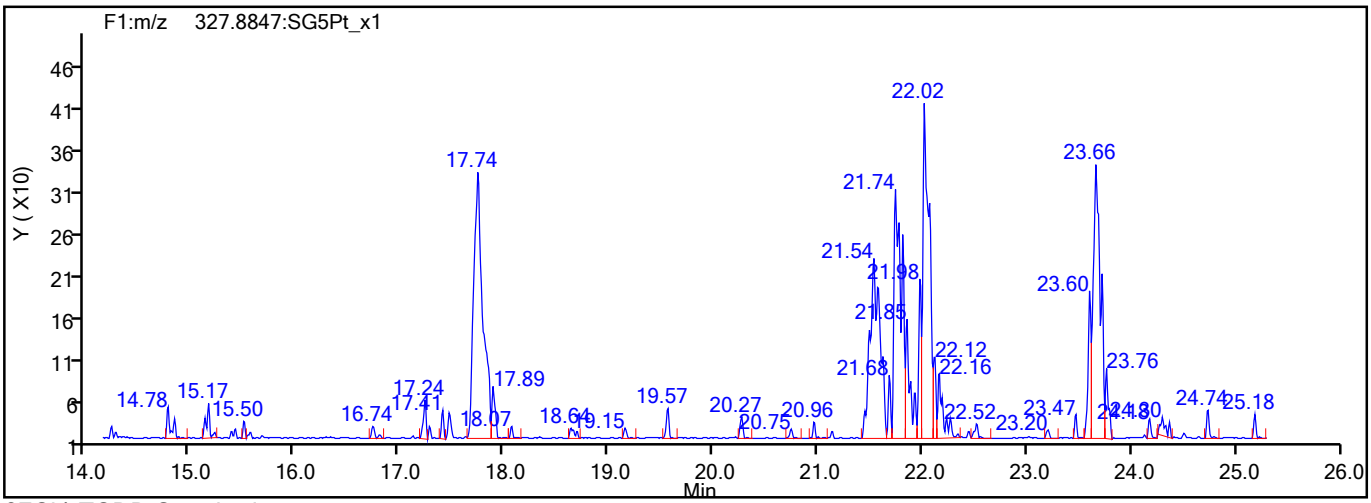

37Cl4-TCDD Standards

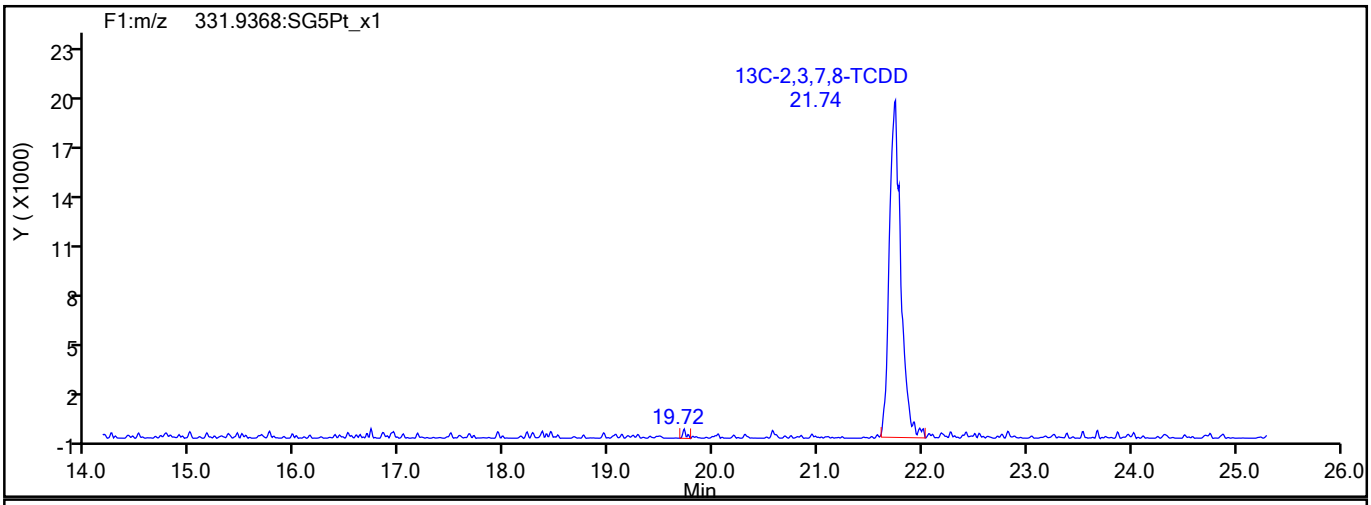

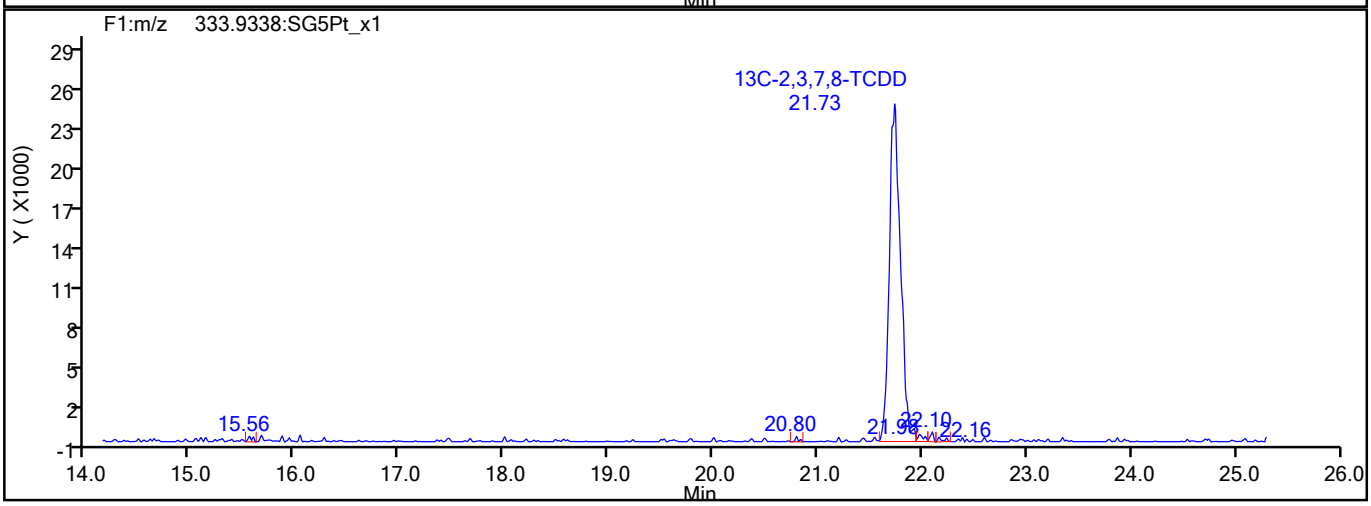

787683

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

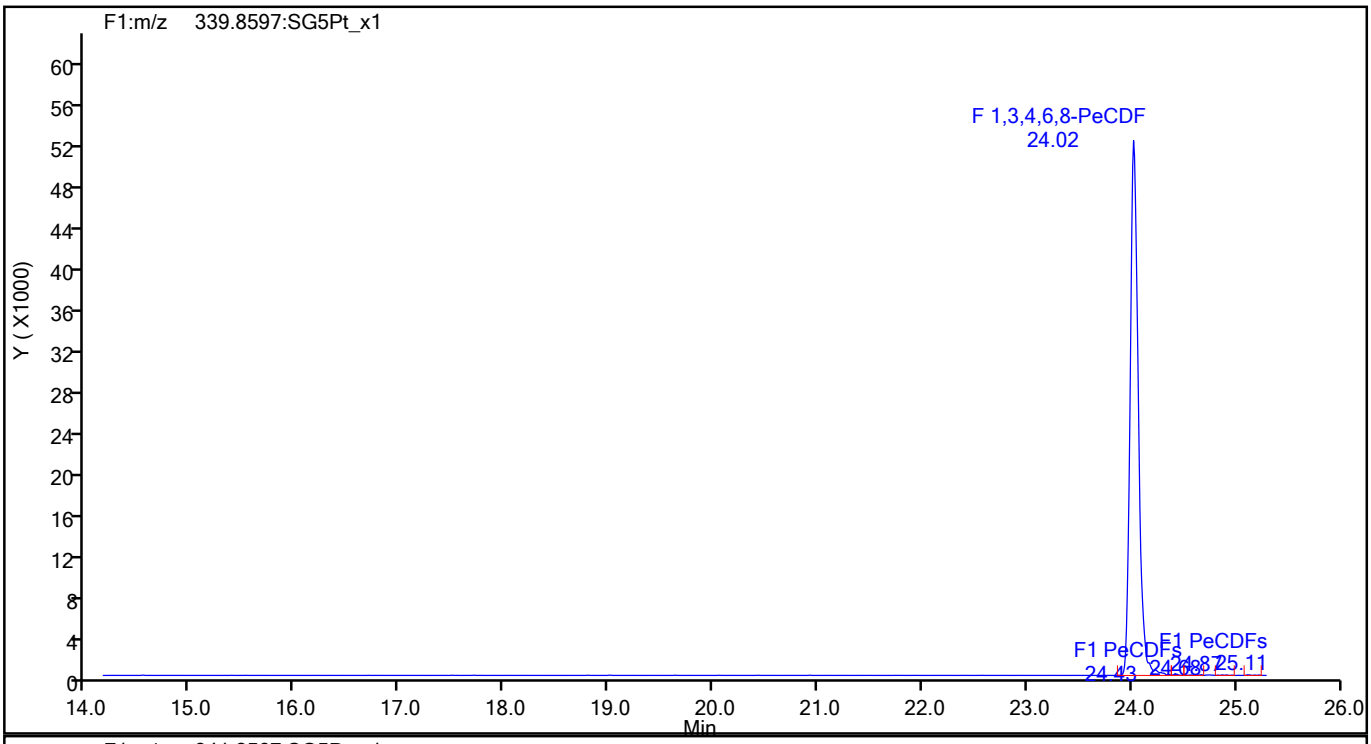

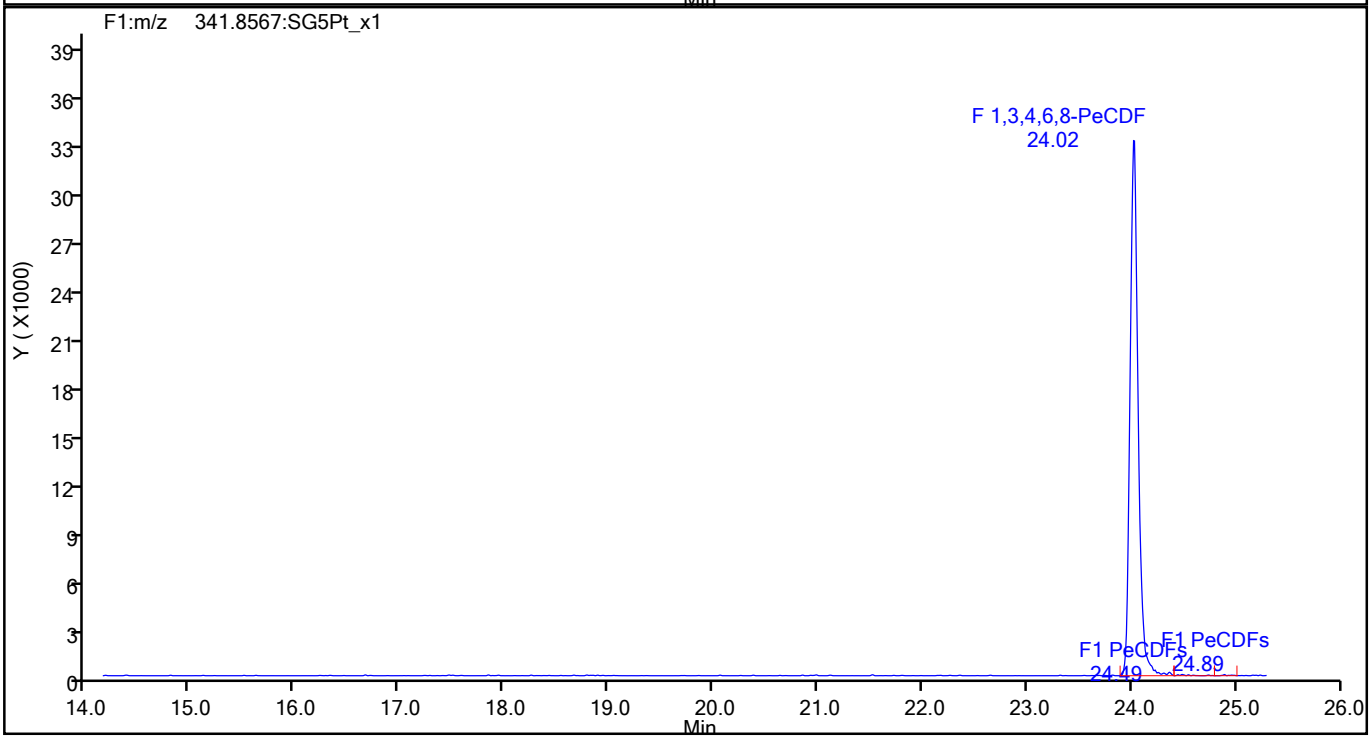

787684

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
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F1 PeCDFs

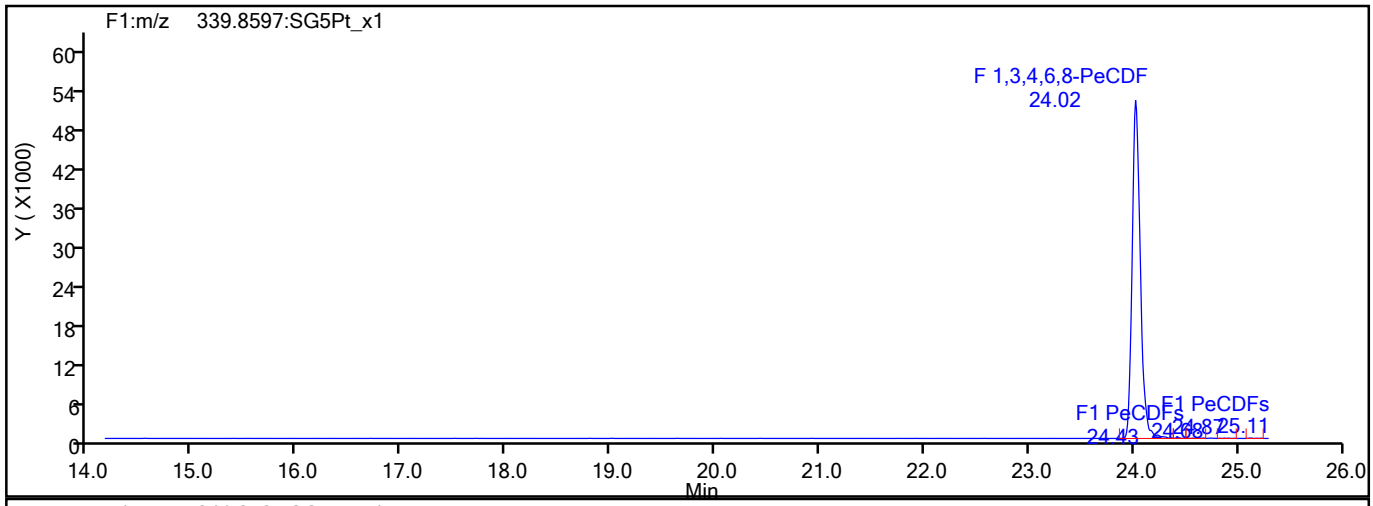

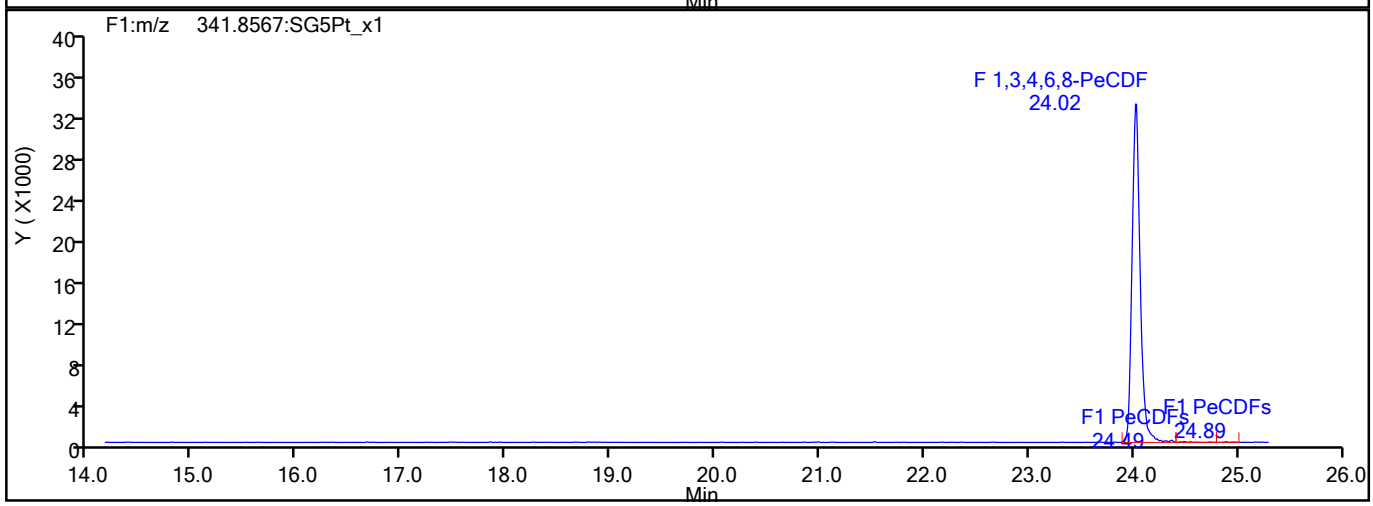

F1 PeCDFs Interference Mass

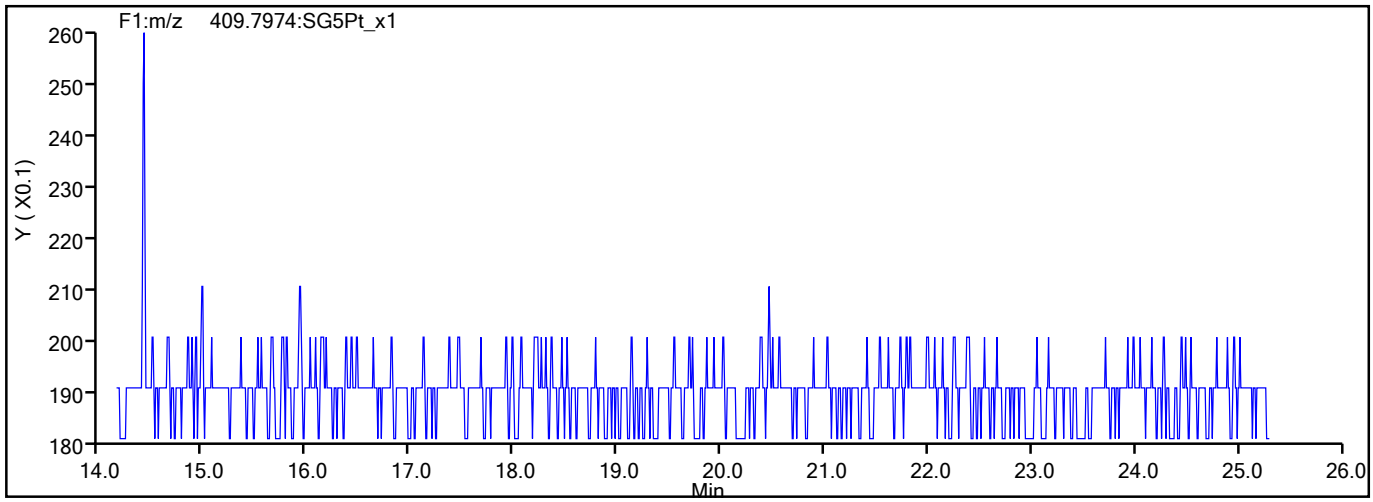

787685

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

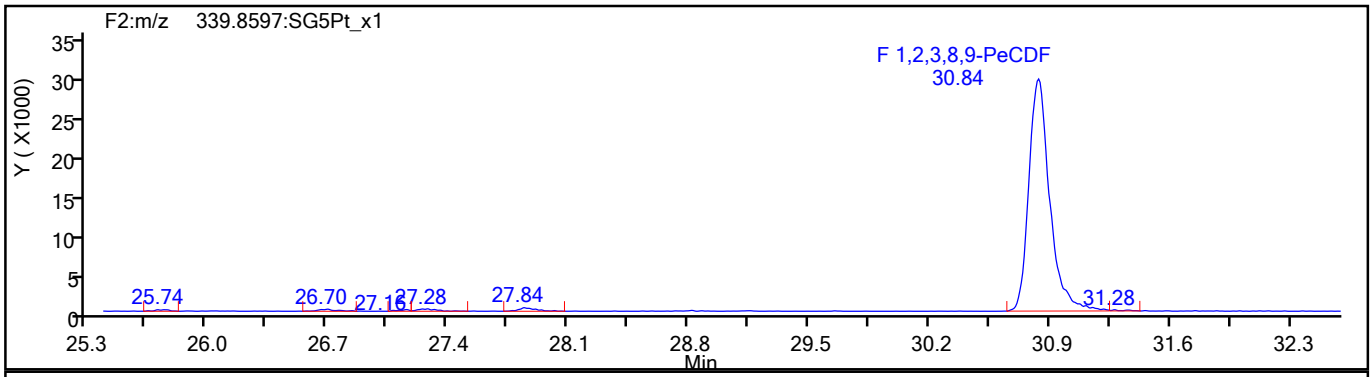

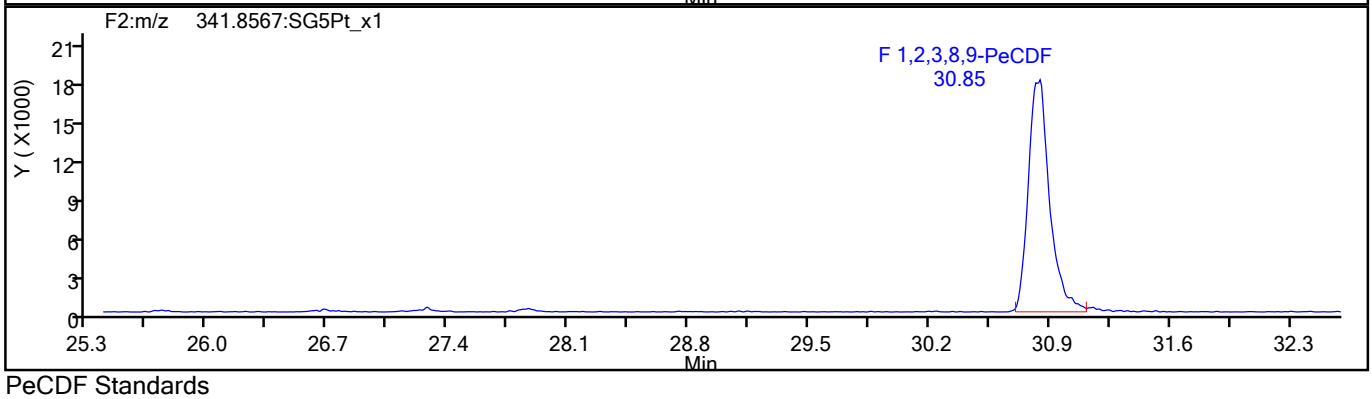

PeCDF Standards

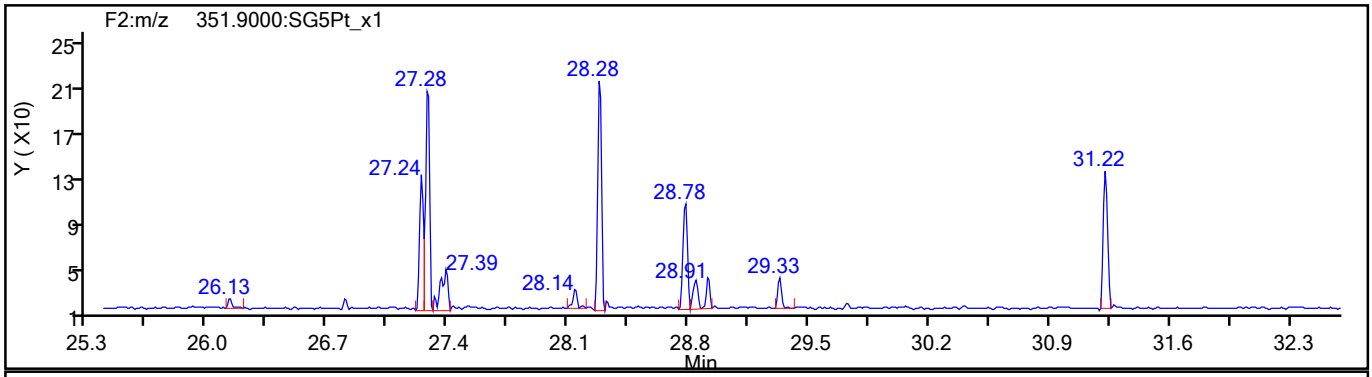

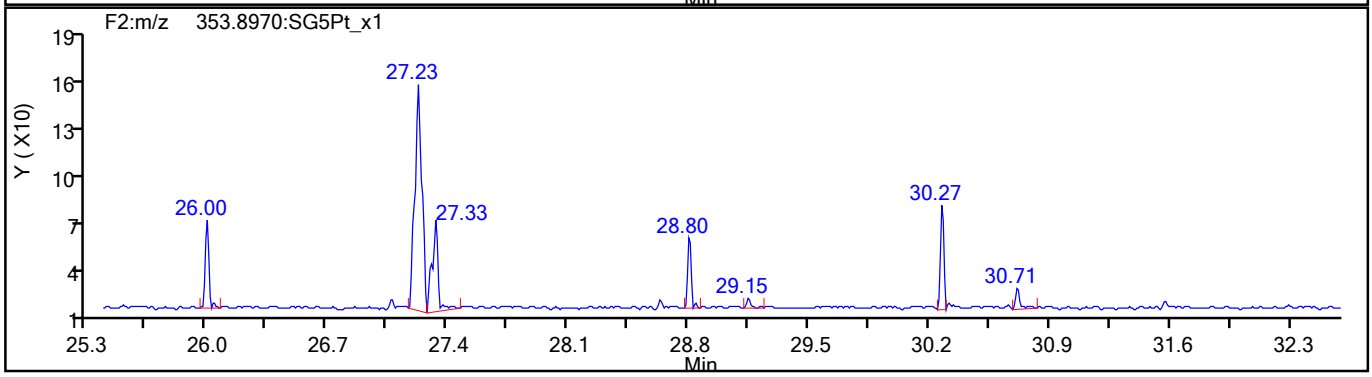

787686

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

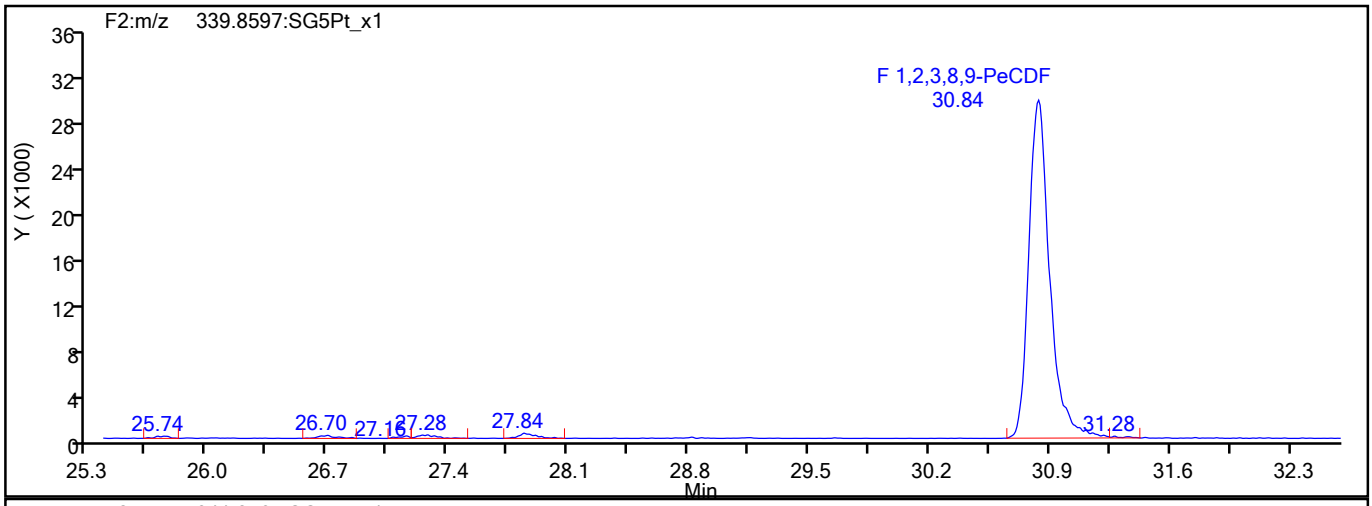

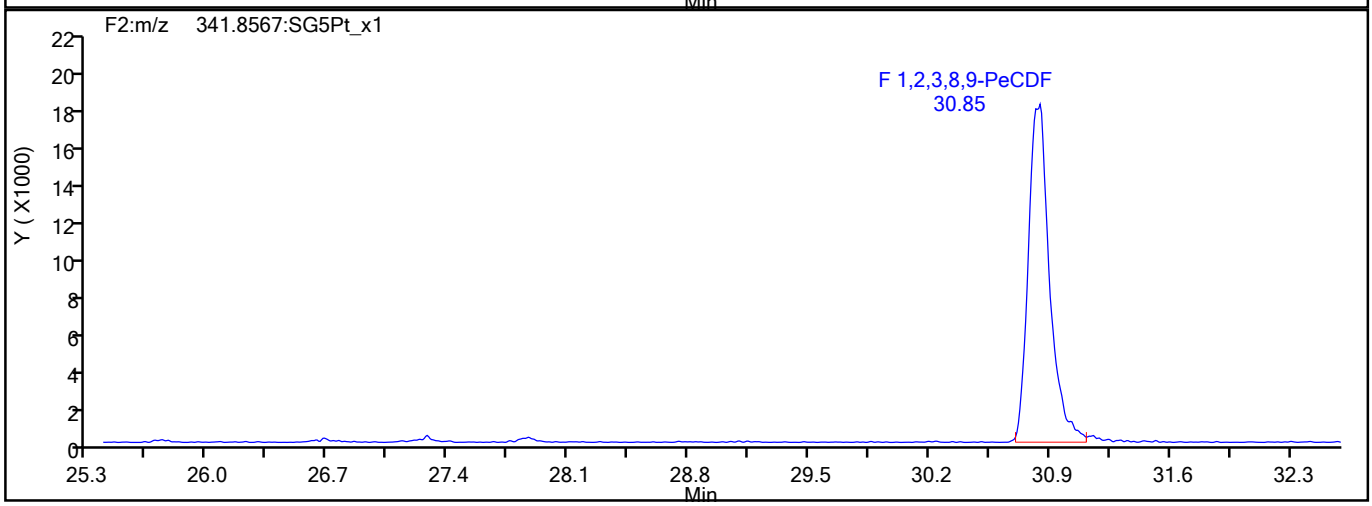

PeCDF Interference Mass

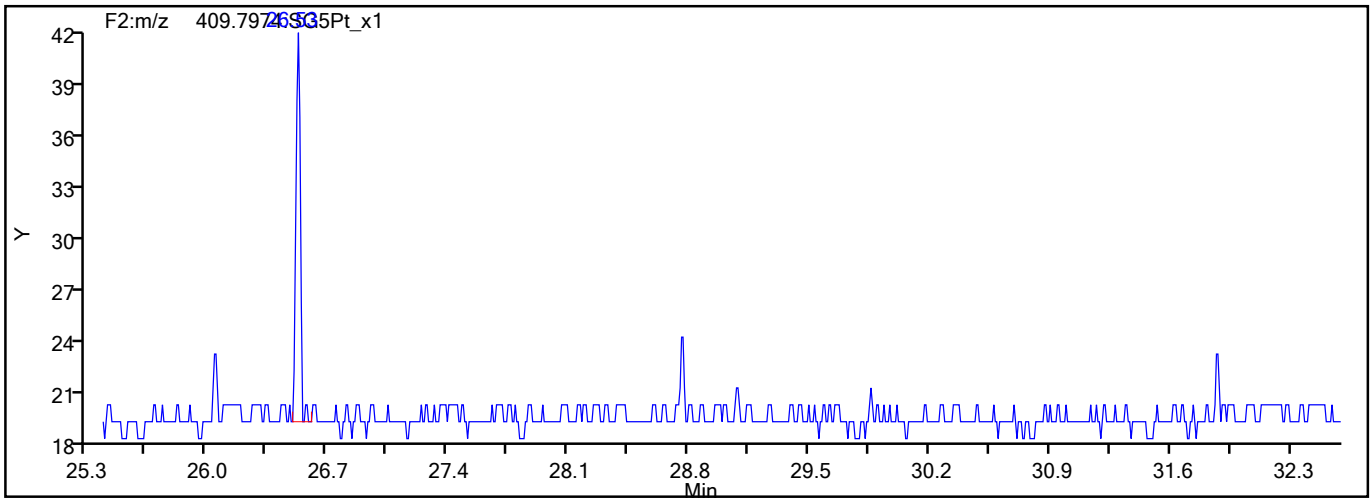

787687

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

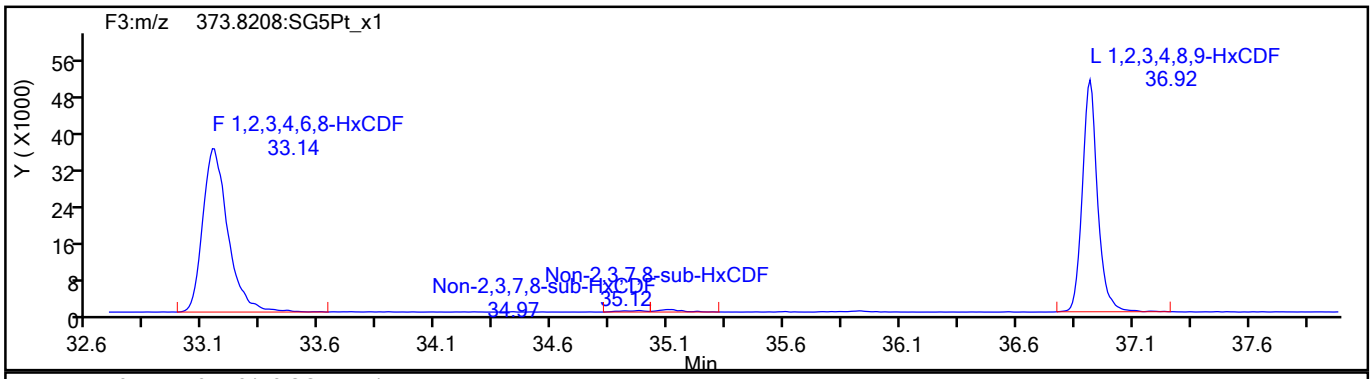

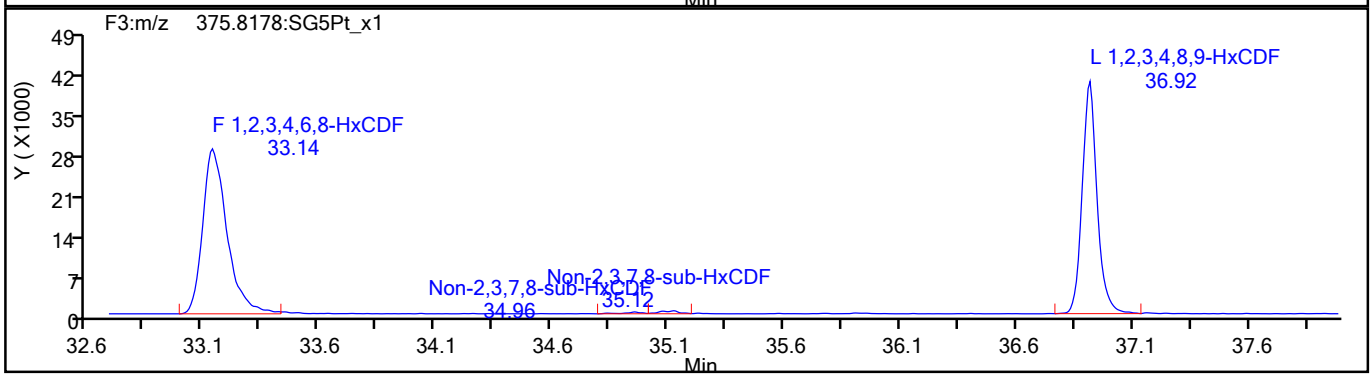

HxCDF Standards

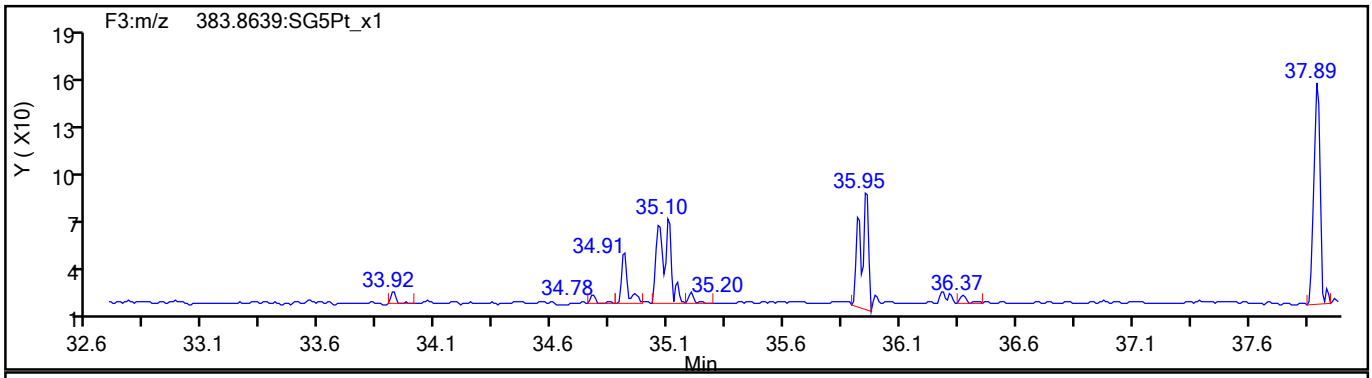

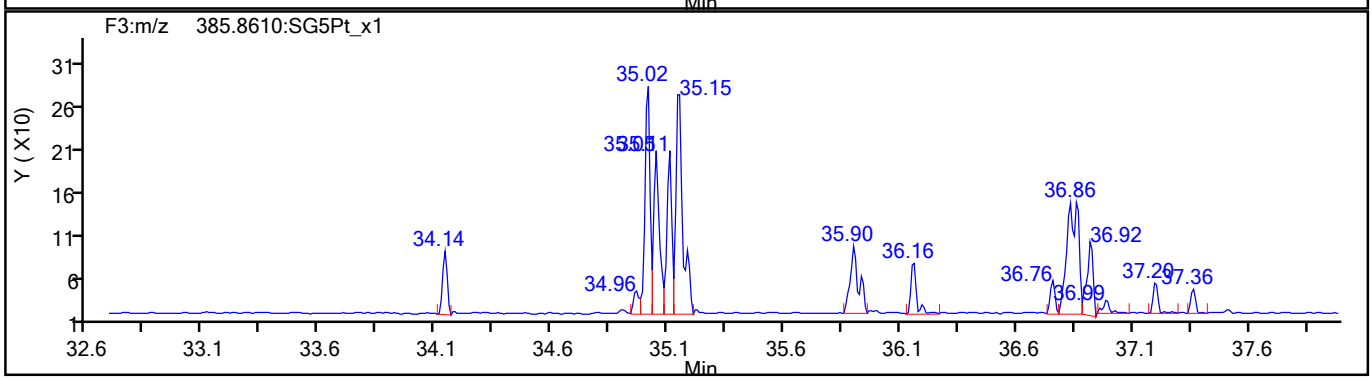

787688

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

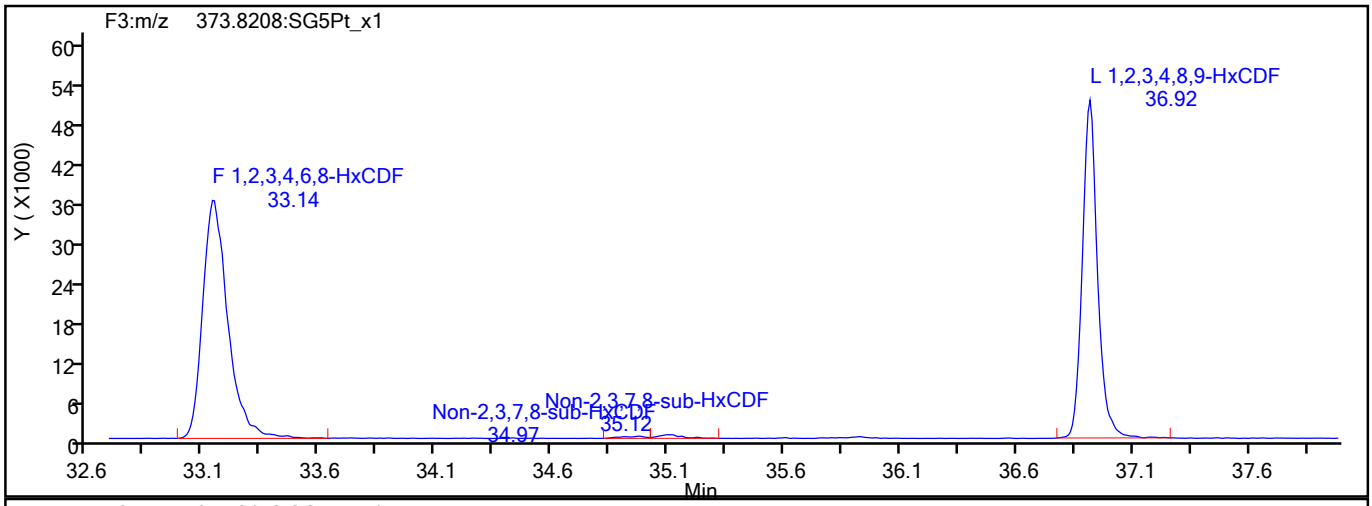

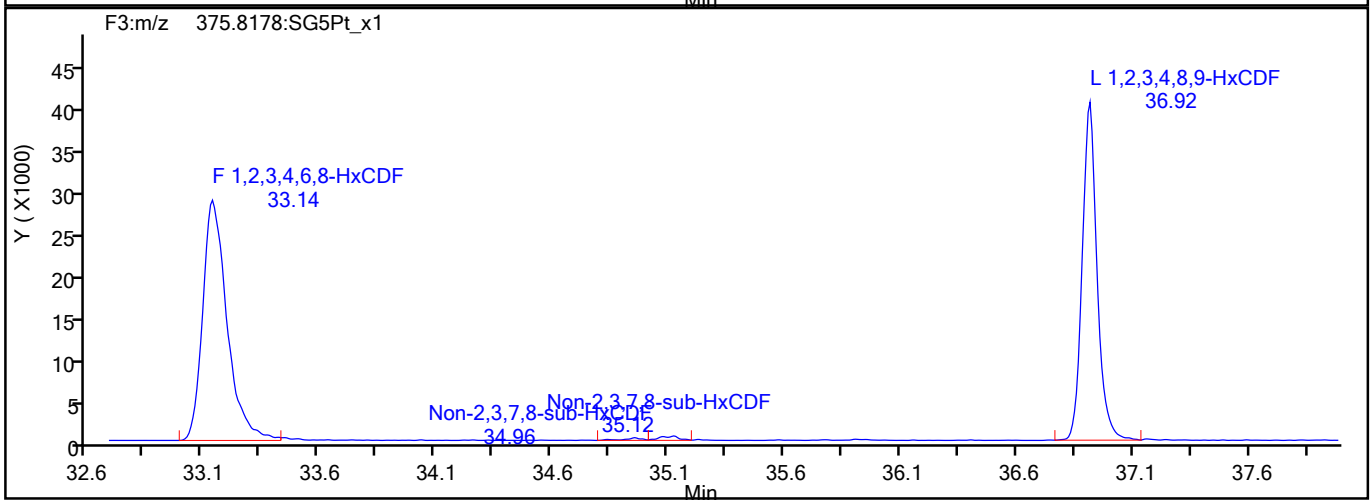

HxCDF Interference Mass

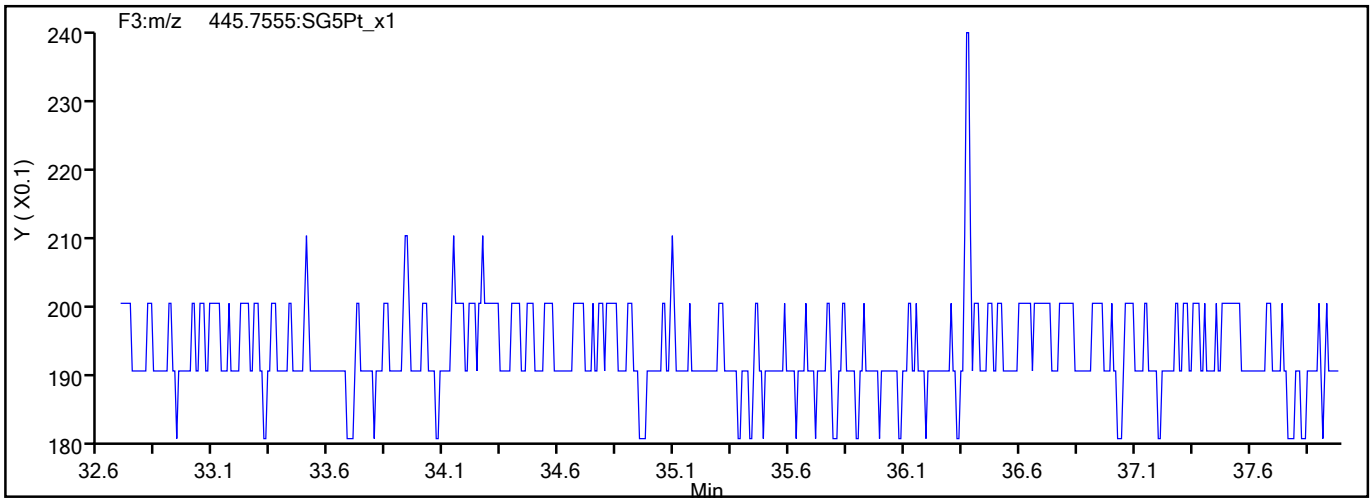

787689

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

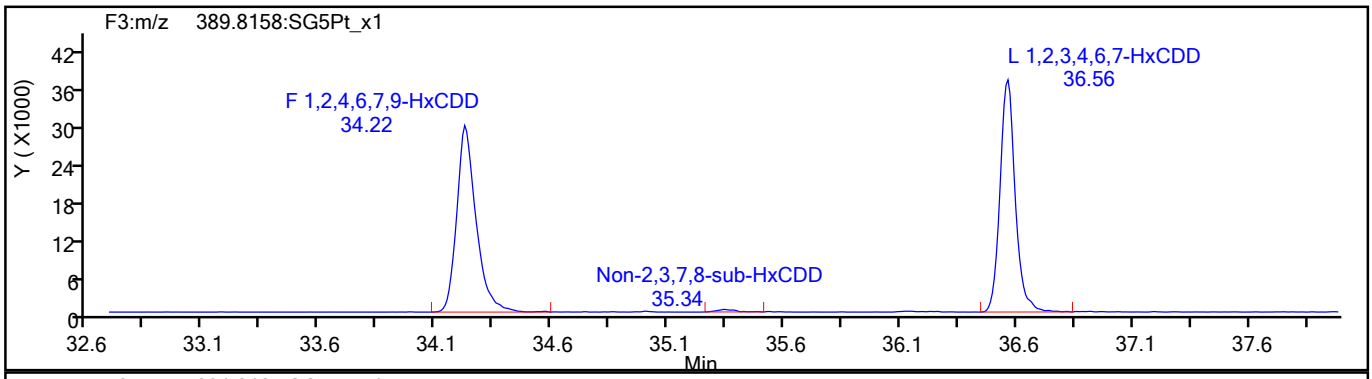

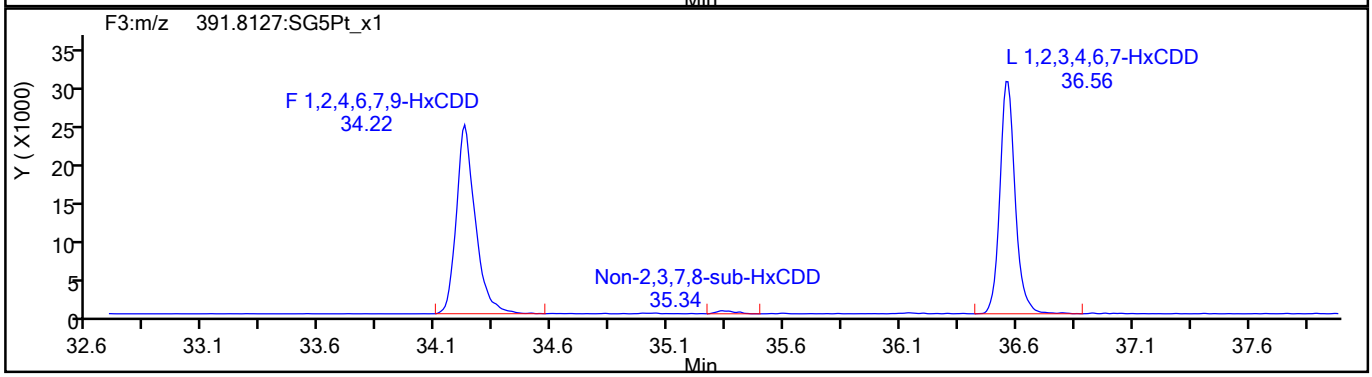

HxCDD Standards

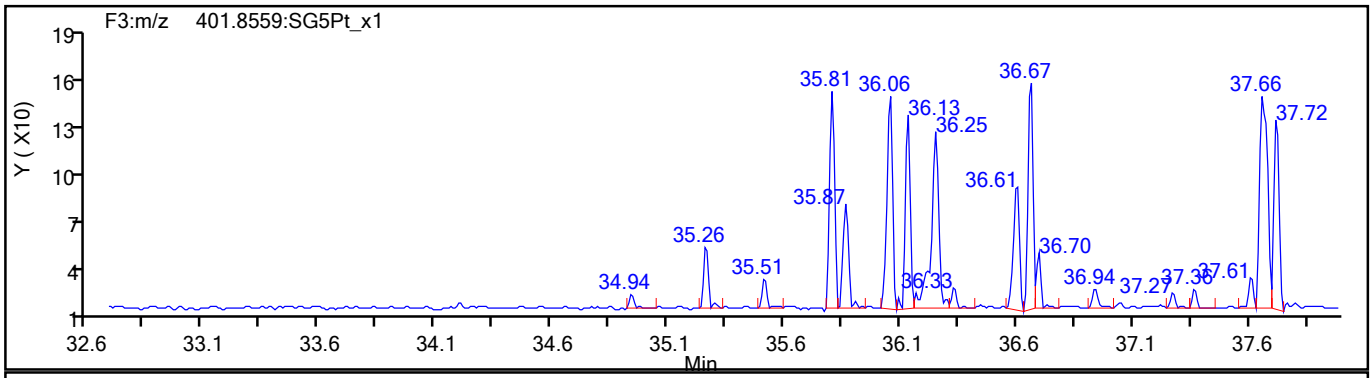

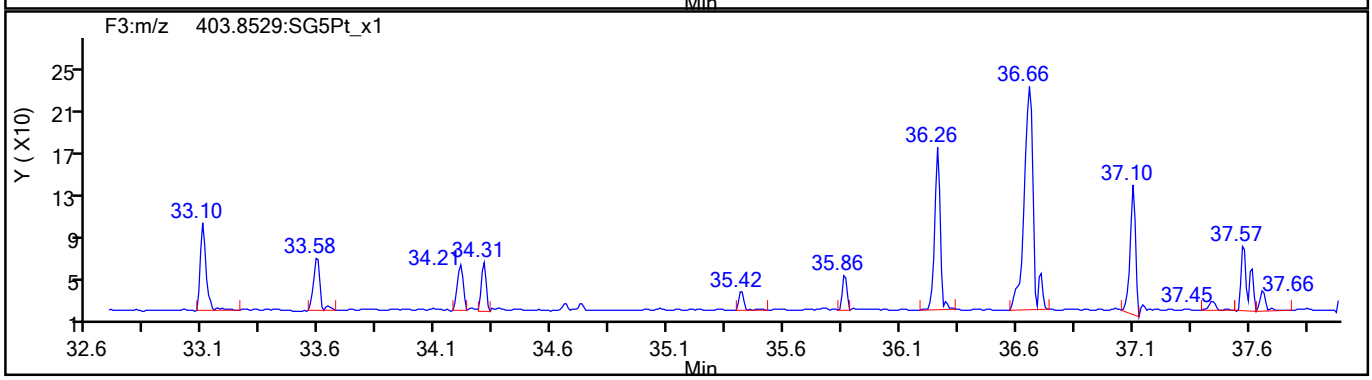

787690

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

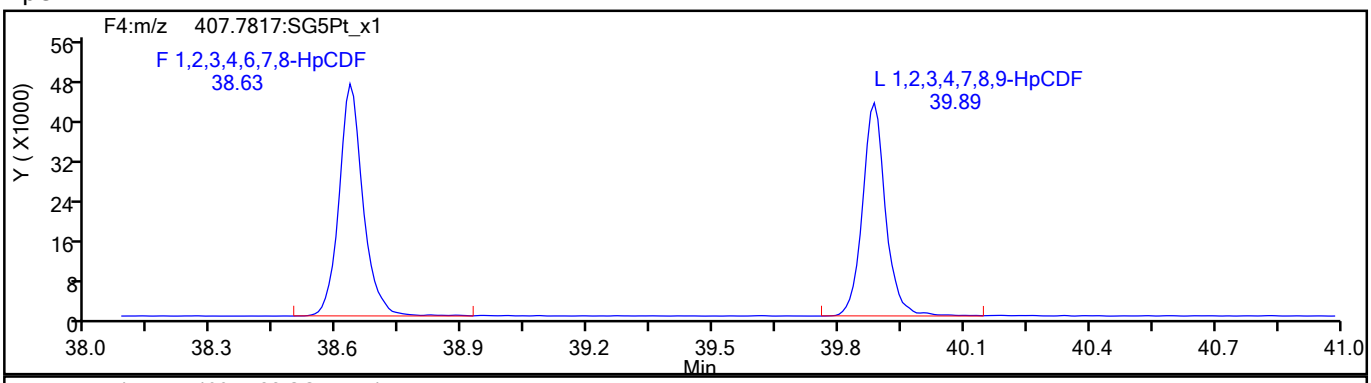

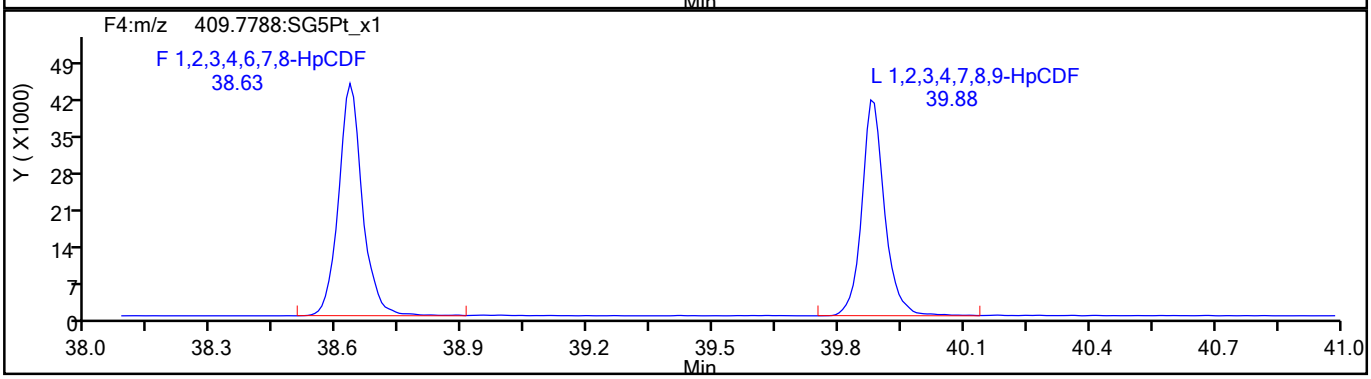

HpCDF Standards

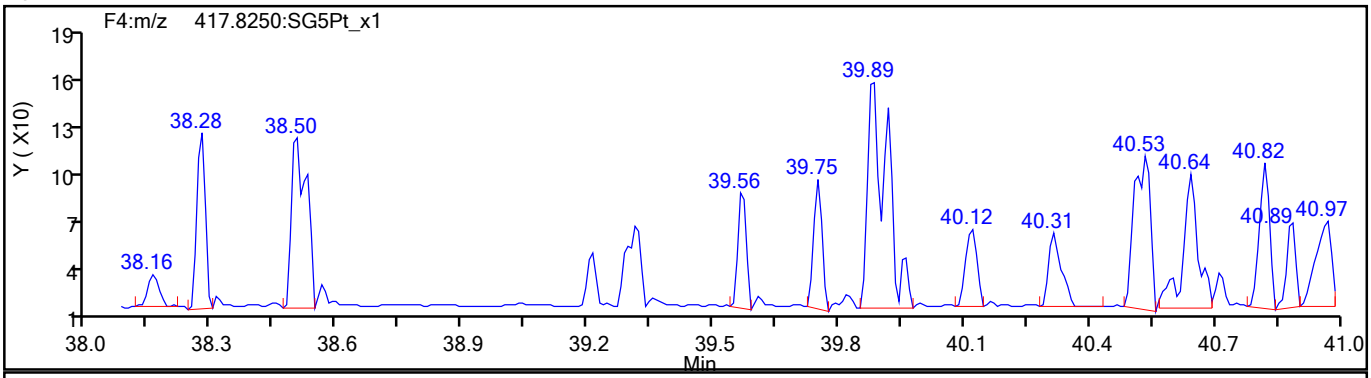

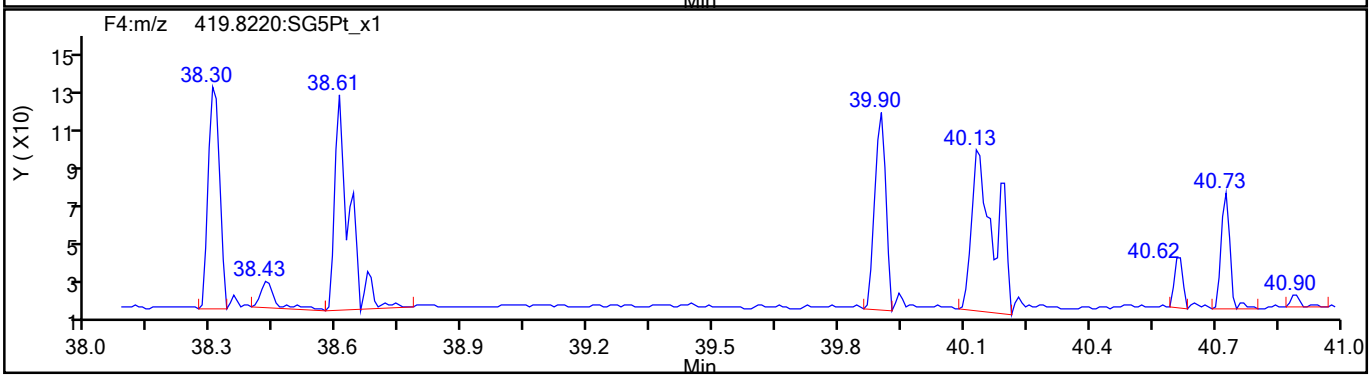

787691

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

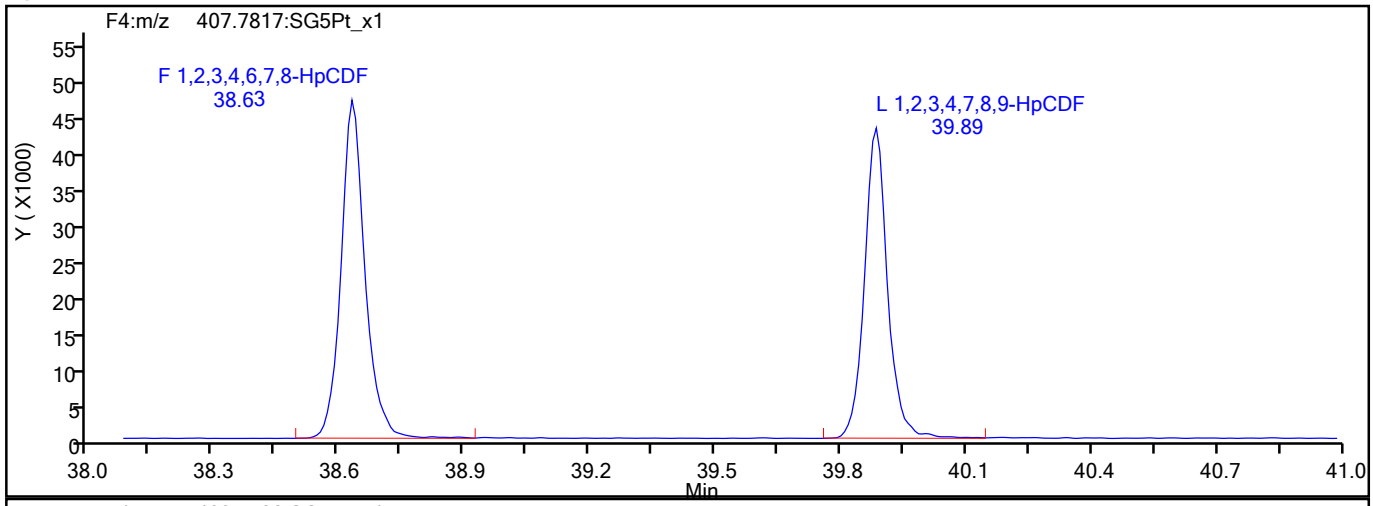

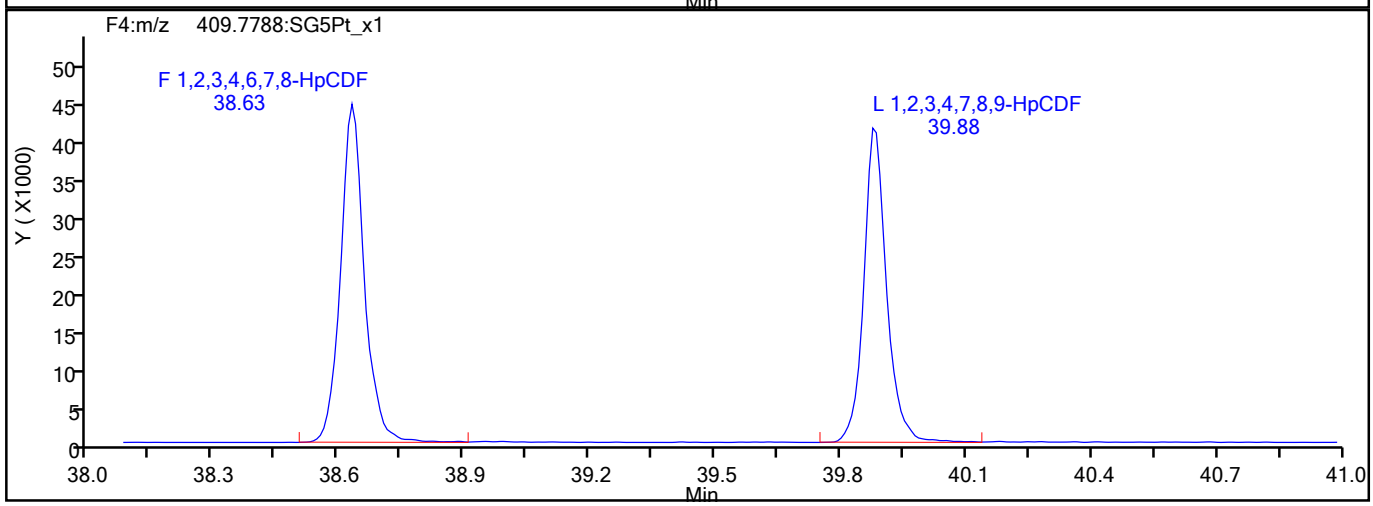

HpCDF Interference Mass

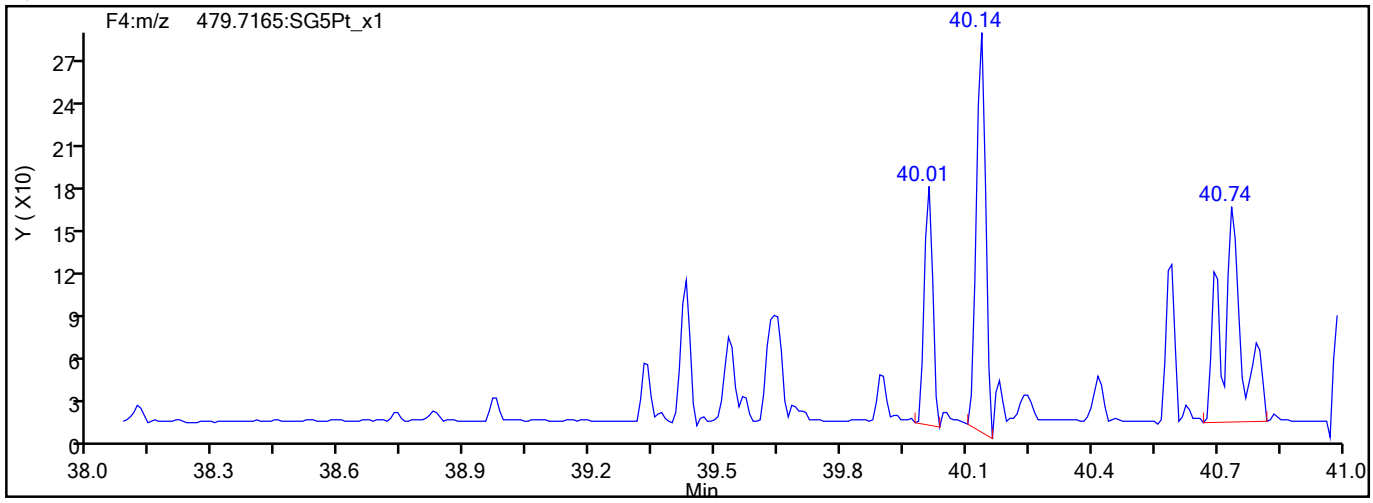

787692

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

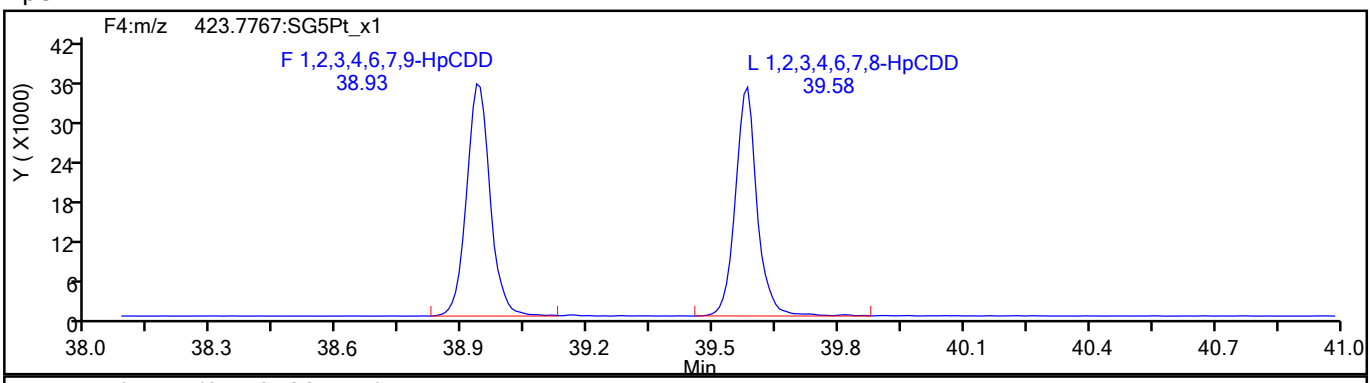

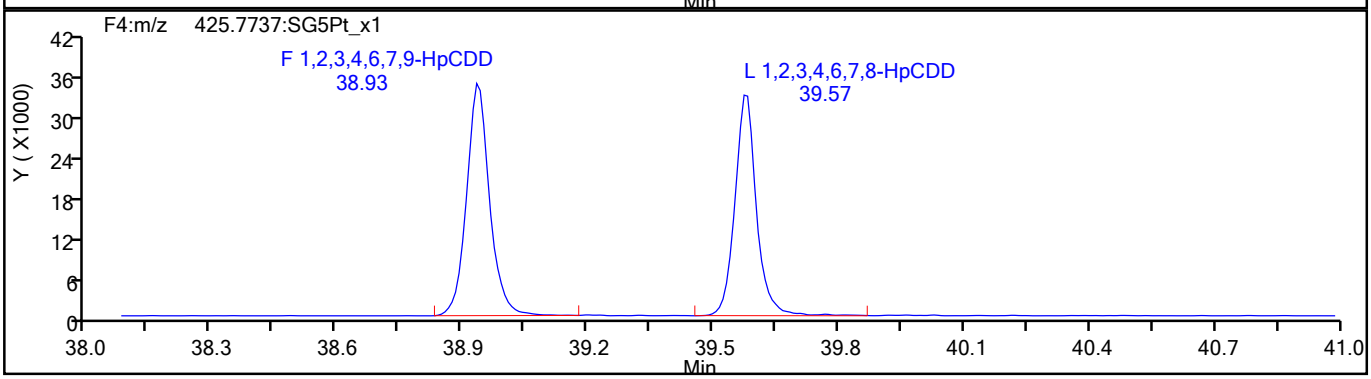

HpCDD Standards

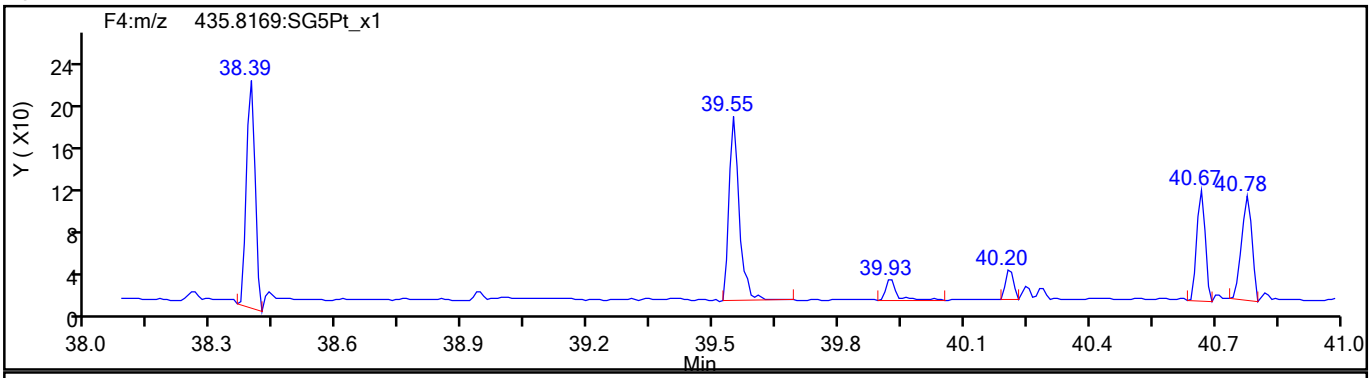

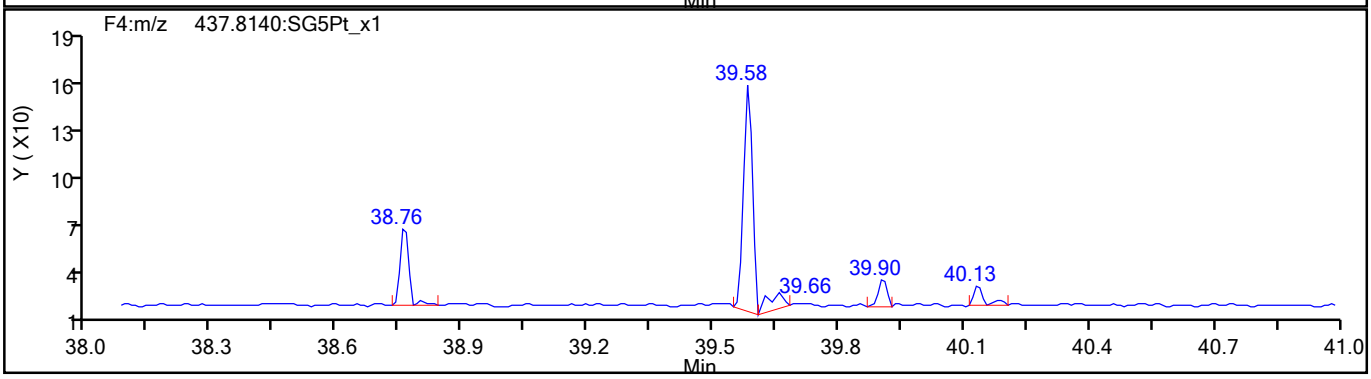

787693

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

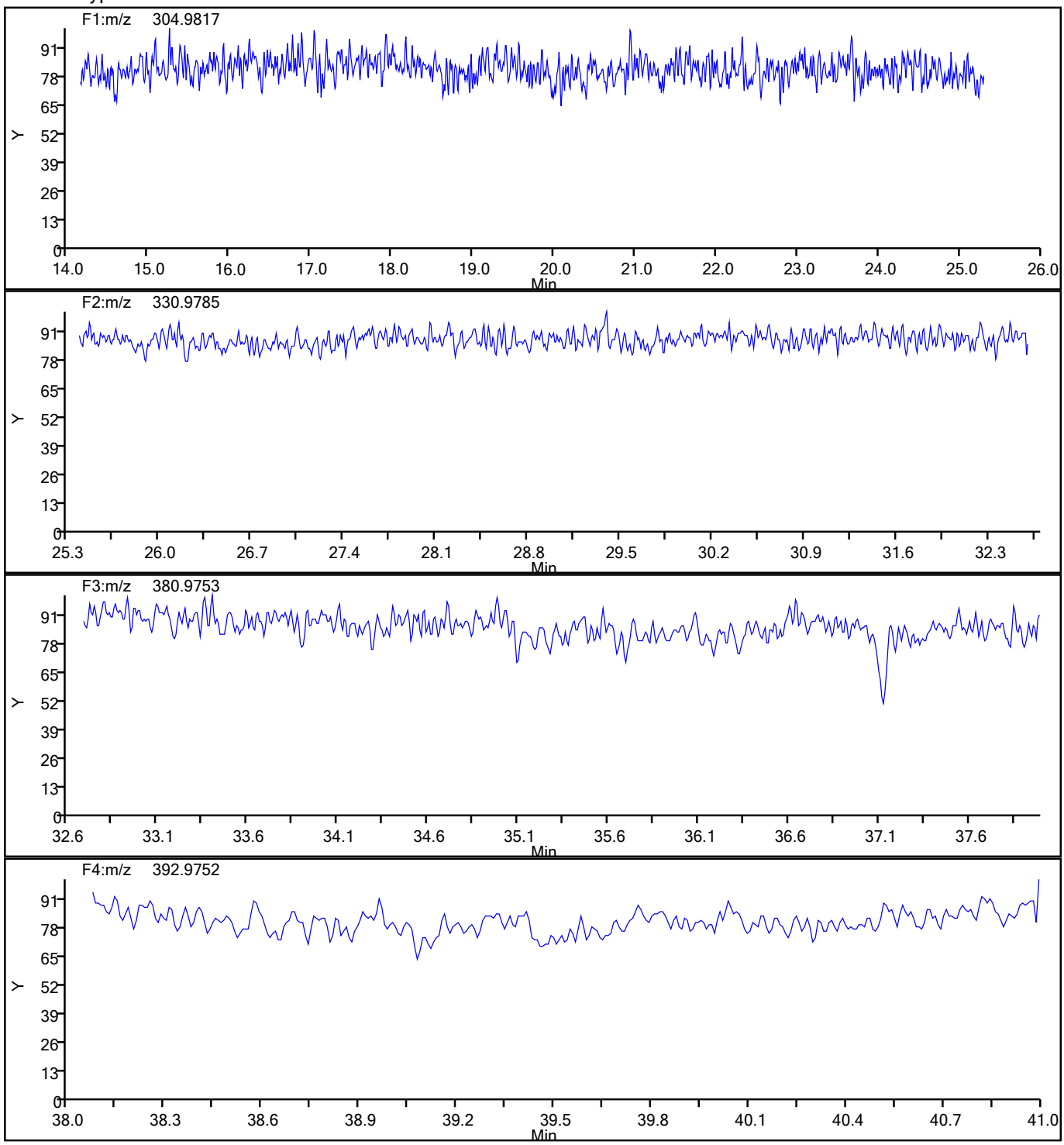

787694

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

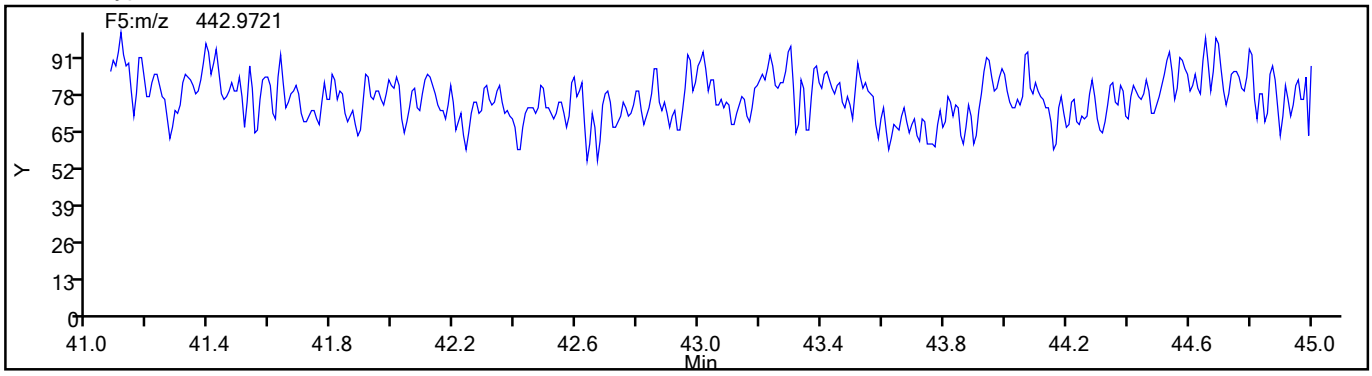

787695

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 13:59:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:08 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:37:44

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.414	82325	0.77	1.3459					0.00	
2,3,7,8-TCDF	20.465	207971	0.79	1.0802	93.5	93.5	0.3796	0.3796		
A Non-2,3,7,8-sub-TCDF	19.885	7691	0.77	1.0802	4.296	3.459	0.3796	0.998		RQ
S Total TCDF					97.8	97.0	0.3796	0.3796		RQ
D 13C-2,3,7,8-TCDD	21.782	52515	0.84	0.9317					0.00	
2,3,7,8-TCDD	21.842	61999	0.78	1.0753	43.9	43.9	0.8255	0.8255		
A Non-2,3,7,8-sub-TCDD	20.727	1960	0.77	1.0753	1.960	1.388	0.8255	1.388		RQ
S Total TCDD					45.9	45.3	0.8255	0.8255		RQ
A F1 PeCDFs	24.666	2431	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.176	71975	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.536	53316	1.56	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.073						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.427	1106	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.630	78952	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.876	71095	1.09	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.253						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.573	55161	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.253						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.121	116172	0.79							
1,3,6,8-TCDD	17.755	65500	0.83							
2,3,4,7-TCDF	20.465	207971	0.79							
1,2,3,7-TCDD	21.584	55945	0.75							
1,2,3,9-TCDF	22.005	88819	0.75							
1,2,3,9-TCDD	22.100	69760	0.77							
1,2,8,9-TCDF	23.649	94787	0.80							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.700	26243								
1,3,4,6,8-PeCDF	24.062	81931	1.50							
1,2,3,8,9-PeCDD	26.119	58169	1.69							
1,2,4,7,9-PeCDD	30.776	53316	1.56							a
1,2,3,8,9-PeCDF	30.944	68306	1.60							a
1,2,3,4,6,8-HxCDF	33.212	94798	1.31							
1,2,4,6,7,9-HxCDD	34.273	63223	1.25							
1,2,3,4,6,7-HxCDD	36.581	60887	1.16							
1,2,3,4,8,9-HxCDF	36.934	83283	1.29							
1,2,3,4,6,7,9-HpCDD	38.933	59370	1.04							

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 13:59:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:08 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:37:44

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.414	20.414	0	1.000	35682	5599	44	110	127		
317.9389	20.414	20.414	0	1.000	46643	6790	11	27	617	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.465	20.465	0	1.003	91905	11730	19	47	617		
305.8987	20.474	20.465	1	1.003	116066	13607	32	80	425	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.708	19.885	-11	0.965	1142	200	19	47	11		
	Empc Correction				920	249	19	47	13		
305.8987	19.742	19.885	-9	0.967	1195	324	32	80	10	0.96(0.65-0.89)	
303.9016	20.982	19.885	66	1.028	799	152	19	47	8		
305.8987	20.982	19.885	66	1.028	2231	334	32	80	10	0.36(0.65-0.89)	
	Empc Correction				1037	197	32	80	6		
303.9016	22.324	19.885	146	1.094	951	173	19	47	9		
305.8987	22.393	19.885	150	1.097	1268	204	32	80	6	0.75(0.65-0.89)	
303.9016	24.053	19.885	250	1.178	662	199	19	47	10		
305.8987	24.036	19.885	249	1.177	1302	181	32	80	6	0.51(0.65-0.89)	
	Empc Correction				859	258	32	80	8		
13C-2,3,7,8-TCDD											
331.9368	21.782	21.782	0	1.000	23953	3420	22	55	155		
333.9338	21.816	21.782	2	1.000	28562	4240	1	2	4240	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.842	21.842	0	1.003	27074	3242	31	77	105		
321.8936	21.816	21.842	-2	1.002	34925	4202	37	92	114	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.358	20.727	98	1.026	853	199	31	77	6		
321.8936	22.341	20.727	97	1.026	1914	264	37	92	7	0.45(0.65-0.89)	
	Empc Correction				1107	258	37	92	7		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A F1 PeCDFs											RQ
339.8597	24.268	24.666	-24	1.000	930	276	5	12	55		
341.8567	24.285	24.666	-23	1.000	557	133	3	7	44	1.67(1.32-1.78)	
339.8597	24.328	24.666	-20	1.000	574	173	5	12	35		
341.8567	24.397	24.666	-16	1.000	801	142	3	7	47	0.72(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.365	28.176	-49	1.000	493	76	7	17	11		
341.8567	27.323	28.176	-51	1.000	293	68	13	32	5	1.68(1.32-1.78)	
339.8597	30.944	28.176	166	1.000	42003	5021	7	17	717		
341.8567	30.952	28.176	166	1.000	26303	3283	13	32	253	1.60(1.32-1.78)	
339.8597	31.197	28.176	181	1.000	1166	325	7	17	46		
341.8567	31.155	28.176	178	1.000	921	220	13	32	17	1.27(1.32-1.78)	
339.8597	31.281	28.176	186	1.000	587	172	7	17	25		
341.8567	31.298	28.176	187	1.000	571	77	13	32	6	1.03(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	30.776	28.536	134	1.000	32522	3921	50	125	78		
357.8516	30.759	28.536	133	1.000	20794	2627	8	20	328	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						19	47			
375.8178	35.073						16	40			
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.385	35.427	-3	1.000	720	183	13	32	14		
391.8127	35.376	35.427	-3	1.000	494	115	10	25	12	1.46(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.630	38.630	0	1.000	40696	10611	27	67	393		
409.7788	38.630	38.630	0	1.000	38256	9931	15	37	662	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.876	39.876	0	1.000	37049	10134	27	67	375		
409.7788	39.876	39.876	0	1.000	34046	9582	15	37	639	1.09(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						27	67			
409.7788	39.253						15	37			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.573	39.573	0	1.000	28472	8182	15	37	545		
425.7737	39.573	39.573	0	1.000	26689	7927	18	45	440	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.253						15	37			
425.7737	39.253						18	45			
1,3,6,8-TCDF											
303.9016	16.121	16.121	0		51259	8761	19	47	461		
305.8987	16.129	16.121	1		64913	11170	32	80	349	0.79(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.755	17.755	0		29748	4895	31	77	158		
321.8936	17.772	17.755	1		35752	5364	37	92	145	0.83(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7-TCDF											
303.9016	20.465	20.465	0		91905	11730	19	47	617		
305.8987	20.474	20.465	1		116066	13607	32	80	425	0.79(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.584	21.584	0		24036	3484	31	77	112		
321.8936	21.601	21.584	1		31909	4496	37	92	122	0.75(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.005	22.005	0		38078	4978	19	47	262		
305.8987	22.005	22.005	0		50741	6292	32	80	197	0.75(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.100	22.100	0		30261	3819	31	77	123		
321.8936	22.117	22.100	1		39499	4583	37	92	124	0.77(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.649	23.649	0		42091	6762	19	47	356		
305.8987	23.640	23.649	-1		52696	8507	32	80	266	0.80(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.700	23.700	0		26243	4229	31	77	136		
1,3,4,6,8-PeCDF											
339.8597	24.062	24.062	0		49143	8715	5	12	1743		
341.8567	24.070	24.062	1		32788	6207	3	7	2069	1.50(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.119	26.119	0		36563	4902	50	125	98		
357.8516	26.136	26.119	1		21606	3187	8	20	398	1.69(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	30.776	30.776	0		32522	3921	50	125	78		a
357.8516	30.759	30.776	-1		20794	2627	8	20	328	1.56(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	30.944	30.944	0		42003	5021	7	17	717		a
341.8567	30.952	30.944	1		26303	3283	13	32	253	1.60(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.212	33.212	0		53745	7067	19	47	372		
375.8178	33.212	33.212	0		41053	5227	16	40	327	1.31(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.273	34.273	0		35102	5925	13	32	456		
391.8127	34.273	34.273	0		28121	4682	10	25	468	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.581	36.581	0		32760	7052	13	32	542		
391.8127	36.572	36.581	-1		28127	6383	10	25	638	1.16(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.934	36.934	0		46978	11482	19	47	604		
375.8178	36.926	36.934	-1		36305	9134	16	40	571	1.29(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.933	38.933	0		30305	8179	15	37	545		
425.7737	38.933	38.933	0		29065	7829	18	45	435	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	82325	12389

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	82325	12389

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.708	1142	200	1195	324	1.05	0.96	RQ
19.708	920	249	1195	324	0.9513		Empc Correction
20.982	799	152	2231	334	1.36	0.36	RQ
20.982	799	152	1037	197	0.8258		Empc Correction
22.324	951	173	1268	204	1.00	0.75	
24.053	662	199	1302	181	0.8834	0.51	RQ
24.053	662	199	859	258	0.6842		Empc Correction
Signal Totals:							
	3332	773	4359	983			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9550	1767				0.59	RQ
	7691	1756					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.296 = (9550 * 40.000) / (82325 * 1.080)
Empc Amount: 3.459 = (7691 * 40.000) / (82325 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 20.727

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	40.000	52515	7660

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		40.000	52515	7660

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.358	853	199	1914	264	1.96	0.45	RQ
22.358	853	199	1107	258	1.39		Empc Correction
Signal Totals:							
	853	199	1107	258			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2767	463				0.45	RQ
	1960	457					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.960 = (2767 * 40.000) / (52515 * 1.075)
Empc Amount: 1.388 = (1960 * 40.000) / (52515 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

F1 PeCDFs, RT: 24.666

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.268	930	276	557	133		1.67	
24.328	574	173	801	142		0.72	R
Signal Totals:							
	1504	449	1358	275			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2862	724				1.11	RQ
	2431	693					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (2862 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (2431 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.365	493	76	293	68		1.68	
30.944	42003	5021	26303	3283		1.60	
31.197	1166	325	921	220		1.27	R
31.281	587	172	571	77		1.03	R
Signal Totals:							
	44249	5594	28088	3648			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	72337	9242				1.58	RQ
	71975	9264					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (72337 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (71975 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.776	32522	3921	20794	2627		1.56	
Signal Totals:							
	32522	3921	20794	2627			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	53316	6548				1.56	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (53316 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

Non-2,3,7,8-sub-HxCDD, RT: 35.427

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.385	720	183	494	115		1.46	R
Signal Totals:							
	720	183	494	115			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1214	298				1.46	RQ
	1106	257					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1214 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (1106 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

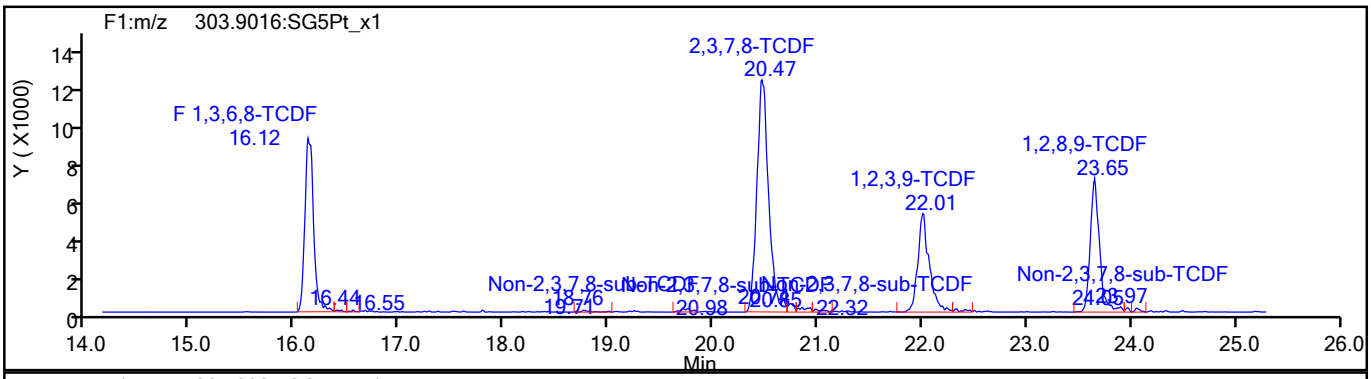

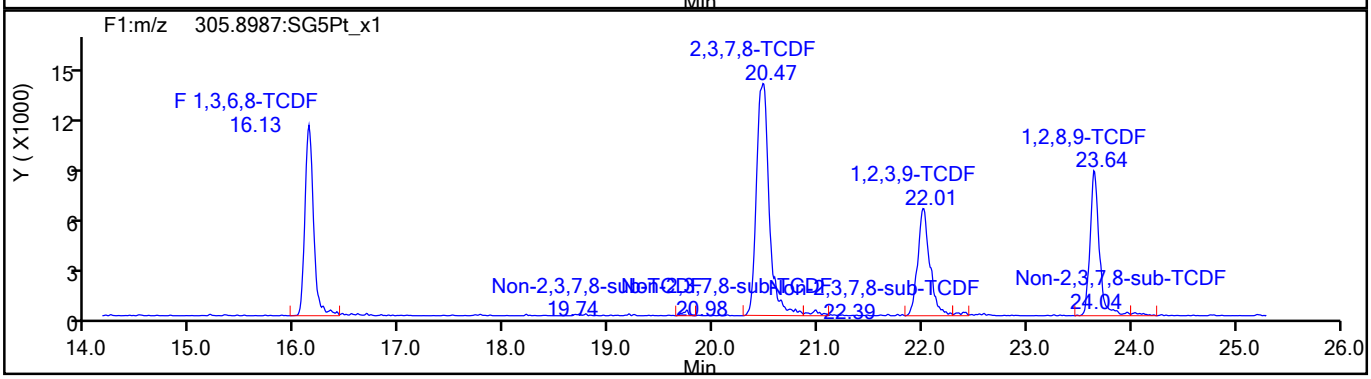

TCDF Standards

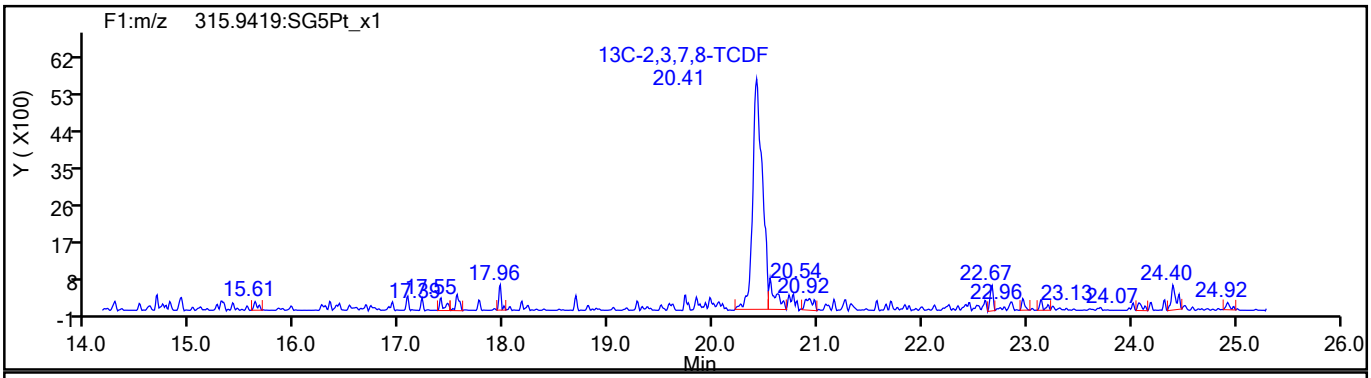

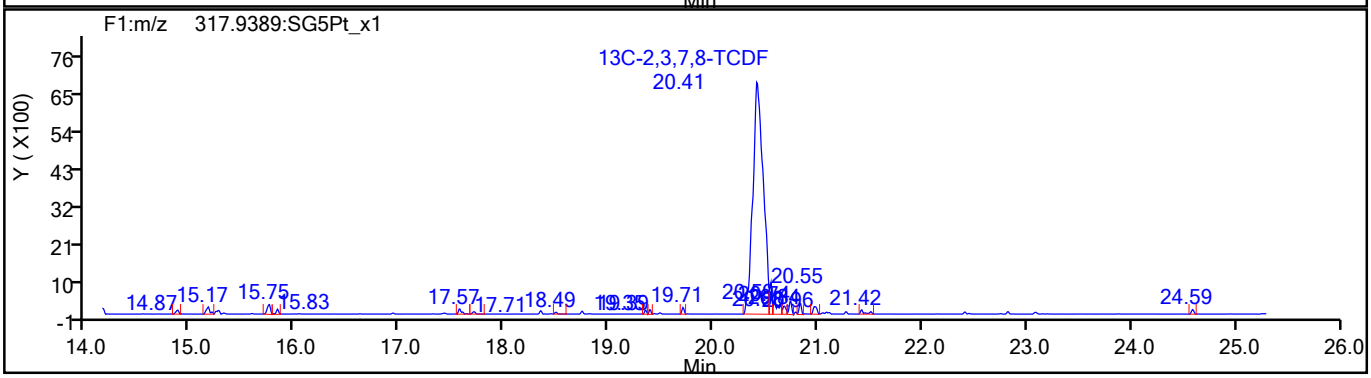

787708

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

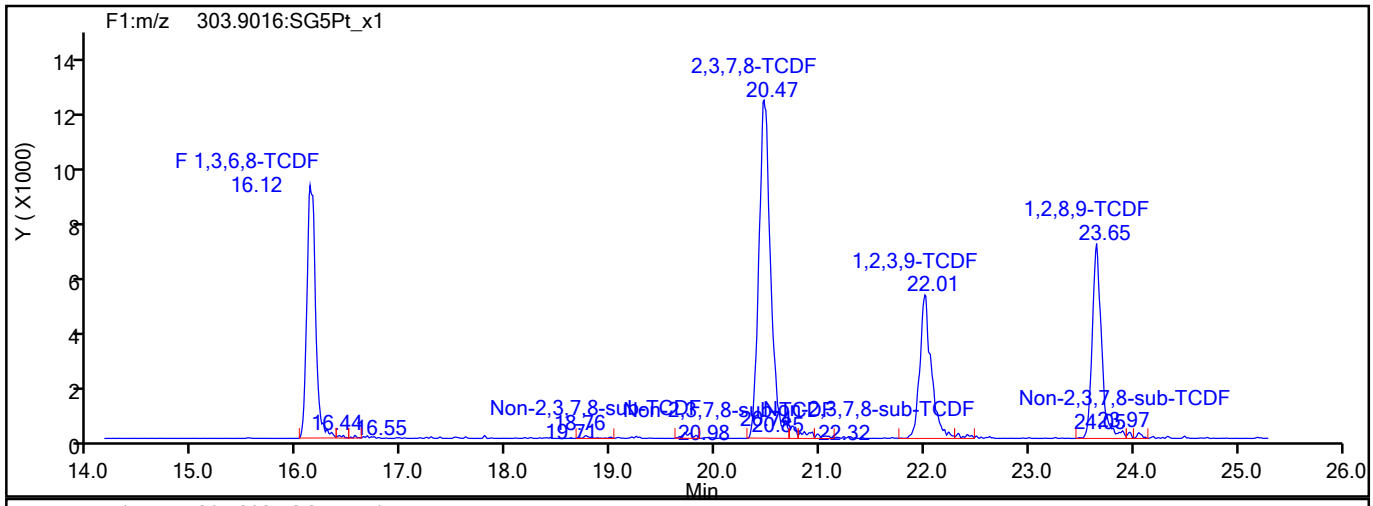

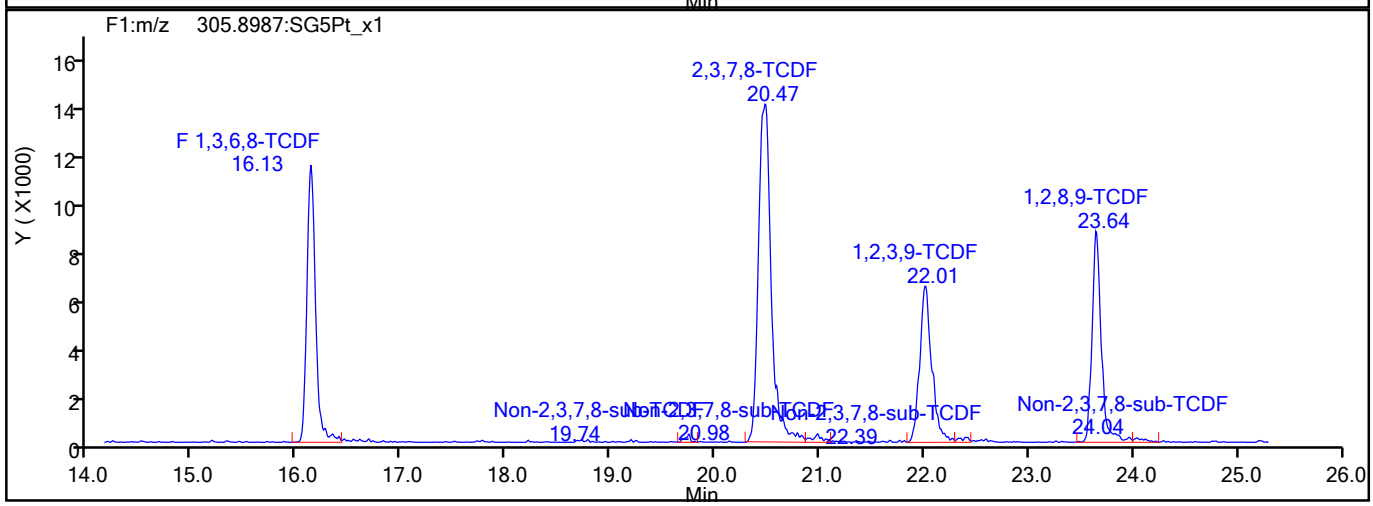

TCDF Interference Mass

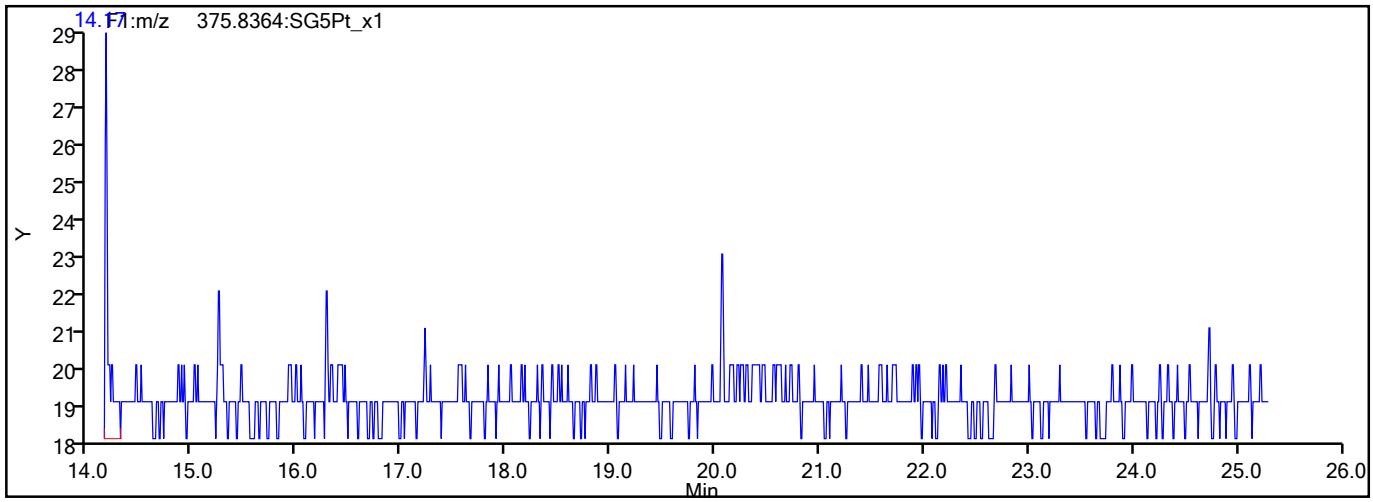

787709

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

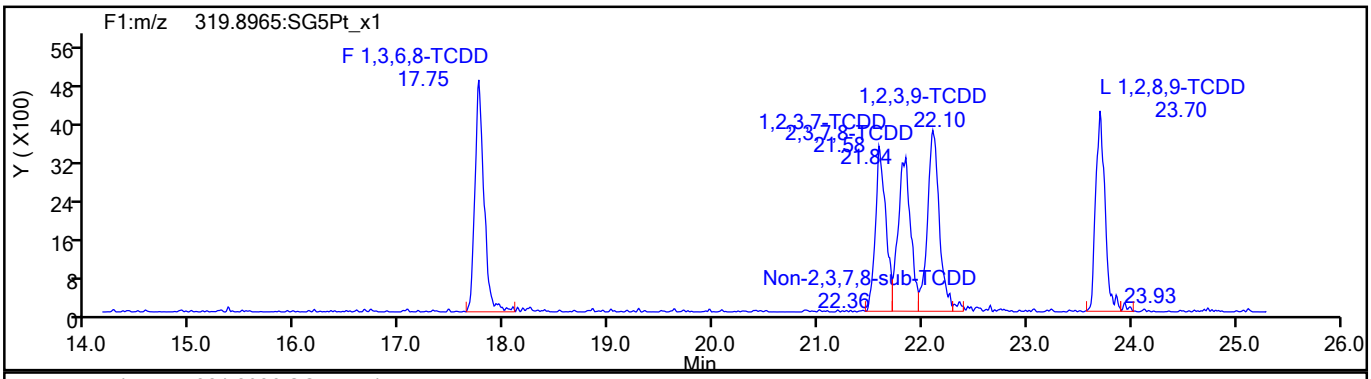

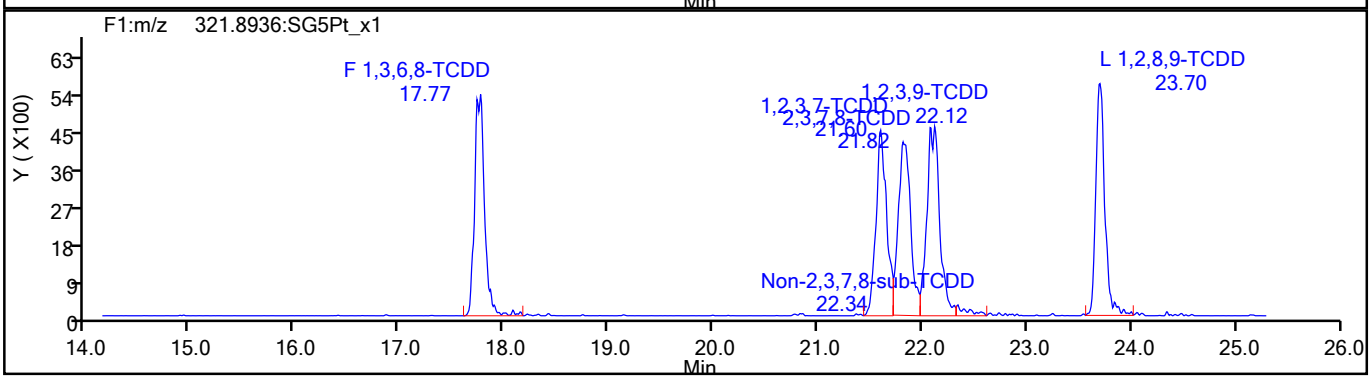

TCDD Standards

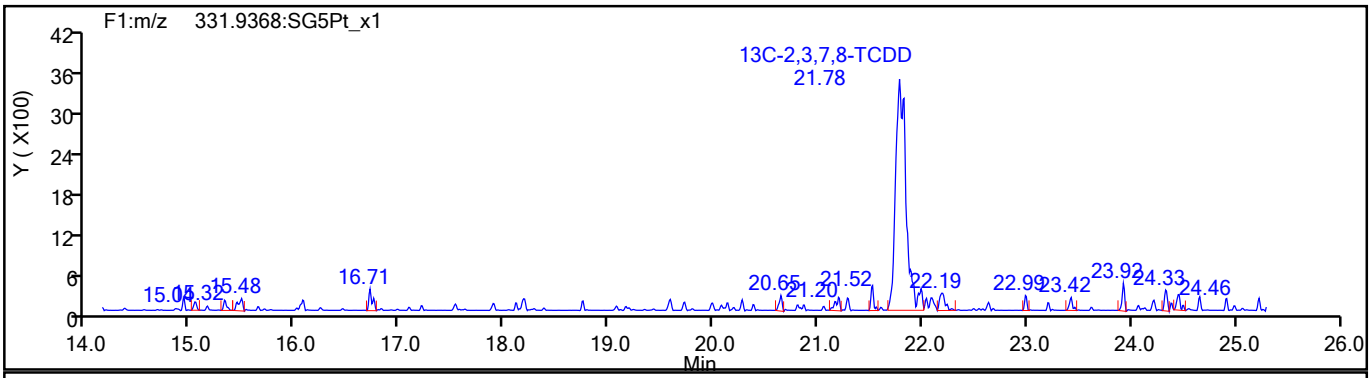

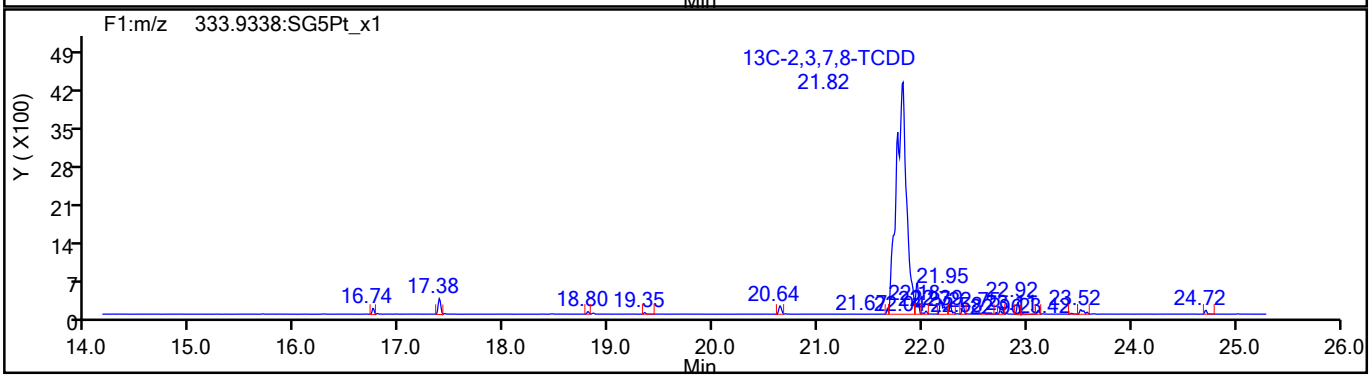

787710

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

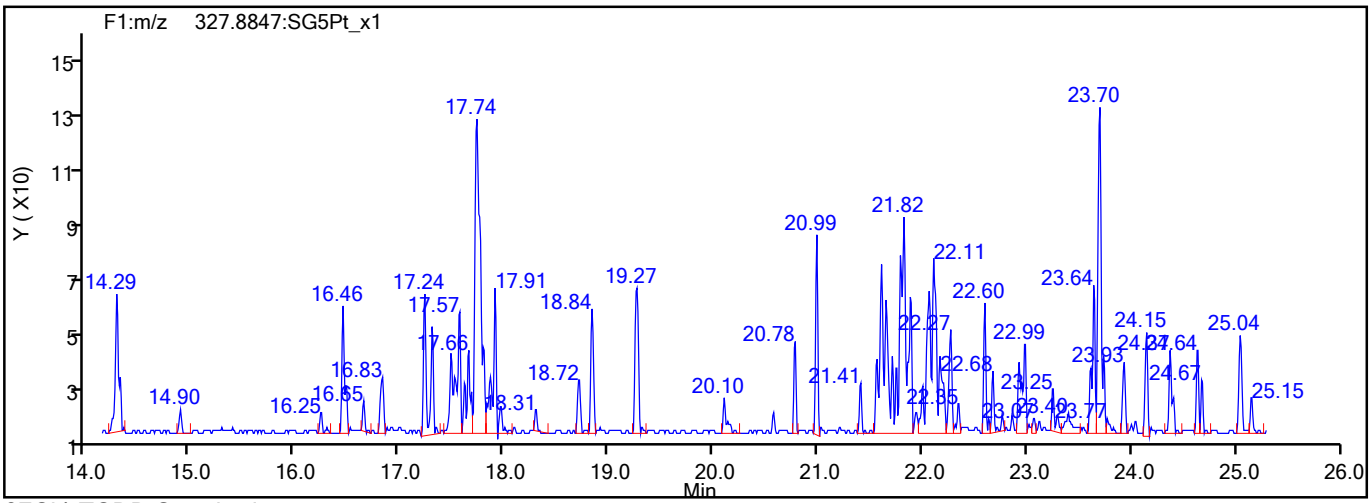

37Cl4-TCDD Standards

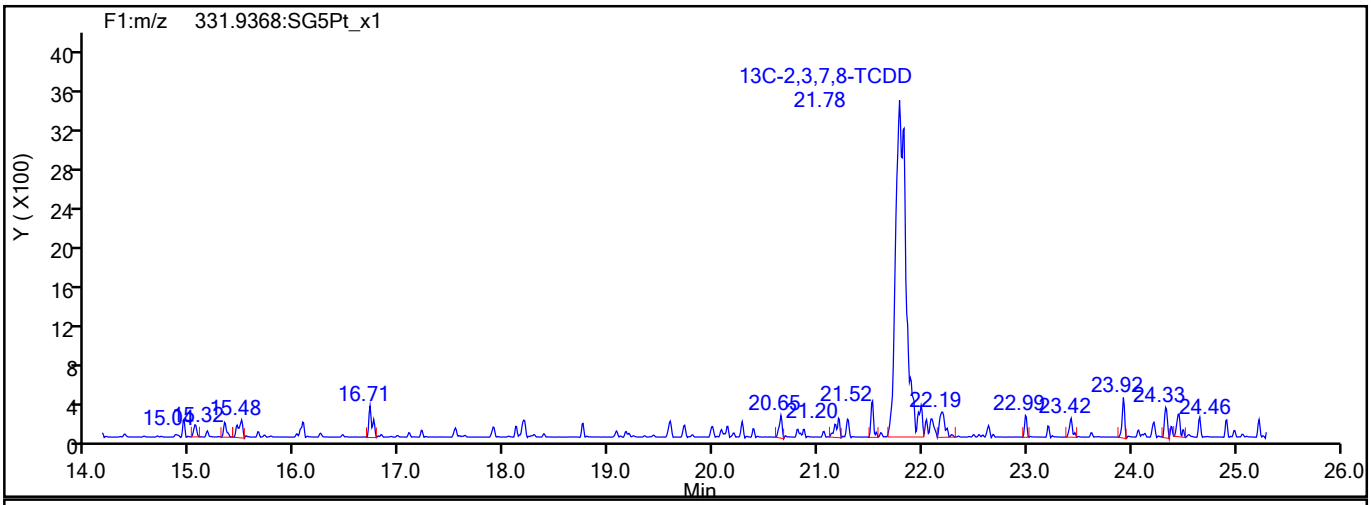

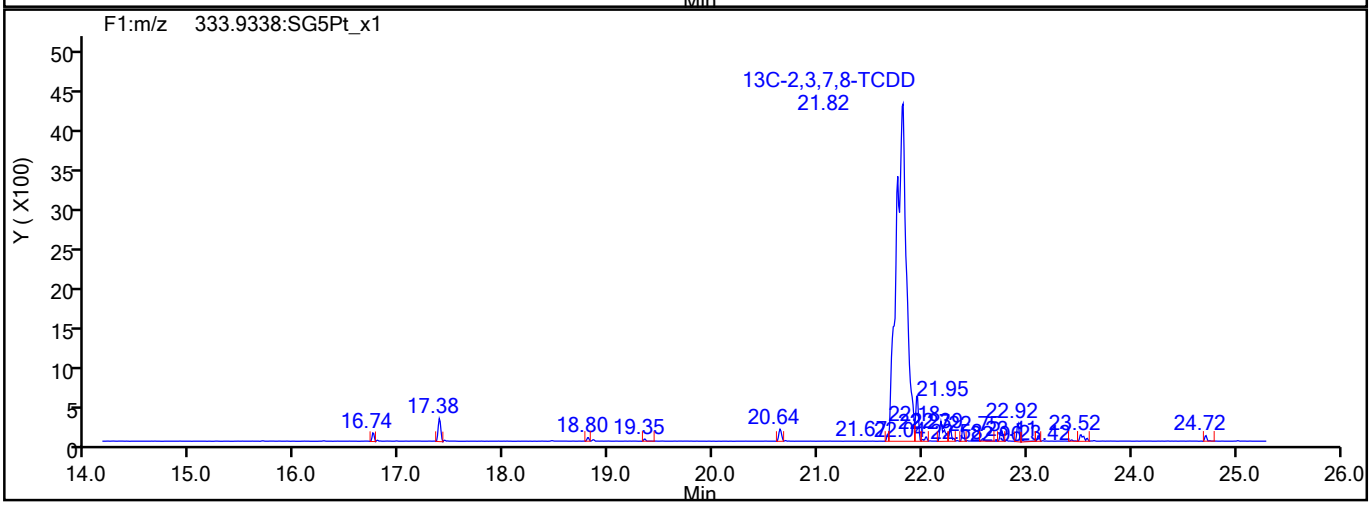

787711

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

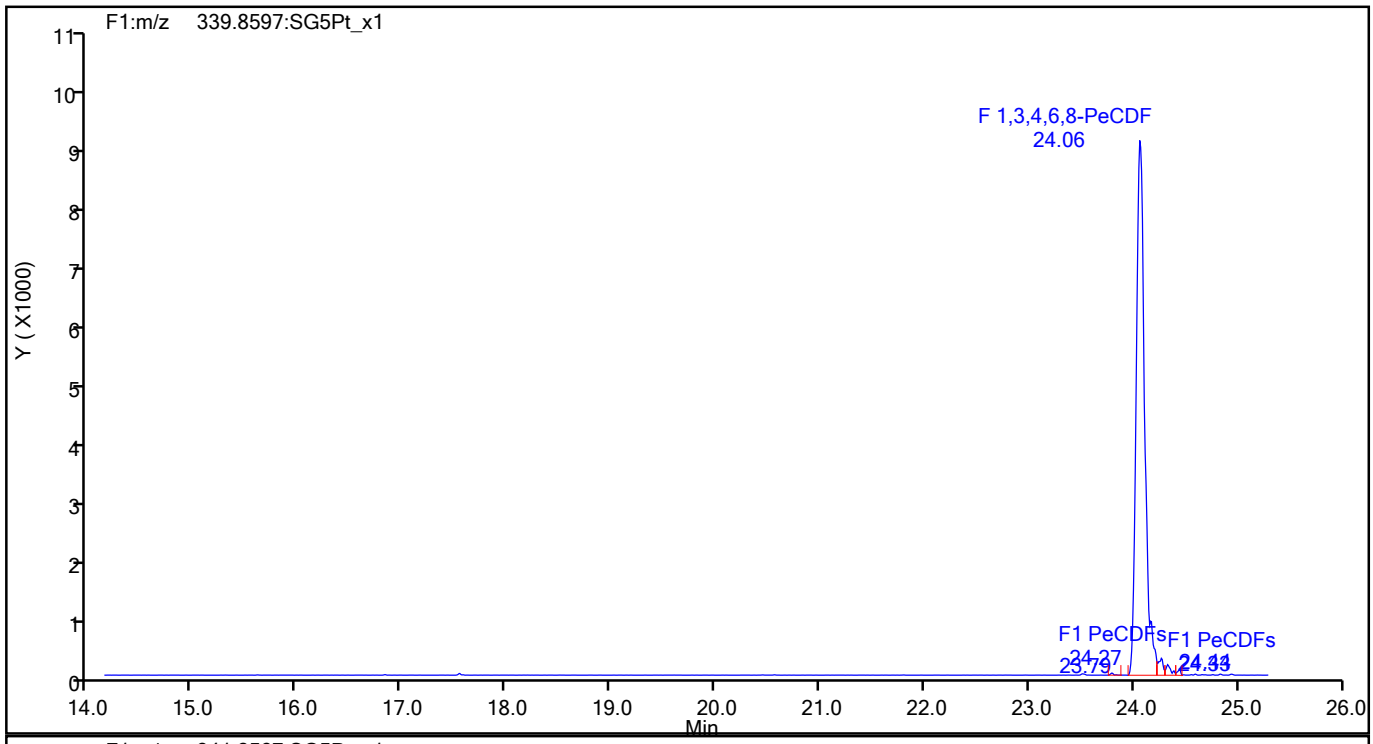

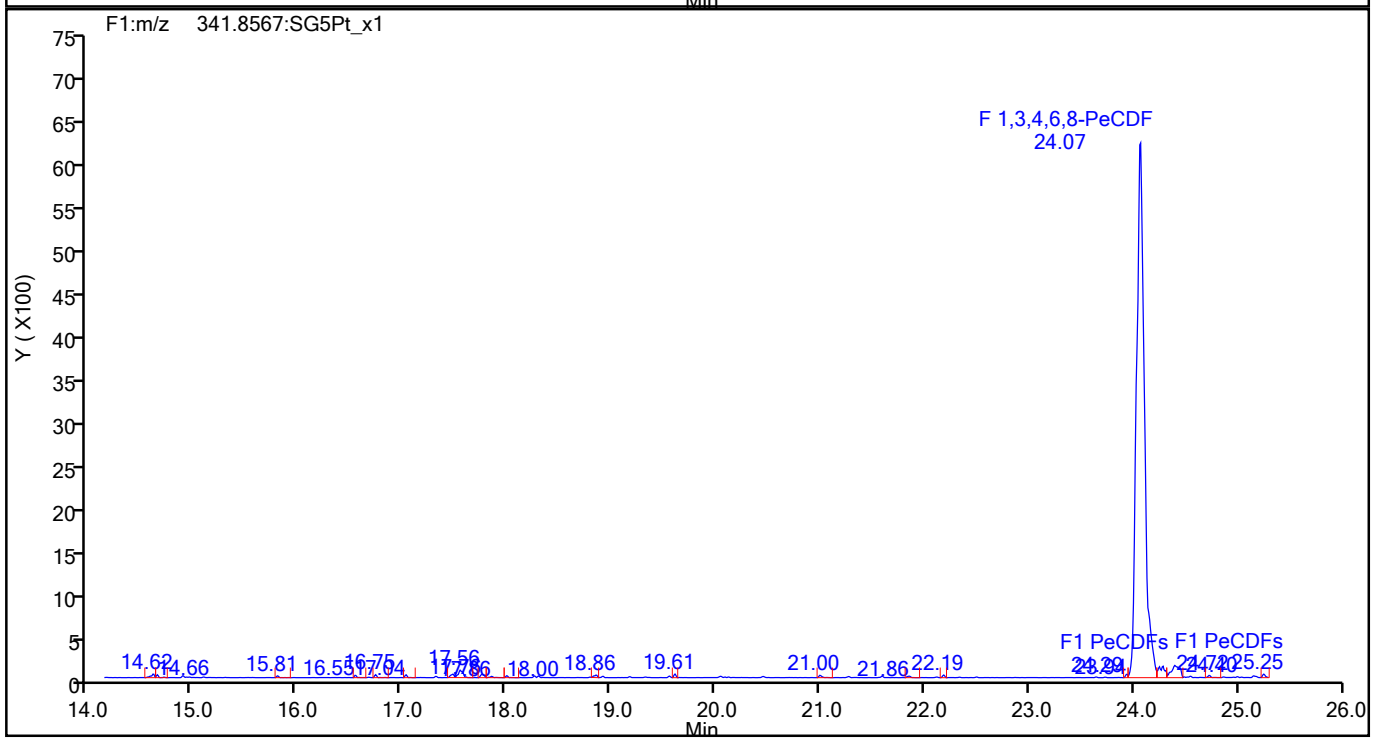

787712

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

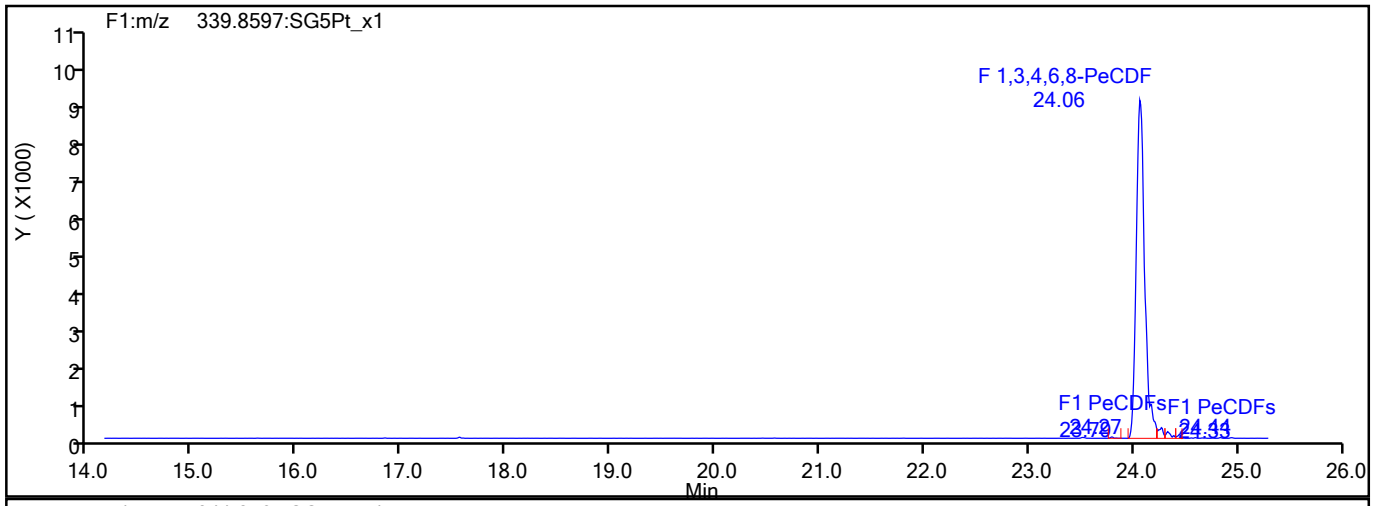

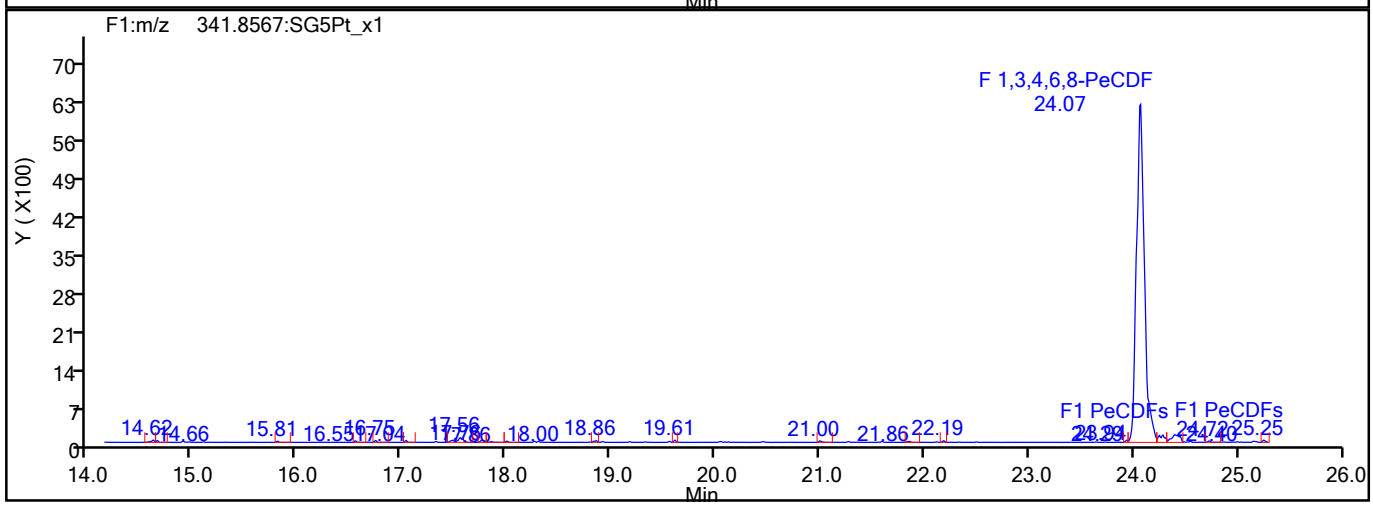

F1 PeCDFs Interference Mass

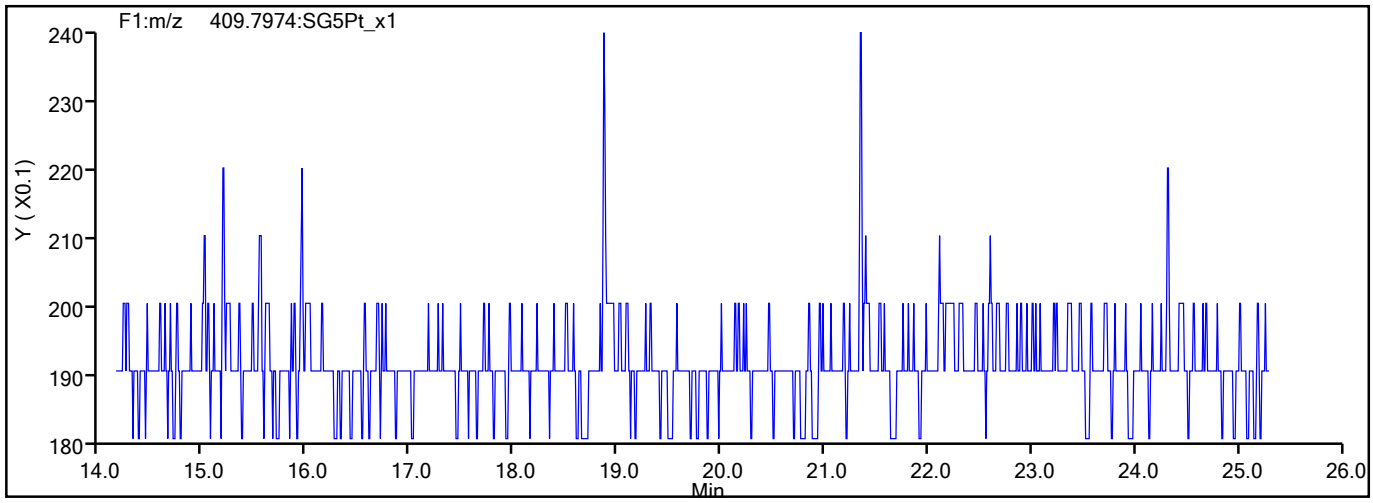

787713

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

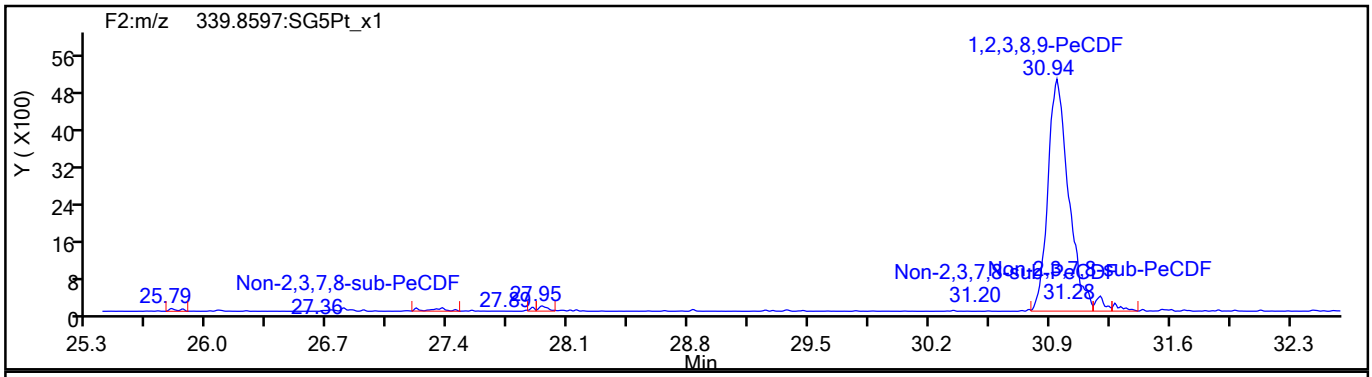

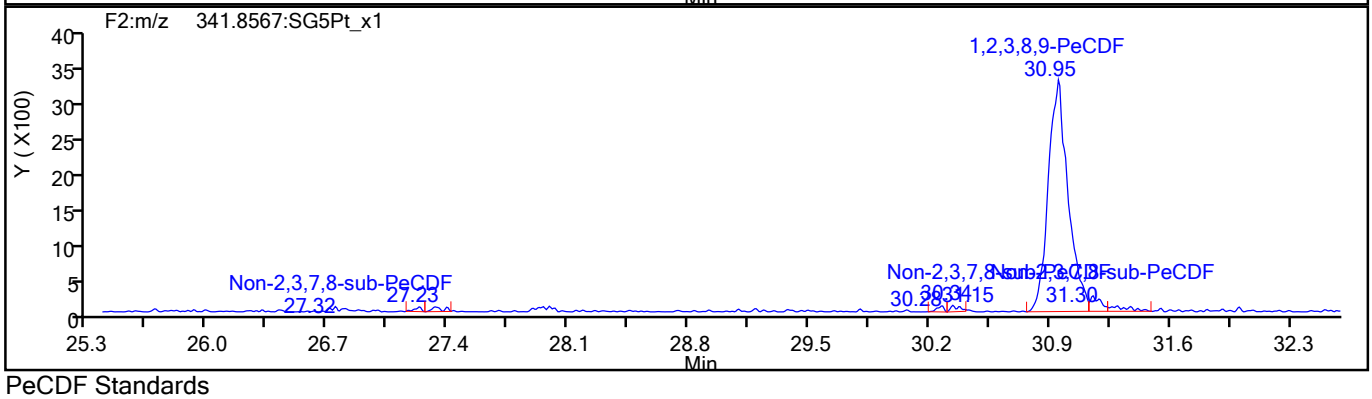

PeCDF Standards

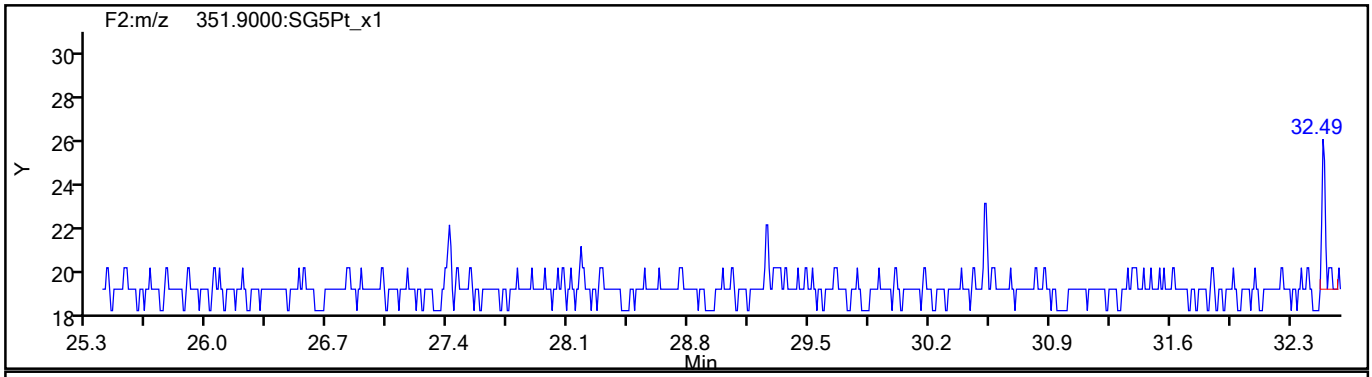

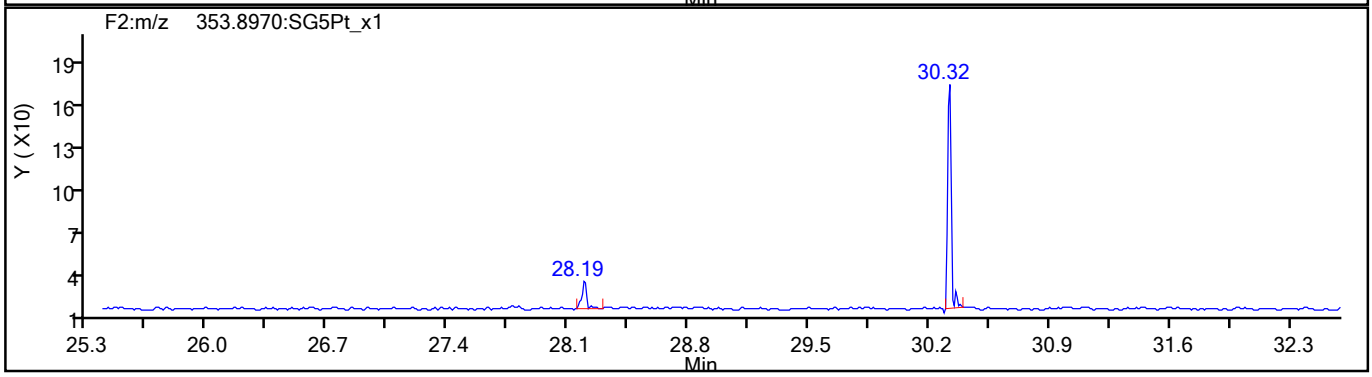

787714

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

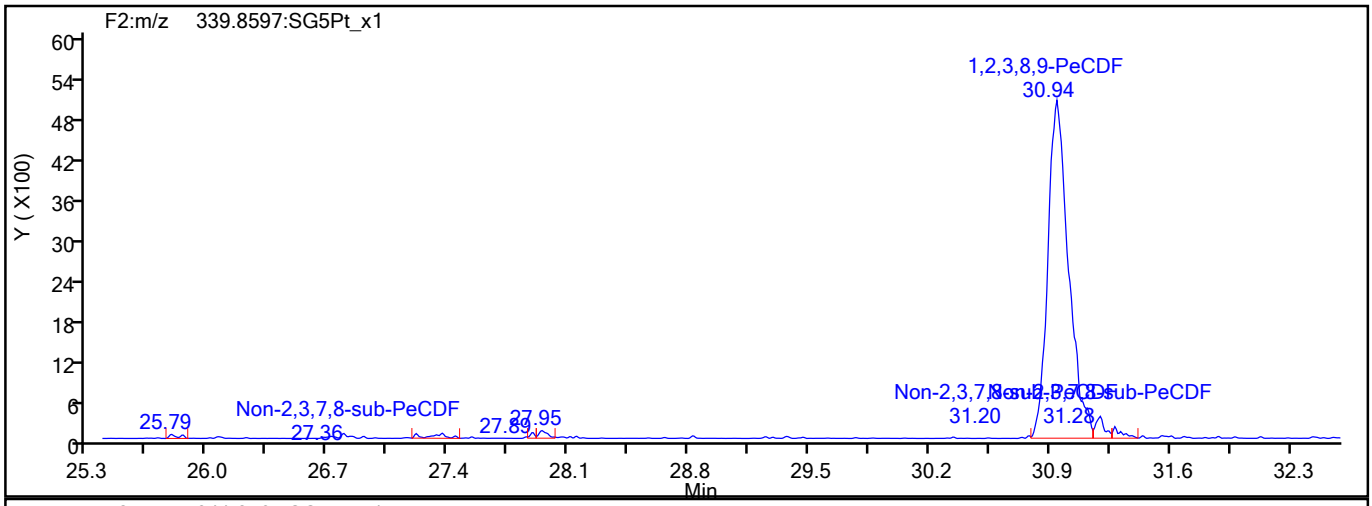

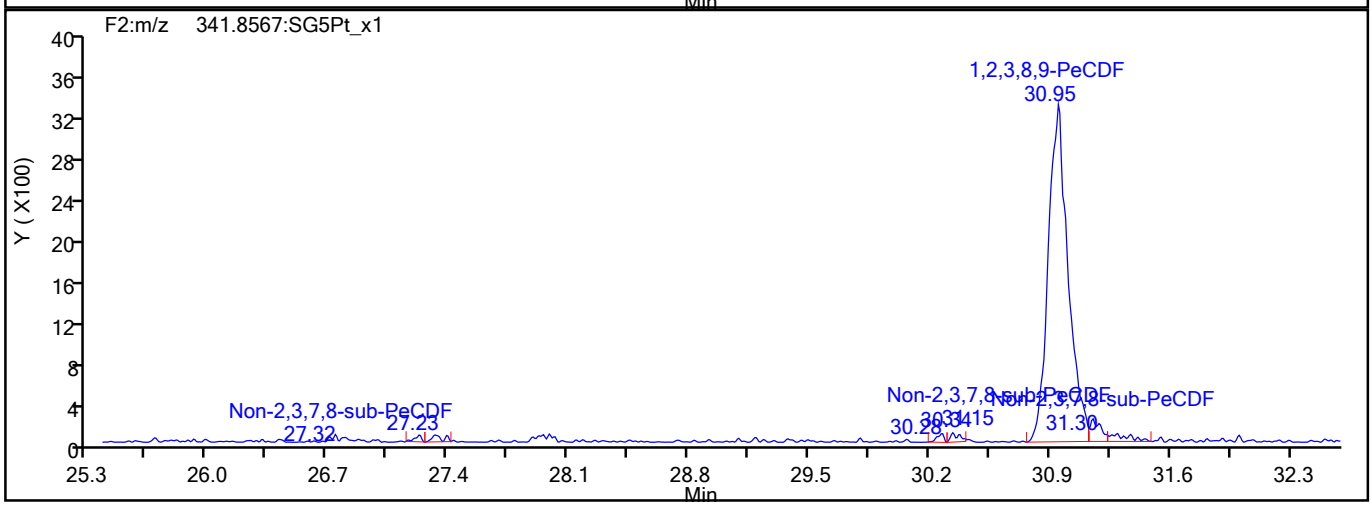

PeCDF Interference Mass

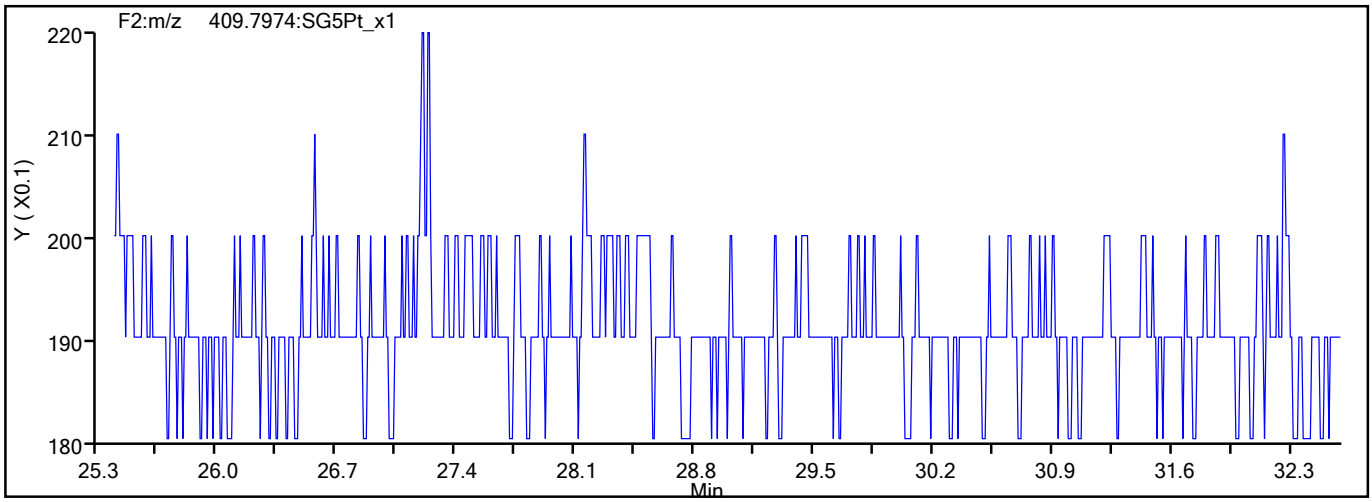

787715

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

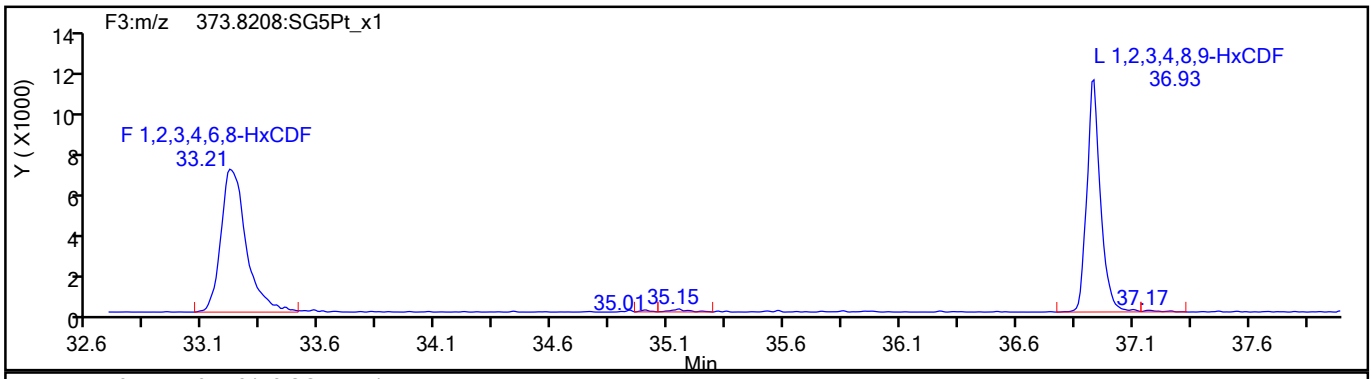

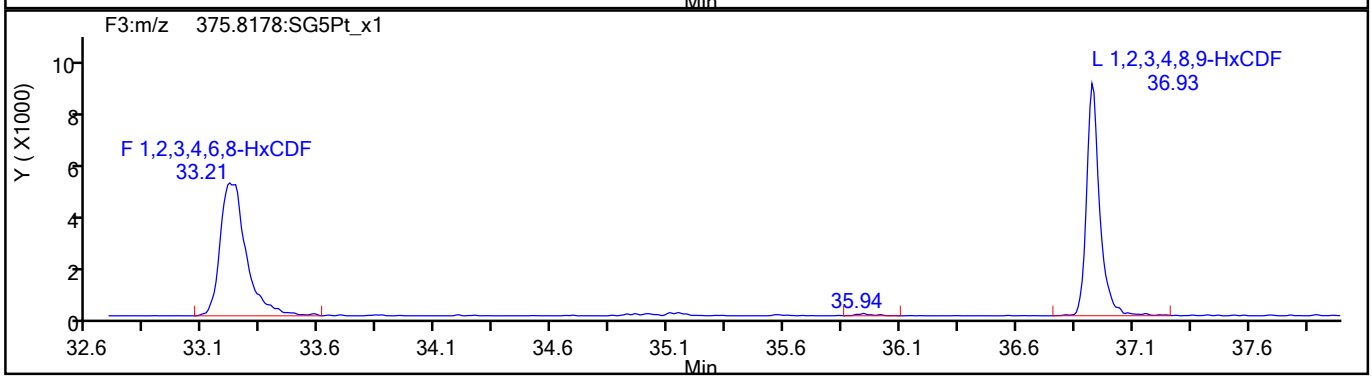

HxCDF Standards

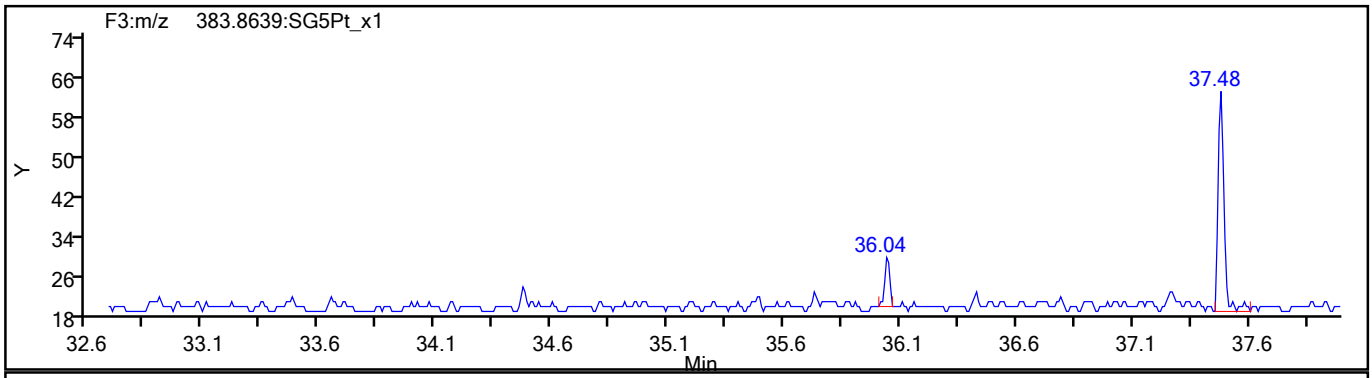

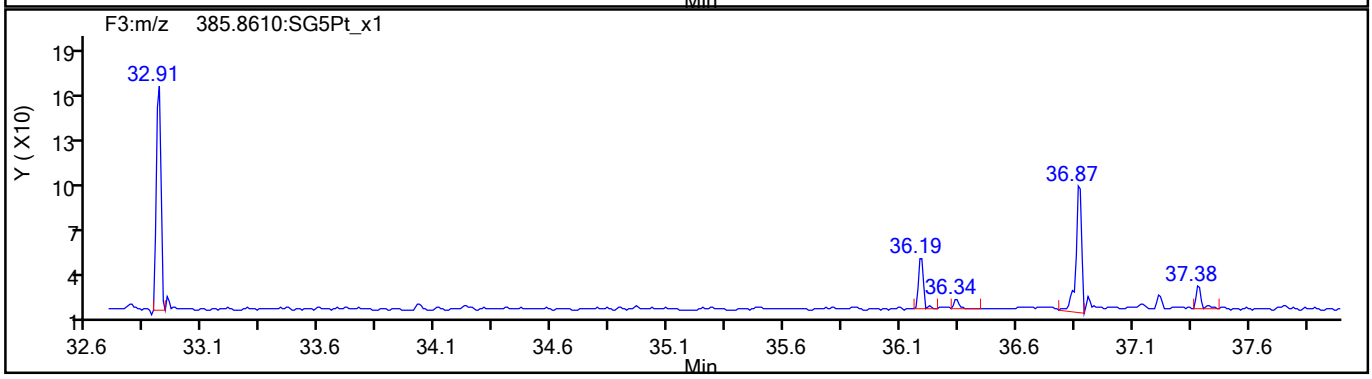

787716

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

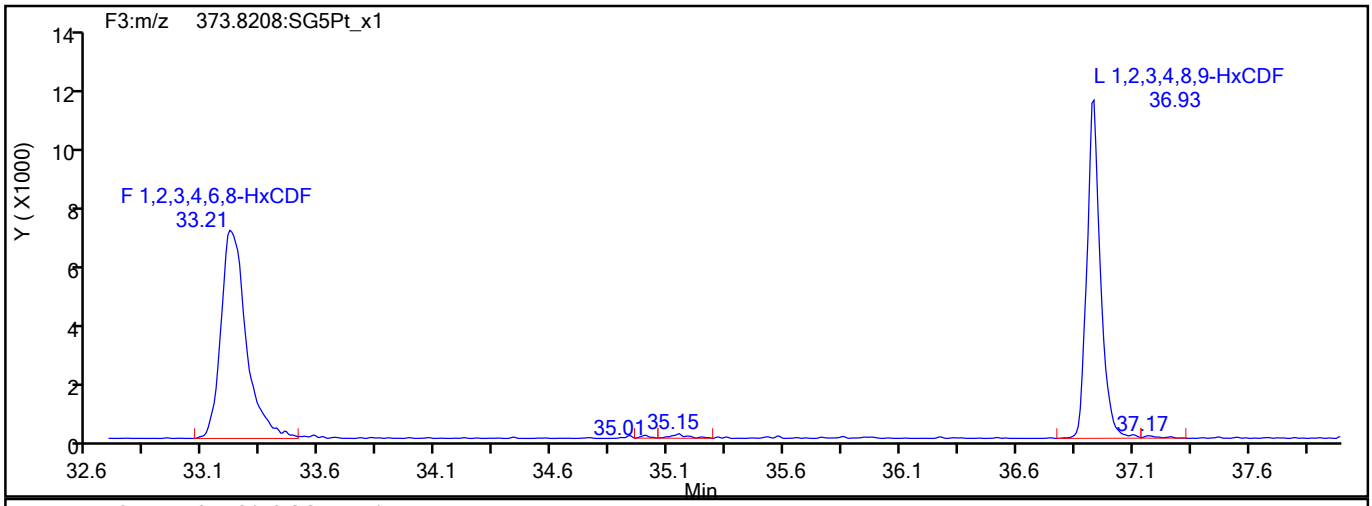

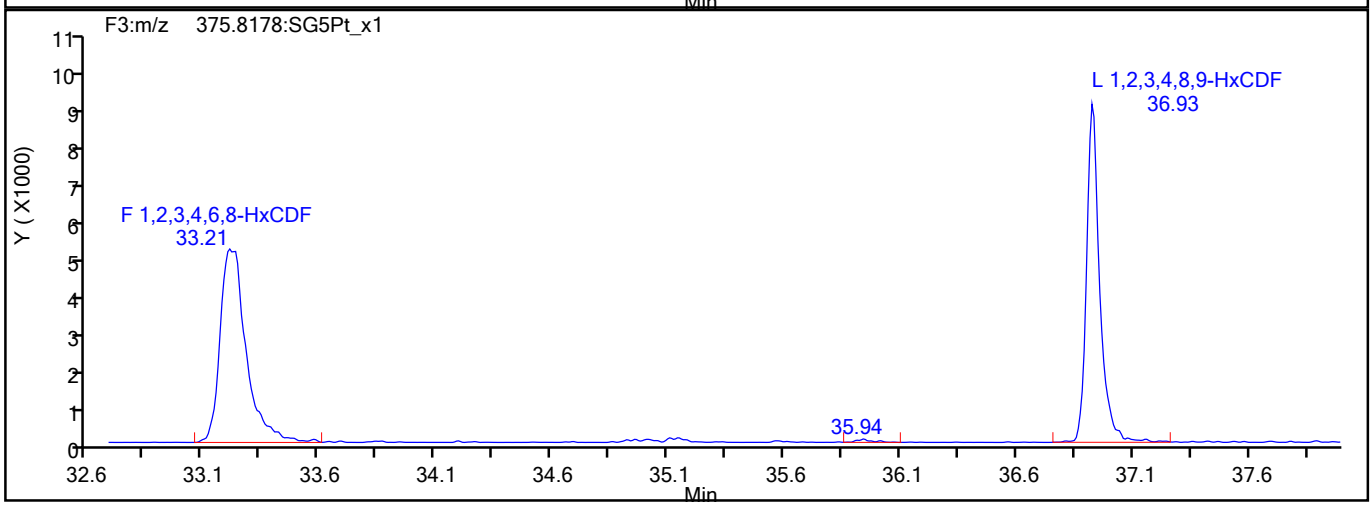

HxCDF Interference Mass

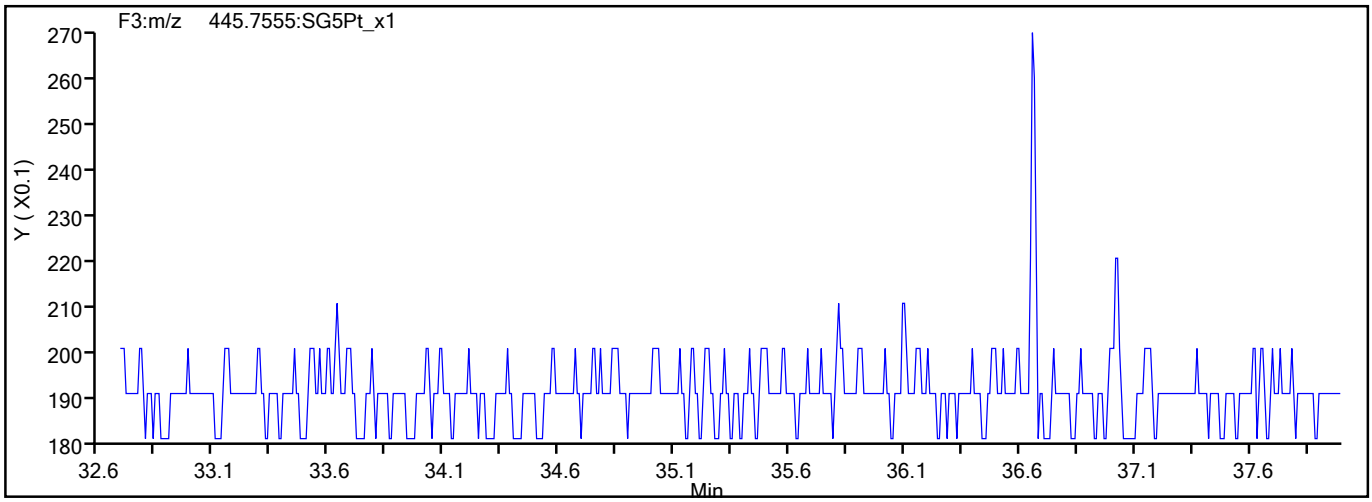

787717

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

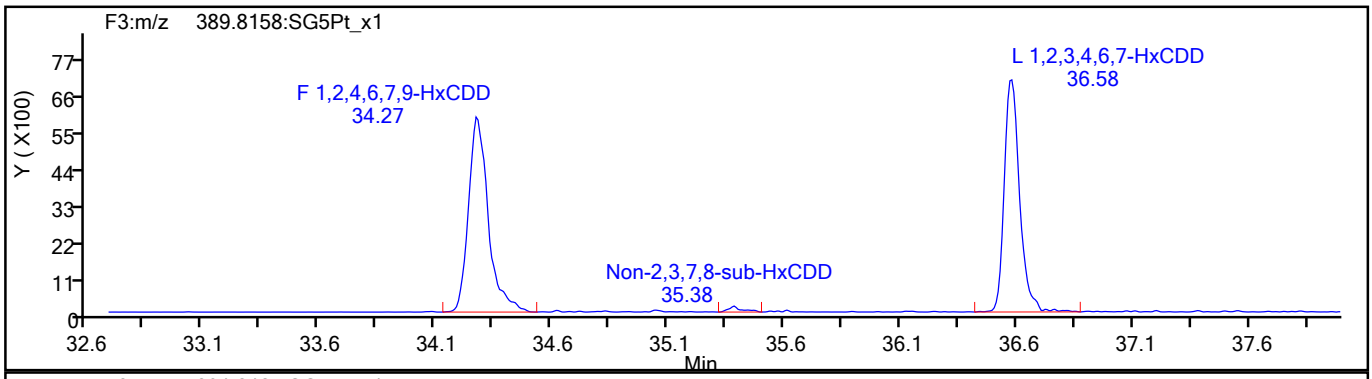

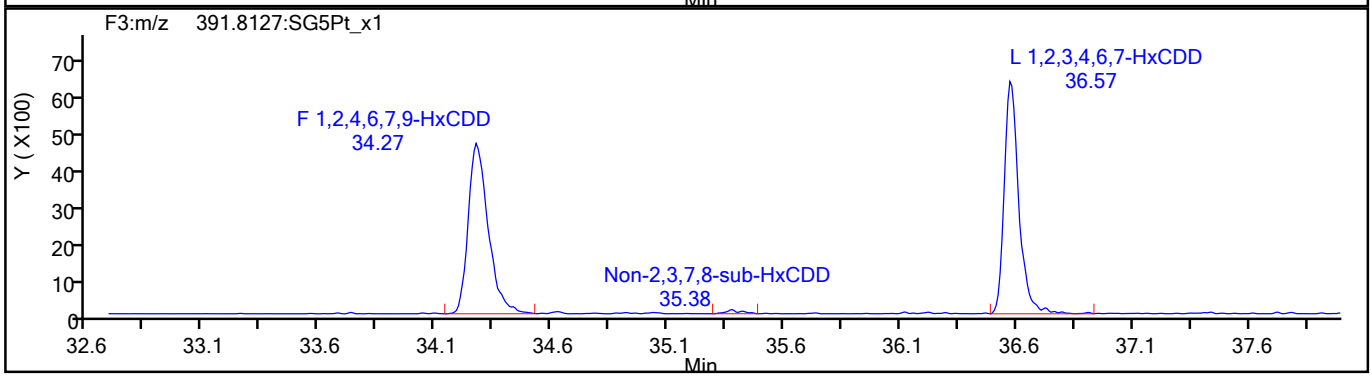

HxCDD Standards

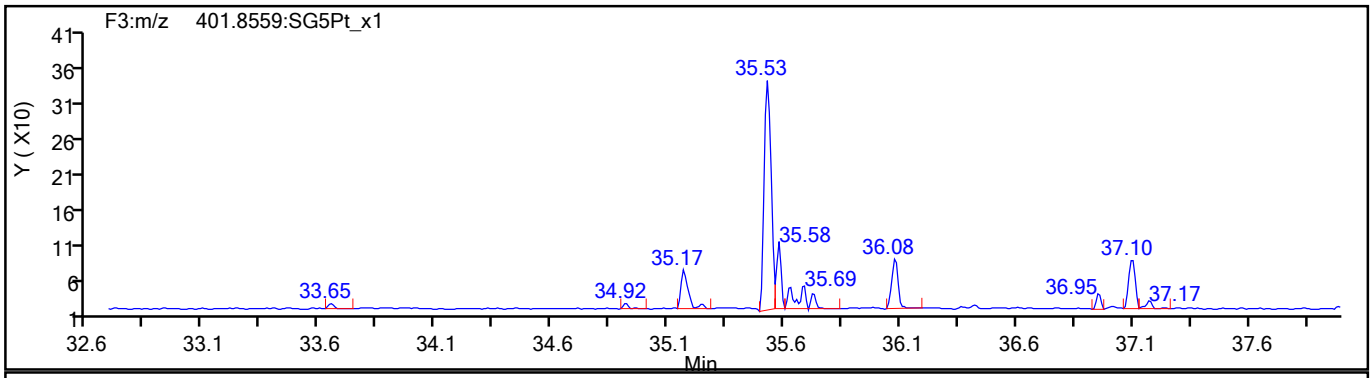

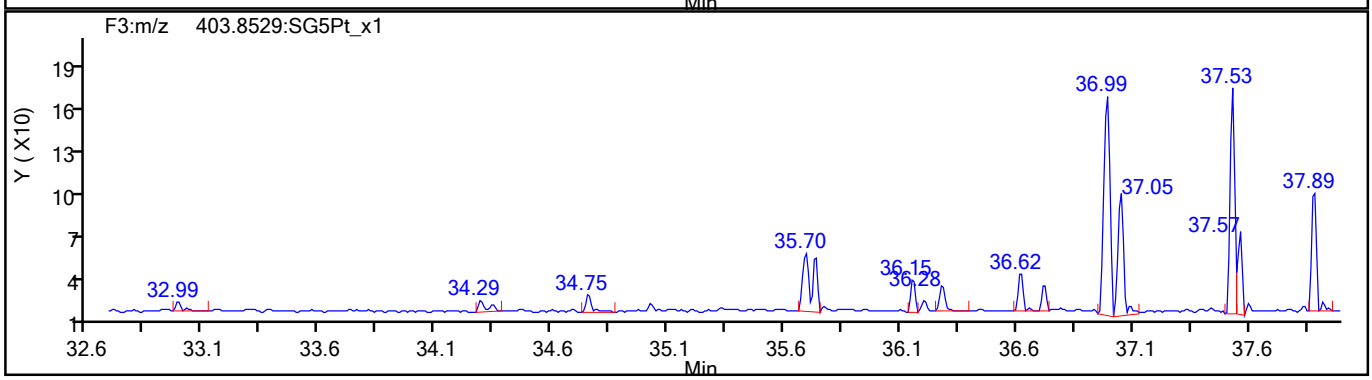

787718

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

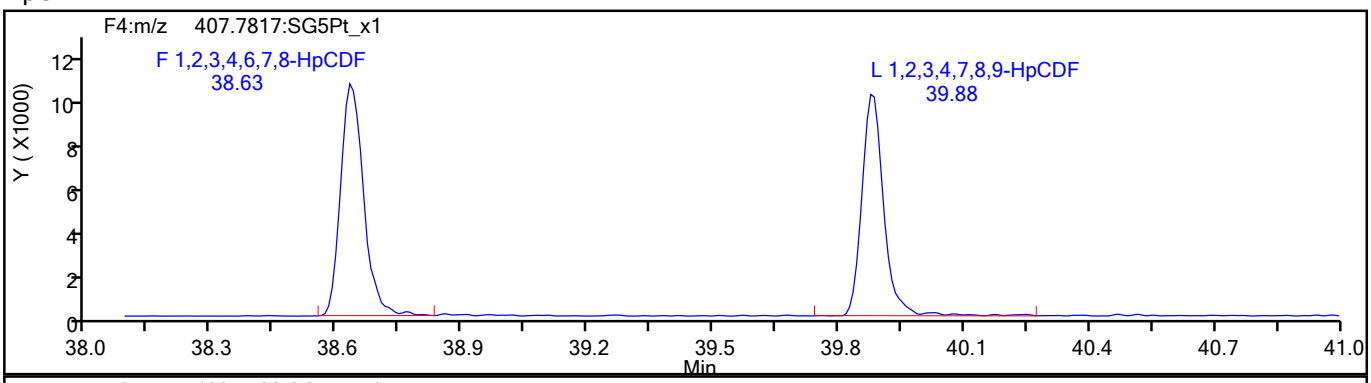

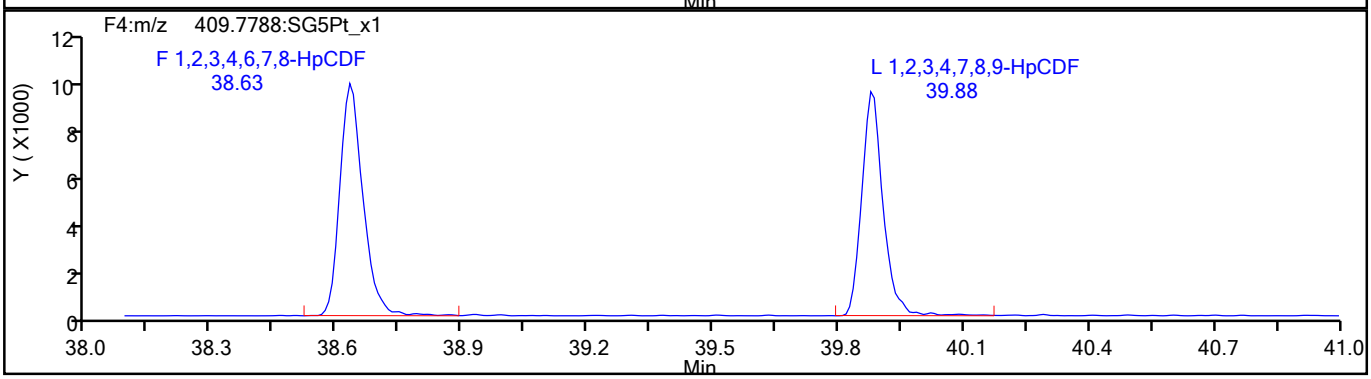

HpCDF Standards

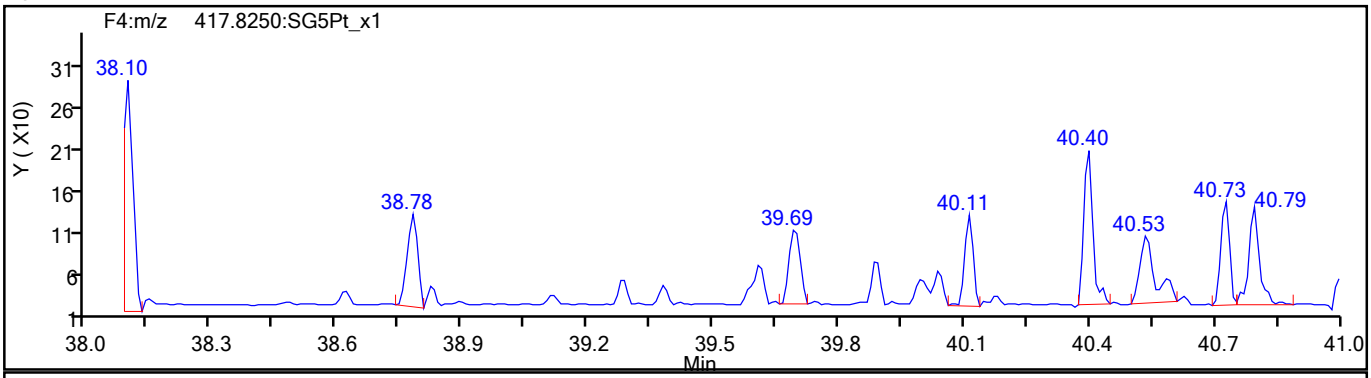

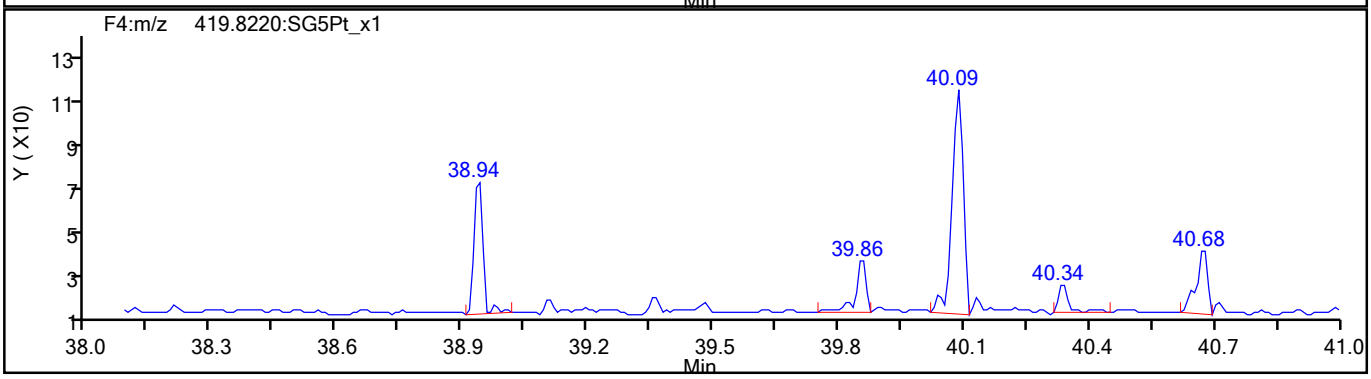

787719

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

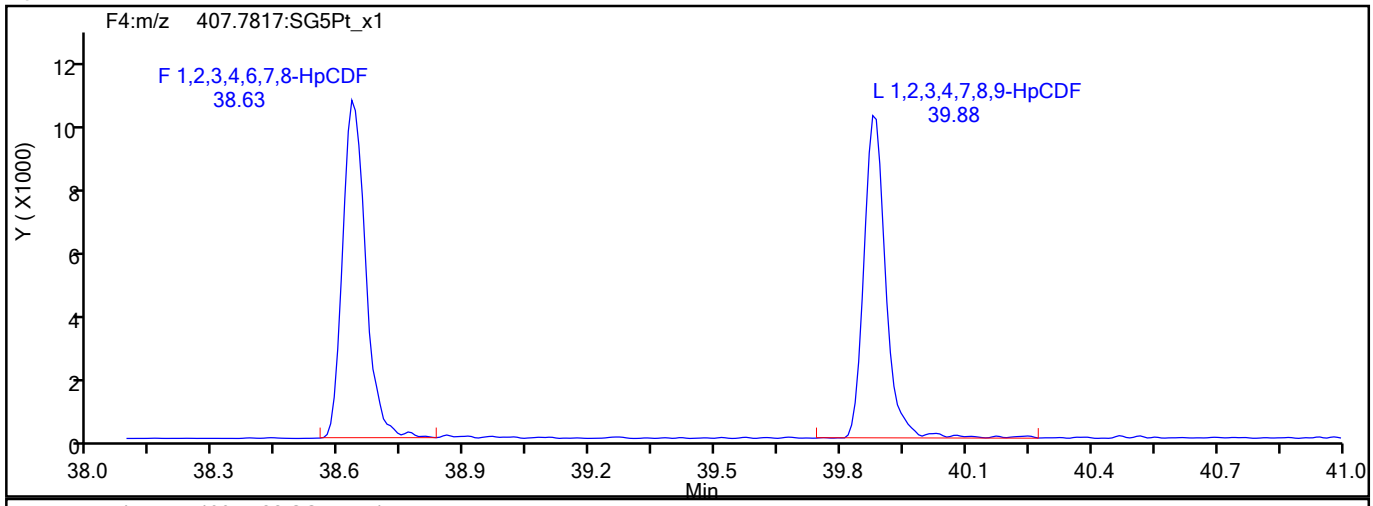

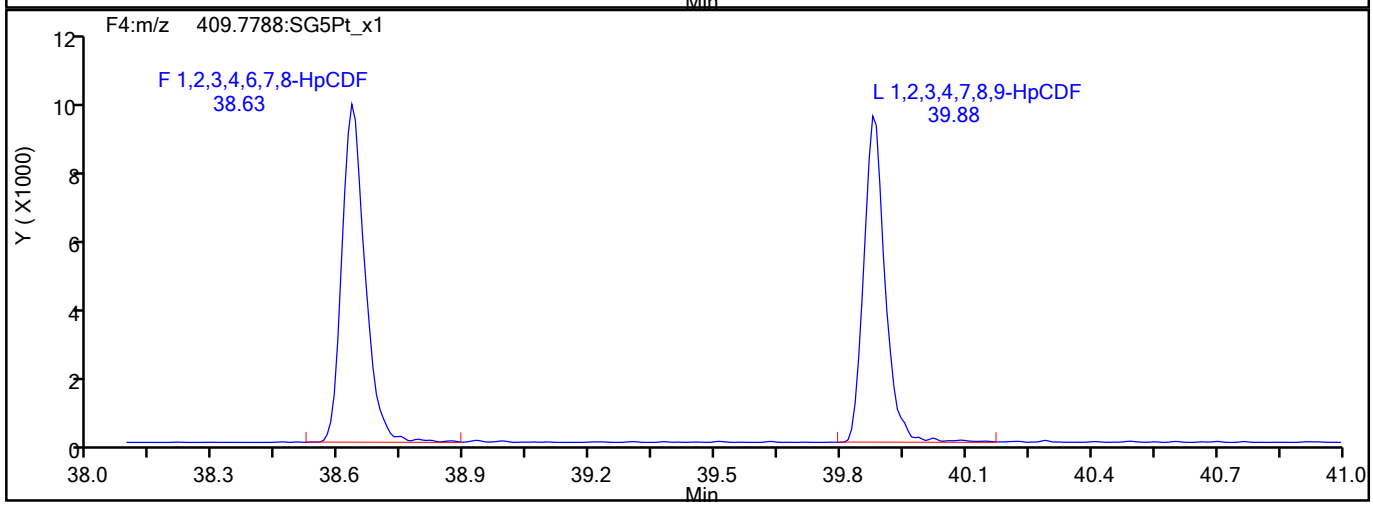

HpCDF Interference Mass

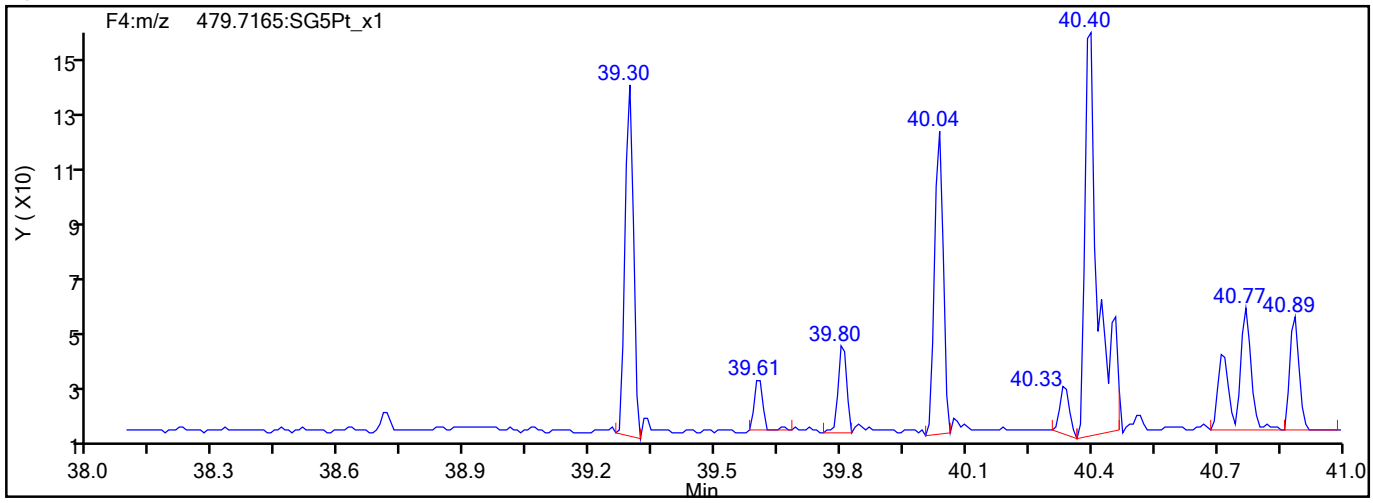

787720

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

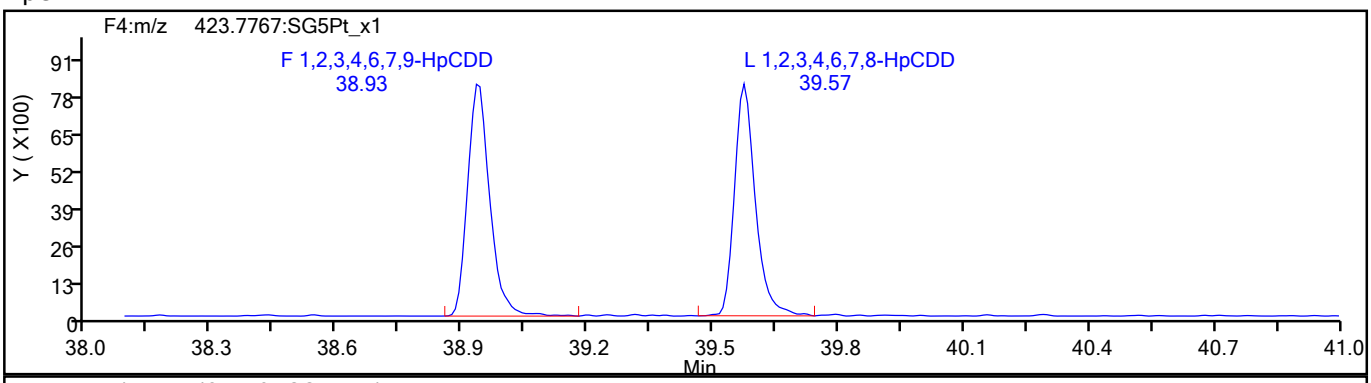

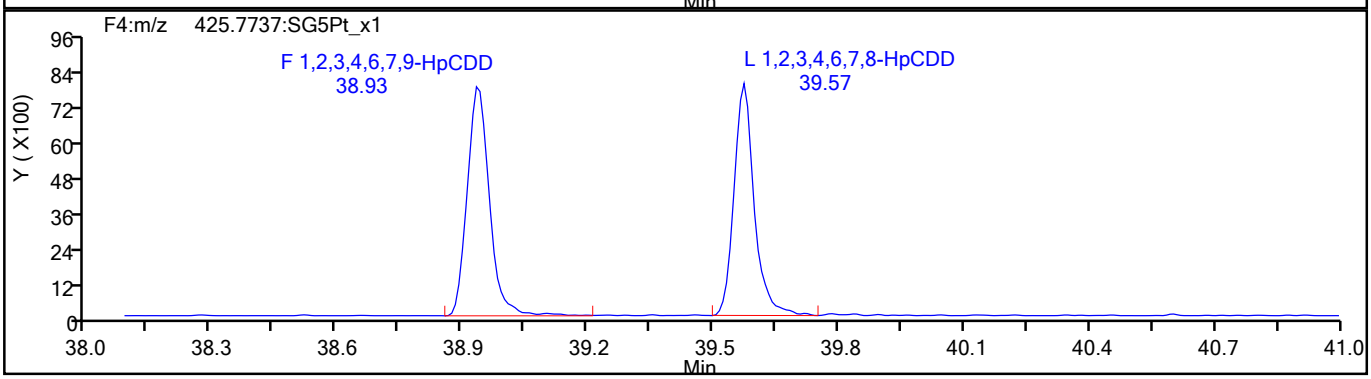

HpCDD Standards

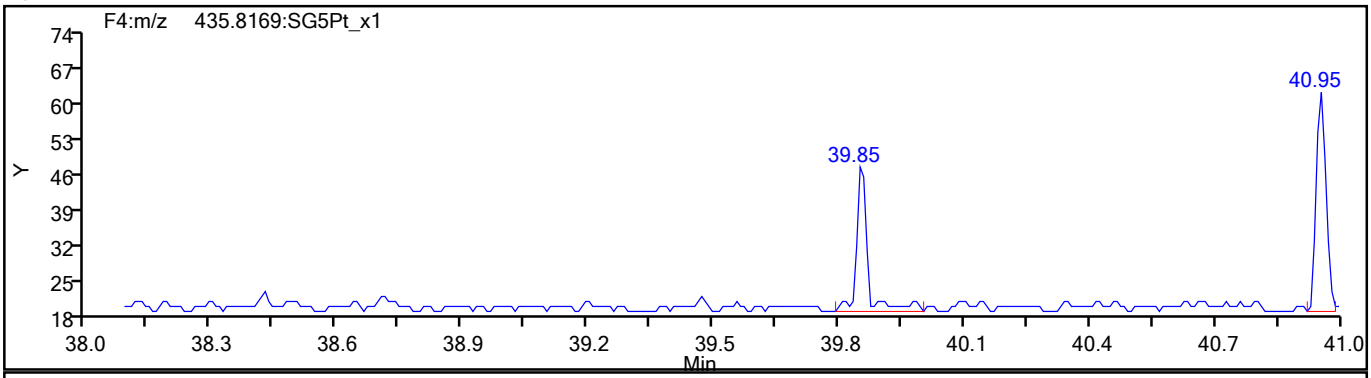

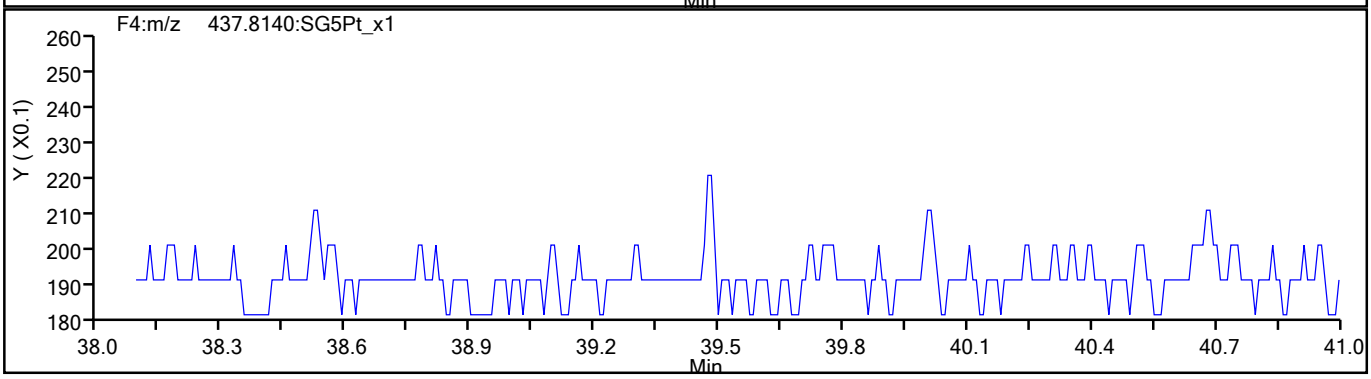

787721

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

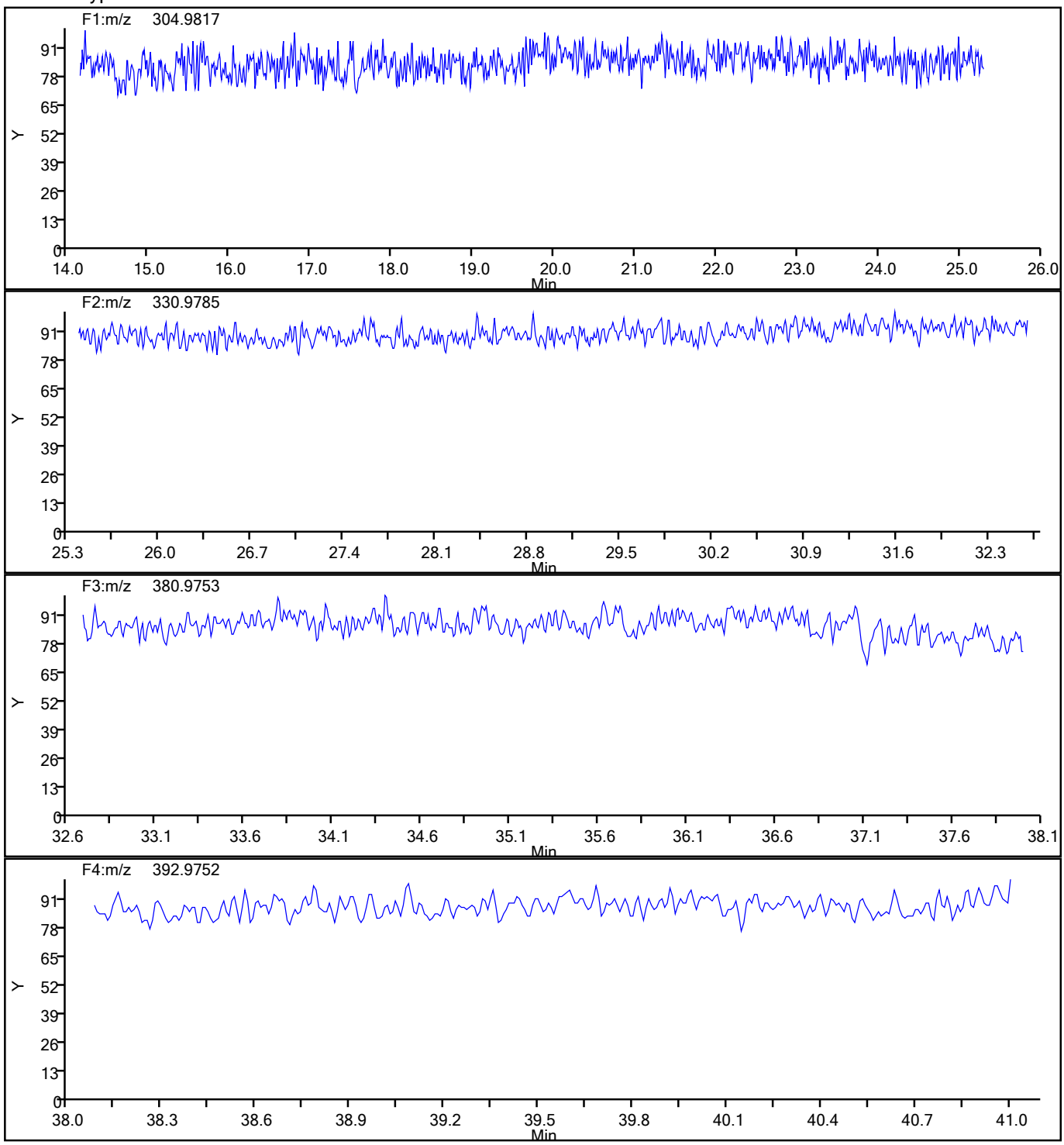

787722

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

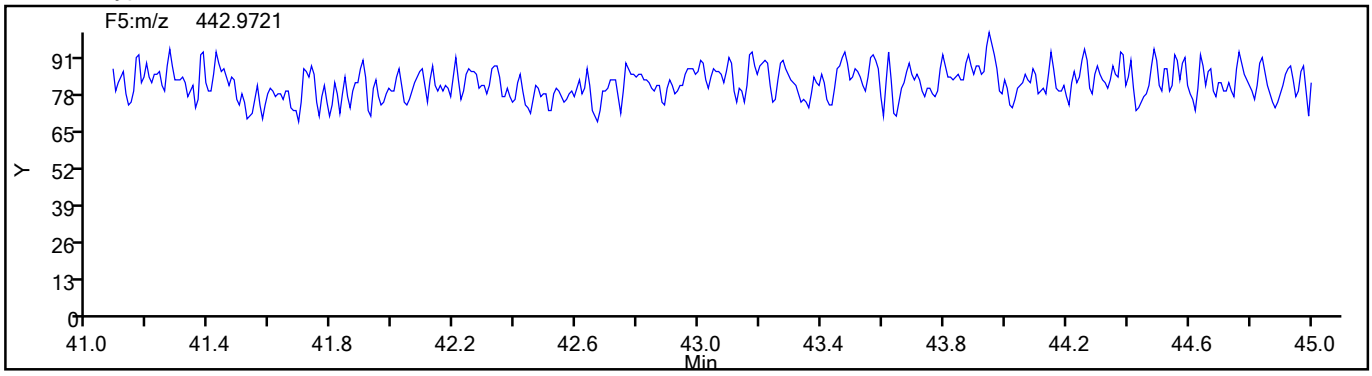

787723

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 20-Aug-2021 02:21:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:41 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:17:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.365	467833	0.81	1.3459					0.00	
2,3,7,8-TCDF	20.408	1028230	0.68	1.0802	81.4	81.4	0.2004	0.2004		
A Non-2,3,7,8-sub-TCDF	19.851	19218	0.77	1.0802	1.833	1.521	0.2004	0.6601		RQ
S Total TCDF					83.2	82.9	0.2004	0.2004		RQ
D 13C-2,3,7,8-TCDD	21.716	306095	0.83	0.9317					0.00	
2,3,7,8-TCDD	21.733	360703	0.82	1.0753	43.8	43.8	0.1149	0.1149		
A Non-2,3,7,8-sub-TCDD	20.684						0.1149	0.1149		
S Total TCDD					43.8	43.8	0.1149	0.1149		
A F1 PeCDFs	24.634	713	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.173	388340	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.478	284602	1.57	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.009	7010	1.24	0.0000						RQ
S Total HxCDF										RQ
A Non-2,3,7,8-sub-HxCDD	35.375	3880	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.618	417242	1.02	1.4421						
1,2,3,4,7,8,9-HpCDF	39.872	395176	1.06	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.245						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.561	315483	1.06	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.241						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.128	632851	0.68							
1,3,6,8-TCDD	17.726	345944	0.79							
2,3,4,7-TCDF	20.408	1028230	0.68							
1,2,3,7-TCDD	21.518	306508	0.76							
1,2,3,9-TCDF	21.939	443680	0.70							
1,2,3,9-TCDD	22.008	363657	0.82							
1,2,8,9-TCDF	23.574	570780	0.73							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.643	174001								
1,3,4,6,8-PeCDF	24.004	470784	1.65							
1,2,3,8,9-PeCDD	26.038	304807	1.59							
1,2,4,7,9-PeCDD	30.776						0.0	0.0		
1,2,3,8,9-PeCDF	30.944						0.0	0.0		
1,2,3,4,6,8-HxCDF	33.120	491975	1.24							
1,2,4,6,7,9-HxCDD	34.205	337333	1.27							
1,2,3,4,6,7-HxCDD	36.545	327967	1.27							
1,2,3,4,8,9-HxCDF	36.898	474737	1.23							
1,2,3,4,6,7,9-HpCDD	38.921	308708	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 20-Aug-2021 02:21:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:41 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:17:20

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.365	20.365	0	1.000	208816	29479	77	192	383		
317.9389	20.356	20.365	-1	1.000	259017	35573	20	50	1779	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.408	20.408	0	1.002	415746	51351	54	135	951		
305.8987	20.399	20.408	-1	1.002	612484	78065	87	217	897	0.68(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.731	19.851	-67	0.920	1292	284	54	135	5		
305.8987	18.714	19.851	-68	0.919	2953	608	87	217	7	0.44(0.65-0.89)	
	Empc Correction				1677	368	87	217	4		
303.9016	19.651	19.851	-12	0.965	3565	599	54	135	11		
305.8987	19.651	19.851	-12	0.965	4345	691	87	217	8	0.82(0.65-0.89)	
303.9016	23.995	19.851	248	1.178	3628	632	54	135	12		
305.8987	23.995	19.851	248	1.178	7371	1071	87	217	12	0.49(0.65-0.89)	
	Empc Correction				4711	820	87	217	9		
13C-2,3,7,8-TCDD											
331.9368	21.716	21.716	0	1.000	138947	18418	16	40	1151		
333.9338	21.681	21.716	-2	1.000	167148	21073	58	145	363	0.83(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.733	21.733	0	1.001	162087	21343	27	67	790		
321.8936	21.741	21.733	1	1.001	198616	25745	22	55	1170	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.684						27	67			
321.8936	20.684						22	55			
A F1 PeCDFs											RQ
339.8597	24.399	24.634	-14	1.000	637	92	7	17	13		
341.8567	24.408	24.634	-14	1.000	280	114	9	22	13	2.28(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.701	28.173	-148	1.000	1007	221	33	82	7		
341.8567	25.726	28.173	-147	1.000	618	105	25	62	4	1.63(1.32-1.78)	
339.8597	26.652	28.173	-91	1.000	1282	272	33	82	8		
341.8567	26.719	28.173	-87	1.000	1199	139	25	62	6	1.07(1.32-1.78)	
339.8597	27.233	28.173	-56	1.000	2704	359	33	82	11		
341.8567	27.266	28.173	-54	1.000	1654	276	25	62	11	1.63(1.32-1.78)	
339.8597	27.847	28.173	-20	1.000	2865	363	33	82	11		
341.8567	27.830	28.173	-21	1.000	1857	264	25	62	11	1.54(1.32-1.78)	
339.8597	30.801	28.173	157	1.000	228677	27894	33	82	845		
341.8567	30.801	28.173	157	1.000	146849	18011	25	62	720	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	30.624	28.478	129	1.000	173911	21451	25	62	858		
357.8516	30.624	28.478	129	1.000	110691	13444	22	55	611	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	35.097	35.009	5	1.000	3881	661	70	175	9		
375.8178	35.097	35.009	5	1.000	3878	670	63	157	11	1.00(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.316	35.375	-4	1.000	2148	405	37	92	11		
391.8127	35.333	35.375	-3	1.000	2394	461	29	72	16	0.90(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.618	38.618	0	1.000	210762	52957	76	190	697		
409.7788	38.610	38.618	-1	1.000	206480	51508	66	165	780	1.02(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872	39.872	0	1.000	203770	54845	76	190	722		
409.7788	39.864	39.872	-1	1.000	191406	52568	66	165	796	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.245						76	190			
409.7788	39.245						66	165			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.561	39.561	0	1.000	162373	45421	47	117	966		
425.7737	39.561	39.561	0	1.000	153110	43013	51	127	843	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.241						47	117			
425.7737	39.241						51	127			
1,3,6,8-TCDF											
303.9016	16.128	16.128	0		256933	49037	54	135	908		
305.8987	16.128	16.128	0		375918	69992	87	217	805	0.68(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.726	17.726	0		153088	25266	27	67	936		
321.8936	17.734	17.726	1		192856	31475	22	55	1431	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.408	20.408	0		415746	51351	54	135	951		
305.8987	20.399	20.408	-1		612484	78065	87	217	897	0.68(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7-TCDD											
319.8965	21.518	21.518	0		132540	17783	27	67	659		
321.8936	21.518	21.518	0		173968	25305	22	55	1150	0.76(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.939	21.939	0		182383	22694	54	135	420		
305.8987	21.931	21.939	-1		261297	32313	87	217	371	0.70(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.008	22.008	0		163777	22768	27	67	843		
321.8936	22.017	22.008	1		199880	26605	22	55	1209	0.82(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.574	23.574	0		240977	39036	54	135	723		
305.8987	23.574	23.574	0		329803	55021	87	217	632	0.73(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.643	23.643	0		174001	29575	27	67	1095		
1,3,4,6,8-PeCDF											
339.8597	24.004	24.004	0		293455	51890	7	17	7413		
341.8567	24.012	24.004	1		177329	31853	9	22	3539	1.65(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.038	26.038	0		187015	26181	25	62	1047		
357.8516	26.038	26.038	0		117792	16681	22	55	758	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.776						25	62			
357.8516	30.776						22	55			
1,2,3,8,9-PeCDF											
339.8597	30.944						33	82			
341.8567	30.944						25	62			
1,2,3,4,6,8-HxCDF											
373.8208	33.120	33.120	0		271876	38426	70	175	549		
375.8178	33.111	33.120	-1		220099	29793	63	157	473	1.24(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.205	34.205	0		188918	32295	37	92	873		
391.8127	34.197	34.205	-1		148415	25256	29	72	871	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.545	36.545	0		183615	42121	37	92	1138		
391.8127	36.536	36.545	-1		144352	33027	29	72	1139	1.27(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.898	36.898	0		262044	59186	70	175	846		
375.8178	36.898	36.898	0		212693	49326	63	157	783	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.921	38.921	0		157870	43353	47	117	922		
425.7737	38.921	38.921	0		150838	40670	51	127	797	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Inject. Date: 20-Aug-2021 02:21:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 16

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	467833	65052

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	467833	65052

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.731	1292	284	2953	608	0.3360	0.44	RQ
18.731	1292	284	1677	368	0.2350		Empc Correction
19.651	3565	599	4345	691	0.6261	0.82	
23.995	3628	632	7371	1071	0.8706	0.49	RQ
23.995	3628	632	4711	820	0.6601		Empc Correction
Signal Totals:							
	8485	1515	10733	1879			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23154	3885				0.58	RQ
	19218	3394					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.833 = (23154 * 40.000) / (467833 * 1.080)
Empc Amount: 1.521 = (19218 * 40.000) / (467833 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.399	637	92	280	114		2.28	R
Signal Totals:							
	637	92	280	114			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	917	206				2.28	RQ
	713	290					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (917 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (713 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.701	1007	221	618	105		1.63	
26.652	1282	272	1199	139		1.07	R
27.233	2704	359	1654	276		1.63	
27.847	2865	363	1857	264		1.54	
30.801	228677	27894	146849	18011		1.56	
Signal Totals:							
	236535	29109	152177	18795			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	388712	47904				1.55	RQ
	388340	47940					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (388712 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (388340 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Inject. Date: 20-Aug-2021 02:21:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 16

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.624	173911	21451	110691	13444		1.57	
Signal Totals:							
	173911	21451	110691	13444			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	284602	34895				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (284602 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Inject. Date: 20-Aug-2021 02:21:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 16

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
35.097	3881	661	3878	670		1.00	R
Signal Totals:							
	3881	661	3878	670			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7759	1331				1.00	RQ
	7010	1194					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (7759 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (7010 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.316	2148	405	2394	461		0.90	R
Signal Totals:							
	2148	405	2394	461			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4542	866				0.90	RQ
	3880	731					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4542 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (3880 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

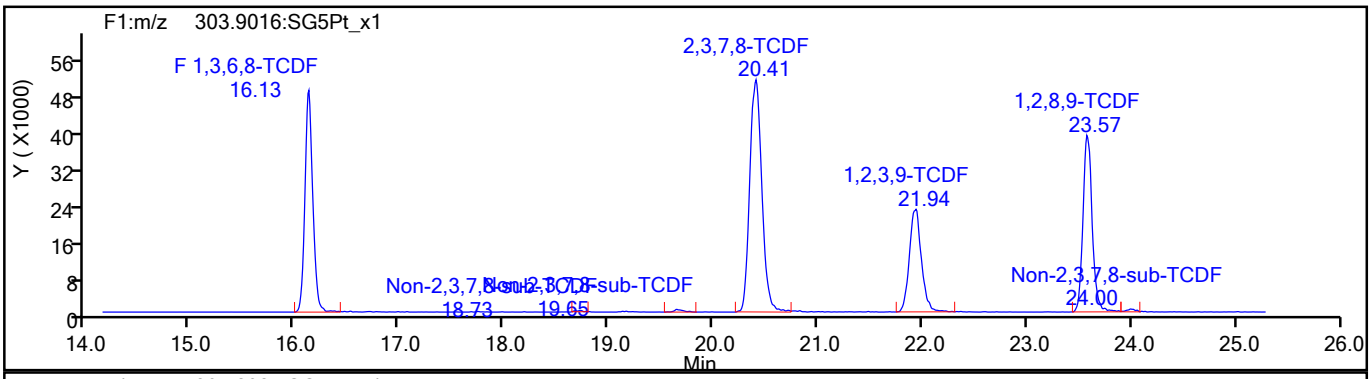

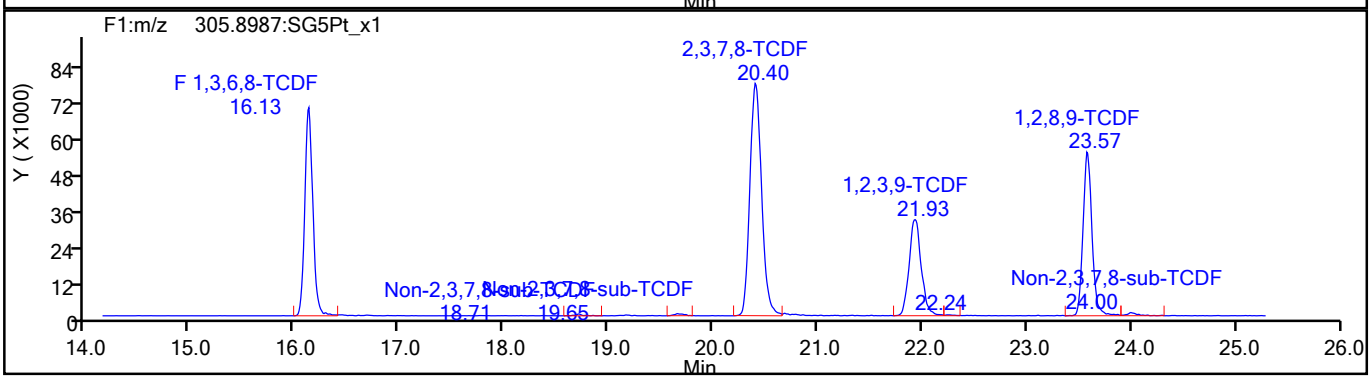

TCDF Standards

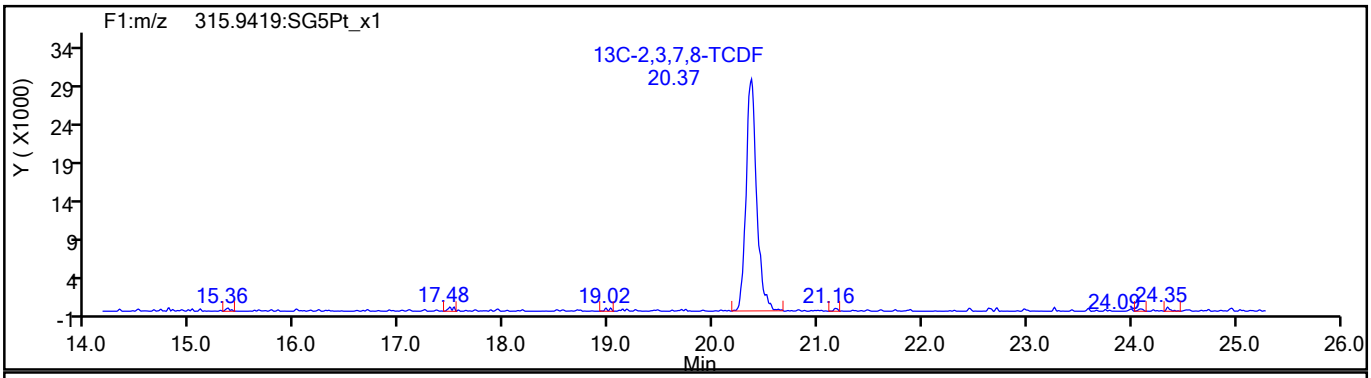

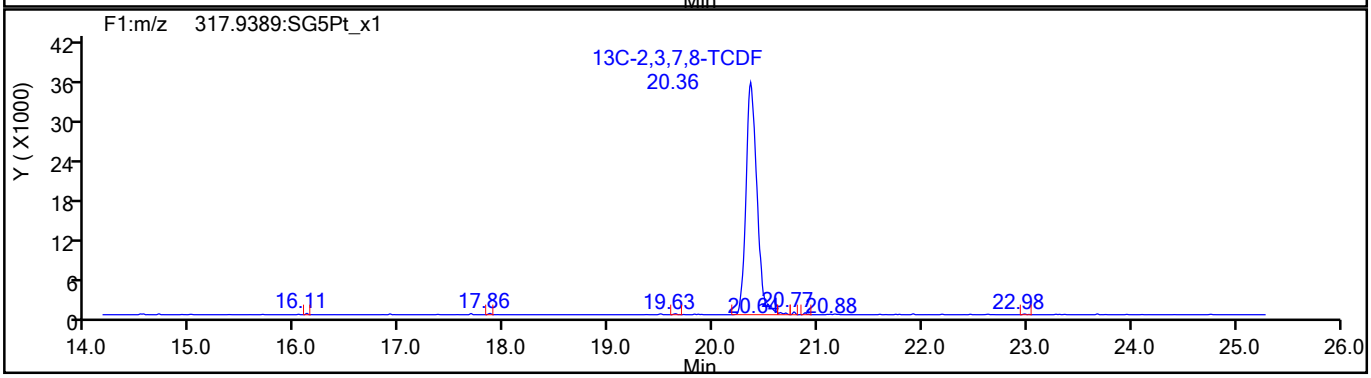

787736

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

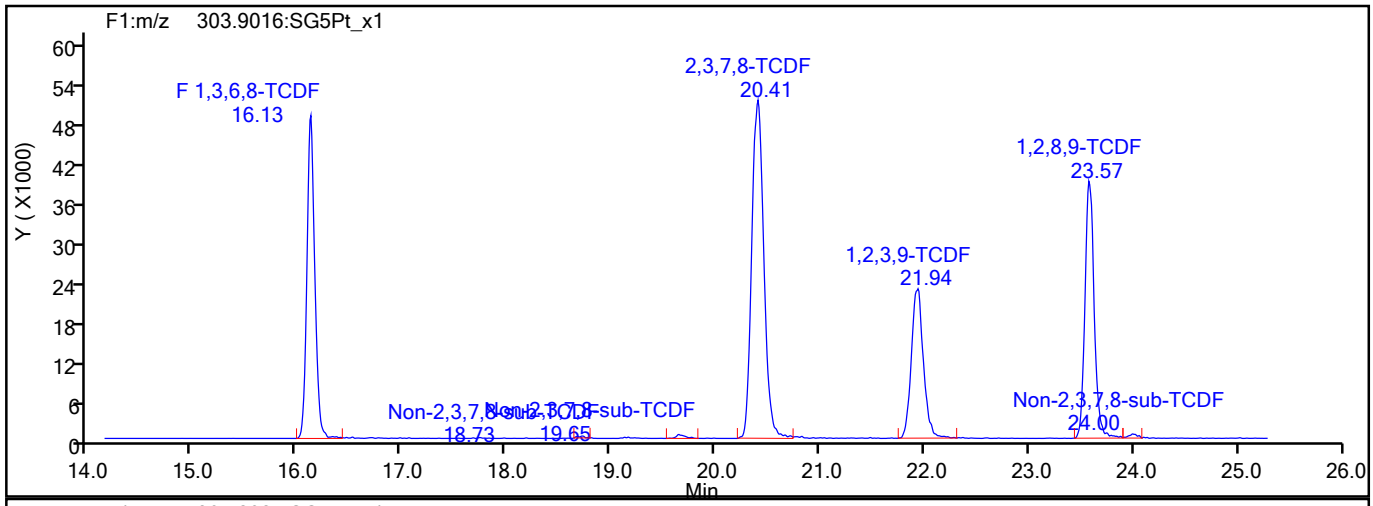

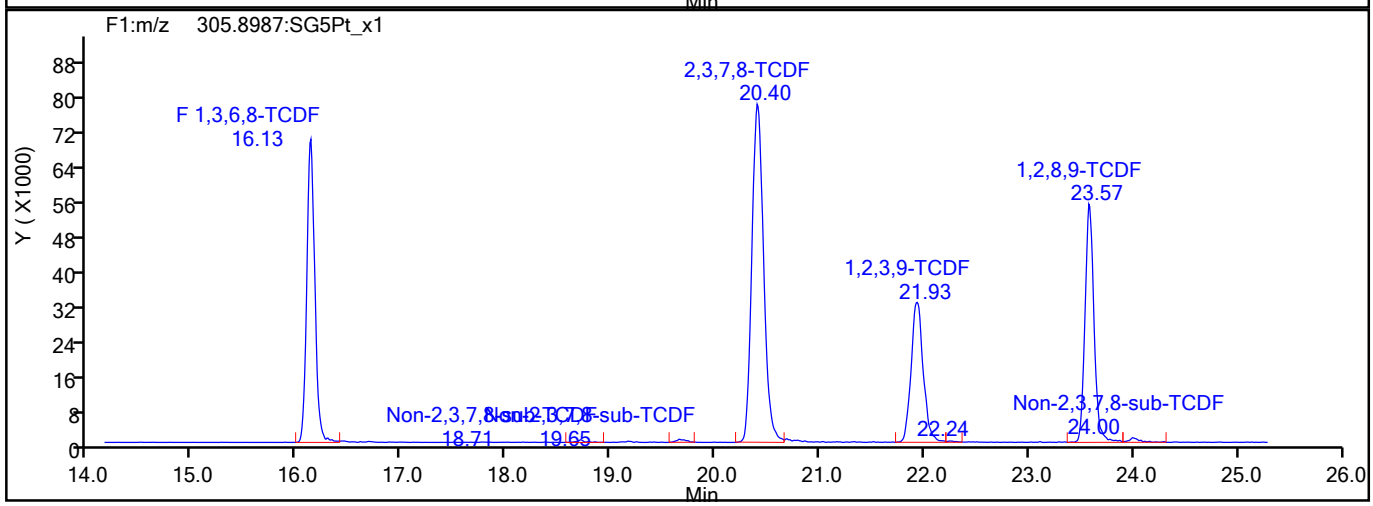

TCDF Interference Mass

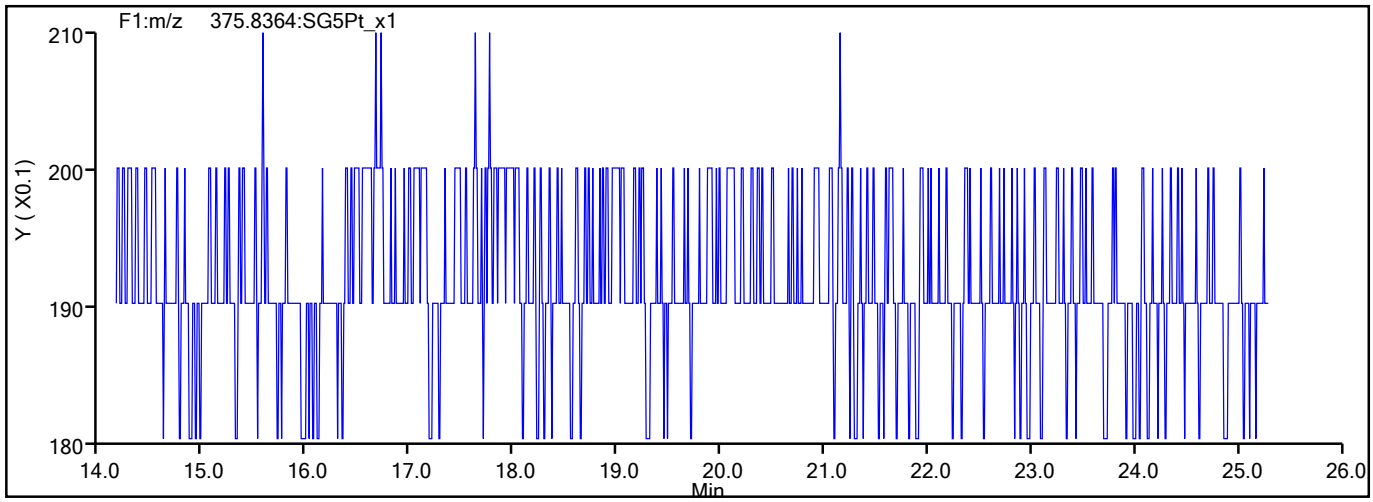

787737

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

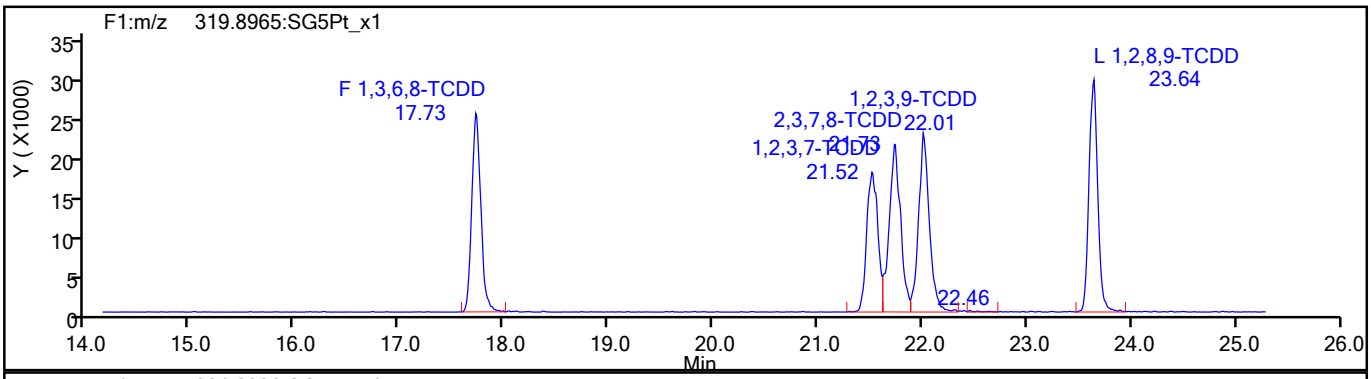

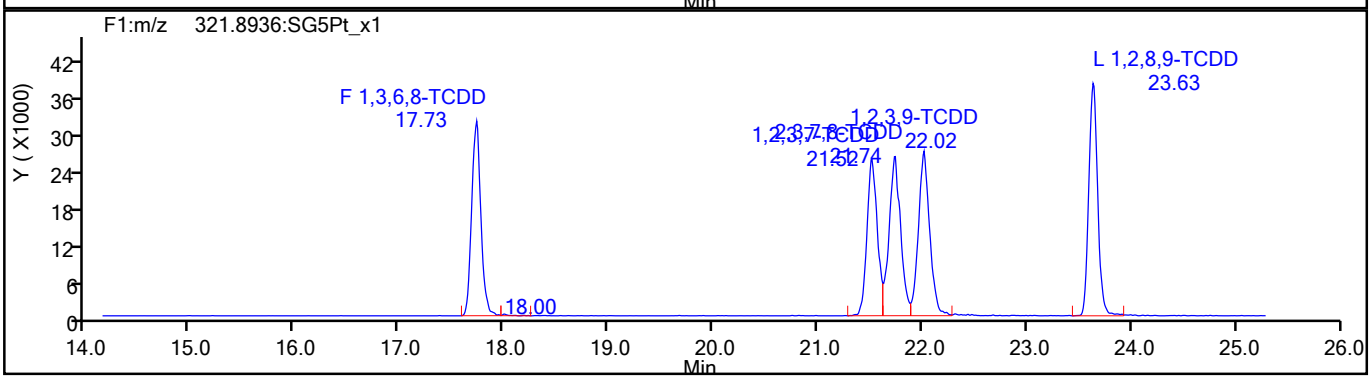

TCDD Standards

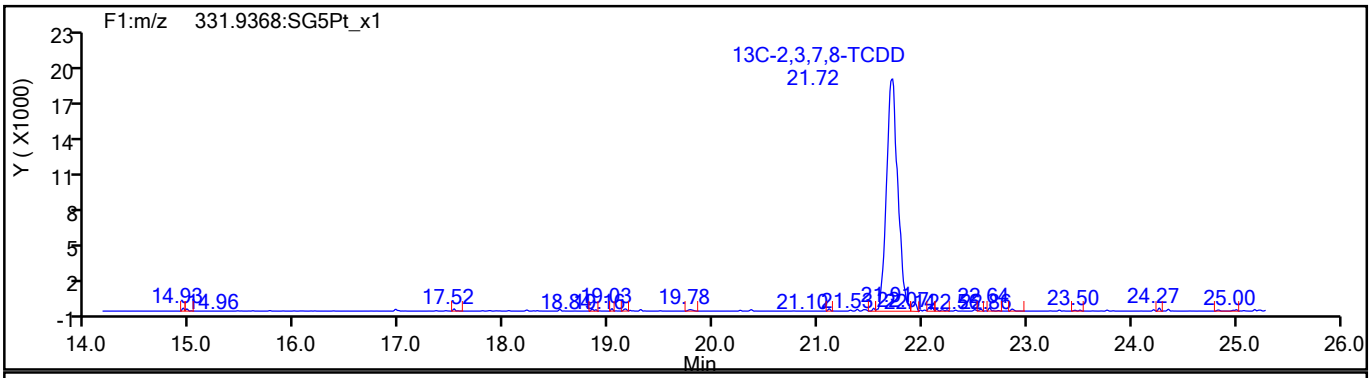

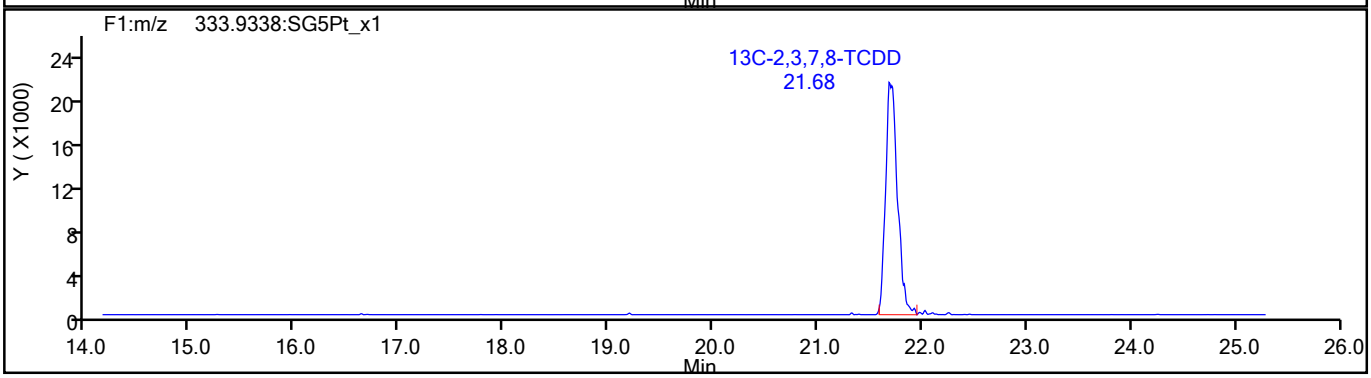

787738

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

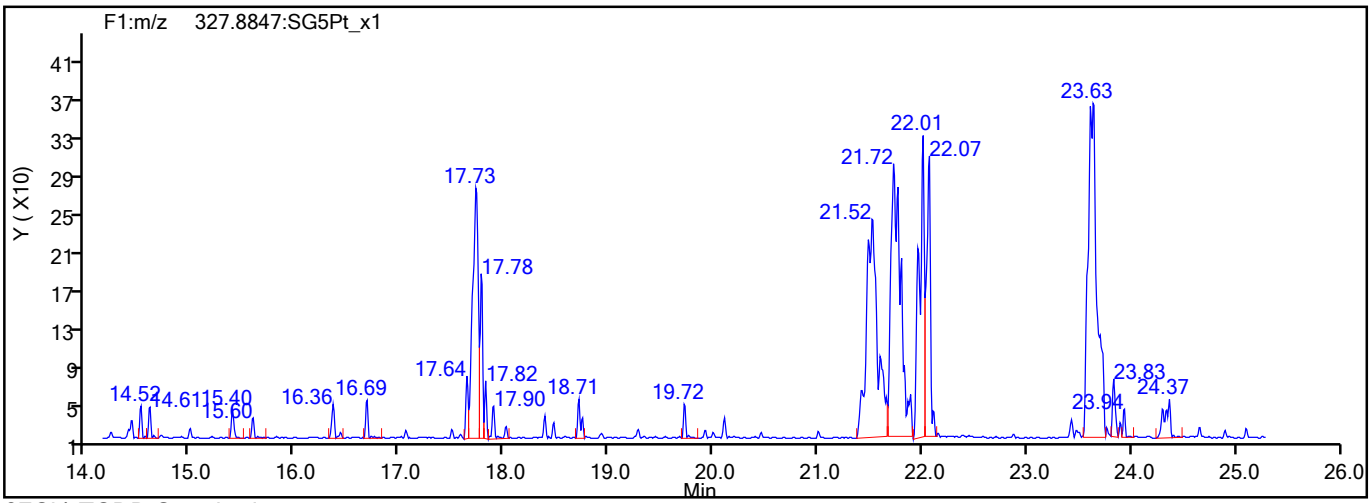

37Cl4-TCDD Standards

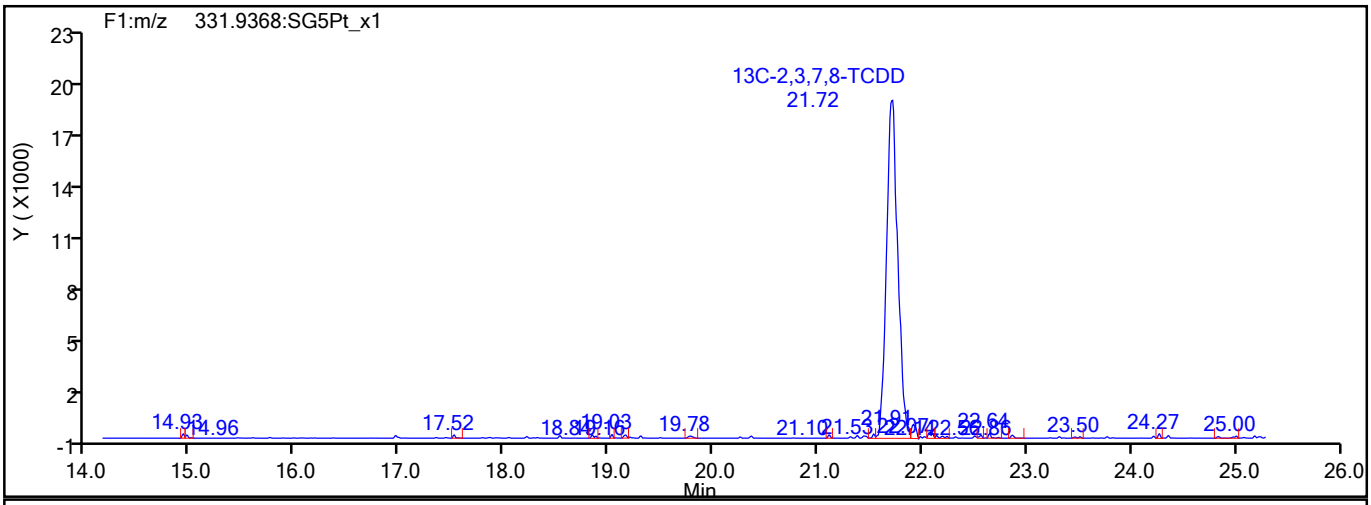

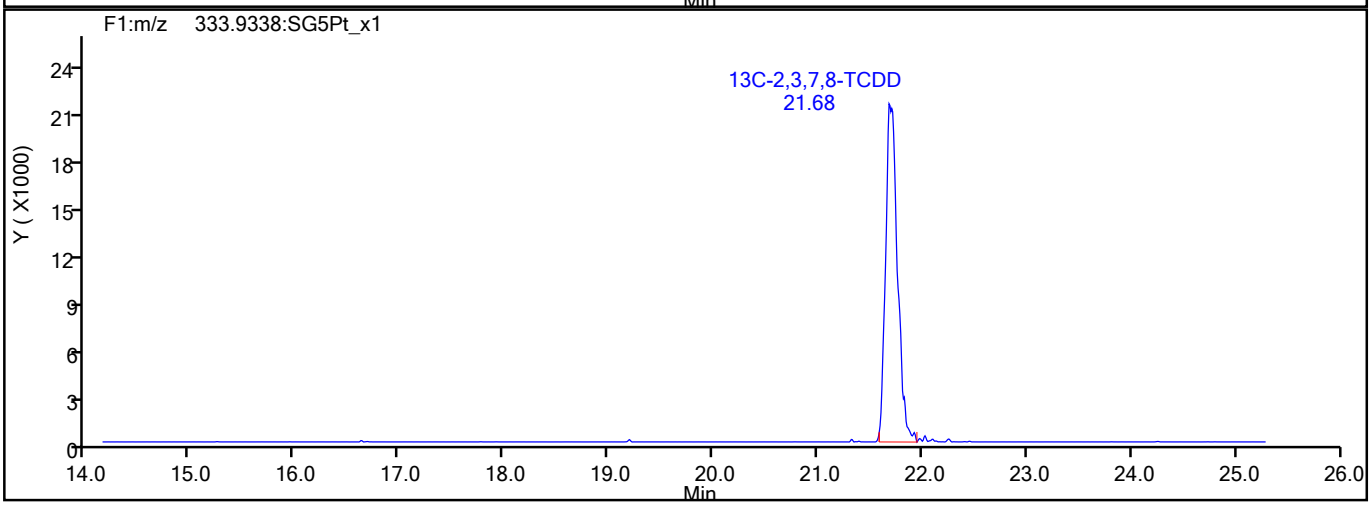

787739

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

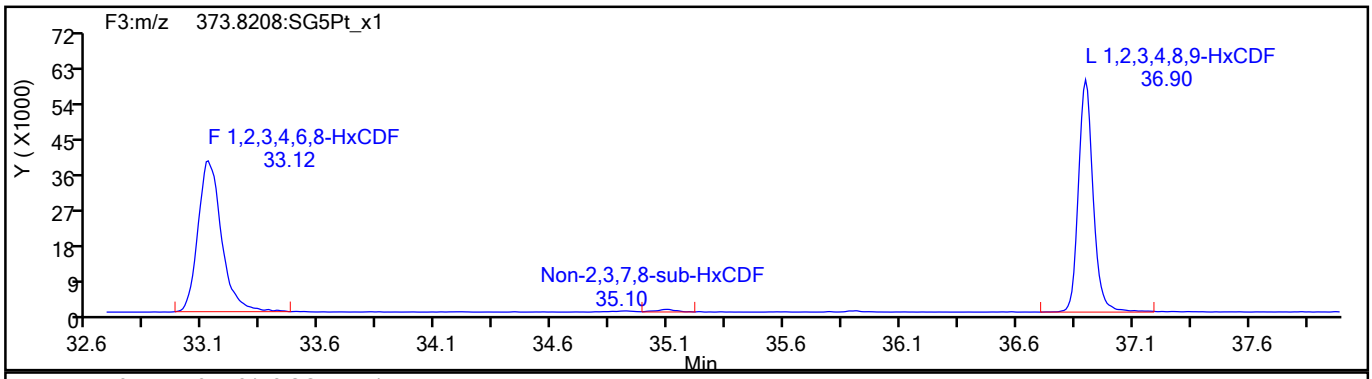

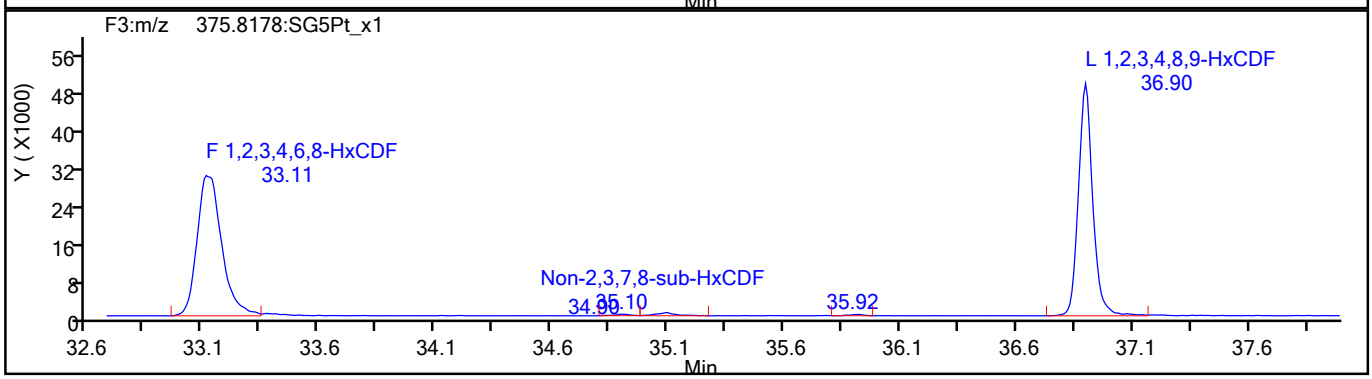

HxCDF Standards

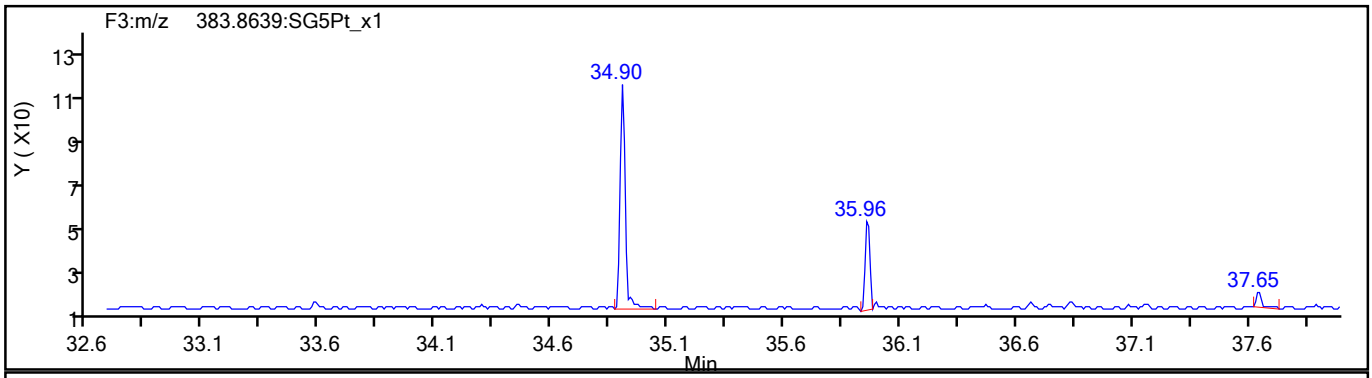

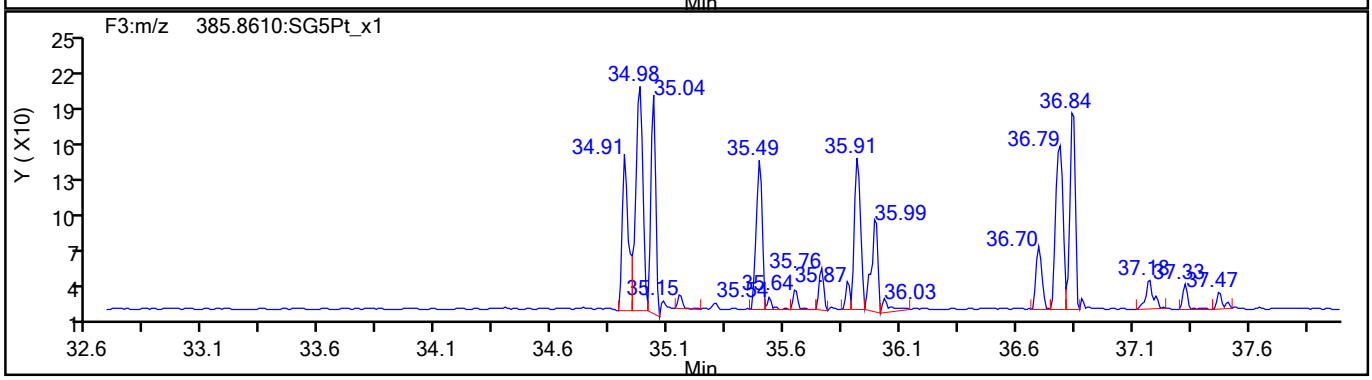

787740

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

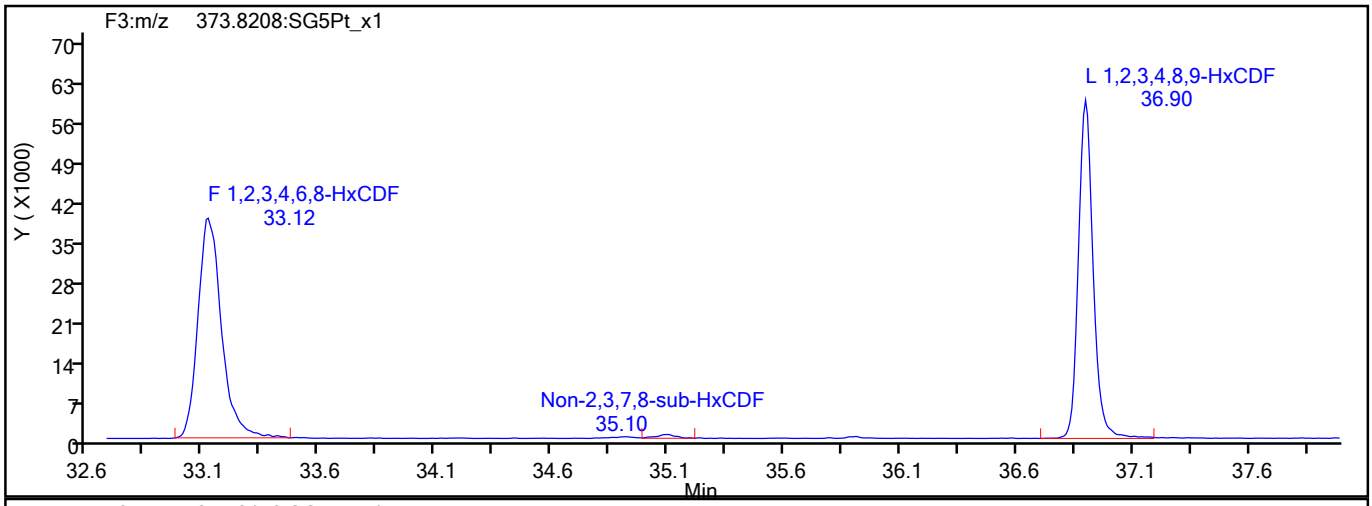

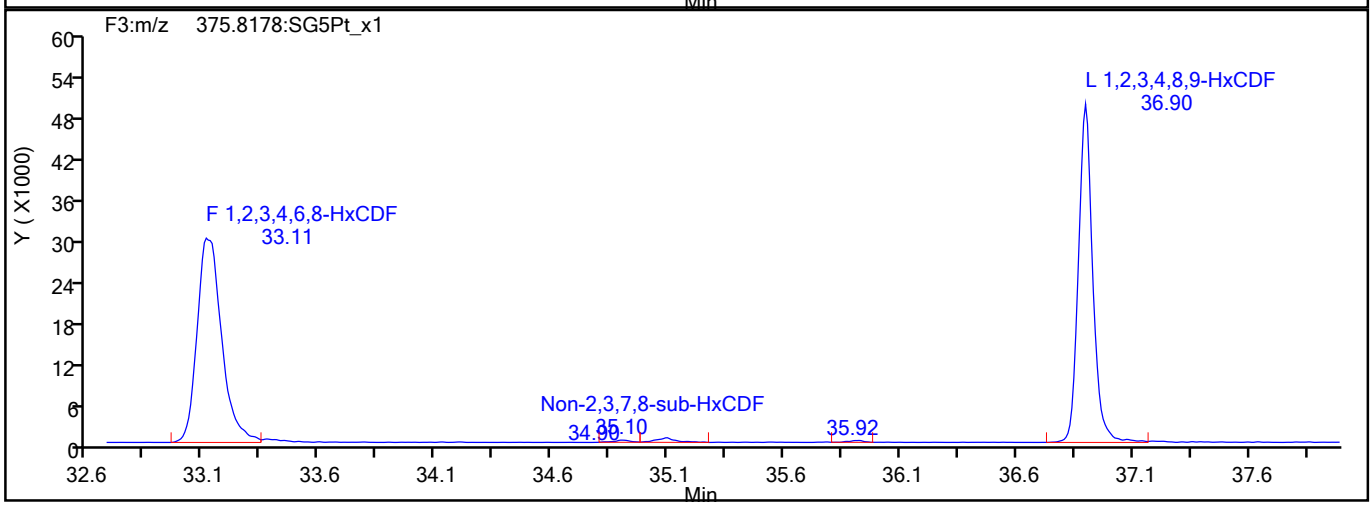

HxCDF Interference Mass

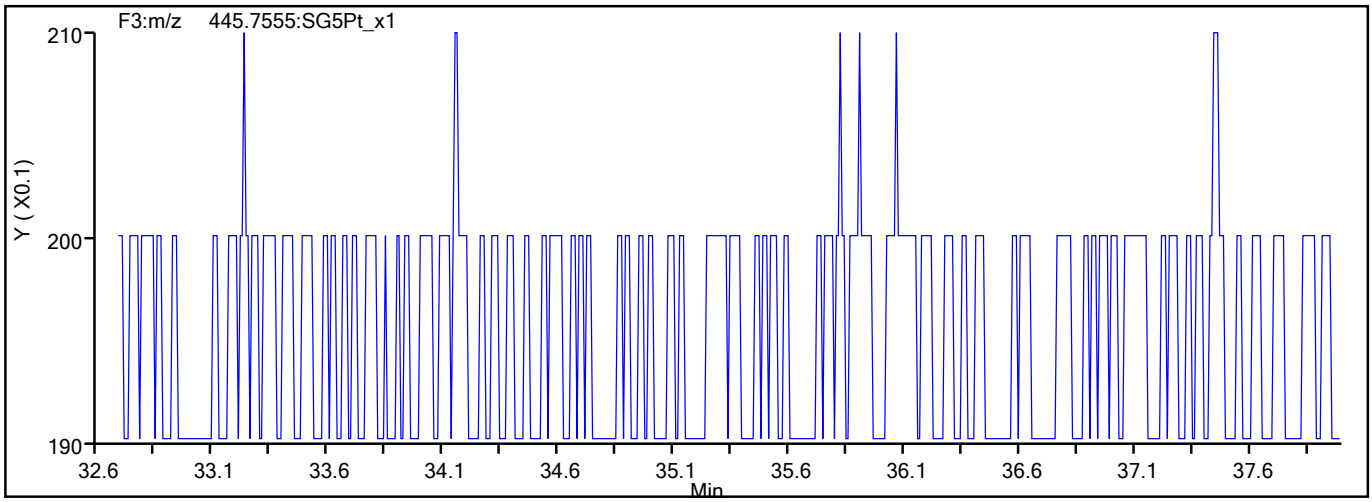

787741

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

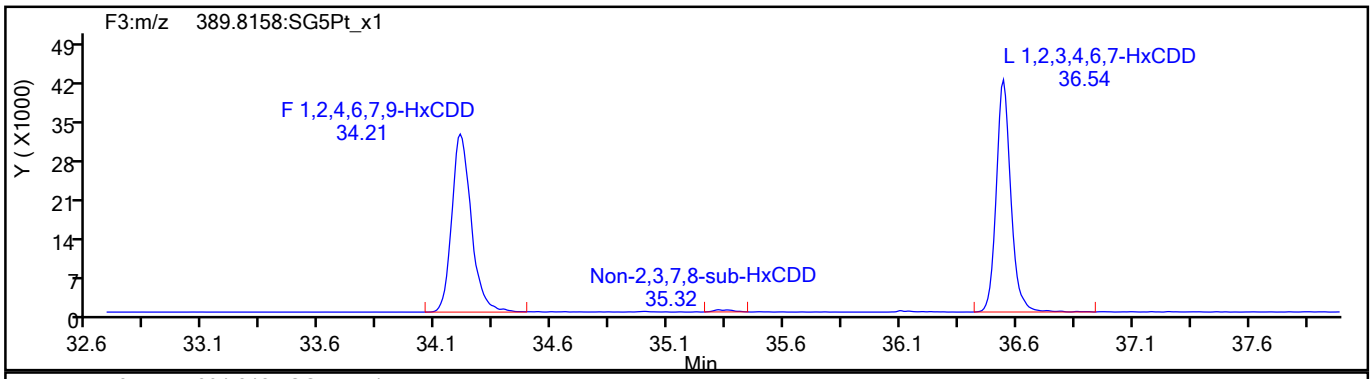

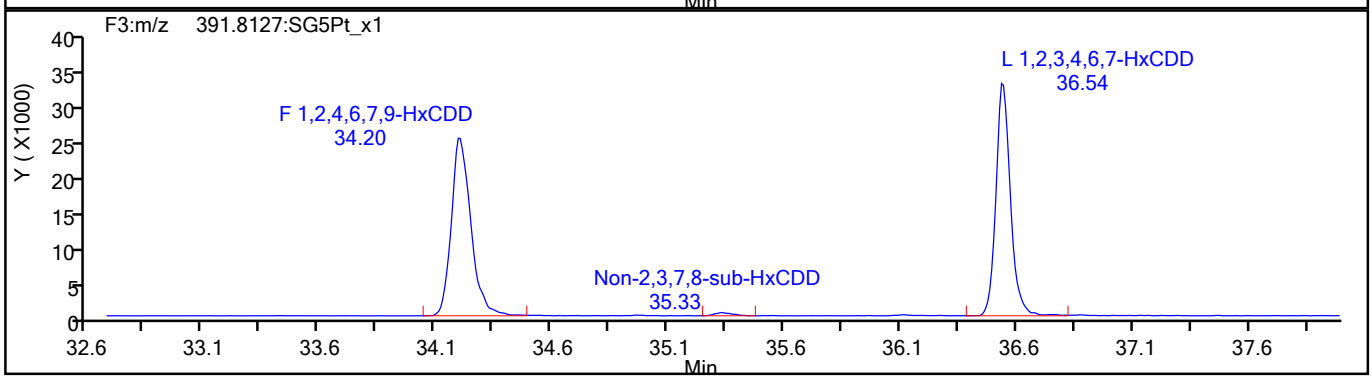

HxCDD Standards

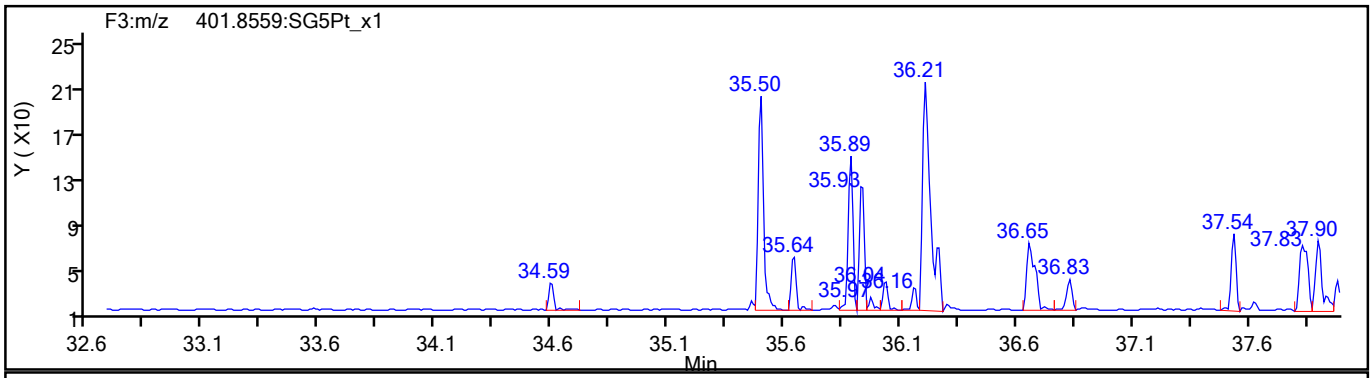

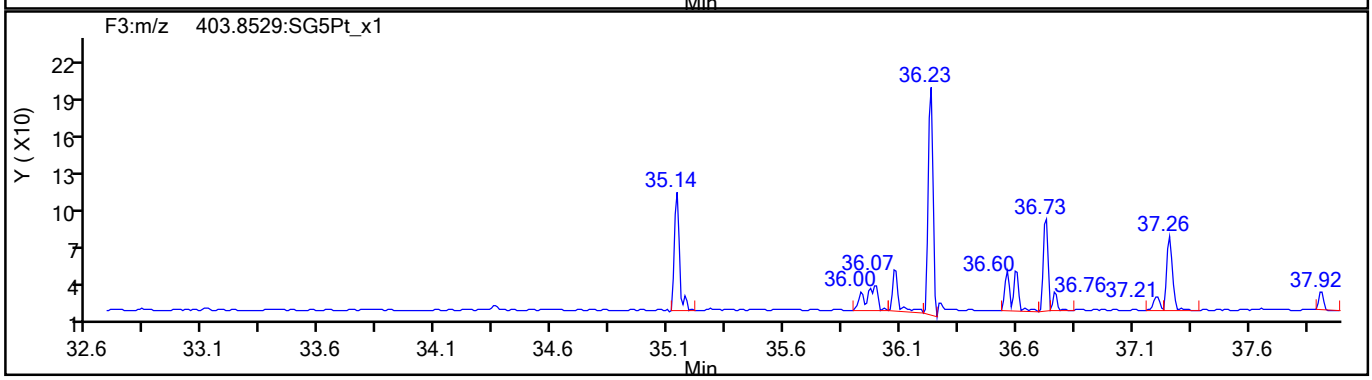

787742

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

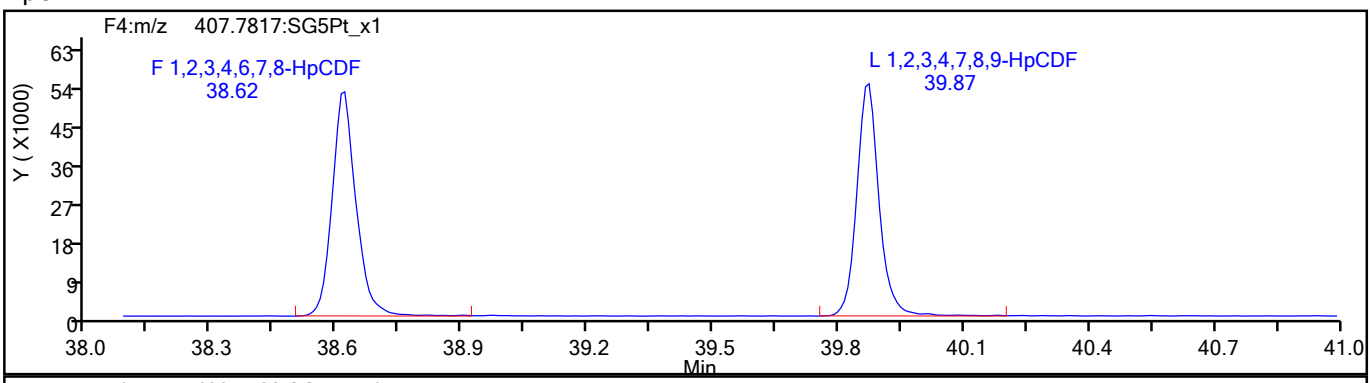

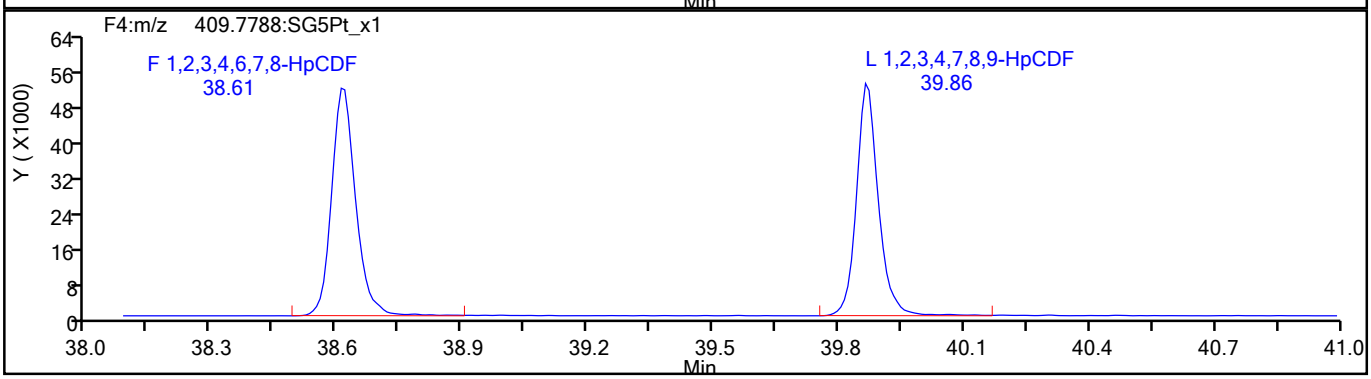

HpCDF Standards

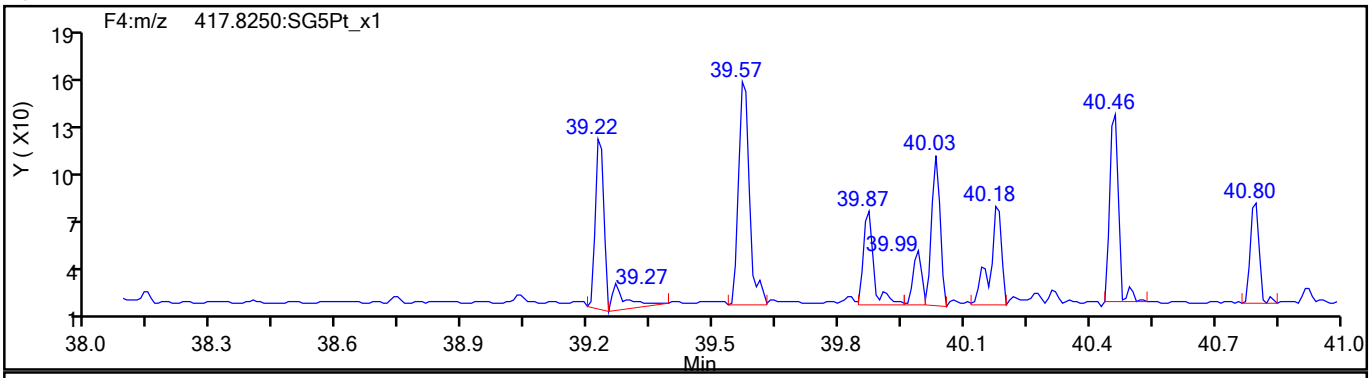

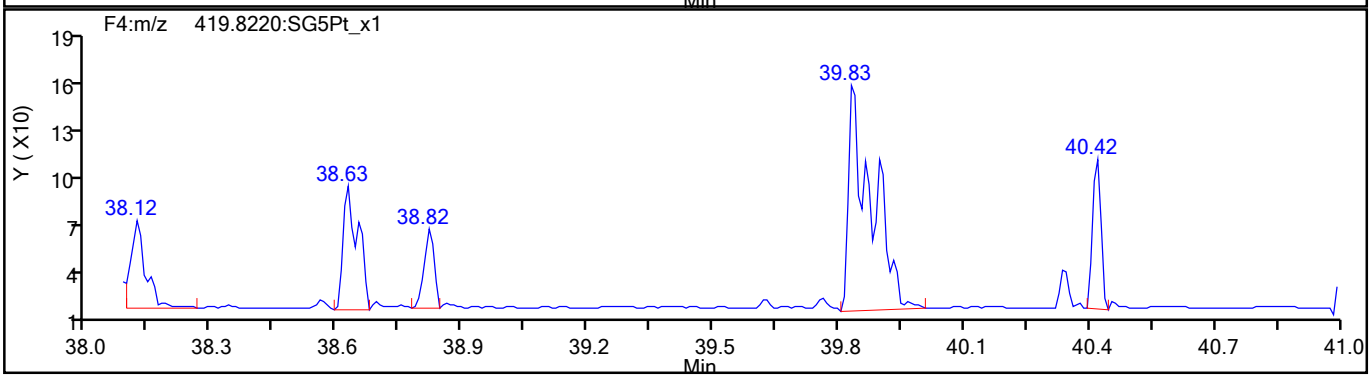

787743

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

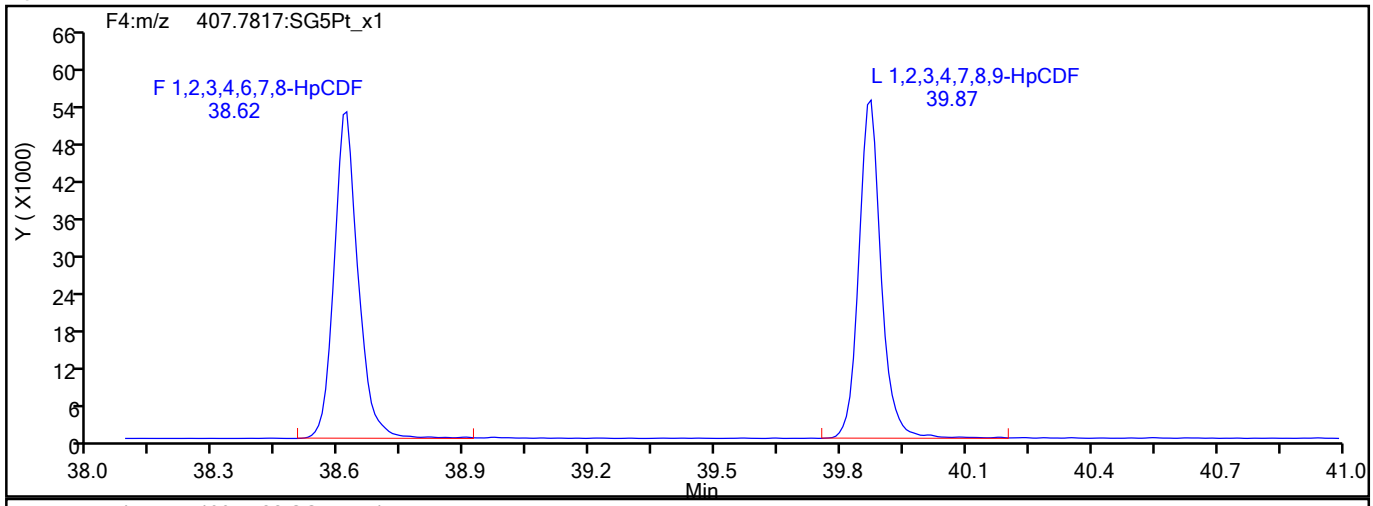

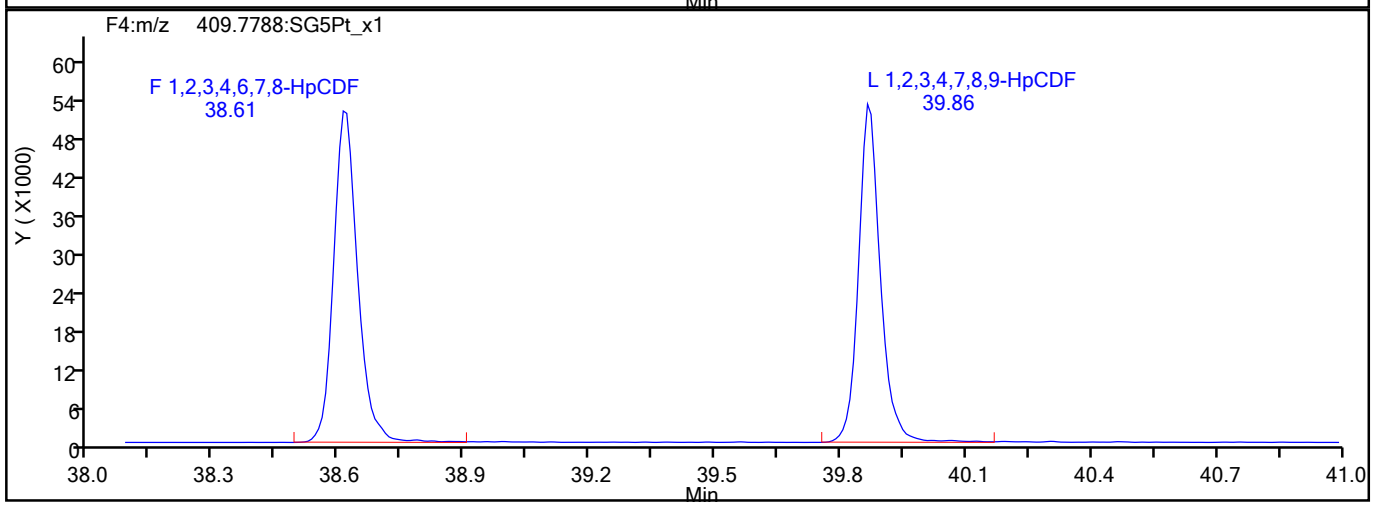

HpCDF Interference Mass

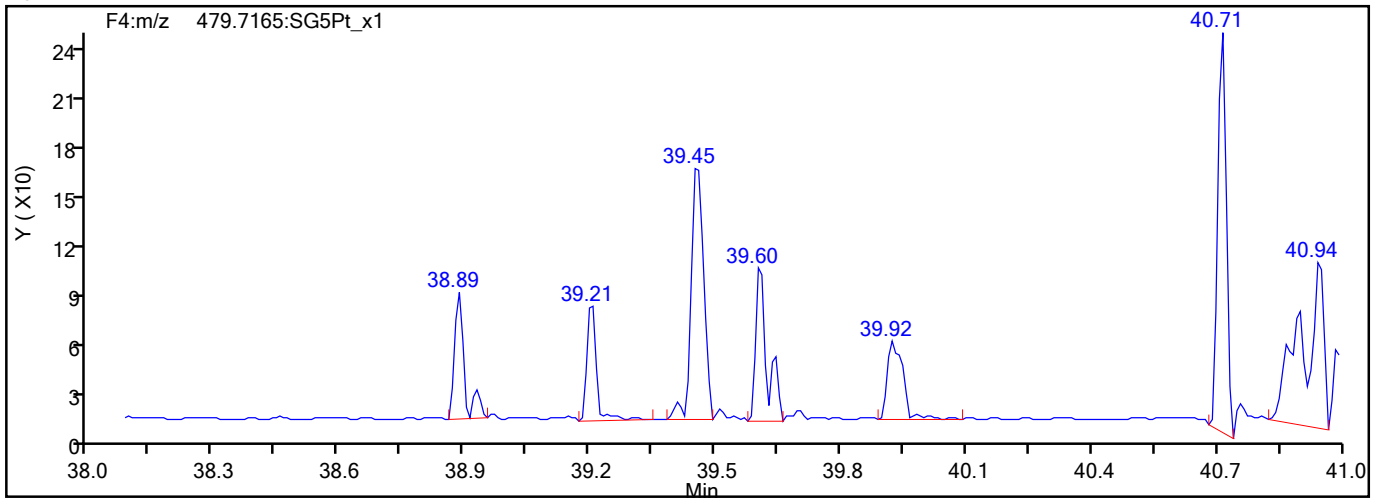

787744

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

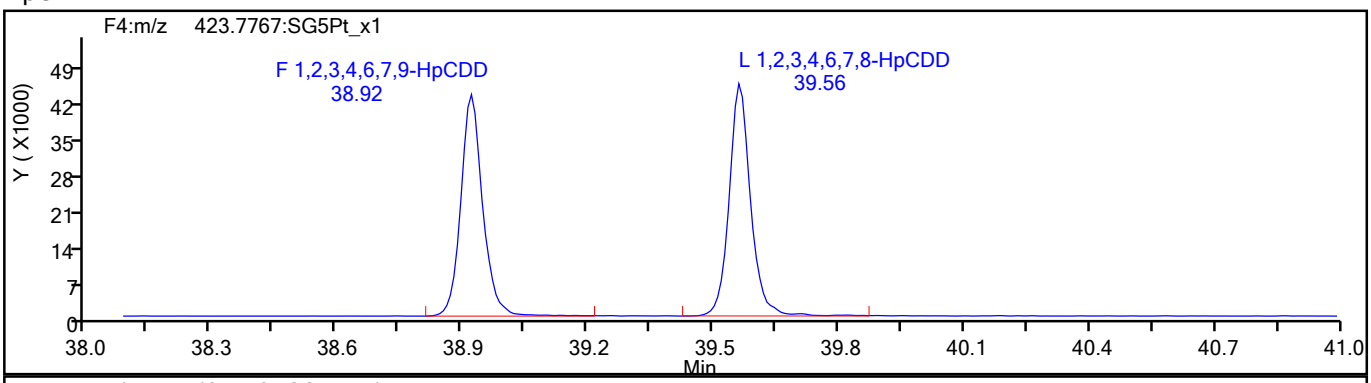

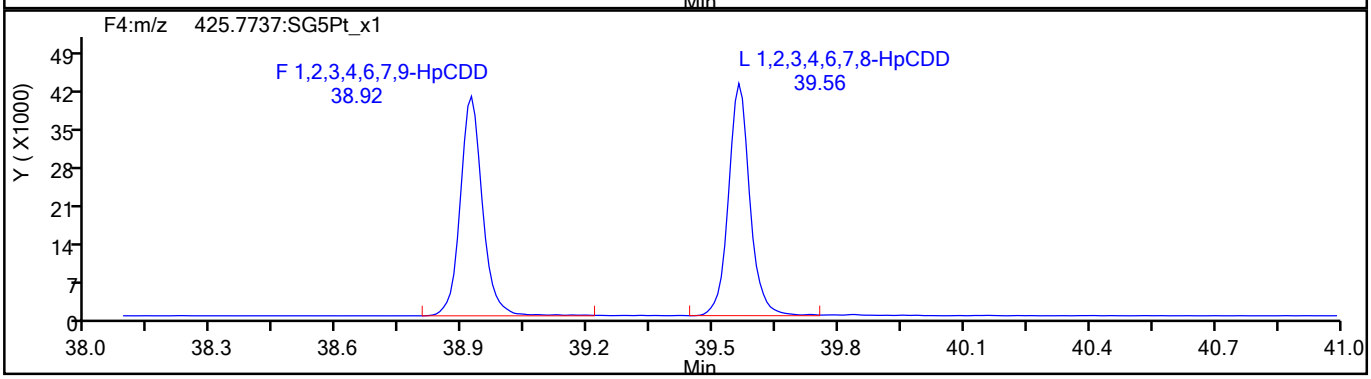

HpCDD Standards

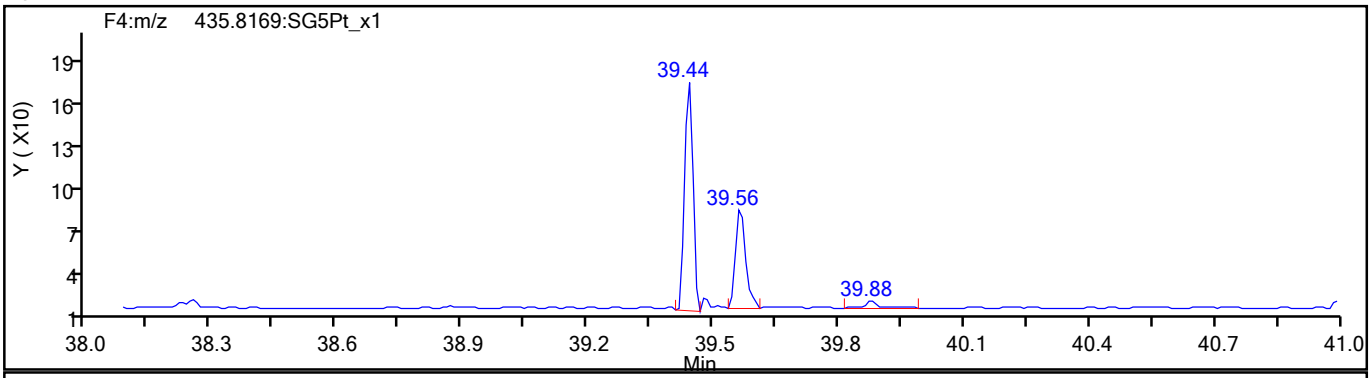

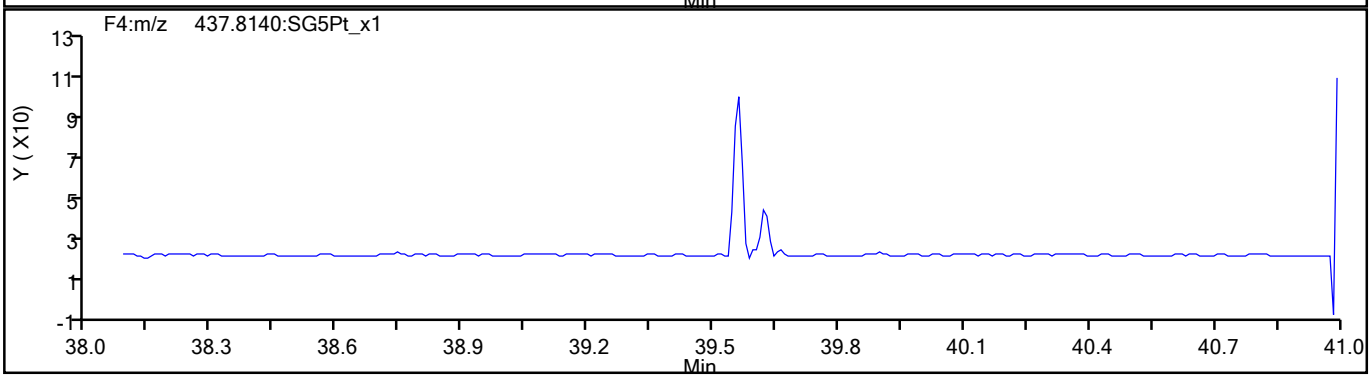

787745

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

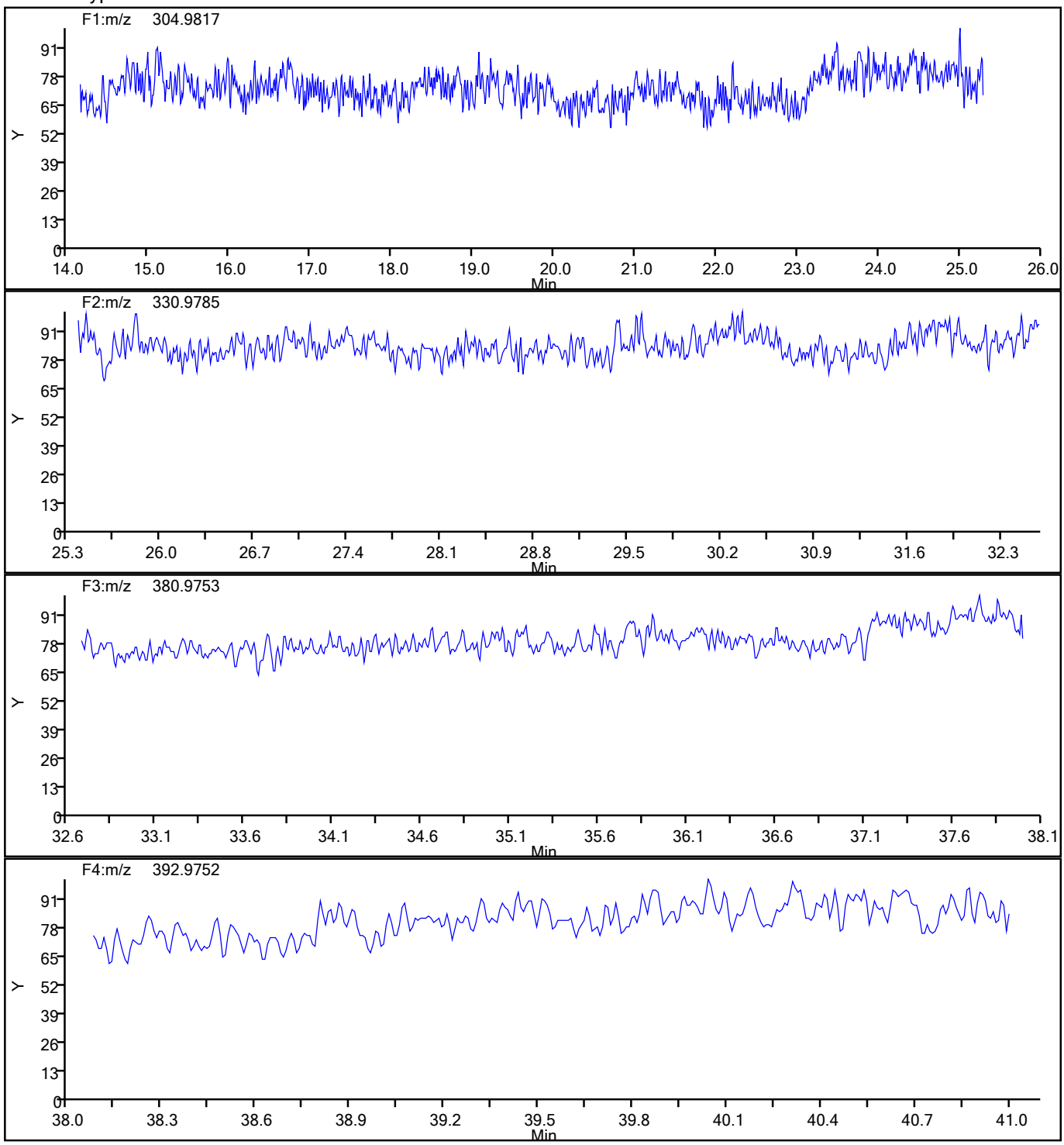

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Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

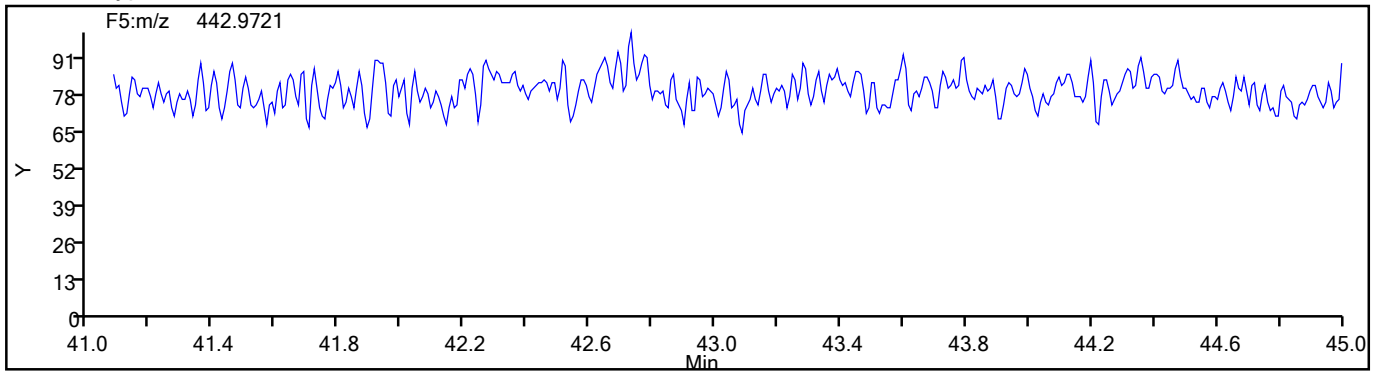

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FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-2
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Lab File ID: 19au21dfs1_5.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/19/2021 16:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.073
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.067
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.052
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.055
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.0	0.042
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.046
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.041
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.021
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.020
72918-21-9	1,2,3,7,8,9-HxCDF	ND		5.0	0.020
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.022
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.338	J	5.0	0.032
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.177	J	5.0	0.038
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.041
3268-87-9	OCDD	1.21	J	10	0.029
39001-02-0	OCDF	ND		10	0.12
41903-57-5	Total TCDD	ND		1.0	0.14
30402-14-3	Total TCDF	4.06		1.0	0.047
36088-22-9	Total PeCDD	ND		5.0	0.21
30402-15-4	Total PeCDF	ND		5.0	0.055
34465-46-8	Total HxCDD	ND		5.0	0.19
55684-94-1	Total HxCDF	ND		5.0	0.040
37871-00-4	Total HpCDD	0.546	J	5.0	0.032
38998-75-3	Total HpCDF	0.177	J	5.0	0.039

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Lab File ID: 19au21dfs1_5.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10(g) Date Analyzed: 08/19/2021 16:27

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517891 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	36		25-164
89059-46-1	13C-2,3,7,8-TCDF	36		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	35		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	36		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	40		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	40		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	39		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	47		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	43		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	39		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	38		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	41		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	41		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	42		26-138
114423-97-1	13C-OCDD	36		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	46		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 19-Aug-2021 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513879/1-a RI
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 08:56:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: dadunj Date: 23-Aug-2021 08:56:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.367	999541	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.413	482916	0.81	1.3459	35.9	35.9	0.2062	0.2062	35.90	
2,3,7,8-TCDF	20.422	7680	0.67	1.0802	1.472	1.472	0.0237	0.0237		M
A Non-2,3,7,8-sub-TCDF	19.851	2918	0.78	1.0802	0.5594	0.5594	0.0237	0.5594		a
S Total TCDF					2.032	2.032	0.0237	0.0237		
D 13C-2,3,7,8-TCDD	21.745	331874	0.84	0.9317	35.6	35.6	0.1263	0.1263	35.64	
2,3,7,8-TCDD	21.797						0.0367	0.0367		RQU
$ 37Cl4-2,3,7,8-TCDD	21.780	184847		1.0083	18.3	18.3	0.0144	0.0144	45.85	
A Non-2,3,7,8-sub-TCDD	20.684						0.0367	0.0717		RQU
S Total TCDD							0.0717	0.0717		
D 13C-1,2,3,7,8-PeCDF	27.242	411361	1.64	1.1405	36.1	36.1	0.1592	0.1592	36.09	
1,2,3,7,8-PeCDF	27.263						0.0262	0.0262		
D 13C-2,3,4,7,8-PeCDF	28.759	451402	1.71	1.1253	40.1	40.1	0.1614	0.1614	40.13	
2,3,4,7,8-PeCDF	28.910						0.0273	0.0273		RQU
A F1 PeCDFs	24.634						0.007863	0.007863		RQU
A Non-2,3,7,8-sub-PeCDF	28.173						0.0267	0.0267		RQU
S Total PeCDF							0.0273	0.0273		
D 13C-1,2,3,7,8-PeCDD	29.559	251252	1.75	0.7165	35.1	35.1	0.0527	0.0527	35.08	
1,2,3,7,8-PeCDD	29.616						0.0337	0.0337		
A Non-2,3,7,8-sub-PeCDD	28.478						0.0337	0.1027		RQU
S Total PeCDD							0.1027	0.1027		
D 13C-1,2,3,4,7,8-HxCDF	34.909	442177	0.56	0.9648	46.8	46.8	0.1353	0.1353	46.82	
1,2,3,4,7,8-HxCDF	34.918						0.0106	0.0106		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.070	452714	0.55	1.0708	43.2	43.2	0.1220	0.1220	43.19	
1,2,3,6,7,8-HxCDF	35.087						0.009816	0.009816		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.887	384775	0.54	1.0413	37.7	37.7	0.1254	0.1254	37.75	
2,3,4,6,7,8-HxCDF	35.916						0.0110	0.0110		
D 13C-1,2,3,7,8,9-HxCDF	36.788	369514	0.55	0.9731	38.8	38.8	0.1342	0.1342	38.79	
1,2,3,7,8,9-HxCDF	36.791						0.0102	0.0102		
A Non-2,3,7,8-sub-HxCDF	35.009						0.0104	0.0199		RQU
S Total HxCDF							0.0199	0.0199		

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.586	978844	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.097	300443	1.30	0.7587	40.5	40.5	0.1264	0.1264	40.46	
1,2,3,4,7,8-HxCDD	36.126						0.0212	0.0212		
D 13C-1,2,3,6,7,8-HxCDD	36.215	325228	1.26	0.8593	38.7	38.7	0.1116	0.1116	38.67	
1,2,3,6,7,8-HxCDD	36.244						0.0231	0.0231		
1,2,3,7,8,9-HxCDD	36.552						0.0205	0.0205		RQU
A Non-2,3,7,8-sub-HxCDD	35.375						0.0215	0.0943		RQU
S Total HxCDD							0.0943	0.0943		
D 13C-1,2,3,4,6,7,8-HpCDF	38.610	296829	0.48	0.7359	41.2	41.2	0.1807	0.1807	41.20	
1,2,3,4,6,7,8-HpCDF	38.619	379	0.90	1.4421	0.0885	0.0885	0.0188	0.0188		M
D 13C-1,2,3,4,7,8,9-HpCDF	39.857	279786	0.49	0.6854	41.7	41.7	0.1940	0.1940	41.70	
1,2,3,4,7,8,9-HpCDF	39.872						0.0205	0.0205		
A Non-2,3,7,8-sub-HpCDF	39.245						0.0196	0.0196		
S Total HpCDF					0.0885	0.0885	0.0197	0.0197		
D 13C-1,2,3,4,6,7,8-HpCDD	39.554	269457	1.07	0.6745	40.8	40.8	0.0880	0.0880	40.81	
1,2,3,4,6,7,8-HpCDD	39.570	478	1.01	1.0503	0.1689	0.1689	0.0159	0.0159		M
A Non-2,3,7,8-sub-HpCDD	39.241	295	1.12	1.0503	0.1042	0.1042	0.0159	0.1042		
S Total HpCDD					0.2731	0.2731	0.0159	0.0159		
D 13C-OCDD	42.051	387569	0.87	0.5446	72.7	72.7	0.2546	0.2546	36.35	
OCDF	42.157						0.0584	0.0584		
OCDD	42.068	1247	0.84	1.0620	0.6059	0.6059	0.0145	0.0145		M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 19-Aug-2021 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513879/1-a RI
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 08:56:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: dadunj Date: 23-Aug-2021 08:56:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.367	21.395	-2		448088	60917	46	115	1324		
333.9338	21.359	21.395	-2		551453	76764	19	47	4040	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.413	20.365	3	0.955	216659	29555	127	317	233		
317.9389	20.388	20.365	1	0.954	266257	36744	26	65	1413	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.422	20.408	1	1.000	3077	466	1	2	466		M
305.8987	20.422	20.408	1	1.000	4603	728	6	15	121	0.67(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	19.734	19.851	-7	0.967	1278	284	1	2	284		a
305.8987	19.709	19.851	-9	0.965	1640	273	6	15	46	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.745	21.716	2	1.018	151821	19232	46	115	418		
333.9338	21.737	21.716	1	1.017	180053	23875	19	47	1257	0.84(0.65-0.89)	
2,3,7,8-TCDD											RQU
319.8965	21.733						6	15			
321.8936	21.733						1	2			
37Cl4-2,3,7,8-TCDD											
327.8847	21.780	21.799	-1	1.019	184847	22658	8	20	2832		
A Non-2,3,7,8-sub-TCDD											U
319.8965	17.808	20.684	-172	0.819	189	61	6	15	10		
	Empc Correction				111	40	6	15	7		
321.8936	17.774	20.684	-174	0.817	145	52	1	2	52	1.30(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.242	27.251	-1	1.275	255453	37782	54	135	700		
353.8970	27.242	27.251	-1	1.275	155908	23687	46	115	515	1.64(1.32-1.78)	

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Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.276						1	2			
341.8567	27.276						6	15			
13C-2,3,4,7,8-PeCDF											
351.9000	28.759	28.757	0	1.346	284972	39477	54	135	731		
353.8970	28.742	28.757	-1	1.345	166430	22399	46	115	487	1.71(1.32-1.78)	
2,3,4,7,8-PeCDF											RQU
339.8597	28.791						1	2			
341.8567	28.791						6	15			
A F1 PeCDFs											U
339.8597	24.270	24.634	-22	0.891	14	10	1	2	10		
341.8567	24.347	24.634	-17	0.894	375	126	1	2	126	0.04(1.32-1.78)	
	Empc Correction				9	6	1	2	6		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	28.173	28.173	0	1.034	22	12	1	2			
341.8567	28.173	28.173	0	1.034	163	52	6	15		0.13(1.32-1.78)	
	Empc Correction				14	7	6	15	0		
13C-1,2,3,7,8-PeCDD											
367.8949	29.559	29.574	-1	1.383	159751	21868	10	25	2187		
369.8919	29.575	29.574	0	1.384	91501	12206	11	27	1110	1.75(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616						4	10			
357.8516	29.616						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.063	28.478	-145	0.882	120	38	4	10	10		
	Empc Correction				54	24	4	10	6		
357.8516	26.054	28.478	-145	0.881	35	16	1	2	16	3.43(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.909	34.906	0	0.954	159560	29606	34	85	871		
385.8610	34.909	34.906	0	0.954	282617	52423	76	190	690	0.56(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	34.922						2	5			
375.8178	34.922						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.070	35.066	0	0.959	161024	31293	34	85	920		
385.8610	35.061	35.066	0	0.958	291690	52360	76	190	689	0.55(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.082						2	5			
375.8178	35.082						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.887	35.890	0	0.981	134908	26852	34	85	790		
385.8610	35.887	35.890	0	0.981	249867	47678	76	190	627	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.907						2	5			
375.8178	35.907						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.788	36.782	0	1.006	131797	27710	34	85	815		
385.8610	36.780	36.782	0	1.005	237717	51610	76	190	679	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791						2	5			
375.8178	36.791						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.419	35.009	-95	0.957	41	29	2	5	15		
375.8178	33.427	35.009	-95	0.958	46	15	2	5	8	0.89(1.05-1.43)	
	Empc Correction				33	23	2	5	12		
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.586	36.581	0		542767	116573	46	115	2534		
403.8529	36.586	36.581	0		436077	94013	35	87	2686	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.097	36.092	0	0.987	169567	35941	46	115	781		
403.8529	36.097	36.092	0	0.987	130876	30793	35	87	880	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.109						4	10			
391.8127	36.109						2	5			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.215	36.210	0	0.990	181621	37484	46	115	815		
403.8529	36.215	36.210	0	0.990	143607	27866	35	87	796	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.227						4	10			
391.8127	36.227						2	5			
1,2,3,7,8,9-HxCDD											RQU
389.8158	36.597						4	10			
391.8127	36.597						2	5			
A Non-2,3,7,8-sub-HxCDD											U
389.8158	34.977	35.375	-24	0.966	247	48	4	10	12		
	Empc Correction				172	48	4	10	12		
391.8127	34.994	35.375	-23	0.966	139	39	2	5	20	1.78(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.610	38.596	1	1.055	96572	24055	41	102	587		
419.8220	38.610	38.596	1	1.055	200257	49761	71	177	701	0.48(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7817	38.619	38.618	0	1.000	180	61	6	15	10		
409.7788	38.619	38.618	0	1.000	199	84	2	5	42	0.90(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.857	39.850	0	1.089	91751	25313	41	102	617		
419.8220	39.857	39.850	0	1.089	188035	49089	71	177	691	0.49(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872						6	15			
409.7788	39.872						2	5			
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.245						6	15			
409.7788	39.245						2	5			

Report Date: 23-Aug-2021 08:56:17 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.554	39.547	0	1.081	139342	37216	23	57	1618		
437.8140	39.554	39.547	0	1.081	130115	34855	27	67	1291	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											M
423.7767	39.570	39.561	1	1.000	240	101	4	10	25		
425.7737	39.562	39.561	0	1.000	238	76	1	2	76	1.01(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.947	39.241	-18	0.985	156	65	4	10	16		
425.7737	38.914	39.241	-20	0.984	139	52	1	2	52	1.12(0.88-1.20)	
13C-OCDD											
469.7780	42.051	42.036	1	1.149	180767	43311	74	185	585		
471.7750	42.051	42.036	1	1.149	206802	47640	43	107	1108	0.87(0.76-1.02)	
OCDF											
441.7428	42.137						3	7			
443.7399	42.137						11	27			
OCDD											M
457.7377	42.068	42.053	1	1.000	569	118	1	2	118		M
459.7348	42.051	42.053	0	1.000	678	161	2	5	81	0.84(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	482916	66299

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	482916	66299

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.734	1278	284	1640	273	0.5594	0.78	a
Signal Totals:							
	1278	284	1640	273			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2918	557				0.78	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5594 = (2918 * 100.000) / (482916 * 1.080)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	331874	43107

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	331874	43107

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.808	189	61	145	52	0.0936	1.30	RQ
17.808	111	40	145	52	0.0717		Empc Correction
21.960	78	44	37	20	0.0322	2.11	RQ
21.960	28	15	37	20	0.0182		Empc Correction
23.385	139	62	10	5	0.0418	13.90	RQ
23.385	7	3	10	5	0.004764		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	411361	61469
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	451402	61876

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	431381	61672

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.270	14	10	375	126	0.0875	0.04	RQ
24.270	14	10	9	6	0.005171		Empc Correction
24.553	8	4	62	43	0.0157	0.13	RQ
24.553	8	4	5	2	0.002923		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	411361	61469
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	451402	61876

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	431381	61672

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
29.567	22	12	163	52	0.0416	0.13	RQ
29.567	22	12	14	7	0.008094		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	251252	34074

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	251252	34074

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.063	120	38	35	16	0.0590	3.43	RQ
26.063	54	24	35	16	0.0338		Empc Correction
26.374	55	36	12	6	0.0255	4.58	RQ
26.374	18	9	12	6	0.0114		Empc Correction
30.224	437	87	106	40	0.2065	4.12	RQ
30.224	164	61	106	40	0.1027		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	442177	82029
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	452714	83653
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	384775	74530
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	369514	79320

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	412295	79883

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.419	41	29	46	15	0.0175	0.89	RQ
33.419	41	29	33	23	0.0149		Empc Correction
35.407	52	27	47	31	0.0199	1.11	

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	300443	66734
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	325228	65350
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	312835	66042

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.977	247	48	139	39	0.1170	1.78	RQ
34.977	172	48	139	39	0.0943		Empc Correction
35.297	59	22	62	34	0.0367	0.95	RQ
35.297	59	22	47	17	0.0321		Empc Correction
35.904	124	47	45	32	0.0512	2.76	RQ
35.904	55	39	45	32	0.0303		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	269457	72071

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	269457	72071

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.947	156	65	139	52	0.1042	1.12	
Signal Totals:							
	156	65	139	52			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	295	117				1.12	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.1042 = (295 * 100.000) / (269457 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.42
Area: 2721
Amount: 1.404027
Amount Units: pg/ul

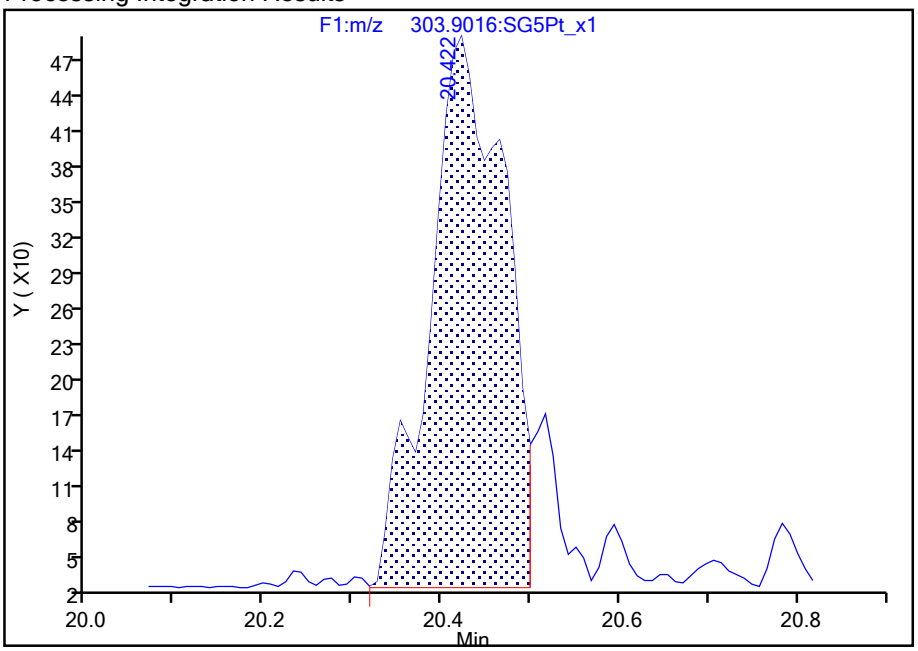

Manual Integration Results

RT: 20.42
Area: 3077
Amount: 1.472273
Amount Units: pg/ul

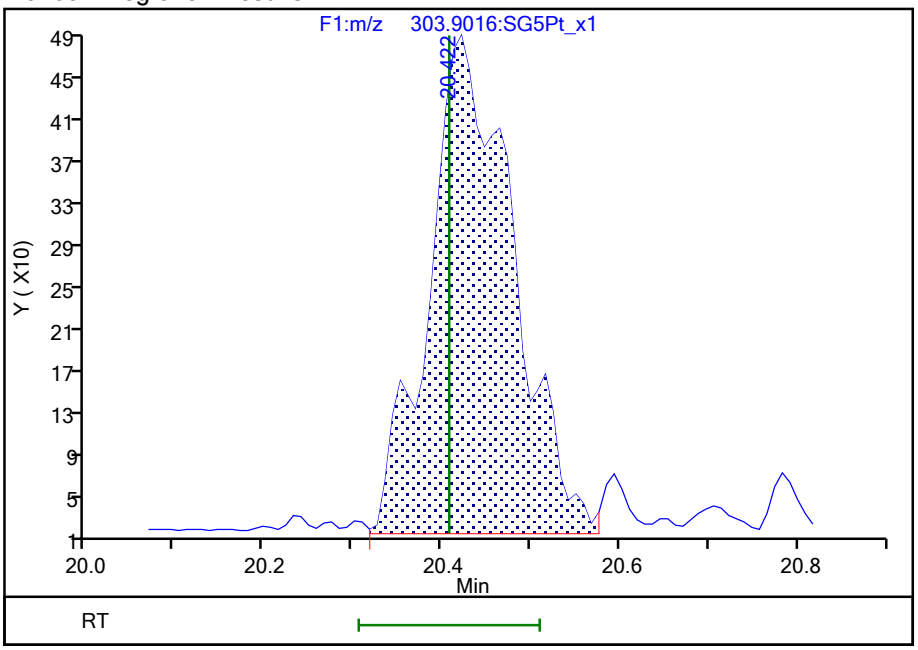

Reviewer: dadunj, 23-Aug-2021 08:53:56

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.62
Area: 339
Amount: 0.121248
Amount Units: pg/ul

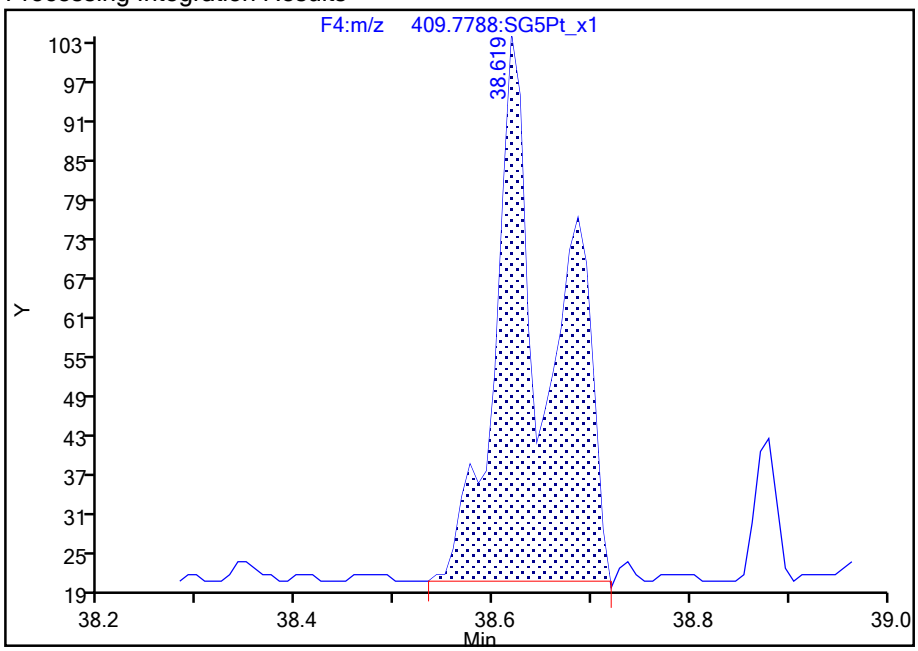

Manual Integration Results

RT: 38.62
Area: 199
Amount: 0.088541
Amount Units: pg/ul

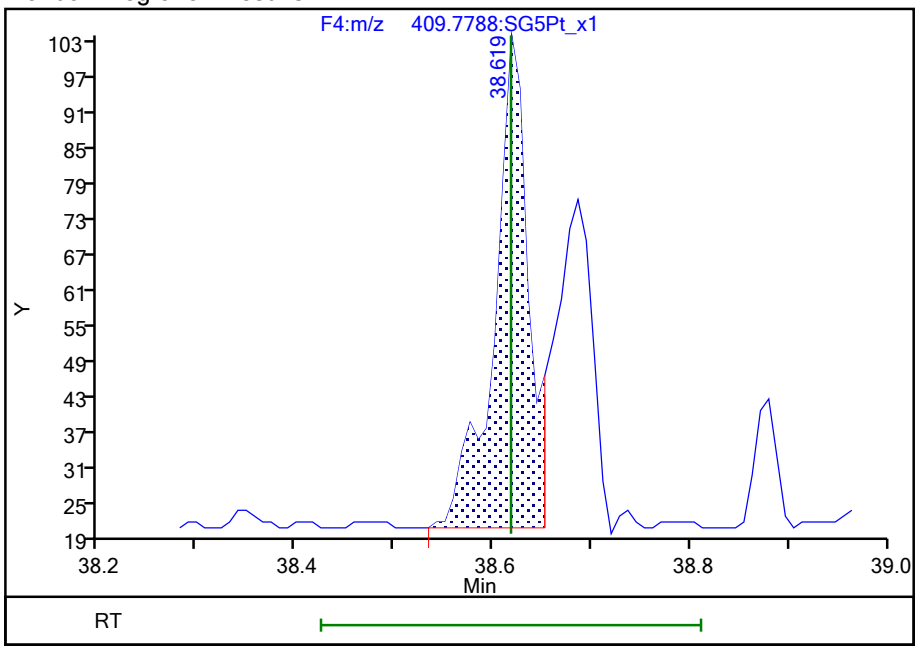

Reviewer: dadunj, 23-Aug-2021 08:55:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 39.56
Area: 255
Amount: 0.174905
Amount Units: pg/ul

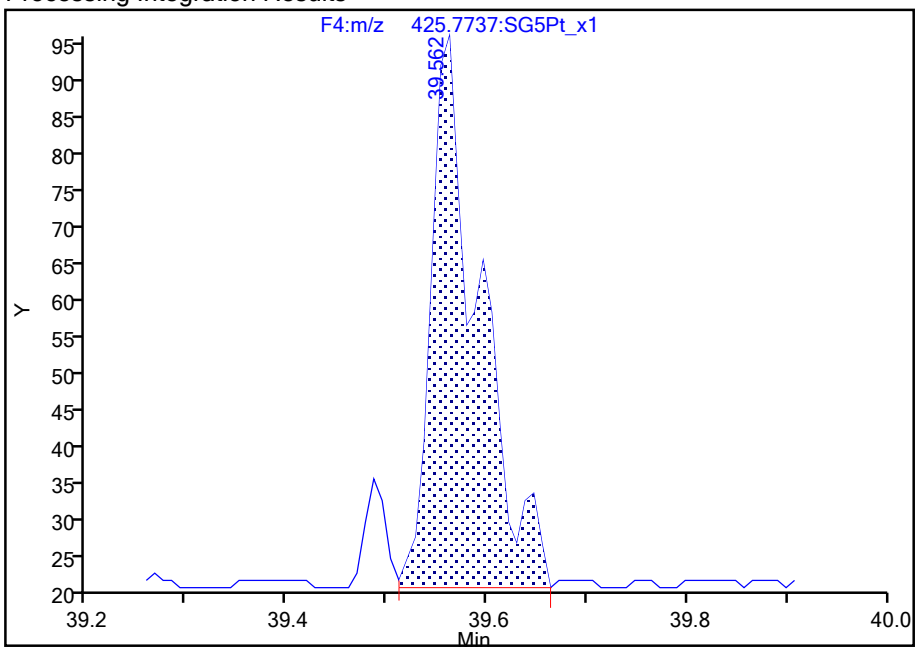

Manual Integration Results

RT: 39.56
Area: 238
Amount: 0.168898
Amount Units: pg/ul

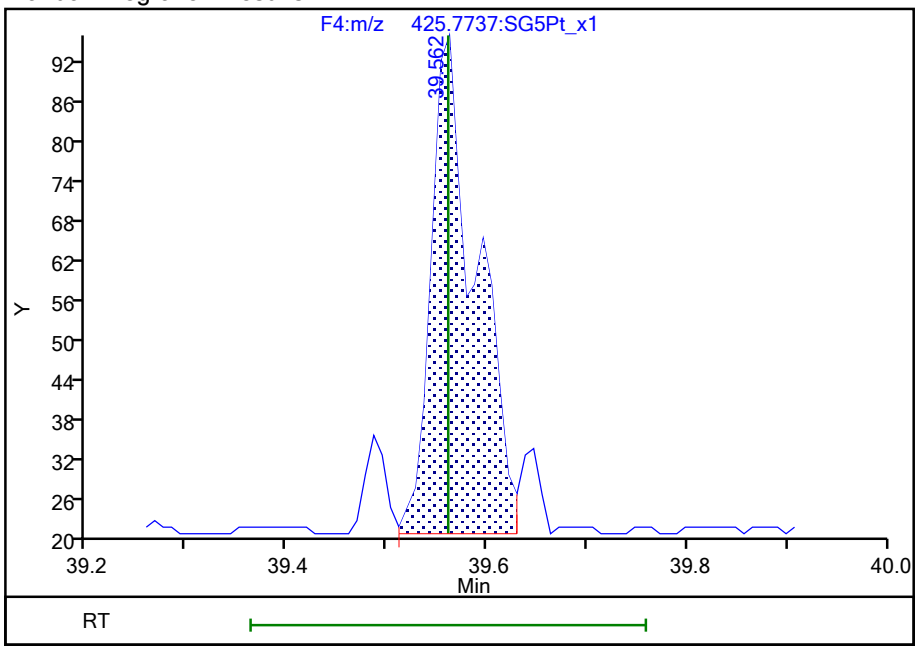

Reviewer: dadunj, 23-Aug-2021 08:55:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

787766

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 42.07
Area: 520
Amount: 0.582127
Amount Units: pg/ul

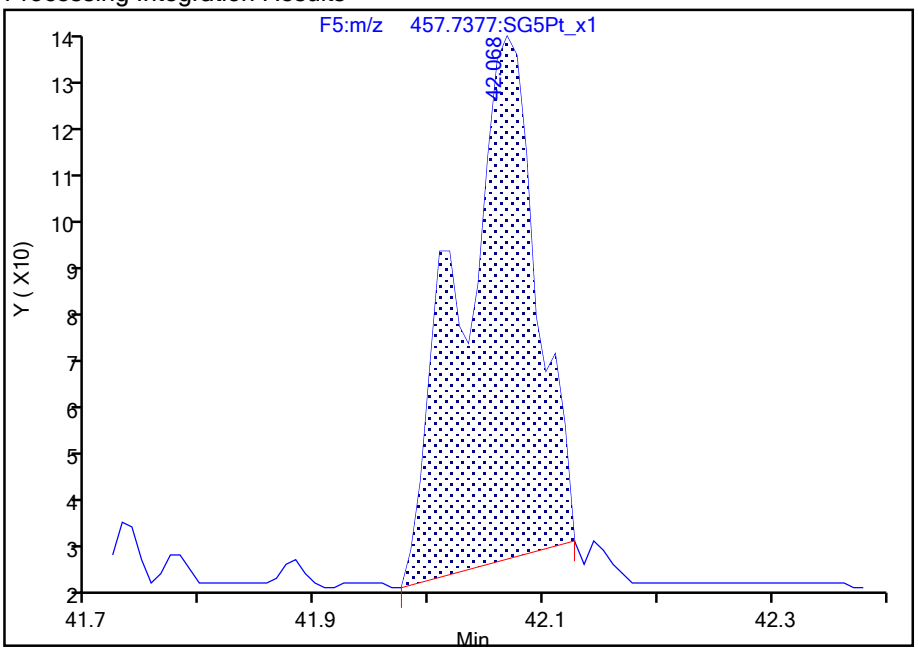

Manual Integration Results

RT: 42.07
Area: 569
Amount: 0.605937
Amount Units: pg/ul

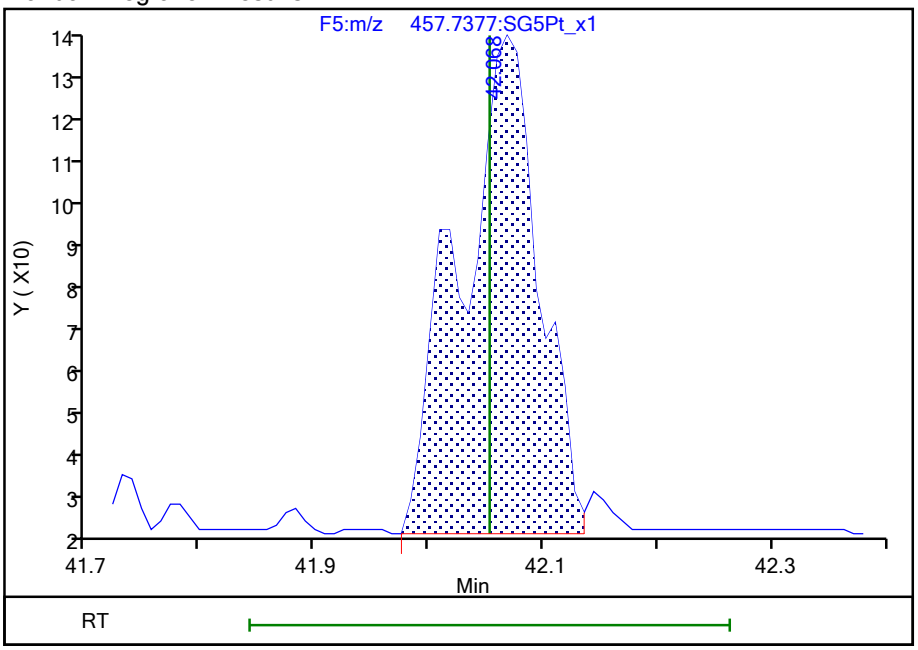

Reviewer: dadunj, 23-Aug-2021 08:55:45

Audit Action: Manually Integrated Audit Reason: Baseline

787767

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

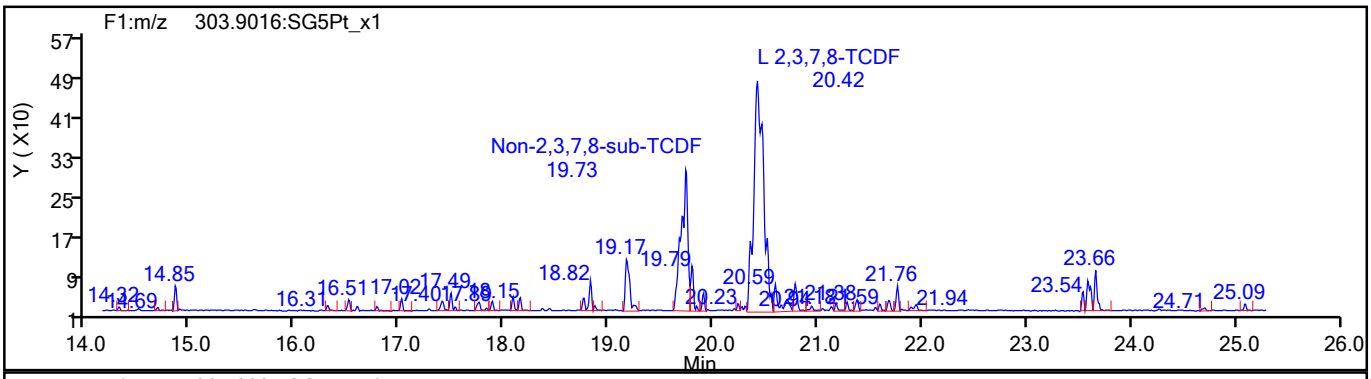

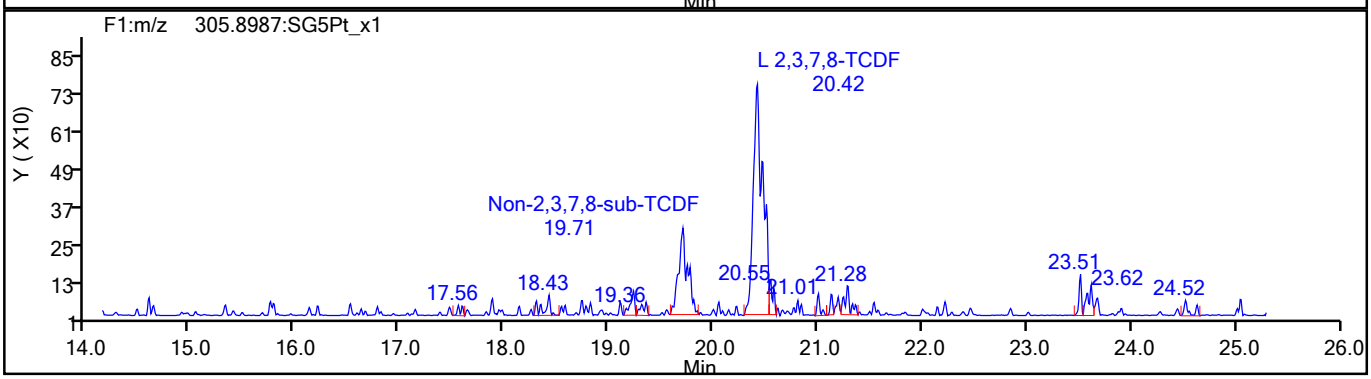

TCDF Standards

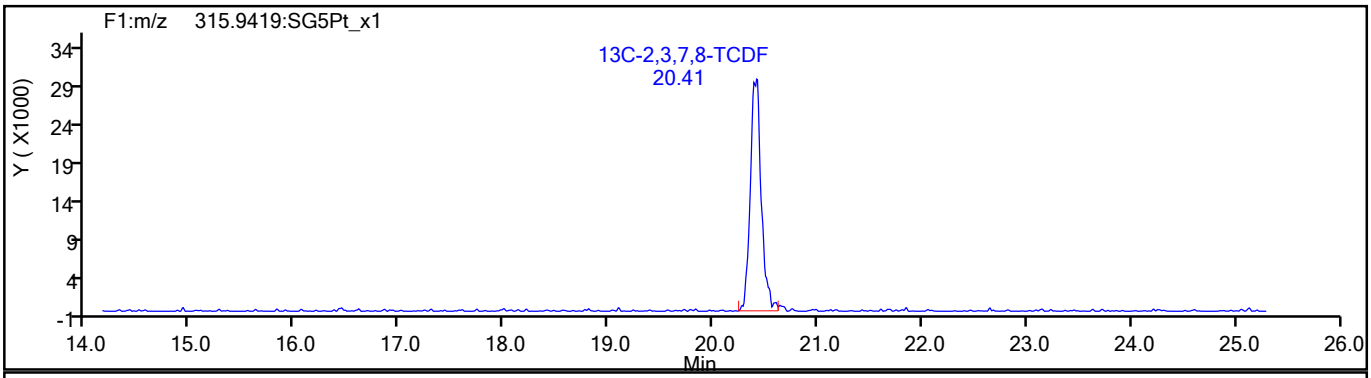

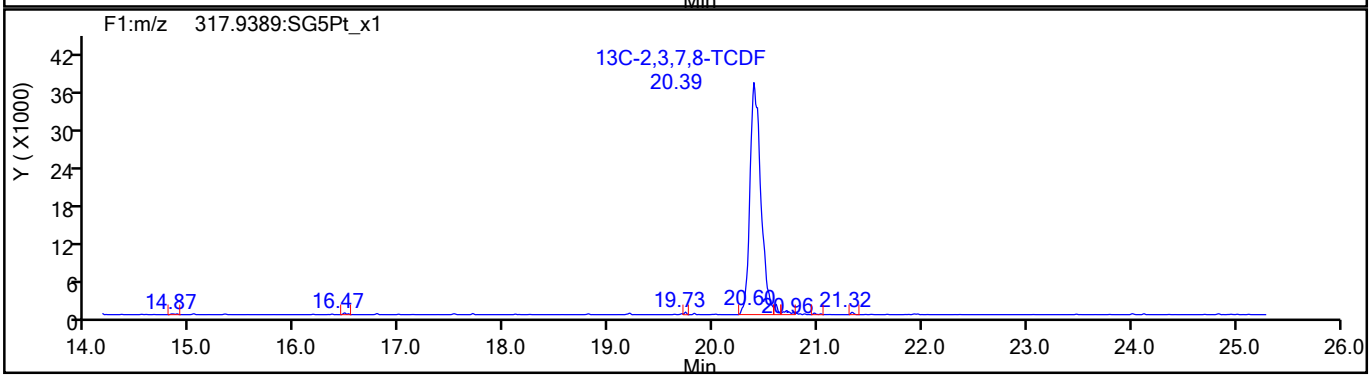

787768

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

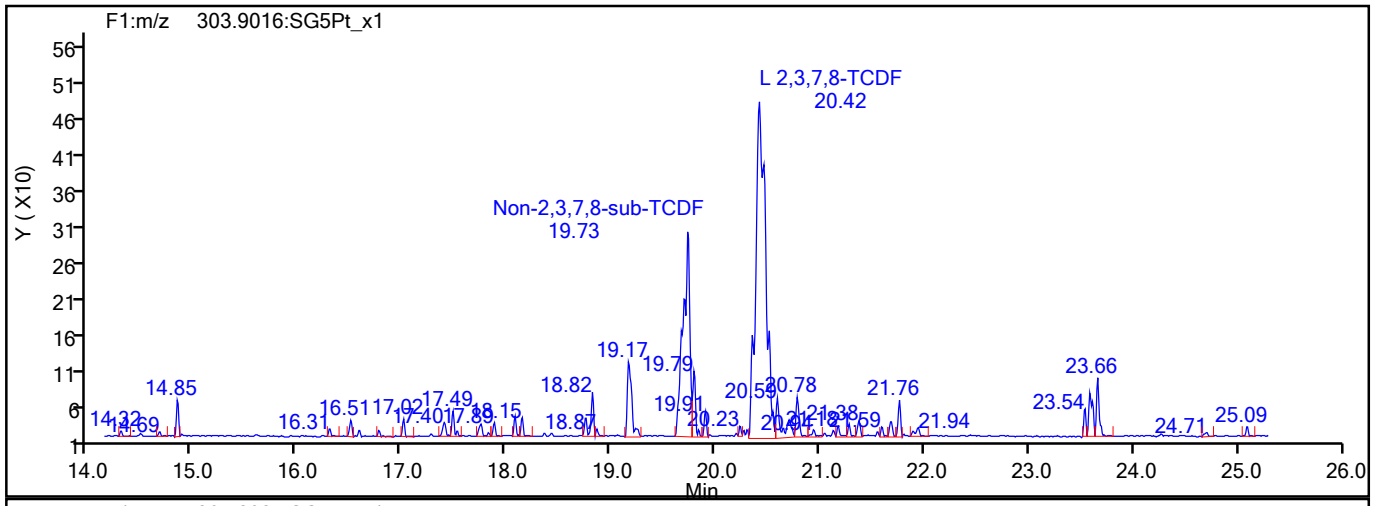

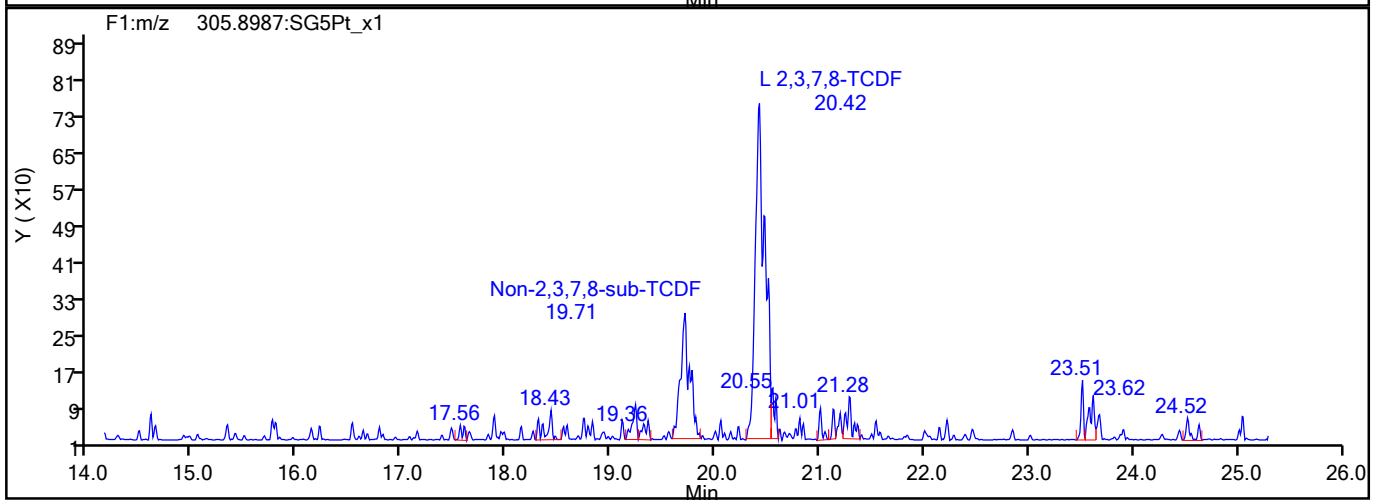

TCDF Interference Mass

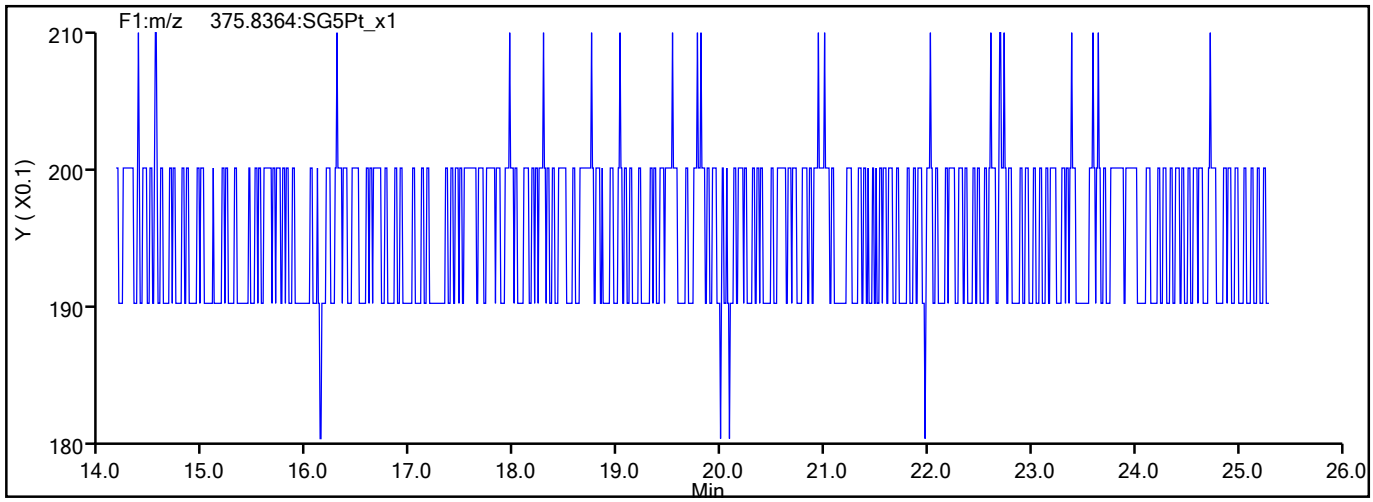

787769

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

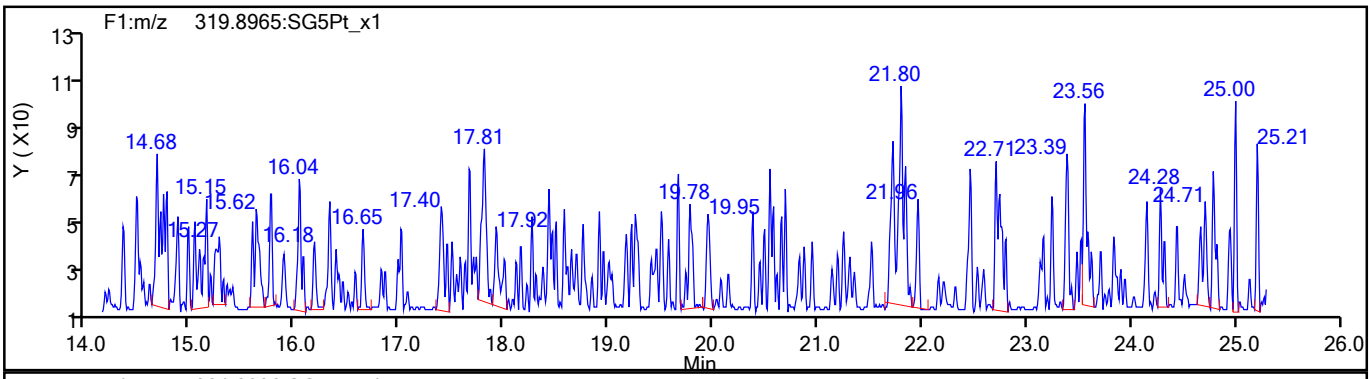

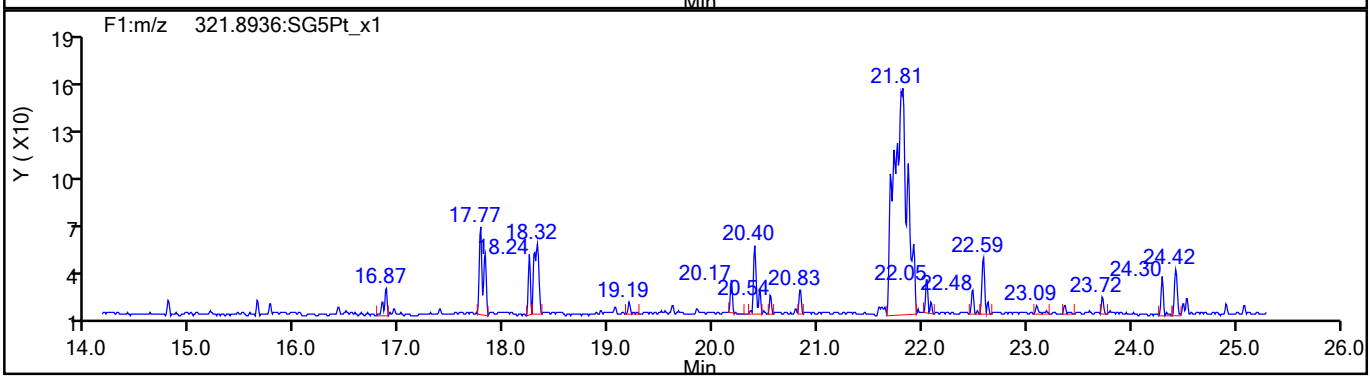

TCDD Standards

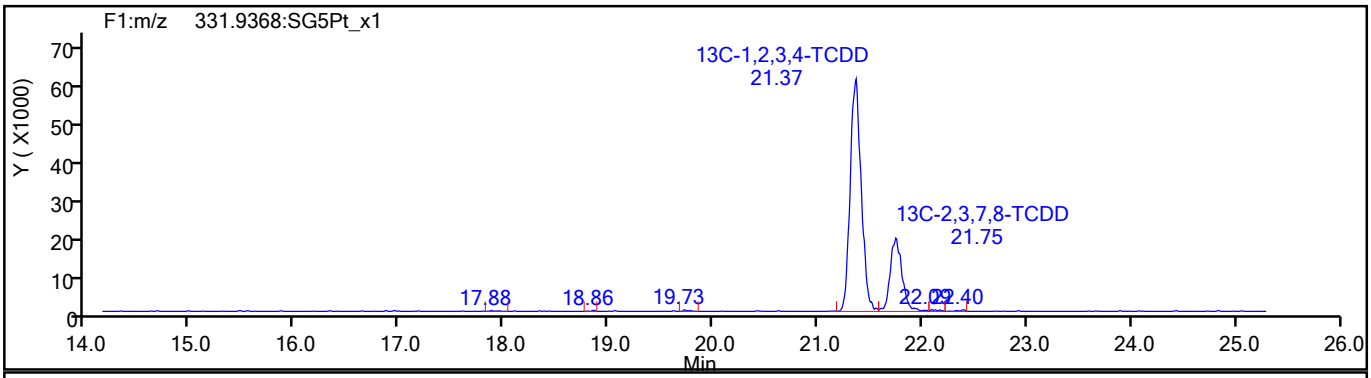

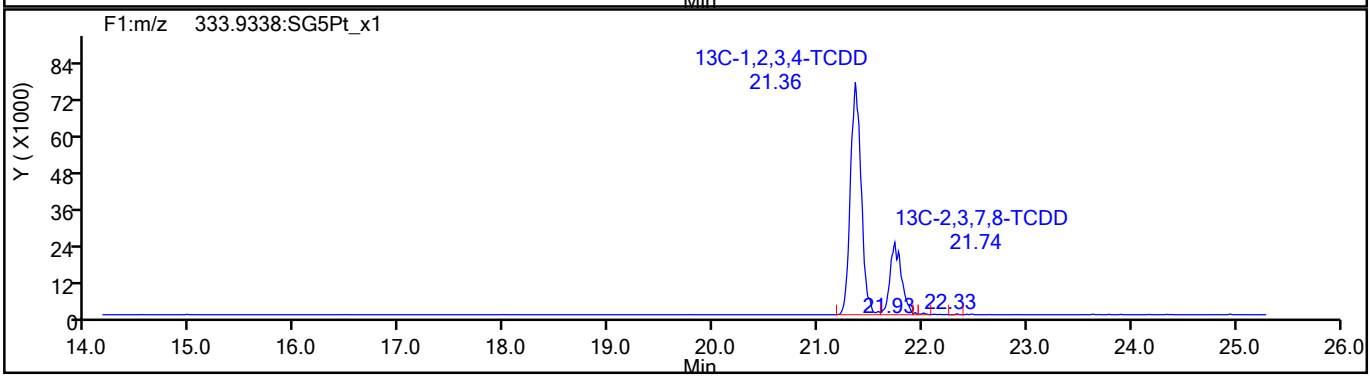

787770

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

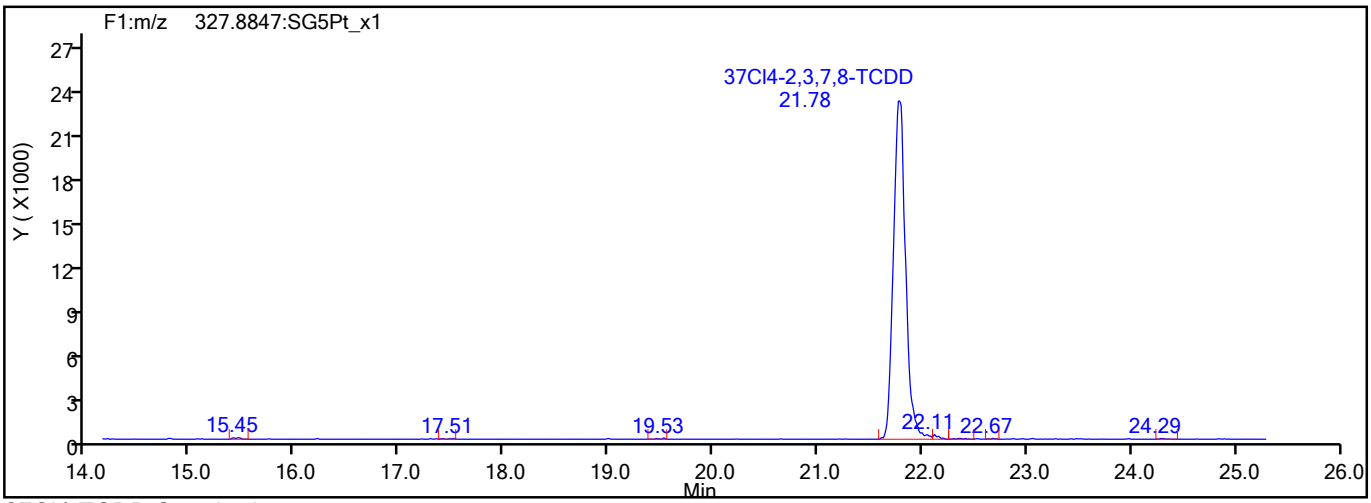

37Cl4-TCDD Standards

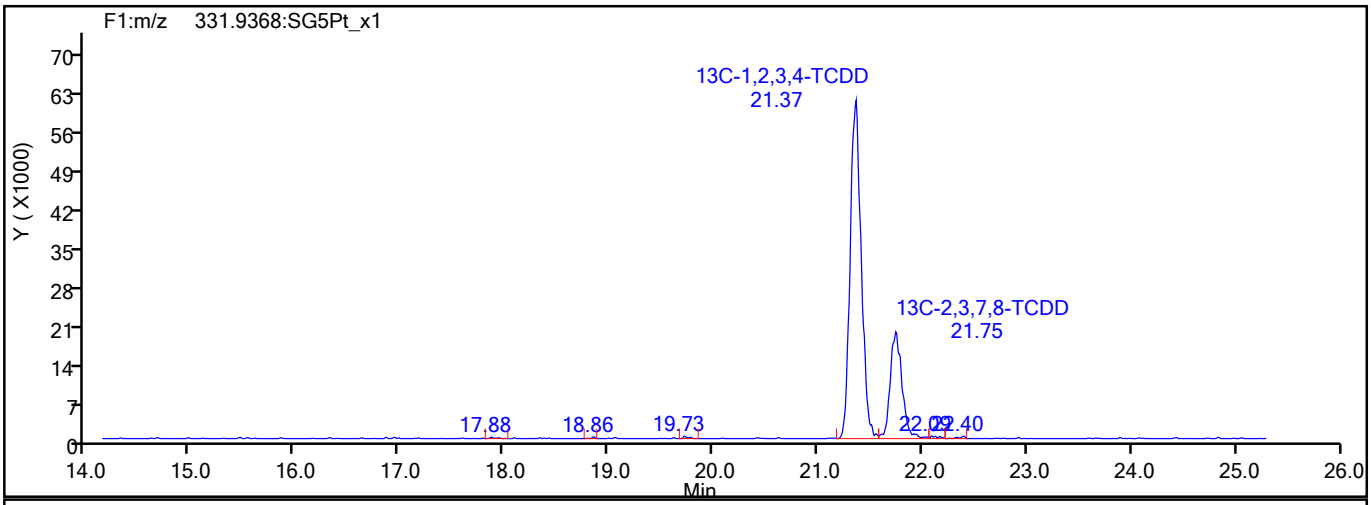

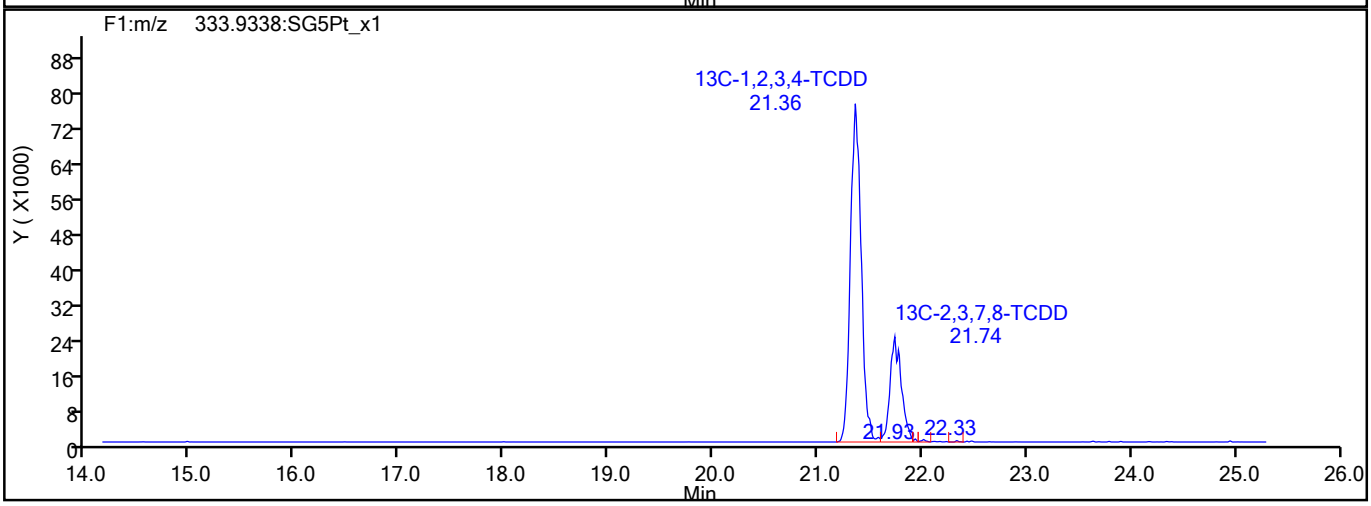

787771

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

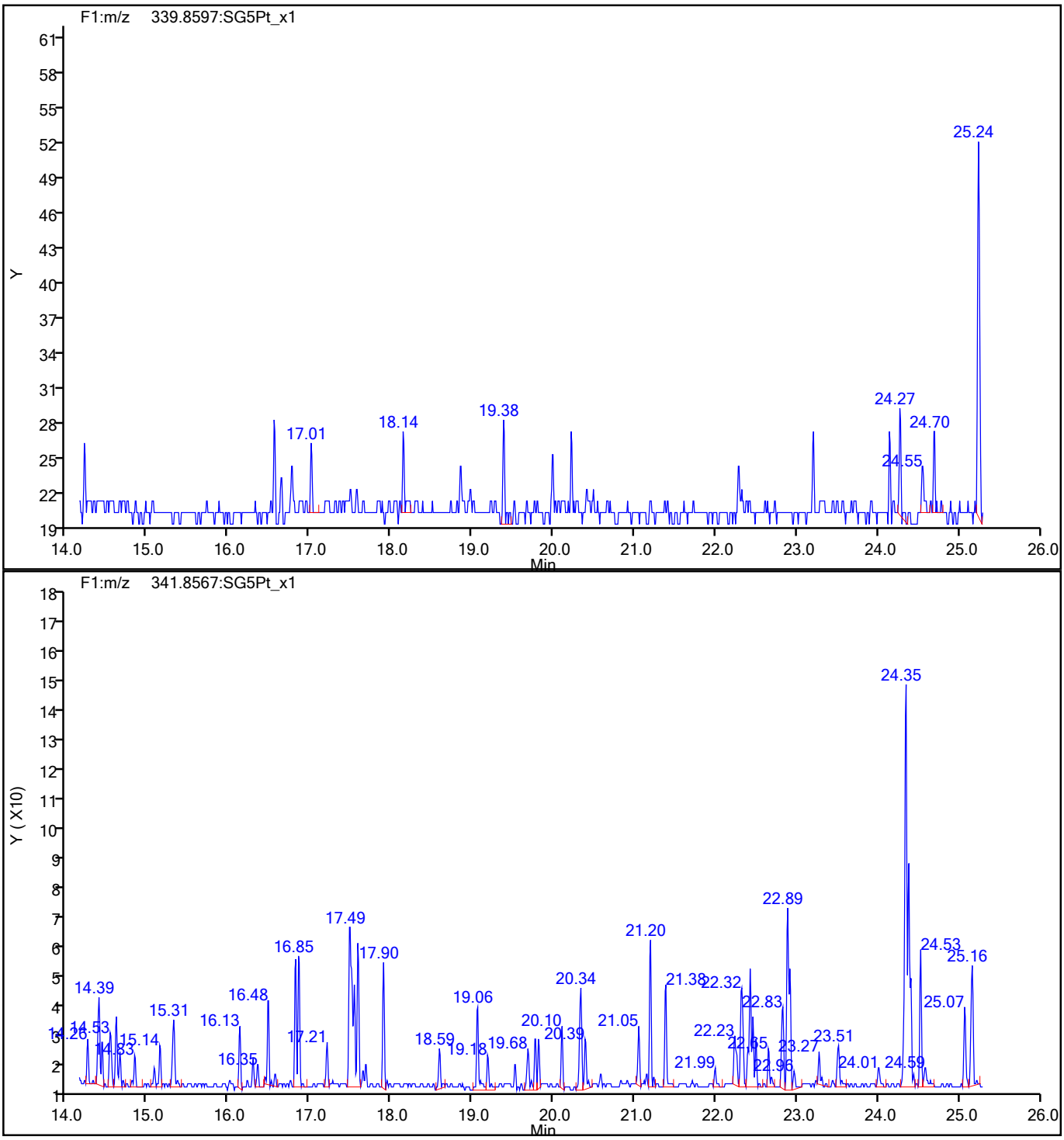

787772

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
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F1 PeCDFs

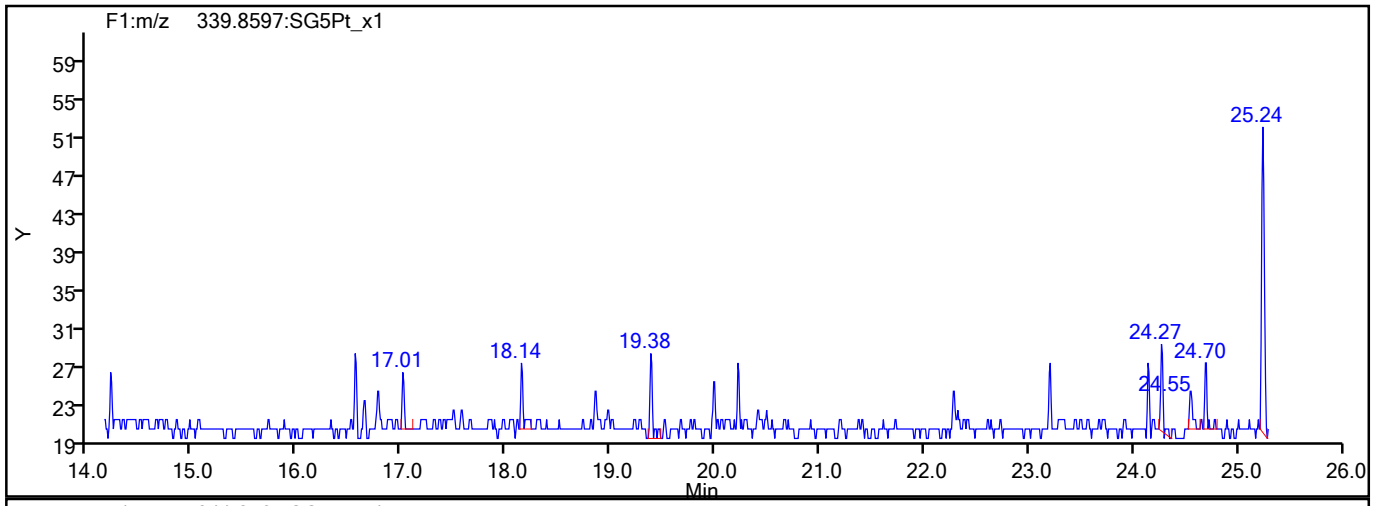

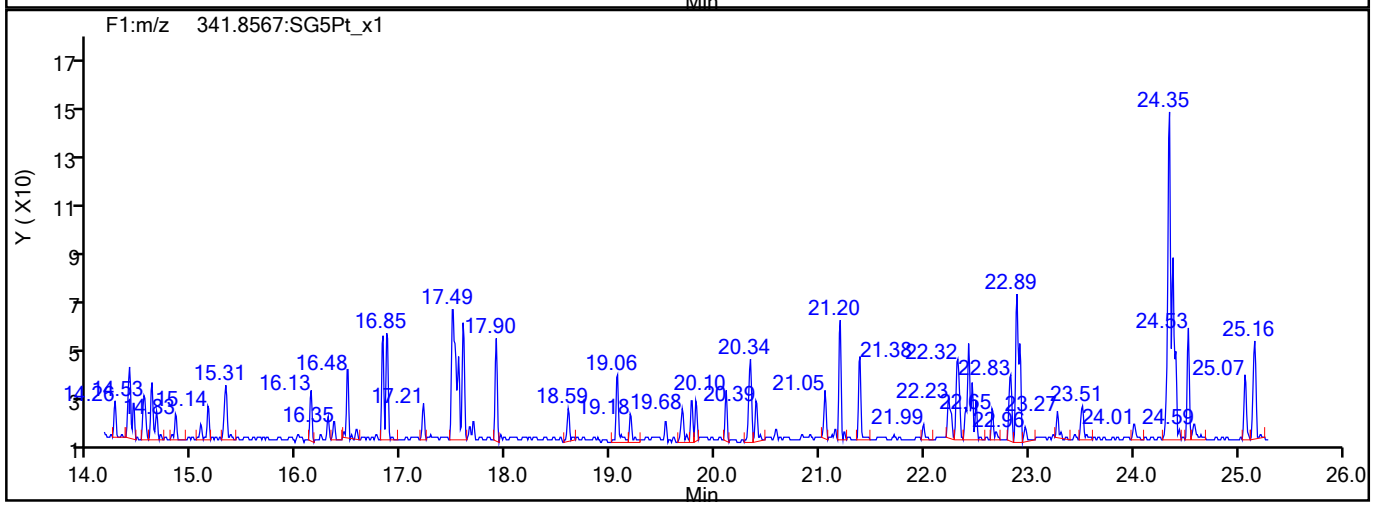

F1 PeCDFs Interference Mass

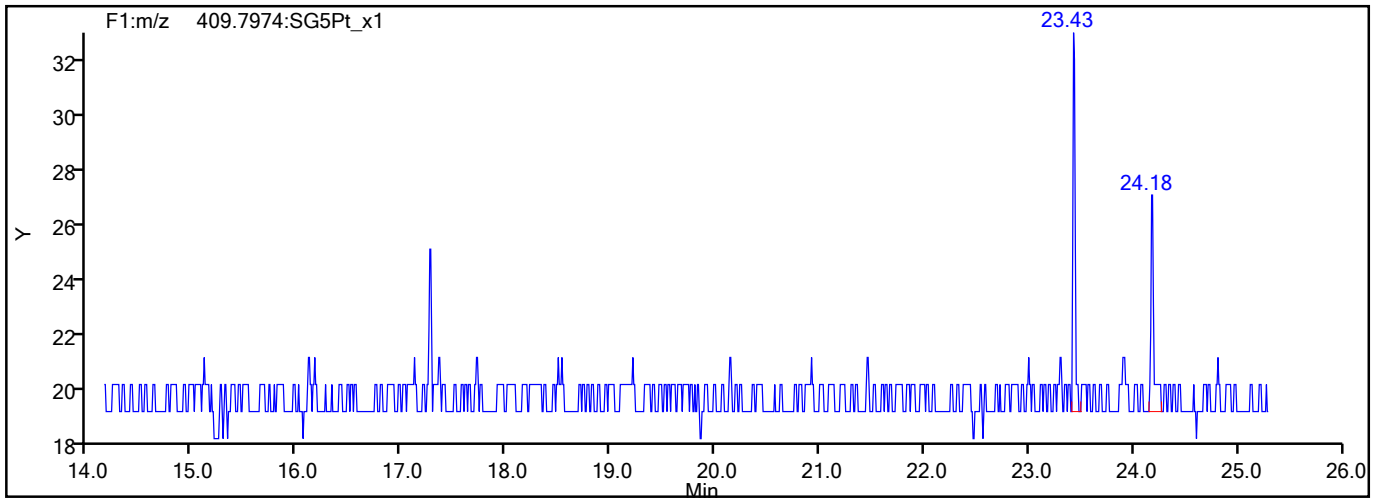

787773

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

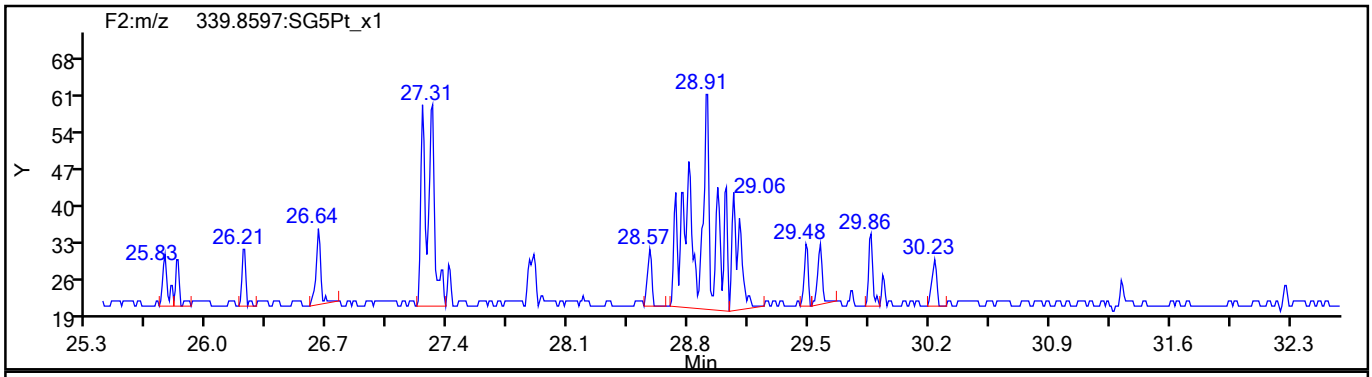

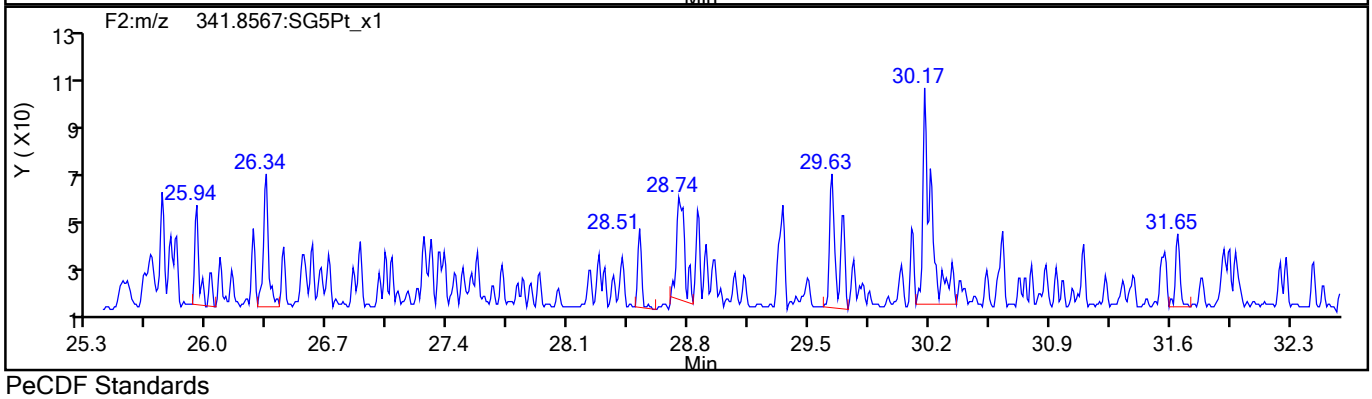

PeCDF Standards

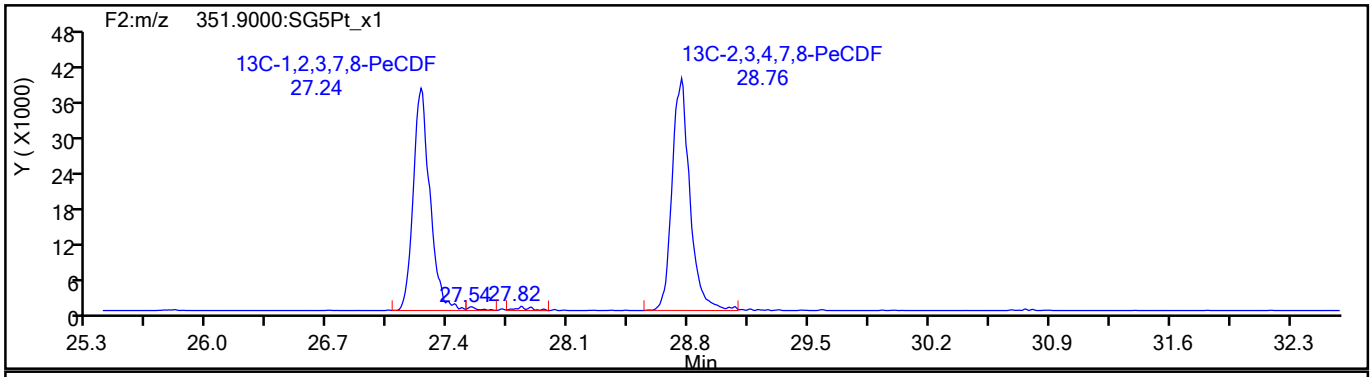

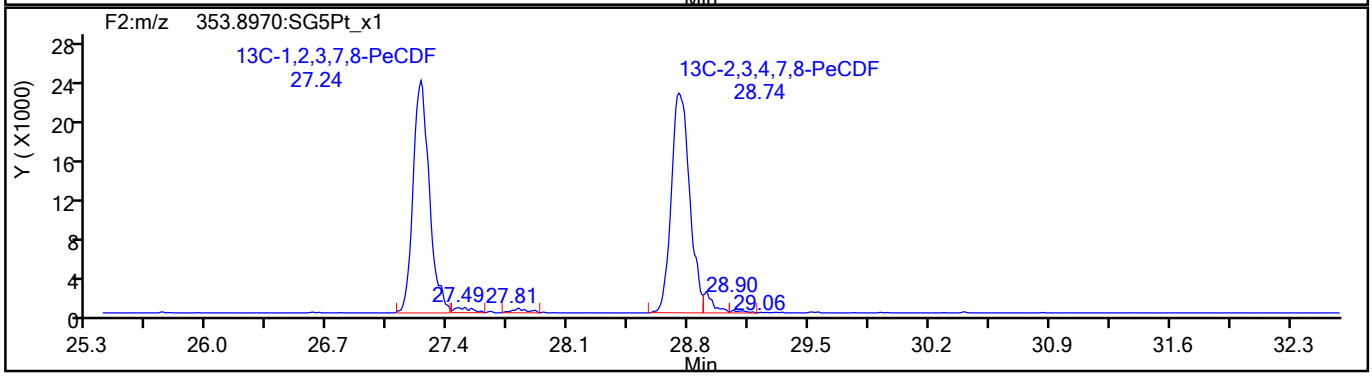

787774

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

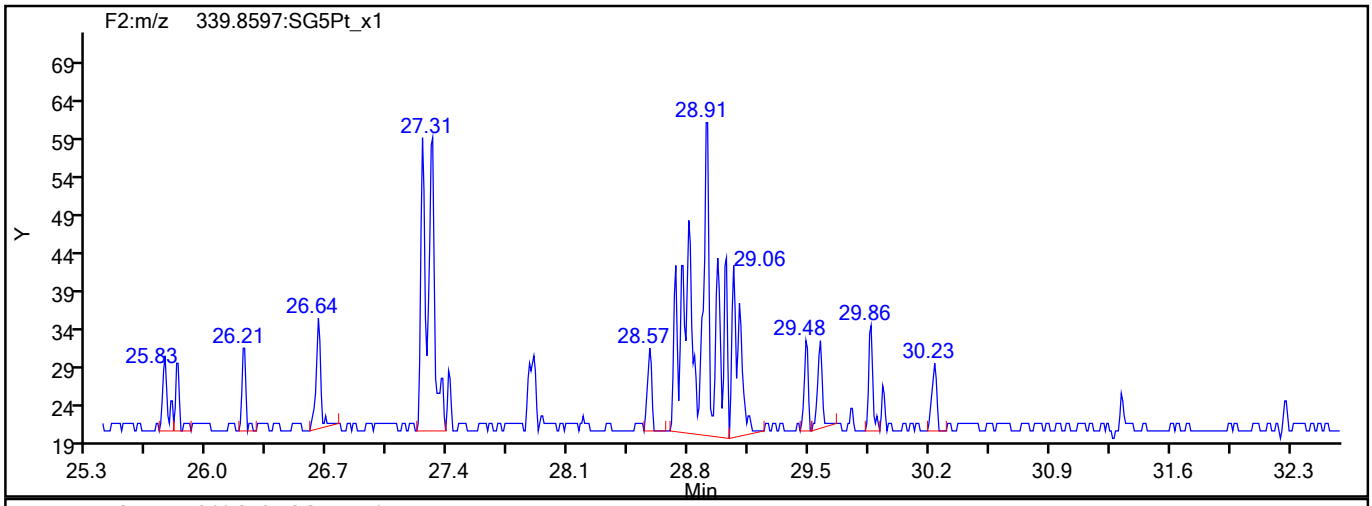

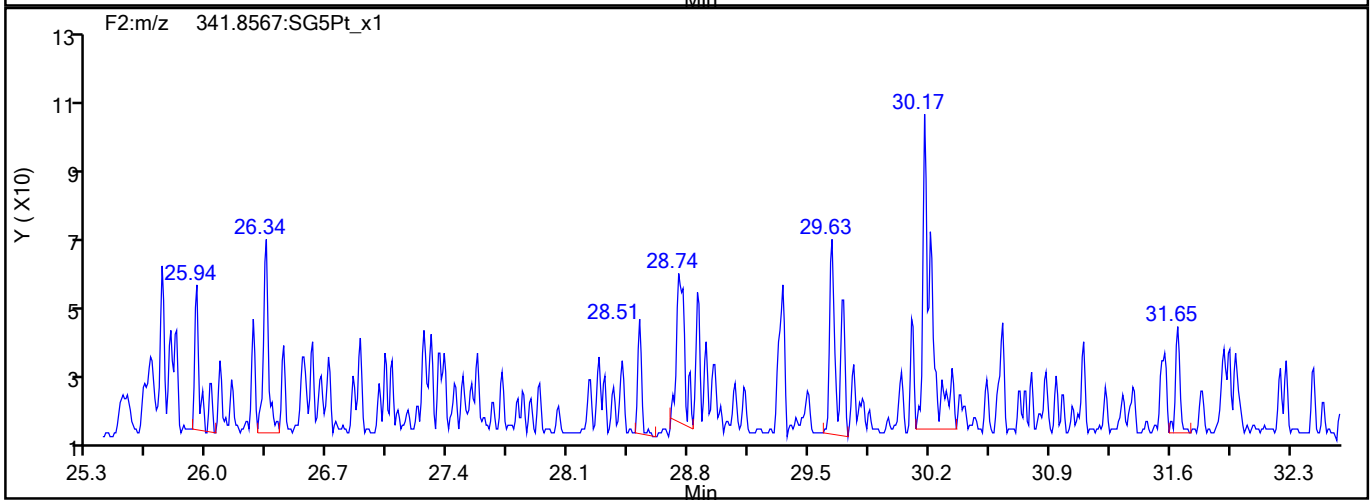

PeCDF Interference Mass

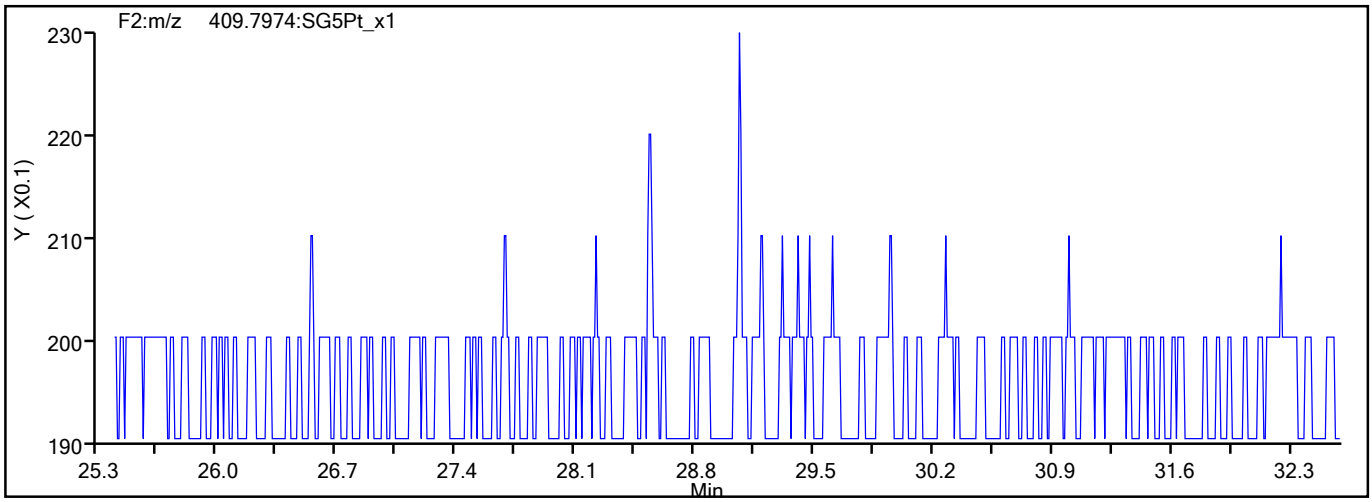

787775

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDD

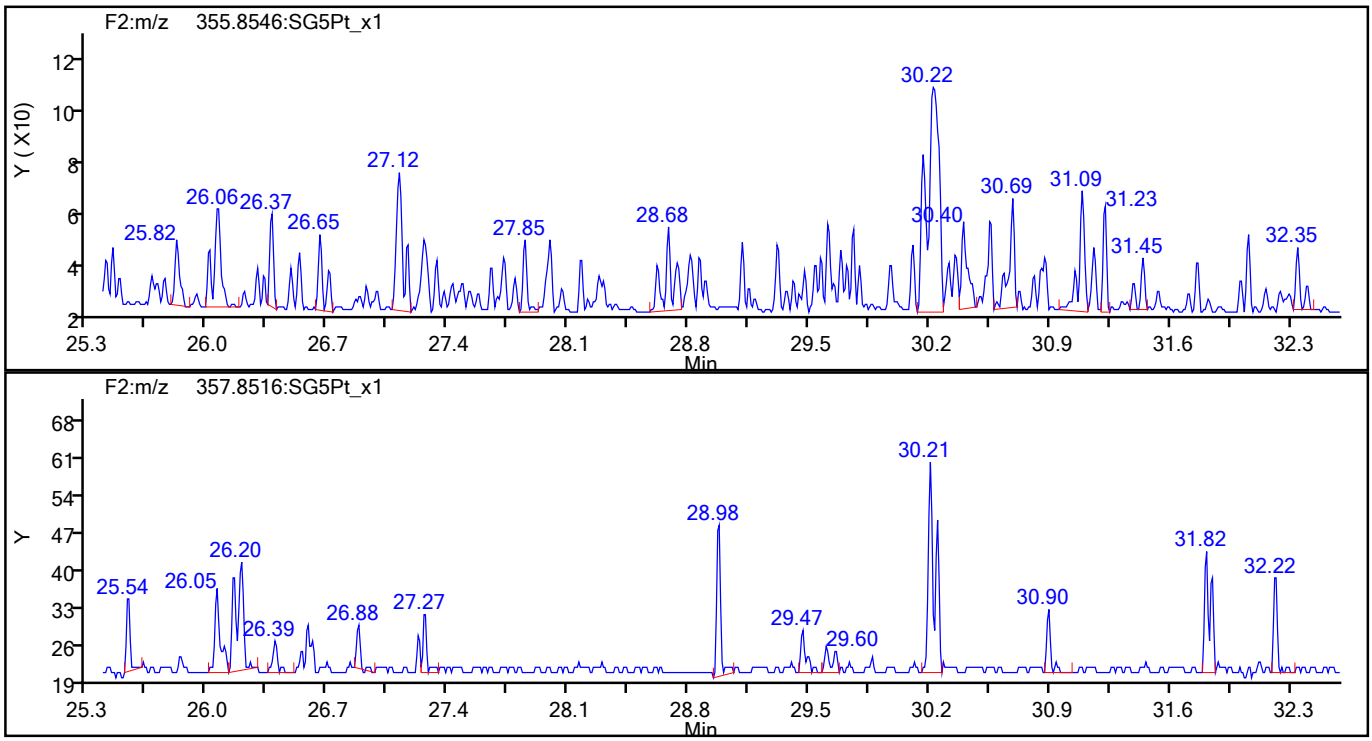

PeCDD Standards

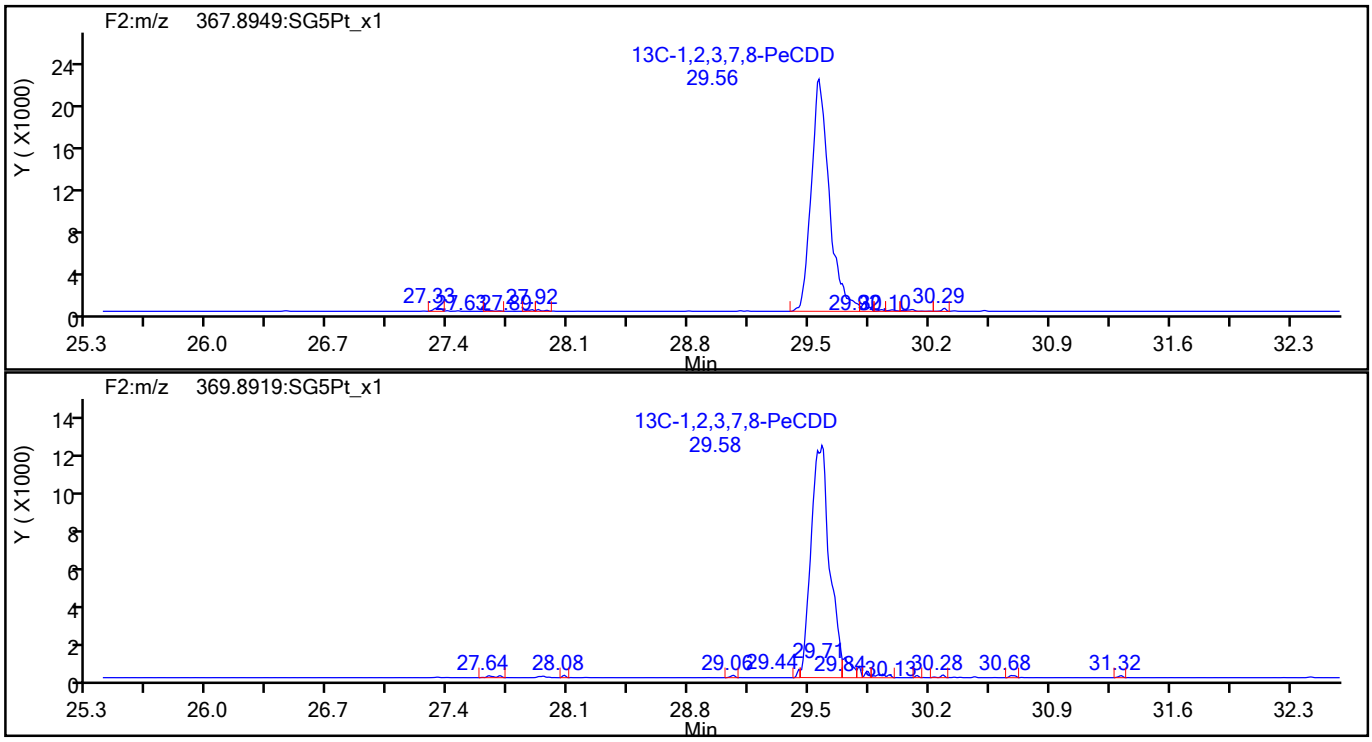

787776

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

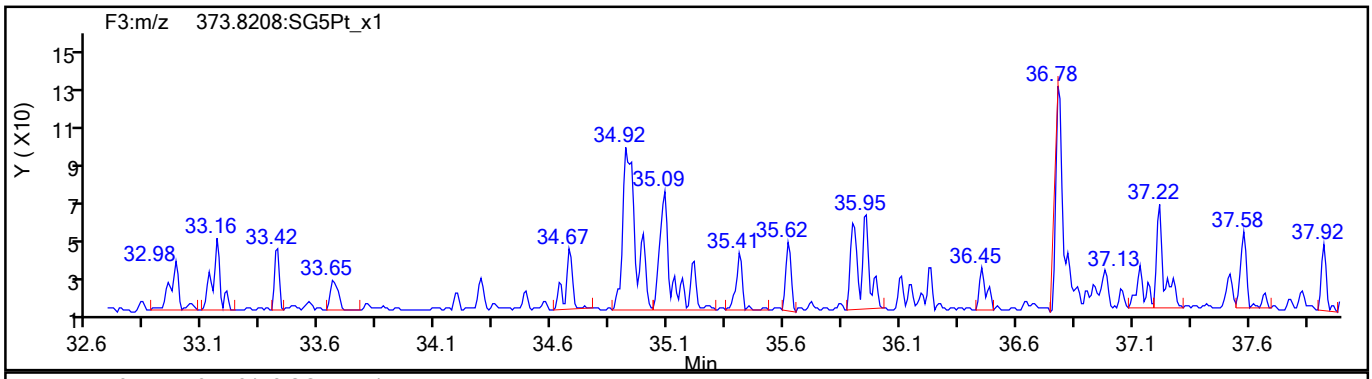

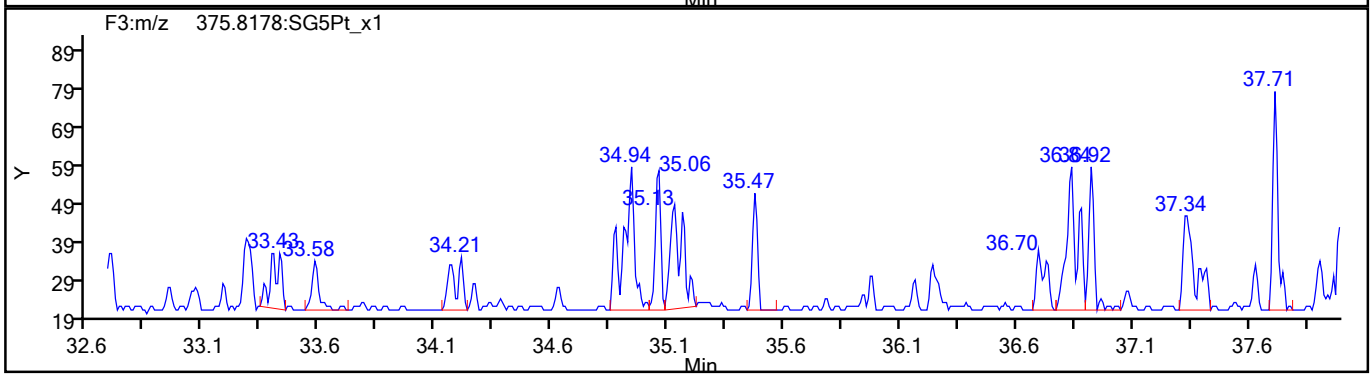

HxCDF Standards

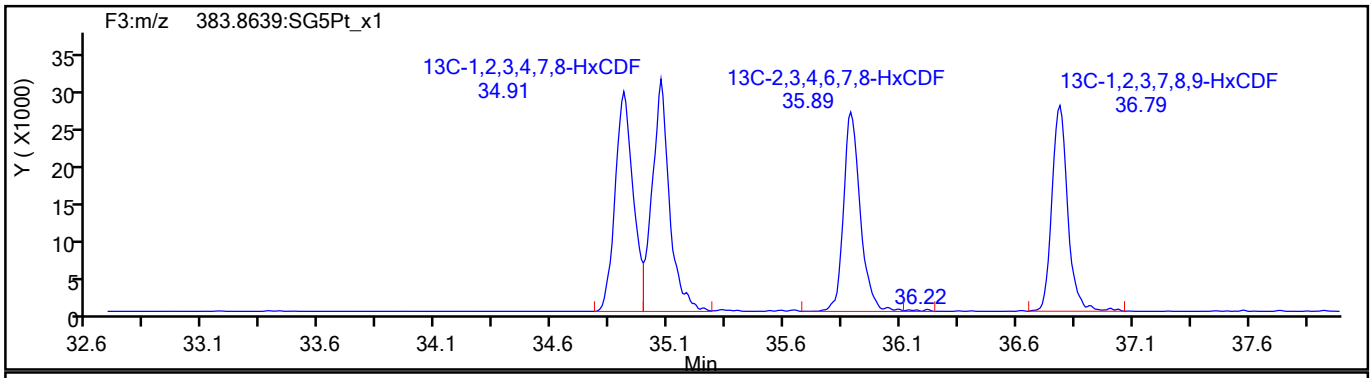

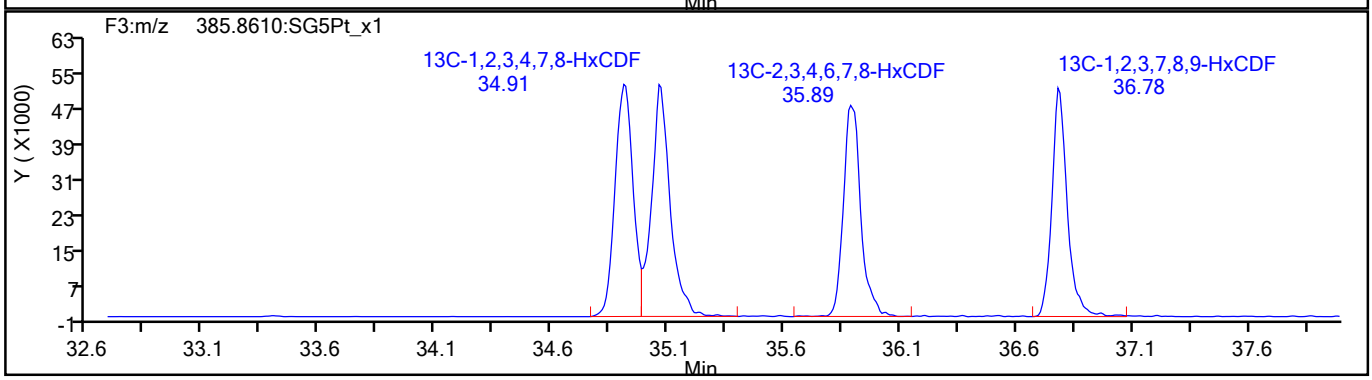

787777

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

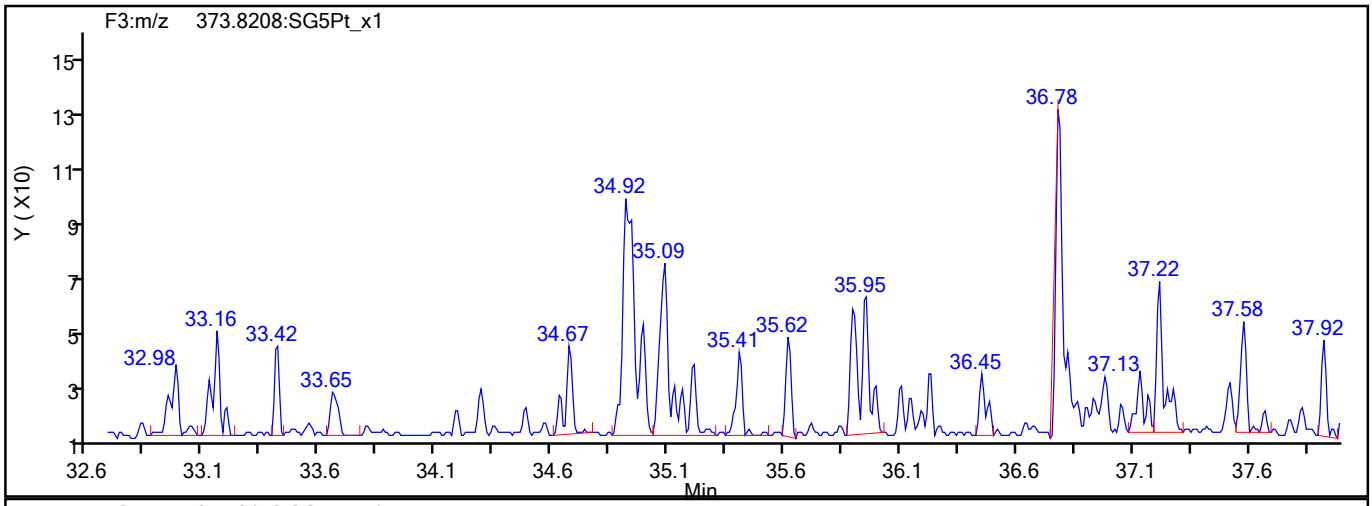

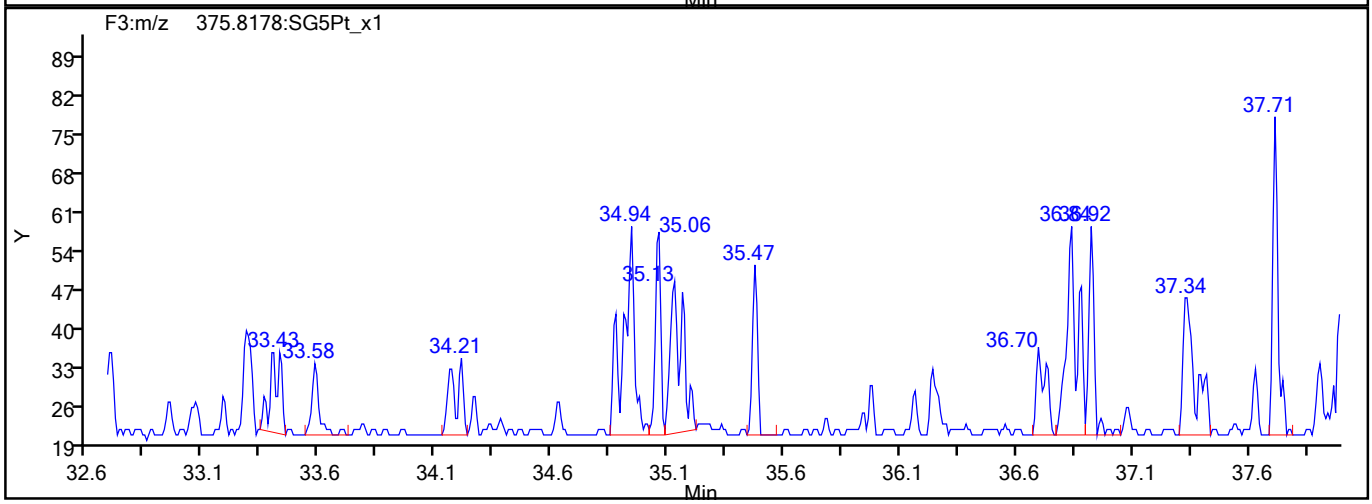

HxCDF Interference Mass

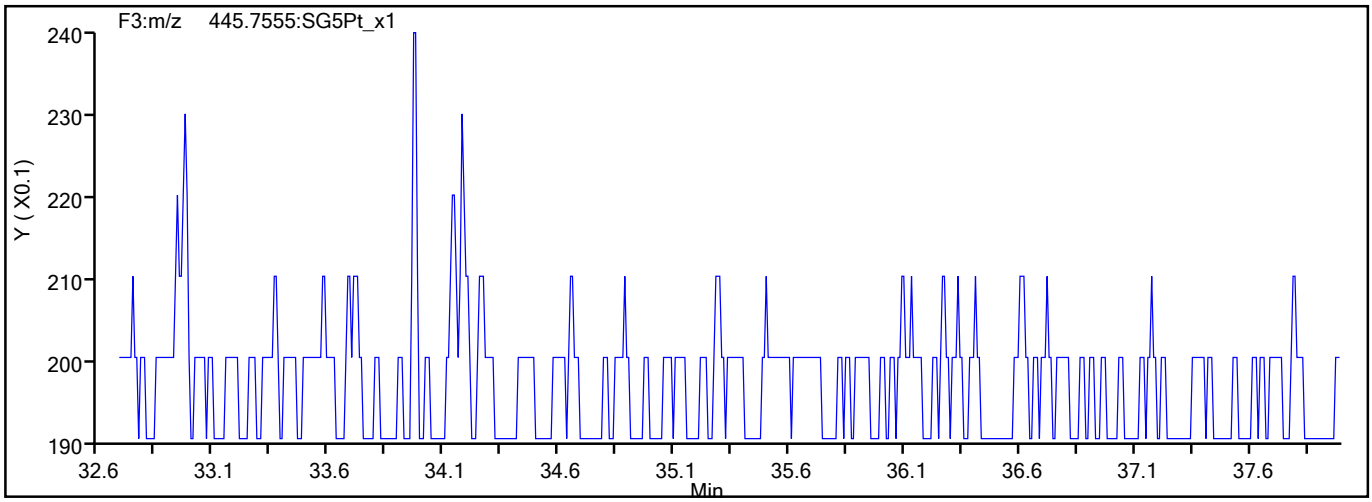

787778

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDD

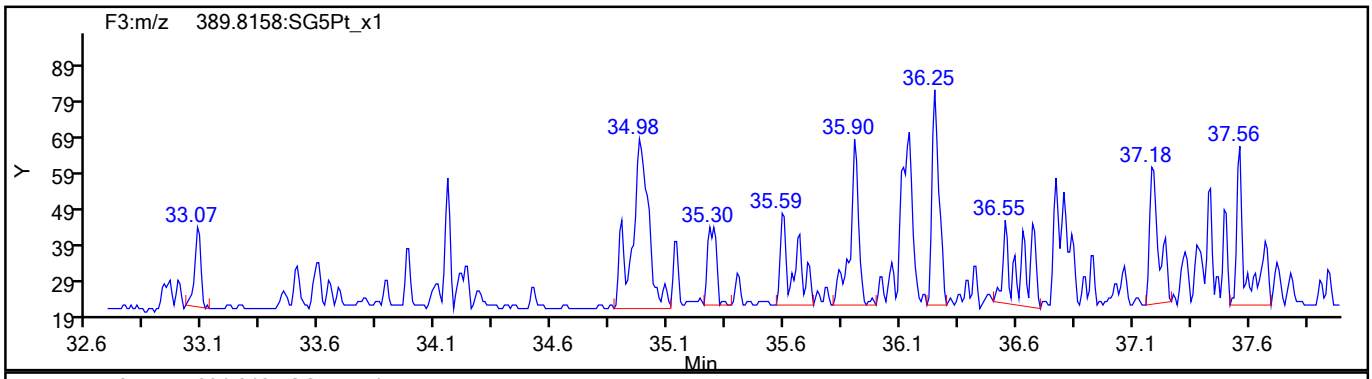

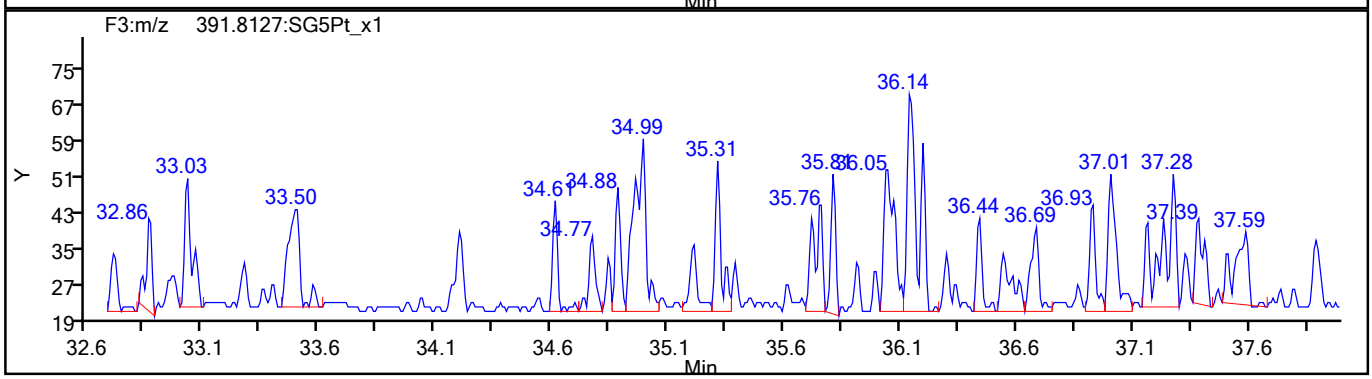

HxCDD Standards

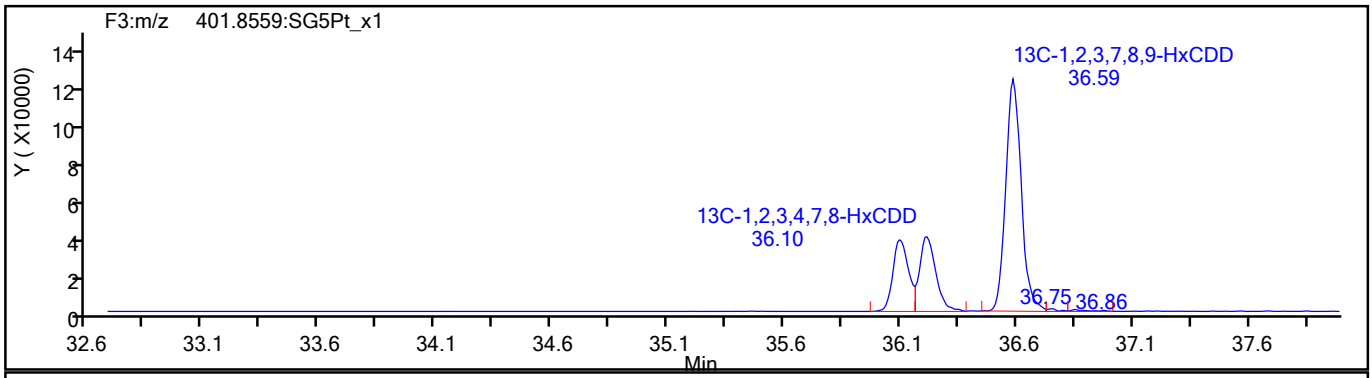

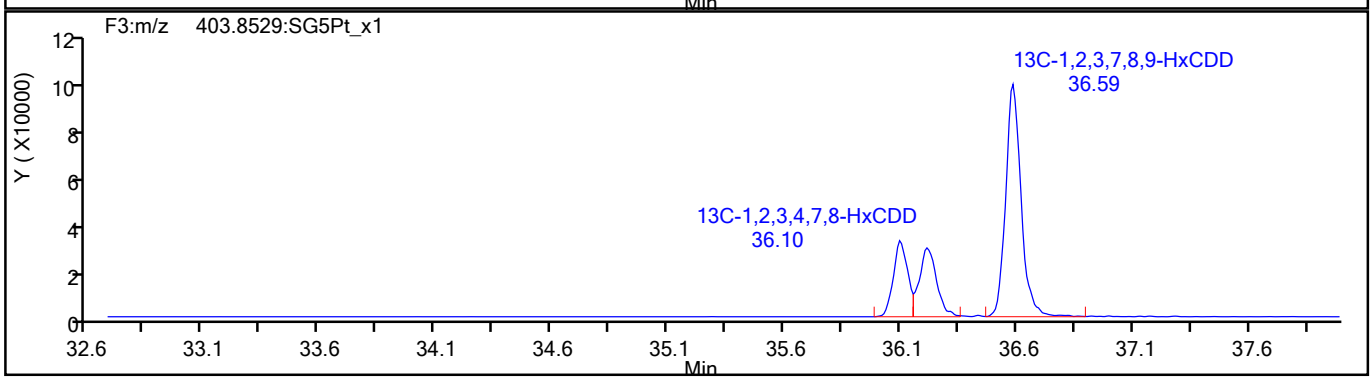

787779

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

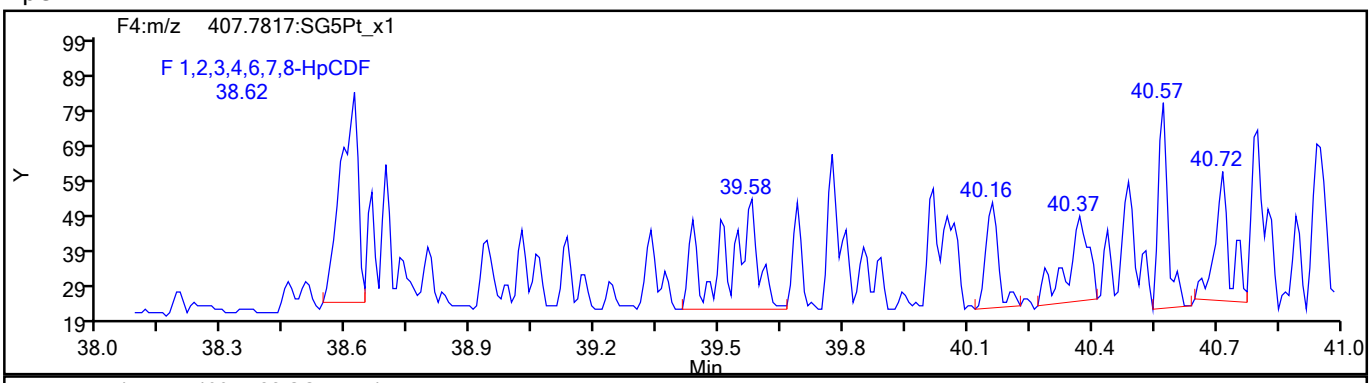

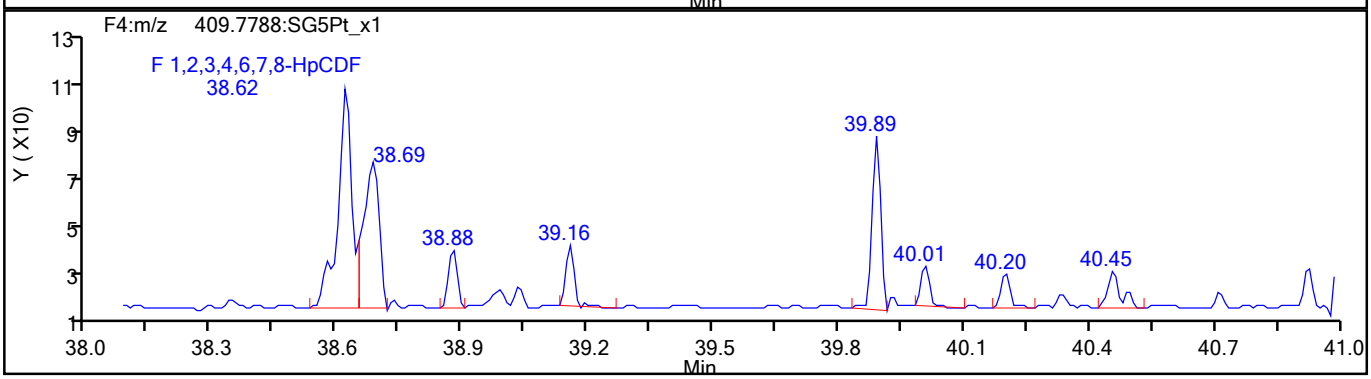

HpCDF Standards

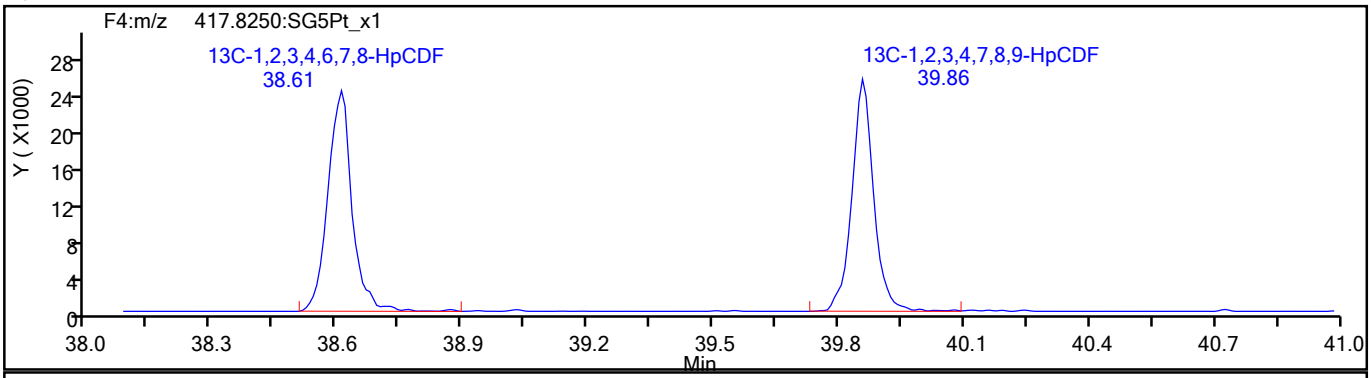

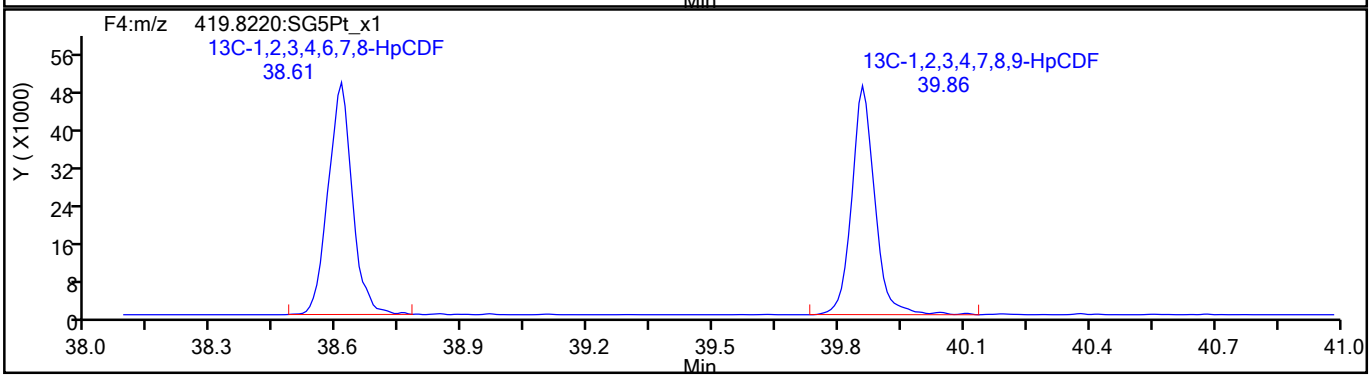

787780

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

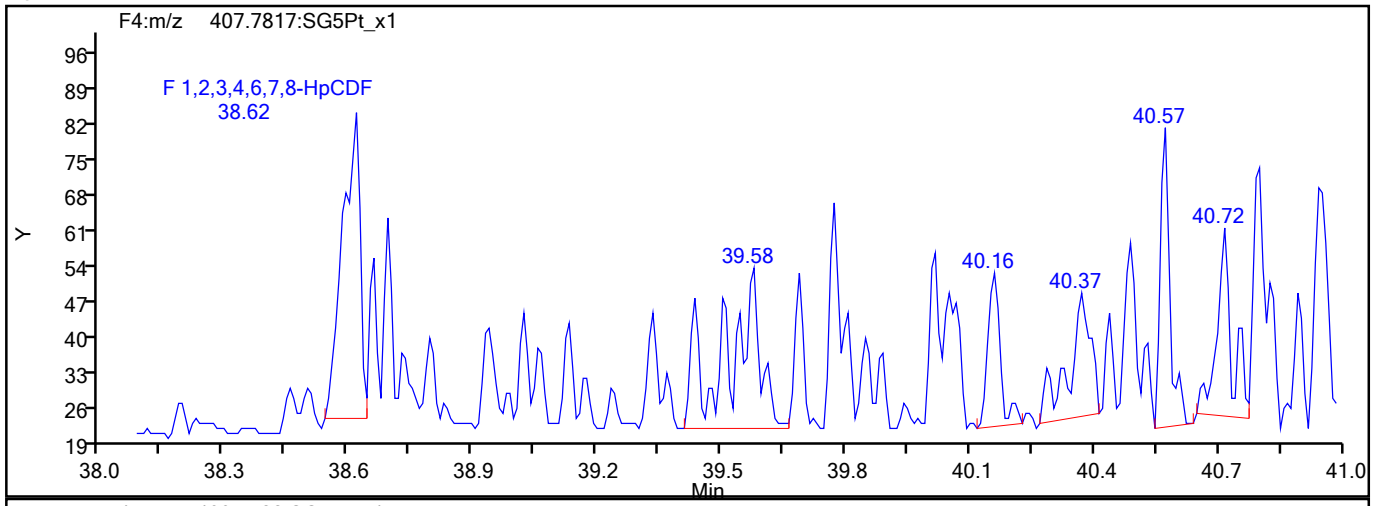

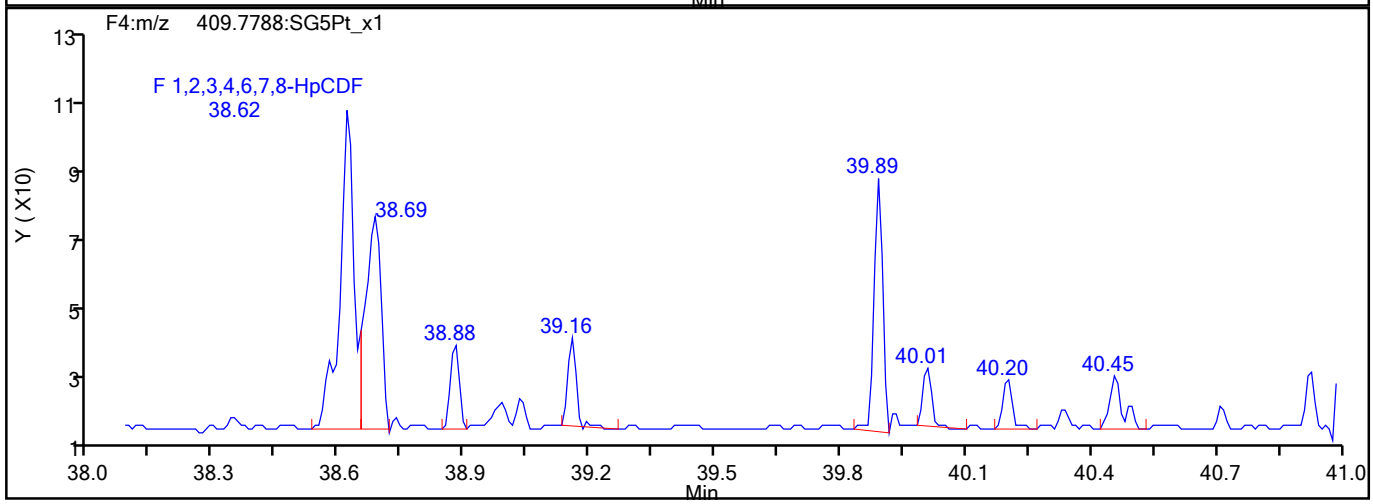

HpCDF Interference Mass

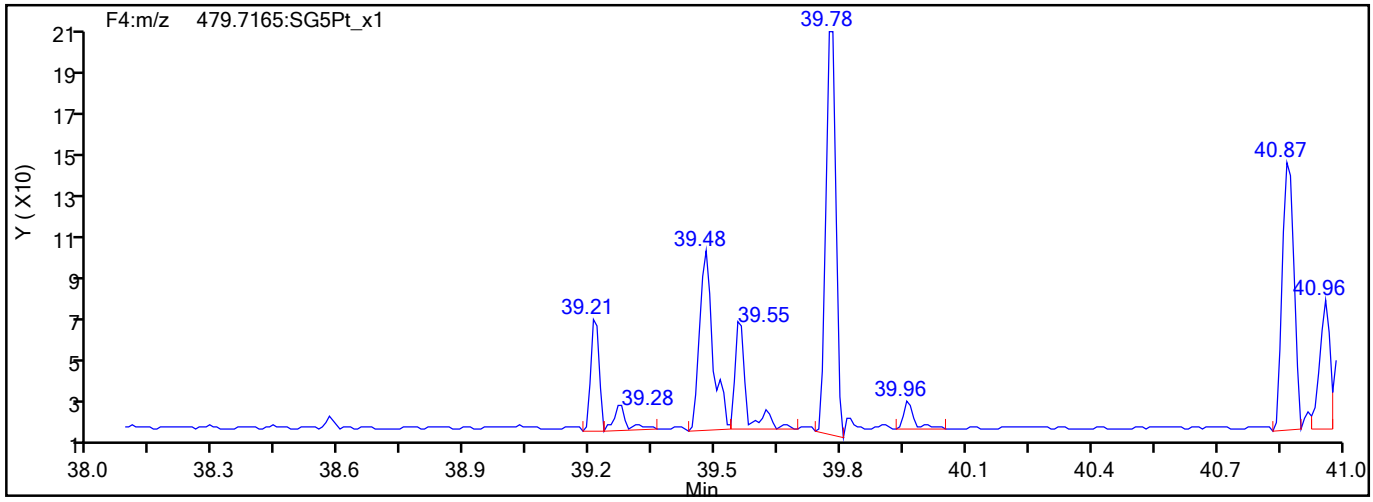

787781

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

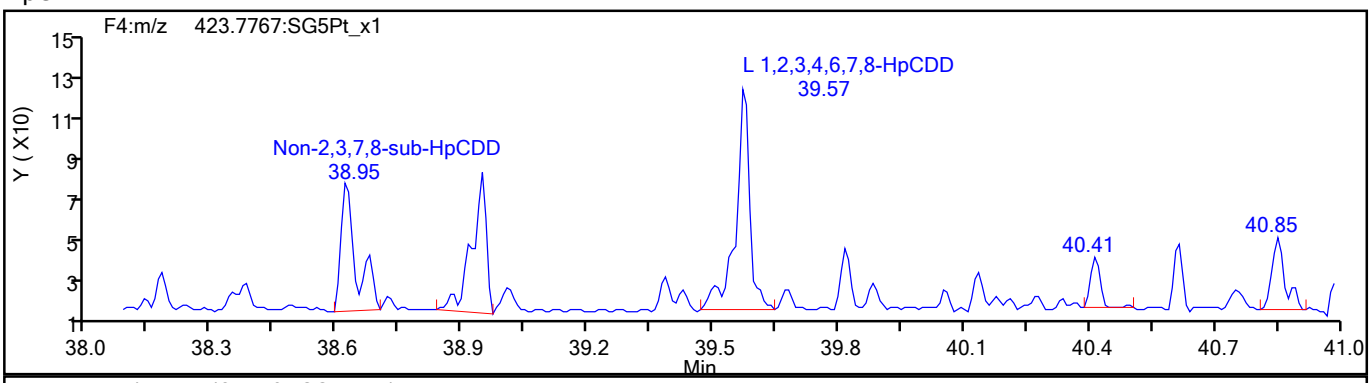

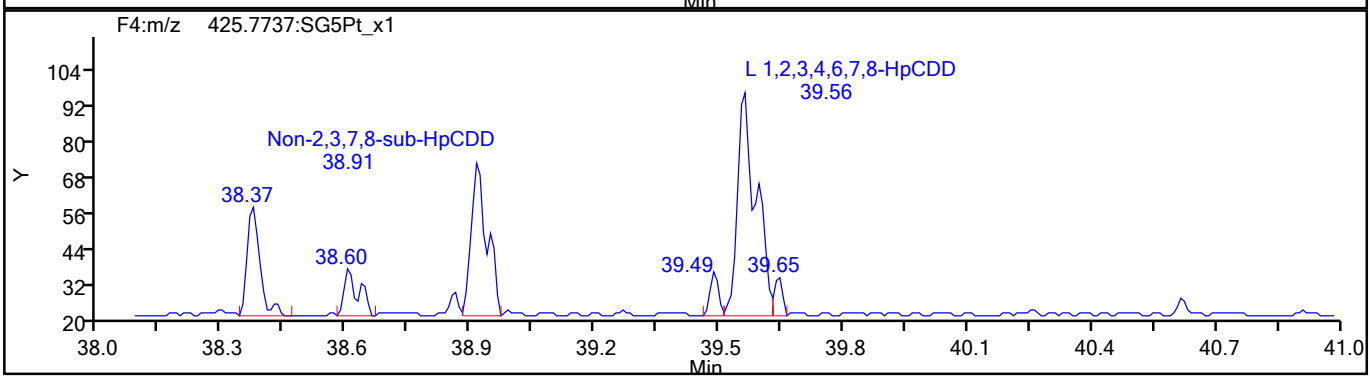

HpCDD Standards

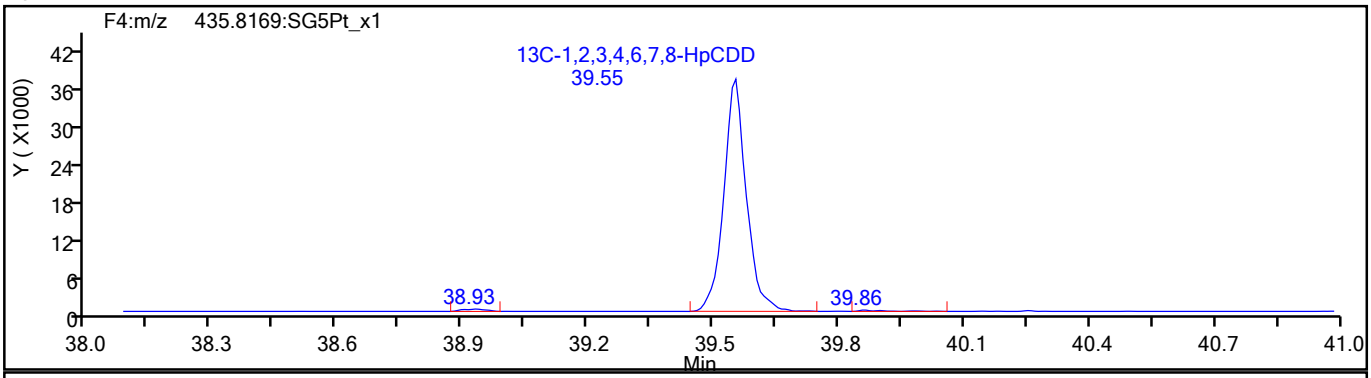

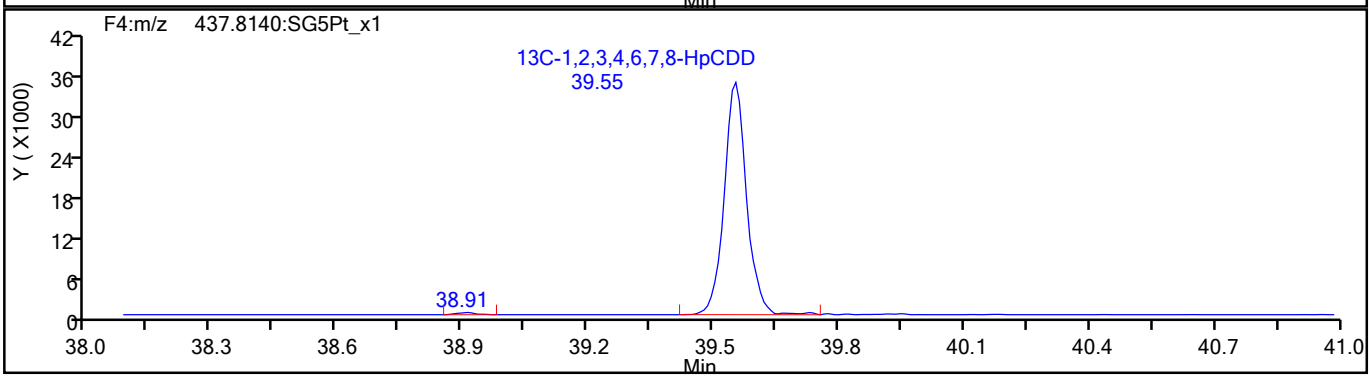

787782

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

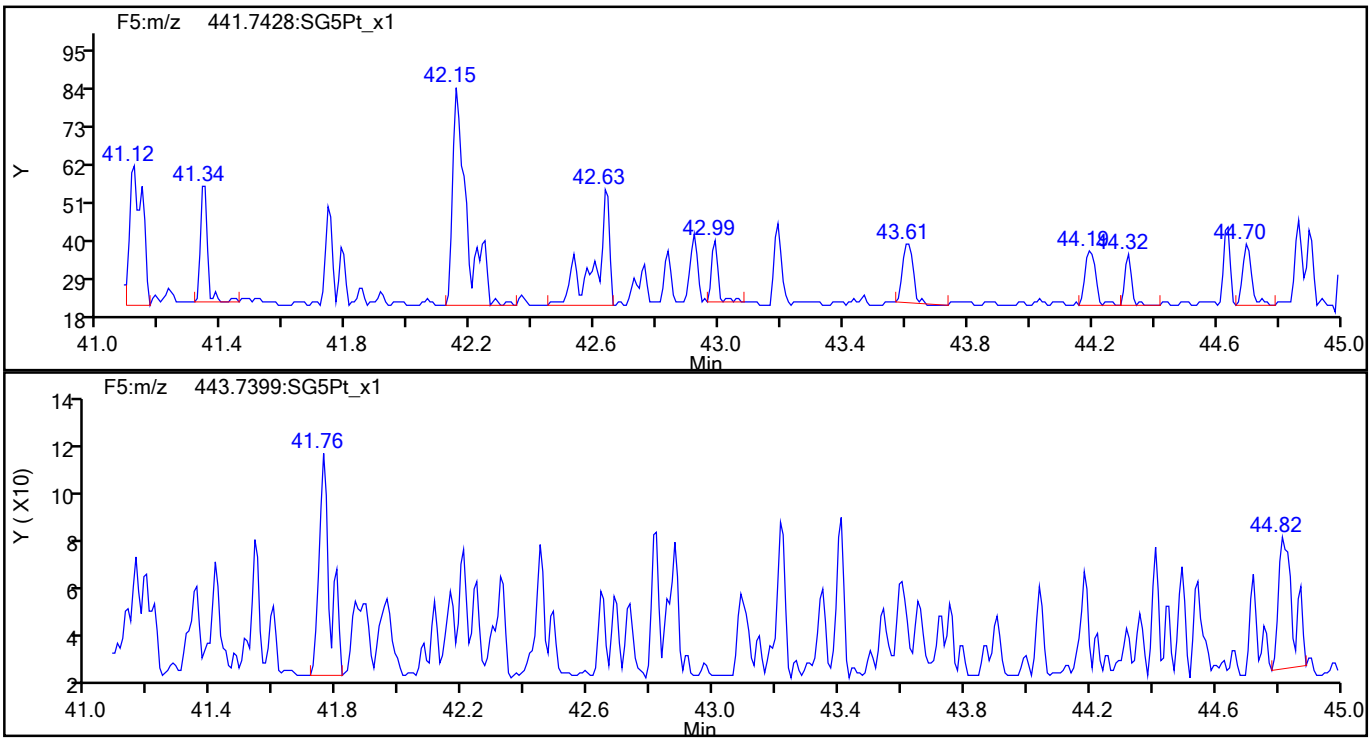

OCDF Standards

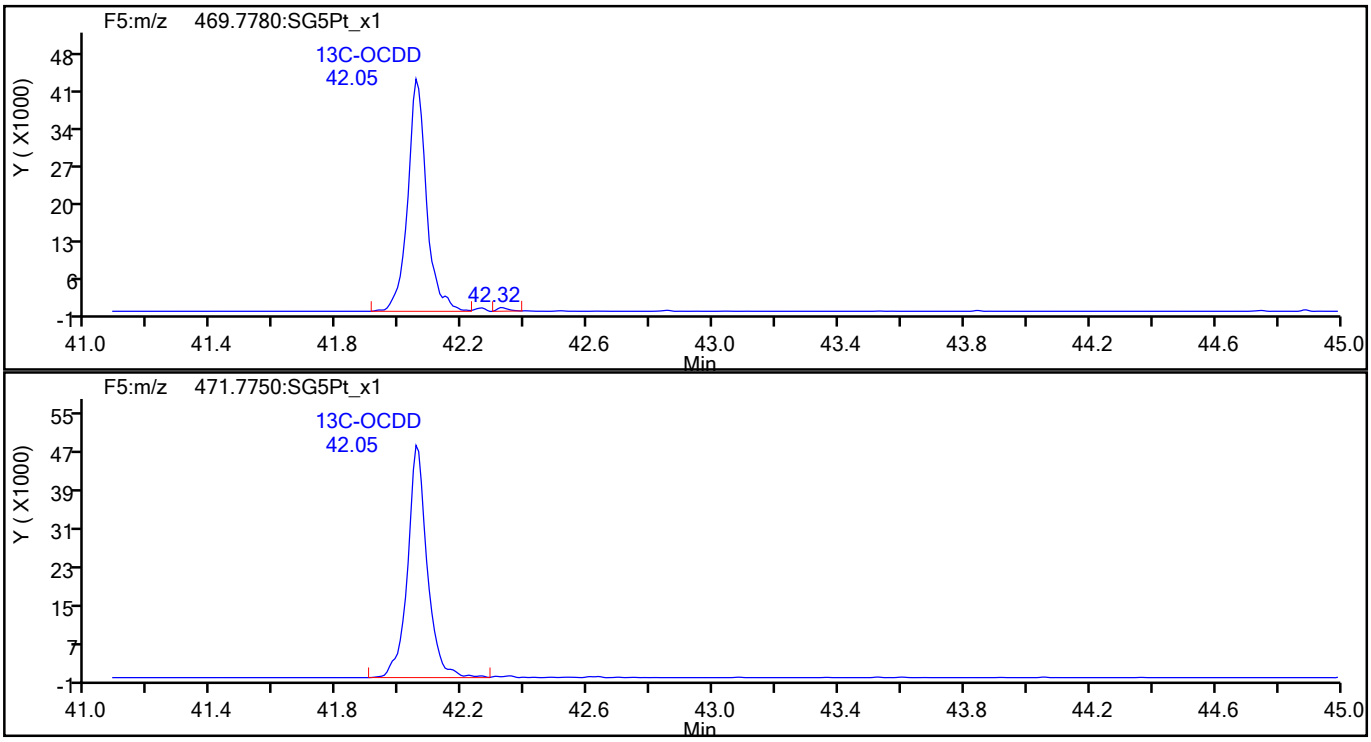

787783

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

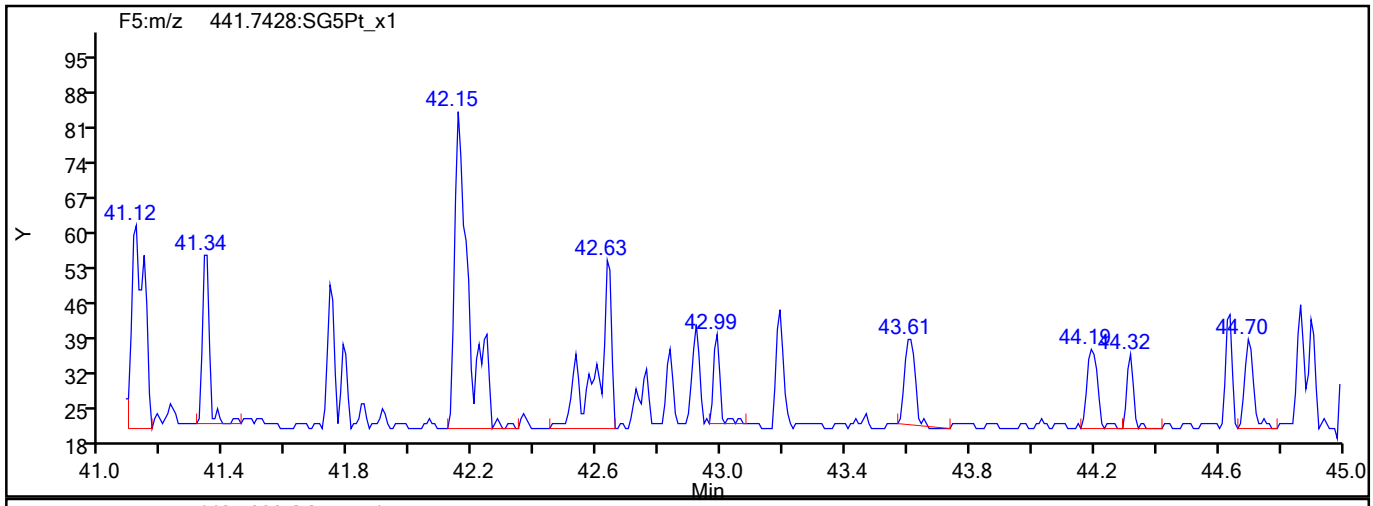

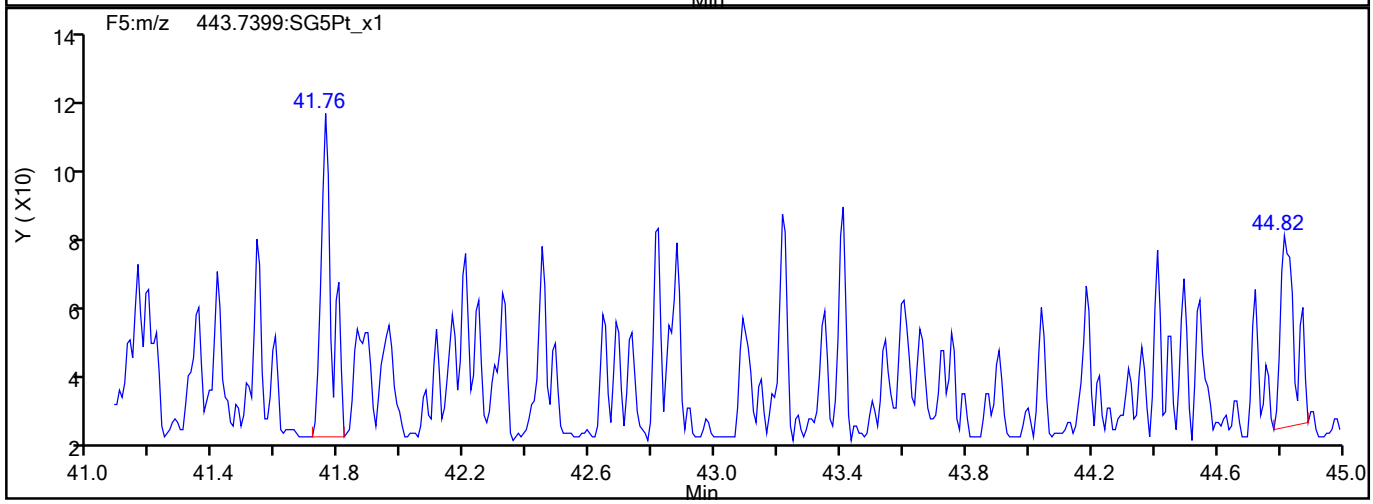

OCDF Interference Mass

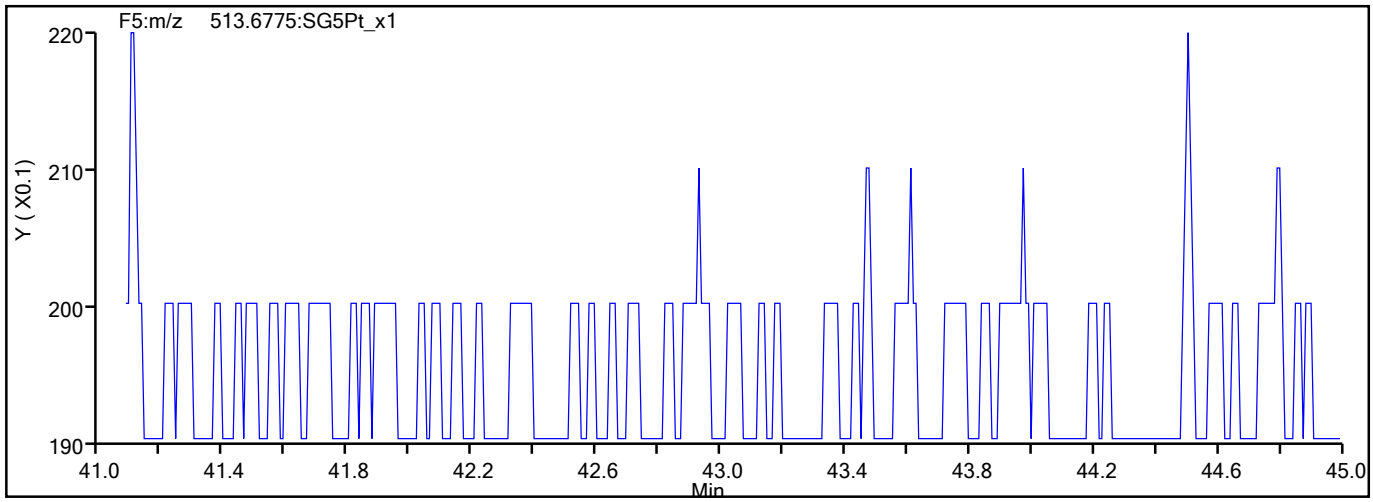

787784

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

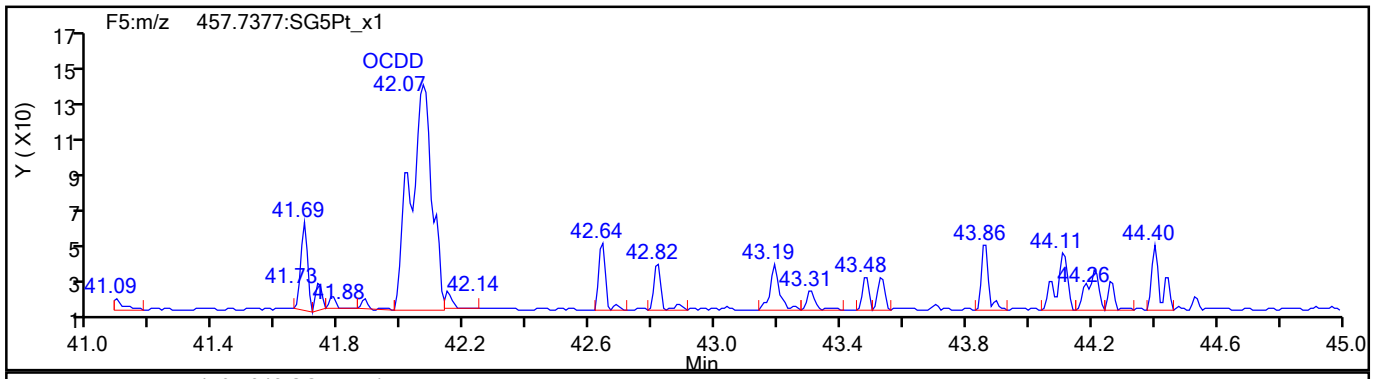

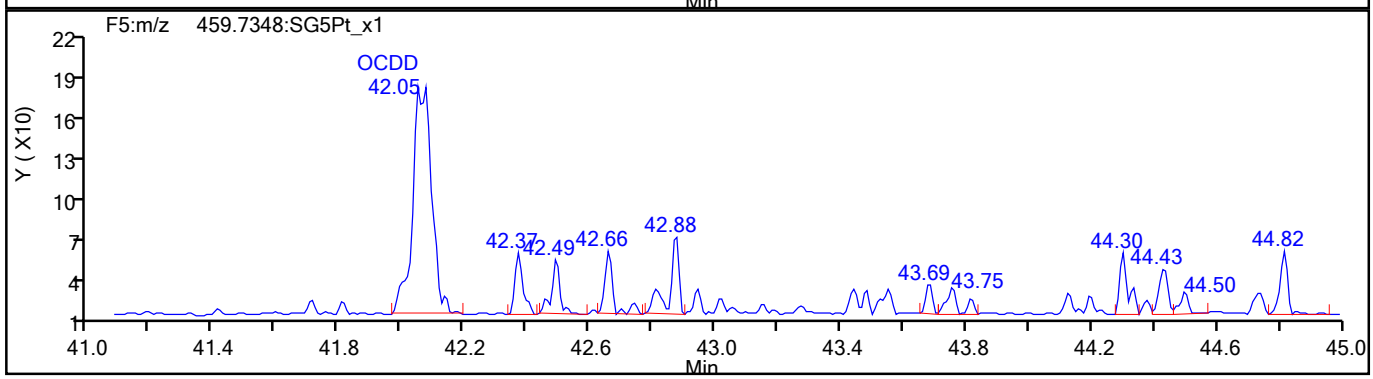

OCDD Standards

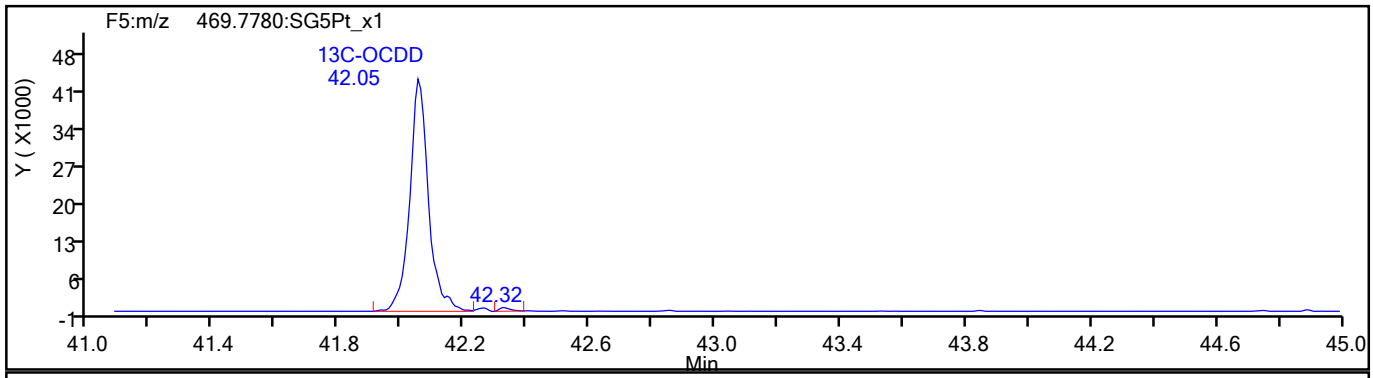

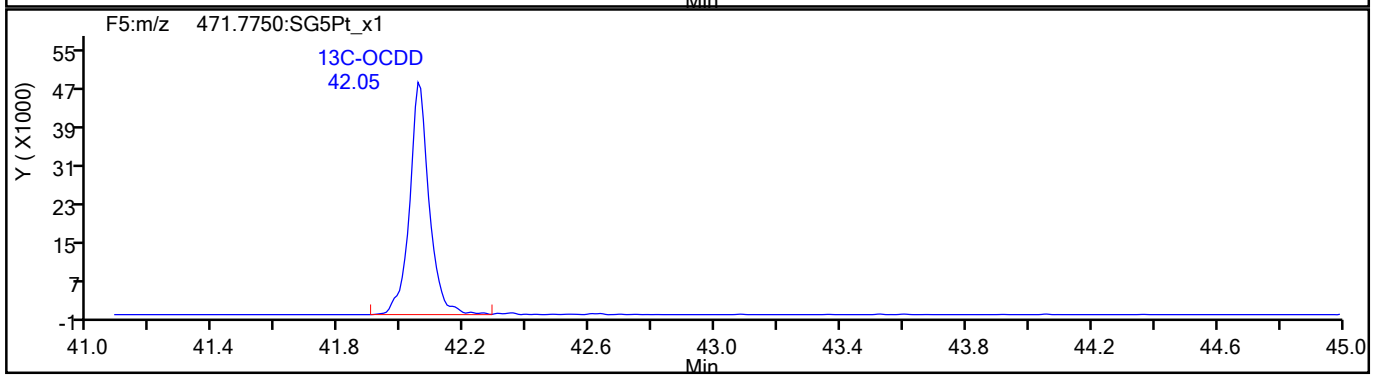

787785

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

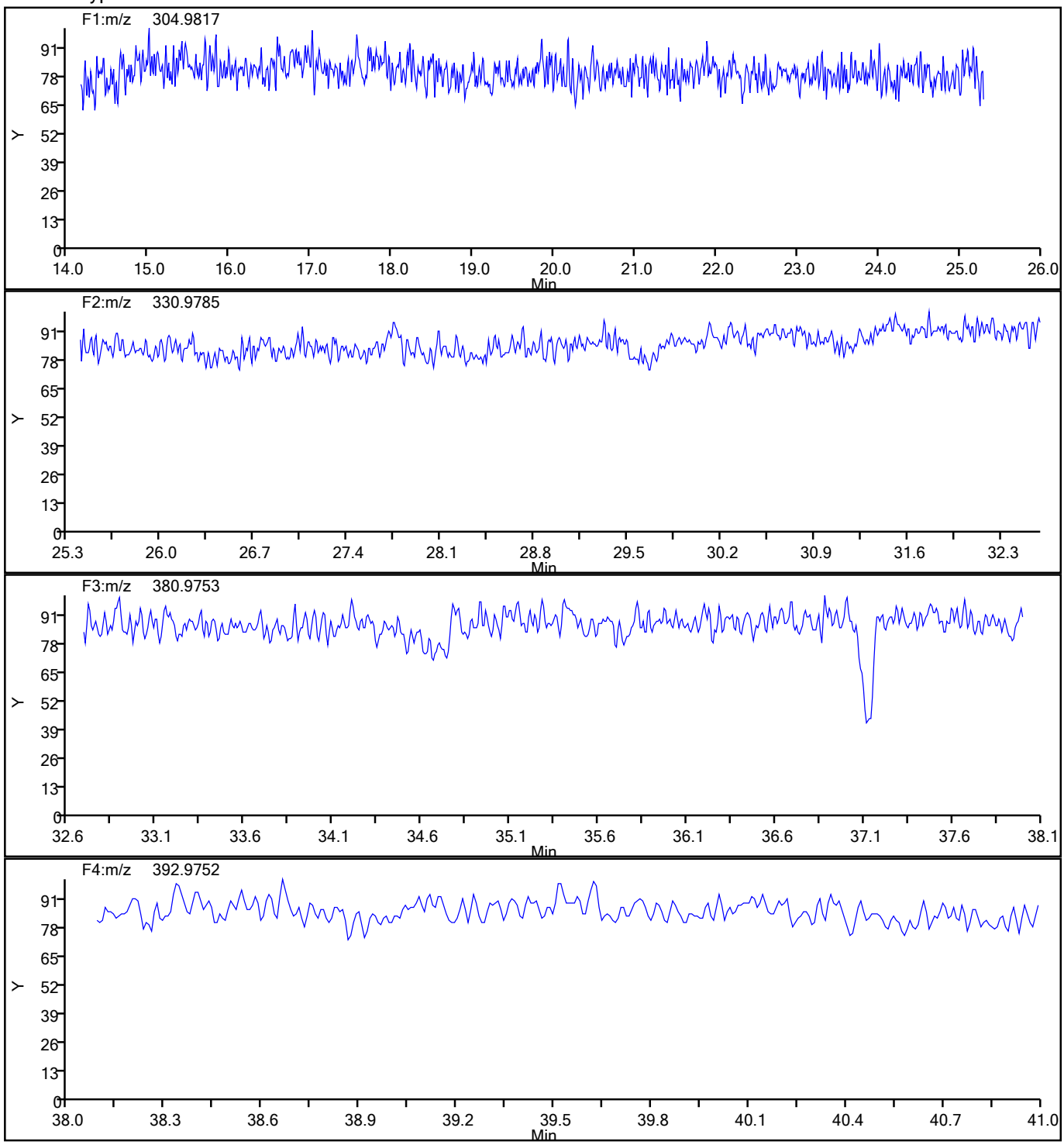

787786

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

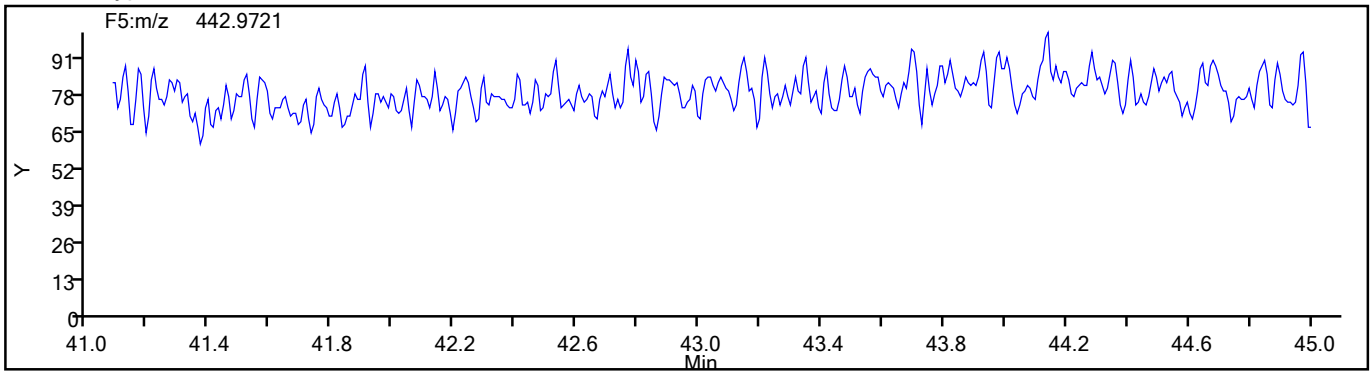

787787

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-2
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Lab File ID: 24AU2111D2_004.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/24/2021 10:23
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	2.39		1.0	0.22

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	37		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	50		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Aug-2021 10:23:51 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-513879/1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:45:21

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.296	33759459	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.599	16734440	0.77	1.3327	37.2	37.2	0.2026	0.2026	37.20	
2,3,7,8-TCDF	17.627	199129	0.67	0.9978	1.193	1.193	0.1094	0.1094		
D 13C-2,3,7,8-TCDD	16.063	10422147	0.73	0.8749	35.3	35.3	0.3776	0.3776	35.29	
$ 37Cl4-2,3,7,8-TCDD	16.077	5861410		0.8648	20.1	20.1	0.0638	0.0638	50.19	
2,3,7,8-TCDD	16.077	55715	0.68	1.0570	0.5058	0.5058	0.1084	0.1084		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

787789

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Aug-2021 10:23:51 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-513879/1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:45:21

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.296	16.283	1		14575481	3405725	5651	14127	603		
333.9339	16.296	16.283	1		19183978	4267762	4489	11222	951	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.599	17.613	-1	1.080	7306406	1361111	3621	9052	376		
317.9389	17.613	17.613	0	1.081	9428034	1838509	4668	11670	394	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.627	17.641	-1	1.002	79942	15130	769	1922	20		
305.8987	17.640	17.641	0	1.002	119187	24047	628	1570	38	0.67(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.063	16.050	1	0.986	4380782	989974	5651	14127	175		
333.9339	16.063	16.050	1	0.986	6041365	1466938	4489	11222	327	0.73(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.077	16.063	1	0.987	5861410	1265710	1693	4232	748		
2,3,7,8-TCDD											
319.8965	16.077	16.077	0	1.001	22554	5305	627	1567	8		
321.8936	16.077	16.077	0	1.001	33161	10494	499	1247	21	0.68(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

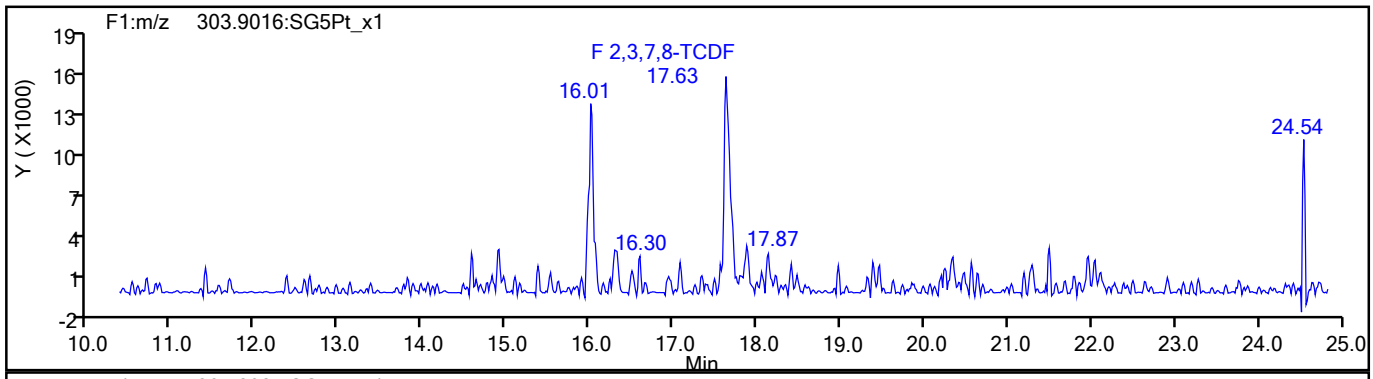

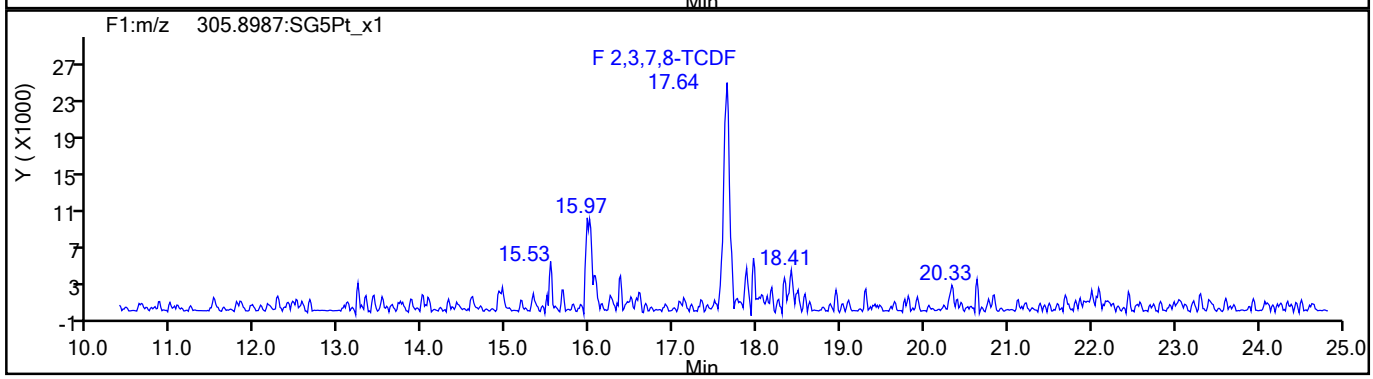

TCDF Standards

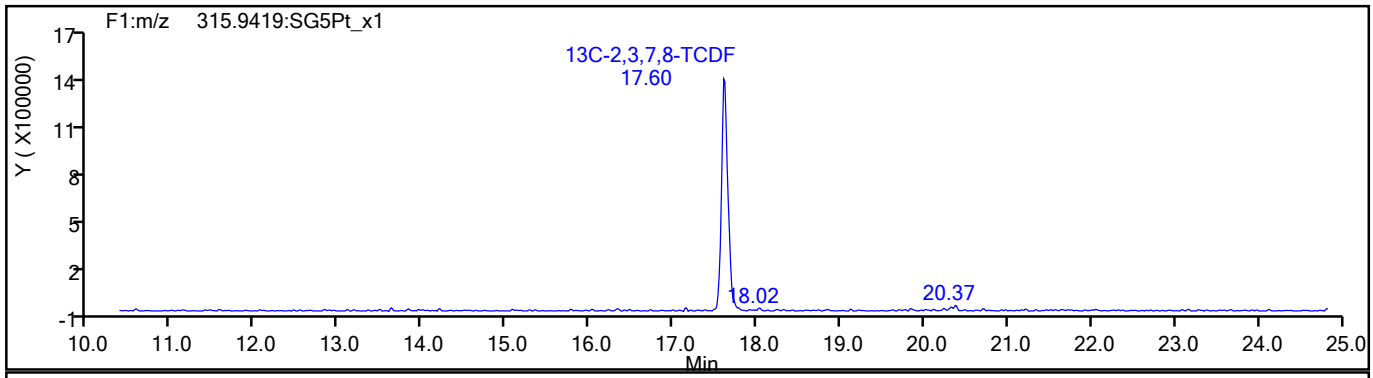

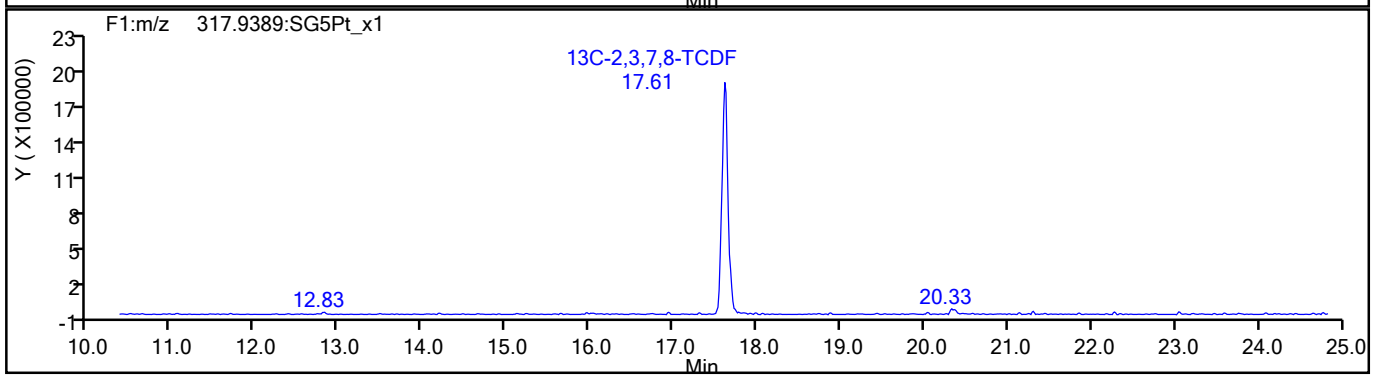

787791

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

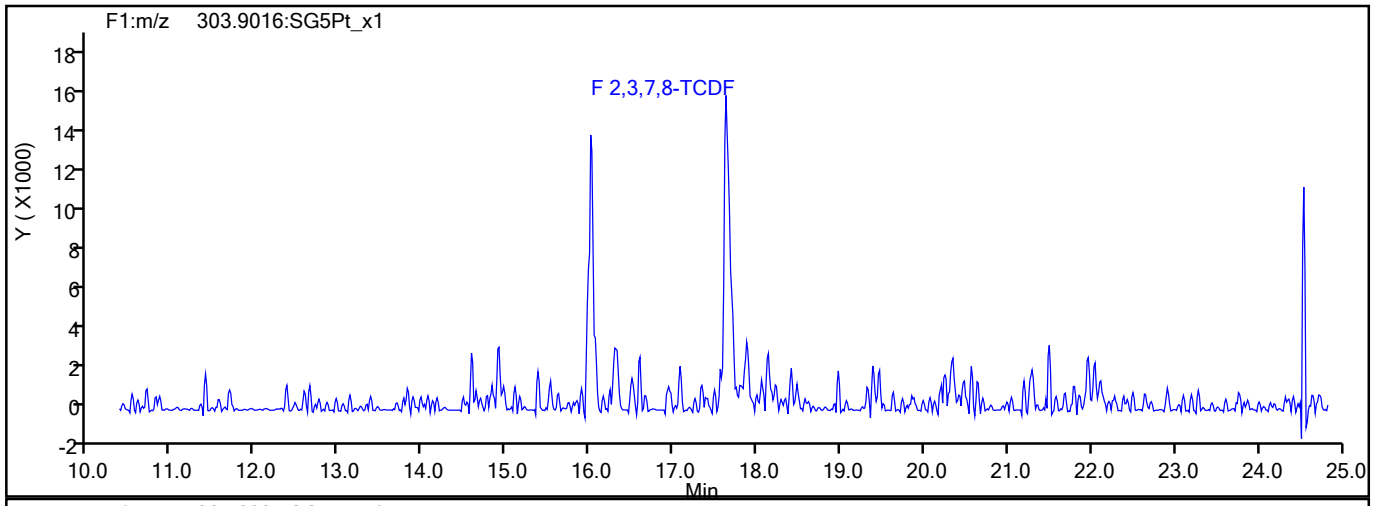

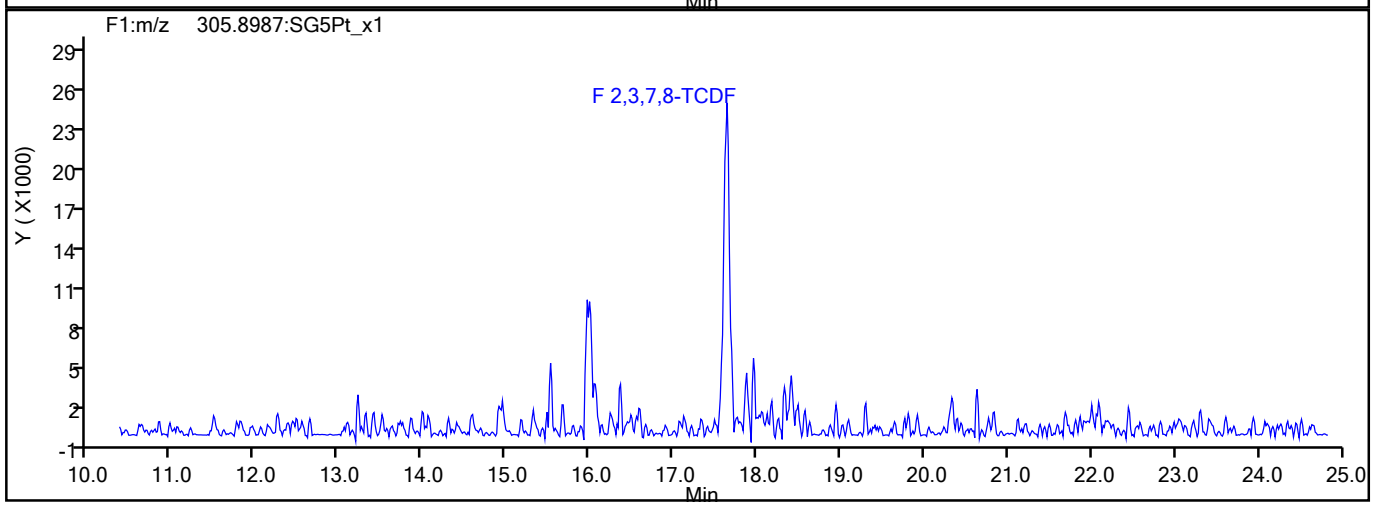

TCDF Interference Mass

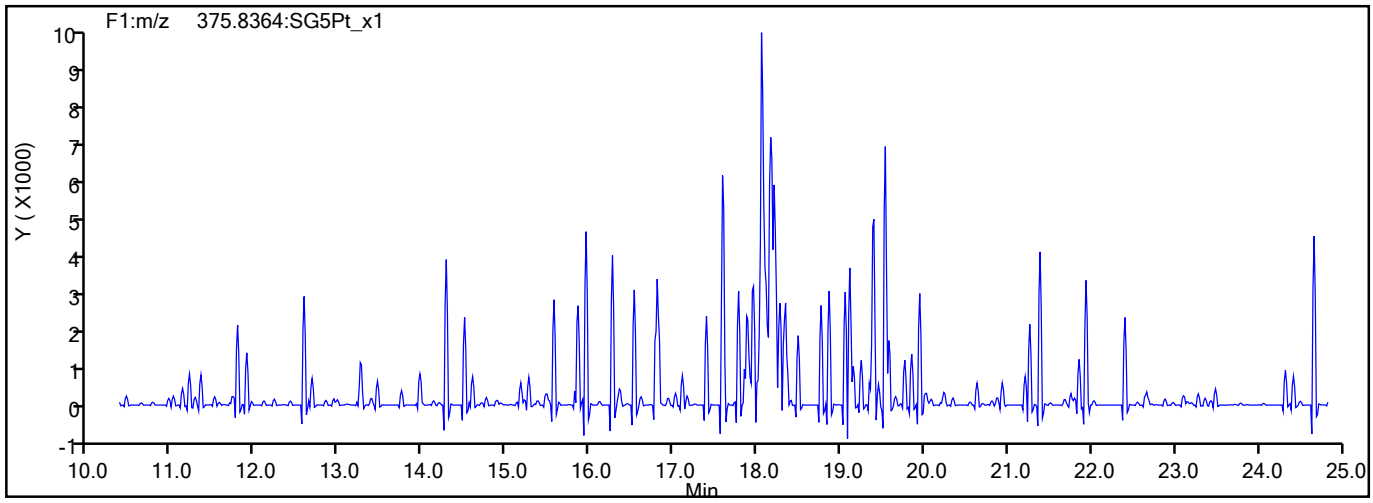

787792

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

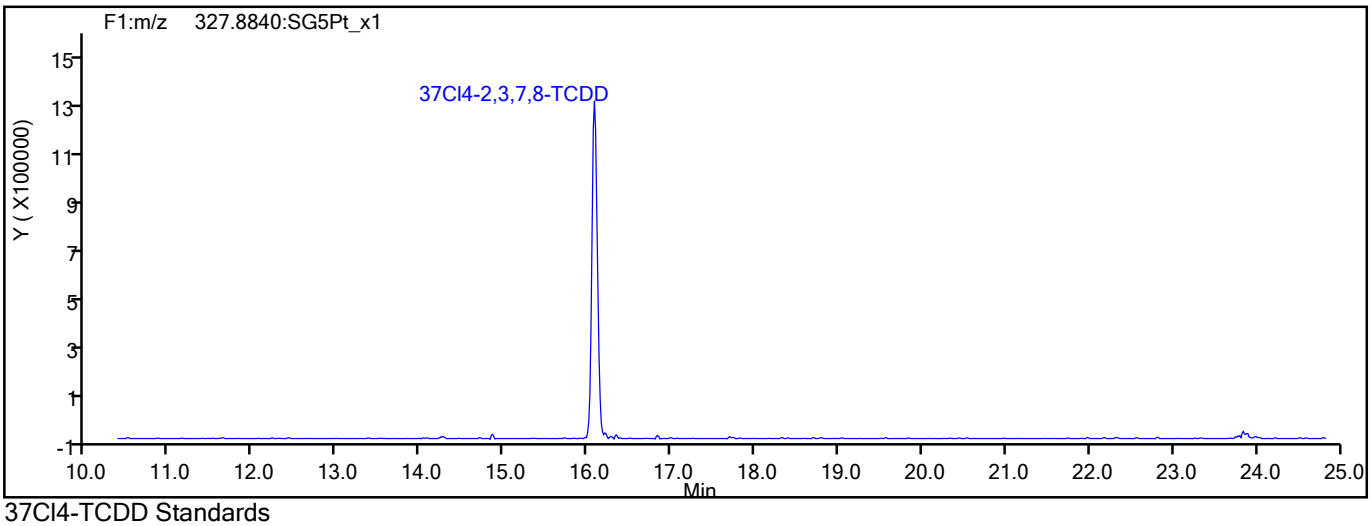

37Cl4-TCDD Standards

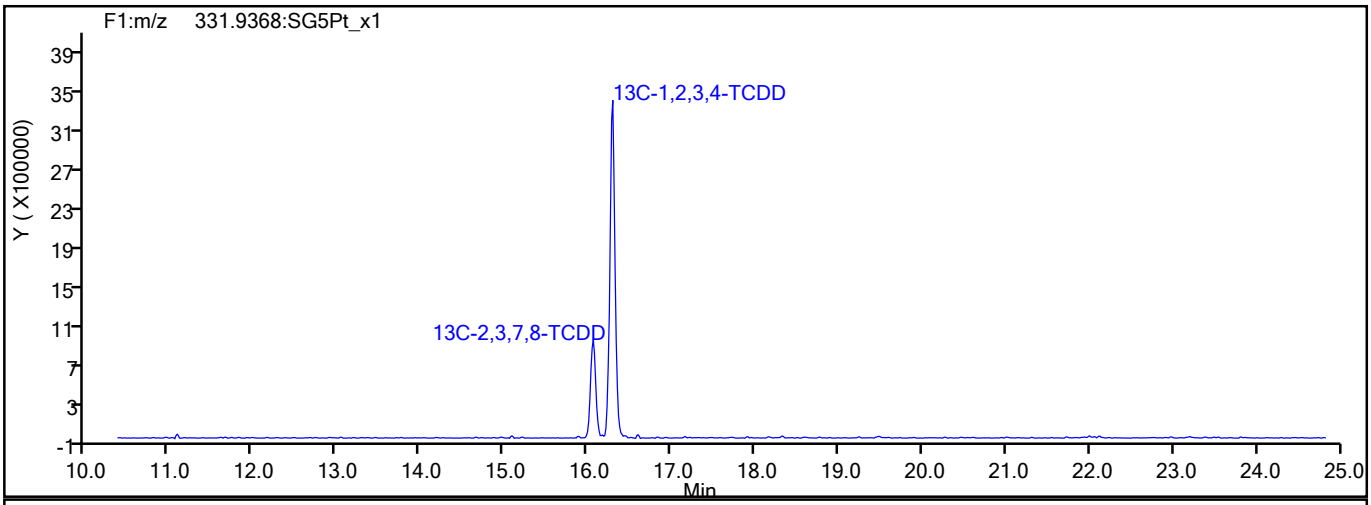

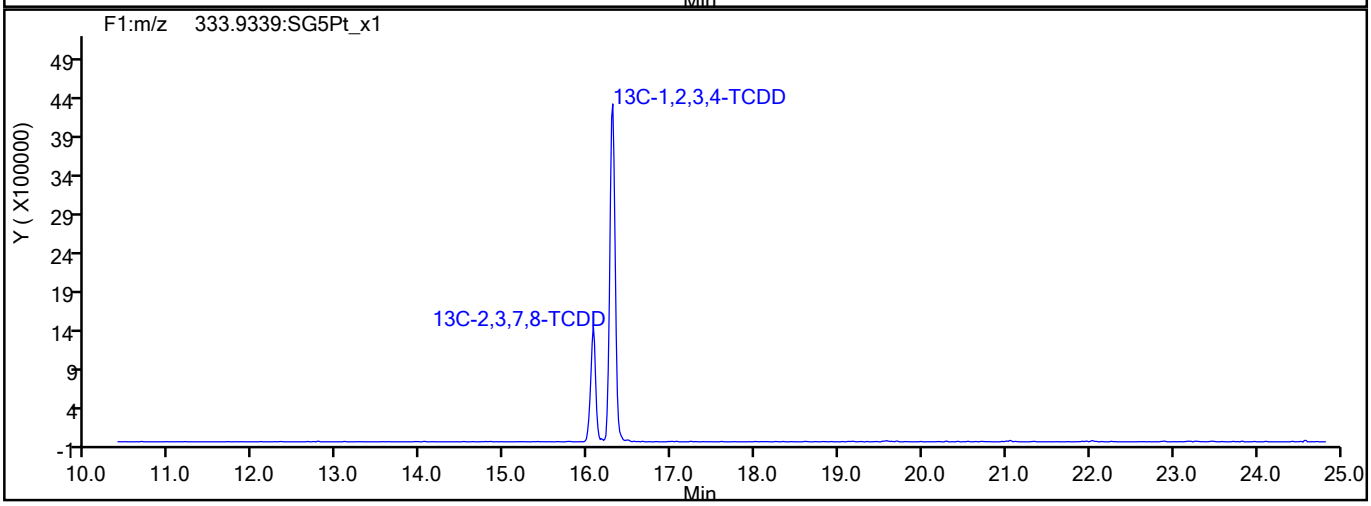

787793

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

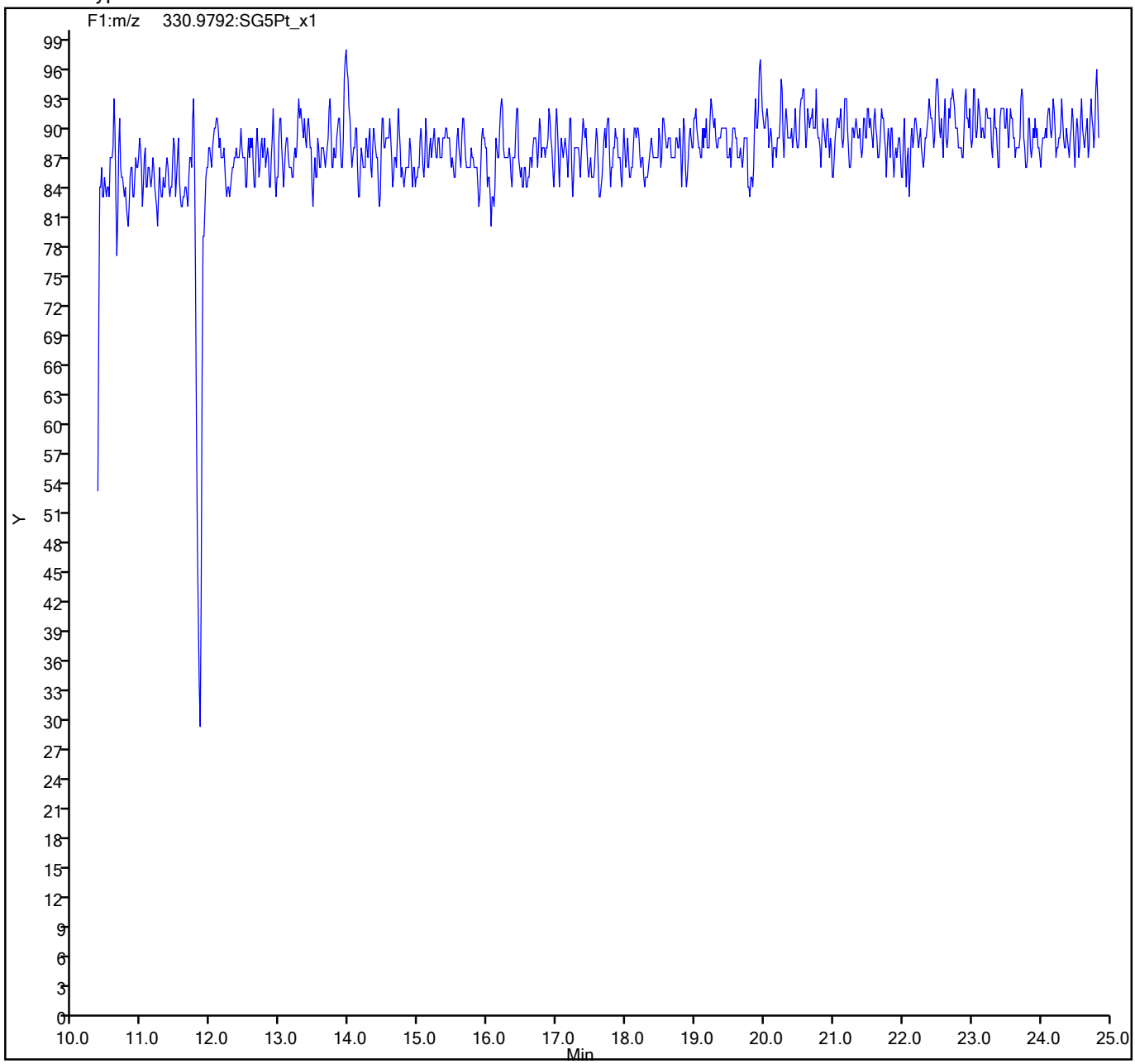

787794

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-2
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-513879/2-A
Matrix: Sediment
Lab File ID: 17au21dfs1_51.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/19/2021 04:43
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	22.3		1.0	0.27
51207-31-9	2,3,7,8-TCDF	23.1		1.0	0.098
40321-76-4	1,2,3,7,8-PeCDD	113		5.0	0.26
57117-41-6	1,2,3,7,8-PeCDF	117		5.0	0.36
57117-31-4	2,3,4,7,8-PeCDF	109		5.0	0.38
39227-28-6	1,2,3,4,7,8-HxCDD	101		5.0	0.22
57653-85-7	1,2,3,6,7,8-HxCDD	112		5.0	0.27
19408-74-3	1,2,3,7,8,9-HxCDD	109		5.0	0.23
70648-26-9	1,2,3,4,7,8-HxCDF	114		5.0	0.35
57117-44-9	1,2,3,6,7,8-HxCDF	120		5.0	0.36
72918-21-9	1,2,3,7,8,9-HxCDF	118		5.0	0.36
60851-34-5	2,3,4,6,7,8-HxCDF	121		5.0	0.36
35822-46-9	1,2,3,4,6,7,8-HpCDD	111		5.0	0.32
67562-39-4	1,2,3,4,6,7,8-HpCDF	118		5.0	0.50
55673-89-7	1,2,3,4,7,8,9-HpCDF	108		5.0	0.50
3268-87-9	OCDD	232		10	0.36
39001-02-0	OCDF	243		10	0.38
41903-57-5	Total TCDD	22.3		1.0	0.27
30402-14-3	Total TCDF	23.1		1.0	0.098
36088-22-9	Total PeCDD	113		5.0	0.26
30402-15-4	Total PeCDF	226		5.0	0.37
34465-46-8	Total HxCDD	322		5.0	0.24
55684-94-1	Total HxCDF	474		5.0	0.36
37871-00-4	Total HpCDD	112		5.0	0.32
38998-75-3	Total HpCDF	227		5.0	0.50

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513879/2-A

Matrix: Sediment Lab File ID: 17au21dfs1_51.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10(g) Date Analyzed: 08/19/2021 04:43

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517462 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	34		20-175
89059-46-1	13C-2,3,7,8-TCDF	36		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	34		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	31		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	36		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	37		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	35		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	42		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	37		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	32		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	33		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	36		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	35		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	40		20-186
114423-97-1	13C-OCDD	39		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	47		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Aug-2021 04:43:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513879/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:46:32 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:28:21

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.378	1152953	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.398	552191	0.79	1.3459	35.6	35.6	0.2111	0.2111	35.59	
2,3,7,8-TCDF	20.449	68815	0.80	1.0802	11.5	11.5	0.0489	0.0489	115	
A Non-2,3,7,8-sub-TCDF	19.878						0.0489	0.3566		RQU
S Total TCDF					11.5	11.5	0.0489	0.0489		
D 13C-2,3,7,8-TCDD	21.765	368595	0.88	0.9317	34.3	34.3	0.2791	0.2791	34.31	
2,3,7,8-TCDD	21.782	44148	0.88	1.0753	11.1	11.1	0.1343	0.1343	111	
$ 37Cl4-2,3,7,8-TCDD	21.799	220145		1.0083	18.9	18.9	0.0142	0.0142	47.34	
A Non-2,3,7,8-sub-TCDD	20.707						0.1343	0.1343		
S Total TCDD					11.1	11.1	0.1343	0.1343		
D 13C-1,2,3,7,8-PeCDF	27.239	404112	1.57	1.1405	30.7	30.7	0.0980	0.0980	30.73	
1,2,3,7,8-PeCDF	27.272	248460	1.62	1.0543	58.3	58.3	0.1811	0.1811	117	
D 13C-2,3,4,7,8-PeCDF	28.763	466834	1.64	1.1253	36.0	36.0	0.0994	0.0994	35.98	
2,3,4,7,8-PeCDF	28.779	256500	1.56	1.0079	54.5	54.5	0.1893	0.1893	109	
A F1 PeCDFs	24.648						0.0108	0.0108		RQU
A Non-2,3,7,8-sub-PeCDF	28.125						0.1851	0.6069		U
S Total PeCDF					112.8	112.8	0.1852	0.1852		
D 13C-1,2,3,7,8-PeCDD	29.571	282216	1.56	0.7165	34.2	34.2	0.1243	0.1243	34.16	
1,2,3,7,8-PeCDD	29.588	167577	1.56	1.0465	56.7	56.7	0.1285	0.1285	113	
A Non-2,3,7,8-sub-PeCDD	28.489						0.1285	0.1629		RQU
S Total PeCDD					56.7	56.7	0.1285	0.1285		
D 13C-1,2,3,4,7,8-HxCDF	34.920	440250	0.54	0.9648	41.5	41.5	0.1289	0.1289	41.52	
1,2,3,4,7,8-HxCDF	34.937	287979	1.27	1.1474	57.0	57.0	0.1753	0.1753	114	
D 13C-1,2,3,6,7,8-HxCDF	35.064	437444	0.52	1.0708	37.2	37.2	0.1162	0.1162	37.17	
1,2,3,6,7,8-HxCDF	35.106	320805	1.31	1.2178	60.2	60.2	0.1818	0.1818	120	
D 13C-2,3,4,6,7,8-HxCDF	35.897	380639	0.55	1.0413	33.3	33.3	0.1194	0.1194	33.26	
2,3,4,6,7,8-HxCDF	35.914	279720	1.28	1.2145	60.5	60.5	0.1780	0.1780	121	
D 13C-1,2,3,7,8,9-HxCDF	36.790	347505	0.54	0.9731	32.5	32.5	0.1278	0.1278	32.49	
1,2,3,7,8,9-HxCDF	36.807	255102	1.35	1.2401	59.2	59.2	0.1804	0.1804	118	
A Non-2,3,7,8-sub-HxCDF	35.028						0.1786	0.1786		
S Total HxCDF					236.9	236.9	0.1789	0.1789		
* 13C-1,2,3,7,8,9-HxCDD	36.596	1099079	1.26	1.8E+04	100.0	100.0				

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-1,2,3,4,7,8-HxCDD	36.108	308239	1.13	0.7587	37.0	37.0	0.1300	0.1300	36.97	
1,2,3,4,7,8-HxCDD	36.125	165063	1.25	1.0608	50.5	50.5	0.1116	0.1116	101	
D 13C-1,2,3,6,7,8-HxCDD	36.226	327063	1.26	0.8593	34.6	34.6	0.1148	0.1148	34.63	
1,2,3,6,7,8-HxCDD	36.243	182721	1.24	0.9933	56.2	56.2	0.1330	0.1330	112	
1,2,3,7,8,9-HxCDD	36.605	191715	1.22	1.1094	54.4	54.4	0.1126	0.1126	109	
A Non-2,3,7,8-sub-HxCDD	35.394						0.1184	0.1184		
S Total HxCDD					161.1	161.1	0.1191	0.1191		
D 13C-1,2,3,4,6,7,8-HpCDF	38.620	285196	0.46	0.7359	35.3	35.3	0.1457	0.1457	35.26	
1,2,3,4,6,7,8-HpCDF	38.628	243533	1.05	1.4421	59.2	59.2	0.2492	0.2492	118	
D 13C-1,2,3,4,7,8,9-HpCDF	39.874	302406	0.45	0.6854	40.1	40.1	0.1564	0.1564	40.14	
1,2,3,4,7,8,9-HpCDF	39.882	214074	1.05	1.3092	54.1	54.1	0.2481	0.2481	108	
A Non-2,3,7,8-sub-HpCDF	39.258						0.2480	0.2480		
S Total HpCDF					113.3	113.3	0.2487	0.2487		
D 13C-1,2,3,4,6,7,8-HpCDD	39.562	268592	1.02	0.6745	36.2	36.2	0.0922	0.0922	36.23	
1,2,3,4,6,7,8-HpCDD	39.579	156038	1.04	1.0503	55.3	55.3	0.1617	0.1617	111	
A Non-2,3,7,8-sub-HpCDD	39.258	1484	1.04	1.0503	0.5969	0.5261	0.1617	0.5261	0.00	RQ
S Total HpCDD					55.9	55.8	0.1617	0.1617		RQ
D 13C-OCDD	42.068	462455	0.94	0.5446	77.3	77.3	0.1394	0.1394	38.63	
OCDF	42.161	370595	0.96	1.3168	121.7	121.7	0.1900	0.1900	122	
OCDD	42.068	284636	0.91	1.0620	115.9	115.9	0.1799	0.1799	116	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Aug-2021 04:43:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513879/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:46:32 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:28:21

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.378	21.427	-3		512123	71188	71	177	1003		a
333.9338	21.378	21.427	-3		640830	82634	89	222	928	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.398	20.401	0	0.954	243971	33108	139	347	238		
317.9389	20.415	20.401	1	0.955	308220	42563	36	90	1182	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.449	20.436	1	1.003	30521	4146	6	15	691		
305.8987	20.432	20.436	0	1.002	38294	5319	10	25	532	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											U
303.9016	18.739	19.878	-68	0.919	162	68	6	15	11		
	Empc Correction				119	50	6	15	8		
305.8987	18.765	19.878	-67	0.920	155	65	10	25	7	1.05(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.765	21.743	1	1.018	172091	21636	71	177	305		
333.9338	21.739	21.743	0	1.017	196504	24757	89	222	278	0.88(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.782	21.777	0	1.001	20673	2465	24	60	103		
321.8936	21.773	21.777	0	1.000	23475	3194	3	7	1065	0.88(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.799	21.849	-3	1.020	220145	28798	9	22	3200		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.707						24	60			
321.8936	20.707						3	7			
13C-1,2,3,7,8-PeCDF											
351.9000	27.239	27.288	-3	1.274	246750	37936	50	125	759		
353.8970	27.247	27.288	-2	1.275	157362	24926	19	47	1312	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.272	27.313	-2	1.001	153449	22468	27	67	832		
341.8567	27.281	27.313	-2	1.002	95011	14063	21	52	670	1.62(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.763	28.795	-2	1.345	290330	39582	50	125	792		
353.8970	28.754	28.795	-2	1.345	176504	23330	19	47	1228	1.64(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.779	28.820	-2	1.001	156208	20762	27	67	769		
341.8567	28.779	28.820	-2	1.001	100292	13170	21	52	627	1.56(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.618	24.648	-2	0.904	12	5	1	2	5		
341.8567	24.610	24.648	-2	0.903	37	18	2	5	9	0.32(1.32-1.78)	
	Empc Correction				7	3	2	5	2		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	27.879	28.125	-15	1.023	1729	241	27	67	9		
341.8567	27.811	28.125	-19	1.021	996	151	21	52	7	1.74(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.571	29.612	-2	1.383	171861	22744	21	52	1083		
369.8919	29.554	29.612	-3	1.382	110355	14435	34	85	425	1.56(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.588	29.637	-3	1.001	102094	13051	15	37	870		
357.8516	29.596	29.637	-2	1.001	65483	8320	5	12	1664	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.489	28.489	0	0.963	712	141	15	37			
	Empc Correction				292	51	15	37	0		
357.8516	28.489	28.489	0	0.963	189	33	5	12		3.77(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.920	34.942	-1	0.954	154382	28905	45	112	642		
385.8610	34.912	34.942	-2	0.954	285868	51650	71	177	727	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.937	34.959	-1	1.000	161292	30332	39	97	778		
375.8178	34.937	34.959	-1	1.000	126687	23452	26	65	902	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.064	35.111	-3	0.958	149152	25148	45	112	559		
385.8610	35.089	35.111	-1	0.959	288292	48027	71	177	676	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.106	35.119	-1	1.001	181702	30359	39	97	778		
375.8178	35.097	35.119	-1	1.001	139103	24502	26	65	942	1.31(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.897	35.919	-1	0.981	134384	27782	45	112	617		
385.8610	35.897	35.919	-1	0.981	246255	47138	71	177	664	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.914	35.936	-1	1.000	157261	31460	39	97	807		
375.8178	35.914	35.936	-1	1.000	122459	23907	26	65	920	1.28(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.790	36.811	-1	1.005	121621	25275	45	112	562		
385.8610	36.790	36.811	-1	1.005	225884	47153	71	177	664	0.54(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	36.807	36.828	-1	1.000	146578	31137	39	97	798		
375.8178	36.807	36.828	-1	1.000	108524	22657	26	65	871	1.35(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						39	97			
375.8178	35.028						26	65			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.596	36.609	-1		613234	129054	45	112	2868		
403.8529	36.596	36.609	-1		485845	104110	47	117	2215	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.108	36.129	-1	0.987	163698	37090	45	112	824		
403.8529	36.108	36.129	-1	0.987	144541	30477	47	117	648	1.13(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.125	36.146	-1	1.000	91763	20395	15	37	1360		
391.8127	36.125	36.146	-1	1.000	73300	15889	17	42	935	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.226	36.247	-1	0.990	182318	33355	45	112	741		
403.8529	36.226	36.247	-1	0.990	144745	27185	47	117	578	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.243	36.264	-1	1.000	101151	20151	15	37	1343		
391.8127	36.234	36.264	-2	1.000	81570	15244	17	42	897	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.605	36.626	-1	1.014	105175	22152	15	37	1477		
391.8127	36.613	36.626	-1	1.014	86540	19124	17	42	1125	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.394						15	37			
391.8127	35.394						17	42			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.620	38.626	0	1.055	90235	21930	39	97	562		
419.8220	38.620	38.626	0	1.055	194961	46799	61	152	767	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.628	38.630	0	1.000	124835	30815	56	140	550		
409.7788	38.628	38.630	0	1.000	118698	28856	43	107	671	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.874	39.880	0	1.090	94287	23632	39	97	606		
419.8220	39.874	39.880	0	1.090	208119	52415	61	152	859	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.882	39.885	0	1.000	109760	27352	56	140	488		
409.7788	39.874	39.885	-1	1.000	104314	26341	43	107	613	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						56	140			
409.7788	39.258						43	107			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.562	39.569	0	1.081	135567	36294	24	60	1512		
437.8140	39.562	39.569	0	1.081	133025	32596	34	85	959	1.02(0.88-1.20)	

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.579	39.582	0	1.000	79370	19810	28	70	708		
425.7737	39.571	39.582	-1	1.000	76668	19293	19	47	1015	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.931	39.258	-20	0.984	757	201	28	70	7		
425.7737	38.940	39.258	-19	0.984	927	213	19	47	11	0.82(0.88-1.20)	
	Empc Correction				727	193	19	47	10		
13C-OCDD											
469.7780	42.068	42.072	0	1.150	224125	50031	47	117	1064		
471.7750	42.059	42.072	-1	1.149	238330	51486	24	60	2145	0.94(0.76-1.02)	
OCDF											
441.7428	42.161	42.165	0	1.002	181285	39296	22	55	1786		
443.7399	42.161	42.165	0	1.002	189310	43296	29	72	1493	0.96(0.76-1.02)	
OCDD											
457.7377	42.068	42.081	-1	1.000	135245	30903	20	50	1545		
459.7348	42.068	42.081	-1	1.000	149391	32862	19	47	1730	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	552191	75671

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	552191	75671

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.739	162	68	155	65	0.0531	1.05	RQ
18.739	119	50	155	65	0.0459		Empc Correction
19.427	92	39	339	85	0.0723	0.27	RQ
19.427	92	39	119	50	0.0354		Empc Correction
19.728	942	162	1185	362	0.3566	0.79	
20.570	1237	306	356	162	0.2671	3.47	RQ
20.570	274	124	356	162	0.1056		Empc Correction
20.759	320	67	178	119	0.0835	1.80	RQ
20.759	137	91	178	119	0.0528		Empc Correction

Compound is Marked ND

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AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Inject. Date: 19-Aug-2021 04:43:00 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 47

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	404112	62862
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	466834	62912

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	435473	62887

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.618	12	5	37	18	0.0109	0.32	RQ
24.618	12	5	7	3	0.004232		Empc Correction

Compound is Marked ND

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	404112	62862
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	466834	62912

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	435473	62887

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.879	1729	241	996	151	0.6069	1.74	

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	282216	37179

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	282216	37179

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.245	712	141	189	33	0.3051	3.77	RQ
30.245	292	51	189	33	0.1629		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	268592	68890

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	268592	68890

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.931	757	201	927	213	0.5969	0.82	RQ
38.931	757	201	727	193	0.5261		Empc Correction
Signal Totals:							
	757	201	727	193			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1684	414				0.82	RQ
	1484	394					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5969 = (1684 * 100.000) / (268592 * 1.050)

Empc Amount: 0.5261 = (1484 * 100.000) / (268592 * 1.050)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

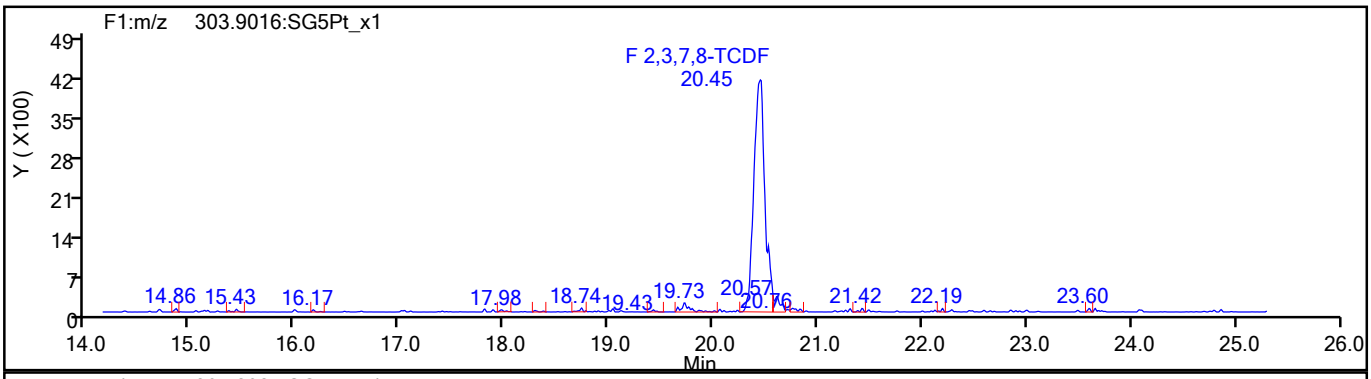

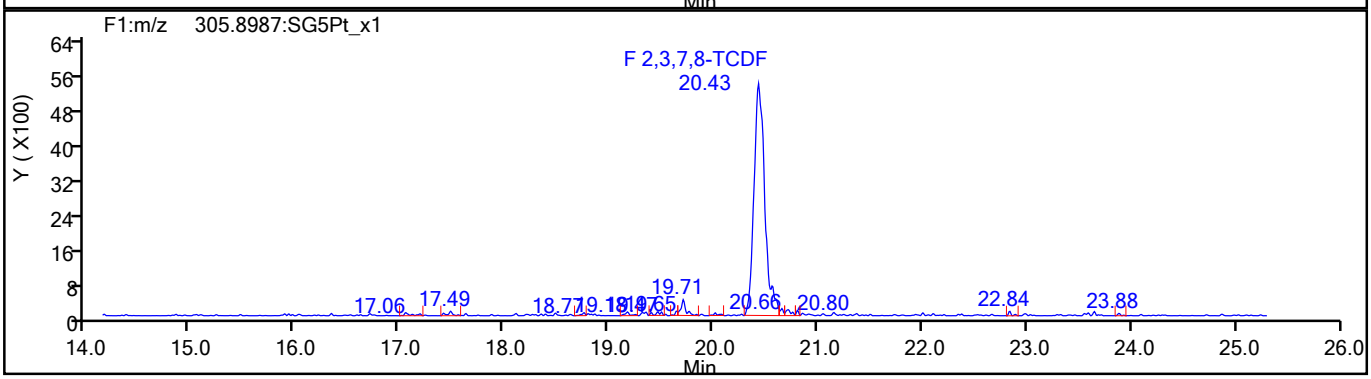

TCDF Standards

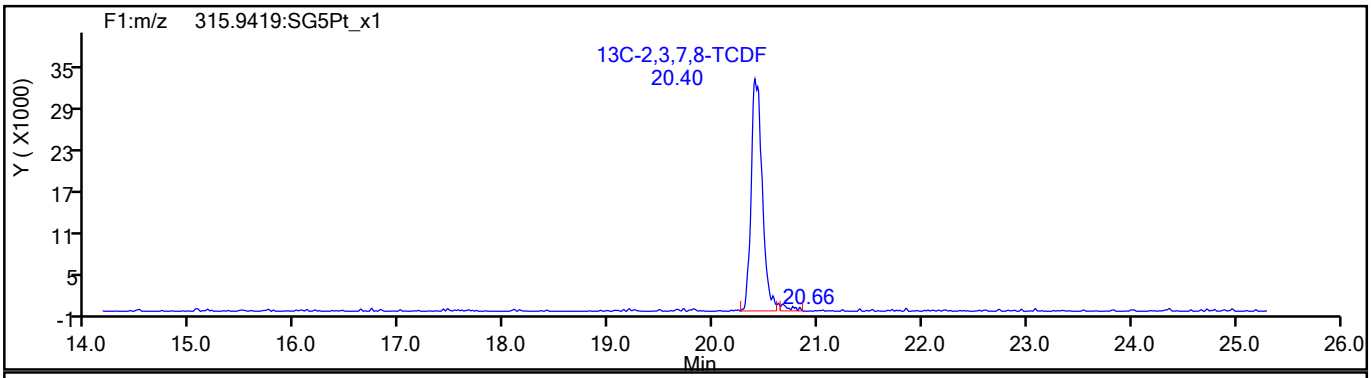

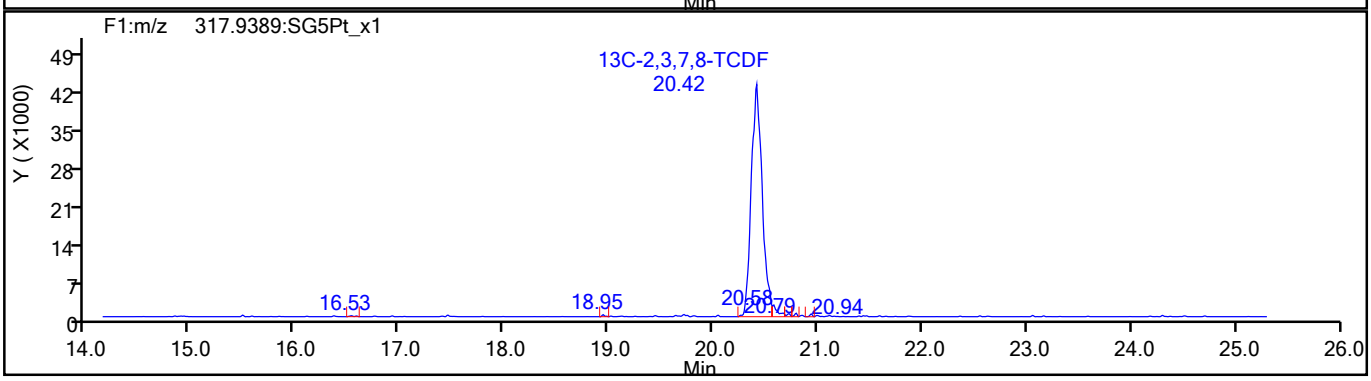

787808

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

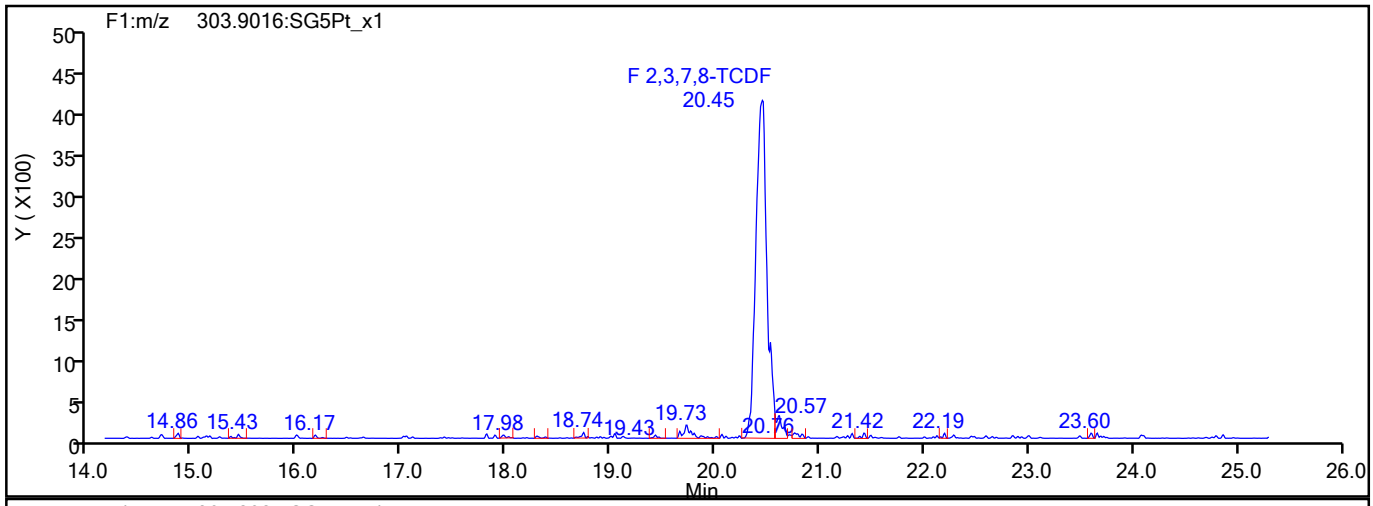

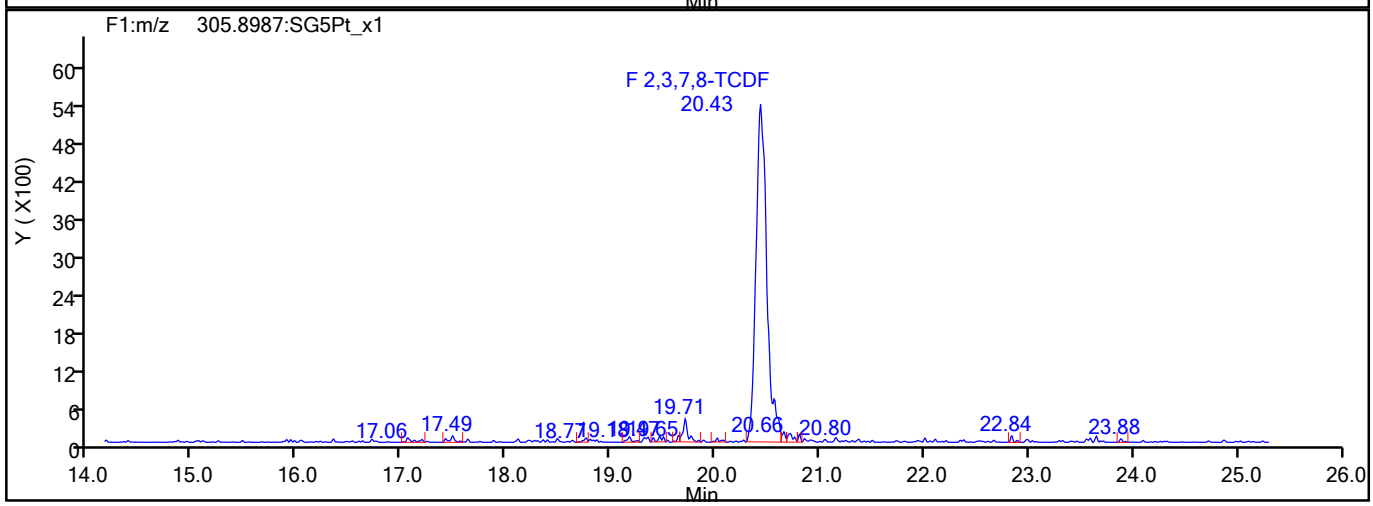

TCDF Interference Mass

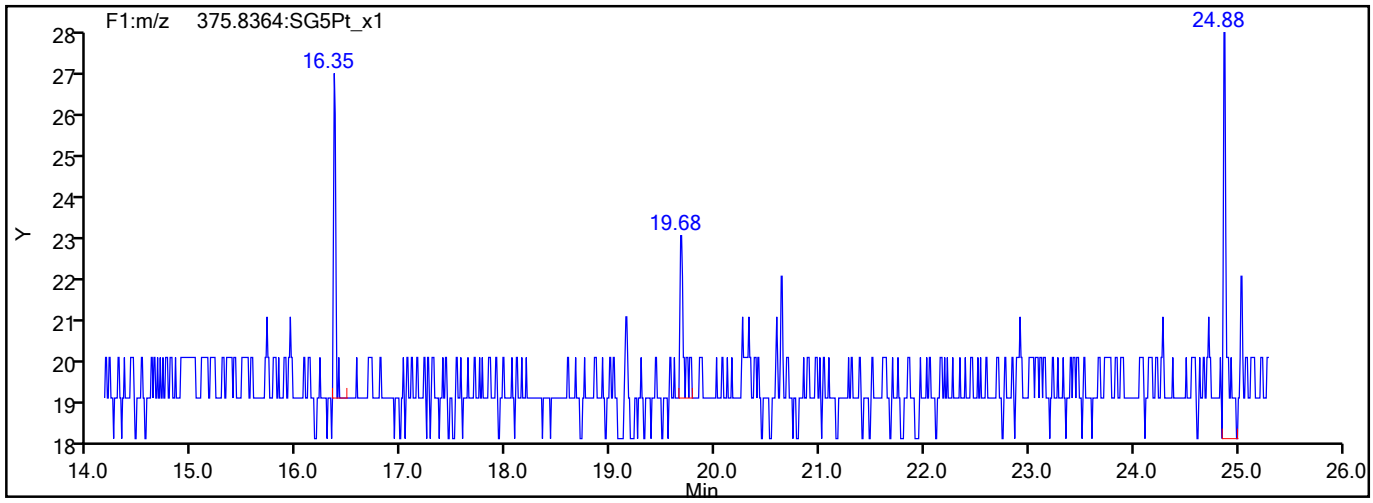

787809

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

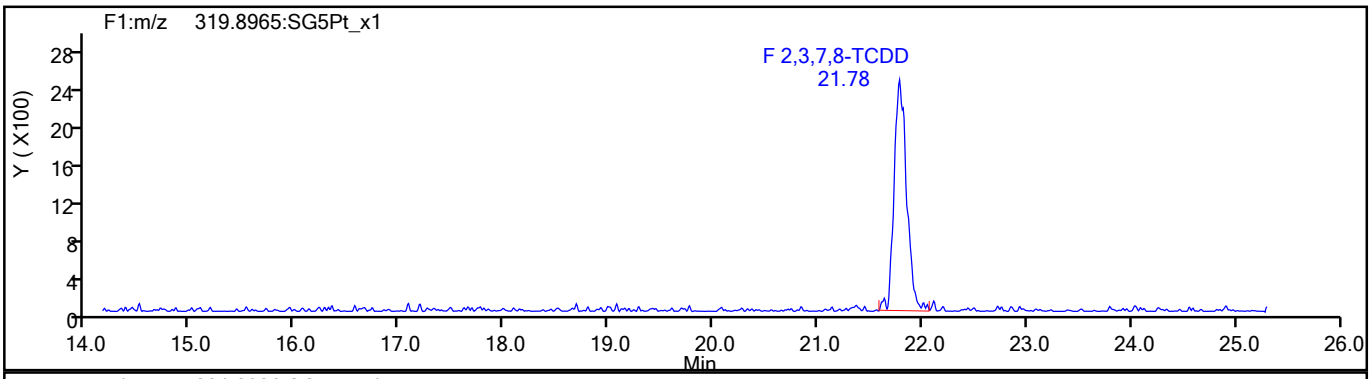

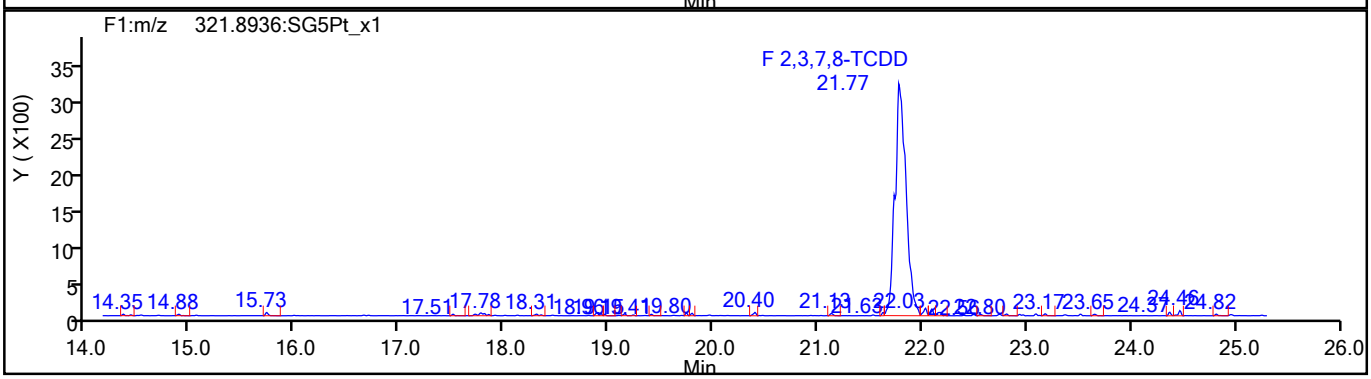

TCDD Standards

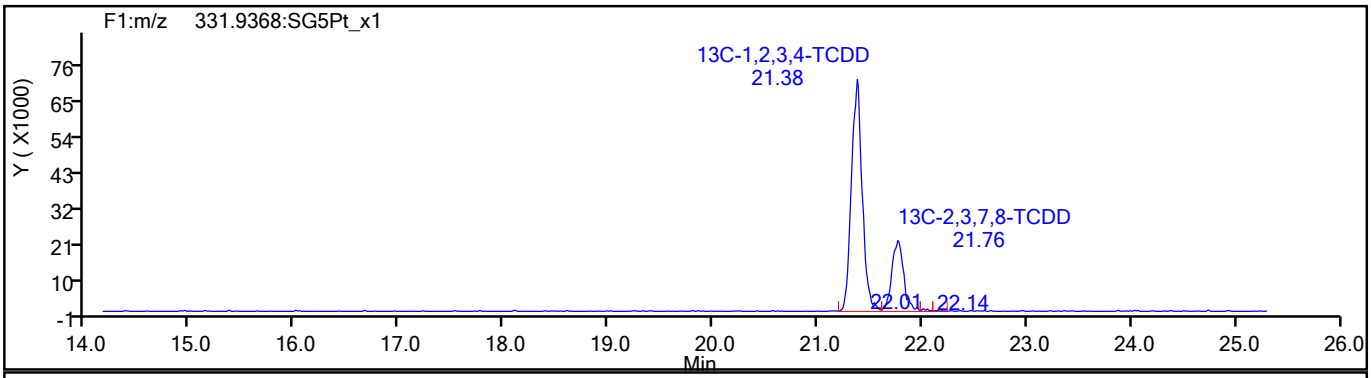

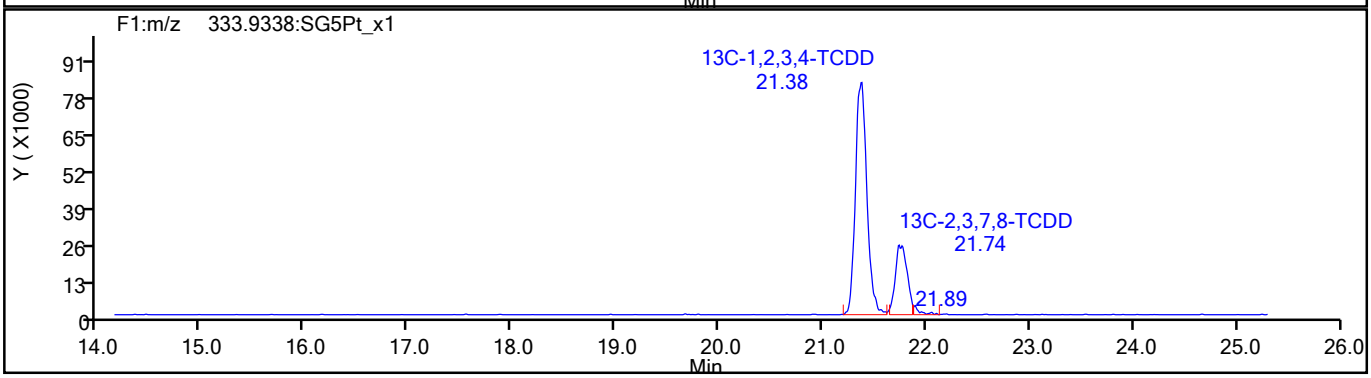

787810

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

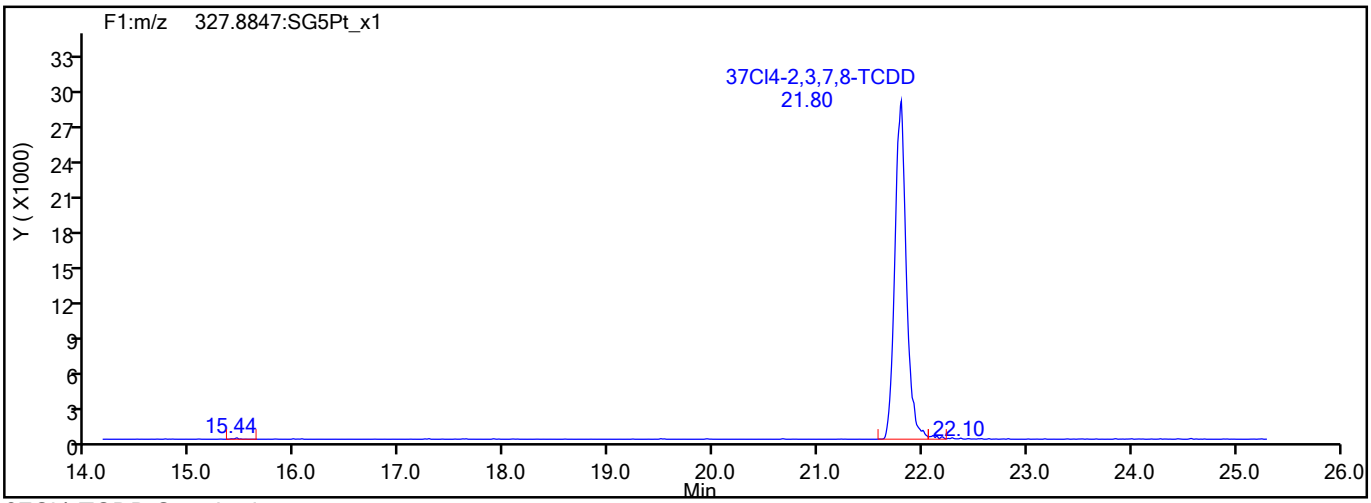

37Cl4-TCDD Standards

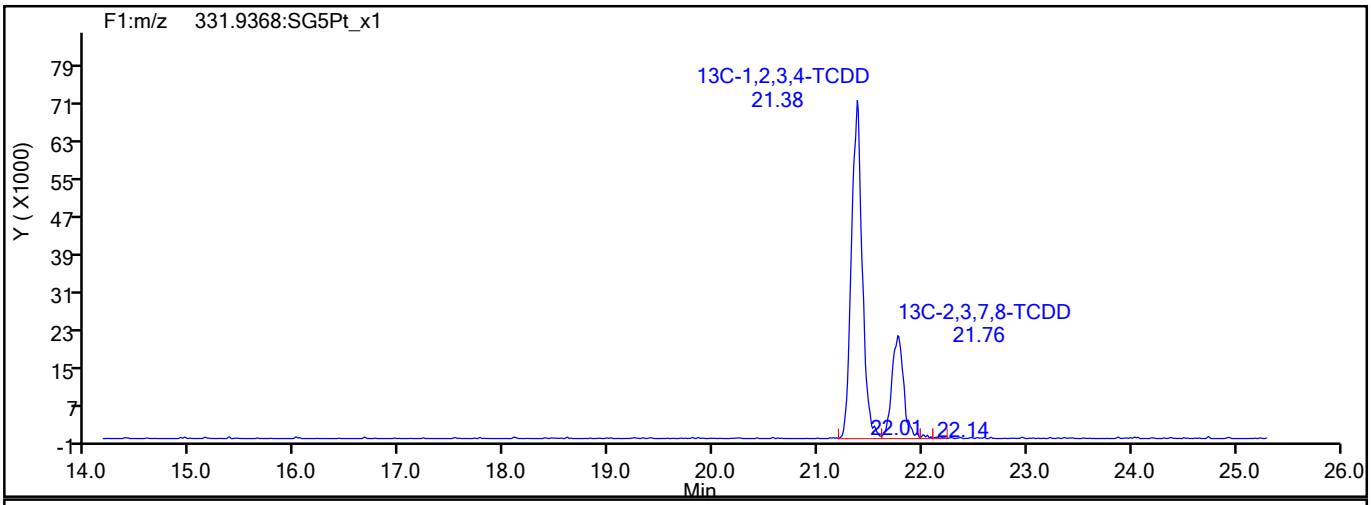

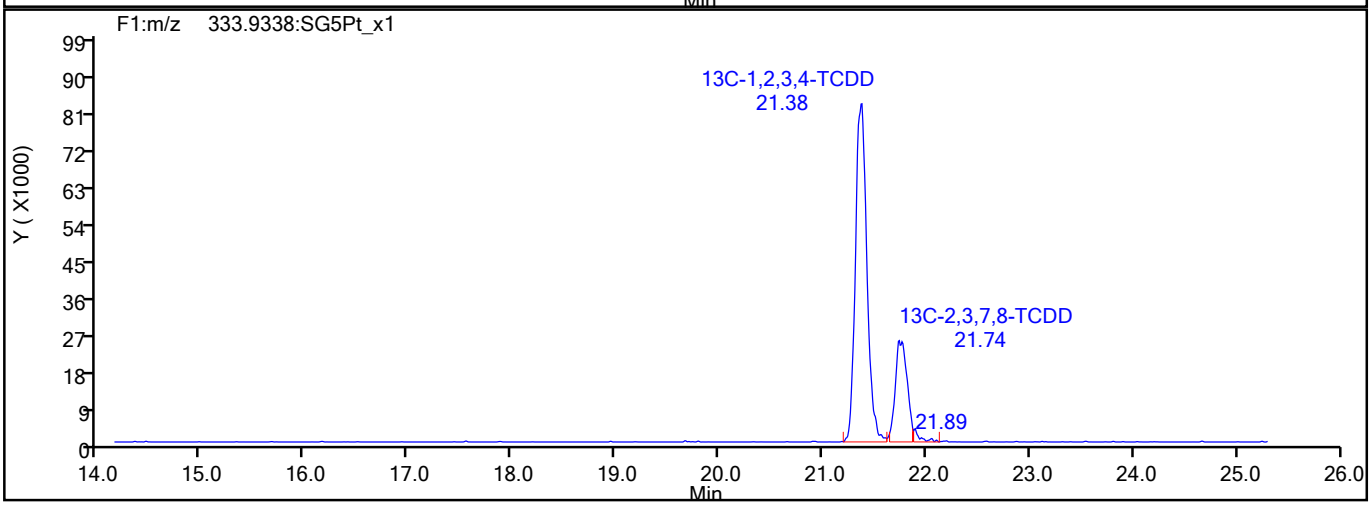

787811

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

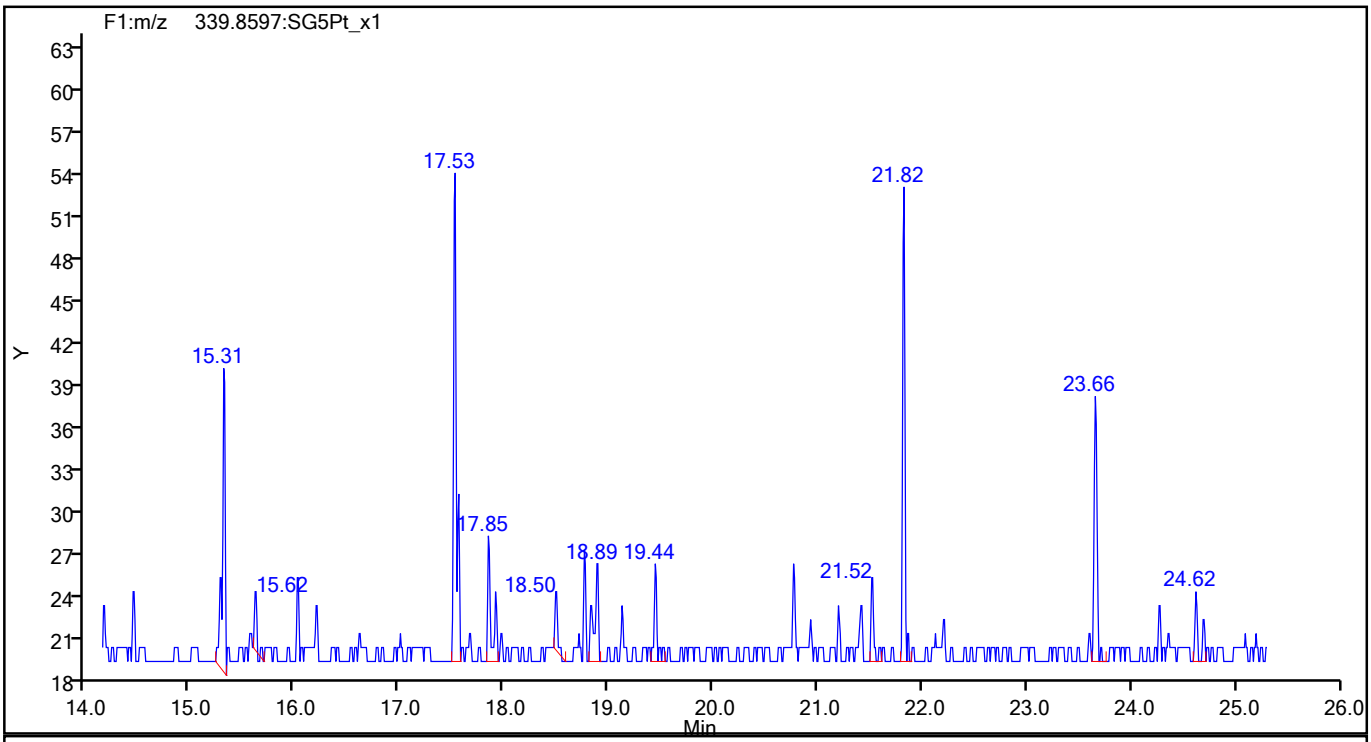

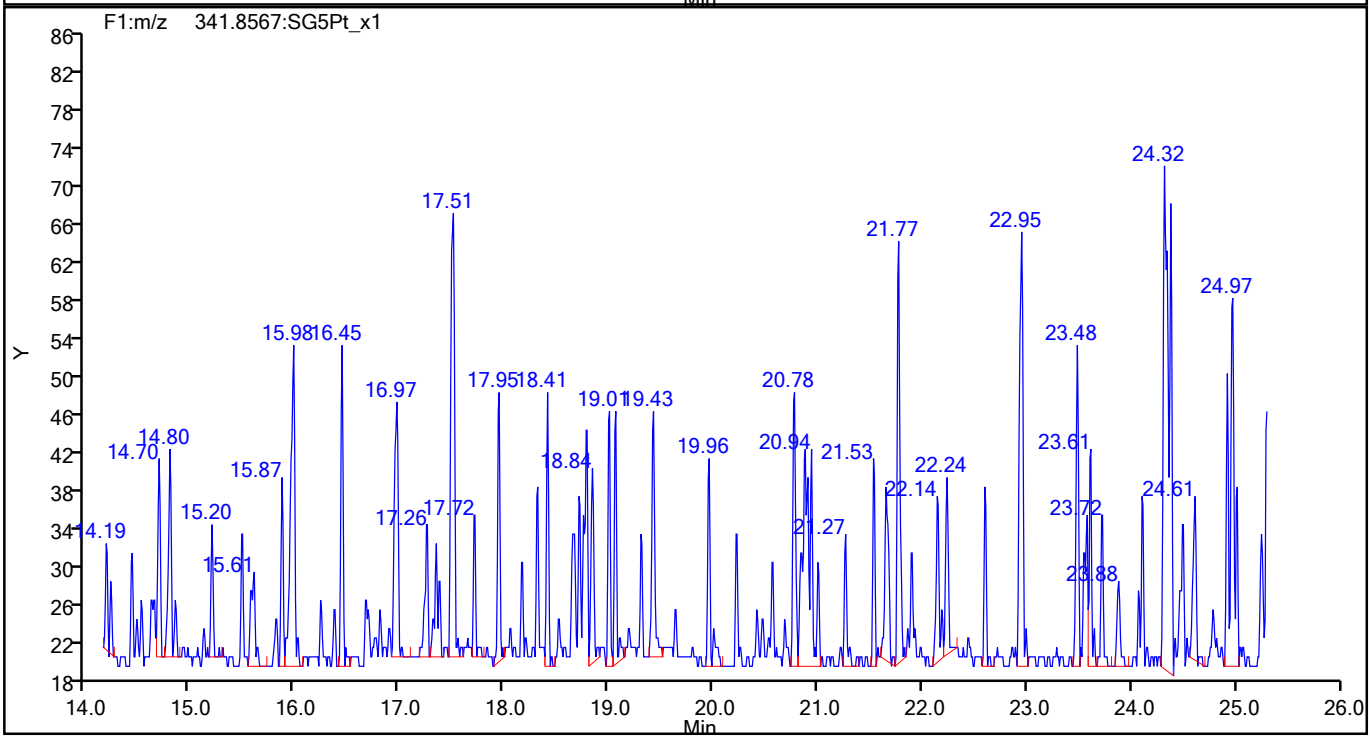

787812

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

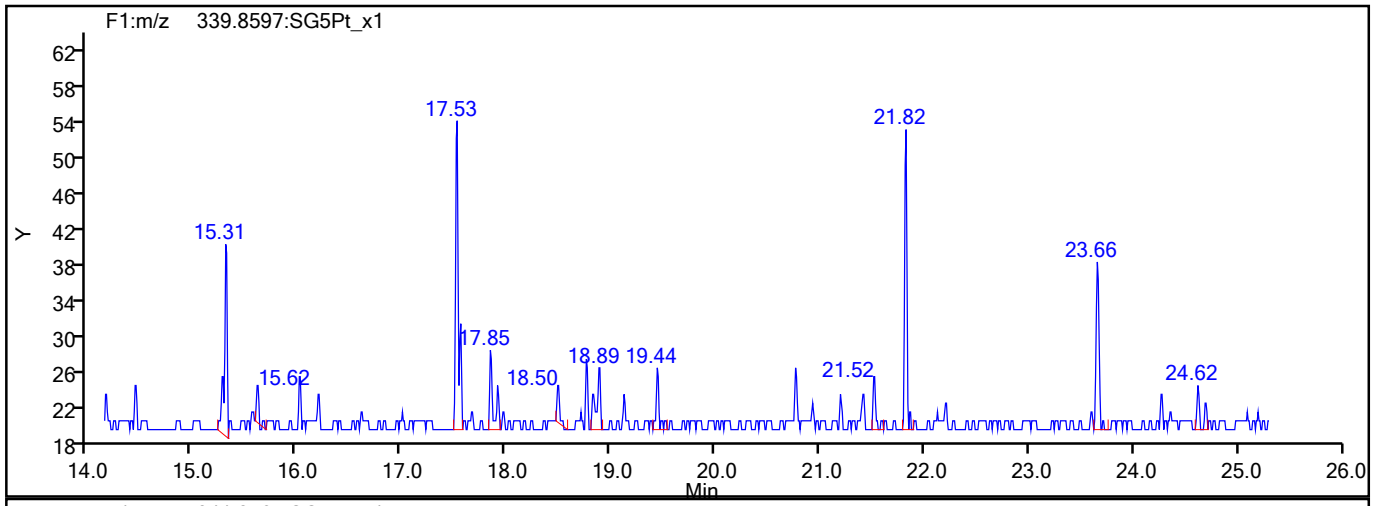

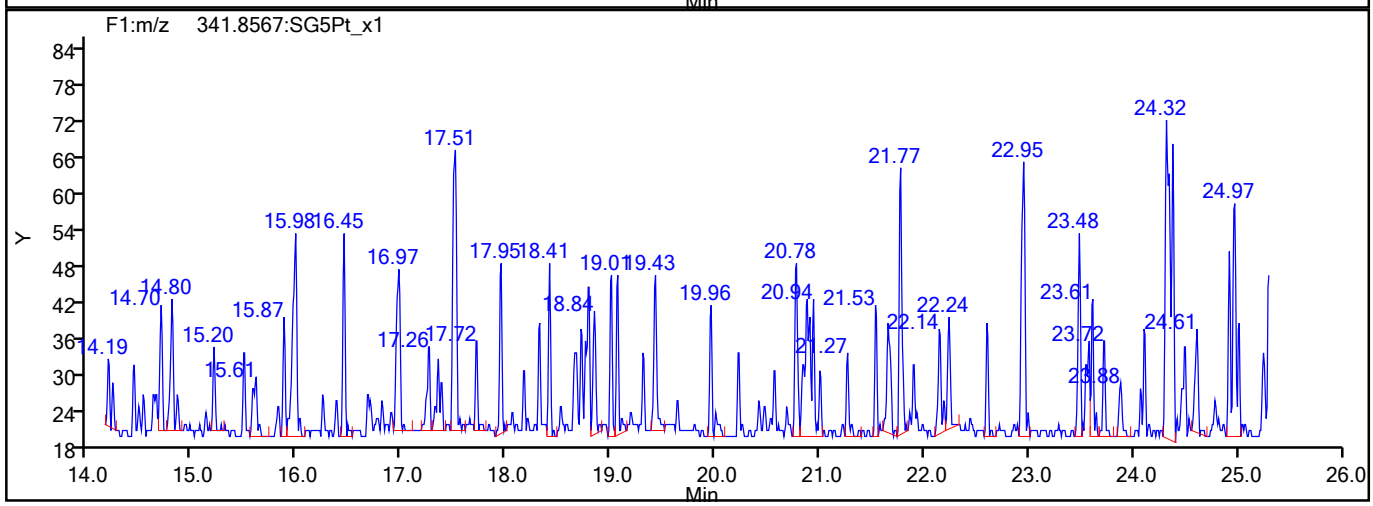

F1 PeCDFs Interference Mass

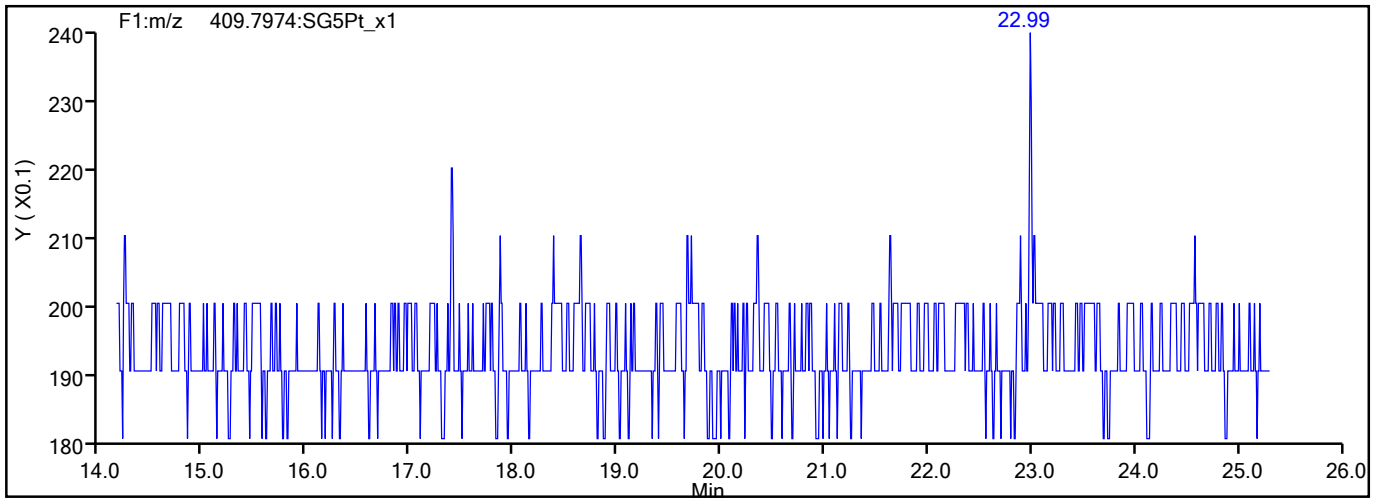

787813

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

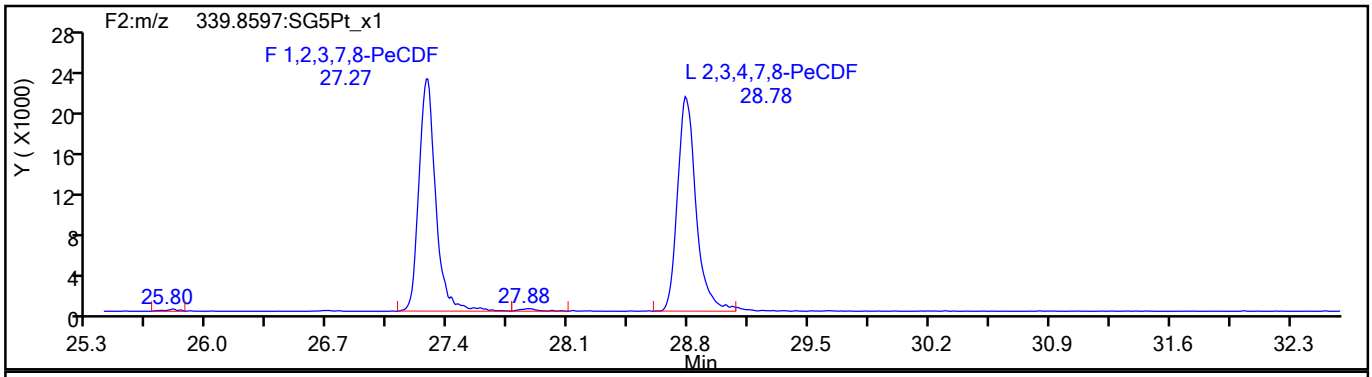

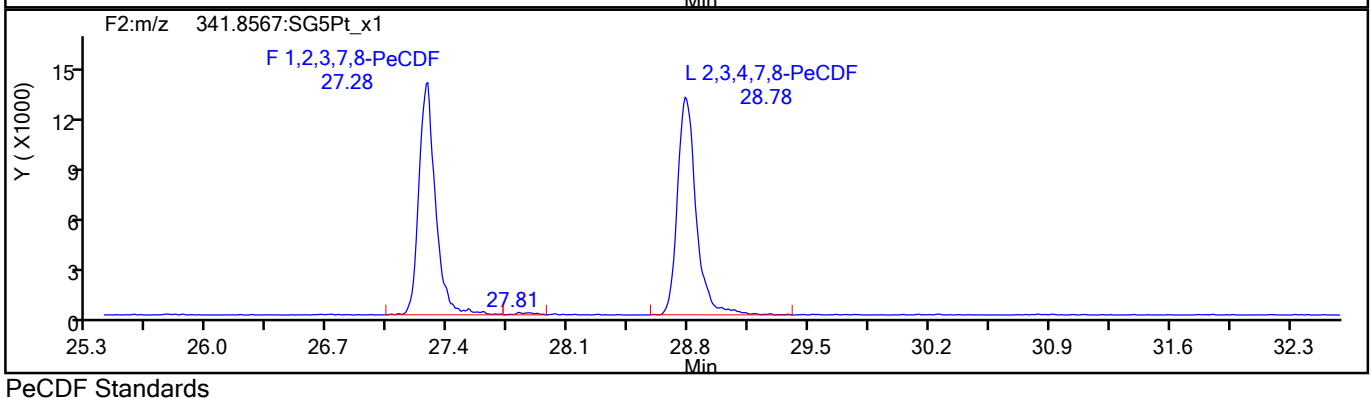

PeCDF Standards

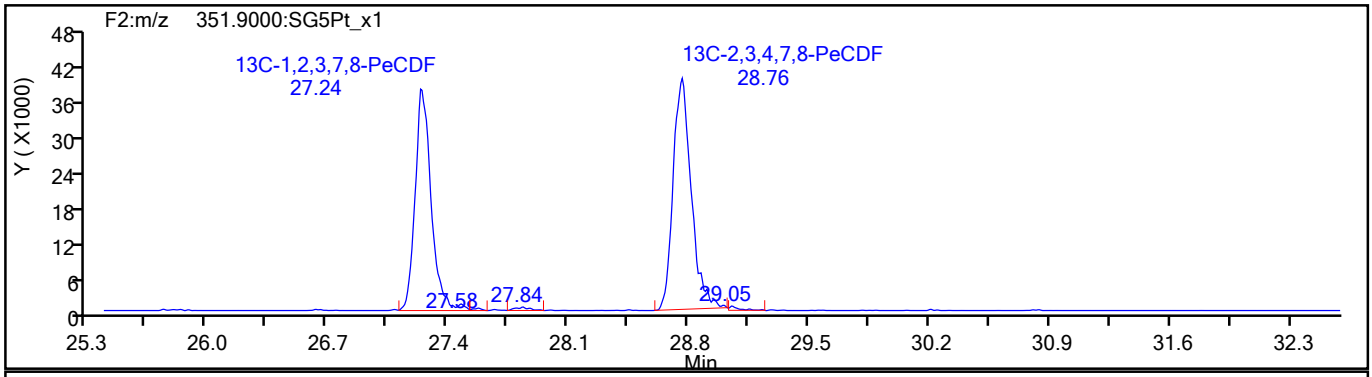

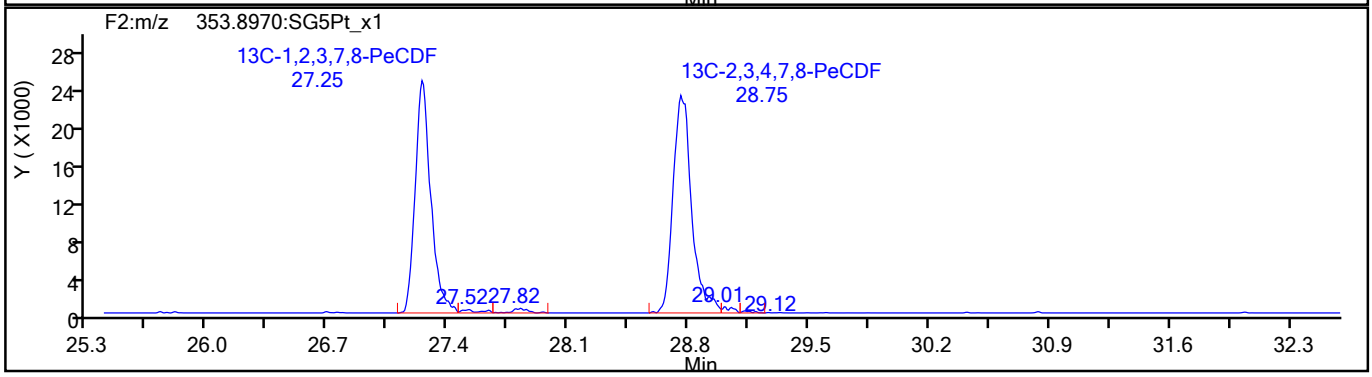

787814

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

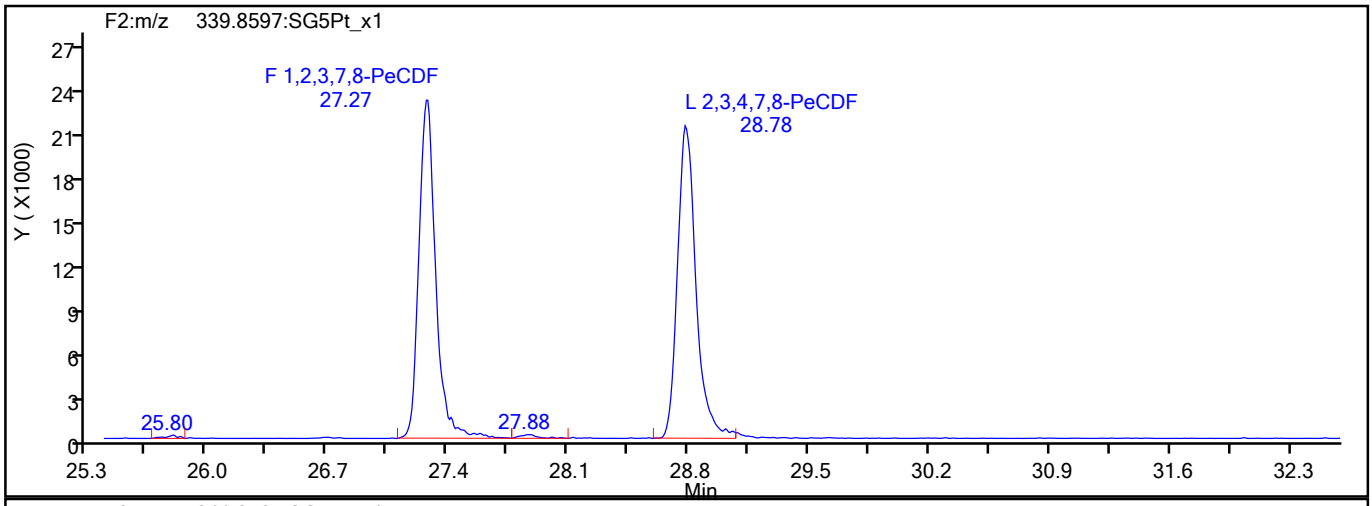

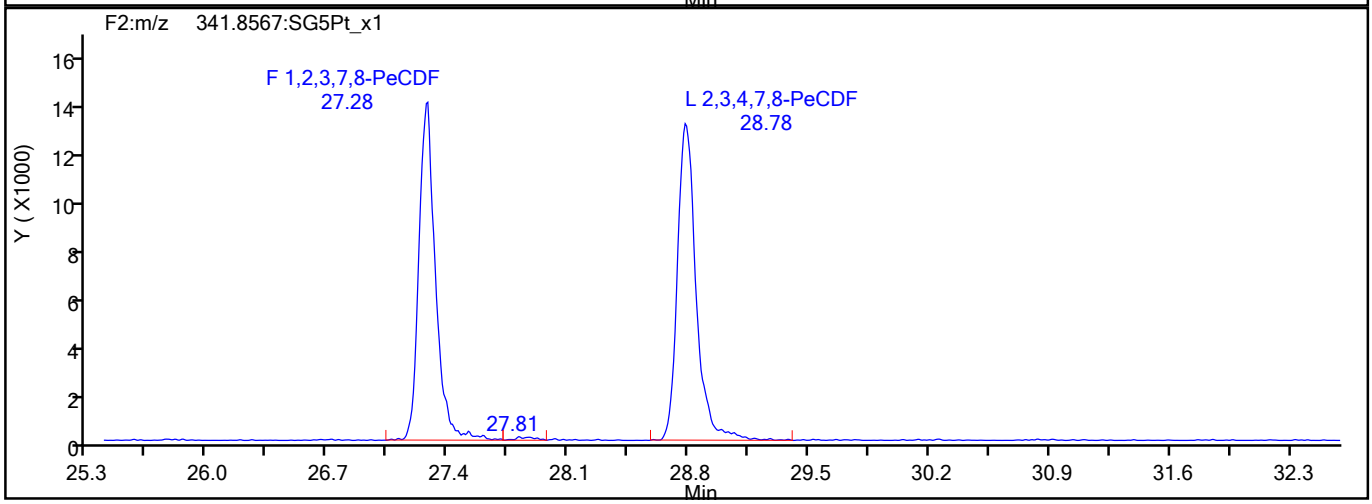

PeCDF Interference Mass

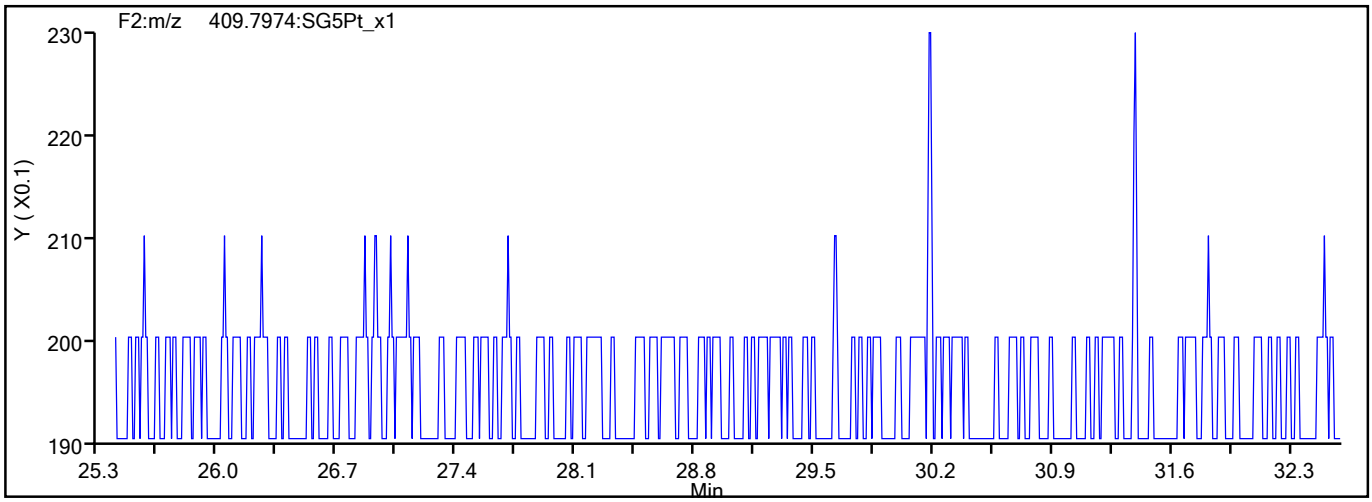

787815

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

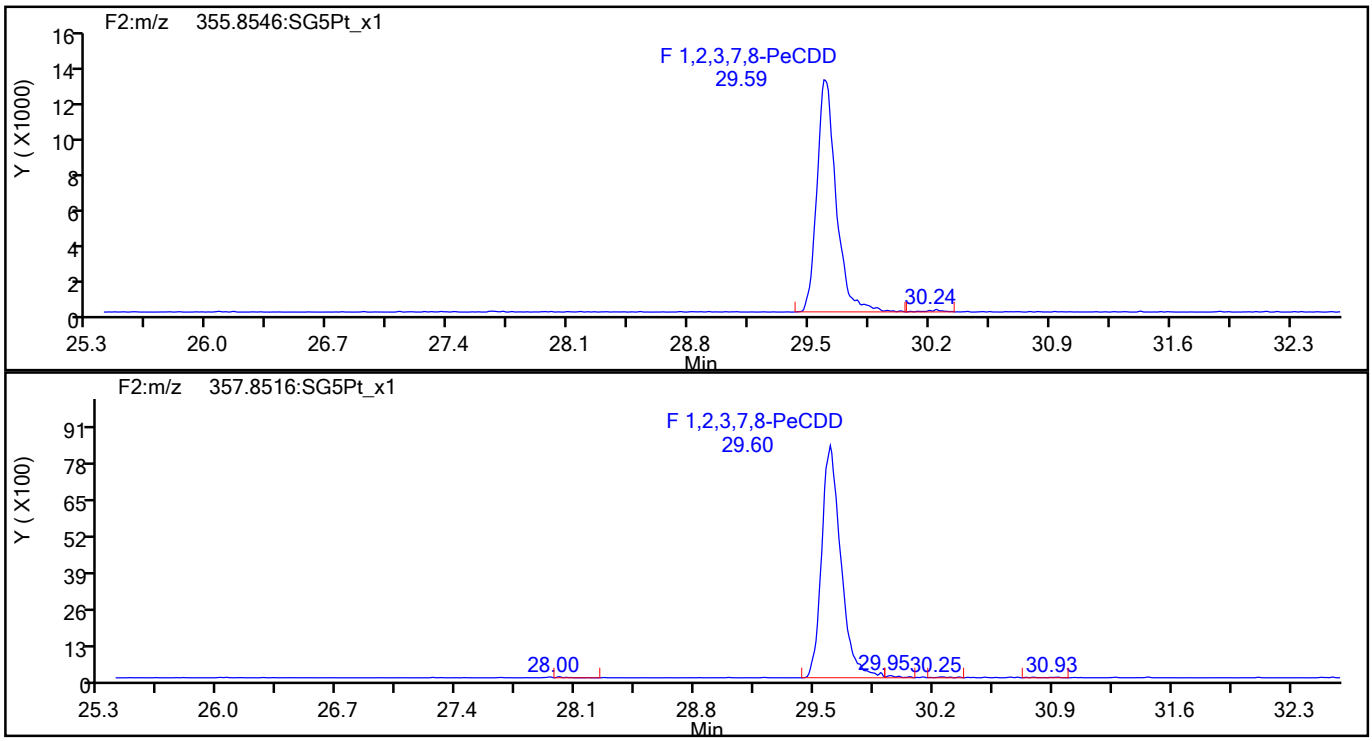

PeCDD Standards

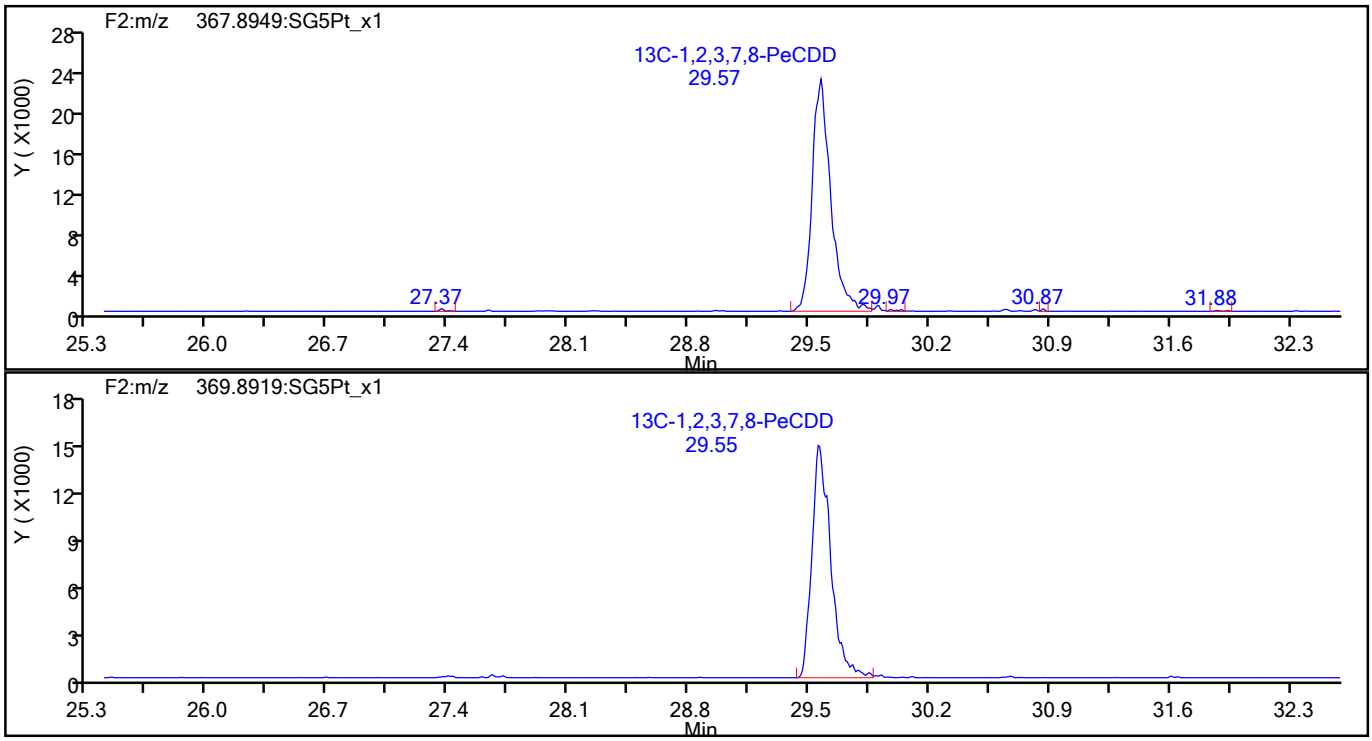

787816

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

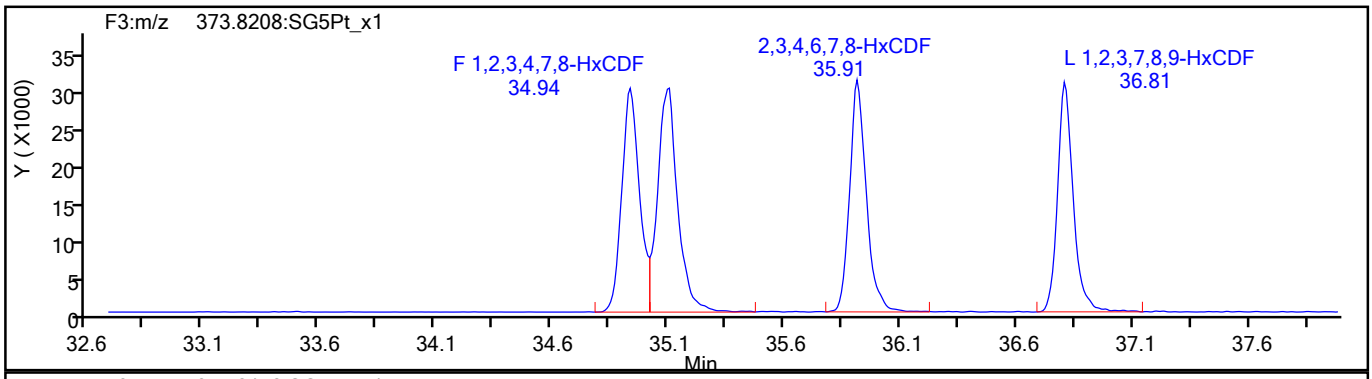

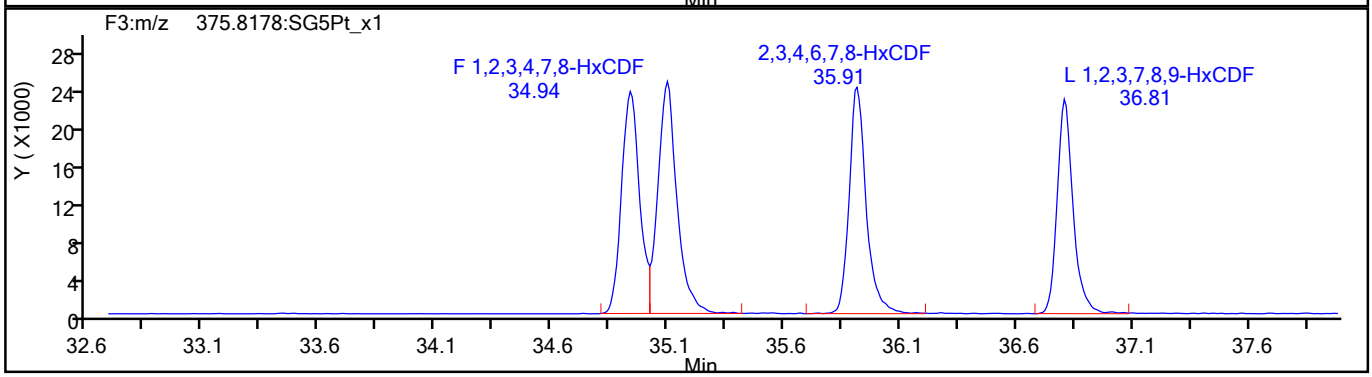

HxCDF Standards

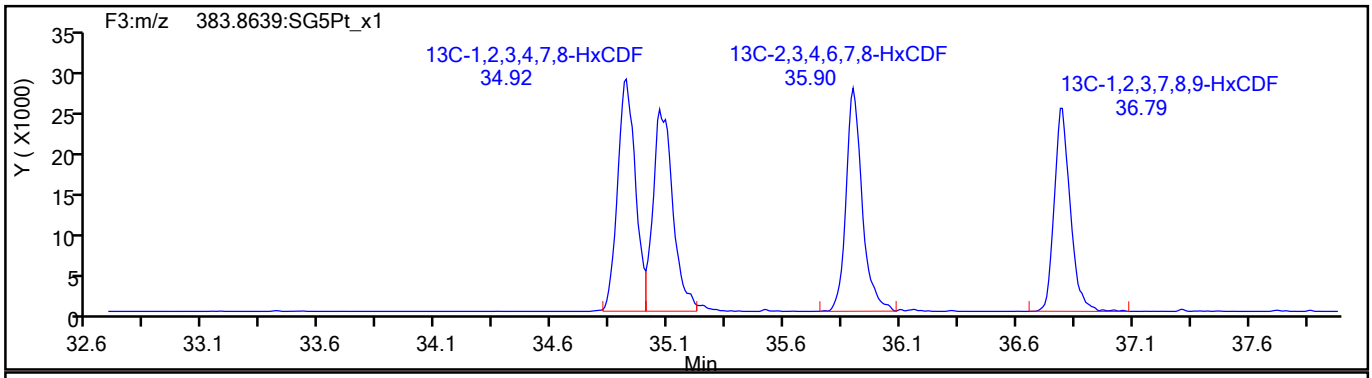

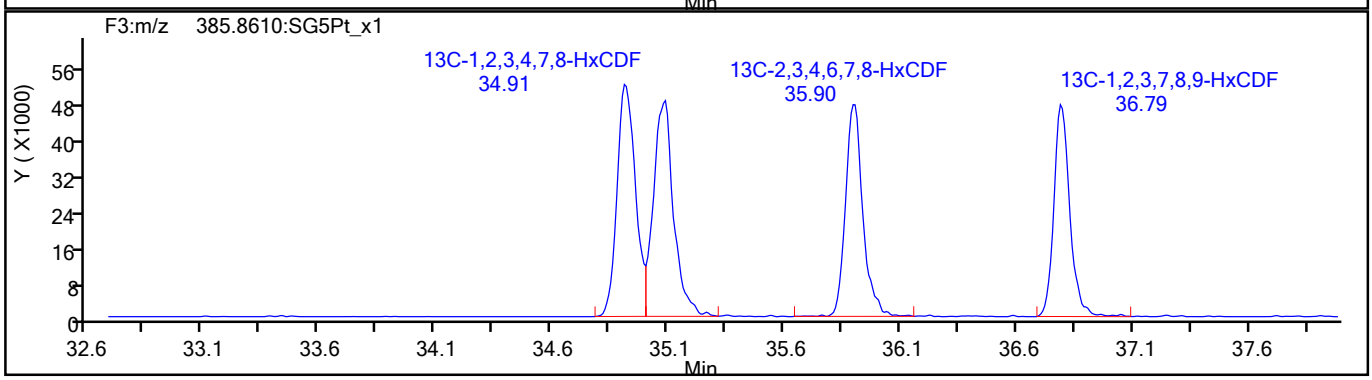

787817

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

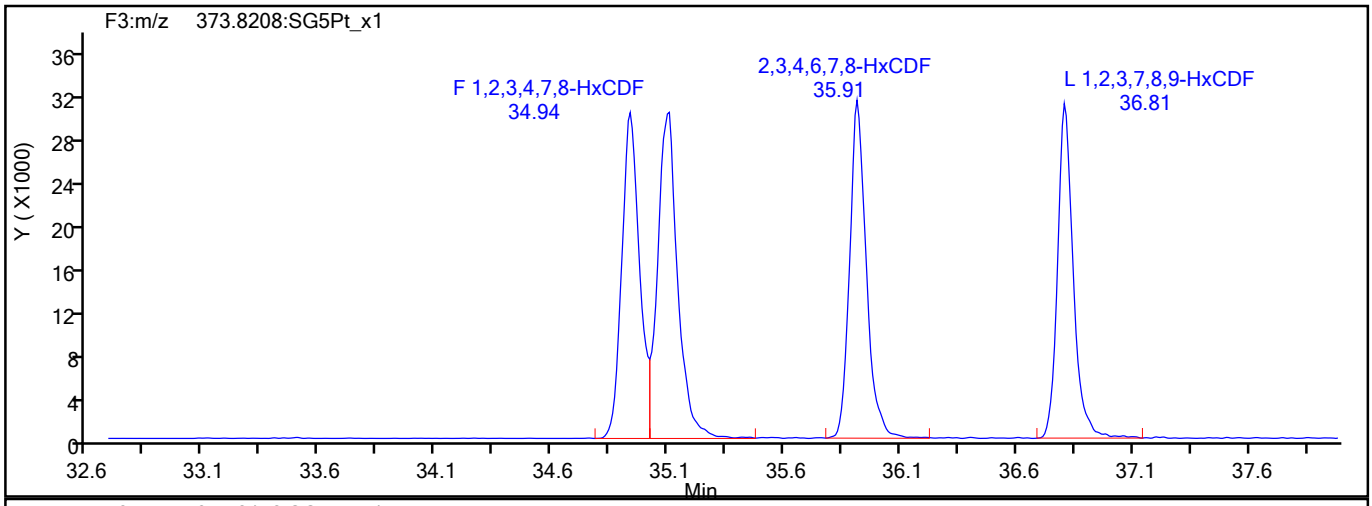

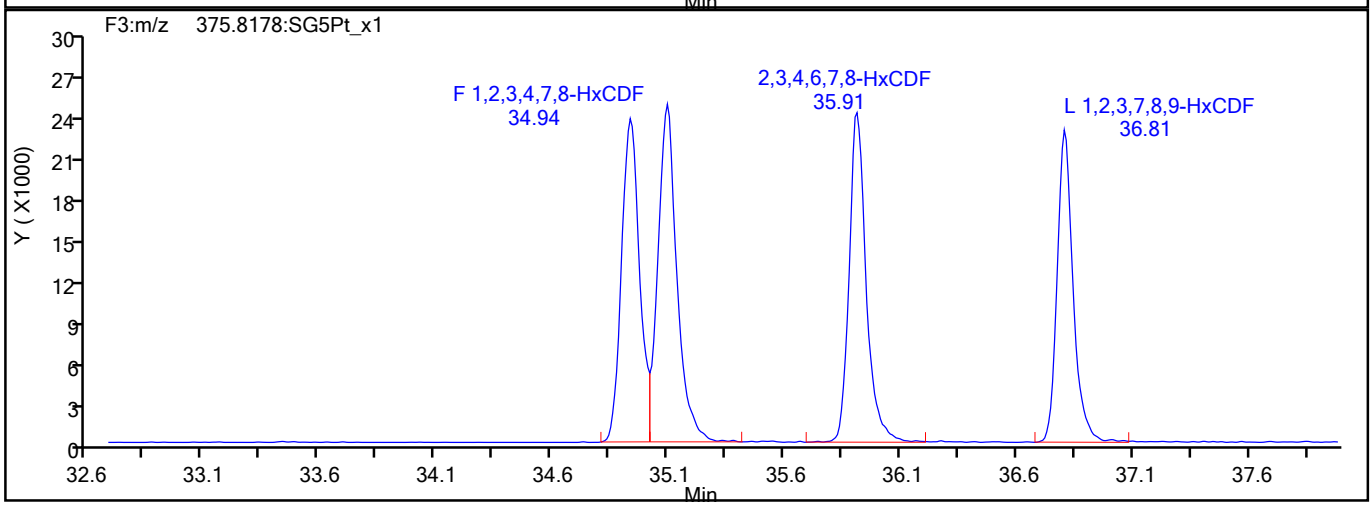

HxCDF Interference Mass

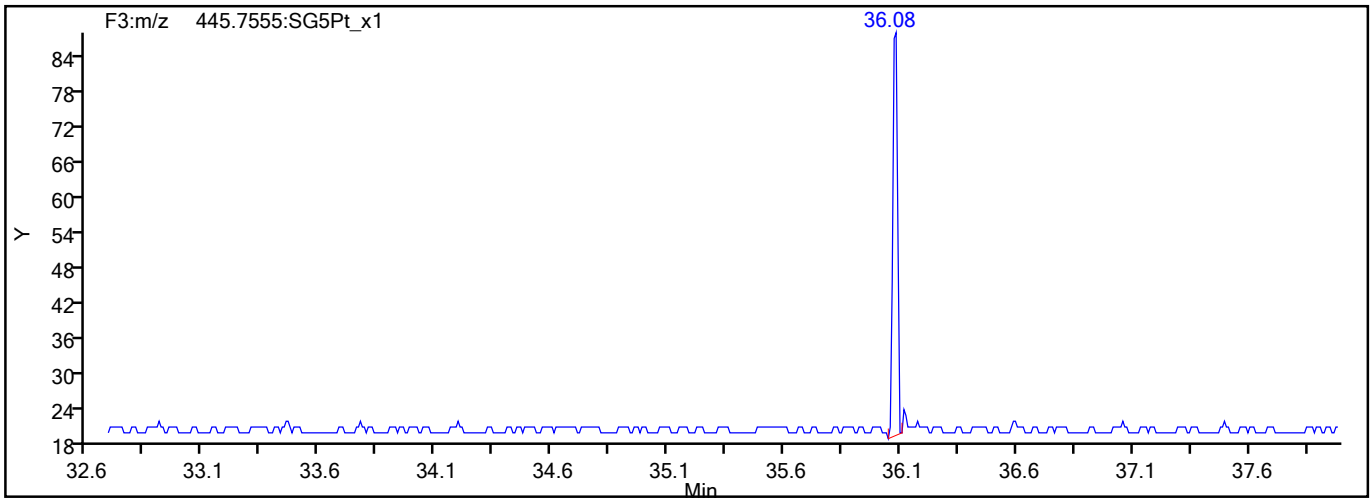

787818

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

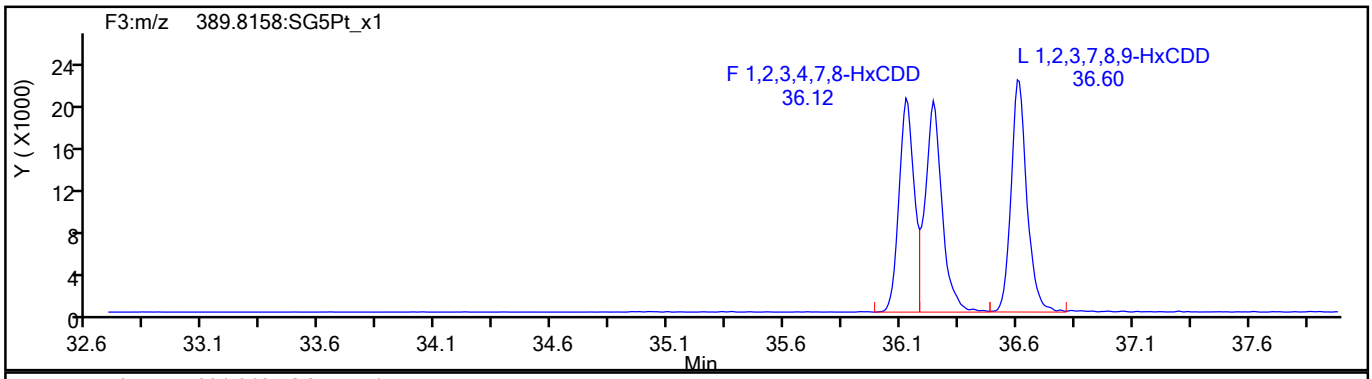

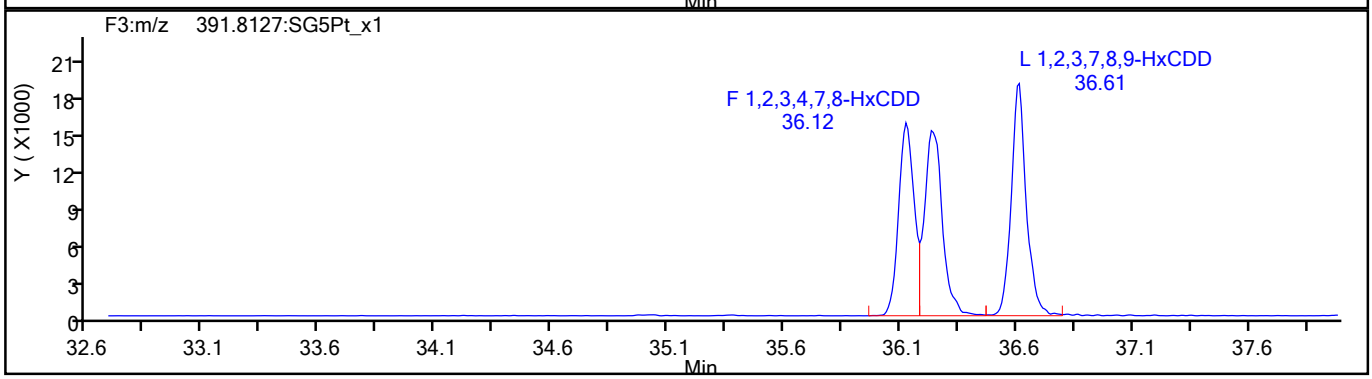

HxCDD Standards

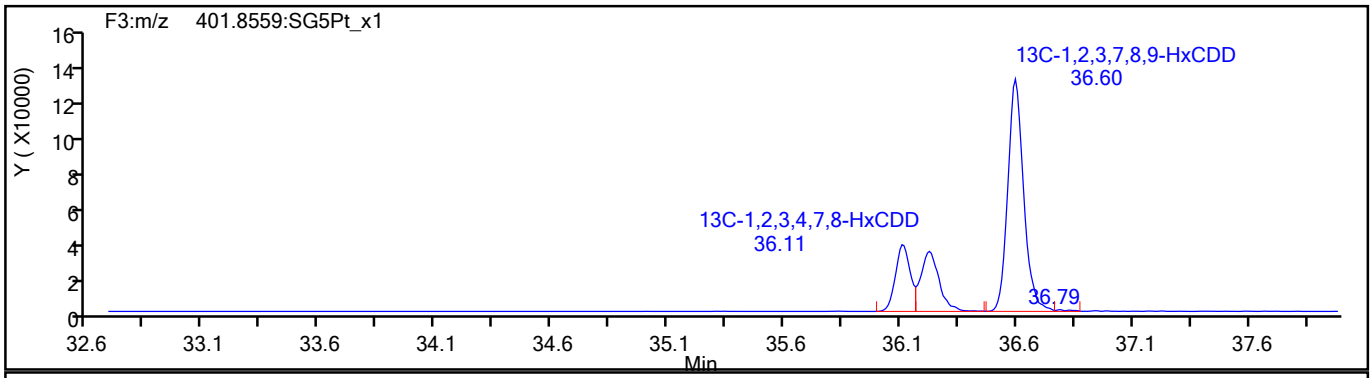

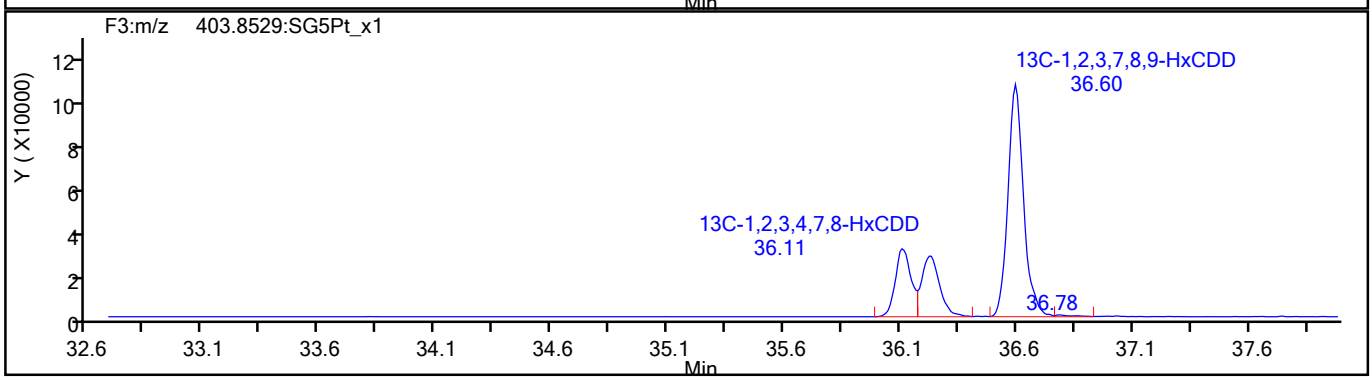

787819

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

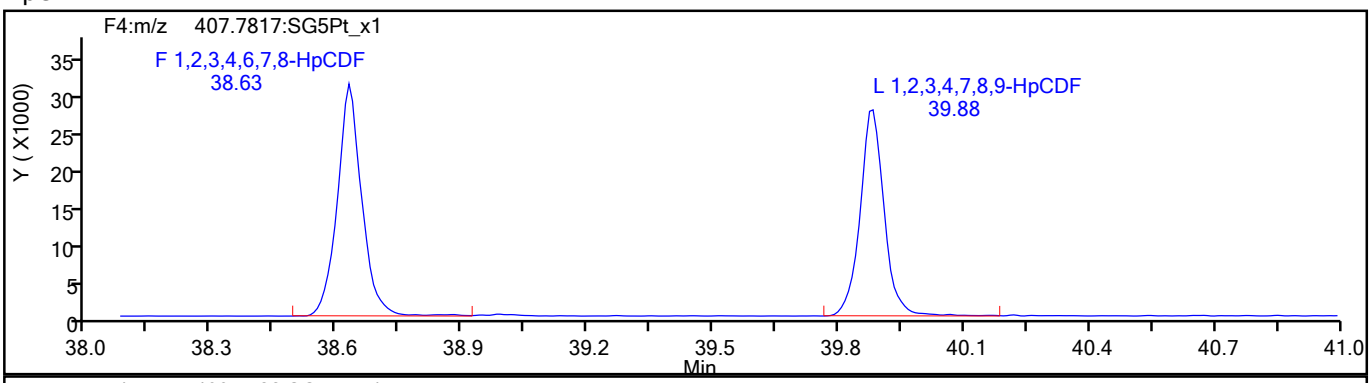

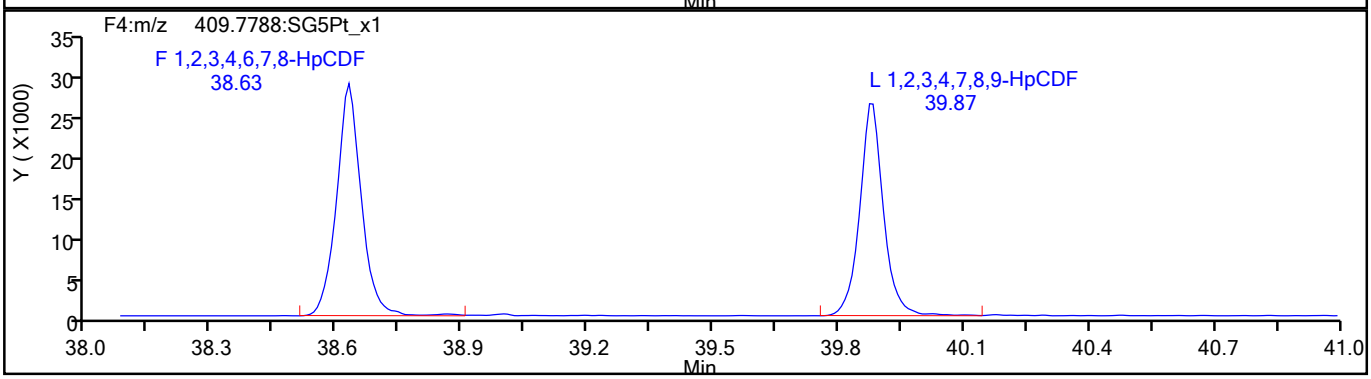

HpCDF Standards

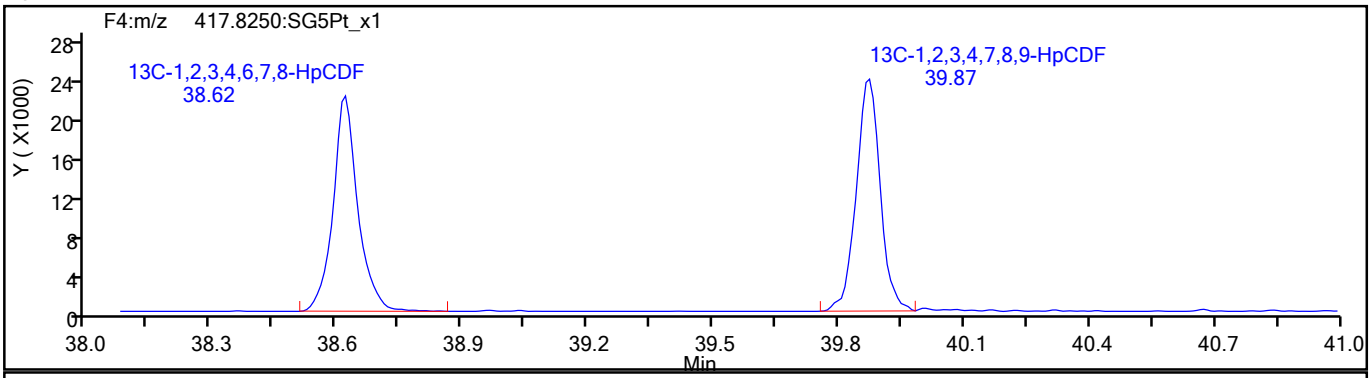

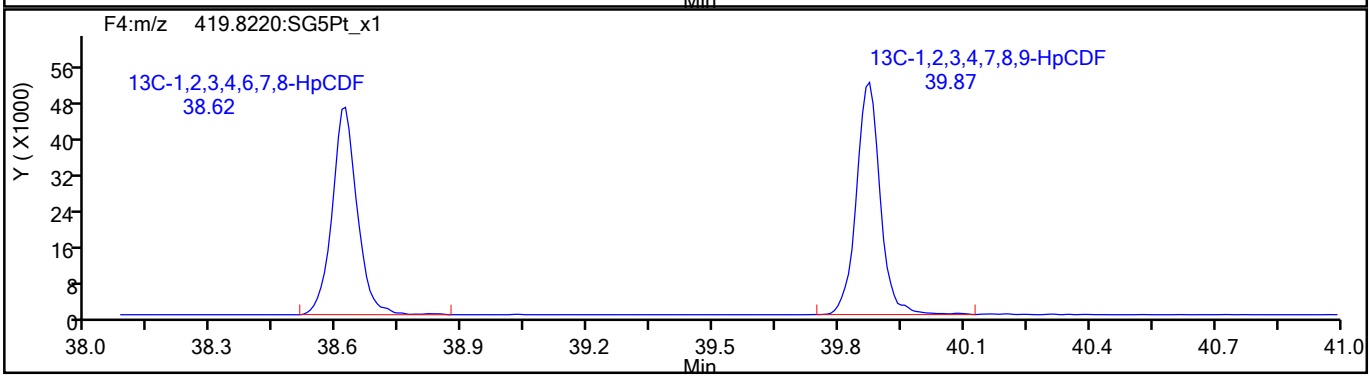

787820

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

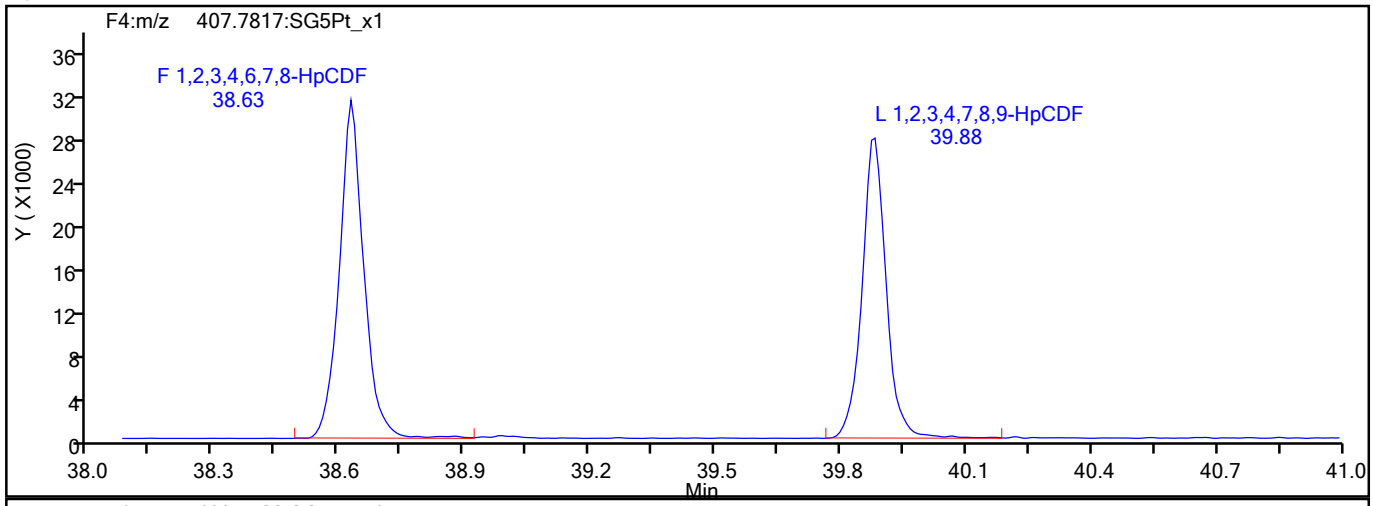

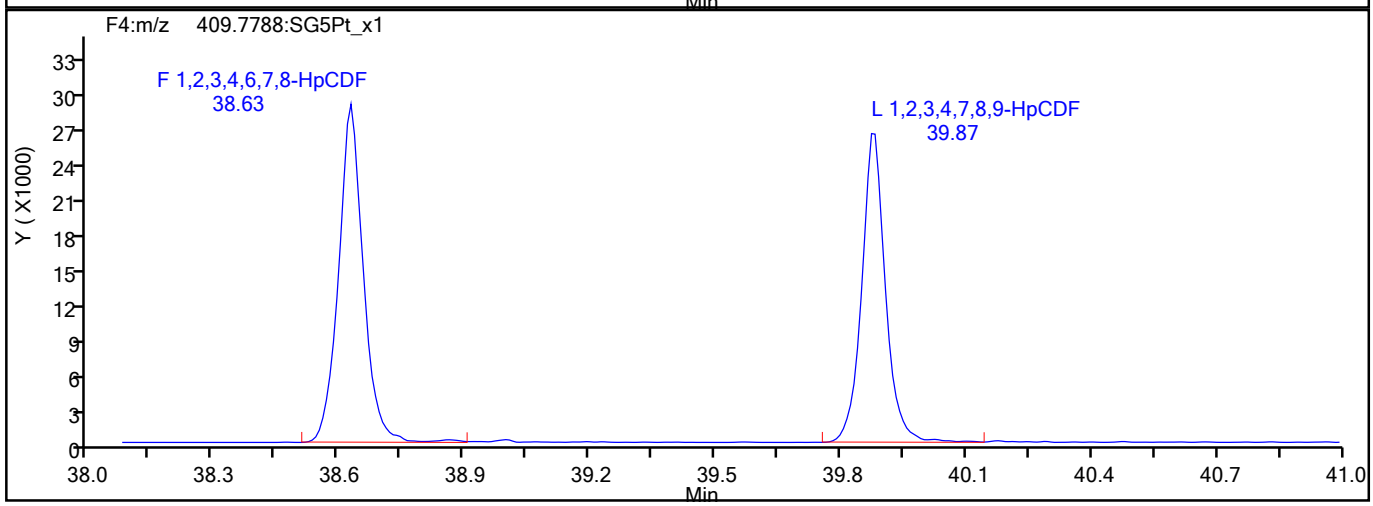

HpCDF Interference Mass

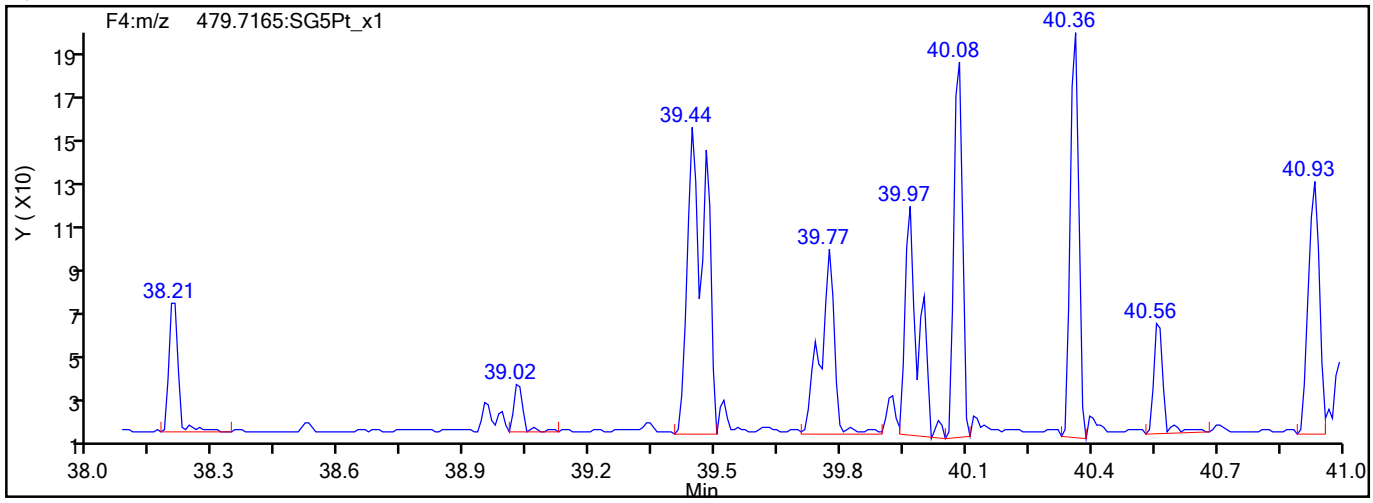

787821

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

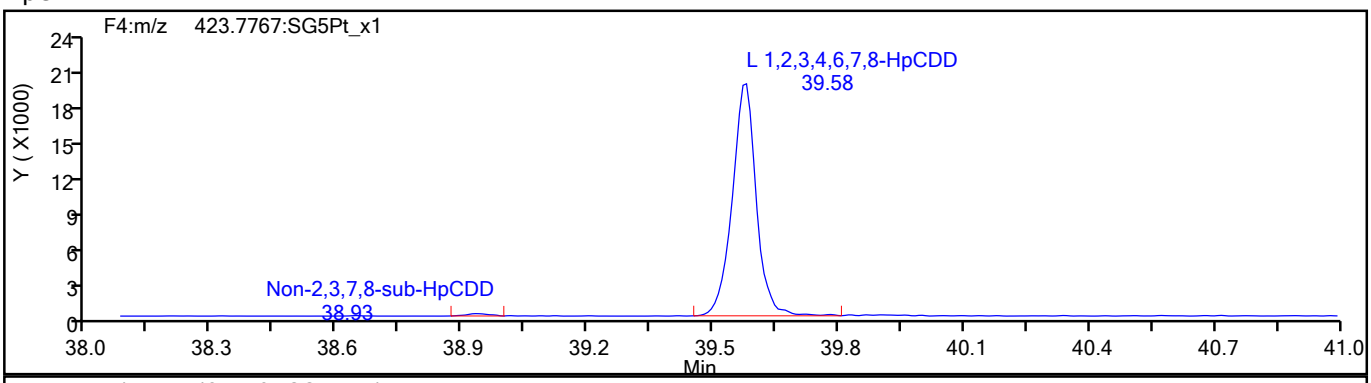

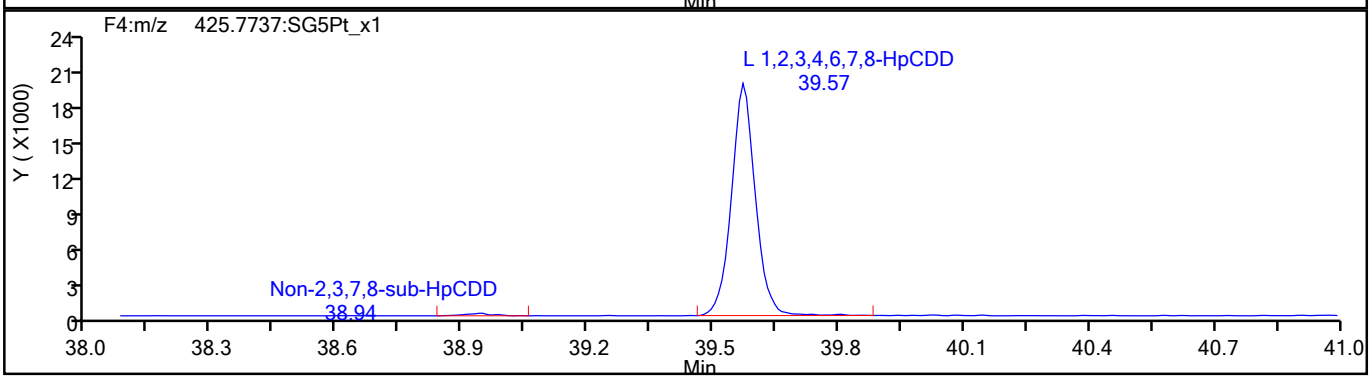

HpCDD Standards

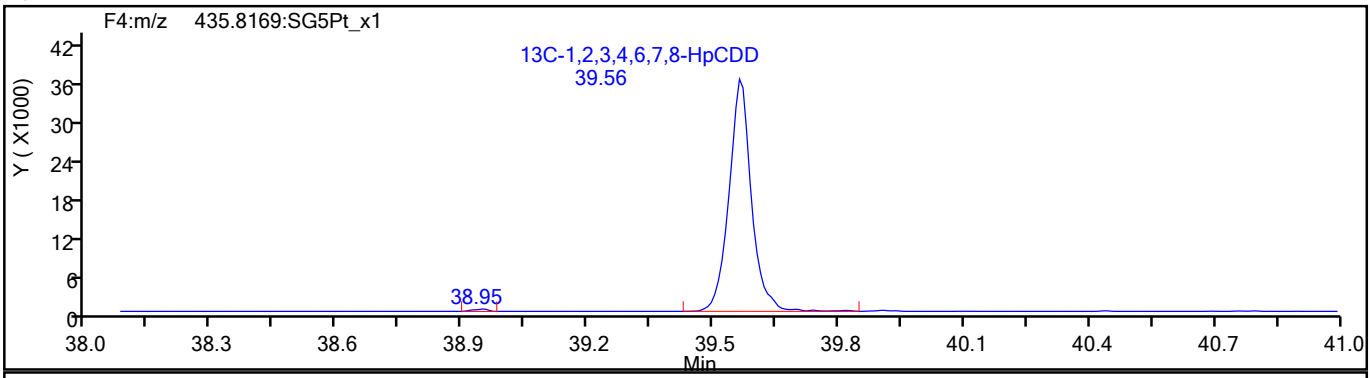

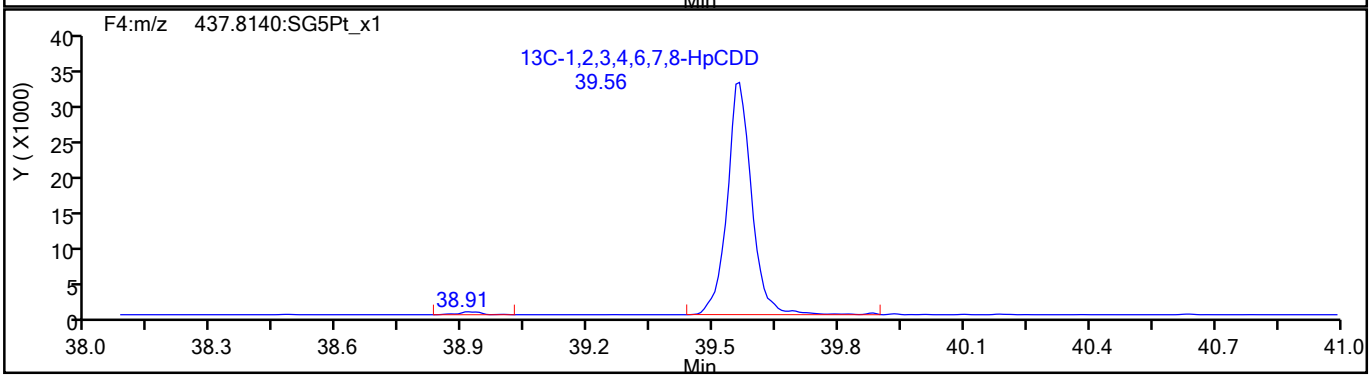

787822

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

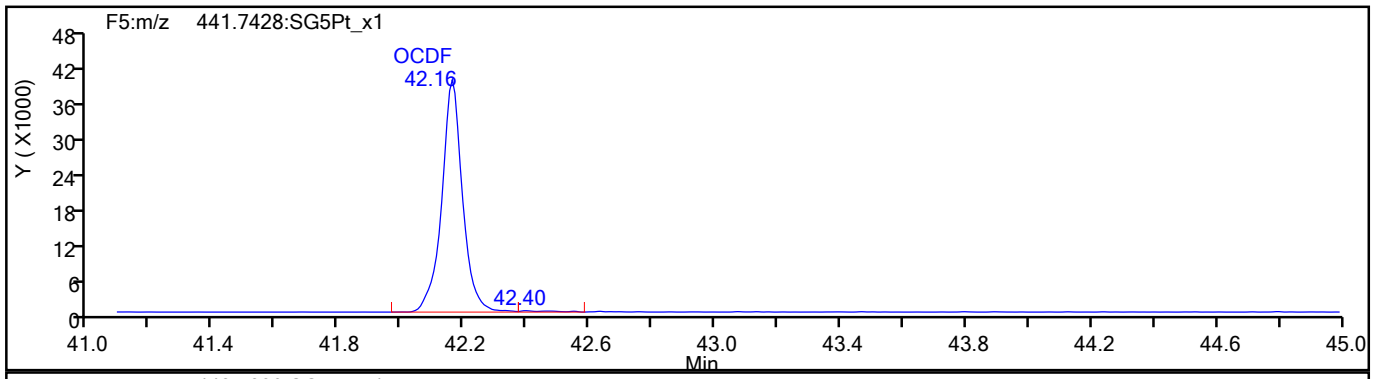

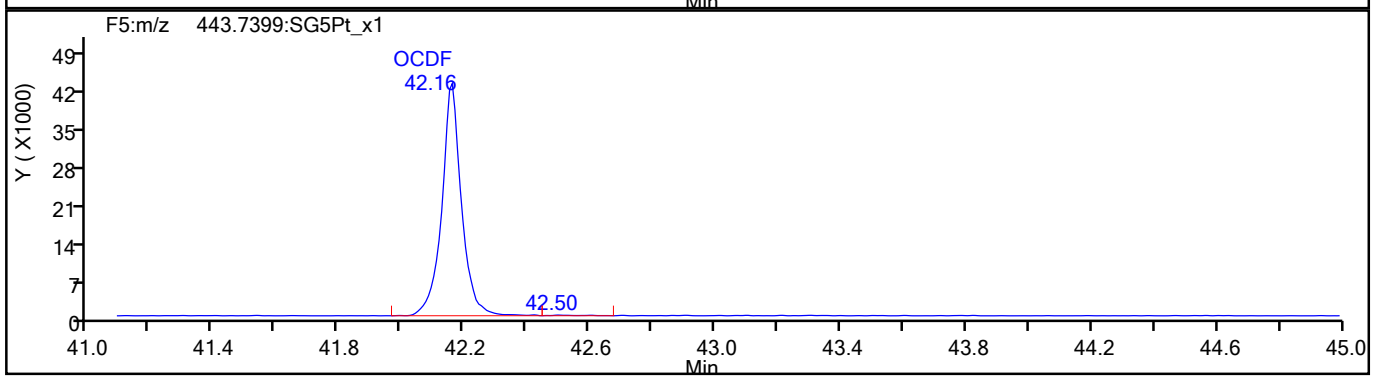

OCDF Standards

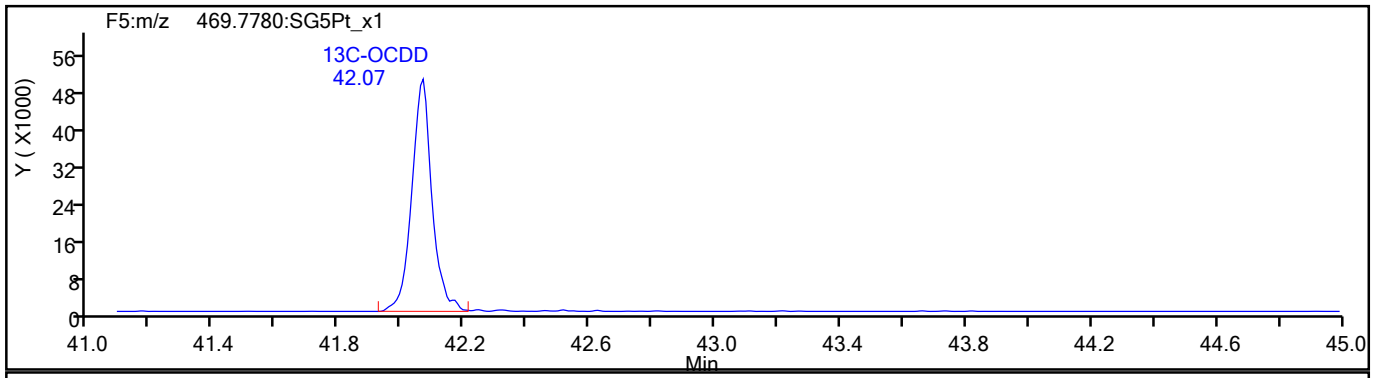

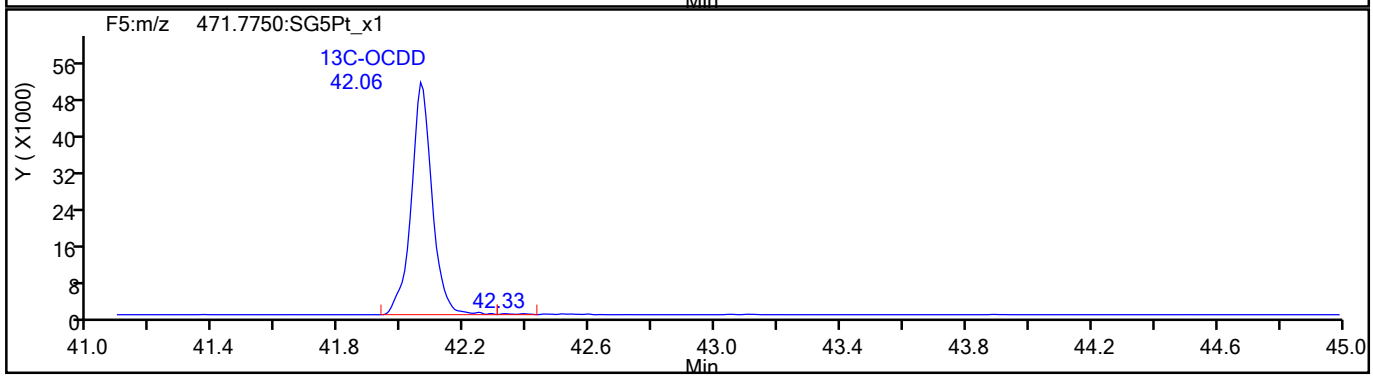

787823

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

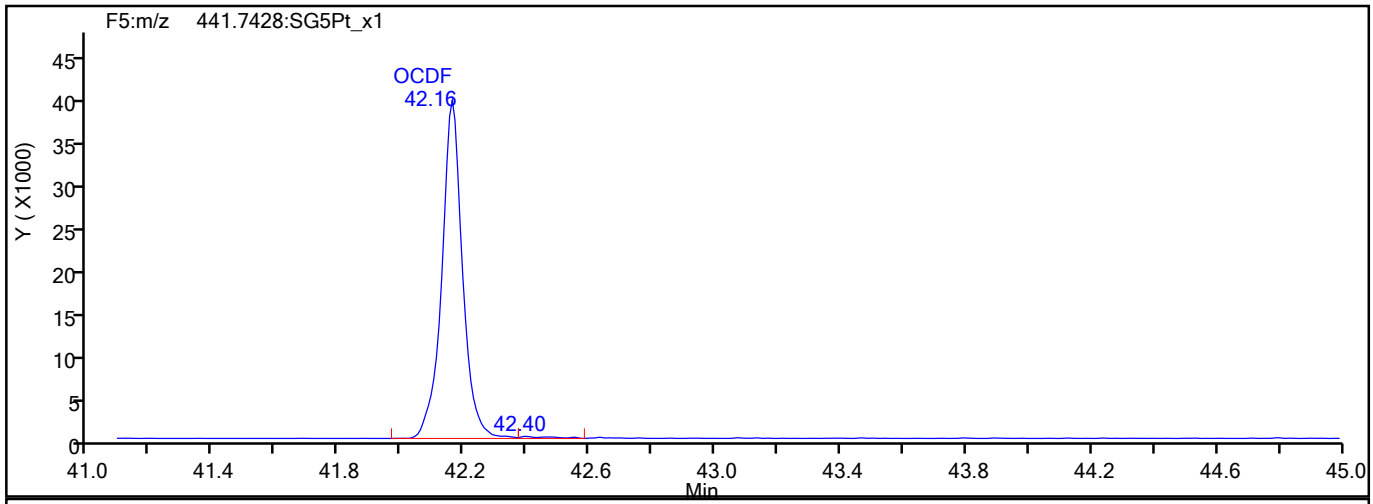

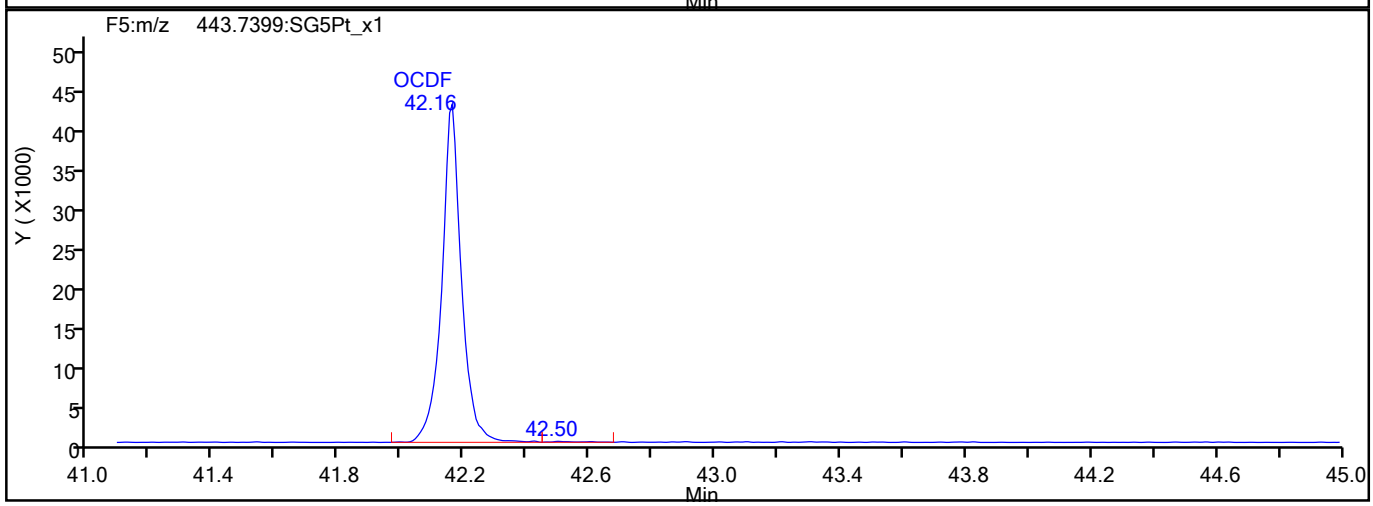

OCDF Interference Mass

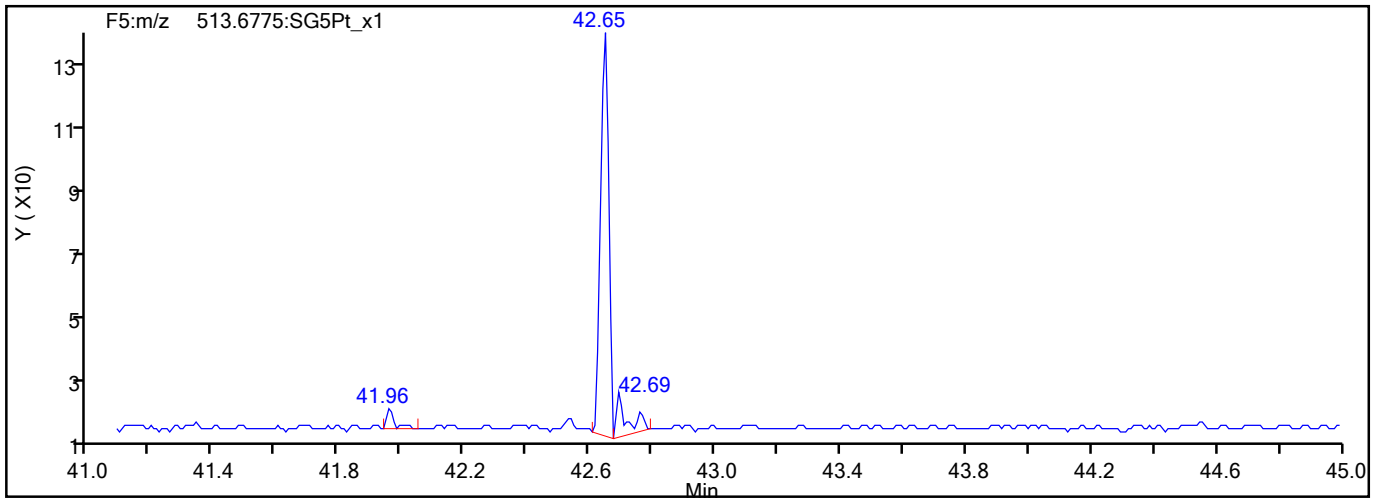

787824

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

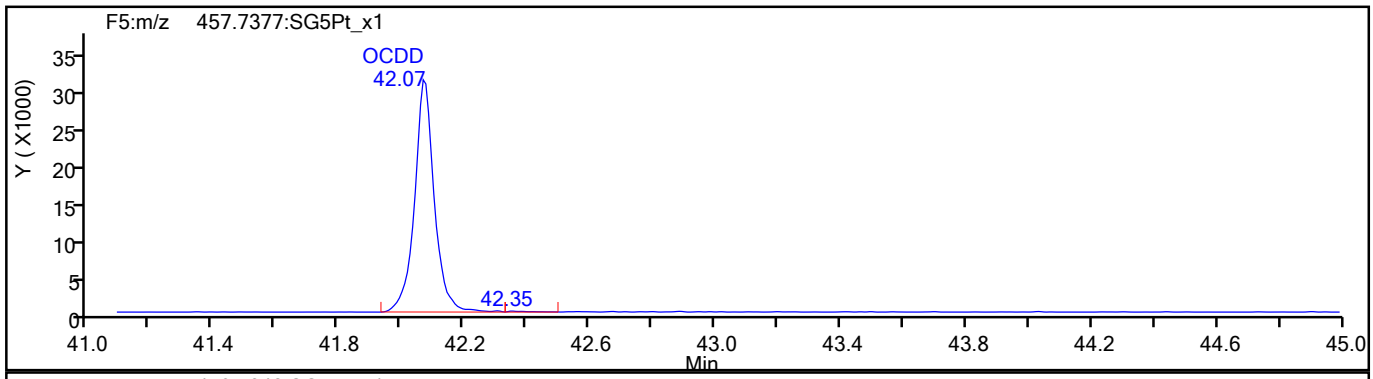

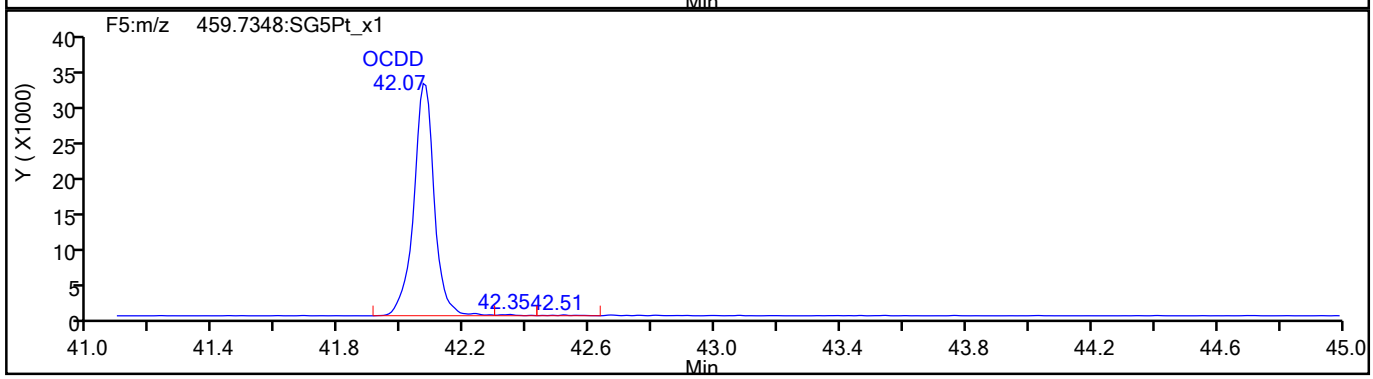

OCDD Standards

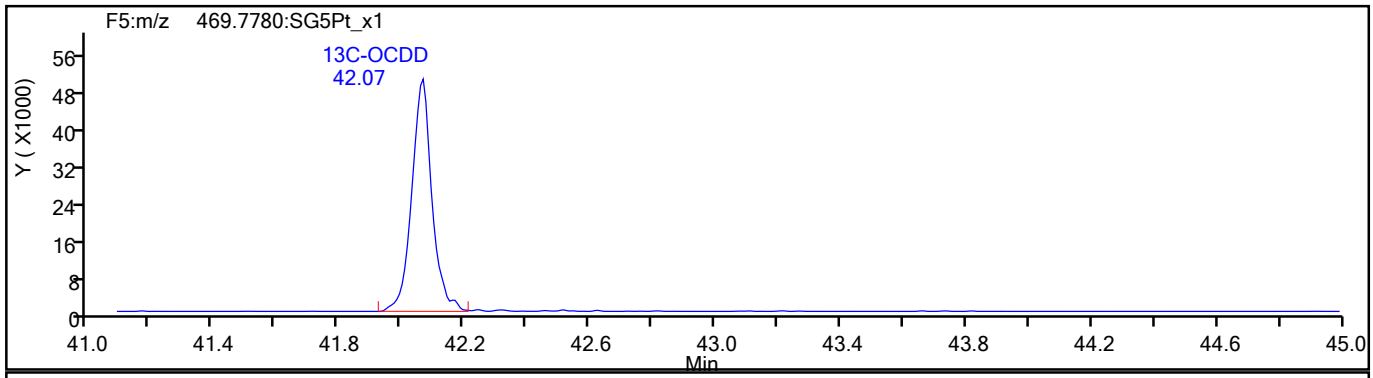

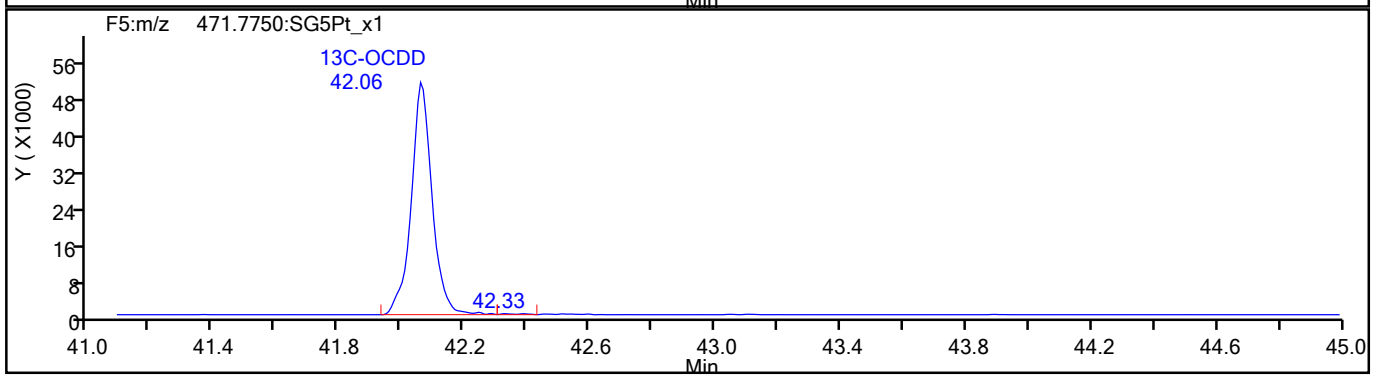

787825

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

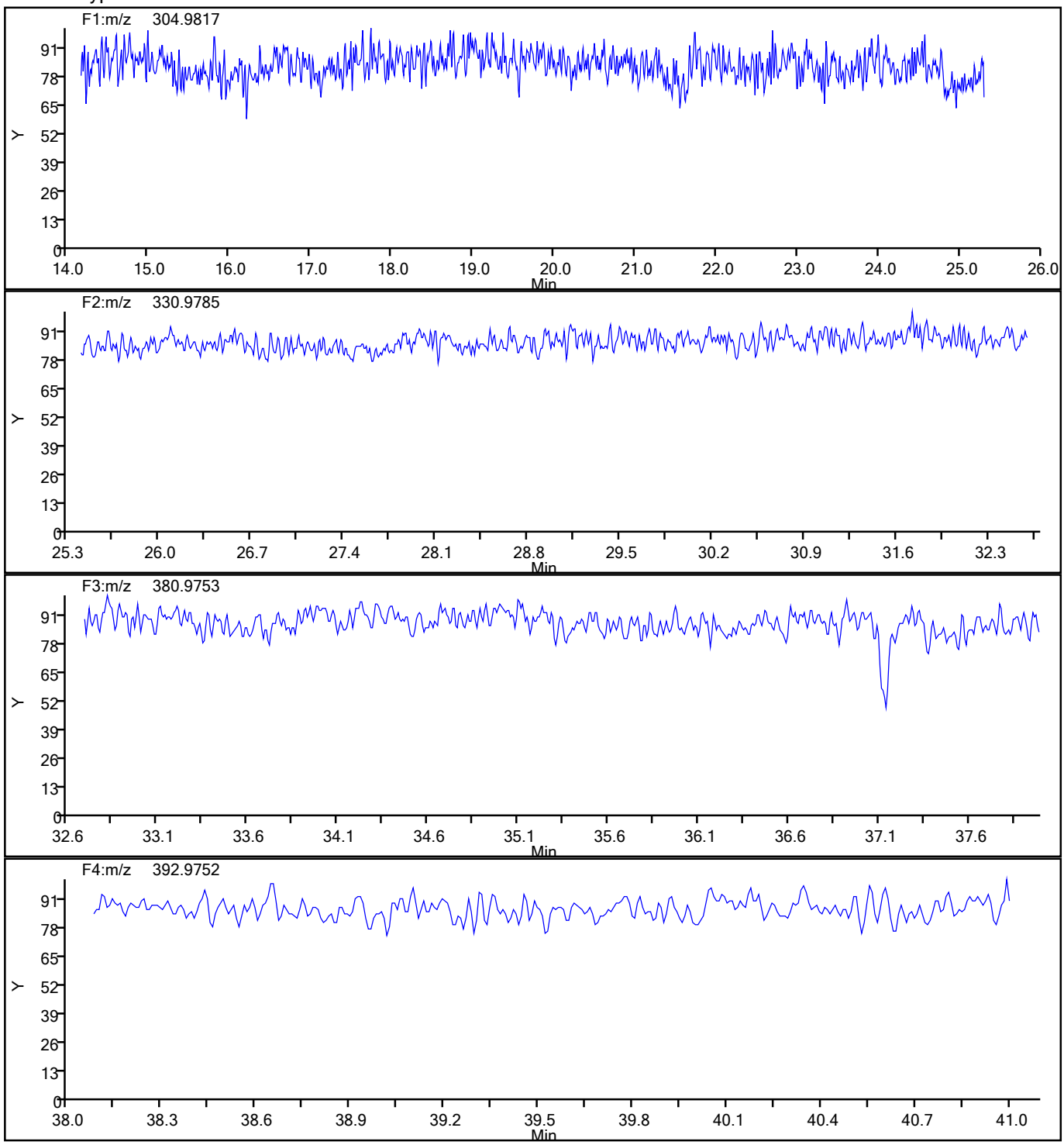

787826

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

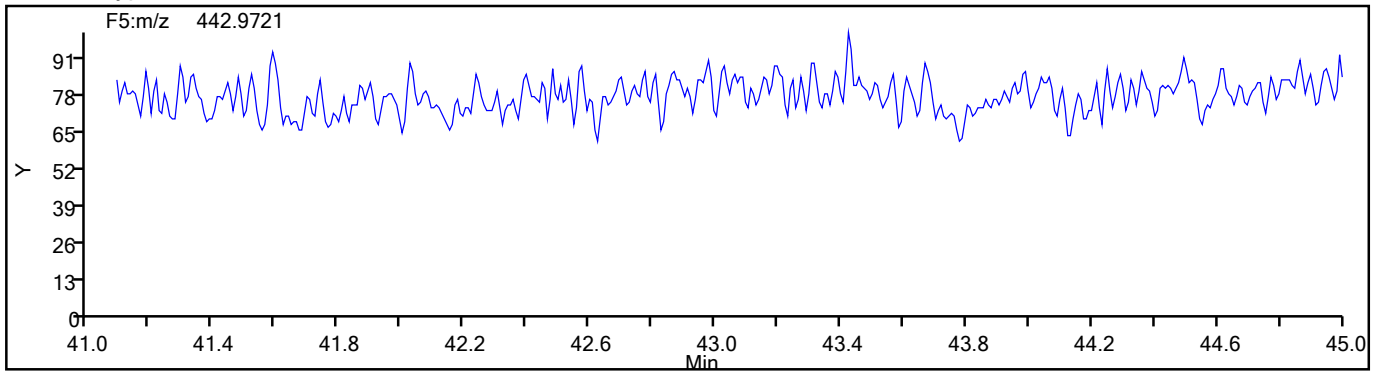

787827

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76888-A-1-B MS
Matrix: Sediment
Lab File ID: 19au21dfs1_22.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.30(g)
Date Analyzed: 08/20/2021 05:33
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	22000		32	32
40321-76-4	1,2,3,7,8-PeCDD	470		90	6.7
57117-41-6	1,2,3,7,8-PeCDF	2670		90	14
57117-31-4	2,3,4,7,8-PeCDF	1900		90	14
39227-28-6	1,2,3,4,7,8-HxCDD	196		90	1.9
57653-85-7	1,2,3,6,7,8-HxCDD	203		90	2.1
19408-74-3	1,2,3,7,8,9-HxCDD	201		90	1.8
70648-26-9	1,2,3,4,7,8-HxCDF	3130		90	12
57117-44-9	1,2,3,6,7,8-HxCDF	1040		90	13
72918-21-9	1,2,3,7,8,9-HxCDF	251		90	13
60851-34-5	2,3,4,6,7,8-HxCDF	367		90	14
35822-46-9	1,2,3,4,6,7,8-HpCDD	265		90	1.1
67562-39-4	1,2,3,4,6,7,8-HpCDF	1100		90	3.6
55673-89-7	1,2,3,4,7,8,9-HpCDF	495		90	3.7
3268-87-9	OCDD	1050		180	2.9
39001-02-0	OCDF	890		180	3.4
41903-57-5	Total TCDD	24100		32	32
30402-14-3	Total TCDF	200000		150	150
36088-22-9	Total PeCDD	470		90	6.7
30402-15-4	Total PeCDF	7700		90	14
34465-46-8	Total HxCDD	612		90	1.9
55684-94-1	Total HxCDF	5290		90	13
37871-00-4	Total HpCDD	326		90	1.1
38998-75-3	Total HpCDF	1760		90	3.6

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Client Sample ID: Lab Sample ID: 320-76888-A-1-B MS

Matrix: Sediment Lab File ID: 19au21dfs1_22.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10.30(g) Date Analyzed: 08/20/2021 05:33

Con. Extract Vol.: 20.0(uL) Dilution Factor: 10

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 46.3 GPC Cleanup:(Y/N) N

Analysis Batch No.: 518043 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	44		25-164
89059-46-1	13C-2,3,7,8-TCDF	41		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	39	q	25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	38		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	46		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	41		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	42		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	51		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	41		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	38		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	35		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	41		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	39		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	44		26-138
114423-97-1	13C-OCDD	41		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	90		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d
Lims ID: 320-76888-A-1-B MS
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MS
Inject. Date: 20-Aug-2021 05:33:00 ALS Bottle#: 0 Worklist Smp#: 20
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-b ms
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:22:19 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 16:58:35

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.444	145175	0.78	2.1E+04	10.0	10.0				a
D 13C-2,3,7,8-TCDF	20.456	80549	0.78	1.3459	4.123	4.123	0.2601	0.2601	41.23	
2,3,7,8-TCDF	20.473	27598918	0.80	1.0802	3172.0	3172.0	4.145	4.145	3.2E+005	E
A Non-2,3,7,8-sub-TCDF	19.851	20632522	0.77	1.0802	2373.0	2371.3	4.145	1392.8	0.00	RQMa
S Total TCDF					5545.0	5543.3	4.145	4.145		RQ
D 13C-2,3,7,8-TCDD	21.823	59738	0.84	0.9317	4.417	4.417	0.3983	0.3983	44.17	M
2,3,7,8-TCDD	21.848	3903989	0.80	1.0753	607.7	607.7	0.8976	0.8976	60773	Ea
$ 37Cl4-2,3,7,8-TCDD	21.840	52578		1.0083	3.592	3.592	0.2126	0.2126	89.80	
A Non-2,3,7,8-sub-TCDD	20.684	387719	0.76	1.0753	60.4	60.4	0.8976	54.1	0.00	a
S Total TCDD					668.1	668.1	0.8976	0.8976		
D 13C-1,2,3,7,8-PeCDF	27.290	63269	1.55	1.1405	3.821	3.821	0.0714	0.0714	38.21	
1,2,3,7,8-PeCDF	27.306	492047	1.57	1.0543	73.8	73.8	0.3792	0.3792	1475	M
D 13C-2,3,4,7,8-PeCDF	28.763	74448	1.66	1.1253	4.557	4.557	0.0724	0.0724	45.57	M
2,3,4,7,8-PeCDF	28.805	395052	1.62	1.0079	52.7	52.7	0.3814	0.3814	1053	
A F1 PeCDFs	24.634	4501	1.60	1.0311	0.6340	0.6340	0.006336	0.6340	0.00	a
A Non-2,3,7,8-sub-PeCDF	28.173	610241	1.55	1.0311	86.2	86.0	0.3802	27.8	0.00	RQMa
S Total PeCDF					213.2	213.0	0.3803	0.3803		RQ
D 13C-1,2,3,7,8-PeCDD	29.571	40060	1.55	0.7165	4.233	3.851	0.0131	0.0131	42.33	RQM
1,2,3,7,8-PeCDD	29.613	59938	1.58	1.0465	13.0	13.0	0.1840	0.1840	260	
A Non-2,3,7,8-sub-PeCDD	28.478						0.1840	0.3421		RQU
S Total PeCDD					13.0	13.0	0.1840	0.1840		
D 13C-1,2,3,4,7,8-HxCDF	34.920	72925	0.59	0.9648	5.092	5.092	0.0236	0.0236	50.92	
1,2,3,4,7,8-HxCDF	34.920	725377	1.26	1.1474	86.7	86.7	0.3418	0.3418	1734	
D 13C-1,2,3,6,7,8-HxCDF	35.063	64671	0.53	1.0708	4.069	4.069	0.0212	0.0212	40.69	
1,2,3,6,7,8-HxCDF	35.080	226831	1.31	1.2178	28.8	28.8	0.3582	0.3582	576	
D 13C-2,3,4,6,7,8-HxCDF	35.896	53384	0.48	1.0413	3.454	3.454	0.0219	0.0219	34.54	
2,3,4,6,7,8-HxCDF	35.905	65869	1.24	1.2145	10.2	10.2	0.3940	0.3940	203	M
D 13C-1,2,3,7,8,9-HxCDF	36.788	54492	0.59	0.9731	3.773	3.773	0.0234	0.0234	37.73	
1,2,3,7,8,9-HxCDF	36.797	46987	1.27	1.2401	6.953	6.953	0.3615	0.3615	139	M
A Non-2,3,7,8-sub-HxCDF	35.009	102124	1.28	1.2049	13.8	13.8	0.3623	5.889	0.00	Ma
S Total HxCDF					146.4	146.4	0.3639	0.3639		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.587	148437	1.20	1.8E+04	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	36.107	45625	1.20	0.7587	4.051	4.051	0.0311	0.0311	40.51	
1,2,3,4,7,8-HxCDD	36.115	26231	1.15	1.0608	5.420	5.420	0.0531	0.0531	108	
D 13C-1,2,3,6,7,8-HxCDD	36.225	53461	1.30	0.8593	4.191	4.191	0.0275	0.0275	41.91	
1,2,3,6,7,8-HxCDD	36.233	29812	1.32	0.9933	5.614	5.614	0.0569	0.0569	112	
1,2,3,7,8,9-HxCDD	36.603	30588	1.14	1.1094	5.565	5.565	0.0509	0.0509	111	
A Non-2,3,7,8-sub-HxCDD	35.375	1689	1.24	1.0545	0.4136	0.3233	0.0535	0.3233	0.00	RQ
S Total HxCDD					17.0	16.9	0.0537	0.0537		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.601	43082	0.45	0.7359	3.944	3.944	0.0385	0.0385	39.44	
1,2,3,4,6,7,8-HpCDF	38.618	188467	1.04	1.4421	30.3	30.3	0.0994	0.0994	607	
D 13C-1,2,3,4,7,8,9-HpCDF	39.855	44371	0.39	0.6854	4.361	4.361	0.0413	0.0413	43.61	
1,2,3,4,7,8,9-HpCDF	39.864	79474	1.04	1.3092	13.7	13.7	0.1011	0.1011	274	
A Non-2,3,7,8-sub-HpCDF	39.245	27529	0.98	1.3756	4.577	4.577	0.1001	4.577	0.00	
S Total HpCDF					48.6	48.6	0.1003	0.1003		
D 13C-1,2,3,4,6,7,8-HpCDD	39.552	40710	1.08	0.6745	4.066	4.066	0.0329	0.0329	40.66	
1,2,3,4,6,7,8-HpCDD	39.561	31383	1.04	1.0503	7.340	7.340	0.0316	0.0316	147	
A Non-2,3,7,8-sub-HpCDD	39.241	7160	1.09	1.0503	1.675	1.675	0.0316	1.675	0.00	
S Total HpCDD					9.014	9.014	0.0316	0.0316		
D 13C-OCDD	42.042	67064	0.94	0.5446	8.296	8.296	0.0204	0.0204	41.48	M
OCDF	42.143	108661	0.94	1.3168	24.6	24.6	0.0947	0.0947	246	
OCDD	42.058	103328	0.93	1.0620	29.0	29.0	0.0806	0.0806	290	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d
Lims ID: 320-76888-A-1-B MS
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MS
Inject. Date: 20-Aug-2021 05:33:00 ALS Bottle#: 0 Worklist Smp#: 20
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-b ms
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:22:19 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 16:58:35

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.444	21.395	3		63834	7696	139	347	55		a
333.9338	21.427	21.395	2		81341	10359	129	322	80	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.456	20.365	5	0.954	35423	5280	130	325	41		
317.9389	20.439	20.365	4	0.953	45126	6391	123	307	52	0.78(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.473	20.408	4	1.001	12289808	1660343	940	2350	1766		
305.8987	20.473	20.408	4	1.001	15309110	2023975	1150	2875	1760	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	17.484	19.851	-142	0.855	69116	10380	940	2350	11		
	Empc Correction				54235	9875	940	2350	11		
305.8987	17.475	19.851	-142	0.854	70436	12825	1150	2875	11	0.98(0.65-0.89)	
303.9016	17.939	19.851	-114	0.877	281154	45390	940	2350	48		M
305.8987	17.939	19.851	-114	0.877	383250	61627	1150	2875	54	0.73(0.65-0.89)	
303.9016	18.446	19.851	-84	0.902	444737	53615	940	2350	57		
305.8987	18.446	19.851	-84	0.902	578794	68145	1150	2875	59	0.77(0.65-0.89)	
303.9016	18.867	19.851	-59	0.922	350179	46885	940	2350	50		
305.8987	18.867	19.851	-59	0.922	477599	62212	1150	2875	54	0.73(0.65-0.89)	
303.9016	19.245	19.851	-36	0.941	510917	76027	940	2350	81		
305.8987	19.245	19.851	-36	0.941	689900	101976	1150	2875	89	0.74(0.65-0.89)	
303.9016	19.743	19.851	-6	0.965	5099293	705019	940	2350	750		
305.8987	19.743	19.851	-6	0.965	7019342	987260	1150	2875	858	0.73(0.65-0.89)	
303.9016	20.164	19.851	19	0.986	201158	25767	940	2350	27		
305.8987	20.155	19.851	18	0.985	259484	34071	1150	2875	30	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.264	19.851	85	1.039	845519	110231	940	2350	117		
305.8987	21.264	19.851	85	1.039	1097397	136256	1150	2875	118	0.77(0.65-0.89)	
303.9016	21.737	19.851	113	1.063	171040	20124	940	2350	21		
305.8987	21.737	19.851	113	1.063	198883	22852	1150	2875	20	0.86(0.65-0.89)	
303.9016	23.645	19.851	227	1.156	834964	149841	940	2350	159		a
305.8987	23.645	19.851	227	1.156	1064241	193906	1150	2875	169	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											M
331.9368	21.823	21.716	6	1.018	27283	4319	139	347	31		M
333.9338	21.831	21.716	7	1.018	32455	5109	129	322	40	0.84(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	21.848	21.733	7	1.001	1733583	235645	223	557	1057		a
321.8936	21.848	21.733	7	1.001	2170406	290704	141	352	2062	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.840	21.799	2	1.018	52578	6582	155	387	42		
A Non-2,3,7,8-sub-TCDD											a
319.8965	21.668	20.684	59	0.993	17625	3070	223	557	14		a
321.8936	21.676	20.684	59	0.993	22714	3651	141	352	26	0.78(0.65-0.89)	
319.8965	22.510	20.684	109	1.032	149960	19158	223	557	86		
321.8936	22.485	20.684	108	1.030	197420	24959	141	352	177	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.290	27.251	2	1.273	38454	6459	44	110	147		
353.8970	27.273	27.251	1	1.272	24815	4046	15	37	270	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.306	27.276	2	1.001	300367	46396	97	242	478		M
341.8567	27.306	27.276	2	1.001	191680	29517	71	177	416	1.57(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											M
351.9000	28.763	28.757	0	1.341	46440	6381	44	110	145		
353.8970	28.771	28.757	1	1.342	28008	4544	15	37	303	1.66(1.32-1.78)	M
2,3,4,7,8-PeCDF											
339.8597	28.805	28.791	1	1.001	244436	36383	97	242	375		
341.8567	28.805	28.791	1	1.001	150616	22570	71	177	318	1.62(1.32-1.78)	
A F1 PeCDFs											a
339.8597	24.084	24.634	-33	0.883	2771	554	1	2	554		a
341.8567	24.101	24.634	-32	0.883	1730	349	2	5	175	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQMa
339.8597	25.825	28.173	-141	0.946	122139	21289	97	242	219		M
341.8567	25.825	28.173	-141	0.000			71	177		0.00(1.32-1.78)	
339.8597	25.825	28.173	-141	0.946	122139	21289	97	242	219		M
341.8567	25.825	28.173	-141	0.946	75507	13119	71	177	185	1.62(1.32-1.78)	
339.8597	26.734	28.173	-86	0.980	10475	1450	97	242	15		
341.8567	26.759	28.173	-85	0.981	8471	1080	71	177	15	1.24(1.32-1.78)	
	Empc Correction				6758	935	71	177	13		
339.8597	27.205	28.173	-58	0.997	24506	4814	97	242	50		M
341.8567	27.205	28.173	-58	0.997	15766	3089	71	177	44	1.55(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	27.879	28.173	-18	1.022	82659	12627	97	242	130		
341.8567	27.871	28.173	-18	1.021	51258	7432	71	177	105	1.61(1.32-1.78)	
339.8597	29.150	28.173	58	1.068	49543	6205	97	242	64		
341.8567	29.150	28.173	58	1.068	30729	3938	71	177	55	1.61(1.32-1.78)	
339.8597	30.817	28.173	158	1.129	11059	1608	97	242	17		
341.8567	30.867	28.173	161	1.131	7703	1071	71	177	15	1.44(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											RQM
367.8949	29.571	29.574	0	1.379	28316	4114	4	10	1029		
	Empc Correction				24350	3442	4	10	861		
369.8919	29.588	29.574	1	1.380	15710	2221	3	7	740	1.80(1.32-1.78)	M
1,2,3,7,8-PeCDD											
355.8546	29.613	29.616	0	1.001	36745	5186	26	65	199		
357.8516	29.613	29.616	0	1.001	23193	3064	23	57	133	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	27.694	28.478	-47	0.937	841	241	26	65	9		
357.8516	27.669	28.478	-48	0.936	640	182	23	57	8	1.31(1.32-1.78)	
	Empc Correction				542	155	23	57	0		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.920	34.906	1	0.954	27119	4754	8	20	594		
385.8610	34.903	34.906	0	0.954	45806	9322	25	62	373	0.59(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.920	34.922	0	1.000	404263	77876	126	315	618		
375.8178	34.920	34.922	0	1.000	321114	61250	95	237	645	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.063	35.066	0	0.958	22497	4200	8	20	525		
385.8610	35.063	35.066	0	0.958	42174	8455	25	62	338	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.080	35.082	0	1.000	128747	22463	126	315	178		
375.8178	35.080	35.082	0	1.000	98084	18158	95	237	191	1.31(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.896	35.890	0	0.981	17305	4048	8	20	506		
385.8610	35.896	35.890	0	0.981	36079	7488	25	62	300	0.48(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.905	35.907	0	1.000	36445	7727	126	315	61		M
375.8178	35.913	35.907	0	1.000	29424	5487	95	237	58	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.788	36.782	0	1.006	20316	4766	8	20	596		
385.8610	36.780	36.782	0	1.005	34176	7546	25	62	302	0.59(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.797	36.791	0	1.000	26260	6668	126	315	53		M
375.8178	36.797	36.791	0	1.000	20727	4699	95	237	49	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											Ma
373.8208	33.430	35.009	-95	0.957	24603	4308	126	315	34		
375.8178	33.447	35.009	-94	0.958	18946	3039	95	237	32	1.30(1.05-1.43)	
373.8208	34.297	35.009	-43	0.982	10304	2218	126	315	18		
375.8178	34.314	35.009	-42	0.983	8200	1492	95	237	16	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	36.898	35.009	113	1.057	22472	5249	126	315	42		M
375.8178	36.890	35.009	113	1.056	17599	3968	95	237	42	1.28(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.587	36.581	0		80966	18844	20	50	942		
403.8529	36.587	36.581	0		67471	17193	14	35	1228	1.20(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.107	36.092	1	0.987	24843	6005	20	50	300		
403.8529	36.107	36.092	1	0.987	20782	4995	14	35	357	1.20(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.115	36.109	0	1.000	14019	3195	11	27	290		
391.8127	36.124	36.109	1	1.000	12212	2787	14	35	199	1.15(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.225	36.210	1	0.990	30250	6519	20	50	326		
403.8529	36.225	36.210	1	0.990	23211	4444	14	35	317	1.30(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.233	36.227	0	1.000	16944	3736	11	27	340		
391.8127	36.241	36.227	1	1.000	12868	2755	14	35	197	1.32(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.603	36.597	0	1.014	16279	4014	11	27	365		
391.8127	36.603	36.597	0	1.014	14309	3301	14	35	236	1.14(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.349	35.375	-2	0.976	935	228	11	27	21		
391.8127	35.349	35.375	-2	0.976	1226	259	14	35	19	0.76(1.05-1.43)	
	Empc Correction				754	183	14	35	13		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.601	38.596	0	1.055	13397	3428	20	50	171		
419.8220	38.601	38.596	0	1.055	29685	7870	21	52	375	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.618	38.618	0	1.000	96158	24605	37	92	665		
409.7788	38.618	38.618	0	1.000	92309	23023	28	70	822	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.855	39.850	0	1.089	12549	3463	20	50	173		
419.8220	39.855	39.850	0	1.089	31822	8773	21	52	418	0.39(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.864	39.872	-1	1.000	40609	11150	37	92	301		
409.7788	39.864	39.872	-1	1.000	38865	11157	28	70	398	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.980	39.245	-16	1.010	13643	3852	37	92	104		
409.7788	38.980	39.245	-16	1.010	13886	4037	28	70	144	0.98(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.552	39.547	0	1.081	21127	6529	21	52	311		
437.8140	39.552	39.547	0	1.081	19583	6112	11	27	556	1.08(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.561	39.561	0	1.000	16002	4575	11	27	416		
425.7737	39.561	39.561	0	1.000	15381	4426	6	15	738	1.04(0.88-1.20)	

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.921	39.241	-19	0.984	3738	1014	11	27	92		
425.7737	38.921	39.241	-19	0.984	3422	1021	6	15	170	1.09(0.88-1.20)	
13C-OCDD											M
469.7780	42.042	42.036	0	1.149	32462	8295	12	30	691		
471.7750	42.050	42.036	1	1.149	34602	8057	4	10	2014	0.94(0.76-1.02)	M
OCDF											
441.7428	42.143	42.137	0	1.002	52566	12871	11	27	1170		
443.7399	42.143	42.137	0	1.002	56095	13731	30	75	458	0.94(0.76-1.02)	
OCDD											
457.7377	42.058	42.053	0	1.000	49742	12229	13	32	941		
459.7348	42.058	42.053	0	1.000	53586	12524	15	37	835	0.93(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	80549	11671

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		10.000	80549	11671

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.484	69116	10380	70436	12825	16.0	0.98	RQ
17.484	54235	9875	70436	12825	14.3		Empc Correction
17.939	281154	45390	383250	61627	76.4	0.73	M
18.446	444737	53615	578794	68145	117.6	0.77	
18.867	350179	46885	477599	62212	95.1	0.73	
19.245	510917	76027	689900	101976	138.0	0.74	
19.743	5099293	705019	7019342	987260	1392.8	0.73	
20.164	201158	25767	259484	34071	52.9	0.78	
21.264	845519	110231	1097397	136256	223.3	0.77	
21.737	171040	20124	198883	22852	42.5	0.86	
23.645	834964	149841	1064241	193906	218.3	0.78	a
Signal Totals:							
	8793196	1242774	11839326	1681130			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	20647403	2924409				0.74	RQMa
	20632522	2923904					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2373.0 = (20647403 * 10.000) / (80549 * 1.080)

Empc Amount: 2371.3 = (20632522 * 10.000) / (80549 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	59738	9428

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		10.000	59738	9428

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
21.668	17625	3070	22714	3651	6.28	0.78	a
22.510	149960	19158	197420	24959	54.1	0.76	
Signal Totals:							
	167585	22228	220134	28610			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	387719	50838				0.76	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 60.356 = (387719 * 10.000) / (59738 * 1.075)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	63269	10505
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	74448	10925

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	68858	10715

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.084	2771	554	1730	349	0.6340	1.60	a
Signal Totals:							
	2771	554	1730	349			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4501	903				1.60	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6340 = (4501 * 10.000) / (68858 * 1.031)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	63269	10505
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	74448	10925

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	68858	10715

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.825	122139	21289	0	0	17.2	0.00	M
25.825	122139	21289	75507	13119	27.8	1.62	Ma
26.734	10475	1450	8471	1080	2.67	1.24	RQ
26.734	10475	1450	6758	935	2.43		Empc Correction
27.205	24506	4814	15766	3089	5.67	1.55	Ma
27.879	82659	12627	51258	7432	18.9	1.61	
29.150	49543	6205	30729	3938	11.3	1.61	
30.817	11059	1608	7703	1071	2.64	1.44	
Signal Totals:							
	422520	69282	187721	29584			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	611954	99011				2.23	RQMa
	610241	98866					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 86.195 = (611954 * 10.000) / (68858 * 1.031)

Empc Amount: 85.953 = (610241 * 10.000) / (68858 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	44026	6335

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		10.000	44026	6335

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
27.694	841	241	640	182	0.3421	1.31	RQ
27.694	841	241	542	155			Empc Correction

Compound is Marked ND

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	72925	14076
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	64671	12655
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	53384	11536
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	54492	12312

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		10.000	61368	12644

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.430	24603	4308	18946	3039	5.89	1.30	
34.297	10304	2218	8200	1492	2.50	1.26	
36.898	22472	5249	17599	3968	5.42	1.28	Ma
Signal Totals:							
	57379	11775	44745	8499			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	102124	20274				1.28	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.811 = (102124 * 10.000) / (61368 * 1.205)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	45625	11000
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	53461	10963
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		10.000	49543	10981

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.349	935	228	1226	259	0.4136	0.76	RQ
35.349	935	228	754	183	0.3233		Empc Correction
Signal Totals:							
	935	228	754	183			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2161	487				0.76	RQ
	1689	411					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4136 = (2161 * 10.000) / (49543 * 1.055)
Empc Amount: 0.3233 = (1689 * 10.000) / (49543 * 1.055)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	43082	11298
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	44371	12236

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		10.000	43726	11767

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.980	13643	3852	13886	4037	4.58	0.98	
Signal Totals:							
	13643	3852	13886	4037			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	27529	7889				0.98	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.577 = (27529 * 10.000) / (43726 * 1.376)

Report Date: 25-Aug-2021 15:22:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Lims ID:	320-76888-A-1-B MS		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 05:33:00	Dil. Factor:	10.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	20

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	40710	12641

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		10.000	40710	12641

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.921	3738	1014	3422	1021	1.67	1.09	
Signal Totals:							
	3738	1014	3422	1021			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7160	2035				1.09	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.675 = (7160 * 10.000) / (40710 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 17.930 Area = 126754

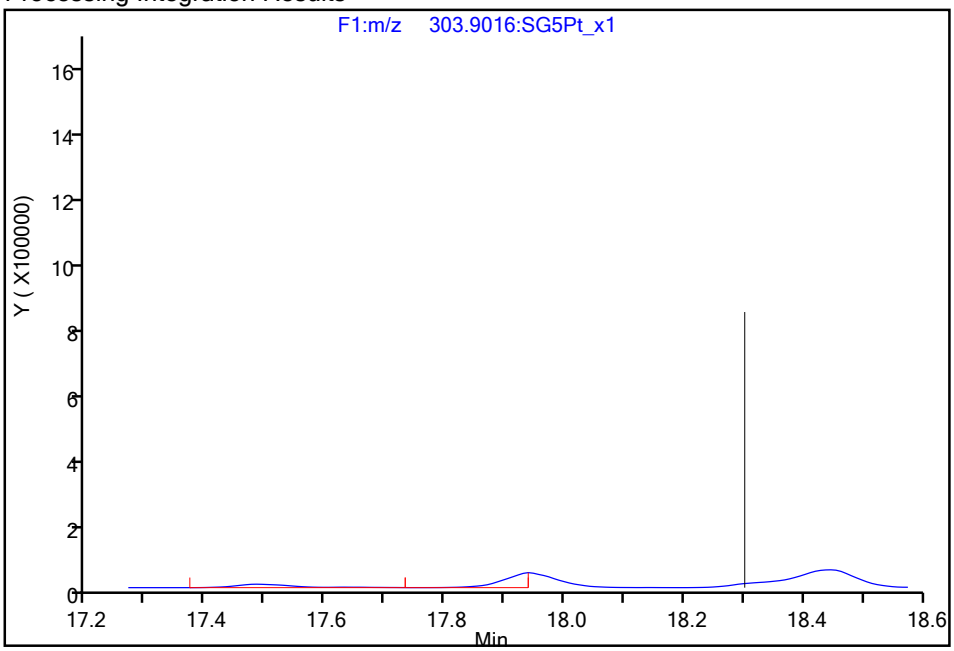

Manual Integration Results

RT = 17.939 Area = 281154 M

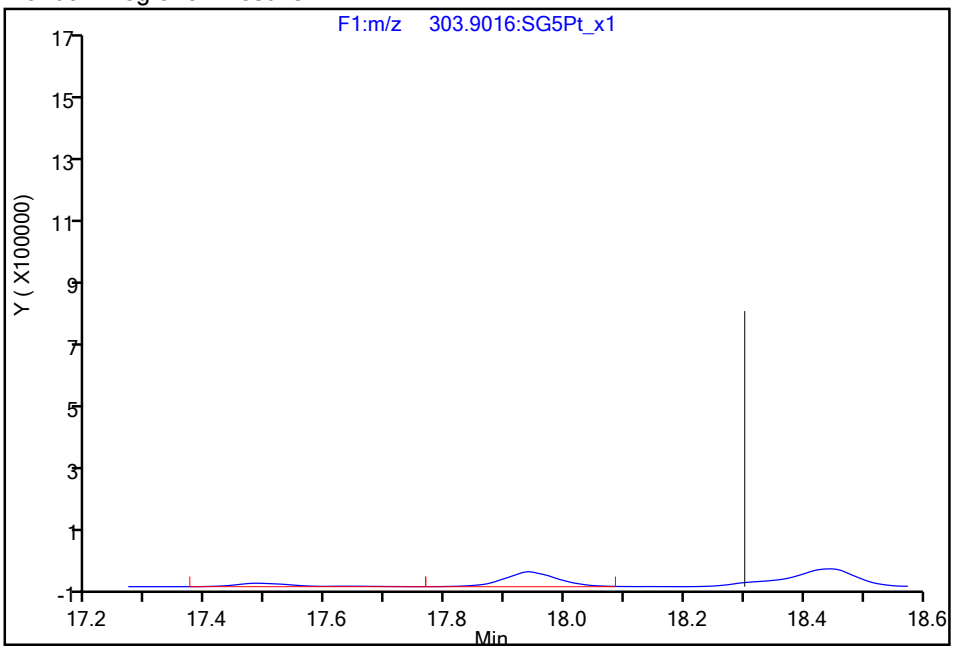

Reviewer: krenns, 25-Aug-2021 15:05:49

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 21.82
Area: 14496
Amount: 3.471308
Amount Units: pg/ul

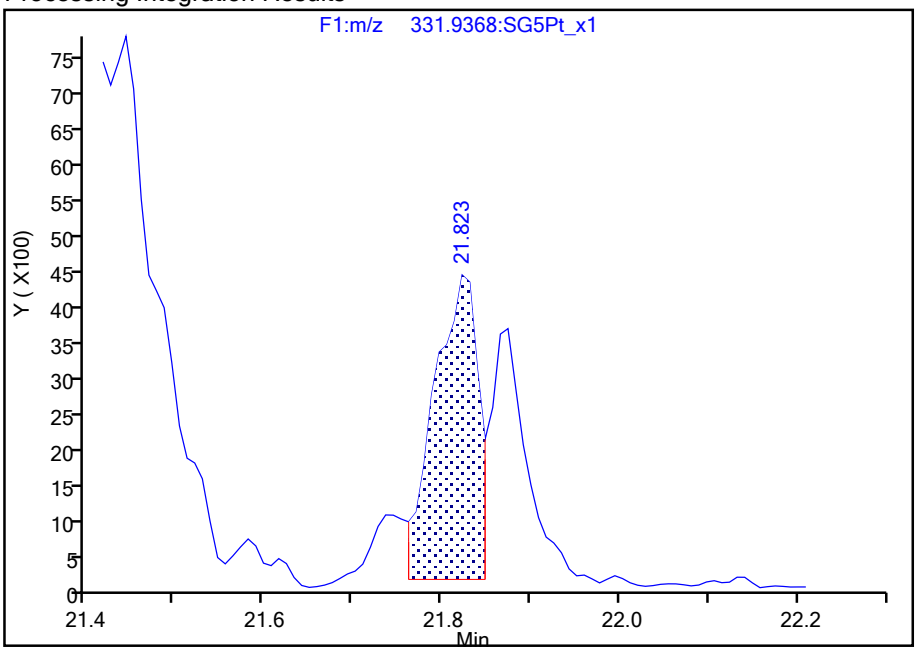

Manual Integration Results

RT: 21.82
Area: 27283
Amount: 4.416711
Amount Units: pg/ul

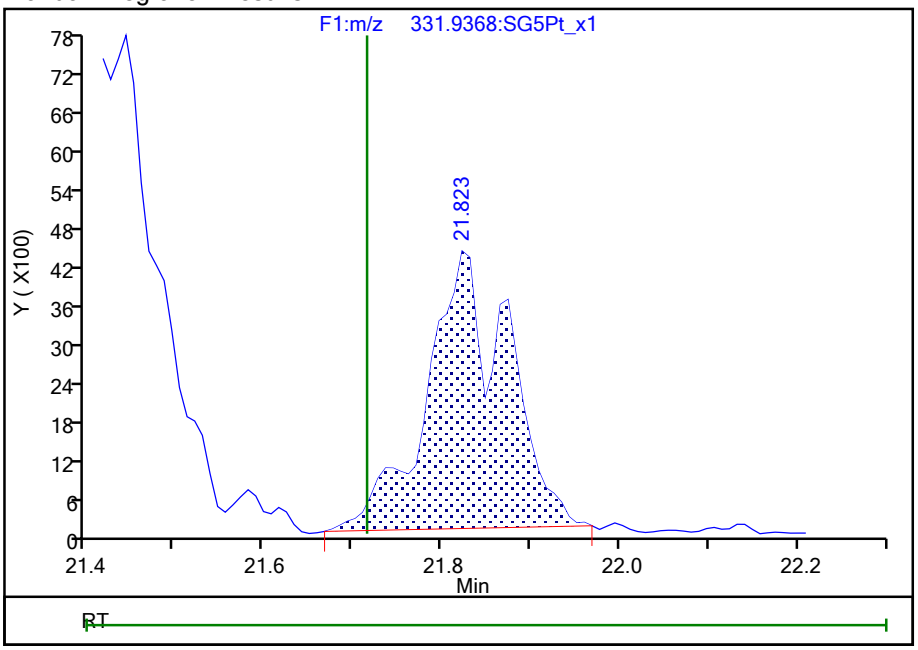

Reviewer: krenns, 25-Aug-2021 15:21:51

Audit Action: Manually Integrated Audit Reason: Baseline

787849

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.67
Area: 17625
Amount: 6.279515
Amount Units: pg/ul

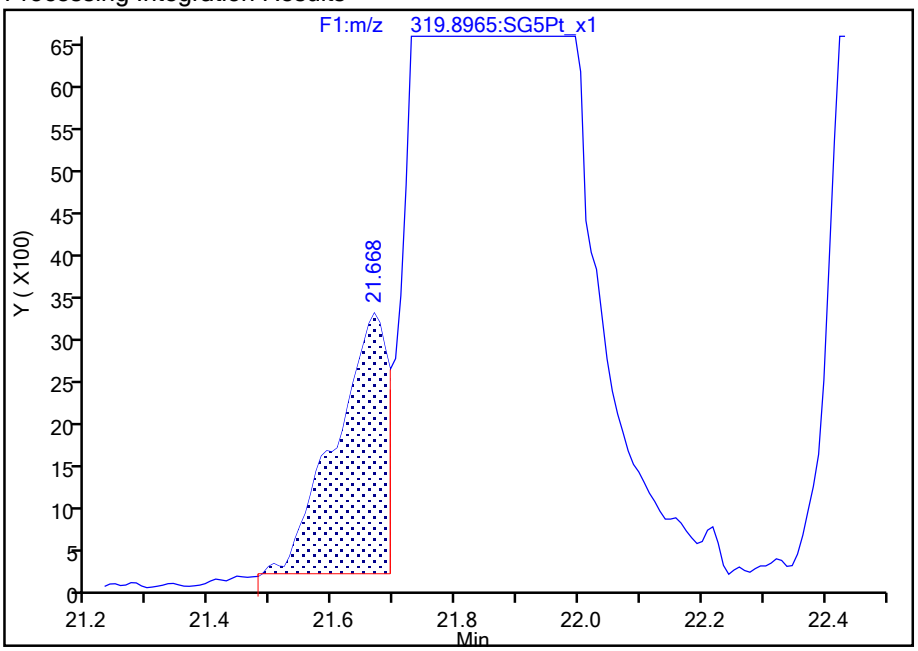

Manual Integration Results

RT: 21.85
Area: 1733583
Amount: 607.7285
Amount Units: pg/ul

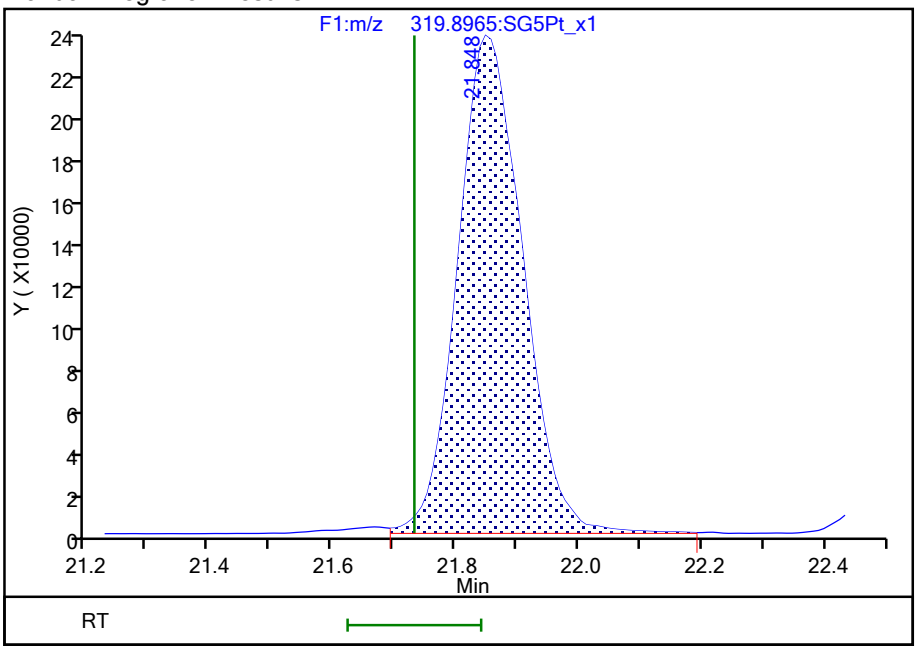

Reviewer: krenns, 25-Aug-2021 15:22:00

Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.31
Area: 324568
Amount: 79.758886
Amount Units: pg/ul

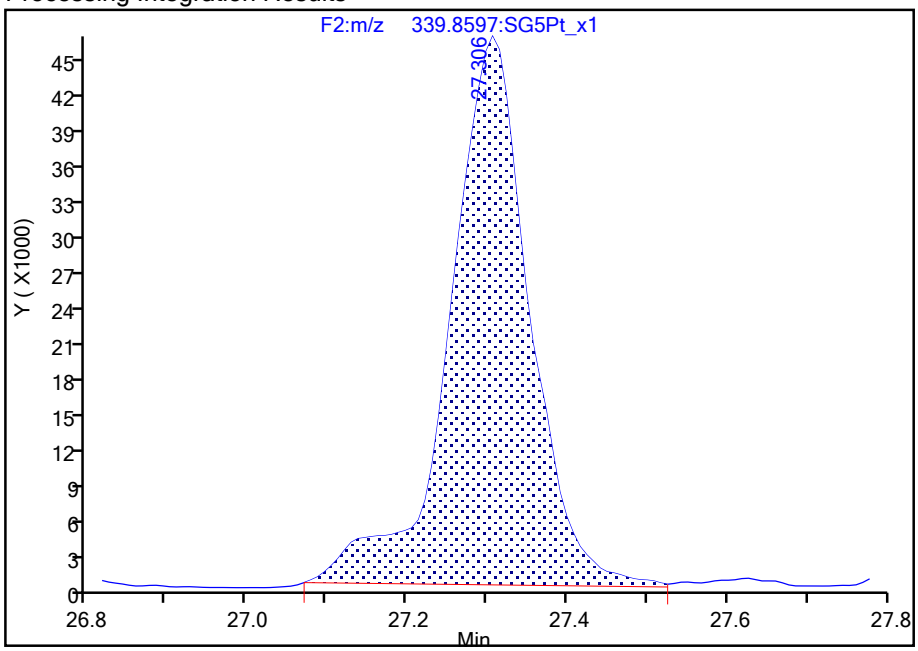

Manual Integration Results

RT: 27.31
Area: 300367
Amount: 73.767775
Amount Units: pg/ul

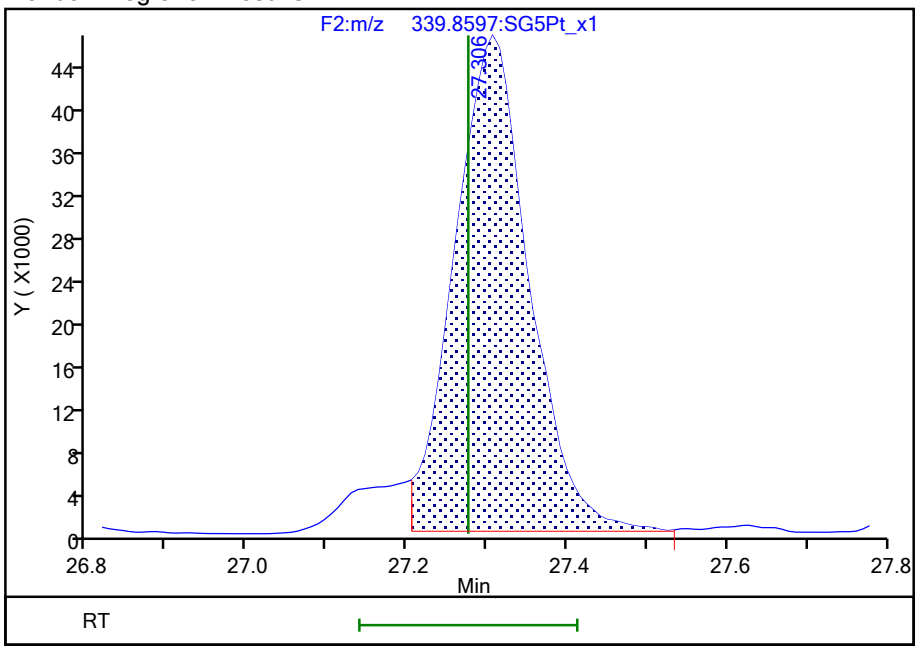

Reviewer: dadunj, 23-Aug-2021 09:39:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.31
Area: 207441
Amount: 79.758886
Amount Units: pg/ul

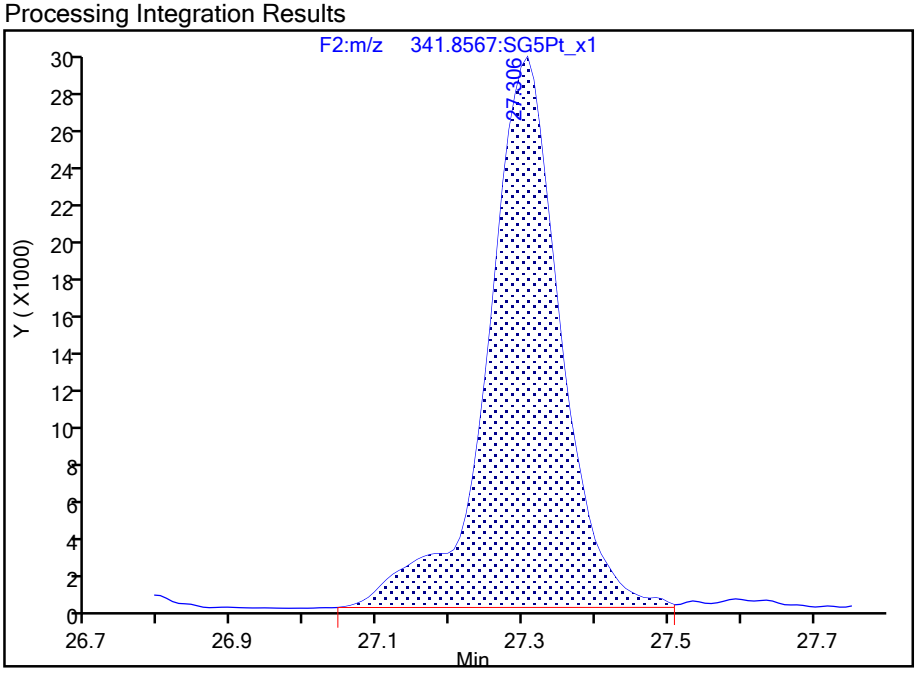

Manual Integration Results

RT: 27.31
Area: 191680
Amount: 73.767775
Amount Units: pg/ul

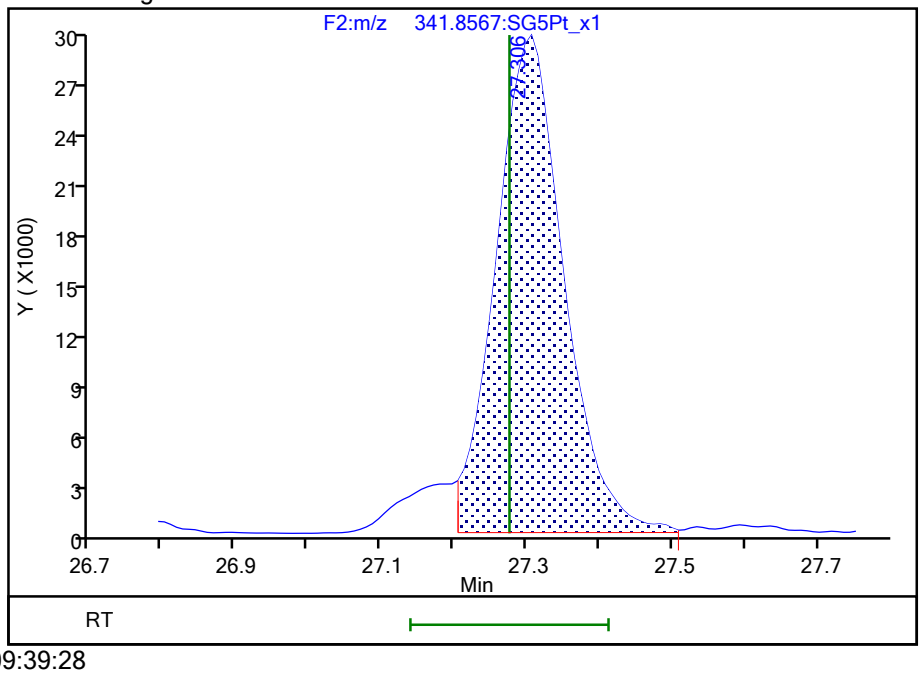

Reviewer: dadunj, 23-Aug-2021 09:39:28
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

787852

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 2

Processing Integration Results

RT: 28.77
Area: 24273
Amount: 4.328418
Amount Units: pg/ul

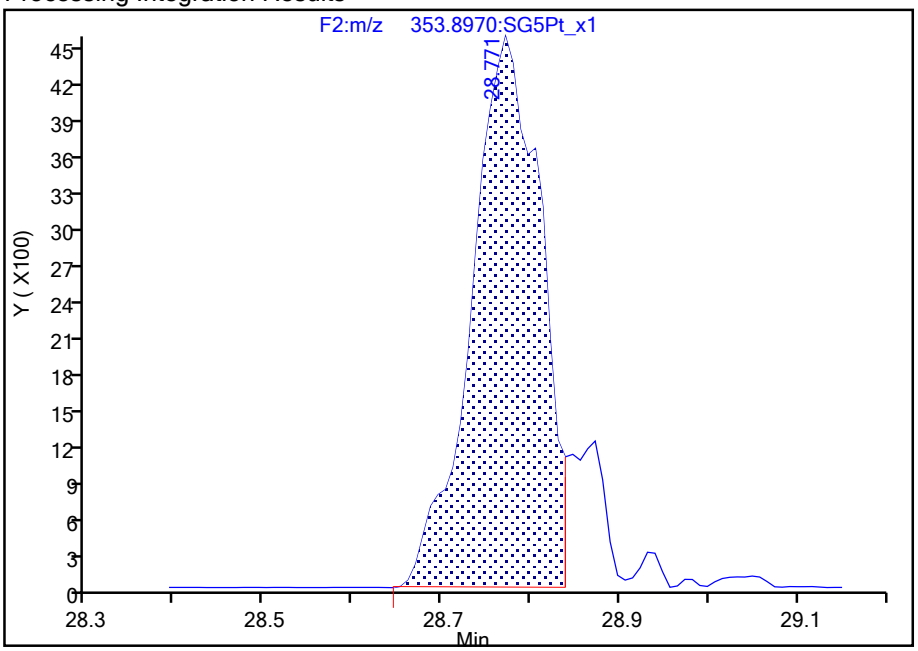

Manual Integration Results

RT: 28.77
Area: 28008
Amount: 4.557042
Amount Units: pg/ul

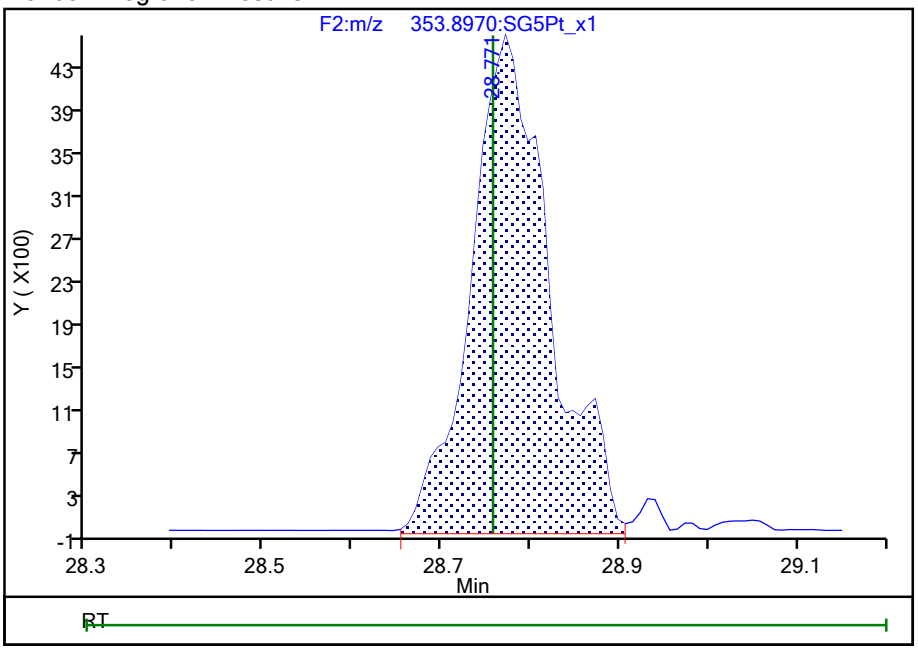

Reviewer: dadunj, 23-Aug-2021 09:42:06

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Processing Integration Results

RT = 25.825 Area = 124540

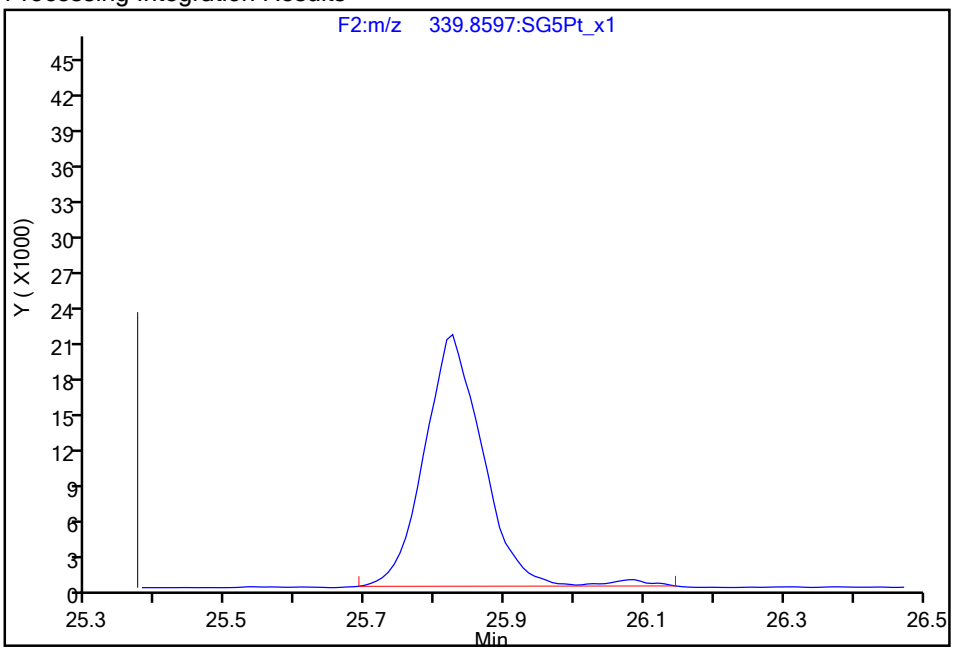

Manual Integration Results

RT = 25.825 Area = 122139 M

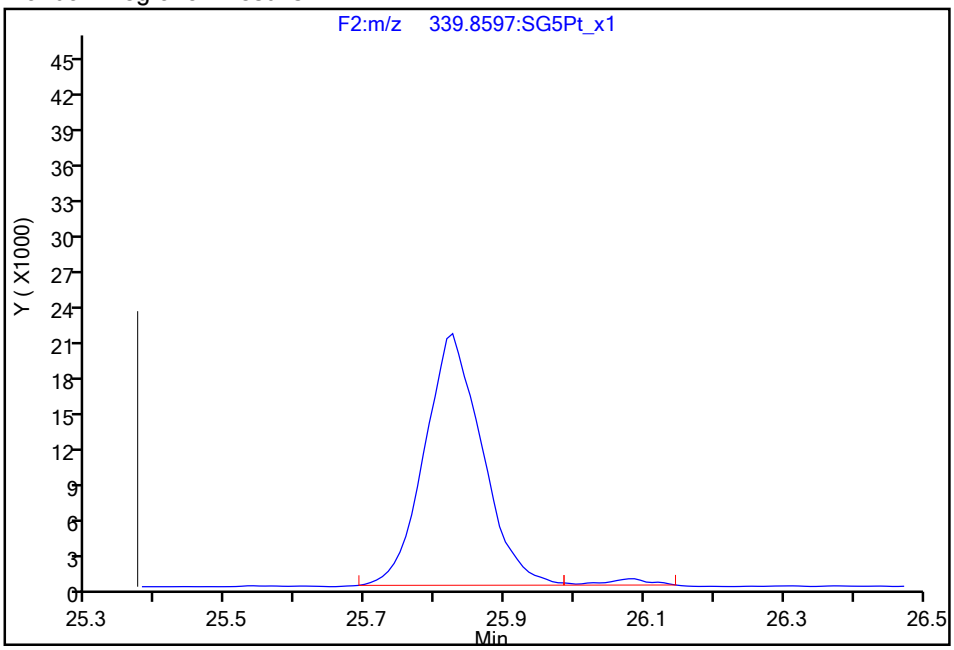

Reviewer: dadunj, 23-Aug-2021 09:39:53

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Processing Integration Results

RT = 25.825 Area = 124540

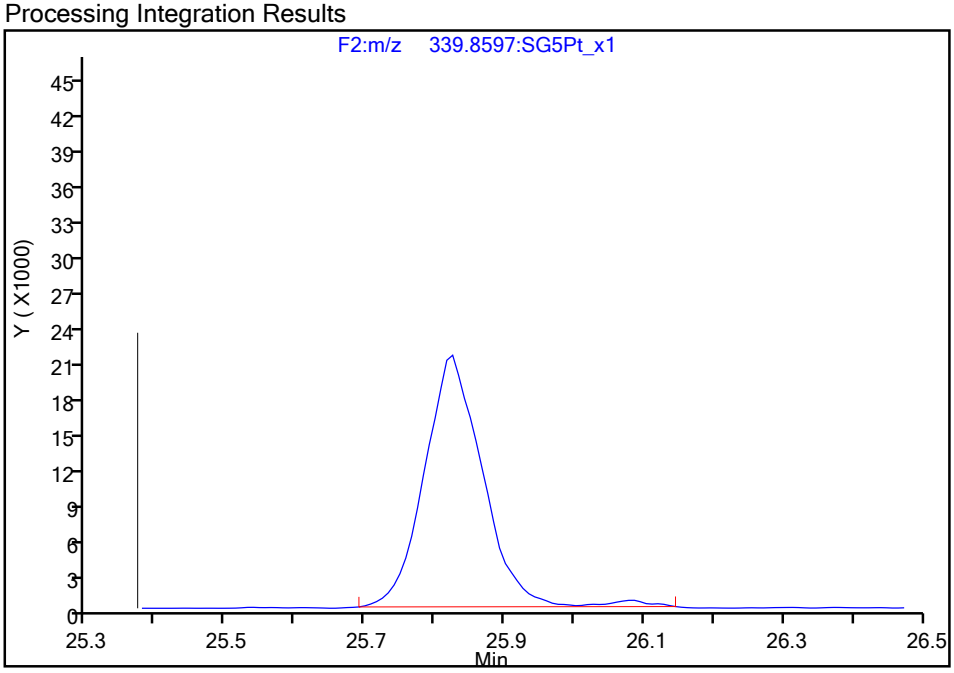

Manual Integration Results

RT = 25.825 Area = 122139 M

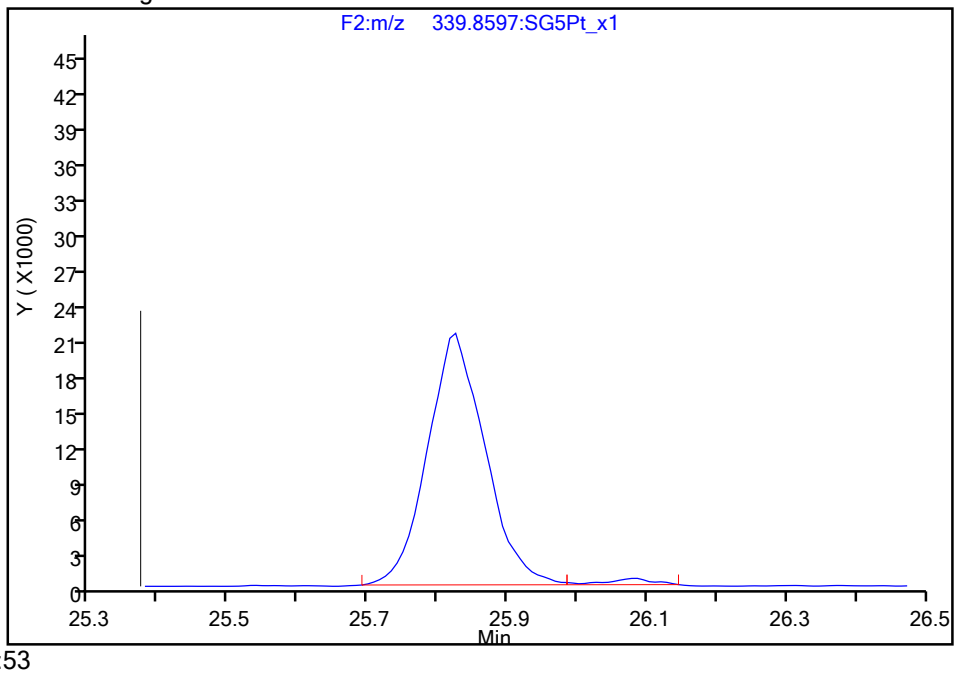

Reviewer: dadunj, 23-Aug-2021 09:39:53

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Not Detected
RT: 25.37- 30.97

Processing Integration Results

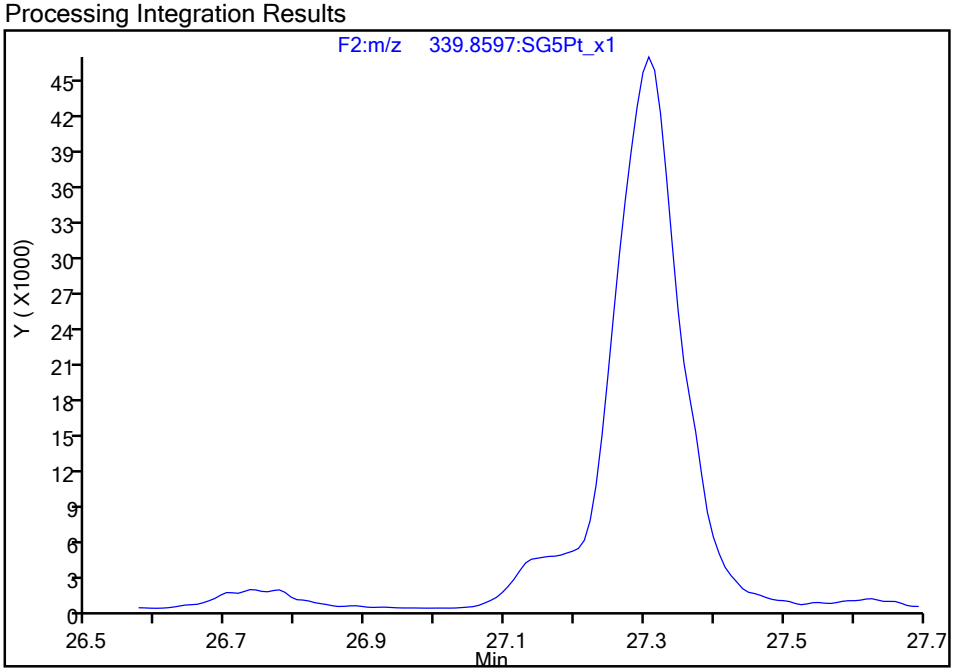

RT = 27.205 Area = 24506 M

Manual Integration Results

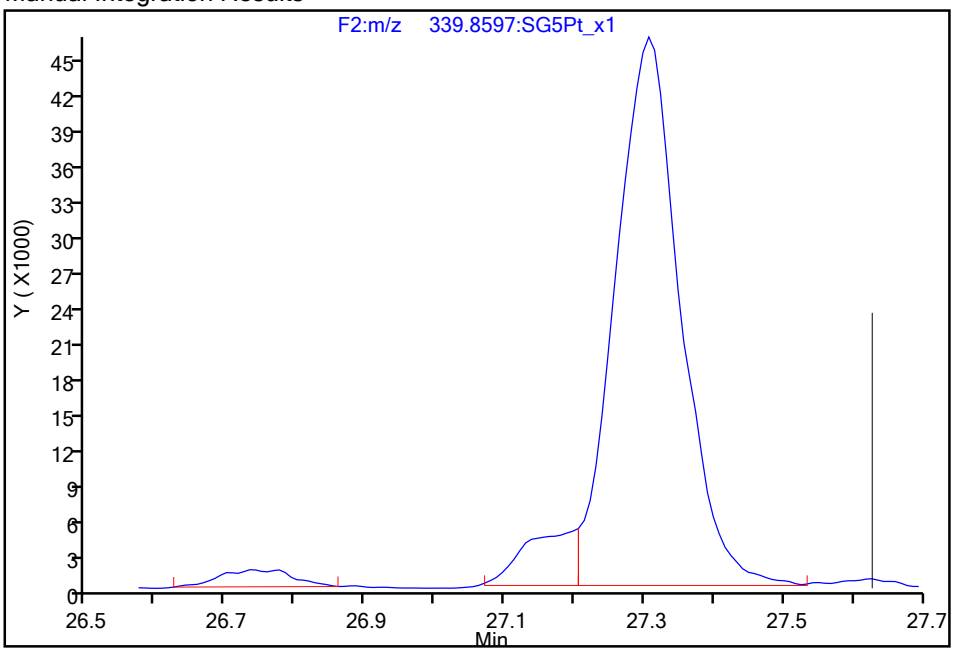

Reviewer: dadunj, 23-Aug-2021 09:39:53
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 2

Processing Integration Results

RT: 29.59
Area: 13049
Amount: 3.976893
Amount Units: pg/ul

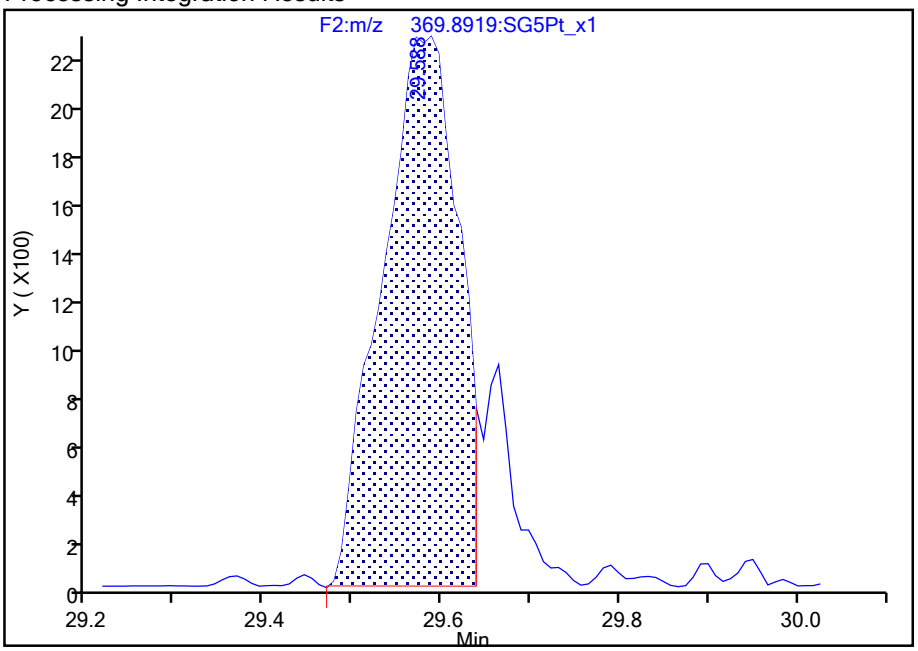

Manual Integration Results

RT: 29.59
Area: 15710
Amount: 4.232725
Amount Units: pg/ul

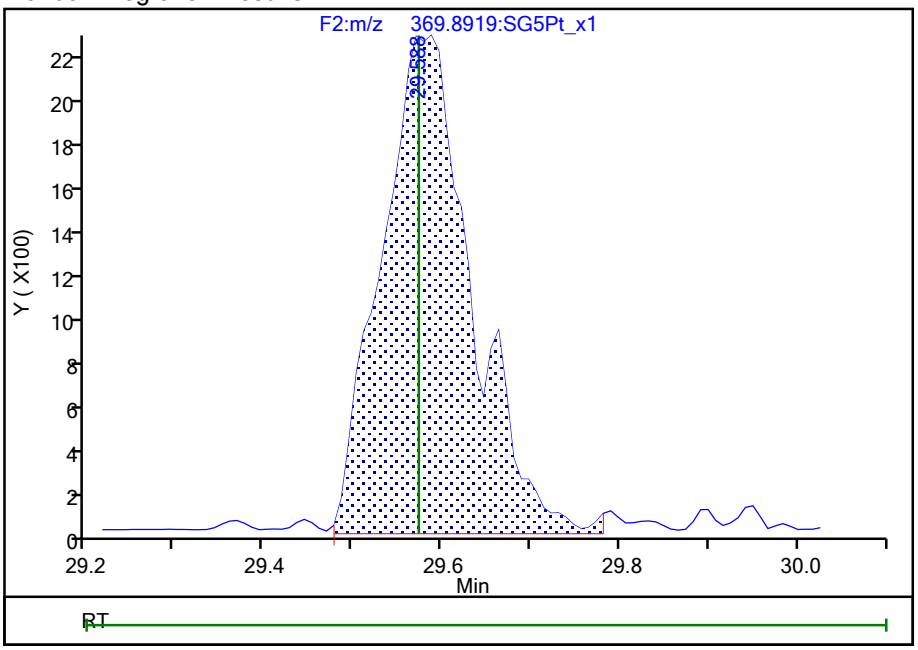

Reviewer: dadunj, 23-Aug-2021 09:42:19

Audit Action: Manually Integrated Audit Reason: Baseline

787857

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.90
Area: 42529
Amount: 11.098164
Amount Units: pg/ul

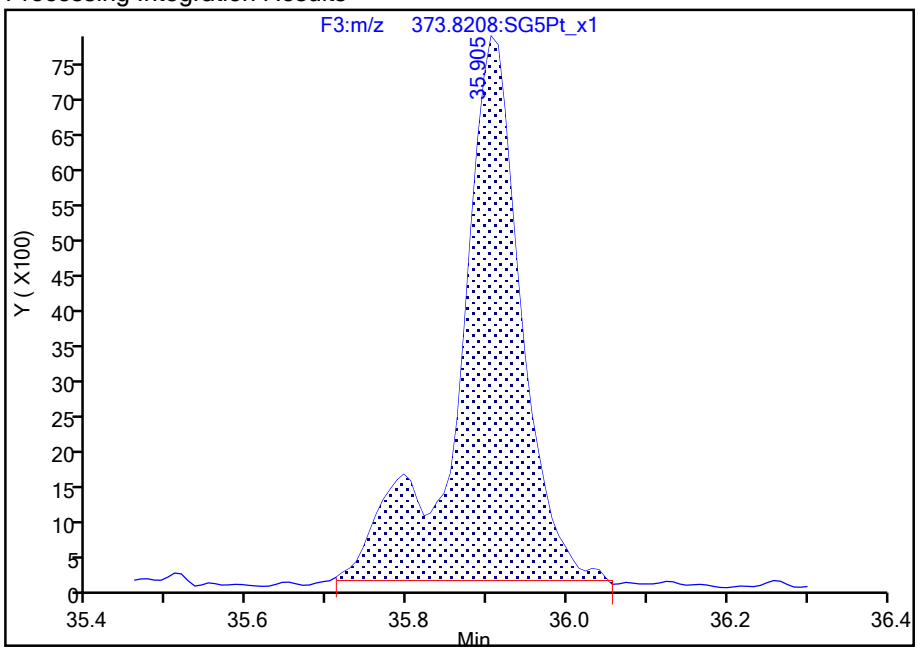

Manual Integration Results

RT: 35.90
Area: 36445
Amount: 10.159756
Amount Units: pg/ul

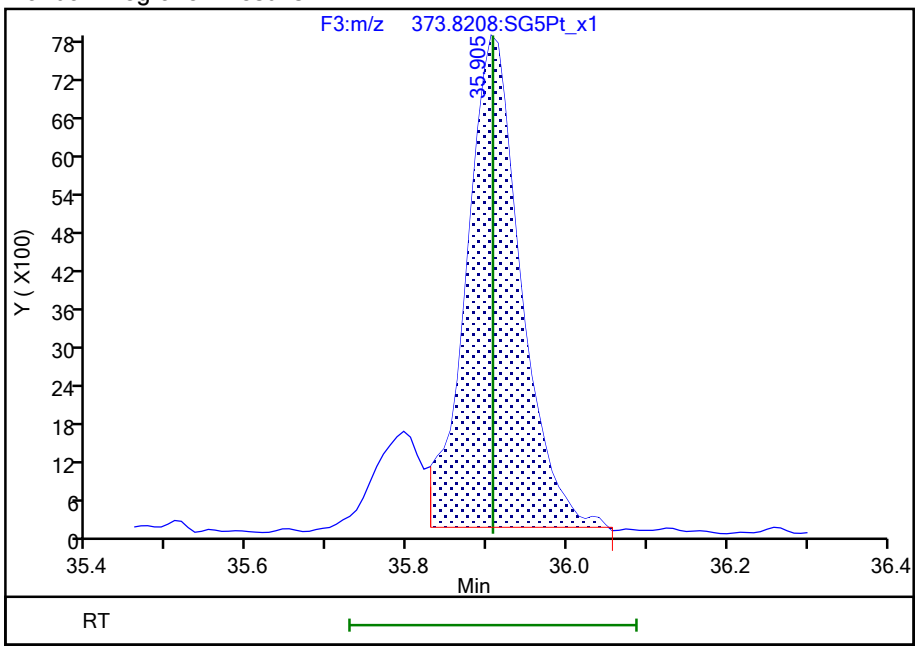

Reviewer: dadunj, 23-Aug-2021 09:40:41

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

787858

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.80
Area: 48733
Amount: 10.278712
Amount Units: pg/ul

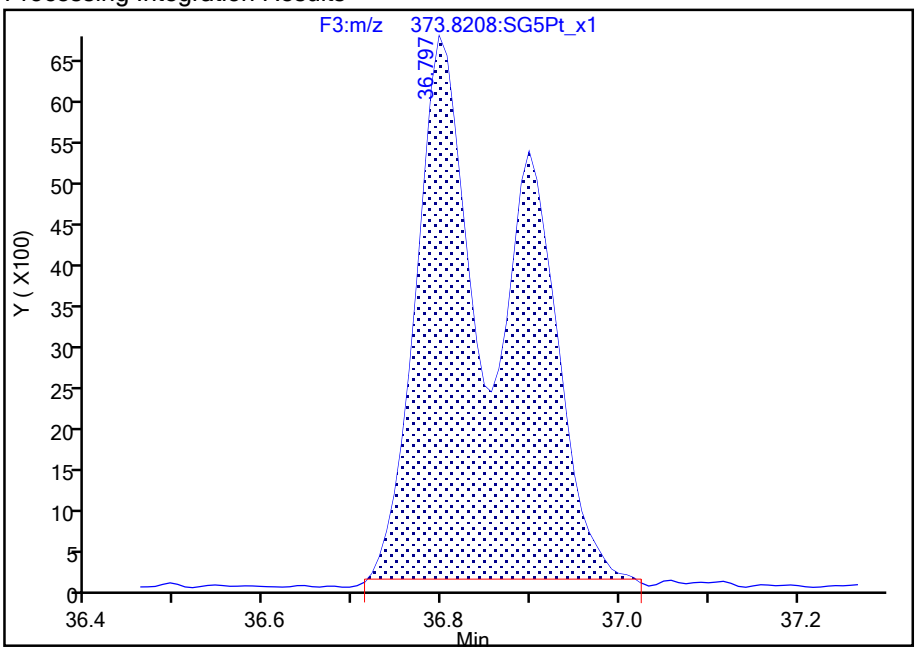

Manual Integration Results

RT: 36.80
Area: 26260
Amount: 6.953151
Amount Units: pg/ul

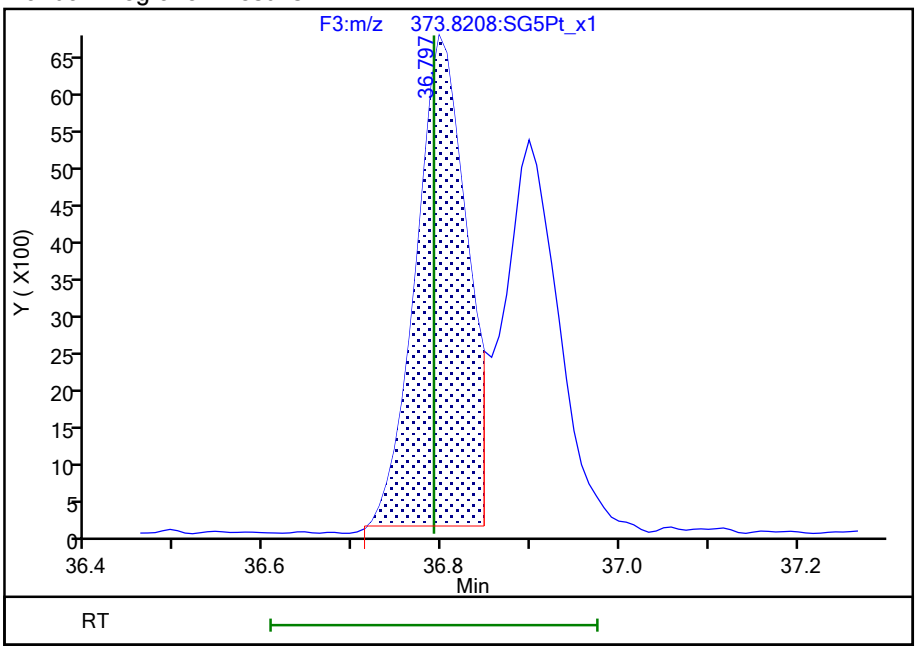

Reviewer: dadunj, 23-Aug-2021 09:40:47

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

Not Detected
RT: 33.09- 36.93

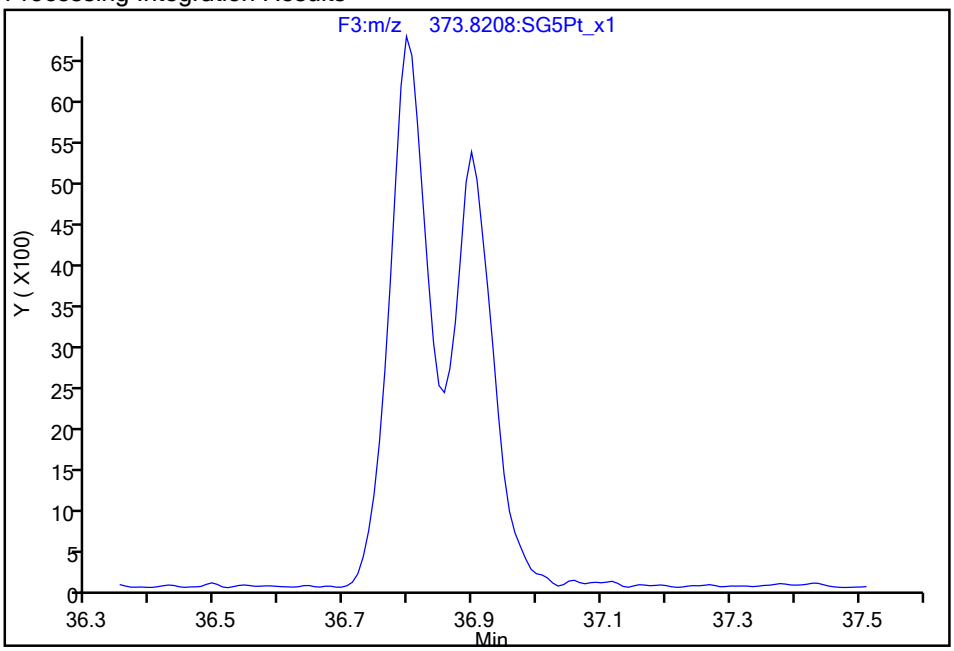

Manual Integration Results

RT = 36.898 Area = 22472 M

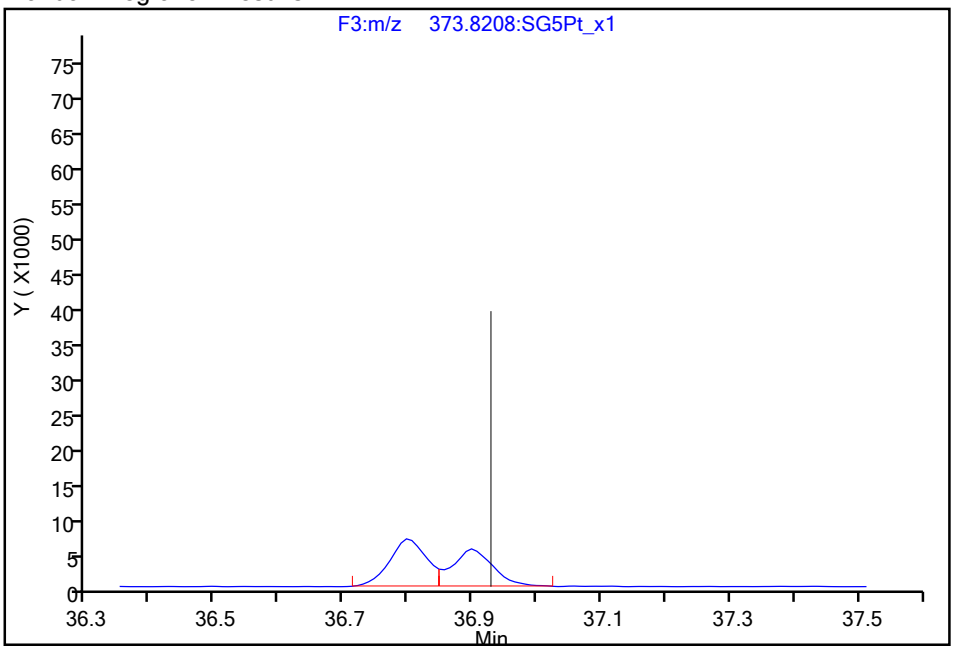

Reviewer: dadunj, 23-Aug-2021 09:40:54

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

787860

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d				
Injection Date:	20-Aug-2021 05:33:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	20
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

13C-OCDD, CAS: 114423-97-1

Signal: 2

Processing Integration Results

RT: 42.05
Area: 36345
Amount: 8.511216
Amount Units: pg/ul

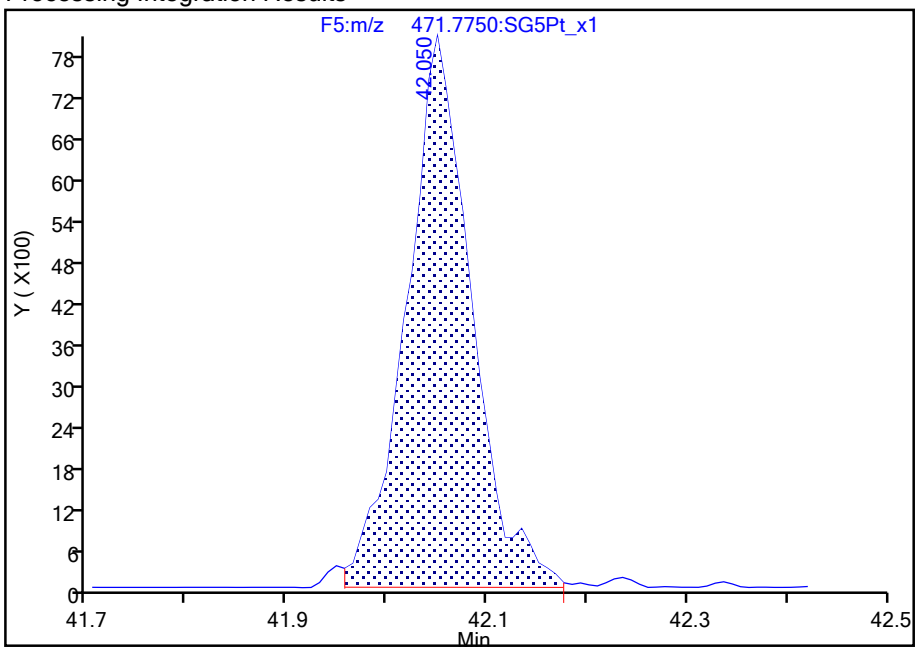

Manual Integration Results

RT: 42.05
Area: 34602
Amount: 8.295612
Amount Units: pg/ul

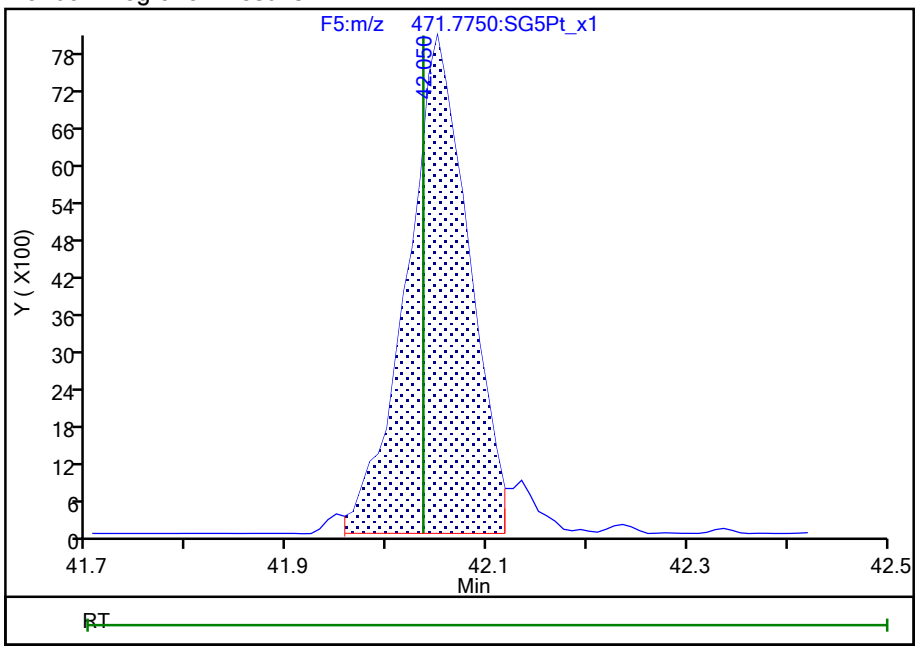

Reviewer: dadunj, 23-Aug-2021 09:41:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

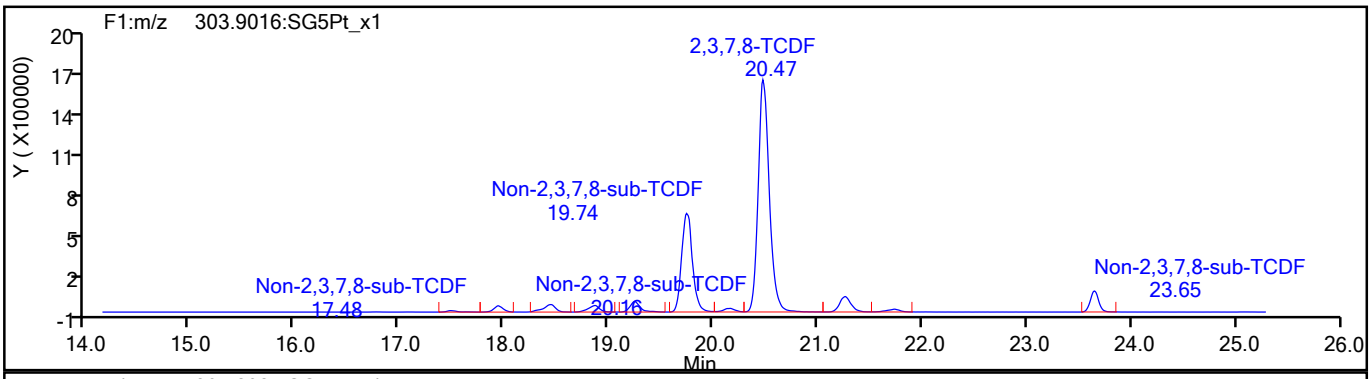

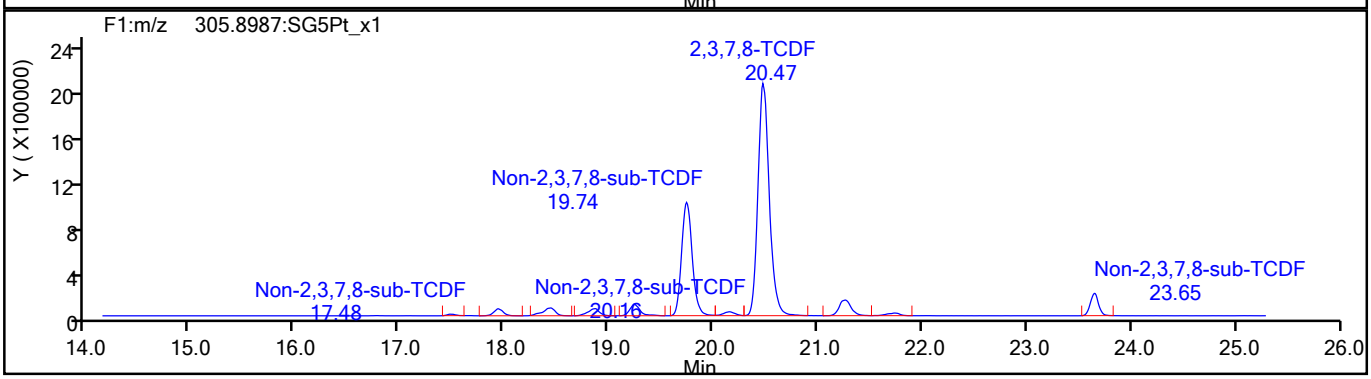

TCDF Standards

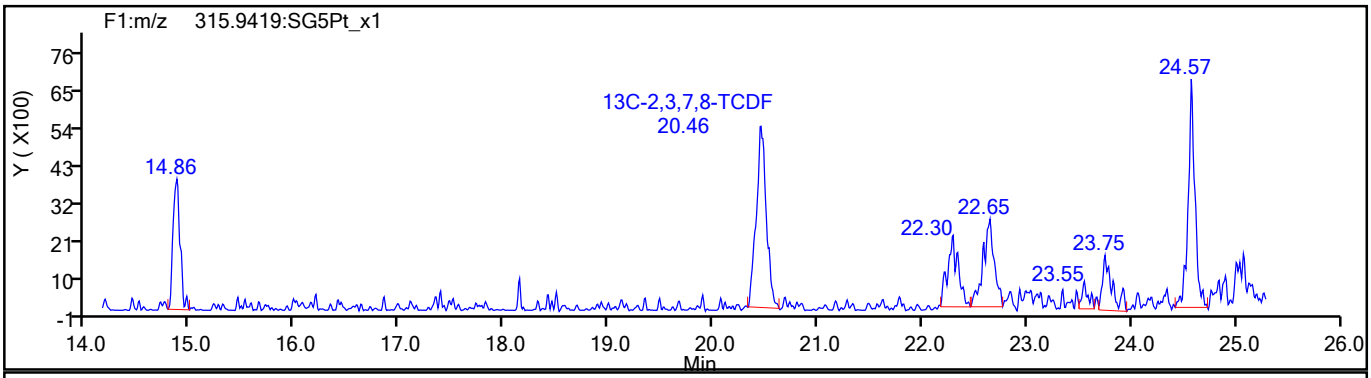

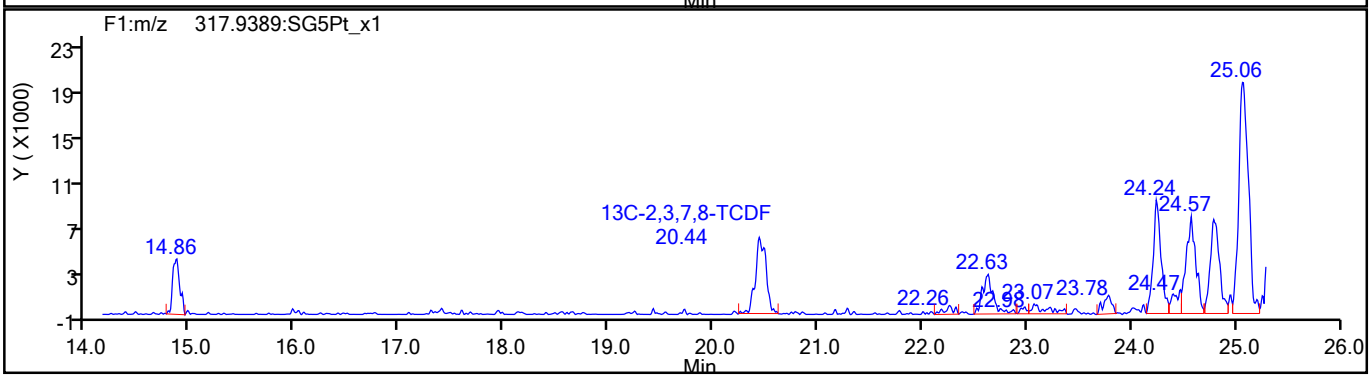

787862

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

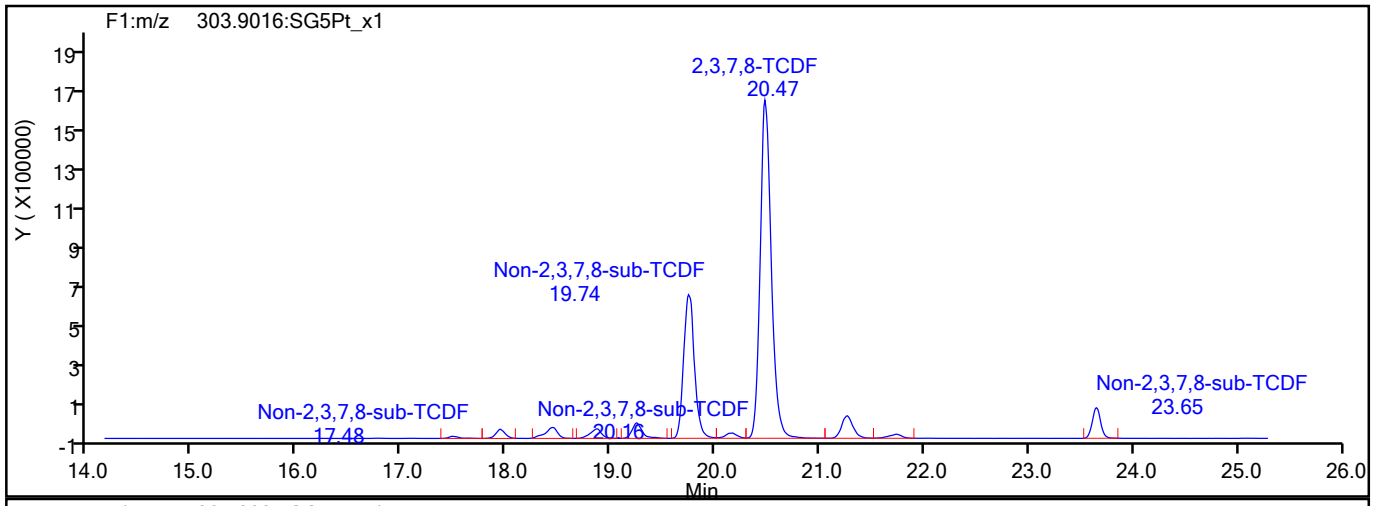

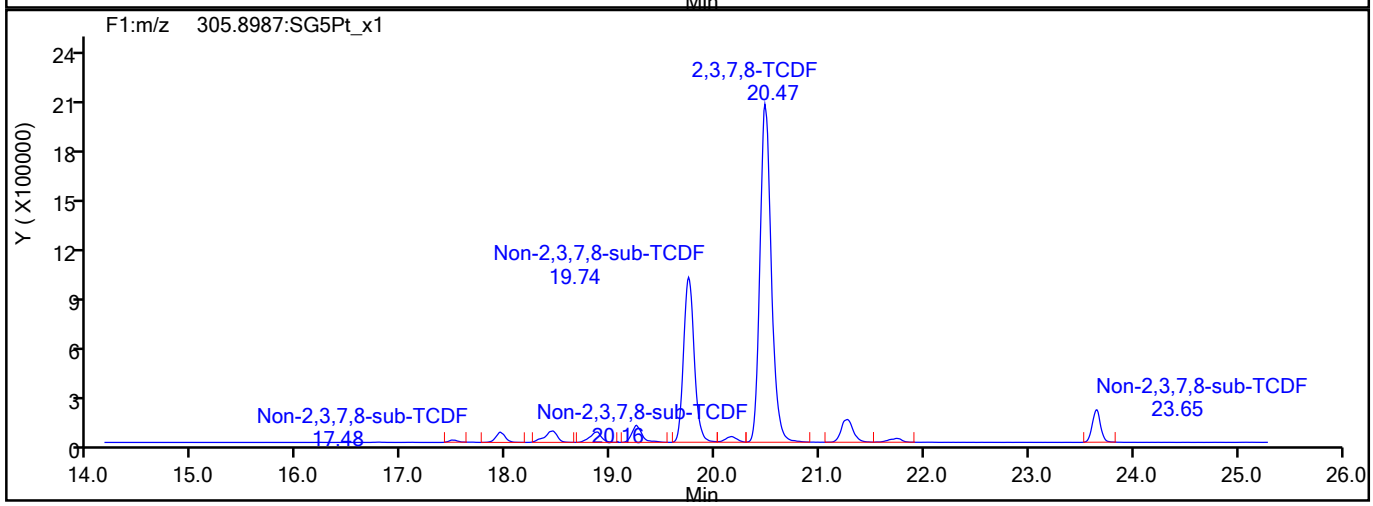

TCDF Interference Mass

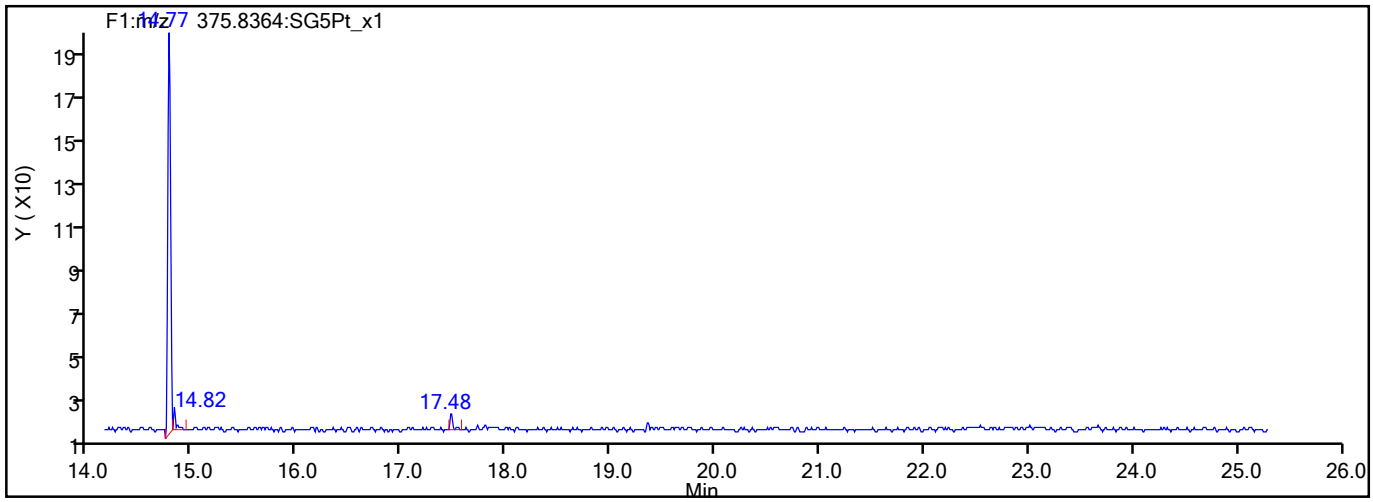

787863

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

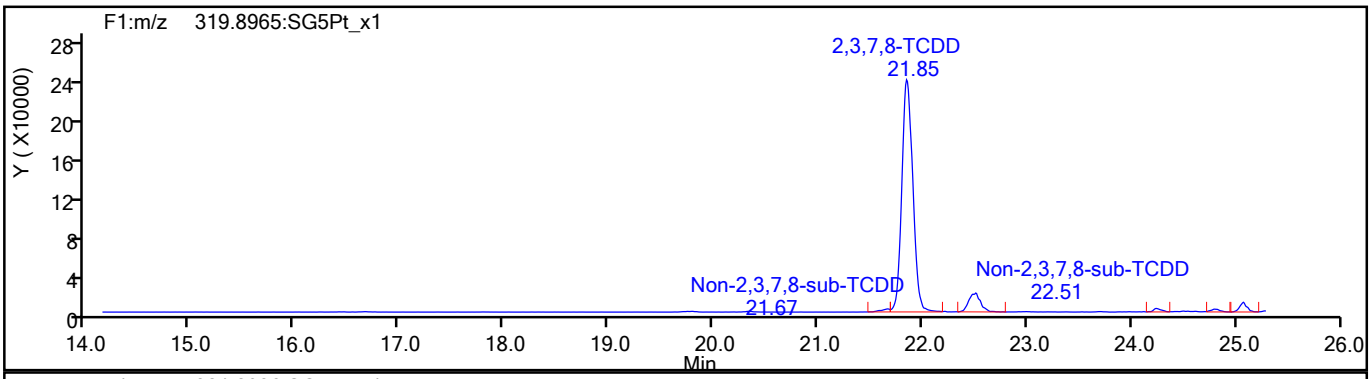

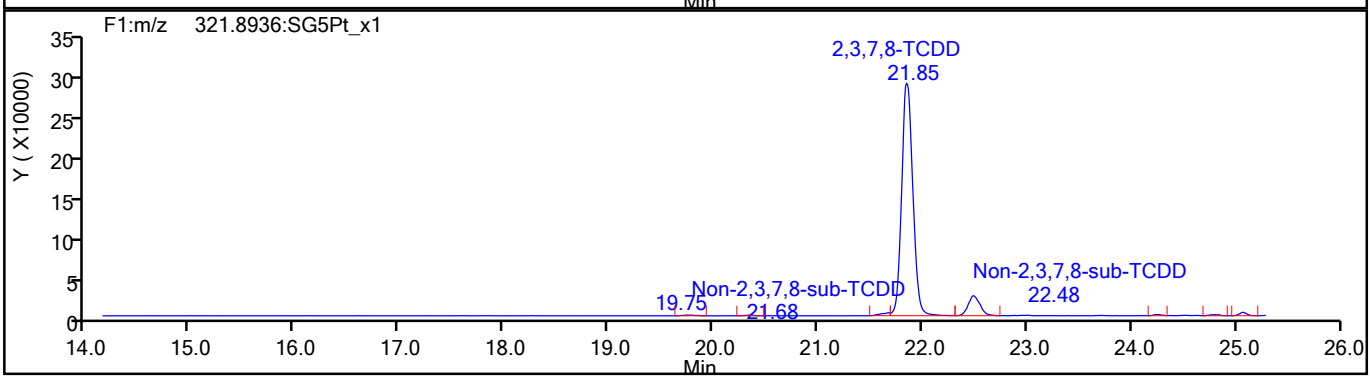

TCDD Standards

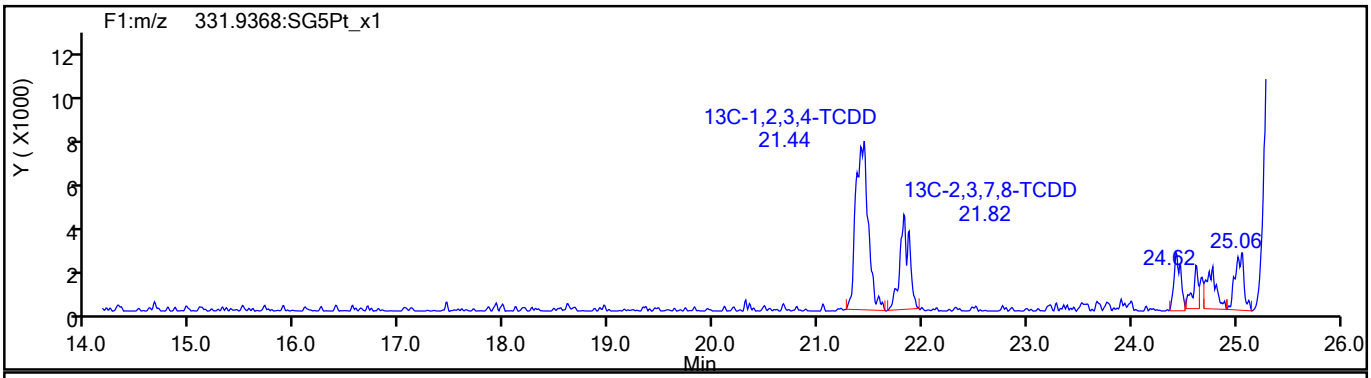

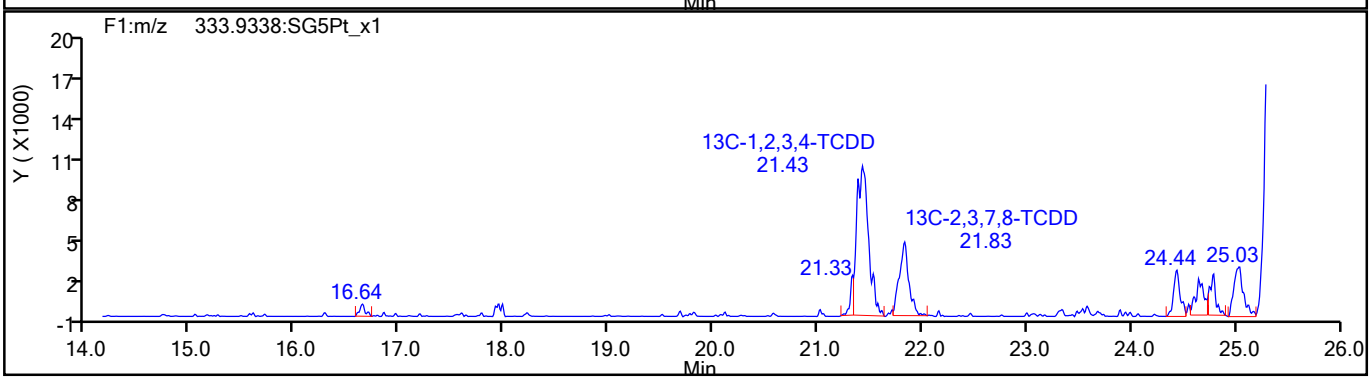

787864

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

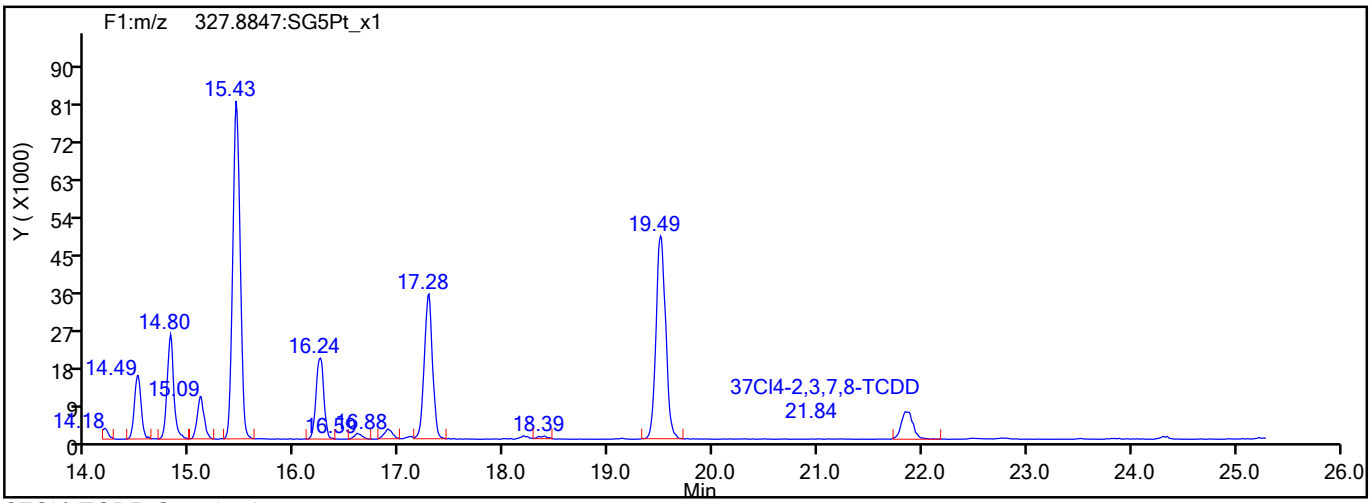

37Cl4-TCDD Standards

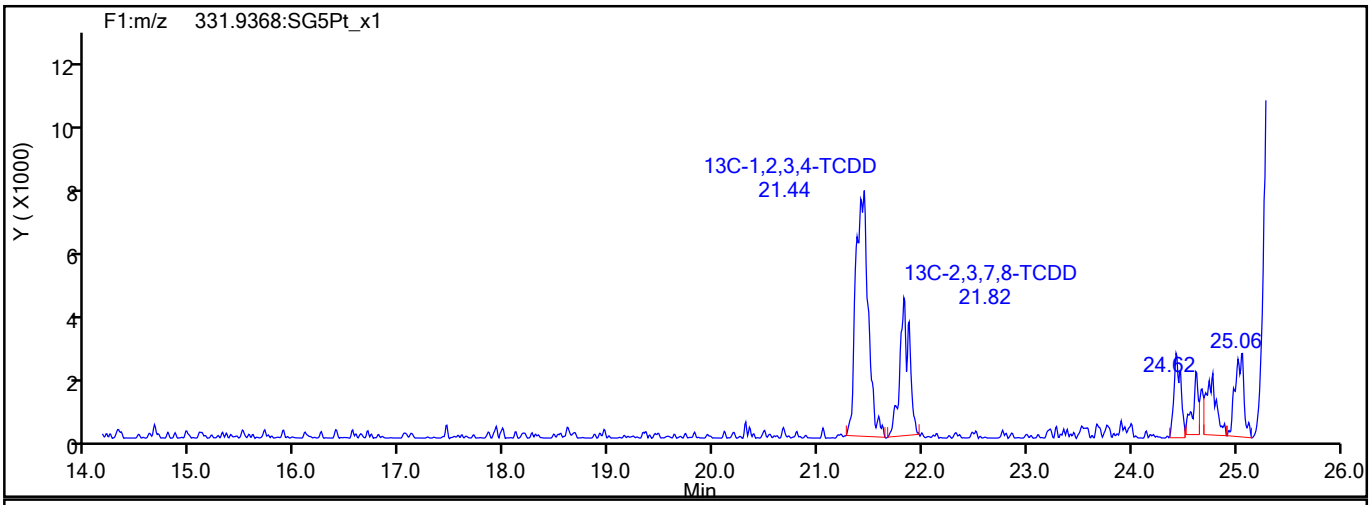

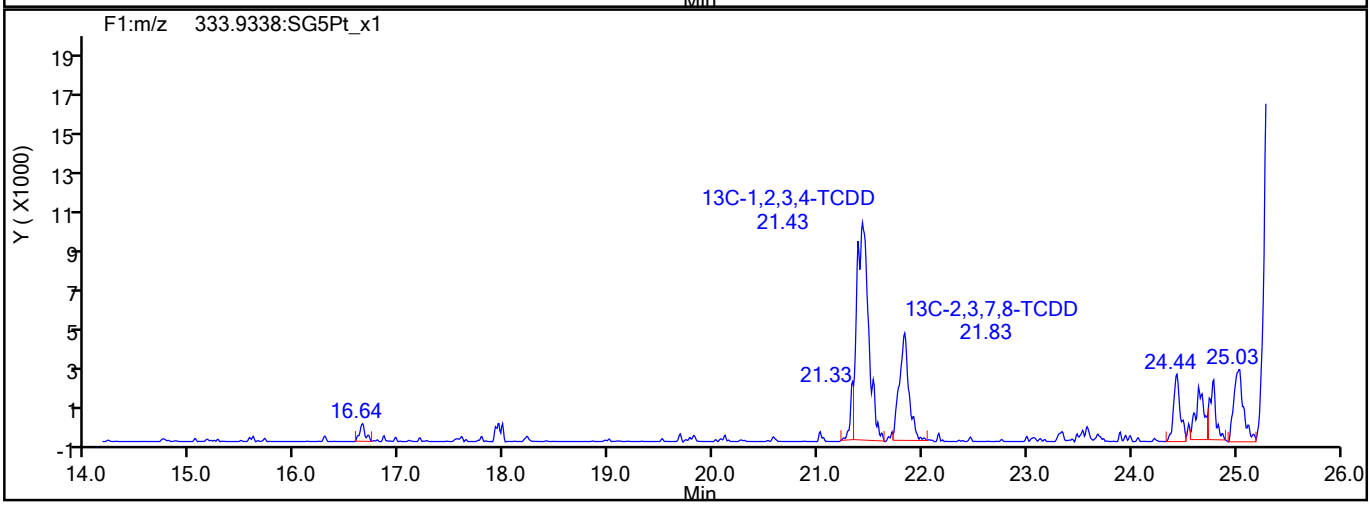

787865

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

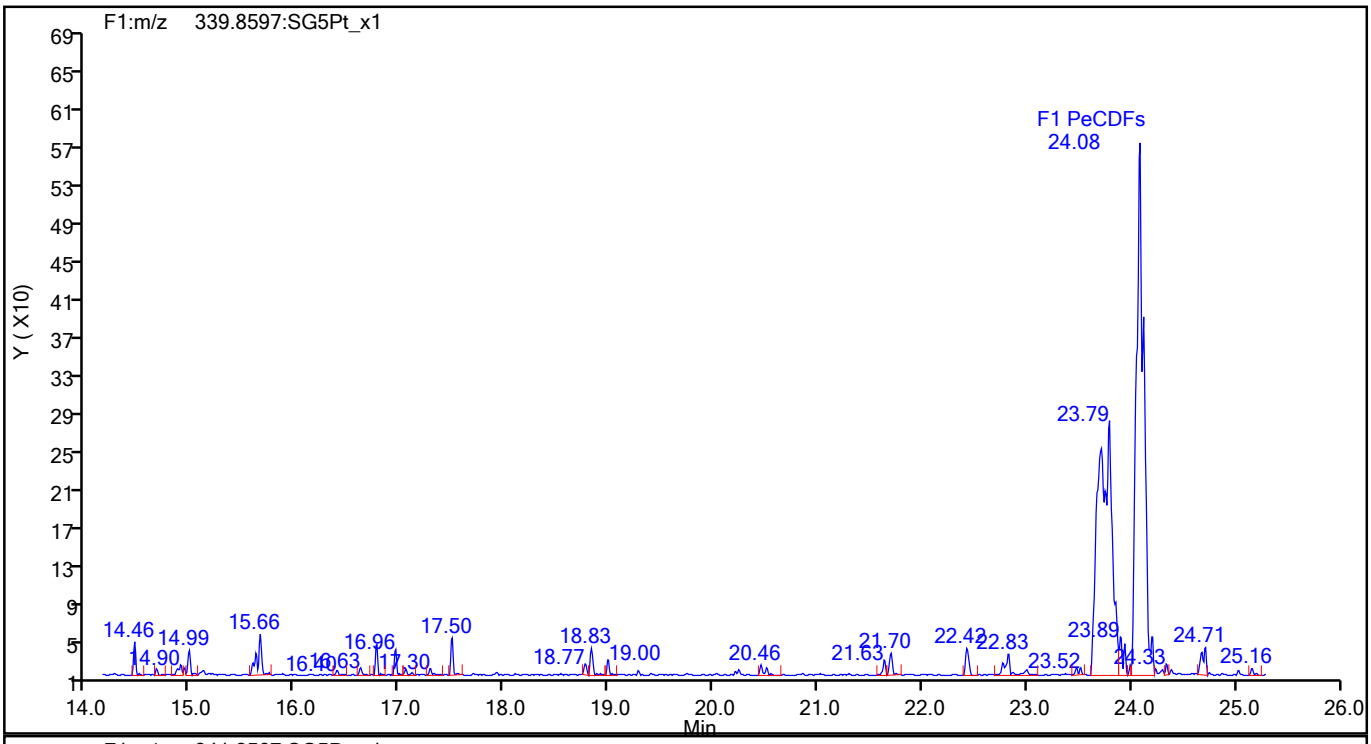

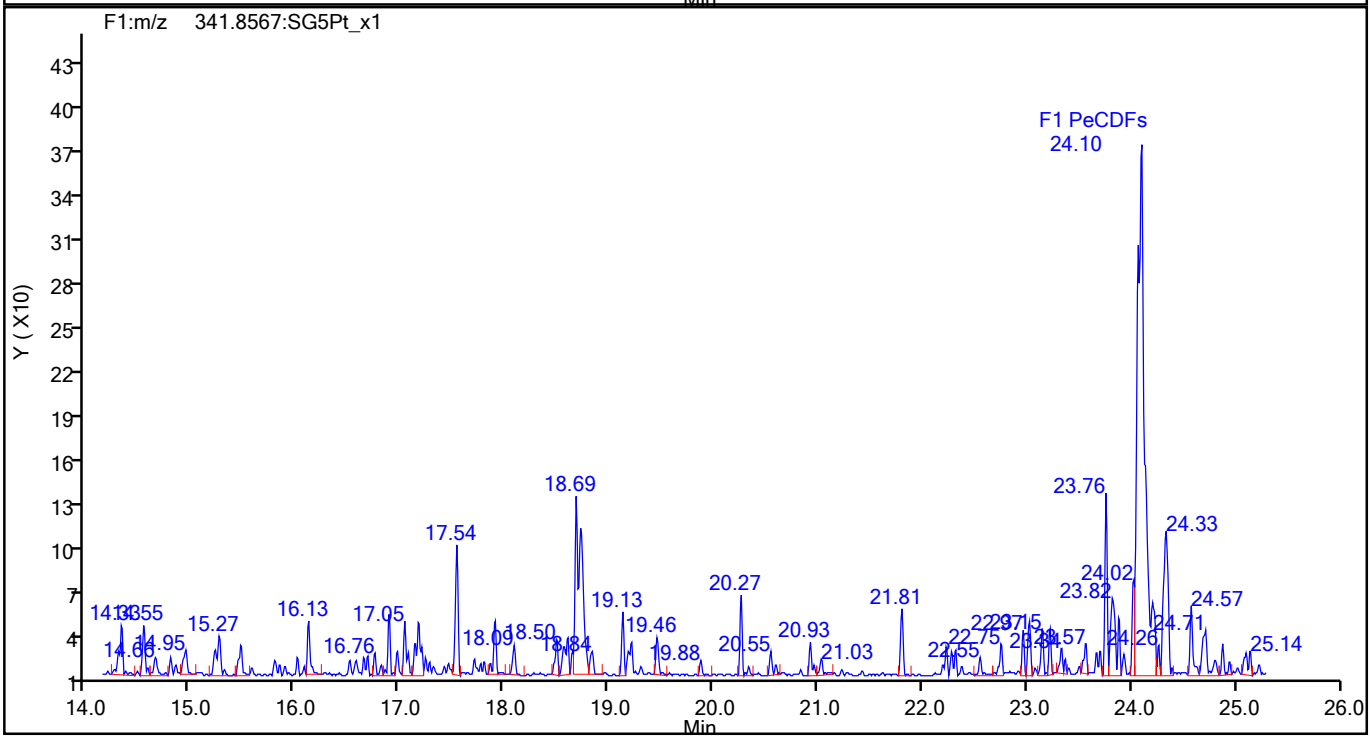

787866

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

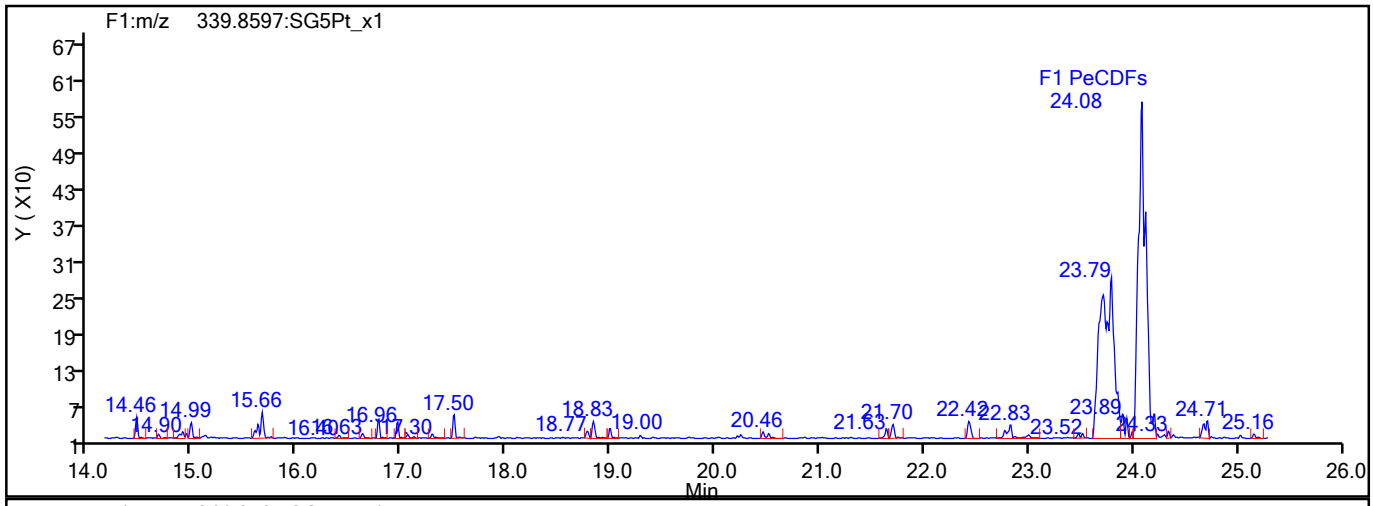

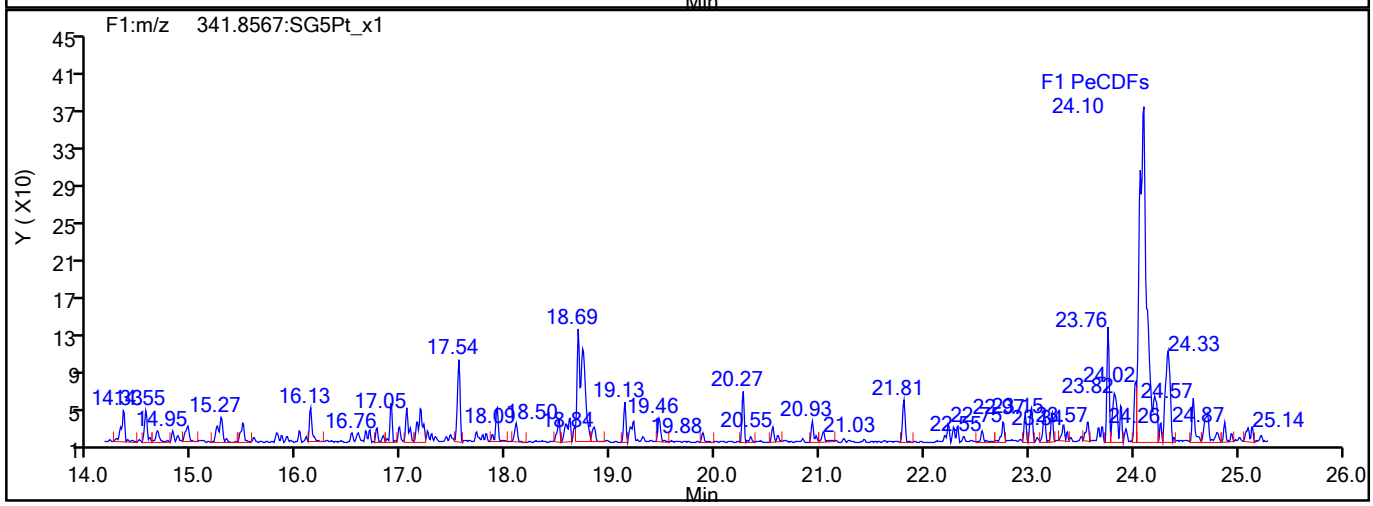

F1 PeCDFs Interference Mass

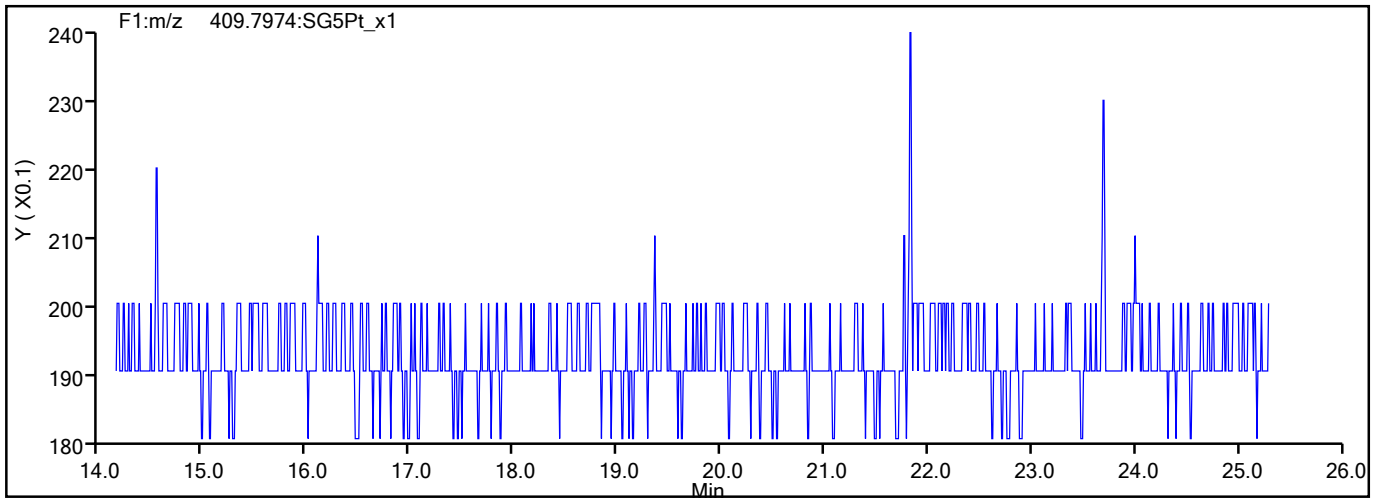

787867

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

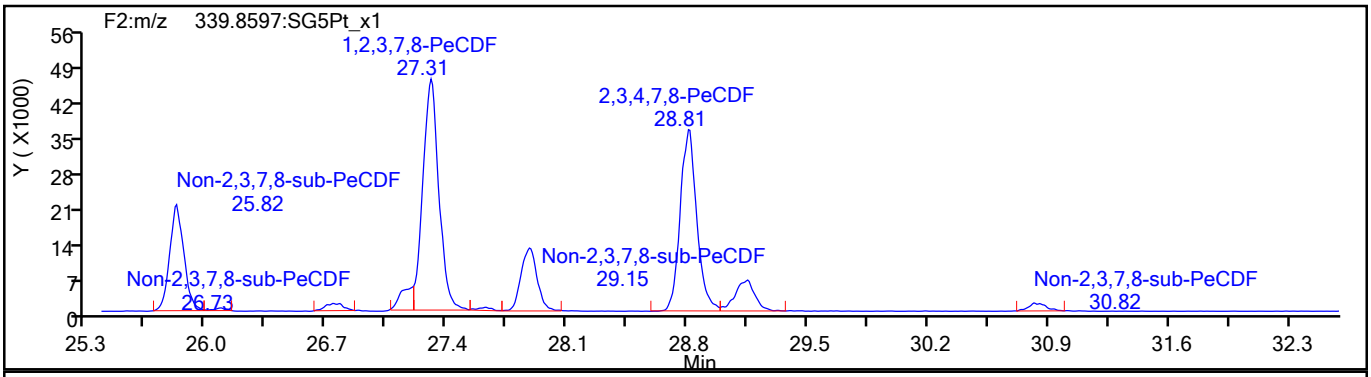

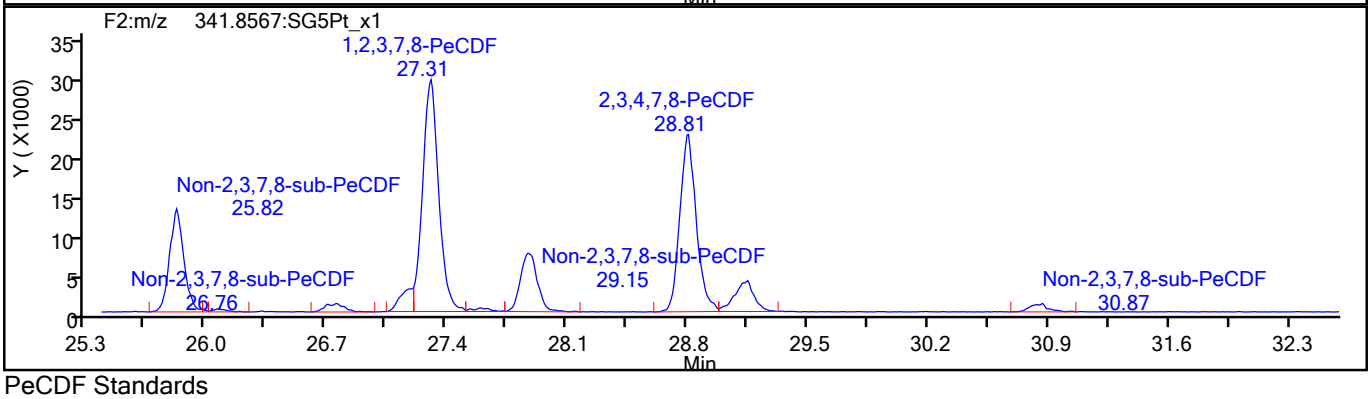

PeCDF Standards

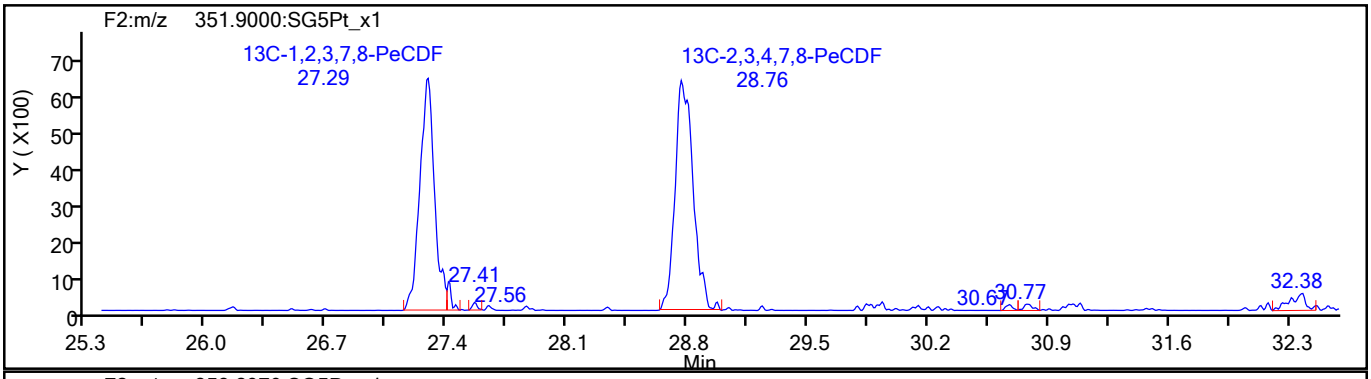

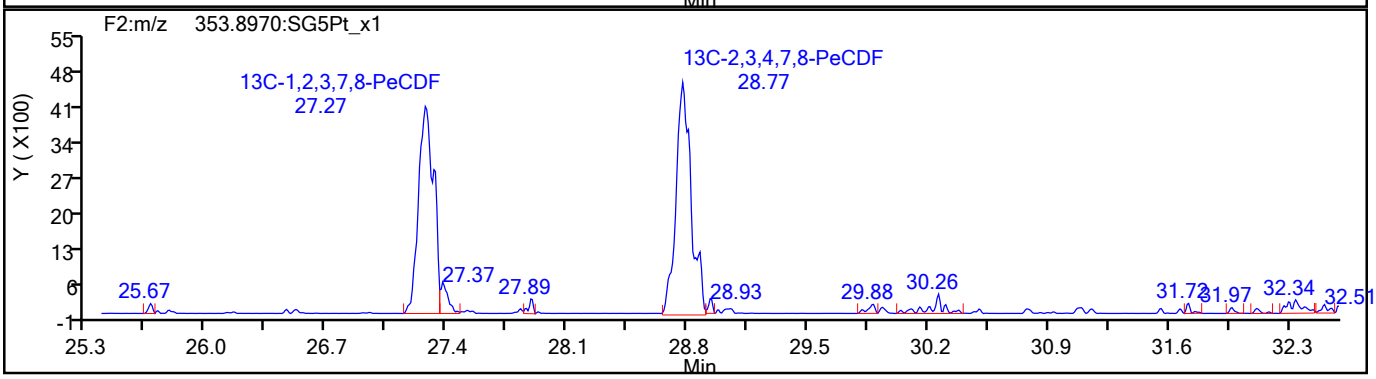

787868

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
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PeCDF

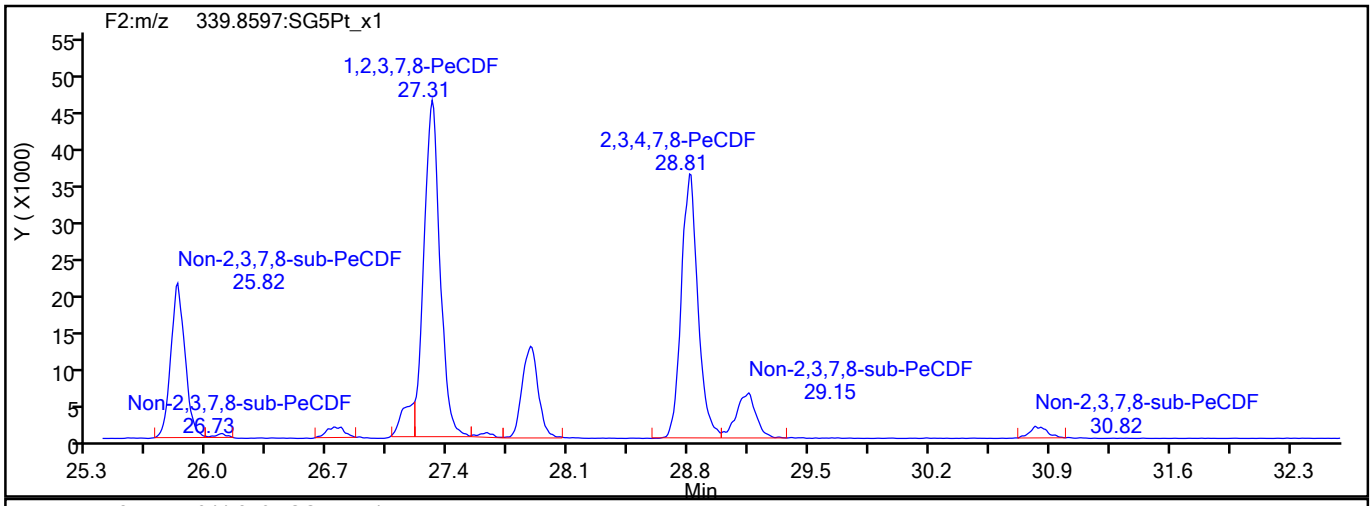

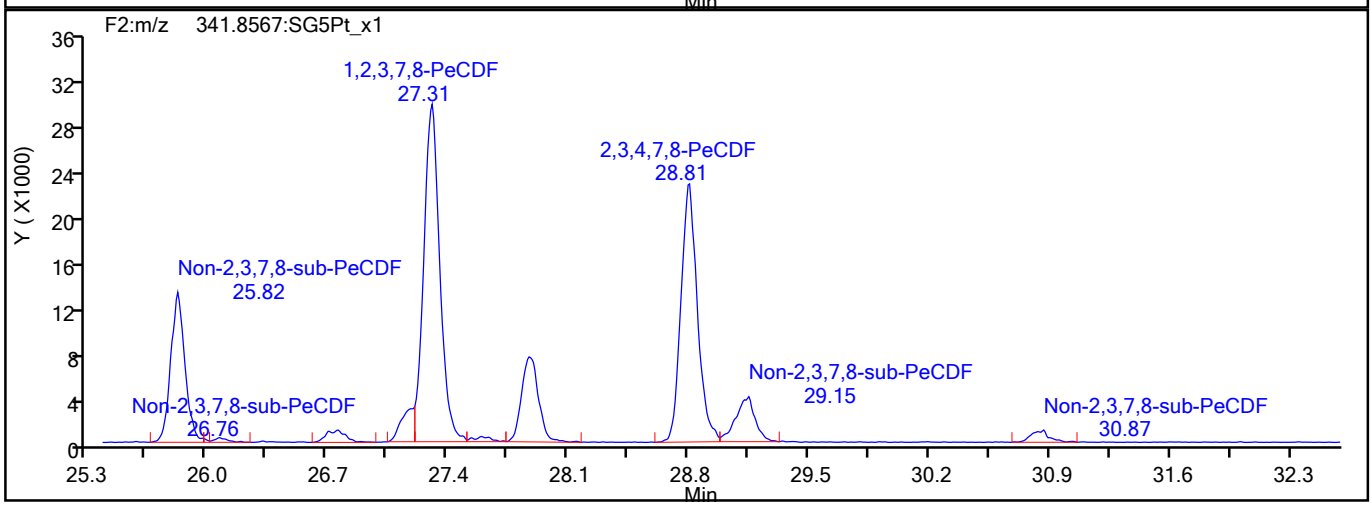

PeCDF Interference Mass

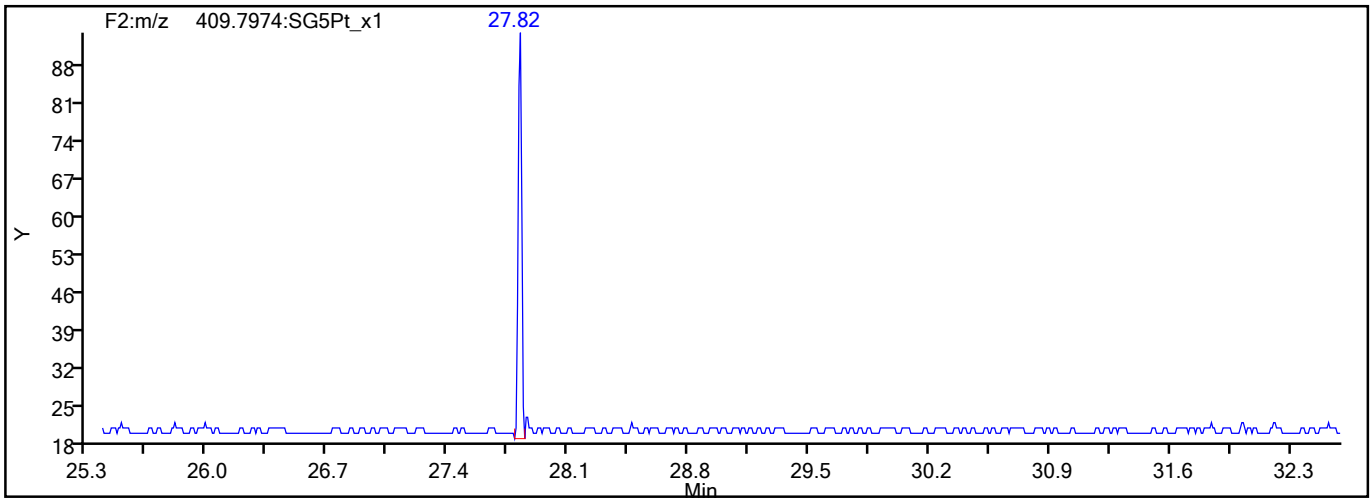

787869

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

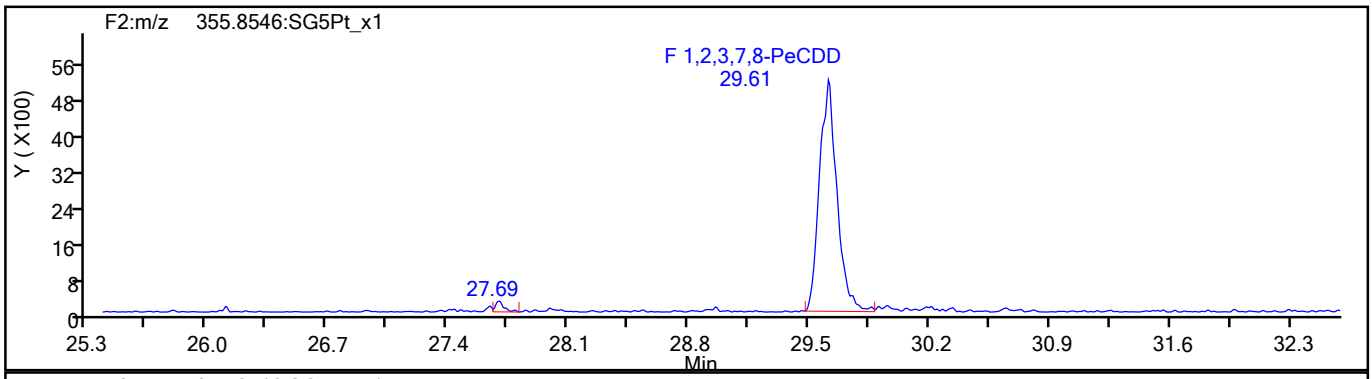

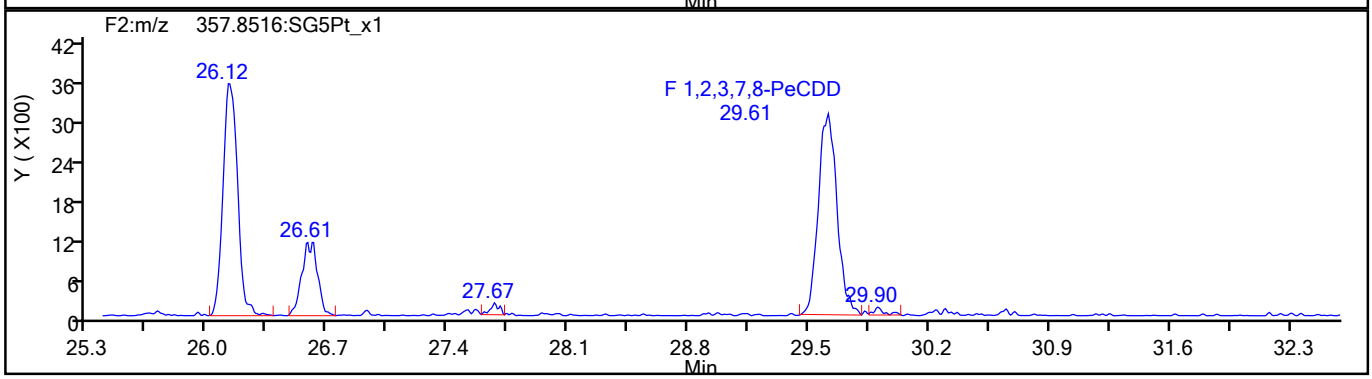

PeCDD Standards

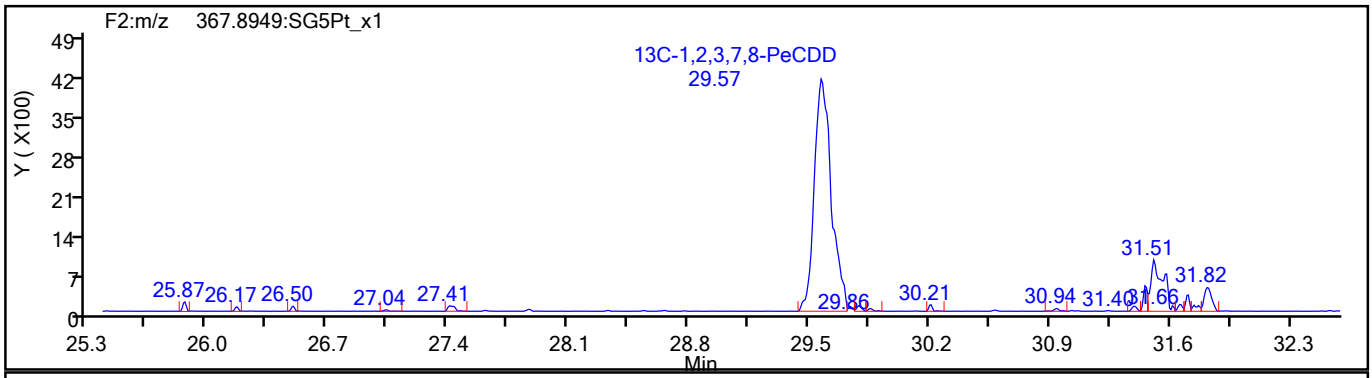

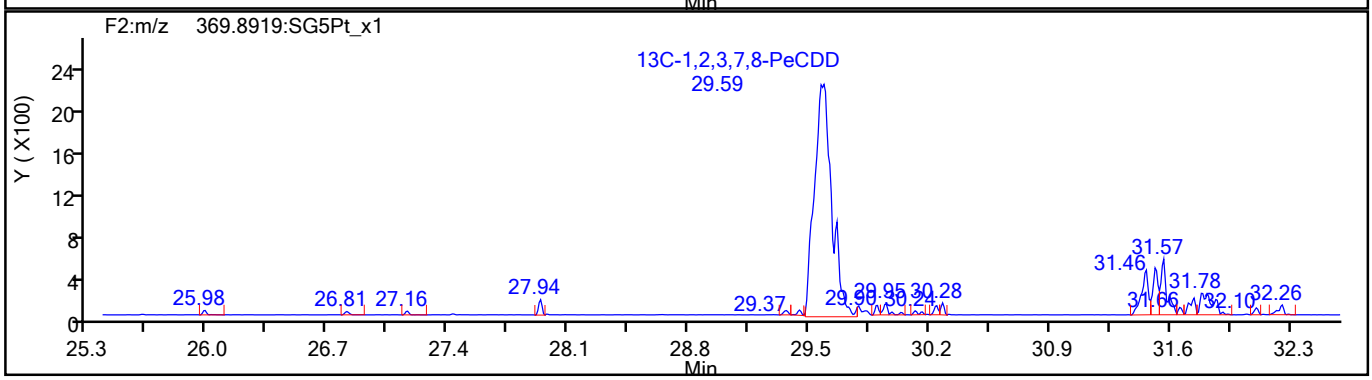

787870

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

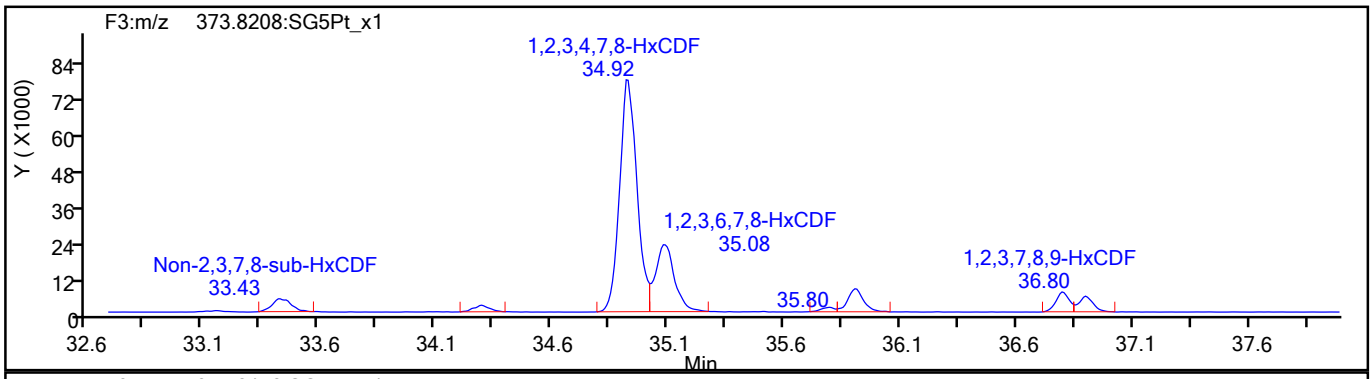

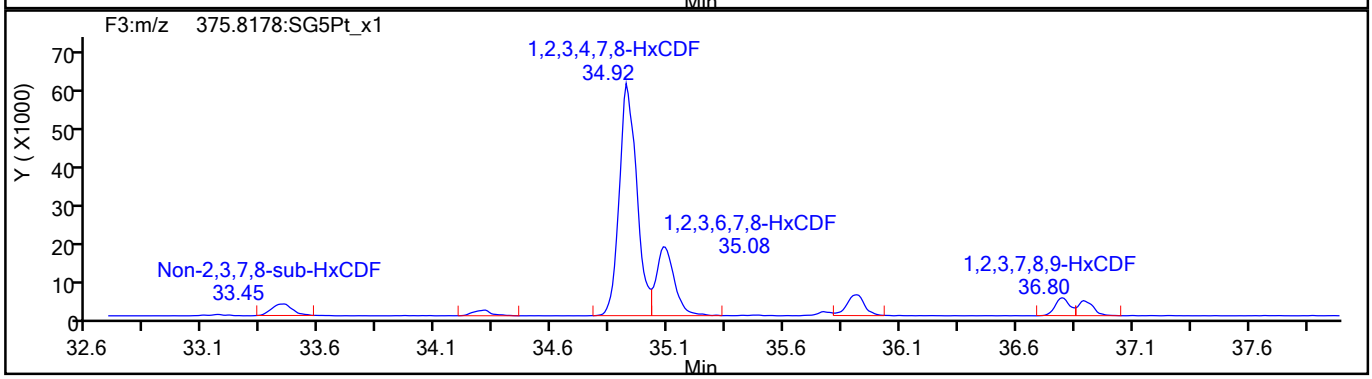

HxCDF Standards

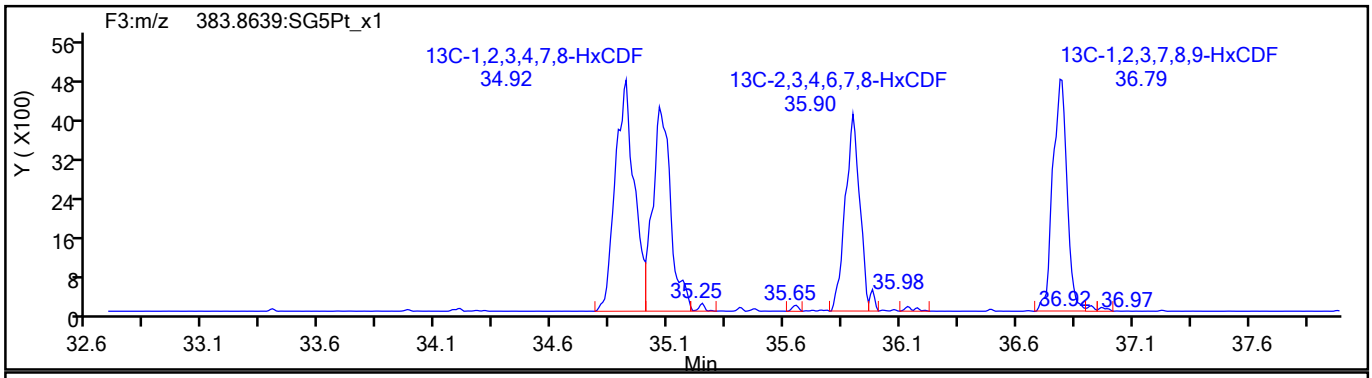

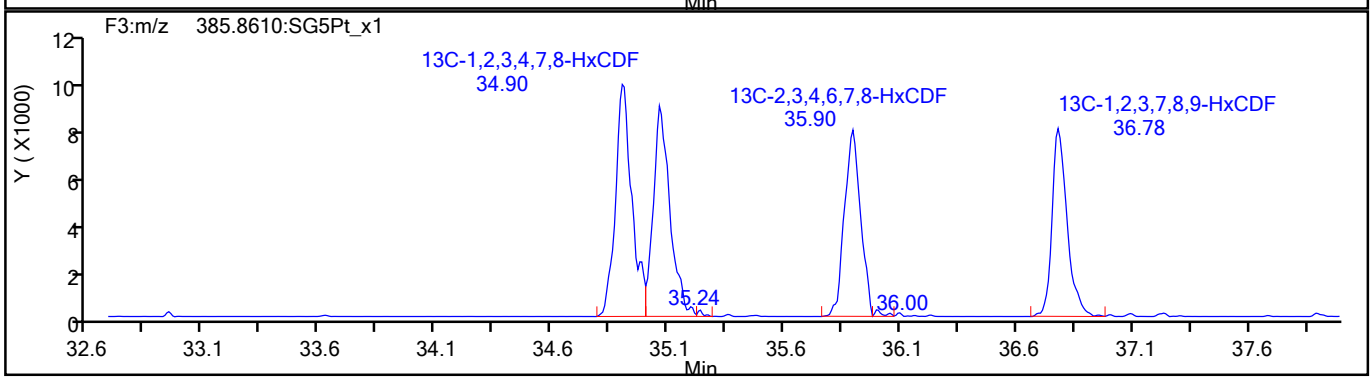

787871

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

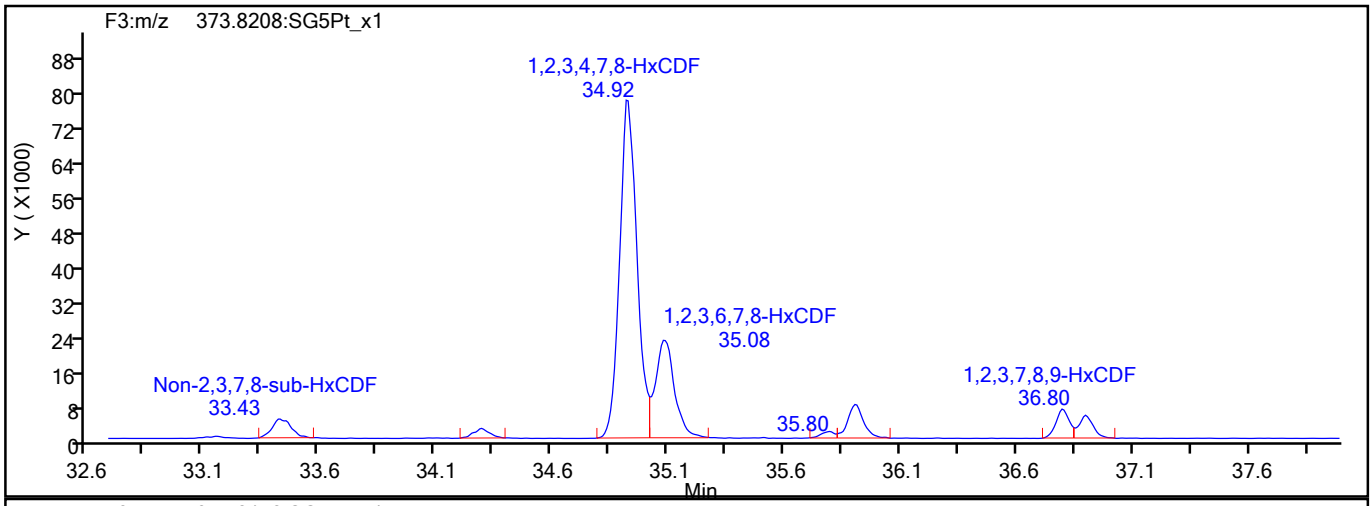

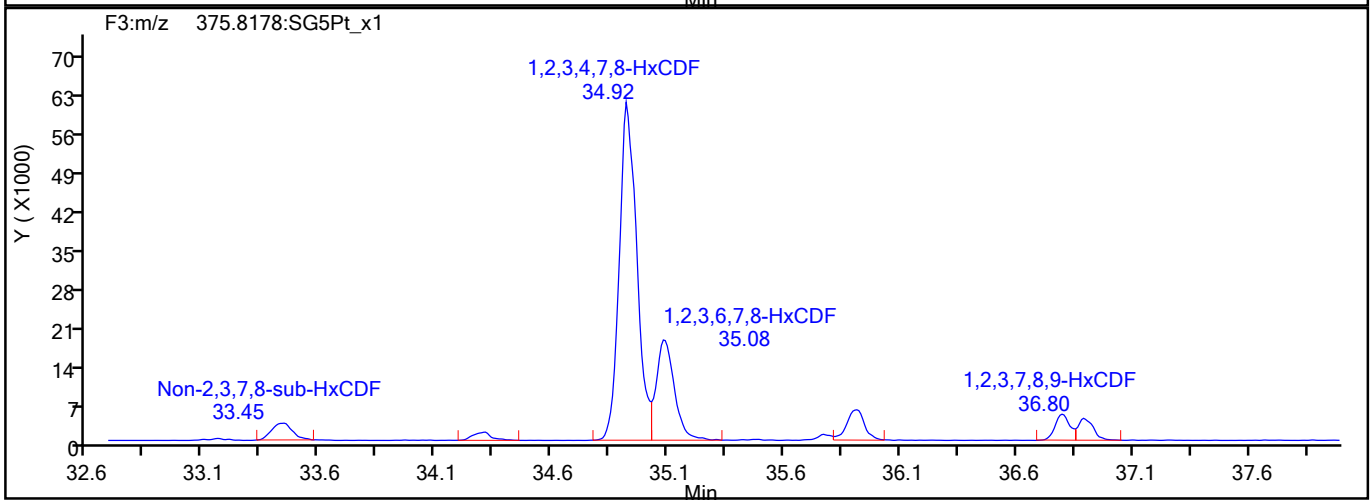

HxCDF Interference Mass

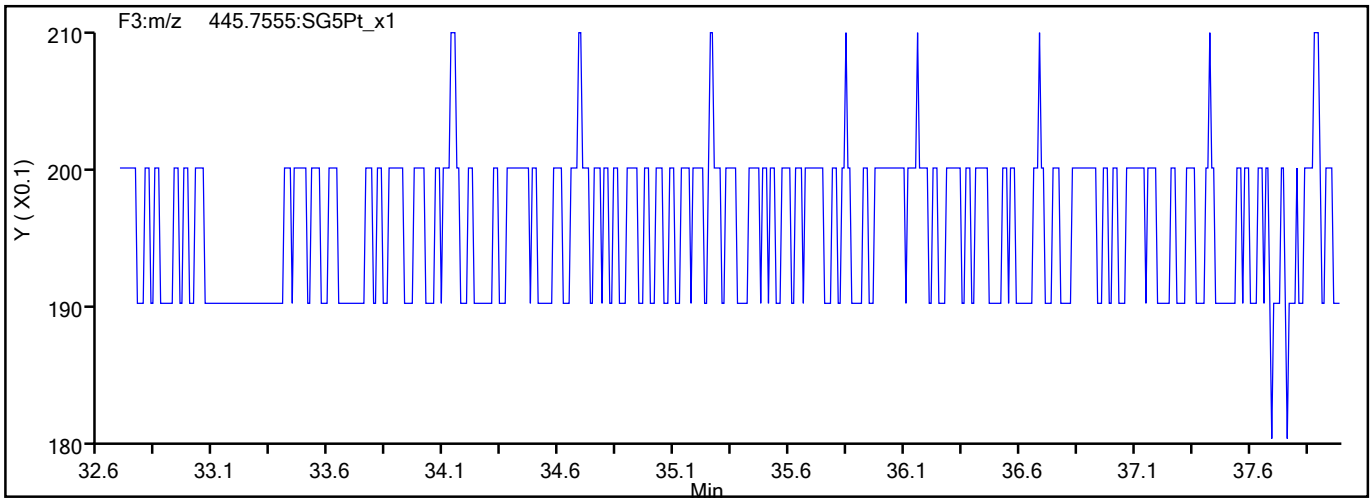

787872

Report Date: 25-Aug-2021 15:22:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

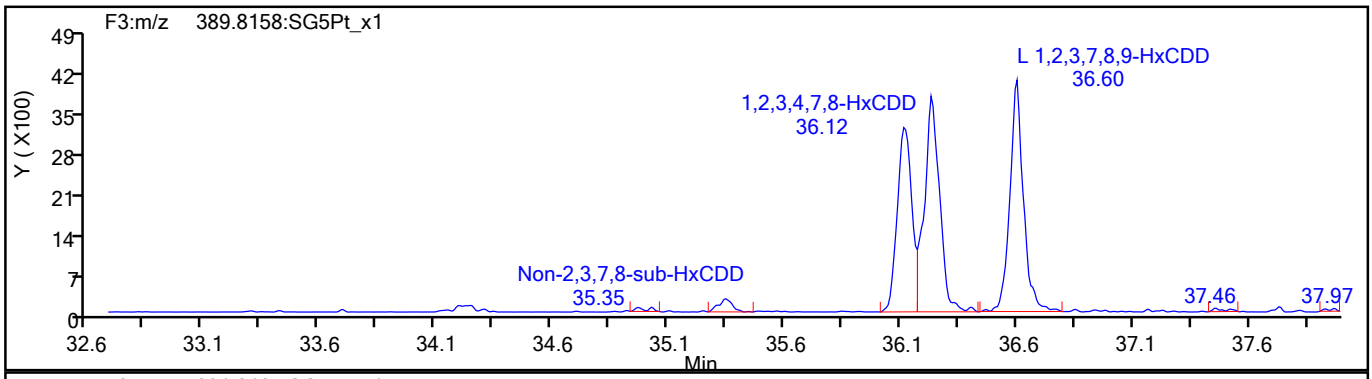

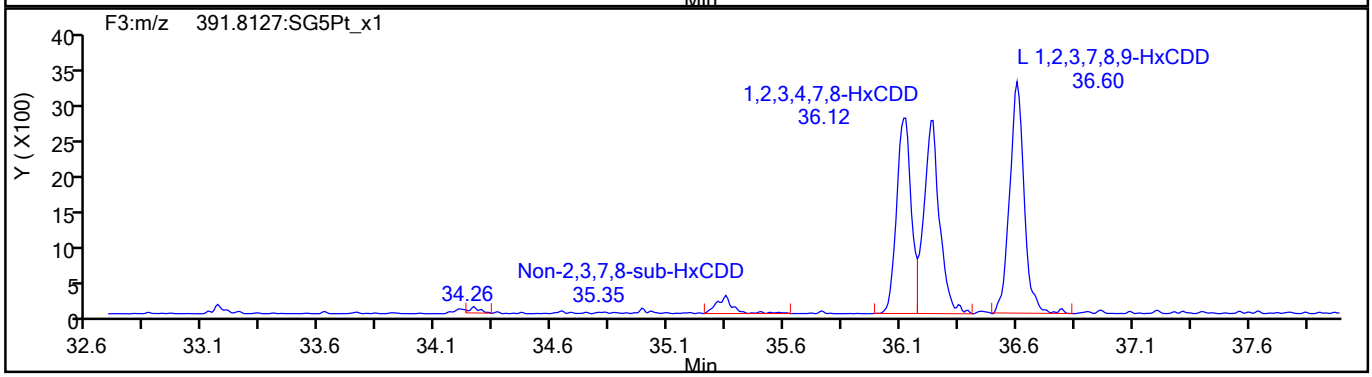

HxCDD Standards

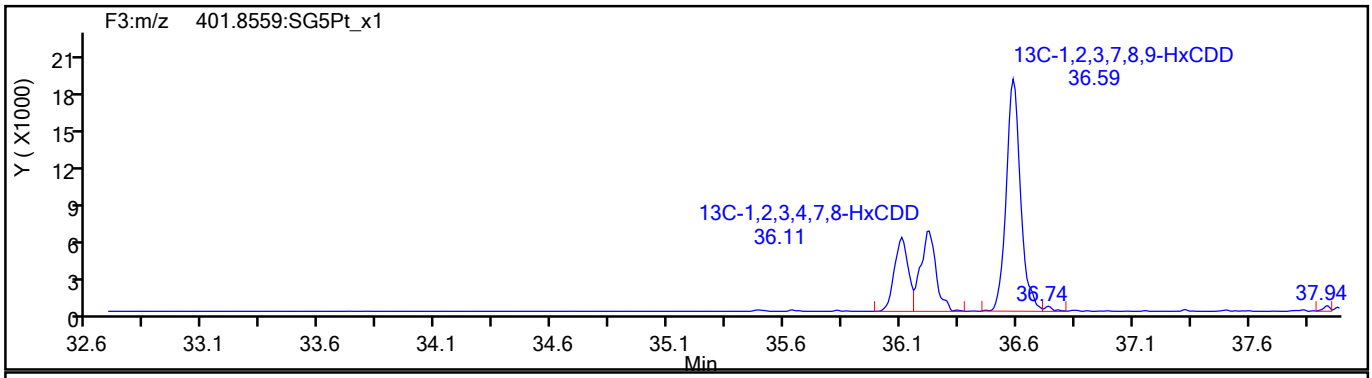

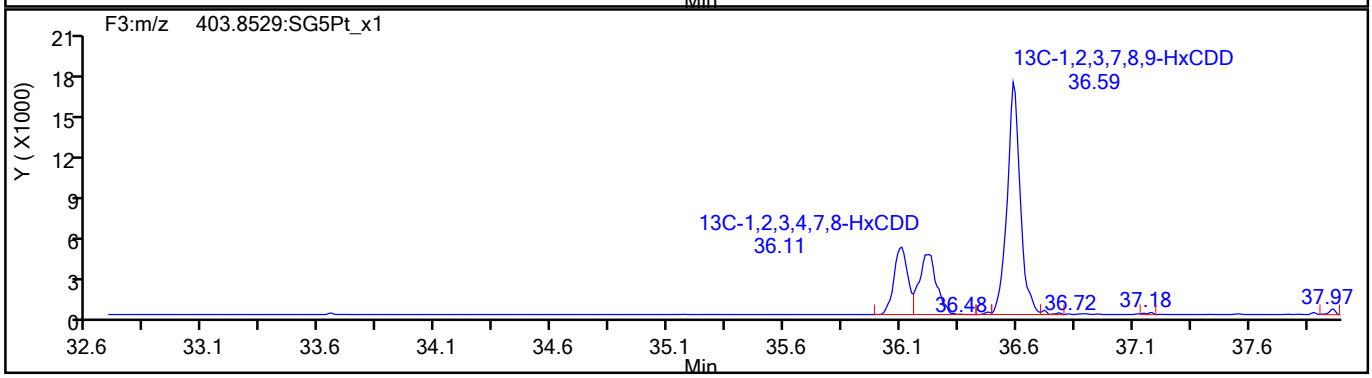

787873

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
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HpCDF

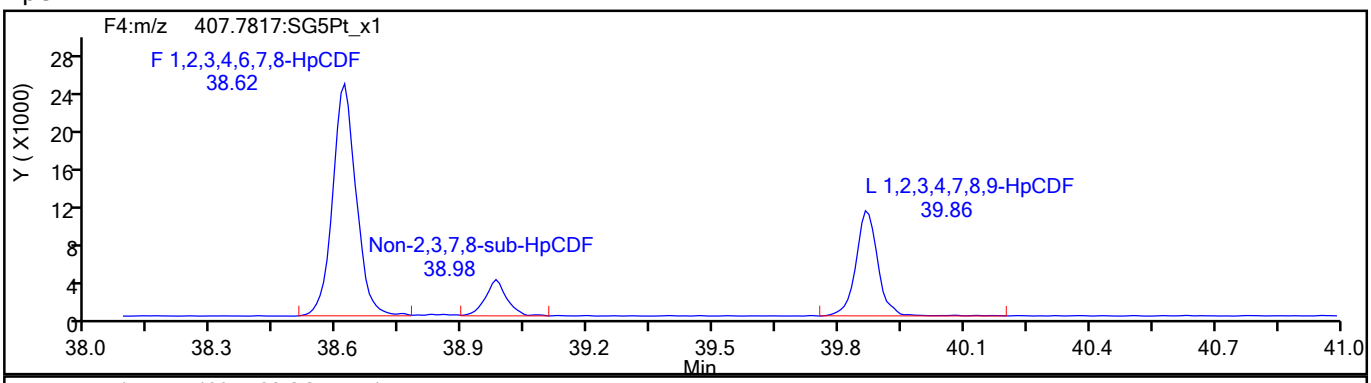

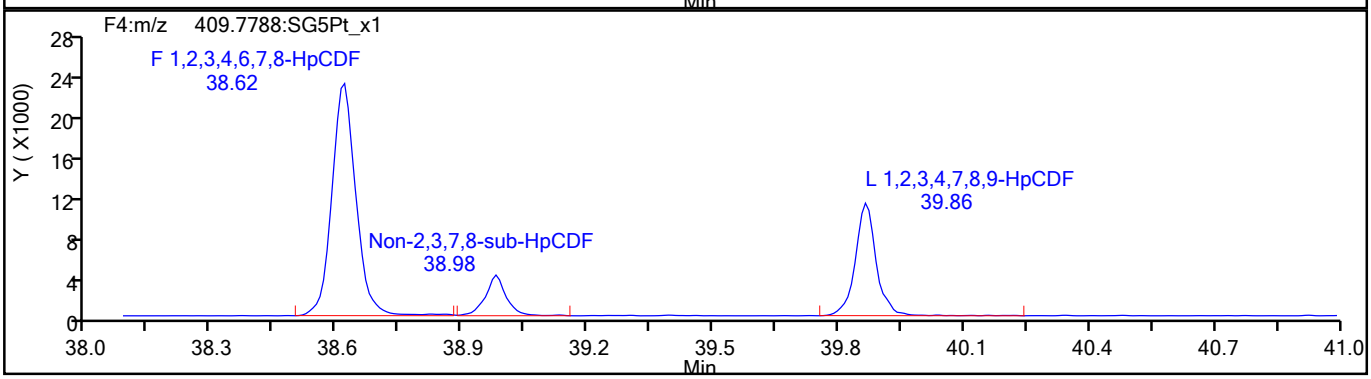

HpCDF Standards

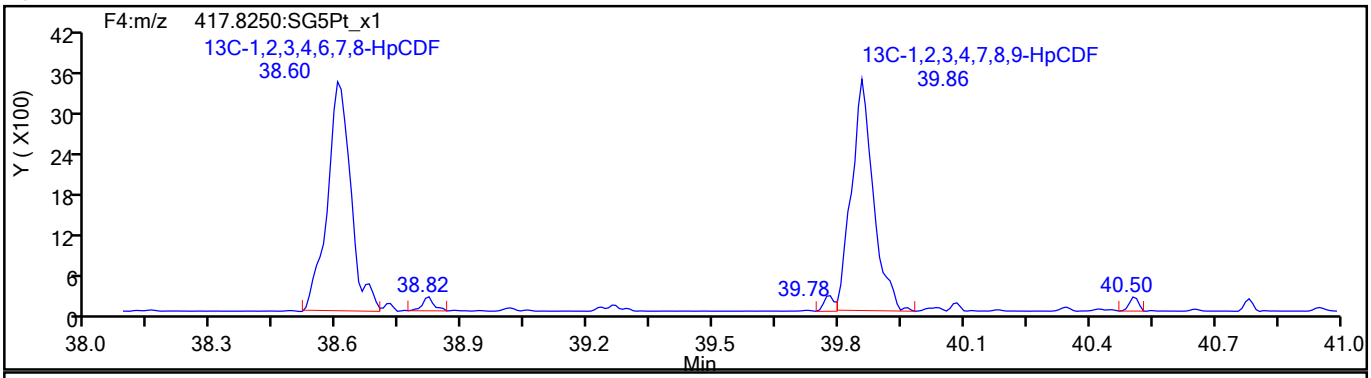

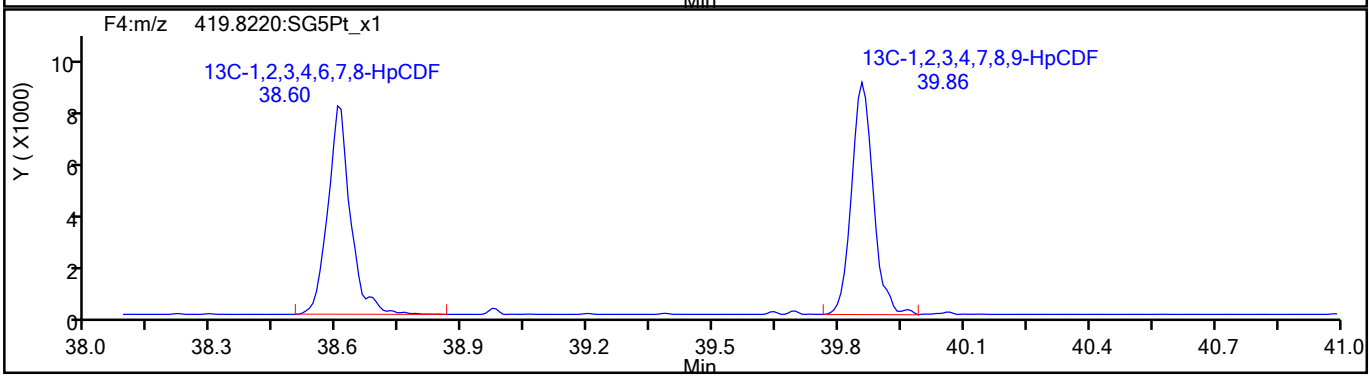

787874

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

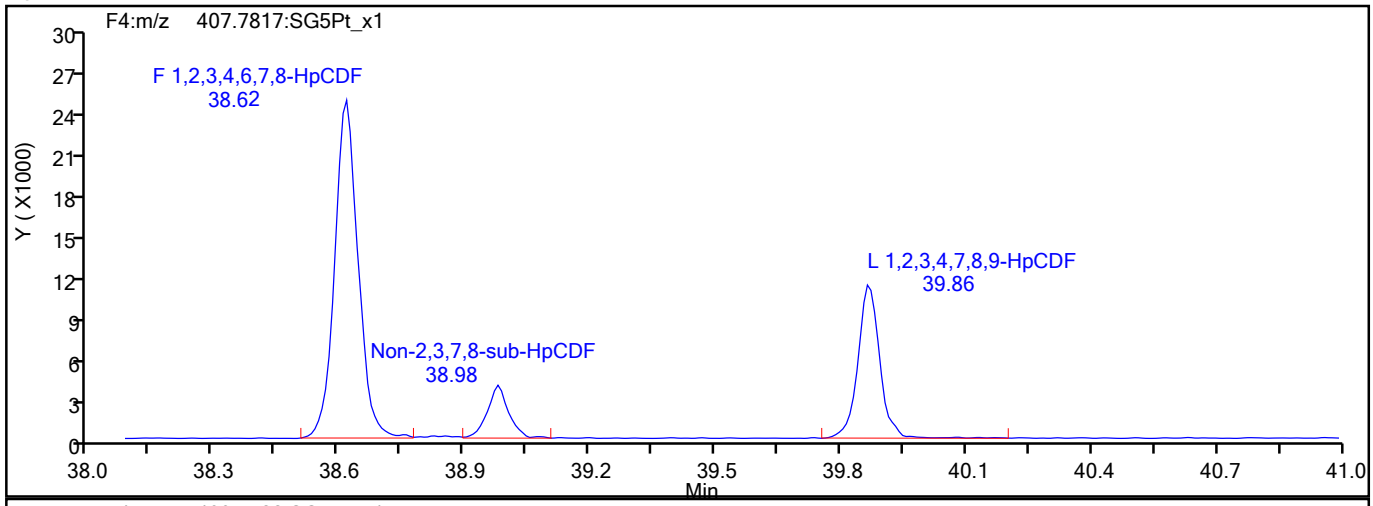

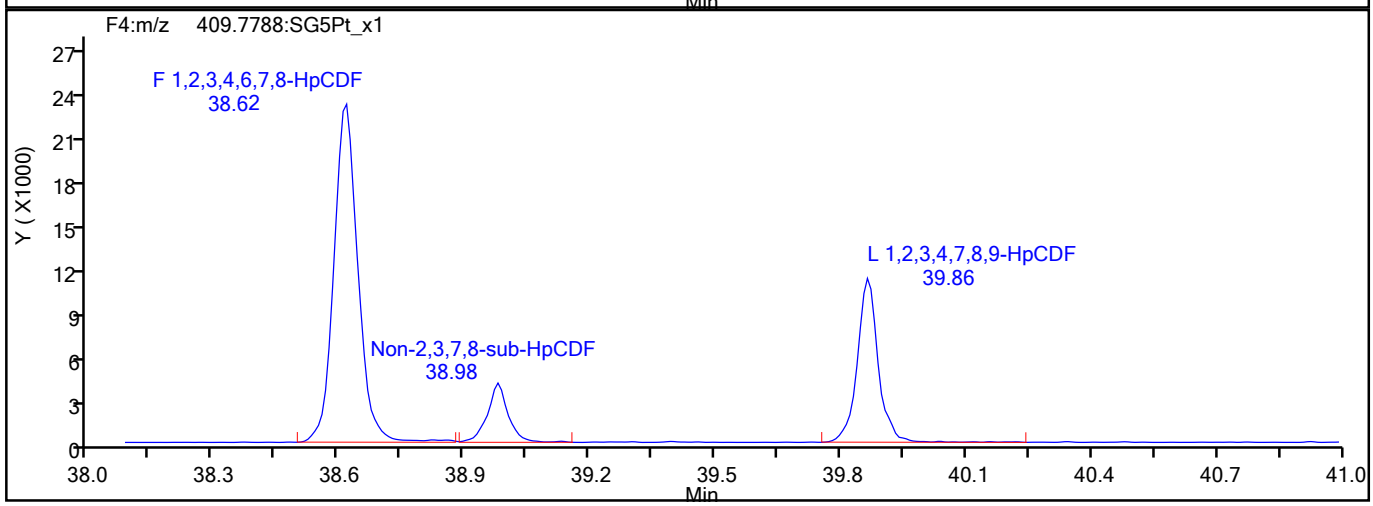

HpCDF Interference Mass

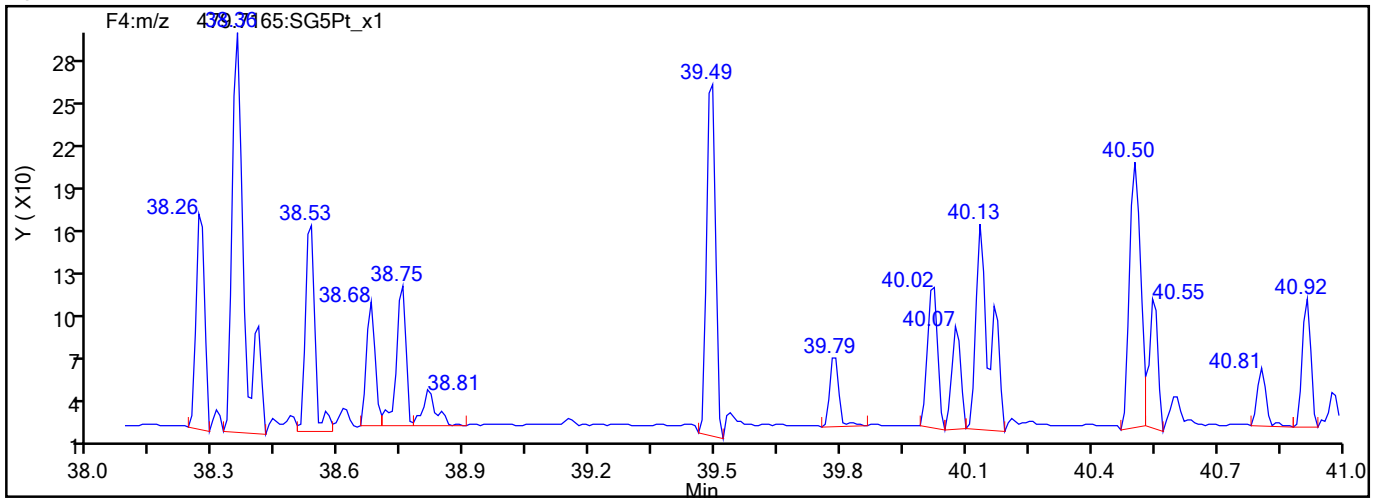

787875

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

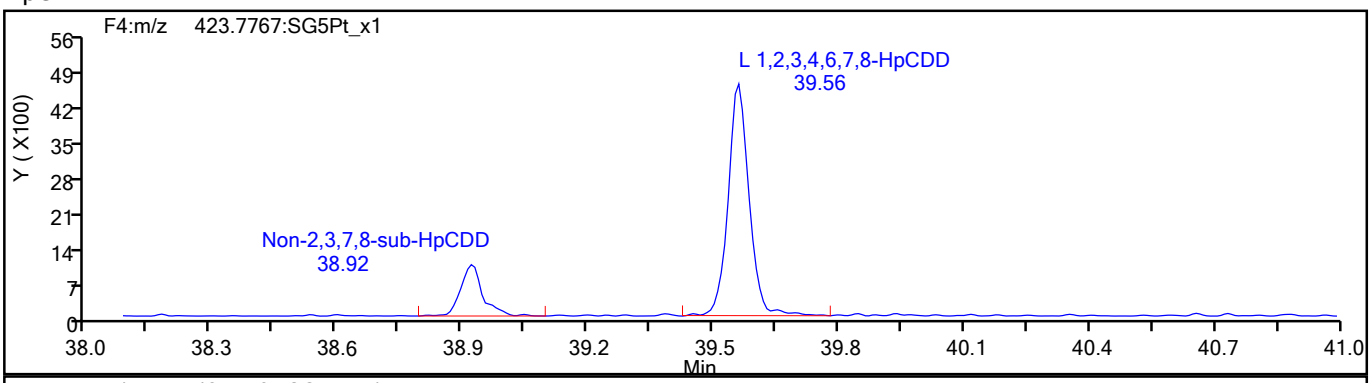

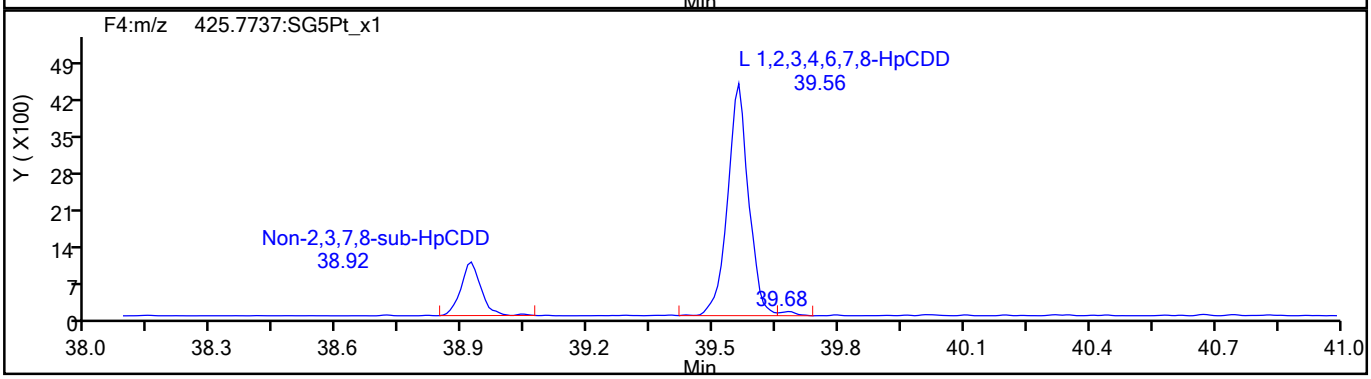

HpCDD Standards

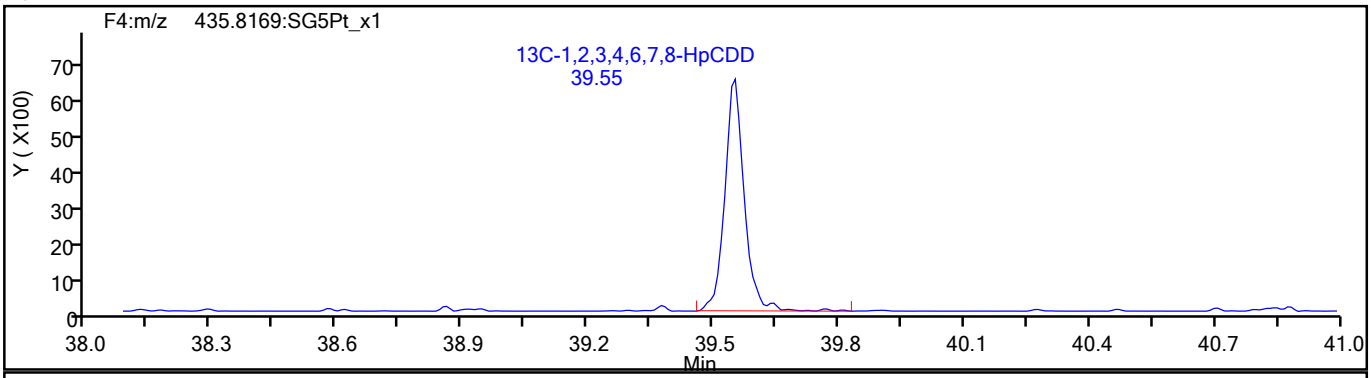

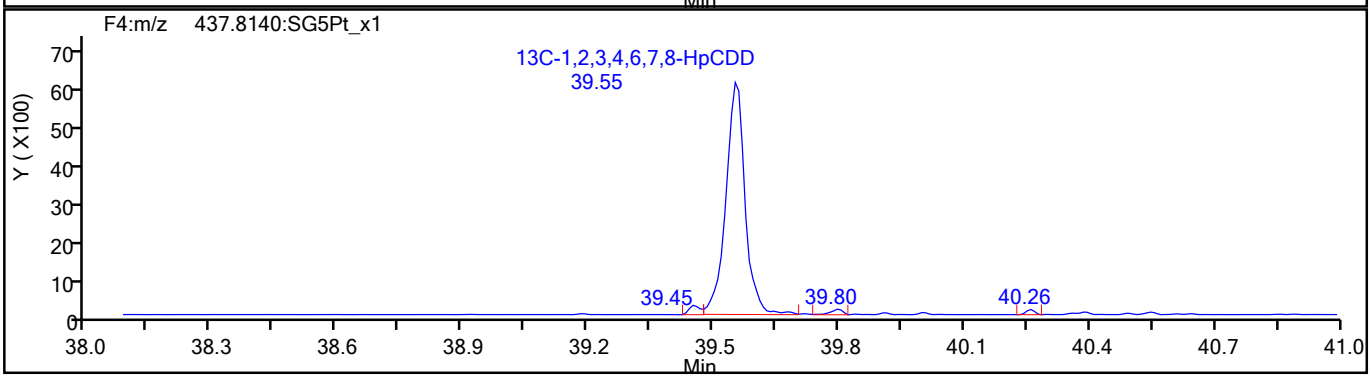

787876

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

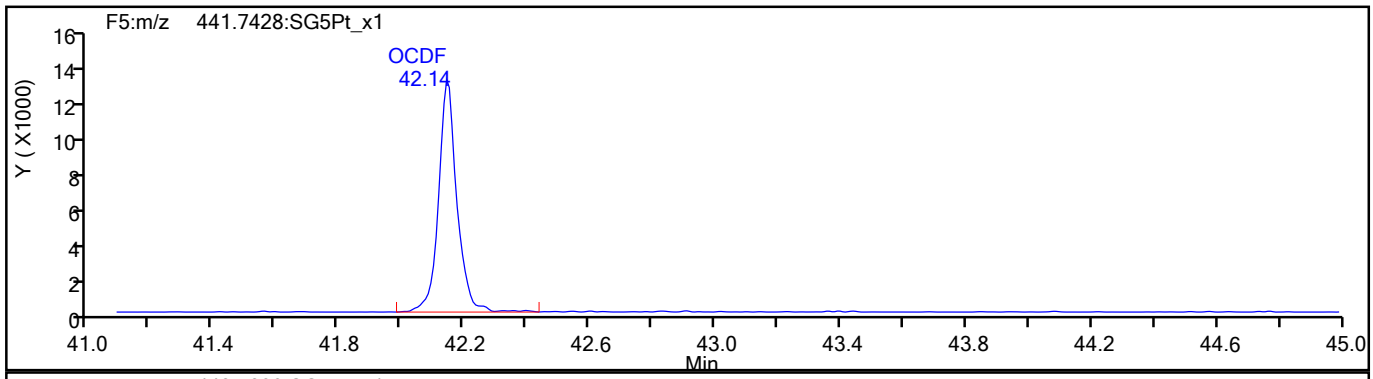

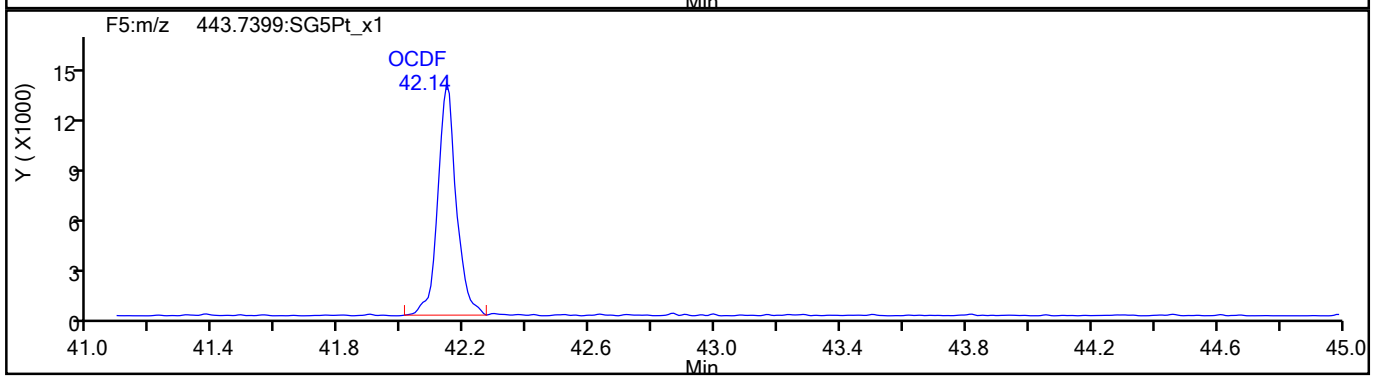

OCDF Standards

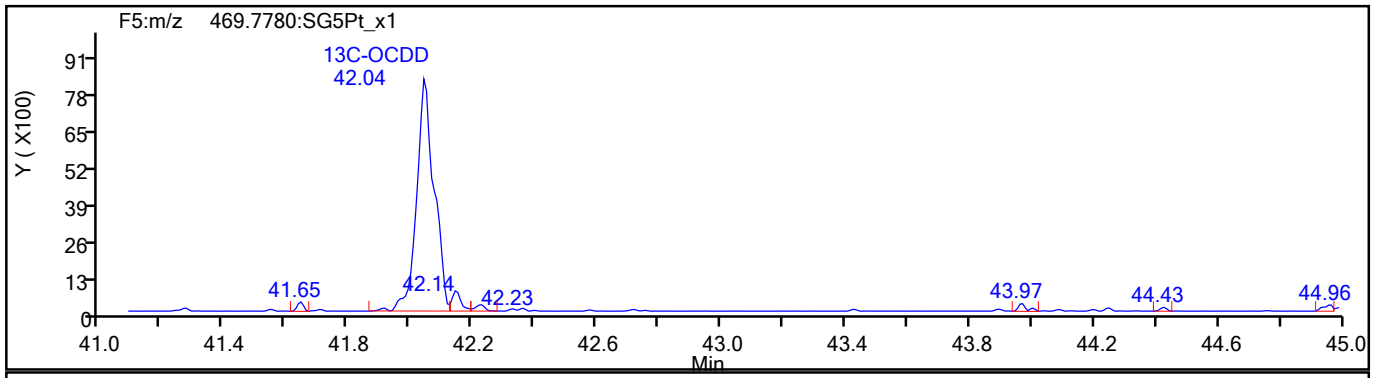

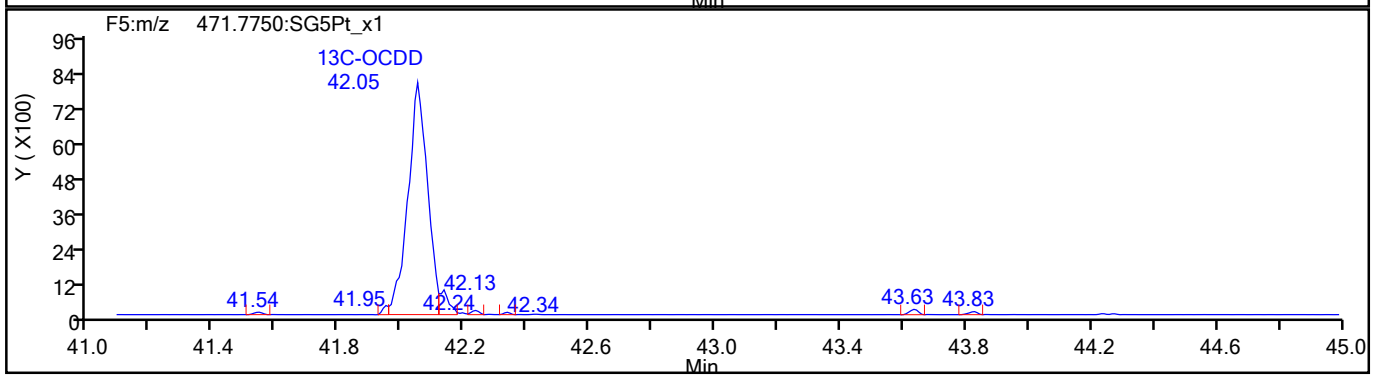

787877

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

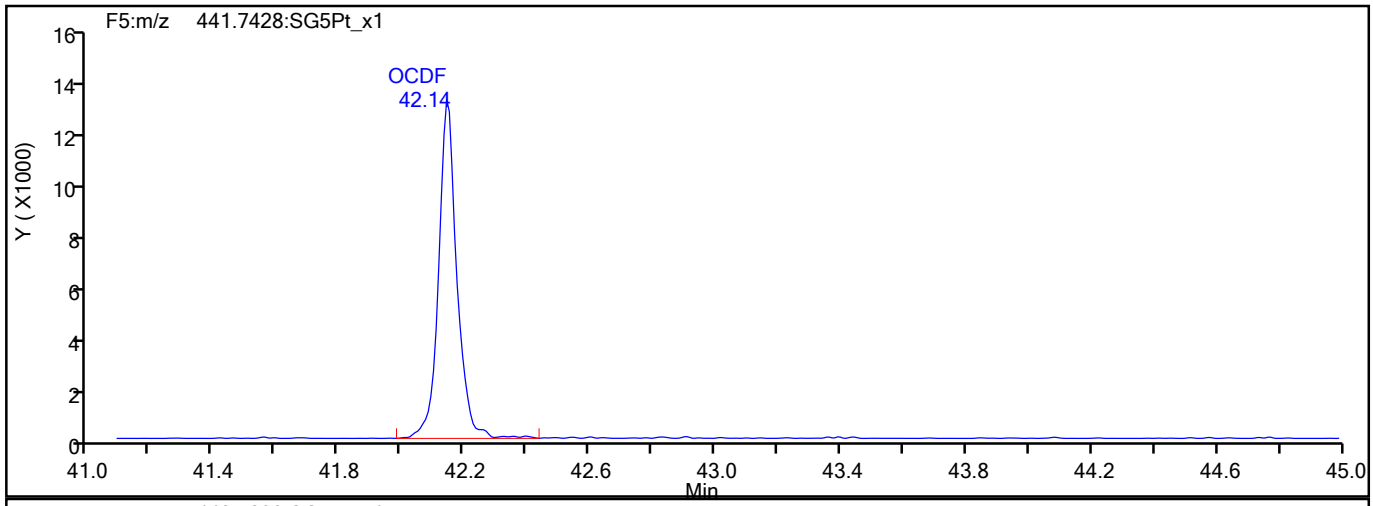

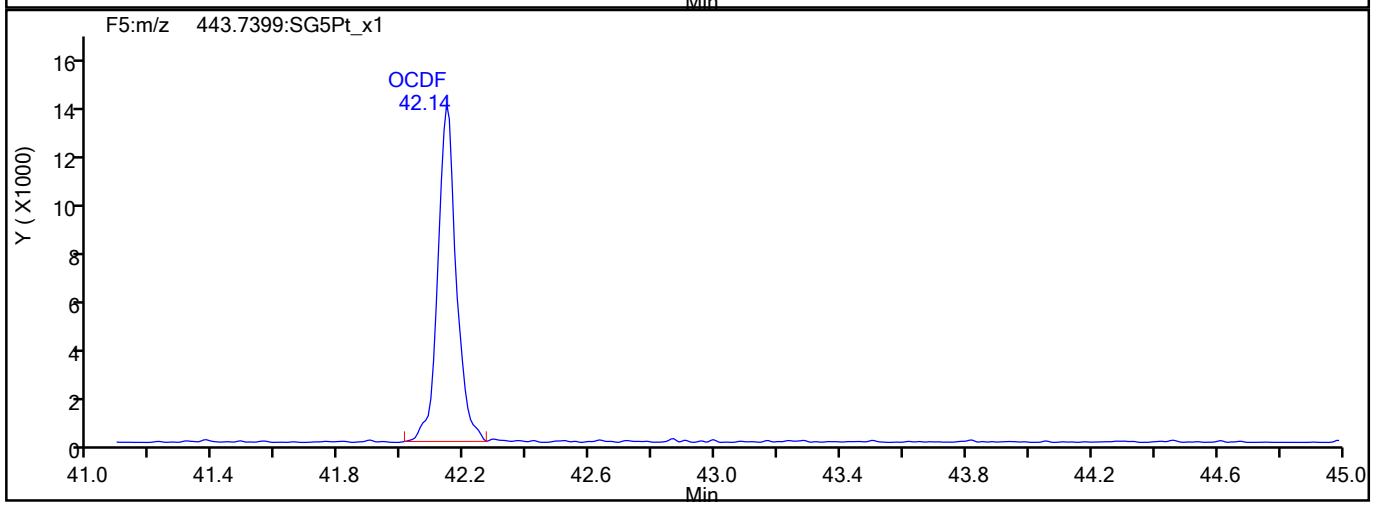

OCDF Interference Mass

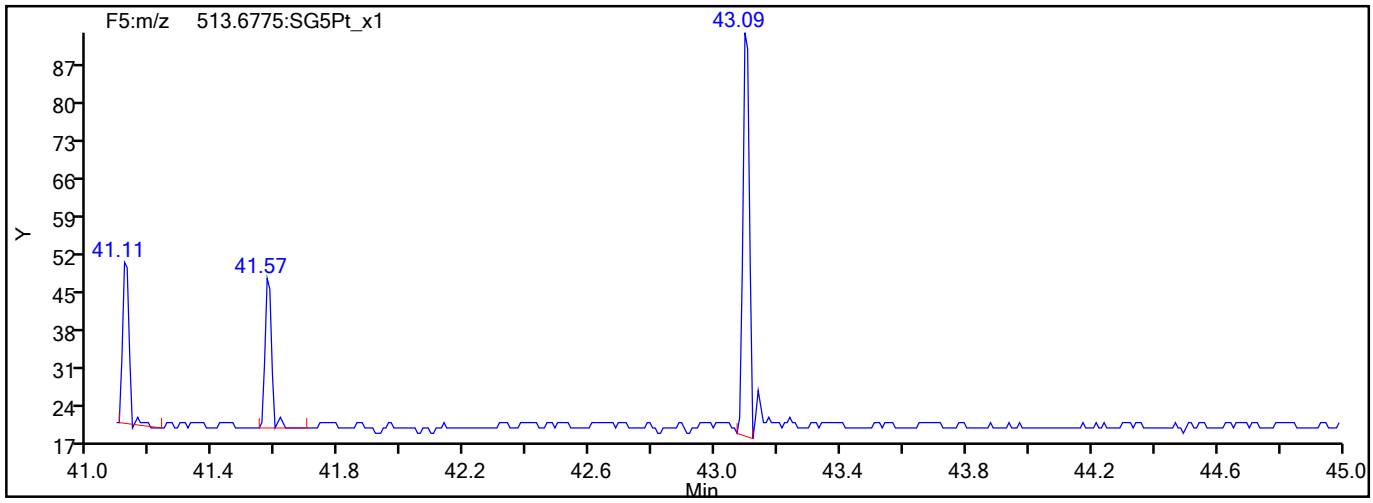

787878

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

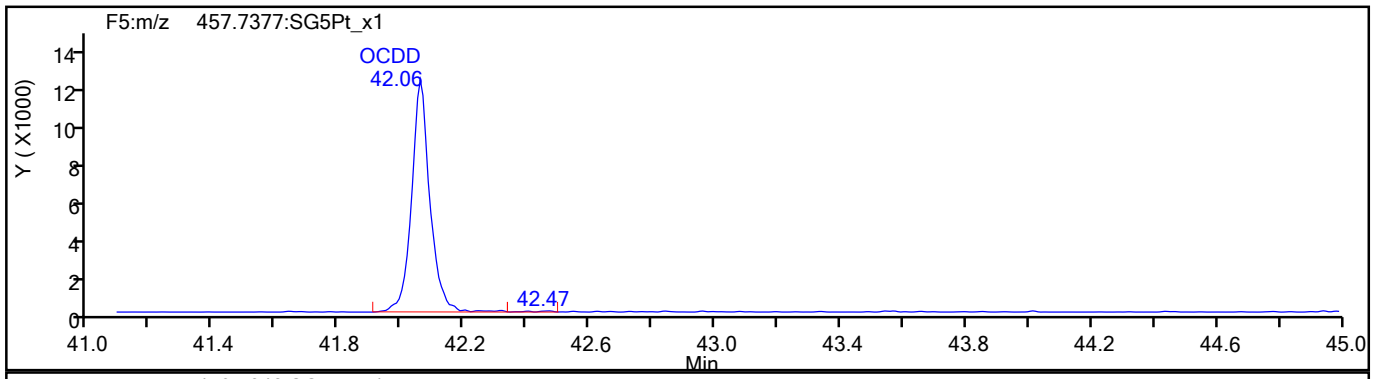

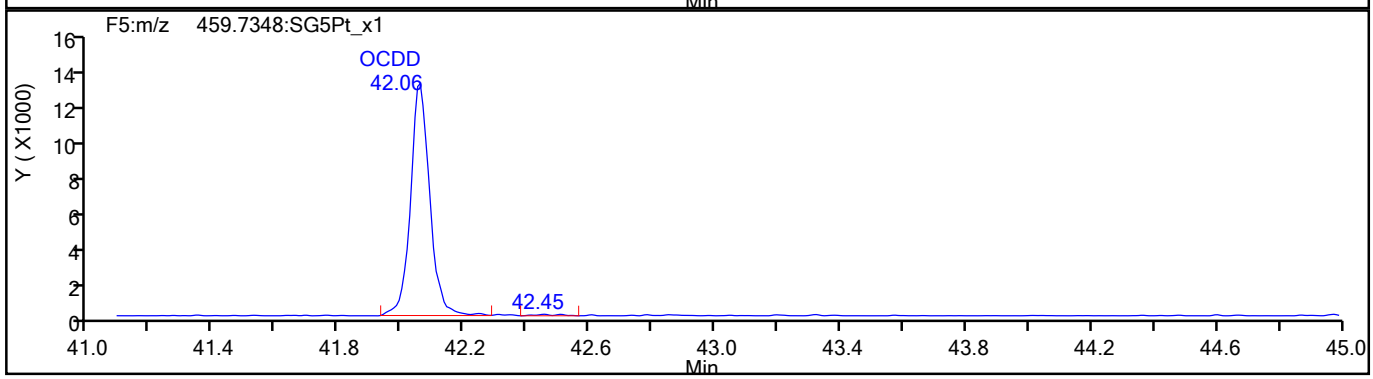

OCDD Standards

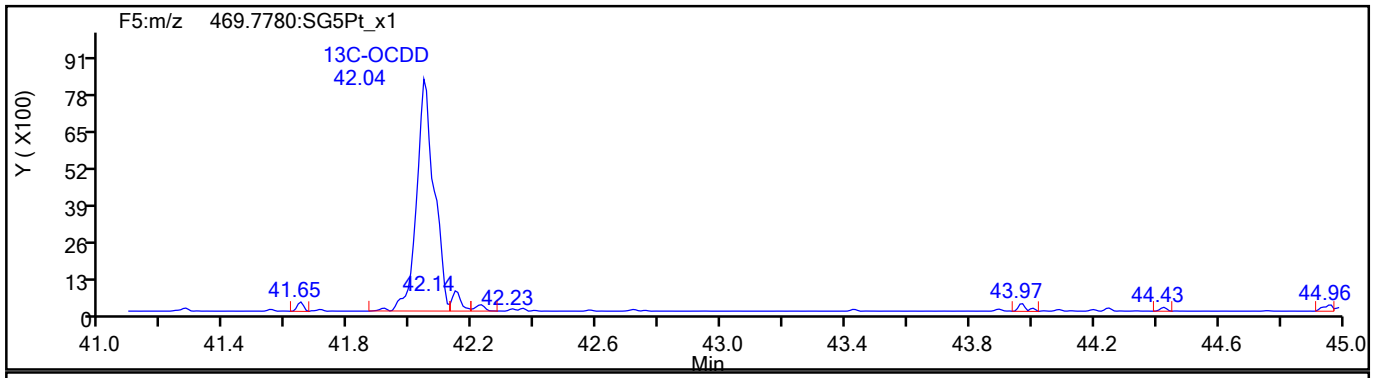

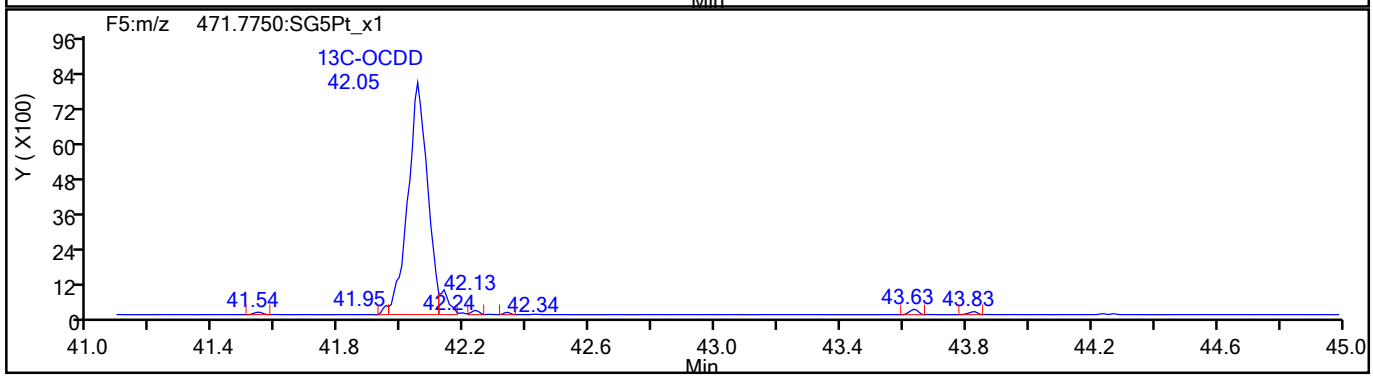

787879

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

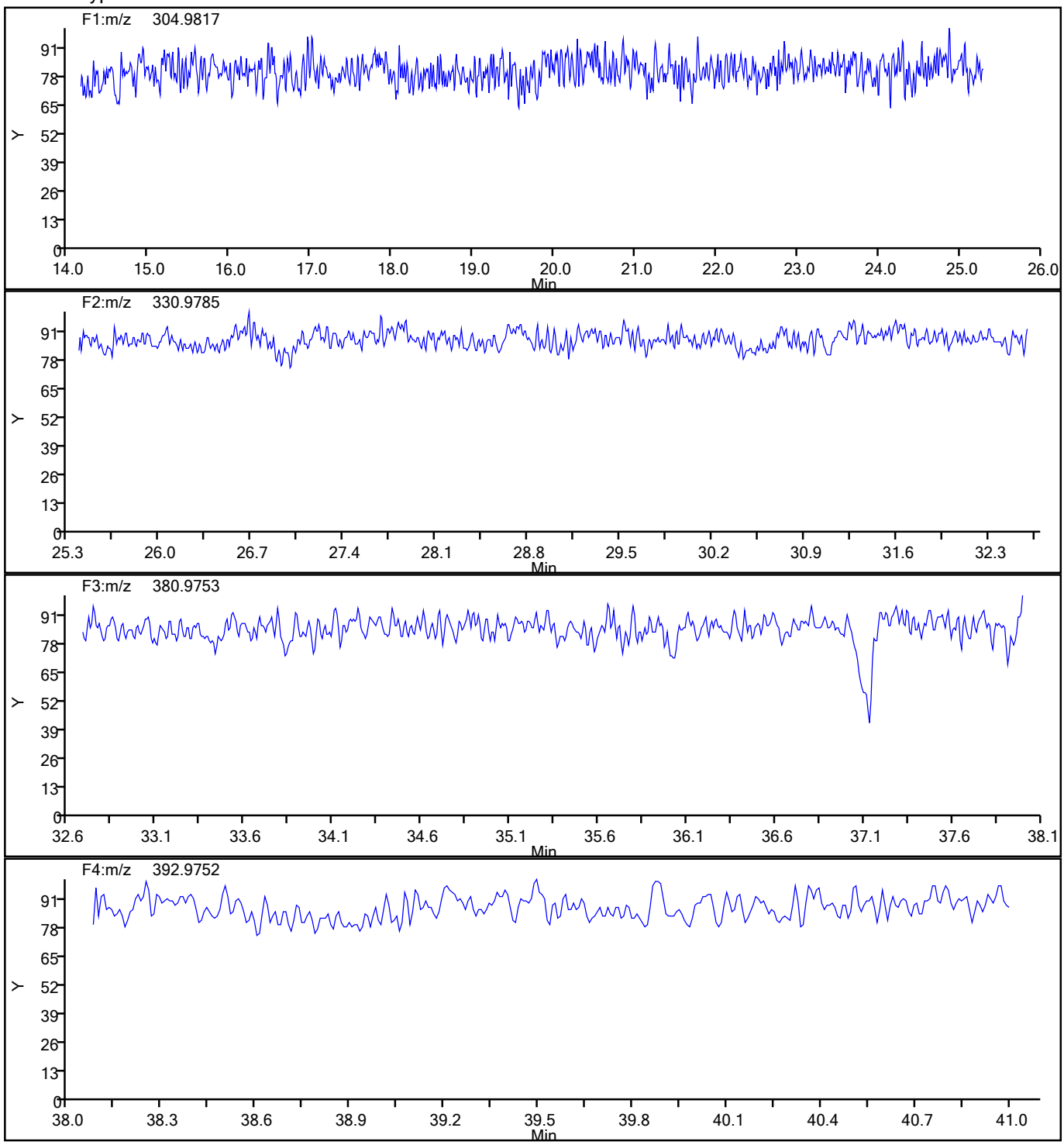

787880

Report Date: 25-Aug-2021 15:22:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_22.d		
Injection Date:	20-Aug-2021 05:33:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	20
Column Type:	DB-5	Column Dia:	0.32 mm

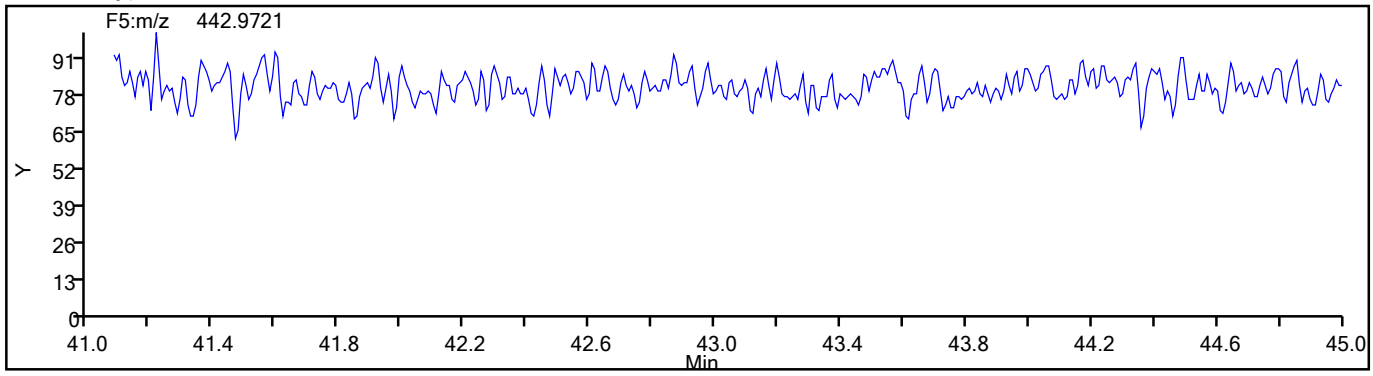

787881

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76888-A-1-B MS RA
Matrix: Sediment
Lab File ID: 25AU2111D2_005.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.30(g)
Date Analyzed: 08/25/2021 11:28
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519650
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	121000		99	99

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	29		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	56		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d
Lims ID: 320-76888-A-1-B MS
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MS
Inject. Date: 25-Aug-2021 11:28:39 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-B MS X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:17:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.357	6847273	0.88	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.687	2646635	0.82	1.3327	2.900	2.900	1.094	1.094	29.00	a
2,3,7,8-TCDF	17.701	882531971	0.79	0.9978	3341.9	3341.9	2.744	2.744	3.3E+005	Ea
D 13C-2,3,7,8-TCDD	16.110	2214123	0.71	0.8749	3.696	3.696	8.075	8.075	36.96	nM
2,3,7,8-TCDD	16.137	136342870	0.79	1.0570	582.6	582.6	2.356	2.356	58258	Ea
$ 37Cl4-2,3,7,8-TCDD	16.151	1328723		0.8648	2.244	2.244	0.2056	0.2056	56.10	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d
Lims ID: 320-76888-A-1-B MS
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MS
Inject. Date: 25-Aug-2021 11:28:39 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-B MS X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:17:11

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.357	16.285	4		3197075	672996	204683	511707	3		M
333.9339	16.357	16.285	4		3650198	767052	202295	505737	4	0.88(0.65-0.89)	M
13C-2,3,7,8-TCDF											a
315.9419	17.687	17.601	5	1.081	1191927	240522	34955	87387	7		a
317.9389	17.660	17.601	3	1.080	1454708	284087	49007	122517	6	0.82(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.701	17.629	4	1.001	389582918	71251385	26379	65947	2701		a
305.8987	17.687	17.629	3	1.000	492949053	90251282	31068	77670	2905	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.110	16.051	3	0.985	918126	196548	204683	511707	1		M
333.9339	16.110	16.051	3	0.985	1295997	234740	202295	505737	1	0.71(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.137	16.079	3	1.002	60108927	13495486	24660	61650	547		a
321.8936	16.137	16.079	3	1.002	76233943	16893308	18305	45762	923	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.151	16.079	4	0.987	1328723	259553	10240	25600	25		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d				
Injection Date:	25-Aug-2021 11:28:39	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 18.58
Area: 683863
Amount: 1.788574
Amount Units: pg/ul

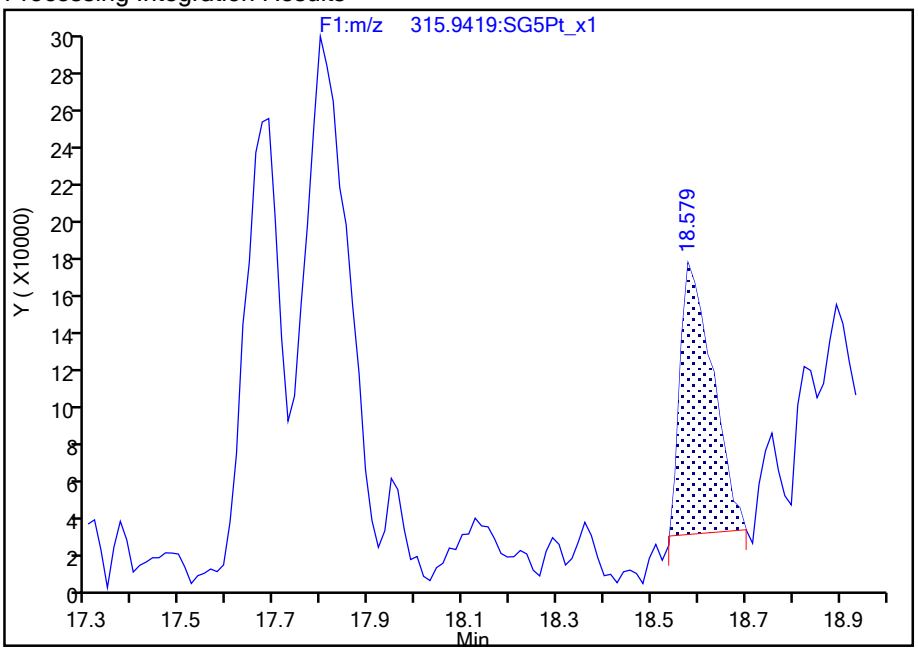

Manual Integration Results

RT: 17.69
Area: 1191927
Amount: 2.900338
Amount Units: pg/ul

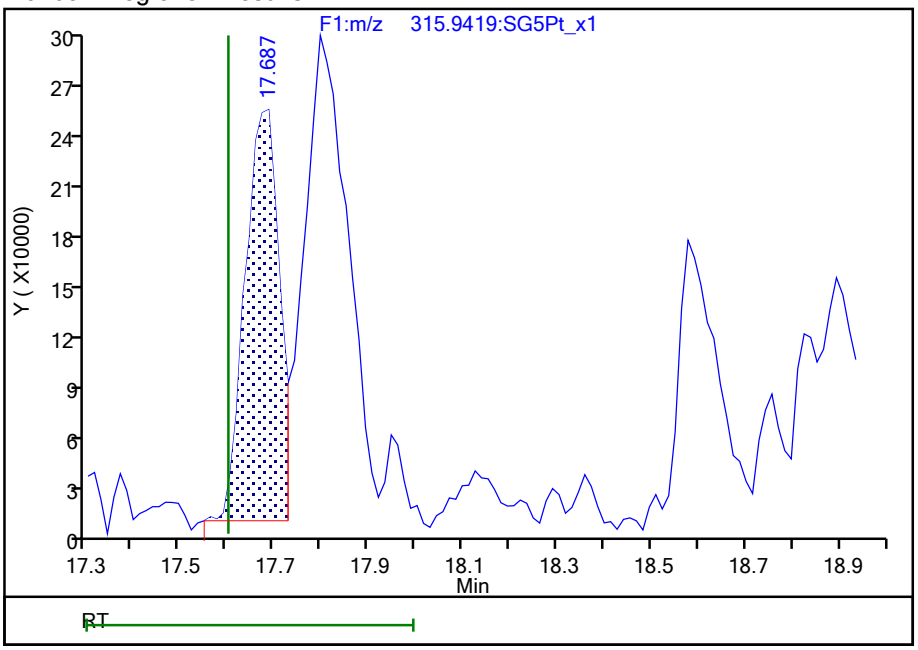

Reviewer: bennettd, 25-Aug-2021 13:16:44

Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d				
Injection Date:	25-Aug-2021 11:28:39	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.63

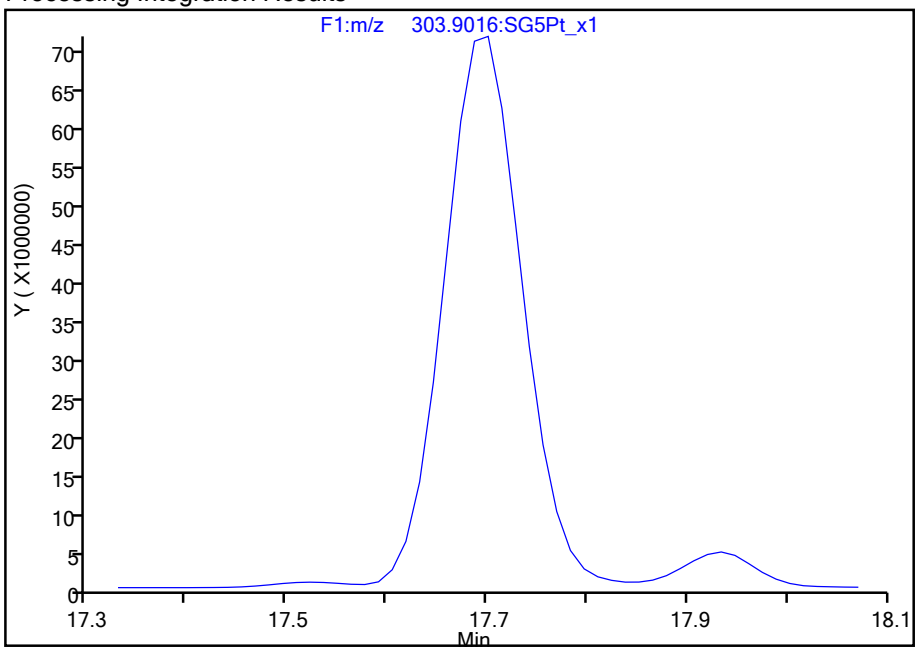

Manual Integration Results

RT: 17.70
Area: 389582918
Amount: 3341.8730
Amount Units: pg/ul

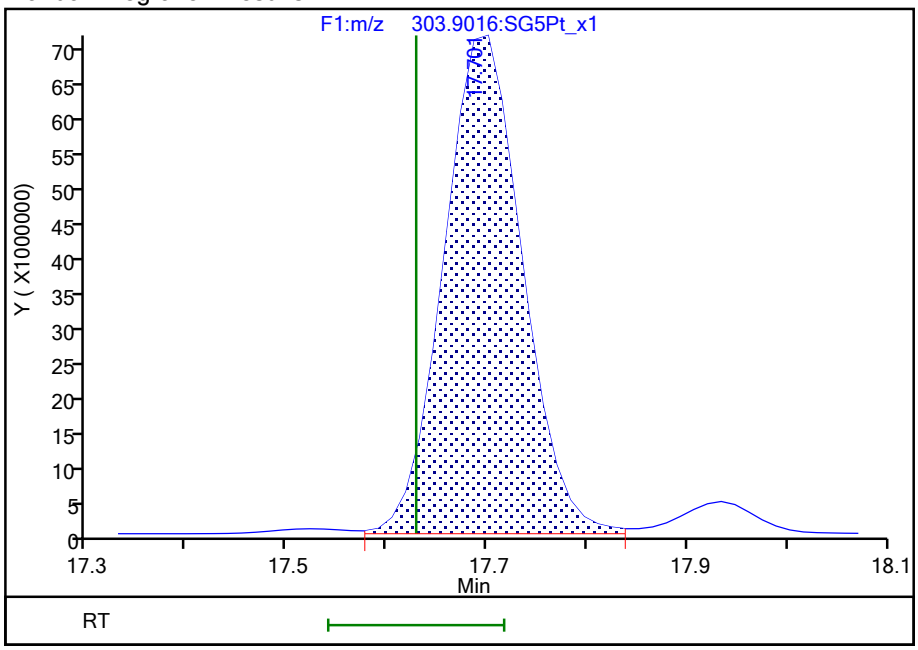

Reviewer: bennettd, 25-Aug-2021 13:17:05
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d				
Injection Date:	25-Aug-2021 11:28:39	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-B MS				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

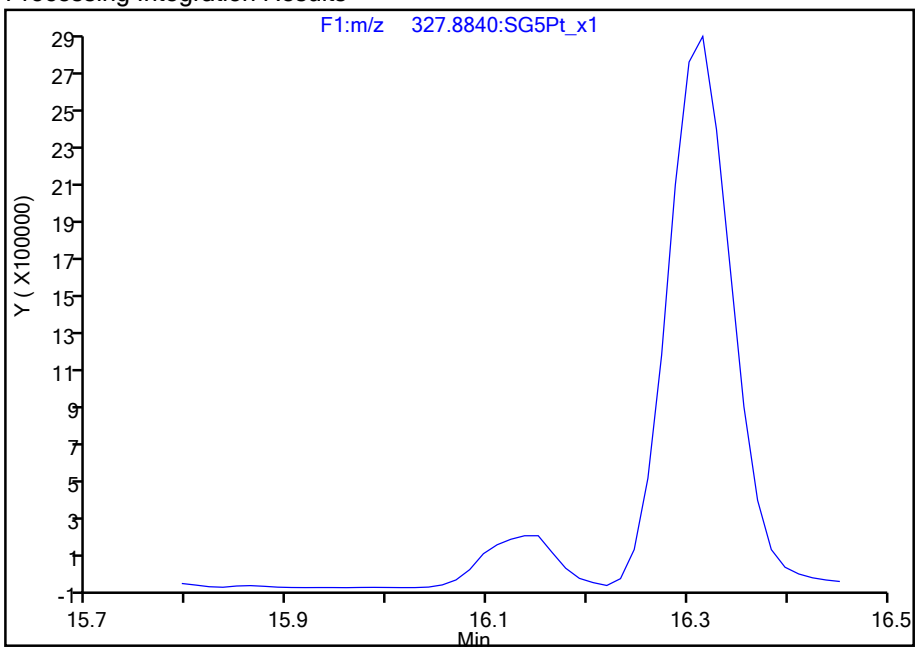

Manual Integration Results

RT: 16.15
Area: 1328723
Amount: 2.243846
Amount Units: pg/ul

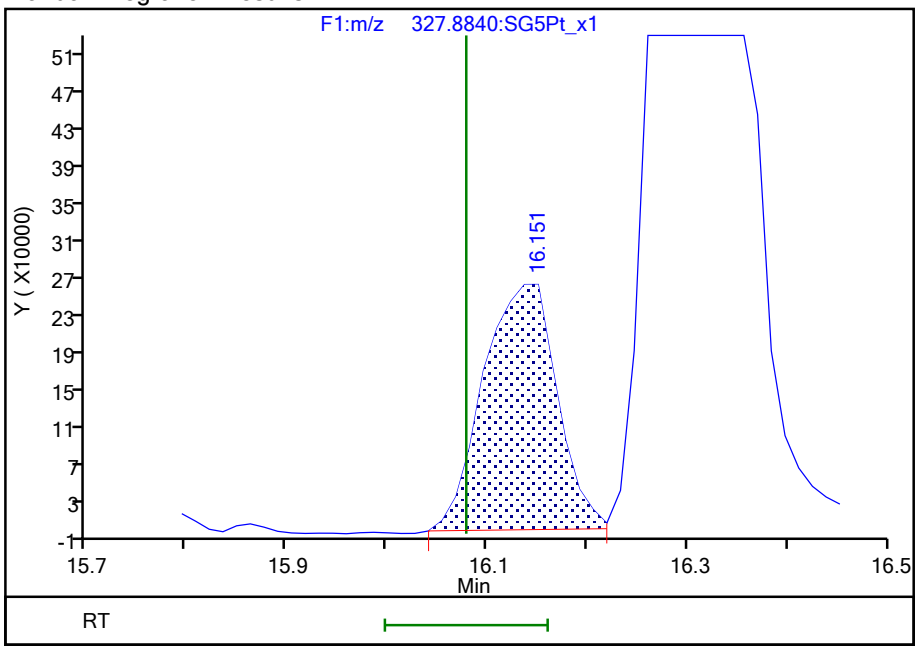

Reviewer: bennettd, 25-Aug-2021 13:16:34
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

787887

Report Date: 25-Aug-2021 13:23:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d		
Injection Date:	25-Aug-2021 11:28:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

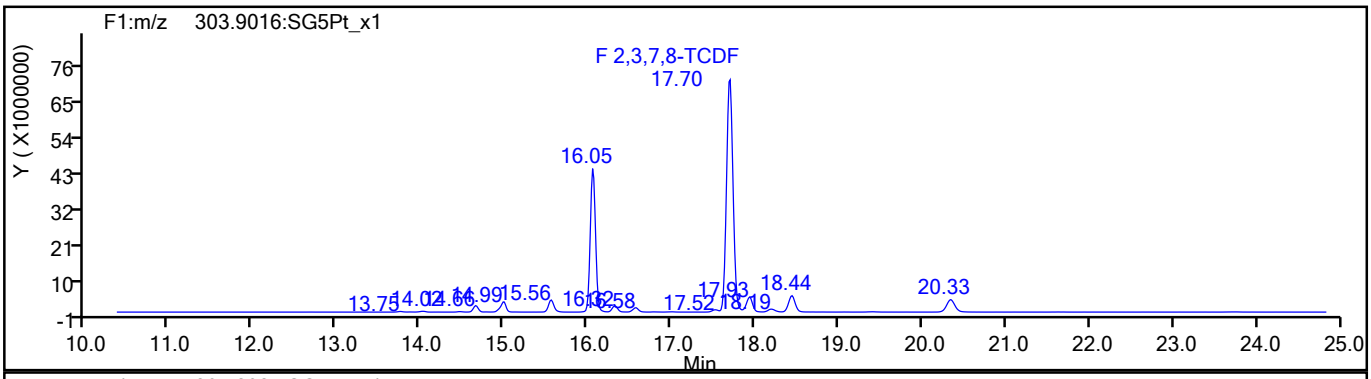

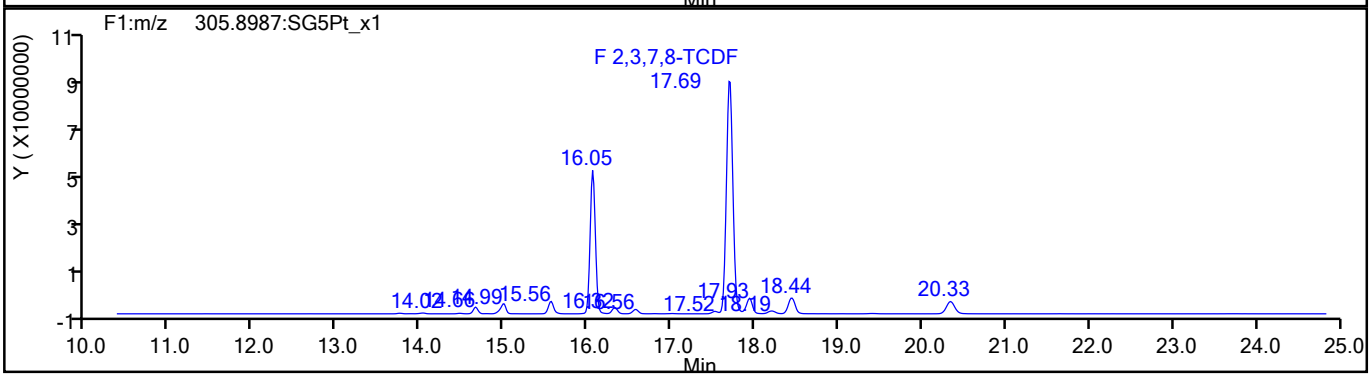

TCDF Standards

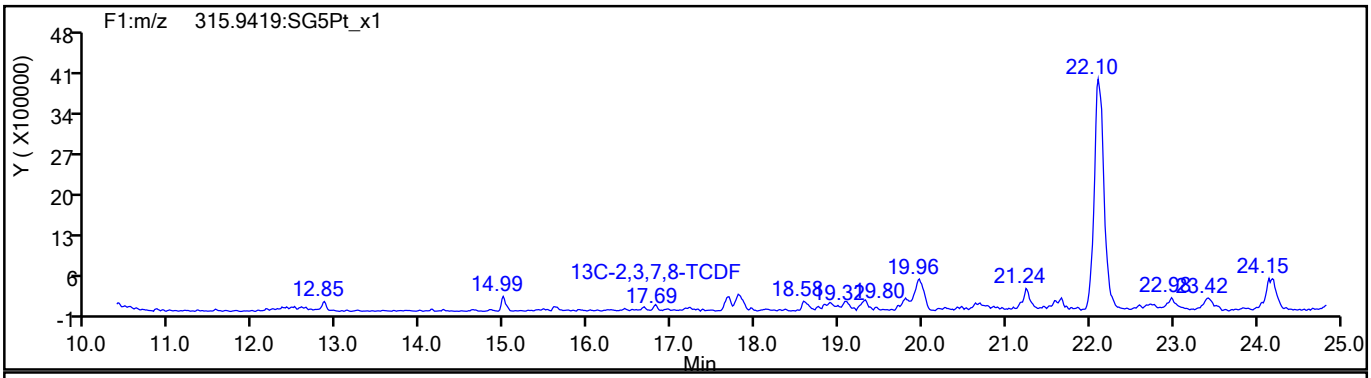

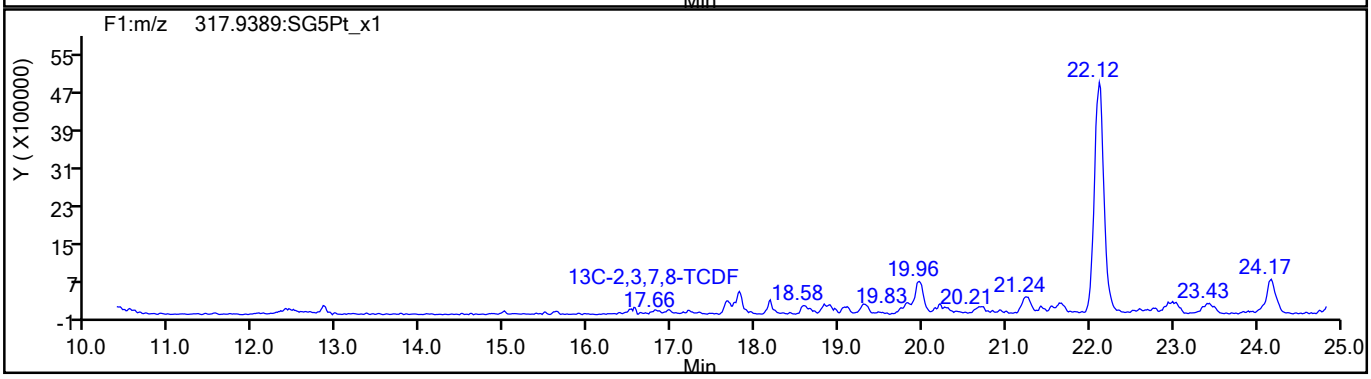

787888

Report Date: 25-Aug-2021 13:23:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d		
Injection Date:	25-Aug-2021 11:28:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

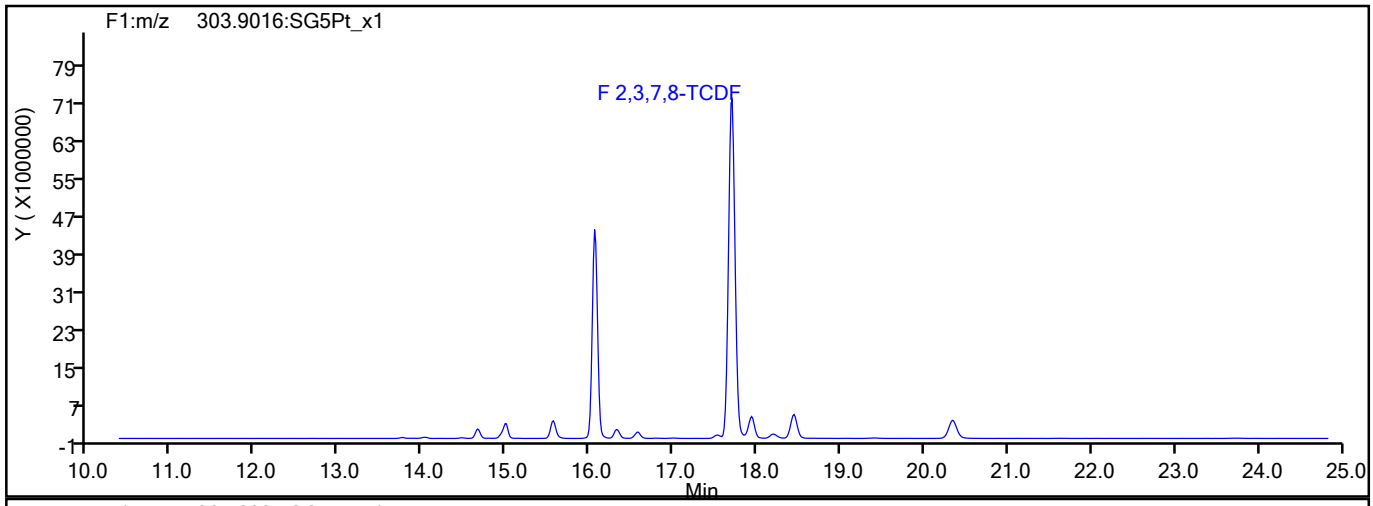

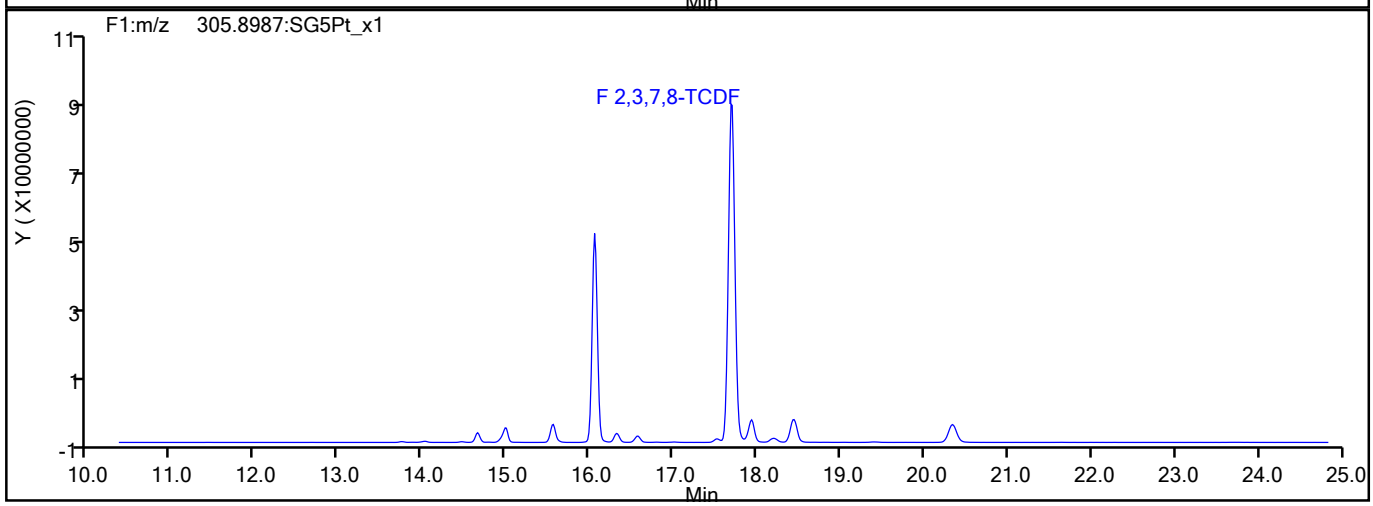

TCDF Interference Mass

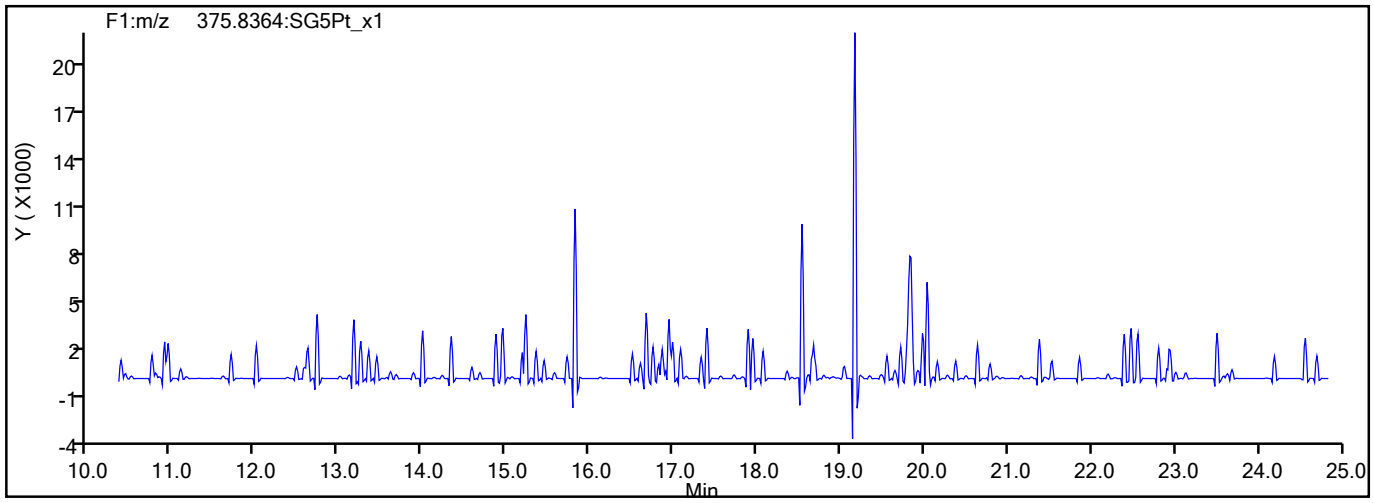

787889

Report Date: 25-Aug-2021 13:23:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d		
Injection Date:	25-Aug-2021 11:28:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

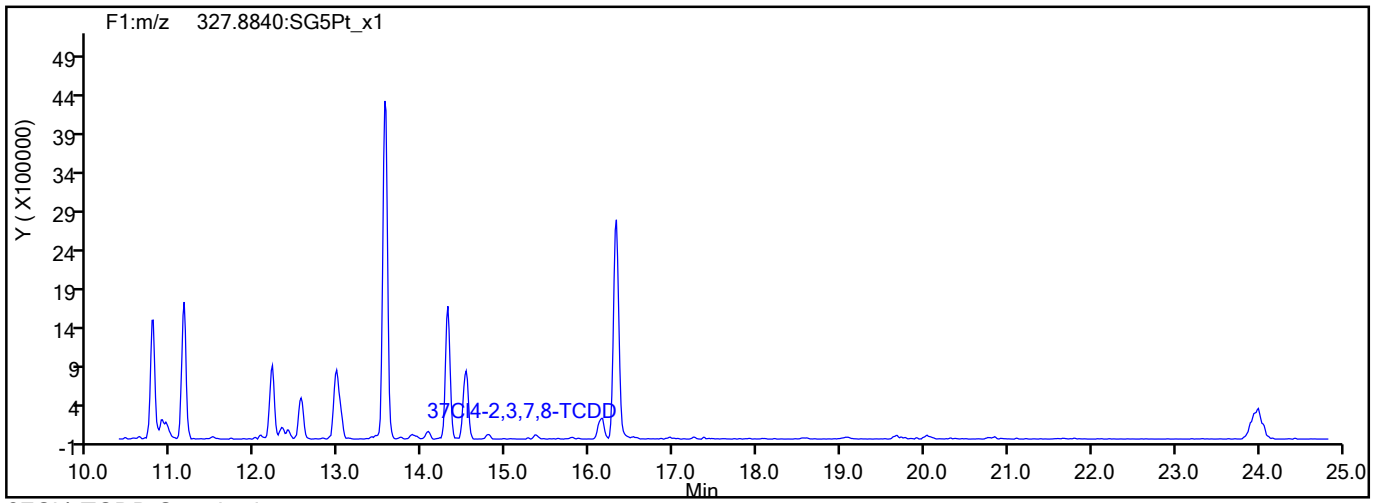

37Cl4-TCDD Standards

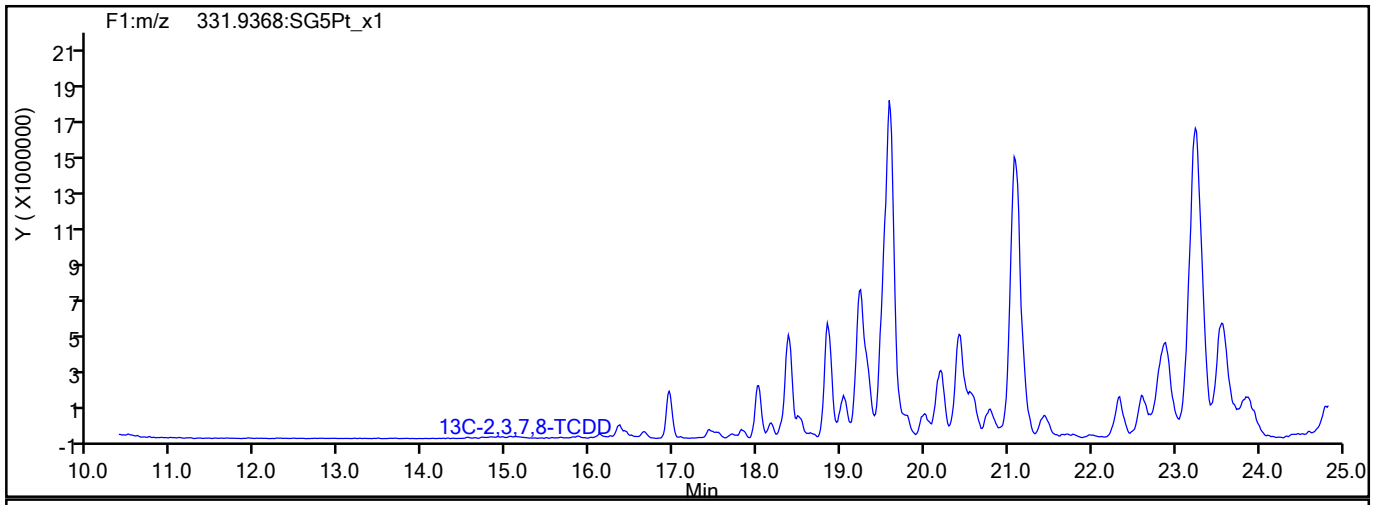

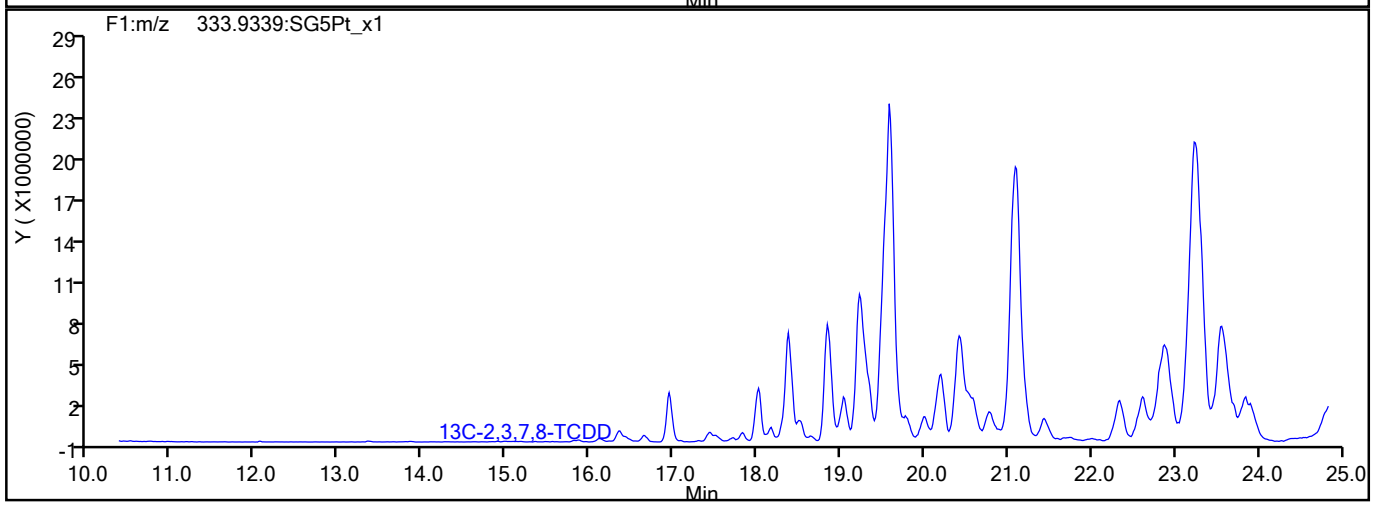

787890

Report Date: 25-Aug-2021 13:23:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_005.d		
Injection Date:	25-Aug-2021 11:28:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

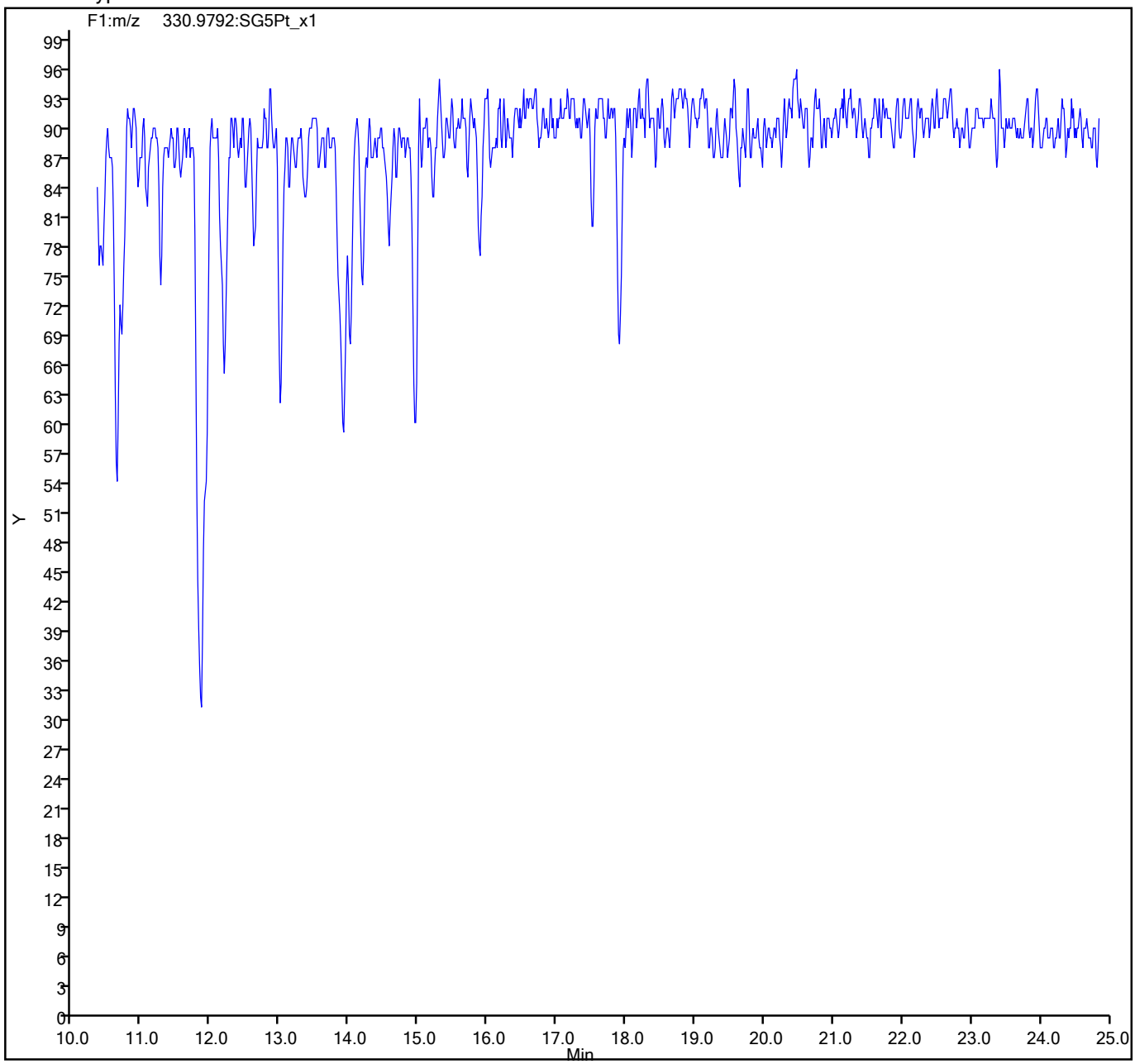

787891

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76888-A-1-C MSD
Matrix: Sediment
Lab File ID: 19au21dfs1_23.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.36(g)
Date Analyzed: 08/20/2021 06:21
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	25300		41	41
40321-76-4	1,2,3,7,8-PeCDD	508		90	24
57117-41-6	1,2,3,7,8-PeCDF	2550		90	17
57117-31-4	2,3,4,7,8-PeCDF	2150		90	18
39227-28-6	1,2,3,4,7,8-HxCDD	199		90	4.2
57653-85-7	1,2,3,6,7,8-HxCDD	202		90	4.7
19408-74-3	1,2,3,7,8,9-HxCDD	188		90	4.1
70648-26-9	1,2,3,4,7,8-HxCDF	3640		90	13
57117-44-9	1,2,3,6,7,8-HxCDF	1130		90	14
72918-21-9	1,2,3,7,8,9-HxCDF	238		90	14
60851-34-5	2,3,4,6,7,8-HxCDF	342		90	15
35822-46-9	1,2,3,4,6,7,8-HpCDD	262		90	1.9
67562-39-4	1,2,3,4,6,7,8-HpCDF	1310		90	4.3
55673-89-7	1,2,3,4,7,8,9-HpCDF	474		90	4.5
3268-87-9	OCDD	921		180	3.3
39001-02-0	OCDF	925		180	4.0
41903-57-5	Total TCDD	27600		41	41
30402-14-3	Total TCDF	254000		180	180
36088-22-9	Total PeCDD	508		90	24
30402-15-4	Total PeCDF	7520		90	18
34465-46-8	Total HxCDD	588		90	4.4
55684-94-1	Total HxCDF	5950		90	14
37871-00-4	Total HpCDD	326		90	1.9
38998-75-3	Total HpCDF	1990		90	4.4

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Client Sample ID: Lab Sample ID: 320-76888-A-1-C MSD

Matrix: Sediment Lab File ID: 19au21dfs1_23.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10.36(g) Date Analyzed: 08/20/2021 06:21

Con. Extract Vol.: 20.0(uL) Dilution Factor: 10

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 46.3 GPC Cleanup:(Y/N) N

Analysis Batch No.: 518043 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	40		25-164
89059-46-1	13C-2,3,7,8-TCDF	37		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	38		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	36		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	40		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	37		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	34	q	28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	44		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	37		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	35		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	34		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	38		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	39		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	44		26-138
114423-97-1	13C-OCDD	37	q	17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	123		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d
Lims ID: 320-76888-A-1-C MSD
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MSD
Inject. Date: 20-Aug-2021 06:21:00 ALS Bottle#: 0 Worklist Smp#: 21
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-c msd
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:07:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 16:59:30

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.449	138210	0.78	2.1E+04	10.0	10.0				a
D 13C-2,3,7,8-TCDF	20.470	68524	0.81	1.3459	3.684	3.684	0.7768	0.7768	36.84	
2,3,7,8-TCDF	20.487	28433784	0.84	1.0802	3841.4	3841.4	4.976	4.976	3.8E+005	E
A Non-2,3,7,8-sub-TCDF	19.851	23839604	0.83	1.0802	3220.7	3220.7	4.976	1819.2	0.00	Ma
S Total TCDF					7062.1	7062.1	4.976	4.976		
D 13C-2,3,7,8-TCDD	21.835	51215	0.66	0.9317	3.977	3.977	0.4530	0.4530	39.77	M
2,3,7,8-TCDD	21.870	3874224	0.80	1.0753	703.5	703.5	1.147	1.147	70346	Ea
$ 37Cl4-2,3,7,8-TCDD	21.861	68453		1.0083	4.912	4.912	1.763	1.763	123	M
A Non-2,3,7,8-sub-TCDD	20.684	356920	0.78	1.0753	64.8	64.8	1.147	64.8	0.00	
S Total TCDD					768.3	768.3	1.147	1.147		
D 13C-1,2,3,7,8-PeCDF	27.281	56214	1.55	1.1405	3.566	3.566	0.1095	0.1095	35.66	
1,2,3,7,8-PeCDF	27.315	419855	1.55	1.0543	70.8	70.8	0.4734	0.4734	1417	M
D 13C-2,3,4,7,8-PeCDF	28.788	61827	1.58	1.1253	3.975	3.975	0.1110	0.1110	39.75	
2,3,4,7,8-PeCDF	28.797	372480	1.58	1.0079	59.8	59.8	0.5072	0.5072	1196	
A F1 PeCDFs	24.634	6909	1.39	1.0311	1.135	1.135	0.0184	1.135	0.00	M
A Non-2,3,7,8-sub-PeCDF	28.173	471813	1.55	1.0311	78.1	77.5	0.4899	32.2	0.00	RQ
S Total PeCDF					209.9	209.3	0.4903	0.4903		RQ
D 13C-1,2,3,7,8-PeCDD	29.588	37227	1.51	0.7165	3.759	3.759	0.0399	0.0399	37.59	
1,2,3,7,8-PeCDD	29.613	55102	1.65	1.0465	14.1	14.1	0.6794	0.6794	283	
A Non-2,3,7,8-sub-PeCDD	28.478						0.6794	2.233		RQU
S Total PeCDD					14.1	14.1	0.6794	0.6794		
D 13C-1,2,3,4,7,8-HxCDF	34.920	56995	0.53	0.9648	4.433	4.433	0.0307	0.0307	44.33	
1,2,3,4,7,8-HxCDF	34.920	662470	1.31	1.1474	101.3	101.3	0.3694	0.3694	2026	
D 13C-1,2,3,6,7,8-HxCDF	35.072	52865	0.51	1.0708	3.705	3.705	0.0277	0.0277	37.05	
1,2,3,6,7,8-HxCDF	35.080	201850	1.32	1.2178	31.4	31.4	0.3863	0.3863	627	
D 13C-2,3,4,6,7,8-HxCDF	35.896	47514	0.56	1.0413	3.424	3.424	0.0285	0.0285	34.24	
2,3,4,6,7,8-HxCDF	35.913	54946	1.31	1.2145	9.522	9.522	0.4273	0.4273	190	M
D 13C-1,2,3,7,8,9-HxCDF	36.772	44941	0.48	0.9731	3.466	3.466	0.0305	0.0305	34.66	
1,2,3,7,8,9-HxCDF	36.789	36983	1.29	1.2401	6.636	6.636	0.3791	0.3791	133	M
A Non-2,3,7,8-sub-HxCDF	35.009	102459	1.24	1.2049	17.3	16.8	0.3888	7.987	0.00	RQMa
S Total HxCDF					166.1	165.6	0.3905	0.3905		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.578	133245	1.23	1.8E+04	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	36.098	37529	1.26	0.7587	3.712	3.712	0.0431	0.0431	37.12	
1,2,3,4,7,8-HxCDD	36.107	22054	1.21	1.0608	5.540	5.540	0.1173	0.1173	111	
D 13C-1,2,3,6,7,8-HxCDD	36.208	38825	1.24	0.8593	3.694	3.391	0.0381	0.0381	36.94	RQ
1,2,3,6,7,8-HxCDD	36.225	23579	1.17	0.9933	5.613	5.613	0.1316	0.1316	112	
1,2,3,7,8,9-HxCDD	36.587	23129	1.15	1.1094	5.224	5.224	0.1149	0.1149	104	
A Non-2,3,7,8-sub-HxCDD	35.375						0.1209	0.5320		RQU
S Total HxCDD					16.4	16.4	0.1213	0.1213		
D 13C-1,2,3,4,6,7,8-HpCDF	38.594	38033	0.45	0.7359	3.878	3.878	0.0382	0.0382	38.78	
1,2,3,4,6,7,8-HpCDF	38.611	199609	1.05	1.4421	36.4	36.4	0.1190	0.1190	728	
D 13C-1,2,3,4,7,8,9-HpCDF	39.831	40572	0.41	0.6854	4.443	4.443	0.0411	0.0411	44.43	
1,2,3,4,7,8,9-HpCDF	39.857	70025	1.04	1.3092	13.2	13.2	0.1243	0.1243	264	
A Non-2,3,7,8-sub-HpCDF	39.245	31032	1.05	1.3756	5.740	5.740	0.1214	5.740	0.00	
S Total HpCDF					55.3	55.3	0.1216	0.1216		
D 13C-1,2,3,4,6,7,8-HpCDD	39.536	33956	1.02	0.6745	3.778	3.778	0.0440	0.0440	37.78	
1,2,3,4,6,7,8-HpCDD	39.553	25965	1.02	1.0503	7.280	7.280	0.0531	0.0531	146	
A Non-2,3,7,8-sub-HpCDD	39.241	6349	1.13	1.0503	1.780	1.780	0.0531	1.780	0.00	
S Total HpCDD					9.061	9.061	0.0531	0.0531		
D 13C-OCDD	42.041	53507	0.89	0.5446	8.025	7.373	0.0601	0.0601	40.12	RQ
OCDF	42.134	98732	0.92	1.3168	25.8	25.8	0.1102	0.1102	258	
OCDD	42.049	79235	0.95	1.0620	25.6	25.6	0.0920	0.0920	256	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d
Lims ID: 320-76888-A-1-C MSD
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MSD
Inject. Date: 20-Aug-2021 06:21:00 ALS Bottle#: 0 Worklist Smp#: 21
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-a-1-c msd
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:07:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: stephensk Date: 21-Aug-2021 16:59:30

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.449	21.395	3		60502	7748	213	532	36		a
333.9338	21.415	21.395	1		77708	10425	94	235	111	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.470	20.365	6	0.954	30577	5056	319	797	16		
317.9389	20.461	20.365	6	0.954	37947	6590	441	1102	15	0.81(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.487	20.408	5	1.001	13021278	1692235	1119	2797	1512		
305.8987	20.487	20.408	5	1.001	15412506	1998792	1385	3462	1443	0.84(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											Ma
303.9016	17.505	19.851	-140	0.855	106502	16483	1119	2797	15		
305.8987	17.497	19.851	-141	0.855	133459	20220	1385	3462	15	0.80(0.65-0.89)	
303.9016	17.961	19.851	-113	0.877	591745	92100	1119	2797	82		
305.8987	17.961	19.851	-113	0.877	722111	112767	1385	3462	81	0.82(0.65-0.89)	
303.9016	18.450	19.851	-84	0.901	731123	82962	1119	2797	74		M
305.8987	18.442	19.851	-84	0.901	853786	99475	1385	3462	72	0.86(0.65-0.89)	
303.9016	18.880	19.851	-58	0.922	455938	62064	1119	2797	55		
305.8987	18.880	19.851	-58	0.922	535530	77917	1385	3462	56	0.85(0.65-0.89)	M
303.9016	19.258	19.851	-35	0.941	603486	85468	1119	2797	76		
305.8987	19.258	19.851	-35	0.941	736111	106921	1385	3462	77	0.82(0.65-0.89)	
303.9016	19.757	19.851	-6	0.965	6089350	847511	1119	2797	757		
305.8987	19.748	19.851	-6	0.965	7375844	1002645	1385	3462	724	0.83(0.65-0.89)	
303.9016	20.178	19.851	20	0.986	289291	39805	1119	2797	36		
305.8987	20.169	19.851	19	0.985	366265	49828	1385	3462	36	0.79(0.65-0.89)	
303.9016	21.269	19.851	85	1.039	909444	118945	1119	2797	106		
305.8987	21.269	19.851	85	1.039	1104797	146602	1385	3462	106	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.741	19.851	113	1.062	162481	19854	1119	2797	18		
305.8987	21.741	19.851	113	1.062	217585	26688	1385	3462	19	0.75(0.65-0.89)	
303.9016	23.650	19.851	227	1.155	838734	147936	1119	2797	132		a
305.8987	23.650	19.851	227	1.155	1016022	177105	1385	3462	128	0.83(0.65-0.89)	
13C-2,3,7,8-TCDD											M
331.9368	21.835	21.716	7	1.018	20413	3804	213	532	18		M
333.9338	21.844	21.716	8	1.018	30802	5313	94	235	57	0.66(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	21.870	21.733	8	1.002	1721088	240273	316	790	760		a
321.8936	21.870	21.733	8	1.002	2153136	290245	134	335	2166	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											M
327.8847	21.861	21.799	4	1.019	68453	9214	1292	3230	7		M
A Non-2,3,7,8-sub-TCDD											
319.8965	22.497	20.684	109	1.030	156488	19243	316	790	61		
321.8936	22.515	20.684	110	1.031	200432	24996	134	335	187	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.281	27.251	2	1.272	34154	5359	48	120	112		
353.8970	27.281	27.251	2	1.272	22060	3697	43	107	86	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.315	27.276	2	1.001	255428	36339	108	270	336		
341.8567	27.306	27.276	2	1.001	164427	23624	73	182	324	1.55(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.788	28.757	2	1.342	37845	5744	48	120	120		
353.8970	28.797	28.757	2	1.343	23982	3099	43	107	72	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.797	28.791	0	1.000	228170	32104	108	270	297		
341.8567	28.805	28.791	1	1.001	144310	20942	73	182	287	1.58(1.32-1.78)	
A F1 PeCDFs											M
339.8597	24.114	24.634	-31	0.884	4024	771	2	5	386		
341.8567	24.096	24.634	-32	0.883	2885	601	5	12	120	1.39(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.841	28.173	-140	0.947	119912	18630	108	270	173		
341.8567	25.833	28.173	-140	0.947	75920	12658	73	182	173	1.58(1.32-1.78)	
339.8597	26.734	28.173	-86	0.980	14944	2070	108	270	19		
341.8567	26.750	28.173	-85	0.981	9505	1272	73	182	17	1.57(1.32-1.78)	
339.8597	27.172	28.173	-60	0.996	24297	5589	108	270	52		
	Empc Correction				20714	4935	108	270	46		
341.8567	27.163	28.173	-60	0.996	13364	3184	73	182	44	1.82(1.32-1.78)	
339.8597	27.887	28.173	-17	1.022	78953	12923	108	270	120		
341.8567	27.879	28.173	-18	1.022	48409	7766	73	182	106	1.63(1.32-1.78)	
339.8597	29.141	28.173	58	1.068	43351	5702	108	270	53		
341.8567	29.141	28.173	58	1.068	25728	3776	73	182	52	1.68(1.32-1.78)	
339.8597	30.859	28.173	161	1.131	13466	1661	108	270	15		
341.8567	30.817	28.173	158	1.130	7547	956	73	182	13	1.78(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	29.588	29.574	1	1.379	22368	3016	18	45	168		
369.8919	29.596	29.574	1	1.380	14859	2118	3	7	706	1.51(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.613	29.616	0	1.001	34290	4663	18	45	259		
357.8516	29.596	29.616	-1	1.000	20812	3125	128	320	24	1.65(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.478	28.478	0	0.963	1176	162	18	45			
357.8516	28.478	28.478	0	0.963	7524	1272	128	320		0.16(1.32-1.78)	
	Empc Correction				758	104	128	320	0		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.920	34.906	1	0.955	19789	4295	13	32	330		
385.8610	34.895	34.906	-1	0.954	37206	7738	26	65	298	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.920	34.922	0	1.000	375459	70118	112	280	626		
375.8178	34.920	34.922	0	1.000	287011	53983	92	230	587	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.072	35.066	0	0.959	17755	3322	13	32	256		
385.8610	35.063	35.066	0	0.959	35110	7518	26	65	289	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.080	35.082	0	1.000	114870	21691	112	280	194		
375.8178	35.080	35.082	0	1.000	86980	15842	92	230	172	1.32(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.896	35.890	0	0.981	17022	3468	13	32	267		
385.8610	35.871	35.890	-1	0.981	30492	6360	26	65	245	0.56(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.913	35.907	0	1.000	31204	6157	112	280	55		M
375.8178	35.905	35.907	0	1.000	23742	5195	92	230	56	1.31(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.772	36.782	-1	1.005	14551	3798	13	32	292		
385.8610	36.780	36.782	0	1.006	30390	7050	26	65	271	0.48(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.789	36.791	0	1.000	20849	5322	112	280	48		
375.8178	36.789	36.791	0	1.000	16134	4109	92	230	45	1.29(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.430	35.009	-95	0.957	27974	4493	112	280	40		
375.8178	33.455	35.009	-93	0.958	20702	3187	92	230	35	1.35(1.05-1.43)	
373.8208	34.289	35.009	-43	0.982	9138	1772	112	280	16		
375.8178	34.272	35.009	-44	0.981	6541	1211	92	230	13	1.40(1.05-1.43)	
373.8208	35.779	35.009	46	1.025	4871	1348	112	280	12		M
375.8178	35.779	35.009	46	1.025	4223	1010	92	230	11	1.15(1.05-1.43)	
373.8208	36.889	35.009	113	1.056	18936	4271	112	280	38		M
	Empc Correction				16059	4028	112	280	36		
375.8178	36.889	35.009	113	1.056	12951	3249	92	230	35	1.46(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.578	36.581	0		73478	17452	29	72	602		
403.8529	36.578	36.581	0		59767	15246	14	35	1089	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.098	36.092	0	0.987	20908	5002	29	72	172		
403.8529	36.098	36.092	0	0.987	16621	4239	14	35	303	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.107	36.109	0	1.000	12061	2852	20	50	143		
391.8127	36.107	36.109	0	1.000	9993	2495	26	65	96	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											RQ
401.8559	36.208	36.210	0	0.990	24960	5055	29	72	174		
	Empc Correction				21492	4642	29	72	160		
403.8529	36.216	36.210	0	0.990	17333	3744	14	35	267	1.44(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.225	36.227	0	1.000	12709	2772	20	50	139		
391.8127	36.225	36.227	0	1.000	10870	2331	26	65	90	1.17(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.587	36.597	-1	1.014	12363	2971	20	50	149		
391.8127	36.587	36.597	-1	1.014	10766	2572	26	65	99	1.15(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											U
389.8158	34.238	35.375	-68	0.946	285	75	20	50	4		
391.8127	34.230	35.375	-69	0.945	1279	205	26	65	8	0.22(1.05-1.43)	
	Empc Correction				229	60	26	65	0		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.594	38.596	0	1.055	11871	3298	22	55	150		
419.8220	38.586	38.596	-1	1.055	26162	7013	15	37	468	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.611	38.618	0	1.000	102272	25855	39	97	663		
409.7788	38.602	38.618	-1	1.000	97337	24500	32	80	766	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.831	39.850	-1	1.089	11895	2988	22	55	136		
419.8220	39.848	39.850	0	1.089	28677	7893	15	37	526	0.41(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.857	39.872	-1	1.001	35702	9875	39	97	253		
409.7788	39.857	39.872	-1	1.001	34323	9081	32	80	284	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.964	39.245	-17	1.010	15859	3968	39	97	102		
409.7788	38.964	39.245	-17	1.010	15173	4339	32	80	136	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.536	39.547	-1	1.081	17168	4282	26	65	165		
437.8140	39.536	39.547	-1	1.081	16788	4687	13	32	361	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.553	39.561	0	1.000	13128	3640	12	30	303		
425.7737	39.553	39.561	0	1.000	12837	3417	8	20	427	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.905	39.241	-20	0.984	3366	1040	12	30	87		
425.7737	38.914	39.241	-20	0.984	2983	835	8	20	104	1.13(0.88-1.20)	
13C-OCDD											RQ
469.7780	42.041	42.036	0	1.149	29922	8735	34	85	257		
	Empc Correction				25196	5349	34	85	157		
471.7750	42.041	42.036	0	1.149	28311	6011	9	22	668	1.06(0.76-1.02)	

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											
441.7428	42.134	42.137	0	1.002	47366	11244	14	35	803		
443.7399	42.134	42.137	0	1.002	51366	12876	29	72	444	0.92(0.76-1.02)	
OCDD											
457.7377	42.049	42.053	0	1.000	38506	8593	14	35	614		
459.7348	42.049	42.053	0	1.000	40729	9402	15	37	627	0.95(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	68524	11646

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		10.000	68524	11646

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.505	106502	16483	133459	20220	32.4	0.80	
17.961	591745	92100	722111	112767	177.5	0.82	
18.450	731123	82962	853786	99475	214.1	0.86	Ma
18.880	455938	62064	535530	77917	133.9	0.85	M
19.258	603486	85468	736111	106921	181.0	0.82	
19.757	6089350	847511	7375844	1002645	1819.2	0.83	
20.178	289291	39805	366265	49828	88.6	0.79	
21.269	909444	118945	1104797	146602	272.1	0.82	
21.741	162481	19854	217585	26688	51.3	0.75	
23.650	838734	147936	1016022	177105	250.6	0.83	a
Signal Totals:	10778094	1513128	13061510	1820168			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23839604	3333296				0.83	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3220.7 = (23839604 * 10.000) / (68524 * 1.080)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	51215	9117

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		10.000	51215	9117

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.497	156488	19243	200432	24996	64.8	0.78	
Signal Totals:							
	156488	19243	200432	24996			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	356920	44239				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 64.808 = (356920 * 10.000) / (51215 * 1.075)

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	56214	9056
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	61827	8843

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	59020	8949

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.114	4024	771	2885	601	1.14	1.39	M
Signal Totals:							
	4024	771	2885	601			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6909	1372				1.39	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.135 = (6909 * 10.000) / (59020 * 1.031)

QC Flag Legend

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	56214	9056
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	61827	8843

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	59020	8949

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.841	119912	18630	75920	12658	32.2	1.58	
26.734	14944	2070	9505	1272	4.02	1.57	
27.172	24297	5589	13364	3184	6.19	1.82	RQ
27.172	20714	4935	13364	3184	5.60		Empc Correction
27.887	78953	12923	48409	7766	20.9	1.63	
29.141	43351	5702	25728	3776	11.4	1.68	
30.859	13466	1661	7547	956	3.45	1.78	
Signal Totals:							
	291340	45921	180473	29612			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	475396	76187				1.63	RQ
	471813	75533					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 78.122 = (475396 * 10.000) / (59020 * 1.031)
Empc Amount: 77.533 = (471813 * 10.000) / (59020 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	37227	5134

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		10.000	37227	5134

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.194	1176	162	7524	1272	2.23	0.16	RQ
30.194	1176	162	758	104			Empc Correction

Compound is Marked ND

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	56995	12033
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	52865	10840
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	47514	9828
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	44941	10848

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		10.000	50578	10887

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.430	27974	4493	20702	3187	7.99	1.35	
34.289	9138	1772	6541	1211	2.57	1.40	
35.779	4871	1348	4223	1010	1.49	1.15	Ma
36.889	18936	4271	12951	3249	5.23	1.46	RQMa
36.889	16059	4028	12951	3249	4.76		Empc Correction
Signal Totals:							
	58042	11641	44417	8657			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	105336	20541				1.37	RQMa
	102459	20298					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 17.284 = (105336 * 10.000) / (50578 * 1.205)

Empc Amount: 16.812 = (102459 * 10.000) / (50578 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	37529	9241
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	42293	8799
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		10.000	39911	9020

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.238	285	75	1279	205	0.3716	0.22	RQ
34.238	285	75	229	60			Empc Correction
35.332	1383	240	856	180	0.5320	1.62	RQ
35.332	1061	223	856	180			Empc Correction

Compound is Marked ND

Report Date: 25-Aug-2021 15:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	38033	10311
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	40572	10881

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		10.000	39302	10596

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.964	15859	3968	15173	4339	5.74	1.05	
Signal Totals:							
	15859	3968	15173	4339			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	31032	8307				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 5.740 = (31032 * 10.000) / (39302 * 1.376)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Lims ID:	320-76888-A-1-C MSD		
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Inject. Date:	20-Aug-2021 06:21:00	Dil. Factor:	10.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	21

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	33956	8969

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		10.000	33956	8969

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.905	3366	1040	2983	835	1.78	1.13	
Signal Totals:							
	3366	1040	2983	835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6349	1875				1.13	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.780 = (6349 * 10.000) / (33956 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 18.450 Area = 731123

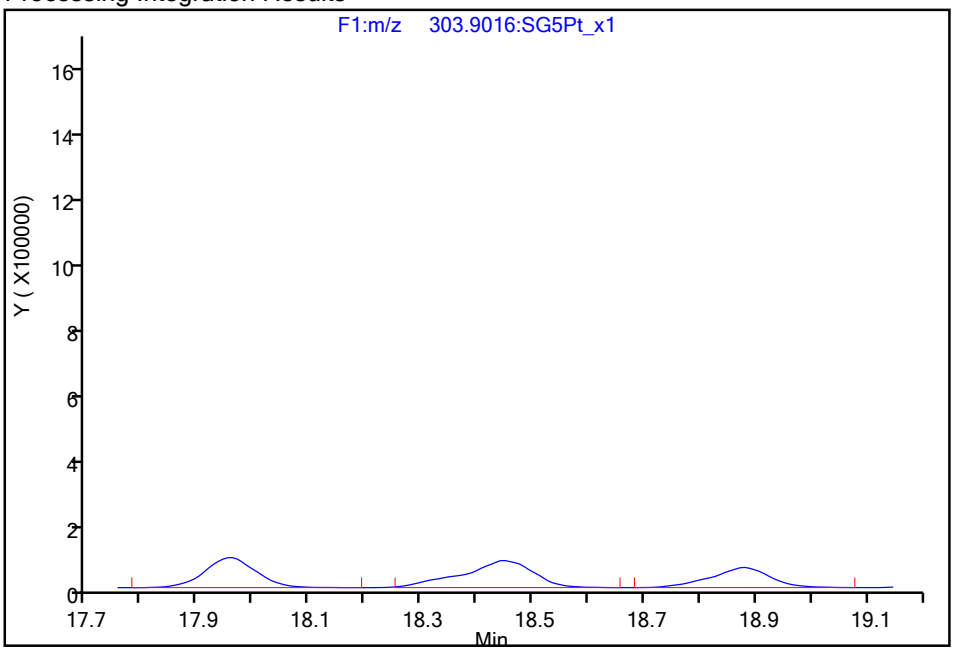

Manual Integration Results

RT = 18.450 Area = 731123

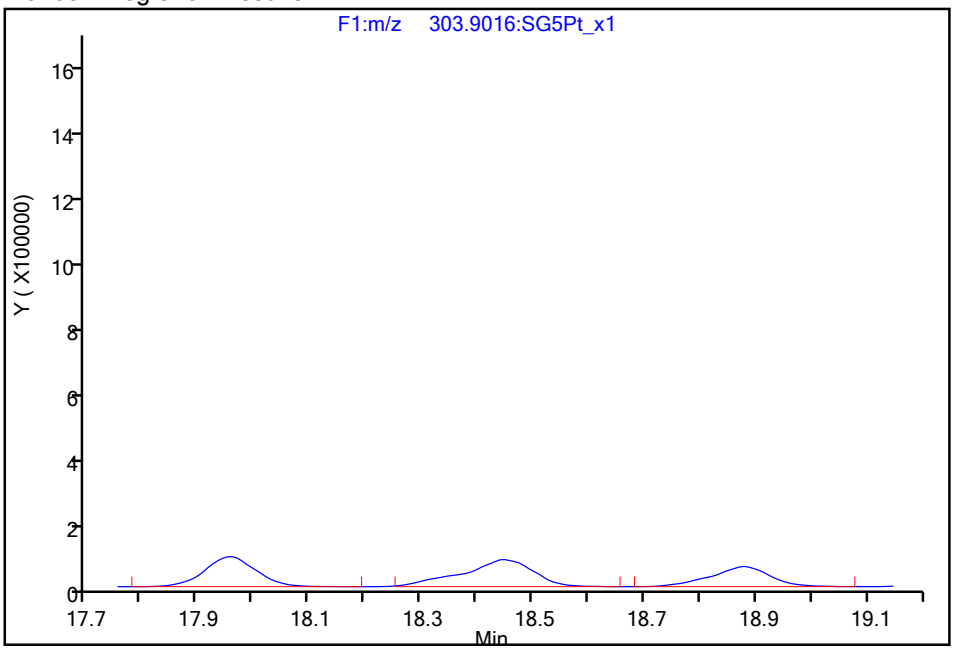

Reviewer: krenns, 25-Aug-2021 15:06:34

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (16.10- 23.60)

Signal: 2

Processing Integration Results

RT = 18.880 Area = 417302

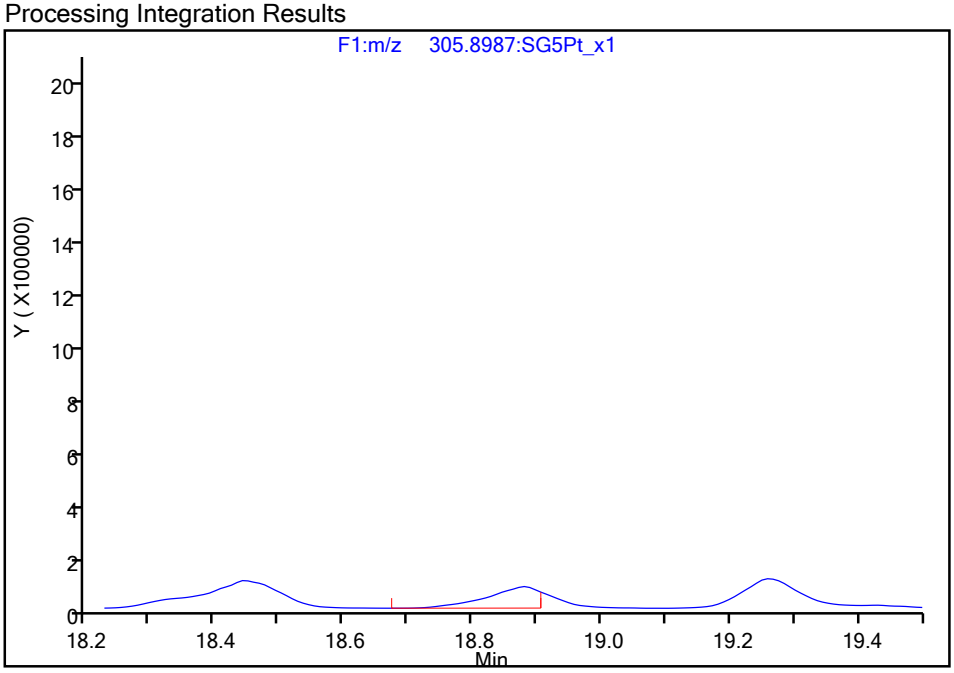

Manual Integration Results

RT = 18.880 Area = 535530 M

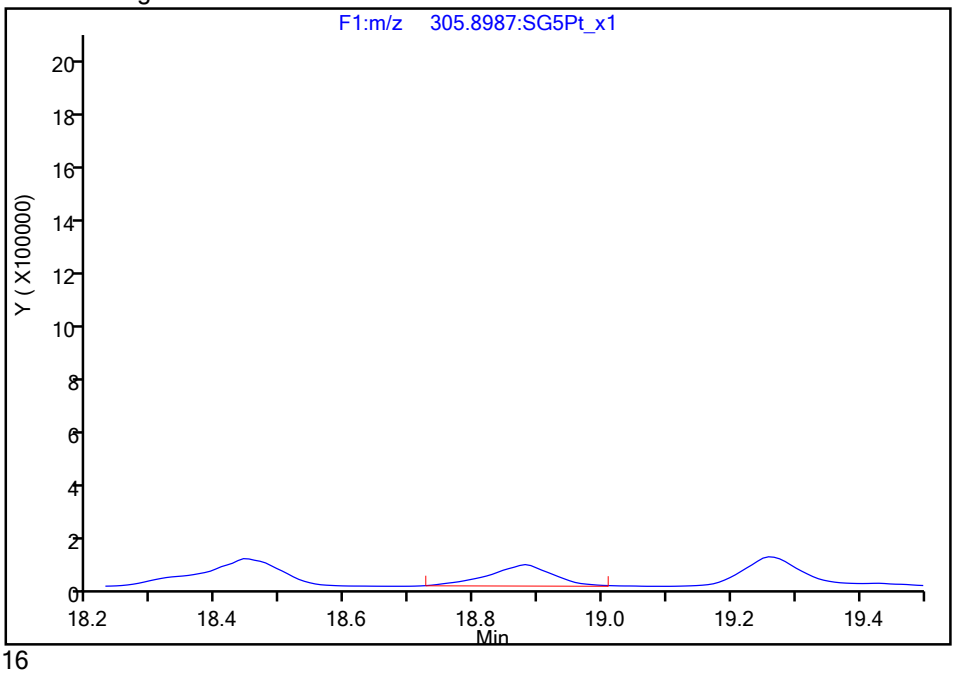

Reviewer: dadunj, 23-Aug-2021 09:43:16

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 21.84
Area: 11899
Amount: 3.316185
Amount Units: pg/ul

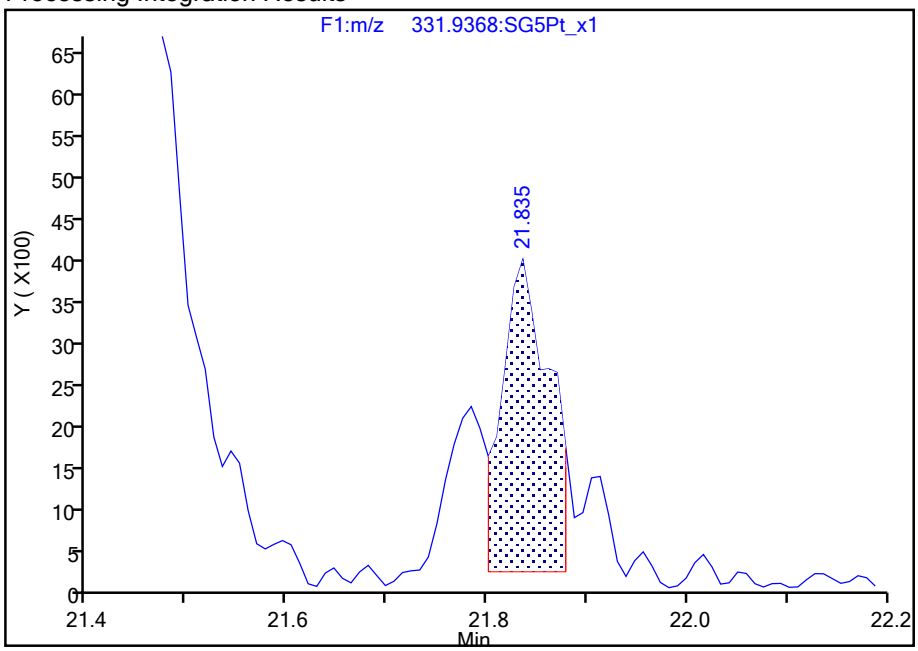

Manual Integration Results

RT: 21.84
Area: 20413
Amount: 3.977387
Amount Units: pg/ul

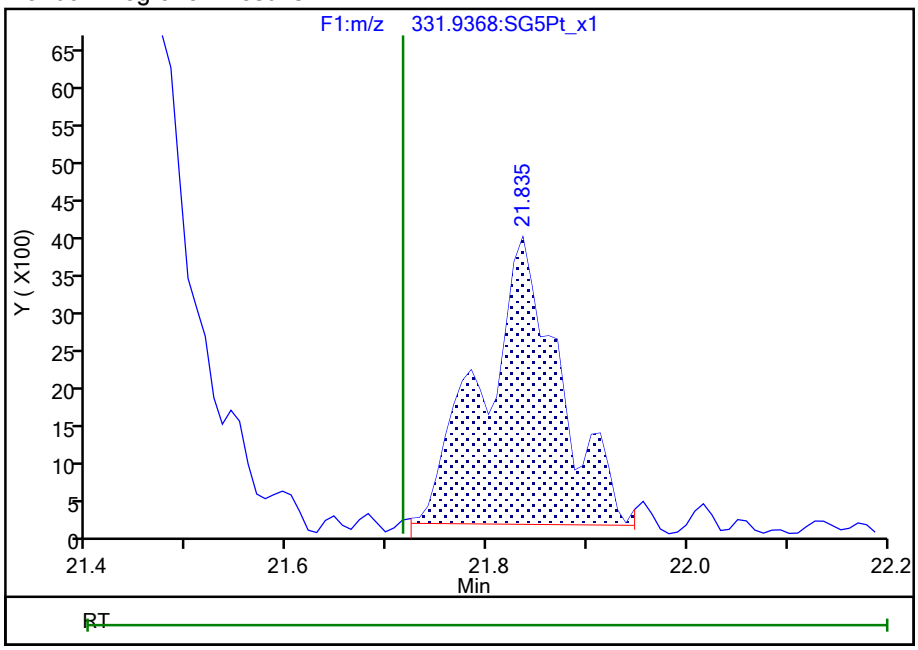

Reviewer: dadunj, 23-Aug-2021 09:45:23

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 21.64
Area: 14080
Amount: 2.916447
Amount Units: pg/ul

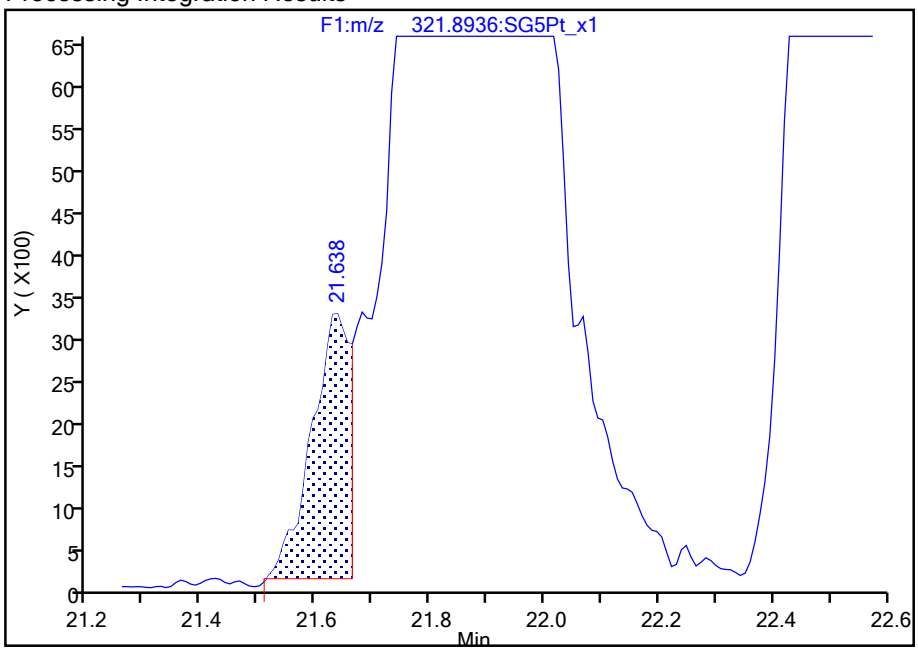

Manual Integration Results

RT: 21.87
Area: 2153136
Amount: 703.4597
Amount Units: pg/ul

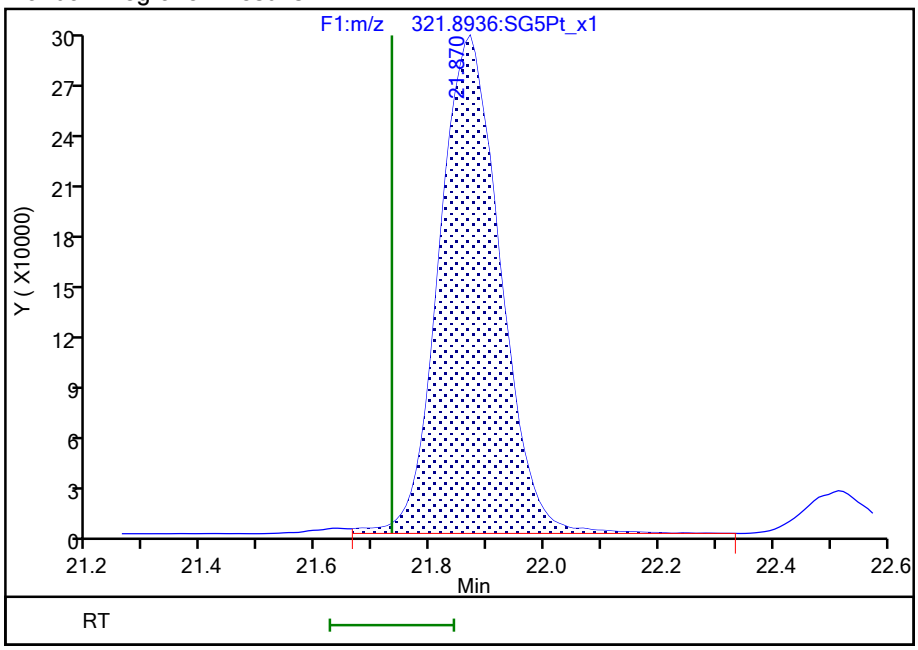

Reviewer: dadunj, 23-Aug-2021 09:45:30

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

RT: 21.66
Area: 16062
Amount: 2.916447
Amount Units: pg/ul

Processing Integration Results

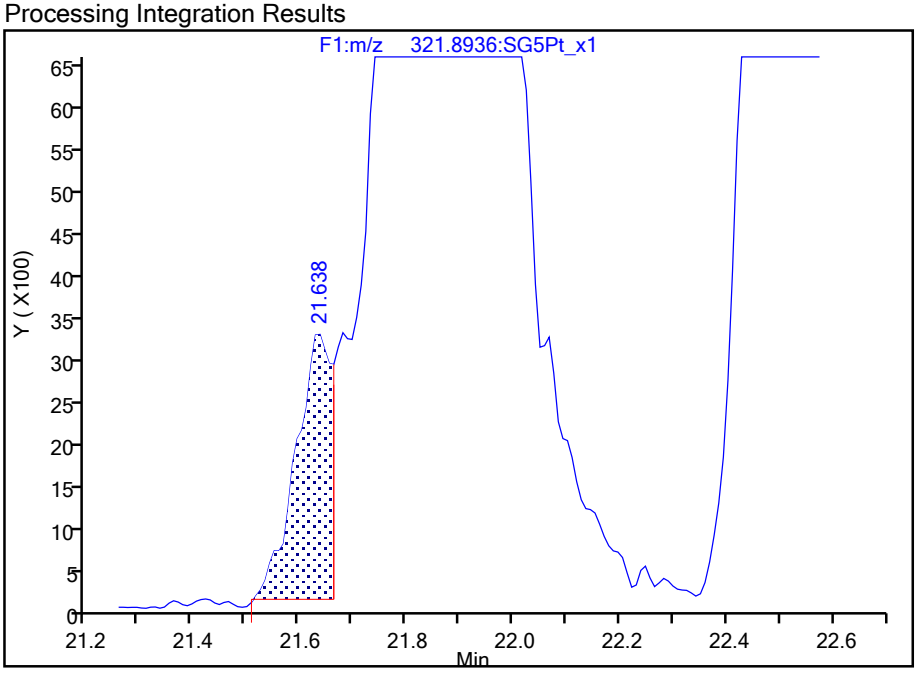

Manual Integration Results

RT: 21.87
Area: 3874224
Amount: 703.4597
Amount Units: pg/ul
Reviewer: dadunj, 23-Aug-2021 09:45:30
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

787915

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.66
Area: 1982
Amount: 2.916447
Amount Units: pg/ul

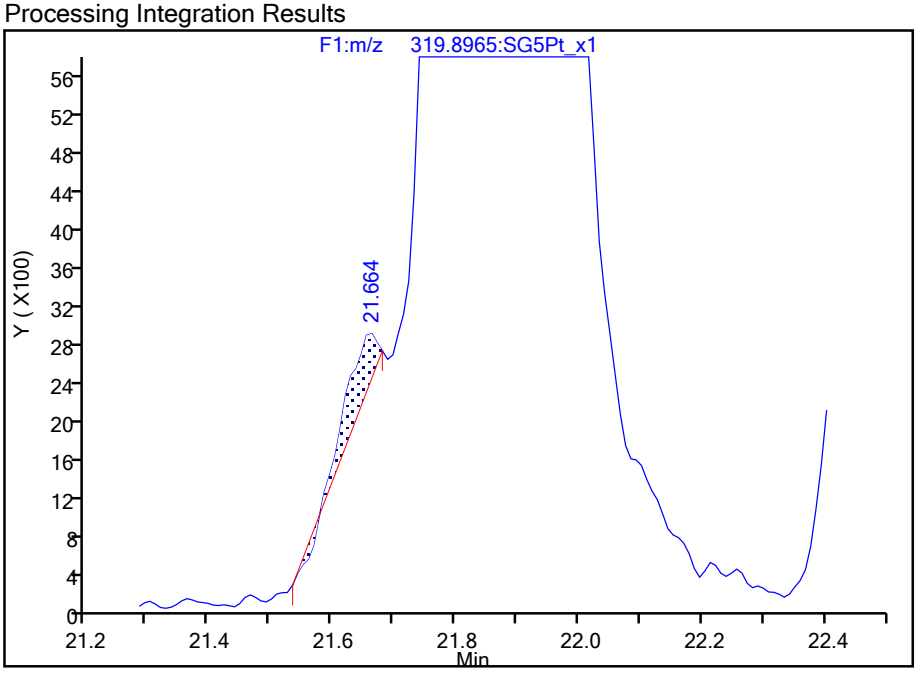

Manual Integration Results

RT: 21.87
Area: 1721088
Amount: 703.4597
Amount Units: pg/ul

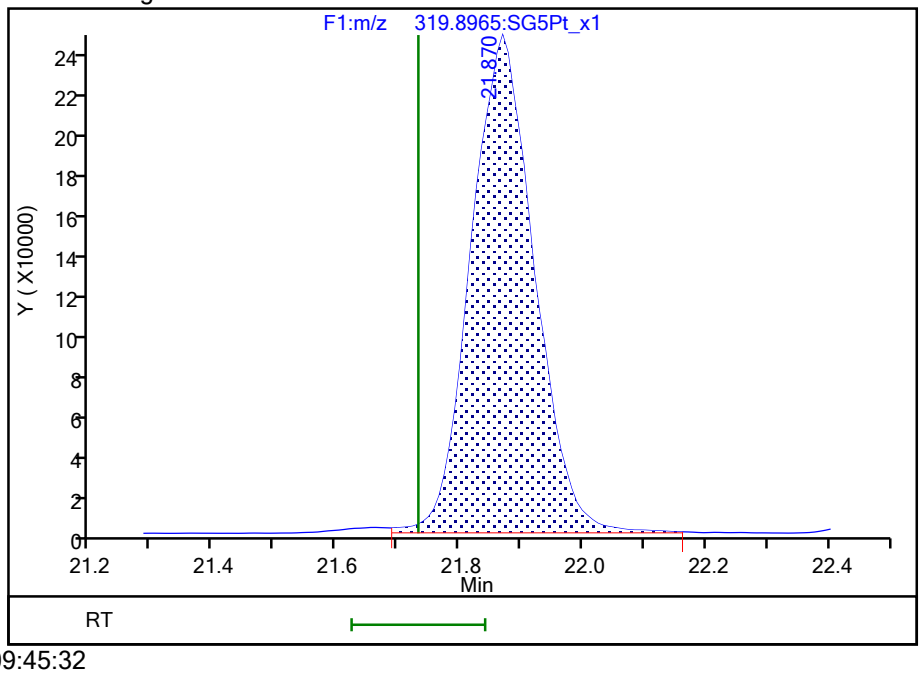

Reviewer: dadunj, 23-Aug-2021 09:45:32
Audit Action: Assigned Compound ID Audit Reason: Baseline

787916

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.80

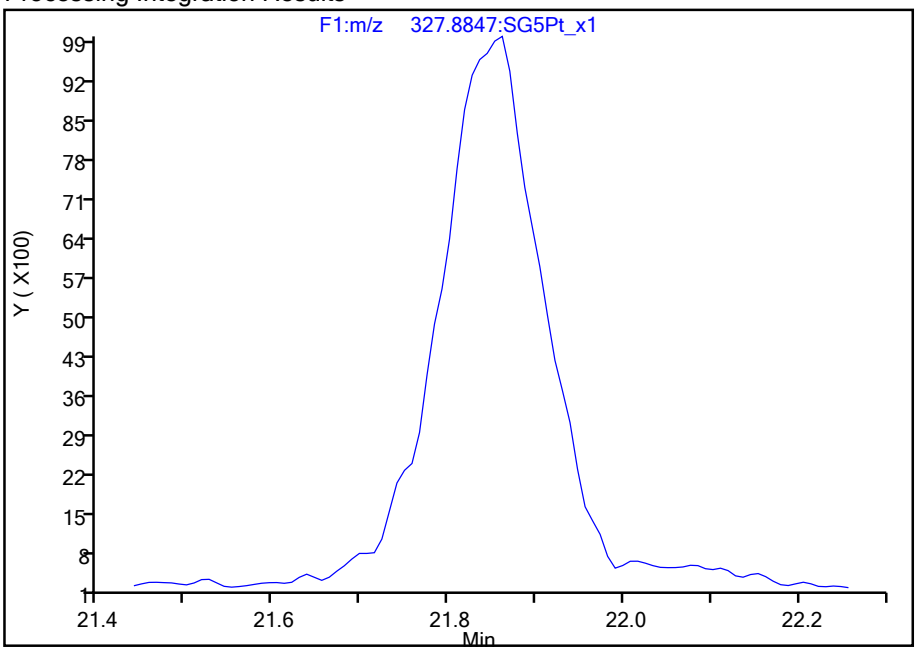

Manual Integration Results

RT: 21.86
Area: 68453
Amount: 4.912080
Amount Units: pg/ul

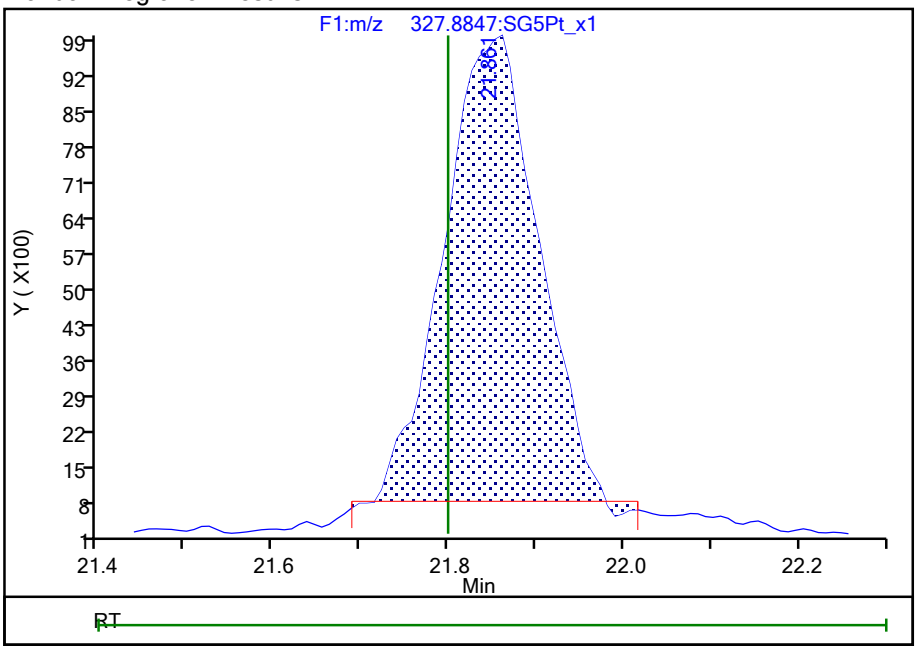

Reviewer: dadunj, 23-Aug-2021 09:45:49
Audit Action: Manually Integrated Audit Reason: Assign Peak

787917

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.31
Area: 167247
Amount: 71.320297
Amount Units: pg/ul

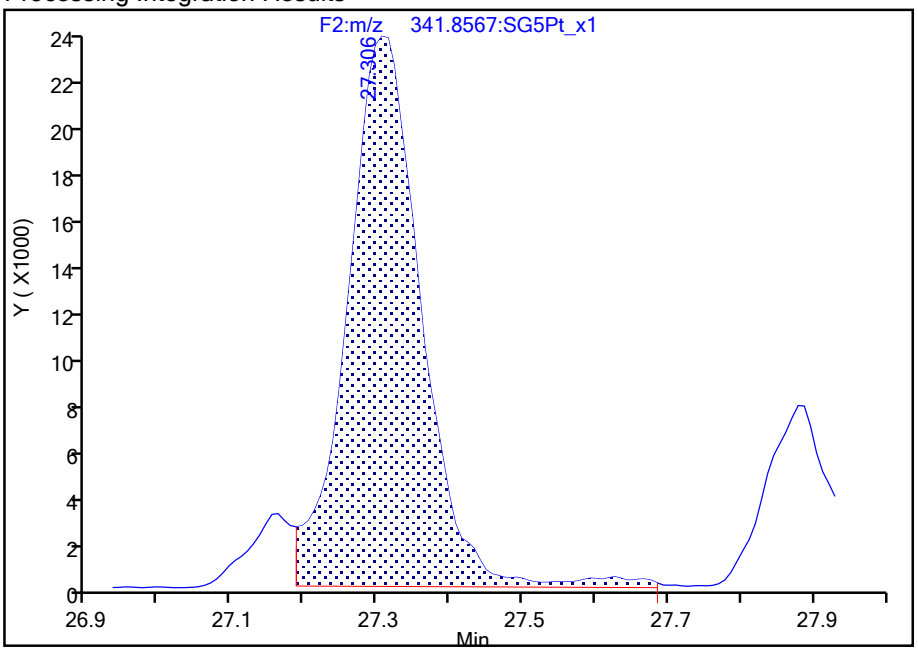

Manual Integration Results

RT: 27.31
Area: 164427
Amount: 70.844462
Amount Units: pg/ul

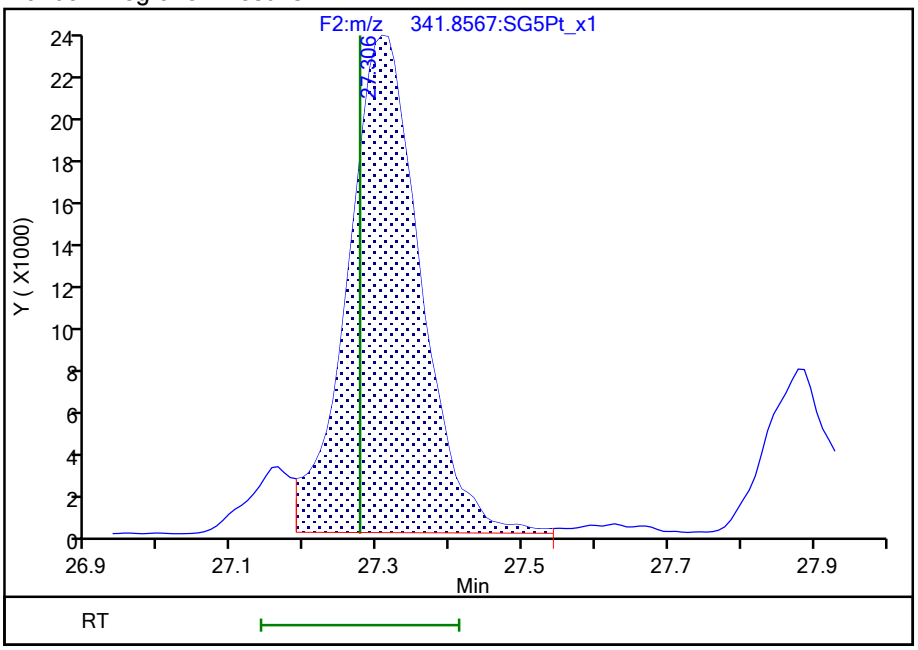

Reviewer: dadunj, 23-Aug-2021 09:46:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

787918

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

F1 PeCDFs, Signal: 2, m/z: 341.8567, RT: (23.97- 25.29)

Signal: 2

Processing Integration Results

RT = 24.096 Area = 3196

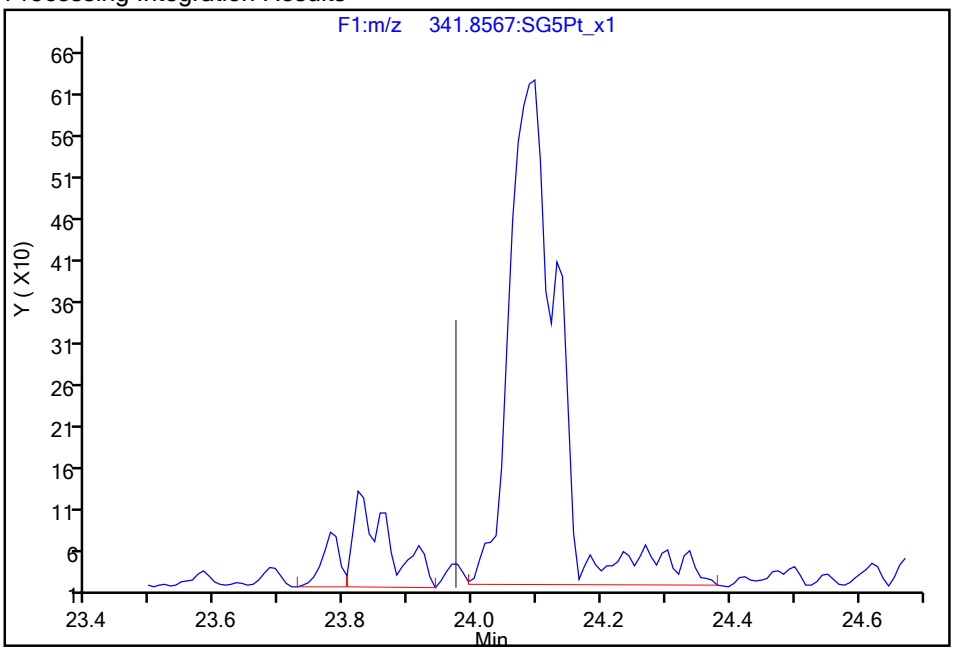

Manual Integration Results

RT = 24.096 Area = 2885 M

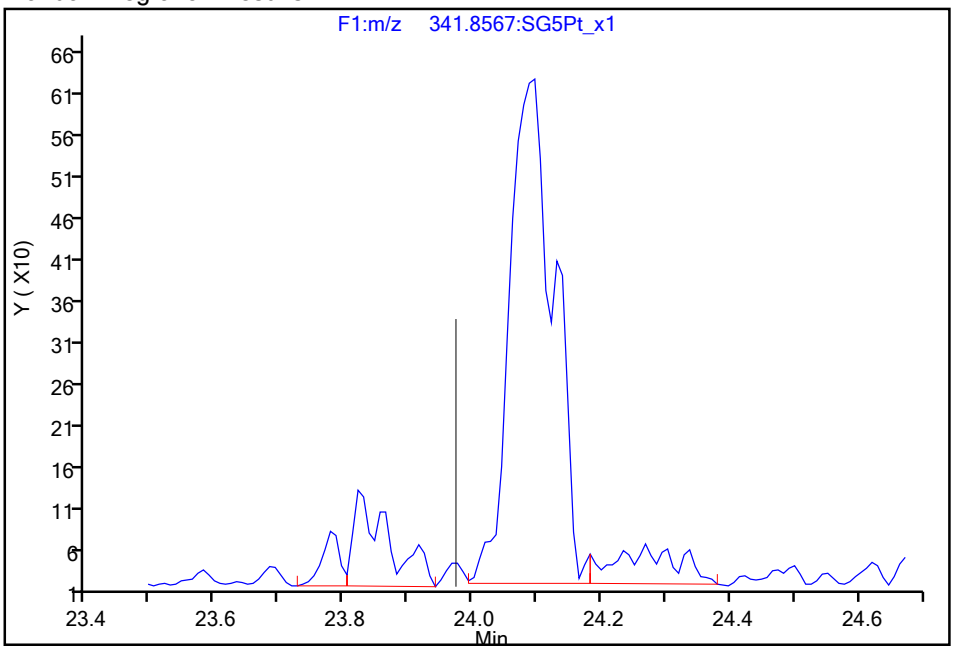

Reviewer: dadunj, 23-Aug-2021 09:46:19

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 35.90
Area: 27971
Amount: 10.323319
Amount Units: pg/ul

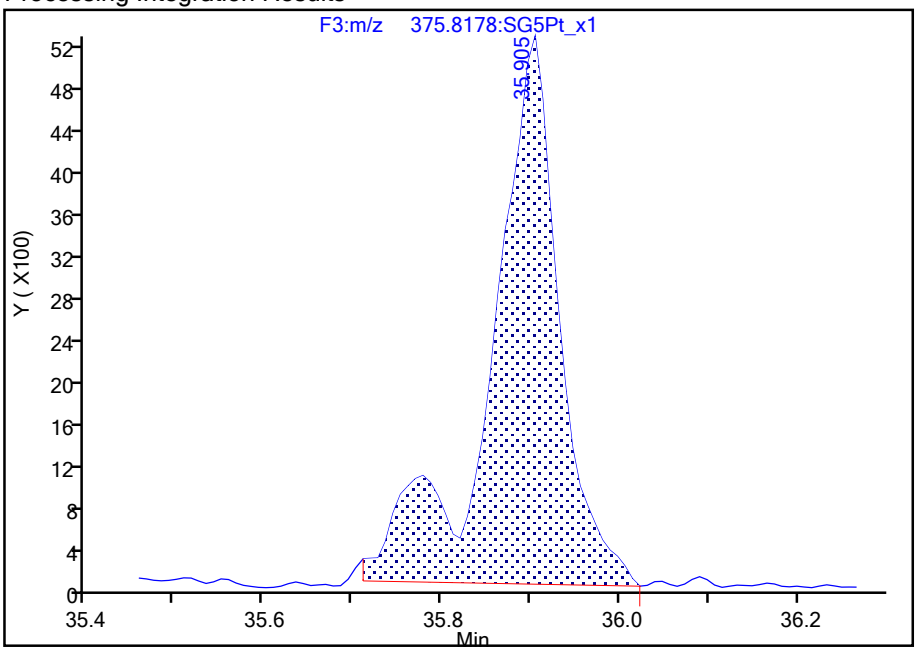

Manual Integration Results

RT: 35.90
Area: 23742
Amount: 9.521992
Amount Units: pg/ul

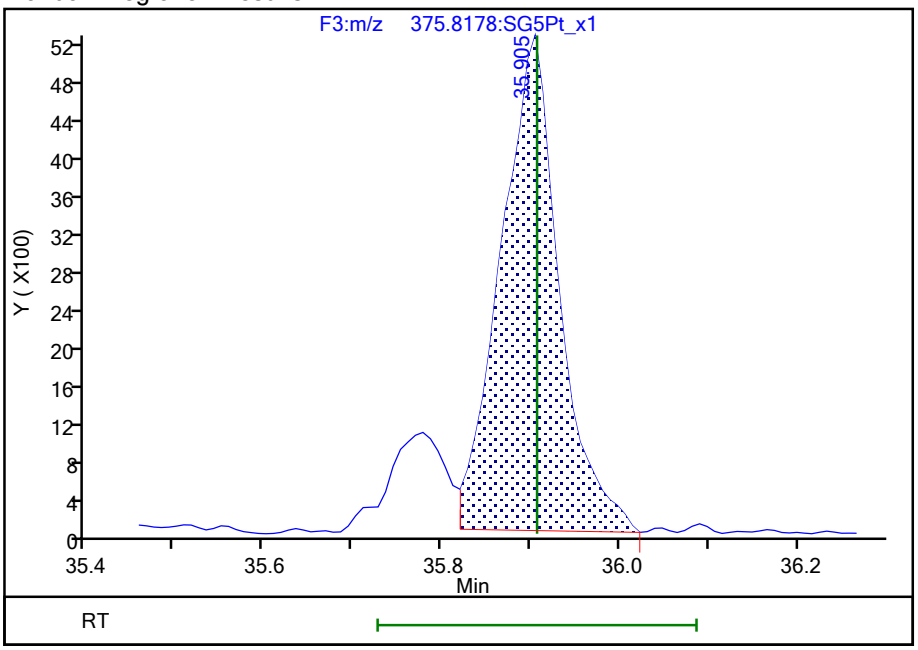

Reviewer: dadunj, 23-Aug-2021 09:46:45

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.91
Area: 31599
Amount: 10.323319
Amount Units: pg/ul

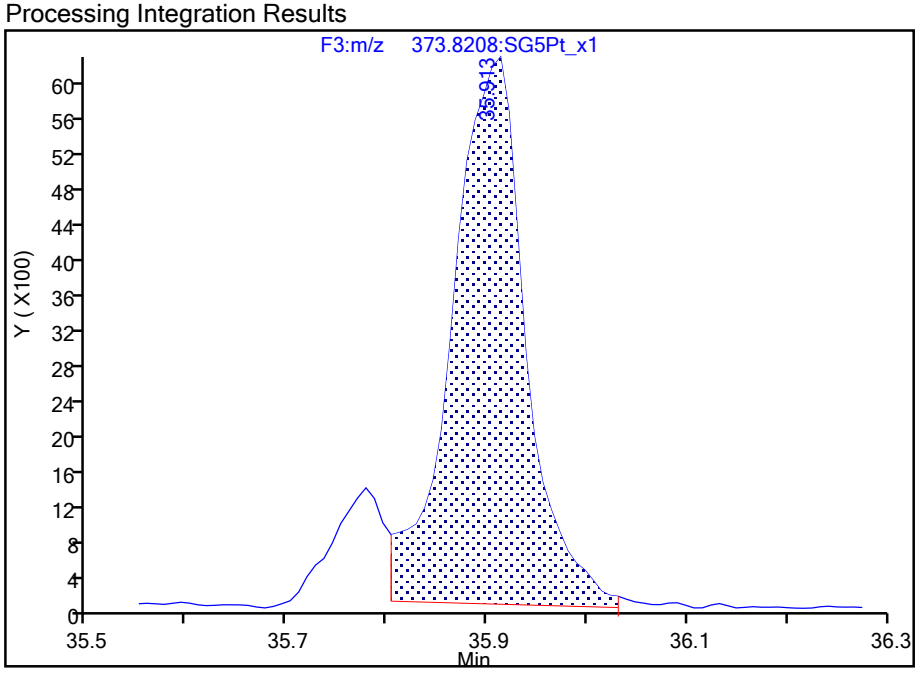

Manual Integration Results

RT: 35.91
Area: 31204
Amount: 9.521992
Amount Units: pg/ul

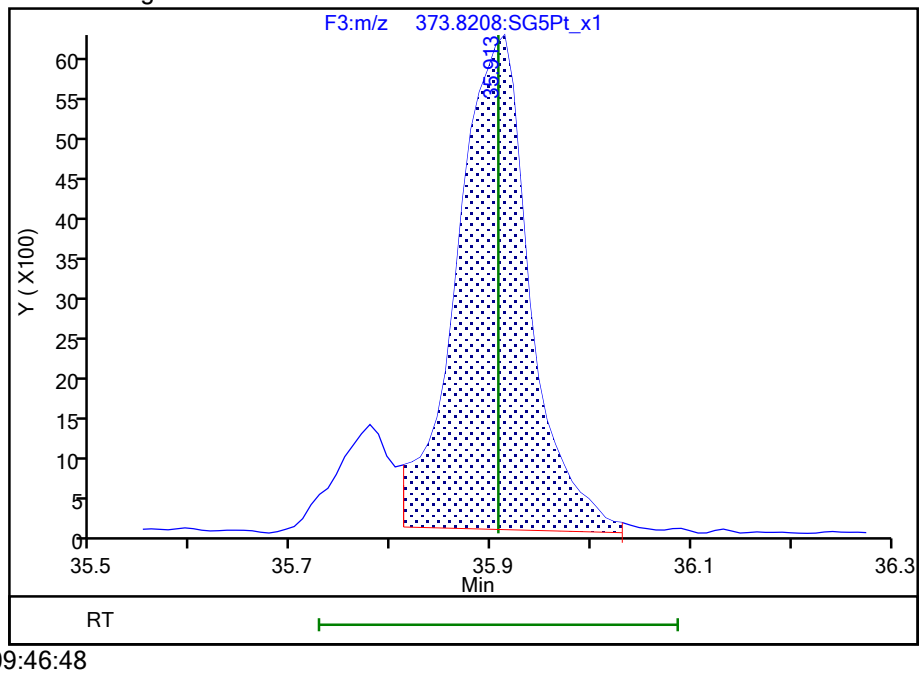

Reviewer: dadunj, 23-Aug-2021 09:46:48

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.79
Area: 29086
Amount: 8.959814
Amount Units: pg/ul

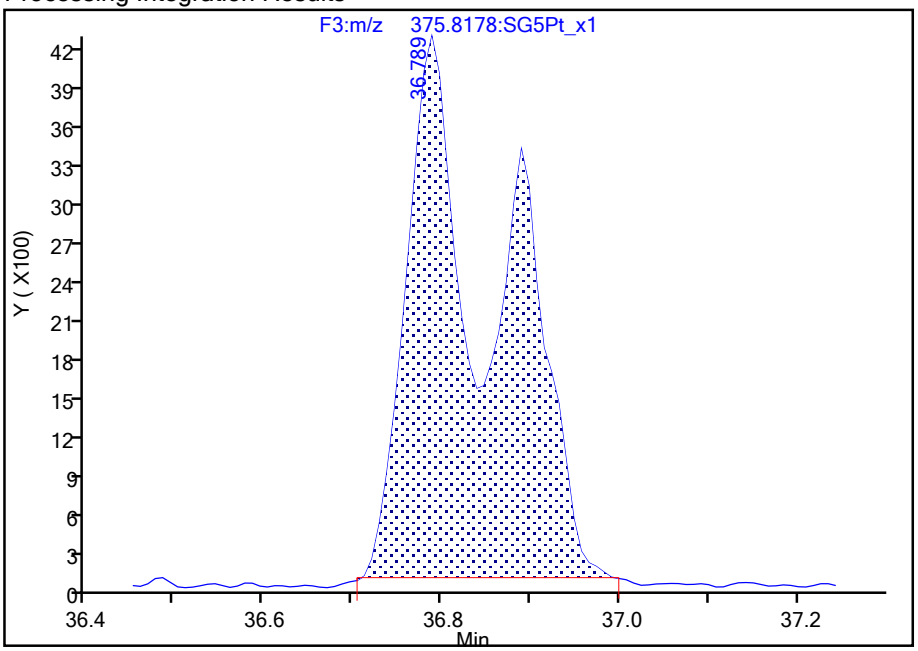

Manual Integration Results

RT: 36.79
Area: 16134
Amount: 6.635842
Amount Units: pg/ul

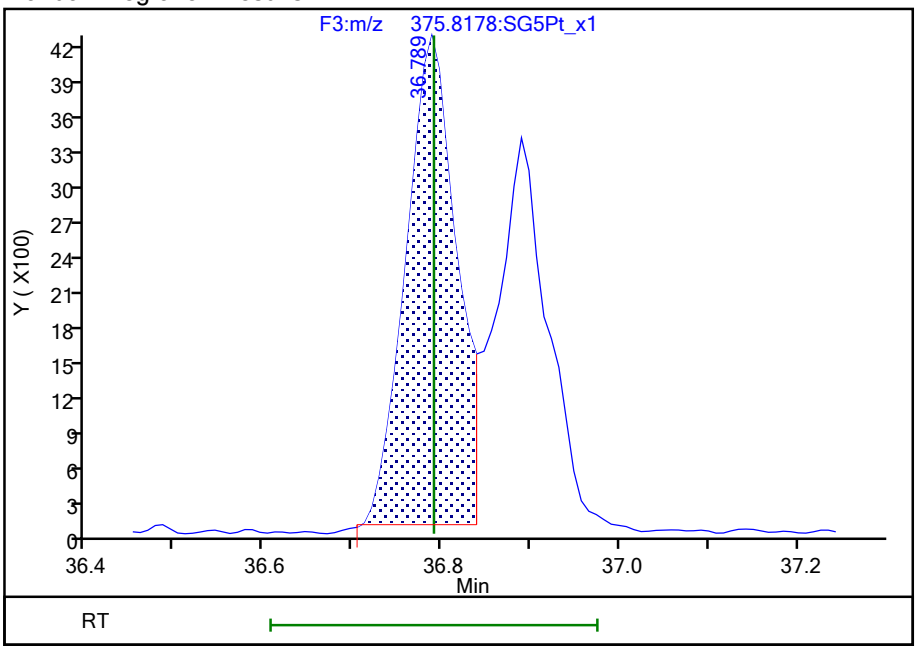

Reviewer: dadunj, 23-Aug-2021 09:46:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 35.779 Area = 4871

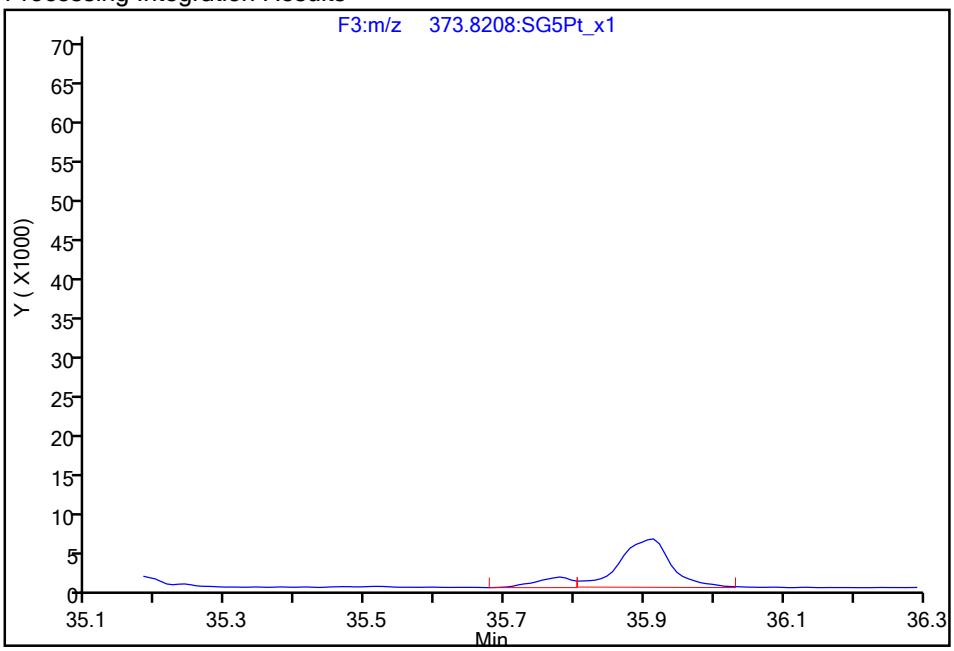

Manual Integration Results

RT = 35.779 Area = 4871

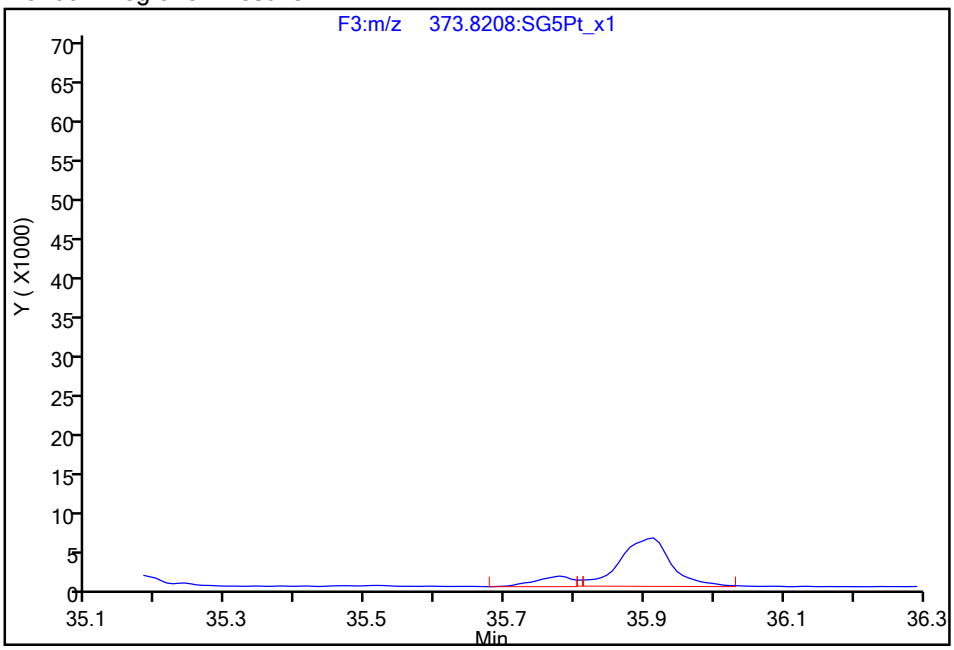

Reviewer: dadunj, 23-Aug-2021 09:47:02

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d				
Injection Date:	20-Aug-2021 06:21:00	Instrument ID:	DFS 1		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	21
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 36.889 Area = 18936

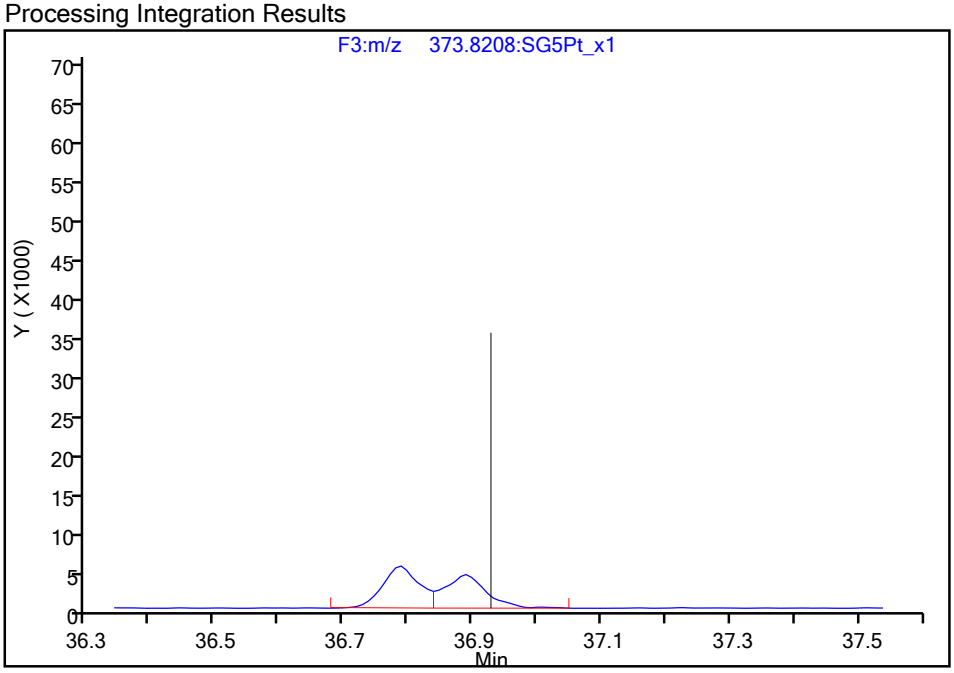

Manual Integration Results

RT = 36.889 Area = 18936

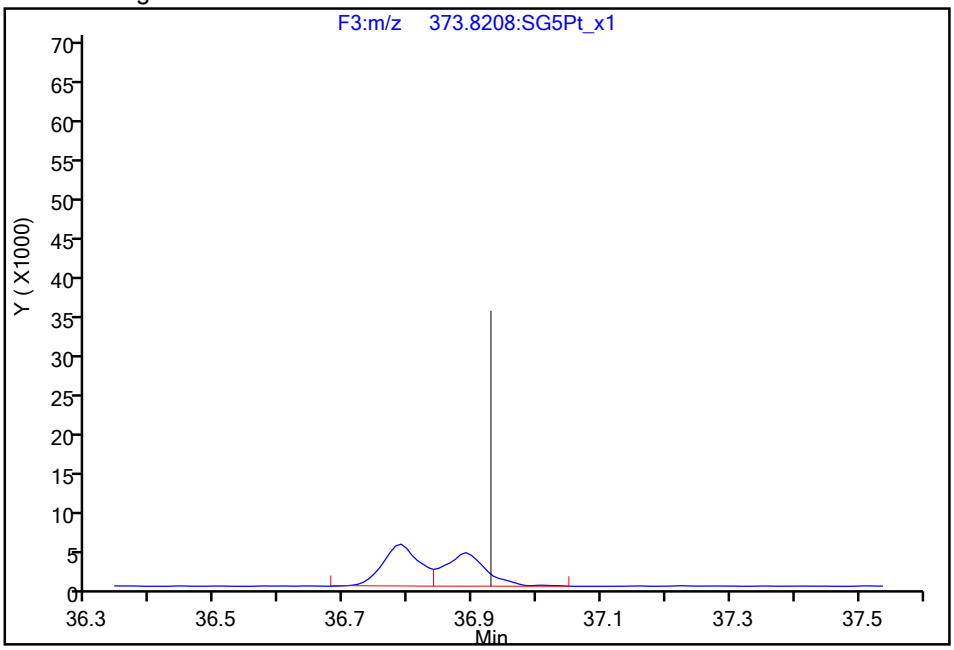

Reviewer: dadunj, 23-Aug-2021 09:47:02

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

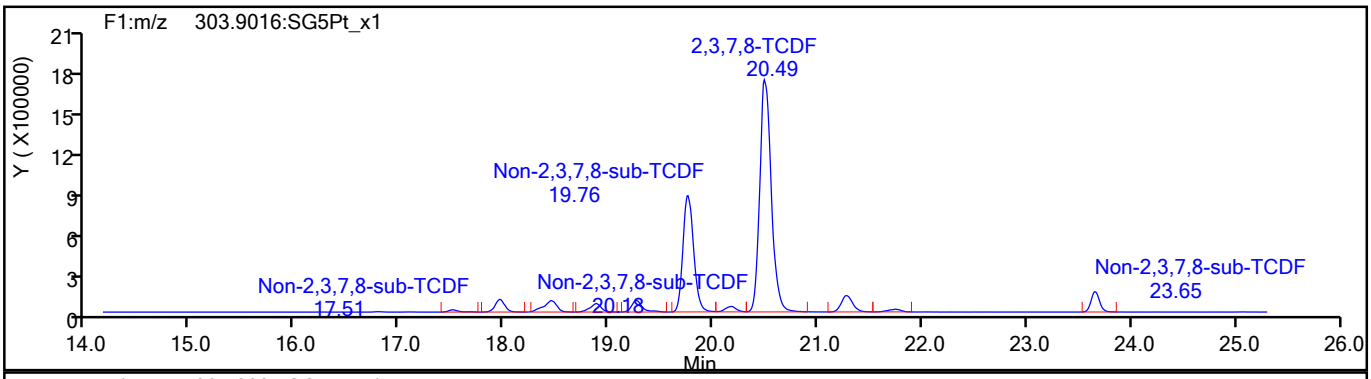

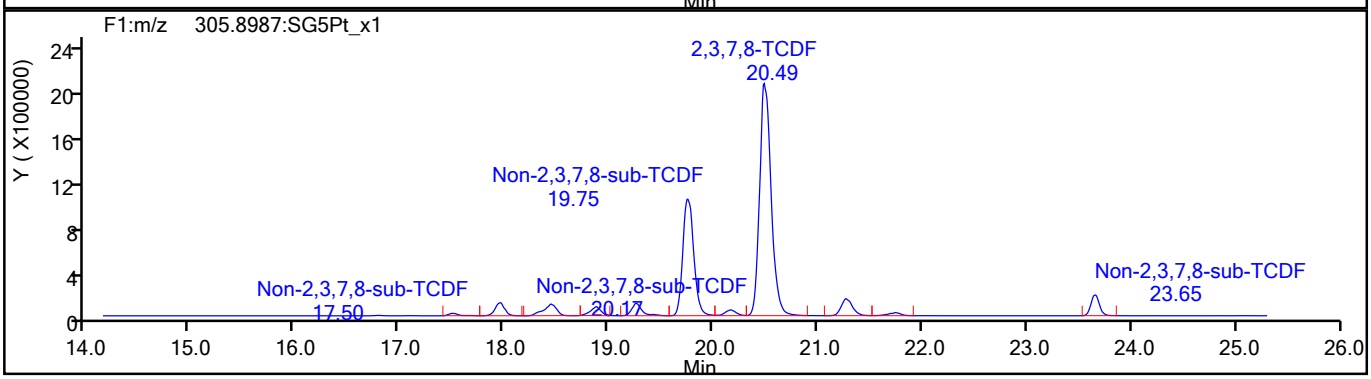

TCDF Standards

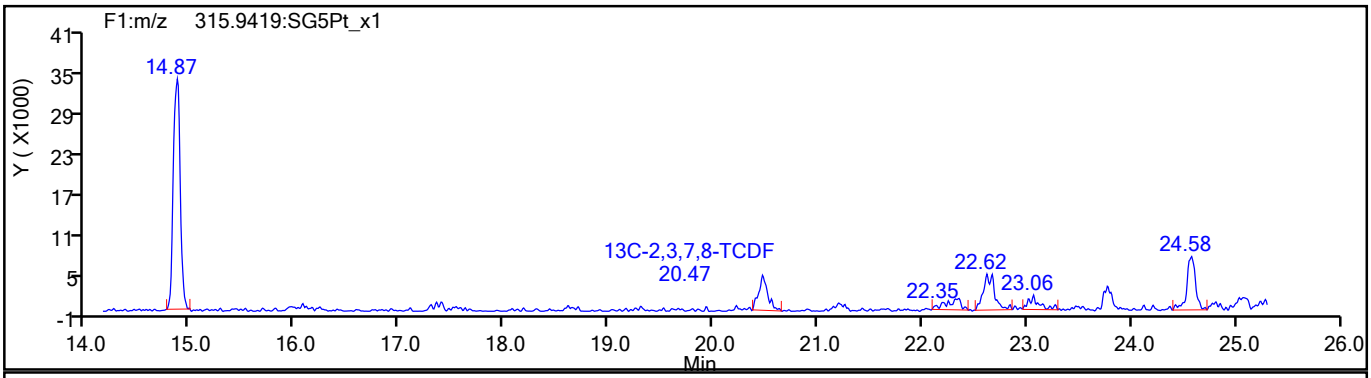

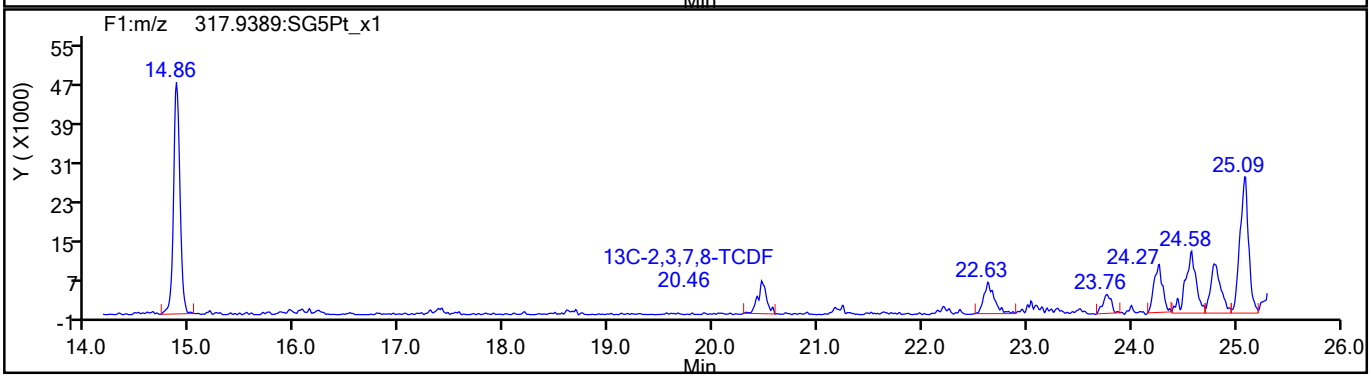

787925

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

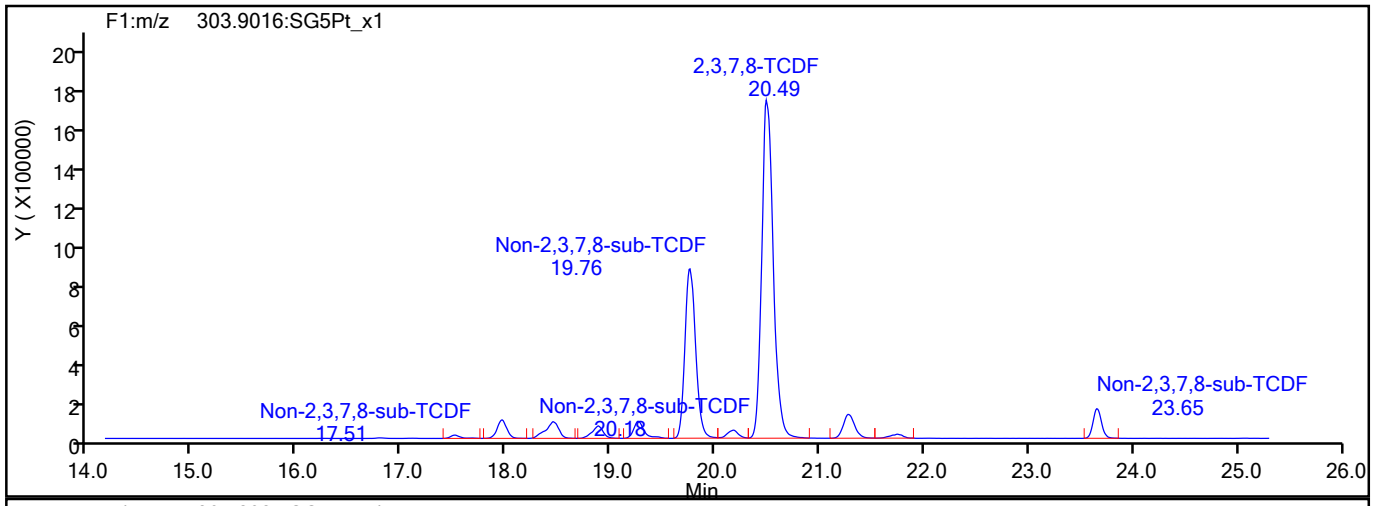

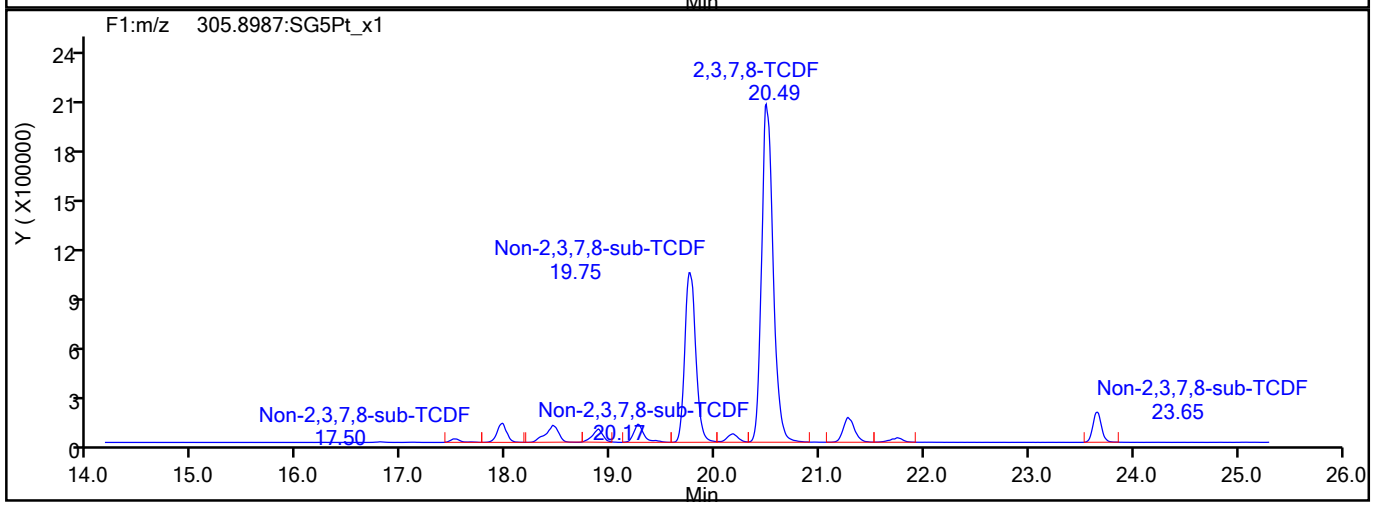

TCDF Interference Mass

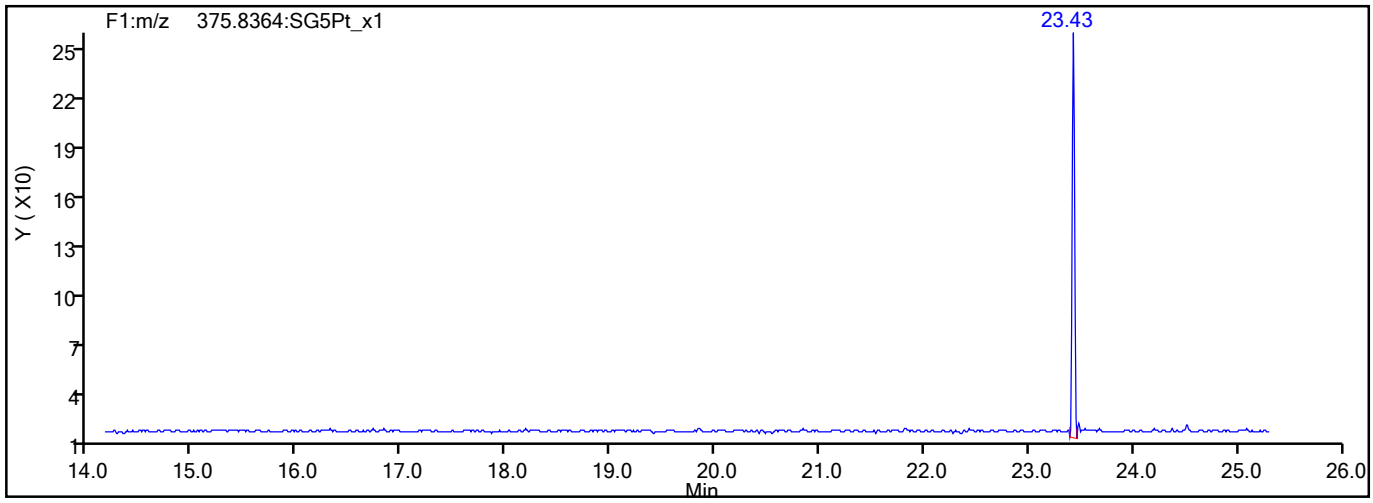

787926

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

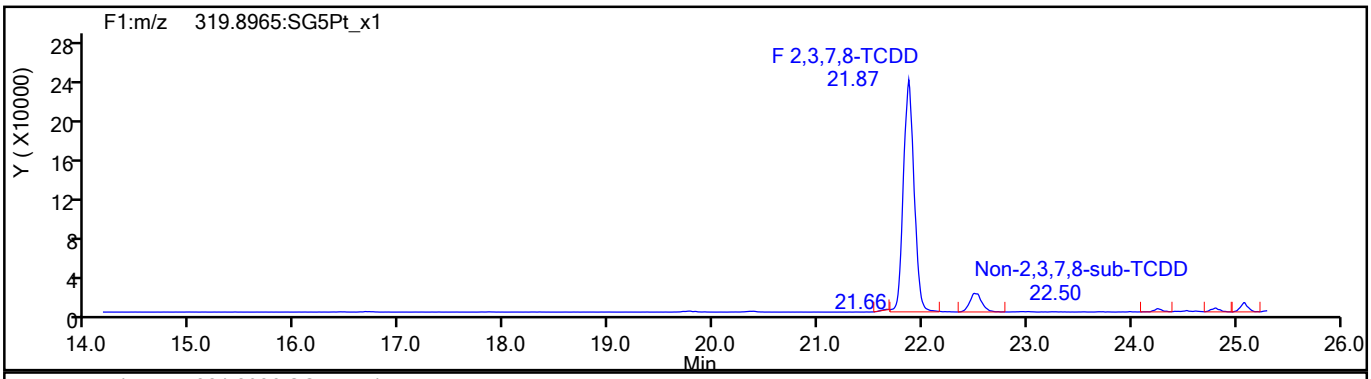

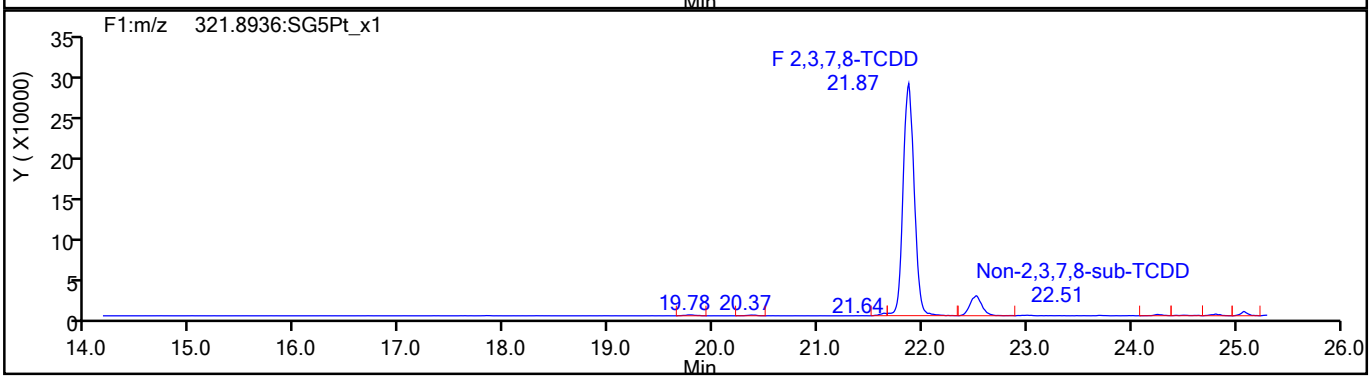

TCDD Standards

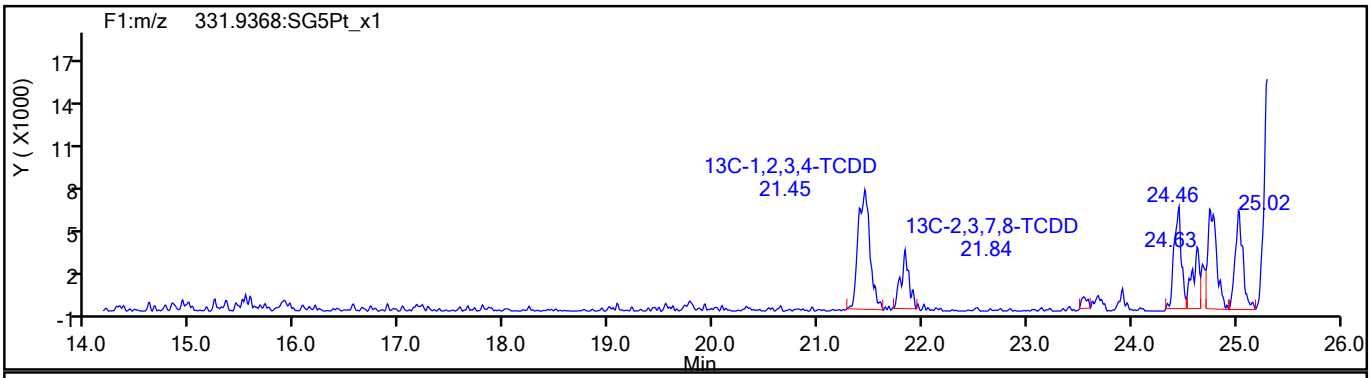

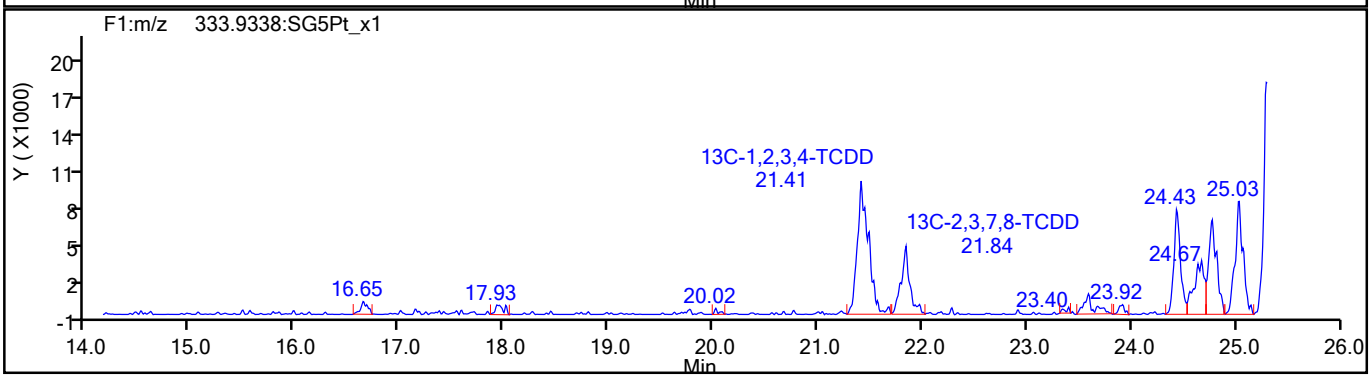

787927

Report Date: 25-Aug-2021 15:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

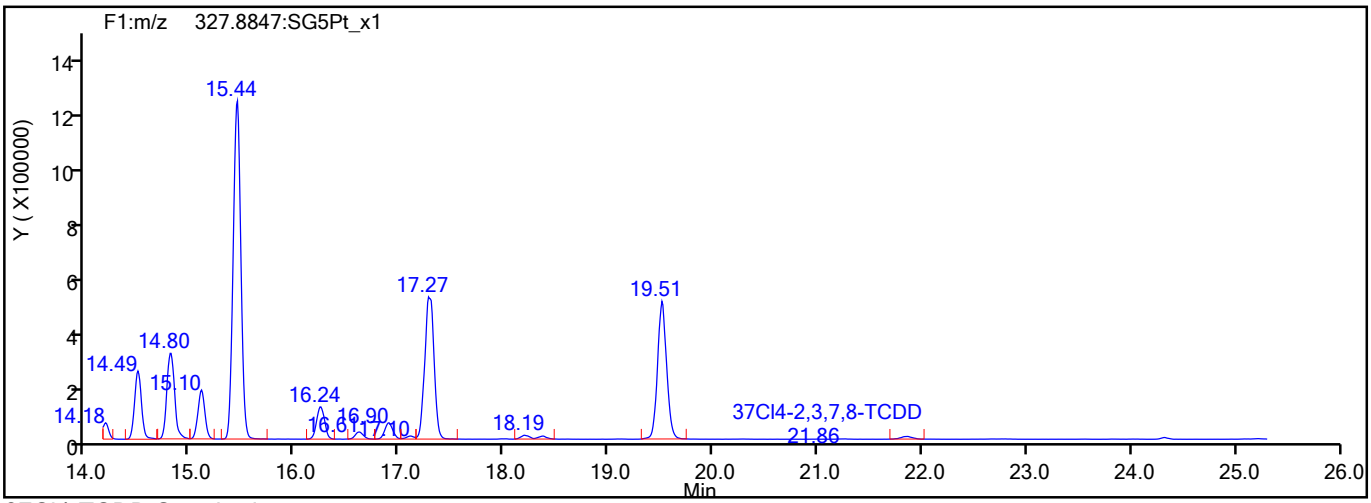

37Cl4-TCDD Standards

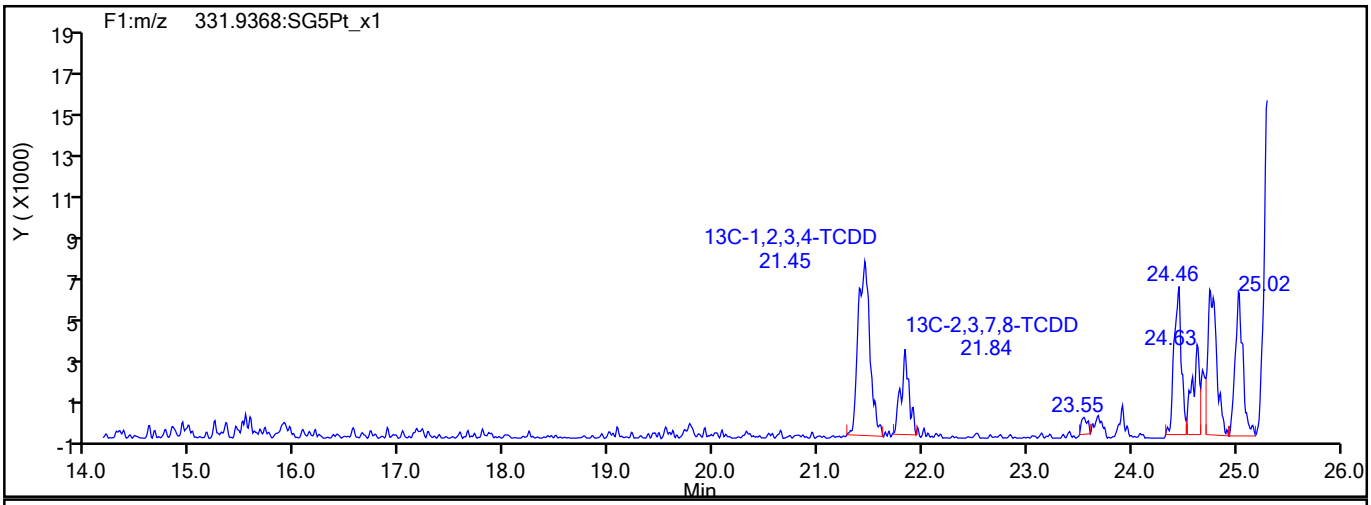

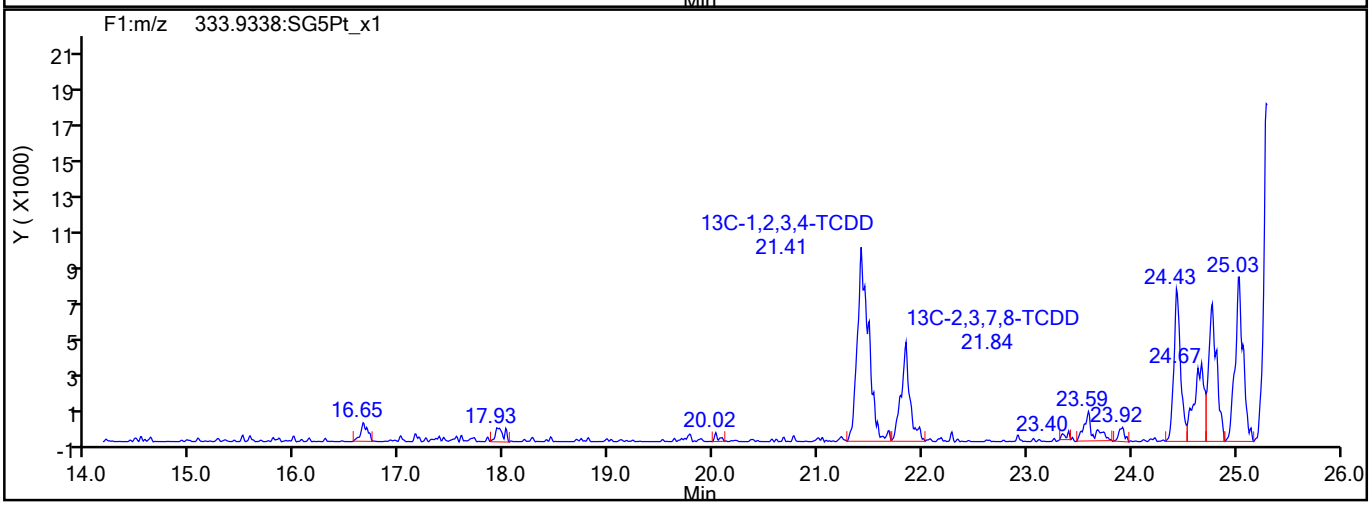

787928

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

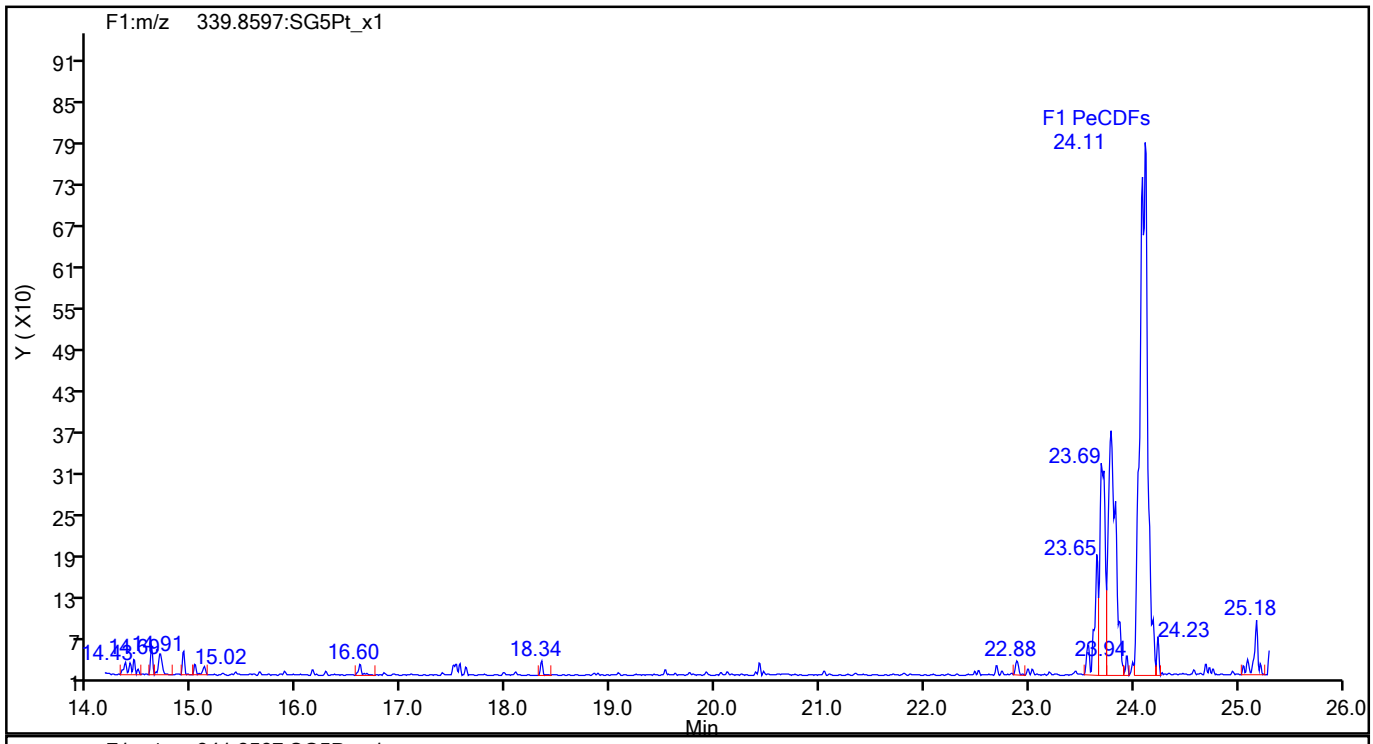

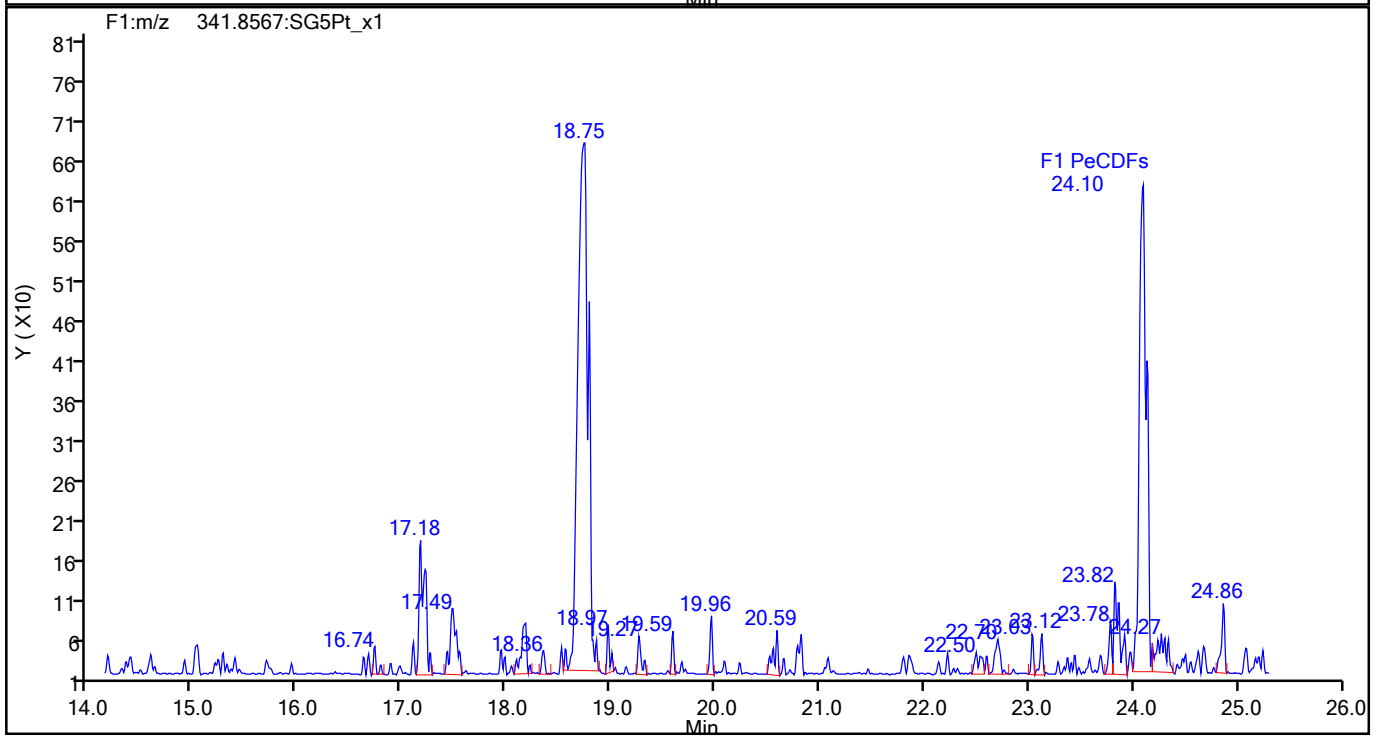

787929

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

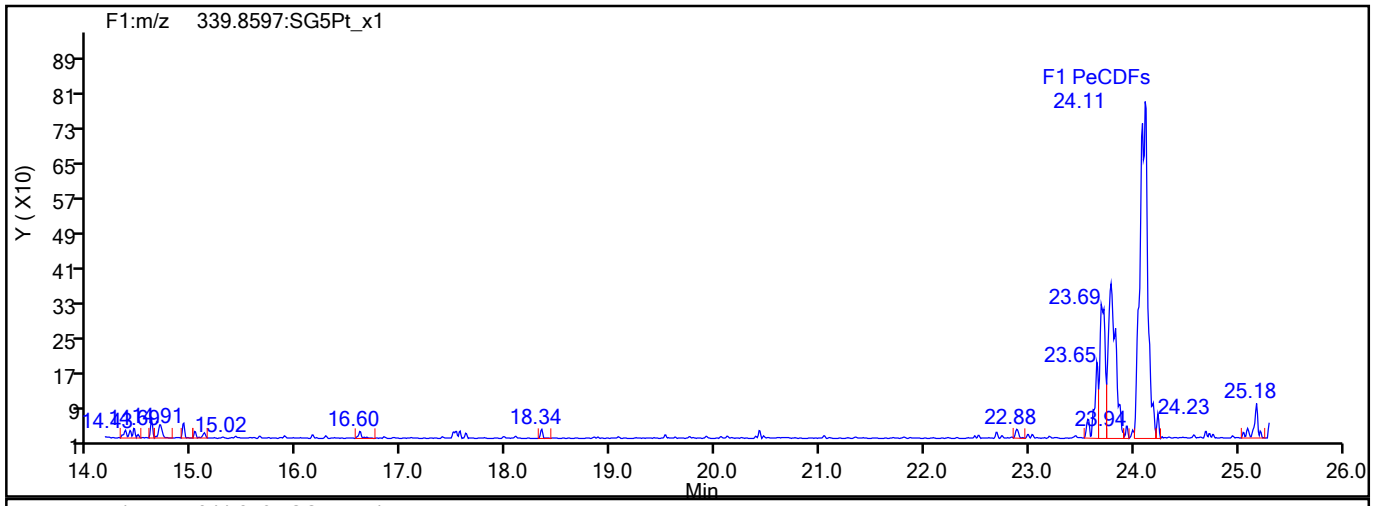

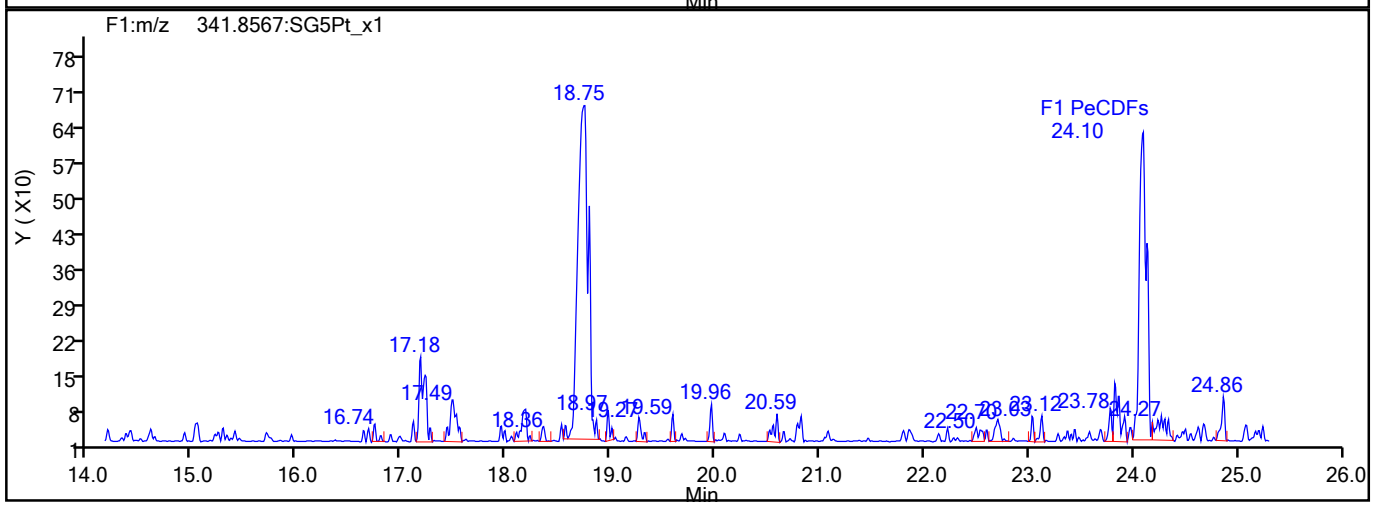

F1 PeCDFs Interference Mass

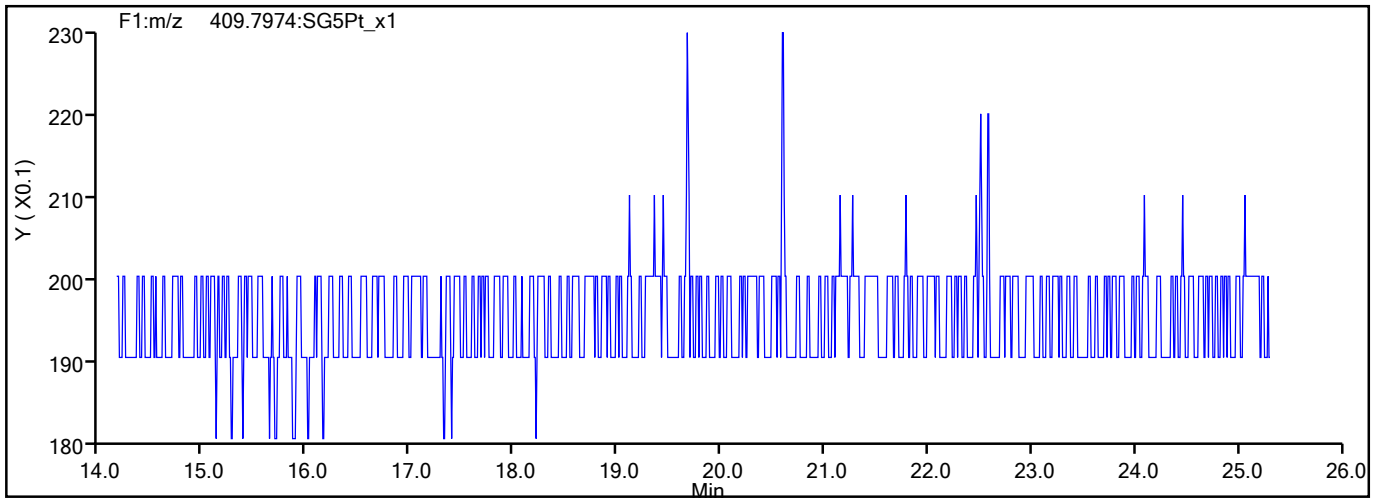

787930

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

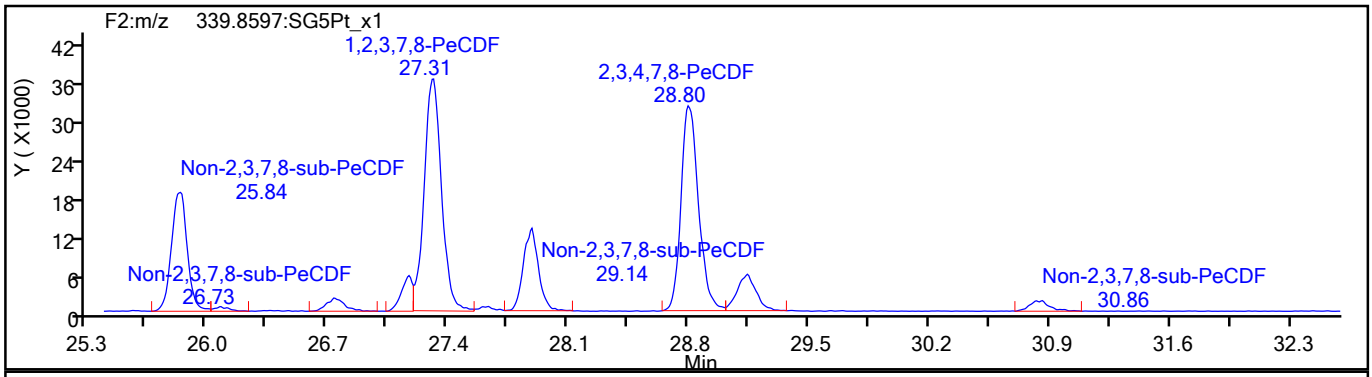

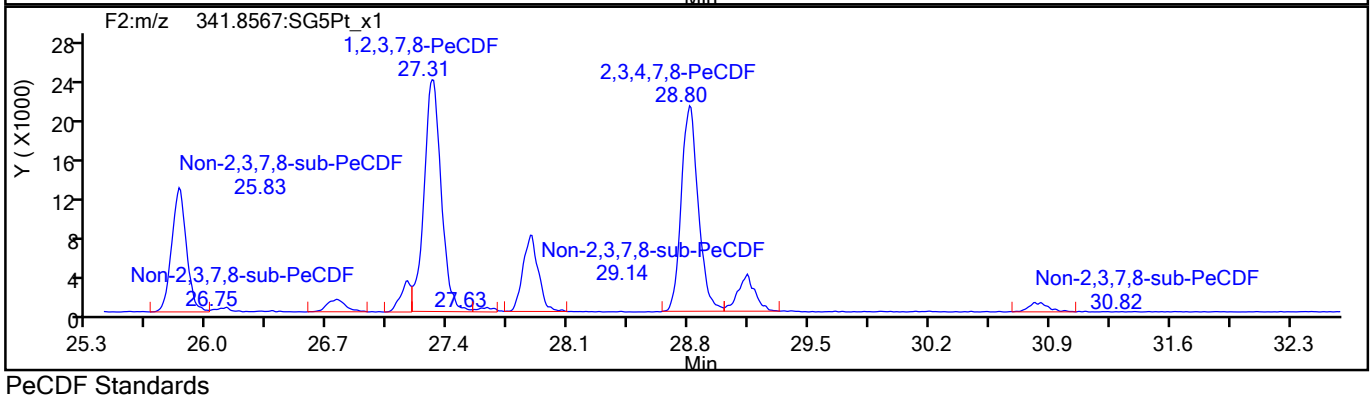

PeCDF Standards

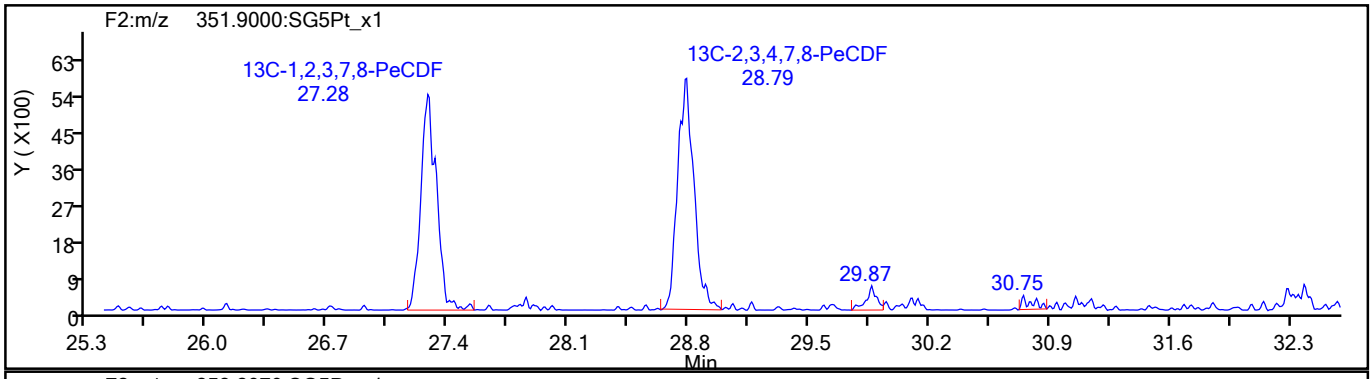

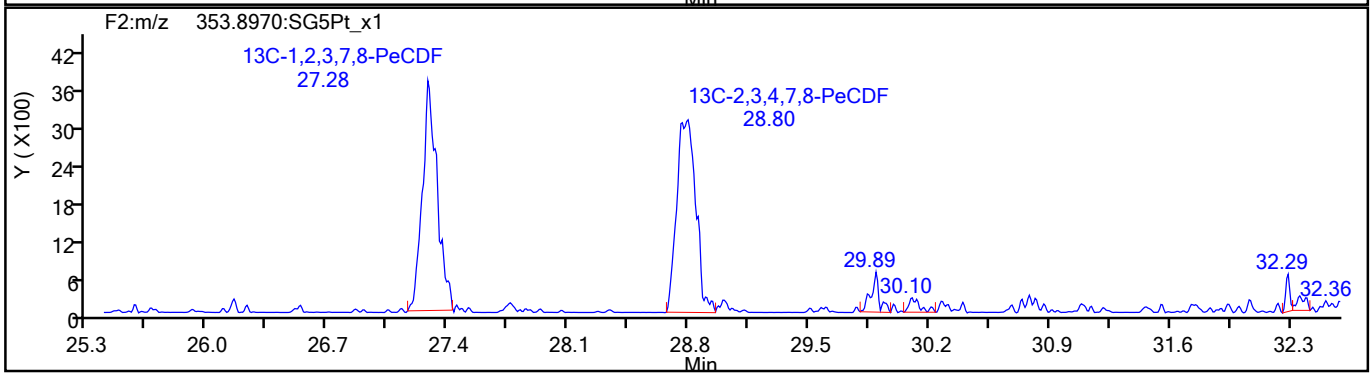

787931

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

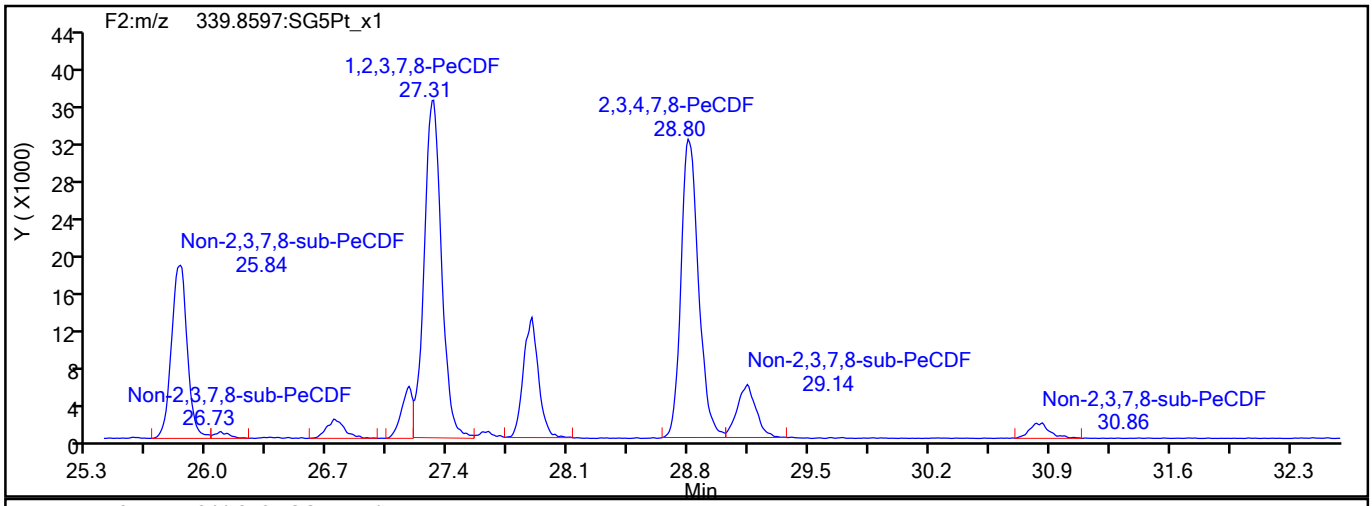

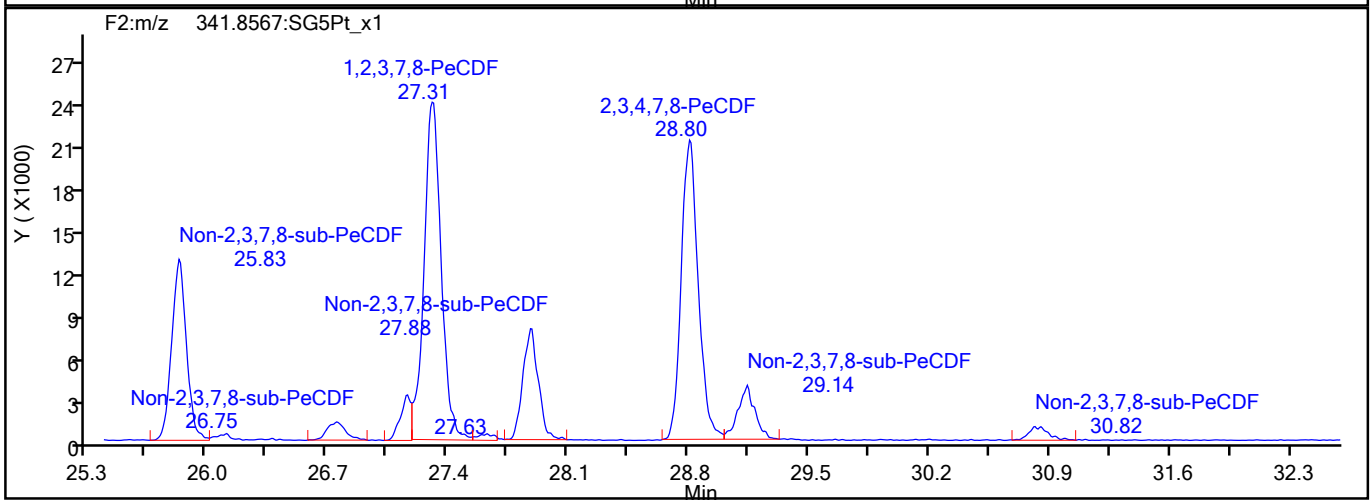

PeCDF Interference Mass

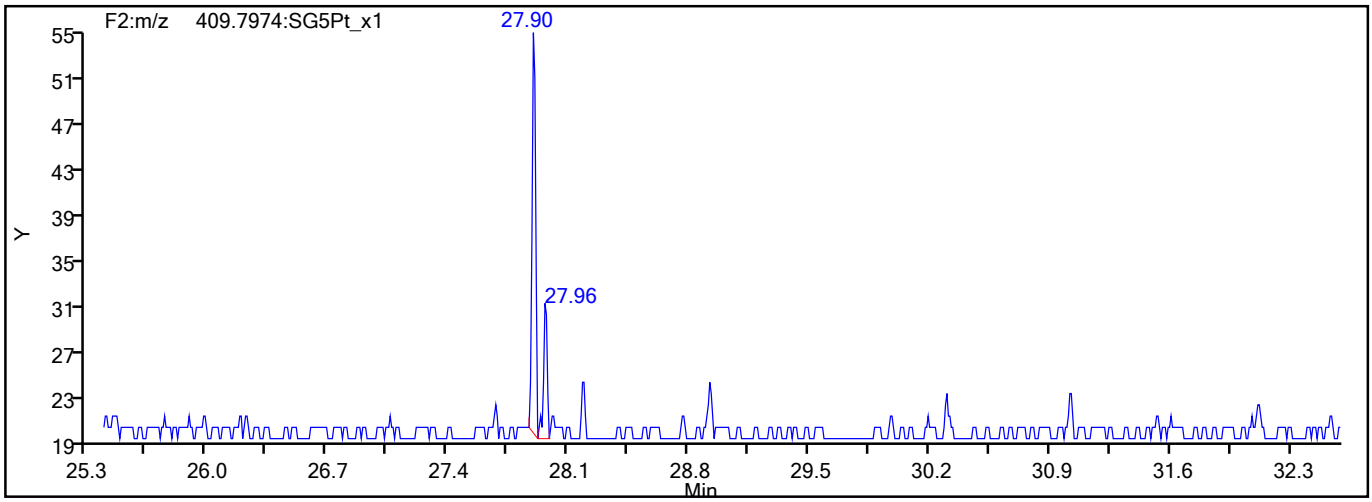

787932

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

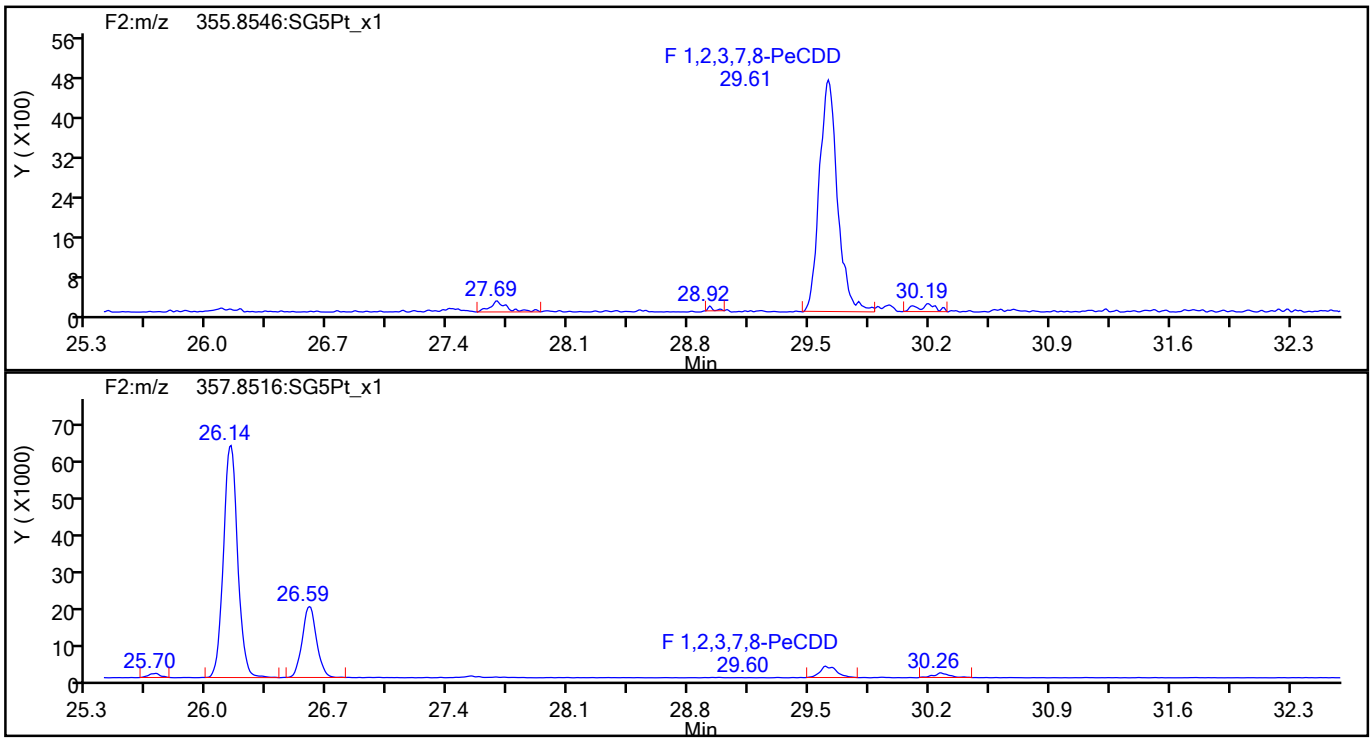

PeCDD Standards

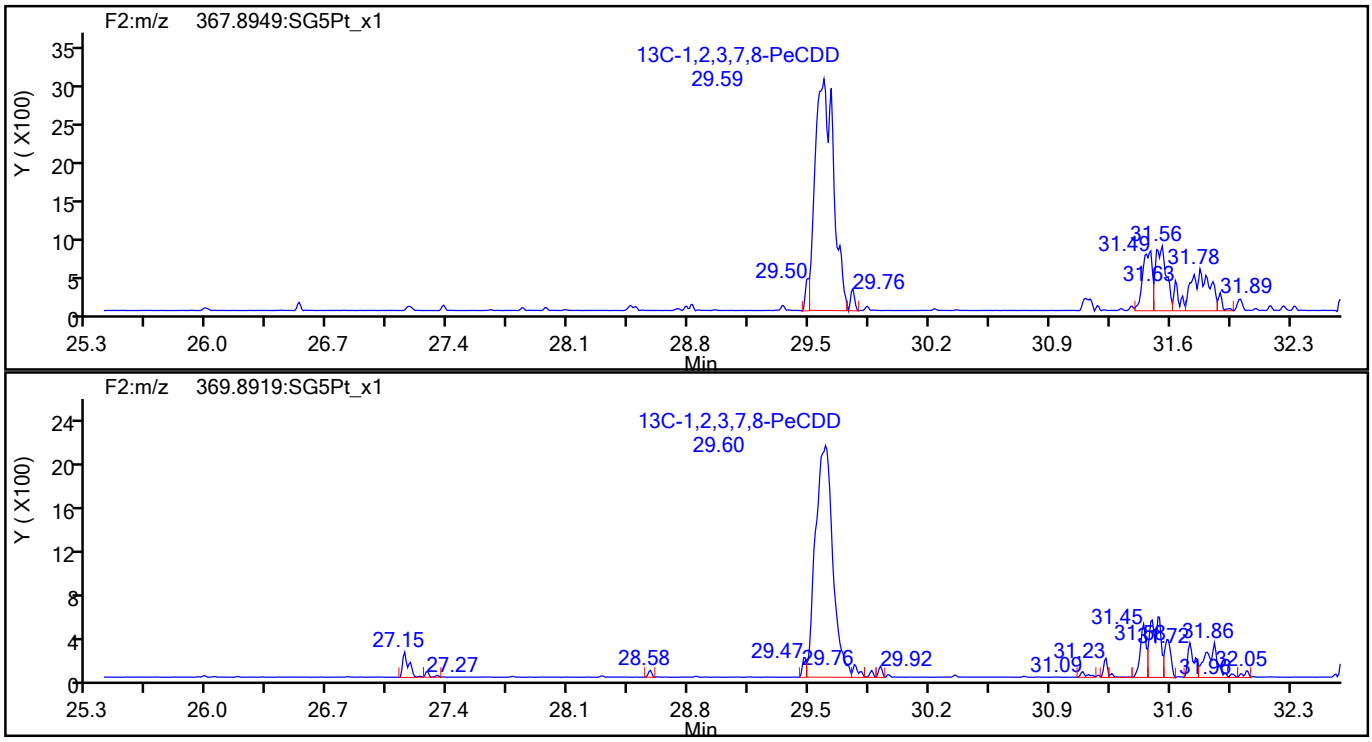

787933

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

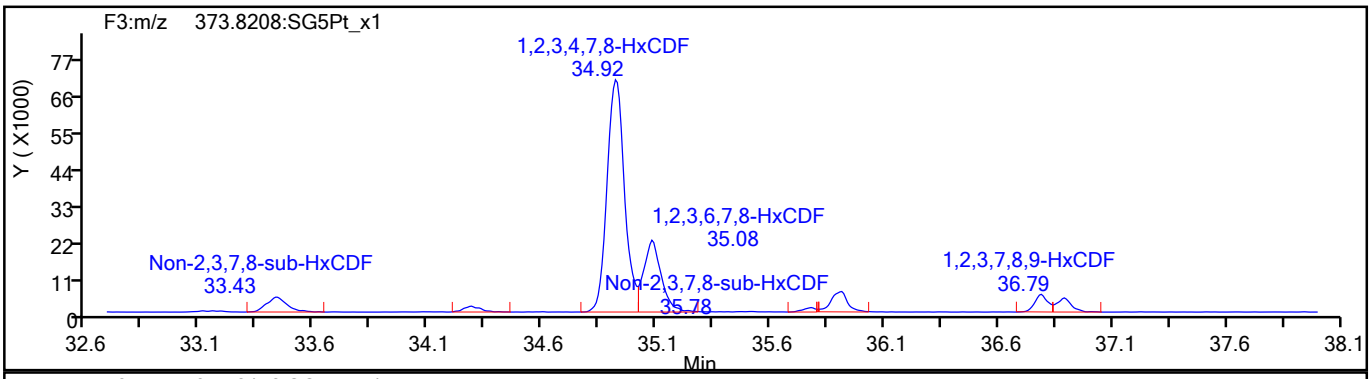

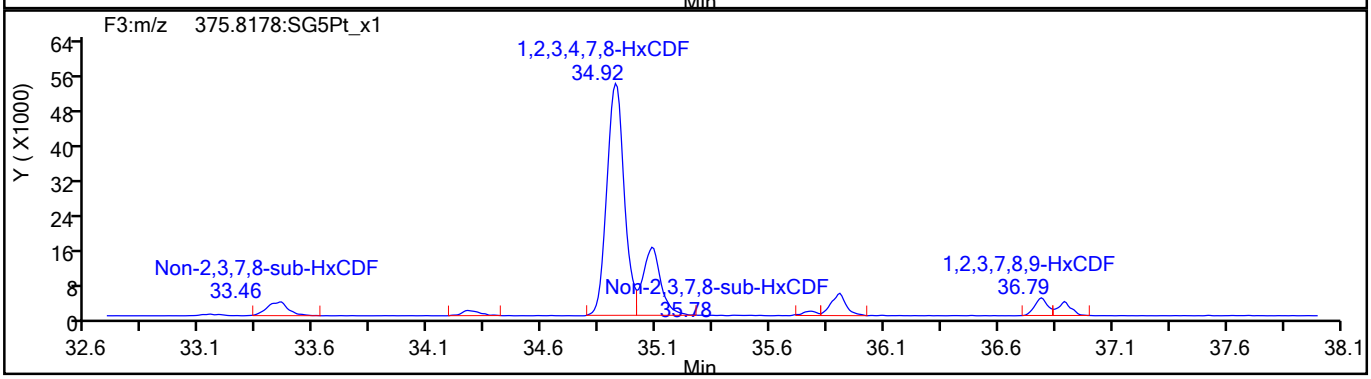

HxCDF Standards

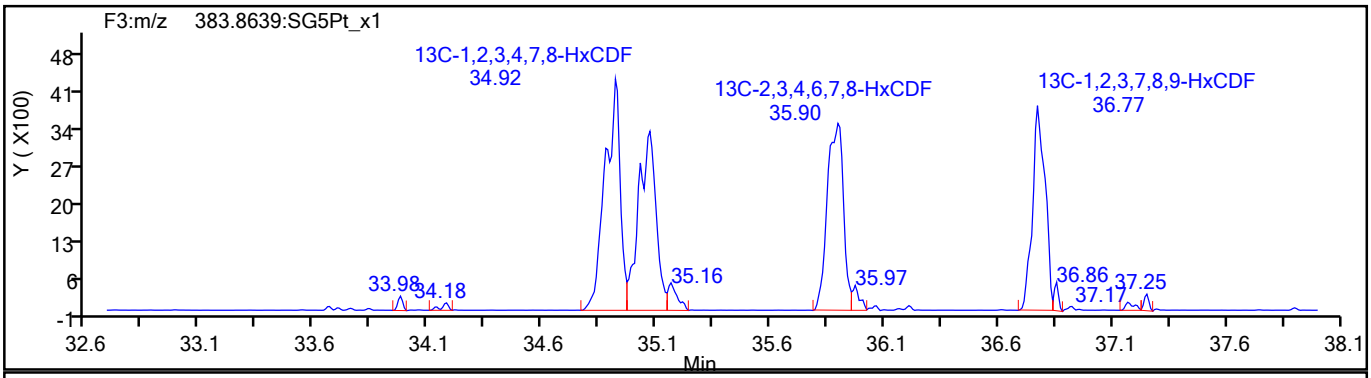

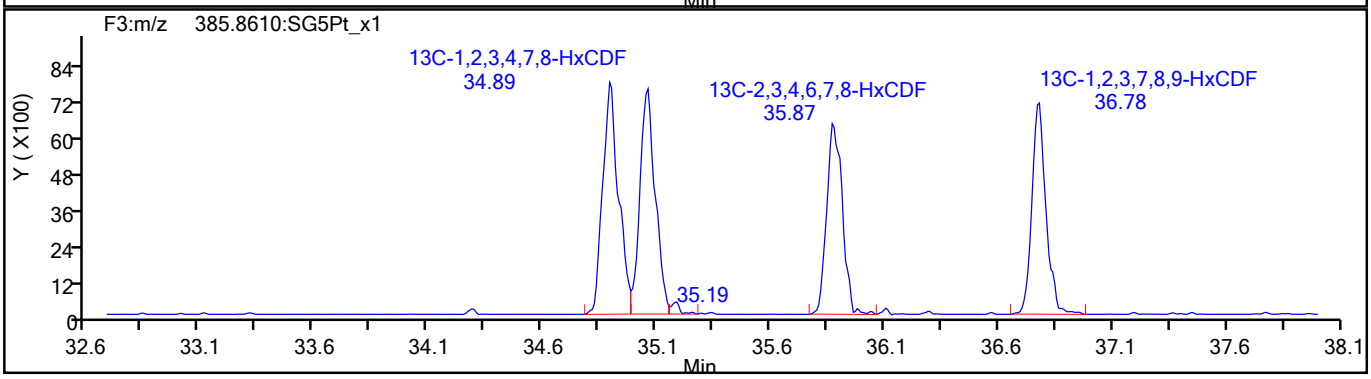

787934

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

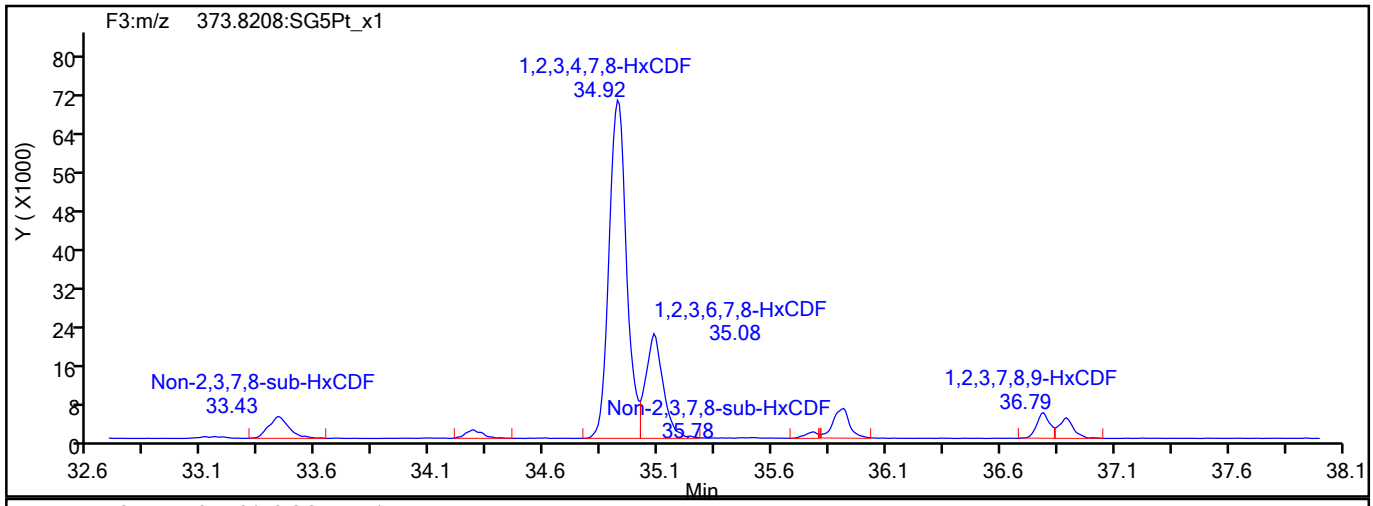

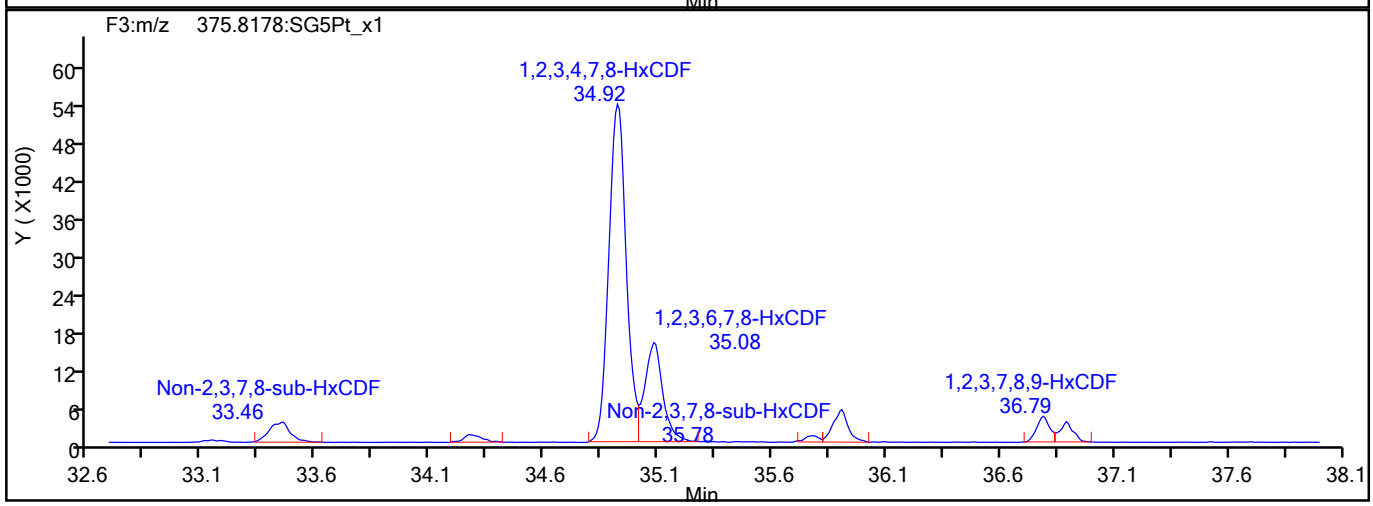

HxCDF Interference Mass

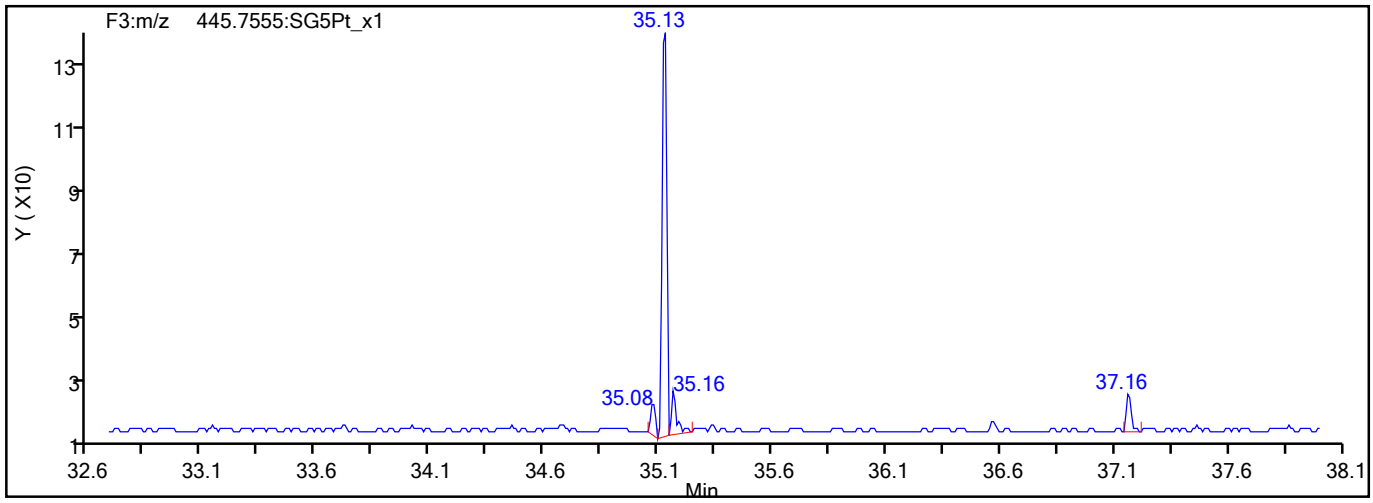

787935

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

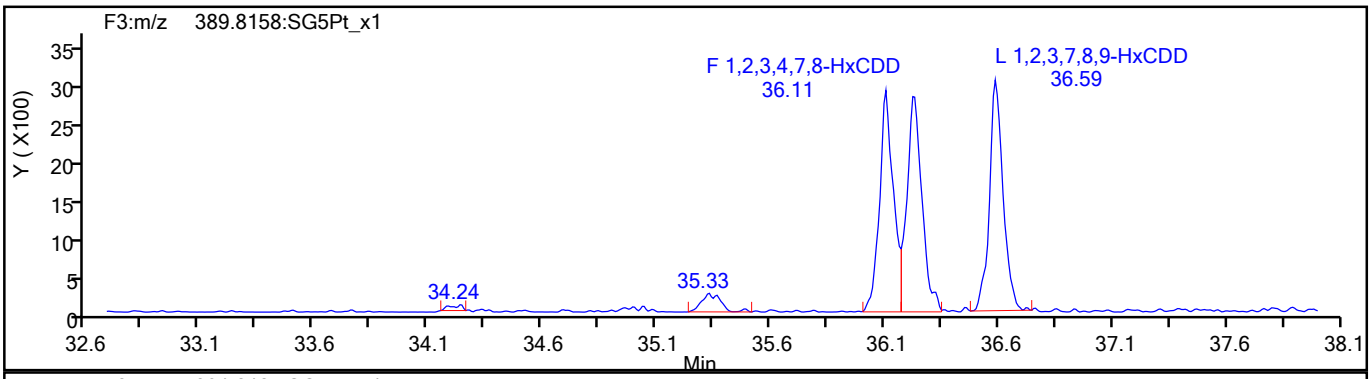

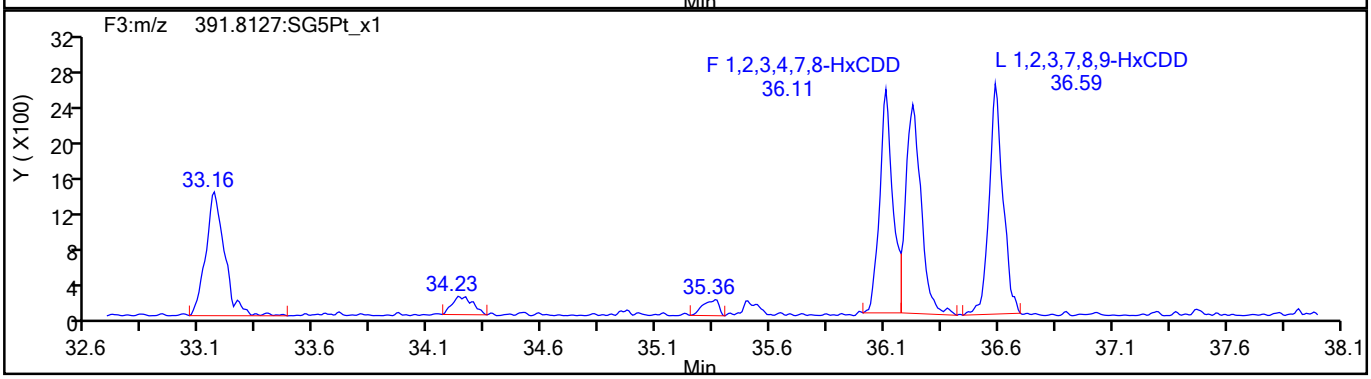

HxCDD Standards

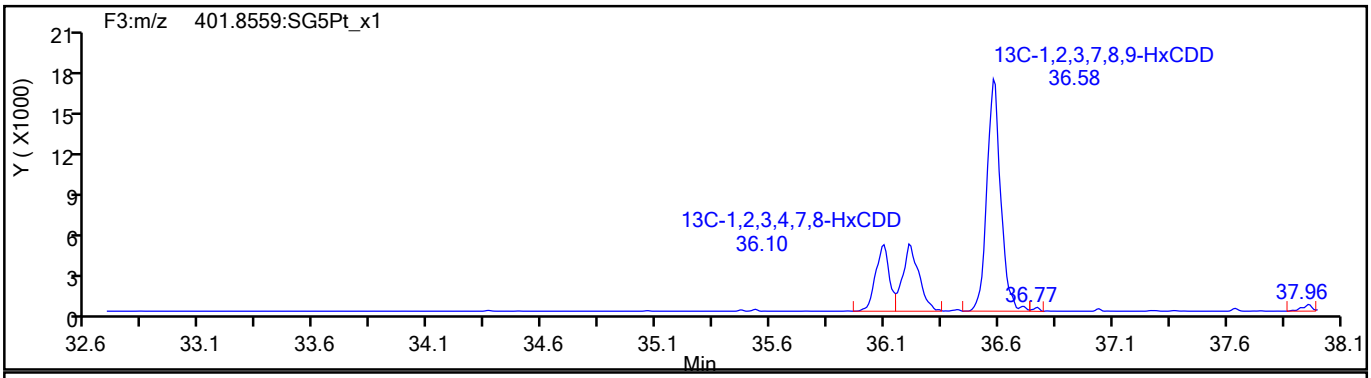

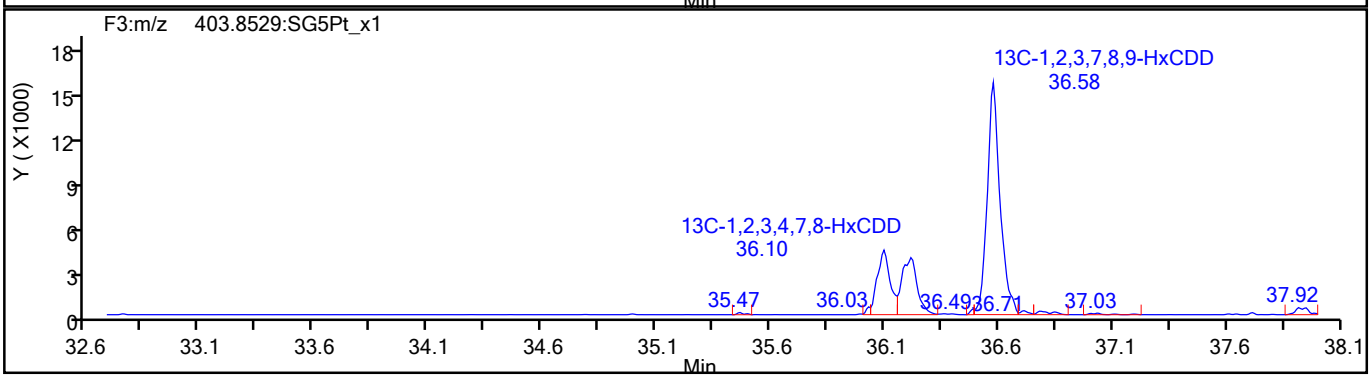

787936

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

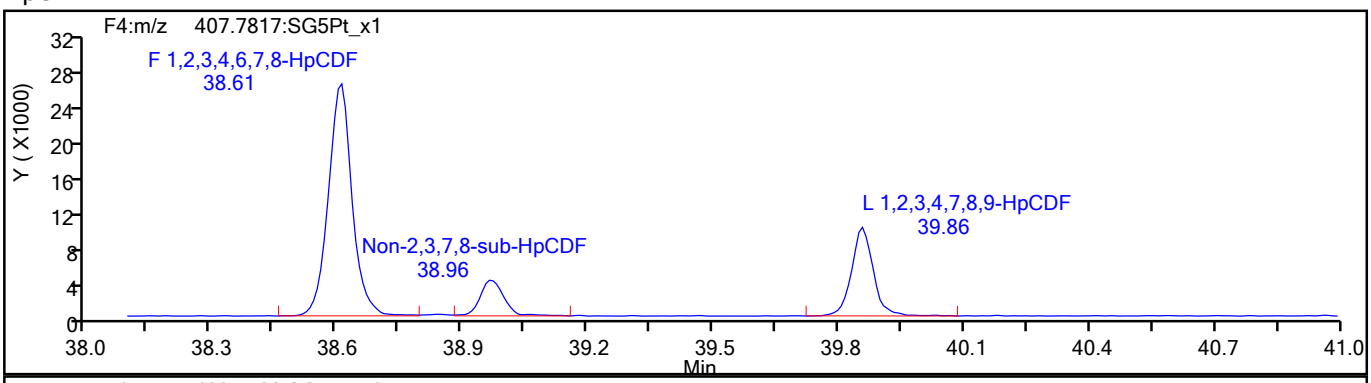

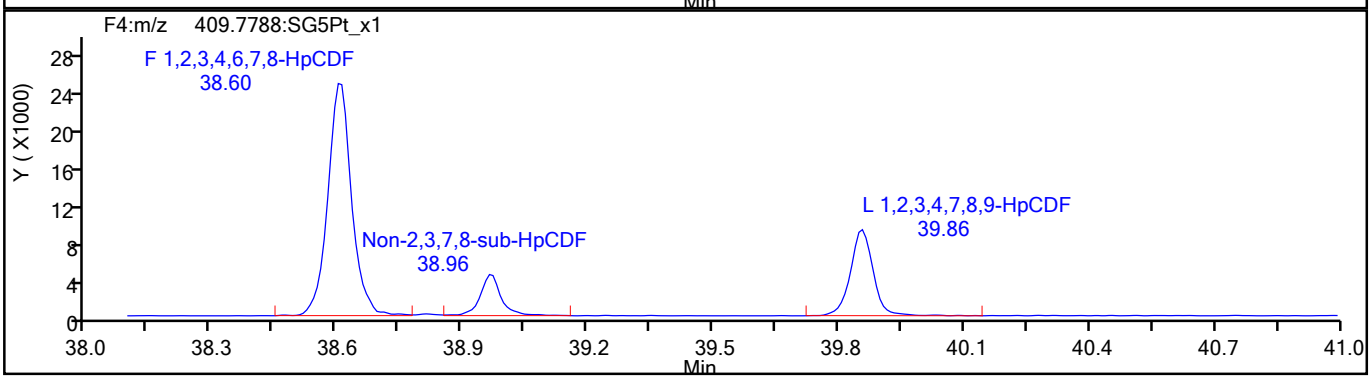

HpCDF Standards

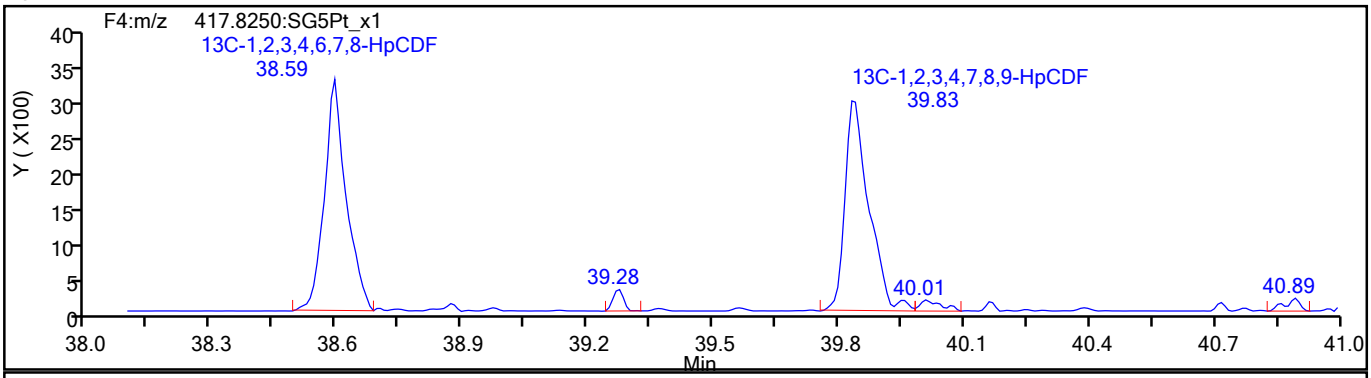

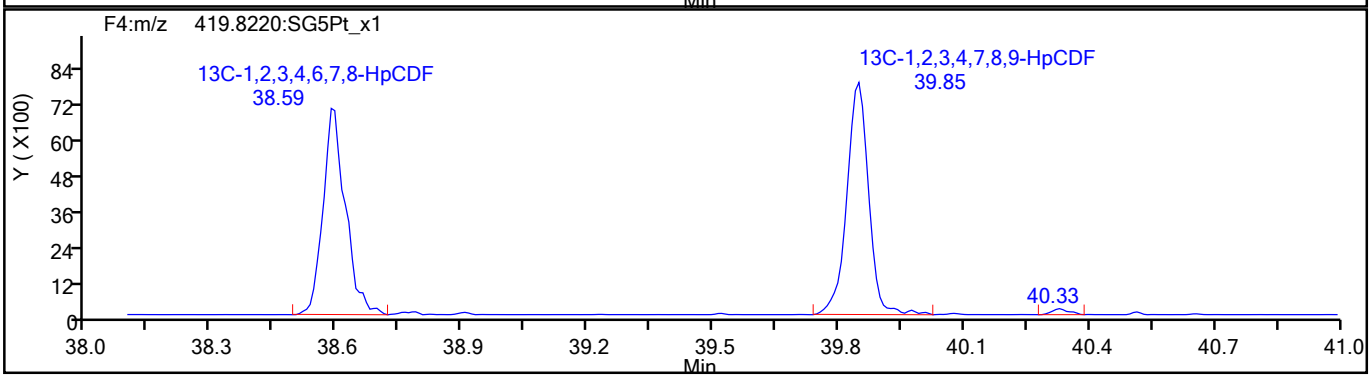

787937

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

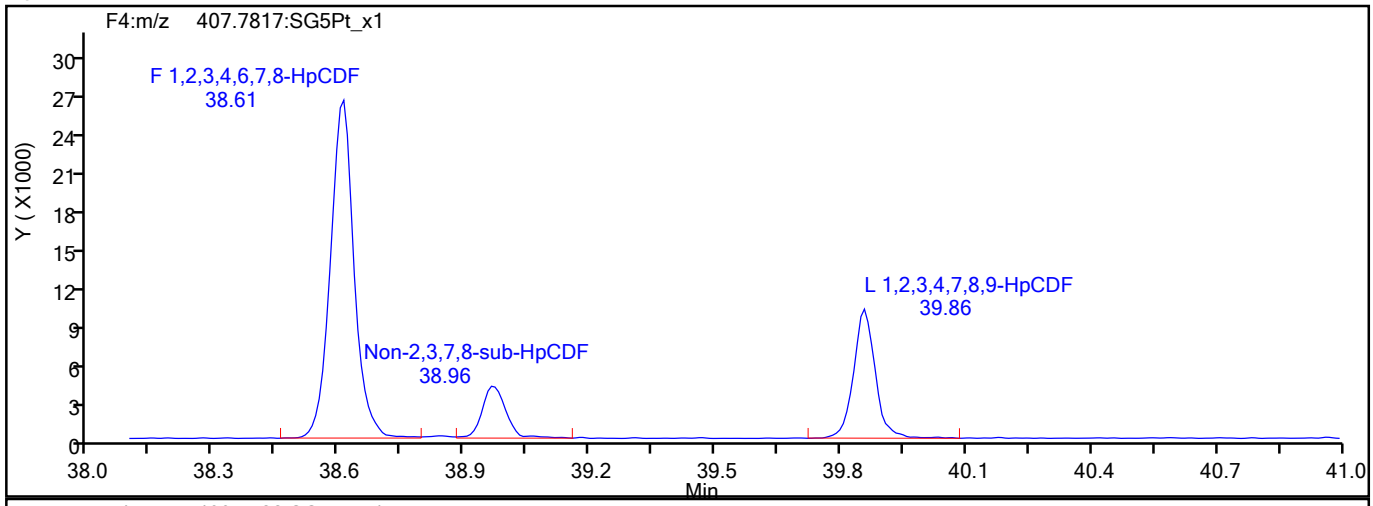

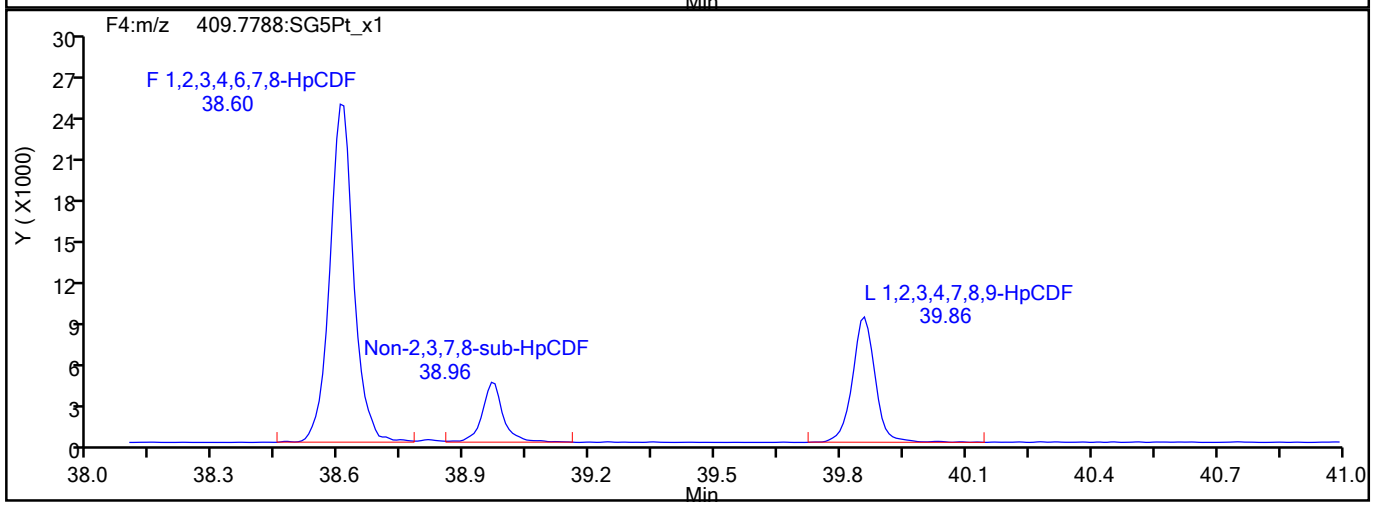

HpCDF Interference Mass

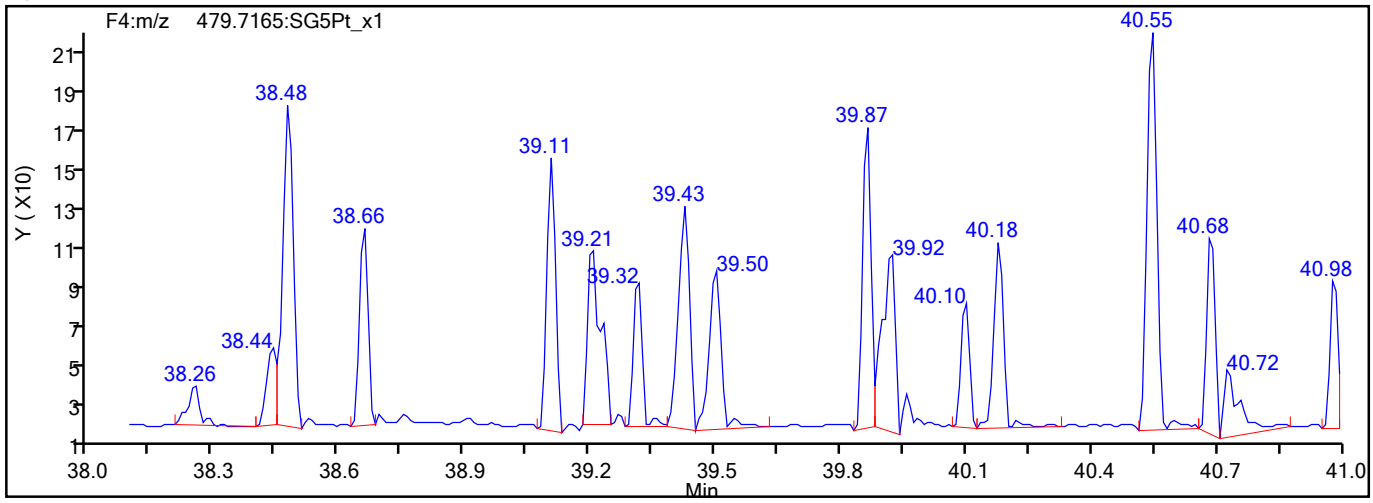

787938

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

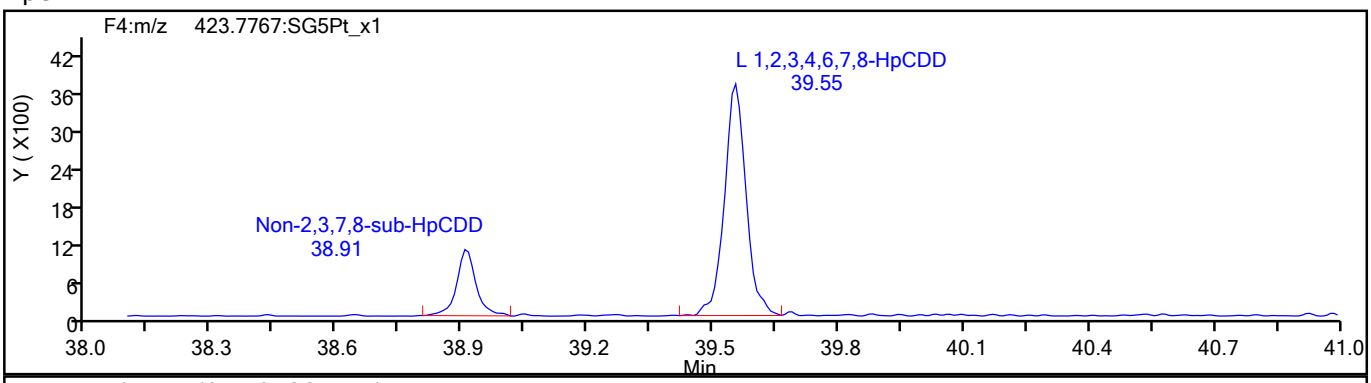

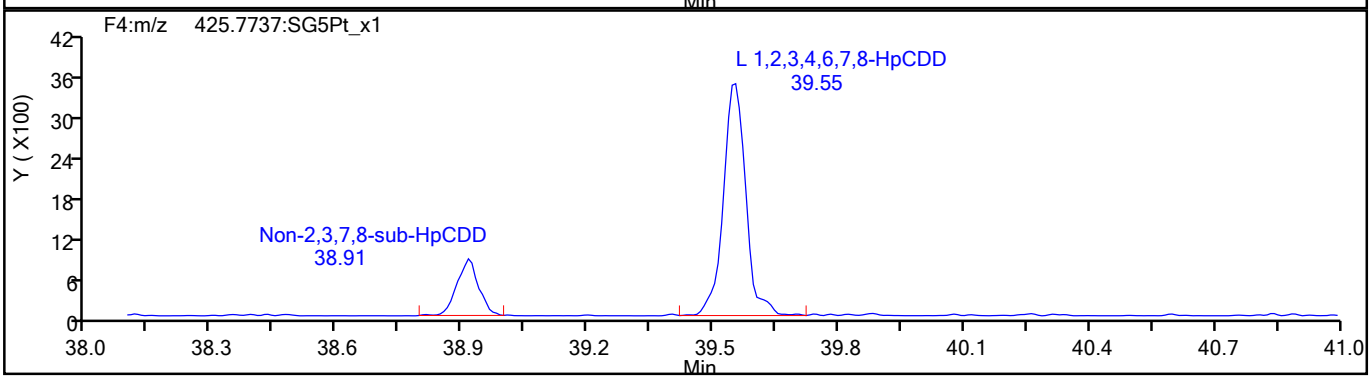

HpCDD Standards

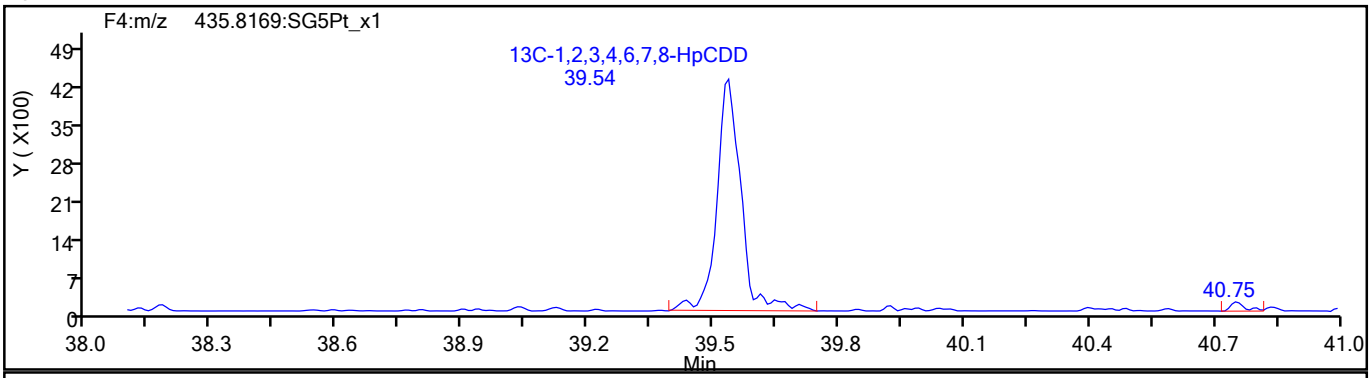

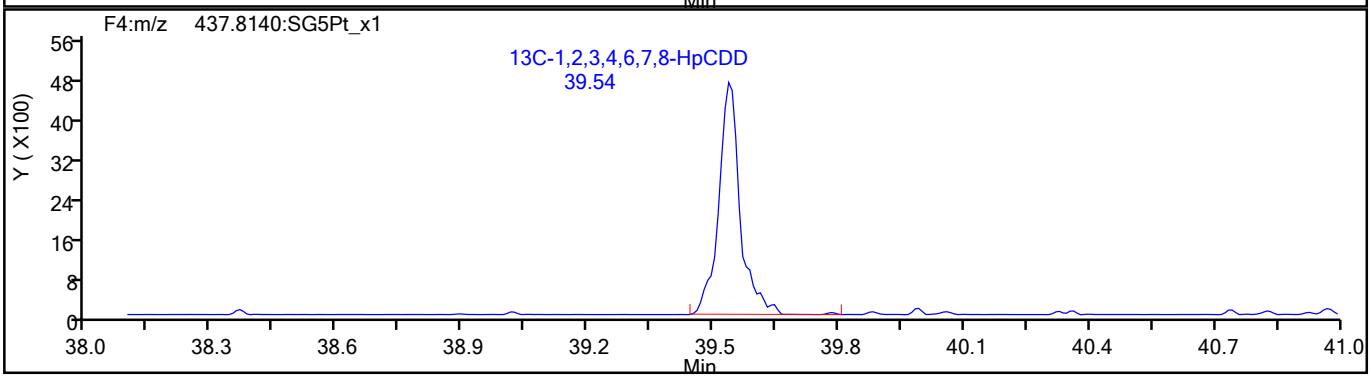

787939

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

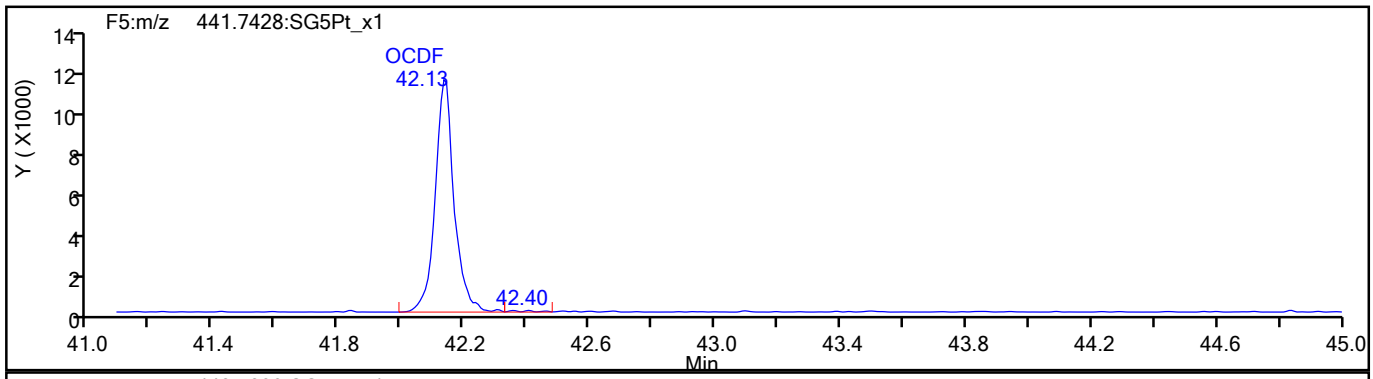

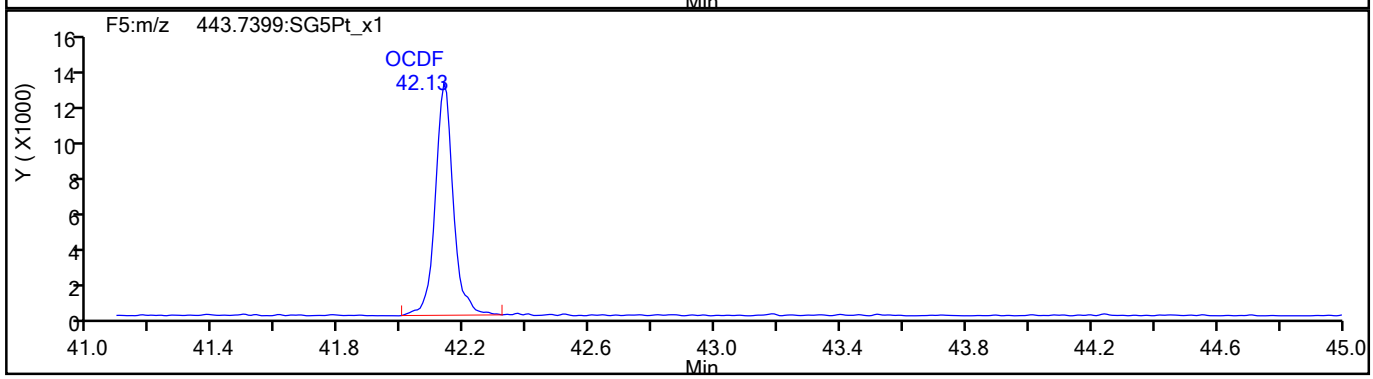

OCDF Standards

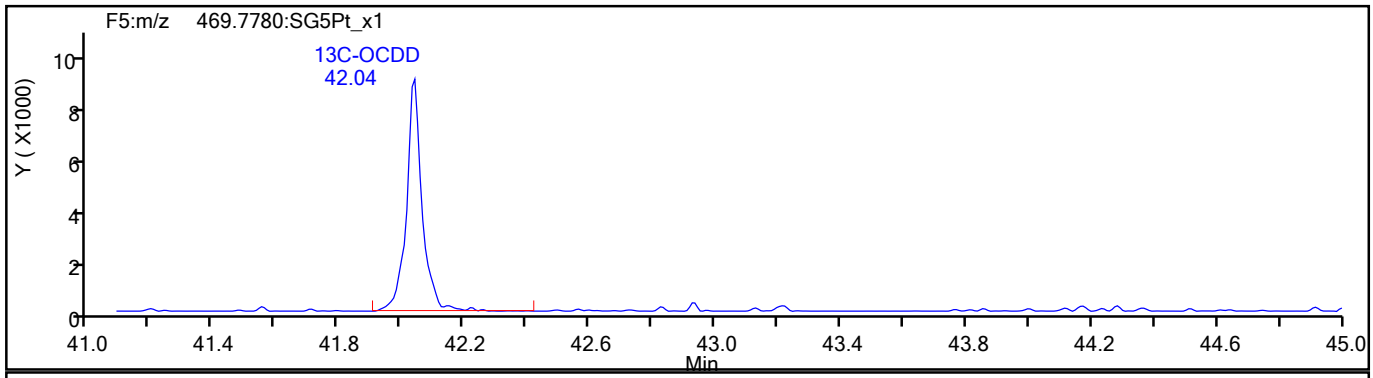

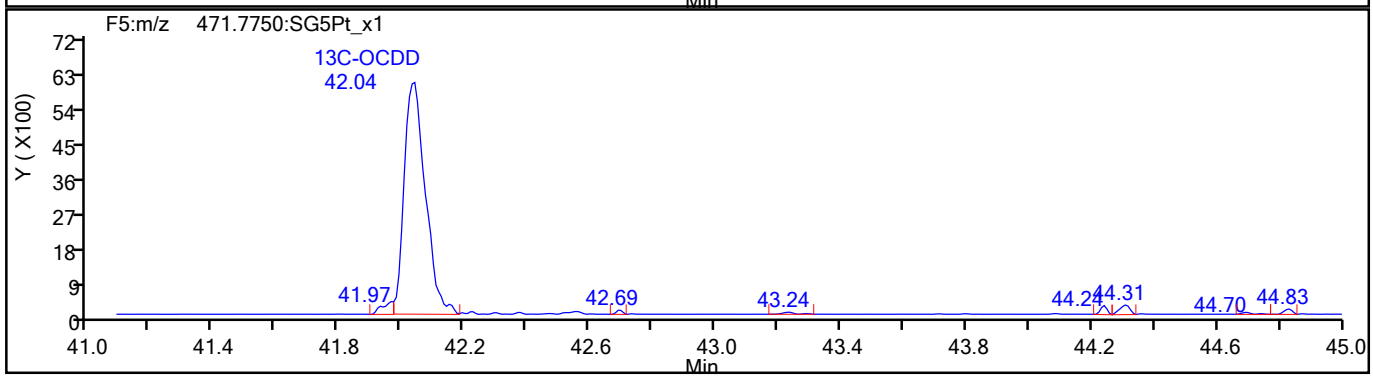

787940

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

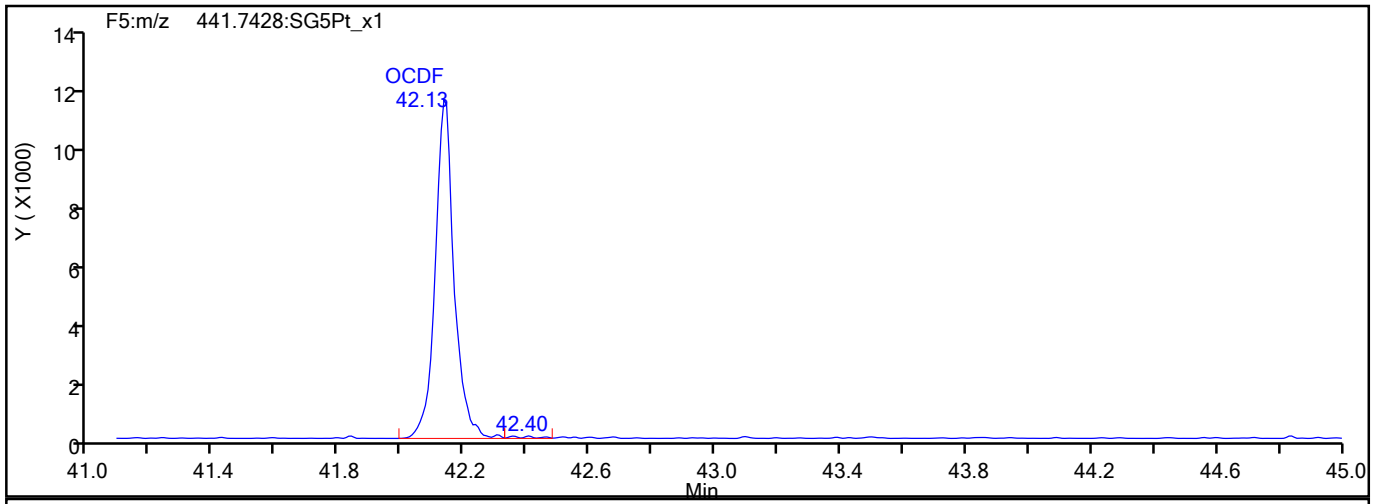

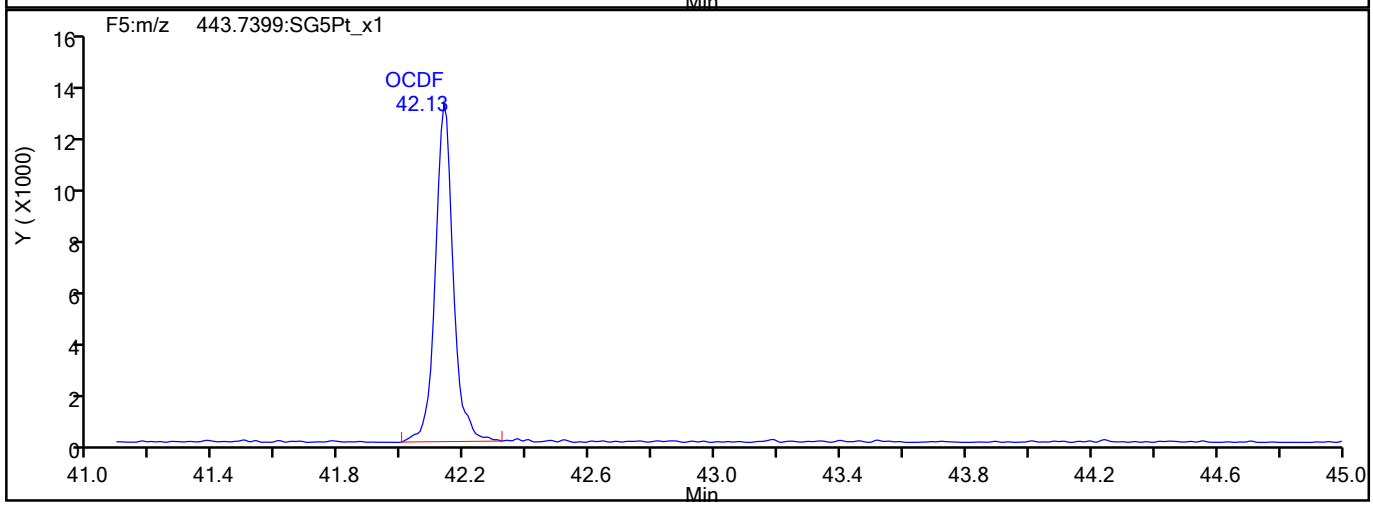

OCDF Interference Mass

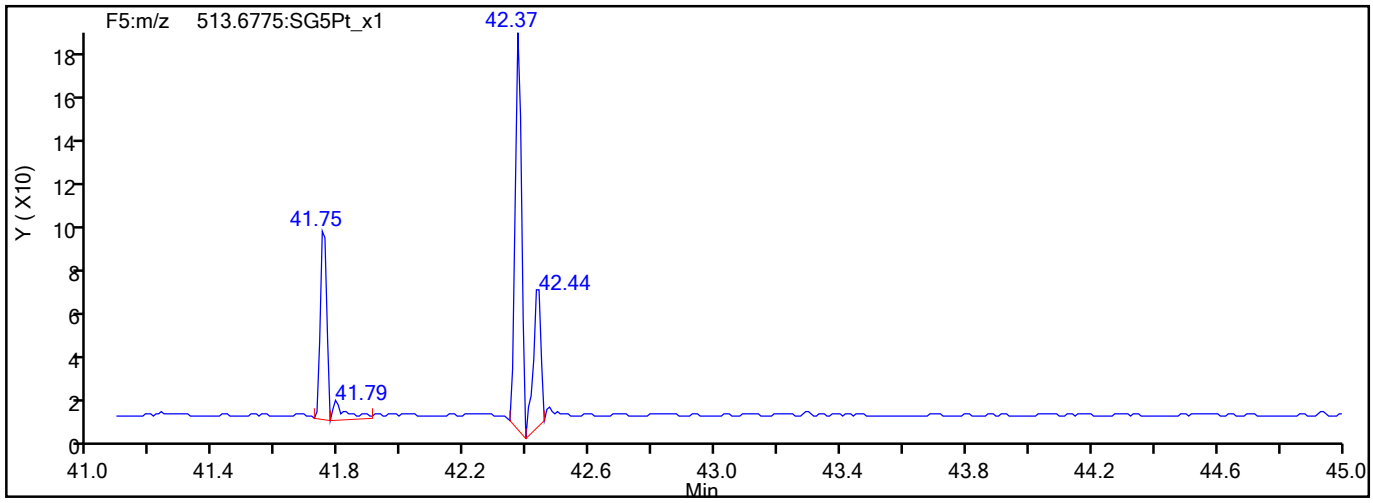

787941

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

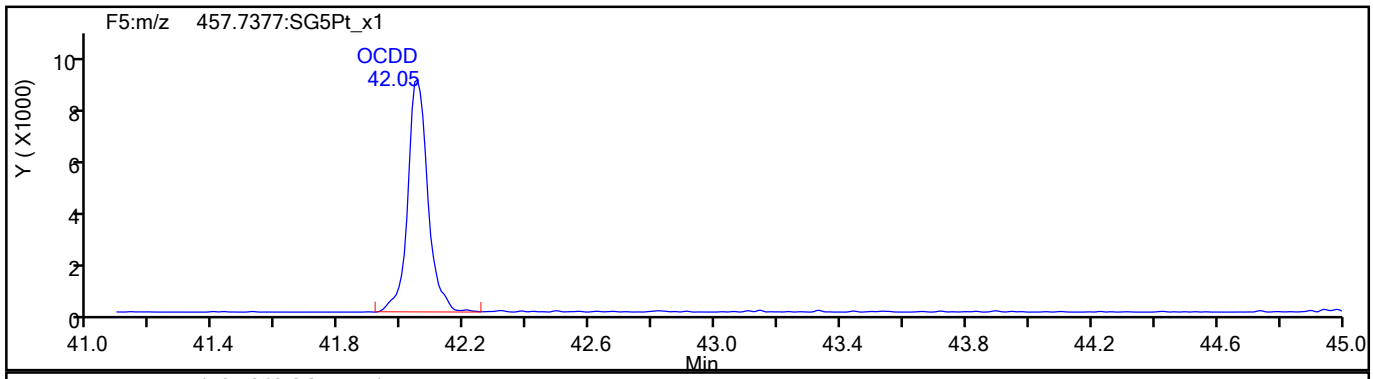

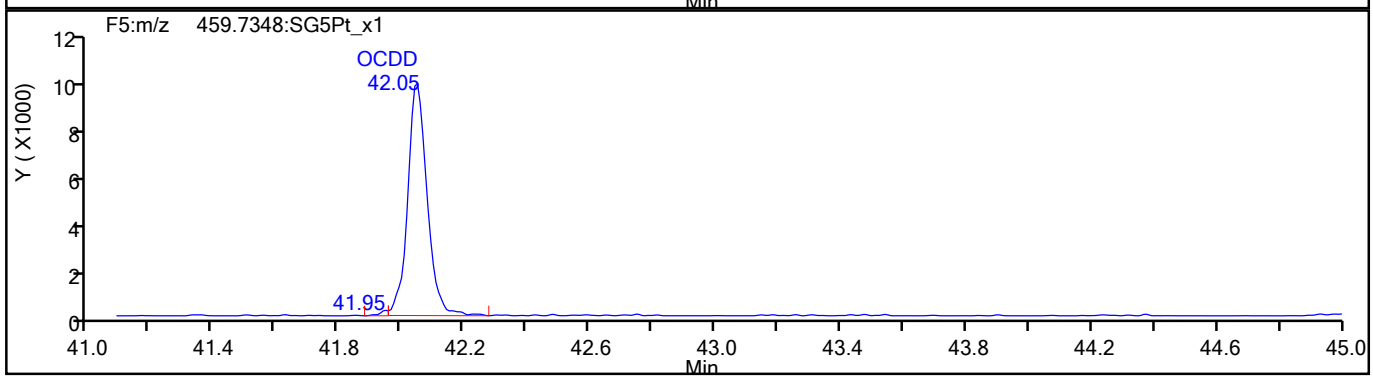

OCDD Standards

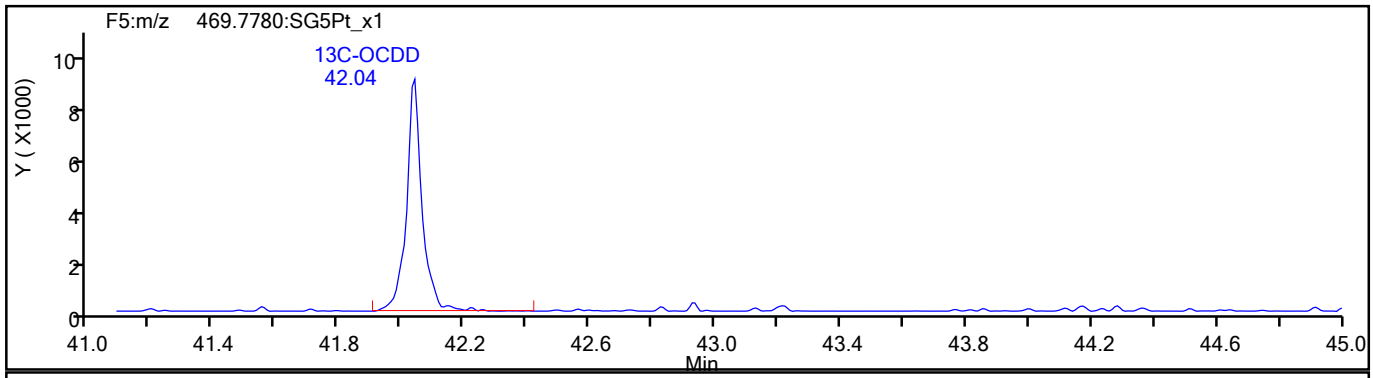

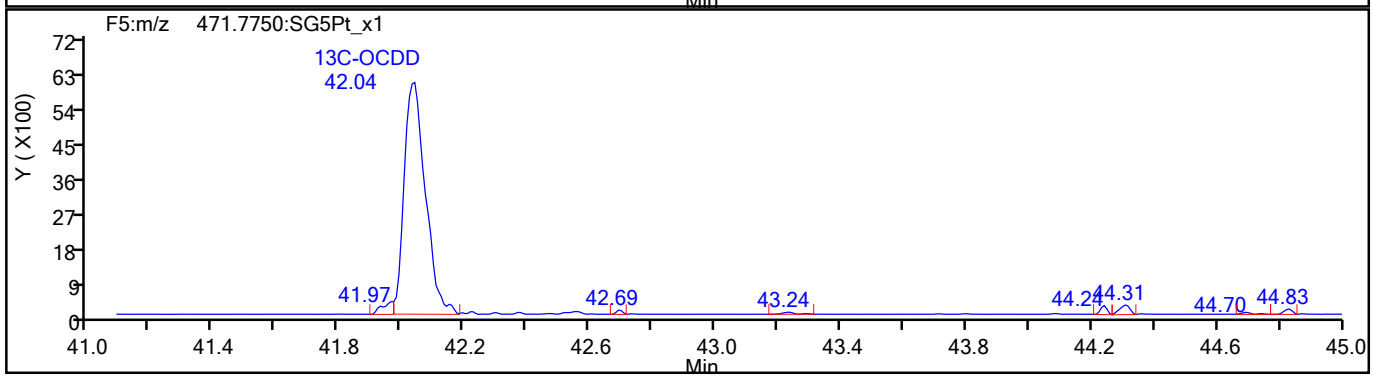

787942

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

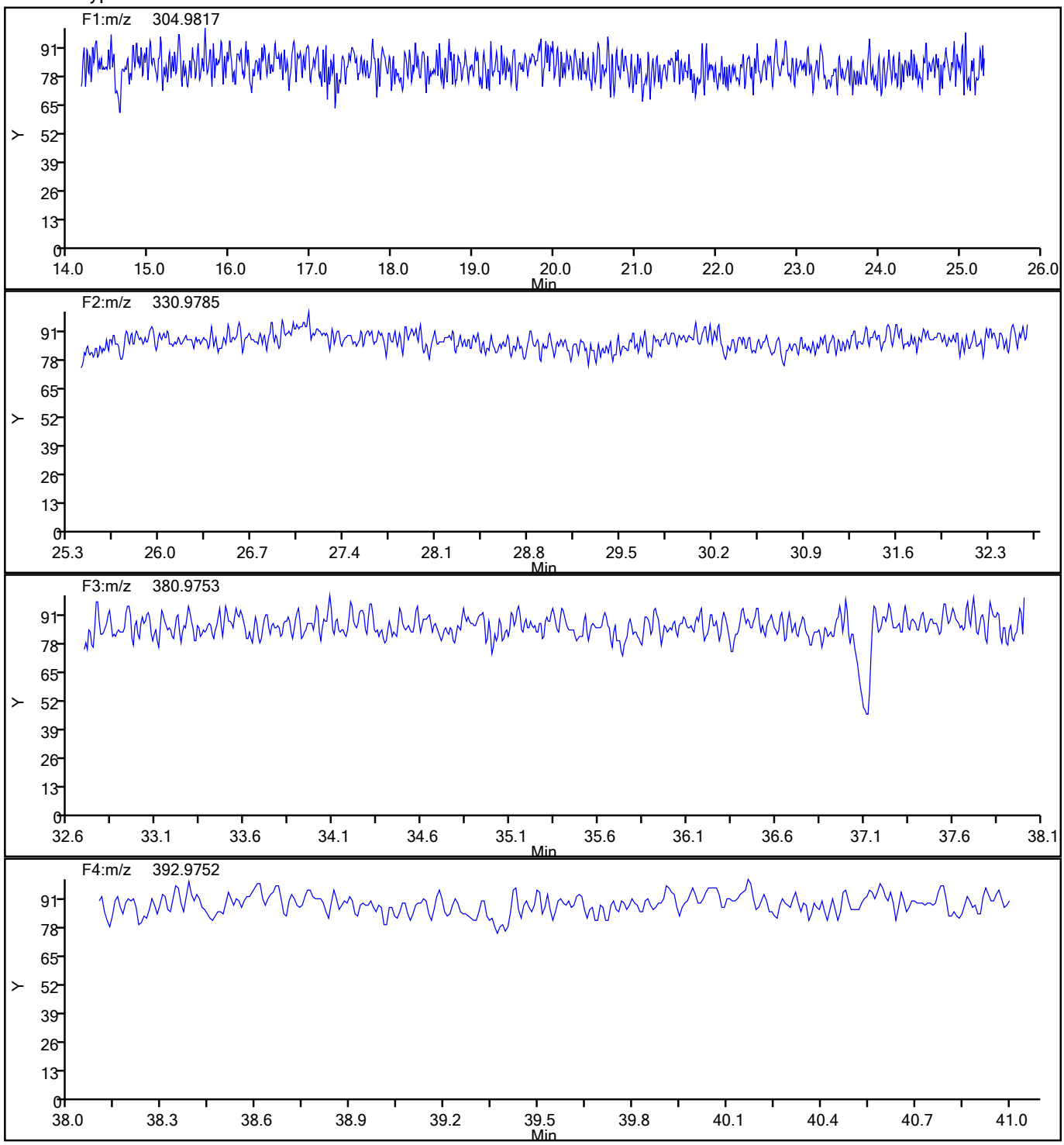

787943

Report Date: 25-Aug-2021 15:07:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_23.d		
Injection Date:	20-Aug-2021 06:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	518043	Sample Line#:	21
Column Type:	DB-5	Column Dia:	0.32 mm

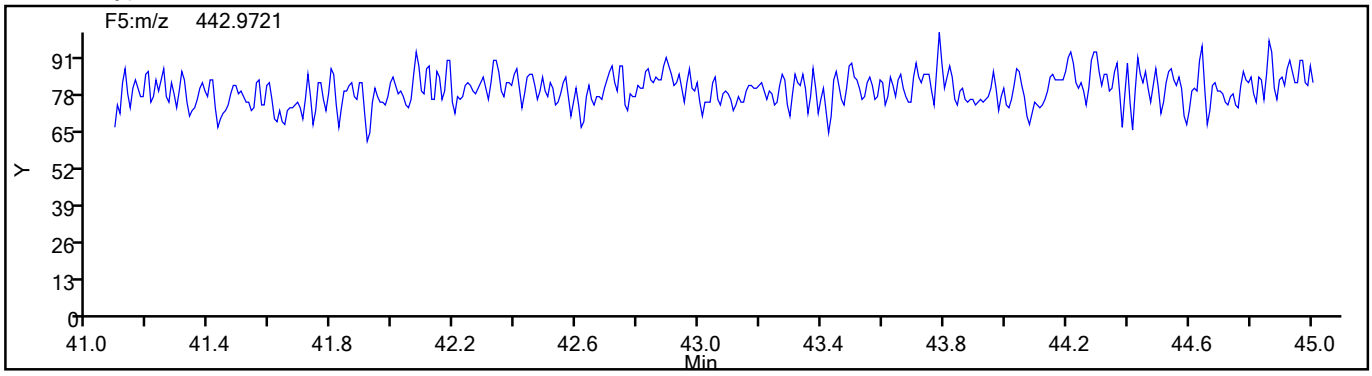

787944

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76888-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76888-A-1-C MSD RA
Matrix: Sediment
Lab File ID: 25AU2111D2_006.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.36(g)
Date Analyzed: 08/25/2021 12:07
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 46.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519650
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	127000		110	110

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	23	*5-	24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	61		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d
Lims ID: 320-76888-A-1-C MSD
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MSD
Inject. Date: 25-Aug-2021 12:07:01 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-C MSD X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:20:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.341	8547708	0.82	7.2E+05	10.0	10.0				M
D 13C-2,3,7,8-TCDF	17.657	2639901	0.66	1.3327	2.317	2.317	1.261	1.261	23.17	M
2,3,7,8-TCDF	17.671	931284861	0.79	0.9978	3535.5	3535.5	3.082	3.082	3.5E+005	Ea
D 13C-2,3,7,8-TCDD	16.094	2719216	0.78	0.8749	3.636	3.636	9.357	9.357	36.36	nM
2,3,7,8-TCDD	16.121	148296810	0.79	1.0570	516.0	516.0	2.909	2.909	51596	Ea
$ 37Cl4-2,3,7,8-TCDD	16.107	1809354		0.8648	2.448	2.448	1.570	1.570	61.19	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d
Lims ID: 320-76888-A-1-C MSD
Client ID: 11215702-072621-BN-SJSB094 (0-2)
Sample Type: MSD
Inject. Date: 25-Aug-2021 12:07:01 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76888-A-1-C MSD X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 13:23:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1657

First Level Reviewer: bennettd Date: 25-Aug-2021 13:20:59

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.341	16.285	3		3856388	730206	258415	646037	3		M
333.9339	16.341	16.285	3		4691320	1004175	309553	773882	3	0.82(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.657	17.601	3	1.081	1052419	236656	55121	137802	4		M
317.9389	17.657	17.601	3	1.081	1587482	327976	61453	153632	5	0.66(0.65-0.89)	M
2,3,7,8-TCDF											Ea
303.9016	17.671	17.629	3	1.001	411435531	74175810	31598	78995	2347		a
305.8987	17.671	17.629	3	1.001	519849330	94085549	37866	94665	2485	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.094	16.051	3	0.985	1189415	205031	258415	646037	1		M
333.9339	16.107	16.051	3	0.986	1529801	283888	309553	773882	1	0.78(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.121	16.079	3	1.002	65493228	14816597	35528	88820	417		a
321.8936	16.121	16.079	3	1.002	82803582	18212476	24597	61492	740	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											M
327.8840	16.107	16.079	2	0.986	1809354	314916	94219	235547	3		M

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d				
Injection Date:	25-Aug-2021 12:07:01	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.79
Area: 5037434
Amount: 11.149494
Amount Units: pg/ul

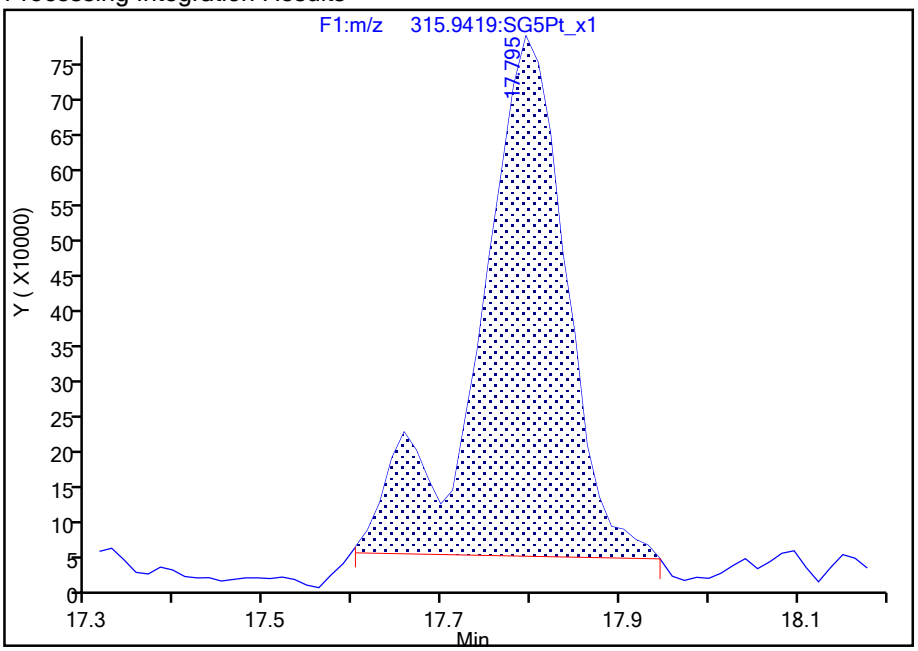

Manual Integration Results

RT: 17.66
Area: 1052419
Amount: 2.317449
Amount Units: pg/ul

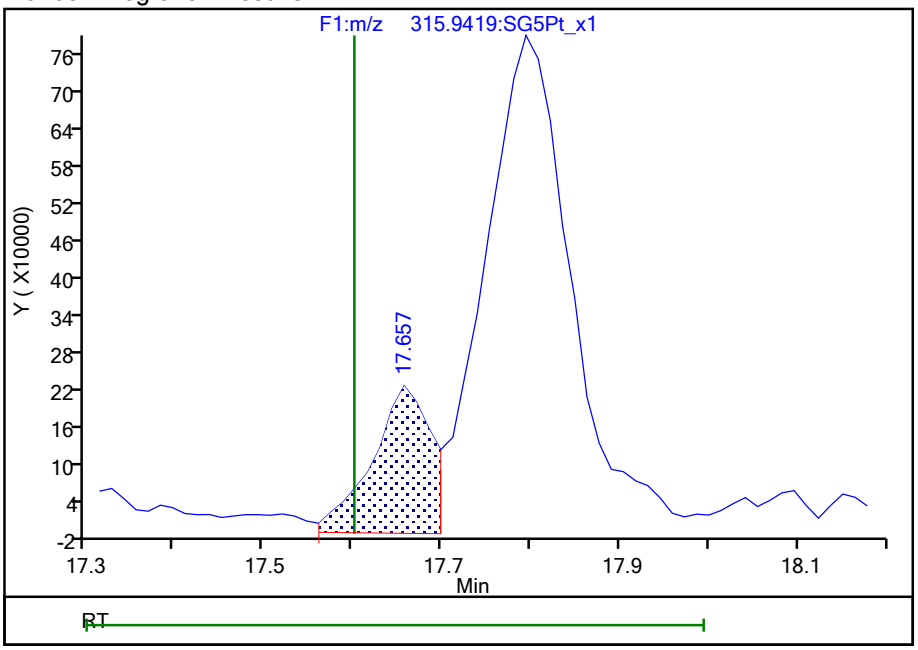

Reviewer: bennettd, 25-Aug-2021 13:22:23

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

787948

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d				
Injection Date:	25-Aug-2021 12:07:01	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.79
Area: 7663413
Amount: 11.149494
Amount Units: pg/ul

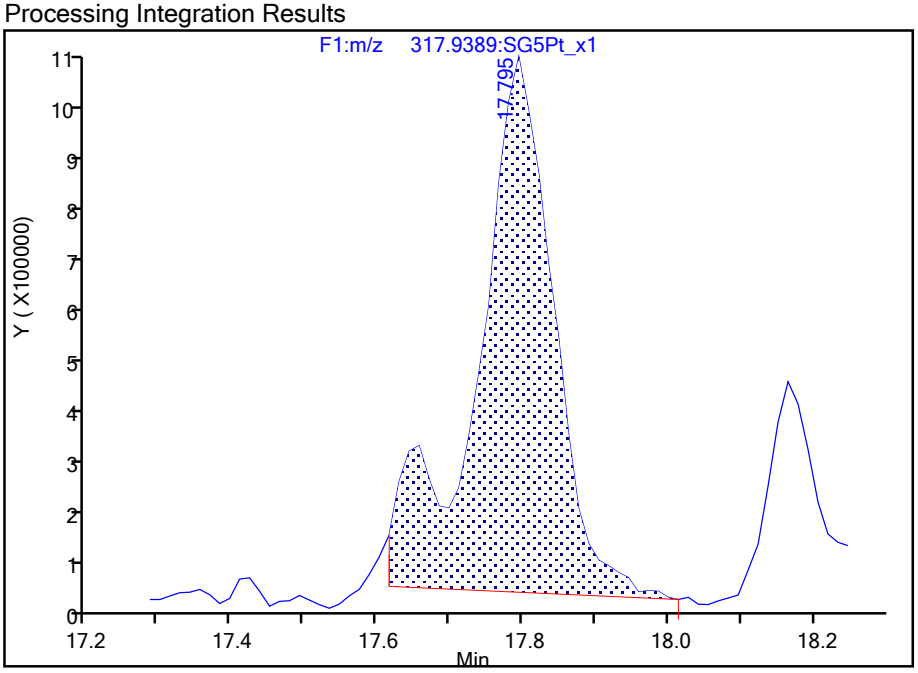

Manual Integration Results

RT: 17.66
Area: 1587482
Amount: 2.317449
Amount Units: pg/ul

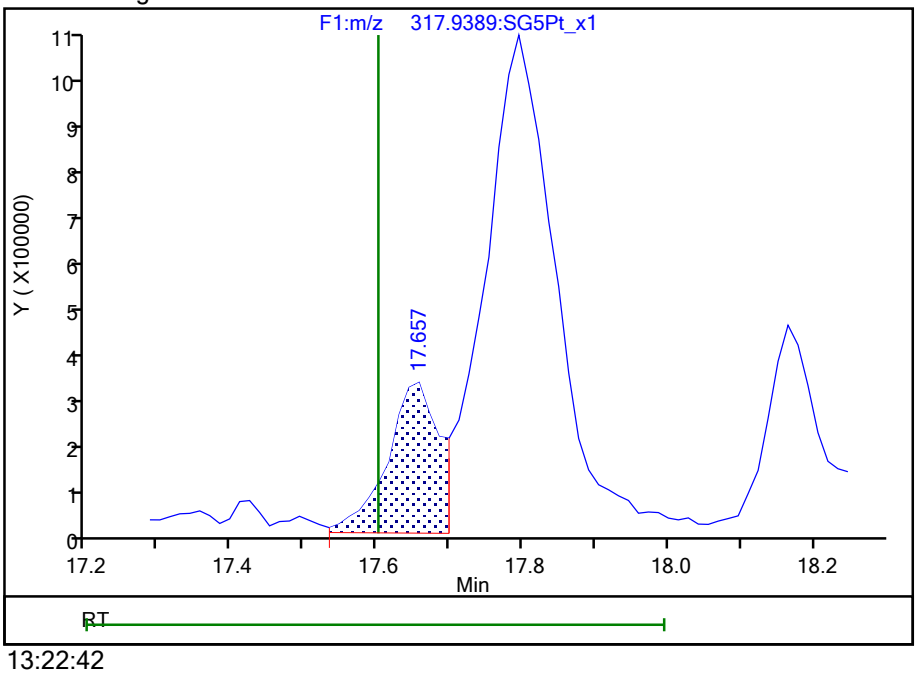

Reviewer: bennettd, 25-Aug-2021 13:22:42

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

787949

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d				
Injection Date:	25-Aug-2021 12:07:01	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.63

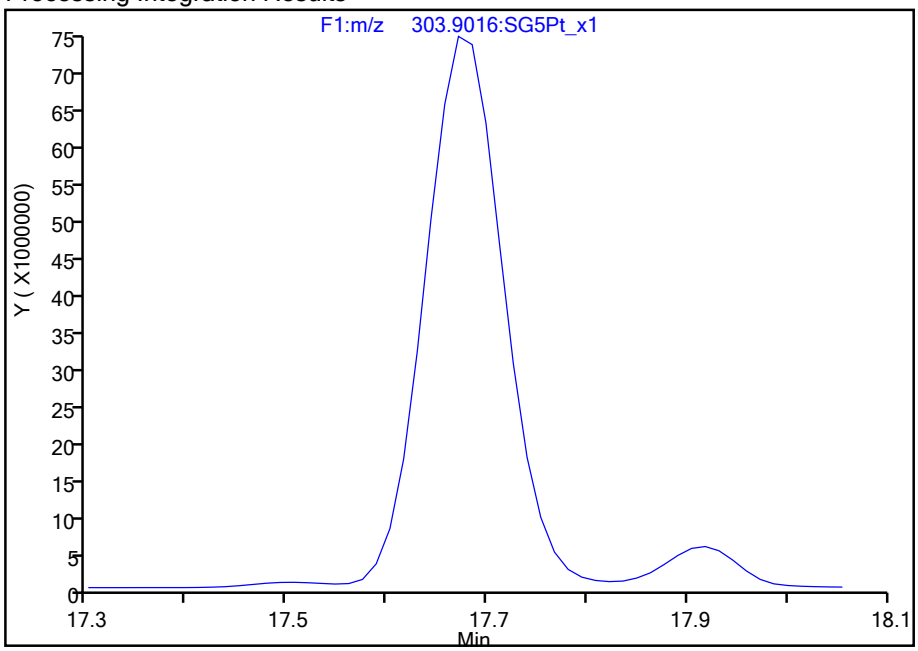

Manual Integration Results

RT: 17.67
Area: 411435531
Amount: 3535.4806
Amount Units: pg/ul

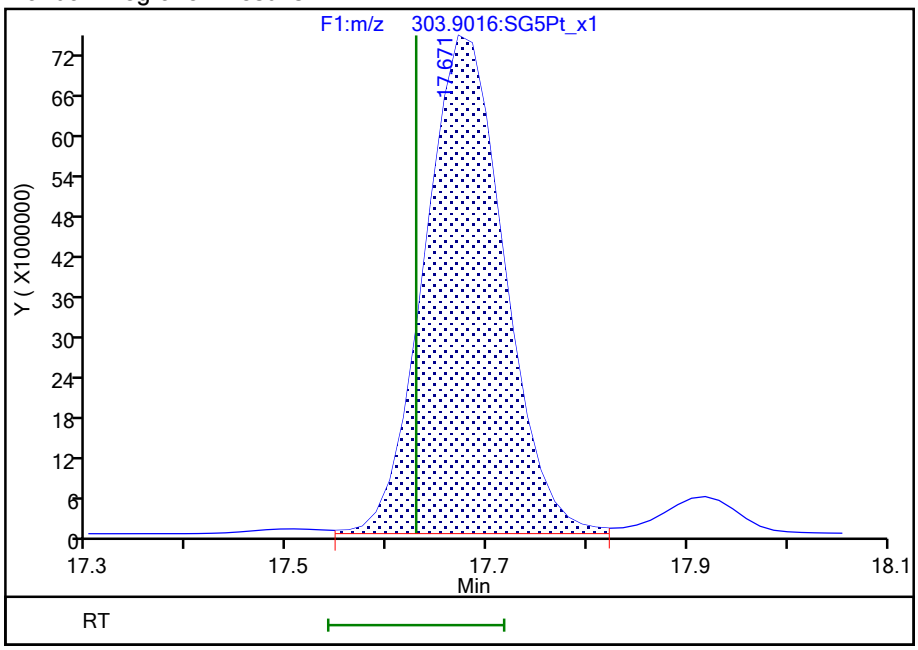

Reviewer: bennettd, 25-Aug-2021 13:22:54
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

787950

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d				
Injection Date:	25-Aug-2021 12:07:01	Instrument ID:	11D2		
Lims ID:	320-76888-A-1-C MSD				
Client ID:	11215702-072621-BN-SJSB094 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

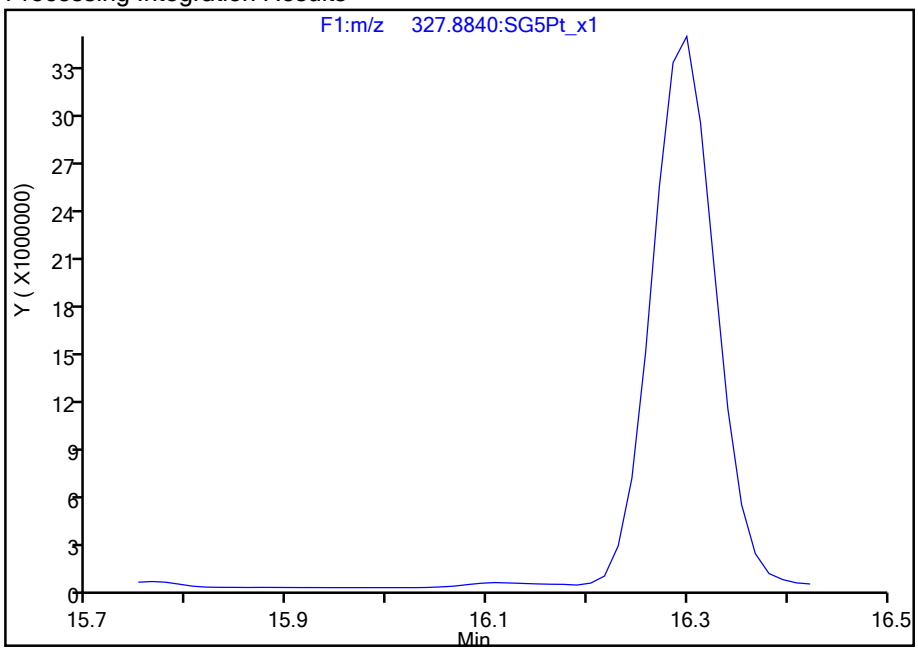

Manual Integration Results

RT: 16.11
Area: 1809354
Amount: 2.447654
Amount Units: pg/ul

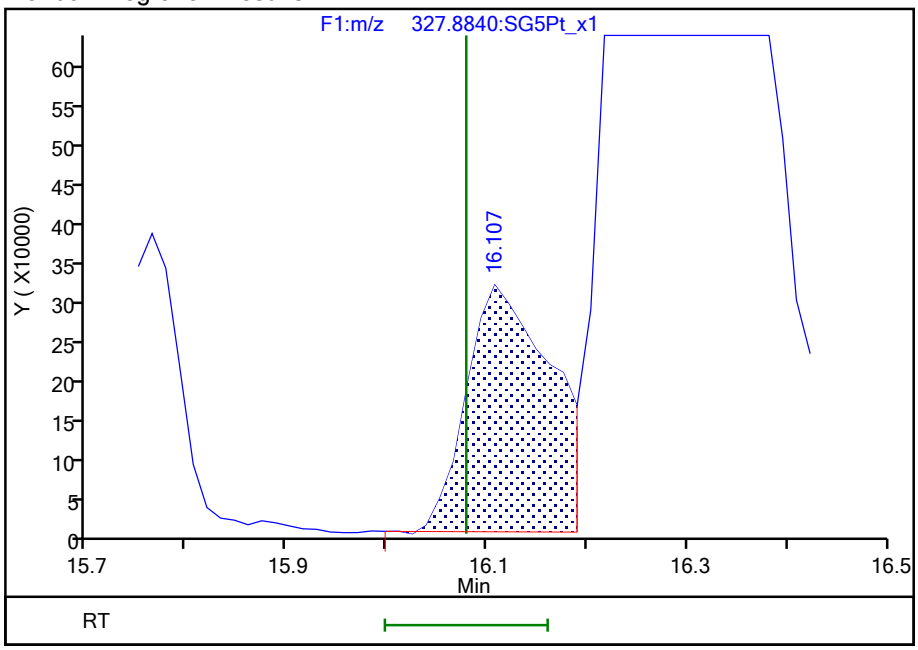

Reviewer: bennettd, 25-Aug-2021 13:21:32
Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

787951

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d		
Injection Date:	25-Aug-2021 12:07:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

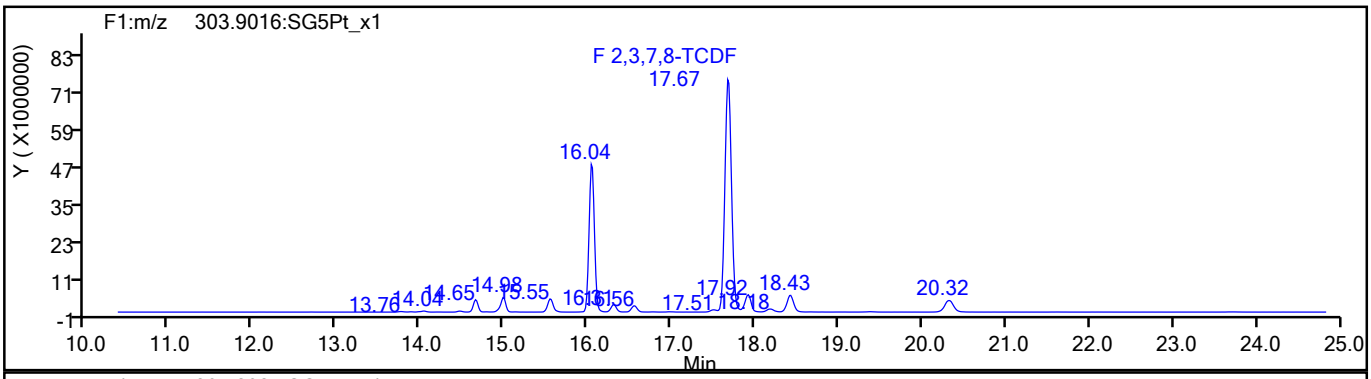

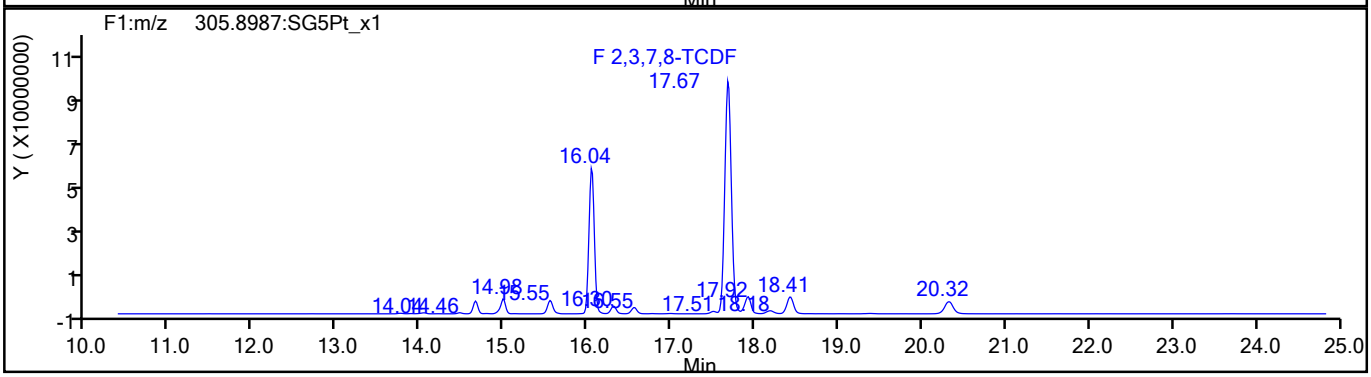

TCDF Standards

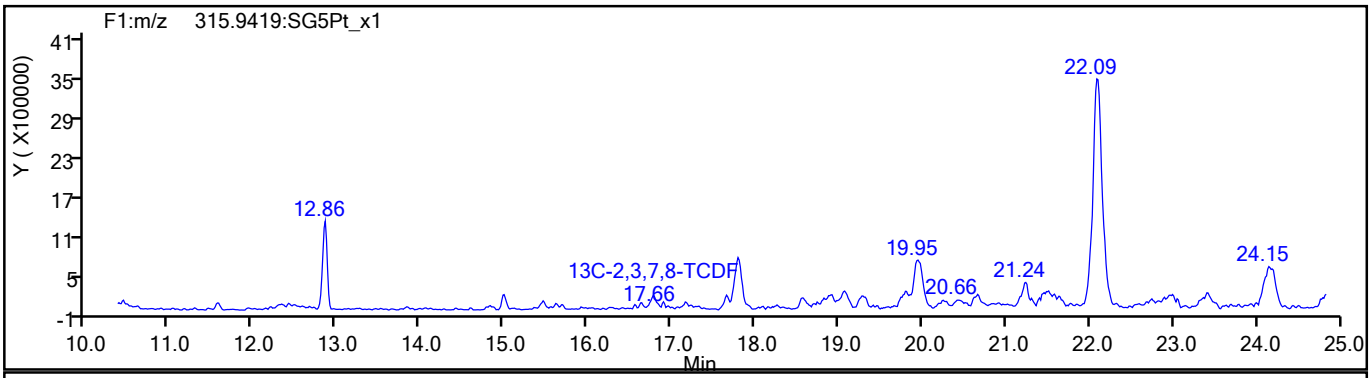

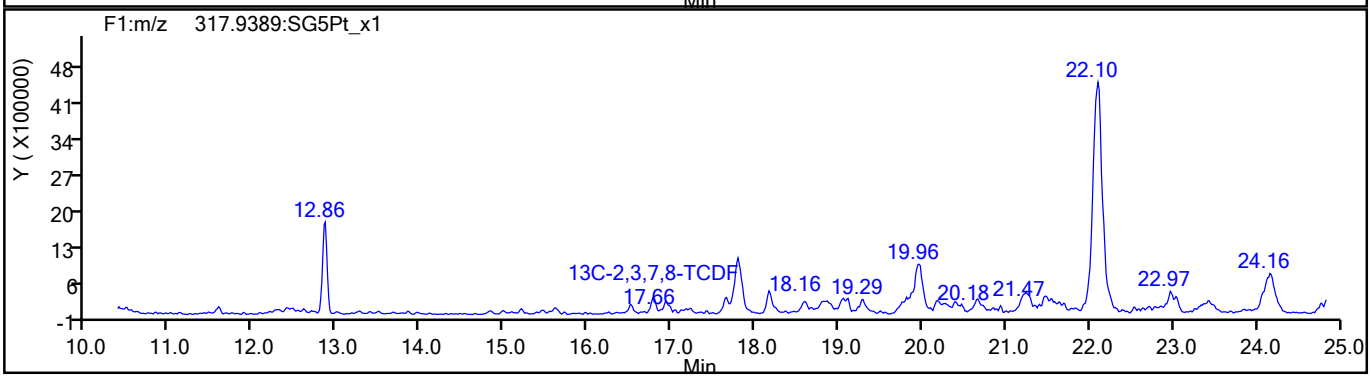

787952

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d		
Injection Date:	25-Aug-2021 12:07:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

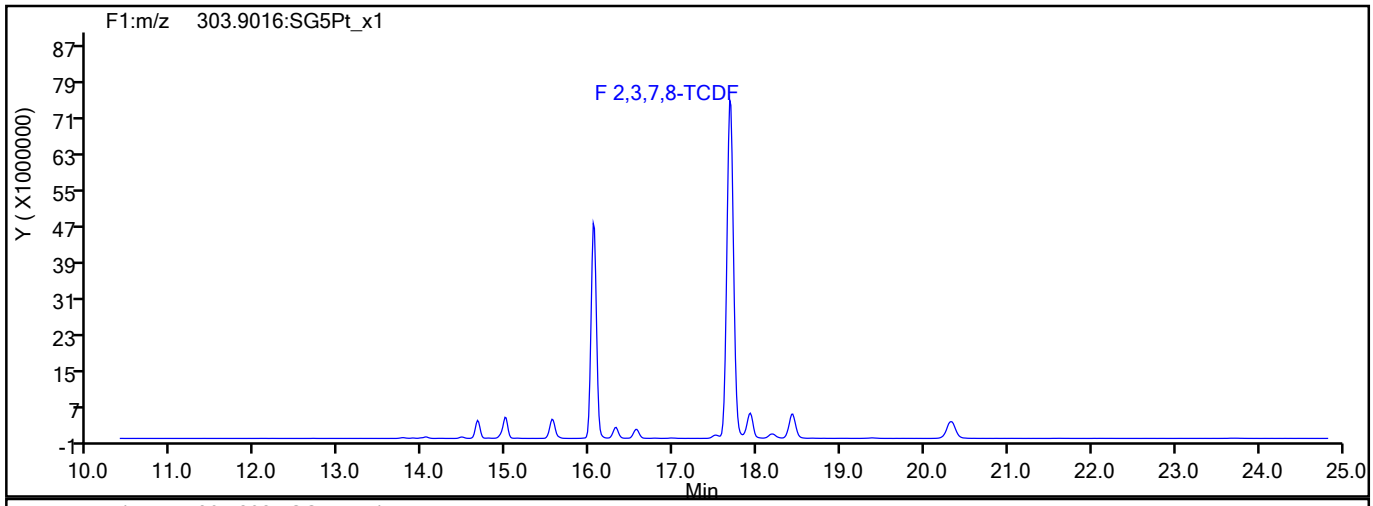

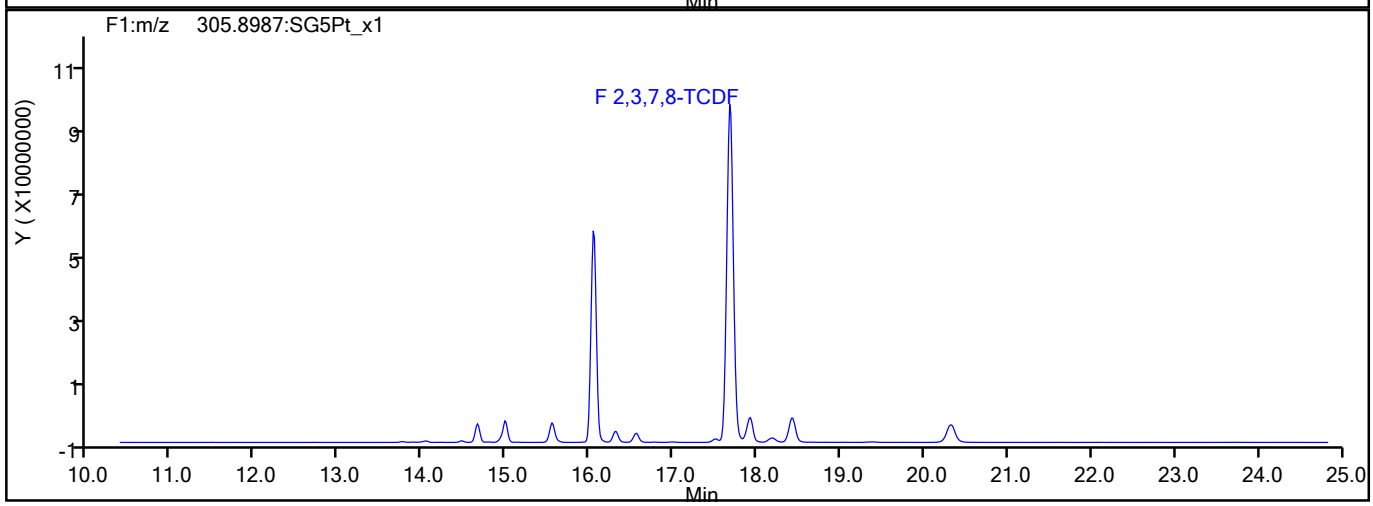

TCDF Interference Mass

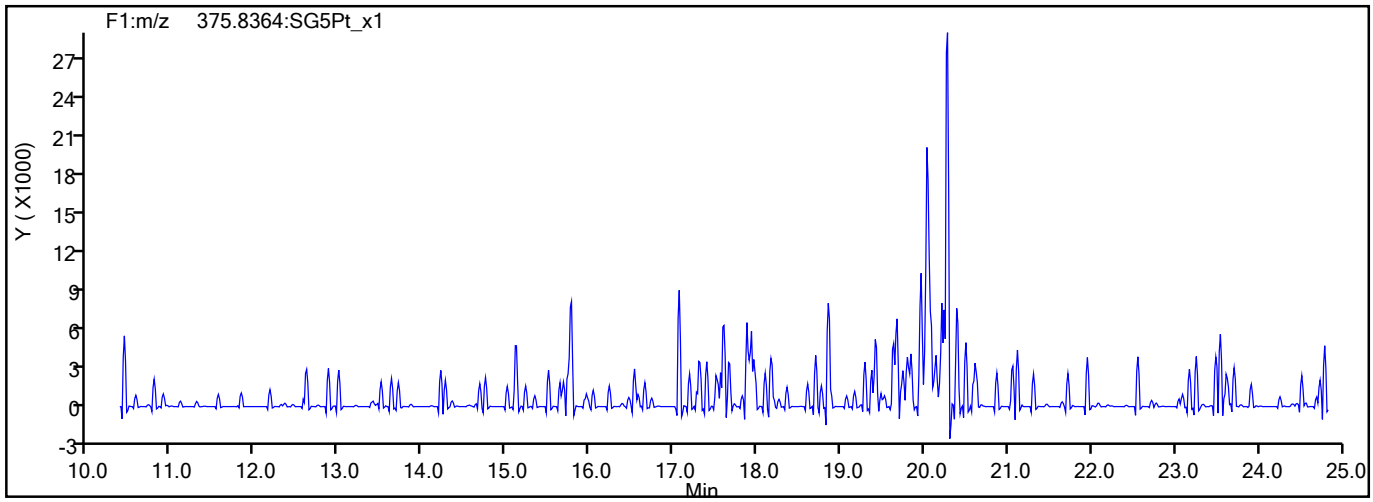

787953

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d		
Injection Date:	25-Aug-2021 12:07:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

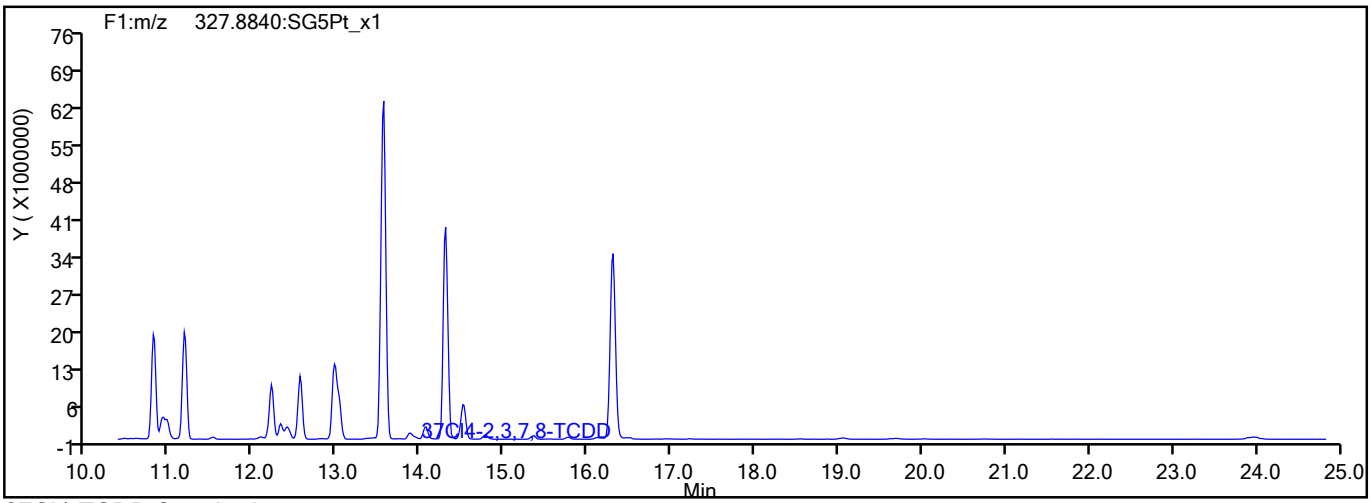

37Cl4-TCDD Standards

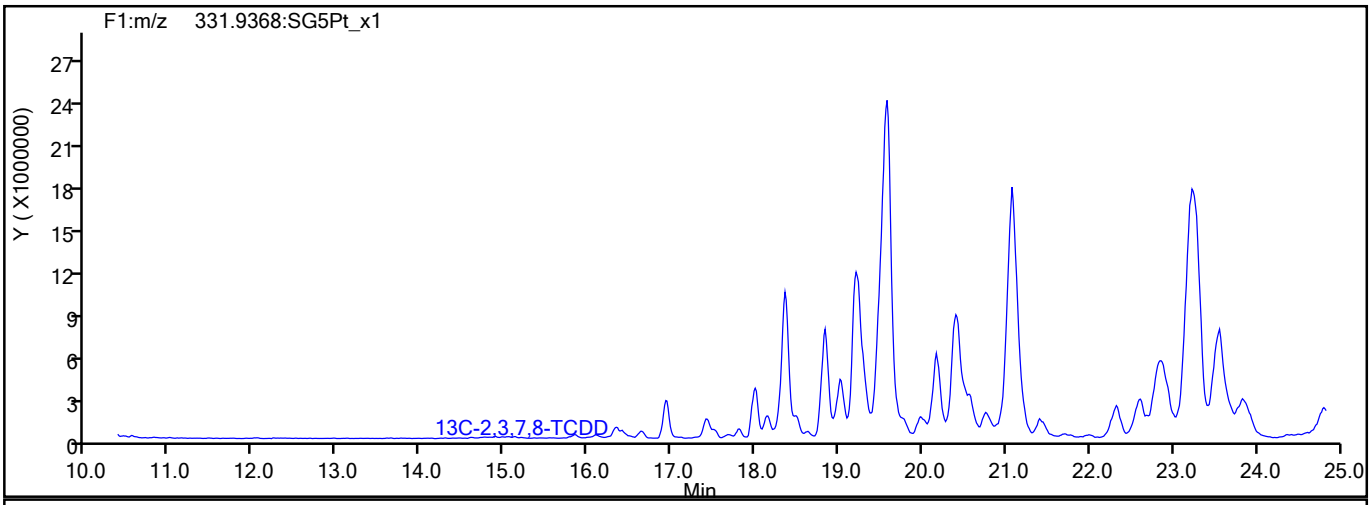

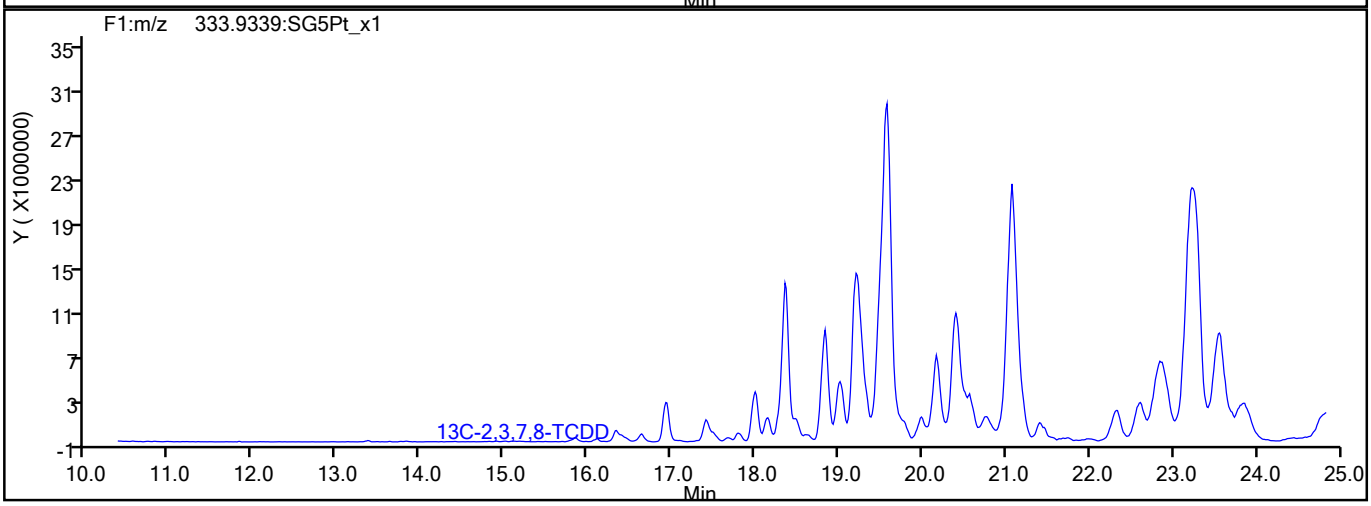

787954

Report Date: 25-Aug-2021 13:23:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210825-125697.b\25AU2111D2_006.d		
Injection Date:	25-Aug-2021 12:07:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072621-BN-SJSB094 (0-2)		
Worklist#:	519650	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

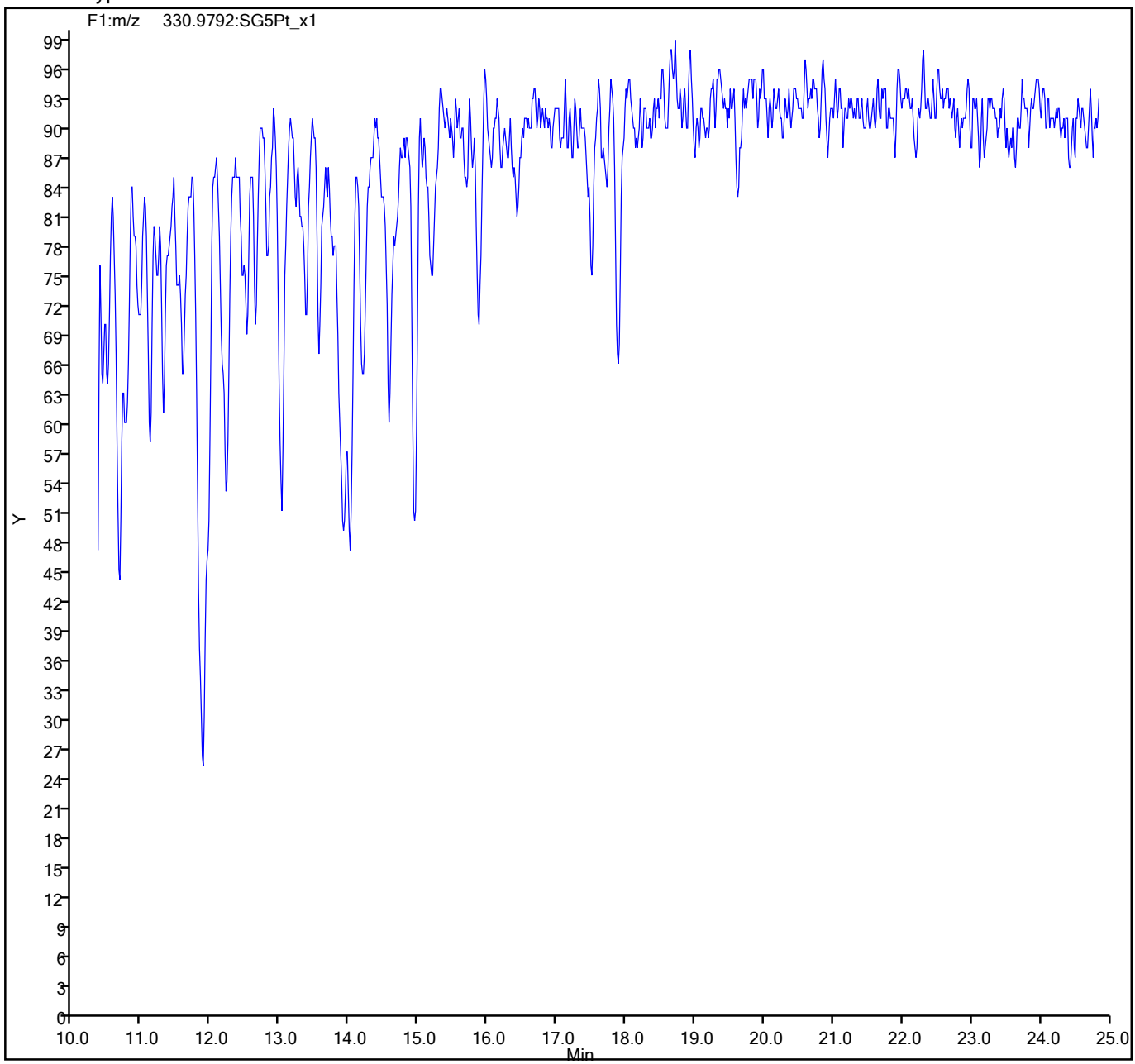

787955

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Instrument ID: DFS 1 Start Date: 06/08/2021 12:40

Analysis Batch Number: 496688 End Date: 06/08/2021 19:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-496688/1		06/08/2021 12:40	1	08jn21adfs1_2.d	DB-5 0.32(mm)
IC 320-496688/3		06/08/2021 14:18	1	08jn21adfs1_4.d	DB-5 0.32(mm)
IC 320-496688/4		06/08/2021 15:06	1	08jn21adfs1_5.d	DB-5 0.32(mm)
IC 320-496688/5		06/08/2021 15:54	1	08jn21adfs1_6.d	DB-5 0.32(mm)
IC 320-496688/6		06/08/2021 16:42	1	08jn21adfs1_7.d	DB-5 0.32(mm)
IC 320-496688/7		06/08/2021 17:30	1	08jn21adfs1_8.d	DB-5 0.32(mm)
ICV 320-496688/9		06/08/2021 19:25	1	08jn21adfs1_11.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Instrument ID: DFS 1 Start Date: 08/19/2021 01:32

Analysis Batch Number: 517462 End Date: 08/19/2021 11:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-517462/43		08/19/2021 01:32	1	17au21dfs1_47.d	DB-5 0.32(mm)
WDM 320-517462/44		08/19/2021 02:19	1	17au21dfs1_48.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 03:55	1		DB-5 0.32(mm)
LCS 320-513879/2-A		08/19/2021 04:43	1	17au21dfs1_51.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 05:30	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 06:18	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 07:06	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 07:54	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 08:42	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 09:30	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 10:18	1		DB-5 0.32(mm)
320-76888-9	11215702-072621-BN-SJ SB094 (16-18)	08/19/2021 11:06	1	17au21dfs1_59.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Instrument ID: DFS 1 Start Date: 08/19/2021 13:59

Analysis Batch Number: 517891 End Date: 08/19/2021 23:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-517891/1		08/19/2021 13:59	1	19au21dfs1_2.d	DB-5 0.32(mm)
CCV 320-517891/2		08/19/2021 14:46	1	19au21dfs1_3.d	DB-5 0.32(mm)
MB 320-513879/1-A		08/19/2021 16:27	1	19au21dfs1_5.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 17:15	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 18:03	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 18:51	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 19:39	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 20:27	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 21:15	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 22:02	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 22:50	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 23:38	1		DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Instrument ID: DFS 1 Start Date: 08/20/2021 01:34

Analysis Batch Number: 518043 End Date: 08/20/2021 09:32

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-518043/15		08/20/2021 01:34	1	19au21dfs1_17.d	DB-5 0.32(mm)
WDM 320-518043/16		08/20/2021 02:21	1	19au21dfs1_18.d	DB-5 0.32(mm)
ZZZZZ		08/20/2021 03:09	1		DB-5 0.32(mm)
ZZZZZ		08/20/2021 03:57	5		DB-5 0.32(mm)
ZZZZZ		08/20/2021 04:45	10		DB-5 0.32(mm)
320-76888-A-1-B MS		08/20/2021 05:33	10	19au21dfs1_22.d	DB-5 0.32(mm)
320-76888-A-1-C MSD		08/20/2021 06:21	10	19au21dfs1_23.d	DB-5 0.32(mm)
ZZZZZ		08/20/2021 07:09	10		DB-5 0.32(mm)
ZZZZZ		08/20/2021 07:57	10		DB-5 0.32(mm)
ZZZZZ		08/20/2021 08:44	10		DB-5 0.32(mm)
ZZZZZ		08/20/2021 09:32	10		DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/23/2021 09:32

Analysis Batch Number: 518958 End Date: 08/23/2021 14:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-518958/1		08/23/2021 09:32	1	23AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-518958/2		08/23/2021 10:10	1	23AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/23/2021 10:48	1		DB-225 0.32(mm)
320-76888-9 RA	11215702-072621-BN-SJ SB094 (16-18) RA	08/23/2021 11:27	1	23AU2111D2_004.d	DB-225 0.32(mm)
ZZZZZ		08/23/2021 12:05	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 12:43	1		DB-225 0.32(mm)
ZZZZZ		08/23/2021 13:22	5		DB-225 0.32(mm)
ZZZZZ		08/23/2021 14:00	5		DB-225 0.32(mm)
ZZZZZ		08/23/2021 14:38	5		DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/24/2021 08:28

Analysis Batch Number: 519438 End Date: 08/24/2021 15:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-519438/1		08/24/2021 08:28	1	24AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-519438/2		08/24/2021 09:07	1	24AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/24/2021 09:45	1		DB-225 0.32(mm)
MB 320-513879/1-A		08/24/2021 10:23	1	24AU2111D2_004.d	DB-225 0.32(mm)
ZZZZZ		08/24/2021 11:02	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 11:40	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 12:18	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 12:57	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 13:35	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 14:13	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 14:51	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 15:30	1		DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/25/2021 08:48

Analysis Batch Number: 519650 End Date: 08/25/2021 12:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-519650/1		08/25/2021 08:48	1	25AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-519650/2		08/25/2021 09:27	1	25AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/25/2021 10:50	10		DB-225 0.32(mm)
320-76888-A-1-B MS RA		08/25/2021 11:28	10	25AU2111D2_005.d	DB-225 0.32(mm)
320-76888-A-1-C MSD RA		08/25/2021 12:07	10	25AU2111D2_006.d	DB-225 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76888-2

SDG No.:

Batch Number: 513879 Batch Start Date: 08/06/21 12:57 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/14/21 06:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-513879/1		HRMS-Sox, 1613B		10 g	20.0 uL	C,1	66	1	1 mL
LCS 320-513879/2		HRMS-Sox, 1613B		10 g	20.0 uL	2	39	3	1 mL
320-76888-A-1 MS		HRMS-Sox, 1613B	T	10.30 g	20.0 uL	5	40	1	1 mL
320-76888-A-1 MSD		HRMS-Sox, 1613B	T	10.36 g	20.0 uL	6	101	3	1 mL
320-76888-A-9	11215702-072621-BN-SJSB094 (16-18)	HRMS-Sox, 1613B	T	10.51 g	20.0 uL	2	28	3	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-513879/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-513879/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76888-A-1 MS		HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76888-A-1 MSD		HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76888-A-9	11215702-072621-BN-SJSB094 (16-18)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76888-2

SDG No.:

Batch Number: 513879 Batch Start Date: 08/06/21 12:57 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/14/21 06:30

Batch Notes	
20% DCM:Hexane ID	DH28_00193 mL
65% DCM:Hexane ID	DH6535_00546
Acid Silica Gel ID	SA5644_00732
Acid Alumina ID	Acid_Alumina_00019
Balance ID	QA-0
Sulfuric Acid Lot Number	H2SO400152
Hexane ID	Hexane_00285
IFB Clean Up	GLB 8-14-21
Na2SO4 ID	SodiumSulfate_00166
Analyst ID - IDA Reagent Drop	HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	EMG 8/7/21
Analyst ID - IS Reagent Drop	GLB 8-14-21 DB15270 HRDXNIS00137 B 1/4 20uL
Analyst ID - IS Reagent Drop Witness	HK 8-14-21
Analyst ID - SU Reagent Drop	SR 8/13/21 HD05018 HRDXNSU00255 B 4/5 1.0mL
Analyst ID - SU Reagent Drop Witness	TGL 8-13-21
Analyst ID - TA Reagent Drop	DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	EMG 8/7/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/7/21 10:00
Soxhlet/Soxtherm Start	8/7/21 7:00
Storage Box ID	DXN -267
Toluene ID	Toluene_00110

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

787966

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-76888-2

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-072621-BN-SJSB094 (16-18)	320-76888-9

Comments:

787967

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76888-2

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76888-2

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76888-2

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/30/2021 12:30 End Date: 07/30/2021 12:30

Lab Sample Id	D/F	Type	Time	Analytes																								
				% Sol	Moist																							
ZZZZZZ			12:30																									
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320-76888-9	1	T	12:30	X	X																							
ZZZZZZ			12:30																									

Prep Types:
T = Total/NA

FORM XIII-IN

787970

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76888-2

SDG No.:

Batch Number: 511708 Batch Start Date: 07/30/21 12:30 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/02/21 09:08

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76888-A-9	11215702-072621-BN-SJSB094 (16-18)	D 2216	T	20	2.00 g	11.04 g	9.19 g	20.4646017699115 %	79.5353982300885 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	08/02/2021 08:37
Date and Time Samples out of Desiccator	08/02/2021 09:08
Date samples were placed in the oven	07/30/2021
Oven Temp In	114 Degrees C
Time samples were place in the oven	12:30
Date samples were removed from oven	08/02/2021
Oven Temp Out	113 Degrees C
Time Samples were removed from oven	08:37
Oven ID	Soil Prep #2
Thermometer ID	151969607

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-76888-2

Batch: 511708
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76888-A-9

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	20.4646017699115	%
Percent Solids	None	1	79.5353982300885	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P
1.00	1.00	200.00	200.00	8/1/2021	DM	WT-3	P
1.00	1.00	200.00	200.00	08/02/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

787975

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins

Client Information
Client Contact: Janie Smith
Company: GHD Services Inc.
Address: 5551 Corporate Boulevard Suite 200
City: Baton Rouge
State, Zip: LA, 70808
Phone: 225-292-9007(Tel)
Email: janie.smith@ghd.com
Project Name: SJRWP Supplemental Design Investigation
Site: San Jacinto Waste Pits

Sampler: Breanna North
Phone: 501-454-9966
Due Date Requested:
TAT Requested (days): 15 business days
PO #: Purchase Order Requested
WO #:
Project #: 11215702
SSOW#: 11215702 - 2021 - 001

Lab PM: Karen Dahl
E-Mail:
Carrier Tracking No(s):
COC No:
Page: 1 of 2
Job #:

Analysis Requested

320-76888 Chain of Custody

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072621-BN-SJSB094 (0-2)	7-26-21	1400	G	S	N	Y	X	X	X	1	MS/MSD
(2-4)		1405			N	N	X	X	X	1	
(4-6)		1410			N	N	X	X	X	1	
(6-8)		1415			N	N	X	X	X	1	
(8-10)		1420			N	N	X	X	X	1	
(10-12)		1425			N	N	X	X	X	1	
(12-14)		1430			N	N	X	X	X	1	
(14-16)		1435			N	N	X	X	X	1	
(16-18)		1440			N	N	X	X	X	1	PRIORITY
(18-20)		1445			N	N	X	X	X	1	HOLD
(20-22)		1450			N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: fedex

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Breanna North	7-27-21 1500	GHD	[illegible]	7/29/21 945	[illegible]
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 0.8°C

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

eurofins

Chain of Custody Record

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 2 of 2
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072621-BN-SJSB094(22-24)	7-26-21	1455	G	S	N	N	X	X	X		HOLD
11215702-072621-BN-DUP-8	7-26-21	—	G	S	N	N	X	X	X		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: fed Ex		
Relinquished by: Breanna North	Date/Time: 7-27-21 1500	Company: GHD	Received by:	Date/Time: 7/29/21 945	Company: EMAS
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.8°C		

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-76888-2

Login Number: 76888
List Number: 1
Creator: Gonzales, Justinn

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Job Number: 320-76901-1

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
9/1/2021 3:42 PM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
09/01/2021

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 320-76901-1
Project/Site: SJRWP Supplemental Design Investigation

Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 7/29/2021 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.5º C.

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

Method 1613B: The concentration of one or more analytes associated with the following sample exceeded the instrument calibration range: 11215702-072821-BN-SJSB095 (0-2) (320-76901-1) & 11215702-072821-BN-SJSB095 (8-10) (320-76901-5). These analytes have been qualified with an 'E' flag; however, the peak(s) did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Method 1613B: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the estimated detection limit (EDL): 11215702-072821-BN-SJSB095 (0-2) (320-76901-1), 11215702-072821-BN-SJSB095 (2-4) (320-76901-2), 11215702-072821-BN-SJSB095 (8-10) (320-76901-5). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method 1613B: Ion abundance ratios are outside criteria for the Isotope Dilution Analyte (IDA) associated with the following sample: 11215702-072821-BN-SJSB095 (0-2) (320-76901-1). The theoretical area for the IDA was used to quantitate recovery and target concentration.

Method 1613B: The method blank for preparation batch 320-513879 contained 2,3,7,8-TCDF above the reporting limit (RL). As discussed, the associated samples were not re-extracted or re-analyzed. Note: Many of the associated sample results are greater than 10X the amount present in the method blank.

Method 1613B: The ending resolution check did not print due to instrument error. A manual resolution check was performed more than 12 hours from the previous check without tuning the instrument indicating the Instrument maintained the greater than 10,000 resolution. All samples were analyzed within the 12 hour analytical clock requirement. There is no adverse impact on the data reported.

Method 1613B: The following sample was diluted to mitigate matrix interference and bring the concentration of target analytes to be under the saturation level of the instrument detector: 11215702-072821-BN-SJSB095 (0-2) (320-76901-1). Elevated reporting limits (RLs) are provided.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument DFS 1 exceeded this criteria: 11215702-072821-BN-SJSB095 (0-2) (320-76901-1), 11215702-072821-BN-SJSB095 (4-6) (320-76901-3), 11215702-072821-BN-SJSB095 (6-8) (320-76901-4), 11215702-072821-BN-SJSB095 (8-10) (320-76901-5), 11215702-072821-BN-SJSB095 (10-12) (320-76901-6), 11215702-072821-BN-SJSB095 (12-14) (320-76901-7), 11215702-072821-BN-DUP-10 (320-76901-13), (CCV 320-517891/2), (CCV 320-518043/15) and (MB 320-513879/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: 11215702-072821-BN-SJSB095 (14-16) (320-76901-8) and (CCV 320-521465/2). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (0-2) — Lab Sample ID: 320-76901-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	23000	E G	21	21	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	290		81	7.8	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	2100		81	15	pg/g	10	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	1700		81	15	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	4.8	J	81	1.2	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	2800		81	11	pg/g	10	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	740		81	12	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	40	J	81	12	pg/g	10	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	88	q	81	13	pg/g	10	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	88	B	81	1.2	pg/g	10	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	790	B	81	3.0	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	250		81	3.3	pg/g	10	☼	1613B	Total/NA
OCDD	1400	B	160	3.5	pg/g	10	☼	1613B	Total/NA
OCDF	340	q	160	2.8	pg/g	10	☼	1613B	Total/NA
Total TCDD	25000	q G	21	21	pg/g	10	☼	1613B	Total/NA
Total TCDF	200000	B G	140	140	pg/g	10	☼	1613B	Total/NA
Total PeCDD	290		81	7.8	pg/g	10	☼	1613B	Total/NA
Total PeCDF	6200	q	81	15	pg/g	10	☼	1613B	Total/NA
Total HxCDD	32	J q	81	1.2	pg/g	10	☼	1613B	Total/NA
Total HxCDF	4100	q	81	12	pg/g	10	☼	1613B	Total/NA
Total HpCDD	200	B q	81	1.2	pg/g	10	☼	1613B	Total/NA
Total HpCDF	1200	B	81	3.2	pg/g	10	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	110000	E G	160	160	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072821-BN-SJSB095 (2-4) — Lab Sample ID: 320-76901-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	42		1.4	0.61	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	7.0		6.8	0.36	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	1.6	J q	6.8	0.34	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	60	B	6.8	0.80	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	4.4	J q B	6.8	0.40	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	2.0	J	6.8	0.34	pg/g	1	☼	1613B	Total/NA
OCDD	1700	B	14	2.3	pg/g	1	☼	1613B	Total/NA
OCDF	18	q	14	0.56	pg/g	1	☼	1613B	Total/NA
Total TCDD	42		1.4	0.61	pg/g	1	☼	1613B	Total/NA
Total TCDF	240	G B	1.7	1.7	pg/g	1	☼	1613B	Total/NA
Total PeCDF	2.6	J q	6.8	0.56	pg/g	1	☼	1613B	Total/NA
Total HxCDD	18	q	6.8	0.35	pg/g	1	☼	1613B	Total/NA
Total HxCDF	8.6	q	6.8	0.35	pg/g	1	☼	1613B	Total/NA
Total HpCDD	150	B	6.8	0.80	pg/g	1	☼	1613B	Total/NA
Total HpCDF	8.3	q B	6.8	0.37	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	140	B	1.4	0.43	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072821-BN-SJSB095 (4-6) — Lab Sample ID: 320-76901-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8,9-HxCDD	0.74	J q	6.2	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	12	B	6.2	0.17	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.26	J B q	6.2	0.067	pg/g	1	☼	1613B	Total/NA
OCDD	240	B	12	0.57	pg/g	1	☼	1613B	Total/NA
Total TCDF	19	B q	1.2	0.20	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072821-BN-SJSB095 (4-6) (Continued) Lab Sample ID: 320-76901-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HxCDD	9.1	q	6.2	0.14	pg/g	1	☼	1613B	Total/NA
Total HpCDD	45	B	6.2	0.17	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.26	J B q	6.2	0.067	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	11		1.2	0.16	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072821-BN-SJSB095 (6-8) Lab Sample ID: 320-76901-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1.7		1.2	0.074	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.50	J q	6.0	0.079	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	10	B q	6.0	0.13	pg/g	1	☼	1613B	Total/NA
OCDD	190	B	12	0.30	pg/g	1	☼	1613B	Total/NA
Total TCDD	1.7		1.2	0.074	pg/g	1	☼	1613B	Total/NA
Total TCDF	8.9	B	1.2	0.051	pg/g	1	☼	1613B	Total/NA
Total HxCDD	8.9	q	6.0	0.083	pg/g	1	☼	1613B	Total/NA
Total HpCDD	38	B q	6.0	0.13	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	5.5		1.2	0.20	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072821-BN-SJSB095 (8-10) Lab Sample ID: 320-76901-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	810	E	1.3	1.1	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	9.3		6.4	0.38	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	74		6.4	1.0	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	55		6.4	0.96	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.71	J	6.4	0.16	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.3	J	6.4	0.17	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.7	J	6.4	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	100		6.4	0.50	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	28		6.4	0.53	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	1.3	J q	6.4	0.49	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	3.6	J	6.4	0.52	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	38	B	6.4	0.33	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	33	B	6.4	0.16	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	10		6.4	0.16	pg/g	1	☼	1613B	Total/NA
OCDD	1300	B	13	1.2	pg/g	1	☼	1613B	Total/NA
OCDF	25		13	0.18	pg/g	1	☼	1613B	Total/NA
Total TCDD	880		1.3	1.1	pg/g	1	☼	1613B	Total/NA
Total TCDF	6400	B G	5.8	5.8	pg/g	1	☼	1613B	Total/NA
Total PeCDD	10	q	6.4	0.38	pg/g	1	☼	1613B	Total/NA
Total PeCDF	190	q	6.4	0.98	pg/g	1	☼	1613B	Total/NA
Total HxCDD	20	q	6.4	0.16	pg/g	1	☼	1613B	Total/NA
Total HxCDF	160	q	6.4	0.51	pg/g	1	☼	1613B	Total/NA
Total HpCDD	100	B	6.4	0.33	pg/g	1	☼	1613B	Total/NA
Total HpCDF	50	B	6.4	0.16	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	3500	E G	3.3	3.3	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072821-BN-SJSB095 (10-12) Lab Sample ID: 320-76901-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	40		1.3	0.19	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-072821-BN-SJSB095 (10-12) (Continued) Lab Sample ID: 320-76901-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8-PeCDF	2.9	J	6.4	0.14	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	2.1	J	6.4	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.1	J	6.4	0.096	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	3.8	J	6.4	0.056	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.91	J	6.4	0.058	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.17	J q	6.4	0.056	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.14	J q	6.4	0.055	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	11	B	6.4	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.62	J B	6.4	0.052	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.35	J	6.4	0.047	pg/g	1	☼	1613B	Total/NA
OCDD	200	B	13	0.37	pg/g	1	☼	1613B	Total/NA
Total TCDD	40		1.3	0.19	pg/g	1	☼	1613B	Total/NA
Total TCDF	300	B q	1.3	0.66	pg/g	1	☼	1613B	Total/NA
Total PeCDF	7.0	q	6.4	0.14	pg/g	1	☼	1613B	Total/NA
Total HxCDD	13		6.4	0.10	pg/g	1	☼	1613B	Total/NA
Total HxCDF	5.0	J q	6.4	0.056	pg/g	1	☼	1613B	Total/NA
Total HpCDD	44	B	6.4	0.15	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1.1	J B q	6.4	0.049	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	150	B	1.3	0.43	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072821-BN-SJSB095 (12-14) Lab Sample ID: 320-76901-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	4.1		1.3	0.061	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	6.5	B	6.3	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.29	J B	6.3	0.044	pg/g	1	☼	1613B	Total/NA
OCDD	130	B	13	0.26	pg/g	1	☼	1613B	Total/NA
Total TCDD	4.1		1.3	0.061	pg/g	1	☼	1613B	Total/NA
Total TCDF	25	B q	1.3	0.12	pg/g	1	☼	1613B	Total/NA
Total HxCDD	6.2	J q	6.3	0.057	pg/g	1	☼	1613B	Total/NA
Total HpCDD	25	B	6.3	0.12	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.29	J B	6.3	0.044	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	17		1.3	0.36	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072821-BN-SJSB095 (14-16) Lab Sample ID: 320-76901-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	35		1.3	0.17	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.43	J	6.4	0.081	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	2.7	J	6.4	0.065	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	2.7	J	6.4	0.072	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.33	J q	6.4	0.065	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.20	J q	6.4	0.067	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.78	J	6.4	0.060	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	2.1	J	6.4	0.049	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.64	J	6.4	0.048	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.17	J	6.4	0.031	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.13	J q	6.4	0.034	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	7.7	B	6.4	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.66	J B	6.4	0.045	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.28	J	6.4	0.049	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (14-16) (Continued)

Lab Sample ID: 320-76901-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
OCDD	170	B	13	0.17	pg/g	1	☼	1613B	Total/NA
OCDF	0.70	J	13	0.042	pg/g	1	☼	1613B	Total/NA
Total TCDD	40	q	1.3	0.17	pg/g	1	☼	1613B	Total/NA
Total TCDF	300	B	1.3	0.50	pg/g	1	☼	1613B	Total/NA
Total PeCDD	1.5	J	6.4	0.081	pg/g	1	☼	1613B	Total/NA
Total PeCDF	7.6		6.4	0.069	pg/g	1	☼	1613B	Total/NA
Total HxCDD	9.3	q	6.4	0.064	pg/g	1	☼	1613B	Total/NA
Total HxCDF	3.3	J q	6.4	0.040	pg/g	1	☼	1613B	Total/NA
Total HpCDD	32	B	6.4	0.13	pg/g	1	☼	1613B	Total/NA
Total HpCDF	1.1	J B	6.4	0.047	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	170		1.3	0.47	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-072821-BN-DUP-10

Lab Sample ID: 320-76901-13

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	6.3	q	1.2	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.55	J q	6.0	0.055	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.48	J q	6.0	0.059	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.0	J	6.0	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	1.2	J	6.0	0.043	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.42	J	6.0	0.040	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	11	B	6.0	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.34	J B q	6.0	0.052	pg/g	1	☼	1613B	Total/NA
OCDD	240	B	12	0.29	pg/g	1	☼	1613B	Total/NA
OCDF	0.61	J	12	0.12	pg/g	1	☼	1613B	Total/NA
Total TCDD	6.3	q	1.2	0.14	pg/g	1	☼	1613B	Total/NA
Total TCDF	49	B	1.2	0.23	pg/g	1	☼	1613B	Total/NA
Total PeCDD	0.90	J	6.0	0.13	pg/g	1	☼	1613B	Total/NA
Total PeCDF	1.0	J q	6.0	0.057	pg/g	1	☼	1613B	Total/NA
Total HxCDD	11		6.0	0.14	pg/g	1	☼	1613B	Total/NA
Total HxCDF	1.6	J	6.0	0.040	pg/g	1	☼	1613B	Total/NA
Total HpCDD	44	B	6.0	0.14	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.34	J B q	6.0	0.053	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	27	B	1.2	0.19	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (0-2)

Lab Sample ID: 320-76901-1
Date Collected: 07/28/21 11:00
Matrix: Sediment
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	43.2		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	56.8		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072821-BN-SJSB095 (0-2)

Lab Sample ID: 320-76901-1
Date Collected: 07/28/21 11:00
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 56.8

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	23000	E G	21	21	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
1,2,3,7,8-PeCDD	290		81	7.8	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
1,2,3,7,8-PeCDF	2100		81	15	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
2,3,4,7,8-PeCDF	1700		81	15	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
1,2,3,4,7,8-HxCDD	ND		81	1.2	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
1,2,3,6,7,8-HxCDD	ND		81	1.3	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
1,2,3,7,8,9-HxCDD	4.8	J	81	1.2	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
1,2,3,4,7,8-HxCDF	2800		81	11	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
1,2,3,6,7,8-HxCDF	740		81	12	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
1,2,3,7,8,9-HxCDF	40	J	81	12	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
2,3,4,6,7,8-HxCDF	88	q	81	13	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
1,2,3,4,6,7,8-HpCDD	88	B	81	1.2	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
1,2,3,4,6,7,8-HpCDF	790	B	81	3.0	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
1,2,3,4,7,8,9-HpCDF	250		81	3.3	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
OCDD	1400	B	160	3.5	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
OCDF	340	q	160	2.8	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
Total TCDD	25000	q G	21	21	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
Total TCDF	200000	B G	140	140	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
Total PeCDD	290		81	7.8	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
Total PeCDF	6200	q	81	15	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
Total HxCDD	32	J q	81	1.2	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
Total HxCDF	4100	q	81	12	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
Total HpCDD	200	B q	81	1.2	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10
Total HpCDF	1200	B	81	3.2	pg/g	☼	08/06/21 12:58	08/20/21 08:44	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*33*		*25 - 164*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-2,3,7,8-TCDF	*34*		*24 - 169*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-1,2,3,7,8-PeCDD	*29*		*25 - 181*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-1,2,3,7,8-PeCDF	*33*		*24 - 185*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-2,3,4,7,8-PeCDF	*36*		*21 - 178*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-1,2,3,4,7,8-HxCDD	*36*		*32 - 141*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-1,2,3,6,7,8-HxCDD	*33*		*28 - 130*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-1,2,3,4,7,8-HxCDF	*43*		*26 - 152*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-1,2,3,6,7,8-HxCDF	*37*		*26 - 123*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-1,2,3,7,8,9-HxCDF	*32*		*29 - 147*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-2,3,4,6,7,8-HxCDF	*34*		*28 - 136*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-1,2,3,4,6,7,8-HpCDD	*33*	*q*	*23 - 140*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-1,2,3,4,6,7,8-HpCDF	*36*		*28 - 143*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-1,2,3,4,7,8,9-HpCDF	*39*		*26 - 138*	*08/06/21 12:58*	*08/20/21 08:44*	*10*
13C-OCDD	*37*		*17 - 157*	*08/06/21 12:58*	*08/20/21 08:44*	*10*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (0-2)

Lab Sample ID: 320-76901-1
Date Collected: 07/28/21 11:00
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 56.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	68		35 - 197	08/06/21 12:58	08/20/21 08:44	10

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	110000	E G	160	160	pg/g	☼	08/06/21 12:58	08/28/21 02:30	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	31		24 - 169	08/06/21 12:58	08/28/21 02:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	68		35 - 197	08/06/21 12:58	08/28/21 02:30	1

Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)

Lab Sample ID: 320-76901-2
Date Collected: 07/28/21 11:05
Matrix: Sediment
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27.3		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	72.7		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)

Lab Sample ID: 320-76901-2
Date Collected: 07/28/21 11:05
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 72.7

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	42		1.4	0.61	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
1,2,3,7,8-PeCDD	ND		6.8	0.50	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
1,2,3,7,8-PeCDF	ND		6.8	0.54	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
2,3,4,7,8-PeCDF	ND		6.8	0.57	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
1,2,3,4,7,8-HxCDD	ND		6.8	0.33	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
1,2,3,6,7,8-HxCDD	ND		6.8	0.40	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
1,2,3,7,8,9-HxCDD	ND		6.8	0.33	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
1,2,3,4,7,8-HxCDF	7.0		6.8	0.36	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
1,2,3,6,7,8-HxCDF	1.6	J q	6.8	0.34	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
1,2,3,7,8,9-HxCDF	ND		6.8	0.36	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
2,3,4,6,7,8-HxCDF	ND		6.8	0.36	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
1,2,3,4,6,7,8-HpCDD	60	B	6.8	0.80	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
1,2,3,4,6,7,8-HpCDF	4.4	J q B	6.8	0.40	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
1,2,3,4,7,8,9-HpCDF	2.0	J	6.8	0.34	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
OCDD	1700	B	14	2.3	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
OCDF	18	q	14	0.56	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
Total TCDD	42		1.4	0.61	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
Total TCDF	240	G B	1.7	1.7	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
Total PeCDD	ND		6.8	1.3	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
Total PeCDF	2.6	J q	6.8	0.56	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
Total HxCDD	18	q	6.8	0.35	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
Total HxCDF	8.6	q	6.8	0.35	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
Total HpCDD	150	B	6.8	0.80	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1
Total HpCDF	8.3	q B	6.8	0.37	pg/g	☼	08/06/21 12:58	08/19/21 05:30	1

Client Sample ID: 11215702-072821-BN-SJSB095 (2-4) Lab Sample ID: 320-76901-2

Date Collected: 07/28/21 11:05 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 72.7**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	47		25 - 164	08/06/21 12:58	08/19/21 05:30	1
13C-2,3,7,8-TCDF	47		24 - 169	08/06/21 12:58	08/19/21 05:30	1
13C-1,2,3,7,8-PeCDD	46		25 - 181	08/06/21 12:58	08/19/21 05:30	1
13C-1,2,3,7,8-PeCDF	43		24 - 185	08/06/21 12:58	08/19/21 05:30	1
13C-2,3,4,7,8-PeCDF	43		21 - 178	08/06/21 12:58	08/19/21 05:30	1
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	08/06/21 12:58	08/19/21 05:30	1
13C-1,2,3,6,7,8-HxCDD	47		28 - 130	08/06/21 12:58	08/19/21 05:30	1
13C-1,2,3,4,7,8-HxCDF	55		26 - 152	08/06/21 12:58	08/19/21 05:30	1
13C-1,2,3,6,7,8-HxCDF	49		26 - 123	08/06/21 12:58	08/19/21 05:30	1
13C-1,2,3,7,8,9-HxCDF	41		29 - 147	08/06/21 12:58	08/19/21 05:30	1
13C-2,3,4,6,7,8-HxCDF	45		28 - 136	08/06/21 12:58	08/19/21 05:30	1
13C-1,2,3,4,6,7,8-HpCDD	53		23 - 140	08/06/21 12:58	08/19/21 05:30	1
13C-1,2,3,4,6,7,8-HpCDF	49		28 - 143	08/06/21 12:58	08/19/21 05:30	1
13C-1,2,3,4,7,8,9-HpCDF	59		26 - 138	08/06/21 12:58	08/19/21 05:30	1
13C-OCDD	56		17 - 157	08/06/21 12:58	08/19/21 05:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	51		35 - 197	08/06/21 12:58	08/19/21 05:30	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**140**	**B**	1.4	0.43	pg/g	☼	08/06/21 12:58	08/27/21 12:13	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	46		24 - 169	08/06/21 12:58	08/27/21 12:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	53		35 - 197	08/06/21 12:58	08/27/21 12:13	1

Client Sample ID: 11215702-072821-BN-SJSB095 (4-6) Lab Sample ID: 320-76901-3

Date Collected: 07/28/21 11:10 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**24.2**		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	**75.8**		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072821-BN-SJSB095 (4-6) Lab Sample ID: 320-76901-3

Date Collected: 07/28/21 11:10 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 75.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.2	0.16	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
1,2,3,7,8-PeCDD	ND		6.2	0.17	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
1,2,3,7,8-PeCDF	ND		6.2	0.078	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
2,3,4,7,8-PeCDF	ND		6.2	0.085	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
1,2,3,4,7,8-HxCDD	ND		6.2	0.13	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
1,2,3,6,7,8-HxCDD	ND		6.2	0.15	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
1,2,3,7,8,9-HxCDD	**0.74**	**J q**	6.2	0.13	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
1,2,3,4,7,8-HxCDF	ND		6.2	0.045	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
1,2,3,6,7,8-HxCDF	ND		6.2	0.044	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (4-6)

Date Collected: 07/28/21 11:10
Date Received: 07/29/21 09:45

Lab Sample ID: 320-76901-3

Matrix: Sediment
Percent Solids: 75.8

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	ND		6.2	0.045	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
2,3,4,6,7,8-HxCDF	ND		6.2	0.041	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
1,2,3,4,6,7,8-HpCDD	**12**	**B**	6.2	0.17	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
1,2,3,4,6,7,8-HpCDF	**0.26**	**J B q**	6.2	0.067	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
1,2,3,4,7,8,9-HpCDF	ND		6.2	0.068	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
OCDD	**240**	**B**	12	0.57	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
OCDF	ND		12	0.17	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
Total TCDD	ND		1.2	0.45	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
Total TCDF	**19**	**B q**	1.2	0.20	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
Total PeCDD	ND		6.2	1.2	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
Total PeCDF	ND		6.2	0.27	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
Total HxCDD	**9.1**	**q**	6.2	0.14	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
Total HxCDF	ND		6.2	0.078	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
Total HpCDD	**45**	**B**	6.2	0.17	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1
Total HpCDF	**0.26**	**J B q**	6.2	0.067	pg/g	☼	08/06/21 12:58	08/19/21 18:03	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*45*		*25 - 164*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-2,3,7,8-TCDF	*44*		*24 - 169*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-1,2,3,7,8-PeCDD	*43*		*25 - 181*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-1,2,3,7,8-PeCDF	*42*		*24 - 185*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-2,3,4,7,8-PeCDF	*47*		*21 - 178*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-1,2,3,4,7,8-HxCDD	*56*		*32 - 141*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-1,2,3,6,7,8-HxCDD	*50*		*28 - 130*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-1,2,3,4,7,8-HxCDF	*59*		*26 - 152*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-1,2,3,6,7,8-HxCDF	*55*		*26 - 123*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-1,2,3,7,8,9-HxCDF	*47*		*29 - 147*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-2,3,4,6,7,8-HxCDF	*53*		*28 - 136*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*54*		*23 - 140*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*54*		*28 - 143*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*55*		*26 - 138*	*08/06/21 12:58*	*08/19/21 18:03*	*1*
13C-OCDD	*49*		*17 - 157*	*08/06/21 12:58*	*08/19/21 18:03*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*55*		*35 - 197*	*08/06/21 12:58*	*08/19/21 18:03*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**11**		1.2	0.16	pg/g	☼	08/06/21 12:58	08/27/21 17:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*48*		*24 - 169*	*08/06/21 12:58*	*08/27/21 17:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*64*		*35 - 197*	*08/06/21 12:58*	*08/27/21 17:33*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (6-8)

Lab Sample ID: 320-76901-4

Date Collected: 07/28/21 11:15
Matrix: Sediment
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**19.0**		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	**81.0**		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072821-BN-SJSB095 (6-8)

Lab Sample ID: 320-76901-4

Date Collected: 07/28/21 11:15
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 81.0

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**1.7**		1.2	0.074	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
1,2,3,7,8-PeCDD	ND		6.0	0.099	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
1,2,3,7,8-PeCDF	ND		6.0	0.044	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
2,3,4,7,8-PeCDF	ND		6.0	0.051	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
1,2,3,4,7,8-HxCDD	ND		6.0	0.080	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
1,2,3,6,7,8-HxCDD	ND		6.0	0.091	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
1,2,3,7,8,9-HxCDD	**0.50**	**J q**	6.0	0.079	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
1,2,3,4,7,8-HxCDF	ND		6.0	0.029	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
1,2,3,6,7,8-HxCDF	ND		6.0	0.027	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
1,2,3,7,8,9-HxCDF	ND		6.0	0.026	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
2,3,4,6,7,8-HxCDF	ND		6.0	0.027	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
1,2,3,4,6,7,8-HpCDD	**10**	**B q**	6.0	0.13	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
1,2,3,4,6,7,8-HpCDF	ND		6.0	0.060	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
1,2,3,4,7,8,9-HpCDF	ND		6.0	0.057	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
OCDD	**190**	**B**	12	0.30	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
OCDF	ND		12	0.12	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
Total TCDD	**1.7**		1.2	0.074	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
Total TCDF	**8.9**	**B**	1.2	0.051	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
Total PeCDD	ND		6.0	0.48	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
Total PeCDF	ND		6.0	0.094	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
Total HxCDD	**8.9**	**q**	6.0	0.083	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
Total HxCDF	ND		6.0	0.036	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
Total HpCDD	**38**	**B q**	6.0	0.13	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1
Total HpCDF	ND		6.0	0.060	pg/g	☼	08/06/21 12:58	08/19/21 18:51	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*42*		*25 - 164*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-2,3,7,8-TCDF	*44*		*24 - 169*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-1,2,3,7,8-PeCDD	*41*		*25 - 181*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-1,2,3,7,8-PeCDF	*43*		*24 - 185*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-2,3,4,7,8-PeCDF	*46*		*21 - 178*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-1,2,3,4,7,8-HxCDD	*48*		*32 - 141*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-1,2,3,6,7,8-HxCDD	*44*		*28 - 130*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-1,2,3,4,7,8-HxCDF	*52*		*26 - 152*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-1,2,3,6,7,8-HxCDF	*49*		*26 - 123*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-1,2,3,7,8,9-HxCDF	*43*		*29 - 147*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-2,3,4,6,7,8-HxCDF	*45*		*28 - 136*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*47*		*23 - 140*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*45*		*28 - 143*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*49*		*26 - 138*	*08/06/21 12:58*	*08/19/21 18:51*	*1*
13C-OCDD	*42*		*17 - 157*	*08/06/21 12:58*	*08/19/21 18:51*	*1*

Client Sample ID: 11215702-072821-BN-SJSB095 (6-8) Lab Sample ID: 320-76901-4

Date Collected: 07/28/21 11:15 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 81.0**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	53		35 - 197	08/06/21 12:58	08/19/21 18:51	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	5.5		1.2	0.20	pg/g	☼	08/06/21 12:58	08/27/21 18:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	47		24 - 169	08/06/21 12:58	08/27/21 18:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	60		35 - 197	08/06/21 12:58	08/27/21 18:11	1

Client Sample ID: 11215702-072821-BN-SJSB095 (8-10) Lab Sample ID: 320-76901-5

Date Collected: 07/28/21 11:20 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23.4		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	76.6		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072821-BN-SJSB095 (8-10) Lab Sample ID: 320-76901-5

Date Collected: 07/28/21 11:20 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 76.6**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	810	E	1.3	1.1	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
1,2,3,7,8-PeCDD	9.3		6.4	0.38	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
1,2,3,7,8-PeCDF	74		6.4	1.0	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
2,3,4,7,8-PeCDF	55		6.4	0.96	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
1,2,3,4,7,8-HxCDD	0.71	J	6.4	0.16	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
1,2,3,6,7,8-HxCDD	1.3	J	6.4	0.17	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
1,2,3,7,8,9-HxCDD	1.7	J	6.4	0.15	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
1,2,3,4,7,8-HxCDF	100		6.4	0.50	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
1,2,3,6,7,8-HxCDF	28		6.4	0.53	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
1,2,3,7,8,9-HxCDF	1.3	J q	6.4	0.49	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
2,3,4,6,7,8-HxCDF	3.6	J	6.4	0.52	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
1,2,3,4,6,7,8-HpCDD	38	B	6.4	0.33	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
1,2,3,4,6,7,8-HpCDF	33	B	6.4	0.16	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
1,2,3,4,7,8,9-HpCDF	10		6.4	0.16	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
OCDD	1300	B	13	1.2	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
OCDF	25		13	0.18	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
Total TCDD	880		1.3	1.1	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
Total TCDF	6400	B G	5.8	5.8	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
Total PeCDD	10	q	6.4	0.38	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
Total PeCDF	190	q	6.4	0.98	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
Total HxCDD	20	q	6.4	0.16	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
Total HxCDF	160	q	6.4	0.51	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
Total HpCDD	100	B	6.4	0.33	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1
Total HpCDF	50	B	6.4	0.16	pg/g	☼	08/06/21 12:58	08/19/21 19:39	1

Client Sample ID: 11215702-072821-BN-SJSB095 (8-10) Lab Sample ID: 320-76901-5

Date Collected: 07/28/21 11:20 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 76.6**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	40		25 - 164	08/06/21 12:58	08/19/21 19:39	1
13C-2,3,7,8-TCDF	41		24 - 169	08/06/21 12:58	08/19/21 19:39	1
13C-1,2,3,7,8-PeCDD	41		25 - 181	08/06/21 12:58	08/19/21 19:39	1
13C-1,2,3,7,8-PeCDF	40		24 - 185	08/06/21 12:58	08/19/21 19:39	1
13C-2,3,4,7,8-PeCDF	46		21 - 178	08/06/21 12:58	08/19/21 19:39	1
13C-1,2,3,4,7,8-HxCDD	44		32 - 141	08/06/21 12:58	08/19/21 19:39	1
13C-1,2,3,6,7,8-HxCDD	42		28 - 130	08/06/21 12:58	08/19/21 19:39	1
13C-1,2,3,4,7,8-HxCDF	51		26 - 152	08/06/21 12:58	08/19/21 19:39	1
13C-1,2,3,6,7,8-HxCDF	45		26 - 123	08/06/21 12:58	08/19/21 19:39	1
13C-1,2,3,7,8,9-HxCDF	42		29 - 147	08/06/21 12:58	08/19/21 19:39	1
13C-2,3,4,6,7,8-HxCDF	41		28 - 136	08/06/21 12:58	08/19/21 19:39	1
13C-1,2,3,4,6,7,8-HpCDD	42		23 - 140	08/06/21 12:58	08/19/21 19:39	1
13C-1,2,3,4,6,7,8-HpCDF	45		28 - 143	08/06/21 12:58	08/19/21 19:39	1
13C-1,2,3,4,7,8,9-HpCDF	48		26 - 138	08/06/21 12:58	08/19/21 19:39	1
13C-OCDD	45		17 - 157	08/06/21 12:58	08/19/21 19:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	50		35 - 197	08/06/21 12:58	08/19/21 19:39	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**3500**	**E G**	3.3	3.3	pg/g	☼	08/06/21 12:58	08/28/21 01:52	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	45		24 - 169	08/06/21 12:58	08/28/21 01:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	53		35 - 197	08/06/21 12:58	08/28/21 01:52	1

Client Sample ID: 11215702-072821-BN-SJSB095 (10-12) Lab Sample ID: 320-76901-6

Date Collected: 07/28/21 11:25 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**23.5**		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	**76.5**		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072821-BN-SJSB095 (10-12) Lab Sample ID: 320-76901-6

Date Collected: 07/28/21 11:25 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 76.5**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**40**		1.3	0.19	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
1,2,3,7,8-PeCDD	ND		6.4	0.14	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
1,2,3,7,8-PeCDF	**2.9**	**J**	6.4	0.14	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
2,3,4,7,8-PeCDF	**2.1**	**J**	6.4	0.13	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
1,2,3,4,7,8-HxCDD	ND		6.4	0.097	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
1,2,3,6,7,8-HxCDD	ND		6.4	0.11	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
1,2,3,7,8,9-HxCDD	**1.1**	**J**	6.4	0.096	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
1,2,3,4,7,8-HxCDF	**3.8**	**J**	6.4	0.056	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
1,2,3,6,7,8-HxCDF	**0.91**	**J**	6.4	0.058	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1

Client Sample ID: 11215702-072821-BN-SJSB095 (10-12) Lab Sample ID: 320-76901-6

Date Collected: 07/28/21 11:25 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 76.5**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	0.17	J q	6.4	0.056	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
2,3,4,6,7,8-HxCDF	0.14	J q	6.4	0.055	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
1,2,3,4,6,7,8-HpCDD	11	B	6.4	0.15	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
1,2,3,4,6,7,8-HpCDF	0.62	J B	6.4	0.052	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
1,2,3,4,7,8,9-HpCDF	0.35	J	6.4	0.047	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
OCDD	200	B	13	0.37	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
OCDF	ND		13	0.10	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
Total TCDD	40		1.3	0.19	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
Total TCDF	300	B q	1.3	0.66	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
Total PeCDD	ND		6.4	0.42	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
Total PeCDF	7.0	q	6.4	0.14	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
Total HxCDD	13		6.4	0.10	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
Total HxCDF	5.0	J q	6.4	0.056	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
Total HpCDD	44	B	6.4	0.15	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1
Total HpCDF	1.1	J B q	6.4	0.049	pg/g	☼	08/06/21 12:58	08/19/21 20:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*45*		*25 - 164*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-2,3,7,8-TCDF	*49*		*24 - 169*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-1,2,3,7,8-PeCDD	*50*		*25 - 181*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-1,2,3,7,8-PeCDF	*54*		*24 - 185*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-2,3,4,7,8-PeCDF	*58*		*21 - 178*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-1,2,3,4,7,8-HxCDD	*55*		*32 - 141*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-1,2,3,6,7,8-HxCDD	*52*		*28 - 130*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-1,2,3,4,7,8-HxCDF	*62*		*26 - 152*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-1,2,3,6,7,8-HxCDF	*53*		*26 - 123*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-1,2,3,7,8,9-HxCDF	*50*		*29 - 147*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-2,3,4,6,7,8-HxCDF	*51*		*28 - 136*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*54*		*23 - 140*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*52*		*28 - 143*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*61*		*26 - 138*	*08/06/21 12:58*	*08/19/21 20:27*	*1*
13C-OCDD	*52*		*17 - 157*	*08/06/21 12:58*	*08/19/21 20:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*57*		*35 - 197*	*08/06/21 12:58*	*08/19/21 20:27*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	150	B	1.3	0.43	pg/g	☼	08/06/21 12:58	08/27/21 11:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*49*		*24 - 169*	*08/06/21 12:58*	*08/27/21 11:35*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*63*		*35 - 197*	*08/06/21 12:58*	*08/27/21 11:35*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (12-14)

Lab Sample ID: 320-76901-7
Date Collected: 07/28/21 11:30
Matrix: Sediment
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**23.2**		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	**76.8**		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072821-BN-SJSB095 (12-14)

Lab Sample ID: 320-76901-7
Date Collected: 07/28/21 11:30
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 76.8

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**4.1**		1.3	0.061	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
1,2,3,7,8-PeCDD	ND		6.3	0.10	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
1,2,3,7,8-PeCDF	ND		6.3	0.071	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
2,3,4,7,8-PeCDF	ND		6.3	0.078	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
1,2,3,4,7,8-HxCDD	ND		6.3	0.057	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
1,2,3,6,7,8-HxCDD	ND		6.3	0.060	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
1,2,3,7,8,9-HxCDD	ND		6.3	0.054	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
1,2,3,4,7,8-HxCDF	ND		6.3	0.032	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
1,2,3,6,7,8-HxCDF	ND		6.3	0.032	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
1,2,3,7,8,9-HxCDF	ND		6.3	0.030	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
2,3,4,6,7,8-HxCDF	ND		6.3	0.029	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
1,2,3,4,6,7,8-HpCDD	**6.5**	**B**	6.3	0.12	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
1,2,3,4,6,7,8-HpCDF	**0.29**	**J B**	6.3	0.044	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
1,2,3,4,7,8,9-HpCDF	ND		6.3	0.043	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
OCDD	**130**	**B**	13	0.26	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
OCDF	ND		13	0.12	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
Total TCDD	**4.1**		1.3	0.061	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
Total TCDF	**25**	**B q**	1.3	0.12	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
Total PeCDD	ND		6.3	0.69	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
Total PeCDF	ND		6.3	0.078	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
Total HxCDD	**6.2**	**J q**	6.3	0.057	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
Total HxCDF	ND		6.3	0.075	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
Total HpCDD	**25**	**B**	6.3	0.12	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1
Total HpCDF	**0.29**	**J B**	6.3	0.044	pg/g	☼	08/06/21 12:58	08/19/21 21:15	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*38*		*25 - 164*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-2,3,7,8-TCDF	*38*		*24 - 169*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-1,2,3,7,8-PeCDD	*34*		*25 - 181*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-1,2,3,7,8-PeCDF	*37*		*24 - 185*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-2,3,4,7,8-PeCDF	*39*		*21 - 178*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-1,2,3,4,7,8-HxCDD	*45*		*32 - 141*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-1,2,3,6,7,8-HxCDD	*42*		*28 - 130*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-1,2,3,4,7,8-HxCDF	*50*		*26 - 152*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-1,2,3,6,7,8-HxCDF	*44*		*26 - 123*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-1,2,3,7,8,9-HxCDF	*41*		*29 - 147*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-2,3,4,6,7,8-HxCDF	*42*		*28 - 136*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*50*		*23 - 140*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*48*		*28 - 143*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*53*		*26 - 138*	*08/06/21 12:58*	*08/19/21 21:15*	*1*
13C-OCDD	*47*		*17 - 157*	*08/06/21 12:58*	*08/19/21 21:15*	*1*

Client Sample ID: 11215702-072821-BN-SJSB095 (12-14) Lab Sample ID: 320-76901-7

Date Collected: 07/28/21 11:30 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 76.8**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	52		35 - 197	08/06/21 12:58	08/19/21 21:15	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	17		1.3	0.36	pg/g	☼	08/06/21 12:58	08/27/21 18:50	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	43		24 - 169	08/06/21 12:58	08/27/21 18:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	58		35 - 197	08/06/21 12:58	08/27/21 18:50	1

Client Sample ID: 11215702-072821-BN-SJSB095 (14-16) Lab Sample ID: 320-76901-8

Date Collected: 07/28/21 11:35 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24.3		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	75.7		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072821-BN-SJSB095 (14-16) Lab Sample ID: 320-76901-8

Date Collected: 07/28/21 11:35 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 75.7**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	35		1.3	0.17	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
1,2,3,7,8-PeCDD	0.43	J	6.4	0.081	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
1,2,3,7,8-PeCDF	2.7	J	6.4	0.065	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
2,3,4,7,8-PeCDF	2.7	J	6.4	0.072	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
1,2,3,4,7,8-HxCDD	0.33	J q	6.4	0.065	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
1,2,3,6,7,8-HxCDD	0.20	J q	6.4	0.067	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
1,2,3,7,8,9-HxCDD	0.78	J	6.4	0.060	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
1,2,3,4,7,8-HxCDF	2.1	J	6.4	0.049	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
1,2,3,6,7,8-HxCDF	0.64	J	6.4	0.048	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
1,2,3,7,8,9-HxCDF	0.17	J	6.4	0.031	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
2,3,4,6,7,8-HxCDF	0.13	J q	6.4	0.034	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
1,2,3,4,6,7,8-HpCDD	7.7	B	6.4	0.13	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
1,2,3,4,6,7,8-HpCDF	0.66	J B	6.4	0.045	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
1,2,3,4,7,8,9-HpCDF	0.28	J	6.4	0.049	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
OCDD	170	B	13	0.17	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
OCDF	0.70	J	13	0.042	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
Total TCDD	40	q	1.3	0.17	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
Total TCDF	300	B	1.3	0.50	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
Total PeCDD	1.5	J	6.4	0.081	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
Total PeCDF	7.6		6.4	0.069	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
Total HxCDD	9.3	q	6.4	0.064	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
Total HxCDF	3.3	J q	6.4	0.040	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
Total HpCDD	32	B	6.4	0.13	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1
Total HpCDF	1.1	J B	6.4	0.047	pg/g	☼	08/06/21 12:58	08/31/21 00:25	1

Client Sample ID: 11215702-072821-BN-SJSB095 (14-16) Lab Sample ID: 320-76901-8

Date Collected: 07/28/21 11:35 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 75.7**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	41		25 - 164	08/06/21 12:58	08/31/21 00:25	1
13C-2,3,7,8-TCDF	39		24 - 169	08/06/21 12:58	08/31/21 00:25	1
13C-1,2,3,7,8-PeCDD	42		25 - 181	08/06/21 12:58	08/31/21 00:25	1
13C-1,2,3,7,8-PeCDF	41		24 - 185	08/06/21 12:58	08/31/21 00:25	1
13C-2,3,4,7,8-PeCDF	41		21 - 178	08/06/21 12:58	08/31/21 00:25	1
13C-1,2,3,4,7,8-HxCDD	40		32 - 141	08/06/21 12:58	08/31/21 00:25	1
13C-1,2,3,6,7,8-HxCDD	37		28 - 130	08/06/21 12:58	08/31/21 00:25	1
13C-1,2,3,4,7,8-HxCDF	41		26 - 152	08/06/21 12:58	08/31/21 00:25	1
13C-1,2,3,6,7,8-HxCDF	36		26 - 123	08/06/21 12:58	08/31/21 00:25	1
13C-1,2,3,7,8,9-HxCDF	39		29 - 147	08/06/21 12:58	08/31/21 00:25	1
13C-2,3,4,6,7,8-HxCDF	38		28 - 136	08/06/21 12:58	08/31/21 00:25	1
13C-1,2,3,4,6,7,8-HpCDD	43		23 - 140	08/06/21 12:58	08/31/21 00:25	1
13C-1,2,3,4,6,7,8-HpCDF	39		28 - 143	08/06/21 12:58	08/31/21 00:25	1
13C-1,2,3,4,7,8,9-HpCDF	46		26 - 138	08/06/21 12:58	08/31/21 00:25	1
13C-OCDD	43		17 - 157	08/06/21 12:58	08/31/21 00:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	48		35 - 197	08/06/21 12:58	08/31/21 00:25	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**170**		1.3	0.47	pg/g	☼	08/06/21 12:58	08/27/21 19:28	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	44		24 - 169	08/06/21 12:58	08/27/21 19:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	48		35 - 197	08/06/21 12:58	08/27/21 19:28	1

Client Sample ID: 11215702-072821-BN-DUP-10 Lab Sample ID: 320-76901-13

Date Collected: 07/28/21 00:00 **Matrix: Sediment**
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**18.3**		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	**81.7**		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072821-BN-DUP-10 Lab Sample ID: 320-76901-13

Date Collected: 07/28/21 00:00 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 81.7**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**6.3**	**q**	1.2	0.14	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
1,2,3,7,8-PeCDD	ND		6.0	0.13	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
1,2,3,7,8-PeCDF	**0.55**	**J q**	6.0	0.055	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
2,3,4,7,8-PeCDF	**0.48**	**J q**	6.0	0.059	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
1,2,3,4,7,8-HxCDD	ND		6.0	0.14	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
1,2,3,6,7,8-HxCDD	ND		6.0	0.15	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
1,2,3,7,8,9-HxCDD	**1.0**	**J**	6.0	0.13	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
1,2,3,4,7,8-HxCDF	**1.2**	**J**	6.0	0.043	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
1,2,3,6,7,8-HxCDF	**0.42**	**J**	6.0	0.040	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1

Client Sample ID: 11215702-072821-BN-DUP-10 Lab Sample ID: 320-76901-13

Date Collected: 07/28/21 00:00 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 81.7**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	ND		6.0	0.040	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
2,3,4,6,7,8-HxCDF	ND		6.0	0.038	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
1,2,3,4,6,7,8-HpCDD	**11**	**B**	6.0	0.14	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
1,2,3,4,6,7,8-HpCDF	**0.34**	**J B q**	6.0	0.052	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
1,2,3,4,7,8,9-HpCDF	ND		6.0	0.054	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
OCDD	**240**	**B**	12	0.29	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
OCDF	**0.61**	**J**	12	0.12	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
Total TCDD	**6.3**	**q**	1.2	0.14	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
Total TCDF	**49**	**B**	1.2	0.23	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
Total PeCDD	**0.90**	**J**	6.0	0.13	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
Total PeCDF	**1.0**	**J q**	6.0	0.057	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
Total HxCDD	**11**		6.0	0.14	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
Total HxCDF	**1.6**	**J**	6.0	0.040	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
Total HpCDD	**44**	**B**	6.0	0.14	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1
Total HpCDF	**0.34**	**J B q**	6.0	0.053	pg/g	☼	08/06/21 12:58	08/19/21 23:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*38*		*25 - 164*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-2,3,7,8-TCDF	*36*		*24 - 169*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-1,2,3,7,8-PeCDD	*37*		*25 - 181*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-1,2,3,7,8-PeCDF	*36*		*24 - 185*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-2,3,4,7,8-PeCDF	*39*		*21 - 178*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-1,2,3,4,7,8-HxCDD	*42*		*32 - 141*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-1,2,3,6,7,8-HxCDD	*39*		*28 - 130*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-1,2,3,4,7,8-HxCDF	*45*		*26 - 152*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-1,2,3,6,7,8-HxCDF	*42*		*26 - 123*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-1,2,3,7,8,9-HxCDF	*37*		*29 - 147*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-2,3,4,6,7,8-HxCDF	*38*		*28 - 136*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*42*		*23 - 140*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*41*		*28 - 143*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*45*		*26 - 138*	*08/06/21 12:58*	*08/19/21 23:38*	*1*
13C-OCDD	*34*		*17 - 157*	*08/06/21 12:58*	*08/19/21 23:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*49*		*35 - 197*	*08/06/21 12:58*	*08/19/21 23:38*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**27**	**B**	1.2	0.19	pg/g	☼	08/06/21 12:58	08/27/21 10:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*39*		*24 - 169*	*08/06/21 12:58*	*08/27/21 10:57*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*54*		*35 - 197*	*08/06/21 12:58*	*08/27/21 10:57*	*1*

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (0-2) — Lab Sample ID: 320-76901-1

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**23000**	**E G**	21	21	pg/g	1	**23000**	1613B
1,2,3,7,8-PeCDD	**290**		81	7.8	pg/g	1	**290**	1613B
1,2,3,7,8-PeCDF	**2100**		81	15	pg/g	0.03	**63**	1613B
2,3,4,7,8-PeCDF	**1700**		81	15	pg/g	0.3	**510**	1613B
1,2,3,4,7,8-HxCDD	ND		81	1.2	pg/g	0.1	0.060	1613B
1,2,3,6,7,8-HxCDD	ND		81	1.3	pg/g	0.1	0.065	1613B
1,2,3,7,8,9-HxCDD	**4.8**	**J**	81	1.2	pg/g	0.1	**0.48**	1613B
1,2,3,4,7,8-HxCDF	**2800**		81	11	pg/g	0.1	**280**	1613B
1,2,3,6,7,8-HxCDF	**740**		81	12	pg/g	0.1	**74**	1613B
1,2,3,7,8,9-HxCDF	**40**	**J**	81	12	pg/g	0.1	**4.0**	1613B
2,3,4,6,7,8-HxCDF	**88**	**q**	81	13	pg/g	0.1	**8.8**	1613B
1,2,3,4,6,7,8-HpCDD	**88**	**B**	81	1.2	pg/g	0.01	**0.88**	1613B
1,2,3,4,6,7,8-HpCDF	**790**	**B**	81	3.0	pg/g	0.01	**7.9**	1613B
1,2,3,4,7,8,9-HpCDF	**250**		81	3.3	pg/g	0.01	**2.5**	1613B
OCDD	**1400**	**B**	160	3.5	pg/g	0.0003	**0.42**	1613B
OCDF	**340**	**q**	160	2.8	pg/g	0.0003	**0.10**	1613B
2,3,7,8-TCDF - RA	**110000**	**E G**	160	160	pg/g	0.1	**11000**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		35000	TEQ

Client Sample ID: 11215702-072821-BN-SJSB095 (2-4) — Lab Sample ID: 320-76901-2

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**42**		1.4	0.61	pg/g	1	**42**	1613B
1,2,3,7,8-PeCDD	ND		6.8	0.50	pg/g	1	0.25	1613B
1,2,3,7,8-PeCDF	ND		6.8	0.54	pg/g	0.03	0.0081	1613B
2,3,4,7,8-PeCDF	ND		6.8	0.57	pg/g	0.3	0.086	1613B
1,2,3,4,7,8-HxCDD	ND		6.8	0.33	pg/g	0.1	0.017	1613B
1,2,3,6,7,8-HxCDD	ND		6.8	0.40	pg/g	0.1	0.020	1613B
1,2,3,7,8,9-HxCDD	ND		6.8	0.33	pg/g	0.1	0.017	1613B
1,2,3,4,7,8-HxCDF	**7.0**		6.8	0.36	pg/g	0.1	**0.70**	1613B
1,2,3,6,7,8-HxCDF	**1.6**	**J q**	6.8	0.34	pg/g	0.1	**0.16**	1613B
1,2,3,7,8,9-HxCDF	ND		6.8	0.36	pg/g	0.1	0.018	1613B
2,3,4,6,7,8-HxCDF	ND		6.8	0.36	pg/g	0.1	0.018	1613B
1,2,3,4,6,7,8-HpCDD	**60**	**B**	6.8	0.80	pg/g	0.01	**0.60**	1613B
1,2,3,4,6,7,8-HpCDF	**4.4**	**J q B**	6.8	0.40	pg/g	0.01	**0.044**	1613B
1,2,3,4,7,8,9-HpCDF	**2.0**	**J**	6.8	0.34	pg/g	0.01	**0.020**	1613B
OCDD	**1700**	**B**	14	2.3	pg/g	0.0003	**0.51**	1613B
OCDF	**18**	**q**	14	0.56	pg/g	0.0003	**0.0054**	1613B
2,3,7,8-TCDF - RA	**140**	**B**	1.4	0.43	pg/g	0.1	**14**	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (2-4) (Continued) — Lab Sample ID: 320-76901-2

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		58	TEQ

Client Sample ID: 11215702-072821-BN-SJSB095 (4-6) — Lab Sample ID: 320-76901-3

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	ND		1.2	0.16	pg/g	1	0.080	1613B
1,2,3,7,8-PeCDD	ND		6.2	0.17	pg/g	1	0.085	1613B
1,2,3,7,8-PeCDF	ND		6.2	0.078	pg/g	0.03	0.0012	1613B
2,3,4,7,8-PeCDF	ND		6.2	0.085	pg/g	0.3	0.013	1613B
1,2,3,4,7,8-HxCDD	ND		6.2	0.13	pg/g	0.1	0.0065	1613B
1,2,3,6,7,8-HxCDD	ND		6.2	0.15	pg/g	0.1	0.0075	1613B
1,2,3,7,8,9-HxCDD	**0.74**	**J q**	6.2	0.13	pg/g	0.1	**0.074**	1613B
1,2,3,4,7,8-HxCDF	ND		6.2	0.045	pg/g	0.1	0.0023	1613B
1,2,3,6,7,8-HxCDF	ND		6.2	0.044	pg/g	0.1	0.0022	1613B
1,2,3,7,8,9-HxCDF	ND		6.2	0.045	pg/g	0.1	0.0023	1613B
2,3,4,6,7,8-HxCDF	ND		6.2	0.041	pg/g	0.1	0.0021	1613B
1,2,3,4,6,7,8-HpCDD	**12**	**B**	6.2	0.17	pg/g	0.01	**0.12**	1613B
1,2,3,4,6,7,8-HpCDF	**0.26**	**J B q**	6.2	0.067	pg/g	0.01	**0.0026**	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.2	0.068	pg/g	0.01	0.00034	1613B
OCDD	**240**	**B**	12	0.57	pg/g	0.0003	**0.072**	1613B
OCDF	ND		12	0.17	pg/g	0.0003	0.000026	1613B
2,3,7,8-TCDF - RA	**11**		1.2	0.16	pg/g	0.1	**1.1**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		1.6	TEQ

Client Sample ID: 11215702-072821-BN-SJSB095 (6-8) — Lab Sample ID: 320-76901-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**1.7**		1.2	0.074	pg/g	1	**1.7**	1613B
1,2,3,7,8-PeCDD	ND		6.0	0.099	pg/g	1	0.050	1613B
1,2,3,7,8-PeCDF	ND		6.0	0.044	pg/g	0.03	0.00066	1613B
2,3,4,7,8-PeCDF	ND		6.0	0.051	pg/g	0.3	0.0077	1613B
1,2,3,4,7,8-HxCDD	ND		6.0	0.080	pg/g	0.1	0.0040	1613B
1,2,3,6,7,8-HxCDD	ND		6.0	0.091	pg/g	0.1	0.0046	1613B
1,2,3,7,8,9-HxCDD	**0.50**	**J q**	6.0	0.079	pg/g	0.1	**0.050**	1613B
1,2,3,4,7,8-HxCDF	ND		6.0	0.029	pg/g	0.1	0.0015	1613B
1,2,3,6,7,8-HxCDF	ND		6.0	0.027	pg/g	0.1	0.0014	1613B
1,2,3,7,8,9-HxCDF	ND		6.0	0.026	pg/g	0.1	0.0013	1613B
2,3,4,6,7,8-HxCDF	ND		6.0	0.027	pg/g	0.1	0.0014	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Client Sample ID: 11215702-072821-BN-SJSB095 (6-8) (Continued) — Lab Sample ID: 320-76901-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDD	10	B q	6.0	0.13	pg/g	0.01	0.10	1613B
1,2,3,4,6,7,8-HpCDF	ND		6.0	0.060	pg/g	0.01	0.00030	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.0	0.057	pg/g	0.01	0.00029	1613B
OCDD	190	B	12	0.30	pg/g	0.0003	0.057	1613B
OCDF	ND		12	0.12	pg/g	0.0003	0.000018	1613B
2,3,7,8-TCDF - RA	5.5		1.2	0.20	pg/g	0.1	0.55	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2.5	TEQ

Client Sample ID: 11215702-072821-BN-SJSB095 (8-10) — Lab Sample ID: 320-76901-5

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	810	E	1.3	1.1	pg/g	1	810	1613B
1,2,3,7,8-PeCDD	9.3		6.4	0.38	pg/g	1	9.3	1613B
1,2,3,7,8-PeCDF	74		6.4	1.0	pg/g	0.03	2.2	1613B
2,3,4,7,8-PeCDF	55		6.4	0.96	pg/g	0.3	17	1613B
1,2,3,4,7,8-HxCDD	0.71	J	6.4	0.16	pg/g	0.1	0.071	1613B
1,2,3,6,7,8-HxCDD	1.3	J	6.4	0.17	pg/g	0.1	0.13	1613B
1,2,3,7,8,9-HxCDD	1.7	J	6.4	0.15	pg/g	0.1	0.17	1613B
1,2,3,4,7,8-HxCDF	100		6.4	0.50	pg/g	0.1	10	1613B
1,2,3,6,7,8-HxCDF	28		6.4	0.53	pg/g	0.1	2.8	1613B
1,2,3,7,8,9-HxCDF	1.3	J q	6.4	0.49	pg/g	0.1	0.13	1613B
2,3,4,6,7,8-HxCDF	3.6	J	6.4	0.52	pg/g	0.1	0.36	1613B
1,2,3,4,6,7,8-HpCDD	38	B	6.4	0.33	pg/g	0.01	0.38	1613B
1,2,3,4,6,7,8-HpCDF	33	B	6.4	0.16	pg/g	0.01	0.33	1613B
1,2,3,4,7,8,9-HpCDF	10		6.4	0.16	pg/g	0.01	0.10	1613B
OCDD	1300	B	13	1.2	pg/g	0.0003	0.39	1613B
OCDF	25		13	0.18	pg/g	0.0003	0.0075	1613B
2,3,7,8-TCDF - RA	3500	E G	3.3	3.3	pg/g	0.1	350	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		1200	TEQ

Client Sample ID: 11215702-072821-BN-SJSB095 (10-12) — Lab Sample ID: 320-76901-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	40		1.3	0.19	pg/g	1	40	1613B
1,2,3,7,8-PeCDD	ND		6.4	0.14	pg/g	1	0.070	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (10-12) (Continued) — Lab Sample ID: 320-76901-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDF	**2.9**	**J**	6.4	0.14	pg/g	0.03	**0.087**	1613B
2,3,4,7,8-PeCDF	**2.1**	**J**	6.4	0.13	pg/g	0.3	**0.63**	1613B
1,2,3,4,7,8-HxCDD	ND		6.4	0.097	pg/g	0.1	0.0049	1613B
1,2,3,6,7,8-HxCDD	ND		6.4	0.11	pg/g	0.1	0.0055	1613B
1,2,3,7,8,9-HxCDD	**1.1**	**J**	6.4	0.096	pg/g	0.1	**0.11**	1613B
1,2,3,4,7,8-HxCDF	**3.8**	**J**	6.4	0.056	pg/g	0.1	**0.38**	1613B
1,2,3,6,7,8-HxCDF	**0.91**	**J**	6.4	0.058	pg/g	0.1	**0.091**	1613B
1,2,3,7,8,9-HxCDF	**0.17**	**J q**	6.4	0.056	pg/g	0.1	**0.017**	1613B
2,3,4,6,7,8-HxCDF	**0.14**	**J q**	6.4	0.055	pg/g	0.1	**0.014**	1613B
1,2,3,4,6,7,8-HpCDD	**11**	**B**	6.4	0.15	pg/g	0.01	**0.11**	1613B
1,2,3,4,6,7,8-HpCDF	**0.62**	**J B**	6.4	0.052	pg/g	0.01	**0.0062**	1613B
1,2,3,4,7,8,9-HpCDF	**0.35**	**J**	6.4	0.047	pg/g	0.01	**0.0035**	1613B
OCDD	**200**	**B**	13	0.37	pg/g	0.0003	**0.060**	1613B
OCDF	ND		13	0.10	pg/g	0.0003	0.000015	1613B
2,3,7,8-TCDF - RA	**150**	**B**	1.3	0.43	pg/g	0.1	**15**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		57	TEQ

Client Sample ID: 11215702-072821-BN-SJSB095 (12-14) — Lab Sample ID: 320-76901-7

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**4.1**		1.3	0.061	pg/g	1	**4.1**	1613B
1,2,3,7,8-PeCDD	ND		6.3	0.10	pg/g	1	0.050	1613B
1,2,3,7,8-PeCDF	ND		6.3	0.071	pg/g	0.03	0.0011	1613B
2,3,4,7,8-PeCDF	ND		6.3	0.078	pg/g	0.3	0.012	1613B
1,2,3,4,7,8-HxCDD	ND		6.3	0.057	pg/g	0.1	0.0029	1613B
1,2,3,6,7,8-HxCDD	ND		6.3	0.060	pg/g	0.1	0.0030	1613B
1,2,3,7,8,9-HxCDD	ND		6.3	0.054	pg/g	0.1	0.0027	1613B
1,2,3,4,7,8-HxCDF	ND		6.3	0.032	pg/g	0.1	0.0016	1613B
1,2,3,6,7,8-HxCDF	ND		6.3	0.032	pg/g	0.1	0.0016	1613B
1,2,3,7,8,9-HxCDF	ND		6.3	0.030	pg/g	0.1	0.0015	1613B
2,3,4,6,7,8-HxCDF	ND		6.3	0.029	pg/g	0.1	0.0015	1613B
1,2,3,4,6,7,8-HpCDD	**6.5**	**B**	6.3	0.12	pg/g	0.01	**0.065**	1613B
1,2,3,4,6,7,8-HpCDF	**0.29**	**J B**	6.3	0.044	pg/g	0.01	**0.0029**	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.3	0.043	pg/g	0.01	0.00022	1613B
OCDD	**130**	**B**	13	0.26	pg/g	0.0003	**0.039**	1613B
OCDF	ND		13	0.12	pg/g	0.0003	0.000018	1613B
2,3,7,8-TCDF - RA	**17**		1.3	0.36	pg/g	0.1	**1.7**	1613B

TEF Reference:
WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (12-14) (Continued) — Lab Sample ID: 320-76901-7

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
Total Dioxin/Furan TEQ					pg/g		6.0	TEQ

Client Sample ID: 11215702-072821-BN-SJSB095 (14-16) — Lab Sample ID: 320-76901-8

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
2,3,7,8-TCDD	**35**		1.3	0.17	pg/g	1	**35**	1613B
1,2,3,7,8-PeCDD	**0.43**	**J**	6.4	0.081	pg/g	1	**0.43**	1613B
1,2,3,7,8-PeCDF	**2.7**	**J**	6.4	0.065	pg/g	0.03	**0.081**	1613B
2,3,4,7,8-PeCDF	**2.7**	**J**	6.4	0.072	pg/g	0.3	**0.81**	1613B
1,2,3,4,7,8-HxCDD	**0.33**	**J q**	6.4	0.065	pg/g	0.1	**0.033**	1613B
1,2,3,6,7,8-HxCDD	**0.20**	**J q**	6.4	0.067	pg/g	0.1	**0.020**	1613B
1,2,3,7,8,9-HxCDD	**0.78**	**J**	6.4	0.060	pg/g	0.1	**0.078**	1613B
1,2,3,4,7,8-HxCDF	**2.1**	**J**	6.4	0.049	pg/g	0.1	**0.21**	1613B
1,2,3,6,7,8-HxCDF	**0.64**	**J**	6.4	0.048	pg/g	0.1	**0.064**	1613B
1,2,3,7,8,9-HxCDF	**0.17**	**J**	6.4	0.031	pg/g	0.1	**0.017**	1613B
2,3,4,6,7,8-HxCDF	**0.13**	**J q**	6.4	0.034	pg/g	0.1	**0.013**	1613B
1,2,3,4,6,7,8-HpCDD	**7.7**	**B**	6.4	0.13	pg/g	0.01	**0.077**	1613B
1,2,3,4,6,7,8-HpCDF	**0.66**	**J B**	6.4	0.045	pg/g	0.01	**0.0066**	1613B
1,2,3,4,7,8,9-HpCDF	**0.28**	**J**	6.4	0.049	pg/g	0.01	**0.0028**	1613B
OCDD	**170**	**B**	13	0.17	pg/g	0.0003	**0.051**	1613B
OCDF	**0.70**	**J**	13	0.042	pg/g	0.0003	**0.00021**	1613B
2,3,7,8-TCDF - RA	**170**		1.3	0.47	pg/g	0.1	**17**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
Total Dioxin/Furan TEQ					pg/g		54	TEQ

Client Sample ID: 11215702-072821-BN-DUP-10 — Lab Sample ID: 320-76901-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
2,3,7,8-TCDD	**6.3**	**q**	1.2	0.14	pg/g	1	**6.3**	1613B
1,2,3,7,8-PeCDD	ND		6.0	0.13	pg/g	1	0.065	1613B
1,2,3,7,8-PeCDF	**0.55**	**J q**	6.0	0.055	pg/g	0.03	**0.017**	1613B
2,3,4,7,8-PeCDF	**0.48**	**J q**	6.0	0.059	pg/g	0.3	**0.14**	1613B
1,2,3,4,7,8-HxCDD	ND		6.0	0.14	pg/g	0.1	0.0070	1613B
1,2,3,6,7,8-HxCDD	ND		6.0	0.15	pg/g	0.1	0.0075	1613B
1,2,3,7,8,9-HxCDD	**1.0**	**J**	6.0	0.13	pg/g	0.1	**0.10**	1613B
1,2,3,4,7,8-HxCDF	**1.2**	**J**	6.0	0.043	pg/g	0.1	**0.12**	1613B
1,2,3,6,7,8-HxCDF	**0.42**	**J**	6.0	0.040	pg/g	0.1	**0.042**	1613B
1,2,3,7,8,9-HxCDF	ND		6.0	0.040	pg/g	0.1	0.0020	1613B
2,3,4,6,7,8-HxCDF	ND		6.0	0.038	pg/g	0.1	0.0019	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Job ID: 320-76901-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072821-BN-DUP-10 (Continued) — Lab Sample ID: 320-76901-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
1,2,3,4,6,7,8-HpCDD	**11**	**B**	6.0	0.14	pg/g	0.01	**0.11**	1613B
1,2,3,4,6,7,8-HpCDF	**0.34**	**J B q**	6.0	0.052	pg/g	0.01	**0.0034**	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.0	0.054	pg/g	0.01	0.00027	1613B
OCDD	**240**	**B**	12	0.29	pg/g	0.0003	**0.072**	1613B
OCDF	**0.61**	**J**	12	0.12	pg/g	0.0003	**0.00018**	1613B
2,3,7,8-TCDF - RA	**27**	**B**	1.2	0.19	pg/g	0.1	**2.7**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
Total Dioxin/Furan TEQ					pg/g		9.7	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-76901-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	37TCDD (35-197)
320-76901-1	11215702-072821-BN-SJSB095	68
320-76901-1 - RA	11215702-072821-BN-SJSB095 (0-2)	68
320-76901-2	11215702-072821-BN-SJSB095 (2-4)	51
320-76901-2 - RA	11215702-072821-BN-SJSB095 (2-4)	53
320-76901-2 MS	11215702-072821-BN-SJSB095 (2-4)	50
320-76901-2 MS - RA	11215702-072821-BN-SJSB095 (2-4)	58
320-76901-2 MSD	11215702-072821-BN-SJSB095 (2-4)	57
320-76901-2 MSD - RA	11215702-072821-BN-SJSB095 (2-4)	65
320-76901-3	11215702-072821-BN-SJSB095 (4-6)	55
320-76901-3 - RA	11215702-072821-BN-SJSB095 (4-6)	64
320-76901-4	11215702-072821-BN-SJSB095 (6-8)	53
320-76901-4 - RA	11215702-072821-BN-SJSB095 (6-8)	60
320-76901-5	11215702-072821-BN-SJSB095 (8-10)	50
320-76901-5 - RA	11215702-072821-BN-SJSB095 (8-10)	53
320-76901-6	11215702-072821-BN-SJSB095 (10-12)	57
320-76901-6 - RA	11215702-072821-BN-SJSB095 (10-12)	63
320-76901-7	11215702-072821-BN-SJSB095 (12-14)	52
320-76901-7 - RA	11215702-072821-BN-SJSB095 (12-14)	58
320-76901-8 - RA	11215702-072821-BN-SJSB095 (14-16)	48
320-76901-8	11215702-072821-BN-SJSB095 (14-16)	48
320-76901-13	11215702-072821-BN-DUP-10	49
320-76901-13 - RA	11215702-072821-BN-DUP-10	54
MB 320-513879/1-A	Method Blank	46
MB 320-513879/1-A - RA	Method Blank	50

Percent Surrogate Recovery (Acceptance Limits)

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	37TCDD (31-191)
LCS 320-513879/2-A	Lab Control Sample	47

Percent Surrogate Recovery (Acceptance Limits)

Surrogate Legend

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-76901-1
Project/Site: SJRWP Supplemental Design Investigation

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76901-1	11215702-072821-BN-SJSB095	33	34	29	33	36	36	33	43
320-76901-1 - RA	11215702-072821-BN-SJSB095 (0-2)		31						
320-76901-2	11215702-072821-BN-SJSB095 (2-4)	47	47	46	43	43	53	47	55
320-76901-2 - RA	11215702-072821-BN-SJSB095 (2-4)		46						
320-76901-2 MS	11215702-072821-BN-SJSB095 (2-4)	41	38	39	39	43	44	39	50
320-76901-2 MS - RA	11215702-072821-BN-SJSB095 (2-4)		43						
320-76901-2 MSD	11215702-072821-BN-SJSB095 (2-4)	46	43	43	45	48	57	56	67
320-76901-2 MSD - RA	11215702-072821-BN-SJSB095 (2-4)		50						
320-76901-3	11215702-072821-BN-SJSB095 (4-6)	45	44	43	42	47	56	50	59
320-76901-3 - RA	11215702-072821-BN-SJSB095 (4-6)		48						
320-76901-4	11215702-072821-BN-SJSB095 (6-8)	42	44	41	43	46	48	44	52
320-76901-4 - RA	11215702-072821-BN-SJSB095 (6-8)		47						
320-76901-5	11215702-072821-BN-SJSB095 (8-10)	40	41	41	40	46	44	42	51
320-76901-5 - RA	11215702-072821-BN-SJSB095 (8-10)		45						
320-76901-6	11215702-072821-BN-SJSB095 (10-12)	45	49	50	54	58	55	52	62
320-76901-6 - RA	11215702-072821-BN-SJSB095 (10-12)		49						
320-76901-7	11215702-072821-BN-SJSB095 (12-14)	38	38	34	37	39	45	42	50
320-76901-7 - RA	11215702-072821-BN-SJSB095 (12-14)		43						
320-76901-8 - RA	11215702-072821-BN-SJSB095 (14-16)		44						
320-76901-8	11215702-072821-BN-SJSB095 (14-16)	41	39	42	41	41	40	37	41
320-76901-13	11215702-072821-BN-DUP-10	38	36	37	36	39	42	39	45
320-76901-13 - RA	11215702-072821-BN-DUP-10		39						
MB 320-513879/1-A	Method Blank	36	36	35	36	40	40	39	47
MB 320-513879/1-A - RA	Method Blank		37						

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76901-1	11215702-072821-BN-SJSB095	37	32	34	33 q	36	39	37
320-76901-1 - RA	11215702-072821-BN-SJSB095 (0-2)							
320-76901-2	11215702-072821-BN-SJSB095 (2-4)	49	41	45	53	49	59	56
320-76901-2 - RA	11215702-072821-BN-SJSB095 (2-4)							
320-76901-2 MS	11215702-072821-BN-SJSB095 (2-4)	46	40	41	47	46	50	42

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76901-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76901-2 MS - RA	11215702-072821-BN-SJSB095							
320-76901-2 MSD	11215702-072821-BN-SJSB095 (2-4)	56	41	50	55	55	61	62
320-76901-2 MSD - RA	11215702-072821-BN-SJSB095 (2-4)							
320-76901-3	11215702-072821-BN-SJSB095 (4-6)	55	47	53	54	54	55	49
320-76901-3 - RA	11215702-072821-BN-SJSB095 (4-6)							
320-76901-4	11215702-072821-BN-SJSB095 (6-8)	49	43	45	47	45	49	42
320-76901-4 - RA	11215702-072821-BN-SJSB095 (6-8)							
320-76901-5	11215702-072821-BN-SJSB095 (8-10)	45	42	41	42	45	48	45
320-76901-5 - RA	11215702-072821-BN-SJSB095 (8-10)							
320-76901-6	11215702-072821-BN-SJSB095 (10-12)	53	50	51	54	52	61	52
320-76901-6 - RA	11215702-072821-BN-SJSB095 (10-12)							
320-76901-7	11215702-072821-BN-SJSB095 (12-14)	44	41	42	50	48	53	47
320-76901-7 - RA	11215702-072821-BN-SJSB095 (12-14)							
320-76901-8 - RA	11215702-072821-BN-SJSB095 (14-16)							
320-76901-8	11215702-072821-BN-SJSB095 (14-16)	36	39	38	43	39	46	43
320-76901-13	11215702-072821-BN-DUP-10	42	37	38	42	41	45	34
320-76901-13 - RA	11215702-072821-BN-DUP-10							
MB 320-513879/1-A	Method Blank	43	39	38	41	41	42	36
MB 320-513879/1-A - RA	Method Blank							

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76901-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**TCDD (20-175)**	**TCDF (22-152)**	**PeCDD (21-227)**	**PeCDF (21-192)**	**PeCF (13-328)**	**HxCDD (21-193)**	**HxDD (25-163)**	**HxCDF (19-202)**
LCS 320-513879/2-A	Lab Control Sample	34	36	34	31	36	37	35	42

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**HxDF (21-159)**	**HxCF (17-205)**	**13CHxCF (22-176)**	**HpCDD (26-166)**	**HpCDF (21-158)**	**HpCDF2 (20-186)**	**OCDD (13-199)**	
LCS 320-513879/2-A	Lab Control Sample	37	32	33	36	35	40	39	

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Analysis Batch: 517891

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513879

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.073	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8-PeCDD	ND		5.0	0.067	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8-PeCDF	ND		5.0	0.052	pg/g		08/06/21 12:58	08/19/21 16:27	1
2,3,4,7,8-PeCDF	ND		5.0	0.055	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.042	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.046	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.041	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.021	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.020	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.020	pg/g		08/06/21 12:58	08/19/21 16:27	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.022	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,6,7,8-HpCDD	0.338	J	5.0	0.032	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,6,7,8-HpCDF	0.177	J	5.0	0.038	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.041	pg/g		08/06/21 12:58	08/19/21 16:27	1
OCDD	1.21	J	10	0.029	pg/g		08/06/21 12:58	08/19/21 16:27	1
OCDF	ND		10	0.12	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total TCDD	ND		1.0	0.14	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total TCDF	4.06		1.0	0.047	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total PeCDD	ND		5.0	0.21	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total PeCDF	ND		5.0	0.055	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HxCDD	ND		5.0	0.19	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HxCDF	ND		5.0	0.040	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HpCDD	0.546	J	5.0	0.032	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HpCDF	0.177	J	5.0	0.039	pg/g		08/06/21 12:58	08/19/21 16:27	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*36*		*25 - 164*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,7,8-TCDF	*36*		*24 - 169*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8-PeCDD	*35*		*25 - 181*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8-PeCDF	*36*		*24 - 185*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,4,7,8-PeCDF	*40*		*21 - 178*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,7,8-HxCDD	*40*		*32 - 141*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,6,7,8-HxCDD	*39*		*28 - 130*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,7,8-HxCDF	*47*		*26 - 152*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,6,7,8-HxCDF	*43*		*26 - 123*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8,9-HxCDF	*39*		*29 - 147*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,4,6,7,8-HxCDF	*38*		*28 - 136*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*41*		*23 - 140*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*41*		*28 - 143*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*42*		*26 - 138*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-OCDD	*36*		*17 - 157*	*08/06/21 12:58*	*08/19/21 16:27*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*46*		*35 - 197*	*08/06/21 12:58*	*08/19/21 16:27*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-513879/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517462 **Prep Batch: 513879**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	22.3		pg/g		111	67 - 158
2,3,7,8-TCDF	20.0	23.1	B	pg/g		115	75 - 158
1,2,3,7,8-PeCDD	100	113		pg/g		113	70 - 142
1,2,3,7,8-PeCDF	100	117		pg/g		117	80 - 134
2,3,4,7,8-PeCDF	100	109		pg/g		109	68 - 160
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	70 - 164
1,2,3,6,7,8-HxCDD	100	112		pg/g		112	76 - 134
1,2,3,7,8,9-HxCDD	100	109		pg/g		109	64 - 162
1,2,3,4,7,8-HxCDF	100	114		pg/g		114	72 - 134
1,2,3,6,7,8-HxCDF	100	120		pg/g		120	84 - 130
1,2,3,7,8,9-HxCDF	100	118		pg/g		118	78 - 130
2,3,4,6,7,8-HxCDF	100	121		pg/g		121	70 - 156
1,2,3,4,6,7,8-HpCDD	100	111	B	pg/g		111	70 - 140
1,2,3,4,6,7,8-HpCDF	100	118	B	pg/g		118	82 - 122
1,2,3,4,7,8,9-HpCDF	100	108		pg/g		108	78 - 138
OCDD	200	232	B	pg/g		116	78 - 144
OCDF	200	243		pg/g		122	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*34*		*20 - 175*
13C-2,3,7,8-TCDF	*36*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*34*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*31*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*36*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*37*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*35*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*42*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*37*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*32*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*33*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*36*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*35*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*40*		*20 - 186*
13C-OCDD	*39*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*47*		*31 - 191*

Lab Sample ID: 320-76901-2 MS **Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517462 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	42		27.3	73.3		pg/g	☼	113	67 - 158
1,2,3,7,8-PeCDD	ND		136	151		pg/g	☼	110	70 - 142
1,2,3,7,8-PeCDF	ND		136	161		pg/g	☼	118	80 - 134
2,3,4,7,8-PeCDF	ND		136	143		pg/g	☼	104	68 - 160
1,2,3,4,7,8-HxCDD	ND		136	132		pg/g	☼	97	70 - 164

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76901-2 MS **Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517462 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	ND		136	140		pg/g	☼	103	76 - 134
1,2,3,7,8,9-HxCDD	ND		136	152		pg/g	☼	111	64 - 162
1,2,3,4,7,8-HxCDF	7.0		136	158		pg/g	☼	111	72 - 134
1,2,3,6,7,8-HxCDF	1.6	J q	136	154		pg/g	☼	111	84 - 130
1,2,3,7,8,9-HxCDF	ND		136	155		pg/g	☼	113	78 - 130
2,3,4,6,7,8-HxCDF	ND		136	160		pg/g	☼	117	70 - 156
1,2,3,4,6,7,8-HpCDD	60	B	136	197	B	pg/g	☼	100	70 - 140
1,2,3,4,6,7,8-HpCDF	4.4	J q B	136	156	B	pg/g	☼	111	82 - 122
1,2,3,4,7,8,9-HpCDF	2.0	J	136	144		pg/g	☼	104	78 - 138
OCDD	1700	B	273	1650	4 B	pg/g	☼	-24	78 - 144
OCDF	18	q	273	279		pg/g	☼	96	63 - 170

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*41*		*25 - 164*
13C-2,3,7,8-TCDF	*38*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*39*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*39*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*43*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*44*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*39*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*50*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*46*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*40*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*41*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*47*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*46*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*50*		*26 - 138*
13C-OCDD	*42*		*17 - 157*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*50*		*35 - 197*

Lab Sample ID: 320-76901-2 MSD **Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517462 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	42		27.0	65.4		pg/g	☼	85	67 - 158	11	50
1,2,3,7,8-PeCDD	ND		135	151		pg/g	☼	112	70 - 142	0	50
1,2,3,7,8-PeCDF	ND		135	161		pg/g	☼	120	80 - 134	0	50
2,3,4,7,8-PeCDF	ND		135	147		pg/g	☼	109	68 - 160	3	50
1,2,3,4,7,8-HxCDD	ND		135	137		pg/g	☼	101	70 - 164	4	50
1,2,3,6,7,8-HxCDD	ND		135	142		pg/g	☼	106	76 - 134	2	50
1,2,3,7,8,9-HxCDD	ND		135	119		pg/g	☼	89	64 - 162	24	50
1,2,3,4,7,8-HxCDF	7.0		135	153		pg/g	☼	108	72 - 134	3	50
1,2,3,6,7,8-HxCDF	1.6	J q	135	161		pg/g	☼	119	84 - 130	5	50
1,2,3,7,8,9-HxCDF	ND		135	155		pg/g	☼	115	78 - 130	0	50
2,3,4,6,7,8-HxCDF	ND		135	164		pg/g	☼	122	70 - 156	3	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76901-2 MSD **Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517462 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	60	B	135	193	B	pg/g	☼	98	70 - 140	2	50
1,2,3,4,6,7,8-HpCDF	4.4	J q B	135	152	B	pg/g	☼	110	82 - 122	3	50
1,2,3,4,7,8,9-HpCDF	2.0	J	135	144		pg/g	☼	105	78 - 138	0	50
OCDD	1700	B	270	1450	4 B	pg/g	☼	-99	78 - 144	13	50
OCDF	18	q	270	326		pg/g	☼	114	63 - 170	16	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*46*		*25 - 164*
13C-2,3,7,8-TCDF	*43*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*43*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*45*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*48*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*57*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*56*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*67*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*56*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*41*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*50*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*55*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*55*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*61*		*26 - 138*
13C-OCDD	*62*		*17 - 157*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*57*		*35 - 197*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: MB 320-513879/1-A **Client Sample ID: Method Blank**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519438 **Prep Batch: 513879**

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF - RA	2.39		1.0	0.22	pg/g		08/06/21 12:58	08/24/21 10:23	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF - RA	*37*		*24 - 169*	*08/06/21 12:58*	*08/24/21 10:23*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD - RA	*50*		*35 - 197*	*08/06/21 12:58*	*08/24/21 10:23*	*1*

Lab Sample ID: 320-76901-2 MS **Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 520438 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDF - RA	140	B	27.3	200	4 B	pg/g	☼	210	75 - 158

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA (Continued)

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C-2,3,7,8-TCDF - RA	43		24 - 169

Surrogate	MS %Recovery	MS Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	58		35 - 197

Lab Sample ID: 320-76901-2 MSD **Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 520438 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	140	B	27.0	172	4 B	pg/g	☼	110	75 - 158	15	50

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDF - RA	50		24 - 169

Surrogate	MSD %Recovery	MSD Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	65		35 - 197

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-76901-2 DU **Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 511711

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	27.3			31.3		%				14	20
Percent Solids	72.7			68.7		%				6	20

Specialty Organics

Prep Batch: 513879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-1 - RA	11215702-072821-BN-SJSB095 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76901-1	11215702-072821-BN-SJSB095 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-76901-2 - RA	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76901-2	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76901-3 - RA	11215702-072821-BN-SJSB095 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-76901-3	11215702-072821-BN-SJSB095 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-76901-4 - RA	11215702-072821-BN-SJSB095 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-76901-4	11215702-072821-BN-SJSB095 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-76901-5 - RA	11215702-072821-BN-SJSB095 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-76901-5	11215702-072821-BN-SJSB095 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-76901-6 - RA	11215702-072821-BN-SJSB095 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-76901-6	11215702-072821-BN-SJSB095 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-76901-7 - RA	11215702-072821-BN-SJSB095 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-76901-7	11215702-072821-BN-SJSB095 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-76901-8	11215702-072821-BN-SJSB095 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-76901-8 - RA	11215702-072821-BN-SJSB095 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-76901-13 - RA	11215702-072821-BN-DUP-10	Total/NA	Sediment	HRMS-Sox	
320-76901-13	11215702-072821-BN-DUP-10	Total/NA	Sediment	HRMS-Sox	
MB 320-513879/1-A - RA	Method Blank	Total/NA	Sediment	HRMS-Sox	
MB 320-513879/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-513879/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-76901-2 MS - RA	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76901-2 MS	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76901-2 MSD - RA	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-76901-2 MSD	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	HRMS-Sox	

Analysis Batch: 517462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-2	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	1613B	513879
LCS 320-513879/2-A	Lab Control Sample	Total/NA	Sediment	1613B	513879
320-76901-2 MS	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	1613B	513879
320-76901-2 MSD	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	1613B	513879

Analysis Batch: 517891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-3	11215702-072821-BN-SJSB095 (4-6)	Total/NA	Sediment	1613B	513879
320-76901-4	11215702-072821-BN-SJSB095 (6-8)	Total/NA	Sediment	1613B	513879
320-76901-5	11215702-072821-BN-SJSB095 (8-10)	Total/NA	Sediment	1613B	513879
320-76901-6	11215702-072821-BN-SJSB095 (10-12)	Total/NA	Sediment	1613B	513879
320-76901-7	11215702-072821-BN-SJSB095 (12-14)	Total/NA	Sediment	1613B	513879
320-76901-13	11215702-072821-BN-DUP-10	Total/NA	Sediment	1613B	513879
MB 320-513879/1-A	Method Blank	Total/NA	Sediment	1613B	513879

Analysis Batch: 518043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-1	11215702-072821-BN-SJSB095 (0-2)	Total/NA	Sediment	1613B	513879

Analysis Batch: 519438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-513879/1-A - RA	Method Blank	Total/NA	Sediment	1613B	513879

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-76901-1
Project/Site: SJRWP Supplemental Design Investigation

Specialty Organics

Analysis Batch: 520438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-2 - RA	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	1613B	513879
320-76901-6 - RA	11215702-072821-BN-SJSB095 (10-12)	Total/NA	Sediment	1613B	513879
320-76901-13 - RA	11215702-072821-BN-DUP-10	Total/NA	Sediment	1613B	513879
320-76901-2 MS - RA	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	1613B	513879
320-76901-2 MSD - RA	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	1613B	513879

Analysis Batch: 520456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-1 - RA	11215702-072821-BN-SJSB095 (0-2)	Total/NA	Sediment	1613B	513879
320-76901-3 - RA	11215702-072821-BN-SJSB095 (4-6)	Total/NA	Sediment	1613B	513879
320-76901-4 - RA	11215702-072821-BN-SJSB095 (6-8)	Total/NA	Sediment	1613B	513879
320-76901-5 - RA	11215702-072821-BN-SJSB095 (8-10)	Total/NA	Sediment	1613B	513879
320-76901-7 - RA	11215702-072821-BN-SJSB095 (12-14)	Total/NA	Sediment	1613B	513879
320-76901-8 - RA	11215702-072821-BN-SJSB095 (14-16)	Total/NA	Sediment	1613B	513879

Analysis Batch: 521465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-8	11215702-072821-BN-SJSB095 (14-16)	Total/NA	Sediment	1613B	513879

General Chemistry

Analysis Batch: 511711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-1	11215702-072821-BN-SJSB095 (0-2)	Total/NA	Sediment	D 2216	
320-76901-2	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	D 2216	
320-76901-3	11215702-072821-BN-SJSB095 (4-6)	Total/NA	Sediment	D 2216	
320-76901-4	11215702-072821-BN-SJSB095 (6-8)	Total/NA	Sediment	D 2216	
320-76901-5	11215702-072821-BN-SJSB095 (8-10)	Total/NA	Sediment	D 2216	
320-76901-6	11215702-072821-BN-SJSB095 (10-12)	Total/NA	Sediment	D 2216	
320-76901-7	11215702-072821-BN-SJSB095 (12-14)	Total/NA	Sediment	D 2216	
320-76901-8	11215702-072821-BN-SJSB095 (14-16)	Total/NA	Sediment	D 2216	
320-76901-13	11215702-072821-BN-DUP-10	Total/NA	Sediment	D 2216	
320-76901-2 DU	11215702-072821-BN-SJSB095 (2-4)	Total/NA	Sediment	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (0-2)
Lab Sample ID: 320-76901-1
Date Collected: 07/28/21 11:00
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511711	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (0-2)
Lab Sample ID: 320-76901-1
Date Collected: 07/28/21 11:00
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 56.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/28/21 02:30	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		10	518043	08/20/21 08:44	KSS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)
Lab Sample ID: 320-76901-2
Date Collected: 07/28/21 11:05
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511711	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)
Lab Sample ID: 320-76901-2
Date Collected: 07/28/21 11:05
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 72.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520438	08/27/21 12:13	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517462	08/19/21 05:30	KSS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (4-6)
Lab Sample ID: 320-76901-3
Date Collected: 07/28/21 11:10
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511711	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (4-6)
Lab Sample ID: 320-76901-3
Date Collected: 07/28/21 11:10
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 75.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/27/21 17:33	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517891	08/19/21 18:03	KSS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (6-8)
Lab Sample ID: 320-76901-4
Date Collected: 07/28/21 11:15
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511711	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (6-8)
Lab Sample ID: 320-76901-4
Date Collected: 07/28/21 11:15
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/27/21 18:11	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517891	08/19/21 18:51	KSS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (8-10)
Lab Sample ID: 320-76901-5
Date Collected: 07/28/21 11:20
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511711	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (8-10)
Lab Sample ID: 320-76901-5
Date Collected: 07/28/21 11:20
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 76.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/28/21 01:52	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517891	08/19/21 19:39	KSS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (10-12)
Lab Sample ID: 320-76901-6
Date Collected: 07/28/21 11:25
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511711	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (10-12)
Lab Sample ID: 320-76901-6
Date Collected: 07/28/21 11:25
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 76.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520438	08/27/21 11:35	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517891	08/19/21 20:27	KSS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Client Sample ID: 11215702-072821-BN-SJSB095 (12-14)
Lab Sample ID: 320-76901-7
Date Collected: 07/28/21 11:30
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511711	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (12-14)
Lab Sample ID: 320-76901-7
Date Collected: 07/28/21 11:30
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 76.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/27/21 18:50	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517891	08/19/21 21:15	KSS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (14-16)
Lab Sample ID: 320-76901-8
Date Collected: 07/28/21 11:35
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511711	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (14-16)
Lab Sample ID: 320-76901-8
Date Collected: 07/28/21 11:35
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 75.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	521465	08/31/21 00:25	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/27/21 19:28	DB	TAL SAC

Client Sample ID: 11215702-072821-BN-DUP-10
Lab Sample ID: 320-76901-13
Date Collected: 07/28/21 00:00
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511711	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072821-BN-DUP-10
Lab Sample ID: 320-76901-13
Date Collected: 07/28/21 00:00
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 81.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520438	08/27/21 10:57	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517891	08/19/21 23:38	KSS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Job ID: 320-76901-1
Project/Site: SJRWP Supplemental Design Investigation

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-76901-1
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDD
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDF
1613B	HRMS-Sox	Sediment	OCDD
1613B	HRMS-Sox	Sediment	OCDF
1613B	HRMS-Sox	Sediment	Total HpCDD
1613B	HRMS-Sox	Sediment	Total HpCDF
1613B	HRMS-Sox	Sediment	Total HxCDD
1613B	HRMS-Sox	Sediment	Total HxCDF
1613B	HRMS-Sox	Sediment	Total PeCDD
1613B	HRMS-Sox	Sediment	Total PeCDF
1613B	HRMS-Sox	Sediment	Total TCDD
1613B	HRMS-Sox	Sediment	Total TCDF
D 2216		Sediment	Percent Moisture
D 2216		Sediment	Percent Solids
TEQ		Sediment	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76901-1	11215702-072821-BN-SJSB095 (0-2)	Sediment	07/28/21 11:00	07/29/21 09:45
320-76901-2	11215702-072821-BN-SJSB095 (2-4)	Sediment	07/28/21 11:05	07/29/21 09:45
320-76901-3	11215702-072821-BN-SJSB095 (4-6)	Sediment	07/28/21 11:10	07/29/21 09:45
320-76901-4	11215702-072821-BN-SJSB095 (6-8)	Sediment	07/28/21 11:15	07/29/21 09:45
320-76901-5	11215702-072821-BN-SJSB095 (8-10)	Sediment	07/28/21 11:20	07/29/21 09:45
320-76901-6	11215702-072821-BN-SJSB095 (10-12)	Sediment	07/28/21 11:25	07/29/21 09:45
320-76901-7	11215702-072821-BN-SJSB095 (12-14)	Sediment	07/28/21 11:30	07/29/21 09:45
320-76901-8	11215702-072821-BN-SJSB095 (14-16)	Sediment	07/28/21 11:35	07/29/21 09:45
320-76901-13	11215702-072821-BN-DUP-10	Sediment	07/28/21 00:00	07/29/21 09:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: WDM 320-510264/1 Client Sample ID:

Date Analyzed: 07/26/21 09:21 Lab File ID: 26JL2110D5_1.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,6,8-TCDF	15.13	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,6,8-TCDD	16.07	Peak assignment corrected	arghestanis	07/26/21 12:21
2,3,4,7-TCDF	17.63	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,7-TCDD	18.22	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDD	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDF	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,8,9-TCDD	19.47	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,8,9-TCDF	19.49	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,4,6,8-PeCDF	19.76	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,4,7,9-PeCDD	21.58	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDD	25.91	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDF	26.14	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,8-HxCDF	28.48	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,4,6,7,9-HxCDD	30.02	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,7-HxCDD	32.30	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,3,4,8,9-HxCDF	32.61	Peak assignment corrected	arghestanis	07/26/21 12:23

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: IC 320-510264/3 Client Sample ID:

Date Analyzed: 07/26/21 10:51 Lab File ID: 26JL2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.35	Invalid Compound ID	stephensk	07/27/21 08:15

Lab Sample ID: IC 320-510264/4 Client Sample ID:

Date Analyzed: 07/26/21 11:36 Lab File ID: 26JL2110D5_4.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,4,7,8-PeCDF	24.13	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDF	30.84	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDD	31.93	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8,9-HpCDF	35.01	Peak assignment corrected	arghestanis	07/26/21 12:31

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 521465

Lab Sample ID: 320-76901-8 Client Sample ID: 11215702-072821-BN-SJSB095 (14-16)

Date Analyzed: 08/31/21 00:25 Lab File ID: 30AU2110D5_18.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDD	24.00	Split Peak	dadunj	09/01/21 09:32
1,2,3,7,8,9-HxCDD	31.92	Split Peak	dadunj	09/01/21 09:33
1,2,3,4,6,7,8-HpCDF	33.60	Split Peak	dadunj	09/01/21 09:33
1,2,3,4,7,8,9-HpCDF	34.66	Split Peak	dadunj	09/01/21 09:33
OCDF	36.79	Split Peak	dadunj	09/01/21 09:33

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 520438

Lab Sample ID: 320-76901-13 RA Client Sample ID: 11215702-072821-BN-DUP-10 RA

Date Analyzed: 08/27/21 10:57 Lab File ID: 27AU2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.66	Peak Tail	bennettd	08/27/21 15:48

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 520456

Lab Sample ID: 320-76901-7 RA Client Sample ID: 11215702-072821-BN-SJSB095 (12-14) RA

Date Analyzed: 08/27/21 18:50 Lab File ID: 27AU21A11D2_006.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.67	Peak Tail	bennettd	08/30/21 09:40

Lab Sample ID: 320-76901-1 RA Client Sample ID: 11215702-072821-BN-SJSB095 (0-2) RA

Date Analyzed: 08/28/21 02:30 Lab File ID: 27AU21A11D2_018.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.25	Missed Peak	bennettd	08/30/21 09:49
13C-2,3,7,8-TCDF	17.81	Wrong peak	bennettd	08/30/21 09:50
2,3,7,8-TCDF	17.84	Wrong peak	bennettd	08/30/21 09:50

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517462

Lab Sample ID: CCV 320-517462/43 Client Sample ID:

Date Analyzed: 08/19/21 01:32 Lab File ID: 17au21dfs1_47.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.49	Baseline	stephensk	08/19/21 09:20
2,3,7,8-TCDD	21.84	Baseline	stephensk	08/19/21 09:21
13C-1,2,3,7,8-PeCDD	29.61	Baseline	stephensk	08/19/21 09:21

Lab Sample ID: 320-76901-2 Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)

Date Analyzed: 08/19/21 05:30 Lab File ID: 17au21dfs1_52.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/20/21 09:51
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/20/21 09:51
1,2,3,7,8,9-HxCDD		Invalid Compound ID	dadunj	08/20/21 09:51
1,2,3,7,8-PeCDF		Invalid Compound ID	dadunj	08/20/21 09:50
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/20/21 09:51
2,3,7,8-TCDF	20.41	Incomplete Integration	dadunj	08/20/21 09:50
1,2,3,4,6,7,8-HpCDF	38.63	Split Peak	dadunj	08/20/21 09:51
1,2,3,4,7,8,9-HpCDF	39.89	Split Peak	dadunj	08/20/21 09:51
OCDF	42.15	Split Peak	dadunj	08/20/21 09:51

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517891

Lab Sample ID: WDM 320-517891/1 Client Sample ID:

Date Analyzed: 08/19/21 13:59 Lab File ID: 19au21dfs1_2.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,4,7,9-PeCDD	30.78	Peak assignment corrected	stephensk	08/19/21 15:00
1,2,3,8,9-PeCDF	30.94	Peak assignment corrected	stephensk	08/19/21 15:00

Lab Sample ID: CCV 320-517891/2 Client Sample ID:

Date Analyzed: 08/19/21 14:46 Lab File ID: 19au21dfs1_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,4-TCDD	21.35	Peak assignment corrected	stephensk	08/19/21 15:37
2,3,7,8-TCDD	21.75	Baseline	stephensk	08/19/21 15:38

Lab Sample ID: MB 320-513879/1-A Client Sample ID:

Date Analyzed: 08/19/21 16:27 Lab File ID: 19au21dfs1_5.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 08:54
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 08:54
1,2,3,7,8,9-HxCDD		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,4,7,8-PeCDF		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,7,8-TCDD		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,7,8-TCDF	20.42	Baseline	dadunj	08/23/21 08:53
1,2,3,4,6,7,8-HpCDF	38.62	Split Peak	dadunj	08/23/21 08:55
1,2,3,4,6,7,8-HpCDD	39.57	Split Peak	dadunj	08/23/21 08:55
OCDD	42.07	Baseline	dadunj	08/23/21 08:55

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517891

Lab Sample ID: 320-76901-3 Client Sample ID: 11215702-072821-BN-SJSB095 (4-6)

Date Analyzed: 08/19/21 18:03 Lab File ID: 19au21dfs1_7.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:02
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 09:02
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:03
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 09:02
1,2,3,7,8-PeCDF		Invalid Compound ID	dadunj	08/23/21 09:02
2,3,4,7,8-PeCDF		Invalid Compound ID	dadunj	08/23/21 09:02
OCDF		Invalid Compound ID	dadunj	08/23/21 09:03
2,3,7,8-TCDF	20.36	Incomplete Integration	dadunj	08/23/21 09:02
1,2,3,4,6,7,8-HpCDF	38.64	Split Peak	dadunj	08/23/21 09:03

Lab Sample ID: 320-76901-4 Client Sample ID: 11215702-072821-BN-SJSB095 (6-8)

Date Analyzed: 08/19/21 18:51 Lab File ID: 19au21dfs1_8.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,6,7,8-HpCDF		Invalid Compound ID	dadunj	08/23/21 09:07
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:07
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 09:06
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:07
1,2,3,7,8,9-HxCDF		Invalid Compound ID	dadunj	08/23/21 09:07
1,2,3,7,8-PeCDD		Invalid Compound ID	dadunj	08/23/21 09:06
1,2,3,7,8-PeCDF		Invalid Compound ID	dadunj	08/23/21 09:06
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 09:07
2,3,4,7,8-PeCDF		Invalid Compound ID	dadunj	08/23/21 09:06
2,3,7,8-TCDF	20.44	Baseline	dadunj	08/23/21 09:06
1,2,3,7,8,9-HxCDD	36.61	Invalid Compound ID	dadunj	08/23/21 09:07

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517891

Lab Sample ID: 320-76901-5 Client Sample ID: 11215702-072821-BN-SJSB095 (8-10)

Date Analyzed: 08/19/21 19:39 Lab File ID: 19au21dfs1_9.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	27.32	Split Peak	dadunj	08/23/21 09:10
1,2,3,7,8-PeCDD	29.65	Split Peak	dadunj	08/23/21 09:11
2,3,4,6,7,8-HxCDF	35.93	Incomplete Integration	dadunj	08/23/21 09:11
13C-1,2,3,4,7,8-HxCDD	36.12	Split Peak	dadunj	08/23/21 09:11
1,2,3,4,7,8-HxCDD	36.15	Invalid Compound ID	dadunj	08/23/21 09:11
13C-1,2,3,6,7,8-HxCDD	36.24	Split Peak	dadunj	08/23/21 09:12
1,2,3,6,7,8-HxCDD	36.26	Split Peak	dadunj	08/23/21 09:12
1,2,3,4,6,7,8-HpCDF	38.63	Split Peak	dadunj	08/23/21 09:12

Lab Sample ID: 320-76901-6 Client Sample ID: 11215702-072821-BN-SJSB095 (10-12)

Date Analyzed: 08/19/21 20:27 Lab File ID: 19au21dfs1_10.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:16
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:17
OCDF		Invalid Compound ID	dadunj	08/23/21 09:18
1,2,3,7,8-PeCDF	27.27	Split Peak	dadunj	08/23/21 09:15
2,3,4,7,8-PeCDF	28.78	Split Peak	dadunj	08/23/21 09:15
2,3,4,6,7,8-HxCDF	35.92	Split Peak	dadunj	08/23/21 09:16
1,2,3,7,8,9-HxCDD	36.57	Baseline	dadunj	08/23/21 09:17
1,2,3,7,8,9-HxCDF	36.81	Split Peak	dadunj	08/23/21 09:16
1,2,3,4,6,7,8-HpCDF	38.62	Split Peak	dadunj	08/23/21 09:17
1,2,3,4,7,8,9-HpCDF	39.88	Baseline	dadunj	08/23/21 09:17

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517891

Lab Sample ID: 320-76901-7 Client Sample ID: 11215702-072821-BN-SJSB095 (12-14)

Date Analyzed: 08/19/21 21:15 Lab File ID: 19au21dfs1_11.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8,9-HpCDF		Invalid Compound ID	dadunj	08/23/21 09:21
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:21
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 09:20
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:21
1,2,3,7,8-PeCDF		Invalid Compound ID	dadunj	08/23/21 09:20
2,3,4,7,8-PeCDF		Invalid Compound ID	dadunj	08/23/21 09:20
2,3,7,8-TCDF	20.45	Baseline	dadunj	08/23/21 09:20
2,3,7,8-TCDD	21.76	Baseline	dadunj	08/23/21 09:20
13C-1,2,3,4,7,8-HxCDD	36.12	Invalid Compound ID	dadunj	08/23/21 09:21
13C-1,2,3,6,7,8-HxCDD	36.23	Split Peak	dadunj	08/23/21 09:21
1,2,3,4,6,7,8-HpCDF	38.64	Split Peak	dadunj	08/23/21 09:21

Lab Sample ID: 320-76901-13 Client Sample ID: 11215702-072821-BN-DUP-10

Date Analyzed: 08/19/21 23:38 Lab File ID: 19au21dfs1_14.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8,9-HpCDF		Invalid Compound ID	dadunj	08/23/21 09:27
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:26
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:26
2,3,4,7,8-PeCDF	28.77	Baseline	dadunj	08/23/21 09:25
1,2,3,4,7,8-HxCDF	34.95	Split Peak	dadunj	08/23/21 09:26
1,2,3,6,7,8-HxCDF	35.08	Split Peak	dadunj	08/23/21 09:26
1,2,3,4,6,7,8-HpCDF	38.62	Split Peak	dadunj	08/23/21 09:27
OCDF	42.15	Split Peak	dadunj	08/23/21 09:27

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-1

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 518043

Lab Sample ID: CCV 320-518043/15 Client Sample ID:

Date Analyzed: 08/20/21 01:34 Lab File ID: 19au21dfs1_17.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,4-TCDD	21.40	Peak assignment corrected	arghestanis	08/20/21 09:08

Lab Sample ID: 320-76901-1 Client Sample ID: 11215702-072821-BN-SJSB095 (0-2)

Date Analyzed: 08/20/21 08:44 Lab File ID: 19au21dfs1_26.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 10:01
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 10:01
2,3,7,8-TCDD	21.84	Incomplete Integration	dadunj	08/23/21 09:59
1,2,3,7,8-PeCDF	27.31	Split Peak	dadunj	08/23/21 09:59
1,2,3,7,8-PeCDD	29.63	Baseline	krenns	08/25/21 15:10
2,3,4,6,7,8-HxCDF	35.92	Split Peak	dadunj	08/23/21 10:00
1,2,3,7,8,9-HxCDD	36.57	Split Peak	dadunj	08/23/21 10:02
1,2,3,7,8,9-HxCDF	36.80	Split Peak	dadunj	08/23/21 10:00

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30		CIL, Lot ER09031903		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

788058

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

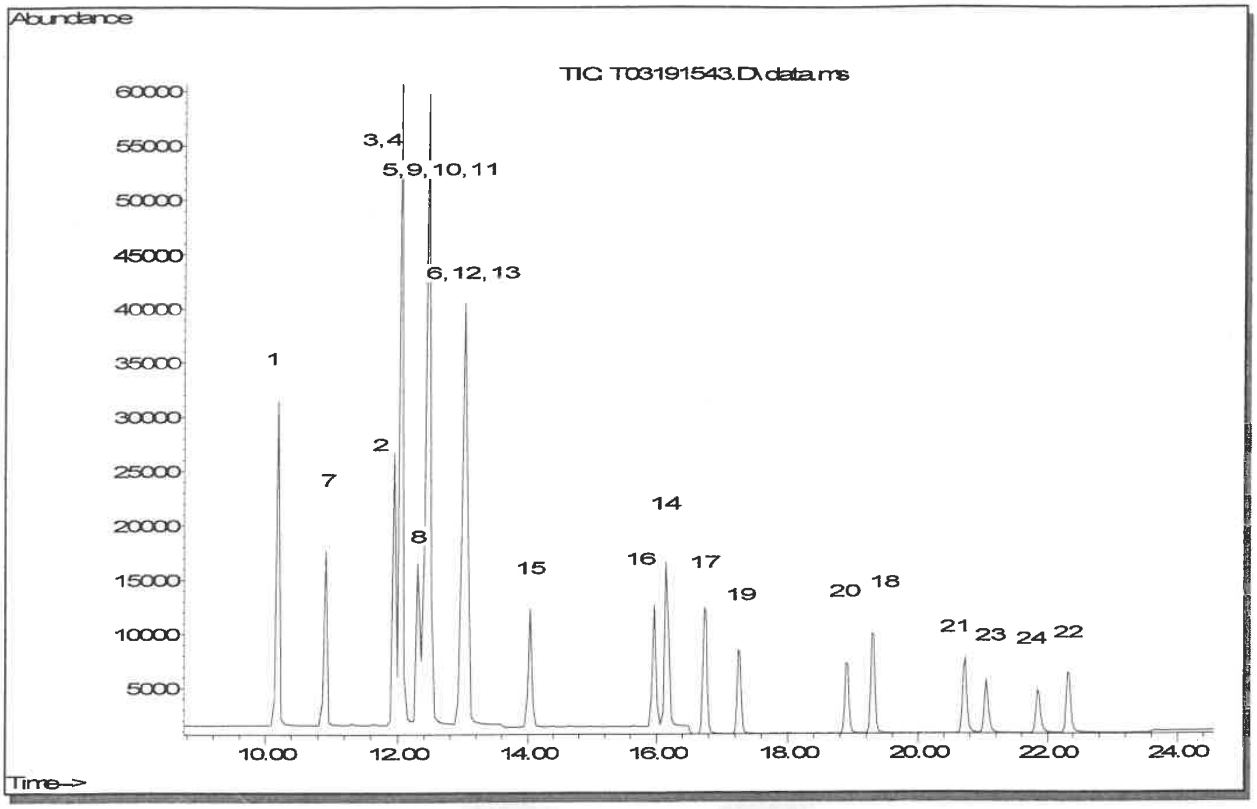

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

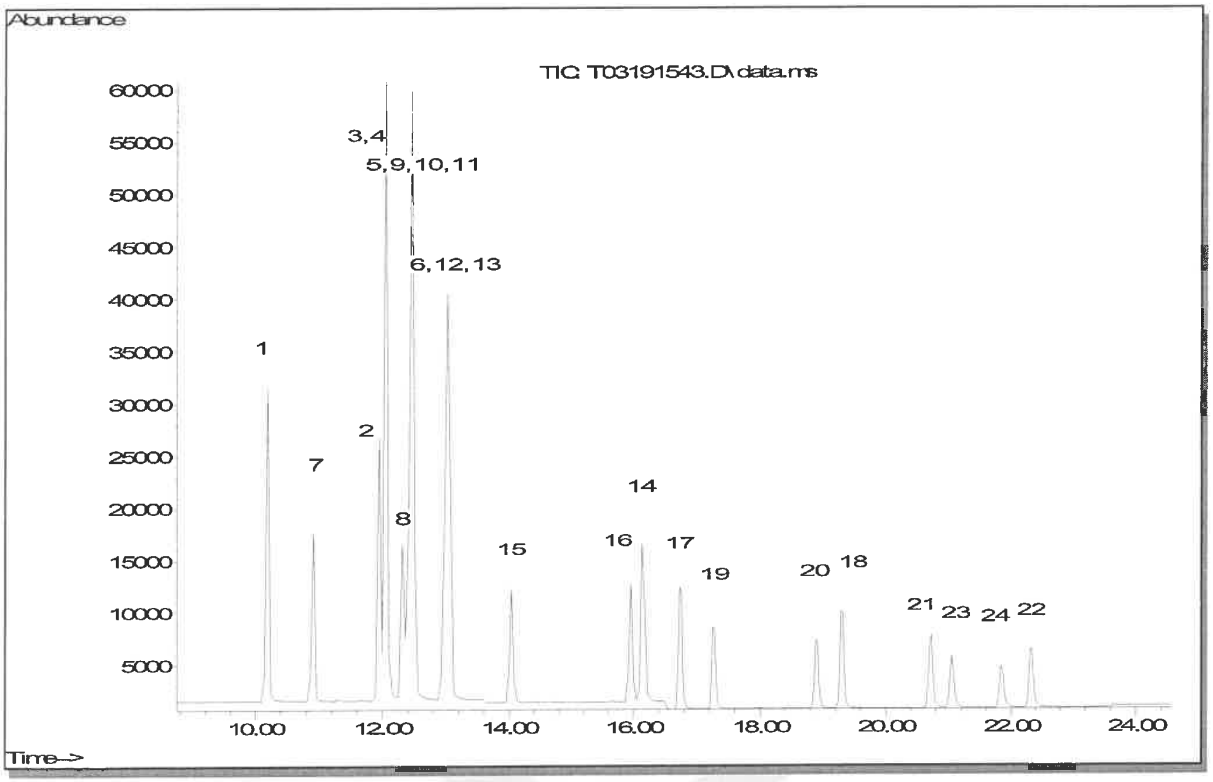

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r: 3/30/20

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

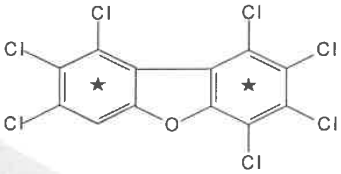

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

788072

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

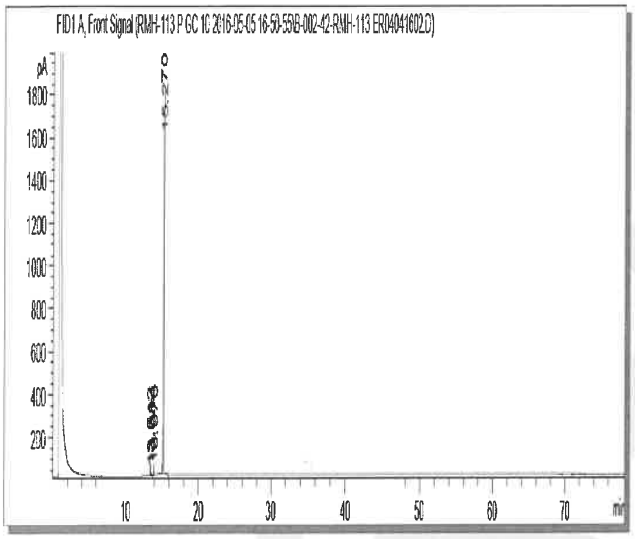

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

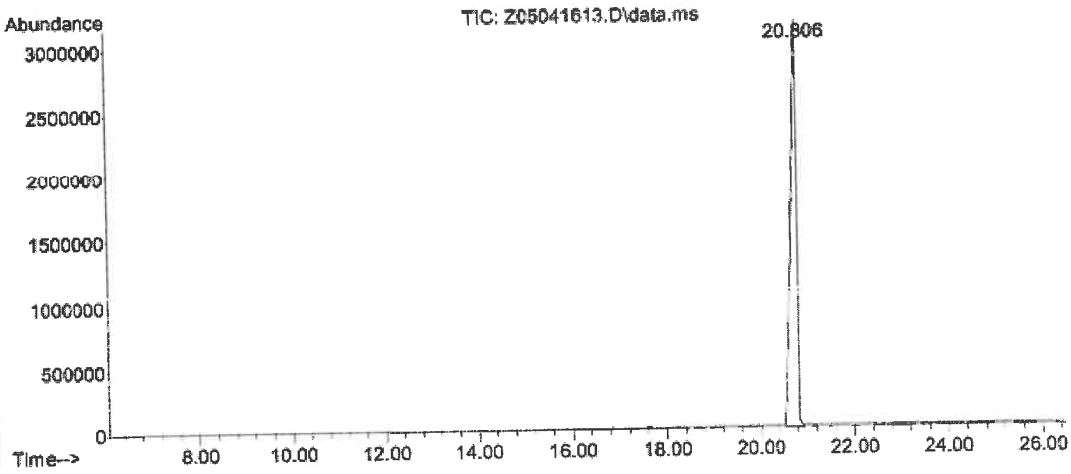

Mass Spectrum

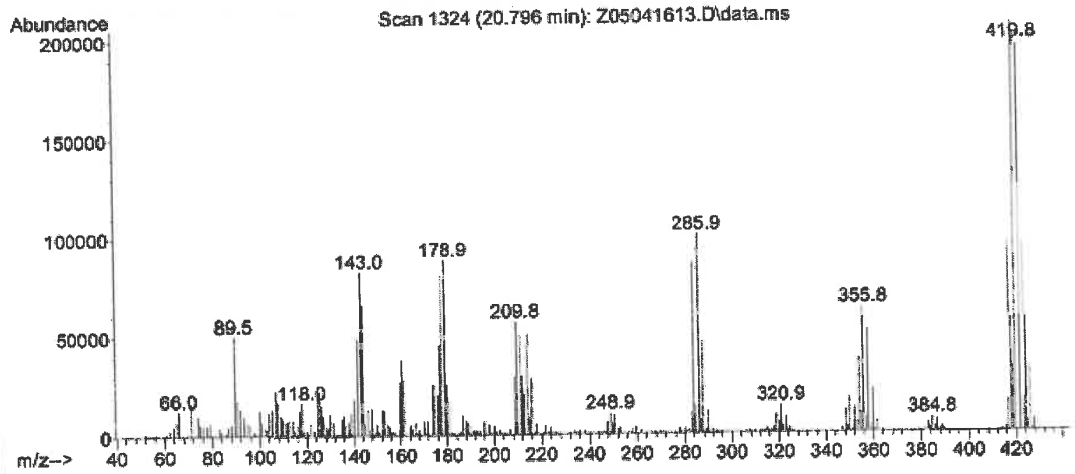

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 SAL

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

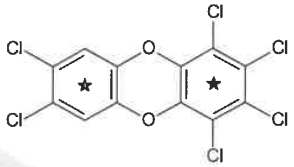

Catalog Number: ED-946
Solution Lot: ER04211601
Expiration Date: June 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

788079

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

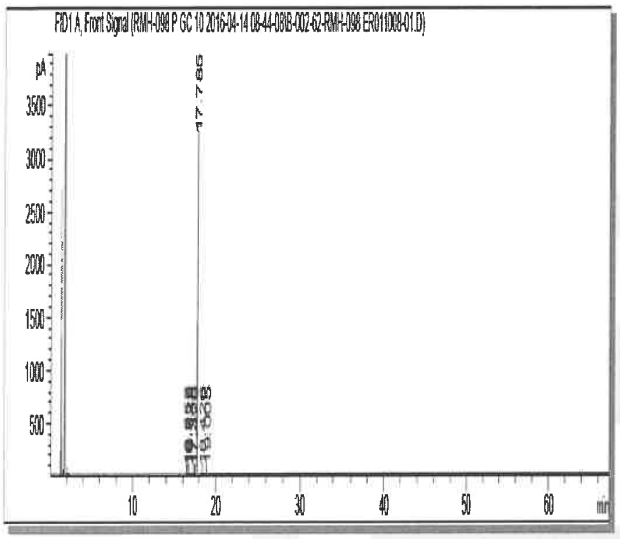

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 50 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Data File Name: RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument: GC#10
Sample Name: ER011008-01
Acquired: April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

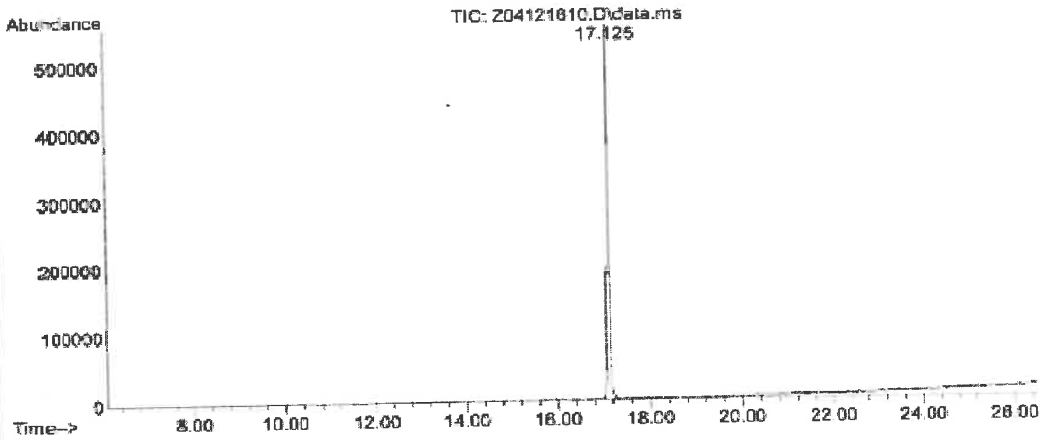

Mass Spectrum

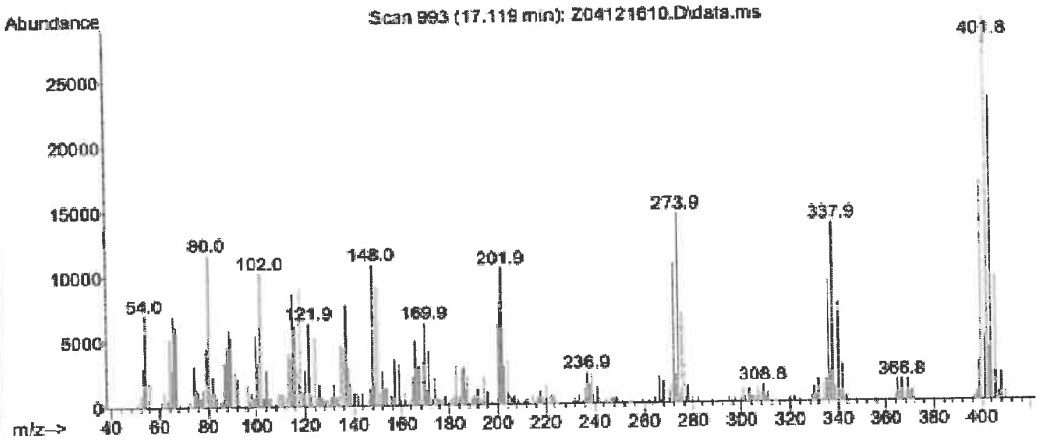

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

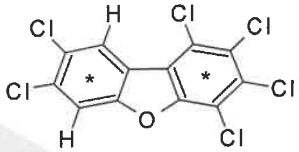

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11281601

Chemical Formula: $^{13}C_{12}Cl_6H_2O$
CAS Number: 114423-98-2
Molecular Weight: 386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

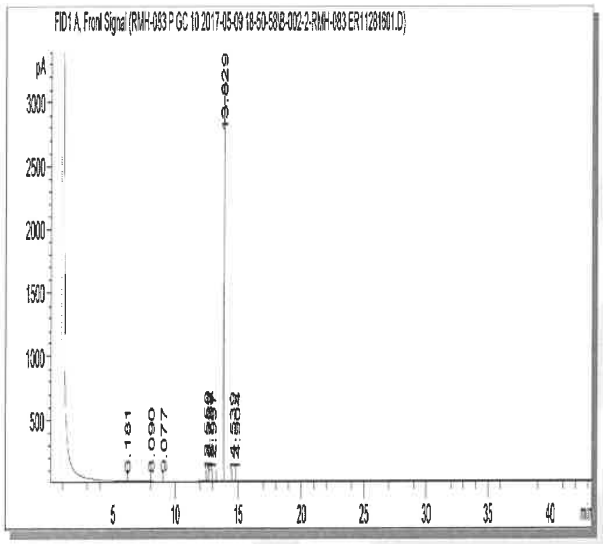

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

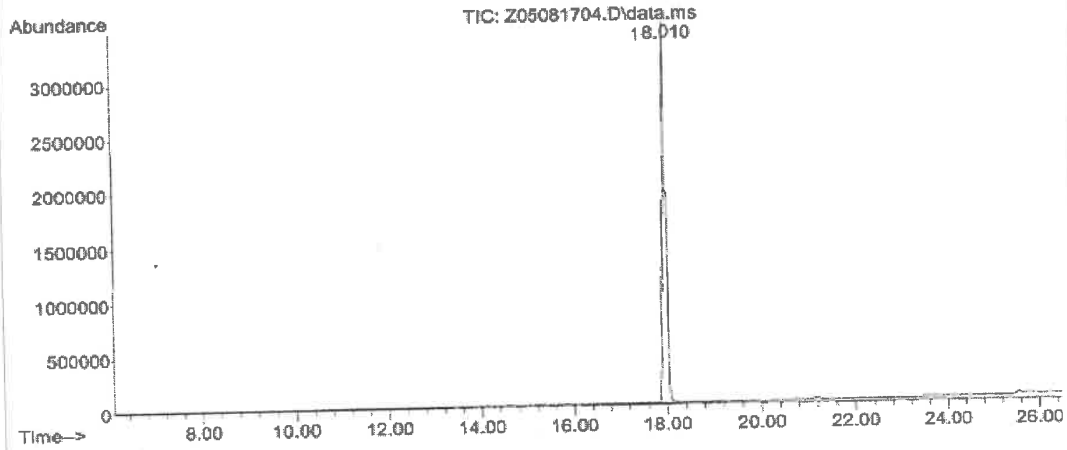

Mass Spectrum

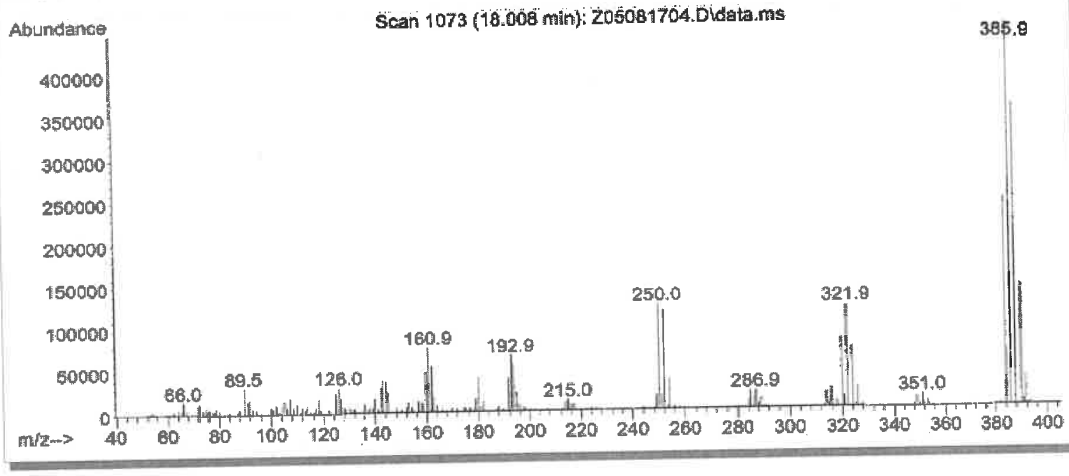

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

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Analytical Reference Standards
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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

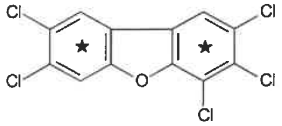

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

788089

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

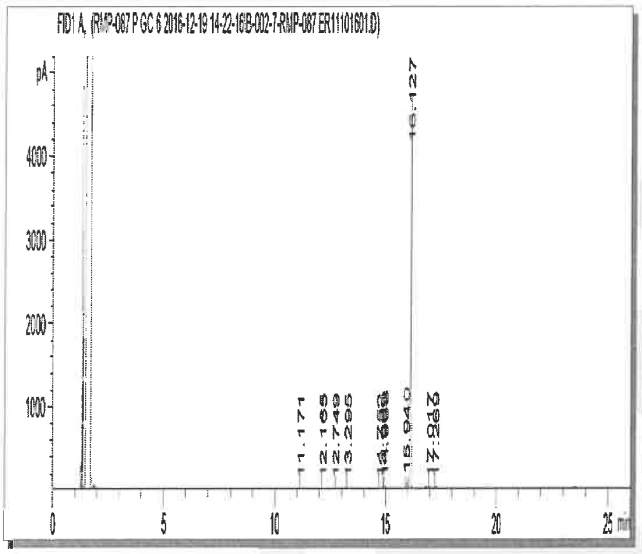

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

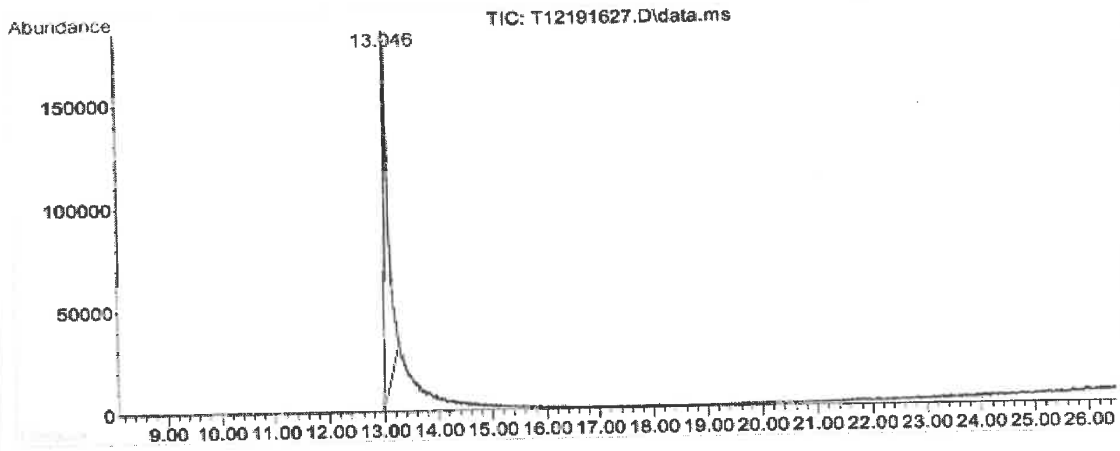

Mass Spectrum

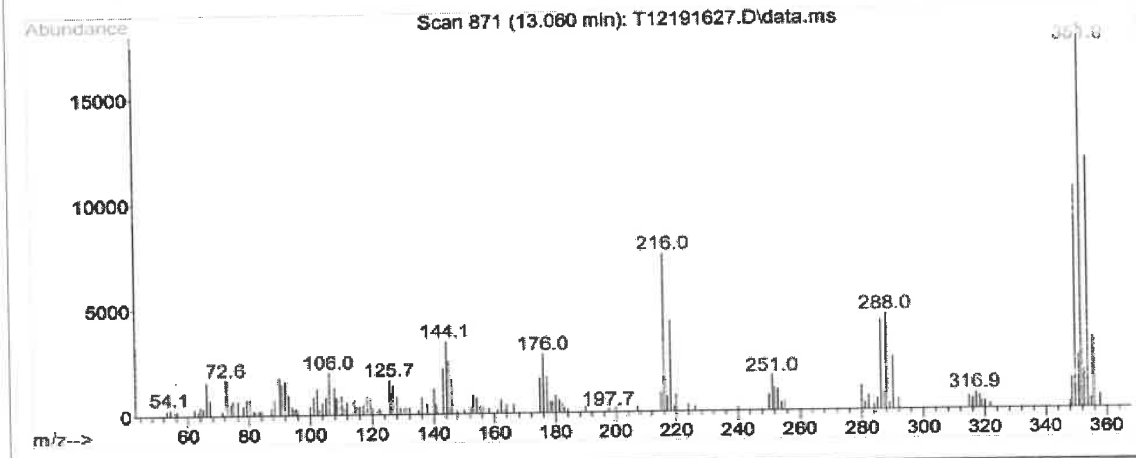

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

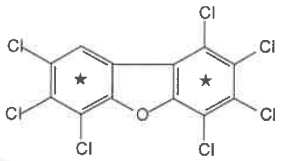

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

788094

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER020507-02

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-84-8
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

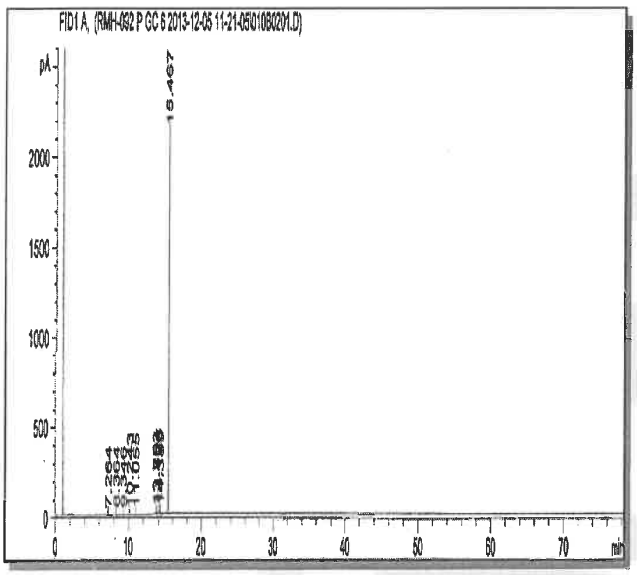

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Data File Name: RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument: GC#6
Sample Name: ER020507-02
Acquired: December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

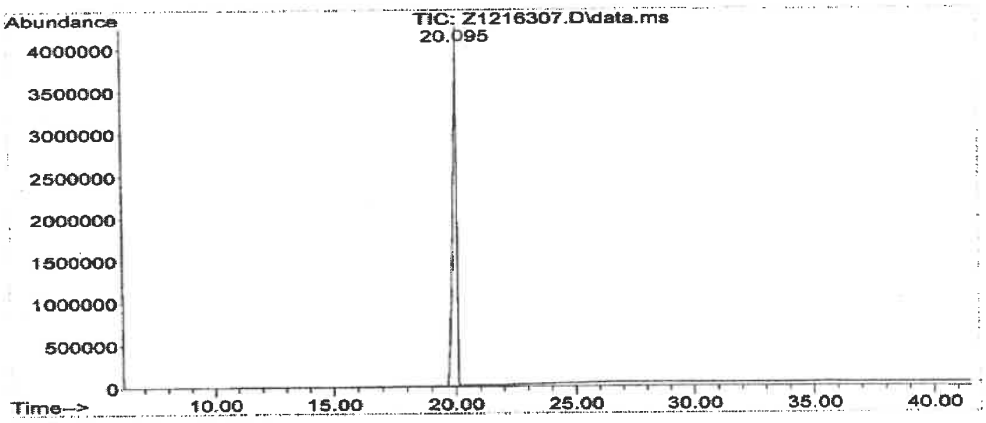

Mass Spectrum

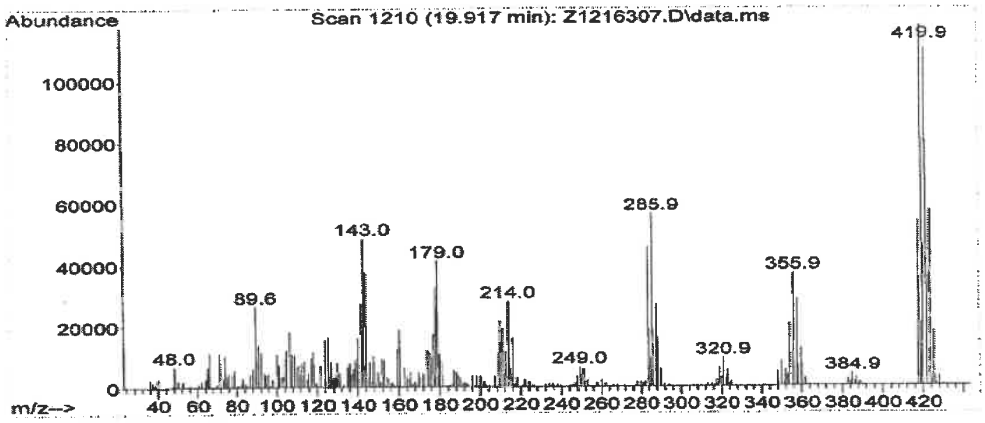

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

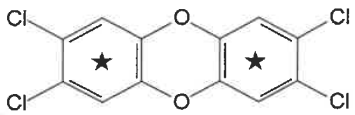

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

788101

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

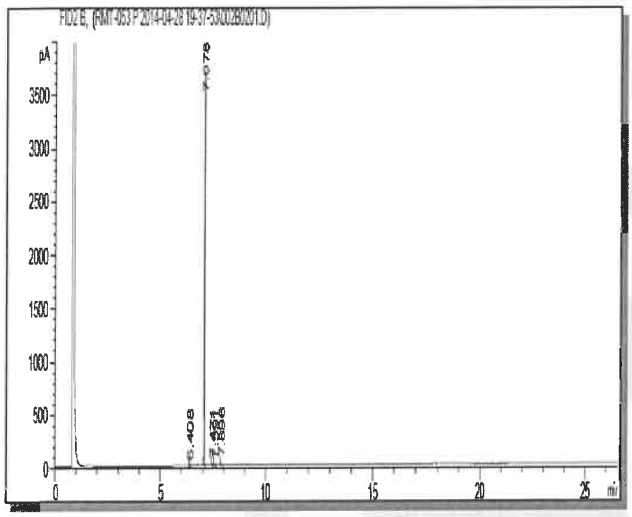

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

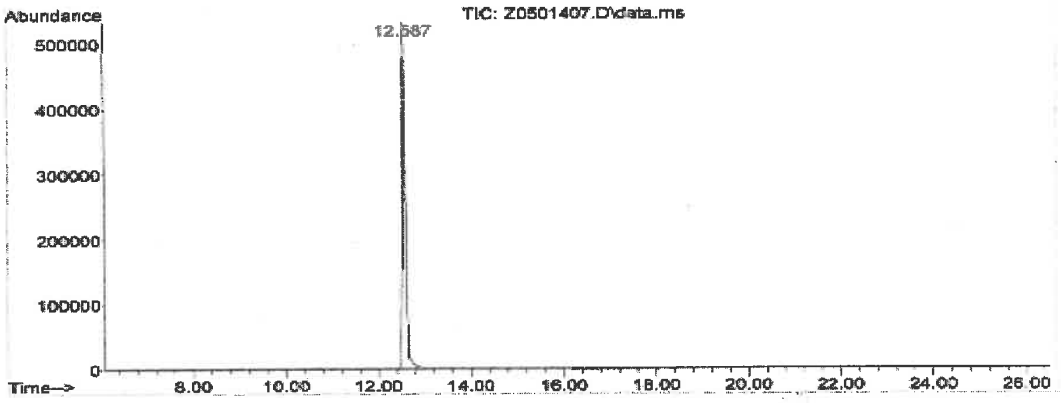

Mass Spectrum

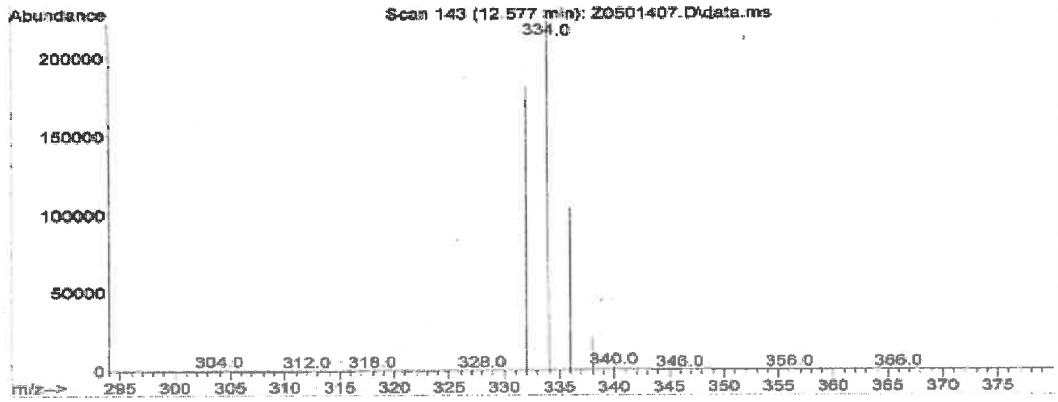

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

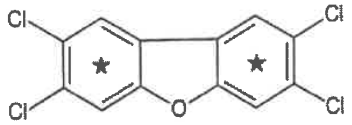

Catalog Number:	EF-904
Solution Lot:	ER09131601
Expiration Date:	September 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

788106

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

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GC/FID

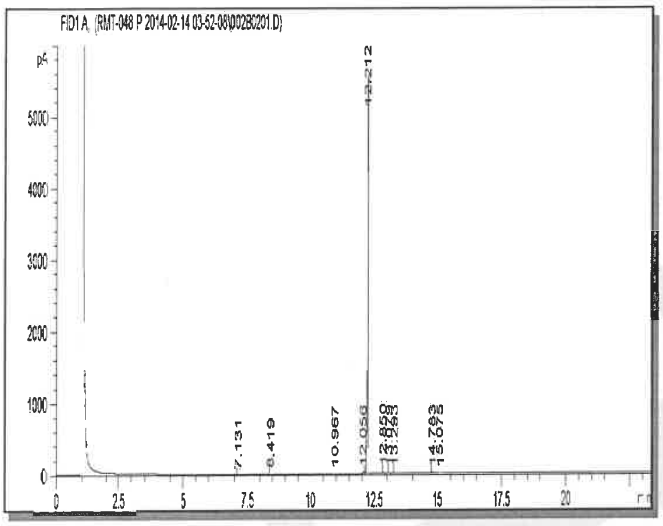

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

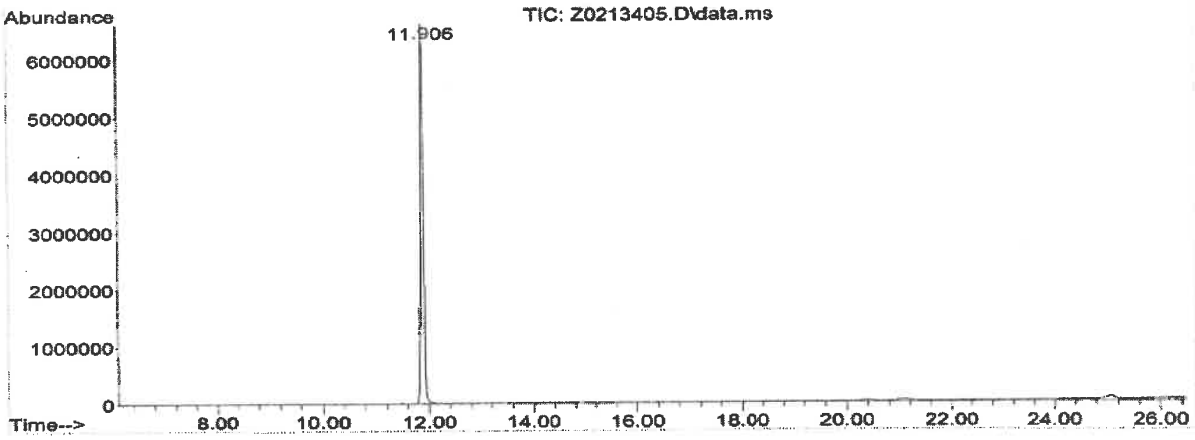

Mass Spectrum

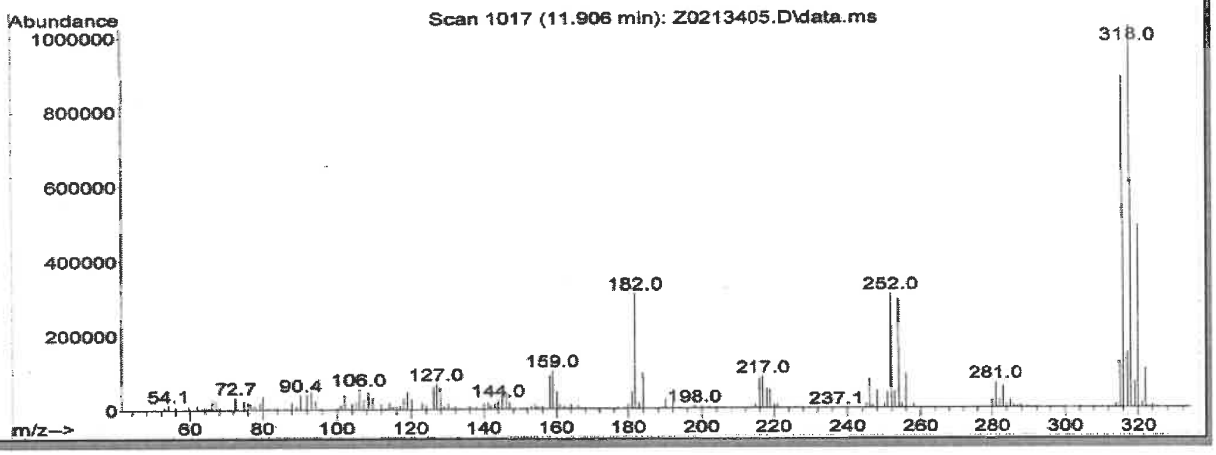

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Reagent

HRDXNIDA_00443

Rec'd 10-19-20

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

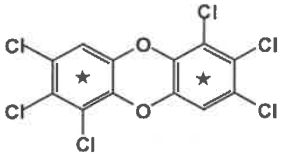

Catalog Number: ED-966
Solution Lot: ER03151801
Expiration Date: March 2028
Solvent: n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

788111

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

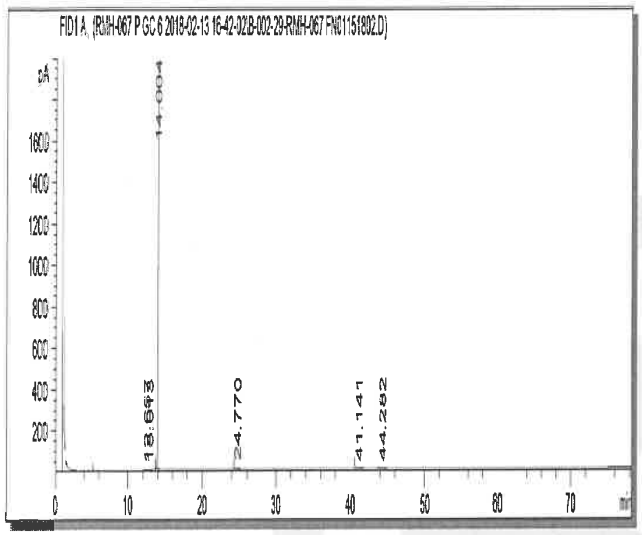

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: FN01151802
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Mar 05 10:17:33 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

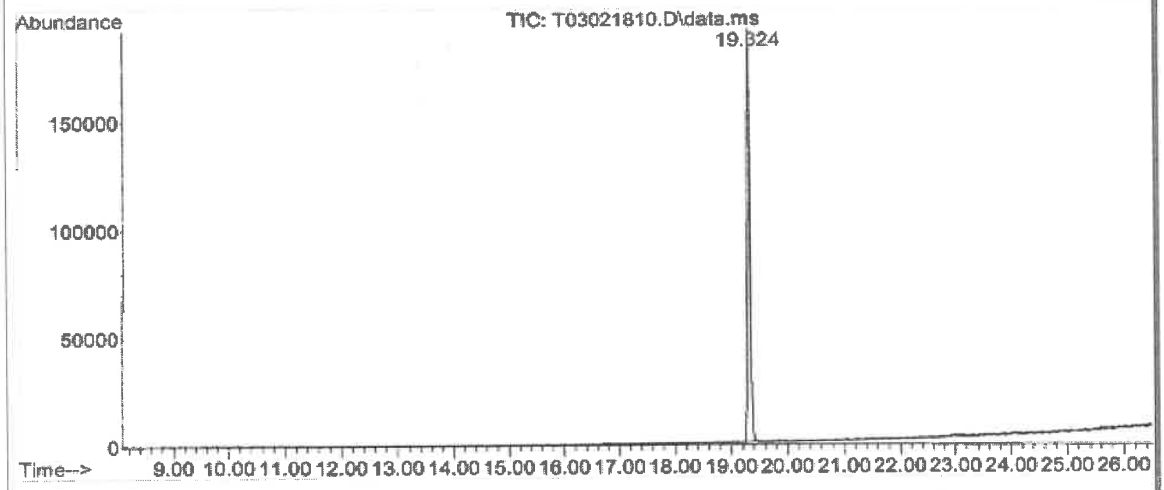

Mass Spectrum

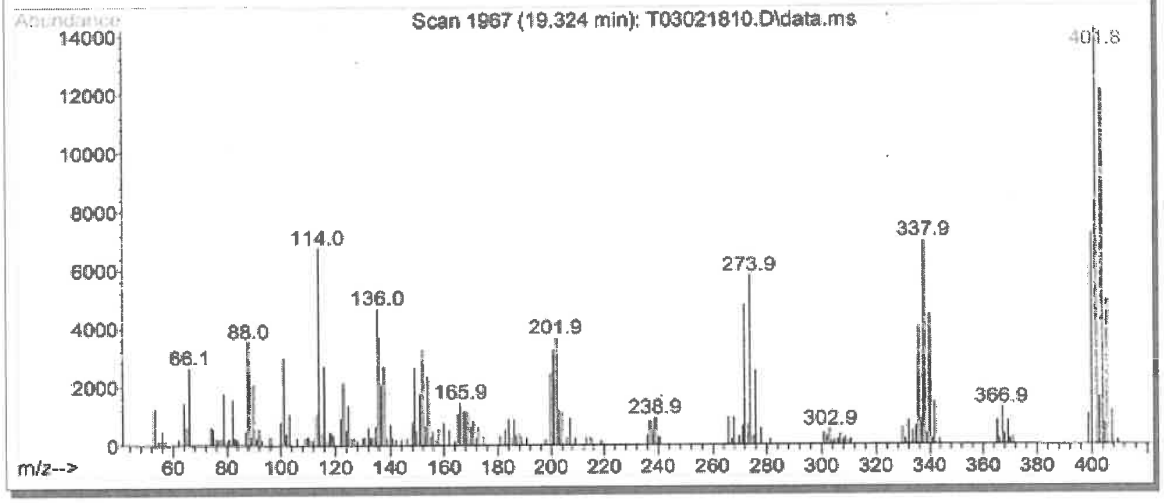

788114

Reagent

HRDXNIDA_00457

r: 1/18/21 SAW

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

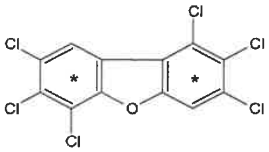

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

788116

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

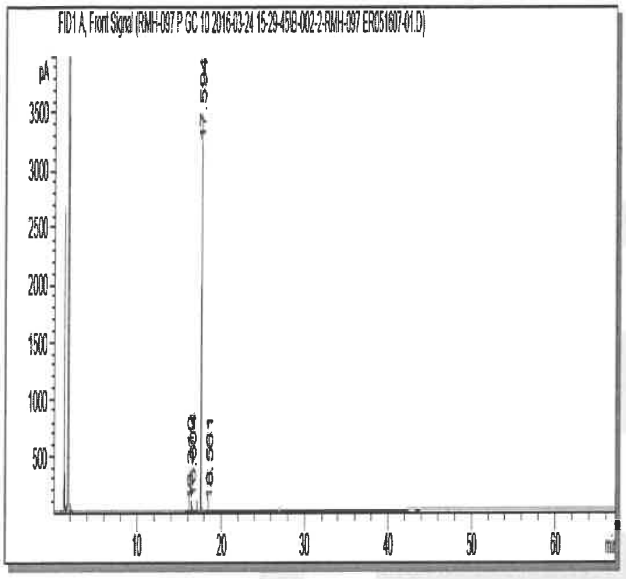

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

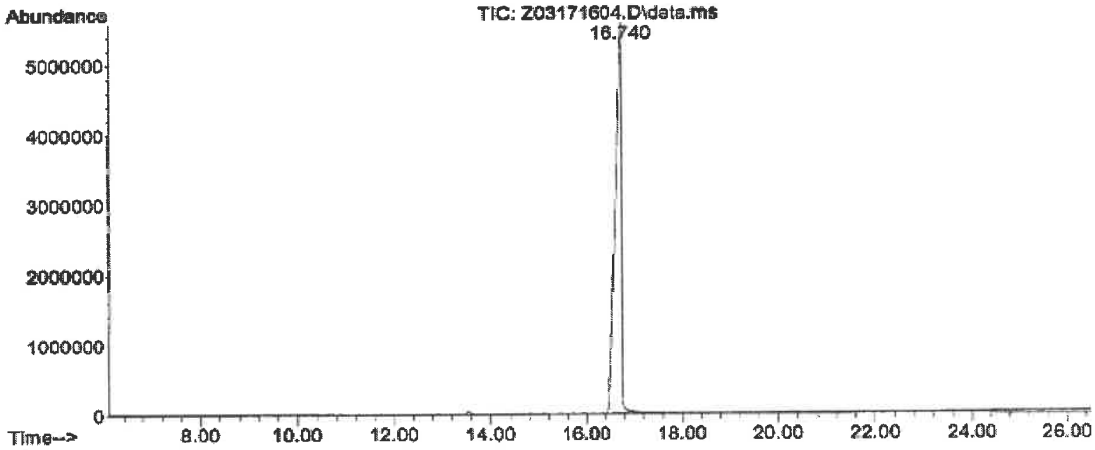

Mass Spectrum

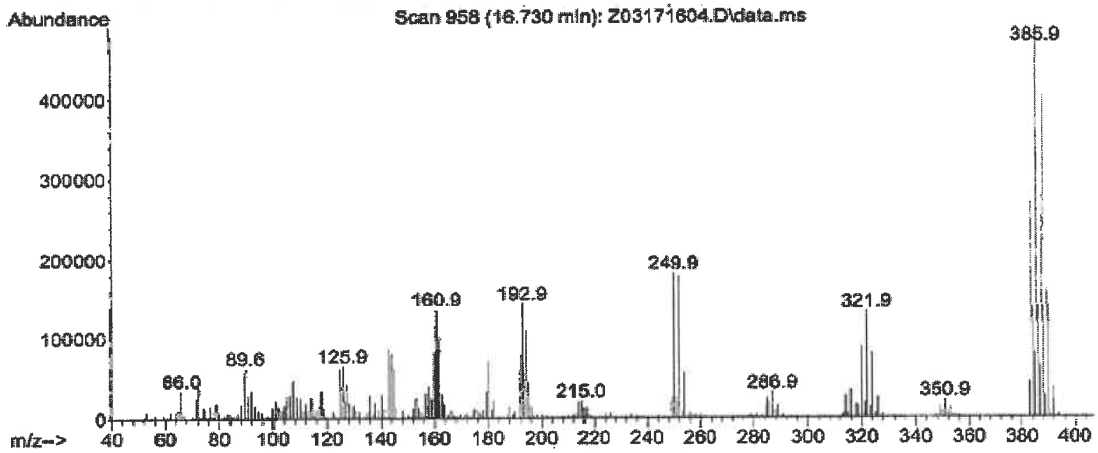

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

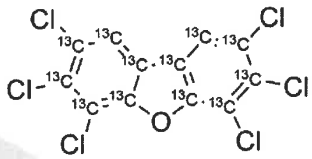

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

788123

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER09051801

Chemical Formula: $^{13}C_{12}H_2Cl_6O$
CAS Number: 116843-05-1
Molecular Weight: 386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

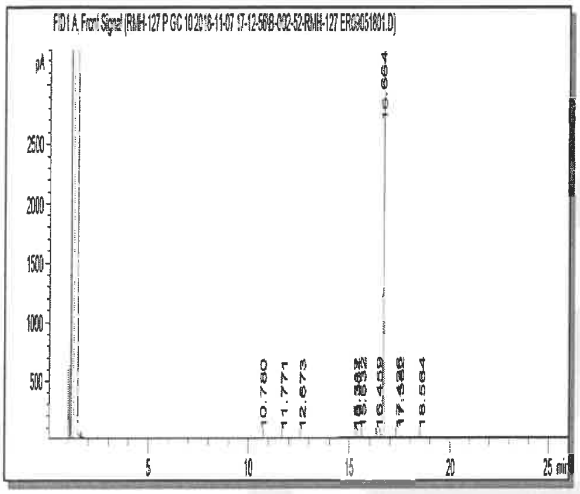

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

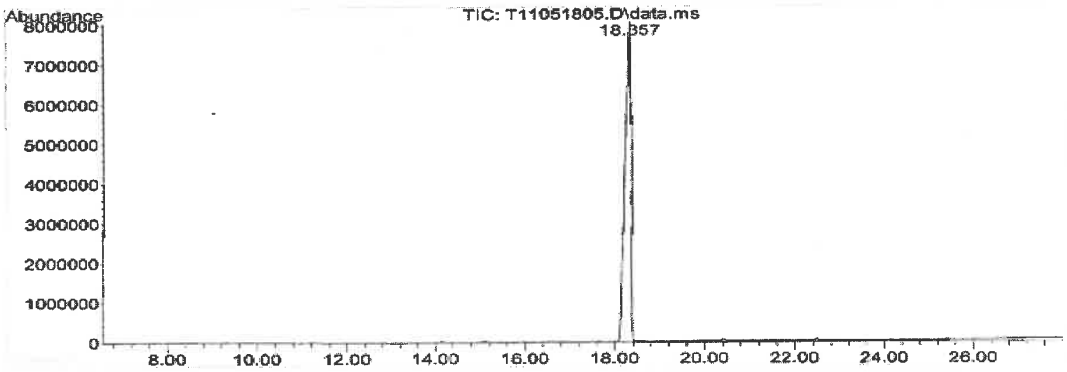

Mass Spectrum

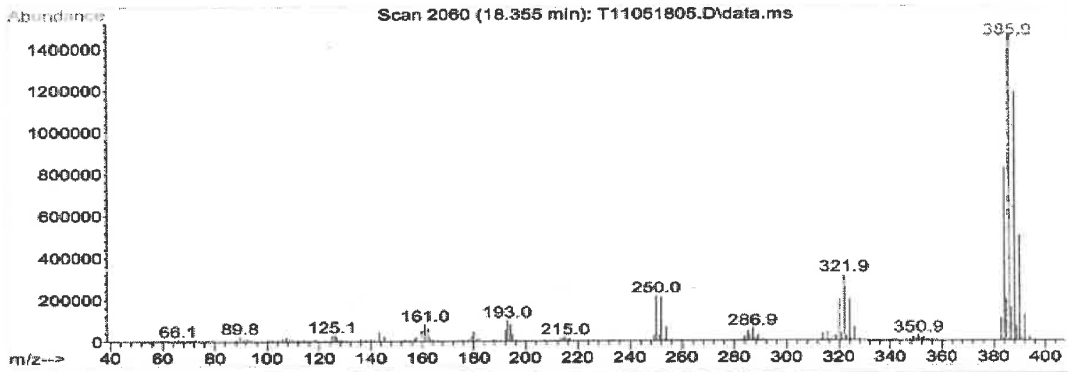

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH® company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

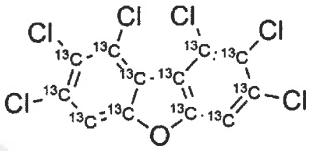

Catalog Number:	EF-986
Solution Lot:	ER01062016
Expiration Date:	January 2030
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

788130

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

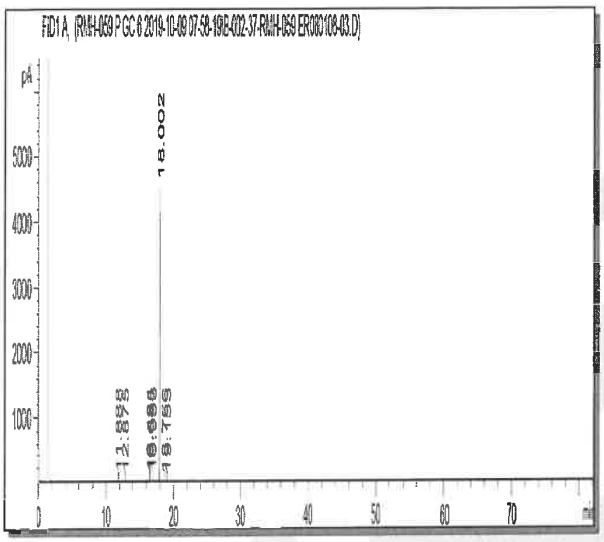

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

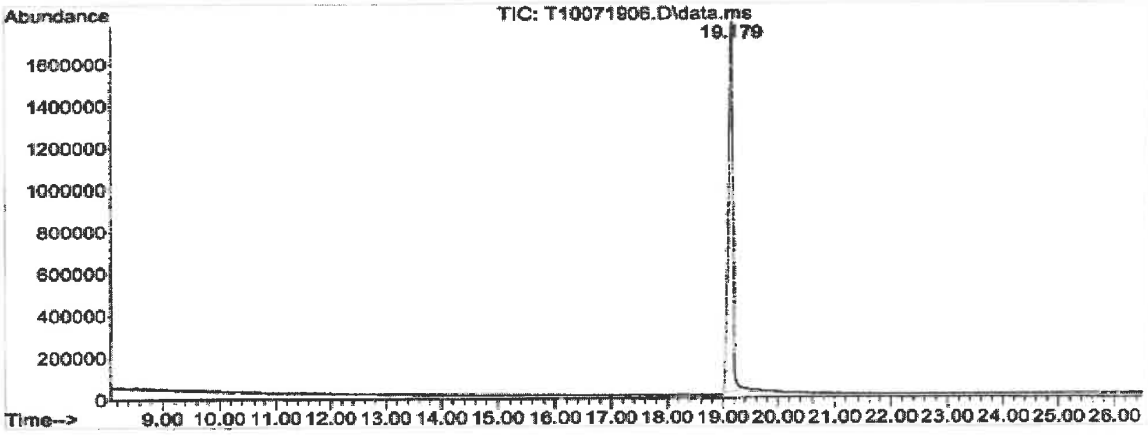

Mass Spectrum

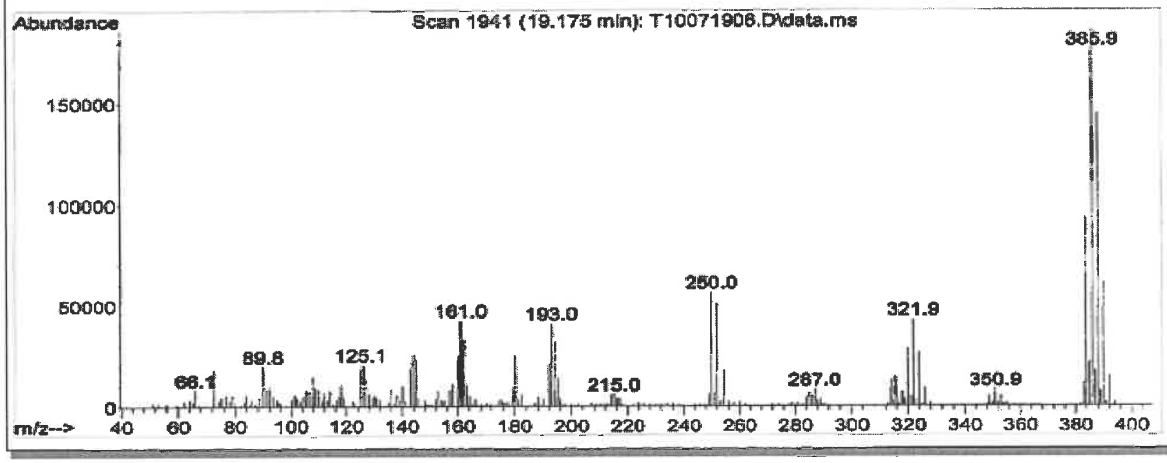

788133

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

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Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

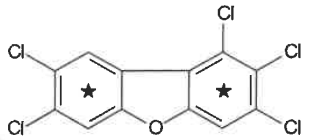

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

788137

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O$
Compound Lot:	ER090110-01	**CAS Number:**	109719-77-9
		Molecular Weight:	352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

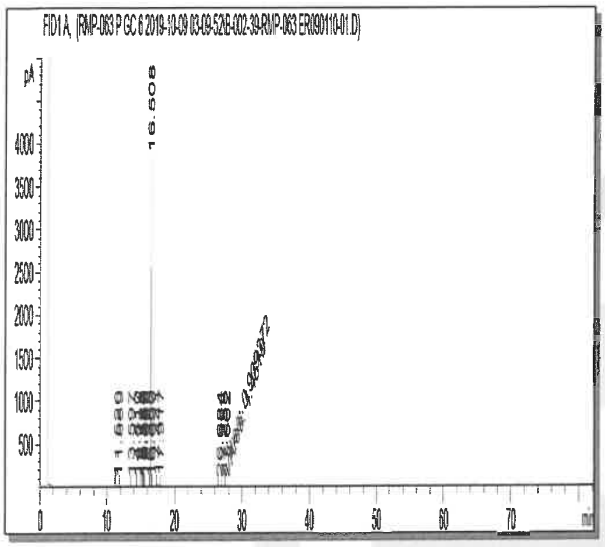

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Sample Name: ER090110-01
Acquired: October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

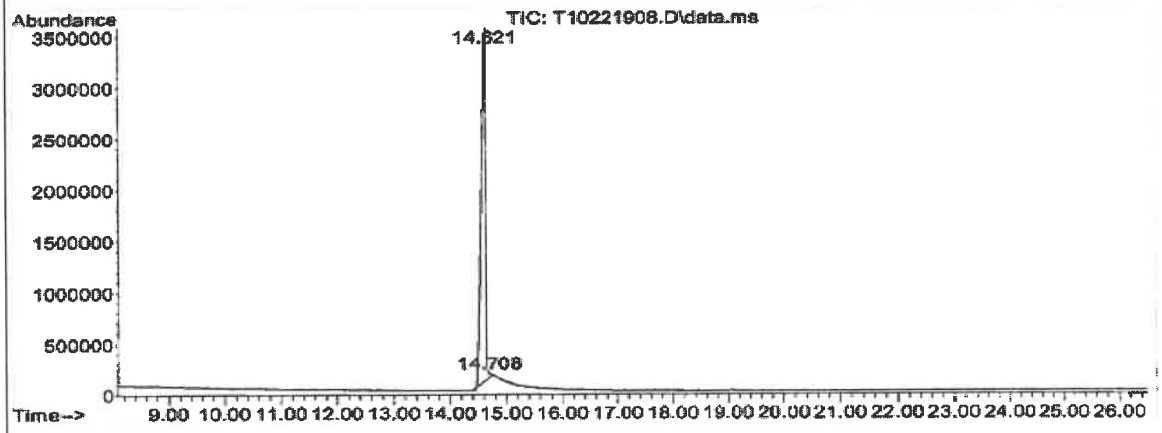

Mass Spectrum

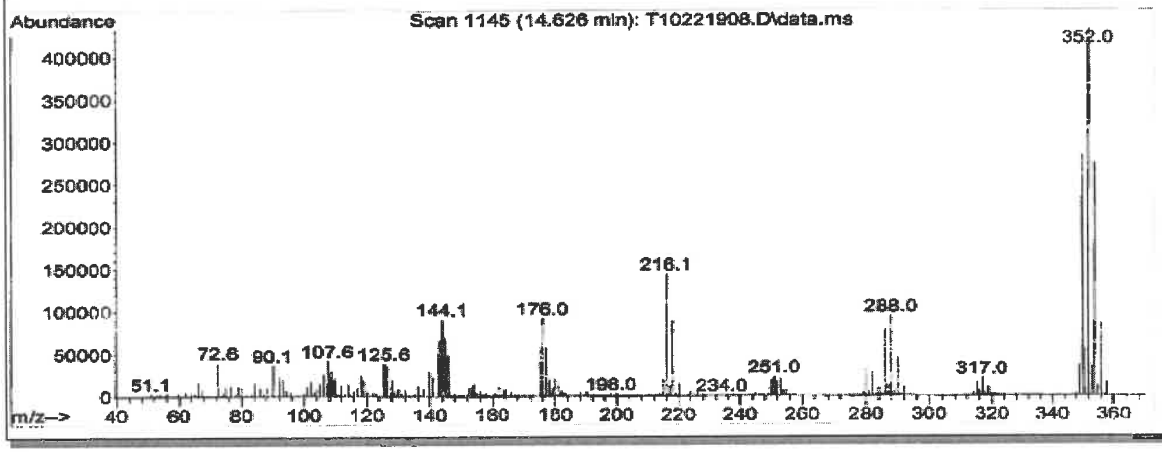

788140

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

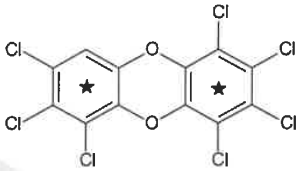

Catalog Number: ED-972
Solution Lot: ER09271601
Expiration Date: October 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

788144

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	0.999

Neat Material Data

Compound Name:	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}HCl_7O_2$
Compound Lot:	ER100110-01	**CAS Number:**	109719-83-7
		Molecular Weight:	437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

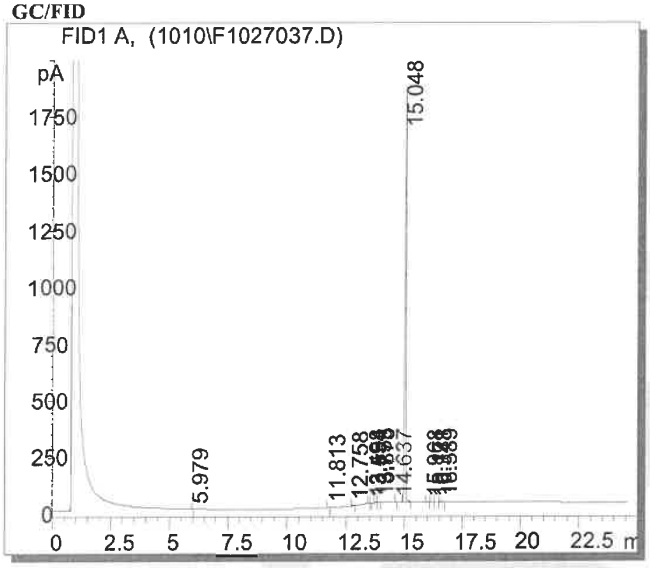

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

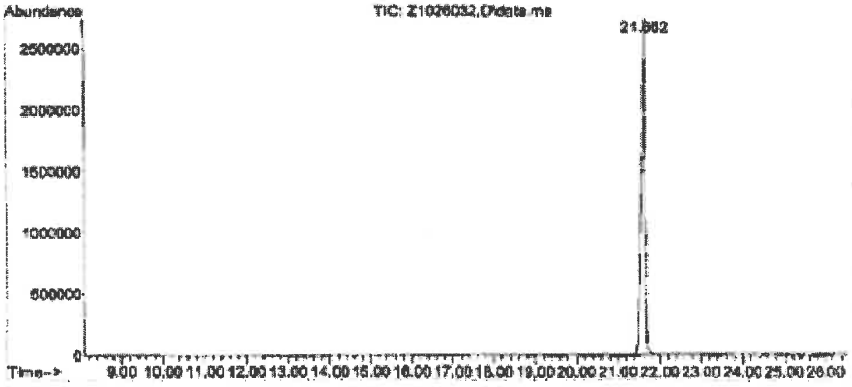

Mass Spectrum

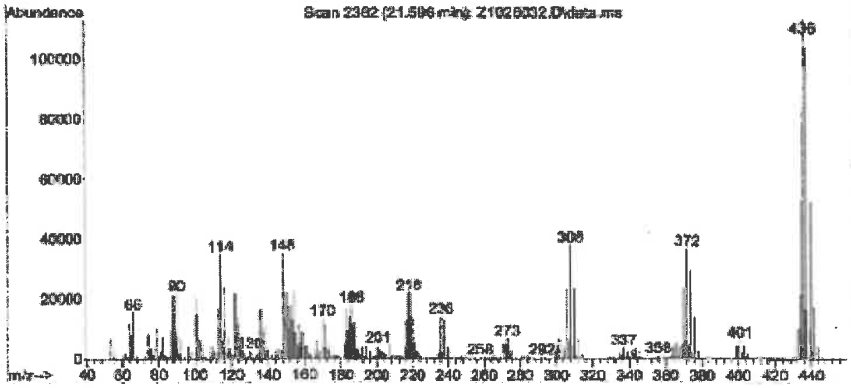

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

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Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

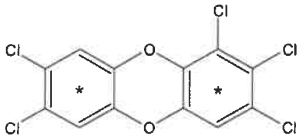

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

788149

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O_2$
Compound Lot:	ER06241403	**CAS Number:**	109719-79-1
		Molecular Weight:	368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

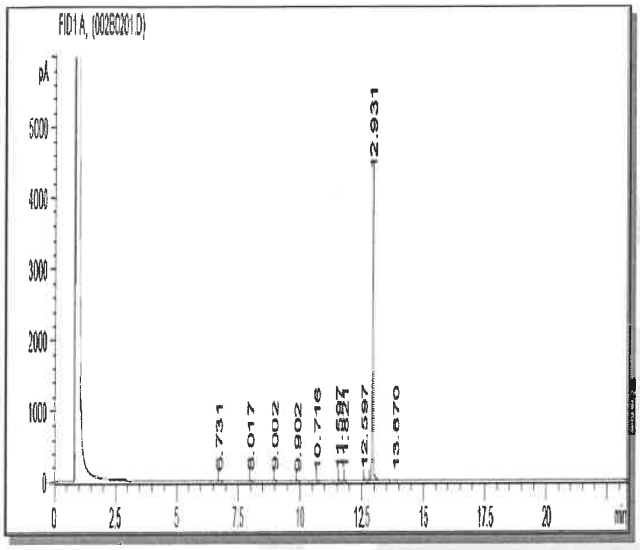

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

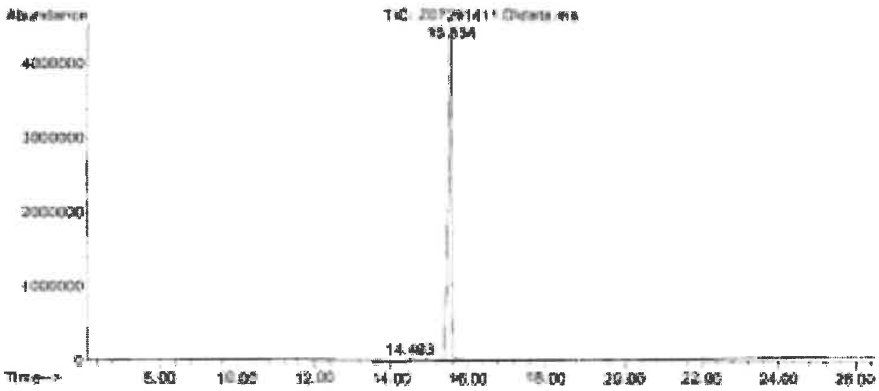

Mass Spectrum

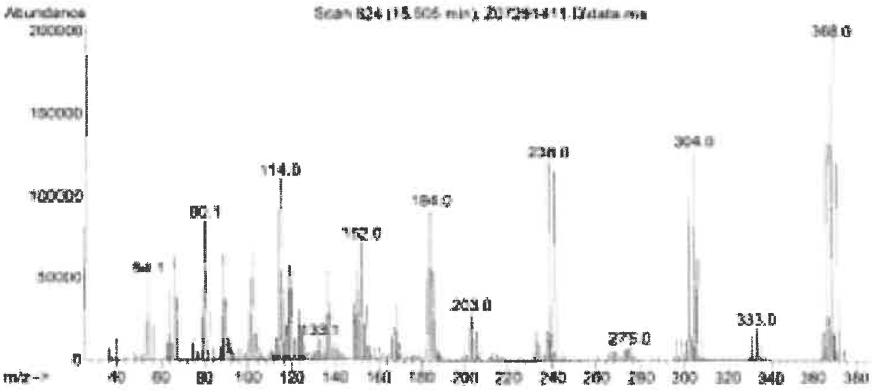

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

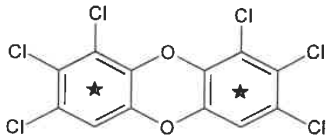

Catalog Number: ED-996
Solution Lot: ER08221601
Expiration Date: September 2026
Solvent: n-Nonane:Toluene (80:20)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

788156

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

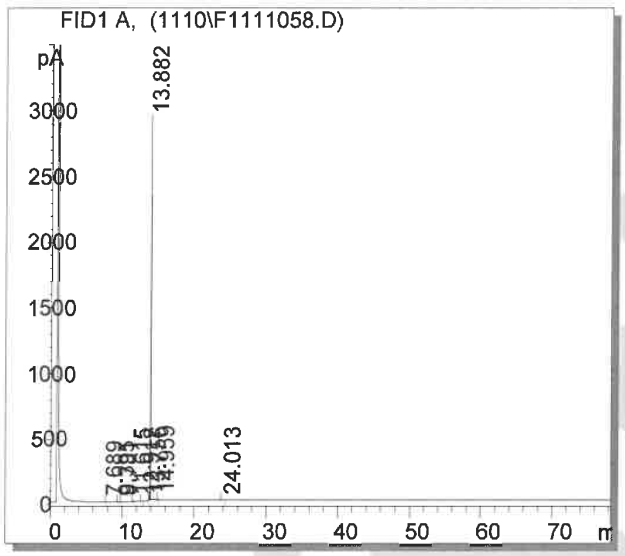

Column:	DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1110\F1111058.D
Instrument:	GC#6
Sample Name:	ER110510-01
Acquired:	November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

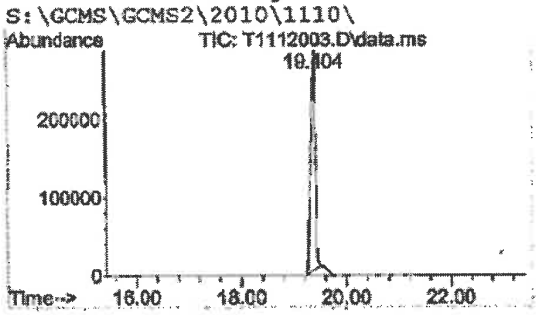

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

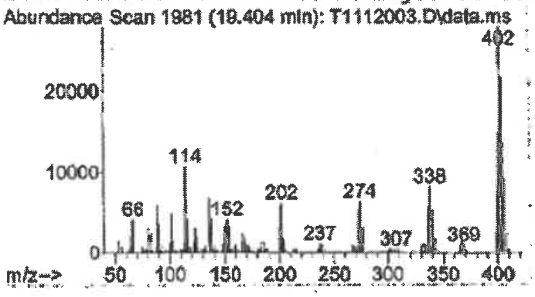

SIM Ion Chromatogram 1

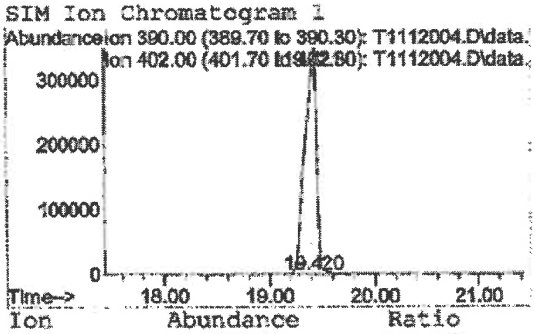

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

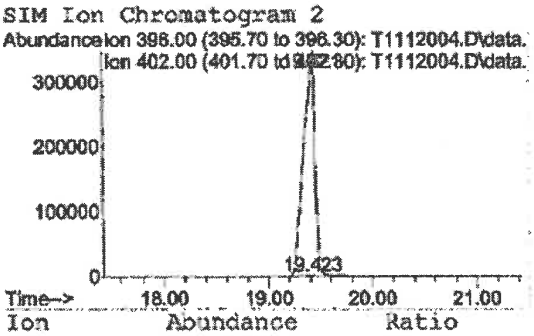

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

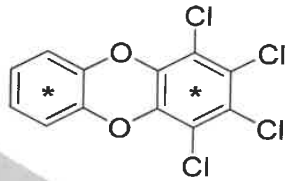

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 13194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

788163

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

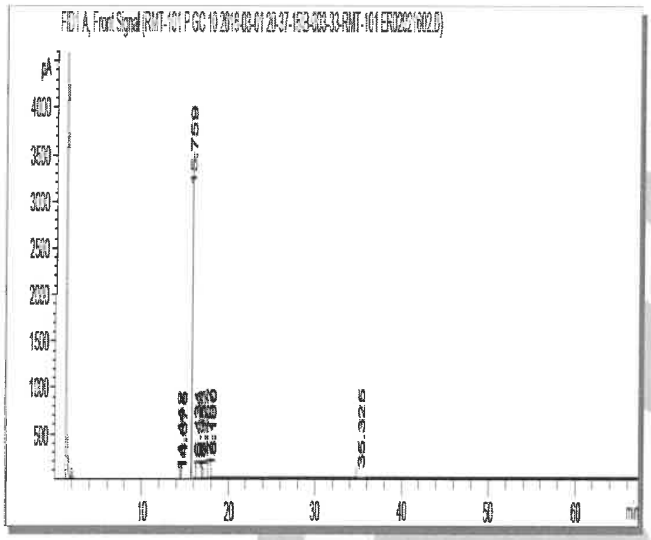

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

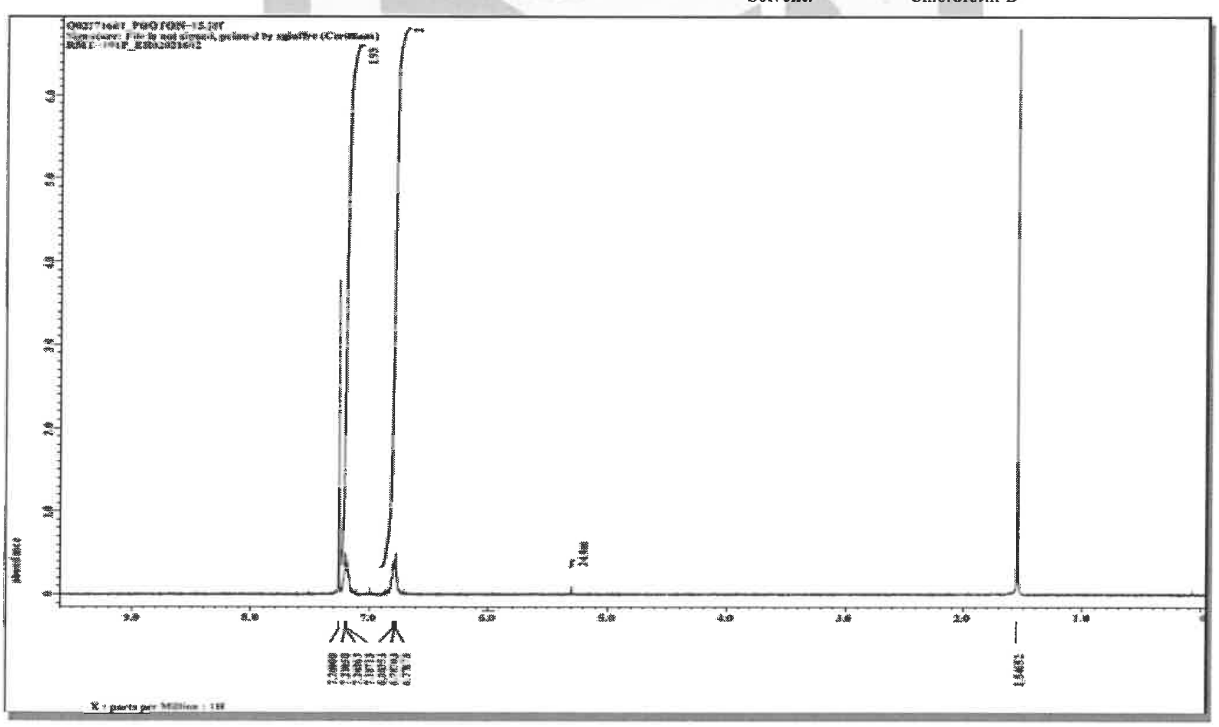

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number	: ER02021602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Feb 19 12:55:12 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

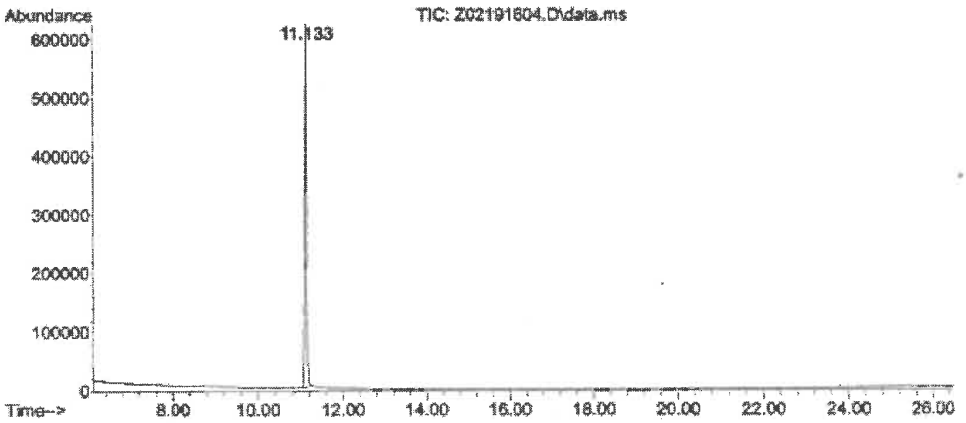

Mass Spectrum

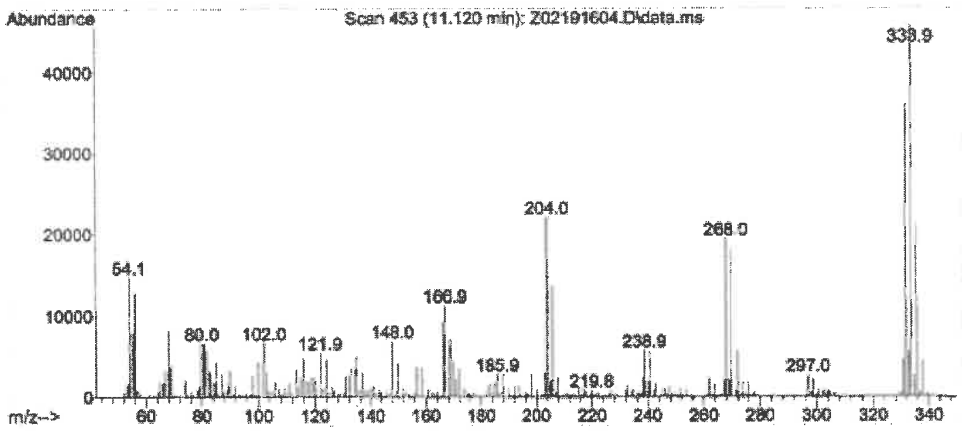

Reagent

HRDXNTA_00108

(2)

P: 4ba/19 SKJ

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

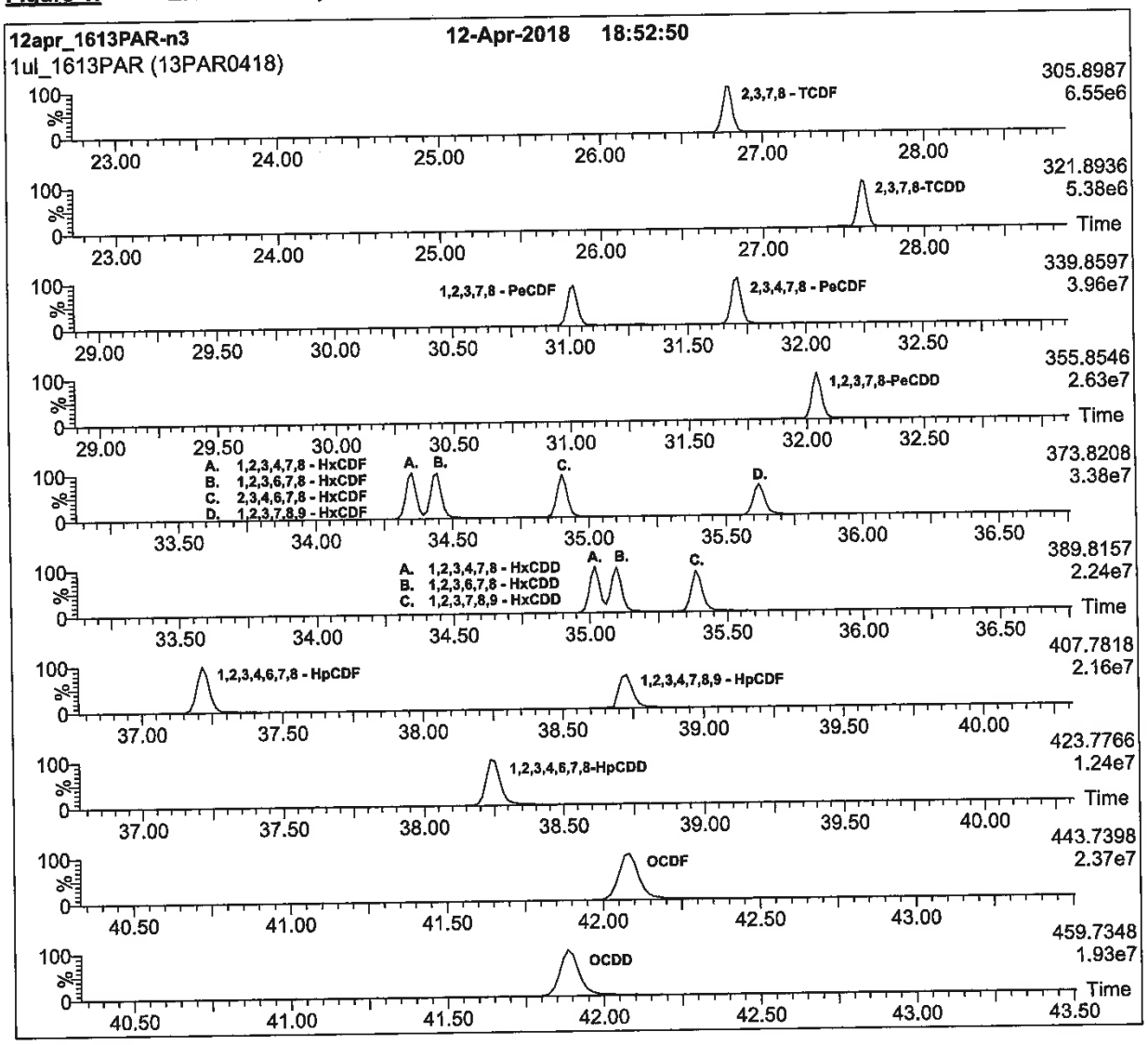

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

(3)

P: 4/3dic SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number: EDF-7999-10X
Solution Lot: ER02241602
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

788173

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method: GC/ECD
Column: DB-5ms, 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program: 140°C to 200°C at 40°C/min, 200°C to 300°C at 4°C/min hold 3 min
Injector Temp: Cool on-column
Detector Temp: 280°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397.1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386.6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0.8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0.7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

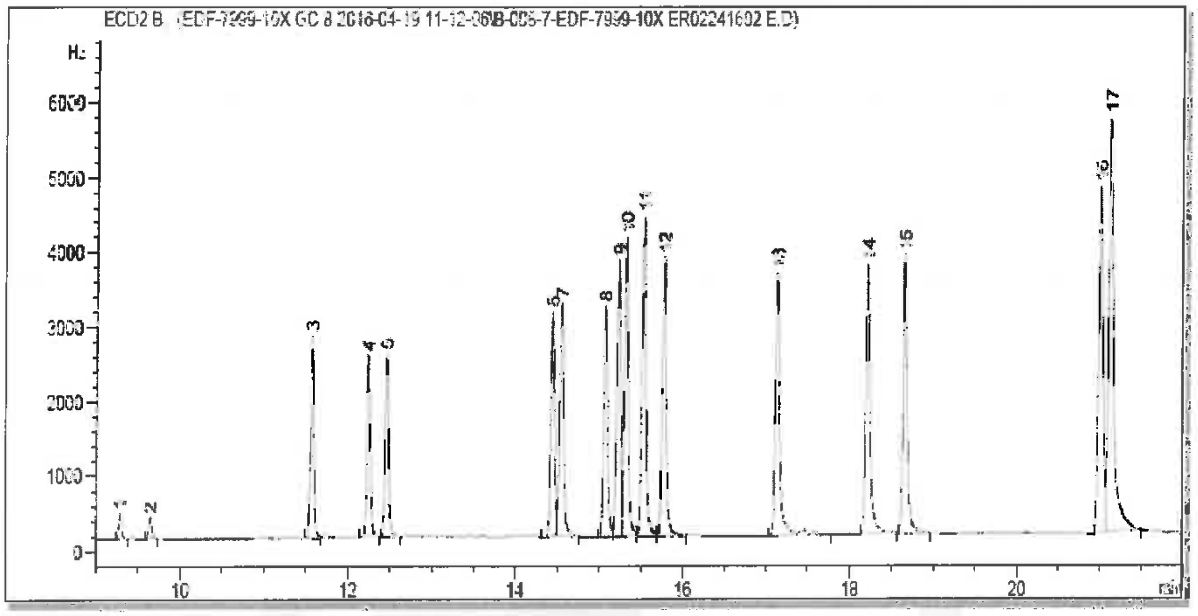

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

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Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Method 1613 PAR Stock Solution

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

788178

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

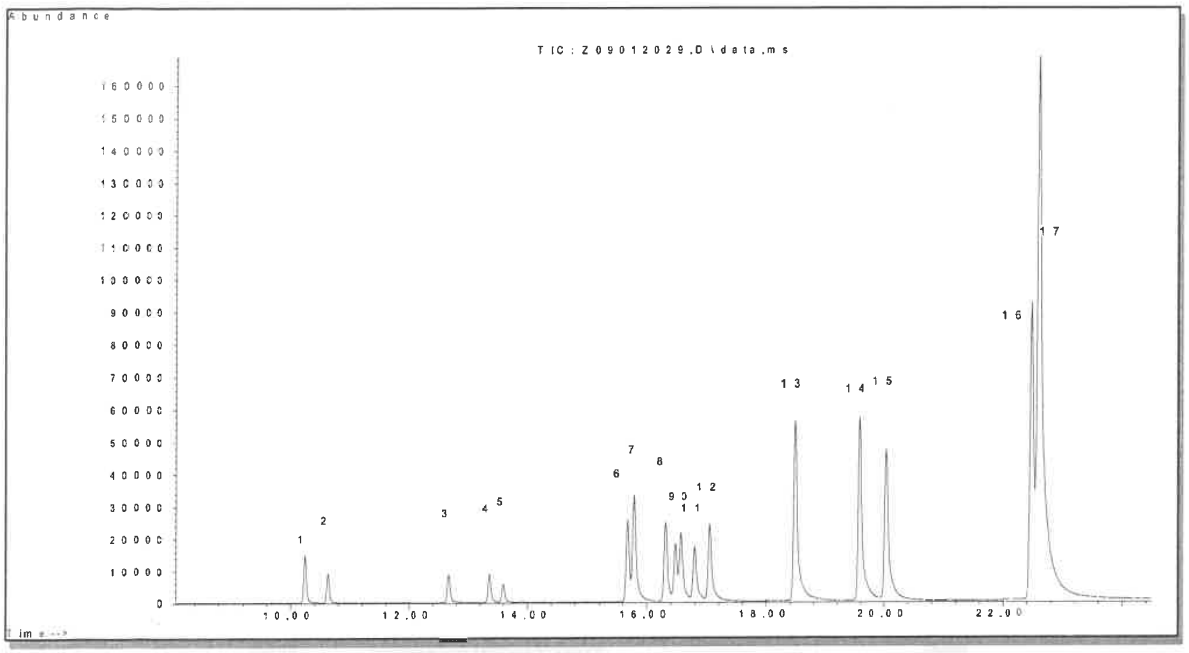

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	37TCDD #	TCDF #
11215702-072821-BN -SJSB095 (0-2) RA	320-76901-1 RA	68	31
11215702-072821-BN -SJSB095 (2-4) RA	320-76901-2 RA	53	46
11215702-072821-BN -SJSB095 (4-6) RA	320-76901-3 RA	64	48
11215702-072821-BN -SJSB095 (6-8) RA	320-76901-4 RA	60	47
11215702-072821-BN -SJSB095 (8-10) RA	320-76901-5 RA	53	45
11215702-072821-BN -SJSB095 (10-12) RA	320-76901-6 RA	63	49
11215702-072821-BN -SJSB095 (12-14) RA	320-76901-7 RA	58	43
11215702-072821-BN -SJSB095 (14-16) RA	320-76901-8 RA	48	44
11215702-072821-BN -DUP-10 RA	320-76901-13 RA	54	39
	MB 320-513879/1-A RA	50	37
11215702-072821-BN -SJSB095 (2-4) MS RA	320-76901-2 MS RA	58	43
11215702-072821-BN -SJSB095 (2-4) MSD RA	320-76901-2 MSD RA	65	50

	QC LIMITS
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
TCDF = 13C-2,3,7,8-TCDF	24-169

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-513879/2-A	36	34	47	31	36	34	42	37

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-513879/2-A	33	37	35	32	35	36	40	39

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-072821-BN -SJSB095 (0-2)	320-76901-1	34	33	68	33	36	29	43	37
11215702-072821-BN -SJSB095 (2-4)	320-76901-2	47	47	51	43	43	46	55	49
11215702-072821-BN -SJSB095 (4-6)	320-76901-3	44	45	55	42	47	43	59	55
11215702-072821-BN -SJSB095 (6-8)	320-76901-4	44	42	53	43	46	41	52	49
11215702-072821-BN -SJSB095 (8-10)	320-76901-5	41	40	50	40	46	41	51	45
11215702-072821-BN -SJSB095 (10-12)	320-76901-6	49	45	57	54	58	50	62	53
11215702-072821-BN -SJSB095 (12-14)	320-76901-7	38	38	52	37	39	34	50	44
11215702-072821-BN -SJSB095 (14-16)	320-76901-8	39	41	48	41	41	42	41	36
11215702-072821-BN -DUP-10	320-76901-13	36	38	49	36	39	37	45	42
	MB 320-513879/1-A	36	36	46	36	40	35	47	43
11215702-072821-BN -SJSB095 (2-4) MS	320-76901-2 MS	38	41	50	39	43	39	50	46
11215702-072821-BN -SJSB095 (2-4) MSD	320-76901-2 MSD	43	46	57	45	48	43	67	56

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072821-BN -SJSB095 (0-2)	320-76901-1	34	36	33	32	36	33 q	39	37
11215702-072821-BN -SJSB095 (2-4)	320-76901-2	45	53	47	41	49	53	59	56
11215702-072821-BN -SJSB095 (4-6)	320-76901-3	53	56	50	47	54	54	55	49
11215702-072821-BN -SJSB095 (6-8)	320-76901-4	45	48	44	43	45	47	49	42
11215702-072821-BN -SJSB095 (8-10)	320-76901-5	41	44	42	42	45	42	48	45
11215702-072821-BN -SJSB095 (10-12)	320-76901-6	51	55	52	50	52	54	61	52
11215702-072821-BN -SJSB095 (12-14)	320-76901-7	42	45	42	41	48	50	53	47
11215702-072821-BN -SJSB095 (14-16)	320-76901-8	38	40	37	39	39	43	46	43
11215702-072821-BN -DUP-10	320-76901-13	38	42	39	37	41	42	45	34
	MB 320-513879/1-A	38	40	39	39	41	41	42	36
11215702-072821-BN -SJSB095 (2-4) MS	320-76901-2 MS	41	44	39	40	46	47	50	42
11215702-072821-BN -SJSB095 (2-4) MSD	320-76901-2 MSD	50	57	56	41	55	55	61	62

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_51.d

Lab ID: LCS 320-513879/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	22.3	111	67-158	
2,3,7,8-TCDF	20.0	23.1	115	75-158	
1,2,3,7,8-PeCDD	100	113	113	70-142	
1,2,3,7,8-PeCDF	100	117	117	80-134	
2,3,4,7,8-PeCDF	100	109	109	68-160	
1,2,3,4,7,8-HxCDD	100	101	101	70-164	
1,2,3,6,7,8-HxCDD	100	112	112	76-134	
1,2,3,7,8,9-HxCDD	100	109	109	64-162	
1,2,3,4,7,8-HxCDF	100	114	114	72-134	
1,2,3,6,7,8-HxCDF	100	120	120	84-130	
1,2,3,7,8,9-HxCDF	100	118	118	78-130	
2,3,4,6,7,8-HxCDF	100	121	121	70-156	
1,2,3,4,6,7,8-HpCDD	100	111	111	70-140	
1,2,3,4,6,7,8-HpCDF	100	118	118	82-122	
1,2,3,4,7,8,9-HpCDF	100	108	108	78-138	
OCDD	200	232	116	78-144	
OCDF	200	243	122	63-170	
13C-2,3,7,8-TCDD	200	68.6	34	20-175	
13C-2,3,7,8-TCDF	200	71.2	36	22-152	
13C-1,2,3,7,8-PeCDD	200	68.3	34	21-227	
13C-1,2,3,7,8-PeCDF	200	61.5	31	21-192	
13C-2,3,4,7,8-PeCDF	200	72.0	36	13-328	
13C-1,2,3,4,7,8-HxCDD	200	73.9	37	21-193	
13C-1,2,3,6,7,8-HxCDD	200	69.3	35	25-163	
13C-1,2,3,4,7,8-HxCDF	200	83.0	42	19-202	
13C-1,2,3,6,7,8-HxCDF	200	74.3	37	21-159	
13C-1,2,3,7,8,9-HxCDF	200	65.0	32	17-205	
13C-2,3,4,6,7,8-HxCDF	200	66.5	33	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	72.5	36	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	70.5	35	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	80.3	40	20-186	
13C-OCDD	400	155	39	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_53.d

Lab ID: 320-76901-2 MS Client ID: 11215702-072821-BN-SJSB095 (2-4

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	27.3	42	73.3	113	67-158	
1,2,3,7,8-PeCDD	136	ND	151	110	70-142	
1,2,3,7,8-PeCDF	136	ND	161	118	80-134	
2,3,4,7,8-PeCDF	136	ND	143	104	68-160	
1,2,3,4,7,8-HxCDD	136	ND	132	97	70-164	
1,2,3,6,7,8-HxCDD	136	ND	140	103	76-134	
1,2,3,7,8,9-HxCDD	136	ND	152	111	64-162	
1,2,3,4,7,8-HxCDF	136	7.0	158	111	72-134	
1,2,3,6,7,8-HxCDF	136	1.6 J	154	111	84-130	
1,2,3,7,8,9-HxCDF	136	ND	155	113	78-130	
2,3,4,6,7,8-HxCDF	136	ND	160	117	70-156	
1,2,3,4,6,7,8-HpCDD	136	60	197	100	70-140	
1,2,3,4,6,7,8-HpCDF	136	4.4 J	156	111	82-122	
1,2,3,4,7,8,9-HpCDF	136	2.0 J	144	104	78-138	
OCDD	273	1700	1650	-24	78-144	4
OCDF	273	18	279	96	63-170	
13C-2,3,7,8-TCDD	273	130	112	41	25-164	
13C-2,3,7,8-TCDF	273	130	105	38	24-169	
13C-1,2,3,7,8-PeCDD	273	130	106	39	25-181	
13C-1,2,3,7,8-PeCDF	273	120	106	39	24-185	
13C-2,3,4,7,8-PeCDF	273	120	116	43	21-178	
13C-1,2,3,4,7,8-HxCDD	273	140	120	44	32-141	
13C-1,2,3,6,7,8-HxCDD	273	130	106	39	28-130	
13C-1,2,3,4,7,8-HxCDF	273	150	135	50	26-152	
13C-1,2,3,6,7,8-HxCDF	273	130	125	46	26-123	
13C-1,2,3,7,8,9-HxCDF	273	110	108	40	29-147	
13C-2,3,4,6,7,8-HxCDF	273	120	113	41	28-136	
13C-1,2,3,4,6,7,8-HpCDD	273	150	129	47	23-140	
13C-1,2,3,4,6,7,8-HpCDF	273	140	125	46	28-143	
13C-1,2,3,4,7,8,9-HpCDF	273	160	136	50	26-138	
13C-OCDD	546	300	231	42	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 27AU2111D2_007.d

Lab ID: 320-76901-2 MS RA Client ID: 11215702-072821-BN-SJSB095 (2-4

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	27.3	140	200	210	75-158	4
13C-2,3,7,8-TCDF	273	130	117	43	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_54.d

Lab ID: 320-76901-2 MSD Client ID: 11215702-072821-BN-SJSB095 (2-4

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	27.0	65.4	85	11	50	67-158	
1,2,3,7,8-PeCDD	135	151	112	0	50	70-142	
1,2,3,7,8-PeCDF	135	161	120	0	50	80-134	
2,3,4,7,8-PeCDF	135	147	109	3	50	68-160	
1,2,3,4,7,8-HxCDD	135	137	101	4	50	70-164	
1,2,3,6,7,8-HxCDD	135	142	106	2	50	76-134	
1,2,3,7,8,9-HxCDD	135	119	89	24	50	64-162	
1,2,3,4,7,8-HxCDF	135	153	108	3	50	72-134	
1,2,3,6,7,8-HxCDF	135	161	119	5	50	84-130	
1,2,3,7,8,9-HxCDF	135	155	115	0	50	78-130	
2,3,4,6,7,8-HxCDF	135	164	122	3	50	70-156	
1,2,3,4,6,7,8-HpCDD	135	193	98	2	50	70-140	
1,2,3,4,6,7,8-HpCDF	135	152	110	3	50	82-122	
1,2,3,4,7,8,9-HpCDF	135	144	105	0	50	78-138	
OCDD	270	1450	-99	13	50	78-144	4
OCDF	270	326	114	16	50	63-170	
13C-2,3,7,8-TCDD	270	123	46			25-164	
13C-2,3,7,8-TCDF	270	117	43			24-169	
13C-1,2,3,7,8-PeCDD	270	117	43			25-181	
13C-1,2,3,7,8-PeCDF	270	122	45			24-185	
13C-2,3,4,7,8-PeCDF	270	130	48			21-178	
13C-1,2,3,4,7,8-HxCDD	270	154	57			32-141	
13C-1,2,3,6,7,8-HxCDD	270	150	56			28-130	
13C-1,2,3,4,7,8-HxCDF	270	182	67			26-152	
13C-1,2,3,6,7,8-HxCDF	270	150	56			26-123	
13C-1,2,3,7,8,9-HxCDF	270	110	41			29-147	
13C-2,3,4,6,7,8-HxCDF	270	135	50			28-136	
13C-1,2,3,4,6,7,8-HpCDD	270	149	55			23-140	
13C-1,2,3,4,6,7,8-HpCDF	270	147	55			28-143	
13C-1,2,3,4,7,8,9-HpCDF	270	164	61			26-138	
13C-OCDD	539	335	62			17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 27AU2111D2_008.d

Lab ID: 320-76901-2 MSD RA Client ID: 11215702-072821-BN-SJSB095 (2-4

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2,3,7,8-TCDF	27.0	172	110	15	50	75-158	4
13C-2,3,7,8-TCDF	270	135	50			24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab File ID: 24AU2111D2_004.d Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Date Extracted: 08/06/2021 12:58

Instrument ID: 11D2 Date Analyzed: 08/24/2021 10:23

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
11215702-072821-BN-DUP-10 RA	320-76901-13 RA	27AU2111D2_004.d	08/27/2021 10:57
11215702-072821-BN-SJSB095 (10-12) RA	320-76901-6 RA	27AU2111D2_005.d	08/27/2021 11:35
11215702-072821-BN-SJSB095 (2-4) RA	320-76901-2 RA	27AU2111D2_006.d	08/27/2021 12:13
11215702-072821-BN-SJSB095 (2-4) MS RA	320-76901-2 MS RA	27AU2111D2_007.d	08/27/2021 12:52
11215702-072821-BN-SJSB095 (2-4) MSD RA	320-76901-2 MSD RA	27AU2111D2_008.d	08/27/2021 13:30
11215702-072821-BN-SJSB095 (4-6) RA	320-76901-3 RA	27AU21A11D2_004.d	08/27/2021 17:33
11215702-072821-BN-SJSB095 (6-8) RA	320-76901-4 RA	27AU21A11D2_005.d	08/27/2021 18:11
11215702-072821-BN-SJSB095 (12-14) RA	320-76901-7 RA	27AU21A11D2_006.d	08/27/2021 18:50
11215702-072821-BN-SJSB095 (14-16) RA	320-76901-8 RA	27AU21A11D2_007.d	08/27/2021 19:28
11215702-072821-BN-SJSB095 (8-10) RA	320-76901-5 RA	27AU21A11D2_017.d	08/28/2021 01:52
11215702-072821-BN-SJSB095 (0-2) RA	320-76901-1 RA	27AU21A11D2_018.d	08/28/2021 02:30

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab File ID: 19au21dfs1_5.d Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Date Extracted: 08/06/2021 12:58

Instrument ID: DFS 1 Date Analyzed: 08/19/2021 16:27

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-513879/2-A	17au21dfs1_51.d	08/19/2021 04:43
11215702-072821-BN-SJSB095 (2-4)	320-76901-2	17au21dfs1_52.d	08/19/2021 05:30
11215702-072821-BN-SJSB095 (2-4) MS	320-76901-2 MS	17au21dfs1_53.d	08/19/2021 06:18
11215702-072821-BN-SJSB095 (2-4) MSD	320-76901-2 MSD	17au21dfs1_54.d	08/19/2021 07:06
11215702-072821-BN-SJSB095 (4-6)	320-76901-3	19au21dfs1_7.d	08/19/2021 18:03
11215702-072821-BN-SJSB095 (6-8)	320-76901-4	19au21dfs1_8.d	08/19/2021 18:51
11215702-072821-BN-SJSB095 (8-10)	320-76901-5	19au21dfs1_9.d	08/19/2021 19:39
11215702-072821-BN-SJSB095 (10-12)	320-76901-6	19au21dfs1_10.d	08/19/2021 20:27
11215702-072821-BN-SJSB095 (12-14)	320-76901-7	19au21dfs1_11.d	08/19/2021 21:15
11215702-072821-BN-DUP-10	320-76901-13	19au21dfs1_14.d	08/19/2021 23:38
11215702-072821-BN-SJSB095 (0-2)	320-76901-1	19au21dfs1_26.d	08/20/2021 08:44
11215702-072821-BN-SJSB095 (14-16)	320-76901-8	30AU2110D5_18.d	08/31/2021 00:25

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (0-2) RA
Lab Sample ID: 320-76901-1 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_018.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.80(g)
Date Analyzed: 08/28/2021 02:30
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 43.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	110000	E G	160	160

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	31		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	68		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_018.d
Lims ID: 320-76901-A-1-A
Client ID: 11215702-072821-BN-SJSB095 (0-2)
Sample Type: Client
Inject. Date: 28-Aug-2021 02:30:28 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:51:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.464	34744823	0.80	7.2E+05	100.0	100.0				M
D 13C-2,3,7,8-TCDF	17.808	14544902	0.71	1.3327	31.4	31.4	11.8	11.8	31.41	M
2,3,7,8-TCDF	17.836	4935867435	0.80	0.9978	34010	34010	49.2	49.2		Ea
D 13C-2,3,7,8-TCDD	16.231	8973162	0.82	0.8749	29.5	29.5	82.5	82.5	29.52	nMa
2,3,7,8-TCDD	16.245	820113034	0.79	1.0570	8646.8	8646.8	52.3	52.3		Ea
$ 37Cl4-2,3,7,8-TCDD	16.245	8133494		0.8648	27.1	27.1	1.581	1.581	67.67	a
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_018.d
Lims ID: 320-76901-A-1-A
Client ID: 11215702-072821-BN-SJSB095 (0-2)
Sample Type: Client
Inject. Date: 28-Aug-2021 02:30:28 ALS Bottle#: 0 Worklist Smp#: 18
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:51:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.464	16.300	10		15490875	3294543	11263262815815		3		M
333.9339	16.451	16.300	9		19253948	3915904	955409	2388522	4	0.80(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.808	17.616	12	1.082	6041814	1016830	220026	550065	5		M
317.9389	17.822	17.616	12	1.082	8503088	1191818	232918	582295	5	0.71(0.65-0.89)	M
2,3,7,8-TCDF											Ea
303.9016	17.836	17.644	12	1.002	2196742322	329542392	206831	517077	1593		a
305.8987	17.836	17.644	12	1.002	2739125113	412562970	226654	566635	1820	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											nMa
331.9368	16.231	16.066	10	0.986	4051545	872100	11263262815815		1		M
333.9339	16.231	16.066	10	0.986	4921617	1114127	955409	2388522	1	0.82(0.65-0.89)	M
2,3,7,8-TCDD											Ea
319.8965	16.245	16.080	10	1.001	362864919	80566405	276404	691010	291		a
321.8936	16.245	16.080	10	1.001	457248115	100580002	162775	406937	618	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											a
327.8840	16.245	16.080	10	0.987	8133494	1865106	39446	98615	47		a

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_018.d				
Injection Date:	28-Aug-2021 02:30:28	Instrument ID:	11D2		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 18.77
Area: 8250396
Amount: 42.830015
Amount Units: pg/ul

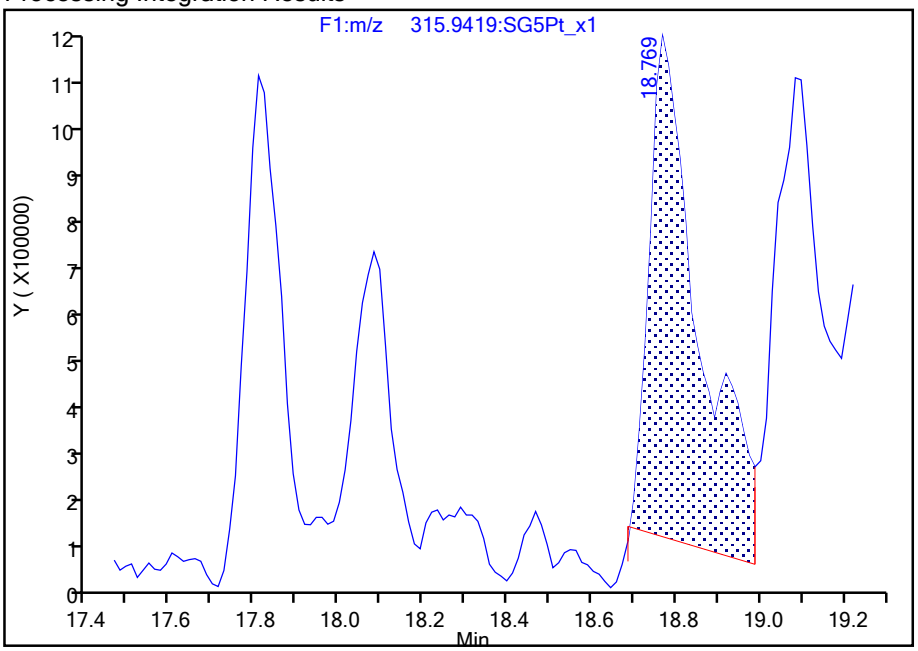

Manual Integration Results

RT: 17.81
Area: 6041814
Amount: 31.411802
Amount Units: pg/ul

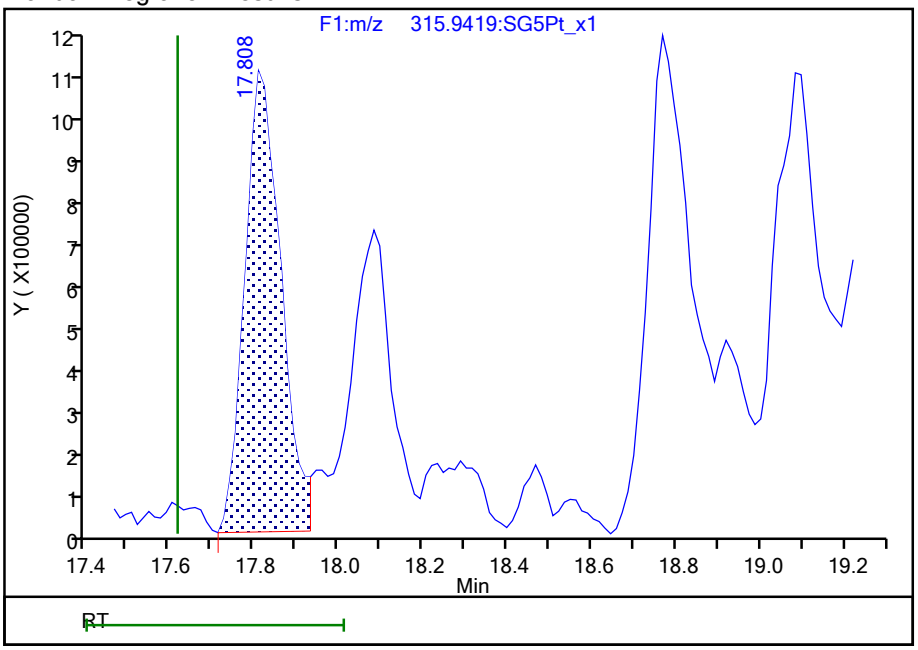

Reviewer: bennettd, 30-Aug-2021 09:50:15

Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

788198

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_018.d				
Injection Date:	28-Aug-2021 02:30:28	Instrument ID:	11D2		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 18.80
Area: 11581588
Amount: 42.830015
Amount Units: pg/ul

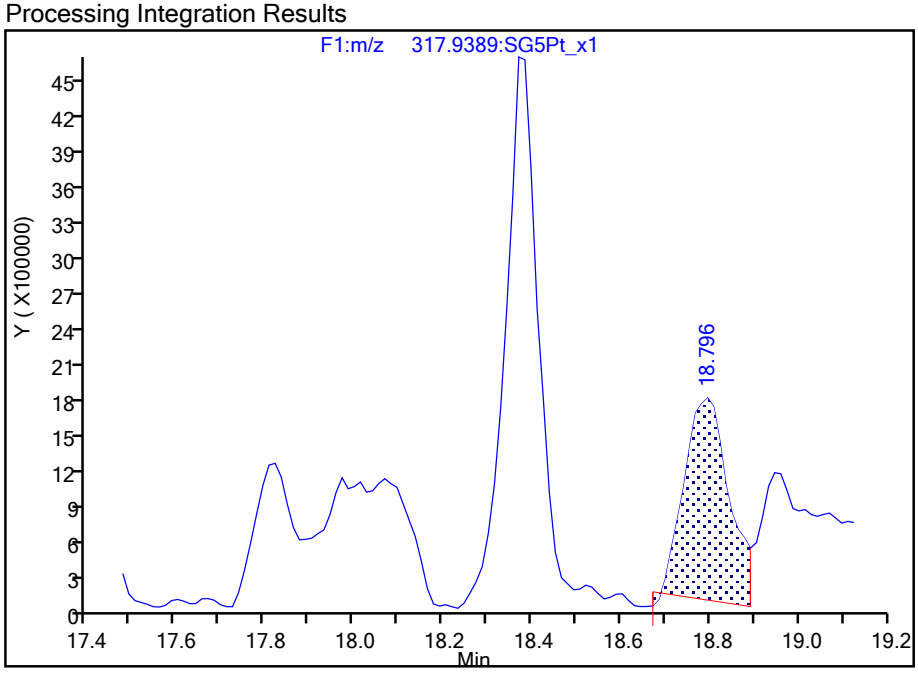

Manual Integration Results

RT: 17.82
Area: 8503088
Amount: 31.411802
Amount Units: pg/ul

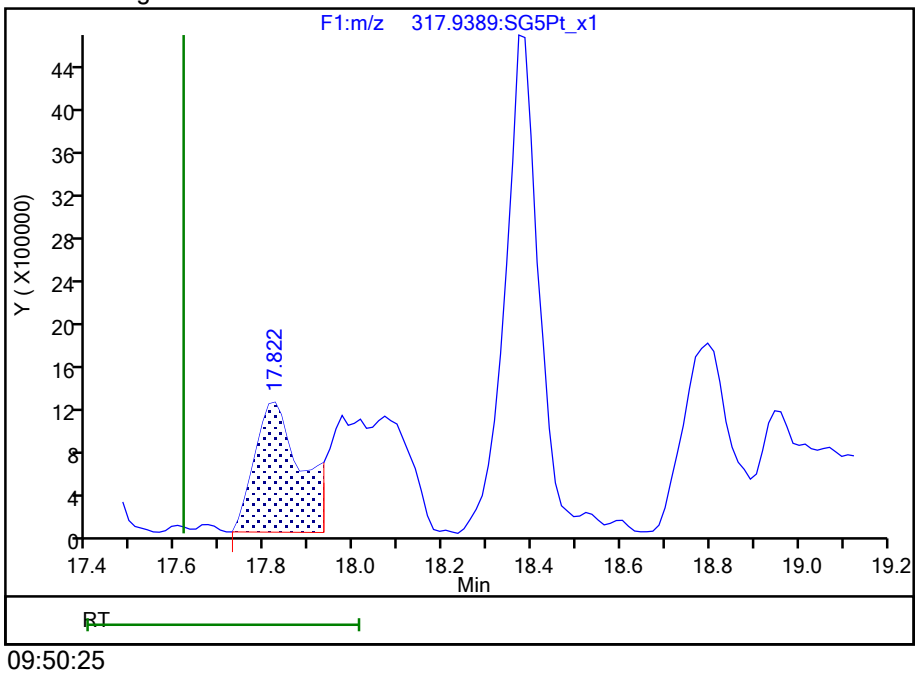

Reviewer: bennettd, 30-Aug-2021 09:50:25

Audit Action: Split an Integrated Peak Audit Reason: Wrong peak

788199

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_018.d				
Injection Date:	28-Aug-2021 02:30:28	Instrument ID:	11D2		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.64

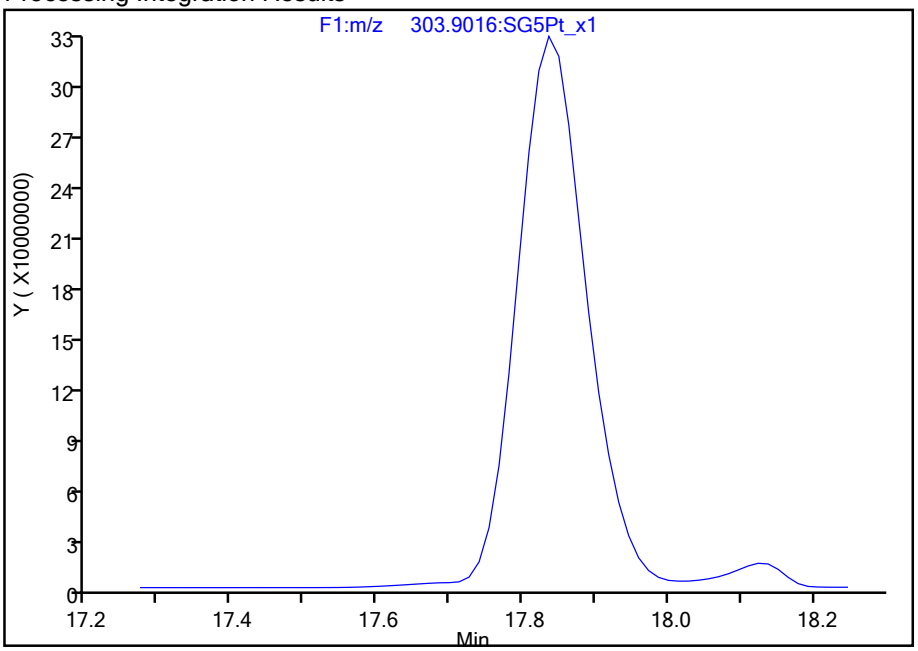

Manual Integration Results

RT: 17.84
Area: 2196742322
Amount: 34010
Amount Units: pg/ul

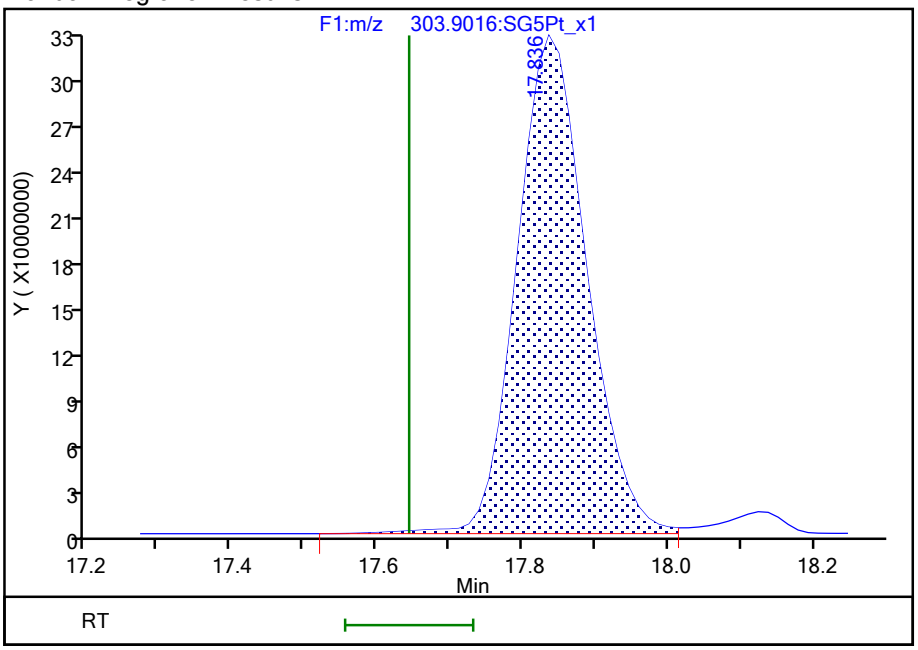

Reviewer: bennettd, 30-Aug-2021 09:50:33
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

788200

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_018.d				
Injection Date:	28-Aug-2021 02:30:28	Instrument ID:	11D2		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	18
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

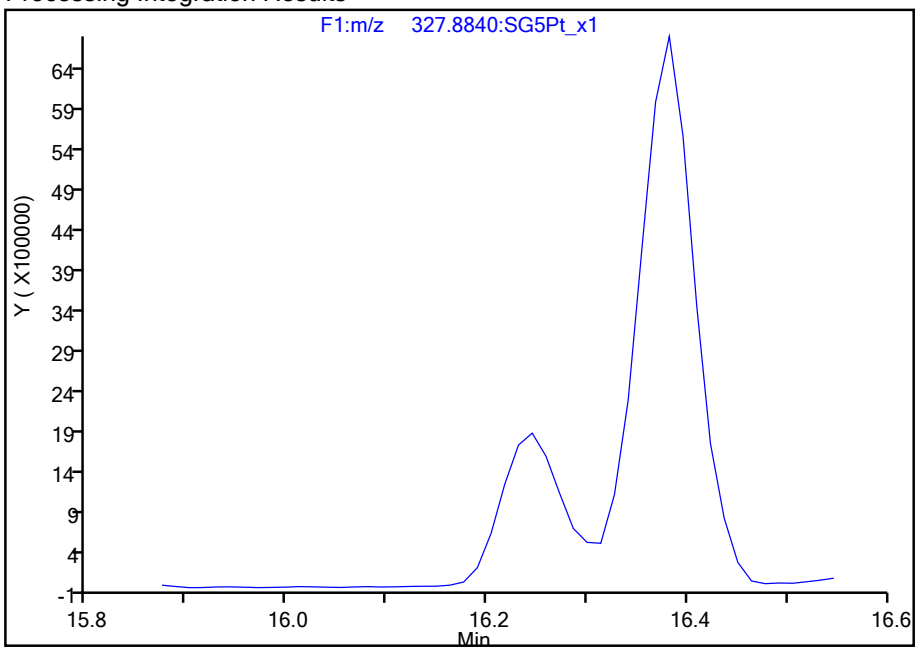

Manual Integration Results

RT: 16.24
Area: 8133494
Amount: 27.068441
Amount Units: pg/ul

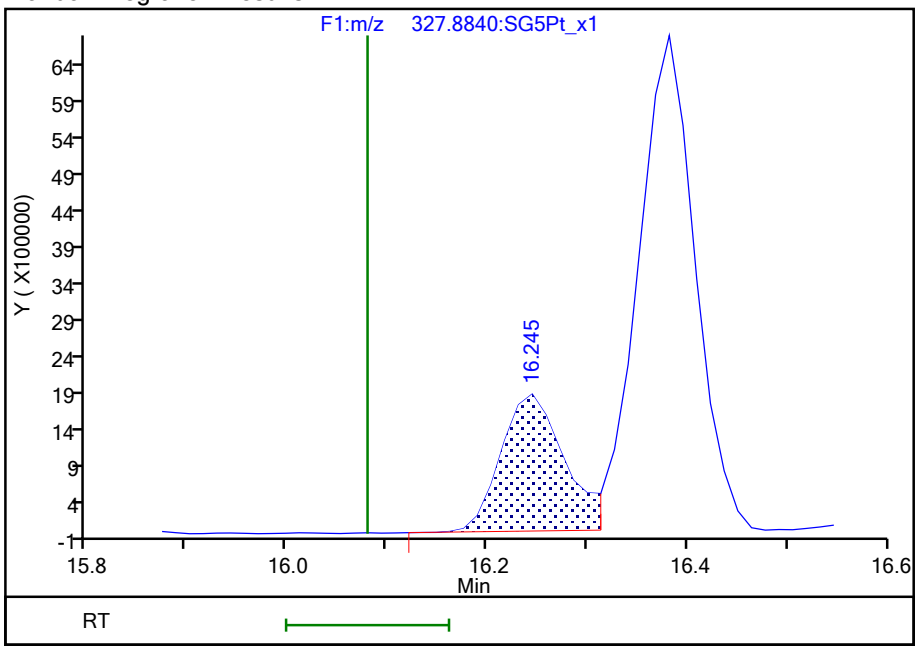

Reviewer: bennettd, 30-Aug-2021 09:49:26
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Report Date: 30-Aug-2021 09:51:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_018.d		
Injection Date:	28-Aug-2021 02:30:28	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	520456	Sample Line#:	18
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

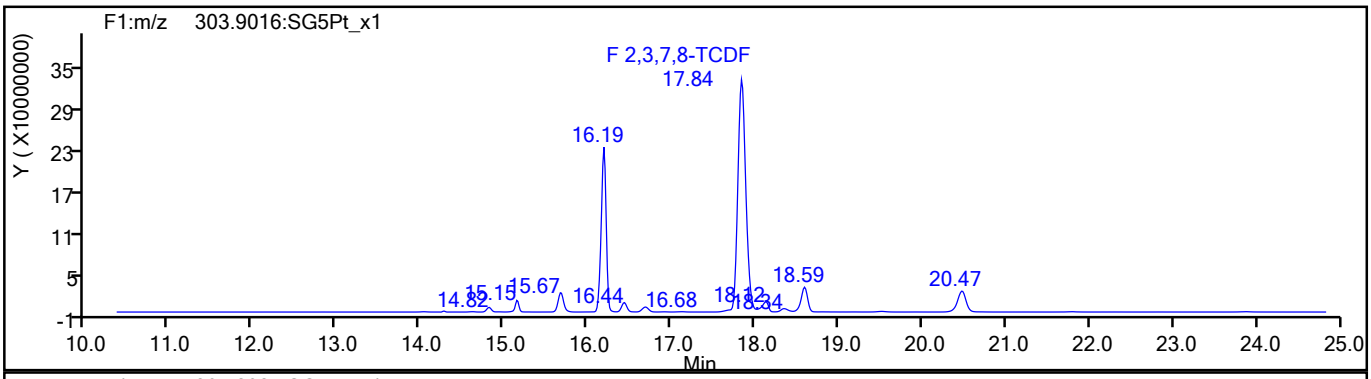

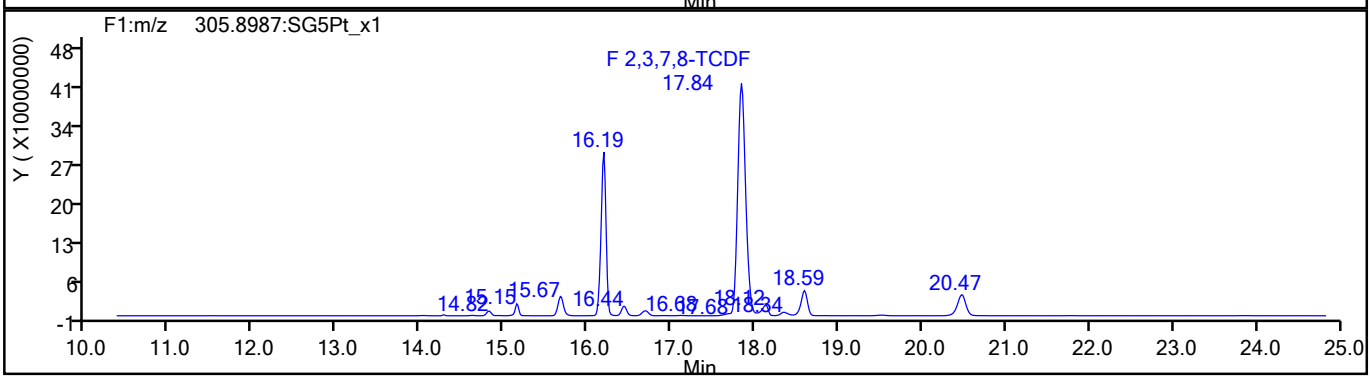

TCDF Standards

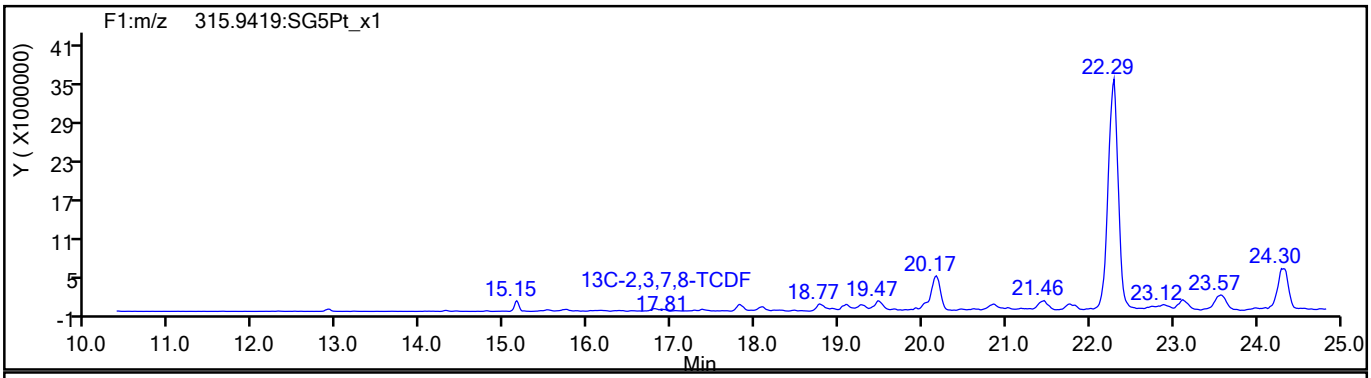

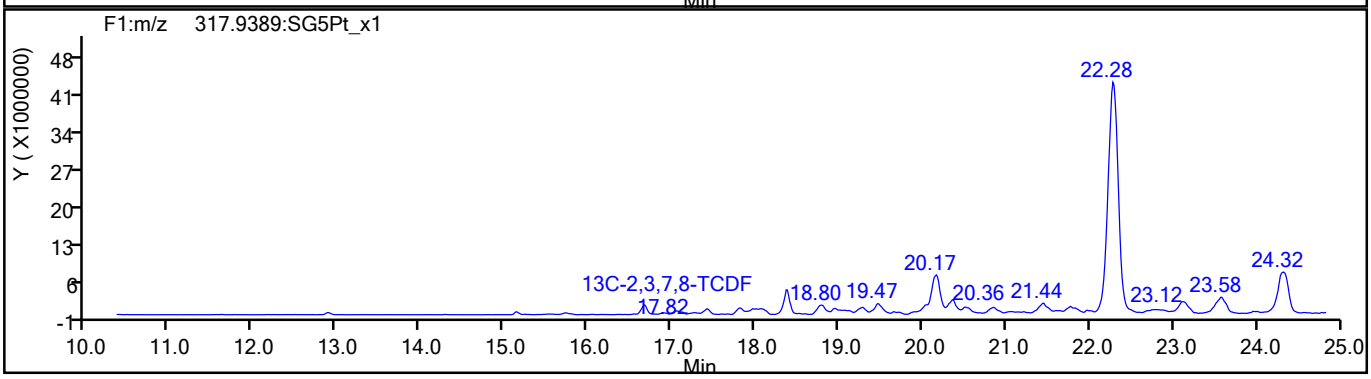

788202

Report Date: 30-Aug-2021 09:51:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_018.d		
Injection Date:	28-Aug-2021 02:30:28	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	520456	Sample Line#:	18
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

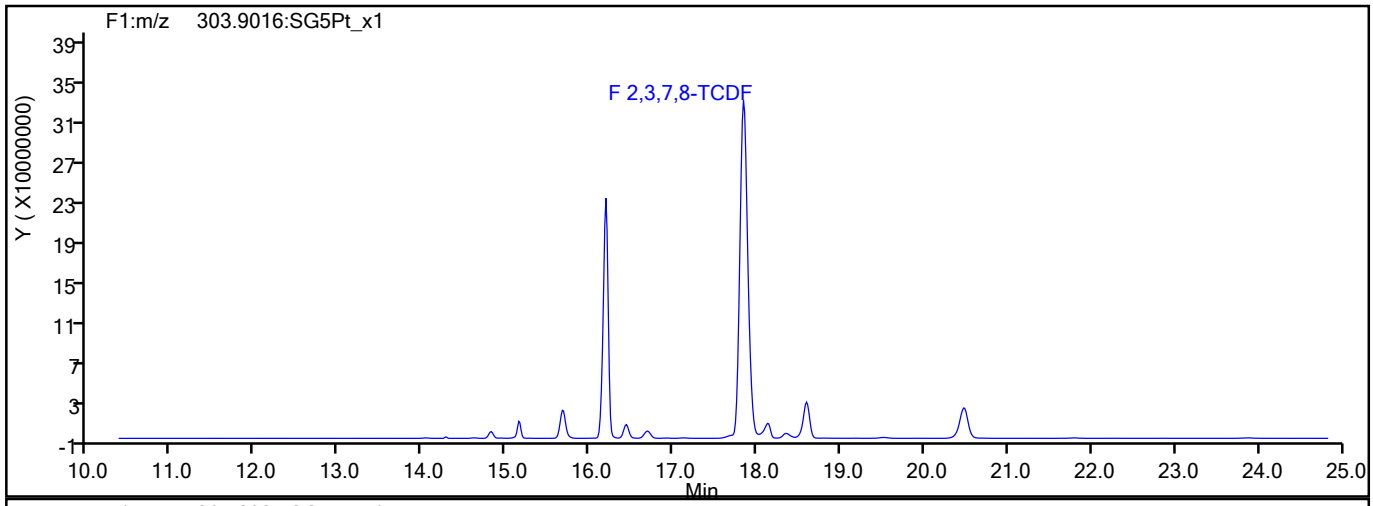

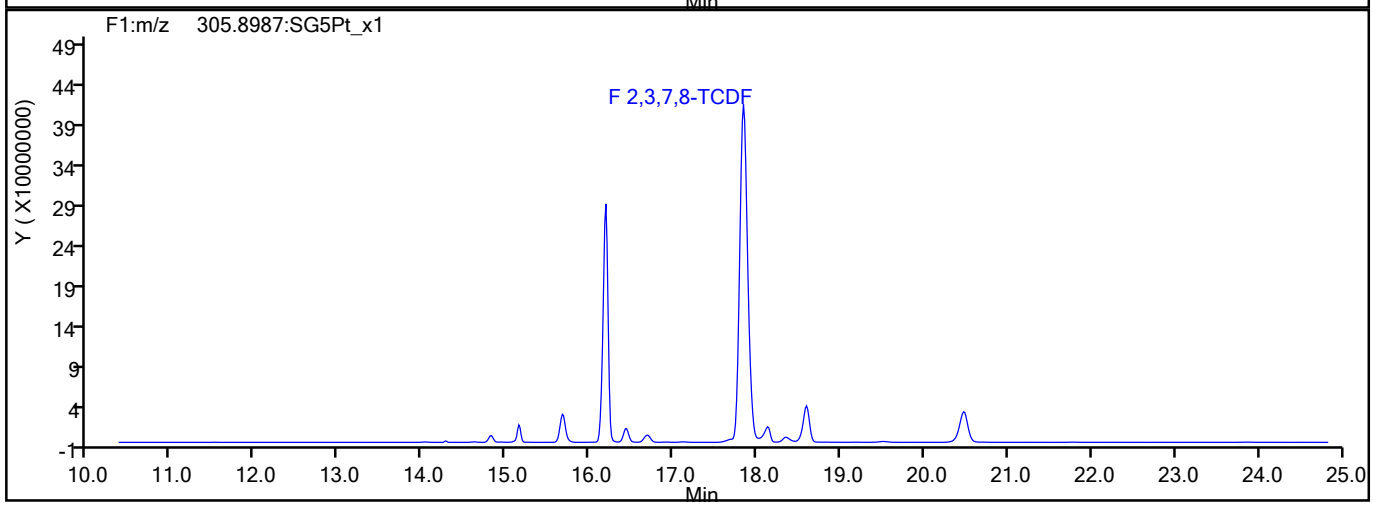

TCDF Interference Mass

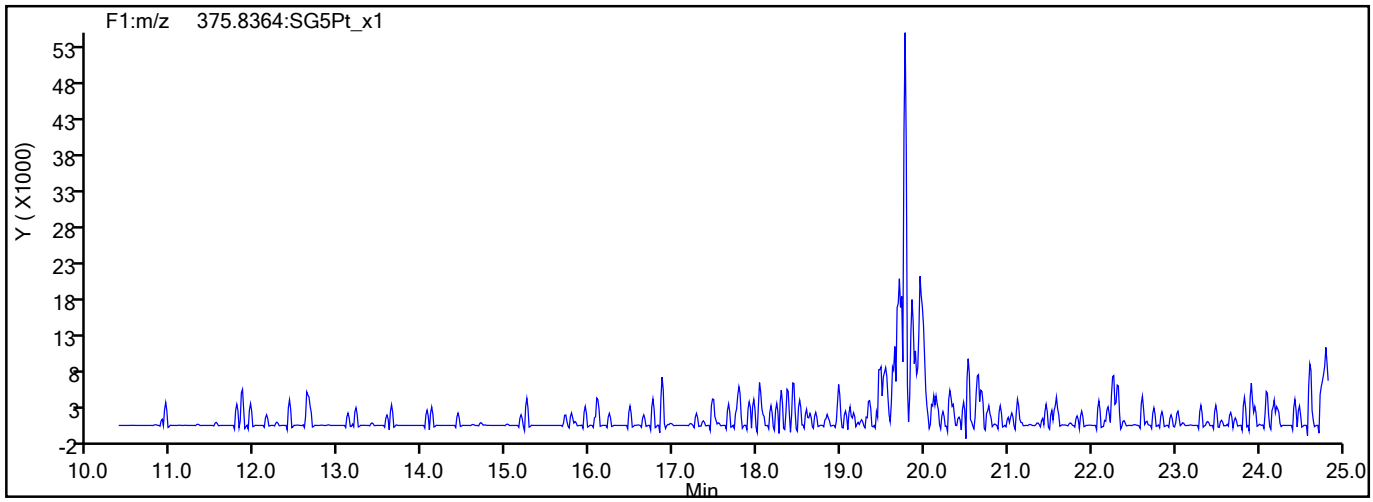

788203

Report Date: 30-Aug-2021 09:51:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_018.d		
Injection Date:	28-Aug-2021 02:30:28	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	520456	Sample Line#:	18
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

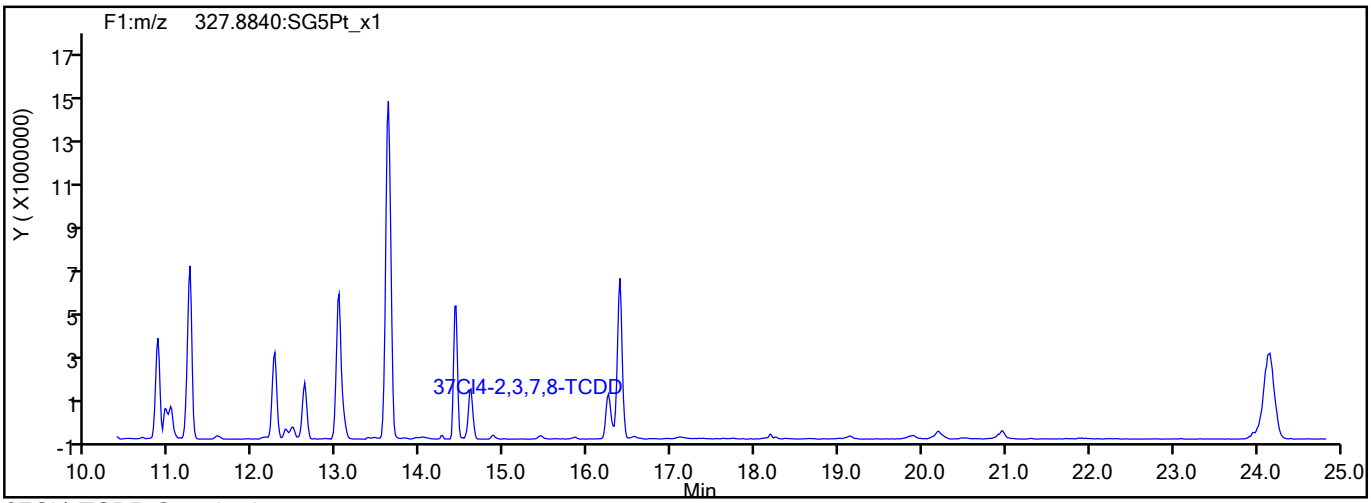

37Cl4-TCDD Standards

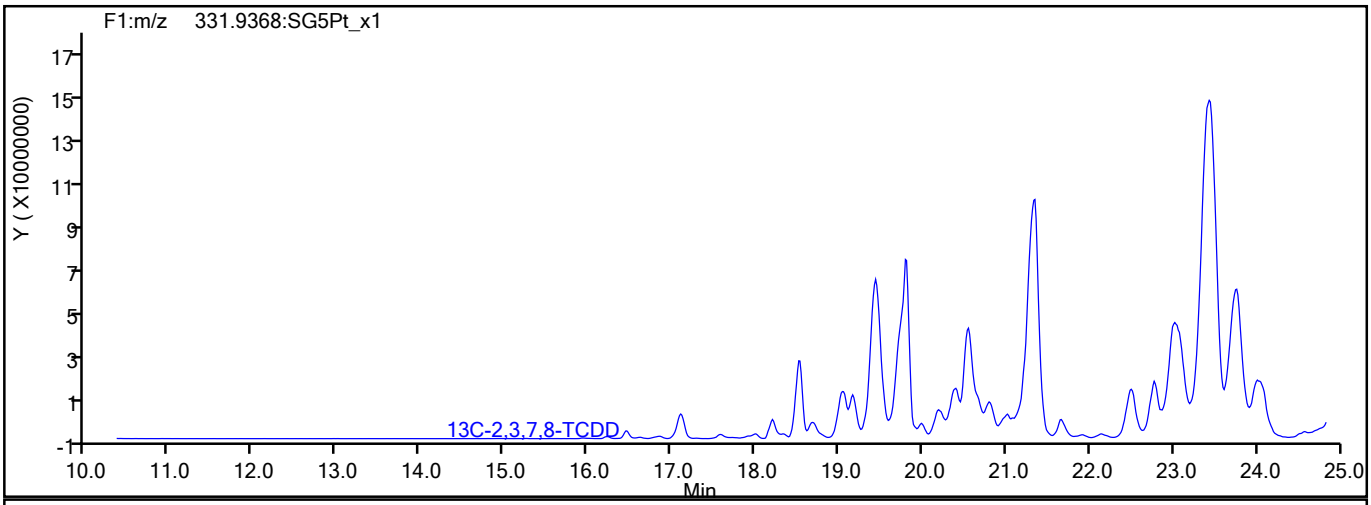

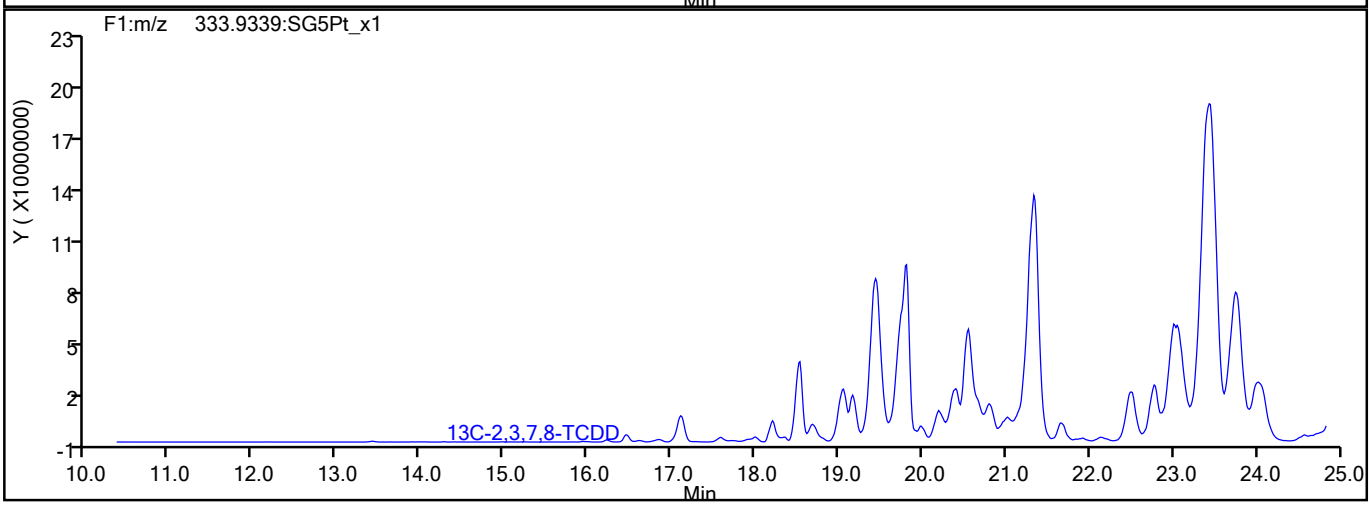

788204

Report Date: 30-Aug-2021 09:51:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_018.d		
Injection Date:	28-Aug-2021 02:30:28	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	520456	Sample Line#:	18
Column Type:	DB-225	Column Dia:	0.32 mm

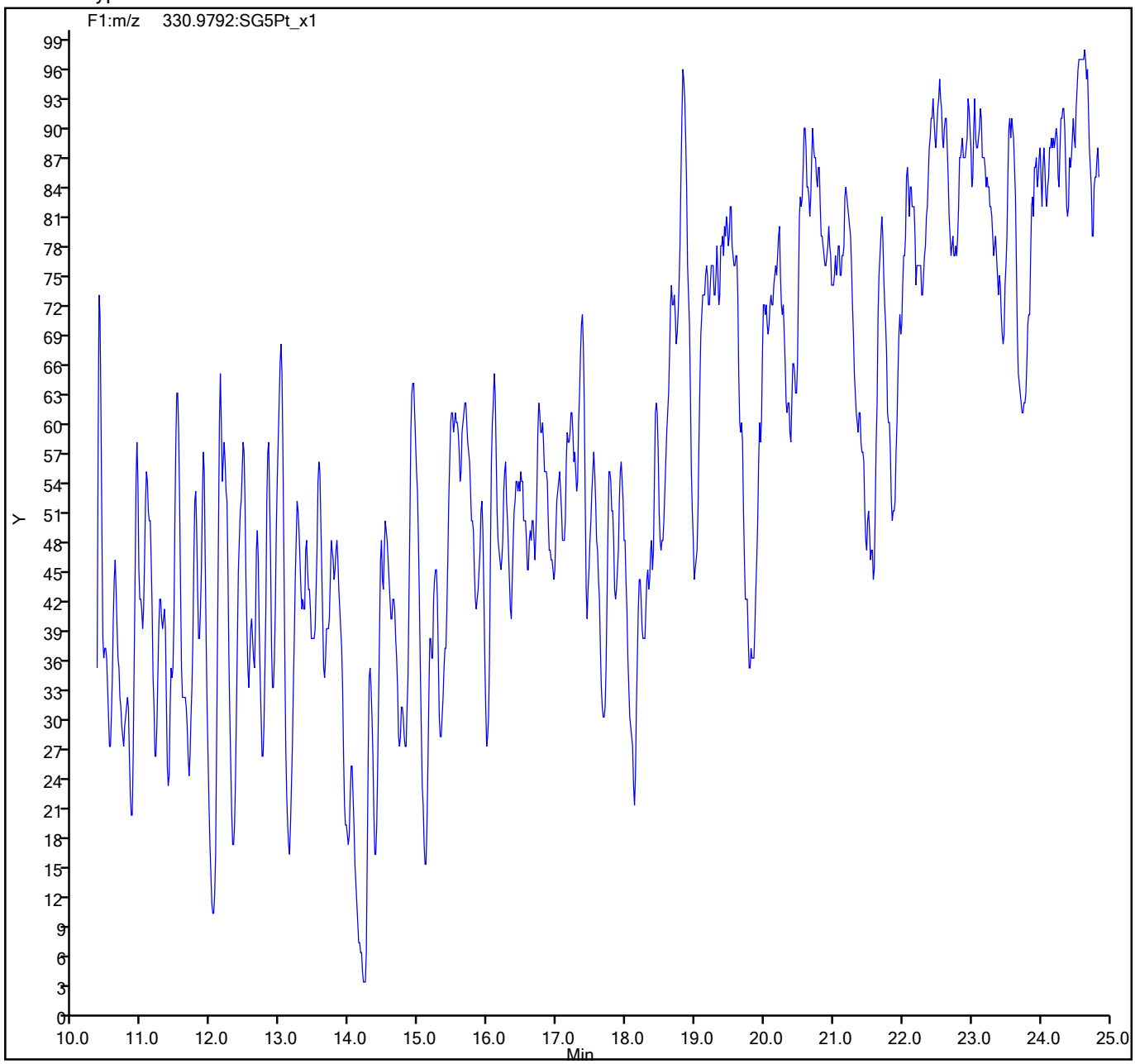

788205

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (0-2)
Lab Sample ID: 320-76901-1
Matrix: Sediment
Lab File ID: 19au21dfs1_26.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.80(g)
Date Analyzed: 08/20/2021 08:44
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 43.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	23000	E G	21	21
40321-76-4	1,2,3,7,8-PeCDD	290		81	7.8
57117-41-6	1,2,3,7,8-PeCDF	2100		81	15
57117-31-4	2,3,4,7,8-PeCDF	1700		81	15
39227-28-6	1,2,3,4,7,8-HxCDD	ND		81	1.2
57653-85-7	1,2,3,6,7,8-HxCDD	ND		81	1.3
19408-74-3	1,2,3,7,8,9-HxCDD	4.8	J	81	1.2
70648-26-9	1,2,3,4,7,8-HxCDF	2800		81	11
57117-44-9	1,2,3,6,7,8-HxCDF	740		81	12
72918-21-9	1,2,3,7,8,9-HxCDF	40	J	81	12
60851-34-5	2,3,4,6,7,8-HxCDF	88	q	81	13
35822-46-9	1,2,3,4,6,7,8-HpCDD	88	B	81	1.2
67562-39-4	1,2,3,4,6,7,8-HpCDF	790	B	81	3.0
55673-89-7	1,2,3,4,7,8,9-HpCDF	250		81	3.3
3268-87-9	OCDD	1400	B	160	3.5
39001-02-0	OCDF	340	q	160	2.8
41903-57-5	Total TCDD	25000	q G	21	21
30402-14-3	Total TCDF	200000	B G	140	140
36088-22-9	Total PeCDD	290		81	7.8
30402-15-4	Total PeCDF	6200	q	81	15
34465-46-8	Total HxCDD	32	J q	81	1.2
55684-94-1	Total HxCDF	4100	q	81	12
37871-00-4	Total HpCDD	200	B q	81	1.2
38998-75-3	Total HpCDF	1200	B	81	3.2

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (0-2)
Lab Sample ID: 320-76901-1
Matrix: Sediment
Lab File ID: 19au21dfs1_26.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.80(g)
Date Analyzed: 08/20/2021 08:44
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 43.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 518043
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	33		25-164
89059-46-1	13C-2,3,7,8-TCDF	34		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	29		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	33		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	36		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	36		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	33		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	43		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	37		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	32		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	34		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	33	q	23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	36		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	39		26-138
114423-97-1	13C-OCDD	37		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	68		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d
Lims ID: 320-76901-A-1-A
Client ID: 11215702-072821-BN-SJSB095 (0-2)
Sample Type: Client
Inject. Date: 20-Aug-2021 08:44:00 ALS Bottle#: 0 Worklist Smp#: 24
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76901-a-1-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:11:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: dadunj Date: 23-Aug-2021 10:03:06

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.421	153921	0.85	2.1E+04	10.0	10.0				
D 13C-2,3,7,8-TCDF	20.441	69504	0.88	1.3459	3.355	3.355	0.2443	0.2443	33.55	
2,3,7,8-TCDF	20.467	25401265	0.83	1.0802	3383.3	3383.3	4.218	4.218		E
A Non-2,3,7,8-sub-TCDF	19.851	19785687	0.82	1.0802	2635.4	2635.4	4.218	1585.2		Ma
S Total TCDF					6018.7	6018.7	4.218	4.218		
D 13C-2,3,7,8-TCDD	21.800	47514	0.76	0.9317	3.313	3.313	0.3621	0.3621	33.13	
2,3,7,8-TCDD	21.843	3605146	0.80	1.0753	705.6	705.6	0.6393	0.6393		Ea
$ 37Cl4-2,3,7,8-TCDD	21.834	42284		1.0083	2.725	2.725	0.1339	0.1339	68.11	
A Non-2,3,7,8-sub-TCDD	20.684	356888	0.77	1.0753	70.1	69.8	0.6393	65.8		RQ
S Total TCDD					775.7	775.4	0.6393	0.6393		RQ
D 13C-1,2,3,7,8-PeCDF	27.294	58282	1.67	1.1405	3.320	3.320	0.0466	0.0466	33.20	
1,2,3,7,8-PeCDF	27.311	393894	1.58	1.0543	64.1	64.1	0.4642	0.4642		M
D 13C-2,3,4,7,8-PeCDF	28.801	62275	1.76	1.1253	3.595	3.595	0.0472	0.0472	35.95	
2,3,4,7,8-PeCDF	28.827	331967	1.62	1.0079	52.9	52.9	0.4584	0.4584		
A F1 PeCDFs	24.634	2088	1.55	1.0311	0.4191	0.3360	0.007061	0.3360		RQa
A Non-2,3,7,8-sub-PeCDF	28.173	446819	1.60	1.0311	71.9	71.9	0.4610	29.2		Ma
S Total PeCDF					189.3	189.2	0.4613	0.4613		RQ
D 13C-1,2,3,7,8-PeCDD	29.610	31733	1.43	0.7165	2.878	2.878	0.0176	0.0176	28.78	
1,2,3,7,8-PeCDD	29.627	29255	1.72	1.0465	8.809	8.809	0.2397	0.2397		M
A Non-2,3,7,8-sub-PeCDD	28.478						0.2397	0.2397		
S Total PeCDD					8.809	8.809	0.2397	0.2397		
D 13C-1,2,3,4,7,8-HxCDF	34.922	58914	0.54	0.9648	4.337	4.337	0.0567	0.0567	43.37	
1,2,3,4,7,8-HxCDF	34.939	575577	1.30	1.1474	85.1	85.1	0.3413	0.3413		
D 13C-1,2,3,6,7,8-HxCDF	35.083	55505	0.51	1.0708	3.682	3.682	0.0511	0.0511	36.82	
1,2,3,6,7,8-HxCDF	35.099	153704	1.28	1.2178	22.7	22.7	0.3713	0.3713		
D 13C-2,3,4,6,7,8-HxCDF	35.907	49302	0.58	1.0413	3.363	3.363	0.0525	0.0525	33.63	
2,3,4,6,7,8-HxCDF	35.915	16136	1.24	1.2145	2.937	2.695	0.4068	0.4068		RQM
D 13C-1,2,3,7,8,9-HxCDF	36.808	43818	0.59	0.9731	3.198	3.198	0.0562	0.0562	31.98	
1,2,3,7,8,9-HxCDF	36.799	6593	1.26	1.2401	1.213	1.213	0.3616	0.3616		M
A Non-2,3,7,8-sub-HxCDF	35.009	96133	1.24	1.2049	15.9	15.4	0.3681	6.865		RQMa
S Total HxCDF					127.9	127.2	0.3703	0.3703		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.597	140796	1.22	1.8E+04	10.0	10.0				
D 13C-1,2,3,4,7,8-HxCDD	36.117	38152	1.27	0.7587	3.572	3.572	0.0308	0.0308	35.72	
1,2,3,4,7,8-HxCDD	36.126						0.0374	0.0374		U
D 13C-1,2,3,6,7,8-HxCDD	36.227	40411	1.23	0.8593	3.340	3.340	0.0272	0.0272	33.40	
1,2,3,6,7,8-HxCDD	36.126						0.0403	0.0403		U
1,2,3,7,8,9-HxCDD	36.572	642	1.13	1.1094	0.1473	0.1473	0.0359	0.0359		M
A Non-2,3,7,8-sub-HxCDD	35.375	3401	1.24	1.0545	0.995	0.8211	0.0378	0.4688		RQ
S Total HxCDD					1.143	0.9684	0.0379	0.0379		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.605	37589	0.46	0.7359	3.628	3.628	0.0433	0.0433	36.28	
1,2,3,4,6,7,8-HpCDF	38.622	131496	1.09	1.4421	24.3	24.3	0.0928	0.0928		
D 13C-1,2,3,4,7,8,9-HpCDF	39.867	37699	0.45	0.6854	3.907	3.907	0.0465	0.0465	39.07	
1,2,3,4,7,8,9-HpCDF	39.875	38588	1.06	1.3092	7.819	7.819	0.1024	0.1024		
A Non-2,3,7,8-sub-HpCDF	39.245	27649	1.00	1.3756	5.339	5.339	0.0974	5.339		
S Total HpCDF					37.4	37.4	0.0976	0.0976		
D 13C-1,2,3,4,6,7,8-HpCDD	39.556	30922	1.04	0.6745	3.556	3.256	0.0360	0.0360	35.56	RQ
1,2,3,4,6,7,8-HpCDD	39.564	9620	1.11	1.0503	2.712	2.712	0.0368	0.0368		
A Non-2,3,7,8-sub-HpCDD	39.241	11607	1.04	1.0503	3.615	3.272	0.0368	3.272		RQ
S Total HpCDD					6.327	5.984	0.0368	0.0368		RQ
D 13C-OCDD	42.059	56069	0.93	0.5446	7.312	7.312	0.0641	0.0641	36.56	
OCDF	42.152	38605	0.89	1.3168	11.3	10.5	0.0857	0.0857		RQ
OCDD	42.059	124281	0.86	1.0620	41.7	41.7	0.1089	0.1089		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d
Lims ID: 320-76901-A-1-A
Client ID: 11215702-072821-BN-SJSB095 (0-2)
Sample Type: Client
Inject. Date: 20-Aug-2021 08:44:00 ALS Bottle#: 0 Worklist Smp#: 24
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-76901-a-1-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 25-Aug-2021 15:11:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1684

First Level Reviewer: dadunj Date: 23-Aug-2021 10:03:06

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.421	21.395	2		70749	9190	134	335	69		
333.9338	21.404	21.395	1		83172	10580	133	332	80	0.85(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.441	20.365	5	0.954	32631	5852	128	320	46		
317.9389	20.433	20.365	4	0.954	36873	5718	132	330	43	0.88(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.467	20.408	4	1.001	11498009	1516271	933	2332	1625		
305.8987	20.467	20.408	4	1.001	13903256	1851227	1176	2940	1574	0.83(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											Ma
303.9016	17.466	19.851	-143	0.854	48770	9115	933	2332	10		
305.8987	17.466	19.851	-143	0.854	60622	11641	1176	2940	10	0.80(0.65-0.89)	
303.9016	17.930	19.851	-115	0.877	244276	39281	933	2332	42		
305.8987	17.921	19.851	-116	0.877	298513	47949	1176	2940	41	0.82(0.65-0.89)	
303.9016	18.420	19.851	-86	0.901	429284	50061	933	2332	54		M
305.8987	18.412	19.851	-86	0.901	535495	60886	1176	2940	52	0.80(0.65-0.89)	
303.9016	18.841	19.851	-60	0.922	359020	46711	933	2332	50		
305.8987	18.841	19.851	-60	0.922	448917	58257	1176	2940	50	0.80(0.65-0.89)	M
303.9016	19.228	19.851	-37	0.941	523088	75836	933	2332	81		
305.8987	19.220	19.851	-38	0.940	619027	87740	1176	2940	75	0.85(0.65-0.89)	
303.9016	19.727	19.851	-7	0.965	5329082	747210	933	2332	801		
305.8987	19.719	19.851	-8	0.965	6572241	920479	1176	2940	783	0.81(0.65-0.89)	
303.9016	20.131	19.851	17	0.985	217518	27534	933	2332	30		
305.8987	20.123	19.851	16	0.984	265376	34602	1176	2940	29	0.82(0.65-0.89)	
303.9016	21.241	19.851	83	1.039	823824	108246	933	2332	116		
305.8987	21.241	19.851	83	1.039	978655	132027	1176	2940	112	0.84(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.731	19.851	113	1.063	154397	18052	933	2332	19		
305.8987	21.731	19.851	113	1.063	182074	20755	1176	2940	18	0.85(0.65-0.89)	
303.9016	23.649	19.851	227	1.157	791257	136140	933	2332	146		a
305.8987	23.641	19.851	227	1.157	904251	158574	1176	2940	135	0.88(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.800	21.716	5	1.018	20541	3835	134	335	29		
333.9338	21.834	21.716	7	1.019	26973	5431	133	332	41	0.76(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	21.843	21.733	7	1.002	1604985	216469	125	312	1732		a
321.8936	21.843	21.733	7	1.002	2000161	269493	130	325	2073	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.834	21.799	2	1.019	42284	5941	107	267	56		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	19.753	20.684	-56	0.906	6661	836	125	312	7		
	Empc Correction				5524	836	125	312	7		
321.8936	19.745	20.684	-56	0.906	7175	1086	130	325	8	0.93(0.65-0.89)	
319.8965	20.346	20.684	-20	0.933	3272	607	125	312	5		
321.8936	20.338	20.684	-21	0.933	4773	765	130	325	6	0.69(0.65-0.89)	
319.8965	22.505	20.684	109	1.032	150771	17977	125	312	144		
321.8936	22.497	20.684	109	1.032	185373	22466	130	325	173	0.81(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.294	27.251	3	1.274	36453	5724	29	72	197		
353.8970	27.286	27.251	2	1.274	21829	3614	13	32	278	1.67(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.311	27.276	2	1.001	241330	33357	97	242	344		M
341.8567	27.311	27.276	2	1.001	152564	21268	86	215	247	1.58(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.801	28.757	3	1.345	39689	6294	29	72	217		
353.8970	28.776	28.757	1	1.343	22586	3598	13	32	277	1.76(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.827	28.791	2	1.001	205028	28988	97	242	299		
341.8567	28.827	28.791	2	1.001	126939	17842	86	215	207	1.62(1.32-1.78)	
A F1 PeCDFs											RQa
339.8597	24.097	24.634	-32	0.883	1786	363	1	2	363		a
	Empc Correction				1269	344	1	2	344		
341.8567	24.097	24.634	-32	0.883	819	222	2	5	111	2.18(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											Ma
339.8597	25.838	28.173	-140	0.947	113100	18895	97	242	195		
341.8567	25.838	28.173	-140	0.947	68582	11926	86	215	139	1.65(1.32-1.78)	
339.8597	26.739	28.173	-86	0.980	11068	1508	97	242	16		
341.8567	26.747	28.173	-85	0.980	8087	1031	86	215	12	1.37(1.32-1.78)	
339.8597	27.176	28.173	-60	0.996	18299	4332	97	242	45		M
341.8567	27.185	28.173	-59	0.996	11834	2579	86	215	30	1.55(1.32-1.78)	
339.8597	27.884	28.173	-17	1.022	77386	11682	97	242	120		
341.8567	27.884	28.173	-17	1.022	49829	7379	86	215	86	1.55(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	29.155	28.173	59	1.068	44725	5873	97	242	61		
341.8567	29.147	28.173	58	1.068	26781	3458	86	215	40	1.67(1.32-1.78)	
339.8597	30.889	28.173	163	1.132	10552	1326	97	242	14		
341.8567	30.889	28.173	163	1.132	6576	804	86	215	9	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.610	29.574	2	1.382	18668	2794	8	20	349		
369.8919	29.610	29.574	2	1.382	13065	1790	2	5	895	1.43(1.32-1.78)	
1,2,3,7,8-PeCDD											M
355.8546	29.627	29.616	1	1.001	18491	2380	26	65	92		
357.8516	29.627	29.616	1	1.001	10764	1411	20	50	71	1.72(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.478						26	65			
357.8516	28.478						20	50			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.922	34.906	1	0.954	20677	4850	27	67	180		
385.8610	34.922	34.906	1	0.954	38237	7712	45	112	171	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.939	34.922	1	1.000	324891	62930	122	305	516		
375.8178	34.939	34.922	1	1.000	250686	48815	75	187	651	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.083	35.066	1	0.959	18767	4134	27	67	153		
385.8610	35.099	35.066	2	0.959	36738	6748	45	112	150	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.099	35.082	1	1.000	86215	17048	122	305	140		
375.8178	35.099	35.082	1	1.000	67489	12379	75	187	165	1.28(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.907	35.890	1	0.981	18075	3676	27	67	136		
385.8610	35.899	35.890	1	0.981	31227	6282	45	112	140	0.58(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQM
373.8208	35.915	35.907	1	1.000	10379	2460	122	305	20		M
	Empc Correction				8932	1788	122	305	15		
375.8178	35.915	35.907	1	1.000	7204	1442	75	187	19	1.44(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.808	36.782	2	1.006	16179	4269	27	67	158		
385.8610	36.791	36.782	1	1.005	27639	6702	45	112	149	0.59(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	36.799	36.791	1	1.000	3682	1108	122	305	9		M
375.8178	36.808	36.791	1	1.000	2911	897	75	187	12	1.26(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											RQMa
373.8208	33.458	35.009	-93	0.958	24195	3977	122	305	33		
375.8178	33.450	35.009	-93	0.958	18724	3370	75	187	45	1.29(1.05-1.43)	
373.8208	34.308	35.009	-42	0.982	9101	1744	122	305	14		
	Empc Correction				7246	1311	122	305	11		
375.8178	34.316	35.009	-41	0.983	5844	1058	75	187	14	1.56(1.05-1.43)	
373.8208	35.798	35.009	47	1.025	5730	1348	122	305	11		M
	Empc Correction				4518	983	122	305	8		
375.8178	35.798	35.009	47	1.025	3644	793	75	187	11	1.57(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	36.909	35.009	114	1.057	18104	3990	122	305	33		M
375.8178	36.917	35.009	114	1.057	13858	3357	75	187	45	1.31(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.597	36.581	1		77289	17931	21	52	854		
403.8529	36.597	36.581	1		63507	14991	10	25	1499	1.22(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.117	36.092	2	0.987	21345	4595	21	52	219		
403.8529	36.109	36.092	1	0.987	16807	4229	10	25	423	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											U
389.8158	36.109						6	15			
391.8127	36.109						8	20			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.227	36.210	1	0.990	22304	4903	21	52	233		
403.8529	36.235	36.210	2	0.990	18107	3832	10	25	383	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											U
389.8158	36.227						6	15			
391.8127	36.227						8	20			
1,2,3,7,8,9-HxCDD											M
389.8158	36.572	36.597	-2	1.013	340	83	6	15	14		M
391.8127	36.614	36.597	1	1.014	302	105	8	20	13	1.13(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	34.224	35.375	-69	0.945	808	237	6	15	40		
391.8127	34.258	35.375	-67	0.946	863	178	8	20	22	0.94(1.05-1.43)	
	Empc Correction				651	191	8	20	24		
389.8158	35.368	35.375	0	0.976	1585	301	6	15	50		
	Empc Correction				1075	200	6	15	33		
391.8127	35.360	35.375	-1	0.976	867	162	8	20	20	1.83(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.605	38.596	1	1.055	11792	3348	26	65	129		
419.8220	38.605	38.596	1	1.055	25797	6884	16	40	430	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.622	38.618	0	1.000	68497	17324	32	80	541		
409.7788	38.622	38.618	0	1.000	62999	16675	23	57	725	1.09(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.867	39.850	1	1.089	11769	3252	26	65	125		
419.8220	39.859	39.850	0	1.089	25930	6967	16	40	435	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.875	39.872	0	1.000	19897	5154	32	80	161		
409.7788	39.867	39.872	0	1.000	18691	5040	23	57	219	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.984	39.245	-16	1.010	13834	3614	32	80	113		
409.7788	38.984	39.245	-16	1.010	13815	3865	23	57	168	1.00(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											RQ
435.8169	39.556	39.547	1	1.081	18615	5031	18	45	280		
	Empc Correction				15764	4720	18	45	262		
437.8140	39.556	39.547	1	1.081	15158	4539	14	35	324	1.23(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.564	39.561	0	1.000	5053	1348	9	22	150		
425.7737	39.564	39.561	0	1.000	4567	1232	6	15	205	1.11(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.925	39.241	-19	0.984	7133	1890	9	22	210		
	Empc Correction				5917	1477	9	22	164		
425.7737	38.933	39.241	-18	0.984	5690	1421	6	15	237	1.25(0.88-1.20)	
13C-OCDD											
469.7780	42.059	42.036	1	1.149	26986	7188	19	47	378		
471.7750	42.059	42.036	1	1.149	29083	6994	27	67	259	0.93(0.76-1.02)	
OCDF											RQ
441.7428	42.152	42.137	1	1.002	21124	4982	11	27	453		
	Empc Correction				18179	4123	11	27	375		
443.7399	42.143	42.137	0	1.002	20426	4633	21	52	221	1.03(0.76-1.02)	
OCDD											
457.7377	42.059	42.053	0	1.000	57585	13946	15	37	930		
459.7348	42.059	42.053	0	1.000	66696	15263	18	45	848	0.86(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 25-Aug-2021 15:11:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Lims ID:	320-76901-A-1-A		
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Inject. Date:	20-Aug-2021 08:44:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	24

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	69504	11570

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		10.000	69504	11570

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.466	48770	9115	60622	11641	14.6	0.80	
17.930	244276	39281	298513	47949	72.3	0.82	
18.420	429284	50061	535495	60886	128.5	0.80	Ma
18.841	359020	46711	448917	58257	107.6	0.80	M
19.228	523088	75836	619027	87740	152.1	0.85	
19.727	5329082	747210	6572241	920479	1585.2	0.81	
20.131	217518	27534	265376	34602	64.3	0.82	
21.241	823824	108246	978655	132027	240.1	0.84	
21.731	154397	18052	182074	20755	44.8	0.85	
23.649	791257	136140	904251	158574	225.8	0.88	a
Signal Totals:							
	8920516	1258186	10865171	1532910			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	19785687	2791096				0.82	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2635.4 = (19785687 * 10.000) / (69504 * 1.080)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Lims ID:	320-76901-A-1-A		
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Inject. Date:	20-Aug-2021 08:44:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	24

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	47514	9266

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		10.000	47514	9266

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.753	6661	836	7175	1086	2.71	0.93	RQ
19.753	5524	836	7175	1086	2.49		Empc Correction
20.346	3272	607	4773	765	1.57	0.69	
22.505	150771	17977	185373	22466	65.8	0.81	
Signal Totals:							
	159567	19420	197321	24317			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	358025	43737				0.81	RQ
	356888	43737					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 70.072 = (358025 * 10.000) / (47514 * 1.075)
Empc Amount: 69.849 = (356888 * 10.000) / (47514 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Lims ID:	320-76901-A-1-A		
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Inject. Date:	20-Aug-2021 08:44:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	24

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	58282	9338
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	62275	9892

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	60278	9615

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.097	1786	363	819	222	0.4191	2.18	RQa
24.097	1269	344	819	222	0.3360		Empc Correction
Signal Totals:							
	1269	344	819	222			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2605	585				2.18	RQa
	2088	566					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4191 = (2605 * 10.000) / (60278 * 1.031)
Empc Amount: 0.3360 = (2088 * 10.000) / (60278 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Lims ID:	320-76901-A-1-A		
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Inject. Date:	20-Aug-2021 08:44:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	24

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	58282	9338
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	62275	9892

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		10.000	60278	9615

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.838	113100	18895	68582	11926	29.2	1.65	
26.739	11068	1508	8087	1031	3.08	1.37	
27.176	18299	4332	11834	2579	4.85	1.55	Ma
27.884	77386	11682	49829	7379	20.5	1.55	
29.155	44725	5873	26781	3458	11.5	1.67	
30.889	10552	1326	6576	804	2.76	1.60	
Signal Totals:							
	275130	43616	171689	27177			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	446819	70793				1.60	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 71.893 = (446819 * 10.000) / (60278 * 1.031)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:11:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Lims ID:	320-76901-A-1-A		
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Inject. Date:	20-Aug-2021 08:44:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	24

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	58914	12562
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	55505	10882
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	49302	9958
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	43818	10971

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		10.000	51884	11093

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.458	24195	3977	18724	3370	6.87	1.29	
34.308	9101	1744	5844	1058	2.39	1.56	RQ
34.308	7246	1311	5844	1058	2.09		Empc Correction
35.798	5730	1348	3644	793	1.50	1.57	RQMa
35.798	4518	983	3644	793	1.31		Empc Correction
36.909	18104	3990	13858	3357	5.11	1.31	Ma
Signal Totals:							
	54063	10261	42070	8578			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	99200	19637				1.36	RQMa
	96133	18839					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 15.868 = (99200 * 10.000) / (51884 * 1.205)

Empc Amount: 15.377 = (96133 * 10.000) / (51884 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 25-Aug-2021 15:11:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Lims ID:	320-76901-A-1-A		
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Inject. Date:	20-Aug-2021 08:44:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	24

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	38152	8824
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	40411	8735
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		10.000	39281	8779

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.224	808	237	863	178	0.4034	0.94	RQ
34.224	808	237	651	191	0.3522		Empc Correction
35.368	1585	301	867	162	0.5919	1.83	RQ
35.368	1075	200	867	162	0.4688		Empc Correction
Signal Totals:							
	1883	437	1518	353			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4123	878				1.38	RQ
	3401	790					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.995 = (4123 * 10.000) / (39281 * 1.055)

Empc Amount: 0.8211 = (3401 * 10.000) / (39281 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 25-Aug-2021 15:11:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Lims ID:	320-76901-A-1-A		
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Inject. Date:	20-Aug-2021 08:44:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	24

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	37589	10232
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	37699	10219

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		10.000	37644	10225

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.984	13834	3614	13815	3865	5.34	1.00	
Signal Totals:							
	13834	3614	13815	3865			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	27649	7479				1.00	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 5.339 = (27649 * 10.000) / (37644 * 1.376)

Report Date: 25-Aug-2021 15:11:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Lims ID:	320-76901-A-1-A		
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Inject. Date:	20-Aug-2021 08:44:00	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	24

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	33773	9570

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		10.000	33773	9570

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.925	7133	1890	5690	1421	3.61	1.25	RQ
38.925	5917	1477	5690	1421	3.27		Empc Correction
Signal Totals:							
	5917	1477	5690	1421			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12823	3311				1.25	RQ
	11607	2898					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.615 = (12823 * 10.000) / (33773 * 1.050)
Empc Amount: 3.272 = (11607 * 10.000) / (33773 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 18.420 Area = 429284

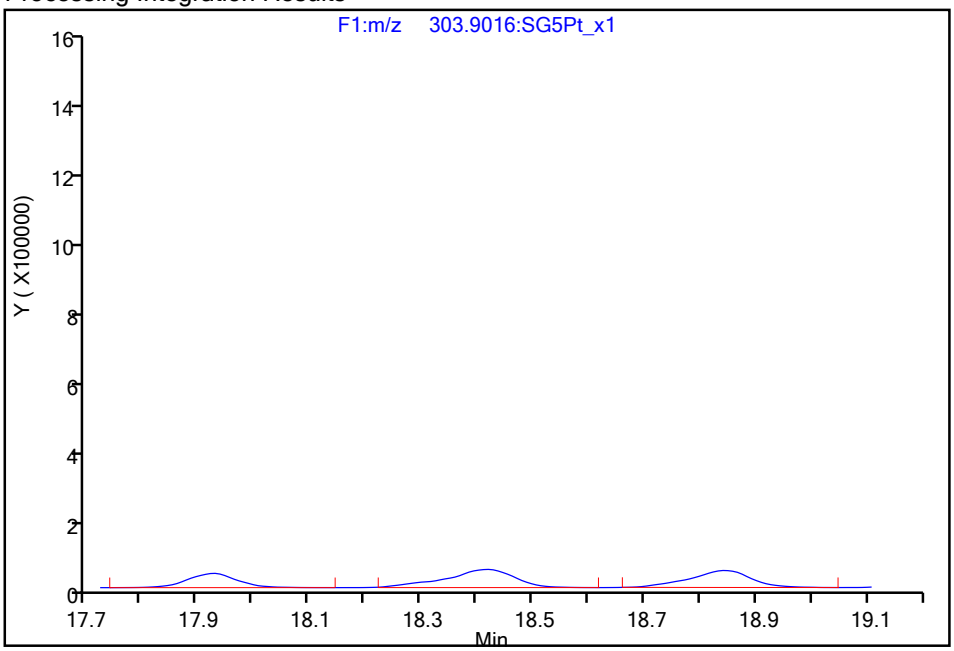

Manual Integration Results

RT = 18.420 Area = 429284

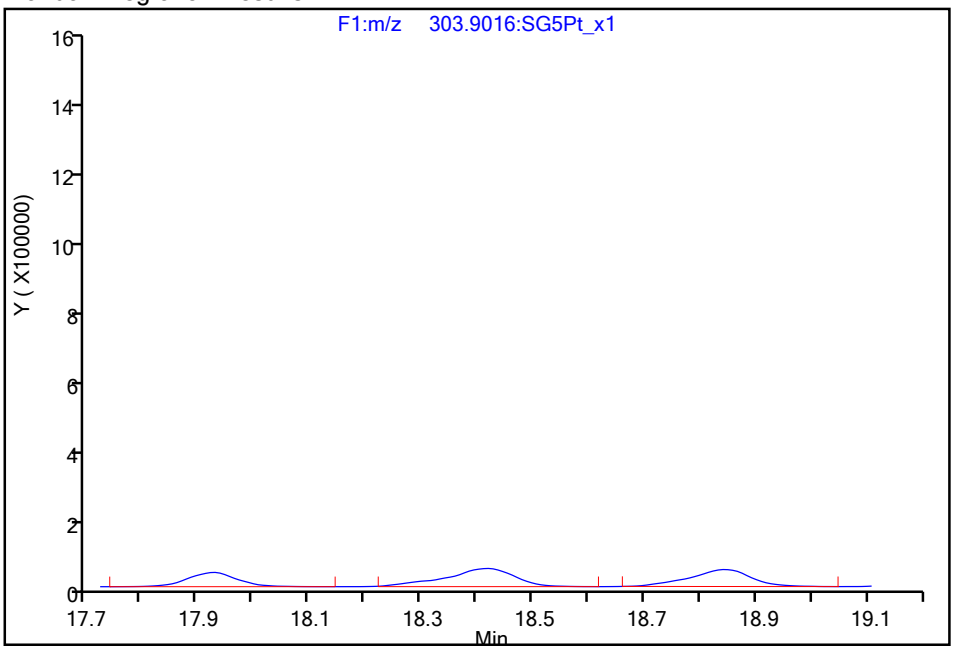

Reviewer: krenns, 25-Aug-2021 15:09:35

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (16.10- 23.60)

Signal: 2

Processing Integration Results

RT = 18.833 Area = 248102

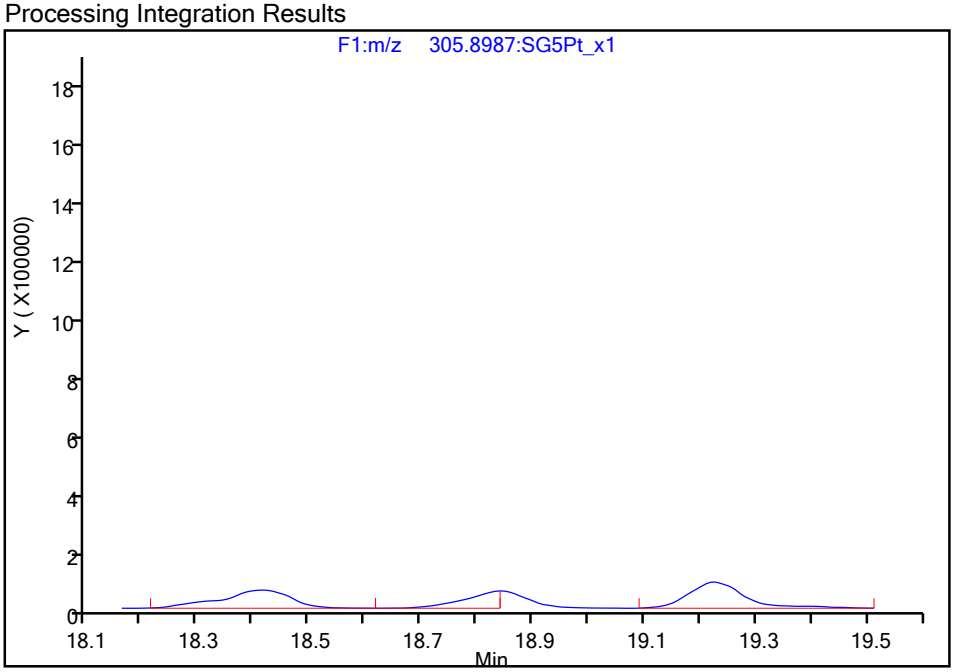

Manual Integration Results

RT = 18.841 Area = 448917 M

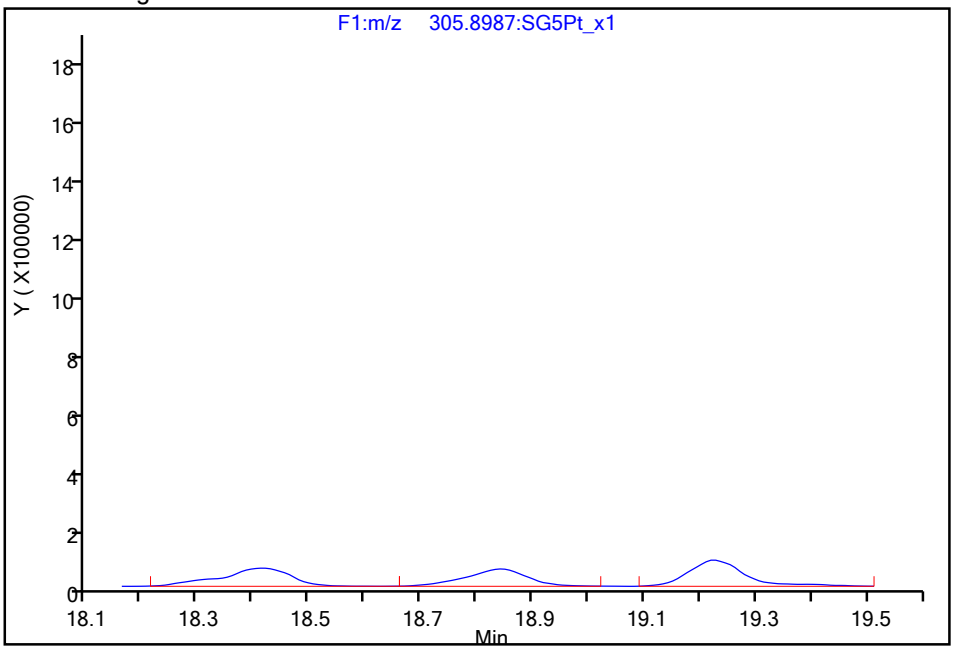

Reviewer: dadunj, 23-Aug-2021 09:58:44

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Not Detected
Expected RT: 21.73

Processing Integration Results

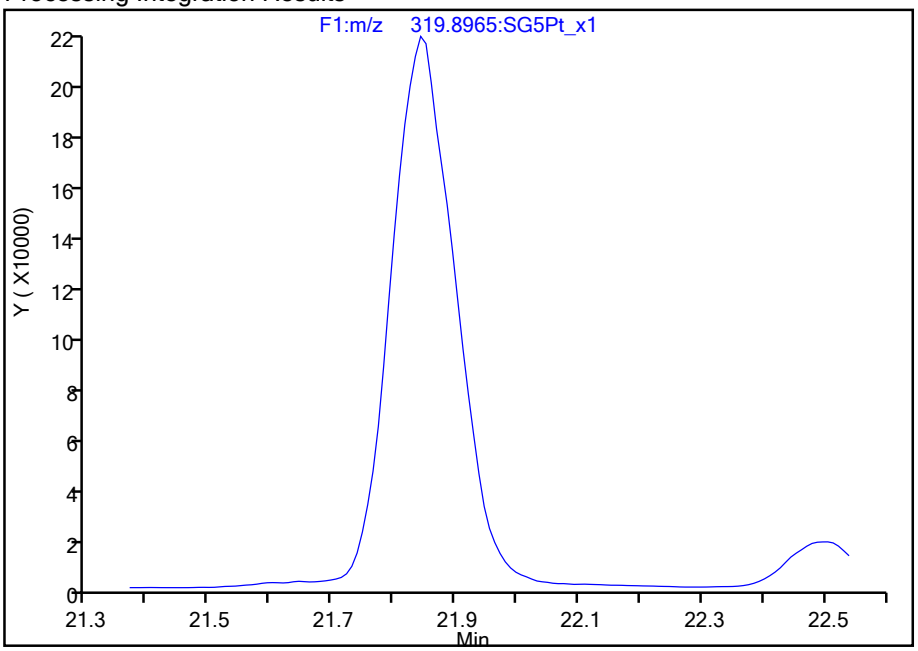

RT: 21.84
Area: 1604985
Amount: 705.5909
Amount Units: pg/ul

Manual Integration Results

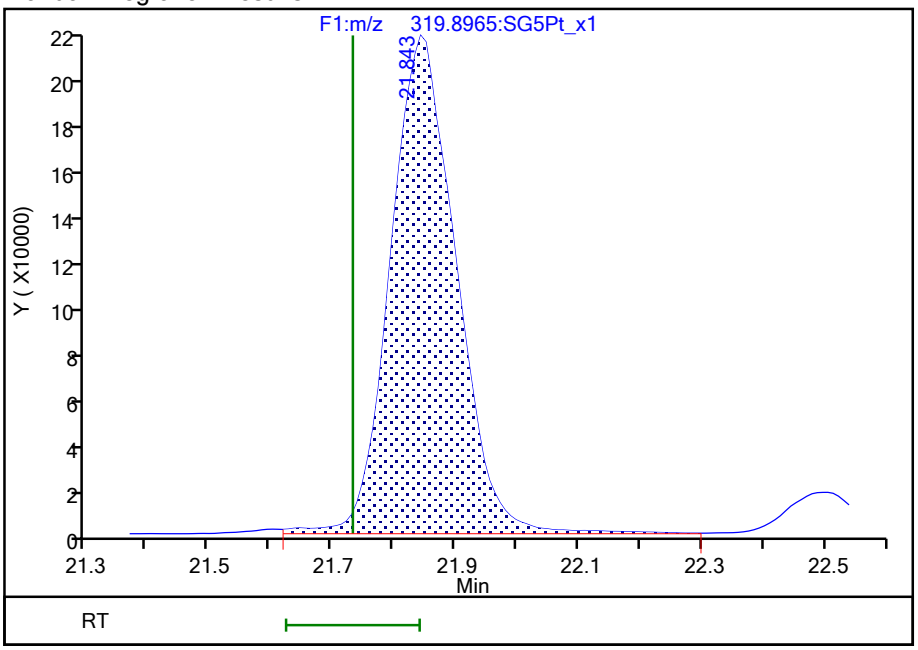

Reviewer: dadunj, 23-Aug-2021 09:59:11
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

788226

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 27.31
Area: 263133
Amount: 69.990746
Amount Units: pg/ul

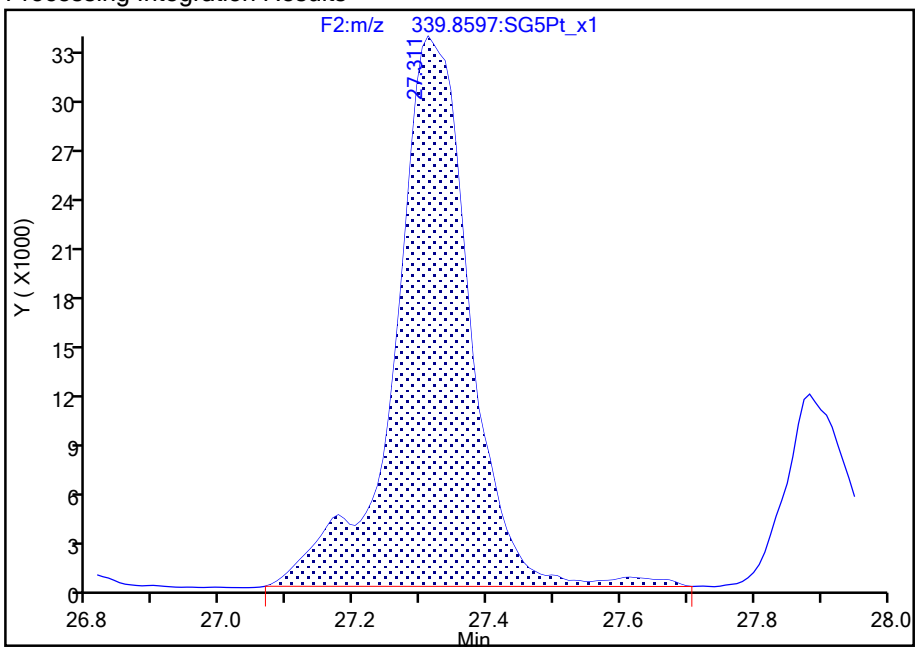

Manual Integration Results

RT: 27.31
Area: 241330
Amount: 64.105603
Amount Units: pg/ul

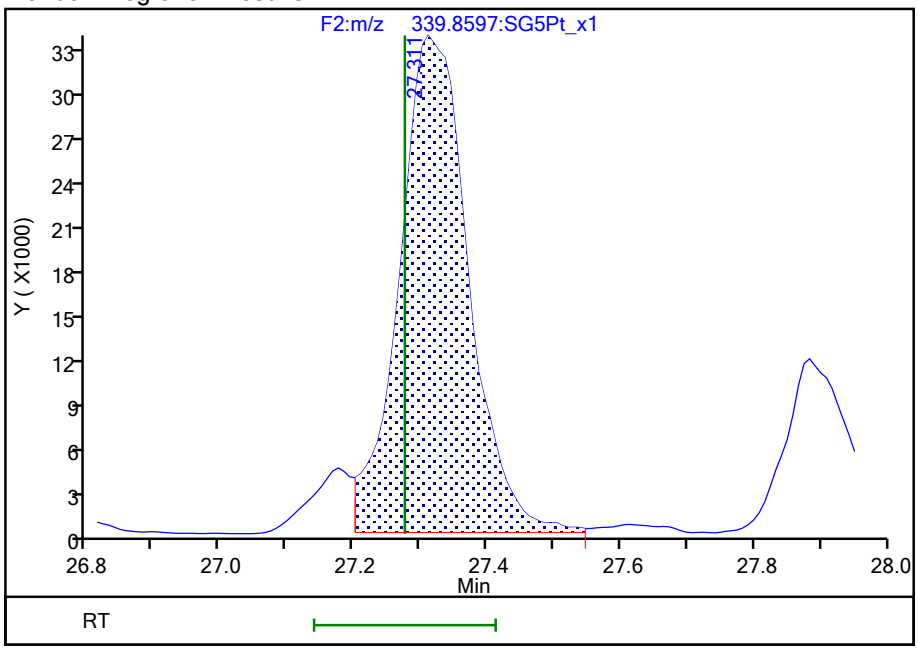

Reviewer: dadunj, 23-Aug-2021 09:59:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.31
Area: 166922
Amount: 69.990746
Amount Units: pg/ul

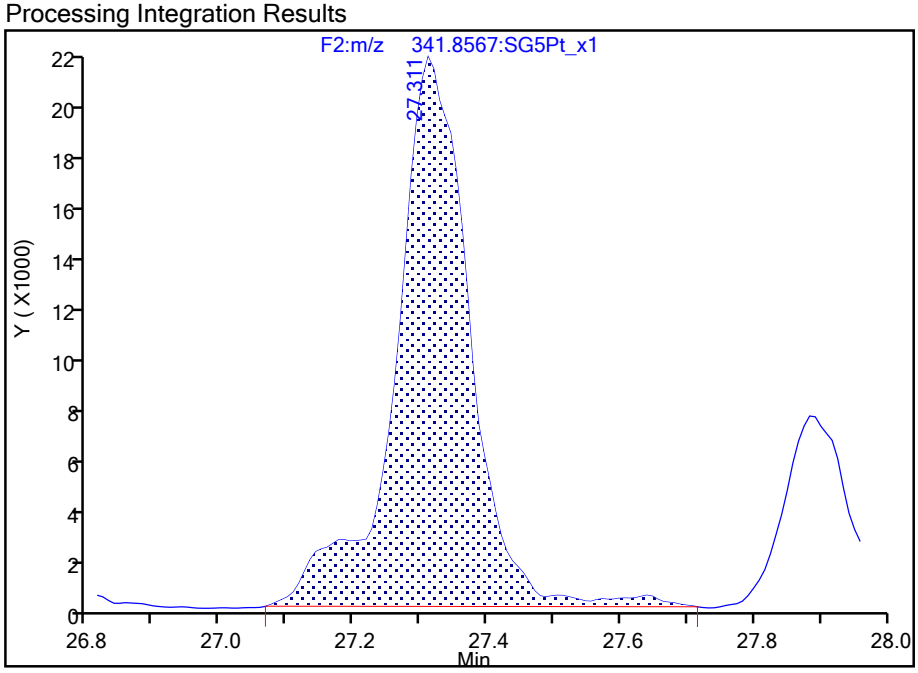

Manual Integration Results

RT: 27.31
Area: 152564
Amount: 64.105603
Amount Units: pg/ul

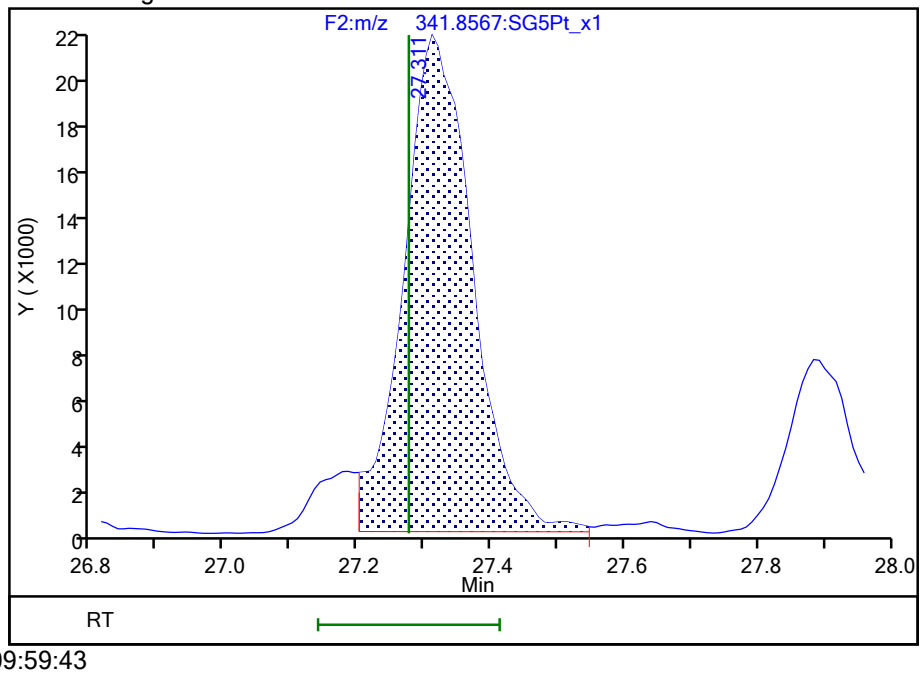

Reviewer: dadunj, 23-Aug-2021 09:59:43
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788228

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

Non-2,3,7,8-sub-PeCDF, Signal: 1, m/z: 339.8597, RT: (25.37- 30.97)

Signal: 1

Processing Integration Results

Not Detected
RT: 25.37- 30.97

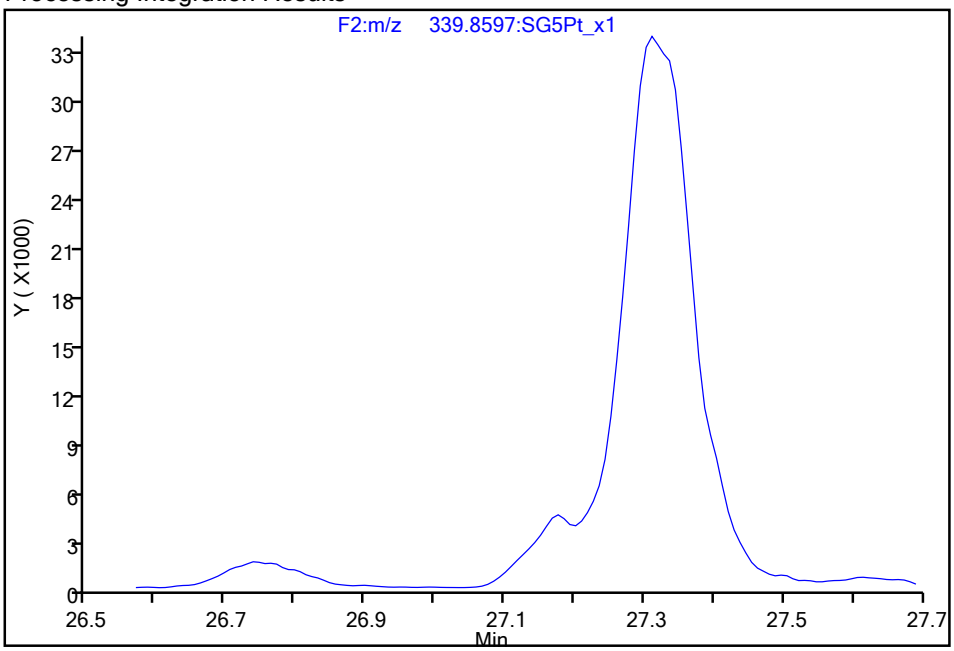

Manual Integration Results

RT = 27.176 Area = 18299 M

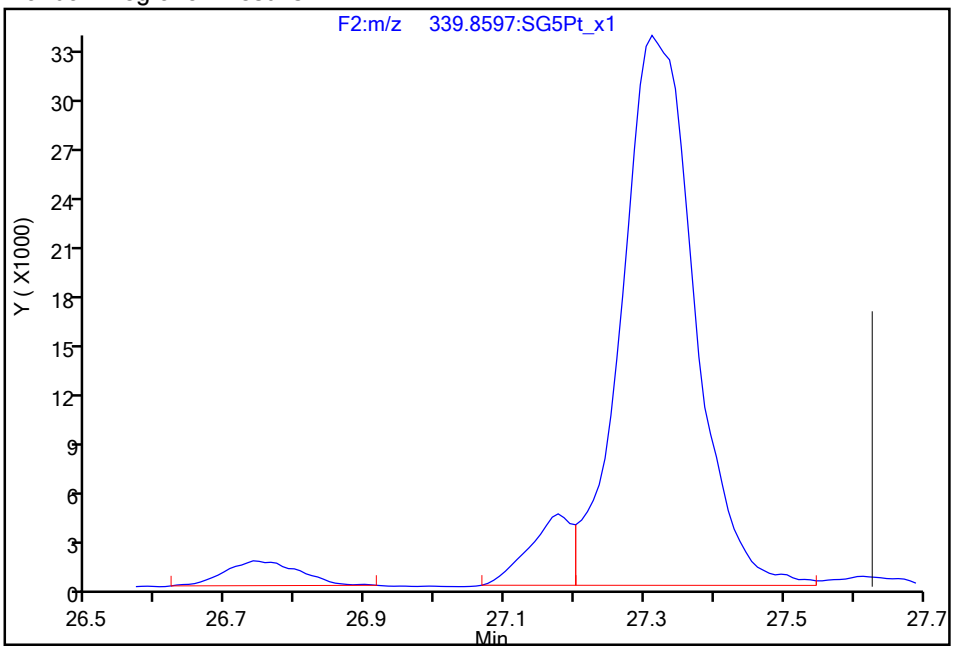

Reviewer: dadunj, 23-Aug-2021 09:59:57

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 2

Processing Integration Results

RT: 29.63
Area: 10270
Amount: 8.660736
Amount Units: pg/ul

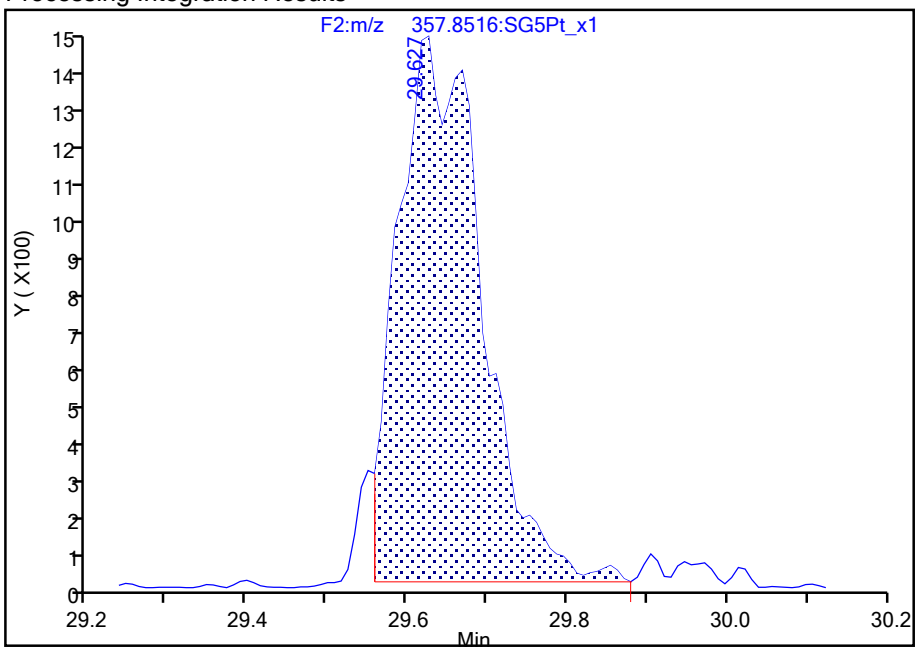

Manual Integration Results

RT: 29.63
Area: 10764
Amount: 8.809493
Amount Units: pg/ul

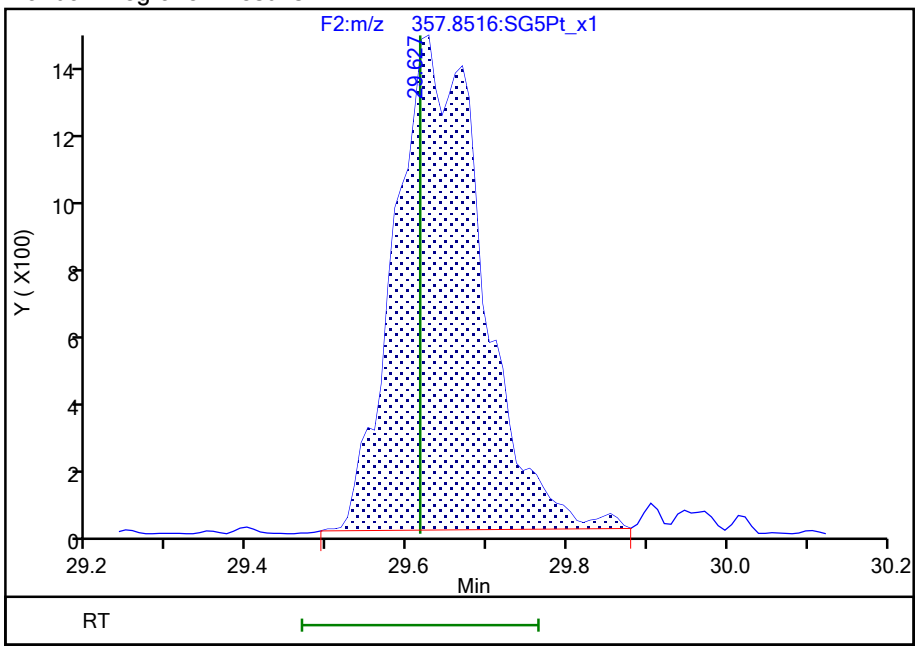

Reviewer: krenns, 25-Aug-2021 15:10:31

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.92
Area: 16110
Amount: 3.618825
Amount Units: pg/ul

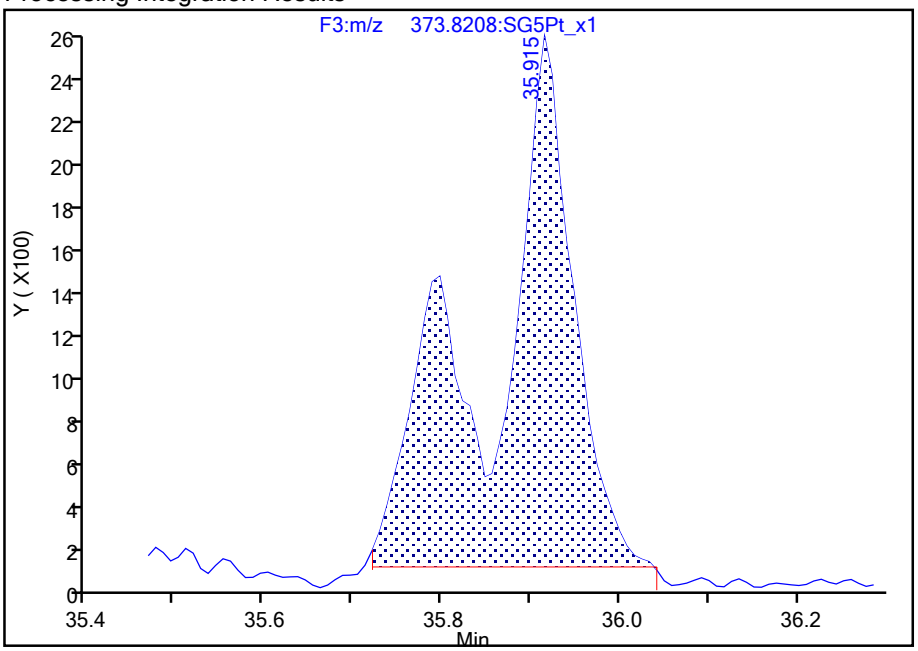

Manual Integration Results

RT: 35.92
Area: 10379
Amount: 2.936580
Amount Units: pg/ul

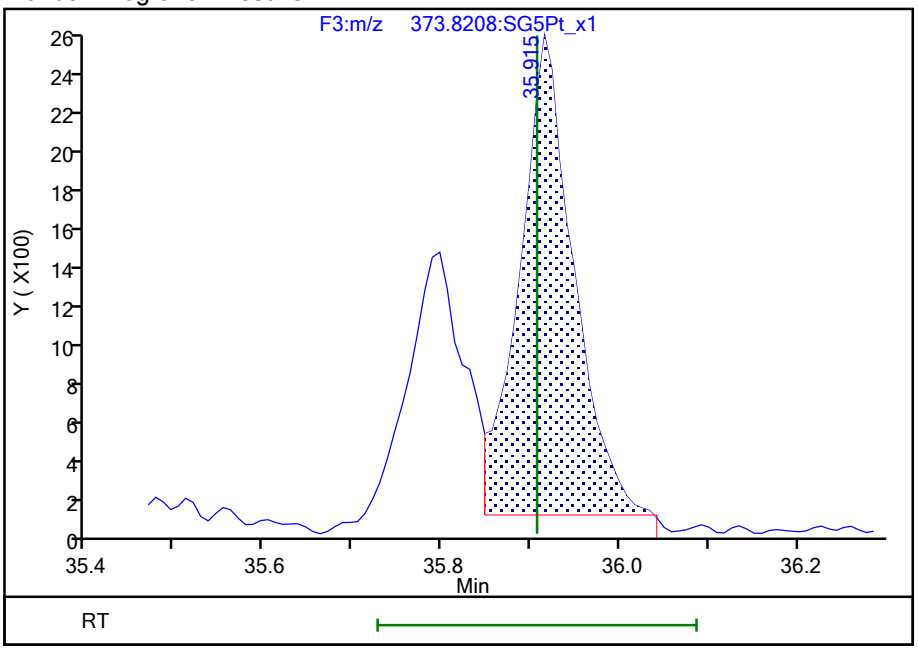

Reviewer: dadunj, 23-Aug-2021 10:00:19

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 35.92
Area: 5558
Amount: 3.618825
Amount Units: pg/ul

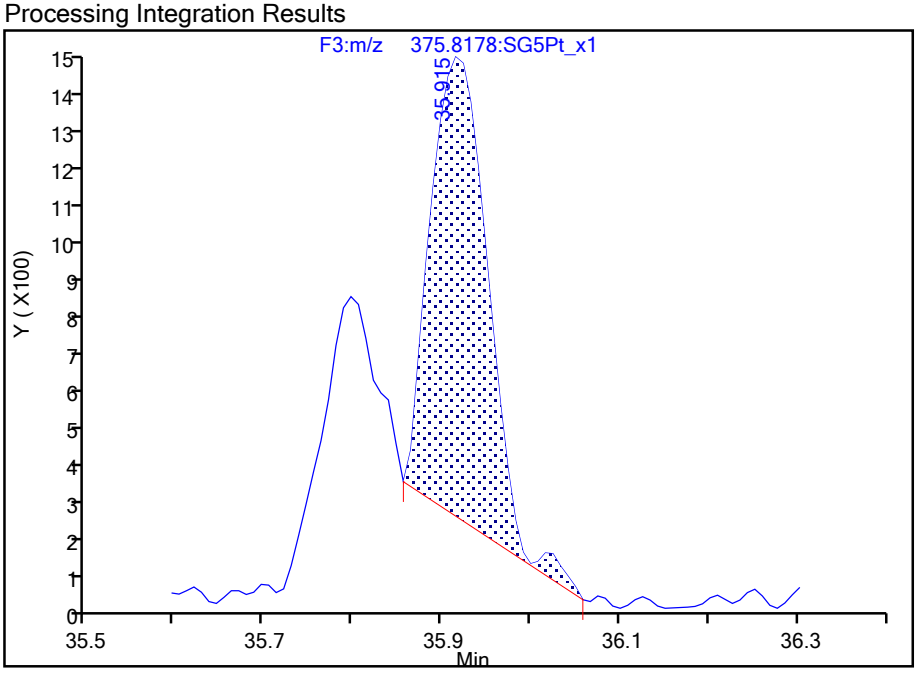

Manual Integration Results

RT: 35.92
Area: 7204
Amount: 2.936580
Amount Units: pg/ul

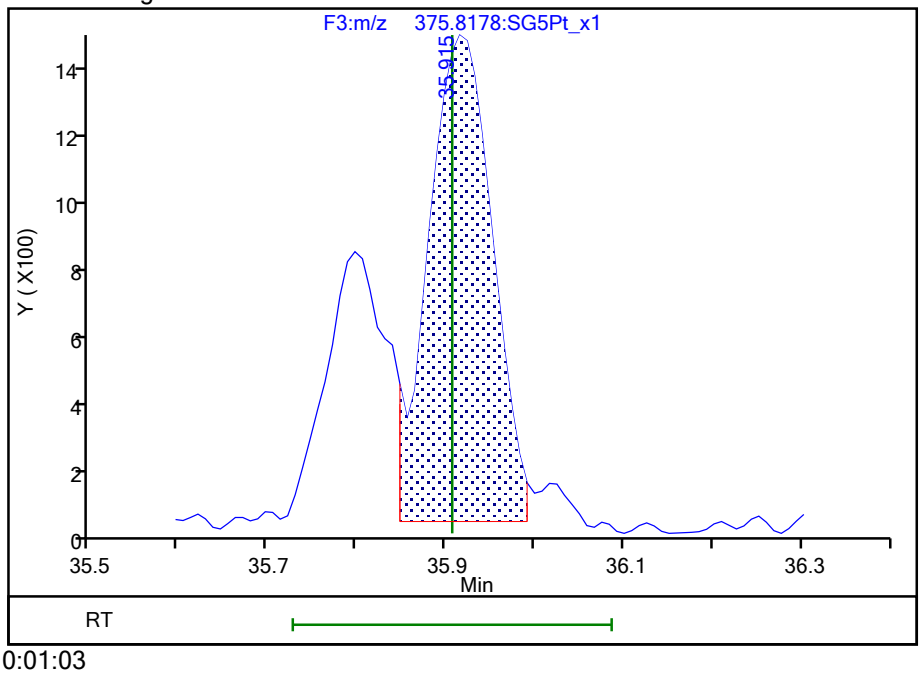

Reviewer: dadunj, 23-Aug-2021 10:01:03

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 36.91
Area: 21785
Amount: 7.096123
Amount Units: pg/ul

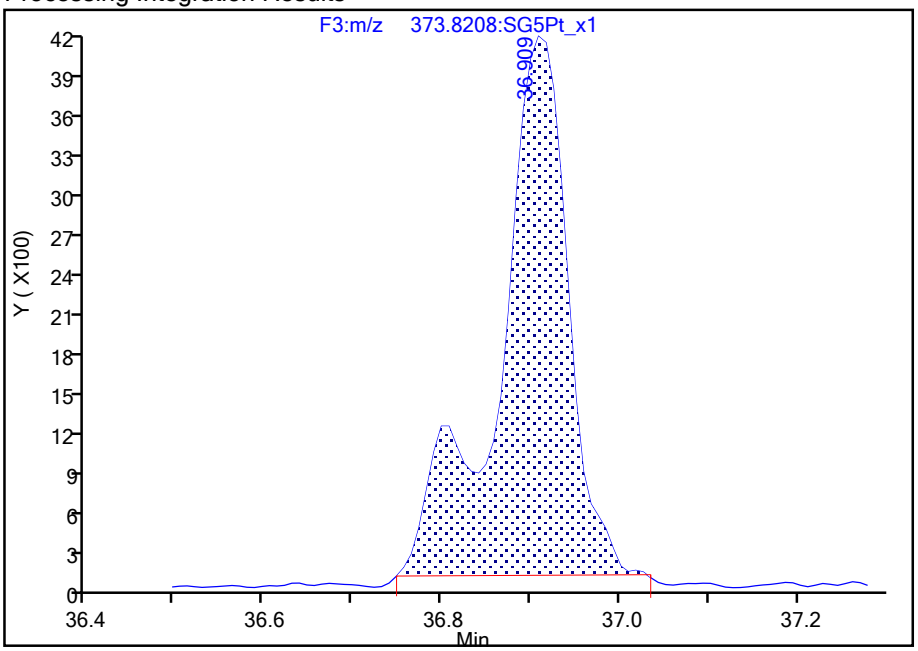

Manual Integration Results

RT: 36.80
Area: 3682
Amount: 1.213297
Amount Units: pg/ul

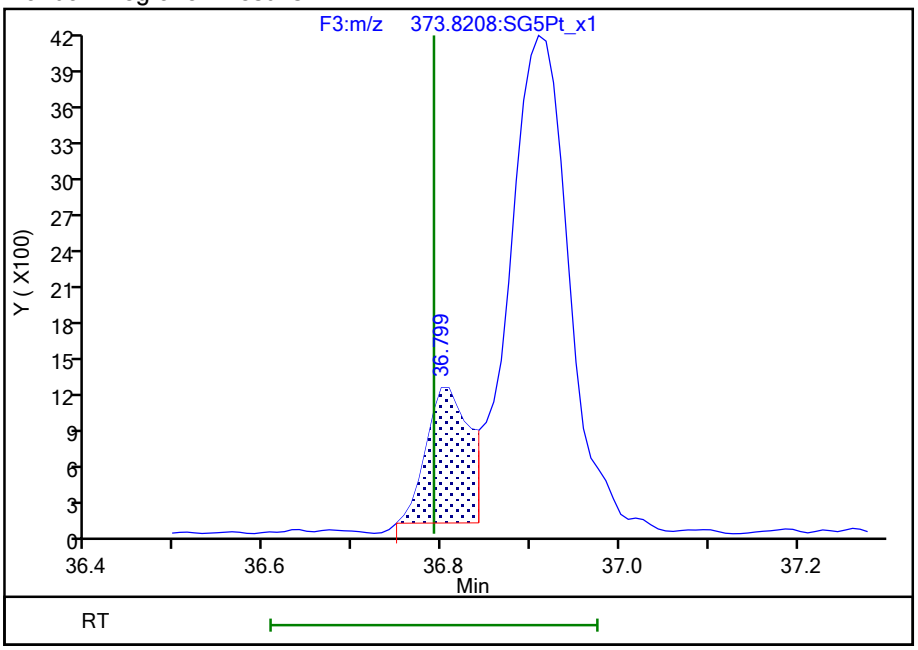

Reviewer: dadunj, 23-Aug-2021 10:00:32

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 36.92
Area: 16775
Amount: 7.096123
Amount Units: pg/ul

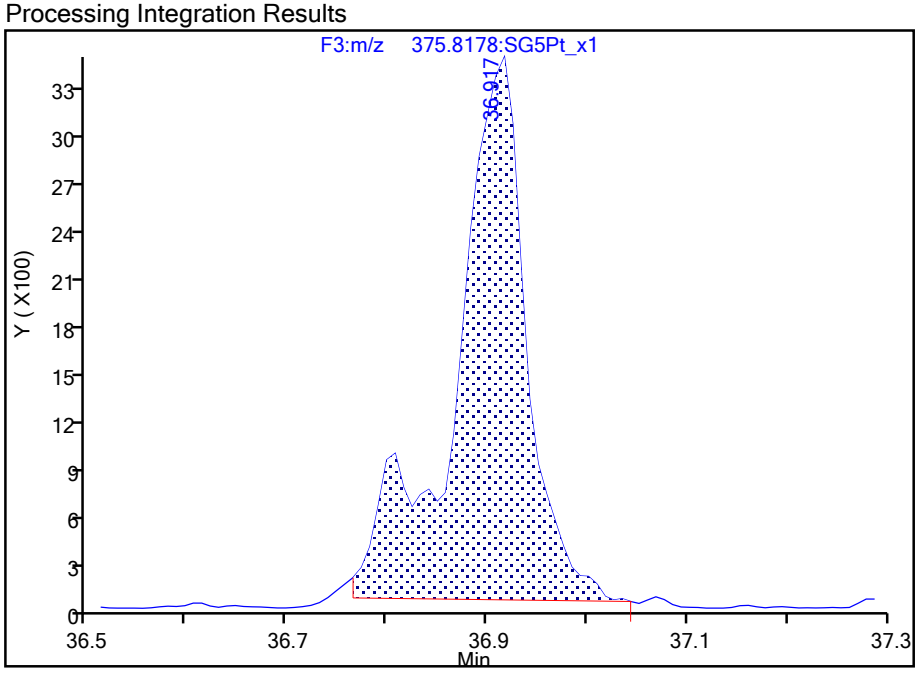

Manual Integration Results

RT: 36.81
Area: 2911
Amount: 1.213297
Amount Units: pg/ul

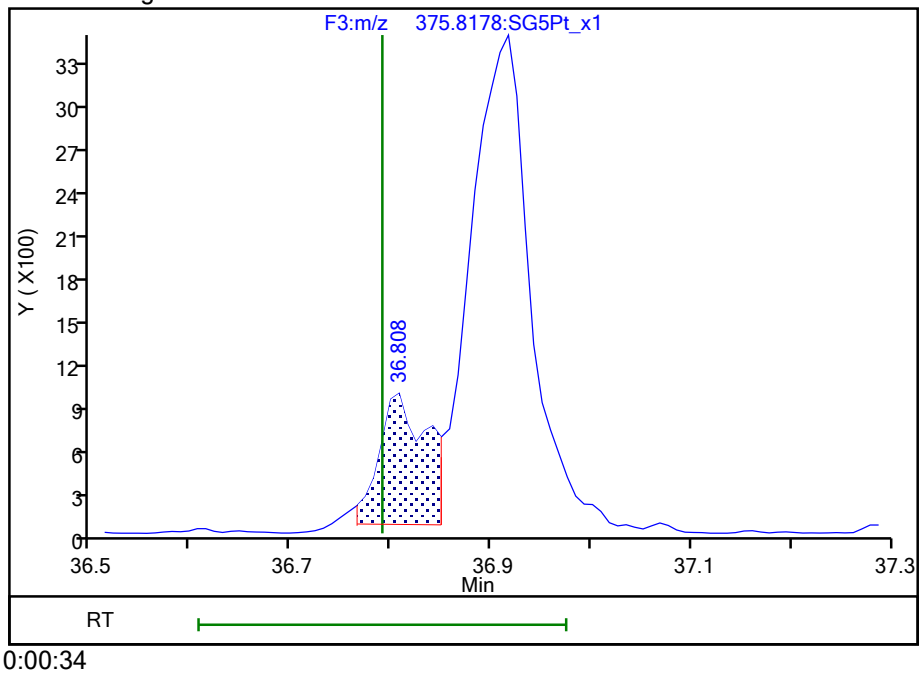

Reviewer: dadunj, 23-Aug-2021 10:00:34

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Not Detected
RT: 33.09- 36.93

Processing Integration Results

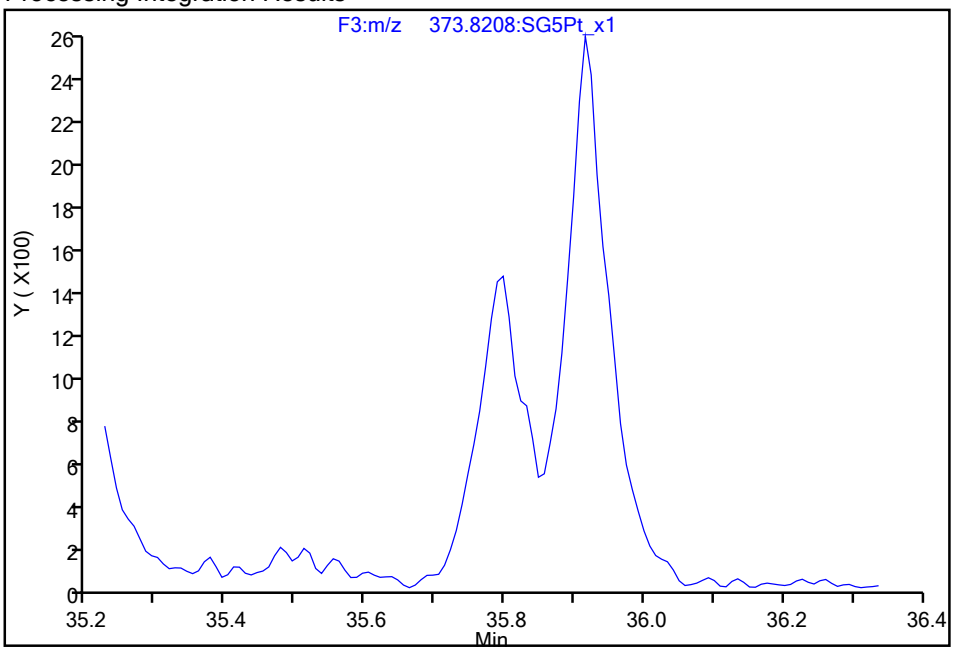

RT = 35.798 Area = 5730 M

Manual Integration Results

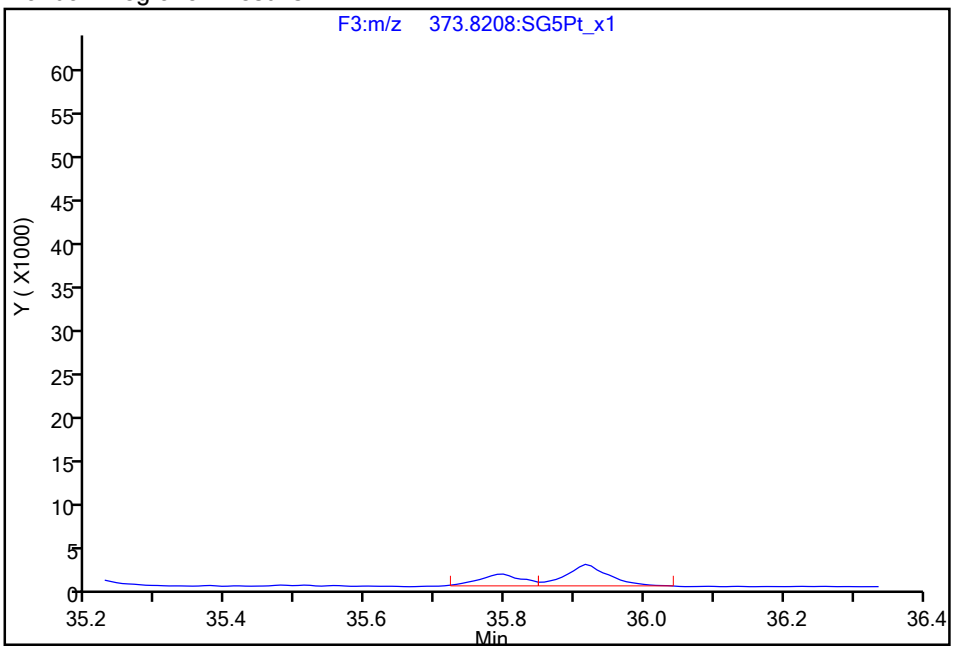

Reviewer: dadunj, 23-Aug-2021 10:00:53

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDF, Signal: 1, m/z: 373.8208, RT: (33.09- 36.93)

Signal: 1

Processing Integration Results

RT = 36.909 Area = 21785

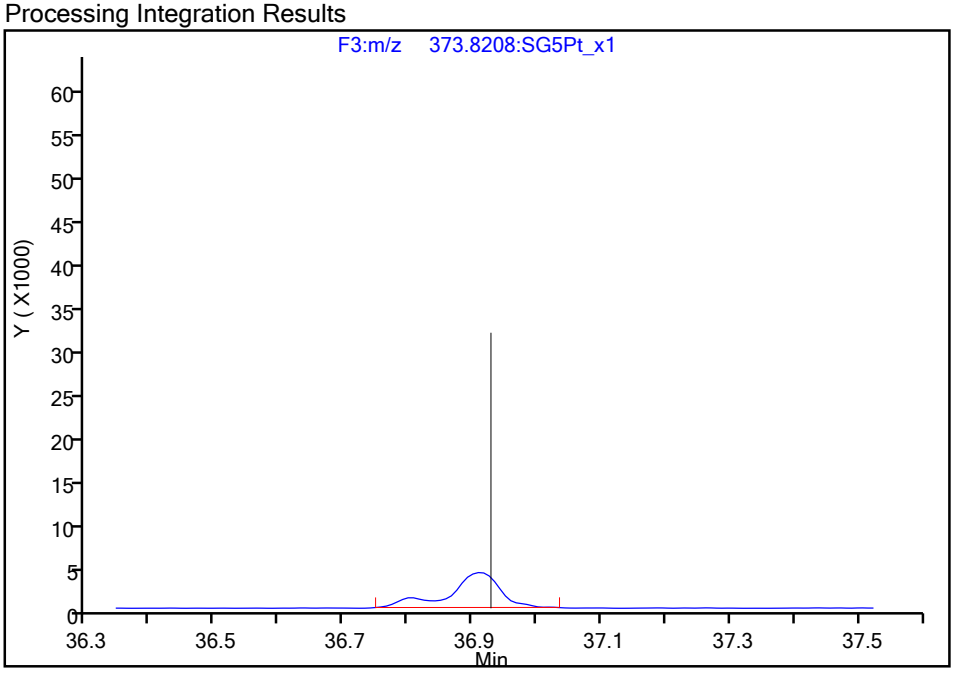

Manual Integration Results

RT = 36.909 Area = 18104 M

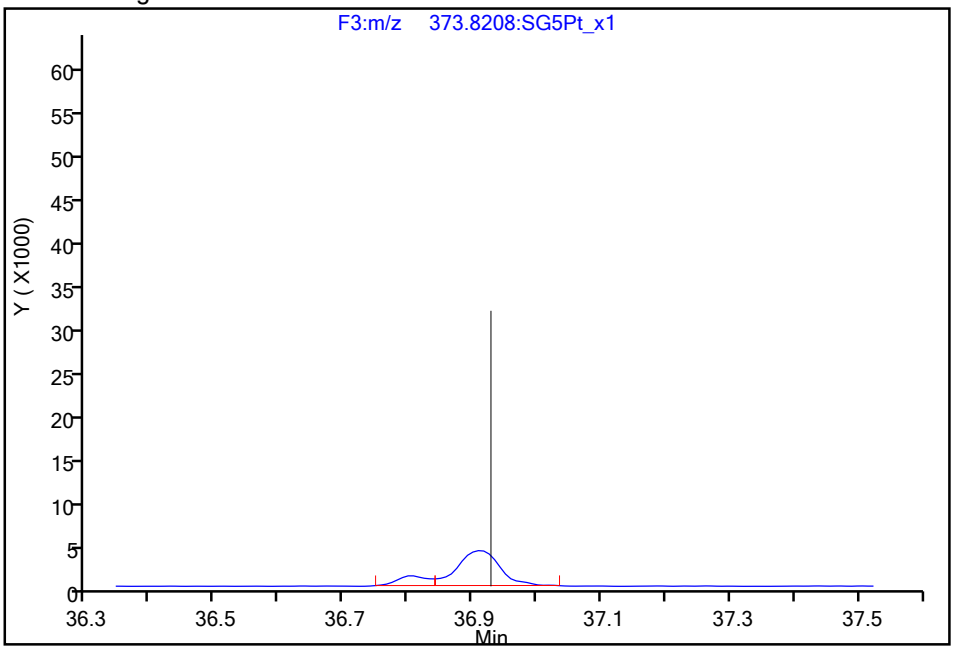

Reviewer: dadunj, 23-Aug-2021 10:00:53

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 36.61
Area: 365
Amount: 0.179443
Amount Units: pg/ul

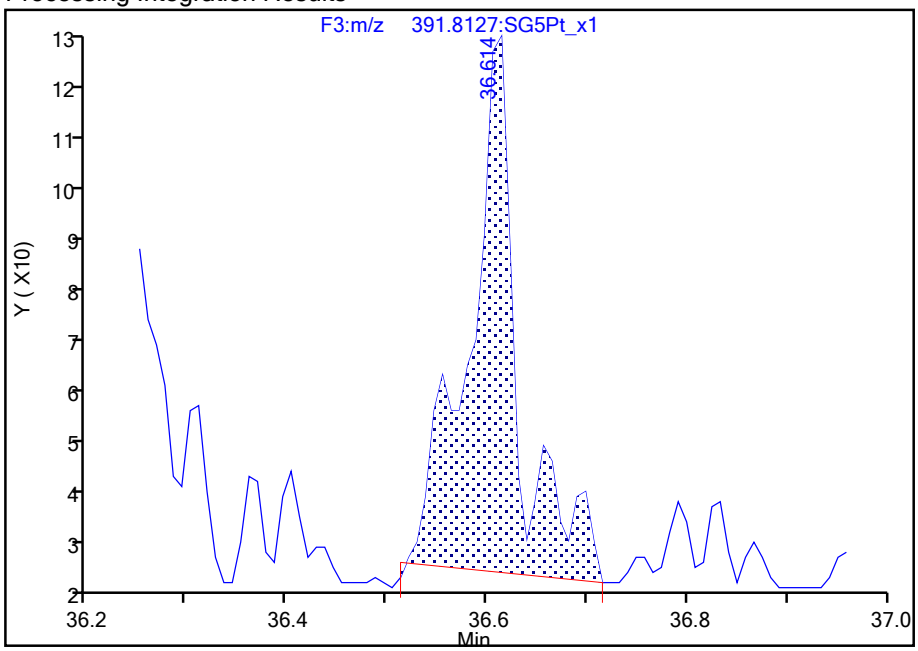

Manual Integration Results

RT: 36.61
Area: 302
Amount: 0.147318
Amount Units: pg/ul

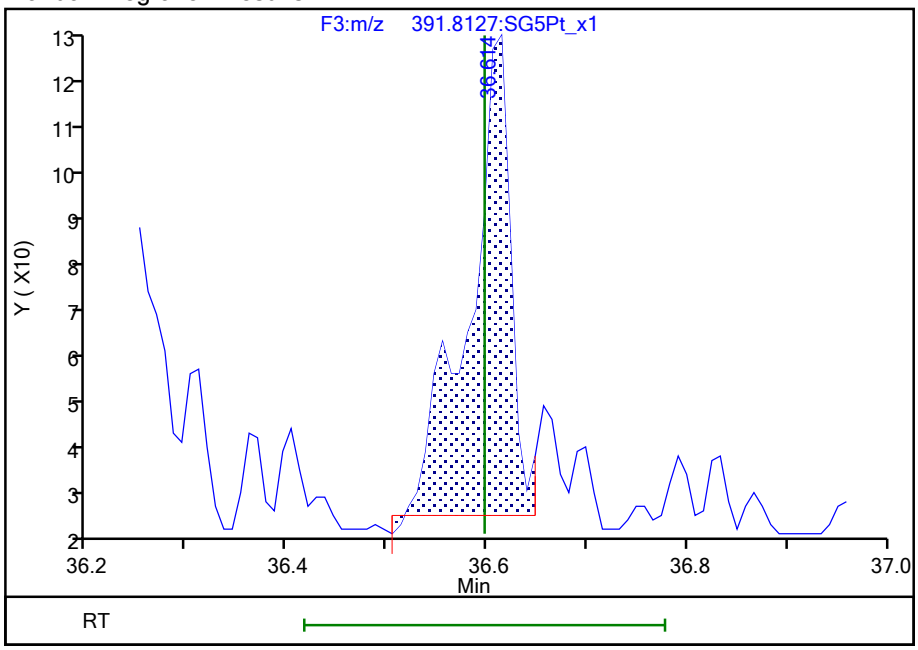

Reviewer: dadunj, 23-Aug-2021 10:02:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d				
Injection Date:	20-Aug-2021 08:44:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-1-A	Lab Sample ID:	320-76901-1		
Client ID:	11215702-072821-BN-SJSB095 (0-2)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	24
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 36.57
Area: 417
Amount: 0.179443
Amount Units: pg/ul

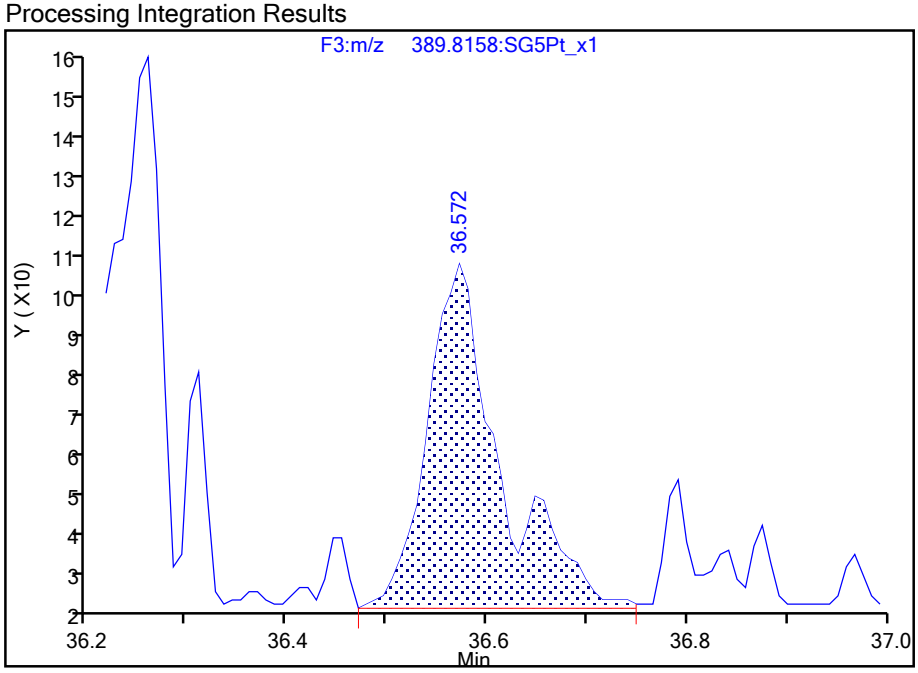

Manual Integration Results

RT: 36.57
Area: 340
Amount: 0.147318
Amount Units: pg/ul

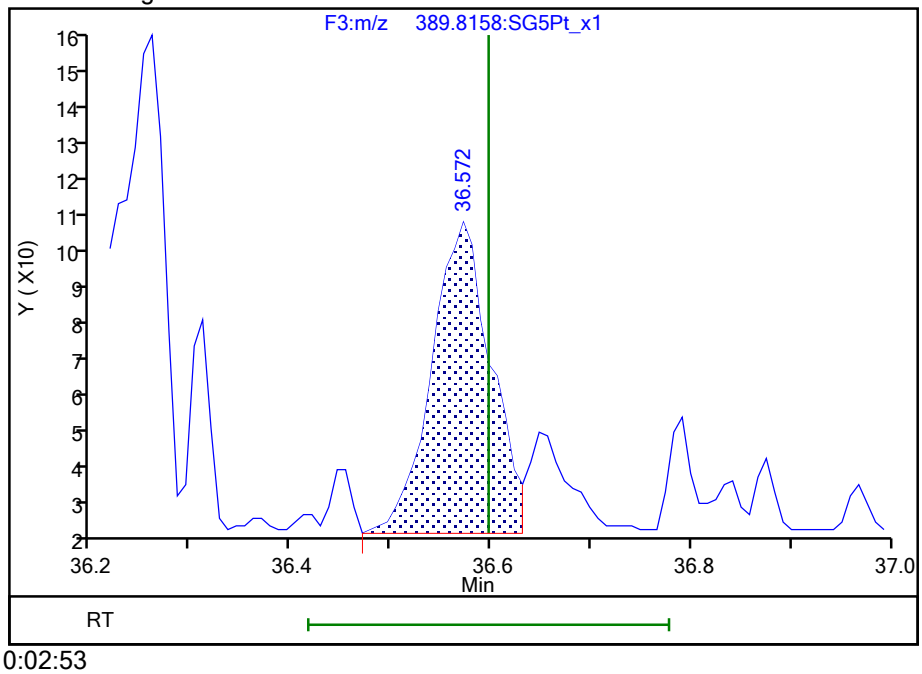

Reviewer: dadunj, 23-Aug-2021 10:02:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 25-Aug-2021 15:11:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Injection Date:	20-Aug-2021 08:44:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

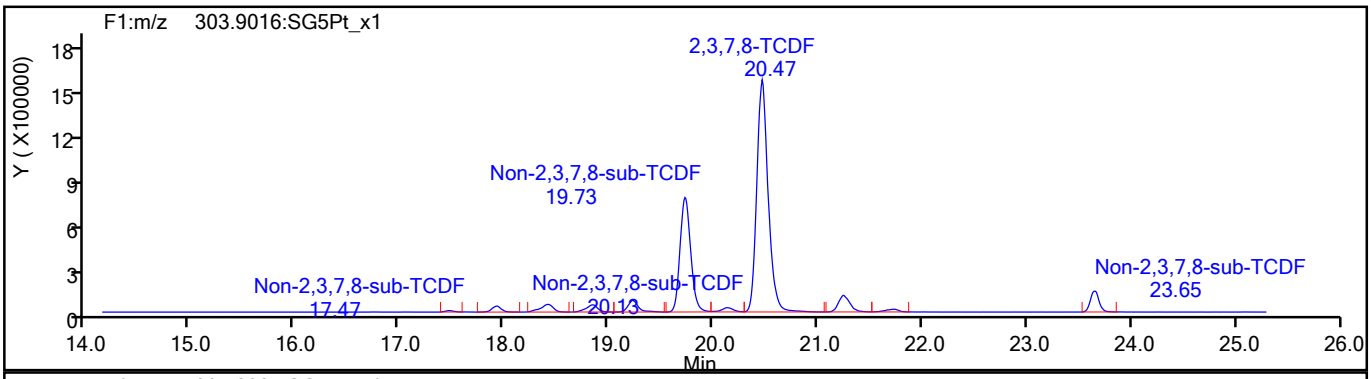

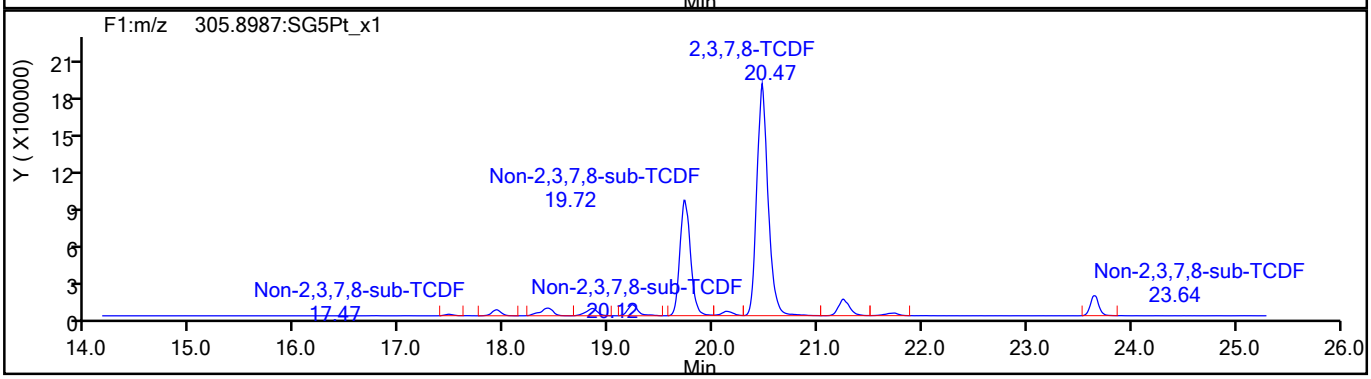

TCDF Standards

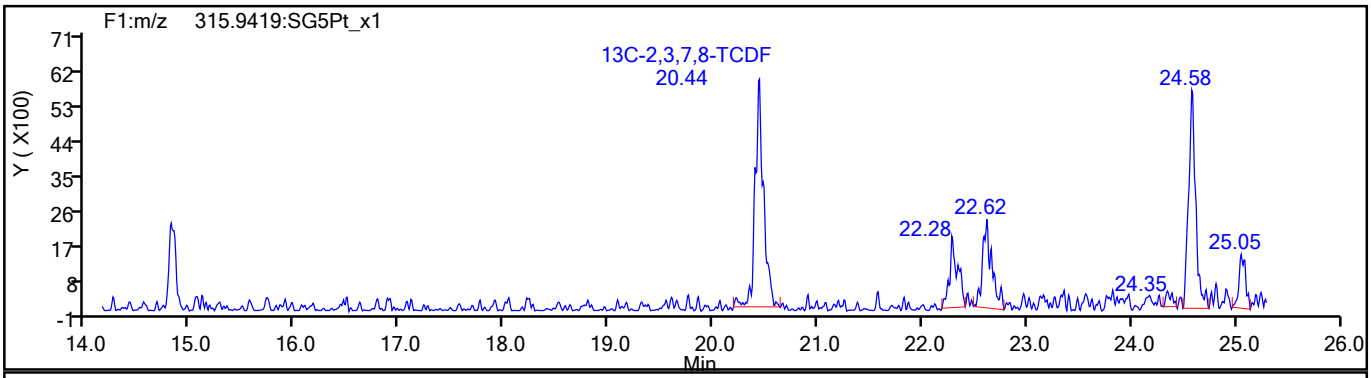

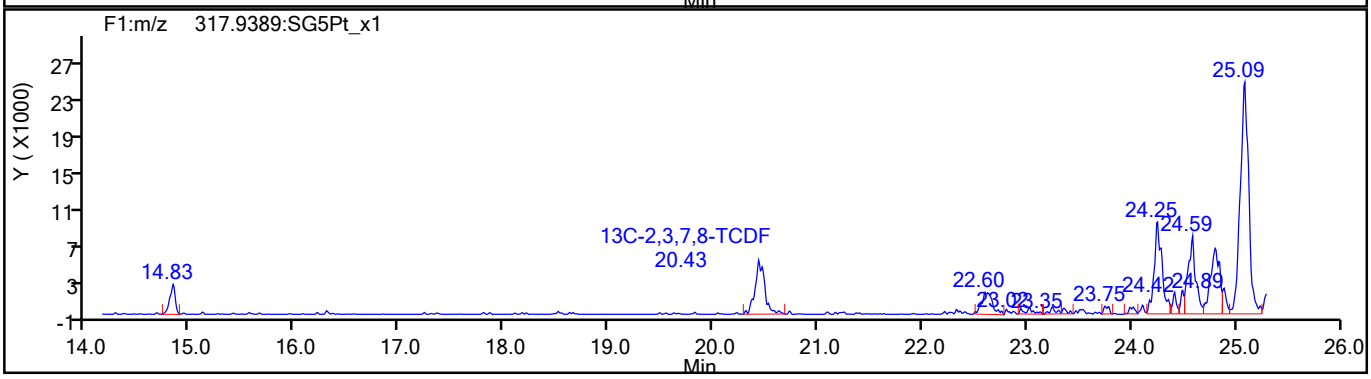

788239

Report Date: 25-Aug-2021 15:11:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Injection Date:	20-Aug-2021 08:44:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

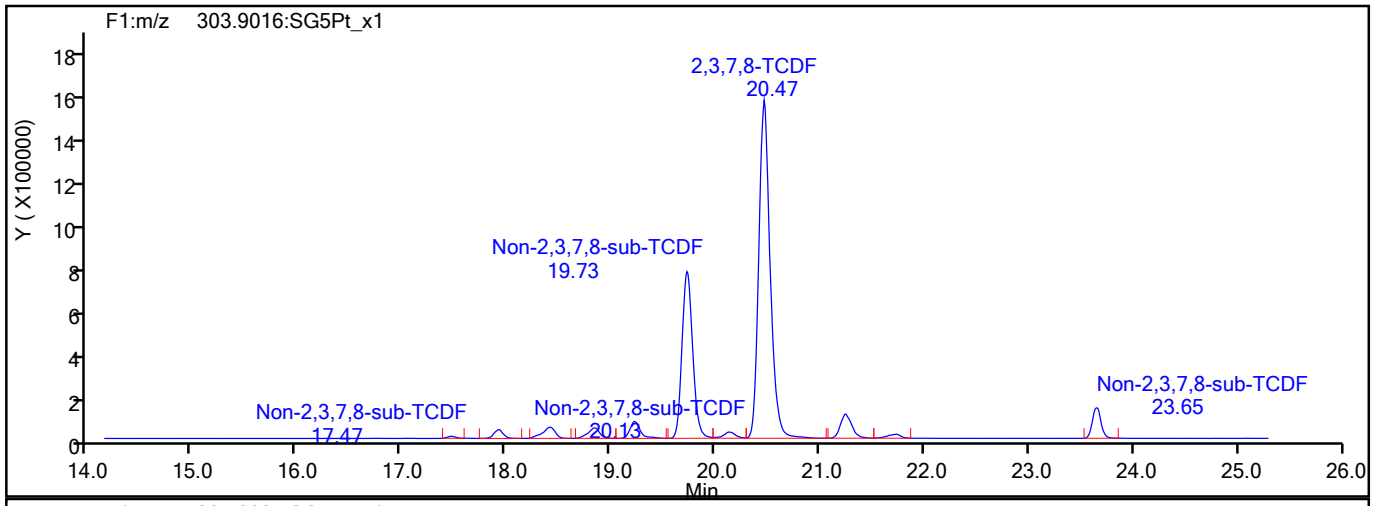

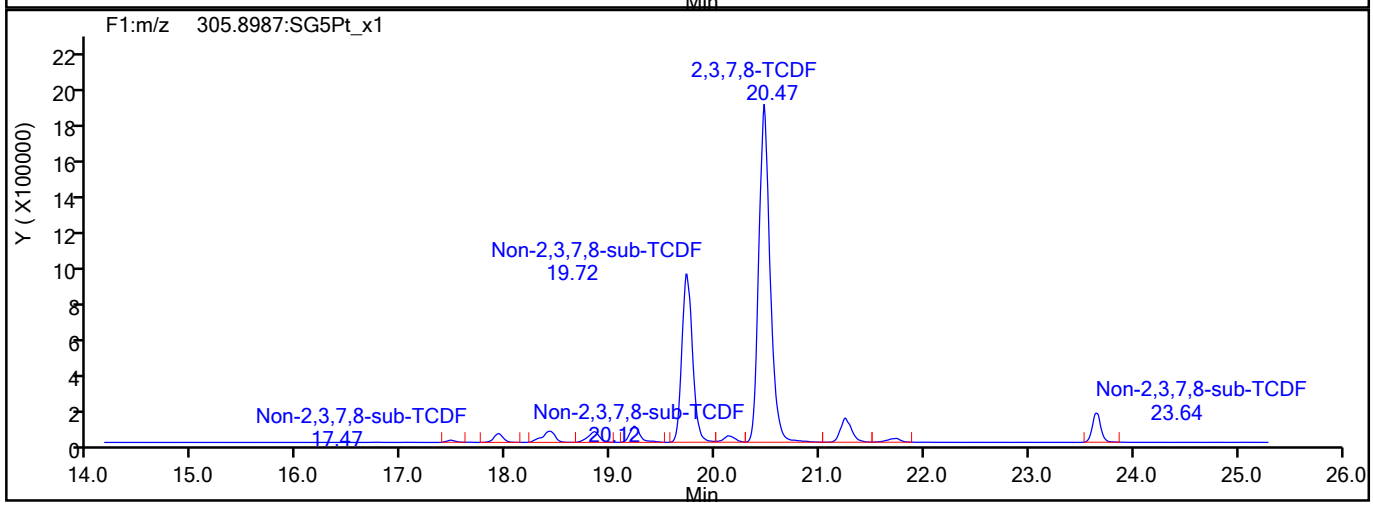

TCDF Interference Mass

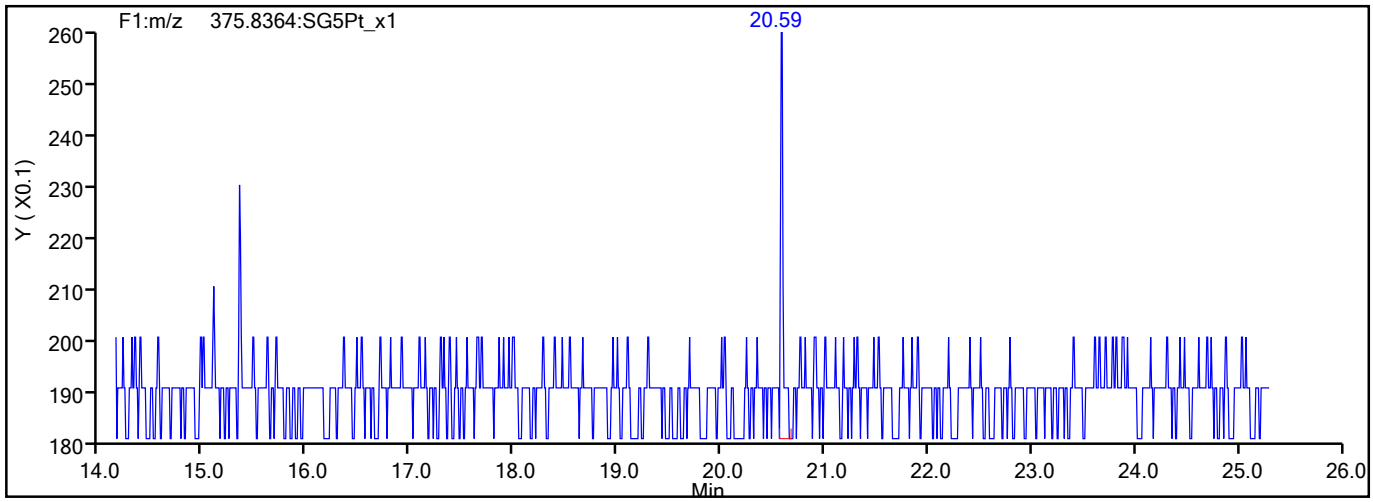

788240

Report Date: 25-Aug-2021 15:11:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Injection Date:	20-Aug-2021 08:44:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

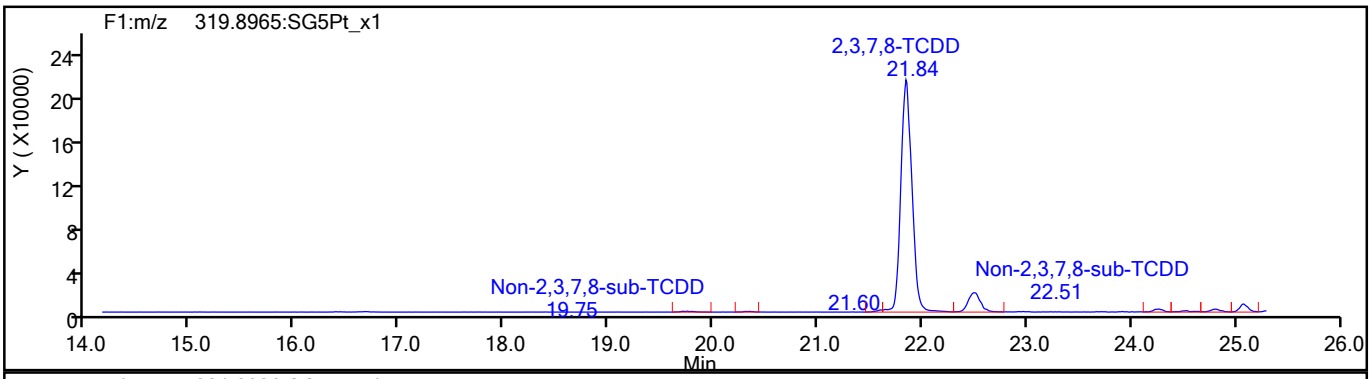

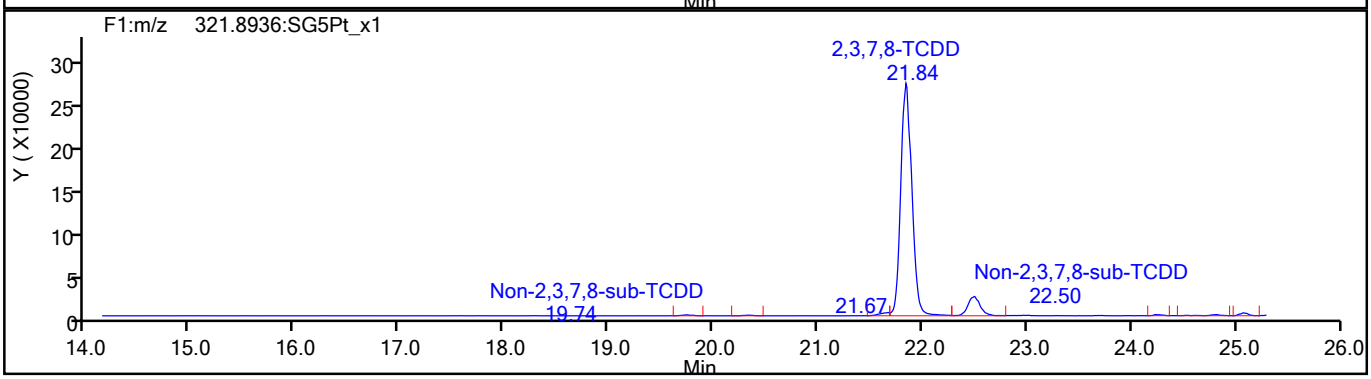

TCDD Standards

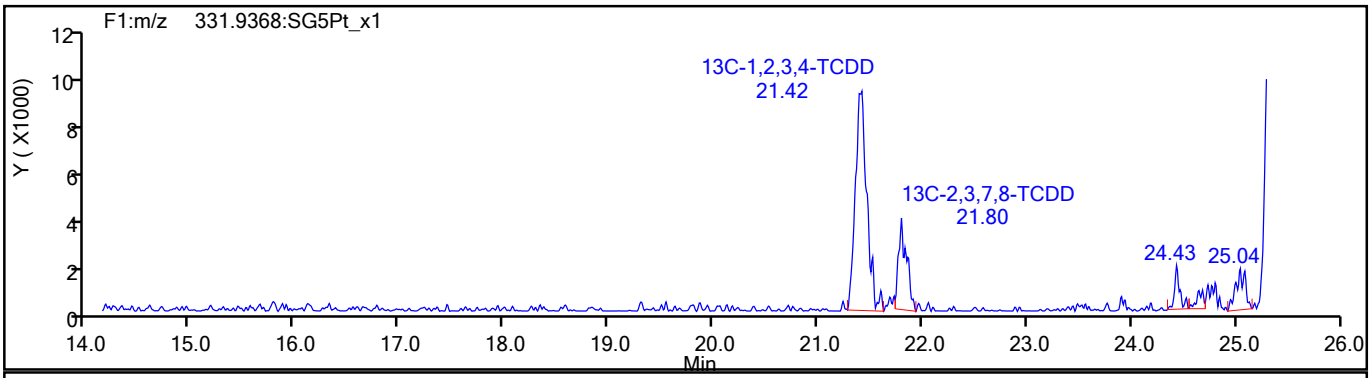

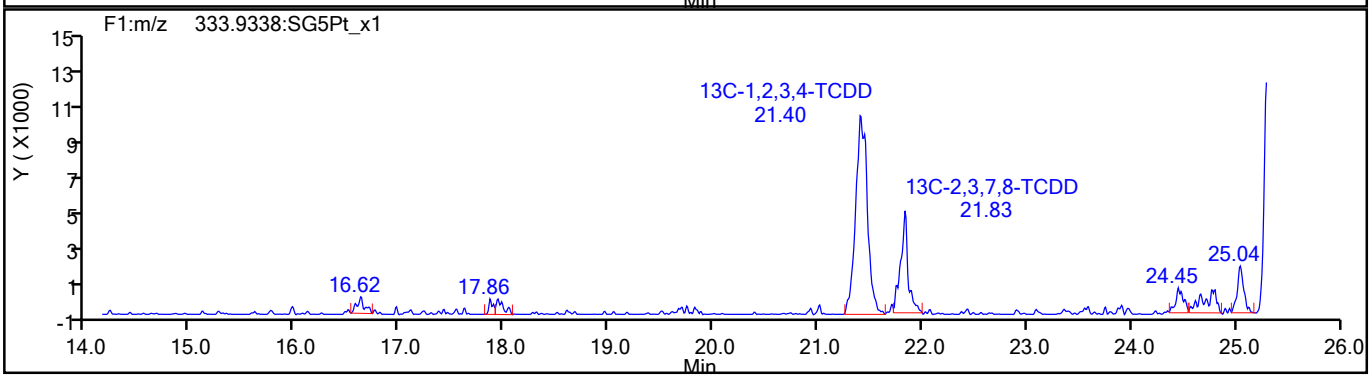

788241

Report Date: 25-Aug-2021 15:11:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Injection Date:	20-Aug-2021 08:44:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

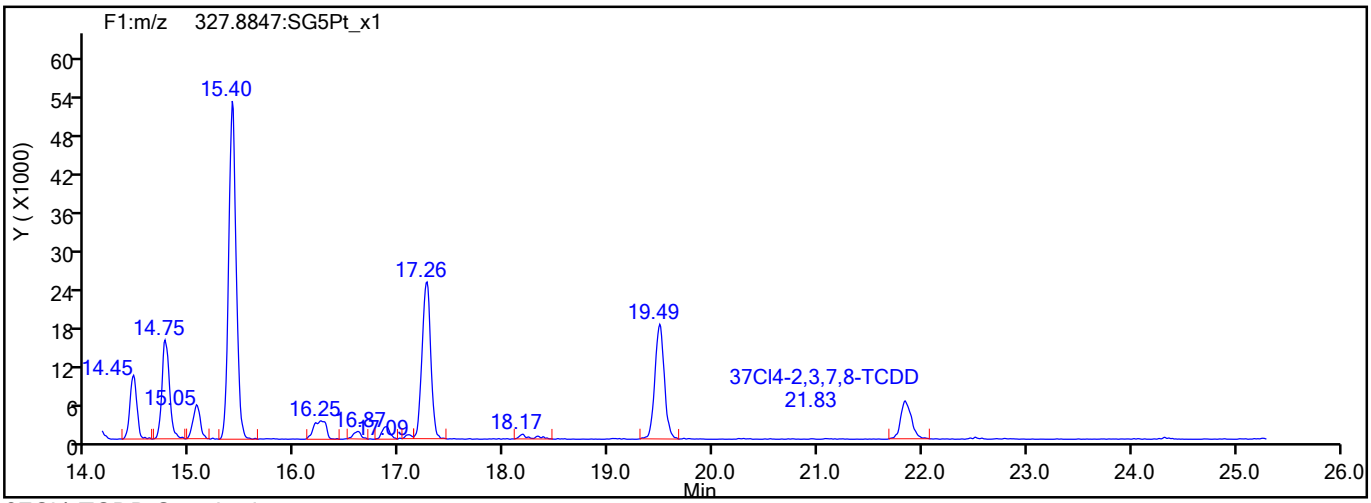

37Cl4-TCDD Standards

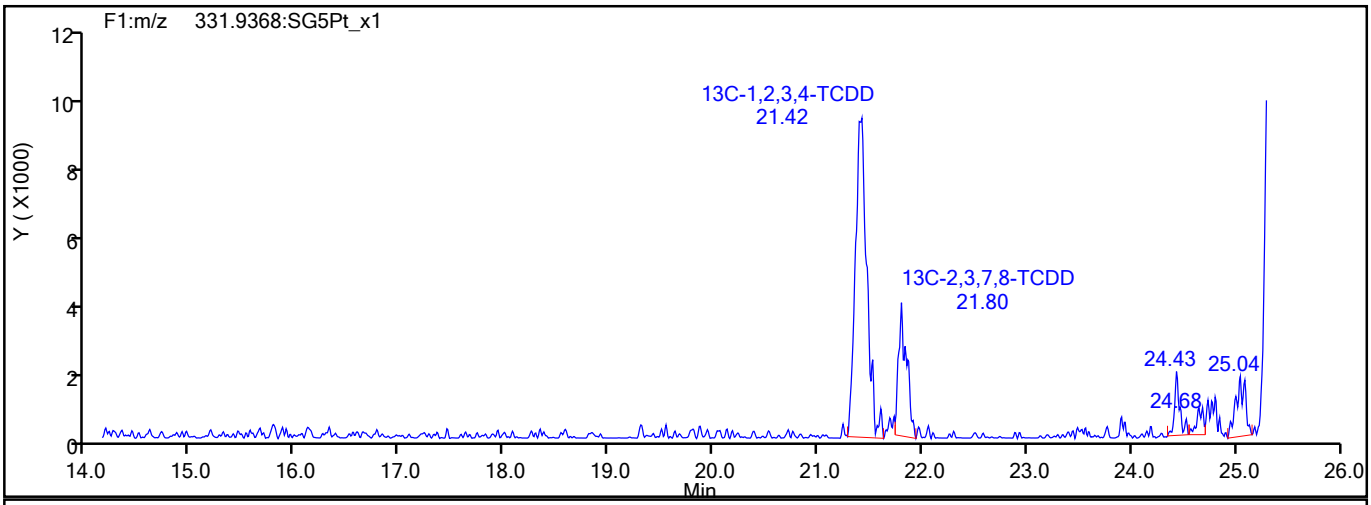

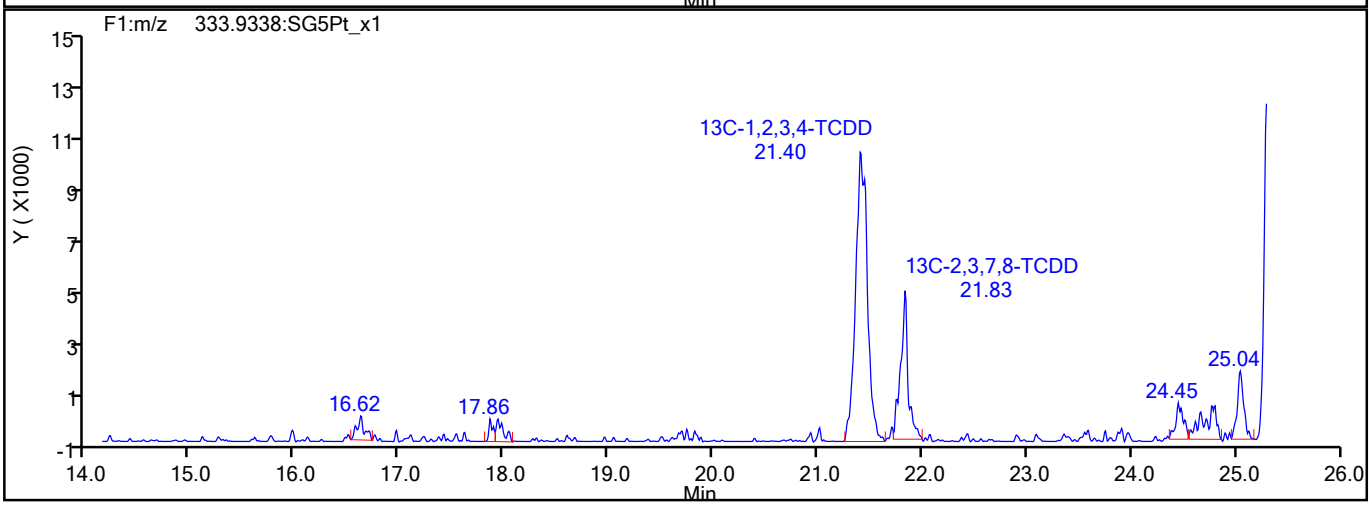

788242

Report Date: 25-Aug-2021 15:11:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Injection Date:	20-Aug-2021 08:44:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

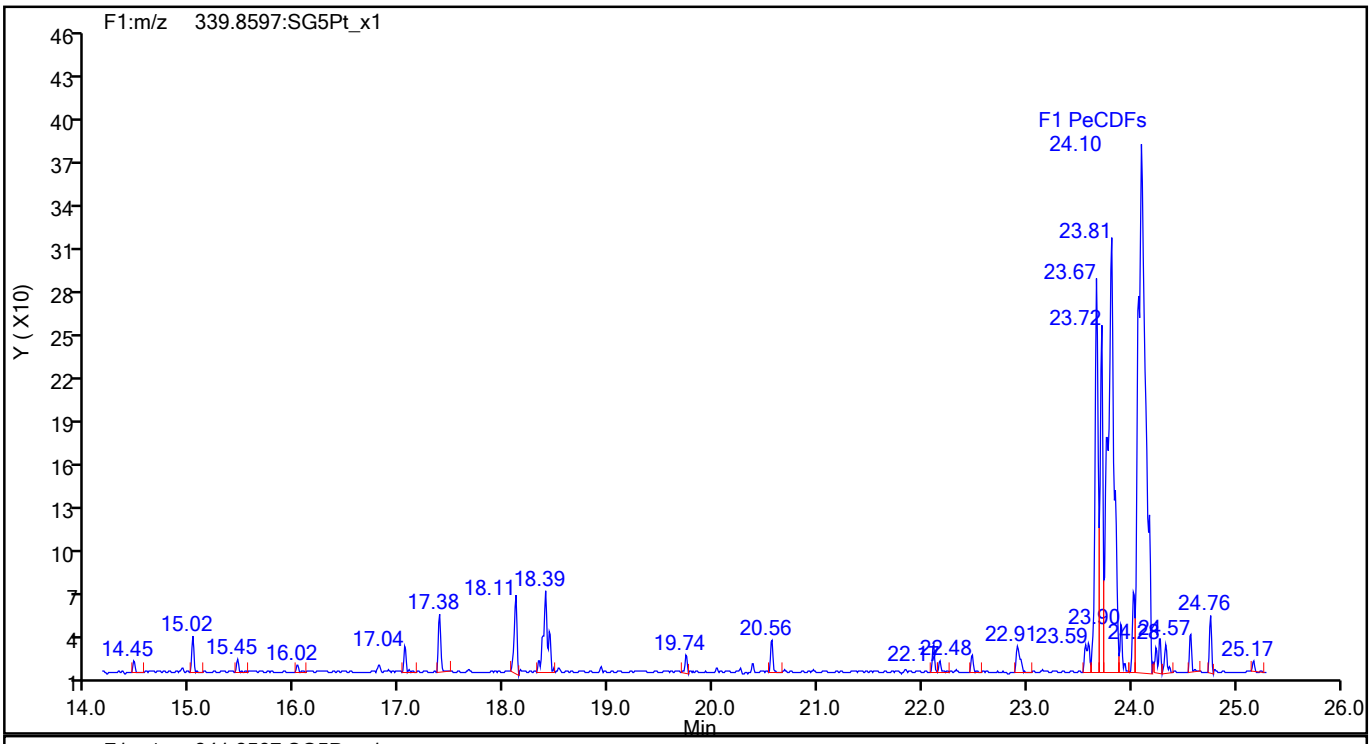

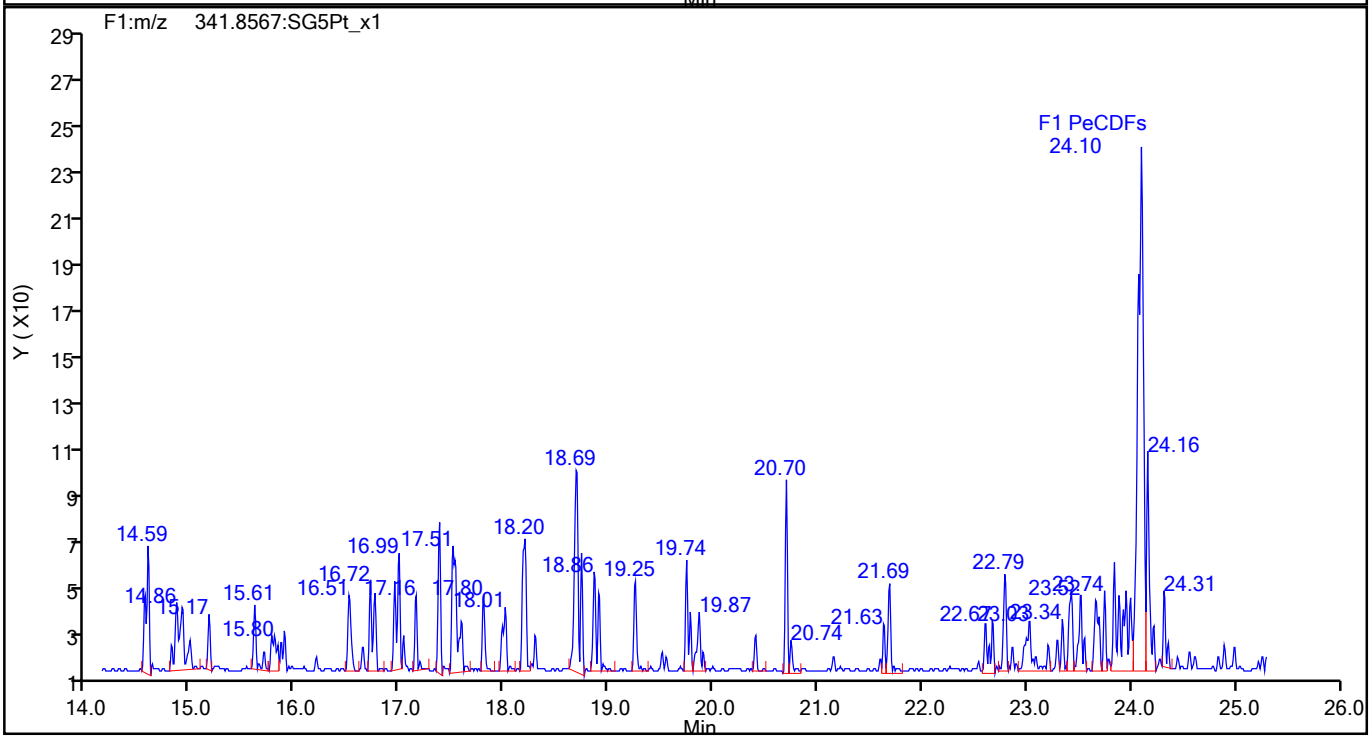

788243

Report Date: 25-Aug-2021 15:11:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Injection Date:	20-Aug-2021 08:44:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

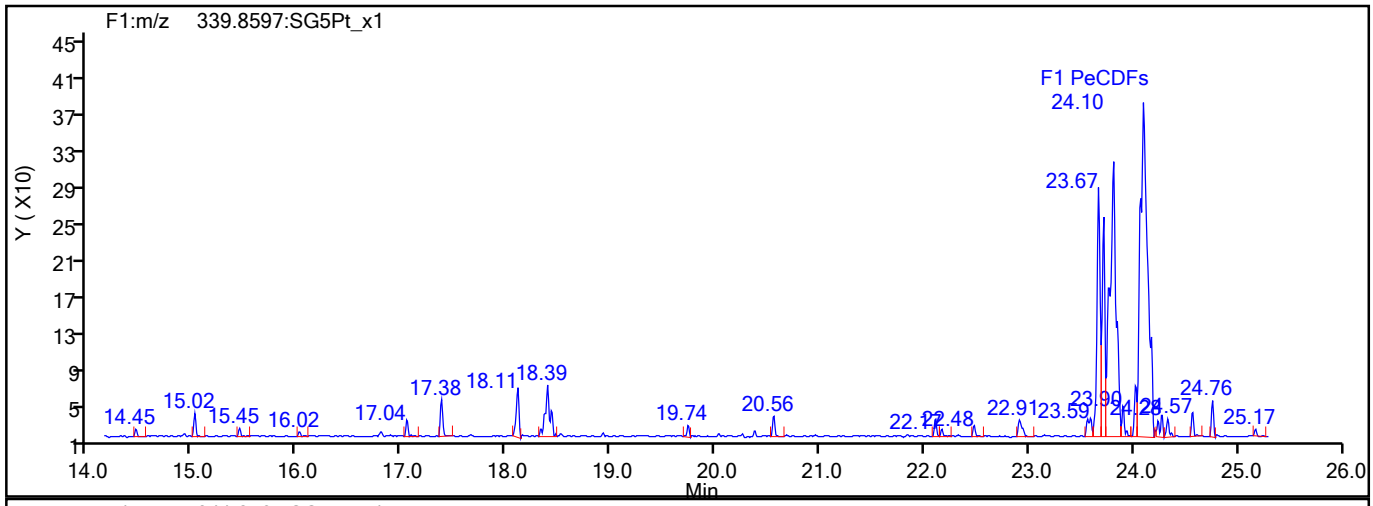

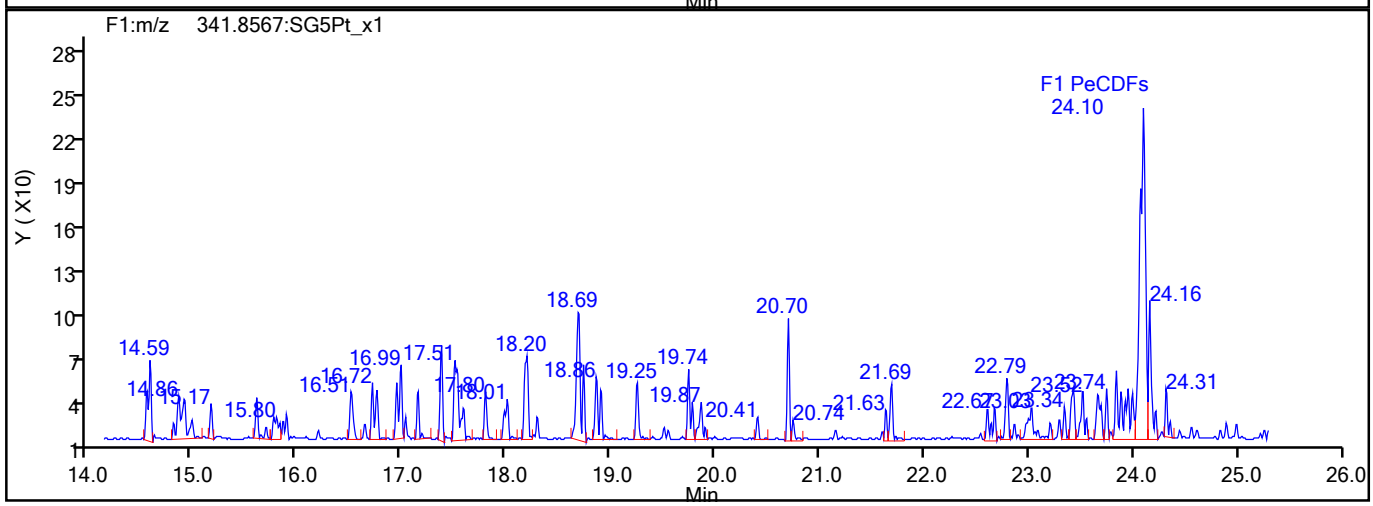

F1 PeCDFs Interference Mass

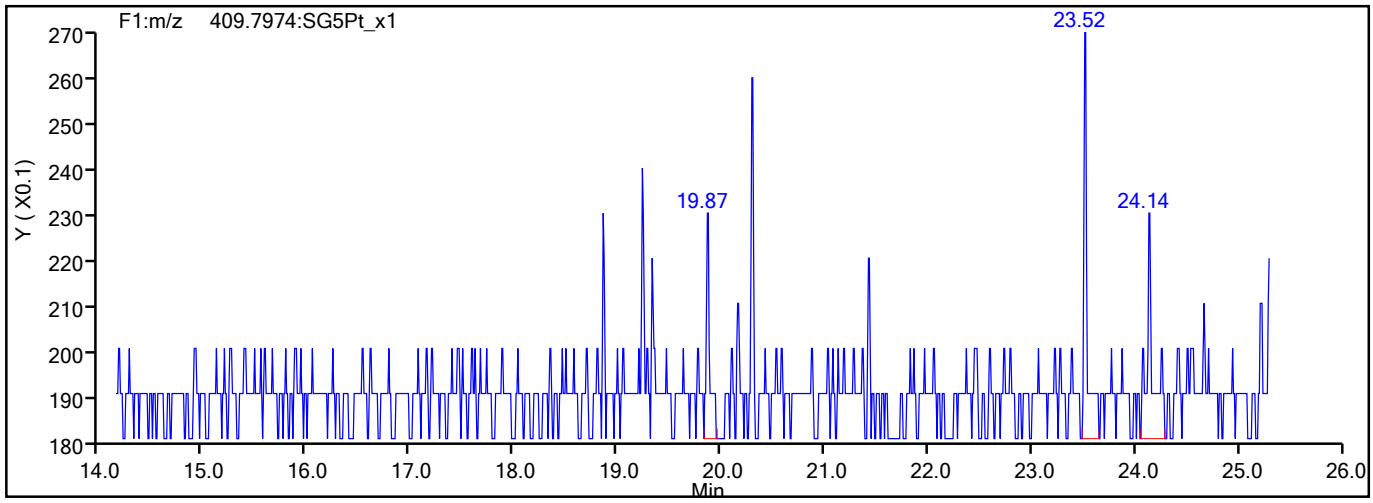

788244

Report Date: 25-Aug-2021 15:11:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Injection Date:	20-Aug-2021 08:44:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

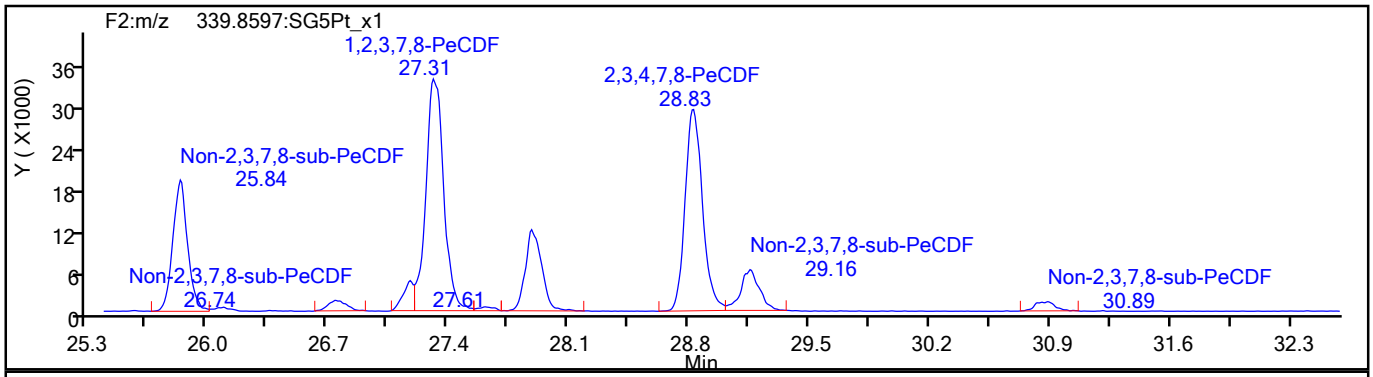

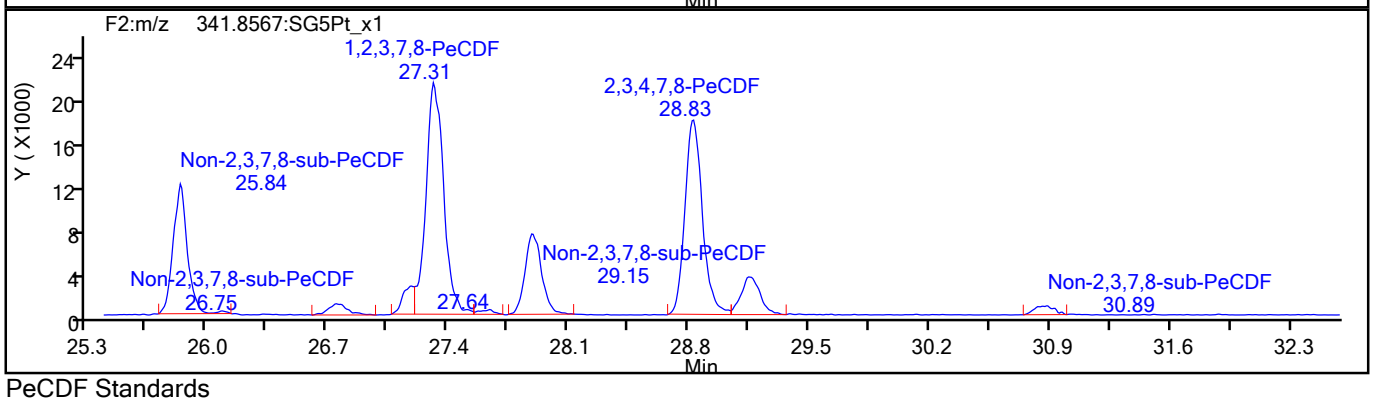

PeCDF Standards

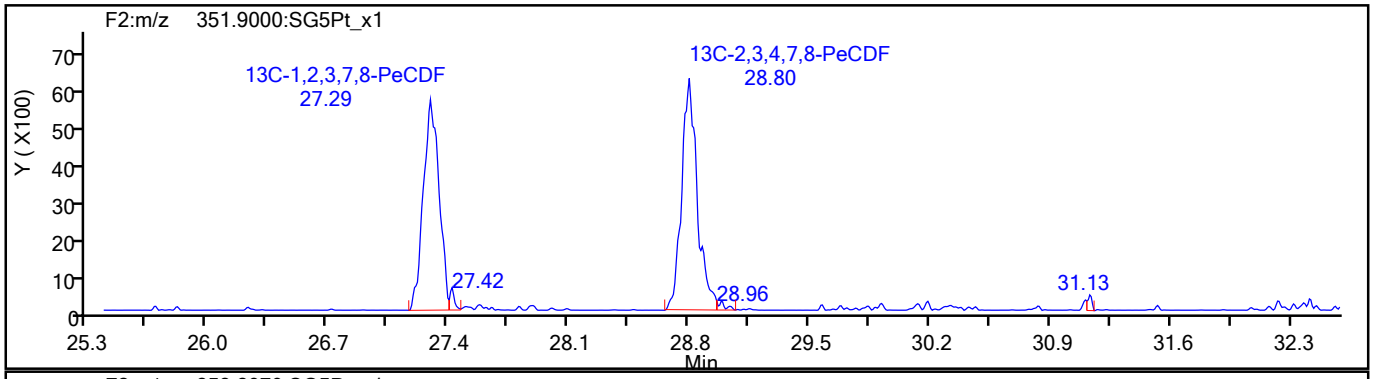

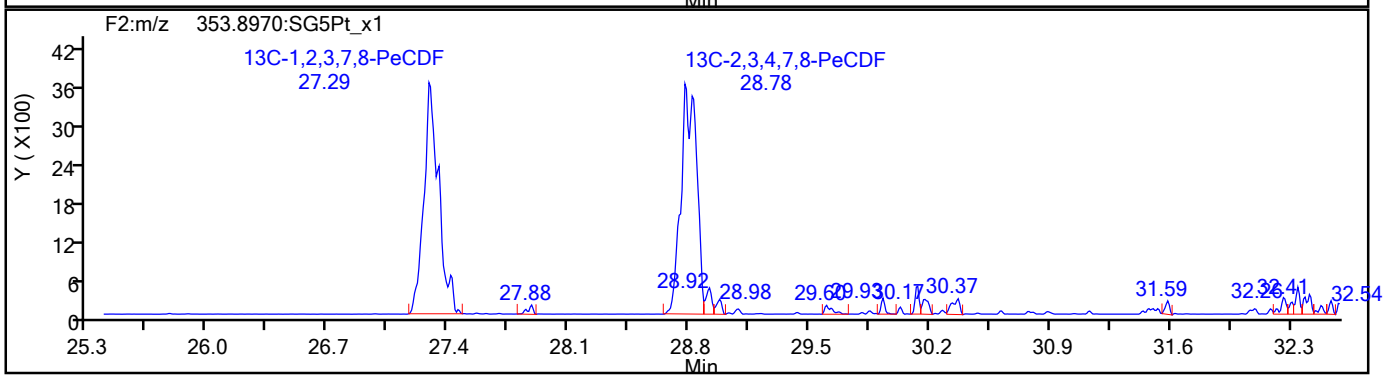

788245

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Injection Date:	20-Aug-2021 08:44:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

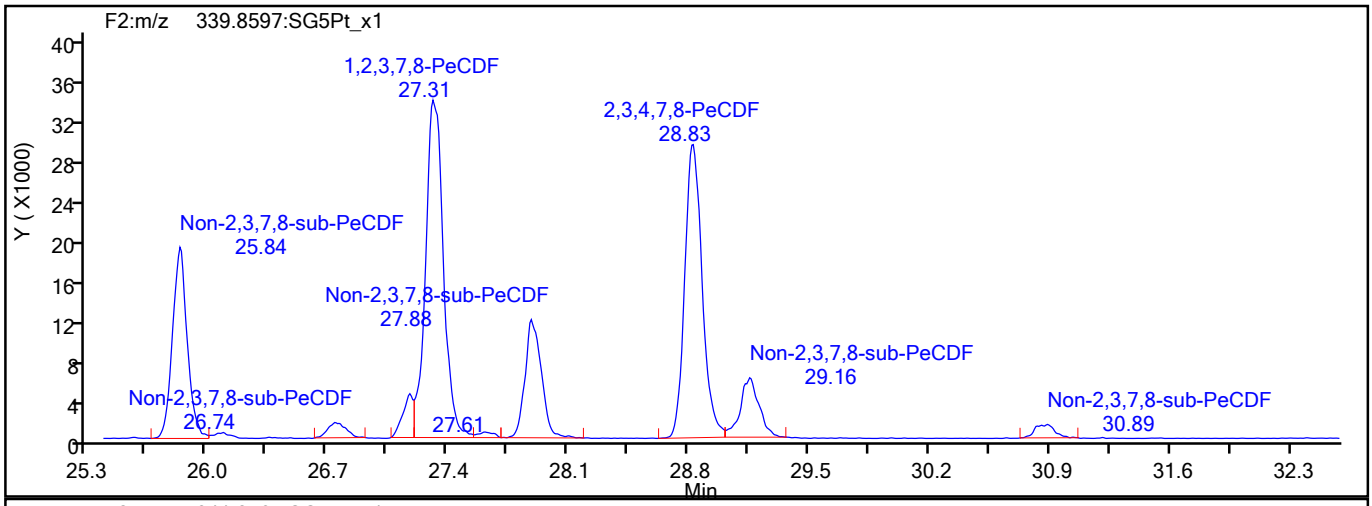

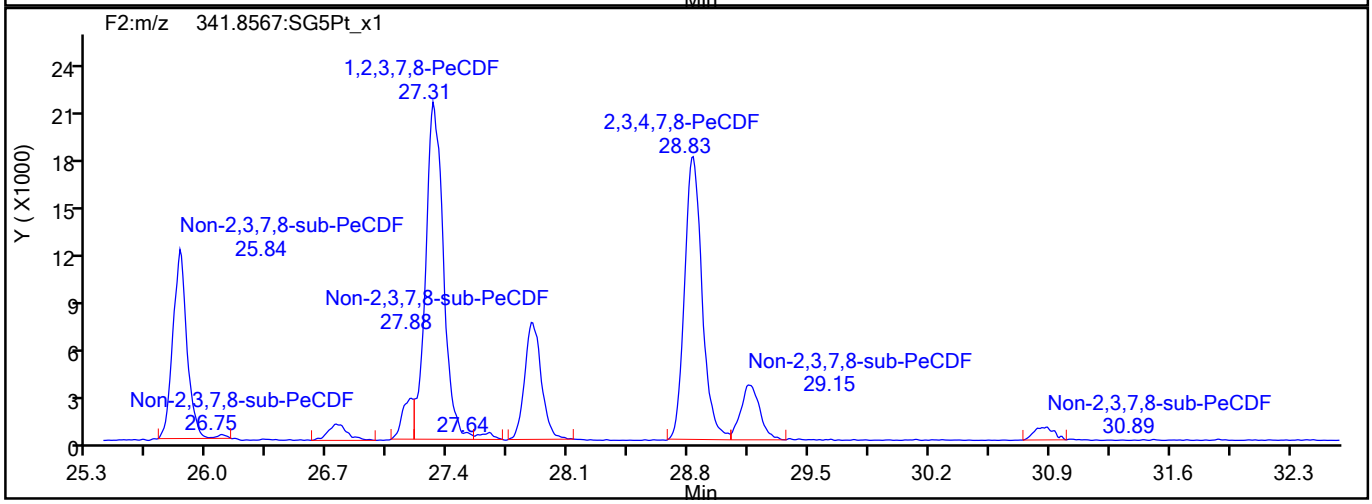

PeCDF Interference Mass

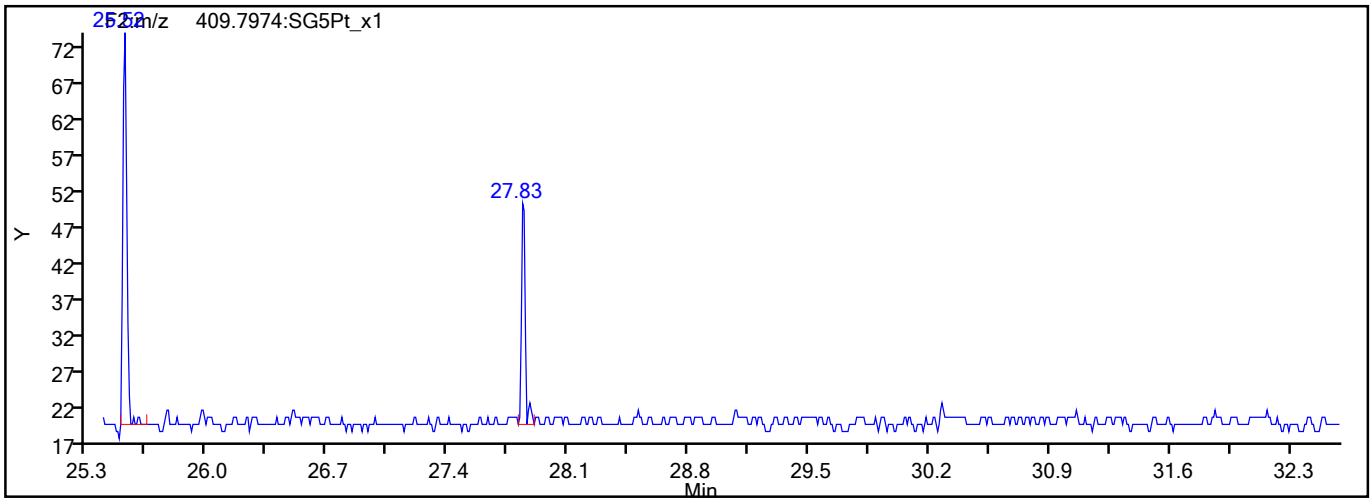

788246

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Injection Date:	20-Aug-2021 08:44:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

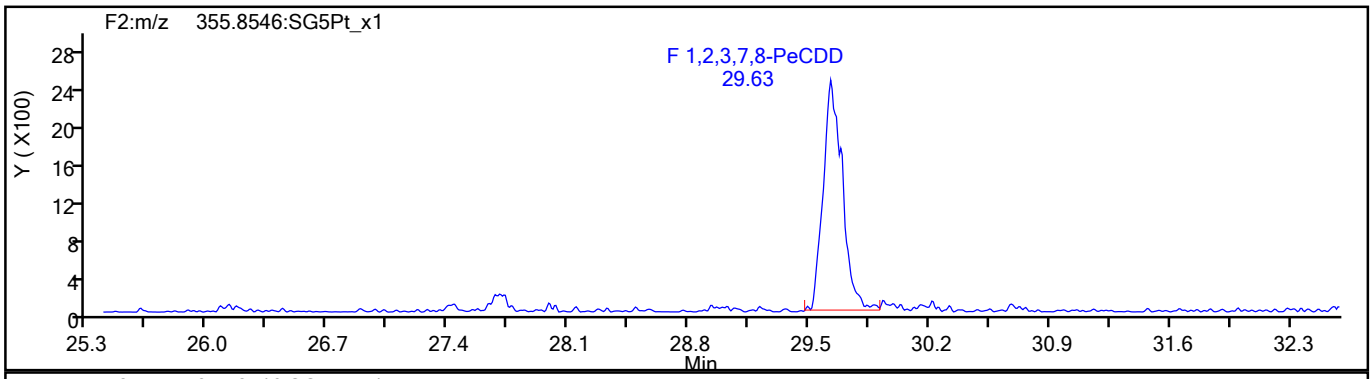

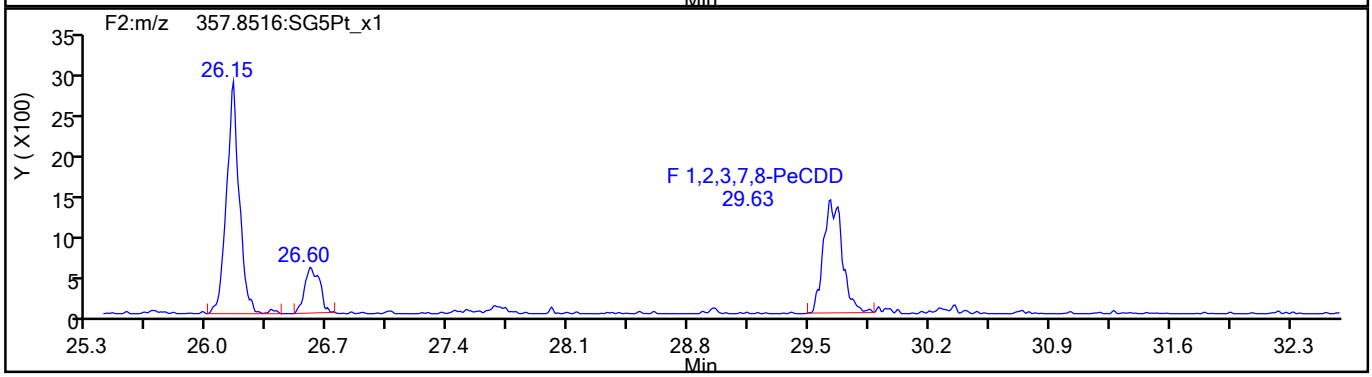

PeCDD Standards

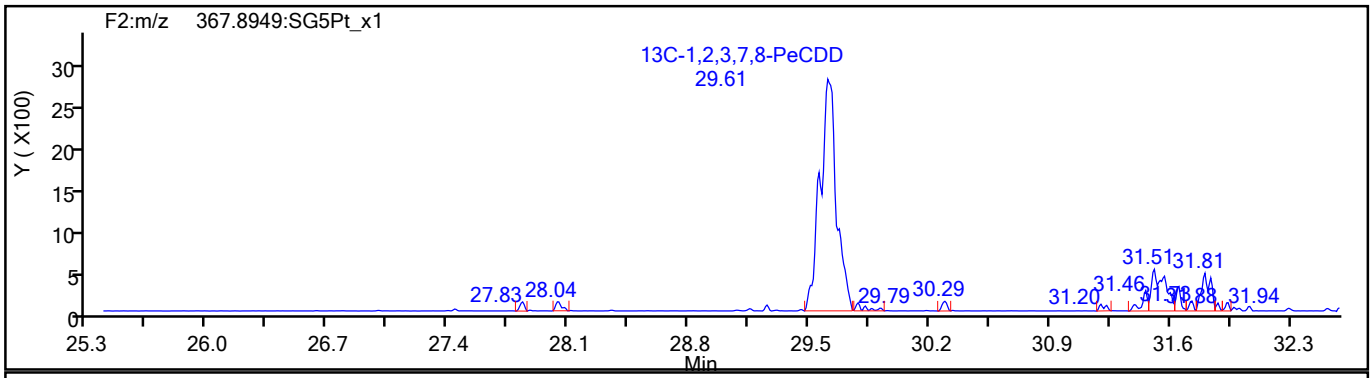

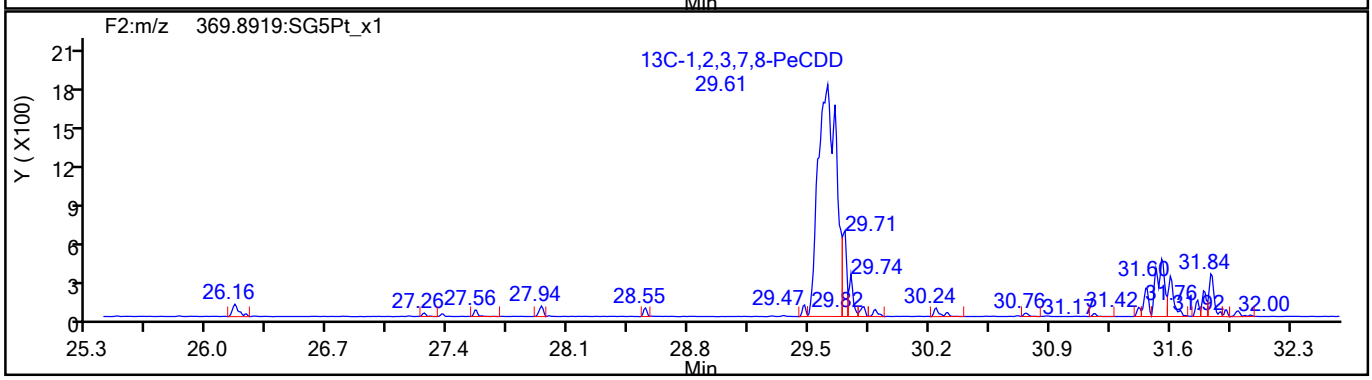

788247

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
Injection Date:	20-Aug-2021 08:44:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

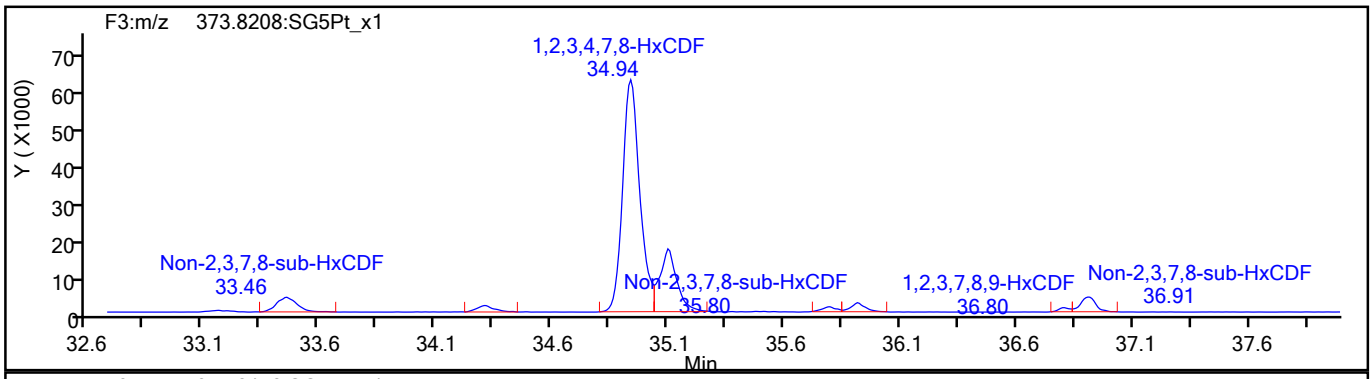

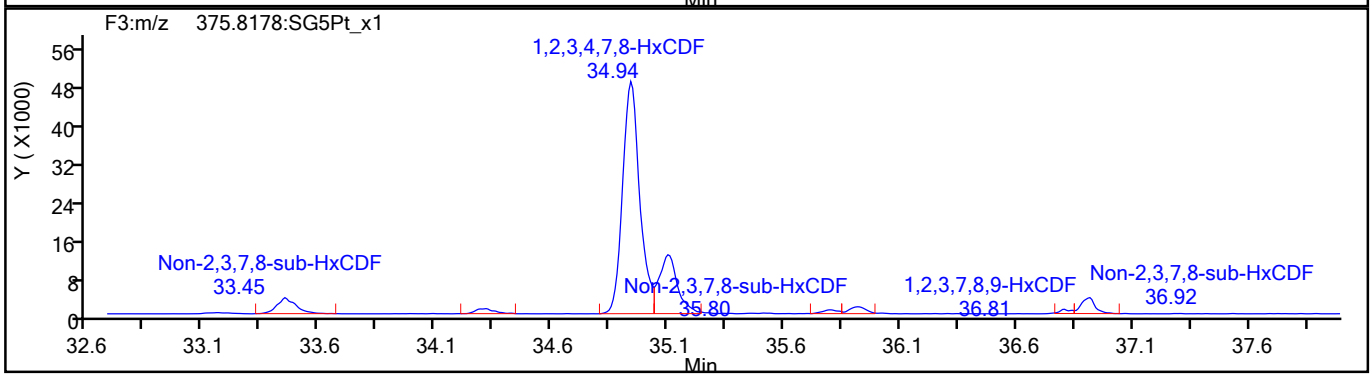

HxCDF Standards

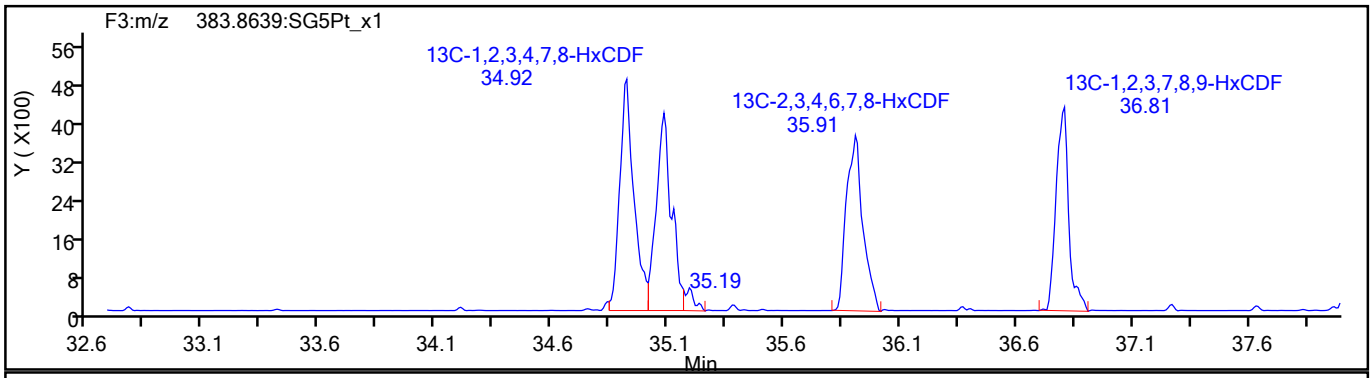

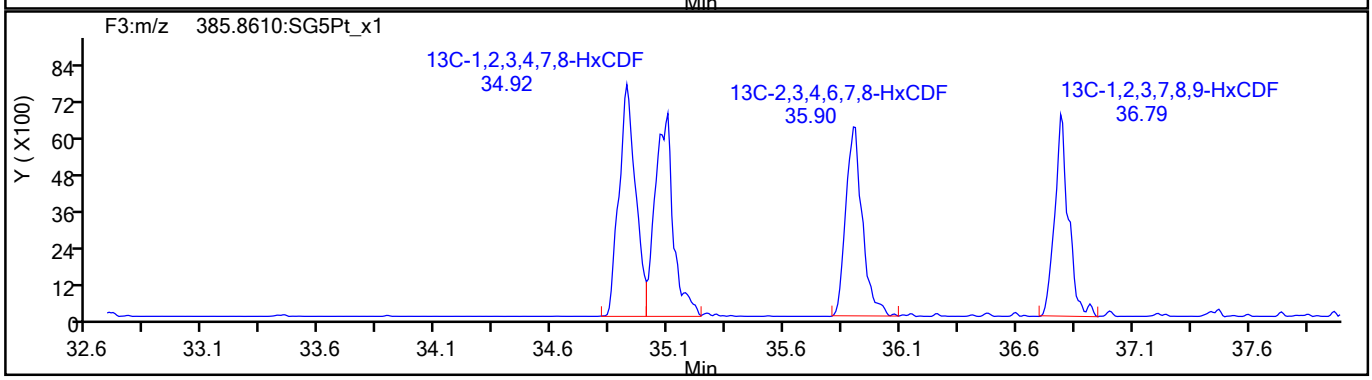

788248

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

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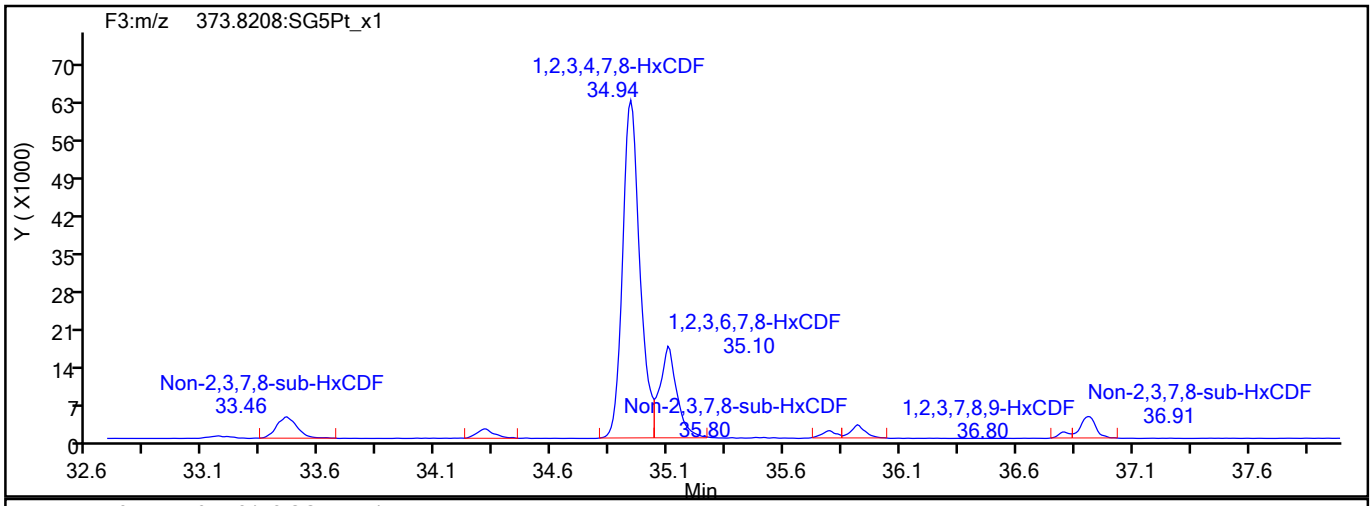

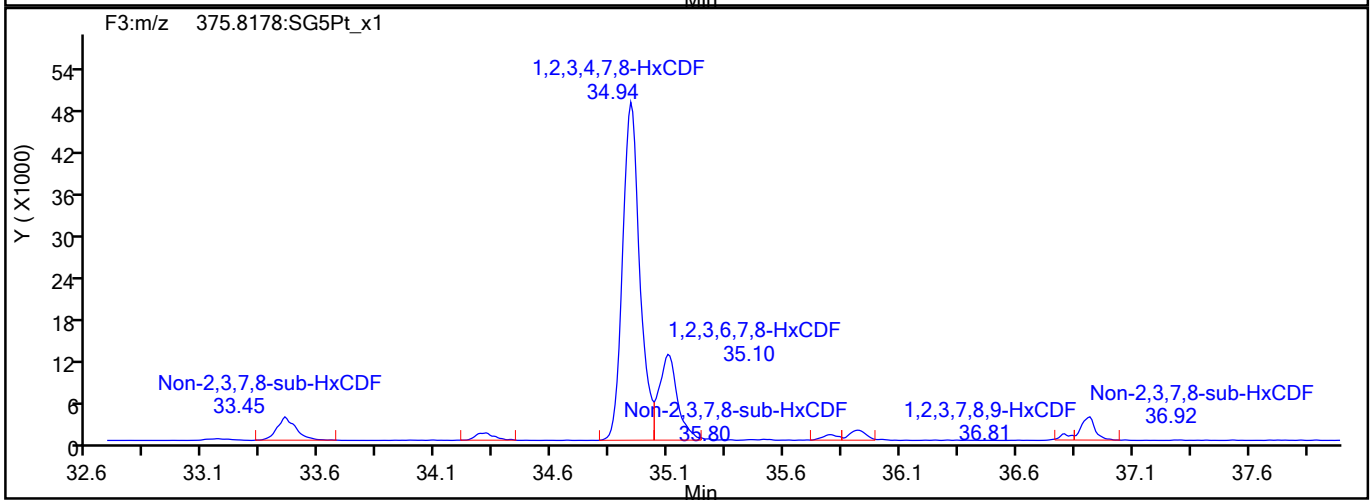

HxCDF Interference Mass

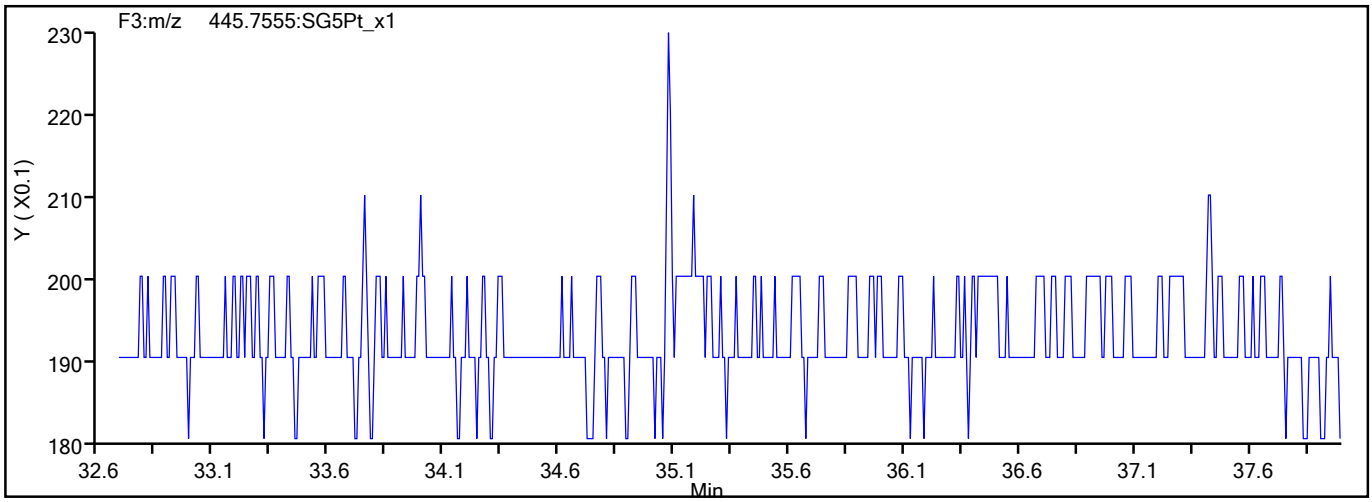

788249

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

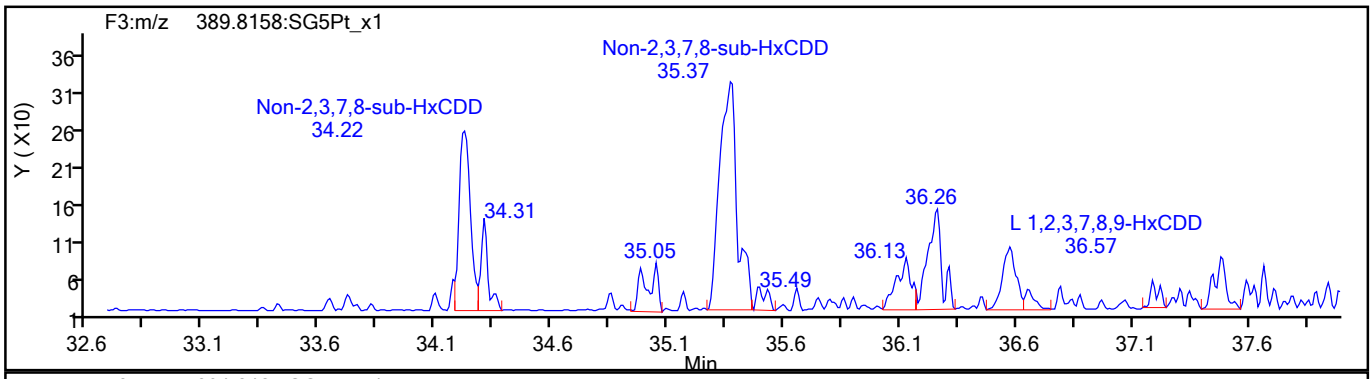

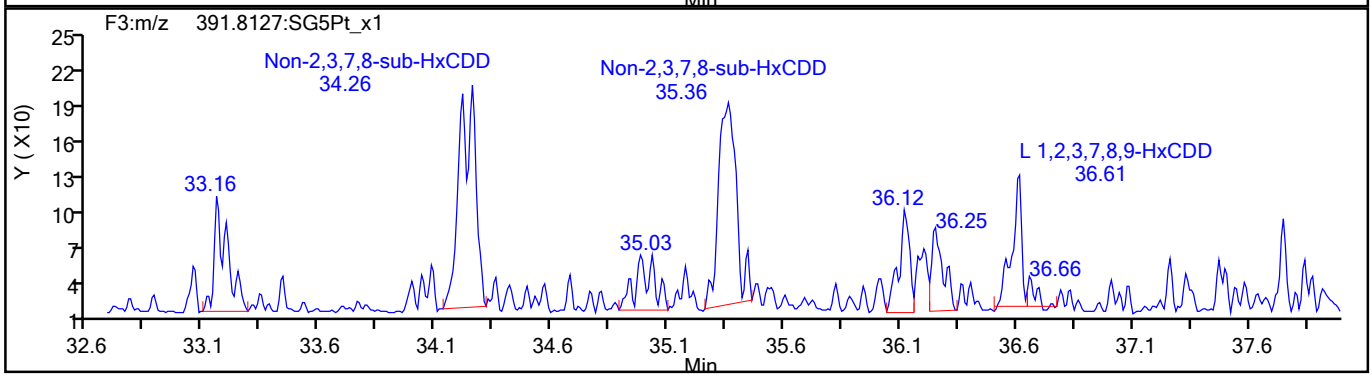

HxCDD Standards

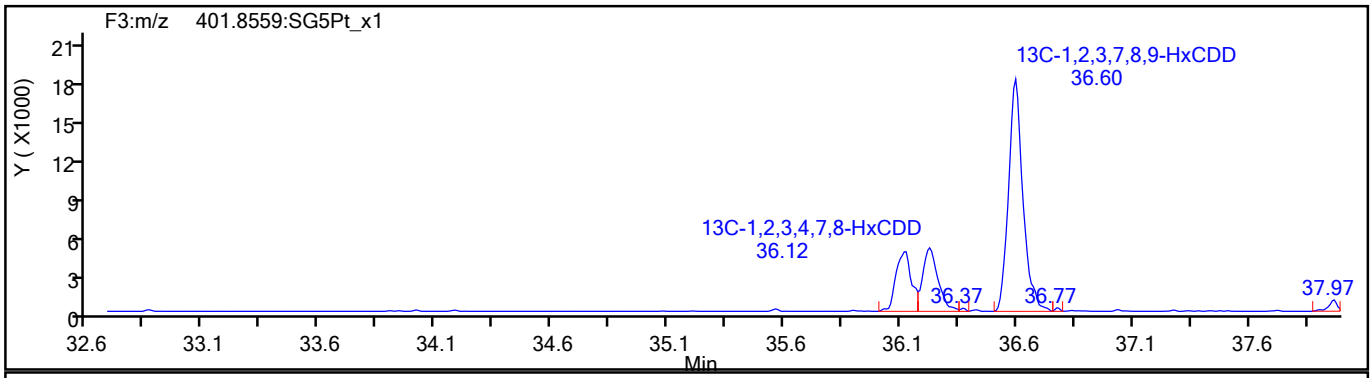

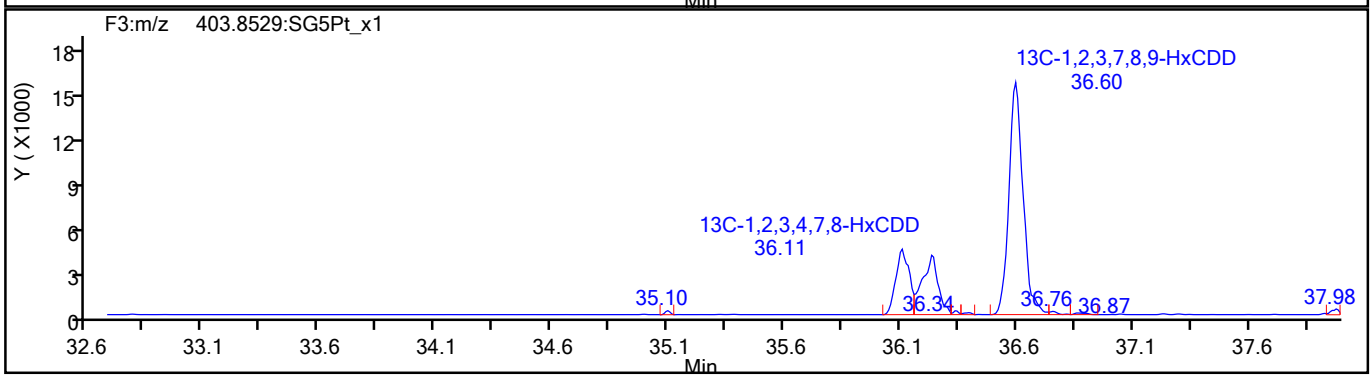

788250

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

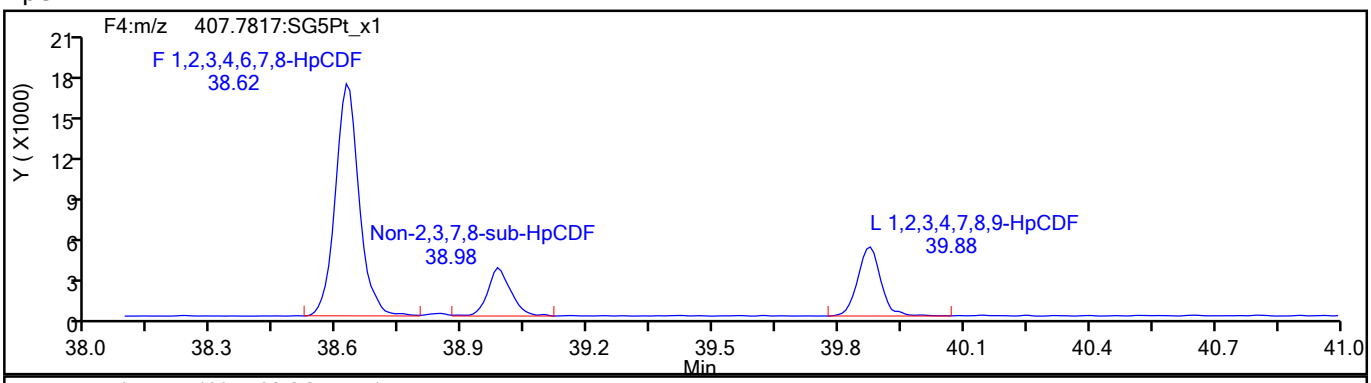

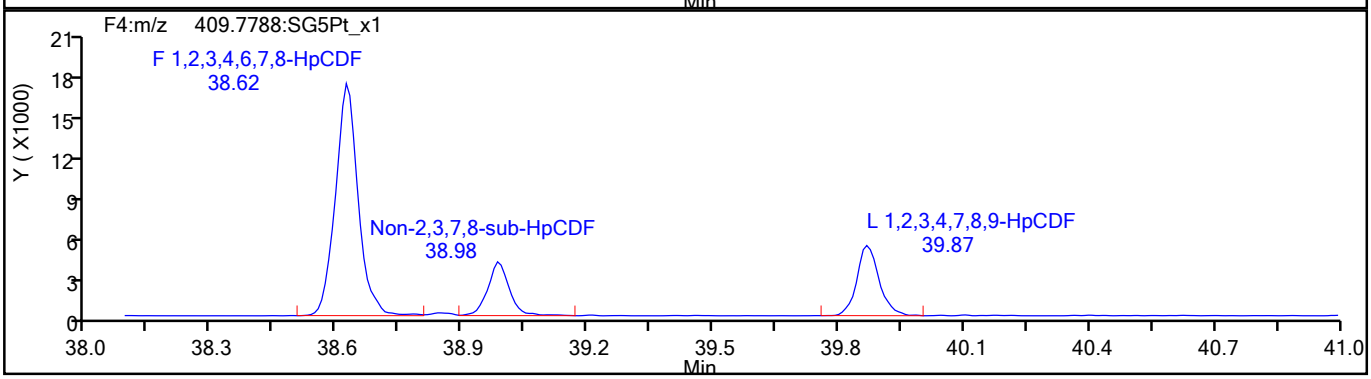

HpCDF Standards

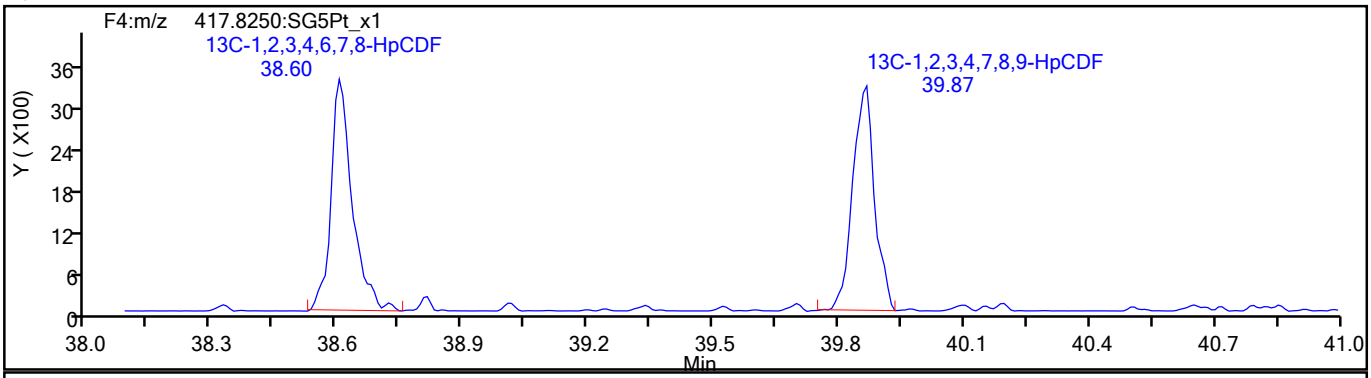

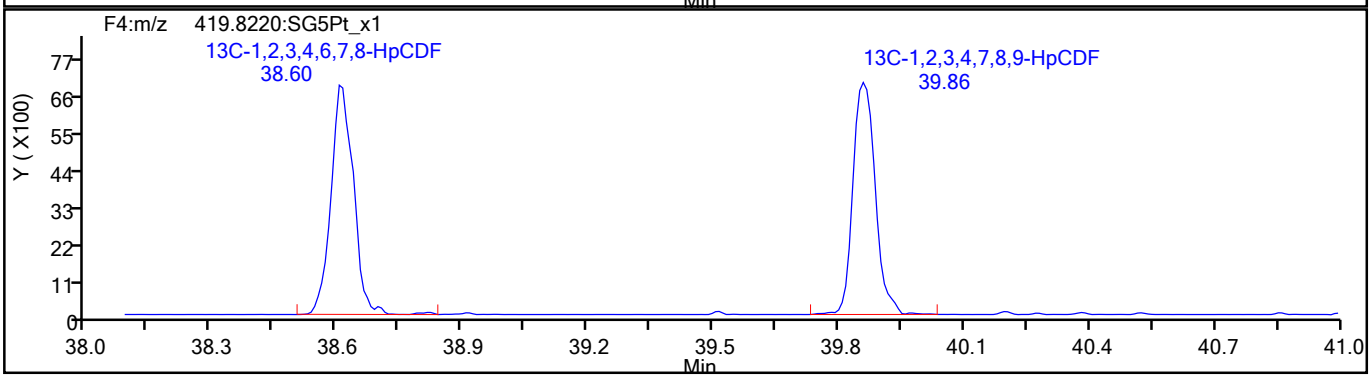

788251

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_26.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
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HpCDF

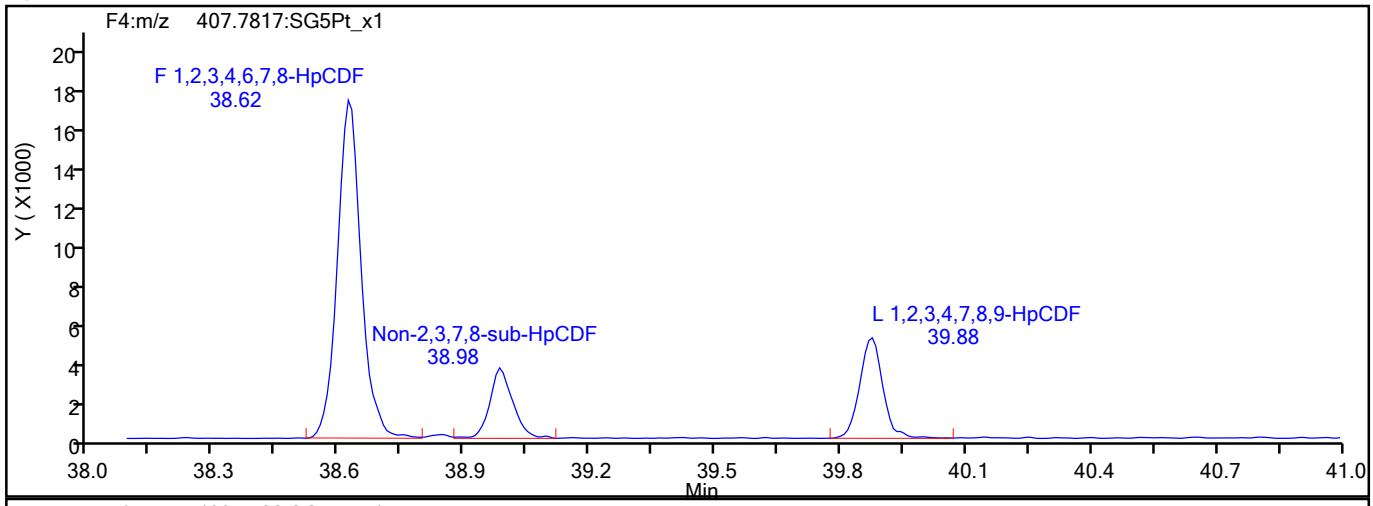

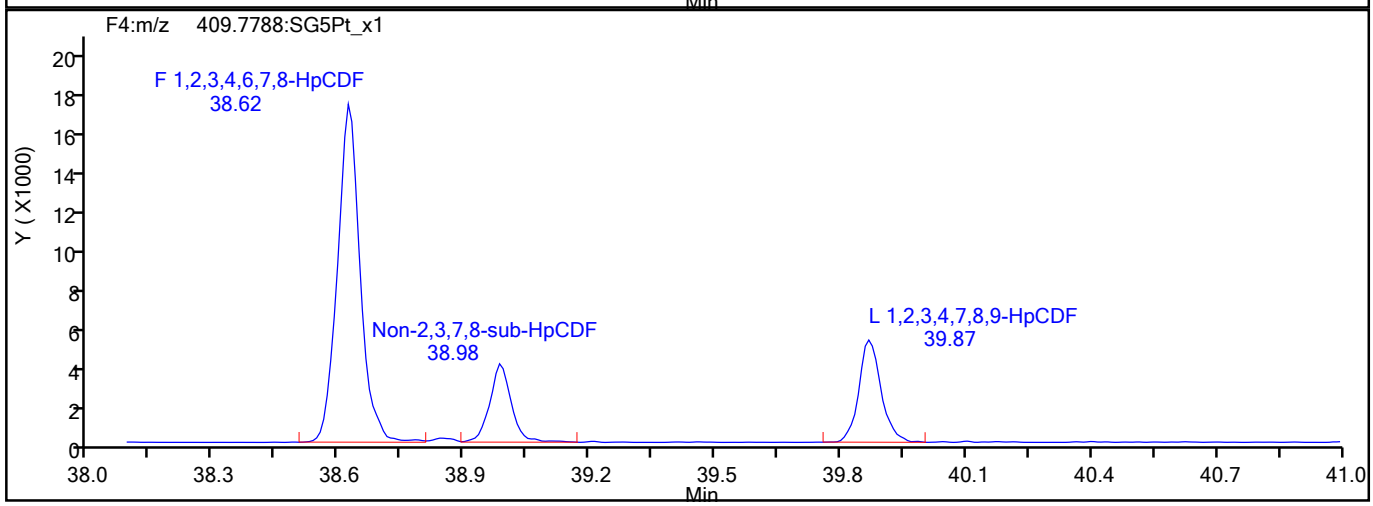

HpCDF Interference Mass

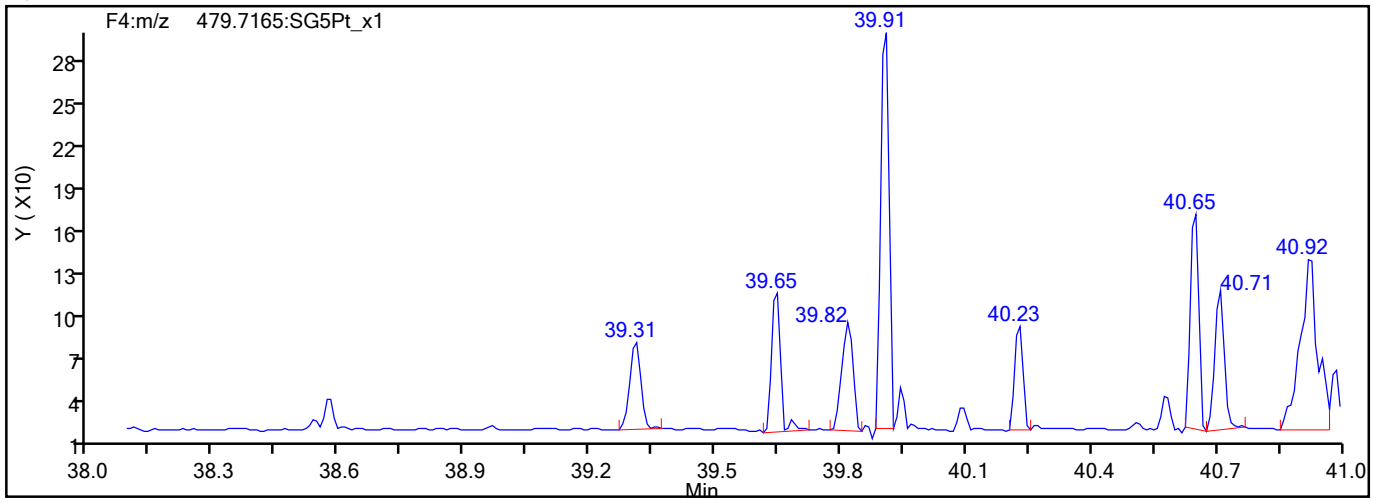

788252

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
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HpCDD

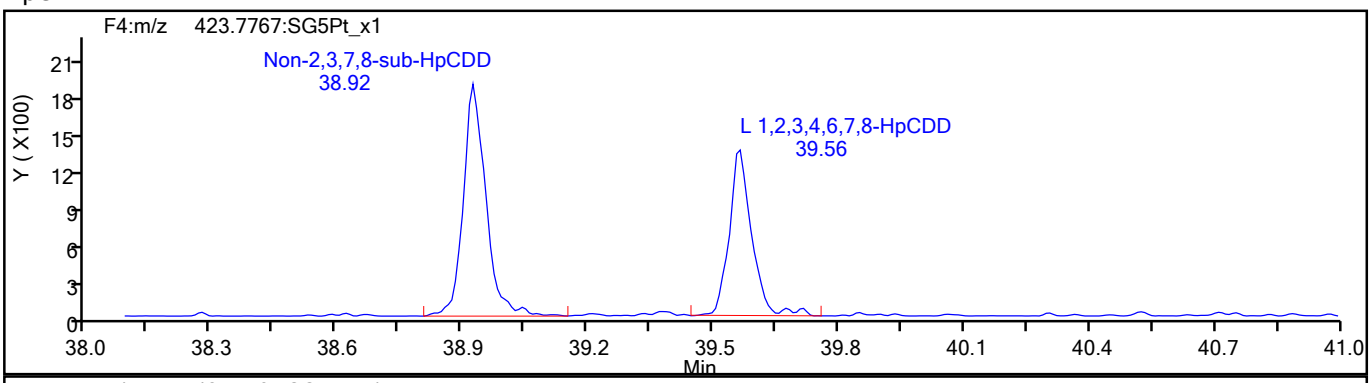

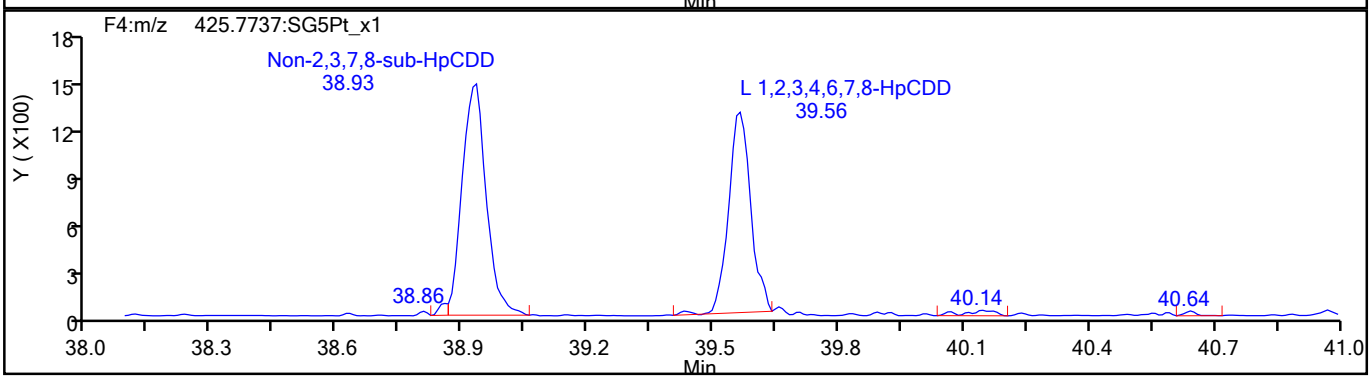

HpCDD Standards

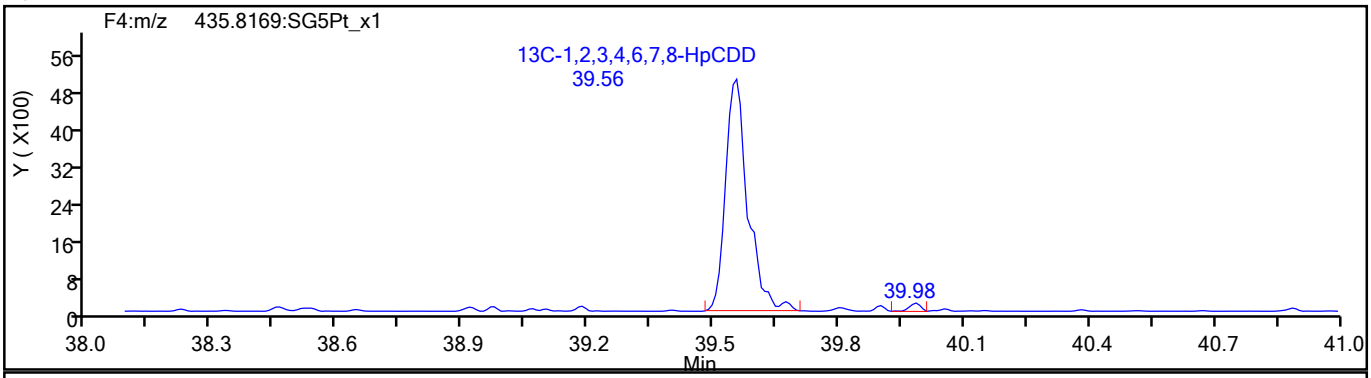

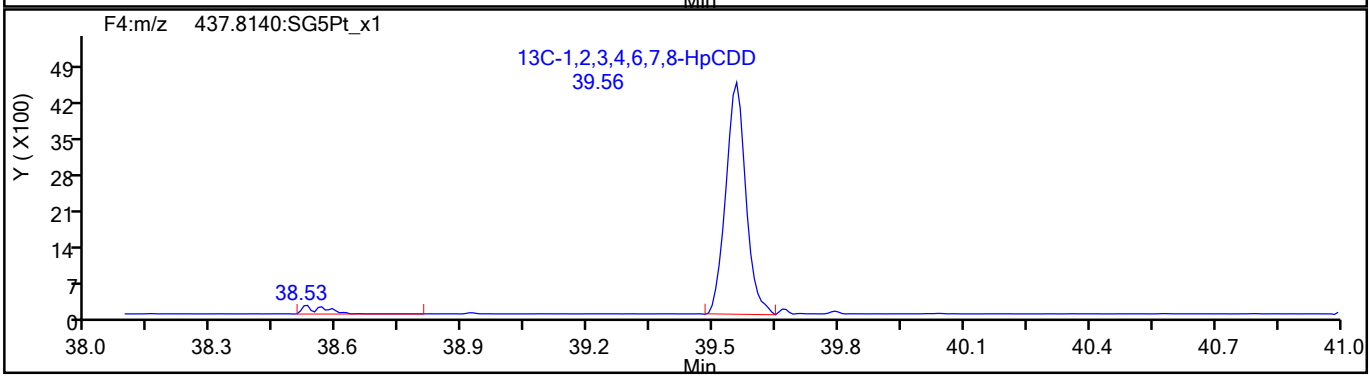

788253

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
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OCDF

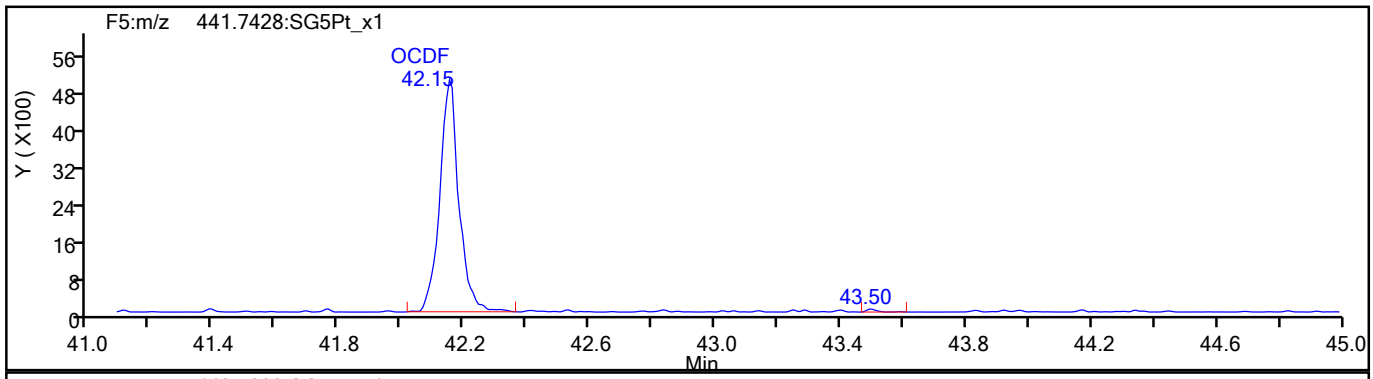

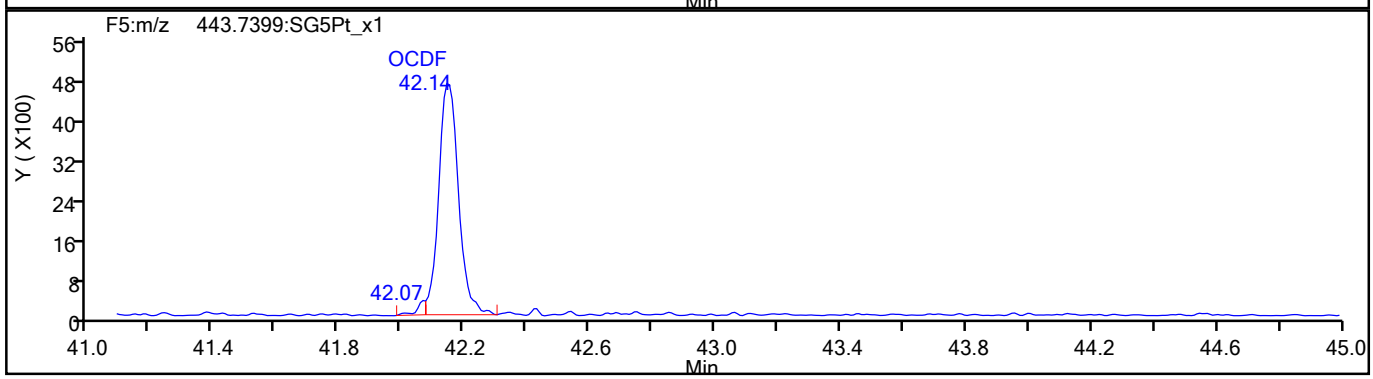

OCDF Standards

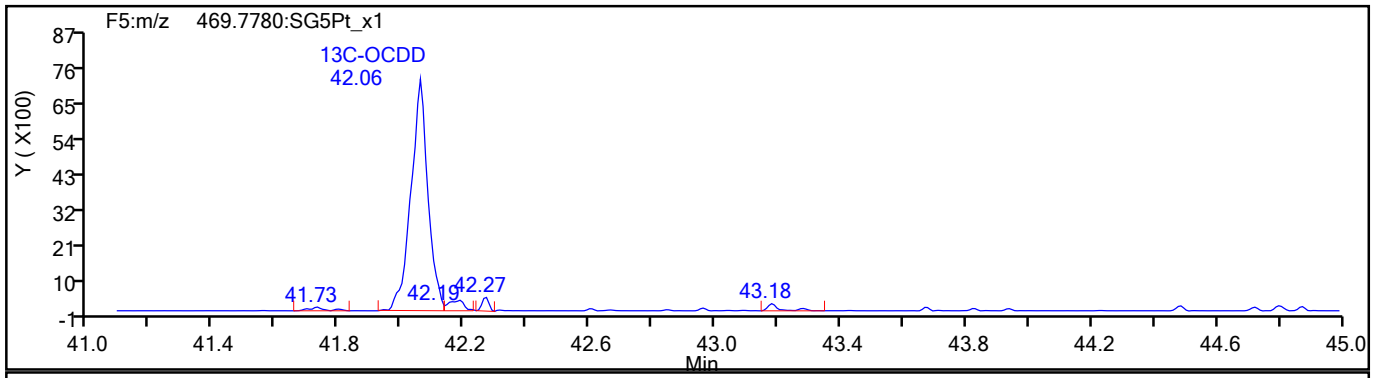

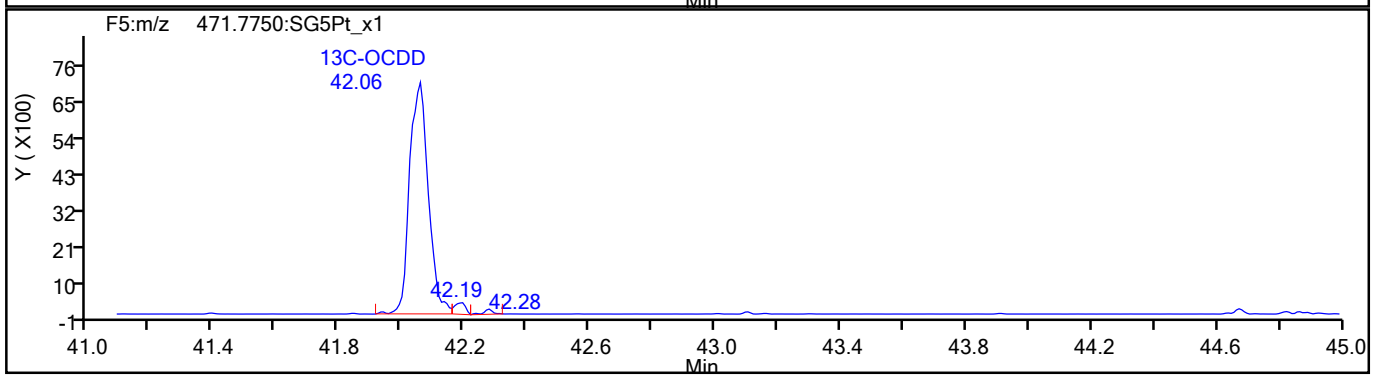

788254

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
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OCDF

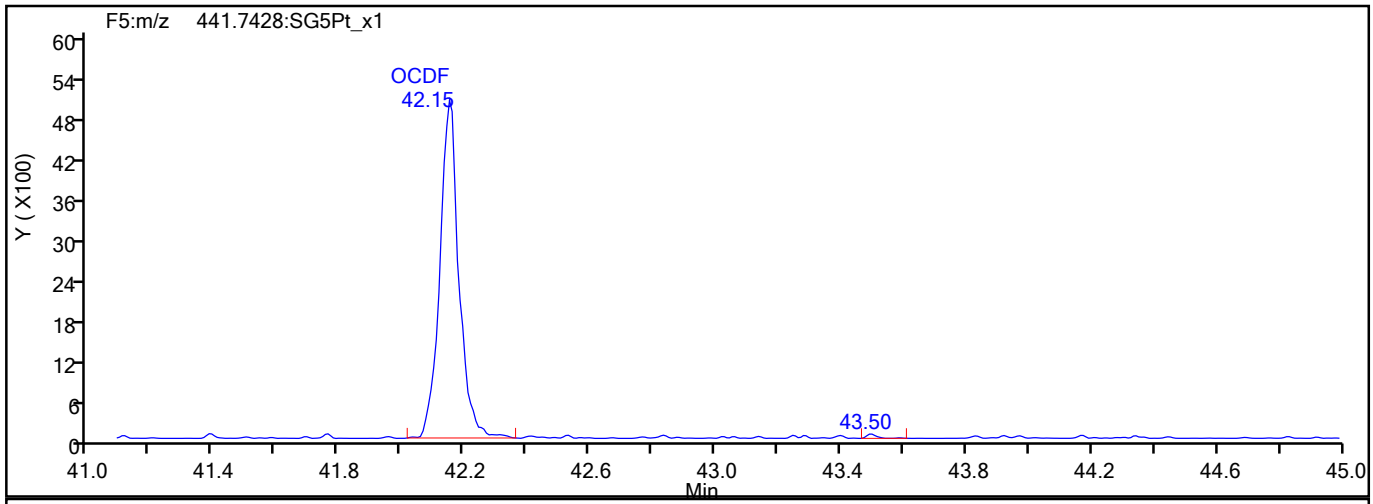

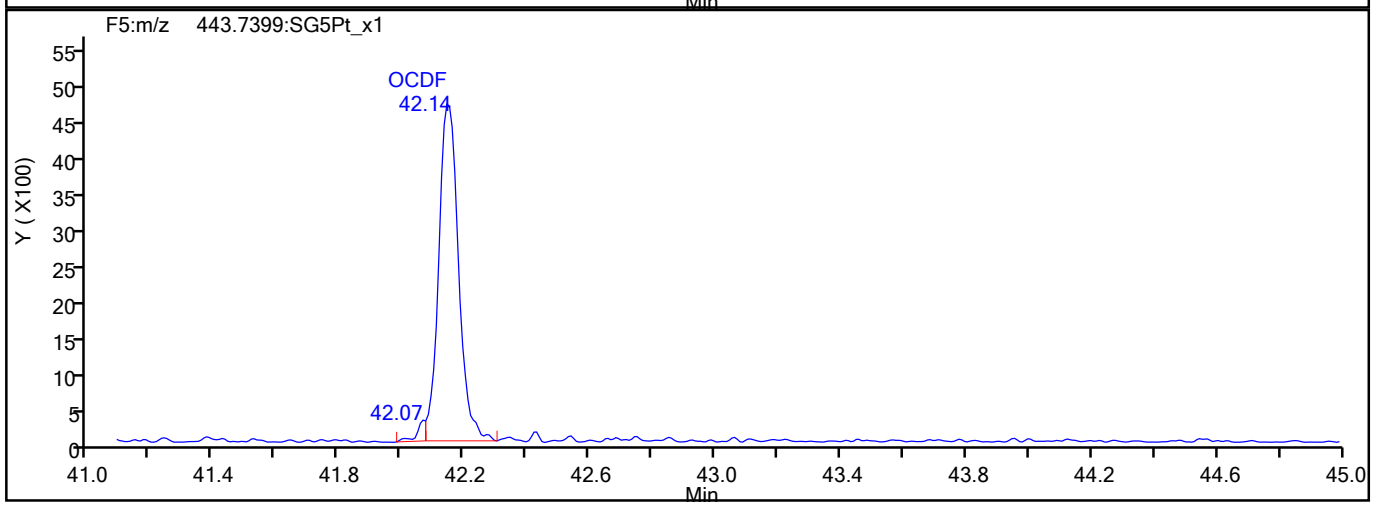

OCDF Interference Mass

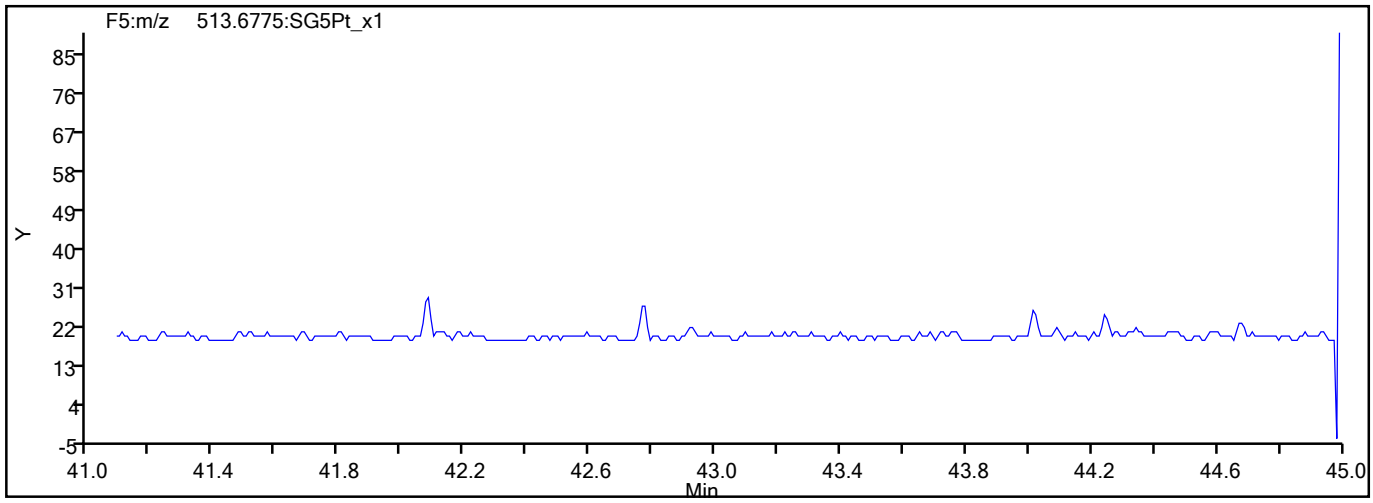

788255

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

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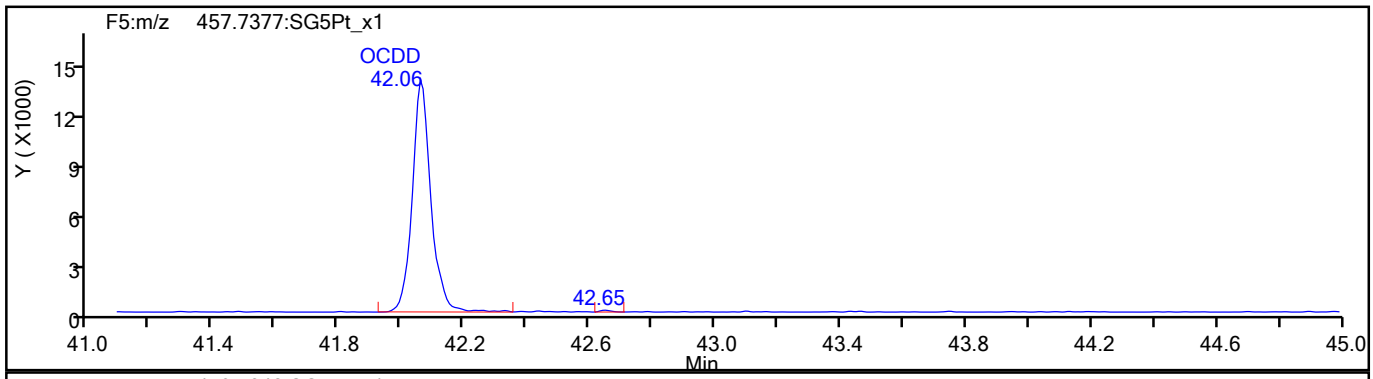

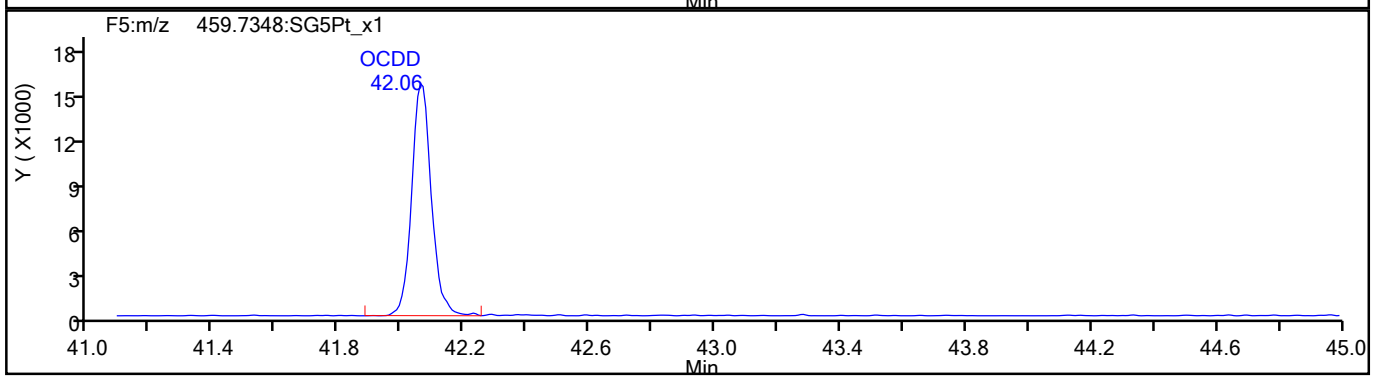

OCDD Standards

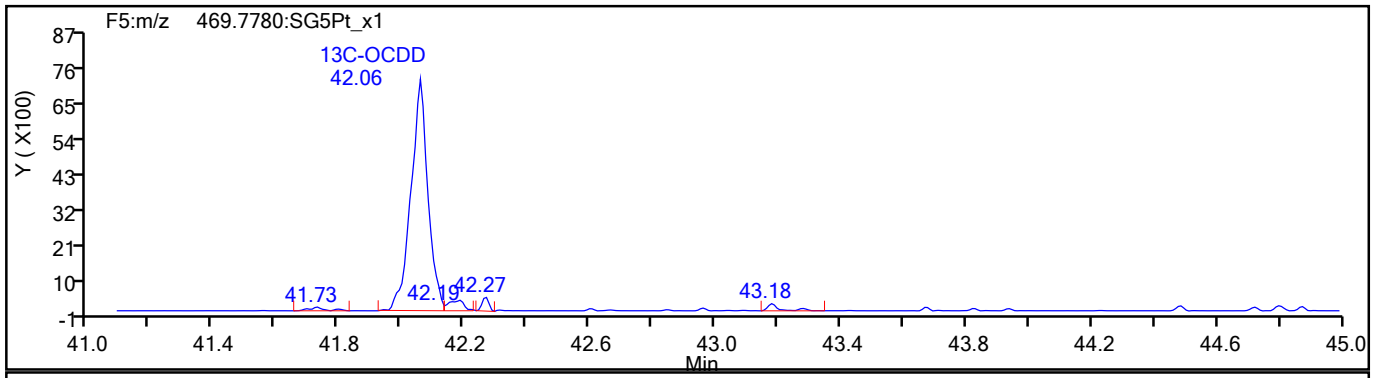

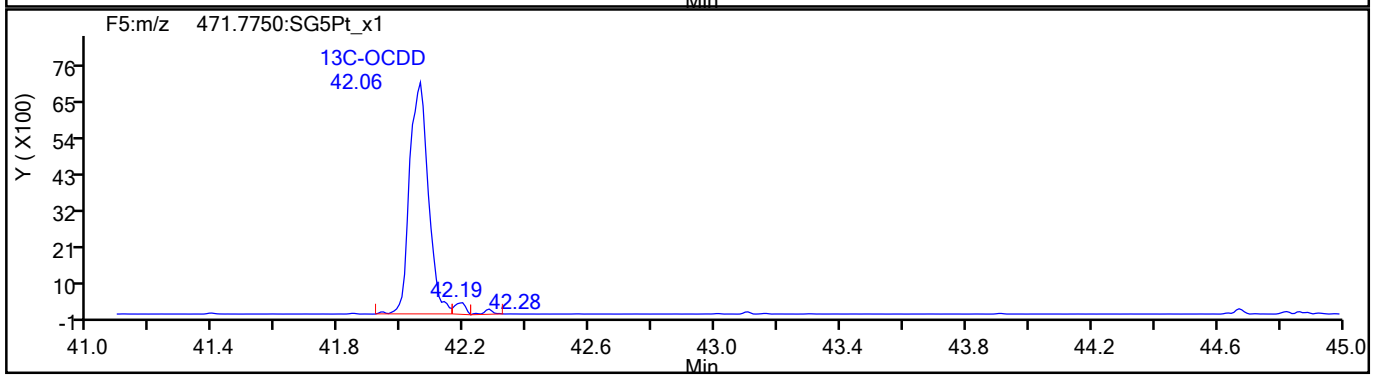

788256

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

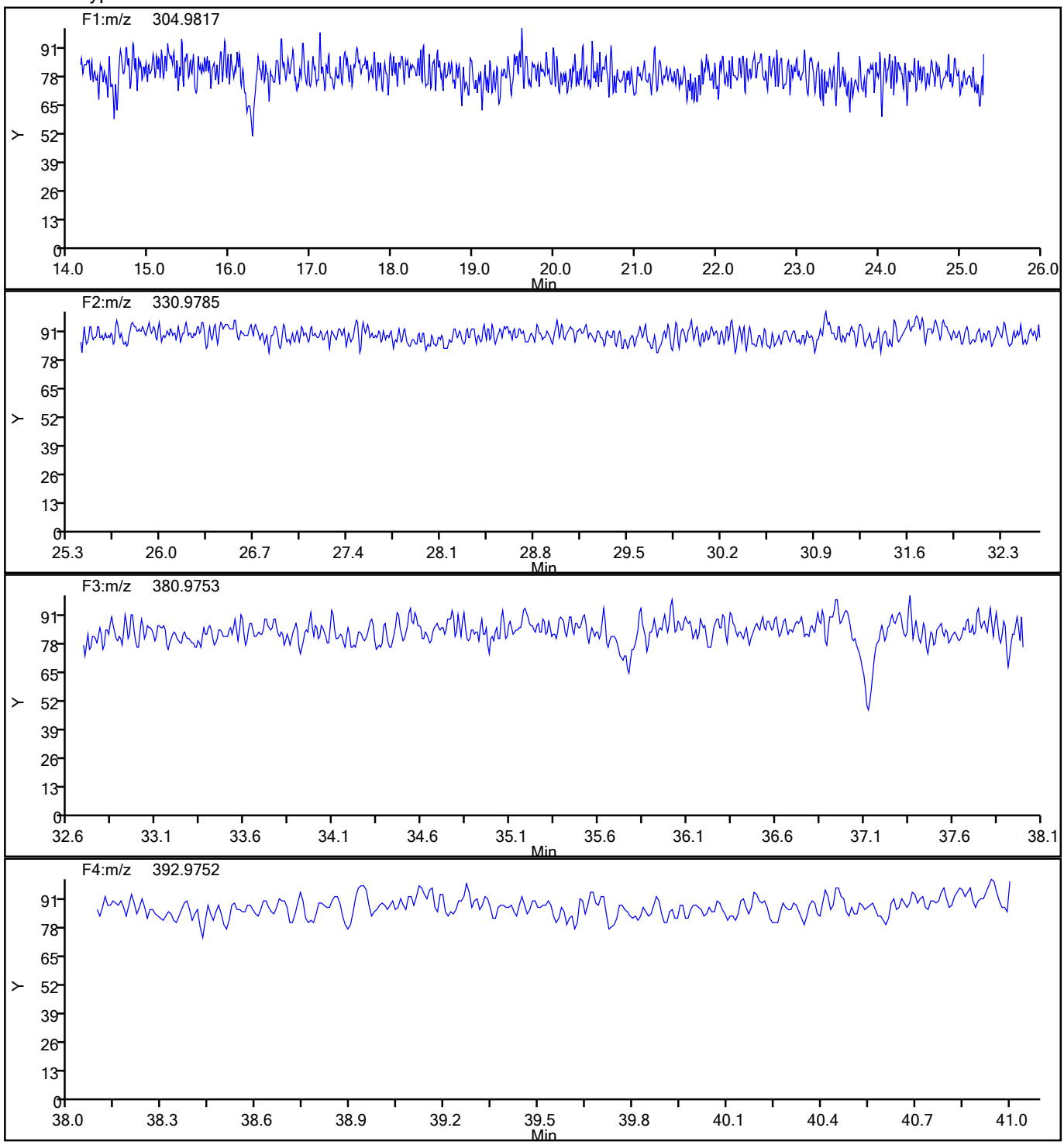

788257

Report Date: 25-Aug-2021 15:11:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (0-2)		
Worklist#:	518043	Sample Line#:	24
Column Type:	DB-5	Column Dia:	0.32 mm

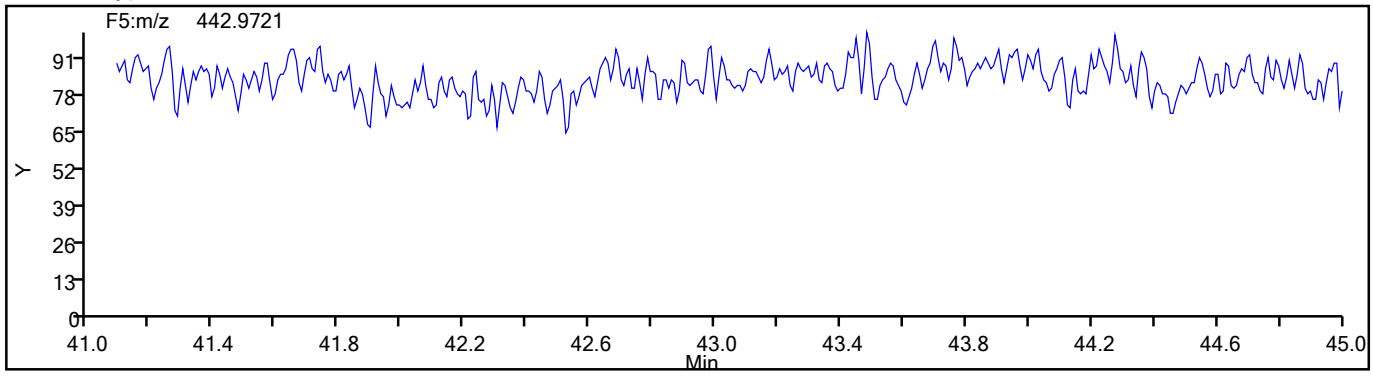

788258

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)
Lab Sample ID: 320-76901-2
Matrix: Sediment
Lab File ID: 17au21dfs1_52.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.06(g)
Date Analyzed: 08/19/2021 05:30
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	42		1.4	0.61
40321-76-4	1,2,3,7,8-PeCDD	ND		6.8	0.50
57117-41-6	1,2,3,7,8-PeCDF	ND		6.8	0.54
57117-31-4	2,3,4,7,8-PeCDF	ND		6.8	0.57
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.8	0.33
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.8	0.40
19408-74-3	1,2,3,7,8,9-HxCDD	ND		6.8	0.33
70648-26-9	1,2,3,4,7,8-HxCDF	7.0		6.8	0.36
57117-44-9	1,2,3,6,7,8-HxCDF	1.6	J q	6.8	0.34
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.8	0.36
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.8	0.36
35822-46-9	1,2,3,4,6,7,8-HpCDD	60	B	6.8	0.80
67562-39-4	1,2,3,4,6,7,8-HpCDF	4.4	J q B	6.8	0.40
55673-89-7	1,2,3,4,7,8,9-HpCDF	2.0	J	6.8	0.34
3268-87-9	OCDD	1700	B	14	2.3
39001-02-0	OCDF	18	q	14	0.56
41903-57-5	Total TCDD	42		1.4	0.61
30402-14-3	Total TCDF	240	G B	1.7	1.7
36088-22-9	Total PeCDD	ND		6.8	1.3
30402-15-4	Total PeCDF	2.6	J q	6.8	0.56
34465-46-8	Total HxCDD	18	q	6.8	0.35
55684-94-1	Total HxCDF	8.6	q	6.8	0.35
37871-00-4	Total HpCDD	150	B	6.8	0.80
38998-75-3	Total HpCDF	8.3	q B	6.8	0.37

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (2-4)
Lab Sample ID: 320-76901-2
Matrix: Sediment
Lab File ID: 17au21dfs1_52.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.06(g)
Date Analyzed: 08/19/2021 05:30
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	47		25-164
89059-46-1	13C-2,3,7,8-TCDF	47		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	46		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	43		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	43		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	53		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	47		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	55		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	49		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	41		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	45		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	53		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	49		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	59		26-138
114423-97-1	13C-OCDD	56		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	51		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d
Lims ID: 320-76901-A-2-A
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: Client
Inject. Date: 19-Aug-2021 05:30:00 ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:52:23 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:29:36

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.354	230563	0.82	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.383	144907	0.79	1.3459	46.7	46.7	0.4882	0.4882	46.70	
2,3,7,8-TCDF	20.409	93888	0.80	1.0802	60.0	60.0	0.6171	0.6171		M
A Non-2,3,7,8-sub-TCDF	19.878	41994	0.83	1.0802	26.8	26.8	0.6171	26.8		a
S Total TCDF					86.8	86.8	0.6171	0.6171		
D 13C-2,3,7,8-TCDD	21.767	100304	0.72	0.9317	46.7	46.7	0.9114	0.9114	46.69	
2,3,7,8-TCDD	21.784	16752	0.81	1.0753	15.5	15.5	0.2216	0.2216		
$ 37Cl4-2,3,7,8-TCDD	21.801	47434		1.0083	20.4	20.4	0.0835	0.0835	51.01	
A Non-2,3,7,8-sub-TCDD	20.707						0.2216	0.2633		RQU
S Total TCDD					15.5	15.5	0.2216	0.2216		
D 13C-1,2,3,7,8-PeCDF	27.290	114199	1.48	1.1405	43.4	43.4	0.2807	0.2807	43.43	
1,2,3,7,8-PeCDF	27.298						0.1983	0.1983		RQU
D 13C-2,3,4,7,8-PeCDF	28.822	112092	1.68	1.1253	43.2	43.2	0.2845	0.2845	43.20	
2,3,4,7,8-PeCDF	28.820						0.2097	0.2097		
A F1 PeCDFs	24.648						0.0408	0.1397		RQU
A Non-2,3,7,8-sub-PeCDF	28.125	1126	1.55	1.0311	1.046	0.9652	0.2039	0.9652		RQa
S Total PeCDF					1.046	0.9652	0.2040	0.2040		RQ
D 13C-1,2,3,7,8-PeCDD	29.647	76288	1.52	0.7165	46.2	46.2	0.1881	0.1881	46.18	
1,2,3,7,8-PeCDD	29.637						0.1814	0.1814		
A Non-2,3,7,8-sub-PeCDD	28.489						0.1814	0.4873		RQU
S Total PeCDD							0.4873	0.4873		
D 13C-1,2,3,4,7,8-HxCDF	34.956	110881	0.54	0.9648	55.3	55.3	0.1971	0.1971	55.25	
1,2,3,4,7,8-HxCDF	34.964	3244	1.12	1.1474	2.550	2.550	0.1307	0.1307		
D 13C-1,2,3,6,7,8-HxCDF	35.116	109330	0.51	1.0708	49.1	49.1	0.1776	0.1776	49.09	
1,2,3,6,7,8-HxCDF	35.133	779	1.24	1.2178	0.8284	0.5851	0.1233	0.1233		RQ
D 13C-2,3,4,6,7,8-HxCDF	35.924	96406	0.53	1.0413	44.5	44.5	0.1826	0.1826	44.51	
2,3,4,6,7,8-HxCDF	35.975						0.1331	0.1331		RQU
D 13C-1,2,3,7,8,9-HxCDF	36.808	83741	0.54	0.9731	41.4	41.4	0.1954	0.1954	41.38	
1,2,3,7,8,9-HxCDF	36.828						0.1299	0.1299		
A Non-2,3,7,8-sub-HxCDF	35.028						0.1291	0.5199		RQU
S Total HxCDF					3.378	3.135	0.1292	0.1292		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.614	207991	1.30	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.126	83277	1.29	0.7587	52.8	52.8	0.4511	0.4511	52.77	
1,2,3,4,7,8-HxCDD	36.143						0.1207	0.1207		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.236	84656	1.20	0.8593	47.4	47.4	0.3983	0.3983	47.37	
1,2,3,6,7,8-HxCDD	36.143						0.1456	0.1456		RQU
1,2,3,7,8,9-HxCDD	36.673						0.1224	0.1224		RQU
A Non-2,3,7,8-sub-HxCDD	35.394	5962	1.24	1.0545	7.038	6.733	0.1288	4.595		RQMa
S Total HxCDD					7.038	6.733	0.1296	0.1296		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.615	75649	0.42	0.7359	49.4	49.4	0.5655	0.5655	49.42	
1,2,3,4,6,7,8-HpCDF	38.632	1764	1.04	1.4421	1.754	1.617	0.1471	0.1471		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	39.862	84564	0.46	0.6854	59.3	59.3	0.6073	0.6073	59.32	
1,2,3,4,7,8,9-HpCDF	39.887	806	0.98	1.3092	0.7280	0.7280	0.1254	0.1254		M
A Non-2,3,7,8-sub-HpCDF	39.258	742	1.04	1.3756	0.7886	0.6734	0.1346	0.6734		RQ
S Total HpCDF					3.271	3.018	0.1363	0.1363		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	39.559	74778	0.95	0.6745	53.3	53.3	0.1879	0.1879	53.30	
1,2,3,4,6,7,8-HpCDD	39.567	17360	0.95	1.0503	22.1	22.1	0.2935	0.2935		
A Non-2,3,7,8-sub-HpCDD	39.258	27154	1.03	1.0503	34.6	34.6	0.2935	34.6		
S Total HpCDD					56.7	56.7	0.2935	0.2935		
D 13C-OCDD	42.046	126064	0.94	0.5446	111.3	111.3	0.2521	0.2521	55.64	
OCDF	42.147	5588	0.89	1.3168	7.528	6.733	0.2042	0.2042		RQM
OCDD	42.063	421455	0.90	1.0620	629.6	629.6	0.8558	0.8558		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d
Lims ID: 320-76901-A-2-A
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: Client
Inject. Date: 19-Aug-2021 05:30:00 ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:52:23 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:29:36

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.354	21.427	-4		103704	14002	52	130	269		a
333.9338	21.354	21.427	-4		126859	15675	49	122	320	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.383	20.401	-1	0.955	63759	9524	67	167	142		
317.9389	20.392	20.401	-1	0.955	81148	10730	11	27	975	0.79(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.409	20.436	-2	1.001	41627	5175	16	40	323		
305.8987	20.426	20.436	-1	1.002	52261	7236	38	95	190	0.80(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											a
303.9016	19.695	19.878	-11	0.966	19081	2854	16	40	178		a
305.8987	19.695	19.878	-11	0.966	22913	3161	38	95	83	0.83(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.767	21.743	1	1.019	41821	5661	52	130	109		
333.9338	21.749	21.743	0	1.019	58483	7770	49	122	159	0.72(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.784	21.777	0	1.001	7483	918	10	25	92		
321.8936	21.767	21.777	-1	1.000	9269	1193	3	7	398	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.801	21.849	-3	1.021	47434	5870	10	25	587		
A Non-2,3,7,8-sub-TCDD											U
319.8965	20.707	20.707	0	0.951	777	131	10	25			
	Empc Correction				123	47	10	25	0		
321.8936	20.707	20.707	0	0.951	161	62	3	7		4.83(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.290	27.288	0	1.278	68085	9871	28	70	353		
353.8970	27.281	27.288	0	1.278	46114	6868	10	25	687	1.48(1.32-1.78)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											RQU
339.8597	27.313						4	10			
341.8567	27.313						10	25			
13C-2,3,4,7,8-PeCDF											
351.9000	28.822	28.795	2	1.350	70285	10183	28	70	364		
353.8970	28.831	28.795	2	1.350	41807	6379	10	25	638	1.68(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.820						4	10			
341.8567	28.820						10	25			
A F1 PeCDFs											U
339.8597	24.061	24.648	-35	0.882	175	80	1	2	80		
	Empc Correction				99	43	1	2	43		
341.8567	24.087	24.648	-34	0.883	64	28	2	5	14	2.73(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQa
339.8597	25.866	28.125	-135	0.948	685	126	4	10	32		a
341.8567	25.832	28.125	-137	0.947	535	94	10	25	9	1.28(1.32-1.78)	
	Empc Correction				441	81	10	25	8		
13C-1,2,3,7,8-PeCDD											
367.8949	29.647	29.612	2	1.388	45981	6650	6	15	1108		
369.8919	29.647	29.612	2	1.388	30307	4937	10	25	494	1.52(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.637						7	17			
357.8516	29.637						2	5			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.077	28.489	-144	0.880	234	62	7	17	9		
	Empc Correction				72	34	7	17	5		
357.8516	26.051	28.489	-146	0.879	47	22	2	5	11	4.98(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.956	34.942	1	0.955	38653	7411	10	25	741		
385.8610	34.947	34.942	0	0.954	72228	13924	26	65	536	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.964	34.959	0	1.000	1713	370	8	20	46		
375.8178	34.947	34.959	-1	1.000	1531	249	5	12	50	1.12(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.116	35.111	0	0.959	37155	8209	10	25	821		
385.8610	35.108	35.111	0	0.959	72175	13110	26	65	504	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQ
373.8208	35.133	35.119	1	1.000	755	118	8	20	15		
	Empc Correction				431	105	8	20	13		
375.8178	35.124	35.119	0	1.000	348	85	5	12	17	2.17(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.924	35.919	0	0.981	33600	7251	10	25	725		
385.8610	35.916	35.919	0	0.981	62806	12550	26	65	483	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQU
373.8208	35.936						8	20			
375.8178	35.936						5	12			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.808	36.811	0	1.005	29410	6905	10	25	691		
385.8610	36.808	36.811	0	1.005	54331	12953	26	65	498	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.828						8	20			
375.8178	36.828						5	12			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.499	35.028	-92	0.958	345	122	8	20	15		
375.8178	33.508	35.028	-91	0.959	282	73	5	12	15	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.614	36.609	0		117430	26596	42	105	633		
403.8529	36.606	36.609	0		90561	20737	23	57	902	1.30(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.126	36.129	0	0.987	46955	11250	42	105	268		
403.8529	36.135	36.129	0	0.987	36322	8279	23	57	360	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.146						6	15			
391.8127	36.146						4	10			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.236	36.247	-1	0.990	46258	9843	42	105	234		
403.8529	36.244	36.247	0	0.990	38398	7437	23	57	323	1.20(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8158	36.264						6	15			
391.8127	36.264						4	10			
1,2,3,7,8,9-HxCDD											RQU
389.8158	36.626						6	15			
391.8127	36.626						4	10			
A Non-2,3,7,8-sub-HxCDD											RQMa
389.8158	34.282	35.394	-67	0.946	2208	422	6	15	70		M
391.8127	34.265	35.394	-68	0.946	1861	361	4	10	90	1.19(1.05-1.43)	
389.8158	35.377	35.394	-1	0.976	1048	282	6	15	47		a
391.8127	35.369	35.394	-2	0.976	1115	233	4	10	58	0.94(1.05-1.43)	
	Empc Correction				845	227	4	10	57		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.615	38.626	-1	1.055	22340	6097	49	122	124		
419.8220	38.615	38.626	-1	1.055	53309	13704	30	75	457	0.42(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7817	38.632	38.630	0	1.000	1049	382	15	37	25		M
	Empc Correction				899	212	15	37	14		
409.7788	38.624	38.630	0	1.000	865	204	2	5	102	1.21(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.862	39.880	-1	1.089	26652	8416	49	122	172		
419.8220	39.870	39.880	-1	1.089	57912	17159	30	75	572	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											M
407.7817	39.887	39.885	0	1.001	399	99	15	37	7		
409.7788	39.879	39.885	0	1.000	407	122	2	5	61	0.98(0.88-1.20)	M

Report Date: 20-Aug-2021 09:52:23 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											RQ
407.7817	38.994	39.258	-16	1.010	505	189	15	37	13		
	Empc Correction				378	121	15	37	8		
409.7788	39.003	39.258	-15	1.010	364	117	2	5	59	1.39(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.559	39.569	-1	1.080	36513	10323	8	20	1290		
437.8140	39.559	39.569	-1	1.080	38265	12382	16	40	774	0.95(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.567	39.582	-1	1.000	8443	2534	15	37	169		
425.7737	39.567	39.582	-1	1.000	8917	2679	13	32	206	0.95(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.927	39.258	-20	0.984	13749	3616	15	37	241		
425.7737	38.927	39.258	-20	0.984	13405	4043	13	32	311	1.03(0.88-1.20)	
13C-OCDD											
469.7780	42.046	42.072	-2	1.148	61183	15041	16	40	940		
471.7750	42.054	42.072	-1	1.149	64881	16206	10	25	1621	0.94(0.76-1.02)	
OCDF											RQM
441.7428	42.147	42.165	-1	1.002	3291	942	3	7	314		
	Empc Correction				2631	647	3	7	216		
443.7399	42.147	42.165	-1	1.002	2957	727	14	35	52	1.11(0.76-1.02)	M
OCDD											
457.7377	42.063	42.081	-1	1.000	199069	51473	29	72	1775		
459.7348	42.063	42.081	-1	1.000	222386	56877	28	70	2031	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 09:52:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Lims ID:	320-76901-A-2-A		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 05:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	48

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	144907	20254

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	144907	20254

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.695	19081	2854	22913	3161	26.8	0.83	a
Signal Totals:							
	19081	2854	22913	3161			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	41994	6015				0.83	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 26.829 = (41994 * 100.000) / (144907 * 1.080)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 20-Aug-2021 09:52:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Lims ID:	320-76901-A-2-A		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 05:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	48

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	100304	13431

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	100304	13431

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.514	777	131	161	62	0.8696	4.83	RQ
22.514	123	47	161	62	0.2633		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:52:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Lims ID:	320-76901-A-2-A		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 05:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	48

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	114199	16739
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	112092	16562

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	113145	16650

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.061	175	80	64	28	0.2049	2.73	RQ
24.061	99	43	64	28	0.1397		Empc Correction
24.147	40	28	65	39	0.0900	0.62	RQ
24.147	40	28	25	18	0.0557		Empc Correction
24.379	44	21	289	105	0.2854	0.15	RQ
24.379	44	21	28	13	0.0617		Empc Correction
25.178	7	5	37	24	0.0377	0.19	RQ
25.178	7	5	4	3	0.009429		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:52:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Lims ID:	320-76901-A-2-A		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 05:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	48

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	114199	16739
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	112092	16562

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	113145	16650

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.866	685	126	535	94	1.05	1.28	RQa
25.866	685	126	441	81	0.9652		Empc Correction
Signal Totals:							
	685	126	441	81			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1220	220				1.28	RQa
	1126	207					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.046 = (1220 * 100.000) / (113145 * 1.031)
Empc Amount: 0.9652 = (1126 * 100.000) / (113145 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 20-Aug-2021 09:52:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Lims ID:	320-76901-A-2-A		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 05:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	48

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	76288	11587

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	76288	11587

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.077	234	62	47	22	0.3520	4.98	RQ
26.077	72	34	47	22	0.1491		Empc Correction
28.561	272	54	112	48	0.4810	2.43	RQ
28.561	173	74	112	48	0.3570		Empc Correction
30.271	245	130	144	49	0.4873	1.70	
30.313	297	95	39	24	0.4209	7.62	RQ
30.313	60	37	39	24	0.1240		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:52:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Lims ID:	320-76901-A-2-A		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 05:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	48

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	110881	21335
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	109330	21319
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	96406	19801
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	83741	19858

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	100089	20578

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.499	345	122	282	73	0.5199	1.22	
34.358	100	37	149	46	0.2065	0.67	RQ
34.358	100	37	80	29	0.1493		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:52:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Lims ID:	320-76901-A-2-A		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 05:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	48

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	83277	19529
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	84656	17280
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	83966	18404

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.282	2208	422	1861	361	4.60	1.19	M
35.377	1048	282	1115	233	2.44	0.94	RQa
35.377	1048	282	845	227	2.14		Empc Correction
Signal Totals:							
	3256	704	2706	588			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6232	1298				1.09	RQMa
	5962	1292					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 7.038 = (6232 * 100.000) / (83966 * 1.055)

Empc Amount: 6.733 = (5962 * 100.000) / (83966 * 1.055)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 20-Aug-2021 09:52:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Lims ID:	320-76901-A-2-A		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 05:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	48

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	75649	19801
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	84564	25575

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	80106	22688

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.994	505	189	364	117	0.7886	1.39	RQ
38.994	378	121	364	117	0.6734		Empc Correction
Signal Totals:							
	378	121	364	117			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	869	306				1.39	RQ
	742	238					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7886 = (869 * 100.000) / (80106 * 1.376)
Empc Amount: 0.6734 = (742 * 100.000) / (80106 * 1.376)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:52:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Lims ID:	320-76901-A-2-A		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 05:30:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	48

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	74778	22705

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	74778	22705

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.927	13749	3616	13405	4043	34.6	1.03	
Signal Totals:							
	13749	3616	13405	4043			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	27154	7659				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 34.574 = (27154 * 100.000) / (74778 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d				
Injection Date:	19-Aug-2021 05:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-2-A	Lab Sample ID:	320-76901-2		
Client ID:	11215702-072821-BN-SJSB095 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	48
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 20.43
Area: 50737
Amount: 59.008158
Amount Units: pg/ul

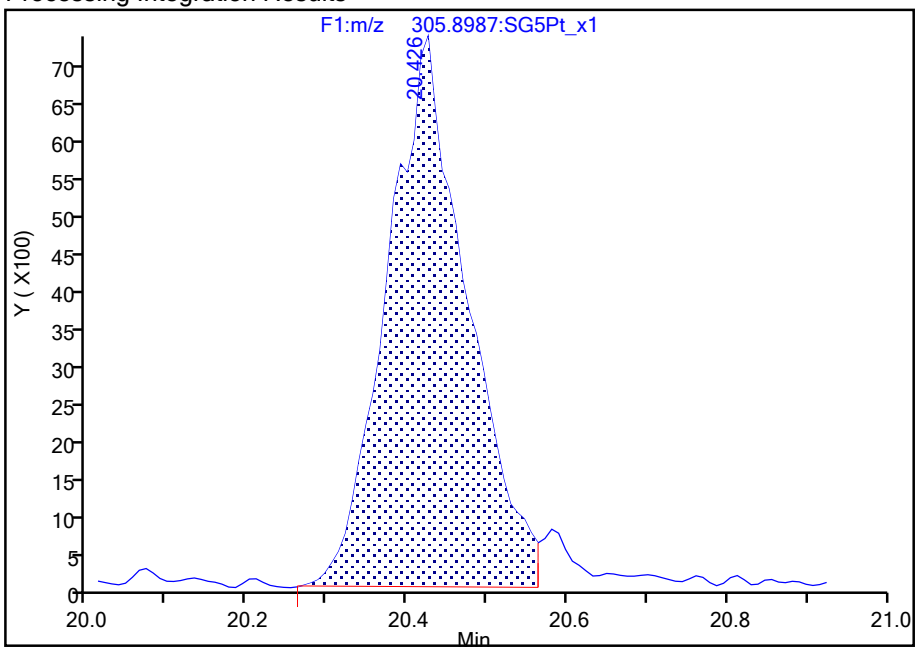

Manual Integration Results

RT: 20.43
Area: 52261
Amount: 59.981788
Amount Units: pg/ul

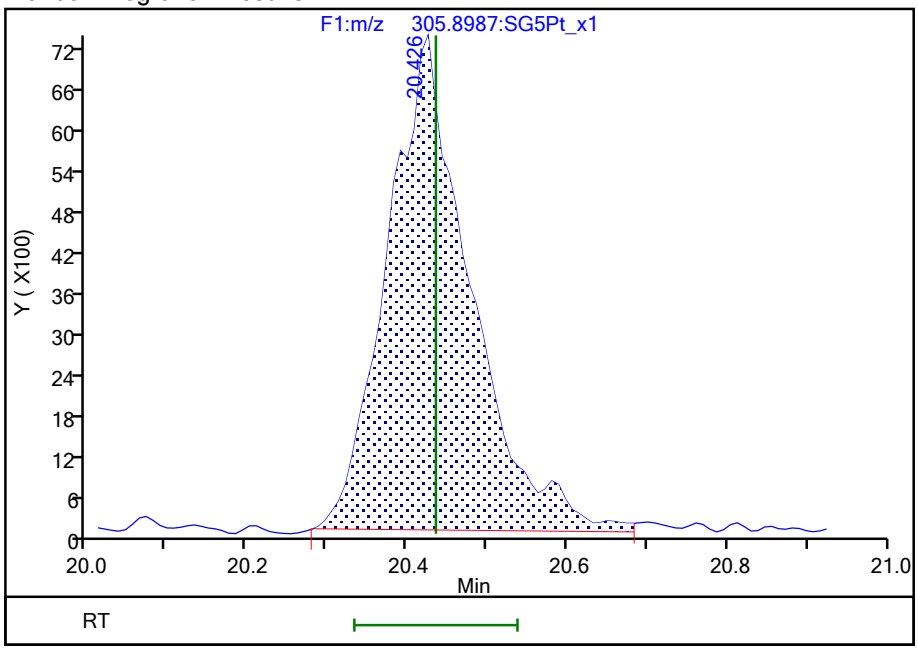

Reviewer: dadunj, 20-Aug-2021 09:50:22

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d				
Injection Date:	19-Aug-2021 05:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-2-A	Lab Sample ID:	320-76901-2		
Client ID:	11215702-072821-BN-SJSB095 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	48
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.19- 36.59)

Signal: 1

Processing Integration Results

RT = 34.282 Area = 2337

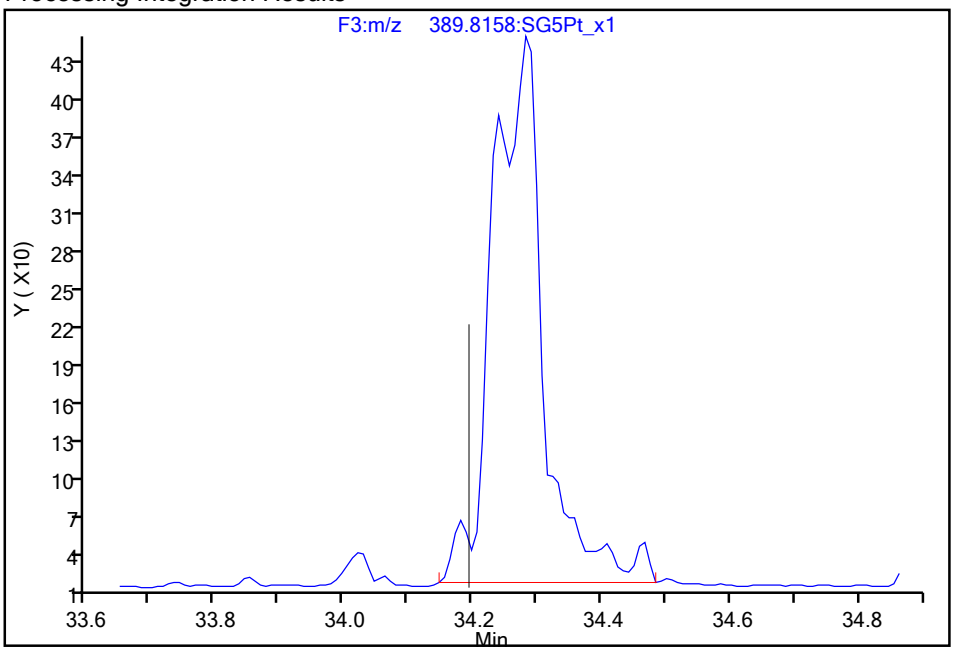

Manual Integration Results

RT = 34.282 Area = 2208 M

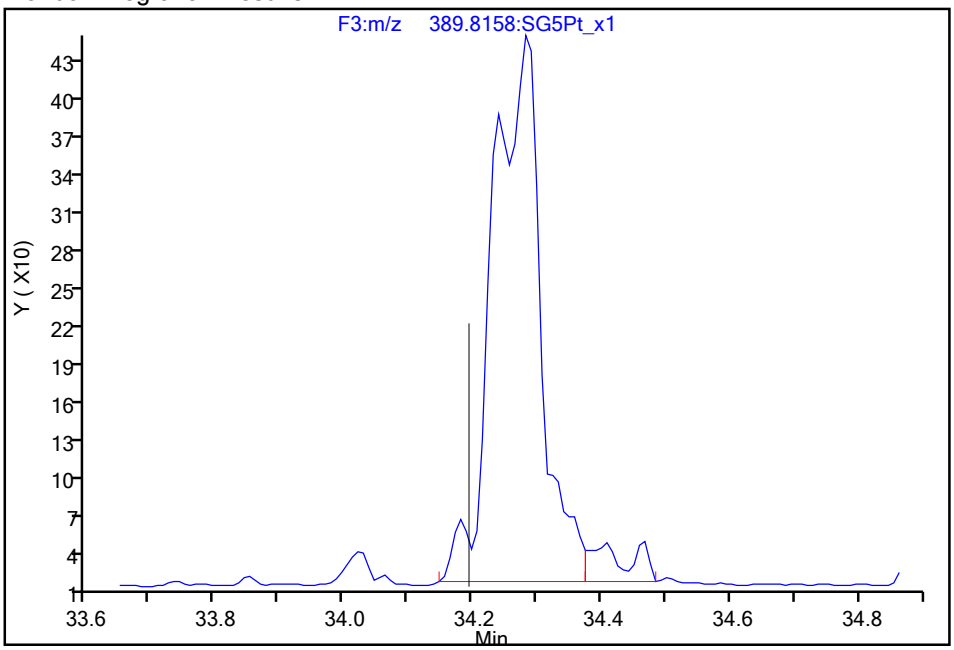

Reviewer: dadunj, 20-Aug-2021 09:51:31

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d				
Injection Date:	19-Aug-2021 05:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-2-A	Lab Sample ID:	320-76901-2		
Client ID:	11215702-072821-BN-SJSB095 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	48
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 38.63
Area: 1215
Amount: 1.906663
Amount Units: pg/ul

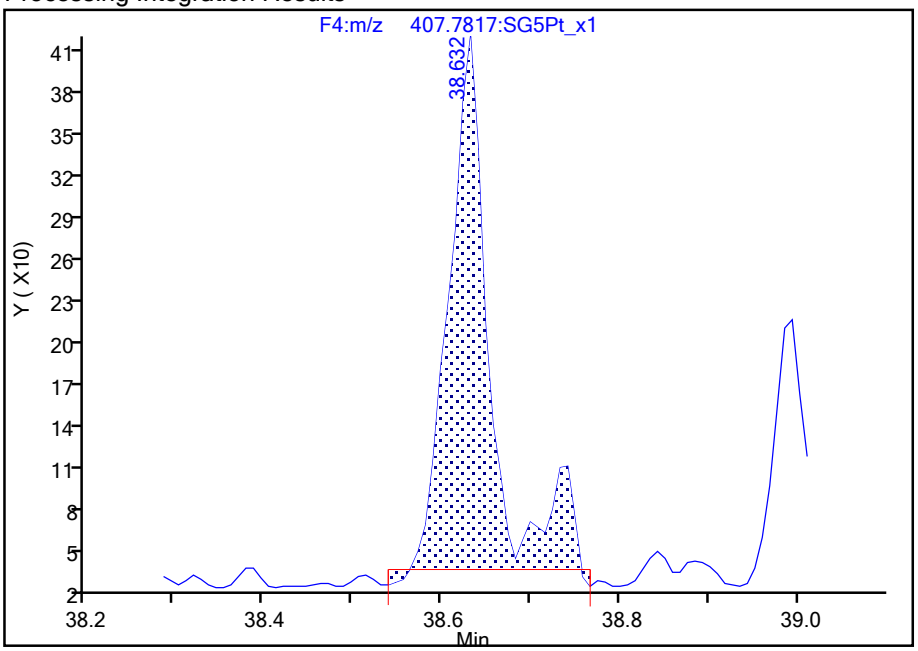

Manual Integration Results

RT: 38.63
Area: 1049
Amount: 1.754497
Amount Units: pg/ul

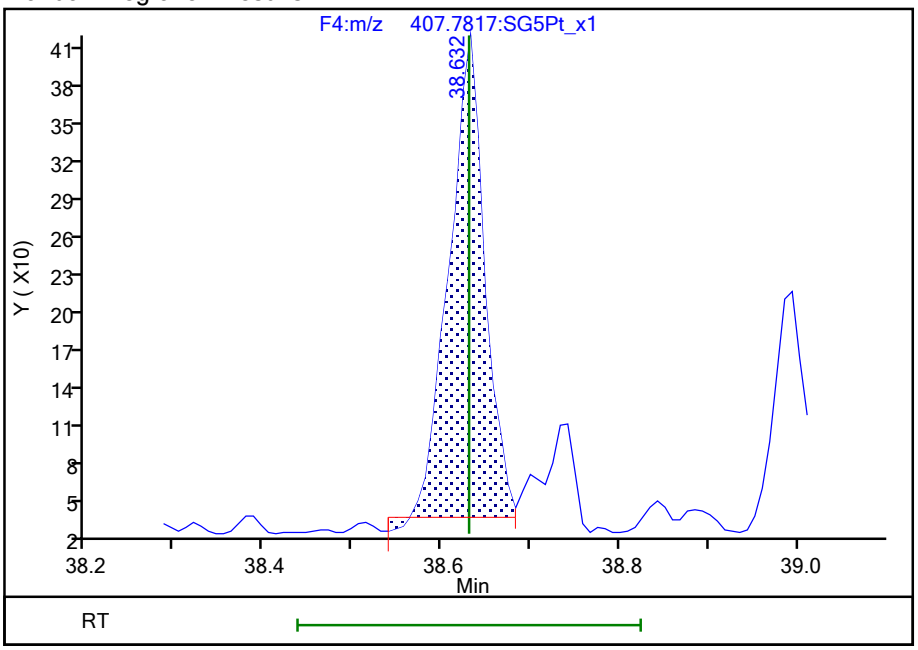

Reviewer: dadunj, 20-Aug-2021 09:51:39

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d				
Injection Date:	19-Aug-2021 05:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-2-A	Lab Sample ID:	320-76901-2		
Client ID:	11215702-072821-BN-SJSB095 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	48
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 2

Processing Integration Results

RT: 39.88
Area: 413
Amount: 0.733465
Amount Units: pg/ul

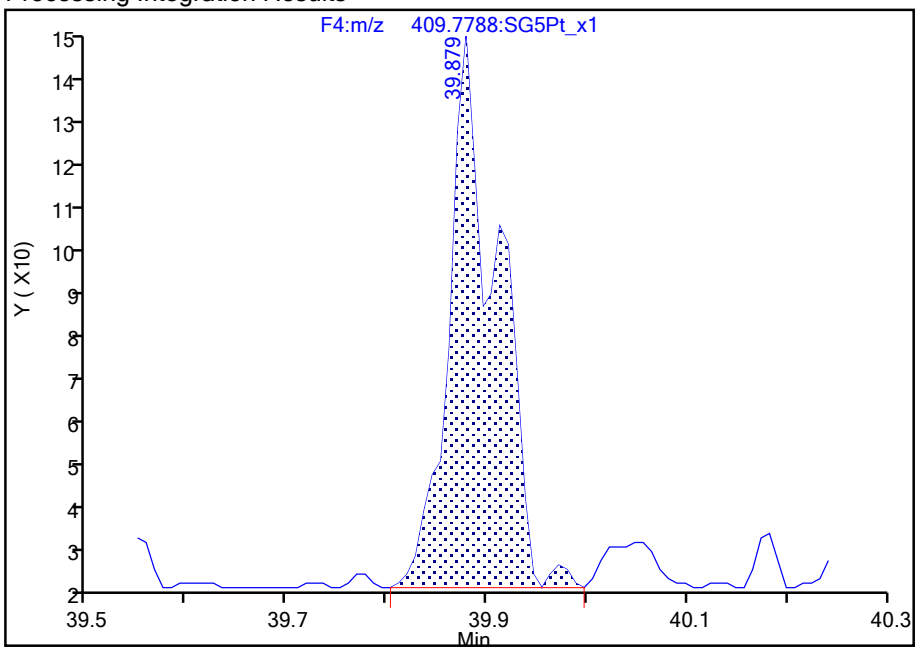

Manual Integration Results

RT: 39.88
Area: 407
Amount: 0.728045
Amount Units: pg/ul

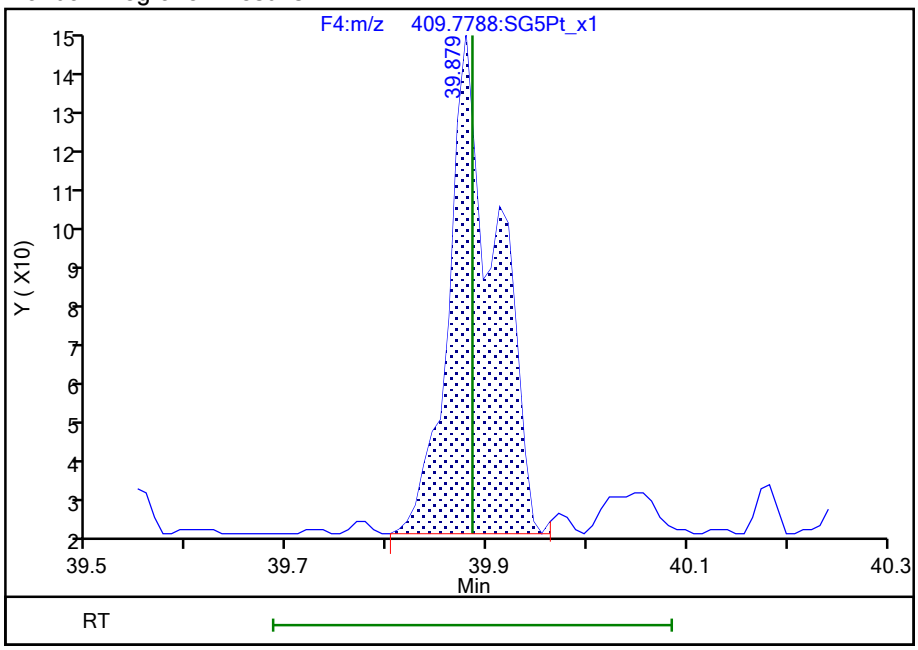

Reviewer: dadunj, 20-Aug-2021 09:51:43

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d				
Injection Date:	19-Aug-2021 05:30:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-2-A	Lab Sample ID:	320-76901-2		
Client ID:	11215702-072821-BN-SJSB095 (2-4)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	48
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 42.15
Area: 3234
Amount: 7.861417
Amount Units: pg/ul

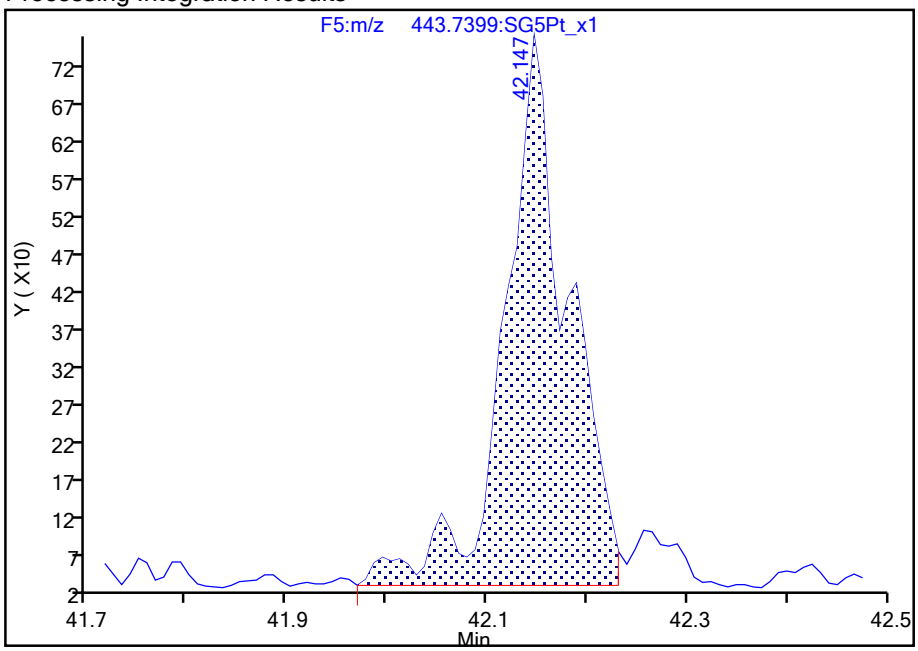

Manual Integration Results

RT: 42.15
Area: 2957
Amount: 7.527683
Amount Units: pg/ul

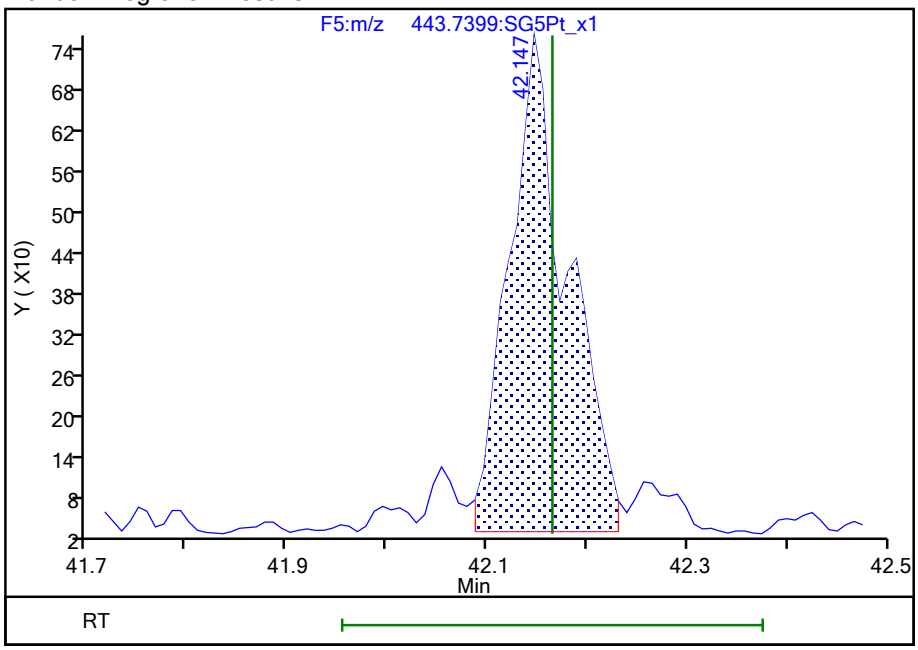

Reviewer: dadunj, 20-Aug-2021 09:51:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Injection Date:	19-Aug-2021 05:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

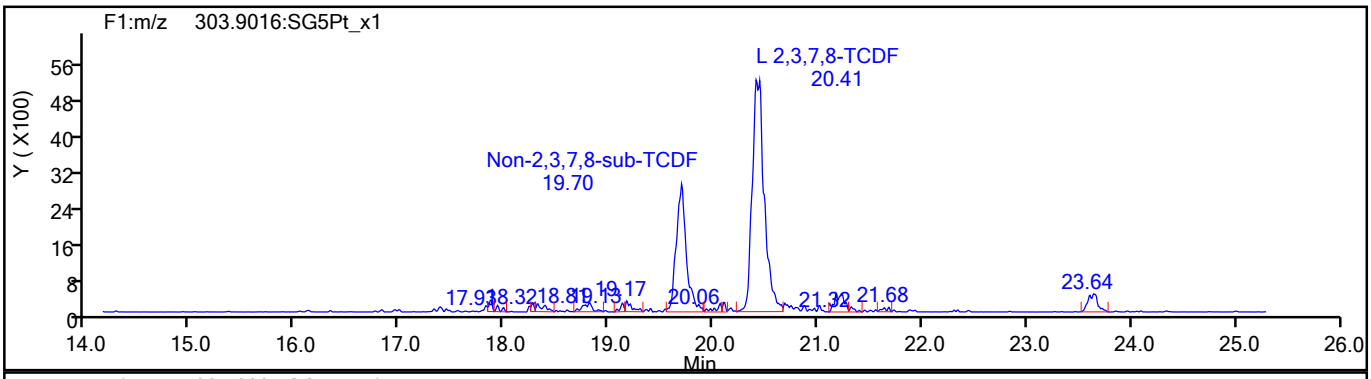

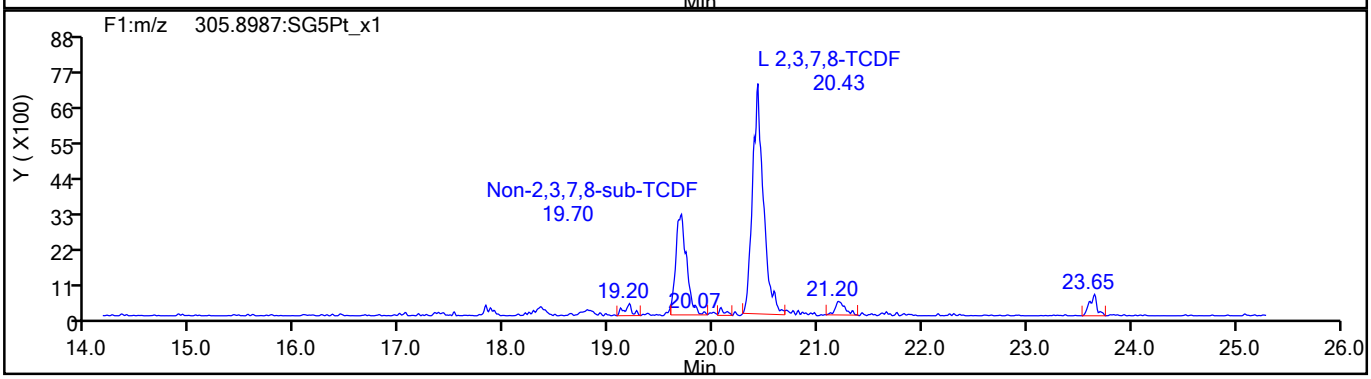

TCDF Standards

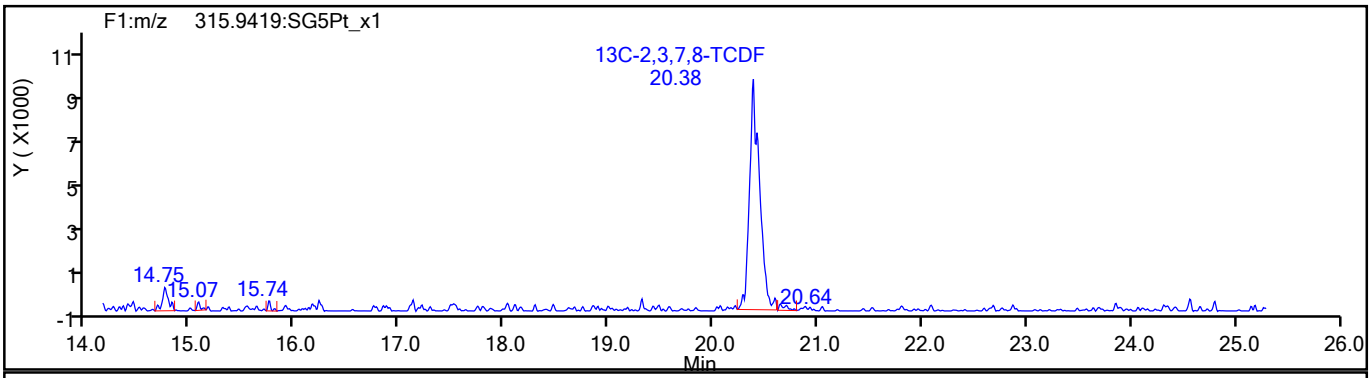

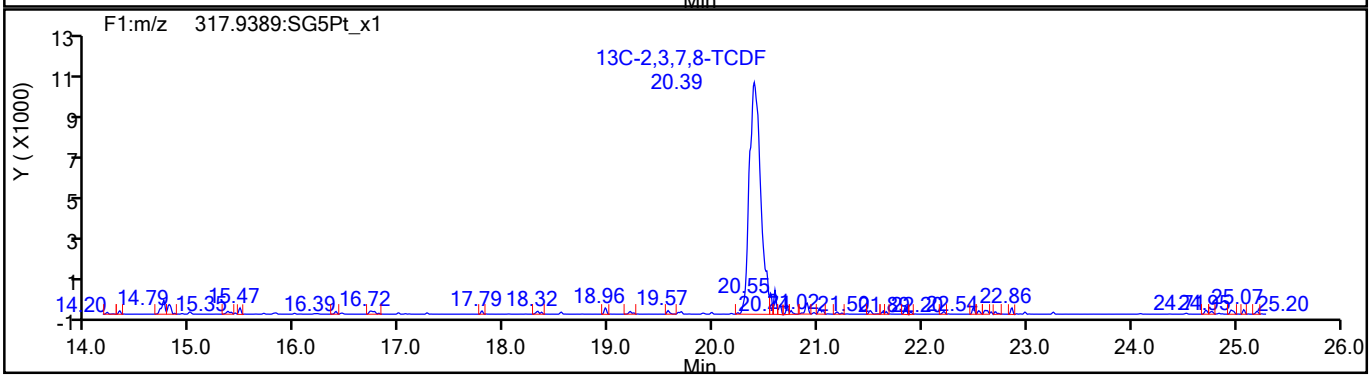

788282

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Injection Date:	19-Aug-2021 05:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

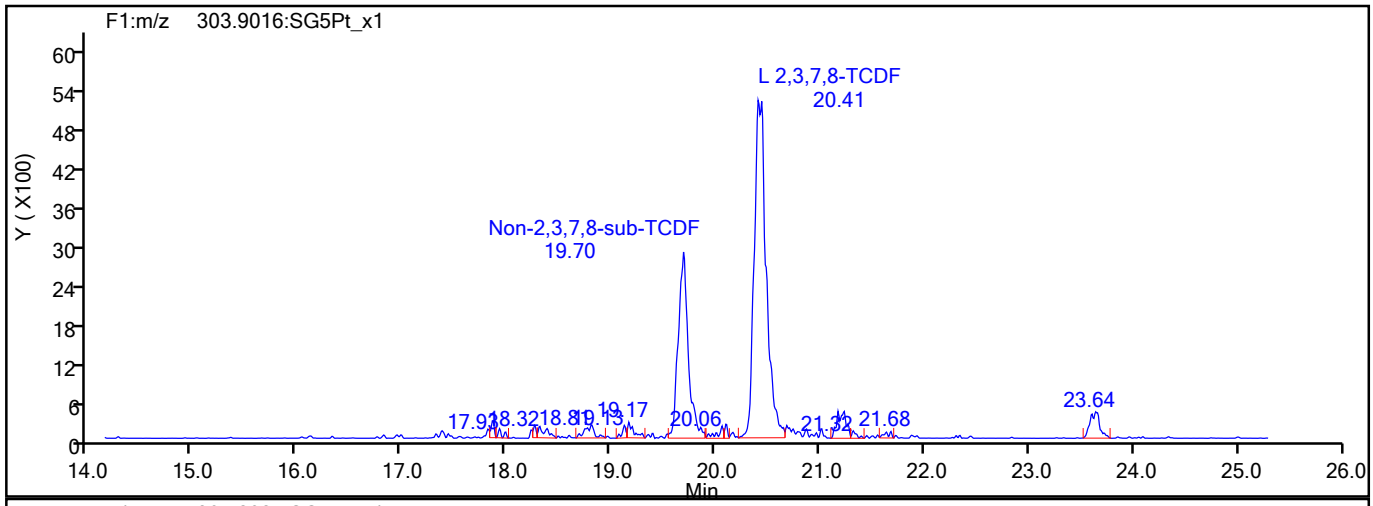

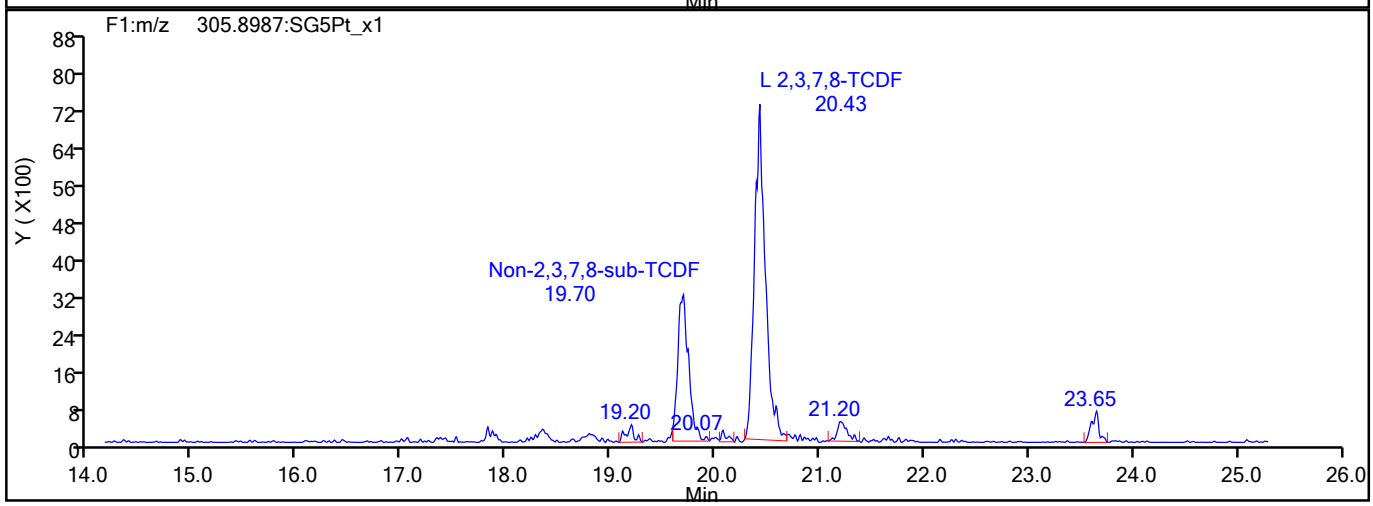

TCDF Interference Mass

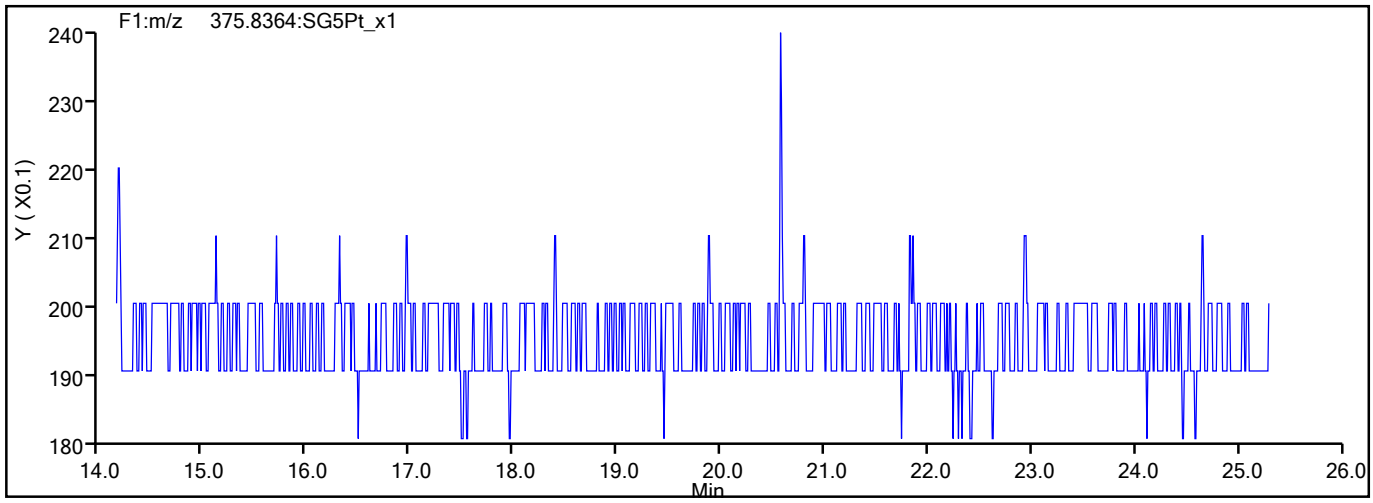

788283

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Injection Date:	19-Aug-2021 05:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

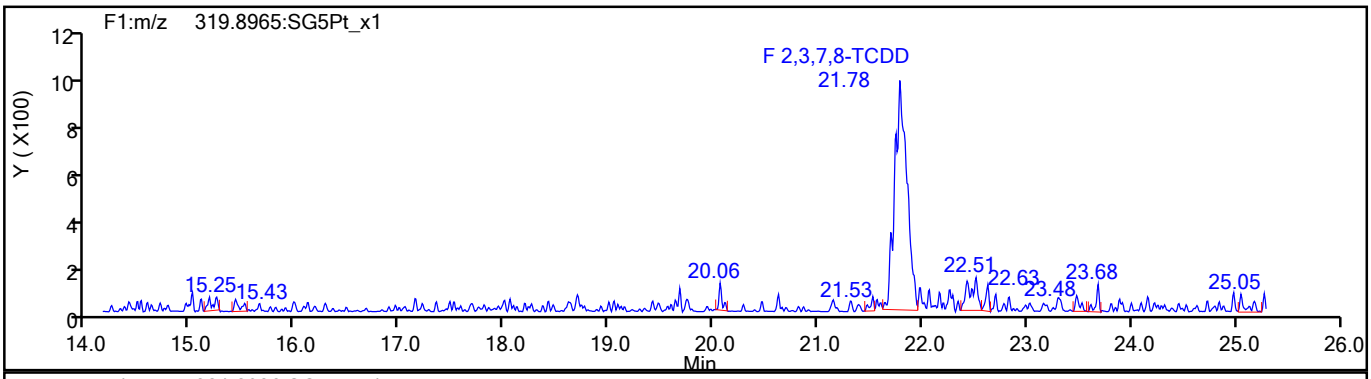

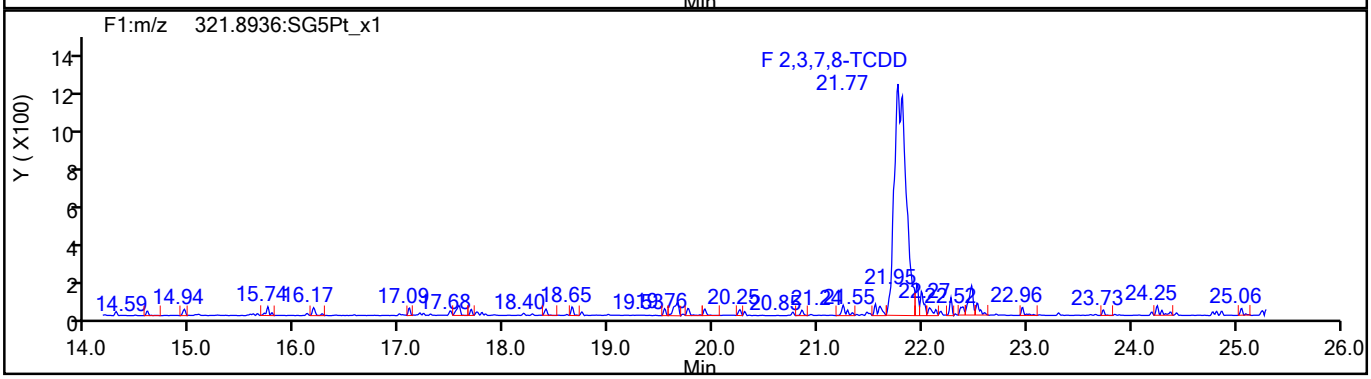

TCDD Standards

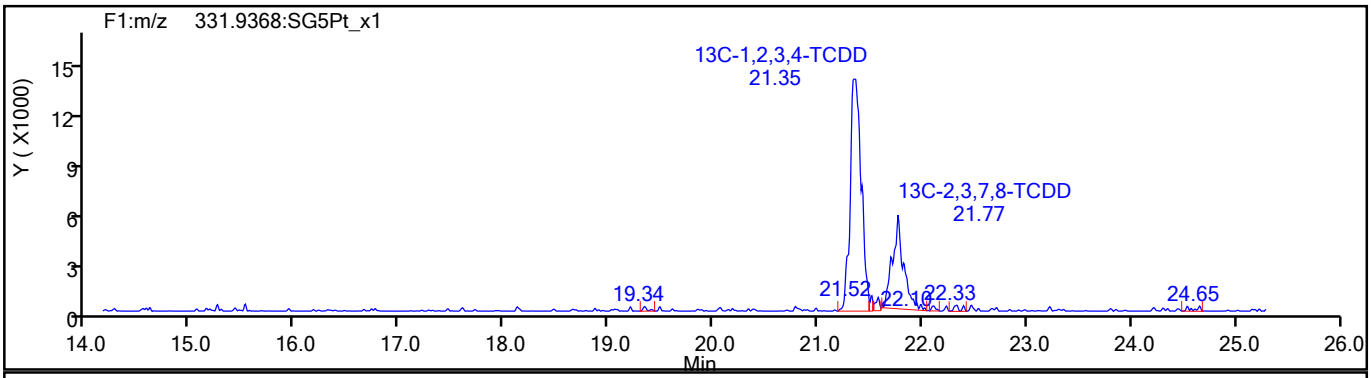

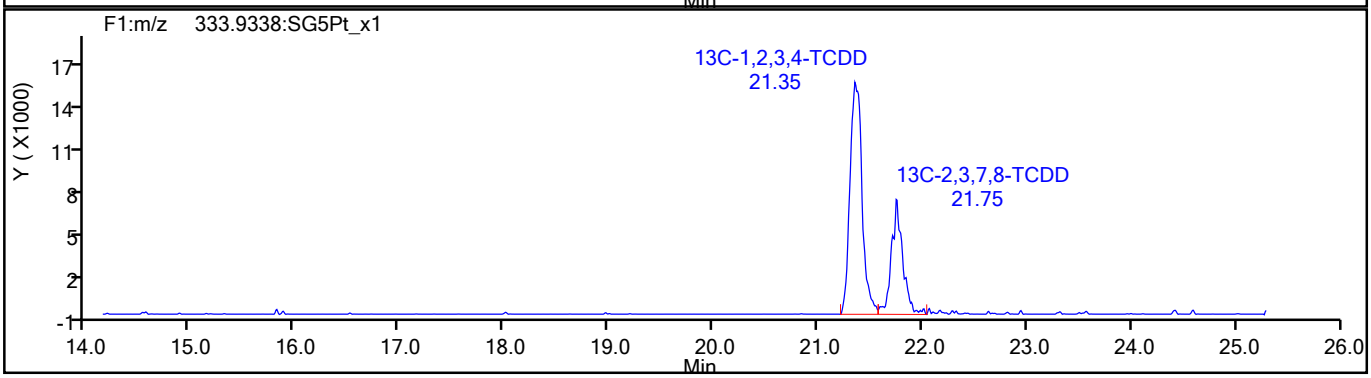

788284

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Injection Date:	19-Aug-2021 05:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

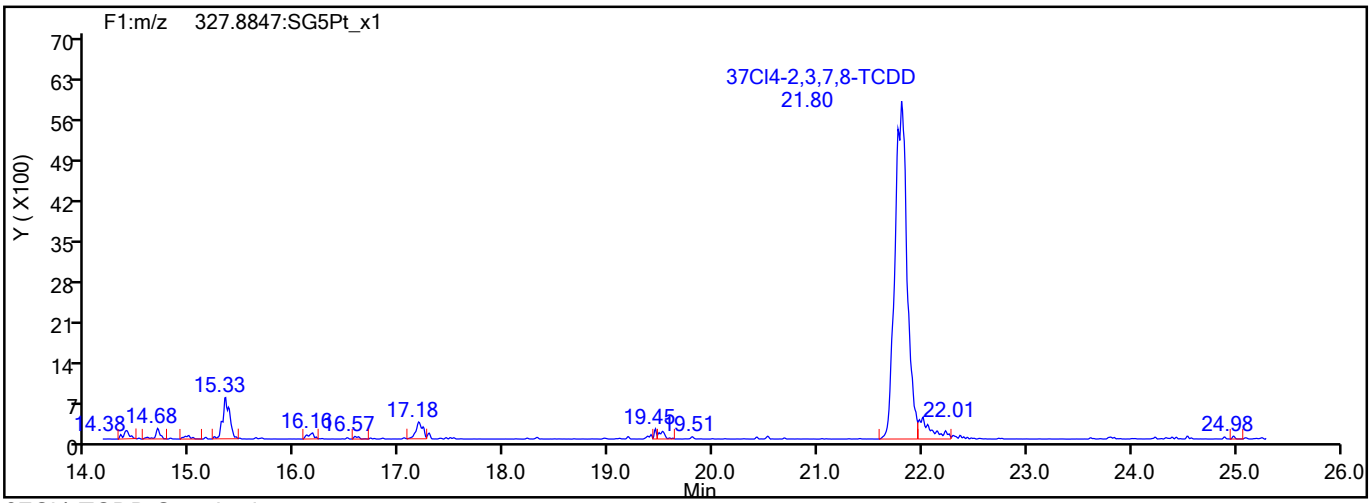

37Cl4-TCDD Standards

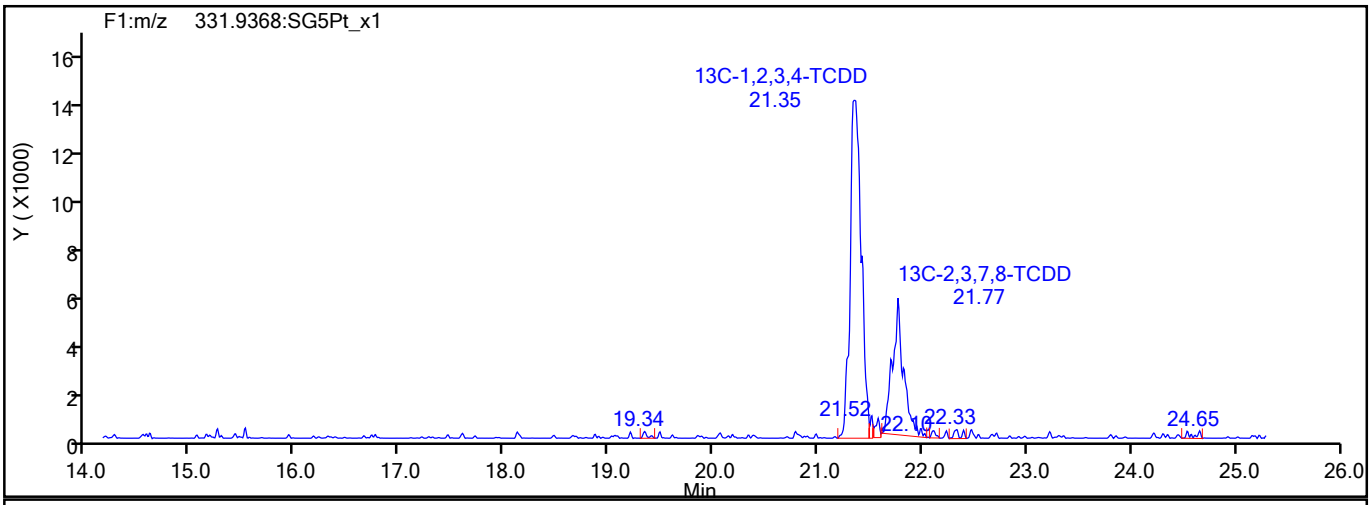

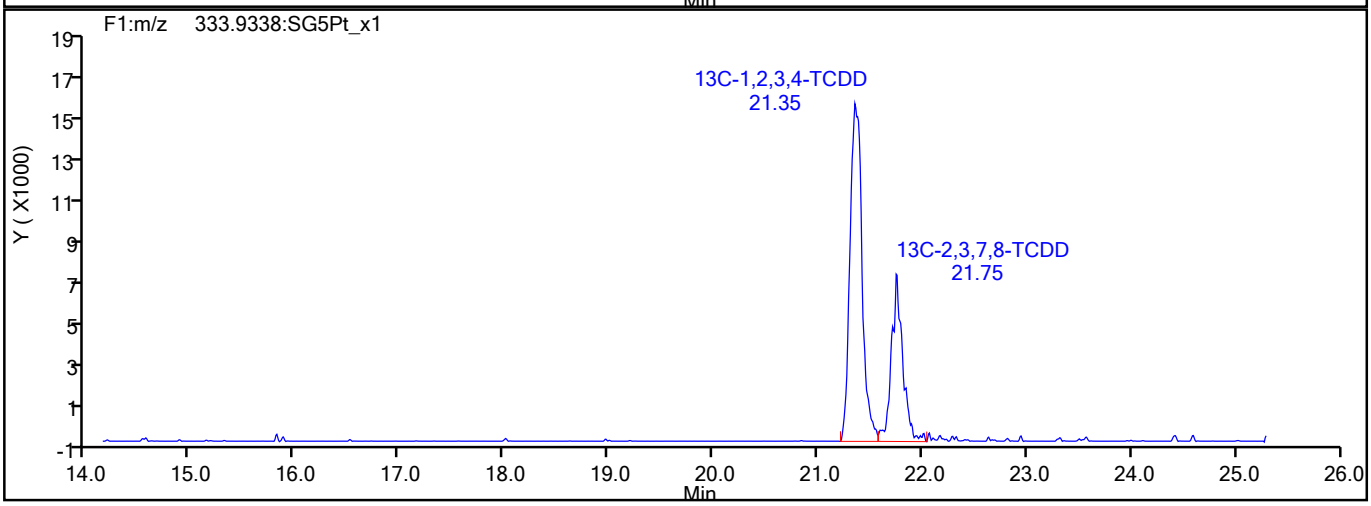

788285

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Injection Date:	19-Aug-2021 05:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

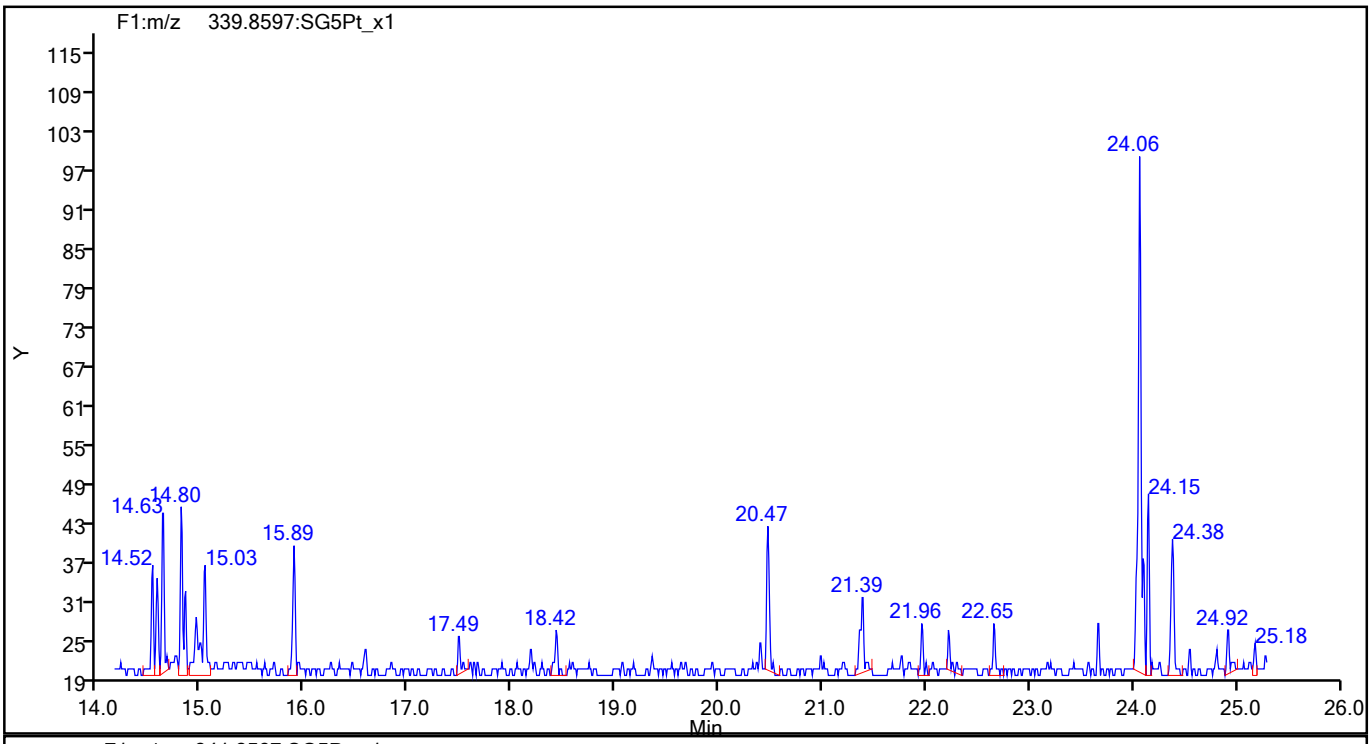

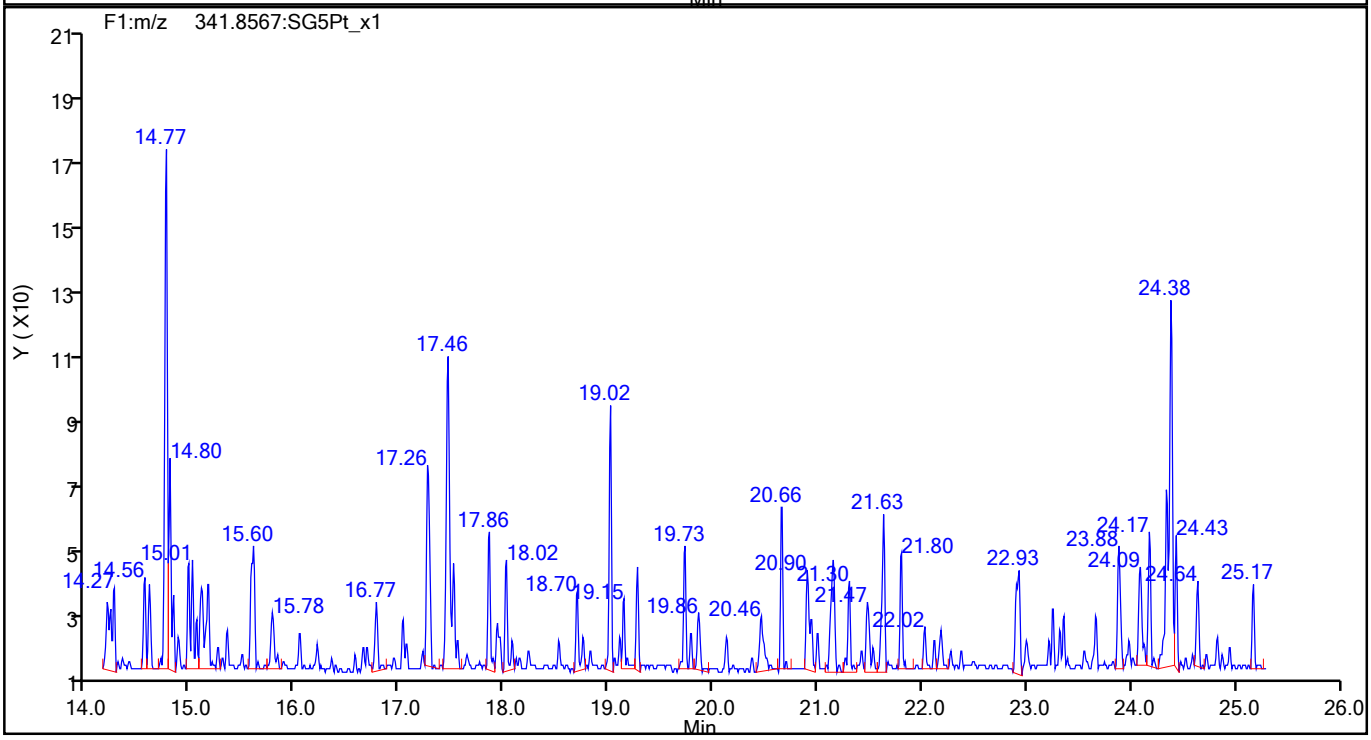

788286

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Injection Date:	19-Aug-2021 05:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

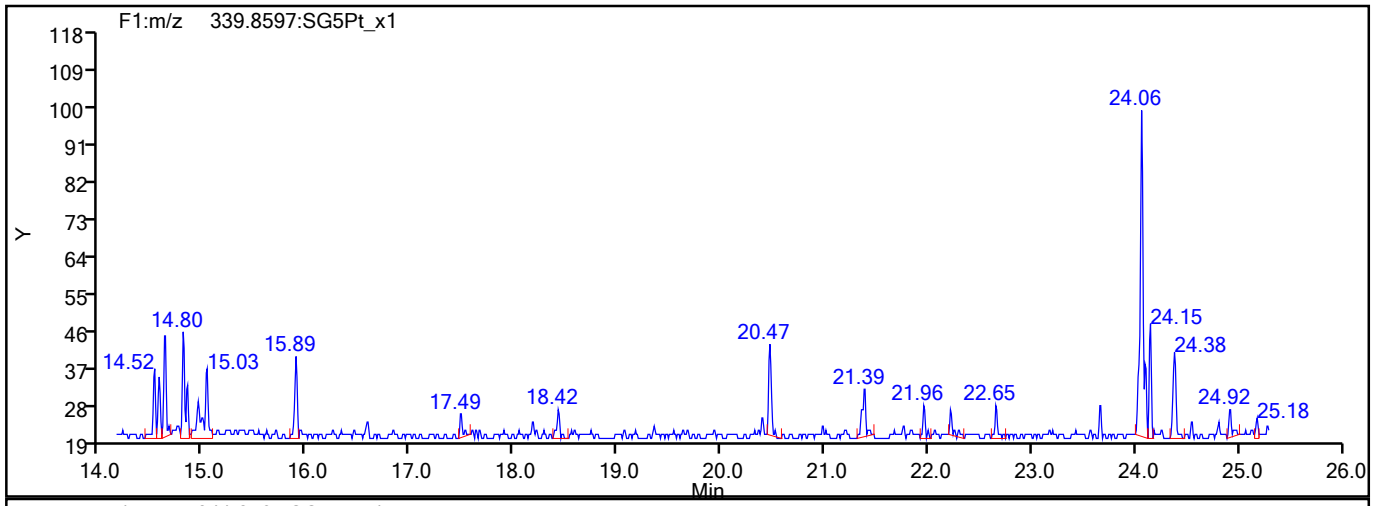

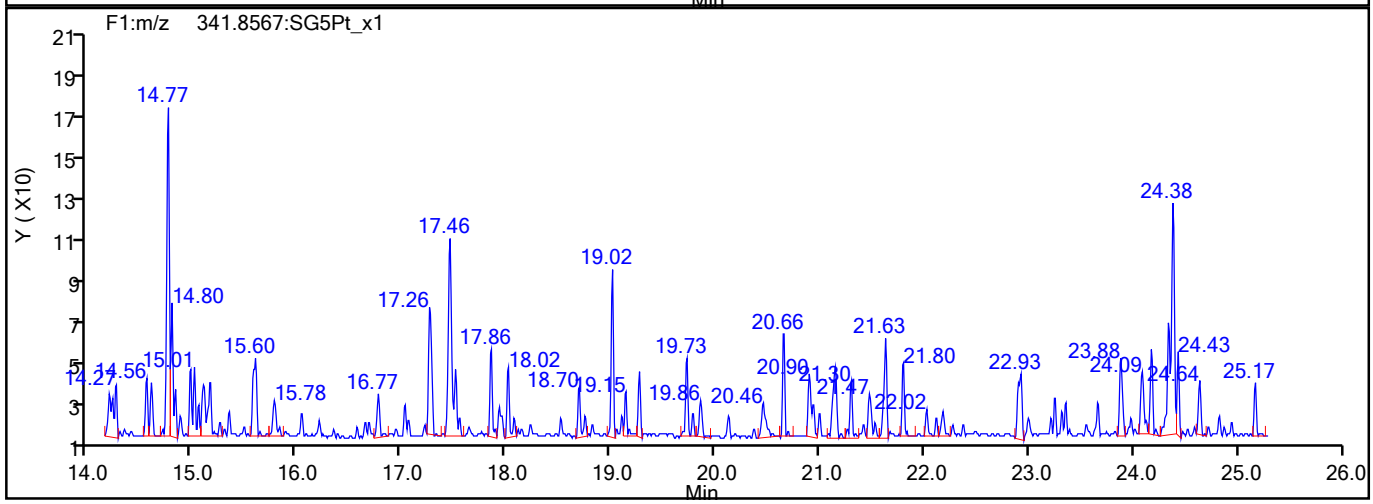

F1 PeCDFs Interference Mass

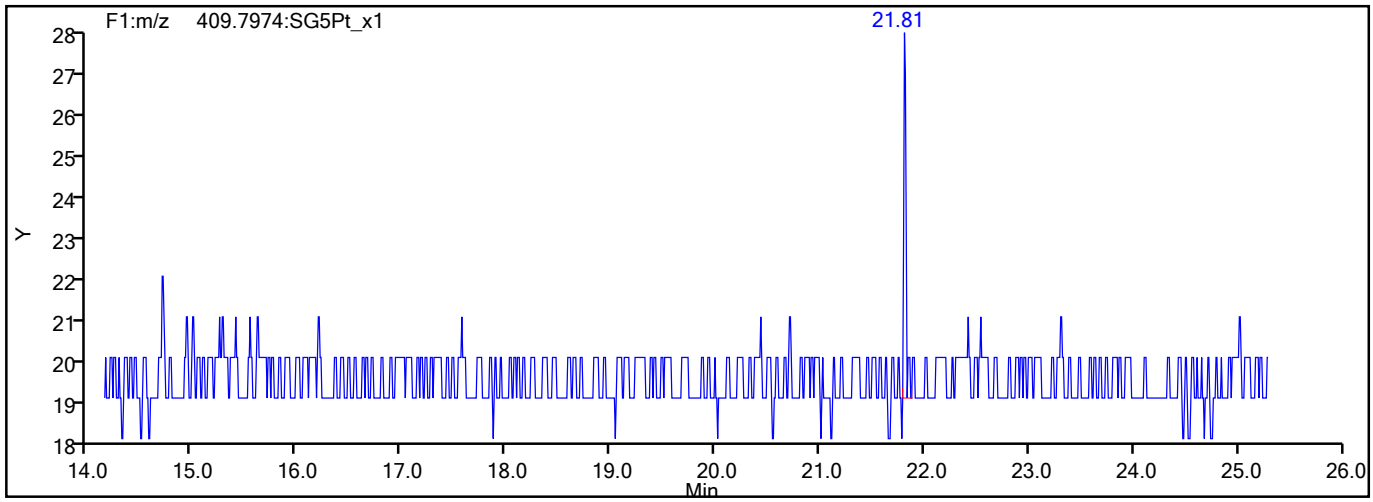

788287

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Injection Date:	19-Aug-2021 05:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

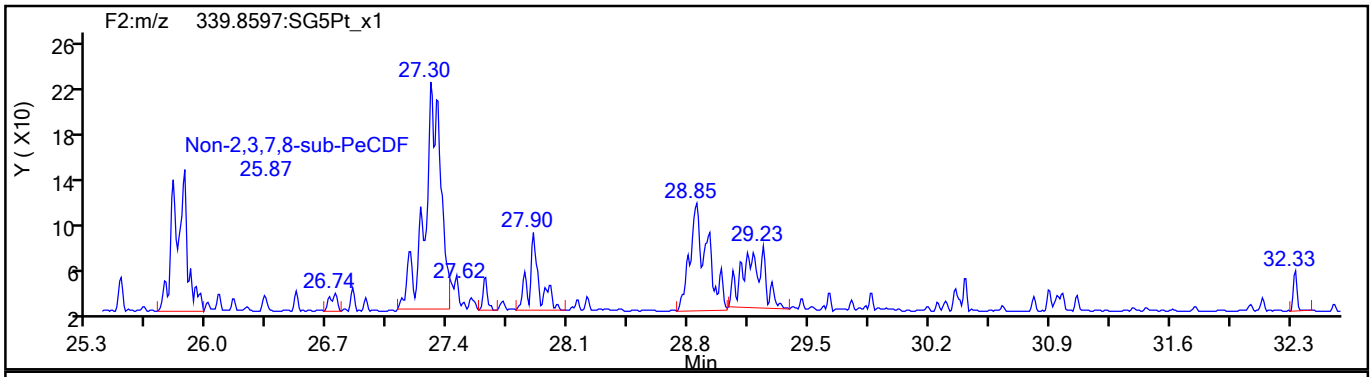

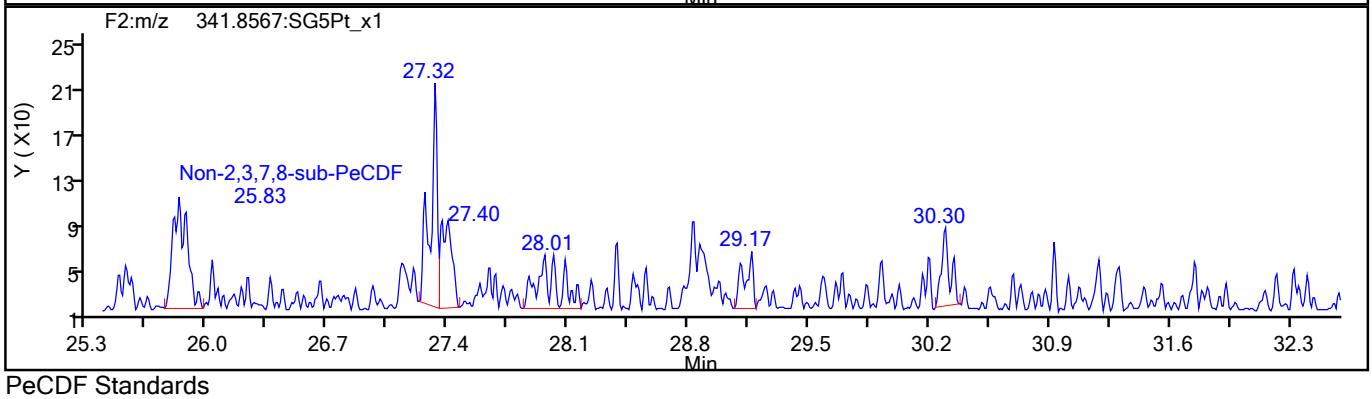

PeCDF Standards

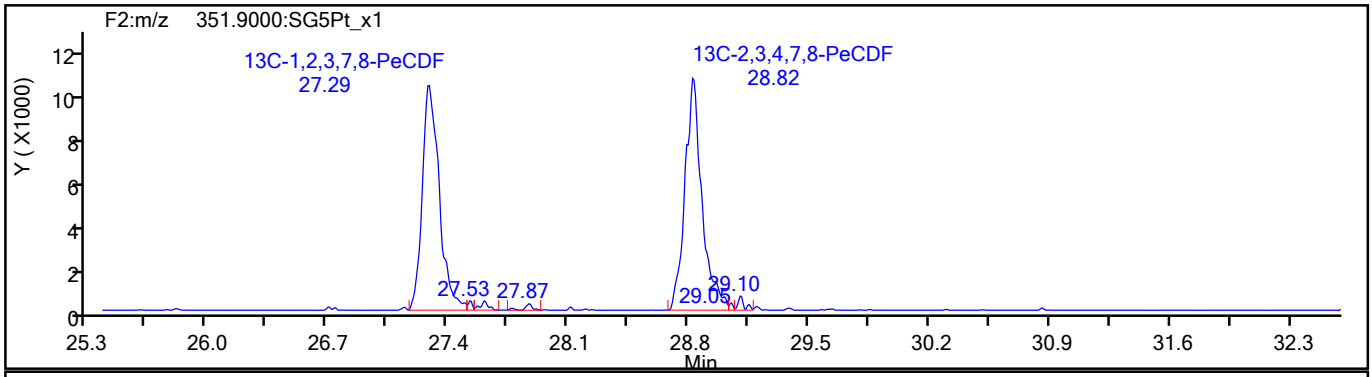

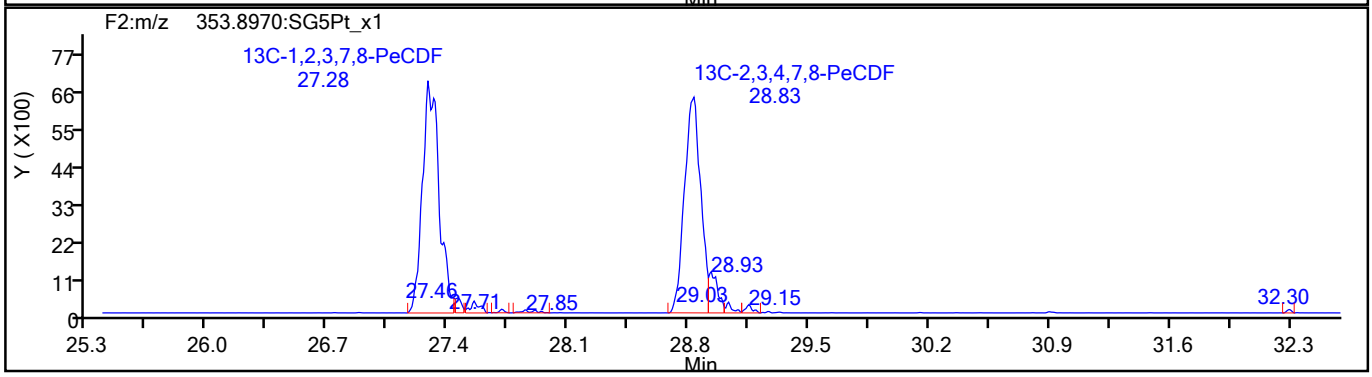

788288

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Injection Date:	19-Aug-2021 05:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

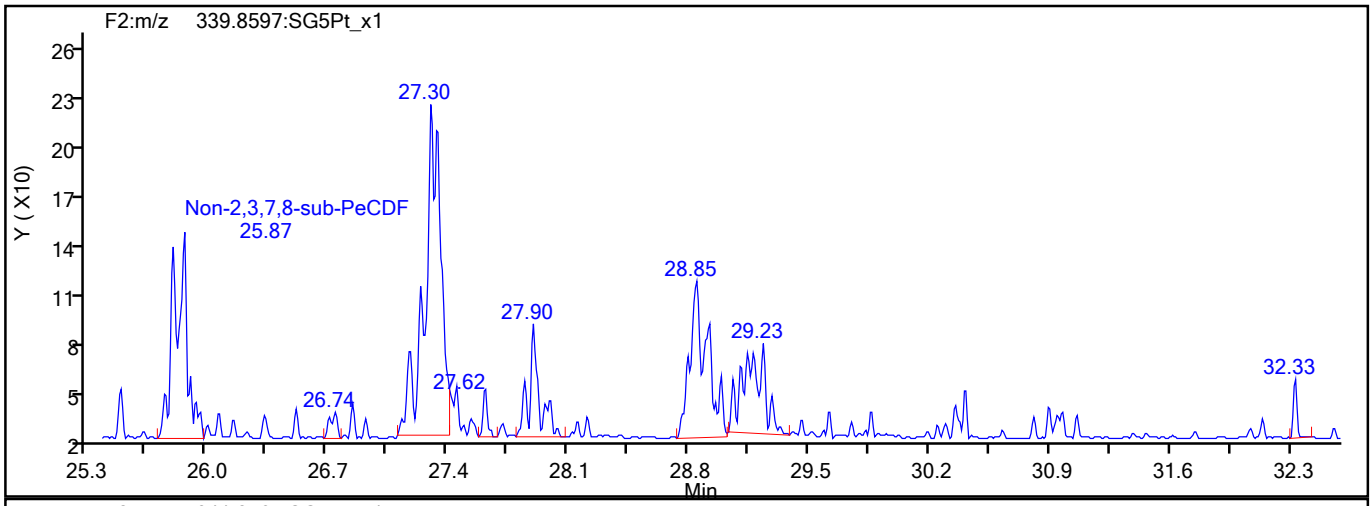

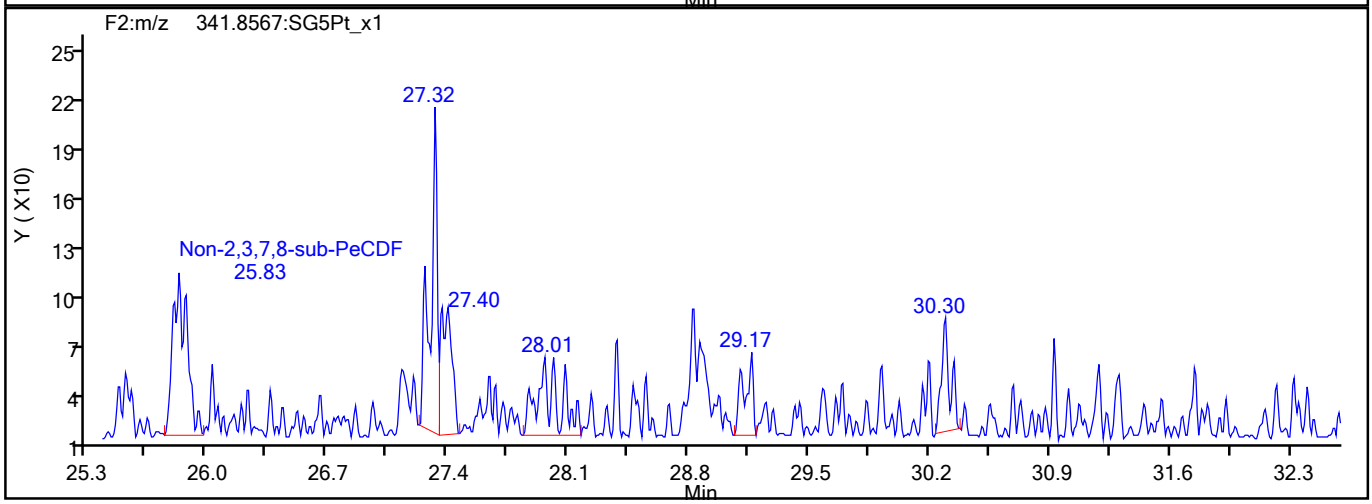

PeCDF Interference Mass

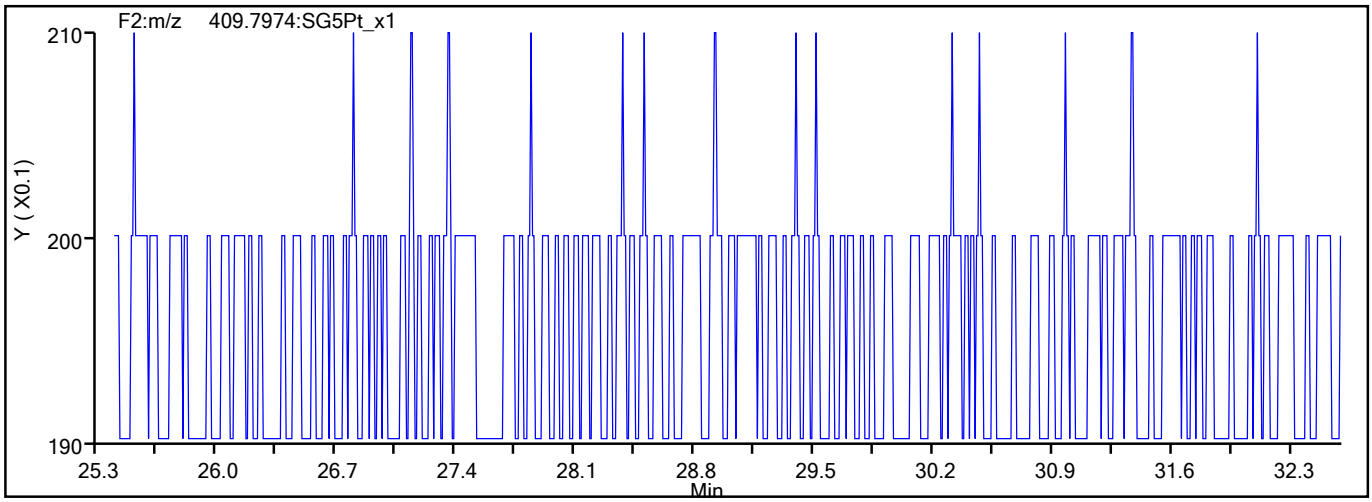

788289

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Injection Date:	19-Aug-2021 05:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

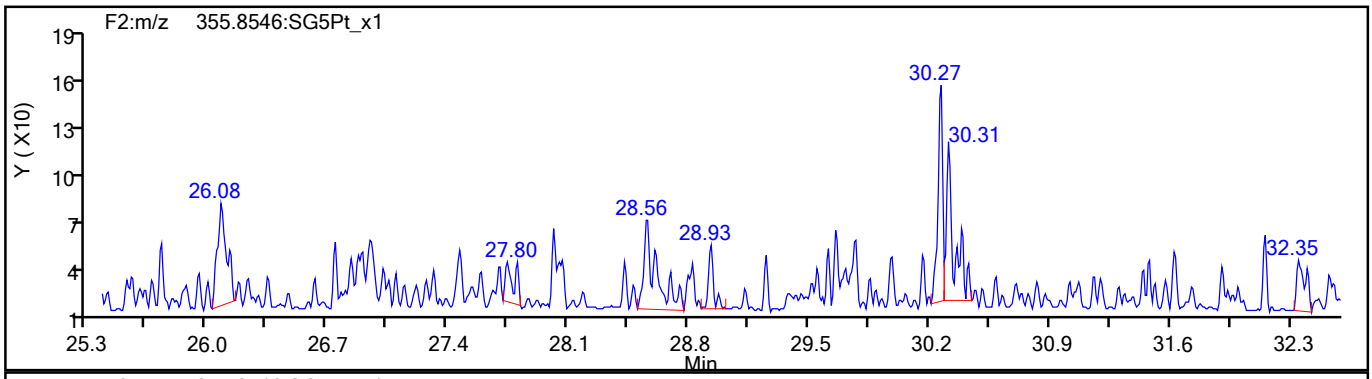

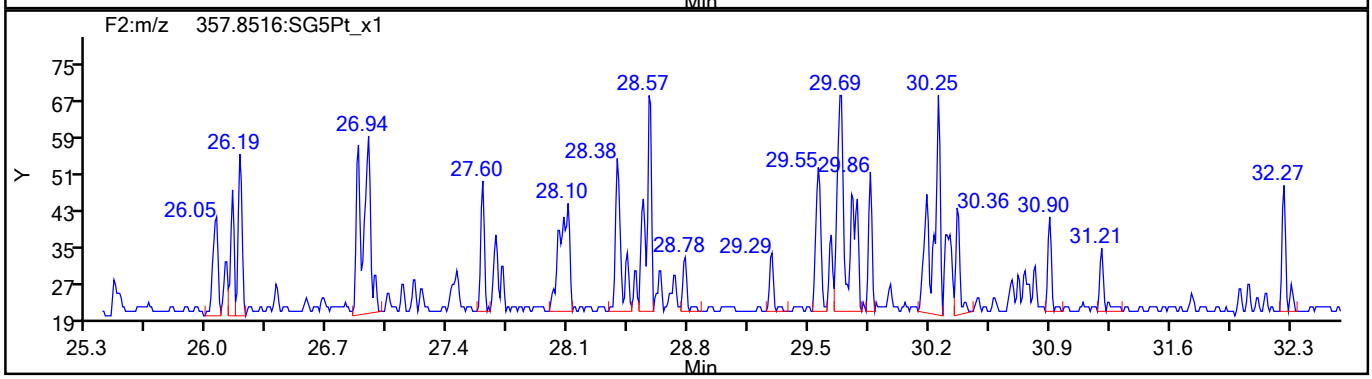

PeCDD Standards

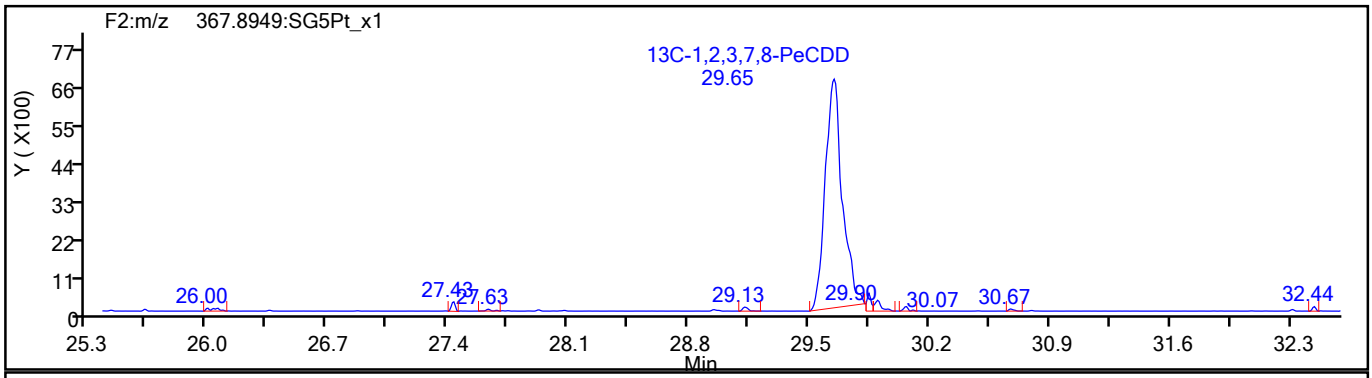

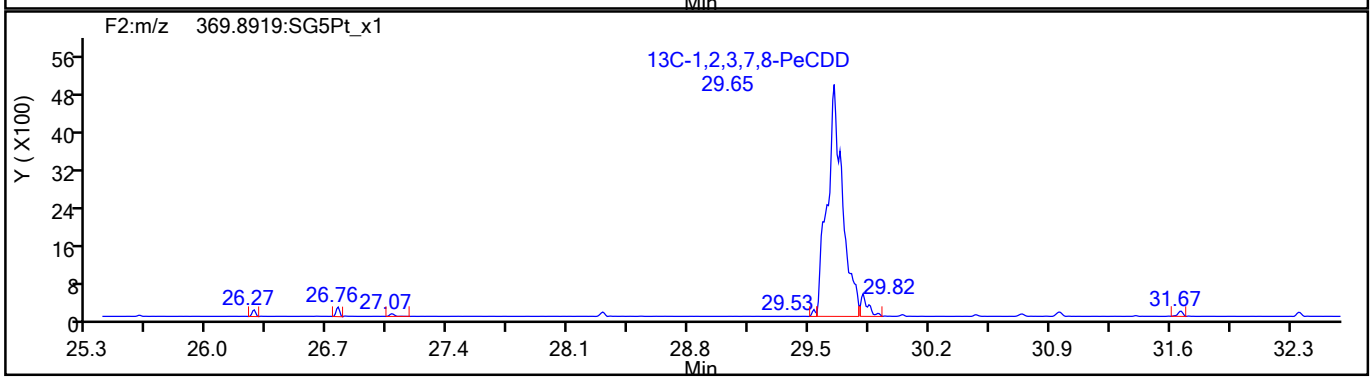

788290

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

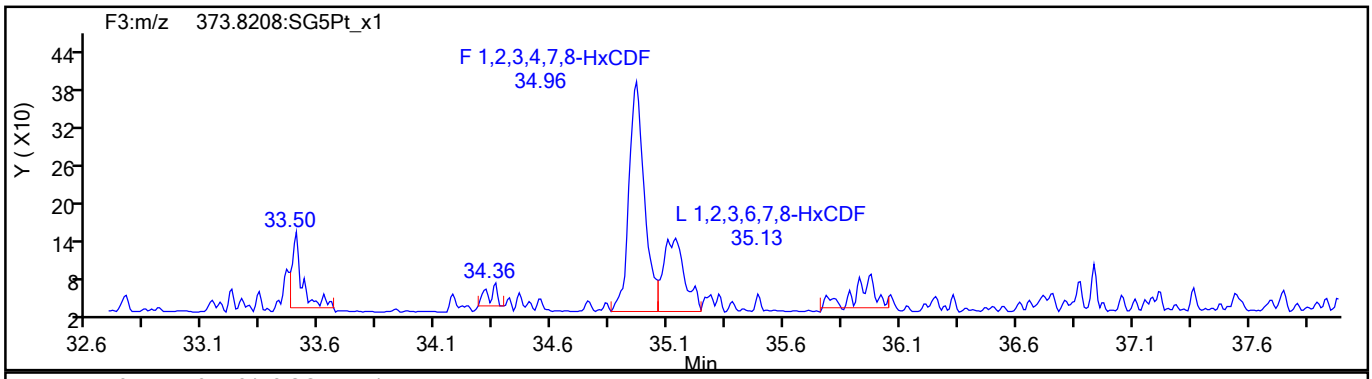

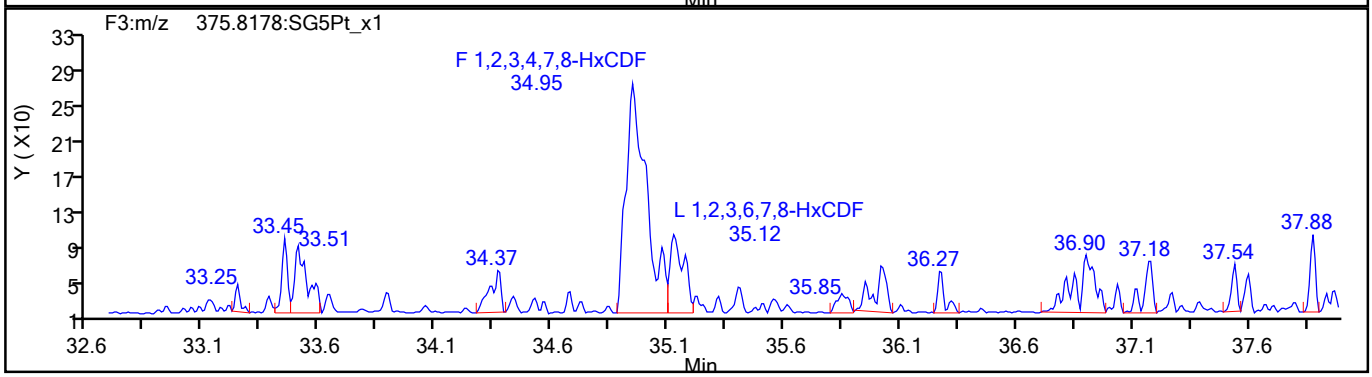

HxCDF Standards

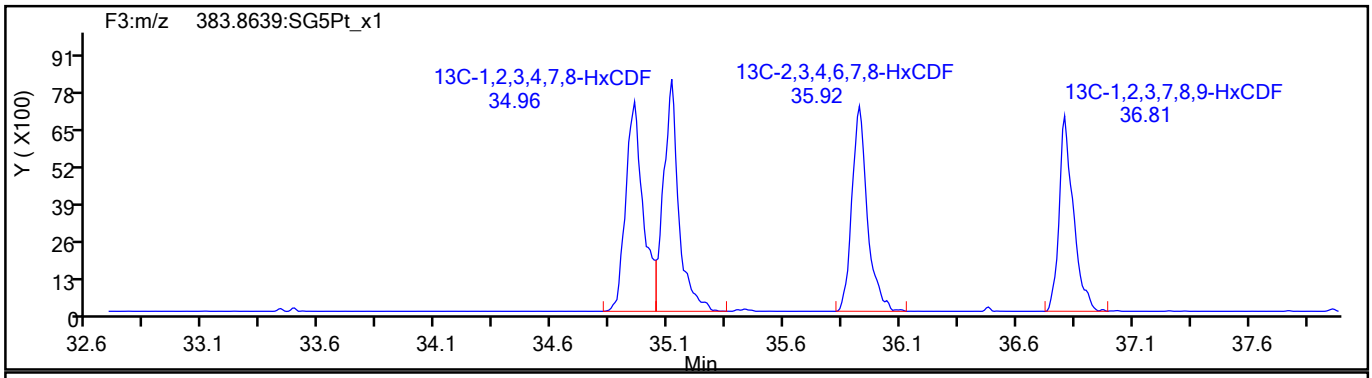

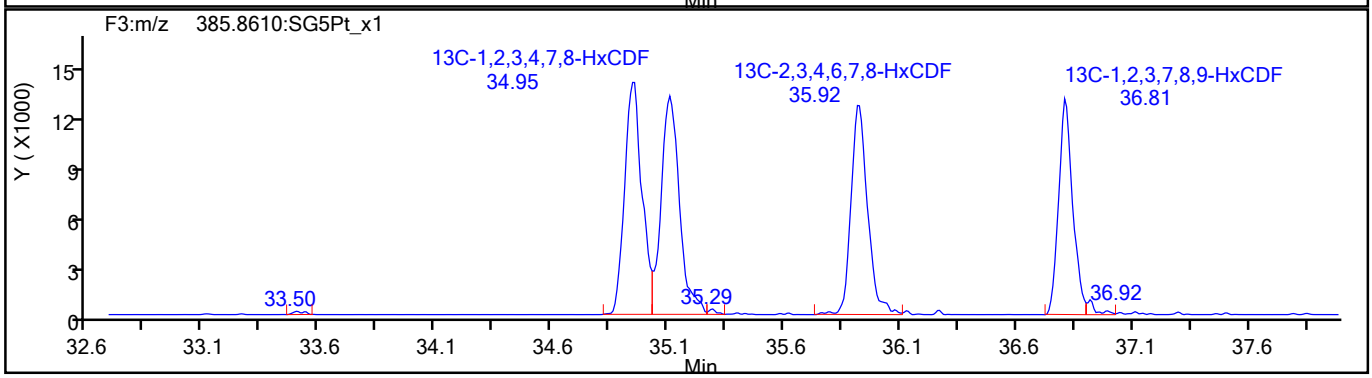

788291

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

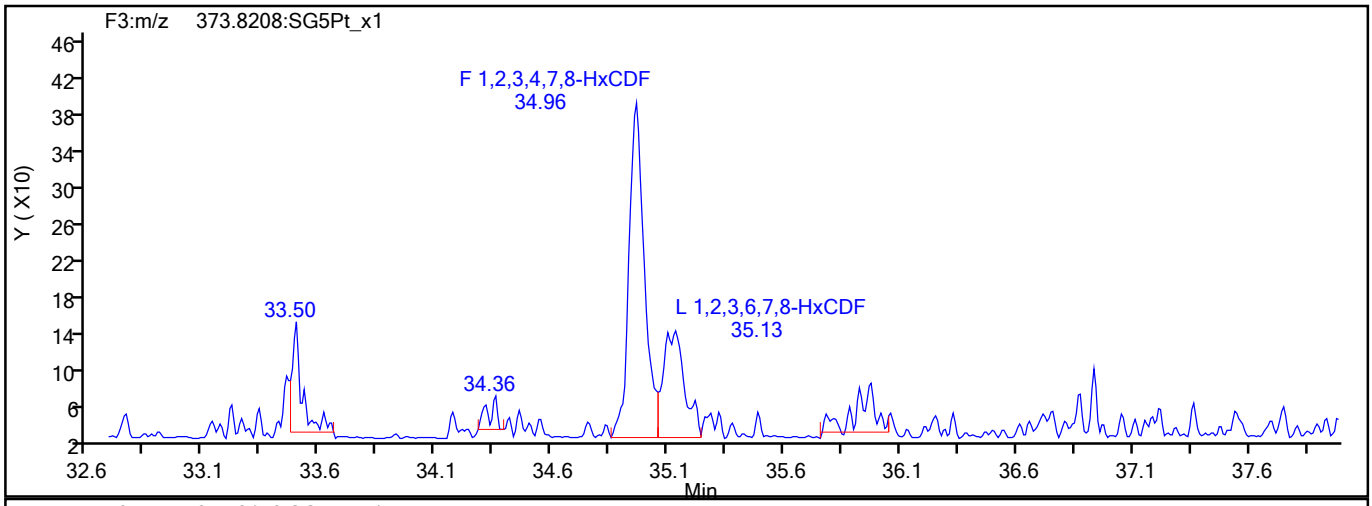

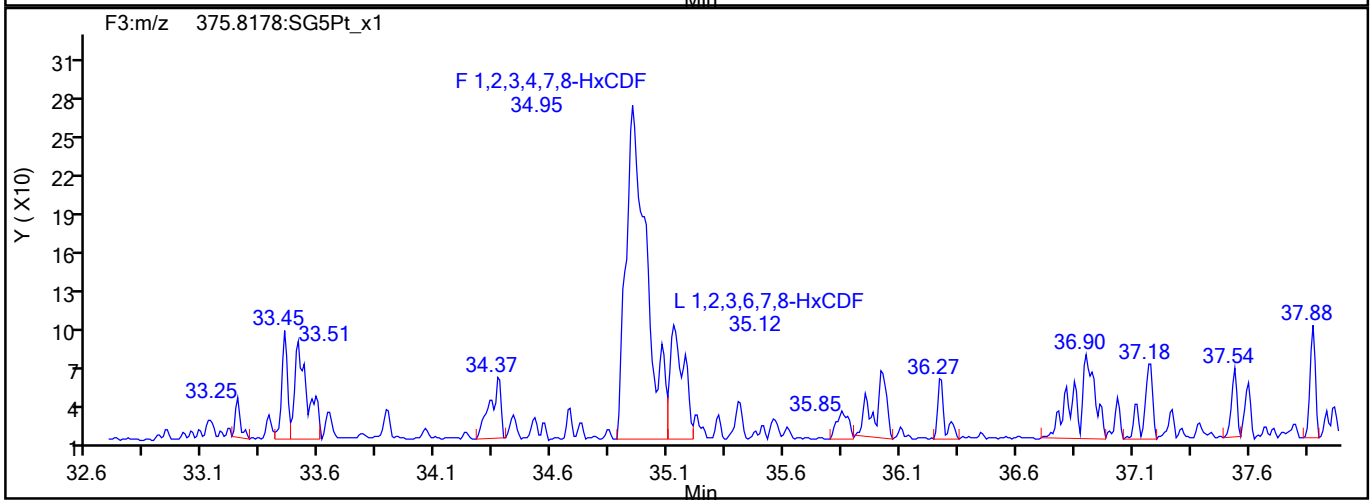

HxCDF Interference Mass

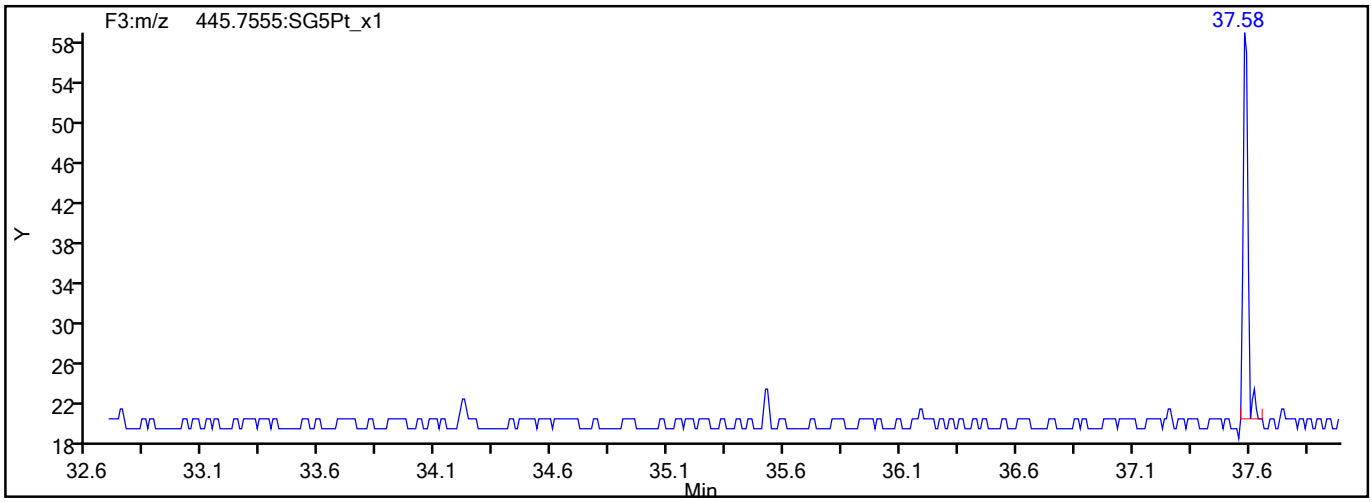

788292

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

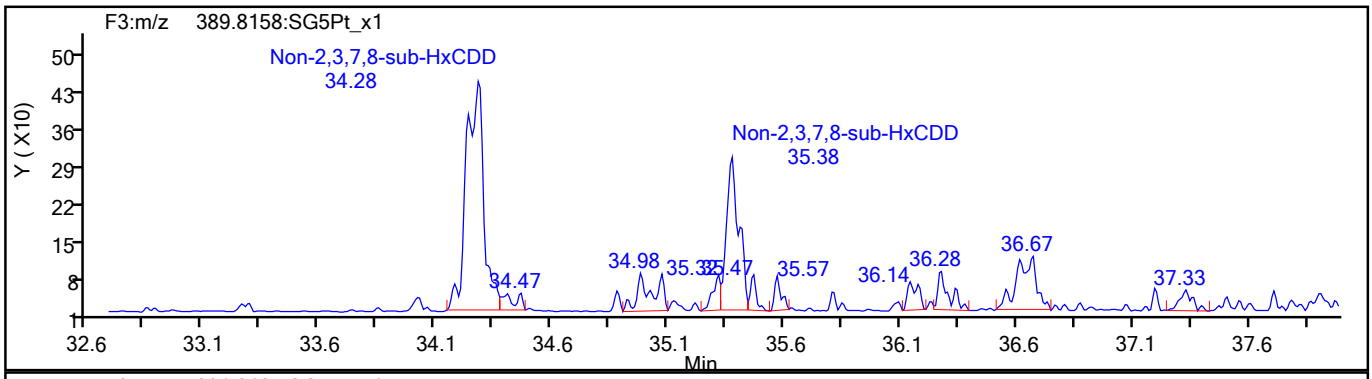

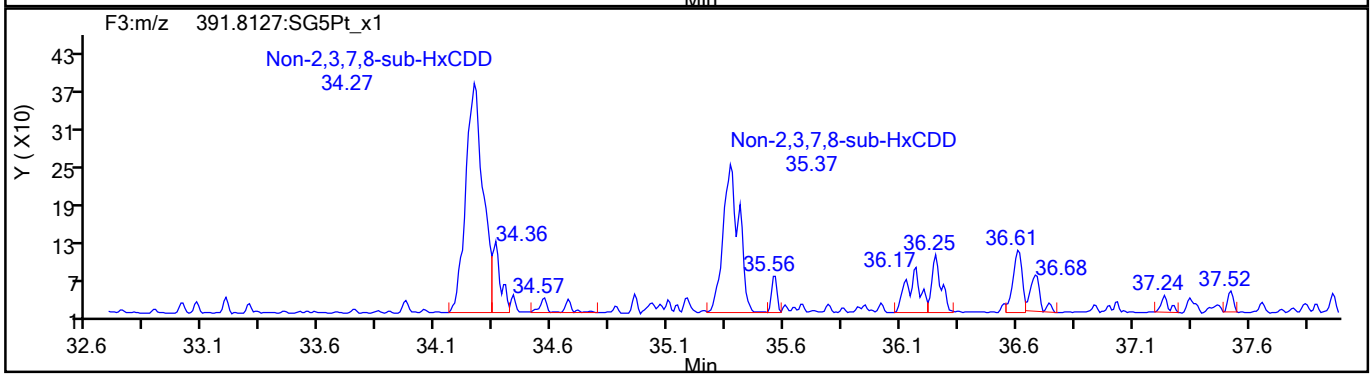

HxCDD Standards

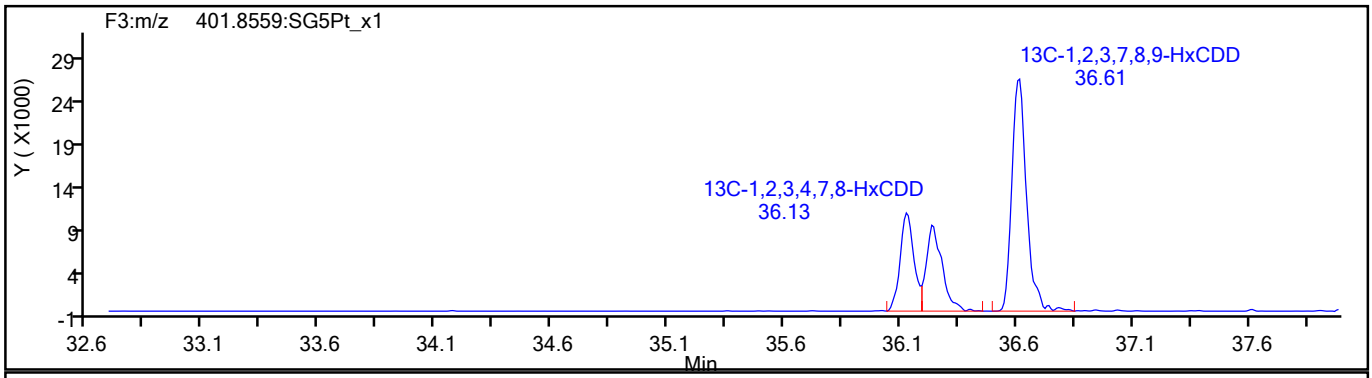

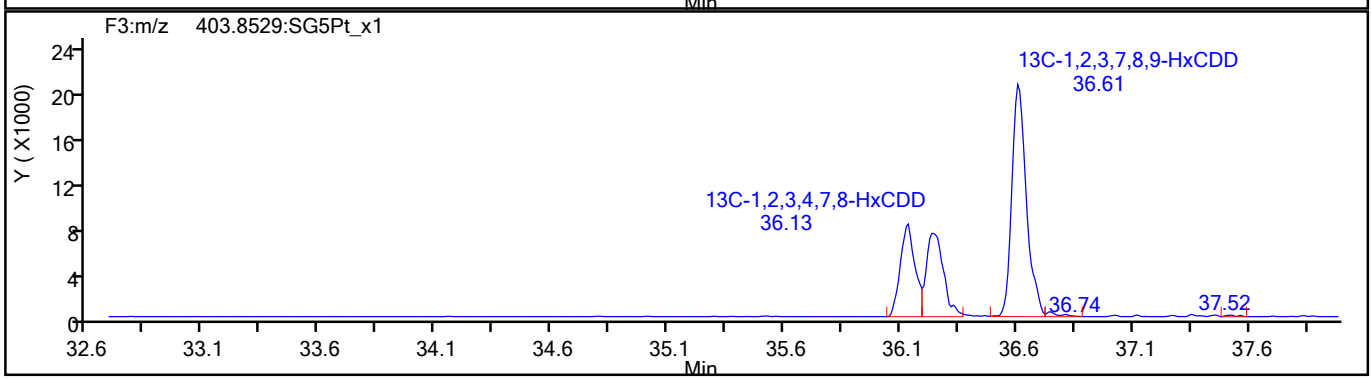

788293

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

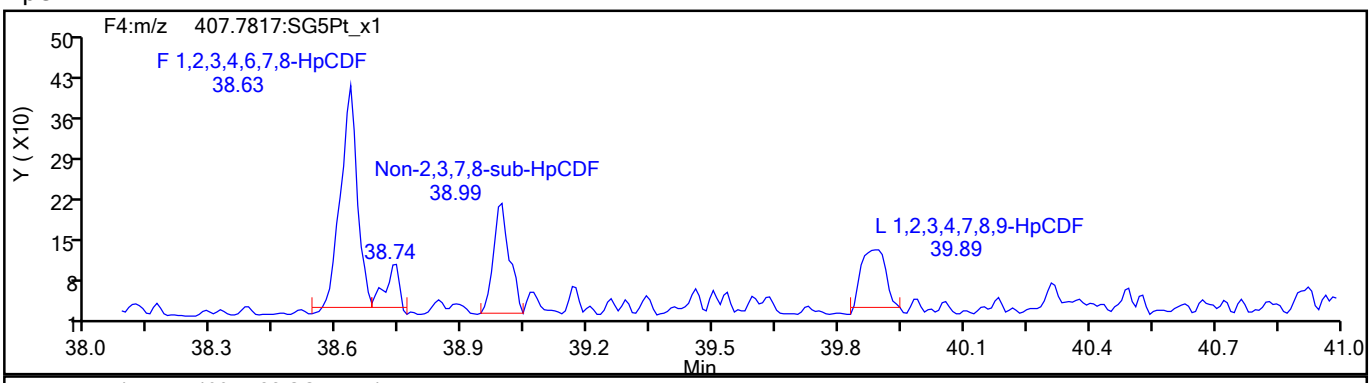

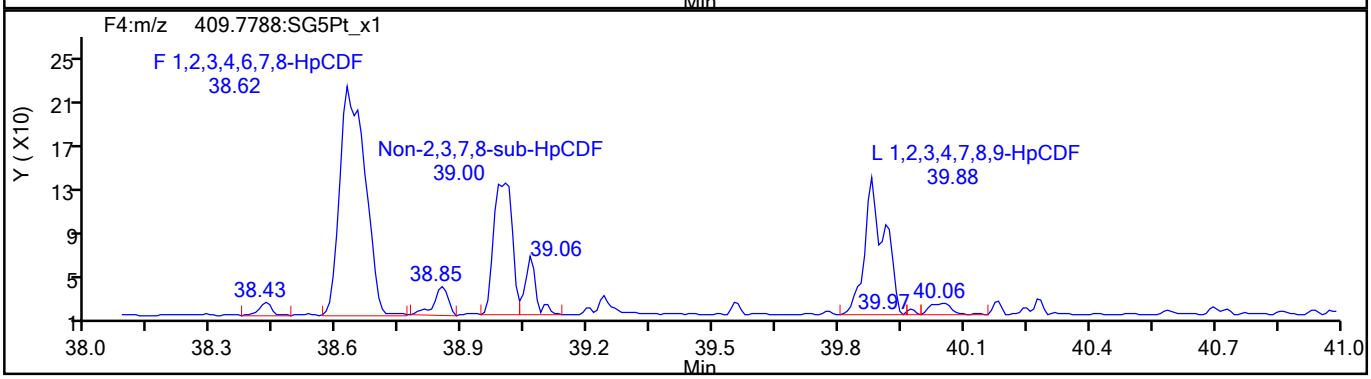

HpCDF Standards

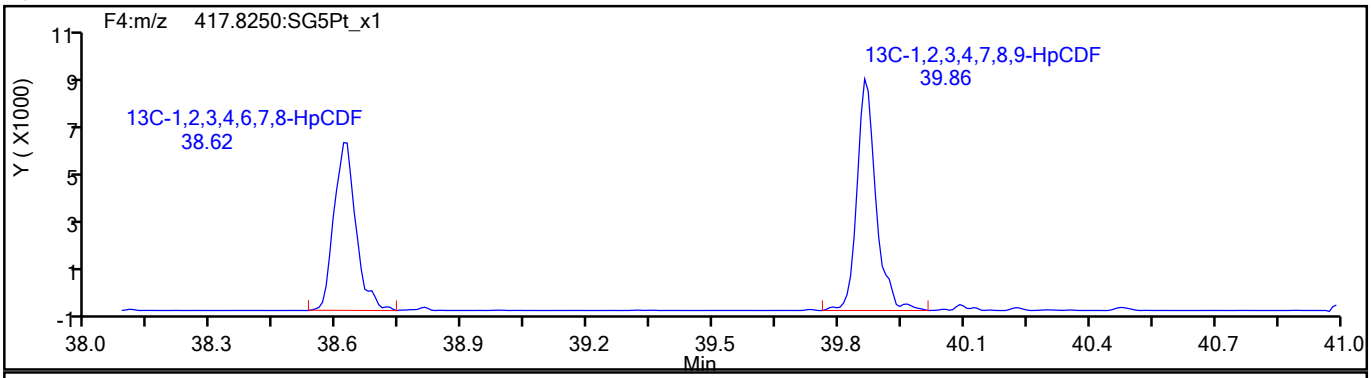

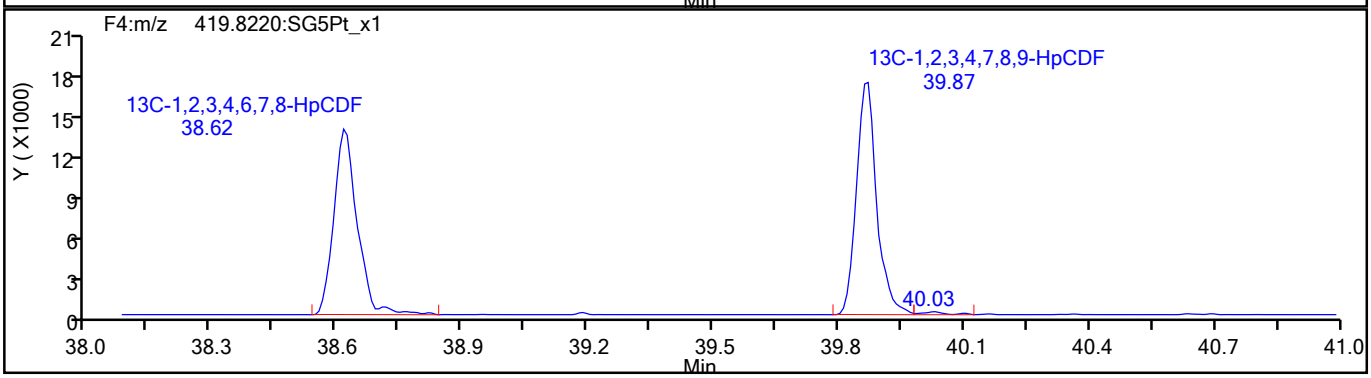

788294

Report Date: 20-Aug-2021 09:52:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
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HpCDF

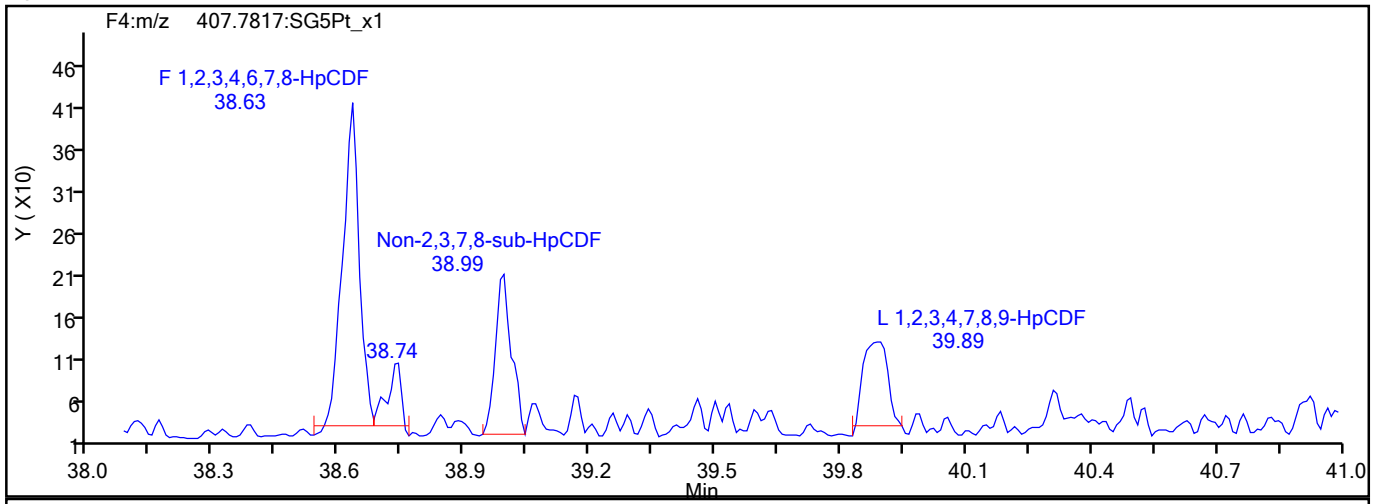

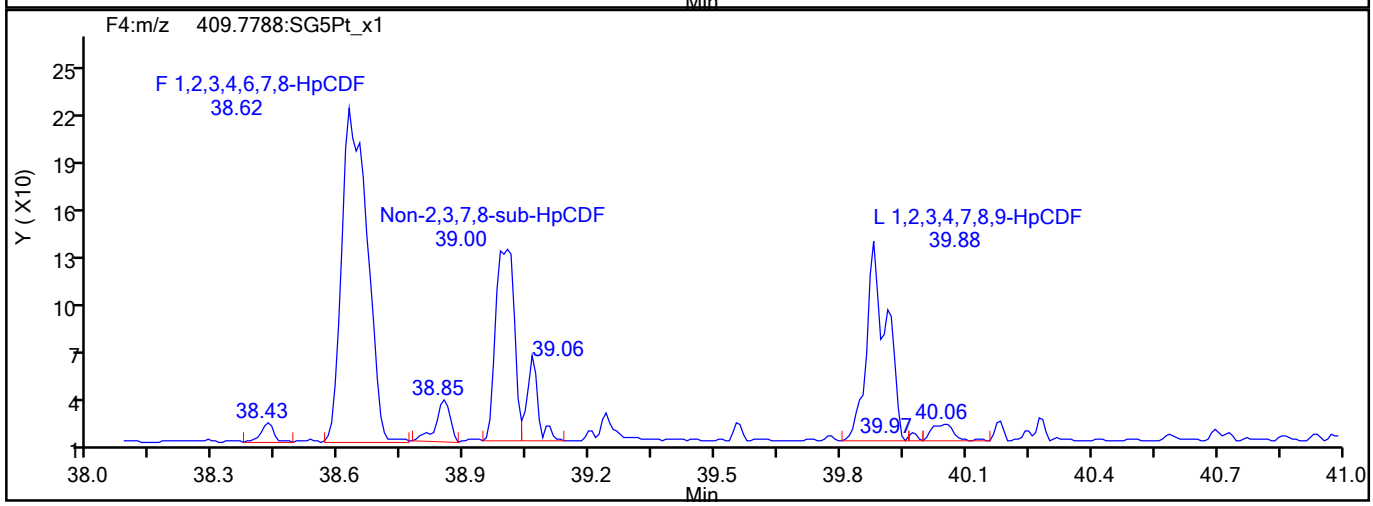

HpCDF Interference Mass

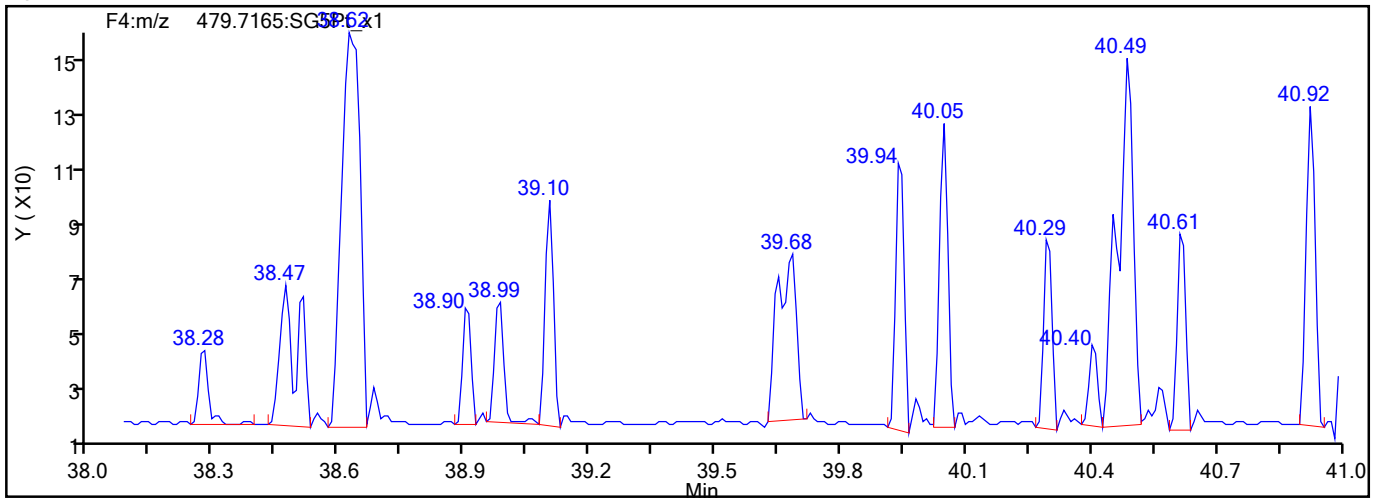

788295

Report Date: 20-Aug-2021 09:52:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

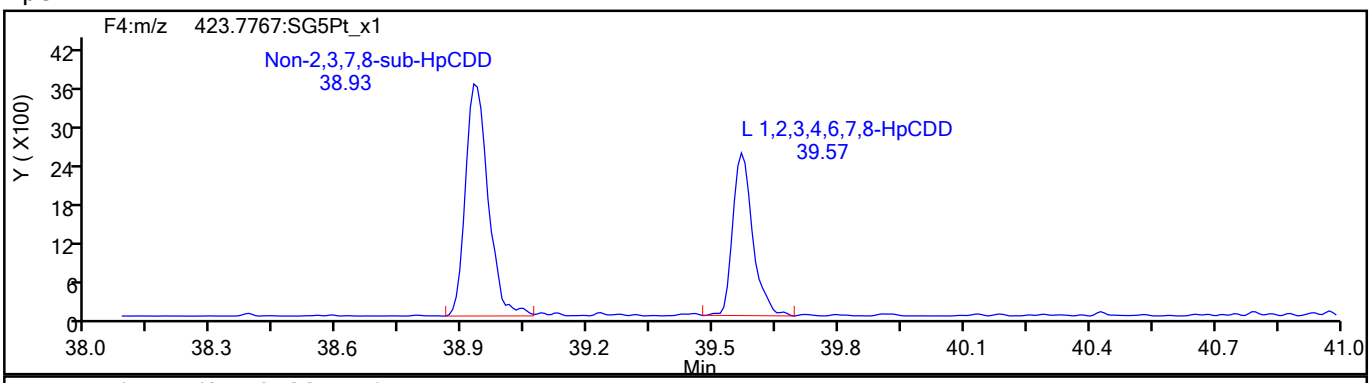

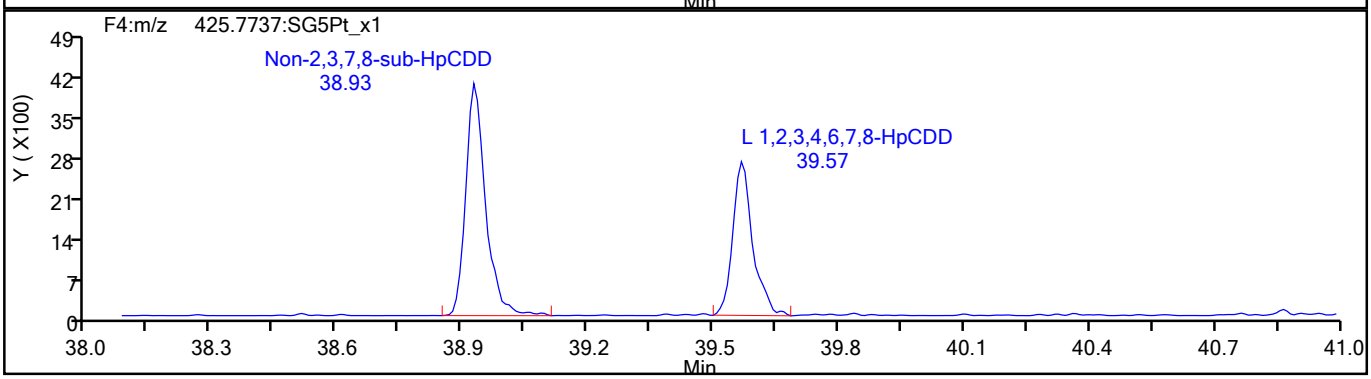

HpCDD Standards

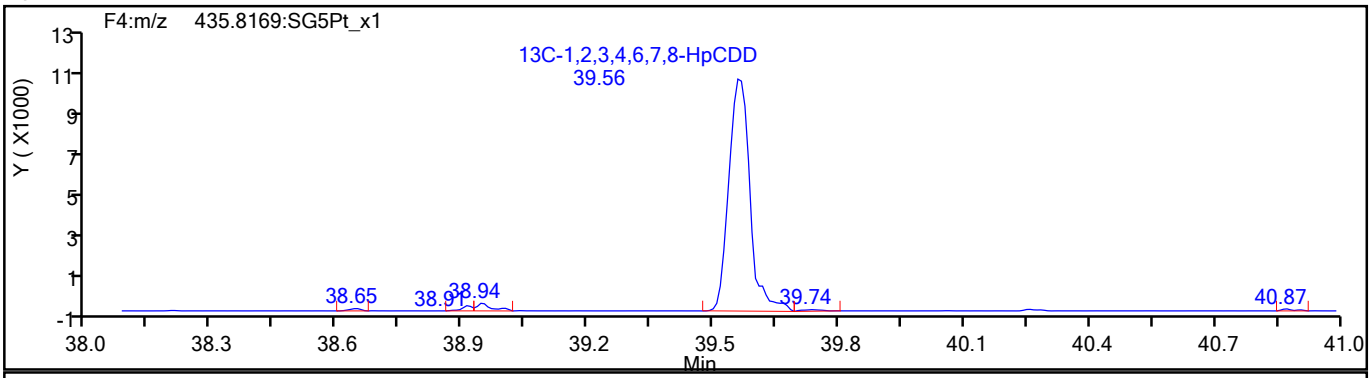

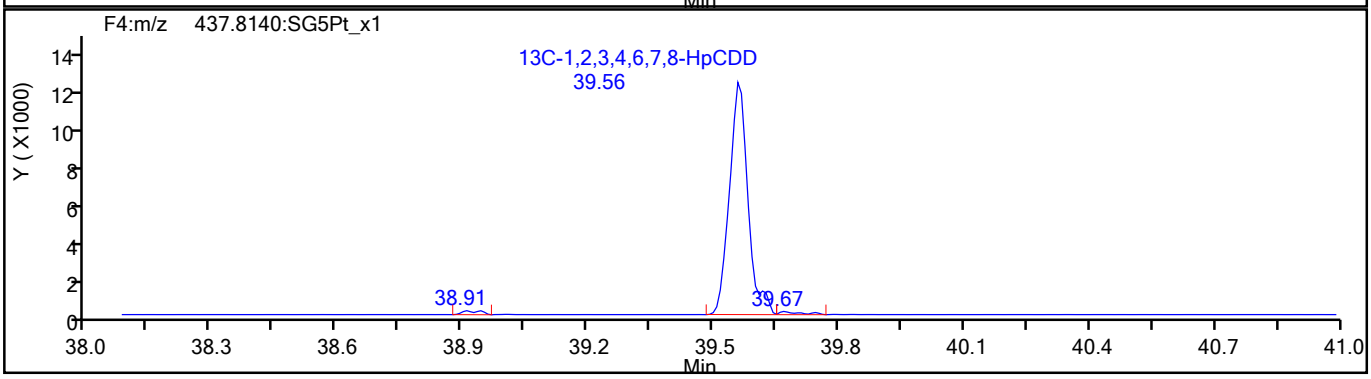

788296

Report Date: 20-Aug-2021 09:52:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
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OCDF

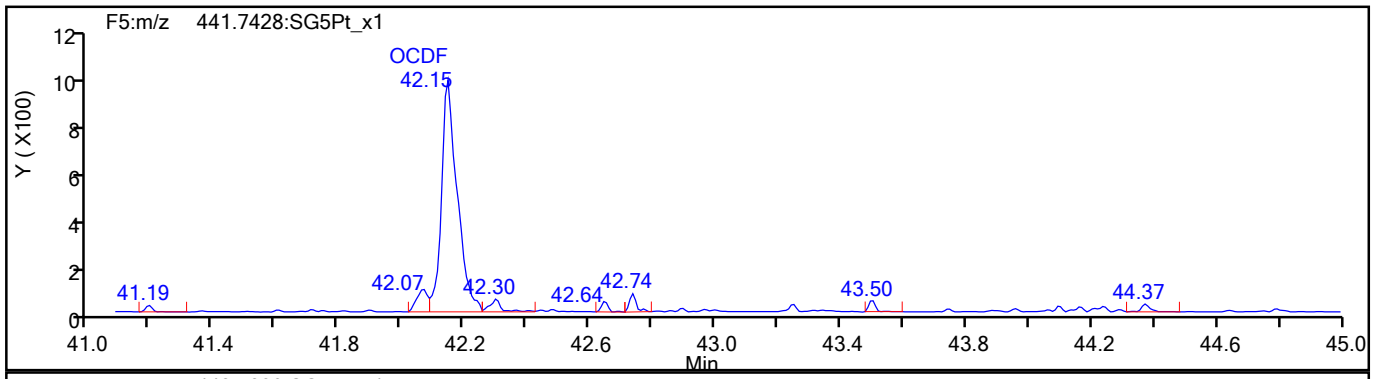

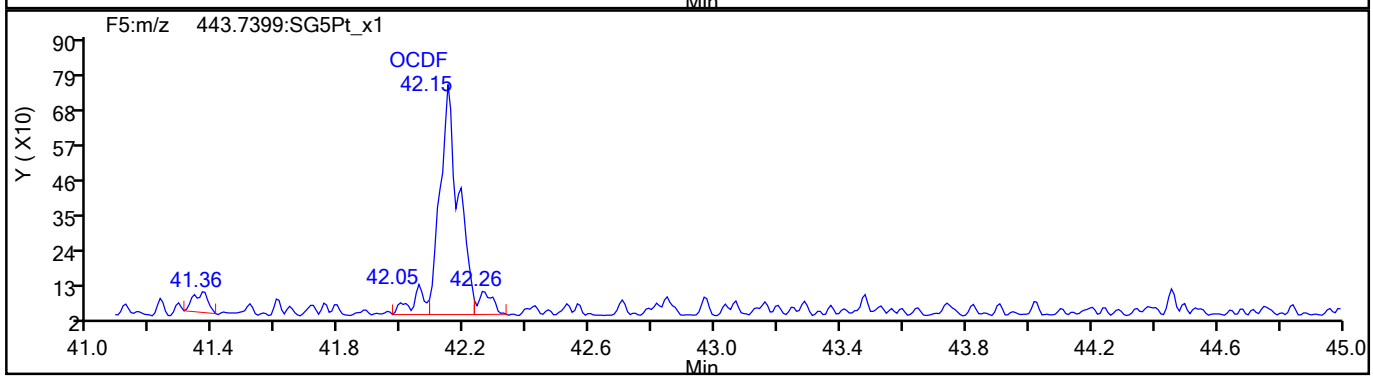

OCDF Standards

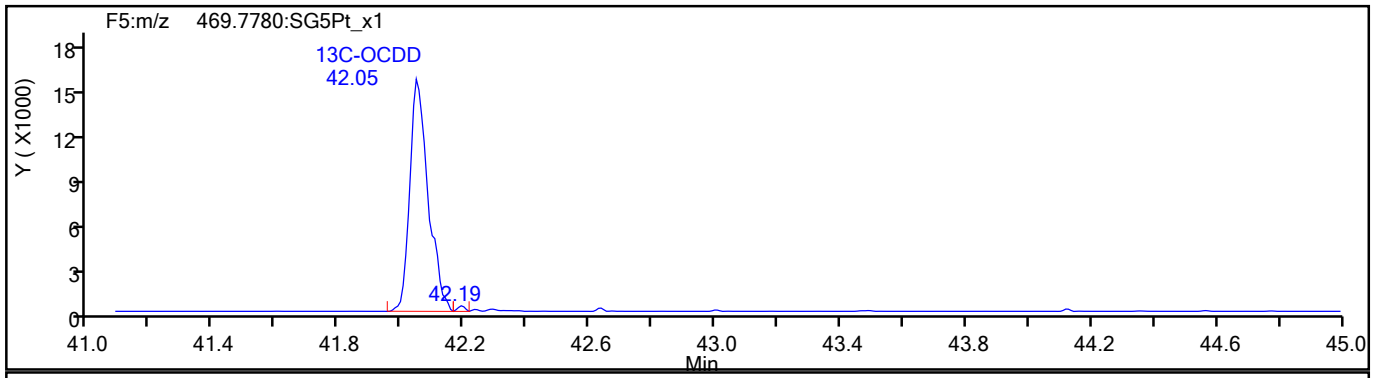

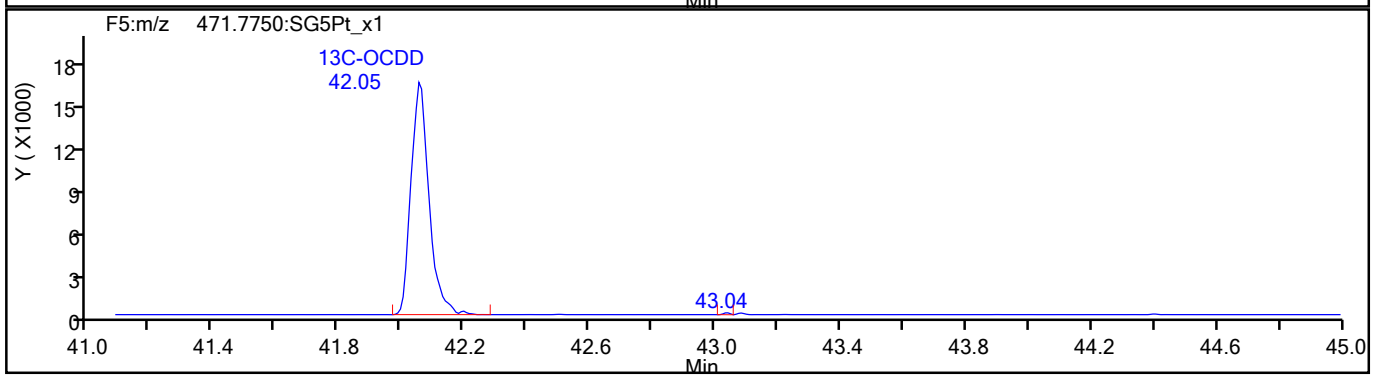

788297

Report Date: 20-Aug-2021 09:52:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

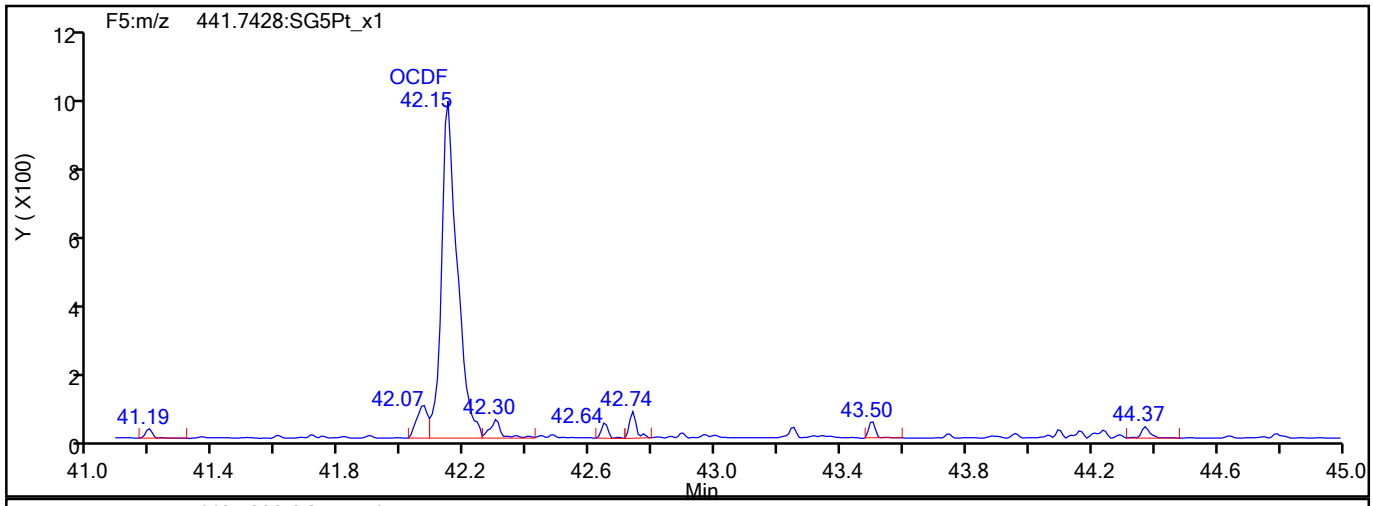

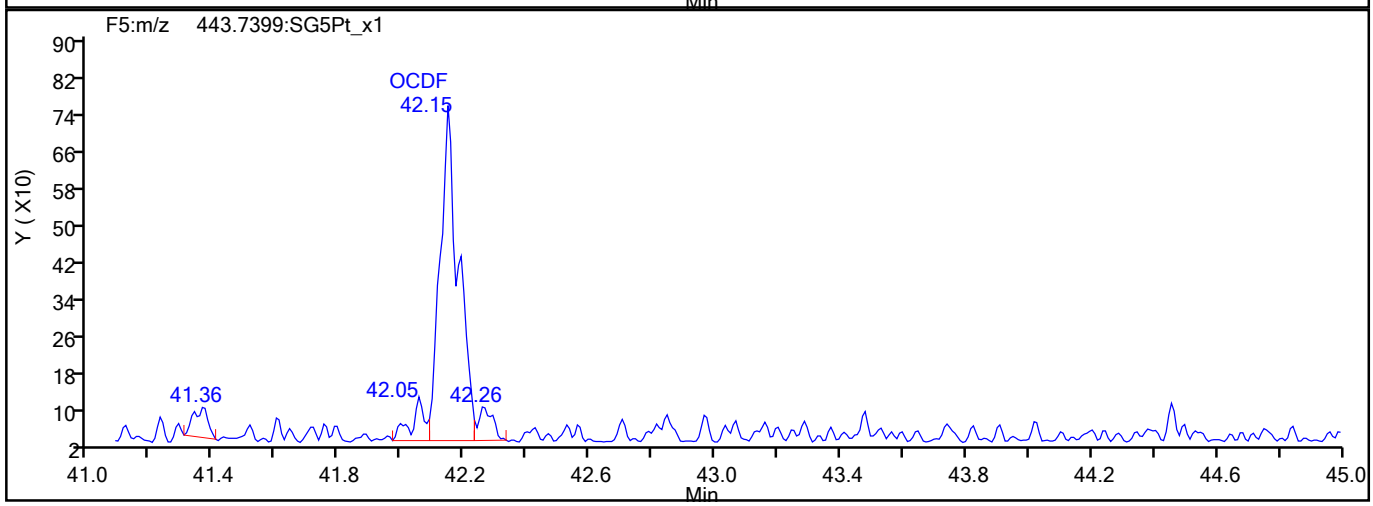

OCDF Interference Mass

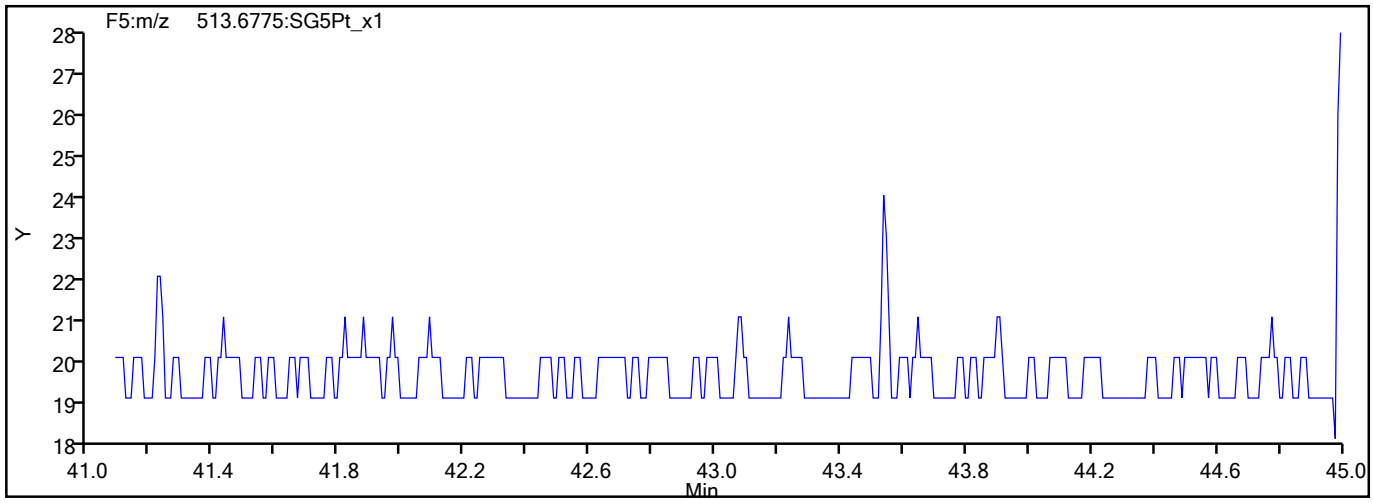

788298

Report Date: 20-Aug-2021 09:52:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

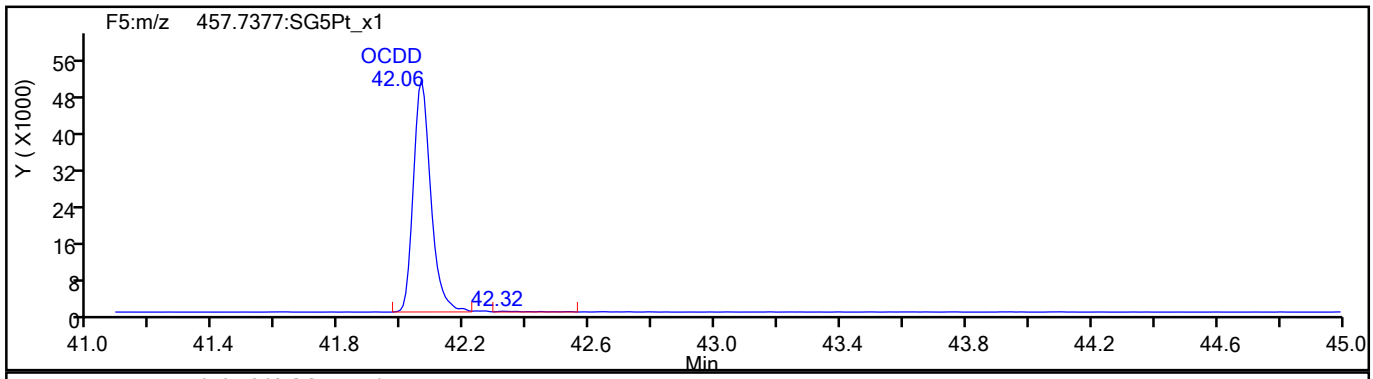

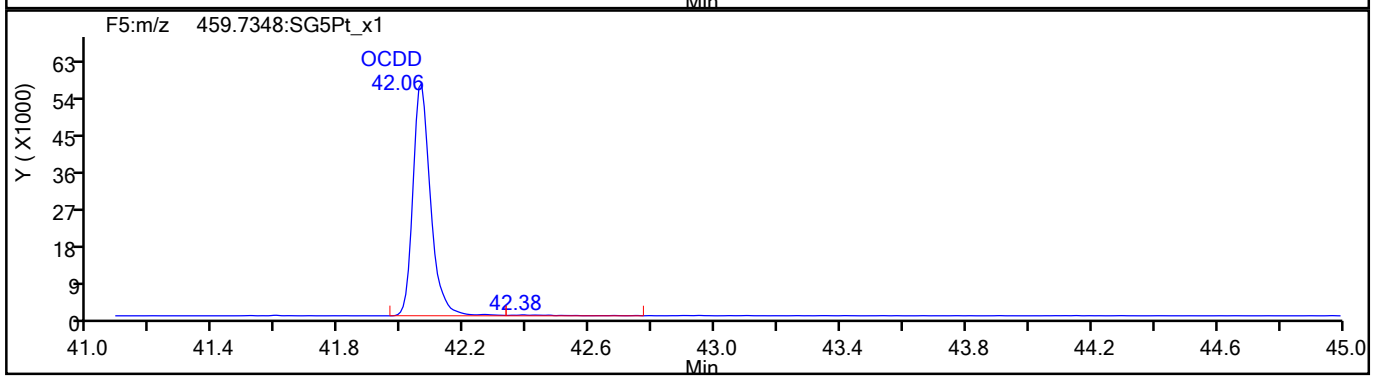

OCDD Standards

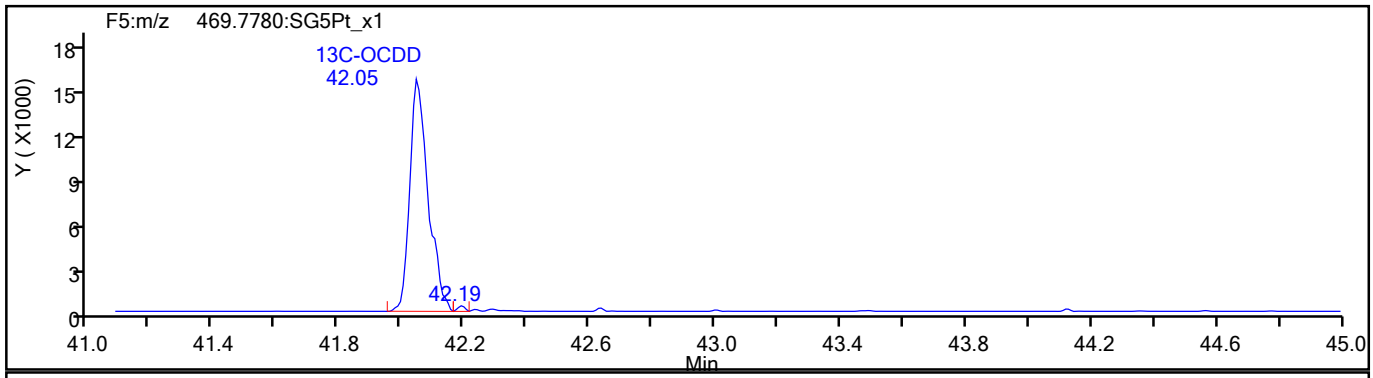

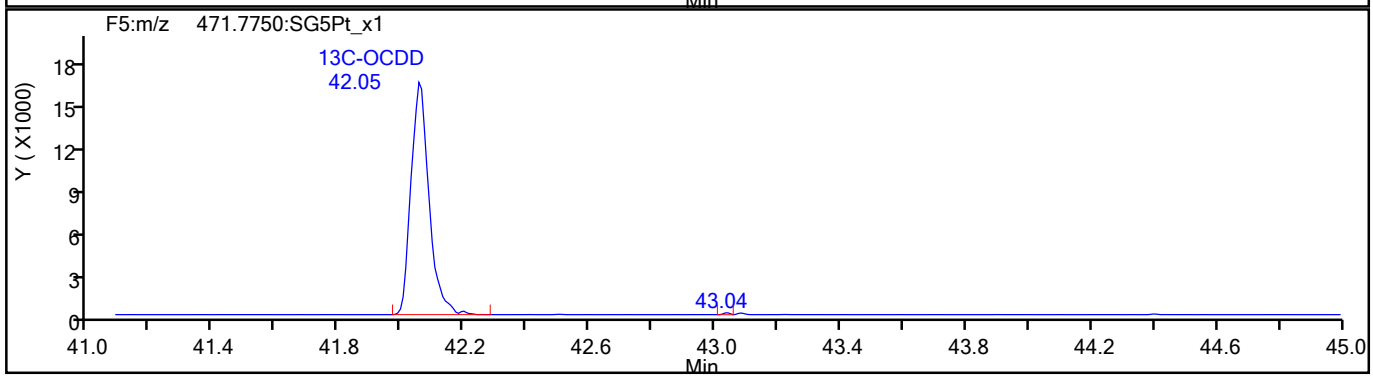

788299

Report Date: 20-Aug-2021 09:52:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	19-Aug-2021 05:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

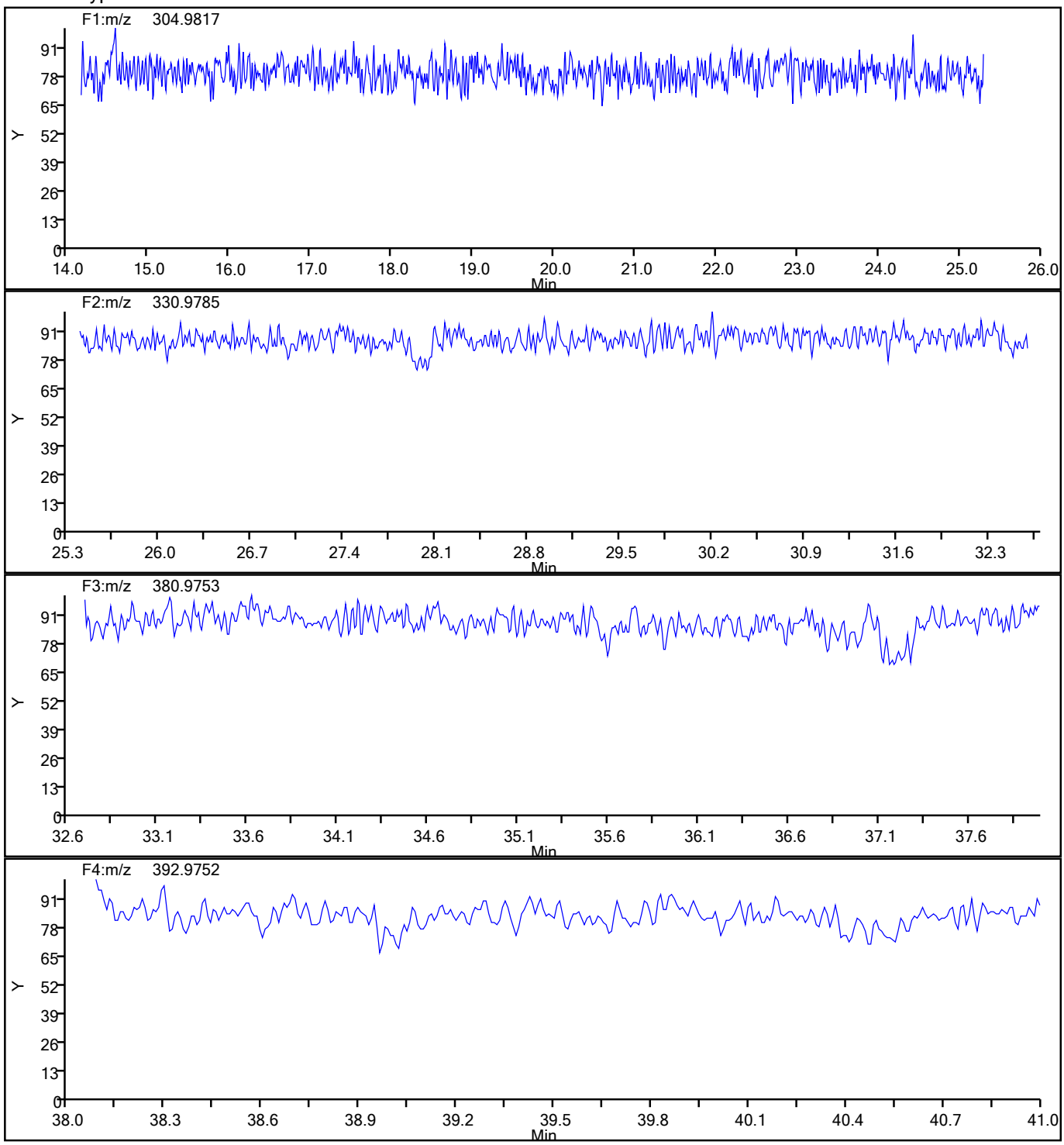

788300

Report Date: 20-Aug-2021 09:52:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_52.d		
Injection Date:	19-Aug-2021 05:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	48
Column Type:	DB-5	Column Dia:	0.32 mm

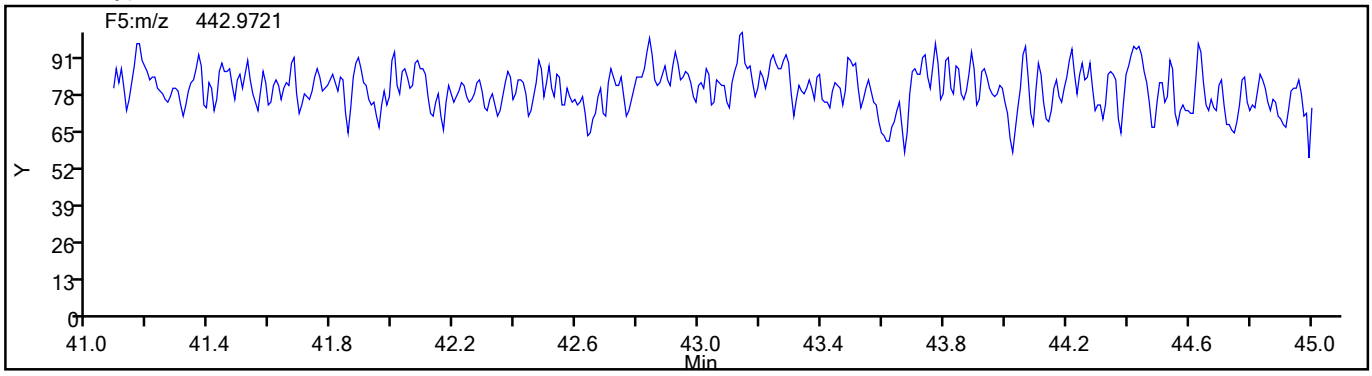

788301

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (2-4) RA
Lab Sample ID: 320-76901-2 RA
Matrix: Sediment
Lab File ID: 27AU2111D2_006.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.06(g)
Date Analyzed: 08/27/2021 12:13
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	140	B	1.4	0.43

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	46		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	53		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_006.d
Lims ID: 320-76901-A-2-A
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: Client
Inject. Date: 27-Aug-2021 12:13:54 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-2-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:49:49

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.299	61062880	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	37505167	0.83	1.3327	46.1	46.1	0.2295	0.2295	46.09	
2,3,7,8-TCDF	17.629	19476042	0.80	0.9978	52.0	52.0	0.1572	0.1572		
D 13C-2,3,7,8-TCDD	16.066	23520445	0.77	0.8749	44.0	44.0	0.9595	0.9595	44.03	
2,3,7,8-TCDD	16.093	4298352	0.78	1.0570	17.3	17.3	0.1715	0.1715		
$ 37Cl4-2,3,7,8-TCDD	16.079	11283409		0.8648	21.4	21.4	0.0874	0.0874	53.42	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

788303

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_006.d				
Lims ID:	320-76901-A-2-A				
Client ID:	11215702-072821-BN-SJSB095 (2-4)				
Sample Type:	Client				
Inject. Date:	27-Aug-2021 12:13:54	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-76901-A-2-A				
Misc. Info.:	DB225RES				
Operator ID:		Instrument ID:	11D2		
Method:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m				
Limit Group:	HR - 1613B - ICAL				
Last Update:	27-Aug-2021 15:52:30	Calib Date:	14-Jul-2021 14:47:36		
Integrator:	Picker				
Quant Method:	Isotopic Dilution	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d				
Column 1 :	DB-225 (0.32 mm)		Det: F1:HRSIR		
Process Host:	CTX1681				
First Level Reviewer: bennettd		Date:	27-Aug-2021 15:49:49		

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.299	16.284	1		26972702	5962829	19524	48810	305		
333.9339	16.299	16.284	1		34090178	7625958	26105	65262	292	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.614	0	1.081	17055690	2977092	8228	20570	362		
317.9389	17.615	17.614	0	1.081	20449477	3734179	8395	20987	445	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.628	0	1.001	8660949	1584629	1700	4250	932		
305.8987	17.629	17.628	0	1.001	10815093	2077727	2510	6275	828	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.064	0	0.986	10253525	2221751	19524	48810	114		
333.9339	16.066	16.064	0	0.986	13266920	3087506	26105	65262	118	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.078	1	1.002	1885247	407582	2105	5262	194		
321.8936	16.079	16.078	0	1.001	2413105	499387	1746	4365	286	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.079	16.078	0	0.987	11283409	2583335	4109	10272	629		

QC Flag Legend

Processing Flags

Report Date: 27-Aug-2021 15:52:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_006.d		
Injection Date:	27-Aug-2021 12:13:54	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

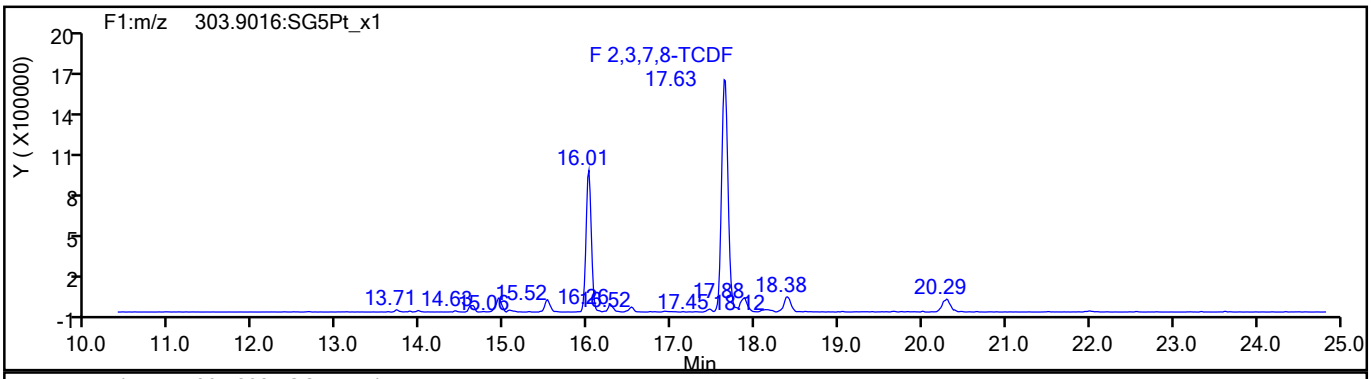

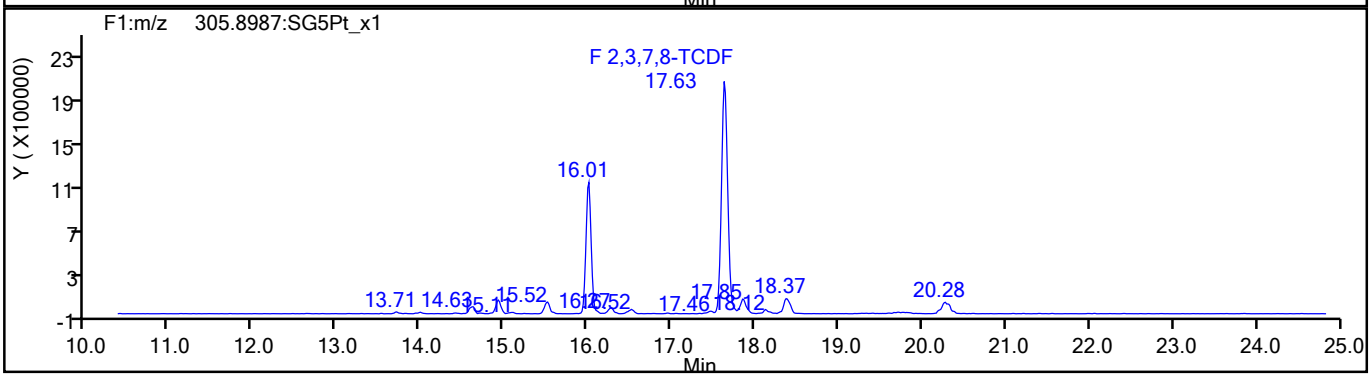

TCDF Standards

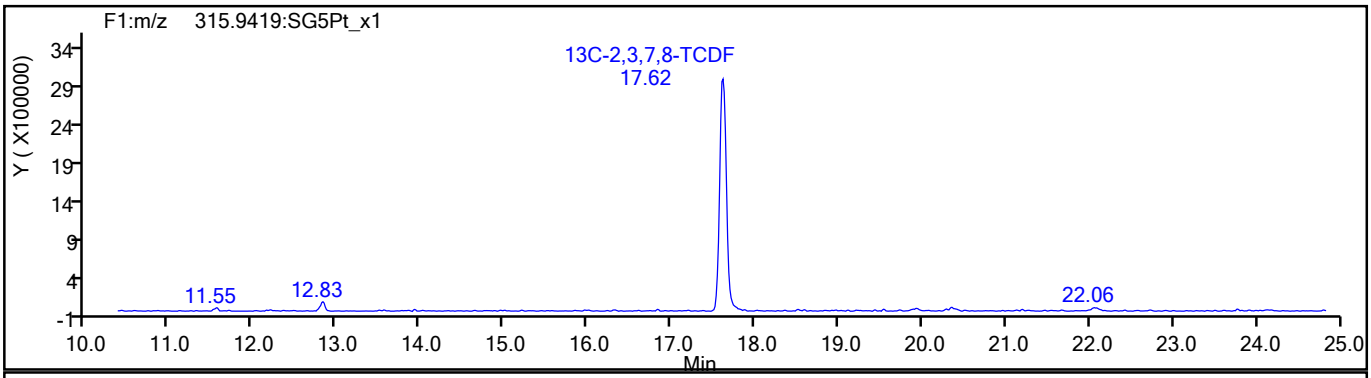

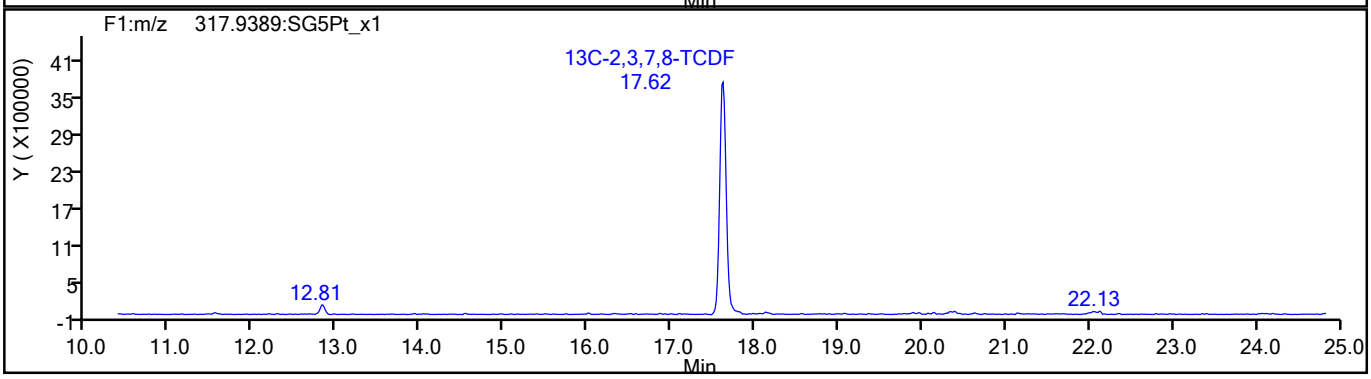

788305

Report Date: 27-Aug-2021 15:52:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_006.d		
Injection Date:	27-Aug-2021 12:13:54	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

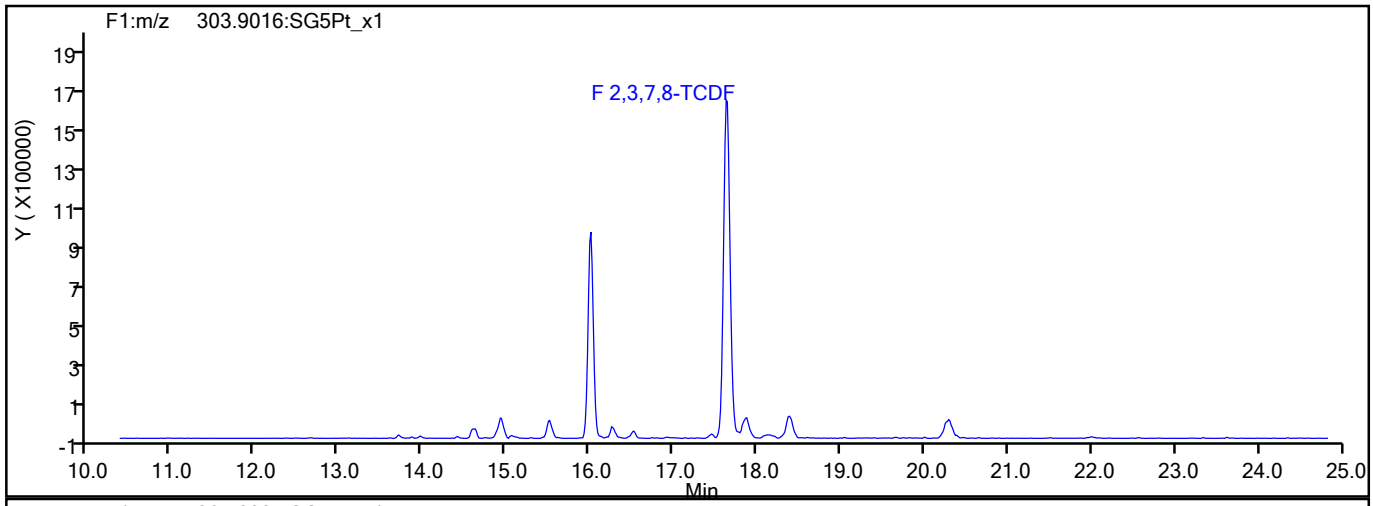

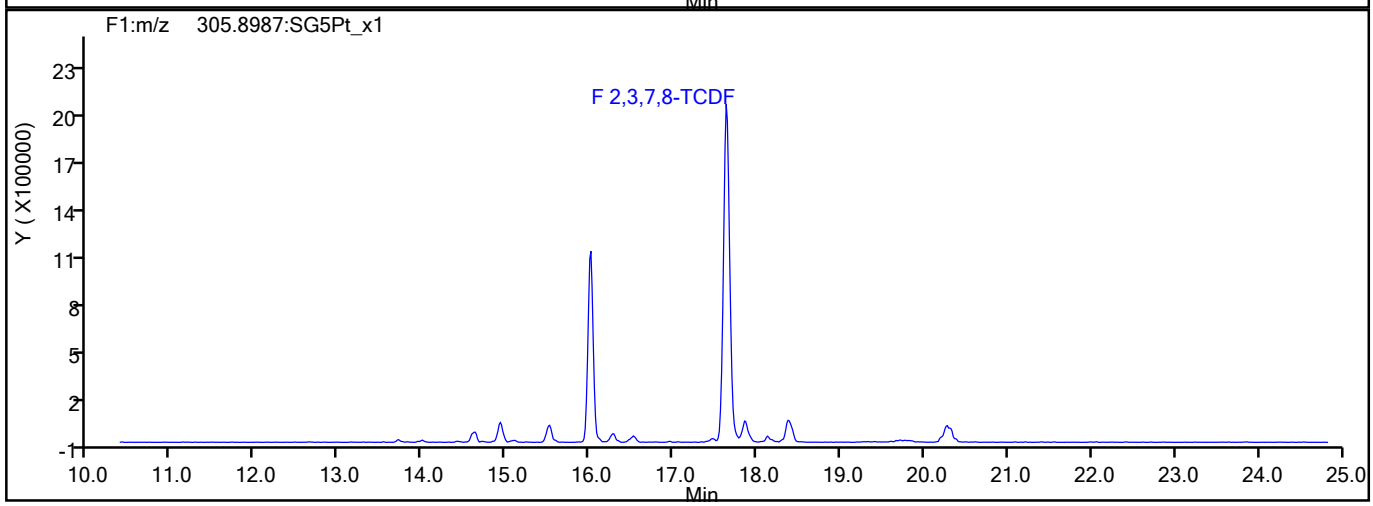

TCDF Interference Mass

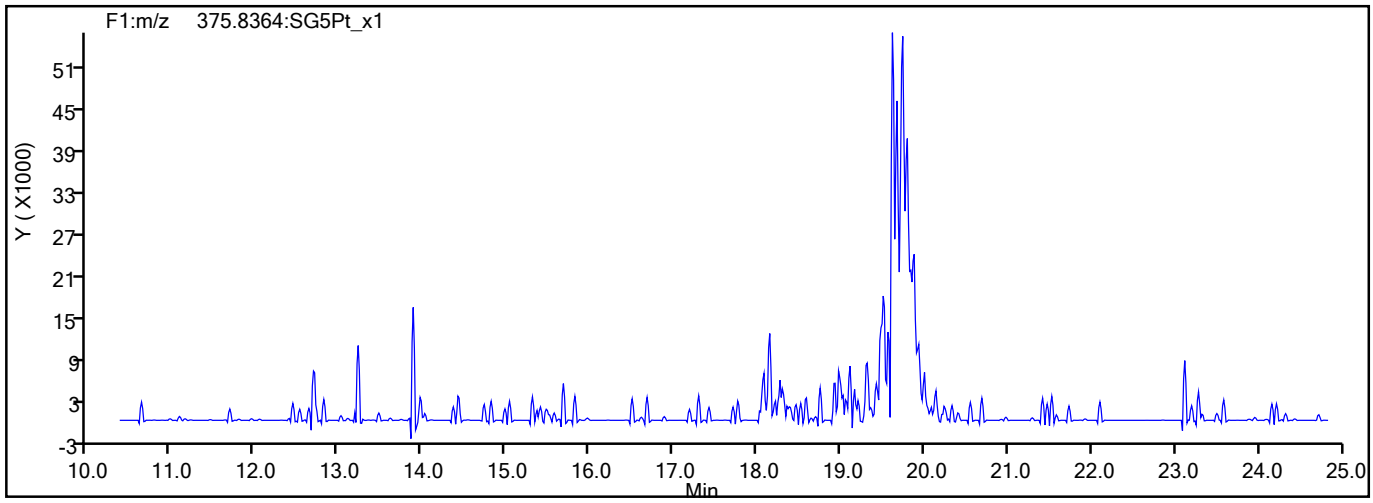

788306

Report Date: 27-Aug-2021 15:52:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_006.d		
Injection Date:	27-Aug-2021 12:13:54	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

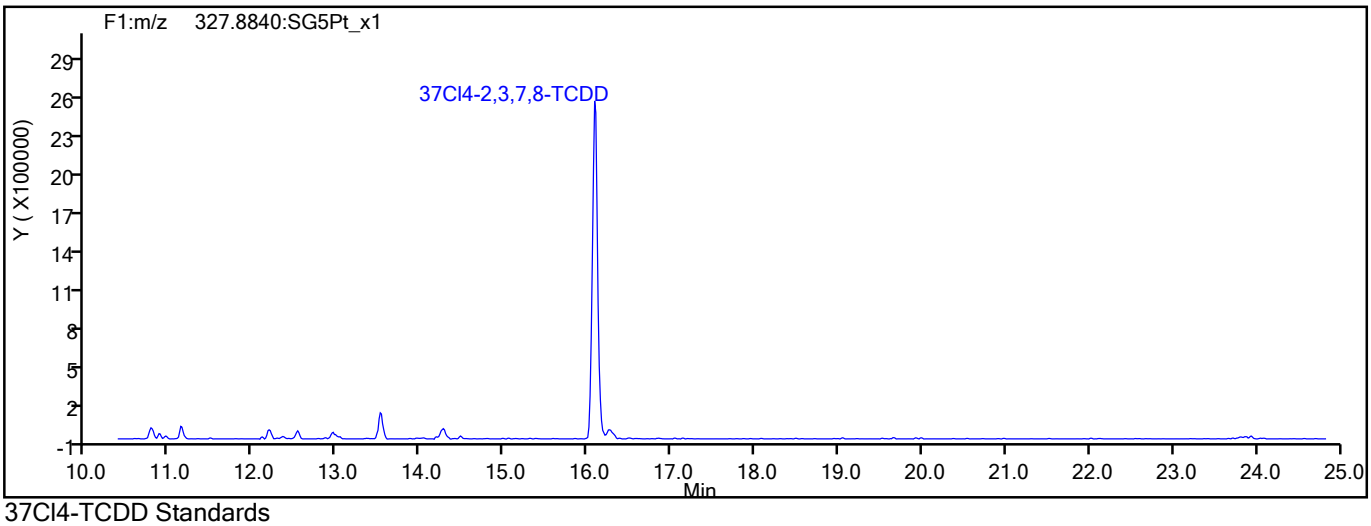

37Cl4-TCDD Standards

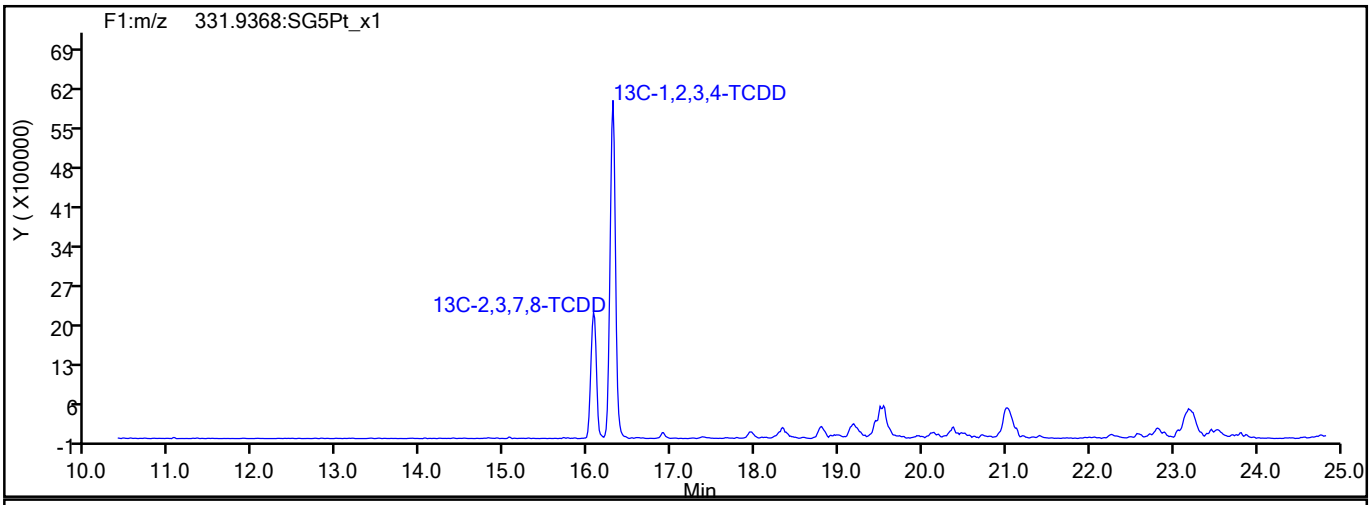

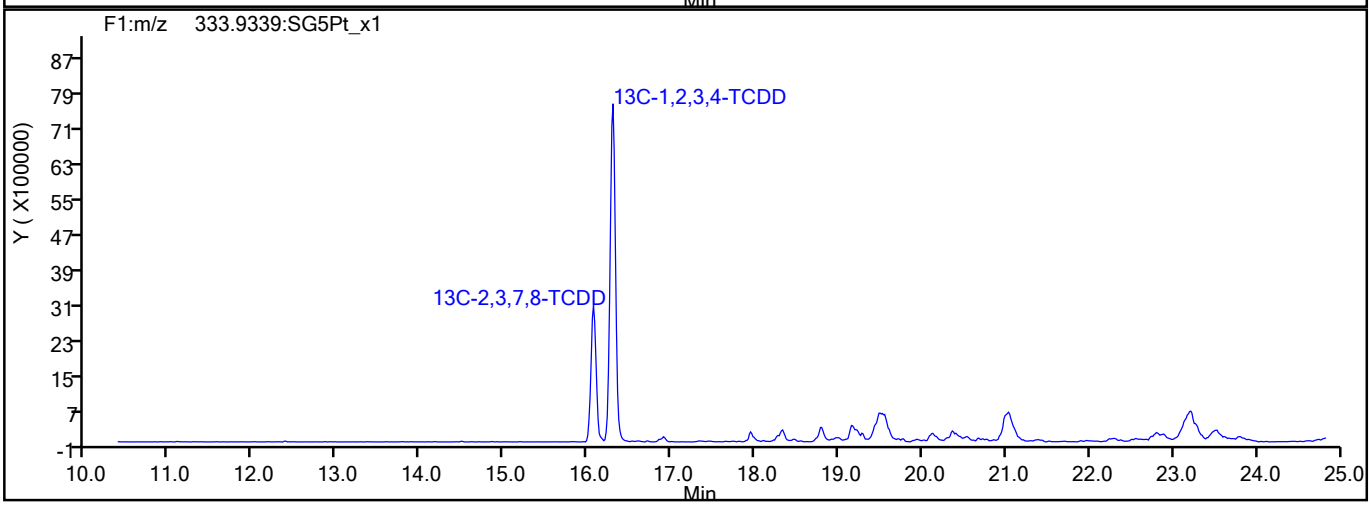

788307

Report Date: 27-Aug-2021 15:52:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_006.d		
Injection Date:	27-Aug-2021 12:13:54	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

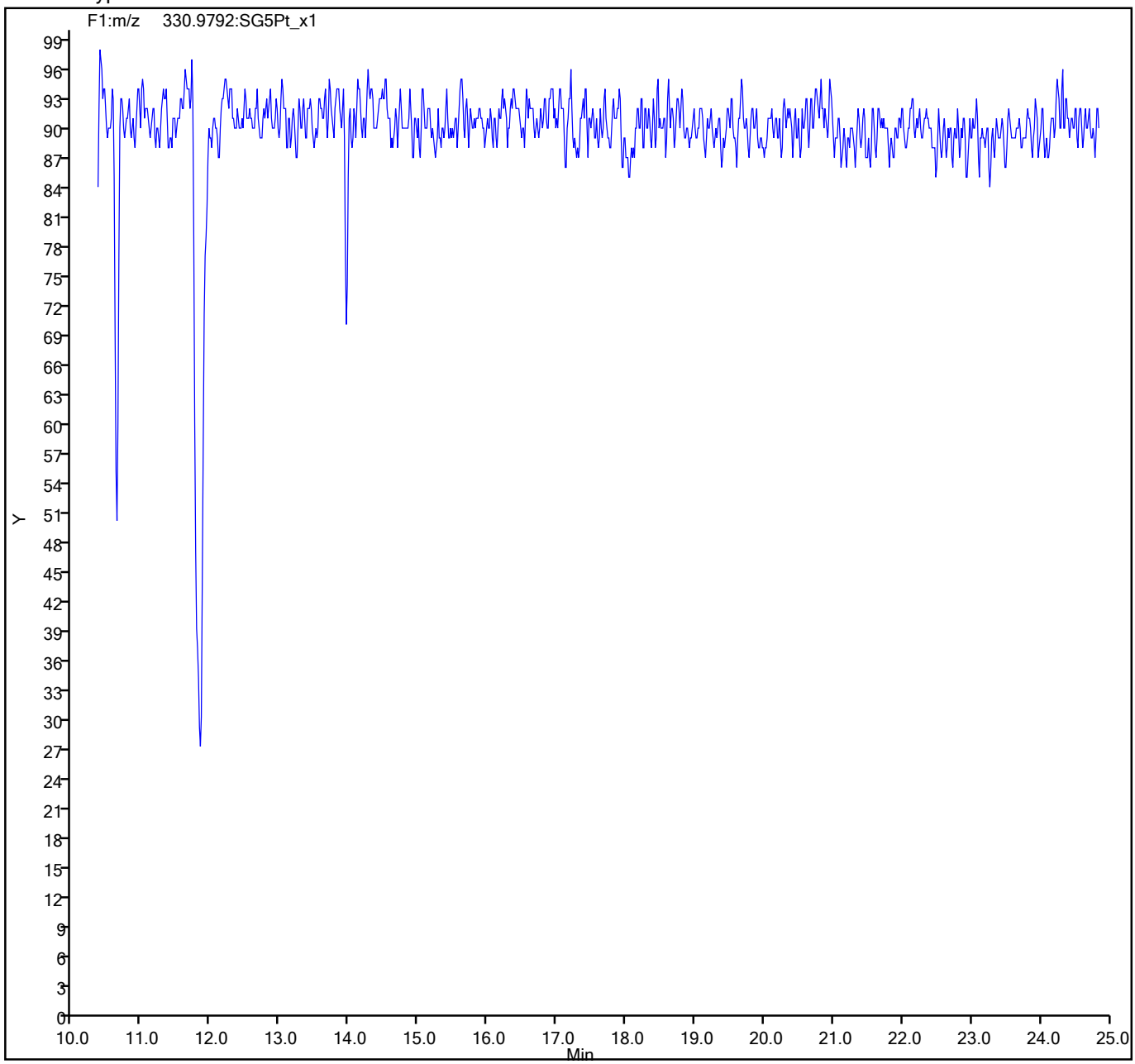

788308

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (4-6)
Lab Sample ID: 320-76901-3
Matrix: Sediment
Lab File ID: 19au21dfs1_7.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.7(g)
Date Analyzed: 08/19/2021 18:03
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.2	0.16
40321-76-4	1,2,3,7,8-PeCDD	ND		6.2	0.17
57117-41-6	1,2,3,7,8-PeCDF	ND		6.2	0.078
57117-31-4	2,3,4,7,8-PeCDF	ND		6.2	0.085
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.2	0.13
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.2	0.15
19408-74-3	1,2,3,7,8,9-HxCDD	0.74	J q	6.2	0.13
70648-26-9	1,2,3,4,7,8-HxCDF	ND		6.2	0.045
57117-44-9	1,2,3,6,7,8-HxCDF	ND		6.2	0.044
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.2	0.045
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.2	0.041
35822-46-9	1,2,3,4,6,7,8-HpCDD	12	B	6.2	0.17
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.26	J B q	6.2	0.067
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.2	0.068
3268-87-9	OCDD	240	B	12	0.57
39001-02-0	OCDF	ND		12	0.17
41903-57-5	Total TCDD	ND		1.2	0.45
30402-14-3	Total TCDF	19	B q	1.2	0.20
36088-22-9	Total PeCDD	ND		6.2	1.2
30402-15-4	Total PeCDF	ND		6.2	0.27
34465-46-8	Total HxCDD	9.1	q	6.2	0.14
55684-94-1	Total HxCDF	ND		6.2	0.078
37871-00-4	Total HpCDD	45	B	6.2	0.17
38998-75-3	Total HpCDF	0.26	J B q	6.2	0.067

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (4-6)
Lab Sample ID: 320-76901-3
Matrix: Sediment
Lab File ID: 19au21dfs1_7.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.7(g)
Date Analyzed: 08/19/2021 18:03
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	45		25-164
89059-46-1	13C-2,3,7,8-TCDF	44		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	43		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	42		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	47		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	56		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	50		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	59		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	55		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	47		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	53		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	54		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	54		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	55		26-138
114423-97-1	13C-OCDD	49		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	55		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d
Lims ID: 320-76901-A-3-A
Client ID: 11215702-072821-BN-SJSB095 (4-6)
Sample Type: Client
Inject. Date: 19-Aug-2021 18:03:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-3-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:03:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 16:44:36

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.291	474699	0.79	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.338	279043	0.83	1.3459	43.7	43.7	0.1964	0.1964	43.68	
2,3,7,8-TCDF	20.364	17145	0.75	1.0802	5.688	5.688	0.0799	0.0799		M
A Non-2,3,7,8-sub-TCDF	19.851	6648	0.77	1.0802	2.432	2.206	0.0799	2.206		RQa
S Total TCDF					8.120	7.894	0.0799	0.0799		RQ
D 13C-2,3,7,8-TCDD	21.711	198032	0.87	0.9317	44.8	44.8	0.5373	0.5373	44.78	
2,3,7,8-TCDD	21.733						0.0658	0.0658		
$ 37Cl4-2,3,7,8-TCDD	21.746	105824		1.0083	22.1	22.1	0.0185	0.0185	55.27	
A Non-2,3,7,8-sub-TCDD	20.684						0.0658	0.1813		RQU
S Total TCDD							0.1813	0.1813		
D 13C-1,2,3,7,8-PeCDF	27.275	230005	1.54	1.1405	42.5	42.5	0.2726	0.2726	42.48	
1,2,3,7,8-PeCDF	27.308						0.0314	0.0314		RQU
D 13C-2,3,4,7,8-PeCDF	28.799	251189	1.53	1.1253	47.0	47.0	0.2763	0.2763	47.02	
2,3,4,7,8-PeCDF	28.858						0.0346	0.0346		U
A F1 PeCDFs	24.634						0.0137	0.0137		
A Non-2,3,7,8-sub-PeCDF	28.173						0.0330	0.1100		RQU
S Total PeCDF							0.1100	0.1100		
D 13C-1,2,3,7,8-PeCDD	29.633	146905	1.57	0.7165	43.2	43.2	0.0477	0.0477	43.19	
1,2,3,7,8-PeCDD	29.595						0.0705	0.0705		
A Non-2,3,7,8-sub-PeCDD	28.478						0.0705	0.4774		RQU
S Total PeCDD							0.4774	0.4774		
D 13C-1,2,3,4,7,8-HxCDF	34.957	243802	0.55	0.9648	59.2	59.2	0.2467	0.2467	59.21	
1,2,3,4,7,8-HxCDF	34.965						0.0183	0.0183		U
D 13C-1,2,3,6,7,8-HxCDF	35.108	251961	0.52	1.0708	55.1	55.1	0.2223	0.2223	55.13	
1,2,3,6,7,8-HxCDF	34.965						0.0177	0.0177		U
D 13C-2,3,4,6,7,8-HxCDF	35.934	237313	0.57	1.0413	53.4	53.4	0.2286	0.2286	53.40	
2,3,4,6,7,8-HxCDF	35.916						0.0166	0.0166		
D 13C-1,2,3,7,8,9-HxCDF	36.818	196422	0.55	0.9731	47.3	47.3	0.2446	0.2446	47.30	
1,2,3,7,8,9-HxCDF	36.791						0.0182	0.0182		
A Non-2,3,7,8-sub-HxCDF	35.009						0.0176	0.0318		RQU
S Total HxCDF							0.0318	0.0318		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.625	426801	1.30	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.136	180627	1.35	0.7587	55.8	55.8	0.1392	0.1392	55.78	
1,2,3,4,7,8-HxCDD	36.170						0.0546	0.0546		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.262	185050	1.32	0.8593	50.5	50.5	0.1229	0.1229	50.46	
1,2,3,6,7,8-HxCDD	36.170						0.0613	0.0613		RQU
1,2,3,7,8,9-HxCDD	36.633	613	1.24	1.1094	0.3520	0.3022	0.0535	0.0535		RQ
A Non-2,3,7,8-sub-HxCDD	35.375	6529	1.24	1.0545	3.714	3.386	0.0563	2.214		RQM
S Total HxCDD					4.066	3.689	0.0564	0.0564		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.645	170444	0.46	0.7359	54.3	54.3	0.1336	0.1336	54.26	
1,2,3,4,6,7,8-HpCDF	38.636	261	1.04	1.4421	0.1196	0.1062	0.0271	0.0271		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	39.883	162062	0.44	0.6854	55.4	55.4	0.1435	0.1435	55.40	
1,2,3,4,7,8,9-HpCDF	39.872						0.0275	0.0275		
A Non-2,3,7,8-sub-HpCDF	39.245						0.0272	0.0272		
S Total HpCDF					0.1196	0.1062	0.0273	0.0273		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	39.579	156284	1.01	0.6745	54.3	54.3	0.0997	0.0997	54.29	
1,2,3,4,6,7,8-HpCDD	39.588	7980	0.90	1.0503	4.862	4.862	0.0678	0.0678		
A Non-2,3,7,8-sub-HpCDD	39.241	21983	0.98	1.0503	13.4	13.4	0.0678	13.4		
S Total HpCDD					18.3	18.3	0.0678	0.0678		
D 13C-OCDD	42.076	228612	1.02	0.5446	98.4	98.4	0.1425	0.1425	49.18	
OCDF	42.093						0.0670	0.0670		RQU
OCDD	42.084	118552	0.92	1.0620	97.7	97.7	0.2326	0.2326		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 23-Aug-2021 09:03:54 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d
Lims ID: 320-76901-A-3-A
Client ID: 11215702-072821-BN-SJSB095 (4-6)
Sample Type: Client
Inject. Date: 19-Aug-2021 18:03:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-3-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:03:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 16:44:36

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.291	21.395	-6		210224	29281	104	260	282		a
333.9338	21.317	21.395	-5		264475	35049	25	62	1402	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.338	20.365	-2	0.955	126186	17378	53	132	328		
317.9389	20.330	20.365	-2	0.955	152857	19700	15	37	1313	0.83(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.364	20.408	-3	1.001	7368	1137	3	7	379		M
305.8987	20.347	20.408	-4	1.000	9777	1320	10	25	132	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQa
303.9016	19.643	19.851	-12	0.966	3575	506	3	7	169		a
	Empc Correction				2892	453	3	7	151		
305.8987	19.660	19.851	-11	0.967	3756	589	10	25	59	0.95(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.711	21.716	0	1.020	91910	11342	104	260	109		
333.9338	21.686	21.716	-2	1.019	106122	12694	25	62	508	0.87(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.733						6	15			
321.8936	21.733						1	2			
37Cl4-2,3,7,8-TCDD											
327.8847	21.746	21.799	-3	1.021	105824	11803	5	12	2361		
A Non-2,3,7,8-sub-TCDD											U
319.8965	18.192	20.684	-149	0.838	193	76	6	15	13		
	Empc Correction				69	22	6	15	4		
321.8936	18.200	20.684	-149	0.838	90	29	1	2	29	2.14(0.65-0.89)	

788313

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	27.275	27.251	1	1.281	139543	22155	52	130	426		
353.8970	27.275	27.251	1	1.281	90462	14044	28	70	502	1.54(1.32-1.78)	
1,2,3,7,8-PeCDF											RQU
339.8597	27.276						1	2			
341.8567	27.276						4	10			
13C-2,3,4,7,8-PeCDF											
351.9000	28.799	28.757	2	1.353	151845	20597	52	130	396		
353.8970	28.807	28.757	3	1.353	99344	13780	28	70	492	1.53(1.32-1.78)	
2,3,4,7,8-PeCDF											U
339.8597	28.791						1	2			
341.8567	28.791						4	10			
A F1 PeCDFs											
339.8597	24.634						1	2			
341.8567	24.634						1	2			
A Non-2,3,7,8-sub-PeCDF											U
339.8597	25.481	28.173	-161	0.934	32	19	1	2	19		
341.8567	25.498	28.173	-160	0.935	59	23	4	10	6	0.54(1.32-1.78)	
	Empc Correction				20	12	4	10	3		
13C-1,2,3,7,8-PeCDD											
367.8949	29.633	29.574	4	1.392	89746	12078	7	17	1725		
369.8919	29.633	29.574	4	1.392	57159	8243	2	5	4122	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616						5	12			
357.8516	29.616						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.079	28.478	-144	0.880	293	52	5	12	10		
	Empc Correction				41	29	5	12	6		
357.8516	26.087	28.478	-143	0.880	27	19	1	2	19	10.85(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.957	34.906	3	0.954	86386	16943	42	105	403		
385.8610	34.949	34.906	3	0.954	157416	30780	50	125	616	0.55(0.43-0.59)	
1,2,3,4,7,8-HxCDF											U
373.8208	34.922						3	7			
375.8178	34.922						1	2			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.108	35.066	3	0.959	86478	16346	42	105	389		
385.8610	35.108	35.066	3	0.959	165483	30028	50	125	601	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											U
373.8208	35.082						3	7			
375.8178	35.082						1	2			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.934	35.890	3	0.981	85920	17855	42	105	425		
385.8610	35.934	35.890	3	0.981	151393	31858	50	125	637	0.57(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.907						3	7			
375.8178	35.907						1	2			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.818	36.782	2	1.005	69655	16335	42	105	389		
385.8610	36.818	36.782	2	1.005	126767	27956	50	125	559	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791						3	7			
375.8178	36.791						1	2			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.669	35.009	-80	0.963	30	19	3	7	6		
375.8178	33.635	35.009	-82	0.962	23	16	1	2	16	1.30(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.625	36.581	3		241077	53901	17	42	3171		
403.8529	36.625	36.581	3		185724	42714	24	60	1780	1.30(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.136	36.092	3	0.987	103641	24744	17	42	1456		
403.8529	36.136	36.092	3	0.987	76986	18452	24	60	769	1.35(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.109						5	12			
391.8127	36.109						5	12			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.262	36.210	3	0.990	105118	22817	17	42	1342		
403.8529	36.262	36.210	3	0.990	79932	18271	24	60	761	1.32(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8158	36.227						5	12			
391.8127	36.227						5	12			
1,2,3,7,8,9-HxCDD											RQ
389.8158	36.633	36.597	2	1.014	440	108	5	12	22		
	Empc Correction				339	60	5	12	12		
391.8127	36.650	36.597	3	1.014	274	49	5	12	10	1.61(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQM
389.8158	34.275	35.375	-66	0.945	2363	417	5	12	83		M
391.8127	34.292	35.375	-65	0.946	2536	438	5	12	88	0.93(1.05-1.43)	
	Empc Correction				1905	336	5	12	67		
389.8158	35.386	35.375	1	0.976	1260	312	5	12	62		M
391.8127	35.361	35.375	-1	0.975	1001	214	5	12	43	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.645	38.596	3	1.055	53987	14042	15	37	936		
419.8220	38.636	38.596	2	1.055	116457	29473	23	57	1281	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7817	38.636	38.618	1	1.000	166	56	6	15	9		
	Empc Correction				133	33	6	15	6		
409.7788	38.645	38.618	2	1.000	128	32	1	2	32	1.30(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.883	39.850	2	1.089	49349	14609	15	37	974		
419.8220	39.883	39.850	2	1.089	112713	32668	23	57	1420	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872						6	15			
409.7788	39.872						1	2			

Report Date: 23-Aug-2021 09:03:54 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.245						6	15			
409.7788	39.245						1	2			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.579	39.547	2	1.081	78427	21369	10	25	2137		
437.8140	39.579	39.547	2	1.081	77857	20780	16	40	1299	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.588	39.561	2	1.000	3769	1048	8	20	131		
425.7737	39.588	39.561	2	1.000	4211	1108	4	10	277	0.90(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.956	39.241	-17	0.984	10874	2761	8	20	345		
425.7737	38.948	39.241	-18	0.984	11109	2865	4	10	716	0.98(0.88-1.20)	
13C-OCDD											
469.7780	42.076	42.036	2	1.149	115555	29008	14	35	2072		
471.7750	42.076	42.036	2	1.149	113057	27662	16	40	1729	1.02(0.76-1.02)	
OCDF											RQU
441.7428	42.137						1	2			
443.7399	42.137						9	22			
OCDD											
457.7377	42.084	42.053	2	1.000	56746	13735	14	35	981		
459.7348	42.084	42.053	2	1.000	61806	15376	14	35	1098	0.92(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Lims ID:	320-76901-A-3-A		
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Inject. Date:	19-Aug-2021 18:03:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	6

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	279043	37078

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	279043	37078

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.643	3575	506	3756	589	2.43	0.95	RQa
19.643	2892	453	3756	589	2.21		Empc Correction
Signal Totals:							
	2892	453	3756	589			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7331	1095				0.95	RQa
	6648	1042					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.432 = (7331 * 100.000) / (279043 * 1.080)
Empc Amount: 2.206 = (6648 * 100.000) / (279043 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d
Lims ID: 320-76901-A-3-A
Client ID: 11215702-072821-BN-SJSB095 (4-6)
Inject. Date: 19-Aug-2021 18:03:00 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	198032	24036

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	198032	24036

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.192	193	76	90	29	0.1329	2.14	RQ
18.192	69	22	90	29	0.0747		Empc Correction
18.655	134	59	60	23	0.0911	2.23	RQ
18.655	46	17	60	23	0.0498		Empc Correction
18.913	231	66	18	13	0.1169	12.83	RQ
18.913	13	10	18	13	0.0146		Empc Correction
19.549	236	105	97	49	0.1564	2.43	RQ
19.549	74	37	97	49	0.0803		Empc Correction
19.617	183	111	107	36	0.1362	1.71	RQ
19.617	82	27	107	36	0.0888		Empc Correction
21.463	168	36	467	160	0.2982	0.36	RQ
21.463	168	36	218	46	0.1813		Empc Correction
21.797	299	85	203	53	0.2357	1.47	RQ
21.797	156	40	203	53	0.1686		Empc Correction
23.171	275	39	51	28	0.1531	5.39	RQ
23.171	39	21	51	28	0.0423		Empc Correction
23.661	61	31	36	23	0.0455	1.69	RQ
23.661	27	17	36	23	0.0296		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Lims ID:	320-76901-A-3-A		
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Inject. Date:	19-Aug-2021 18:03:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	6

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	230005	36199
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	251189	34377

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	240597	35288

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.481	32	19	59	23	0.0367	0.54	RQ
25.481	32	19	20	12	0.0210		Empc Correction
25.818	105	39	115	51	0.0887	0.91	RQ
25.818	105	39	67	25	0.0693		Empc Correction
26.769	29	12	65	33	0.0379	0.45	RQ
26.769	29	12	18	7	0.0189		Empc Correction
27.881	163	54	110	52	0.1100	1.48	

Compound is Marked ND

Report Date: 23-Aug-2021 09:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Lims ID:	320-76901-A-3-A		
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Inject. Date:	19-Aug-2021 18:03:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	6

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	146905	20321

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	146905	20321

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.079	293	52	27	19	0.2081	10.85	RQ
26.079	41	29	27	19	0.0442		Empc Correction
26.904	418	100	316	70	0.4774	1.32	
28.622	65	35	73	24	0.0898	0.89	RQ
28.622	65	35	41	22	0.0689		Empc Correction
29.178	163	45	21	13	0.1197	7.76	RQ
29.178	32	20	21	13	0.0345		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Lims ID:	320-76901-A-3-A		
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Inject. Date:	19-Aug-2021 18:03:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	6

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	243802	47723
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	251961	46374
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	237313	49713
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	196422	44291

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	232374	47025

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.669	30	19	23	16	0.0189	1.30	
35.639	83	36	14	7	0.0346	5.93	RQ
35.639	17	8	14	7	0.0111		Empc Correction
36.204	61	22	40	25	0.0361	1.53	RQ
36.204	49	31	40	25	0.0318		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Lims ID:	320-76901-A-3-A		
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Inject. Date:	19-Aug-2021 18:03:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	6

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	180627	43196
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	185050	41088
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	182838	42142

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.275	2363	417	2536	438	2.54	0.93	RQM
34.275	2363	417	1905	336	2.21		Empc Correction
35.386	1260	312	1001	214	1.17	1.26	M
Signal Totals:							
	3623	729	2906	550			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7160	1381				1.02	RQM
	6529	1279					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.714 = (7160 * 100.000) / (182838 * 1.055)

Empc Amount: 3.386 = (6529 * 100.000) / (182838 * 1.055)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 23-Aug-2021 09:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Lims ID:	320-76901-A-3-A		
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Inject. Date:	19-Aug-2021 18:03:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	6

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	156284	42149

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	156284	42149

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.956	10874	2761	11109	2865	13.4	0.98	
Signal Totals:							
	10874	2761	11109	2865			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	21983	5626				0.98	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.392 = (21983 * 100.000) / (156284 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d				
Injection Date:	19-Aug-2021 18:03:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-3-A	Lab Sample ID:	320-76901-3		
Client ID:	11215702-072821-BN-SJSB095 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.36
Area: 6465
Amount: 5.388490
Amount Units: pg/ul

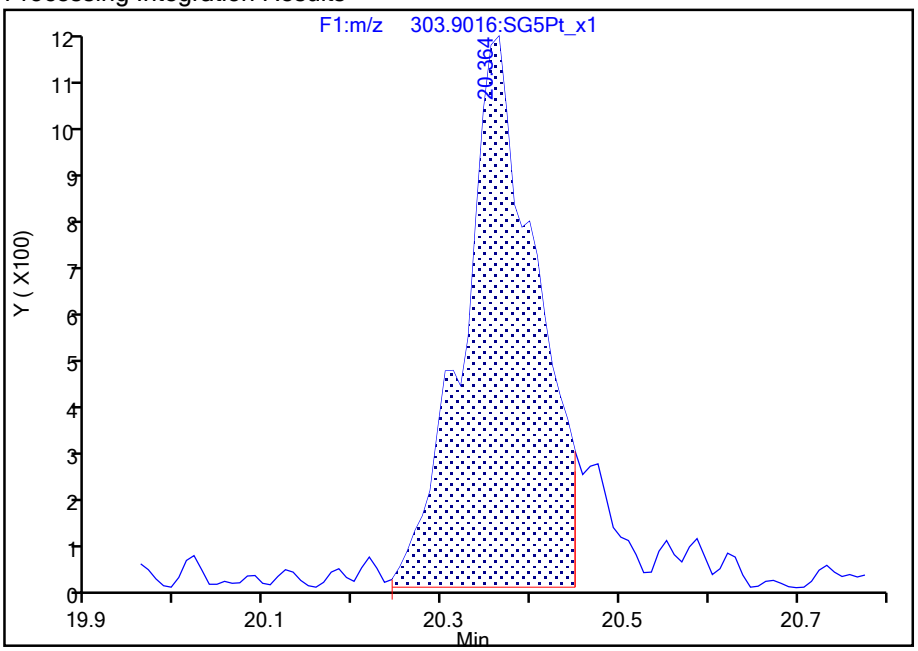

Manual Integration Results

RT: 20.36
Area: 7368
Amount: 5.688071
Amount Units: pg/ul

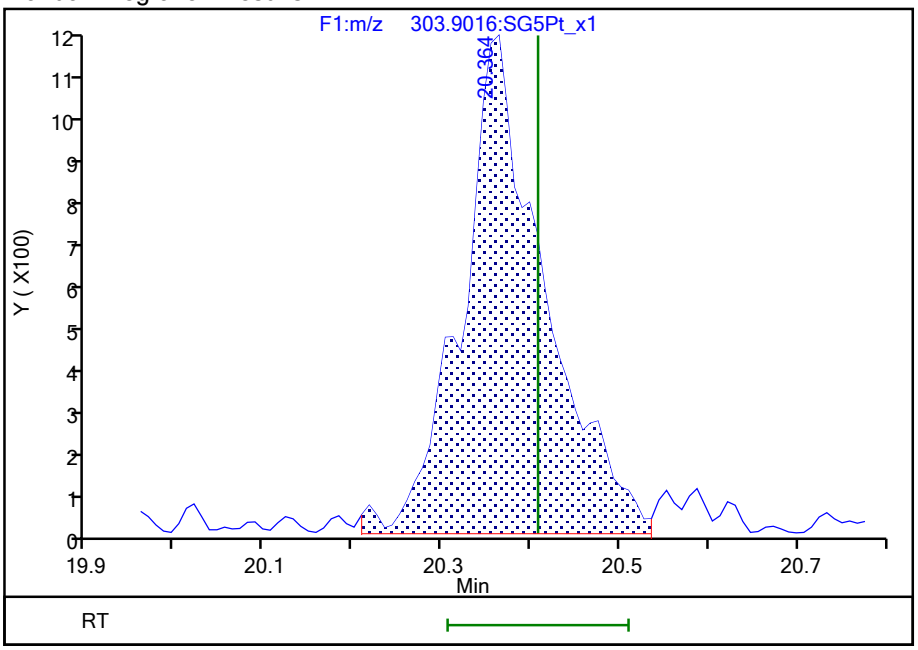

Reviewer: dadunj, 23-Aug-2021 09:02:15

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d				
Injection Date:	19-Aug-2021 18:03:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-3-A	Lab Sample ID:	320-76901-3		
Client ID:	11215702-072821-BN-SJSB095 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.18- 36.57)

Signal: 1

Processing Integration Results

RT = 34.275 Area = 2615

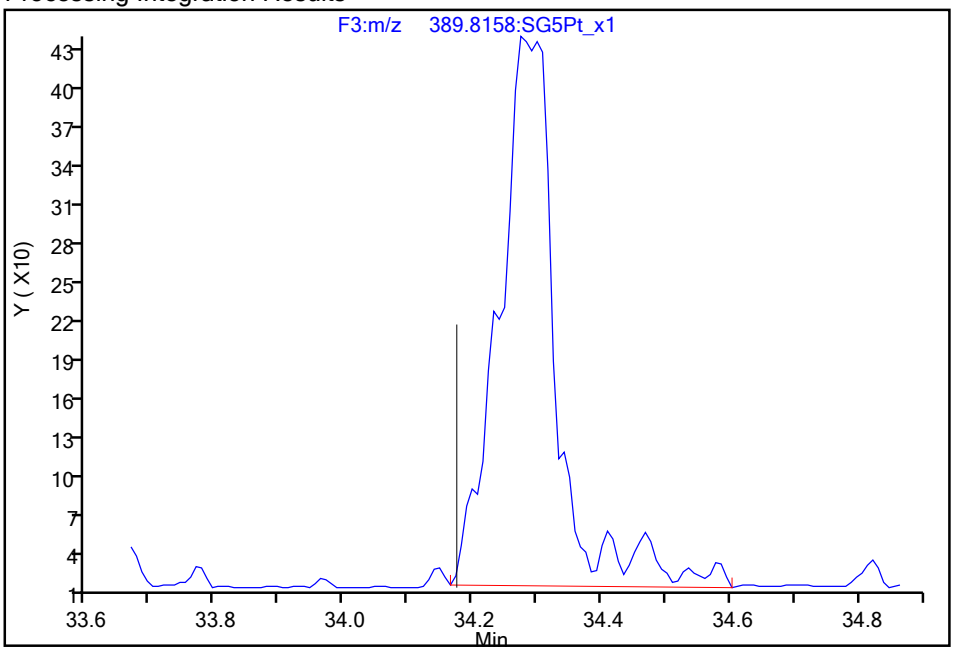

Manual Integration Results

RT = 34.275 Area = 2363 M

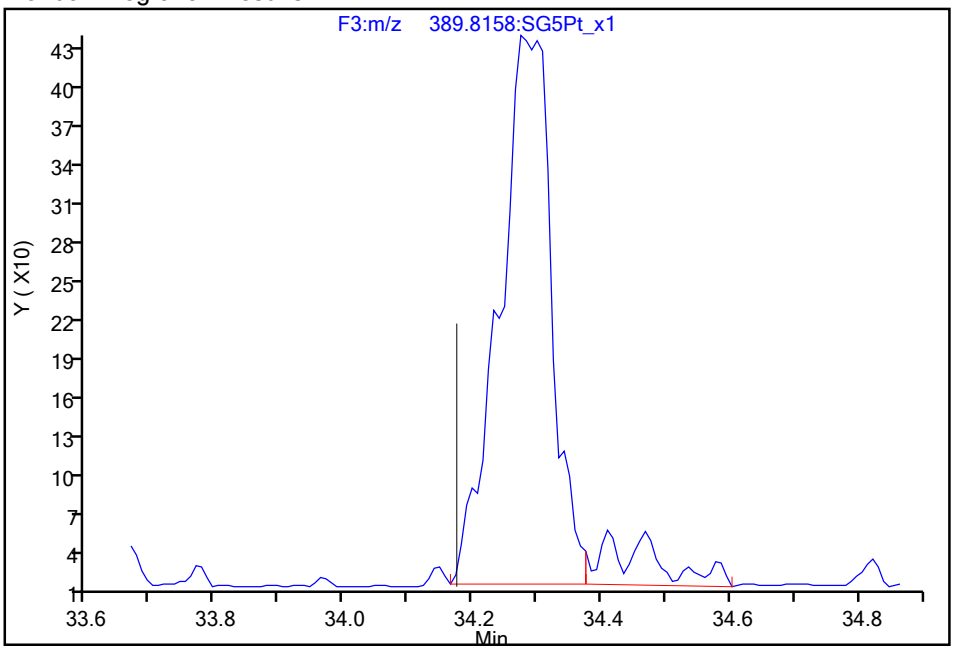

Reviewer: dadunj, 23-Aug-2021 09:03:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d				
Injection Date:	19-Aug-2021 18:03:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-3-A	Lab Sample ID:	320-76901-3		
Client ID:	11215702-072821-BN-SJSB095 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.18- 36.57)

Signal: 1

Processing Integration Results

RT = 35.386 Area = 1389

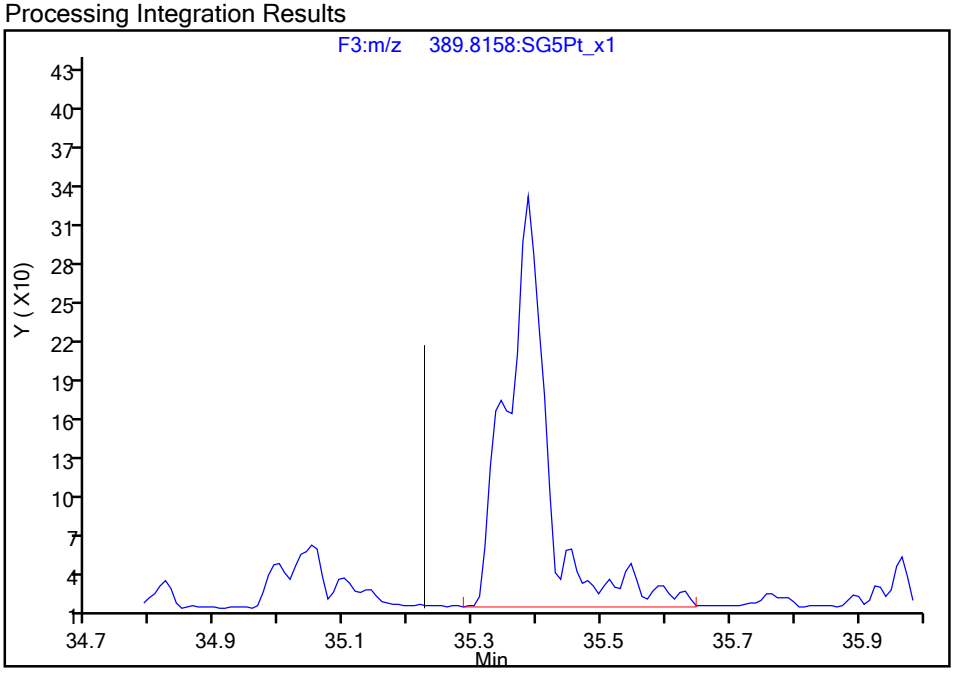

Manual Integration Results

RT = 35.386 Area = 1260 M

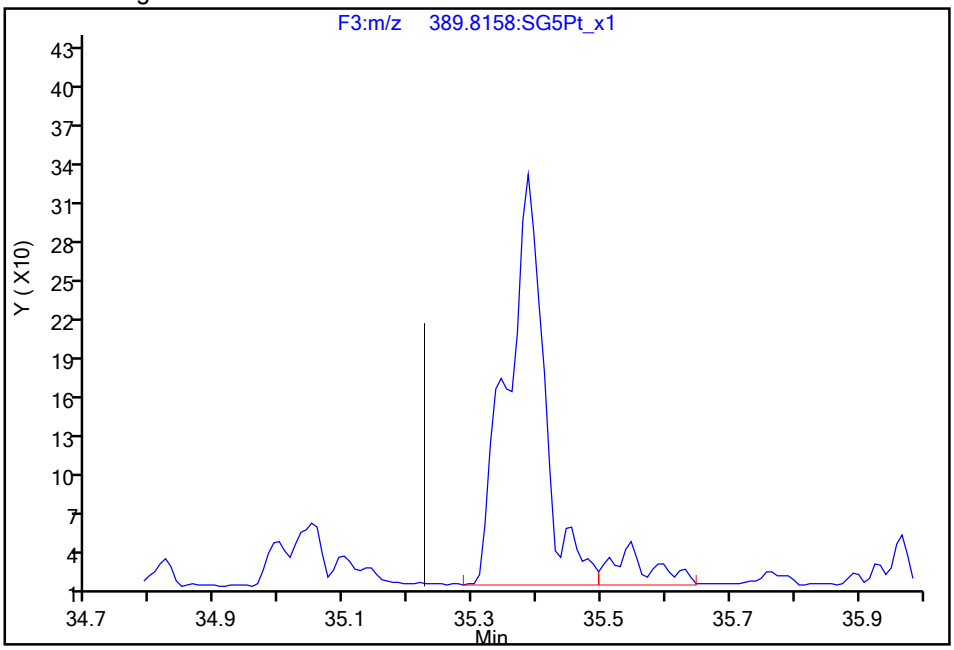

Reviewer: dadunj, 23-Aug-2021 09:03:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788327

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d				
Injection Date:	19-Aug-2021 18:03:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-3-A	Lab Sample ID:	320-76901-3		
Client ID:	11215702-072821-BN-SJSB095 (4-6)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.64
Area: 133
Amount: 0.121648
Amount Units: pg/ul

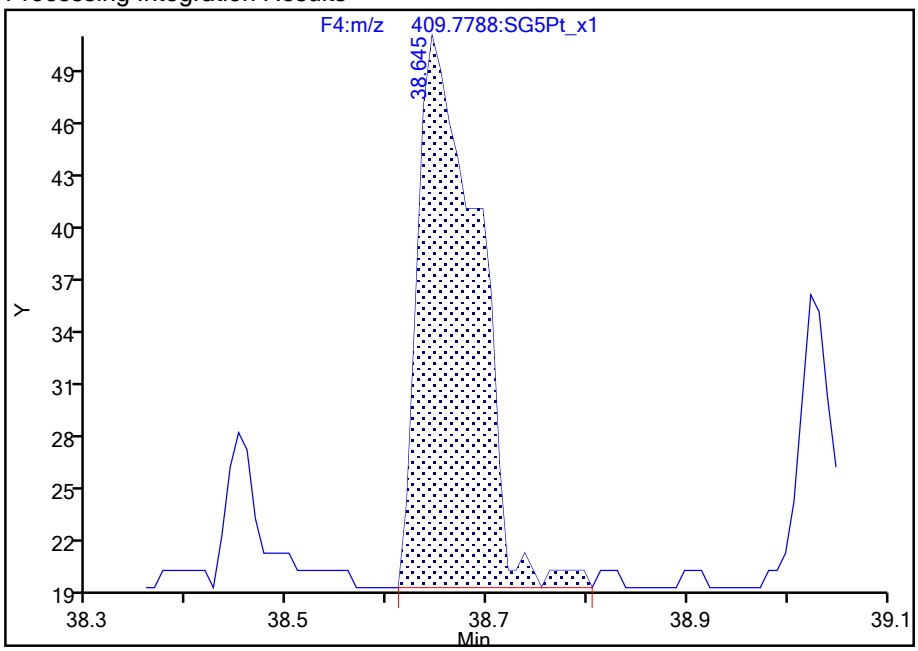

Manual Integration Results

RT: 38.64
Area: 128
Amount: 0.119613
Amount Units: pg/ul

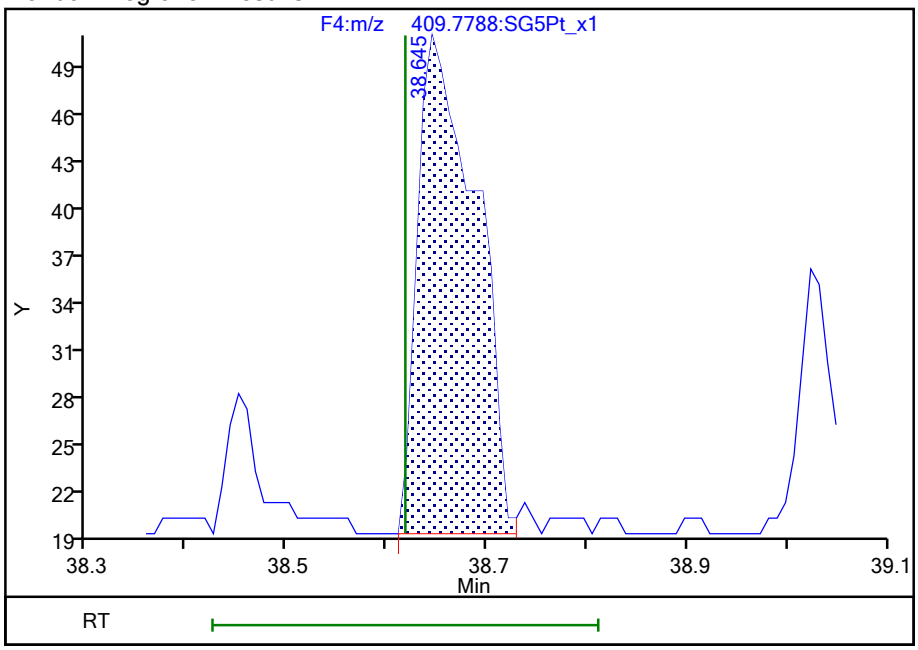

Reviewer: dadunj, 23-Aug-2021 09:03:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 23-Aug-2021 09:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

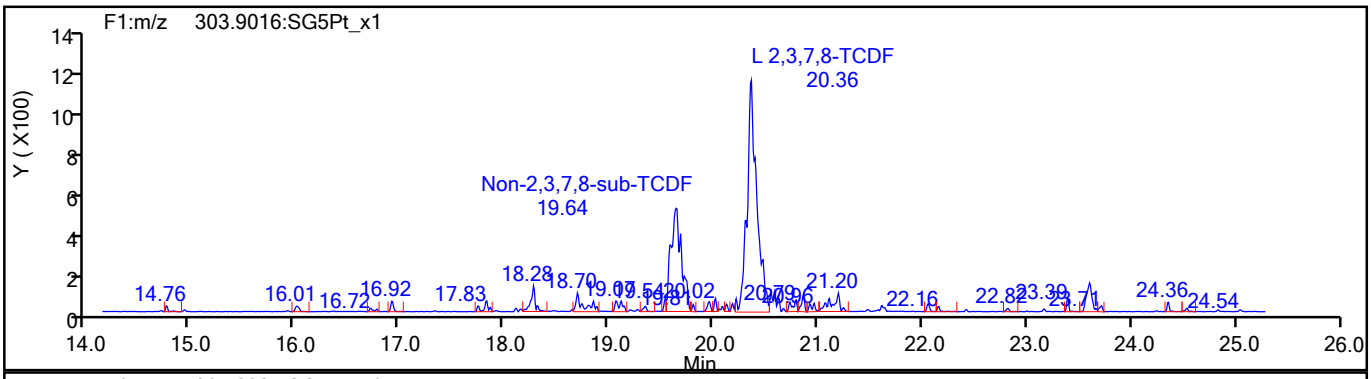

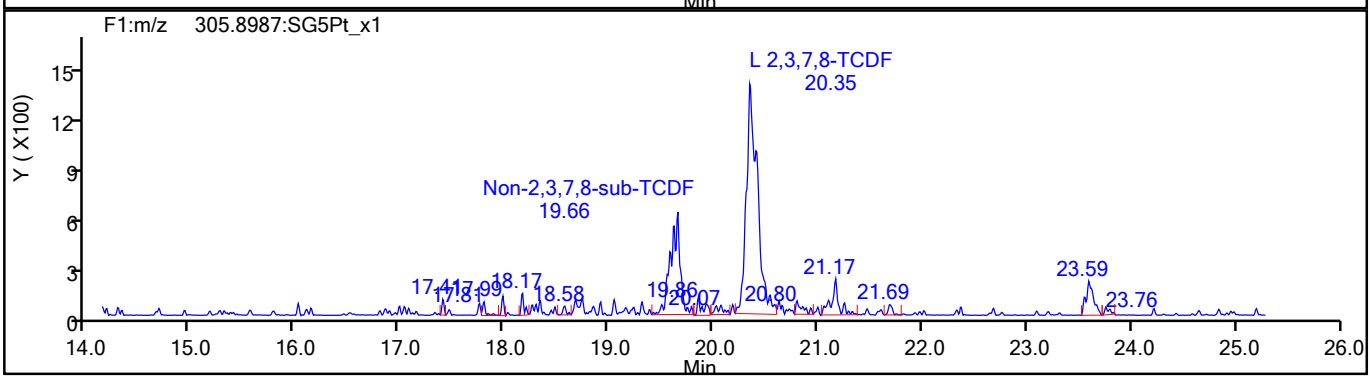

TCDF Standards

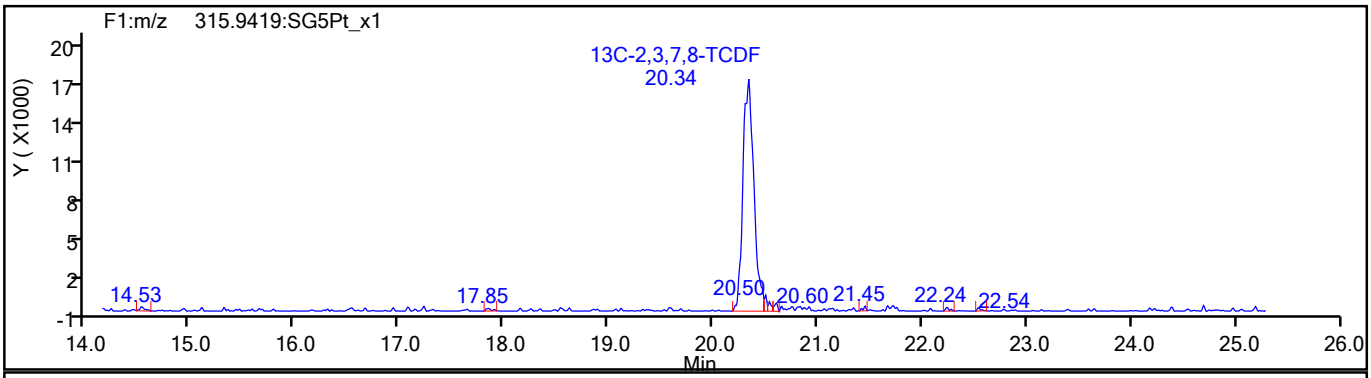

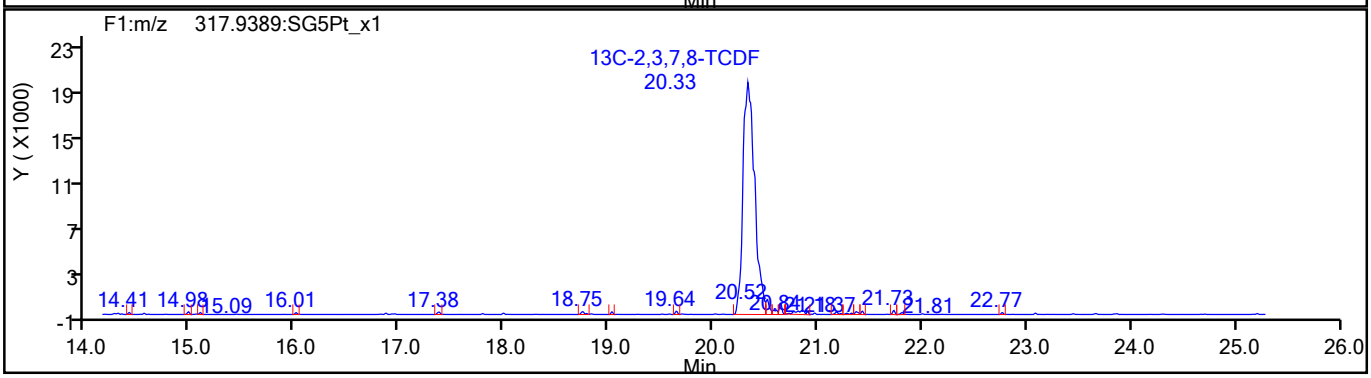

788329

Report Date: 23-Aug-2021 09:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

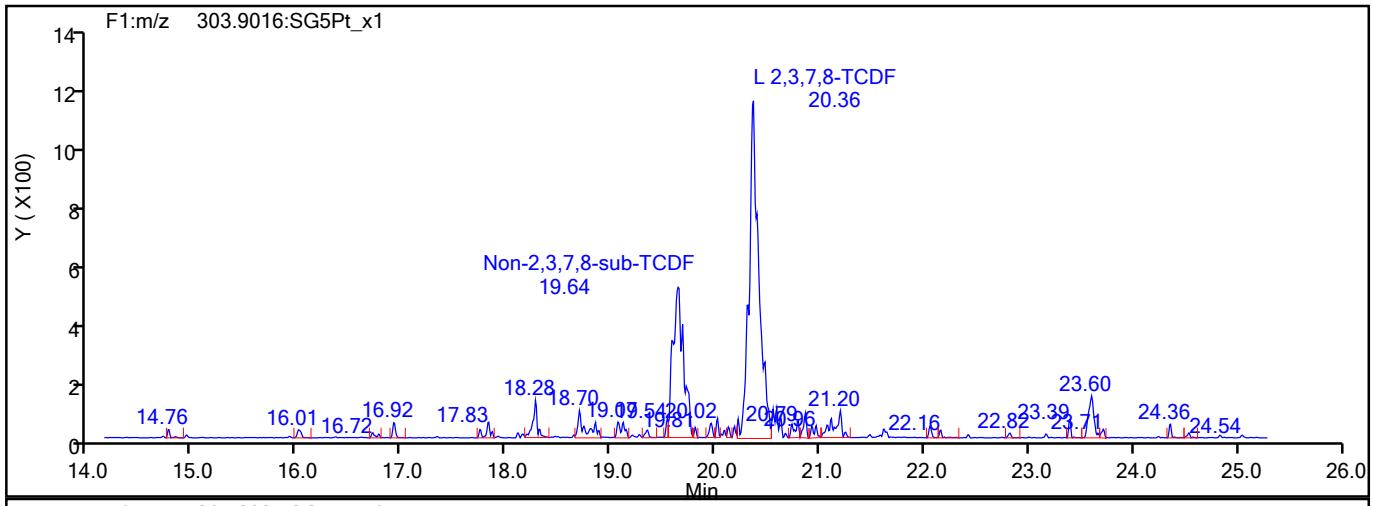

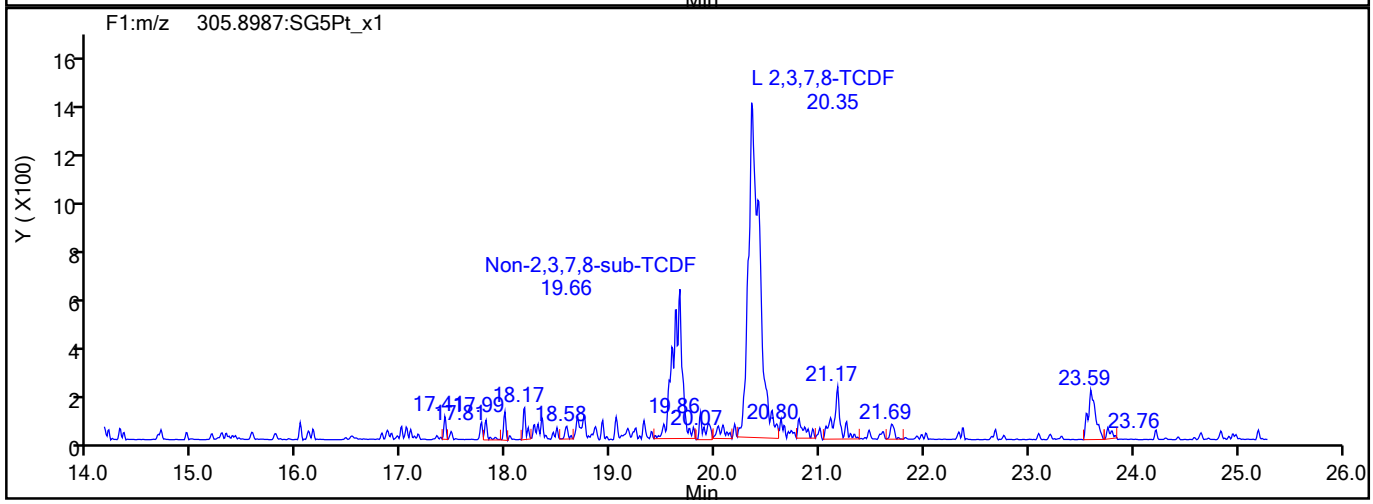

TCDF Interference Mass

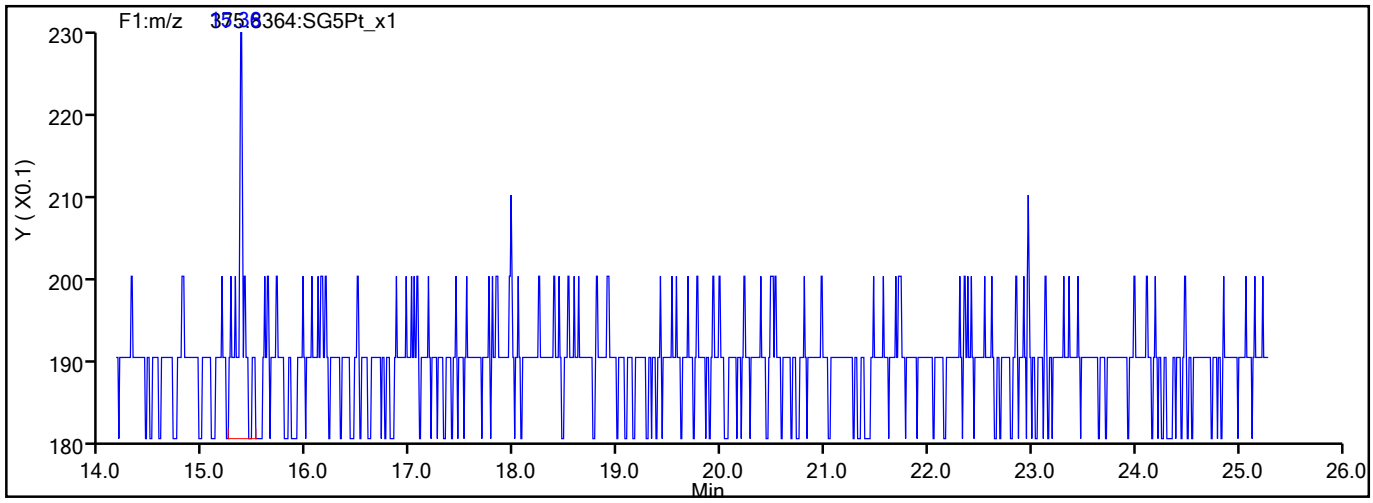

788330

Report Date: 23-Aug-2021 09:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

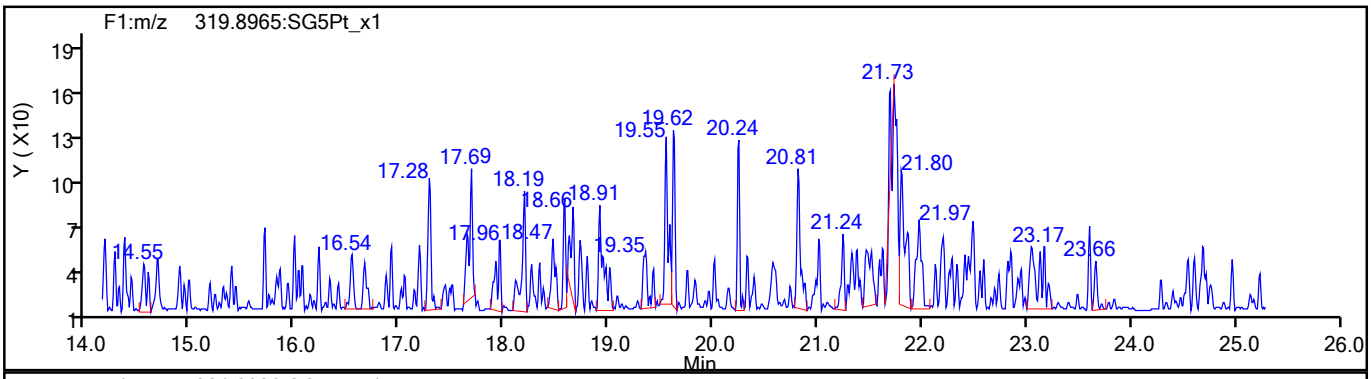

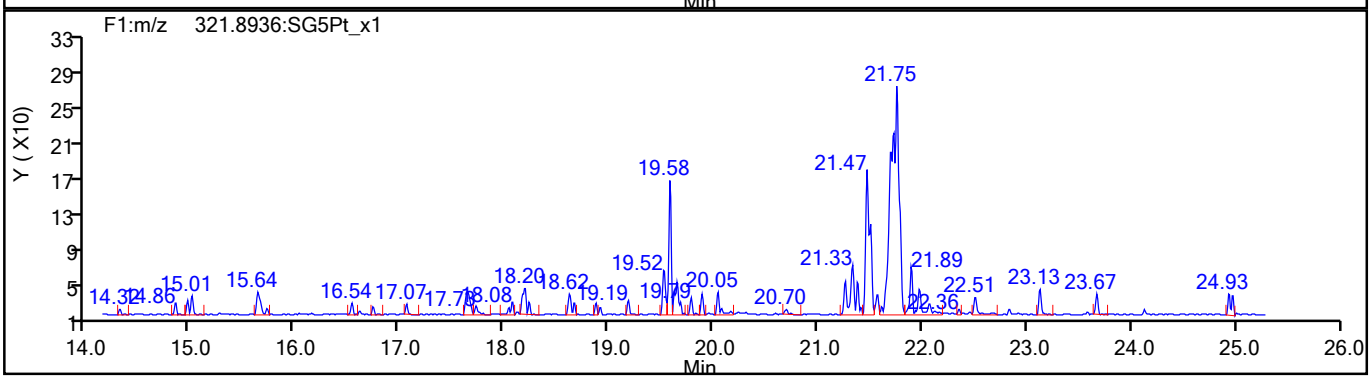

TCDD Standards

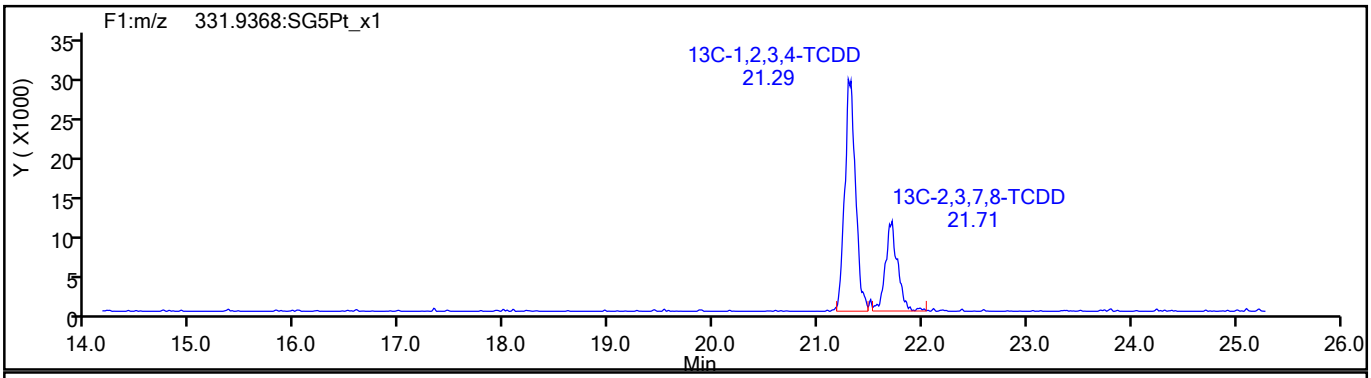

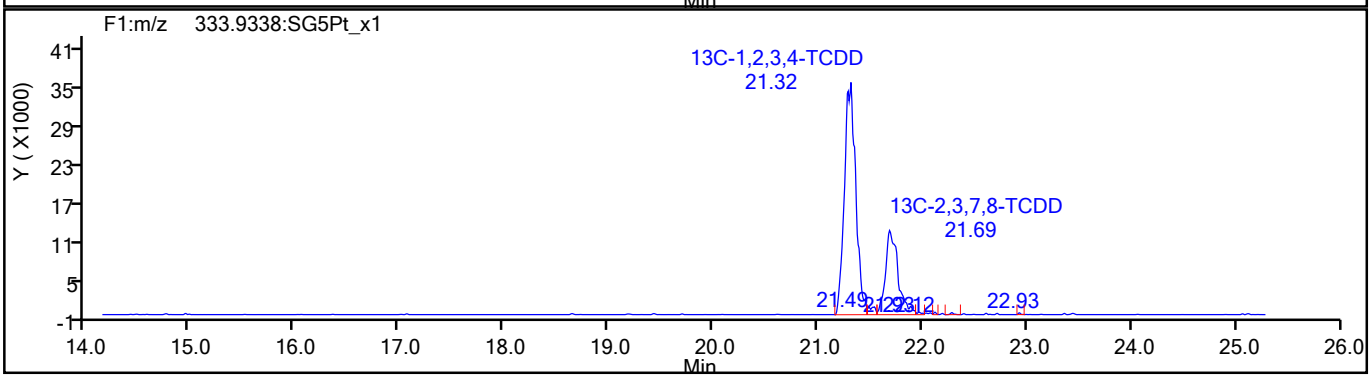

788331

Report Date: 23-Aug-2021 09:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

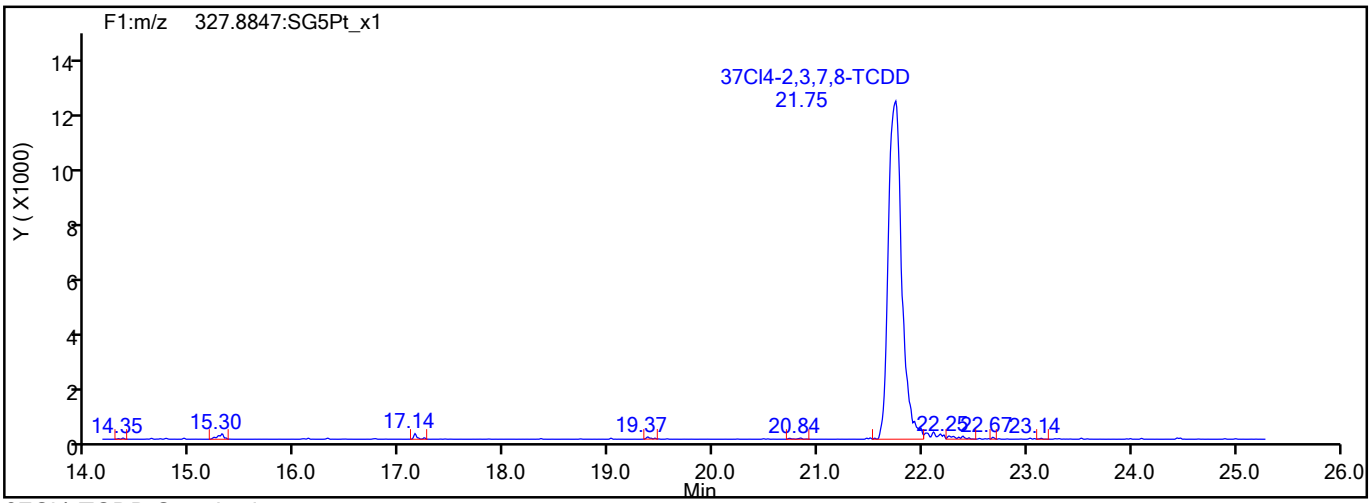

37Cl4-TCDD Standards

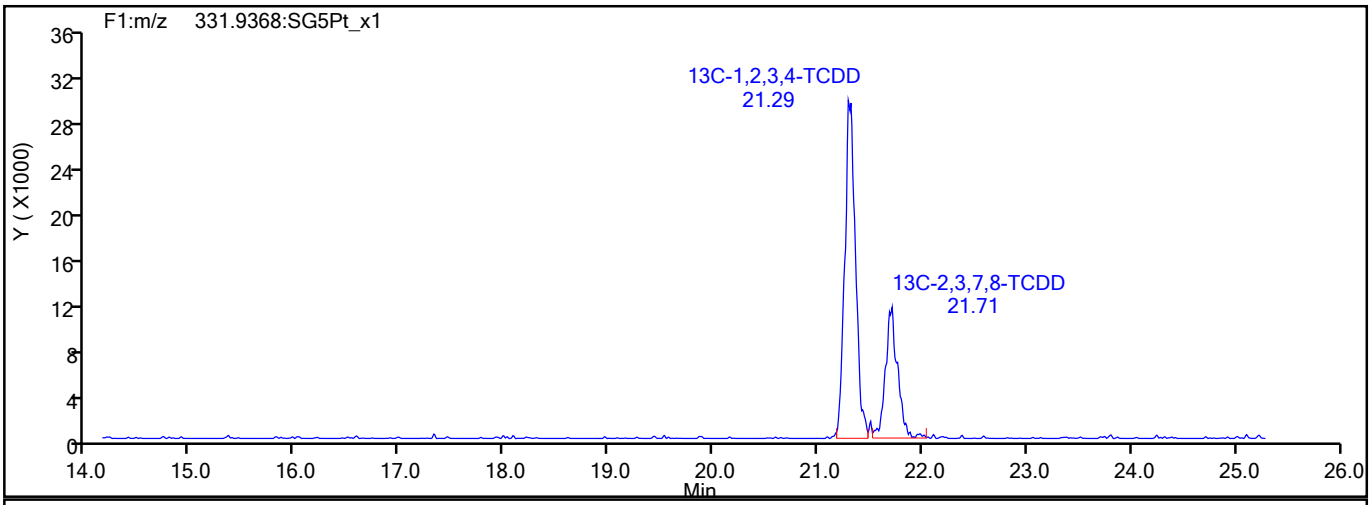

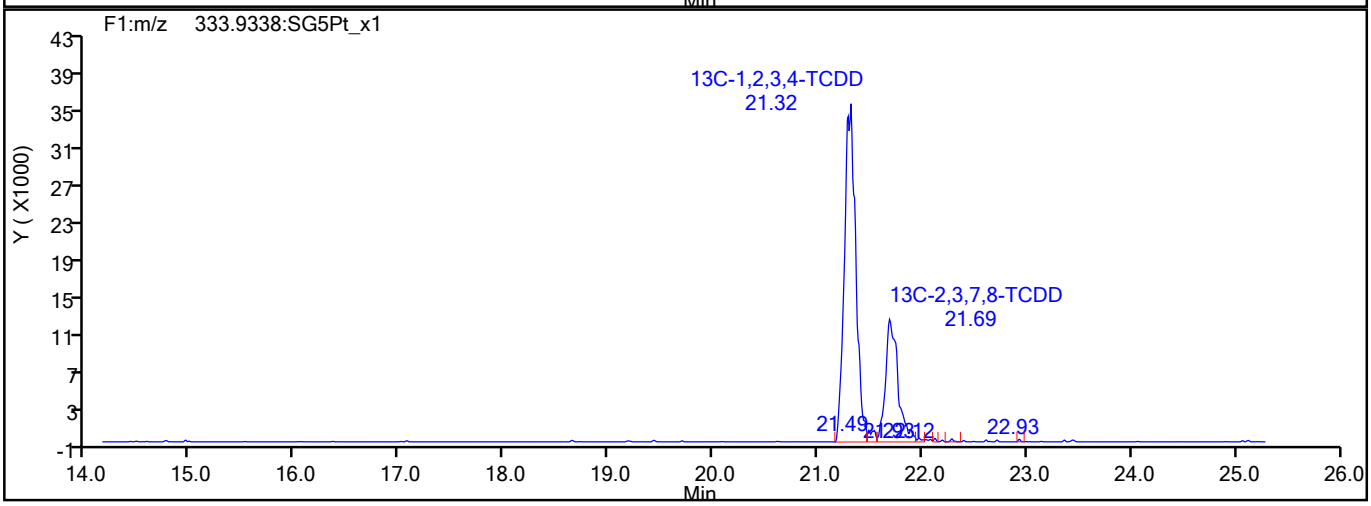

788332

Report Date: 23-Aug-2021 09:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

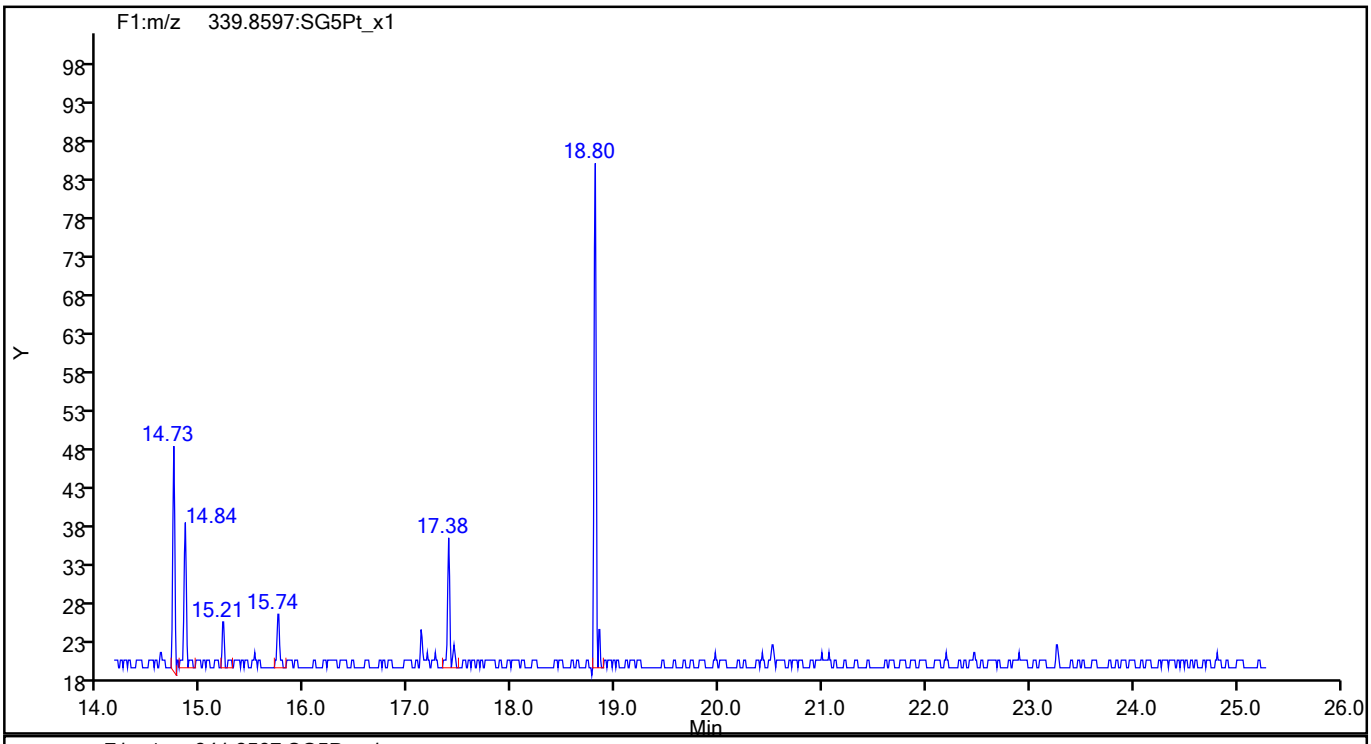

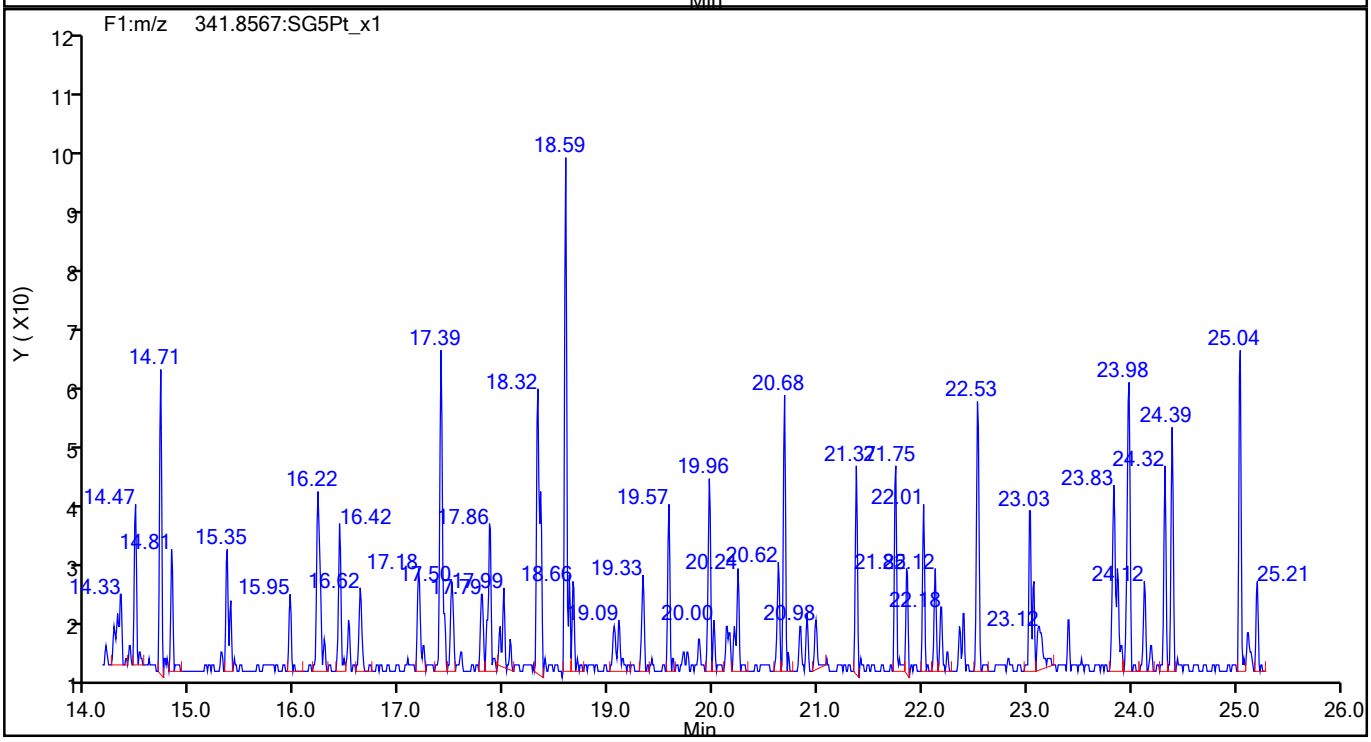

788333

Report Date: 23-Aug-2021 09:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

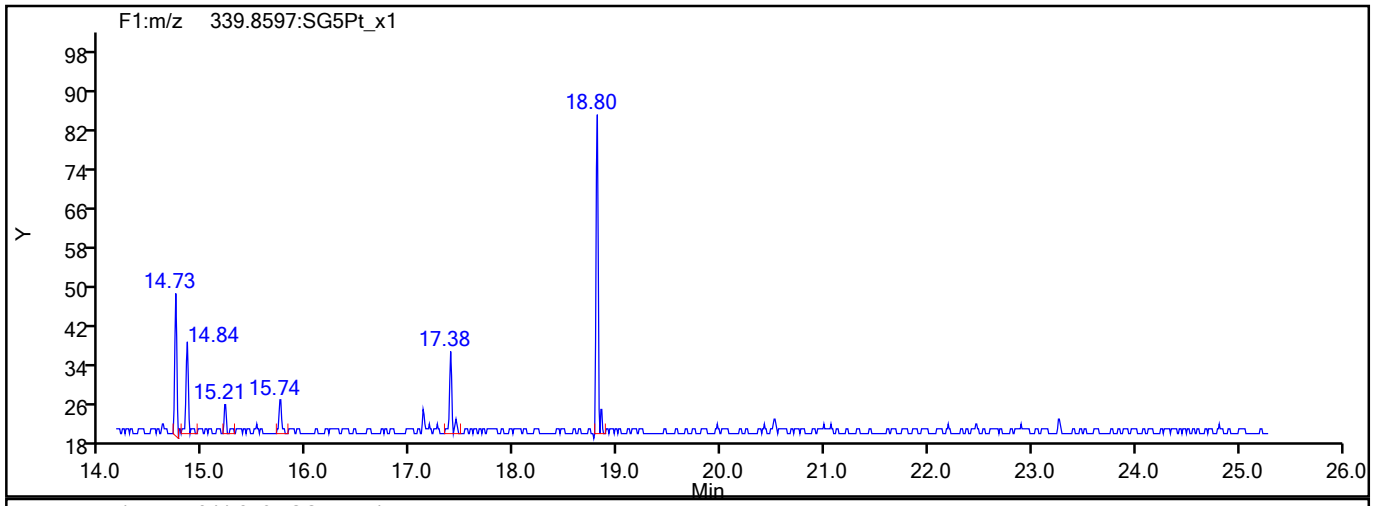

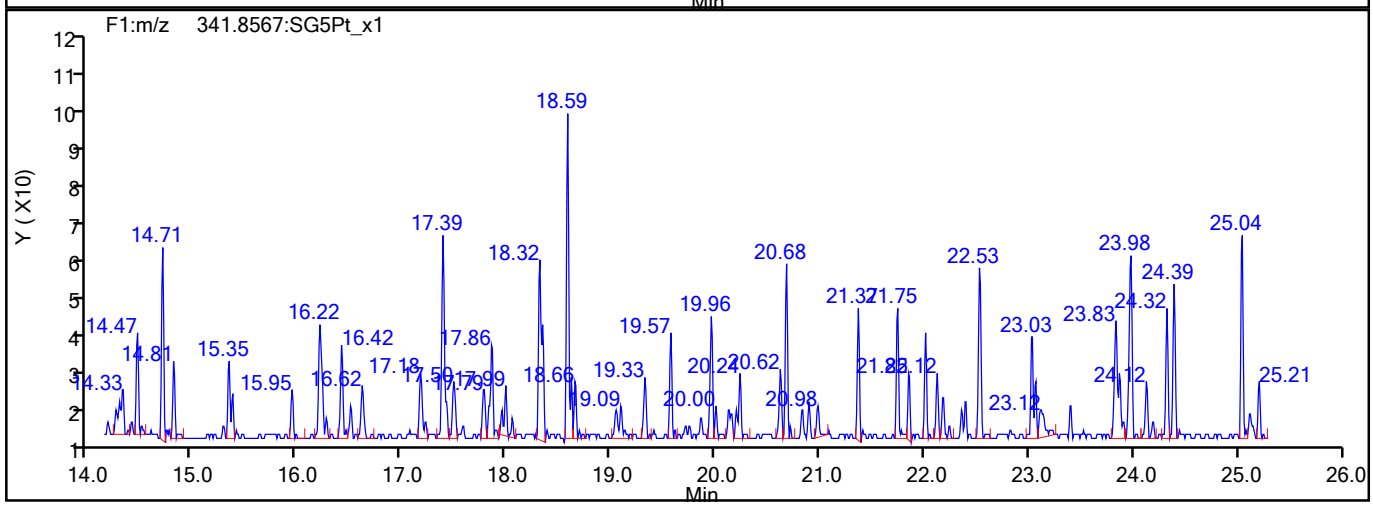

F1 PeCDFs Interference Mass

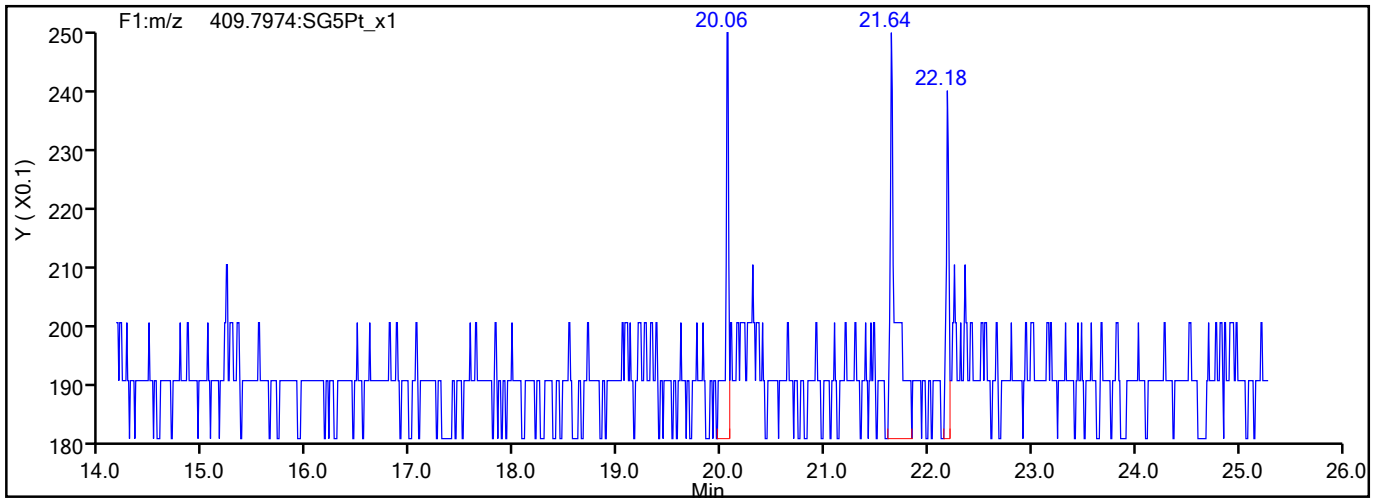

788334

Report Date: 23-Aug-2021 09:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

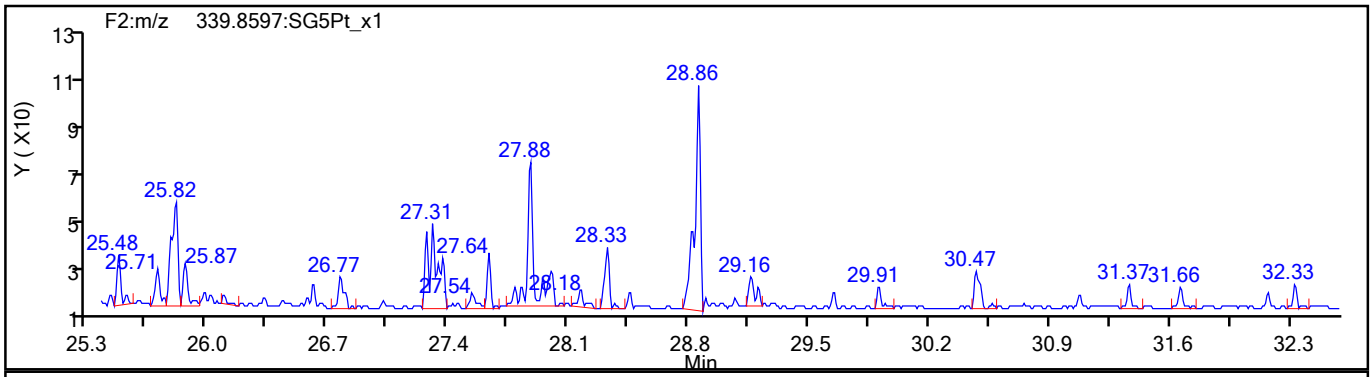

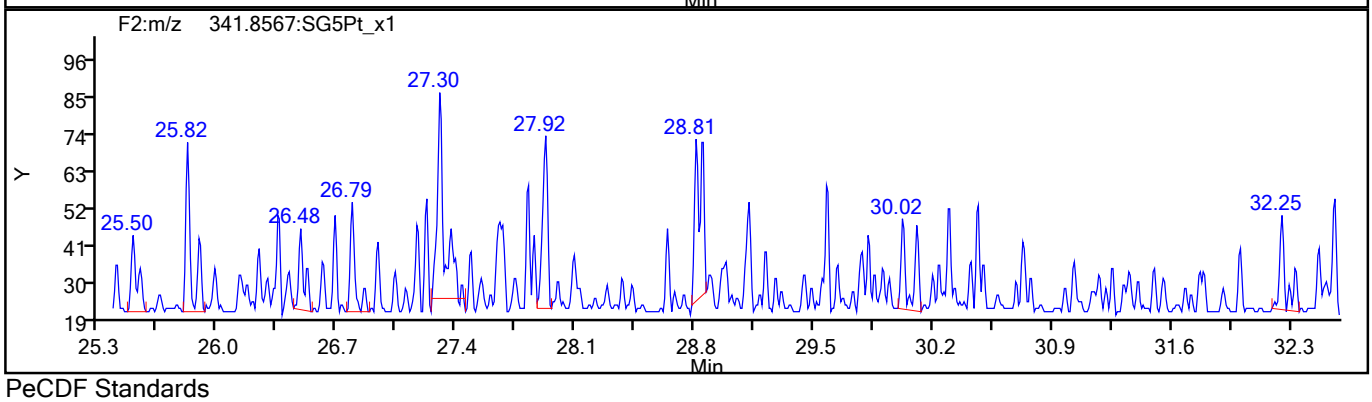

PeCDF Standards

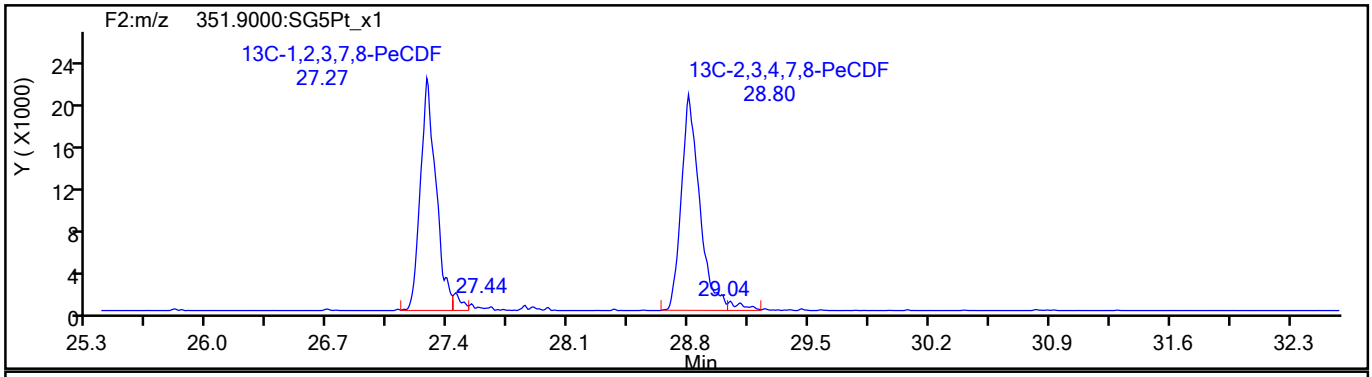

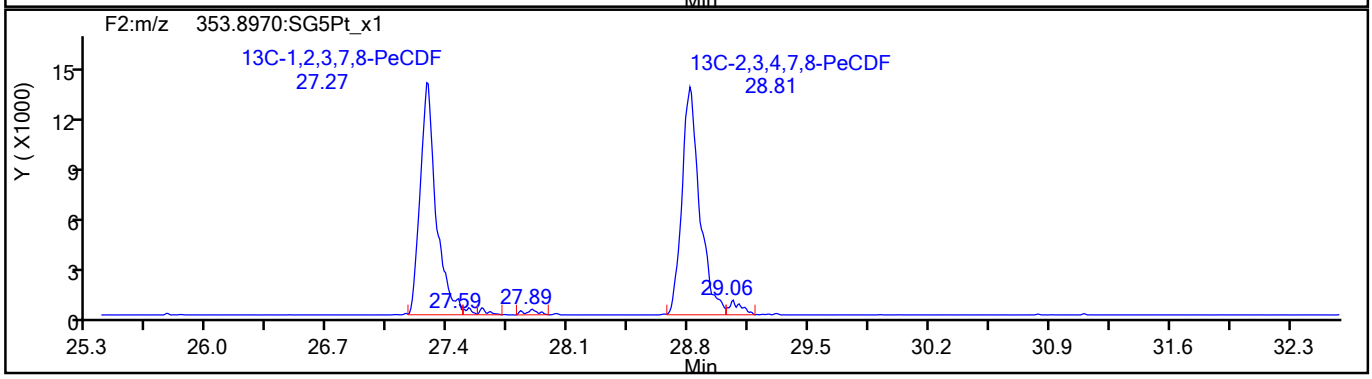

788335

Report Date: 23-Aug-2021 09:03:55 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

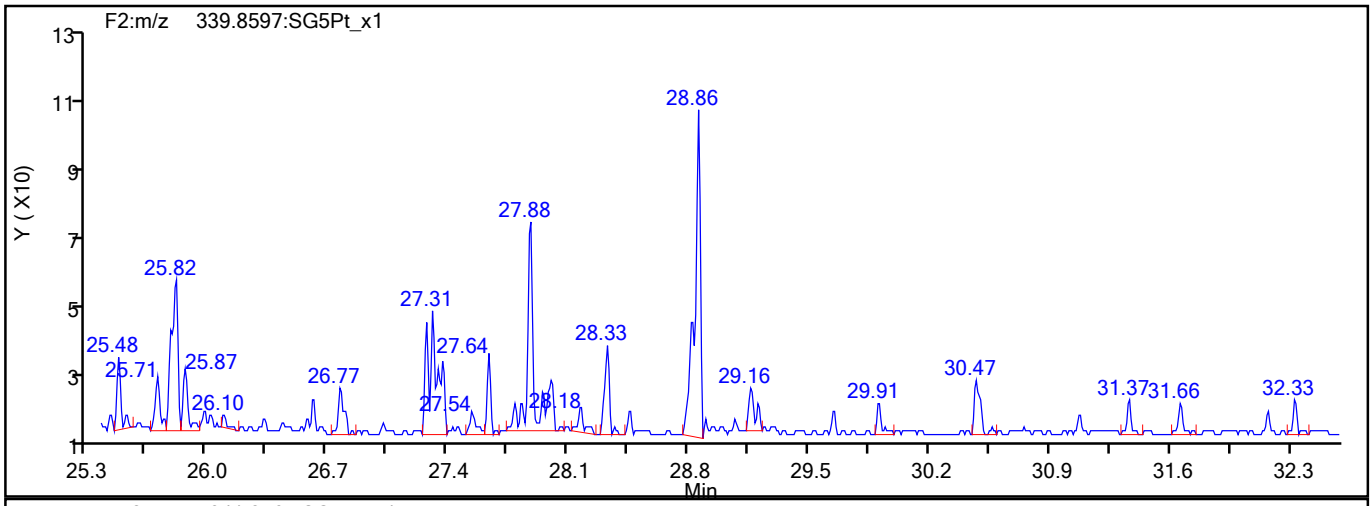

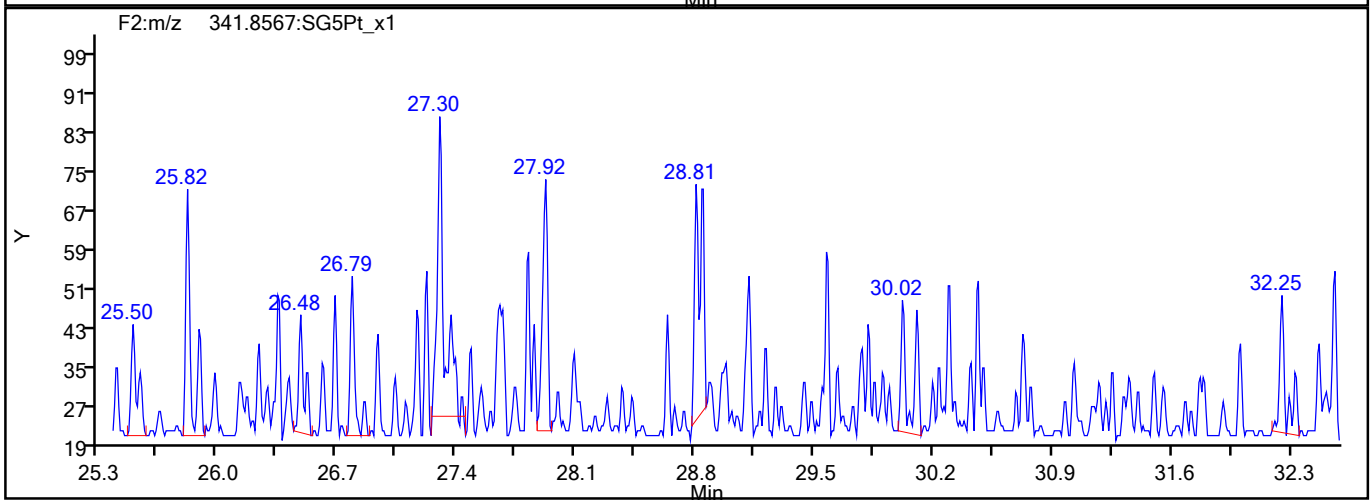

PeCDF Interference Mass

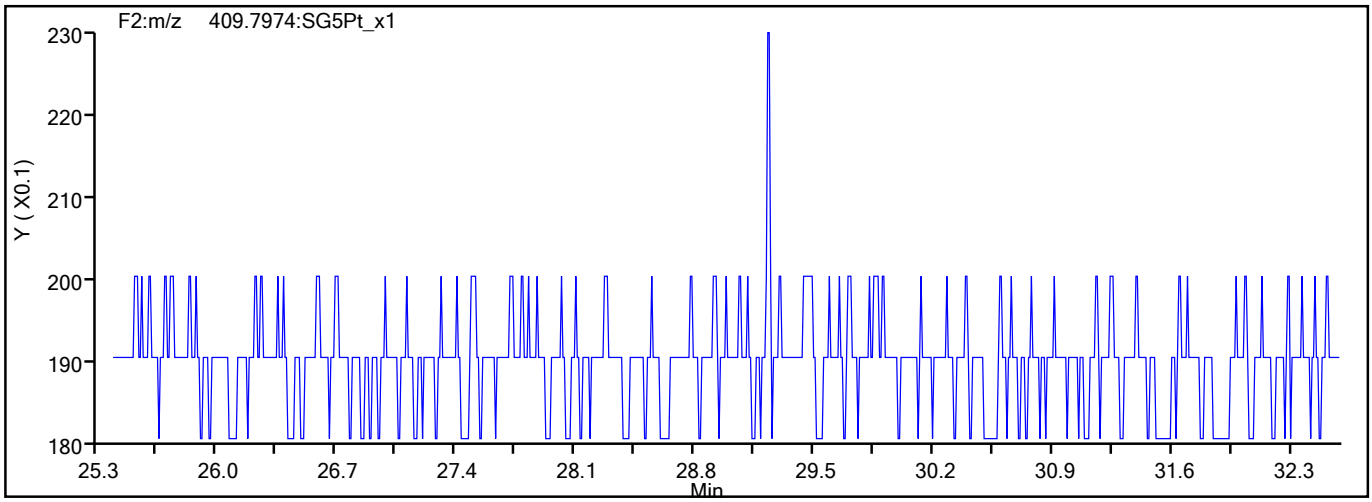

788336

Report Date: 23-Aug-2021 09:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

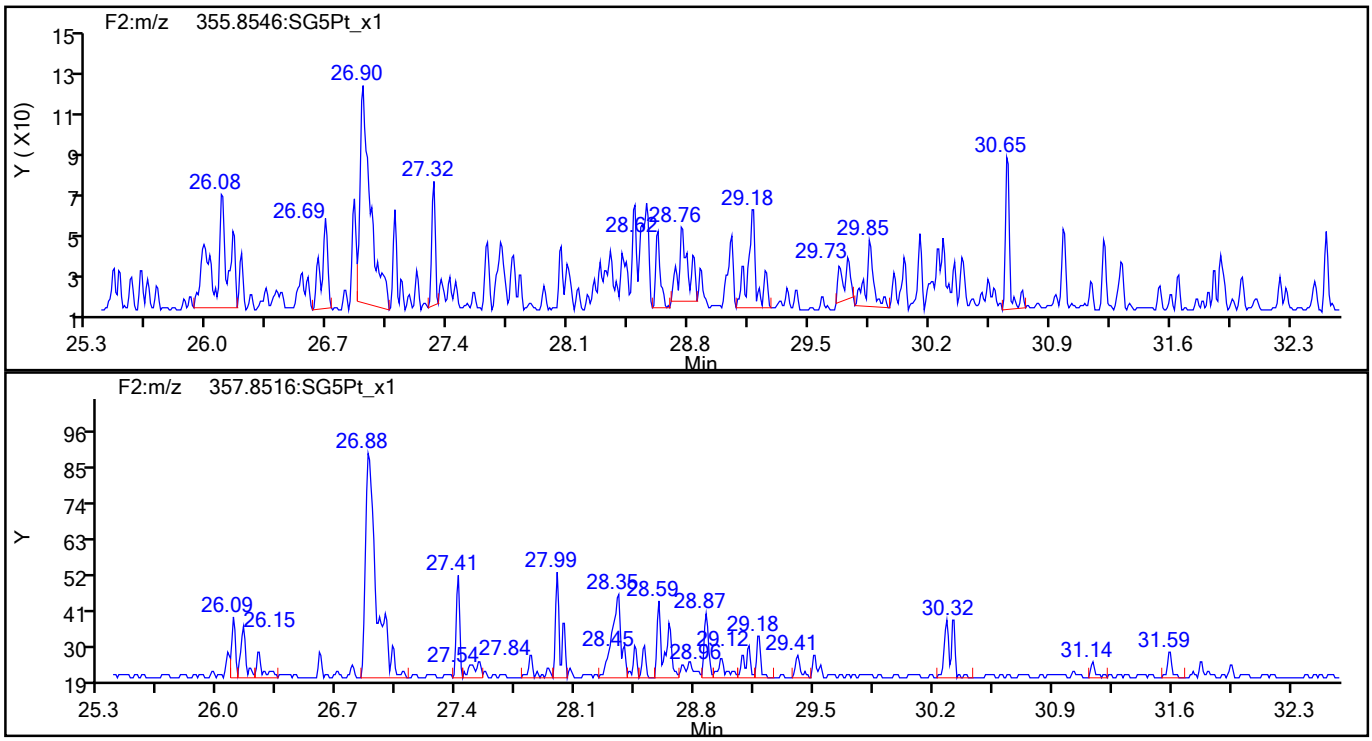

PeCDD Standards

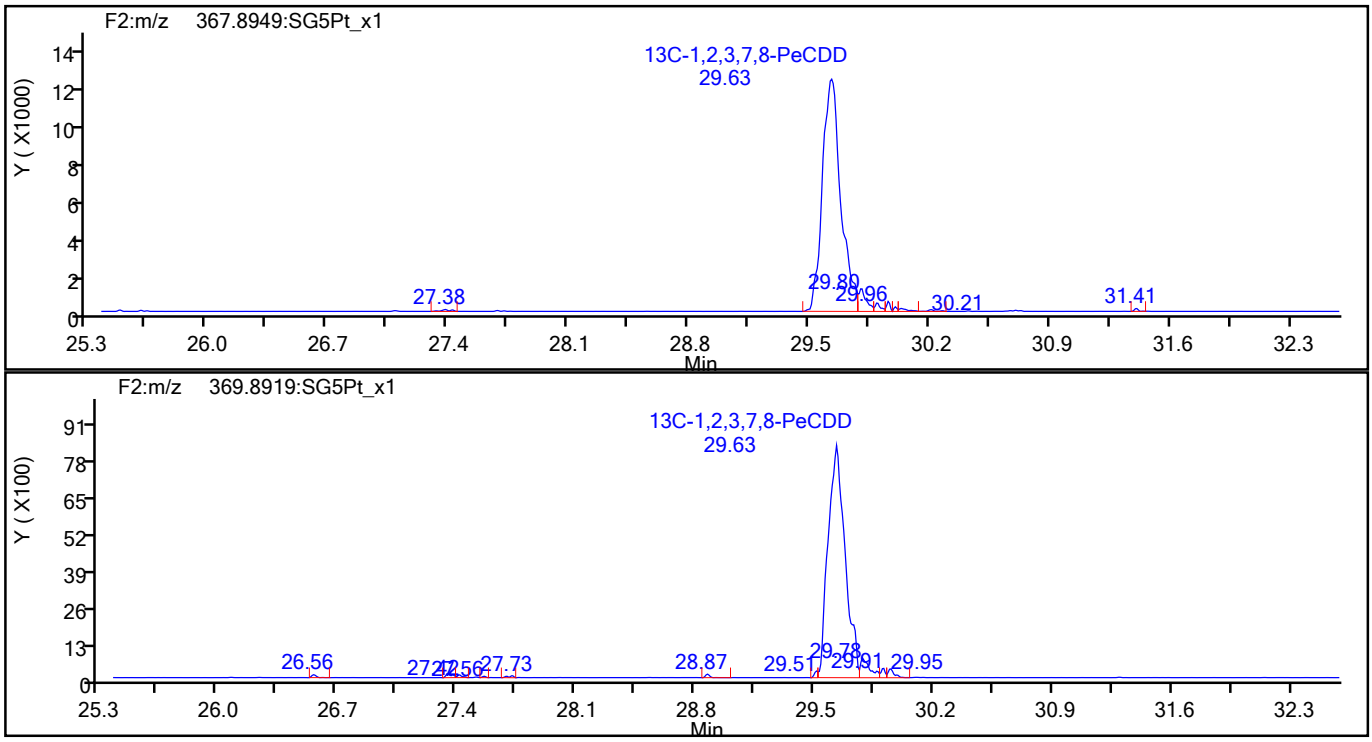

788337

Report Date: 23-Aug-2021 09:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

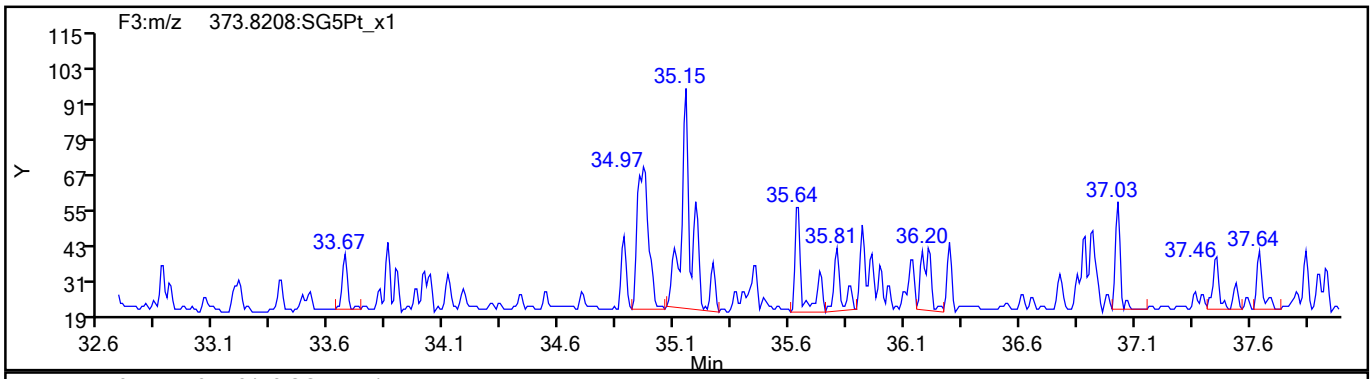

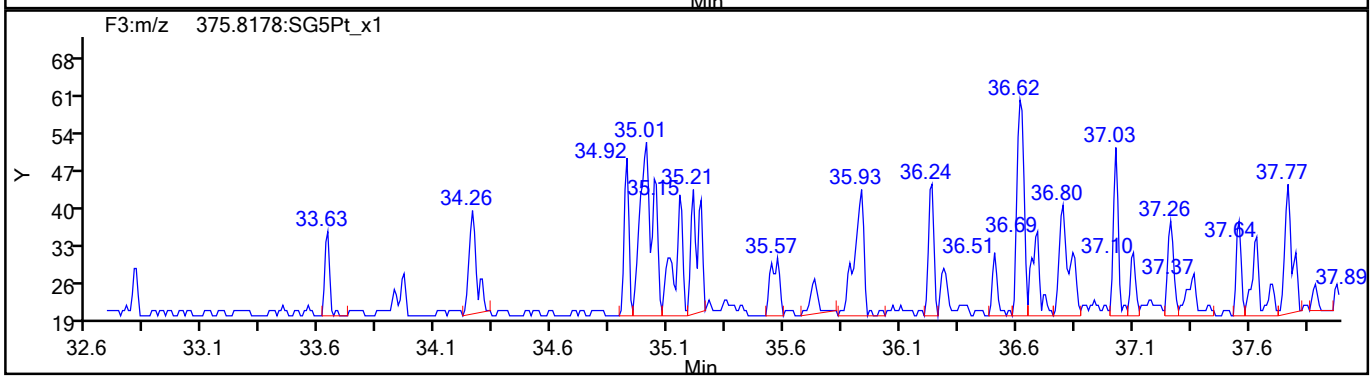

HxCDF Standards

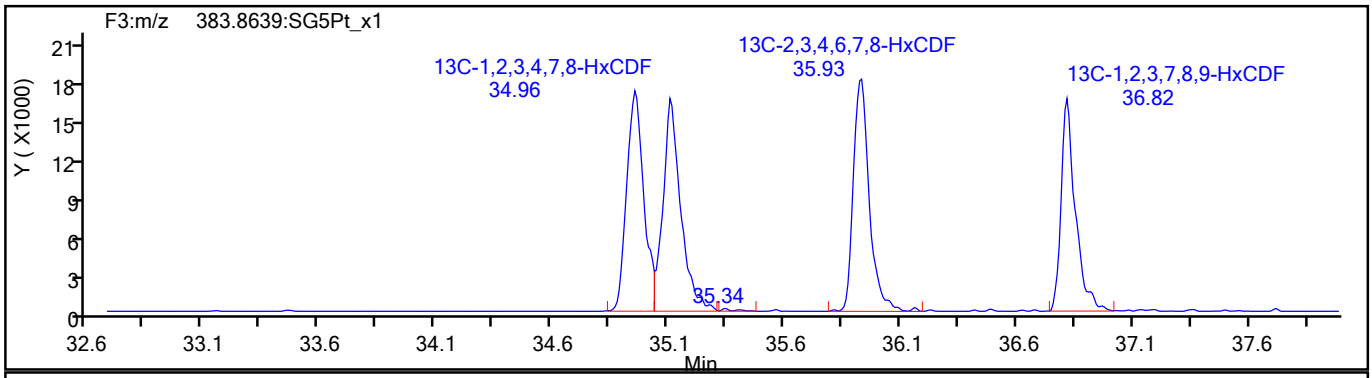

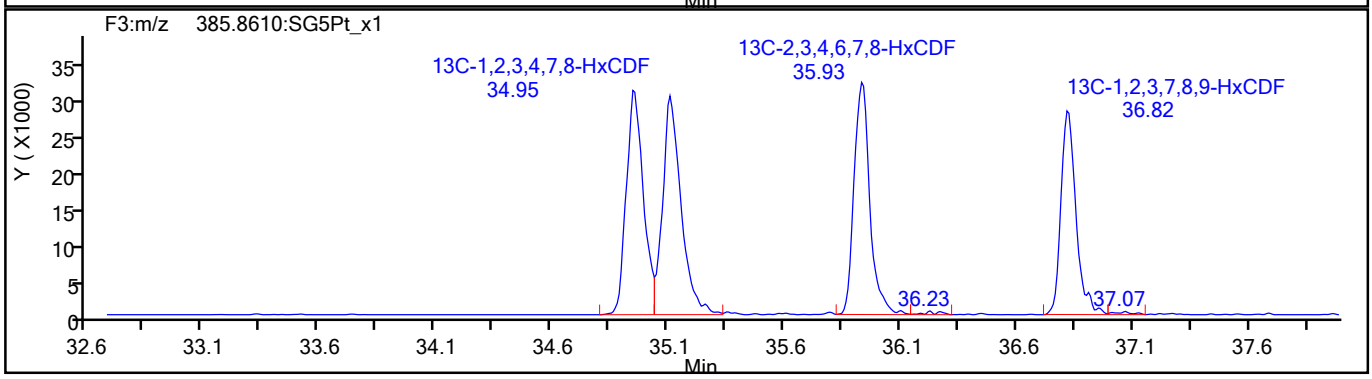

788338

Report Date: 23-Aug-2021 09:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

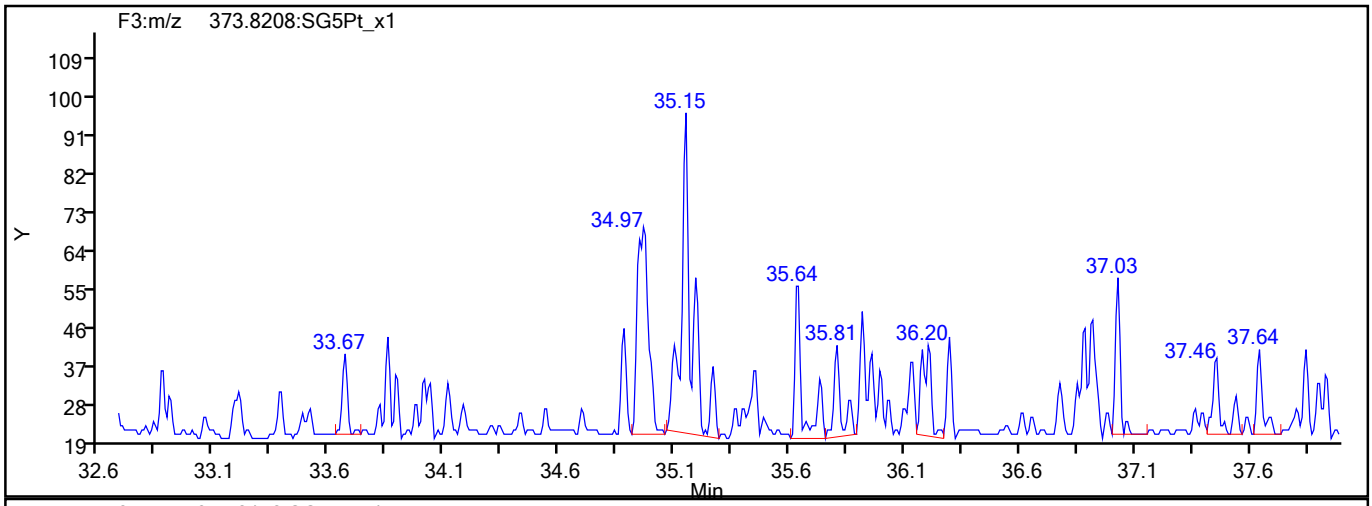

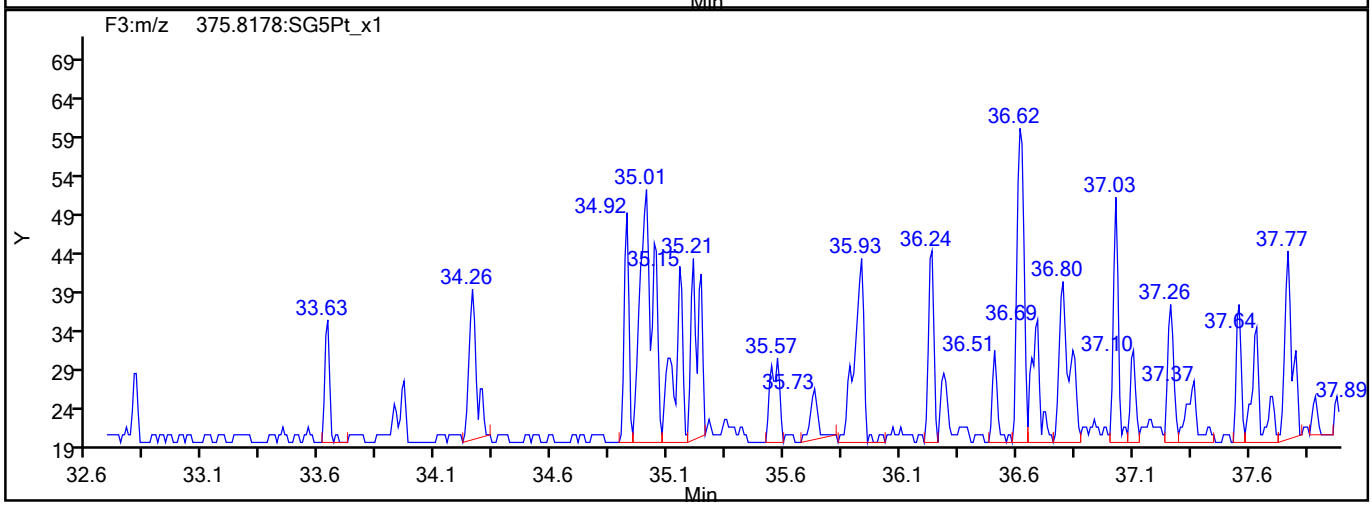

HxCDF Interference Mass

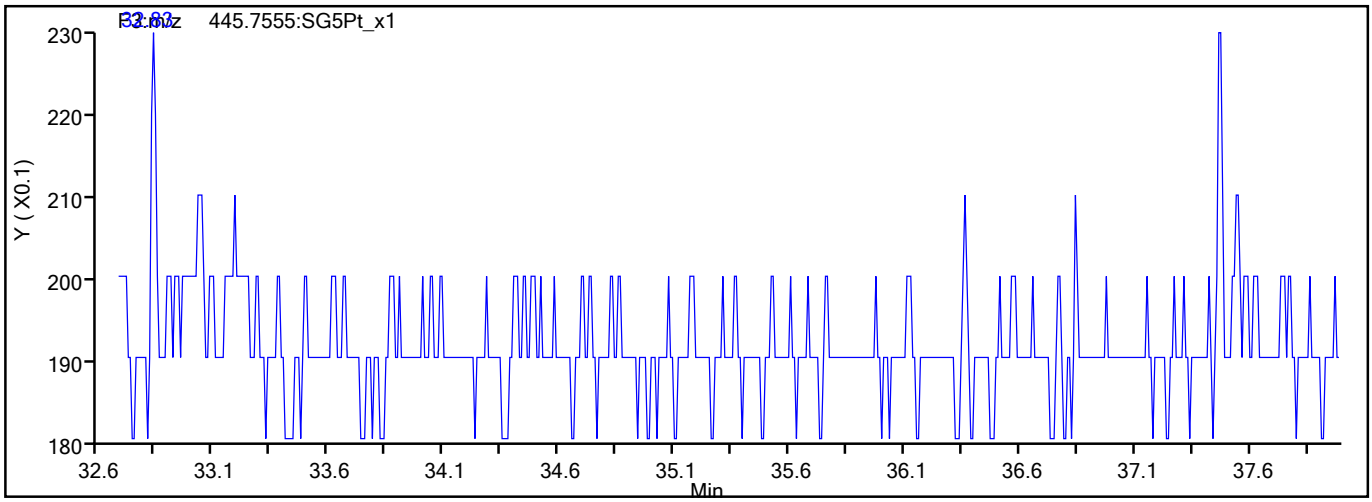

788339

Report Date: 23-Aug-2021 09:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

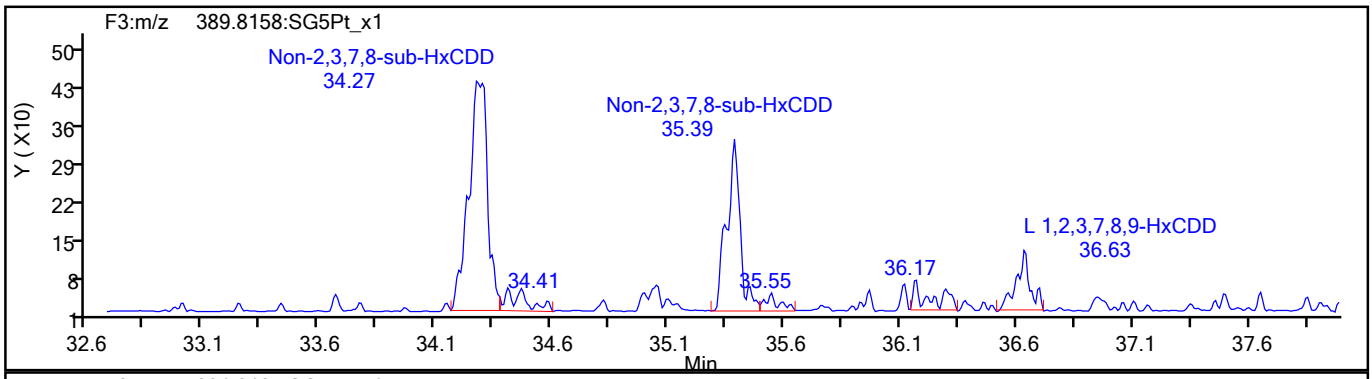

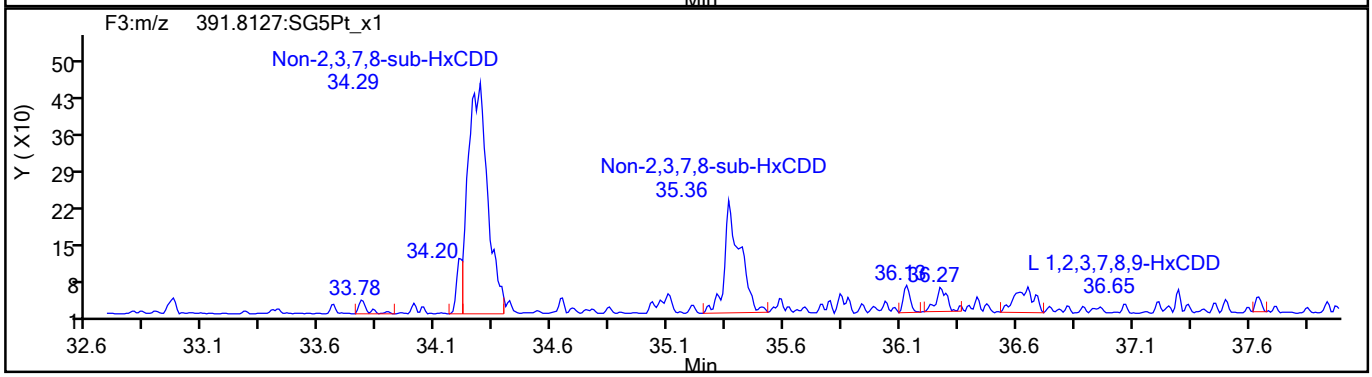

HxCDD Standards

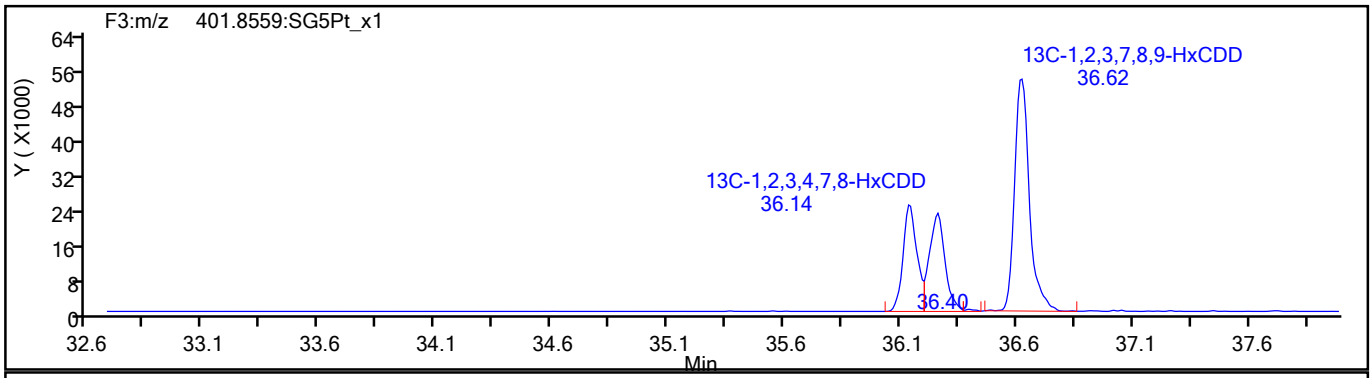

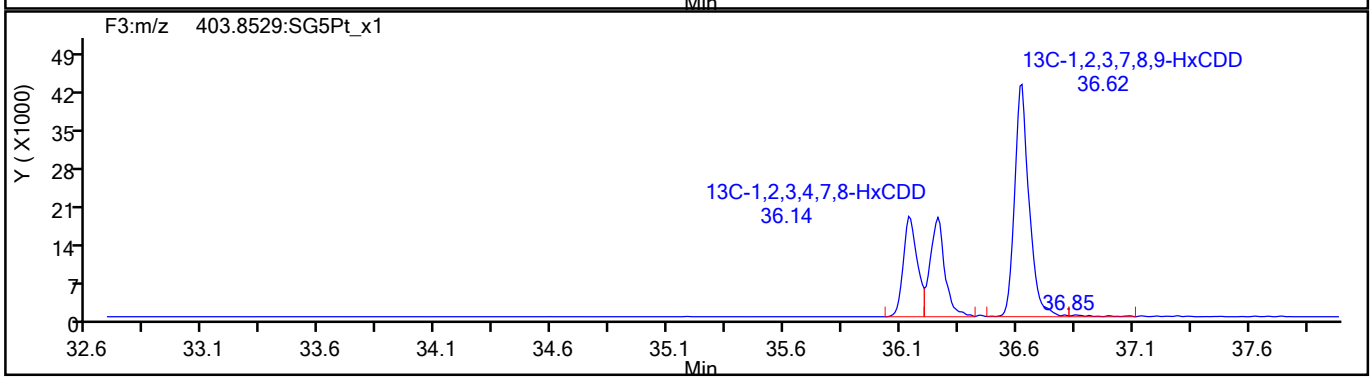

788340

Report Date: 23-Aug-2021 09:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

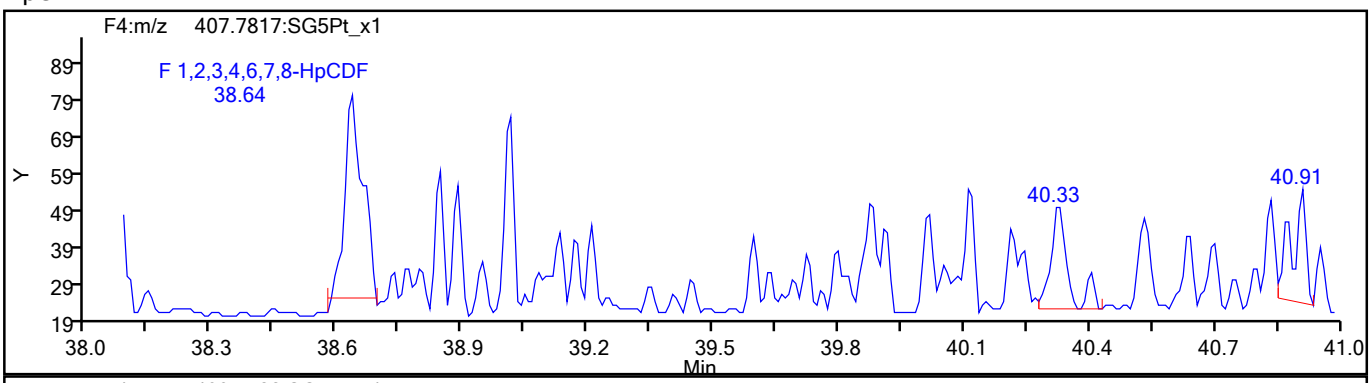

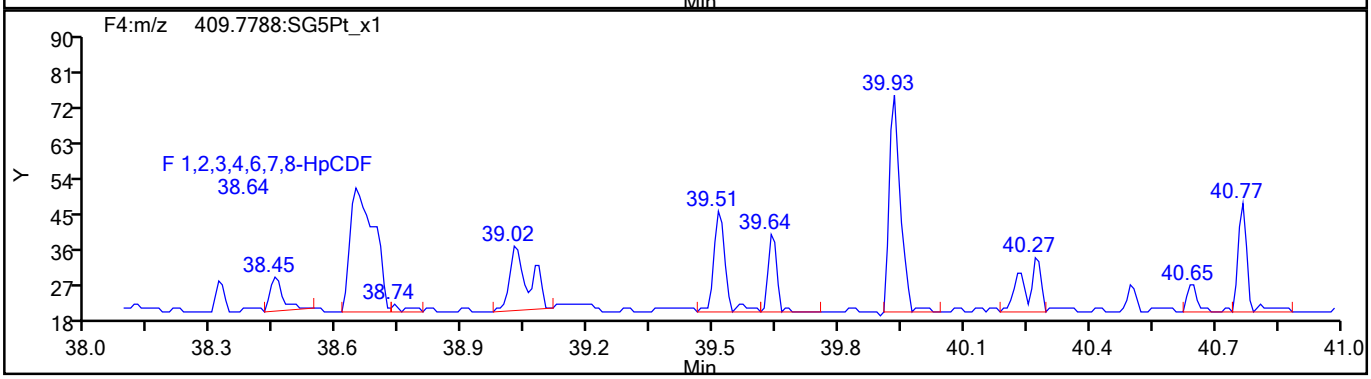

HpCDF Standards

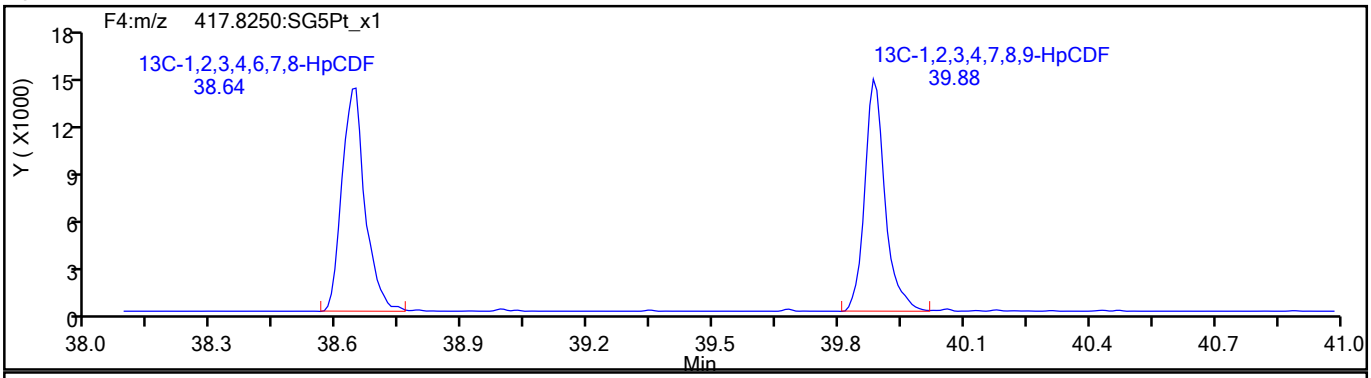

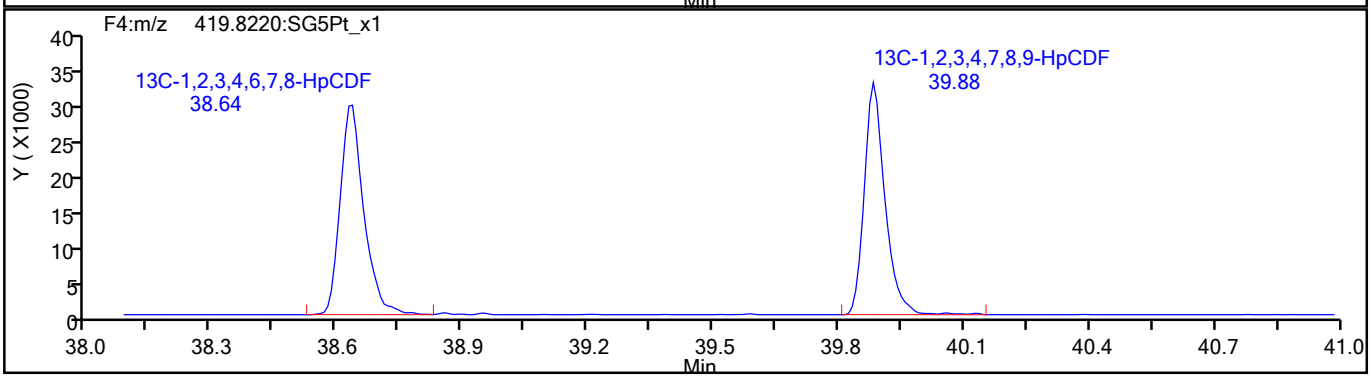

788341

Report Date: 23-Aug-2021 09:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
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HpCDF

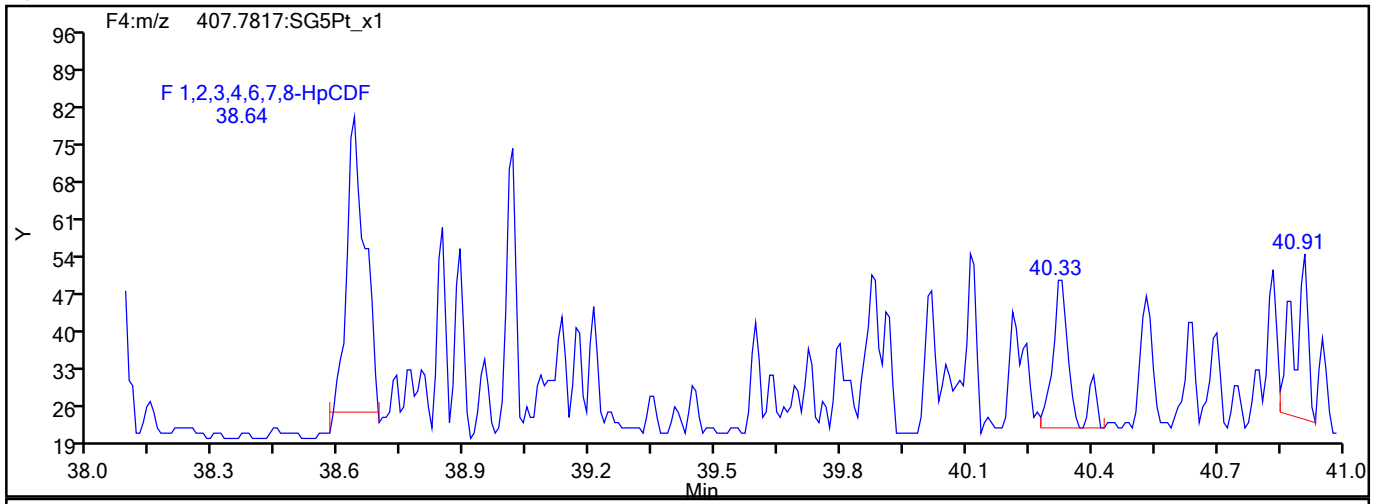

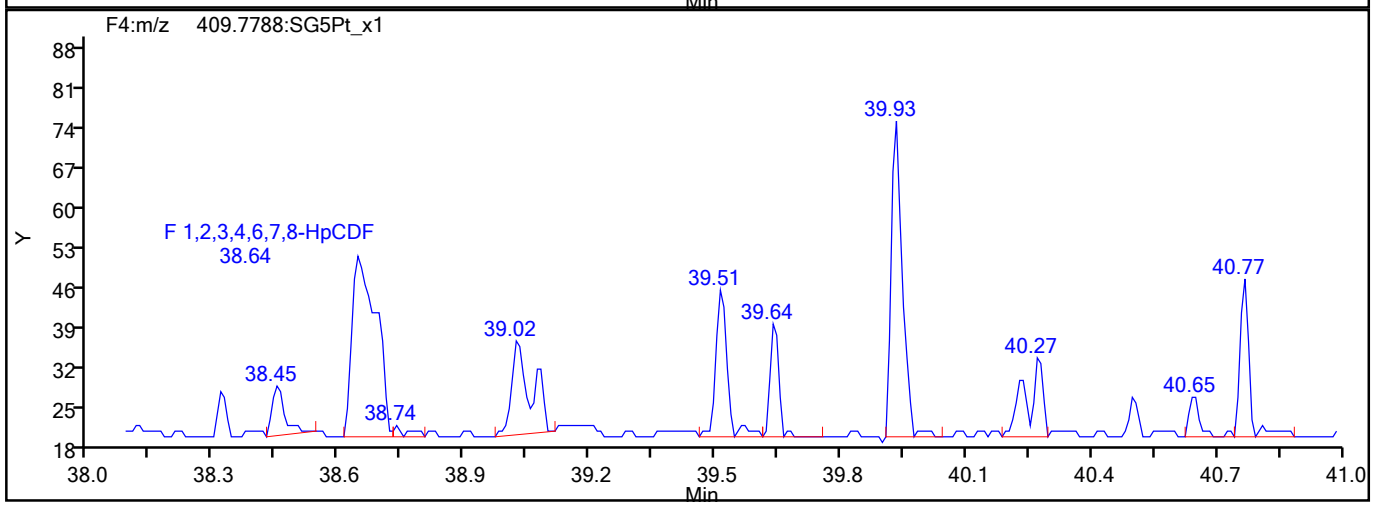

HpCDF Interference Mass

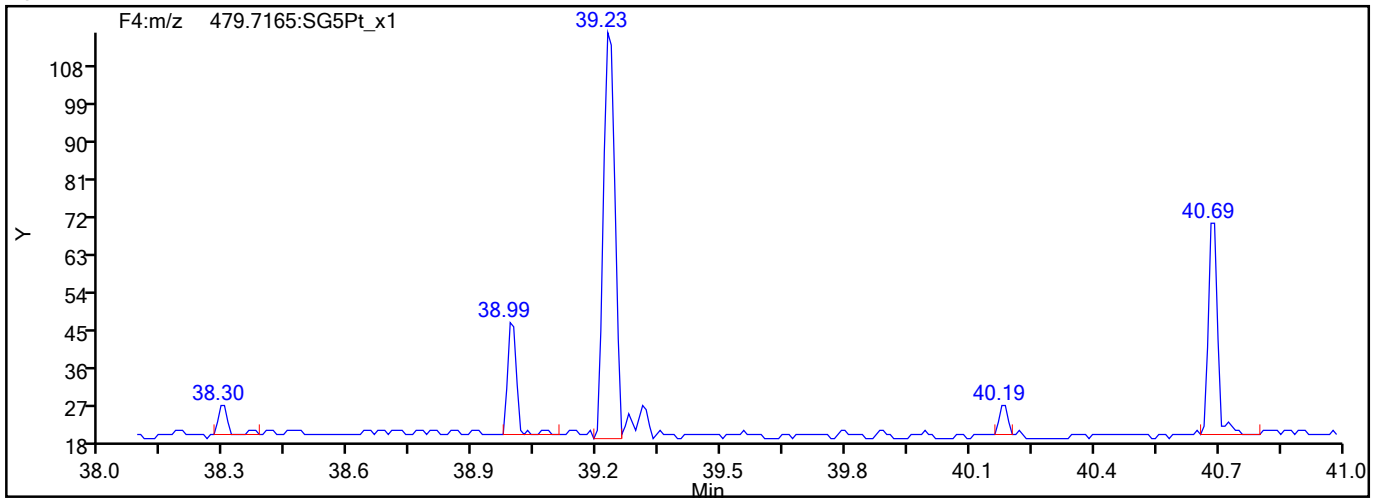

788342

Report Date: 23-Aug-2021 09:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

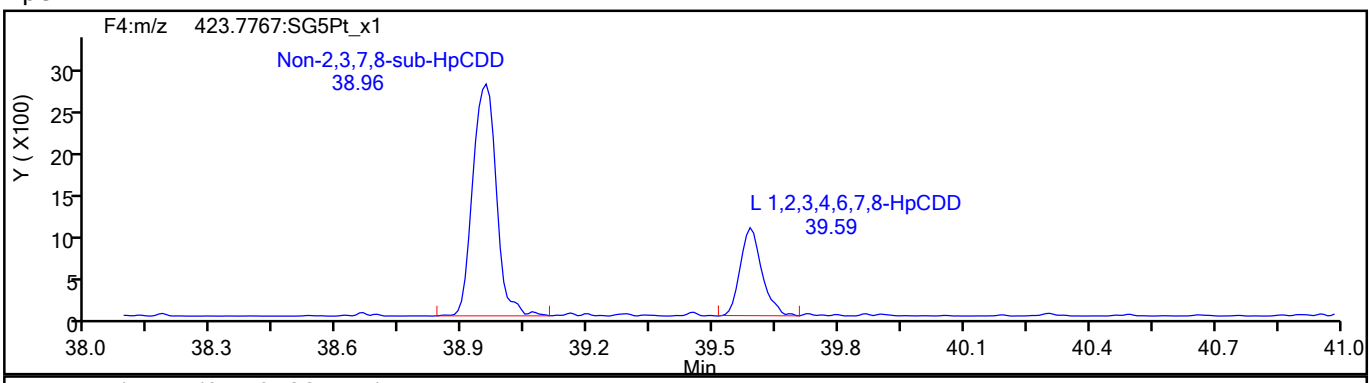

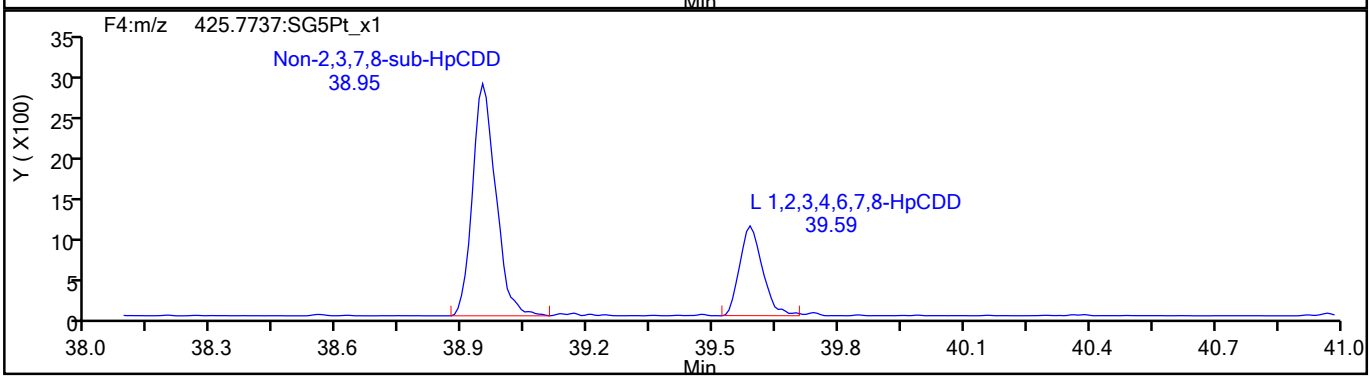

HpCDD Standards

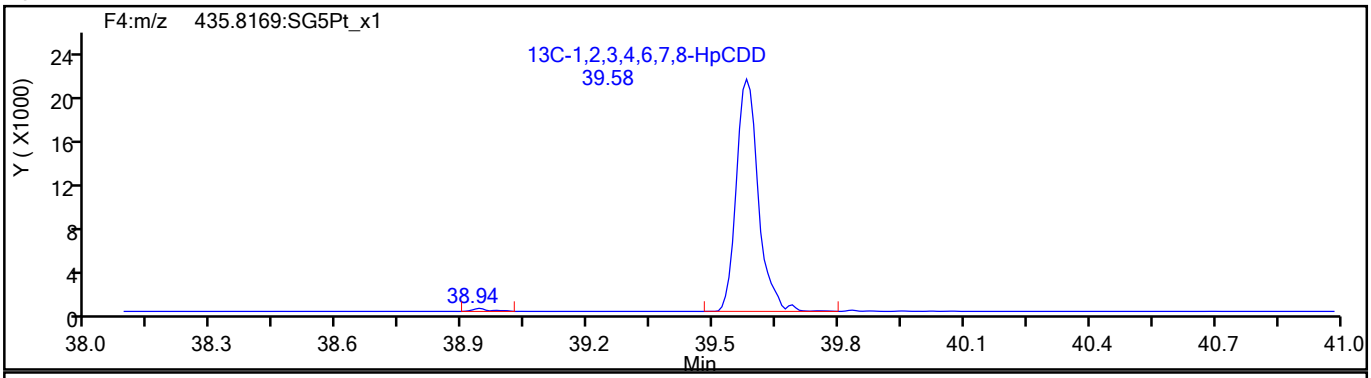

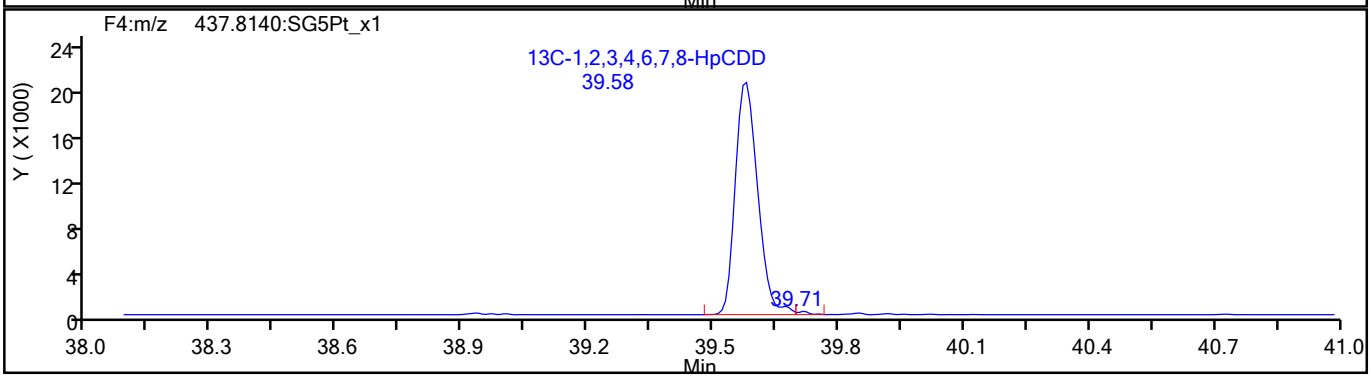

788343

Report Date: 23-Aug-2021 09:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

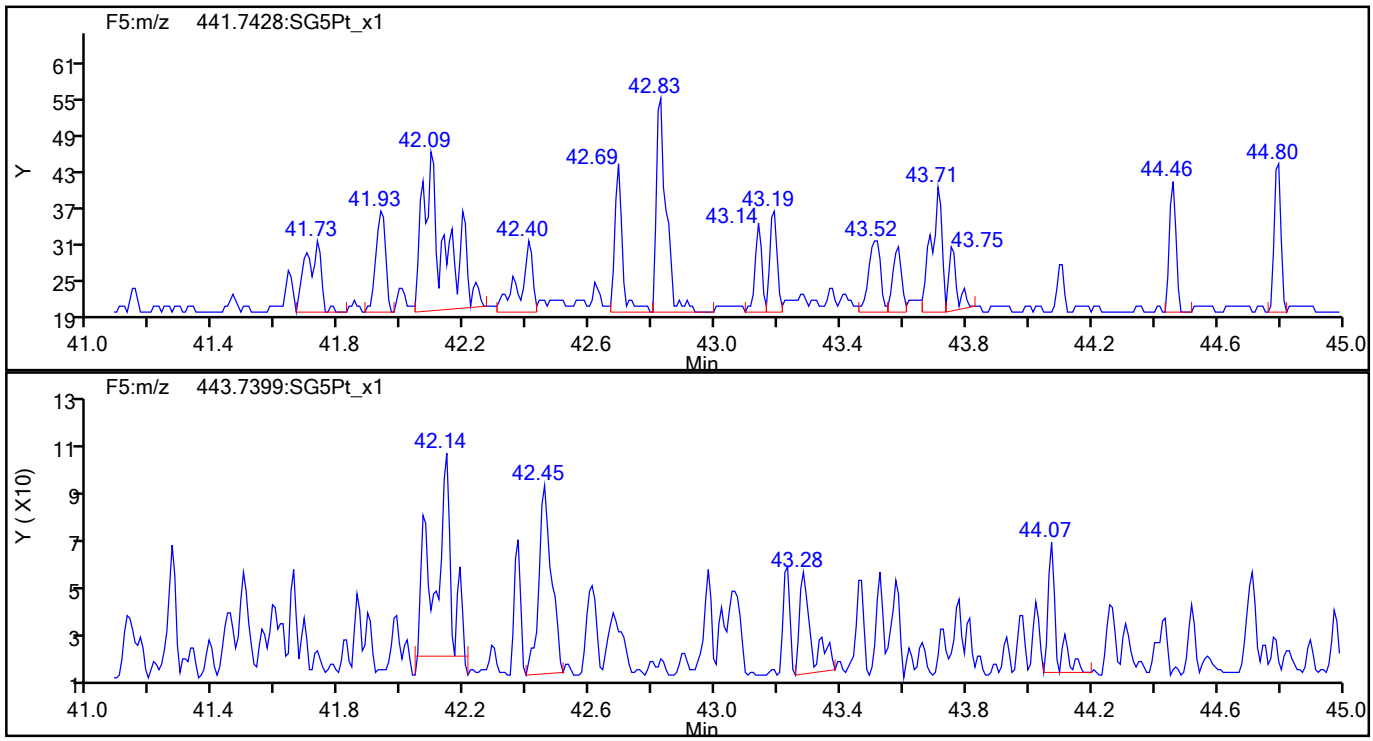

OCDF Standards

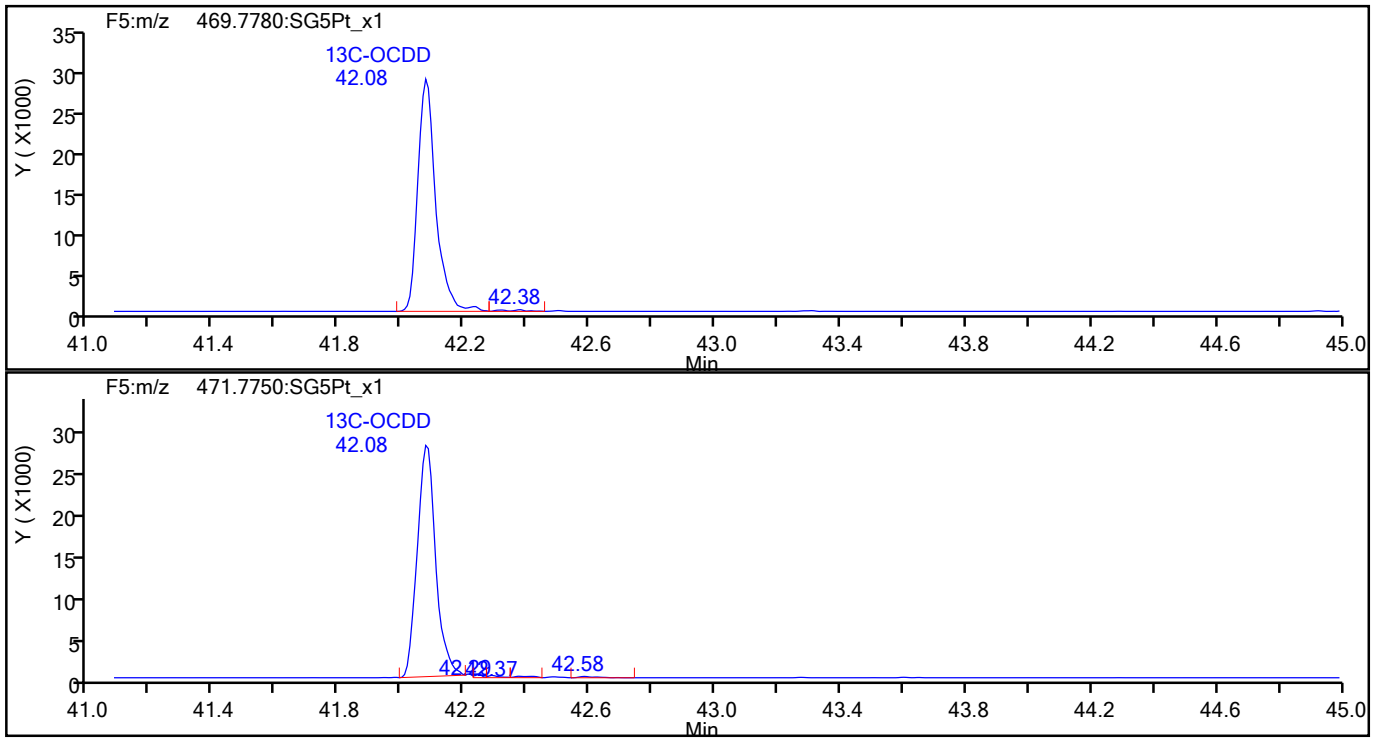

788344

Report Date: 23-Aug-2021 09:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

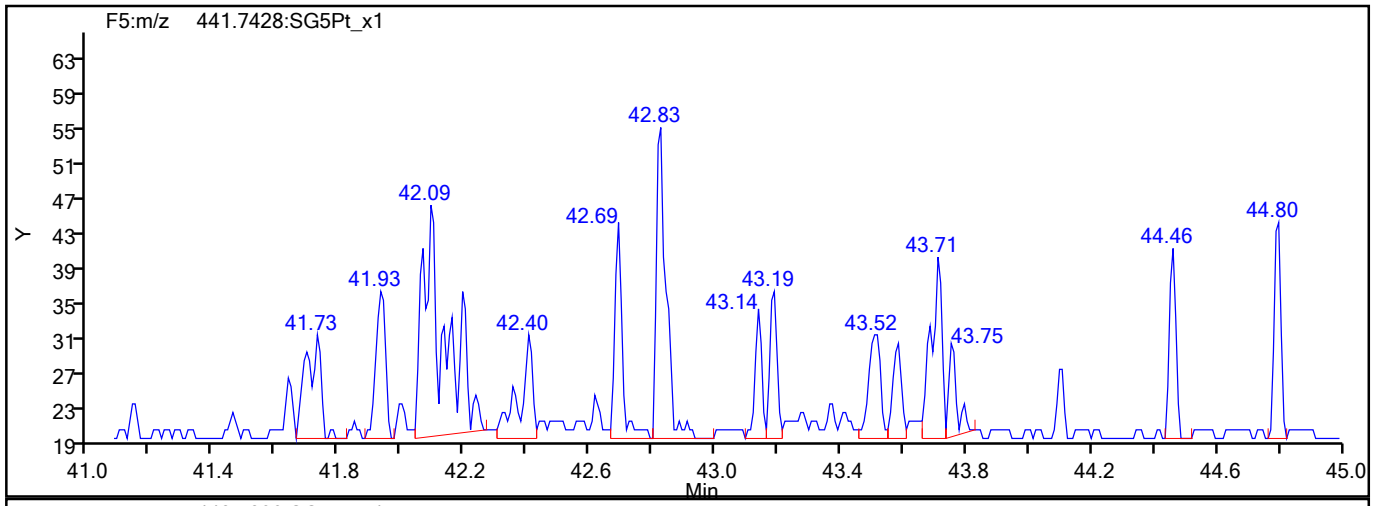

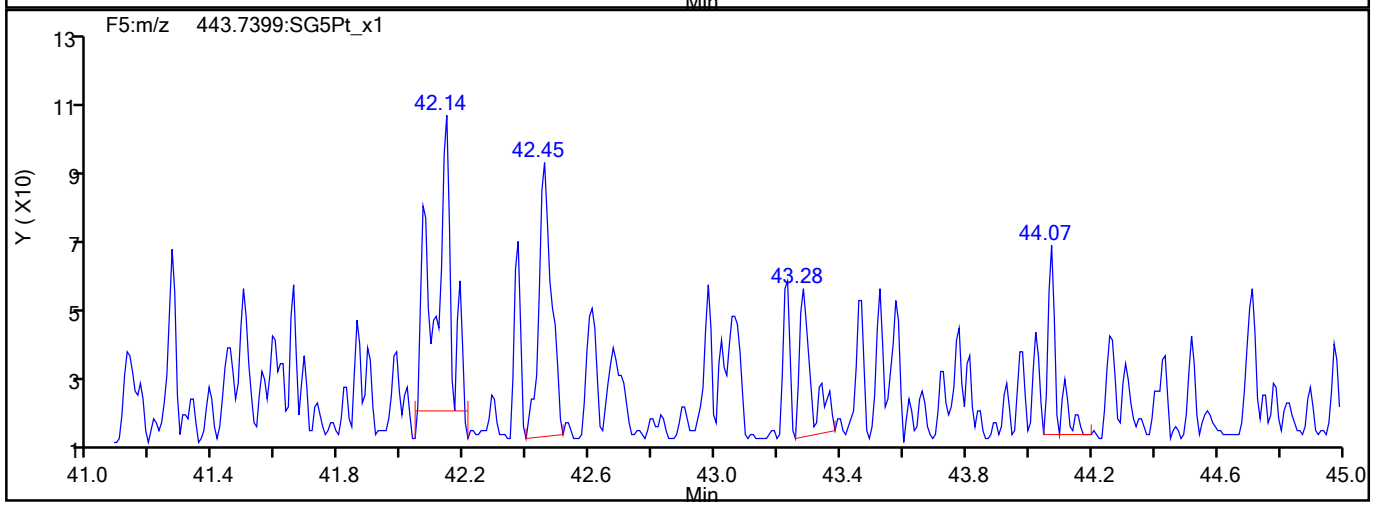

OCDF Interference Mass

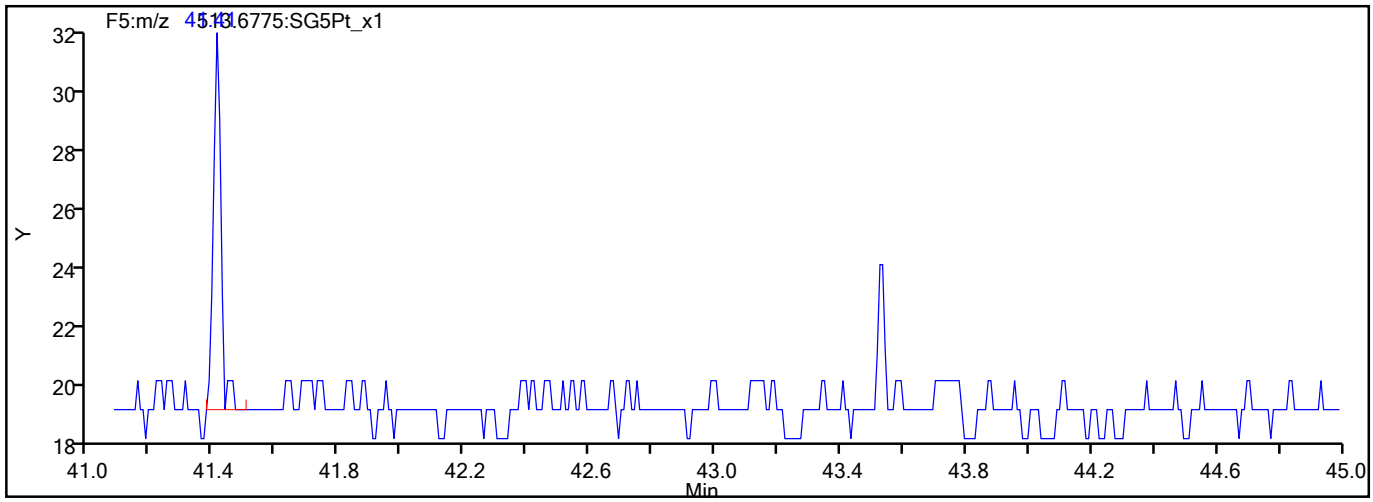

788345

Report Date: 23-Aug-2021 09:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

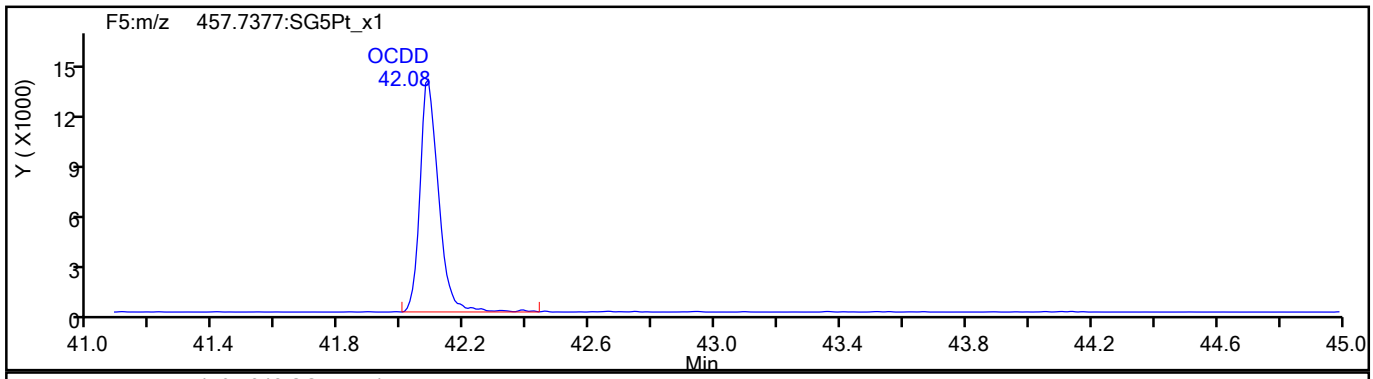

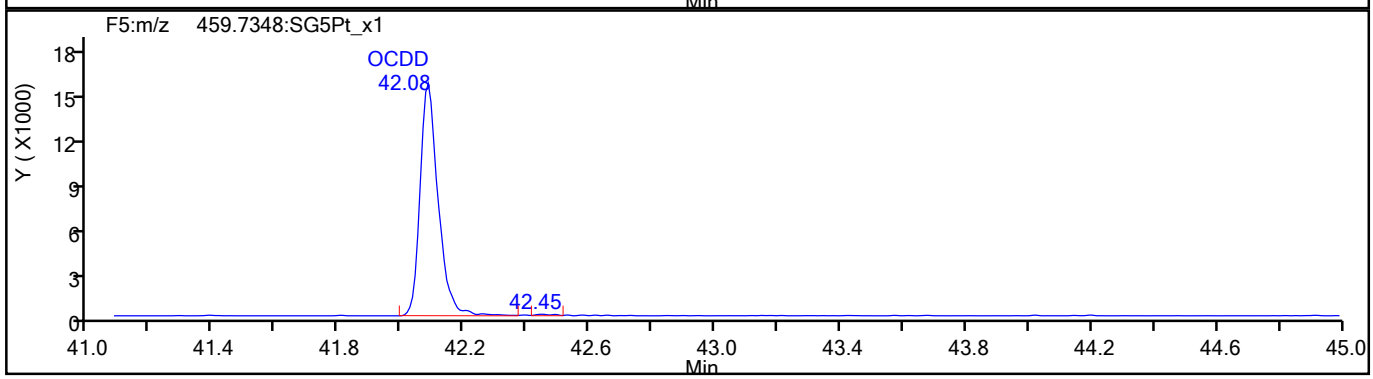

OCDD Standards

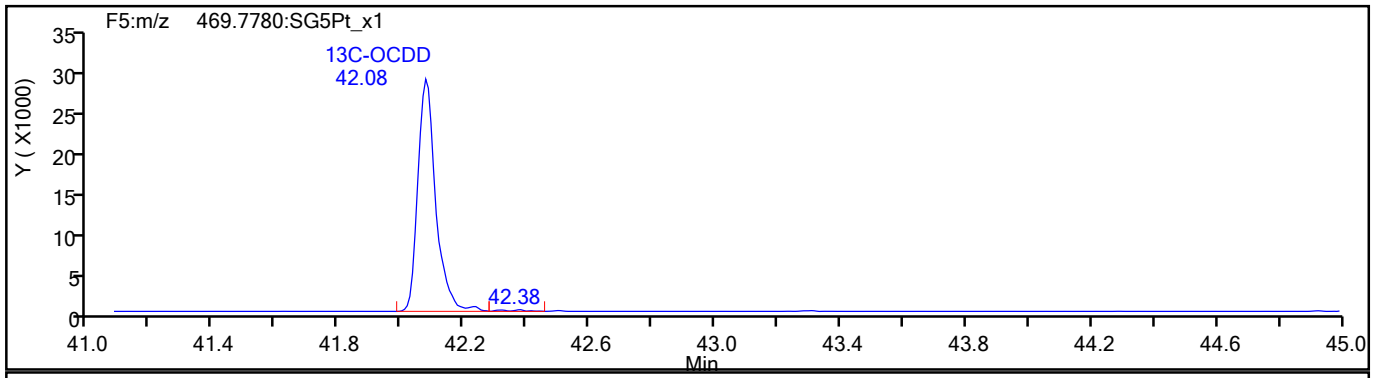

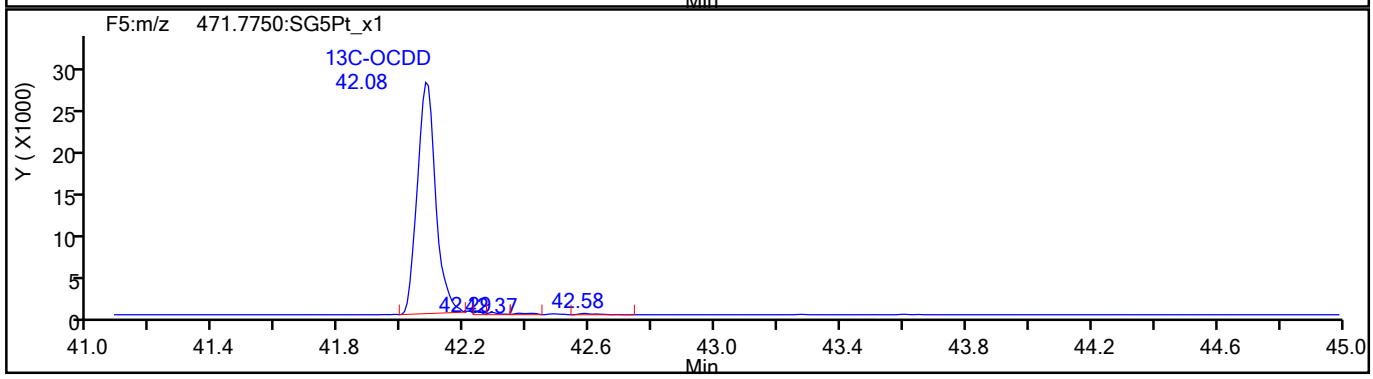

788346

Report Date: 23-Aug-2021 09:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

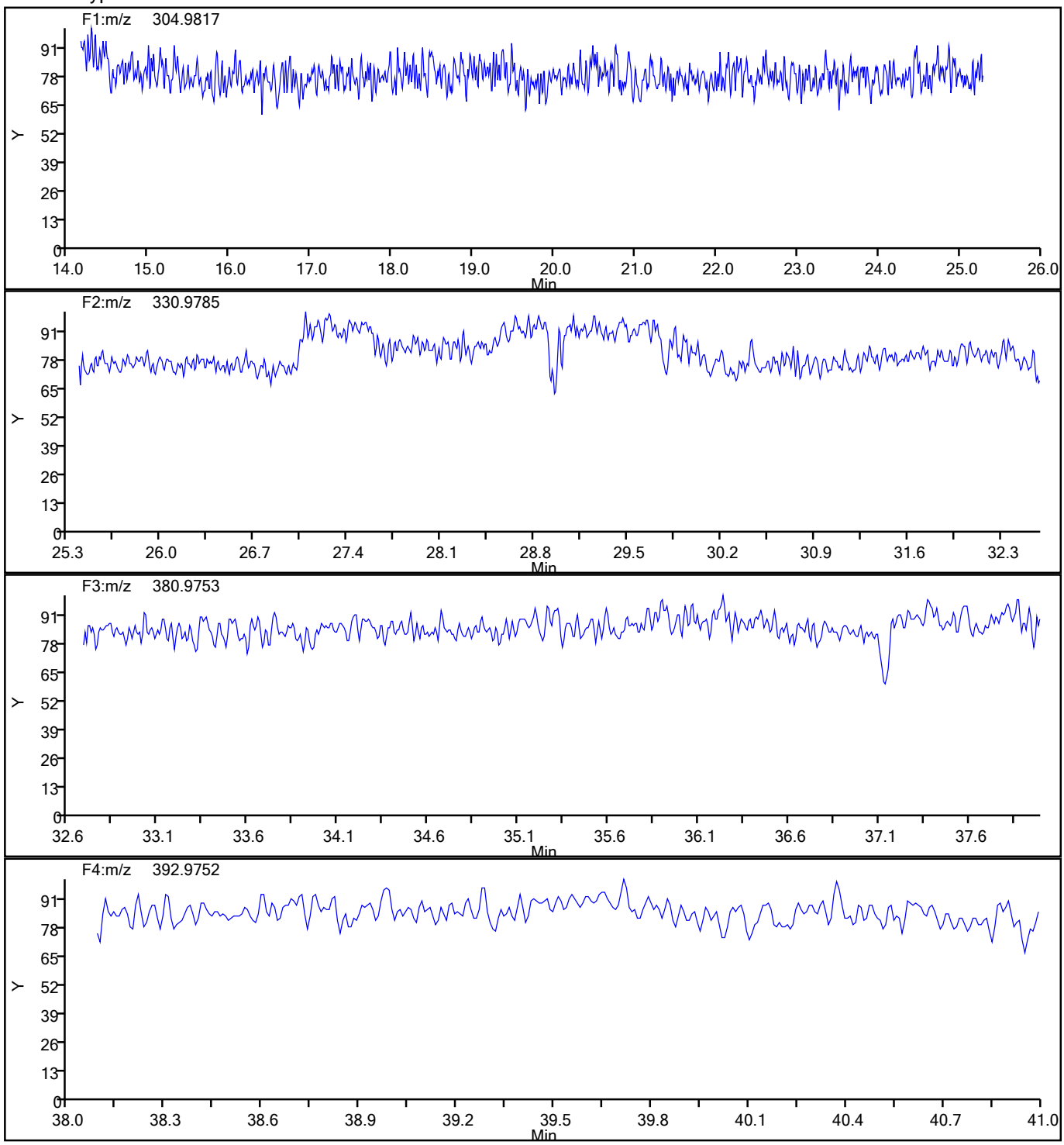

788347

Report Date: 23-Aug-2021 09:03:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_7.d		
Injection Date:	19-Aug-2021 18:03:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	517891	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

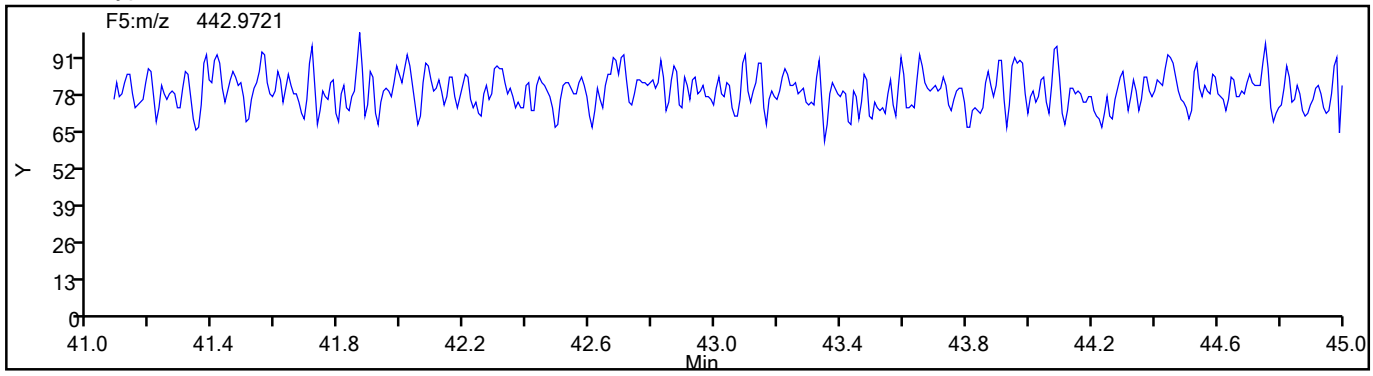

788348

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (4-6) RA
Lab Sample ID: 320-76901-3 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_004.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:10
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.7(g)
Date Analyzed: 08/27/2021 17:33
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	11		1.2	0.16

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	48		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	64		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_004.d
Lims ID: 320-76901-A-3-A
Client ID: 11215702-072821-BN-SJSB095 (4-6)
Sample Type: Client
Inject. Date: 27-Aug-2021 17:33:16 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-3-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:39:30

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.287	61000767	0.80	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.604	38619476	0.80	1.3327	47.5	47.5	0.1808	0.1808	47.51	
2,3,7,8-TCDF	17.631	1720298	0.86	0.9978	4.464	4.464	0.0632	0.0632		
D 13C-2,3,7,8-TCDD	16.054	23688227	0.80	0.8749	44.4	44.4	0.3507	0.3507	44.38	
2,3,7,8-TCDD	16.068	323423	0.67	1.0570	1.292	1.292	0.0764	0.0764		
$ 37Cl4-2,3,7,8-TCDD	16.081	13435068		0.8648	25.5	25.5	0.0756	0.0756	63.67	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

788350

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_004.d
Lims ID: 320-76901-A-3-A
Client ID: 11215702-072821-BN-SJSB095 (4-6)
Sample Type: Client
Inject. Date: 27-Aug-2021 17:33:16 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-3-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:39:30

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.287	16.300	-1		27033130	5899370	6526	16315	904		
333.9339	16.287	16.300	-1		33967637	7381899	9776	24440	755	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.604	17.616	-1	1.081	17220030	3273730	7079	17697	462		
317.9389	17.604	17.616	-1	1.081	21399446	3965862	5723	14307	693	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.631	17.644	-1	1.002	794749	137691	915	2287	150		
305.8987	17.617	17.644	-2	1.001	925549	173758	910	2275	191	0.86(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.054	16.066	-1	0.986	10547886	2284100	6526	16315	350		
333.9339	16.068	16.066	0	0.987	13140341	2955547	9776	24440	302	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.068	16.080	-1	1.001	129224	27828	741	1852	38		
321.8936	16.068	16.080	-1	1.001	194199	43328	951	2377	46	0.67(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.081	16.080	0	0.987	13435068	2916190	3474	8685	839		

QC Flag Legend

Processing Flags

Report Date: 30-Aug-2021 09:51:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_004.d		
Injection Date:	27-Aug-2021 17:33:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	520456	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

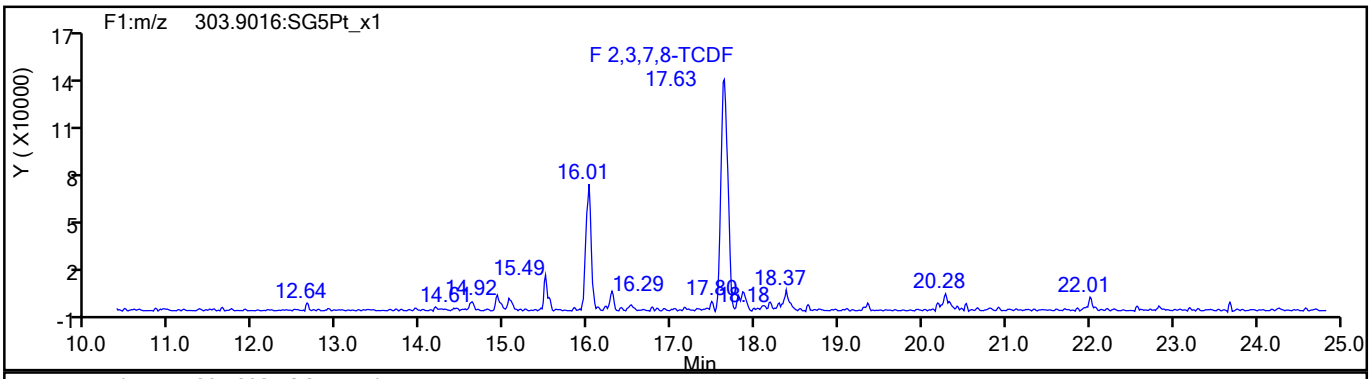

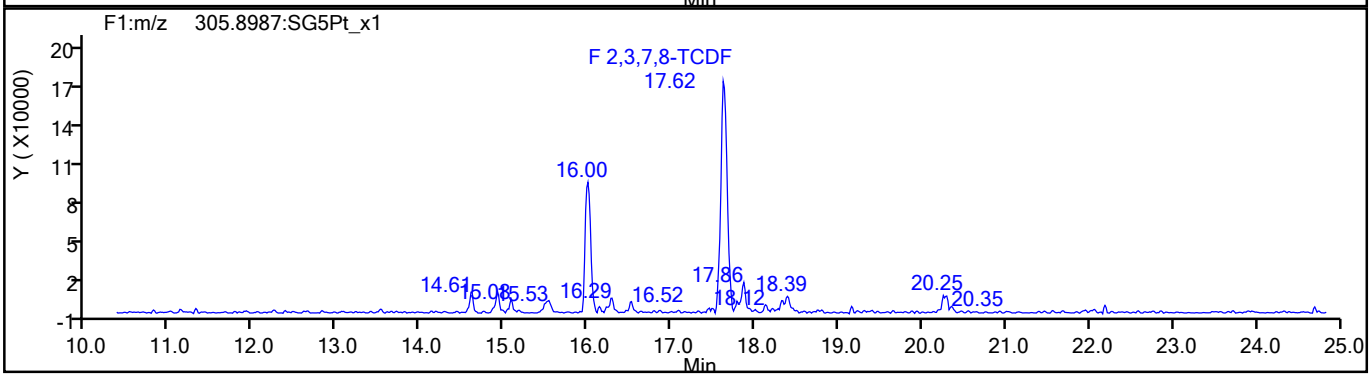

TCDF Standards

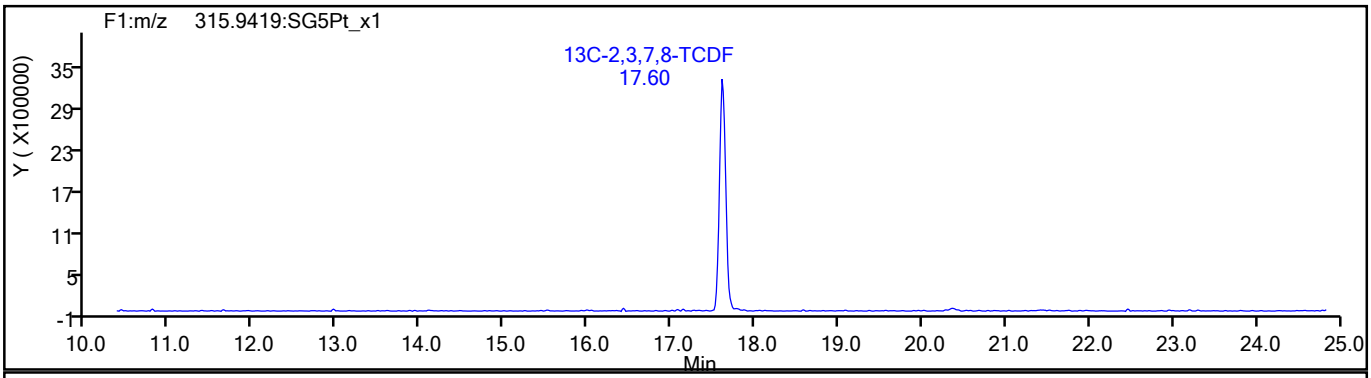

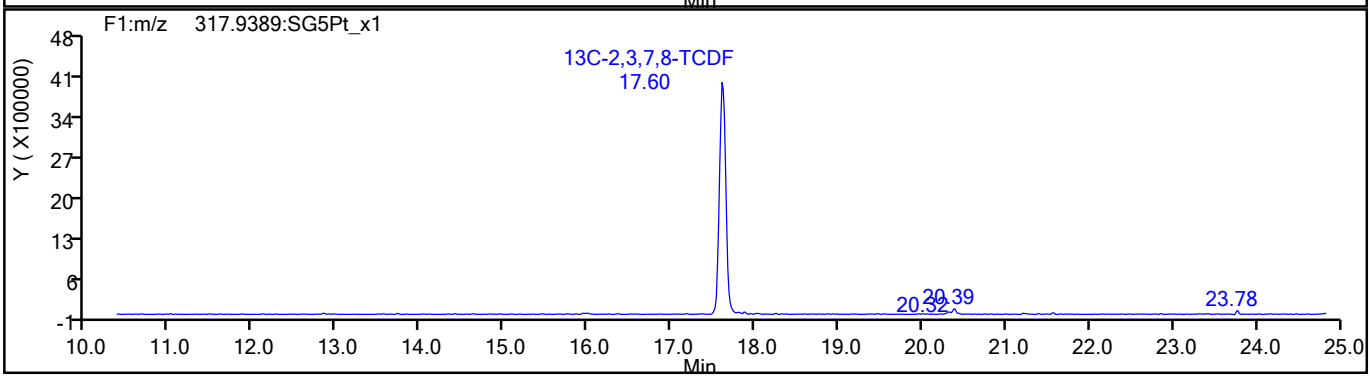

788352

Report Date: 30-Aug-2021 09:51:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_004.d		
Injection Date:	27-Aug-2021 17:33:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	520456	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

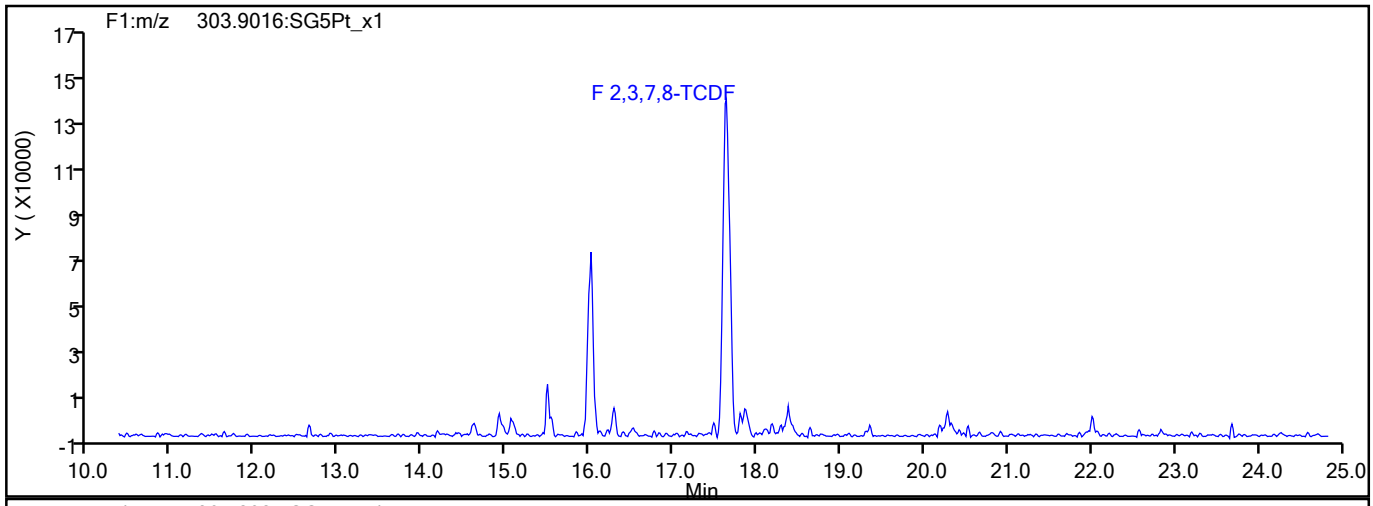

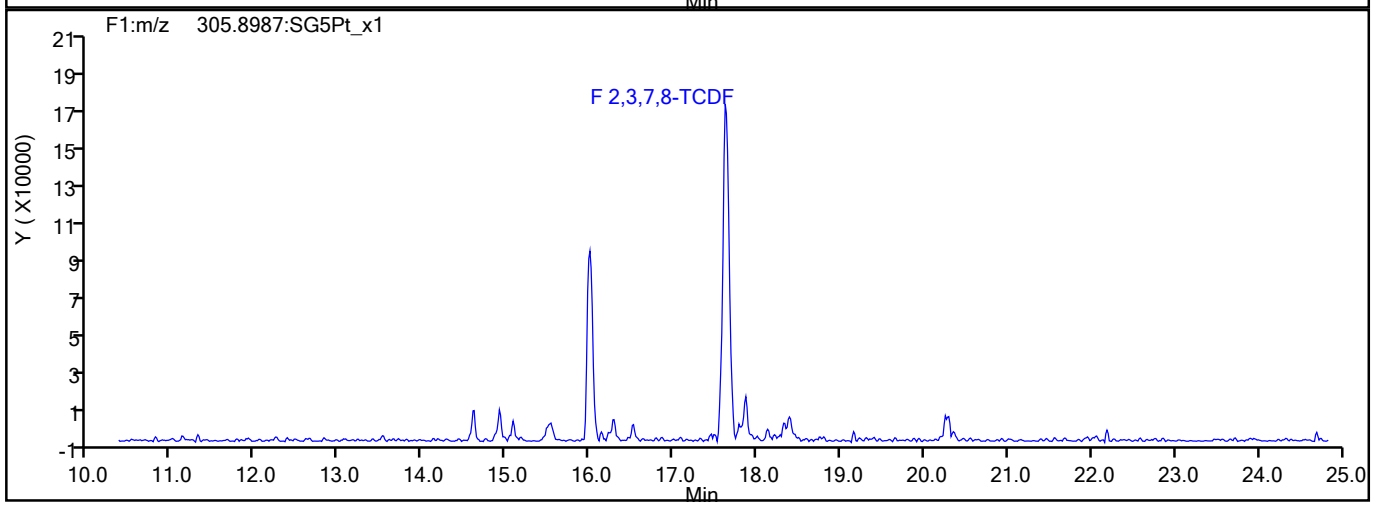

TCDF Interference Mass

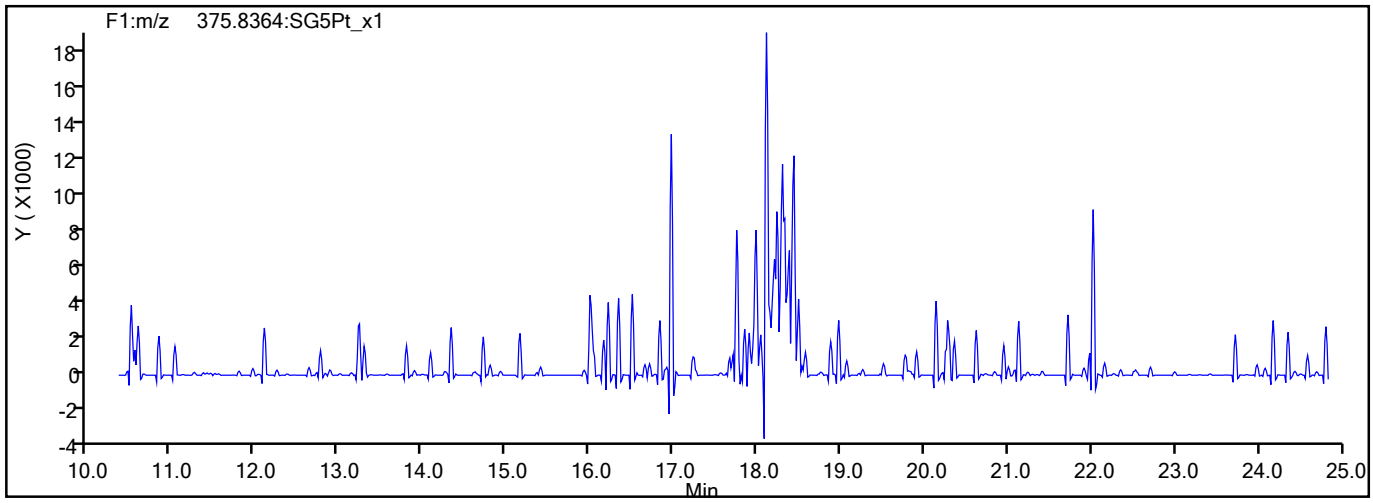

788353

Report Date: 30-Aug-2021 09:51:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_004.d		
Injection Date:	27-Aug-2021 17:33:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	520456	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

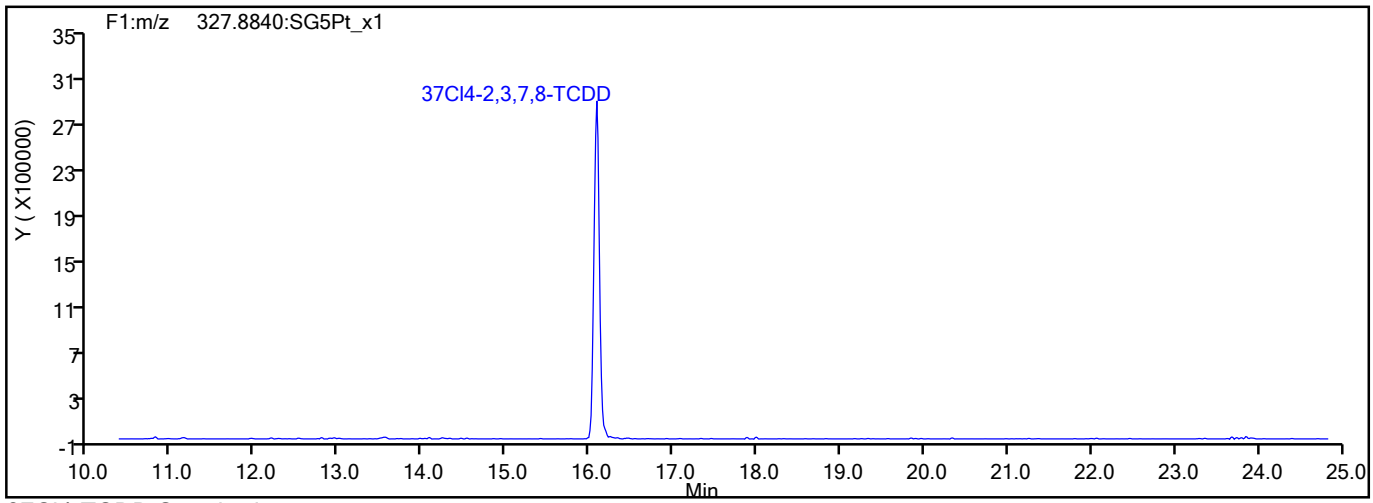

37Cl4-TCDD Standards

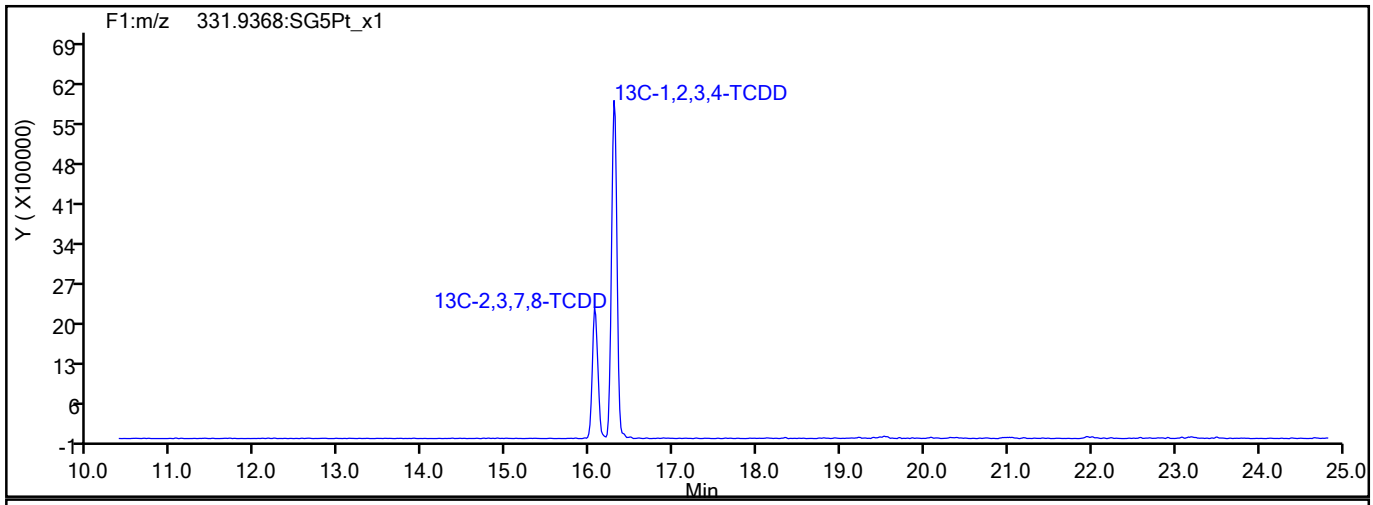

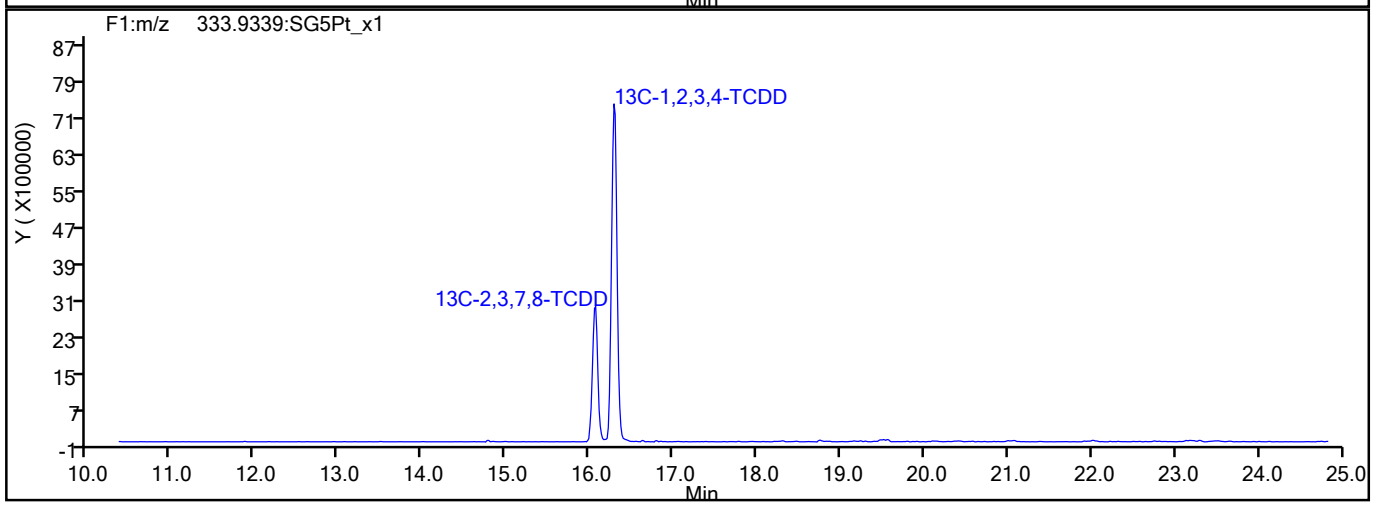

788354

Report Date: 30-Aug-2021 09:51:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_004.d		
Injection Date:	27-Aug-2021 17:33:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (4-6)		
Worklist#:	520456	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

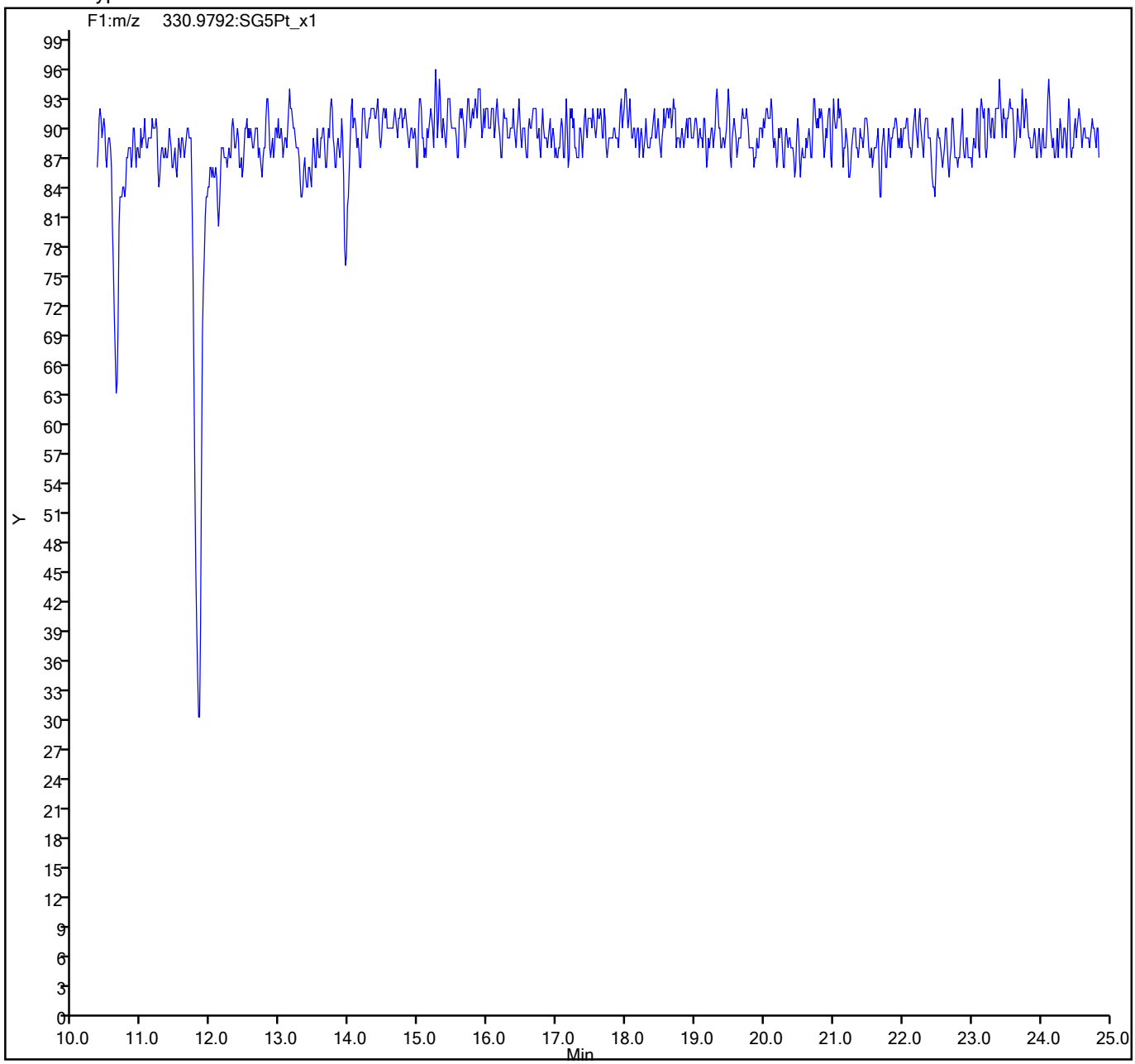

788355

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (6-8)
Lab Sample ID: 320-76901-4
Matrix: Sediment
Lab File ID: 19au21dfs1_8.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.28(g)
Date Analyzed: 08/19/2021 18:51
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 19.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	1.7		1.2	0.074
40321-76-4	1,2,3,7,8-PeCDD	ND		6.0	0.099
57117-41-6	1,2,3,7,8-PeCDF	ND		6.0	0.044
57117-31-4	2,3,4,7,8-PeCDF	ND		6.0	0.051
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.0	0.080
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.0	0.091
19408-74-3	1,2,3,7,8,9-HxCDD	0.50	J q	6.0	0.079
70648-26-9	1,2,3,4,7,8-HxCDF	ND		6.0	0.029
57117-44-9	1,2,3,6,7,8-HxCDF	ND		6.0	0.027
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.0	0.026
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.0	0.027
35822-46-9	1,2,3,4,6,7,8-HpCDD	10	B q	6.0	0.13
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		6.0	0.060
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.0	0.057
3268-87-9	OCDD	190	B	12	0.30
39001-02-0	OCDF	ND		12	0.12
41903-57-5	Total TCDD	1.7		1.2	0.074
30402-14-3	Total TCDF	8.9	B	1.2	0.051
36088-22-9	Total PeCDD	ND		6.0	0.48
30402-15-4	Total PeCDF	ND		6.0	0.094
34465-46-8	Total HxCDD	8.9	q	6.0	0.083
55684-94-1	Total HxCDF	ND		6.0	0.036
37871-00-4	Total HpCDD	38	B q	6.0	0.13
38998-75-3	Total HpCDF	ND		6.0	0.060

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (6-8)
Lab Sample ID: 320-76901-4
Matrix: Sediment
Lab File ID: 19au21dfs1_8.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.28(g)
Date Analyzed: 08/19/2021 18:51
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 19.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	42		25-164
89059-46-1	13C-2,3,7,8-TCDF	44		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	41		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	43		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	46		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	48		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	44		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	52		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	49		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	43		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	45		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	47		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	45		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	49		26-138
114423-97-1	13C-OCDD	42		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	53		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d
Lims ID: 320-76901-A-4-A
Client ID: 11215702-072821-BN-SJSB095 (6-8)
Sample Type: Client
Inject. Date: 19-Aug-2021 18:51:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-4-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:08:59 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: dadunj Date: 23-Aug-2021 09:08:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.348	1001337	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.403	591627	0.78	1.3459	43.9	43.9	0.1543	0.1543	43.90	
2,3,7,8-TCDF	20.437	16373	0.82	1.0802	2.562	2.562	0.0212	0.0212		M
A Non-2,3,7,8-sub-TCDF	19.851	7269	0.74	1.0802	1.137	1.137	0.0212	1.137		M
S Total TCDF					3.699	3.699	0.0212	0.0212		
D 13C-2,3,7,8-TCDD	21.760	395894	0.82	0.9317	42.4	42.4	0.1580	0.1580	42.44	
2,3,7,8-TCDD	21.777	2990	0.70	1.0753	0.7023	0.7023	0.0307	0.0307		
$ 37Cl4-2,3,7,8-TCDD	21.777	212290		1.0083	21.0	21.0	0.0225	0.0225	52.57	
A Non-2,3,7,8-sub-TCDD	20.684						0.0307	0.1193		RQU
S Total TCDD					0.7023	0.7023	0.0307	0.0307		
D 13C-1,2,3,7,8-PeCDF	27.247	493367	1.63	1.1405	43.2	43.2	0.1754	0.1754	43.20	
1,2,3,7,8-PeCDF	27.281						0.0185	0.0185		RQU
D 13C-2,3,4,7,8-PeCDF	28.763	522564	1.64	1.1253	46.4	46.4	0.1778	0.1778	46.37	
2,3,4,7,8-PeCDF	28.771						0.0213	0.0213		RQU
A F1 PeCDFs	24.634						0.006604	0.007828		U
A Non-2,3,7,8-sub-PeCDF	28.173						0.0198	0.0391		RQU
S Total PeCDF							0.0391	0.0391		
D 13C-1,2,3,7,8-PeCDD	29.555	292966	1.58	0.7165	40.8	40.8	0.1760	0.1760	40.84	
1,2,3,7,8-PeCDD	29.664						0.0413	0.0413		RQU
A Non-2,3,7,8-sub-PeCDD	28.478						0.0413	0.2019		RQU
S Total PeCDD							0.2019	0.2019		
D 13C-1,2,3,4,7,8-HxCDF	34.914	475638	0.53	0.9648	51.8	51.8	0.1825	0.1825	51.79	
1,2,3,4,7,8-HxCDF	34.922						0.0123	0.0123		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.082	502139	0.53	1.0708	49.3	49.3	0.1644	0.1644	49.27	
1,2,3,6,7,8-HxCDF	35.099						0.0113	0.0113		
D 13C-2,3,4,6,7,8-HxCDF	35.891	446590	0.55	1.0413	45.1	45.1	0.1691	0.1691	45.06	
2,3,4,6,7,8-HxCDF	35.992						0.0113	0.0113		RQU
D 13C-1,2,3,7,8,9-HxCDF	36.792	401463	0.52	0.9731	43.3	43.3	0.1809	0.1809	43.35	
1,2,3,7,8,9-HxCDF	36.792						0.0107	0.0107		U
A Non-2,3,7,8-sub-HxCDF	35.009						0.0114	0.0151		RQU
S Total HxCDF							0.0151	0.0151		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.598	951788	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.110	347022	1.29	0.7587	48.1	48.1	0.1317	0.1317	48.06	
1,2,3,4,7,8-HxCDD	36.127						0.0334	0.0334		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.228	361385	1.25	0.8593	44.2	44.2	0.1163	0.1163	44.19	
1,2,3,6,7,8-HxCDD	36.127						0.0378	0.0378		RQU
1,2,3,7,8,9-HxCDD	36.607	813	1.24	1.1094	0.3234	0.2069	0.0329	0.0329		RQM
A Non-2,3,7,8-sub-HxCDD	35.375	13077	1.17	1.0545	3.501	3.501	0.0346	2.382		
S Total HxCDD					3.825	3.708	0.0347	0.0347		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.615	318388	0.47	0.7359	45.5	45.5	0.1726	0.1726	45.45	
1,2,3,4,6,7,8-HpCDF	38.623						0.0249	0.0249		U
D 13C-1,2,3,4,7,8,9-HpCDF	39.869	319302	0.46	0.6854	48.9	48.9	0.1854	0.1854	48.95	
1,2,3,4,7,8,9-HpCDF	39.872						0.0238	0.0238		
A Non-2,3,7,8-sub-HpCDF	39.245						0.0242	0.0242		U
S Total HpCDF							0.0249	0.0249		
D 13C-1,2,3,4,6,7,8-HpCDD	39.558	299744	1.11	0.6745	46.7	46.7	0.1234	0.1234	46.69	
1,2,3,4,6,7,8-HpCDD	39.566	13207	1.04	1.0503	4.614	4.195	0.0541	0.0541		RQ
A Non-2,3,7,8-sub-HpCDD	39.241	37109	1.02	1.0503	11.8	11.8	0.0541	11.8		
S Total HpCDD					16.4	16.0	0.0541	0.0541		RQ
D 13C-OCDD	42.056	439525	0.89	0.5446	84.8	84.8	0.1153	0.1153	42.39	
OCDF	42.157						0.0521	0.0521		
OCDD	42.065	186576	0.89	1.0620	79.9	79.9	0.1236	0.1236		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d
Lims ID: 320-76901-A-4-A
Client ID: 11215702-072821-BN-SJSB095 (6-8)
Sample Type: Client
Inject. Date: 19-Aug-2021 18:51:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-4-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:08:59 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: dadunj Date: 23-Aug-2021 09:08:59

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.348	21.395	-3		446480	58915	59	147	999		
333.9338	21.365	21.395	-2		554857	73529	19	47	3870	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.403	20.365	2	0.956	258626	38004	83	207	458		
317.9389	20.403	20.365	2	0.956	333001	49470	27	67	1832	0.78(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.437	20.408	2	1.002	7401	1001	2	5	501		M
305.8987	20.437	20.408	2	1.002	8972	1354	6	15	226	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											M
303.9016	19.707	19.851	-9	0.966	3083	450	2	5	225		M
305.8987	19.716	19.851	-8	0.966	4186	706	6	15	118	0.74(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	21.760	21.716	3	1.019	177976	22954	59	147	389		
333.9338	21.751	21.716	2	1.019	217918	28509	19	47	1500	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.777	21.733	3	1.001	1229	229	6	15	38		
321.8936	21.811	21.733	5	1.002	1761	268	1	2	268	0.70(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.777	21.799	-1	1.020	212290	26811	12	30	2234		
A Non-2,3,7,8-sub-TCDD											U
319.8965	18.264	20.684	-145	0.839	154	93	6	15	16		
321.8936	18.247	20.684	-146	0.839	274	57	1	2	57	0.56(0.65-0.89)	
	Empc Correction				200	120	1	2	120		
13C-1,2,3,7,8-PeCDF											
351.9000	27.247	27.251	0	1.276	306075	47968	67	167	716		
353.8970	27.247	27.251	0	1.276	187292	29075	39	97	746	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											RQU
339.8597	27.276						1	2			
341.8567	27.276						5	12			
13C-2,3,4,7,8-PeCDF											
351.9000	28.763	28.757	0	1.347	324714	43072	67	167	643		
353.8970	28.763	28.757	0	1.347	197850	26742	39	97	686	1.64(1.32-1.78)	
2,3,4,7,8-PeCDF											RQU
339.8597	28.791						1	2			
341.8567	28.791						5	12			
A F1 PeCDFs											U
339.8597	24.035	24.634	-36	0.882	24	14	1	2	14		
341.8567	24.027	24.634	-36	0.882	17	8	1	2	8	1.41(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											U
339.8597	25.747	28.173	-145	0.945	28	15	1	2	15		
341.8567	25.764	28.173	-144	0.946	98	29	5	12	6	0.29(1.32-1.78)	
	Empc Correction				18	9	5	12	2		
13C-1,2,3,7,8-PeCDD											
367.8949	29.555	29.574	-1	1.384	179292	23872	12	30	1989		
369.8919	29.563	29.574	-1	1.385	113674	15465	55	137	281	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											RQU
355.8546	29.616						5	12			
357.8516	29.616						2	5			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.093	28.478	-143	0.883	329	63	5	12	13		
357.8516	26.110	28.478	-142	0.883	300	67	2	5	34	1.10(1.32-1.78)	
	Empc Correction				212	40	2	5	20		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.914	34.906	0	0.954	164950	29094	48	120	606		
385.8610	34.914	34.906	0	0.954	310688	56191	100	250	562	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	34.922						3	7			
375.8178	34.922						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.082	35.066	1	0.959	173459	29193	48	120	608		
385.8610	35.074	35.066	1	0.958	328680	57783	100	250	578	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.082						3	7			
375.8178	35.082						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.891	35.890	0	0.981	157593	32777	48	120	683		
385.8610	35.899	35.890	1	0.981	288997	54975	100	250	550	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQU
373.8208	35.907						3	7			
375.8178	35.907						2	5			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.792	36.782	1	1.005	138071	30428	48	120	634		
385.8610	36.792	36.782	1	1.005	263392	59721	100	250	597	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											U
373.8208	36.791						3	7			
375.8178	36.791						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	34.206	35.009	-48	0.980	46	31	3	7	10		
375.8178	34.282	35.009	-44	0.982	52	21	2	5	11	0.88(1.05-1.43)	
	Empc Correction				37	24	2	5	12		
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.598	36.581	1		526231	117645	47	117	2503		
403.8529	36.598	36.581	1		425557	92522	37	92	2501	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.110	36.092	1	0.987	195574	44085	47	117	938		
403.8529	36.110	36.092	1	0.987	151448	32144	37	92	869	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.109						6	15			
391.8127	36.109						5	12			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.228	36.210	1	0.990	200787	40210	47	117	856		
403.8529	36.219	36.210	1	0.990	160598	31656	37	92	856	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8158	36.227						6	15			
391.8127	36.227						5	12			
1,2,3,7,8,9-HxCDD											RQM
389.8158	36.607	36.597	1	1.014	908	153	6	15	26		
	Empc Correction				450	105	6	15	18		
391.8127	36.624	36.597	2	1.014	363	85	5	12	17	2.50(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.240	35.375	-68	0.945	4827	942	6	15	157		
391.8127	34.223	35.375	-69	0.945	4071	771	5	12	154	1.19(1.05-1.43)	
389.8158	35.369	35.375	0	0.976	2221	415	6	15	69		
391.8127	35.369	35.375	0	0.976	1958	341	5	12	68	1.13(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.615	38.596	1	1.055	102143	23868	45	112	530		
419.8220	38.615	38.596	1	1.055	216245	51434	62	155	830	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											U
407.7817	38.618						10	25			
409.7788	38.618						1	2			
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.869	39.850	1	1.089	100086	27065	45	112	601		
419.8220	39.869	39.850	1	1.089	219216	59515	62	155	960	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872						10	25			
409.7788	39.872						1	2			
A Non-2,3,7,8-sub-HpCDF											U
407.7817	39.245						10	25			
409.7788	39.245						1	2			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.558	39.547	1	1.081	157397	40962	31	77	1321		
437.8140	39.558	39.547	1	1.081	142347	38174	39	97	979	1.11(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											RQ
423.7767	39.566	39.561	0	1.000	6733	1733	10	25	173		
425.7737	39.575	39.561	1	1.000	7794	2106	8	20	263	0.86(0.88-1.20)	
	Empc Correction				6474	1666	8	20	208		
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.935	39.241	-18	0.984	18737	5000	10	25	500		
425.7737	38.926	39.241	-19	0.984	18372	4813	8	20	602	1.02(0.88-1.20)	
13C-OCDD											
469.7780	42.056	42.036	1	1.149	207509	48413	19	47	2548		
471.7750	42.056	42.036	1	1.149	232016	53698	34	85	1579	0.89(0.76-1.02)	
OCDF											
441.7428	42.137						2	5			
443.7399	42.137						12	30			
OCDD											
457.7377	42.065	42.053	1	1.000	88095	20634	14	35	1474		
459.7348	42.065	42.053	1	1.000	98481	22973	13	32	1767	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Lims ID:	320-76901-A-4-A		
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Inject. Date:	19-Aug-2021 18:51:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	7

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	591627	87474

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	591627	87474

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.707	3083	450	4186	706	1.14	0.74	M
Signal Totals:							
	3083	450	4186	706			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7269	1156				0.74	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.137 = (7269 * 100.000) / (591627 * 1.080)

QC Flag Legend

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d
Lims ID: 320-76901-A-4-A
Client ID: 11215702-072821-BN-SJSB095 (6-8)
Inject. Date: 19-Aug-2021 18:51:00 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	395894	51463

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	395894	51463

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.264	154	93	274	57	0.1005	0.56	RQ
18.264	154	93	200	120	0.0832		Empc Correction
18.720	249	41	92	60	0.0801	2.71	RQ
18.720	70	46	92	60	0.0381		Empc Correction
19.716	221	78	478	61	0.1642	0.46	RQ
19.716	221	78	287	101	0.1193		Empc Correction
20.463	272	73	31	15	0.0712	8.77	RQ
20.463	23	11	31	15	0.0127		Empc Correction
21.537	213	103	260	124	0.1111	0.82	
21.897	173	78	148	54	0.0754	1.17	RQ
21.897	113	41	148	54	0.0613		Empc Correction
22.146	148	69	38	16	0.0437	3.89	RQ
22.146	29	12	38	16	0.0157		Empc Correction
23.589	100	43	158	56	0.0606	0.63	RQ
23.589	100	43	129	55	0.0538		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Lims ID:	320-76901-A-4-A		
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Inject. Date:	19-Aug-2021 18:51:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	7

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	493367	77043
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	522564	69814

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	507965	73428

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.035	24	14	17	8	0.007828	1.41	

Compound is Marked ND

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Lims ID:	320-76901-A-4-A		
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Inject. Date:	19-Aug-2021 18:51:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	7

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	493367	77043
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	522564	69814

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	507965	73428

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.747	28	15	98	29	0.0241	0.29	RQ
25.747	28	15	18	9	0.008783		Empc Correction
25.806	125	40	98	29	0.0426	1.28	RQ
25.806	125	40	80	25	0.0391		Empc Correction
27.878	51	33	66	32	0.0223	0.77	RQ
27.878	51	33	32	21	0.0158		Empc Correction
30.212	83	26	111	40	0.0370	0.75	RQ
30.212	83	26	53	16	0.0260		Empc Correction
30.464	31	19	70	30	0.0193	0.44	RQ
30.464	31	19	20	12	0.009738		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Lims ID:	320-76901-A-4-A		
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Inject. Date:	19-Aug-2021 18:51:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	7

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	292966	39337

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	292966	39337

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.093	329	63	300	67	0.2052	1.10	RQ
26.093	329	63	212	40	0.1765		Empc Correction
26.902	620	122	243	51	0.2815	2.55	RQ
26.902	376	79	243	51	0.2019		Empc Correction
27.727	186	40	24	13	0.0685	7.75	RQ
27.727	37	20	24	13	0.0199		Empc Correction
28.308	255	56	147	57	0.1311	1.73	
28.485	389	83	192	47	0.1895	2.03	RQ
28.485	297	72	192	47	0.1595		Empc Correction
28.746	49	29	32	9	0.0264	1.53	
30.203	477	104	73	48	0.1794	6.53	RQ
30.203	113	74	73	48	0.0607		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Lims ID:	320-76901-A-4-A		
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Inject. Date:	19-Aug-2021 18:51:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	7

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	475638	85285
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	502139	86976
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	446590	87752
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	401463	90149

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	456457	87540

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
34.206	46	31	52	21	0.0178	0.88	RQ
34.206	46	31	37	24	0.0151		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Lims ID:	320-76901-A-4-A		
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Inject. Date:	19-Aug-2021 18:51:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	7

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	347022	76229
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	361385	71866
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	354203	74047

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.240	4827	942	4071	771	2.38	1.19	
35.369	2221	415	1958	341	1.12	1.13	
Signal Totals:							
	7048	1357	6029	1112			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13077	2469				1.17	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.501 = (13077 * 100.000) / (354203 * 1.055)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Lims ID:	320-76901-A-4-A		
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Inject. Date:	19-Aug-2021 18:51:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	7

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	318388	75302
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	319302	86580

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	318845	80941

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Lims ID:	320-76901-A-4-A		
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Inject. Date:	19-Aug-2021 18:51:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	7

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	299744	79136

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	299744	79136

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.935	18737	5000	18372	4813	11.8	1.02	
Signal Totals:							
	18737	5000	18372	4813			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	37109	9813				1.02	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 11.787 = (37109 * 100.000) / (299744 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d				
Injection Date:	19-Aug-2021 18:51:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-4-A	Lab Sample ID:	320-76901-4		
Client ID:	11215702-072821-BN-SJSB095 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.44
Area: 6273
Amount: 2.385493
Amount Units: pg/ul

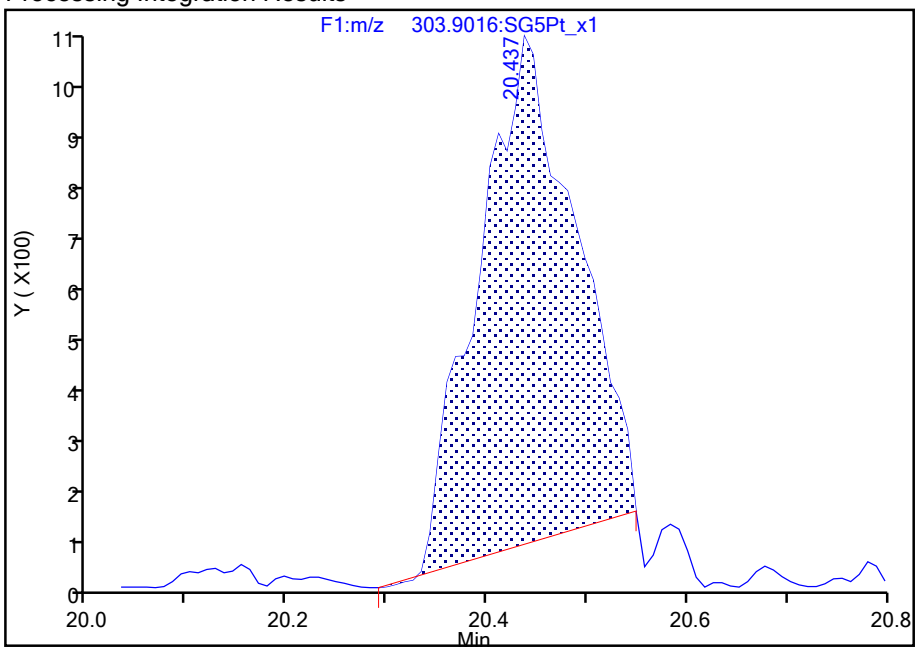

Manual Integration Results

RT: 20.44
Area: 7401
Amount: 2.561999
Amount Units: pg/ul

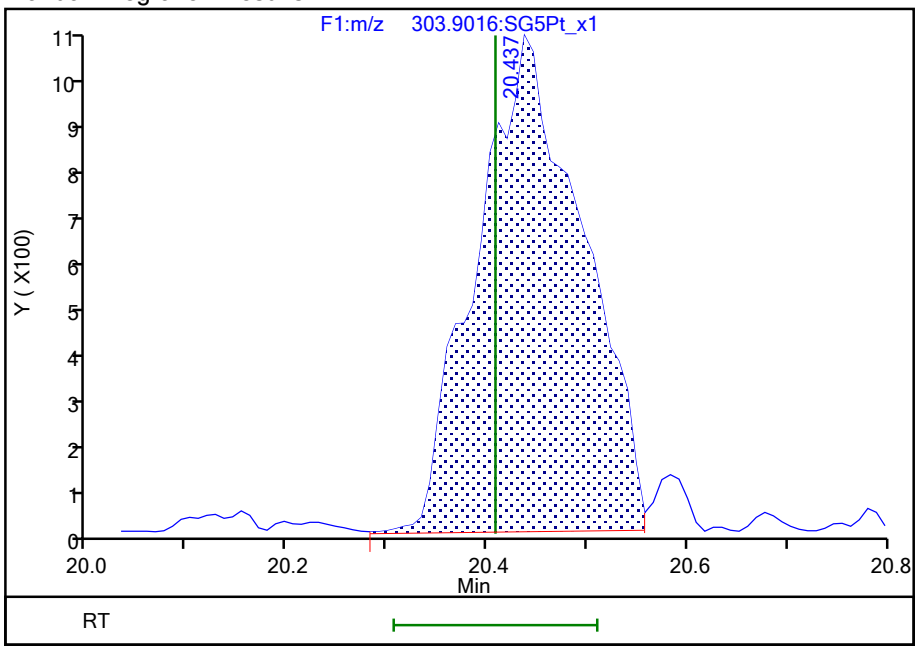

Reviewer: dadunj, 23-Aug-2021 09:06:01

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d				
Injection Date:	19-Aug-2021 18:51:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-4-A	Lab Sample ID:	320-76901-4		
Client ID:	11215702-072821-BN-SJSB095 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 19.707 Area = 3083

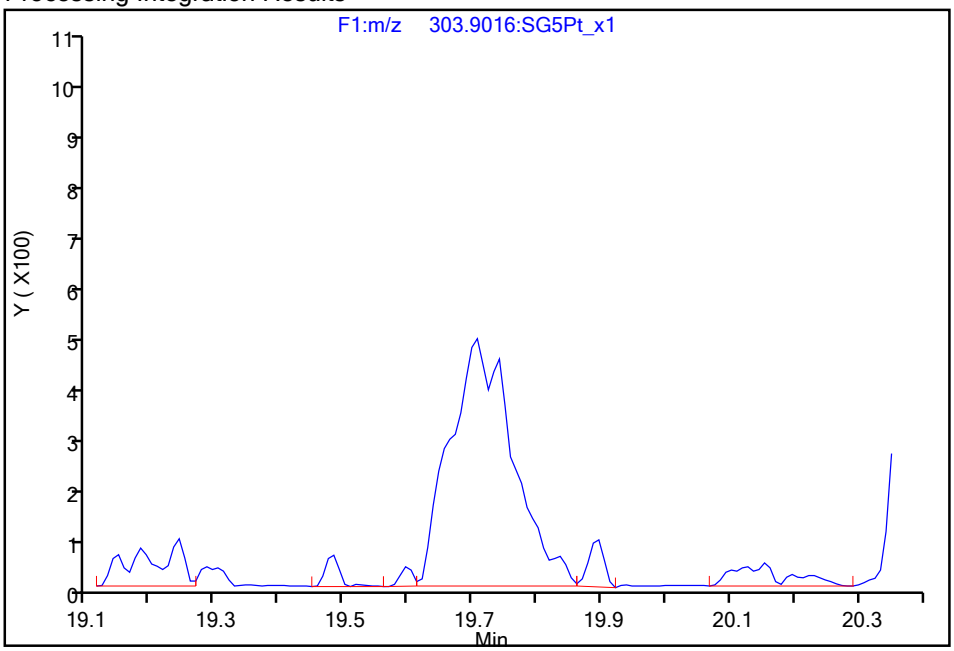

Manual Integration Results

RT = 19.707 Area = 3083

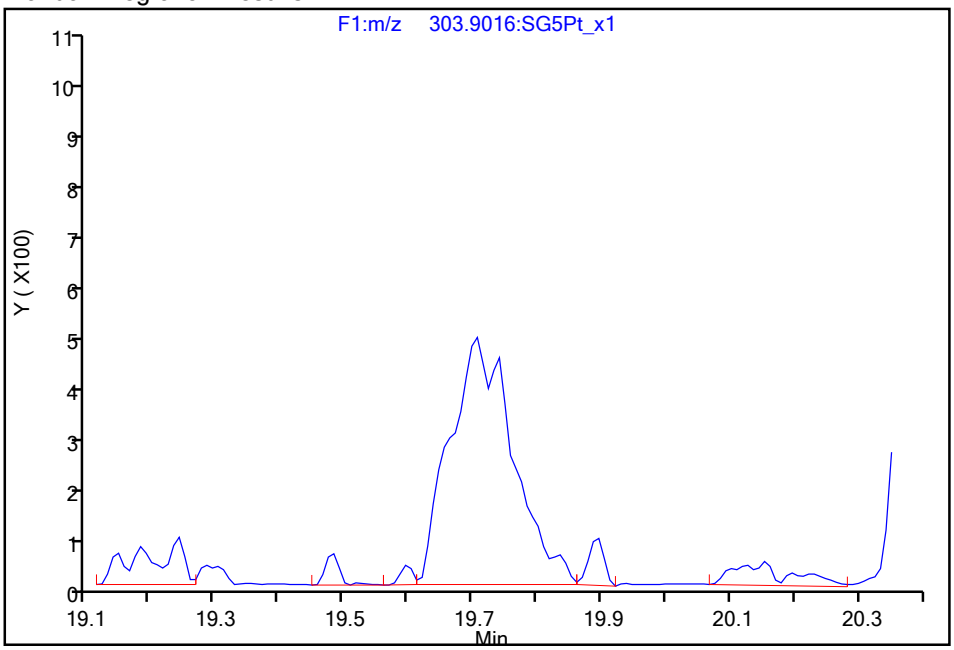

Reviewer: dadunj, 23-Aug-2021 09:06:09

Audit Action: Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d				
Injection Date:	19-Aug-2021 18:51:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-4-A	Lab Sample ID:	320-76901-4		
Client ID:	11215702-072821-BN-SJSB095 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (16.10- 23.60)

Signal: 2

Processing Integration Results

RT = 19.716 Area = 3287

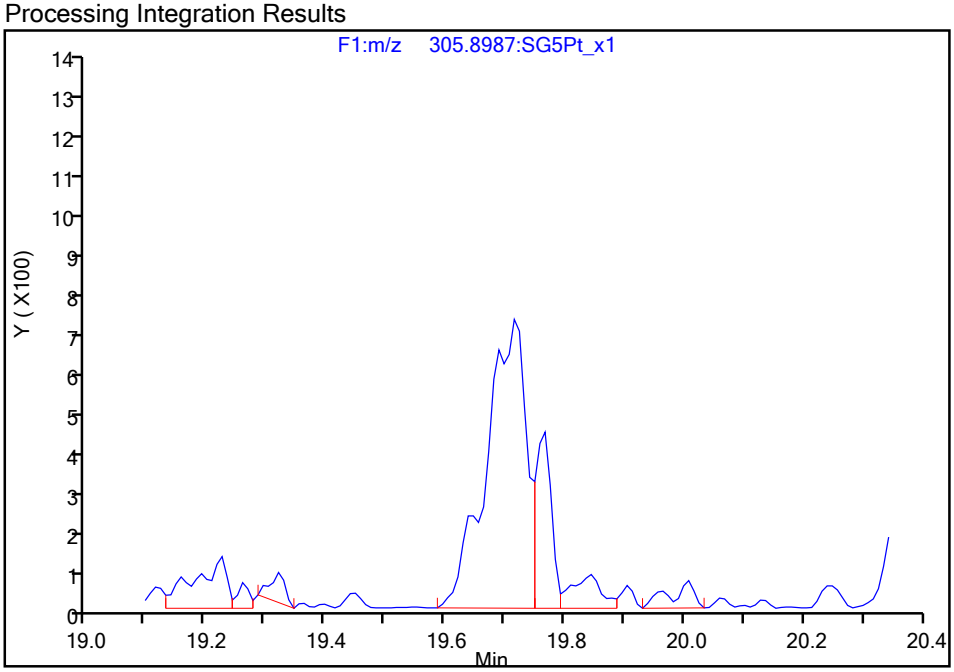

Manual Integration Results

RT = 19.716 Area = 4186 M

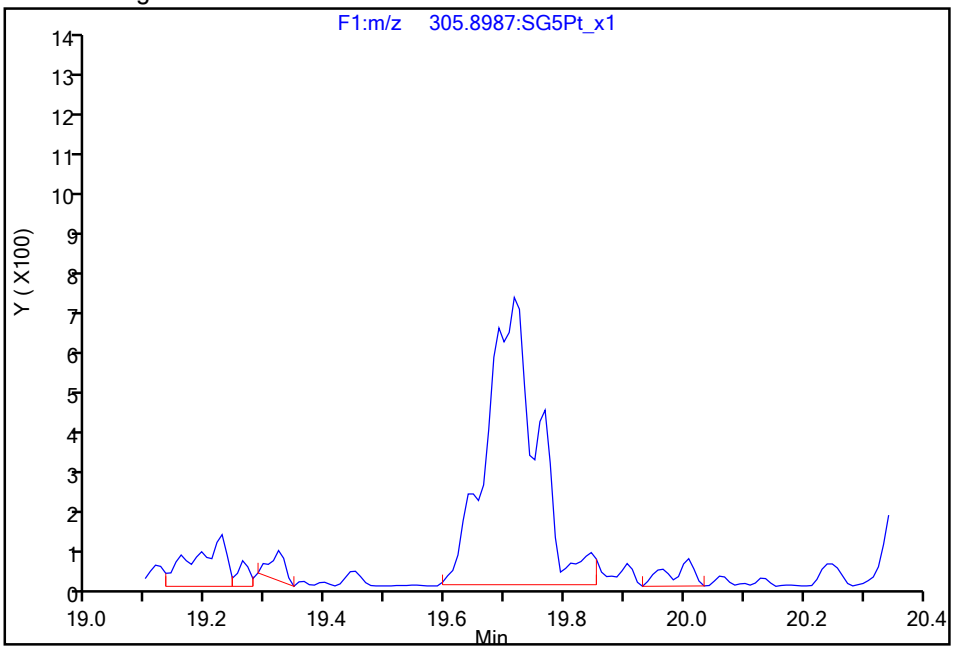

Reviewer: dadunj, 23-Aug-2021 09:06:14

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d				
Injection Date:	19-Aug-2021 18:51:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-4-A	Lab Sample ID:	320-76901-4		
Client ID:	11215702-072821-BN-SJSB095 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 3

Processing Integration Results

RT: 36.61
Area: 1358
Amount: 0.345582
Amount Units: pg/ul

Manual Integration Results

RT: 36.61
Area: 1271
Amount: 0.323442
Amount Units: pg/ul
Reviewer: dadunj, 23-Aug-2021 09:07:15
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d				
Injection Date:	19-Aug-2021 18:51:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-4-A	Lab Sample ID:	320-76901-4		
Client ID:	11215702-072821-BN-SJSB095 (6-8)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 36.62
Area: 450
Amount: 0.345582
Amount Units: pg/ul

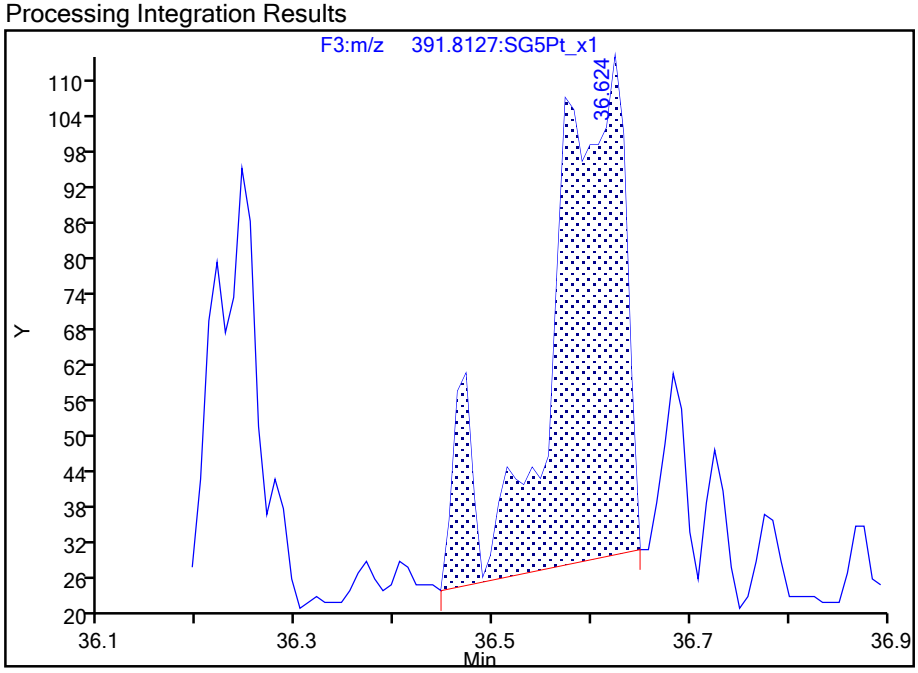

Manual Integration Results

RT: 36.62
Area: 363
Amount: 0.323442
Amount Units: pg/ul

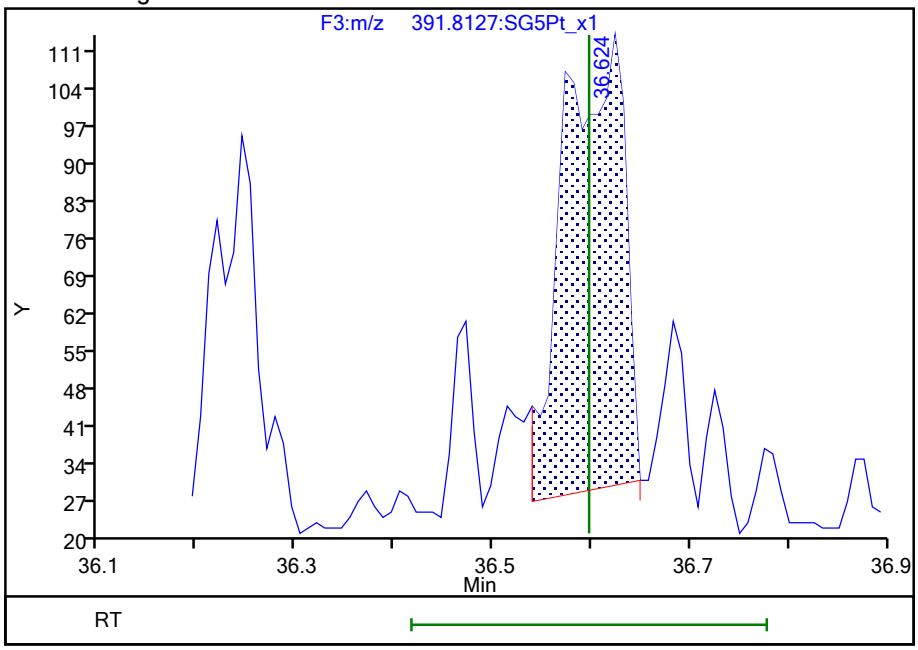

Reviewer: dadunj, 23-Aug-2021 09:07:30
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788377

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Injection Date:	19-Aug-2021 18:51:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	517891	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

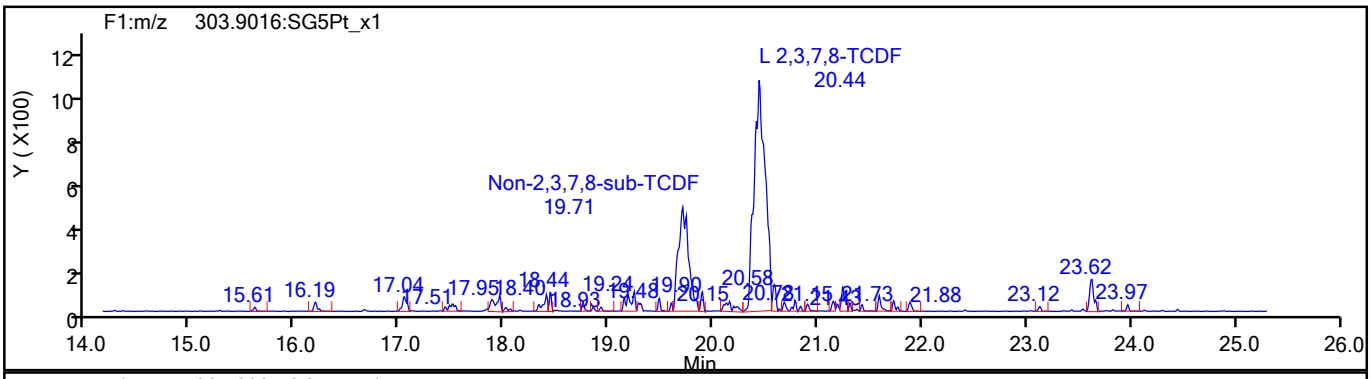

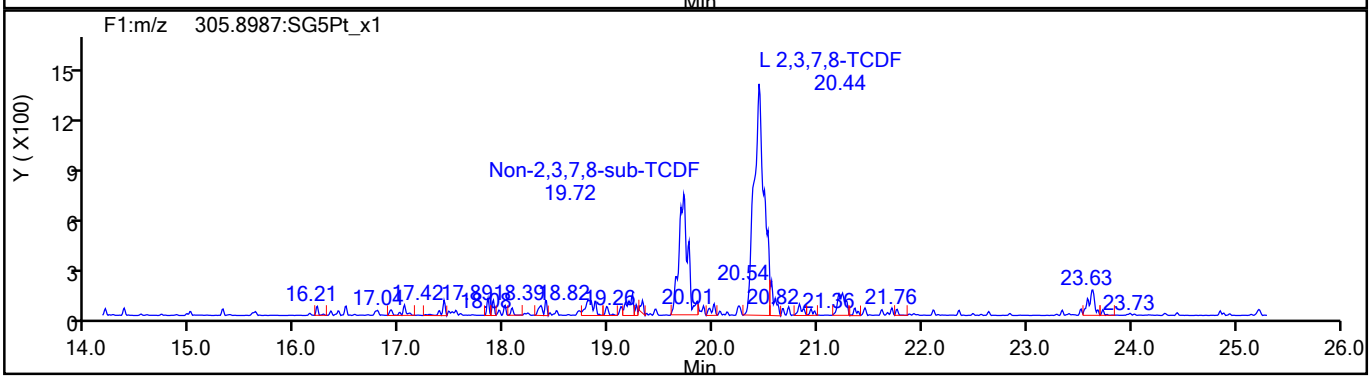

TCDF Standards

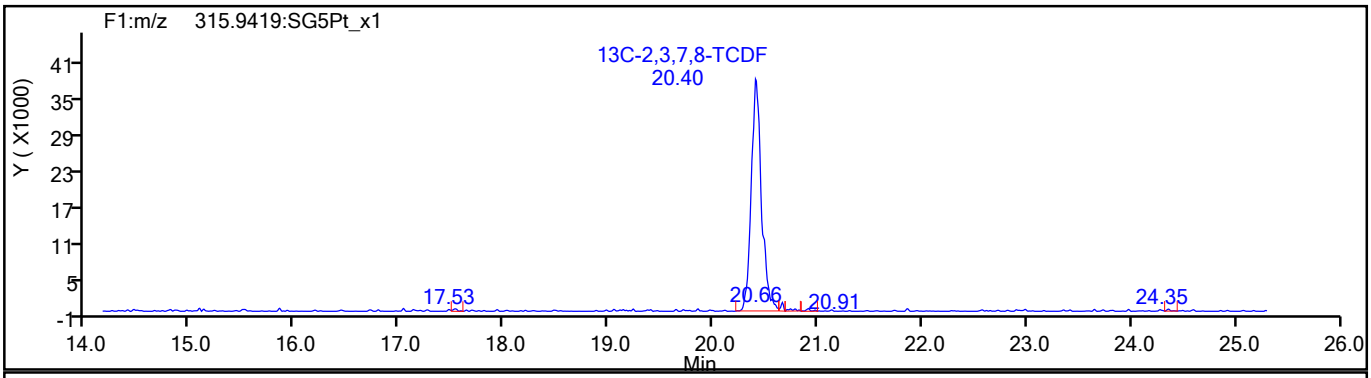

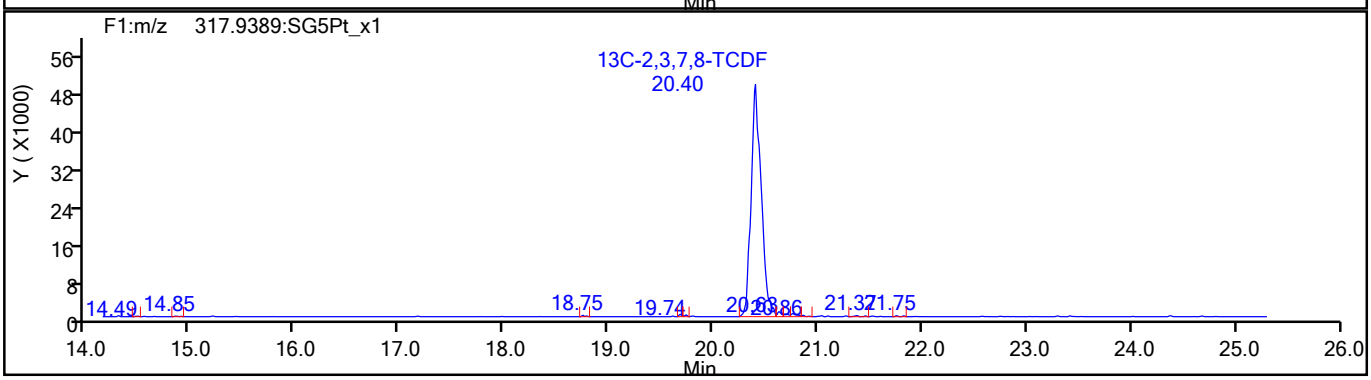

788378

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

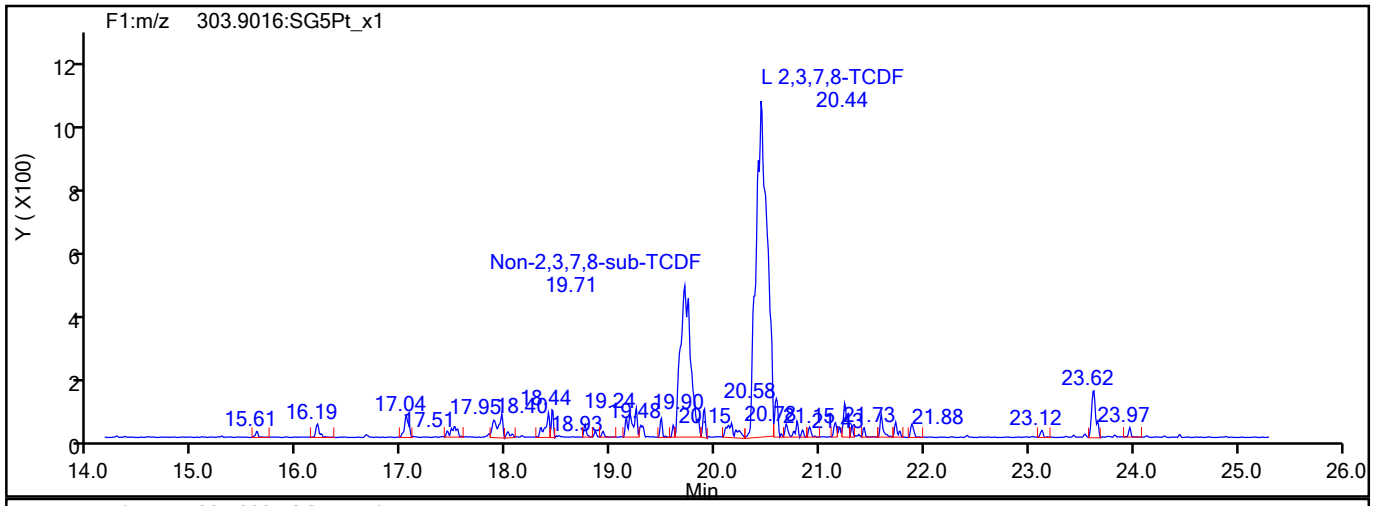

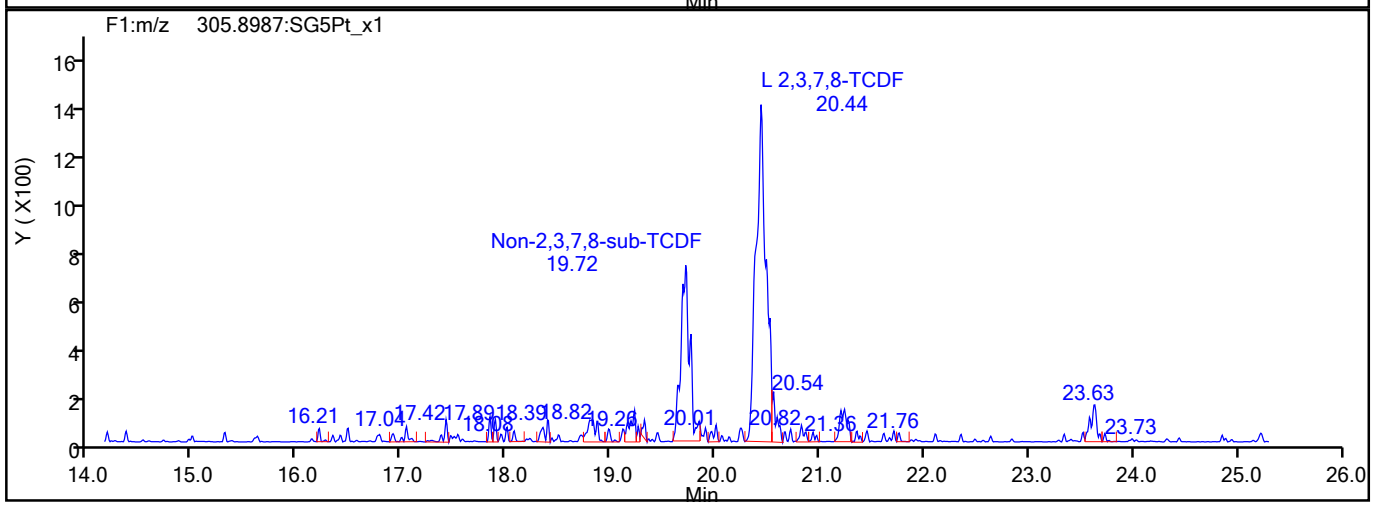

TCDF Interference Mass

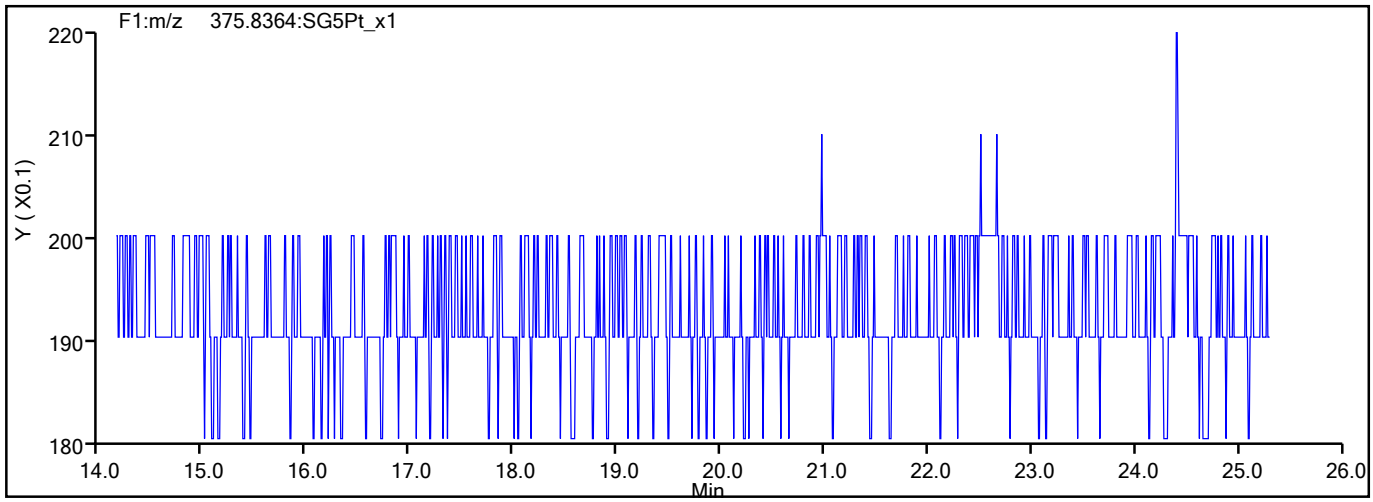

788379

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
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TCDD

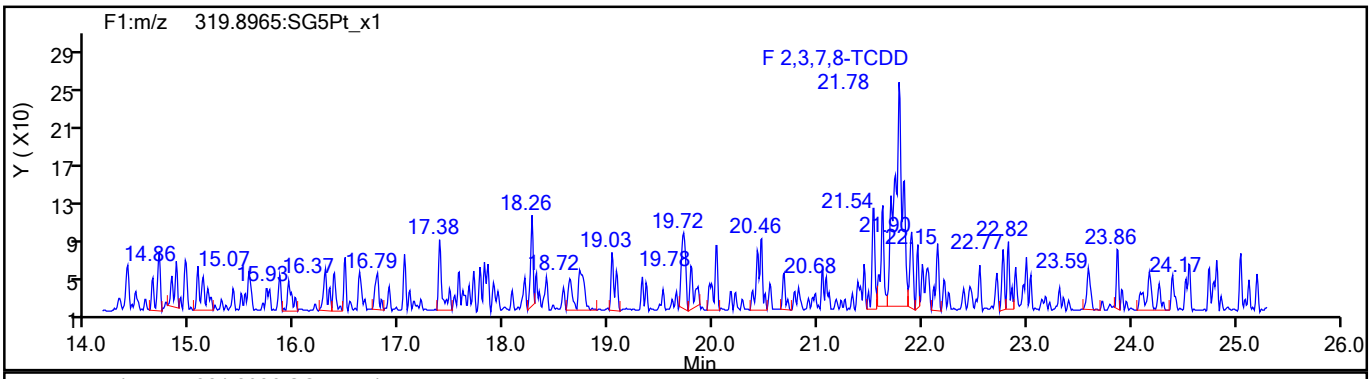

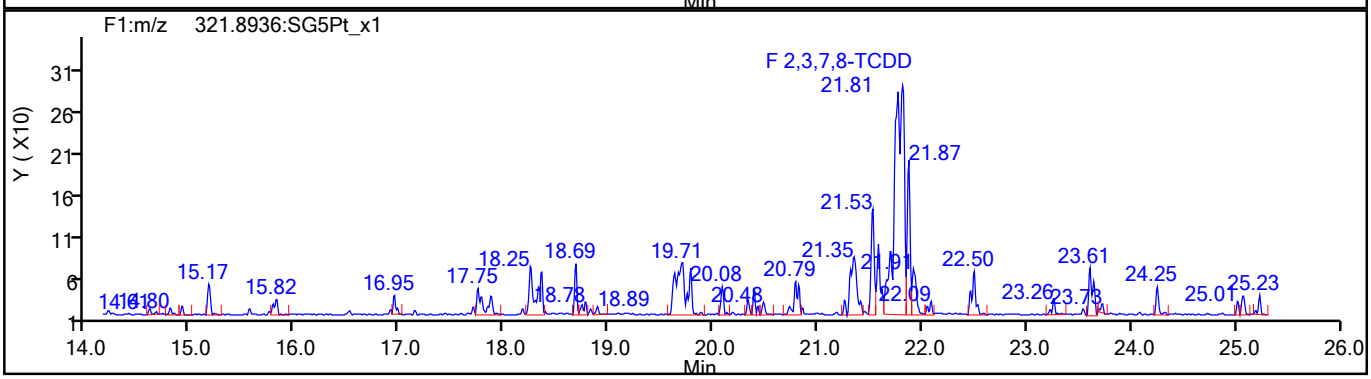

TCDD Standards

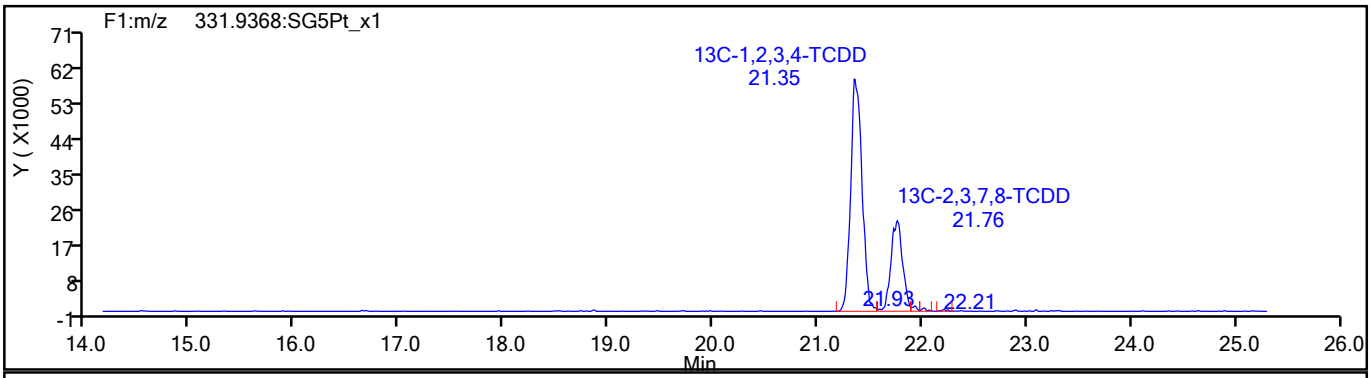

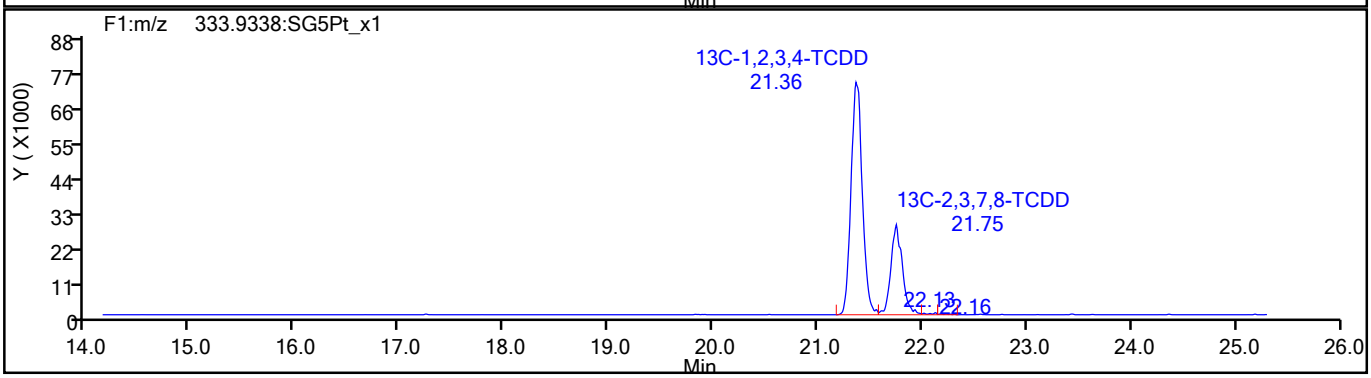

788380

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

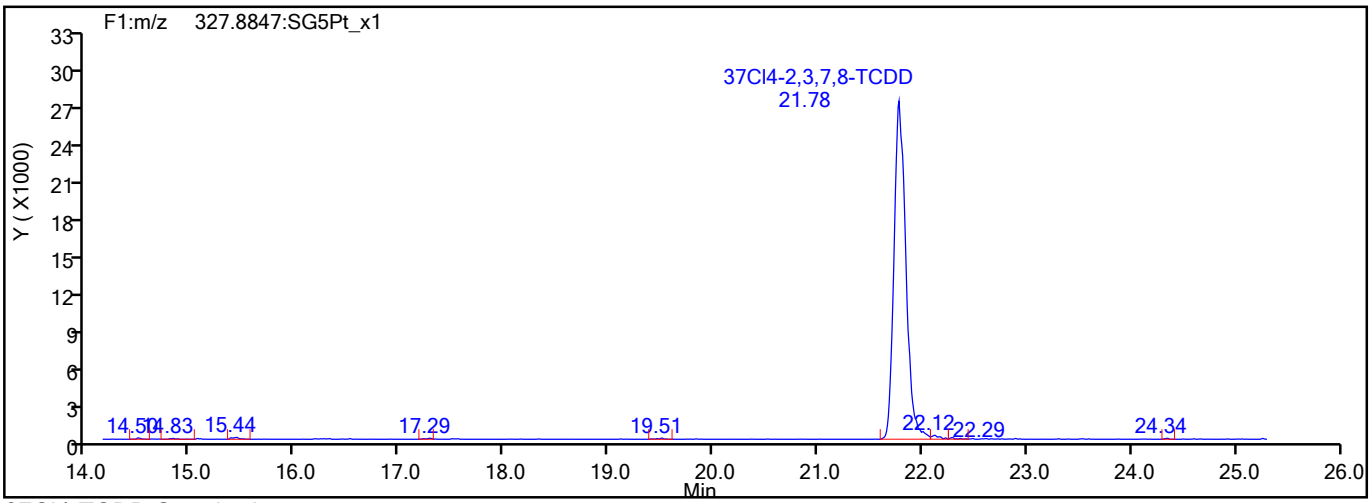

37Cl4-TCDD Standards

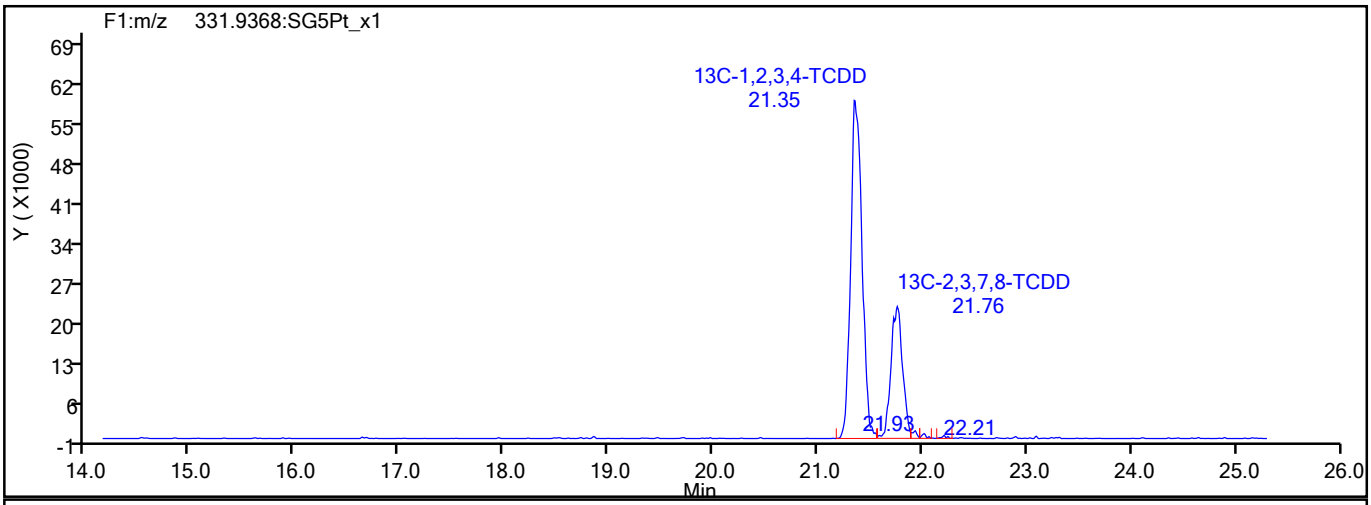

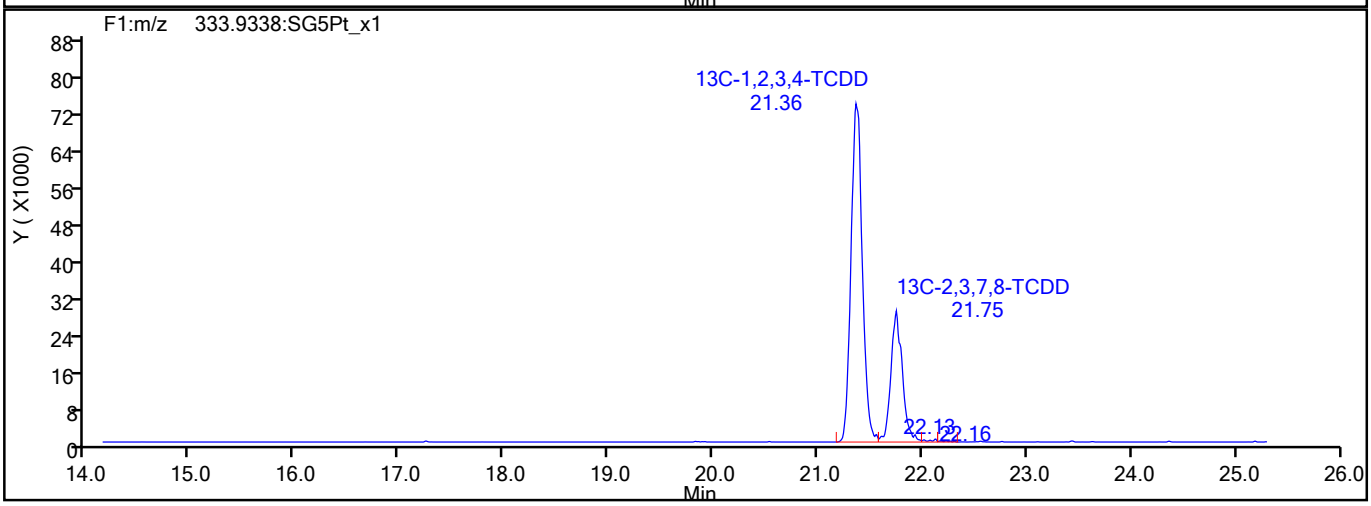

788381

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

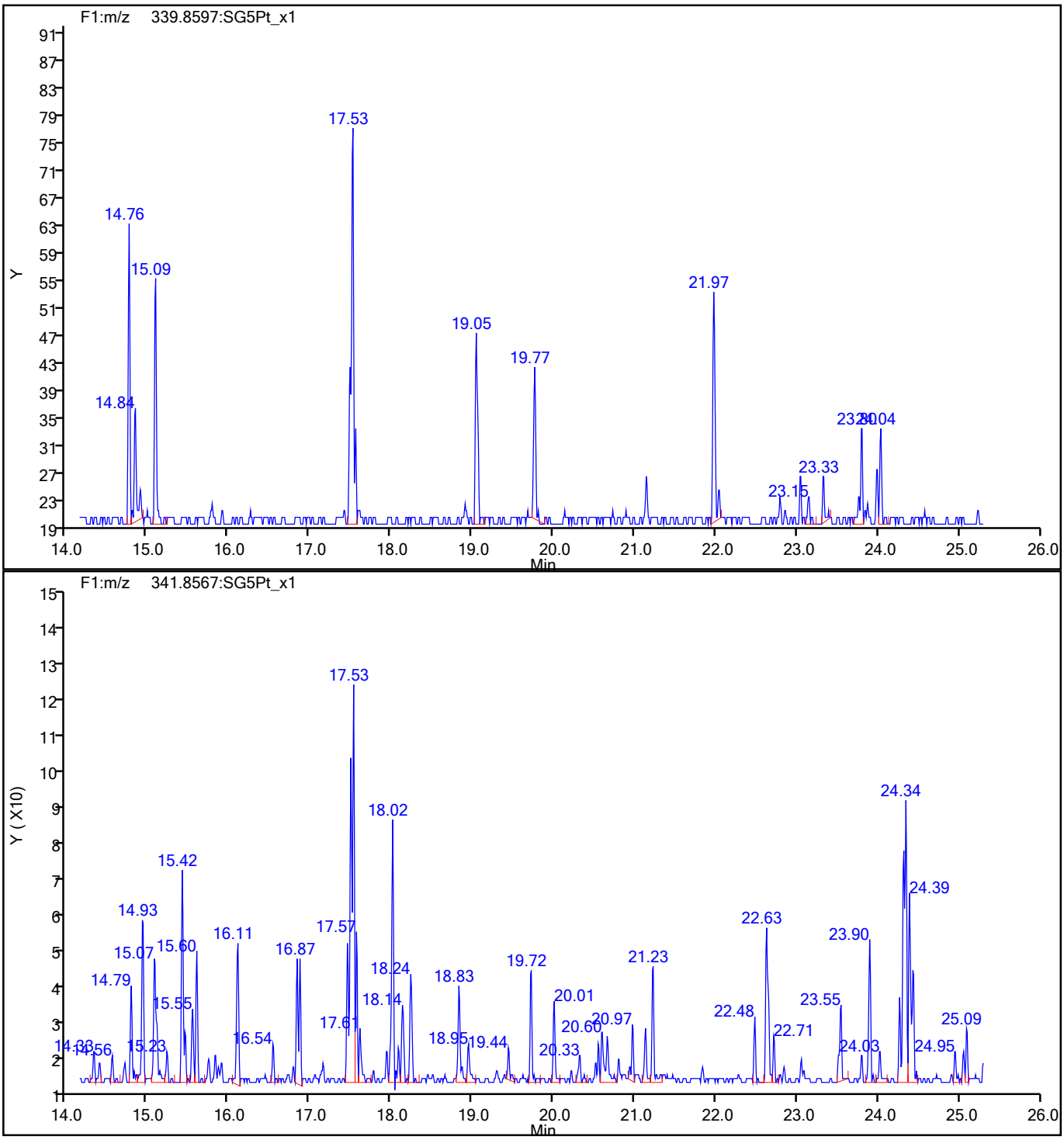

788382

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

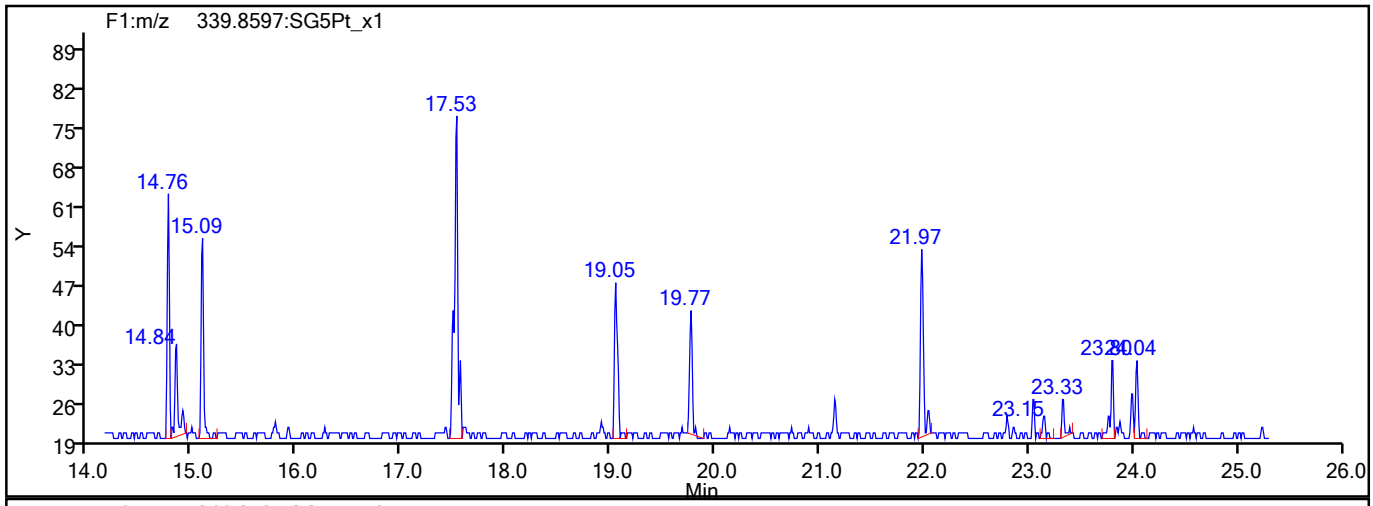

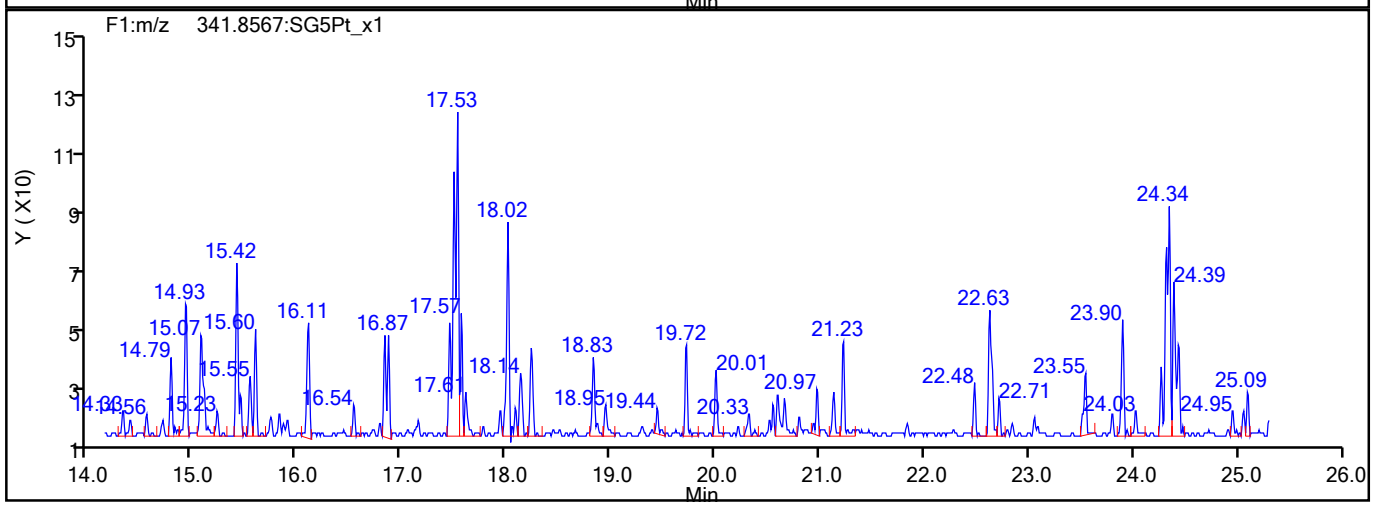

F1 PeCDFs Interference Mass

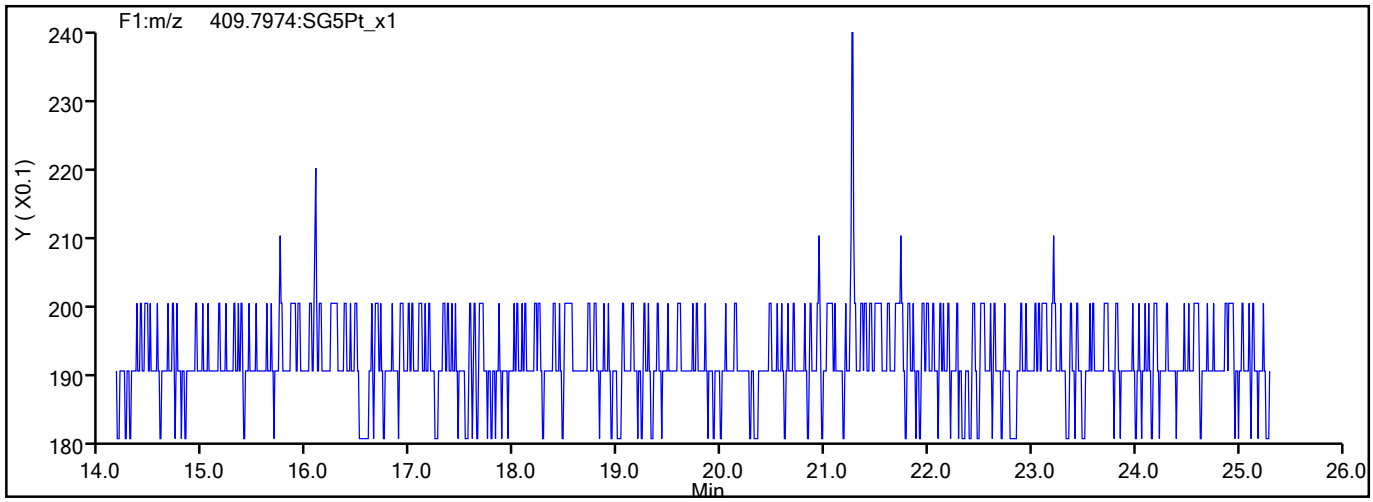

788383

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
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PeCDF

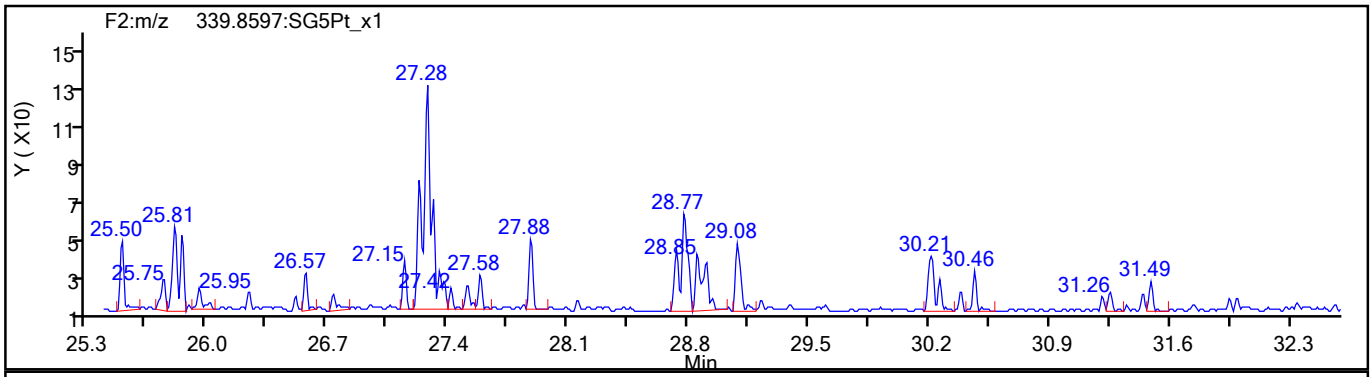

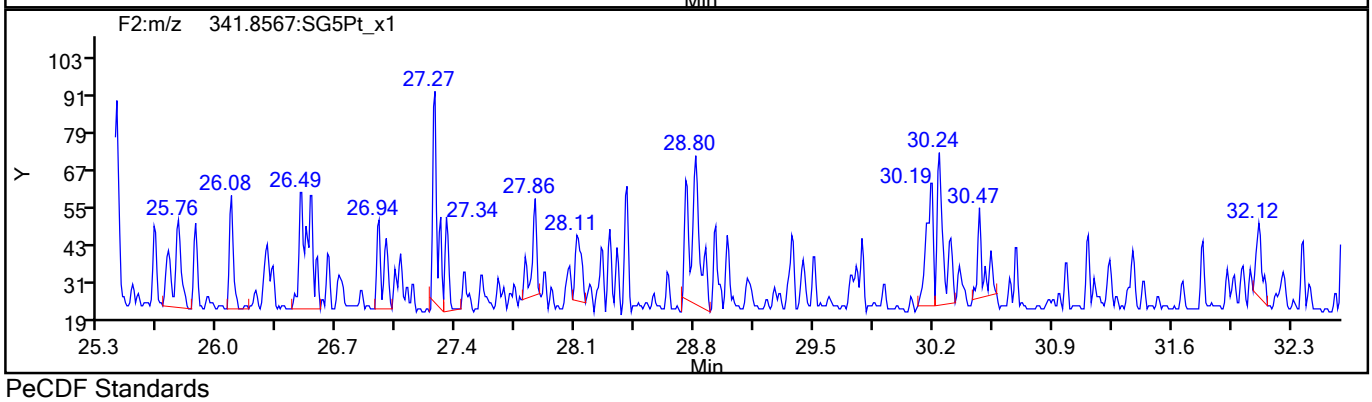

PeCDF Standards

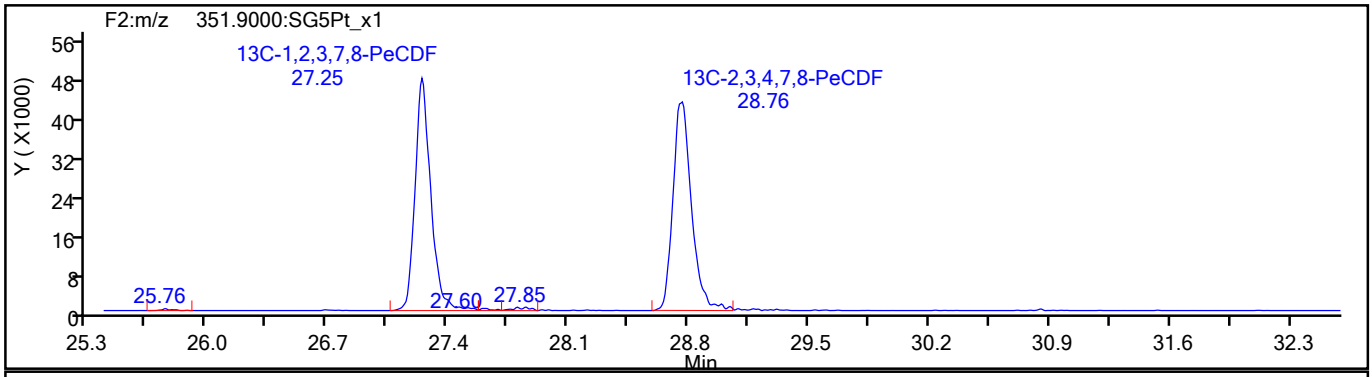

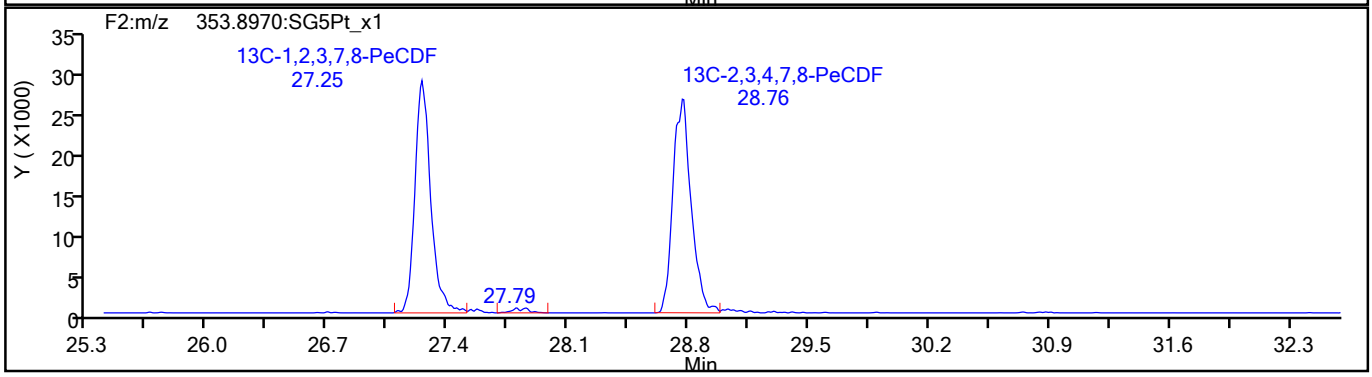

788384

Report Date: 23-Aug-2021 09:09:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
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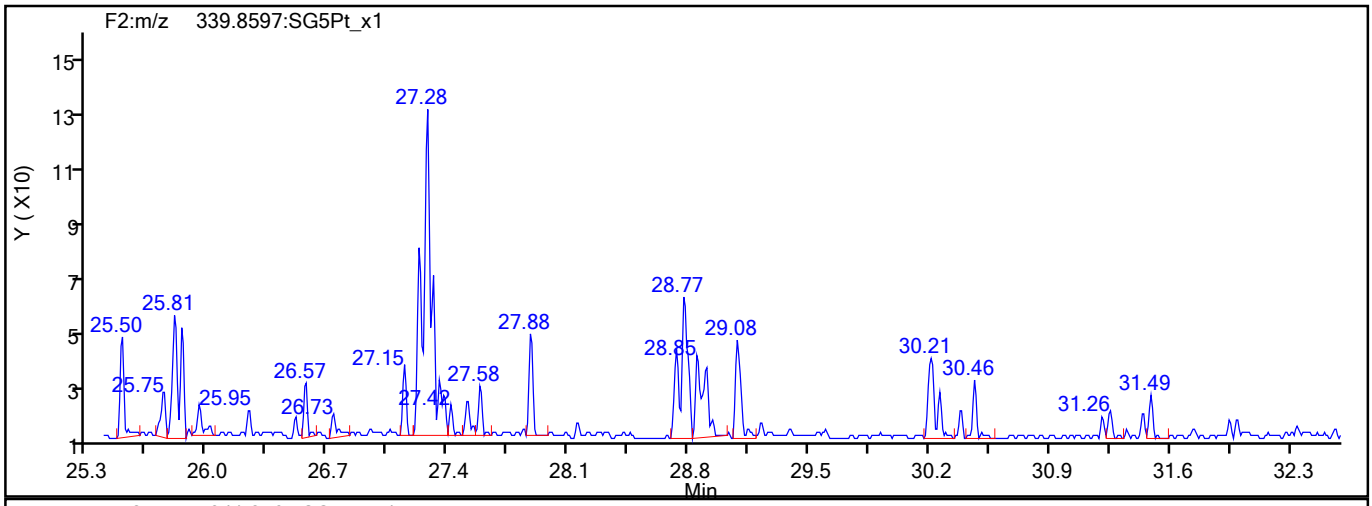

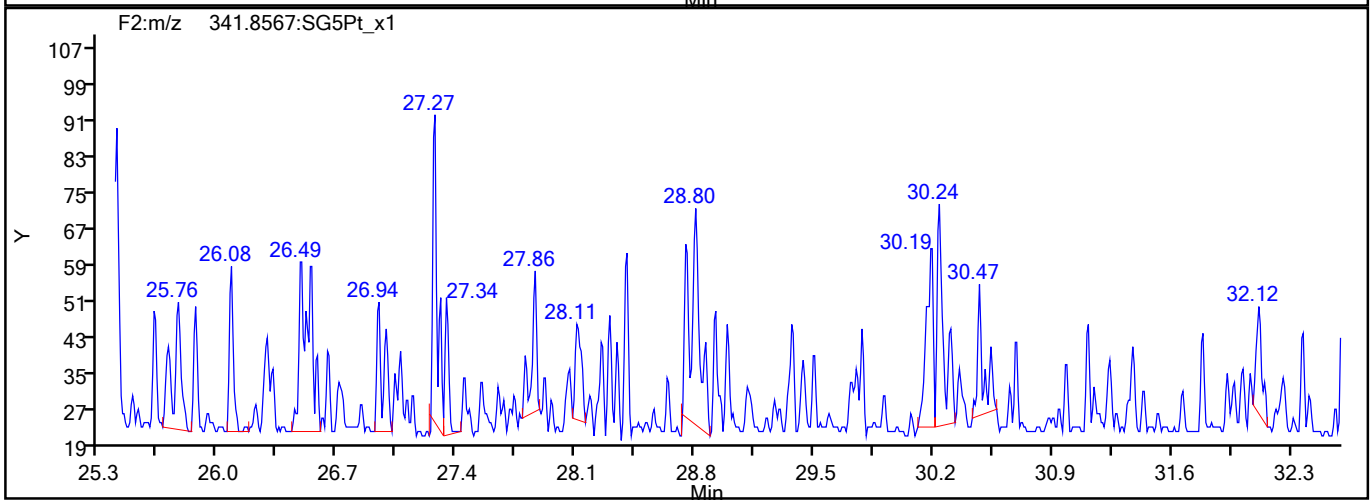

PeCDF Interference Mass

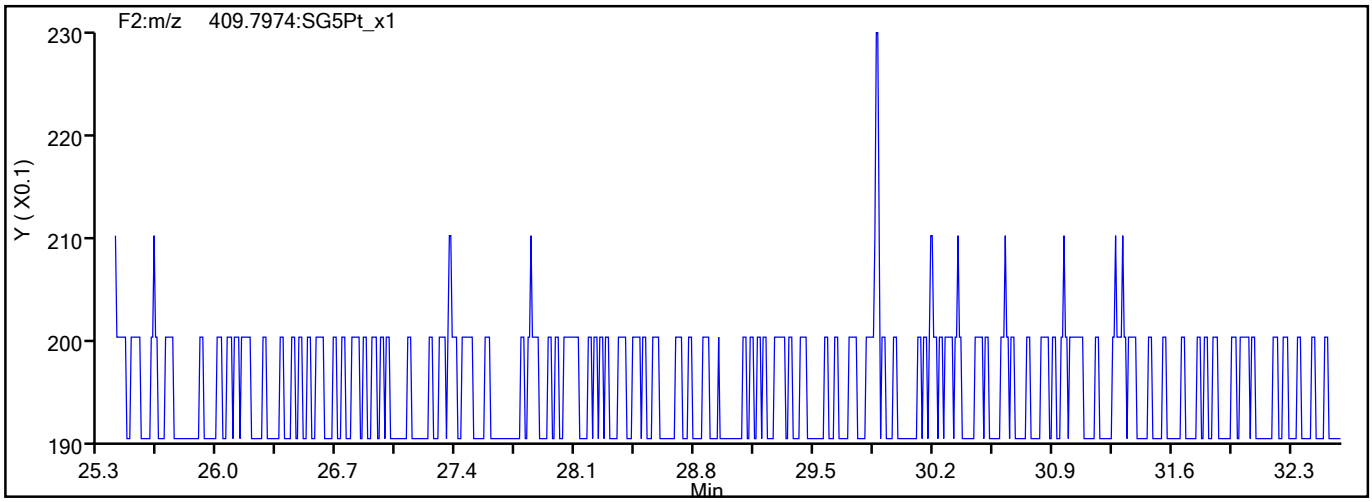

788385

Report Date: 23-Aug-2021 09:09:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

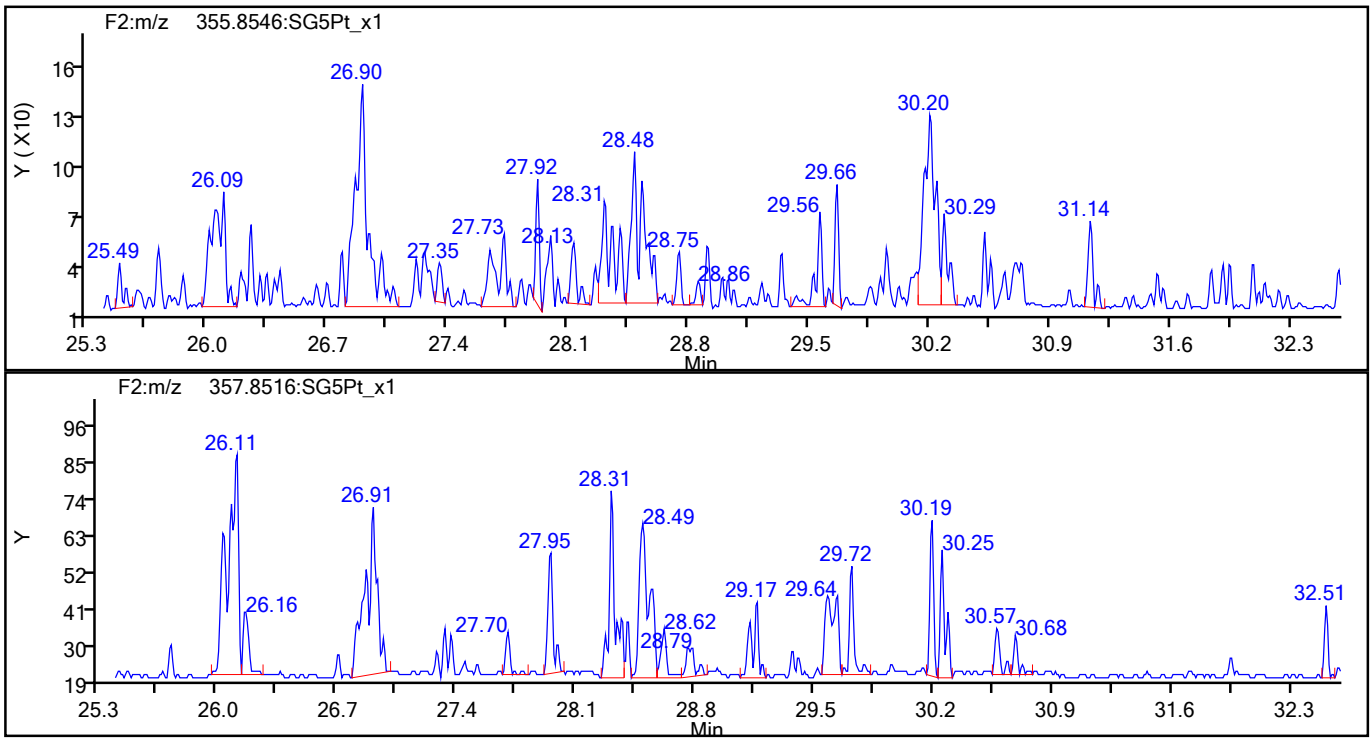

PeCDD Standards

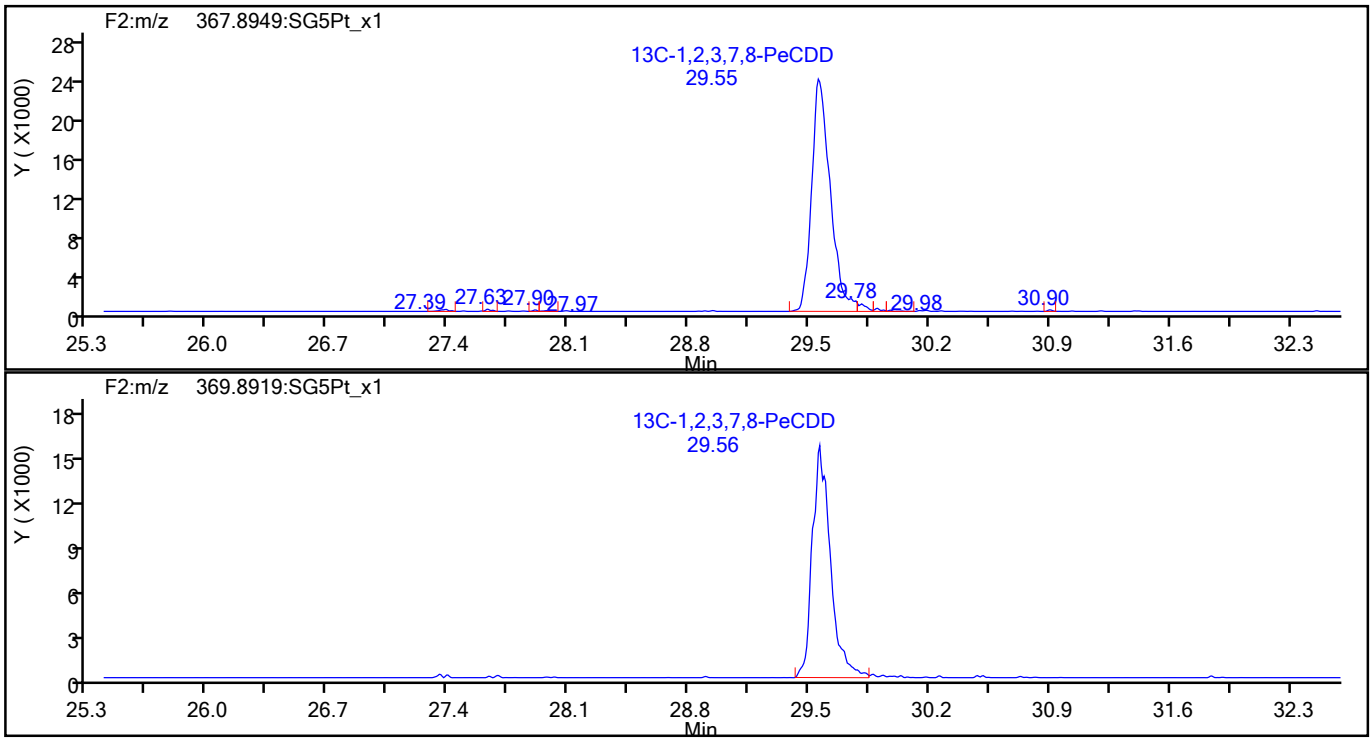

788386

Report Date: 23-Aug-2021 09:09:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

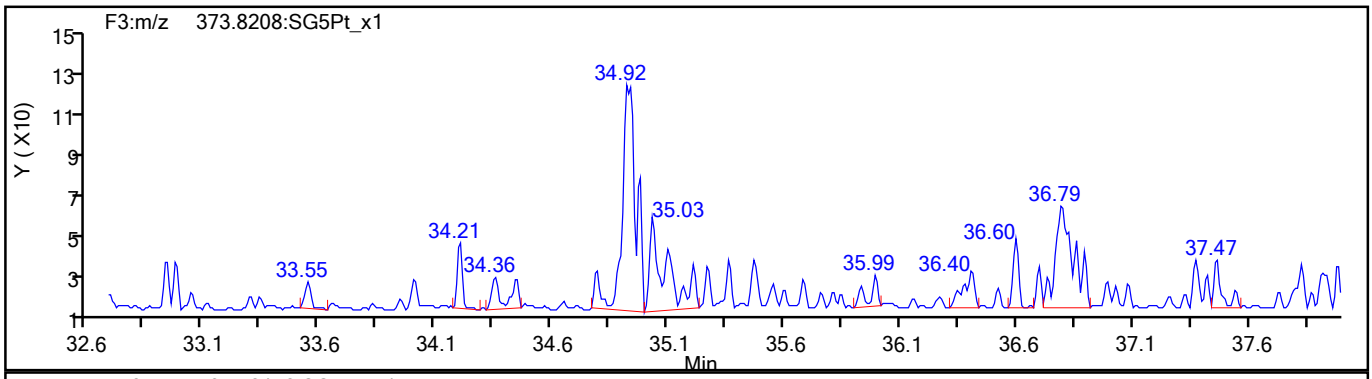

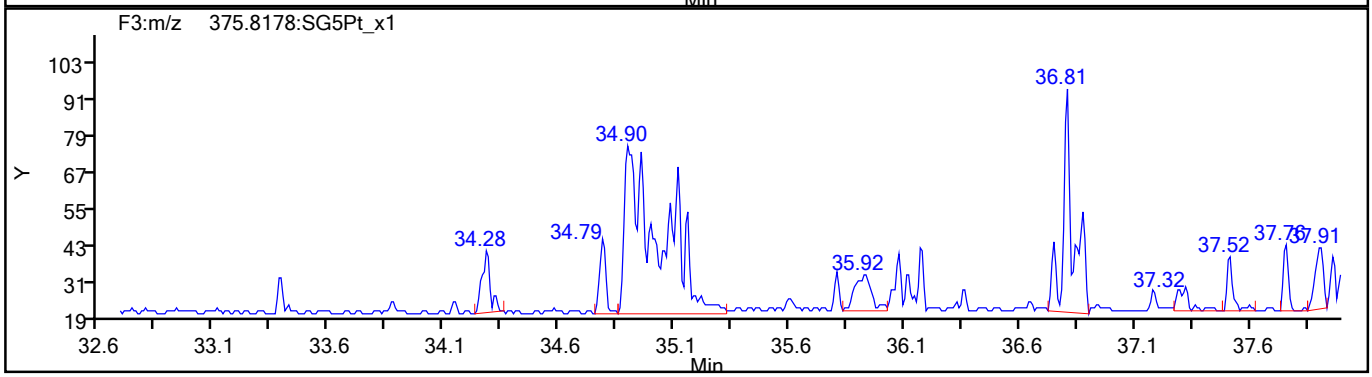

HxCDF Standards

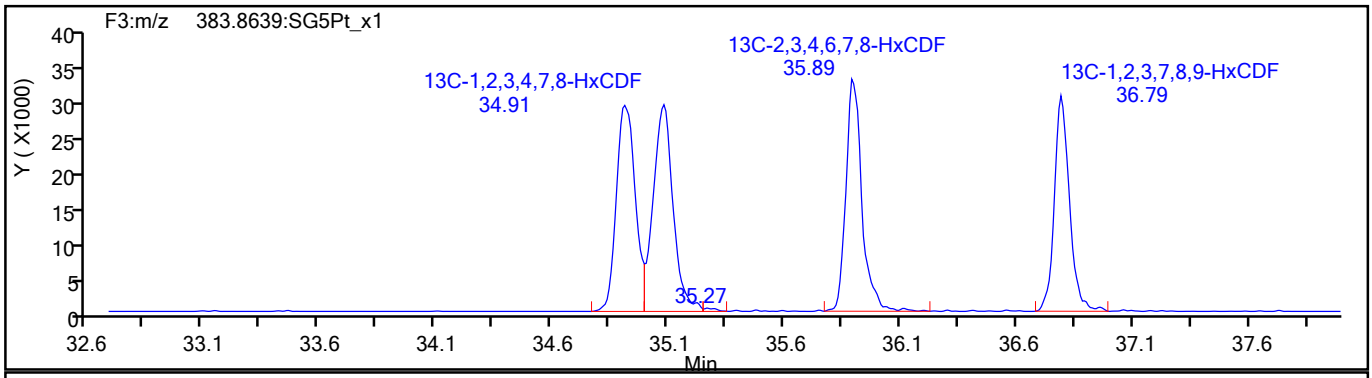

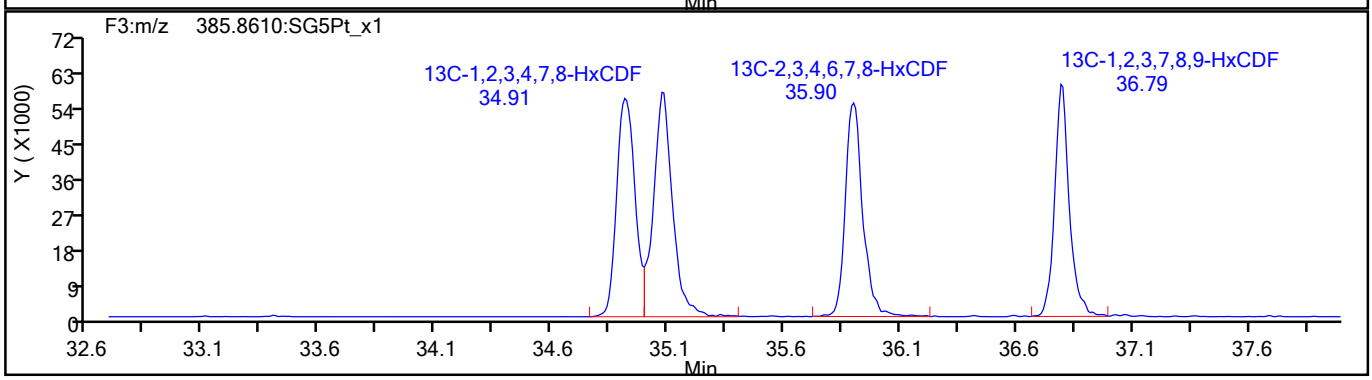

788387

Report Date: 23-Aug-2021 09:09:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	517891	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

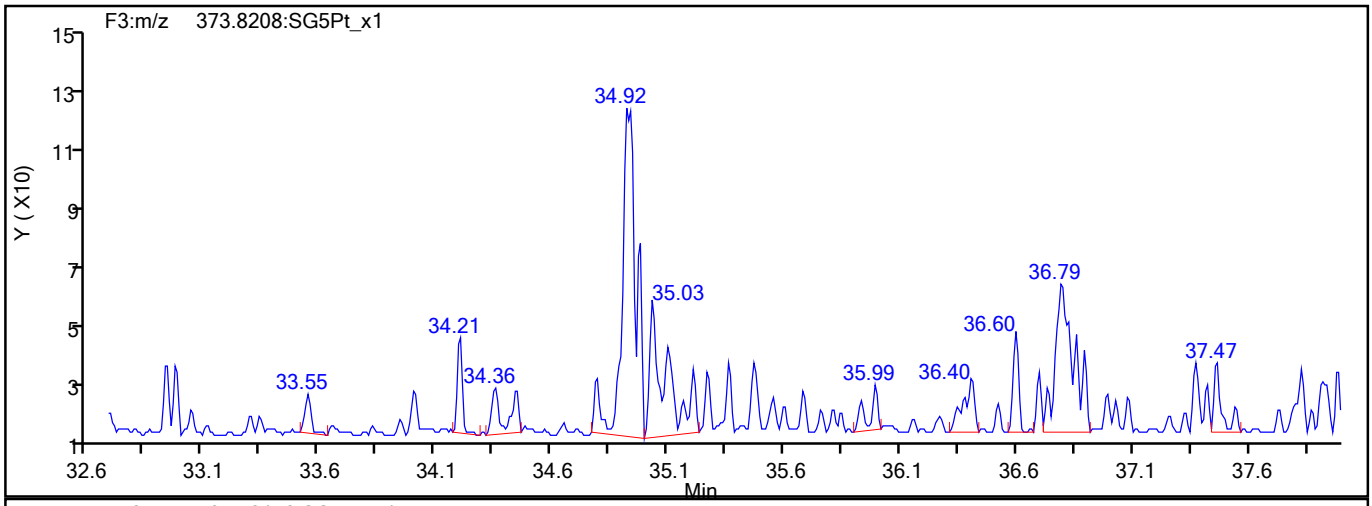

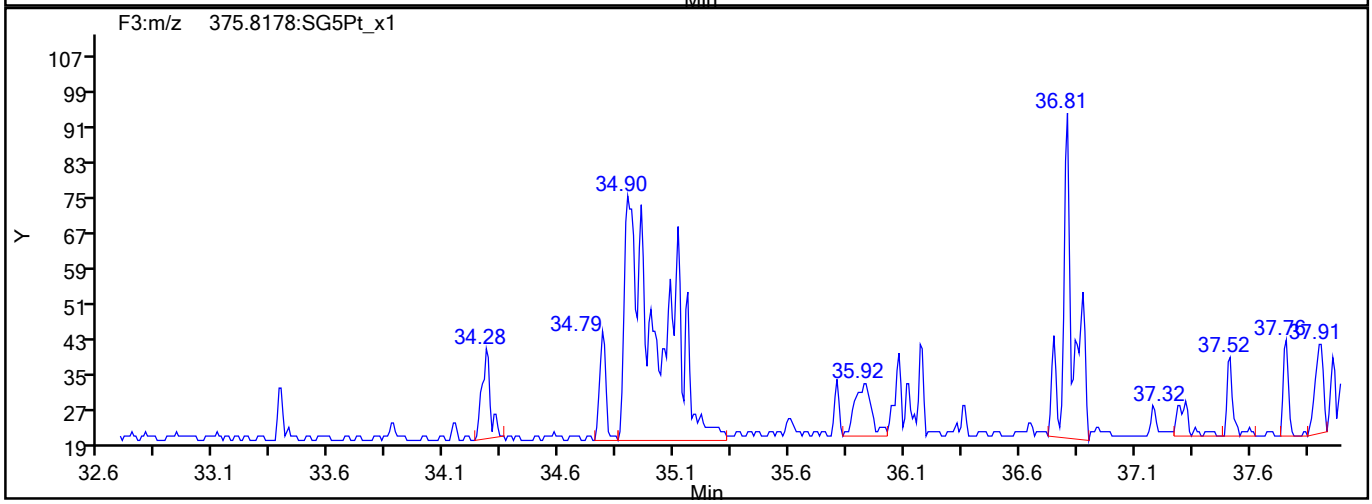

HxCDF Interference Mass

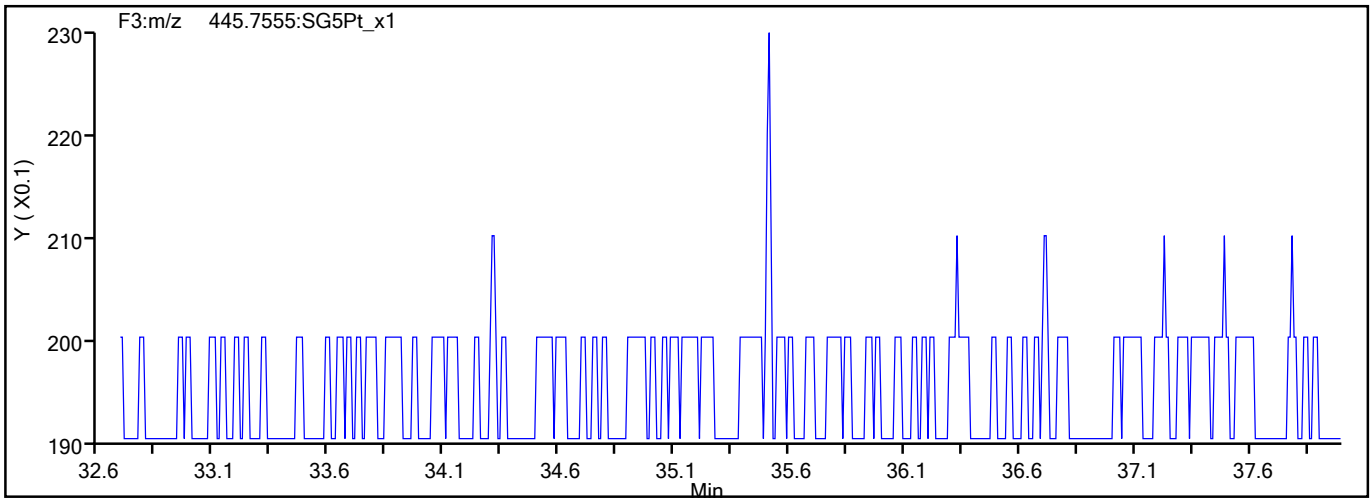

788388

Report Date: 23-Aug-2021 09:09:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

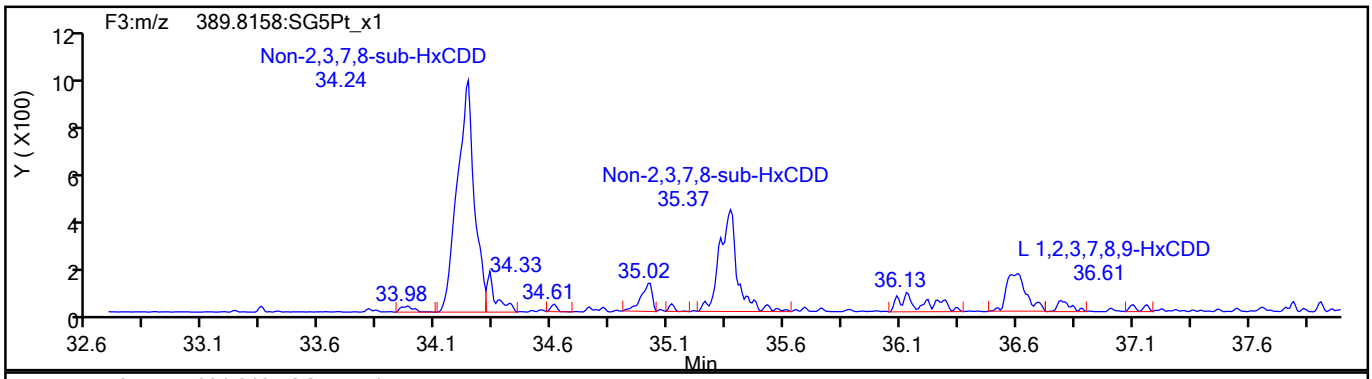

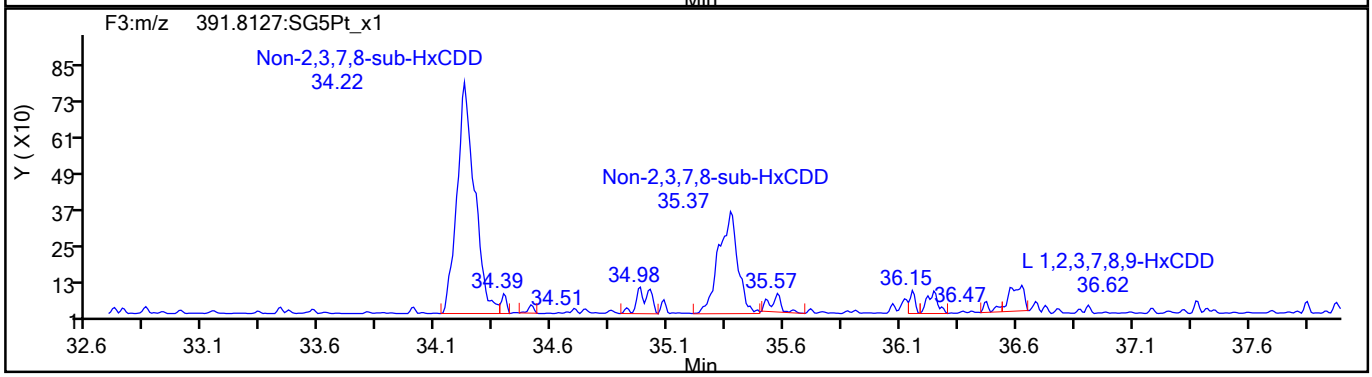

HxCDD Standards

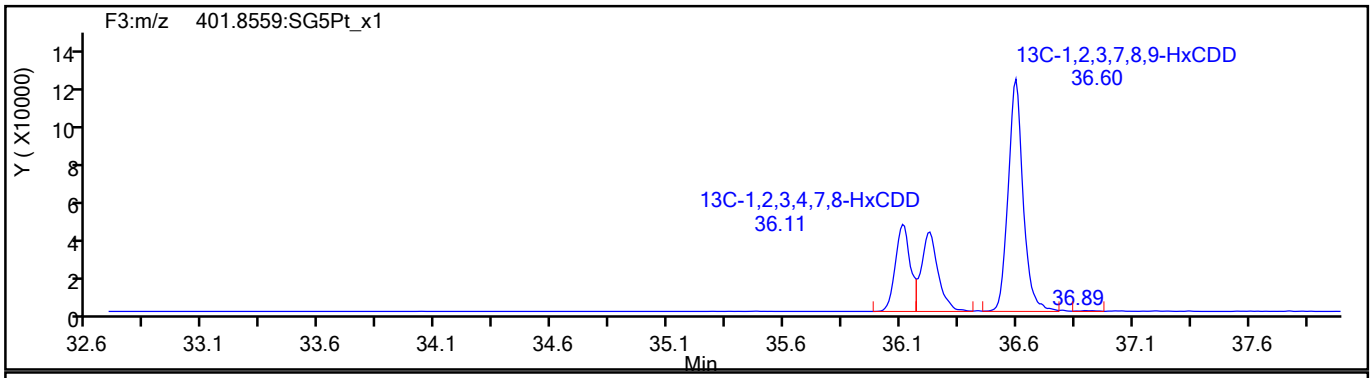

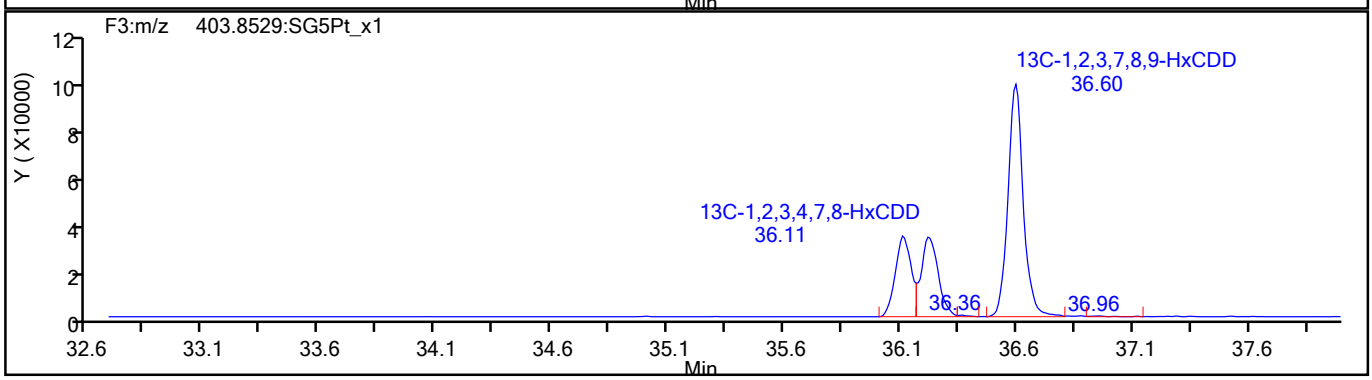

788389

Report Date: 23-Aug-2021 09:09:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Injection Date:	19-Aug-2021 18:51:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	517891	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

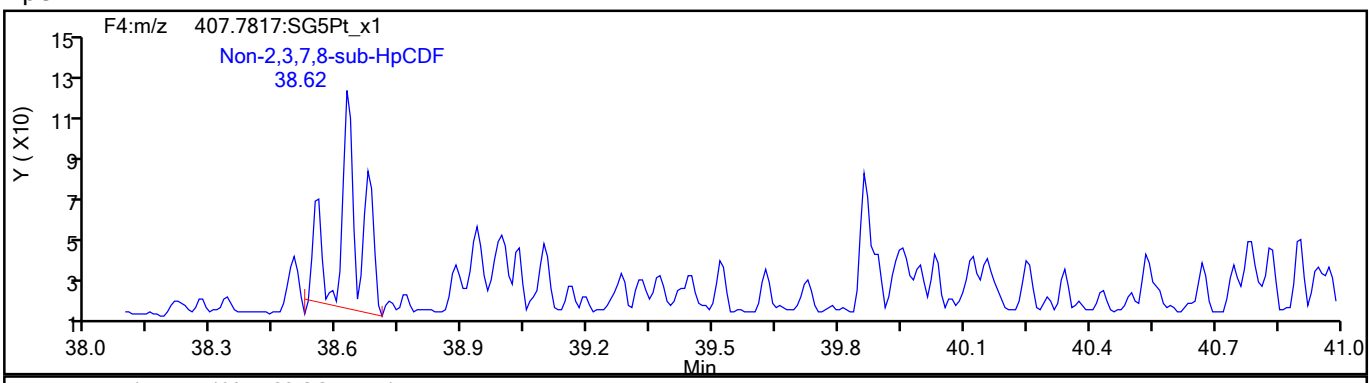

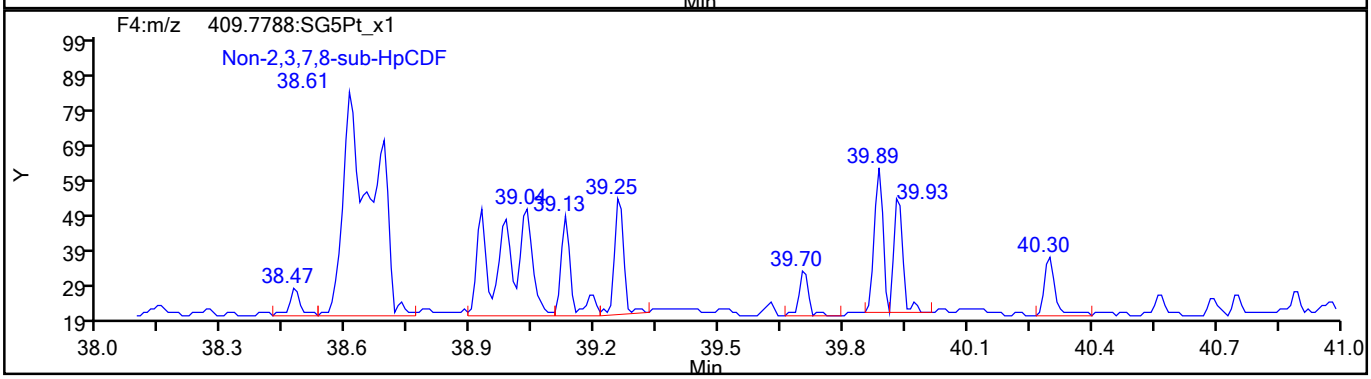

HpCDF Standards

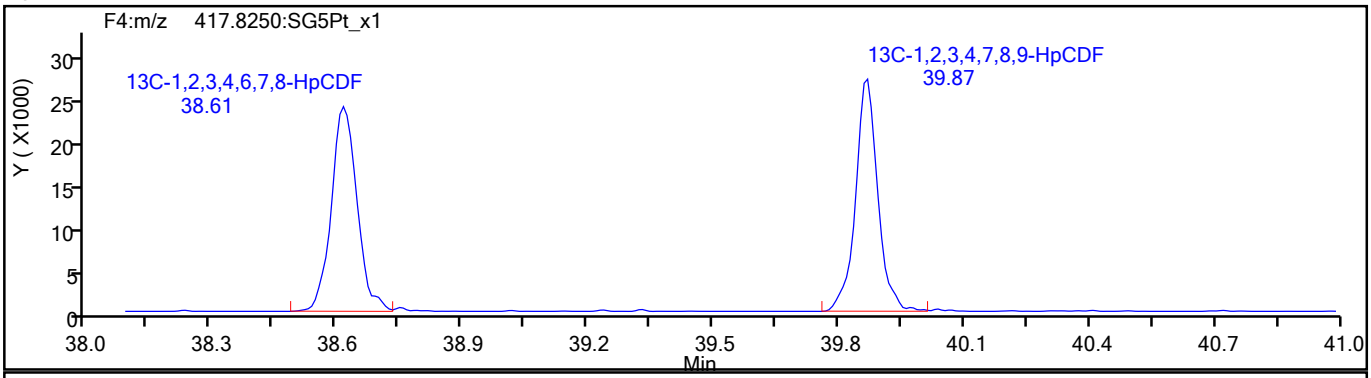

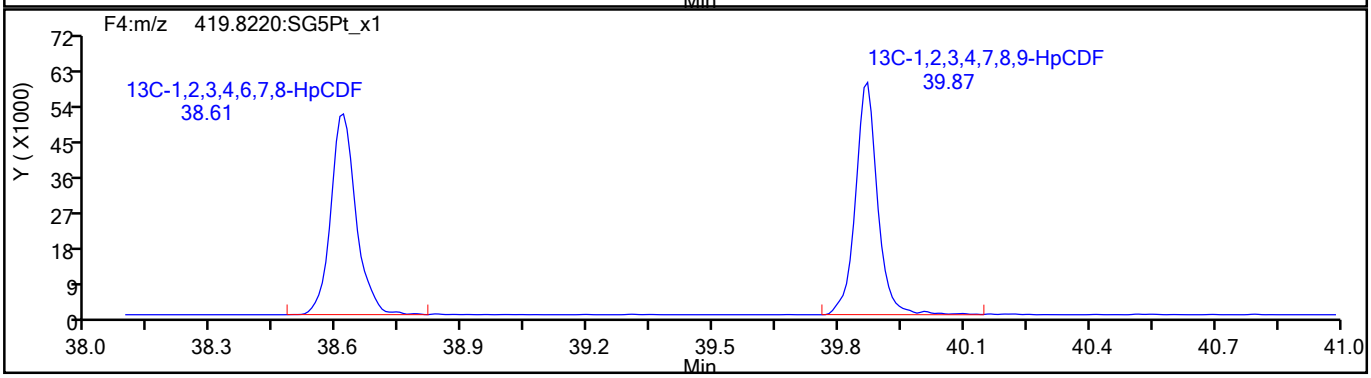

788390

Report Date: 23-Aug-2021 09:09:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Injection Date:	19-Aug-2021 18:51:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	517891	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

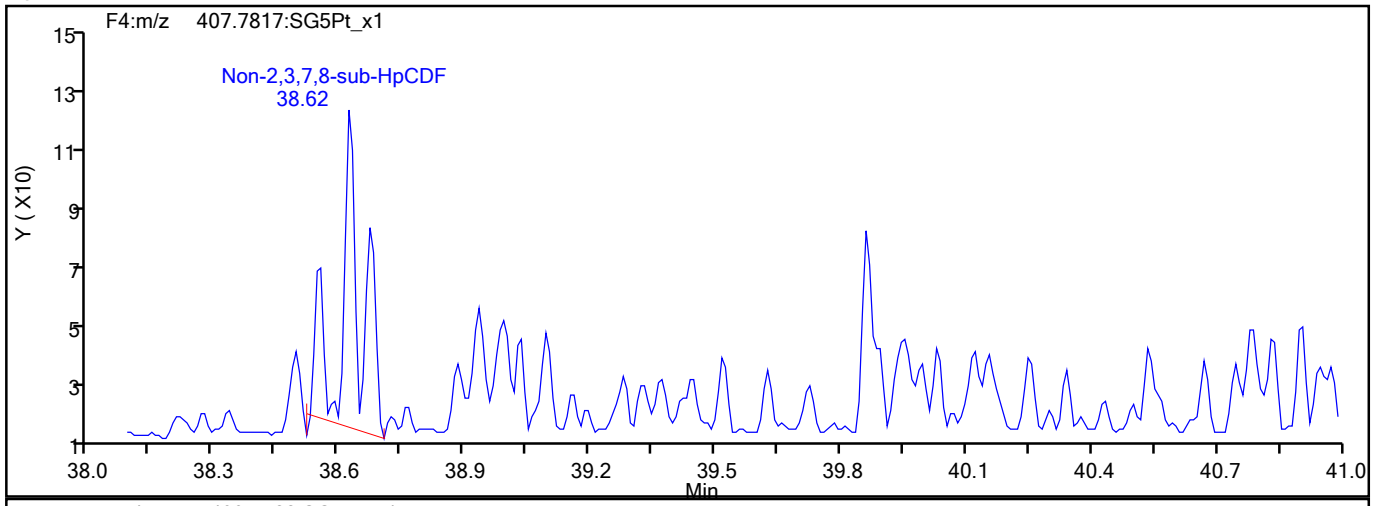

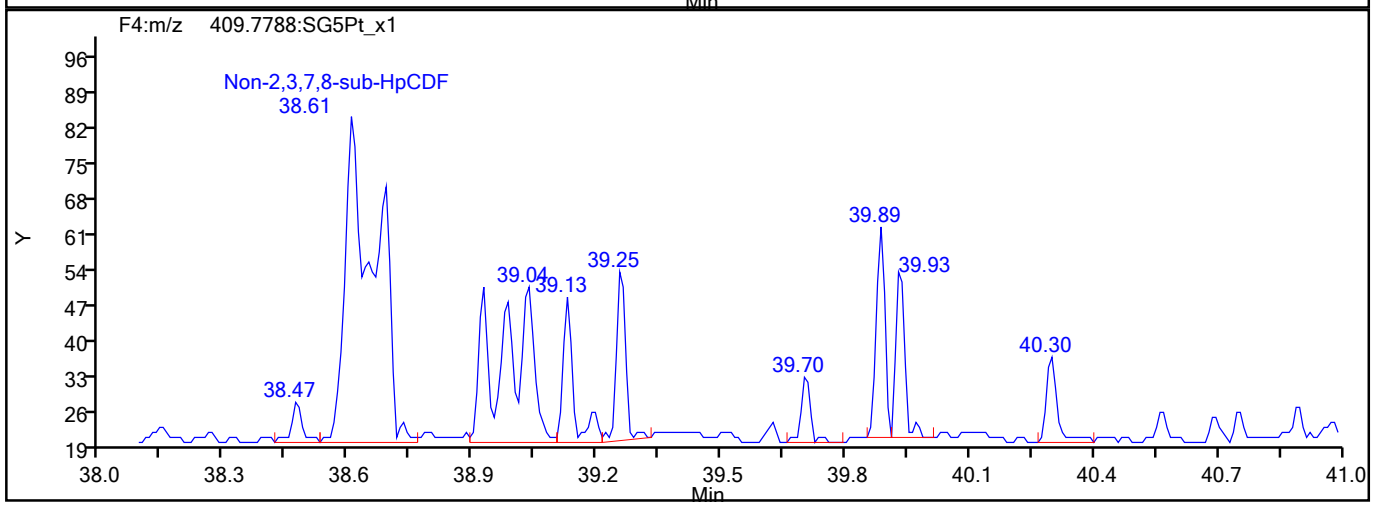

HpCDF Interference Mass

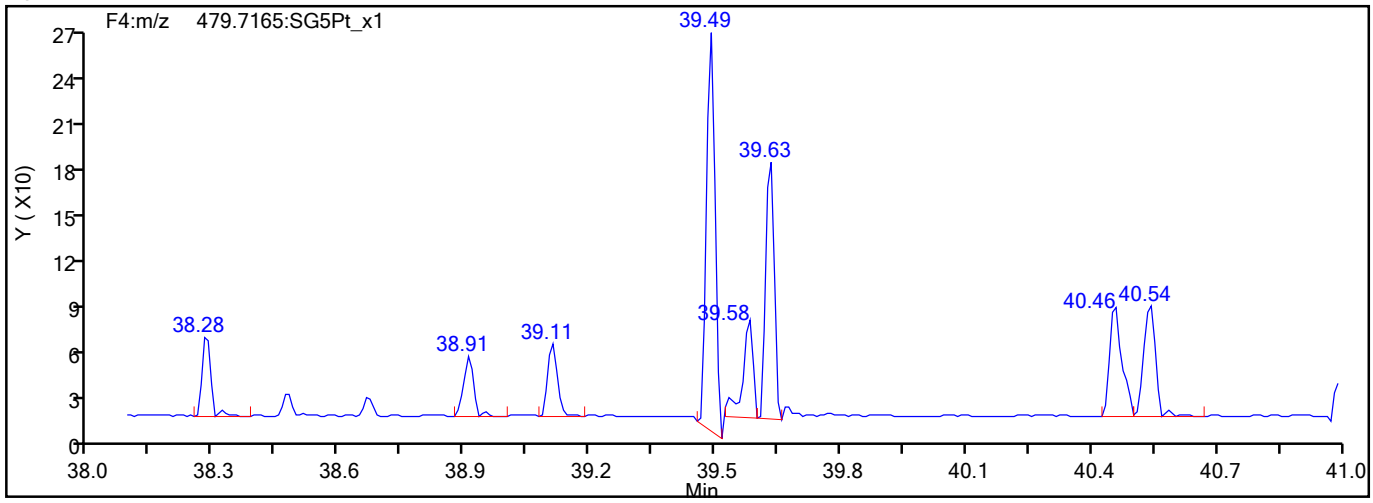

788391

Report Date: 23-Aug-2021 09:09:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Injection Date:	19-Aug-2021 18:51:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	517891	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

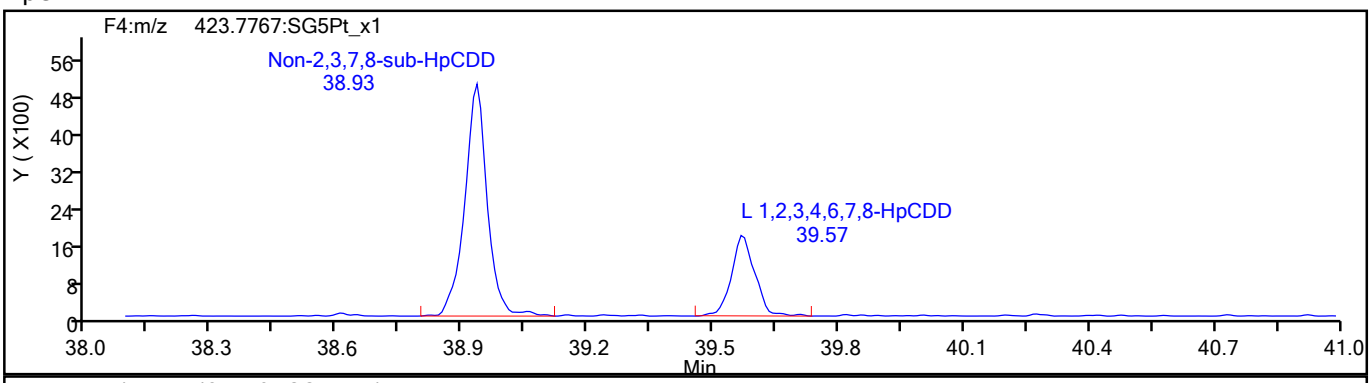

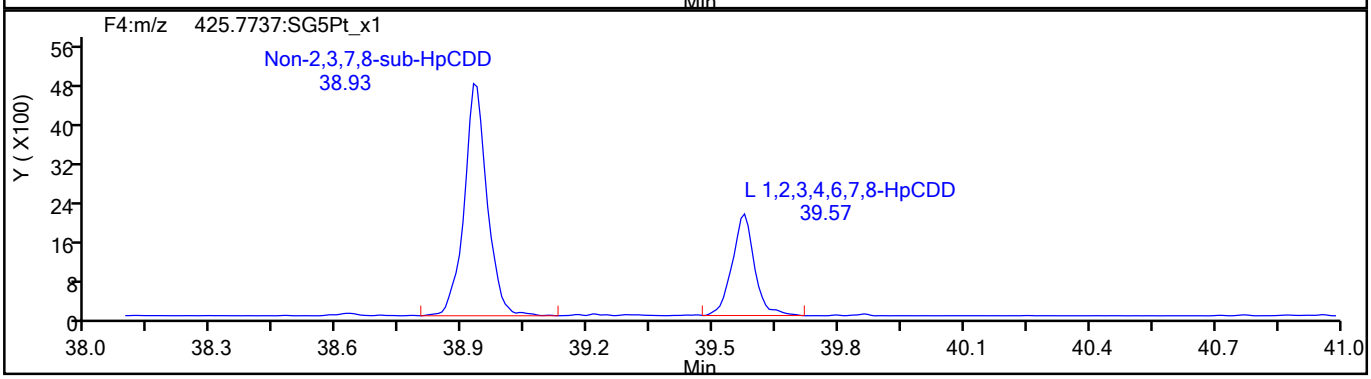

HpCDD Standards

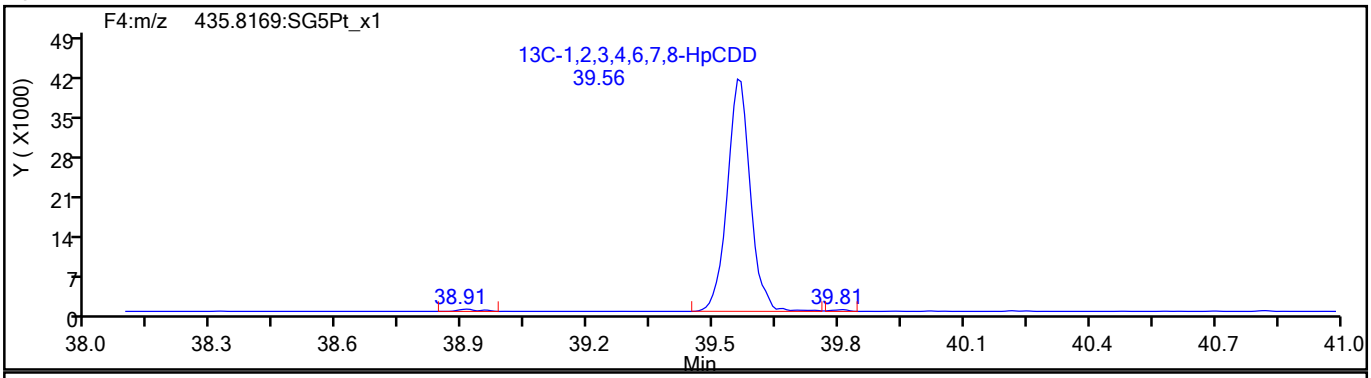

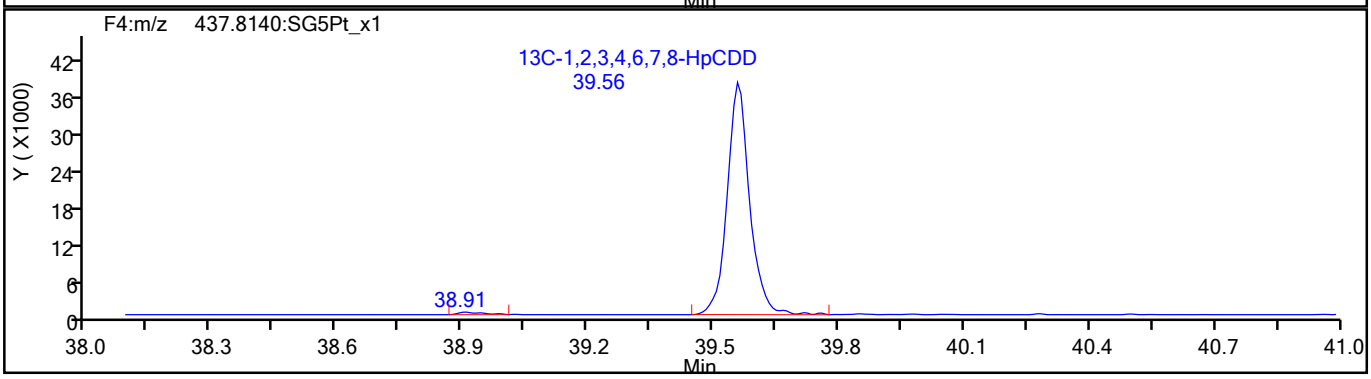

788392

Report Date: 23-Aug-2021 09:09:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Injection Date:	19-Aug-2021 18:51:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	517891	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

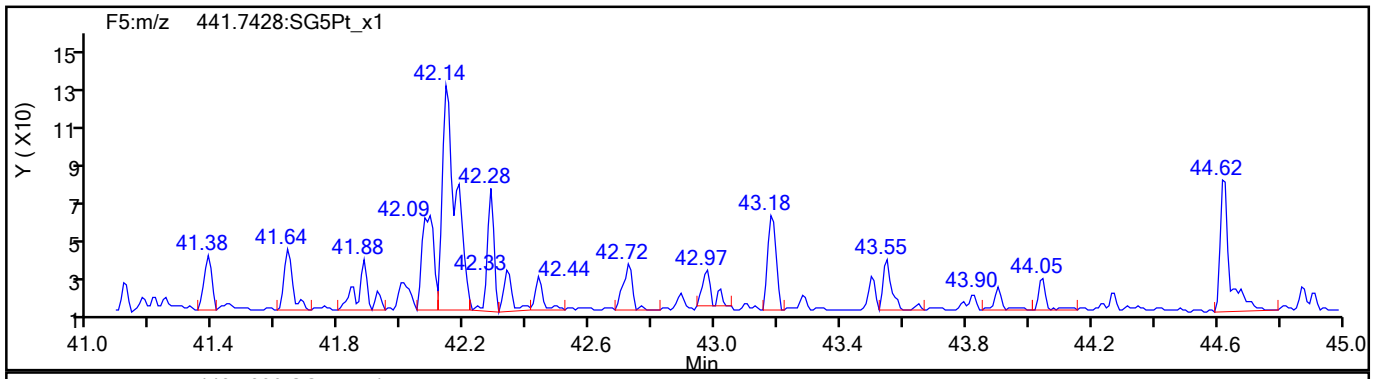

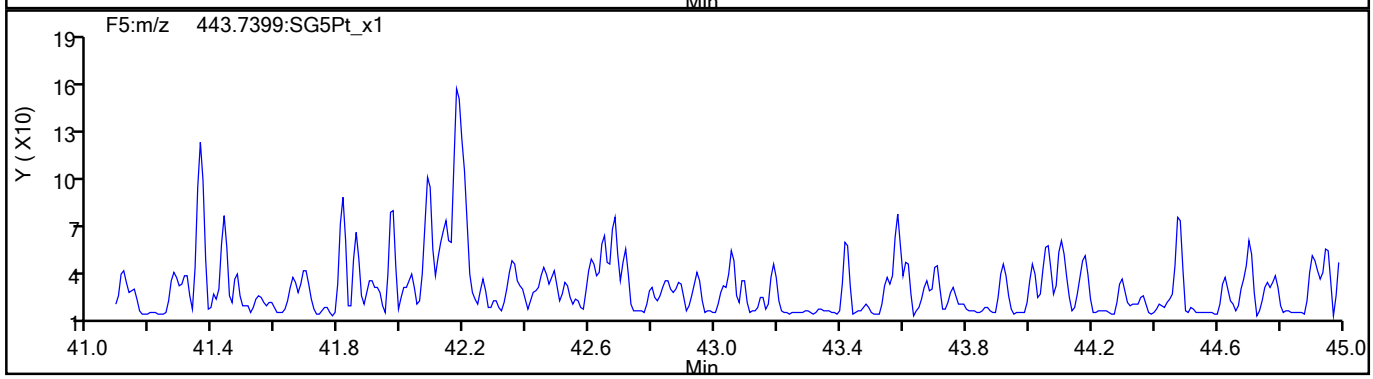

OCDF Standards

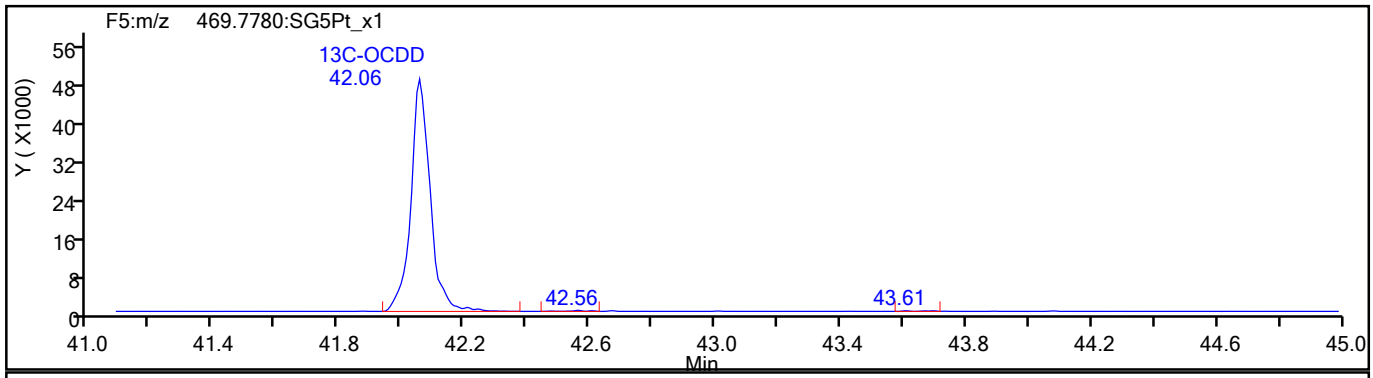

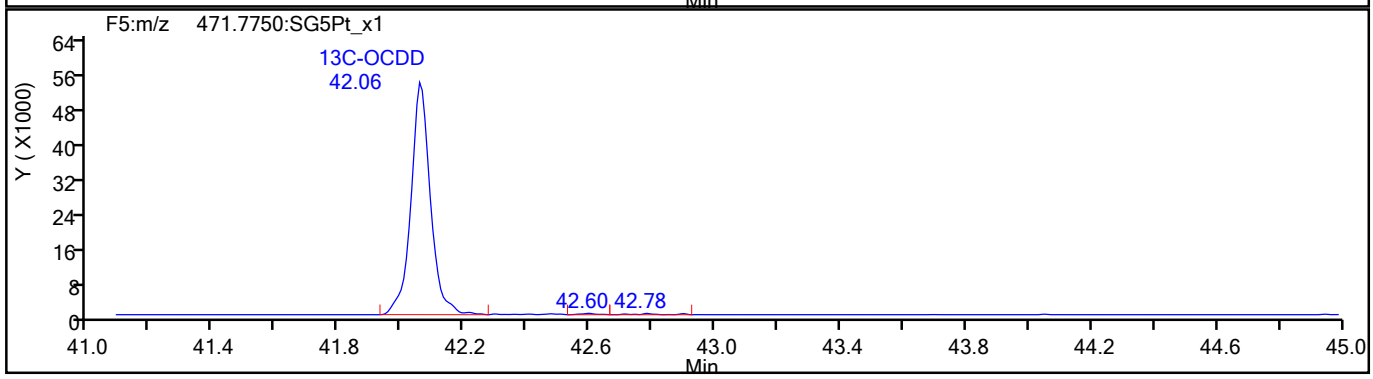

788393

Report Date: 23-Aug-2021 09:09:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Injection Date:	19-Aug-2021 18:51:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	517891	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

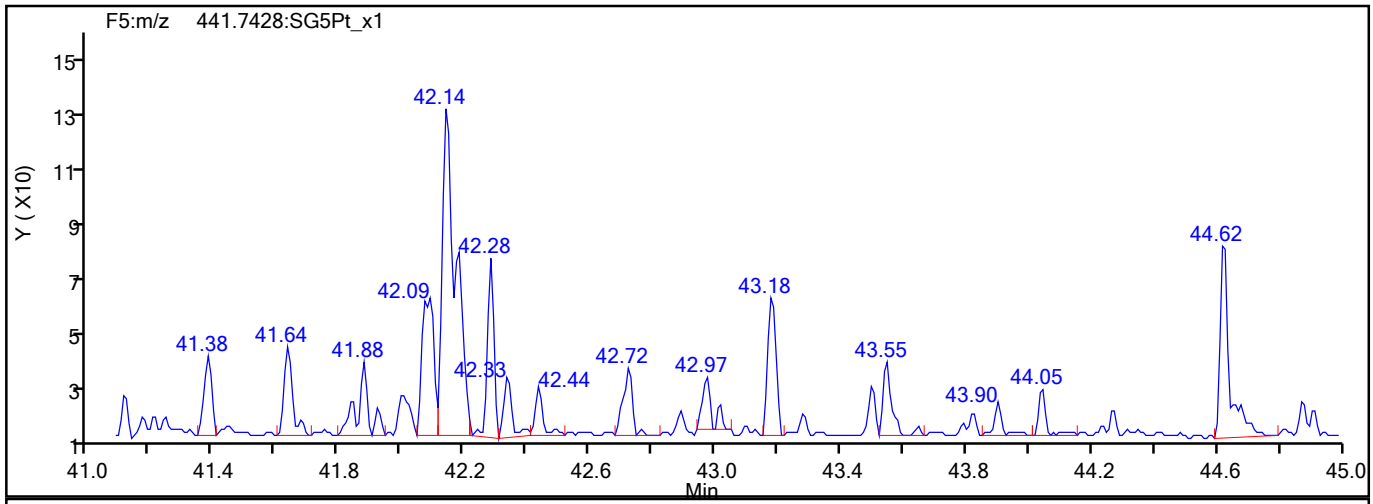

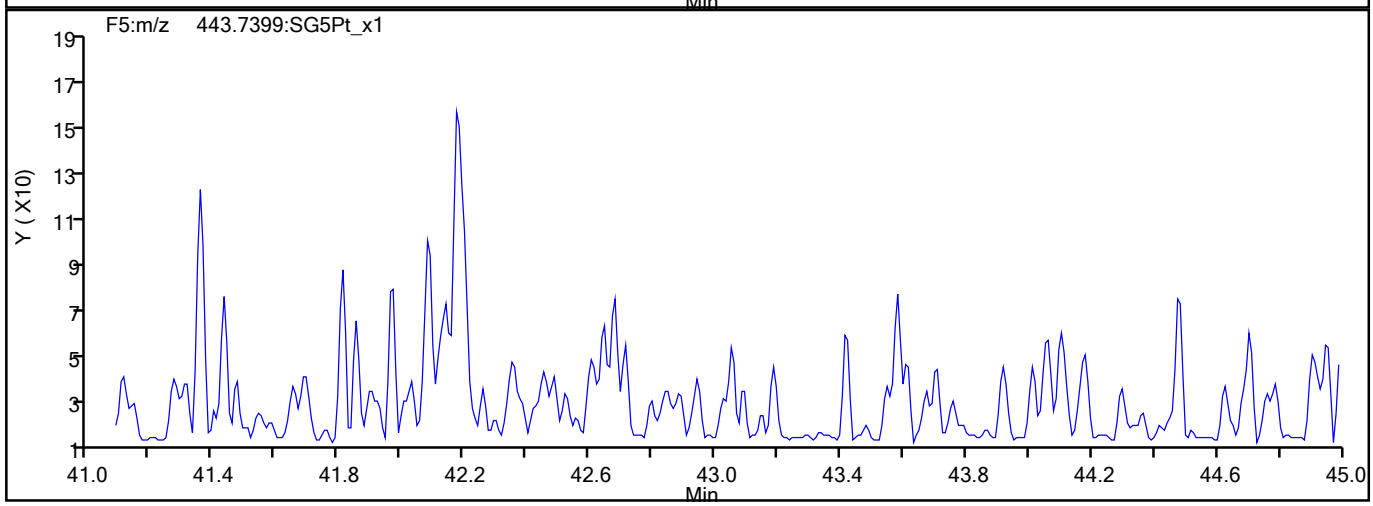

OCDF Interference Mass

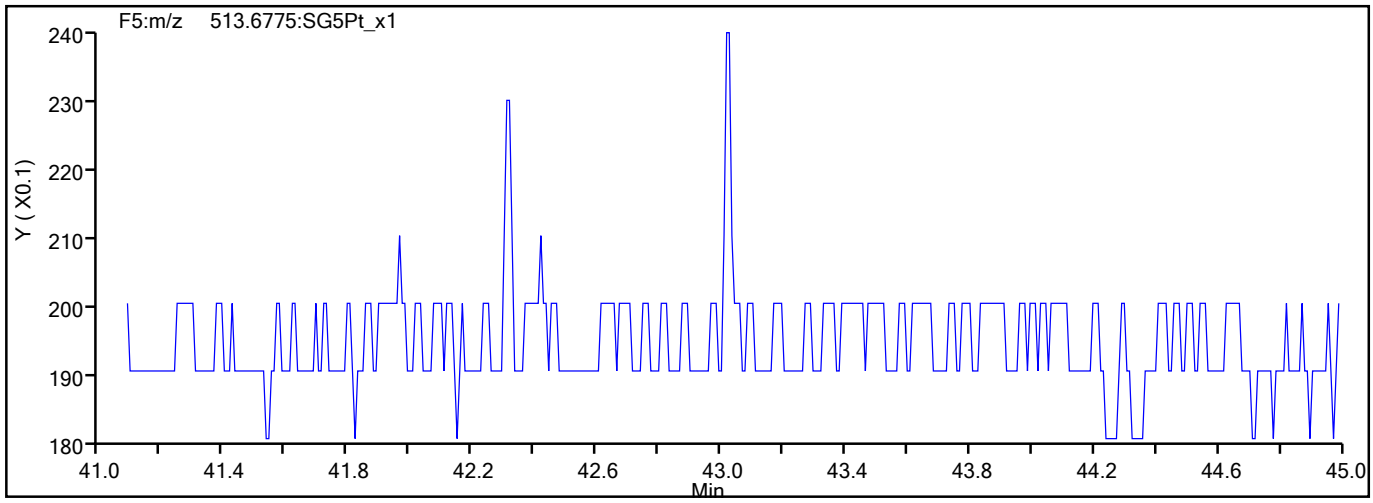

788394

Report Date: 23-Aug-2021 09:09:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Injection Date:	19-Aug-2021 18:51:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	517891	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

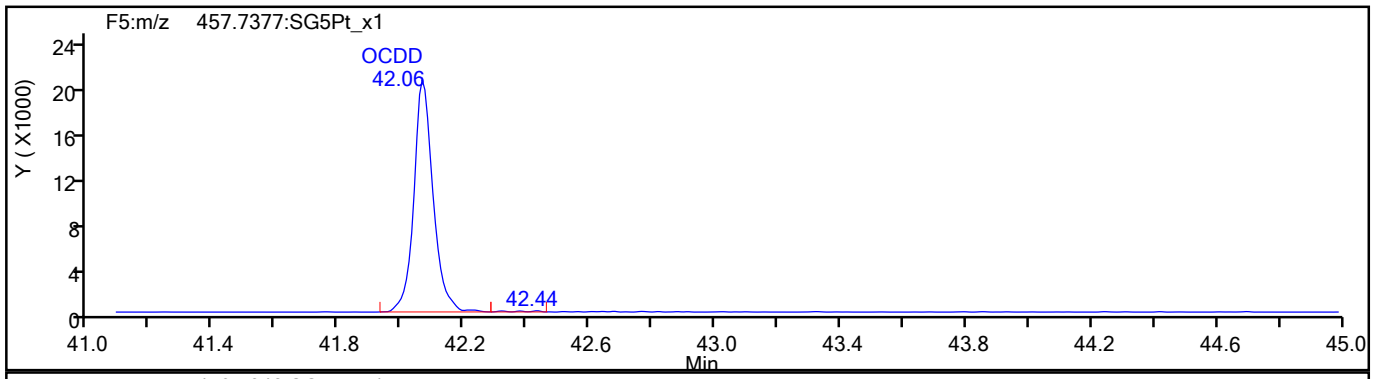

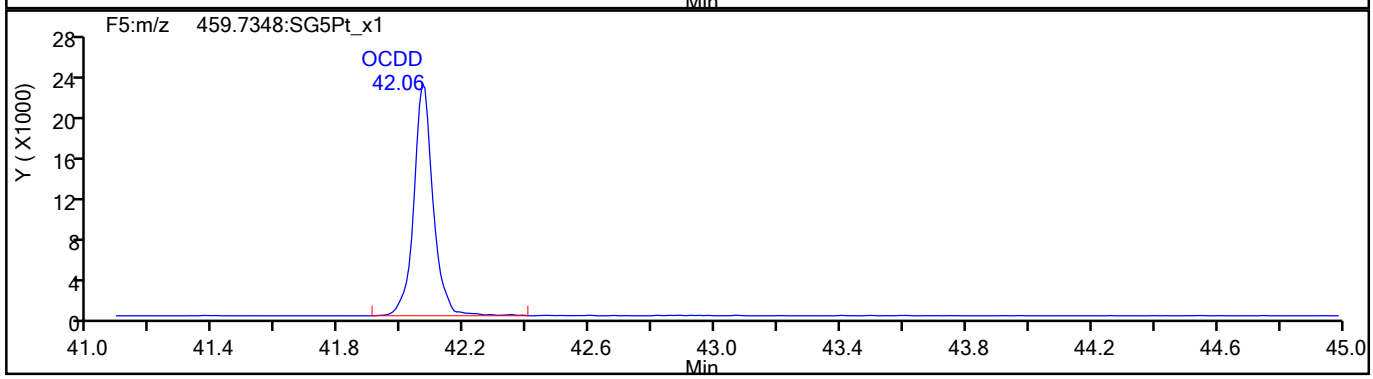

OCDD Standards

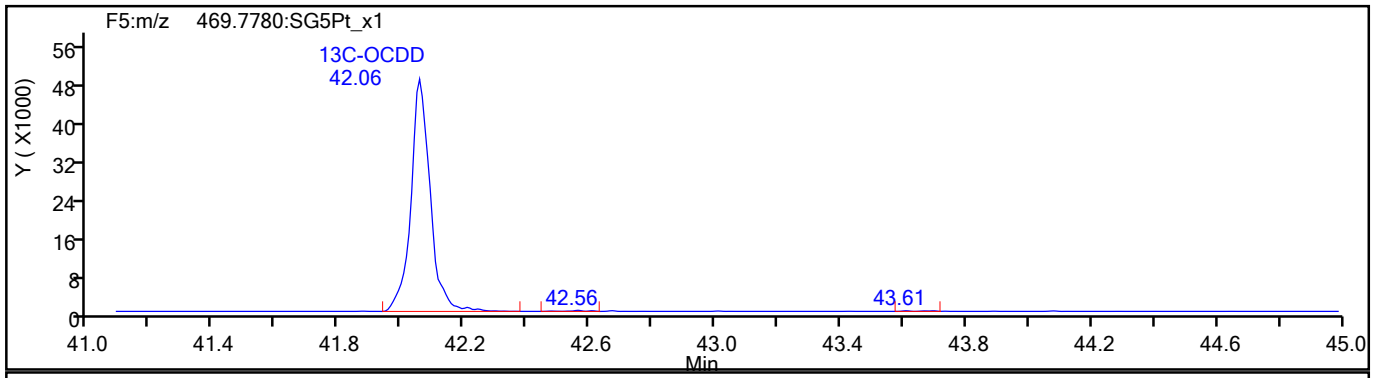

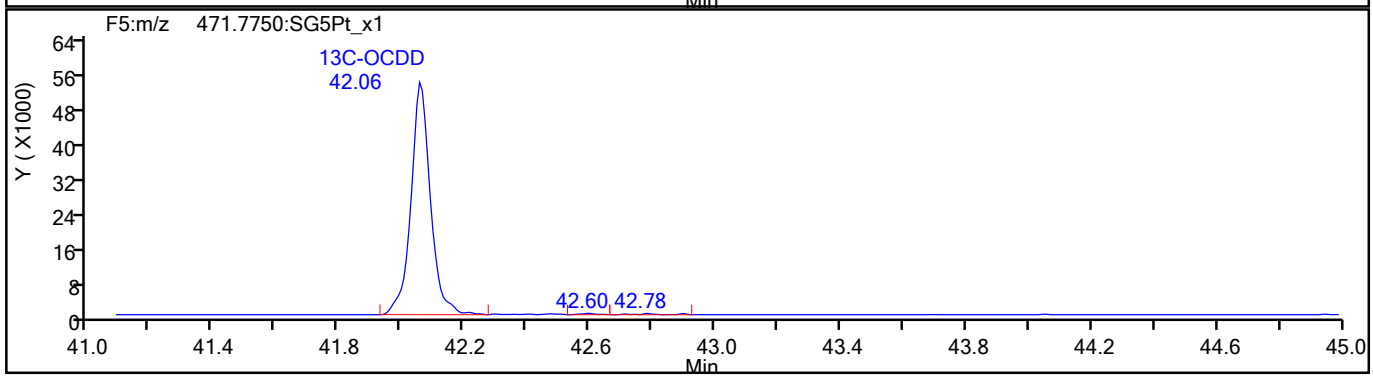

788395

Report Date: 23-Aug-2021 09:09:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Injection Date:	19-Aug-2021 18:51:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	517891	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

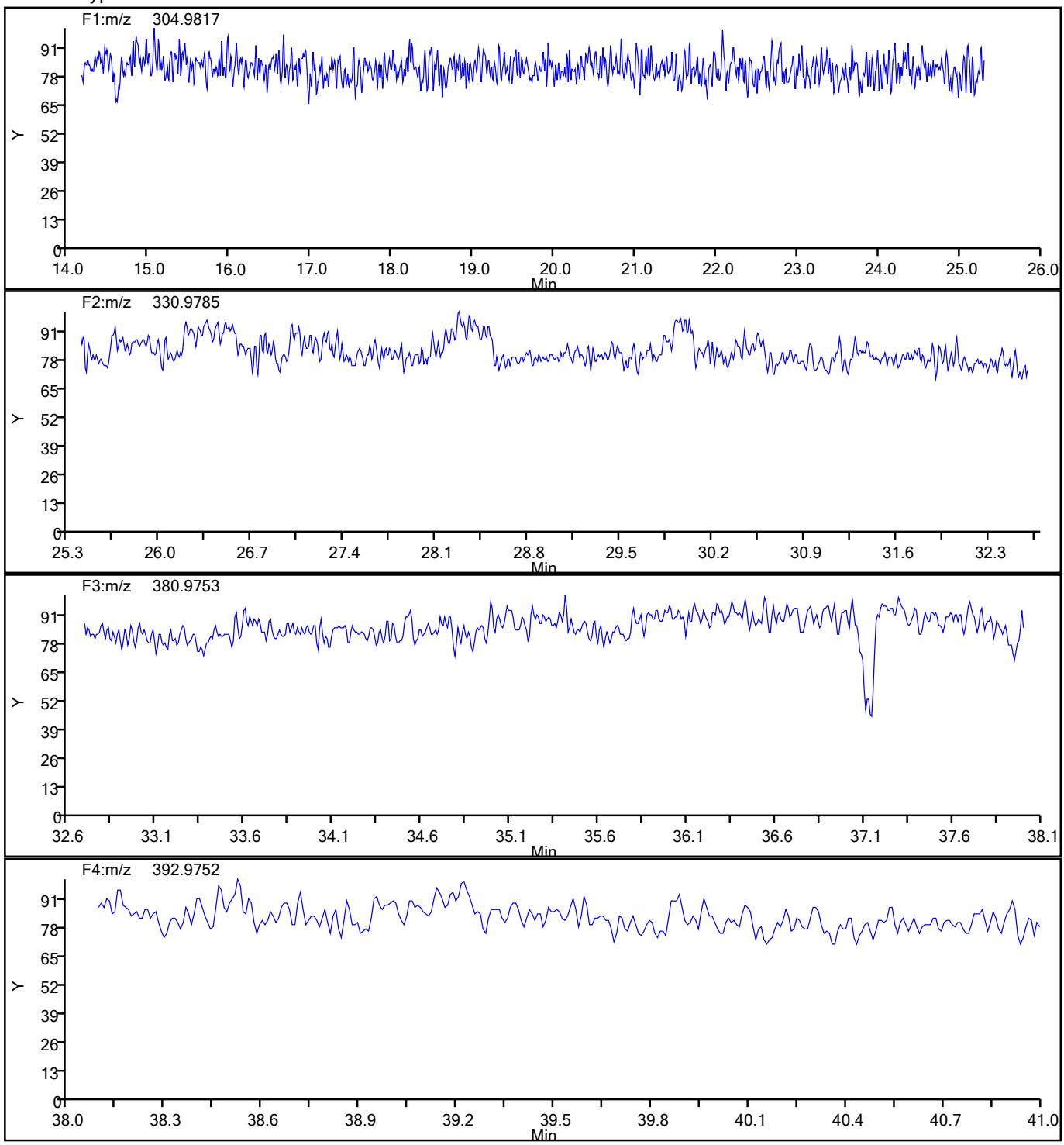

788396

Report Date: 23-Aug-2021 09:09:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_8.d		
Injection Date:	19-Aug-2021 18:51:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	517891	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

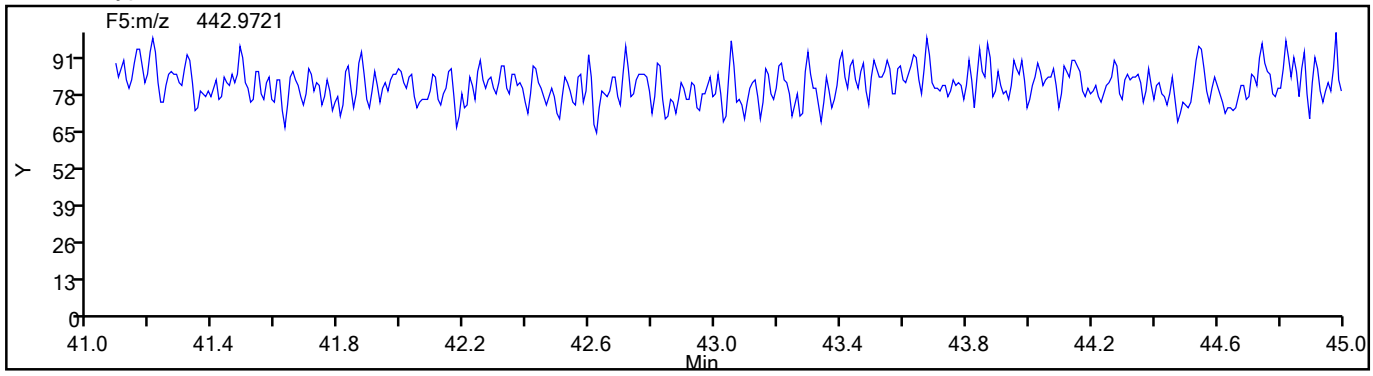

788397

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (6-8) RA
Lab Sample ID: 320-76901-4 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_005.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:15
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.28(g)
Date Analyzed: 08/27/2021 18:11
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 19.0
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	5.5		1.2	0.20

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	47		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	60		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_005.d
Lims ID: 320-76901-A-4-A
Client ID: 11215702-072821-BN-SJSB095 (6-8)
Sample Type: Client
Inject. Date: 27-Aug-2021 18:11:39 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-4-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:39:44

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.285	56894631	0.80	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.616	35864951	0.85	1.3327	47.3	47.3	0.1945	0.1945	47.30	
2,3,7,8-TCDF	17.629	818097	0.75	0.9978	2.286	2.286	0.0825	0.0825		
D 13C-2,3,7,8-TCDD	16.066	21818733	0.74	0.8749	43.8	43.8	0.2609	0.2609	43.83	
2,3,7,8-TCDD	16.093	174573	0.67	1.0570	0.7570	0.7570	0.0893	0.0893		
$ 37Cl4-2,3,7,8-TCDD	16.079	11739811		0.8648	23.9	23.9	0.0536	0.0536	59.65	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

788399

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_005.d
Lims ID: 320-76901-A-4-A
Client ID: 11215702-072821-BN-SJSB095 (6-8)
Sample Type: Client
Inject. Date: 27-Aug-2021 18:11:39 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-4-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:39:44

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.285	16.300	-1		25224152	5472019	5806	14515	942		
333.9339	16.285	16.300	-1		31670479	7163304	5730	14325	1250	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.616	17.616	0	1.082	16519068	3059932	6642	16605	461		
317.9389	17.602	17.616	-1	1.081	19345883	3529262	6456	16140	547	0.85(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.644	-1	1.001	351572	61792	1176	2940	53		
305.8987	17.643	17.644	0	1.002	466525	81965	994	2485	82	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	0.987	9305832	2054179	5806	14515	354		
333.9339	16.052	16.066	-1	0.986	12512901	2734144	5730	14325	477	0.74(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.080	1	1.002	69863	14231	788	1970	18		
321.8936	16.079	16.080	0	1.001	104710	23282	1020	2550	23	0.67(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.079	16.080	0	0.987	11739811	2512669	2345	5862	1072		

QC Flag Legend

Processing Flags

Report Date: 30-Aug-2021 09:51:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_005.d		
Injection Date:	27-Aug-2021 18:11:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	520456	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

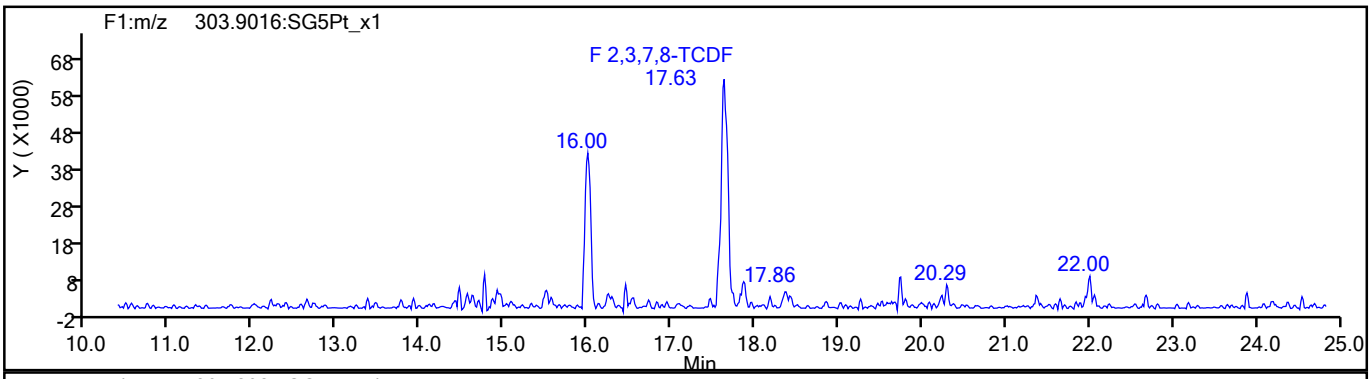

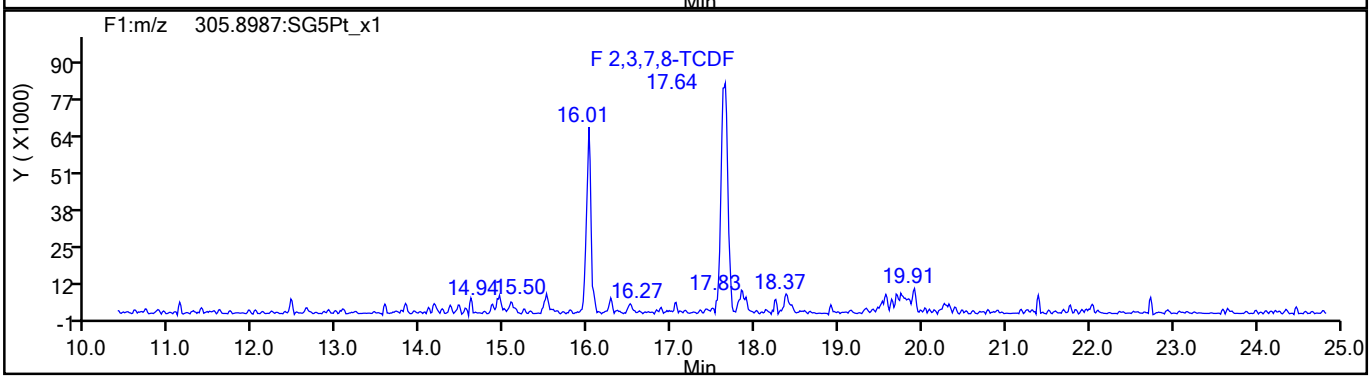

TCDF Standards

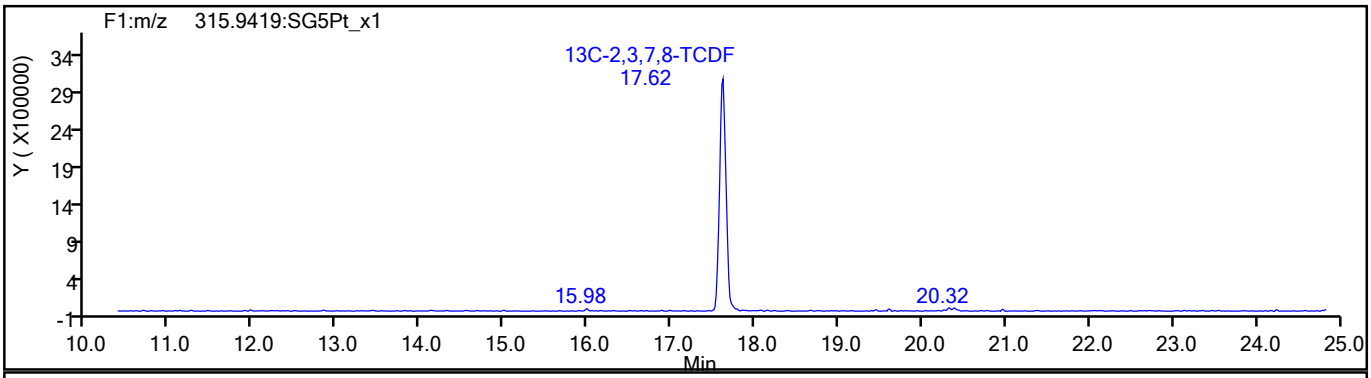

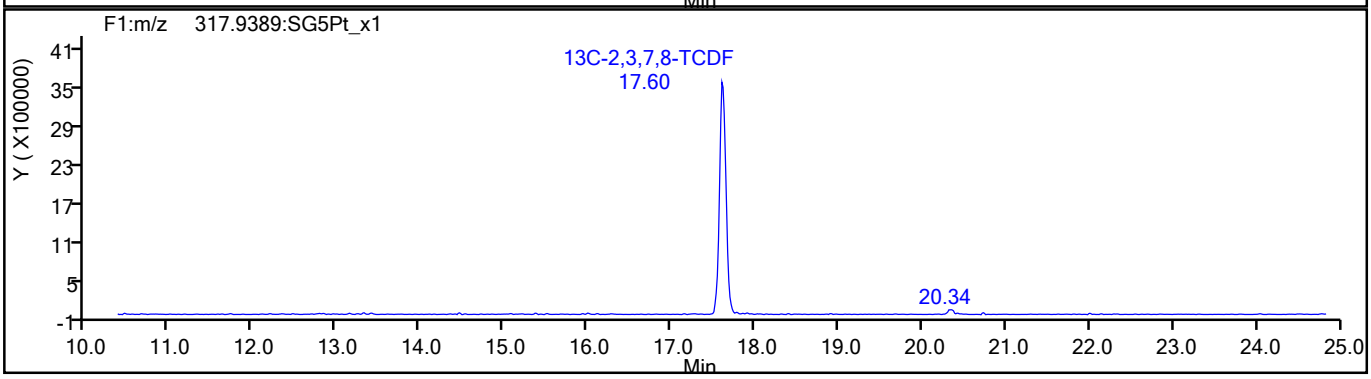

788401

Report Date: 30-Aug-2021 09:51:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_005.d		
Injection Date:	27-Aug-2021 18:11:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	520456	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

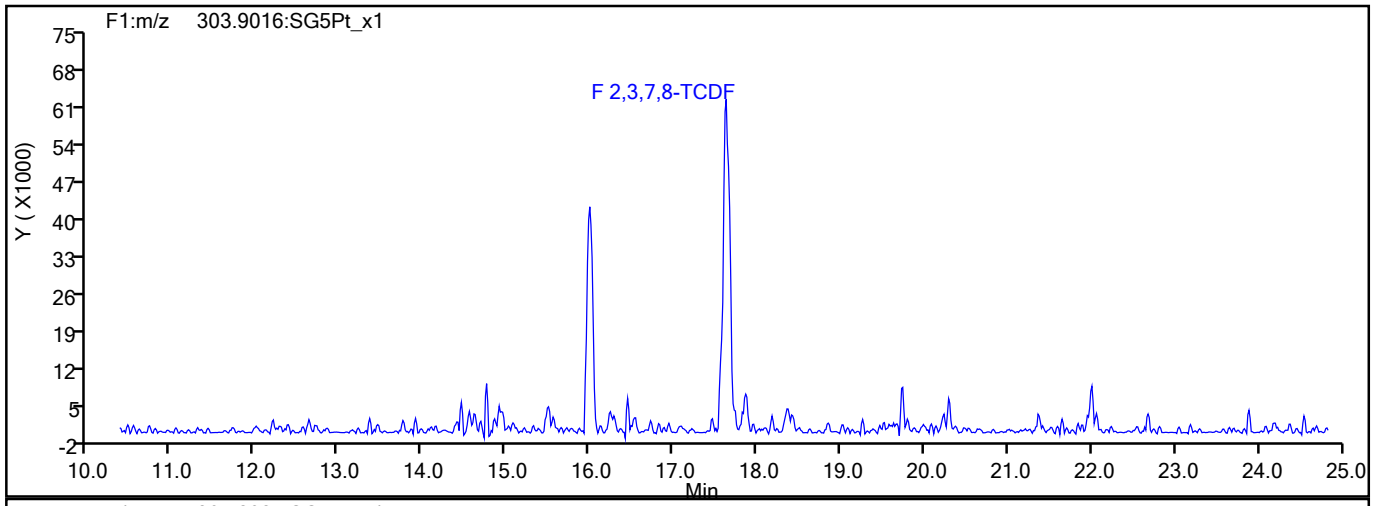

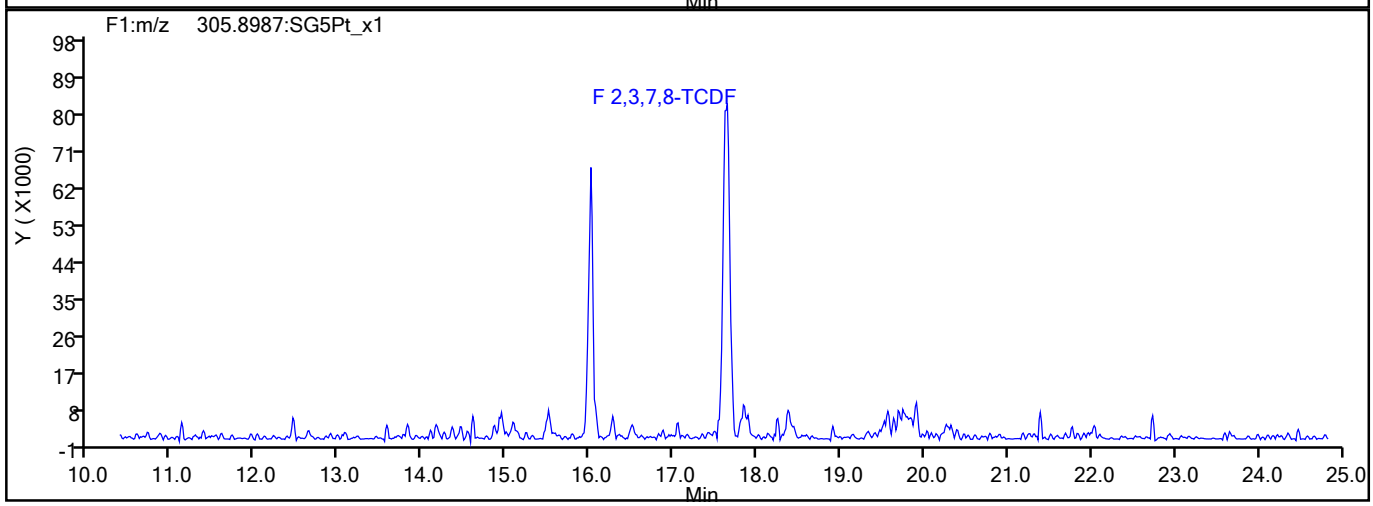

TCDF Interference Mass

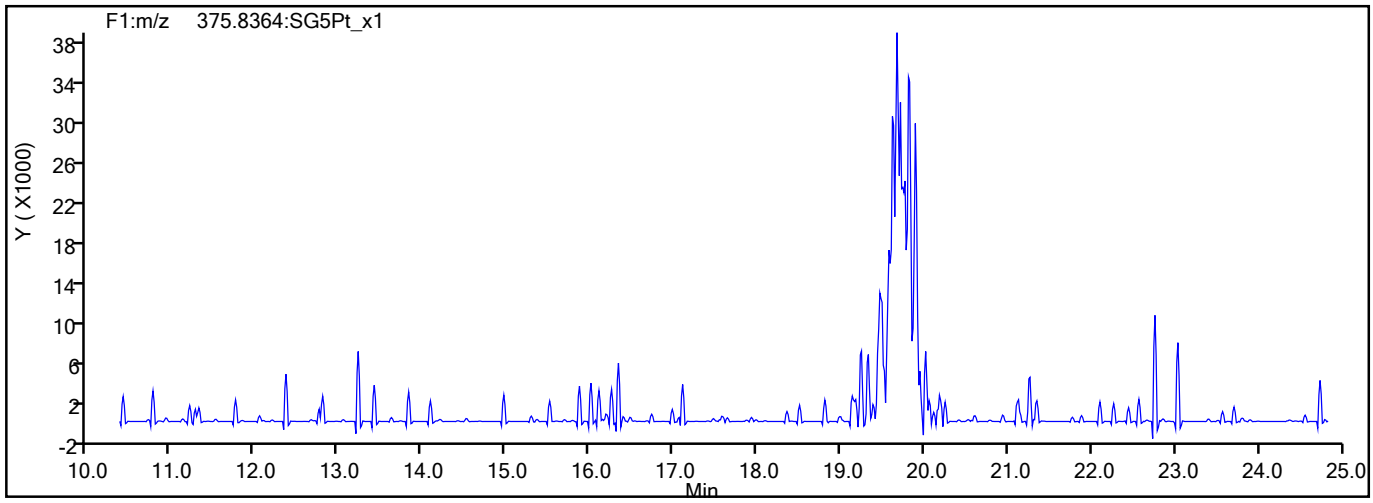

788402

Report Date: 30-Aug-2021 09:51:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_005.d		
Injection Date:	27-Aug-2021 18:11:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	520456	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

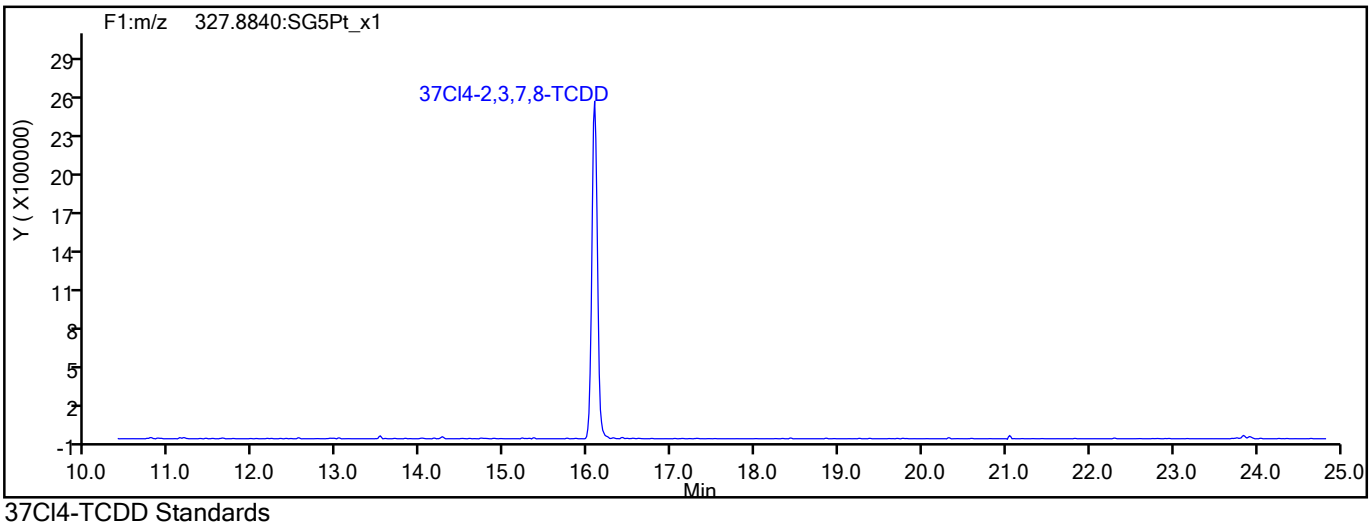

37Cl4-TCDD Standards

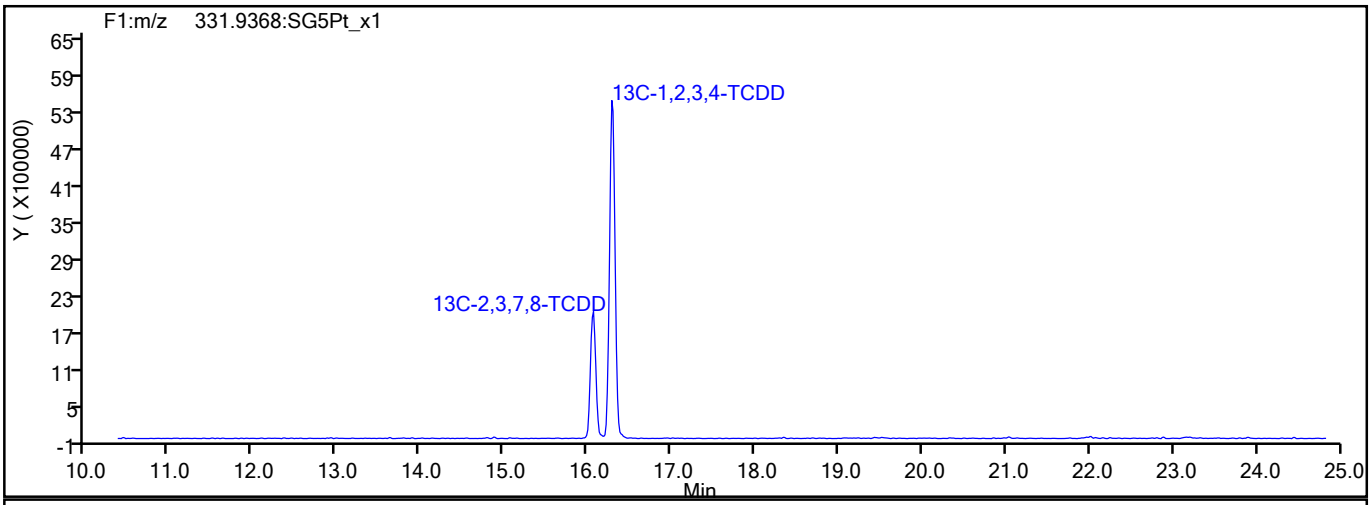

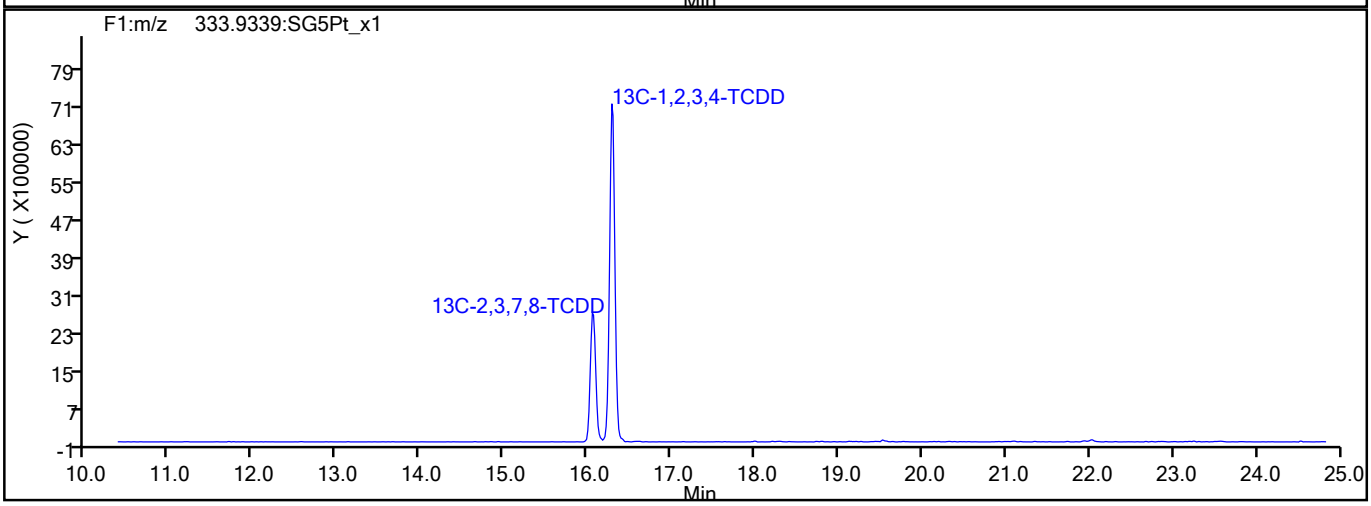

788403

Report Date: 30-Aug-2021 09:51:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_005.d		
Injection Date:	27-Aug-2021 18:11:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (6-8)		
Worklist#:	520456	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

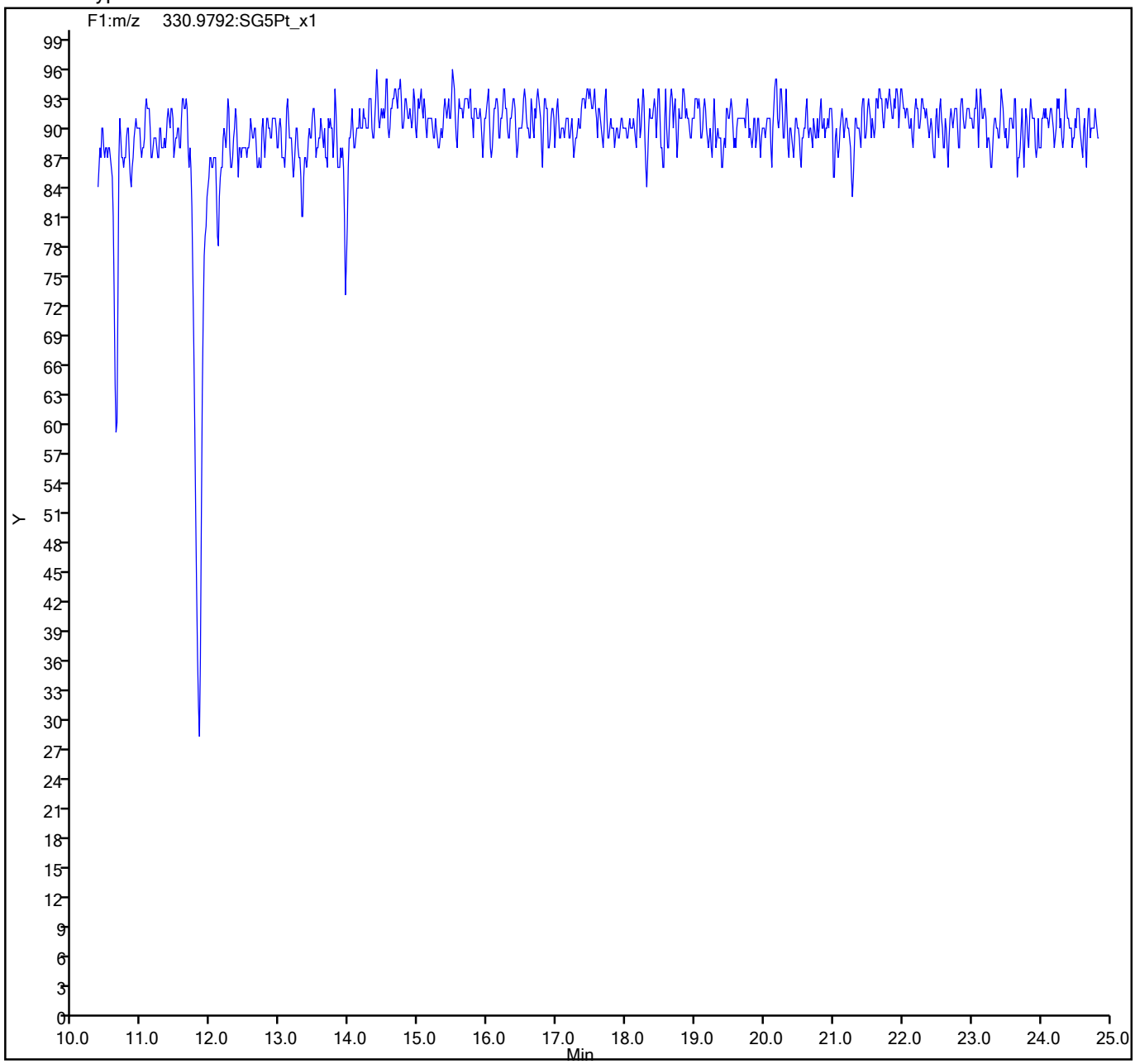

788404

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (8-10)
Lab Sample ID: 320-76901-5
Matrix: Sediment
Lab File ID: 19au21dfs1_9.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.14(g)
Date Analyzed: 08/19/2021 19:39
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	810	E	1.3	1.1
40321-76-4	1,2,3,7,8-PeCDD	9.3		6.4	0.38
57117-41-6	1,2,3,7,8-PeCDF	74		6.4	1.0
57117-31-4	2,3,4,7,8-PeCDF	55		6.4	0.96
39227-28-6	1,2,3,4,7,8-HxCDD	0.71	J	6.4	0.16
57653-85-7	1,2,3,6,7,8-HxCDD	1.3	J	6.4	0.17
19408-74-3	1,2,3,7,8,9-HxCDD	1.7	J	6.4	0.15
70648-26-9	1,2,3,4,7,8-HxCDF	100		6.4	0.50
57117-44-9	1,2,3,6,7,8-HxCDF	28		6.4	0.53
72918-21-9	1,2,3,7,8,9-HxCDF	1.3	J q	6.4	0.49
60851-34-5	2,3,4,6,7,8-HxCDF	3.6	J	6.4	0.52
35822-46-9	1,2,3,4,6,7,8-HpCDD	38	B	6.4	0.33
67562-39-4	1,2,3,4,6,7,8-HpCDF	33	B	6.4	0.16
55673-89-7	1,2,3,4,7,8,9-HpCDF	10		6.4	0.16
3268-87-9	OCDD	1300	B	13	1.2
39001-02-0	OCDF	25		13	0.18
41903-57-5	Total TCDD	880		1.3	1.1
30402-14-3	Total TCDF	6400	B G	5.8	5.8
36088-22-9	Total PeCDD	10	q	6.4	0.38
30402-15-4	Total PeCDF	190	q	6.4	0.98
34465-46-8	Total HxCDD	20	q	6.4	0.16
55684-94-1	Total HxCDF	160	q	6.4	0.51
37871-00-4	Total HpCDD	100	B	6.4	0.33
38998-75-3	Total HpCDF	50	B	6.4	0.16

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (8-10)
Lab Sample ID: 320-76901-5
Matrix: Sediment
Lab File ID: 19au21dfs1_9.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.14(g)
Date Analyzed: 08/19/2021 19:39
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	40		25-164
89059-46-1	13C-2,3,7,8-TCDF	41		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	41		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	40		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	46		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	44		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	42		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	51		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	45		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	42		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	41		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	42		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	45		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	48		26-138
114423-97-1	13C-OCDD	45		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	50		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d
Lims ID: 320-76901-A-5-A
Client ID: 11215702-072821-BN-SJSB095 (8-10)
Sample Type: Client
Inject. Date: 19-Aug-2021 19:39:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-5-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:13:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 16:44:56

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.402	1179156	0.84	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.422	652990	0.77	1.3459	41.1	41.1	0.2699	0.2699	41.15	
2,3,7,8-TCDF	20.457	9941844	0.77	1.0802	1409.5	1409.5	2.250	2.250		E
A Non-2,3,7,8-sub-TCDF	19.851	7531514	0.77	1.0802	1067.8	1067.8	2.250	638.0		Ma
S Total TCDF					2477.2	2477.2	2.250	2.250		
D 13C-2,3,7,8-TCDD	21.771	439711	0.79	0.9317	40.0	40.0	0.6957	0.6957	40.03	
2,3,7,8-TCDD	21.814	1490554	0.79	1.0753	315.2	315.2	0.4422	0.4422		E
$ 37Cl4-2,3,7,8-TCDD	21.823	236731		1.0083	19.9	19.9	0.0568	0.0568	49.78	
A Non-2,3,7,8-sub-TCDD	20.684	129041	0.71	1.0753	27.3	27.3	0.4422	26.1		M
S Total TCDD					342.5	342.5	0.4422	0.4422		
D 13C-1,2,3,7,8-PeCDF	27.286	538968	1.63	1.1405	40.1	40.1	0.1760	0.1760	40.08	
1,2,3,7,8-PeCDF	27.319	164033	1.64	1.0543	28.9	28.9	0.3890	0.3890		M
D 13C-2,3,4,7,8-PeCDF	28.801	606209	1.59	1.1253	45.7	45.7	0.1783	0.1783	45.68	
2,3,4,7,8-PeCDF	28.827	130989	1.61	1.0079	21.4	21.4	0.3725	0.3725		
A F1 PeCDFs	24.634	1386	1.55	1.0311	0.2766	0.2348	0.008585	0.2348		RQa
A Non-2,3,7,8-sub-PeCDF	28.173	133776	1.55	1.0311	23.0	22.7	0.3802	11.9		RQ
S Total PeCDF					73.6	73.2	0.3808	0.3808		RQ
D 13C-1,2,3,7,8-PeCDD	29.601	348238	1.59	0.7165	41.2	41.2	0.0827	0.0827	41.22	
1,2,3,7,8-PeCDD	29.652	13165	1.52	1.0465	3.612	3.612	0.1462	0.1462		M
A Non-2,3,7,8-sub-PeCDD	28.478	1484	1.55	1.0465	0.5318	0.4072	0.1462	0.2568		RQ
S Total PeCDD					4.144	4.020	0.1462	0.1462		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.935	538144	0.57	0.9648	50.8	50.8	0.1282	0.1282	50.77	
1,2,3,4,7,8-HxCDF	34.943	250713	1.25	1.1474	40.6	40.6	0.1939	0.1939		
D 13C-1,2,3,6,7,8-HxCDF	35.095	530474	0.53	1.0708	45.1	45.1	0.1156	0.1156	45.09	
1,2,3,6,7,8-HxCDF	35.112	71146	1.27	1.2178	11.0	11.0	0.2043	0.2043		
D 13C-2,3,4,6,7,8-HxCDF	35.912	467992	0.54	1.0413	40.9	40.9	0.1188	0.1188	40.91	
2,3,4,6,7,8-HxCDF	35.928	8020	1.19	1.2145	1.411	1.411	0.2012	0.2012		M
D 13C-1,2,3,7,8,9-HxCDF	36.805	444330	0.54	0.9731	41.6	41.6	0.1272	0.1272	41.56	
1,2,3,7,8,9-HxCDF	36.813	2812	1.24	1.2401	0.6453	0.5103	0.1893	0.1893		RQ
A Non-2,3,7,8-sub-HxCDF	35.009	41933	1.24	1.2049	7.102	7.027	0.1968	2.968		RQ
S Total HxCDF					60.8	60.6	0.1972	0.1972		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.602	1098589	1.25	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.122	369994	1.28	0.7587	44.4	44.4	0.1237	0.1237	44.39	M
1,2,3,4,7,8-HxCDD	36.147	1079	1.42	1.0608	0.2749	0.2749	0.0618	0.0618		Ma
D 13C-1,2,3,6,7,8-HxCDD	36.240	396088	1.23	0.8593	42.0	42.0	0.1092	0.1092	41.96	Ma
1,2,3,6,7,8-HxCDD	36.257	2042	1.19	0.9933	0.5190	0.5190	0.0676	0.0676		M
1,2,3,7,8,9-HxCDD	36.611	2767	1.20	1.1094	0.6511	0.6511	0.0598	0.0598		
A Non-2,3,7,8-sub-HxCDD	35.375	25939	1.24	1.0545	6.490	6.422	0.0629	3.950		RQM
S Total HxCDD					7.935	7.867	0.0631	0.0631		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.619	361352	0.47	0.7359	44.7	44.7	0.1942	0.1942	44.69	
1,2,3,4,6,7,8-HpCDF	38.627	66739	1.01	1.4421	12.8	12.8	0.0610	0.0610		M
D 13C-1,2,3,4,7,8,9-HpCDF	39.865	361359	0.46	0.6854	48.0	48.0	0.2085	0.2085	47.99	
1,2,3,4,7,8,9-HpCDF	39.874	19241	1.08	1.3092	4.067	4.067	0.0627	0.0627		
A Non-2,3,7,8-sub-HpCDF	39.245	12486	1.10	1.3756	2.512	2.512	0.0617	2.512		
S Total HpCDF					19.4	19.4	0.0618	0.0618		
D 13C-1,2,3,4,6,7,8-HpCDD	39.562	312552	1.09	0.6745	42.2	42.2	0.1088	0.1088	42.18	
1,2,3,4,6,7,8-HpCDD	39.570	48272	1.06	1.0503	14.7	14.7	0.1270	0.1270		
A Non-2,3,7,8-sub-HpCDD	39.241	79965	1.02	1.0503	24.4	24.4	0.1270	24.4		
S Total HpCDD					39.1	39.1	0.1270	0.1270		
D 13C-OCDD	42.058	533209	0.91	0.5446	89.1	89.1	0.1410	0.1410	44.56	
OCDF	42.159	34572	0.89	1.3168	9.848	9.848	0.0708	0.0708		
OCDD	42.067	1384167	0.90	1.0620	488.9	488.9	0.4772	0.4772		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 23-Aug-2021 09:13:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d
Lims ID: 320-76901-A-5-A
Client ID: 11215702-072821-BN-SJSB095 (8-10)
Sample Type: Client
Inject. Date: 19-Aug-2021 19:39:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-5-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:13:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 16:44:56

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.402	21.395	0		537646	71880	141	352	510		a
333.9338	21.411	21.395	1		641510	80089	253	632	317	0.84(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.422	20.365	3	0.954	283843	39618	106	265	374		
317.9389	20.440	20.365	4	0.955	369147	52639	115	287	458	0.77(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	20.457	20.408	3	1.002	4329740	564567	393	982	1437		
305.8987	20.448	20.408	2	1.001	5612104	760449	504	1260	1509	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											Ma
303.9016	17.474	19.851	-142	0.856	19172	3358	393	982	9		
305.8987	17.439	19.851	-144	0.854	23076	4423	504	1260	9	0.83(0.65-0.89)	
303.9016	17.921	19.851	-116	0.878	97560	14851	393	982	38		
305.8987	17.904	19.851	-117	0.877	122809	19542	504	1260	39	0.79(0.65-0.89)	
303.9016	18.402	19.851	-87	0.901	163931	19967	393	982	51		M
305.8987	18.385	19.851	-88	0.900	207669	25642	504	1260	51	0.79(0.65-0.89)	
303.9016	18.824	19.851	-62	0.922	133113	16469	393	982	42		M
305.8987	18.832	19.851	-61	0.922	174691	21333	504	1260	42	0.76(0.65-0.89)	M
303.9016	19.210	19.851	-38	0.941	193562	25967	393	982	66		
305.8987	19.219	19.851	-38	0.941	235579	31999	504	1260	63	0.82(0.65-0.89)	
303.9016	19.717	19.851	-8	0.965	1958057	283717	393	982	722		
305.8987	19.717	19.851	-8	0.965	2542354	376317	504	1260	747	0.77(0.65-0.89)	
303.9016	20.139	19.851	17	0.986	84986	10927	393	982	28		
305.8987	20.121	19.851	16	0.985	112889	13209	504	1260	26	0.75(0.65-0.89)	
303.9016	21.239	19.851	83	1.040	291087	38071	393	982	97		
305.8987	21.230	19.851	83	1.040	384811	49707	504	1260	99	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.677	19.851	109	1.061	61335	7322	393	982	19		
305.8987	21.668	19.851	109	1.061	83636	10005	504	1260	20	0.73(0.65-0.89)	
303.9016	23.645	19.851	227	1.158	282346	51017	393	982	130		
305.8987	23.645	19.851	227	1.158	358851	62811	504	1260	125	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.771	21.716	3	1.017	193731	25490	141	352	181		
333.9338	21.797	21.716	5	1.018	245980	33394	253	632	132	0.79(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	21.814	21.733	5	1.002	658199	89851	70	175	1284		
321.8936	21.814	21.733	5	1.002	832355	111260	42	105	2649	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.823	21.799	1	1.020	236731	30501	35	87	871		
A Non-2,3,7,8-sub-TCDD											M
319.8965	19.760	20.684	-55	0.908	2480	368	70	175	5		
321.8936	19.760	20.684	-55	0.908	3190	397	42	105	9	0.78(0.65-0.89)	
319.8965	22.484	20.684	108	1.033	50926	6648	70	175	95		M
321.8936	22.476	20.684	107	1.032	72445	8991	42	105	214	0.70(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.286	27.251	2	1.275	333807	46541	75	187	621		
353.8970	27.286	27.251	2	1.275	205161	29045	47	117	618	1.63(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.319	27.276	3	1.001	101896	14659	67	167	219		
341.8567	27.311	27.276	2	1.001	62137	9403	57	142	165	1.64(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.801	28.757	3	1.346	371923	50411	75	187	672		
353.8970	28.801	28.757	3	1.346	234286	32157	47	117	684	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.827	28.791	2	1.001	80786	11404	67	167	170		
341.8567	28.827	28.791	2	1.001	50203	6850	57	142	120	1.61(1.32-1.78)	
A F1 PeCDFs											RQa
339.8597	24.074	24.634	-34	0.882	843	200	1	2	200		a
341.8567	24.074	24.634	-34	0.882	790	136	2	5	68	1.07(1.32-1.78)	
	Empc Correction				543	129	2	5	65		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.828	28.173	-140	0.947	42833	6700	67	167	100		
341.8567	25.820	28.173	-141	0.946	27214	4281	57	142	75	1.57(1.32-1.78)	
339.8597	27.168	28.173	-60	0.996	7092	1729	67	167	26		
341.8567	27.193	28.173	-59	0.997	5742	1151	57	142	20	1.24(1.32-1.78)	
	Empc Correction				4575	1115	57	142	20		
339.8597	27.909	28.173	-16	1.023	28572	4373	67	167	65		
341.8567	27.892	28.173	-17	1.022	17513	2860	57	142	50	1.63(1.32-1.78)	
339.8597	30.873	28.173	162	1.131	4385	666	67	167	10		
	Empc Correction				3633	571	67	167	9		
341.8567	30.865	28.173	161	1.131	2344	369	57	142	6	1.87(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	29.601	29.574	2	1.383	213958	28913	21	52	1377		
369.8919	29.627	29.574	3	1.384	134280	18157	15	37	1210	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											M
355.8546	29.652	29.616	2	1.002	7934	945	21	52	45		M
357.8516	29.652	29.616	2	1.002	5231	775	8	20	97	1.52(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.957	28.478	-91	0.911	707	137	21	52	7		
	Empc Correction				333	119	21	52	6		
357.8516	26.982	28.478	-90	0.912	215	77	8	20	10	3.29(1.32-1.78)	
355.8546	28.027	28.478	-27	0.947	569	129	21	52	6		
357.8516	27.993	28.478	-29	0.946	447	103	8	20	13	1.27(1.32-1.78)	
	Empc Correction				367	83	8	20	10		
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.935	34.906	2	0.954	195831	37886	39	97	971		
385.8610	34.935	34.906	2	0.954	342313	66397	77	192	862	0.57(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.943	34.922	1	1.000	139447	26523	55	137	482		
375.8178	34.952	34.922	2	1.000	111266	21814	38	95	574	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.095	35.066	2	0.959	183829	32205	39	97	826		
385.8610	35.087	35.066	1	0.959	346645	61022	77	192	792	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.112	35.082	2	1.000	39787	7099	55	137	129		
375.8178	35.112	35.082	2	1.000	31359	5515	38	95	145	1.27(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.912	35.890	1	0.981	163611	33411	39	97	857		
385.8610	35.912	35.890	1	0.981	304381	61545	77	192	799	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	35.928	35.907	1	1.000	4363	1041	55	137	19		
375.8178	35.920	35.907	1	1.000	3657	869	38	95	23	1.19(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.805	36.782	1	1.006	155801	34859	39	97	894		
385.8610	36.796	36.782	1	1.005	288529	63982	77	192	831	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQ
373.8208	36.813	36.791	1	1.000	1557	609	55	137	11		
375.8178	36.813	36.791	1	1.000	1999	498	38	95	13	0.78(1.05-1.43)	
	Empc Correction				1255	491	38	95	13		
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	33.461	35.009	-93	0.958	9816	1655	55	137	30		
375.8178	33.470	35.009	-92	0.958	7894	1327	38	95	35	1.24(1.05-1.43)	
373.8208	34.337	35.009	-40	0.983	3771	750	55	137	14		
375.8178	34.329	35.009	-41	0.983	3113	553	38	95	15	1.21(1.05-1.43)	
373.8208	35.802	35.009	47	1.025	2086	491	55	137	9		
	Empc Correction				1638	437	55	137	8		
375.8178	35.802	35.009	47	1.025	1321	353	38	95	9	1.58(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	36.914	35.009	114	1.057	8269	1775	55	137	32		
375.8178	36.914	35.009	114	1.057	6111	1524	38	95	40	1.35(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.602	36.581	1		610613	130963	46	115	2847		
403.8529	36.602	36.581	1		487976	103413	42	105	2462	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											M
401.8559	36.122	36.092	2	0.987	207710	46424	46	115	1009		M
403.8529	36.114	36.092	1	0.987	162284	37413	42	105	891	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											Ma
389.8158	36.147	36.109	2	1.001	633	174	11	27	16		M
391.8127	36.147	36.109	2	1.001	446	130	11	27	12	1.42(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											Ma
401.8559	36.240	36.210	2	0.990	218554	45596	46	115	991		M
403.8529	36.240	36.210	2	0.990	177534	36317	42	105	865	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8158	36.257	36.227	2	1.000	1108	313	11	27	28		M
391.8127	36.257	36.227	2	1.000	934	195	11	27	18	1.19(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.611	36.597	1	1.014	1507	299	11	27	27		
391.8127	36.611	36.597	1	1.014	1260	242	11	27	22	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQM
389.8158	34.236	35.375	-68	0.945	9035	1723	11	27	157		M
391.8127	34.244	35.375	-68	0.945	6921	1208	11	27	110	1.31(1.05-1.43)	M
389.8158	35.019	35.375	-21	0.966	694	171	11	27	16		
391.8127	34.994	35.375	-23	0.966	835	190	11	27	17	0.83(1.05-1.43)	
	Empc Correction				559	137	11	27	12		
389.8158	35.373	35.375	0	0.976	4752	992	11	27	90		
391.8127	35.356	35.375	-1	0.976	3978	734	11	27	67	1.19(1.05-1.43)	M
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.619	38.596	1	1.055	116234	28646	43	107	666		
419.8220	38.619	38.596	1	1.055	245118	62354	91	227	685	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7817	38.627	38.618	1	1.000	33604	8477	20	50	424		M
409.7788	38.627	38.618	1	1.000	33135	8324	12	30	694	1.01(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.865	39.850	1	1.089	113029	29706	43	107	691		
419.8220	39.865	39.850	1	1.089	248330	67720	91	227	744	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.874	39.872	0	1.000	9970	2647	20	50	132		
409.7788	39.874	39.872	0	1.000	9271	2593	12	30	216	1.08(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.989	39.245	-15	1.010	6551	1694	20	50	85		
409.7788	38.989	39.245	-15	1.010	5935	1557	12	30	130	1.10(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.562	39.547	1	1.081	162968	44007	42	105	1048		
437.8140	39.562	39.547	1	1.081	149584	42236	27	67	1564	1.09(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.570	39.561	1	1.000	24877	6487	24	60	270		
425.7737	39.570	39.561	1	1.000	23395	6093	22	55	277	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.930	39.241	-19	0.984	40358	10504	24	60	438		
425.7737	38.930	39.241	-19	0.984	39607	10812	22	55	491	1.02(0.88-1.20)	
13C-OCDD											
469.7780	42.058	42.036	1	1.149	253753	58472	35	87	1671		
471.7750	42.058	42.036	1	1.149	279456	63868	37	92	1726	0.91(0.76-1.02)	
OCDF											
441.7428	42.159	42.137	1	1.002	16239	3772	6	15	629		
443.7399	42.159	42.137	1	1.002	18333	4201	17	42	247	0.89(0.76-1.02)	
OCDD											
457.7377	42.067	42.053	1	1.000	657532	154820	64	160	2419		
459.7348	42.067	42.053	1	1.000	726635	169452	60	150	2824	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 23-Aug-2021 09:13:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Lims ID:	320-76901-A-5-A		
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Inject. Date:	19-Aug-2021 19:39:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	8

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	652990	92257

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	652990	92257

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.474	19172	3358	23076	4423	5.99	0.83	
17.921	97560	14851	122809	19542	31.2	0.79	
18.402	163931	19967	207669	25642	52.7	0.79	Ma
18.824	133113	16469	174691	21333	43.6	0.76	M
19.210	193562	25967	235579	31999	60.8	0.82	
19.717	1958057	283717	2542354	376317	638.0	0.77	
20.139	84986	10927	112889	13209	28.1	0.75	
21.239	291087	38071	384811	49707	95.8	0.76	
21.677	61335	7322	83636	10005	20.6	0.73	
23.645	282346	51017	358851	62811	90.9	0.79	
Signal Totals:							
	3285149	471666	4246365	614988			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7531514	1086654				0.77	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1067.8 = (7531514 * 100.000) / (652990 * 1.080)

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 23-Aug-2021 09:13:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Lims ID:	320-76901-A-5-A		
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Inject. Date:	19-Aug-2021 19:39:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	8

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	439711	58884

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	439711	58884

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.760	2480	368	3190	397	1.20	0.78	
22.484	50926	6648	72445	8991	26.1	0.70	M
Signal Totals:							
	53406	7016	75635	9388			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	129041	16404				0.71	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 27.291 = (129041 * 100.000) / (439711 * 1.075)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 23-Aug-2021 09:13:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Lims ID:	320-76901-A-5-A		
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Inject. Date:	19-Aug-2021 19:39:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	8

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	538968	75586
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	606209	82568

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	572588	79077

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.074	843	200	790	136	0.2766	1.07	RQa
24.074	843	200	543	129	0.2348		Empc Correction
Signal Totals:							
	843	200	543	129			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1633	336				1.07	RQa
	1386	329					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2766 = (1633 * 100.000) / (572588 * 1.031)
Empc Amount: 0.2348 = (1386 * 100.000) / (572588 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 23-Aug-2021 09:13:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Lims ID:	320-76901-A-5-A		
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Inject. Date:	19-Aug-2021 19:39:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	538968	75586
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	606209	82568

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	572588	79077

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.828	42833	6700	27214	4281	11.9	1.57	
27.168	7092	1729	5742	1151	2.17	1.24	RQ
27.168	7092	1729	4575	1115	1.98		Empc Correction
27.909	28572	4373	17513	2860	7.81	1.63	
30.873	4385	666	2344	369	1.14	1.87	RQ
30.873	3633	571	2344	369	1.01		Empc Correction
Signal Totals:							
	82130	13373	51646	8625			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	135695	22129				1.57	RQ
	133776	21998					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 22.985 = (135695 * 100.000) / (572588 * 1.031)

Empc Amount: 22.660 = (133776 * 100.000) / (572588 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Lims ID:	320-76901-A-5-A		
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Inject. Date:	19-Aug-2021 19:39:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	348238	47070

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	348238	47070

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.957	707	137	215	77	0.2530	3.29	RQ
26.957	333	119	215	77	0.1504		Empc Correction
28.027	569	129	447	103	0.2788	1.27	RQ
28.027	569	129	367	83	0.2568		Empc Correction
Signal Totals:							
	902	248	582	160			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1938	446				1.93	RQ
	1484	408					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5318 = (1938 * 100.000) / (348238 * 1.046)
Empc Amount: 0.4072 = (1484 * 100.000) / (348238 * 1.046)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 23-Aug-2021 09:13:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Lims ID:	320-76901-A-5-A		
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Inject. Date:	19-Aug-2021 19:39:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	8

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	538144	104283
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	530474	93227
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	467992	94956
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	444330	98841

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	495235	97826

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.461	9816	1655	7894	1327	2.97	1.24	
34.337	3771	750	3113	553	1.15	1.21	
35.802	2086	491	1321	353	0.5709	1.58	RQ
35.802	1638	437	1321	353	0.4959		Empc Correction
36.914	8269	1775	6111	1524	2.41	1.35	
Signal Totals:							
	23494	4617	18439	3757			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	42381	8428				1.30	RQ
	41933	8374					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.102 = (42381 * 100.000) / (495235 * 1.205)
Empc Amount: 7.027 = (41933 * 100.000) / (495235 * 1.205)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 23-Aug-2021 09:13:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Lims ID:	320-76901-A-5-A		
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Inject. Date:	19-Aug-2021 19:39:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	8

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	369994	83837
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	396088	81913
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	383041	82875

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.236	9035	1723	6921	1208	3.95	1.31	M
35.019	694	171	835	190	0.3785	0.83	RQ
35.019	694	171	559	137	0.3102		Empc Correction
35.373	4752	992	3978	734	2.16	1.19	M
Signal Totals:							
	14481	2886	11458	2079			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	26215	5018				1.23	RQM
	25939	4965					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 6.490 = (26215 * 100.000) / (383041 * 1.055)

Empc Amount: 6.422 = (25939 * 100.000) / (383041 * 1.055)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 23-Aug-2021 09:13:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Lims ID:	320-76901-A-5-A		
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Inject. Date:	19-Aug-2021 19:39:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	8

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	361352	91000
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	361359	97426

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	361355	94213

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.989	6551	1694	5935	1557	2.51	1.10	
Signal Totals:							
	6551	1694	5935	1557			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12486	3251				1.10	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.512 = (12486 * 100.000) / (361355 * 1.376)

Report Date: 23-Aug-2021 09:13:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Lims ID:	320-76901-A-5-A		
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Inject. Date:	19-Aug-2021 19:39:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	8

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	312552	86243

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	312552	86243

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.930	40358	10504	39607	10812	24.4	1.02	
Signal Totals:							
	40358	10504	39607	10812			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	79965	21316				1.02	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 24.359 = (79965 * 100.000) / (312552 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 18.402 Area = 164154

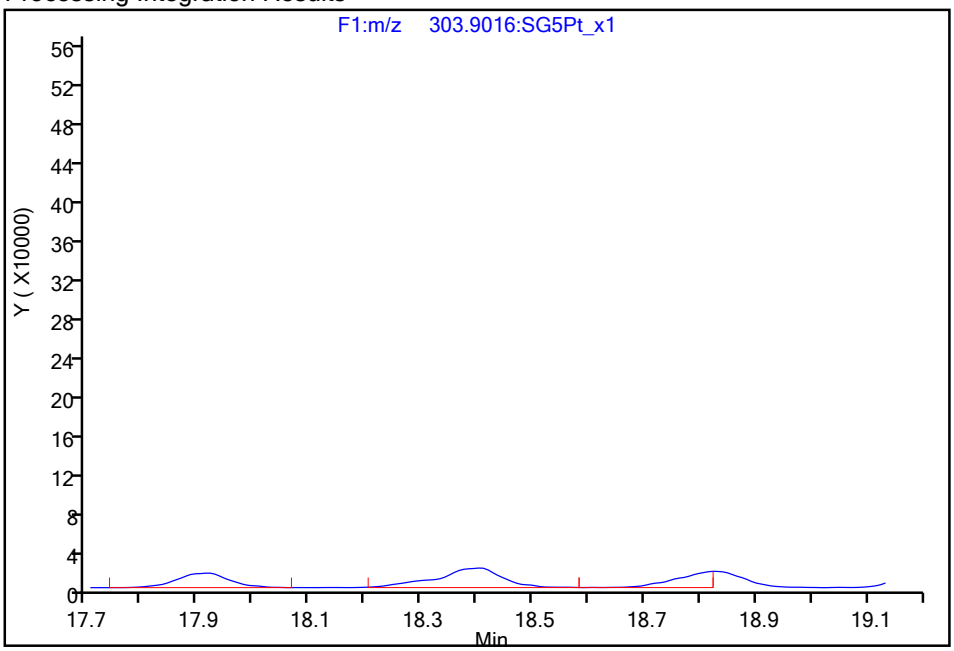

Manual Integration Results

RT = 18.402 Area = 163931 M

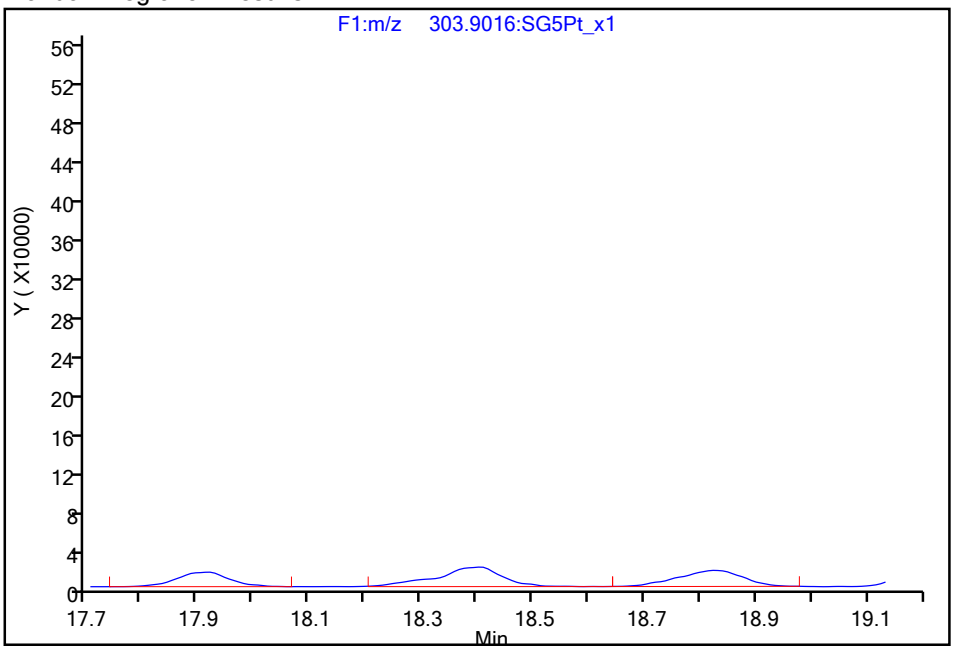

Reviewer: dadunj, 23-Aug-2021 09:09:39

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (16.10- 23.60)

Signal: 1

Processing Integration Results

RT = 18.815 Area = 73811

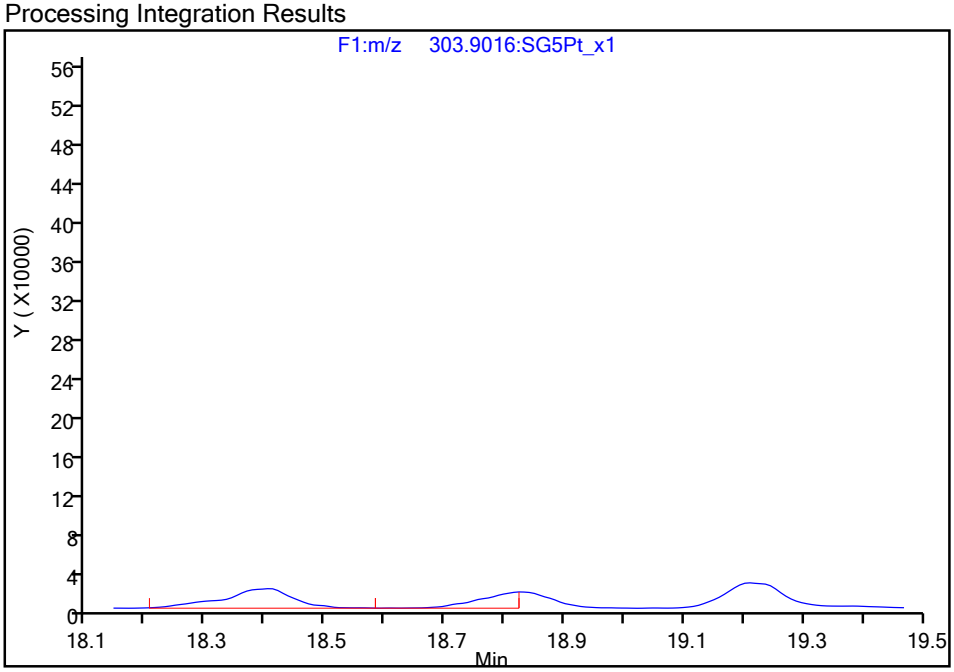

Manual Integration Results

RT = 18.824 Area = 133113 M

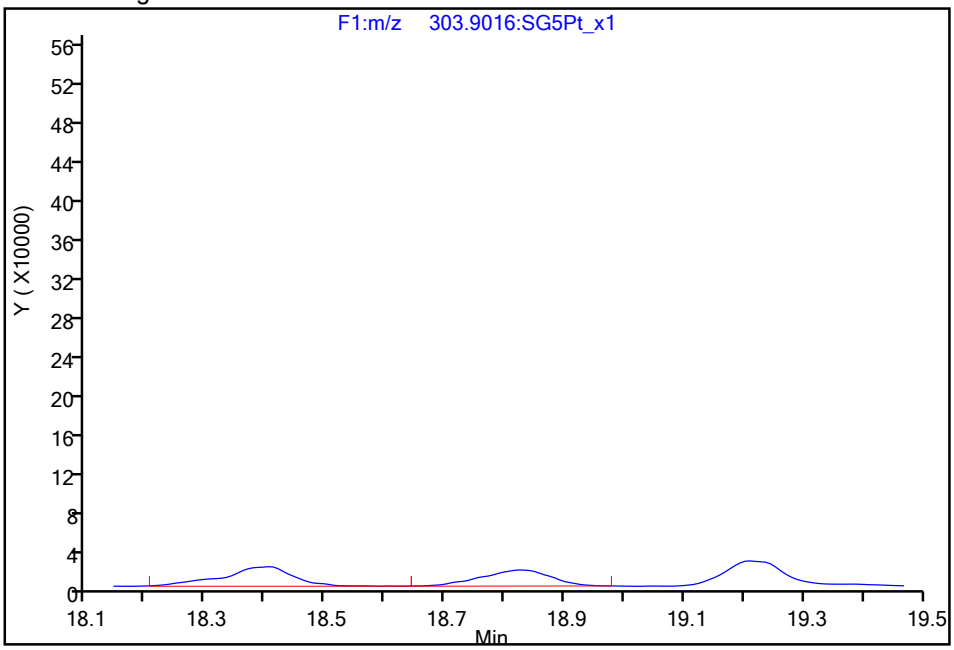

Reviewer: dadunj, 23-Aug-2021 09:09:39

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (16.10- 23.60)

Signal: 2

Processing Integration Results

RT = 18.824 Area = 102911

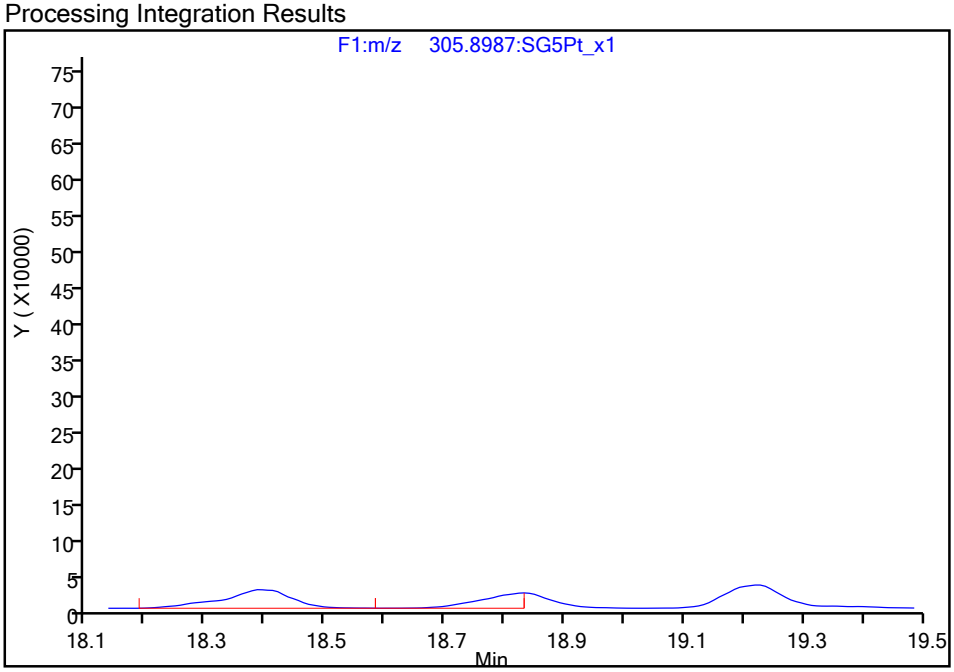

Manual Integration Results

RT = 18.832 Area = 174691 M

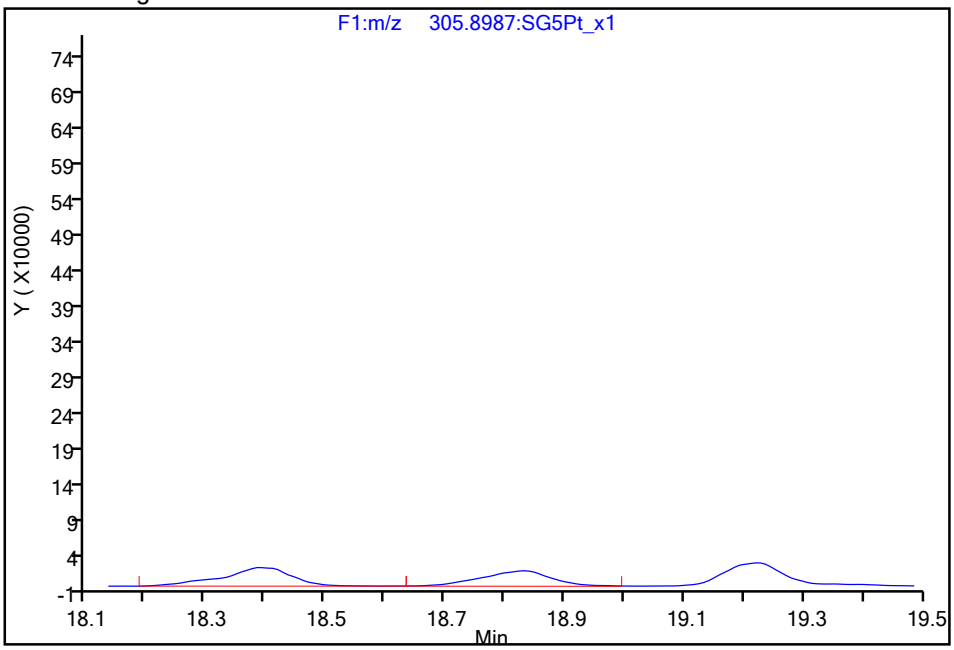

Reviewer: dadunj, 23-Aug-2021 09:09:29

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Report Date: 23-Aug-2021 09:13:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (17.70- 23.67)

Signal: 1

Processing Integration Results

RT = 22.476 Area = 24383

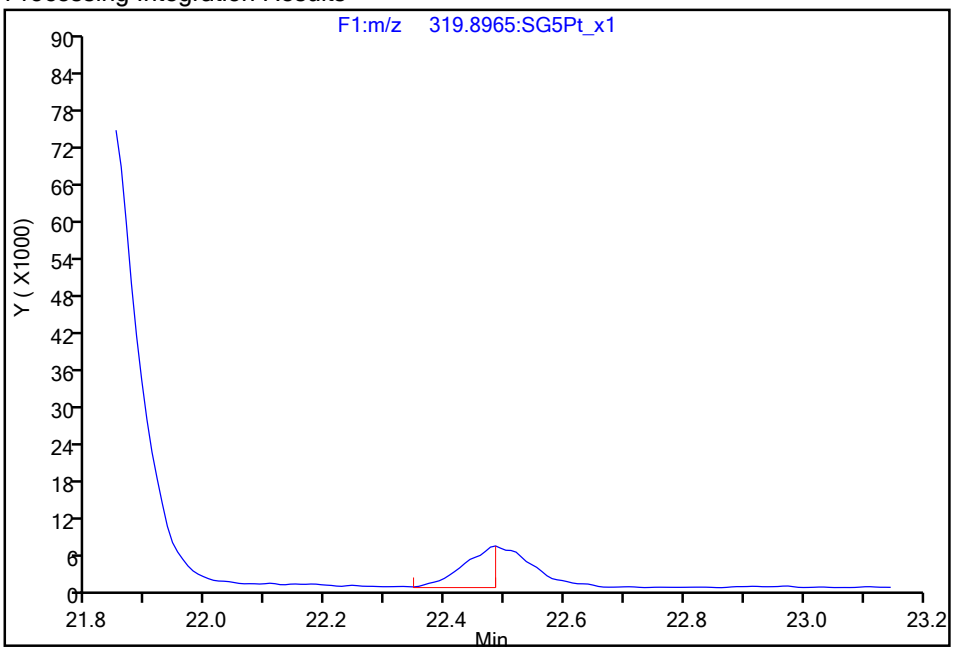

Manual Integration Results

RT = 22.484 Area = 50926 M

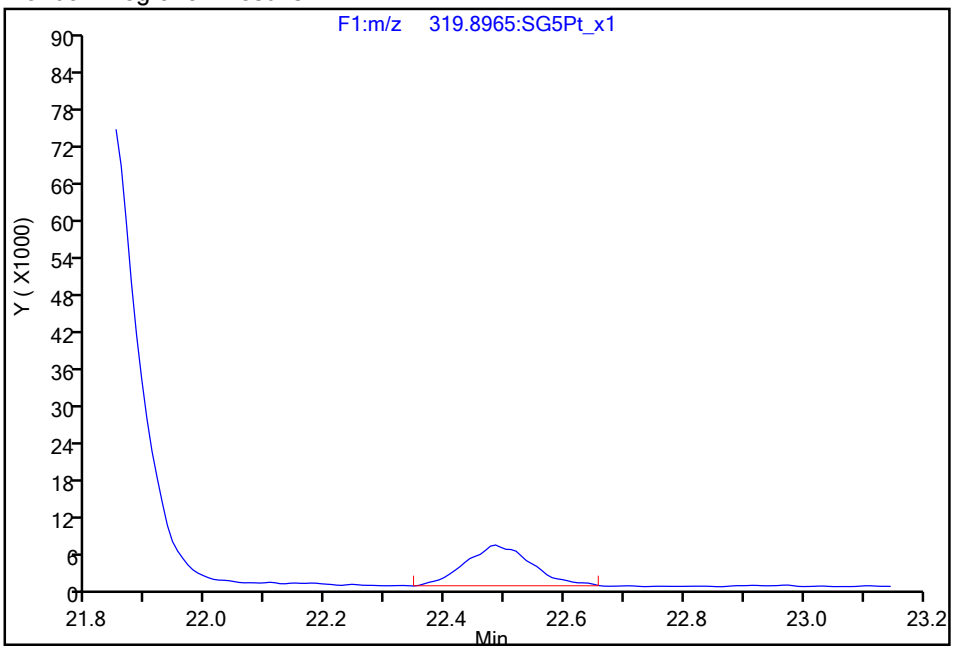

Reviewer: dadunj, 23-Aug-2021 09:10:08

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.31
Area: 63512
Amount: 29.110160
Amount Units: pg/ul

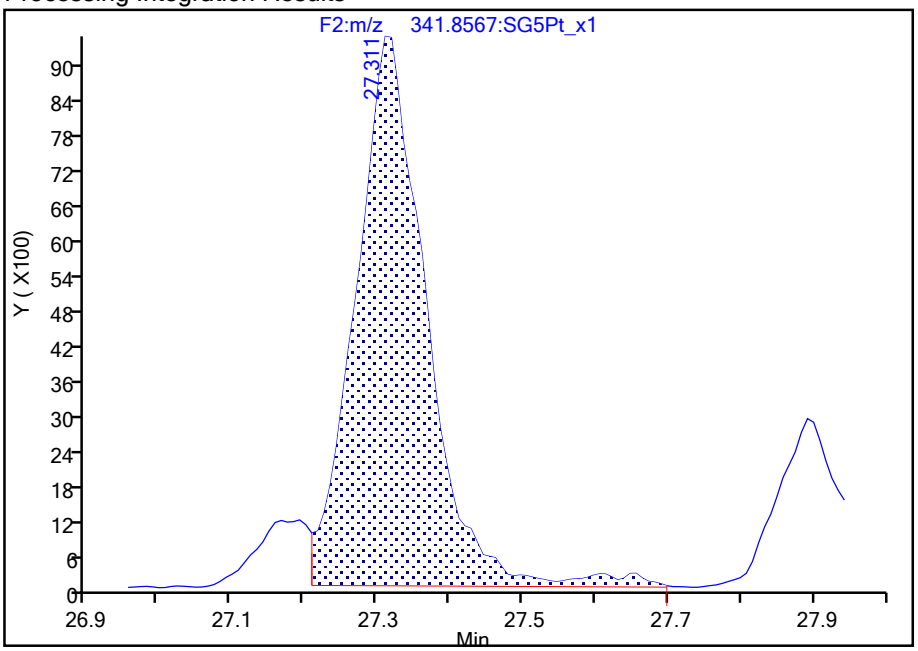

Manual Integration Results

RT: 27.31
Area: 62137
Amount: 28.868174
Amount Units: pg/ul

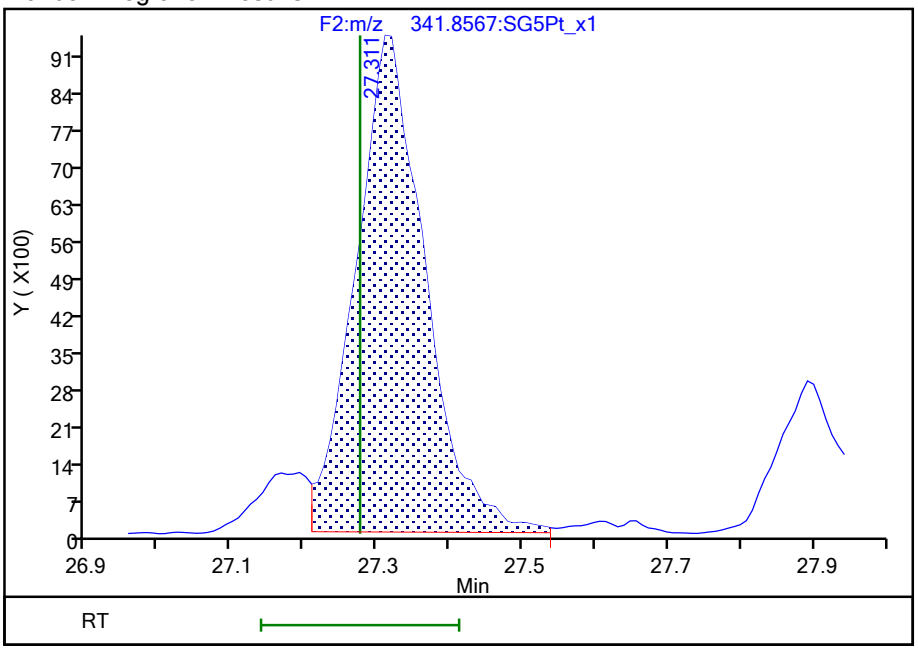

Reviewer: dadunj, 23-Aug-2021 09:10:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

RT: 29.65
Area: 8275
Amount: 3.706061
Amount Units: pg/ul

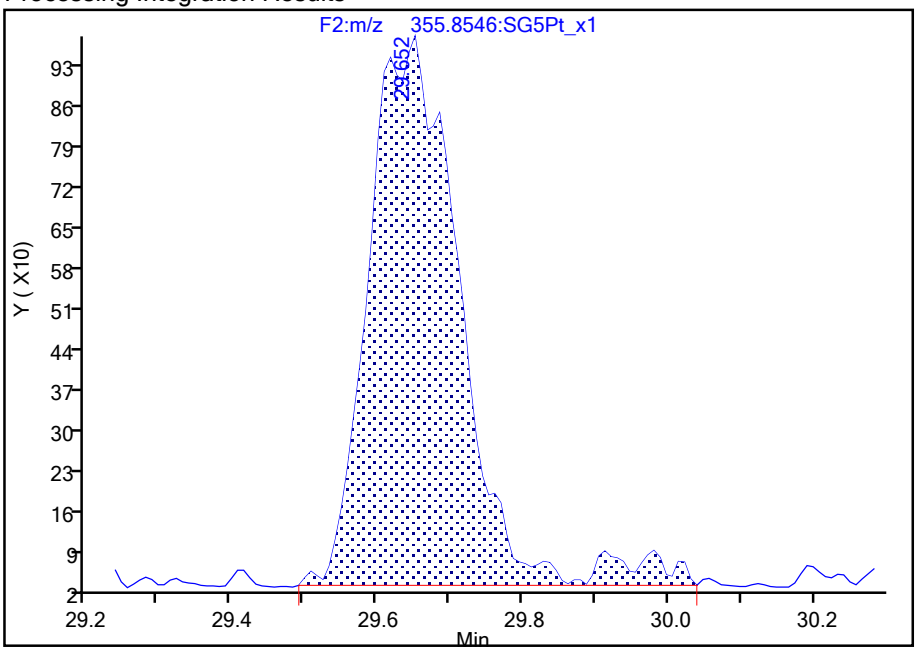

Manual Integration Results

RT: 29.65
Area: 7934
Amount: 3.612490
Amount Units: pg/ul

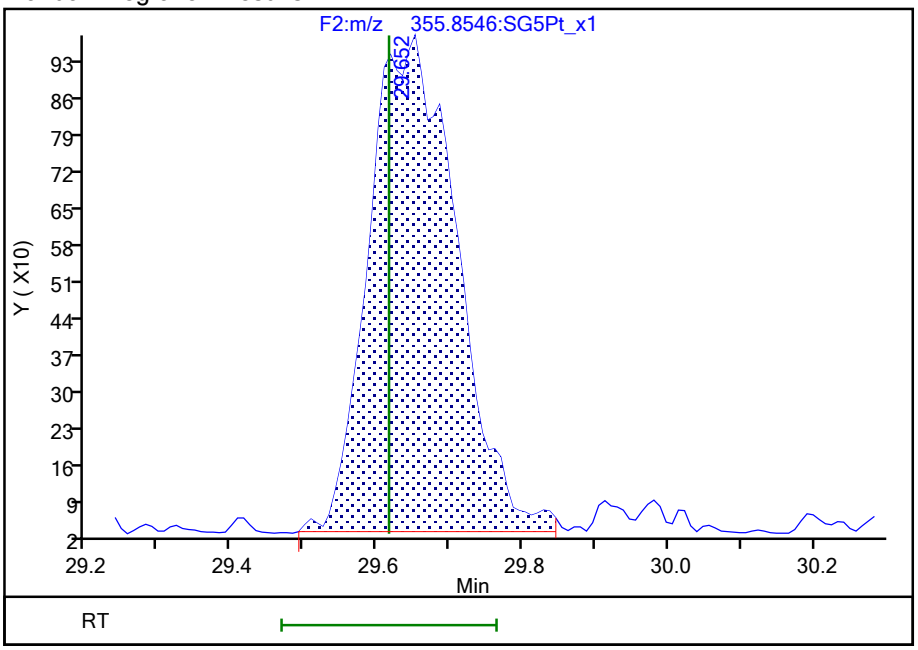

Reviewer: dadunj, 23-Aug-2021 09:11:04

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 35.92
Area: 1787
Amount: 1.082057
Amount Units: pg/ul

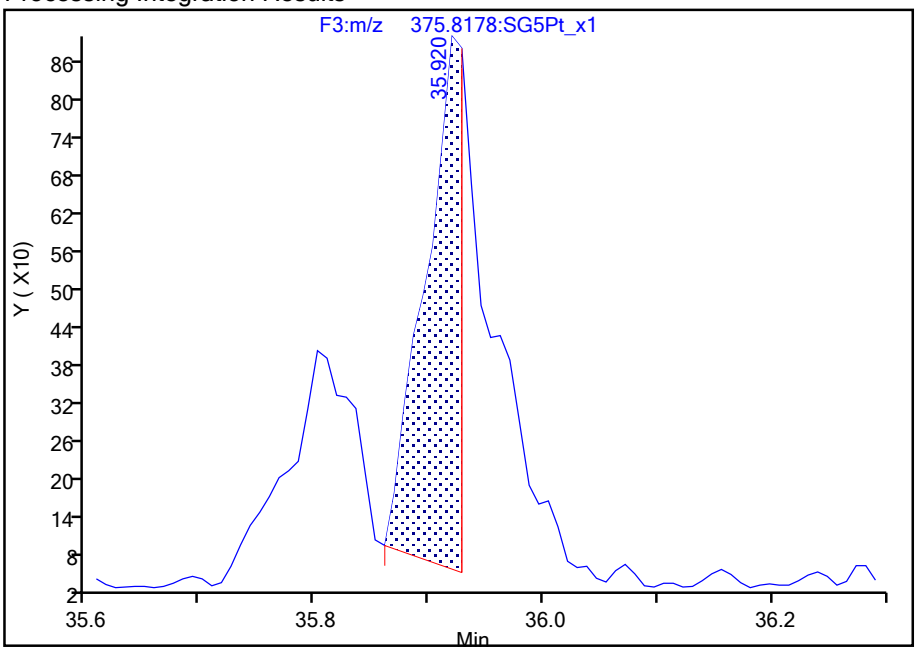

Manual Integration Results

RT: 35.92
Area: 3657
Amount: 1.411072
Amount Units: pg/ul

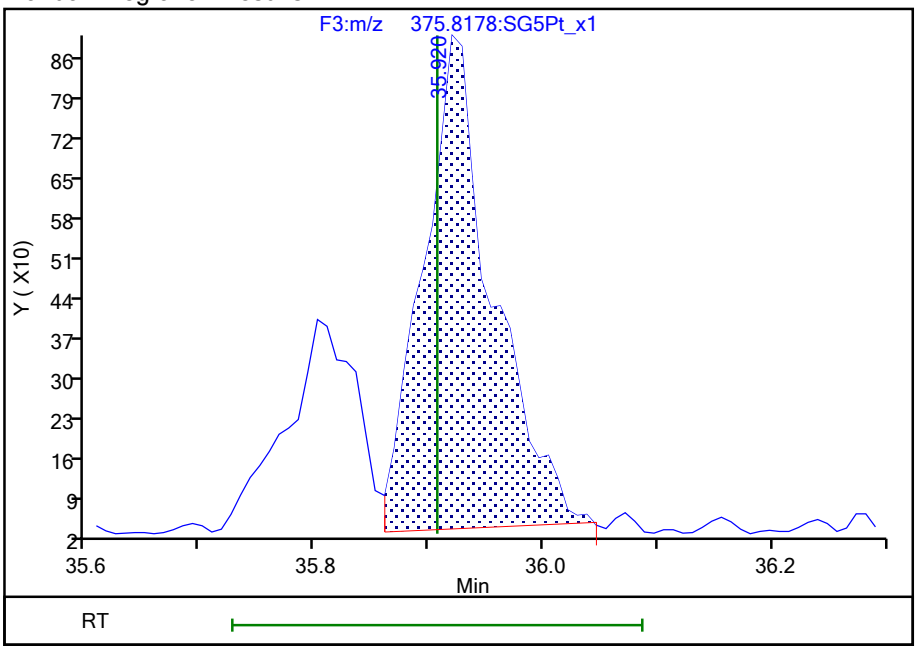

Reviewer: dadunj, 23-Aug-2021 09:11:30

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

RT: 36.12
Area: 426264
Amount: 70.613314
Amount Units: pg/ul

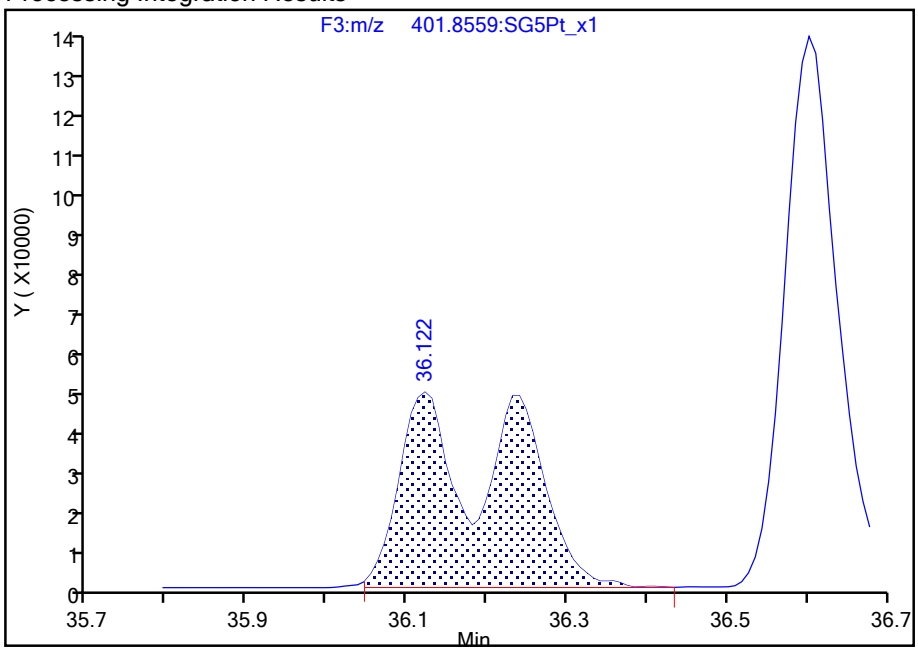

Manual Integration Results

RT: 36.12
Area: 207710
Amount: 44.391456
Amount Units: pg/ul

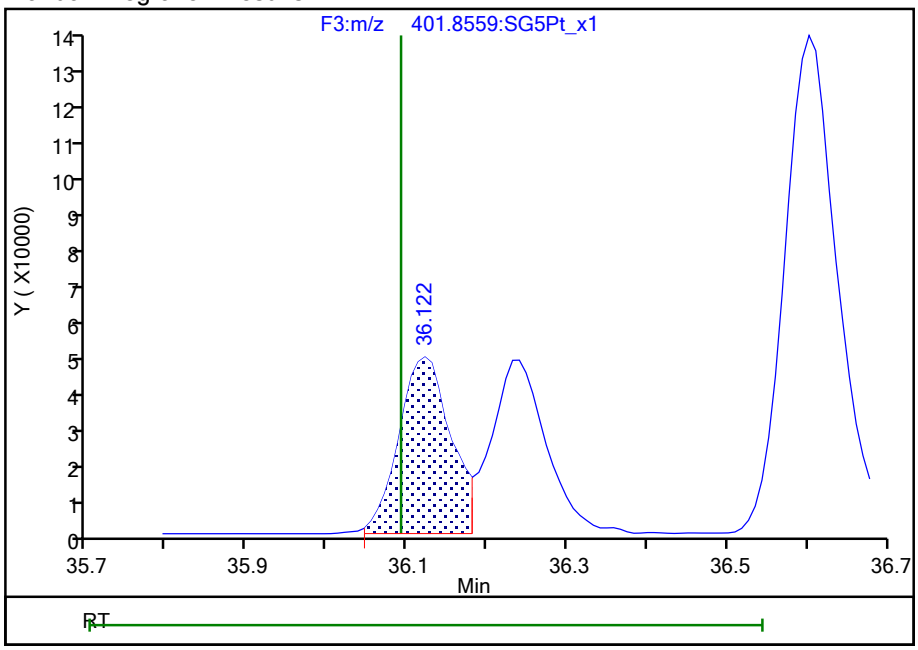

Reviewer: dadunj, 23-Aug-2021 09:11:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 36.26
Area: 934
Amount: 0.727415
Amount Units: pg/ul

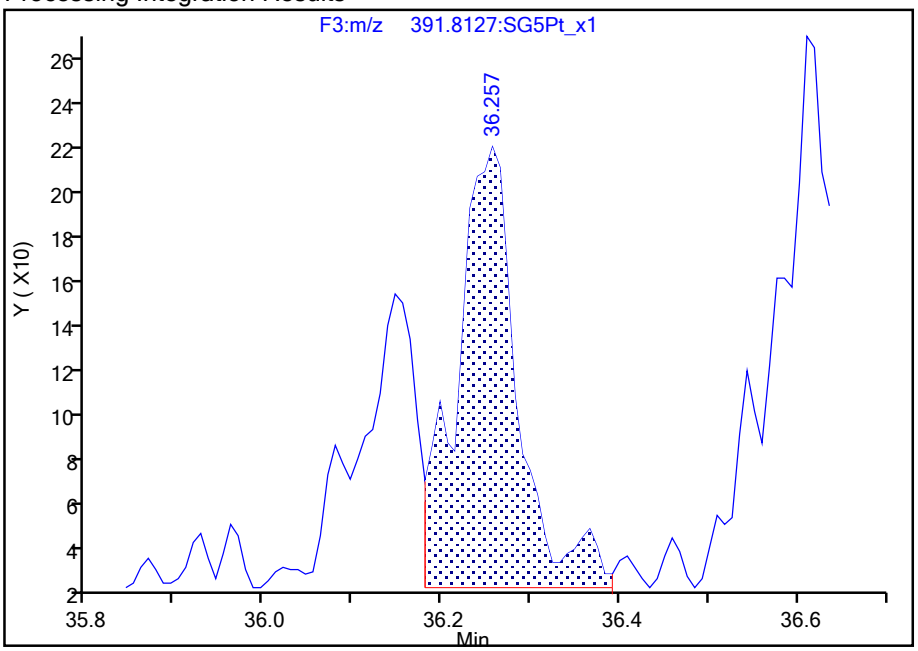

Manual Integration Results

RT: 36.15
Area: 446
Amount: 0.274914
Amount Units: pg/ul

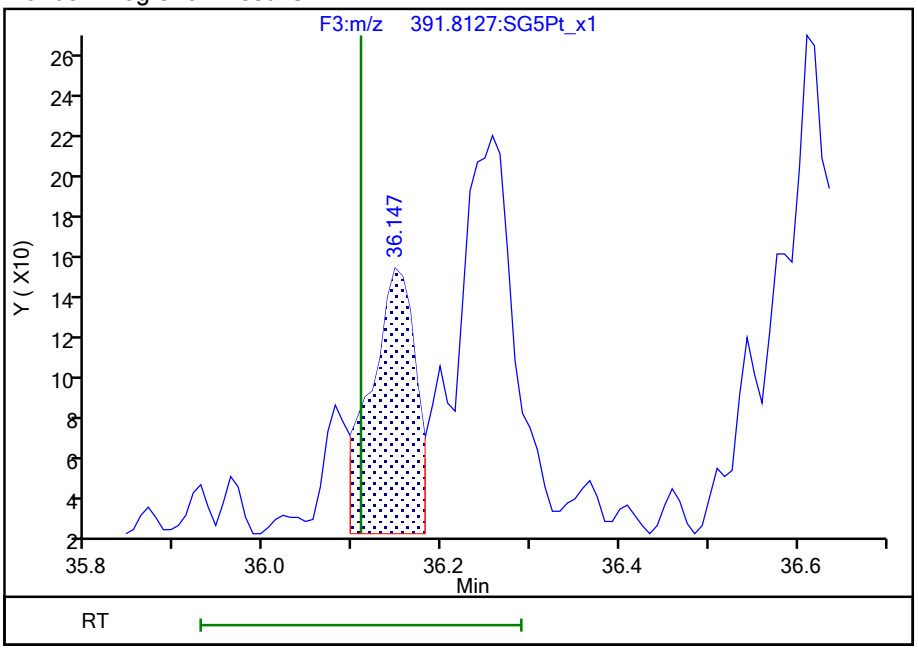

Reviewer: dadunj, 23-Aug-2021 09:11:59

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

Processing Integration Results

RT: 36.26
Area: 2855
Amount: 0.727415
Amount Units: pg/ul

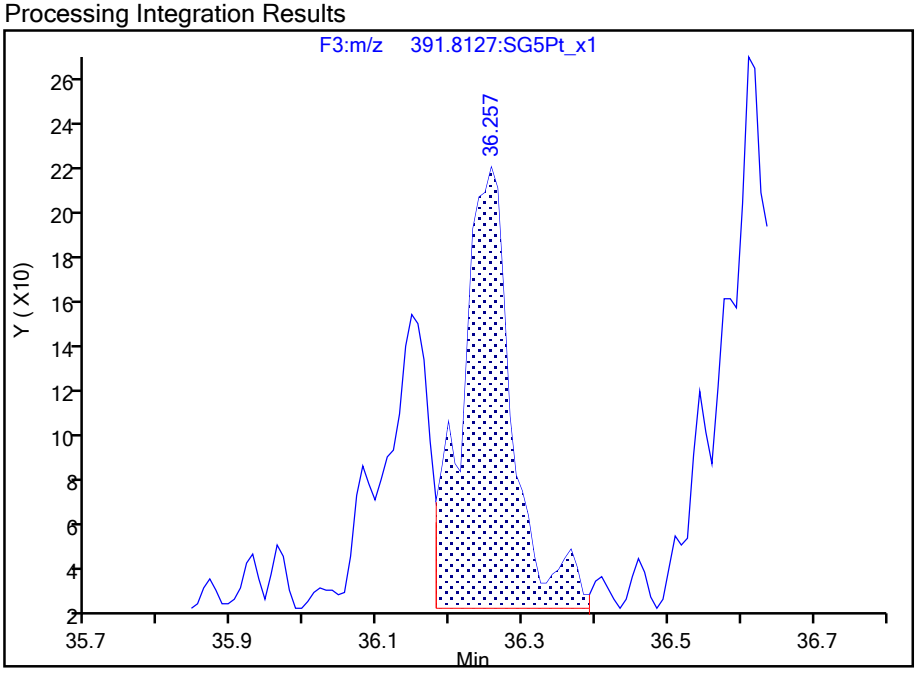

Manual Integration Results

RT: 36.15
Area: 1079
Amount: 0.274914
Amount Units: pg/ul
Reviewer: dadunj, 23-Aug-2021 09:11:59
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 36.26
Area: 1921
Amount: 0.727415
Amount Units: pg/ul

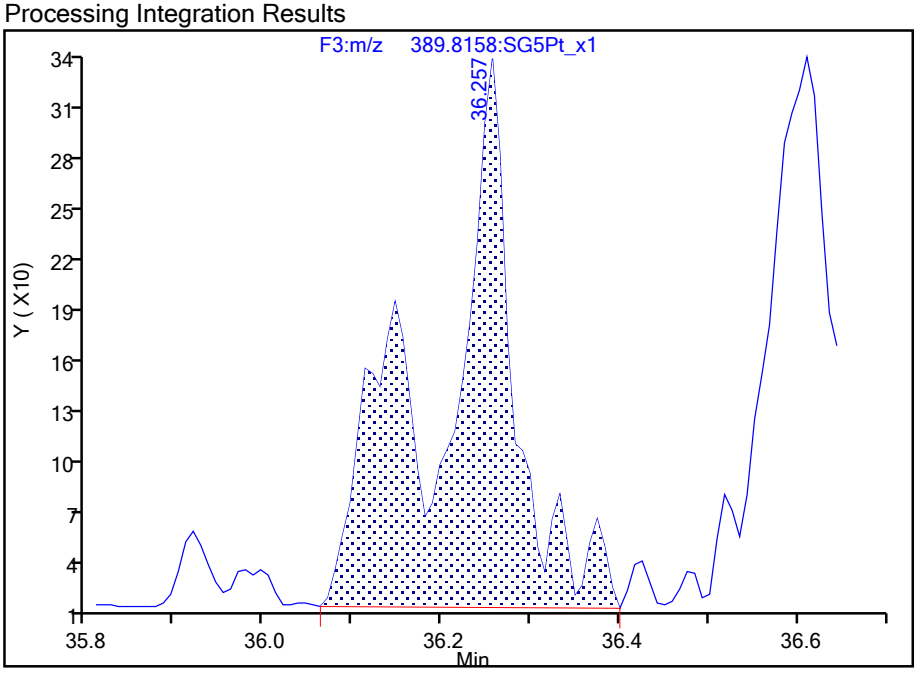

Manual Integration Results

RT: 36.15
Area: 633
Amount: 0.274914
Amount Units: pg/ul

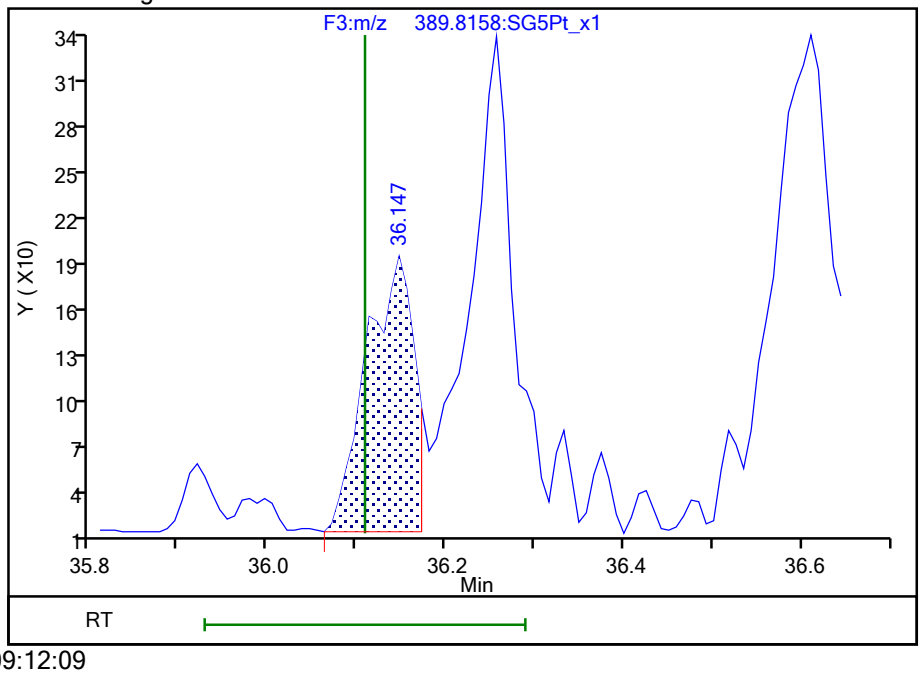

Reviewer: dadunj, 23-Aug-2021 09:12:09

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

788434

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,6,7,8-HxCDD, CAS: 109719-81-5

Signal: 1

Processing Integration Results

RT: 36.12
Area: 426264
Amount: 62.347663
Amount Units: pg/ul

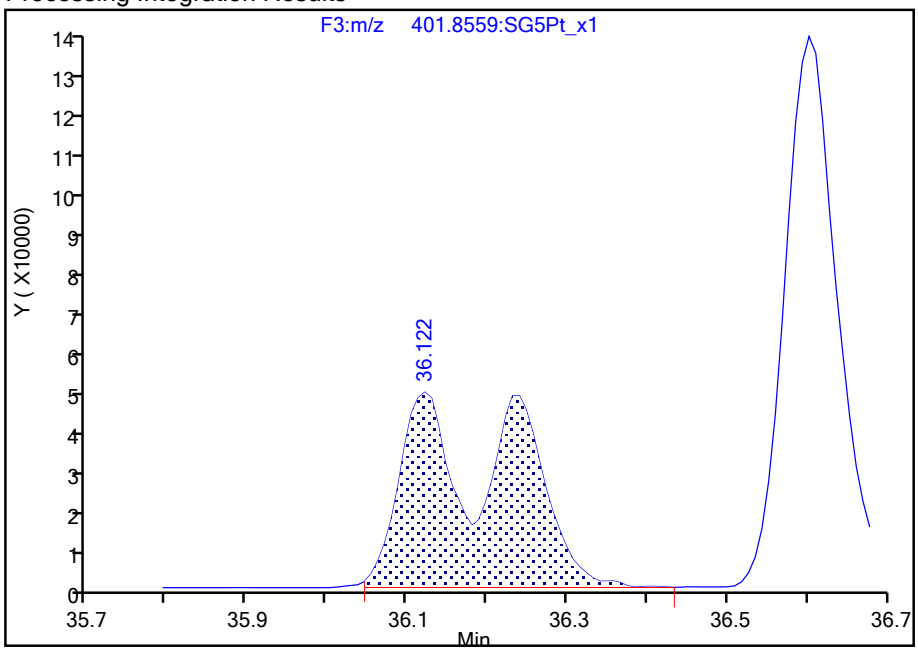

Manual Integration Results

RT: 36.24
Area: 218554
Amount: 41.959468
Amount Units: pg/ul

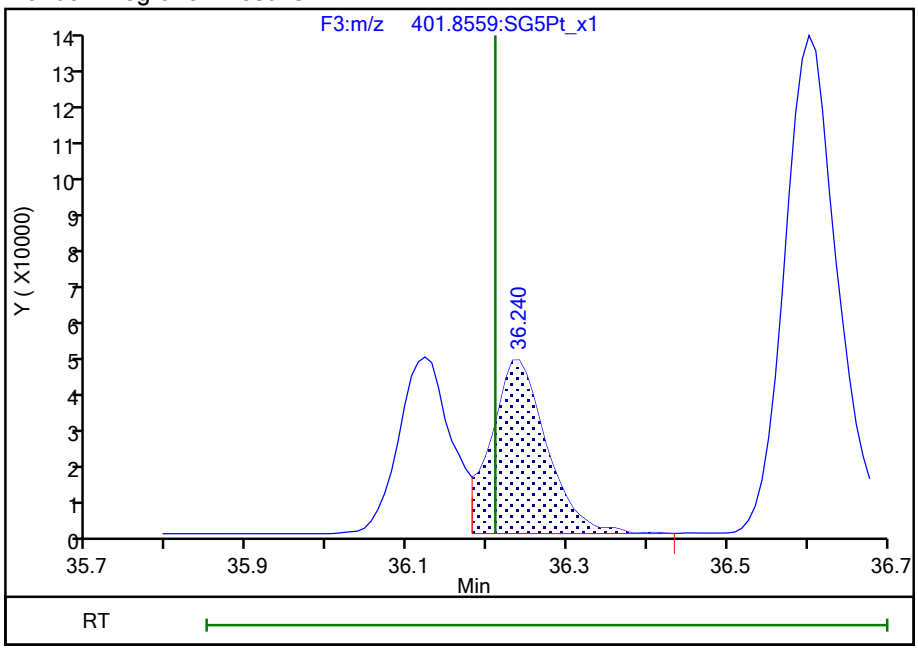

Reviewer: dadunj, 23-Aug-2021 09:12:16

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

788435

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 36.26
Area: 1921
Amount: 0.776806
Amount Units: pg/ul

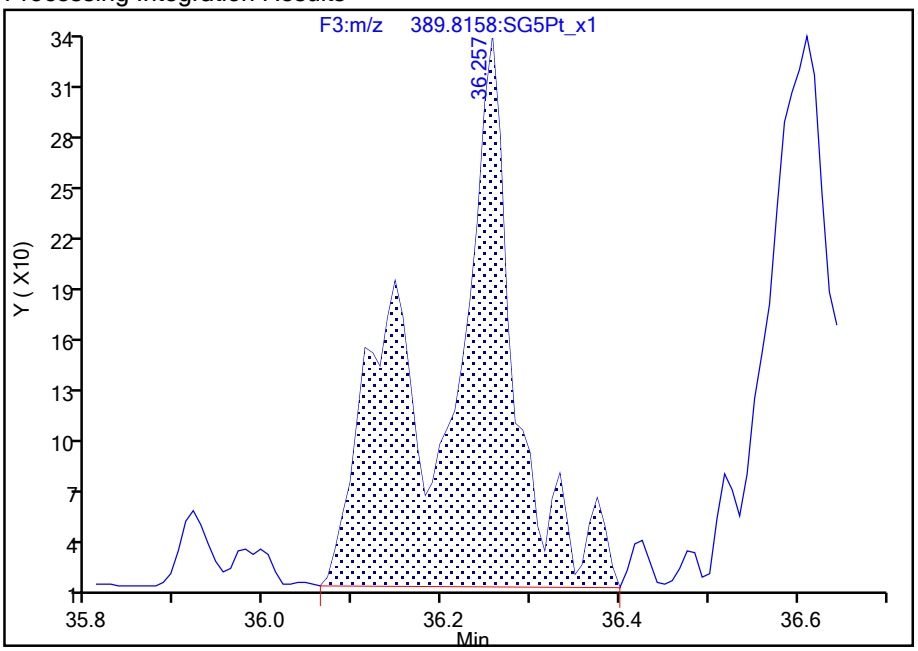

Manual Integration Results

RT: 36.26
Area: 1108
Amount: 0.518998
Amount Units: pg/ul

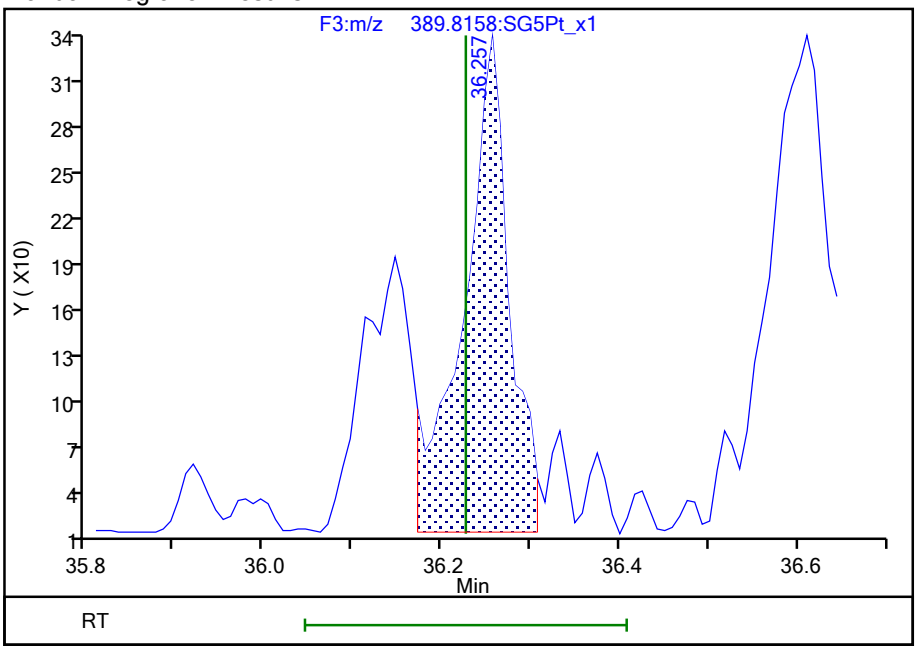

Reviewer: dadunj, 23-Aug-2021 09:12:19

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8158, RT: (34.18- 36.57)

Signal: 1

Processing Integration Results

RT = 34.236 Area = 9229

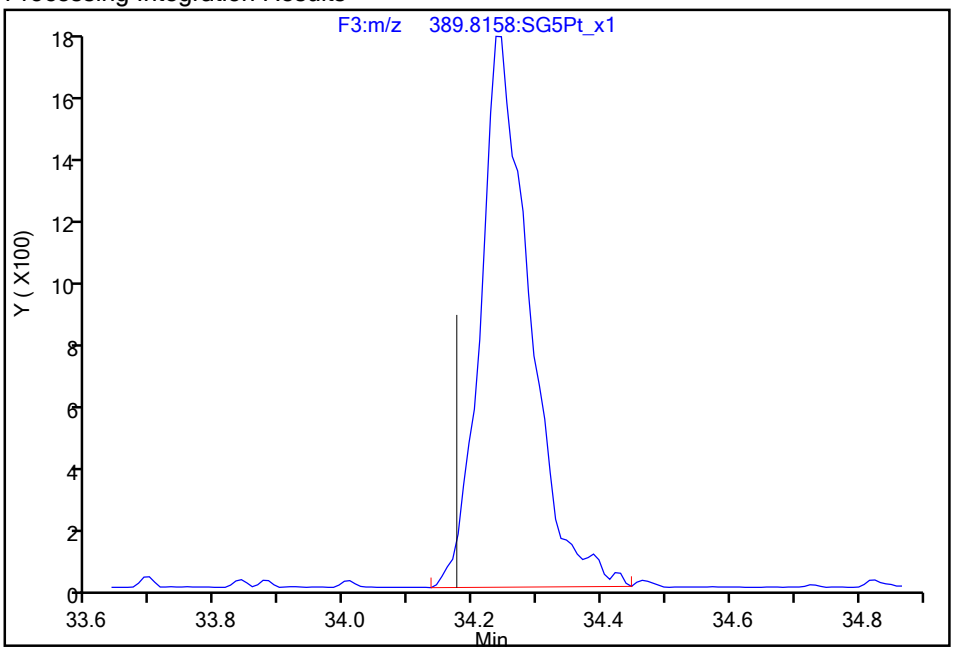

Manual Integration Results

RT = 34.236 Area = 9035 M

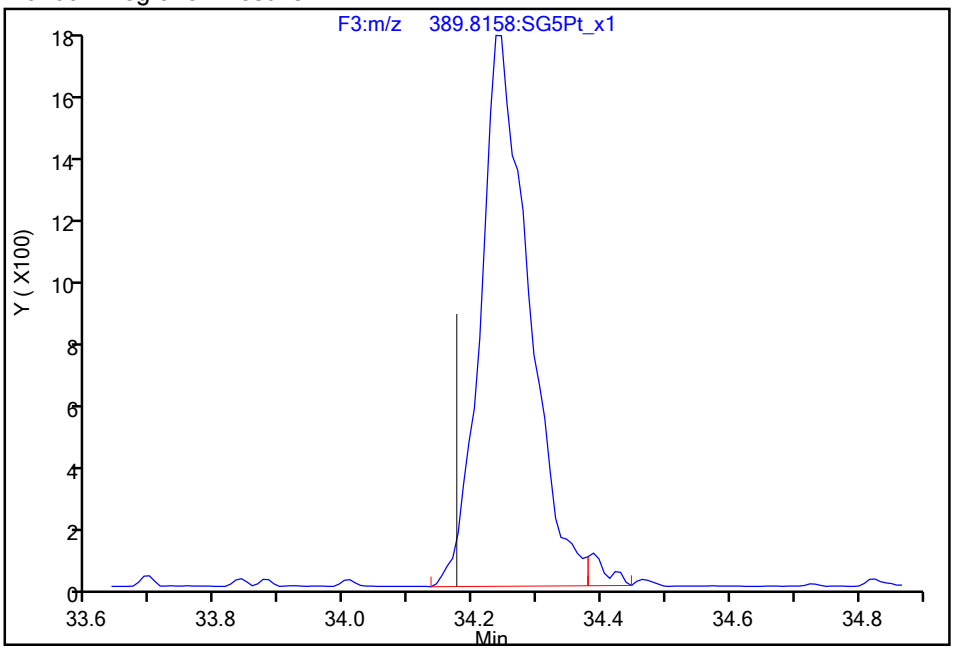

Reviewer: dadunj, 23-Aug-2021 09:12:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 23-Aug-2021 09:13:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (34.18- 36.57)

Signal: 2

Processing Integration Results

RT = 34.244 Area = 7242

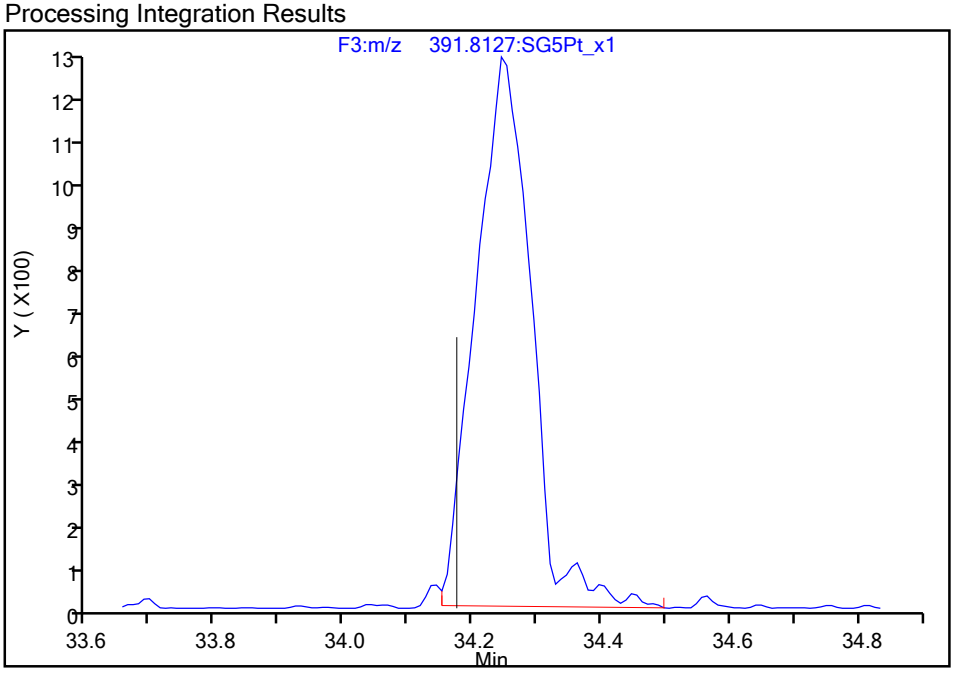

Manual Integration Results

RT = 34.244 Area = 6921 M

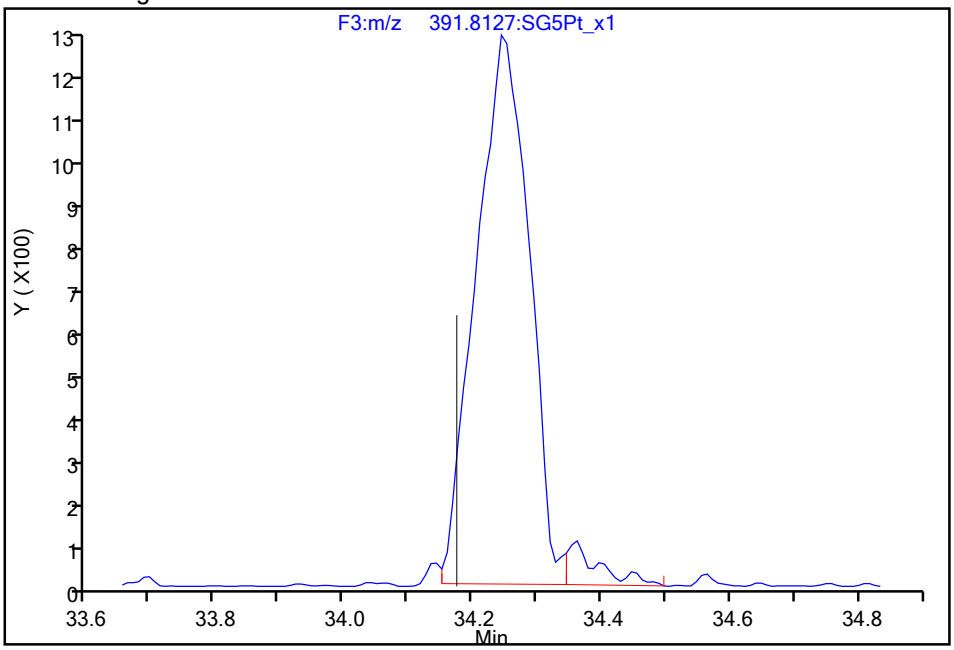

Reviewer: dadunj, 23-Aug-2021 09:12:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788438

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

Non-2,3,7,8-sub-HxCDD, Signal: 2, m/z: 391.8127, RT: (34.18- 36.57)

Signal: 2

Processing Integration Results

RT = 35.364 Area = 4355

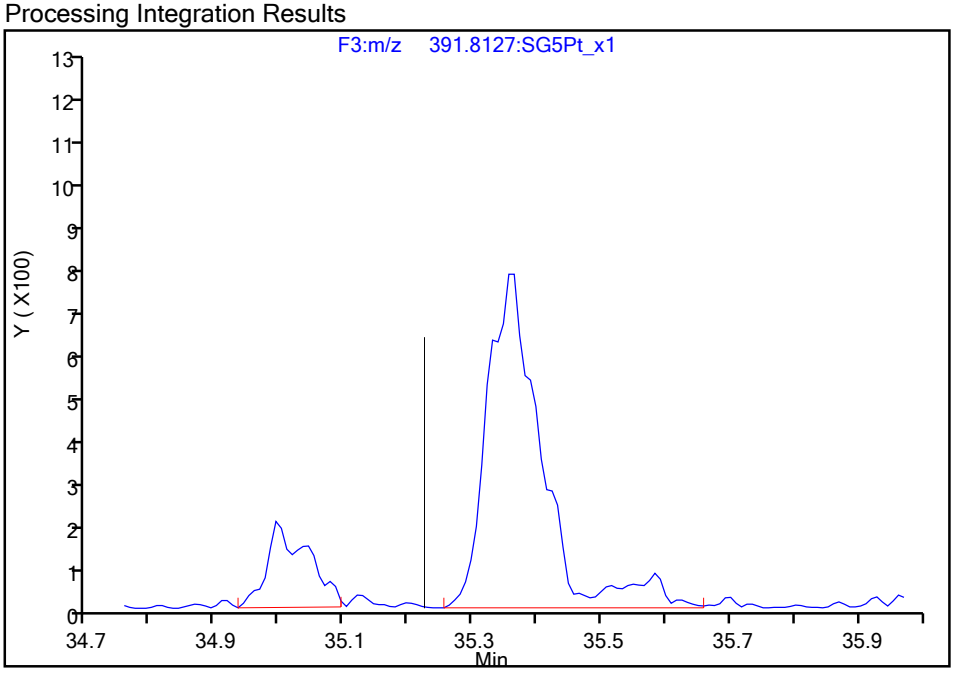

Manual Integration Results

RT = 35.356 Area = 3978 M

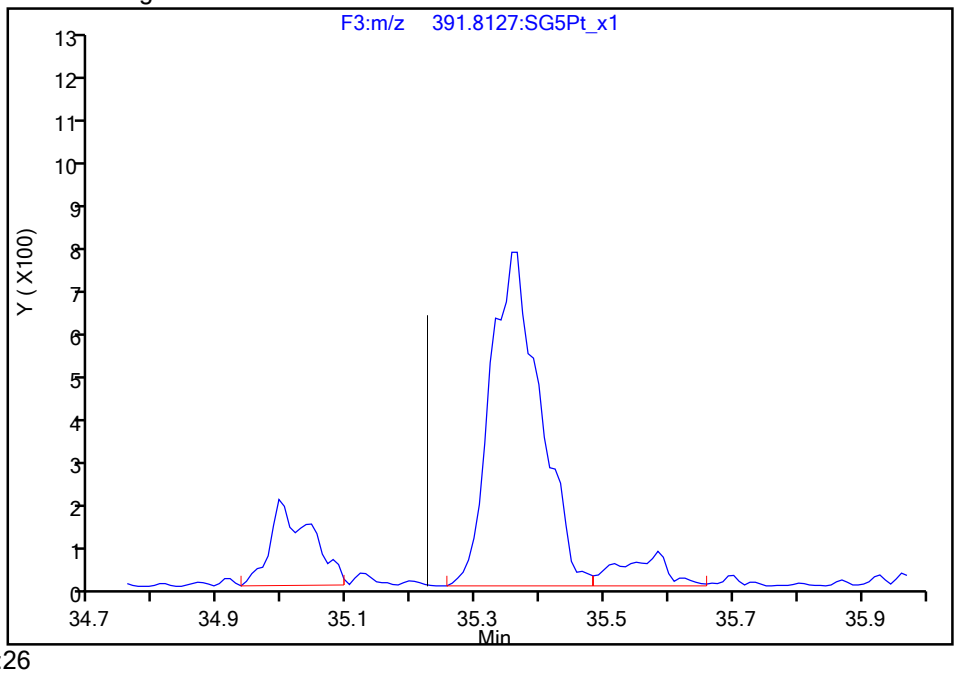

Reviewer: dadunj, 23-Aug-2021 09:12:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788439

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d				
Injection Date:	19-Aug-2021 19:39:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-5-A	Lab Sample ID:	320-76901-5		
Client ID:	11215702-072821-BN-SJSB095 (8-10)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 38.63
Area: 34399
Amount: 12.960024
Amount Units: pg/ul

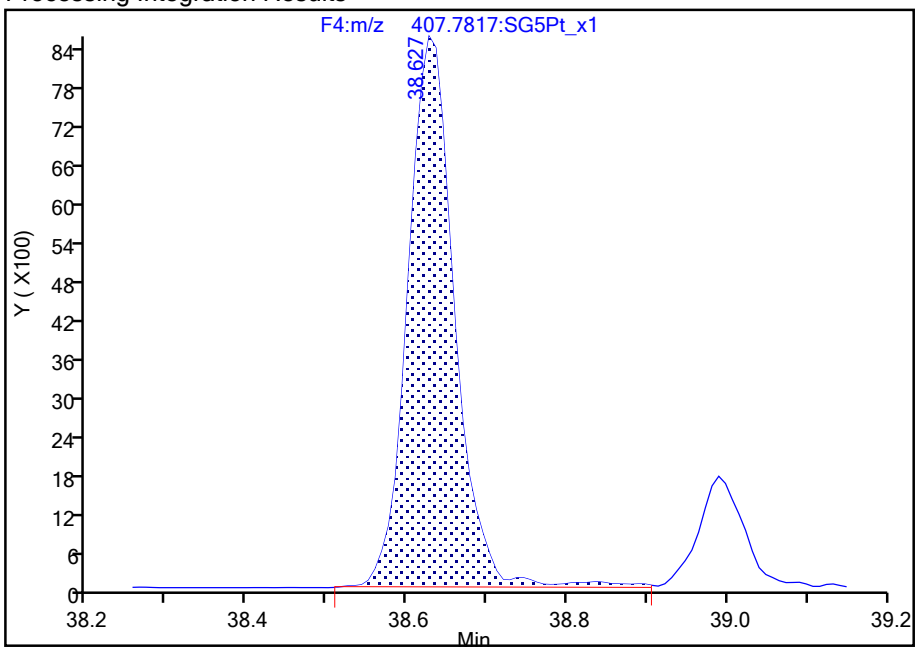

Manual Integration Results

RT: 38.63
Area: 33604
Amount: 12.807461
Amount Units: pg/ul

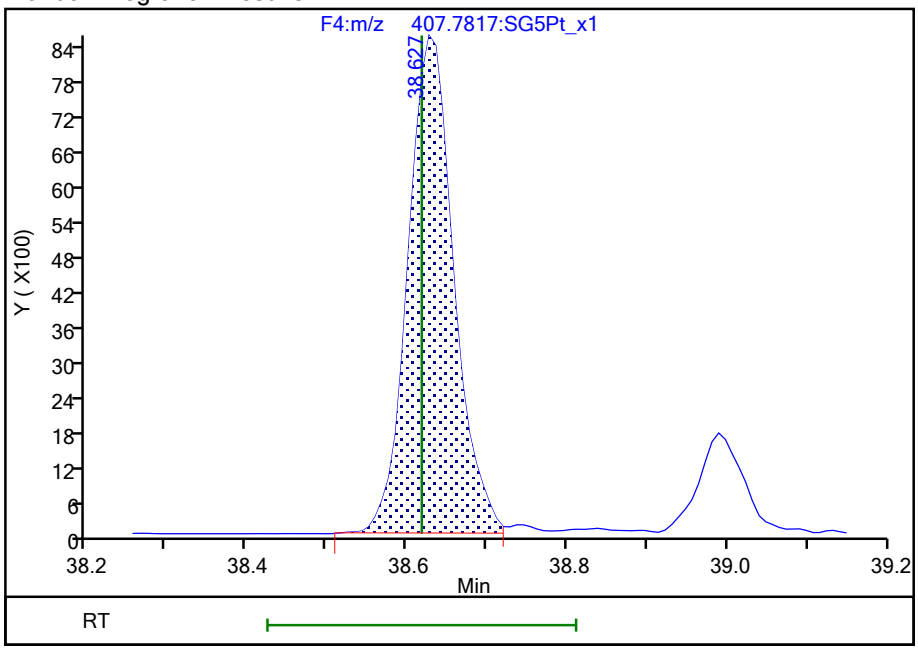

Reviewer: dadunj, 23-Aug-2021 09:12:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788440

Report Date: 23-Aug-2021 09:13:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

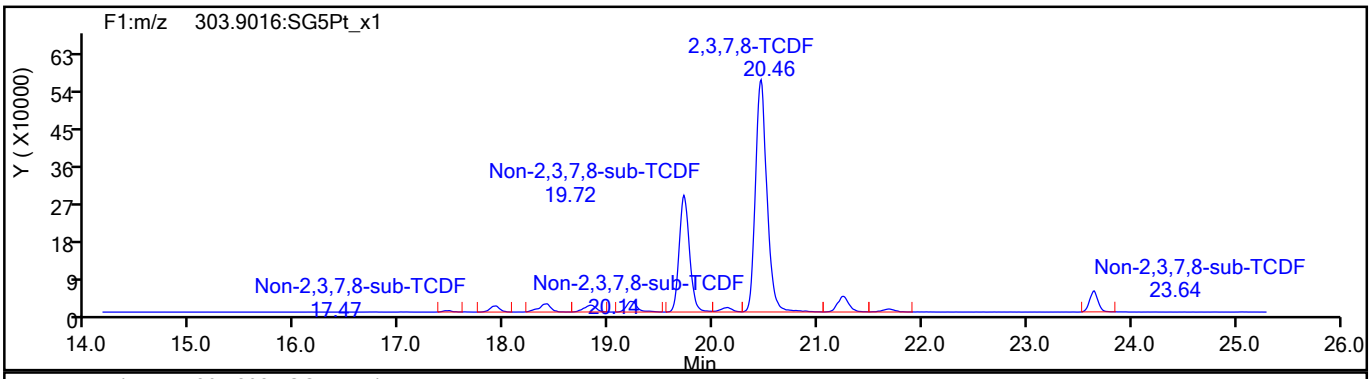

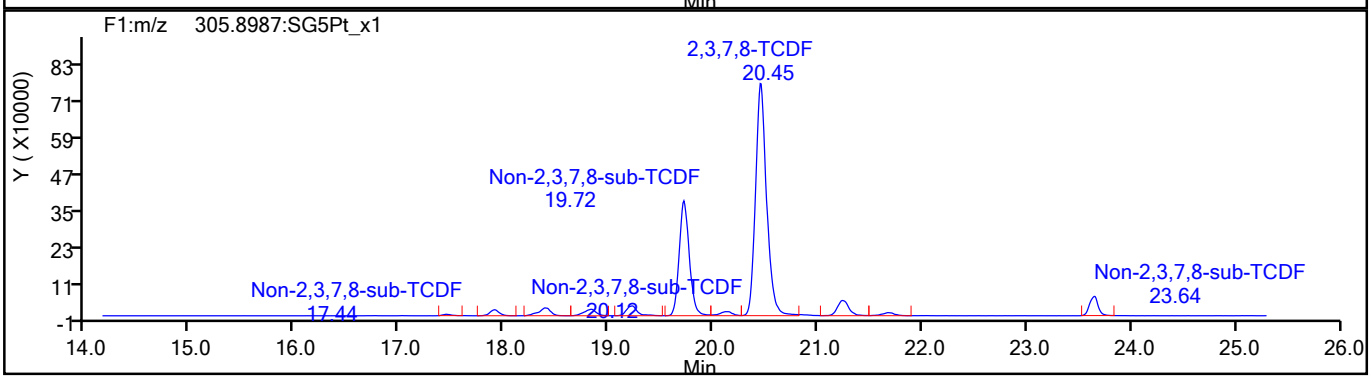

TCDF Standards

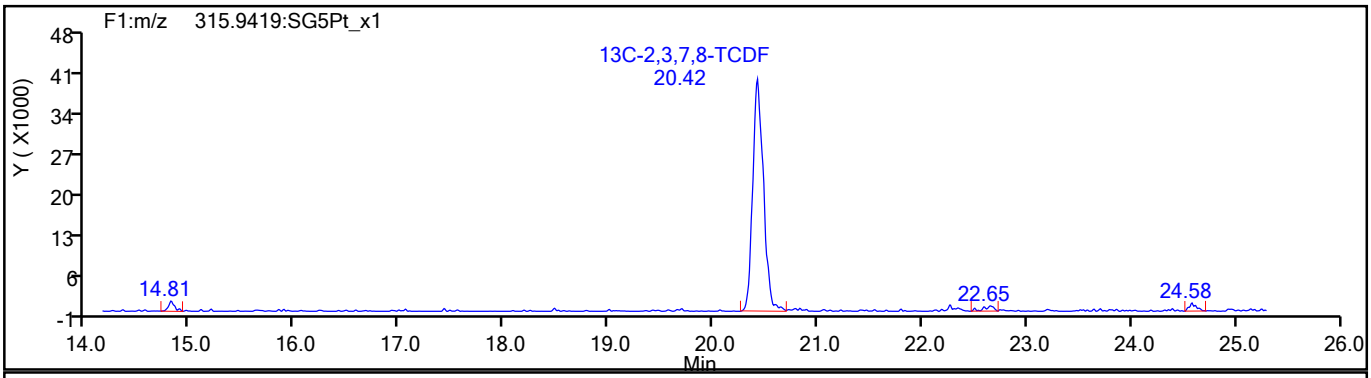

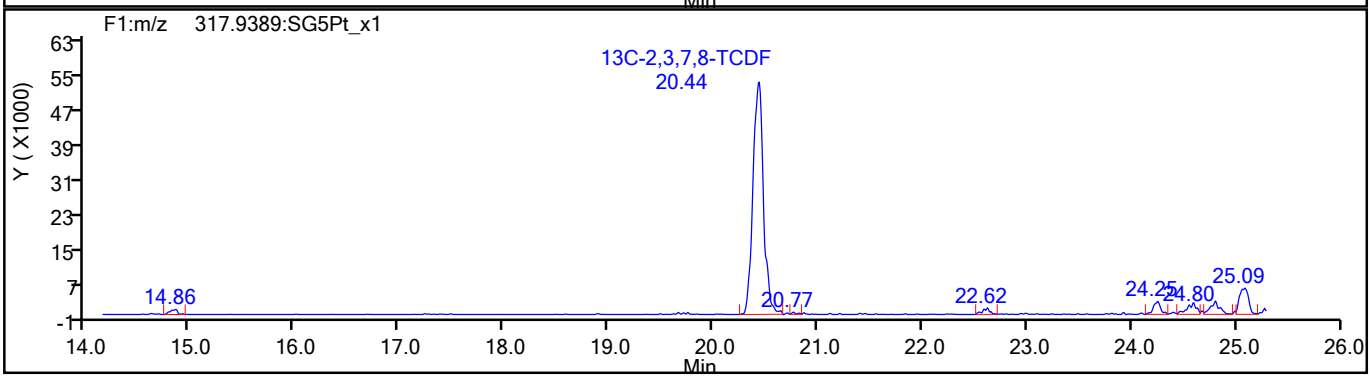

788441

Report Date: 23-Aug-2021 09:13:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

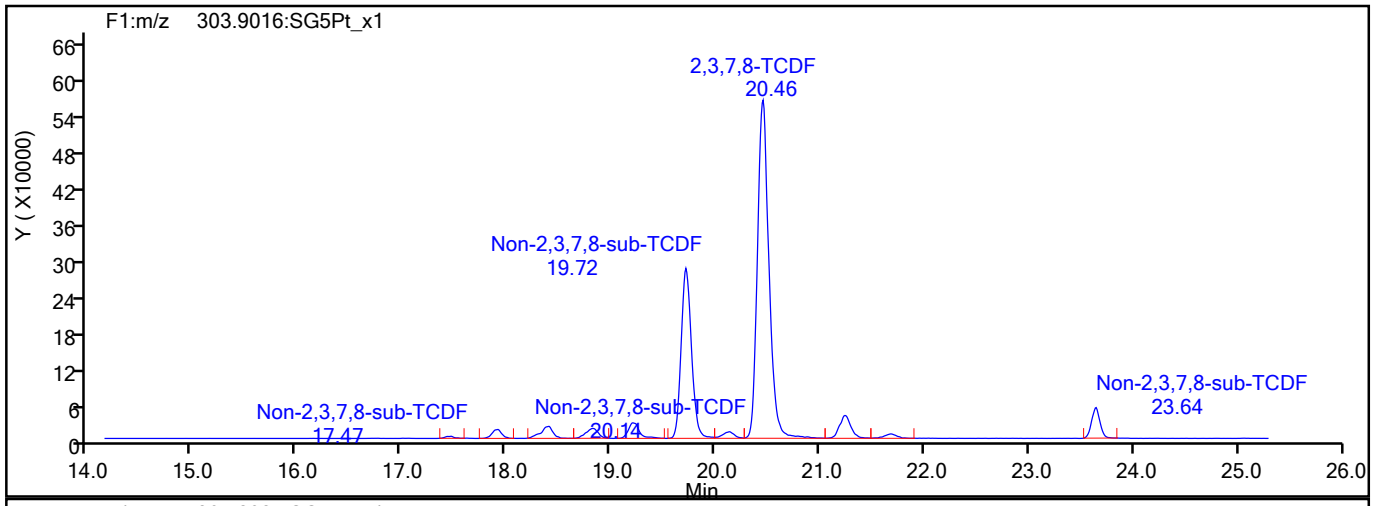

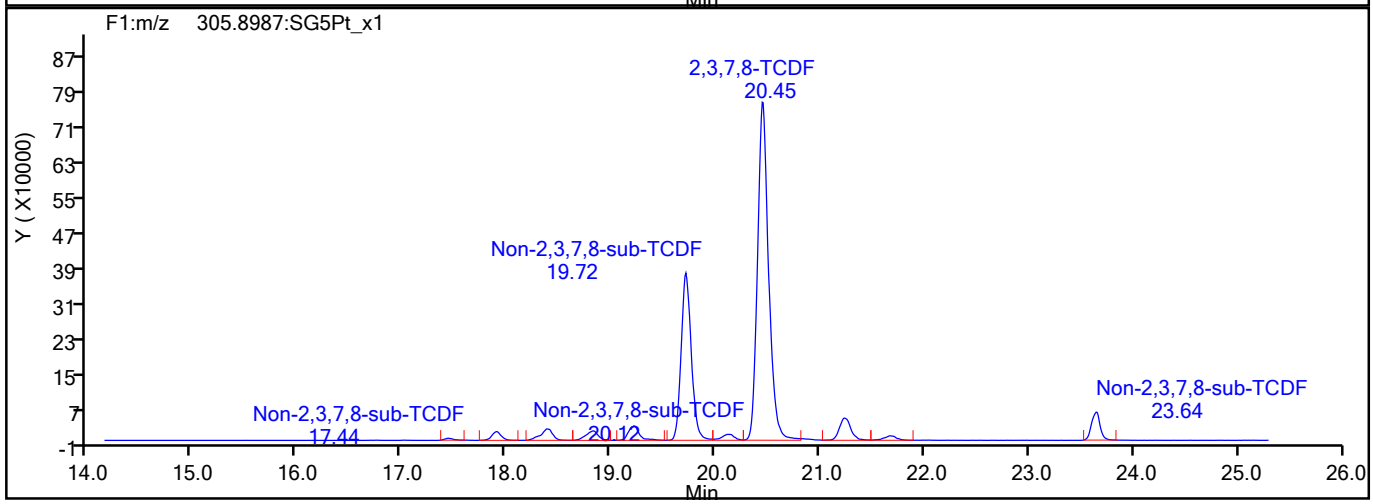

TCDF Interference Mass

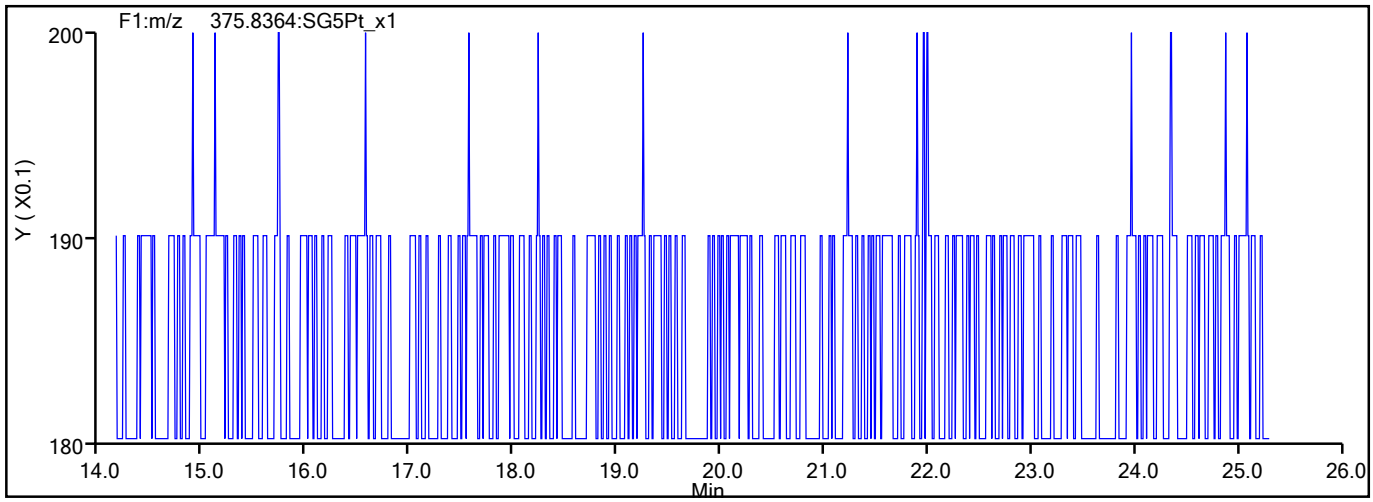

788442

Report Date: 23-Aug-2021 09:13:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

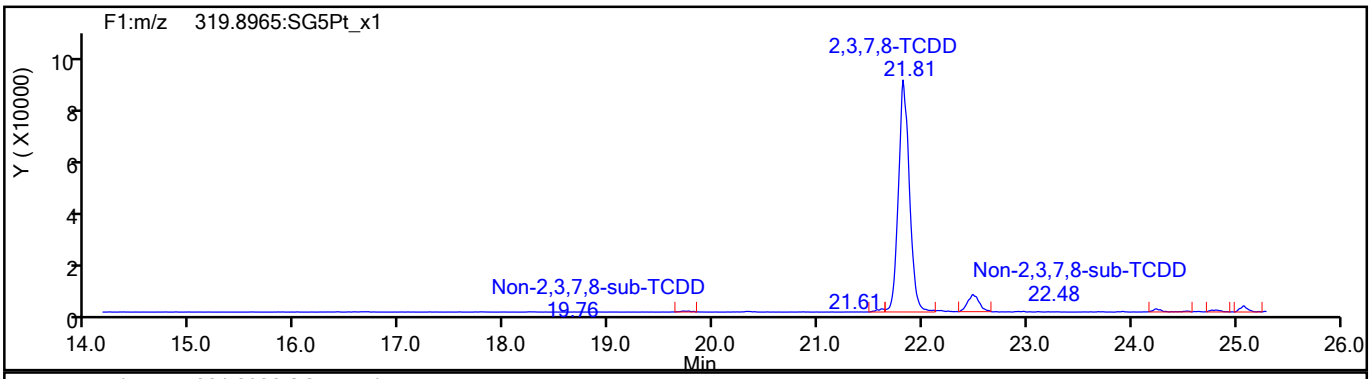

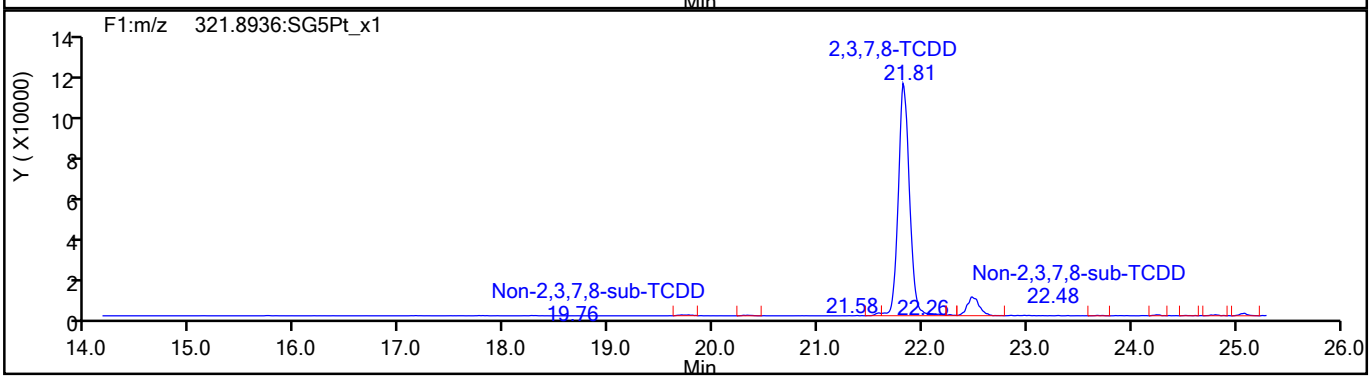

TCDD Standards

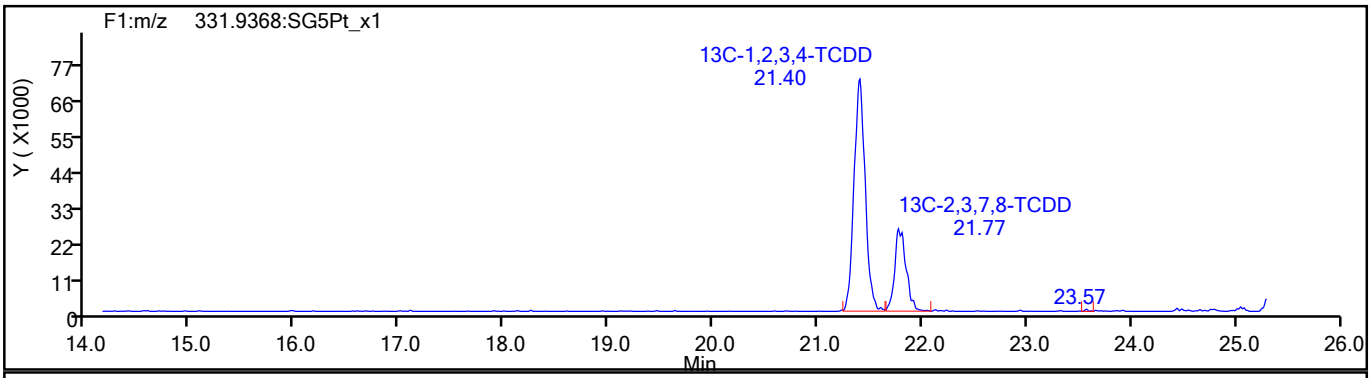

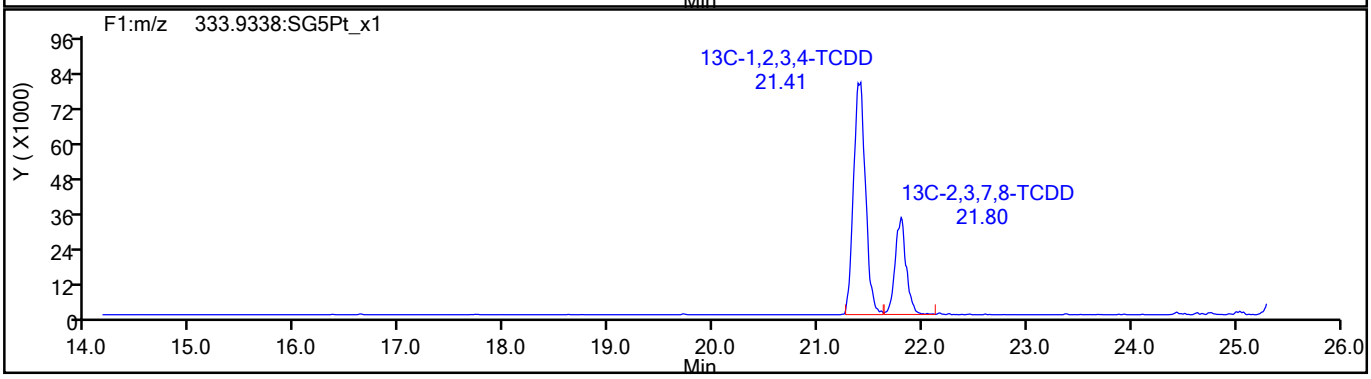

788443

Report Date: 23-Aug-2021 09:13:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

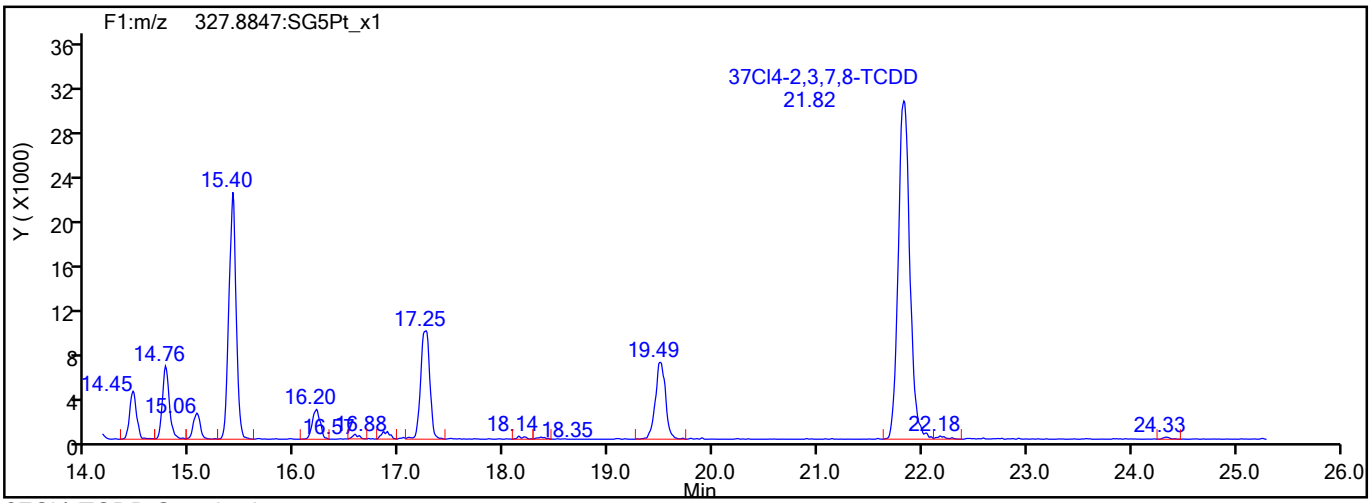

37Cl4-TCDD Standards

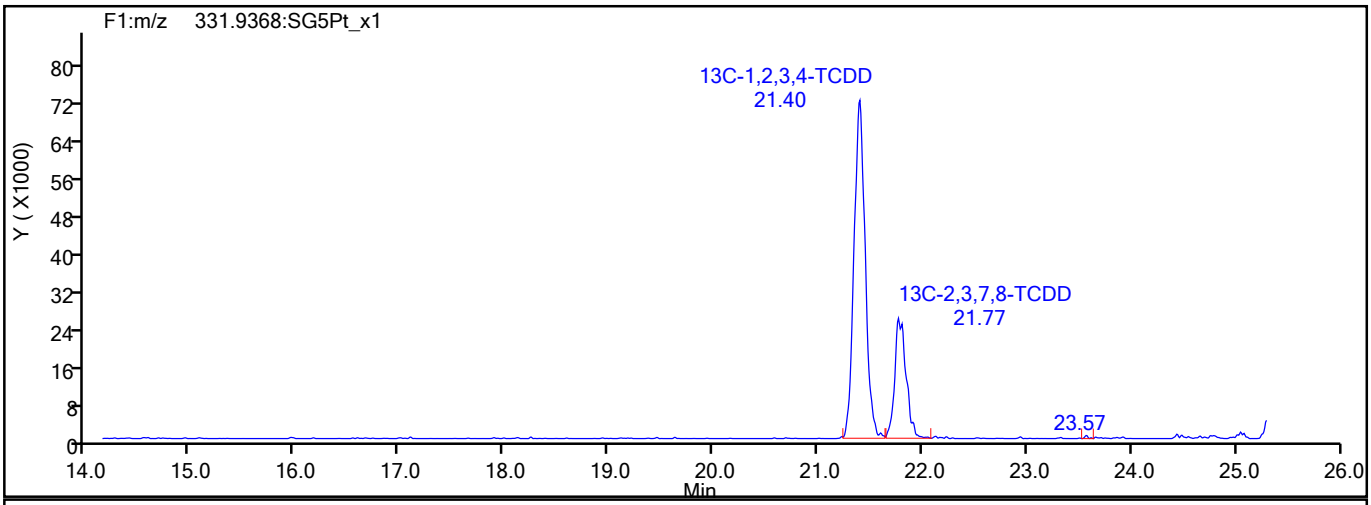

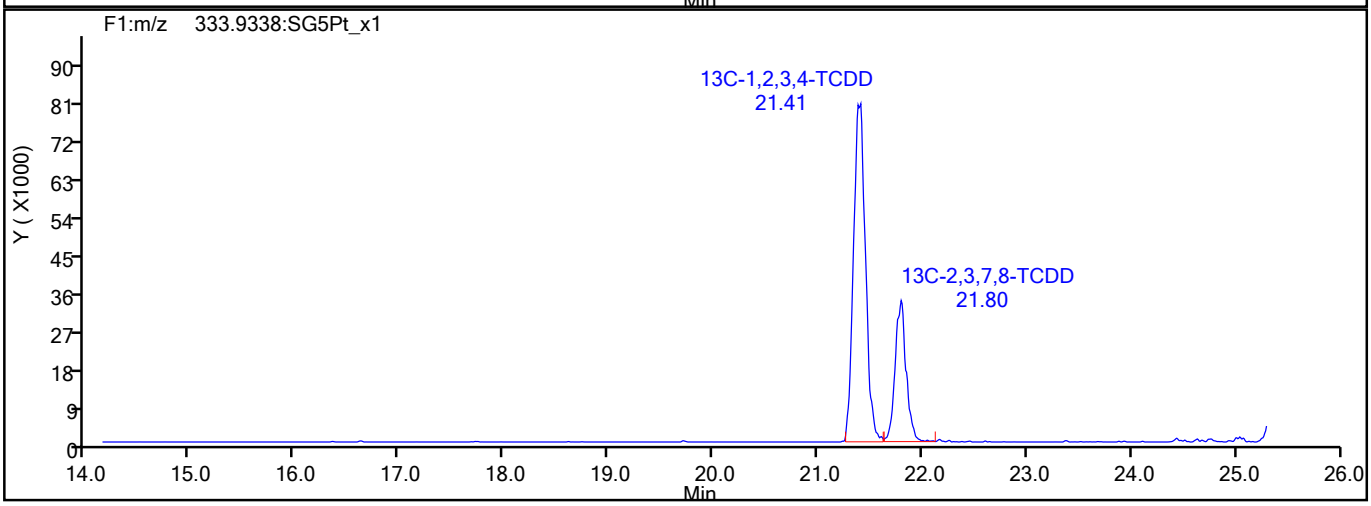

788444

Report Date: 23-Aug-2021 09:13:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

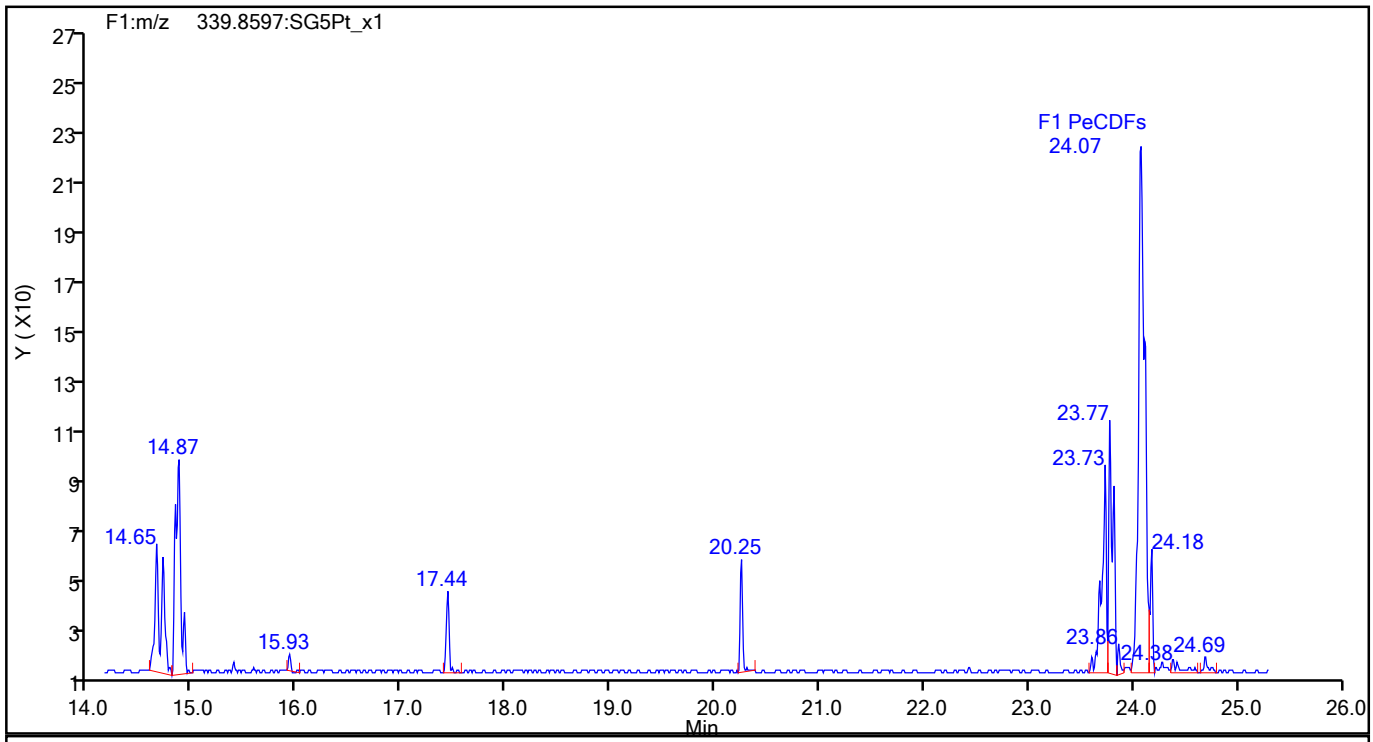

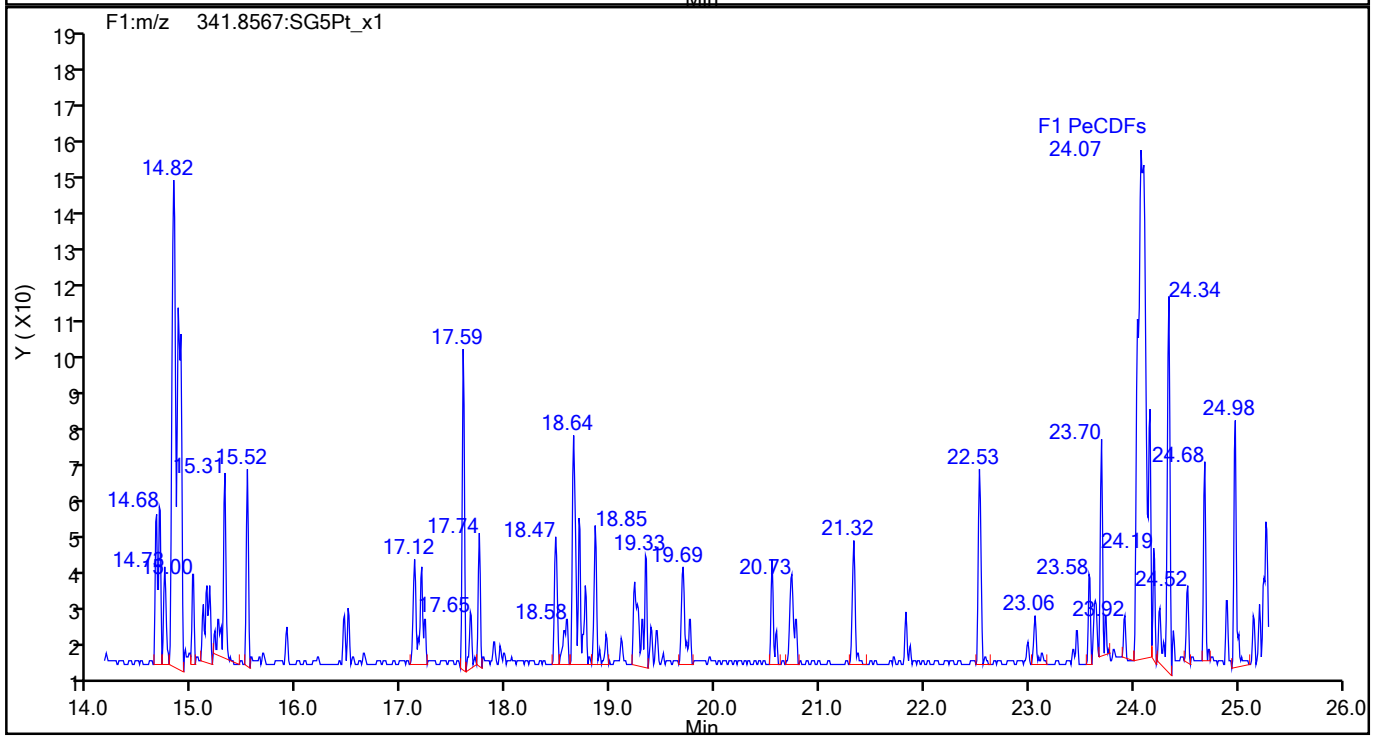

788445

Report Date: 23-Aug-2021 09:13:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

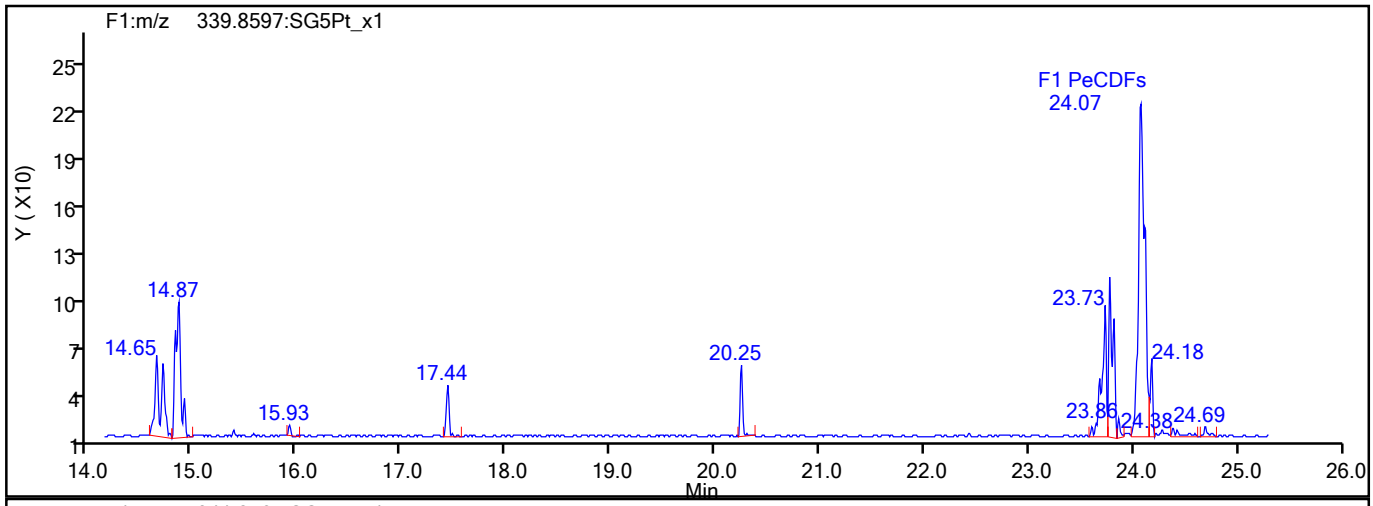

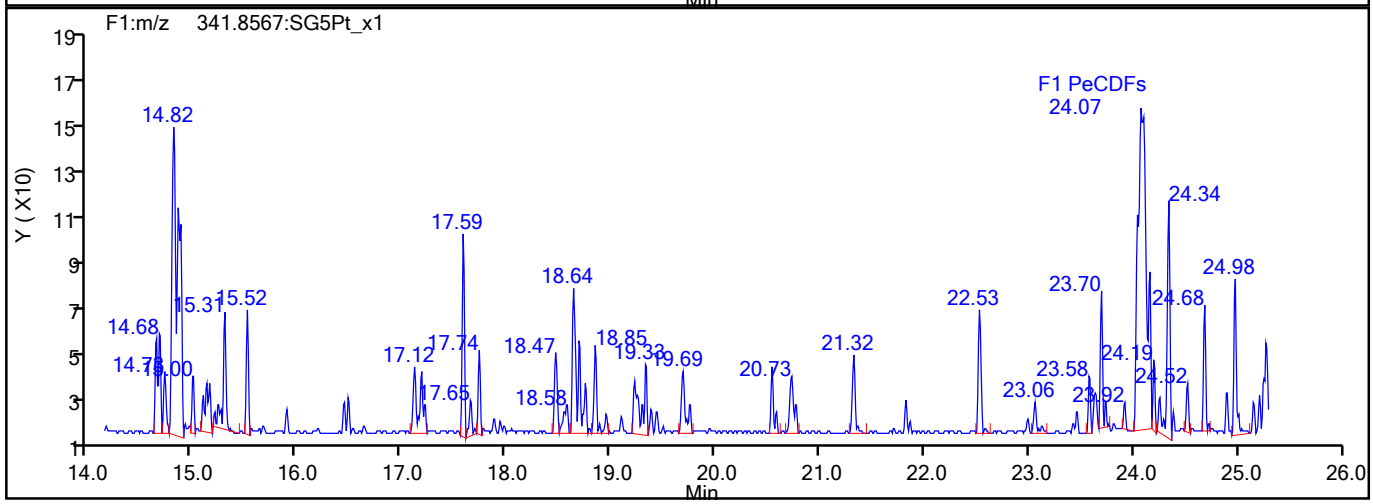

F1 PeCDFs Interference Mass

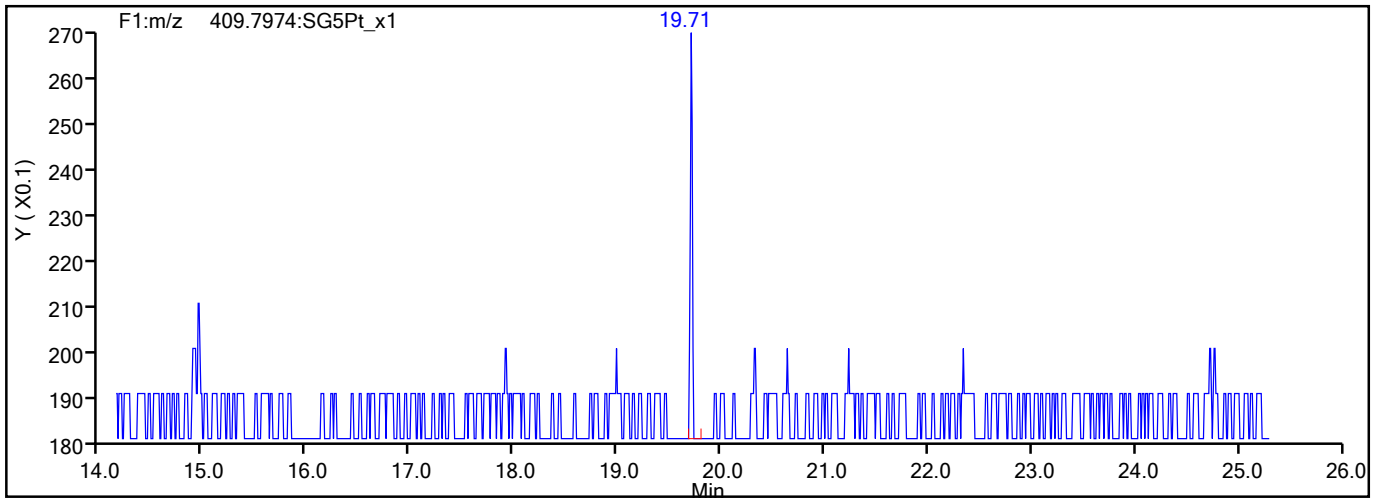

788446

Report Date: 23-Aug-2021 09:13:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
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PeCDF

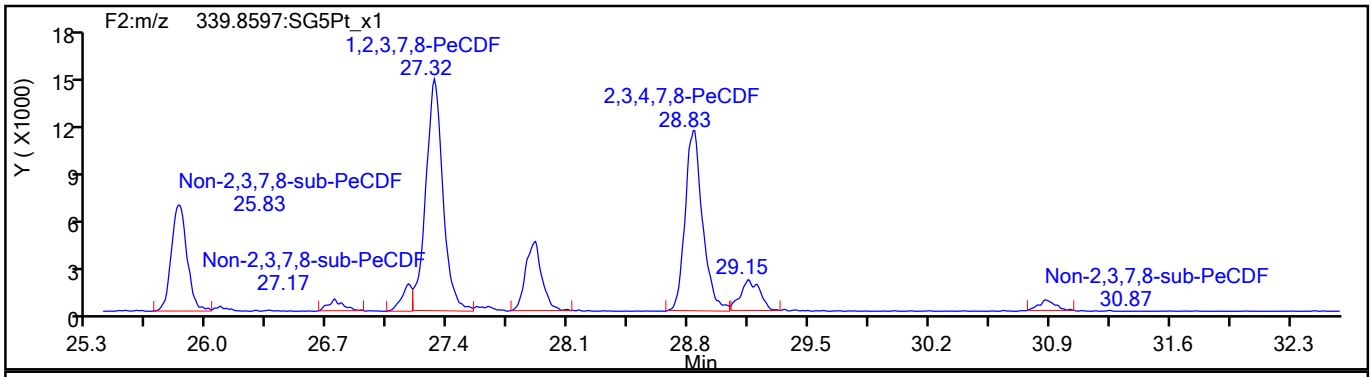

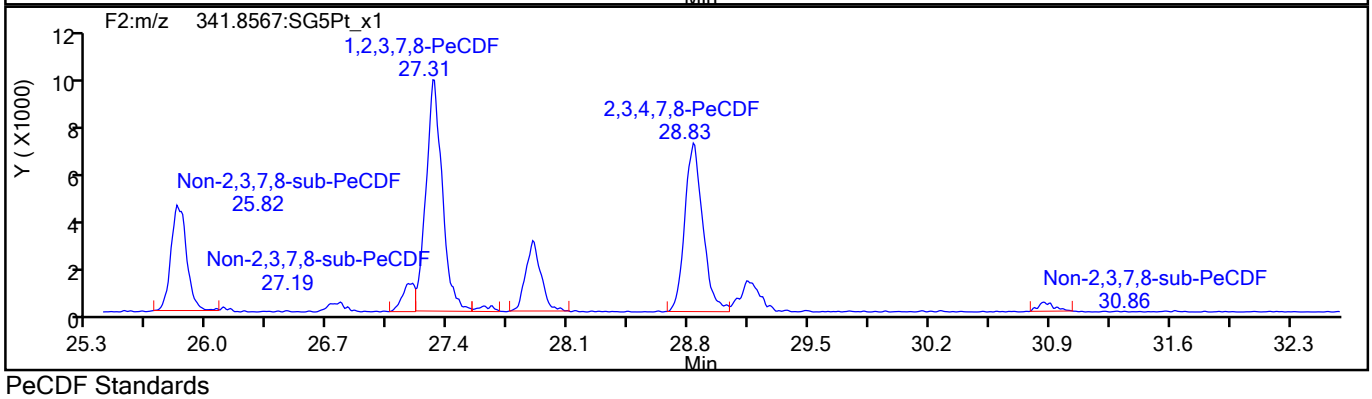

PeCDF Standards

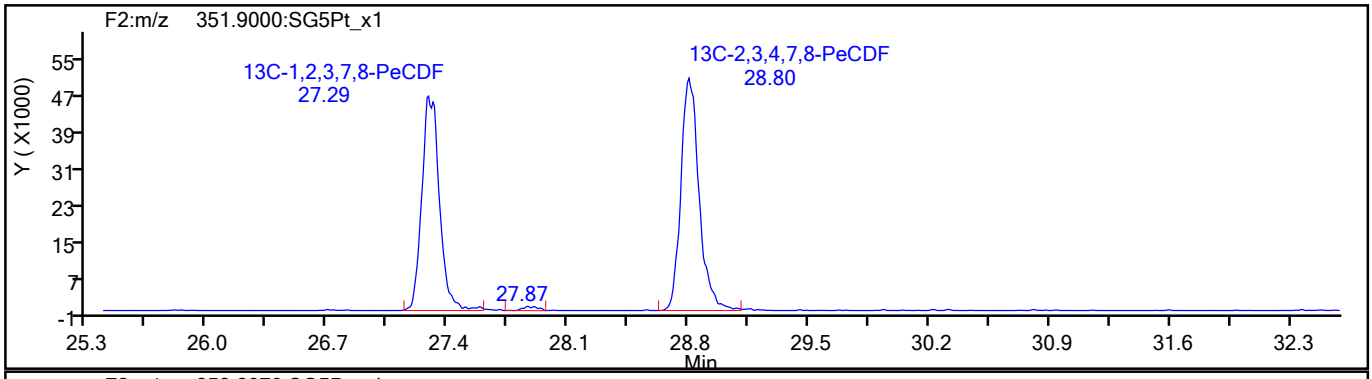

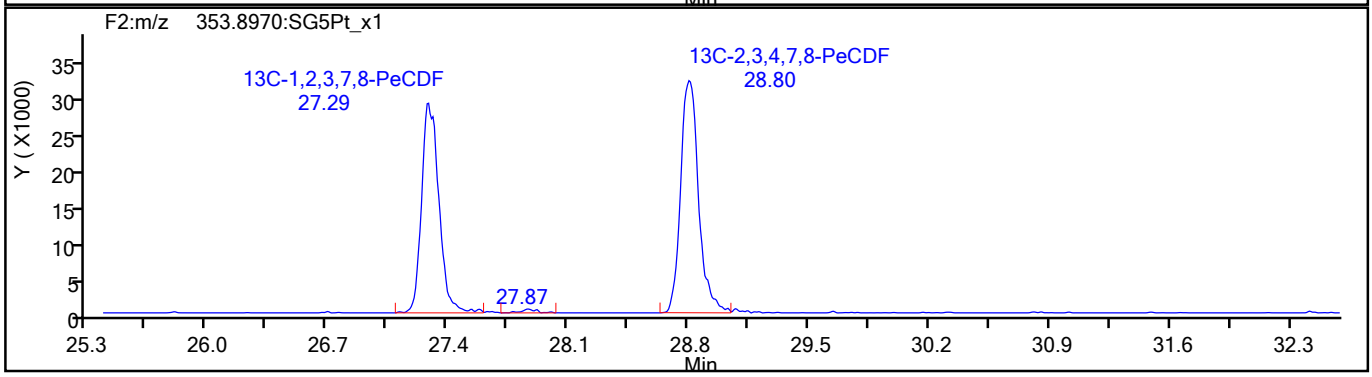

788447

Report Date: 23-Aug-2021 09:13:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

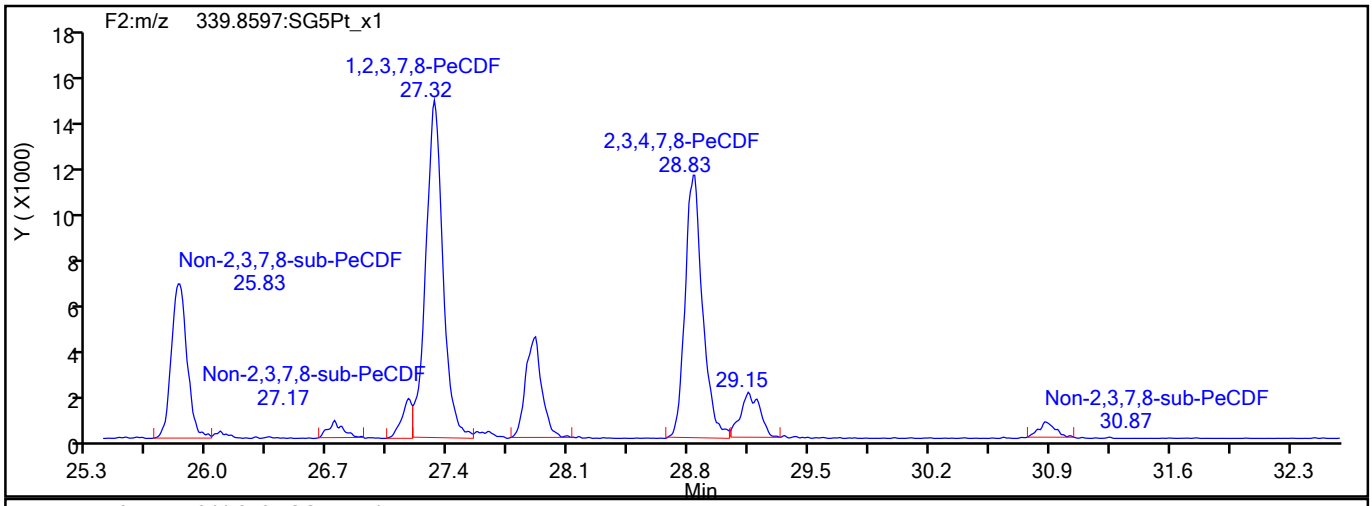

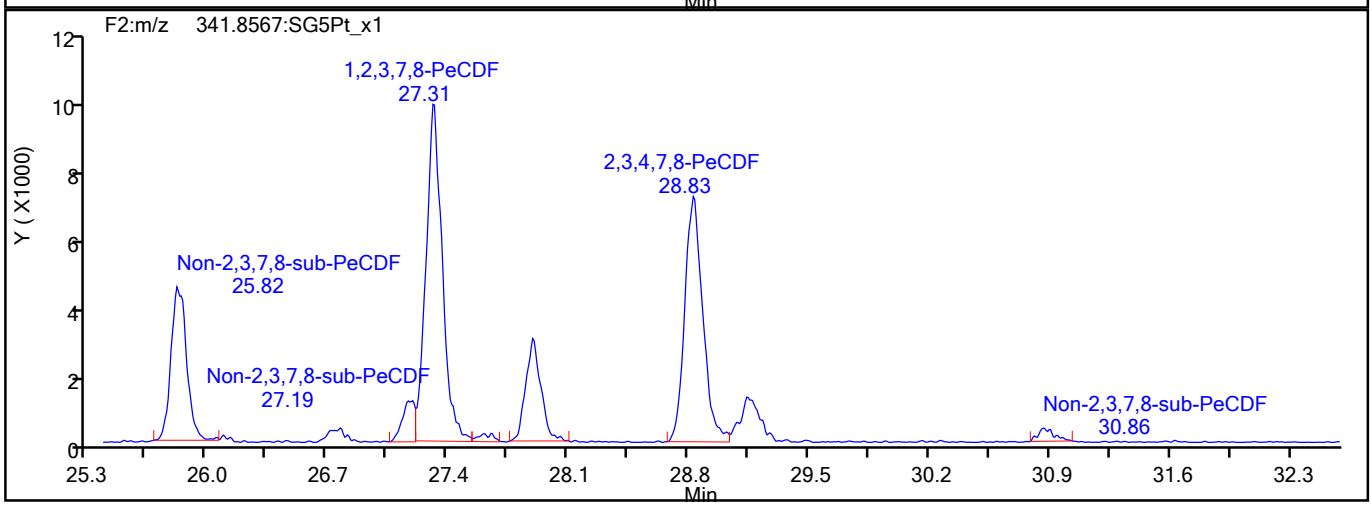

PeCDF Interference Mass

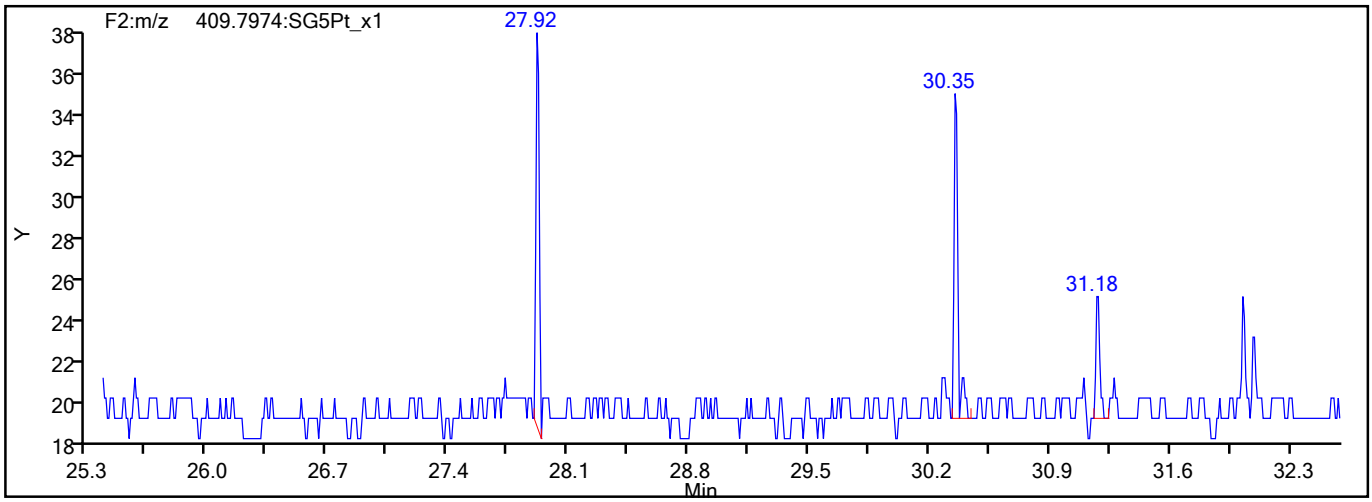

788448

Report Date: 23-Aug-2021 09:13:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

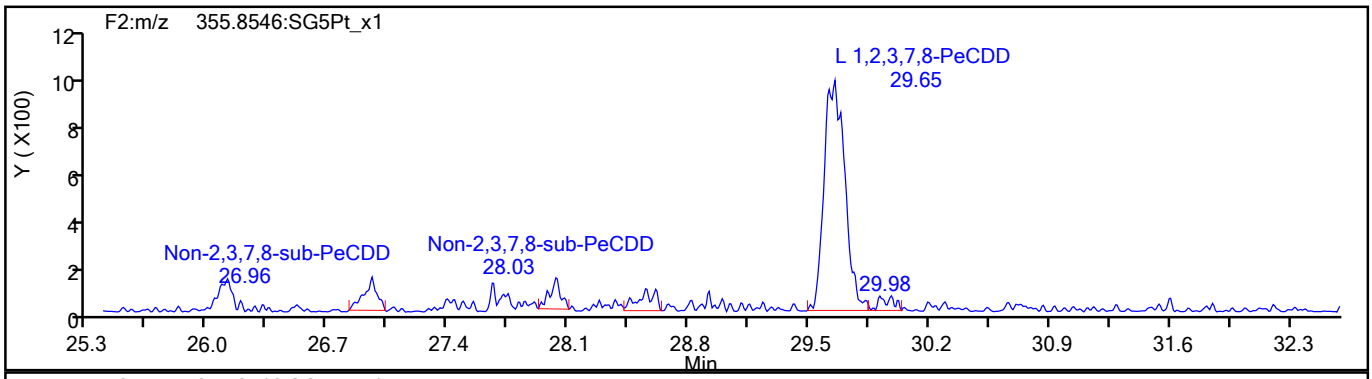

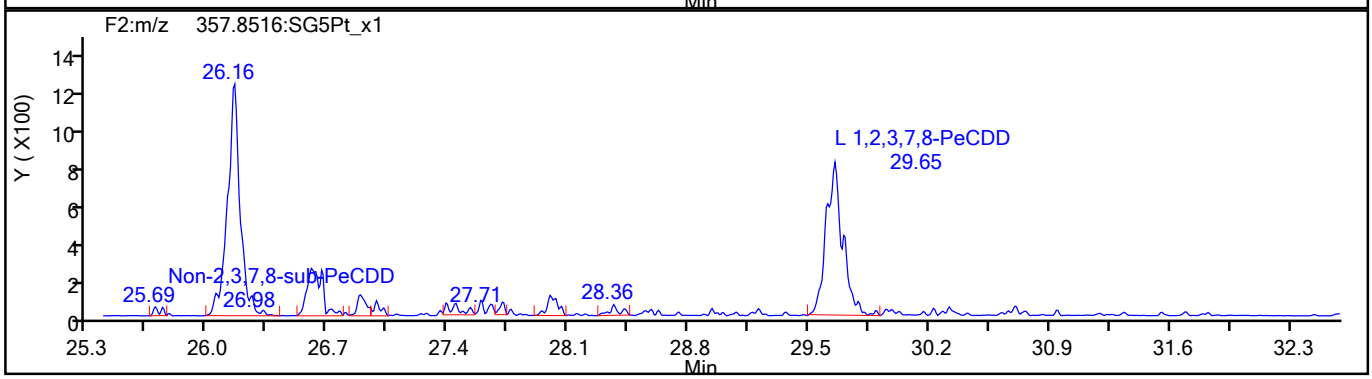

PeCDD Standards

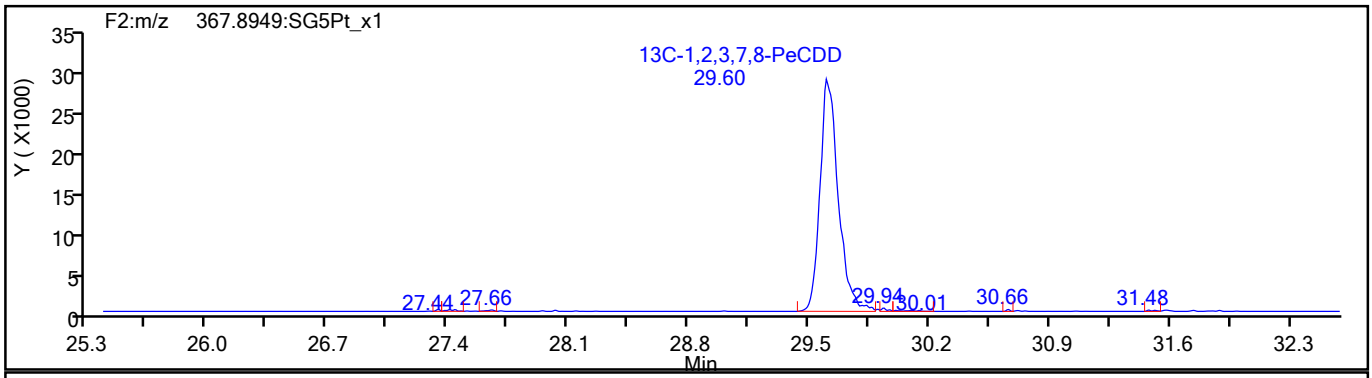

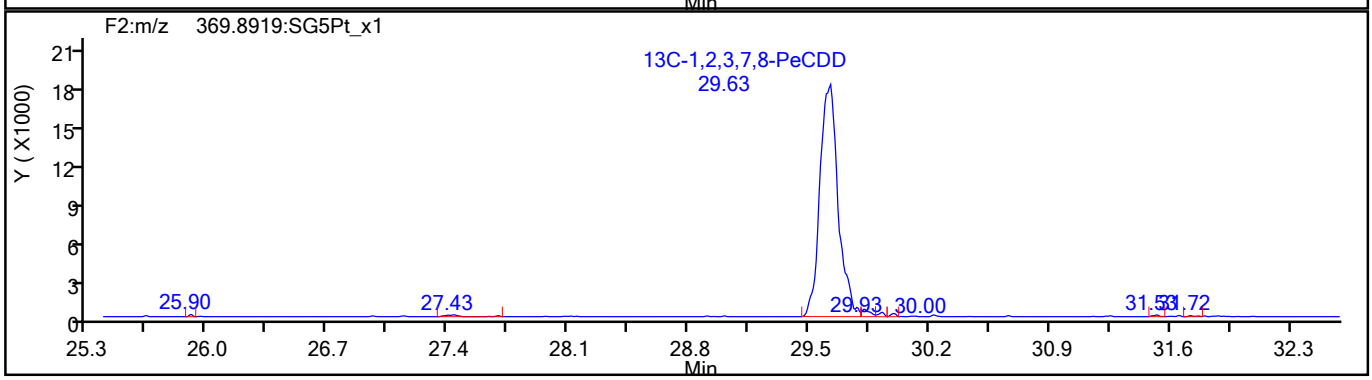

788449

Report Date: 23-Aug-2021 09:13:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

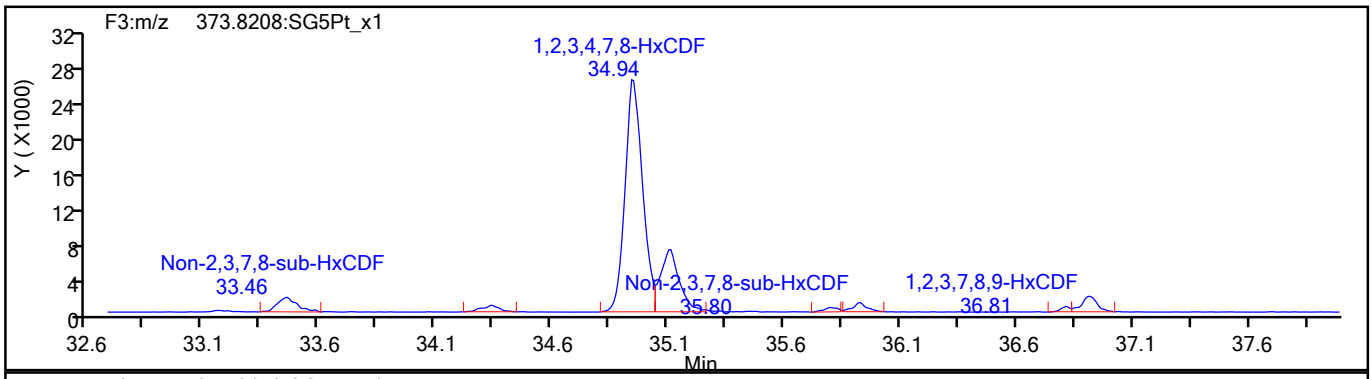

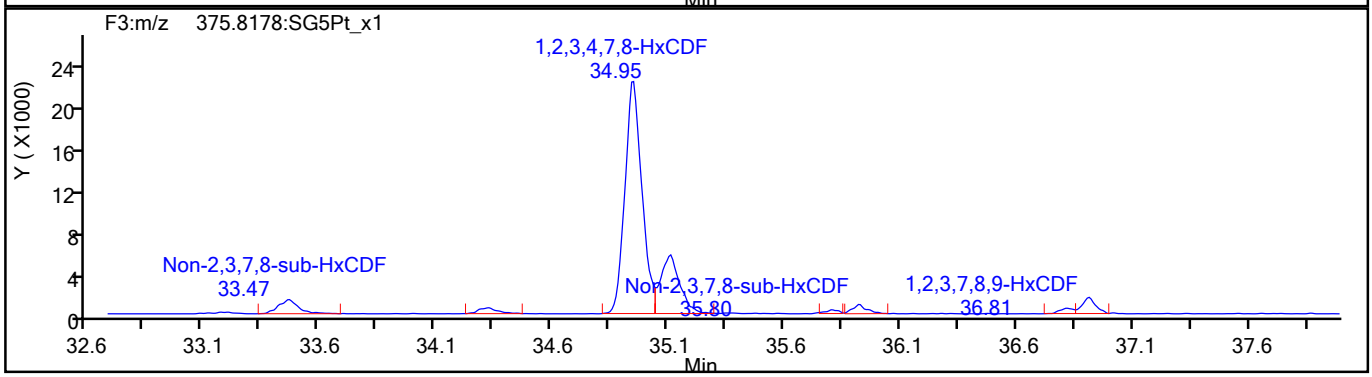

HxCDF Standards

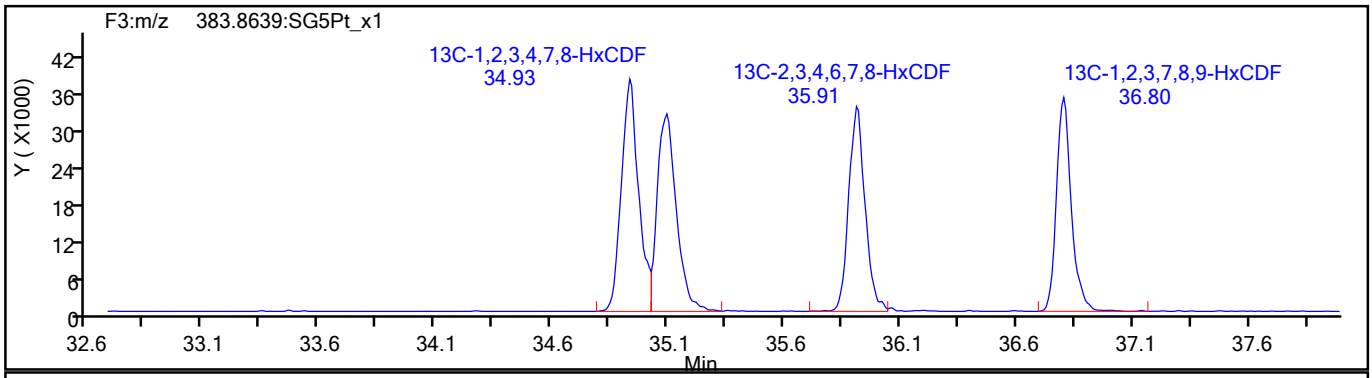

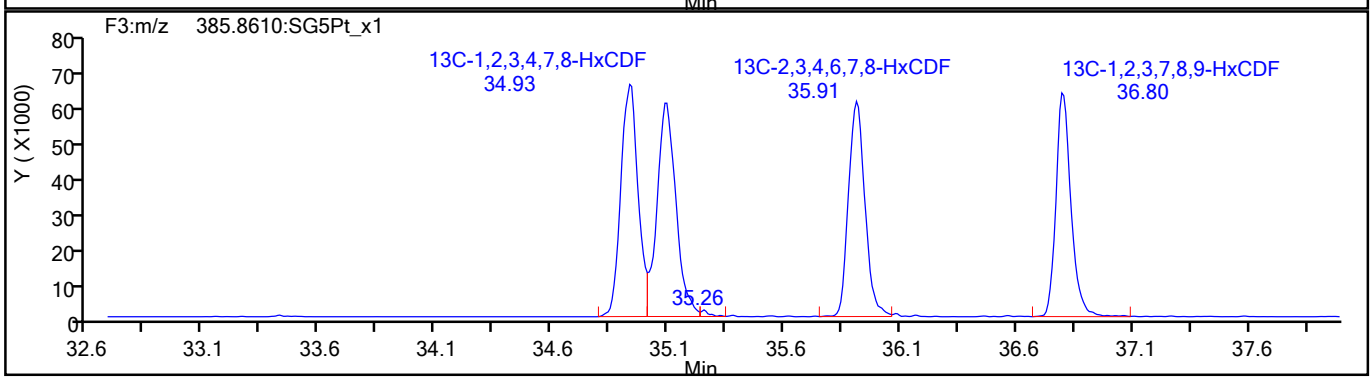

788450

Report Date: 23-Aug-2021 09:13:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
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HxCDF

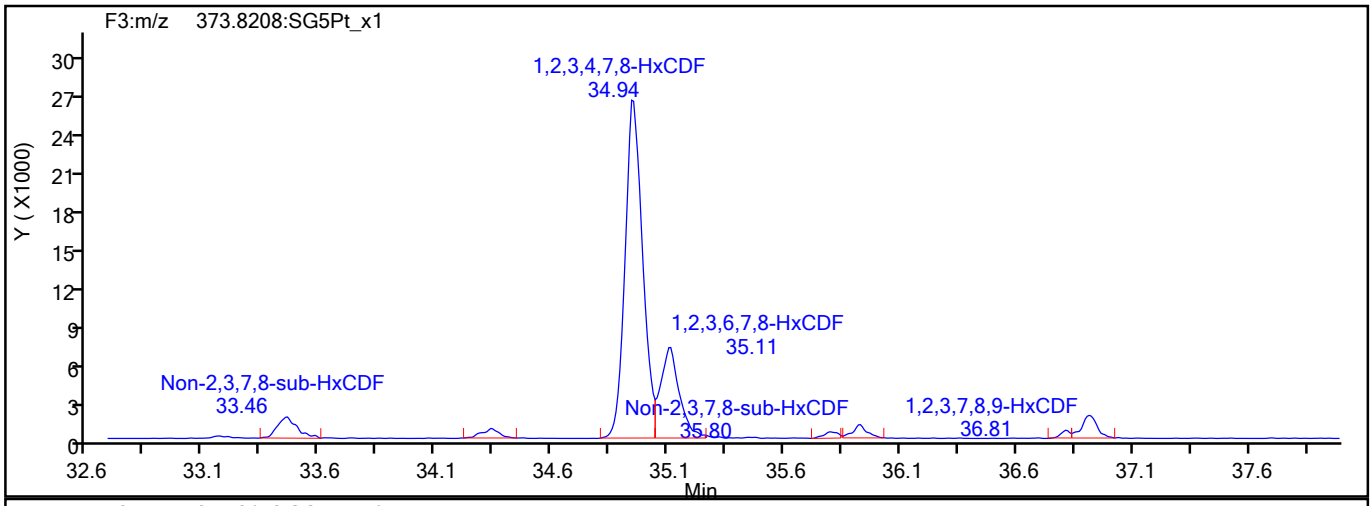

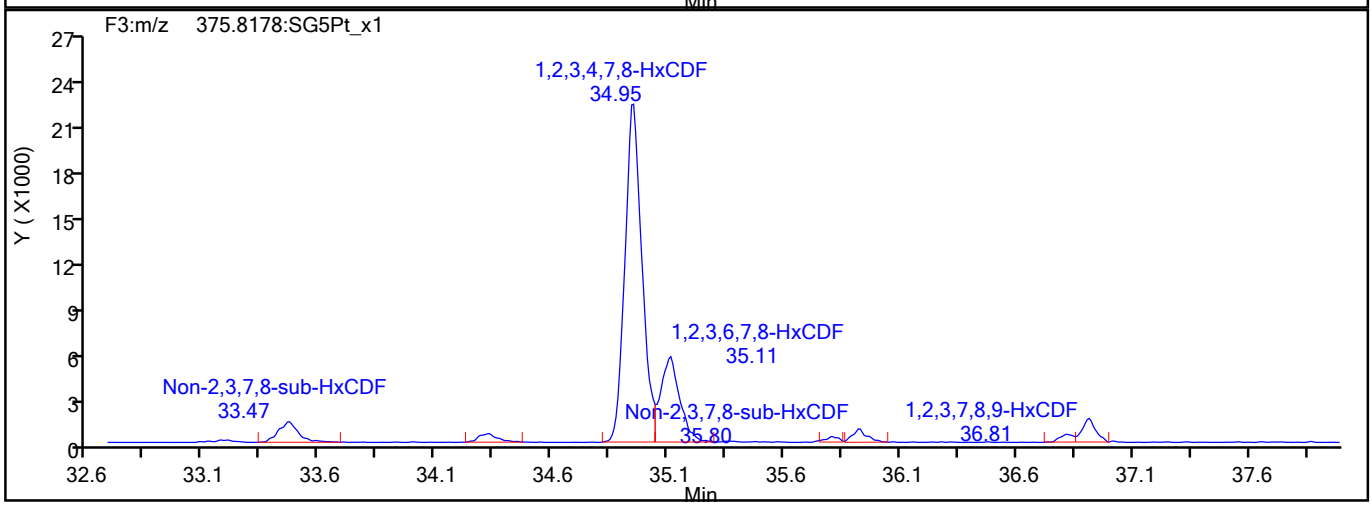

HxCDF Interference Mass

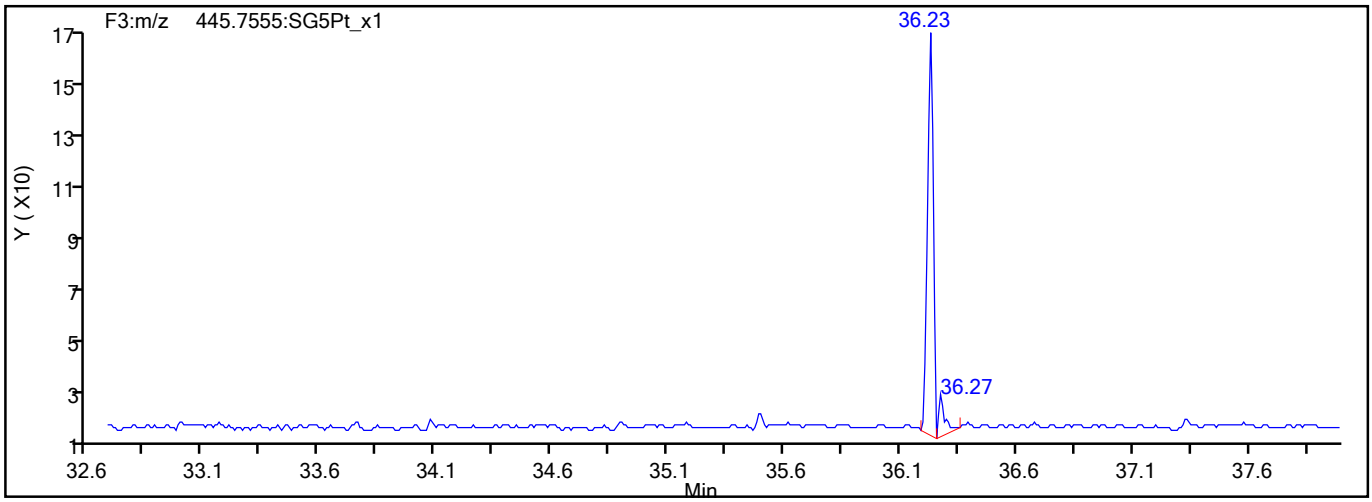

788451

Report Date: 23-Aug-2021 09:13:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

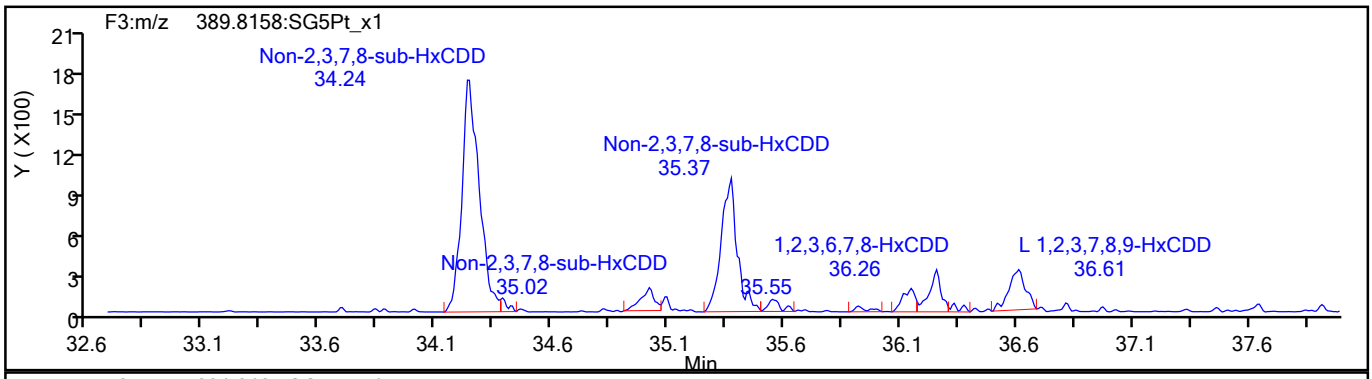

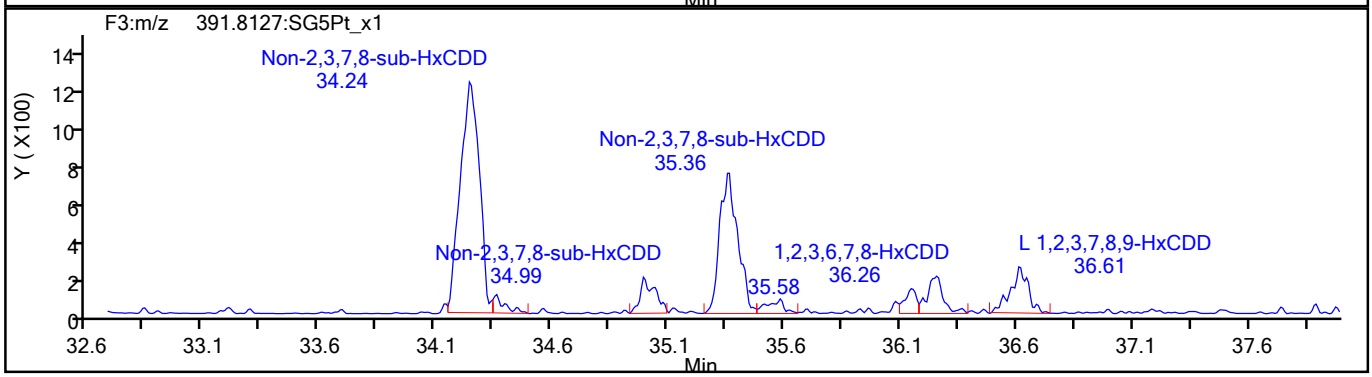

HxCDD Standards

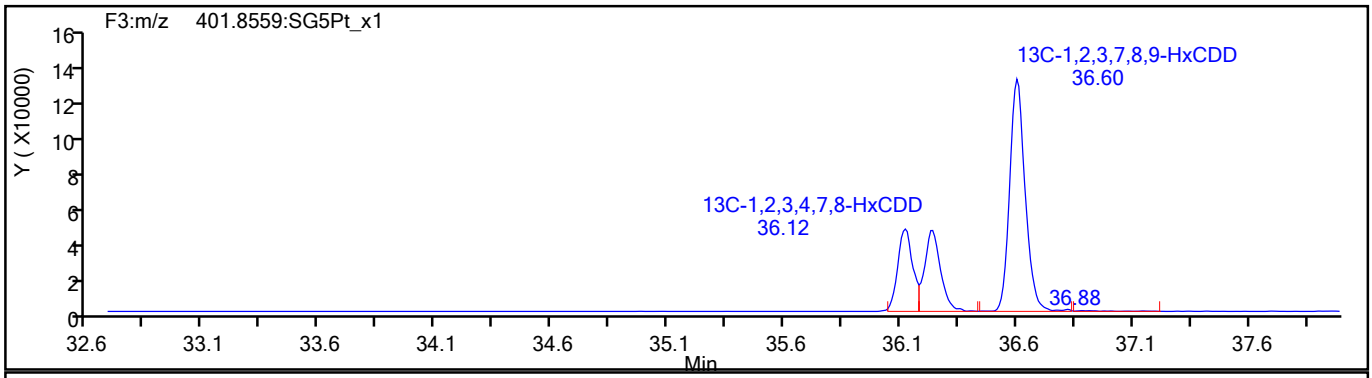

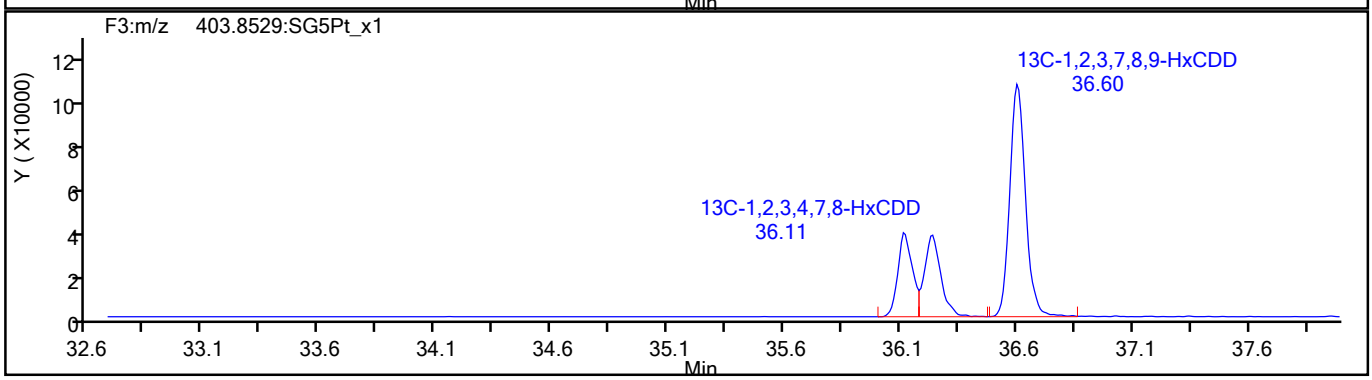

788452

Report Date: 23-Aug-2021 09:13:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

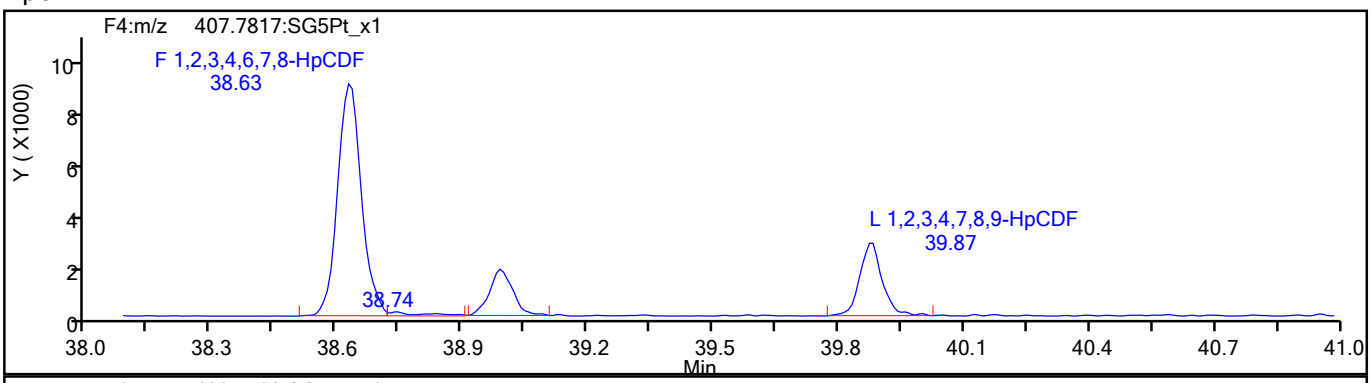

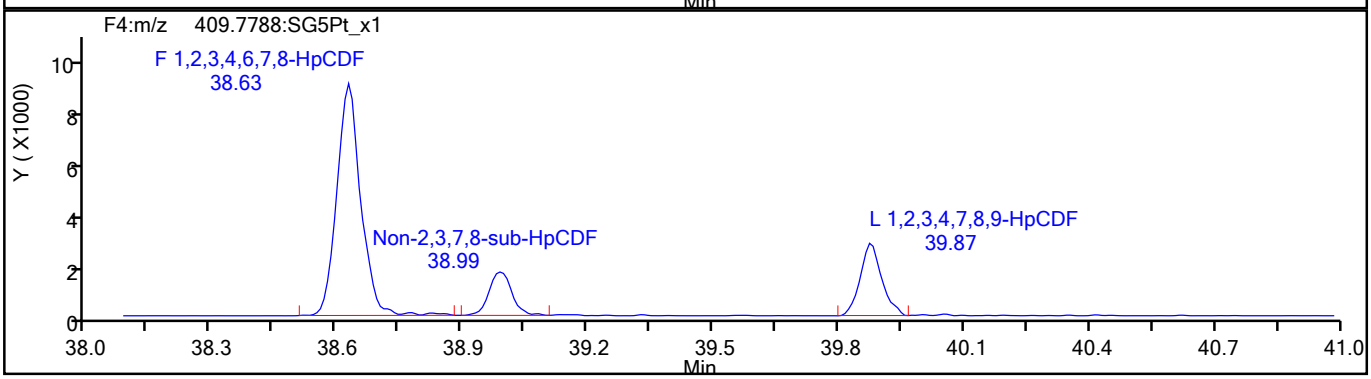

HpCDF Standards

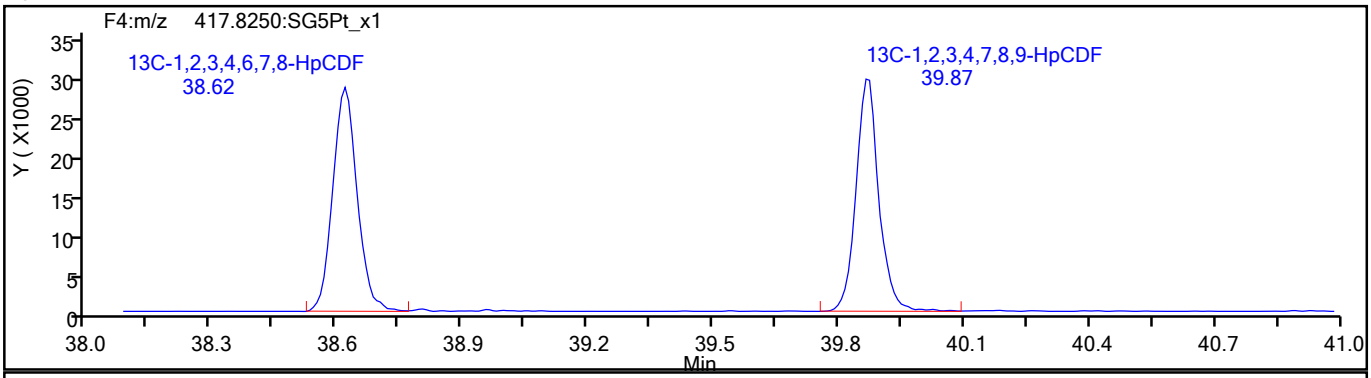

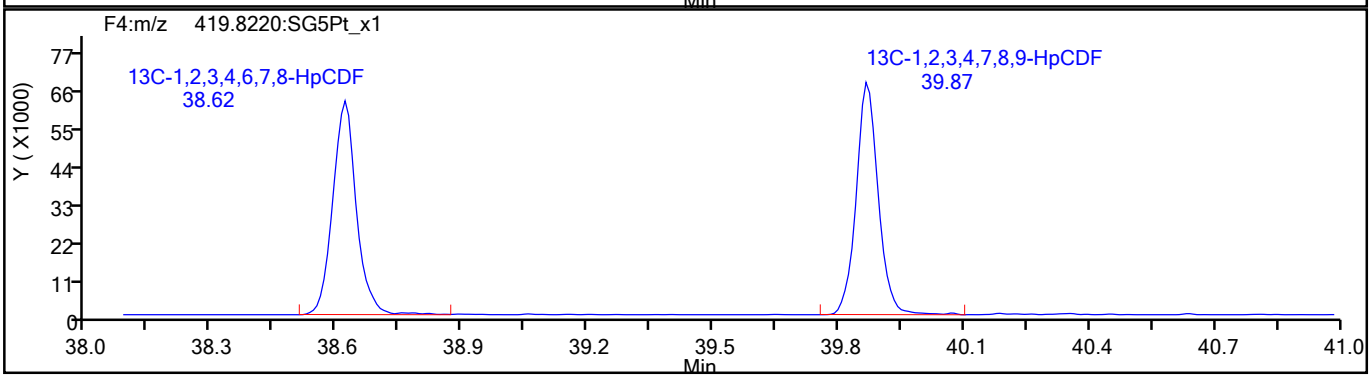

788453

Report Date: 23-Aug-2021 09:13:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

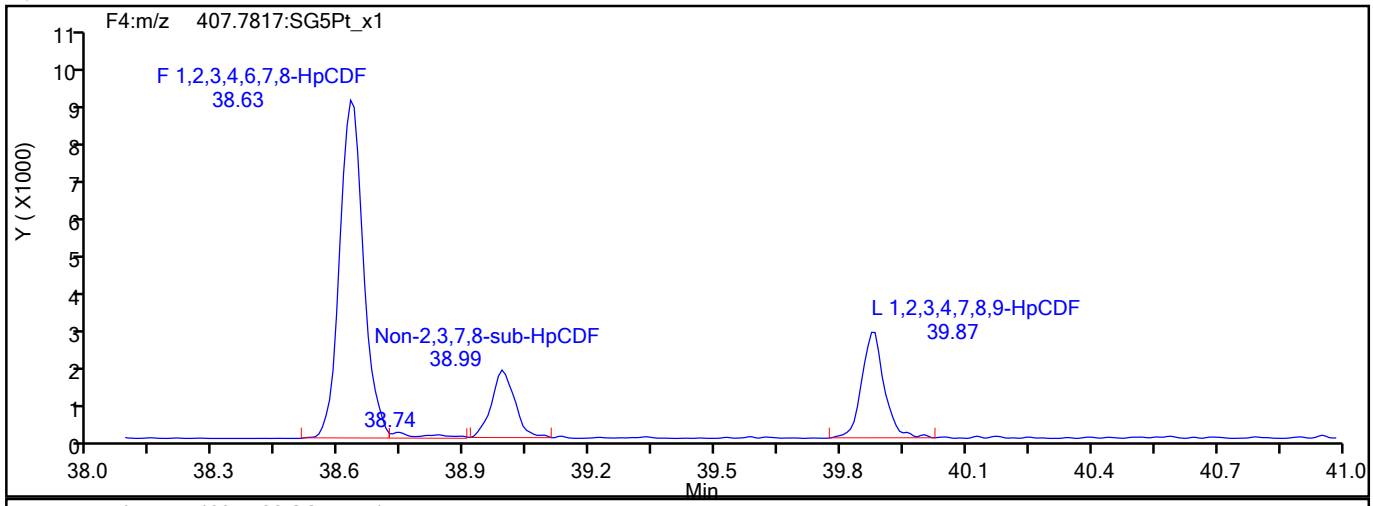

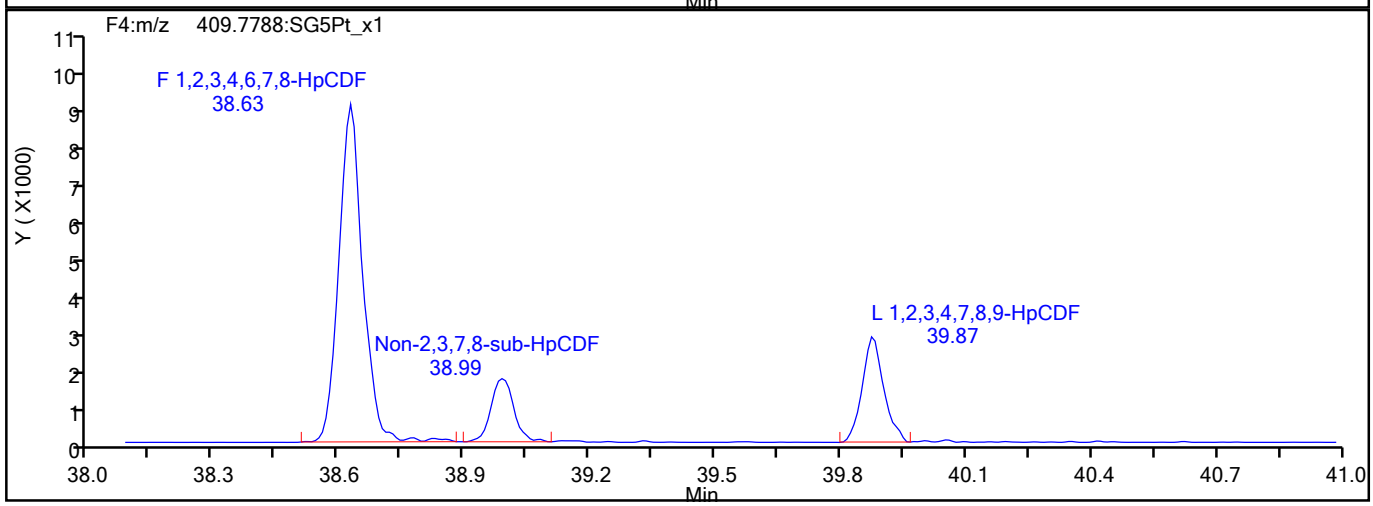

HpCDF Interference Mass

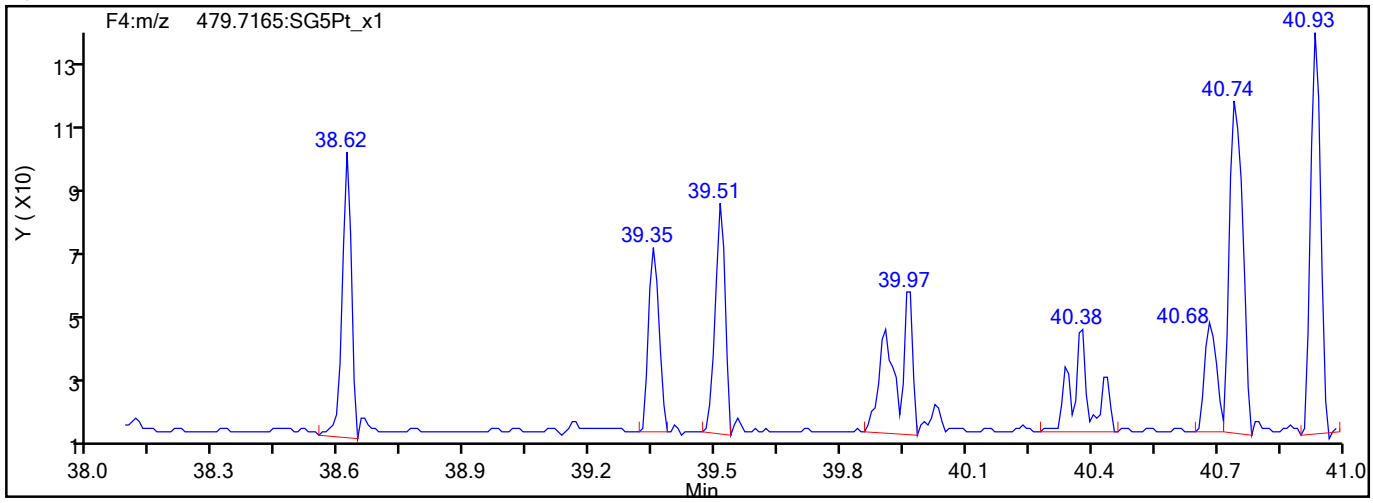

788454

Report Date: 23-Aug-2021 09:13:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

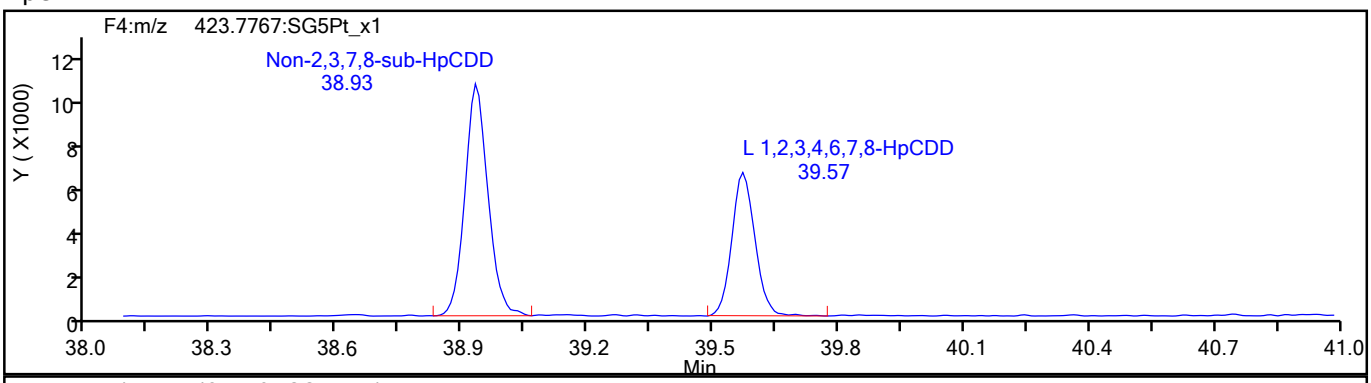

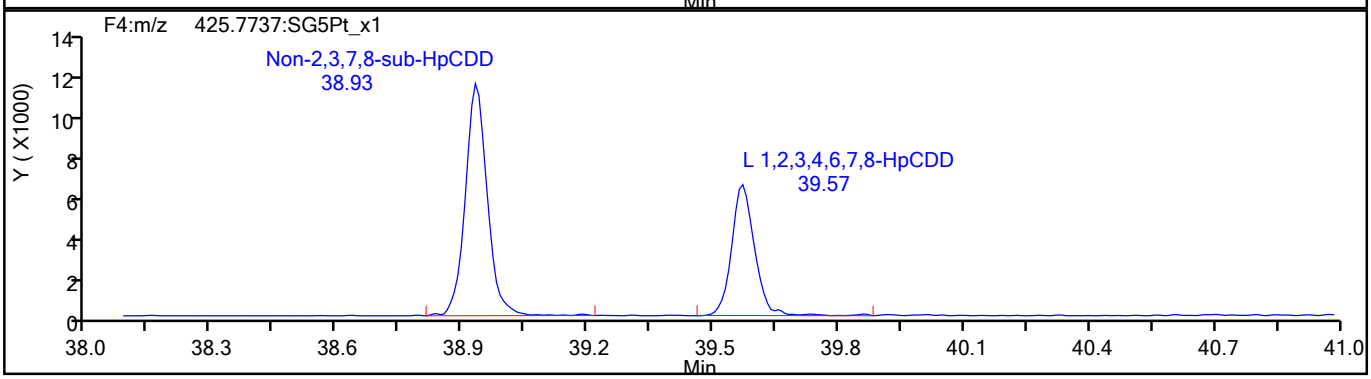

HpCDD Standards

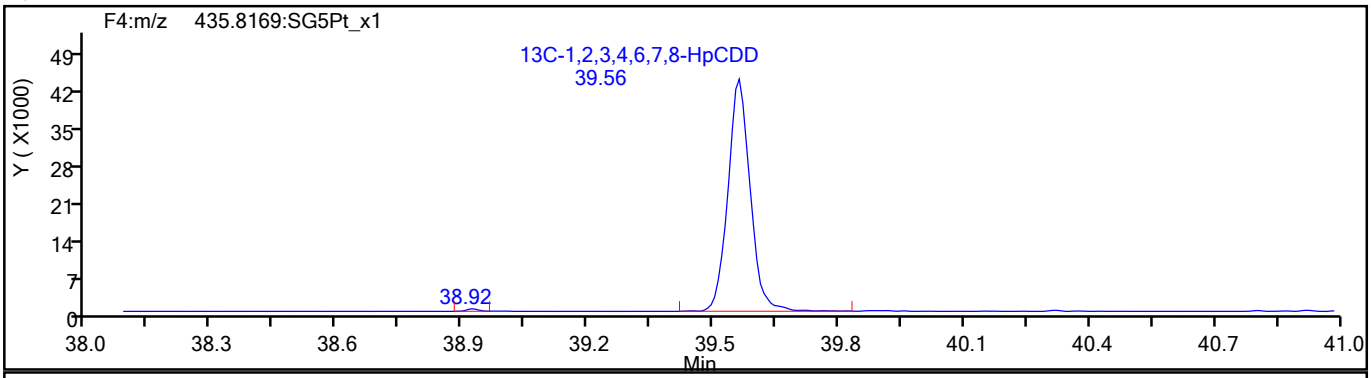

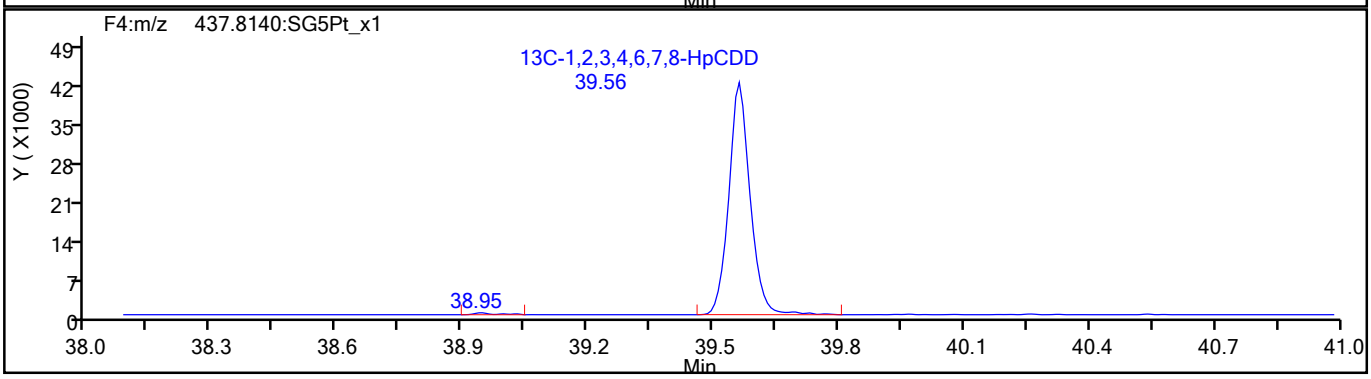

788455

Report Date: 23-Aug-2021 09:13:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

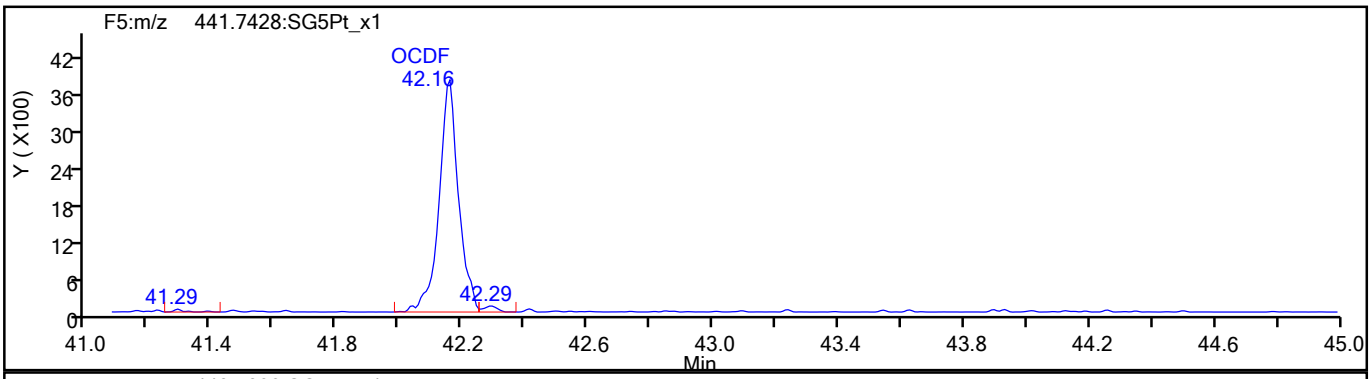

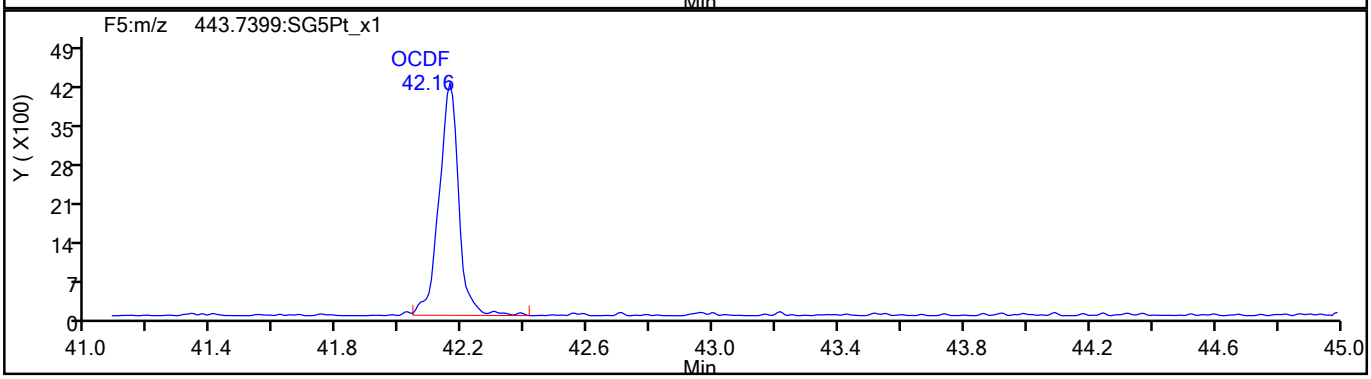

OCDF Standards

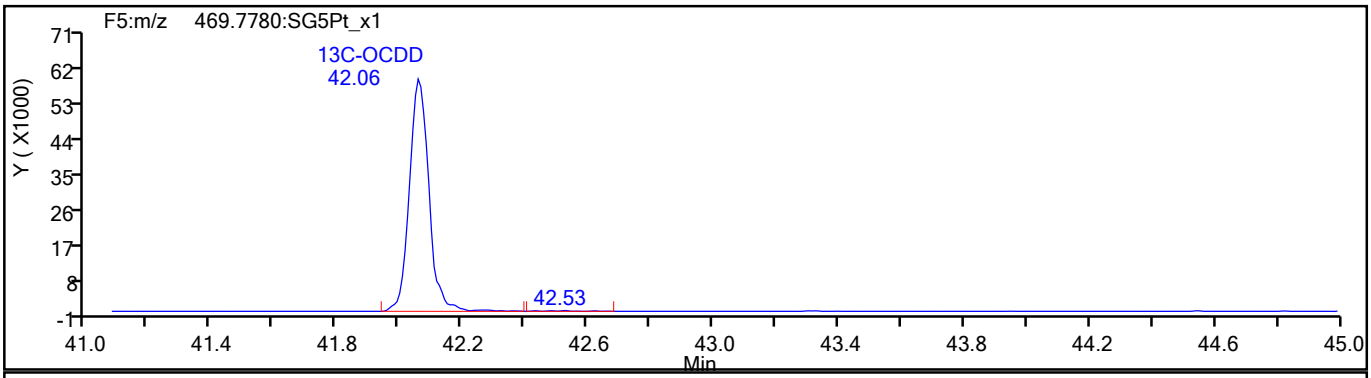

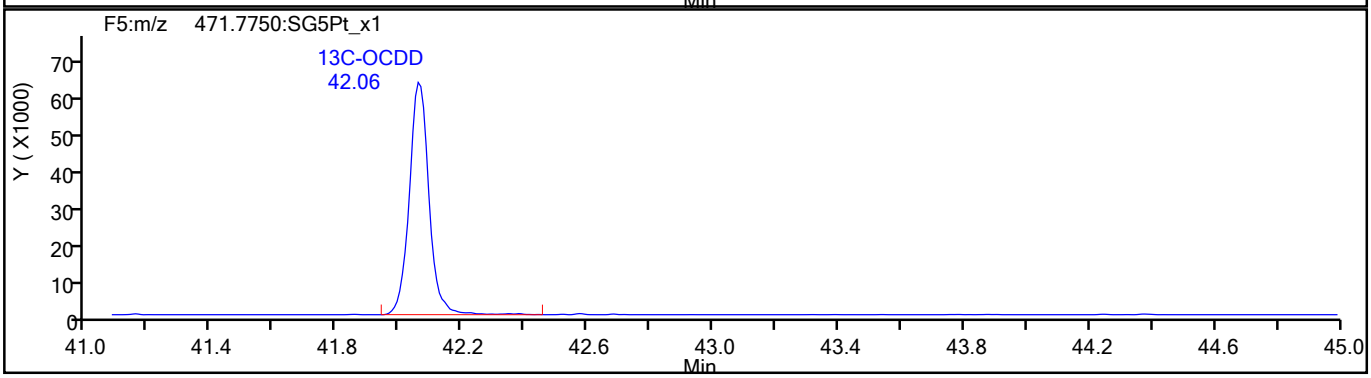

788456

Report Date: 23-Aug-2021 09:13:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

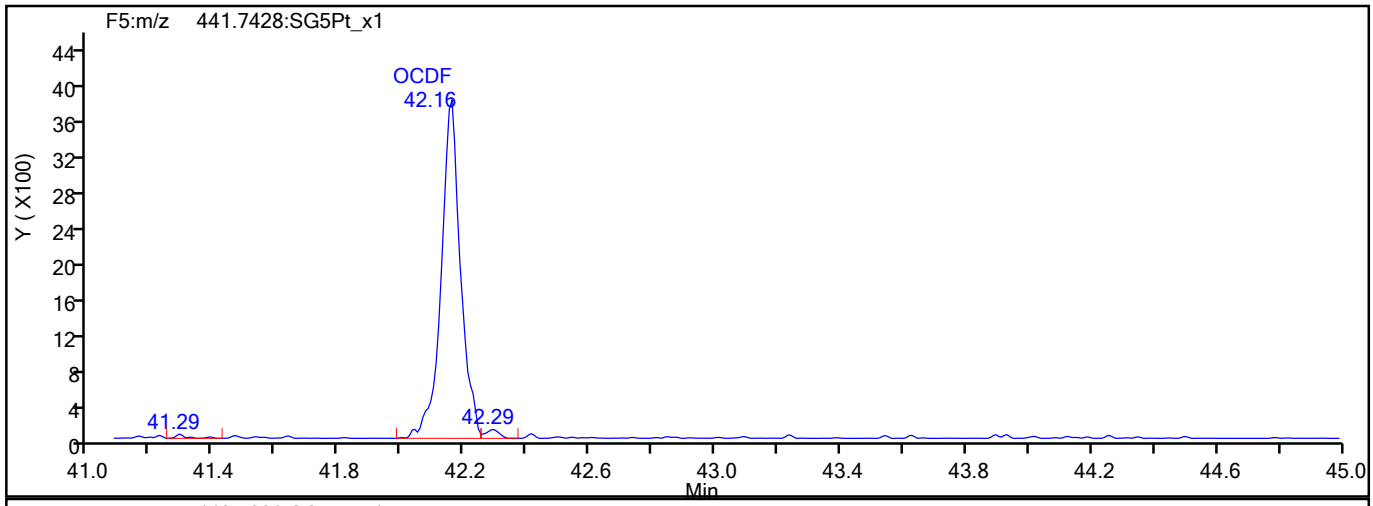

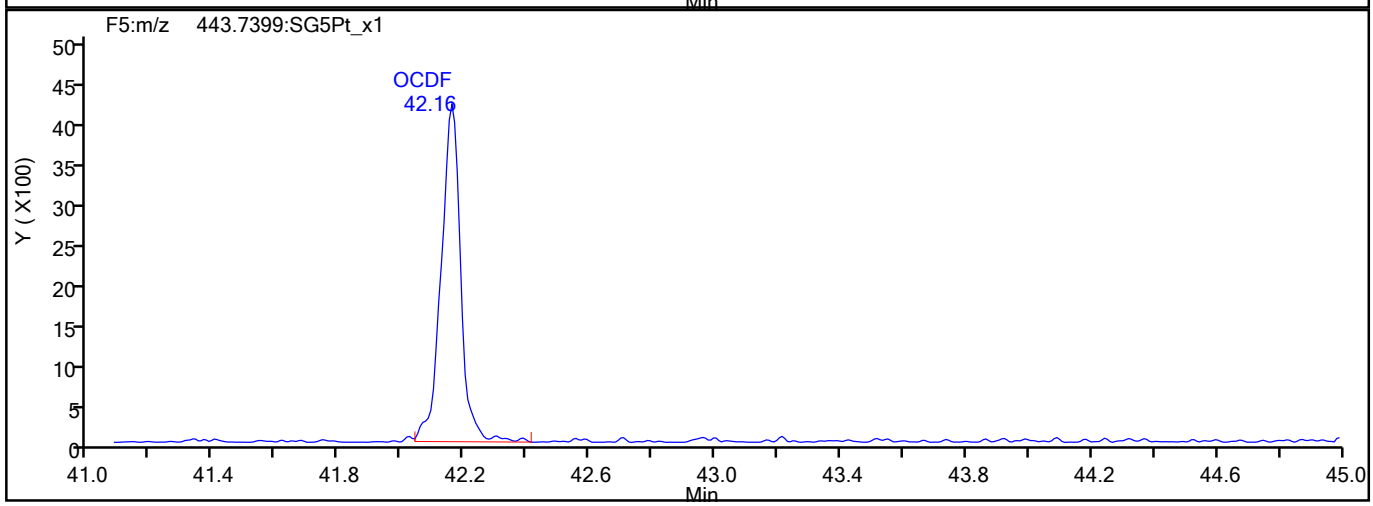

OCDF Interference Mass

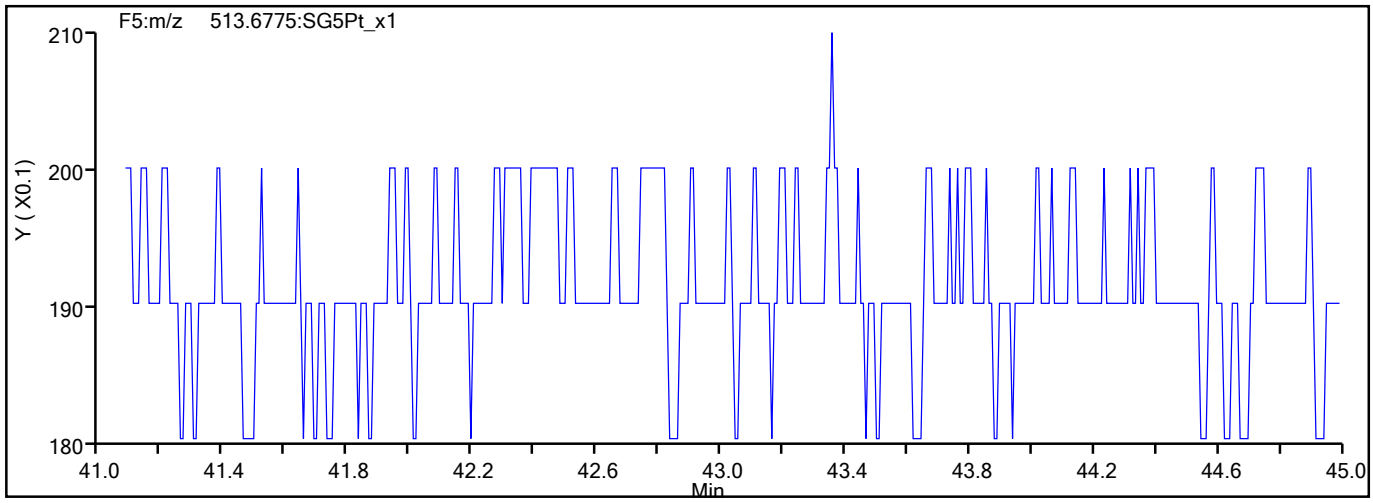

788457

Report Date: 23-Aug-2021 09:13:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

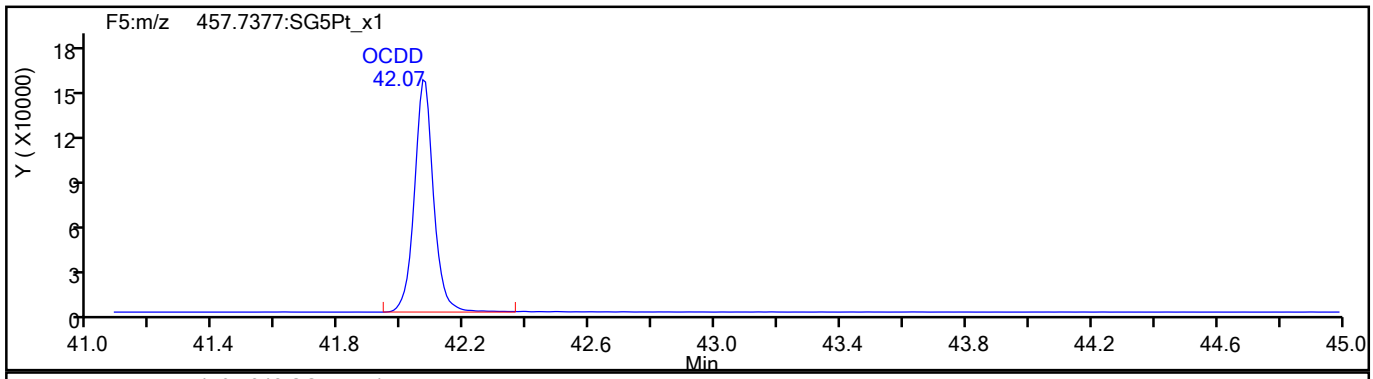

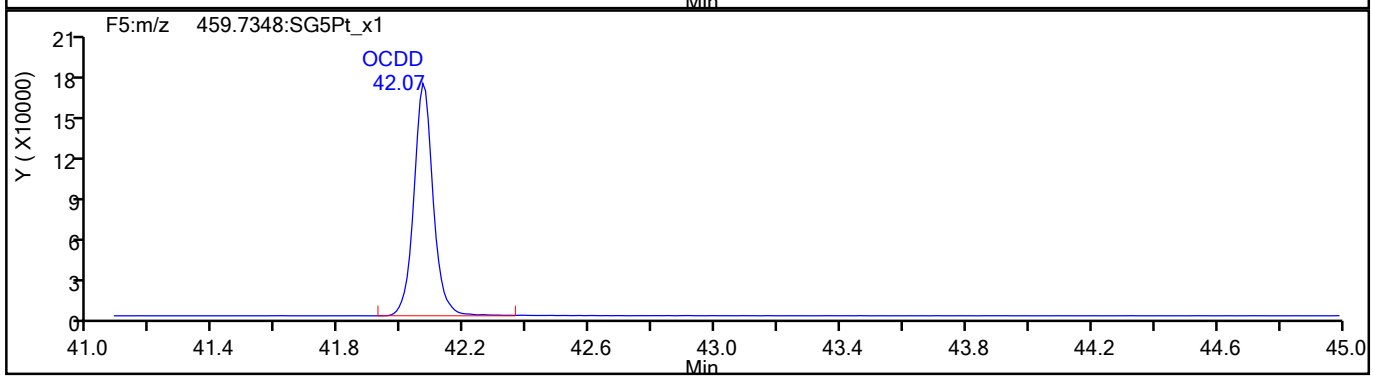

OCDD Standards

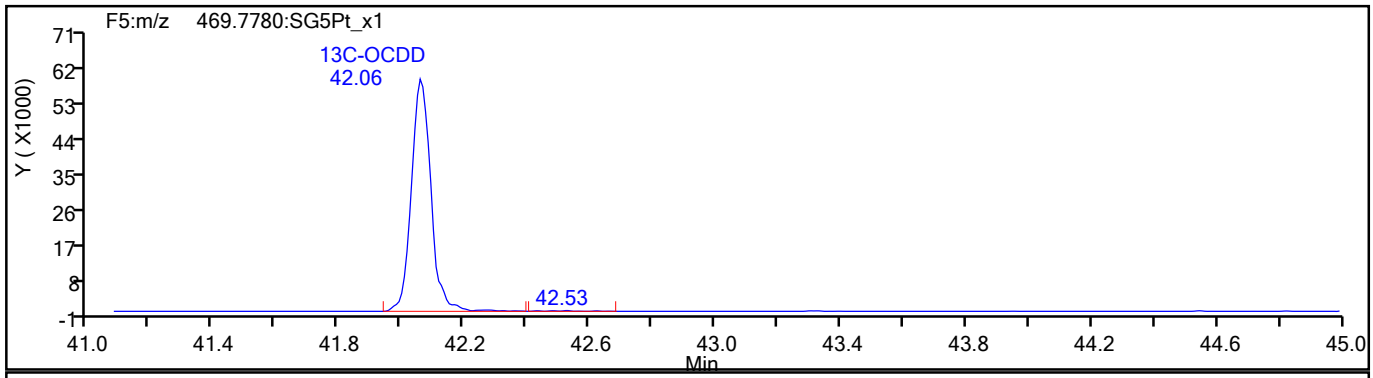

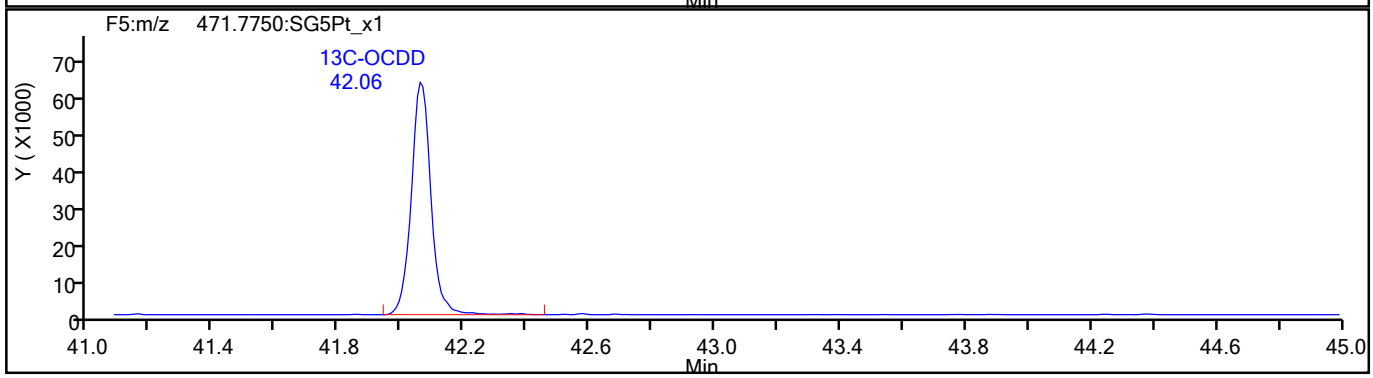

788458

Report Date: 23-Aug-2021 09:13:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

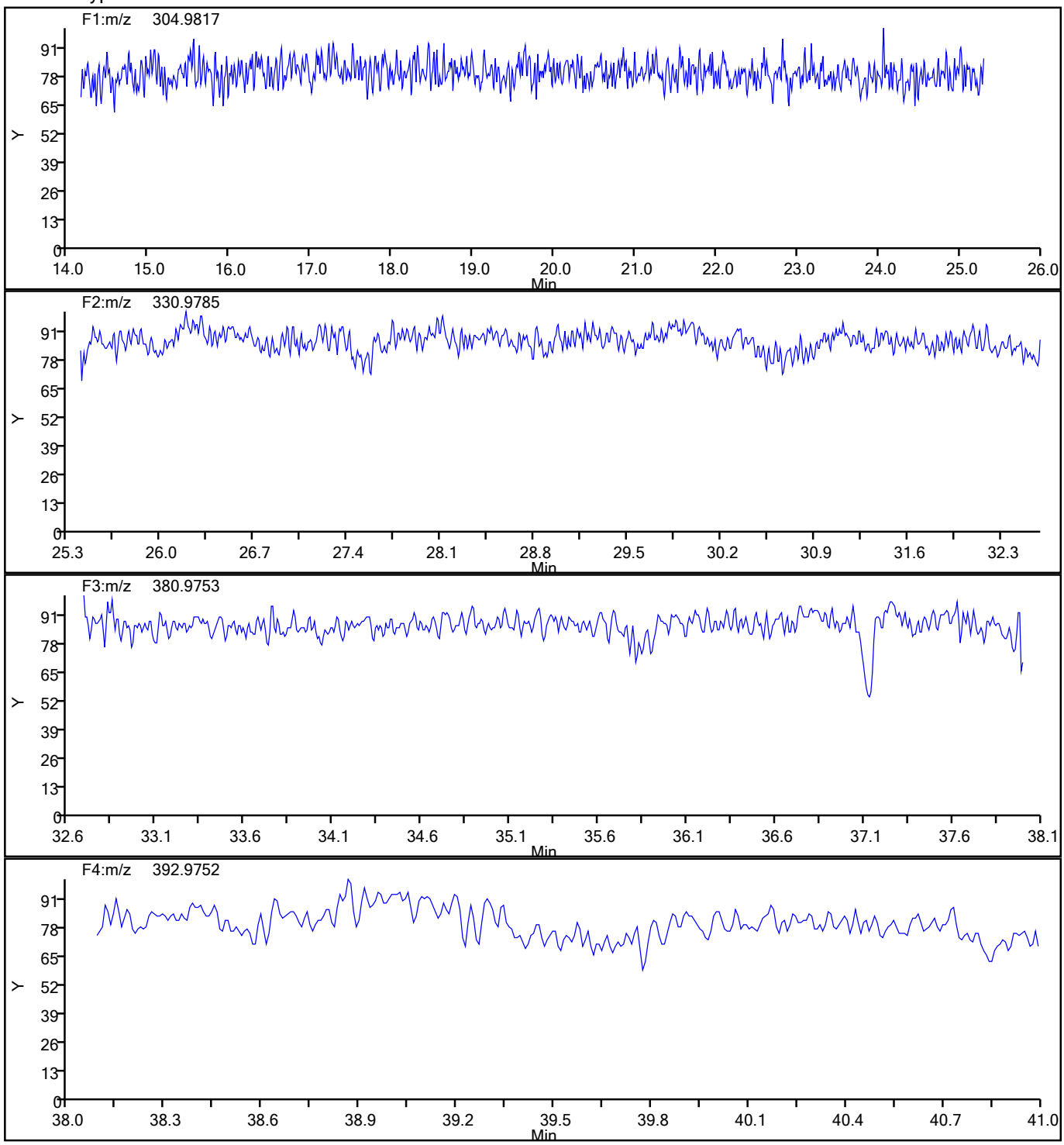

788459

Report Date: 23-Aug-2021 09:13:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_9.d		
Injection Date:	19-Aug-2021 19:39:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	517891	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

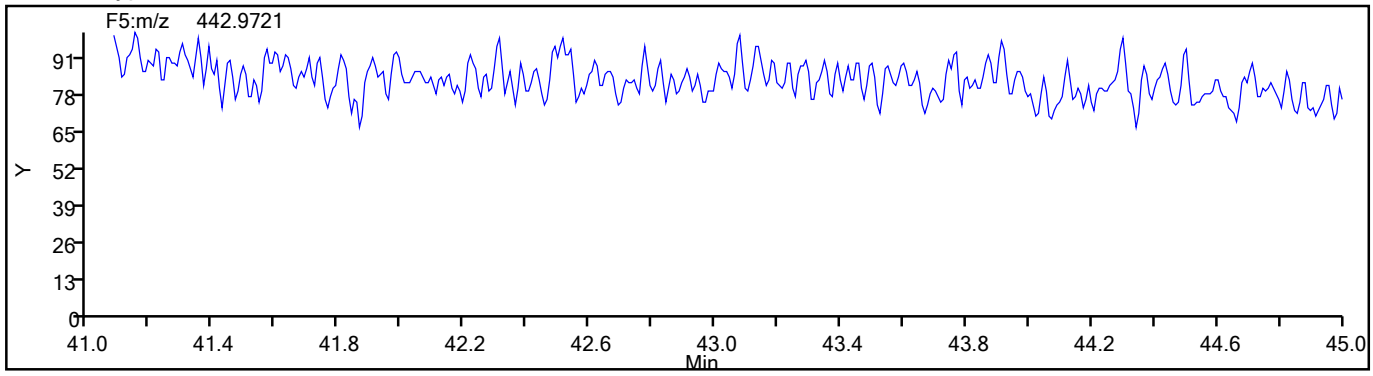

788460

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (8-10) RA
Lab Sample ID: 320-76901-5 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_017.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:20
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.14(g)
Date Analyzed: 08/28/2021 01:52
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	3500	E G	3.3	3.3

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	45		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	53		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_017.d
Lims ID: 320-76901-A-5-A
Client ID: 11215702-072821-BN-SJSB095 (8-10)
Sample Type: Client
Inject. Date: 28-Aug-2021 01:52:06 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-5-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:47:06

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.297	54101360	0.81	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.614	32547335	0.80	1.3327	45.1	45.1	0.7247	0.7247	45.14	
2,3,7,8-TCDF	17.641	436847394	0.79	0.9978	1345.1	1345.1	1.267	1.267		E
D 13C-2,3,7,8-TCDD	16.064	17890438	0.81	0.8749	37.8	37.8	5.242	5.242	37.80	
2,3,7,8-TCDD	16.092	71439020	0.80	1.0570	377.8	377.8	1.525	1.525		E
$ 37Cl4-2,3,7,8-TCDD	16.078	9887715		0.8648	21.1	21.1	0.1497	0.1497	52.83	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_017.d
Lims ID: 320-76901-A-5-A
Client ID: 11215702-072821-BN-SJSB095 (8-10)
Sample Type: Client
Inject. Date: 28-Aug-2021 01:52:06 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-5-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:47:06

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.297	16.300	0		24195481	5503976	83700	209250	66		
333.9339	16.297	16.300	0		29905879	6701250	140192	350480	48	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.614	17.616	0	1.081	14467445	2569645	21890	54725	117		
317.9389	17.614	17.616	0	1.081	18079890	3152925	25264	63160	125	0.80(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.641	17.644	0	1.002	192276603	36168105	13074	32685	2766		
305.8987	17.641	17.644	0	1.002	244570791	45920521	15865	39662	2894	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.066	0	0.986	8026986	1875293	83700	209250	22		
333.9339	16.064	16.066	0	0.986	9863452	2417387	140192	350480	17	0.81(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	16.092	16.080	1	1.002	31710477	7050471	16242	40605	434		
321.8936	16.092	16.080	1	1.002	39728543	8688822	11431	28577	760	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.080	0	0.987	9887715	2249068	6320	15800	356		

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 30-Aug-2021 09:51:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_017.d		
Injection Date:	28-Aug-2021 01:52:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	520456	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

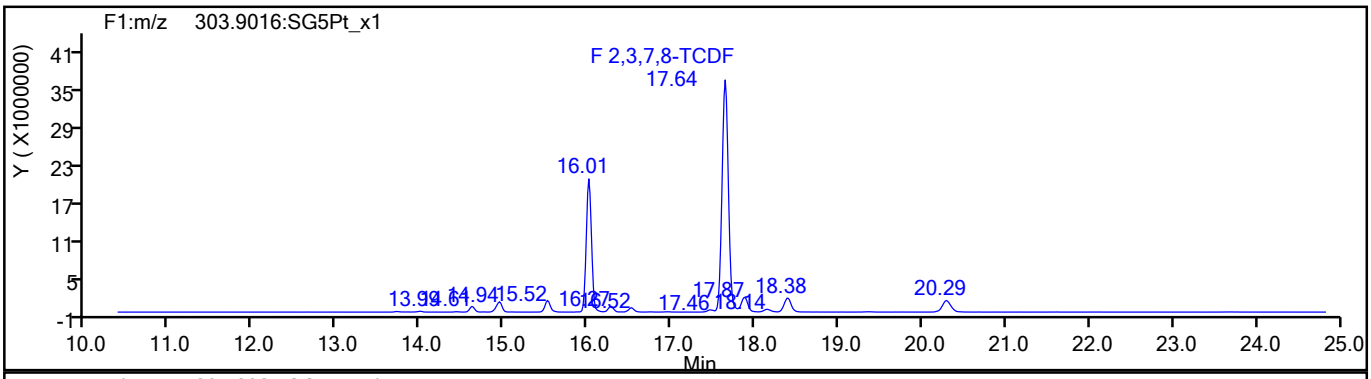

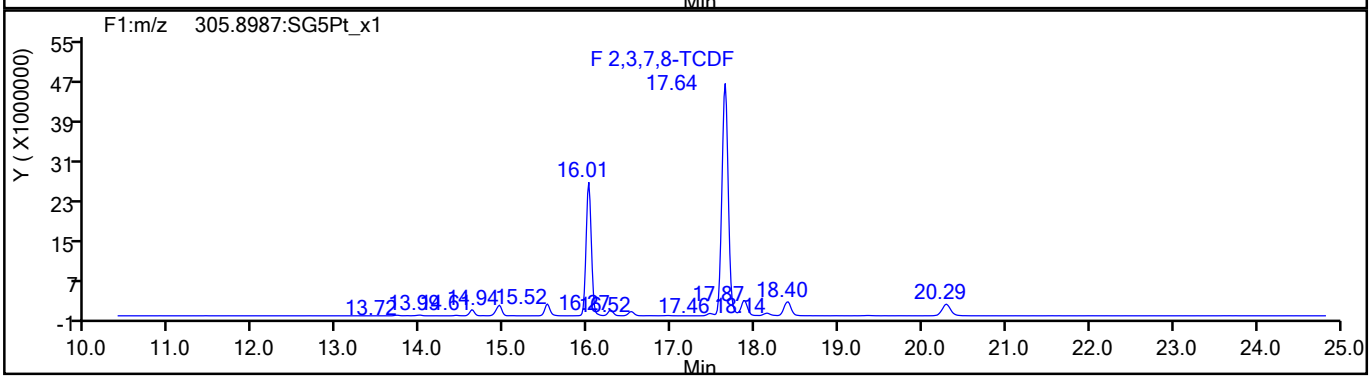

TCDF Standards

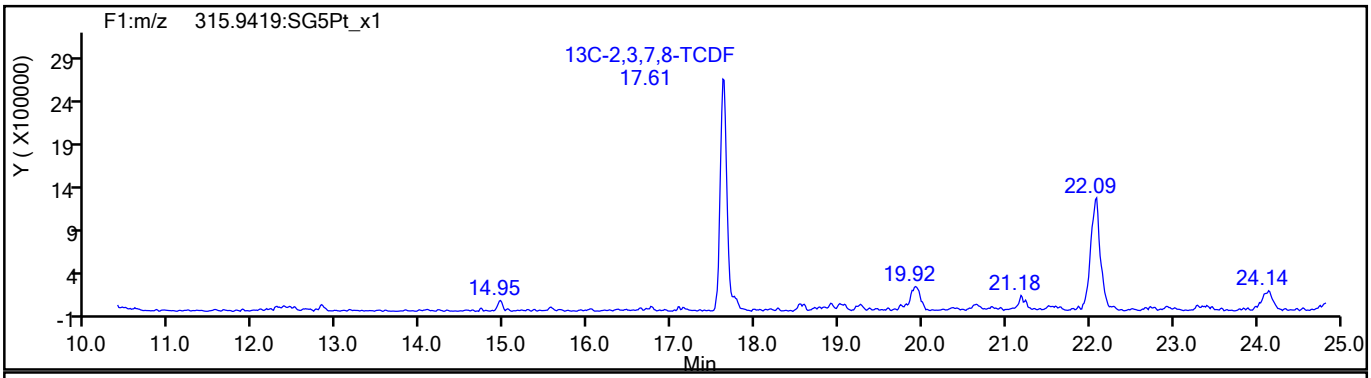

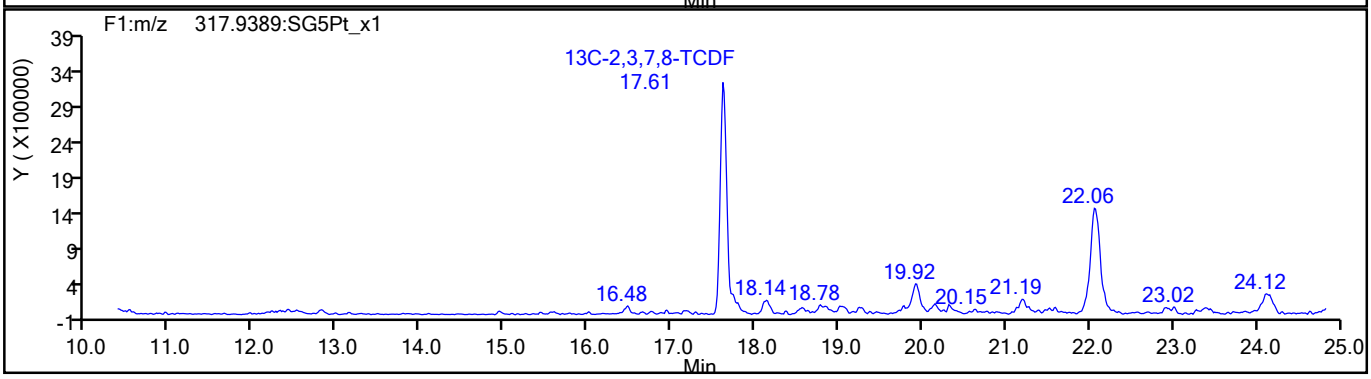

788464

Report Date: 30-Aug-2021 09:51:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_017.d		
Injection Date:	28-Aug-2021 01:52:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	520456	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

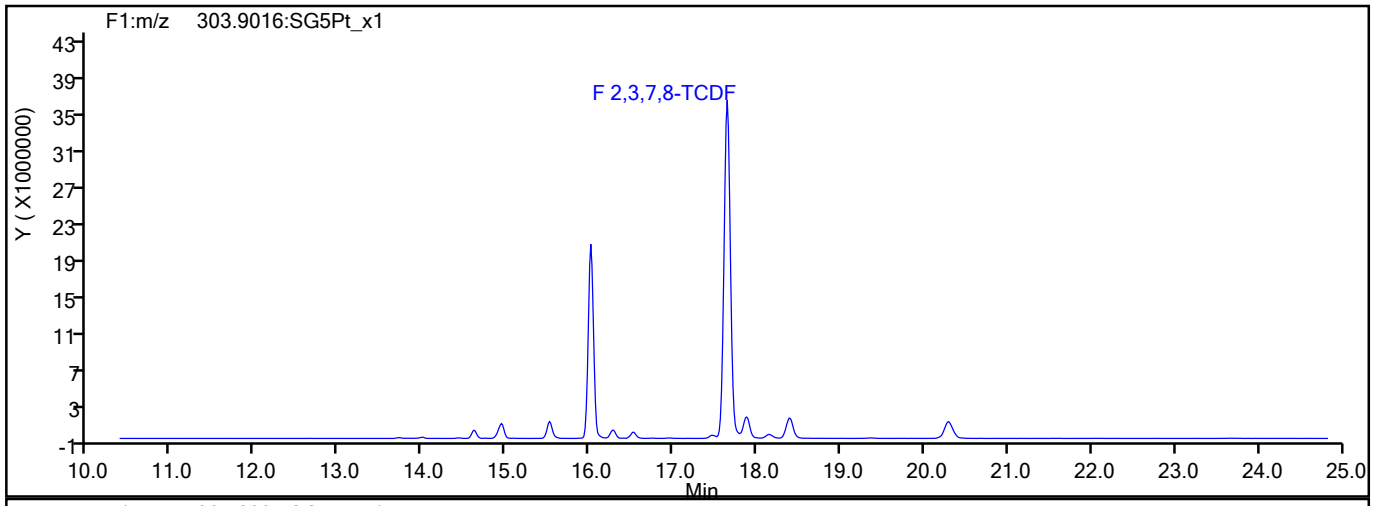

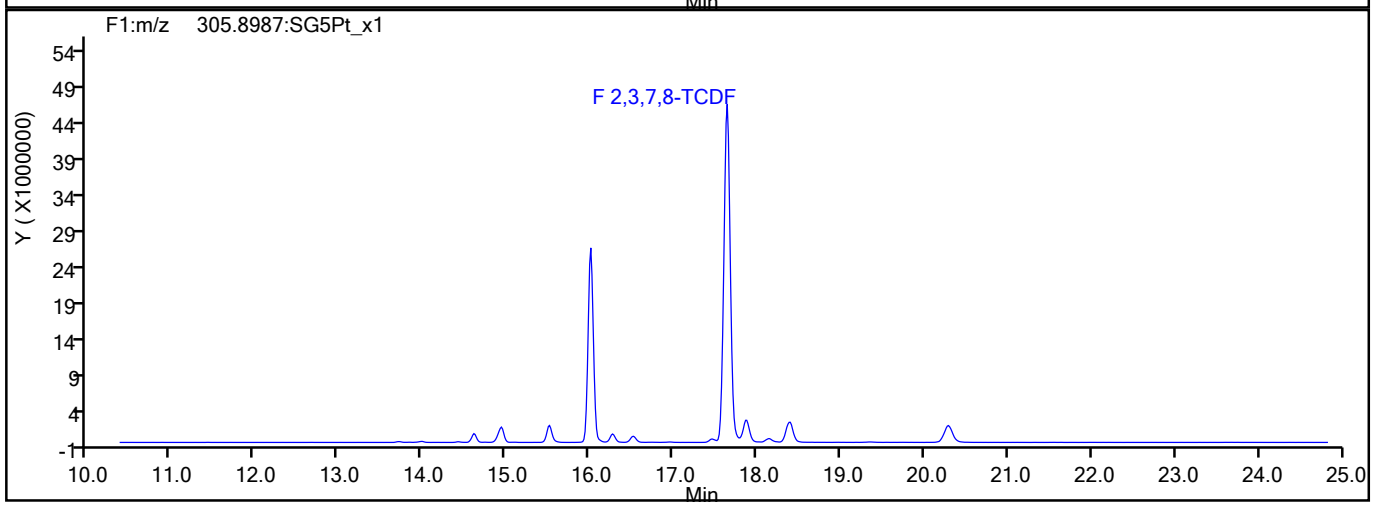

TCDF Interference Mass

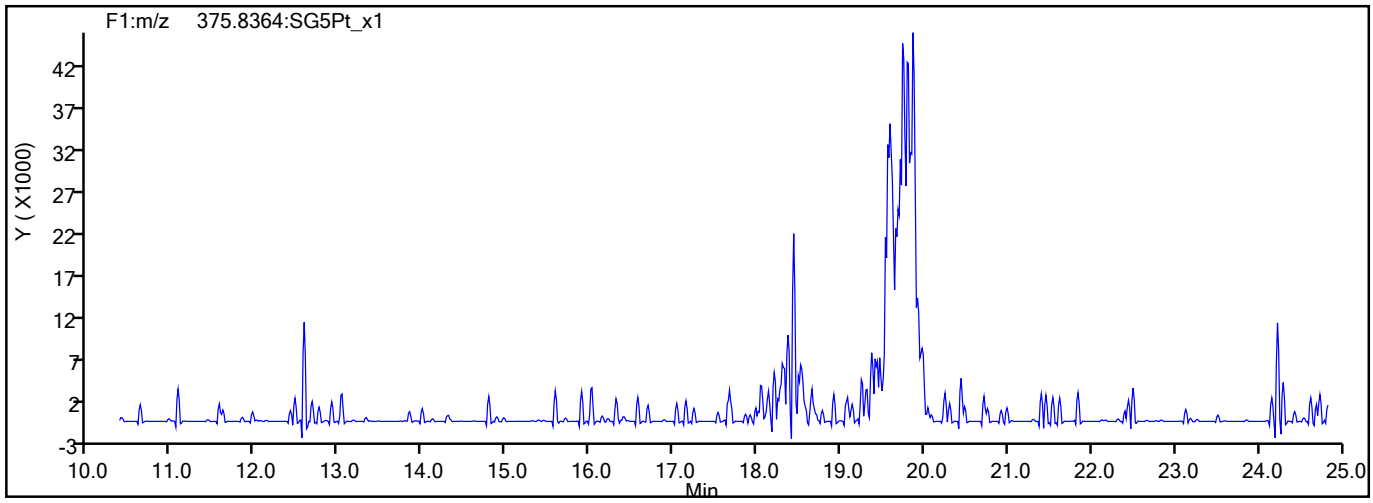

788465

Report Date: 30-Aug-2021 09:51:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_017.d		
Injection Date:	28-Aug-2021 01:52:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	520456	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

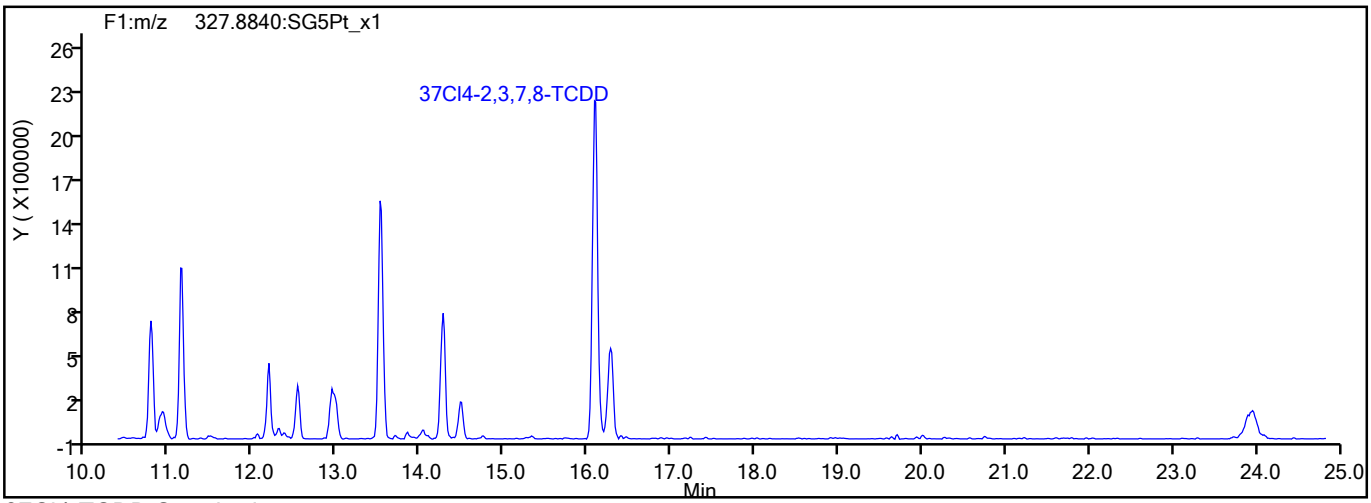

37Cl4-TCDD Standards

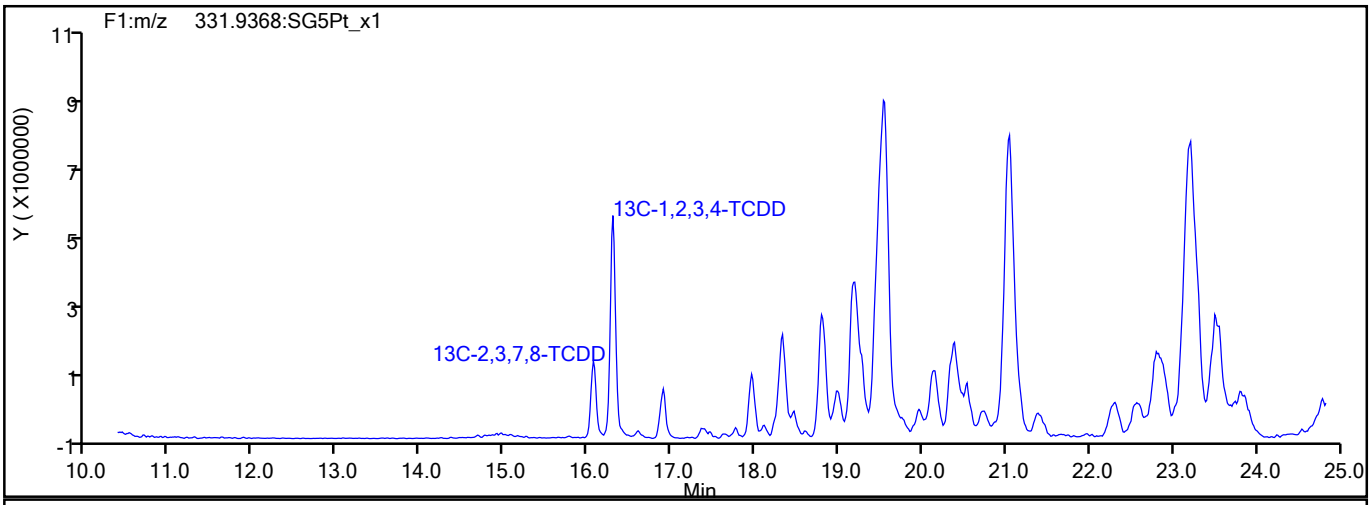

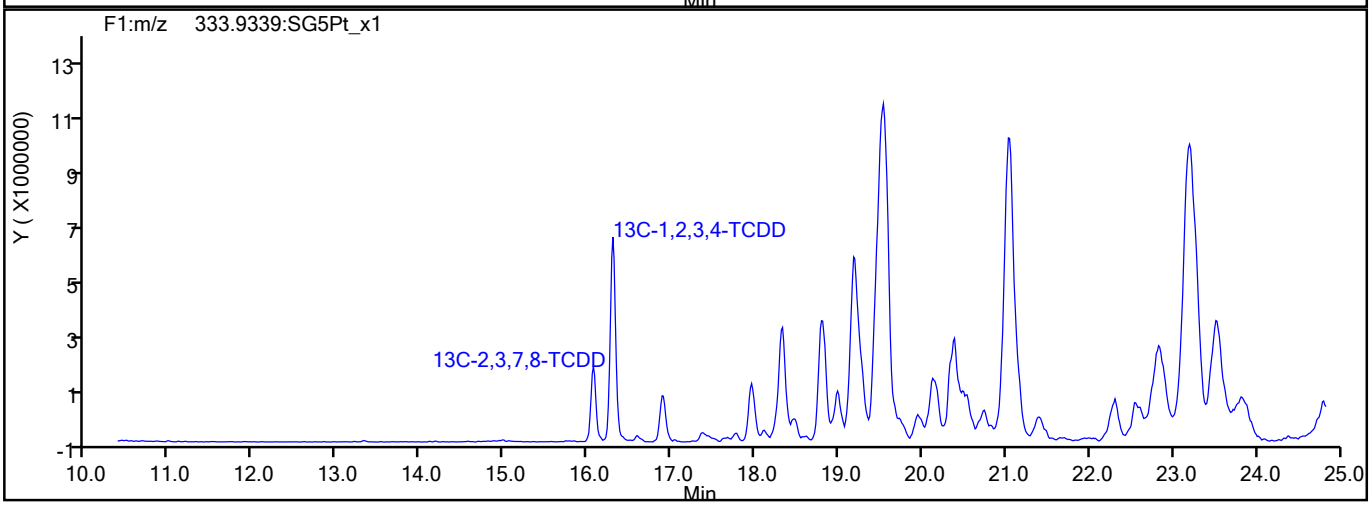

788466

Report Date: 30-Aug-2021 09:51:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_017.d		
Injection Date:	28-Aug-2021 01:52:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (8-10)		
Worklist#:	520456	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

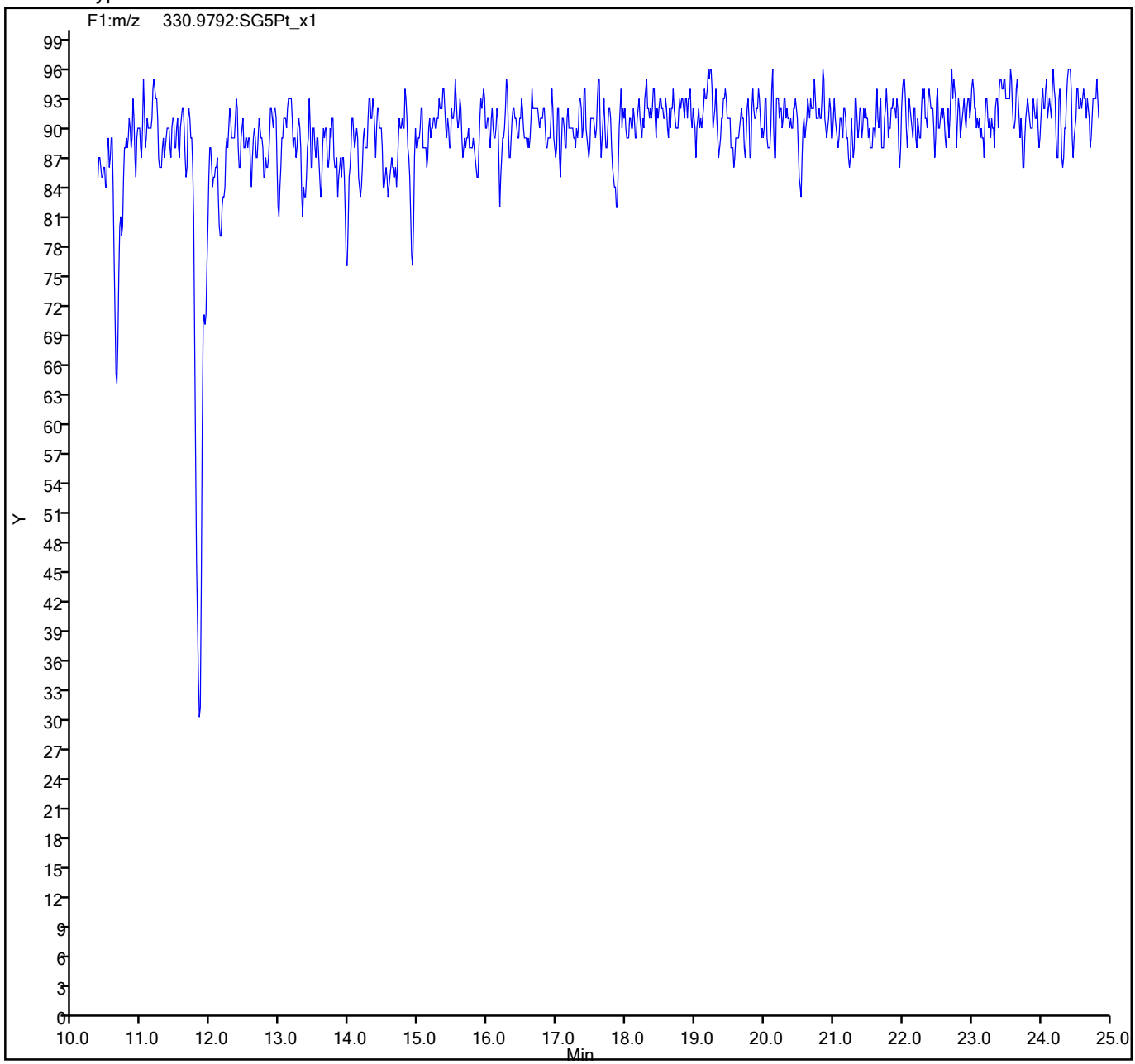

788467

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (10-12)
Lab Sample ID: 320-76901-6
Matrix: Sediment
Lab File ID: 19au21dfs1_10.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.15(g)
Date Analyzed: 08/19/2021 20:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	40		1.3	0.19
40321-76-4	1,2,3,7,8-PeCDD	ND		6.4	0.14
57117-41-6	1,2,3,7,8-PeCDF	2.9	J	6.4	0.14
57117-31-4	2,3,4,7,8-PeCDF	2.1	J	6.4	0.13
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.4	0.097
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.4	0.11
19408-74-3	1,2,3,7,8,9-HxCDD	1.1	J	6.4	0.096
70648-26-9	1,2,3,4,7,8-HxCDF	3.8	J	6.4	0.056
57117-44-9	1,2,3,6,7,8-HxCDF	0.91	J	6.4	0.058
72918-21-9	1,2,3,7,8,9-HxCDF	0.17	J q	6.4	0.056
60851-34-5	2,3,4,6,7,8-HxCDF	0.14	J q	6.4	0.055
35822-46-9	1,2,3,4,6,7,8-HpCDD	11	B	6.4	0.15
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.62	J B	6.4	0.052
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.35	J	6.4	0.047
3268-87-9	OCDD	200	B	13	0.37
39001-02-0	OCDF	ND		13	0.10
41903-57-5	Total TCDD	40		1.3	0.19
30402-14-3	Total TCDF	300	B q	1.3	0.66
36088-22-9	Total PeCDD	ND		6.4	0.42
30402-15-4	Total PeCDF	7.0	q	6.4	0.14
34465-46-8	Total HxCDD	13		6.4	0.10
55684-94-1	Total HxCDF	5.0	J q	6.4	0.056
37871-00-4	Total HpCDD	44	B	6.4	0.15
38998-75-3	Total HpCDF	1.1	J B q	6.4	0.049

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Client Sample ID: 11215702-072821-BN-SJSB095 (10-12) Lab Sample ID: 320-76901-6

Matrix: Sediment Lab File ID: 19au21dfs1_10.d

Analysis Method: 1613B Date Collected: 07/28/2021 11:25

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10.15(g) Date Analyzed: 08/19/2021 20:27

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 23.5 GPC Cleanup:(Y/N) N

Analysis Batch No.: 517891 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	45		25-164
89059-46-1	13C-2,3,7,8-TCDF	49		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	50		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	54		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	58		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	55		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	52		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	62		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	53		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	50		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	51		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	54		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	52		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	61		26-138
114423-97-1	13C-OCDD	52		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	57		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d
Lims ID: 320-76901-A-6-A
Client ID: 11215702-072821-BN-SJSB095 (10-12)
Sample Type: Client
Inject. Date: 19-Aug-2021 20:27:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-6-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:19:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 17:00:15

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.375	967120	0.79	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.403	631304	0.82	1.3459	48.5	48.5	0.1569	0.1569	48.50	
2,3,7,8-TCDF	20.438	449384	0.69	1.0802	65.9	65.9	0.2577	0.2577		
A Non-2,3,7,8-sub-TCDF	19.851	339596	0.77	1.0802	50.9	49.8	0.2577	31.6		RQ
S Total TCDF					116.8	115.7	0.2577	0.2577		RQ
D 13C-2,3,7,8-TCDD	21.754	406069	0.80	0.9317	45.1	45.1	0.1744	0.1744	45.07	
2,3,7,8-TCDD	21.771	67416	0.82	1.0753	15.4	15.4	0.0734	0.0734		
$ 37Cl4-2,3,7,8-TCDD	21.780	221619		1.0083	22.7	22.7	0.0312	0.0312	56.82	
A Non-2,3,7,8-sub-TCDD	20.684						0.0734	0.4177		RQU
S Total TCDD					15.4	15.4	0.0734	0.0734		
D 13C-1,2,3,7,8-PeCDF	27.246	592734	1.61	1.1405	53.7	53.7	0.1720	0.1720	53.74	
1,2,3,7,8-PeCDF	27.271	7007	1.37	1.0543	1.121	1.121	0.0531	0.0531		M
D 13C-2,3,4,7,8-PeCDF	28.761	635523	1.66	1.1253	58.4	58.4	0.1744	0.1744	58.39	
2,3,4,7,8-PeCDF	28.777	5332	1.46	1.0079	0.8325	0.8325	0.0523	0.0523		M
A F1 PeCDFs	24.634						0.007839	0.0126		RQU
A Non-2,3,7,8-sub-PeCDF	28.173	4735	1.55	1.0311	0.8309	0.7478	0.0526	0.4003		RQ
S Total PeCDF					2.785	2.702	0.0527	0.0527		RQ
D 13C-1,2,3,7,8-PeCDD	29.568	345860	1.61	0.7165	49.9	49.9	0.0470	0.0470	49.91	
1,2,3,7,8-PeCDD	29.616						0.0558	0.0558		
A Non-2,3,7,8-sub-PeCDD	28.478						0.0558	0.1641		RQU
S Total PeCDD							0.1641	0.1641		
D 13C-1,2,3,4,7,8-HxCDF	34.918	581535	0.55	0.9648	62.0	62.0	0.1895	0.1895	61.98	
1,2,3,4,7,8-HxCDF	34.951	9794	1.19	1.1474	1.468	1.468	0.0218	0.0218		
D 13C-1,2,3,6,7,8-HxCDF	35.078	549365	0.53	1.0708	52.8	52.8	0.1707	0.1707	52.75	
1,2,3,6,7,8-HxCDF	35.078	2363	1.24	1.2178	0.3532	0.3532	0.0226	0.0226		
D 13C-2,3,4,6,7,8-HxCDF	35.894	513588	0.53	1.0413	50.7	50.7	0.1756	0.1756	50.72	
2,3,4,6,7,8-HxCDF	35.920	341	1.24	1.2145	0.0600	0.0547	0.0213	0.0213		RQM
D 13C-1,2,3,7,8,9-HxCDF	36.787	468480	0.56	0.9731	49.5	49.5	0.1879	0.1879	49.50	
1,2,3,7,8,9-HxCDF	36.812	386	1.24	1.2401	0.0735	0.0664	0.0217	0.0217		RQM
A Non-2,3,7,8-sub-HxCDF	35.009						0.0218	0.0701		RQMU
S Total HxCDF					1.954	1.942	0.0219	0.0219		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.593	972520	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.113	407515	1.29	0.7587	55.2	55.2	0.1556	0.1556	55.23	
1,2,3,4,7,8-HxCDD	36.231						0.0378	0.0378		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.223	436974	1.28	0.8593	52.3	52.3	0.1374	0.1374	52.29	
1,2,3,6,7,8-HxCDD	36.231						0.0428	0.0428		RQU
1,2,3,7,8,9-HxCDD	36.568	1980	1.39	1.1094	0.4227	0.4227	0.0372	0.0372		M
A Non-2,3,7,8-sub-HxCDD	35.375	20225	1.26	1.0545	4.542	4.542	0.0392	3.433		
S Total HxCDD					4.965	4.965	0.0393	0.0393		
D 13C-1,2,3,4,6,7,8-HpCDF	38.615	372271	0.47	0.7359	52.0	52.0	0.1950	0.1950	52.01	
1,2,3,4,6,7,8-HpCDF	38.624	1288	0.89	1.4421	0.2399	0.2399	0.0200	0.0200		M
D 13C-1,2,3,4,7,8,9-HpCDF	39.870	405206	0.47	0.6854	60.8	60.8	0.2093	0.2093	60.79	
1,2,3,4,7,8,9-HpCDF	39.879	714	1.03	1.3092	0.1346	0.1346	0.0184	0.0184		M
A Non-2,3,7,8-sub-HpCDF	39.245	324	1.04	1.3756	0.1045	0.0606	0.0191	0.0606		RQM
S Total HpCDF					0.4791	0.4351	0.0192	0.0192		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	39.559	354833	1.08	0.6745	54.1	54.1	0.0961	0.0961	54.09	
1,2,3,4,6,7,8-HpCDD	39.576	16376	1.16	1.0503	4.394	4.394	0.0592	0.0592		
A Non-2,3,7,8-sub-HpCDD	39.241	46936	1.04	1.0503	12.6	12.6	0.0592	12.6		
S Total HpCDD					17.0	17.0	0.0592	0.0592		
D 13C-OCDD	42.062	547756	0.90	0.5446	103.4	103.4	0.1062	0.1062	51.71	
OCDF	42.147						0.0407	0.0407		U
OCDD	42.071	229097	0.91	1.0620	78.8	78.8	0.1452	0.1452		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d
Lims ID: 320-76901-A-6-A
Client ID: 11215702-072821-BN-SJSB095 (10-12)
Sample Type: Client
Inject. Date: 19-Aug-2021 20:27:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-6-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:19:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 17:00:15

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.375	21.395	-1		426537	60854	48	120	1268		
333.9338	21.384	21.395	-1		540583	72669	39	97	1863	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.403	20.365	2	0.955	284345	40738	82	205	497		
317.9389	20.412	20.365	3	0.955	346959	46211	31	77	1491	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.438	20.408	2	1.002	182955	23141	34	85	681		
305.8987	20.438	20.408	2	1.002	266429	33635	63	157	534	0.69(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	17.942	19.851	-114	0.879	3145	518	34	85	15		
305.8987	17.925	19.851	-115	0.879	6070	982	63	157	16	0.52(0.65-0.89)	
	Empc Correction				4084	672	63	157	11		
303.9016	18.389	19.851	-88	0.901	6360	897	34	85	26		
305.8987	18.398	19.851	-87	0.902	7481	1132	63	157	18	0.85(0.65-0.89)	
303.9016	18.819	19.851	-62	0.922	5692	950	34	85	28		
305.8987	18.845	19.851	-60	0.924	6978	953	63	157	15	0.82(0.65-0.89)	
303.9016	19.189	19.851	-40	0.941	8350	1102	34	85	32		
305.8987	19.207	19.851	-39	0.941	12998	1937	63	157	31	0.64(0.65-0.89)	
	Empc Correction				10844	1431	63	157	23		
303.9016	19.714	19.851	-8	0.966	87838	13271	34	85	390		
305.8987	19.723	19.851	-8	0.967	127464	17927	63	157	285	0.69(0.65-0.89)	
303.9016	20.128	19.851	17	0.986	2983	468	34	85	14		
305.8987	20.128	19.851	17	0.986	3856	577	63	157	9	0.77(0.65-0.89)	
303.9016	21.203	19.851	81	1.039	12549	1647	34	85	48		
305.8987	21.238	19.851	83	1.041	17559	2183	63	157	35	0.71(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	21.651	19.851	108	1.061	2579	557	34	85	16		
305.8987	21.651	19.851	108	1.061	3494	575	63	157	9	0.74(0.65-0.89)	
303.9016	23.622	19.851	226	1.158	12329	2012	34	85	59		
305.8987	23.604	19.851	225	1.157	19670	3352	63	157	53	0.63(0.65-0.89)	
	Empc Correction				16011	2612	63	157	41		
13C-2,3,7,8-TCDD											
331.9368	21.754	21.716	2	1.018	181010	24227	48	120	505		
333.9338	21.754	21.716	2	1.018	225059	28985	39	97	743	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.771	21.733	2	1.001	30371	4150	14	35	296		
321.8936	21.780	21.733	3	1.001	37045	4959	3	7	1653	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.780	21.799	-1	1.019	221619	27471	17	42	1616		
A Non-2,3,7,8-sub-TCDD											U
319.8965	19.663	20.684	-61	0.904	549	204	14	35	15		
	Empc Correction				381	103	14	35	7		
321.8936	19.671	20.684	-61	0.904	496	134	3	7	45	1.11(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.246	27.251	0	1.275	365949	51972	73	182	712		
353.8970	27.246	27.251	0	1.275	226785	32050	32	80	1002	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	27.271	27.276	0	1.001	4048	670	4	10	168		
341.8567	27.254	27.276	-1	1.000	2959	539	15	37	36	1.37(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	28.761	28.757	0	1.346	396811	56211	73	182	770		
353.8970	28.769	28.757	1	1.346	238712	32979	32	80	1031	1.66(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	28.777	28.791	-1	1.001	3161	486	4	10	122		
341.8567	28.777	28.791	-1	1.001	2171	344	15	37	23	1.46(1.32-1.78)	M
A F1 PeCDFs											U
339.8597	24.353	24.634	-17	0.894	49	17	1	2	17		
341.8567	24.335	24.634	-18	0.893	121	40	2	5	20	0.40(1.32-1.78)	
	Empc Correction				31	10	2	5	5		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.798	28.173	-142	0.947	1541	291	4	10	73		
341.8567	25.815	28.173	-141	0.947	1253	192	15	37	13	1.23(1.32-1.78)	
	Empc Correction				994	187	15	37	12		
339.8597	27.860	28.173	-19	1.023	1604	279	4	10	70		
	Empc Correction				1337	330	4	10	83		
341.8567	27.843	28.173	-20	1.022	863	213	15	37	14	1.86(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.568	29.574	0	1.383	213308	28461	15	37	1897		
369.8919	29.560	29.574	-1	1.383	132552	17785	3	7	5928	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616						9	22			
357.8516	29.616						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.858	28.478	-97	0.908	1408	313	9	22	35		
	Empc Correction				361	130	9	22	14		
357.8516	26.833	28.478	-99	0.907	233	84	2	5	42	6.04(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.918	34.906	1	0.954	205998	37865	55	137	688		
385.8610	34.909	34.906	0	0.954	375537	69877	103	257	678	0.55(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.951	34.922	2	1.001	5329	943	7	17	135		
375.8178	34.935	34.922	1	1.000	4465	799	4	10	200	1.19(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.078	35.066	1	0.959	189509	35066	55	137	638		
385.8610	35.078	35.066	1	0.959	359856	62938	103	257	611	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.078	35.082	0	1.000	1309	294	7	17	42		
375.8178	35.078	35.082	0	1.000	1054	276	4	10	69	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.894	35.890	0	0.981	176850	36870	55	137	670		
385.8610	35.894	35.890	0	0.981	336738	67343	103	257	654	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQM
373.8208	35.920	35.907	1	1.001	189	53	7	17	8		M
375.8178	35.928	35.907	1	1.001	185	58	4	10	15	1.02(1.05-1.43)	
	Empc Correction				152	42	4	10	11		
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.787	36.782	0	1.005	167341	35245	55	137	641		
385.8610	36.795	36.782	1	1.006	301139	65236	103	257	633	0.56(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	36.812	36.791	1	1.001	214	125	7	17	18		M
375.8178	36.837	36.791	3	1.001	213	68	4	10	17	1.00(1.05-1.43)	M
	Empc Correction				172	100	4	10	25		
A Non-2,3,7,8-sub-HxCDF											MU
373.8208	33.427	35.009	-95	0.957	355	94	7	17	13		
	Empc Correction				223	91	7	17	13		
375.8178	33.453	35.009	-93	0.958	180	74	4	10	19	1.97(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.593	36.581	1		542655	119348	65	162	1836		
403.8529	36.593	36.581	1		429865	96705	37	92	2614	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.113	36.092	1	0.987	229487	50797	65	162	781		
403.8529	36.113	36.092	1	0.987	178028	41451	37	92	1120	1.29(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.109						9	22			
391.8127	36.109						6	15			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.223	36.210	1	0.990	245450	48242	65	162	742		
403.8529	36.223	36.210	1	0.990	191524	38702	37	92	1046	1.28(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											RQU
389.8158	36.227						9	22			
391.8127	36.227						6	15			
1,2,3,7,8,9-HxCDD											M
389.8158	36.568	36.597	-2	1.013	1150	206	9	22	23		
391.8127	36.585	36.597	-1	1.013	830	180	6	15	30	1.39(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.210	35.375	-70	0.944	8510	1432	9	22	159		
391.8127	34.227	35.375	-69	0.945	6775	1062	6	15	177	1.26(1.05-1.43)	
389.8158	35.347	35.375	-2	0.976	2750	531	9	22	59		
391.8127	35.339	35.375	-2	0.976	2190	424	6	15	71	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.615	38.596	1	1.055	118749	29787	53	132	562		
419.8220	38.615	38.596	1	1.055	253522	63769	71	177	898	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7817	38.624	38.618	0	1.000	606	206	9	22	23		M
409.7788	38.641	38.618	1	1.001	682	200	2	5	100	0.89(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.870	39.850	1	1.090	130039	37469	53	132	707		
419.8220	39.870	39.850	1	1.090	275167	74893	71	177	1055	0.47(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											M
407.7817	39.879	39.872	0	1.000	363	96	9	22	11		M
409.7788	39.904	39.872	2	1.001	351	96	2	5	48	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											RQM
407.7817	38.995	39.245	-15	1.010	400	137	9	22	15		M
	Empc Correction				165	34	9	22	4		
409.7788	38.995	39.245	-15	1.010	159	33	2	5	17	2.52(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.559	39.547	1	1.081	184472	45675	28	70	1631		
437.8140	39.559	39.547	1	1.081	170361	42786	28	70	1528	1.08(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.576	39.561	1	1.000	8806	2456	12	30	205		
425.7737	39.576	39.561	1	1.000	7570	2136	10	25	214	1.16(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.927	39.241	-19	0.984	23926	6406	12	30	534		
425.7737	38.927	39.241	-19	0.984	23010	5998	10	25	600	1.04(0.88-1.20)	
13C-OCDD											
469.7780	42.062	42.036	2	1.149	260144	58089	30	75	1936		
471.7750	42.062	42.036	2	1.149	287612	61218	20	50	3061	0.90(0.76-1.02)	
OCDF											U
441.7428	42.137						2	5			
443.7399	42.137						11	27			
OCDD											
457.7377	42.071	42.053	1	1.000	109042	24664	20	50	1233		
459.7348	42.071	42.053	1	1.000	120055	27141	17	42	1597	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

Report Date: 23-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Lims ID:	320-76901-A-6-A		
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Inject. Date:	19-Aug-2021 20:27:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	9

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	631304	86949

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	631304	86949

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.942	3145	518	6070	982	1.35	0.52	RQ
17.942	3145	518	4084	672	1.06		Empc Correction
18.389	6360	897	7481	1132	2.03	0.85	
18.819	5692	950	6978	953	1.86	0.82	
19.189	8350	1102	12998	1937	3.13	0.64	RQ
19.189	8350	1102	10844	1431	2.81		Empc Correction
19.714	87838	13271	127464	17927	31.6	0.69	
20.128	2983	468	3856	577	1.00	0.77	
21.203	12549	1647	17559	2183	4.42	0.71	
21.651	2579	557	3494	575	0.8906	0.74	
23.622	12329	2012	19670	3352	4.69	0.63	RQ
23.622	12329	2012	16011	2612	4.16		Empc Correction
Signal Totals:							
	141825	21422	197771	28062			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	347395	51040				0.69	RQ
	339596	49484					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 50.943 = (347395 * 100.000) / (631304 * 1.080)

Empc Amount: 49.799 = (339596 * 100.000) / (631304 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 23-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Lims ID:	320-76901-A-6-A		
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Inject. Date:	19-Aug-2021 20:27:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	9

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	406069	53212

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	406069	53212

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.663	549	204	496	134	0.2393	1.11	RQ
19.663	381	103	496	134	0.2008		Empc Correction
21.582	799	188	1025	190	0.4177	0.78	
22.426	519	236	2945	607	0.7933	0.18	RQ
22.426	519	236	674	306	0.2732		Empc Correction
22.486	1214	374	618	159	0.4195	1.96	RQ
22.486	475	122	618	159	0.2503		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Lims ID:	320-76901-A-6-A		
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Inject. Date:	19-Aug-2021 20:27:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	9

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	592734	84022
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	635523	89190

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	614128	86606

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.353	49	17	121	40	0.0268	0.40	RQ
24.353	49	17	31	10	0.0126		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Lims ID:	320-76901-A-6-A		
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Inject. Date:	19-Aug-2021 20:27:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	9

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	592734	84022
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	635523	89190

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	614128	86606

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.798	1541	291	1253	192	0.4412	1.23	RQ
25.798	1541	291	994	187	0.4003		Empc Correction
27.860	1604	279	863	213	0.3896	1.86	RQ
27.860	1337	330	863	213	0.3474		Empc Correction
Signal Totals:							
	2878	621	1857	400			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5261	975				1.49	RQ
	4735	1021					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.8309 = (5261 * 100.000) / (614128 * 1.031)

Empc Amount: 0.7478 = (4735 * 100.000) / (614128 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 23-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Lims ID:	320-76901-A-6-A		
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Inject. Date:	19-Aug-2021 20:27:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	9

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	345860	46246

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	345860	46246

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.858	1408	313	233	84	0.4534	6.04	RQ
26.858	361	130	233	84	0.1641		Empc Correction
28.533	297	124	574	96	0.2406	0.52	RQ
28.533	297	124	191	80	0.1348		Empc Correction
29.610	509	142	22	0	0.1467	23.14	RnQ
29.610	34	0	22	0	0.0155		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Lims ID:	320-76901-A-6-A		
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Inject. Date:	19-Aug-2021 20:27:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	9

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	581535	107742
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	549365	98004
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	513588	104213
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	468480	100481

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	528242	102610

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.427	355	94	180	74	0.0841	1.97	RQ
33.427	223	91	180	74	0.0633		Empc Correction
34.337	173	48	214	76	0.0608	0.81	RQ
34.337	173	48	139	38	0.0490		Empc Correction
36.896	247	75	347	85	0.0933	0.71	RQ
36.896	247	75	199	60	0.0701		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Lims ID:	320-76901-A-6-A		
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Inject. Date:	19-Aug-2021 20:27:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	9

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	407515	92248
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	436974	86944
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	422244	89596

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.210	8510	1432	6775	1062	3.43	1.26	
35.347	2750	531	2190	424	1.11	1.26	
Signal Totals:							
	11260	1963	8965	1486			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	20225	3449				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.542 = (20225 * 100.000) / (422244 * 1.055)

Report Date: 23-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Lims ID:	320-76901-A-6-A		
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Inject. Date:	19-Aug-2021 20:27:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	9

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	372271	93556
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	405206	112362

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	388738	102959

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.995	400	137	159	33	0.1045	2.52	RQM
38.995	165	34	159	33	0.0606		Empc Correction
Signal Totals:							
	165	34	159	33			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	559	170				2.52	RQM
	324	67					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1045 = (559 * 100.000) / (388738 * 1.376)
Empc Amount: 0.0606 = (324 * 100.000) / (388738 * 1.376)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 23-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Lims ID:	320-76901-A-6-A		
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Inject. Date:	19-Aug-2021 20:27:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	9

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	354833	88461

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	354833	88461

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.927	23926	6406	23010	5998	12.6	1.04	
Signal Totals:							
	23926	6406	23010	5998			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	46936	12404				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 12.594 = (46936 * 100.000) / (354833 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d				
Injection Date:	19-Aug-2021 20:27:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-6-A	Lab Sample ID:	320-76901-6		
Client ID:	11215702-072821-BN-SJSB095 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 27.25
Area: 3157
Amount: 1.152989
Amount Units: pg/ul

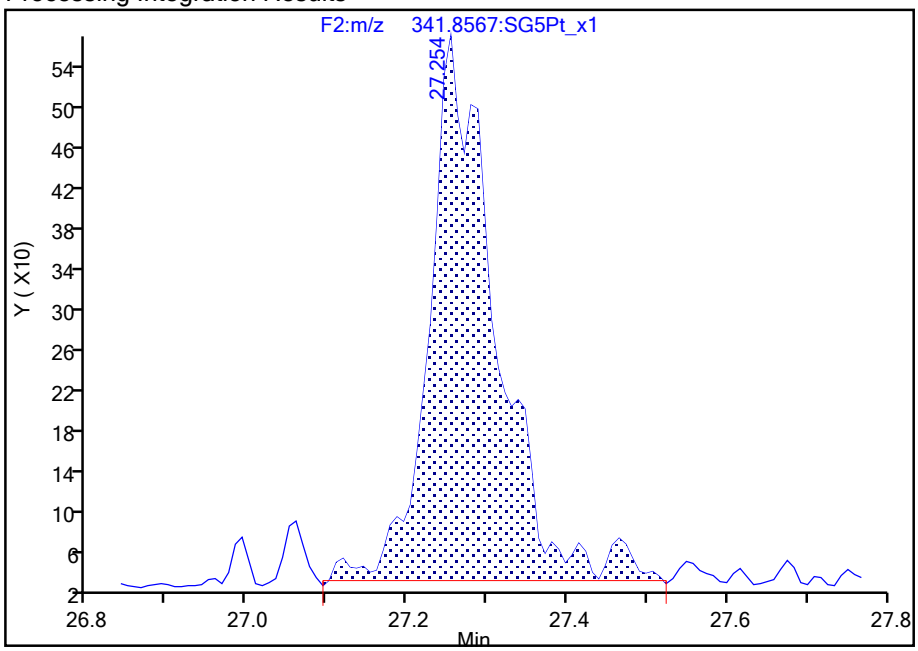

Manual Integration Results

RT: 27.25
Area: 2959
Amount: 1.121304
Amount Units: pg/ul

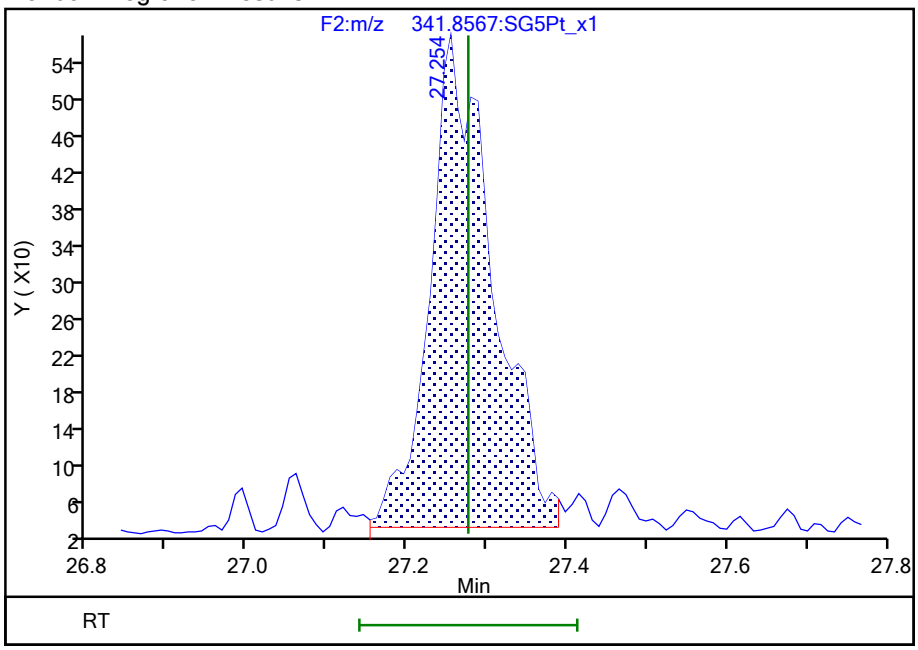

Reviewer: dadunj, 23-Aug-2021 09:15:51

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d				
Injection Date:	19-Aug-2021 20:27:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-6-A	Lab Sample ID:	320-76901-6		
Client ID:	11215702-072821-BN-SJSB095 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 28.78
Area: 2301
Amount: 0.852747
Amount Units: pg/ul

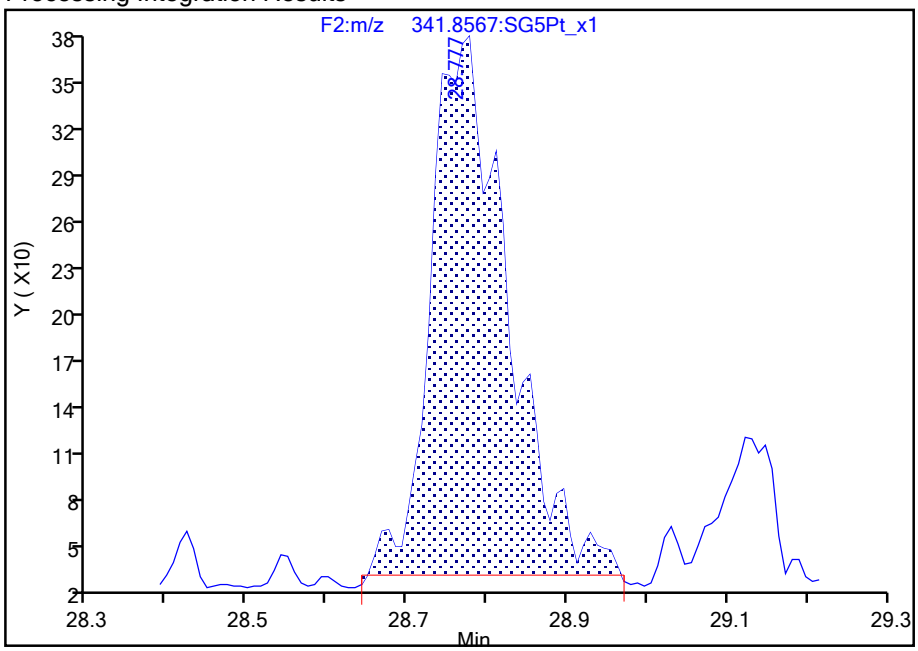

Manual Integration Results

RT: 28.78
Area: 2171
Amount: 0.832451
Amount Units: pg/ul

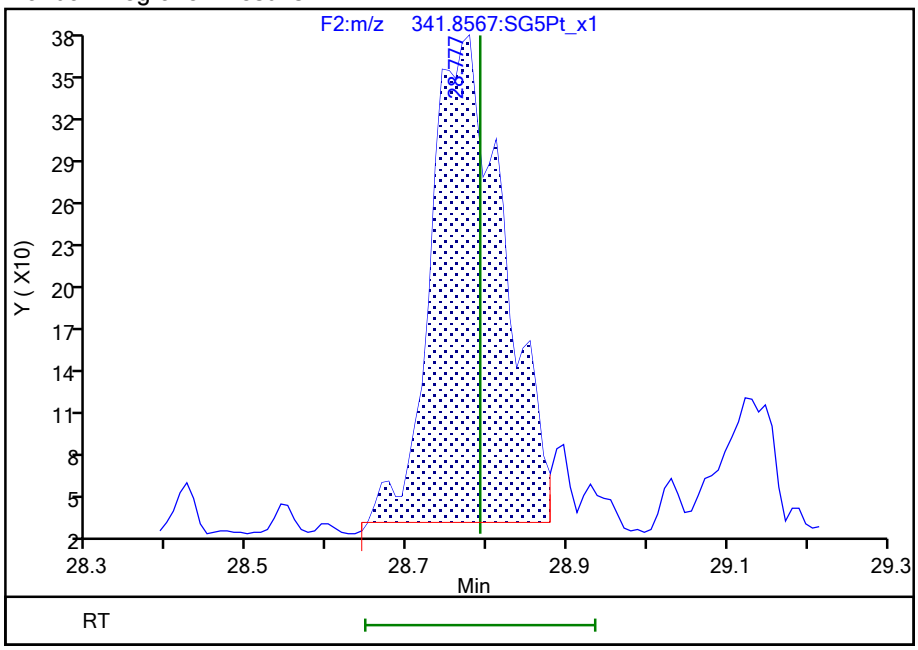

Reviewer: dadunj, 23-Aug-2021 09:15:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d				
Injection Date:	19-Aug-2021 20:27:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-6-A	Lab Sample ID:	320-76901-6		
Client ID:	11215702-072821-BN-SJSB095 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 35.92
Area: 309
Amount: 0.079200
Amount Units: pg/ul

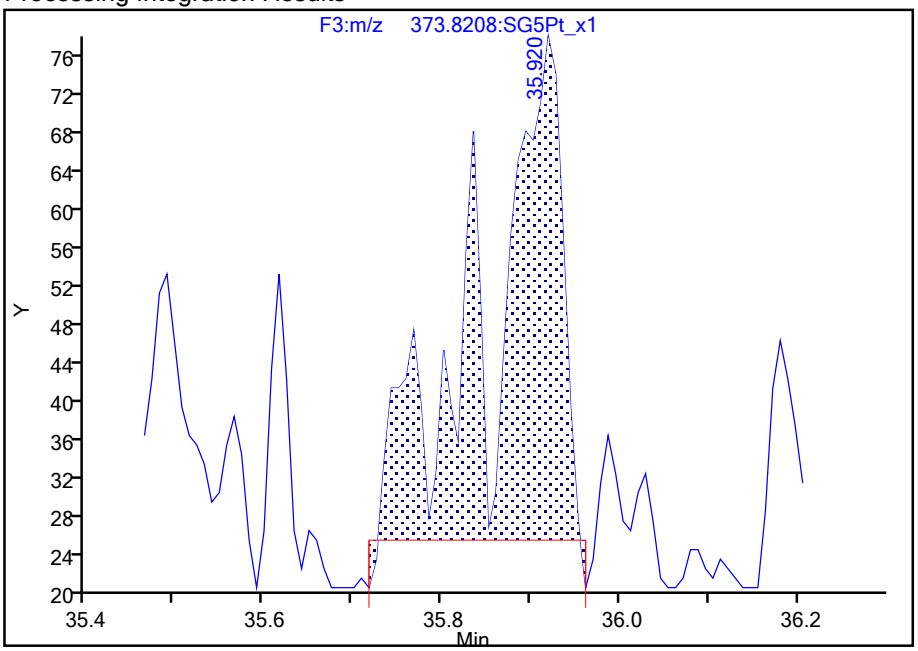

Manual Integration Results

RT: 35.92
Area: 189
Amount: 0.059961
Amount Units: pg/ul

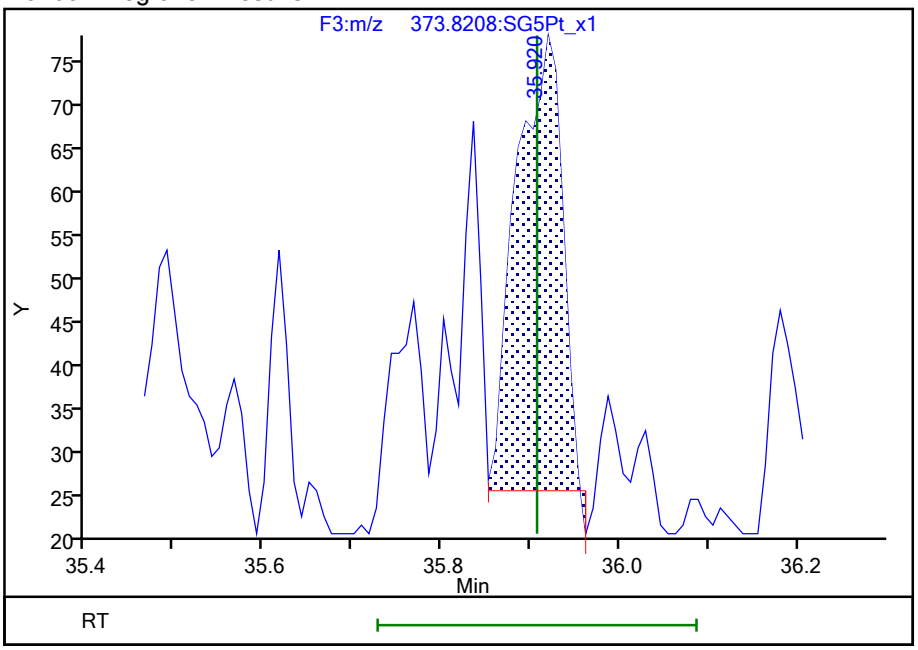

Reviewer: dadunj, 23-Aug-2021 09:16:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d				
Injection Date:	19-Aug-2021 20:27:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-6-A	Lab Sample ID:	320-76901-6		
Client ID:	11215702-072821-BN-SJSB095 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 36.79

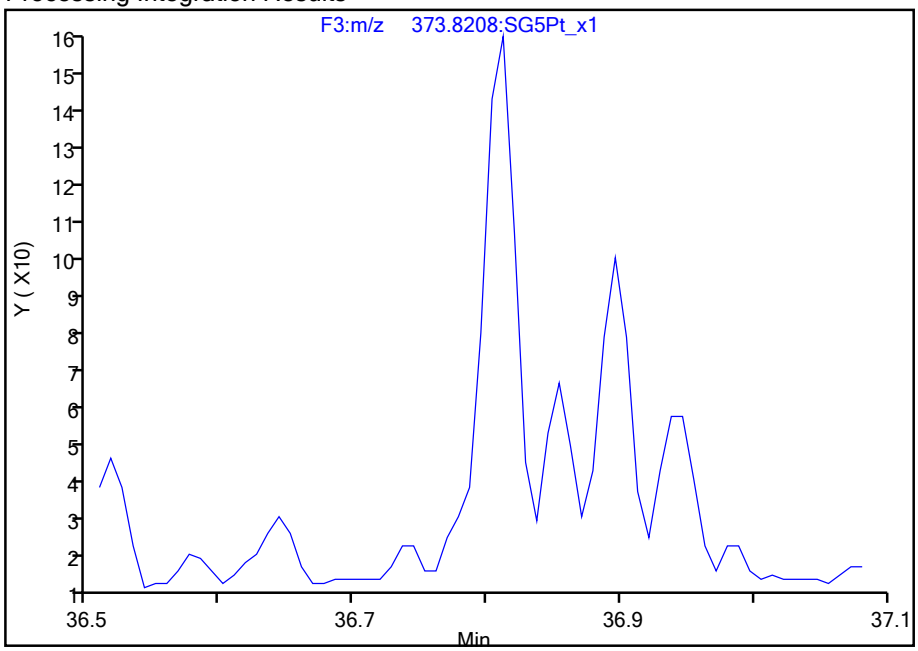

Manual Integration Results

RT: 36.81
Area: 214
Amount: 0.073498
Amount Units: pg/ul

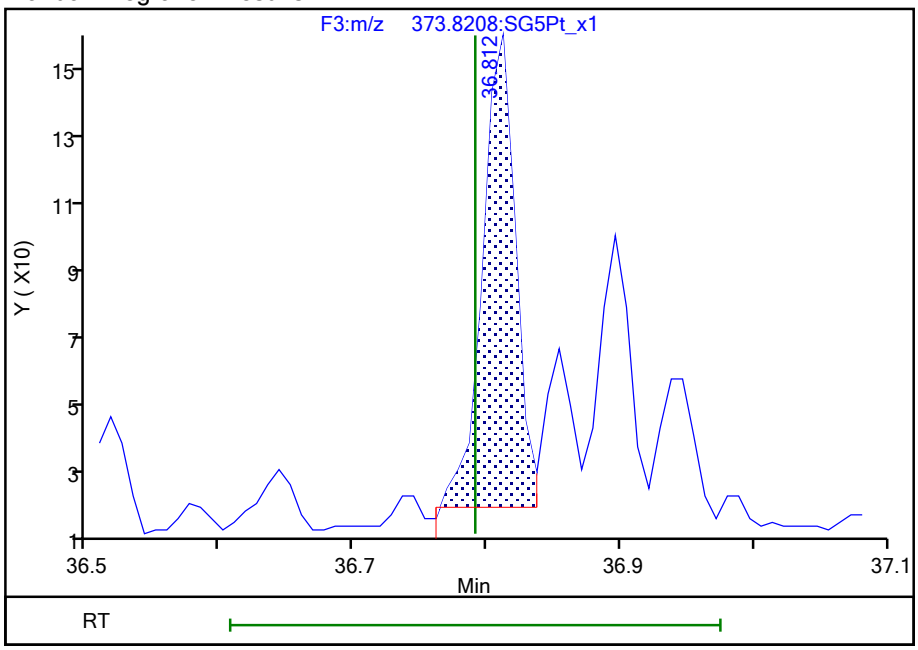

Reviewer: dadunj, 23-Aug-2021 09:16:32
Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d				
Injection Date:	19-Aug-2021 20:27:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-6-A	Lab Sample ID:	320-76901-6		
Client ID:	11215702-072821-BN-SJSB095 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Not Detected
Expected RT: 36.79

Processing Integration Results

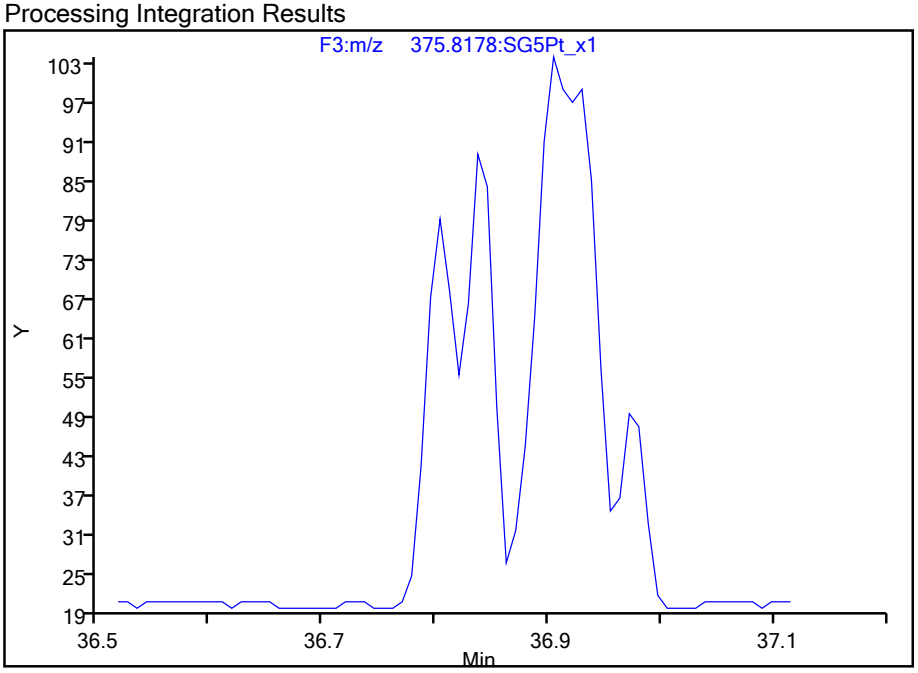

Manual Integration Results

RT: 36.84
Area: 213
Amount: 0.073498
Amount Units: pg/ul

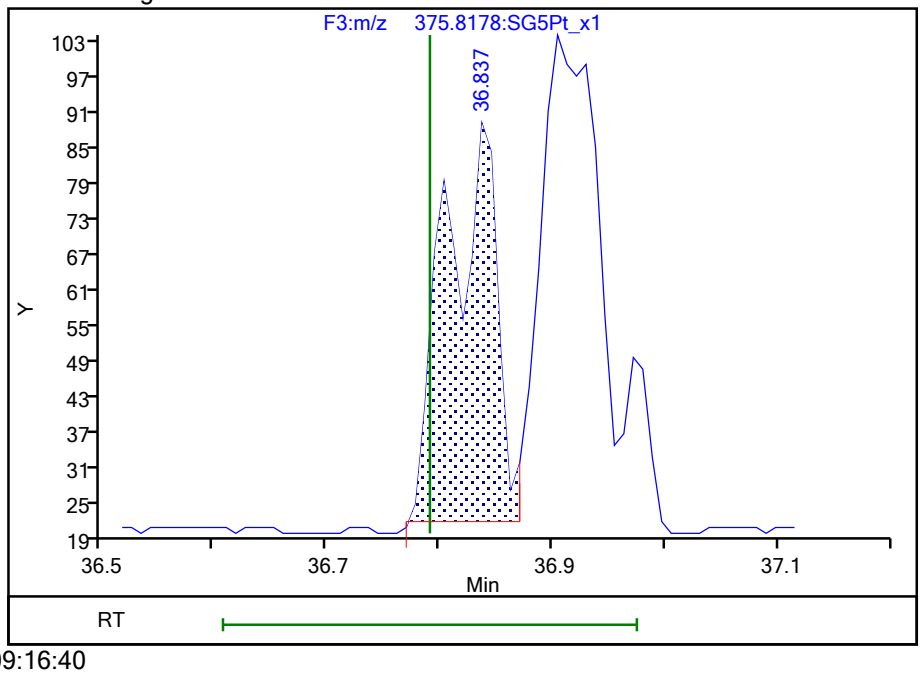

Reviewer: dadunj, 23-Aug-2021 09:16:40
Audit Action: Manually Integrated Audit Reason: Split Peak

788491

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d				
Injection Date:	19-Aug-2021 20:27:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-6-A	Lab Sample ID:	320-76901-6		
Client ID:	11215702-072821-BN-SJSB095 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 36.58
Area: 56
Amount: 0.257446
Amount Units: pg/ul

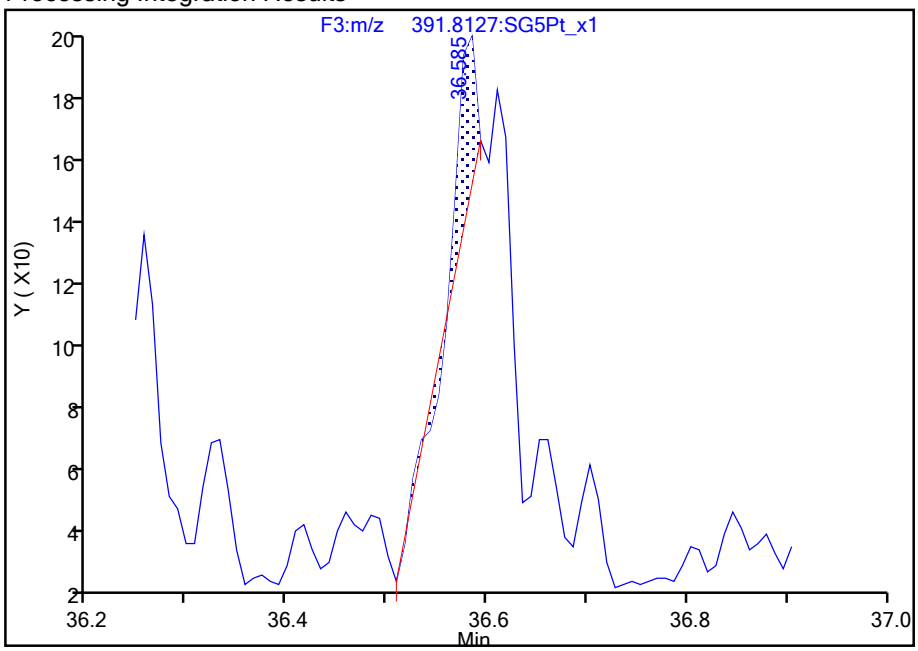

Manual Integration Results

RT: 36.58
Area: 830
Amount: 0.422673
Amount Units: pg/ul

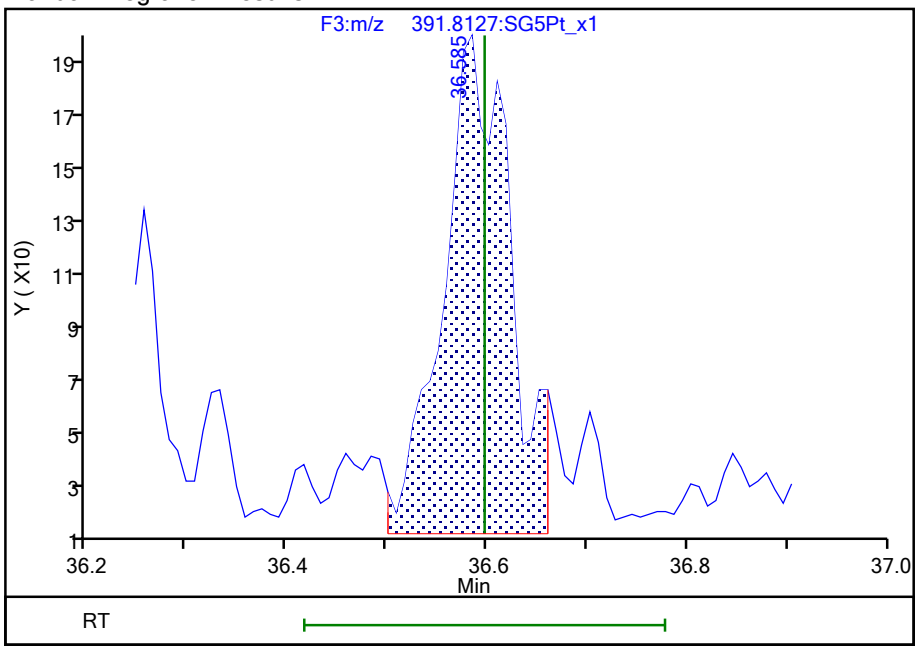

Reviewer: dadunj, 23-Aug-2021 09:17:10

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d				
Injection Date:	19-Aug-2021 20:27:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-6-A	Lab Sample ID:	320-76901-6		
Client ID:	11215702-072821-BN-SJSB095 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 38.62
Area: 639
Amount: 0.251099
Amount Units: pg/ul

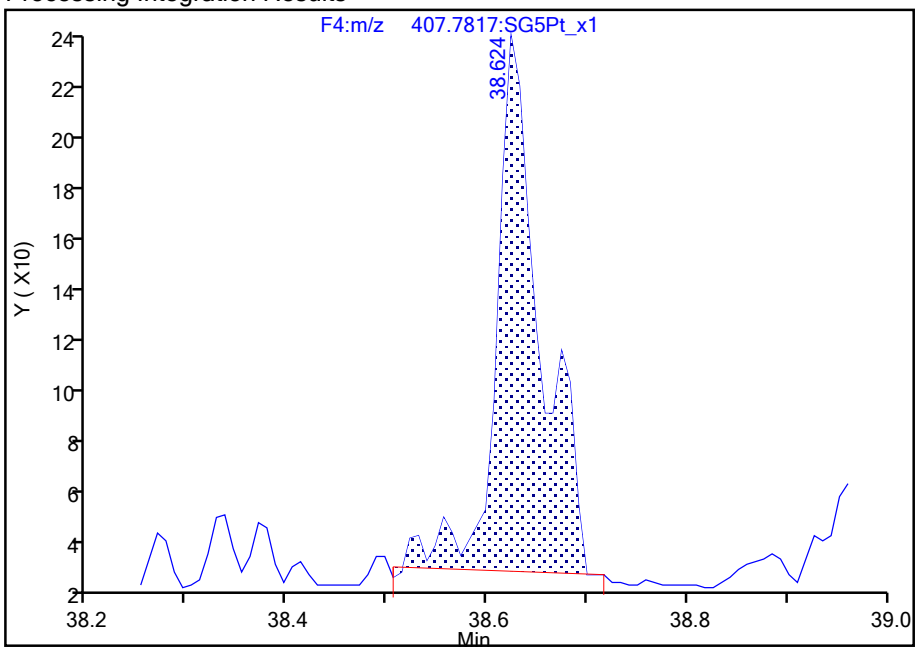

Manual Integration Results

RT: 38.62
Area: 606
Amount: 0.239922
Amount Units: pg/ul

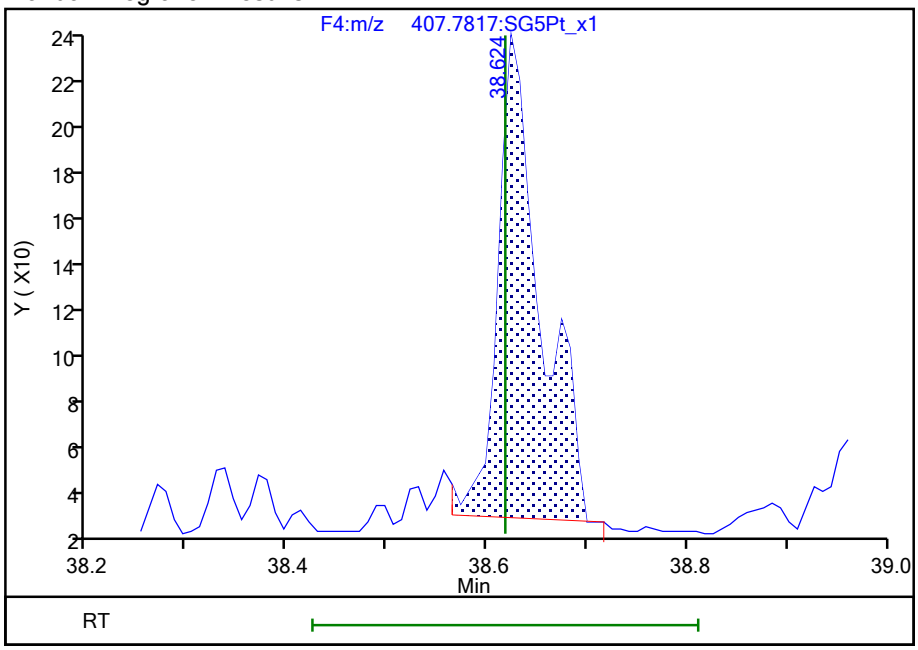

Reviewer: dadunj, 23-Aug-2021 09:17:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788493

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d				
Injection Date:	19-Aug-2021 20:27:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-6-A	Lab Sample ID:	320-76901-6		
Client ID:	11215702-072821-BN-SJSB095 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.64
Area: 709
Amount: 0.251099
Amount Units: pg/ul

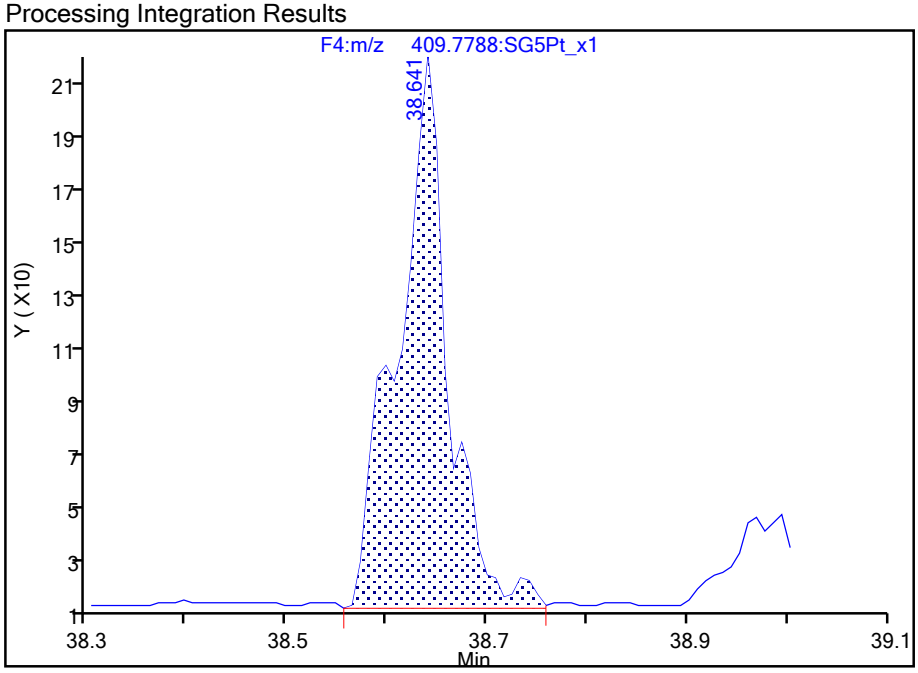

Manual Integration Results

RT: 38.64
Area: 682
Amount: 0.239922
Amount Units: pg/ul

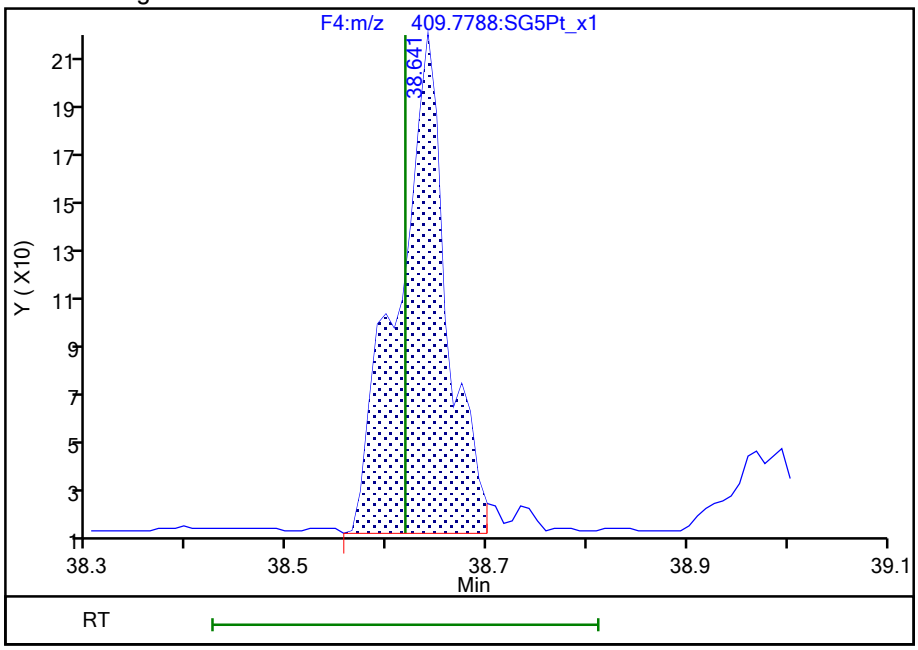

Reviewer: dadunj, 23-Aug-2021 09:17:31
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788494

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d				
Injection Date:	19-Aug-2021 20:27:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-6-A	Lab Sample ID:	320-76901-6		
Client ID:	11215702-072821-BN-SJSB095 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 39.88
Area: 159
Amount: 0.096140
Amount Units: pg/ul

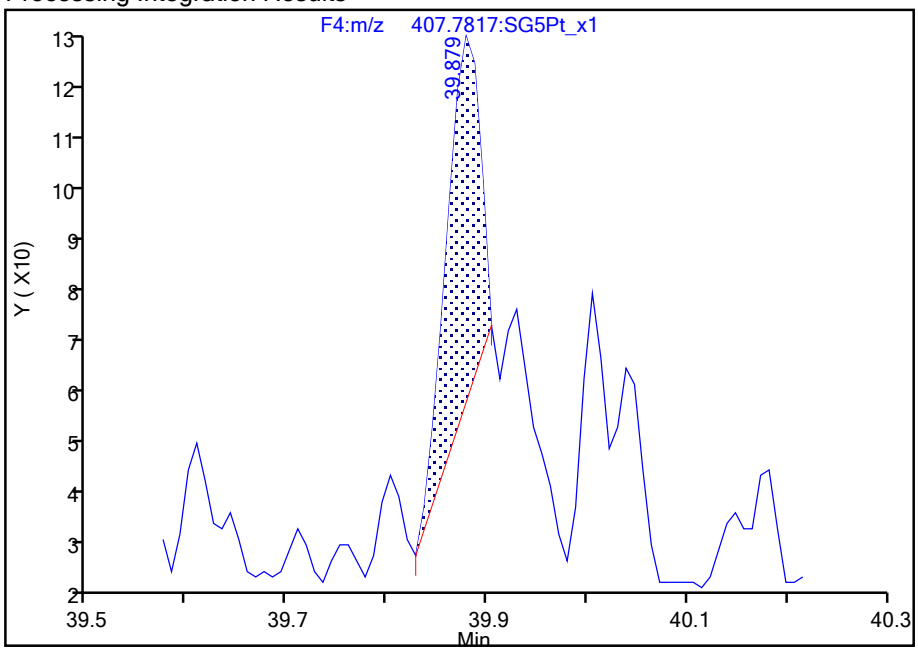

Manual Integration Results

RT: 39.88
Area: 363
Amount: 0.134596
Amount Units: pg/ul

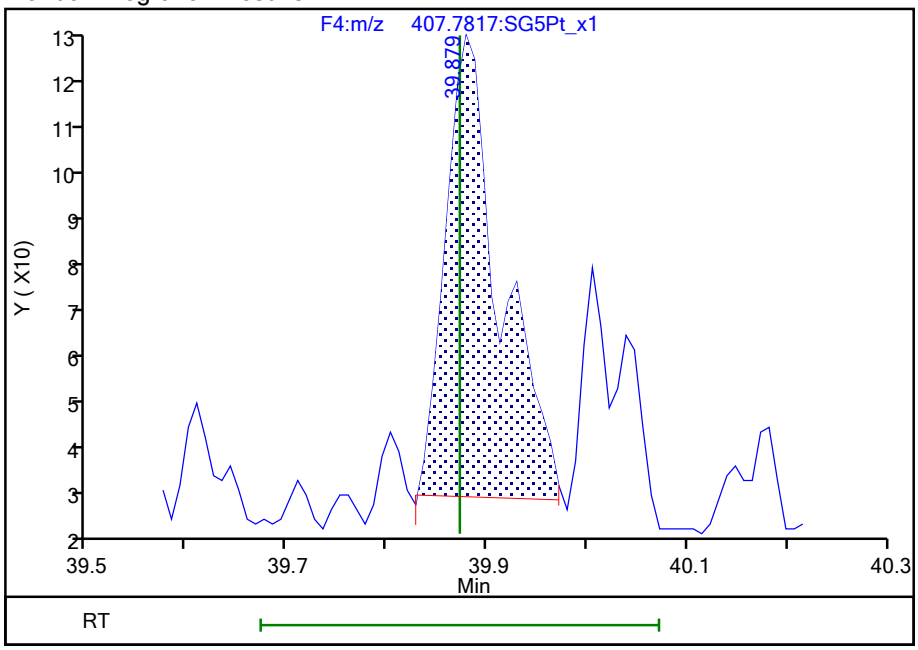

Reviewer: dadunj, 23-Aug-2021 09:17:44

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 23-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d				
Injection Date:	19-Aug-2021 20:27:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-6-A	Lab Sample ID:	320-76901-6		
Client ID:	11215702-072821-BN-SJSB095 (10-12)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7817, RT: (38.59- 39.90)

Signal: 1

Processing Integration Results

RT = 38.995 Area = 434

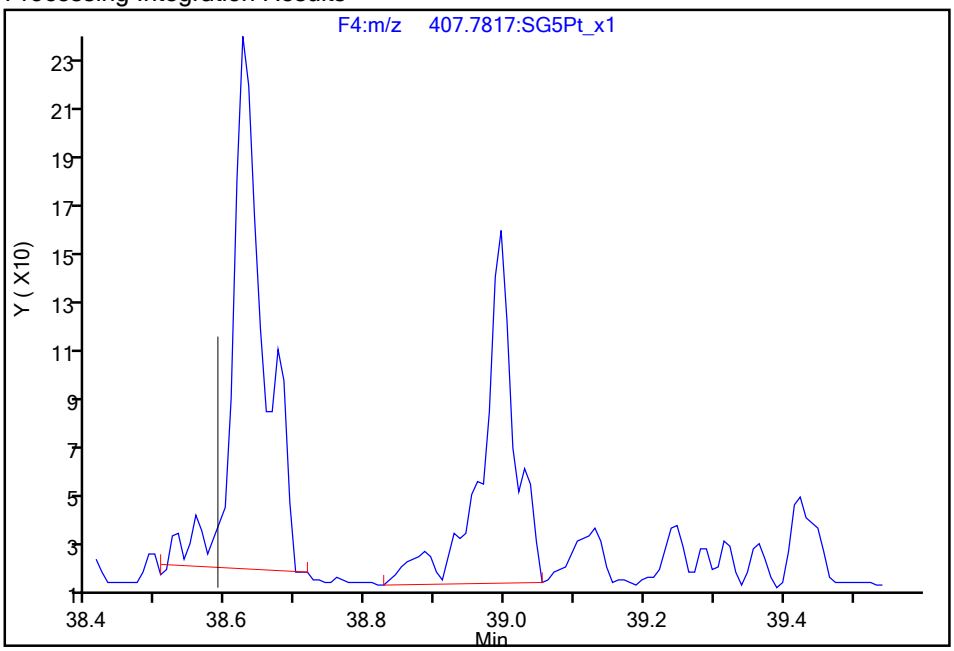

Manual Integration Results

RT = 38.995 Area = 400 M

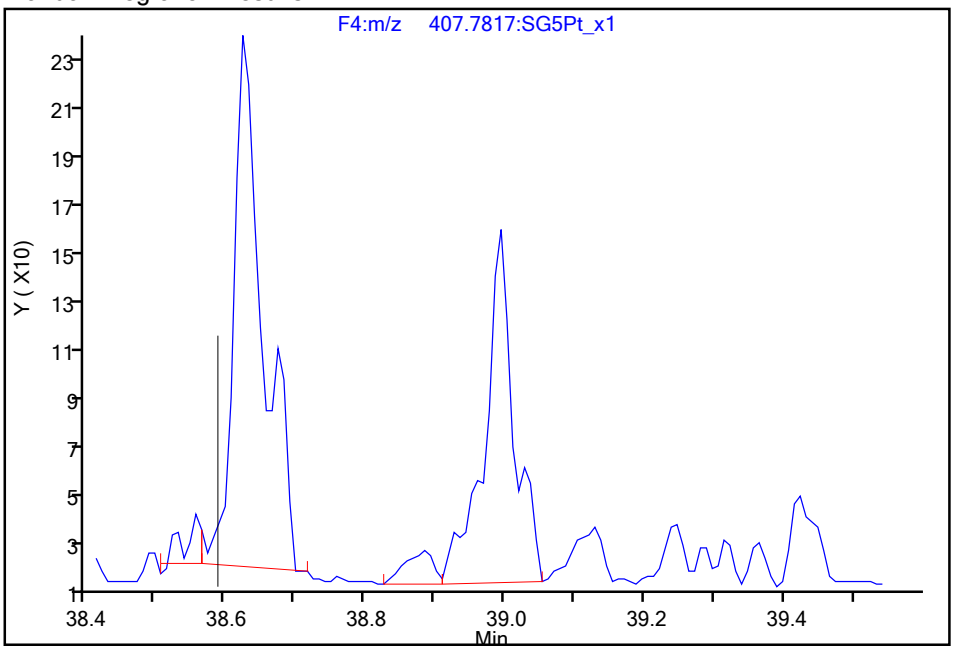

Reviewer: dadunj, 23-Aug-2021 09:17:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788496

Report Date: 23-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

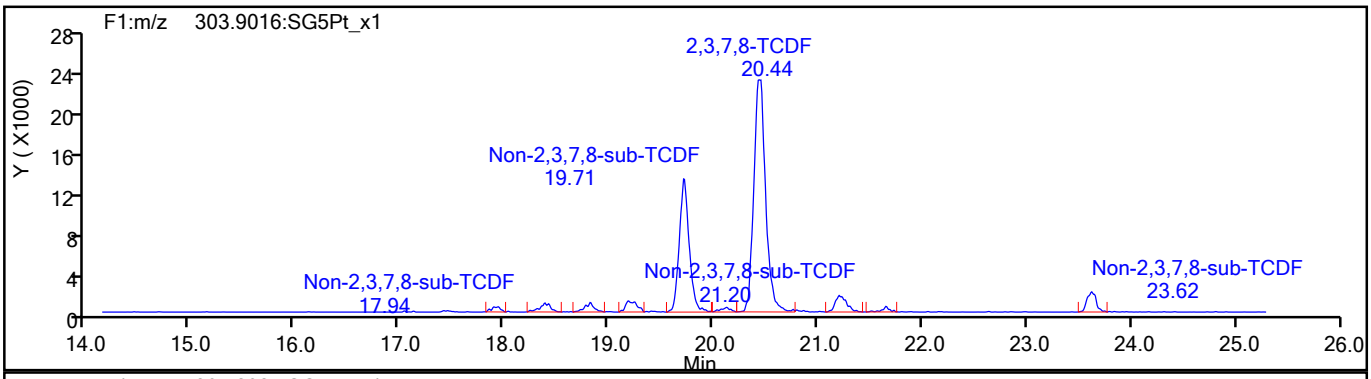

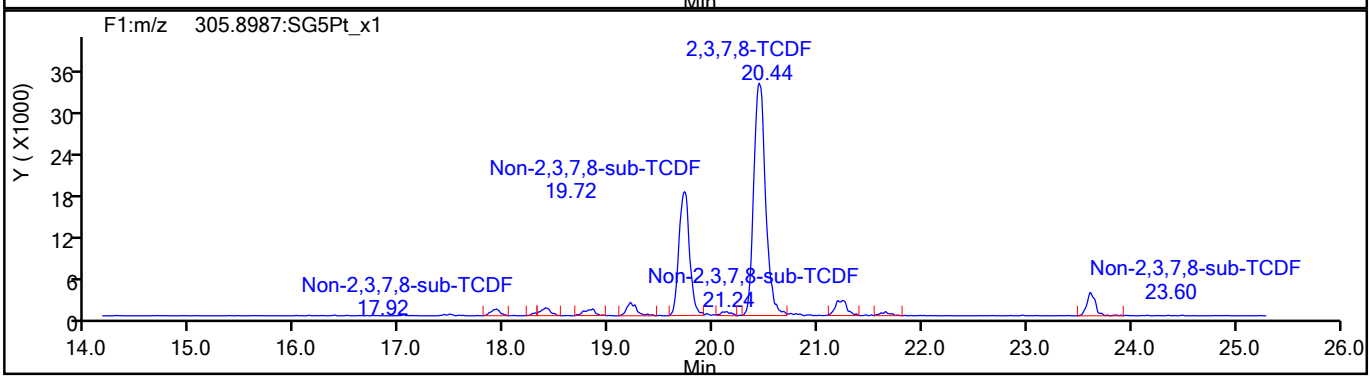

TCDF Standards

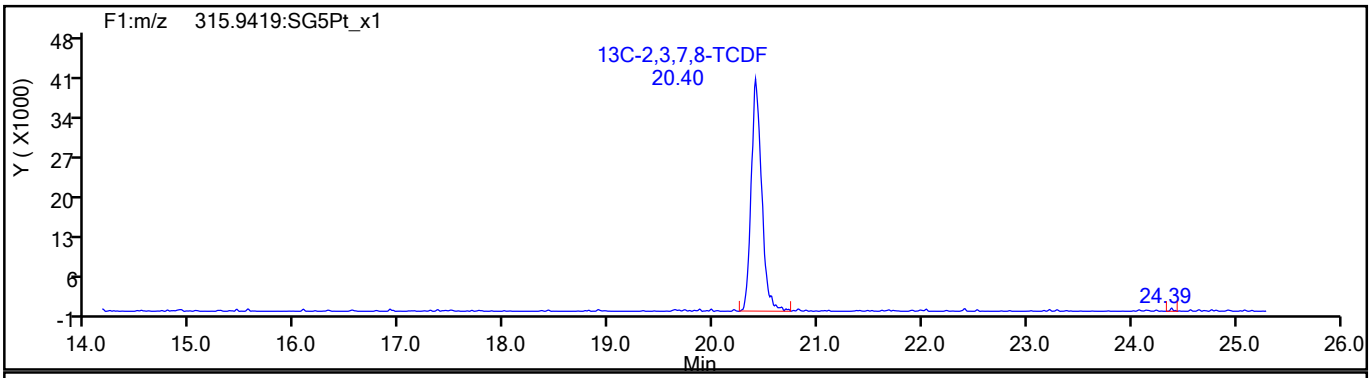

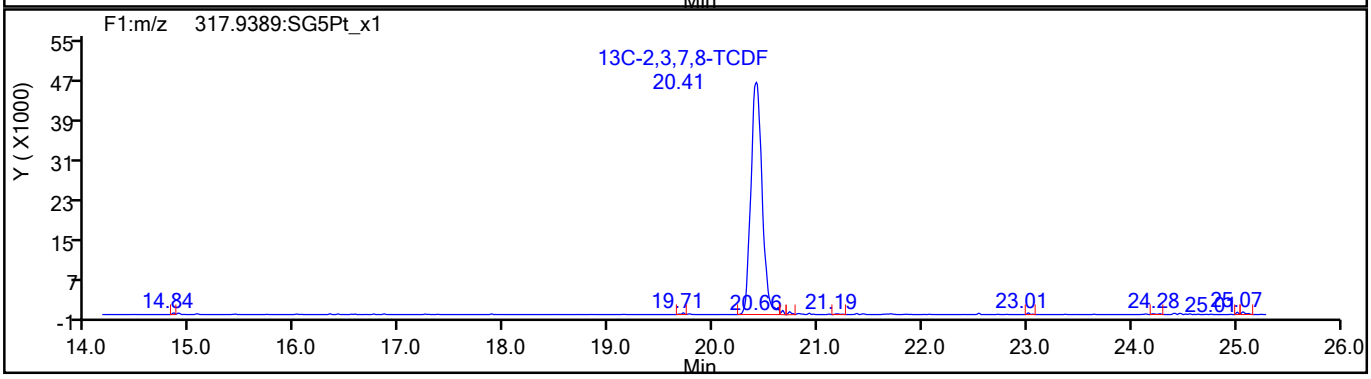

788497

Report Date: 23-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

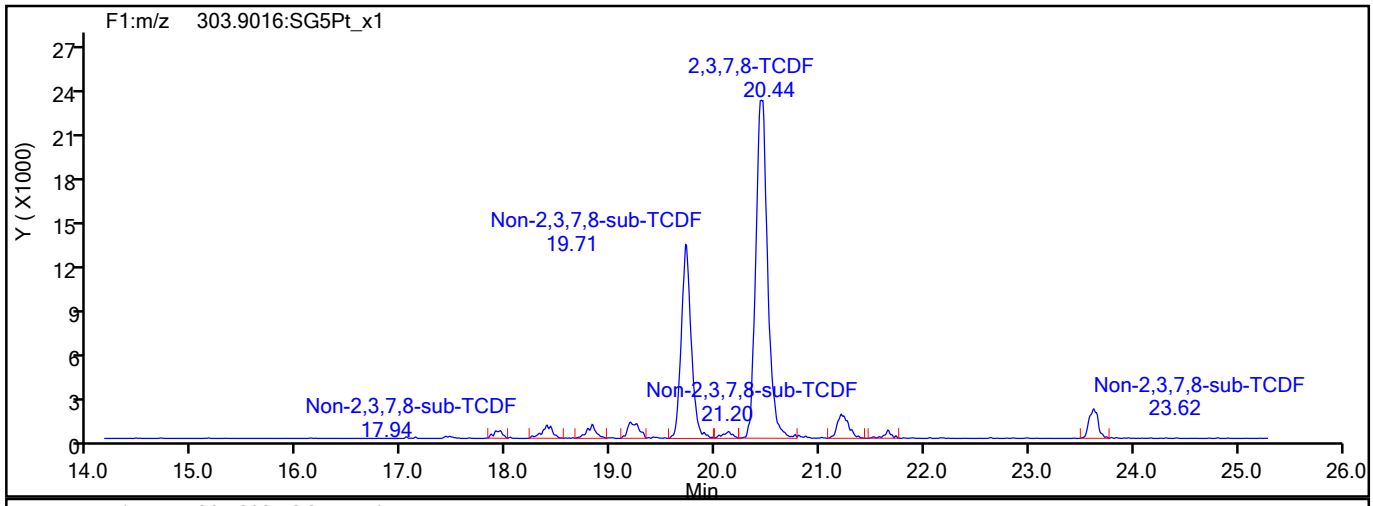

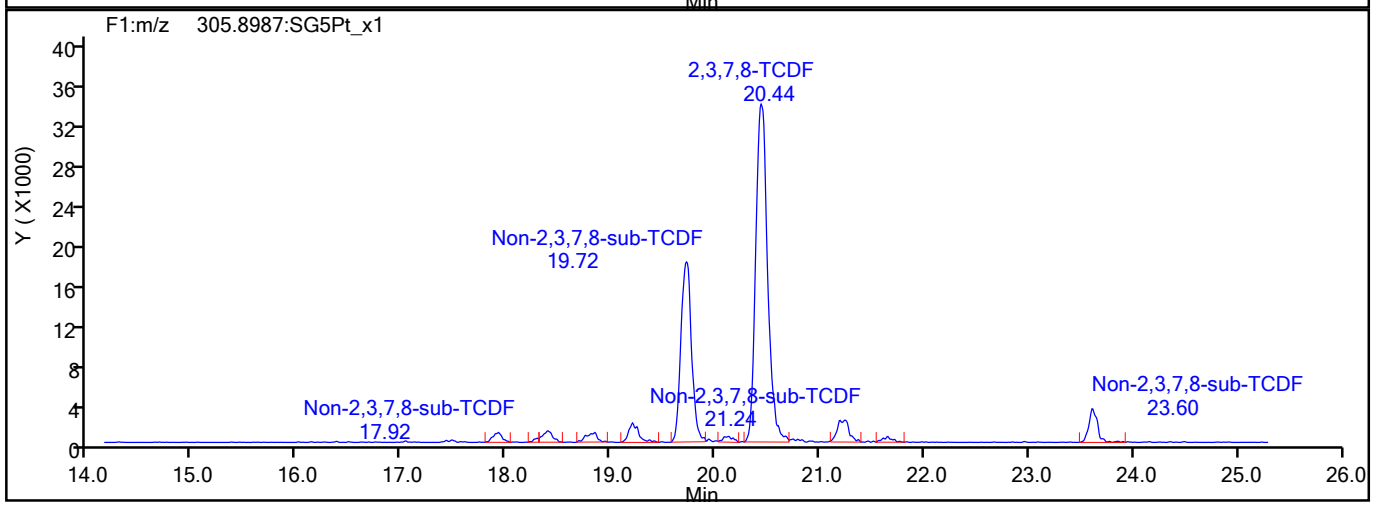

TCDF Interference Mass

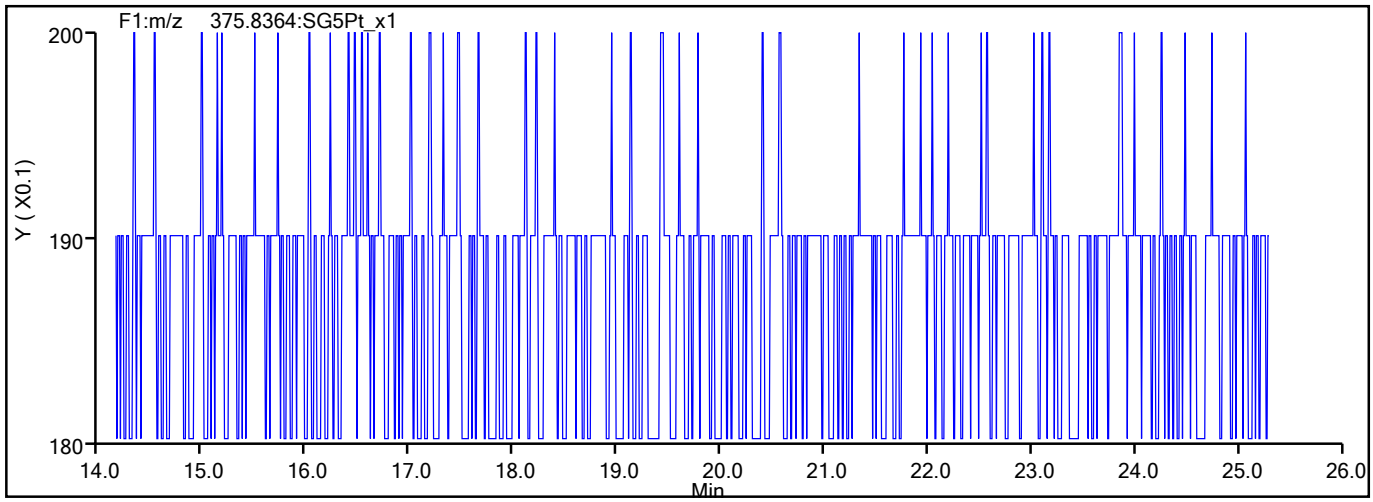

788498

Report Date: 23-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

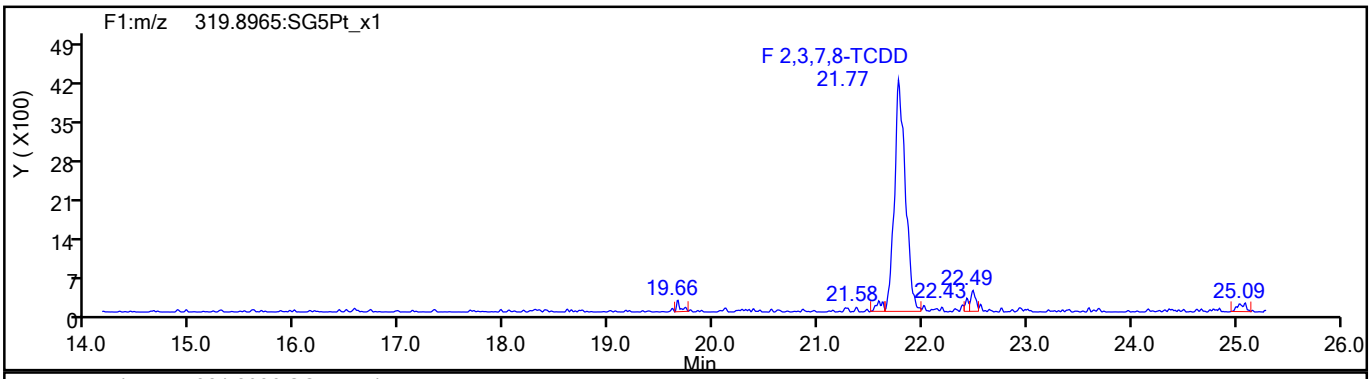

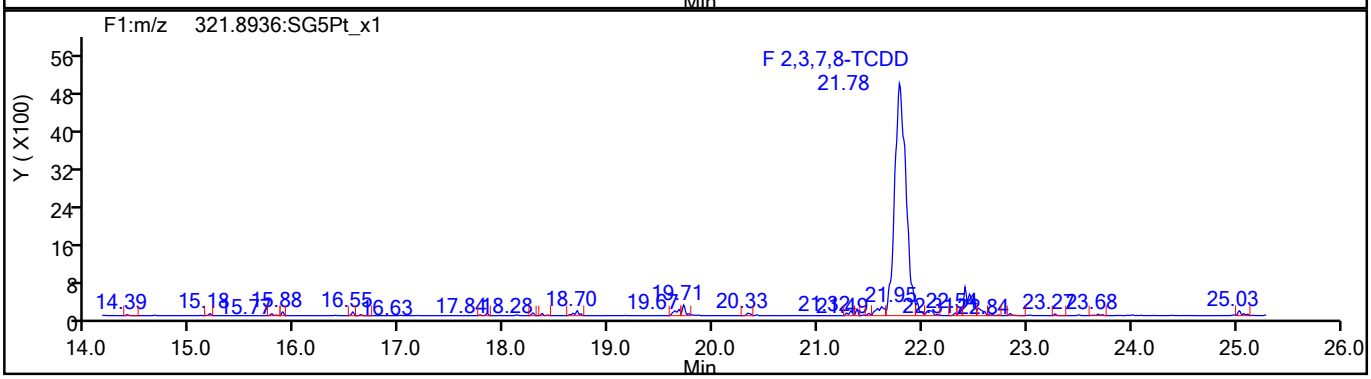

TCDD Standards

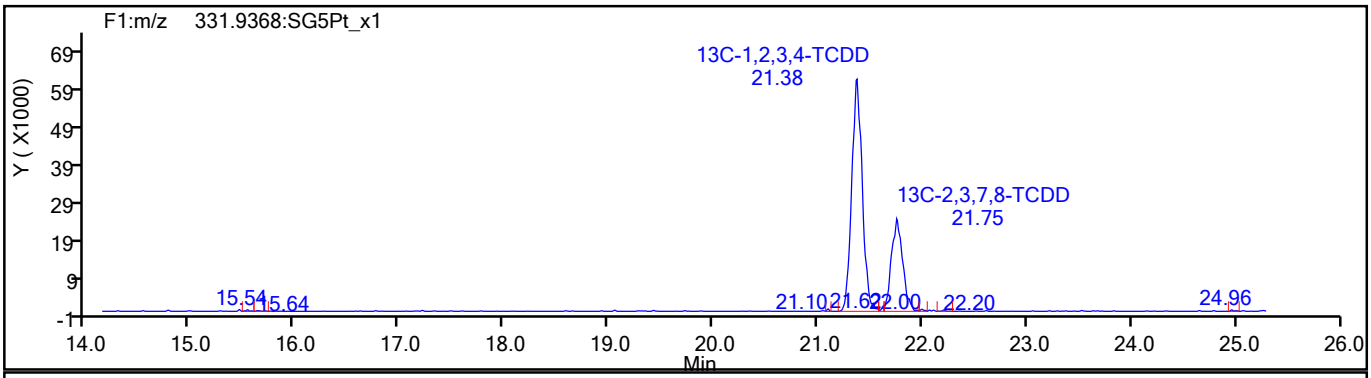

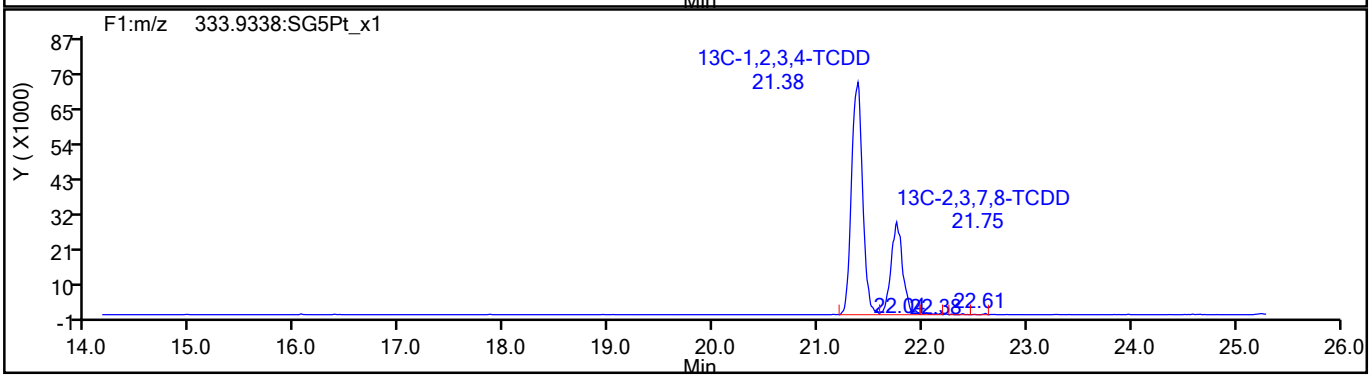

788499

Report Date: 23-Aug-2021 09:19:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

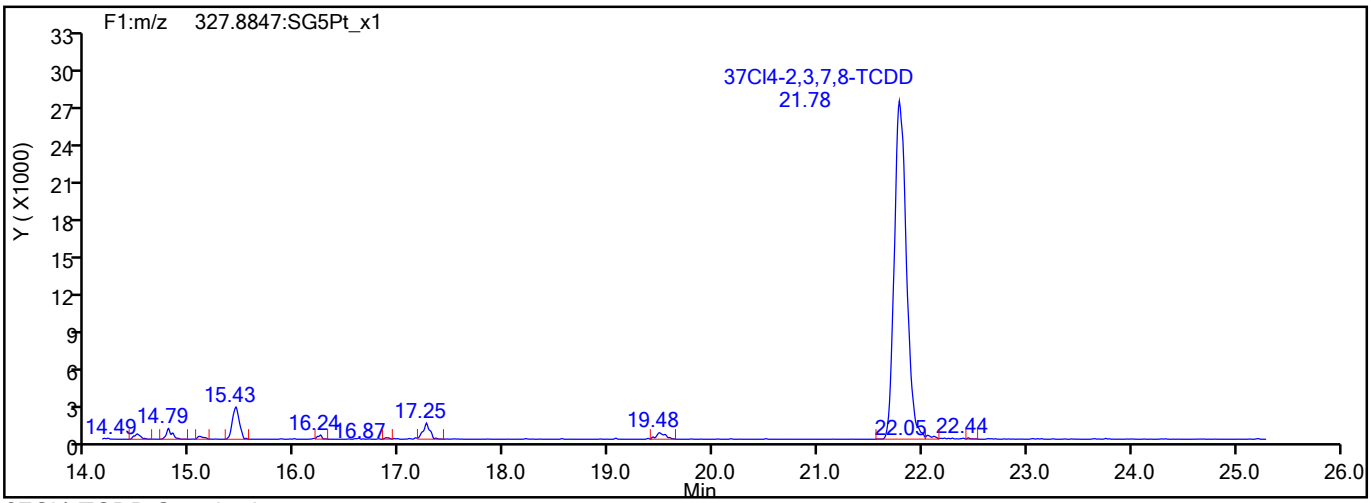

37Cl4-TCDD Standards

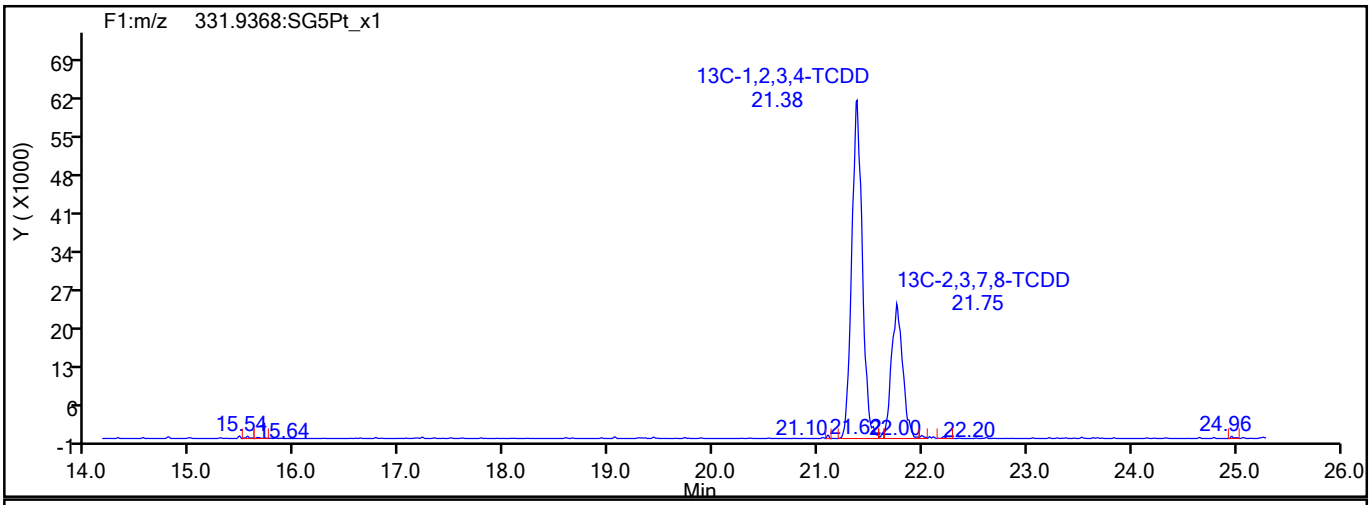

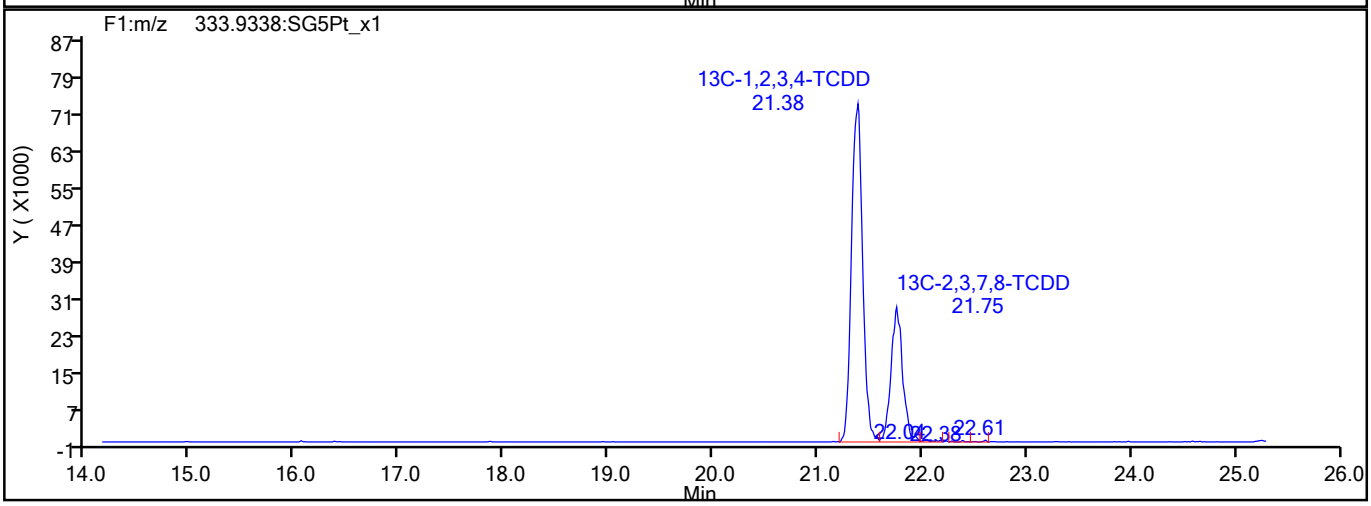

788500

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

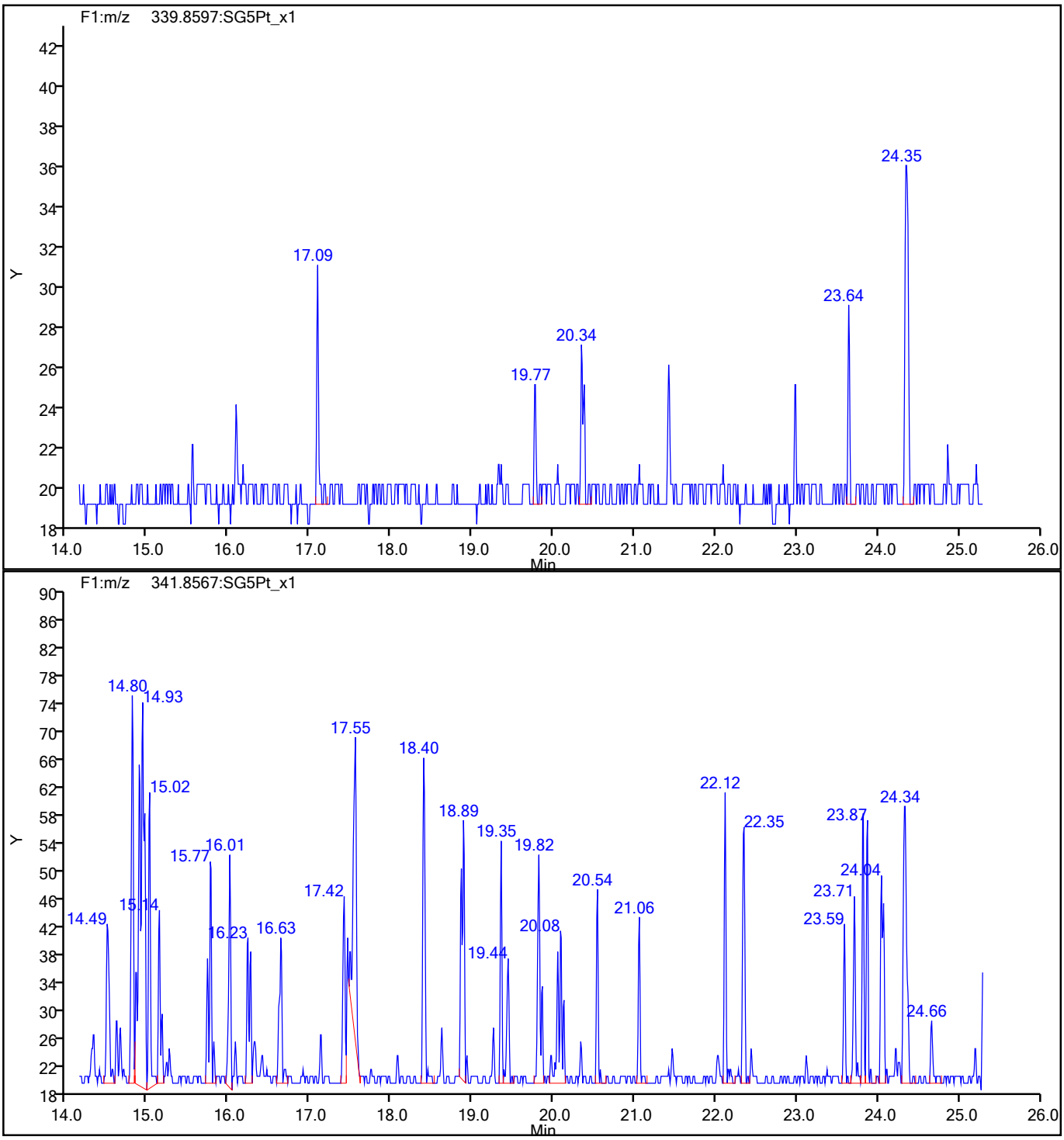

788501

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

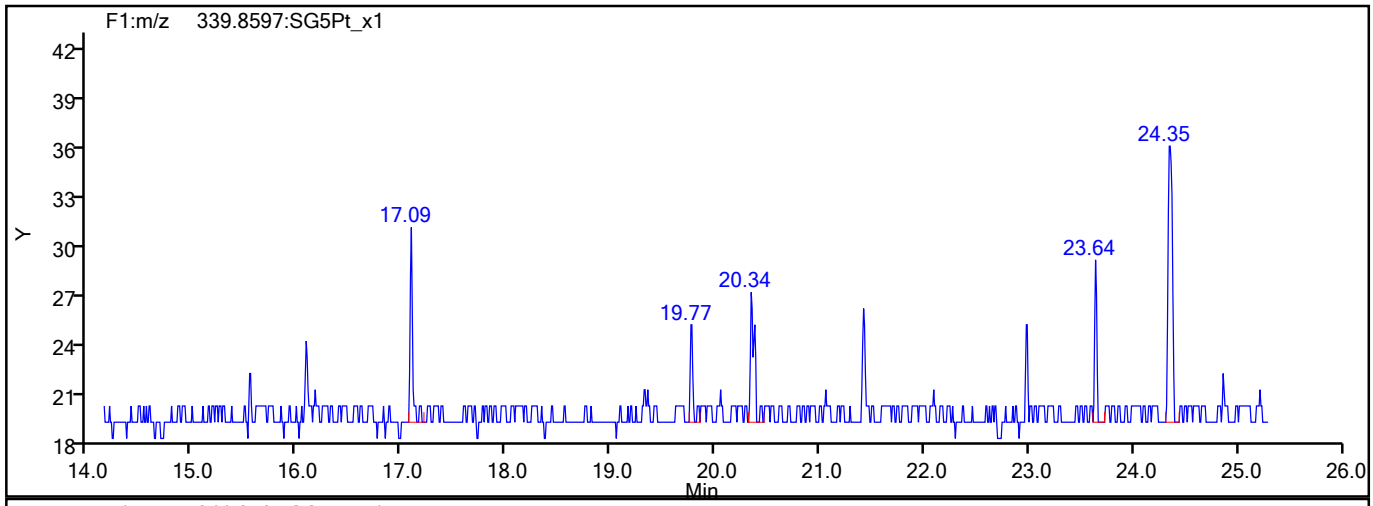

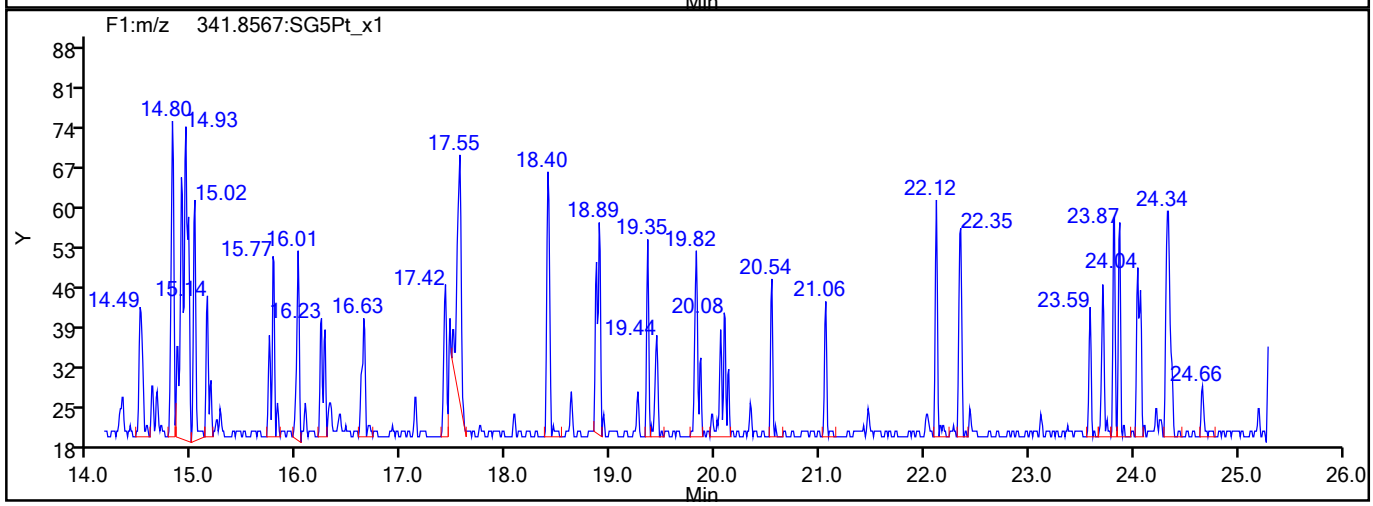

F1 PeCDFs Interference Mass

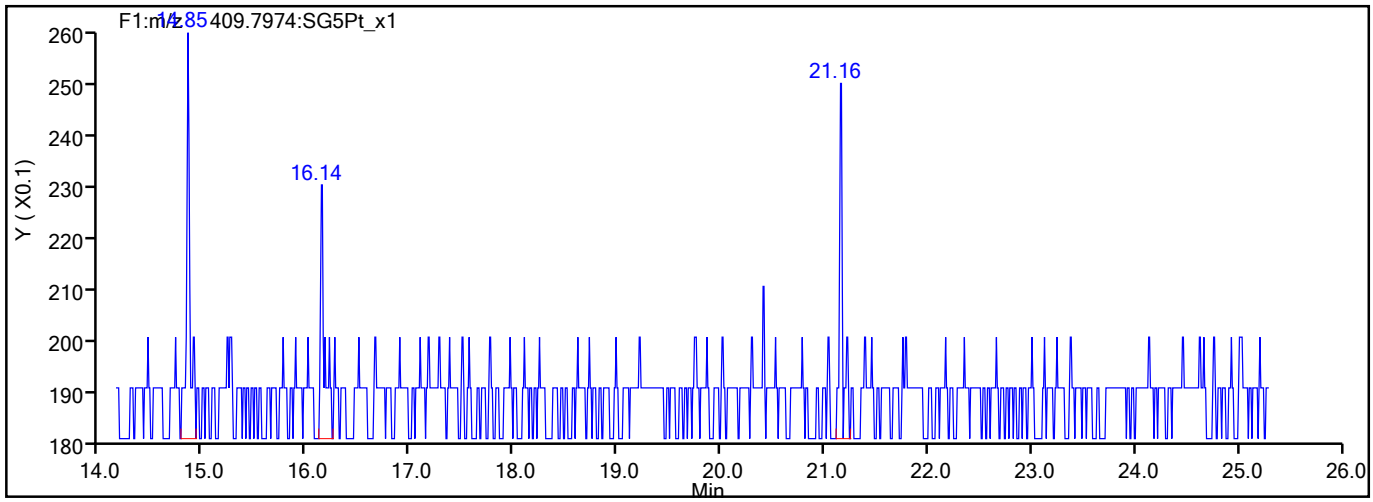

788502

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

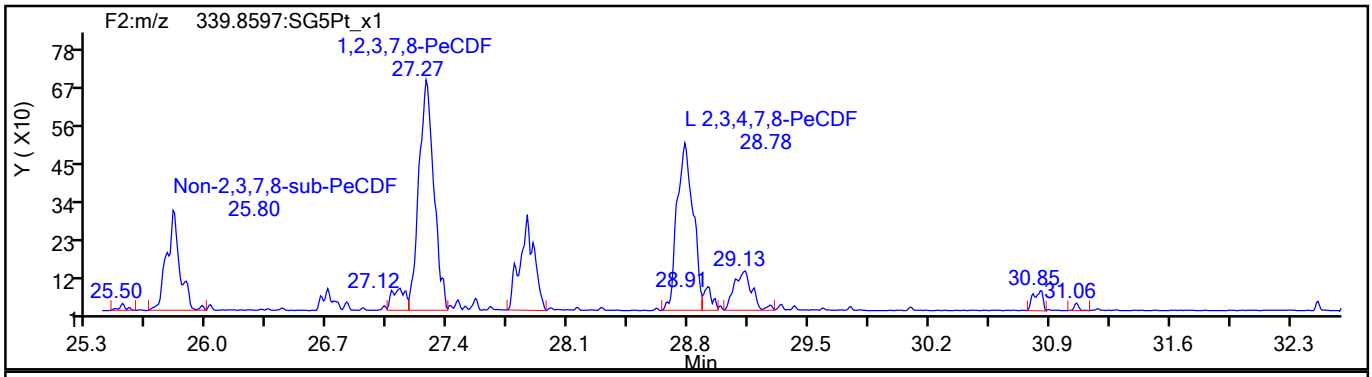

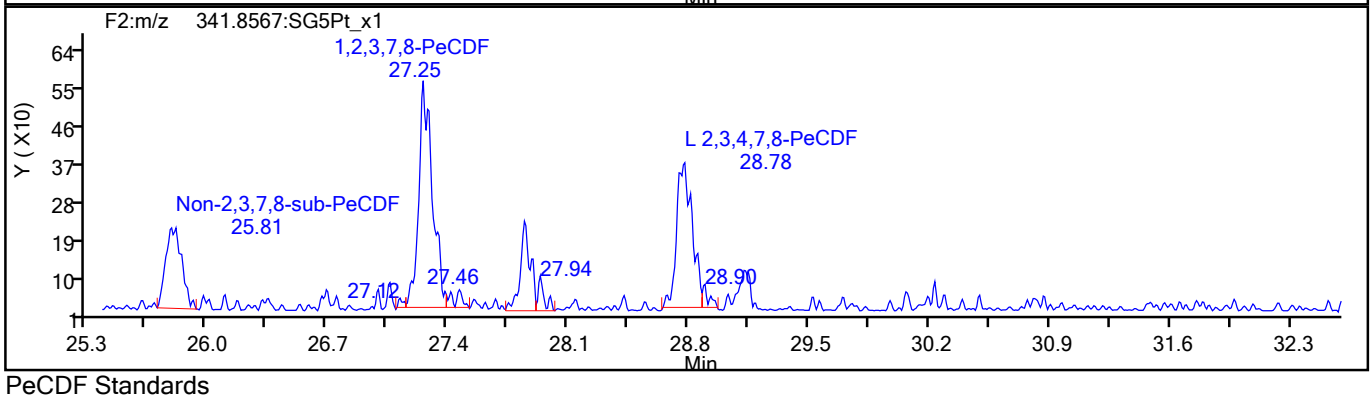

PeCDF Standards

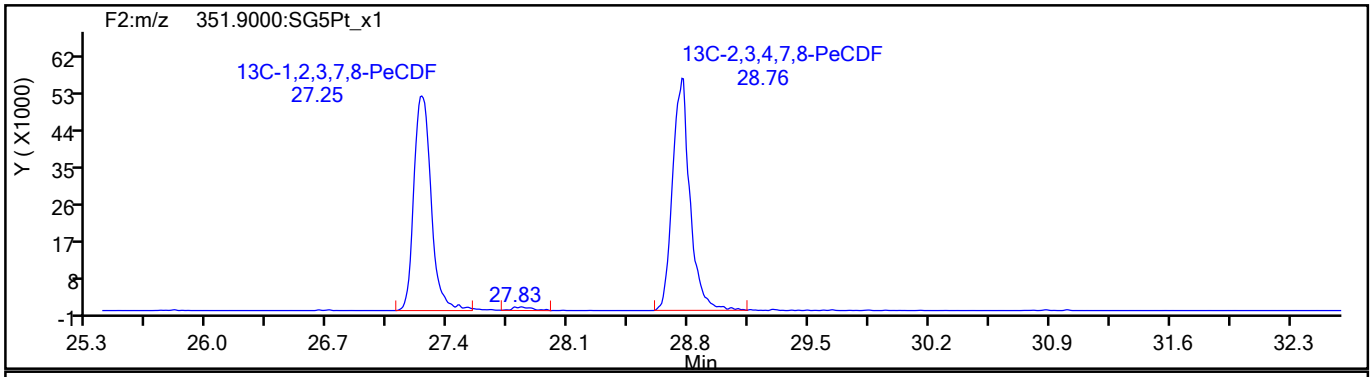

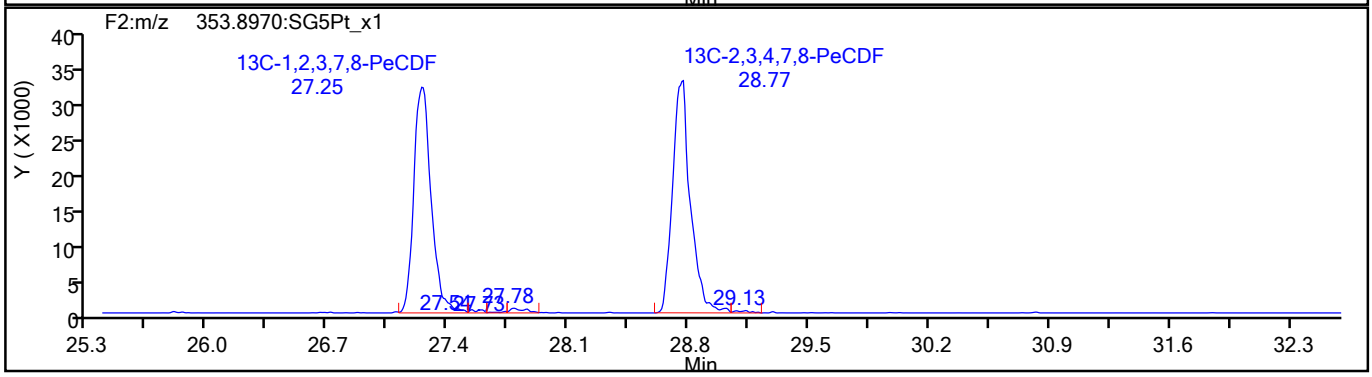

788503

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

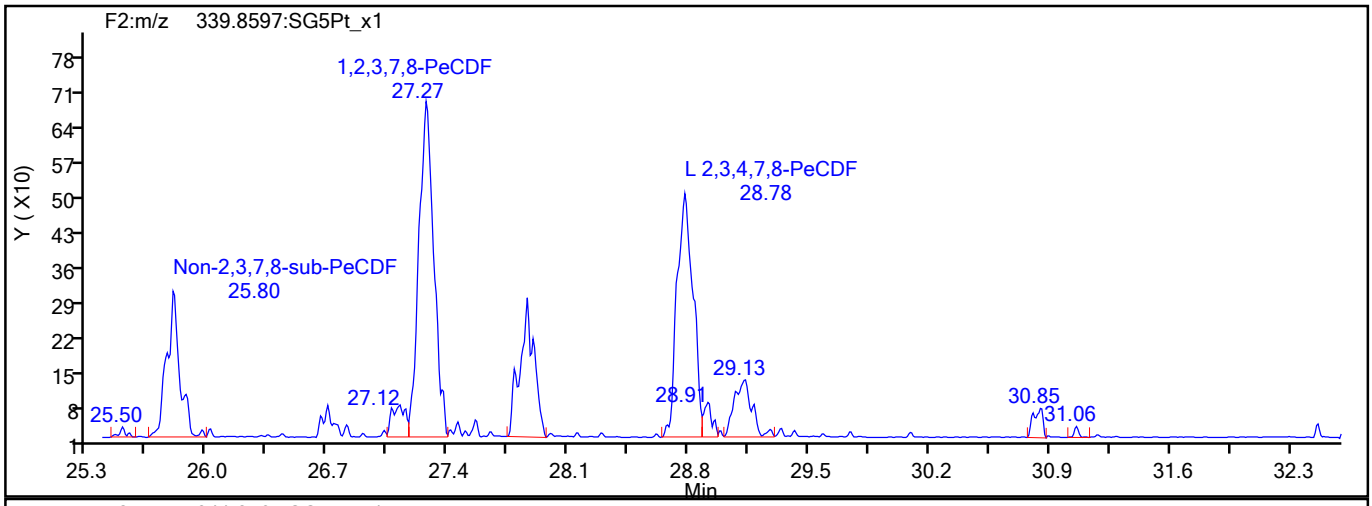

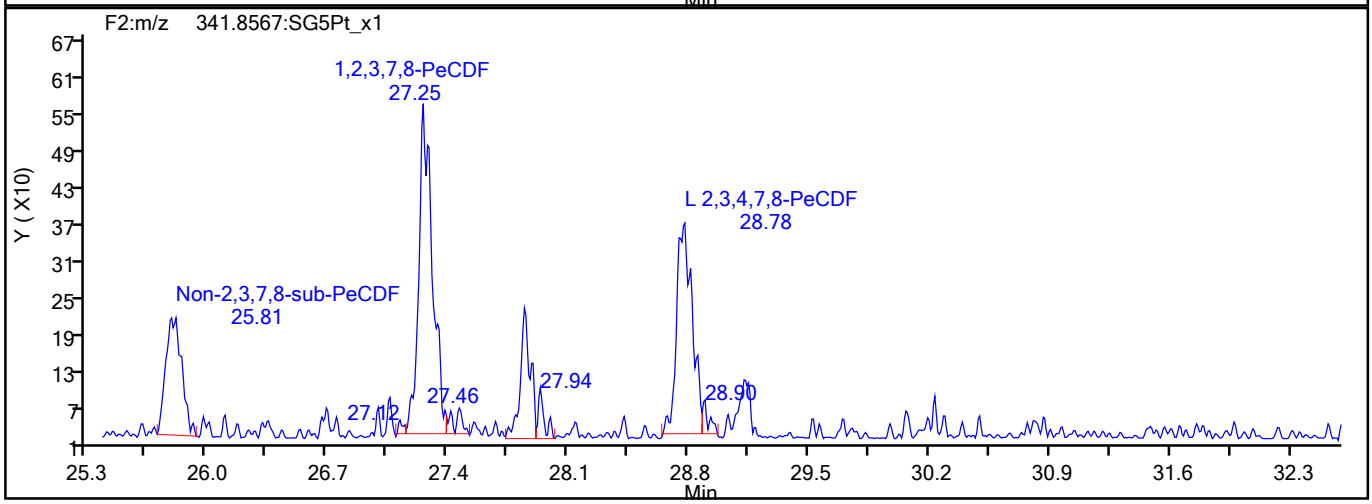

PeCDF Interference Mass

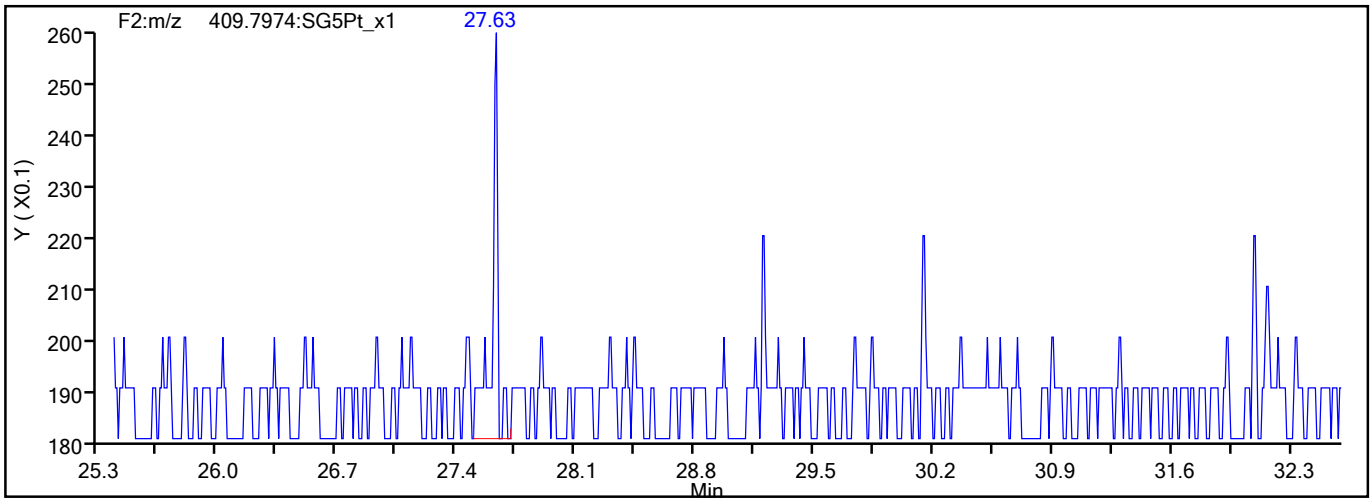

788504

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

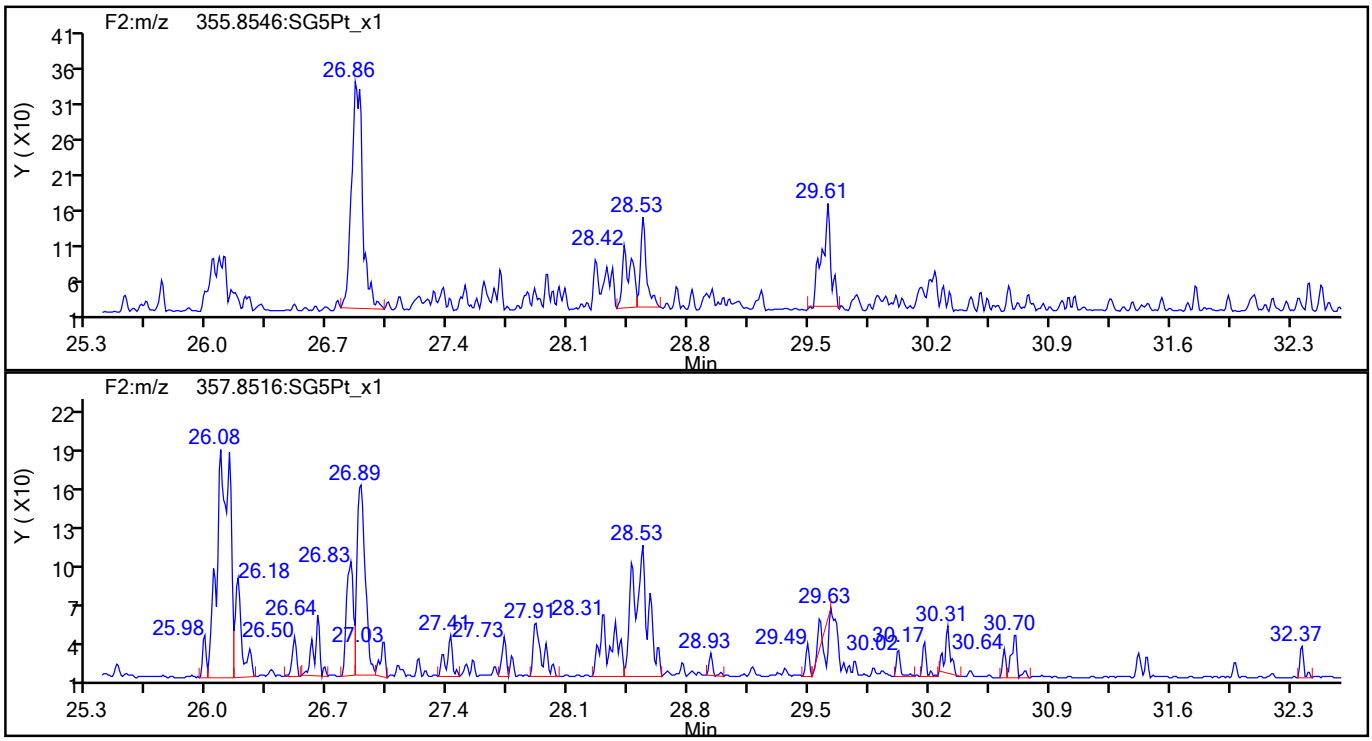

PeCDD Standards

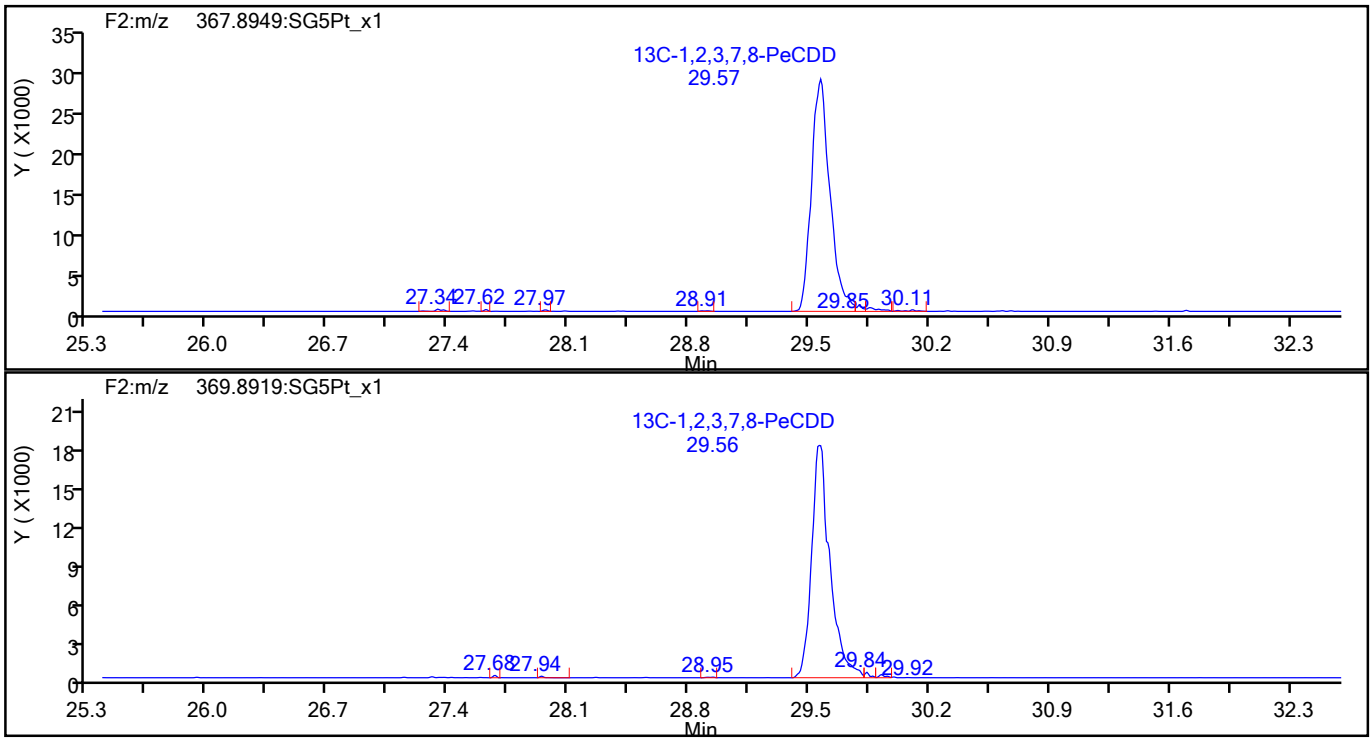

788505

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

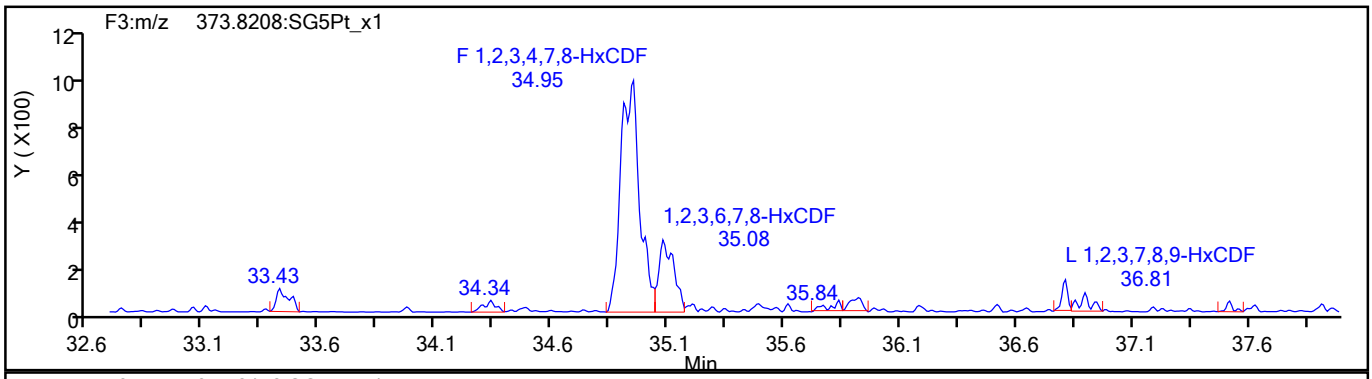

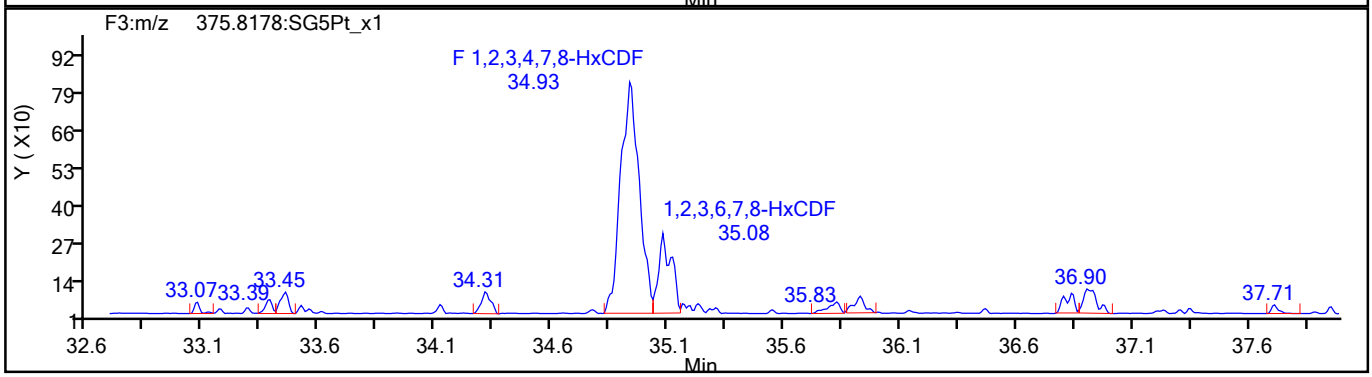

HxCDF Standards

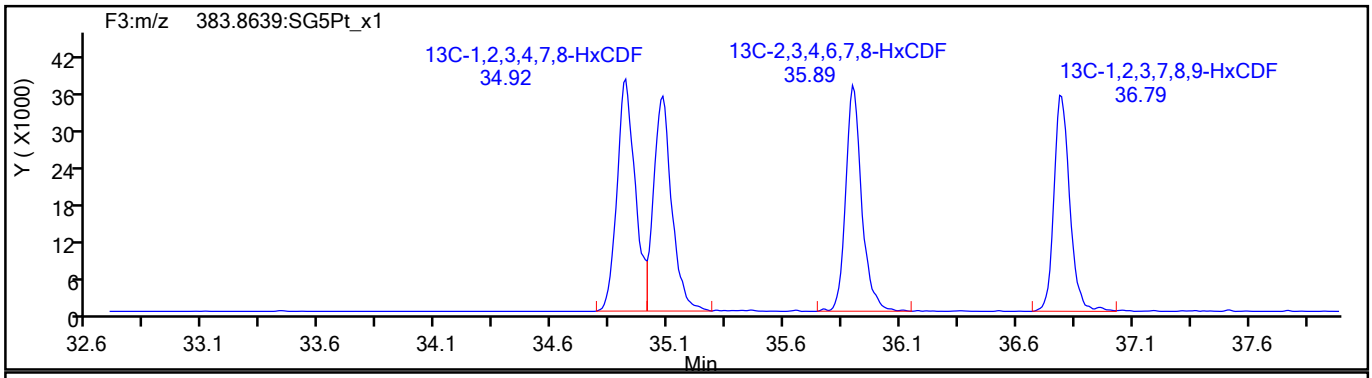

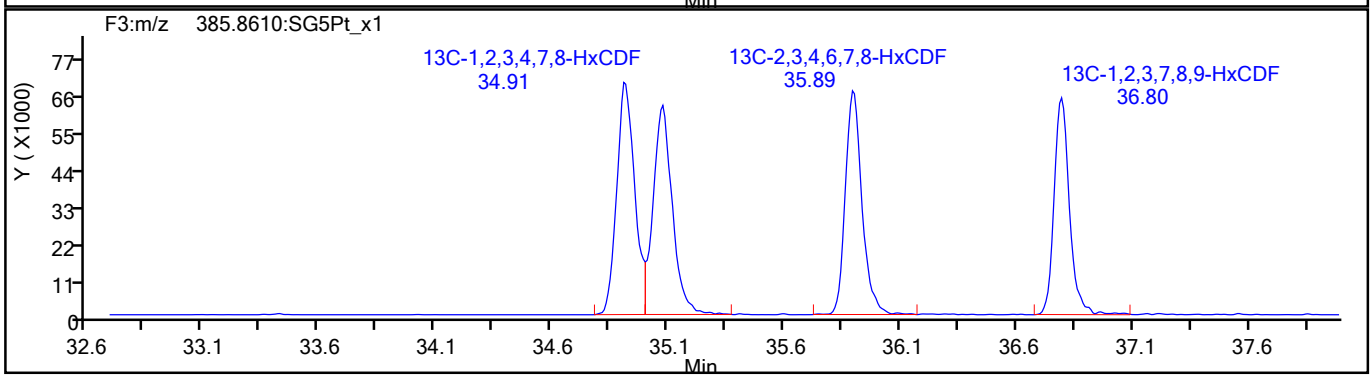

788506

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

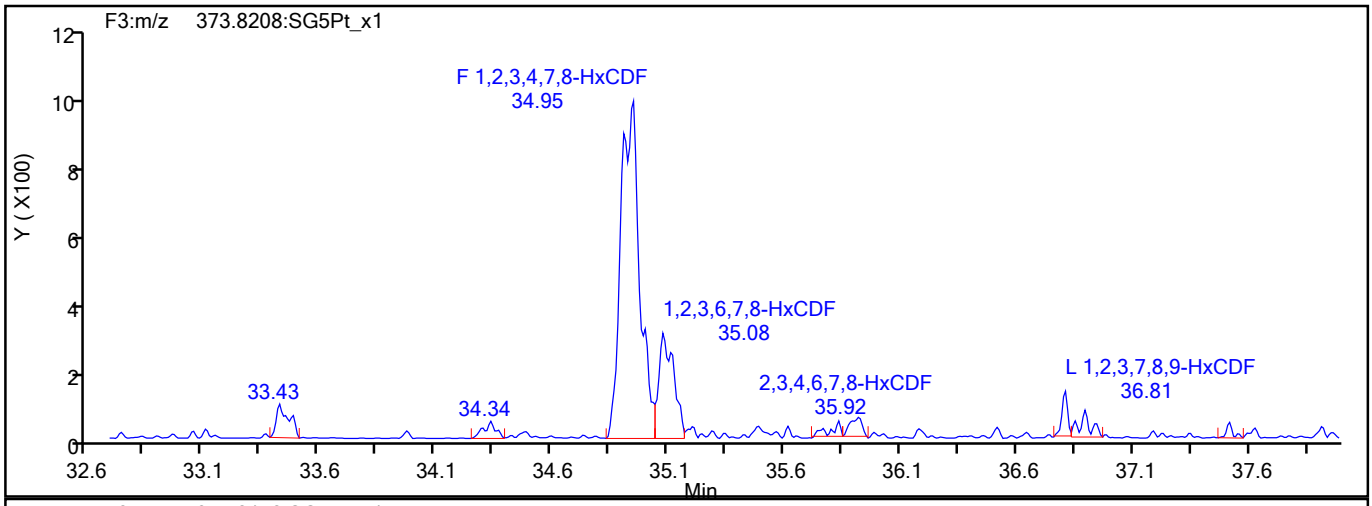

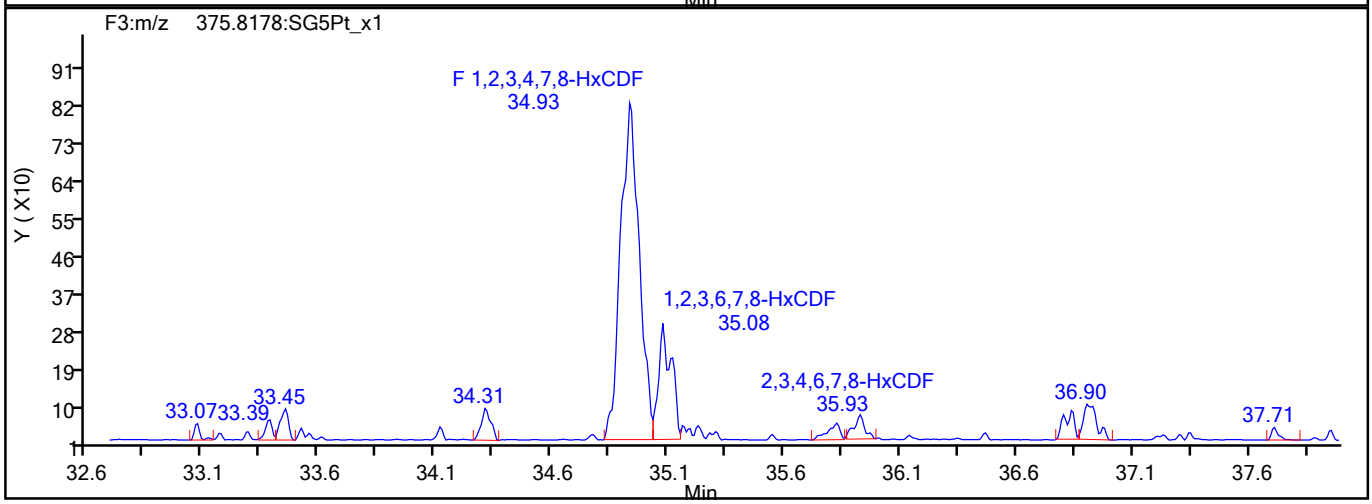

HxCDF Interference Mass

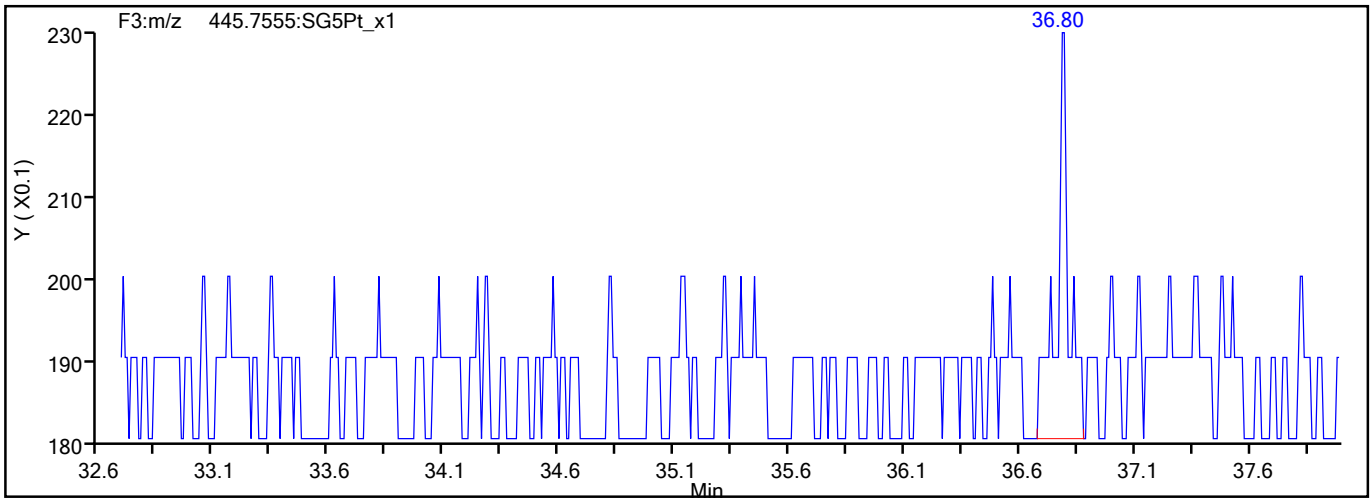

788507

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

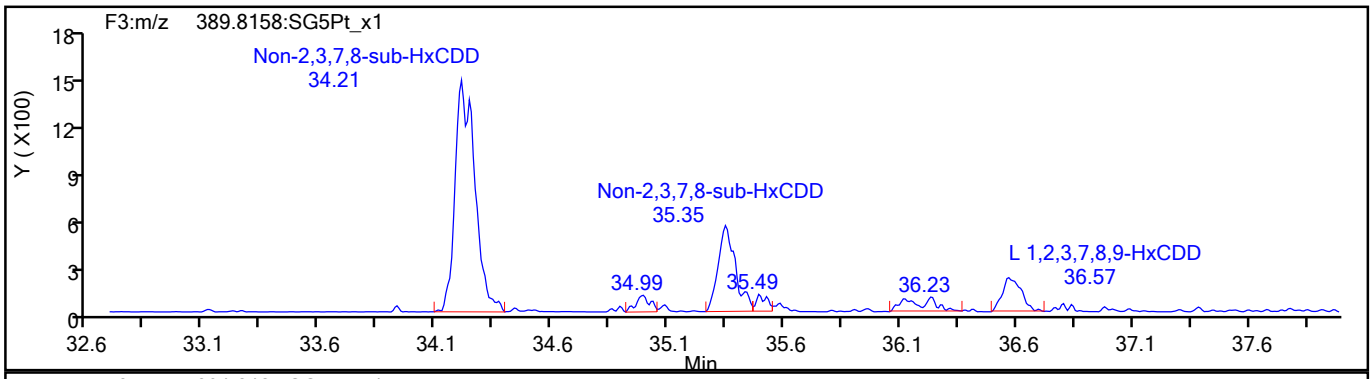

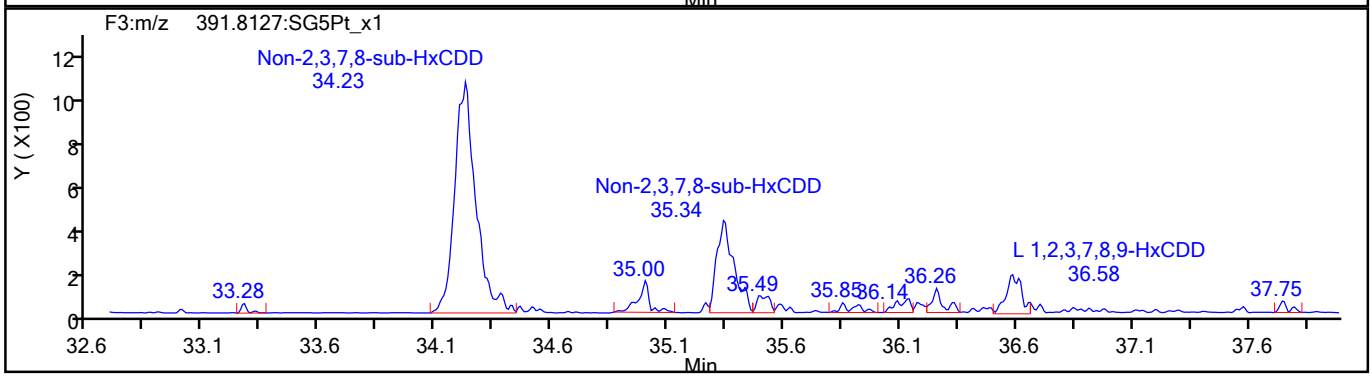

HxCDD Standards

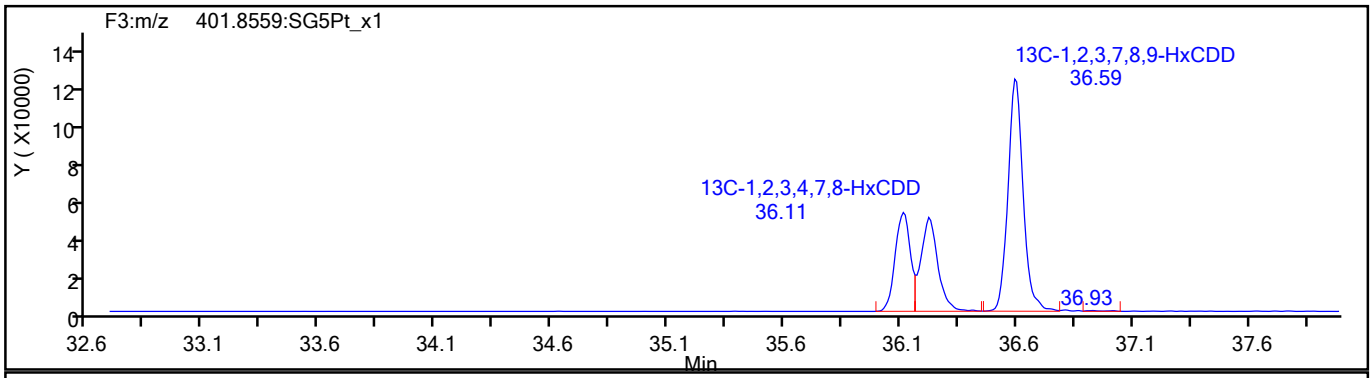

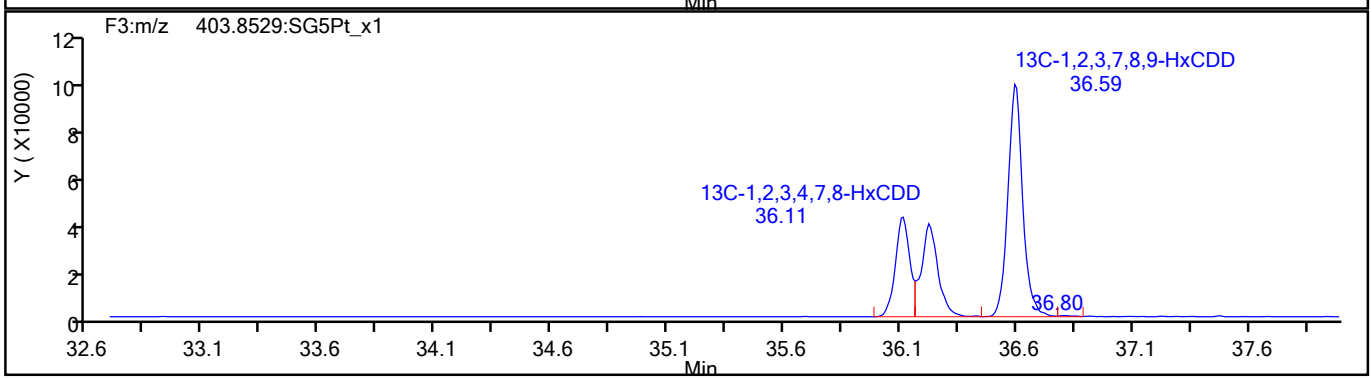

788508

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

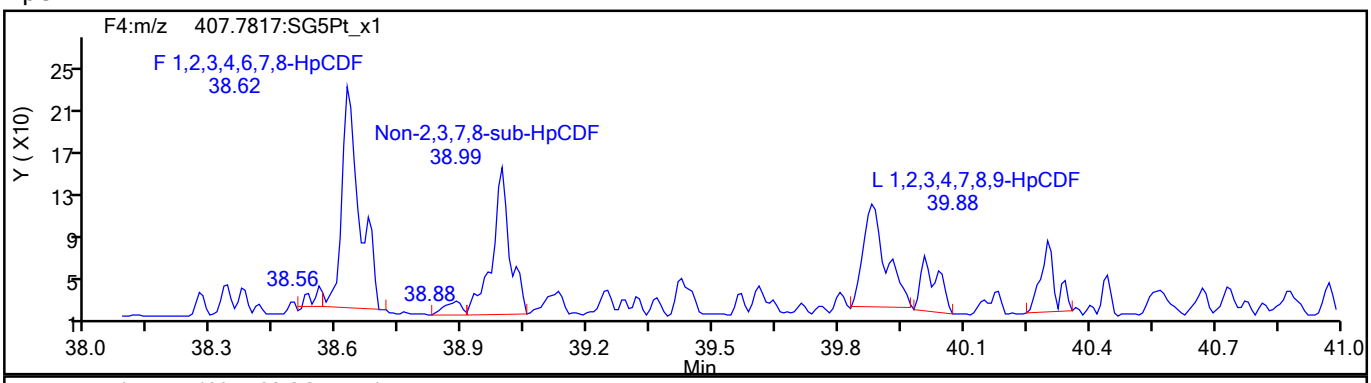

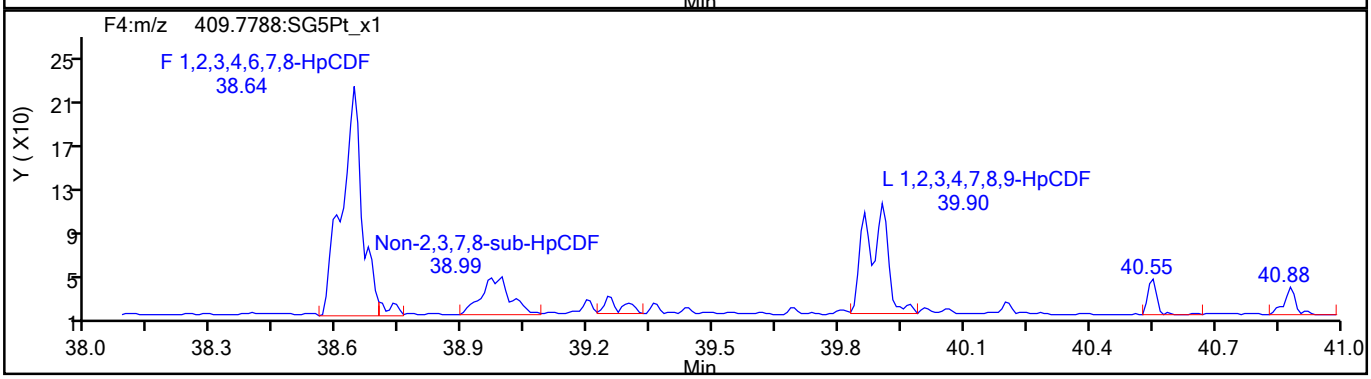

HpCDF Standards

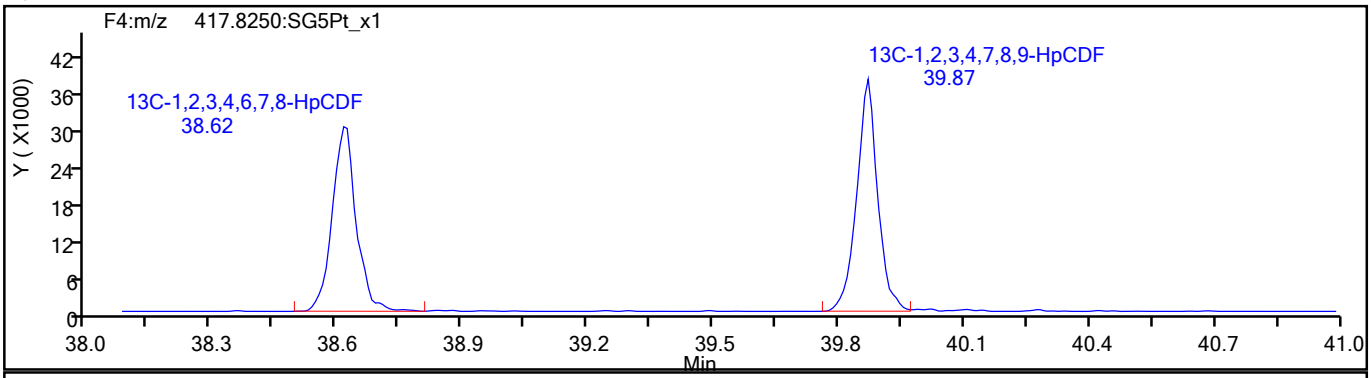

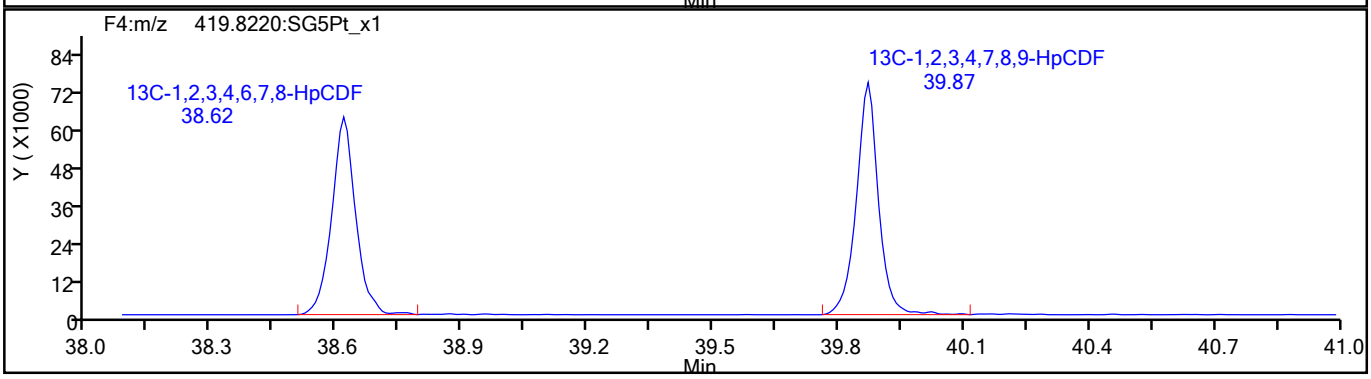

788509

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

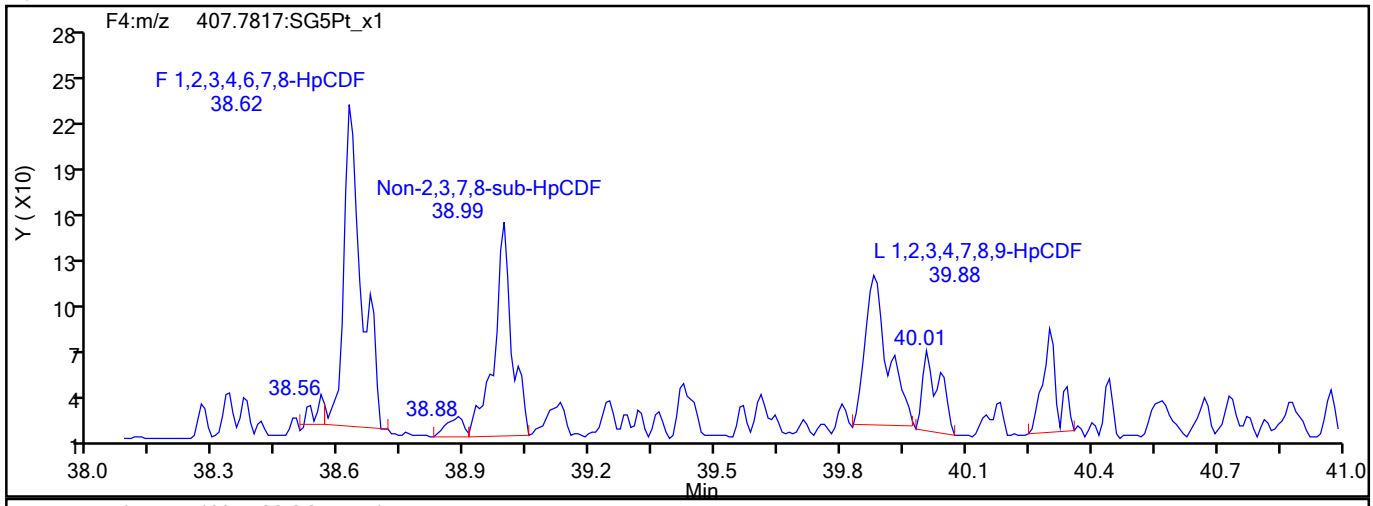

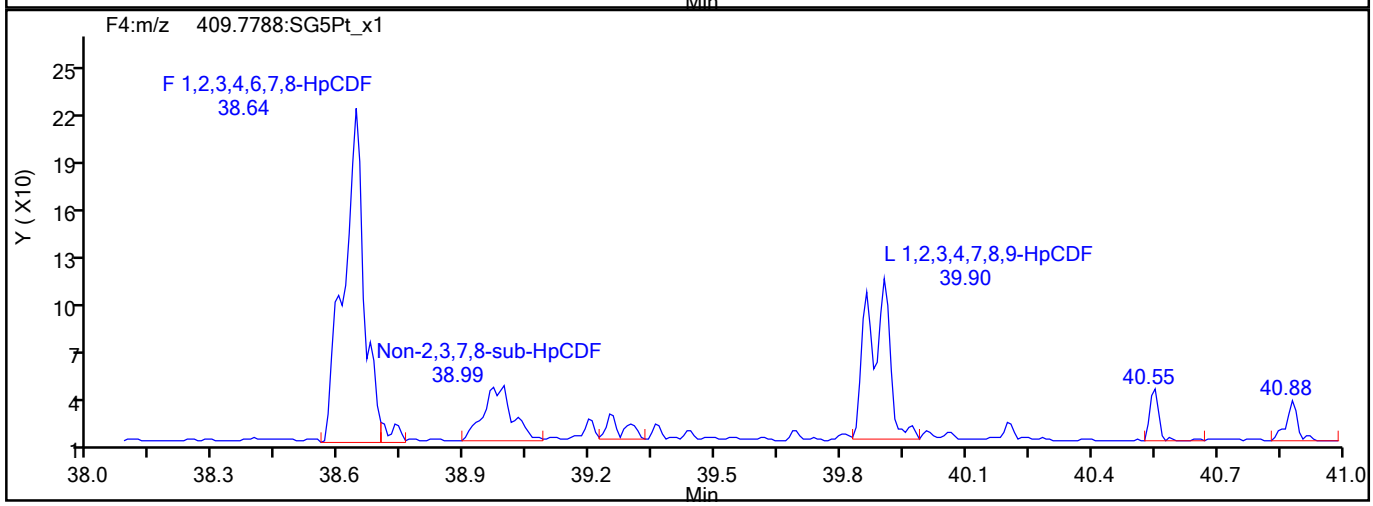

HpCDF Interference Mass

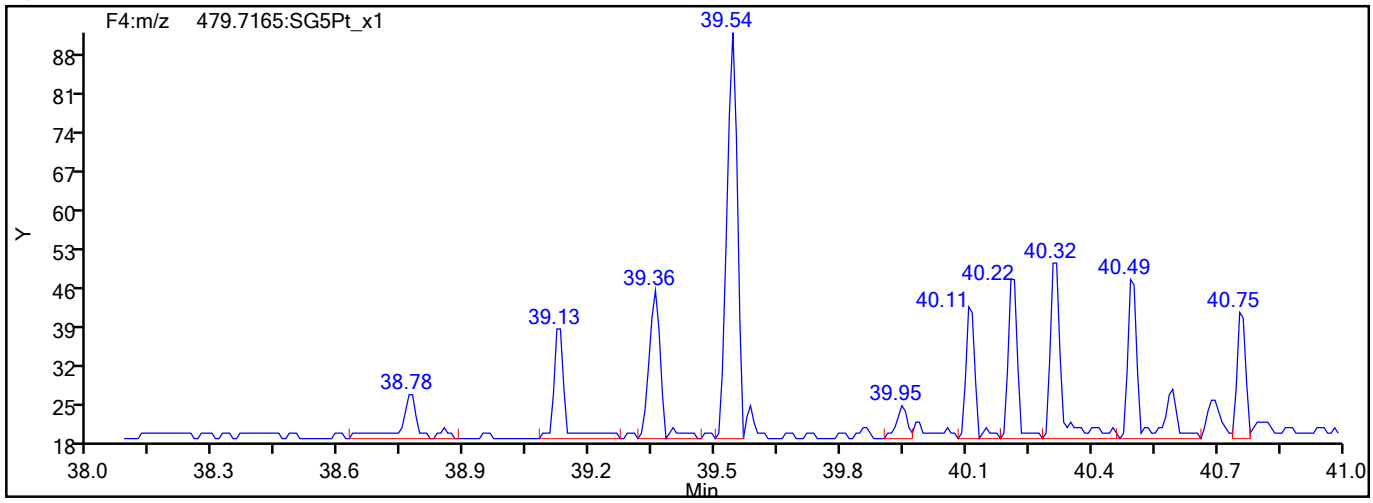

788510

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

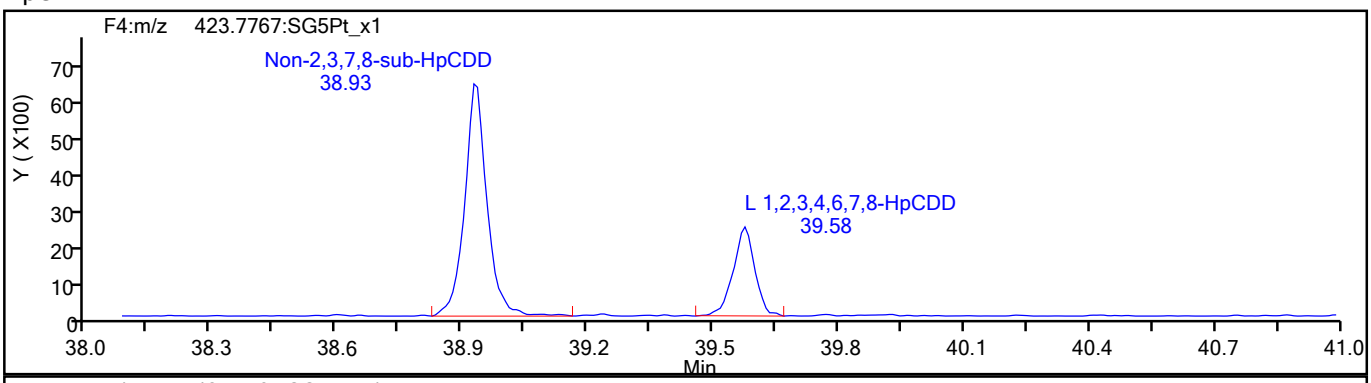

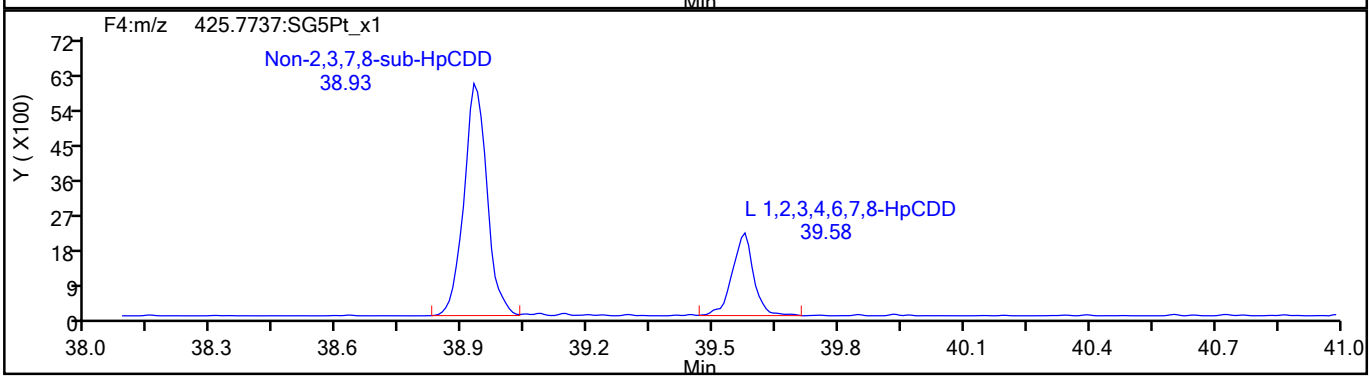

HpCDD Standards

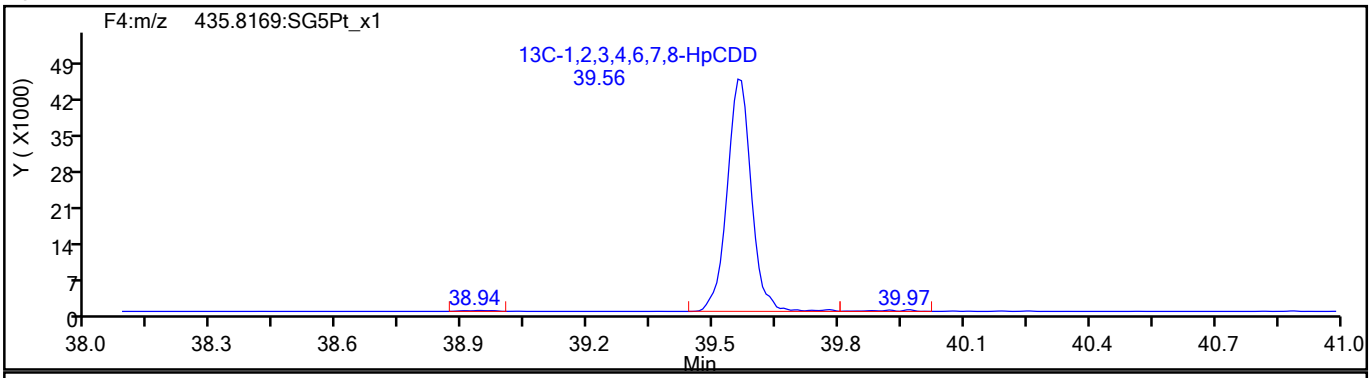

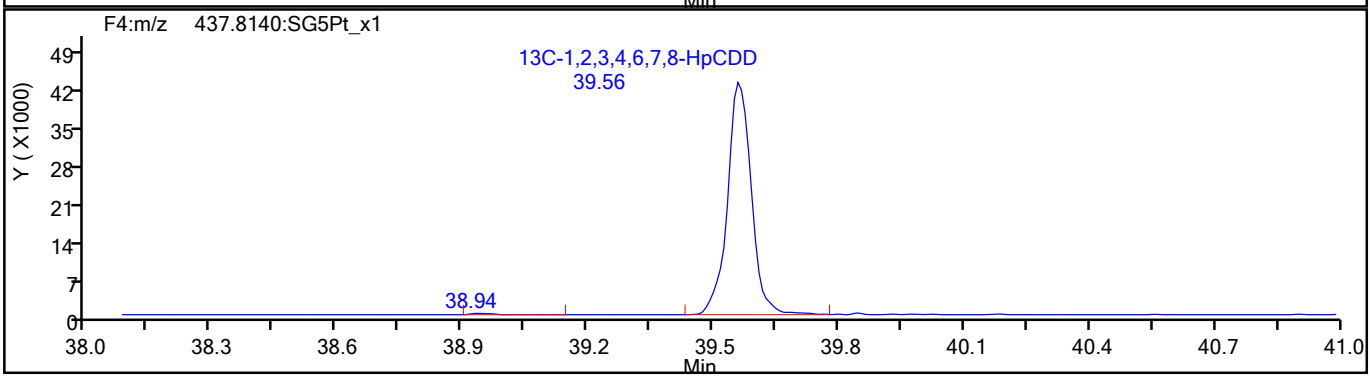

788511

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

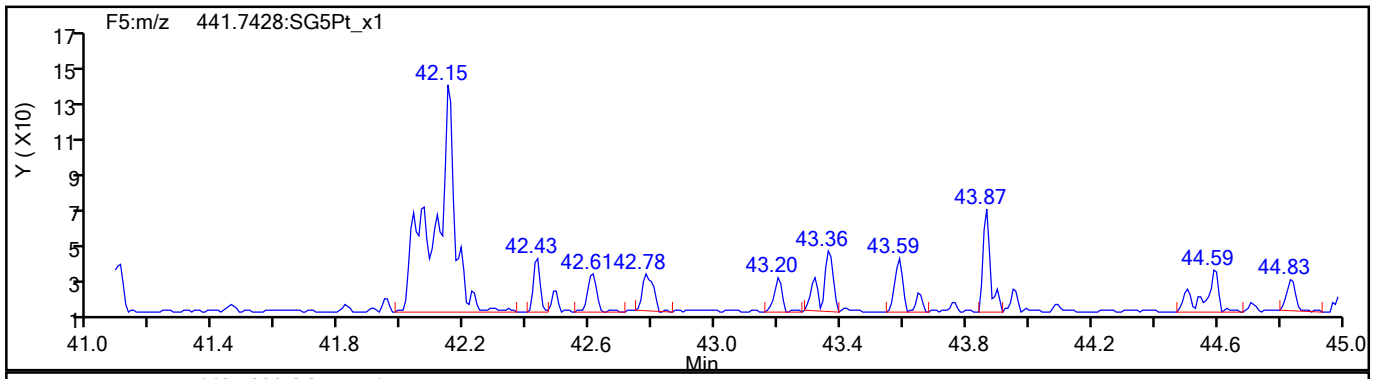

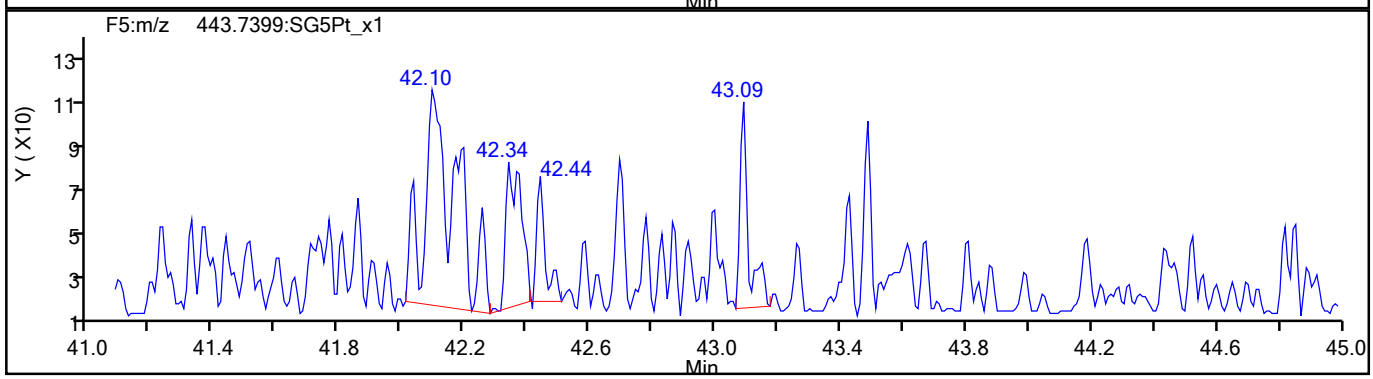

OCDF Standards

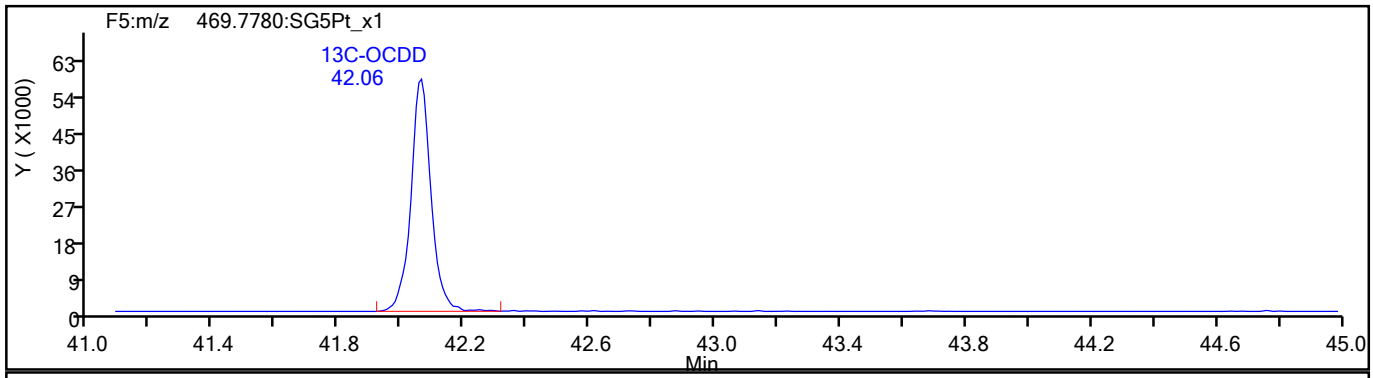

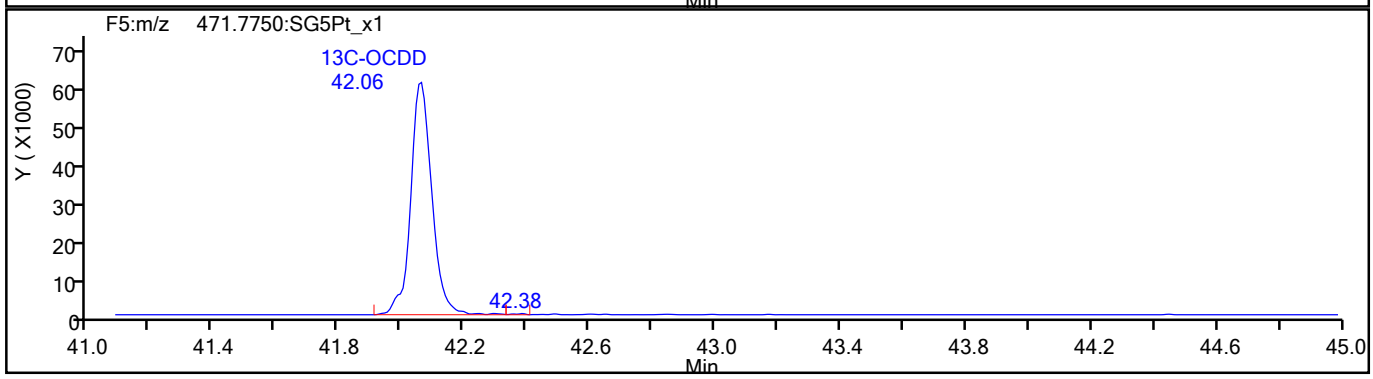

788512

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

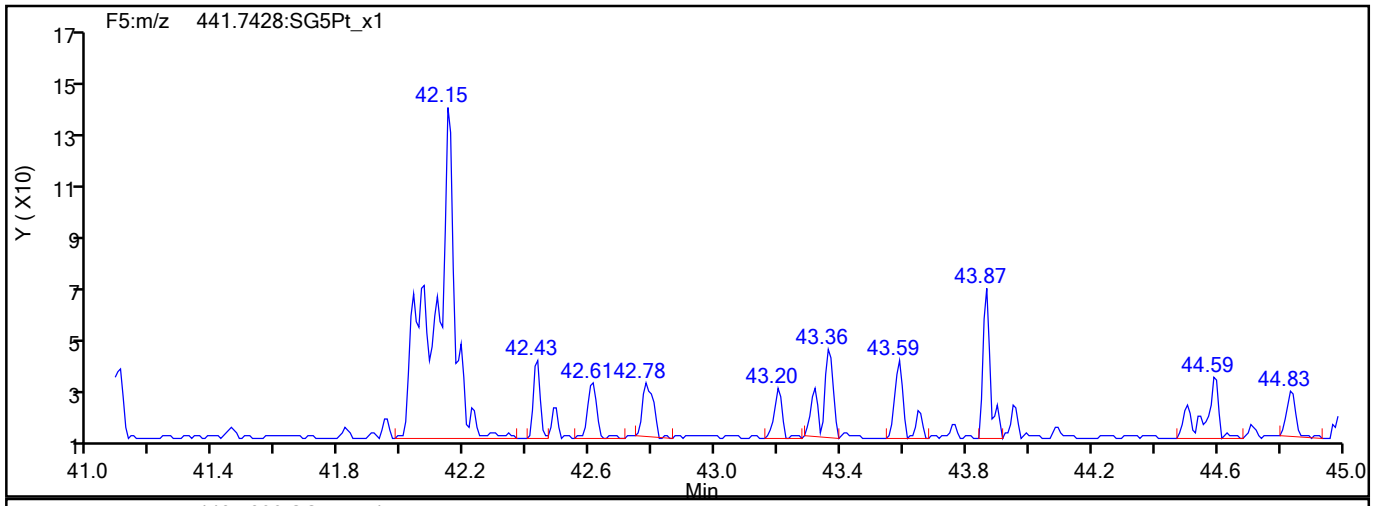

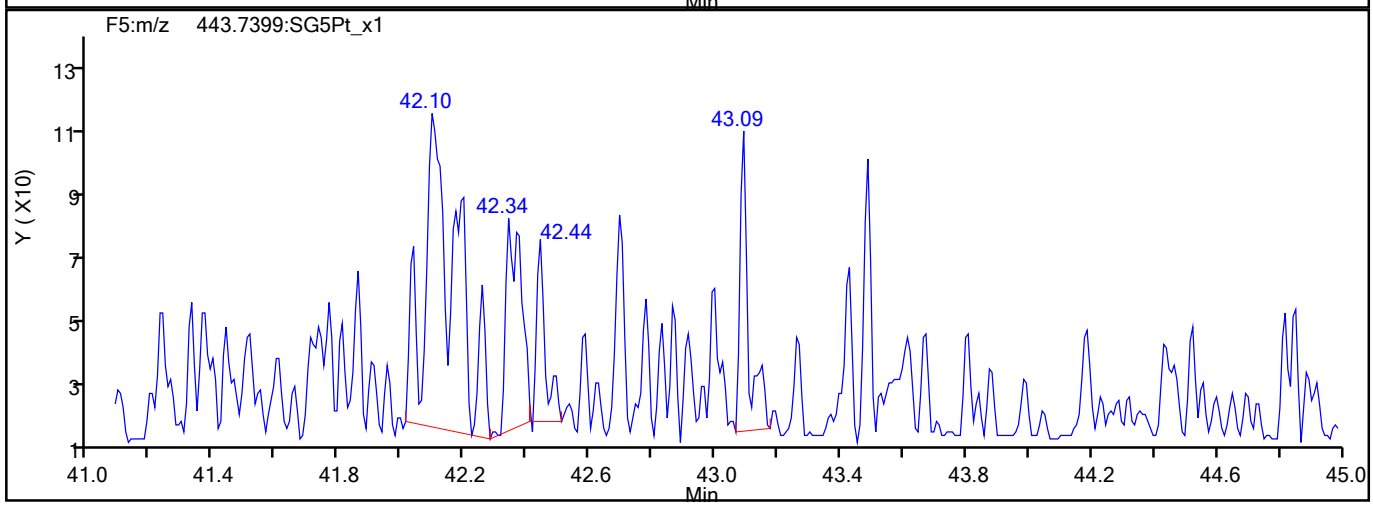

OCDF Interference Mass

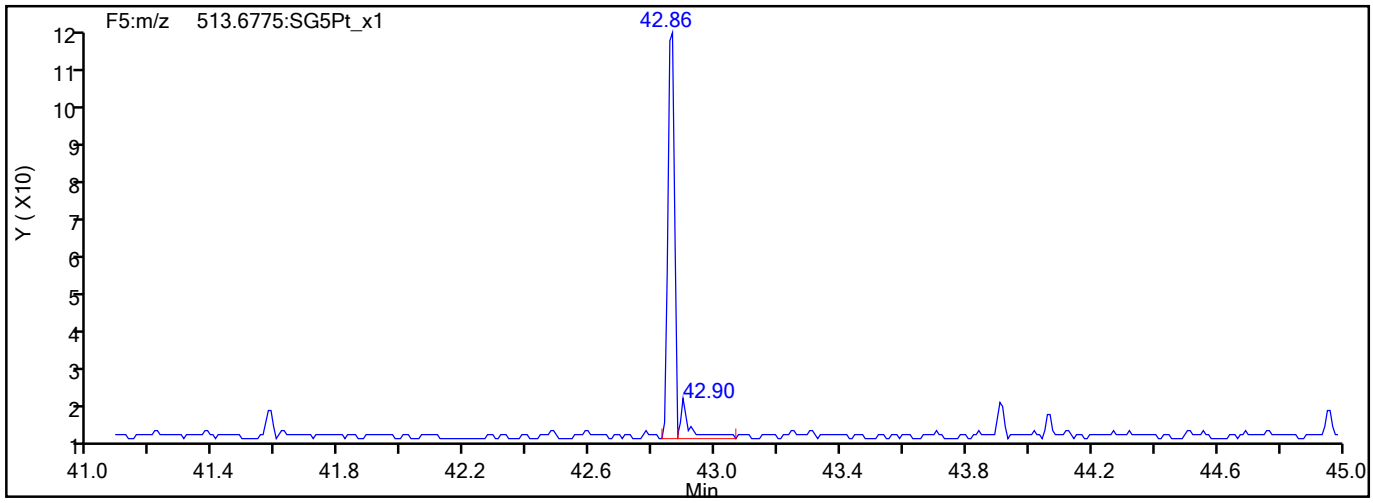

788513

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

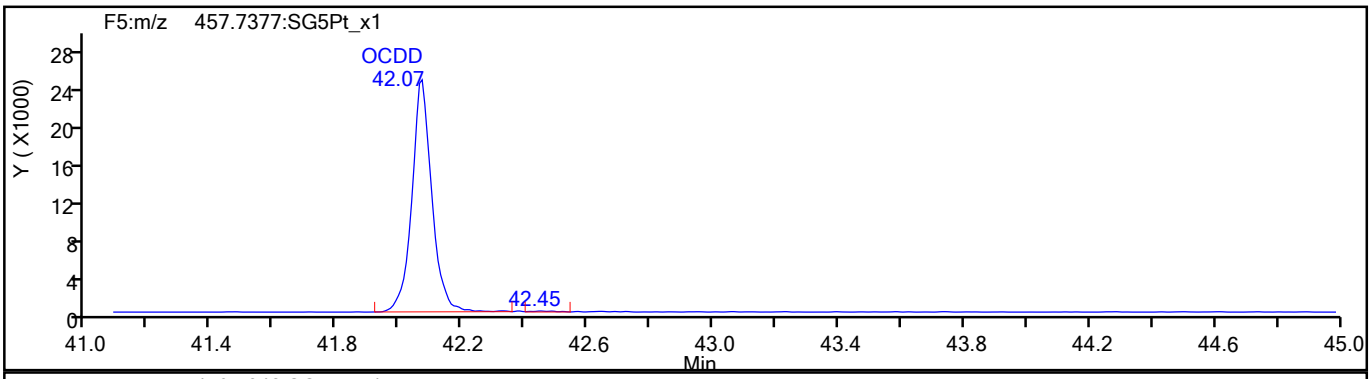

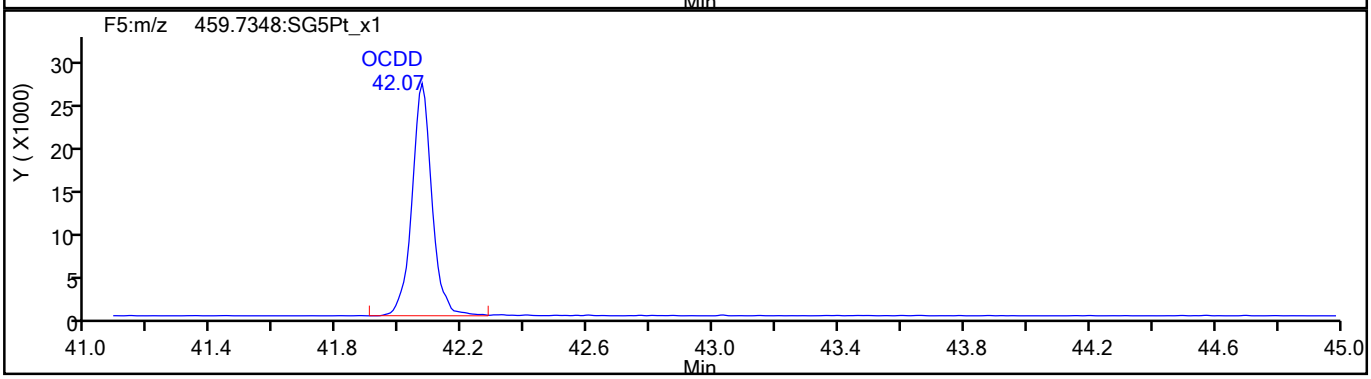

OCDD Standards

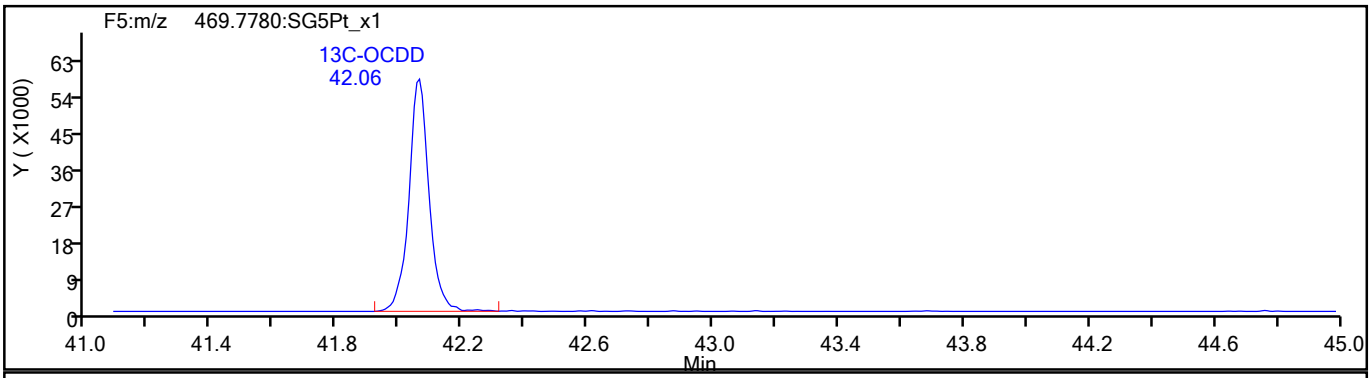

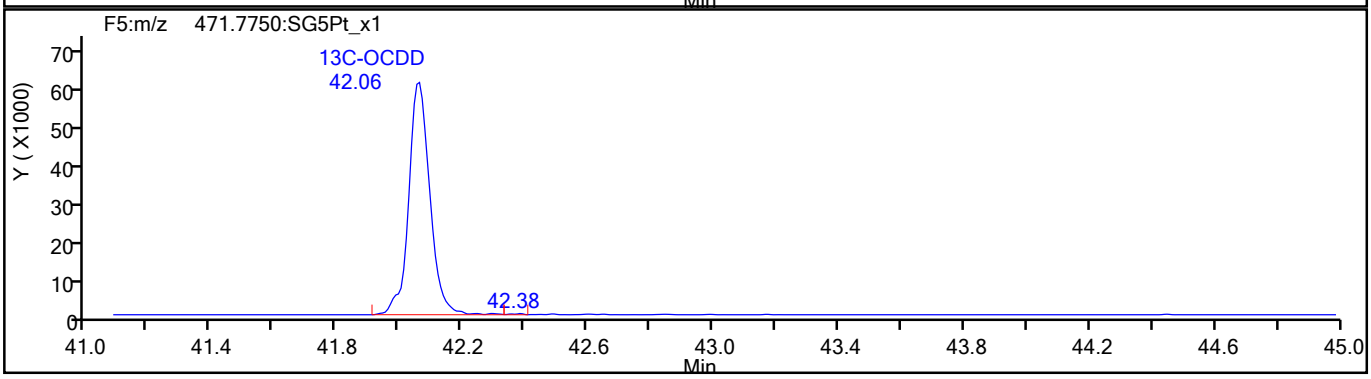

788514

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

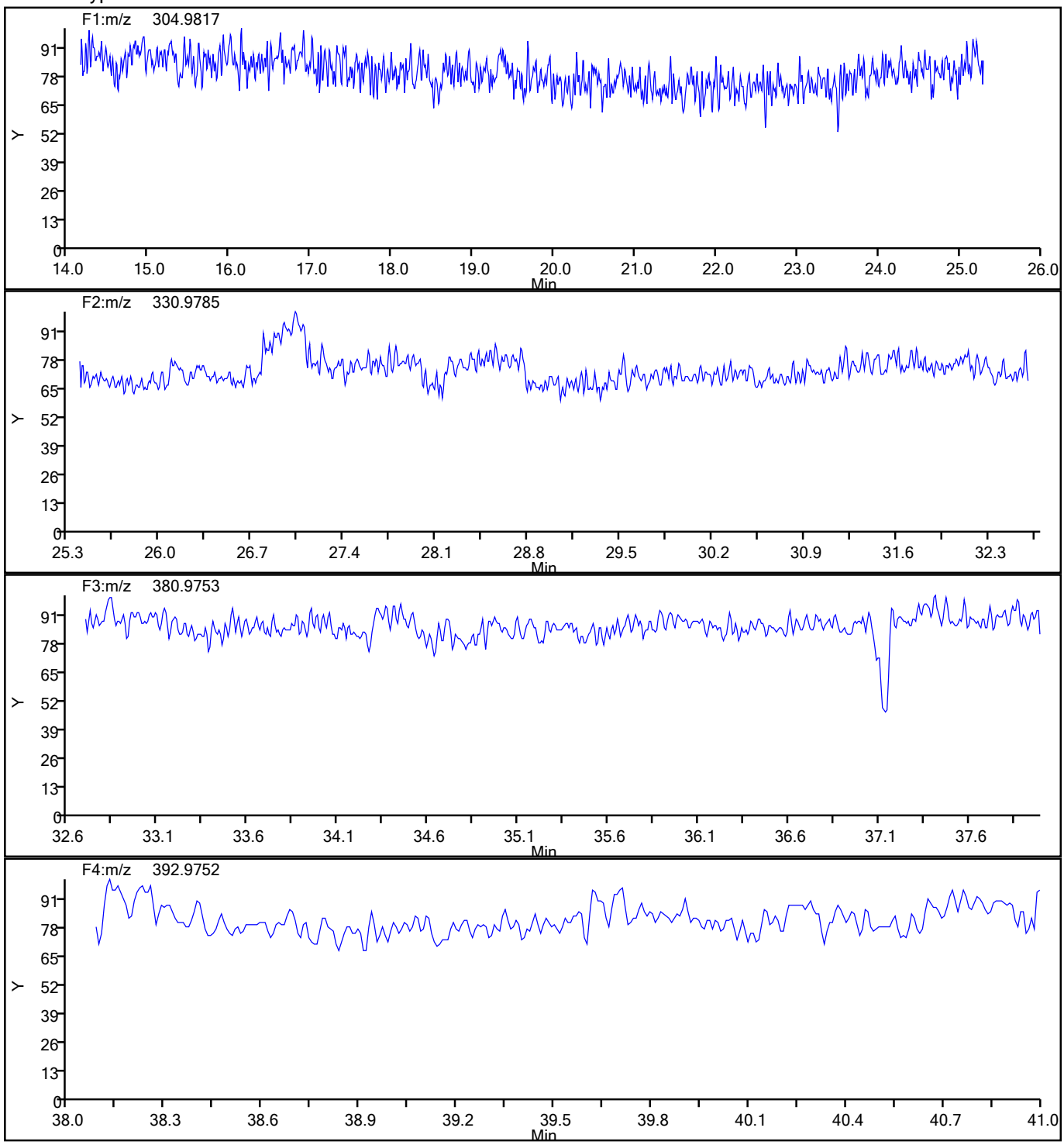

788515

Report Date: 23-Aug-2021 09:19:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_10.d		
Injection Date:	19-Aug-2021 20:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	517891	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

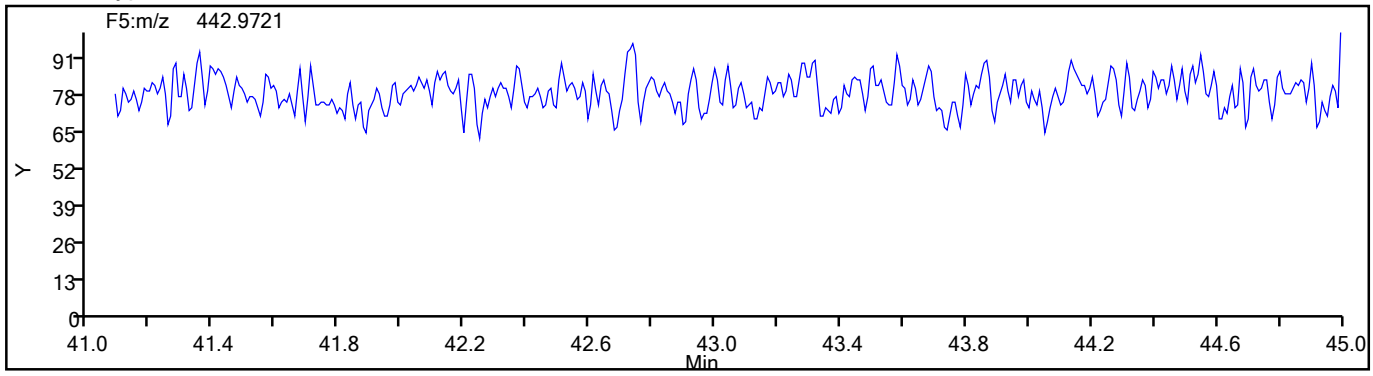

788516

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (10-12) RA
Lab Sample ID: 320-76901-6 RA
Matrix: Sediment
Lab File ID: 27AU2111D2_005.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:25
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.15(g)
Date Analyzed: 08/27/2021 11:35
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	150	B	1.3	0.43

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	49		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	63		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_005.d
Lims ID: 320-76901-A-6-A
Client ID: 11215702-072821-BN-SJSB095 (10-12)
Sample Type: Client
Inject. Date: 27-Aug-2021 11:35:36 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-6-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:49:35

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.297	58115440	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.614	37837230	0.78	1.3327	48.9	48.9	0.1837	0.1837	48.85	
2,3,7,8-TCDF	17.642	22619235	0.80	0.9978	59.9	59.9	0.1685	0.1685		
D 13C-2,3,7,8-TCDD	16.064	23849156	0.76	0.8749	46.9	46.9	0.9762	0.9762	46.90	
2,3,7,8-TCDD	16.078	4044203	0.79	1.0570	16.0	16.0	0.1713	0.1713		
$ 37Cl4-2,3,7,8-TCDD	16.078	12733974		0.8648	25.3	25.3	0.0577	0.0577	63.34	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

788518

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_005.d
Lims ID: 320-76901-A-6-A
Client ID: 11215702-072821-BN-SJSB095 (10-12)
Sample Type: Client
Inject. Date: 27-Aug-2021 11:35:36 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-6-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:49:35

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.297	16.284	1		25415145	5744132	21936	54840	262		
333.9339	16.297	16.284	1		32700295	7398783	22966	57415	322	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.614	17.614	0	1.081	16610593	3029407	5856	14640	517		
317.9389	17.614	17.614	0	1.081	21226637	3749399	7016	17540	534	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.642	17.628	1	1.002	10033589	1849734	1765	4412	1048		
305.8987	17.642	17.628	1	1.002	12585646	2241541	2793	6982	803	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.064	0	0.986	10274195	2522055	21936	54840	115		
333.9339	16.064	16.064	0	0.986	13574961	3149957	22966	57415	137	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.078	16.078	0	1.001	1784103	376100	2227	5567	169		
321.8936	16.078	16.078	0	1.001	2260100	501804	1881	4702	267	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.078	0	0.987	12733974	2846113	2623	6557	1085		

QC Flag Legend

Processing Flags

Report Date: 27-Aug-2021 15:52:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_005.d		
Injection Date:	27-Aug-2021 11:35:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	520438	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

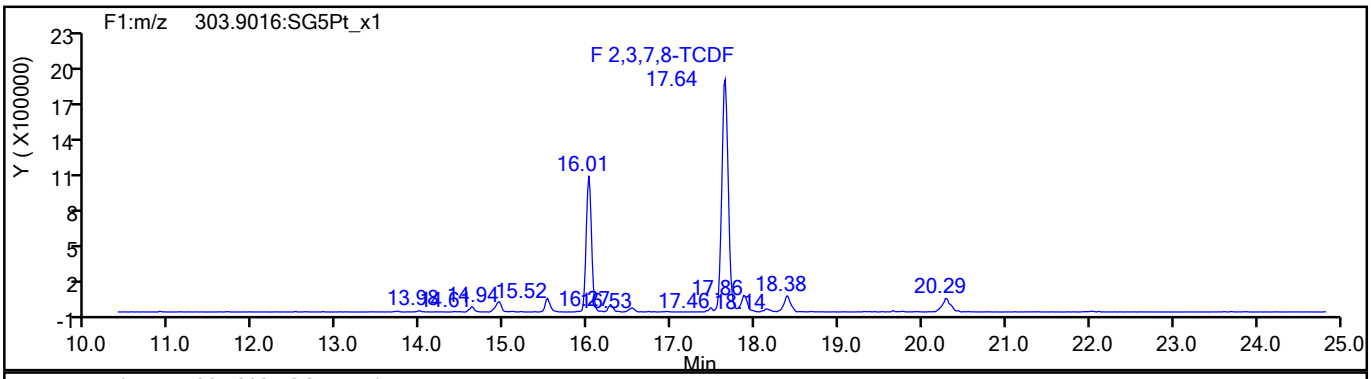

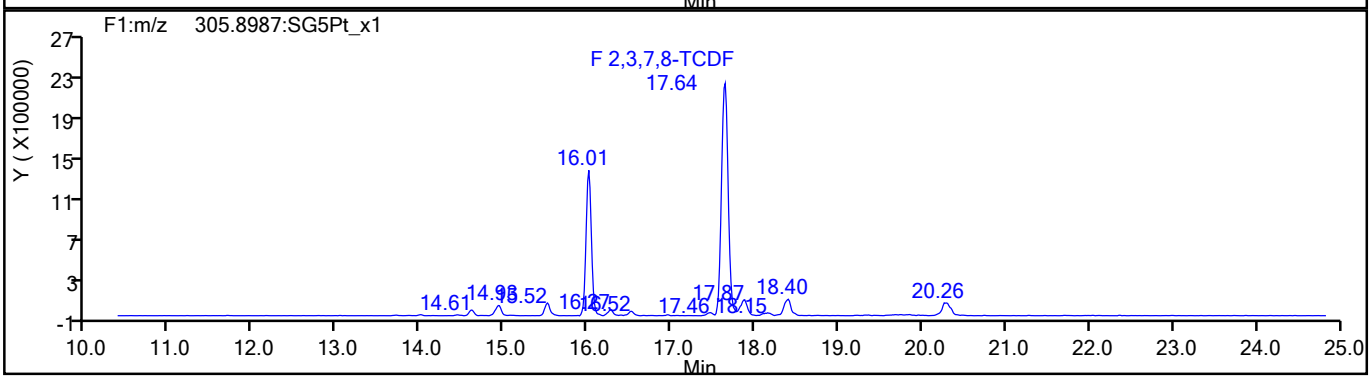

TCDF Standards

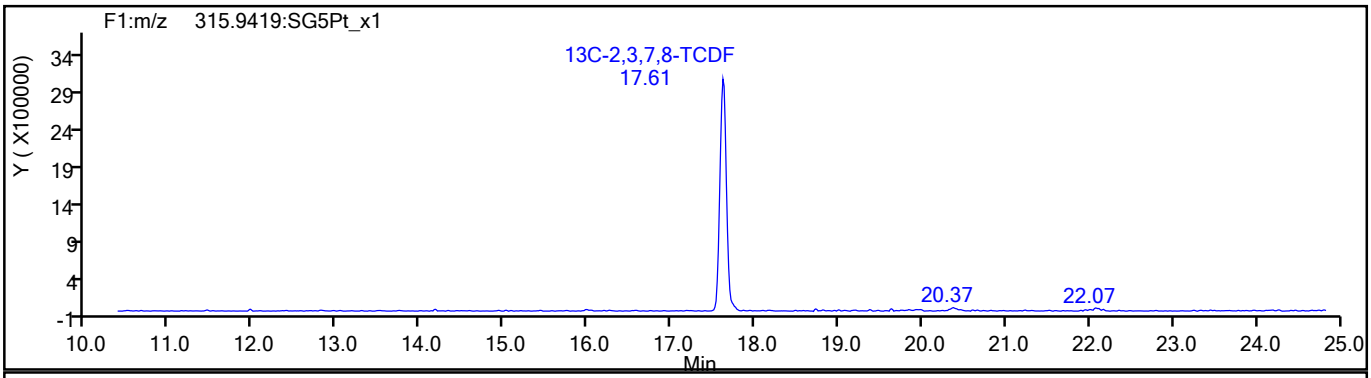

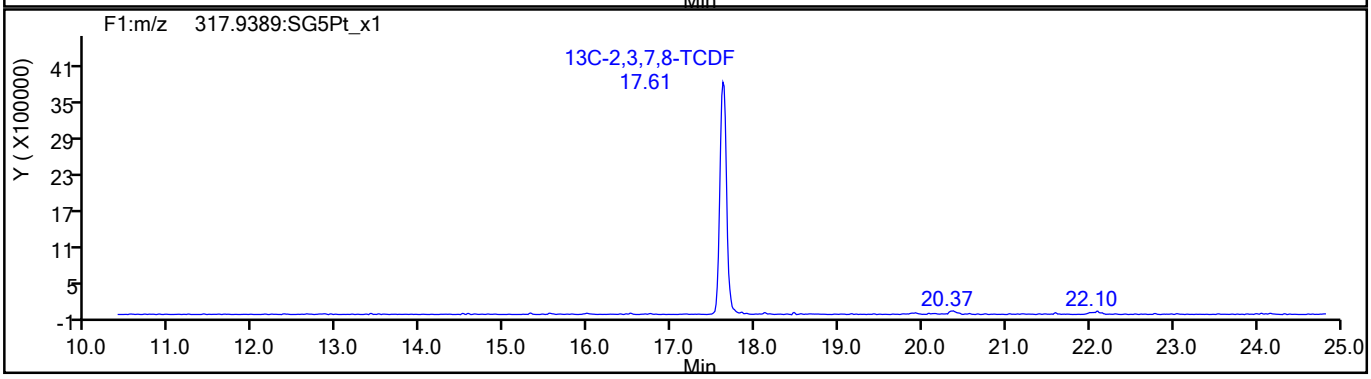

788520

Report Date: 27-Aug-2021 15:52:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_005.d		
Injection Date:	27-Aug-2021 11:35:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	520438	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

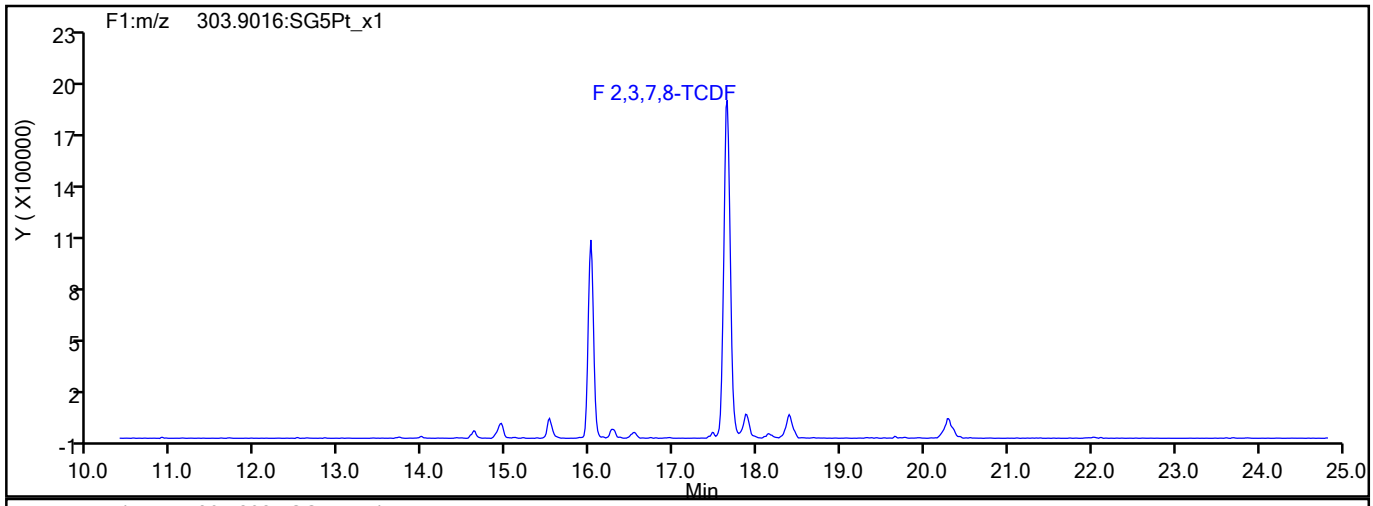

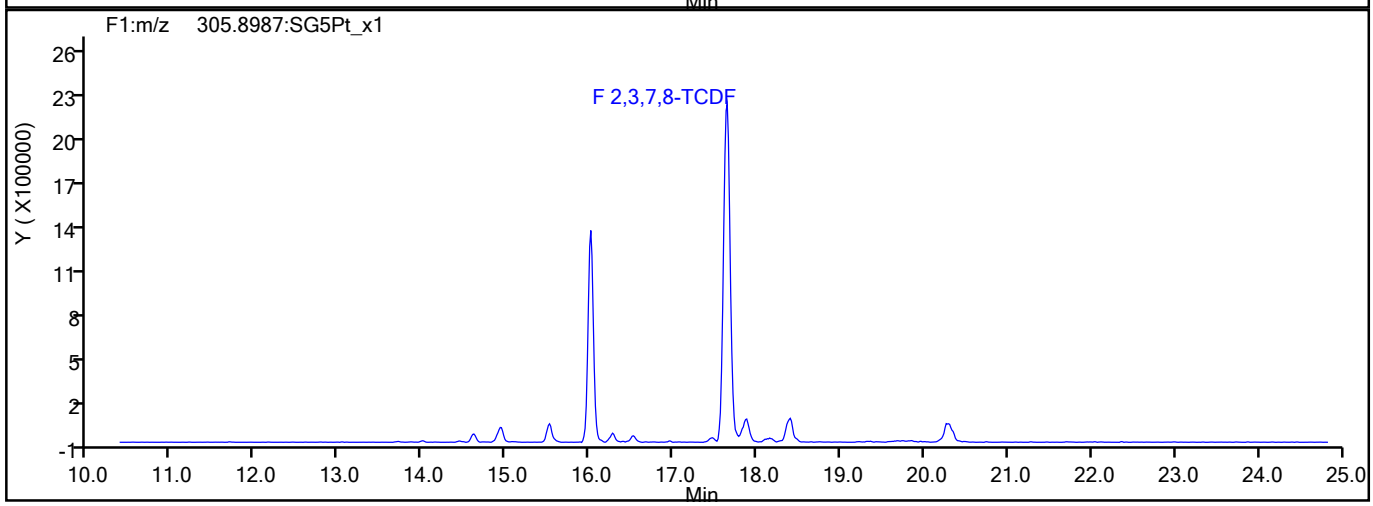

TCDF Interference Mass

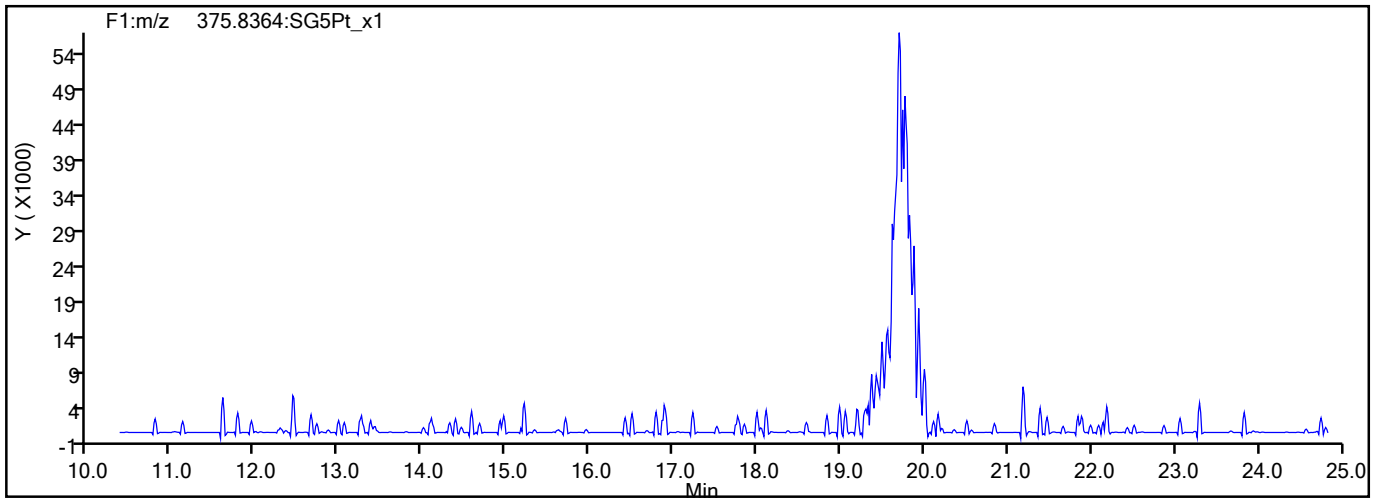

788521

Report Date: 27-Aug-2021 15:52:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_005.d		
Injection Date:	27-Aug-2021 11:35:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	520438	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

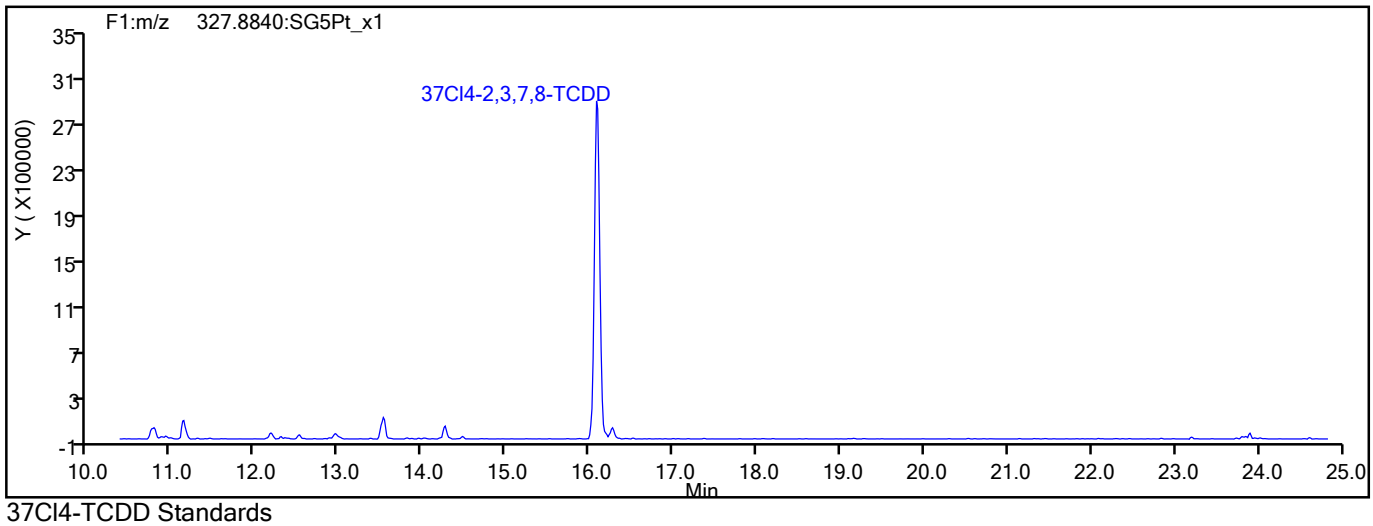

37Cl4-TCDD Standards

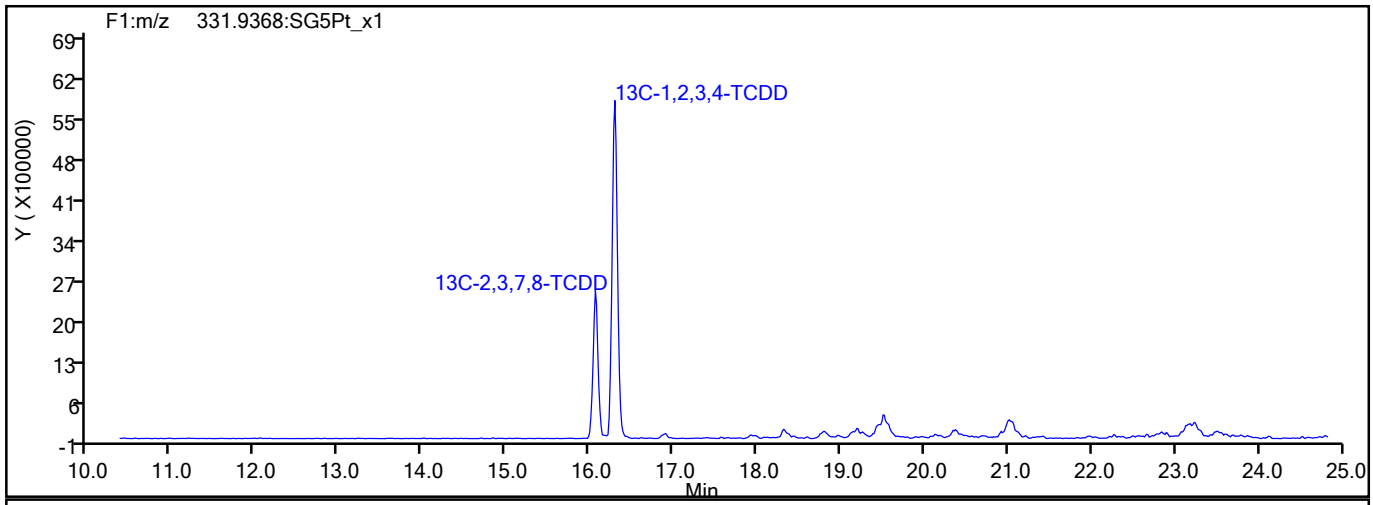

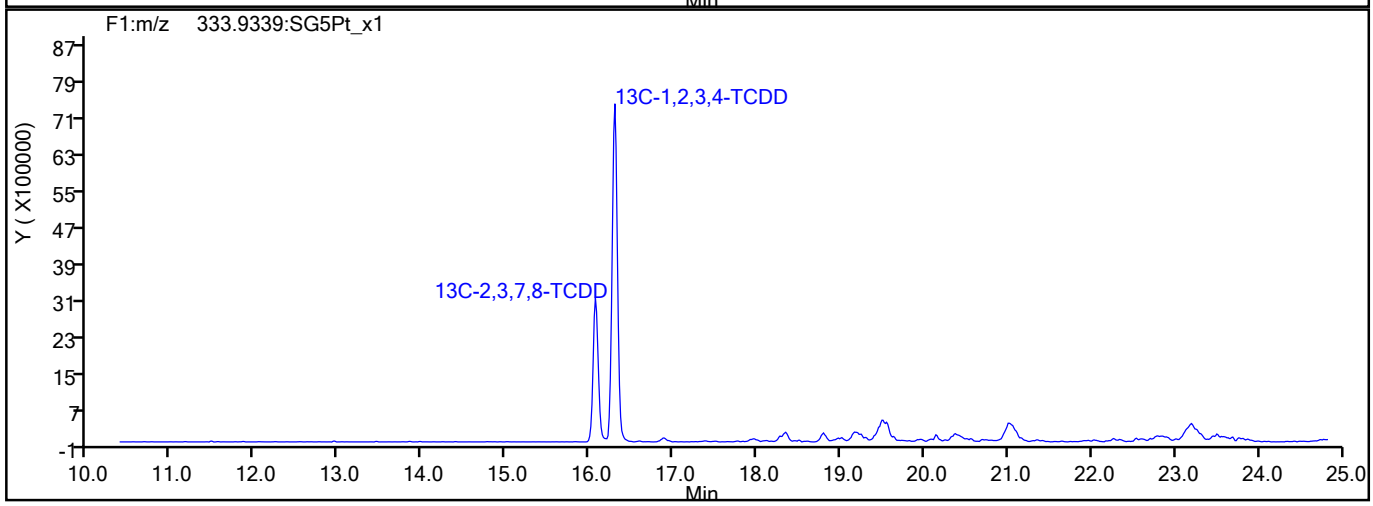

788522

Report Date: 27-Aug-2021 15:52:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_005.d		
Injection Date:	27-Aug-2021 11:35:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (10-12)		
Worklist#:	520438	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

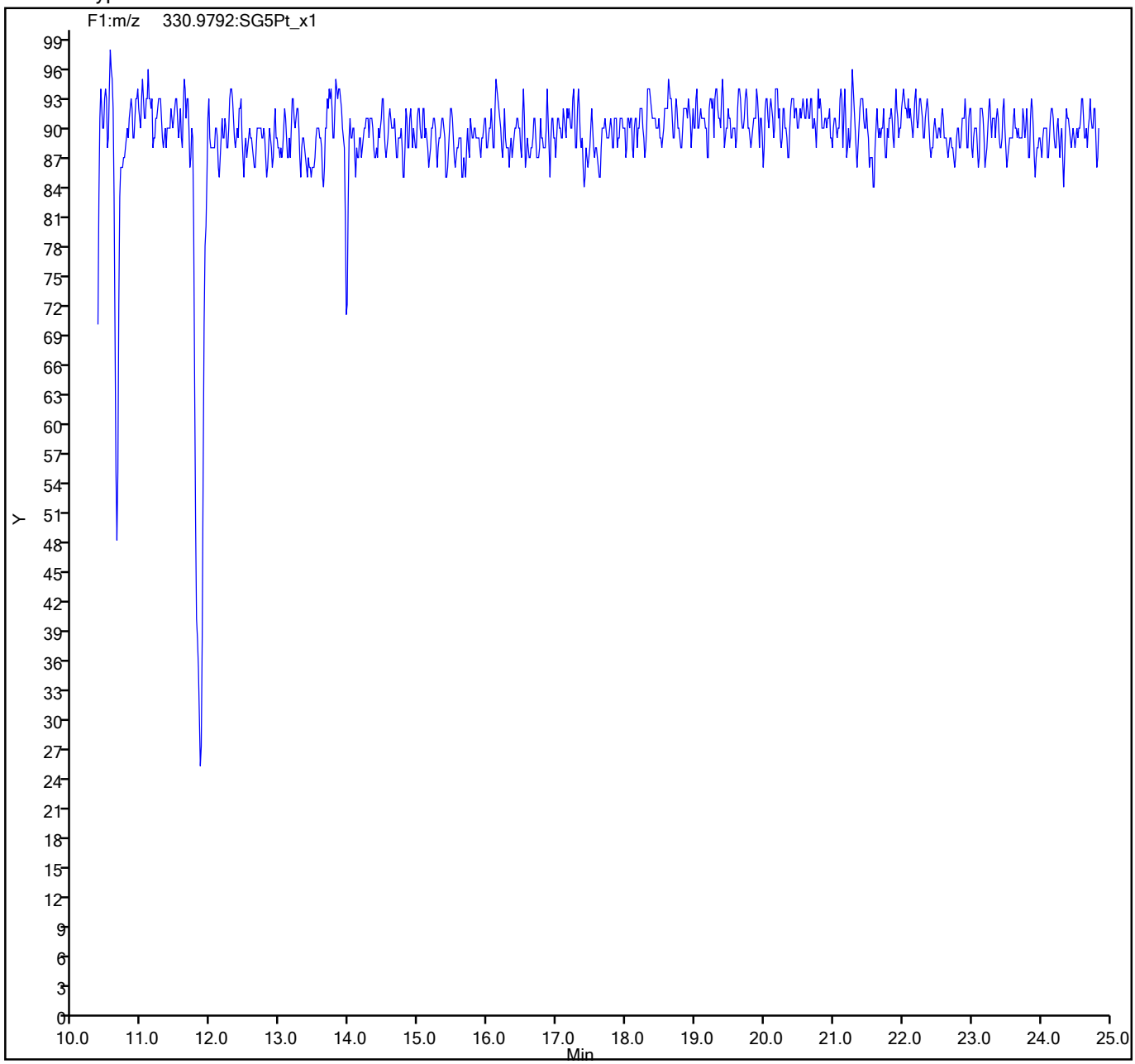

788523

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (12-14)
Lab Sample ID: 320-76901-7
Matrix: Sediment
Lab File ID: 19au21dfs1_11.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:30
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.33(g)
Date Analyzed: 08/19/2021 21:15
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	4.1		1.3	0.061
40321-76-4	1,2,3,7,8-PeCDD	ND		6.3	0.10
57117-41-6	1,2,3,7,8-PeCDF	ND		6.3	0.071
57117-31-4	2,3,4,7,8-PeCDF	ND		6.3	0.078
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.3	0.057
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.3	0.060
19408-74-3	1,2,3,7,8,9-HxCDD	ND		6.3	0.054
70648-26-9	1,2,3,4,7,8-HxCDF	ND		6.3	0.032
57117-44-9	1,2,3,6,7,8-HxCDF	ND		6.3	0.032
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.3	0.030
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.3	0.029
35822-46-9	1,2,3,4,6,7,8-HpCDD	6.5	B	6.3	0.12
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.29	J B	6.3	0.044
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.3	0.043
3268-87-9	OCDD	130	B	13	0.26
39001-02-0	OCDF	ND		13	0.12
41903-57-5	Total TCDD	4.1		1.3	0.061
30402-14-3	Total TCDF	25	B q	1.3	0.12
36088-22-9	Total PeCDD	ND		6.3	0.69
30402-15-4	Total PeCDF	ND		6.3	0.078
34465-46-8	Total HxCDD	6.2	J q	6.3	0.057
55684-94-1	Total HxCDF	ND		6.3	0.075
37871-00-4	Total HpCDD	25	B	6.3	0.12
38998-75-3	Total HpCDF	0.29	J B	6.3	0.044

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (12-14)
Lab Sample ID: 320-76901-7
Matrix: Sediment
Lab File ID: 19au21dfs1_11.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:30
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.33(g)
Date Analyzed: 08/19/2021 21:15
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	38		25-164
89059-46-1	13C-2,3,7,8-TCDF	38		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	34		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	37		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	39		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	45		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	42		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	50		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	44		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	41		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	42		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	50		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	48		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	53		26-138
114423-97-1	13C-OCDD	47		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	52		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d
Lims ID: 320-76901-A-7-A
Client ID: 11215702-072821-BN-SJSB095 (12-14)
Sample Type: Client
Inject. Date: 19-Aug-2021 21:15:00 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-7-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:22:23 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 17:00:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.357	1044344	0.79	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.419	533591	0.77	1.3459	38.0	38.0	0.1126	0.1126	37.96	
2,3,7,8-TCDF	20.445	41613	0.68	1.0802	7.220	7.220	0.0460	0.0460		M
A Non-2,3,7,8-sub-TCDF	19.851	14536	0.77	1.0802	2.810	2.522	0.0460	2.522		RQMa
S Total TCDF					10.0	9.742	0.0460	0.0460		RQ
D 13C-2,3,7,8-TCDD	21.752	372824	0.83	0.9317	38.3	38.3	0.1365	0.1365	38.32	
2,3,7,8-TCDD	21.761	6552	0.78	1.0753	1.634	1.634	0.0244	0.0244		M
$ 37Cl4-2,3,7,8-TCDD	21.778	217054		1.0083	20.6	20.6	0.0110	0.0110	51.53	
A Non-2,3,7,8-sub-TCDD	20.684						0.0244	0.2028		RQU
S Total TCDD					1.634	1.634	0.0244	0.0244		
D 13C-1,2,3,7,8-PeCDF	27.237	442361	1.56	1.1405	37.1	37.1	0.1200	0.1200	37.14	
1,2,3,7,8-PeCDF	27.237						0.0283	0.0283		RQU
D 13C-2,3,4,7,8-PeCDF	28.761	456922	1.62	1.1253	38.9	38.9	0.1216	0.1216	38.88	
2,3,4,7,8-PeCDF	28.811						0.0307	0.0307		RQU
A F1 PeCDFs	24.634						0.007375	0.007375		
A Non-2,3,7,8-sub-PeCDF	28.173						0.0295	0.0311		RQU
S Total PeCDF							0.0311	0.0311		
D 13C-1,2,3,7,8-PeCDD	29.561	252990	1.57	0.7165	33.8	33.8	0.1104	0.1104	33.81	
1,2,3,7,8-PeCDD	29.616						0.0407	0.0407		
A Non-2,3,7,8-sub-PeCDD	28.478						0.0407	0.2716		RQU
S Total PeCDD							0.2716	0.2716		
D 13C-1,2,3,4,7,8-HxCDF	34.911	450864	0.52	0.9648	49.8	49.8	0.1786	0.1786	49.78	
1,2,3,4,7,8-HxCDF	34.919						0.0126	0.0126		U
D 13C-1,2,3,6,7,8-HxCDF	35.071	446563	0.57	1.0708	44.4	44.4	0.1609	0.1609	44.42	
1,2,3,6,7,8-HxCDF	35.099						0.0127	0.0127		
D 13C-2,3,4,6,7,8-HxCDF	35.896	411880	0.54	1.0413	42.1	42.1	0.1655	0.1655	42.13	
2,3,4,6,7,8-HxCDF	35.916						0.0116	0.0116		
D 13C-1,2,3,7,8,9-HxCDF	36.789	370757	0.55	0.9731	40.6	40.6	0.1771	0.1771	40.59	
1,2,3,7,8,9-HxCDF	36.791						0.0121	0.0121		
A Non-2,3,7,8-sub-HxCDF	35.009						0.0122	0.0298		RQU
S Total HxCDF							0.0298	0.0298		

788526

Report Date: 23-Aug-2021 09:22:23 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.595	938750	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.115	320982	1.25	0.7587	45.1	45.1	0.1383	0.1383	45.07	Ma
1,2,3,4,7,8-HxCDD	36.166						0.0227	0.0227		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.225	335197	1.27	0.8593	41.6	41.6	0.1221	0.1221	41.56	M
1,2,3,6,7,8-HxCDD	36.166						0.0239	0.0239		RQU
1,2,3,7,8,9-HxCDD	36.606						0.0216	0.0216		
A Non-2,3,7,8-sub-HxCDD	35.375	8489	1.24	1.0545	2.686	2.454	0.0227	1.875		RQ
S Total HxCDD					2.686	2.454	0.0227	0.0227		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.613	331132	0.46	0.7359	47.9	47.9	0.1756	0.1756	47.93	
1,2,3,4,6,7,8-HpCDF	38.638	550	0.99	1.4421	0.1152	0.1152	0.0173	0.0173		M
D 13C-1,2,3,4,7,8,9-HpCDF	39.868	338314	0.46	0.6854	52.6	52.6	0.1885	0.1885	52.58	
1,2,3,4,7,8,9-HpCDF	39.944						0.0172	0.0172		RQU
A Non-2,3,7,8-sub-HpCDF	39.245						0.0172	0.0172		
S Total HpCDF					0.1152	0.1152	0.0173	0.0173		
D 13C-1,2,3,4,6,7,8-HpCDD	39.565	314276	1.04	0.6745	49.6	49.6	0.1540	0.1540	49.63	
1,2,3,4,6,7,8-HpCDD	39.565	8479	0.99	1.0503	2.569	2.569	0.0472	0.0472		
A Non-2,3,7,8-sub-HpCDD	39.241	24138	1.14	1.0503	7.313	7.313	0.0472	7.313		M
S Total HpCDD					9.881	9.881	0.0472	0.0472		
D 13C-OCDD	42.063	478219	0.90	0.5446	93.5	93.5	0.1489	0.1489	46.77	
OCDF	42.157						0.0466	0.0466		
OCDD	42.072	129933	0.91	1.0620	51.2	51.2	0.1024	0.1024		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d
Lims ID: 320-76901-A-7-A
Client ID: 11215702-072821-BN-SJSB095 (12-14)
Sample Type: Client
Inject. Date: 19-Aug-2021 21:15:00 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-7-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:22:23 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 17:00:37

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.357	21.395	-2		460148	61191	48	120	1275		
333.9338	21.357	21.395	-2		584196	74032	21	52	3525	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.419	20.365	3	0.956	231792	31092	60	150	518		
317.9389	20.419	20.365	3	0.956	301799	39370	22	55	1790	0.77(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.445	20.408	2	1.001	16896	2105	3	7	702		M
305.8987	20.436	20.408	2	1.001	24717	3139	11	27	285	0.68(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQMa
303.9016	19.722	19.851	-8	0.966	6324	1100	3	7	367		a
305.8987	19.713	19.851	-8	0.965	9871	1570	11	27	143	0.64(0.65-0.89)	
	Empc Correction				8212	1428	11	27	130		
13C-2,3,7,8-TCDD											
331.9368	21.752	21.716	2	1.019	168576	20786	48	120	433		
333.9338	21.744	21.716	2	1.018	204248	25008	21	52	1191	0.83(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.761	21.733	2	1.000	2869	441	4	10	110		M
321.8936	21.778	21.733	3	1.001	3683	537	1	2	537	0.78(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	21.778	21.799	-1	1.020	217054	27455	6	15	4576		
A Non-2,3,7,8-sub-TCDD											U
319.8965	17.811	20.684	-172	0.819	71	48	4	10	12		
	Empc Correction				16	9	4	10	2		
321.8936	17.777	20.684	-174	0.817	22	12	1	2	12	3.23(0.65-0.89)	

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	27.237	27.251	-1	1.275	269522	39316	36	90	1092		
353.8970	27.245	27.251	0	1.276	172839	27638	38	95	727	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											RQU
339.8597	27.276						3	7			
341.8567	27.276						5	12			
13C-2,3,4,7,8-PeCDF											
351.9000	28.761	28.757	0	1.347	282252	39928	36	90	1109		
353.8970	28.761	28.757	0	1.347	174670	24633	38	95	648	1.62(1.32-1.78)	
2,3,4,7,8-PeCDF											RQU
339.8597	28.791						3	7			
341.8567	28.791						5	12			
A F1 PeCDFs											
339.8597	24.634						1	2			
341.8567	24.634						1	2			
A Non-2,3,7,8-sub-PeCDF											U
339.8597	27.843	28.173	-20	1.022	88	36	3	7	12		
341.8567	27.860	28.173	-19	1.023	126	43	5	12	9	0.70(1.32-1.78)	
	Empc Correction				56	23	5	12	5		
13C-1,2,3,7,8-PeCDD											
367.8949	29.561	29.574	-1	1.384	154576	20931	31	77	675		
369.8919	29.561	29.574	-1	1.384	98414	14261	12	30	1188	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616						5	12			
357.8516	29.616						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.033	28.478	-146	0.881	379	68	5	12	14		
357.8516	26.041	28.478	-146	0.881	263	66	1	2	66	1.44(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.911	34.906	0	0.954	153756	28471	67	167	425		
385.8610	34.919	34.906	1	0.954	297108	54469	69	172	789	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											U
373.8208	34.922						3	7			
375.8178	34.922						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.071	35.066	0	0.958	162364	28079	67	167	419		
385.8610	35.079	35.066	1	0.959	284199	49610	69	172	719	0.57(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.082						3	7			
375.8178	35.082						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.896	35.890	0	0.981	143813	30922	67	167	462		
385.8610	35.896	35.890	0	0.981	268067	54174	69	172	785	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.907						3	7			
375.8178	35.907						2	5			

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.789	36.782	0	1.005	131304	27639	67	167	413		
385.8610	36.789	36.782	0	1.005	239453	52574	69	172	762	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791						3	7			
375.8178	36.791						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.479	35.009	-92	0.959	84	27	3	7	9		
375.8178	33.471	35.009	-92	0.959	92	35	2	5	18	0.91(1.05-1.43)	
	Empc Correction				67	21	2	5	11		
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.595	36.581	1		522992	109650	43	107	2550		
403.8529	36.595	36.581	1		415758	87690	40	100	2192	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											Ma
401.8559	36.115	36.092	1	0.987	178521	37867	43	107	881		M
403.8529	36.107	36.092	1	0.987	142461	32618	40	100	815	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.109						3	7			
391.8127	36.109						4	10			
13C-1,2,3,6,7,8-HxCDD											M
401.8559	36.225	36.210	1	0.990	187313	40391	43	107	939		M
403.8529	36.225	36.210	1	0.990	147884	31291	40	100	782	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8158	36.227						3	7			
391.8127	36.227						4	10			
1,2,3,7,8,9-HxCDD											
389.8158	36.597						3	7			
391.8127	36.597						4	10			
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	34.237	35.375	-68	0.945	3591	717	3	7	239		
391.8127	34.221	35.375	-69	0.945	3455	704	4	10	176	1.04(1.05-1.43)	
	Empc Correction				2895	578	4	10	145		
389.8158	35.341	35.375	-2	0.976	1109	192	3	7	64		
391.8127	35.332	35.375	-3	0.975	1139	251	4	10	63	0.97(1.05-1.43)	
	Empc Correction				894	154	4	10	39		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.613	38.596	1	1.055	105059	24959	27	67	924		
419.8220	38.613	38.596	1	1.055	226073	54988	75	187	733	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7817	38.638	38.618	1	1.001	273	83	7	17	12		M
409.7788	38.672	38.618	3	1.002	277	58	1	2	58	0.99(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.868	39.850	1	1.089	106035	26796	27	67	992		
419.8220	39.868	39.850	1	1.089	232279	62189	75	187	829	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											RQU
407.7817	39.872						7	17			
409.7788	39.872						1	2			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.245						7	17			
409.7788	39.245						1	2			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.565	39.547	1	1.081	160463	40826	25	62	1633		
437.8140	39.556	39.547	1	1.081	153813	39859	57	142	699	1.04(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.565	39.561	0	1.000	4218	1017	11	27	92		
425.7737	39.573	39.561	1	1.000	4261	1058	5	12	212	0.99(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											M
423.7767	38.933	39.241	-18	0.984	12869	3291	11	27	299		M
425.7737	38.925	39.241	-19	0.984	11269	2737	5	12	547	1.14(0.88-1.20)	
13C-OCDD											
469.7780	42.063	42.036	2	1.149	226927	54372	33	82	1648		
471.7750	42.055	42.036	1	1.149	251292	59609	31	77	1923	0.90(0.76-1.02)	
OCDF											
441.7428	42.137						4	10			
443.7399	42.137						10	25			
OCDD											
457.7377	42.072	42.053	1	1.000	61818	14504	12	30	1209		
459.7348	42.063	42.053	1	1.000	68115	15943	13	32	1226	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Lims ID:	320-76901-A-7-A		
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Inject. Date:	19-Aug-2021 21:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	10

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	533591	70462

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	533591	70462

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.722	6324	1100	9871	1570	2.81	0.64	RQa
19.722	6324	1100	8212	1428	2.52		Empc Correction
Signal Totals:							
	6324	1100	8212	1428			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	16195	2670				0.64	RQa
	14536	2528					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.810 = (16195 * 100.000) / (533591 * 1.080)
Empc Amount: 2.522 = (14536 * 100.000) / (533591 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Lims ID:	320-76901-A-7-A		
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Inject. Date:	19-Aug-2021 21:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	10

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	372824	45794

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	372824	45794

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.811	71	48	22	12	0.0232	3.23	RQ
17.811	16	9	22	12	0.009478		Empc Correction
18.293	350	70	199	54	0.1369	1.76	RQ
18.293	153	41	199	54	0.0878		Empc Correction
18.663	140	77	84	41	0.0559	1.67	RQ
18.663	64	31	84	41	0.0369		Empc Correction
19.644	227	63	305	72	0.1327	0.74	
20.040	89	32	18	8	0.0267	4.94	RQ
20.040	13	6	18	8	0.007732		Empc Correction
20.823	162	52	28	13	0.0474	5.79	RQ
20.823	21	10	28	13	0.0122		Empc Correction
21.339	324	62	378	66	0.1751	0.86	
21.555	346	59	172	74	0.1292	2.01	RQ
21.555	132	56	172	74	0.0758		Empc Correction
22.535	373	82	440	77	0.2028	0.85	

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Lims ID:	320-76901-A-7-A		
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Inject. Date:	19-Aug-2021 21:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	10

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	442361	66954
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	456922	64561

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	449641	65757

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.843	88	36	126	43	0.0462	0.70	RQ
27.843	88	36	56	23	0.0311		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Lims ID:	320-76901-A-7-A		
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Inject. Date:	19-Aug-2021 21:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	10

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	252990	35192

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	252990	35192

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.033	379	68	263	66	0.2425	1.44	
26.875	565	133	282	49	0.3199	2.00	RQ
26.875	437	75	282	49	0.2716		Empc Correction
27.633	59	33	20	15	0.0298	2.95	RQ
27.633	30	23	20	15	0.0189		Empc Correction
28.020	94	61	25	12	0.0449	3.76	RQ
28.020	38	18	25	12	0.0238		Empc Correction
28.508	426	99	135	43	0.2119	3.16	RQ
28.508	209	66	135	43	0.1299		Empc Correction
30.209	380	59	18	10	0.1503	21.11	RQ
30.209	27	15	18	10	0.0170		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Lims ID:	320-76901-A-7-A		
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Inject. Date:	19-Aug-2021 21:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	10

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	450864	82940
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	446563	77689
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	411880	85096
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	370757	80213

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	420016	81484

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.479	84	27	92	35	0.0348	0.91	RQ
33.479	84	27	67	21	0.0298		Empc Correction
34.128	51	21	41	23	0.0182	1.24	
36.865	61	0	130	52	0.0377	0.47	RnQ
36.865	61	0	49	0	0.0217		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Lims ID:	320-76901-A-7-A		
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Inject. Date:	19-Aug-2021 21:15:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	10

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	320982	70485
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	335197	71682
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	328089	71083

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.237	3591	717	3455	704	2.04	1.04	RQ
34.237	3591	717	2895	578	1.87		Empc Correction
35.341	1109	192	1139	251	0.6498	0.97	RQ
35.341	1109	192	894	154	0.5789		Empc Correction
Signal Totals:							
	4700	909	3789	732			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9294	1864				1.02	RQ
	8489	1641					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.686 = (9294 * 100.000) / (328089 * 1.055)

Empc Amount: 2.454 = (8489 * 100.000) / (328089 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d
Lims ID: 320-76901-A-7-A
Client ID: 11215702-072821-BN-SJSB095 (12-14)
Inject. Date: 19-Aug-2021 21:15:00 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 10

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	314276	80685

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	314276	80685

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.933	12869	3291	11269	2737	7.31	1.14	M
Signal Totals:							
	12869	3291	11269	2737			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	24138	6028				1.14	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.313 = (24138 * 100.000) / (314276 * 1.050)

QC Flag Legend

Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d				
Injection Date:	19-Aug-2021 21:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-7-A	Lab Sample ID:	320-76901-7		
Client ID:	11215702-072821-BN-SJSB095 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.44
Area: 13982
Amount: 6.714133
Amount Units: pg/ul

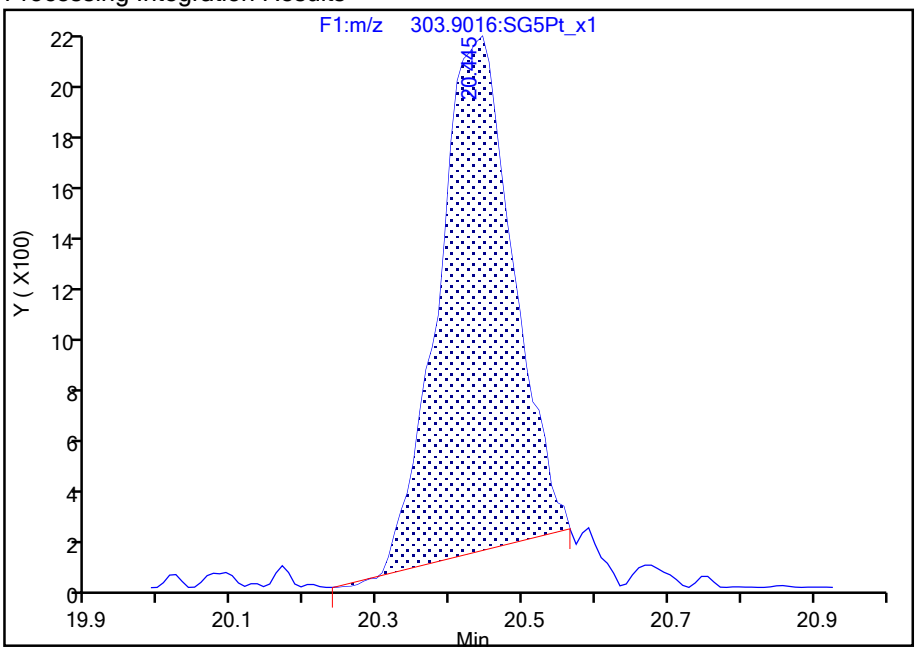

Manual Integration Results

RT: 20.44
Area: 16896
Amount: 7.219701
Amount Units: pg/ul

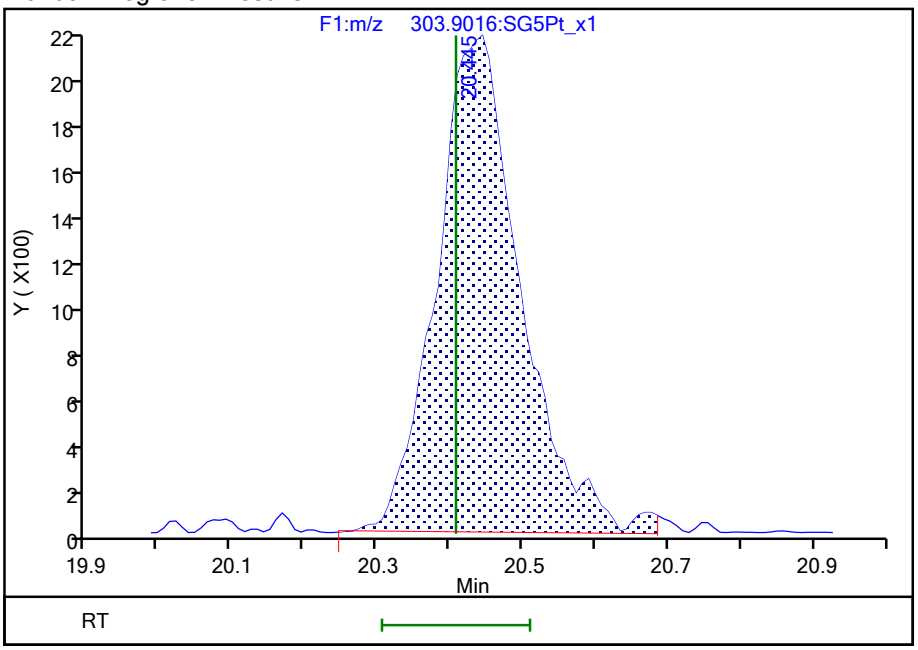

Reviewer: dadunj, 23-Aug-2021 09:20:06

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d				
Injection Date:	19-Aug-2021 21:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-7-A	Lab Sample ID:	320-76901-7		
Client ID:	11215702-072821-BN-SJSB095 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.76
Area: 1348
Amount: 1.093748
Amount Units: pg/ul

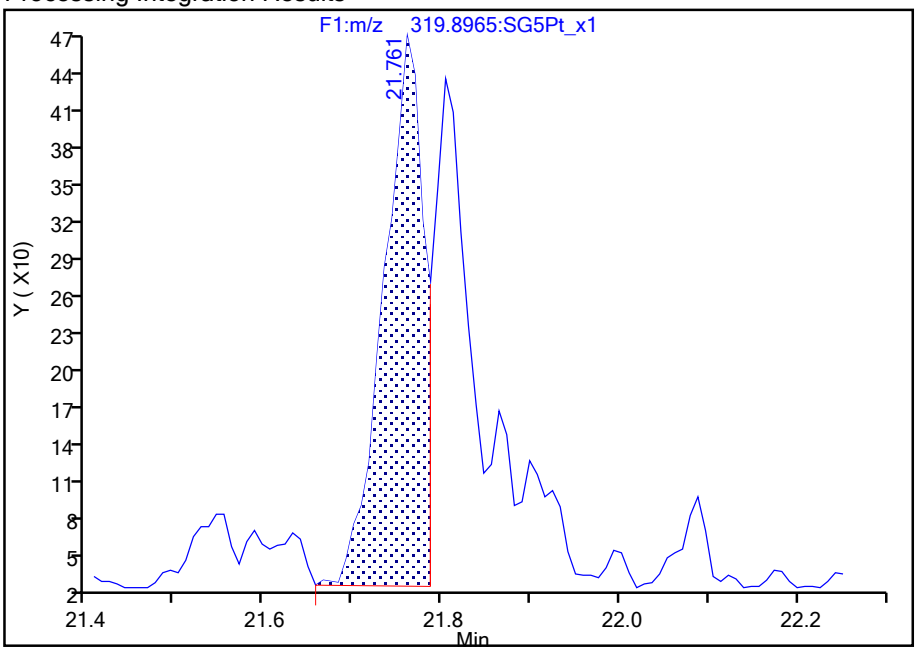

Manual Integration Results

RT: 21.76
Area: 2869
Amount: 1.634262
Amount Units: pg/ul

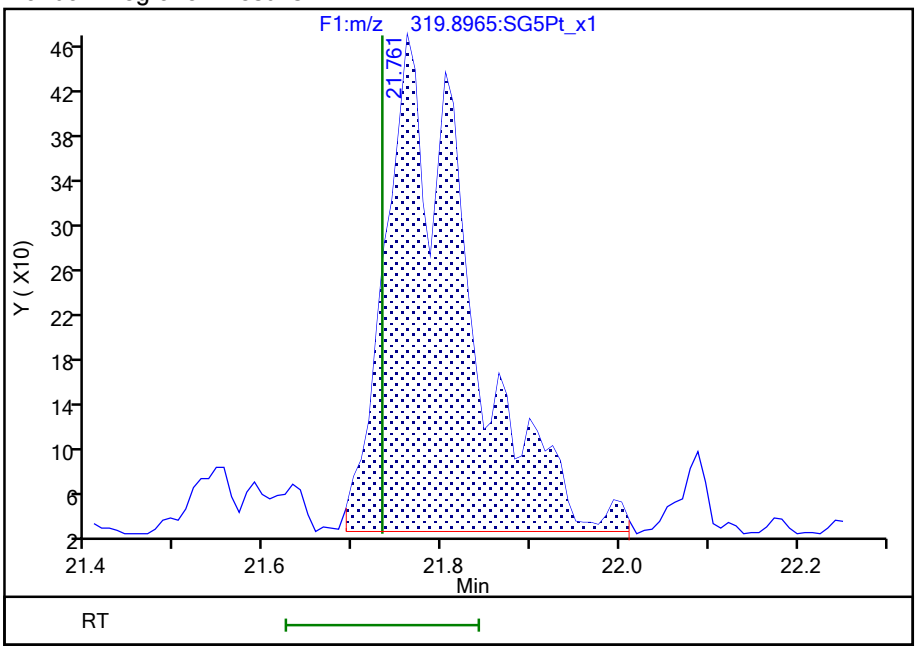

Reviewer: dadunj, 23-Aug-2021 09:20:23

Audit Action: Manually Integrated Audit Reason: Baseline

788540

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d				
Injection Date:	19-Aug-2021 21:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-7-A	Lab Sample ID:	320-76901-7		
Client ID:	11215702-072821-BN-SJSB095 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 21.78
Area: 3037
Amount: 1.093748
Amount Units: pg/ul

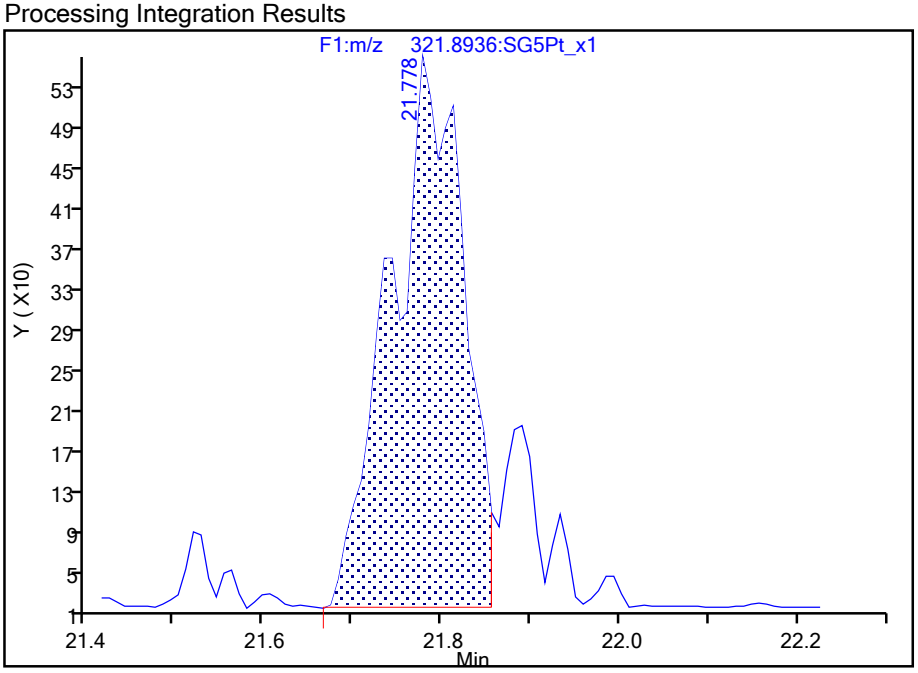

Manual Integration Results

RT: 21.78
Area: 3683
Amount: 1.634262
Amount Units: pg/ul

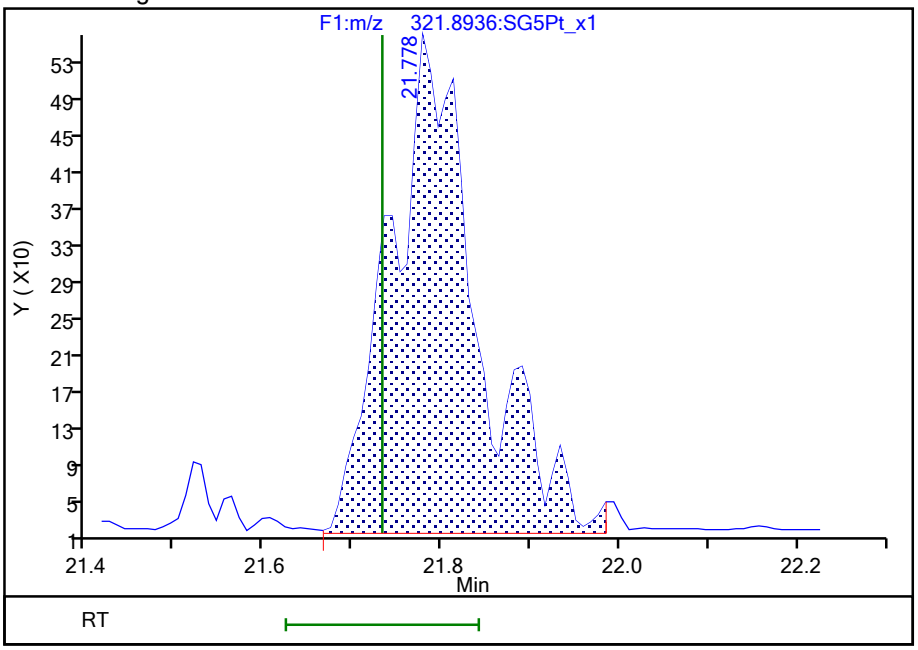

Reviewer: dadunj, 23-Aug-2021 09:20:27

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d				
Injection Date:	19-Aug-2021 21:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-7-A	Lab Sample ID:	320-76901-7		
Client ID:	11215702-072821-BN-SJSB095 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 2

Processing Integration Results

RT: 36.22
Area: 147884
Amount: 72.129950
Amount Units: pg/ul

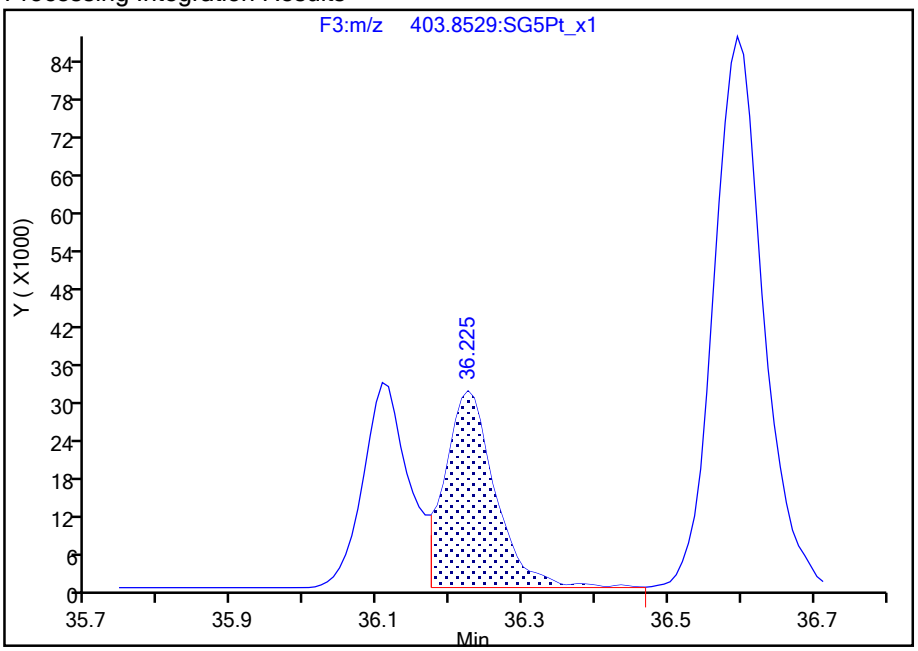

Manual Integration Results

RT: 36.11
Area: 142461
Amount: 45.068249
Amount Units: pg/ul

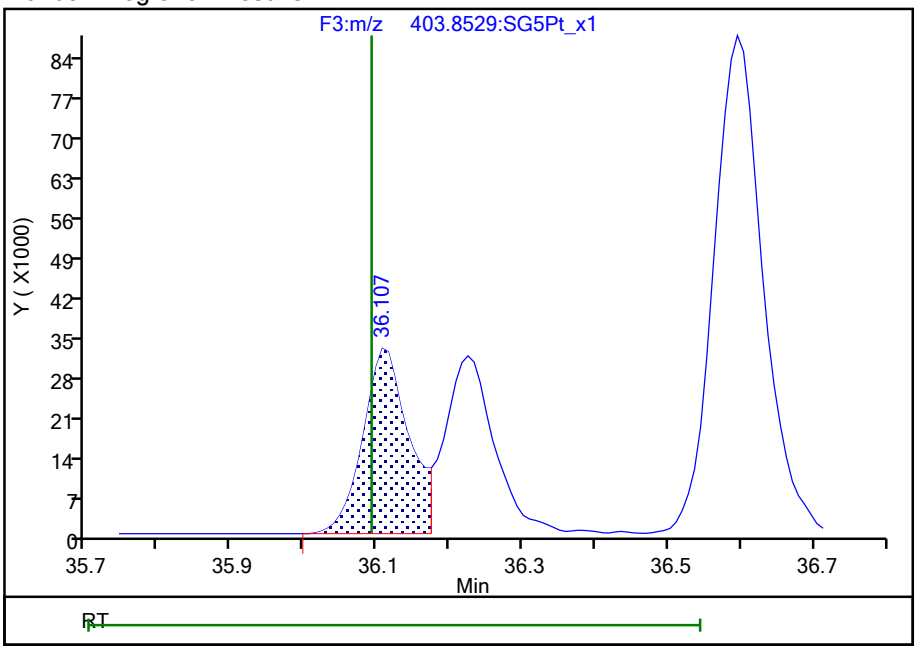

Reviewer: dadunj, 23-Aug-2021 09:21:14

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

788542

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d				
Injection Date:	19-Aug-2021 21:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-7-A	Lab Sample ID:	320-76901-7		
Client ID:	11215702-072821-BN-SJSB095 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 3

RT: 36.22
Area: 513719
Amount: 72.129950
Amount Units: pg/ul

Processing Integration Results

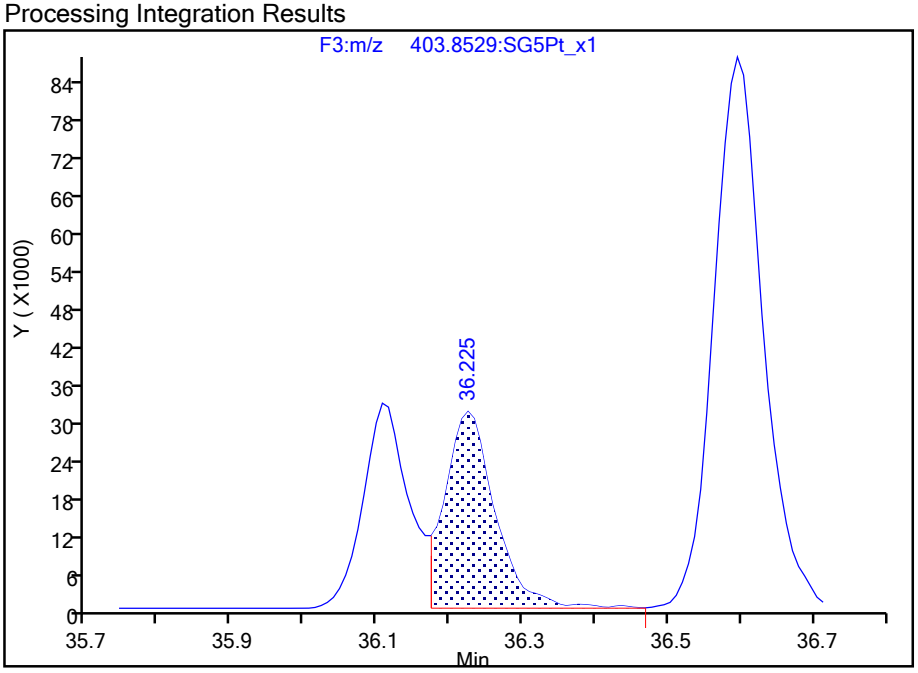

Manual Integration Results

RT: 36.12
Area: 320982
Amount: 45.068249
Amount Units: pg/ul
Reviewer: dadunj, 23-Aug-2021 09:21:14
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

788543

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d				
Injection Date:	19-Aug-2021 21:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-7-A	Lab Sample ID:	320-76901-7		
Client ID:	11215702-072821-BN-SJSB095 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

RT: 36.22
Area: 365835
Amount: 72.129950
Amount Units: pg/ul

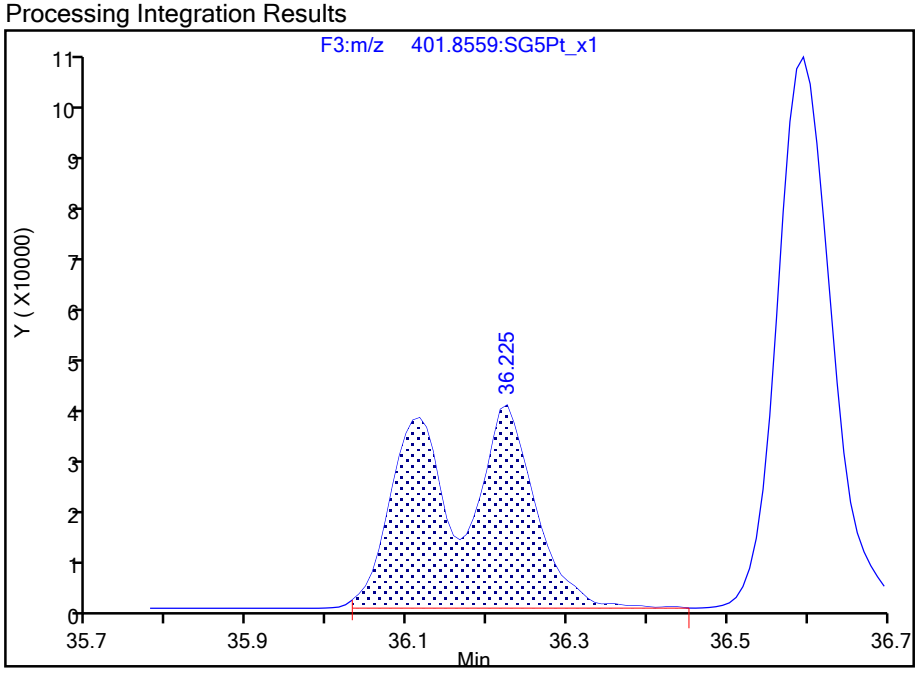

Manual Integration Results

RT: 36.12
Area: 178521
Amount: 45.068249
Amount Units: pg/ul

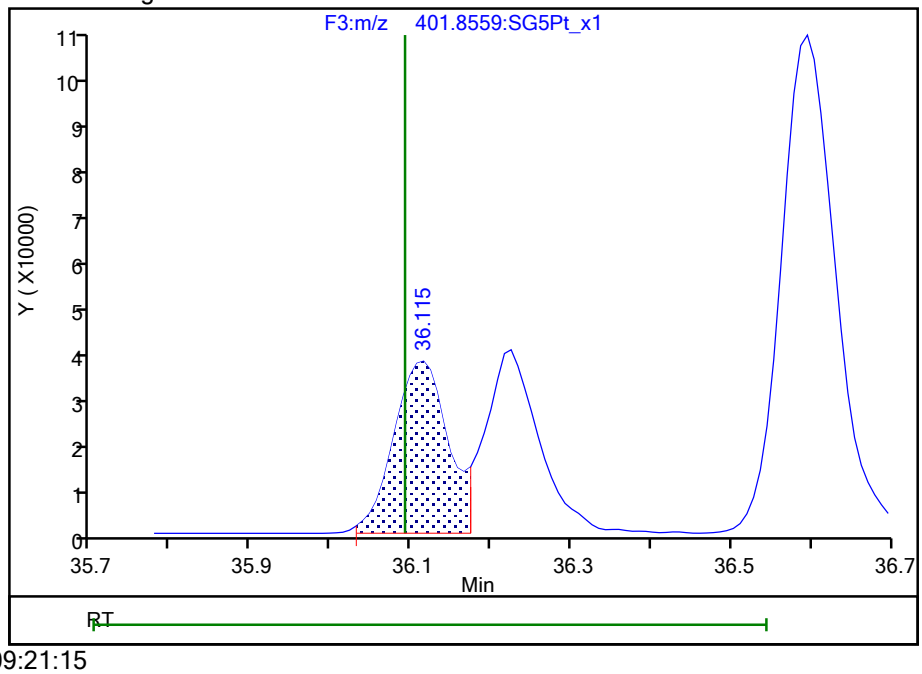

Reviewer: dadunj, 23-Aug-2021 09:21:15

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

788544

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d				
Injection Date:	19-Aug-2021 21:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-7-A	Lab Sample ID:	320-76901-7		
Client ID:	11215702-072821-BN-SJSB095 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

13C-1,2,3,6,7,8-HxCDD, CAS: 109719-81-5

Signal: 1

Processing Integration Results

RT: 36.22
Area: 365835
Amount: 63.686769
Amount Units: pg/ul

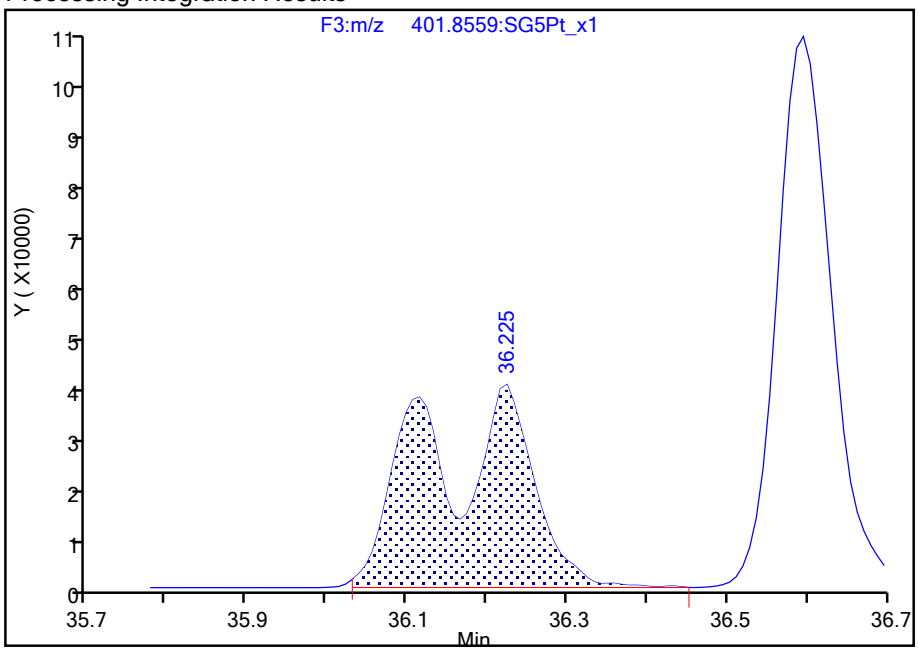

Manual Integration Results

RT: 36.22
Area: 187313
Amount: 41.555040
Amount Units: pg/ul

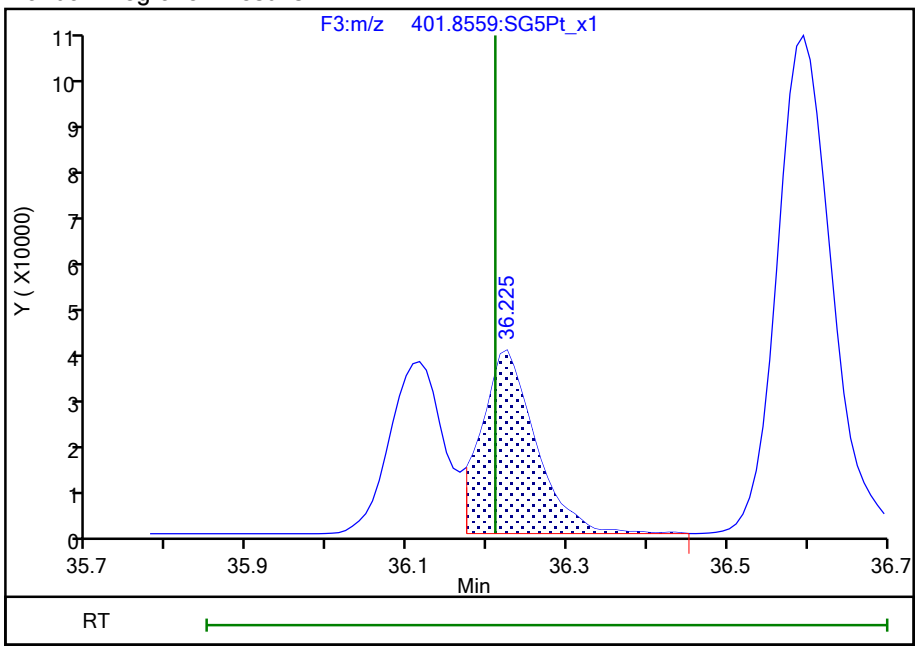

Reviewer: dadunj, 23-Aug-2021 09:21:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788545

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d				
Injection Date:	19-Aug-2021 21:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-7-A	Lab Sample ID:	320-76901-7		
Client ID:	11215702-072821-BN-SJSB095 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 38.64
Area: 338
Amount: 0.128792
Amount Units: pg/ul

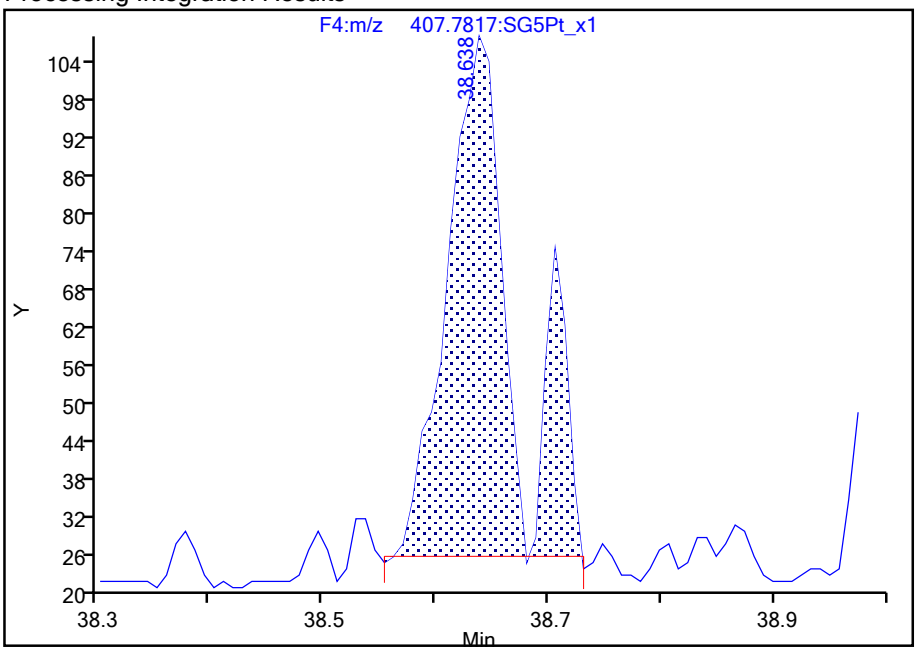

Manual Integration Results

RT: 38.64
Area: 273
Amount: 0.115180
Amount Units: pg/ul

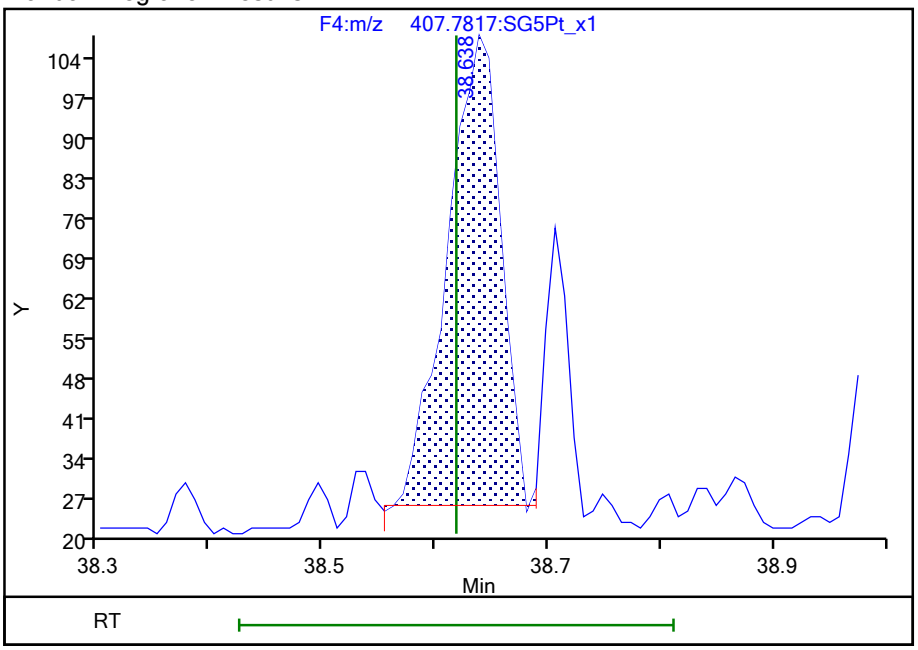

Reviewer: dadunj, 23-Aug-2021 09:21:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d				
Injection Date:	19-Aug-2021 21:15:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-7-A	Lab Sample ID:	320-76901-7		
Client ID:	11215702-072821-BN-SJSB095 (12-14)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

Non-2,3,7,8-sub-HpCDD, Signal: 1, m/z: 423.7767, RT: (38.86- 39.62)

Signal: 1

Processing Integration Results

RT = 38.933 Area = 13176

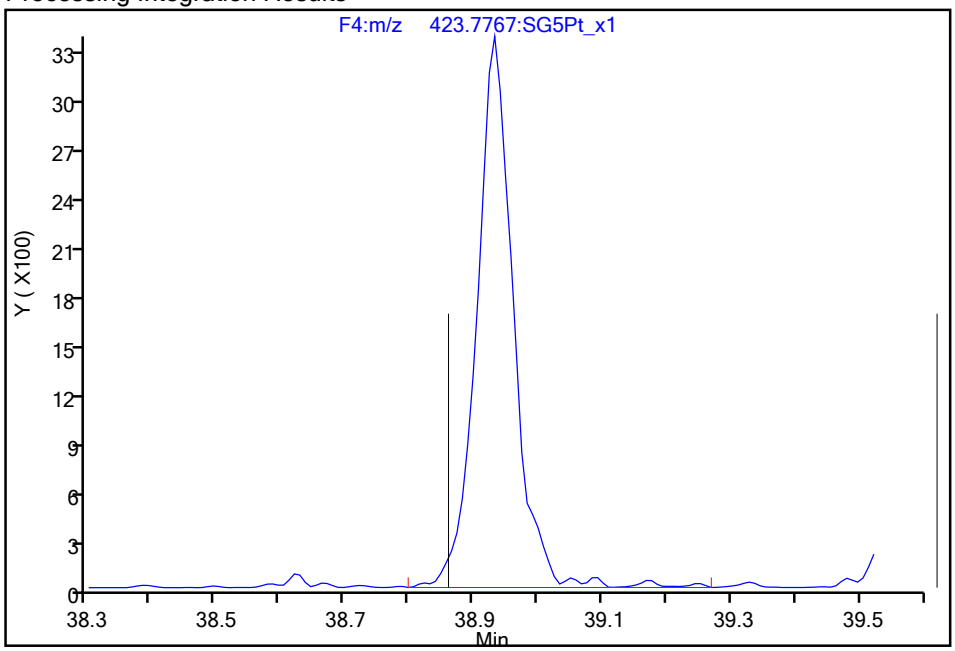

Manual Integration Results

RT = 38.933 Area = 12869 M

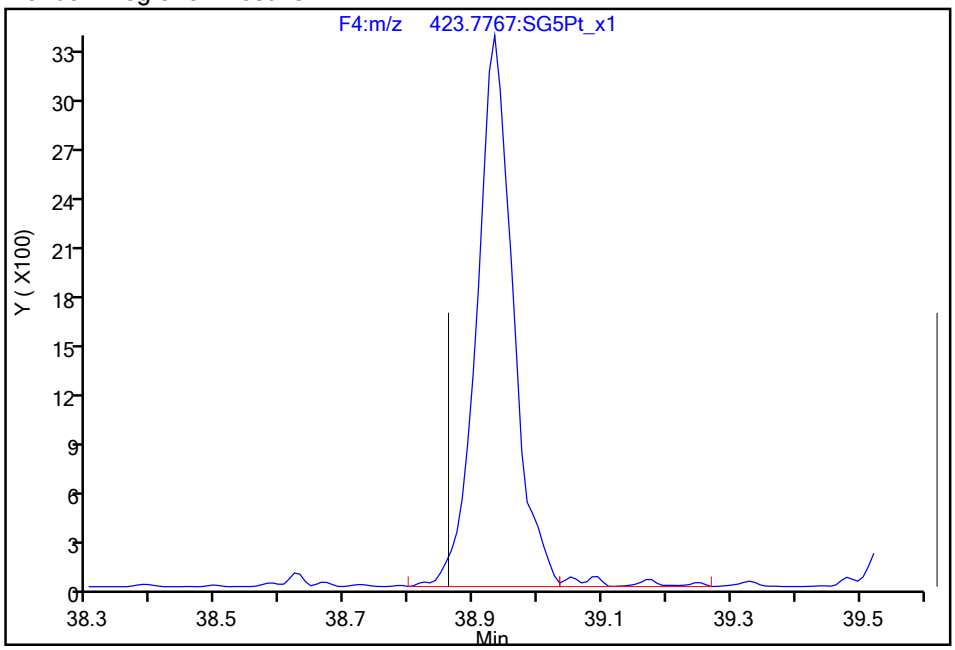

Reviewer: dadunj, 23-Aug-2021 09:21:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788547

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Injection Date:	19-Aug-2021 21:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	517891	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

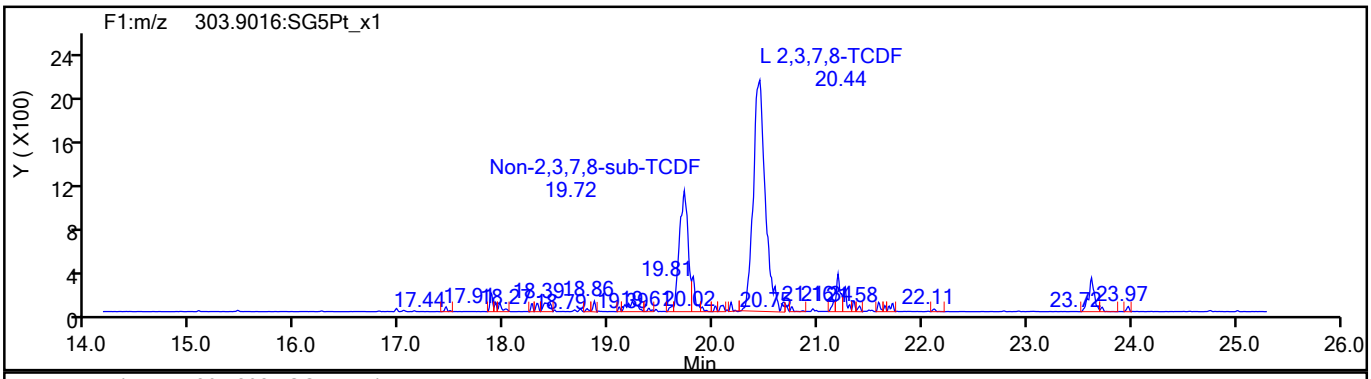

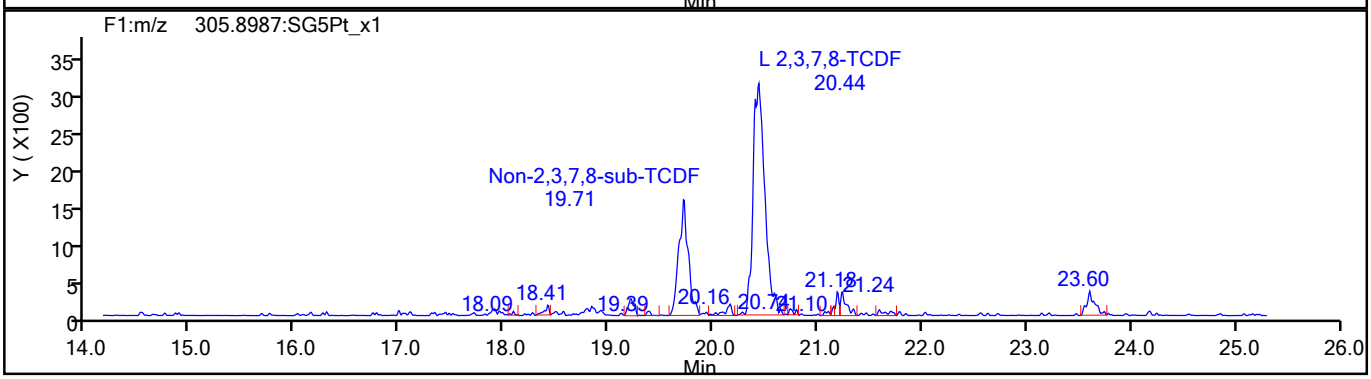

TCDF Standards

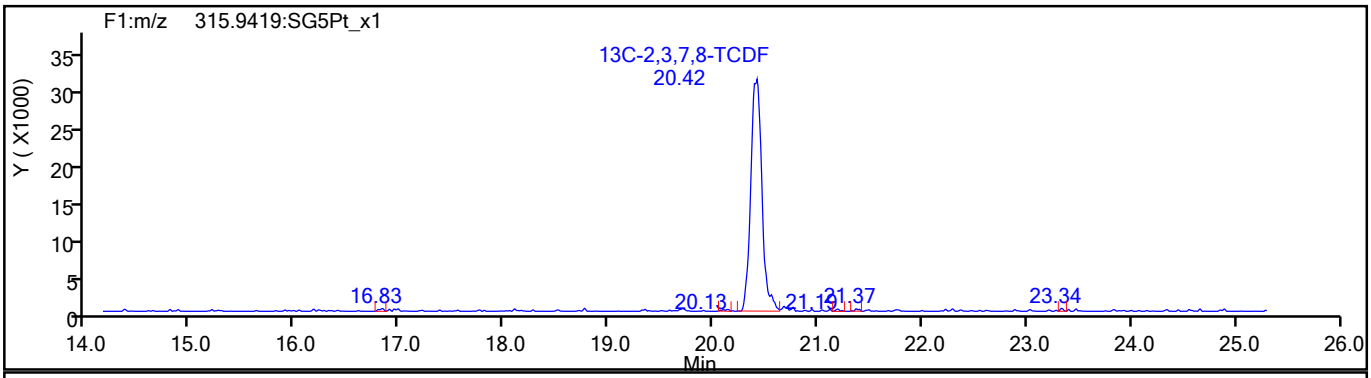

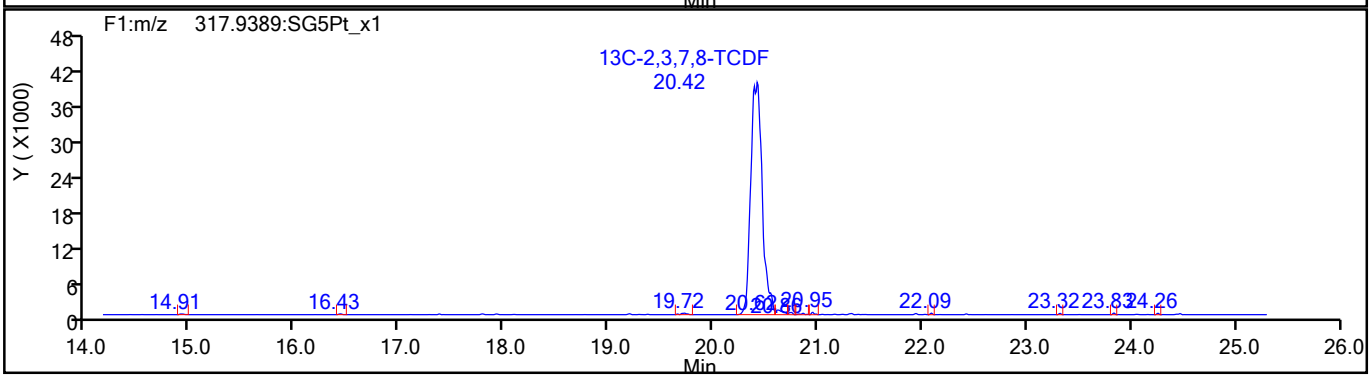

788548

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	517891	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

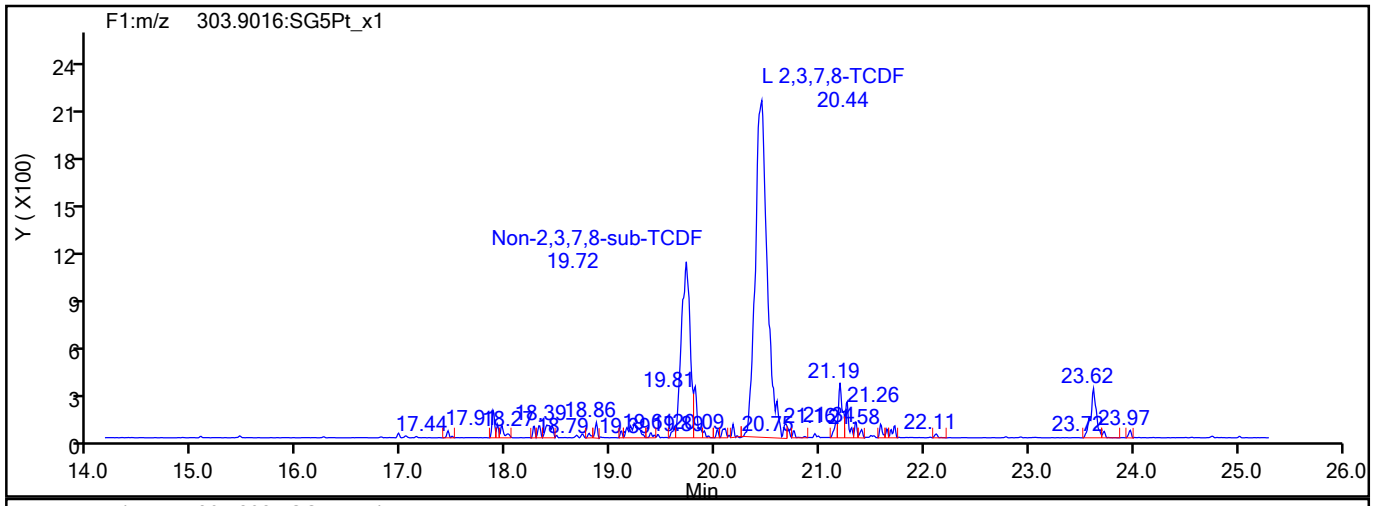

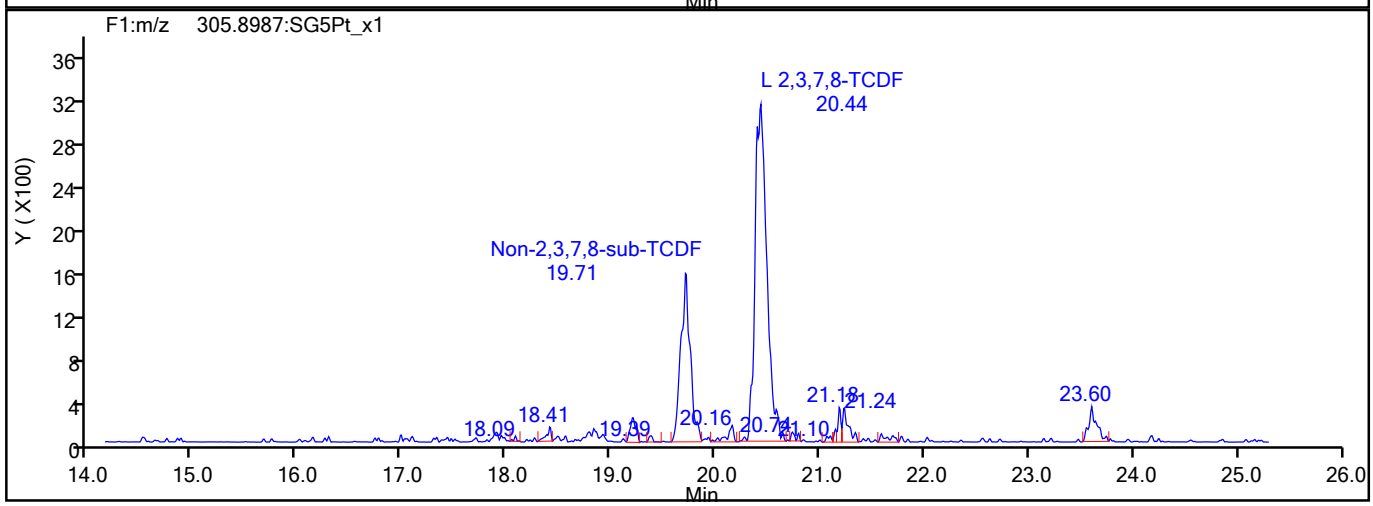

TCDF Interference Mass

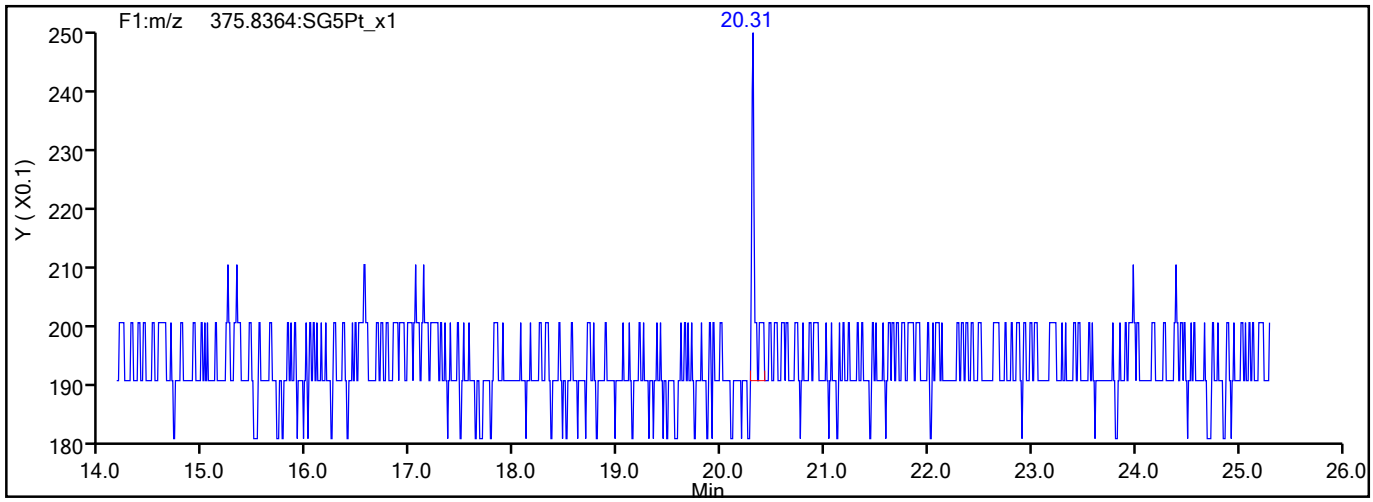

788549

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
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TCDD

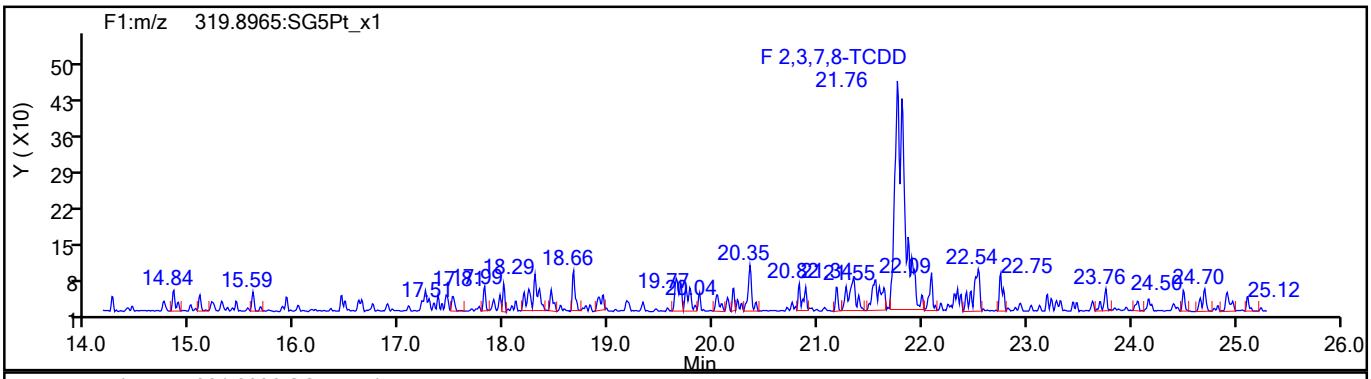

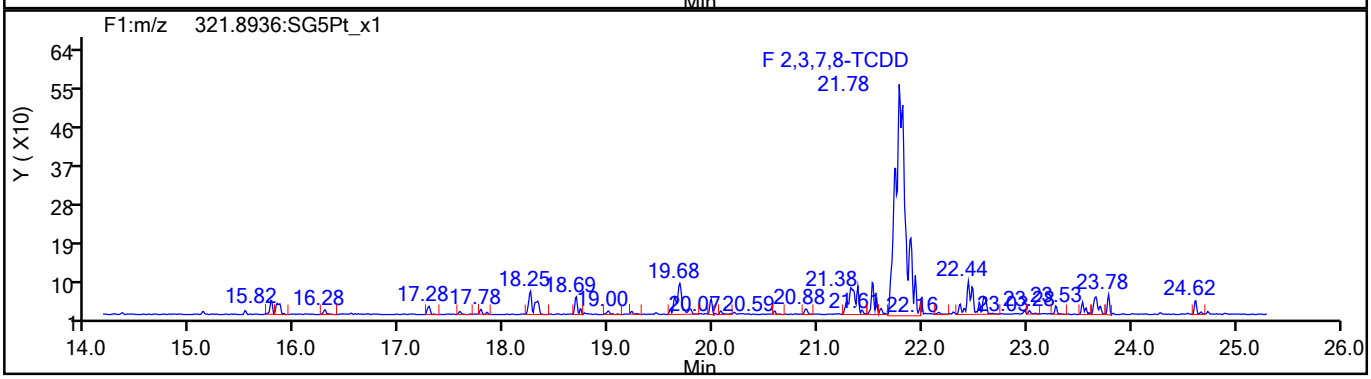

TCDD Standards

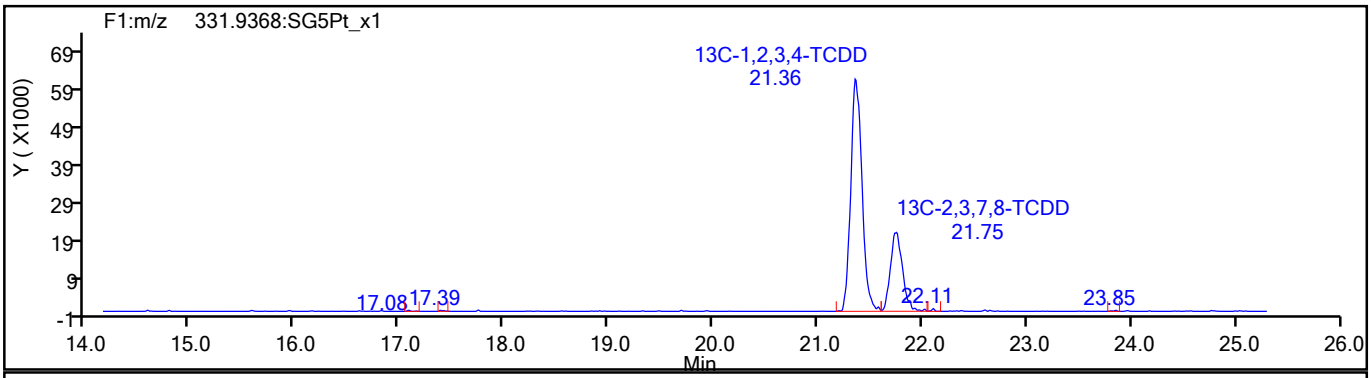

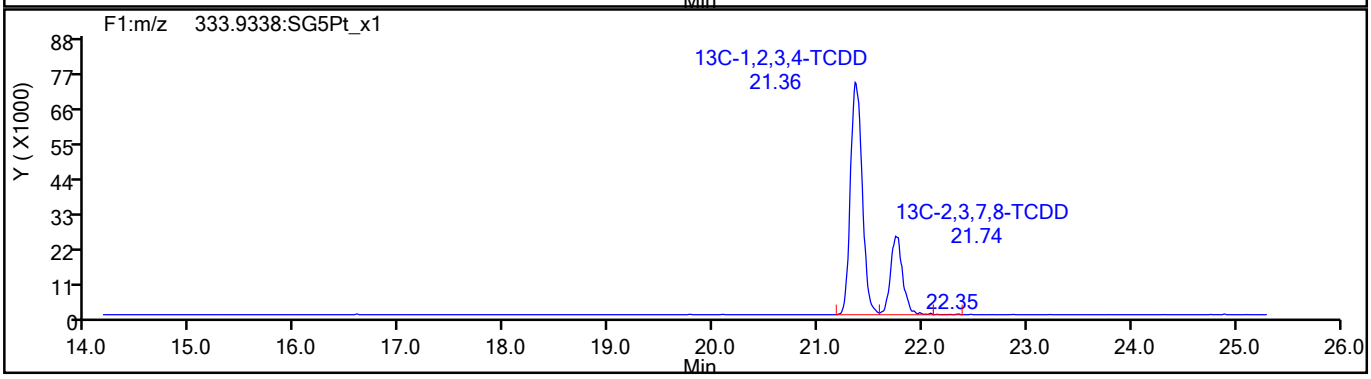

788550

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

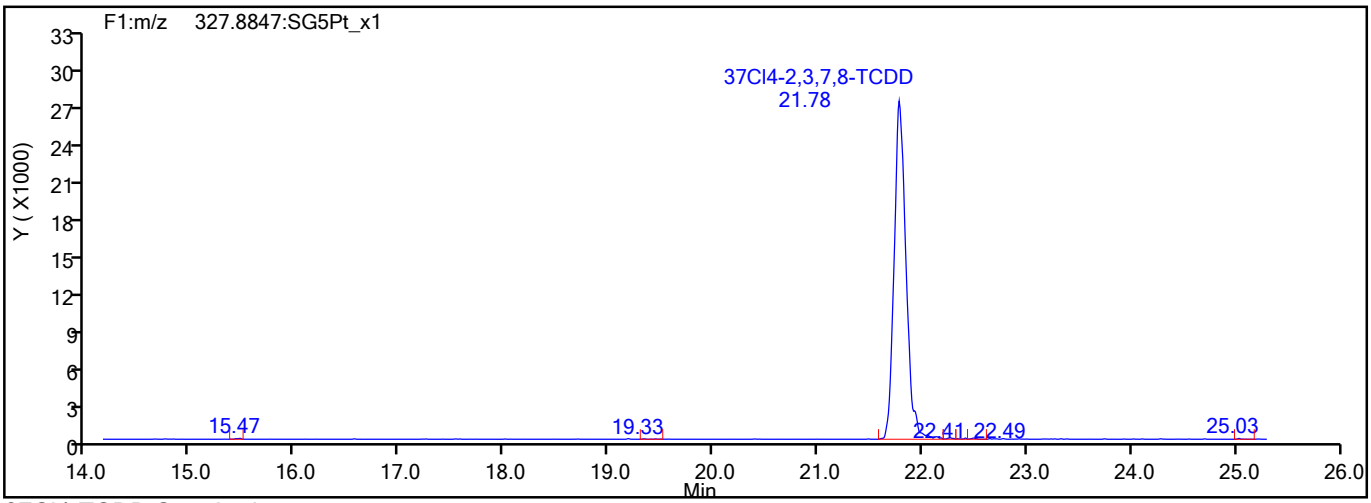

37Cl4-TCDD Standards

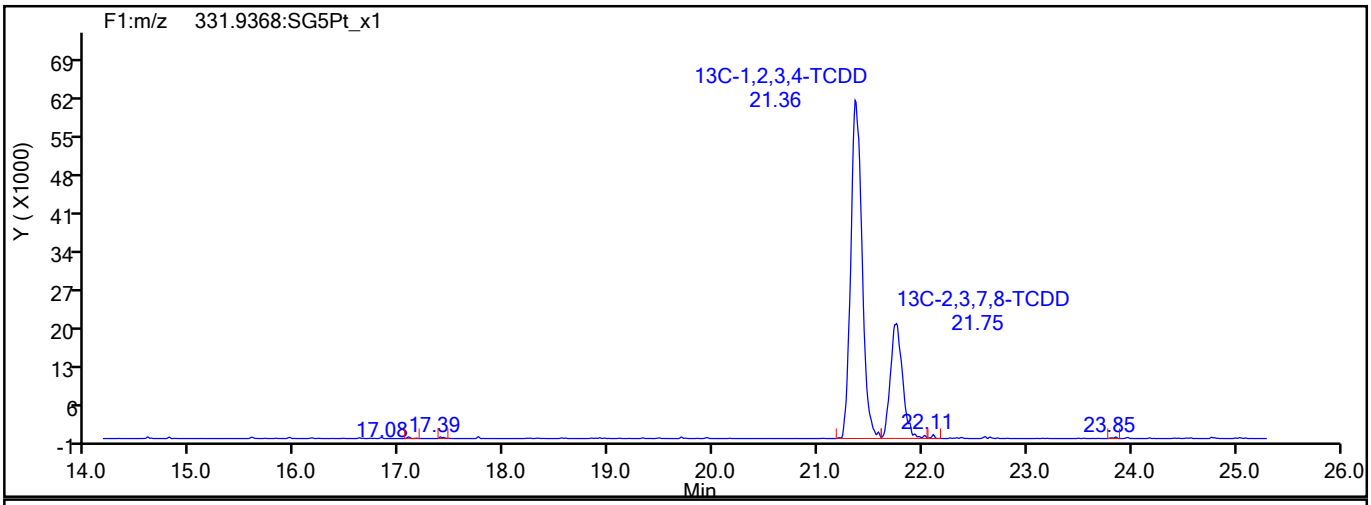

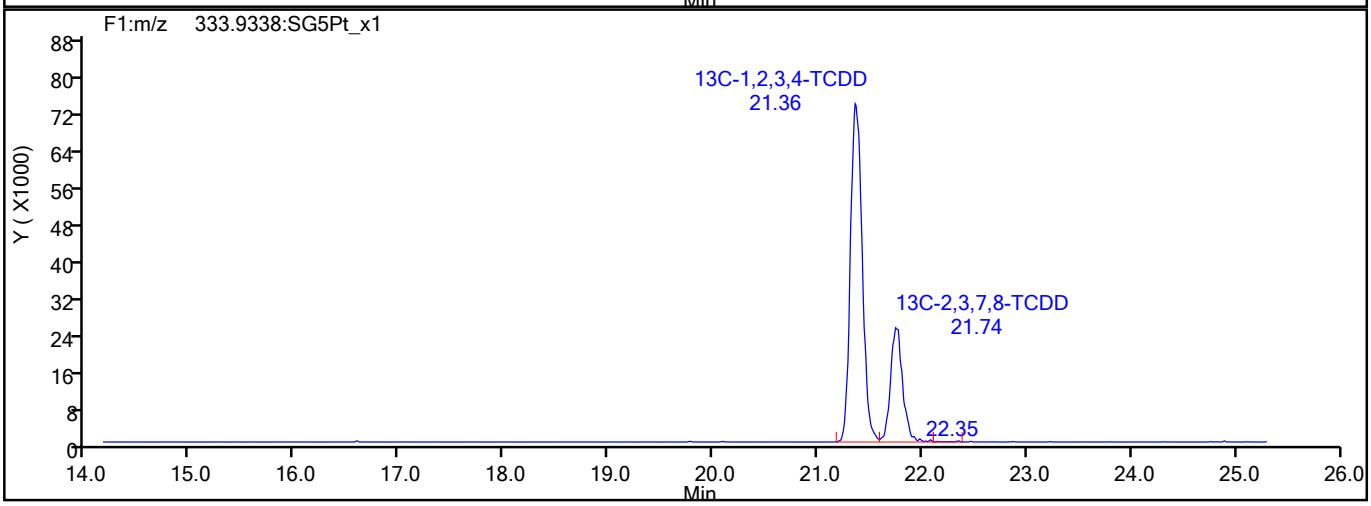

788551

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
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F1 PeCDFs

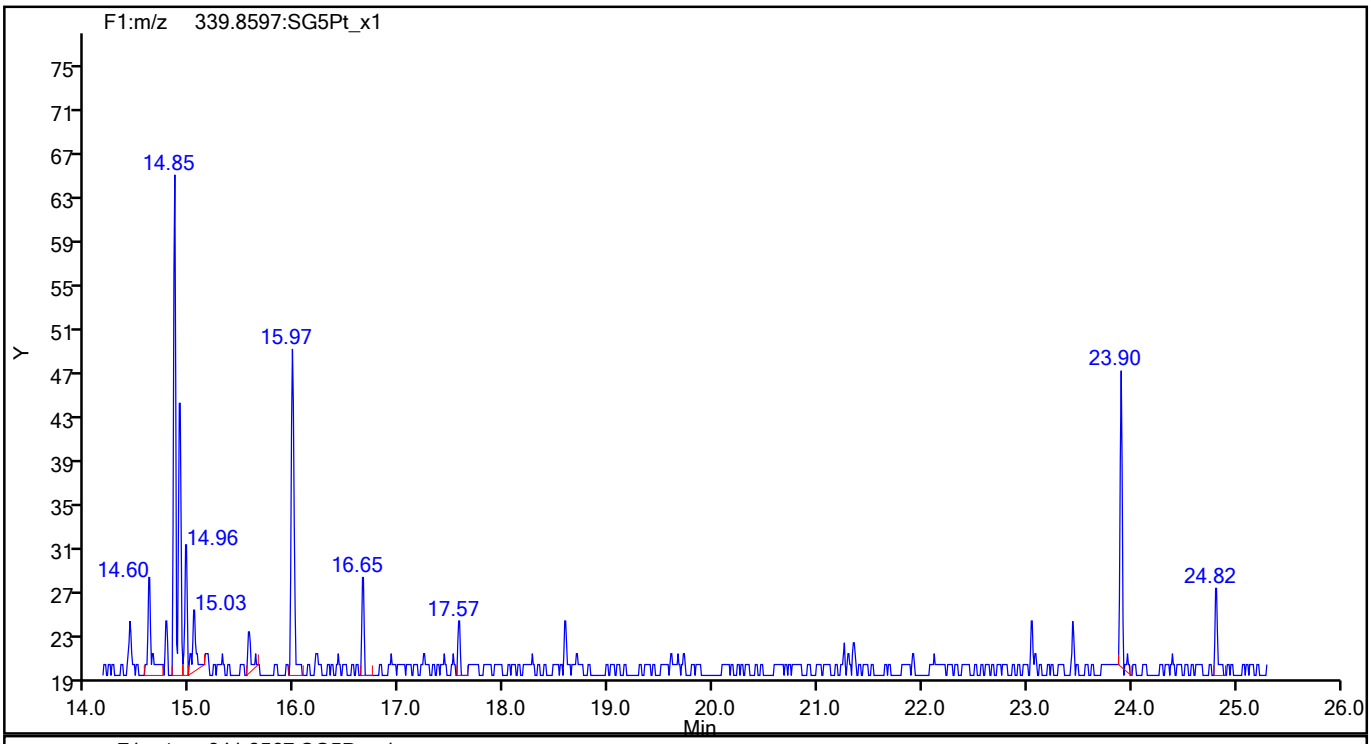

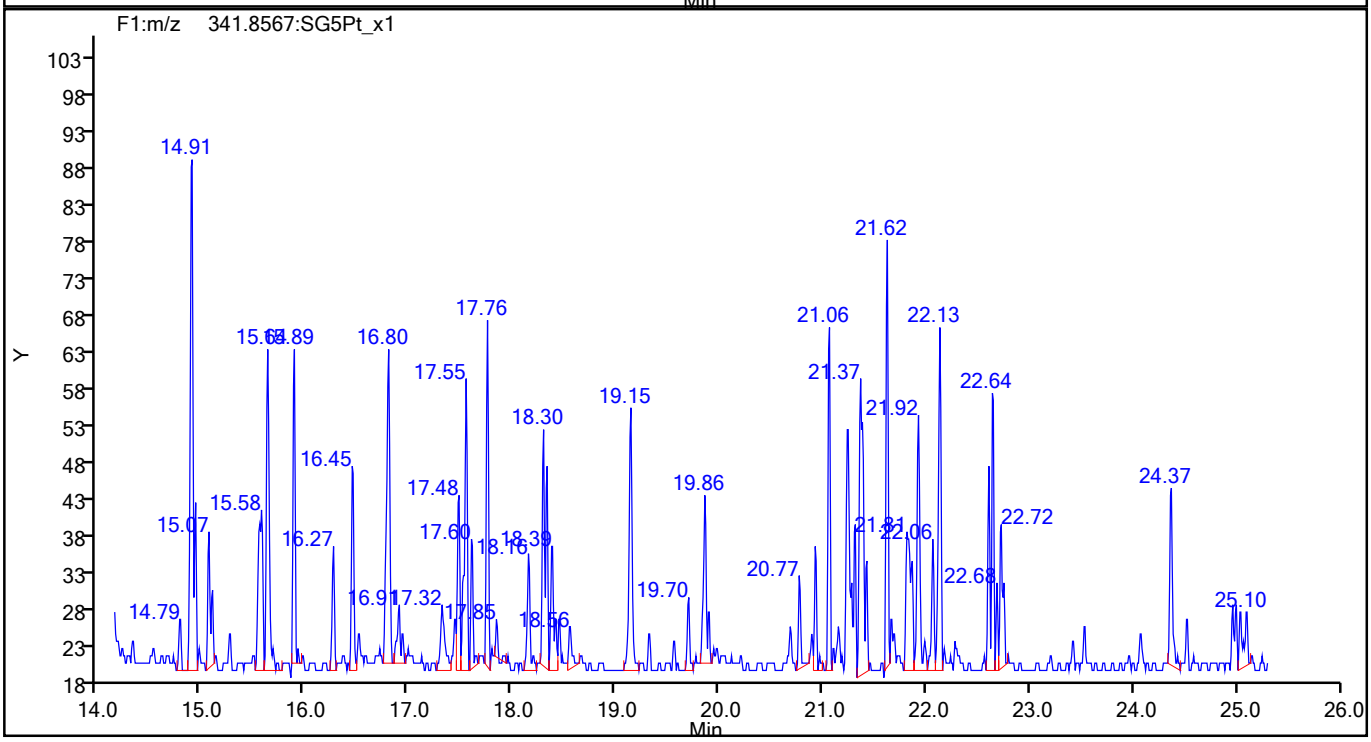

788552

Report Date: 23-Aug-2021 09:22:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
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F1 PeCDFs

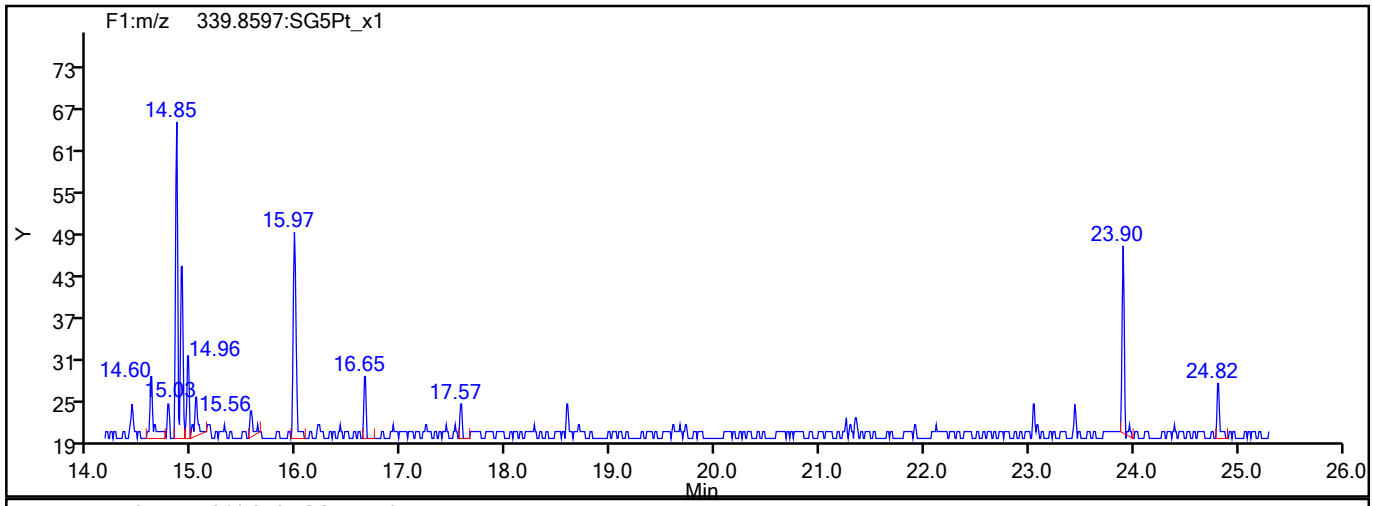

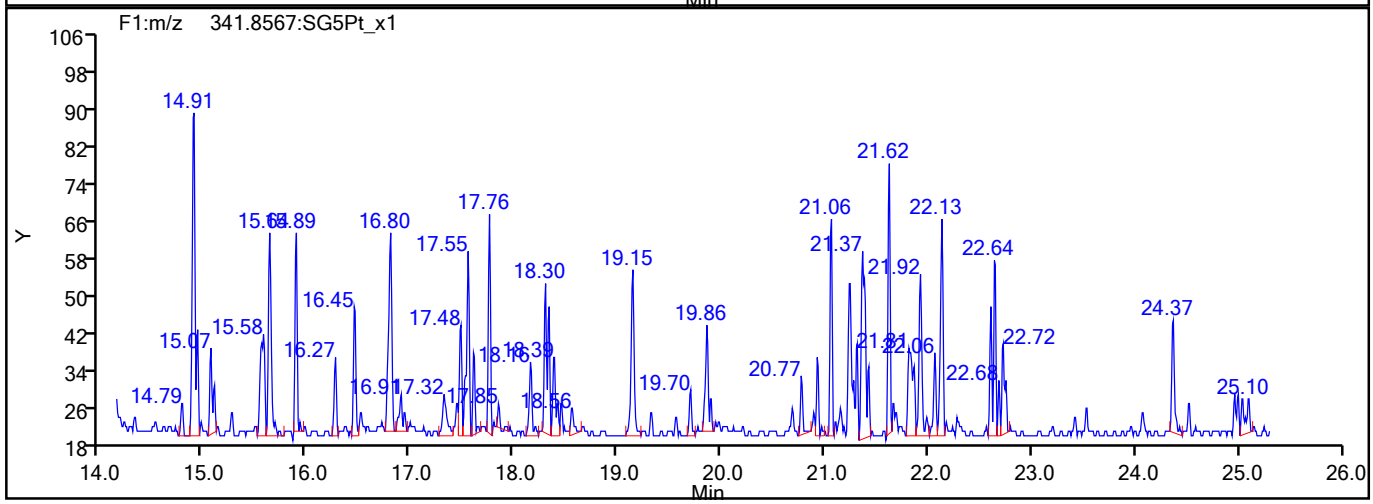

F1 PeCDFs Interference Mass

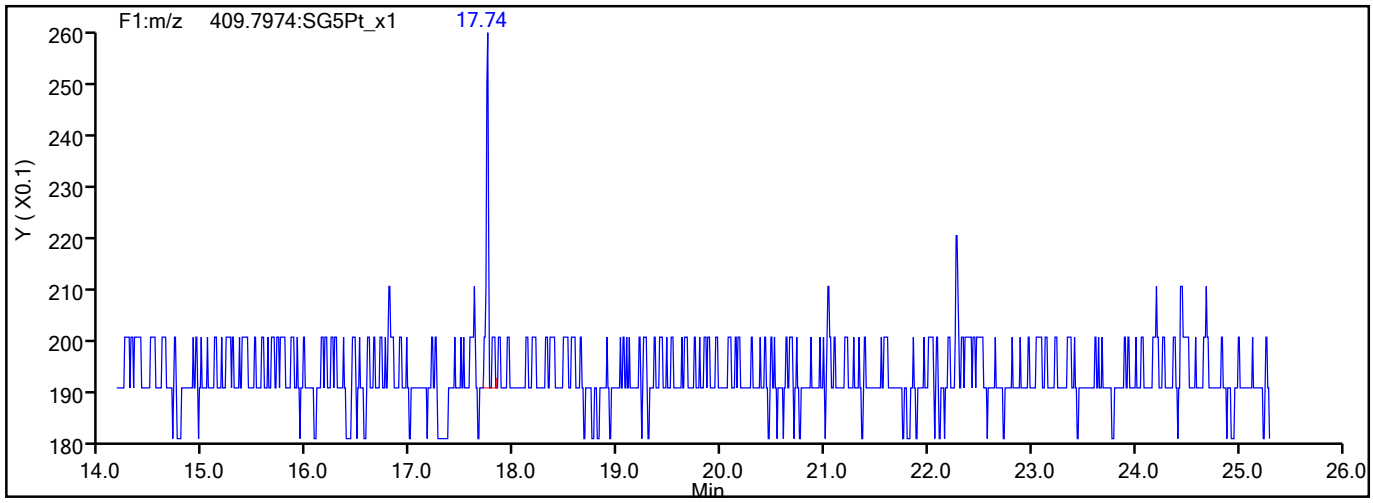

788553

Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

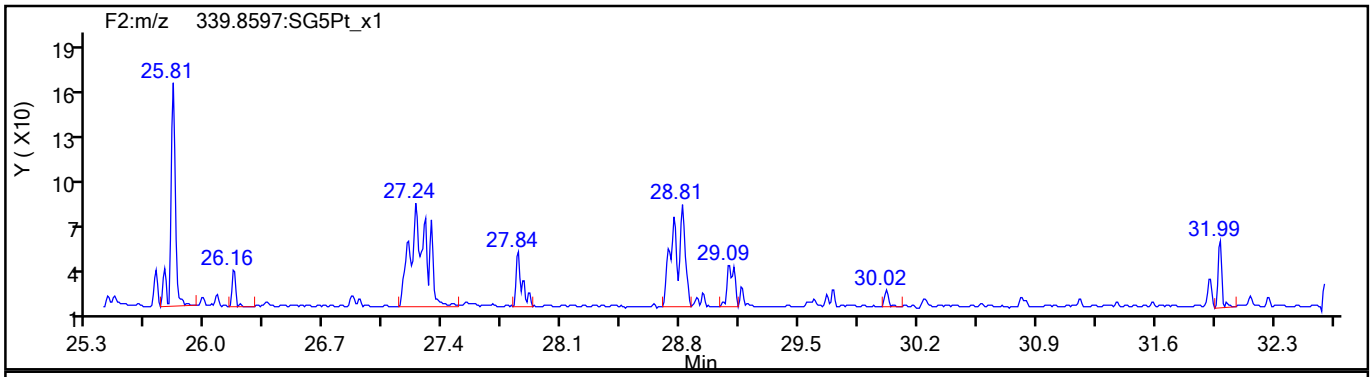

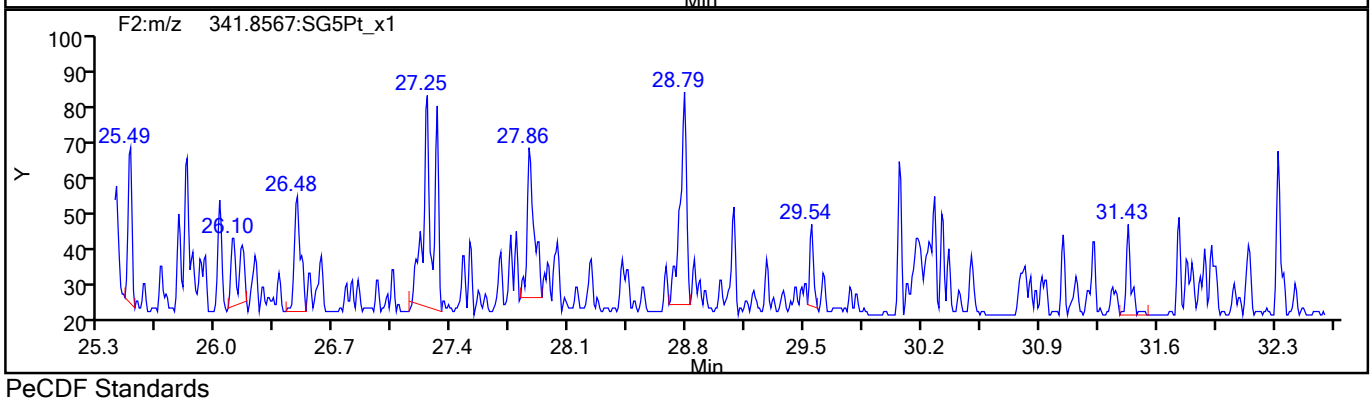

PeCDF Standards

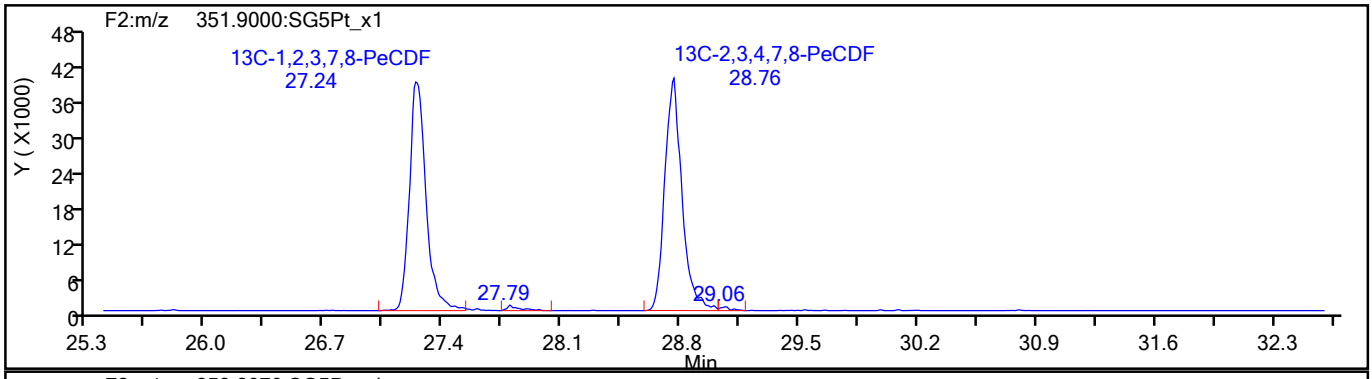

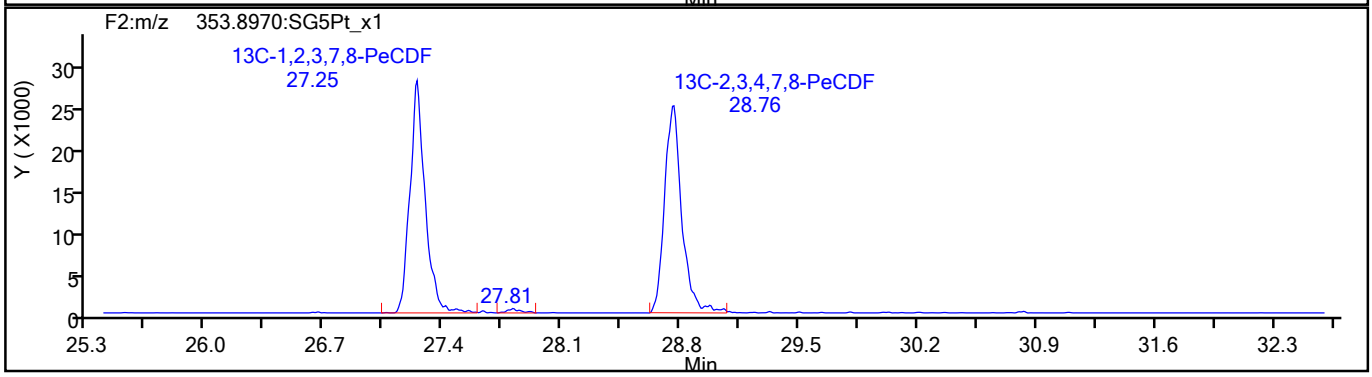

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Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

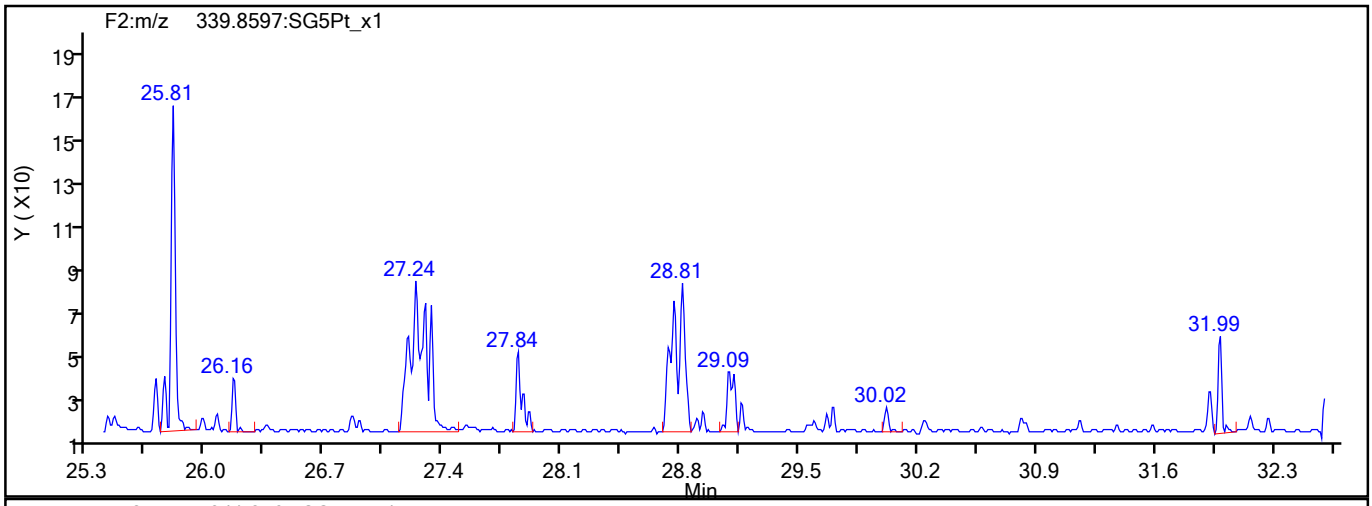

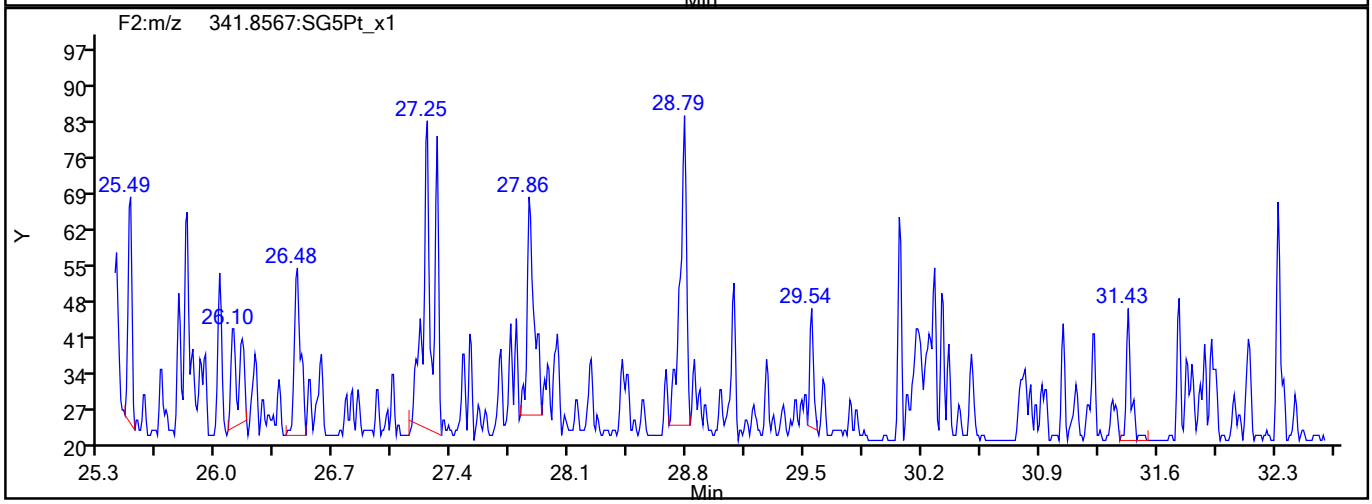

PeCDF Interference Mass

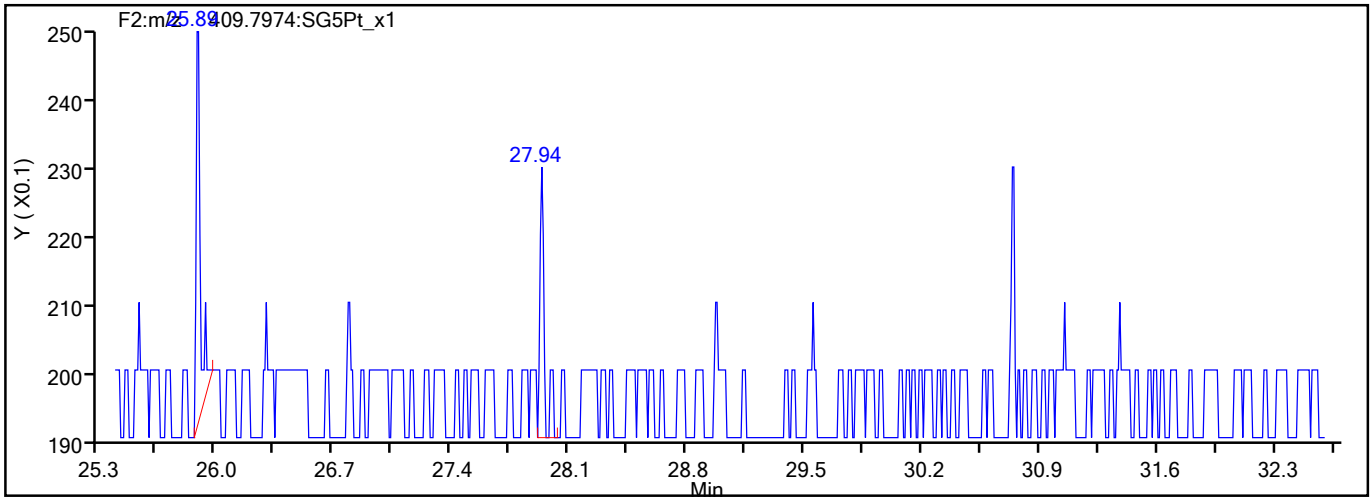

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Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
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PeCDD

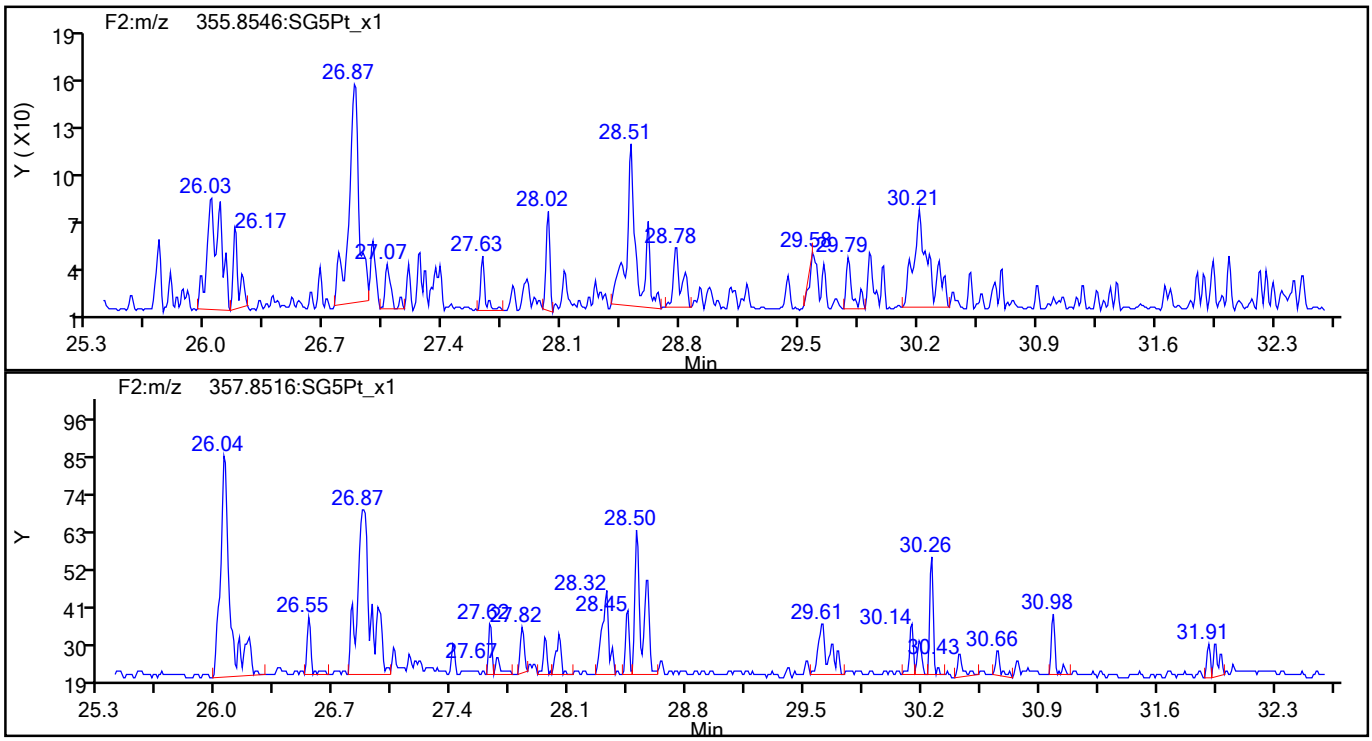

PeCDD Standards

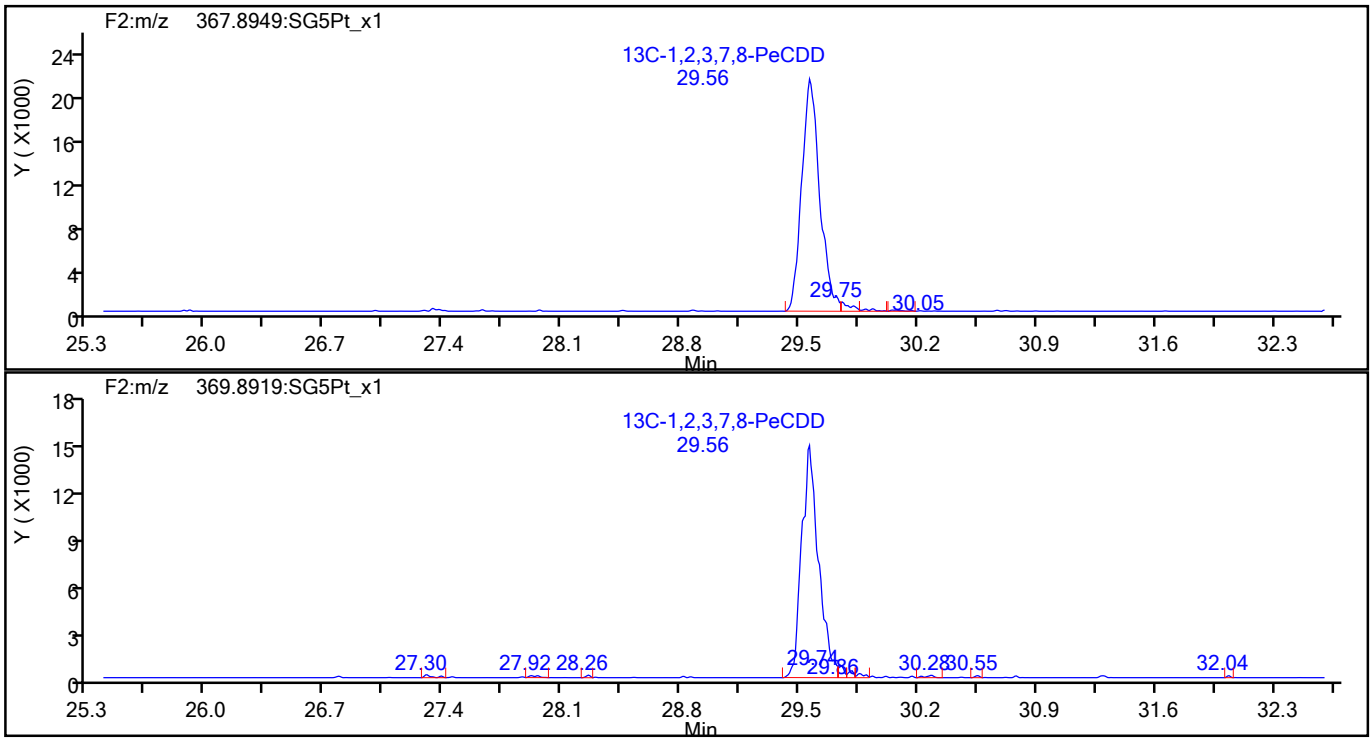

788556

Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

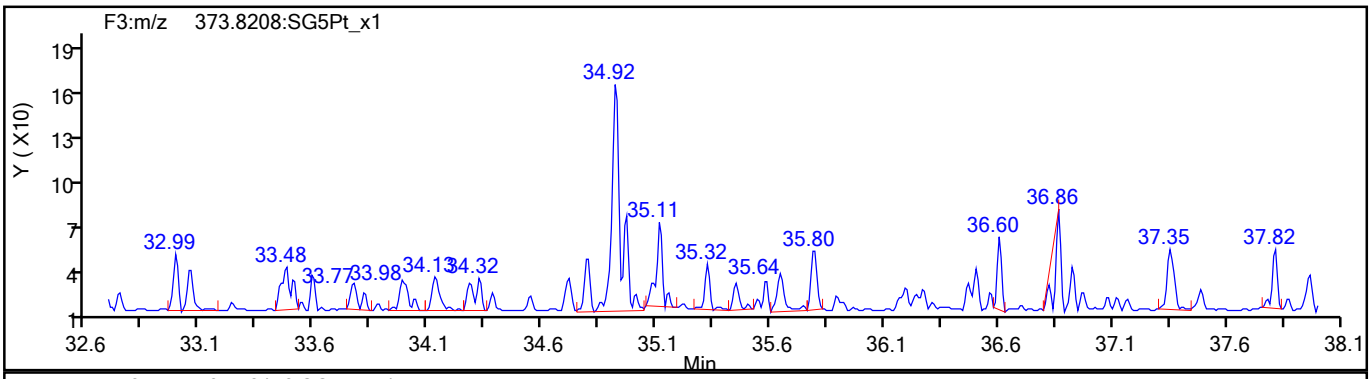

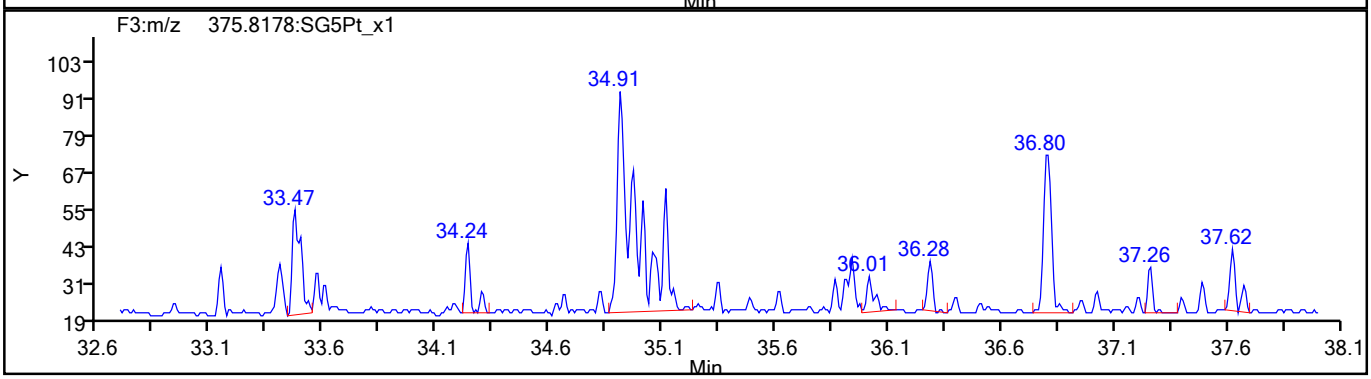

HxCDF Standards

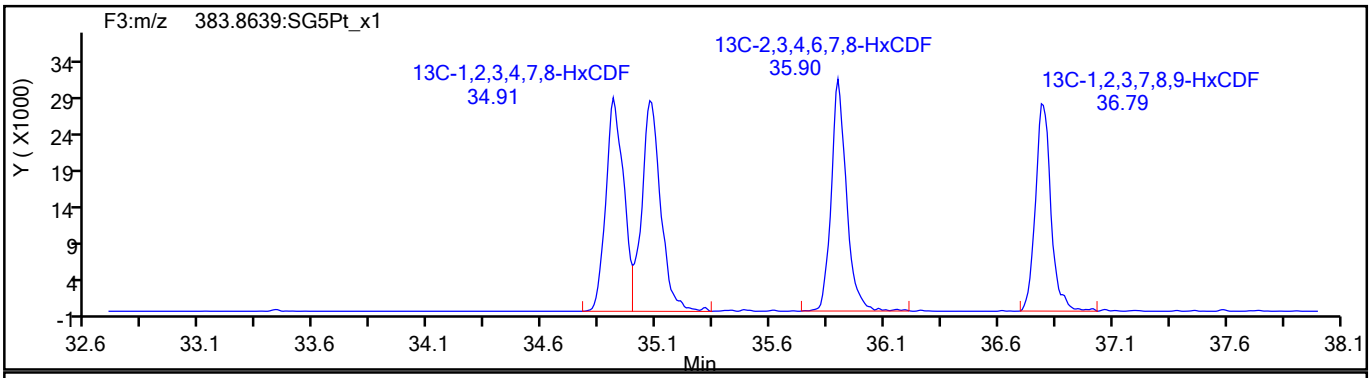

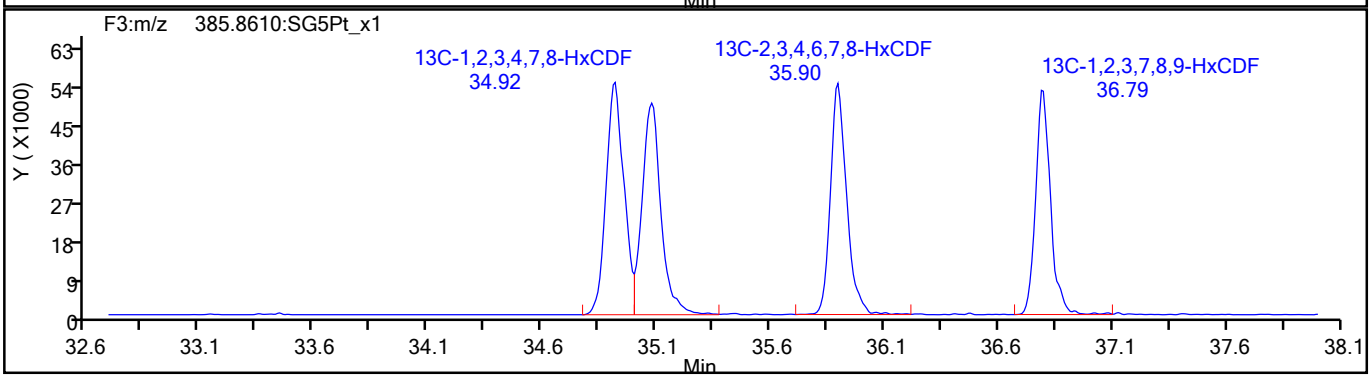

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Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

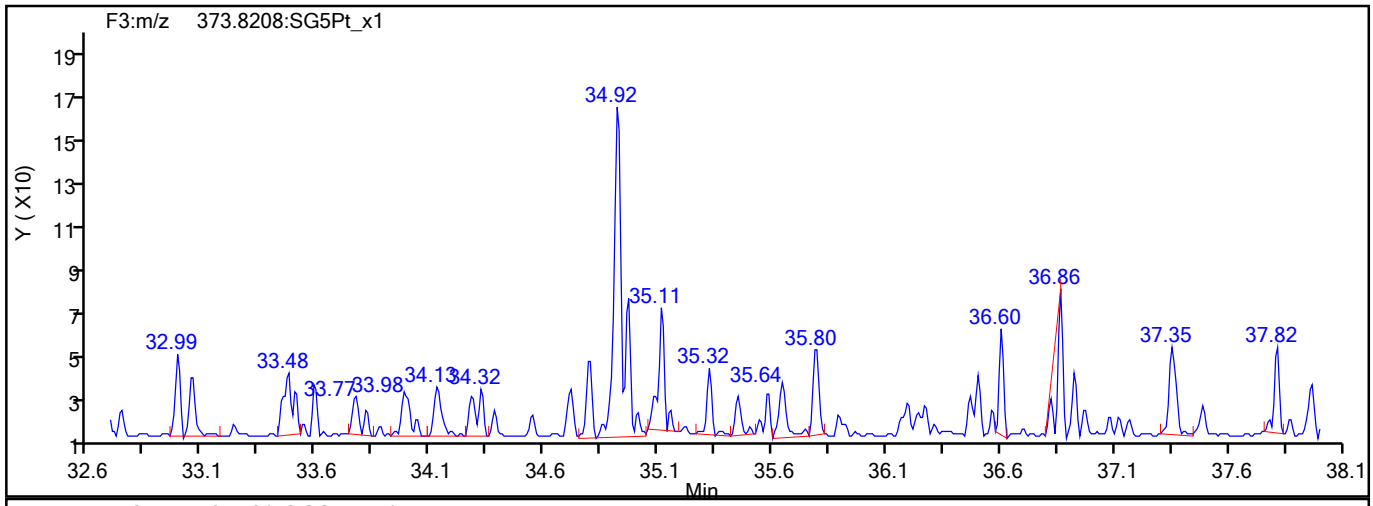

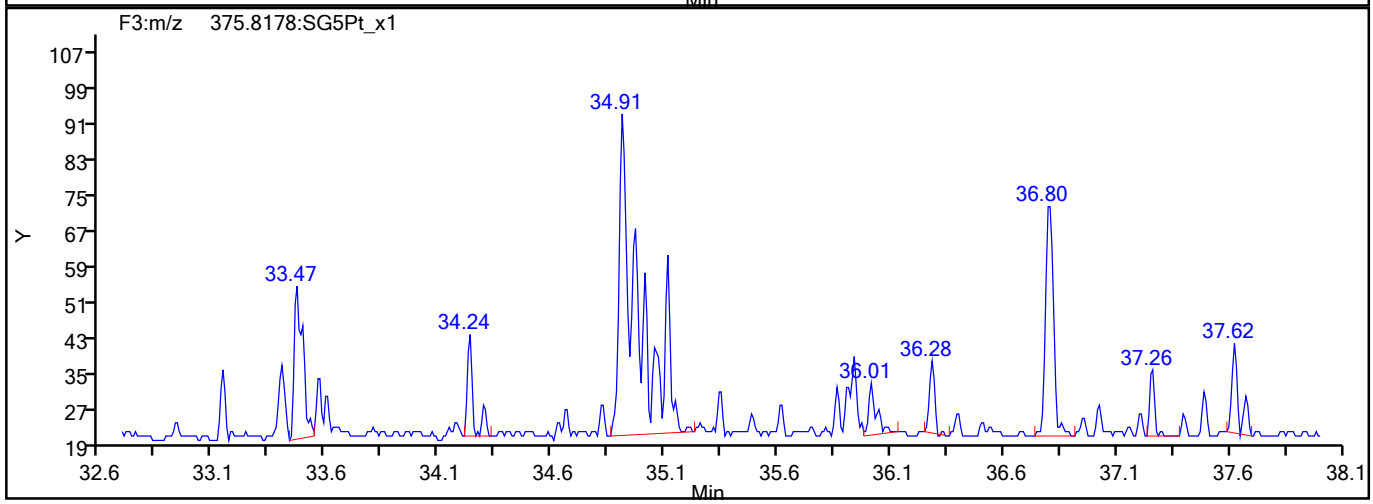

HxCDF Interference Mass

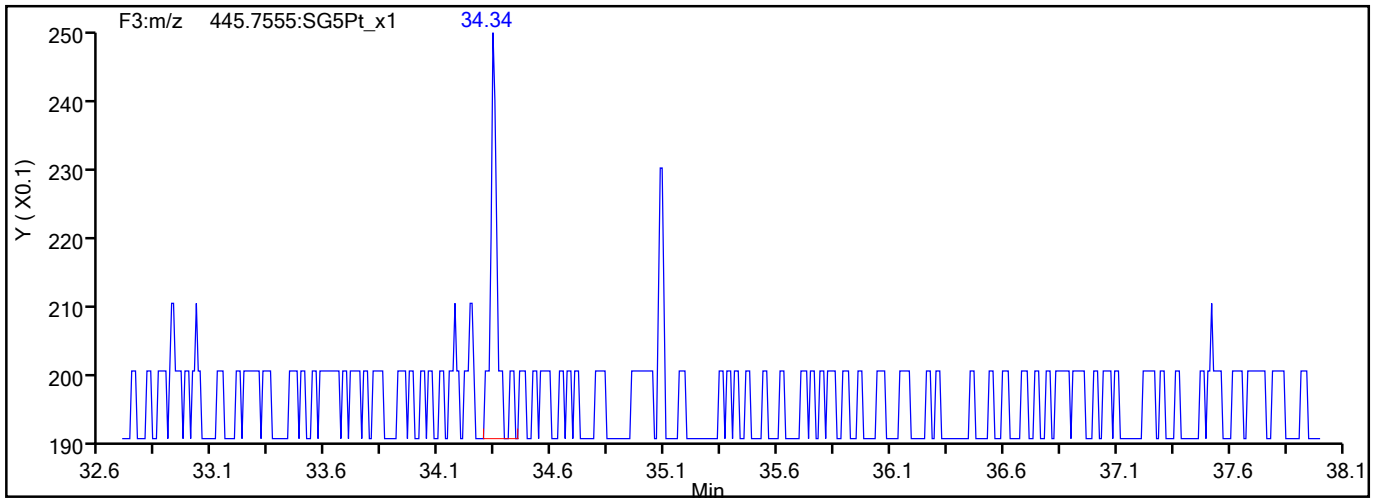

788558

Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

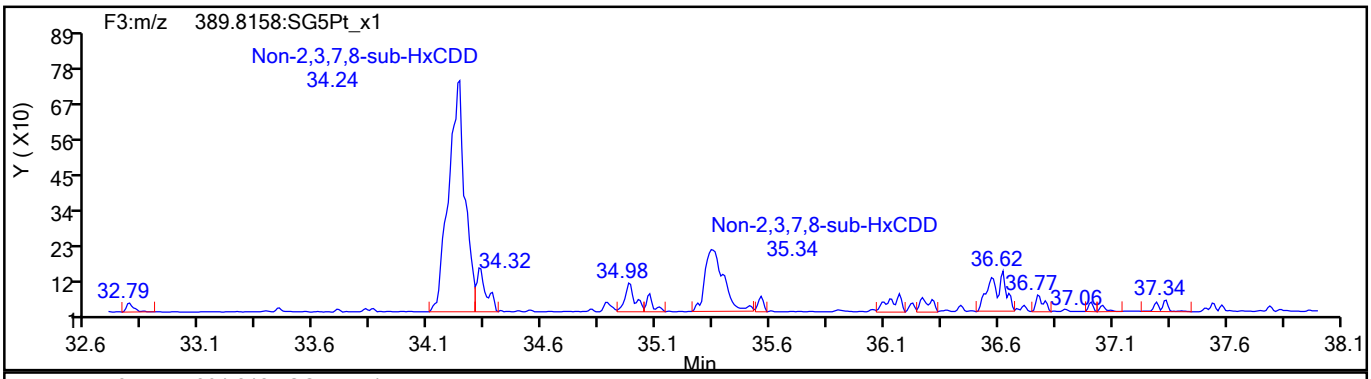

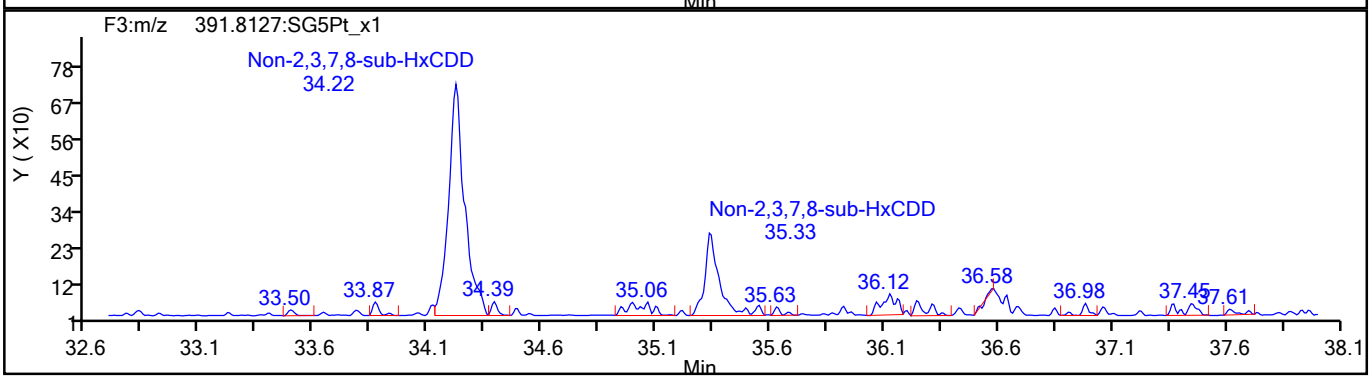

HxCDD Standards

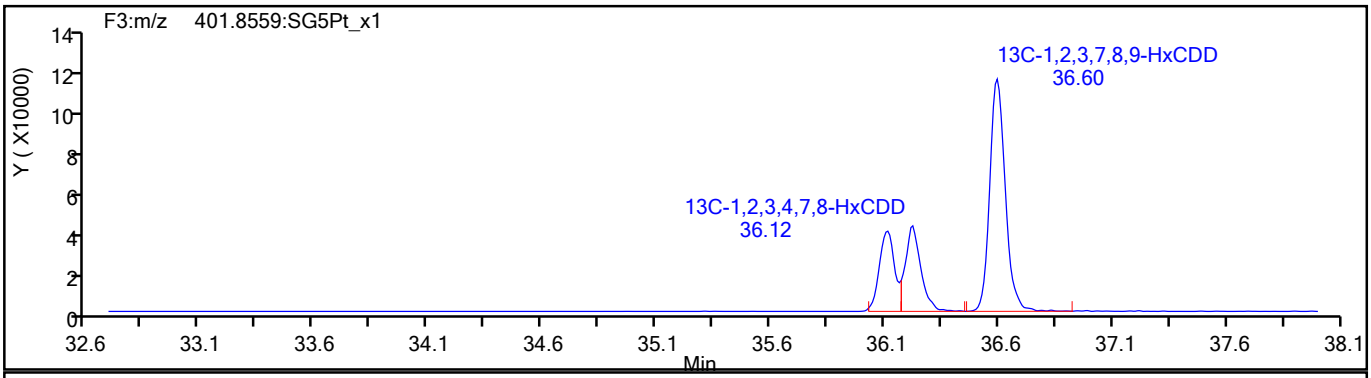

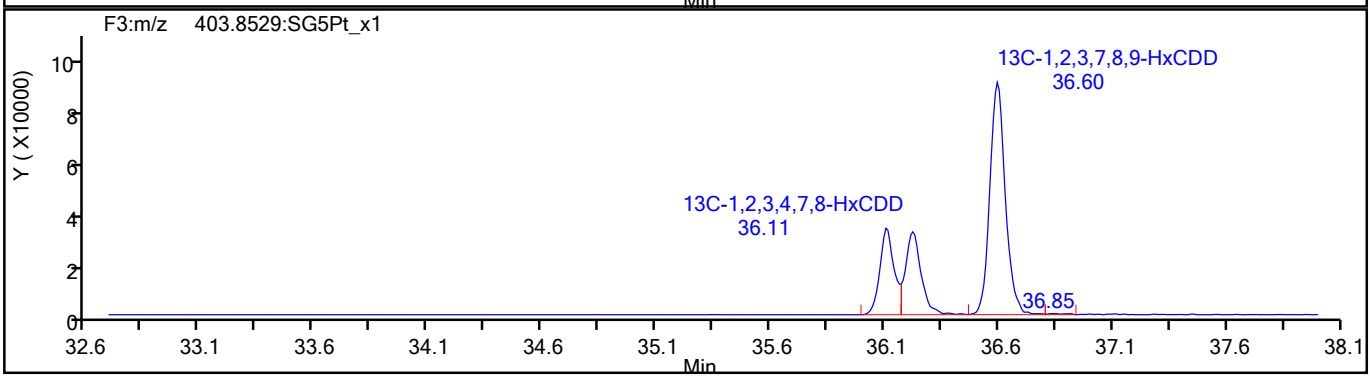

788559

Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Injection Date:	19-Aug-2021 21:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	517891	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

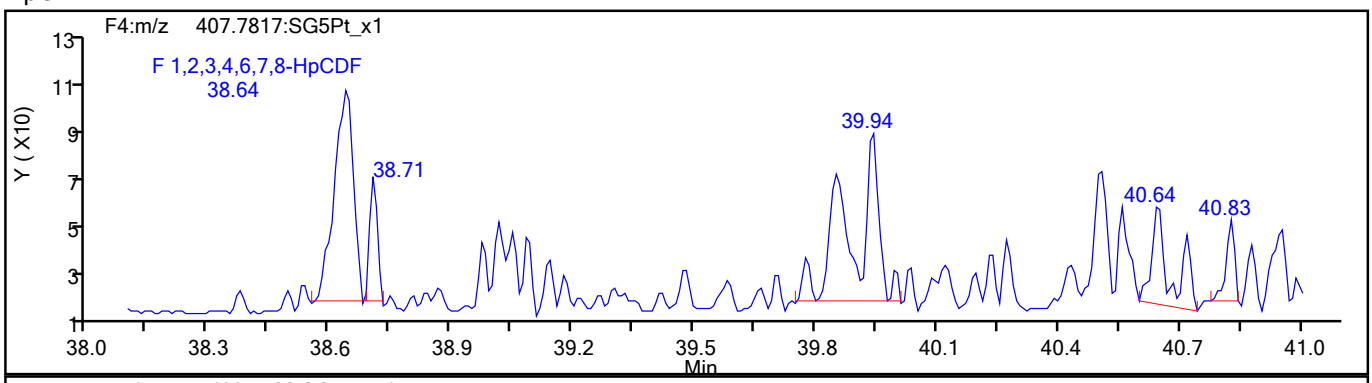

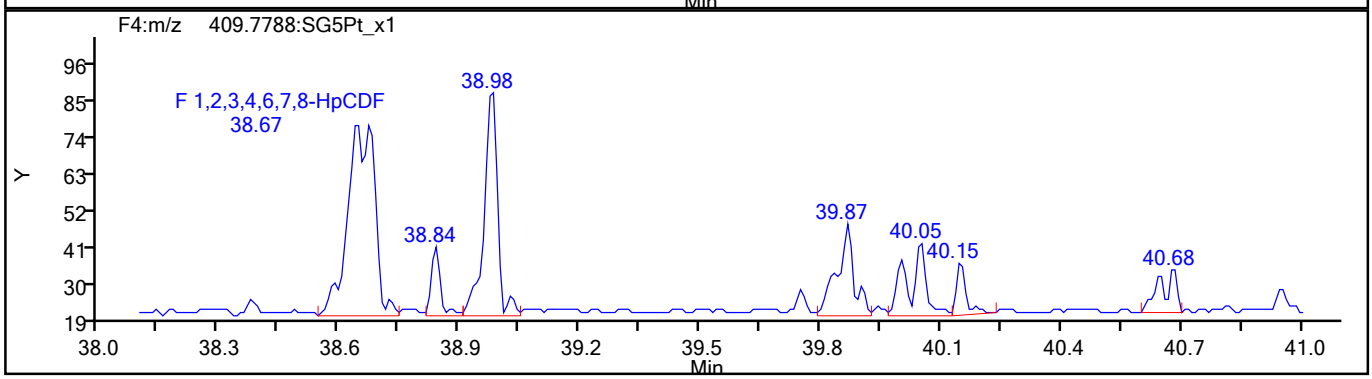

HpCDF Standards

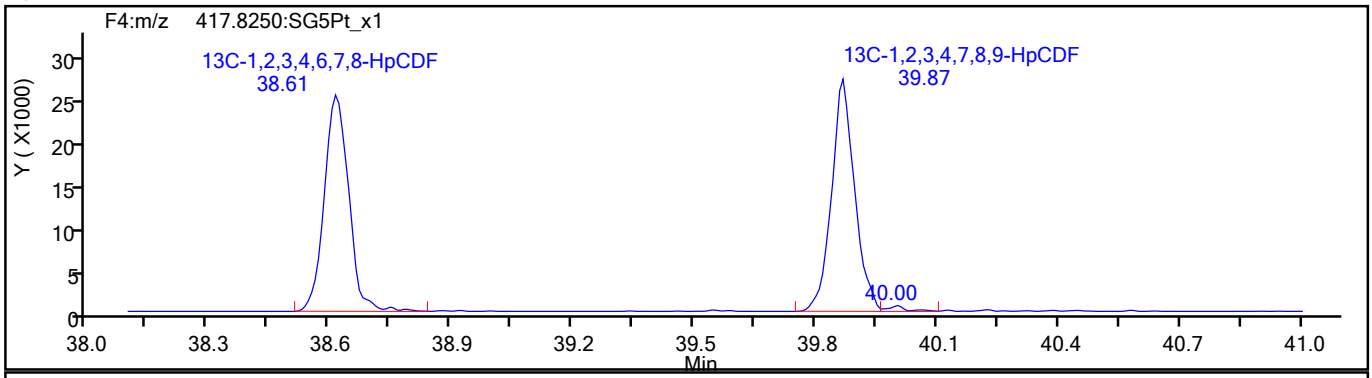

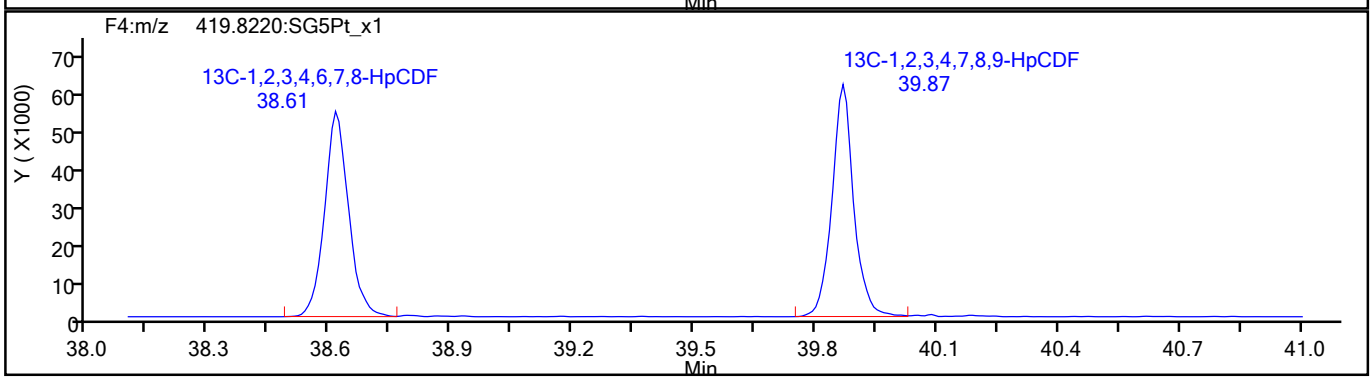

788560

Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Injection Date:	19-Aug-2021 21:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	517891	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

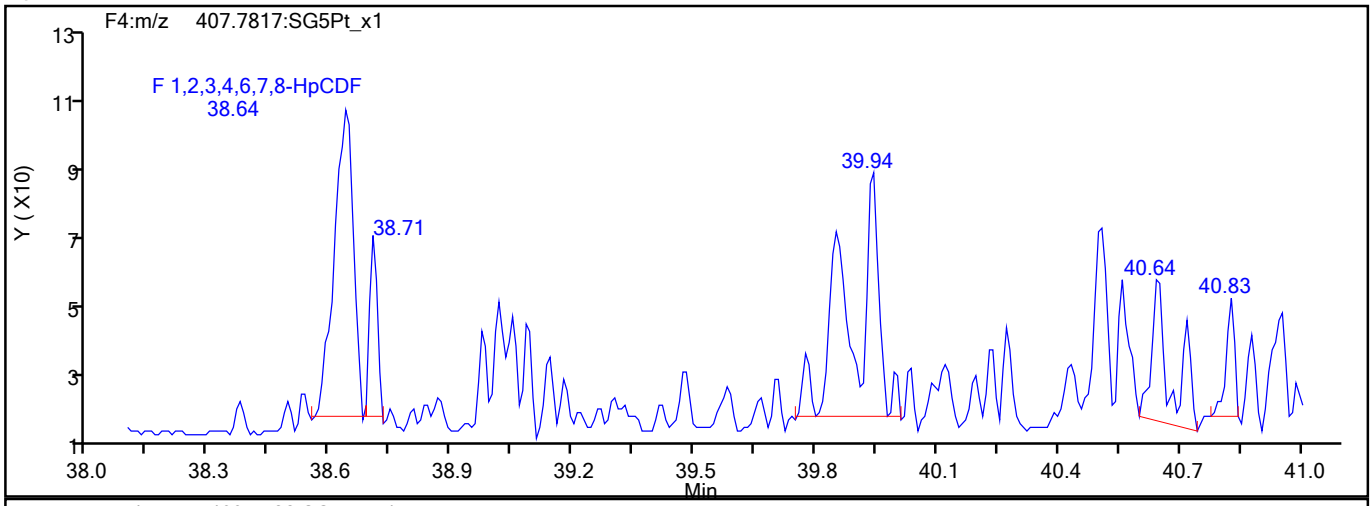

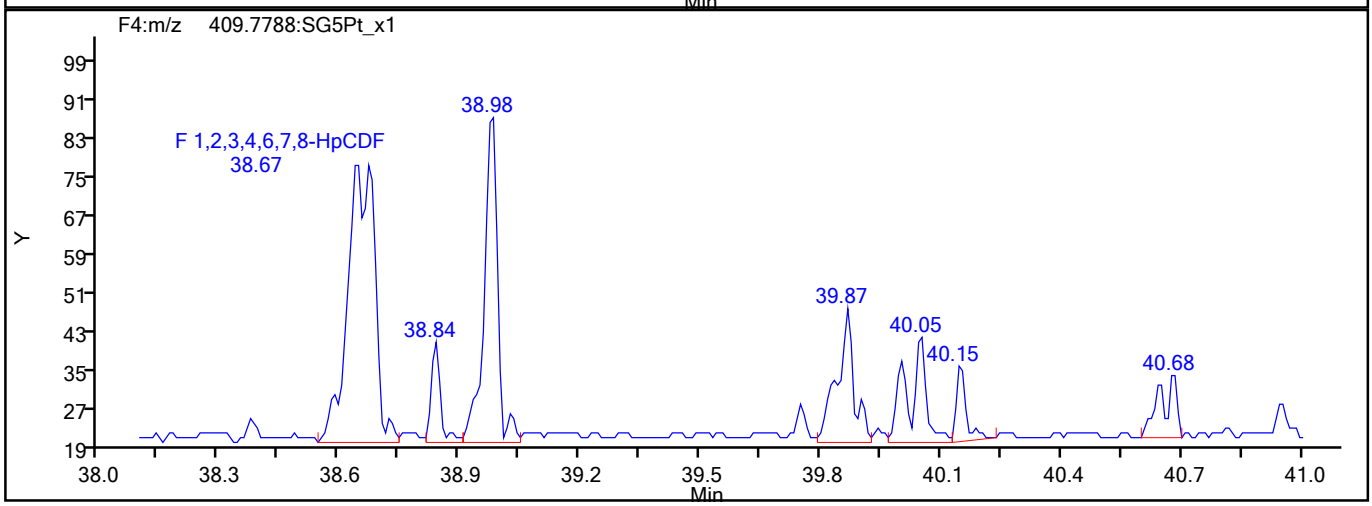

HpCDF Interference Mass

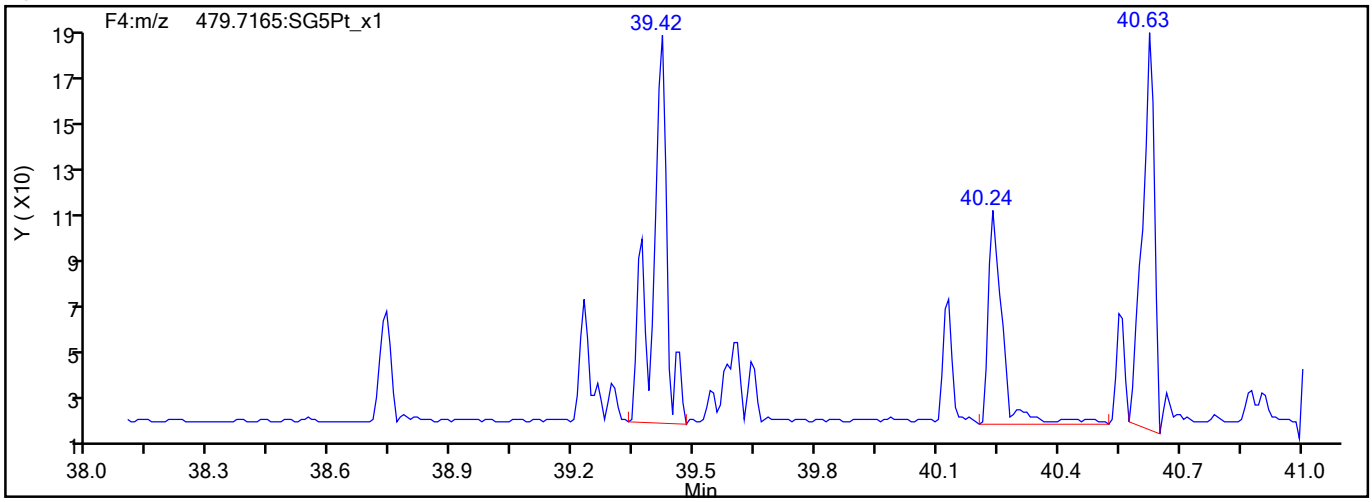

788561

Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Injection Date:	19-Aug-2021 21:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	517891	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

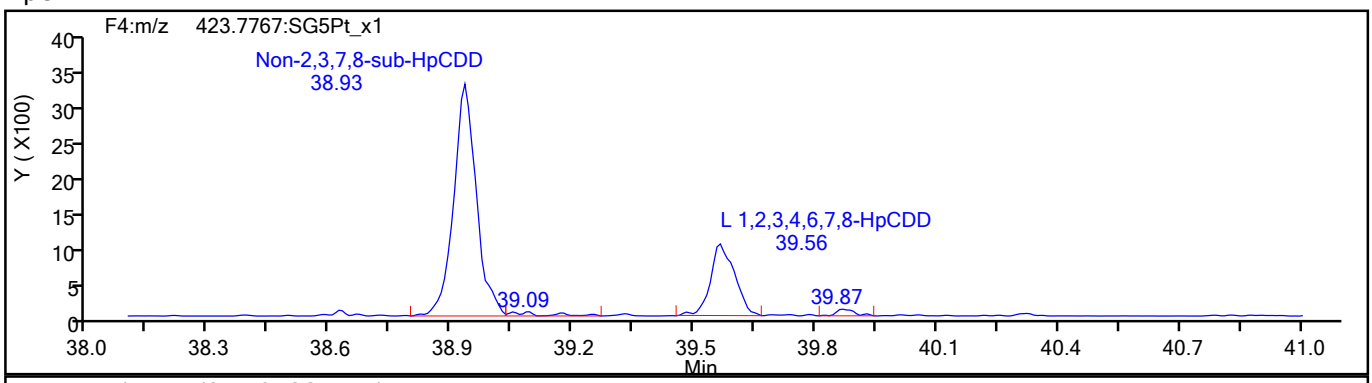

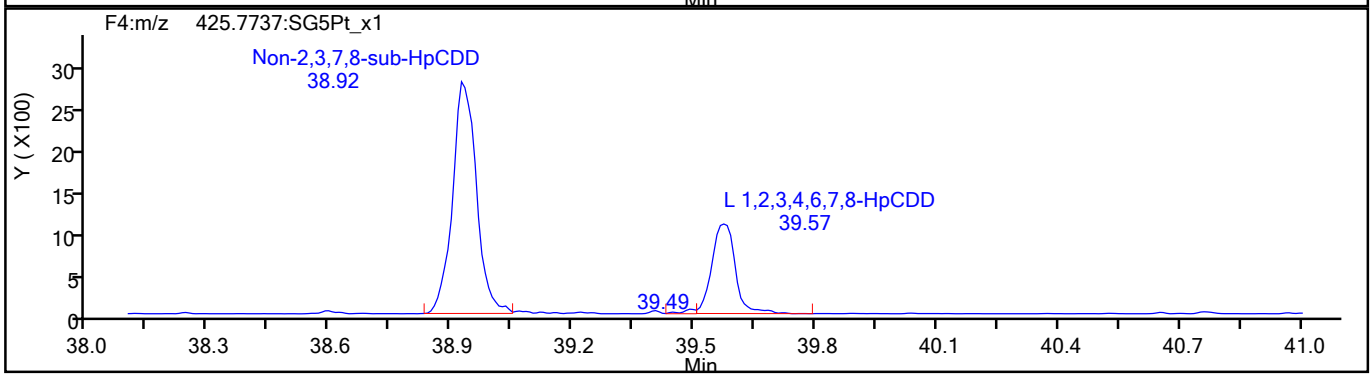

HpCDD Standards

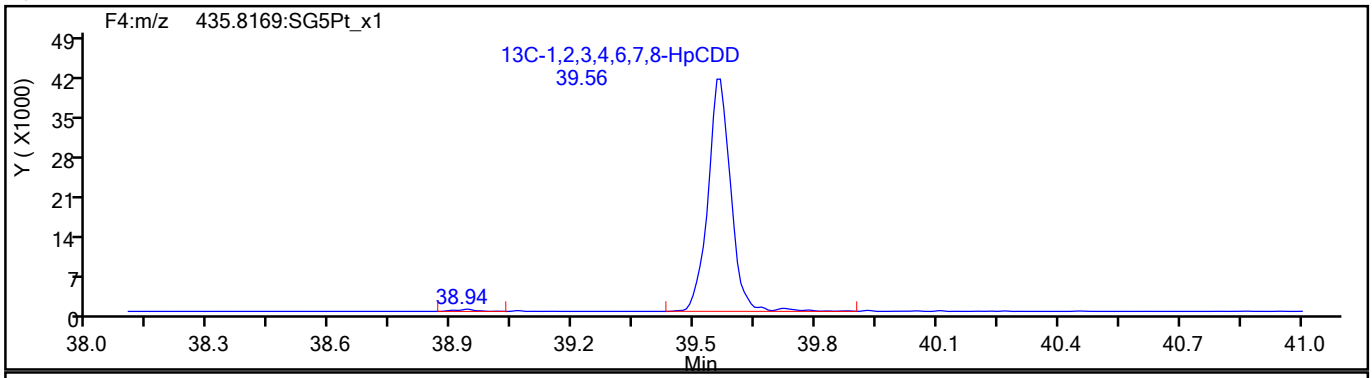

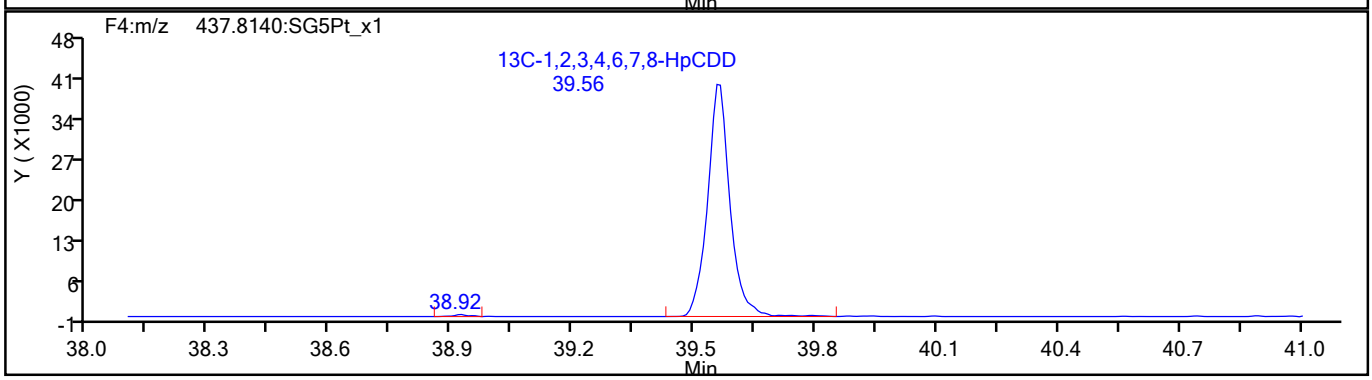

788562

Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Injection Date:	19-Aug-2021 21:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	517891	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

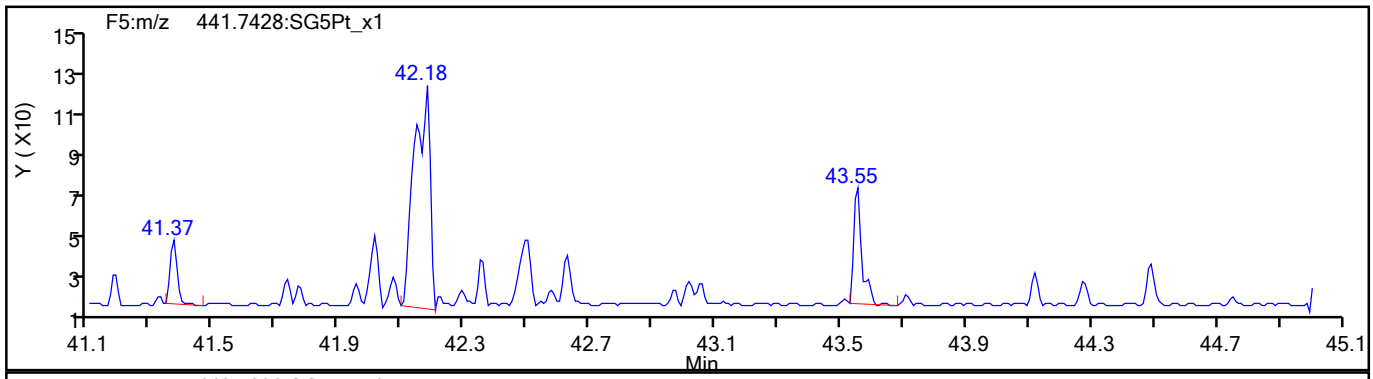

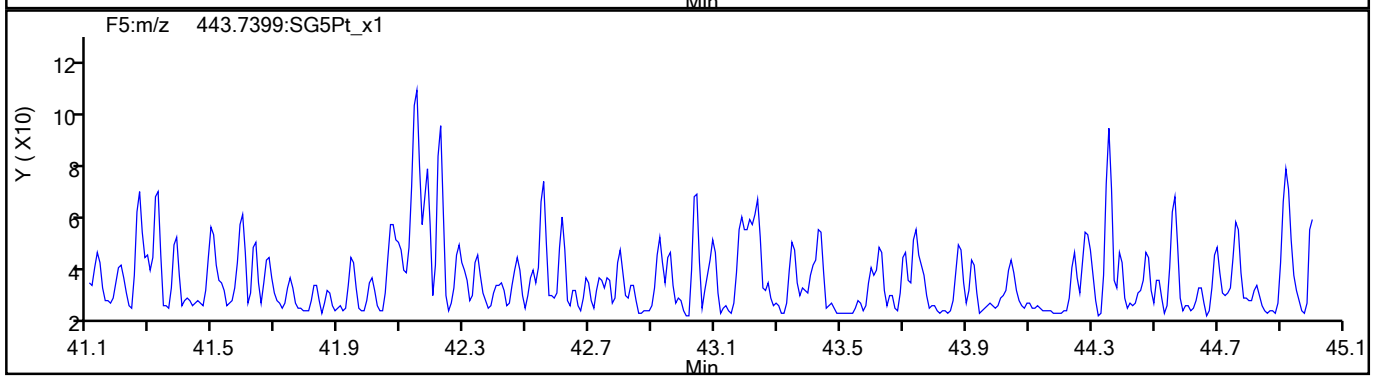

OCDF Standards

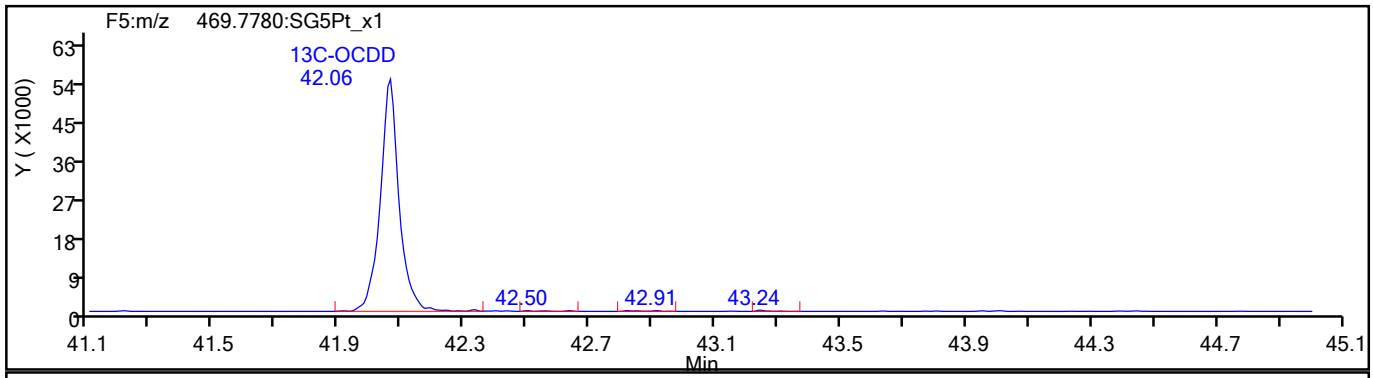

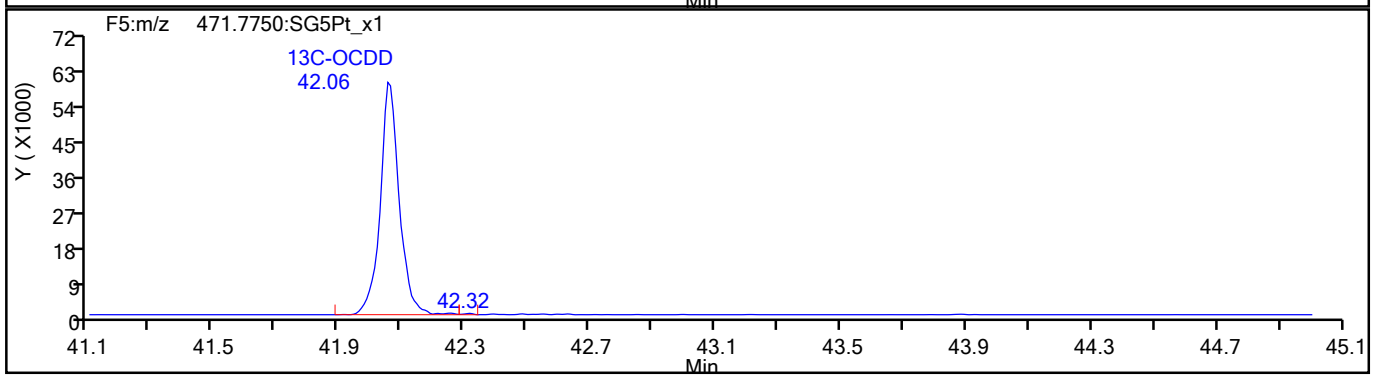

788563

Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Injection Date:	19-Aug-2021 21:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	517891	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

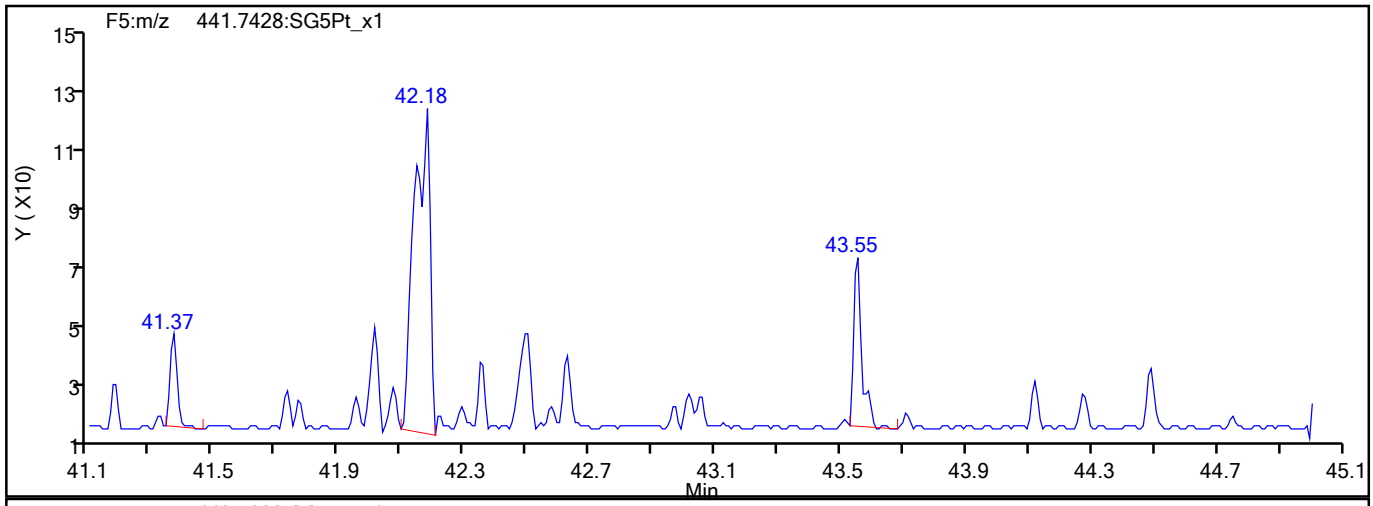

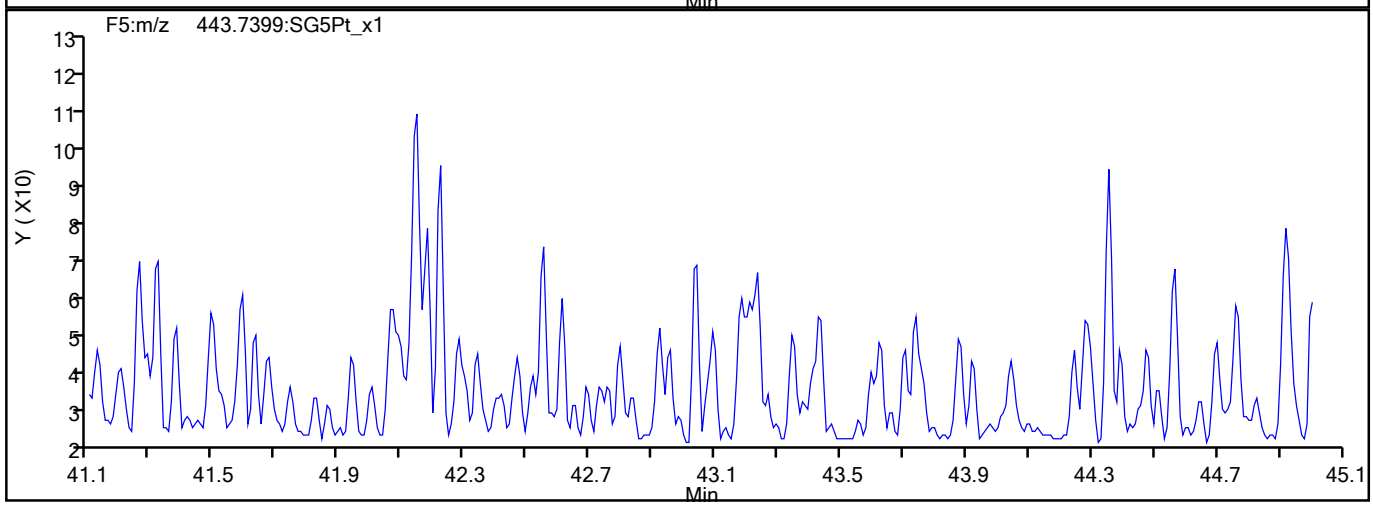

OCDF Interference Mass

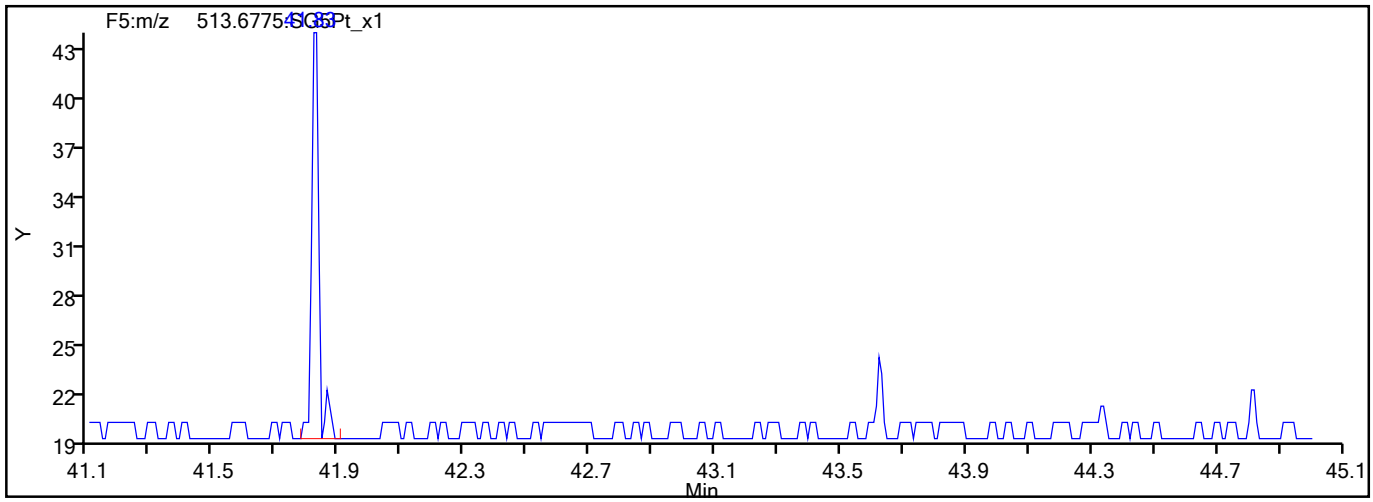

788564

Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Injection Date:	19-Aug-2021 21:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	517891	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

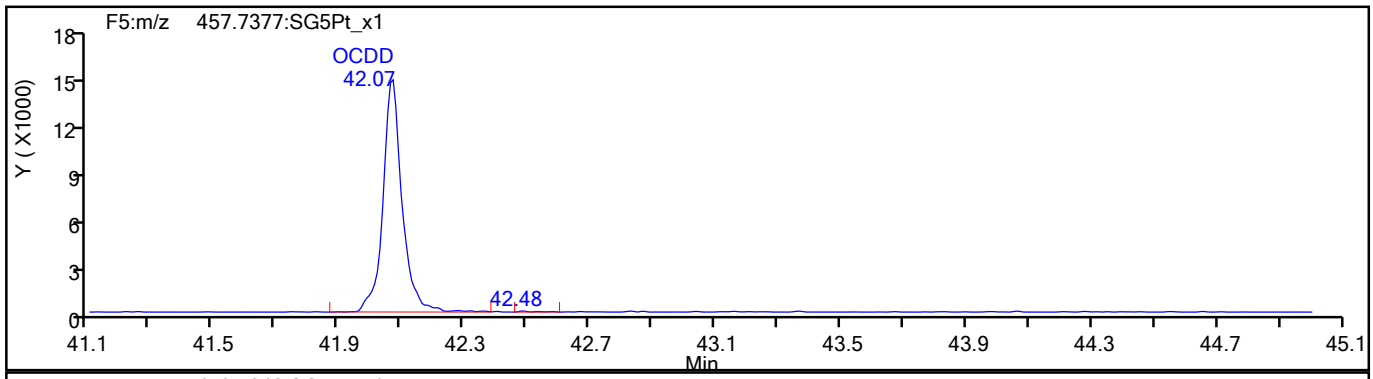

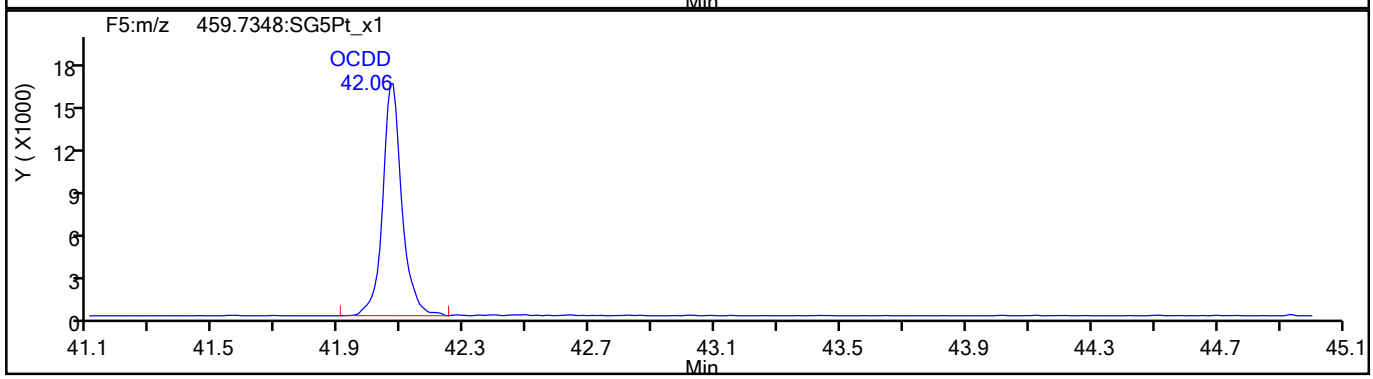

OCDD Standards

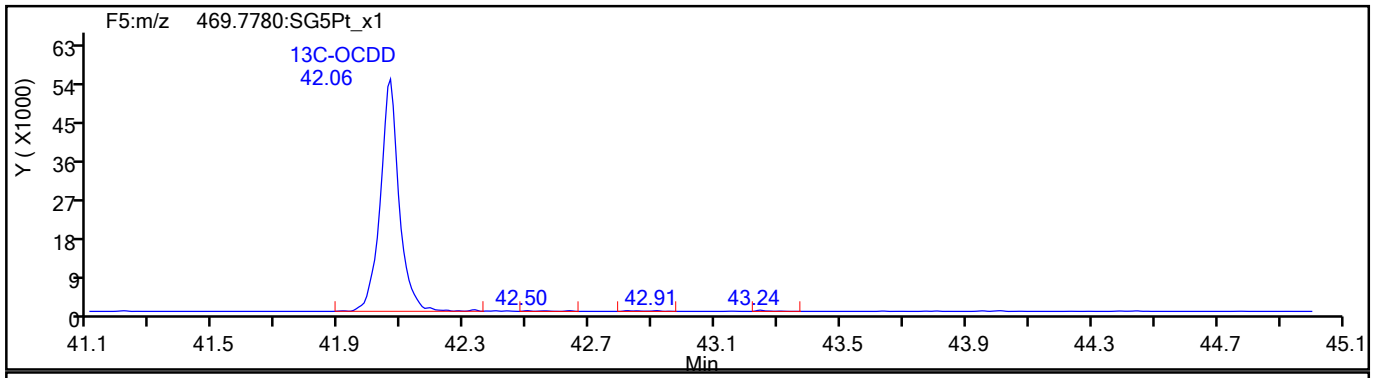

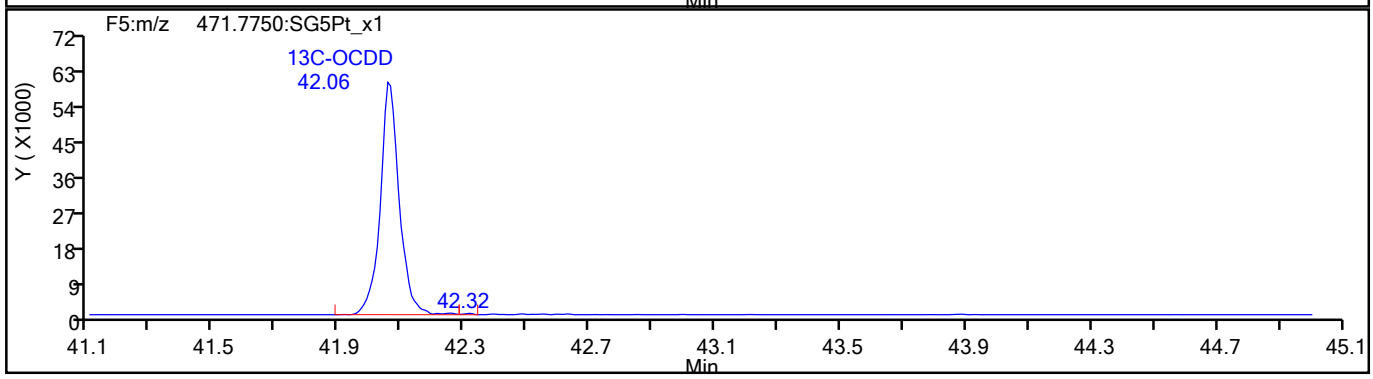

788565

Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Injection Date:	19-Aug-2021 21:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	517891	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

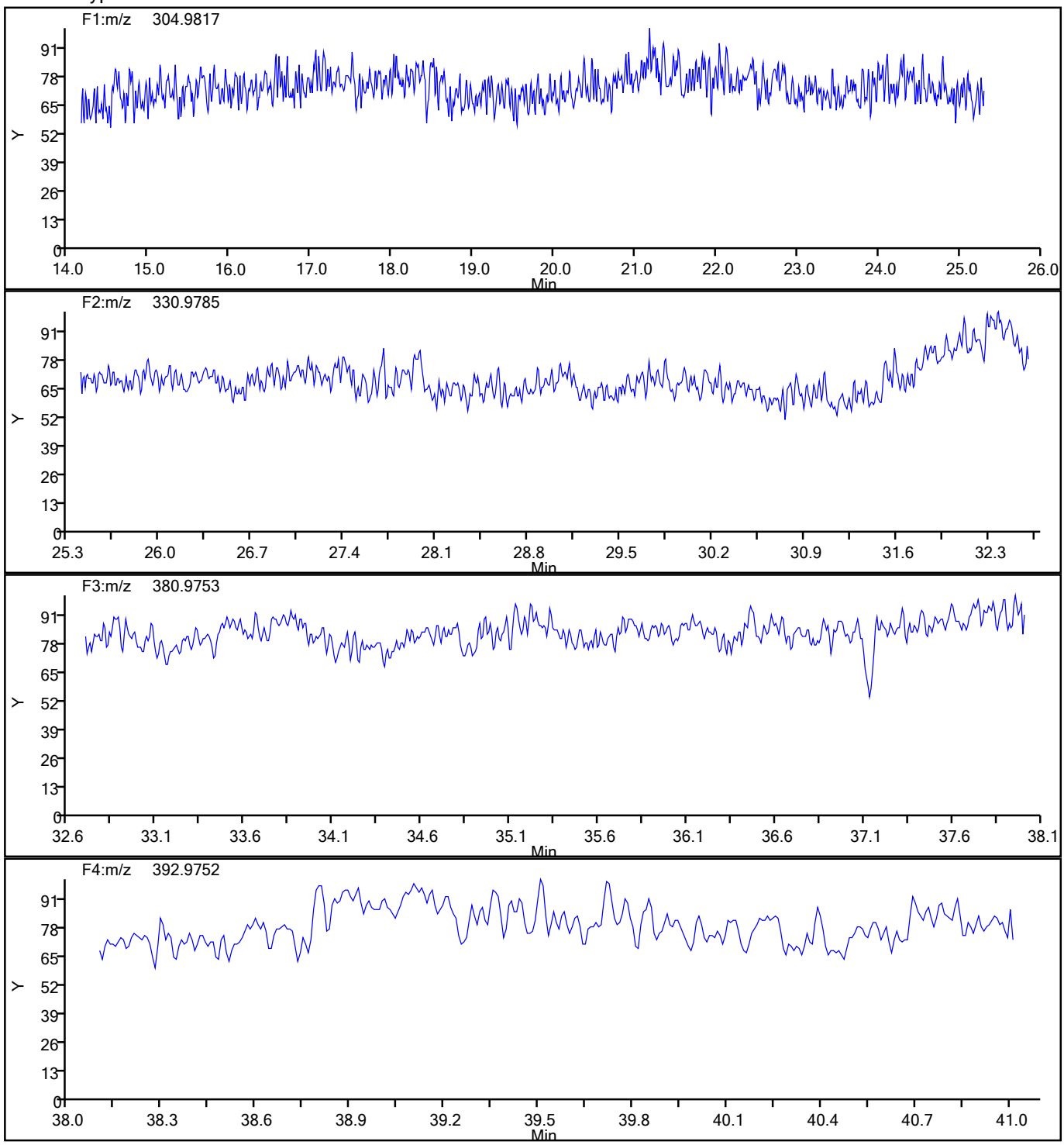

788566

Report Date: 23-Aug-2021 09:22:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_11.d		
Injection Date:	19-Aug-2021 21:15:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	517891	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

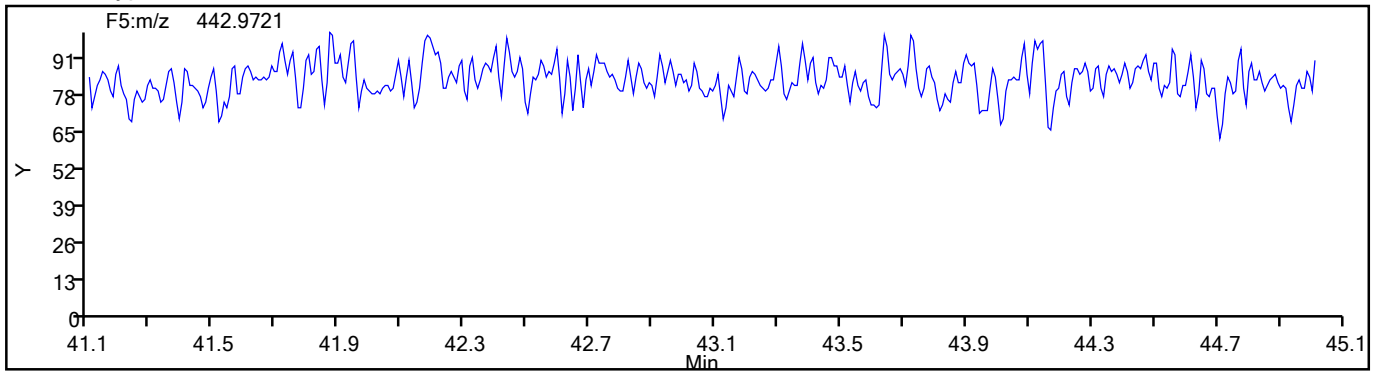

788567

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (12-14) RA
Lab Sample ID: 320-76901-7 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_006.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:30
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.33(g)
Date Analyzed: 08/27/2021 18:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	17		1.3	0.36

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	43		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	58		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_006.d
Lims ID: 320-76901-A-7-A
Client ID: 11215702-072821-BN-SJSB095 (12-14)
Sample Type: Client
Inject. Date: 27-Aug-2021 18:50:01 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-7-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:40:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	32707301	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	18649954	0.81	1.3327	42.8	42.8	0.2603	0.2603	42.79	
2,3,7,8-TCDF	17.671	1244277	0.74	0.9978	6.686	6.686	0.1431	0.1431		M
D 13C-2,3,7,8-TCDD	16.094	11168298	0.75	0.8749	39.0	39.0	0.4051	0.4051	39.03	
2,3,7,8-TCDD	16.094	253635	0.82	1.0570	2.149	2.149	0.1734	0.1734		
$ 37Cl4-2,3,7,8-TCDD	16.108	6544128		0.8648	23.1	23.1	0.0506	0.0506	57.84	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

788569

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_006.d
Lims ID: 320-76901-A-7-A
Client ID: 11215702-072821-BN-SJSB095 (12-14)
Sample Type: Client
Inject. Date: 27-Aug-2021 18:50:01 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-7-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:40:11

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.300	2		14402472	3280338	5303	13257	619		
333.9339	16.327	16.300	2		18304829	4090338	5146	12865	795	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.616	2	1.081	8335423	1499698	4615	11537	325		
317.9389	17.644	17.616	2	1.081	10314531	1990531	5614	14035	355	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.671	17.644	2	1.002	527188	108238	1050	2625	103		
305.8987	17.671	17.644	2	1.002	717089	131160	944	2360	139	0.74(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.094	16.066	2	0.986	4795199	1037713	5303	13257	196		
333.9339	16.094	16.066	2	0.986	6373099	1425982	5146	12865	277	0.75(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.094	16.080	1	1.000	114209	22482	946	2365	24		
321.8936	16.121	16.080	2	1.002	139426	27426	860	2150	32	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.108	16.080	2	0.987	6544128	1452883	1291	3227	1125		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_006.d				
Injection Date:	27-Aug-2021 18:50:01	Instrument ID:	11D2		
Lims ID:	320-76901-A-7-A	Lab Sample ID:	320-76901-7		
Client ID:	11215702-072821-BN-SJSB095 (12-14)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.67
Area: 727558
Amount: 6.742665
Amount Units: pg/ul

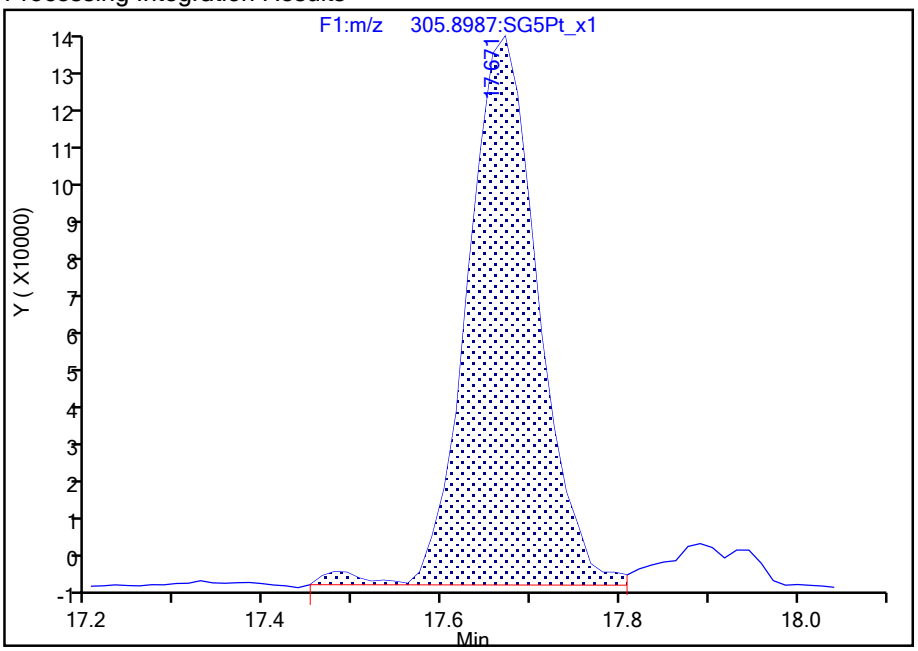

Manual Integration Results

RT: 17.67
Area: 717089
Amount: 6.686408
Amount Units: pg/ul

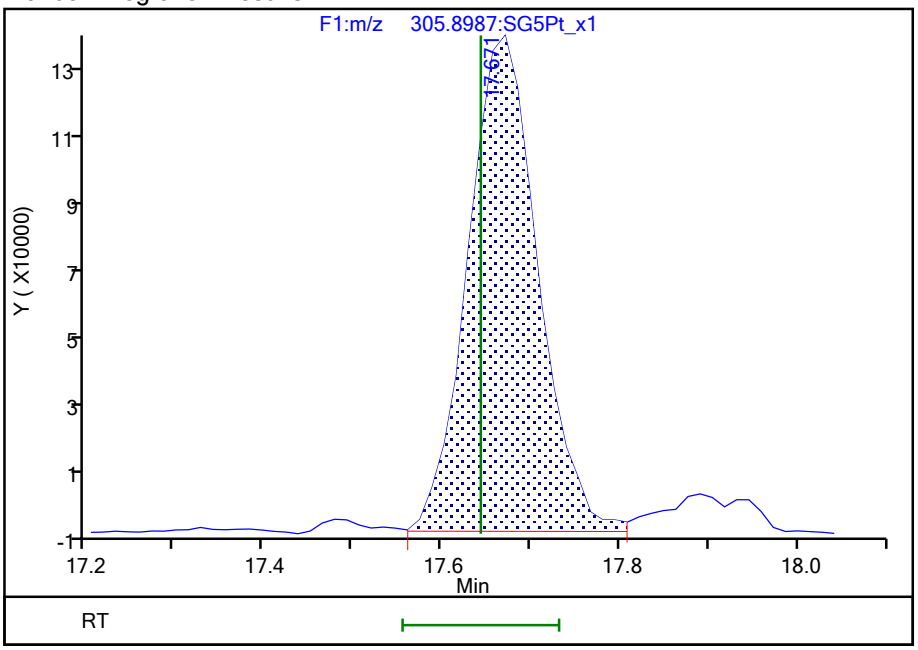

Reviewer: bennettd, 30-Aug-2021 09:40:03

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 30-Aug-2021 09:51:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_006.d		
Injection Date:	27-Aug-2021 18:50:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	520456	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

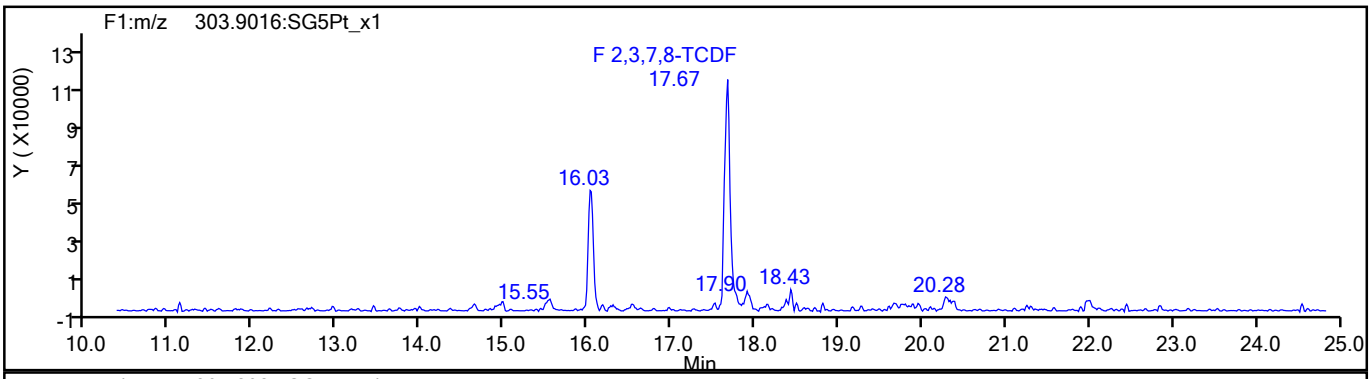

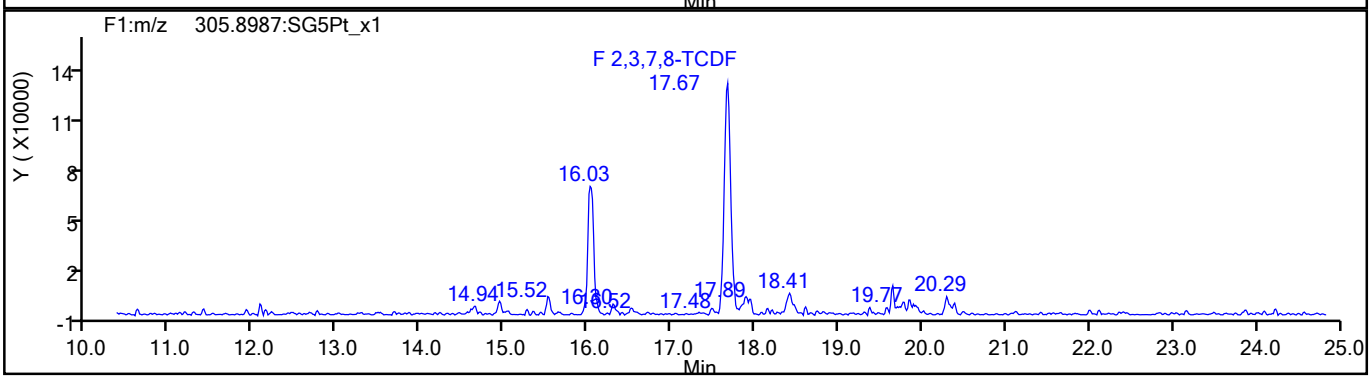

TCDF Standards

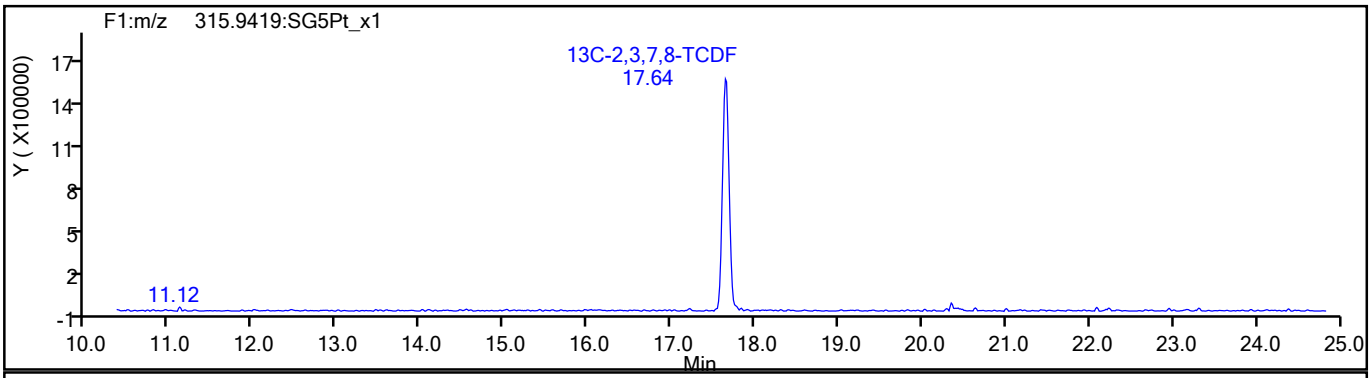

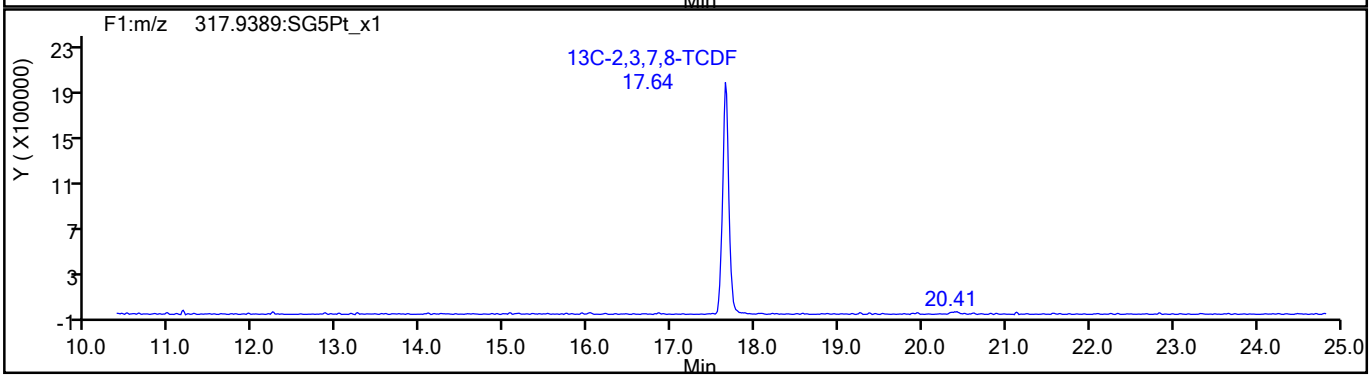

788572

Report Date: 30-Aug-2021 09:51:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_006.d		
Injection Date:	27-Aug-2021 18:50:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	520456	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

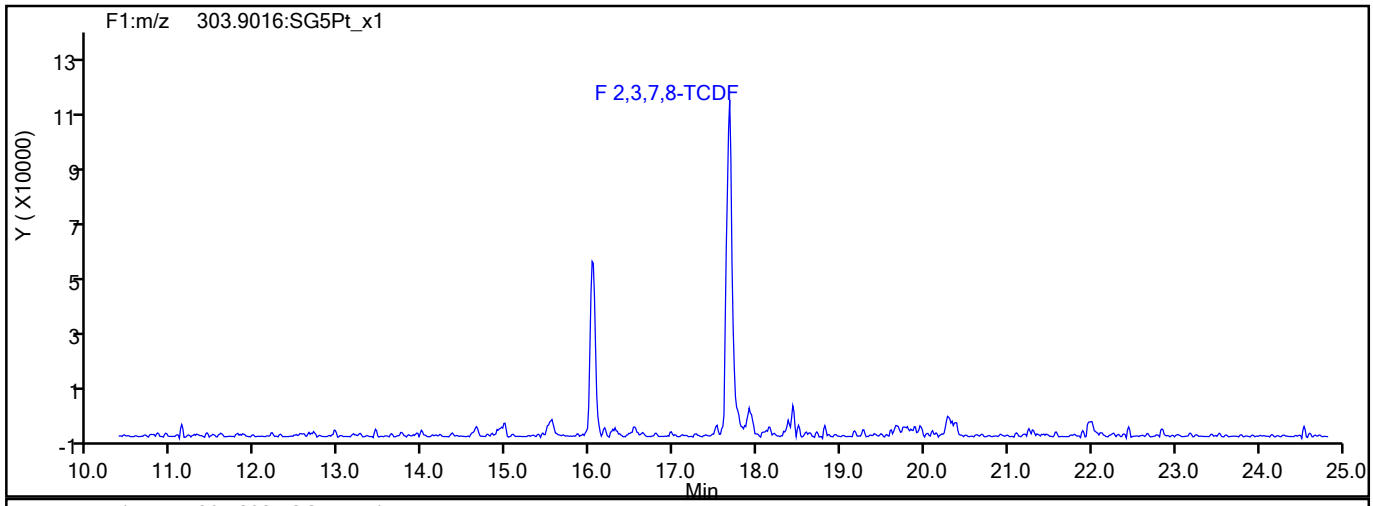

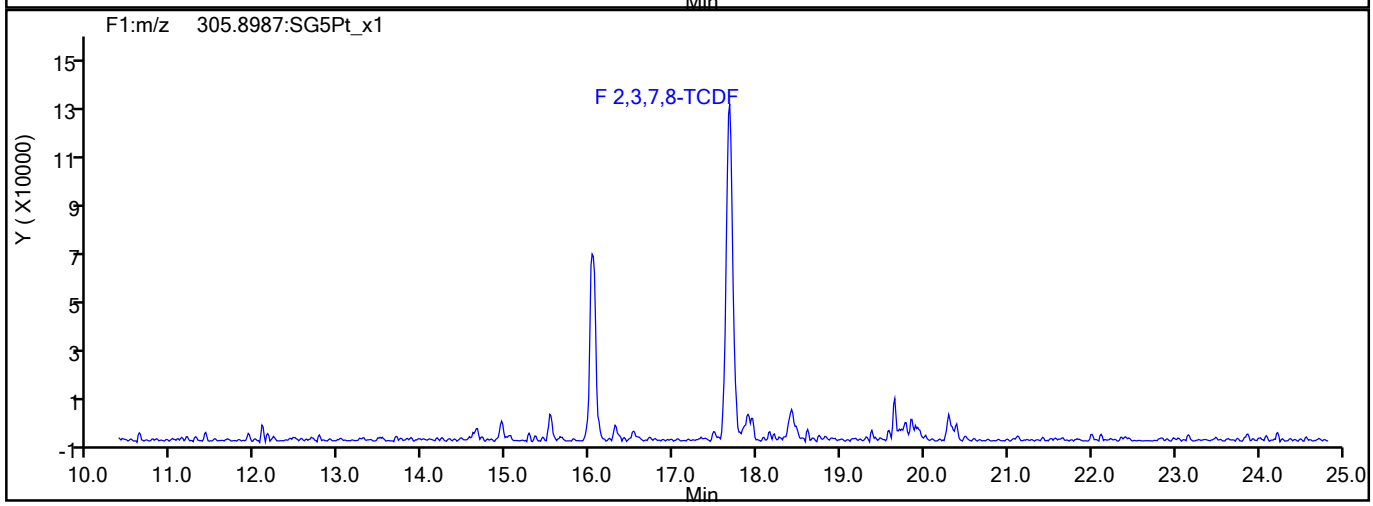

TCDF Interference Mass

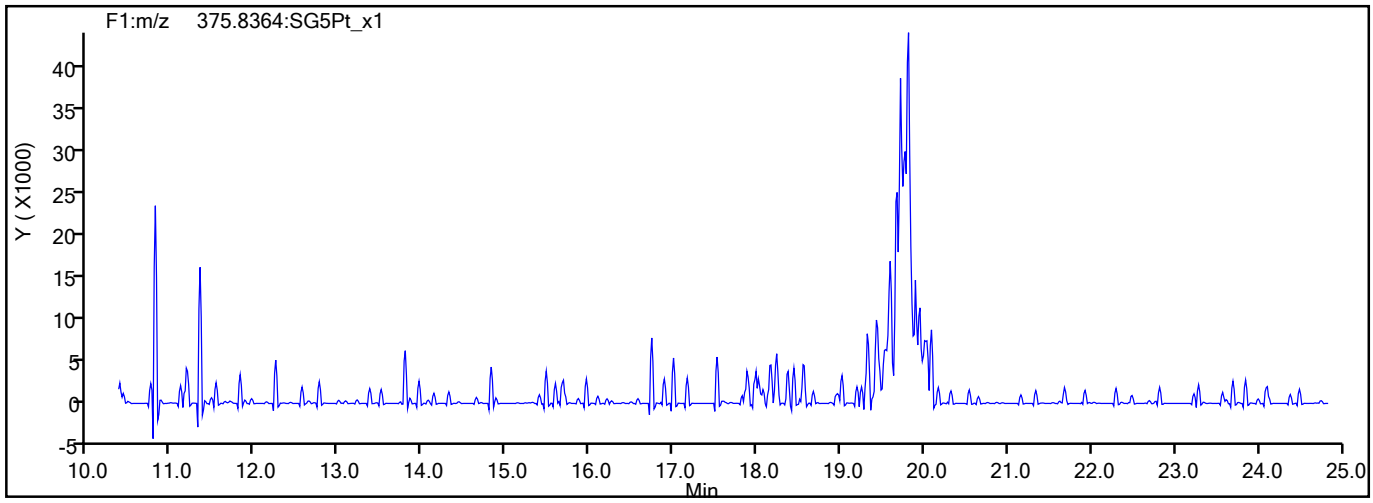

788573

Report Date: 30-Aug-2021 09:51:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_006.d		
Injection Date:	27-Aug-2021 18:50:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	520456	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

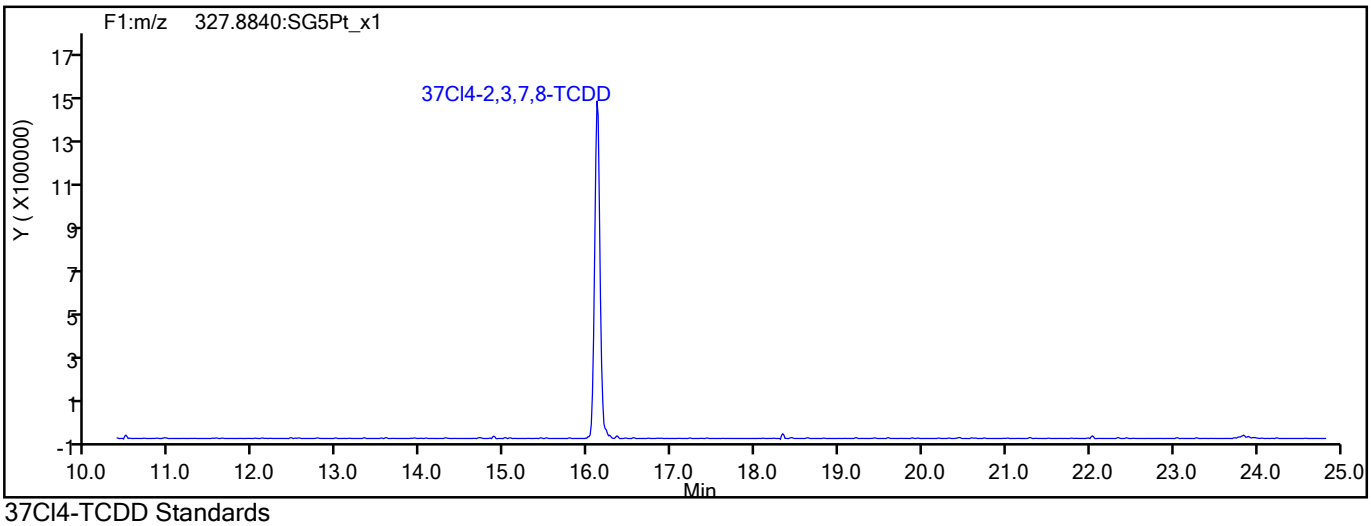

37Cl4-TCDD Standards

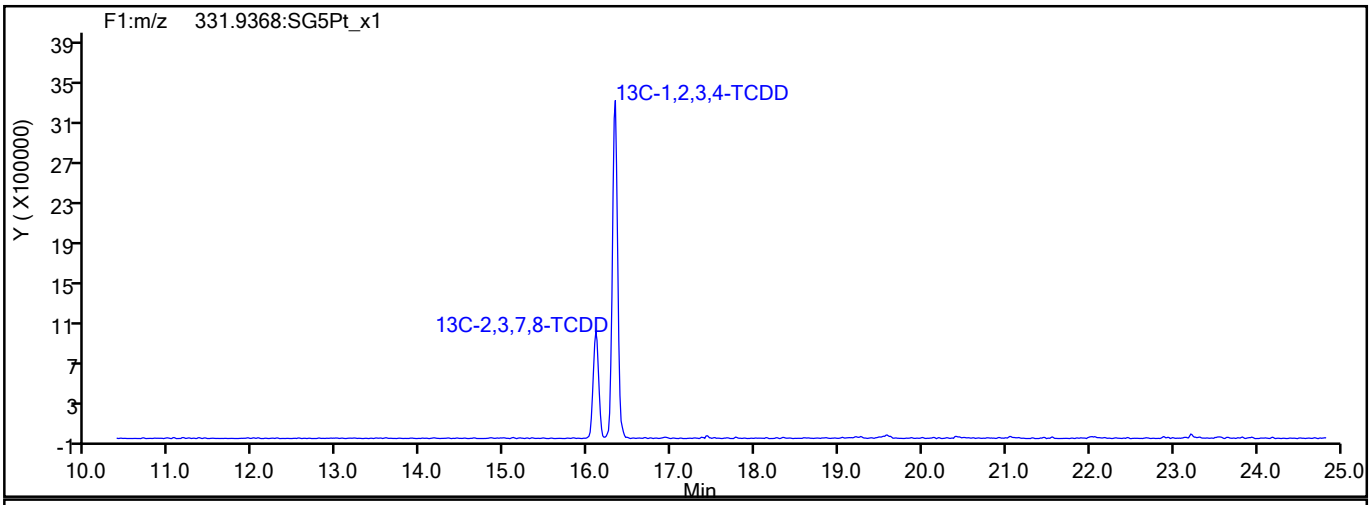

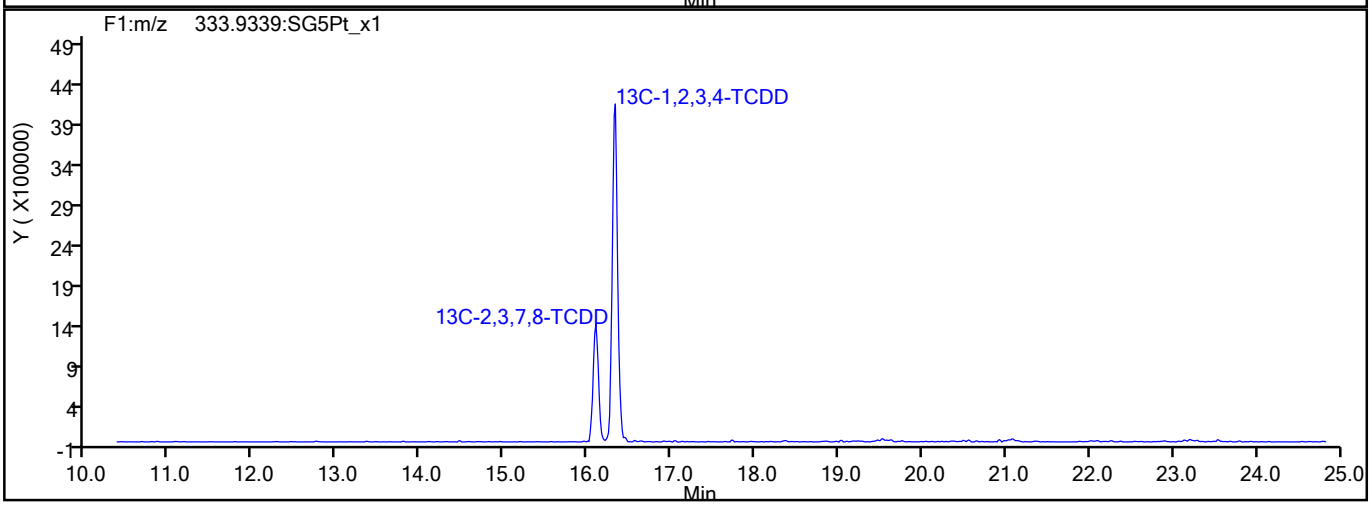

788574

Report Date: 30-Aug-2021 09:51:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_006.d		
Injection Date:	27-Aug-2021 18:50:01	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (12-14)		
Worklist#:	520456	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

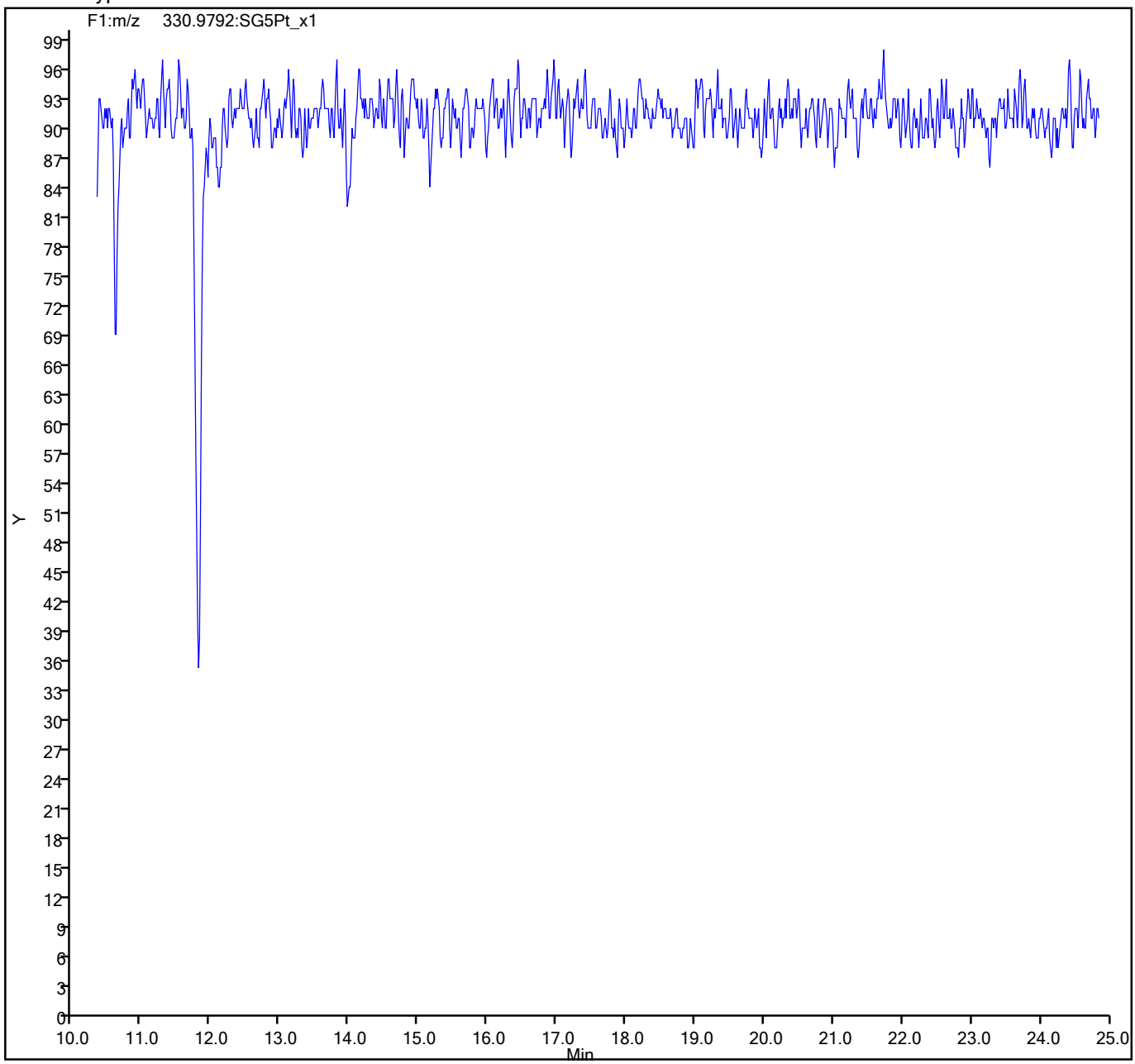

788575

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (14-16) RA
Lab Sample ID: 320-76901-8 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_007.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:35
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.31(g)
Date Analyzed: 08/27/2021 19:28
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	170		1.3	0.47

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	44		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	48		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_007.d
Lims ID: 320-76901-A-8-A
Client ID: 11215702-072821-BN-SJSB095 (14-16)
Sample Type: Client
Inject. Date: 27-Aug-2021 19:28:23 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-8-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:40:22

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.300	63716765	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.630	37020538	0.81	1.3327	43.6	43.6	0.1797	0.1797	43.60	
2,3,7,8-TCDF	17.644	24013360	0.81	0.9978	65.0	65.0	0.1826	0.1826		
D 13C-2,3,7,8-TCDD	16.080	22252749	0.82	0.8749	39.9	39.9	0.7059	0.7059	39.92	
2,3,7,8-TCDD	16.094	3648718	0.82	1.0570	15.5	15.5	0.1681	0.1681		
$ 37Cl4-2,3,7,8-TCDD	16.094	10640588		0.8648	19.3	19.3	0.0430	0.0430	48.28	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

788577

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_007.d
Lims ID: 320-76901-A-8-A
Client ID: 11215702-072821-BN-SJSB095 (14-16)
Sample Type: Client
Inject. Date: 27-Aug-2021 19:28:23 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-8-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:40:22

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.300	16.300	0		27944421	6260371	17328	43320	361		
333.9339	16.300	16.300	0		35772344	8091994	18130	45325	446	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.630	17.616	1	1.082	16572965	3223769	6065	15162	532		
317.9389	17.630	17.616	1	1.082	20447573	3646995	7683	19207	475	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.644	0	1.001	10724052	1976888	2604	6510	759		
305.8987	17.644	17.644	0	1.001	13289308	2524116	2404	6010	1050	0.81(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.080	16.066	1	0.987	10002986	2222030	17328	43320	128		
333.9339	16.080	16.066	1	0.987	12249763	2680674	18130	45325	148	0.82(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.094	16.080	1	1.001	1643422	343603	1714	4285	200		
321.8936	16.094	16.080	1	1.001	2005296	422025	1770	4425	238	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.094	16.080	1	0.987	10640588	2383989	2136	5340	1116		

QC Flag Legend

Processing Flags

Report Date: 30-Aug-2021 09:51:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_007.d		
Injection Date:	27-Aug-2021 19:28:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	520456	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

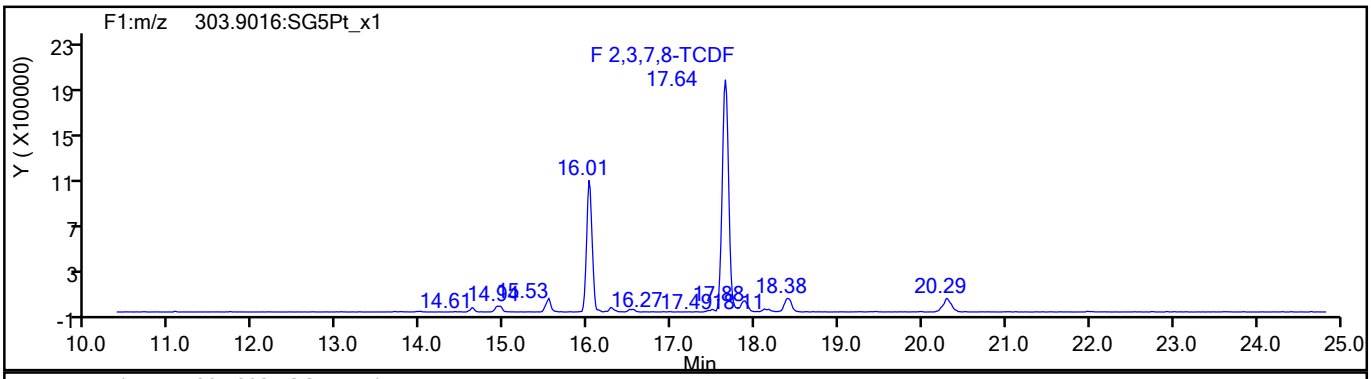

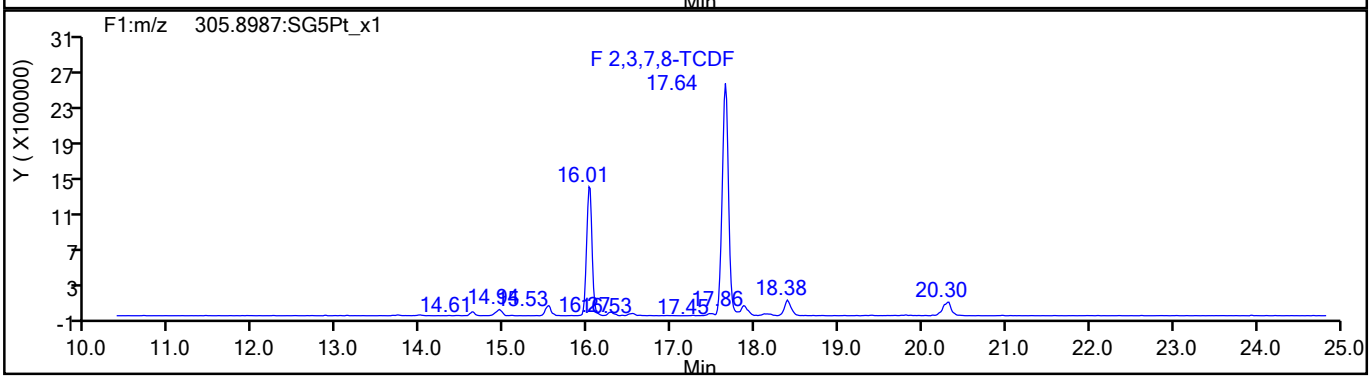

TCDF Standards

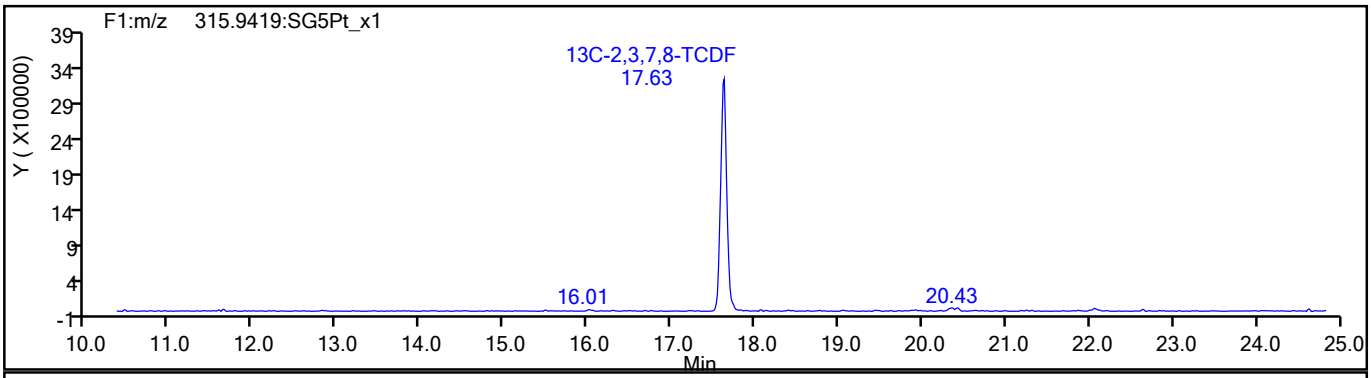

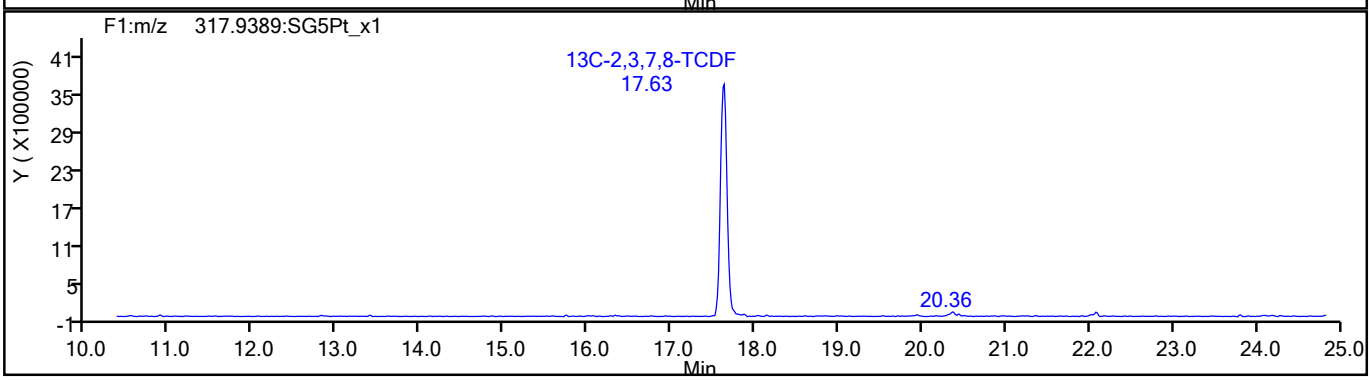

788579

Report Date: 30-Aug-2021 09:51:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_007.d		
Injection Date:	27-Aug-2021 19:28:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	520456	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

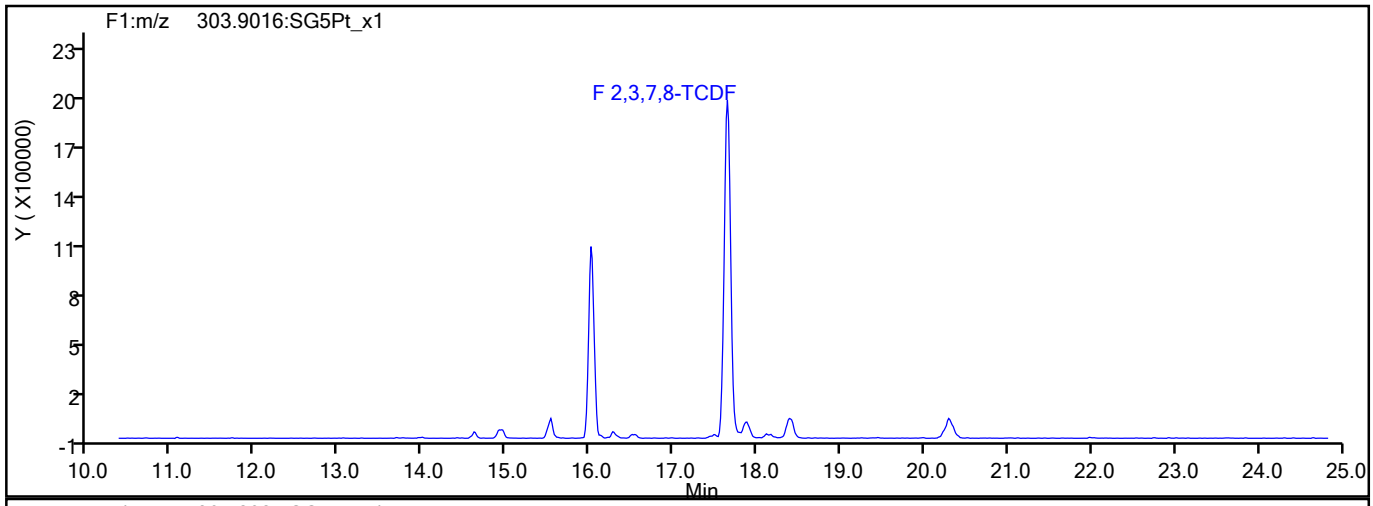

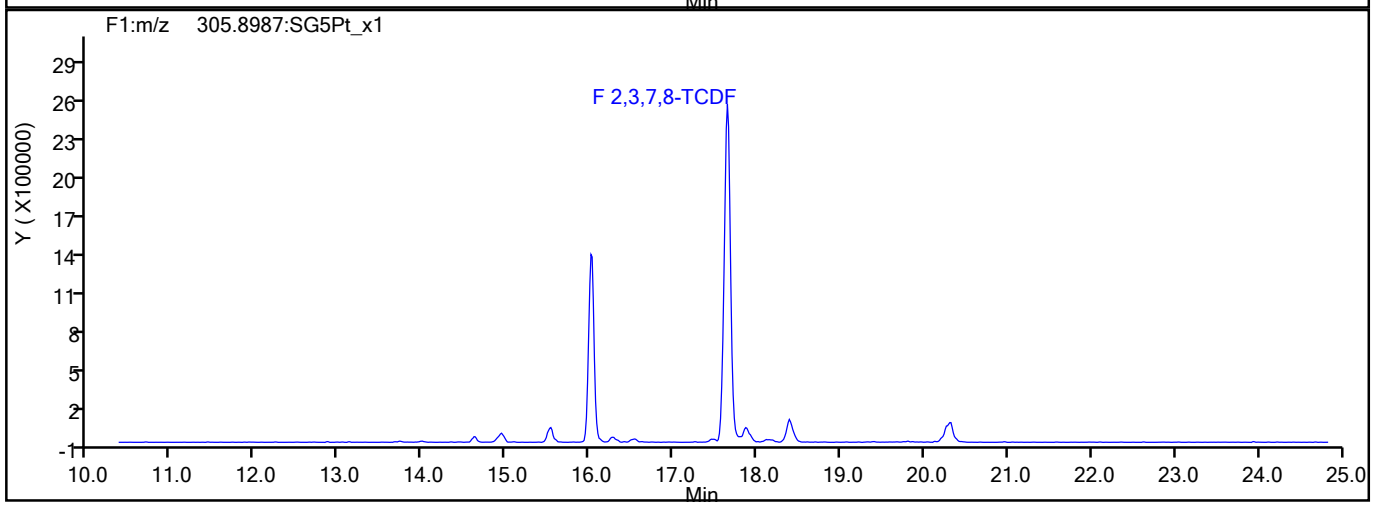

TCDF Interference Mass

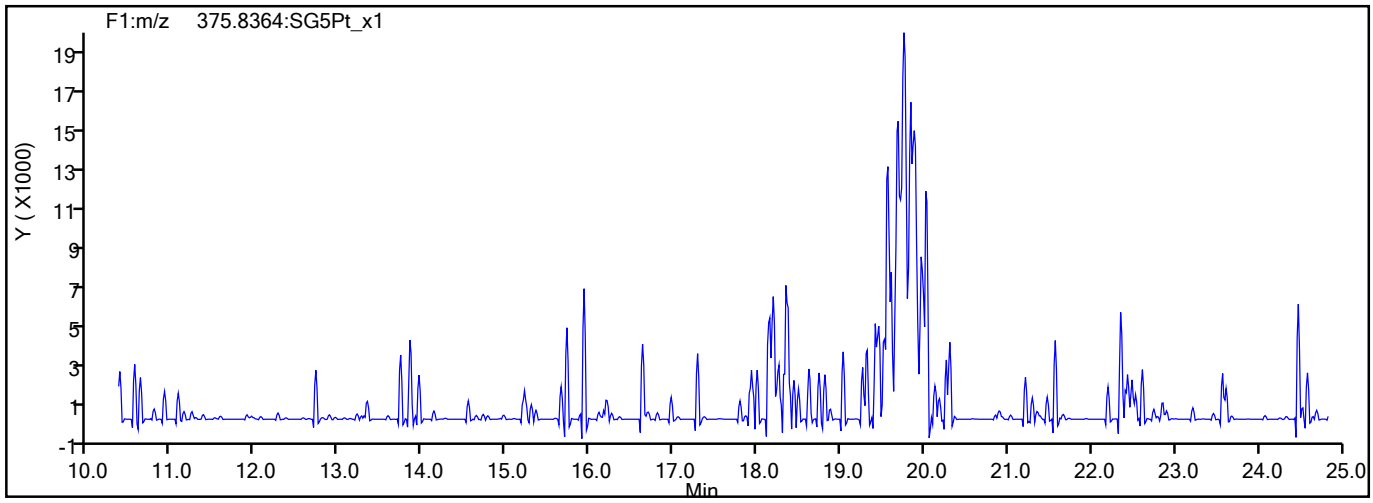

788580

Report Date: 30-Aug-2021 09:51:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_007.d		
Injection Date:	27-Aug-2021 19:28:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	520456	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

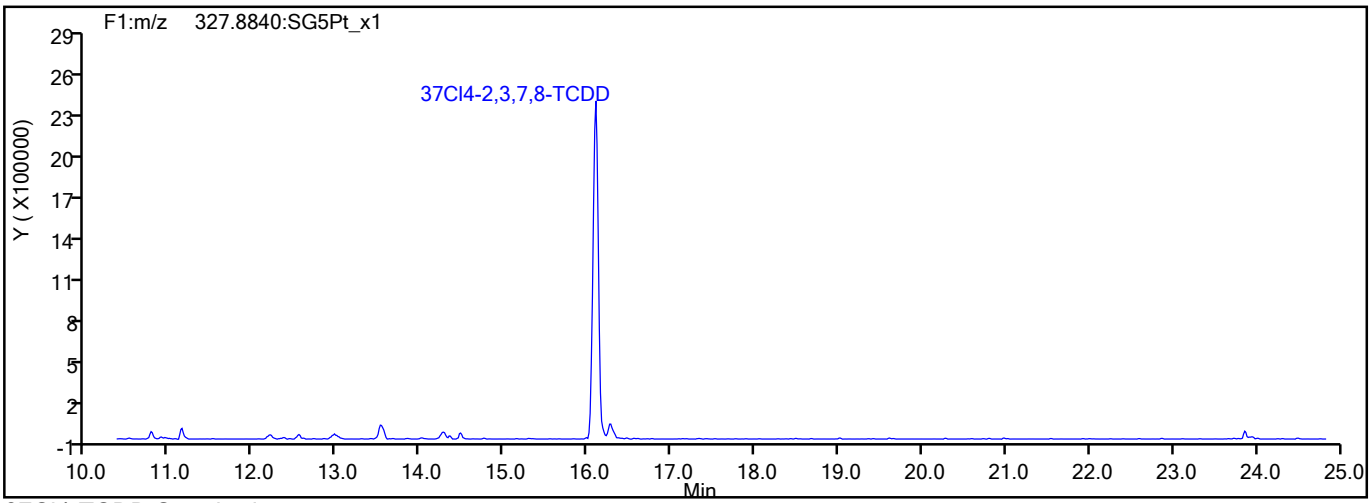

37Cl4-TCDD Standards

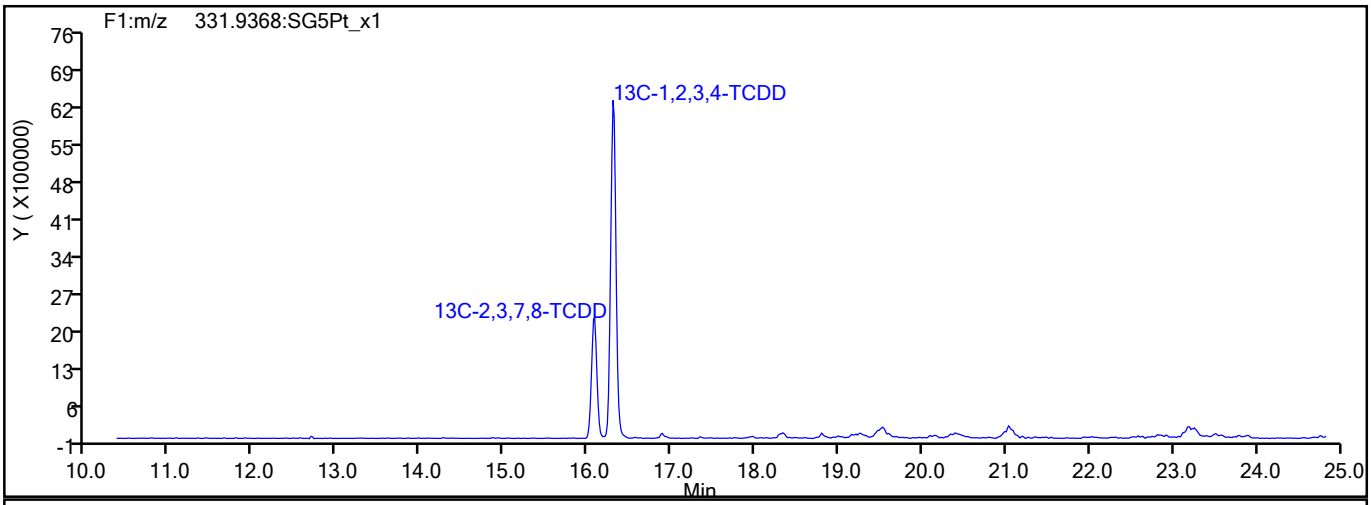

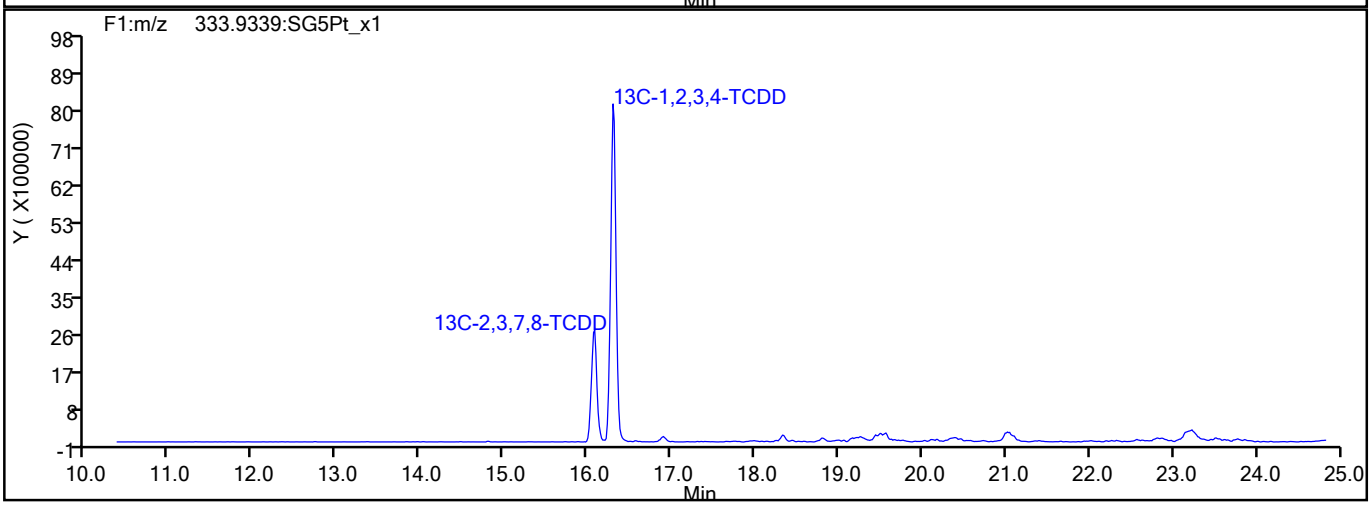

788581

Report Date: 30-Aug-2021 09:51:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_007.d		
Injection Date:	27-Aug-2021 19:28:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	520456	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

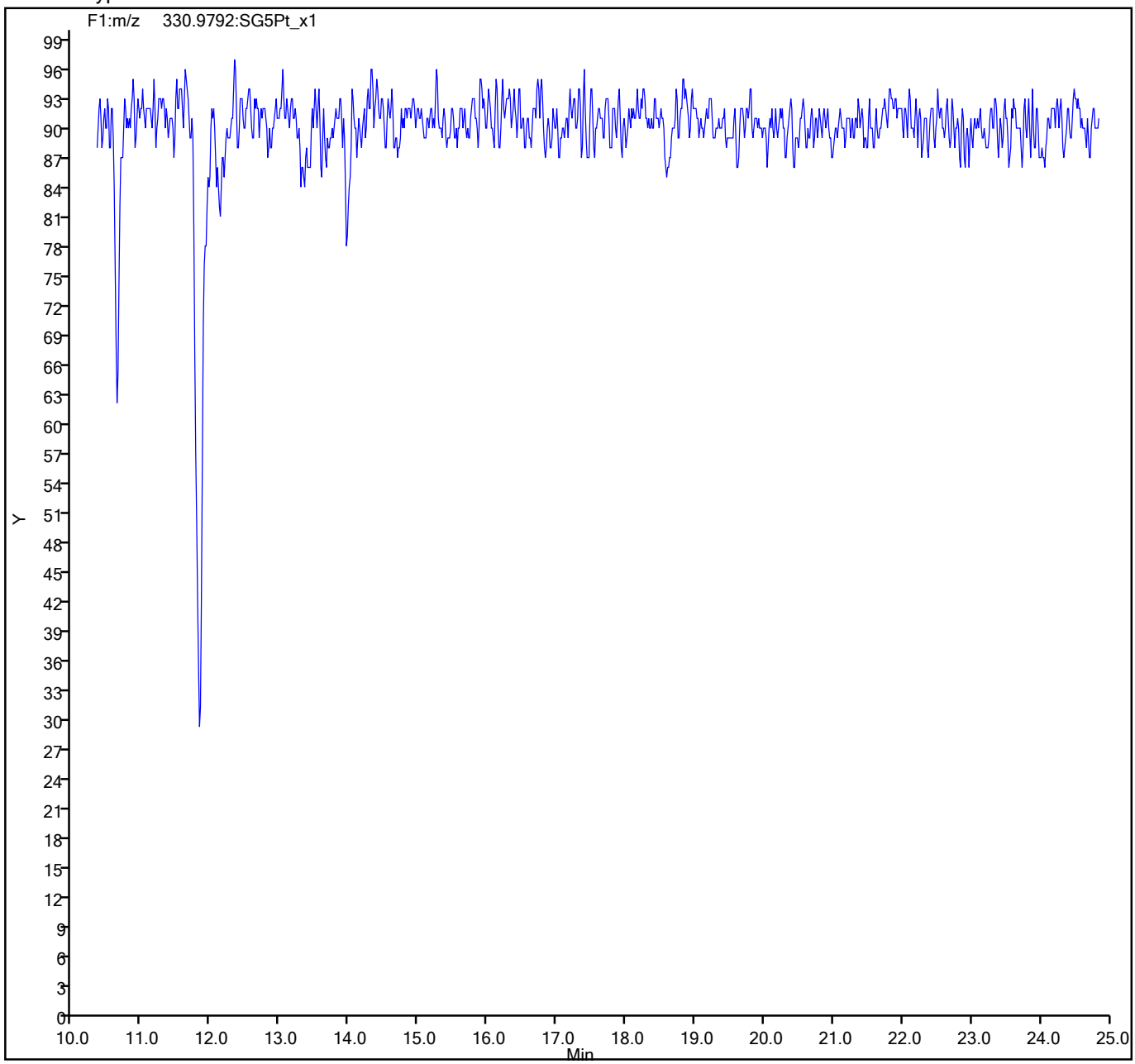

788582

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (14-16)
Lab Sample ID: 320-76901-8
Matrix: Sediment
Lab File ID: 30AU2110D5_18.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:35
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.31(g)
Date Analyzed: 08/31/2021 00:25
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 521465
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	35		1.3	0.17
40321-76-4	1,2,3,7,8-PeCDD	0.43	J	6.4	0.081
57117-41-6	1,2,3,7,8-PeCDF	2.7	J	6.4	0.065
57117-31-4	2,3,4,7,8-PeCDF	2.7	J	6.4	0.072
39227-28-6	1,2,3,4,7,8-HxCDD	0.33	J q	6.4	0.065
57653-85-7	1,2,3,6,7,8-HxCDD	0.20	J q	6.4	0.067
19408-74-3	1,2,3,7,8,9-HxCDD	0.78	J	6.4	0.060
70648-26-9	1,2,3,4,7,8-HxCDF	2.1	J	6.4	0.049
57117-44-9	1,2,3,6,7,8-HxCDF	0.64	J	6.4	0.048
72918-21-9	1,2,3,7,8,9-HxCDF	0.17	J	6.4	0.031
60851-34-5	2,3,4,6,7,8-HxCDF	0.13	J q	6.4	0.034
35822-46-9	1,2,3,4,6,7,8-HpCDD	7.7	B	6.4	0.13
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.66	J B	6.4	0.045
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.28	J	6.4	0.049
3268-87-9	OCDD	170	B	13	0.17
39001-02-0	OCDF	0.70	J	13	0.042
41903-57-5	Total TCDD	40	q	1.3	0.17
30402-14-3	Total TCDF	300	B	1.3	0.50
36088-22-9	Total PeCDD	1.5	J	6.4	0.081
30402-15-4	Total PeCDF	7.6		6.4	0.069
34465-46-8	Total HxCDD	9.3	q	6.4	0.064
55684-94-1	Total HxCDF	3.3	J q	6.4	0.040
37871-00-4	Total HpCDD	32	B	6.4	0.13
38998-75-3	Total HpCDF	1.1	J B	6.4	0.047

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (14-16)
Lab Sample ID: 320-76901-8
Matrix: Sediment
Lab File ID: 30AU2110D5_18.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:35
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.31(g)
Date Analyzed: 08/31/2021 00:25
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 24.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 521465
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	41		25-164
89059-46-1	13C-2,3,7,8-TCDF	39		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	42		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	41		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	41		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	40		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	37		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	41		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	36		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	39		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	38		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	43		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	39		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	46		26-138
114423-97-1	13C-OCDD	43		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	48		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d
Lims ID: 320-76901-A-8-A
Client ID: 11215702-072821-BN-SJSB095 (14-16)
Sample Type: Client
Inject. Date: 31-Aug-2021 00:25:45 ALS Bottle#: 19 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-8-A RI 320-76901-A-8-A RI
Misc. Info.: 30AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:35:22 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1601

First Level Reviewer: bennettd Date: 31-Aug-2021 16:03:53

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.567	91188727	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.053	57888746	0.77	1.6249	39.1	39.1	0.1084	0.1084	39.07	
2,3,7,8-TCDF	17.069	41819324	0.78	1.0239	70.6	70.6	0.1952	0.1952		
A Non-2,3,7,8-sub-TCDF	17.061	28290029	0.78	1.0239	47.7	47.7	0.1952	31.7		
S Total TCDF					118.3	118.3	0.1952	0.1952		
D 13C-2,3,7,8-TCDD	17.749	33750833	0.80	0.8993	41.2	41.2	0.2280	0.2280	41.16	
2,3,7,8-TCDD	17.764	5850733	0.78	1.2541	13.8	13.8	0.0663	0.0663		
$ 37Cl4-2,3,7,8-TCDD	17.764	19347057		1.1071	19.2	19.2	0.0350	0.0350	47.91	
A Non-2,3,7,8-sub-TCDD	17.515	783539	0.77	1.2541	2.051	1.851	0.0663	1.166		RQ
S Total TCDD					15.9	15.7	0.0663	0.0663		RQ
D 13C-1,2,3,7,8-PeCDF	21.952	44806687	1.56	1.2101	40.6	40.6	0.0577	0.0577	40.61	
1,2,3,7,8-PeCDF	21.979	503888	1.60	1.0611	1.060	1.060	0.0253	0.0253		
D 13C-2,3,4,7,8-PeCDF	23.261	45928889	1.57	1.2395	40.6	40.6	0.0564	0.0564	40.64	
2,3,4,7,8-PeCDF	23.288	486659	1.64	1.0184	1.040	1.040	0.0283	0.0283		
A F1 PeCDFs	19.851						0.0169	0.0169		
A Non-2,3,7,8-sub-PeCDF	23.067	406622	1.63	1.0398	0.8620	0.8620	0.0267	0.3259		
S Total PeCDF					2.962	2.962	0.0268	0.0268		
D 13C-1,2,3,7,8-PeCDD	23.970	29211969	1.61	0.7612	42.1	42.1	0.0336	0.0336	42.08	
1,2,3,7,8-PeCDD	23.997	50817	1.60	1.0484	0.1659	0.1659	0.0316	0.0316		M
A Non-2,3,7,8-sub-PeCDD	23.696	134017	1.63	1.0484	0.4376	0.4376	0.0316	0.2780		M
S Total PeCDD					0.6035	0.6035	0.0316	0.0316		
D 13C-1,2,3,4,7,8-HxCDF	30.106	41446966	0.52	1.0837	40.9	40.9	0.1045	0.1045	40.88	
1,2,3,4,7,8-HxCDF	30.133	363109	1.21	1.0851	0.8074	0.8074	0.0191	0.0191		
D 13C-1,2,3,6,7,8-HxCDF	30.319	38034220	0.51	1.1279	36.0	36.0	0.1004	0.1004	36.04	
1,2,3,6,7,8-HxCDF	30.359	107018	1.31	1.1260	0.2499	0.2499	0.0188	0.0188		
D 13C-2,3,4,6,7,8-HxCDF	31.251	38134179	0.51	1.0637	38.3	38.3	0.1064	0.1064	38.32	
2,3,4,6,7,8-HxCDF	31.277	22209	1.24	1.1675	0.0586	0.0499	0.0131	0.0131		RQ
D 13C-1,2,3,7,8,9-HxCDF	32.103	35488126	0.52	0.9676	39.2	39.2	0.1170	0.1170	39.20	
1,2,3,7,8,9-HxCDF	32.116	27484	1.37	1.1664	0.0664	0.0664	0.0120	0.0120		
A Non-2,3,7,8-sub-HxCDF	30.311	42986	1.24	1.1363	0.1123	0.0988	0.0152	0.0697		RQ

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					1.295	1.272	0.0158	0.0158		RQ
* 13C-1,2,3,7,8,9-HxCDD	31.916	93561296	1.22	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.450	27664265	1.22	0.7334	40.3	40.3	0.1500	0.1500	40.31	
1,2,3,4,7,8-HxCDD	31.464	37796	1.24	1.0640	0.1436	0.1284	0.0253	0.0253		RQ
D 13C-1,2,3,6,7,8-HxCDD	31.570	30656025	1.25	0.8802	37.2	37.2	0.1250	0.1250	37.23	
1,2,3,6,7,8-HxCDD	31.583	24403	1.24	1.0001	0.0926	0.0796	0.0263	0.0263		RQ
1,2,3,7,8,9-HxCDD	31.916	101029	1.25	1.1325	0.3059	0.3059	0.0235	0.0235		M
A Non-2,3,7,8-sub-HxCDD	30.432	969509	1.24	1.0655	3.150	3.120	0.0250	2.217		RQ
S Total HxCDD					3.692	3.634	0.0250	0.0250		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.591	28128497	0.45	0.7730	38.9	38.9	0.3329	0.3329	38.89	
1,2,3,4,6,7,8-HpCDF	33.603	105002	1.05	1.4413	0.2590	0.2590	0.0177	0.0177		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.648	30009117	0.44	0.7008	45.8	45.8	0.3672	0.3672	45.77	
1,2,3,4,7,8,9-HpCDF	34.660	43668	1.11	1.3174	0.1105	0.1105	0.0192	0.0192		M
A Non-2,3,7,8-sub-HpCDF	34.120	26514	1.09	1.3793	0.0661	0.0661	0.0184	0.0661		M
S Total HpCDF					0.4356	0.4356	0.0185	0.0185		
D 13C-1,2,3,4,6,7,8-HpCDD	34.368	25947106	1.01	0.6472	42.8	42.8	0.1695	0.1695	42.85	
1,2,3,4,6,7,8-HpCDD	34.381	853361	1.06	1.0943	3.005	3.005	0.0508	0.0508		
A Non-2,3,7,8-sub-HpCDD	34.223	2699833	1.07	1.0943	9.508	9.508	0.0508	9.508		
S Total HpCDD					12.5	12.5	0.0508	0.0508		
D 13C-OCDD	36.677	35739599	0.87	0.4472	85.4	85.4	0.1734	0.1734	42.71	
OCDF	36.785	69950	0.80	1.4382	0.2722	0.2722	0.0164	0.0164		M
OCDD	36.689	12851995	0.90	1.1070	65.0	65.0	0.0649	0.0649		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d
Lims ID: 320-76901-A-8-A
Client ID: 11215702-072821-BN-SJSB095 (14-16)
Sample Type: Client
Inject. Date: 31-Aug-2021 00:25:45 ALS Bottle#: 19 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-8-A RI 320-76901-A-8-A RI
Misc. Info.: 30AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:35:22 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1601

First Level Reviewer: bennettd Date: 31-Aug-2021 16:03:53

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.567	17.552	1		40997531	10465836	4872	12180	2148		
333.9339	17.567	17.552	1		50191196	12685474	14116	35290	899	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.053	17.053	0	0.971	25246838	6550504	5924	14810	1106		
317.9389	17.053	17.053	0	0.971	32641908	8434004	10380	25950	813	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.069	17.069	0	1.001	18298014	4600118	5165	12912	891		
305.8987	17.069	17.069	0	1.001	23521310	5908999	6815	17037	867	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.693	17.061	-82	0.920	212150	60303	5165	12912	12		
305.8987	15.693	17.061	-82	0.920	250006	70905	6815	17037	10	0.85(0.65-0.89)	
303.9016	15.965	17.061	-66	0.936	315872	73156	5165	12912	14		
305.8987	15.965	17.061	-66	0.936	410537	93875	6815	17037	14	0.77(0.65-0.89)	
303.9016	16.192	17.061	-52	0.949	394194	96539	5165	12912	19		
305.8987	16.192	17.061	-52	0.949	483675	124781	6815	17037	18	0.81(0.65-0.89)	
303.9016	16.419	17.061	-38	0.963	709948	176632	5165	12912	34		
305.8987	16.419	17.061	-38	0.963	829242	227207	6815	17037	33	0.86(0.65-0.89)	
303.9016	16.706	17.061	-21	0.980	8159785	2222113	5165	12912	430		
305.8987	16.706	17.061	-21	0.980	10610189	2825631	6815	17037	415	0.77(0.65-0.89)	
303.9016	16.917	17.061	-9	0.992	186583	48051	5165	12912	9		
305.8987	16.917	17.061	-9	0.992	245891	59110	6815	17037	9	0.76(0.65-0.89)	
303.9016	17.492	17.061	26	1.026	1157491	288184	5165	12912	56		
305.8987	17.492	17.061	26	1.026	1424654	368550	6815	17037	54	0.81(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.853	17.061	107	1.106	1248975	299954	5165	12912	58		
305.8987	18.853	17.061	107	1.106	1650837	378592	6815	17037	56	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.749	17.749	0	1.010	15048597	3780475	4872	12180	776		
333.9339	17.749	17.749	0	1.010	18702236	4619630	14116	35290	327	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.764	17.764	0	1.001	2560754	633740	1485	3712	427		
321.8936	17.764	17.764	0	1.001	3289979	827343	1307	3267	633	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.764	17.764	0	1.011	19347057	4844430	3588	8970	1350		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	16.645	17.515	-52	0.938	36455	9806	1485	3712	7		
321.8936	16.660	17.515	-51	0.939	44329	11108	1307	3267	8	0.82(0.65-0.89)	
319.8965	17.658	17.515	9	0.995	66309	14136	1485	3712	10		
	Empc Correction				48097	13183	1485	3712	9		
321.8936	17.658	17.515	9	0.995	62464	17121	1307	3267	13	1.06(0.65-0.89)	
319.8965	18.112	17.515	36	1.020	221761	51160	1485	3712	34		
321.8936	18.112	17.515	36	1.020	271891	64916	1307	3267	50	0.82(0.65-0.89)	
319.8965	19.321	17.515	108	1.089	109274	23248	1485	3712	16		
	Empc Correction				42868	9109	1485	3712	6		
321.8936	19.306	17.515	107	1.088	55674	11831	1307	3267	9	1.96(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	21.952	21.952	0	1.250	27309603	5200489	3991	9977	1303		
353.8970	21.952	21.952	0	1.250	17497084	3356746	2480	6200	1354	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	21.979	21.979	0	1.001	310201	60810	367	917	166		
341.8567	21.965	21.979	-1	1.001	193687	36945	553	1382	67	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.261	23.261	0	1.324	28065901	4891268	3991	9977	1226		
353.8970	23.261	23.261	0	1.324	17862988	3100299	2480	6200	1250	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.288	23.288	0	1.001	302474	51017	367	917	139		
341.8567	23.288	23.288	0	1.001	184185	30020	553	1382	54	1.64(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						172	430			
341.8567	19.851						408	1020			
A Non-2,3,7,8-sub-PeCDF											
339.8597	20.684	23.067	-143	0.942	96951	18456	367	917	50		
341.8567	20.670	23.067	-144	0.942	56782	12329	553	1382	22	1.71(1.32-1.78)	
339.8597	21.870	23.067	-72	0.996	18874	4573	367	917	12		
341.8567	21.856	23.067	-73	0.996	11550	2818	553	1382	5	1.63(1.32-1.78)	
339.8597	22.497	23.067	-34	1.025	77898	13189	367	917	36		
341.8567	22.470	23.067	-36	1.024	49218	8015	553	1382	14	1.58(1.32-1.78)	
339.8597	23.629	23.067	34	1.076	58041	8371	367	917	23		
341.8567	23.615	23.067	33	1.076	37308	6390	553	1382	12	1.56(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	23.970	23.970	0	1.364	18001878	2989588	1492	3730	2004		
369.8919	23.970	23.970	0	1.364	11210091	1888230	877	2192	2153	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											M
355.8546	23.997	23.997	0	1.001	31295	5509	396	990	14		
357.8516	23.970	23.997	-2	1.000	19522	3522	250	625	14	1.60(1.32-1.78)	M
A Non-2,3,7,8-sub-PeCDD											M
355.8546	21.583	23.696	-127	0.900	53317	11920	396	990	30		
357.8516	21.570	23.696	-127	0.900	31833	5981	250	625	24	1.67(1.32-1.78)	
355.8546	23.015	23.696	-41	0.960	29761	5091	396	990	13		
357.8516	23.043	23.696	-39	0.961	19106	2546	250	625	10	1.56(1.32-1.78)	M
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.106	30.093	1	0.943	14200018	2361421	3934	9835	600		
385.8610	30.106	30.093	1	0.943	27246948	4611984	7874	19685	586	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.133	30.120	1	1.001	198959	35942	339	847	106		
375.8178	30.119	30.120	0	1.000	164150	27987	240	600	117	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.319	30.319	0	0.950	12894421	2286184	3934	9835	581		
385.8610	30.319	30.319	0	0.950	25139799	4533692	7874	19685	576	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.359	30.346	1	1.001	60783	9324	339	847	28		
375.8178	30.346	30.346	0	1.001	46235	8503	240	600	35	1.31(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.251	31.238	1	0.979	12910168	3247017	3934	9835	825		
385.8610	31.251	31.238	1	0.979	25224011	6224599	7874	19685	791	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQ
373.8208	31.277	31.264	1	1.001	16178	4146	339	847	12		
	Empc Correction				12294	2670	339	847	8		
375.8178	31.237	31.264	-2	1.000	9915	2154	240	600	9	1.63(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.103	32.103	0	1.006	12080041	3575325	3934	9835	909		
385.8610	32.103	32.103	0	1.006	23408085	6777534	7874	19685	861	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.116	32.116	0	1.000	15882	4015	339	847	12		
375.8178	32.116	32.116	0	1.000	11602	4266	240	600	18	1.37(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	31.118	30.311	48	1.034	6687	1399	339	847	4		
375.8178	31.144	30.311	50	1.034	5976	1372	240	600	6	1.12(1.05-1.43)	
373.8208	32.209	30.311	114	1.070	16786	4746	339	847	14		
375.8178	32.196	30.311	113	1.069	19398	4794	240	600	20	0.87(1.05-1.43)	
	Empc Correction				13537	3827	240	600	16		
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.916	31.903	1		51436867	14295580	5958	14895	2399		
403.8529	31.916	31.903	1		42124429	11774911	5516	13790	2135	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.450	31.451	0	0.985	15190531	4341980	5958	14895	729		
403.8529	31.450	31.451	0	0.985	12473734	3536534	5516	13790	641	1.22(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQ
389.8157	31.464	31.464	0	1.000	20923	5405	498	1245	11		
391.8127	31.464	31.464	0	1.000	21335	5289	349	872	15	0.98(1.05-1.43)	
	Empc Correction				16873	4358	349	872	12		
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.570	31.557	1	0.989	17061111	4510697	5958	14895	757		
403.8529	31.570	31.557	1	0.989	13594914	3532622	5516	13790	640	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQ
389.8157	31.583	31.584	0	1.000	13509	3680	498	1245	7		
391.8127	31.583	31.584	0	1.000	14887	3779	349	872	11	0.91(1.05-1.43)	
	Empc Correction				10894	2967	349	872	9		
1,2,3,7,8,9-HxCDD											M
389.8157	31.916	31.930	-1	1.015	56187	11068	498	1245	22		M
391.8127	31.903	31.930	-2	1.014	44842	8378	349	872	24	1.25(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	28.948	30.432	-89	0.917	390105	48929	498	1245	98		
391.8127	28.948	30.432	-89	0.917	298885	36673	349	872	105	1.31(1.05-1.43)	
389.8157	30.212	30.432	-13	0.957	29549	4771	498	1245	10		
	Empc Correction				23629	4586	498	1245	9		
391.8127	30.199	30.432	-14	0.957	19056	3699	349	872	11	1.55(1.05-1.43)	
389.8157	30.639	30.432	12	0.970	117959	23034	498	1245	46		
391.8127	30.652	30.432	13	0.971	100662	18524	349	872	53	1.17(1.05-1.43)	
389.8157	30.878	30.432	27	0.978	10636	3092	498	1245	6		
391.8127	30.851	30.432	25	0.977	11983	1966	349	872	6	0.89(1.05-1.43)	
	Empc Correction				8577	2493	349	872	7		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.591	33.579	1	1.052	8739548	3127303	8483	21207	369		
419.8220	33.591	33.579	1	1.052	19388949	7065764	18355	45887	385	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.603	33.591	1	1.000	53784	19781	777	1942	25		
409.7789	33.591	33.591	0	1.000	51218	19650	265	662	74	1.05(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.648	34.648	0	1.086	9185174	3123904	8483	21207	368		
419.8220	34.648	34.648	0	1.086	20823943	7166750	18355	45887	390	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.660	34.661	0	1.000	22955	7473	777	1942	10		M
409.7789	34.660	34.661	0	1.000	20713	8412	265	662	32	1.11(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDF											M
407.7818	33.882	34.120	-14	1.009	13830	4508	777	1942	6		
409.7789	33.882	34.120	-14	1.009	12684	4007	265	662	15	1.09(0.88-1.20)	M
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.368	34.369	0	1.077	13026843	4613343	5952	14880	775		
437.8140	34.368	34.369	0	1.077	12920263	4591309	5490	13725	836	1.01(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.381	34.381	0	1.000	439195	150909	984	2460	153		
425.7737	34.381	34.381	0	1.000	414166	143714	1061	2652	135	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.834	34.223	-23	0.984	1392835	494210	984	2460	502		
425.7737	33.834	34.223	-23	0.984	1306998	463391	1061	2652	437	1.07(0.88-1.20)	
13C-OCDD											
469.7779	36.677	36.678	0	1.149	16604698	5007693	3183	7957	1573		
471.7750	36.677	36.678	0	1.149	19134901	5729146	4902	12255	1169	0.87(0.76-1.02)	
OCDF											M
441.7428	36.785	36.773	1	1.003	31035	11836	230	575	51		
443.7399	36.785	36.773	1	1.003	38915	12380	276	690	45	0.80(0.76-1.02)	M
OCDD											
457.7377	36.689	36.689	0	1.000	6075635	1840908	758	1895	2429		
459.7348	36.689	36.689	0	1.000	6776360	2092760	784	1960	2669	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Lims ID:	320-76901-A-8-A		
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Inject. Date:	31-Aug-2021 00:25:45	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	521465	Lims Sample ID:	5

Non-2,3,7,8-sub-TCDF, RT: 17.061

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	57888746	14984508

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	57888746	14984508

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.693	212150	60303	250006	70905	0.7797	0.85	
15.965	315872	73156	410537	93875	1.23	0.77	
16.192	394194	96539	483675	124781	1.48	0.81	
16.419	709948	176632	829242	227207	2.60	0.86	
16.706	8159785	2222113	10610189	2825631	31.7	0.77	
16.917	186583	48051	245891	59110	0.7296	0.76	
17.492	1157491	288184	1424654	368550	4.36	0.81	
18.853	1248975	299954	1650837	378592	4.89	0.76	
Signal Totals:							
	12384998	3264932	15905031	4148651			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28290029	7413583				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 47.728 = (28290029 * 100.000) / (57888746 * 1.024)

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d
Lims ID: 320-76901-A-8-A
Client ID: 11215702-072821-BN-SJSB095 (14-16)
Inject. Date: 31-Aug-2021 00:25:45 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 521465 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDD, RT: 17.515

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	33750833	8400105

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	33750833	8400105

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.645	36455	9806	44329	11108	0.1909	0.82	
17.658	66309	14136	62464	17121	0.3042	1.06	RQ
17.658	48097	13183	62464	17121	0.2612		Empc Correction
18.112	221761	51160	271891	64916	1.17	0.82	
19.321	109274	23248	55674	11831	0.3897	1.96	RQ
19.321	42868	9109	55674	11831	0.2328		Empc Correction
Signal Totals:							
	349181	83258	434358	104976			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	868157	203326				1.00	RQ
	783539	188234					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.051 = (868157 * 100.000) / (33750833 * 1.254)
Empc Amount: 1.851 = (783539 * 100.000) / (33750833 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d
Lims ID: 320-76901-A-8-A
Client ID: 11215702-072821-BN-SJSB095 (14-16)
Inject. Date: 31-Aug-2021 00:25:45 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 521465 Lims Sample ID: 5

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	44806687	8557235
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	45928889	7991567

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	45367788	8274401

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.684	96951	18456	56782	12329	0.3259	1.71	
21.870	18874	4573	11550	2818	0.0645	1.63	
22.497	77898	13189	49218	8015	0.2695	1.58	
23.629	58041	8371	37308	6390	0.2021	1.56	
Signal Totals:	251764	44589	154858	29552			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	406622	74141				1.63	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8620 = (406622 * 100.000) / (45367788 * 1.040)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d
Lims ID: 320-76901-A-8-A
Client ID: 11215702-072821-BN-SJSB095 (14-16)
Inject. Date: 31-Aug-2021 00:25:45 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 521465 Lims Sample ID: 5

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	29211969	4877818

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	29211969	4877818

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.583	53317	11920	31833	5981	0.2780	1.67	
23.015	29761	5091	19106	2546	0.1596	1.56	M
Signal Totals:							
	83078	17011	50939	8527			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	134017	25538				1.63	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4376 = (134017 * 100.000) / (29211969 * 1.048)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d
Lims ID: 320-76901-A-8-A
Client ID: 11215702-072821-BN-SJSB095 (14-16)
Inject. Date: 31-Aug-2021 00:25:45 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 521465 Lims Sample ID: 5

Non-2,3,7,8-sub-HxCDF, RT: 30.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	41446966	6973405
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	38034220	6819876
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	38134179	9471616
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	35488126	10352859

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	38275872	8404439

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
31.118	6687	1399	5976	1372	0.0291	1.12	
32.209	16786	4746	19398	4794	0.0832	0.87	RQ
32.209	16786	4746	13537	3827	0.0697		Empc Correction
Signal Totals:							
	23473	6145	19513	5199			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	48847	12311				0.93	RQ
	42986	11344					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1123 = (48847 * 100.000) / (38275872 * 1.136)
Empc Amount: 0.0988 = (42986 * 100.000) / (38275872 * 1.136)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Lims ID:	320-76901-A-8-A		
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Inject. Date:	31-Aug-2021 00:25:45	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	521465	Lims Sample ID:	5

Non-2,3,7,8-sub-HxCDD, RT: 30.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	27664265	7878514
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	30656025	8043319
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	29160145	7960916

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
28.948	390105	48929	298885	36673	2.22	1.31	
30.212	29549	4771	19056	3699	0.1564	1.55	RQ
30.212	23629	4586	19056	3699	0.1374		Empc Correction
30.639	117959	23034	100662	18524	0.7036	1.17	
30.878	10636	3092	11983	1966	0.0728	0.89	RQ
30.878	10636	3092	8577	2493	0.0618		Empc Correction
Signal Totals:							
	542329	79641	427180	61389			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	978835	140688				1.27	RQ
	969509	141030					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.150 = (978835 * 100.000) / (29160145 * 1.066)

Empc Amount: 3.120 = (969509 * 100.000) / (29160145 * 1.066)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d
Lims ID: 320-76901-A-8-A
Client ID: 11215702-072821-BN-SJSB095 (14-16)
Inject. Date: 31-Aug-2021 00:25:45 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 521465 Lims Sample ID: 5

Non-2,3,7,8-sub-HpCDF, RT: 34.120

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	28128497	10193067
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	30009117	10290654

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	29068807	10241860

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
33.882	13830	4508	12684	4007	0.0661	1.09	M
Signal Totals:							
	13830	4508	12684	4007			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	26514	8515				1.09	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0661 = (26514 * 100.000) / (29068807 * 1.379)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Lims ID:	320-76901-A-8-A		
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Inject. Date:	31-Aug-2021 00:25:45	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	521465	Lims Sample ID:	5

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	25947106	9204652

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	25947106	9204652

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.834	1392835	494210	1306998	463391	9.51	1.07	
Signal Totals:							
	1392835	494210	1306998	463391			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2699833	957601				1.07	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 9.508 = (2699833 * 100.000) / (25947106 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d				
Injection Date:	31-Aug-2021 00:25:45	Instrument ID:	10D5		
Lims ID:	320-76901-A-8-A	Lab Sample ID:	320-76901-8		
Client ID:	11215702-072821-BN-SJSB095 (14-16)				
Operator ID:	SMA	ALS Bottle#:	19	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 2

Processing Integration Results

RT: 23.97
Area: 23305
Amount: 0.178276
Amount Units: pg/ul

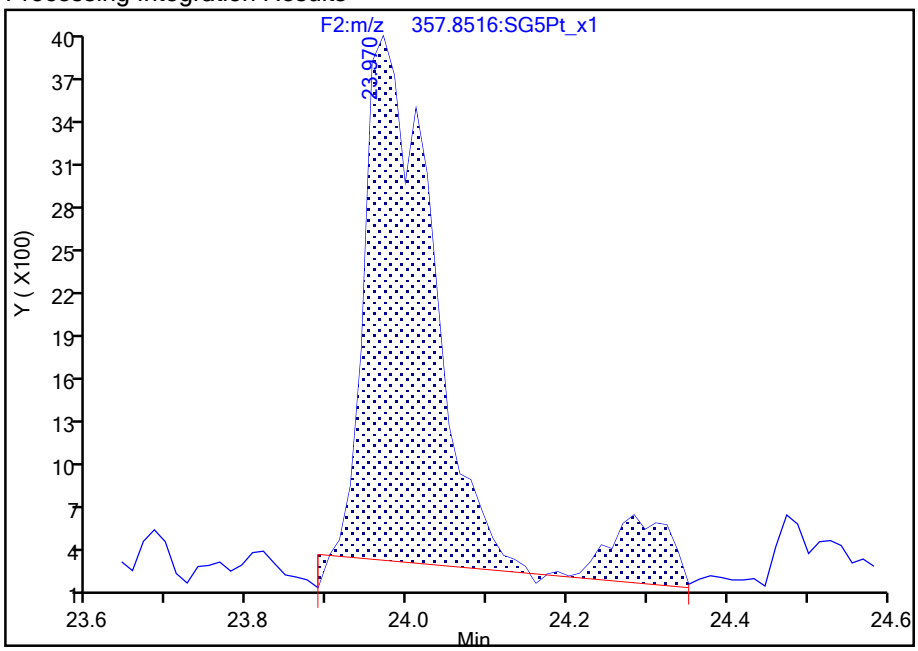

Manual Integration Results

RT: 23.97
Area: 19522
Amount: 0.165924
Amount Units: pg/ul

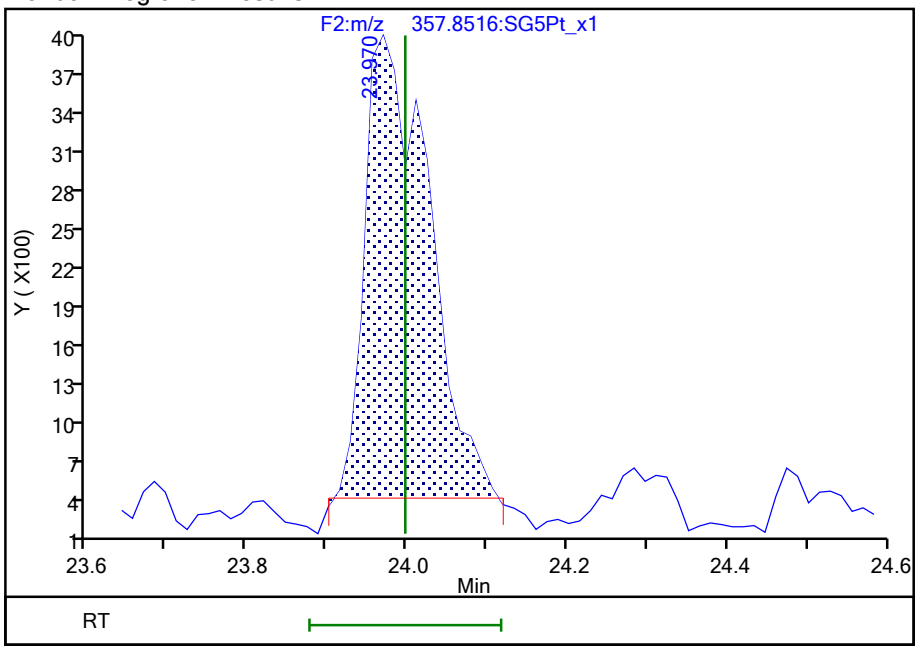

Reviewer: dadunj, 01-Sep-2021 09:32:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788600

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d				
Injection Date:	31-Aug-2021 00:25:45	Instrument ID:	10D5		
Lims ID:	320-76901-A-8-A	Lab Sample ID:	320-76901-8		
Client ID:	11215702-072821-BN-SJSB095 (14-16)				
Operator ID:	SMA	ALS Bottle#:	19	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.50- 25.89)

Signal: 2

Processing Integration Results

RT = 23.043 Area = 24578

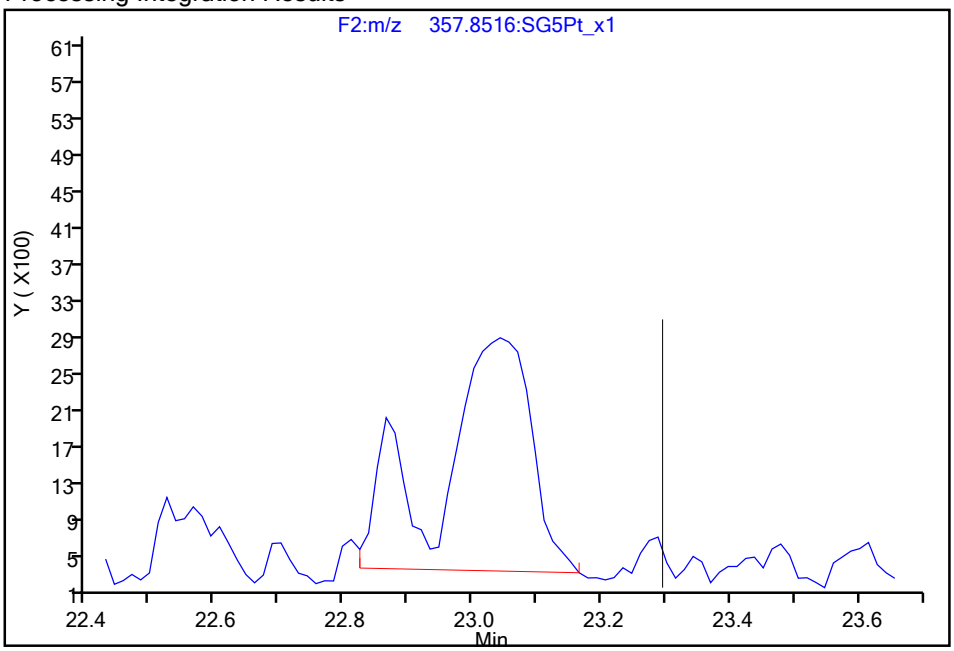

Manual Integration Results

RT = 23.043 Area = 19106 M

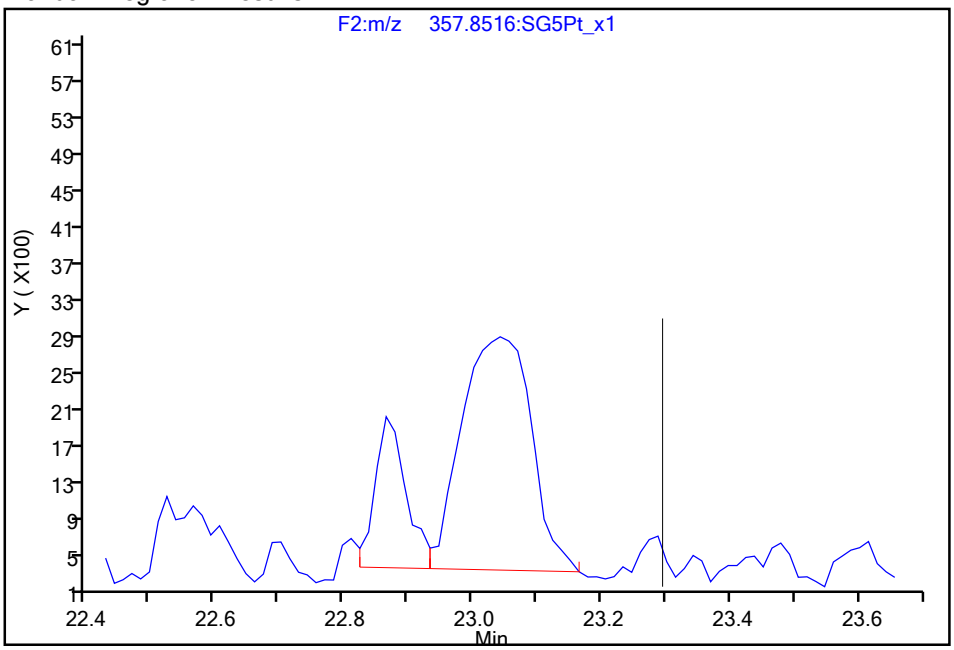

Reviewer: dadunj, 01-Sep-2021 09:33:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d				
Injection Date:	31-Aug-2021 00:25:45	Instrument ID:	10D5		
Lims ID:	320-76901-A-8-A	Lab Sample ID:	320-76901-8		
Client ID:	11215702-072821-BN-SJSB095 (14-16)				
Operator ID:	SMA	ALS Bottle#:	19	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 31.92
Area: 64686
Amount: 0.348081
Amount Units: pg/ul

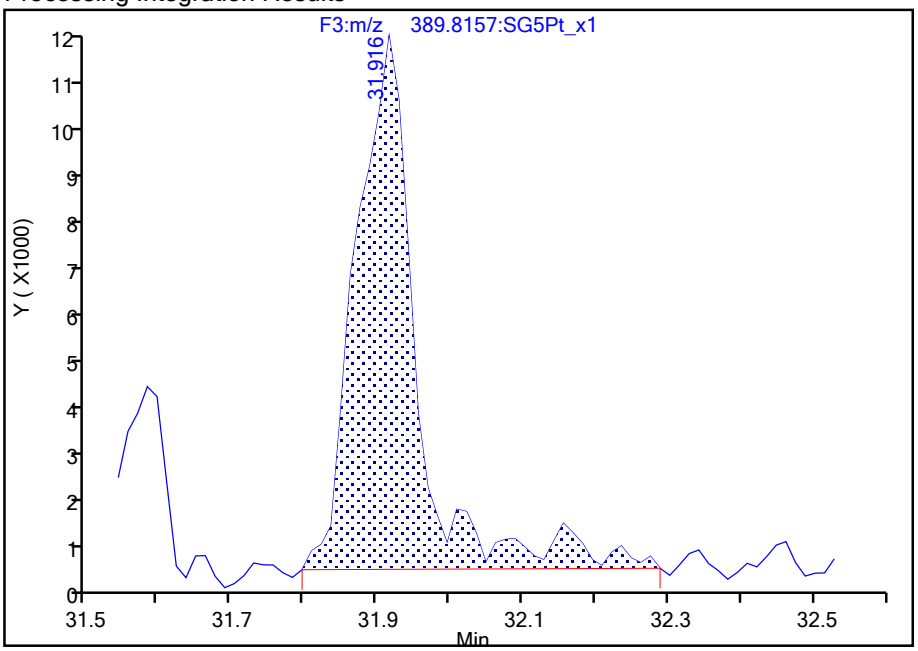

Manual Integration Results

RT: 31.92
Area: 56187
Amount: 0.305921
Amount Units: pg/ul

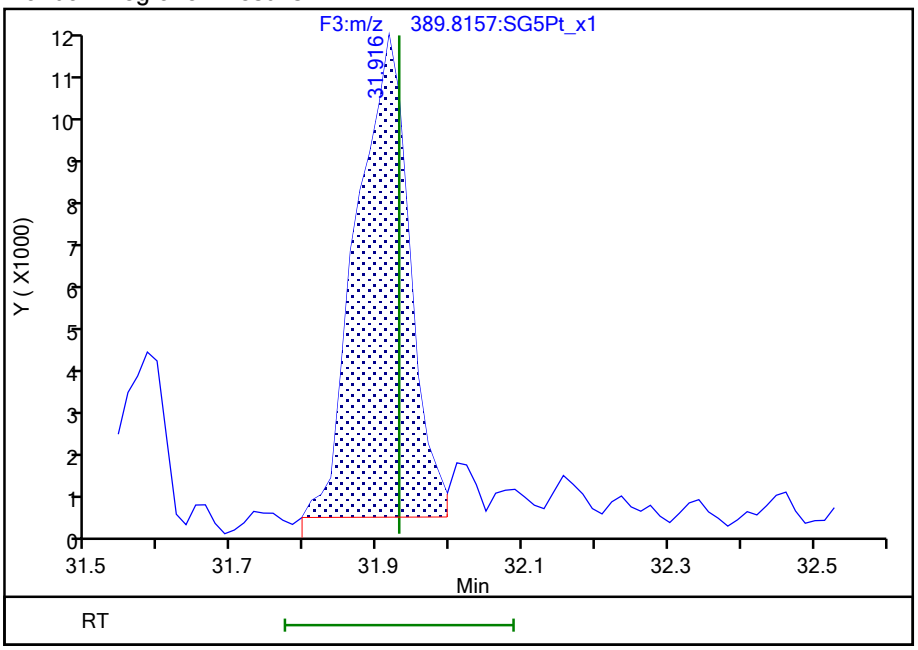

Reviewer: dadunj, 01-Sep-2021 09:33:20

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d				
Injection Date:	31-Aug-2021 00:25:45	Instrument ID:	10D5		
Lims ID:	320-76901-A-8-A	Lab Sample ID:	320-76901-8		
Client ID:	11215702-072821-BN-SJSB095 (14-16)				
Operator ID:	SMA	ALS Bottle#:	19	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 31.90
Area: 50266
Amount: 0.348081
Amount Units: pg/ul

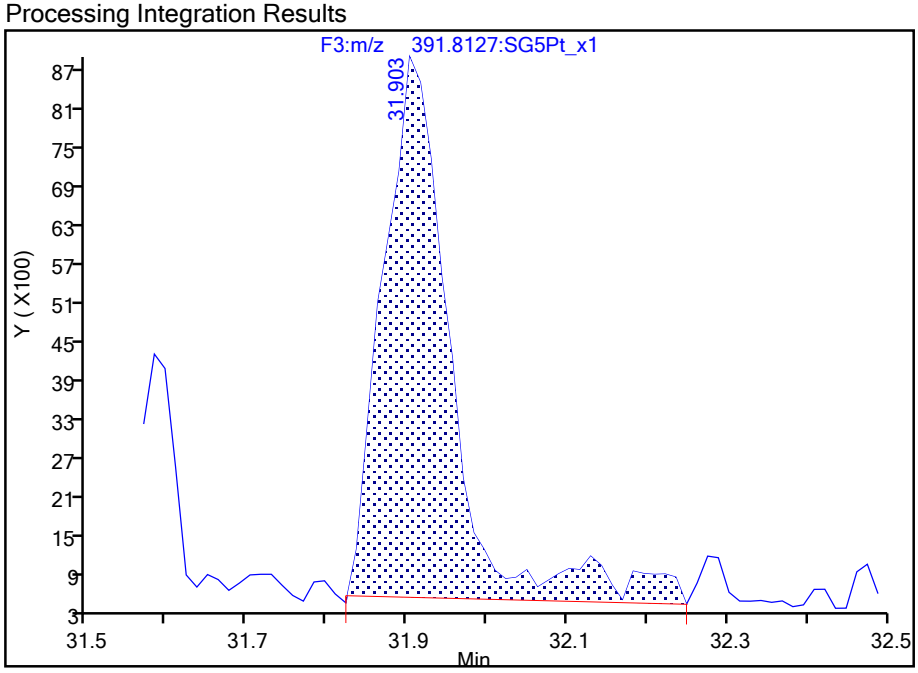

Manual Integration Results

RT: 31.90
Area: 44842
Amount: 0.305921
Amount Units: pg/ul

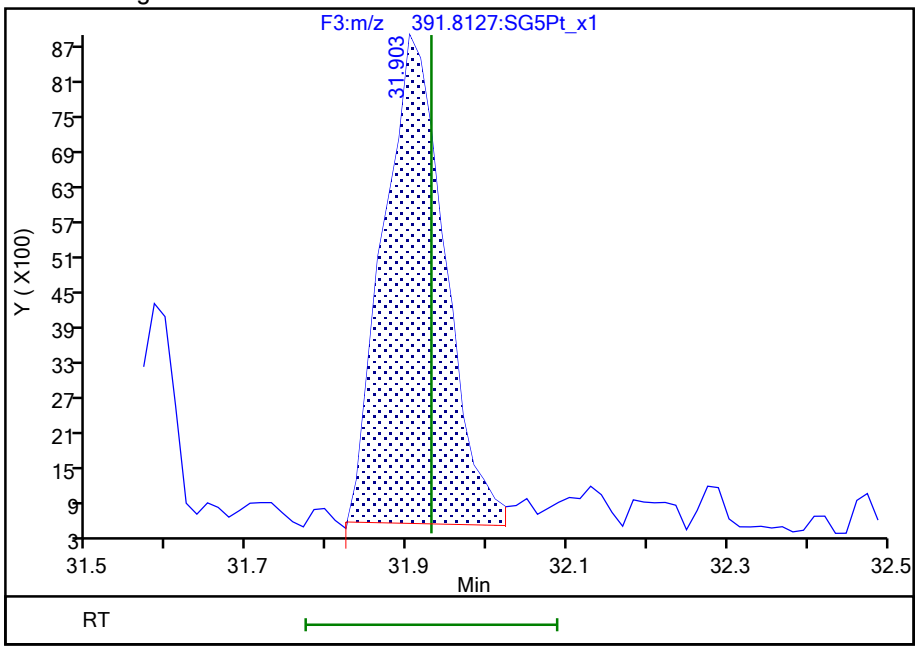

Reviewer: dadunj, 01-Sep-2021 09:33:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788603

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d				
Injection Date:	31-Aug-2021 00:25:45	Instrument ID:	10D5		
Lims ID:	320-76901-A-8-A	Lab Sample ID:	320-76901-8		
Client ID:	11215702-072821-BN-SJSB095 (14-16)				
Operator ID:	SMA	ALS Bottle#:	19	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.59
Area: 52336
Amount: 0.261757
Amount Units: pg/ul

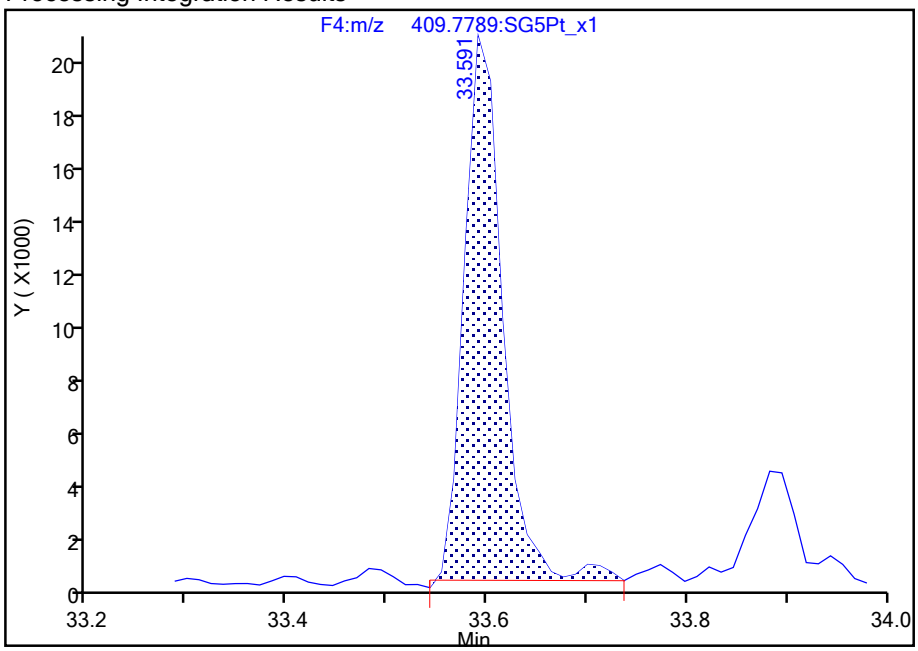

Manual Integration Results

RT: 33.59
Area: 51218
Amount: 0.259000
Amount Units: pg/ul

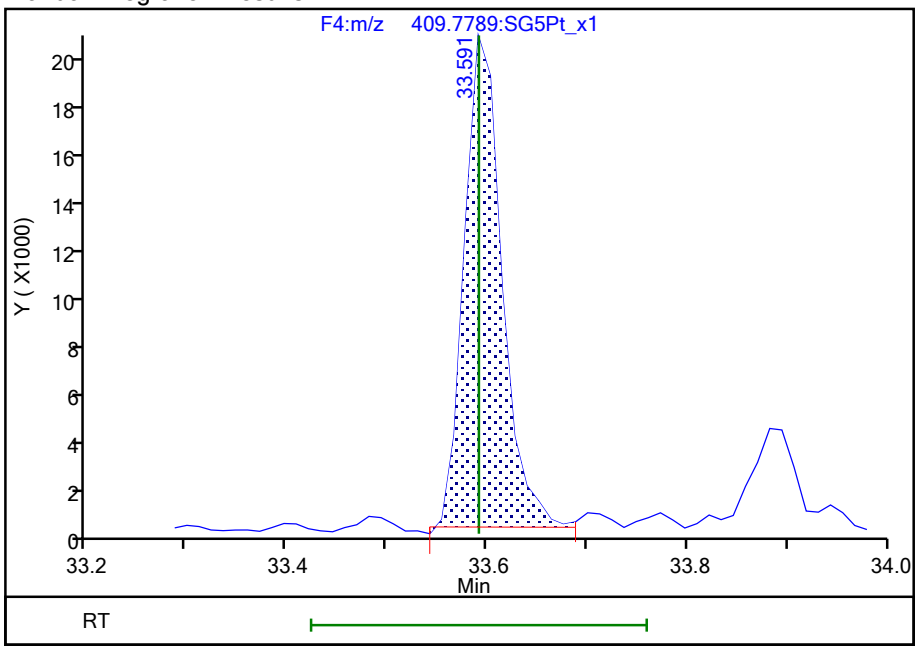

Reviewer: dadunj, 01-Sep-2021 09:33:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d				
Injection Date:	31-Aug-2021 00:25:45	Instrument ID:	10D5		
Lims ID:	320-76901-A-8-A	Lab Sample ID:	320-76901-8		
Client ID:	11215702-072821-BN-SJSB095 (14-16)				
Operator ID:	SMA	ALS Bottle#:	19	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 2

Processing Integration Results

RT: 34.66
Area: 24546
Amount: 0.131101
Amount Units: pg/ul

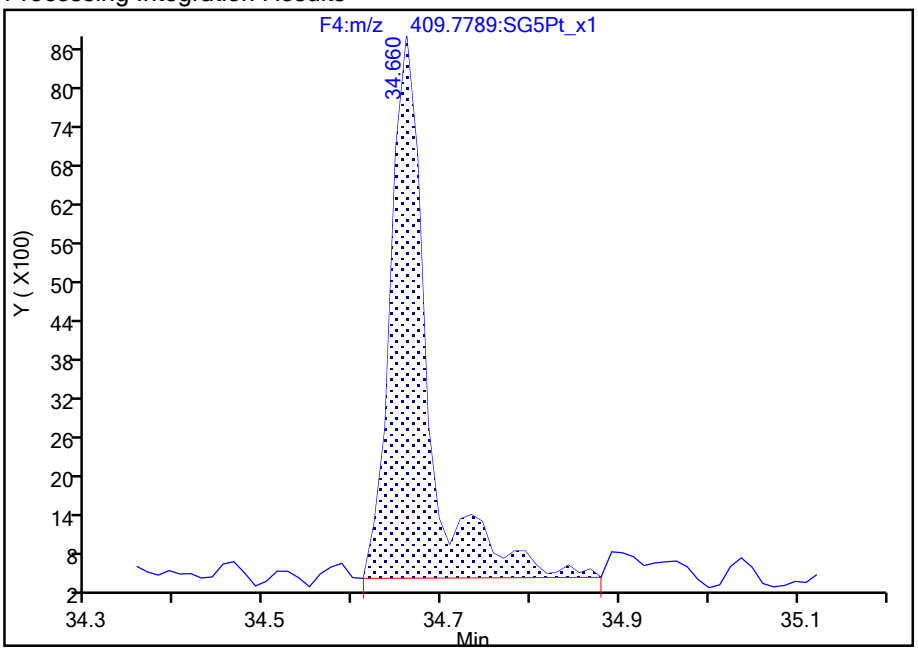

Manual Integration Results

RT: 34.66
Area: 20713
Amount: 0.110458
Amount Units: pg/ul

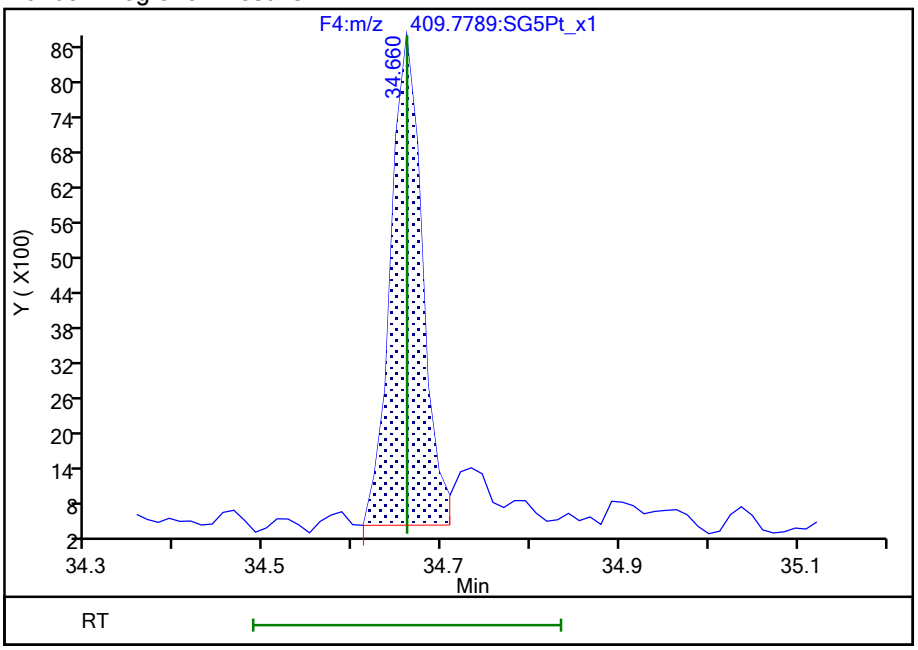

Reviewer: dadunj, 01-Sep-2021 09:33:32

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d				
Injection Date:	31-Aug-2021 00:25:45	Instrument ID:	10D5		
Lims ID:	320-76901-A-8-A	Lab Sample ID:	320-76901-8		
Client ID:	11215702-072821-BN-SJSB095 (14-16)				
Operator ID:	SMA	ALS Bottle#:	19	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 34.66
Area: 27283
Amount: 0.131101
Amount Units: pg/ul

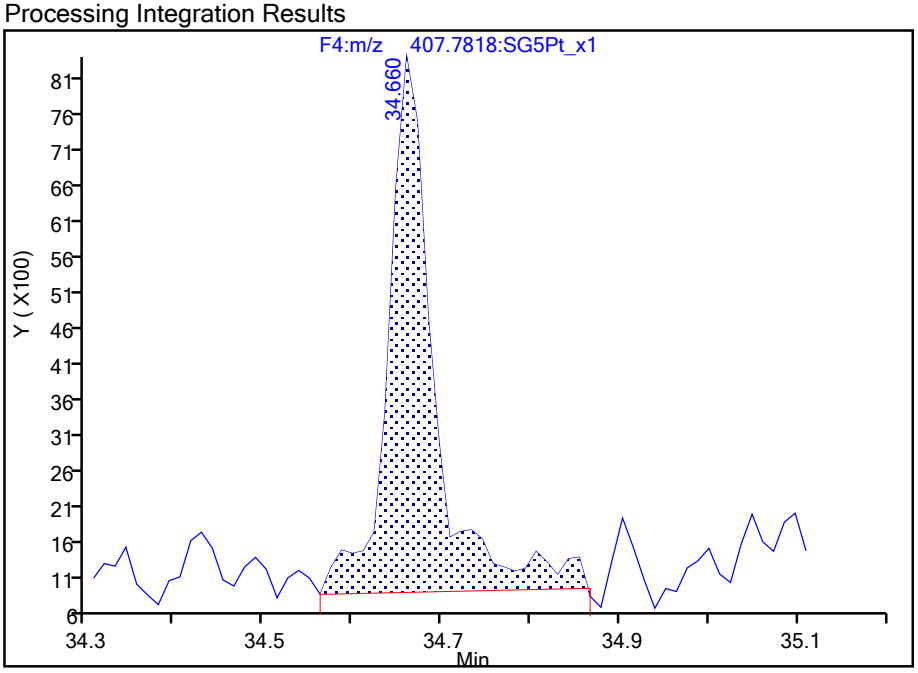

Manual Integration Results

RT: 34.66
Area: 22955
Amount: 0.110458
Amount Units: pg/ul

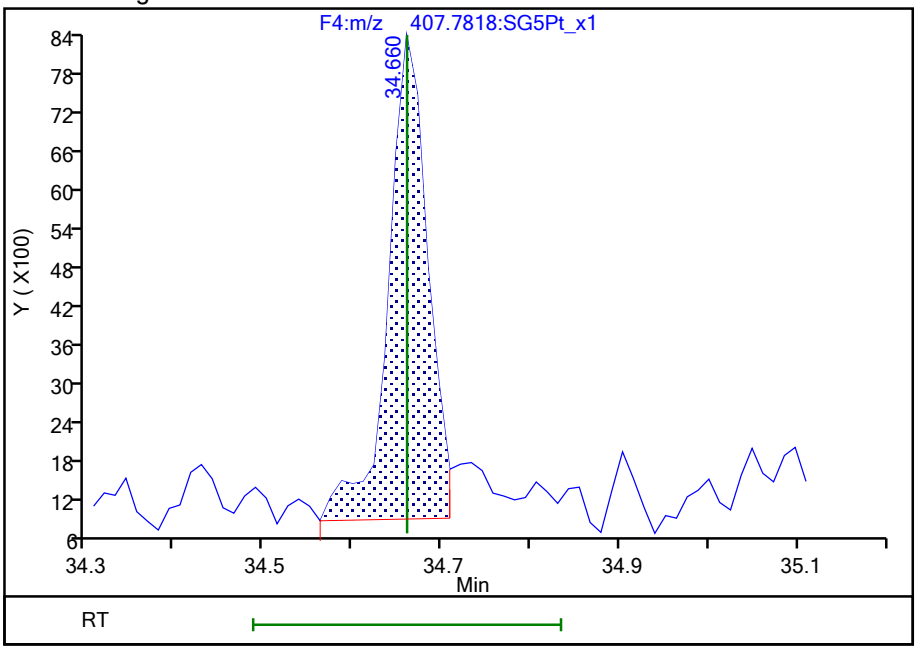

Reviewer: dadunj, 01-Sep-2021 09:33:34

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788606

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d				
Injection Date:	31-Aug-2021 00:25:45	Instrument ID:	10D5		
Lims ID:	320-76901-A-8-A	Lab Sample ID:	320-76901-8		
Client ID:	11215702-072821-BN-SJSB095 (14-16)				
Operator ID:	SMA	ALS Bottle#:	19	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 2, m/z: 409.7789, RT: (33.56- 34.68)

Signal: 2

Processing Integration Results

RT = 33.882 Area = 14241

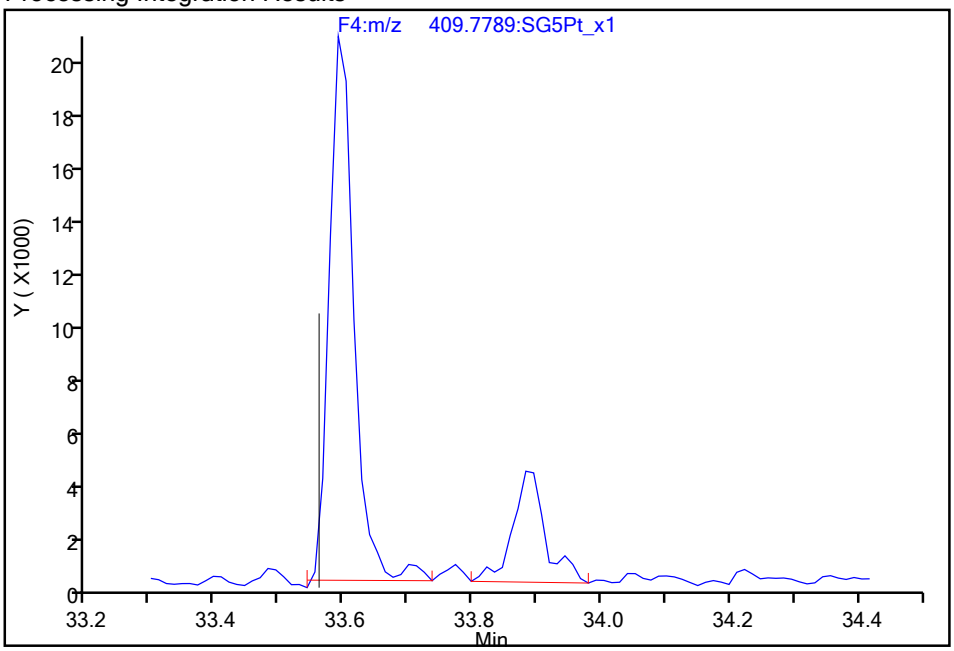

Manual Integration Results

RT = 33.882 Area = 12684 M

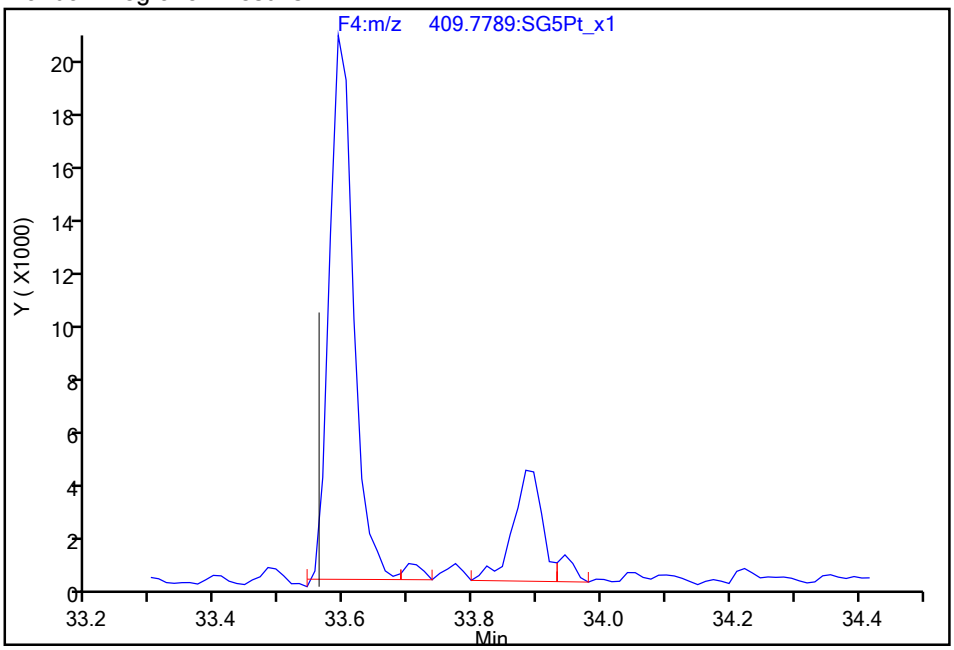

Reviewer: dadunj, 01-Sep-2021 09:33:37

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d				
Injection Date:	31-Aug-2021 00:25:45	Instrument ID:	10D5		
Lims ID:	320-76901-A-8-A	Lab Sample ID:	320-76901-8		
Client ID:	11215702-072821-BN-SJSB095 (14-16)				
Operator ID:	SMA	ALS Bottle#:	19	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.78
Area: 45113
Amount: 0.296300
Amount Units: pg/ul

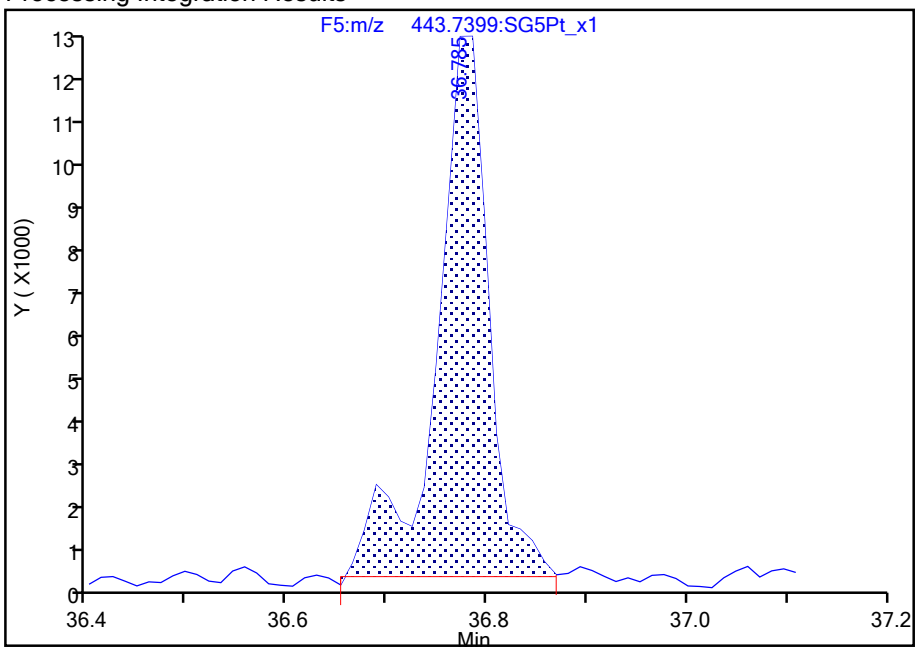

Manual Integration Results

RT: 36.78
Area: 38915
Amount: 0.272183
Amount Units: pg/ul

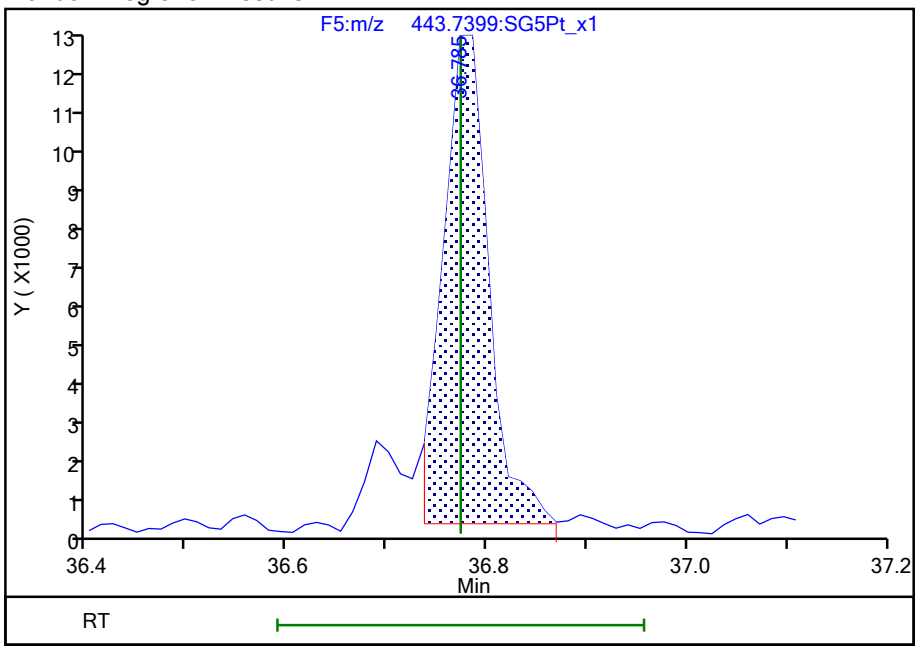

Reviewer: dadunj, 01-Sep-2021 09:33:46

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

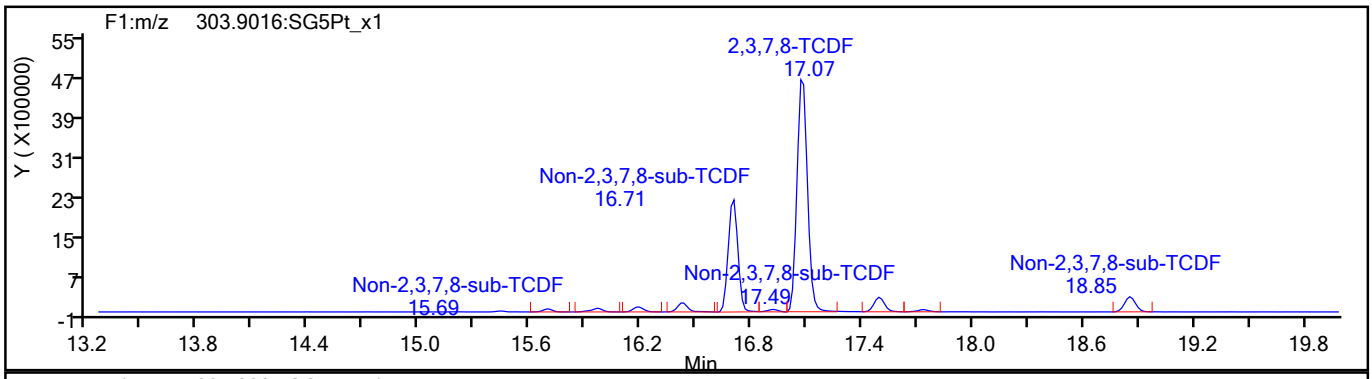

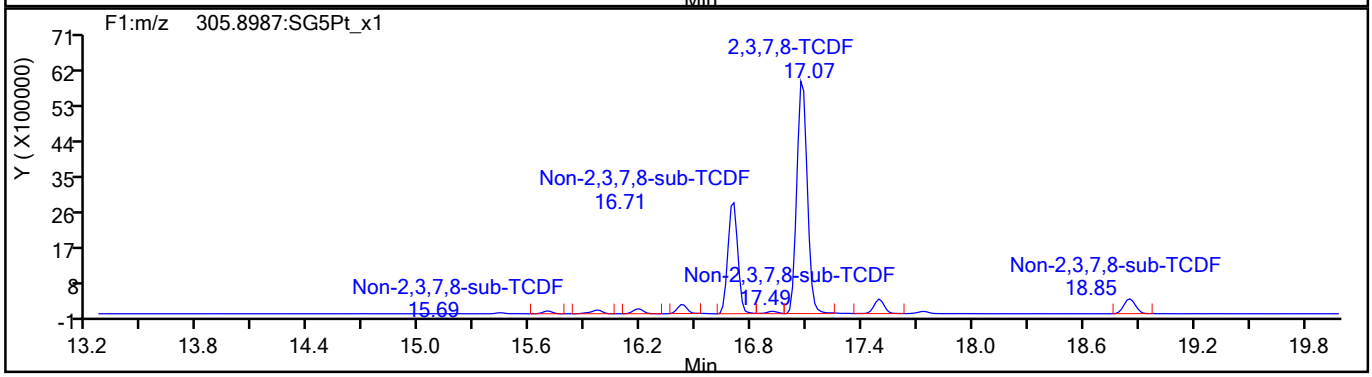

TCDF Standards

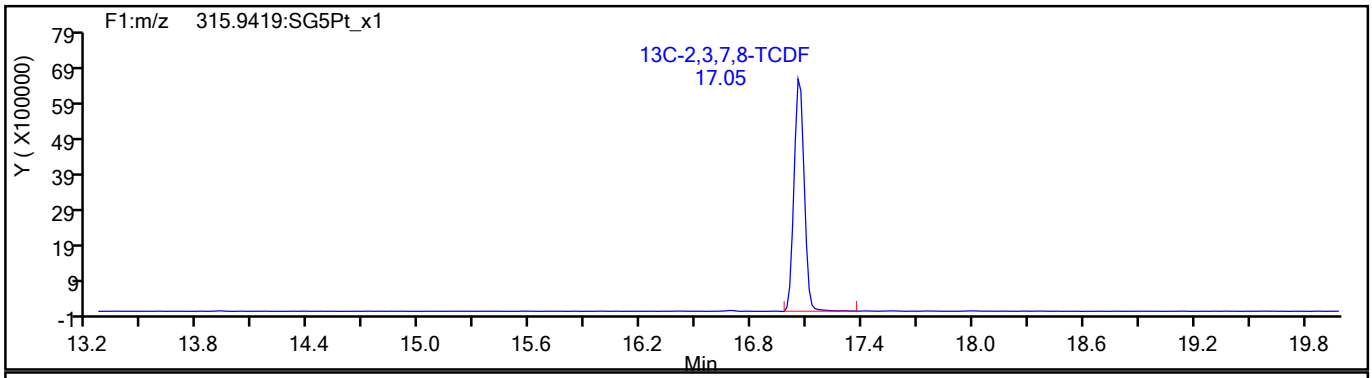

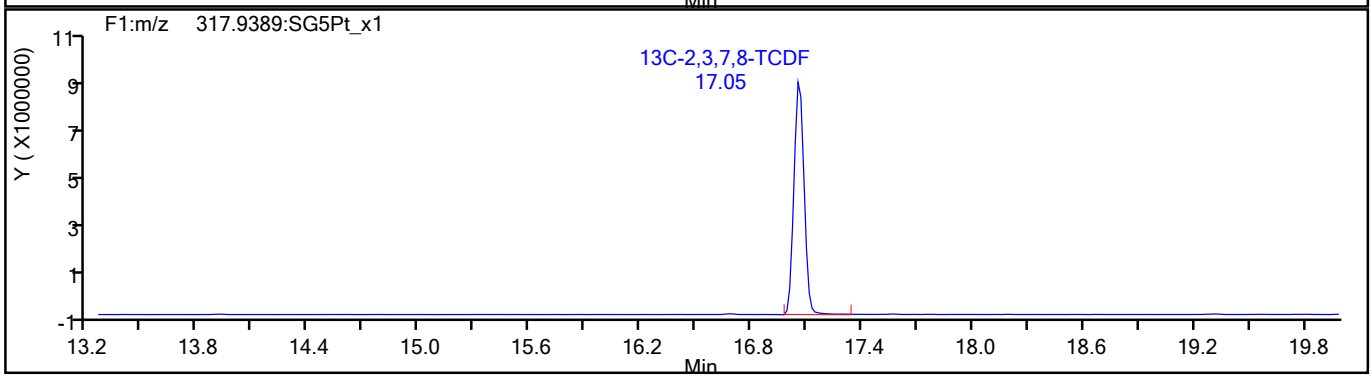

788609

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

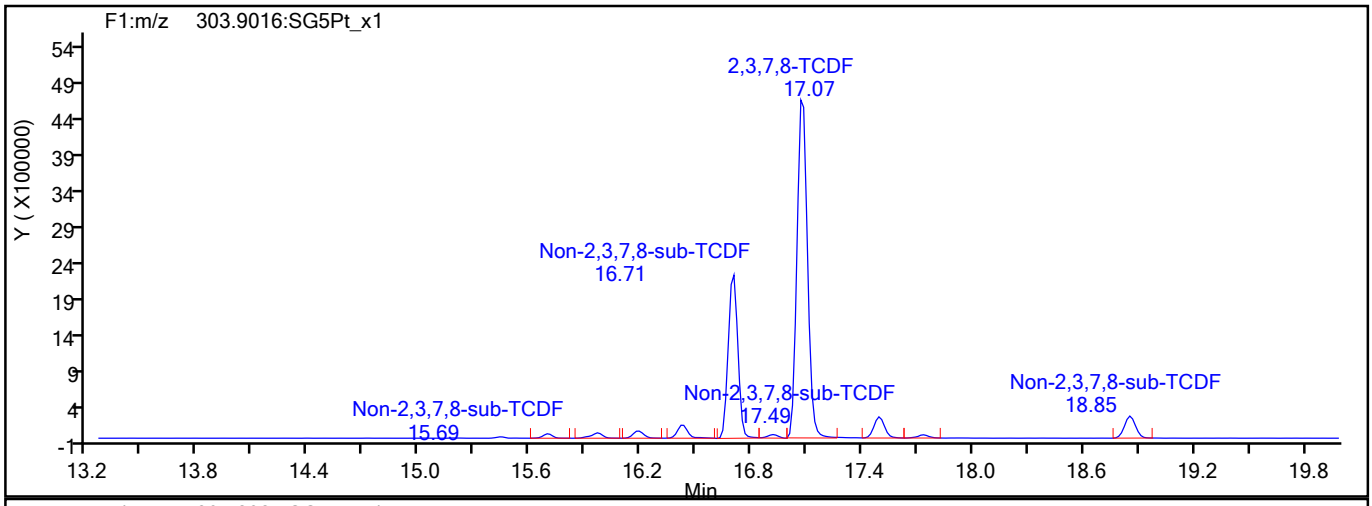

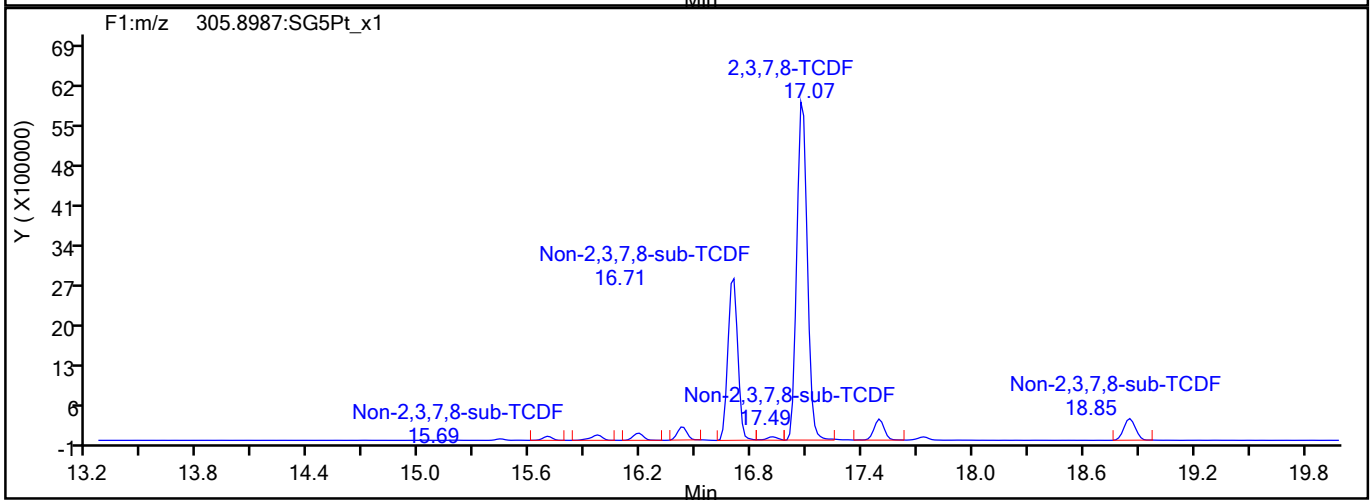

TCDF Interference Mass

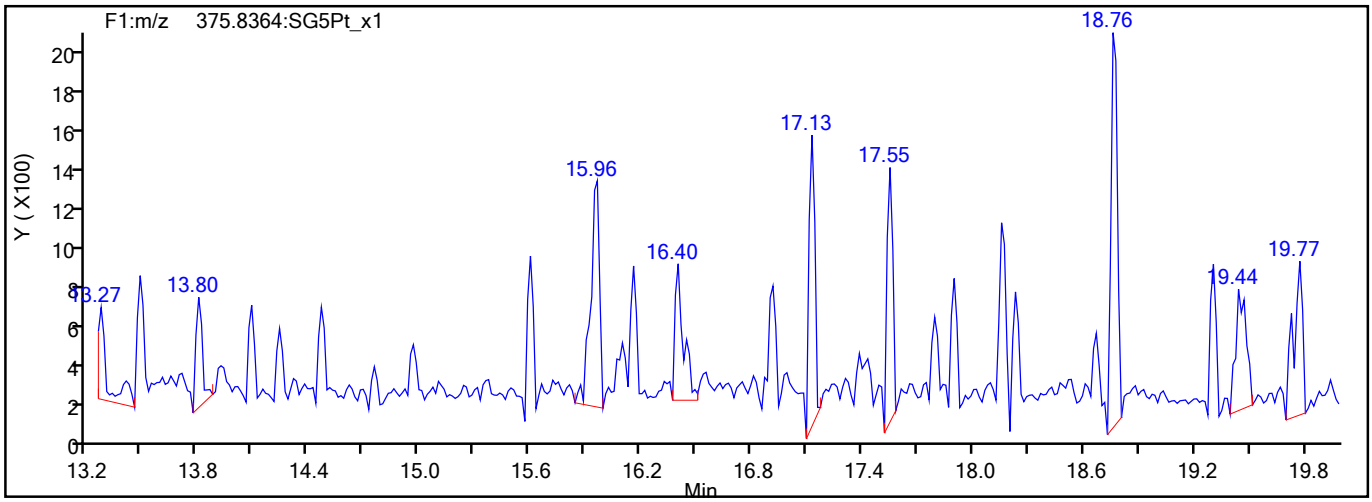

788610

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

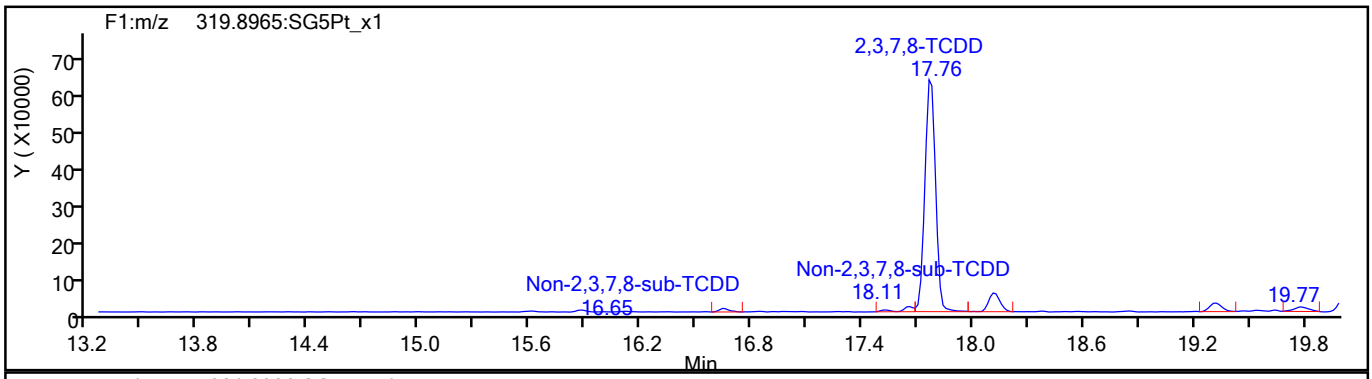

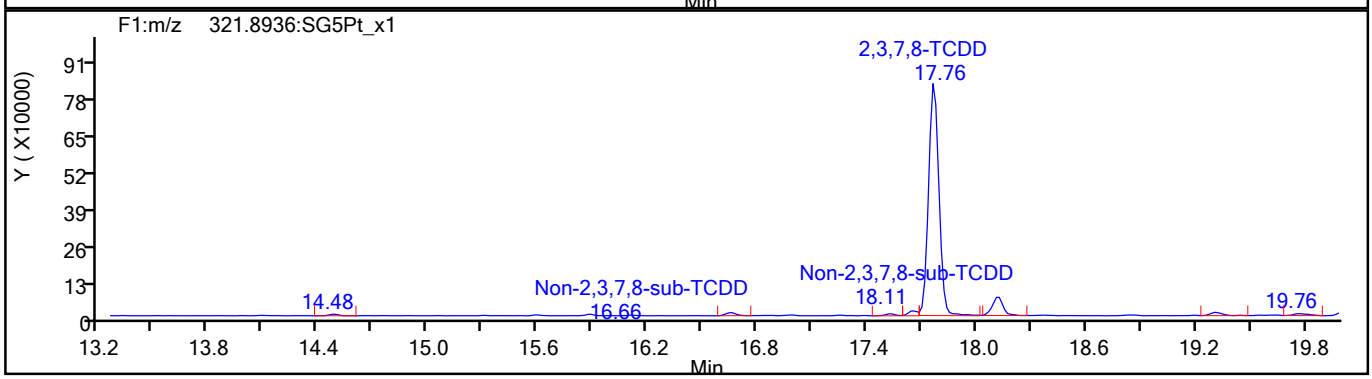

TCDD Standards

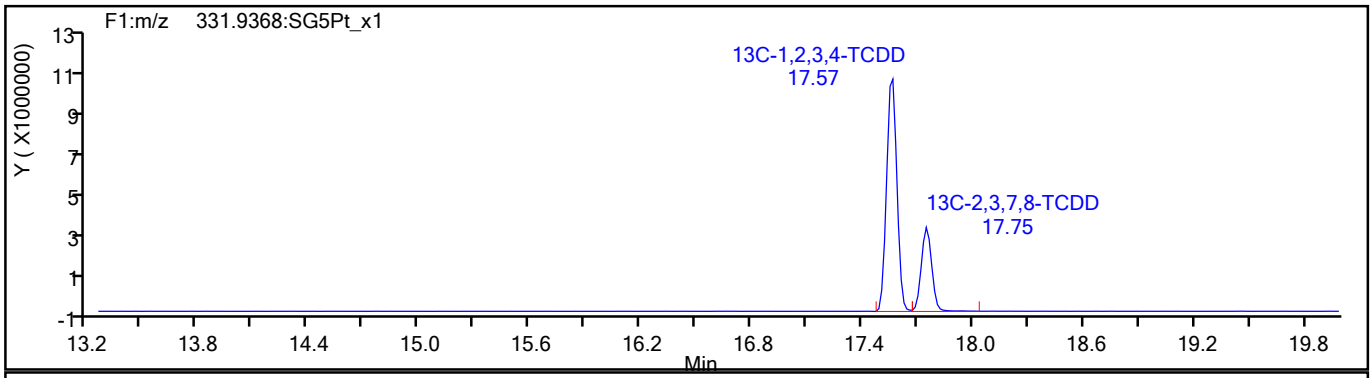

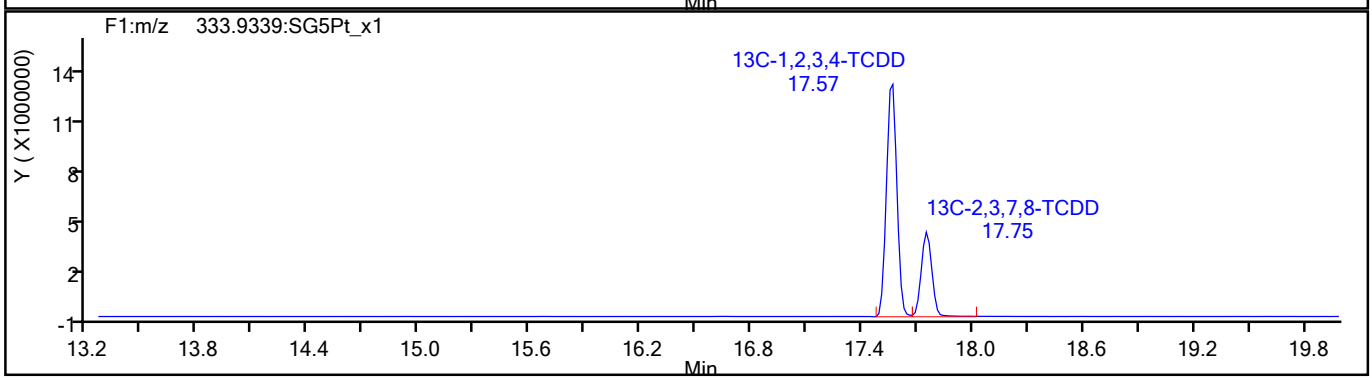

788611

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

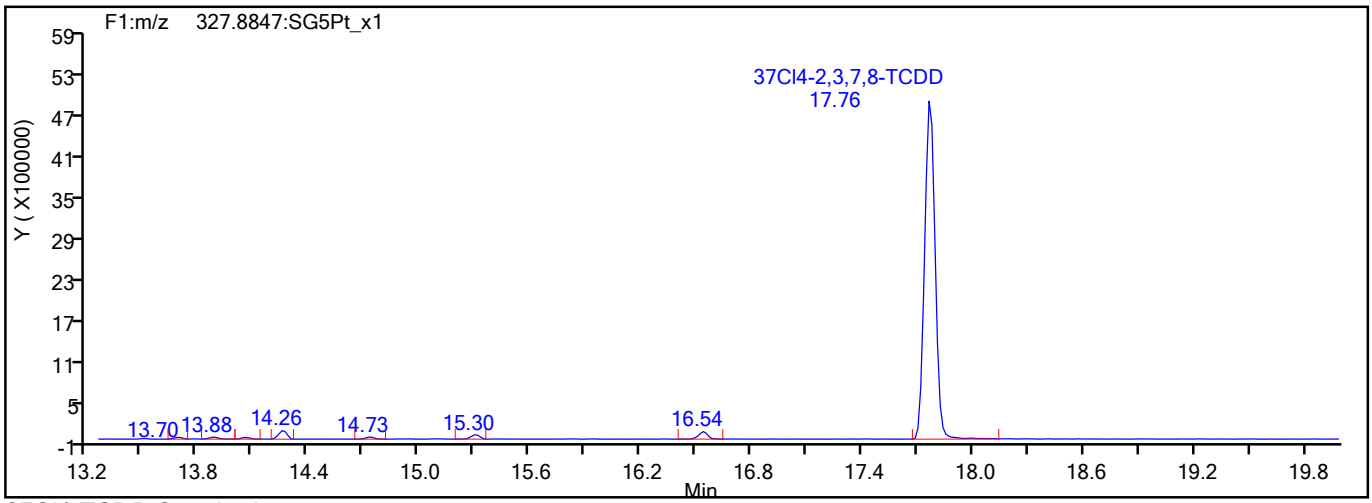

37Cl4-TCDD Standards

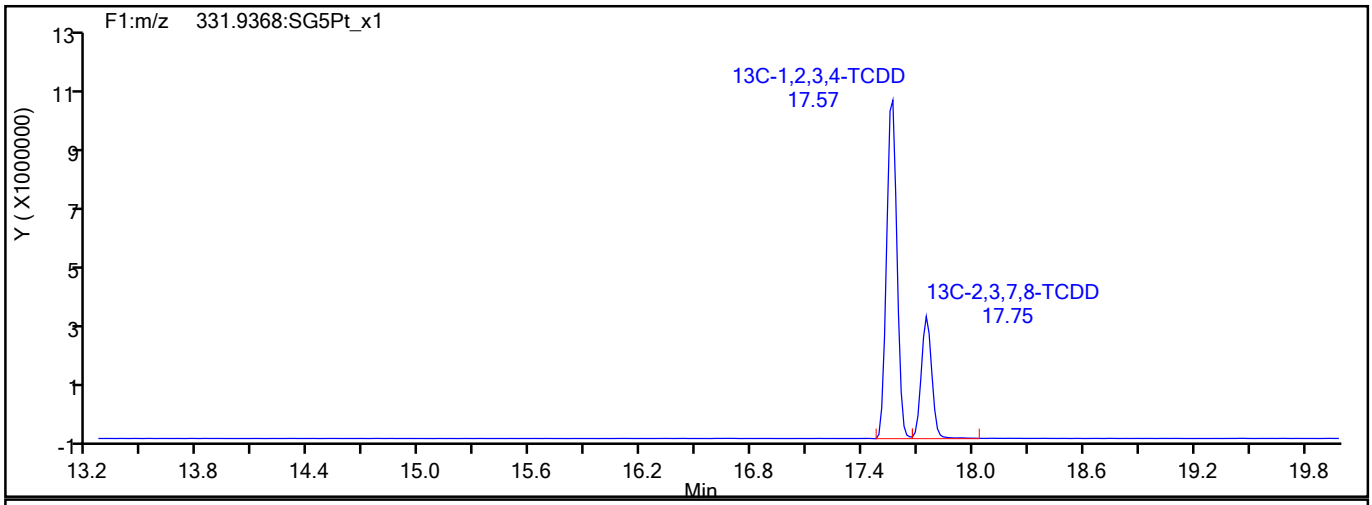

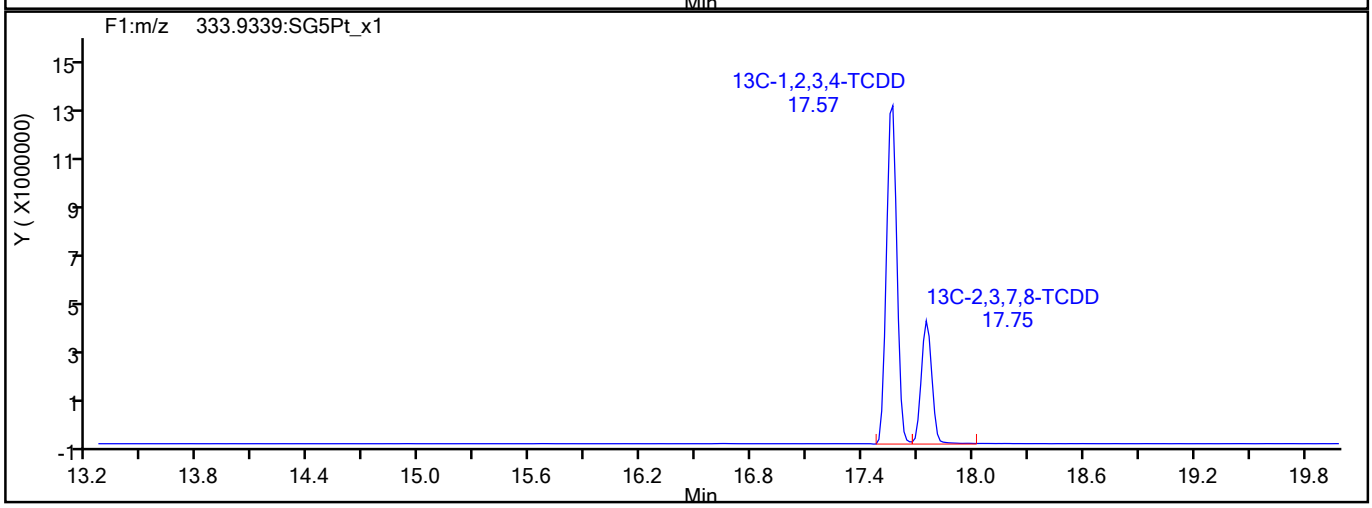

788612

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

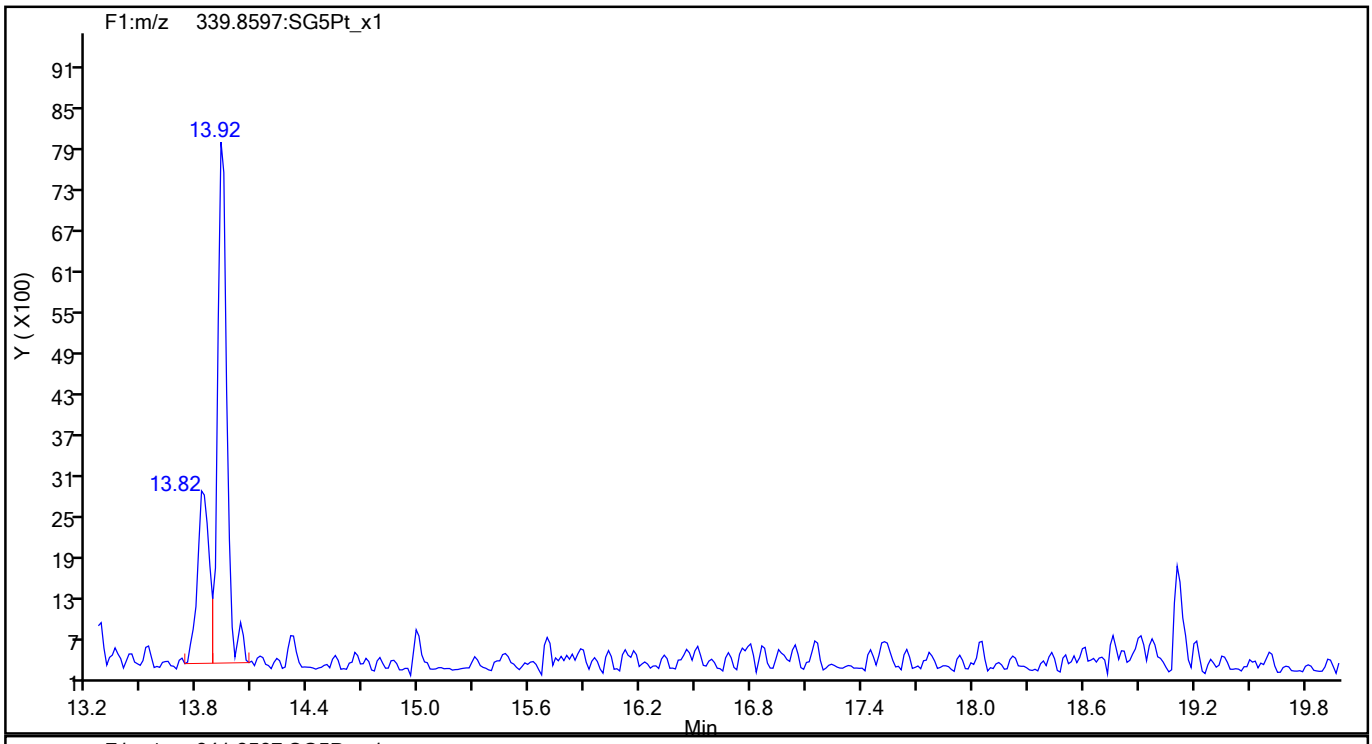

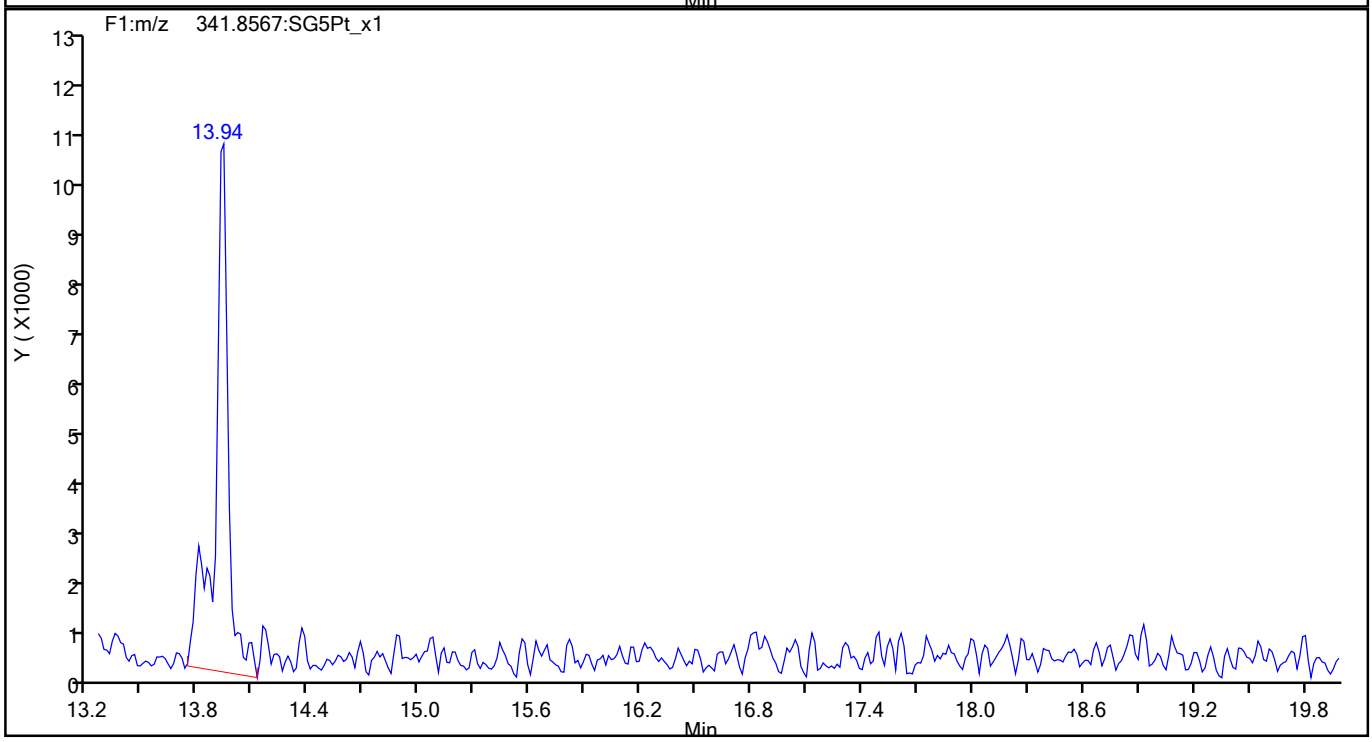

788613

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

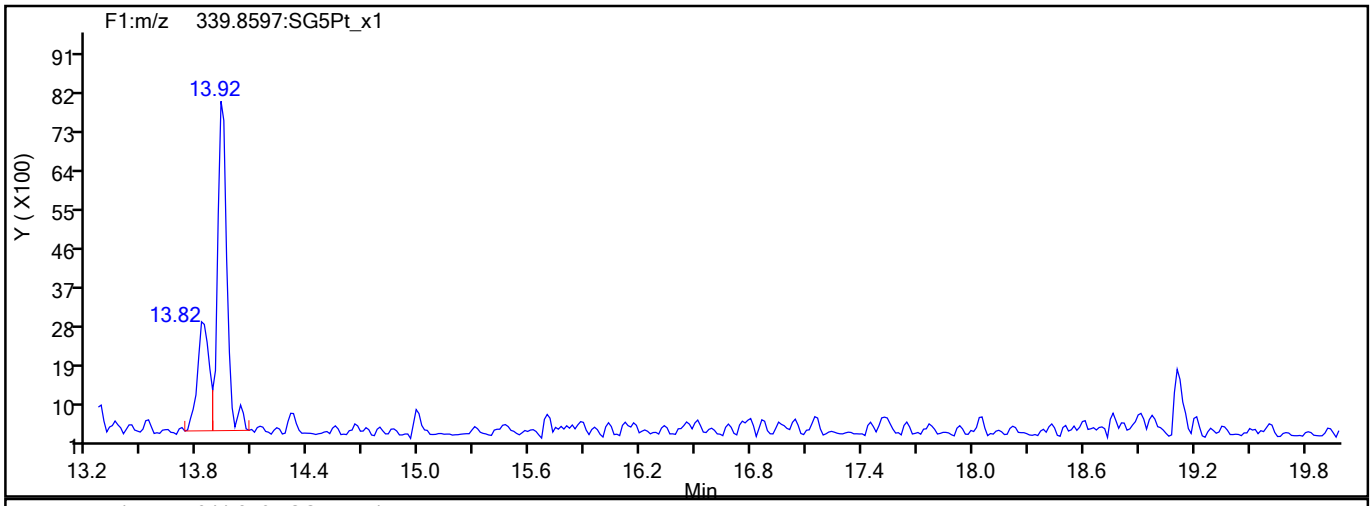

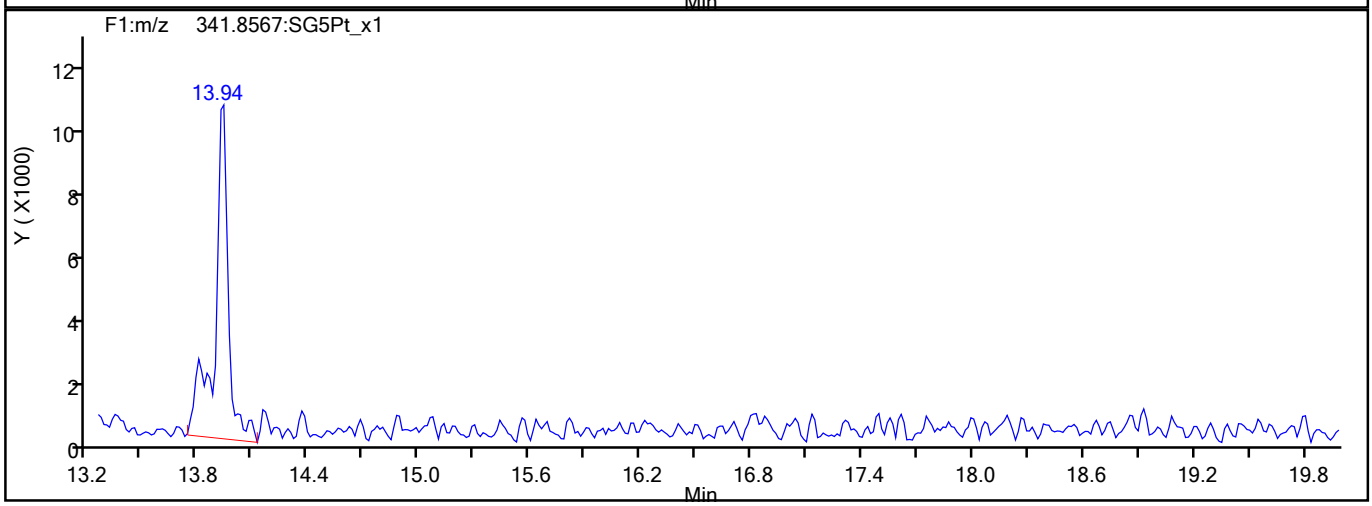

F1 PeCDFs Interference Mass

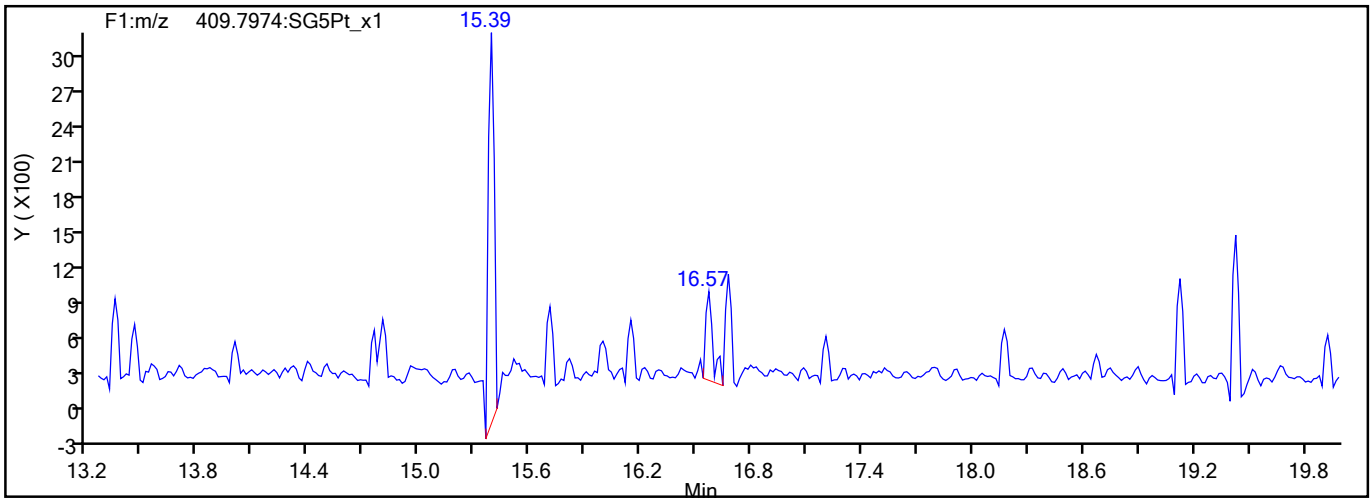

788614

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

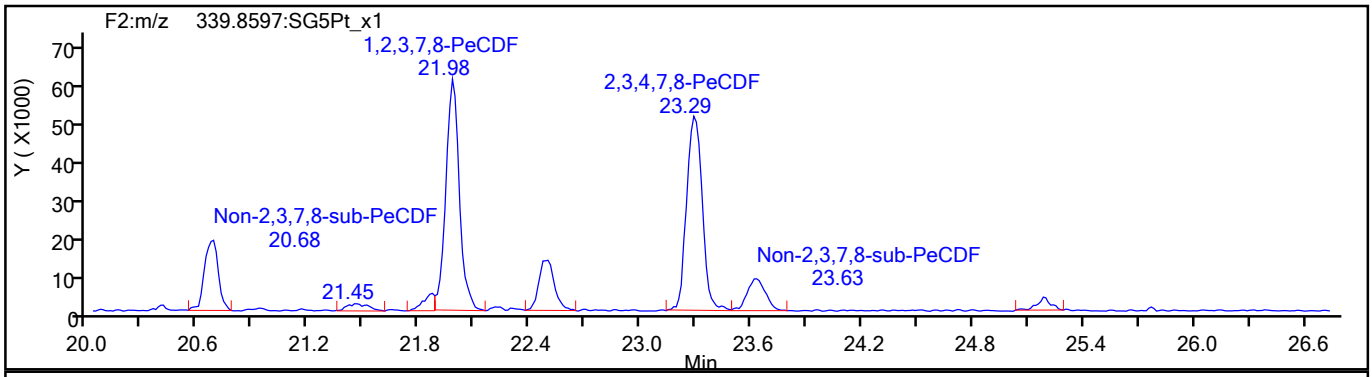

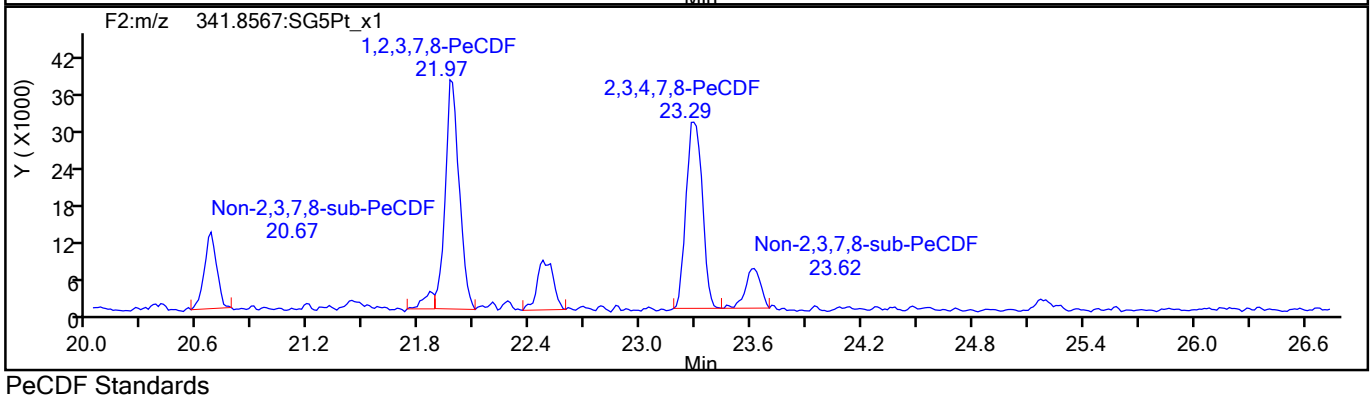

PeCDF Standards

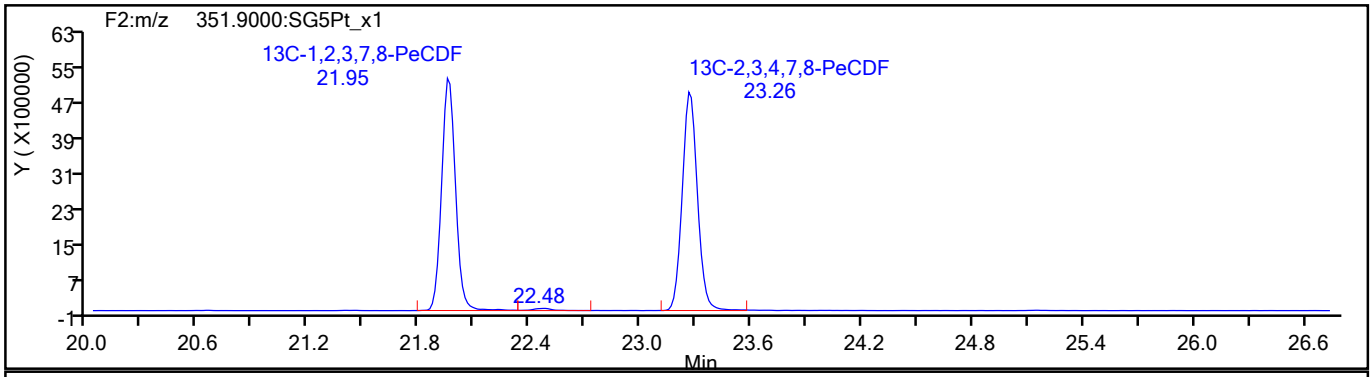

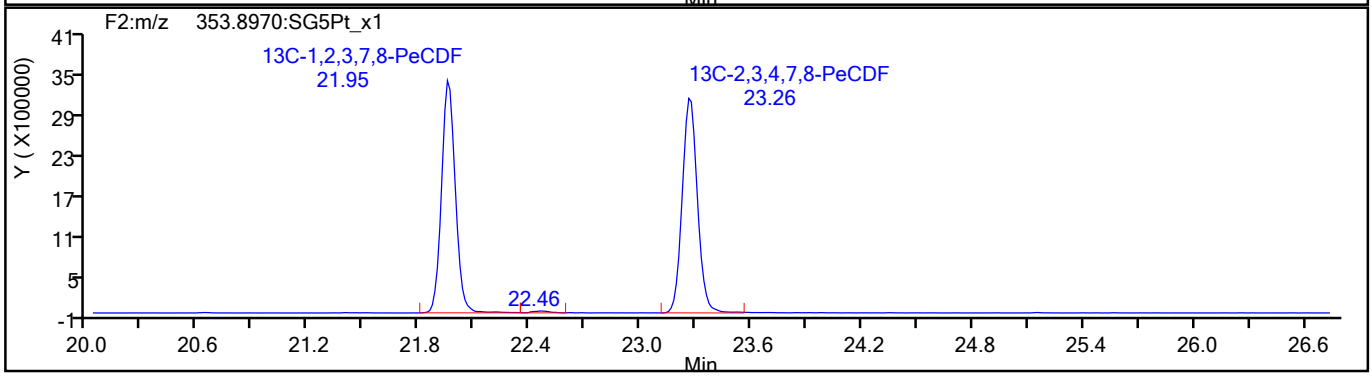

788615

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

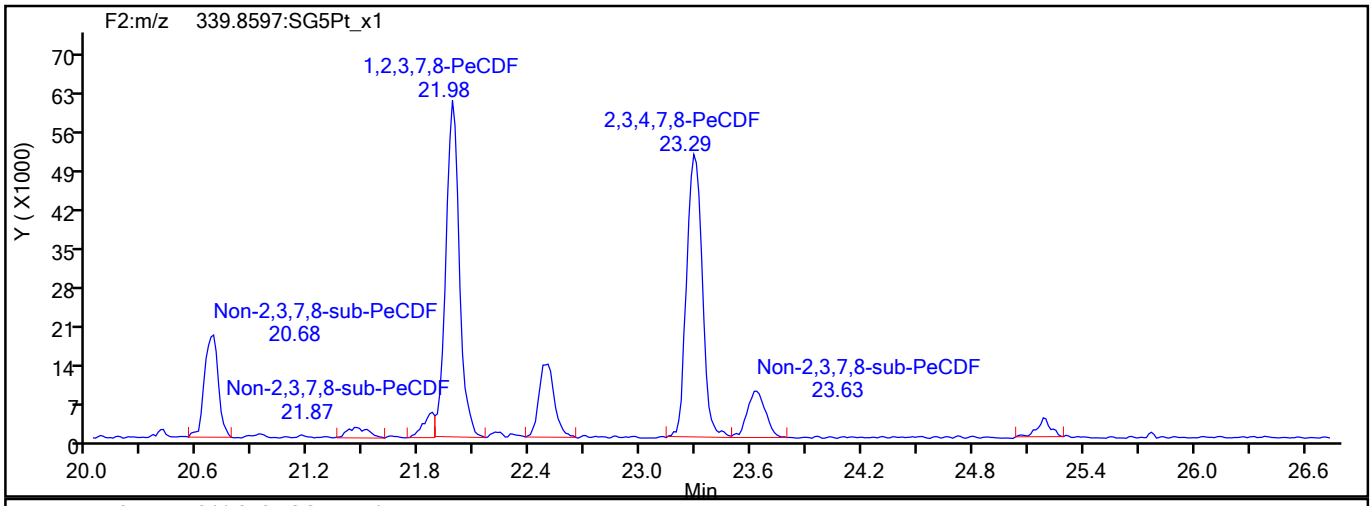

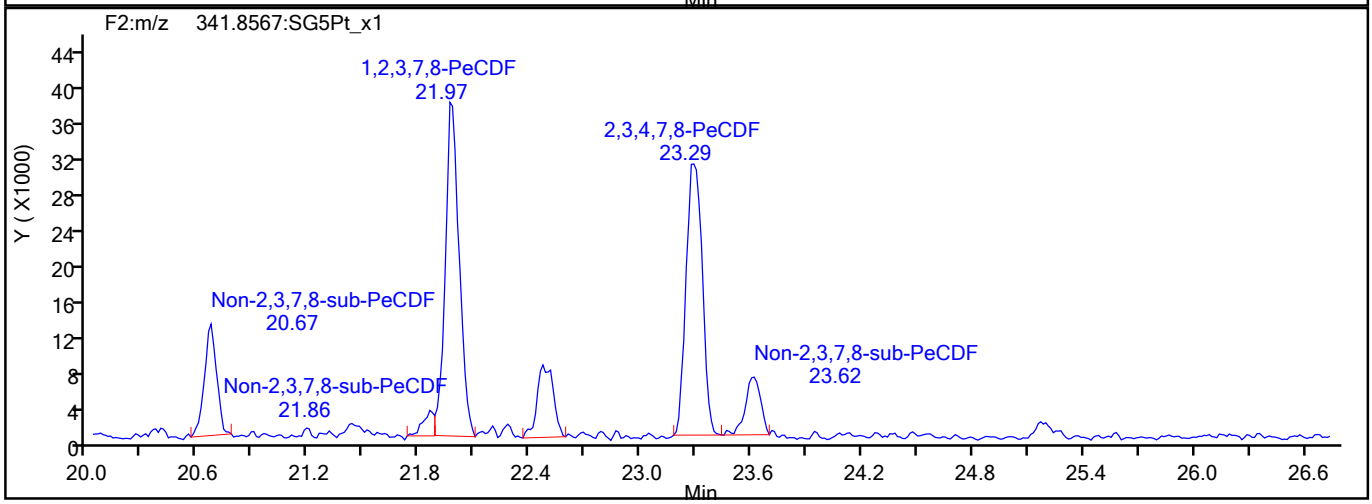

PeCDF Interference Mass

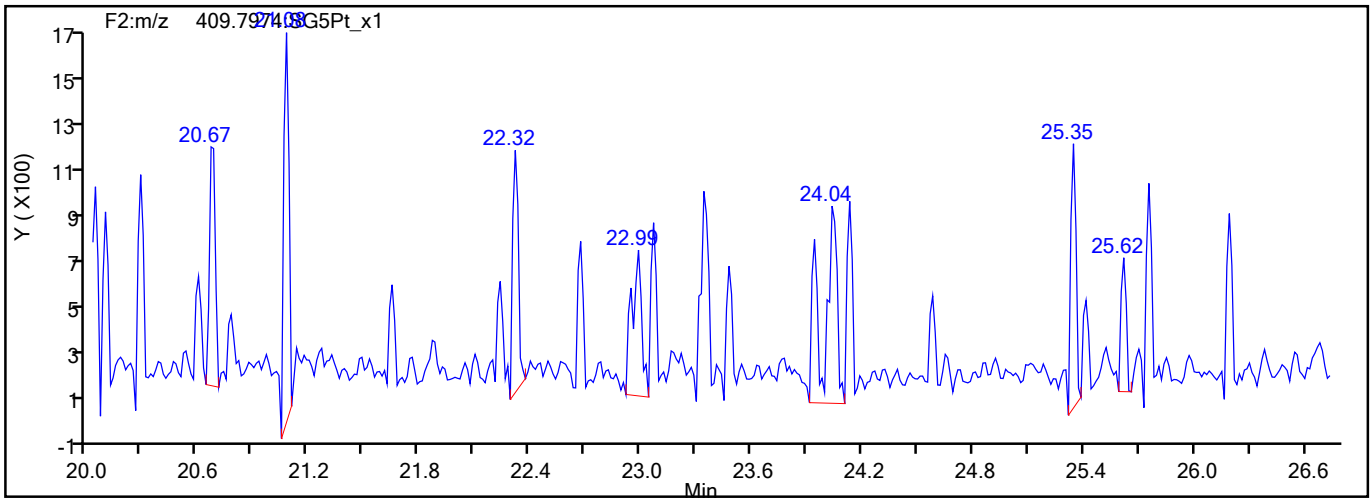

788616

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

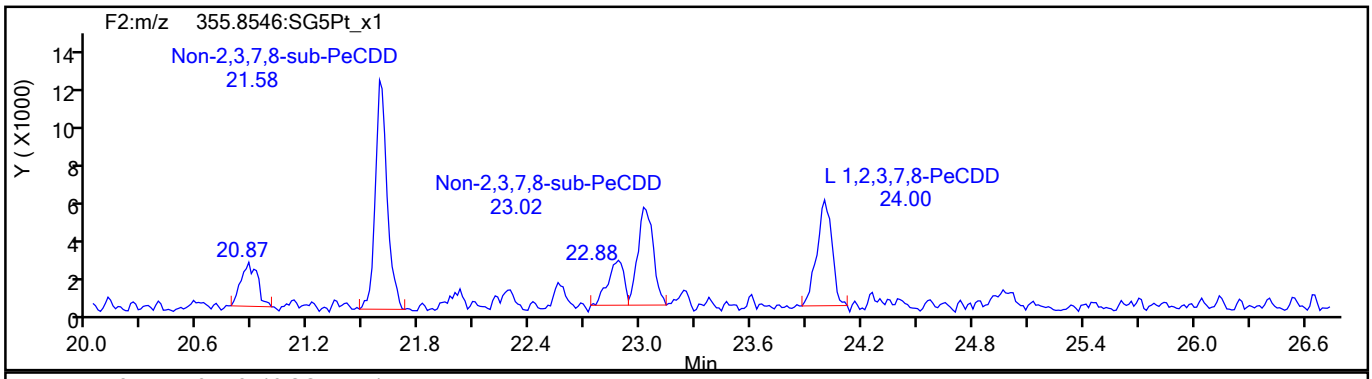

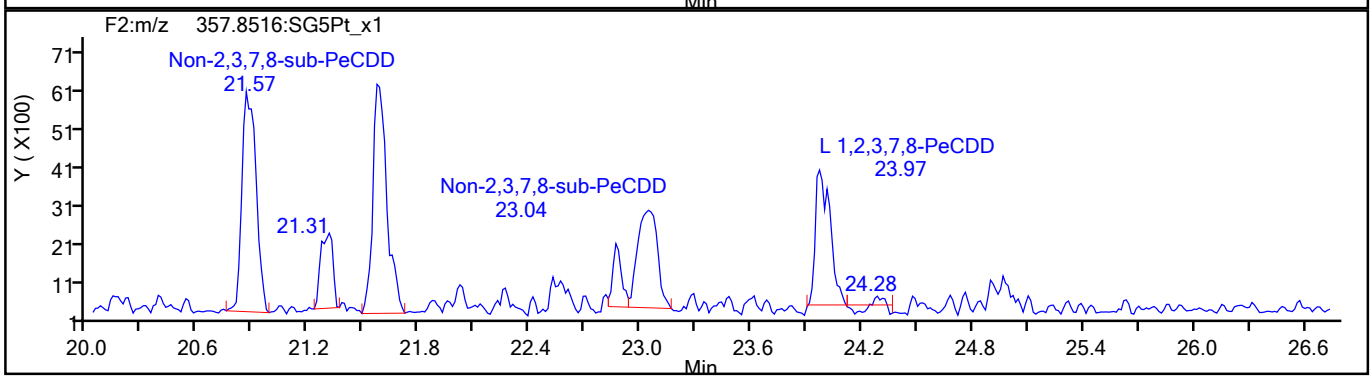

PeCDD Standards

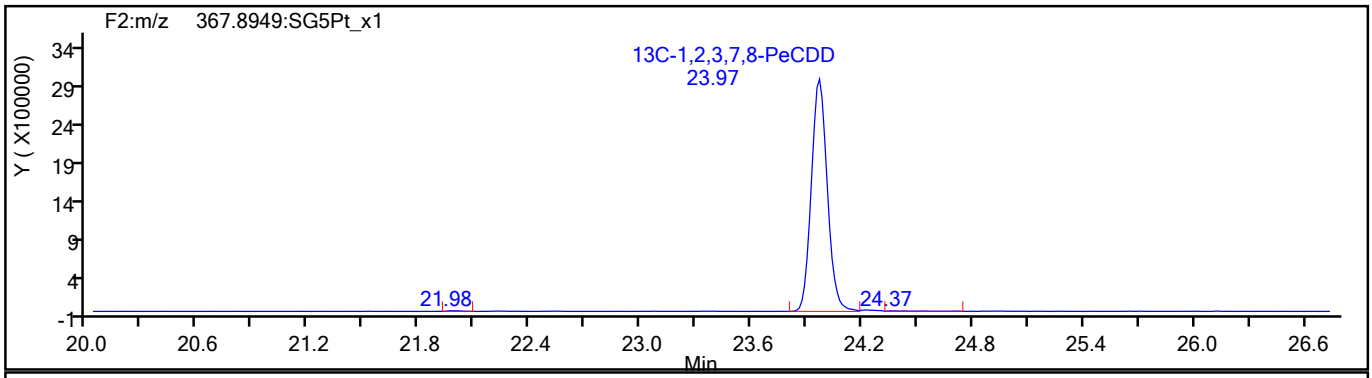

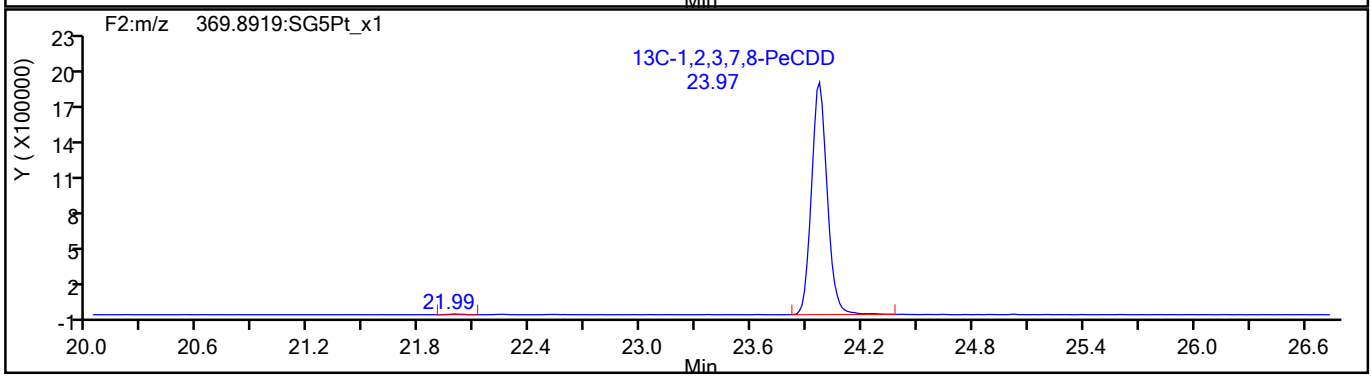

788617

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

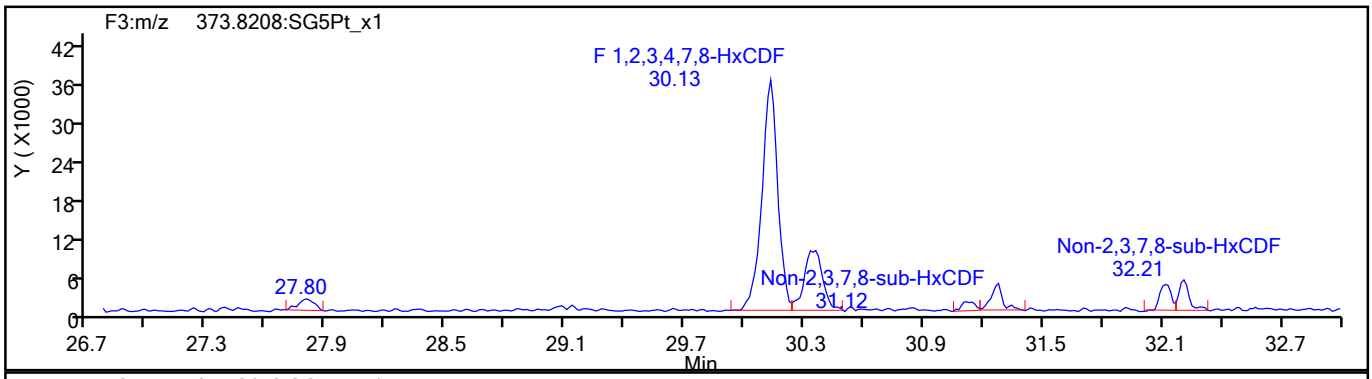

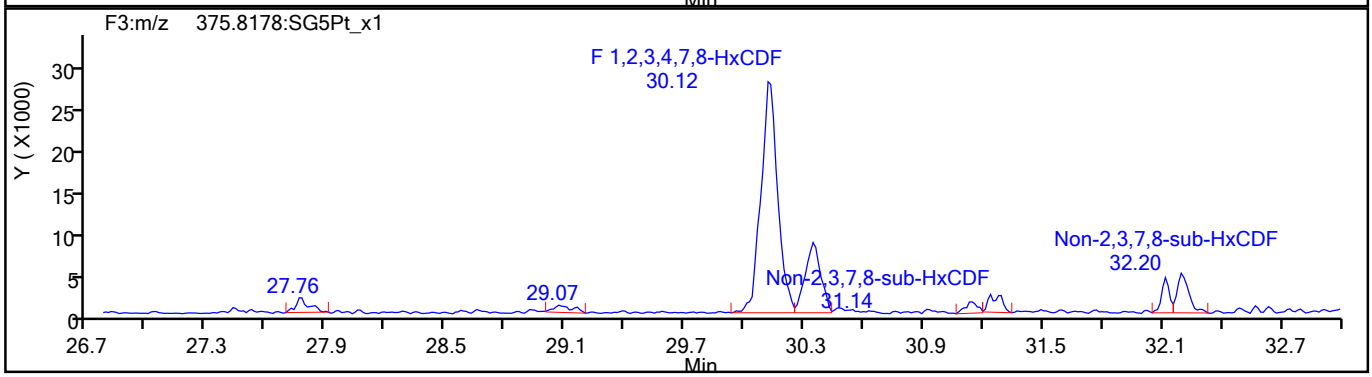

HxCDF Standards

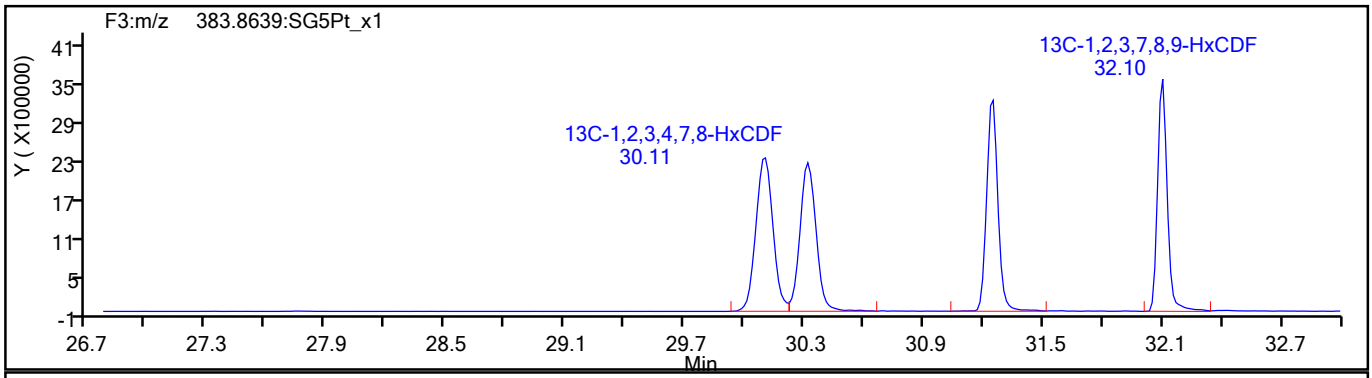

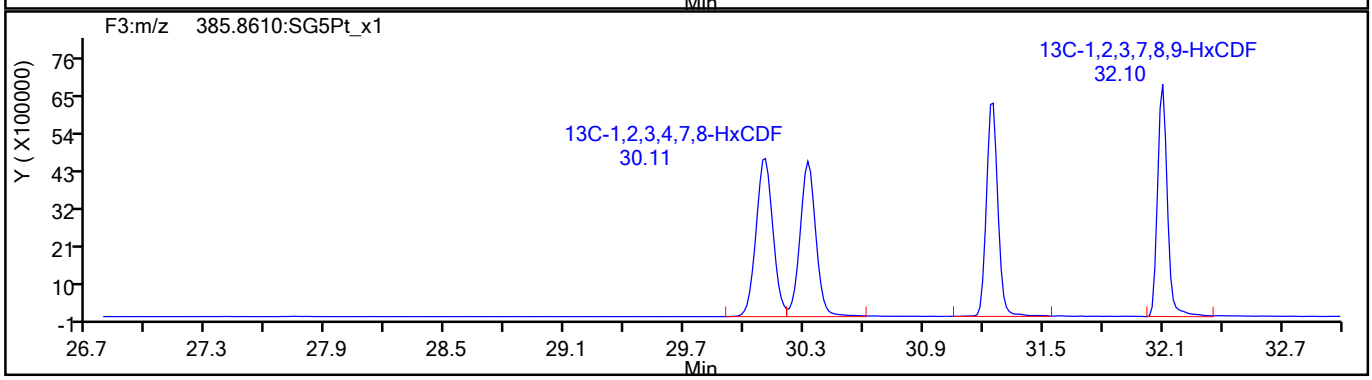

788618

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

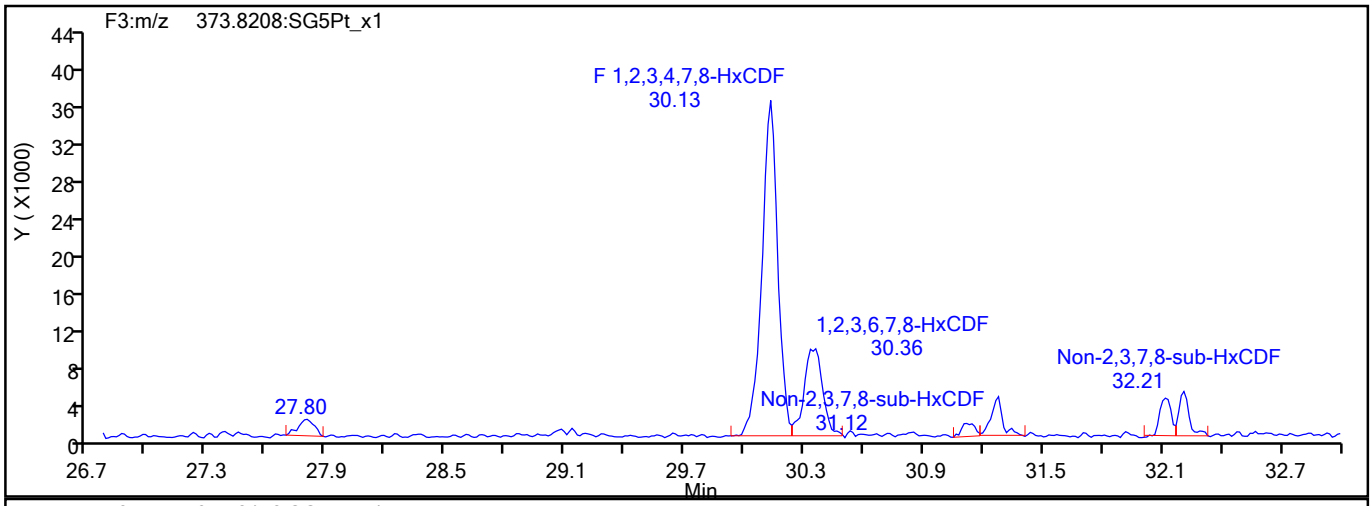

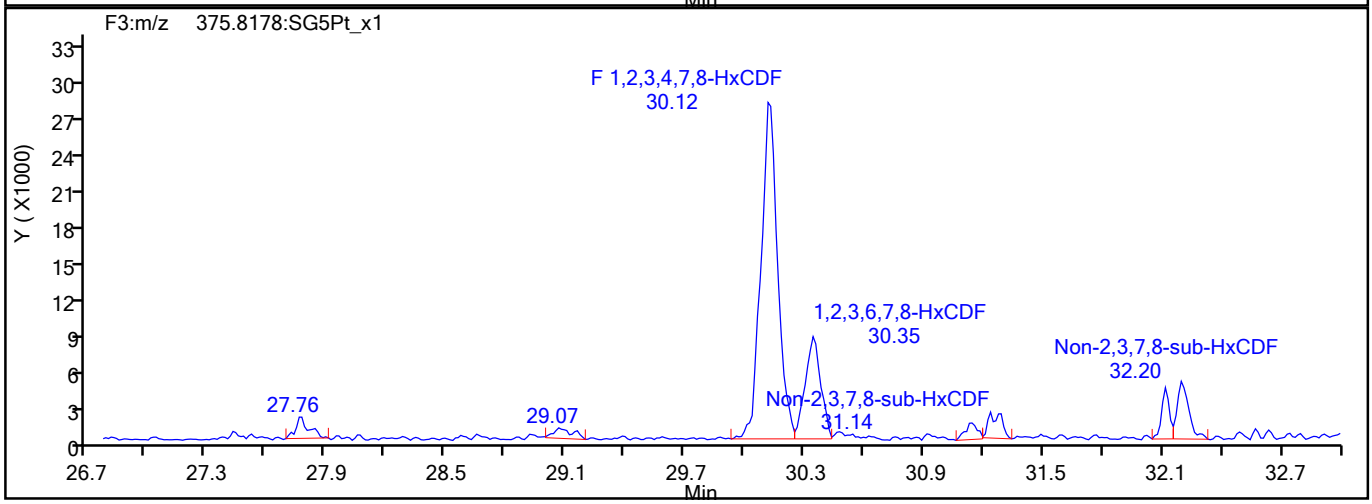

HxCDF Interference Mass

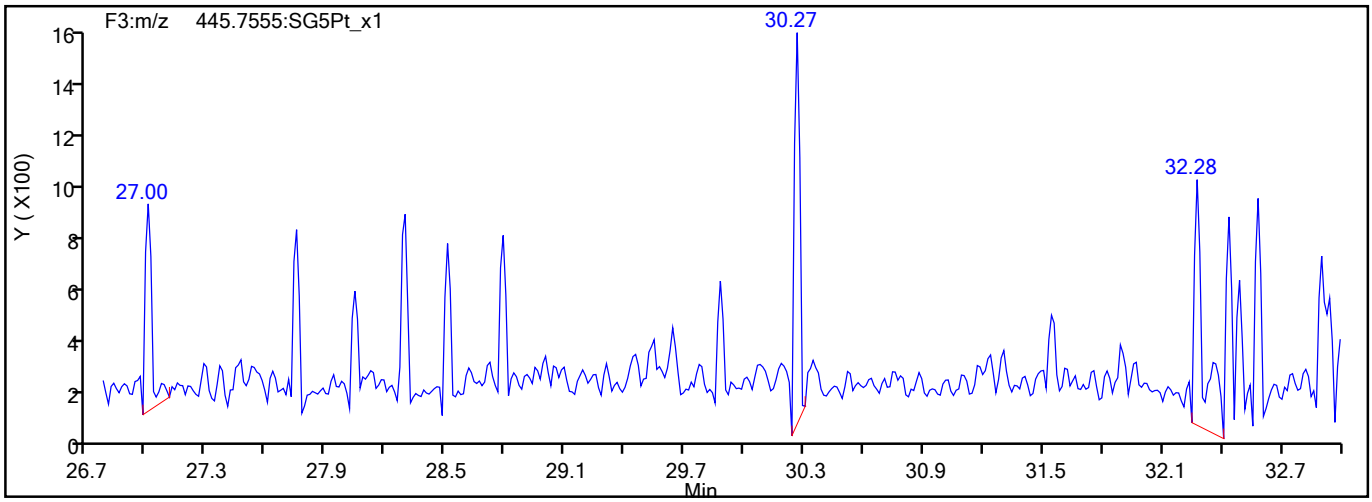

788619

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

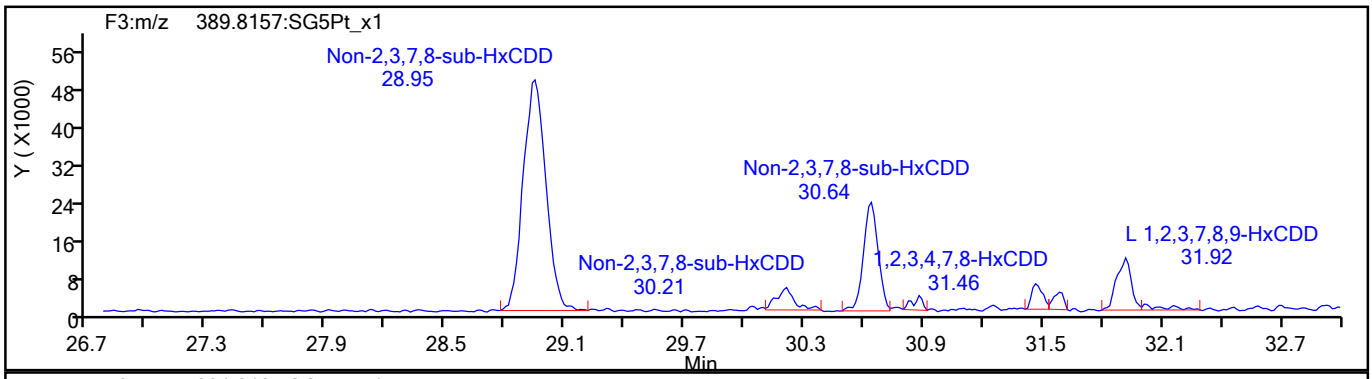

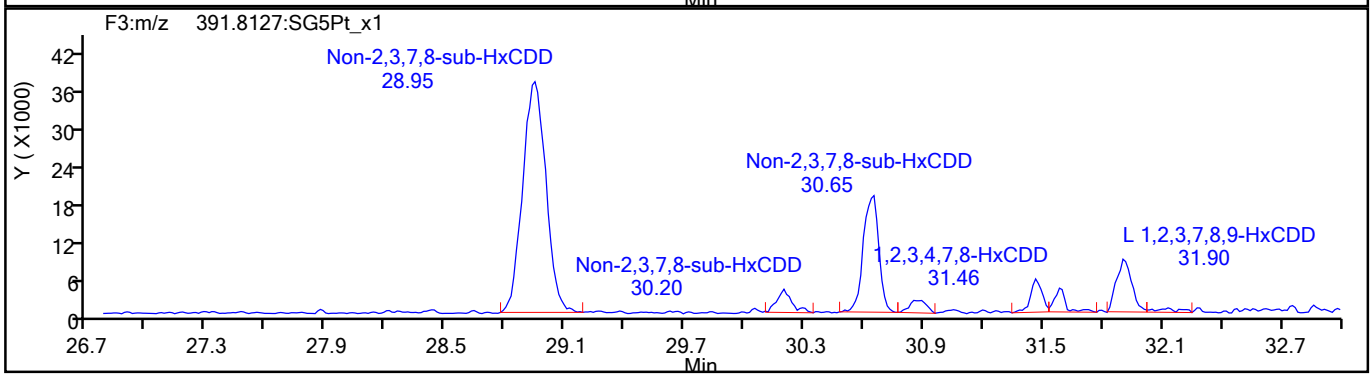

HxCDD Standards

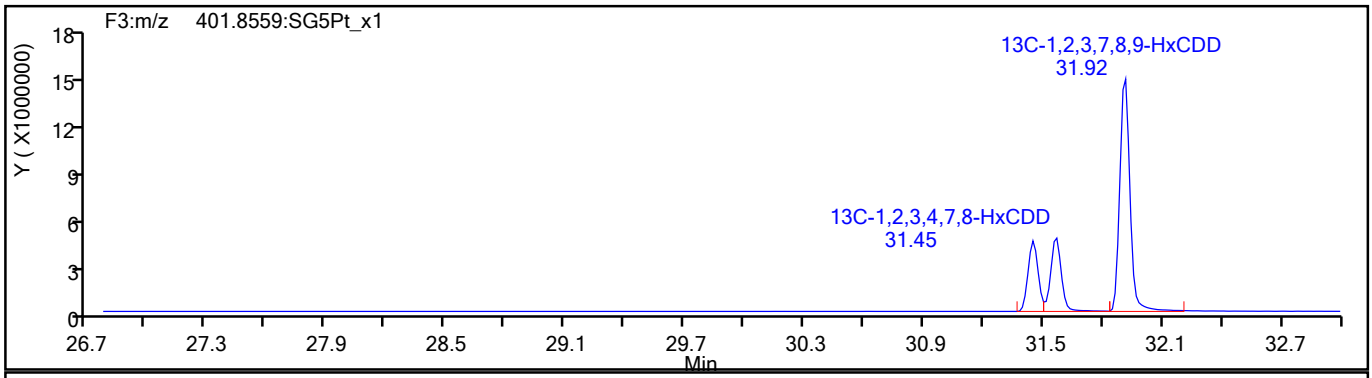

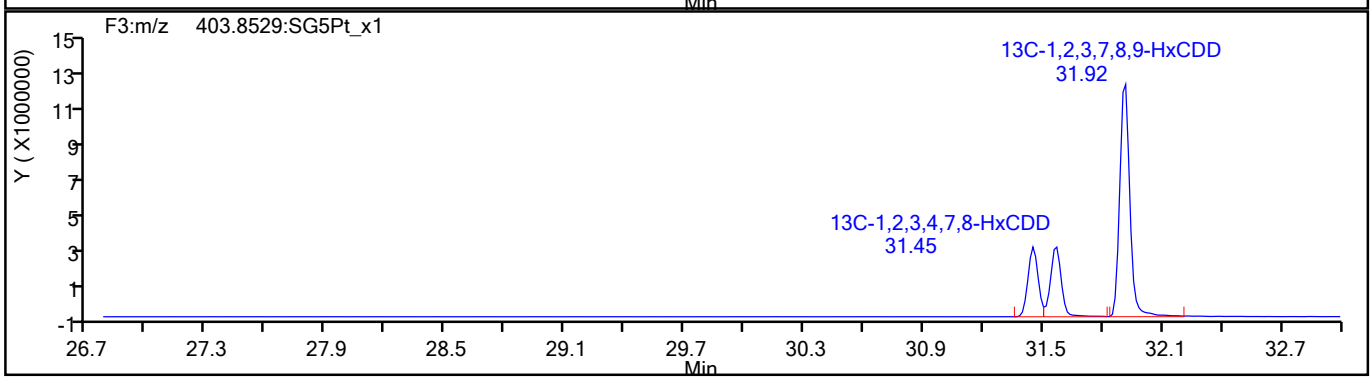

788620

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

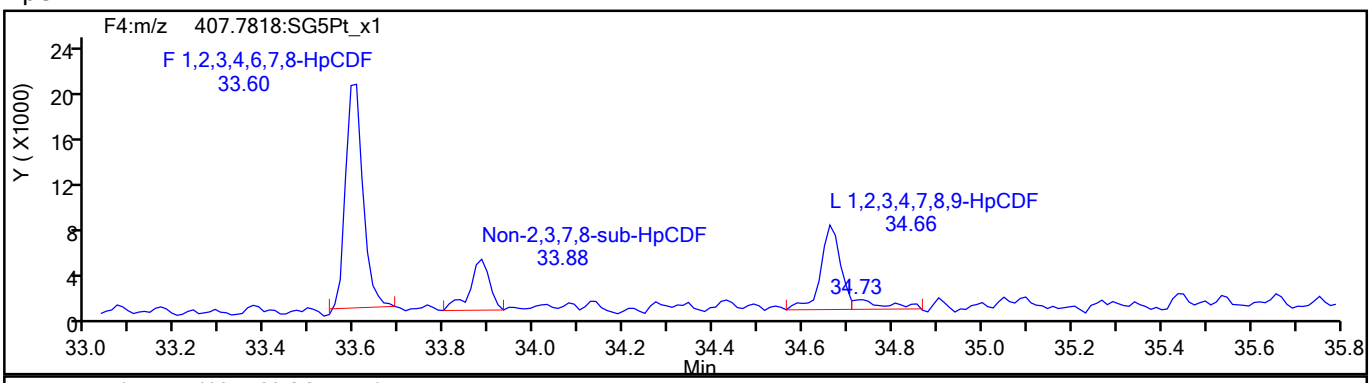

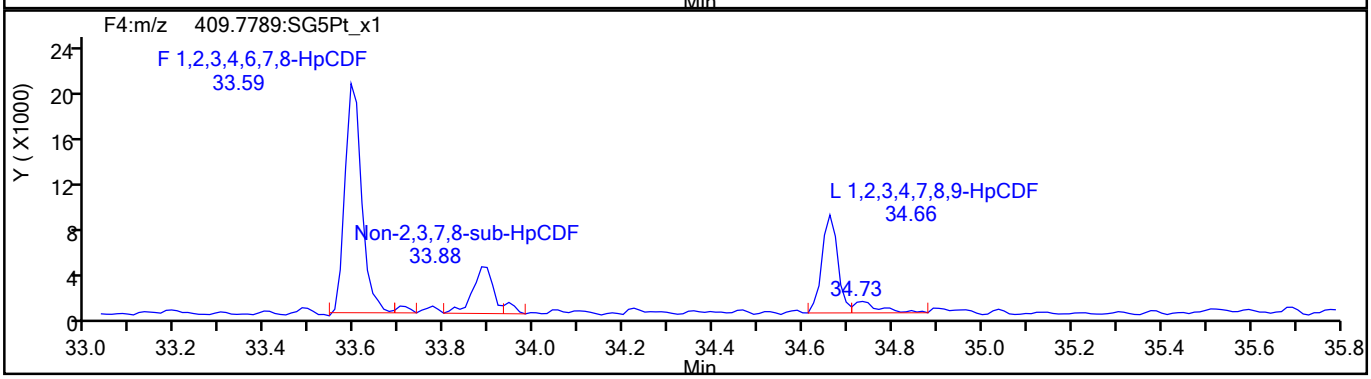

HpCDF Standards

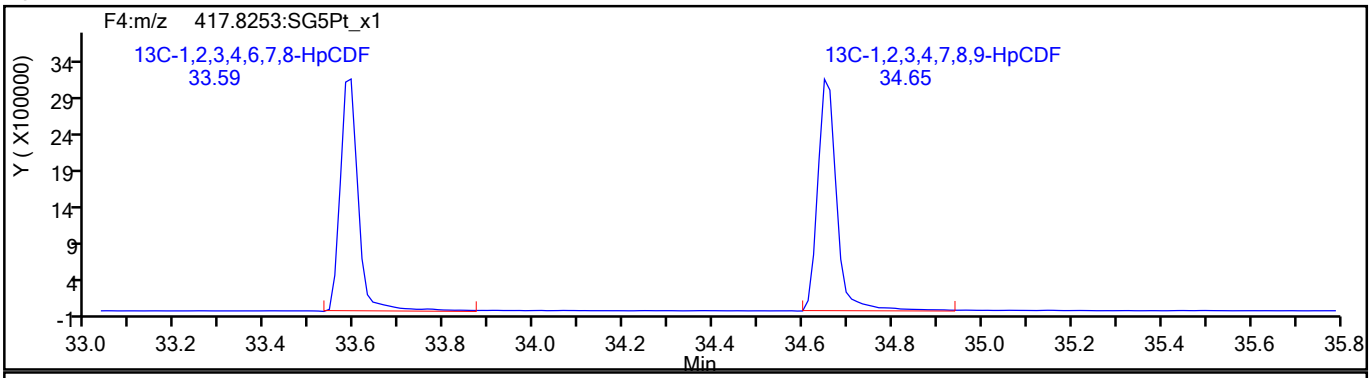

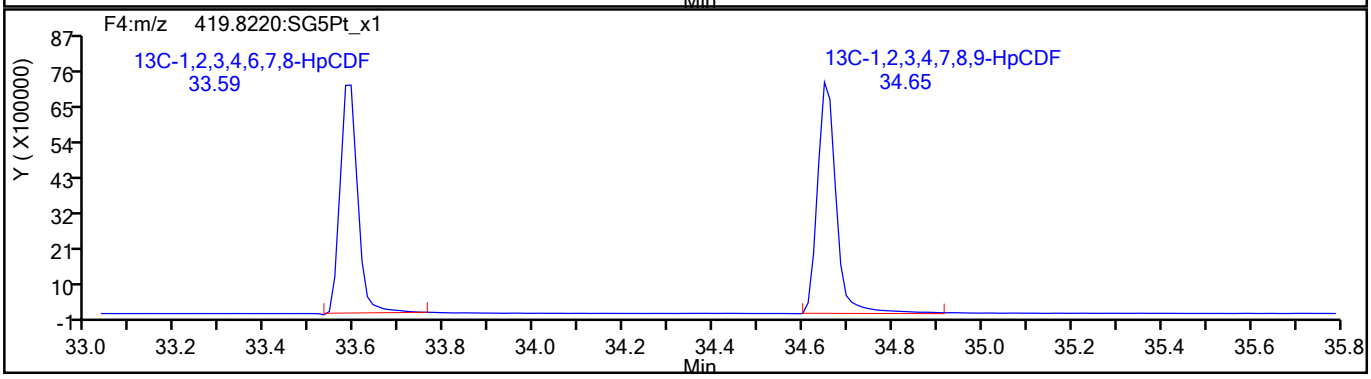

788621

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

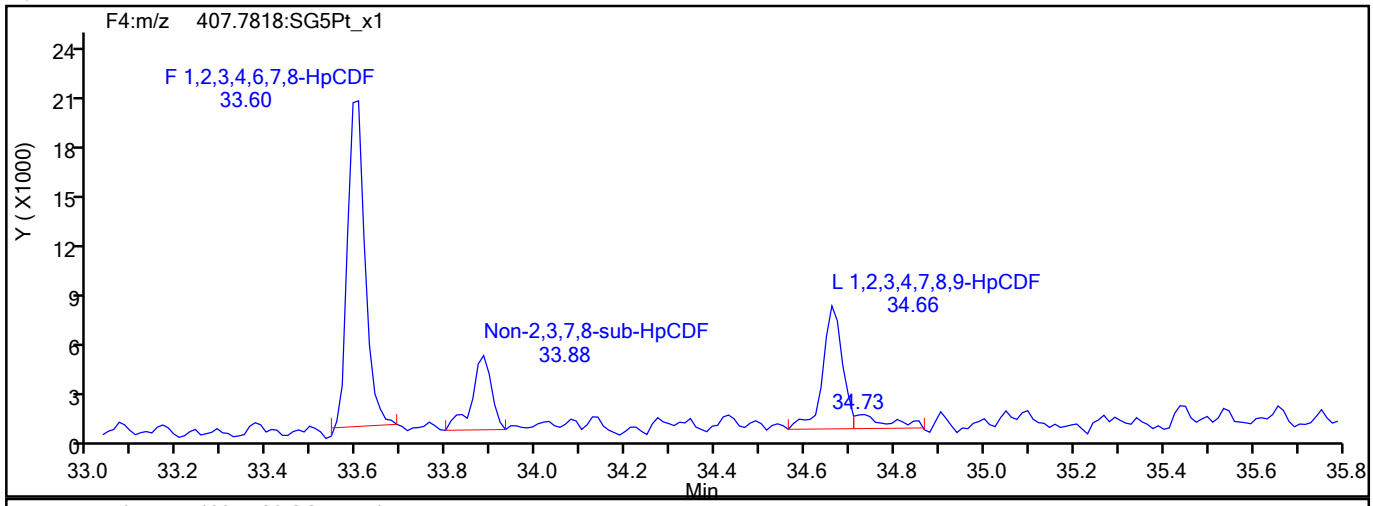

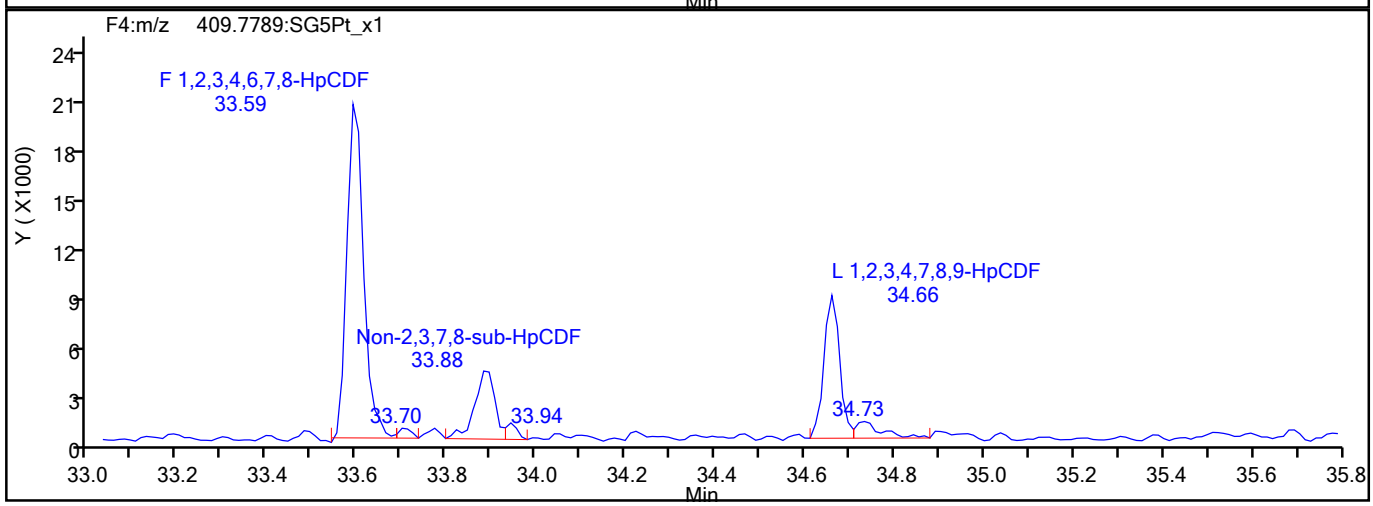

HpCDF Interference Mass

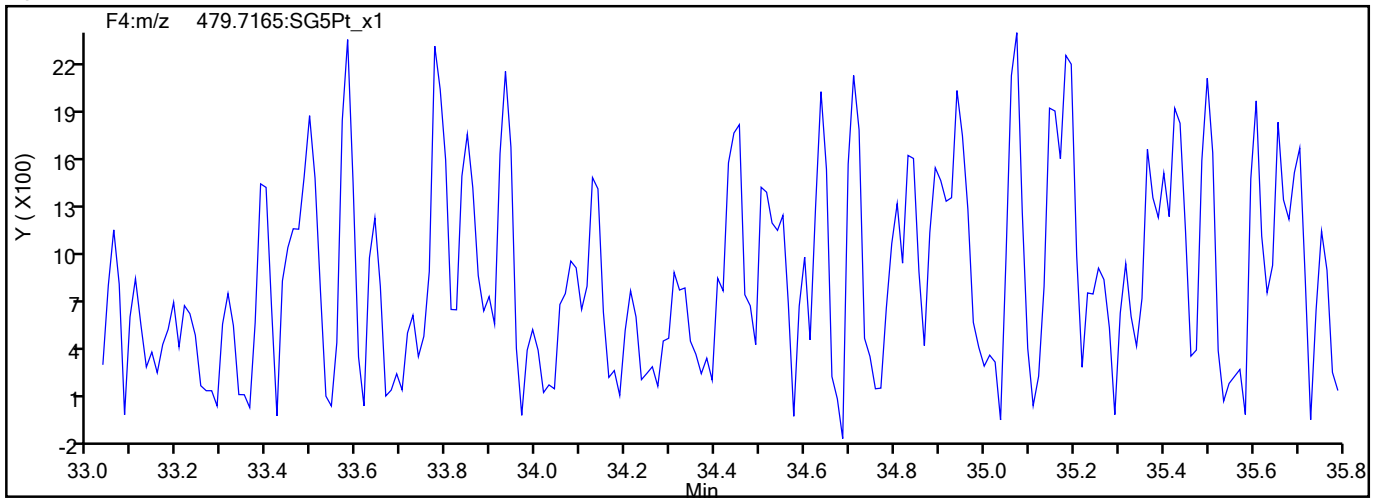

788622

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

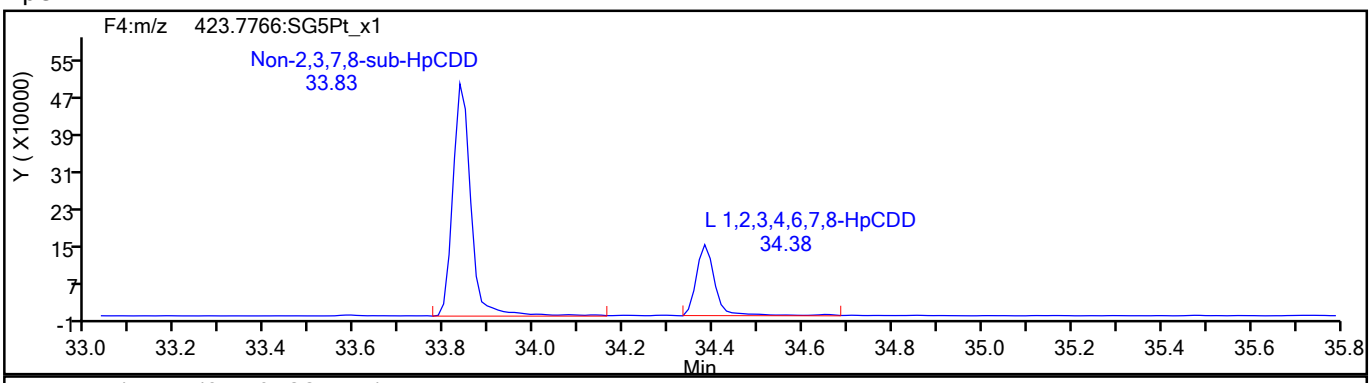

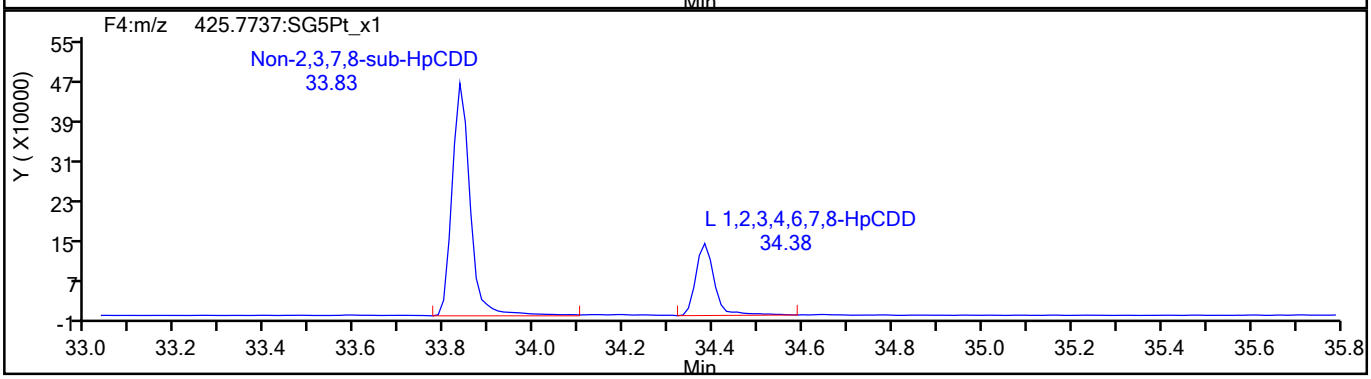

HpCDD Standards

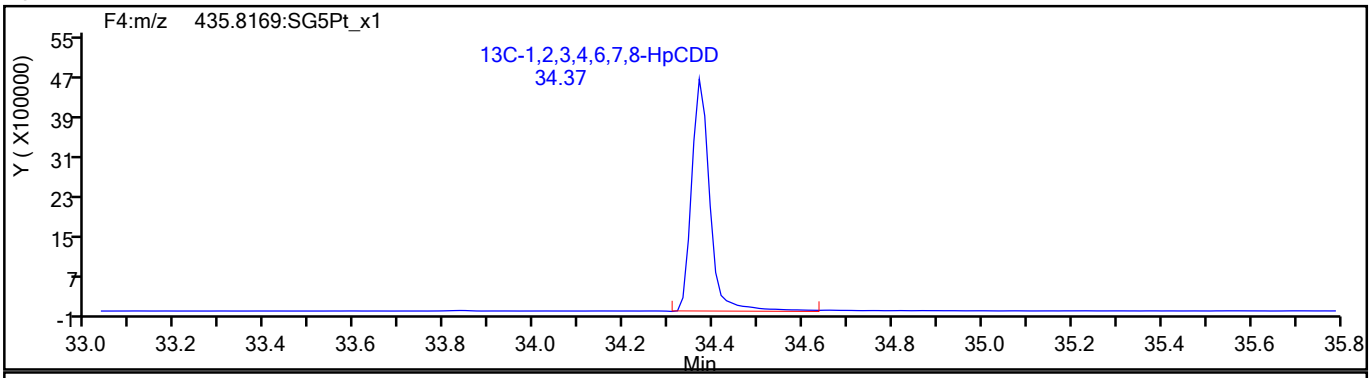

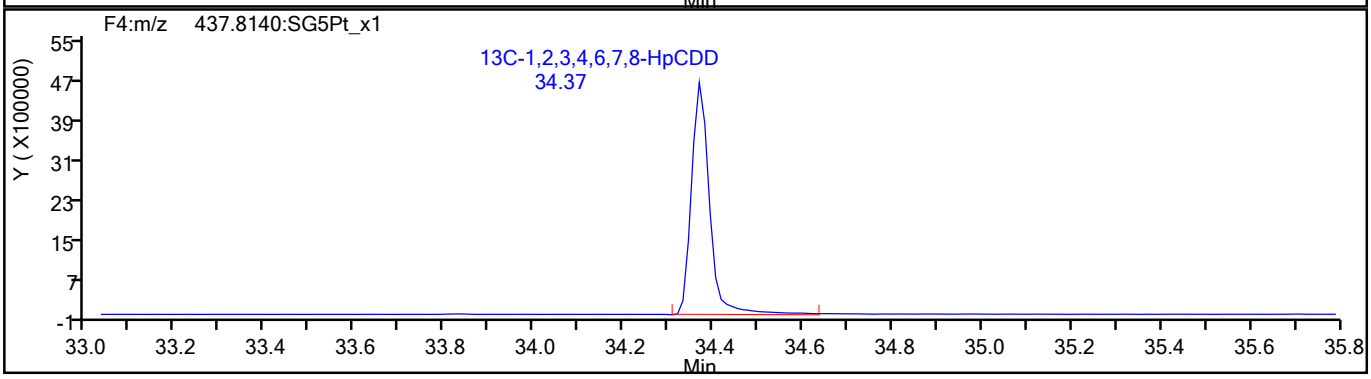

788623

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

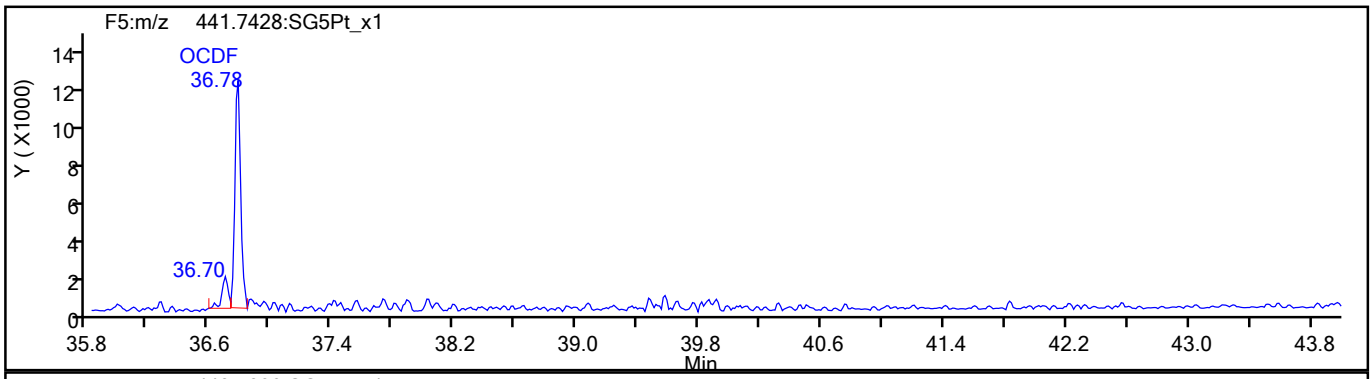

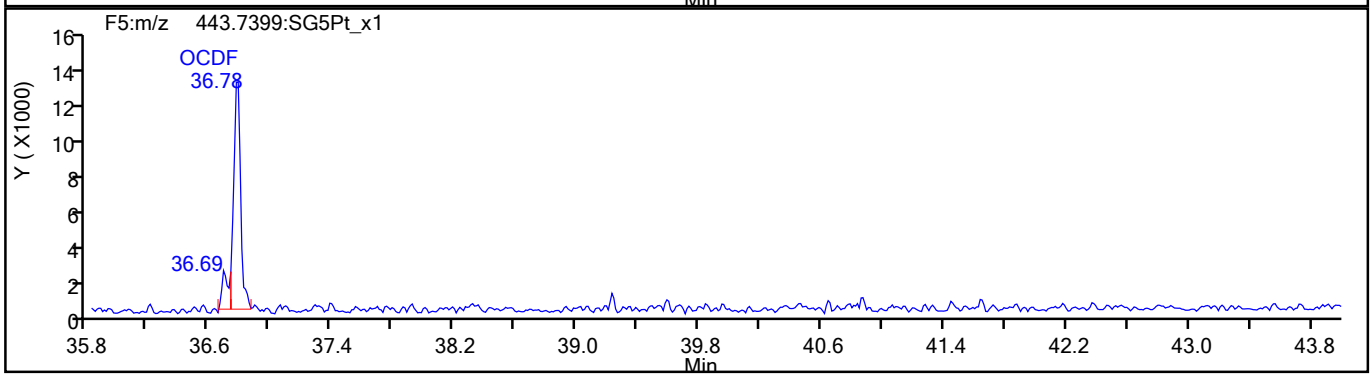

OCDF Standards

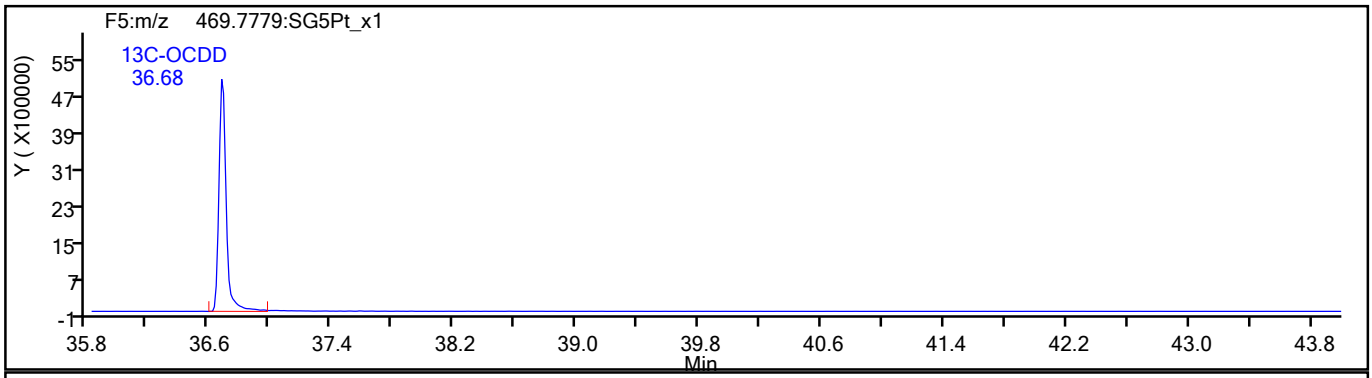

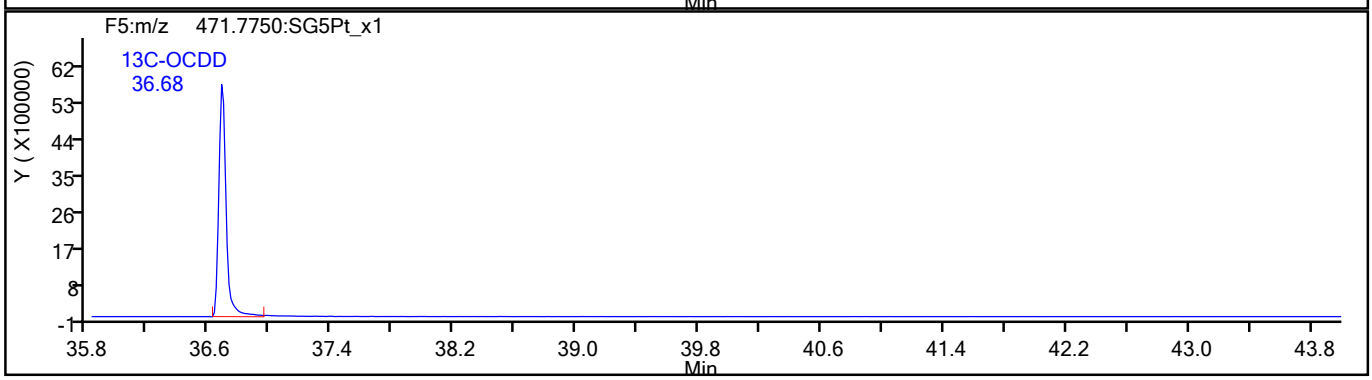

788624

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

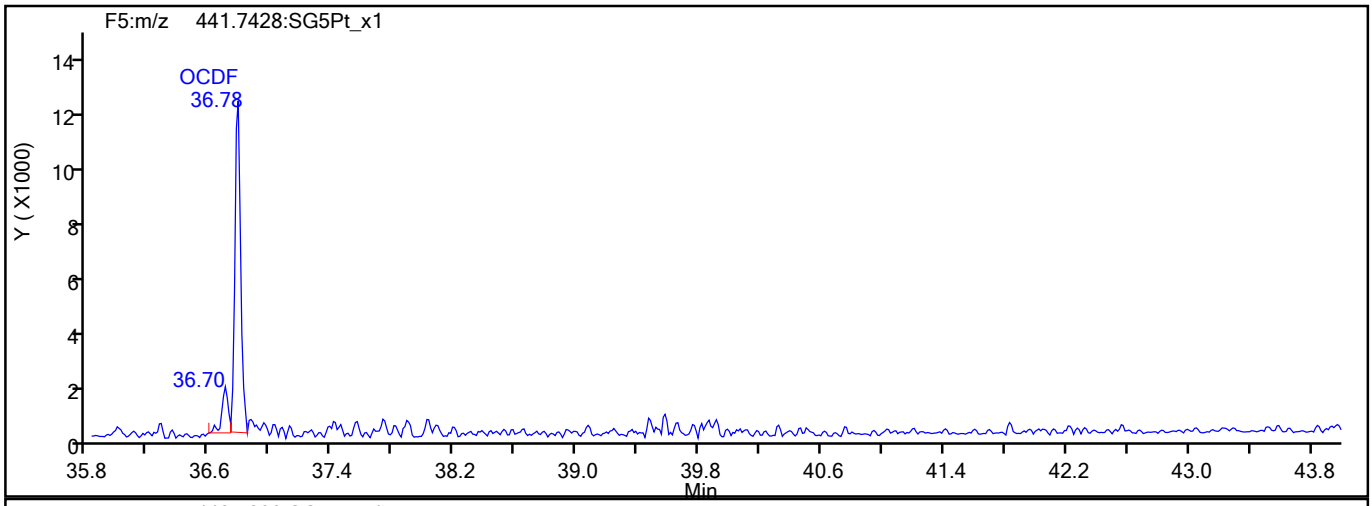

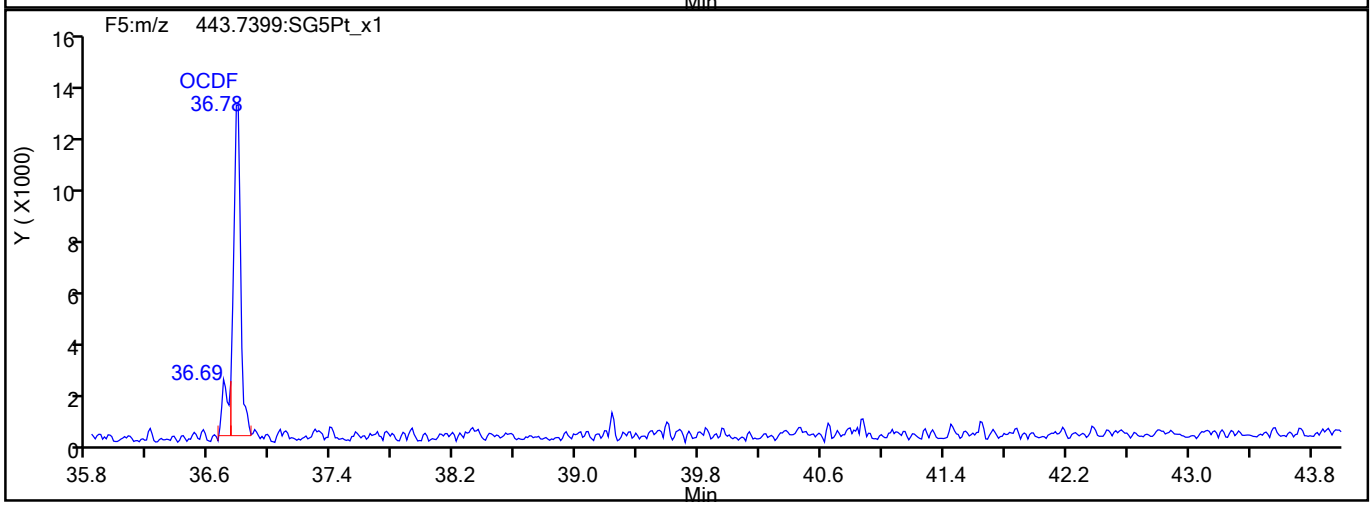

OCDF Interference Mass

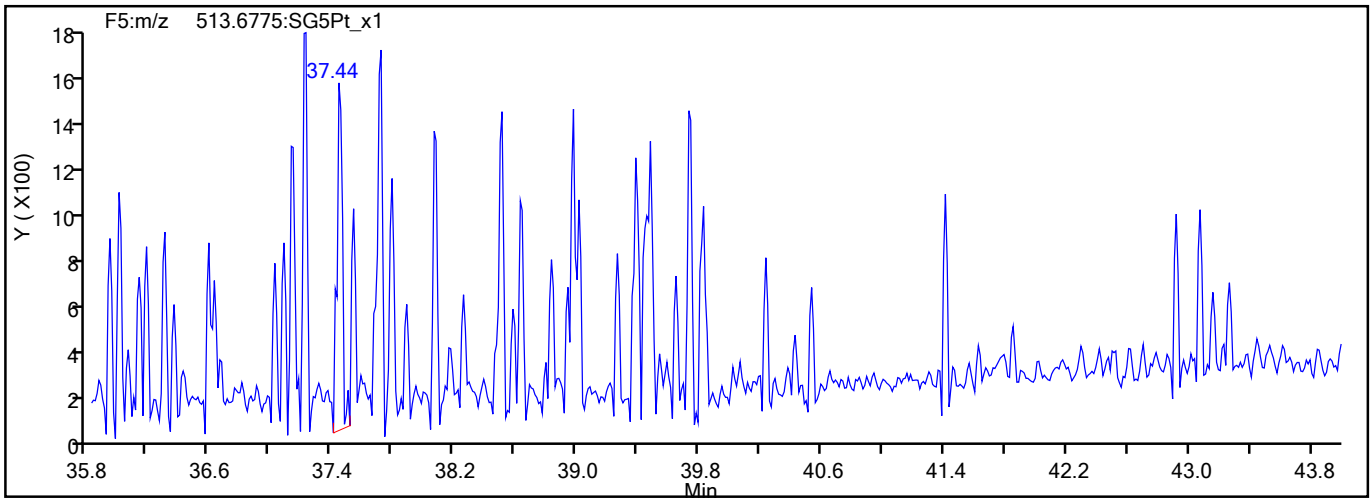

788625

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

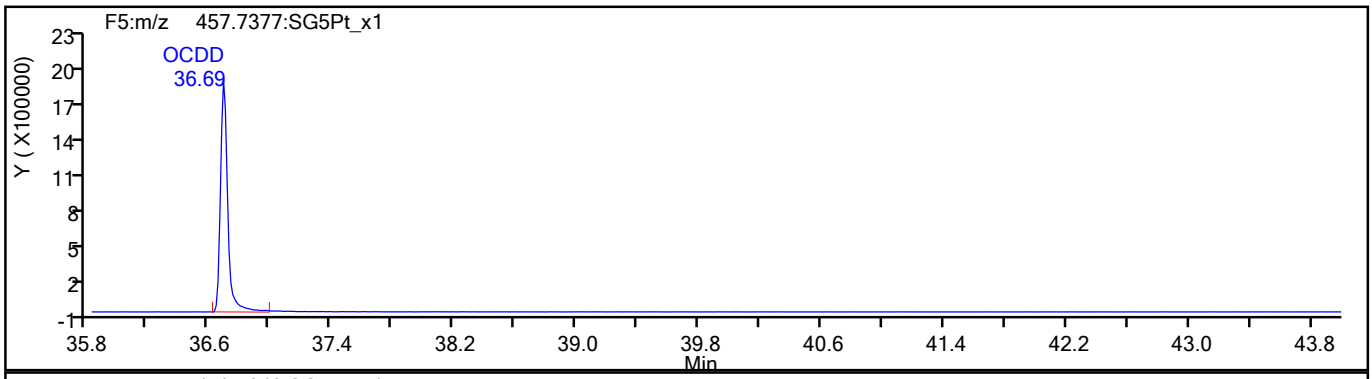

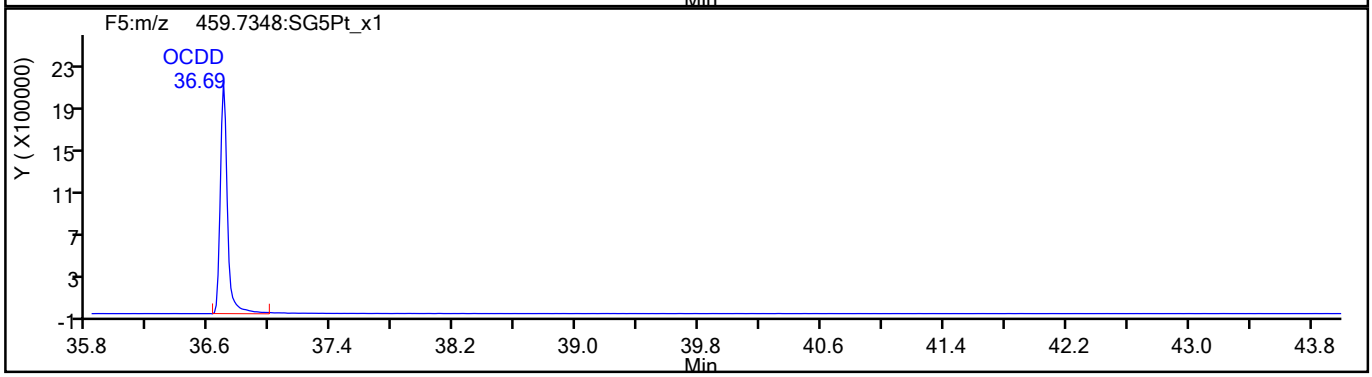

OCDD Standards

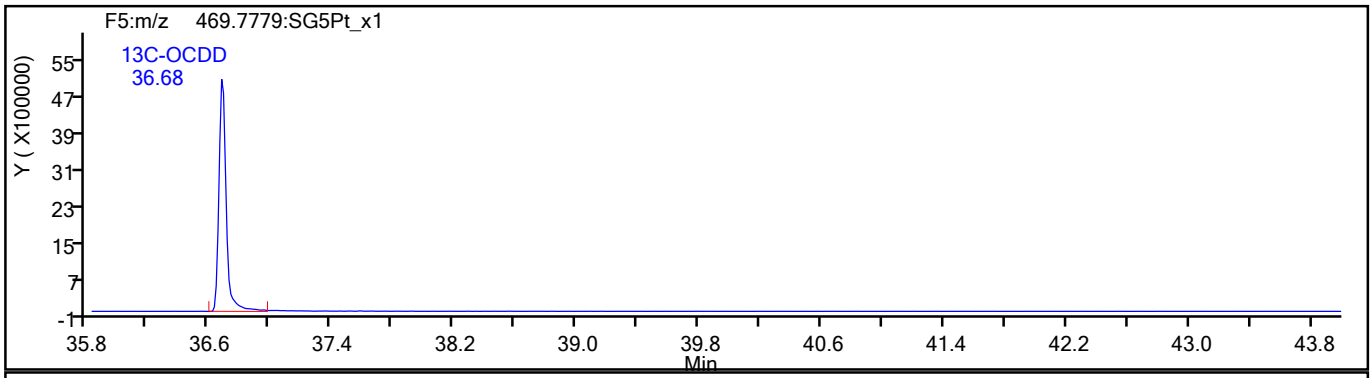

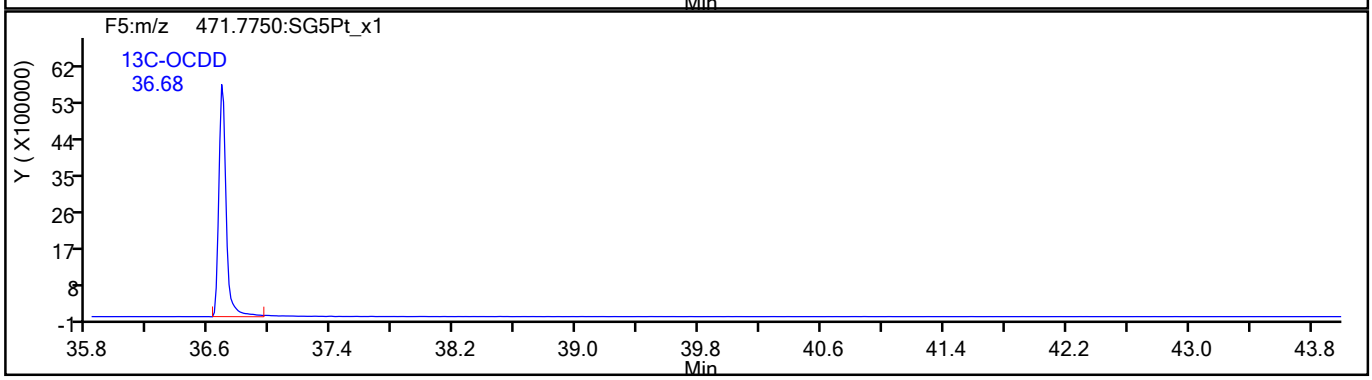

788626

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

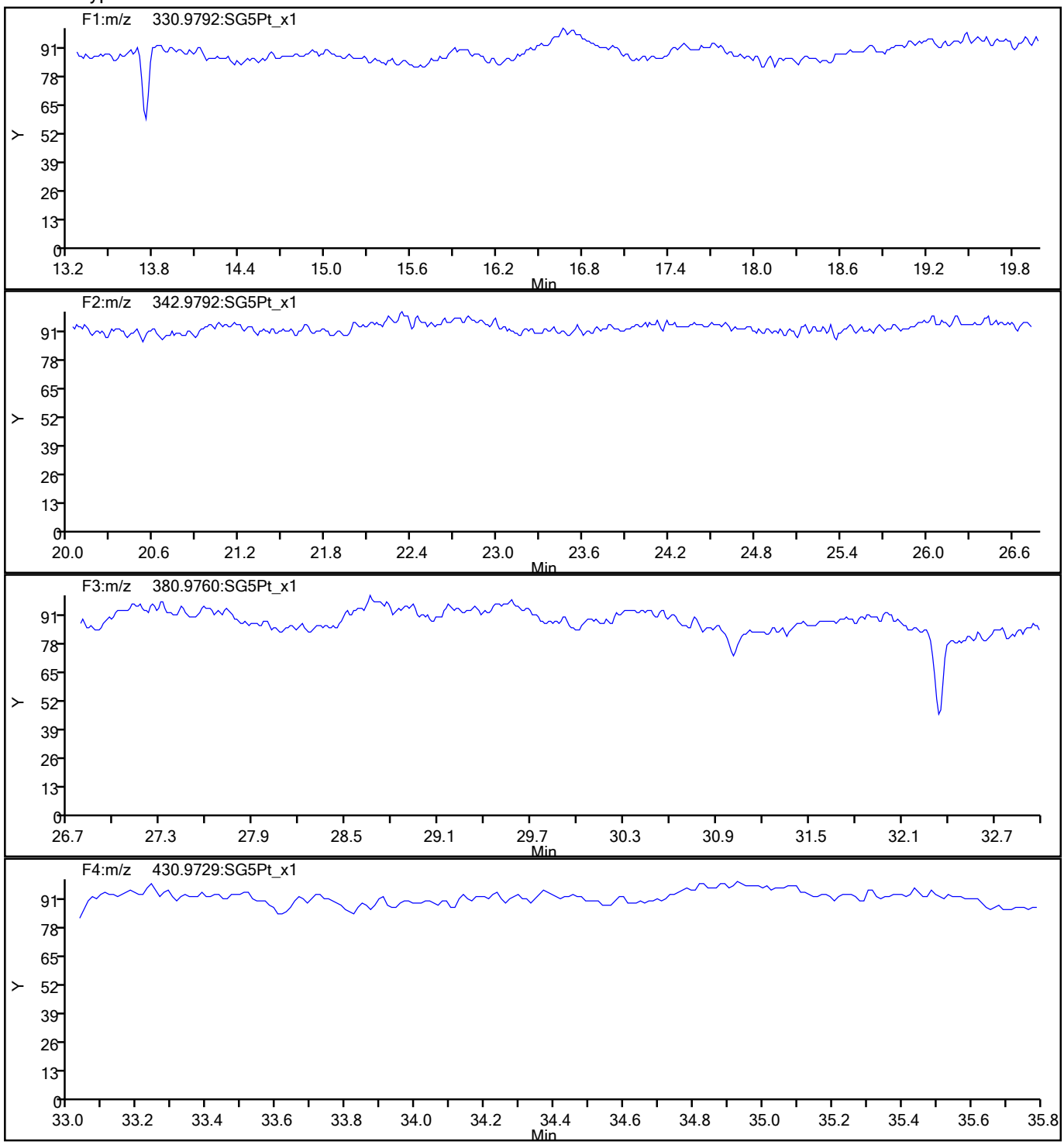

788627

Report Date: 01-Sep-2021 09:35:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_18.d		
Injection Date:	31-Aug-2021 00:25:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (14-16)		
Worklist#:	521465	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

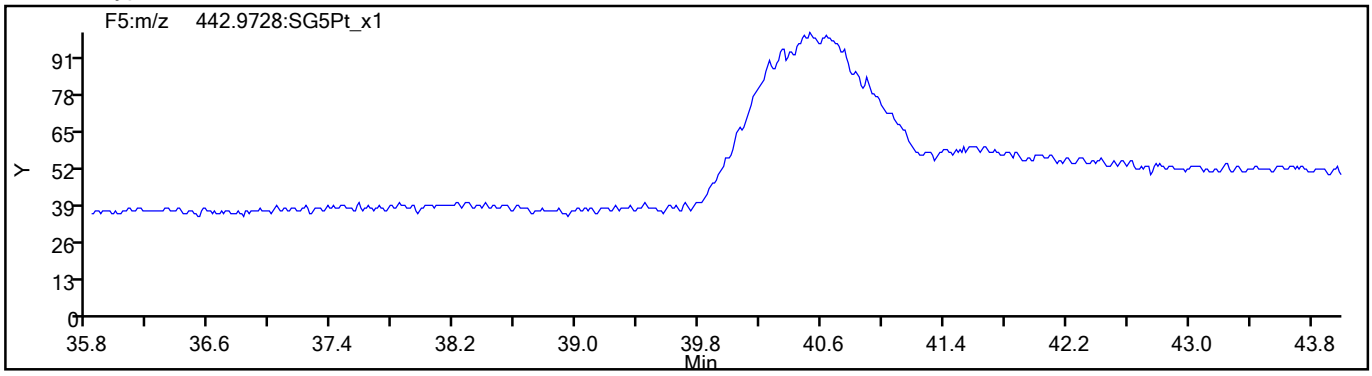

788628

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Client Sample ID: 11215702-072821-BN-DUP-10 Lab Sample ID: 320-76901-13

Matrix: Sediment Lab File ID: 19au21dfs1_14.d

Analysis Method: 1613B Date Collected: 07/28/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10.24(g) Date Analyzed: 08/19/2021 23:38

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 18.2 GPC Cleanup:(Y/N) N

Analysis Batch No.: 517891 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	6.3	q	1.2	0.14
40321-76-4	1,2,3,7,8-PeCDD	ND		6.0	0.13
57117-41-6	1,2,3,7,8-PeCDF	0.55	J q	6.0	0.055
57117-31-4	2,3,4,7,8-PeCDF	0.48	J q	6.0	0.059
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.0	0.14
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.0	0.15
19408-74-3	1,2,3,7,8,9-HxCDD	1.0	J	6.0	0.13
70648-26-9	1,2,3,4,7,8-HxCDF	1.2	J	6.0	0.043
57117-44-9	1,2,3,6,7,8-HxCDF	0.42	J	6.0	0.040
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.0	0.040
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.0	0.038
35822-46-9	1,2,3,4,6,7,8-HpCDD	11	B	6.0	0.14
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.34	J B q	6.0	0.052
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.0	0.054
3268-87-9	OCDD	240	B	12	0.29
39001-02-0	OCDF	0.61	J	12	0.12
41903-57-5	Total TCDD	6.3	q	1.2	0.14
30402-14-3	Total TCDF	49	B	1.2	0.23
36088-22-9	Total PeCDD	0.90	J	6.0	0.13
30402-15-4	Total PeCDF	1.0	J q	6.0	0.057
34465-46-8	Total HxCDD	11		6.0	0.14
55684-94-1	Total HxCDF	1.6	J	6.0	0.040
37871-00-4	Total HpCDD	44	B	6.0	0.14
38998-75-3	Total HpCDF	0.34	J B q	6.0	0.053

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Client Sample ID: 11215702-072821-BN-DUP-10 Lab Sample ID: 320-76901-13

Matrix: Sediment Lab File ID: 19au21dfs1_14.d

Analysis Method: 1613B Date Collected: 07/28/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10.24(g) Date Analyzed: 08/19/2021 23:38

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 18.2 GPC Cleanup:(Y/N) N

Analysis Batch No.: 517891 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	38		25-164
89059-46-1	13C-2,3,7,8-TCDF	36		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	37		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	36		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	39		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	42		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	39		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	45		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	42		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	37		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	38		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	42		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	41		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	45		26-138
114423-97-1	13C-OCDD	34		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	49		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d
Lims ID: 320-76901-A-13-A
Client ID: 11215702-072821-BN-DUP-10
Sample Type: Client
Inject. Date: 19-Aug-2021 23:38:00 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-13-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:28:13 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 17:02:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.360	1150912	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.396	555706	0.88	1.3459	35.9	35.9	0.1807	0.1807	35.88	
2,3,7,8-TCDF	20.422	83878	0.86	1.0802	14.0	14.0	0.0945	0.0945		
A Non-2,3,7,8-sub-TCDF	19.851	39834	0.79	1.0802	6.636	6.636	0.0945	6.636		a
S Total TCDF					20.6	20.6	0.0945	0.0945		
D 13C-2,3,7,8-TCDD	21.747	407900	0.76	0.9317	38.0	38.0	0.1201	0.1201	38.04	
2,3,7,8-TCDD	21.765	11644	0.77	1.0753	2.906	2.655	0.0601	0.0601		RQ
$ 37Cl4-2,3,7,8-TCDD	21.773	226116		1.0083	19.5	19.5	0.0300	0.0300	48.71	
A Non-2,3,7,8-sub-TCDD	20.684						0.0601	0.1822		RQU
S Total TCDD					2.906	2.655	0.0601	0.0601		RQ
D 13C-1,2,3,7,8-PeCDF	27.241	472208	1.52	1.1405	36.0	36.0	0.1019	0.1019	35.97	
1,2,3,7,8-PeCDF	27.241	1145	1.55	1.0543	0.2854	0.2300	0.0230	0.0230		RQ
D 13C-2,3,4,7,8-PeCDF	28.731	510979	1.58	1.1253	39.5	39.5	0.1032	0.1032	39.45	
2,3,4,7,8-PeCDF	28.765	1040	1.55	1.0079	0.2569	0.2019	0.0246	0.0246		RQM
A F1 PeCDFs	24.634						0.009790	0.0249		RQU
A Non-2,3,7,8-sub-PeCDF	28.173						0.0238	0.1399		RQU
S Total PeCDF					0.5423	0.4319	0.0238	0.0238		RQ
D 13C-1,2,3,7,8-PeCDD	29.539	305619	1.58	0.7165	37.1	37.1	0.3884	0.3884	37.06	
1,2,3,7,8-PeCDD	29.616						0.0545	0.0545		
A Non-2,3,7,8-sub-PeCDD	28.478	1204	1.69	1.0465	0.3765	0.3765	0.0545	0.3765		a
S Total PeCDD					0.3765	0.3765	0.0545	0.0545		
D 13C-1,2,3,4,7,8-HxCDF	34.913	464454	0.54	0.9648	45.2	45.2	0.1077	0.1077	45.18	
1,2,3,4,7,8-HxCDF	34.947	2690	1.20	1.1474	0.5048	0.5048	0.0178	0.0178		M
D 13C-1,2,3,6,7,8-HxCDF	35.073	482685	0.57	1.0708	42.3	42.3	0.0970	0.0970	42.31	
1,2,3,6,7,8-HxCDF	35.081	1024	1.25	1.2178	0.1742	0.1742	0.0166	0.0166		Ma
D 13C-2,3,4,6,7,8-HxCDF	35.881	427042	0.55	1.0413	38.5	38.5	0.0998	0.0998	38.49	
2,3,4,6,7,8-HxCDF	35.907						0.0161	0.0161		
D 13C-1,2,3,7,8,9-HxCDF	36.781	379498	0.51	0.9731	36.6	36.6	0.1068	0.1068	36.61	
1,2,3,7,8,9-HxCDF	36.808						0.0168	0.0168		
A Non-2,3,7,8-sub-HxCDF	35.009						0.0168	0.0216		U
S Total HxCDF					0.6790	0.6790	0.0168	0.0168		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.588	1065400	1.25	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.100	336547	1.32	0.7587	41.6	41.6	0.1511	0.1511	41.64	
1,2,3,4,7,8-HxCDD	36.117						0.0590	0.0590		RQU
D 13C-1,2,3,6,7,8-HxCDD	36.218	357734	1.18	0.8593	39.1	39.1	0.1334	0.1334	39.08	
1,2,3,6,7,8-HxCDD	36.117						0.0617	0.0617		RQU
1,2,3,7,8,9-HxCDD	36.588	1610	1.12	1.1094	0.4180	0.4180	0.0558	0.0558		
A Non-2,3,7,8-sub-HxCDD	35.375	14681	1.22	1.0545	4.010	4.010	0.0587	2.990		
S Total HxCDD					4.429	4.429	0.0588	0.0588		
D 13C-1,2,3,4,6,7,8-HpCDF	38.605	325086	0.46	0.7359	41.5	41.5	0.1546	0.1546	41.46	
1,2,3,4,6,7,8-HpCDF	38.622	662	1.04	1.4421	0.1662	0.1412	0.0217	0.0217		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	39.868	324965	0.47	0.6854	44.5	44.5	0.1660	0.1660	44.50	
1,2,3,4,7,8,9-HpCDF	39.868						0.0226	0.0226		RQU
A Non-2,3,7,8-sub-HpCDF	39.245						0.0221	0.0221		U
S Total HpCDF					0.1662	0.1412	0.0221	0.0221		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	39.556	302363	1.08	0.6745	42.1	42.1	0.0840	0.0840	42.07	
1,2,3,4,6,7,8-HpCDD	39.565	15037	1.08	1.0503	4.735	4.735	0.0602	0.0602		
A Non-2,3,7,8-sub-HpCDD	39.241	43458	1.10	1.0503	13.7	13.7	0.0602	13.7		
S Total HpCDD					18.4	18.4	0.0602	0.0602		
D 13C-OCDD	42.053	398648	0.89	0.5446	68.7	68.7	0.1120	0.1120	34.35	
OCDF	42.146	665	0.80	1.3168	0.2534	0.2534	0.0516	0.0516		M
OCDD	42.062	209537	0.89	1.0620	99.0	99.0	0.1215	0.1215		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 23-Aug-2021 09:28:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d
Lims ID: 320-76901-A-13-A
Client ID: 11215702-072821-BN-DUP-10
Sample Type: Client
Inject. Date: 19-Aug-2021 23:38:00 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-13-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:28:13 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 17:02:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.360	21.395	-2		511416	75352	51	127	1477		
333.9338	21.360	21.395	-2		639496	89936	23	57	3910	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.396	20.365	2	0.955	260643	35911	121	302	297		
317.9389	20.396	20.365	2	0.955	295063	42429	40	100	1061	0.88(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.422	20.408	1	1.001	38788	5157	13	32	397		
305.8987	20.447	20.408	2	1.003	45090	5888	19	47	310	0.86(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	19.724	19.851	-8	0.967	17628	2480	13	32	191		a
305.8987	19.715	19.851	-8	0.967	22206	3200	19	47	168	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.747	21.716	2	1.018	176181	23262	51	127	456		
333.9338	21.756	21.716	2	1.019	231719	30917	23	57	1344	0.76(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	21.765	21.733	2	1.001	6167	852	11	27	77		
	Empc Correction				5065	743	11	27	68		
321.8936	21.756	21.733	1	1.000	6579	966	3	7	322	0.94(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.773	21.799	-2	1.019	226116	29631	20	50	1482		
A Non-2,3,7,8-sub-TCDD											U
319.8965	17.736	20.684	-177	0.816	160	49	11	27	4		
	Empc Correction				77	20	11	27	2		
321.8936	17.736	20.684	-177	0.816	101	26	3	7	9	1.58(0.65-0.89)	

788633

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	27.241	27.251	-1	1.275	284762	42116	50	125	842		
353.8970	27.233	27.251	-1	1.275	187446	27877	27	67	1032	1.52(1.32-1.78)	
1,2,3,7,8-PeCDF											RQ
339.8597	27.241	27.276	-2	1.000	696	129	2	5	65		
341.8567	27.283	27.276	0	1.002	725	127	5	12	25	0.96(1.32-1.78)	
	Empc Correction				449	83	5	12	17		
13C-2,3,4,7,8-PeCDF											
351.9000	28.731	28.757	-2	1.345	313008	42039	50	125	841		
353.8970	28.748	28.757	-1	1.346	197971	26657	27	67	987	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											RQM
339.8597	28.765	28.791	-2	1.001	915	158	2	5	79		M
	Empc Correction				632	130	2	5	65		
341.8567	28.773	28.791	-1	1.001	408	84	5	12	17	2.24(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.347	24.634	-17	0.894	77	54	1	2	54		
341.8567	24.321	24.634	-19	0.893	198	61	2	5	31	0.39(1.32-1.78)	
	Empc Correction				49	34	2	5	17		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	25.835	28.173	-140	0.948	431	66	2	5	33		
341.8567	25.785	28.173	-143	0.947	399	89	5	12	18	1.08(1.32-1.78)	
	Empc Correction				278	42	5	12	8		
13C-1,2,3,7,8-PeCDD											
367.8949	29.539	29.574	-2	1.383	187125	23137	118	295	196		
369.8919	29.548	29.574	-2	1.383	118494	15465	66	165	234	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616						7	17			
357.8516	29.616						2	5			
A Non-2,3,7,8-sub-PeCDD											a
355.8546	26.888	28.478	-95	0.910	757	120	7	17	17		a
357.8516	26.854	28.478	-97	0.909	447	88	2	5	44	1.69(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.913	34.906	0	0.954	162784	28261	31	77	912		
385.8610	34.913	34.906	0	0.954	301670	54758	66	165	830	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											M
373.8208	34.947	34.922	1	1.001	1468	273	4	10	68		
375.8178	34.921	34.922	0	1.000	1222	282	3	7	94	1.20(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.073	35.066	0	0.959	174338	30364	31	77	979		
385.8610	35.073	35.066	0	0.959	308347	53873	66	165	816	0.57(0.43-0.59)	
1,2,3,6,7,8-HxCDF											Ma
373.8208	35.081	35.082	0	1.000	568	141	4	10	35		M
375.8178	35.098	35.082	1	1.001	456	69	3	7	23	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.881	35.890	-1	0.981	151360	29392	31	77	948		
385.8610	35.889	35.890	0	0.981	275682	57739	66	165	875	0.55(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	35.907						4	10			
375.8178	35.907						3	7			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.781	36.782	0	1.005	128578	27293	31	77	880		
385.8610	36.781	36.782	0	1.005	250920	54343	66	165	823	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791						4	10			
375.8178	36.791						3	7			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	34.273	35.009	-44	0.982	67	22	4	10	6		
375.8178	34.197	35.009	-49	0.980	47	18	3	7	6	1.43(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.588	36.581	0		591920	131143	63	157	2082		
403.8529	36.588	36.581	0		473480	101745	44	110	2312	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.100	36.092	0	0.987	191230	40484	63	157	643		
403.8529	36.108	36.092	1	0.987	145317	31439	44	110	715	1.32(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8158	36.109						10	25			
391.8127	36.109						8	20			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.218	36.210	0	0.990	193652	38558	63	157	612		
403.8529	36.218	36.210	0	0.990	164082	34840	44	110	792	1.18(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8158	36.227						10	25			
391.8127	36.227						8	20			
1,2,3,7,8,9-HxCDD											
389.8158	36.588	36.597	-1	1.014	850	139	10	25	14		
391.8127	36.605	36.597	0	1.014	760	129	8	20	16	1.12(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.206	35.375	-70	0.944	5888	913	10	25	91		
391.8127	34.206	35.375	-70	0.944	5057	839	8	20	105	1.16(1.05-1.43)	
389.8158	35.350	35.375	-1	0.976	2181	442	10	25	44		
391.8127	35.334	35.375	-2	0.976	1555	357	8	20	45	1.40(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.605	38.596	1	1.055	102486	25073	47	117	533		
419.8220	38.614	38.596	1	1.055	222600	54967	59	147	932	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7817	38.622	38.618	0	1.000	454	163	9	22	18		
	Empc Correction				337	123	9	22	14		
409.7788	38.614	38.618	0	1.000	325	119	1	2	119	1.40(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.868	39.850	1	1.090	103952	26919	47	117	573		
419.8220	39.859	39.850	1	1.089	221013	57679	59	147	978	0.47(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8,9-HpCDF											RQU
407.7817	39.872						9	22			
409.7788	39.872						1	2			
A Non-2,3,7,8-sub-HpCDF											U
407.7817	39.245						9	22			
409.7788	39.245						1	2			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.556	39.547	1	1.081	157144	41034	35	87	1172		
437.8140	39.556	39.547	1	1.081	145219	38103	18	45	2117	1.08(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.565	39.561	0	1.000	7814	2063	11	27	188		
425.7737	39.565	39.561	0	1.000	7223	1889	9	22	210	1.08(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.925	39.241	-19	0.984	22738	5603	11	27	509		
425.7737	38.925	39.241	-19	0.984	20720	5459	9	22	607	1.10(0.88-1.20)	
13C-OCDD											
469.7780	42.053	42.036	1	1.149	187892	41244	23	57	1793		
471.7750	42.053	42.036	1	1.149	210756	47071	34	85	1384	0.89(0.76-1.02)	
OCDF											M
441.7428	42.146	42.137	1	1.002	295	79	1	2	79		M
443.7399	42.163	42.137	2	1.003	370	92	11	27	8	0.80(0.76-1.02)	M
OCDD											
457.7377	42.062	42.053	1	1.000	98922	22205	13	32	1708		
459.7348	42.062	42.053	1	1.000	110615	23893	10	25	2389	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 23-Aug-2021 09:28:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Lims ID:	320-76901-A-13-A		
Client ID:	11215702-072821-BN-DUP-10		
Inject. Date:	19-Aug-2021 23:38:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	13

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	555706	78340

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	555706	78340

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.724	17628	2480	22206	3200	6.64	0.79	a
Signal Totals:							
	17628	2480	22206	3200			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	39834	5680				0.79	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.636 = (39834 * 100.000) / (555706 * 1.080)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 23-Aug-2021 09:28:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Lims ID:	320-76901-A-13-A		
Client ID:	11215702-072821-BN-DUP-10		
Inject. Date:	19-Aug-2021 23:38:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	13

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	407900	54179

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	407900	54179

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.736	160	49	101	26	0.0595	1.58	RQ
17.736	77	20	101	26	0.0406		Empc Correction
18.666	262	59	240	34	0.1144	1.09	RQ
18.666	184	26	240	34	0.0967		Empc Correction
19.647	339	82	127	74	0.1062	2.67	RQ
19.647	97	56	127	74	0.0511		Empc Correction
22.410	348	102	728	171	0.2453	0.48	RQ
22.410	348	102	451	132	0.1822		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:28:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Lims ID:	320-76901-A-13-A		
Client ID:	11215702-072821-BN-DUP-10		
Inject. Date:	19-Aug-2021 23:38:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	13

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	472208	69993
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	510979	68696

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	491593	69344

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.347	77	54	198	61	0.0543	0.39	RQ
24.347	77	54	49	34	0.0249		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:28:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Lims ID:	320-76901-A-13-A		
Client ID:	11215702-072821-BN-DUP-10		
Inject. Date:	19-Aug-2021 23:38:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	13

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	472208	69993
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	510979	68696

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	491593	69344

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.835	431	66	399	89	0.1638	1.08	RQ
25.835	431	66	278	42	0.1399		Empc Correction
27.460	43	16	59	27	0.0201	0.73	RQ
27.460	43	16	27	10	0.0138		Empc Correction
29.144	118	37	184	51	0.0596	0.64	RQ
29.144	118	37	76	23	0.0383		Empc Correction
29.405	29	18	71	34	0.0197	0.41	RQ
29.405	29	18	18	11	0.009273		Empc Correction
30.719	44	14	116	56	0.0316	0.38	RQ
30.719	44	14	28	9	0.0142		Empc Correction
30.895	33	19	60	35	0.0183	0.55	RQ
30.895	33	19	21	12	0.0107		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:28:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Lims ID:	320-76901-A-13-A		
Client ID:	11215702-072821-BN-DUP-10		
Inject. Date:	19-Aug-2021 23:38:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	13

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	305619	38602

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	305619	38602

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.888	757	120	447	88	0.3765	1.69	a
Signal Totals:							
	757	120	447	88			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1204	208				1.69	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3765 = (1204 * 100.000) / (305619 * 1.046)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 23-Aug-2021 09:28:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Lims ID:	320-76901-A-13-A		
Client ID:	11215702-072821-BN-DUP-10		
Inject. Date:	19-Aug-2021 23:38:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	13

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	464454	83019
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	482685	84237
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	427042	87131
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	379498	81636

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	438419	84005

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
34.273	67	22	47	18	0.0216	1.43	

Compound is Marked ND

Report Date: 23-Aug-2021 09:28:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Lims ID:	320-76901-A-13-A		
Client ID:	11215702-072821-BN-DUP-10		
Inject. Date:	19-Aug-2021 23:38:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	13

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	336547	71923
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	357734	73398
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	347140	72660

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.206	5888	913	5057	839	2.99	1.16	
35.350	2181	442	1555	357	1.02	1.40	
Signal Totals:							
	8069	1355	6612	1196			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	14681	2551				1.22	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.010 = (14681 * 100.000) / (347140 * 1.055)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Lims ID:	320-76901-A-13-A		
Client ID:	11215702-072821-BN-DUP-10		
Inject. Date:	19-Aug-2021 23:38:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	13

Non-2,3,7,8-sub-HpCDF, RT: 39.245

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	325086	80040
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	324965	84598

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	325025	82319

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 23-Aug-2021 09:28:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Lims ID:	320-76901-A-13-A		
Client ID:	11215702-072821-BN-DUP-10		
Inject. Date:	19-Aug-2021 23:38:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	13

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	302363	79137

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	302363	79137

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.925	22738	5603	20720	5459	13.7	1.10	
Signal Totals:							
	22738	5603	20720	5459			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43458	11062				1.10	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.684 = (43458 * 100.000) / (302363 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d				
Injection Date:	19-Aug-2021 23:38:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-13-A	Lab Sample ID:	320-76901-13		
Client ID:	11215702-072821-BN-DUP-10				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 28.76
Area: 443
Amount: 0.165244
Amount Units: pg/ul

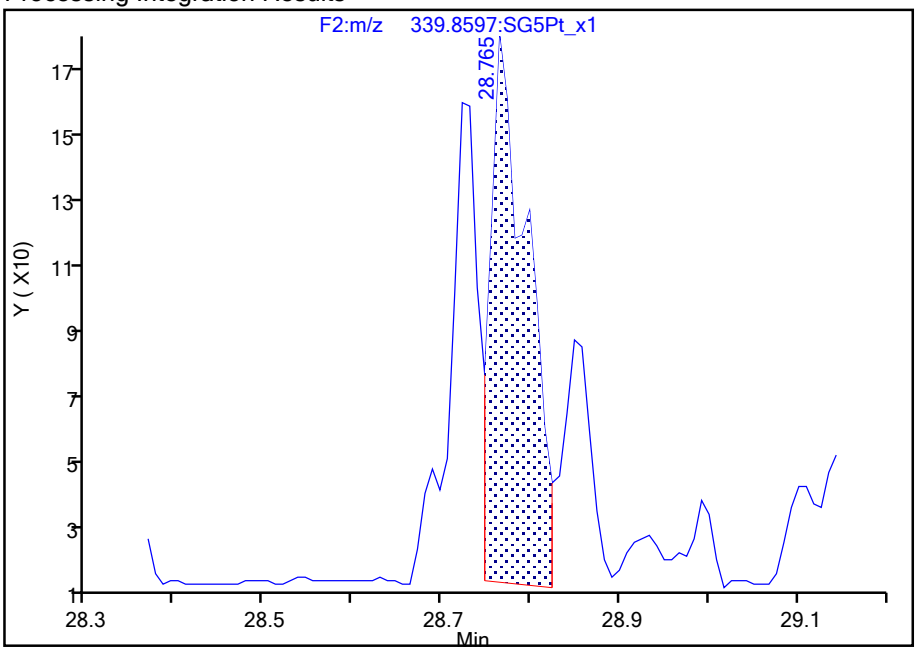

Manual Integration Results

RT: 28.76
Area: 915
Amount: 0.256896
Amount Units: pg/ul

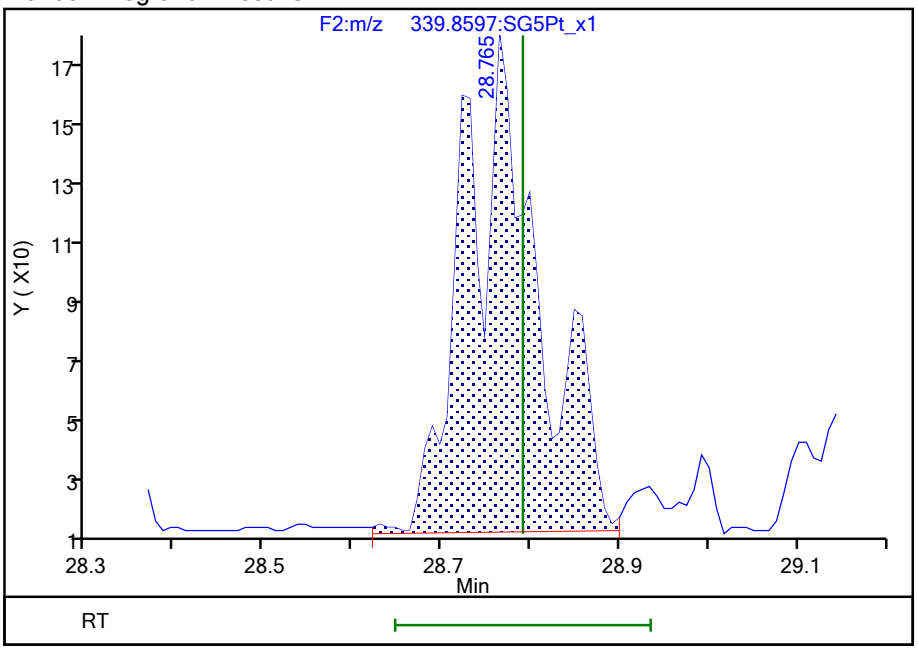

Reviewer: dadunj, 23-Aug-2021 09:25:43

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d				
Injection Date:	19-Aug-2021 23:38:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-13-A	Lab Sample ID:	320-76901-13		
Client ID:	11215702-072821-BN-DUP-10				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 2

Processing Integration Results

RT: 34.92
Area: 1109
Amount: 0.483575
Amount Units: pg/ul

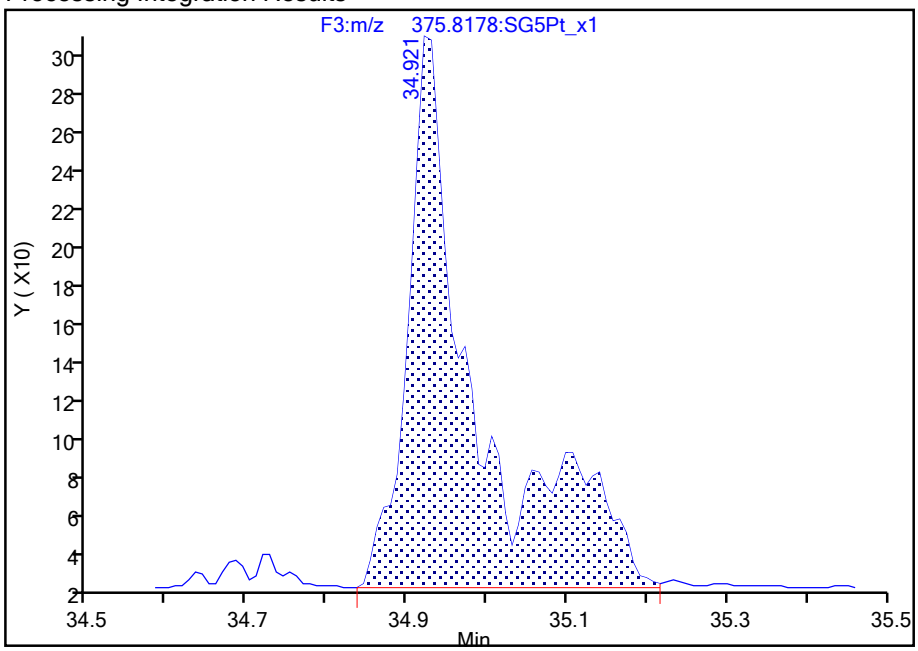

Manual Integration Results

RT: 34.92
Area: 1222
Amount: 0.504780
Amount Units: pg/ul

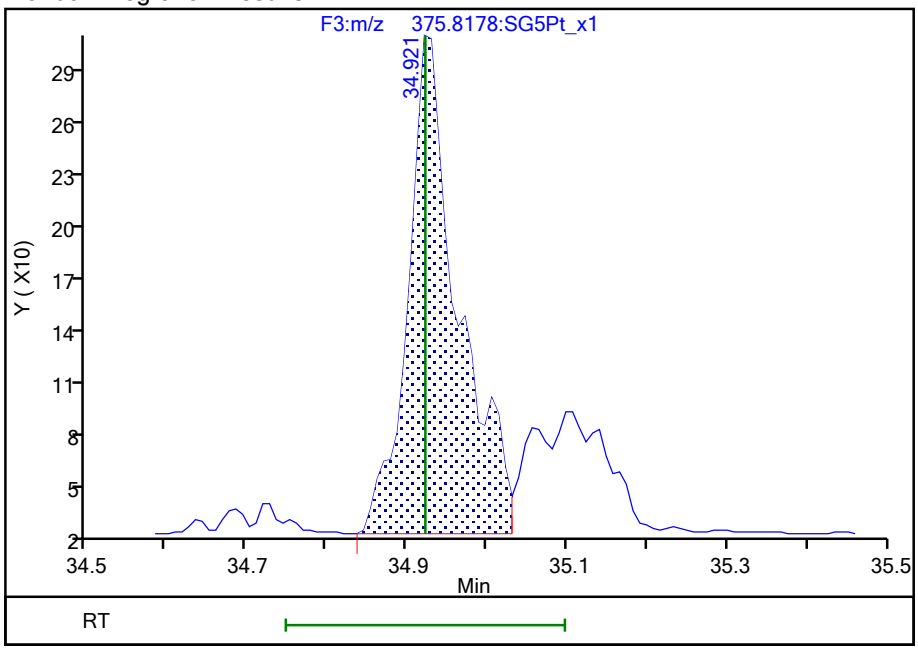

Reviewer: dadunj, 23-Aug-2021 09:26:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d				
Injection Date:	19-Aug-2021 23:38:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-13-A	Lab Sample ID:	320-76901-13		
Client ID:	11215702-072821-BN-DUP-10				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 34.92
Area: 1679
Amount: 0.535376
Amount Units: pg/ul

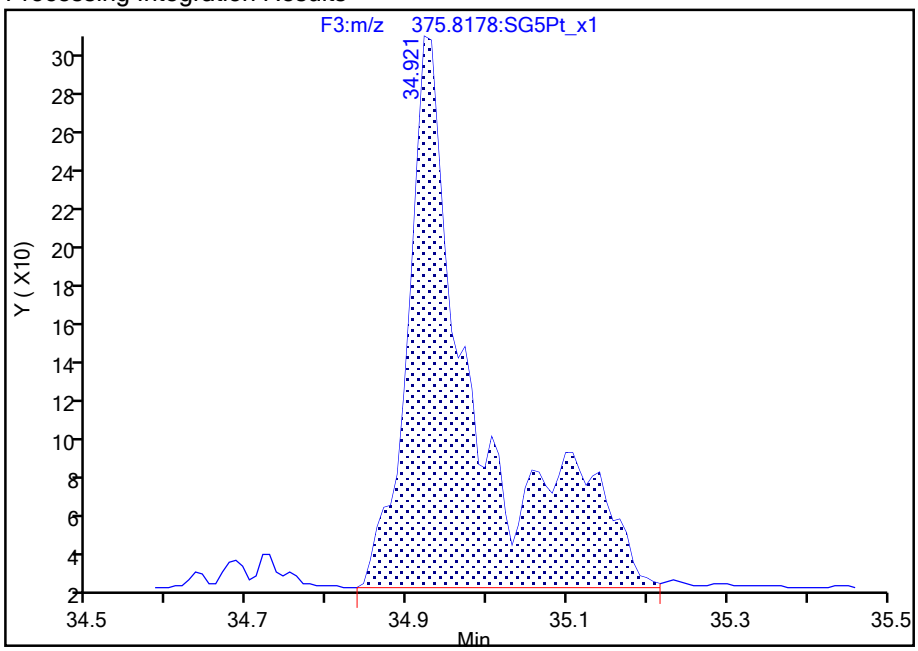

Manual Integration Results

RT: 35.10
Area: 456
Amount: 0.174206
Amount Units: pg/ul

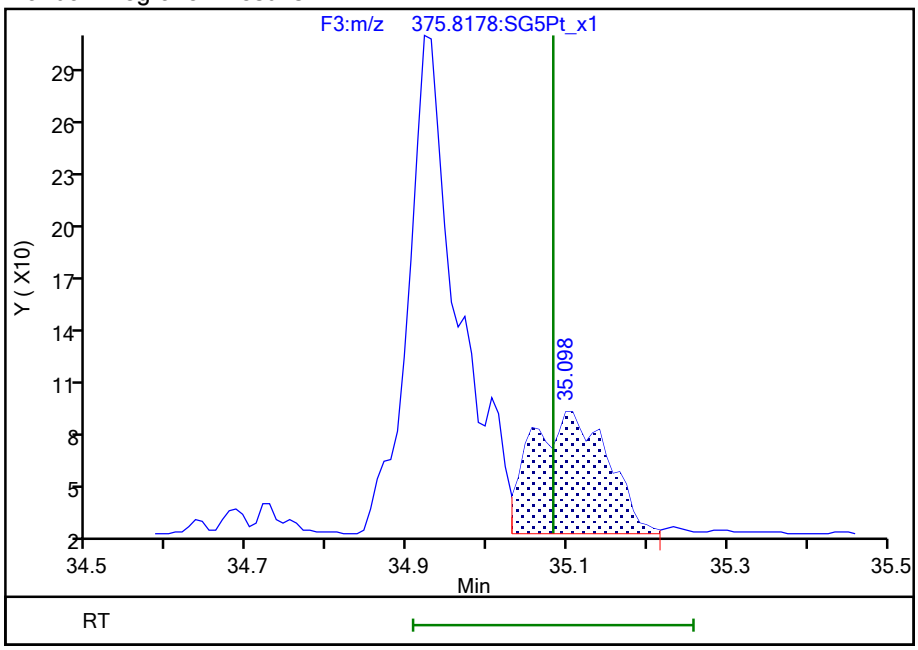

Reviewer: dadunj, 23-Aug-2021 09:26:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788648

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d				
Injection Date:	19-Aug-2021 23:38:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-13-A	Lab Sample ID:	320-76901-13		
Client ID:	11215702-072821-BN-DUP-10				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3(33.08 :38.50)		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 34.95
Area: 1468
Amount: 0.535376
Amount Units: pg/ul

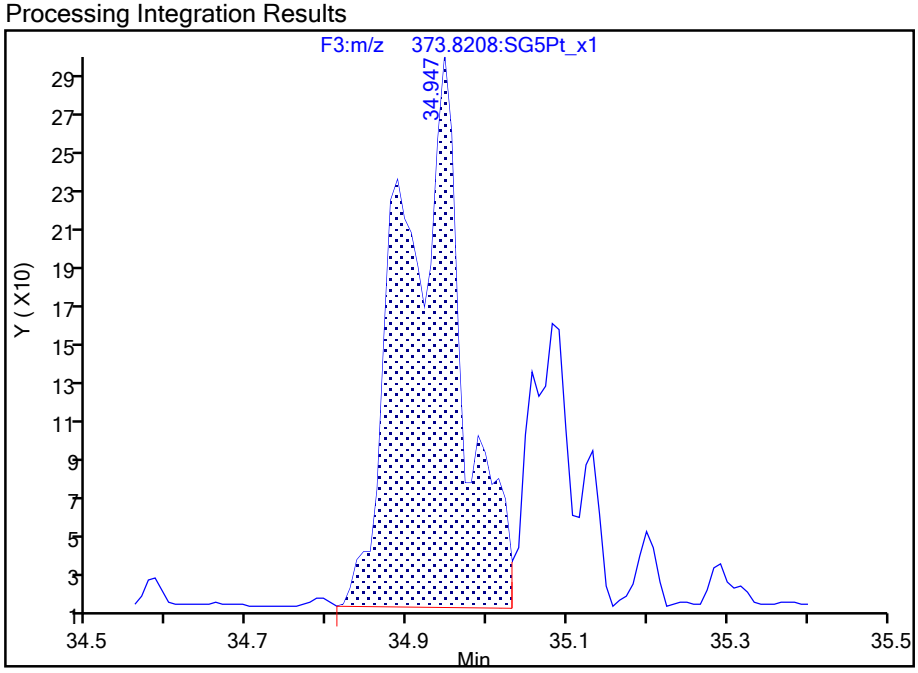

Manual Integration Results

RT: 35.08
Area: 568
Amount: 0.174206
Amount Units: pg/ul

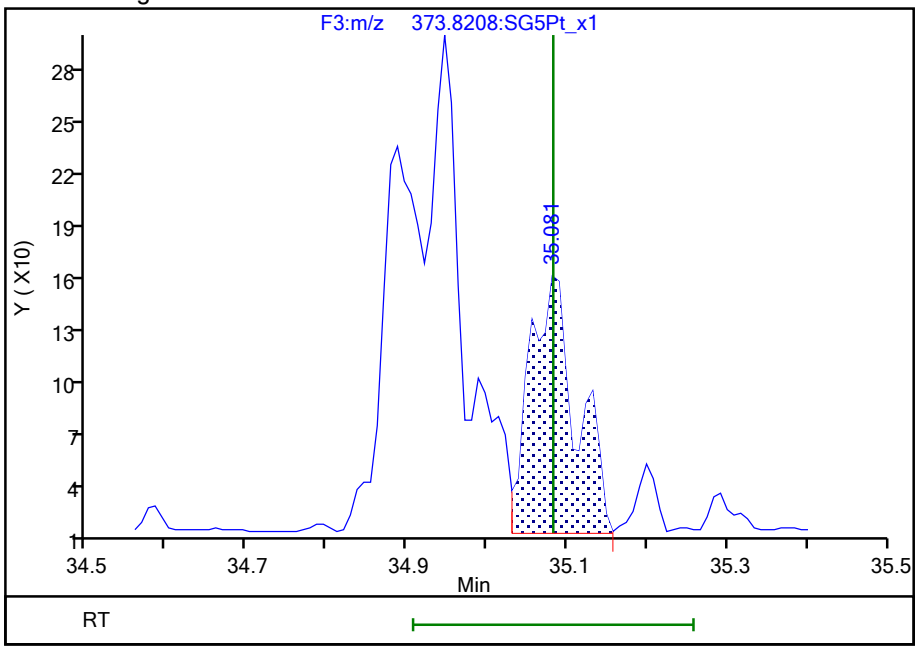

Reviewer: dadunj, 23-Aug-2021 09:26:20

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

788649

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d				
Injection Date:	19-Aug-2021 23:38:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-13-A	Lab Sample ID:	320-76901-13		
Client ID:	11215702-072821-BN-DUP-10				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.61
Area: 268
Amount: 0.154011
Amount Units: pg/ul

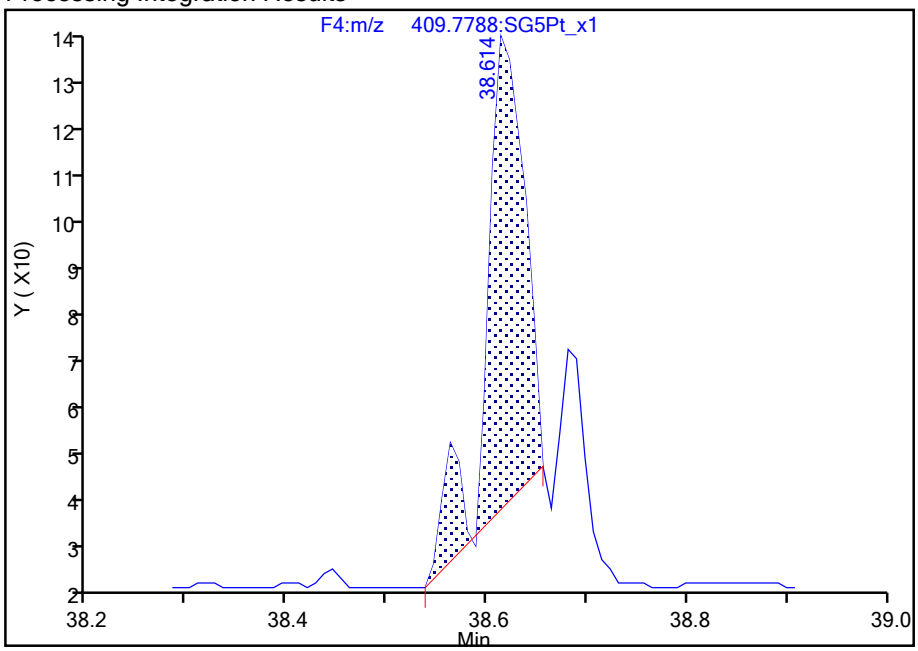

Manual Integration Results

RT: 38.61
Area: 325
Amount: 0.166170
Amount Units: pg/ul

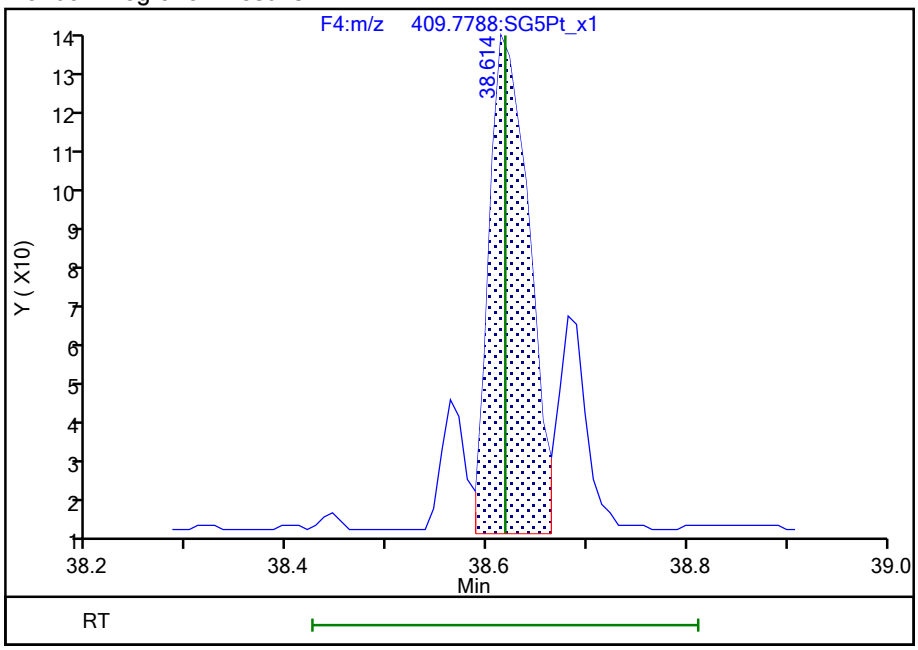

Reviewer: dadunj, 23-Aug-2021 09:27:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788650

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d				
Injection Date:	19-Aug-2021 23:38:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-13-A	Lab Sample ID:	320-76901-13		
Client ID:	11215702-072821-BN-DUP-10				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 42.16
Area: 692
Amount: 0.412239
Amount Units: pg/ul

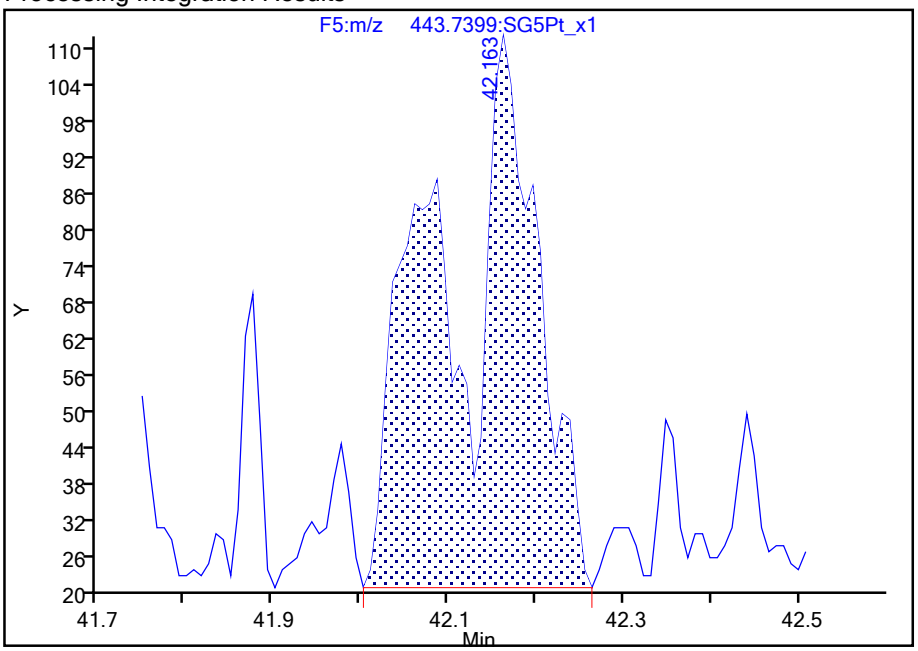

Manual Integration Results

RT: 42.16
Area: 370
Amount: 0.253363
Amount Units: pg/ul

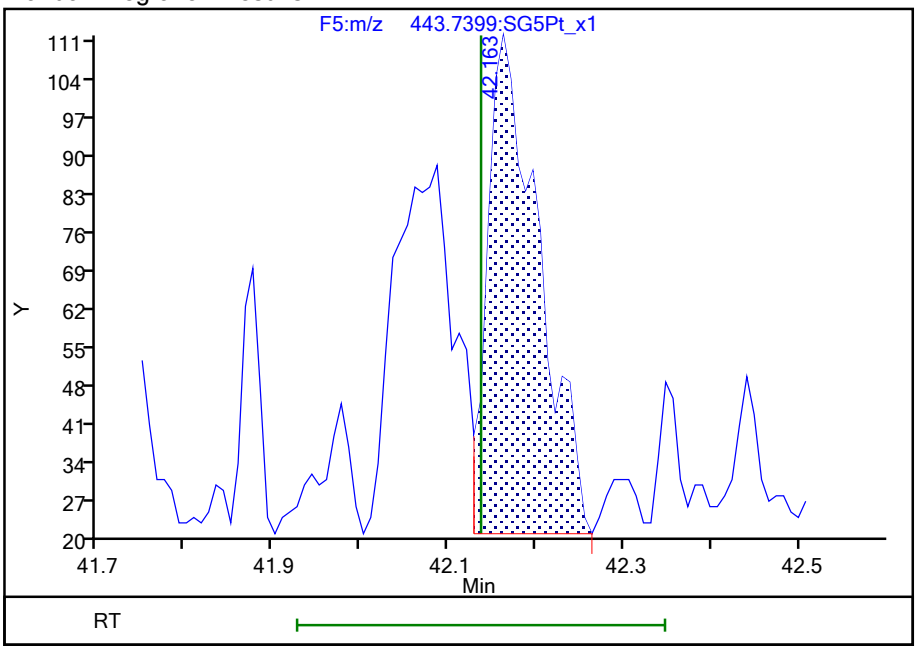

Reviewer: dadunj, 23-Aug-2021 09:27:17

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d				
Injection Date:	19-Aug-2021 23:38:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-13-A	Lab Sample ID:	320-76901-13		
Client ID:	11215702-072821-BN-DUP-10				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 42.15
Area: 390
Amount: 0.412239
Amount Units: pg/ul

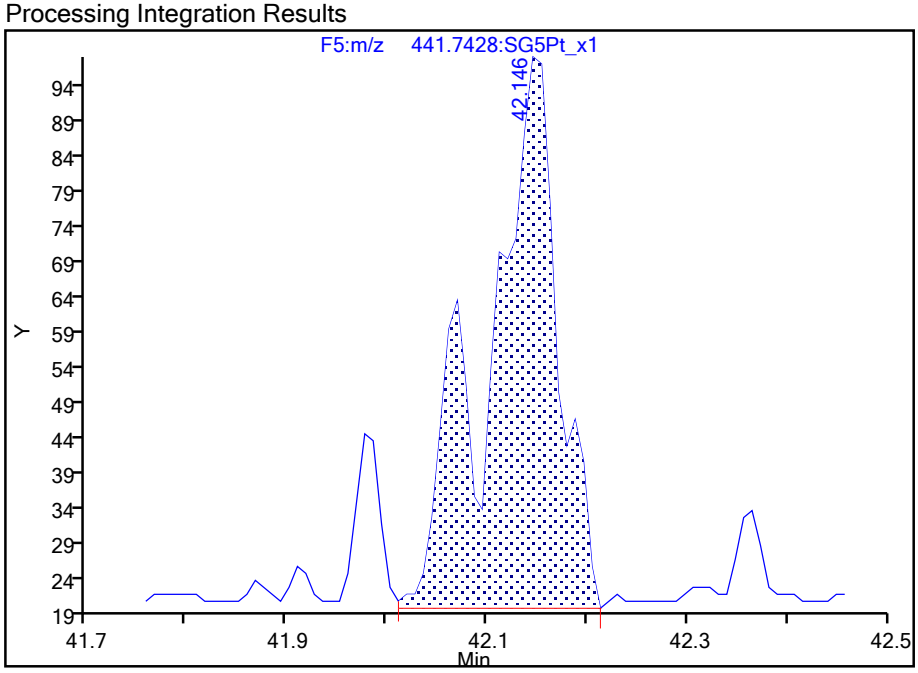

Manual Integration Results

RT: 42.15
Area: 295
Amount: 0.253363
Amount Units: pg/ul

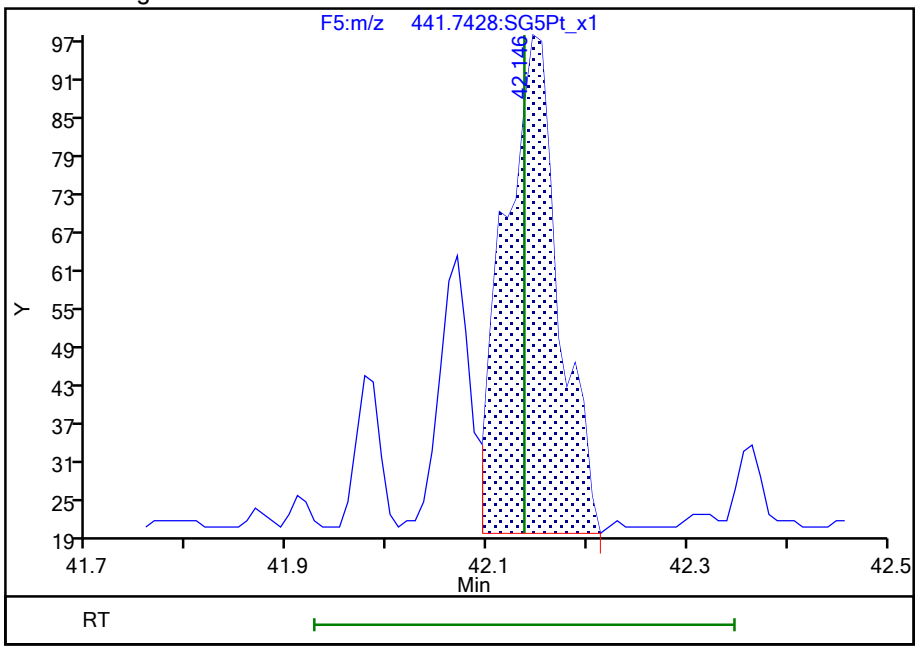

Reviewer: dadunj, 23-Aug-2021 09:27:20

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

788652

Report Date: 23-Aug-2021 09:28:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Injection Date:	19-Aug-2021 23:38:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

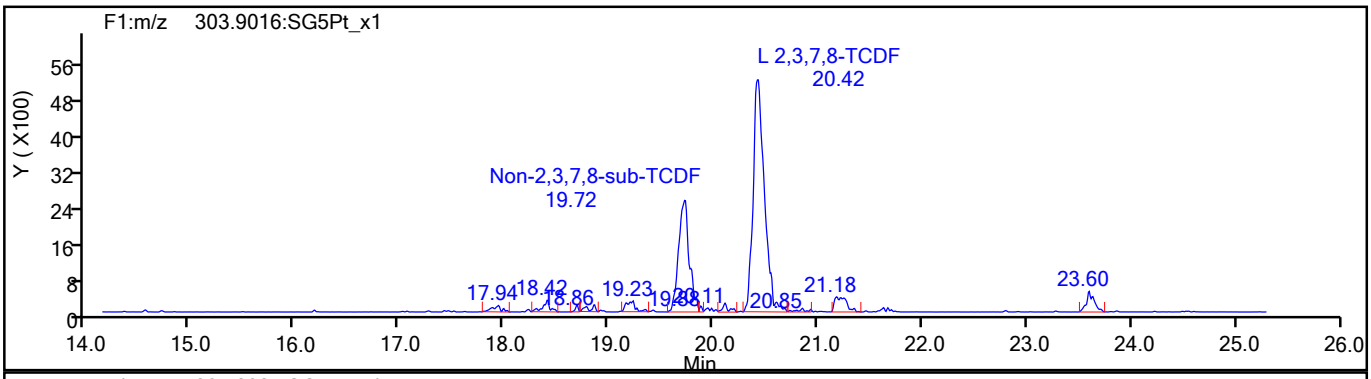

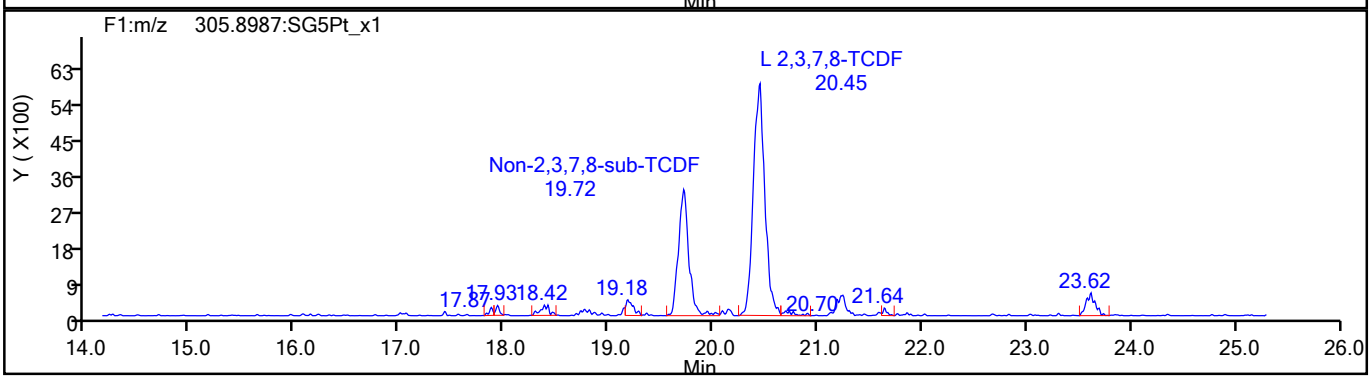

TCDF Standards

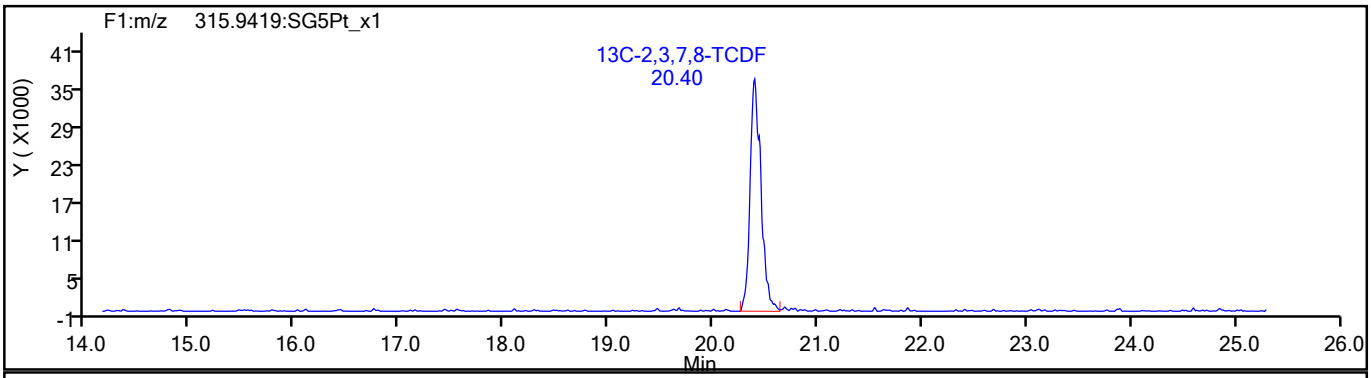

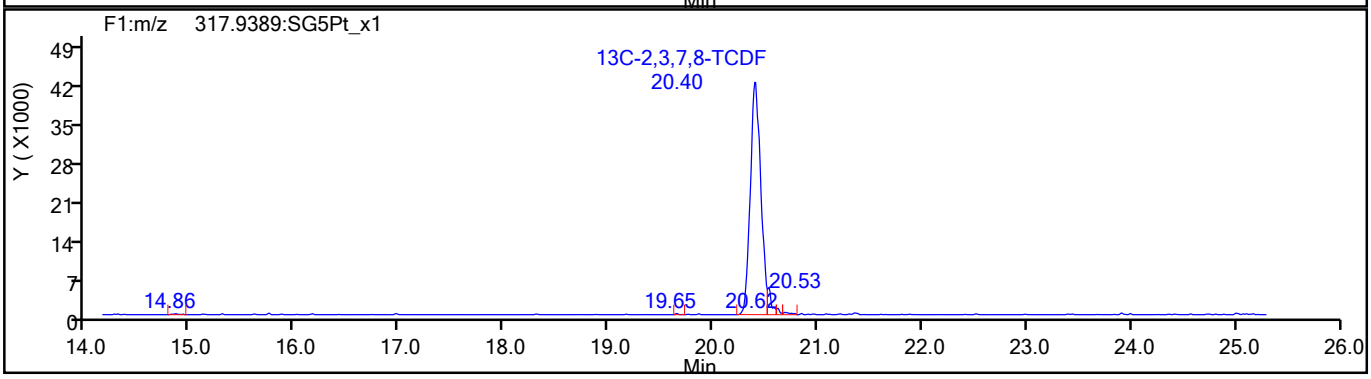

788653

Report Date: 23-Aug-2021 09:28:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

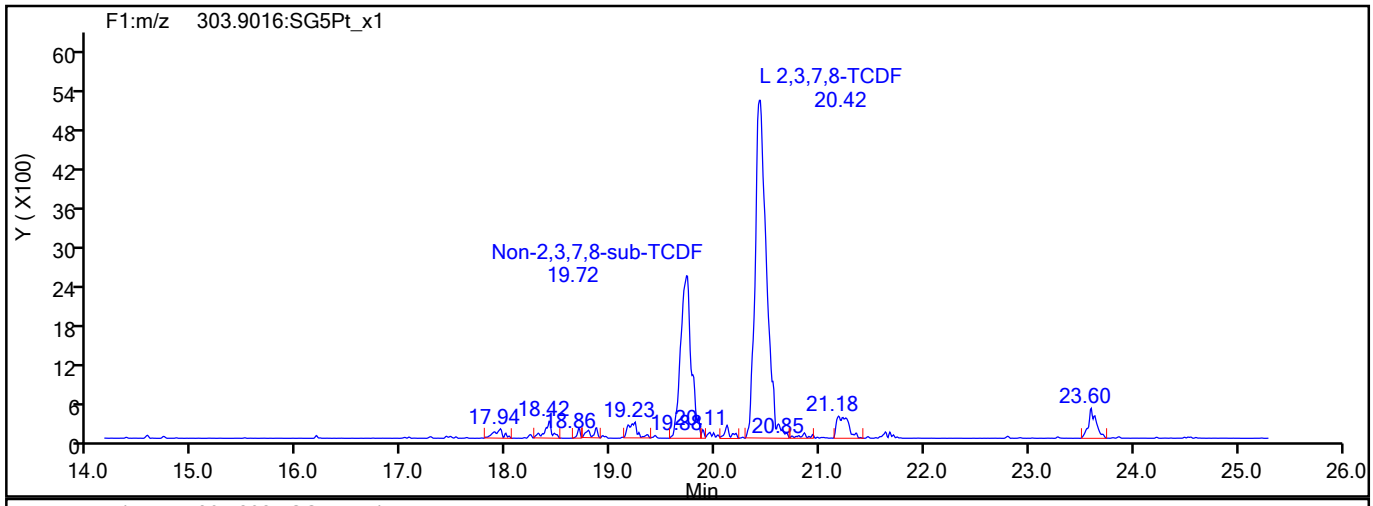

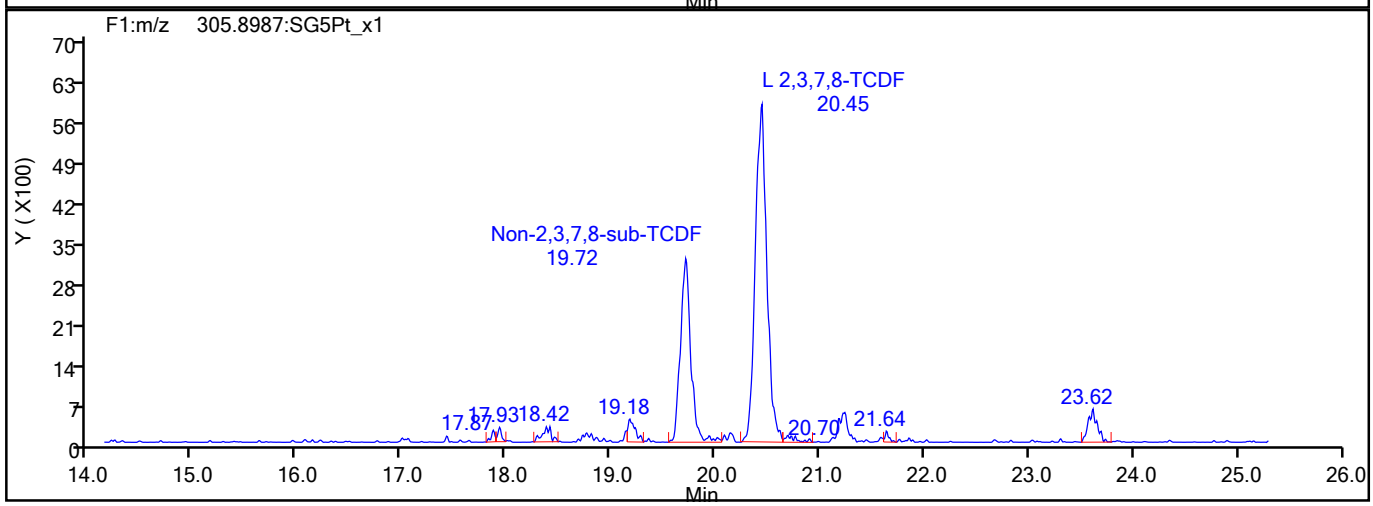

TCDF Interference Mass

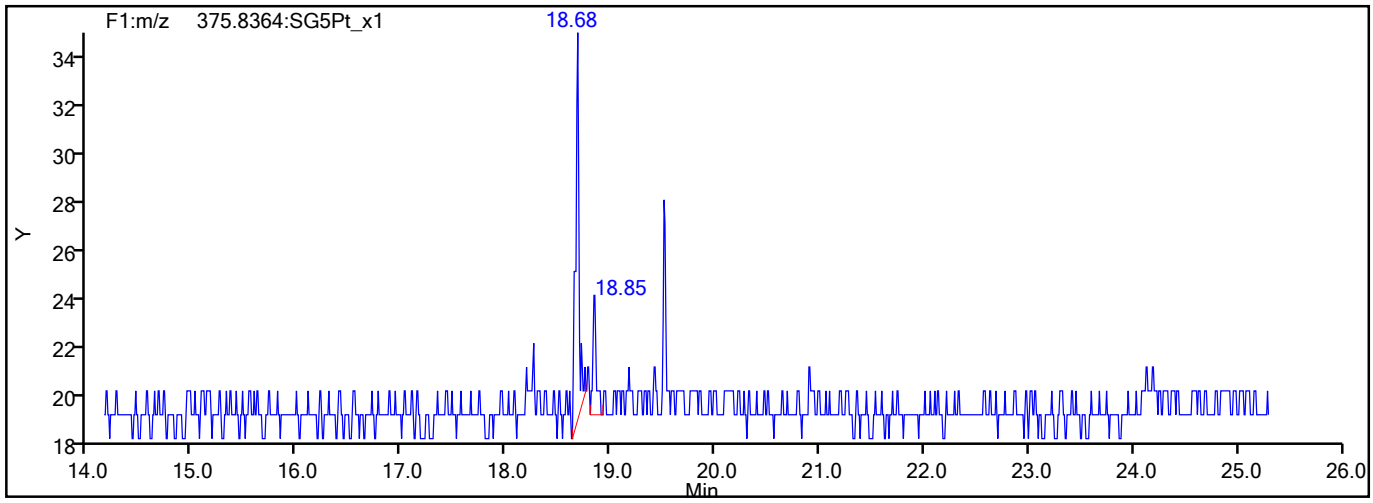

788654

Report Date: 23-Aug-2021 09:28:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

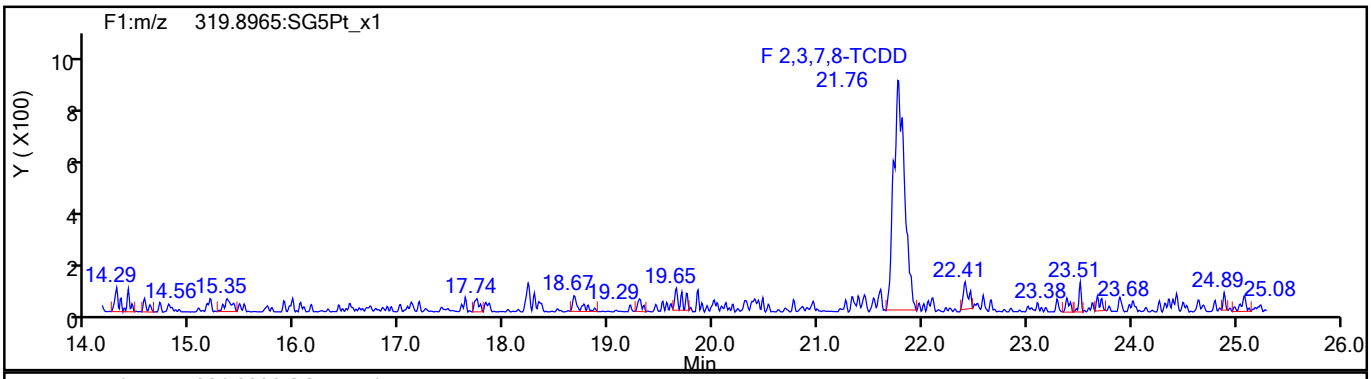

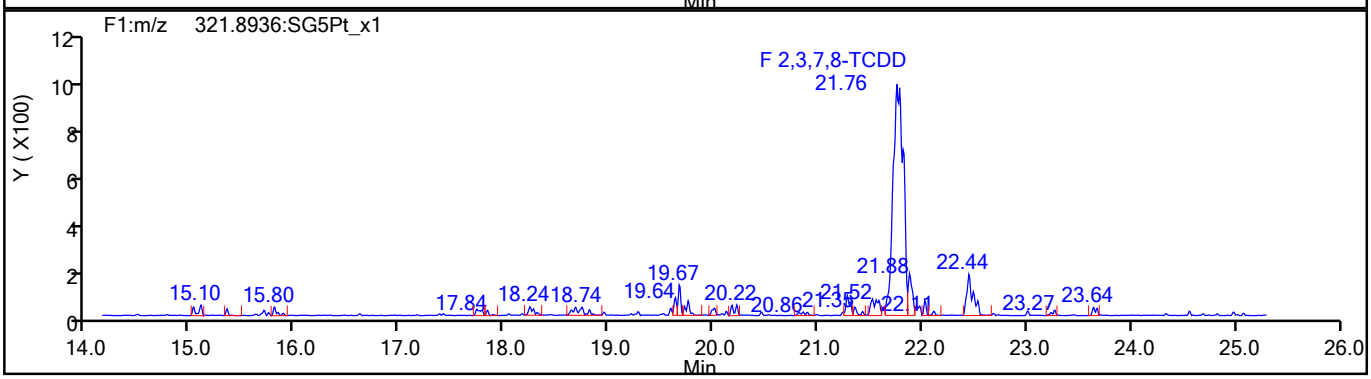

TCDD Standards

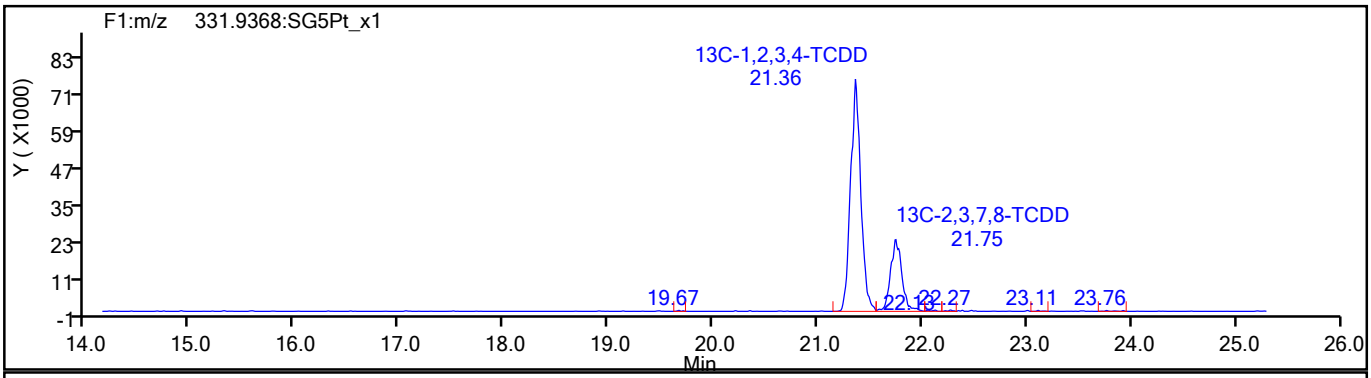

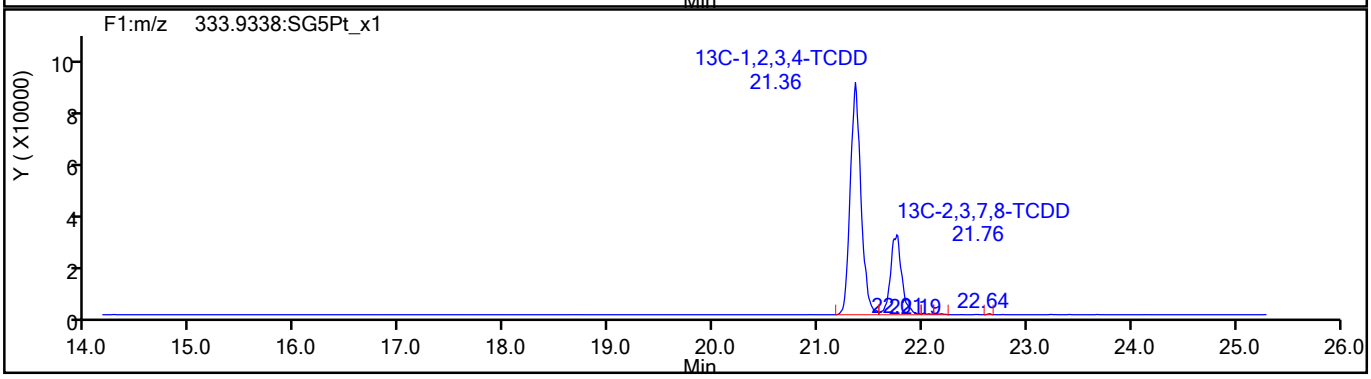

788655

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

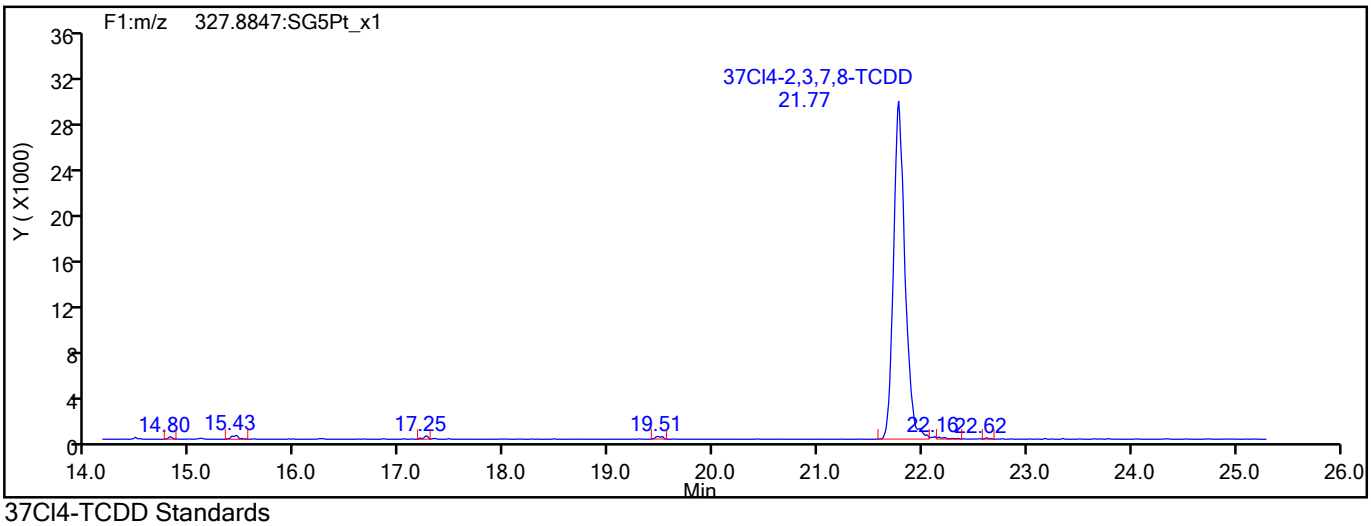

37Cl4-TCDD Standards

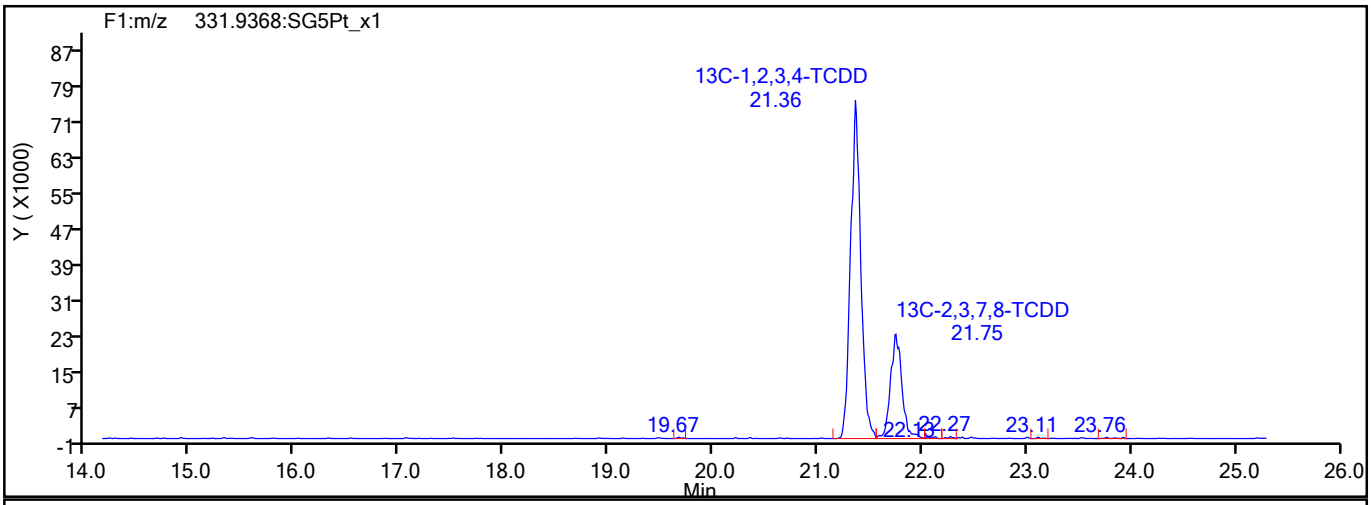

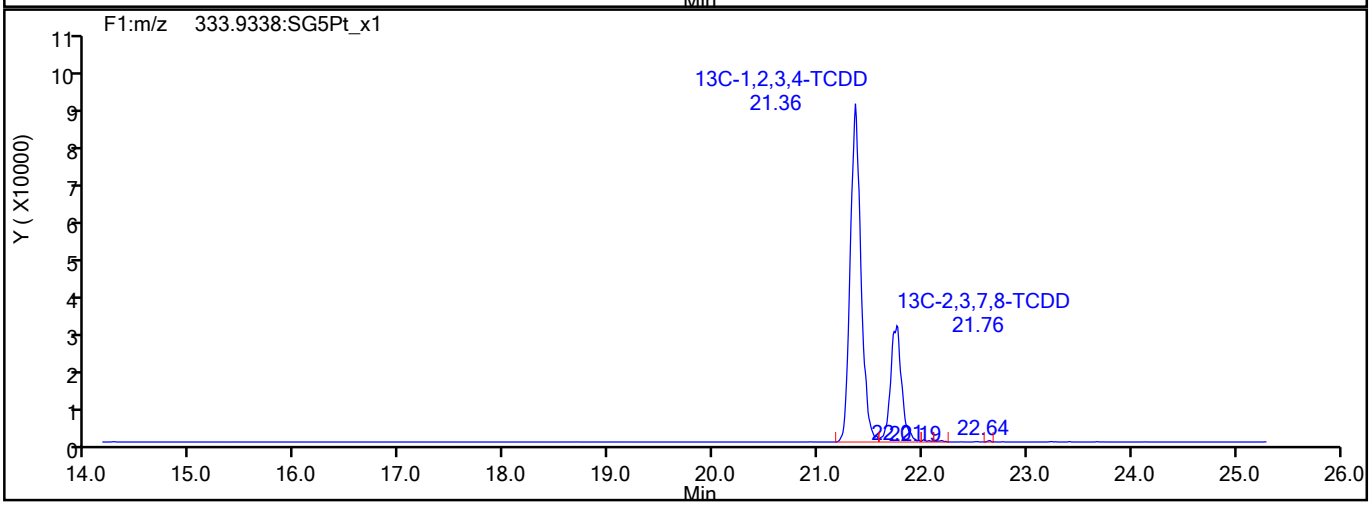

788656

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

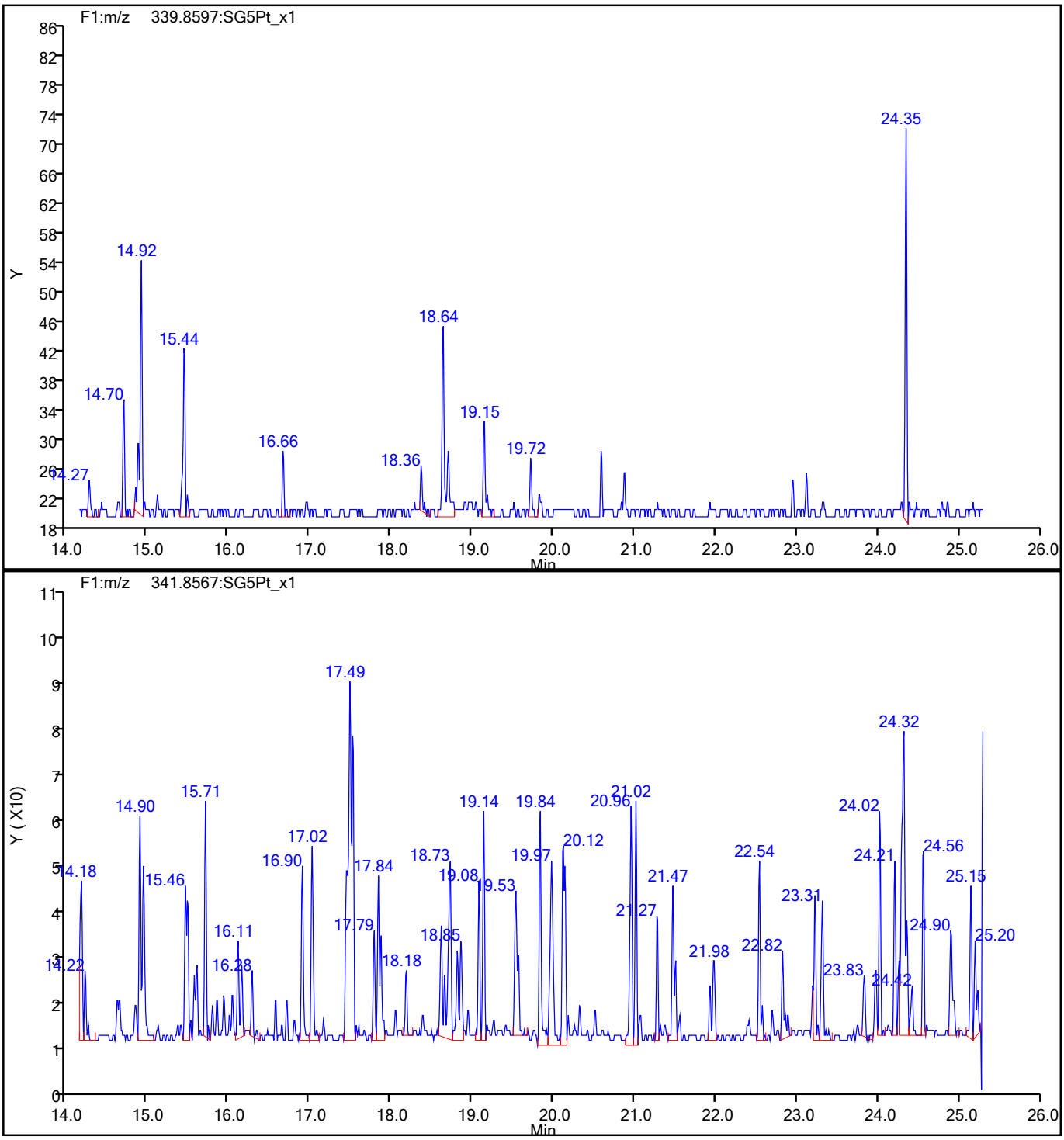

788657

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Injection Date:	19-Aug-2021 23:38:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

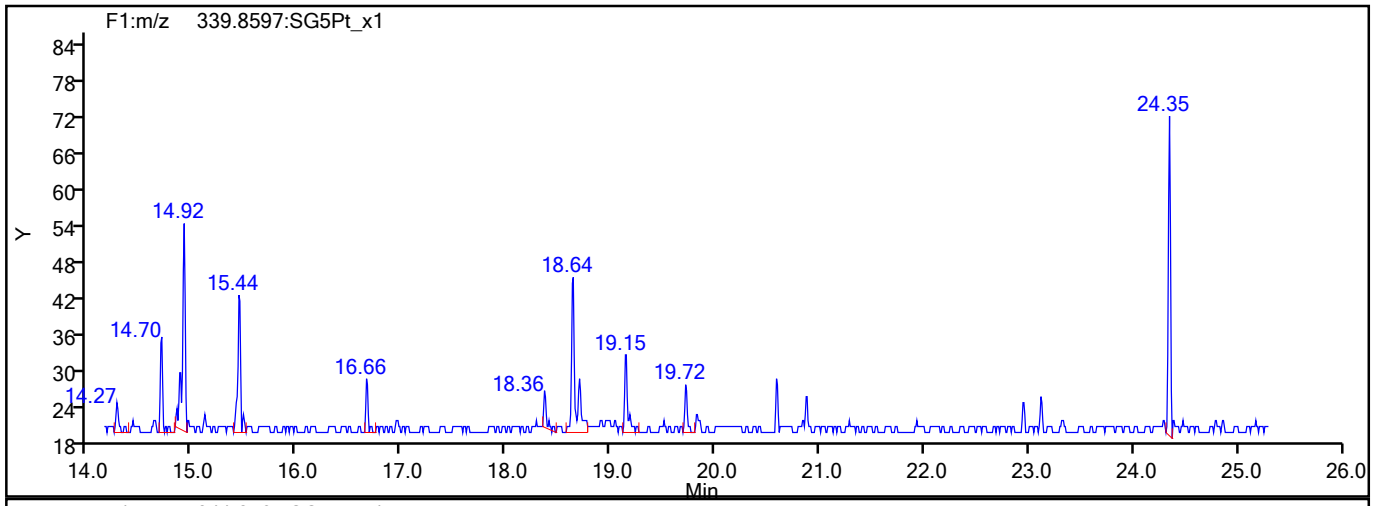

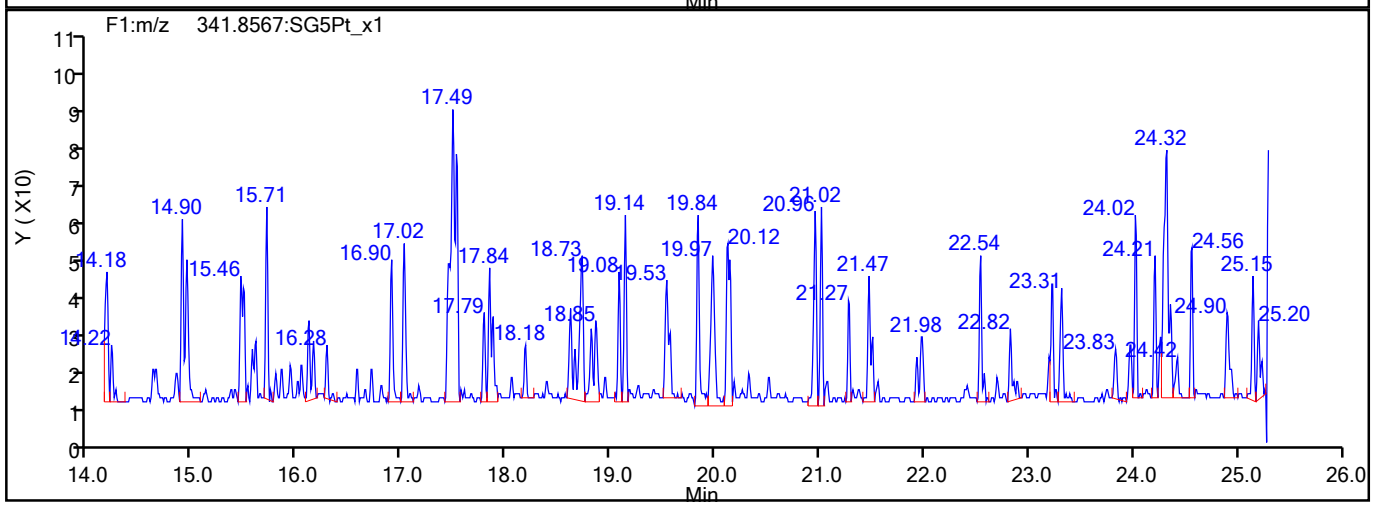

F1 PeCDFs Interference Mass

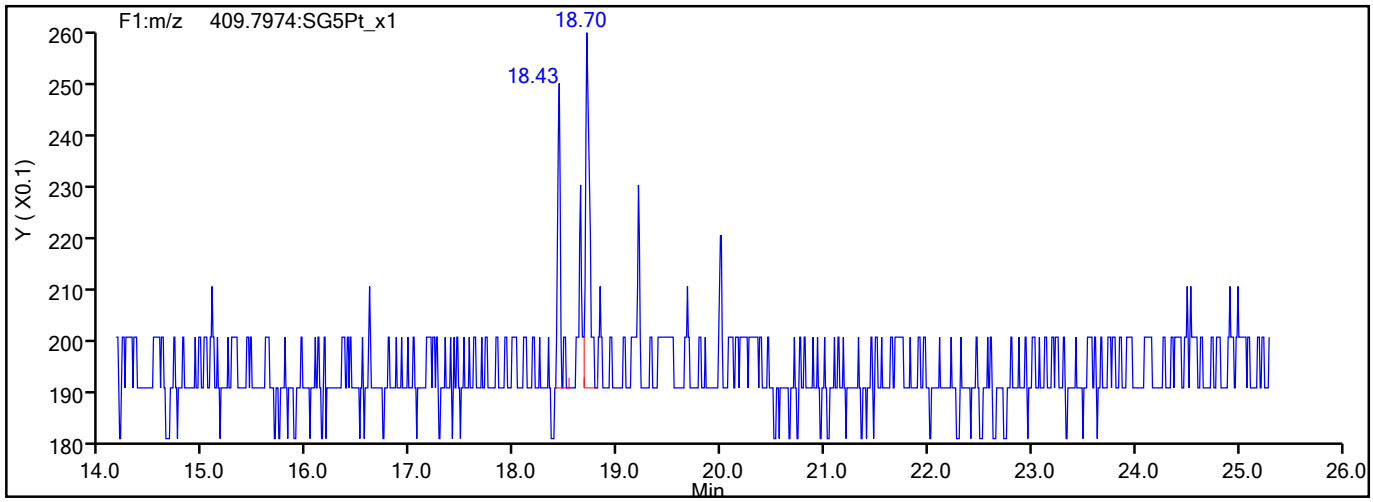

788658

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

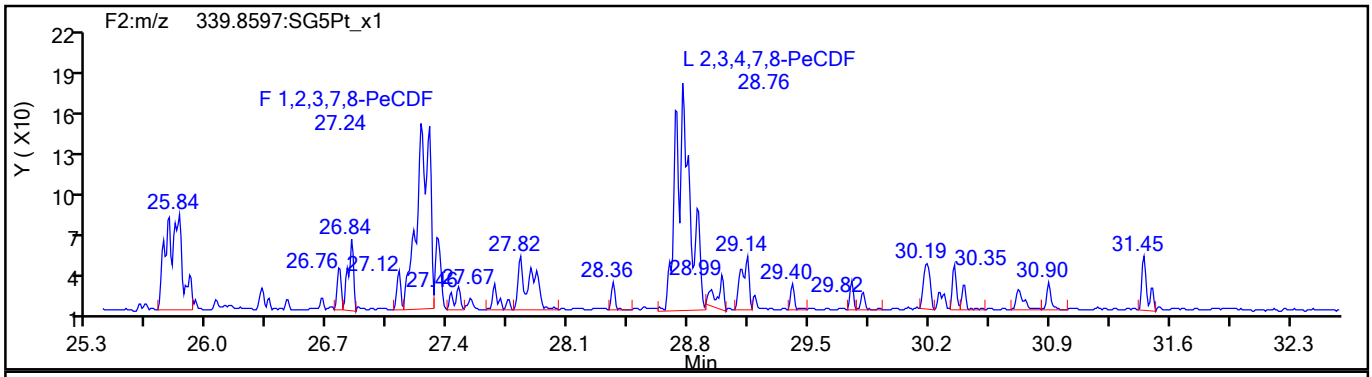

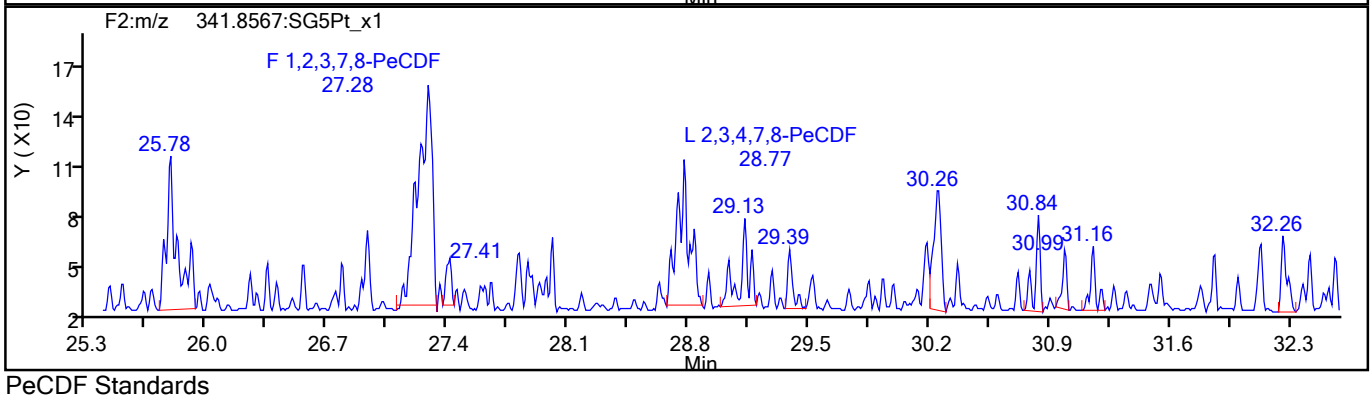

PeCDF Standards

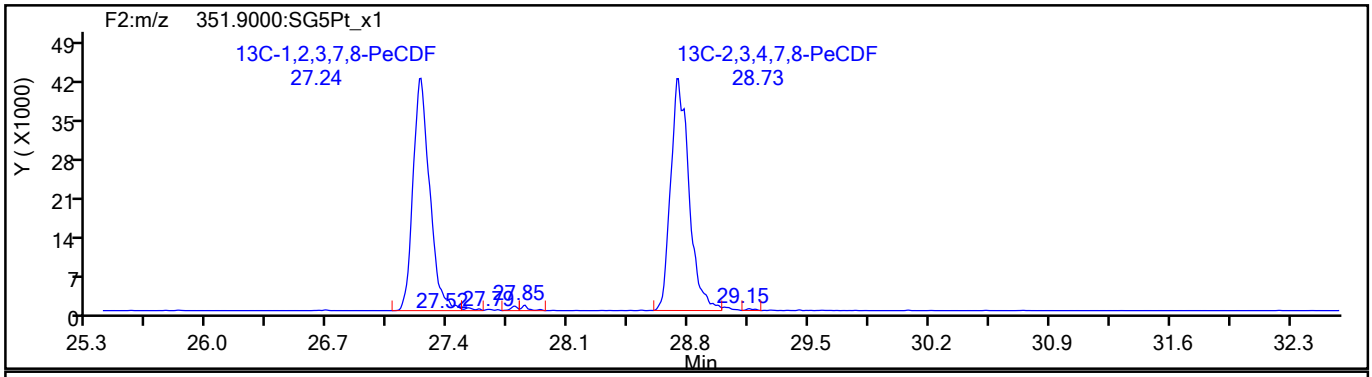

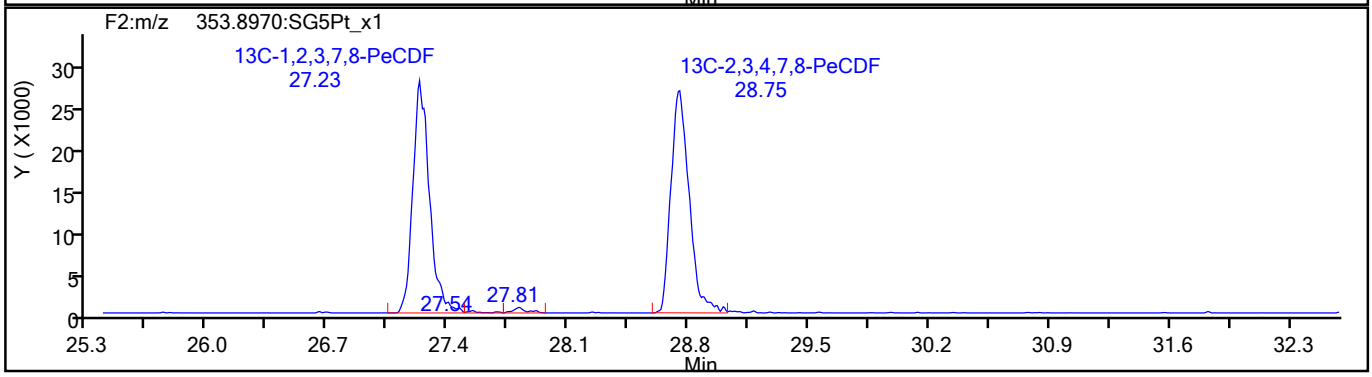

788659

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

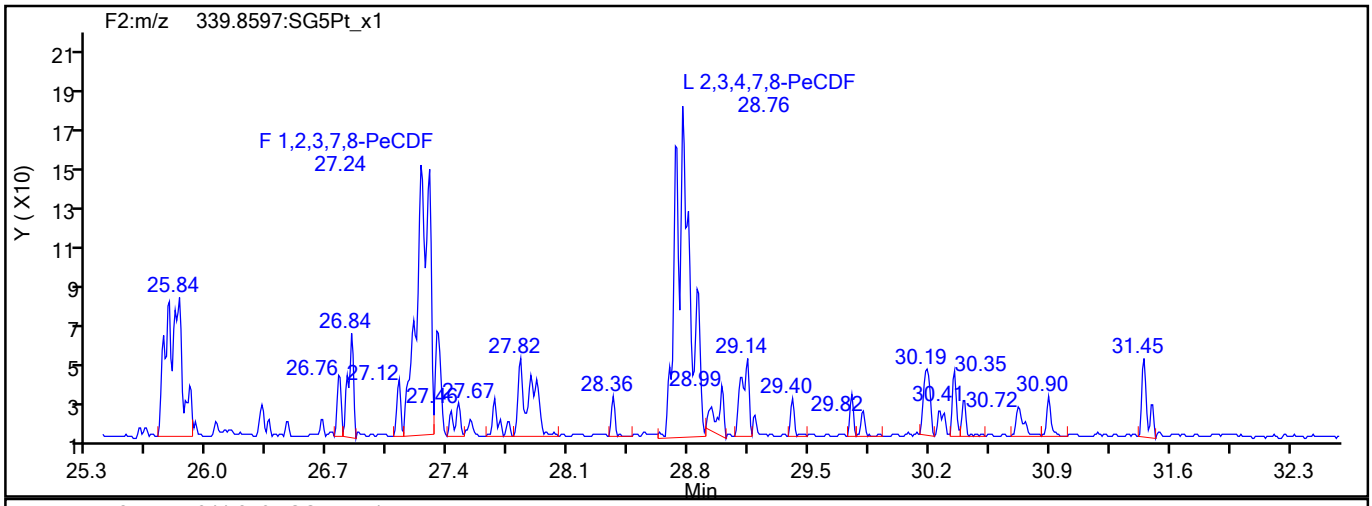

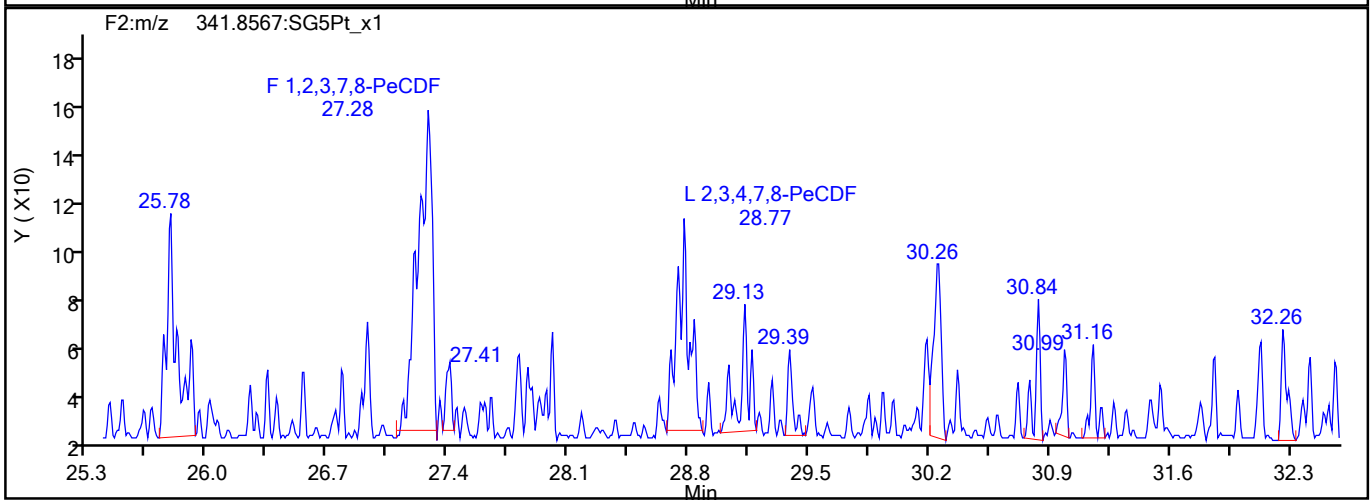

PeCDF Interference Mass

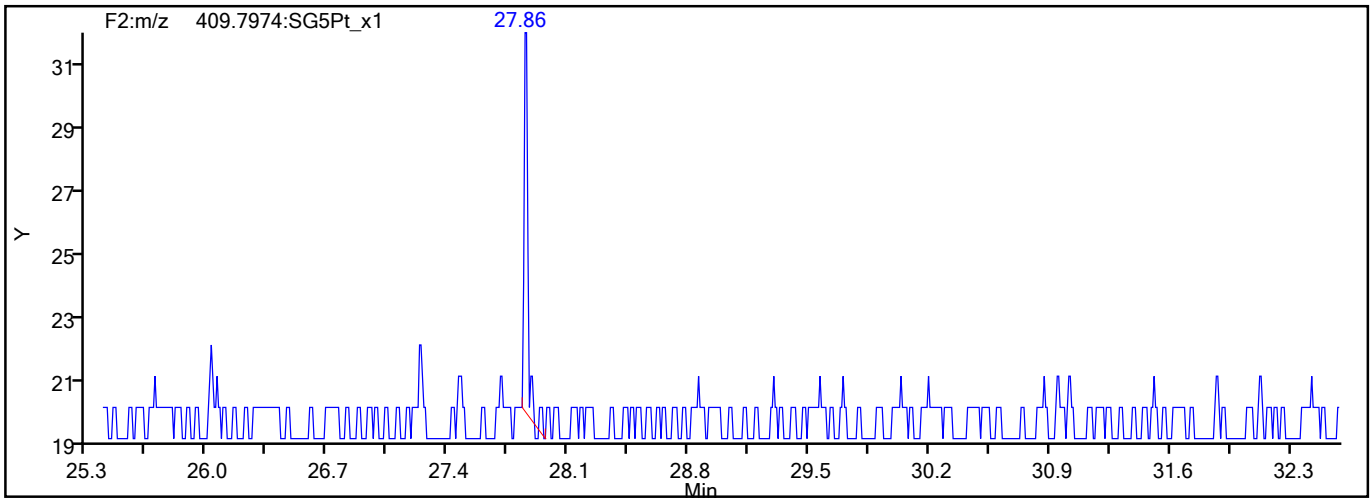

788660

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

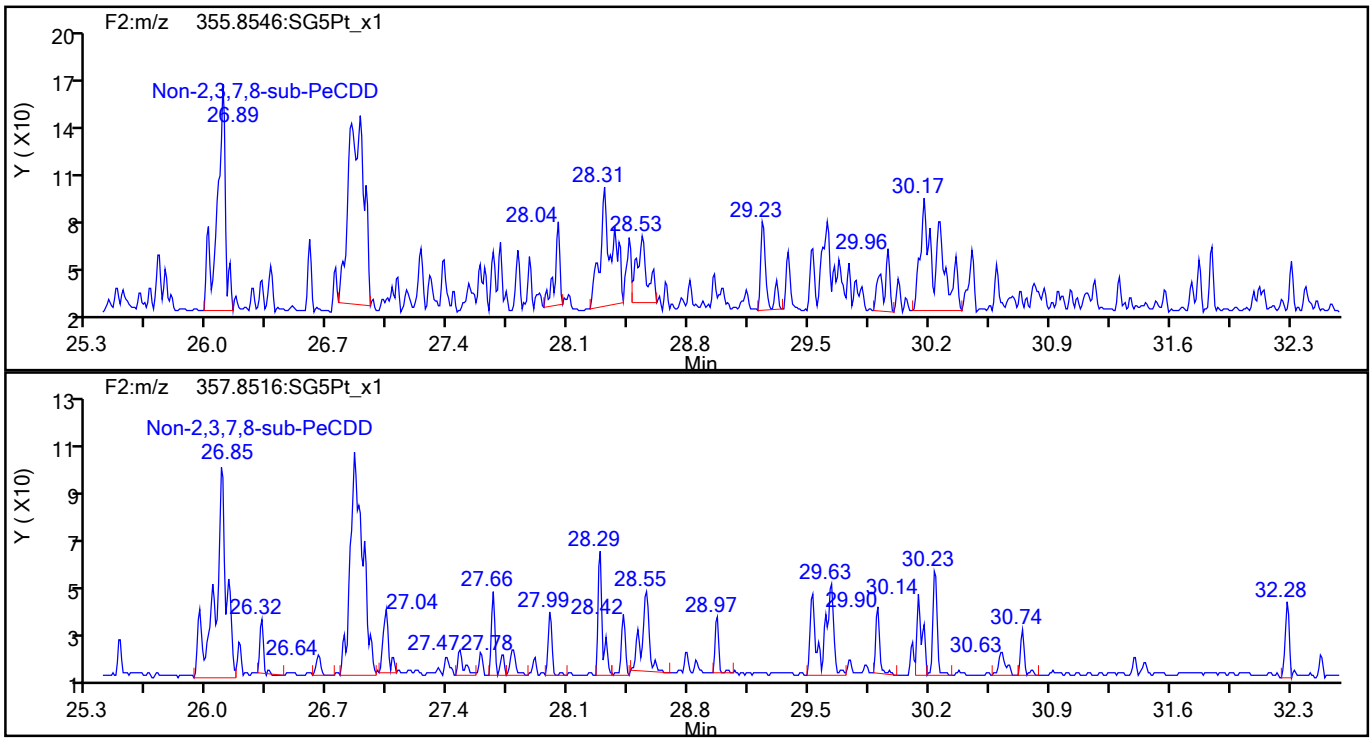

PeCDD Standards

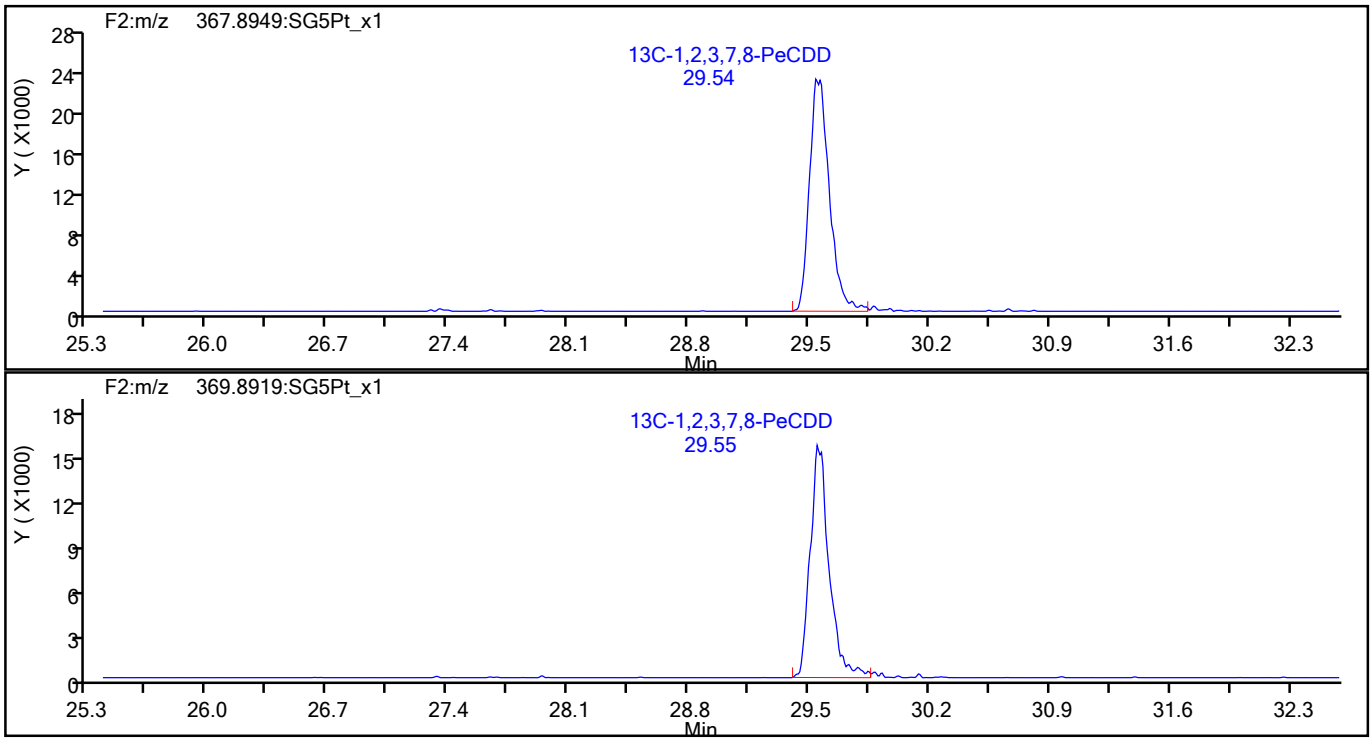

788661

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

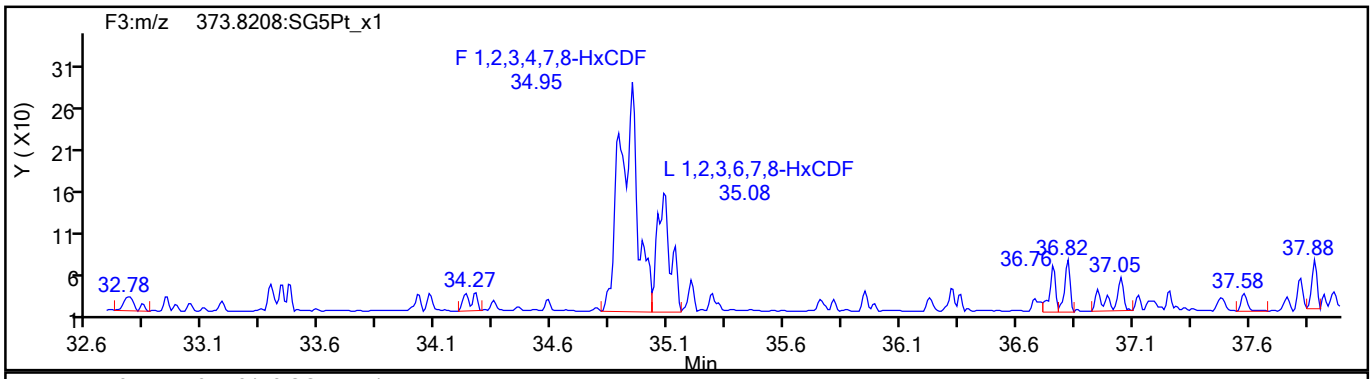

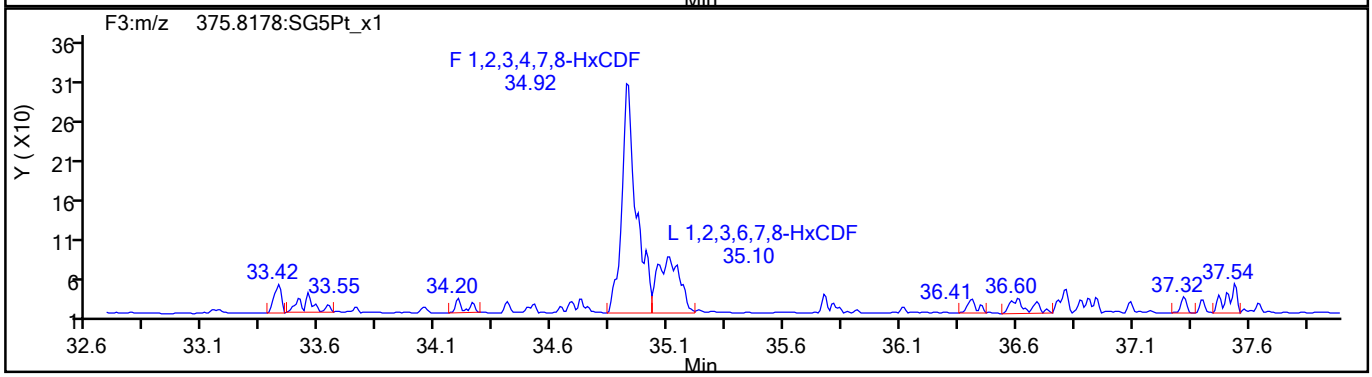

HxCDF Standards

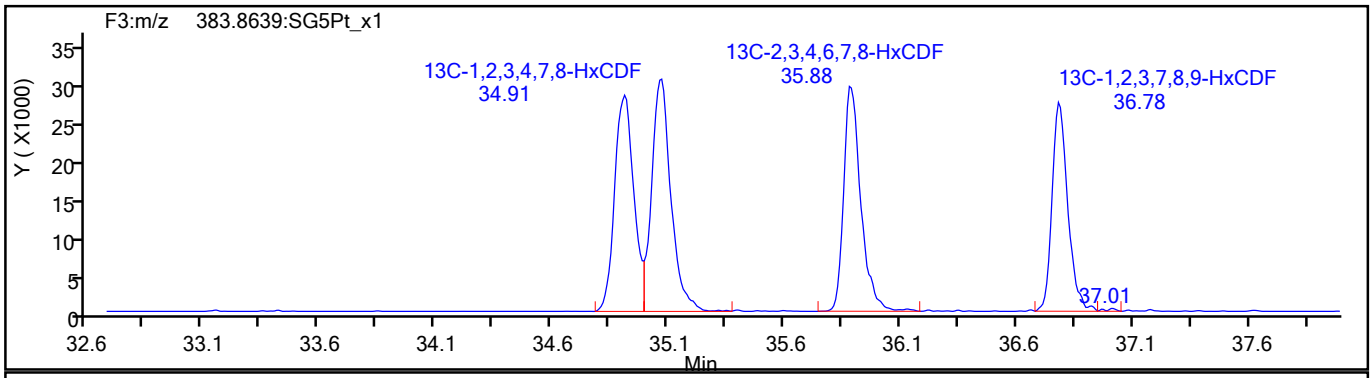

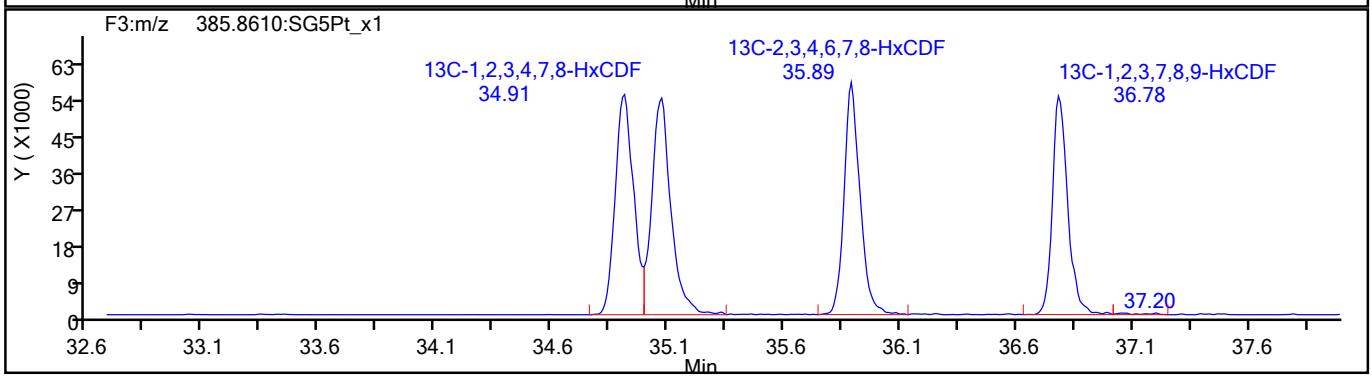

788662

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

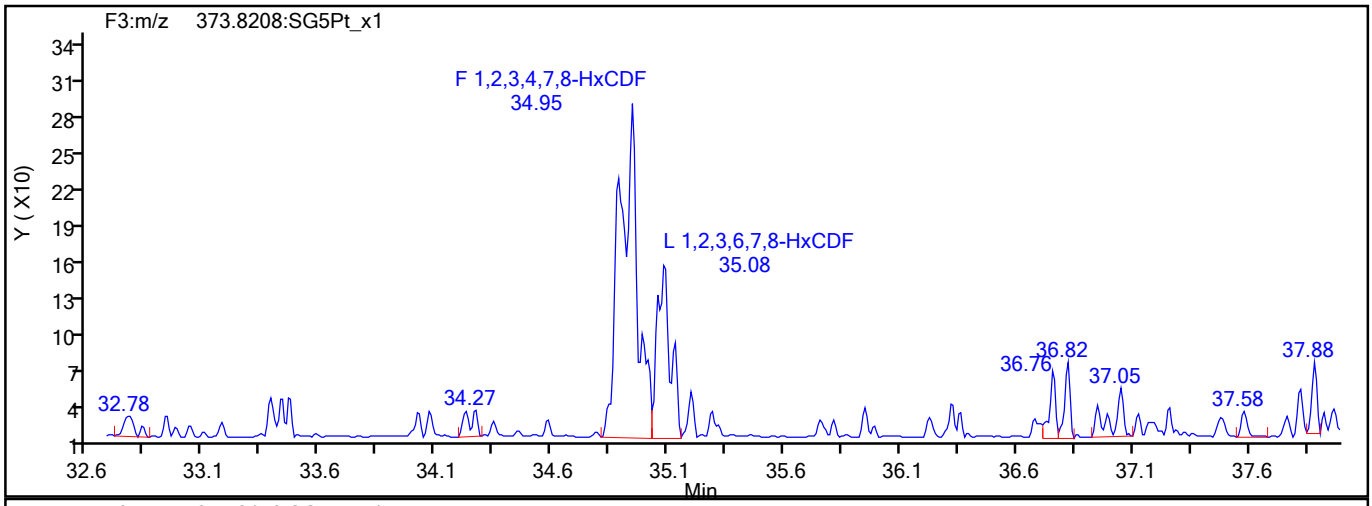

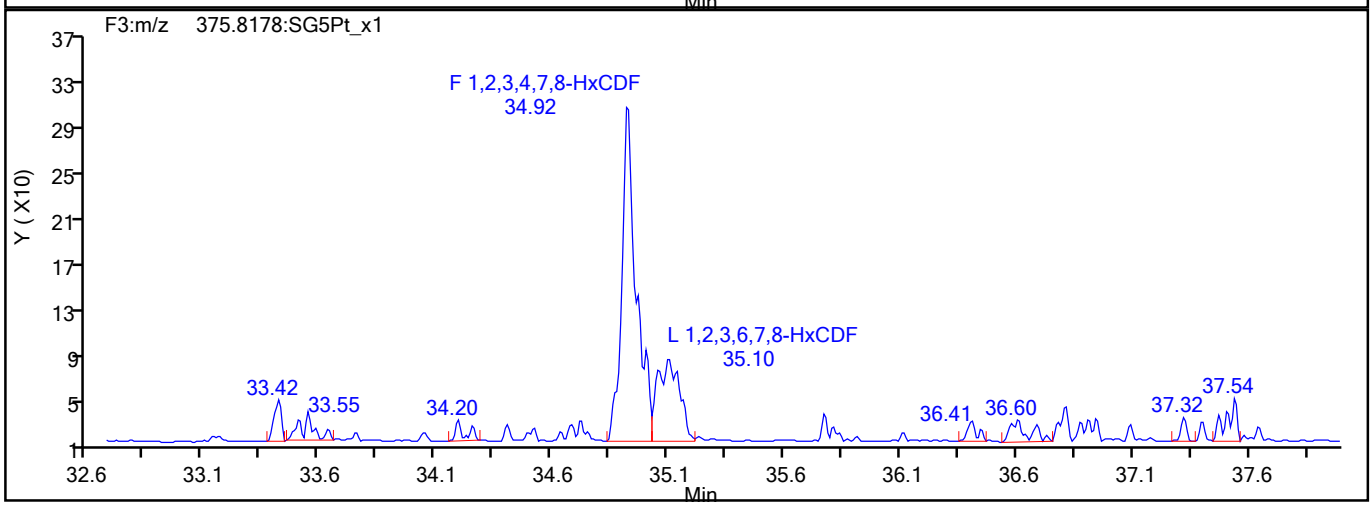

HxCDF Interference Mass

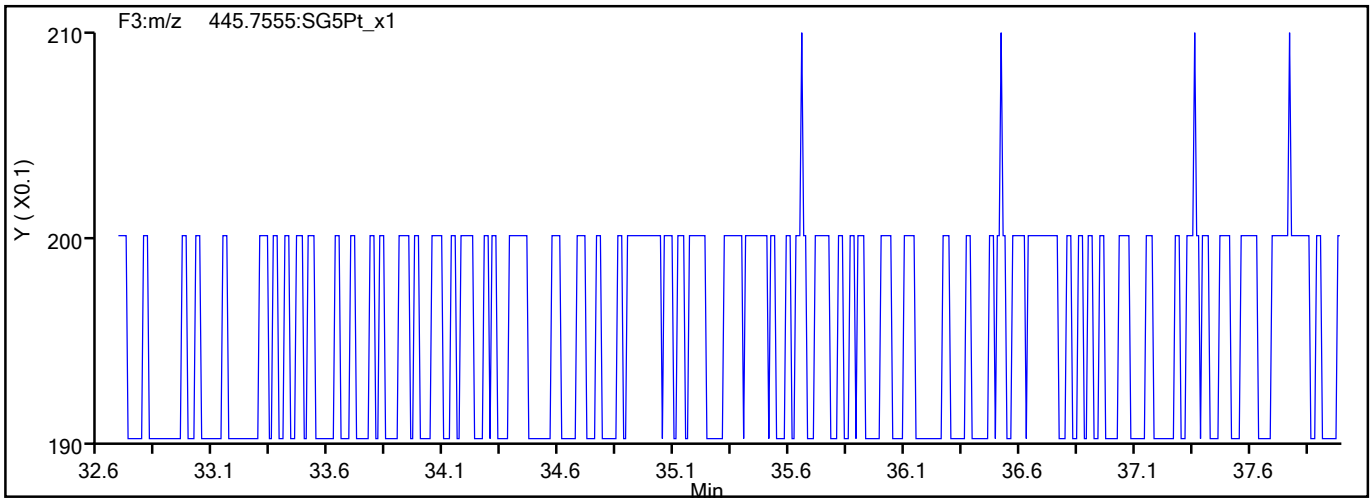

788663

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

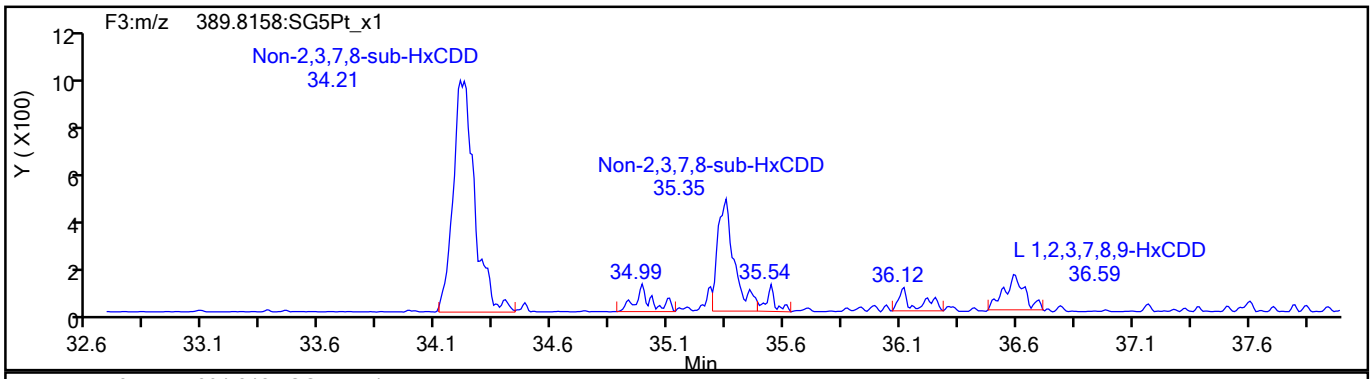

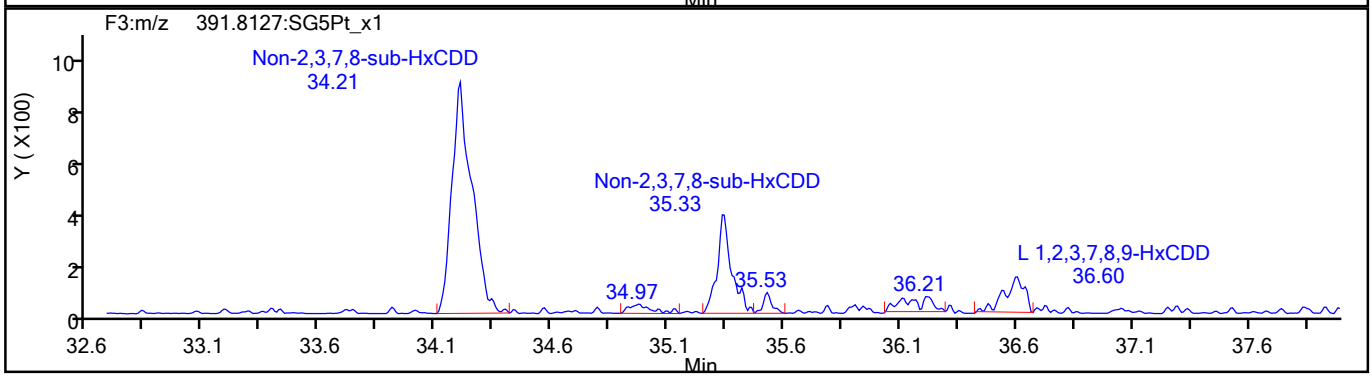

HxCDD Standards

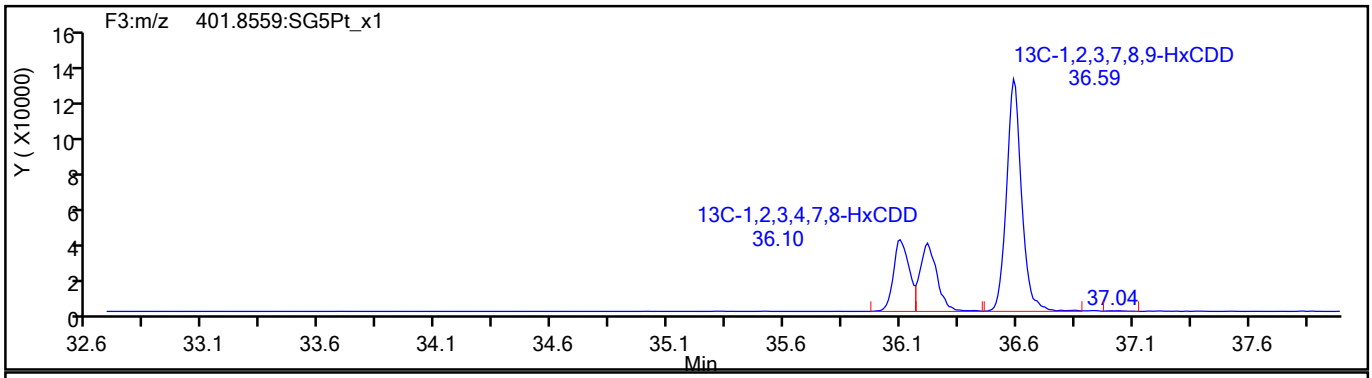

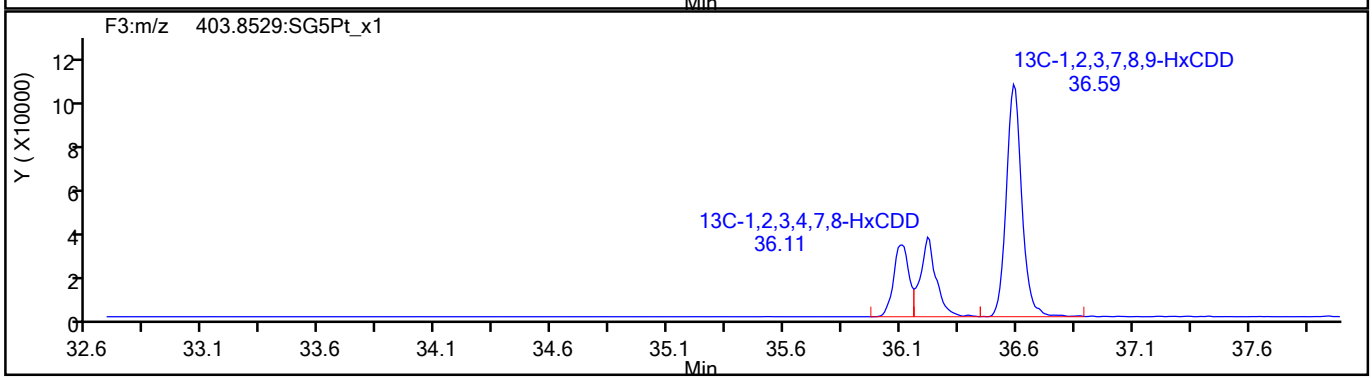

788664

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Injection Date:	19-Aug-2021 23:38:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

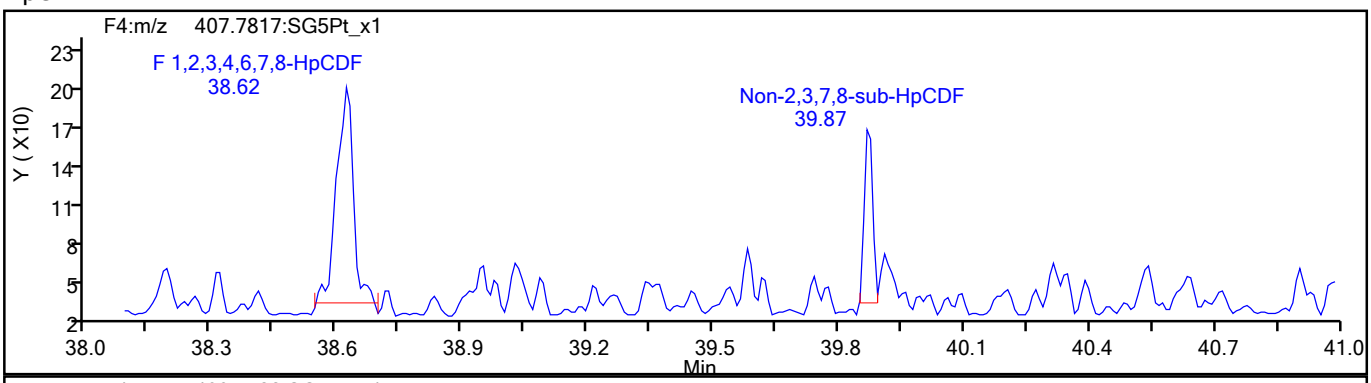

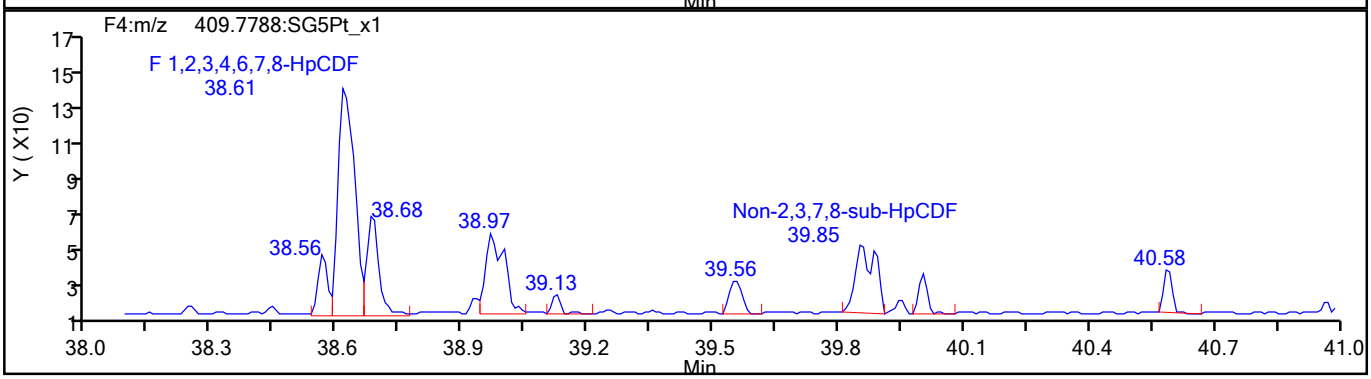

HpCDF Standards

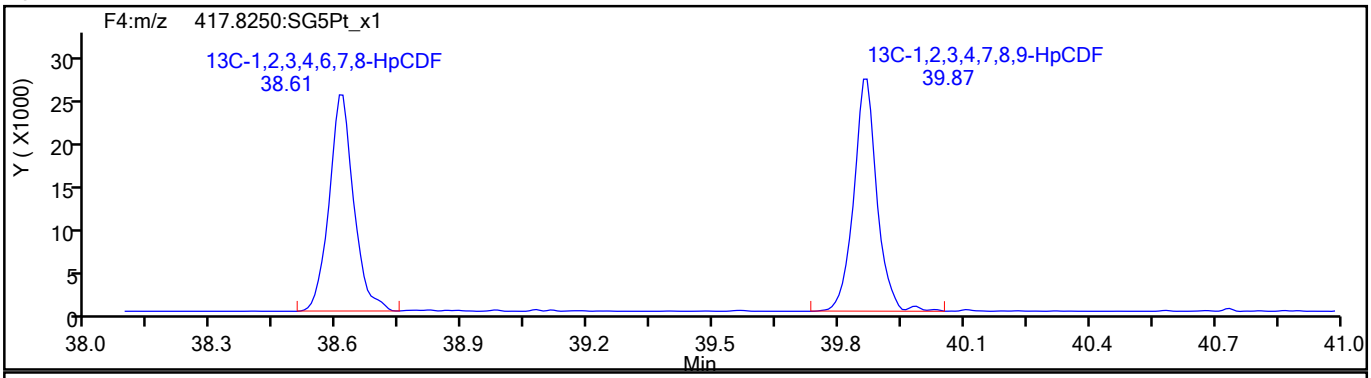

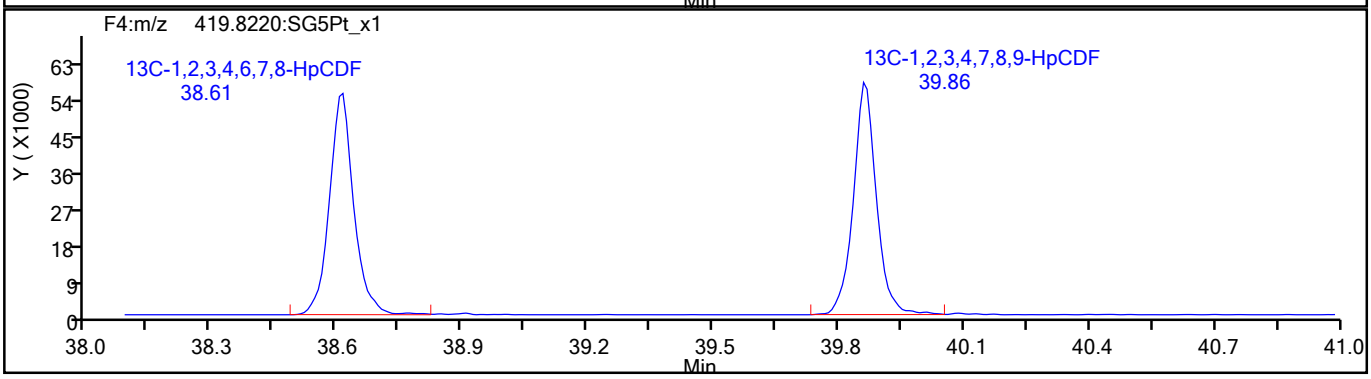

788665

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Injection Date:	19-Aug-2021 23:38:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

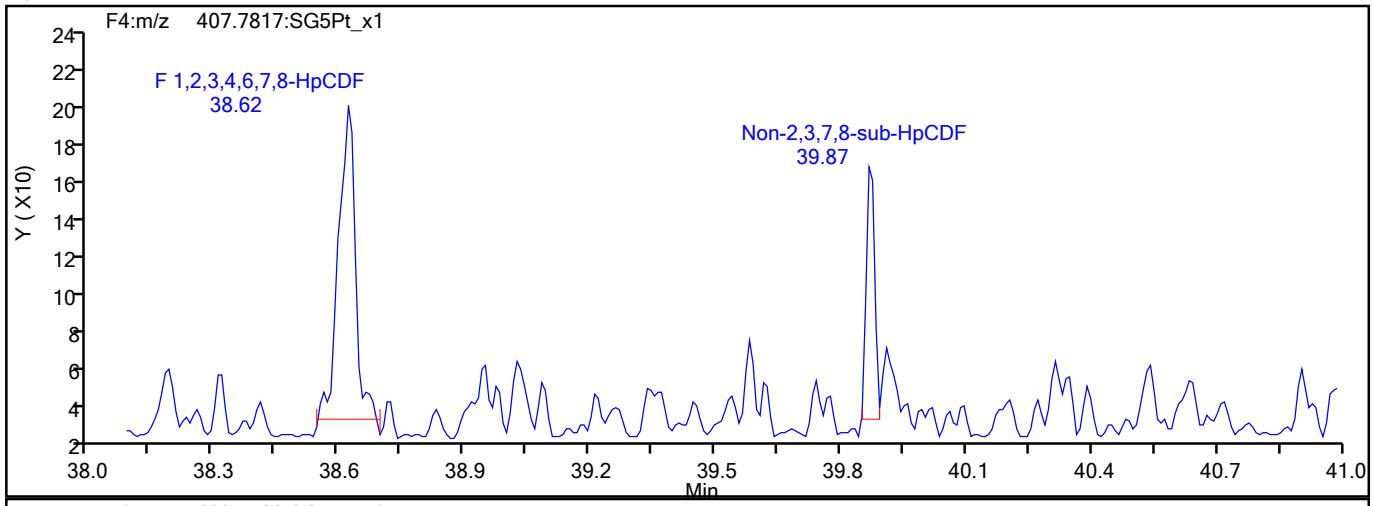

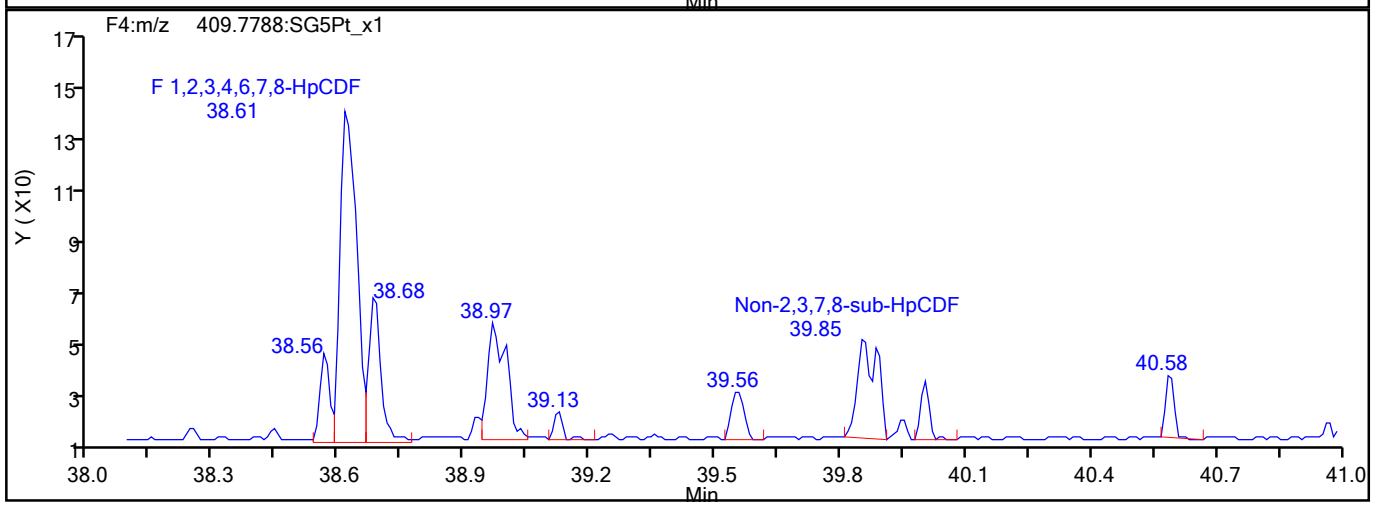

HpCDF Interference Mass

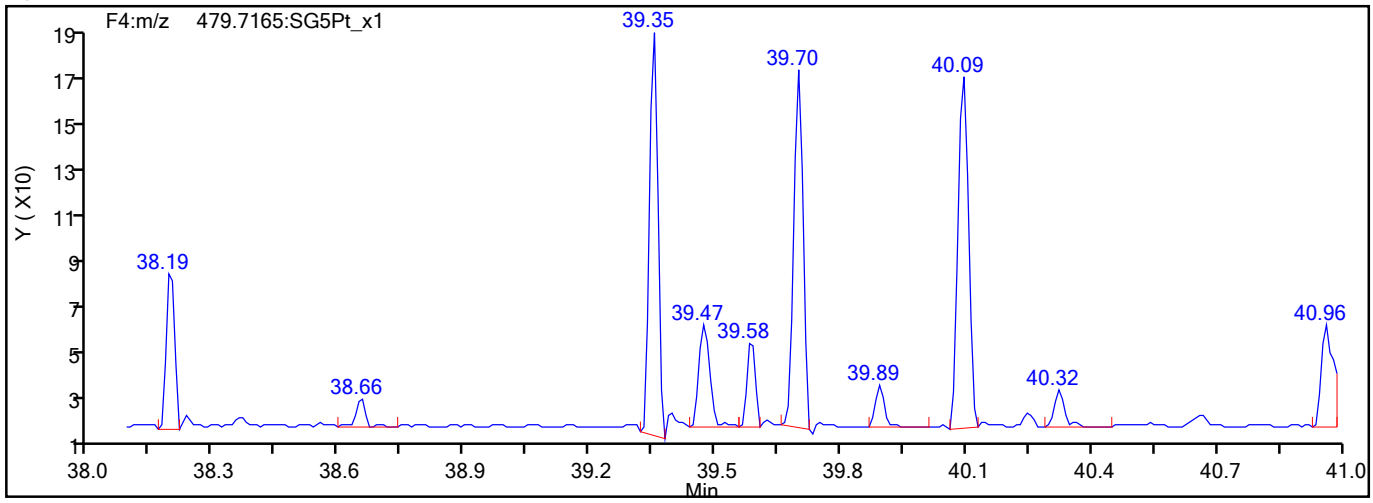

788666

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Injection Date:	19-Aug-2021 23:38:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

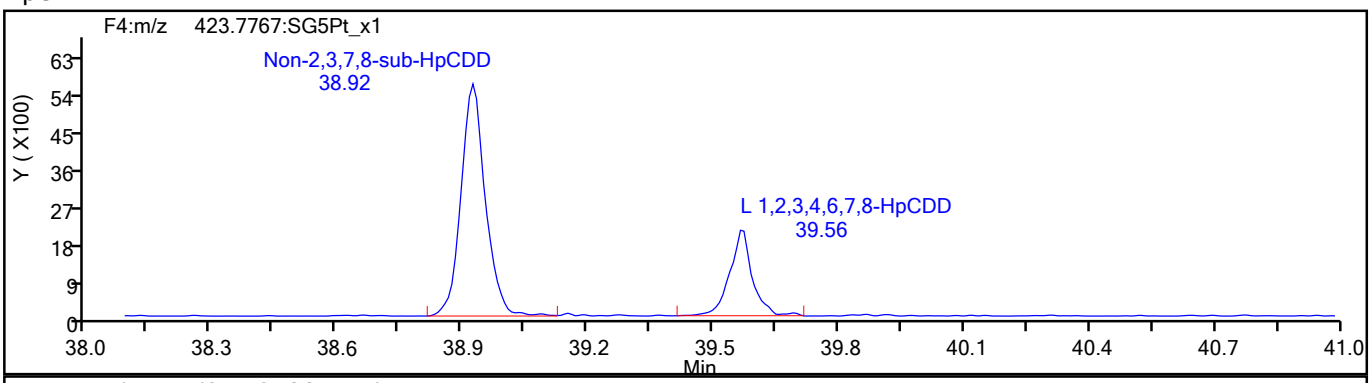

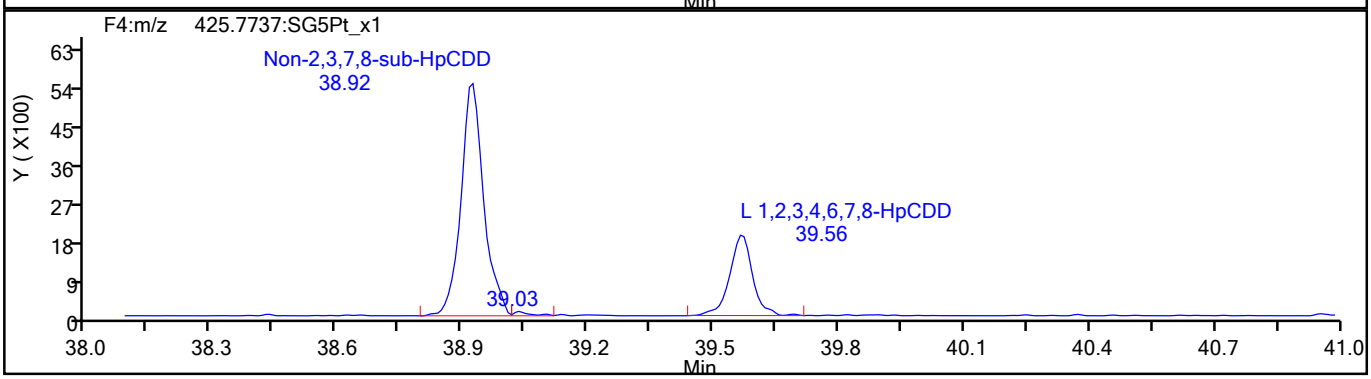

HpCDD Standards

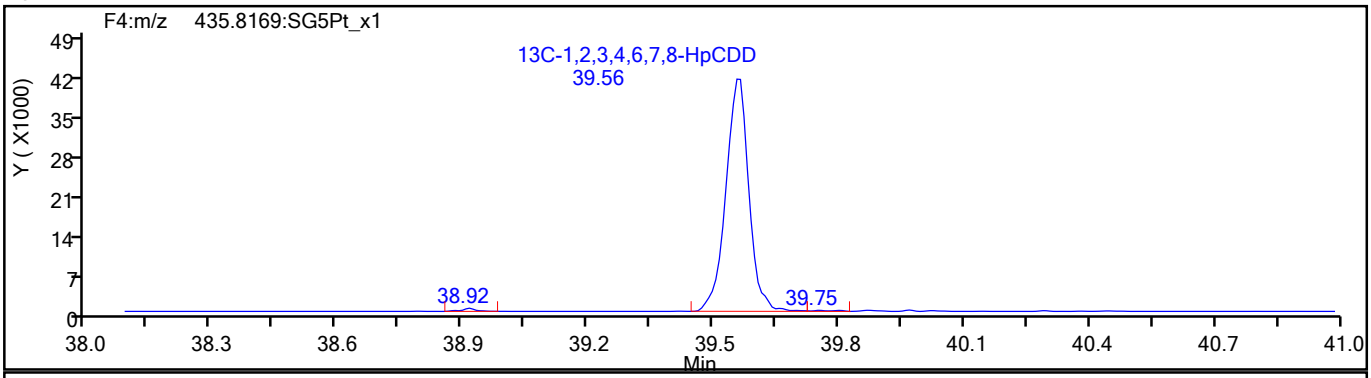

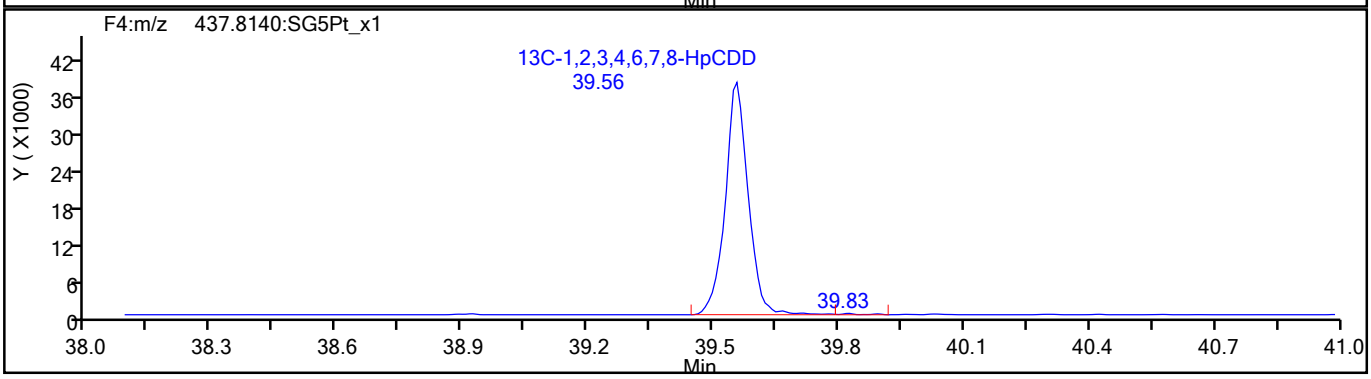

788667

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Injection Date:	19-Aug-2021 23:38:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

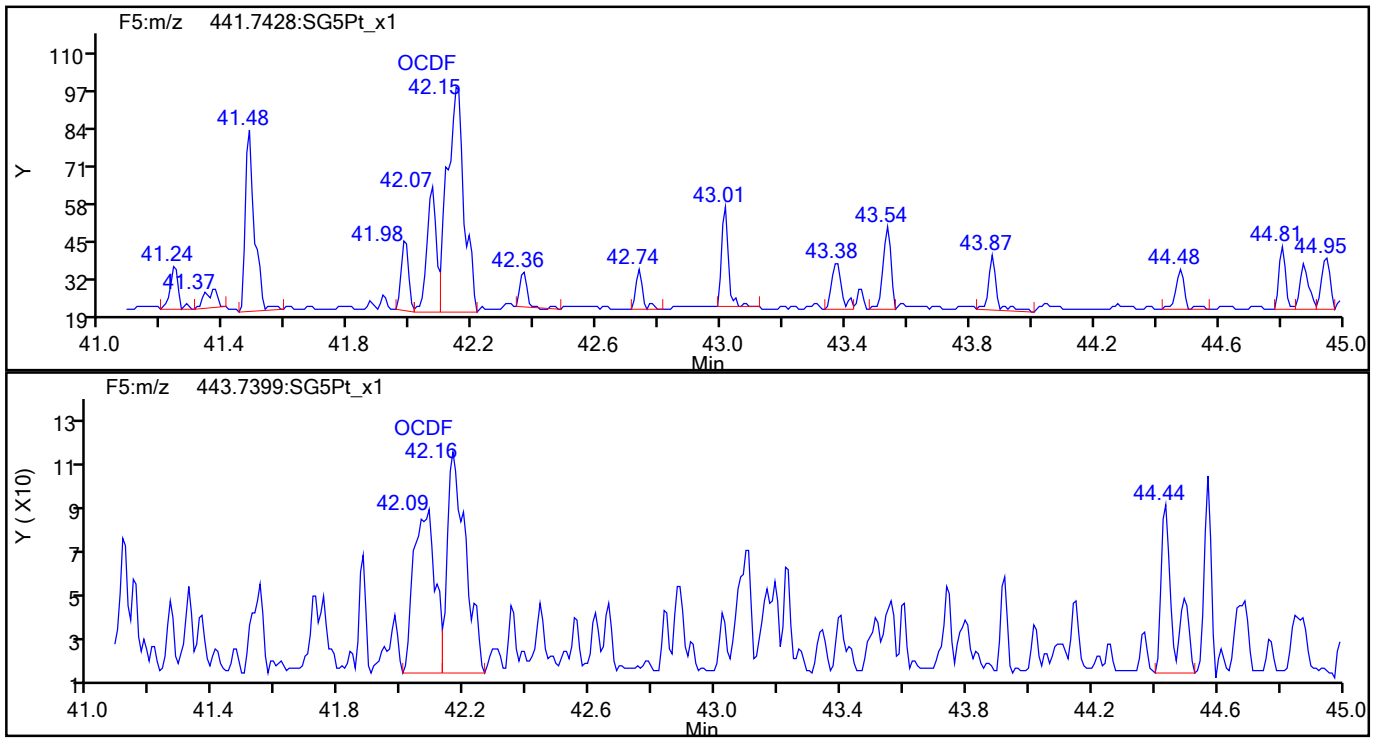

OCDF Standards

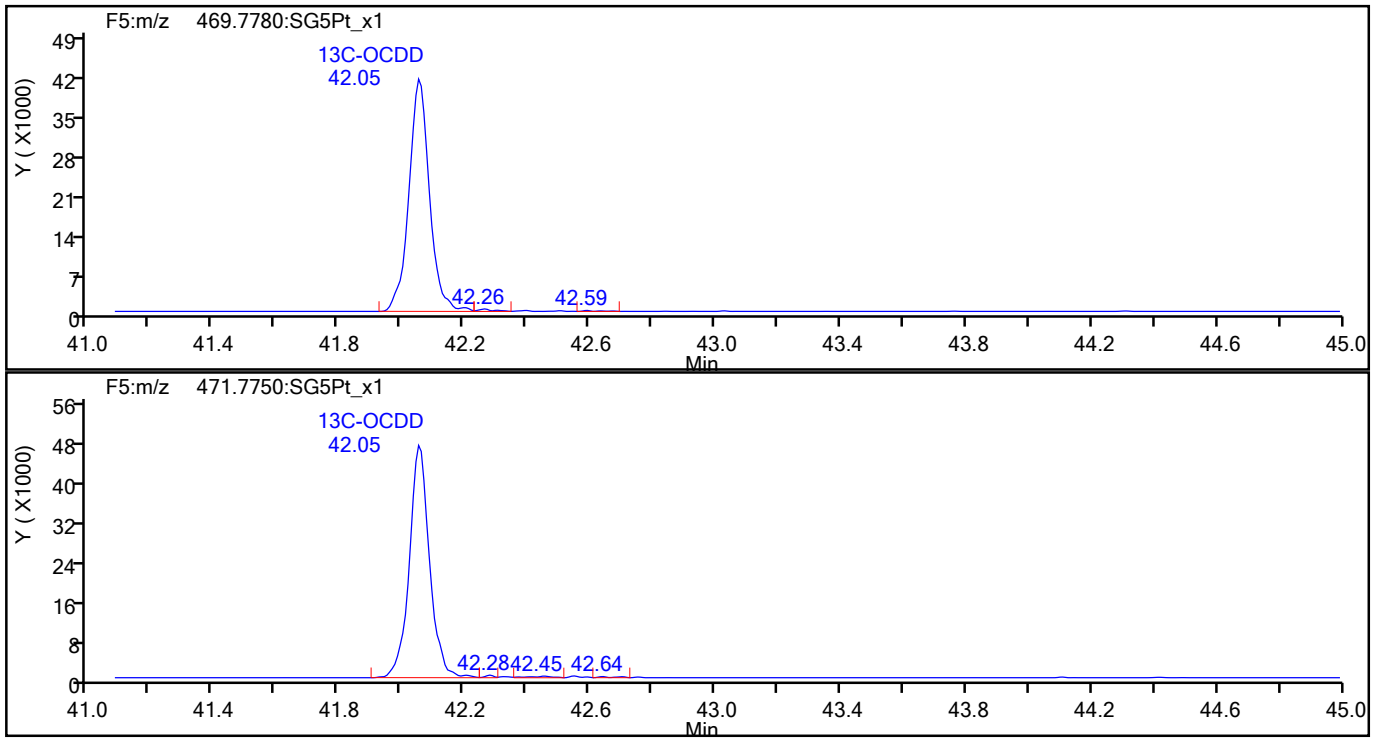

788668

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Injection Date:	19-Aug-2021 23:38:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

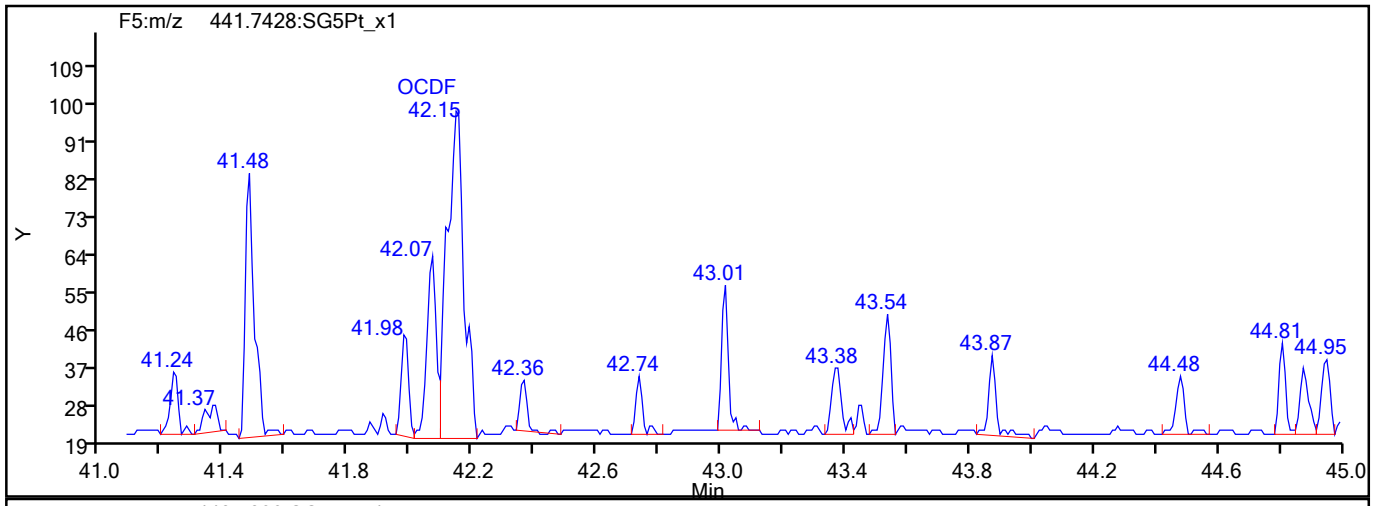

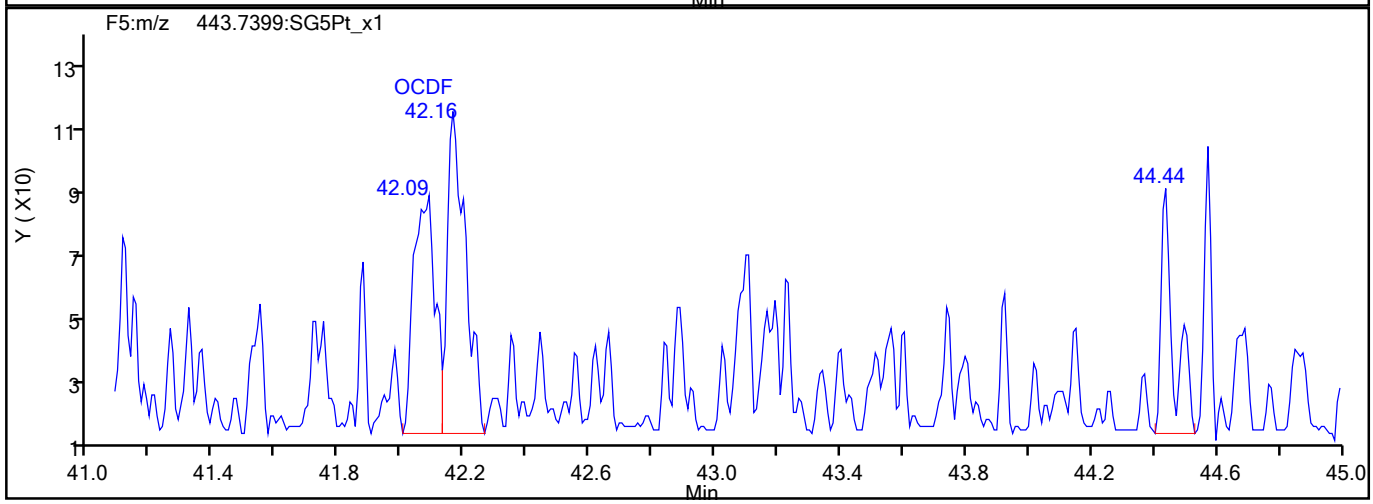

OCDF Interference Mass

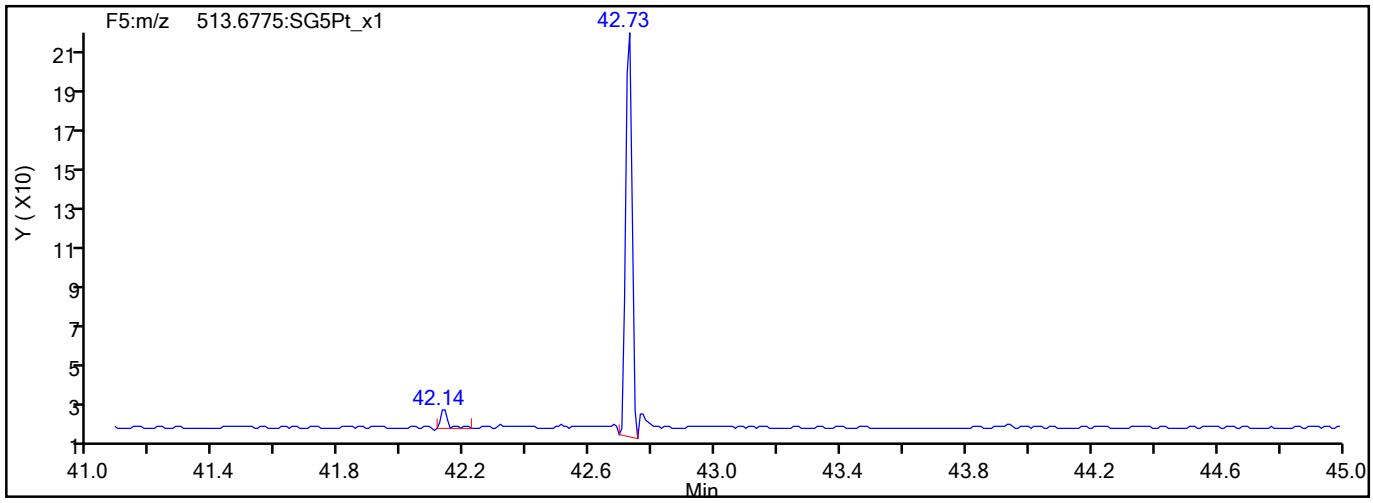

788669

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Injection Date:	19-Aug-2021 23:38:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

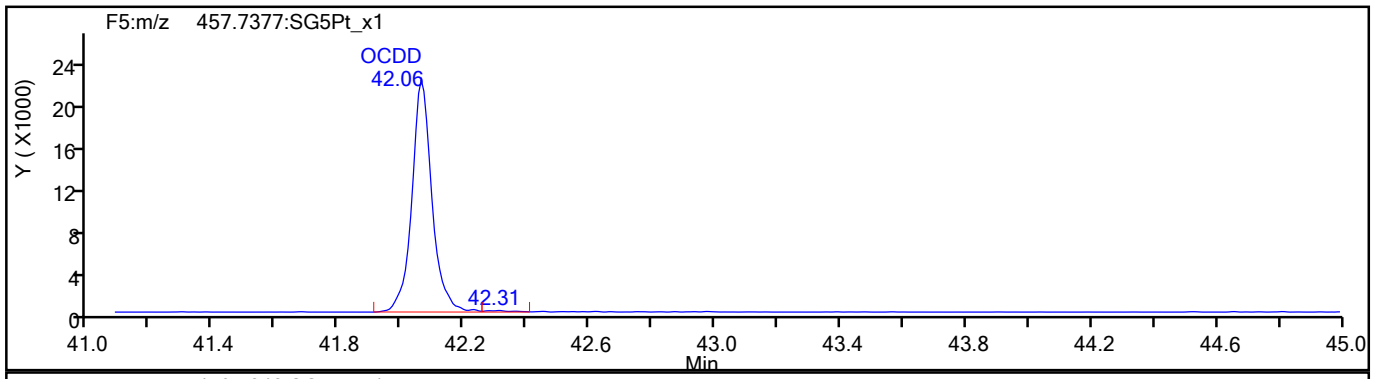

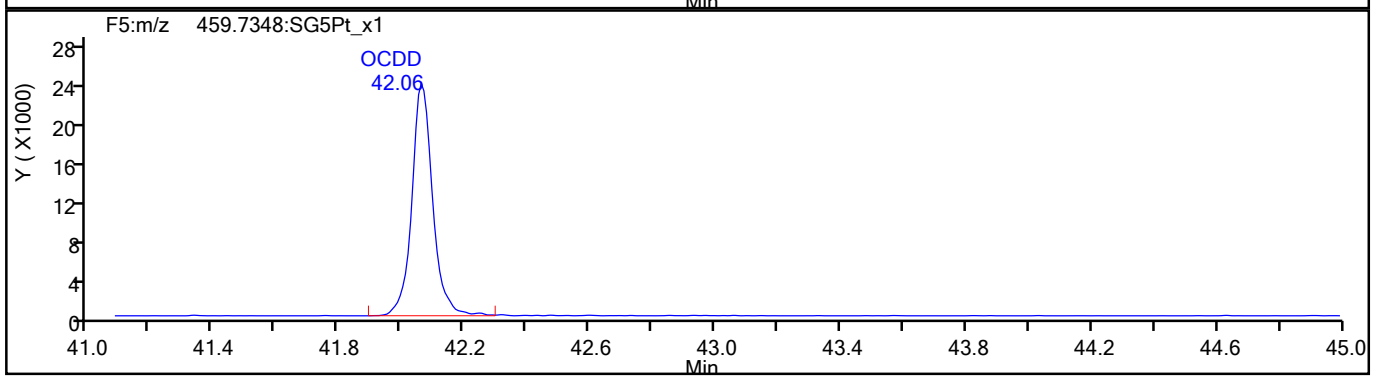

OCDD Standards

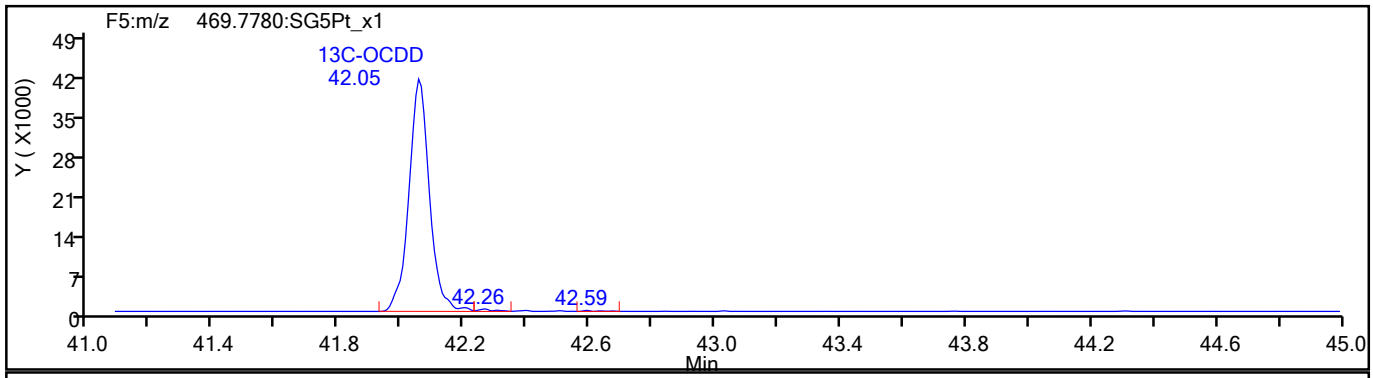

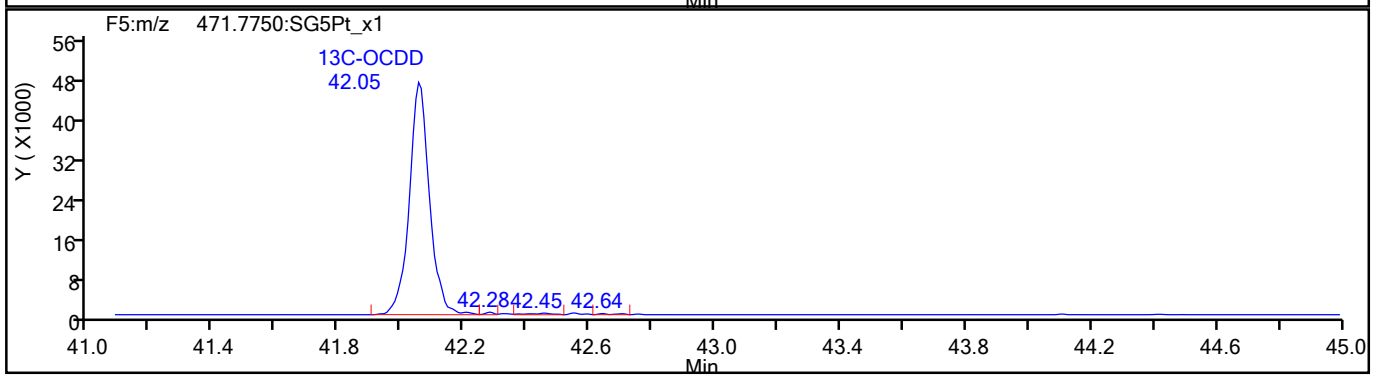

788670

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Injection Date:	19-Aug-2021 23:38:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

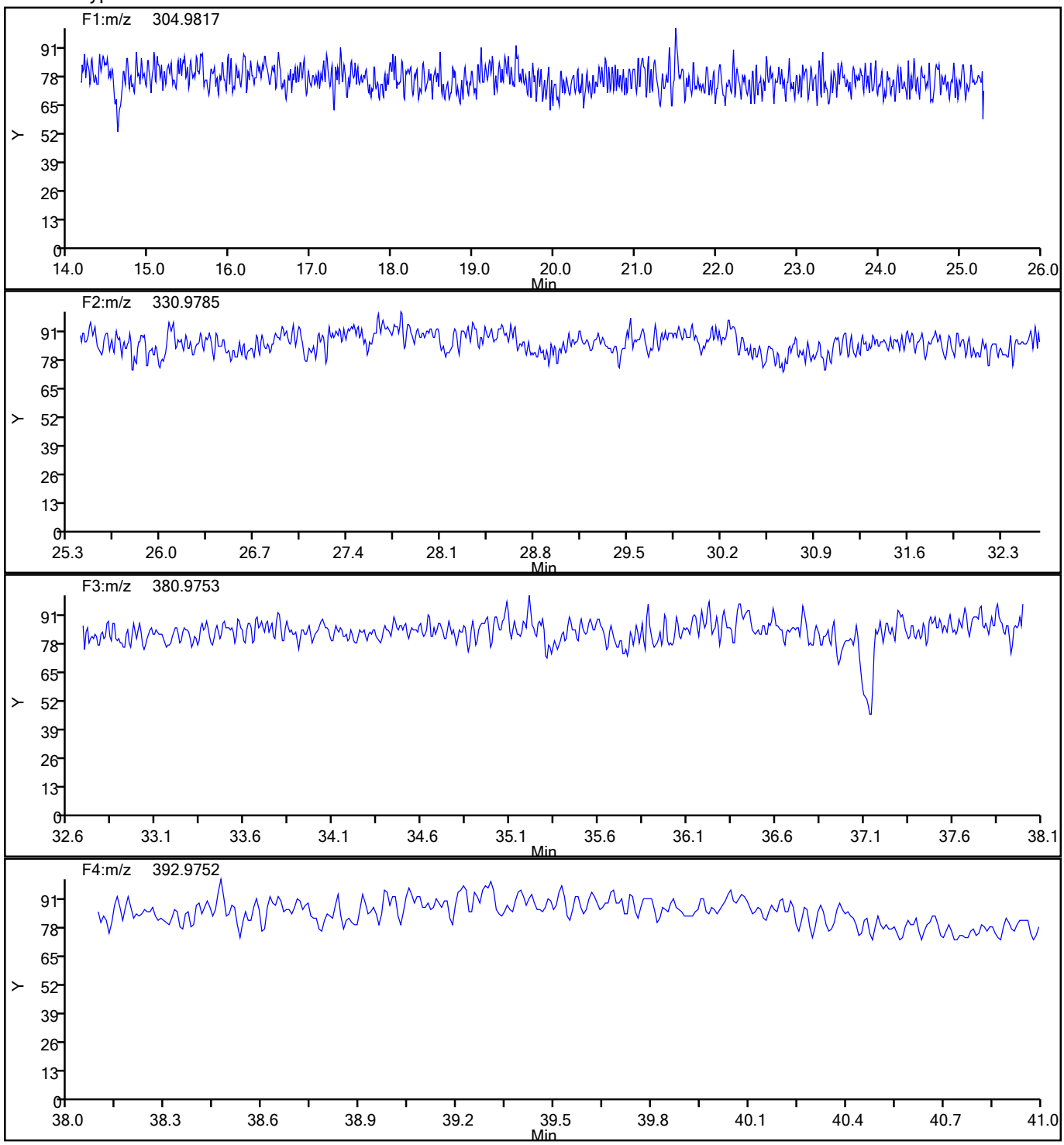

788671

Report Date: 23-Aug-2021 09:28:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_14.d		
Injection Date:	19-Aug-2021 23:38:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	517891	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

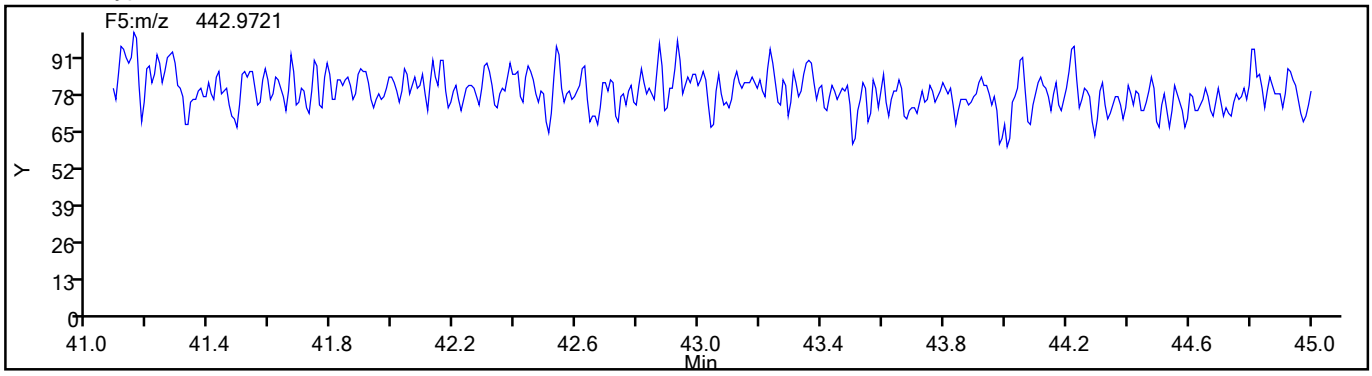

788672

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-DUP-10 RA
Lab Sample ID: 320-76901-13 RA
Matrix: Sediment
Lab File ID: 27AU2111D2_004.d
Analysis Method: 1613B
Date Collected: 07/28/2021 00:00
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.24(g)
Date Analyzed: 08/27/2021 10:57
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 18.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	27	B	1.2	0.19

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	39		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	54		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_004.d
Lims ID: 320-76901-A-13-A
Client ID: 11215702-072821-BN-DUP-10
Sample Type: Client
Inject. Date: 27-Aug-2021 10:57:18 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-13-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:49:22

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.318	68939041	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.635	35817168	0.78	1.3327	39.0	39.0	0.1656	0.1656	38.99	
2,3,7,8-TCDF	17.662	4052136	0.77	0.9978	11.3	11.3	0.0791	0.0791		M
D 13C-2,3,7,8-TCDD	16.085	21527149	0.78	0.8749	35.7	35.7	0.4352	0.4352	35.69	
2,3,7,8-TCDD	16.113	739310	0.79	1.0570	3.249	3.249	0.0876	0.0876		M
$ 37Cl4-2,3,7,8-TCDD	16.099	12908704		0.8648	21.7	21.7	0.0443	0.0443	54.13	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

788674

Report Date: 27-Aug-2021 15:52:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_004.d
Lims ID: 320-76901-A-13-A
Client ID: 11215702-072821-BN-DUP-10
Sample Type: Client
Inject. Date: 27-Aug-2021 10:57:18 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-13-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:49:22

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.318	16.284	2		30208354	6591495	9946	24865	663		
333.9339	16.318	16.284	2		38730687	8701622	13347	33367	652	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.635	17.614	1	1.081	15645995	3020907	6647	16617	454		
317.9389	17.635	17.614	1	1.081	20171173	3921240	6855	17137	572	0.78(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.662	17.628	2	1.002	1756894	315901	1158	2895	273		M
305.8987	17.649	17.628	1	1.001	2295242	422752	1033	2582	409	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.085	16.064	1	0.986	9422703	2223264	9946	24865	224		
333.9339	16.085	16.064	1	0.986	12104446	2690013	13347	33367	202	0.78(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	16.113	16.078	2	1.002	325545	69849	836	2090	84		
321.8936	16.099	16.078	1	1.001	413765	100600	984	2460	102	0.79(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8840	16.099	16.078	1	0.987	12908704	3051805	2345	5862	1301		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_004.d				
Injection Date:	27-Aug-2021 10:57:18	Instrument ID:	11D2		
Lims ID:	320-76901-A-13-A	Lab Sample ID:	320-76901-13		
Client ID:	11215702-072821-BN-DUP-10				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.66
Area: 1776752
Amount: 11.393822
Amount Units: pg/ul

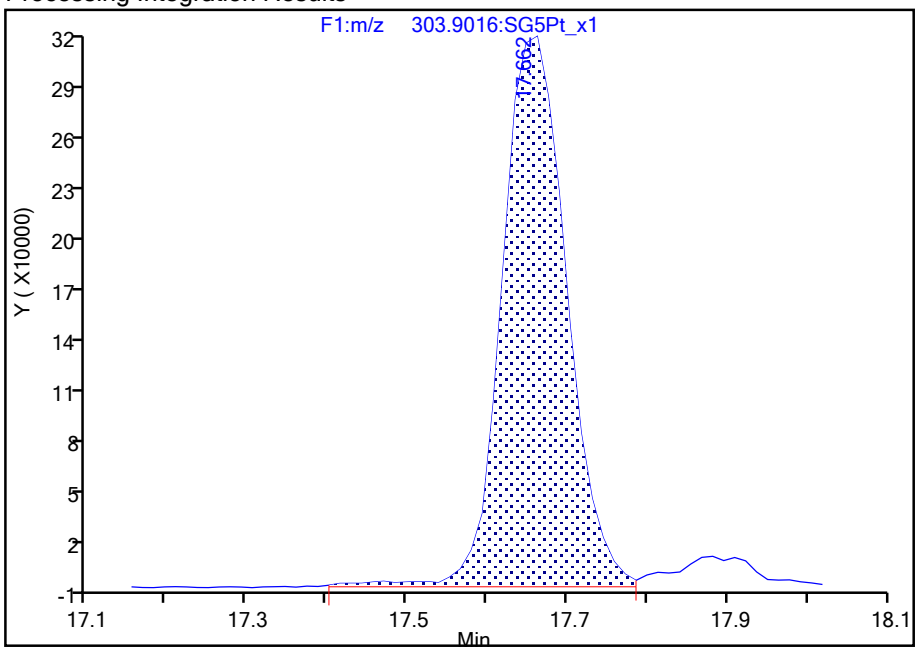

Manual Integration Results

RT: 17.66
Area: 1756894
Amount: 11.338258
Amount Units: pg/ul

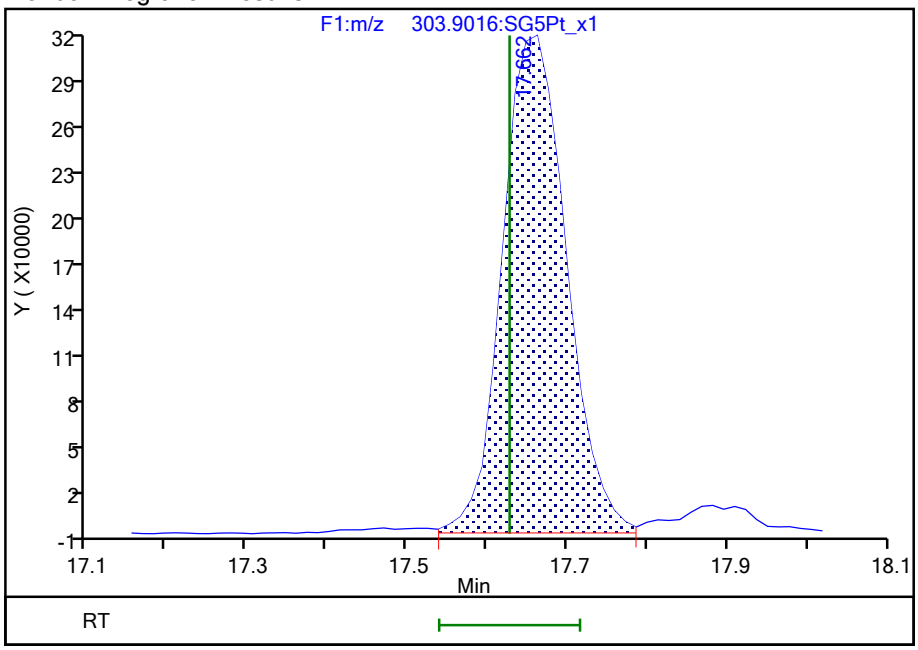

Reviewer: bennettd, 27-Aug-2021 15:48:56

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 27-Aug-2021 15:52:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_004.d		
Injection Date:	27-Aug-2021 10:57:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	520438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

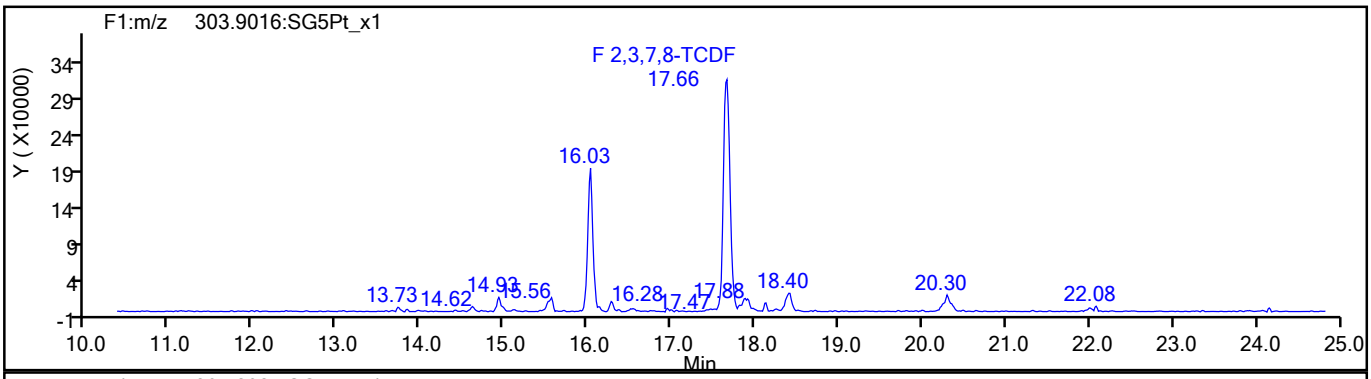

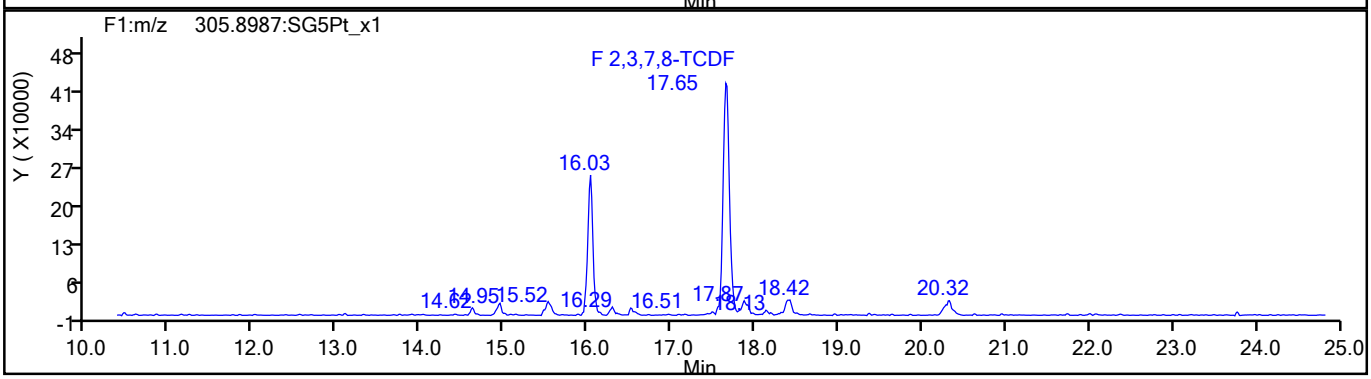

TCDF Standards

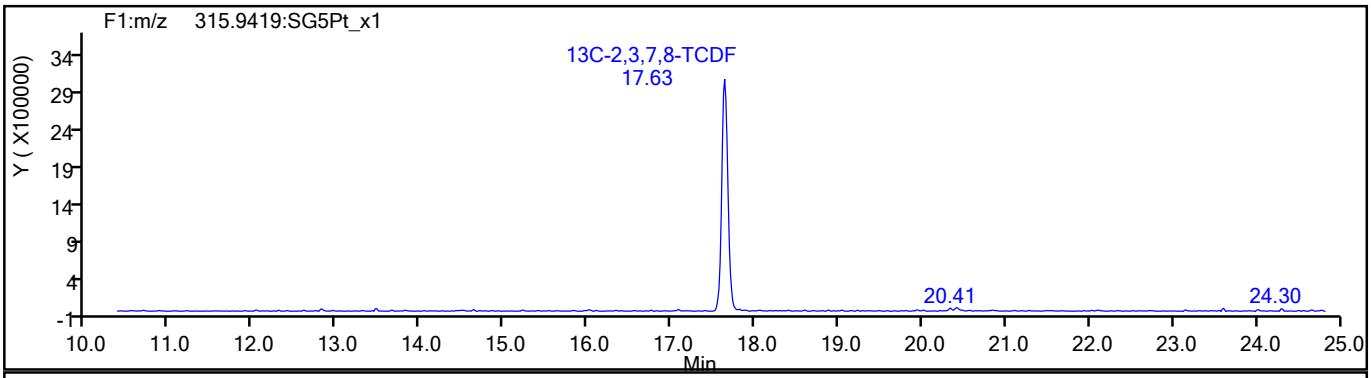

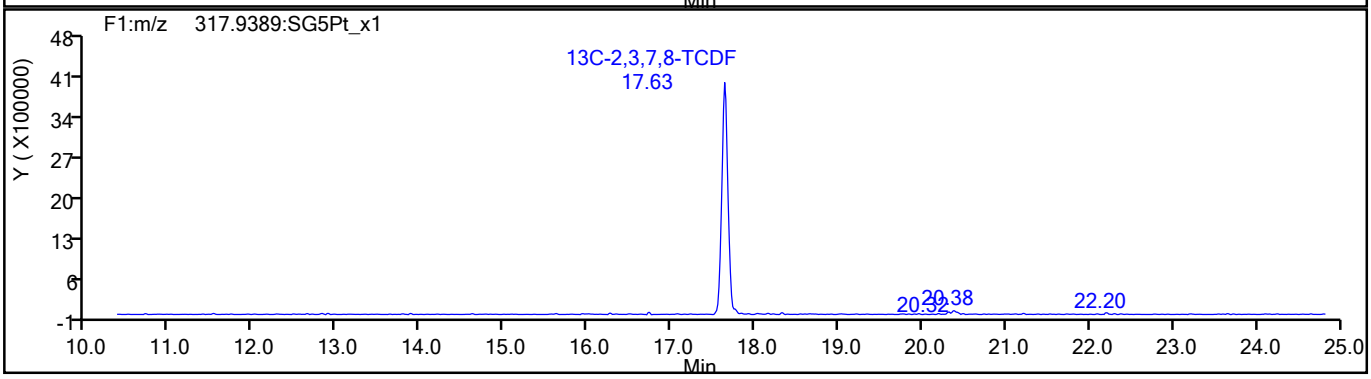

788677

Report Date: 27-Aug-2021 15:52:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_004.d		
Injection Date:	27-Aug-2021 10:57:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	520438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

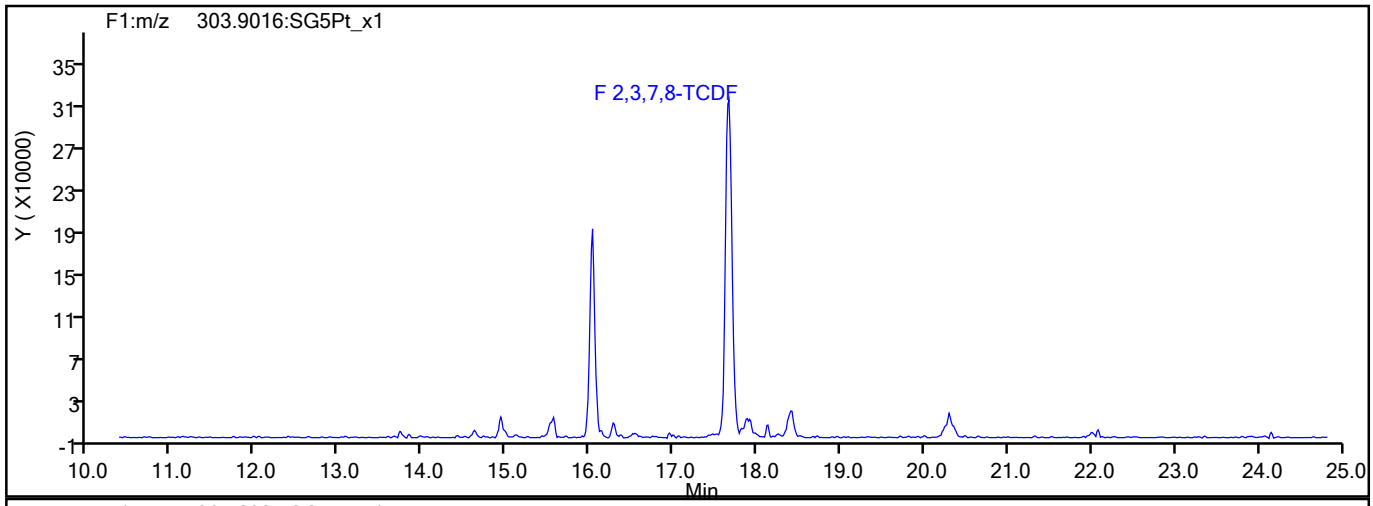

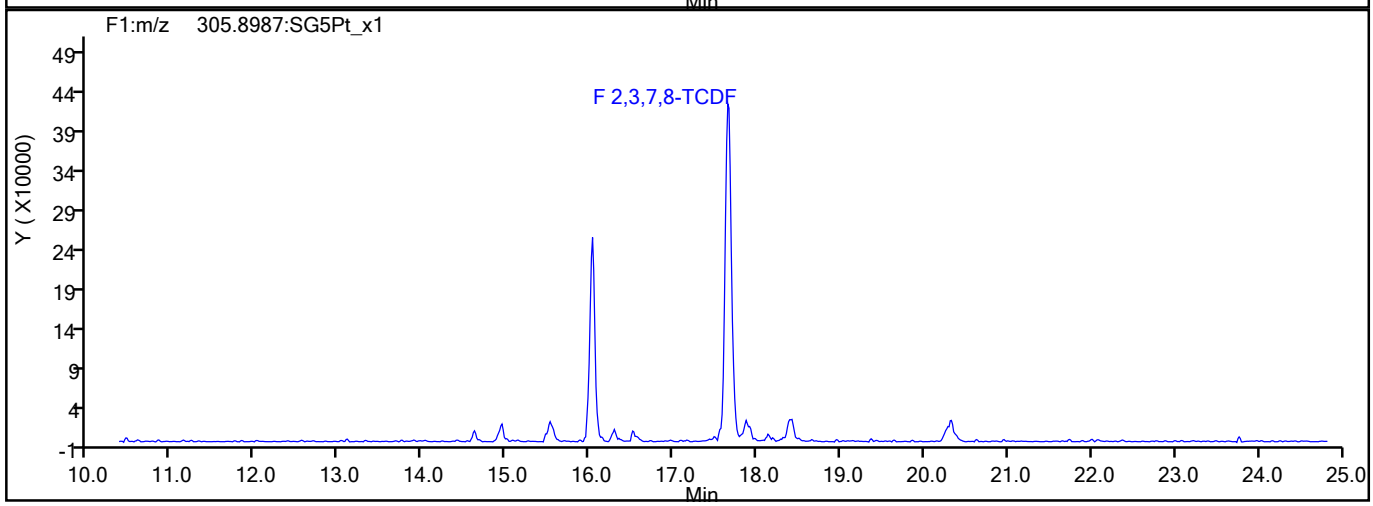

TCDF Interference Mass

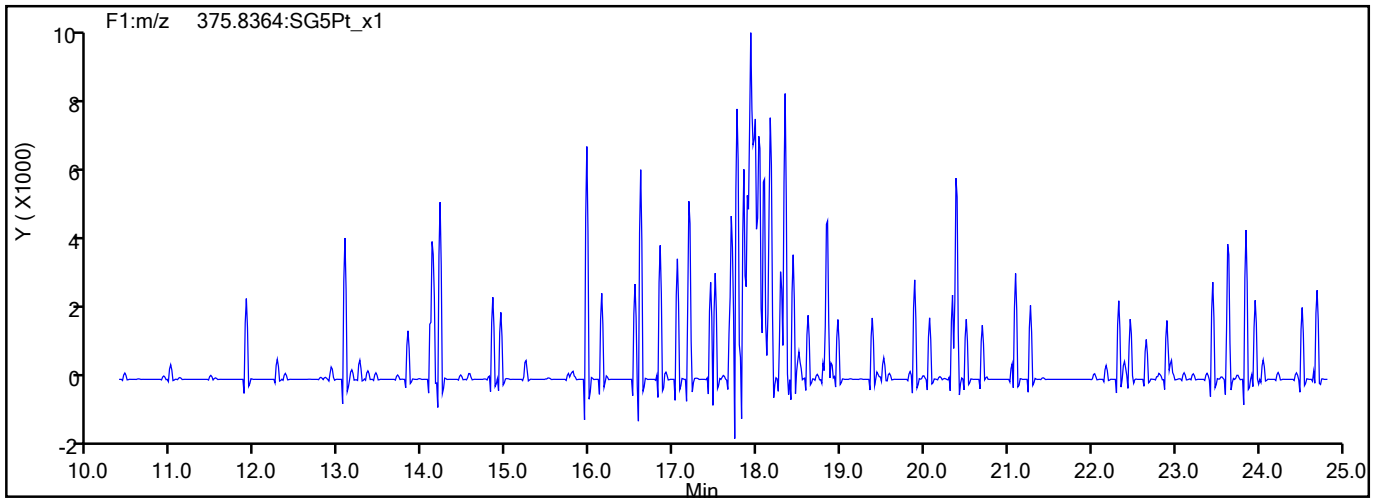

788678

Report Date: 27-Aug-2021 15:52:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_004.d		
Injection Date:	27-Aug-2021 10:57:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	520438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

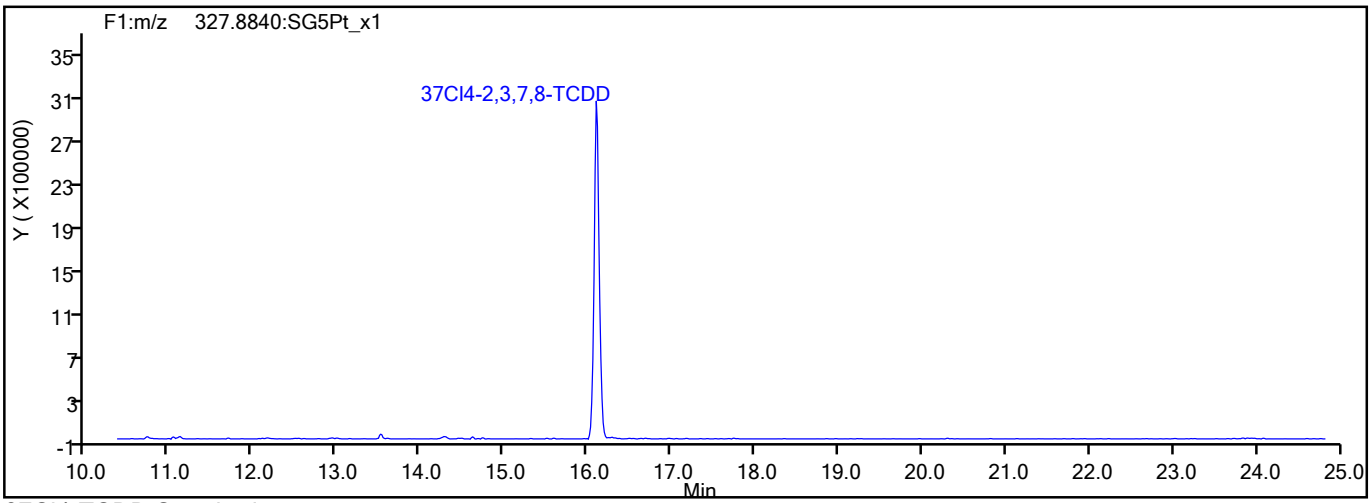

37Cl4-TCDD Standards

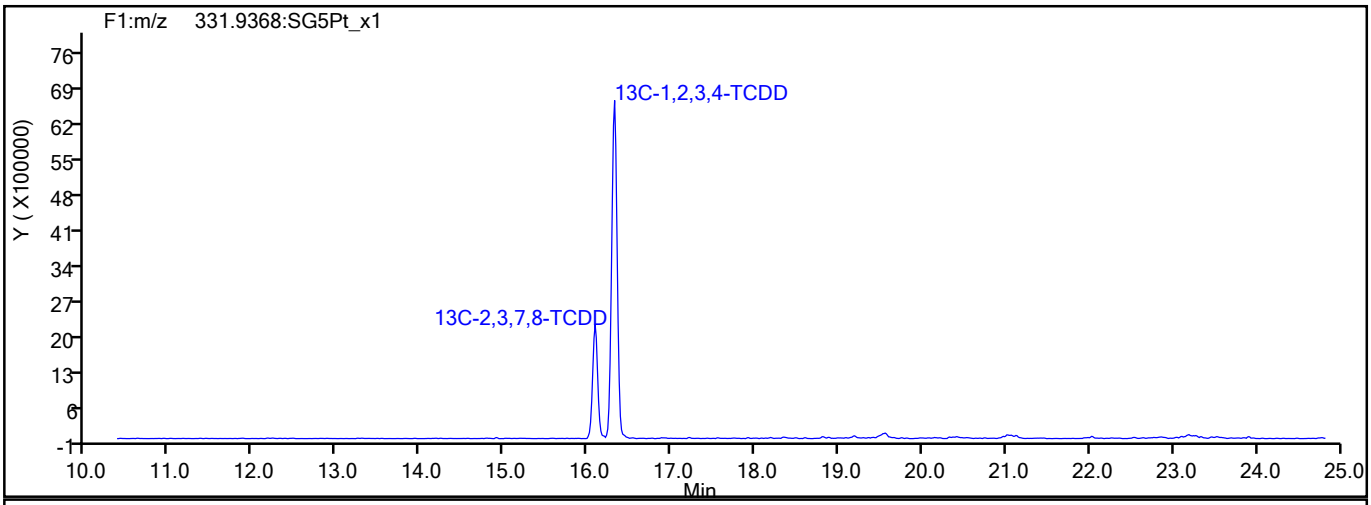

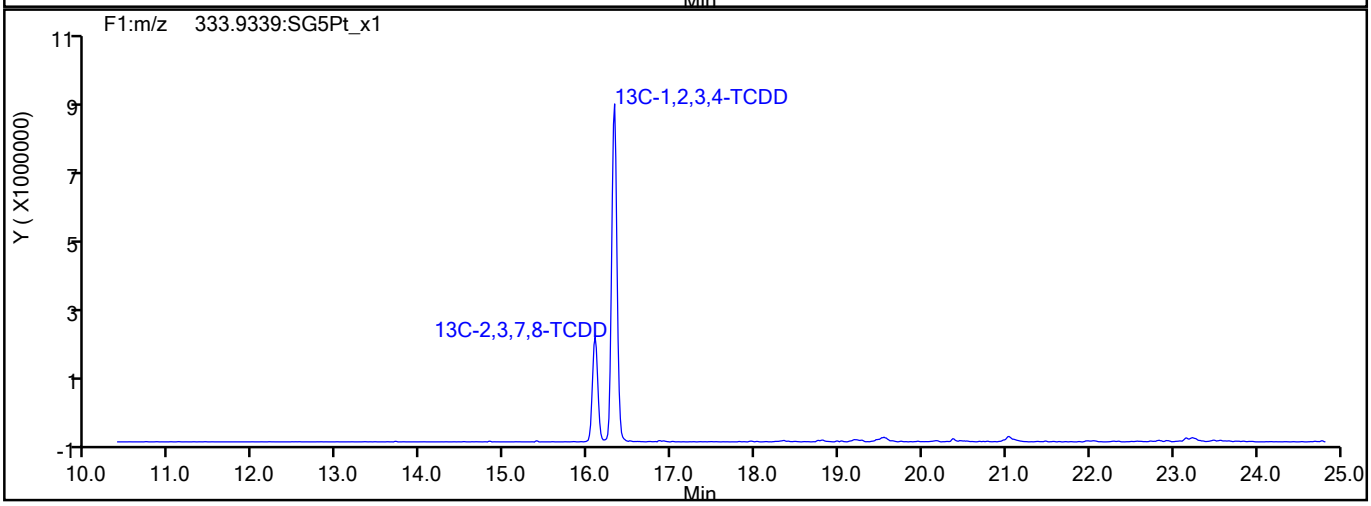

788679

Report Date: 27-Aug-2021 15:52:31 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_004.d		
Injection Date:	27-Aug-2021 10:57:18	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-DUP-10		
Worklist#:	520438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

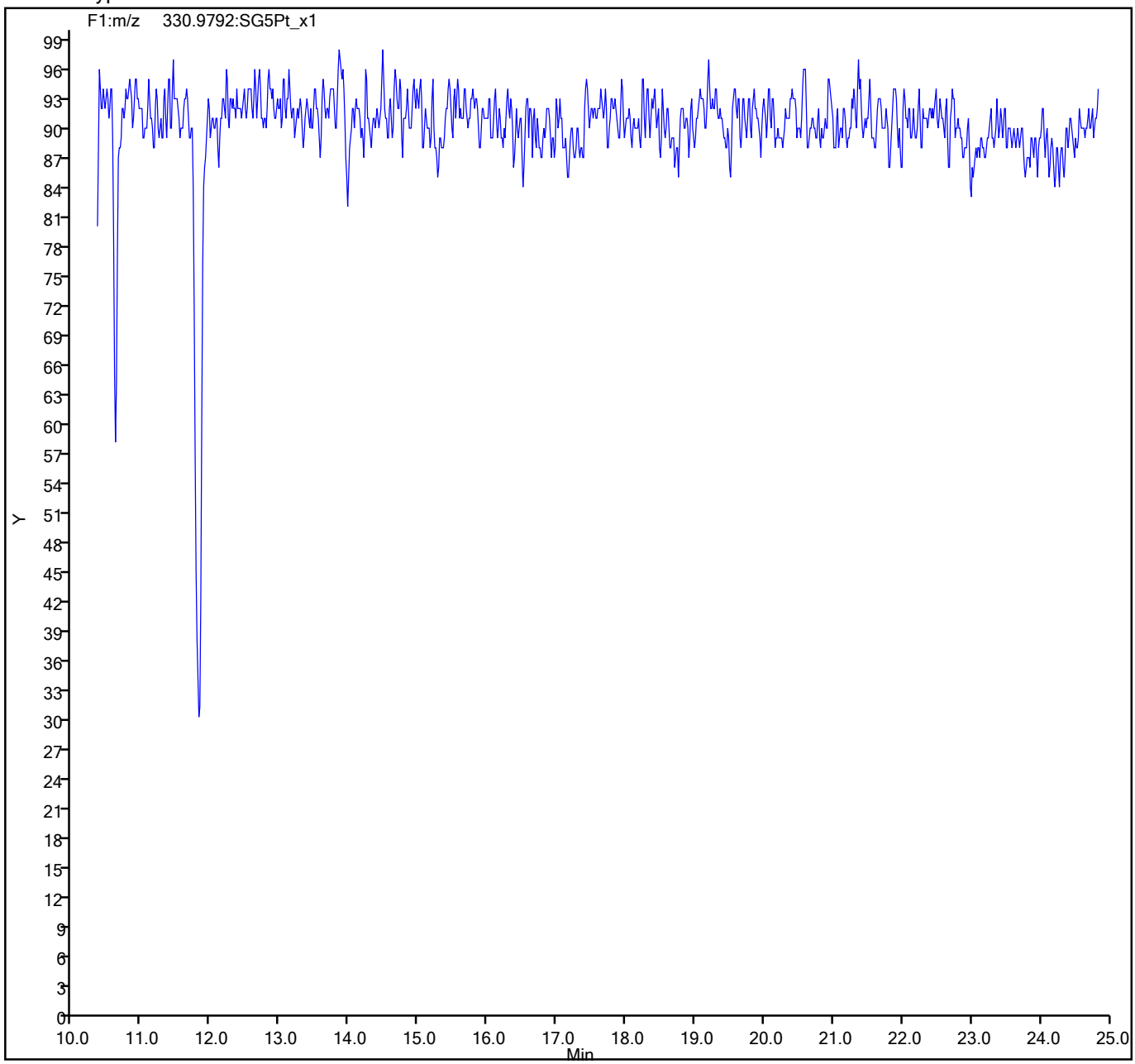

788680

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.0287	0.8698	1.0458	1.1094	1.0657	AveID		1.0239				8.9		20.0			
2,3,7,8-TCDD	1.2575	1.0971	1.2651	1.3434	1.3075	AveID		1.2541				7.5		20.0			
1,2,3,7,8-PeCDF	1.0739	0.9128	1.0891	1.1370	1.0928	AveID		1.0611				8.1		20.0			
2,3,4,7,8-PeCDF	1.0408	0.8610	1.0466	1.1082	1.0356	AveID		1.0184				9.1		20.0			
1,2,3,7,8-PeCDD	1.0578	0.9031	1.0680	1.1310	1.0823	AveID		1.0484				8.2		20.0			
1,2,3,4,7,8-HxCDF	1.1222	0.9192	1.1025	1.1936	1.0881	AveID		1.0851				9.3		20.0			
1,2,3,6,7,8-HxCDF	1.1488	0.9637	1.1546	1.1966	1.1664	AveID		1.1260				8.2		20.0			
2,3,4,6,7,8-HxCDF	1.2223	0.9863	1.1858	1.2415	1.2018	AveID		1.1675				8.9		20.0			
1,2,3,4,7,8-HxCDD	1.0979	0.8906	1.1304	1.1671	1.0341	AveID		1.0640				10.2		20.0			
1,2,3,6,7,8-HxCDD	1.0294	0.8529	1.0113	1.0930	1.0138	AveID		1.0001				8.9		20.0			
1,2,3,7,8,9-HxCDD	1.1551	0.9428	1.1999	1.2421	1.1227	AveID		1.1325				10.2		20.0			
1,2,3,7,8,9-HxCDF	1.1733	1.0136	1.1898	1.2479	1.2072	AveID		1.1664				7.7		20.0			
1,2,3,4,6,7,8-HpCDF	1.4474	1.2413	1.4986	1.5485	1.4706	AveID		1.4413				8.2		20.0			
1,2,3,4,6,7,8-HpCDD	1.1119	0.9539	1.1176	1.1675	1.1205	AveID		1.0943				7.5		20.0			
1,2,3,4,7,8,9-HpCDF	1.3136	1.1269	1.3622	1.4520	1.3321	AveID		1.3174				9.0		20.0			
OCDD	1.1009	0.9635	1.1652	1.1829	1.1226	AveID		1.1070				7.8		20.0			
OCDF	1.3863	1.1912	1.5145	1.5858	1.5129	AveID		1.4382				10.8		20.0			
13C-2,3,7,8-TCDF	1.6500	1.5631	1.6241	1.6170	1.6703	Ave		1.6249				2.5		35.0			
13C-2,3,7,8-TCDD	0.9128	0.8588	0.8965	0.8940	0.9345	Ave		0.8993				3.1		35.0			
13C-1,2,3,7,8-PeCDF	1.1977	1.1539	1.2193	1.2121	1.2674	Ave		1.2101				3.4		35.0			
13C-2,3,4,7,8-PeCDF	1.2269	1.1924	1.2487	1.2129	1.3165	Ave		1.2395				3.8		35.0			
13C-1,2,3,7,8-PeCDD	0.7558	0.7433	0.7524	0.7498	0.8049	Ave		0.7612				3.3		35.0			
13C-1,2,3,4,7,8-HxCDF	1.0875	1.1006	1.0706	1.0371	1.1225	Ave		1.0837				3.0		35.0			
13C-1,2,3,6,7,8-HxCDF	1.1466	1.1401	1.1115	1.1251	1.1163	Ave		1.1279				1.3		35.0			
13C-2,3,4,6,7,8-HxCDF	1.0781	1.0785	1.0541	1.0562	1.0518	Ave		1.0637				1.3		35.0			
13C-1,2,3,4,7,8-HxCDD	0.7413	0.7515	0.6926	0.7049	0.7769	Ave		0.7334				4.7		35.0			
13C-1,2,3,6,7,8-HxCDD	0.8884	0.8870	0.8694	0.8685	0.8876	Ave		0.8802				1.2		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9787	0.9851	0.9497	0.9522	0.9722	Ave		0.9676				1.6		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.8030	0.7818	0.7501	0.7625	0.7677	Ave		0.7730				2.6		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6554	0.6478	0.6343	0.6458	0.6528	Ave		0.6472				1.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6985	0.7093	0.6800	0.6816	0.7346	Ave		0.7008				3.2		35.0			
13C-OCDD	0.4462	0.4357	0.4273	0.4575	0.4691	Ave		0.4472				3.7		35.0			
37Cl4-2,3,7,8-TCDD	0.9705	0.9794	1.1718	1.1876	1.2264	Ave		1.1071				11.1					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	557485	1709191	10638776	44524782	204575642	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	376984	1184284	7104238	29808948	140421448	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	2112140	6620354	41588176	171023920	795873691	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	2096967	6452410	40928436	166805723	783403837	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	1312779	4219570	25165054	105236005	500555284	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	1949462	6041767	37525146	155057762	737075796	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	2104086	6561860	40802767	168618976	785709889	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	2104896	6352404	39741365	164241378	762810877	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	1300030	3996910	24891170	103044220	484857042	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	1460747	4517909	27953752	118900298	543061818	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	1503407	4612548	29794954	122394998	563888565	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	1834100	5963032	35924190	148834491	708280047	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	1856599	5795616	35740964	147892240	681312007	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	1164074	3690749	22538791	94435922	441437476	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	1465634	4773949	29450636	123968724	590555312	2.50	10.0	50.0	200	1000
OCDD		AveID	1569338	5013385	31656667	135570174	635652839	5.00	20.0	100	400	2000
OCDF		AveID	1976175	6198469	41147202	181747068	856685987	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	108384725	98246522	101724636	100332269	95980421	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	59957723	53975587	56155483	55471422	53698206	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	78674290	72525655	76368219	75205597	72829681	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	80591659	74944110	78214582	75259591	75649463	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	49643581	46721712	47124414	46524396	46251010	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	69484482	65726932	68075509	64951889	67741189	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	73262388	68089005	70677463	70459920	67363664	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	68885161	64406928	67028498	66145684	63471184	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	47363504	44877133	44039927	44144841	46886171	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	56759108	52974056	55284532	54392394	53564396	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	62528954	58828058	60389284	59636084	58669892	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	51308225	46691158	47697671	47752972	46328151	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	41876556	38689128	40333717	40442950	39395832	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	44628352	42362179	43238622	42687625	44333848	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	57018462	52034518	54338243	57303880	56623863	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	318727	1231219	7339670	29474361	140953034	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\26JL2110D5.SPL
Last Modified: Monday, July 26, 2021 16:58:03 Pacific Daylight Time
Printed: Tuesday, July 27, 2021 07:40:45 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	26JL2110D5_1	WDM HRDXNCP_00042	WDM 072621	Tray01:1	Dioxin		SMA
2	26JL2110D5_2	SB Solvent Blank C-14	SB 072621	Tray01:3			SMA
3	26JL2110D5_3	CS-2 HRDXNL2_00032	IC 072621	Tray01:4	Dioxin		SMA
4	26JL2110D5_4	CS-3 HRDXNL3_00029	IC 072621A	Tray01:5	Dioxin		SMA
5	26JL2110D5_5	CS-4 HRDXNL4_00099	IC 072621B	Tray01:2	Dioxin		SMA
6	26JL2110D5_6	CS-5 HRDXNL5_00032	IC 072621C	Tray01:6	Dioxin		SMA
7	26JL2110D5_7	CS-6 HRDXNL6_00028	IC 072621D	Tray01:7	Dioxin		SMA
8	26JL2110D5_8	SB Solvent Blank C-14	SB 072621A	Tray01:3			SMA
9	26JL2110D5_9	ICV HRDXNIC_00047	ICV 072621	Tray01:8	Dioxin		SMA
10	26JL2110D5_10	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS
11	26JL2110D5_11	WDM HRDXNCP_00042	WDM 031621C	Tray01:1	Dioxin		KSS
12	26JL2110D5_12	SB Solvent Blank C-14	SB 072621B	Tray01:3			KSS
13	26JL2110D5_13	mb 320-508015/1-a	mb 320-508015/1-a	Tray01:9	1613B/8290/Water	D255	KSS
14	26JL2110D5_14	lcs 320-508015/2-a	lcs 320-508015/2-a	Tray01:10	1613B/8290/Water		KSS
15	26JL2110D5_15	lcsd 320-508015/3-a	lcsd 320-508015/3-a	Tray01:11	1613B/8290/Water		KSS
16	26JL2110D5_16	320-76081-a-3-c	320-76081-a-3-c	Tray01:12	1613B/8290/Water		KSS
17	26JL2110D5_17	SB Solvent Blank C-14	SB 072621C	Tray01:3			KSS
18	26JL2110D5_18	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS

LOGFILE CHECKED
DB 7/27/21

788686

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:18:21 Pacific Daylight Time

M 292.9824 R 12499

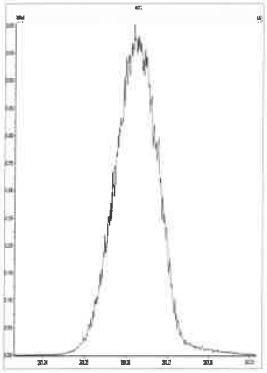

M 304.9824 R 12752

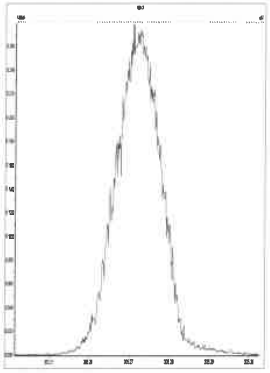

M 318.9792 R 13230

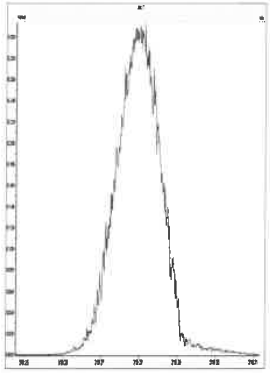

M 330.9792 R 12691

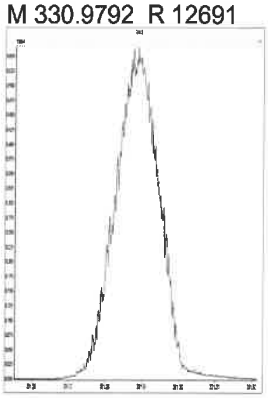

M 342.9792 R 12885

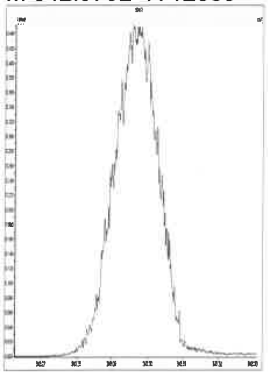

M 354.9792 R 12138

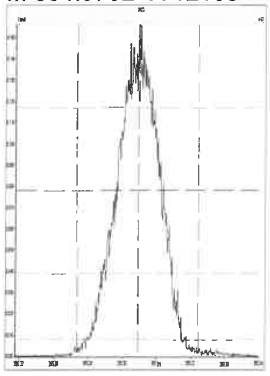

M 366.9792 R 13090

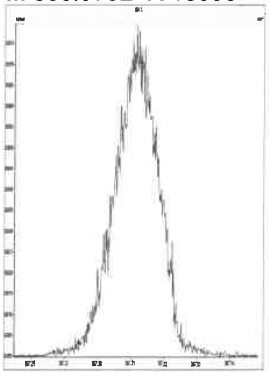

M 380.9760 R 12562

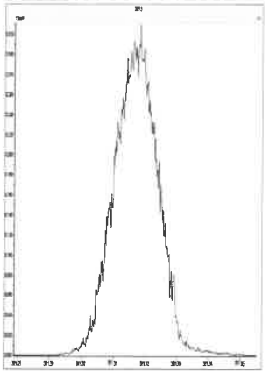

M 392.9760 R 12753

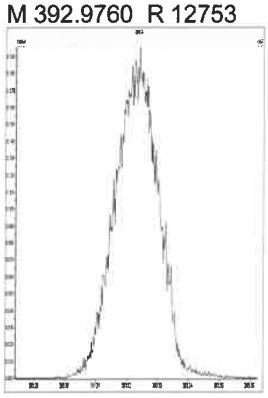

M 404.9760 R 12137

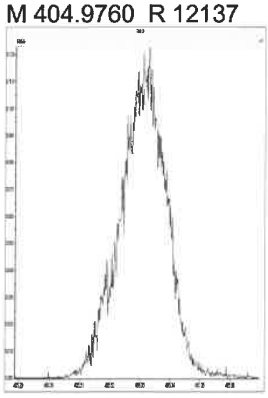

M 416.9760 R 12563

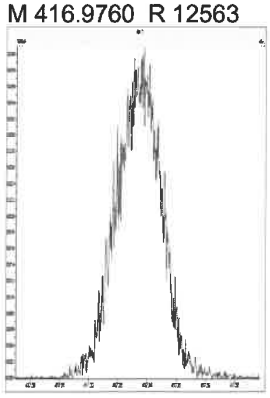

788687

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:04 Pacific Daylight Time

M 318.9792 R 13300

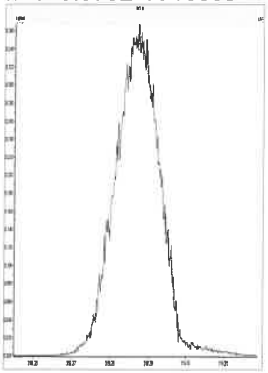

M 330.9792 R 12691

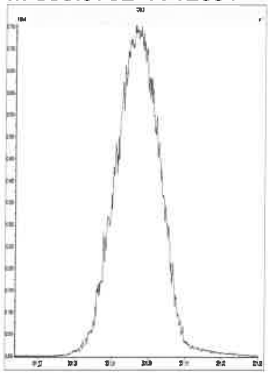

M 342.9792 R 12499

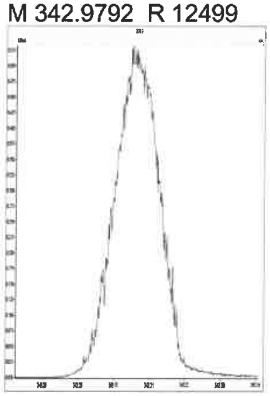

M 354.9792 R 12374

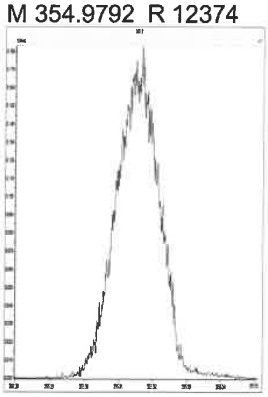

M 366.9792 R 12691

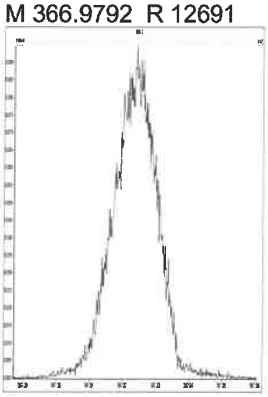

M 380.9760 R 12690

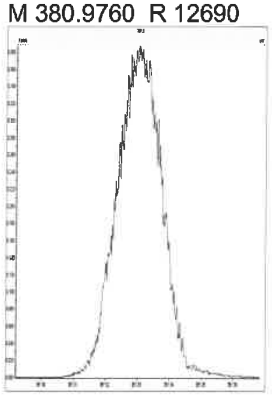

M 392.9760 R 12885

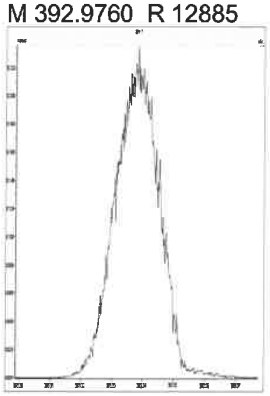

M 404.9760 R 12817

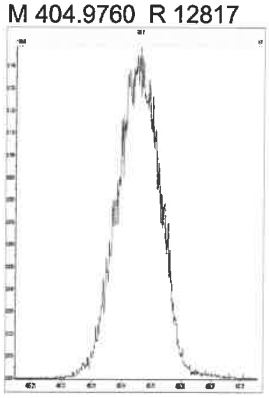

M 416.9760 R 12954

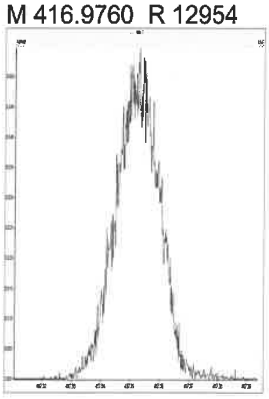

788688

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:43 Pacific Daylight Time

M 366.9792 R 12440

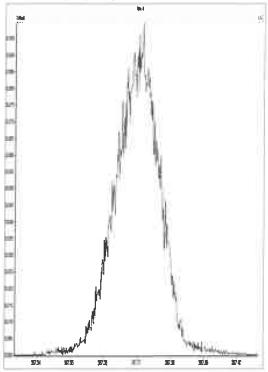

M 380.9760 R 12955

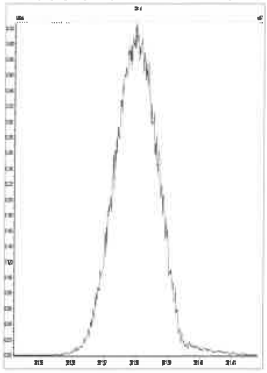

M 392.9760 R 12690

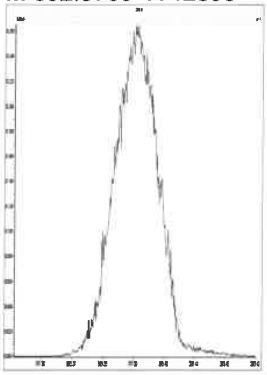

M 404.9760 R 12957

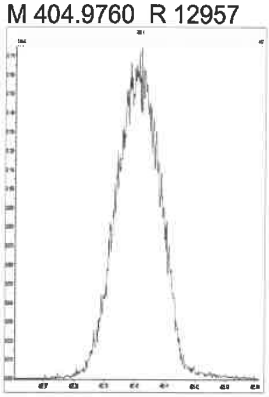

M 416.9760 R 13516

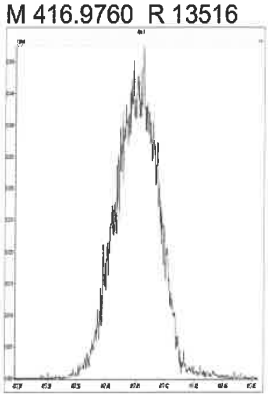

M 430.9728 R 12564

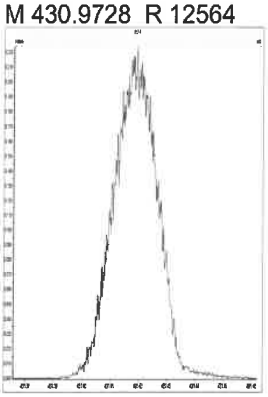

M 442.9728 R 12953

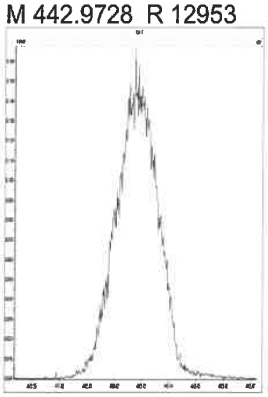

M 454.9728 R 13226

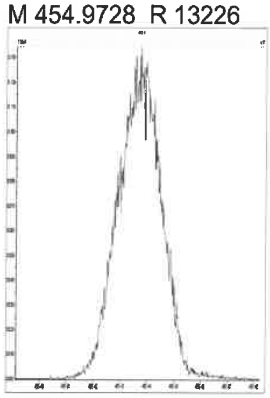

788689

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:20:01 Pacific Daylight Time

M 380.9760 R 12885

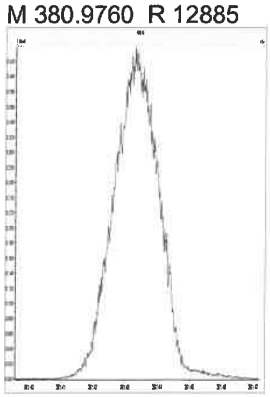

M 392.9760 R 12955

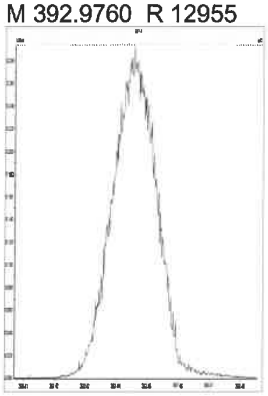

M 404.9760 R 12756

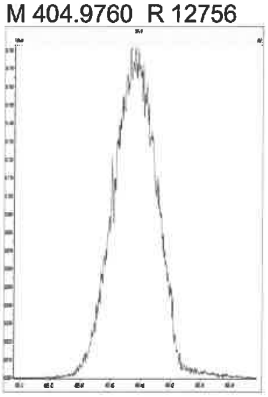

M 416.9760 R 13368

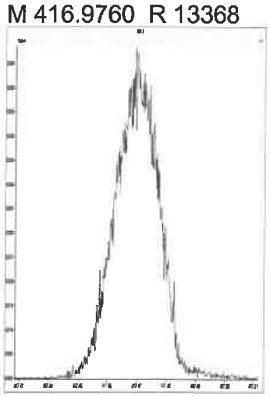

M 430.9728 R 12758

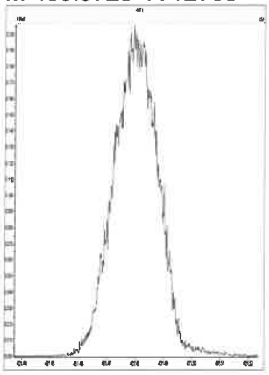

M 442.9728 R 13229

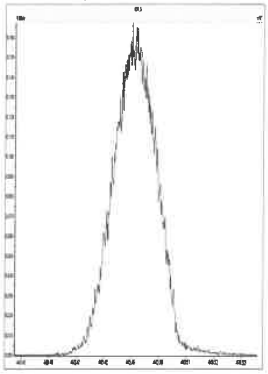

M 454.9728 R 13737

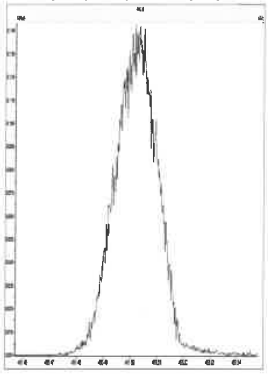

M 466.9728 R 12952

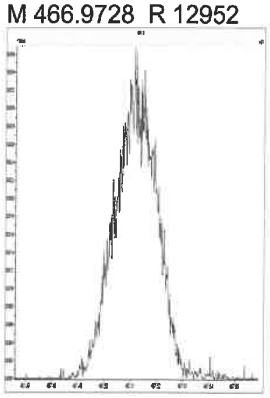

M 480.9696 R 12819

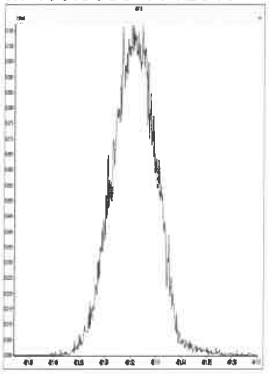

788690

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:21:28 Pacific Daylight Time

M 380.9760 R 12630

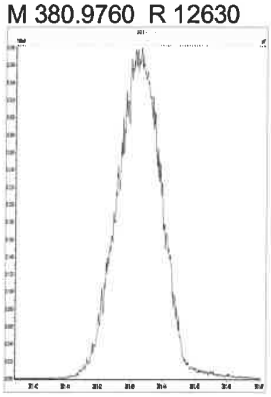

M 392.9760 R 12687

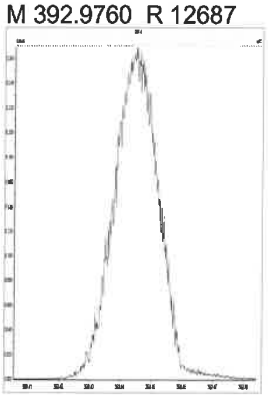

M 404.9760 R 13441

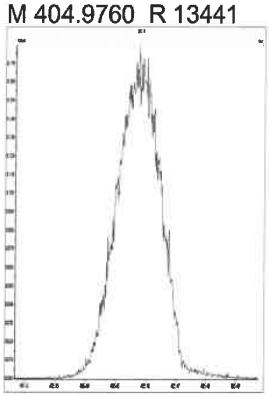

M 416.9760 R 12886

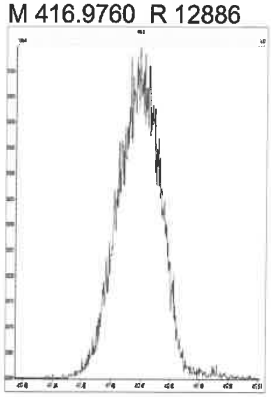

M 430.9728 R 12952

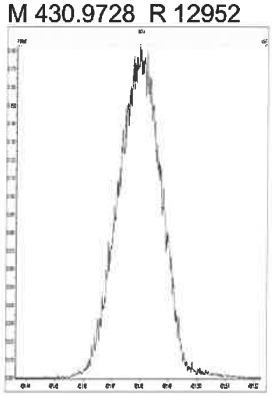

M 442.9728 R 12564

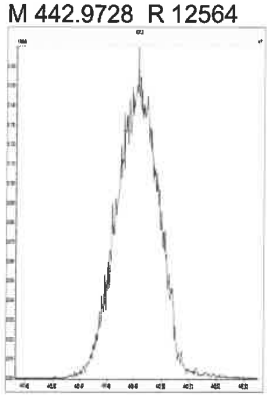

M 454.9728 R 13228

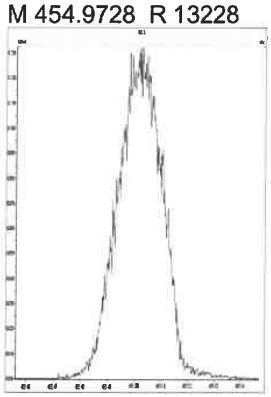

M 466.9728 R 12689

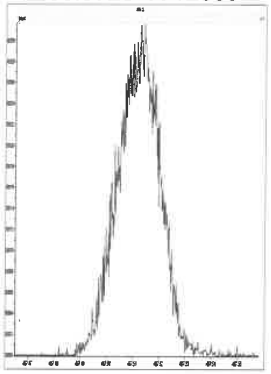

M 480.9696 R 13226

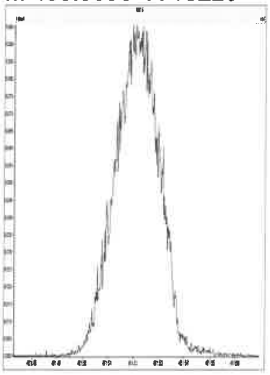

M 492.9696 R 13090

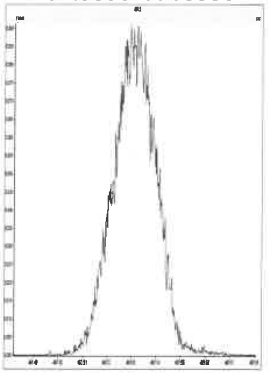

M 504.9696 R 13021

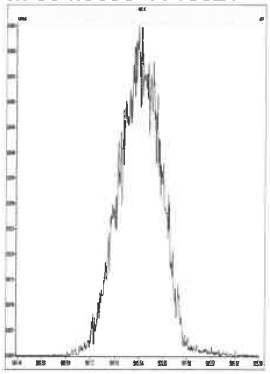

M 516.9697 R 13811

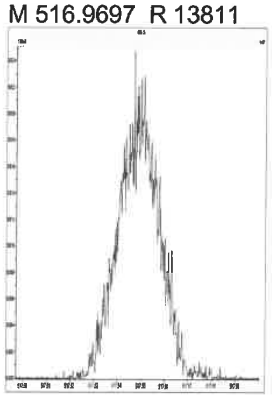

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M 292.9824_R 12322

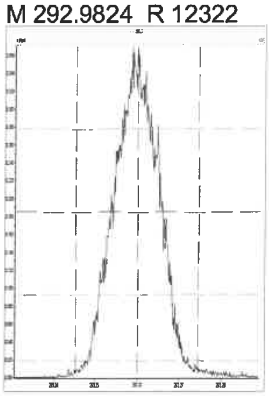

M 304.9824_R 12923

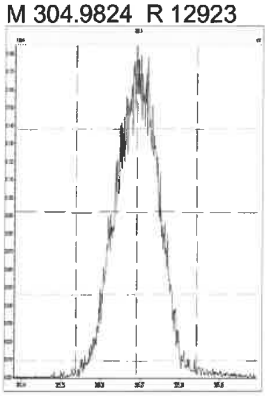

M 318.9792_R 12953

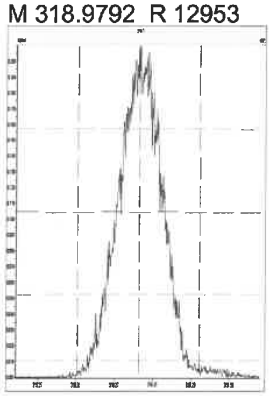

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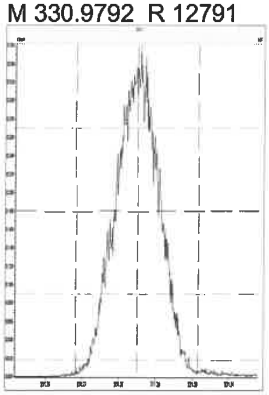

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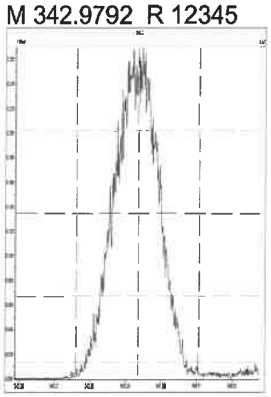

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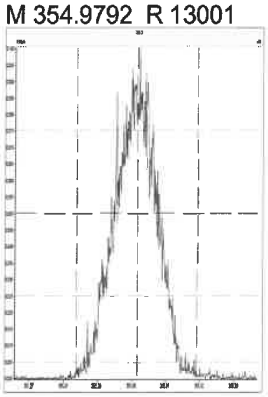

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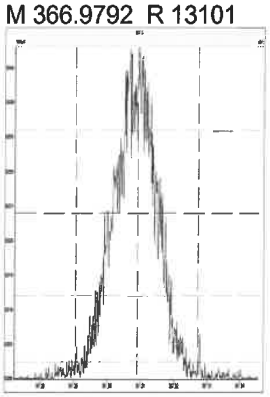

M 380.9760_R 13055

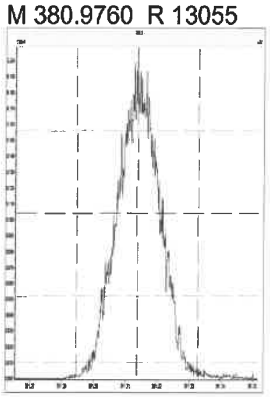

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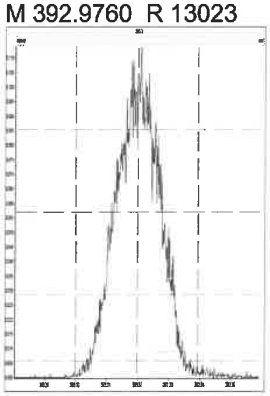

M 404.9760_R 13233

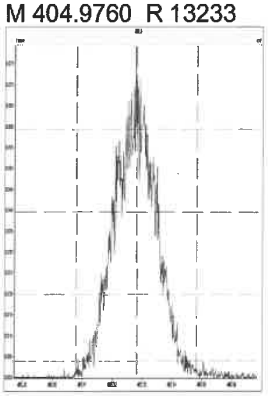

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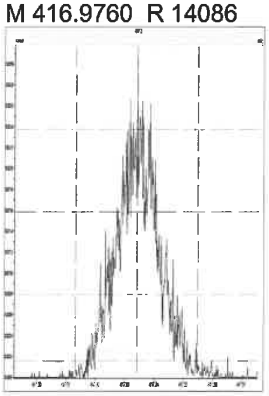

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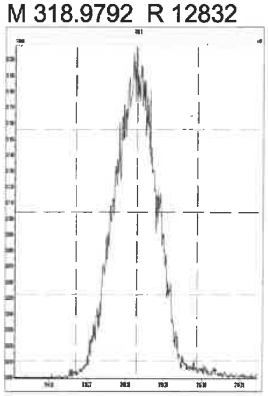

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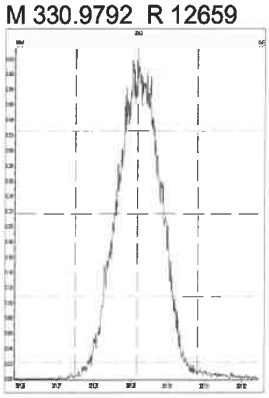

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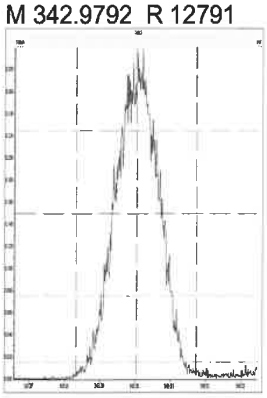

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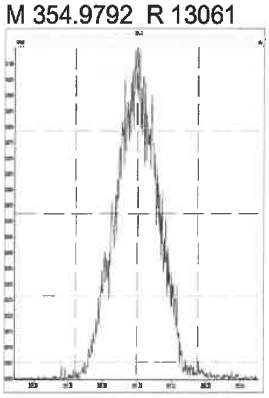

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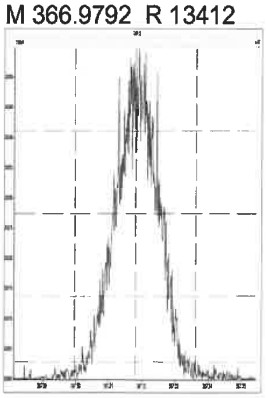

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M 380.9760 R 13021

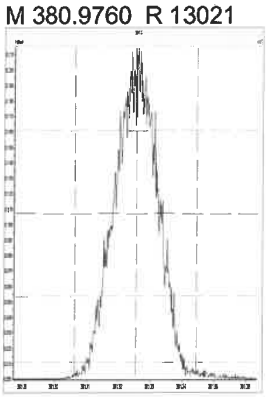

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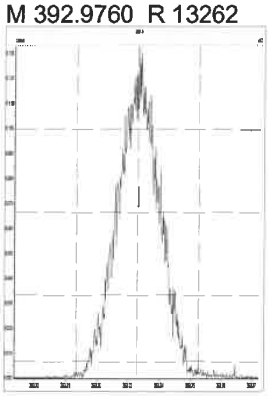

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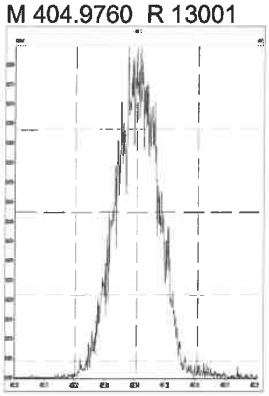

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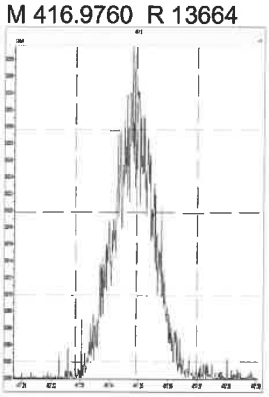

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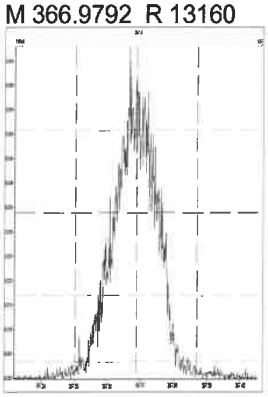

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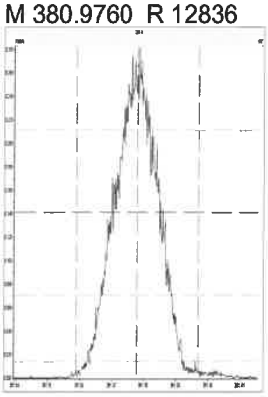

M 392.9760 R 12820

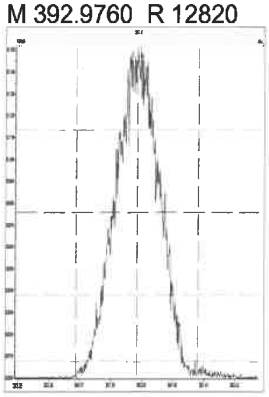

M 404.9760 R 13479

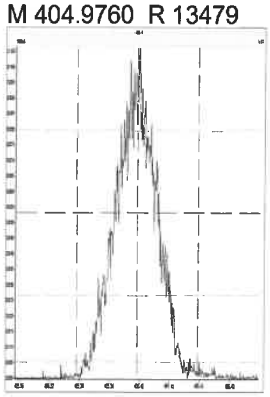

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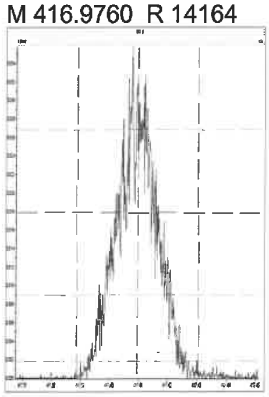

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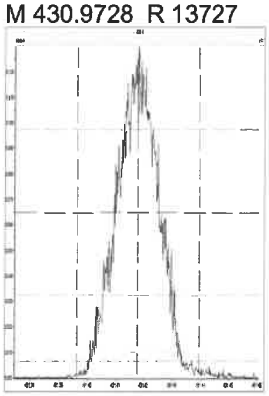

M 442.9728 R 13415

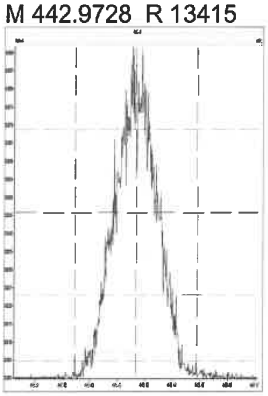

M 454.9728 R 13335

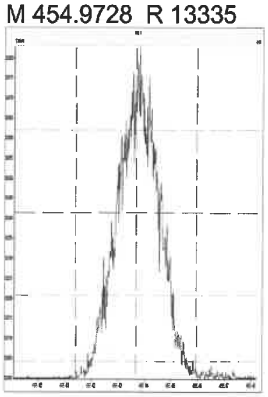

M 380.9760 R 13021

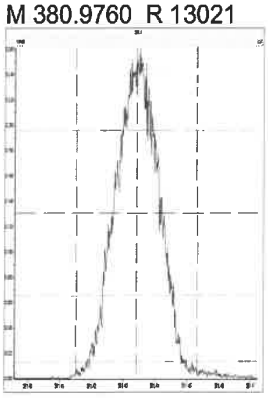

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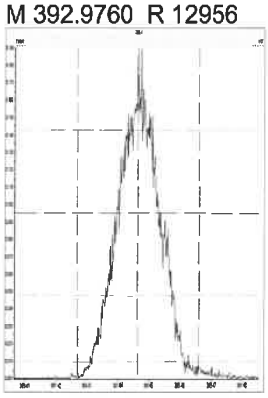

M 404.9760 R 13194

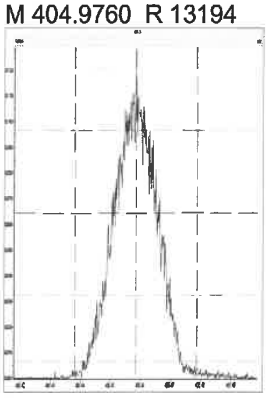

M 416.9760 R 13592

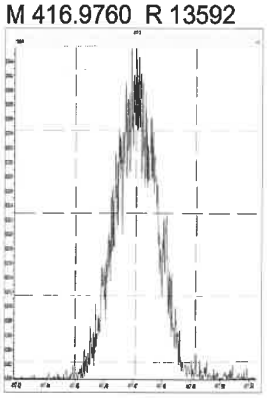

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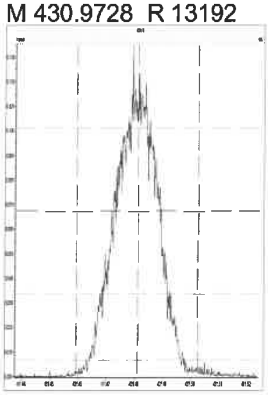

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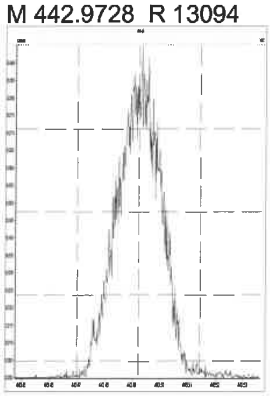

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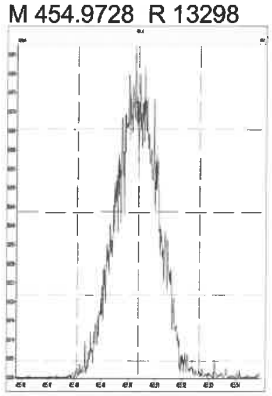

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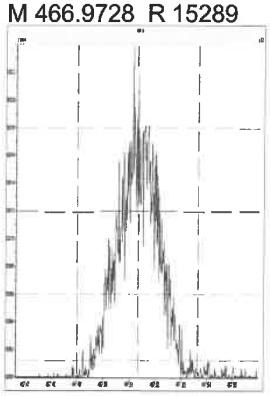

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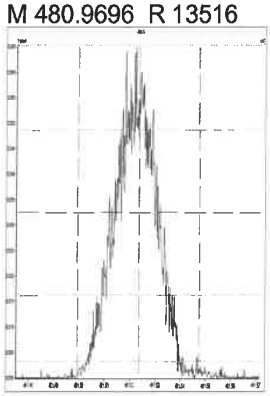

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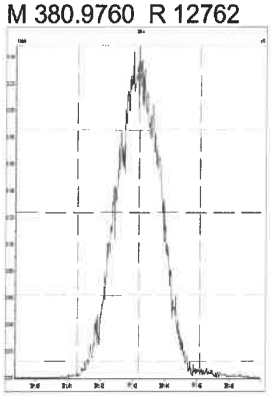

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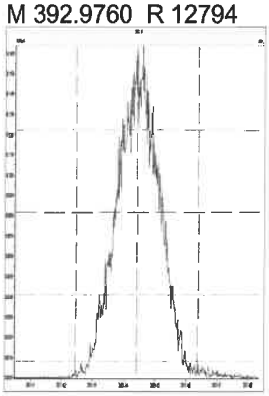

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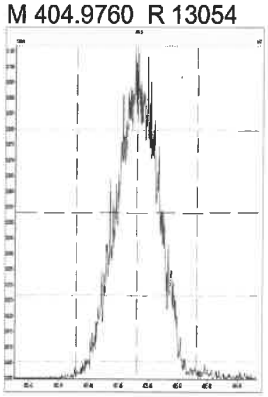

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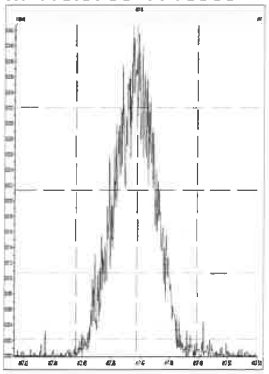

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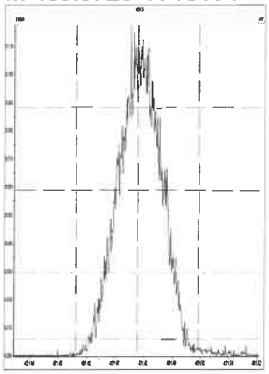

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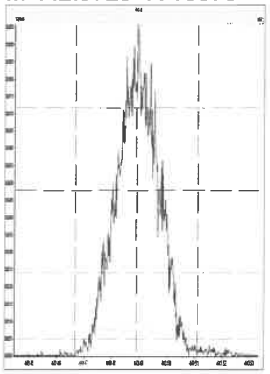

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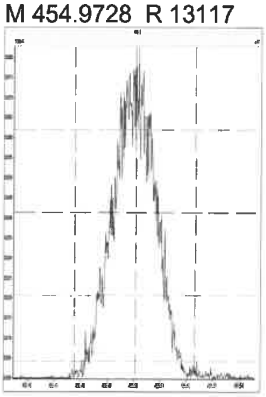

M 466.9728_R 14253

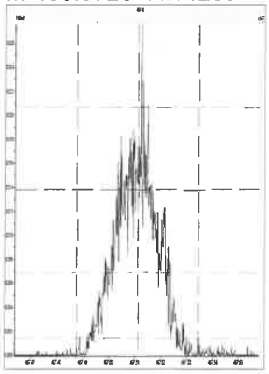

M 480.9696_R 13737

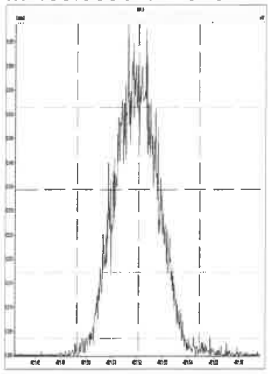

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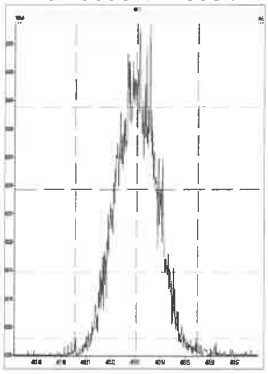

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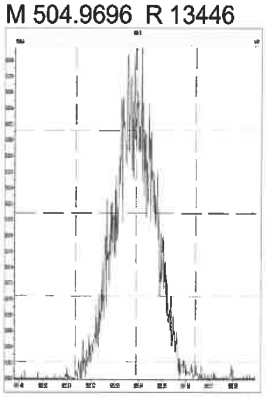

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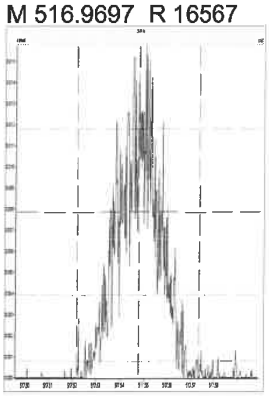

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M 292.9824 R 12376

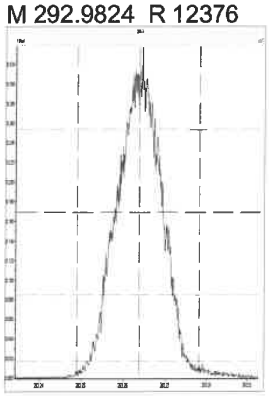

M 304.9824 R 12412

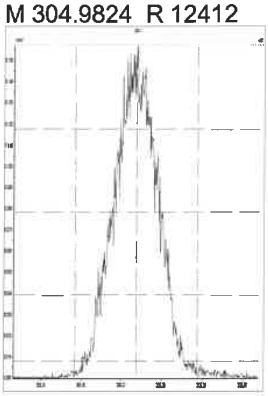

M 318.9792 R 12886

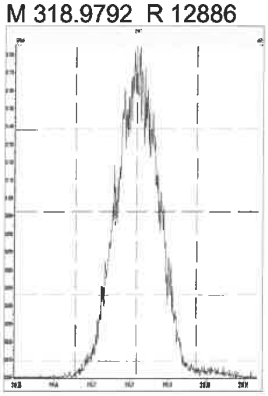

M 330.9792 R 12820

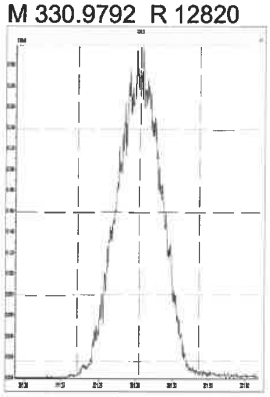

M 342.9792 R 12788

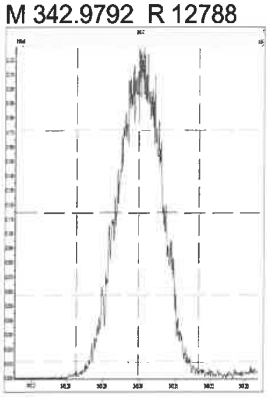

M 354.9792 R 12991

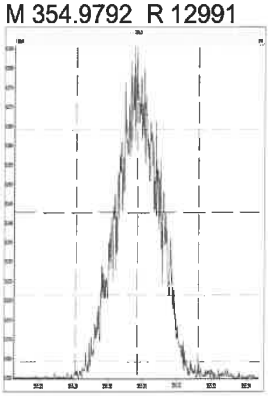

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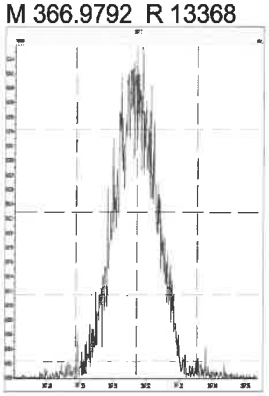

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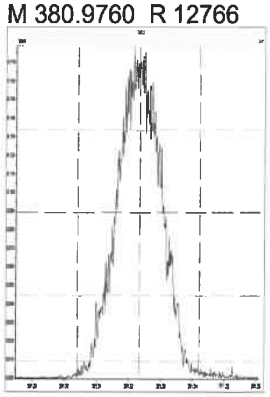

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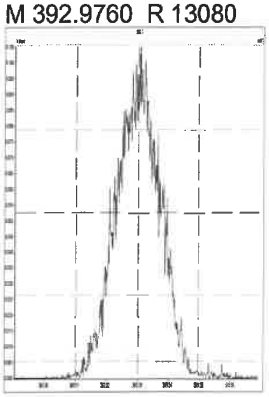

M 404.9760 R 13514

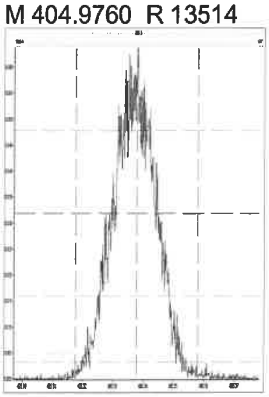

M 416.9760 R 14713

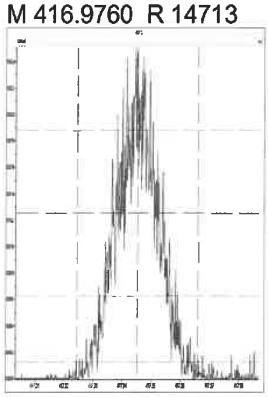

M 318.9792 R 12628

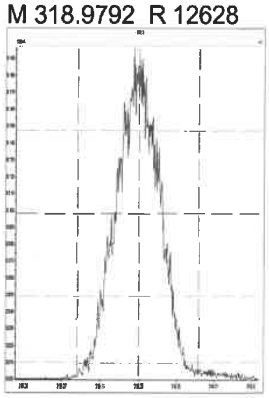

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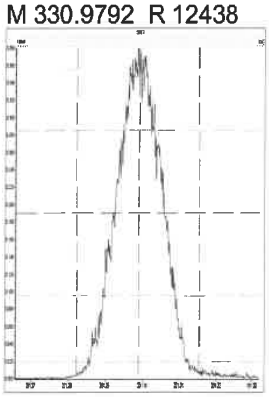

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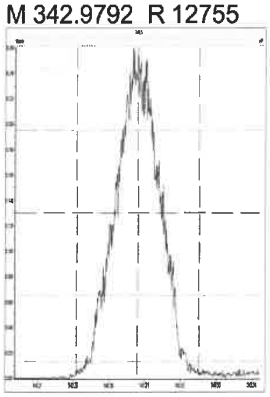

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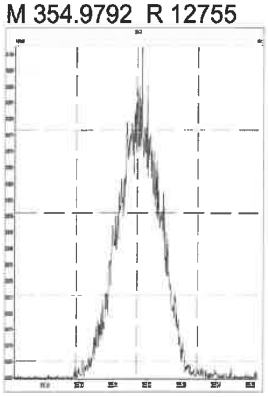

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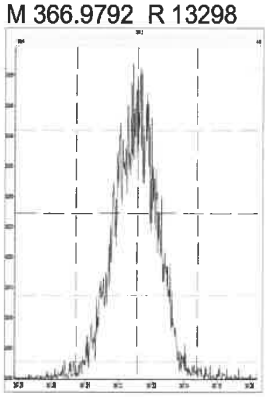

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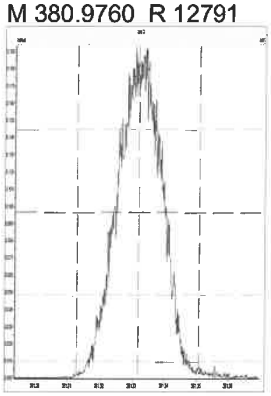

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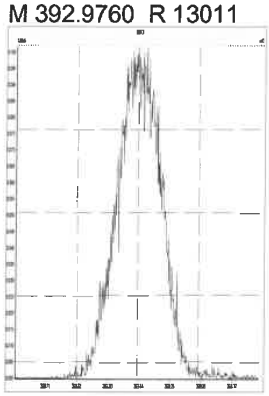

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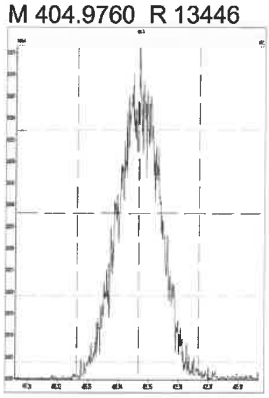

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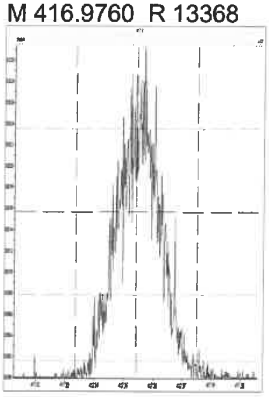

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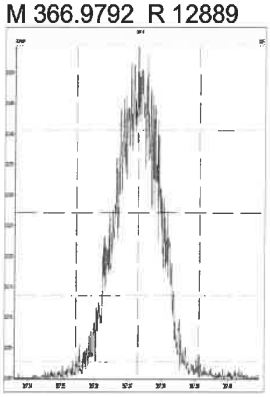

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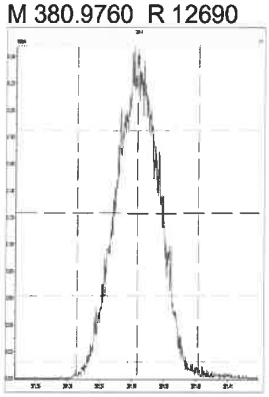

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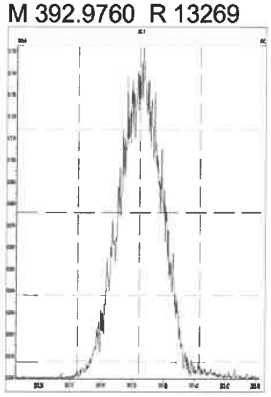

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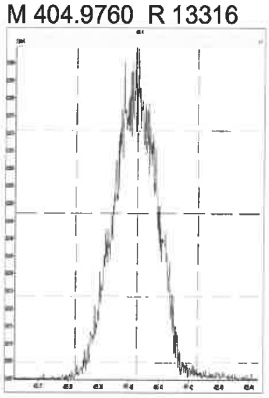

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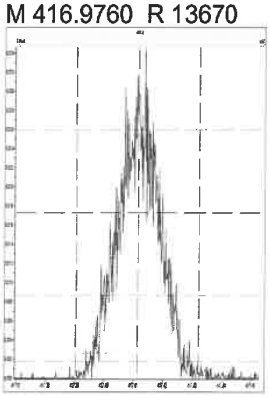

M 430.9728 R 13055

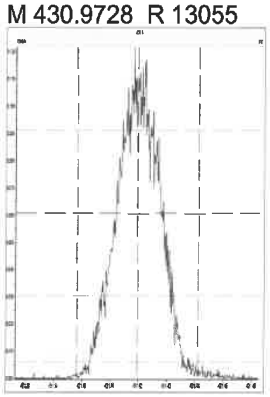

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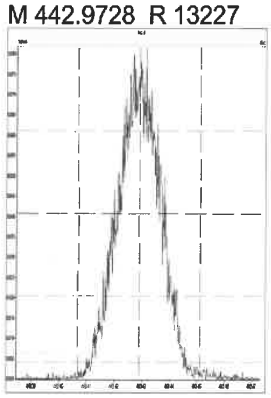

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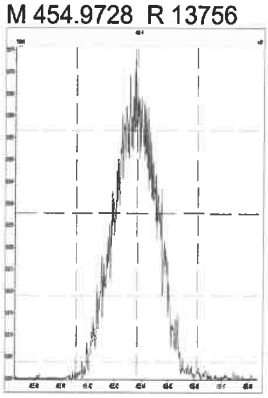

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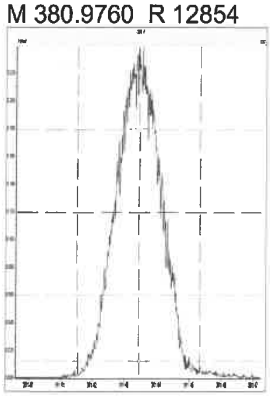

M 392.9760 R 12598

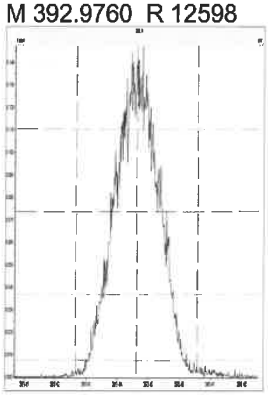

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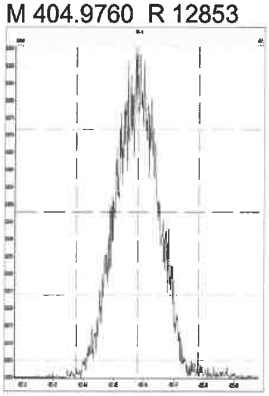

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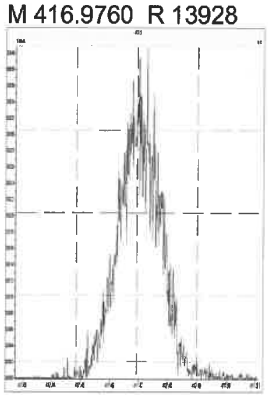

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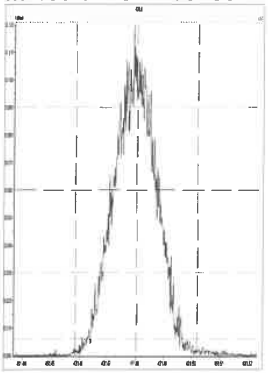

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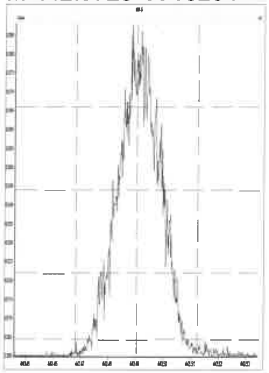

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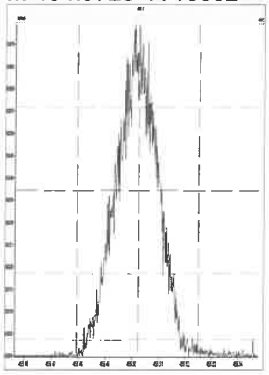

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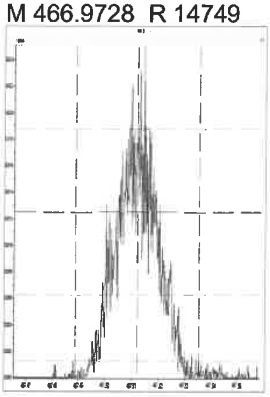

M 480.9696 R 13412

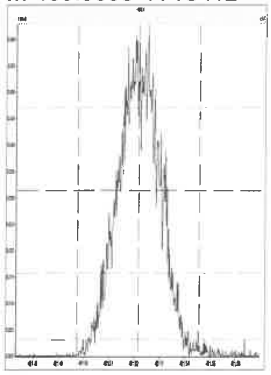

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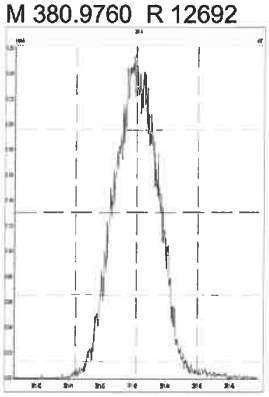

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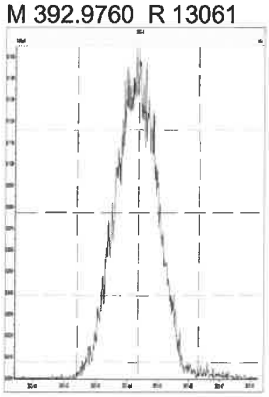

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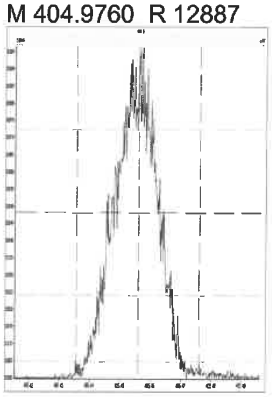

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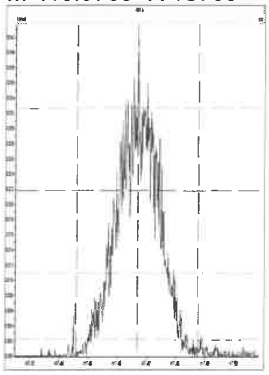

M 430.9728 R 12760

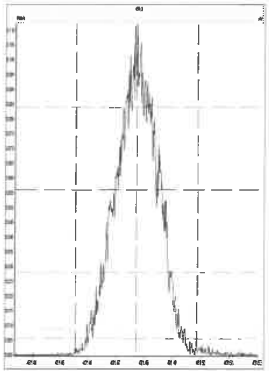

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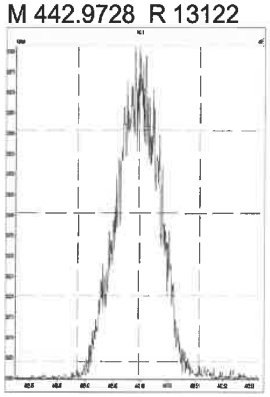

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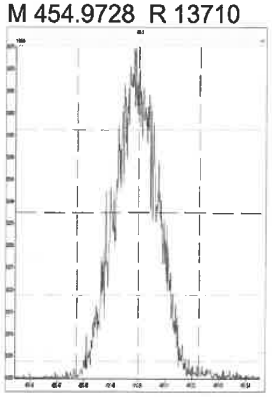

M 466.9728 R 14205

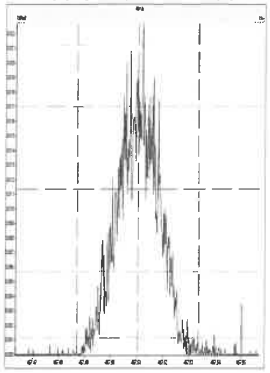

M 480.9696 R 13298

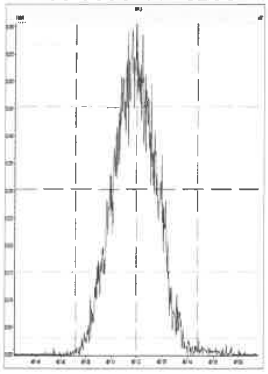

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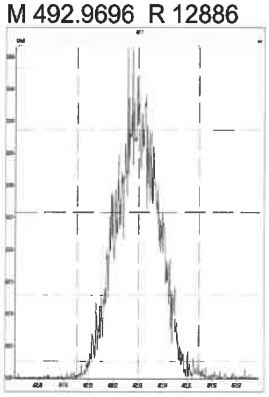

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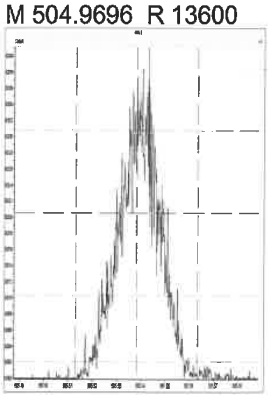

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M 516.9697 R 15872

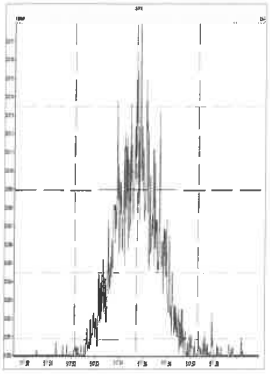

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

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Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	65685883	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	108384725	0.78	1.6249	101.5	101.5	0.1385	0.1385	102	
2,3,7,8-TCDF	17.628	557485	0.78	1.0239	0.5023	0.5023	0.009259	0.009259	100	
S Total TCDF					0.5023	0.5023	0.009259	0.009259		
D 13C-2,3,7,8-TCDD	18.338	59957723	0.80	0.8993	101.5	101.5	0.1222	0.1222	101	
$ 37Cl4-2,3,7,8-TCDD	18.338	318727		1.1071	0.4383	0.4383	0.006072	0.006072	87.65	
2,3,7,8-TCDD	18.354	376984	0.89	1.2541	0.5013	0.5013	0.0150	0.0150	100	M
S Total TCDD					0.5013	0.5013	0.0150	0.0150		
D 13C-1,2,3,7,8-PeCDF	22.749	78674290	1.60	1.2101	99.0	99.0	0.2282	0.2282	98.98	
1,2,3,7,8-PeCDF	22.776	2112140	1.63	1.0611	2.530	2.530	0.0220	0.0220	101	
D 13C-2,3,4,7,8-PeCDF	24.126	80591659	1.57	1.2395	99.0	99.0	0.2228	0.2228	98.99	
2,3,4,7,8-PeCDF	24.153	2096967	1.56	1.0184	2.555	2.555	0.0245	0.0245	102	
S Total PeCDF					5.085	5.085	0.0233	0.0233		
D 13C-1,2,3,7,8-PeCDD	24.862	49643581	1.62	0.7612	99.3	99.3	0.1197	0.1197	99.28	
1,2,3,7,8-PeCDD	24.889	1312779	1.42	1.0484	2.522	2.522	0.0218	0.0218	101	
S Total PeCDD					2.522	2.522	0.0218	0.0218		
D 13C-1,2,3,4,7,8-HxCDF	30.835	69484482	0.52	1.0837	100.4	100.4	0.5299	0.5299	100	
1,2,3,4,7,8-HxCDF	30.849	1949462	1.23	1.0851	2.586	2.586	0.0289	0.0289	103	
D 13C-1,2,3,6,7,8-HxCDF	30.995	73262388	0.52	1.1279	101.7	101.7	0.5091	0.5091	102	
1,2,3,6,7,8-HxCDF	31.022	2104086	1.18	1.1260	2.551	2.551	0.0273	0.0273	102	
D 13C-2,3,4,6,7,8-HxCDF	31.754	68885161	0.52	1.0637	101.4	101.4	0.5398	0.5398	101	
2,3,4,6,7,8-HxCDF	31.767	2104896	1.20	1.1675	2.617	2.617	0.0225	0.0225	105	
D 13C-1,2,3,7,8,9-HxCDF	32.512	62528954	0.51	0.9676	101.1	101.1	0.5935	0.5935	101	
1,2,3,7,8,9-HxCDF	32.526	1834100	1.21	1.1664	2.515	2.515	0.0244	0.0244	101	
S Total HxCDF					10.3	10.3	0.0258	0.0258		
* 13C-1,2,3,7,8,9-HxCDD	32.339	63892665	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	47363504	1.27	0.7334	101.1	101.1	0.5001	0.5001	101	
1,2,3,4,7,8-HxCDD	31.940	1300030	1.26	1.0640	2.580	2.580	0.0268	0.0268	103	
D 13C-1,2,3,6,7,8-HxCDD	32.033	56759108	1.25	0.8802	100.9	100.9	0.4167	0.4167	101	

788700

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	1460747	1.28	1.0001	2.573	2.573	0.0268	0.0268	103	
1,2,3,7,8,9-HxCDD	32.353	1503407	1.26	1.1325	2.550	2.550	0.0244	0.0244	102	
S Total HxCDD					7.703	7.703	0.0260	0.0260		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	51308225	0.44	0.7730	103.9	103.9	1.147	1.147	104	
1,2,3,4,6,7,8-HpCDF	33.924	1856599	1.05	1.4413	2.511	2.511	0.0321	0.0321	100	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44628352	0.44	0.7008	99.7	99.7	1.266	1.266	99.67	
1,2,3,4,7,8,9-HpCDF	35.017	1465634	1.06	1.3174	2.493	2.493	0.0442	0.0442	99.72	
S Total HpCDF					5.003	5.003	0.0381	0.0381		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	41876556	1.01	0.6472	101.3	101.3	0.6709	0.6709	101	
1,2,3,4,6,7,8-HpCDD	34.726	1164074	1.06	1.0943	2.540	2.540	0.0284	0.0284	102	
S Total HpCDD					2.540	2.540	0.0284	0.0284		
D 13C-OCDD	37.093	57018462	0.89	0.4472	199.6	199.6	0.2479	0.2479	99.79	
OCDF	37.201	1976175	0.91	1.4382	4.820	4.820	0.0196	0.0196	96.40	
OCDD	37.105	1569338	0.92	1.1070	4.973	4.973	0.0246	0.0246	99.45	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		29725607	7464659	4167	10417	1791		
333.9339	18.142	18.142	0		35960276	9003139	3074	7685	2929	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	47438761	11992473	9243	23107	1297		
317.9389	17.613	17.616	0	0.971	60945964	15328013	5578	13945	2748	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	244966	62557	418	1045	150		
305.8987	17.628	17.631	0	1.001	312519	74119	618	1545	120	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	26677109	6242710	4167	10417	1498		
333.9339	18.338	18.338	0	1.011	33280614	7789380	3074	7685	2534	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.011	318727	66577	443	1107	150		
2,3,7,8-TCDD											M
319.8965	18.354	18.357	0	1.001	177891	43427	698	1745	62		M
321.8936	18.354	18.357	0	1.001	199093	47894	356	890	135	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	48367116	8680931	10780	26950	805		
353.8970	22.749	22.754	0	1.254	30307174	5346402	7413	18532	721	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	1307686	232308	692	1730	336		
341.8567	22.762	22.779	-1	1.001	804454	137466	619	1547	222	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	49186157	7929286	10780	26950	736		
353.8970	24.126	24.129	0	1.330	31405502	5197836	7413	18532	701	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	1276283	202864	692	1730	293		
341.8567	24.153	24.156	0	1.001	820684	134634	619	1547	218	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	30684379	4744795	3870	9675	1226		
369.8919	24.862	24.865	0	1.370	18959202	2913489	2133	5332	1366	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	770345	123302	470	1175	262		
357.8516	24.889	24.892	0	1.001	542434	83964	231	577	363	1.42(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23885791	5080702	12413	31032	409		
385.8610	30.835	30.838	0	0.953	45598691	9653525	24179	60447	399	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.857	0	1.000	1073816	228005	1130	2825	202		
375.8178	30.849	30.857	0	1.000	875646	183719	720	1800	255	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	25163610	5186426	12413	31032	418		
385.8610	30.995	31.003	0	0.958	48098778	9847658	24179	60447	407	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.001	1138605	230252	1130	2825	204		
375.8178	31.008	31.022	-1	1.000	965481	194261	720	1800	270	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	23545536	6005512	12413	31032	484		
385.8610	31.754	31.756	0	0.982	45339625	11622590	24179	60447	481	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	1148495	290976	1130	2825	258		
375.8178	31.767	31.772	0	1.000	956401	245408	720	1800	341	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.512	32.523	-1	1.005	21115296	5525344	12413	31032	445		
385.8610	32.512	32.523	-1	1.005	41413658	10740911	24179	60447	444	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	1004237	260741	1130	2825	231		
375.8178	32.526	32.534	0	1.000	829863	215930	720	1800	300	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		35492157	8840472	14115	35287	626		
403.8529	32.339	32.342	0		28400508	7090007	9259	23147	766	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	26497467	7547113	14115	35287	535		
403.8529	31.927	31.929	0	0.987	20866037	5954906	9259	23147	643	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	725563	201392	885	2212	228		
391.8127	31.940	31.945	0	1.000	574467	160999	657	1642	245	1.26(1.05-1.43)	

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	31586686	7983088	14115	35287	566		
403.8529	32.033	32.033	0	0.991	25172422	6406461	9259	23147	692	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	819435	207367	885	2212	234		
391.8127	32.047	32.047	0	1.000	641312	163363	657	1642	249	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	837706	208716	885	2212	236		
391.8127	32.353	32.355	0	1.013	665701	168193	657	1642	256	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	15666898	4905580	16994	42485	289		
419.8220	33.912	33.914	0	1.049	35641327	11012481	39521	98802	279	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	949994	280926	1603	4007	175		
409.7789	33.924	33.926	0	1.000	906605	280503	1346	3365	208	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13532847	3927195	16994	42485	231		
419.8220	35.005	35.010	0	1.082	31095505	8744356	39521	98802	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	755406	231092	1603	4007	144		
409.7789	35.017	35.020	0	1.000	710228	201627	1346	3365	150	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	21029381	6108519	13979	34947	437		
437.8140	34.714	34.716	0	1.073	20847175	6052425	13690	34225	442	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	599401	178801	821	2052	218		
425.7737	34.726	34.726	0	1.000	564673	160703	693	1732	232	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26904388	6653832	3548	8870	1875		
471.7750	37.093	37.094	0	1.147	30114074	7334467	3515	8787	2087	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	941996	224700	300	750	749		
443.7399	37.189	37.199	-1	1.003	1034179	253612	487	1217	521	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	750544	177364	389	972	456		
459.7348	37.105	37.106	0	1.000	818794	206090	374	935	551	0.92(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.35
Area: 201476
Amount: 0.545465
Amount Units: pg/ul

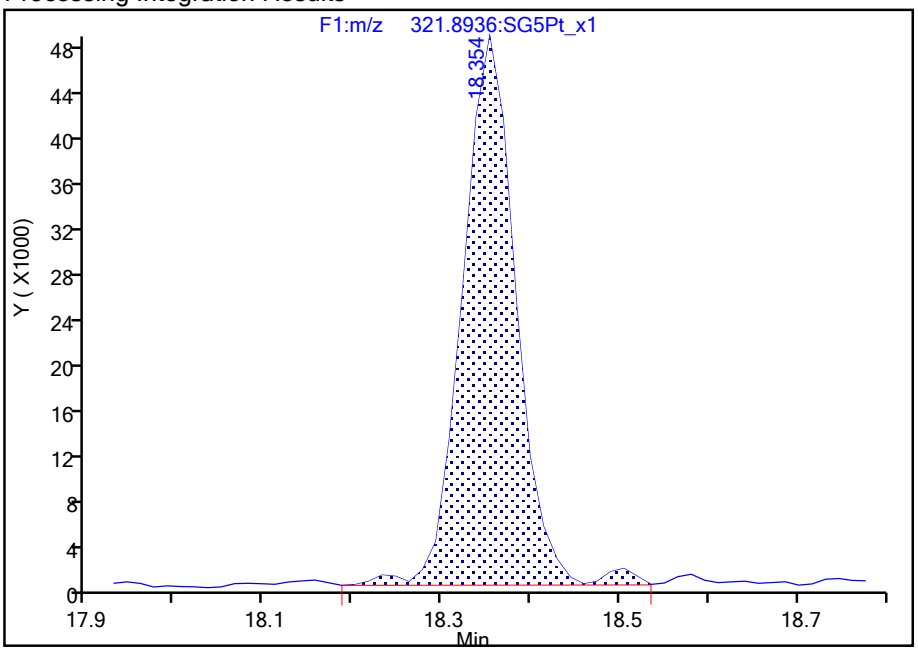

Manual Integration Results

RT: 18.35
Area: 199093
Amount: 0.501347
Amount Units: pg/ul

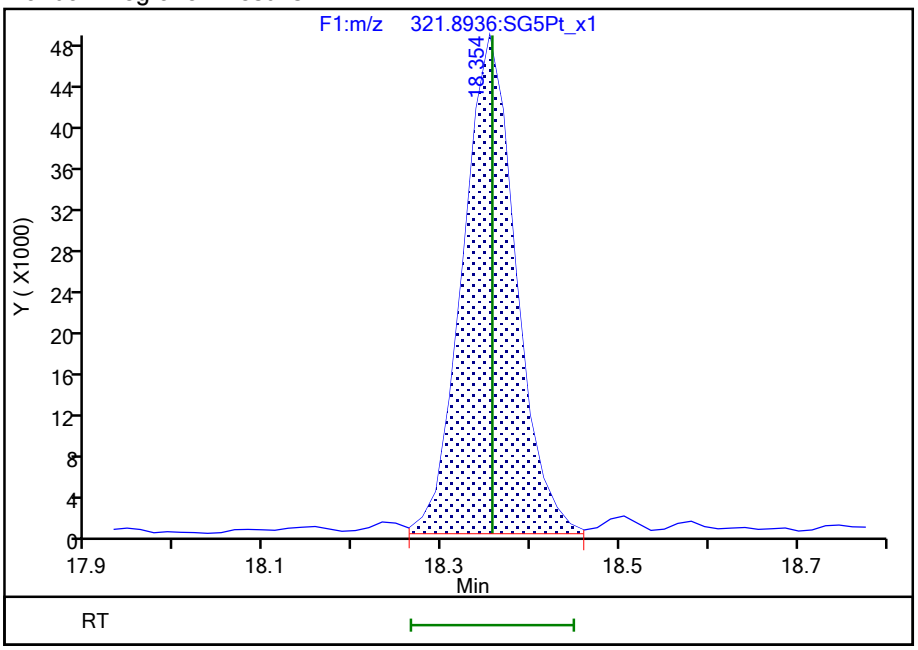

Reviewer: stephensk, 27-Jul-2021 08:15:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

Processing Integration Results

RT: 18.35
Area: 394678
Amount: 0.545465
Amount Units: pg/ul

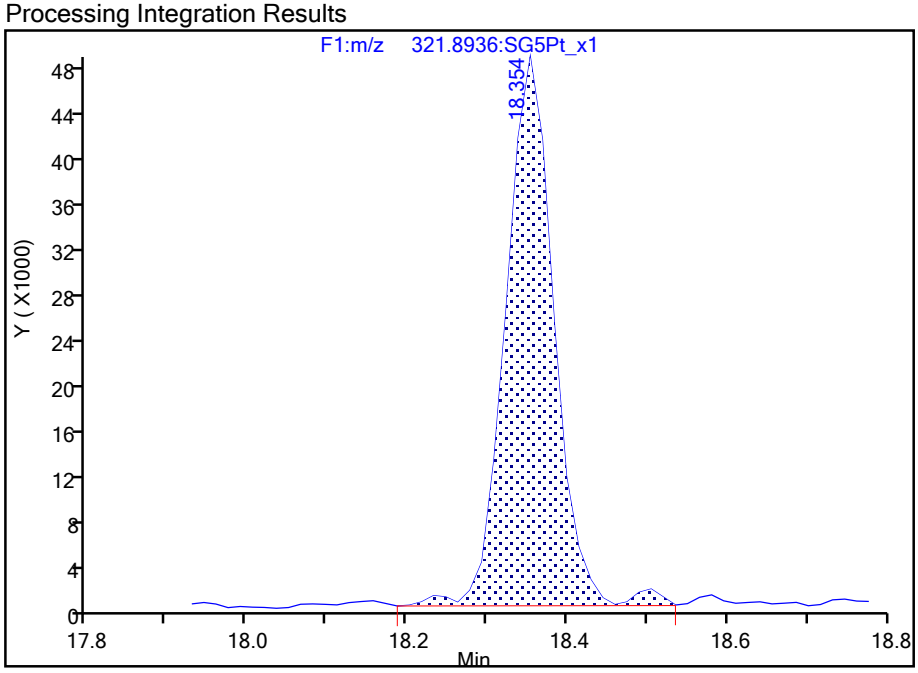

Manual Integration Results

RT: 18.35
Area: 376984
Amount: 0.501347
Amount Units: pg/ul
Reviewer: stephensk, 27-Jul-2021 08:15:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

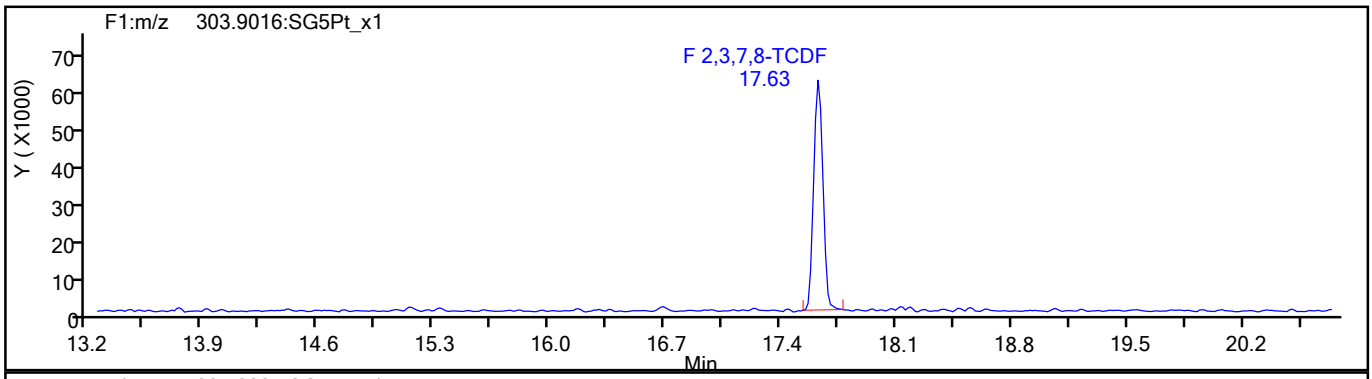

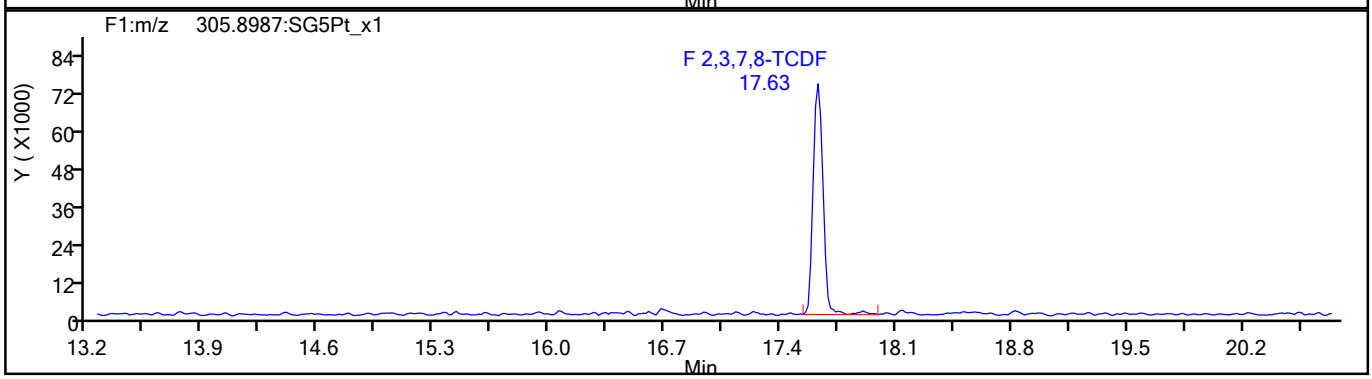

TCDF Standards

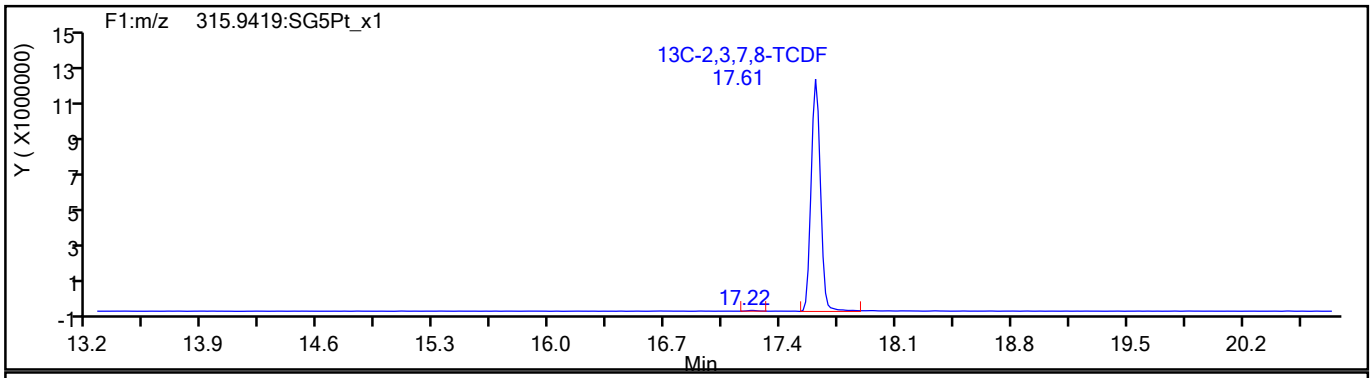

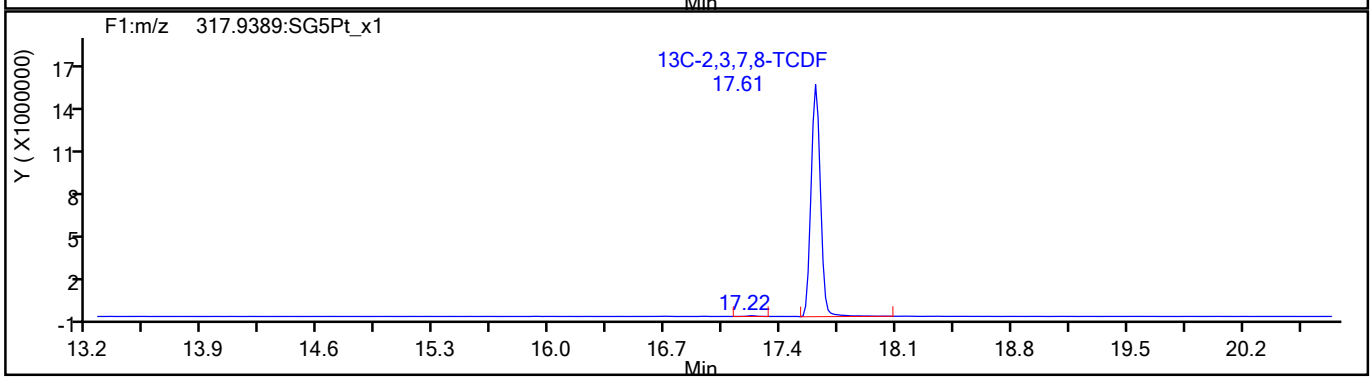

788707

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

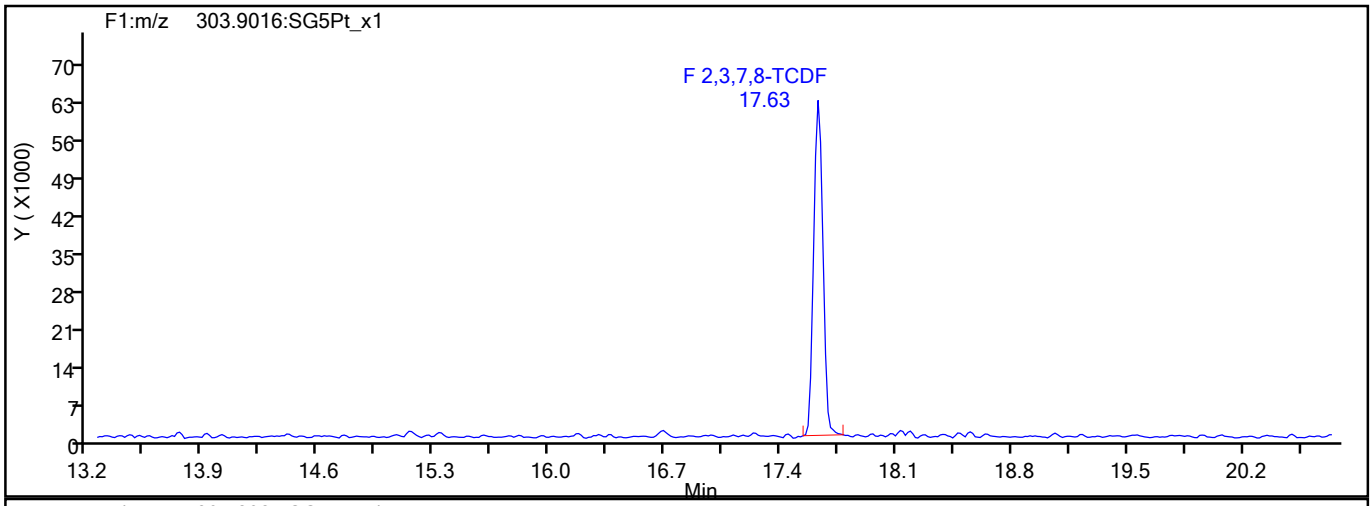

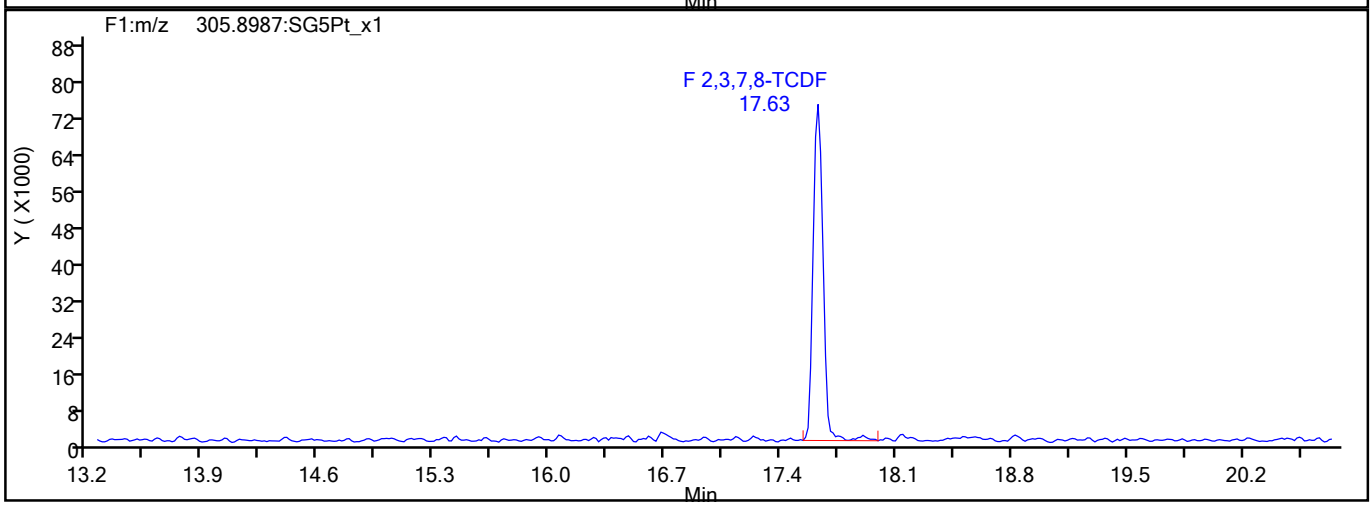

TCDF Interference Mass

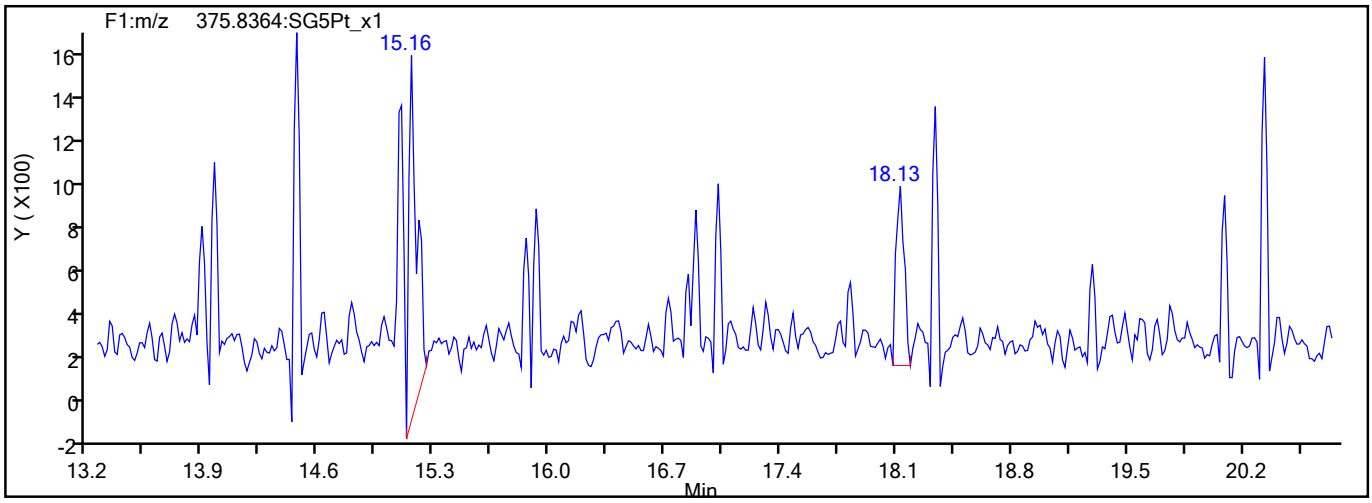

788708

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

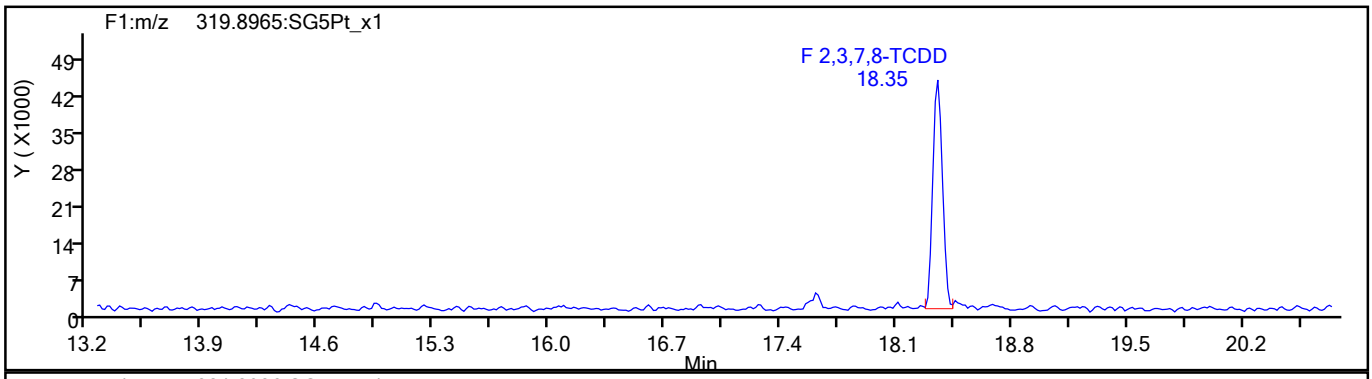

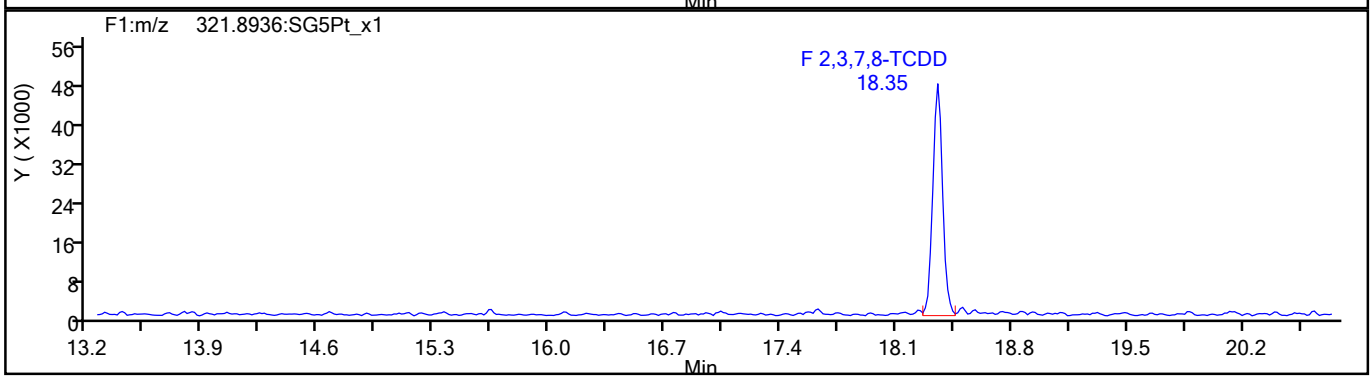

TCDD Standards

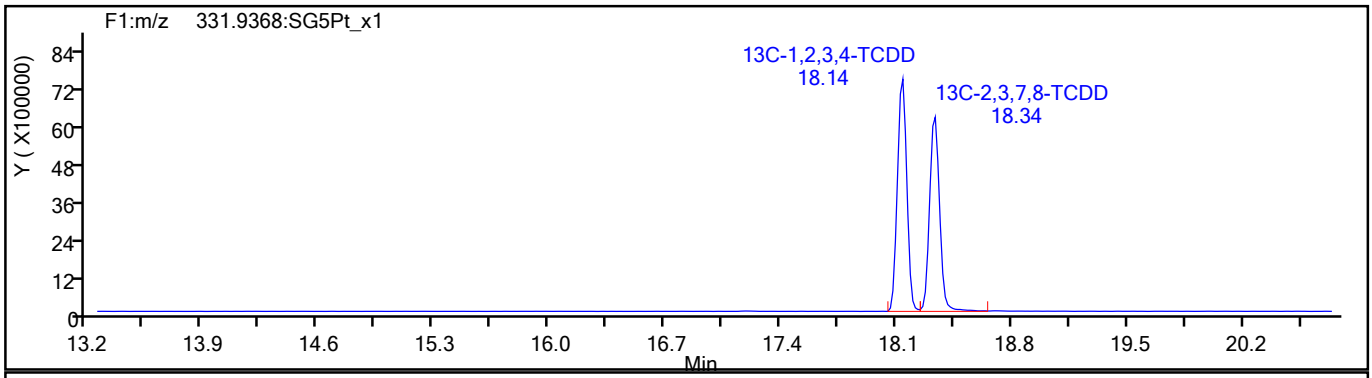

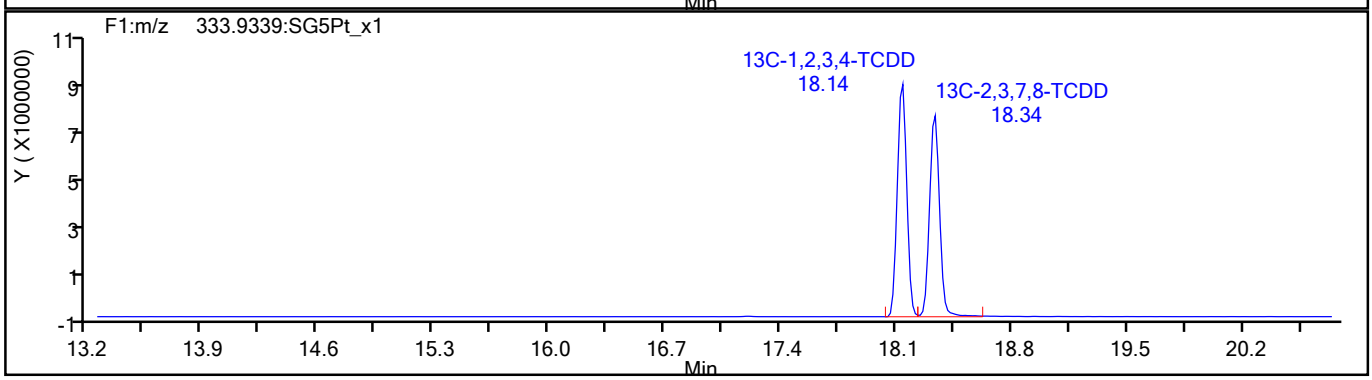

788709

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

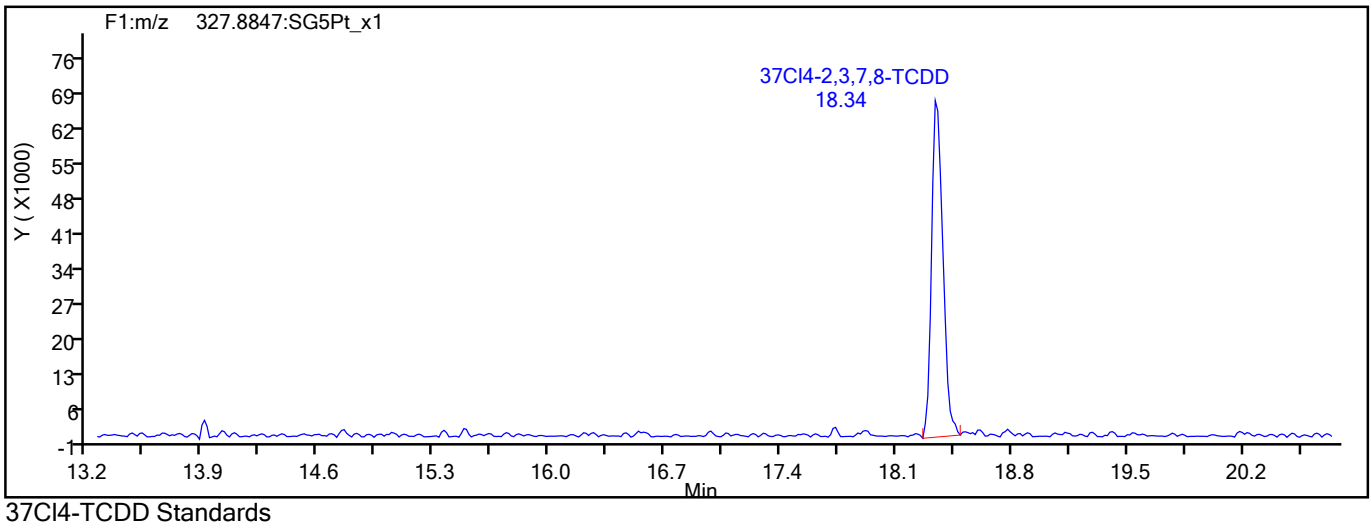

37Cl4-TCDD Standards

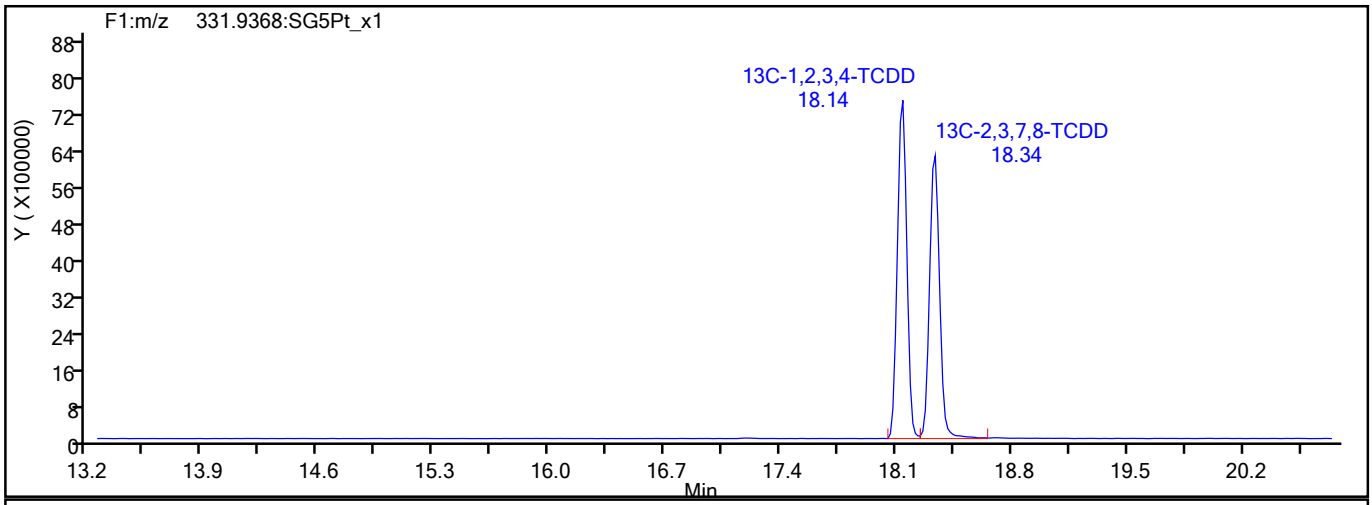

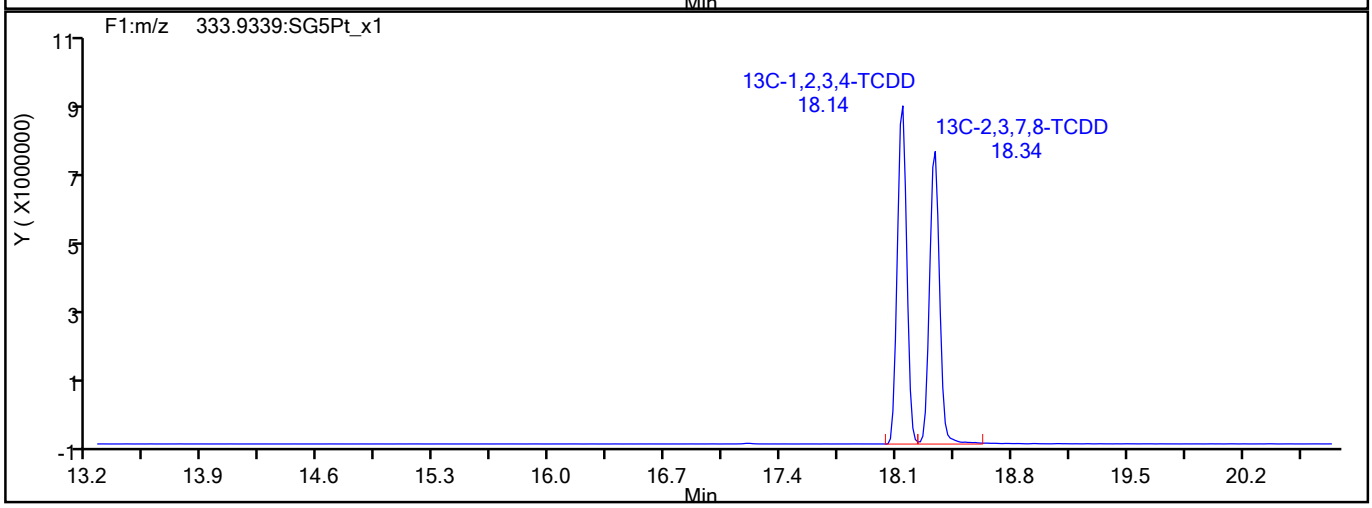

788710

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

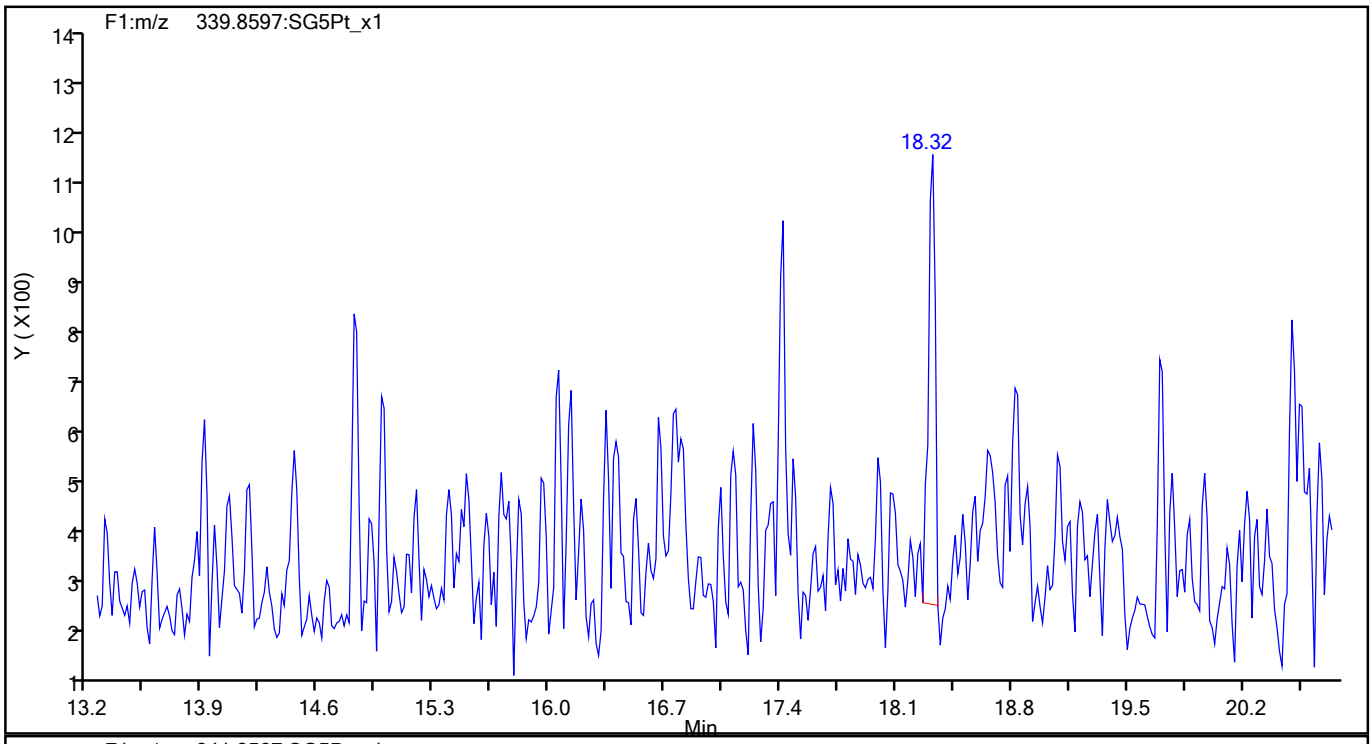

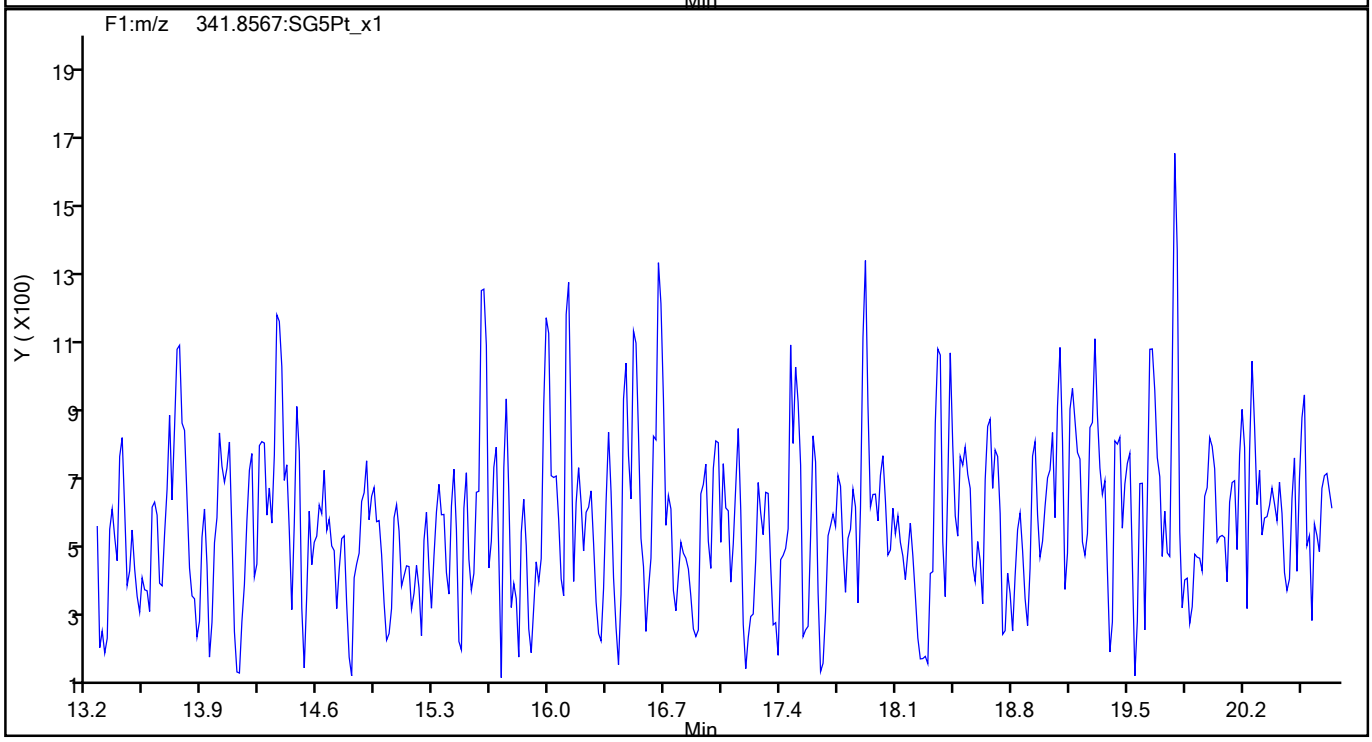

788711

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

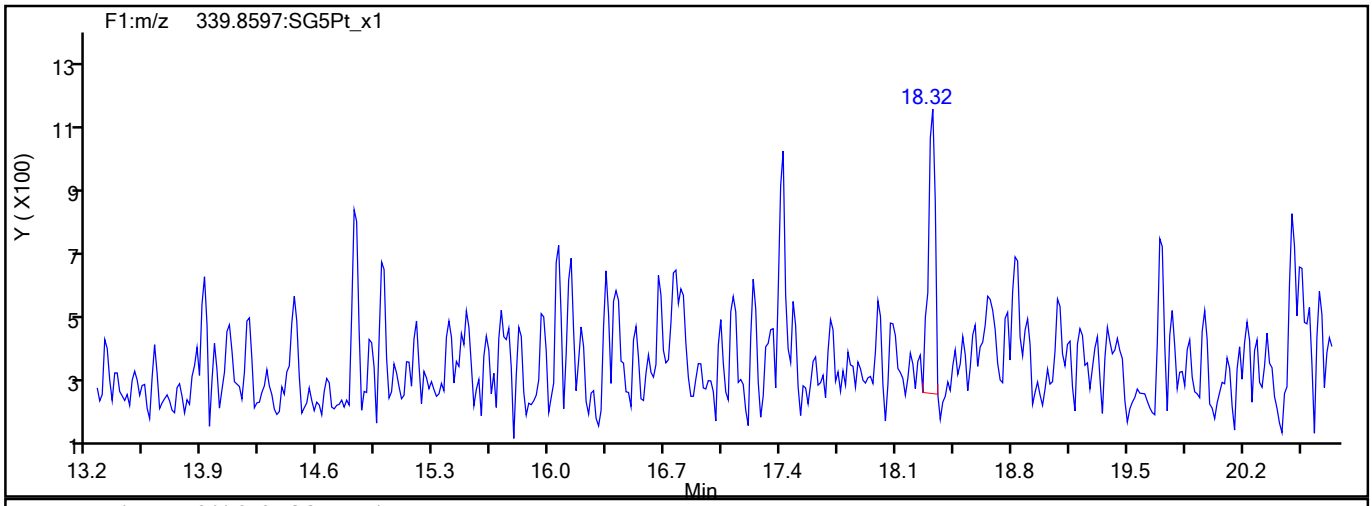

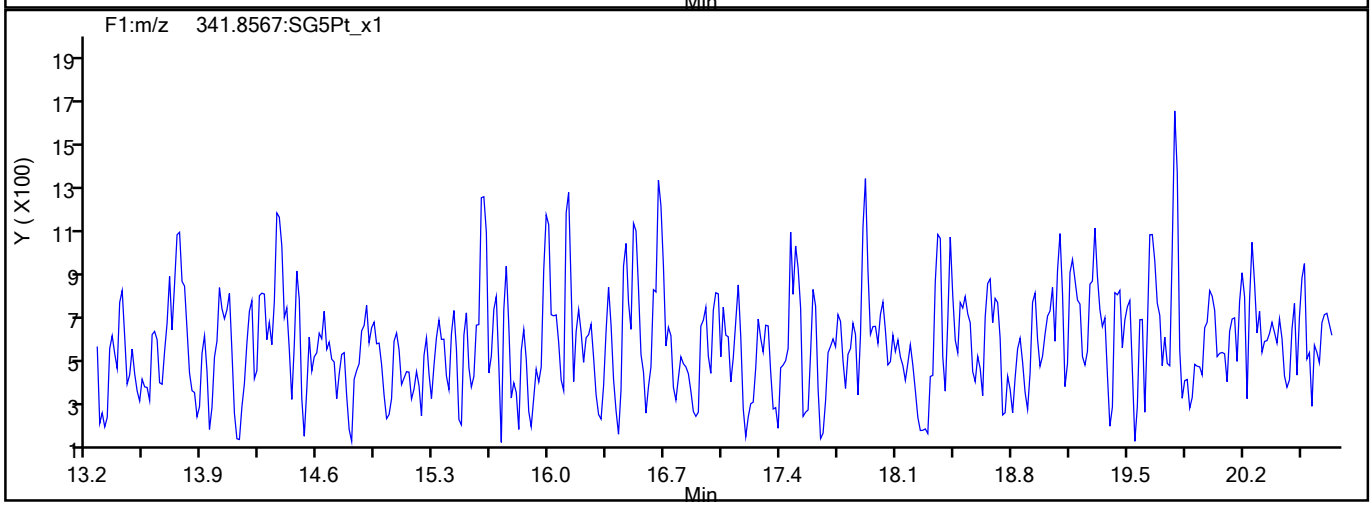

F1 PeCDFs Interference Mass

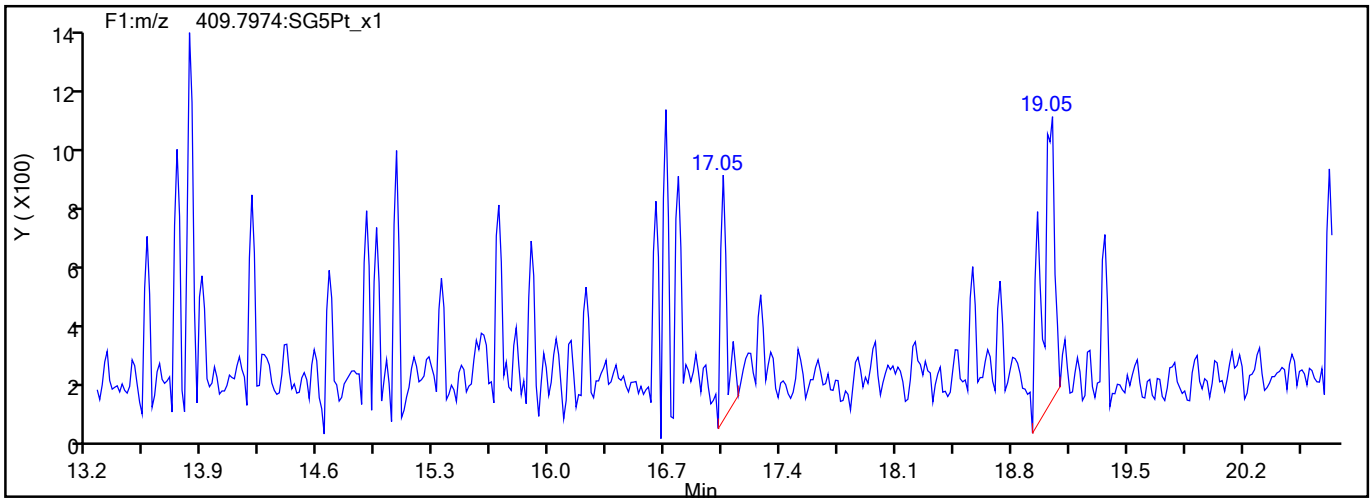

788712

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

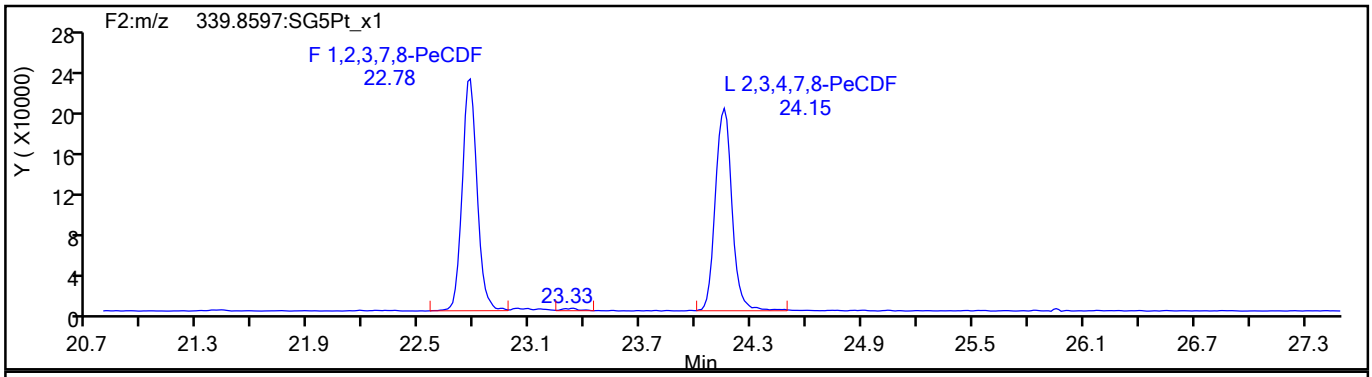

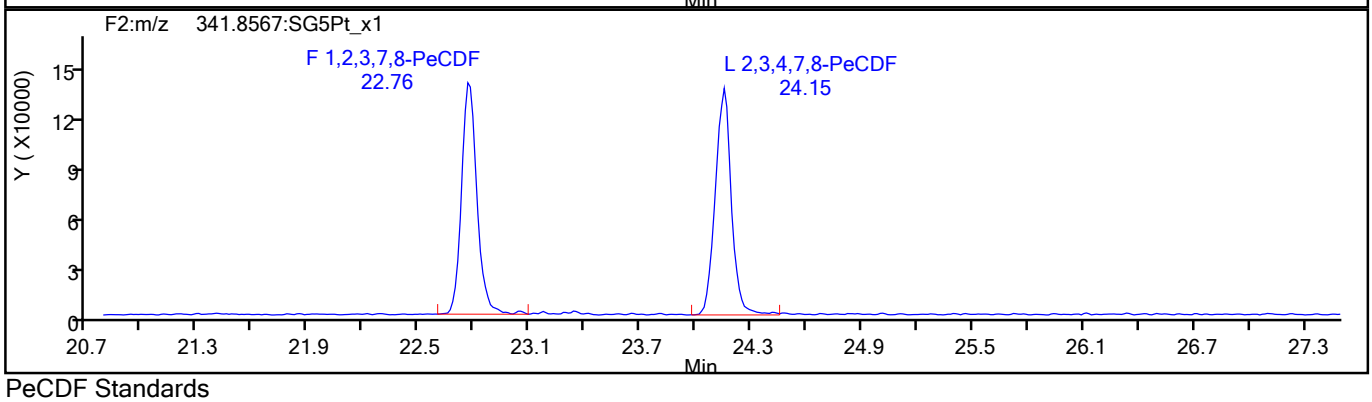

PeCDF Standards

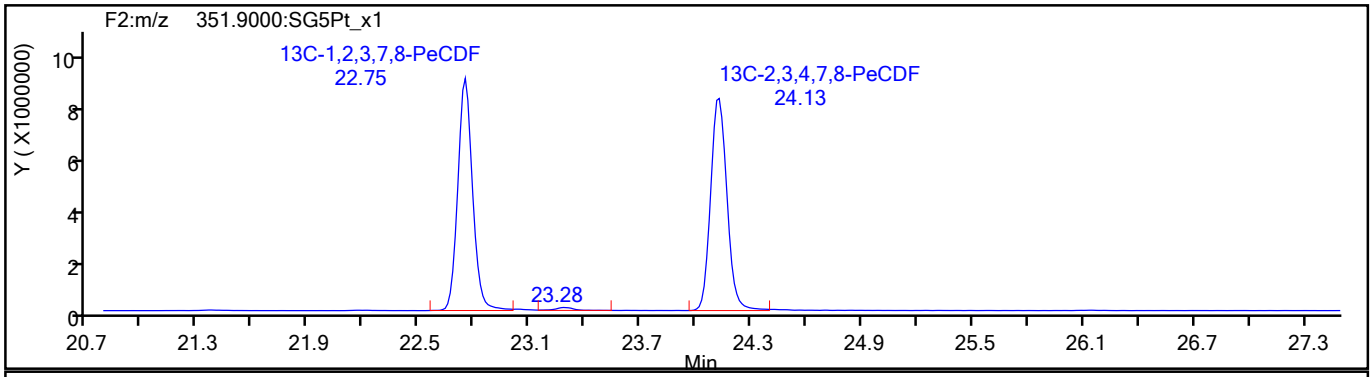

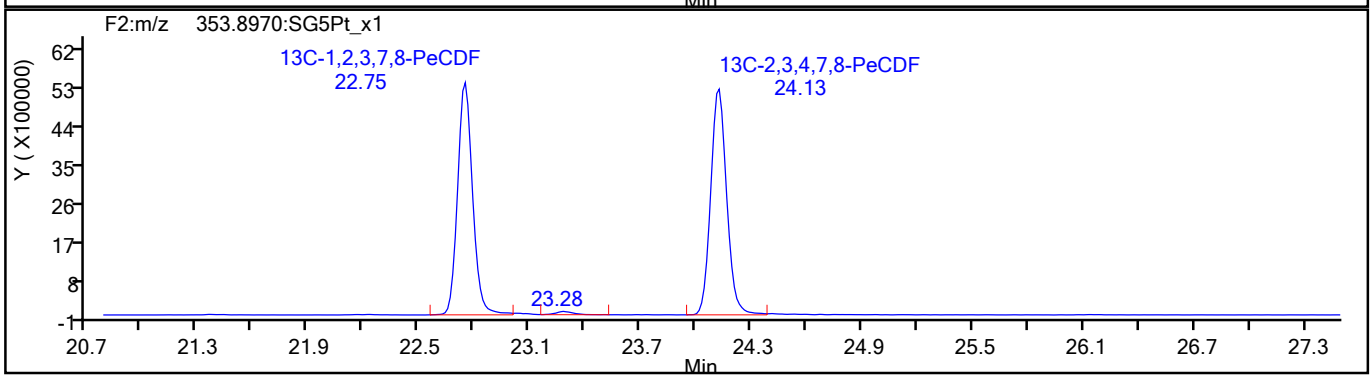

788713

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

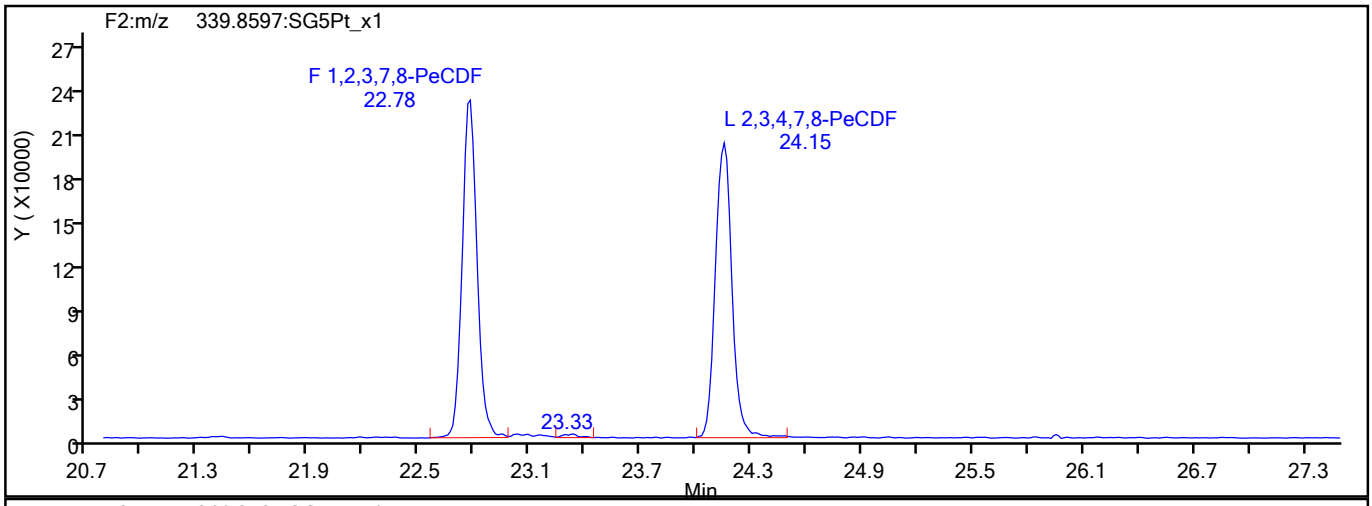

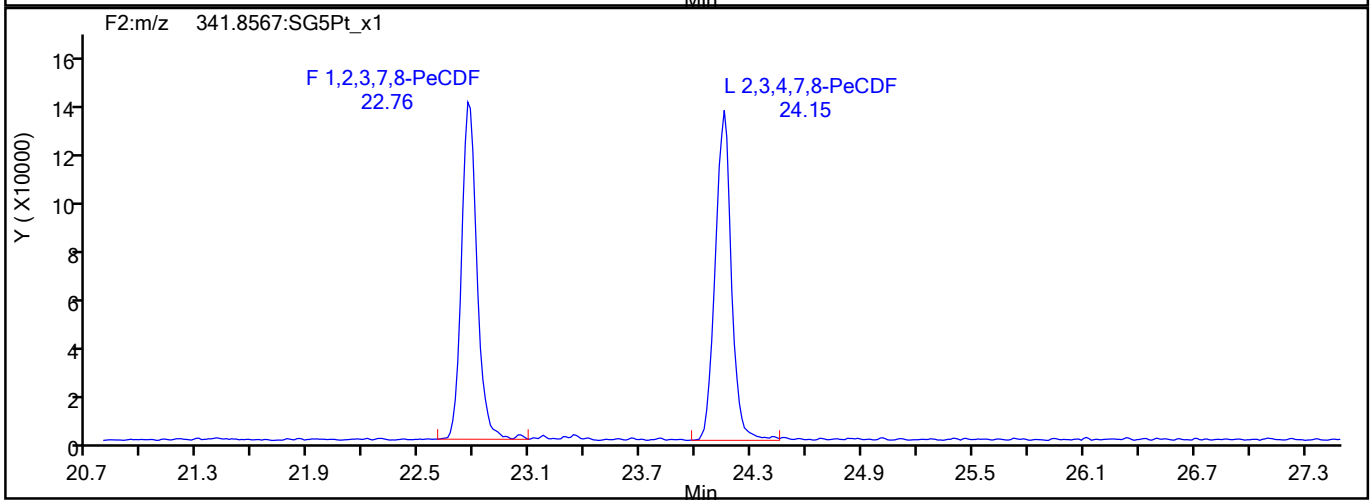

PeCDF Interference Mass

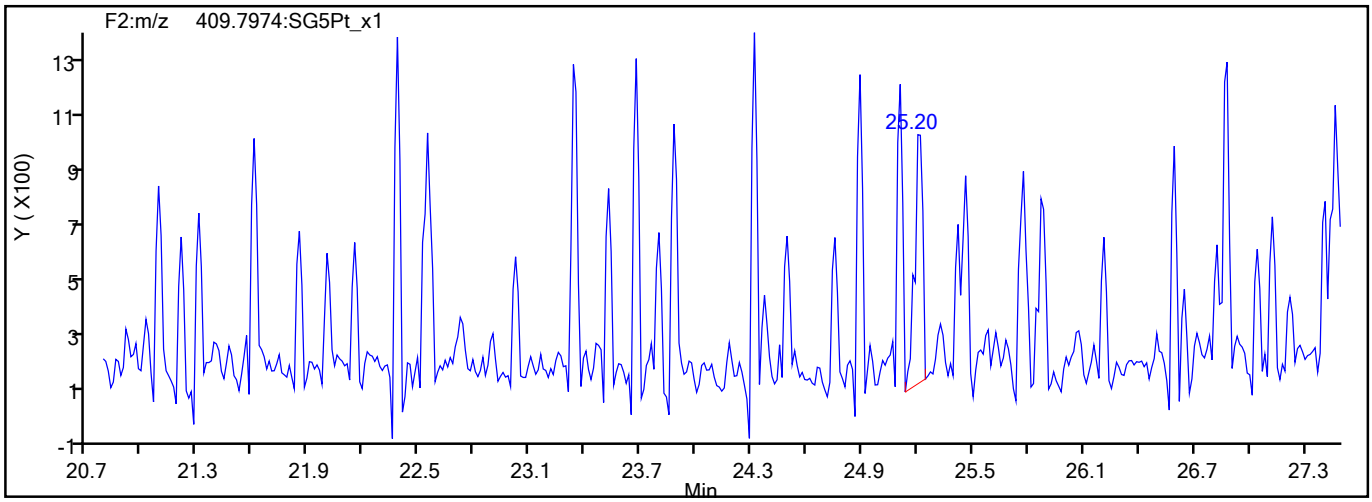

788714

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

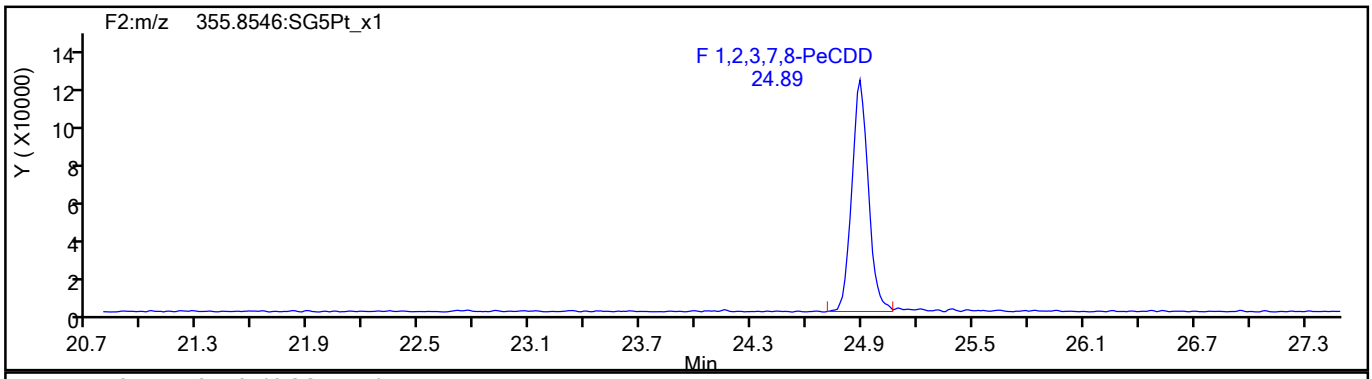

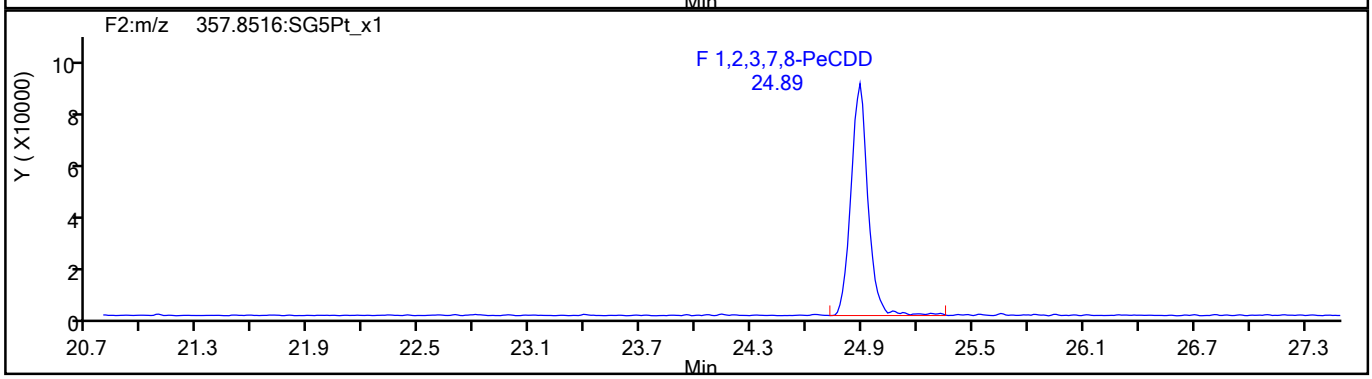

PeCDD Standards

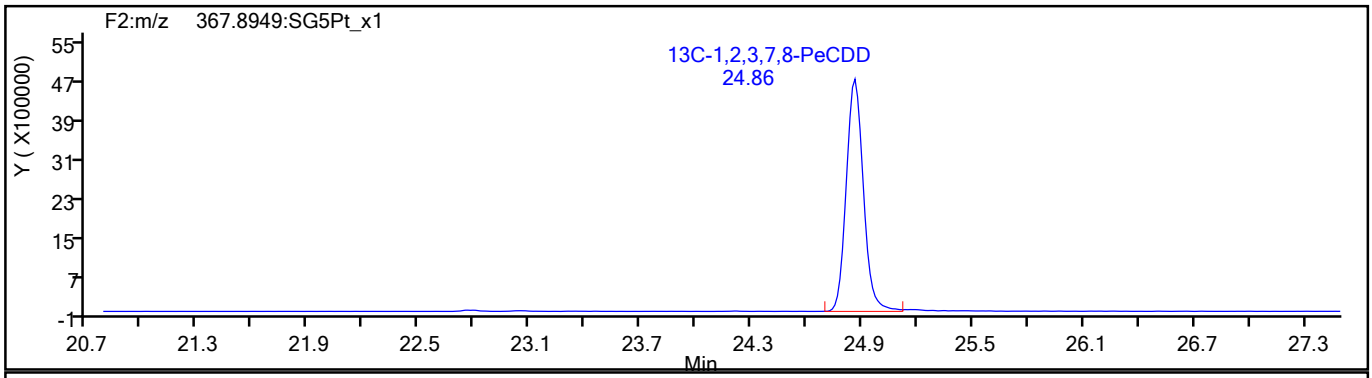

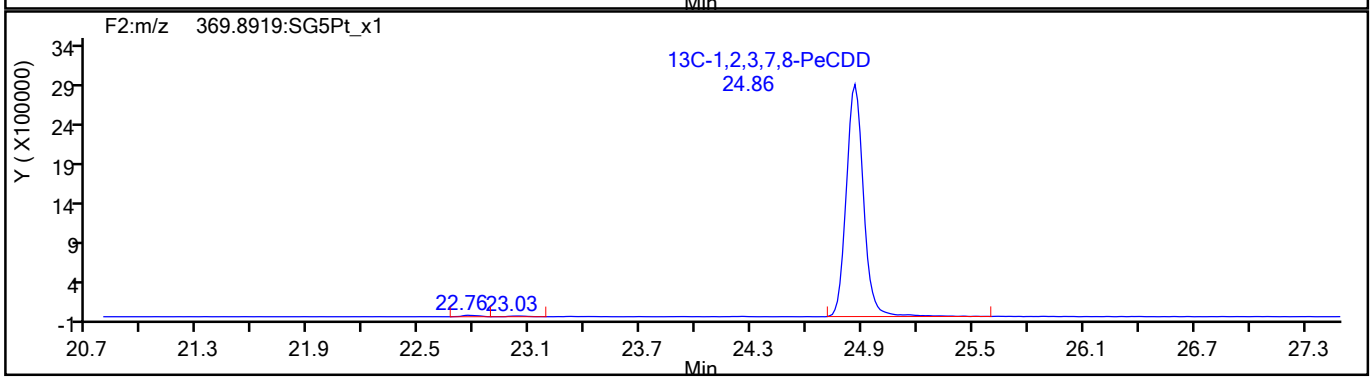

788715

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

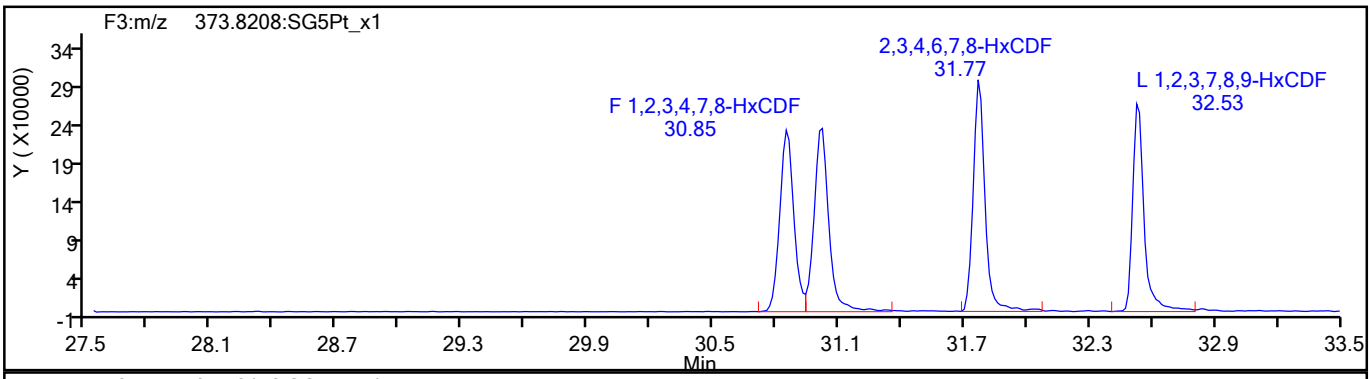

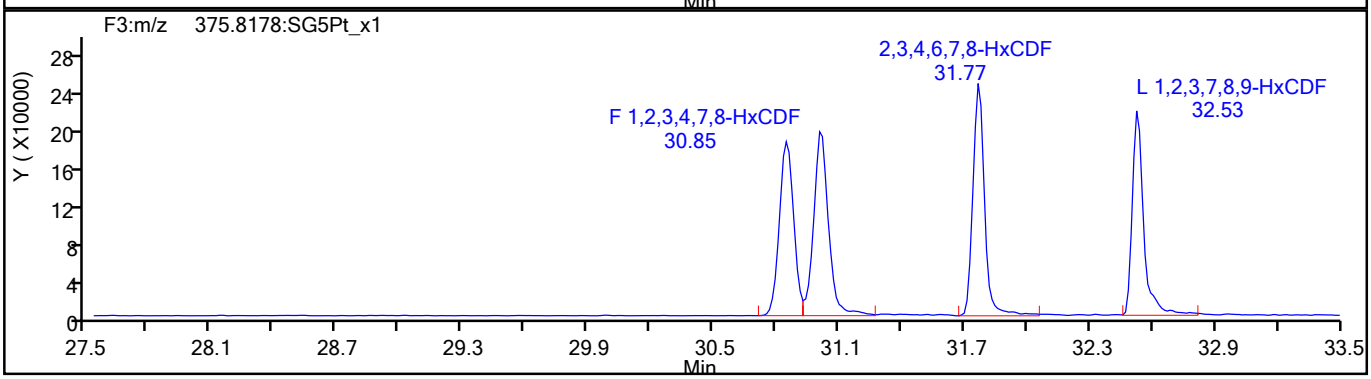

HxCDF Standards

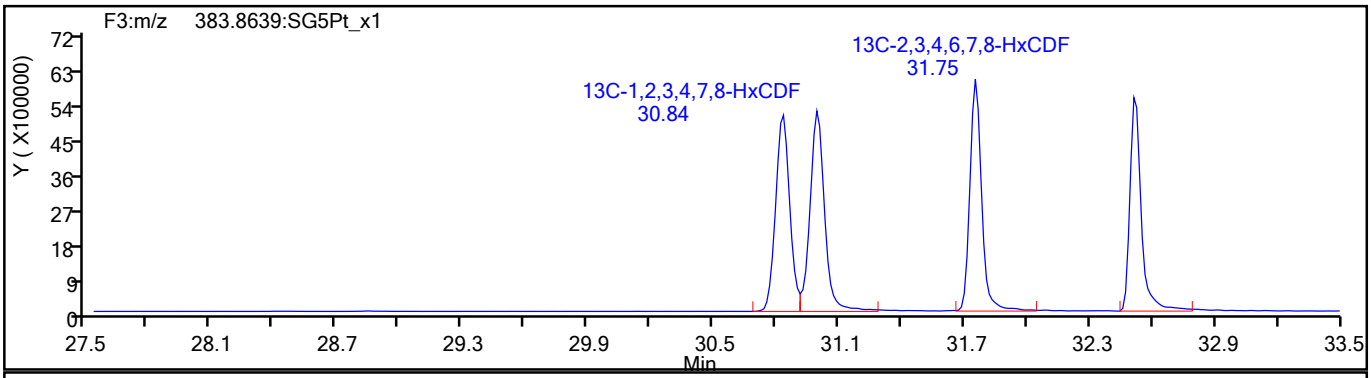

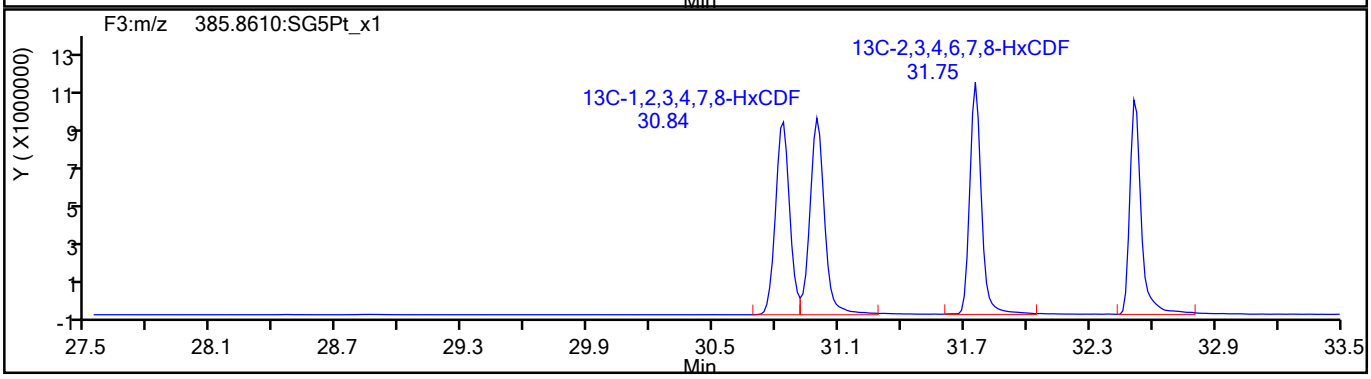

788716

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

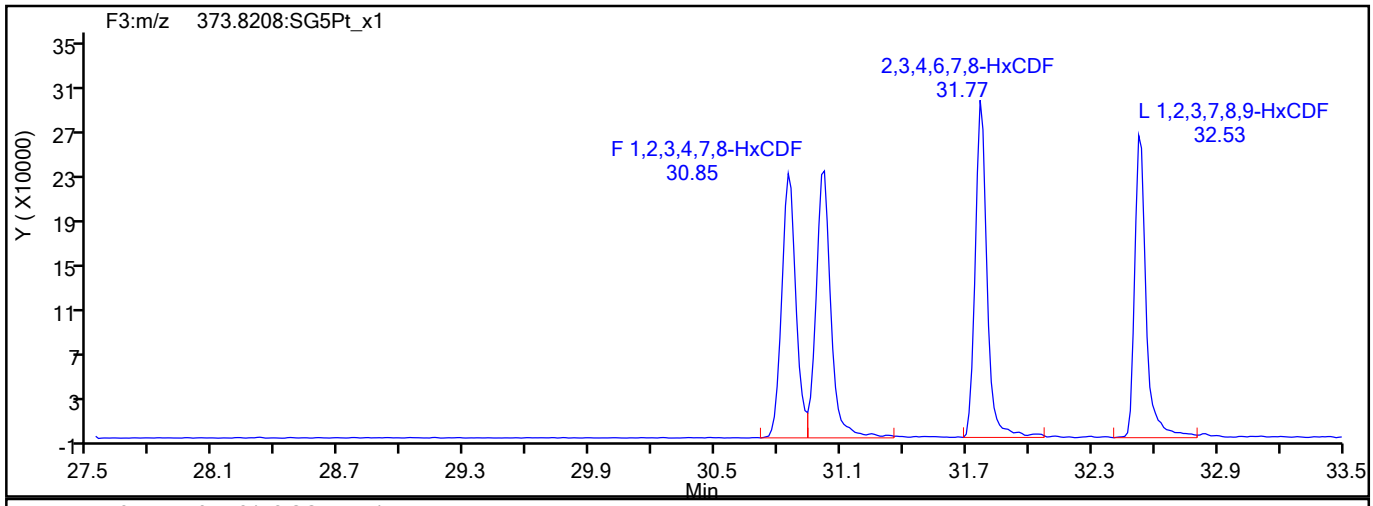

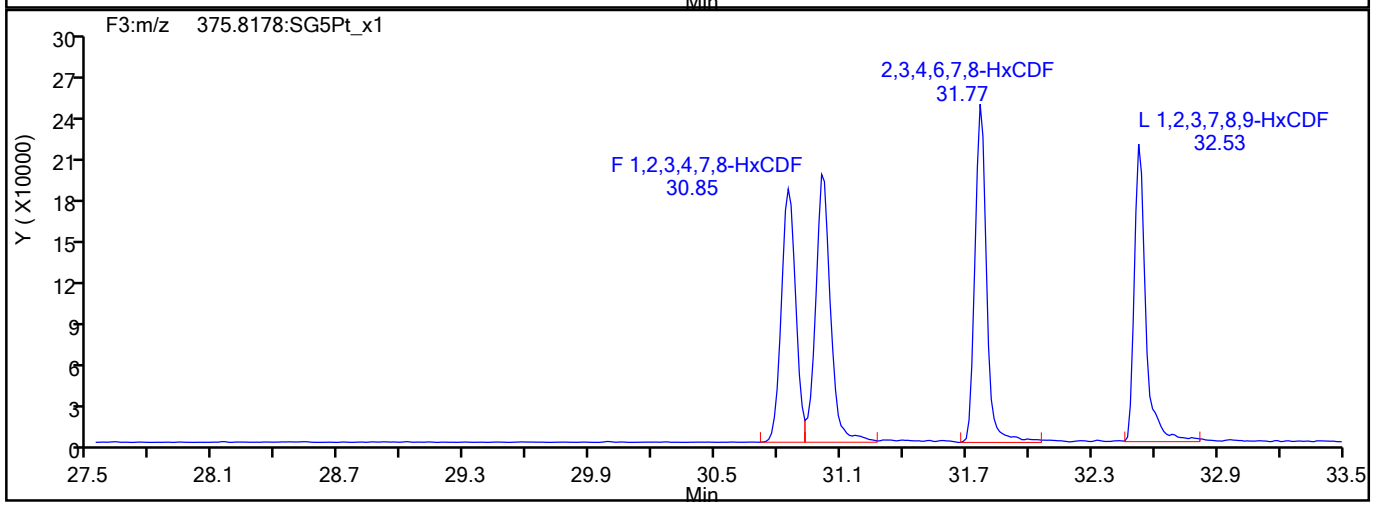

HxCDF Interference Mass

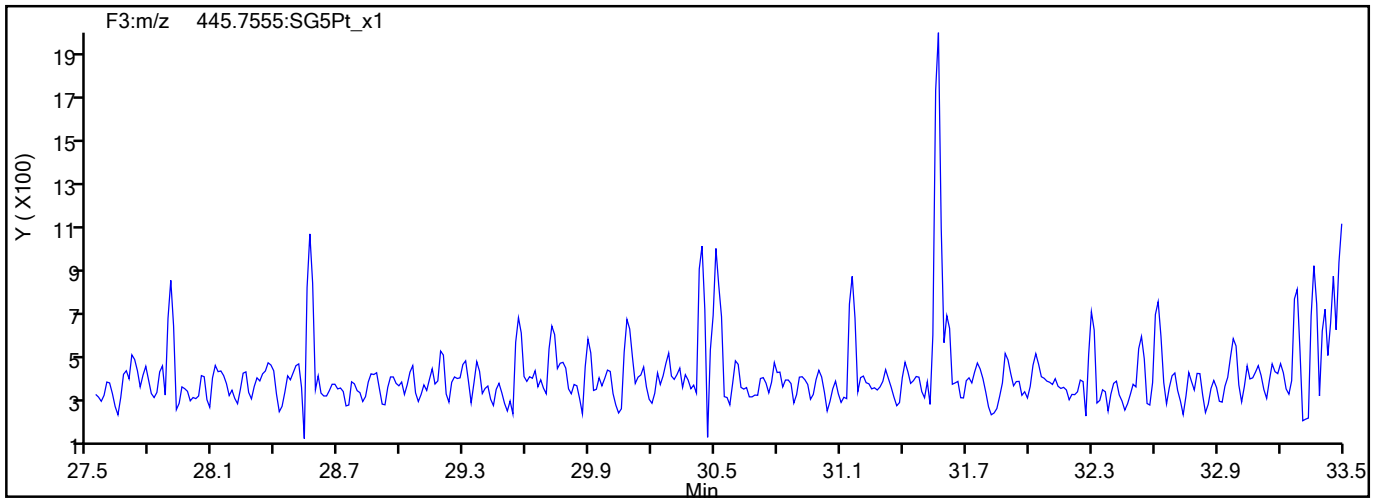

788717

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

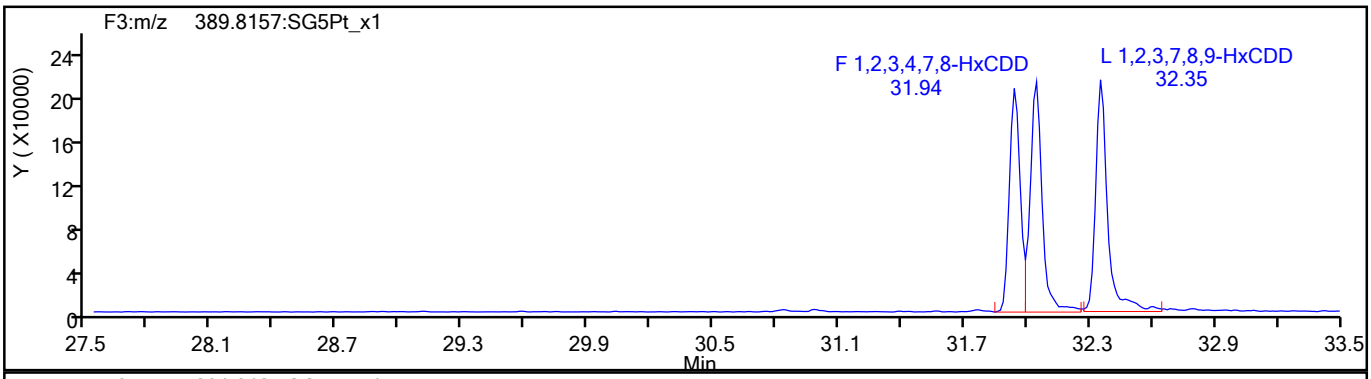

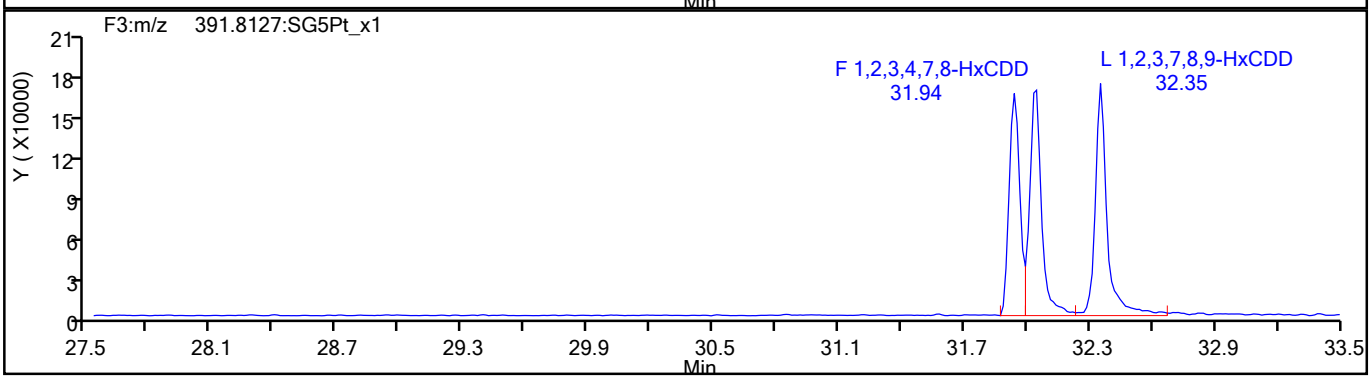

HxCDD Standards

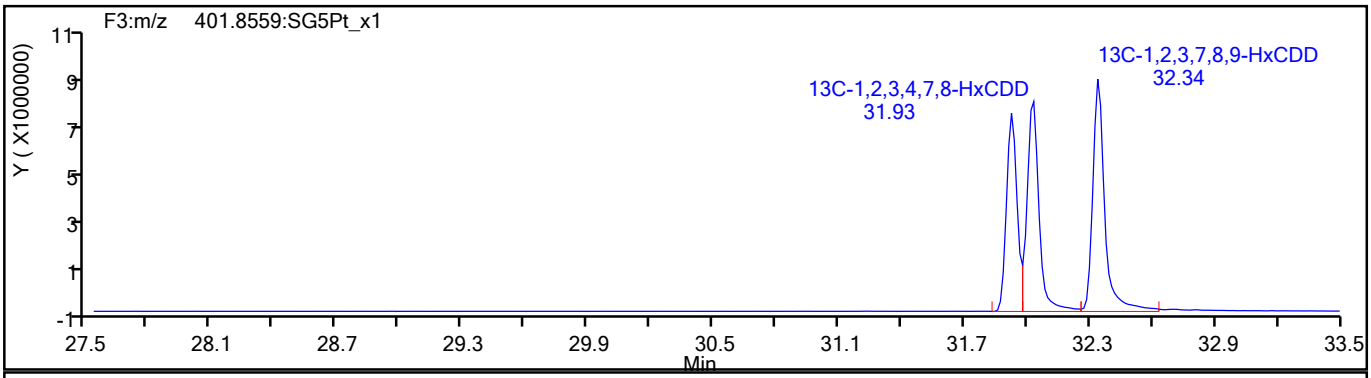

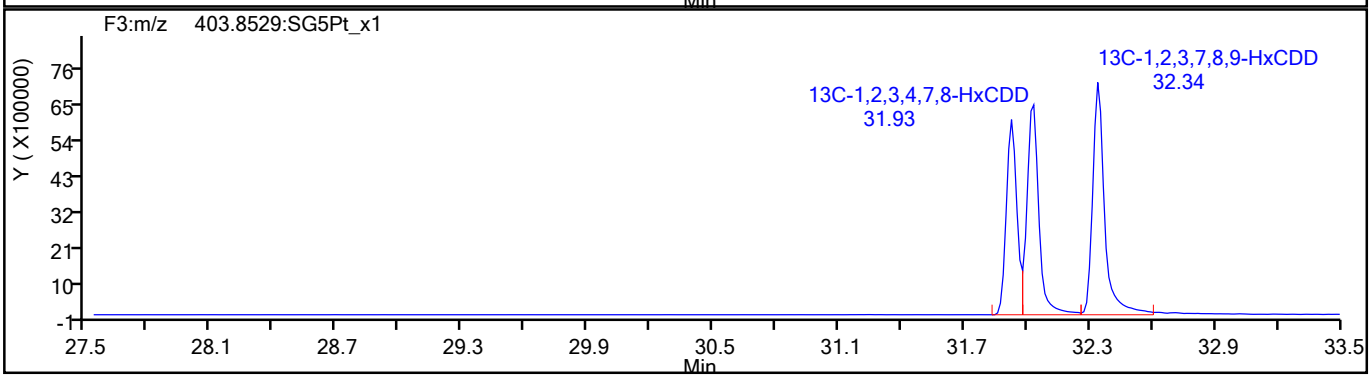

788718

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

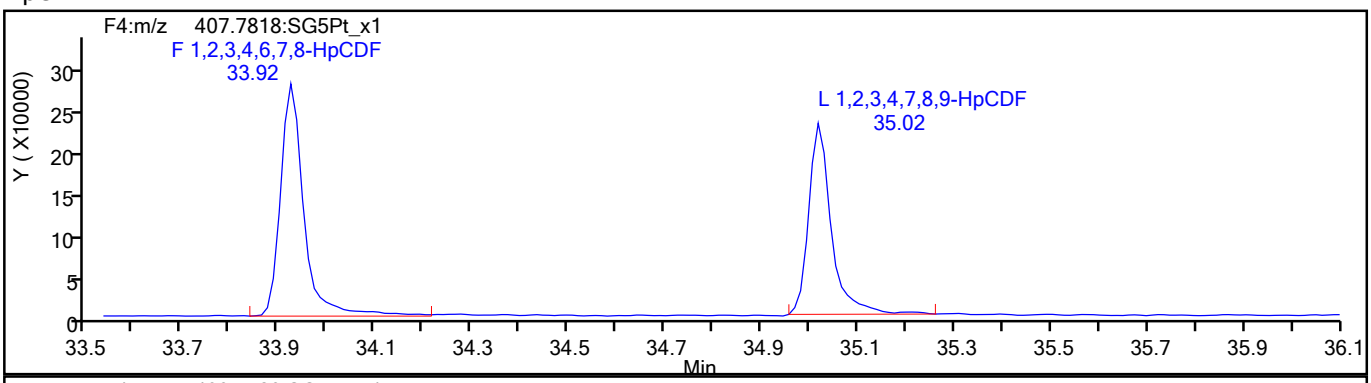

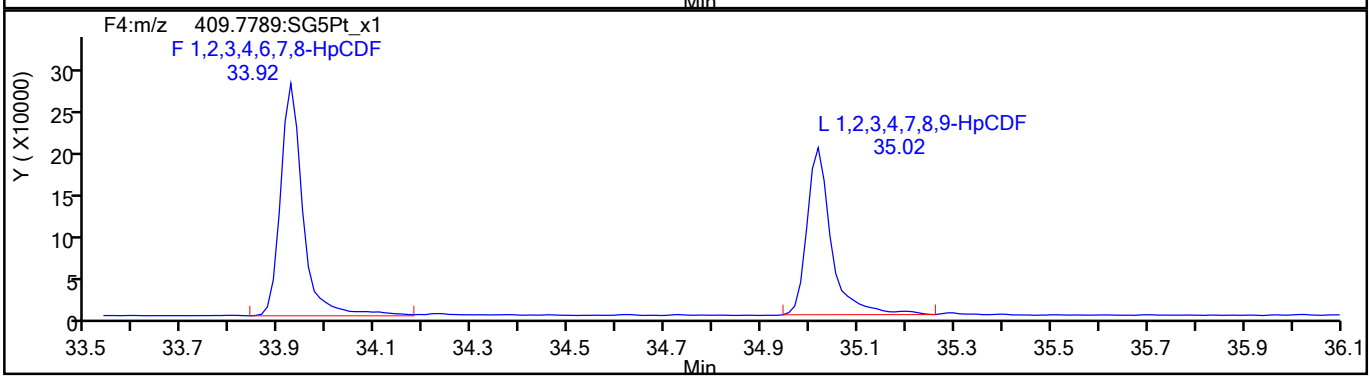

HpCDF Standards

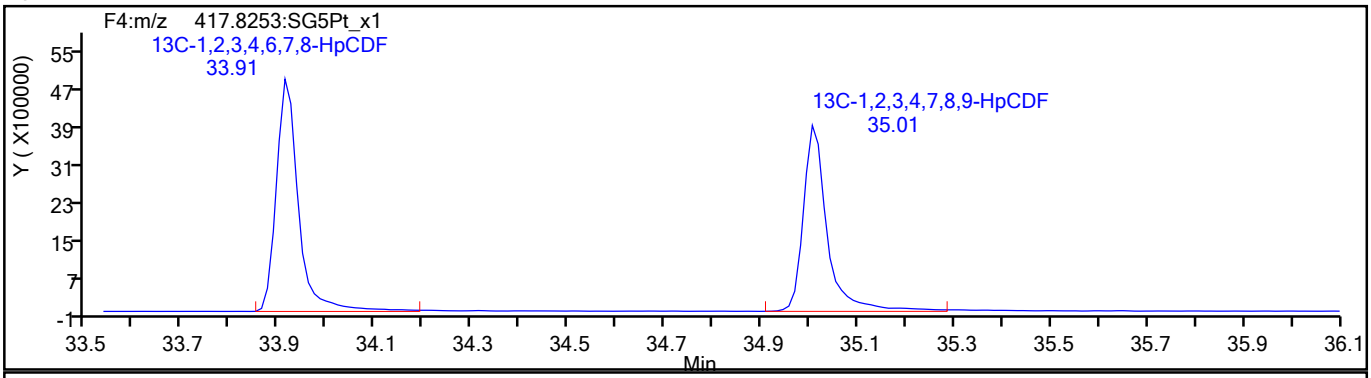

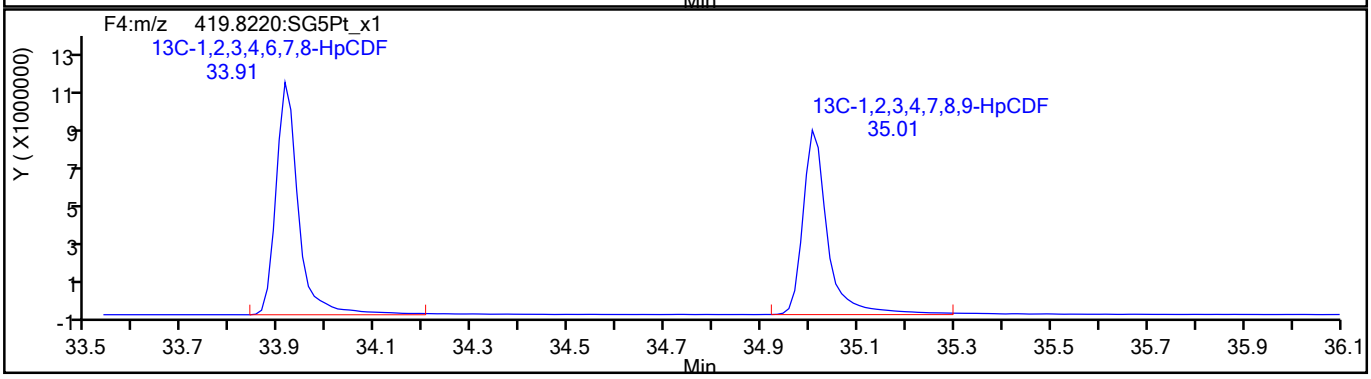

788719

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

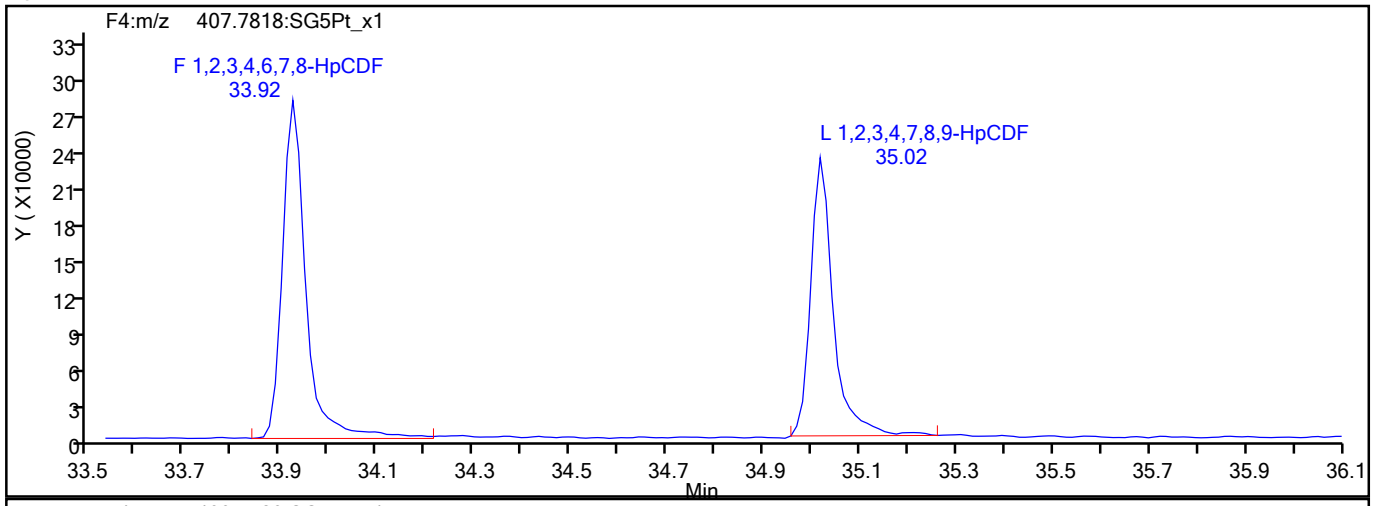

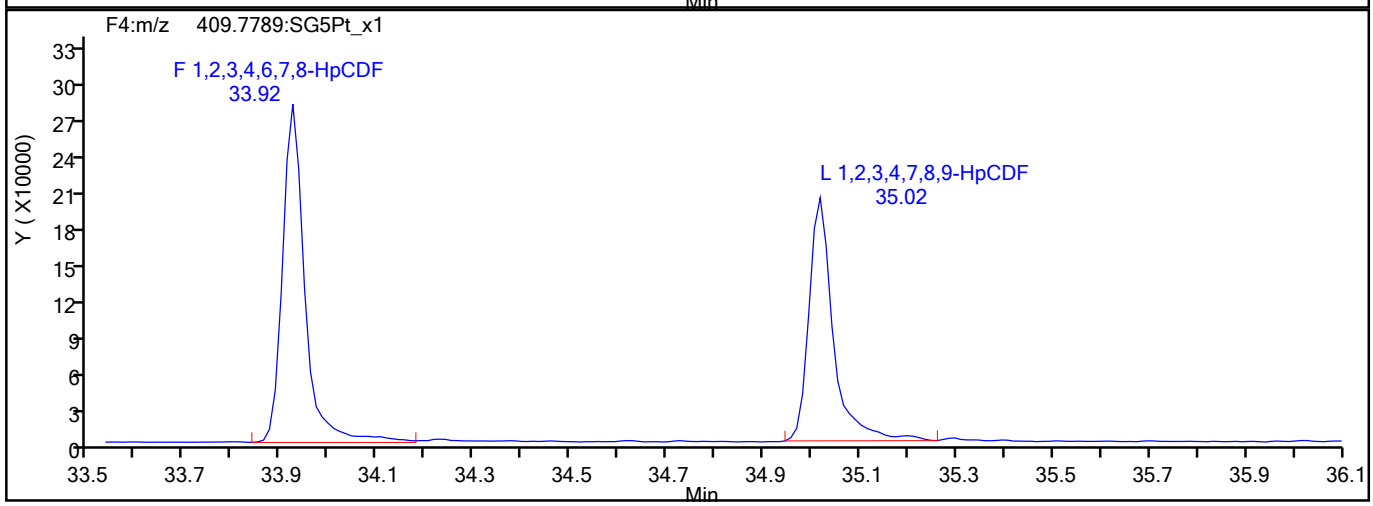

HpCDF Interference Mass

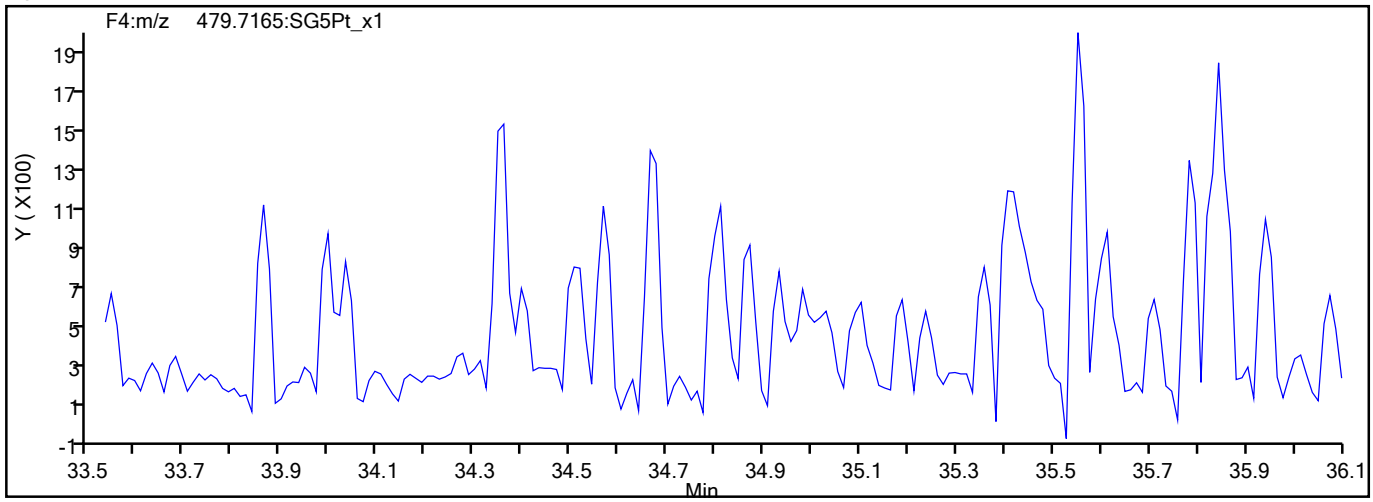

788720

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

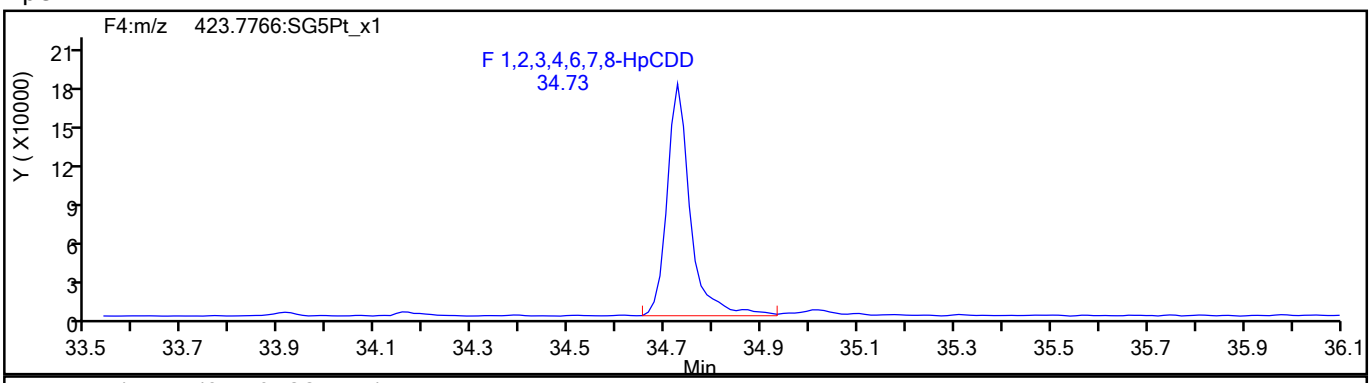

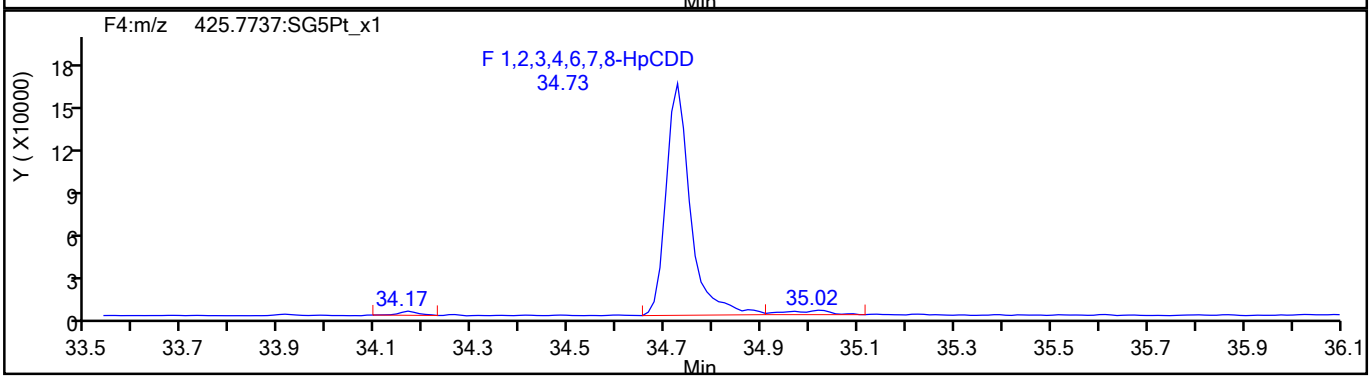

HpCDD Standards

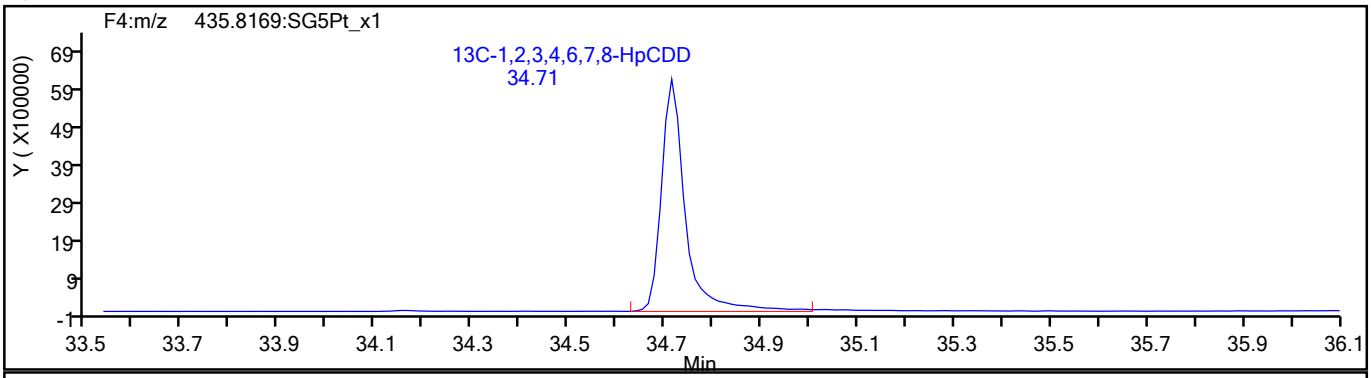

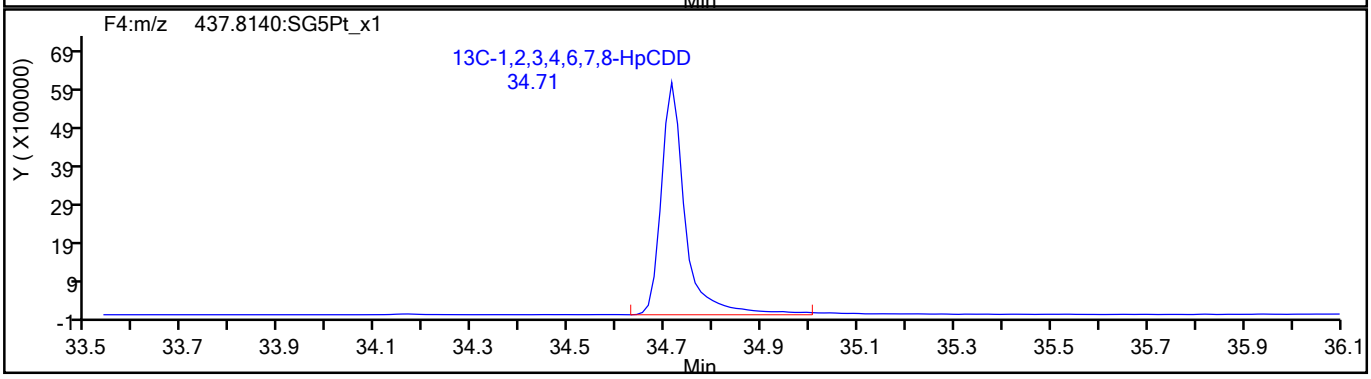

788721

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

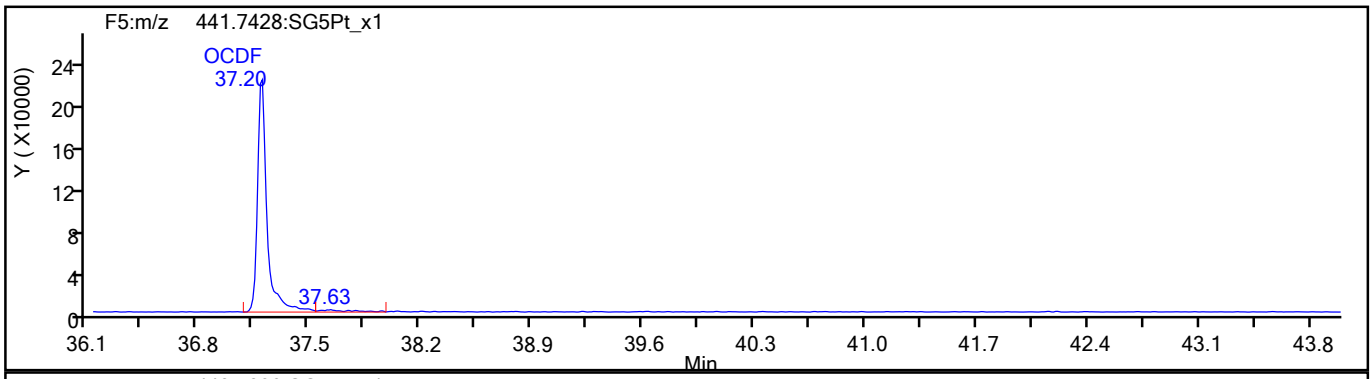

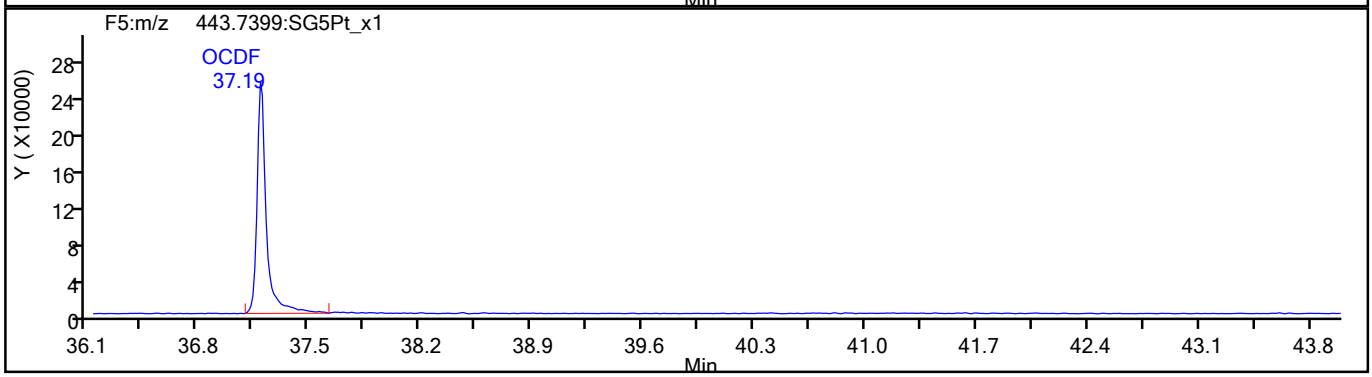

OCDF Standards

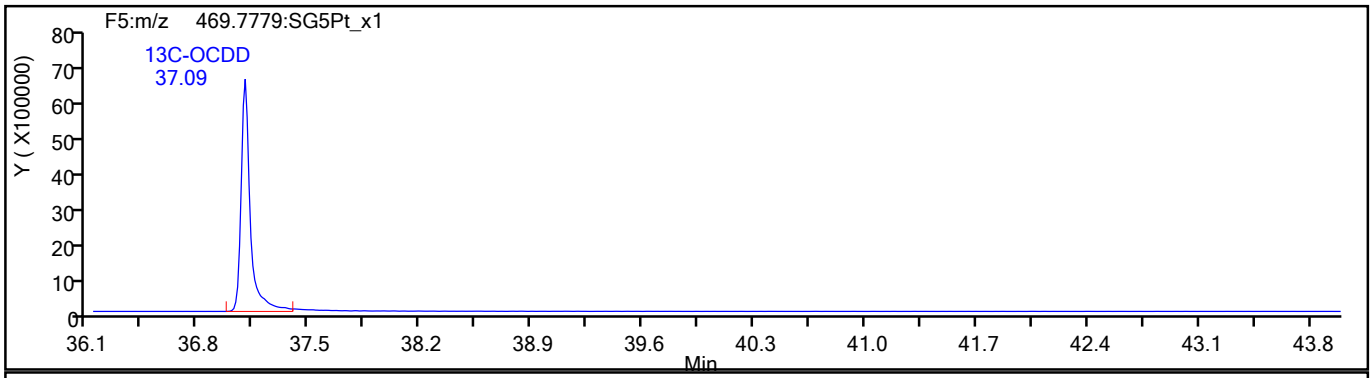

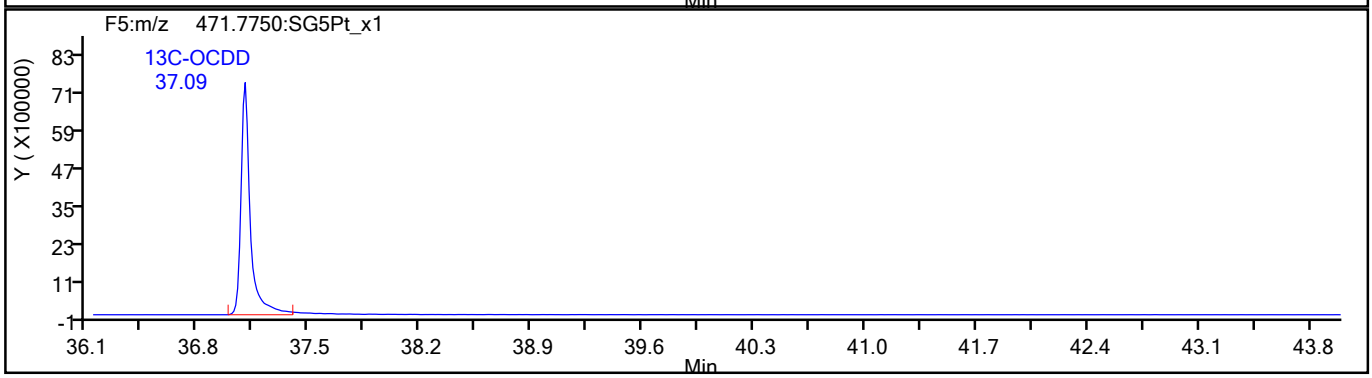

788722

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

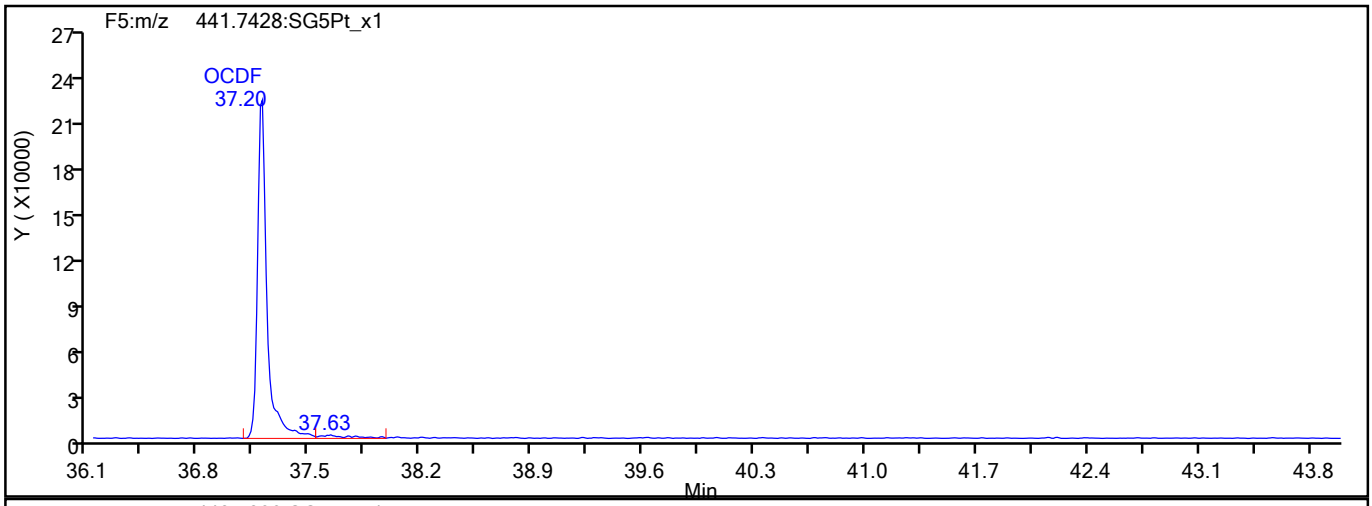

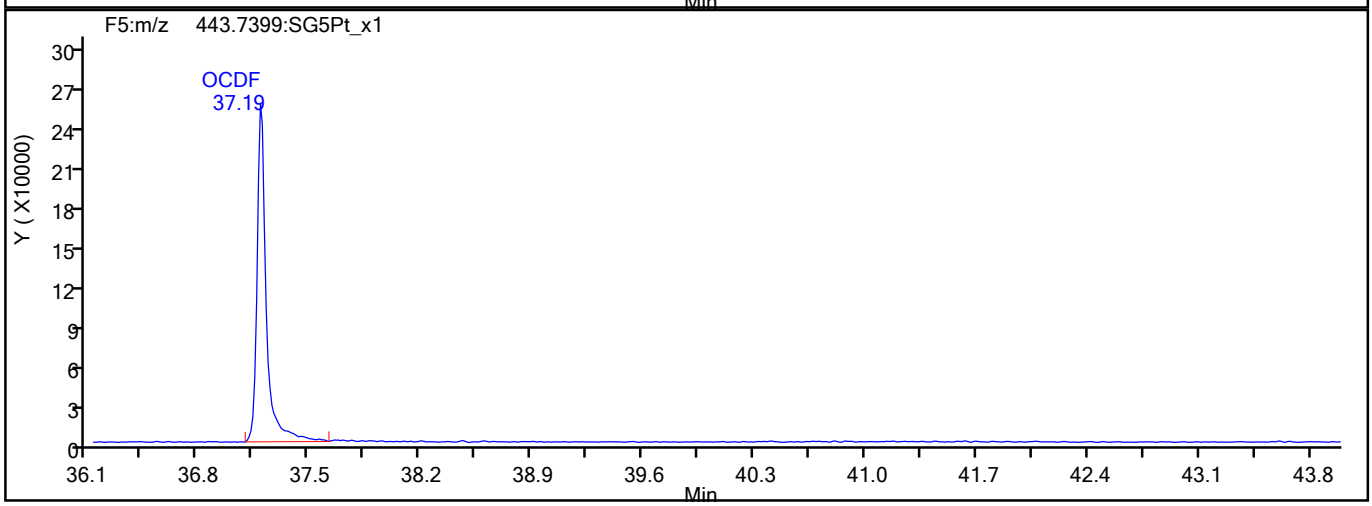

OCDF Interference Mass

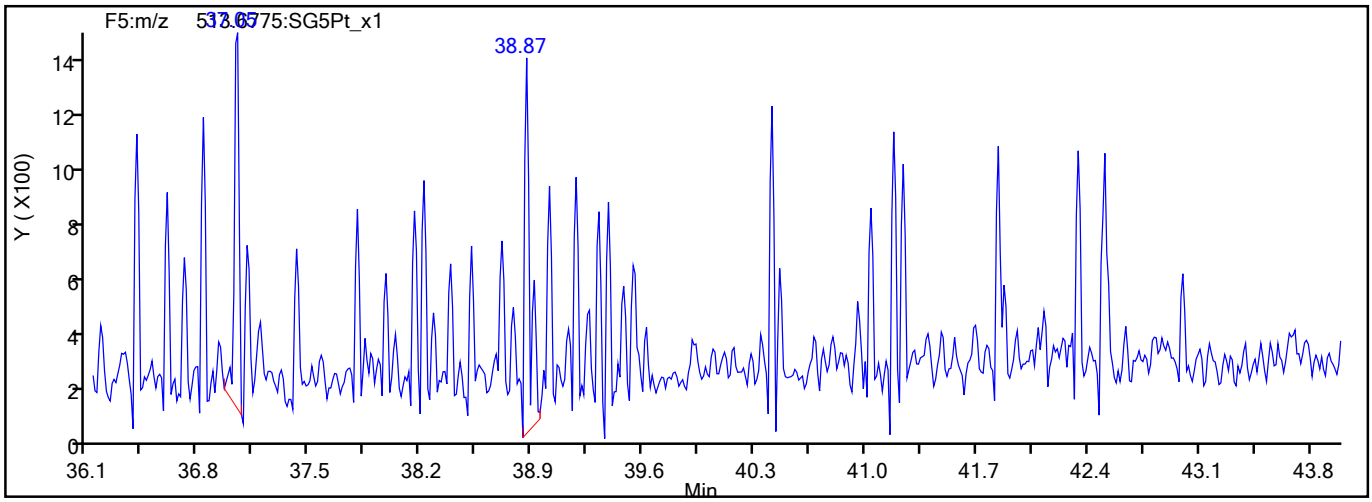

788723

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

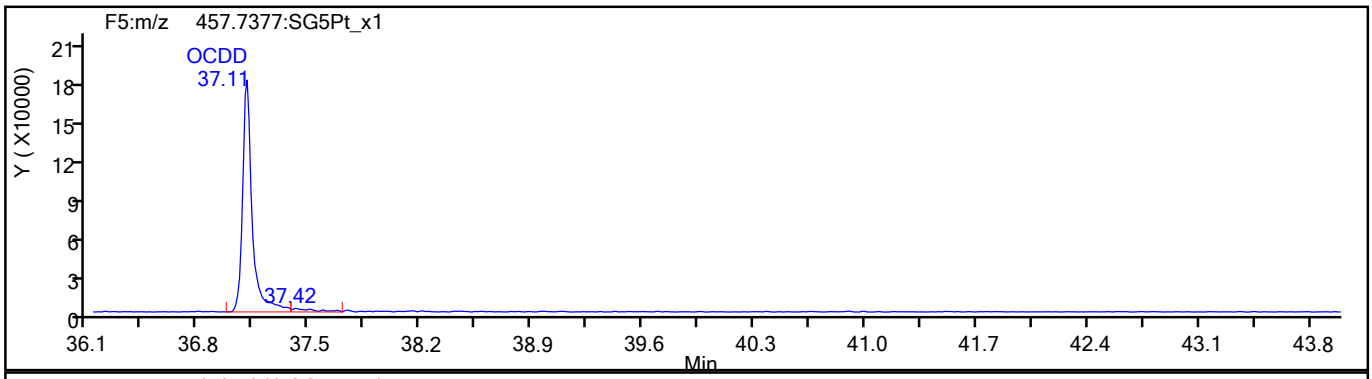

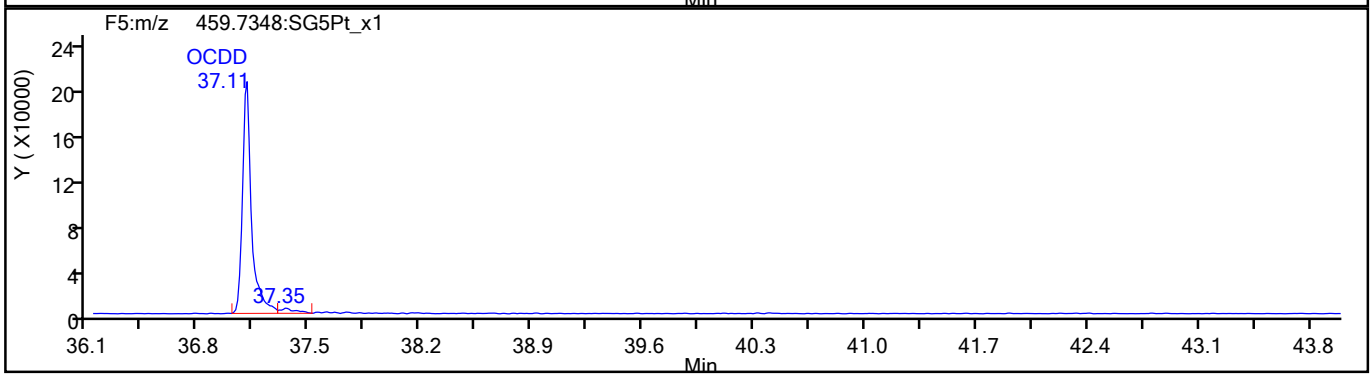

OCDD Standards

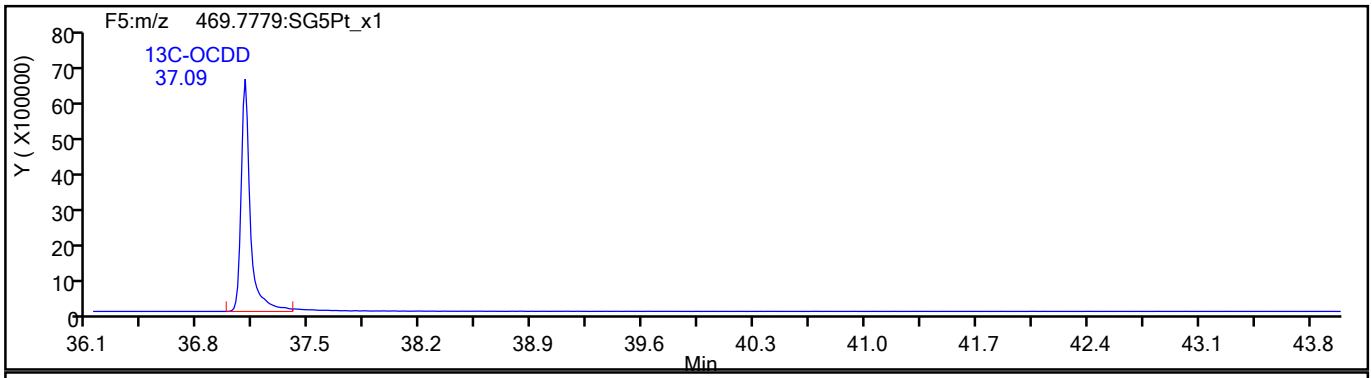

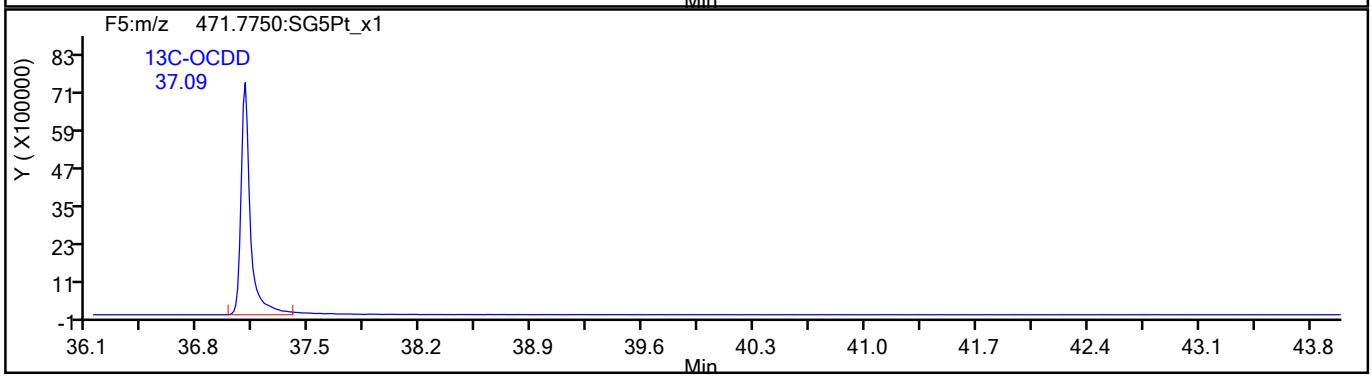

788724

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

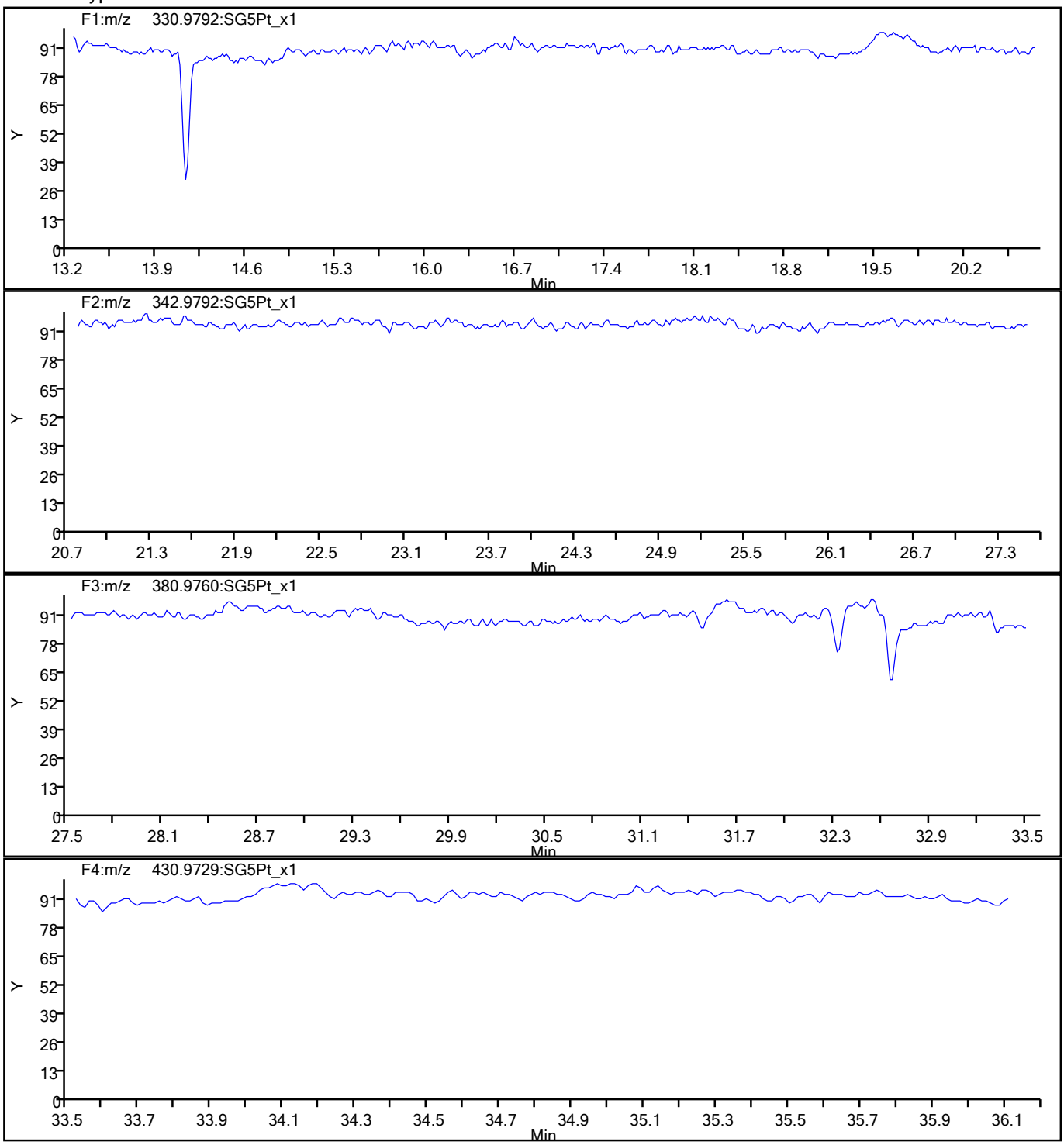

788725

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

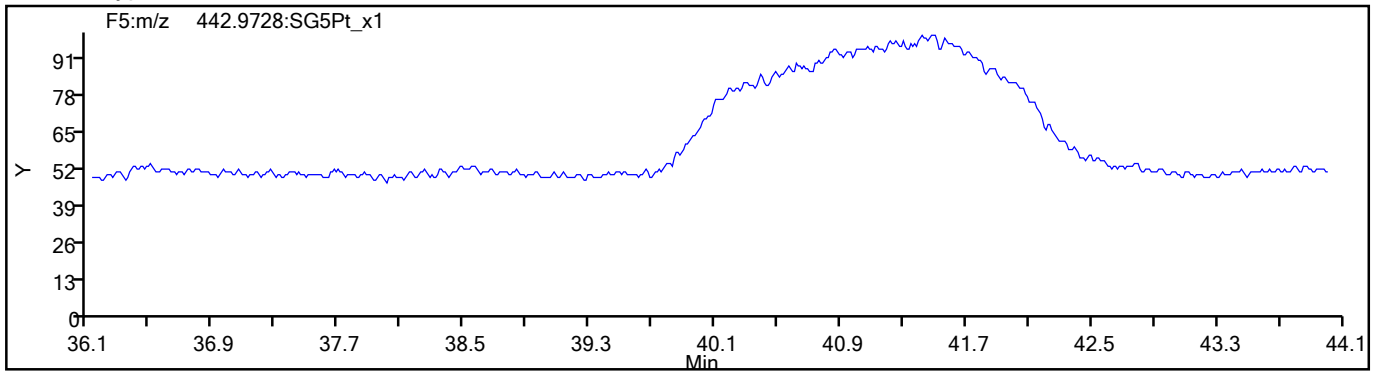

788726

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62853211	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	98246522	0.78	1.6249	96.2	96.2	0.1370	0.1370	96.20	
2,3,7,8-TCDF	17.628	1709191	0.74	1.0239	1.699	1.699	0.0115	0.0115	84.95	
S Total TCDF					1.699	1.699	0.0115	0.0115		
D 13C-2,3,7,8-TCDD	18.338	53975587	0.81	0.8993	95.5	95.5	0.1627	0.1627	95.49	
$ 37Cl4-2,3,7,8-TCDD	18.354	1231219		1.1071	1.769	1.769	0.009070	0.009070	88.47	
2,3,7,8-TCDD	18.354	1184284	0.77	1.2541	1.750	1.750	0.0187	0.0187	87.48	
S Total TCDD					1.750	1.750	0.0187	0.0187		
D 13C-1,2,3,7,8-PeCDF	22.749	72525655	1.59	1.2101	95.4	95.4	0.2163	0.2163	95.36	
1,2,3,7,8-PeCDF	22.776	6620354	1.62	1.0611	8.602	8.602	0.0369	0.0369	86.02	
D 13C-2,3,4,7,8-PeCDF	24.126	74944110	1.59	1.2395	96.2	96.2	0.2111	0.2111	96.20	a
2,3,4,7,8-PeCDF	24.153	6452410	1.61	1.0184	8.454	8.454	0.0398	0.0398	84.54	
S Total PeCDF					17.1	17.1	0.0383	0.0383		
D 13C-1,2,3,7,8-PeCDD	24.862	46721712	1.62	0.7612	97.7	97.7	0.1174	0.1174	97.65	
1,2,3,7,8-PeCDD	24.889	4219570	1.58	1.0484	8.614	8.614	0.0282	0.0282	86.14	
S Total PeCDD					8.614	8.614	0.0282	0.0282		
D 13C-1,2,3,4,7,8-HxCDF	30.835	65726932	0.51	1.0837	101.6	101.6	0.5284	0.5284	102	a
1,2,3,4,7,8-HxCDF	30.848	6041767	1.22	1.0851	8.471	8.471	0.0611	0.0611	84.71	
D 13C-1,2,3,6,7,8-HxCDF	30.995	68089005	0.53	1.1279	101.1	101.1	0.5077	0.5077	101	
1,2,3,6,7,8-HxCDF	31.021	6561860	1.24	1.1260	8.559	8.559	0.0596	0.0596	85.59	
D 13C-2,3,4,6,7,8-HxCDF	31.753	64406928	0.52	1.0637	101.4	101.4	0.5383	0.5383	101	
2,3,4,6,7,8-HxCDF	31.767	6352404	1.21	1.1675	8.448	8.448	0.0492	0.0492	84.48	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58828058	0.51	0.9676	101.8	101.8	0.5918	0.5918	102	
1,2,3,7,8,9-HxCDF	32.526	5963032	1.22	1.1664	8.691	8.691	0.0536	0.0536	86.91	
S Total HxCDF					34.2	34.2	0.0559	0.0559		
* 13C-1,2,3,7,8,9-HxCDD	32.339	59719891	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44877133	1.26	0.7334	102.5	102.5	0.4904	0.4904	102	a
1,2,3,4,7,8-HxCDD	31.940	3996910	1.25	1.0640	8.370	8.370	0.0541	0.0541	83.70	
D 13C-1,2,3,6,7,8-HxCDD	32.033	52974056	1.27	0.8802	100.8	100.8	0.4087	0.4087	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.046	4517909	1.28	1.0001	8.528	8.528	0.0541	0.0541	85.28	
1,2,3,7,8,9-HxCDD	32.353	4612548	1.27	1.1325	8.324	8.324	0.0492	0.0492	83.24	
S Total HxCDD					25.2	25.2	0.0525	0.0525		
D 13C-1,2,3,4,6,7,8-HpCDF	33.911	46691158	0.44	0.7730	101.1	101.1	1.219	1.219	101	
1,2,3,4,6,7,8-HpCDF	33.924	5795616	1.06	1.4413	8.612	8.612	0.0908	0.0908	86.12	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	42362179	0.44	0.7008	101.2	101.2	1.344	1.344	101	a
1,2,3,4,7,8,9-HpCDF	35.017	4773949	1.04	1.3174	8.554	8.554	0.1198	0.1198	85.54	
S Total HpCDF					17.2	17.2	0.1053	0.1053		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	38689128	1.01	0.6472	100.1	100.1	0.6644	0.6644	100	
1,2,3,4,6,7,8-HpCDD	34.725	3690749	1.06	1.0943	8.717	8.717	0.0588	0.0588	87.17	
S Total HpCDD					8.717	8.717	0.0588	0.0588		
D 13C-OCDD	37.093	52034518	0.88	0.4472	194.9	194.9	0.3057	0.3057	97.43	
OCDF	37.189	6198469	0.89	1.4382	16.6	16.6	0.0331	0.0331	82.83	
OCDD	37.105	5013385	0.90	1.1070	17.4	17.4	0.0477	0.0477	87.03	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28386456	7046087	6003	15007	1174		
333.9339	18.142	18.142	0		34466755	8558284	3128	7820	2736	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42972486	10763336	8679	21697	1240		
317.9389	17.613	17.616	0	0.971	55274036	13878642	5218	13045	2660	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	725190	178427	386	965	462		
305.8987	17.628	17.631	0	1.001	984001	248871	771	1927	323	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24153490	5697854	6003	15007	949		
333.9339	18.338	18.338	0	1.011	29822097	7031837	3128	7820	2248	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	1231219	295748	627	1567	472		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	516509	120344	727	1817	166		
321.8936	18.354	18.357	0	1.001	667775	162973	470	1175	347	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44514928	7853181	9659	24147	813		
353.8970	22.749	22.754	0	1.254	28010727	4960984	6675	16687	743	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	4089215	716349	1056	2640	678		
341.8567	22.776	22.779	0	1.001	2531139	446464	949	2372	470	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											a
351.9000	24.126	24.129	0	1.330	46033296	7621284	9659	24147	789		a
353.8970	24.126	24.129	0	1.330	28910814	4739818	6675	16687	710	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	3984657	653372	1056	2640	619		
341.8567	24.153	24.156	0	1.001	2467753	411895	949	2372	434	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28869986	4442492	3510	8775	1266		
369.8919	24.862	24.865	0	1.370	17851726	2719251	2068	5170	1315	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	2584600	398905	491	1227	812		
357.8516	24.889	24.892	0	1.001	1634970	246537	355	887	694	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											a
383.8639	30.835	30.838	0	0.953	22324815	4908430	11721	29302	419		a
385.8610	30.835	30.838	0	0.953	43402117	9487505	22146	55365	428	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.848	30.857	0	1.000	3322045	734549	2125	5312	346		
375.8178	30.848	30.857	0	1.000	2719722	584076	1696	4240	344	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	23443638	4852452	11721	29302	414		
385.8610	30.995	31.003	0	0.958	44645367	9390378	22146	55365	424	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.001	3628802	774738	2125	5312	365		
375.8178	31.021	31.022	0	1.001	2933058	621989	1696	4240	367	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.753	31.756	0	0.982	22116278	5724833	11721	29302	488		
385.8610	31.753	31.756	0	0.982	42290650	10891641	22146	55365	492	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	3476984	900887	2125	5312	424		
375.8178	31.767	31.772	0	1.000	2875420	748664	1696	4240	441	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	19952155	5224965	11721	29302	446		
385.8610	32.512	32.523	-1	1.005	38875903	10047992	22146	55365	454	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	3272570	870864	2125	5312	410		
375.8178	32.526	32.534	0	1.000	2690462	702575	1696	4240	414	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33208186	8207924	11753	29382	698		
403.8529	32.339	32.342	0		26511705	6578059	9521	23802	691	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	31.927	31.929	0	0.987	24991401	7247079	11753	29382	617		a
403.8529	31.927	31.929	0	0.987	19885732	5749736	9521	23802	604	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	2220855	634454	1798	4495	353		
391.8127	31.940	31.945	0	1.000	1776055	520388	1195	2987	435	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29637474	7731021	11753	29382	658		
403.8529	32.033	32.033	0	0.991	23336582	6105317	9521	23802	641	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.046	32.047	0	1.000	2539756	681391	1798	4495	379		
391.8127	32.046	32.047	0	1.000	1978153	525440	1195	2987	440	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	2578931	681238	1798	4495	379		
391.8127	32.353	32.355	0	1.013	2033617	530890	1195	2987	444	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.911	33.914	0	1.049	14324046	4548819	17096	42740	266		
419.8220	33.911	33.914	0	1.049	32367112	10373412	38619	96547	269	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	2984390	989226	3939	9847	251		
409.7789	33.924	33.926	0	1.000	2811226	912647	3871	9677	236	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											a
417.8253	35.005	35.010	0	1.082	12913204	3817815	17096	42740	223		a
419.8220	35.005	35.010	0	1.082	29448975	8551787	38619	96547	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	2430692	699814	3939	9847	178		
409.7789	35.017	35.020	0	1.000	2343257	686031	3871	9677	177	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19472945	5796031	12697	31742	456		
437.8140	34.714	34.716	0	1.073	19216183	5692167	12738	31845	447	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.725	34.726	0	1.000	1901971	557241	1605	4012	347		
425.7737	34.725	34.726	0	1.000	1788778	518346	1352	3380	383	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	24422535	6155132	2912	7280	2114		
471.7750	37.093	37.094	0	1.147	27611983	6845350	5172	12930	1324	0.88(0.76-1.02)	
OCDF											
441.7428	37.189	37.199	-1	1.003	2921445	715883	635	1587	1127		
443.7399	37.189	37.199	-1	1.003	3277024	845078	603	1507	1401	0.89(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	2373314	577341	633	1582	912		
459.7348	37.105	37.106	0	1.000	2640071	638330	739	1847	864	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.13

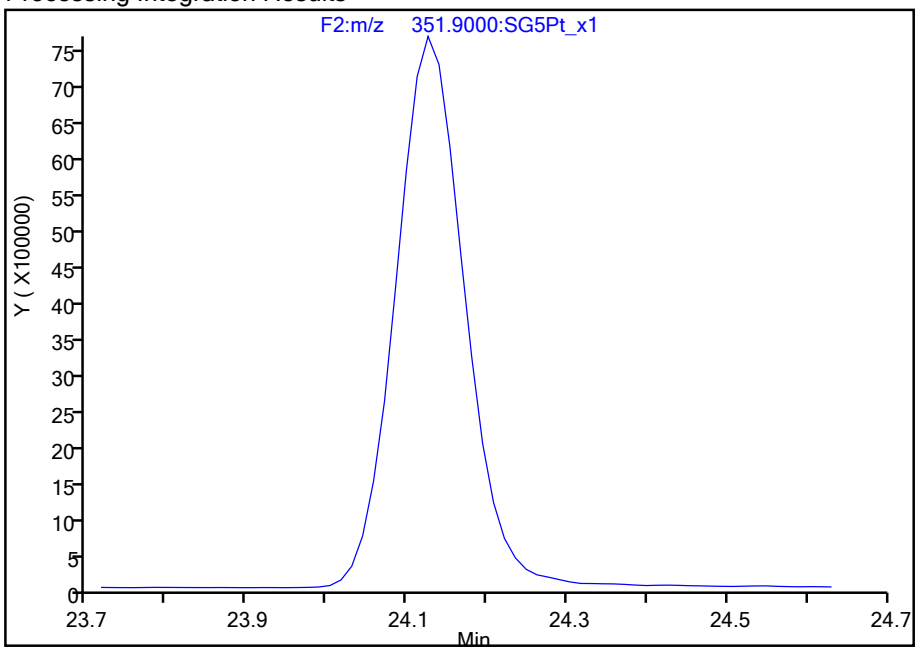

Manual Integration Results

RT: 24.13
Area: 46033296
Amount: 96.198549
Amount Units: pg/ul

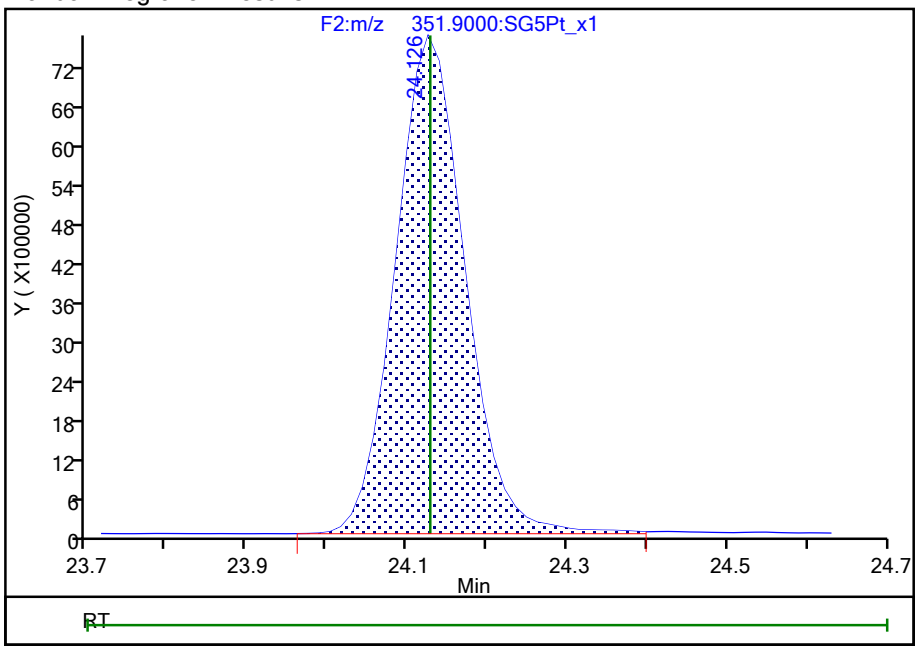

Reviewer: arghestanis, 26-Jul-2021 12:30:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

788732

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDF, CAS: 114423-98-2

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.84

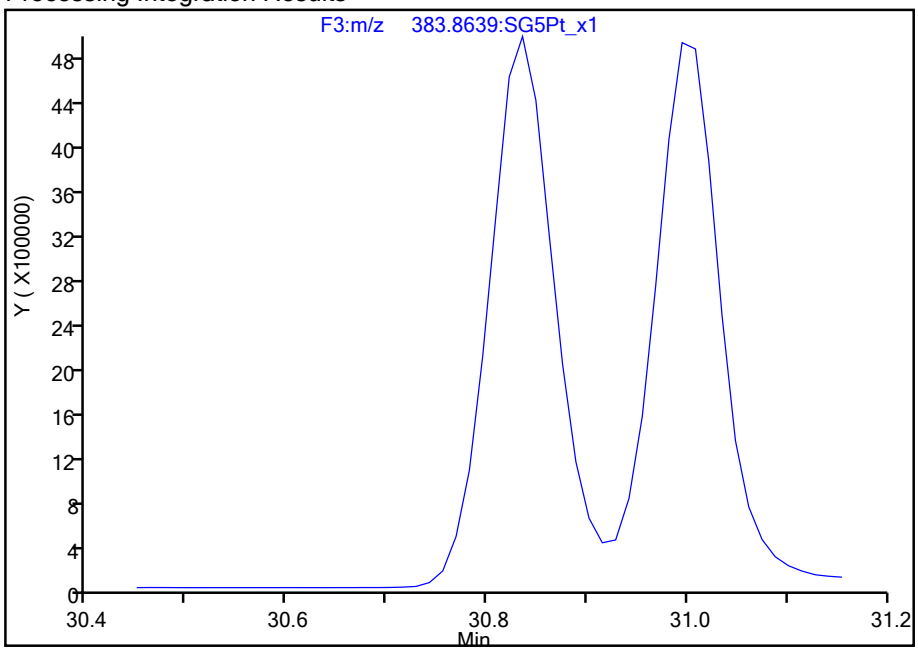

Manual Integration Results

RT: 30.84
Area: 22324815
Amount: 101.5622
Amount Units: pg/ul

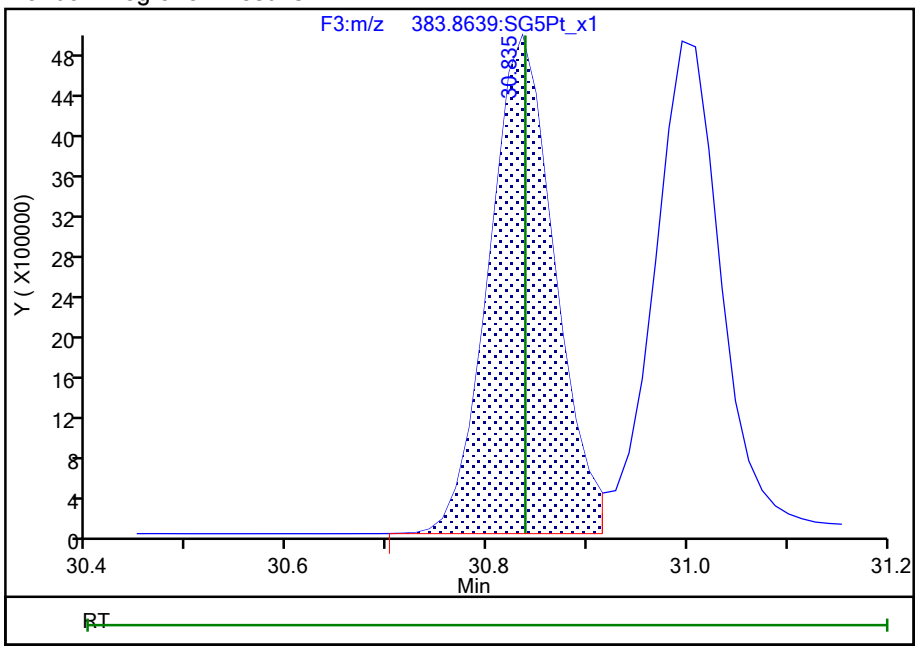

Reviewer: arghestanis, 26-Jul-2021 12:30:40
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

788733

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.93

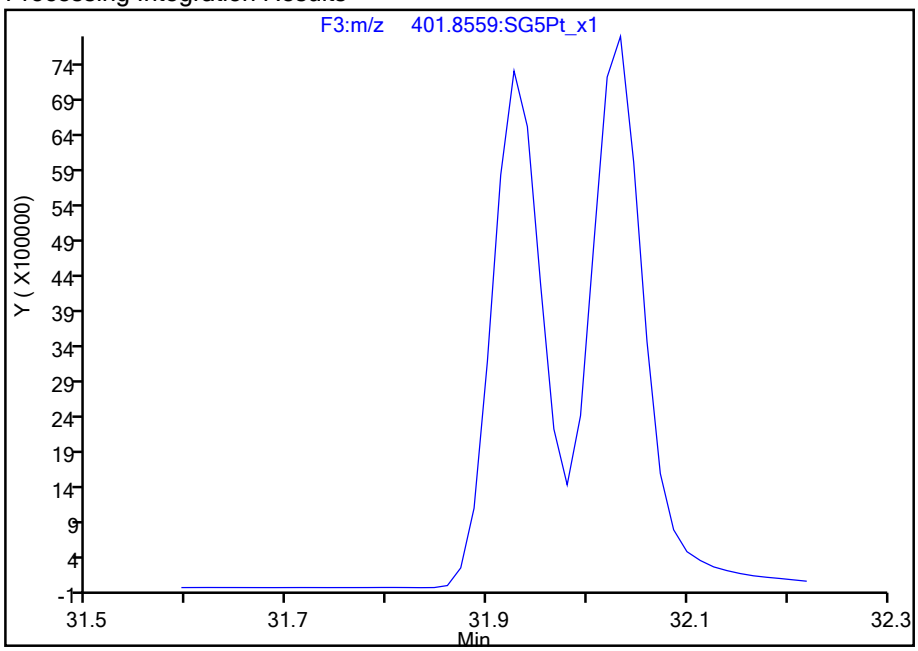

Manual Integration Results

RT: 31.93
Area: 24991401
Amount: 102.4585
Amount Units: pg/ul

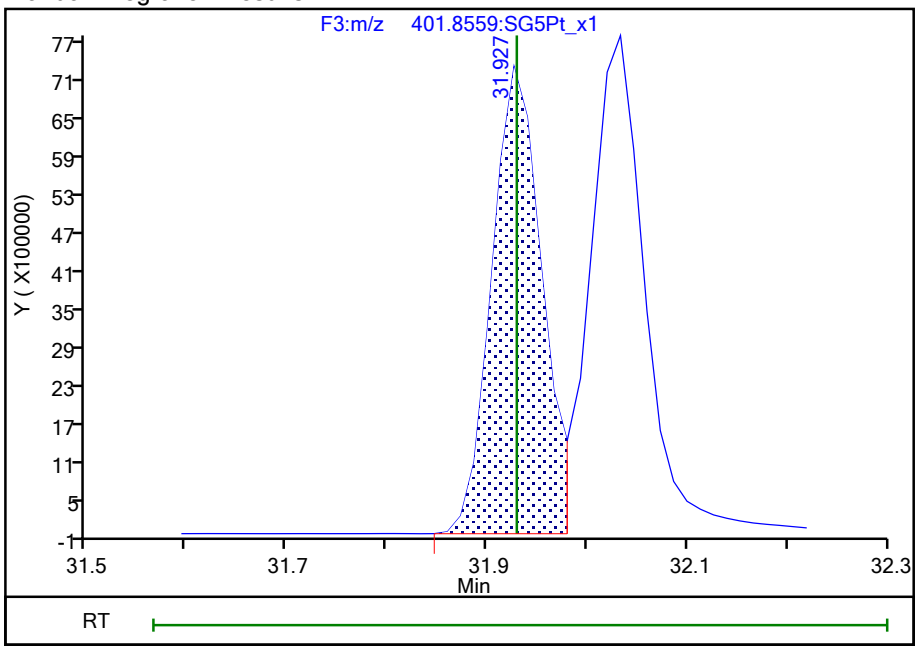

Reviewer: arghestanis, 26-Jul-2021 12:30:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.01

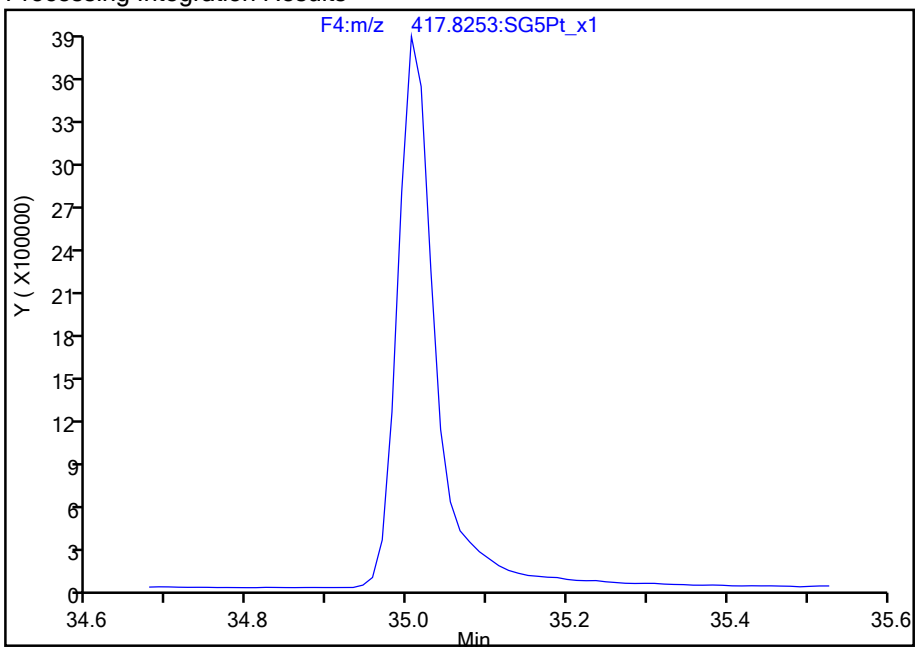

Manual Integration Results

RT: 35.01
Area: 12913204
Amount: 101.2180
Amount Units: pg/ul

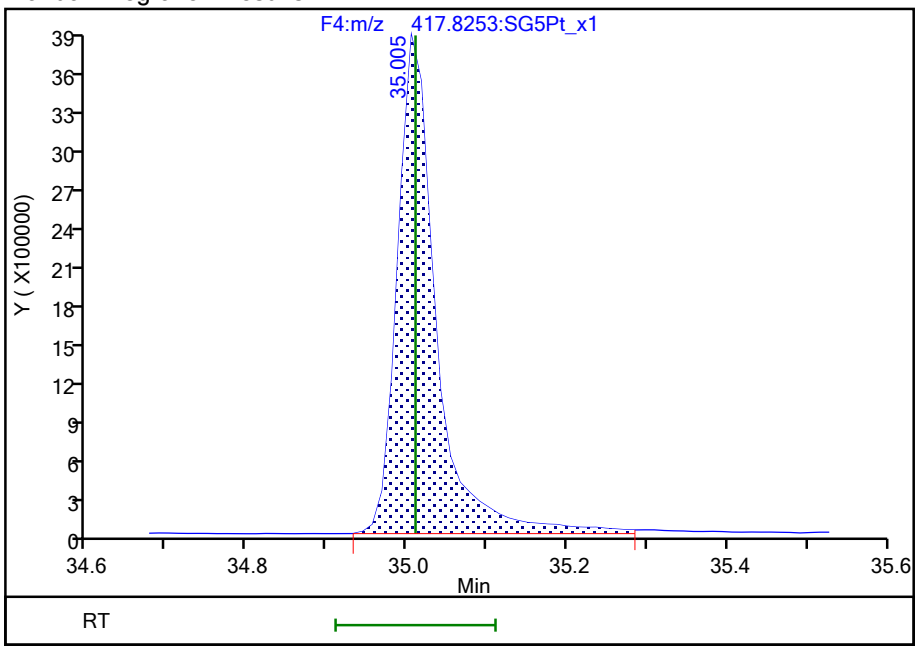

Reviewer: arghestanis, 26-Jul-2021 12:31:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

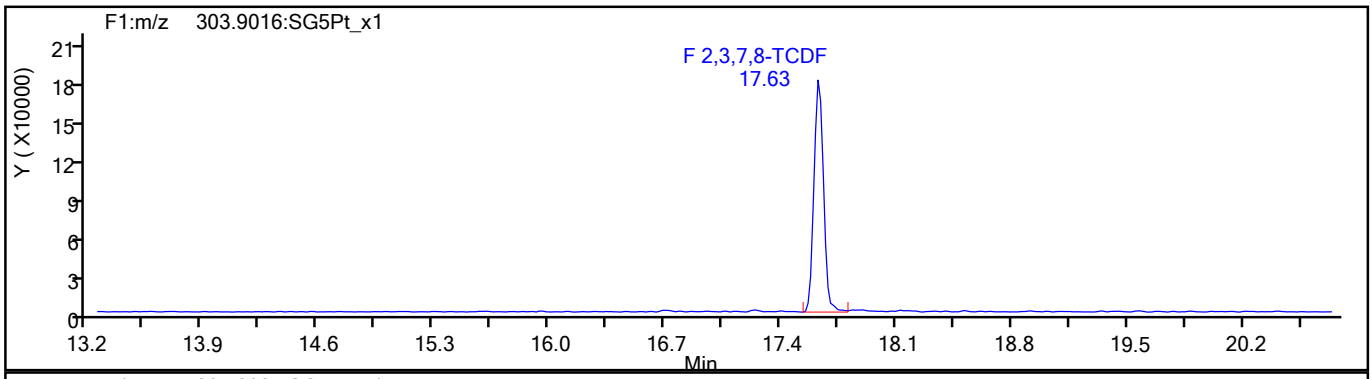

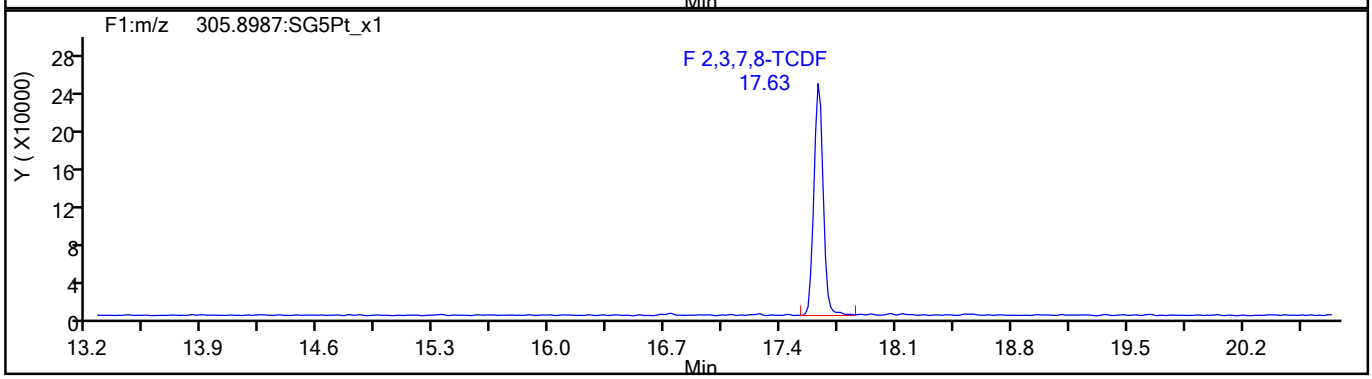

TCDF Standards

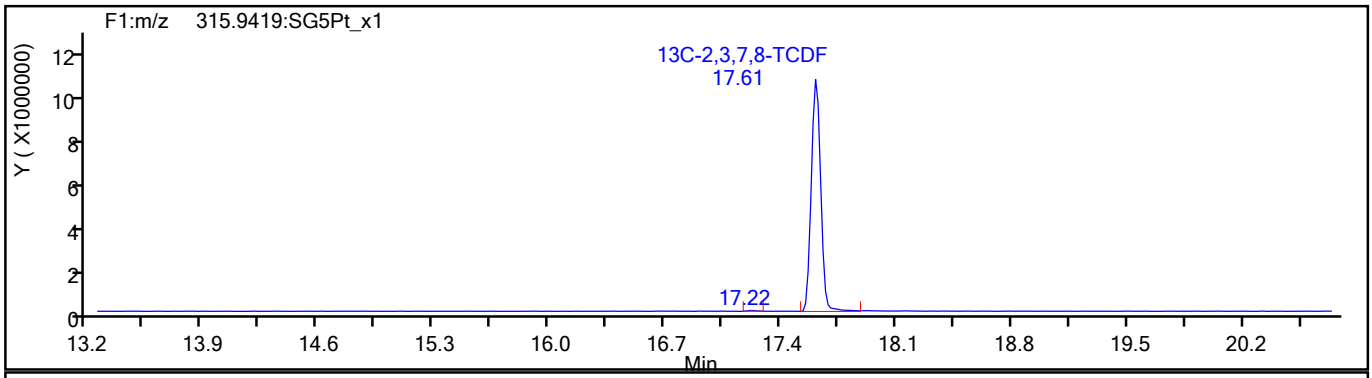

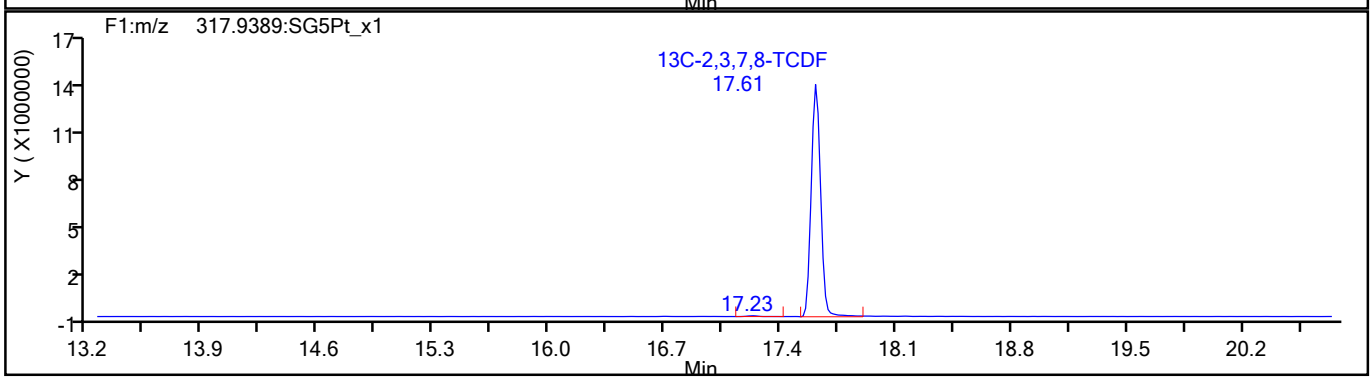

788736

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

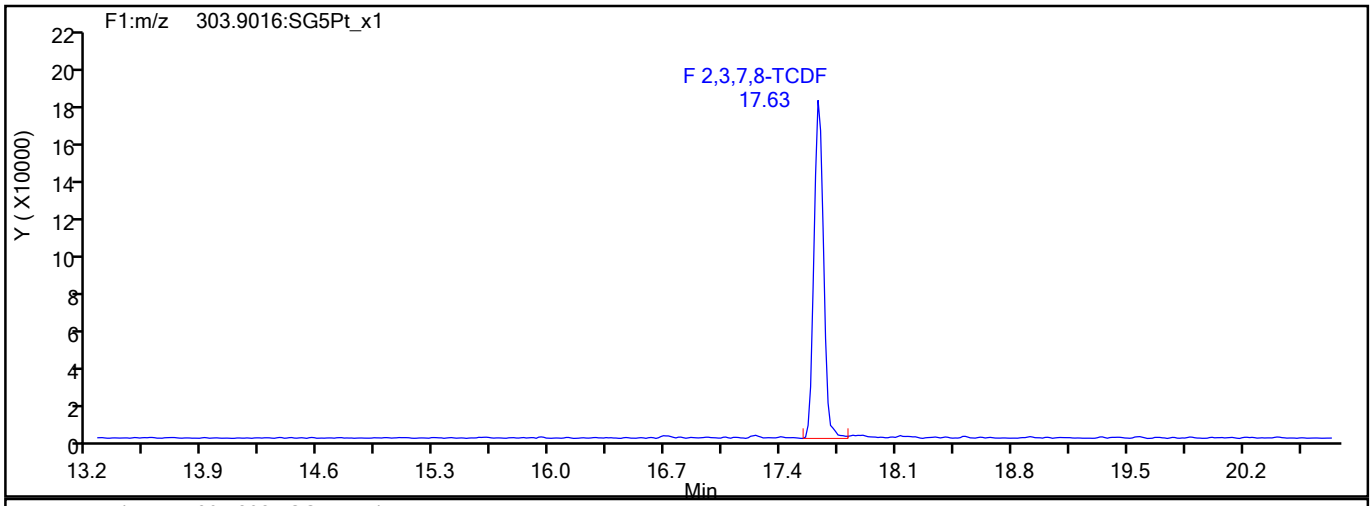

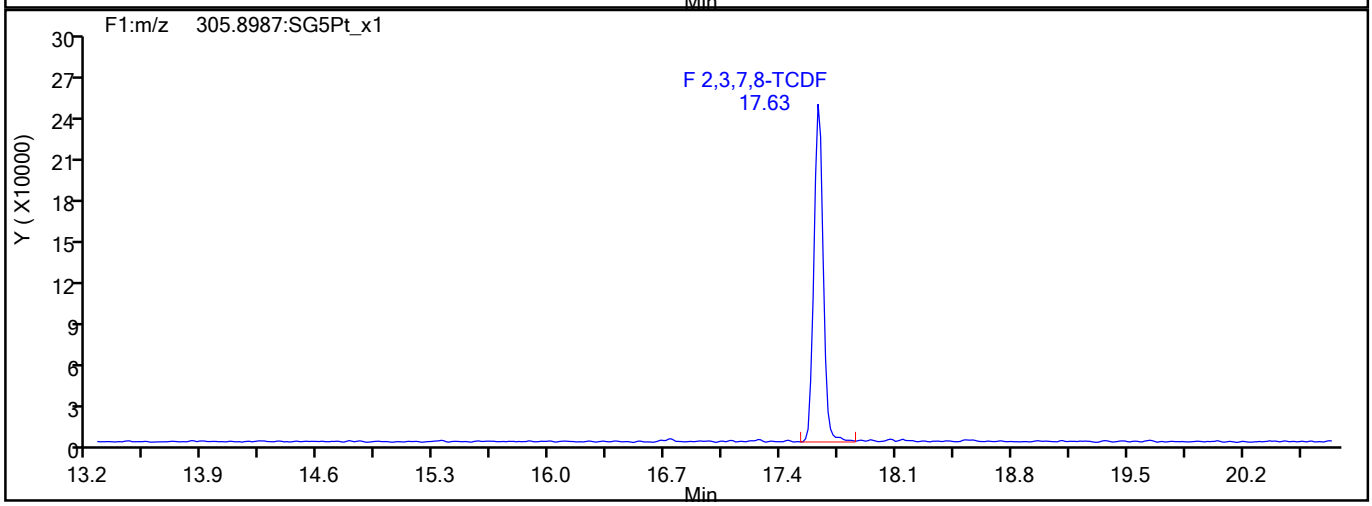

TCDF Interference Mass

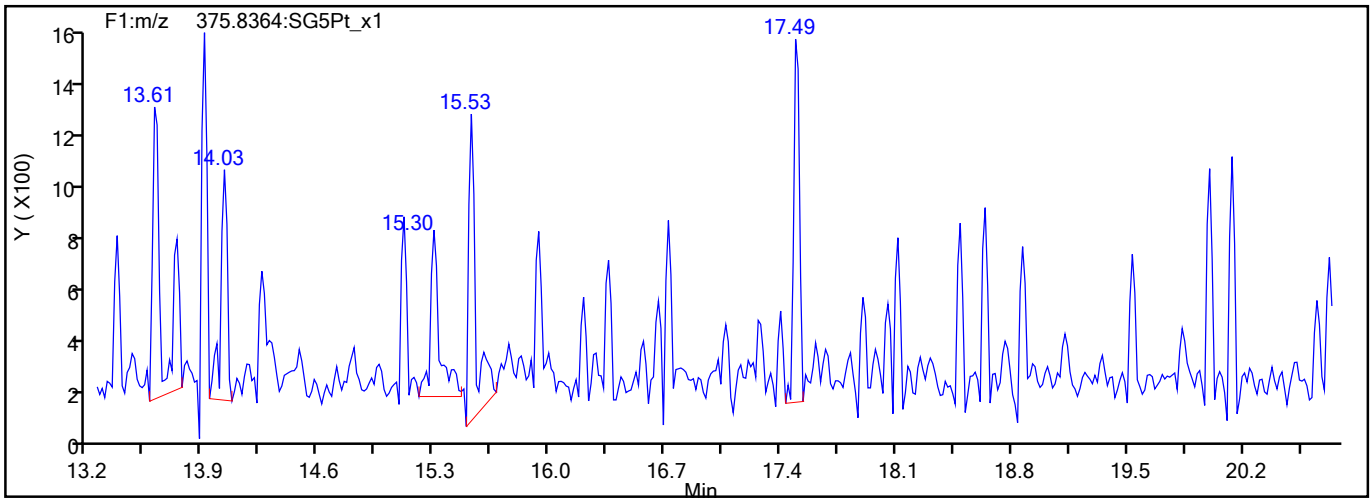

788737

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

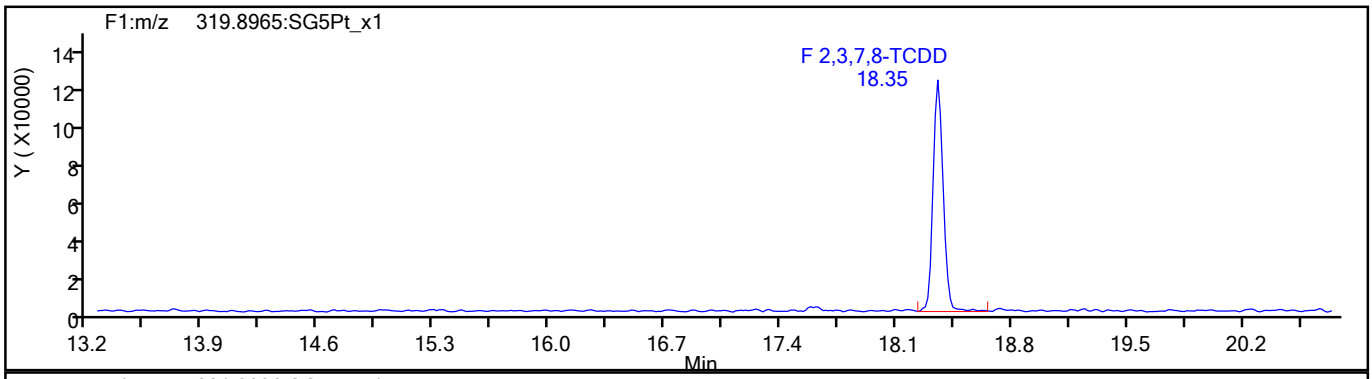

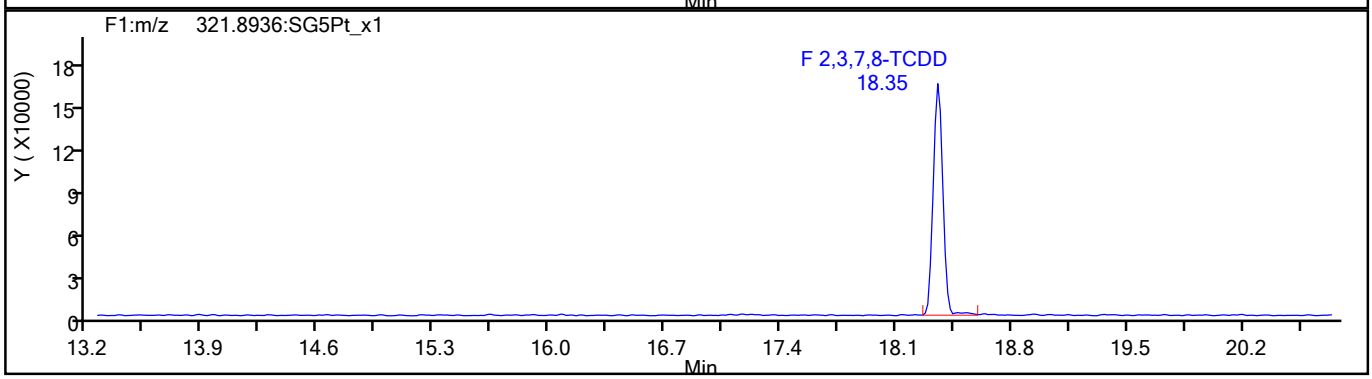

TCDD Standards

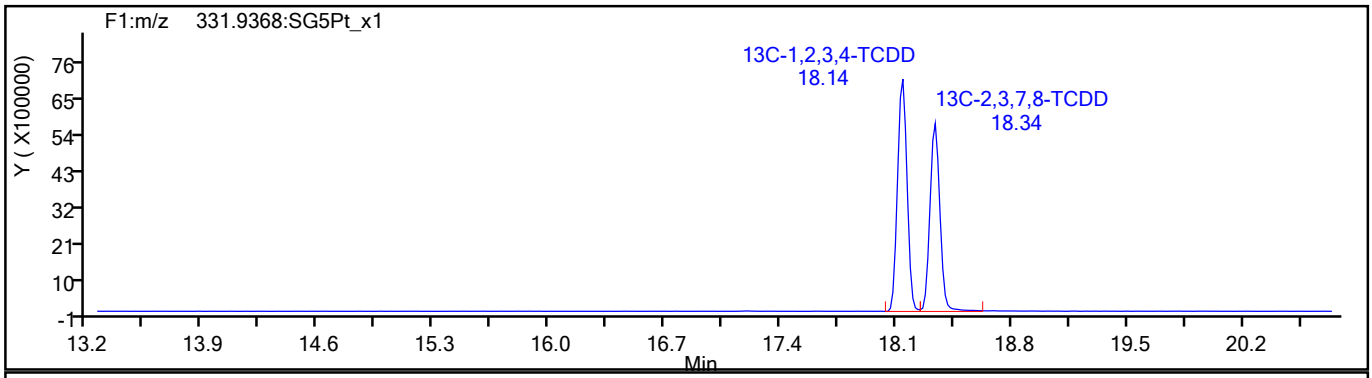

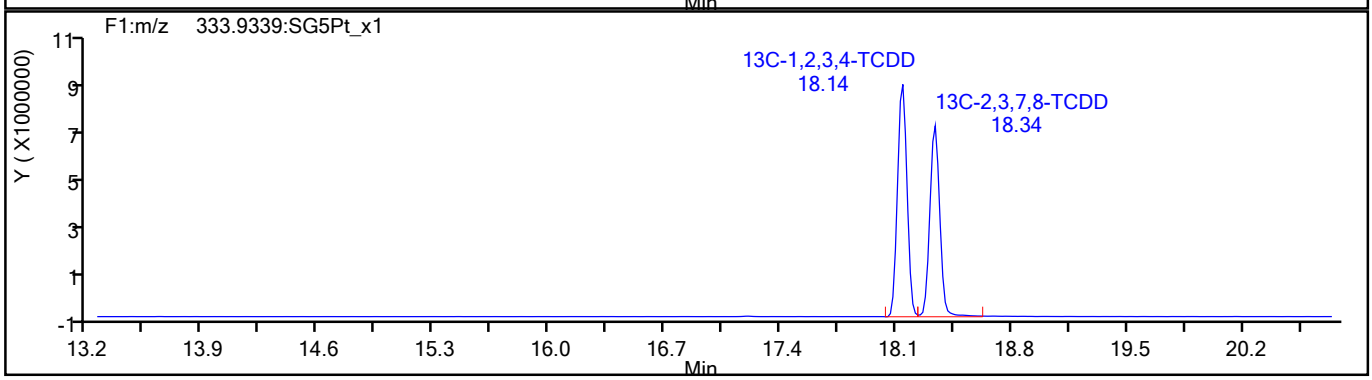

788738

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

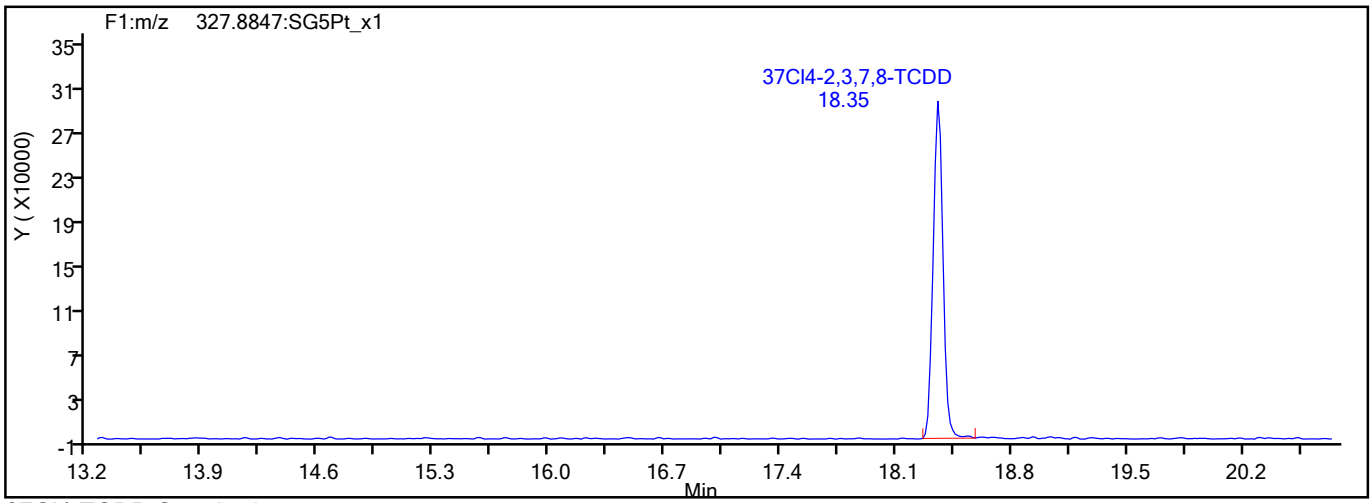

37Cl4-TCDD Standards

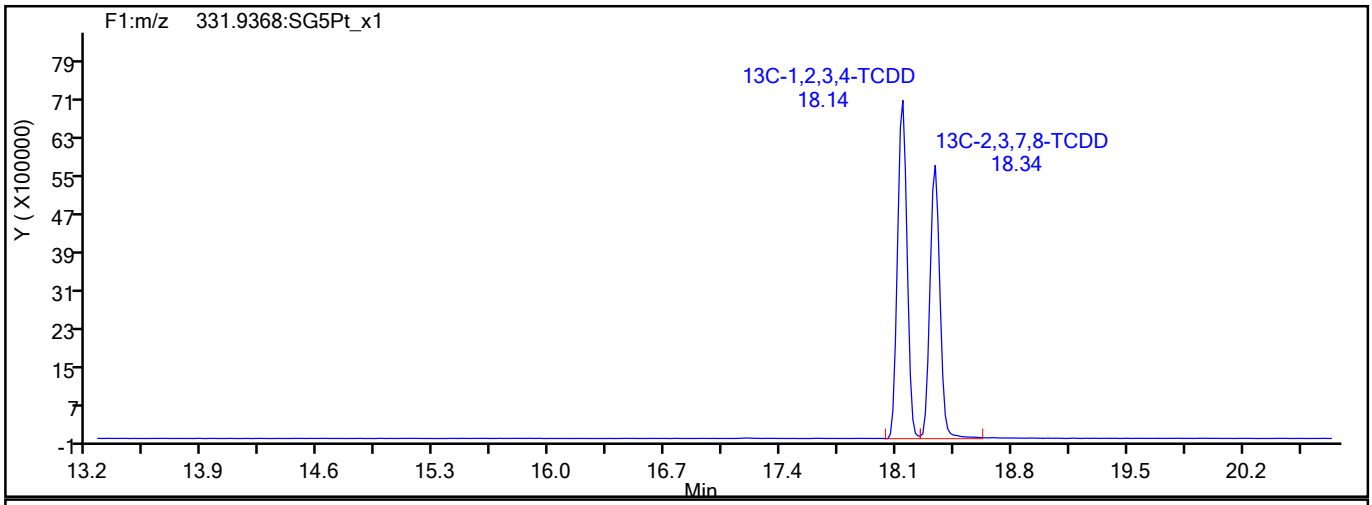

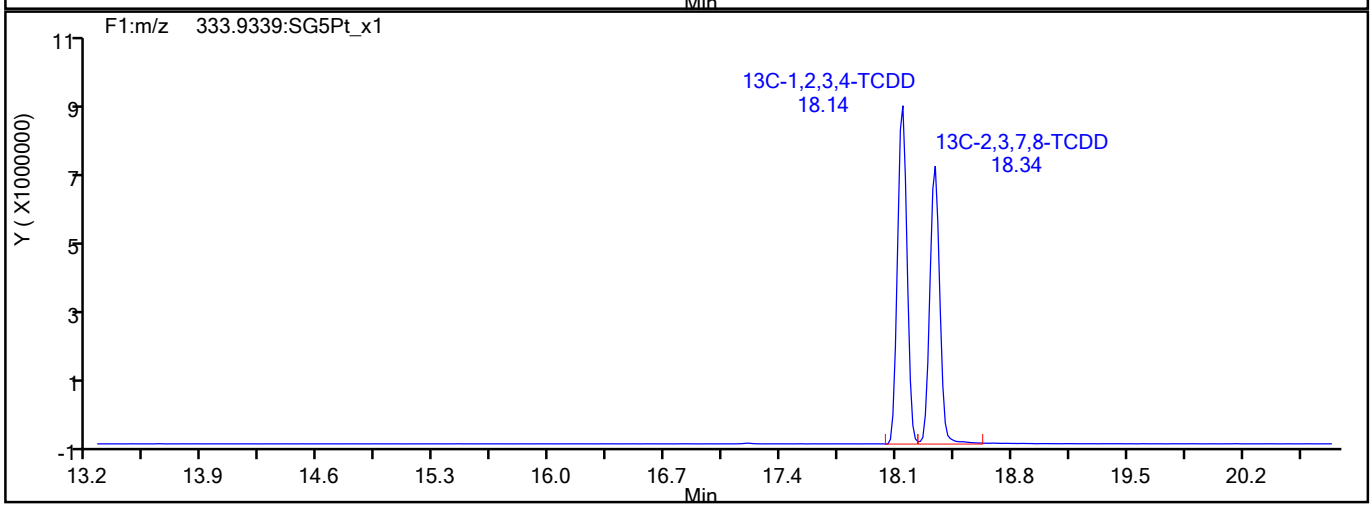

788739

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

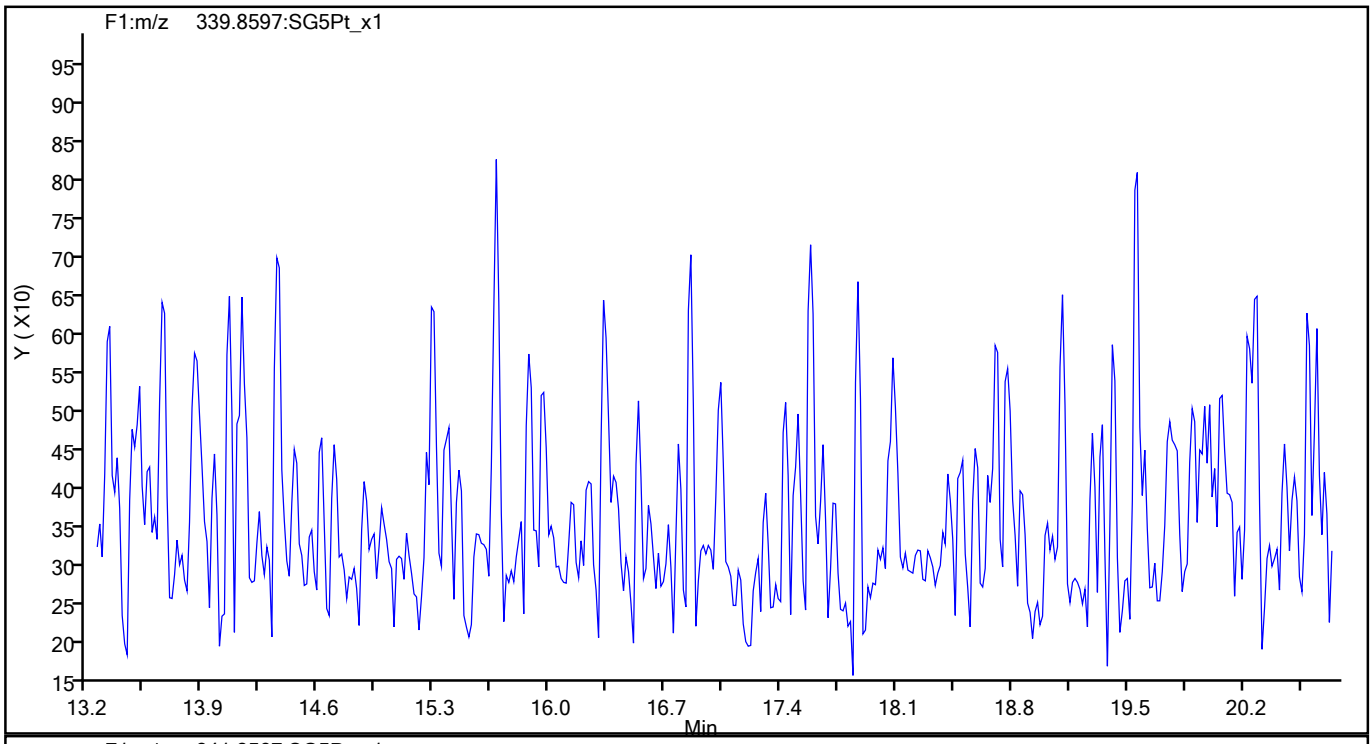

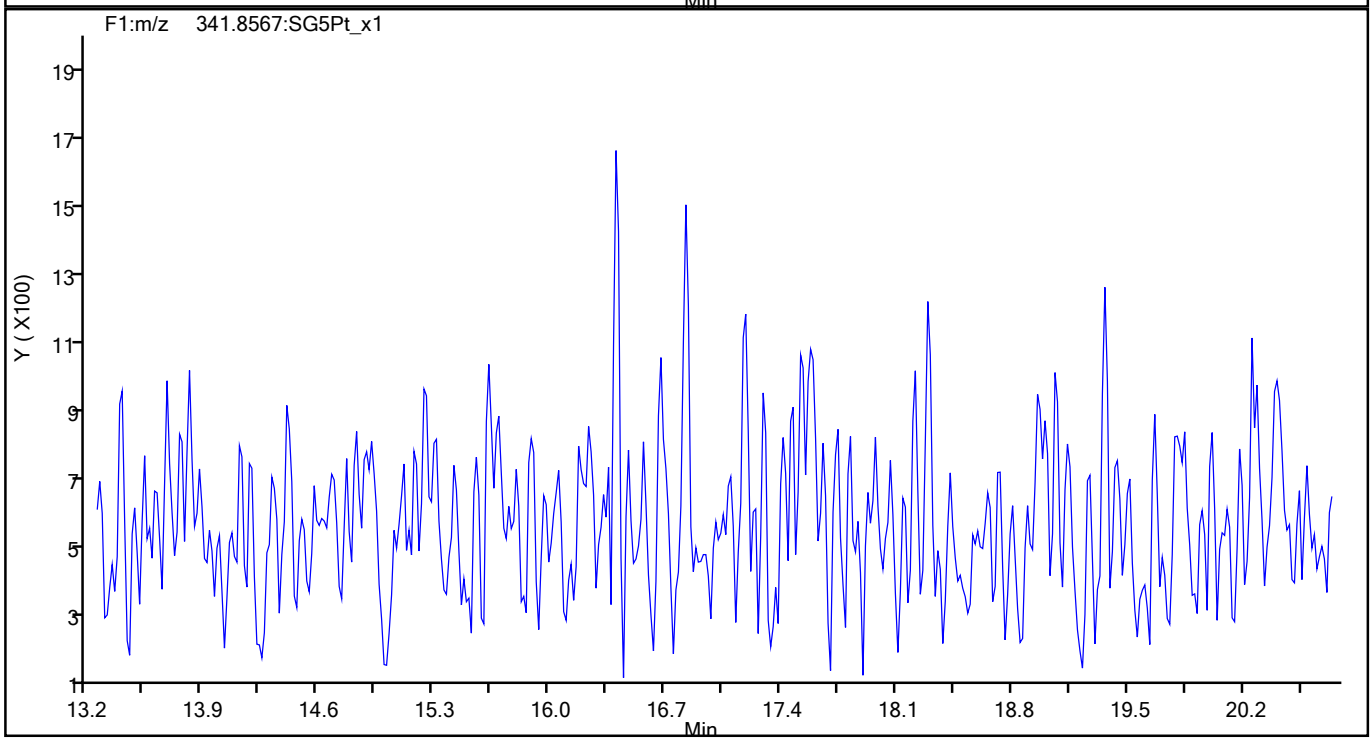

788740

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

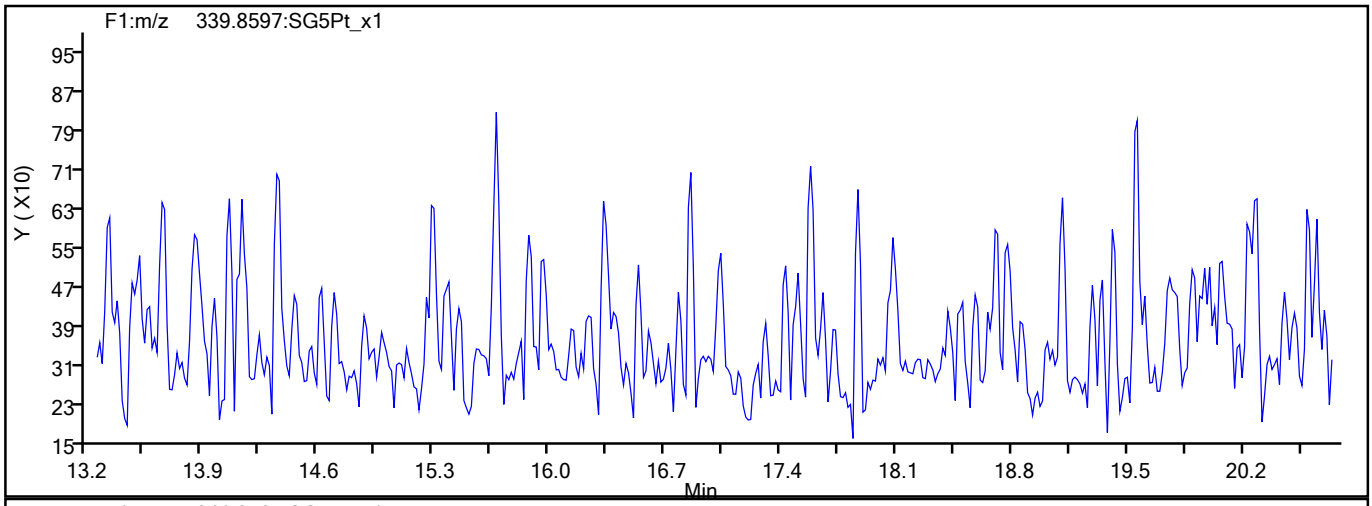

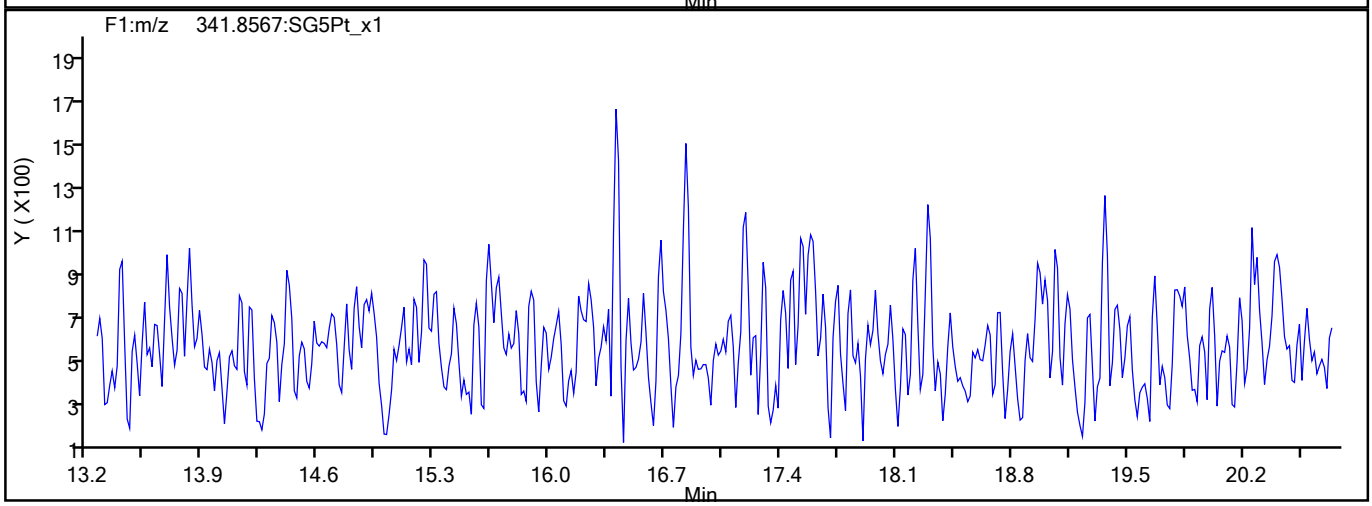

F1 PeCDFs Interference Mass

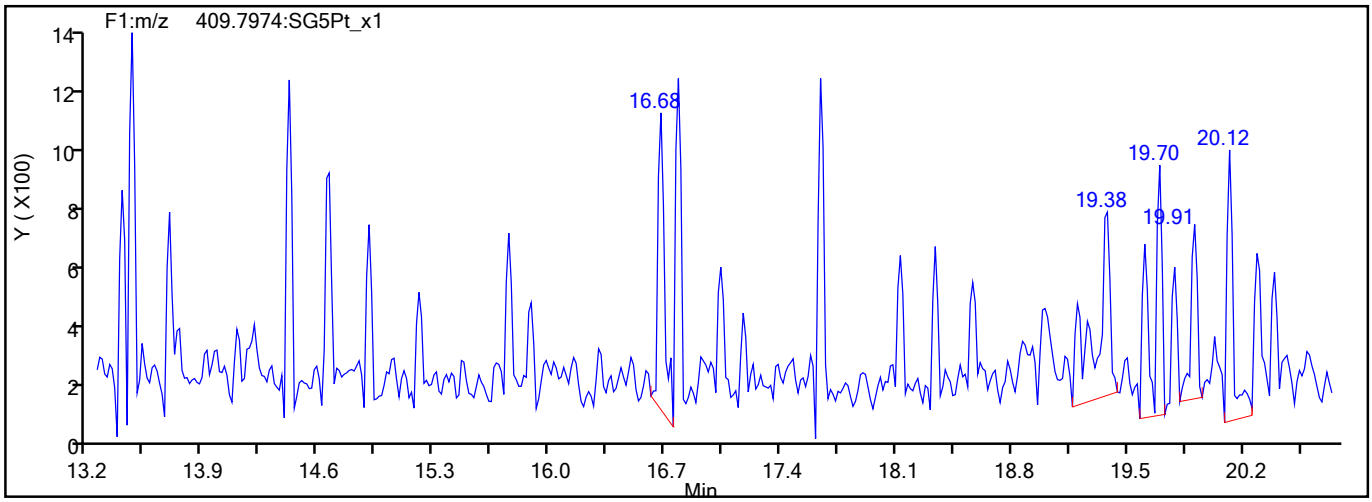

788741

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

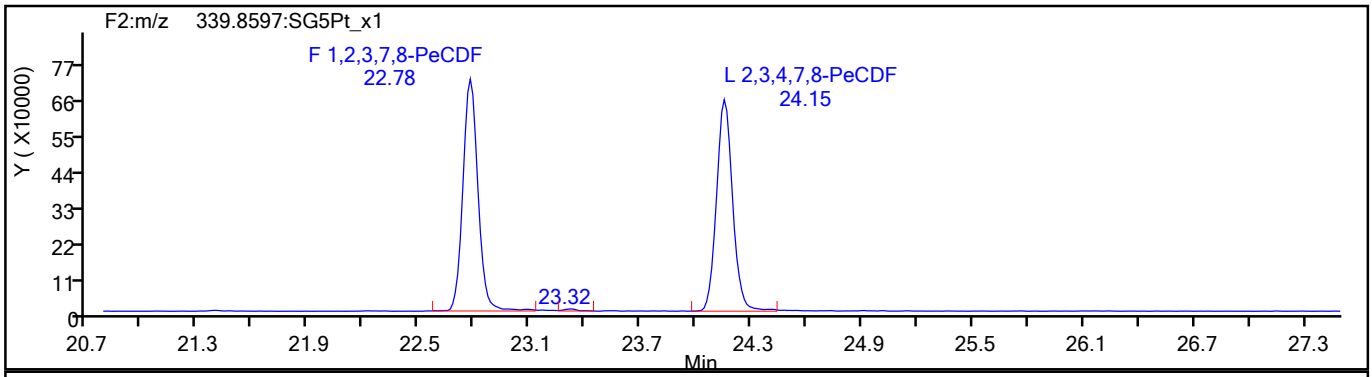

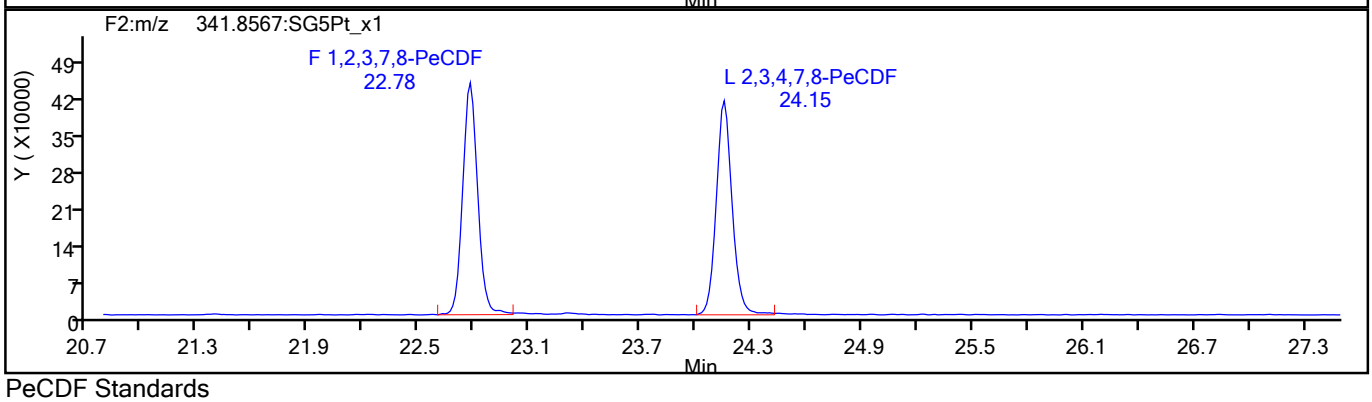

PeCDF Standards

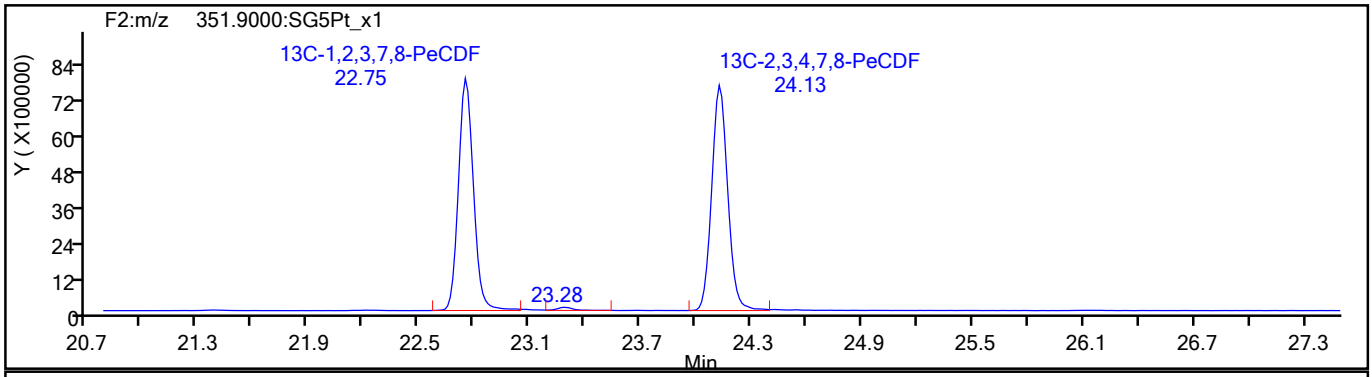

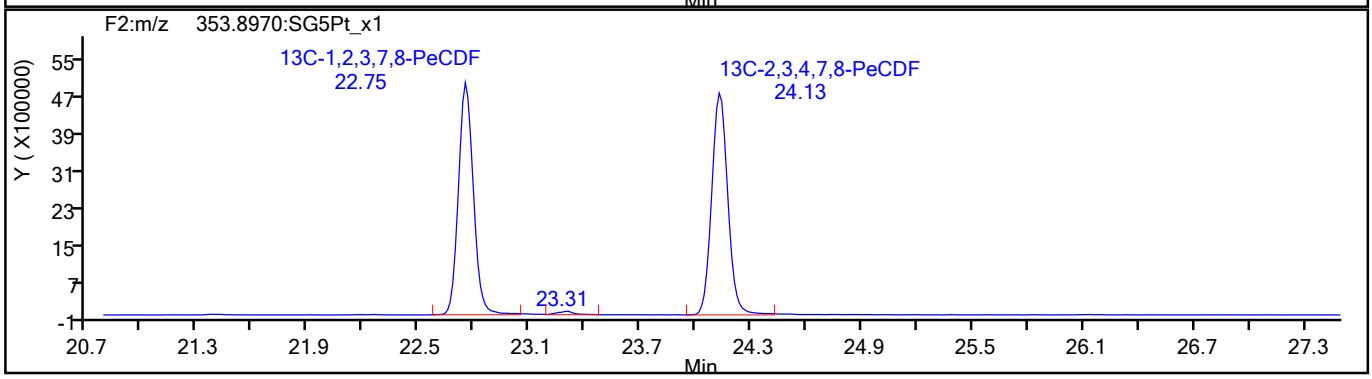

788742

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

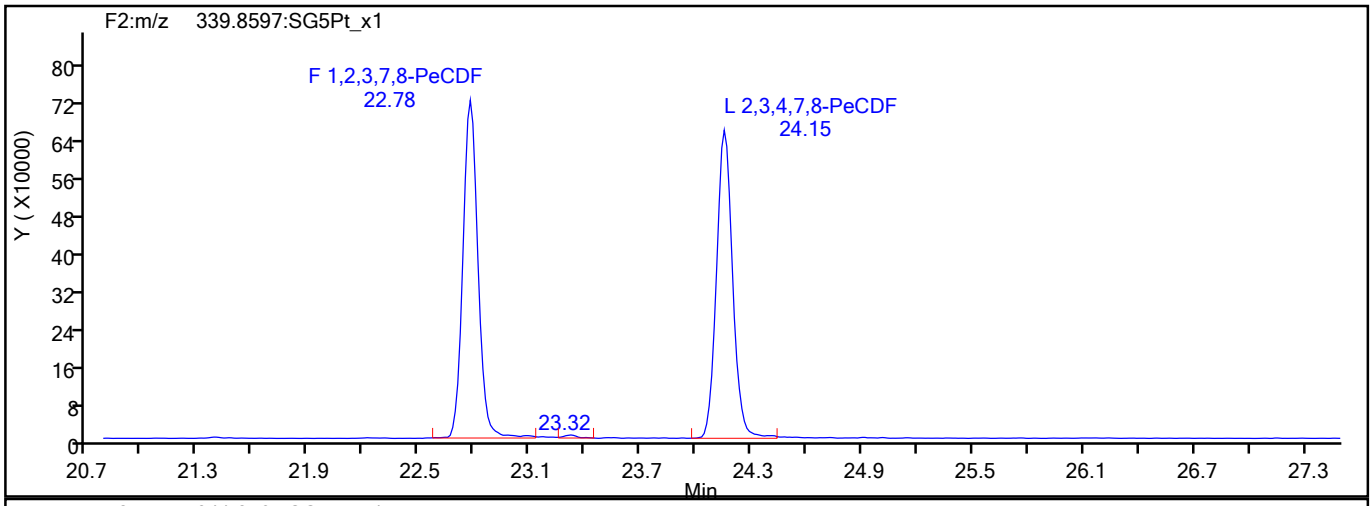

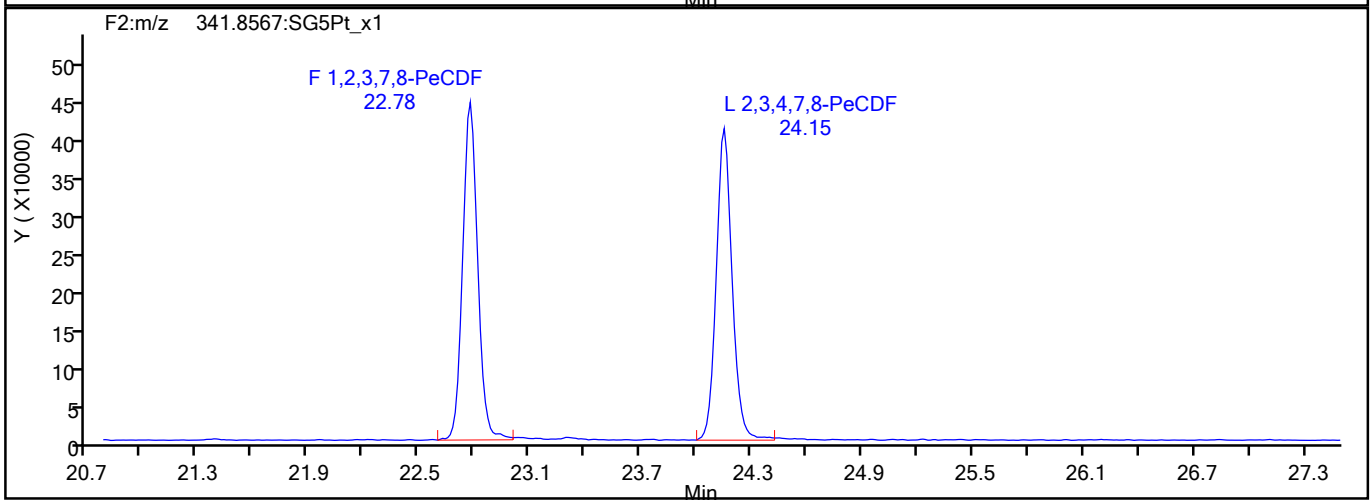

PeCDF Interference Mass

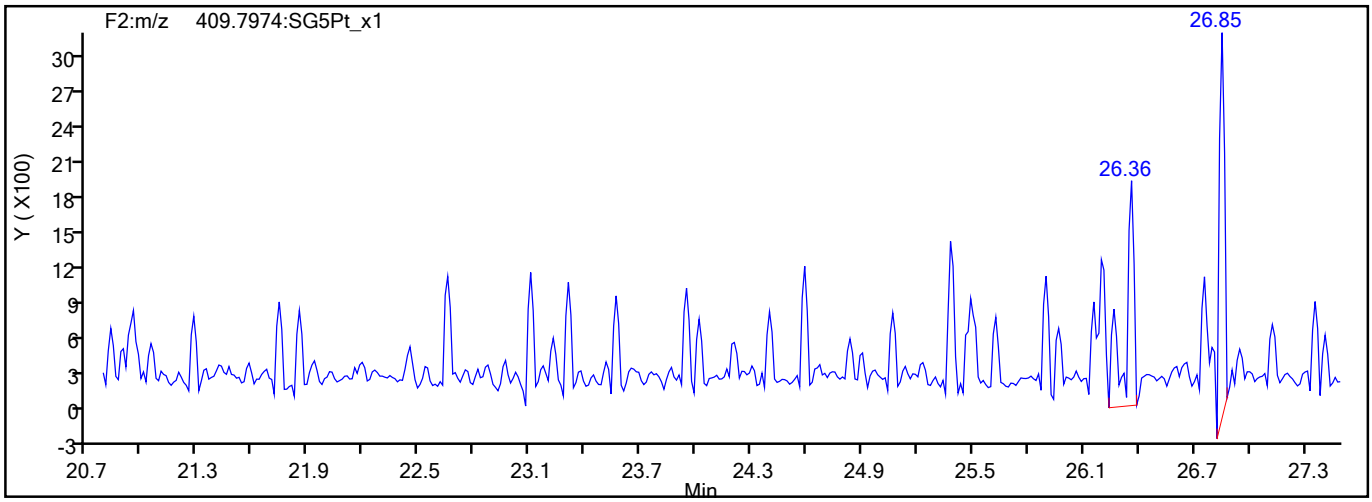

788743

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

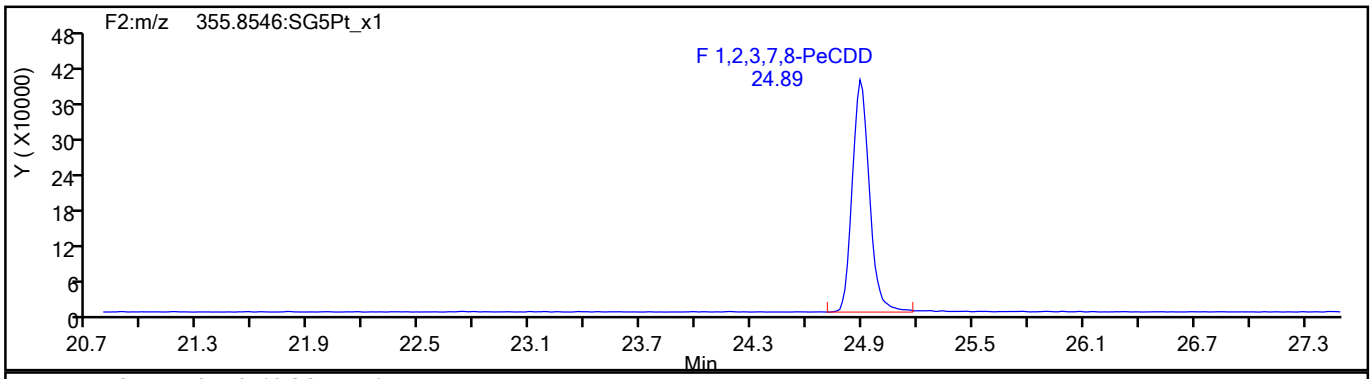

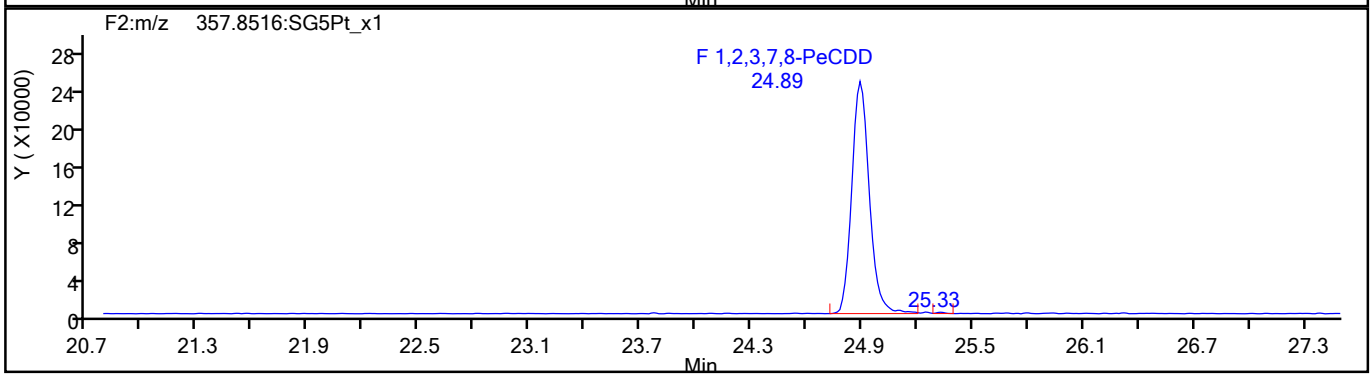

PeCDD Standards

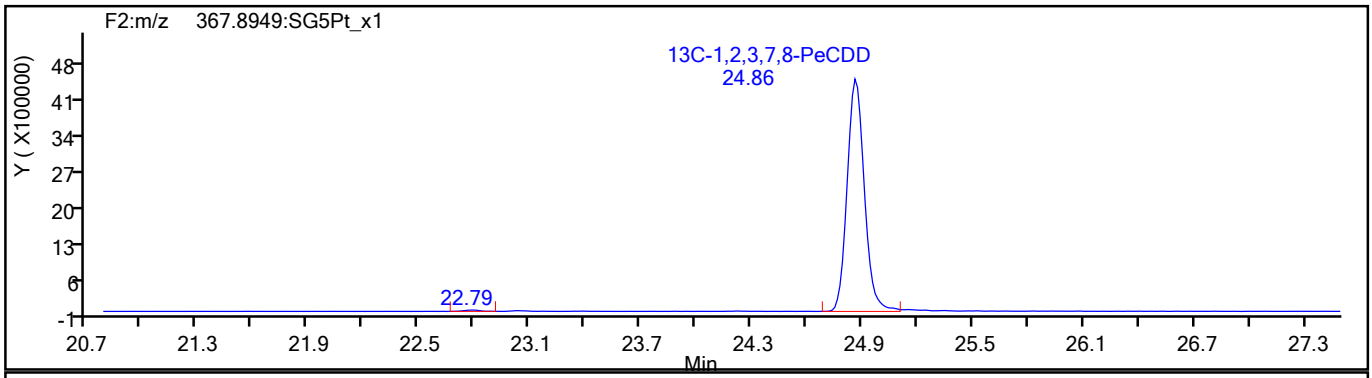

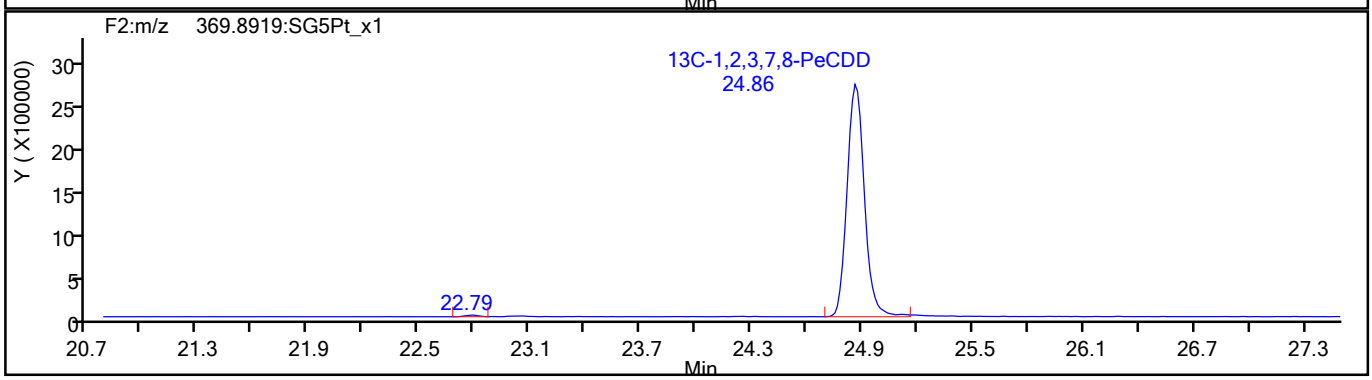

788744

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

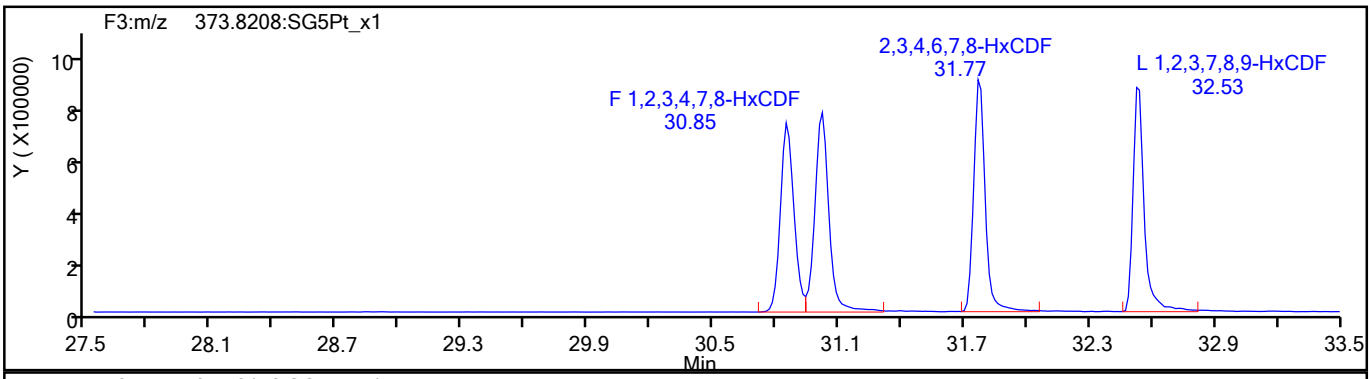

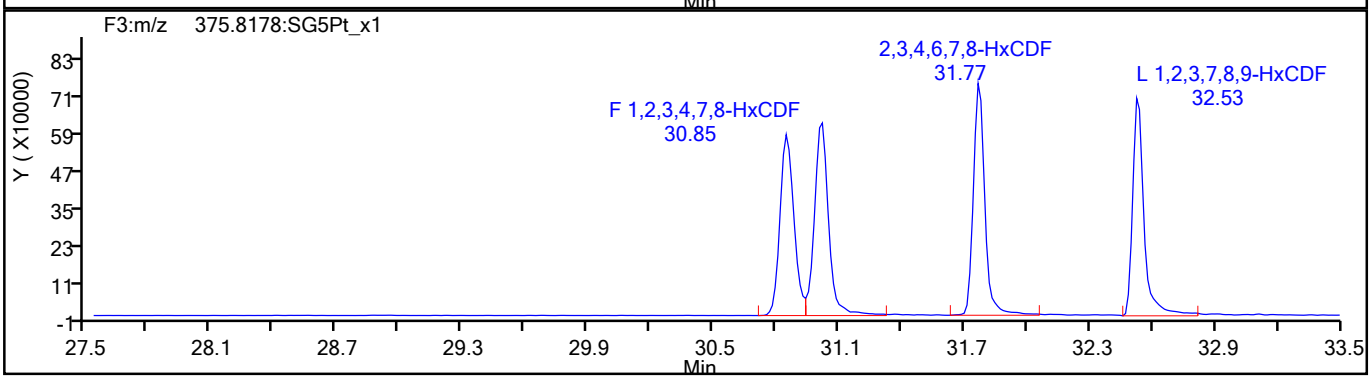

HxCDF Standards

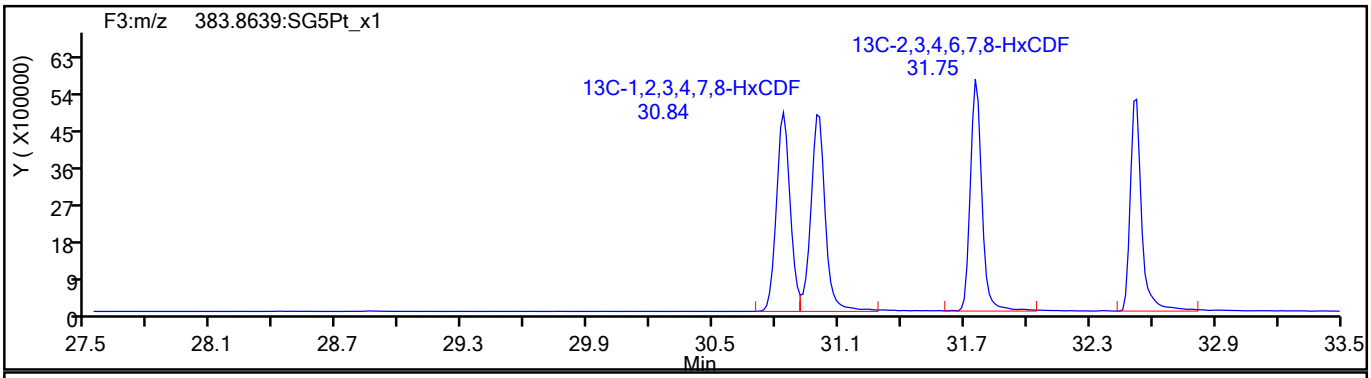

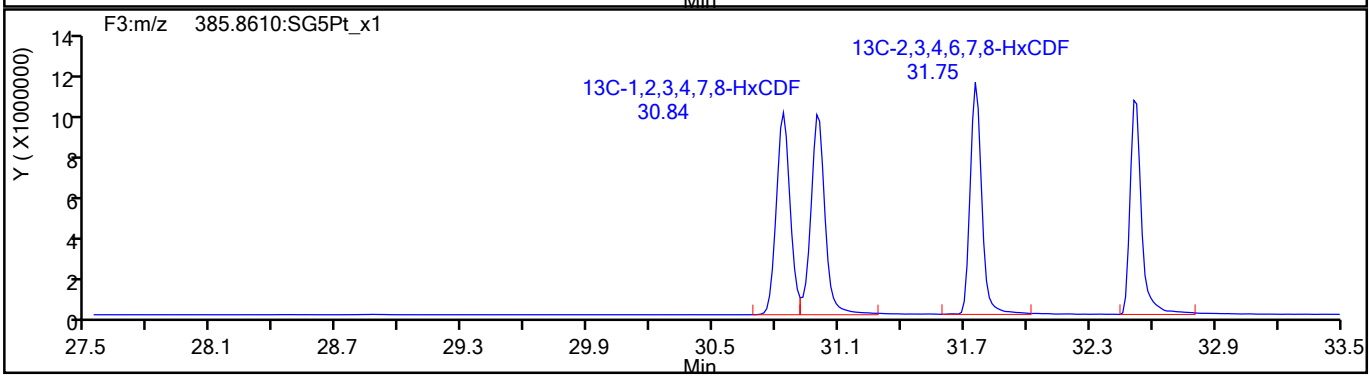

788745

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

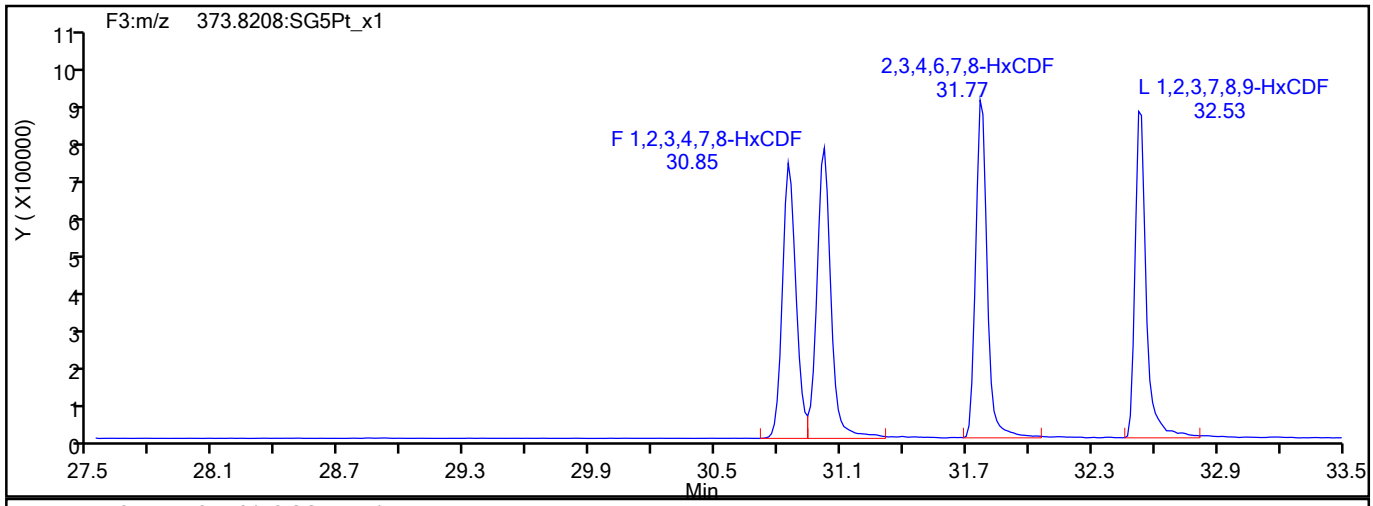

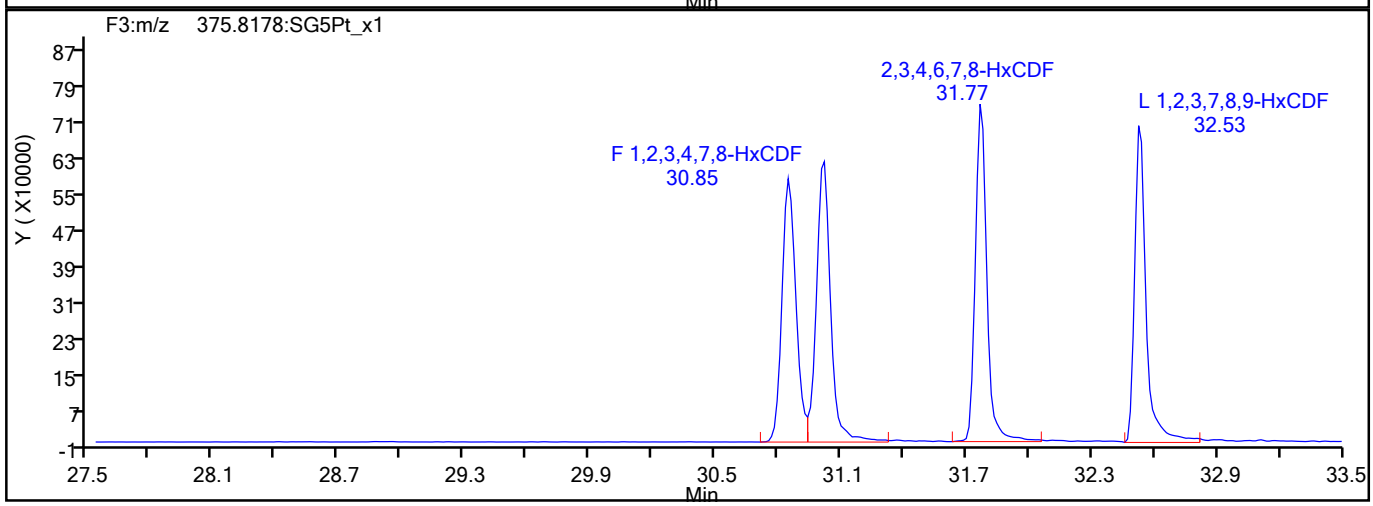

HxCDF Interference Mass

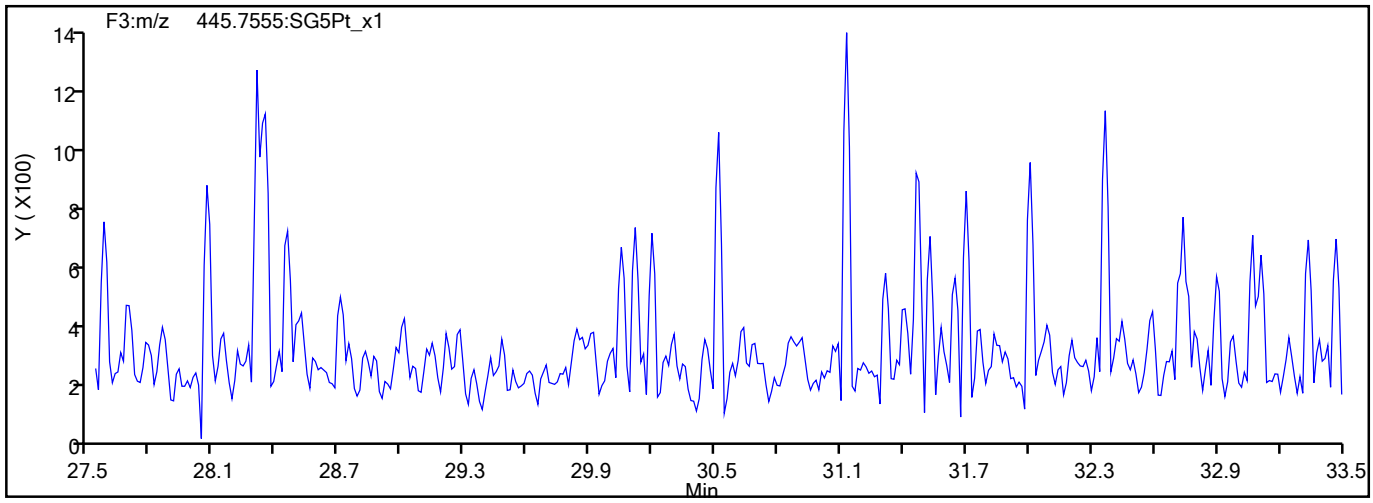

788746

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

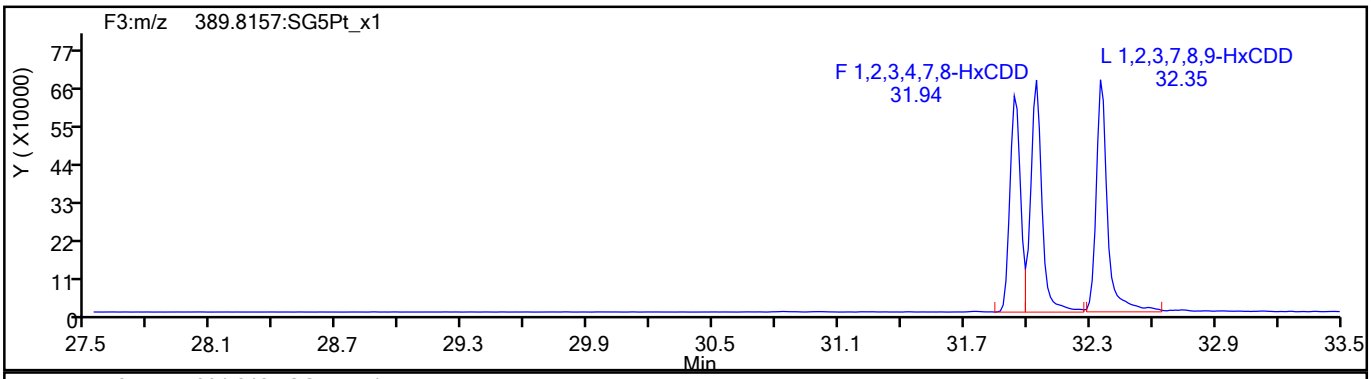

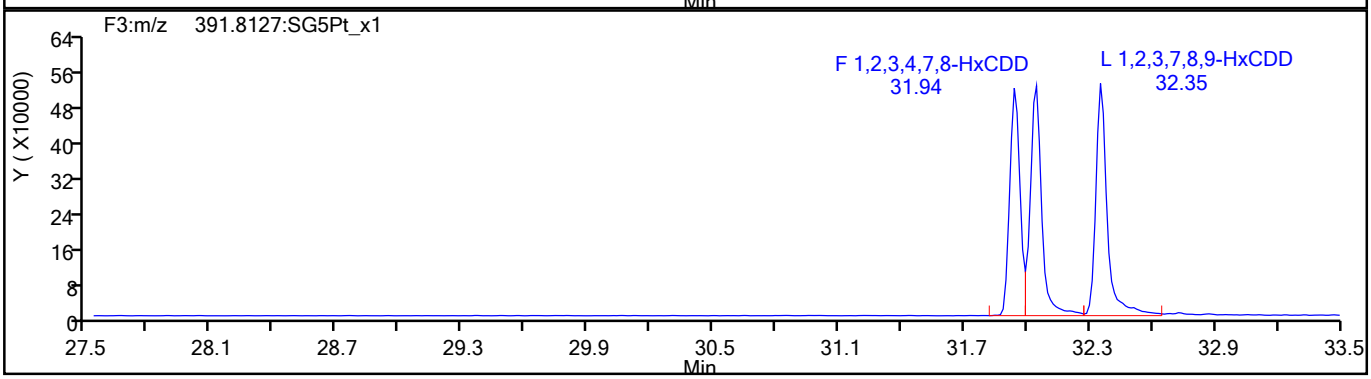

HxCDD Standards

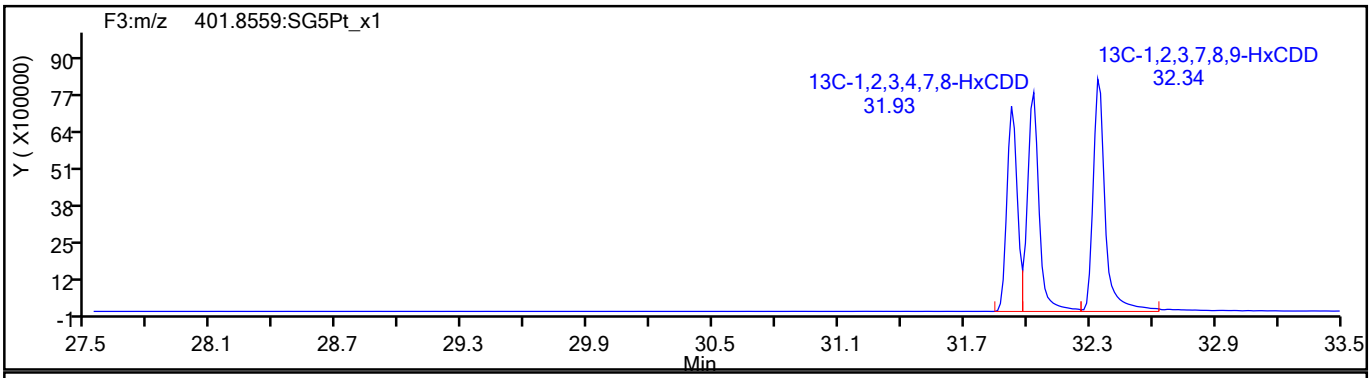

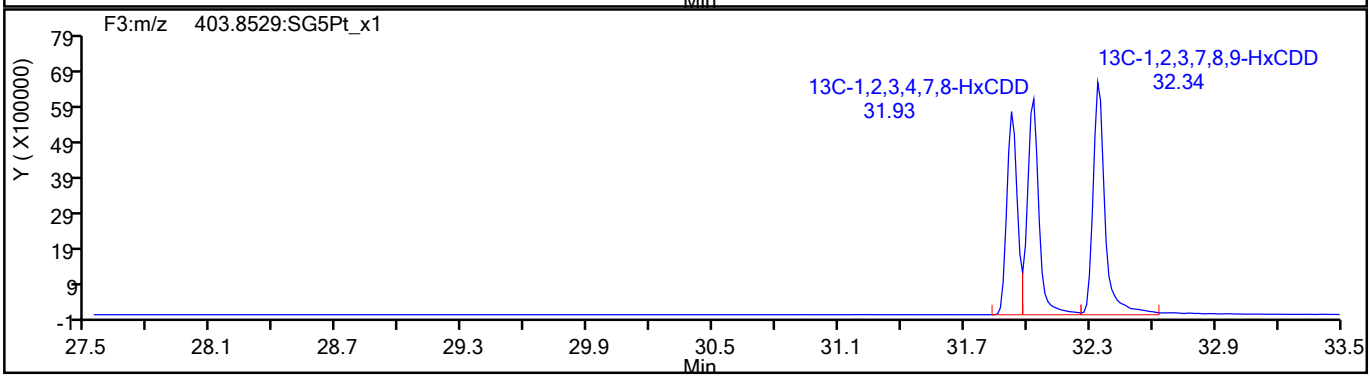

788747

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

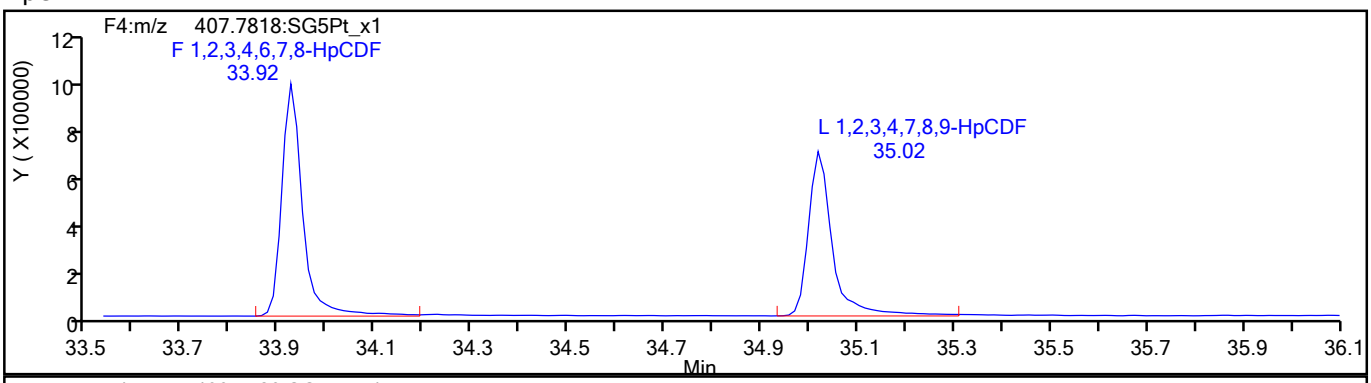

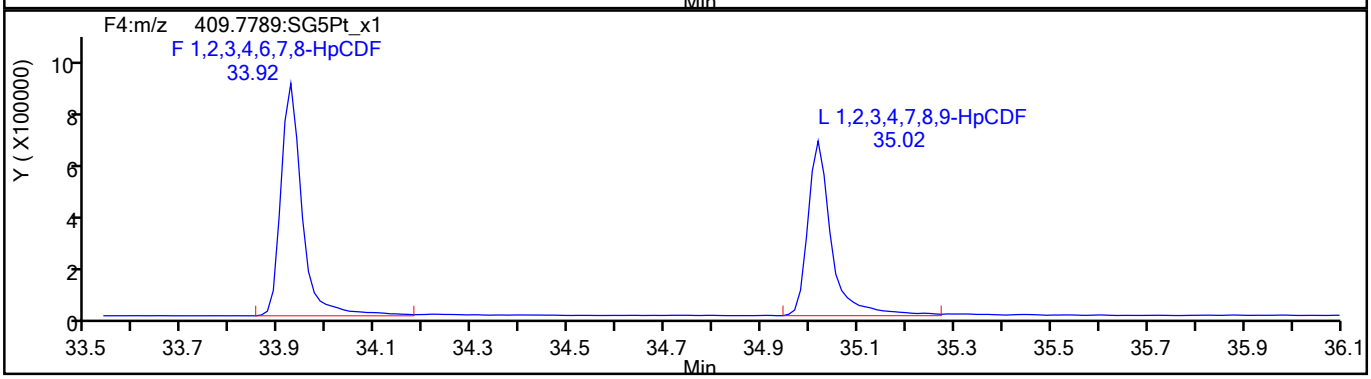

HpCDF Standards

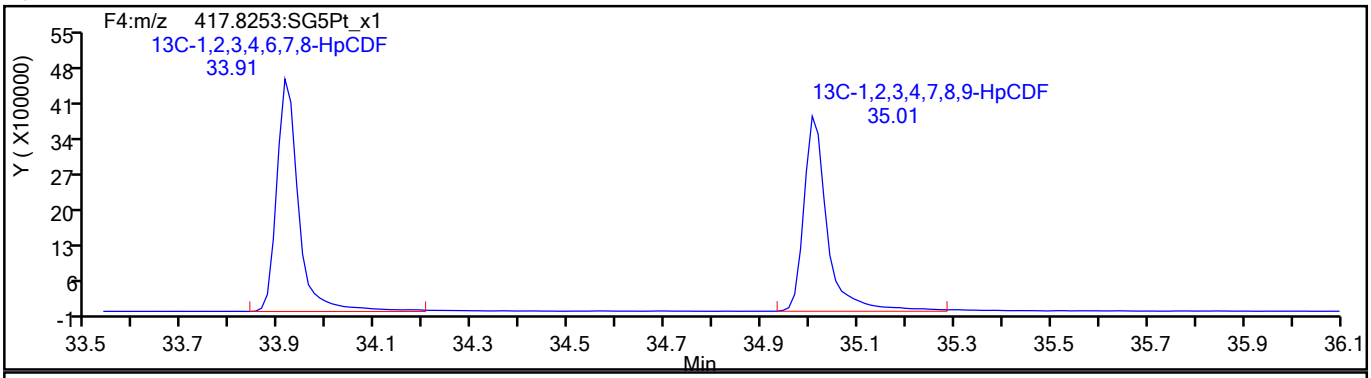

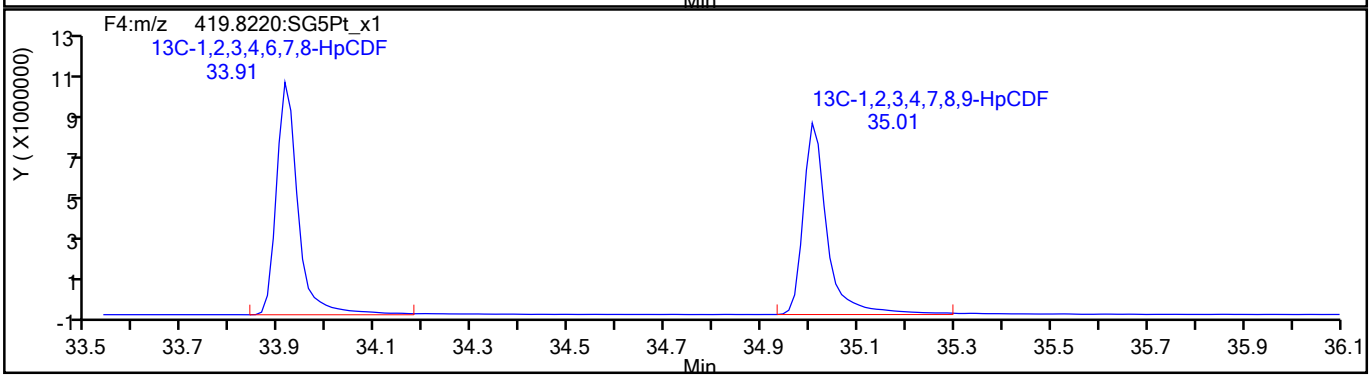

788748

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

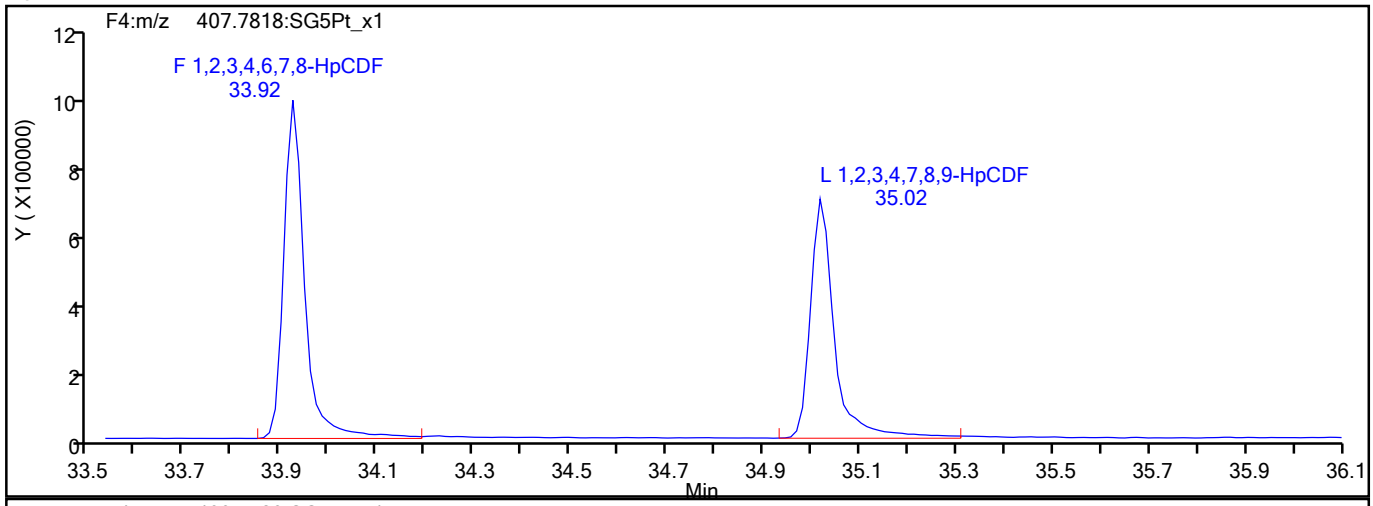

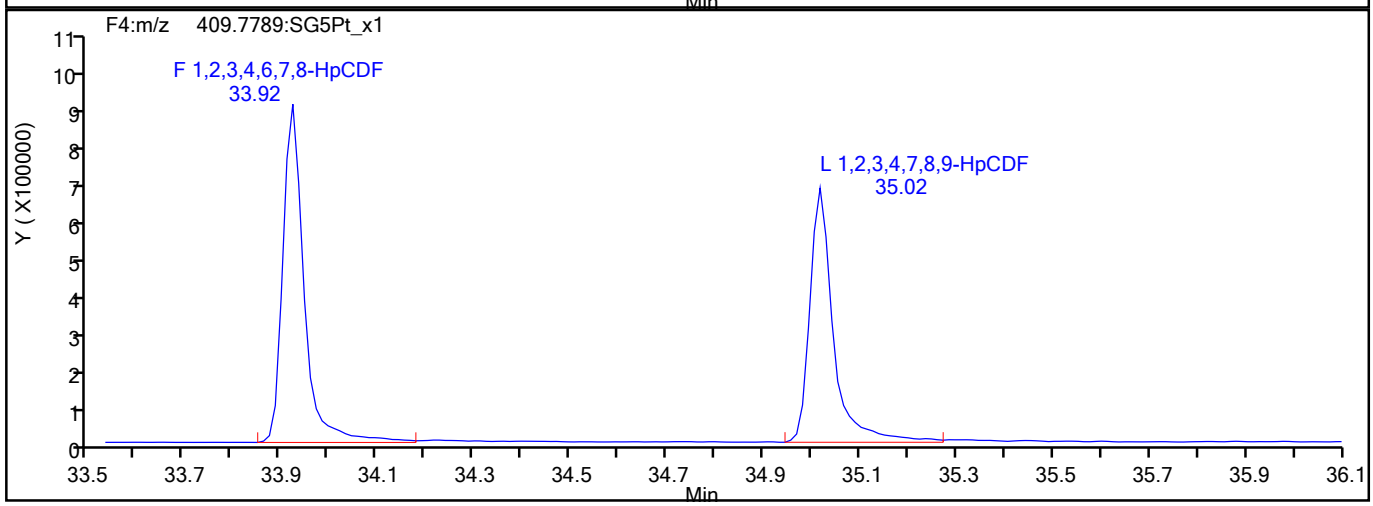

HpCDF Interference Mass

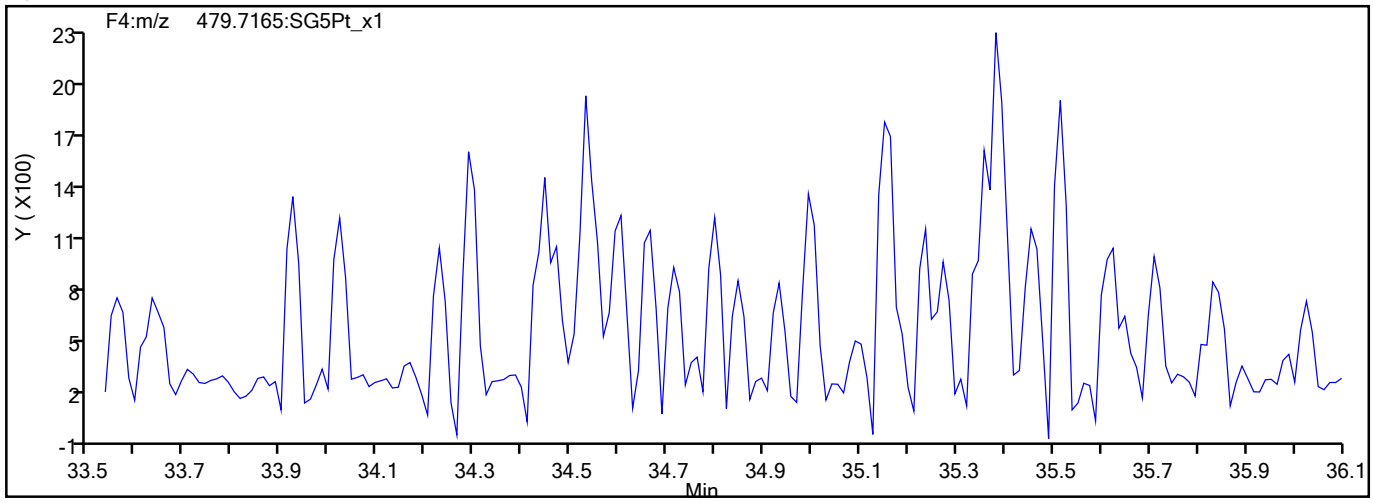

788749

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

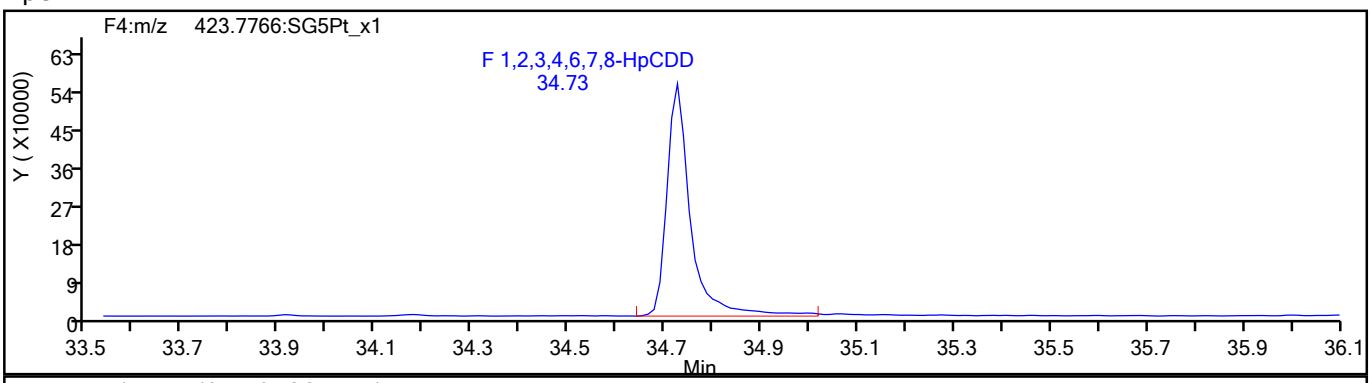

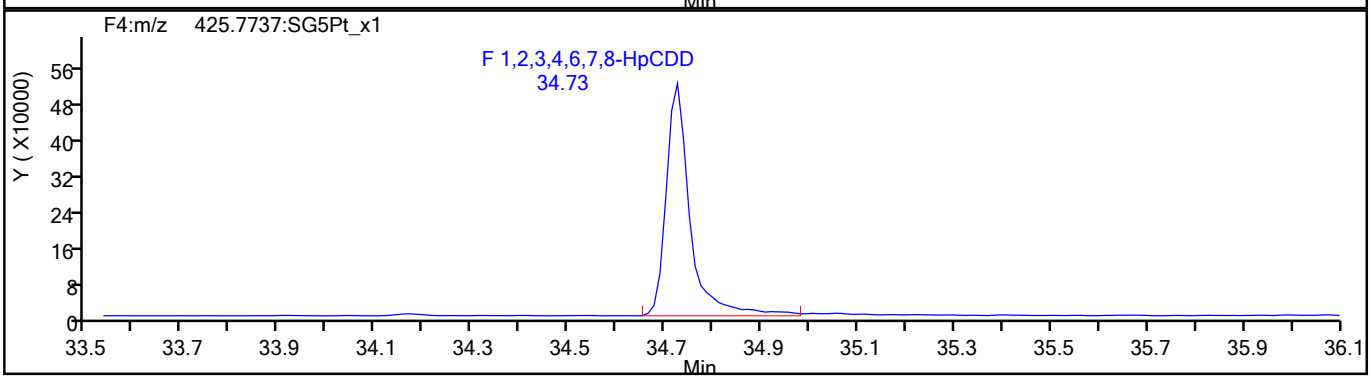

HpCDD Standards

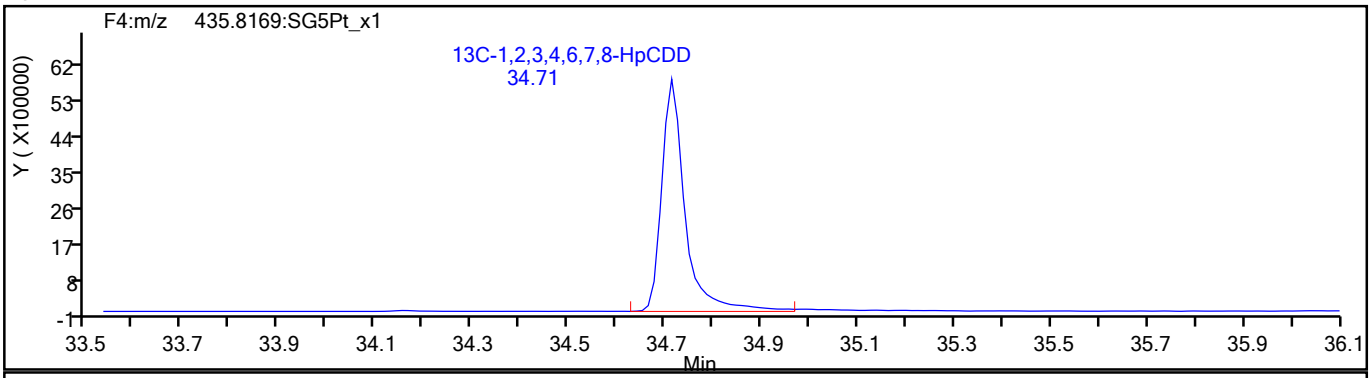

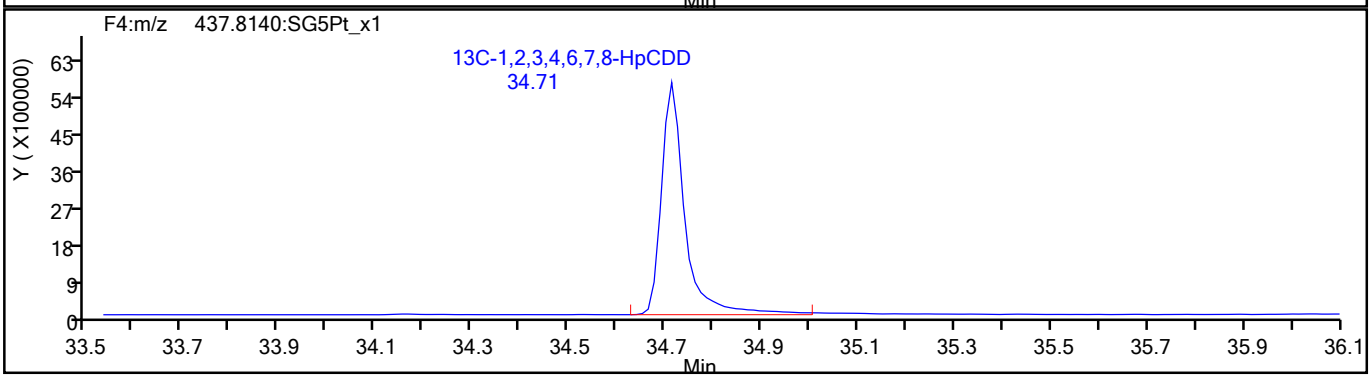

788750

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

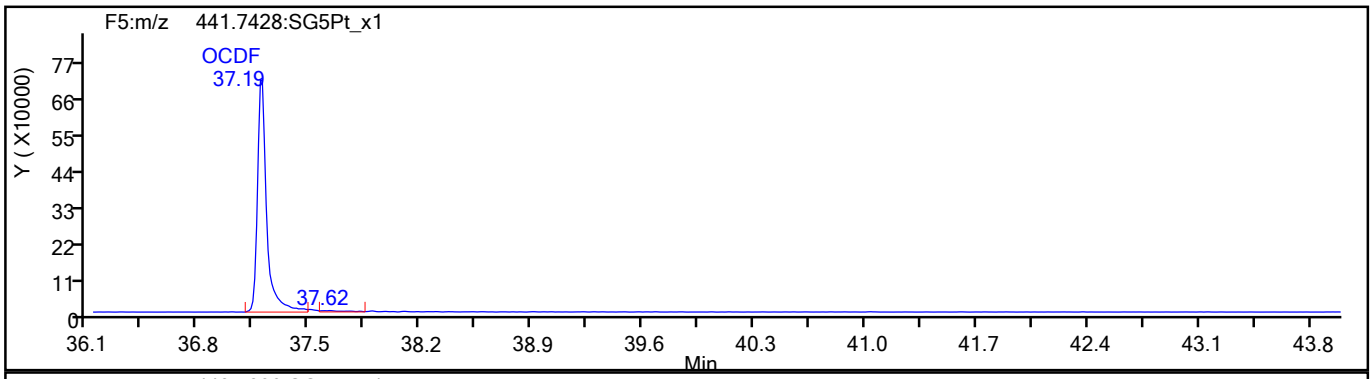

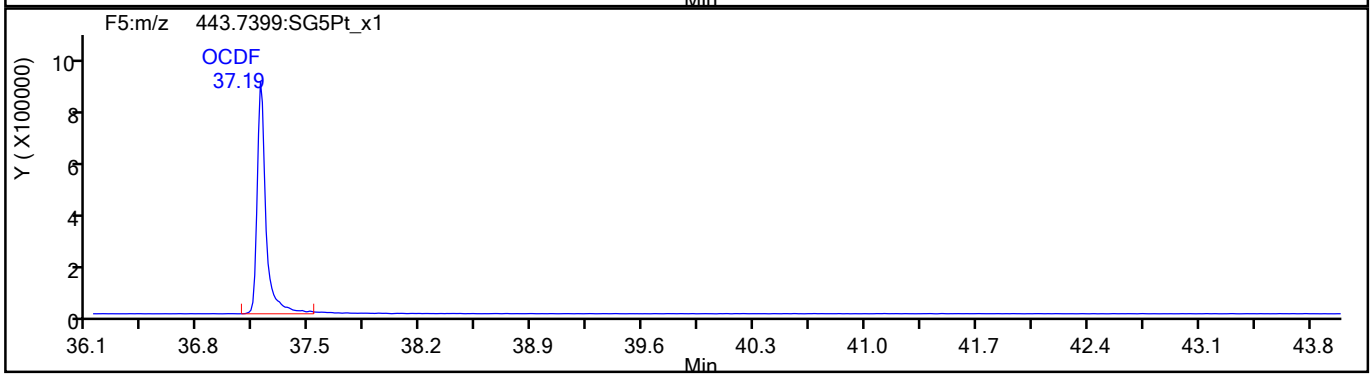

OCDF Standards

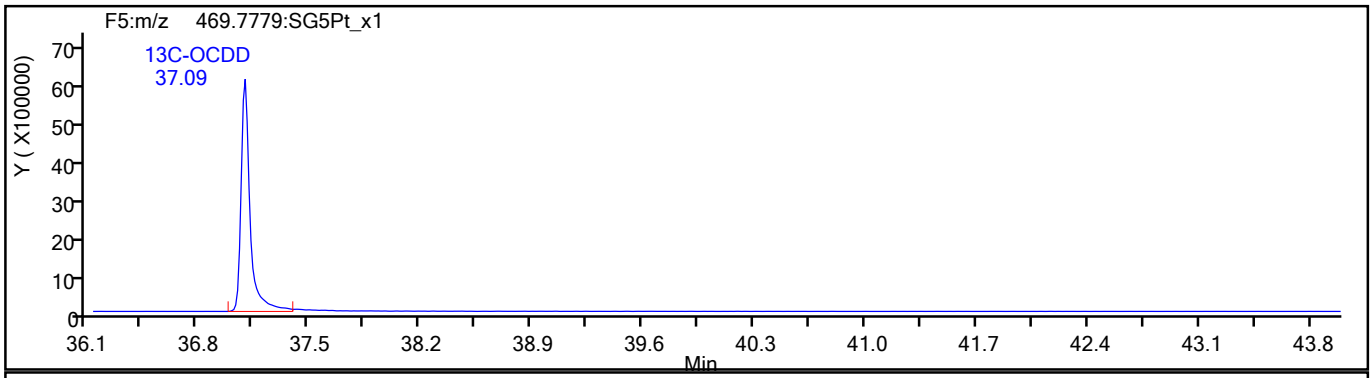

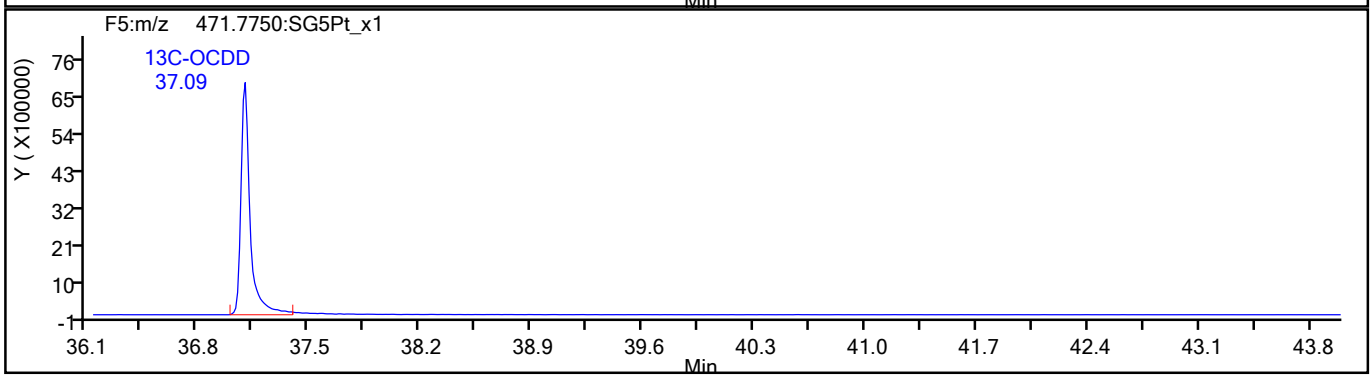

788751

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

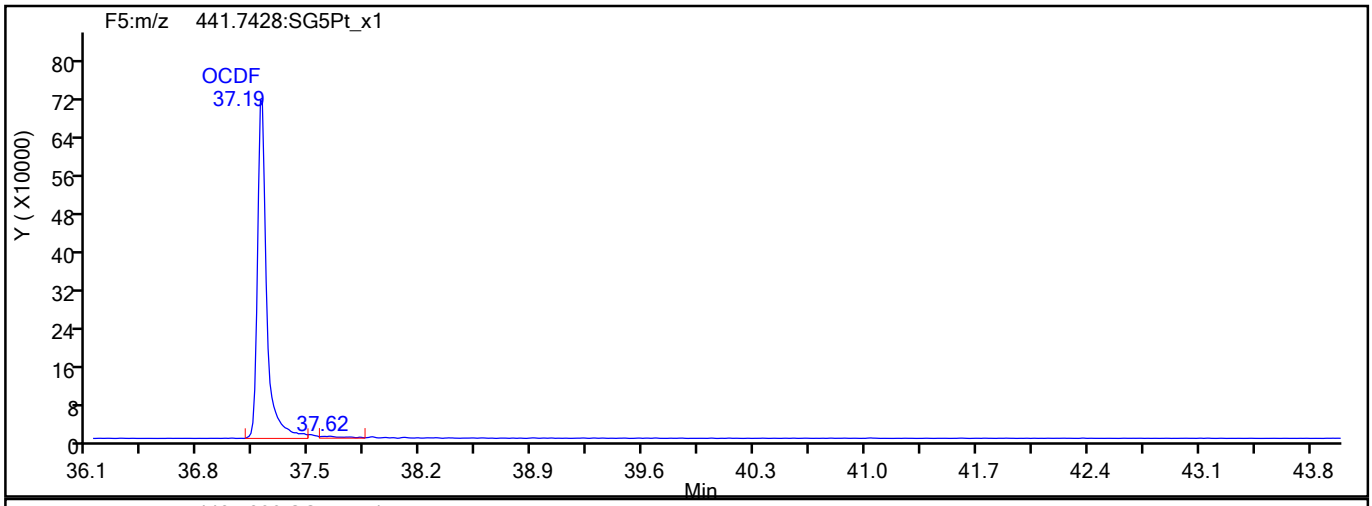

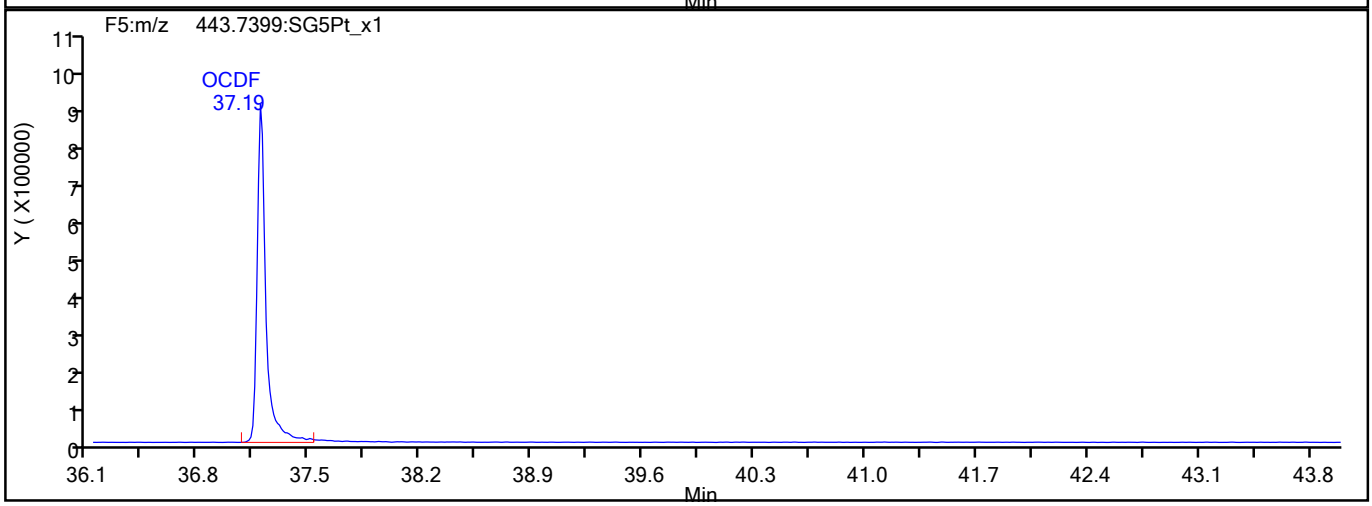

OCDF Interference Mass

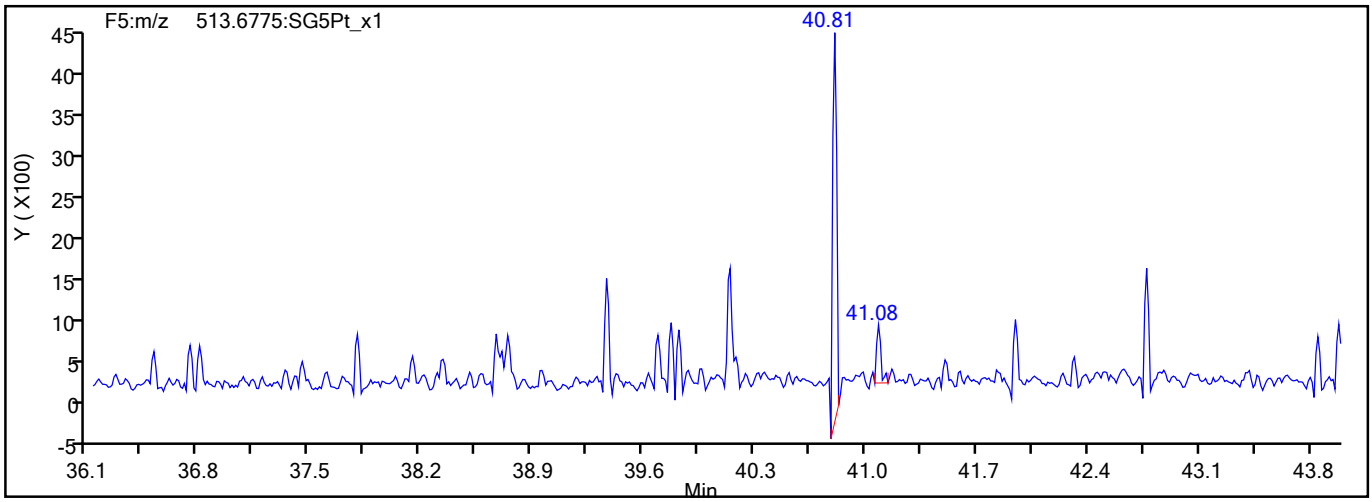

788752

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

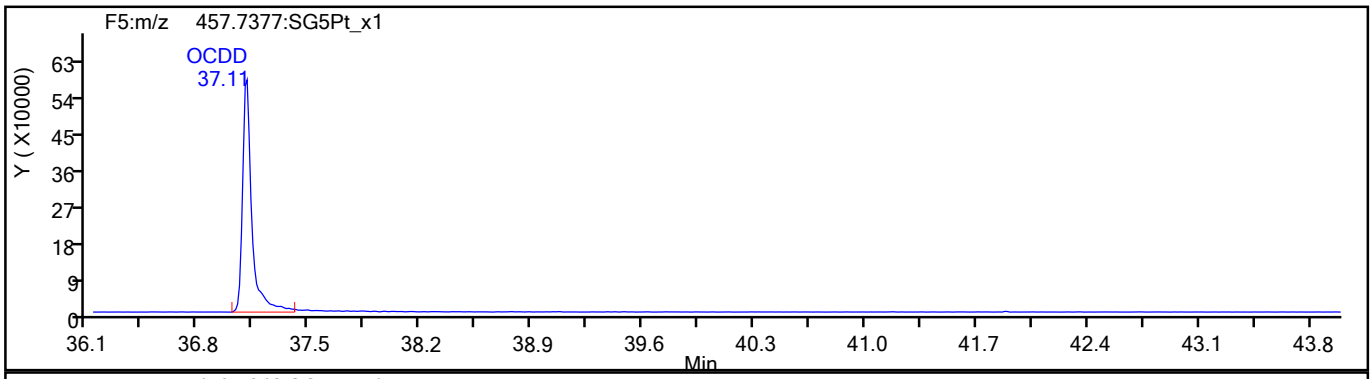

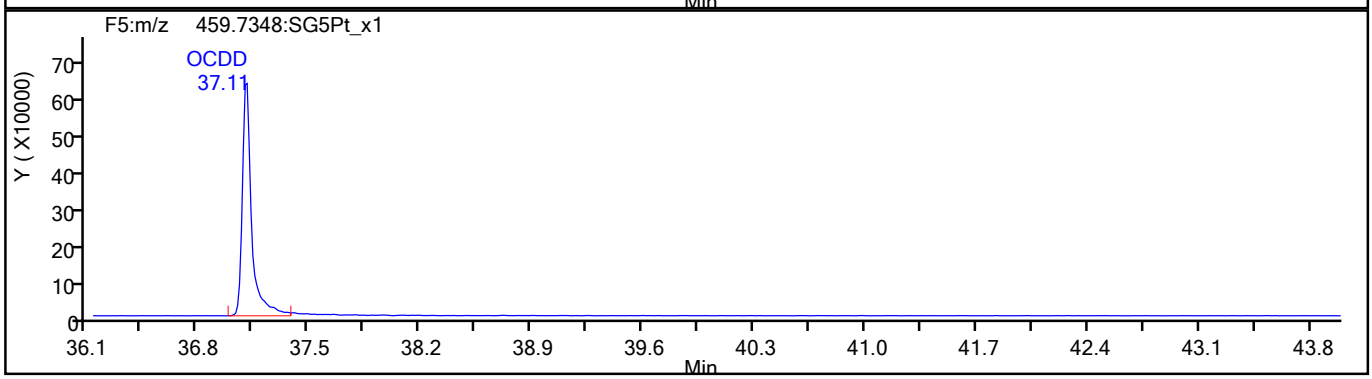

OCDD Standards

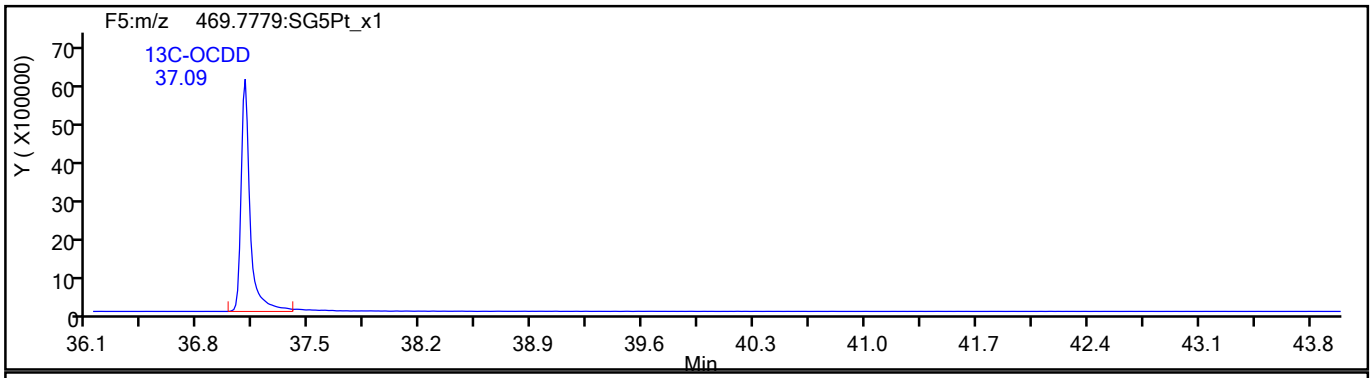

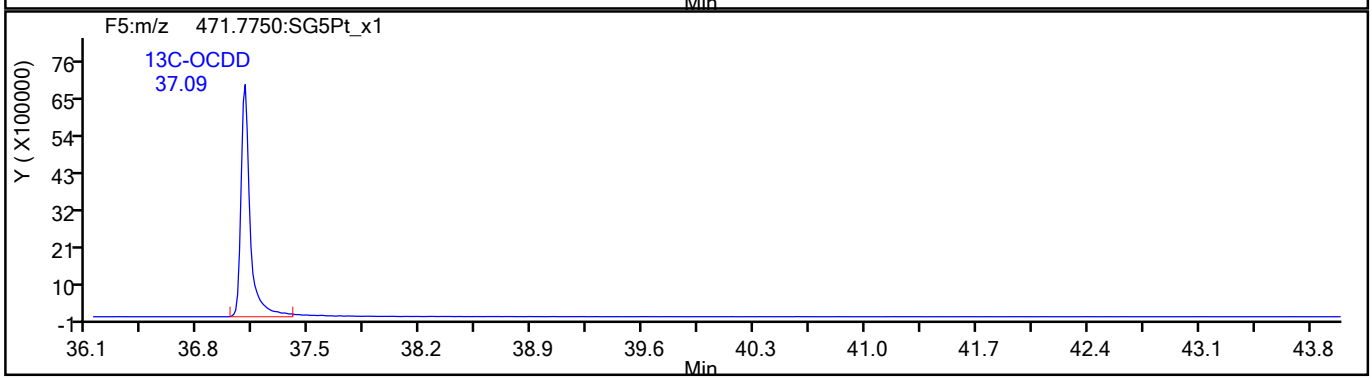

788753

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

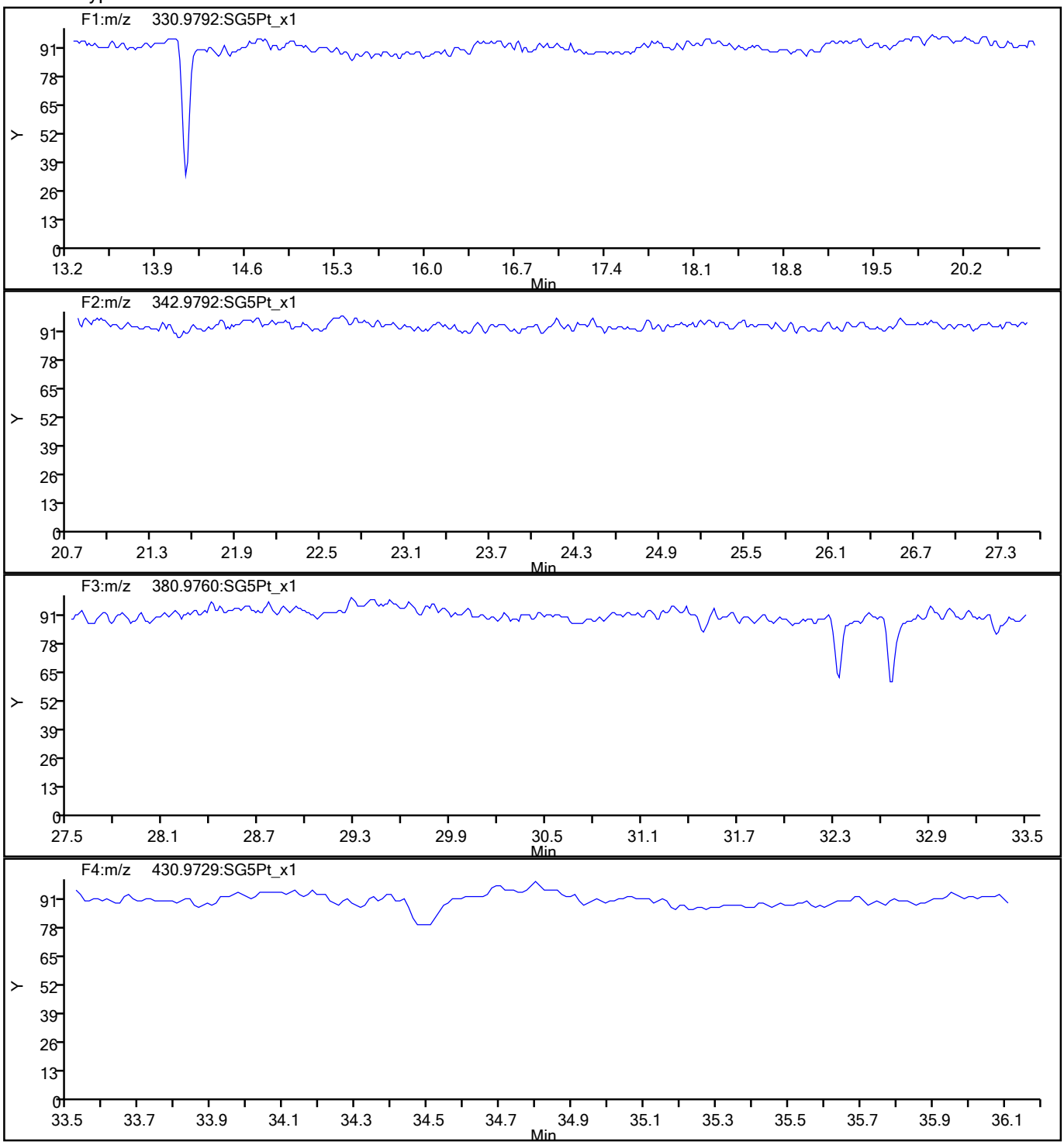

788754

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

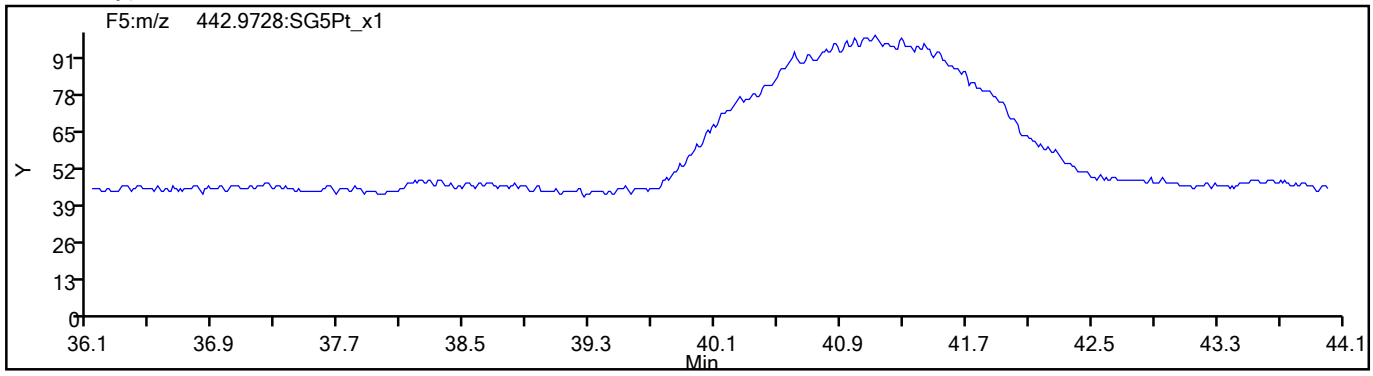

788755

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62635225	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	101724636	0.78	1.6249	99.9	99.9	0.2242	0.2242	99.95	
2,3,7,8-TCDF	17.643	10638776	0.78	1.0239	10.2	10.2	0.0283	0.0283	102	
S Total TCDF					10.2	10.2	0.0283	0.0283		
D 13C-2,3,7,8-TCDD	18.338	56155483	0.81	0.8993	99.7	99.7	0.1510	0.1510	99.69	
$ 37Cl4-2,3,7,8-TCDD	18.369	7339670		1.1071	10.6	10.6	0.0132	0.0132	106	
2,3,7,8-TCDD	18.369	7104238	0.76	1.2541	10.1	10.1	0.0224	0.0224	101	
S Total TCDD					10.1	10.1	0.0224	0.0224		
D 13C-1,2,3,7,8-PeCDF	22.762	76368219	1.58	1.2101	100.8	100.8	0.2109	0.2109	101	
1,2,3,7,8-PeCDF	22.789	41588176	1.62	1.0611	51.3	51.3	0.1508	0.1508	103	
D 13C-2,3,4,7,8-PeCDF	24.139	78214582	1.58	1.2395	100.7	100.7	0.2059	0.2059	101	
2,3,4,7,8-PeCDF	24.167	40928436	1.60	1.0184	51.4	51.4	0.1656	0.1656	103	
S Total PeCDF					102.7	102.7	0.1582	0.1582		
D 13C-1,2,3,7,8-PeCDD	24.876	47124414	1.60	0.7612	98.8	98.8	0.1214	0.1214	98.83	
1,2,3,7,8-PeCDD	24.903	25165054	1.62	1.0484	50.9	50.9	0.0669	0.0669	102	
S Total PeCDD					50.9	50.9	0.0669	0.0669		
D 13C-1,2,3,4,7,8-HxCDF	30.849	68075509	0.52	1.0837	98.8	98.8	0.4389	0.4389	98.79	
1,2,3,4,7,8-HxCDF	30.862	37525146	1.24	1.0851	50.8	50.8	0.2914	0.2914	102	
D 13C-1,2,3,6,7,8-HxCDF	31.009	70677463	0.52	1.1279	98.5	98.5	0.4217	0.4217	98.54	
1,2,3,6,7,8-HxCDF	31.022	40802767	1.21	1.1260	51.3	51.3	0.2729	0.2729	103	
D 13C-2,3,4,6,7,8-HxCDF	31.767	67028498	0.52	1.0637	99.1	99.1	0.4471	0.4471	99.10	
2,3,4,6,7,8-HxCDF	31.781	39741365	1.22	1.1675	50.8	50.8	0.2260	0.2260	102	
D 13C-1,2,3,7,8,9-HxCDF	32.526	60389284	0.52	0.9676	98.2	98.2	0.4916	0.4916	98.15	
1,2,3,7,8,9-HxCDF	32.540	35924190	1.21	1.1664	51.0	51.0	0.2363	0.2363	102	
S Total HxCDF					203.9	203.9	0.2566	0.2566		
* 13C-1,2,3,7,8,9-HxCDD	32.353	63588089	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.941	44039927	1.25	0.7334	94.4	94.4	0.3731	0.3731	94.43	
1,2,3,4,7,8-HxCDD	31.954	24891170	1.33	1.0640	53.1	53.1	0.1747	0.1747	106	
D 13C-1,2,3,6,7,8-HxCDD	32.034	55284532	1.26	0.8802	98.8	98.8	0.3109	0.3109	98.78	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	27953752	1.21	1.0001	50.6	50.6	0.1666	0.1666	101	
1,2,3,7,8,9-HxCDD	32.367	29794954	1.26	1.1325	53.0	53.0	0.1552	0.1552	106	
S Total HxCDD					156.7	156.7	0.1655	0.1655		
D 13C-1,2,3,4,6,7,8-HpCDF	33.924	47697671	0.44	0.7730	97.0	97.0	1.328	1.328	97.03	
1,2,3,4,6,7,8-HpCDF	33.937	35740964	1.05	1.4413	52.0	52.0	0.5190	0.5190	104	
D 13C-1,2,3,4,7,8,9-HpCDF	35.018	43238622	0.44	0.7008	97.0	97.0	1.465	1.465	97.03	
1,2,3,4,7,8,9-HpCDF	35.030	29450636	1.07	1.3174	51.7	51.7	0.6741	0.6741	103	
S Total HpCDF					103.7	103.7	0.5966	0.5966		
D 13C-1,2,3,4,6,7,8-HpCDD	34.726	40333717	1.03	0.6472	98.0	98.0	0.5563	0.5563	98.00	
1,2,3,4,6,7,8-HpCDD	34.726	22538791	1.03	1.0943	51.1	51.1	0.2539	0.2539	102	
S Total HpCDD					51.1	51.1	0.2539	0.2539		
D 13C-OCDD	37.094	54338243	0.87	0.4472	191.1	191.1	0.2612	0.2612	95.55	
OCDF	37.202	41147202	0.91	1.4382	105.3	105.3	0.1155	0.1155	105	
OCDD	37.106	31656667	0.89	1.1070	105.3	105.3	0.1572	0.1572	105	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28287778	7074314	3903	9757	1813		
333.9339	18.142	18.142	0		34347447	8672273	4653	11632	1864	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.616	1	0.972	44652675	10978931	8756	21890	1254		
317.9389	17.628	17.616	1	0.972	57071961	13787474	14192	35480	971	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.631	1	1.001	4665898	1145703	1759	4397	651		
305.8987	17.643	17.631	1	1.001	5972878	1458593	1111	2777	1313	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	25132336	5946858	3903	9757	1524		
333.9339	18.338	18.338	0	1.011	31023147	7337223	4653	11632	1577	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.369	18.354	1	1.012	7339670	1703834	921	2302	1850		
2,3,7,8-TCDD											
319.8965	18.369	18.357	1	1.002	3077636	720367	906	2265	795		
321.8936	18.369	18.357	1	1.002	4026602	947792	588	1470	1612	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46742521	8181774	9794	24485	835		
353.8970	22.762	22.754	0	1.255	29625698	5225925	6278	15695	832	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.789	22.779	1	1.001	25738852	4452039	5088	12720	875		
341.8567	22.789	22.779	1	1.001	15849324	2731041	3494	8735	782	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.139	24.129	1	1.331	47906018	7878060	9794	24485	804		
353.8970	24.139	24.129	1	1.331	30308564	4845446	6278	15695	772	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.167	24.156	1	1.001	25185293	4111601	5088	12720	808		
341.8567	24.167	24.156	1	1.001	15743143	2618923	3494	8735	750	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.876	24.865	1	1.371	29023498	4508866	3701	9252	1218		
369.8919	24.876	24.865	1	1.371	18100916	2812844	2121	5302	1326	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.903	24.892	1	1.001	15548746	2422000	1286	3215	1883		
357.8516	24.903	24.892	1	1.001	9616308	1489099	768	1920	1939	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.849	30.838	1	0.954	23323404	5008910	10853	27132	462		
385.8610	30.849	30.838	1	0.954	44752105	9511743	20971	52427	454	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.000	20753403	4584464	10058	25145	456		
375.8178	30.862	30.857	0	1.000	16771743	3729681	8311	20777	449	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.009	31.003	0	0.958	24213048	5206646	10853	27132	480		
385.8610	31.009	31.003	0	0.958	46464415	9739576	20971	52427	464	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	22352739	4771379	10058	25145	474		
375.8178	31.022	31.022	0	1.000	18450028	3943683	8311	20777	475	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.767	31.756	1	0.982	22835025	6015846	10853	27132	554		
385.8610	31.767	31.756	1	0.982	44193473	11391437	20971	52427	543	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.781	31.772	1	1.000	21800962	5788708	10058	25145	576		
375.8178	31.781	31.772	1	1.000	17940403	4765095	8311	20777	573	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.005	20681548	5801162	10853	27132	535		
385.8610	32.526	32.523	0	1.005	39707736	10862121	20971	52427	518	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.540	32.534	0	1.000	19691436	5514300	10058	25145	548		
375.8178	32.540	32.534	0	1.000	16232754	4594829	8311	20777	553	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.353	32.342	1		35642869	9349119	10403	26007	899		
403.8529	32.353	32.342	1		27945220	7378163	7908	19770	933	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.941	31.929	1	0.987	24473480	7240164	10403	26007	696		
403.8529	31.941	31.929	1	0.987	19566447	5775722	7908	19770	730	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.954	31.945	1	1.000	14220855	4121905	5566	13915	741		
391.8127	31.954	31.945	1	1.000	10670315	3199272	4114	10285	778	1.33(1.05-1.43)	

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Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.034	32.033	0	0.990	30876044	8117648	10403	26007	780		
403.8529	32.034	32.033	0	0.990	24408488	6404371	7908	19770	810	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	15327109	4211681	5566	13915	757		
391.8127	32.047	32.047	0	1.000	12626643	3343117	4114	10285	813	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.367	32.355	1	1.013	16583478	4368640	5566	13915	785		
391.8127	32.353	32.355	0	1.013	13211476	3519862	4114	10285	856	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.924	33.914	1	1.049	14460337	4683854	18083	45207	259		
419.8220	33.924	33.914	1	1.049	33237334	10568693	50629	126572	209	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.937	33.926	1	1.000	18301949	5790856	23497	58742	246		
409.7789	33.924	33.926	0	1.000	17439015	5585138	22139	55347	252	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.018	35.010	0	1.082	13111896	3936331	18083	45207	218		
419.8220	35.018	35.010	0	1.082	30126726	8910423	50629	126572	176	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.030	35.020	1	1.000	15206712	4448229	23497	58742	189		
409.7789	35.018	35.020	0	1.000	14243924	4117019	22139	55347	186	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.726	34.716	1	1.073	20474082	5927612	12552	31380	472		
437.8140	34.714	34.716	0	1.073	19859635	5735510	11540	28850	497	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	11412485	3410093	6511	16277	524		
425.7737	34.726	34.726	0	1.000	11126306	3358586	6451	16127	521	1.03(0.88-1.20)	
13C-OCDD											
469.7779	37.094	37.094	0	1.147	25234291	6398501	3020	7550	2119		
471.7750	37.094	37.094	0	1.147	29103952	7389026	4794	11985	1541	0.87(0.76-1.02)	
OCDF											
441.7428	37.202	37.199	0	1.003	19626693	5149784	2565	6412	2008		
443.7399	37.202	37.199	0	1.003	21520509	5563126	2015	5037	2761	0.91(0.76-1.02)	
OCDD											
457.7377	37.106	37.106	0	1.000	14916504	3846231	2276	5690	1690		
459.7348	37.106	37.106	0	1.000	16740163	4277323	2524	6310	1695	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

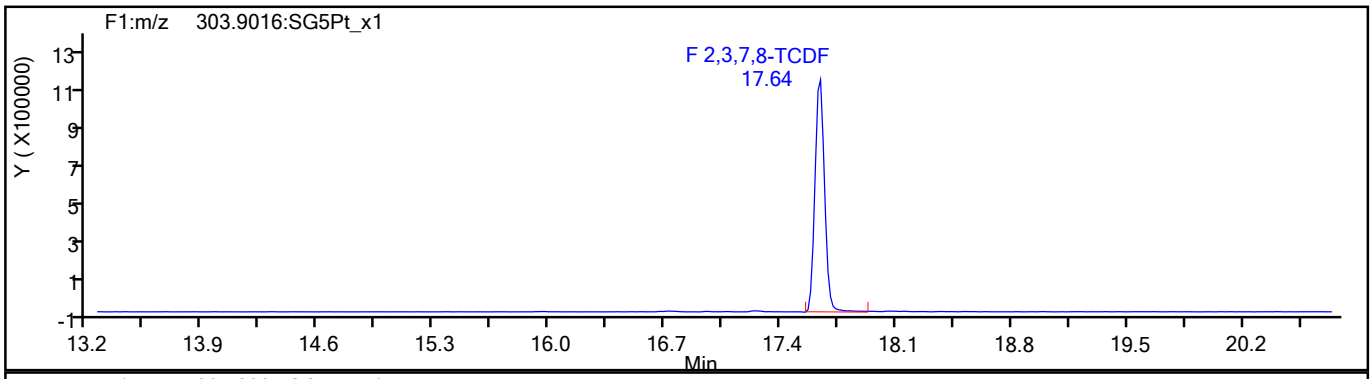

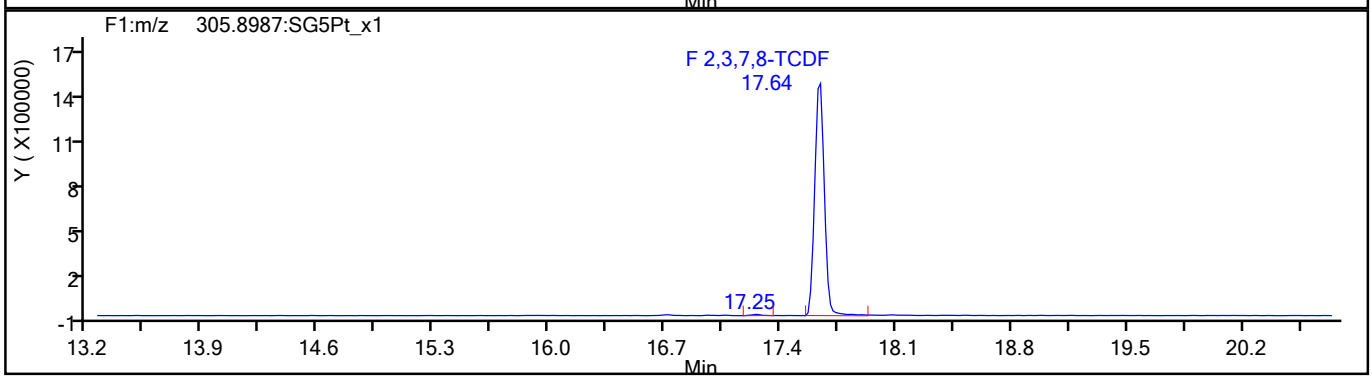

TCDF Standards

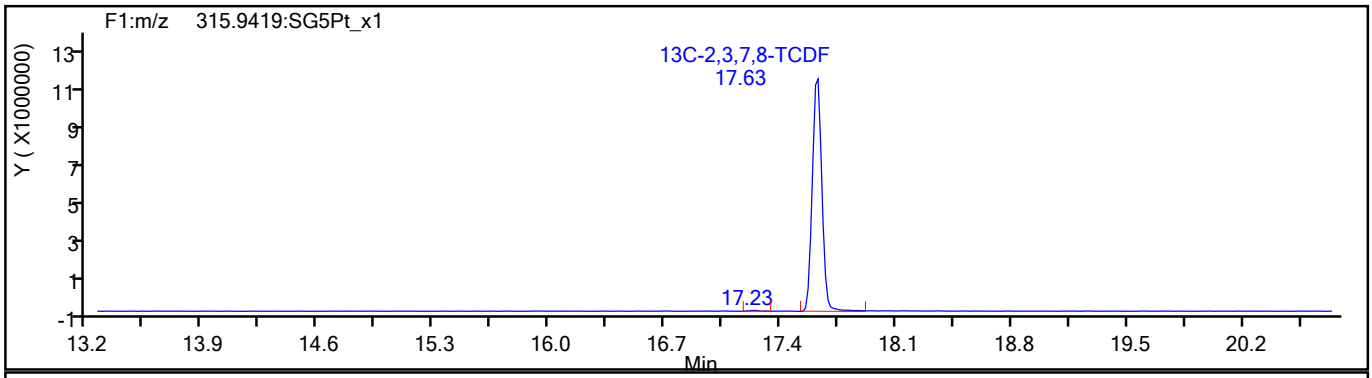

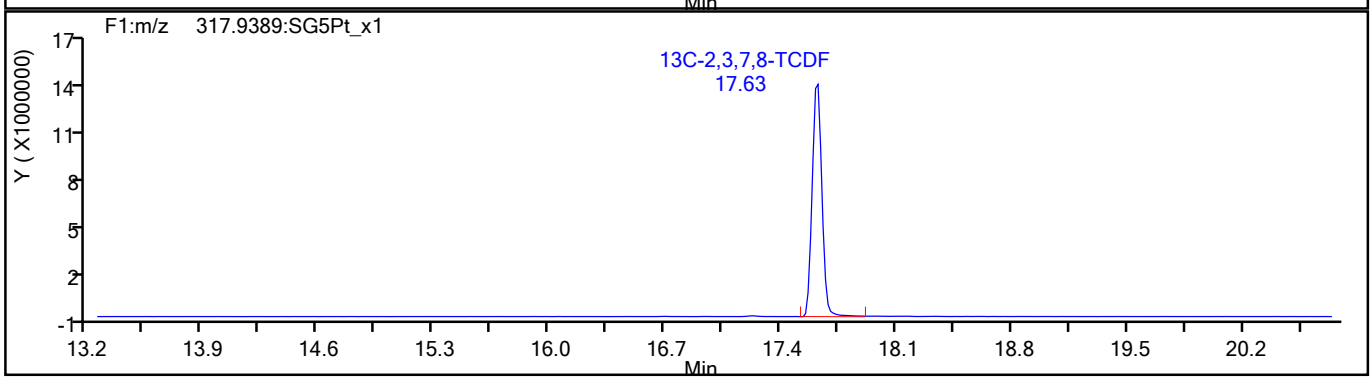

788761

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

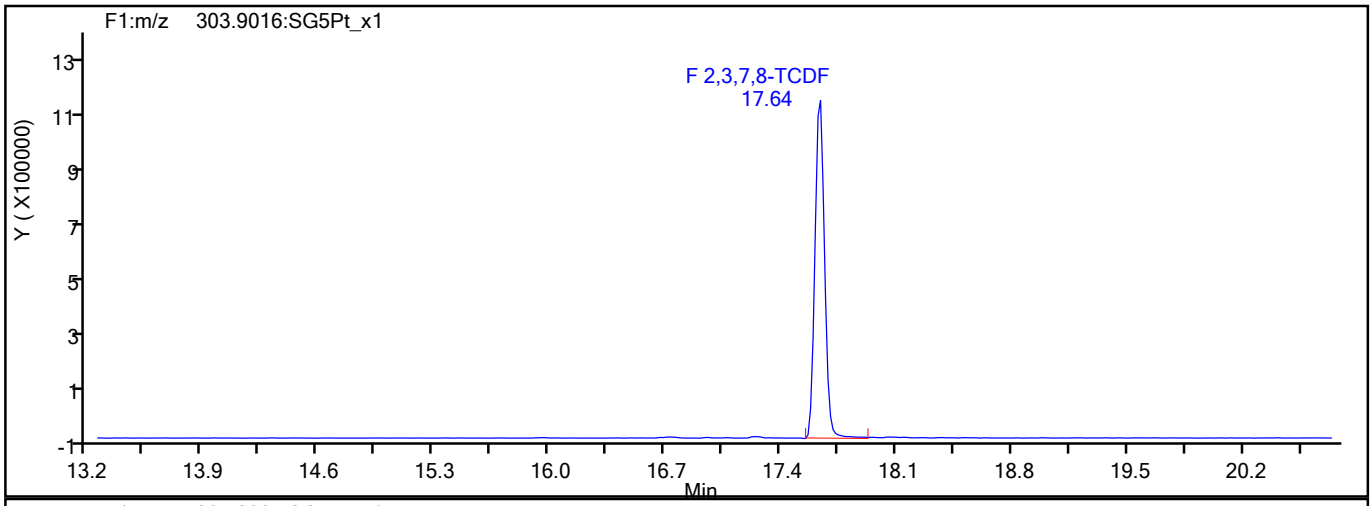

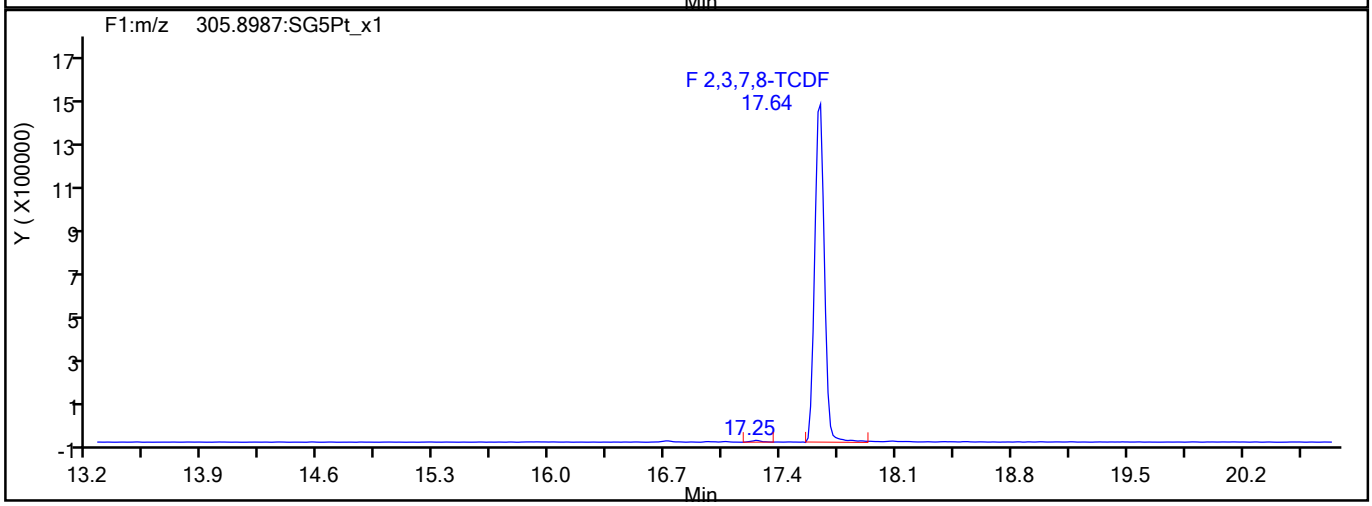

TCDF Interference Mass

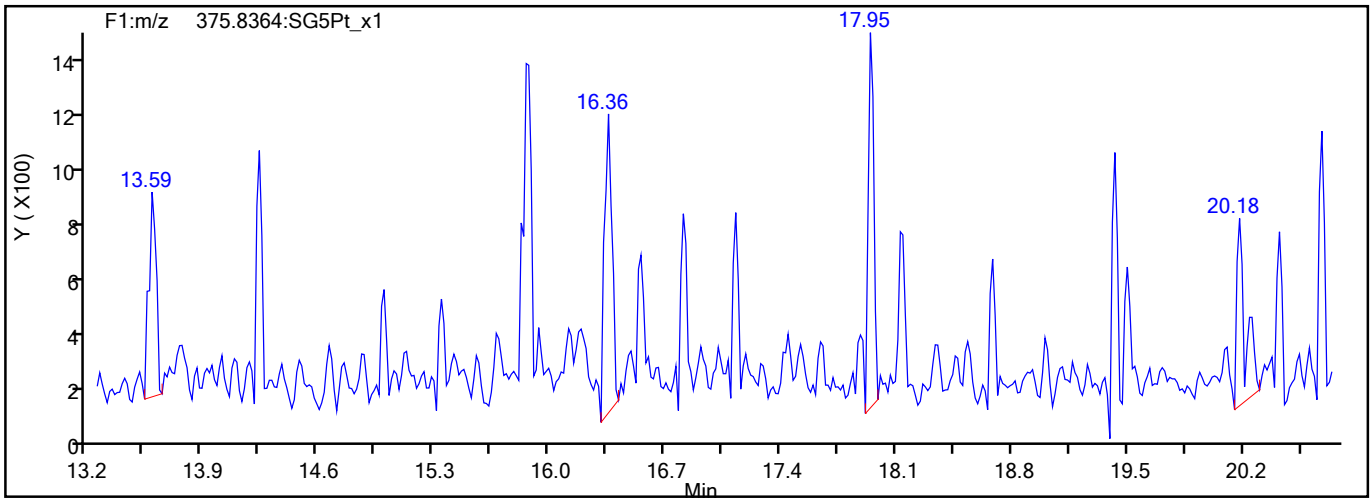

788762

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

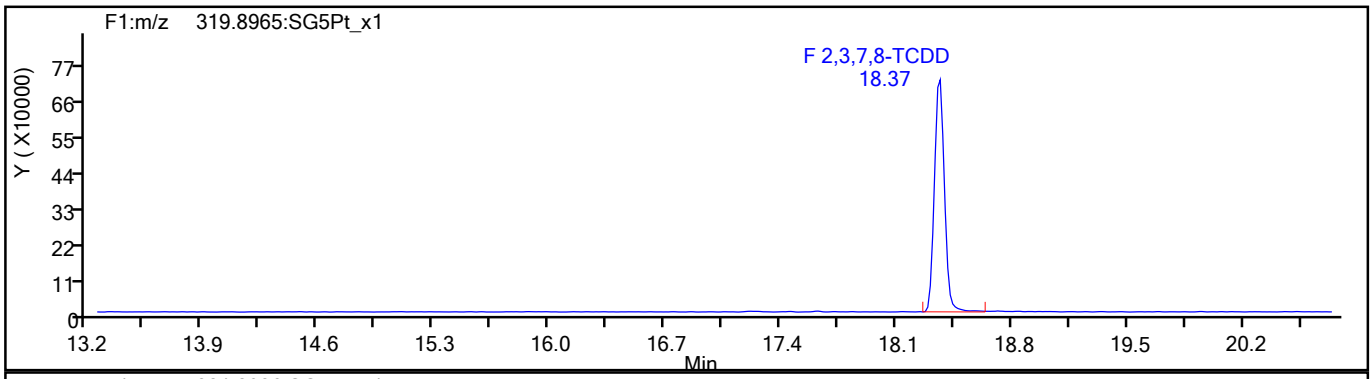

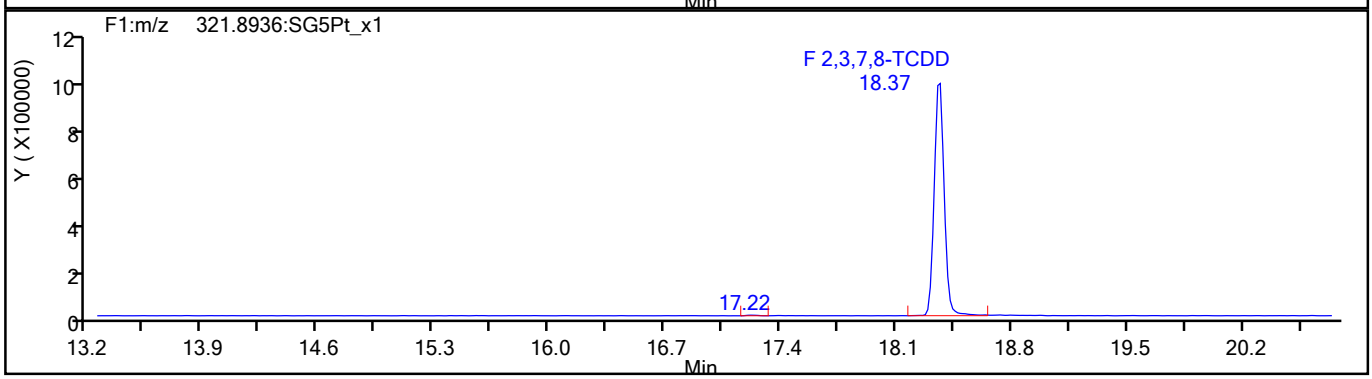

TCDD Standards

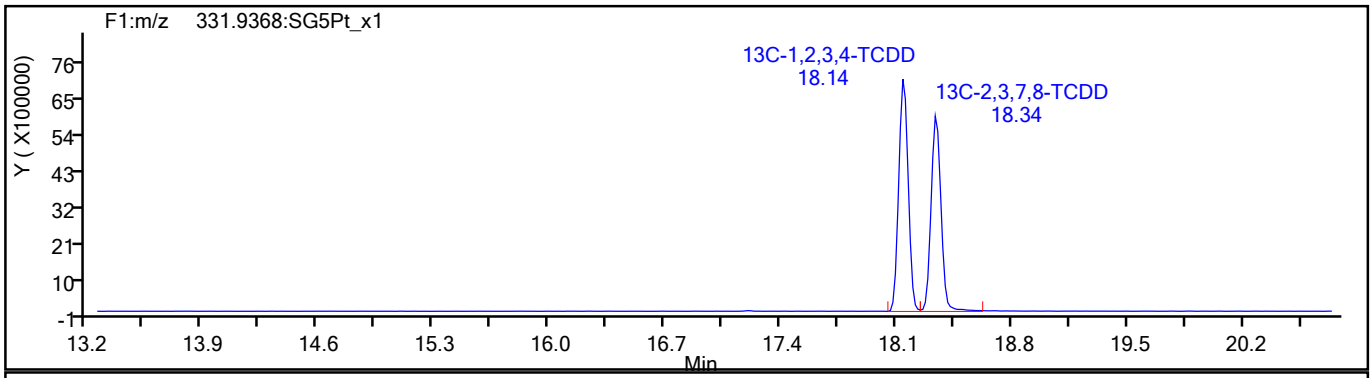

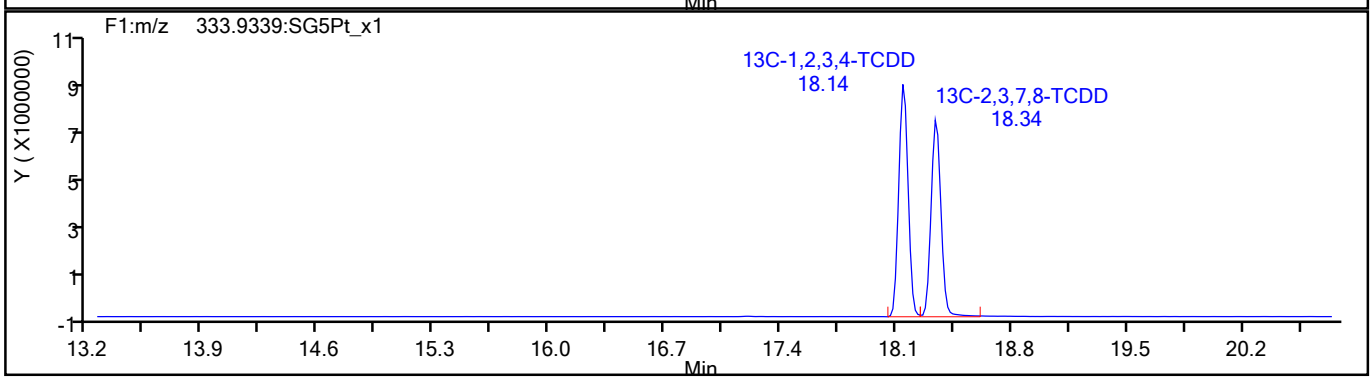

788763

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

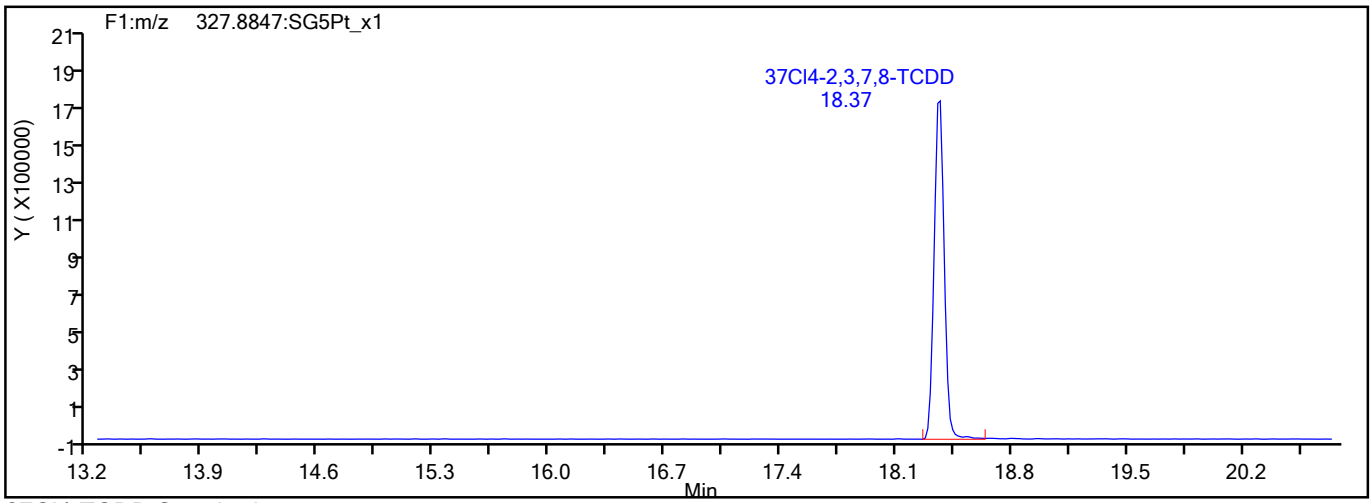

37Cl4-TCDD Standards

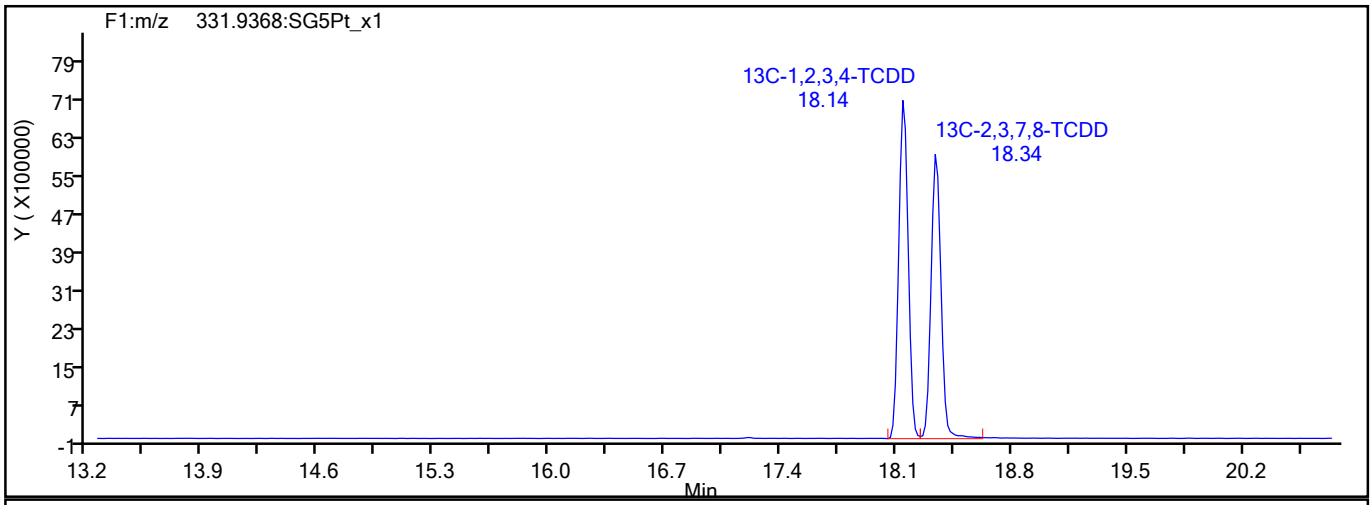

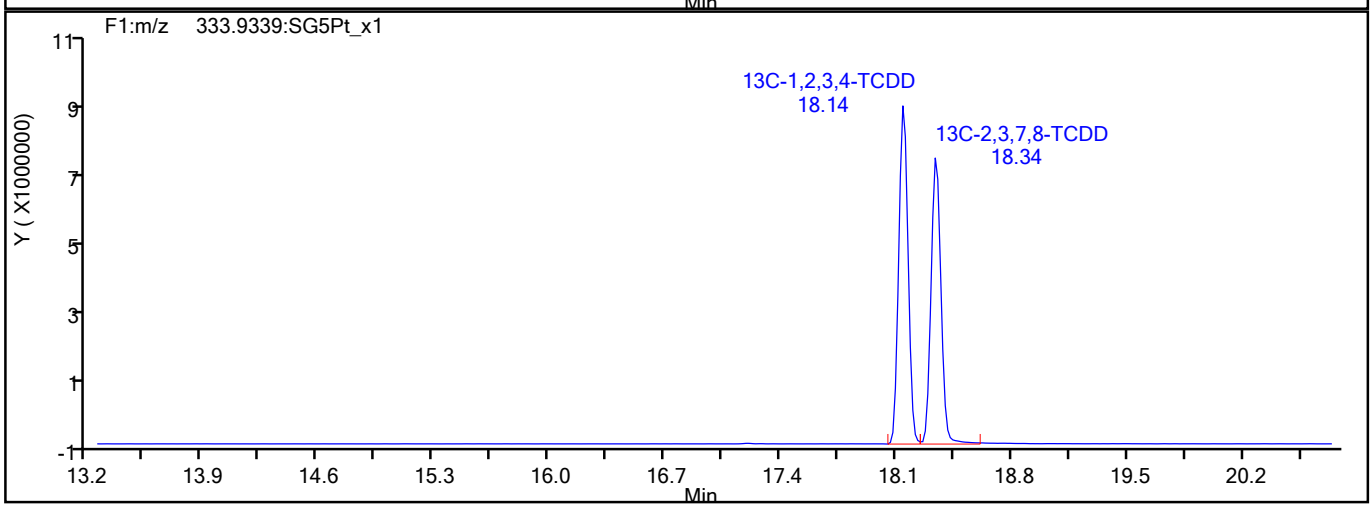

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

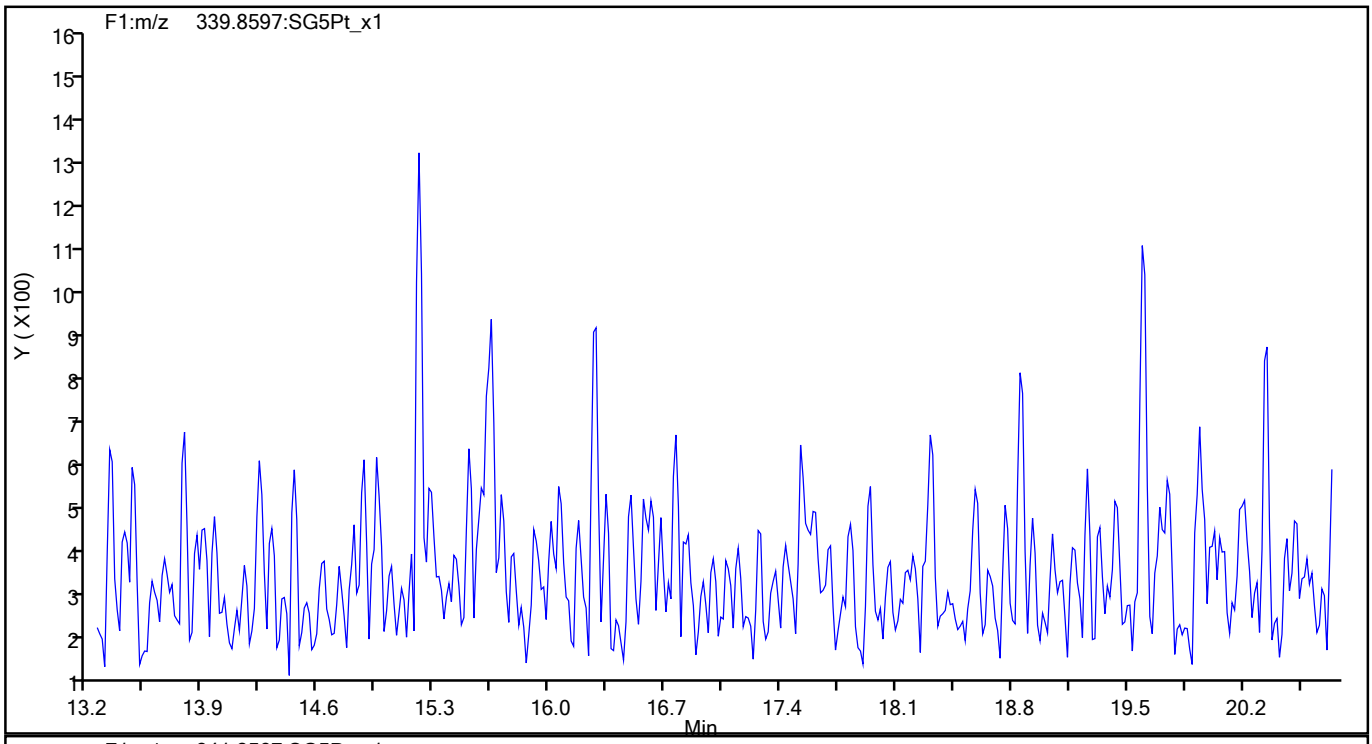

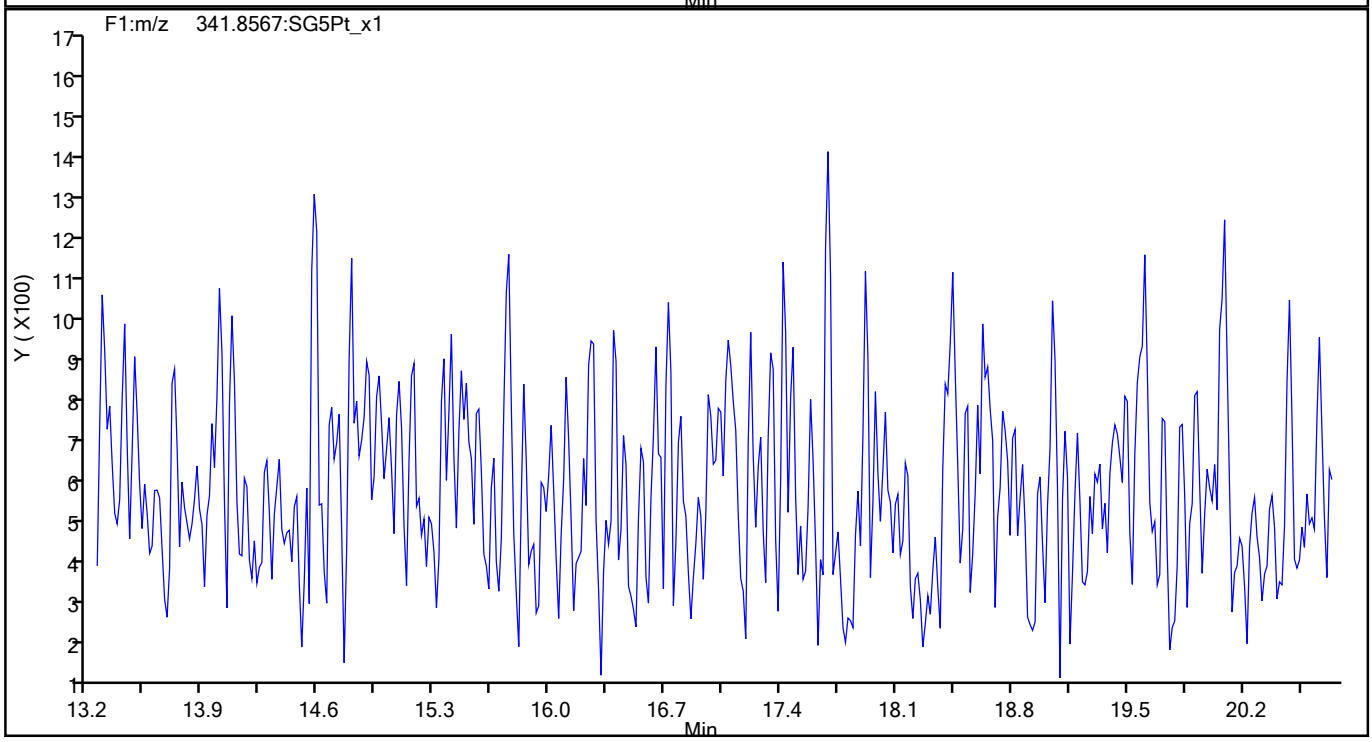

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

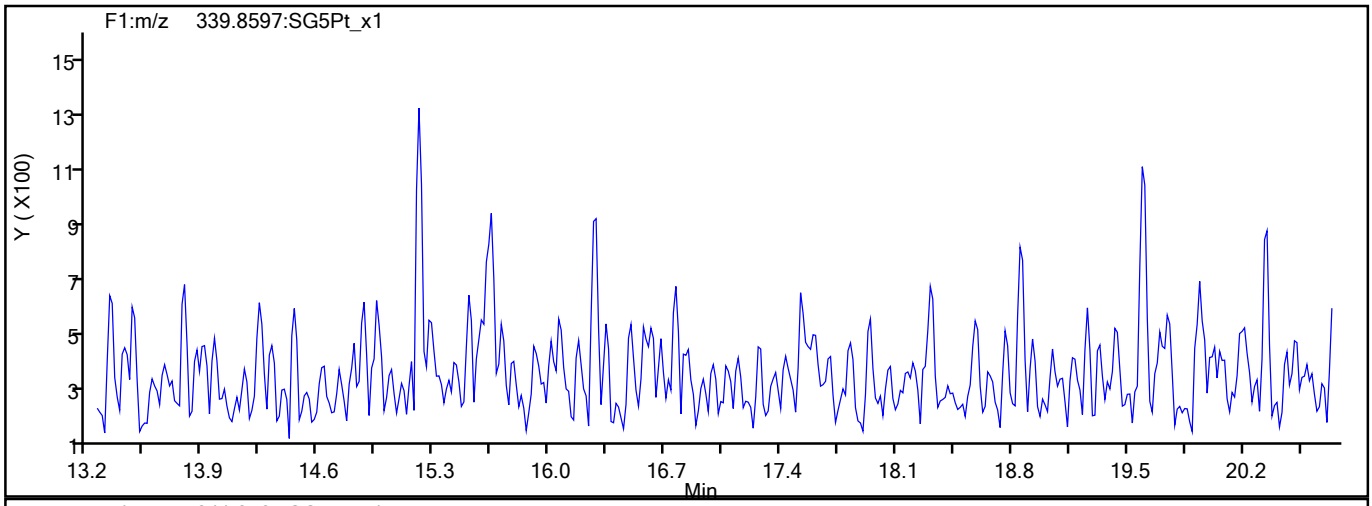

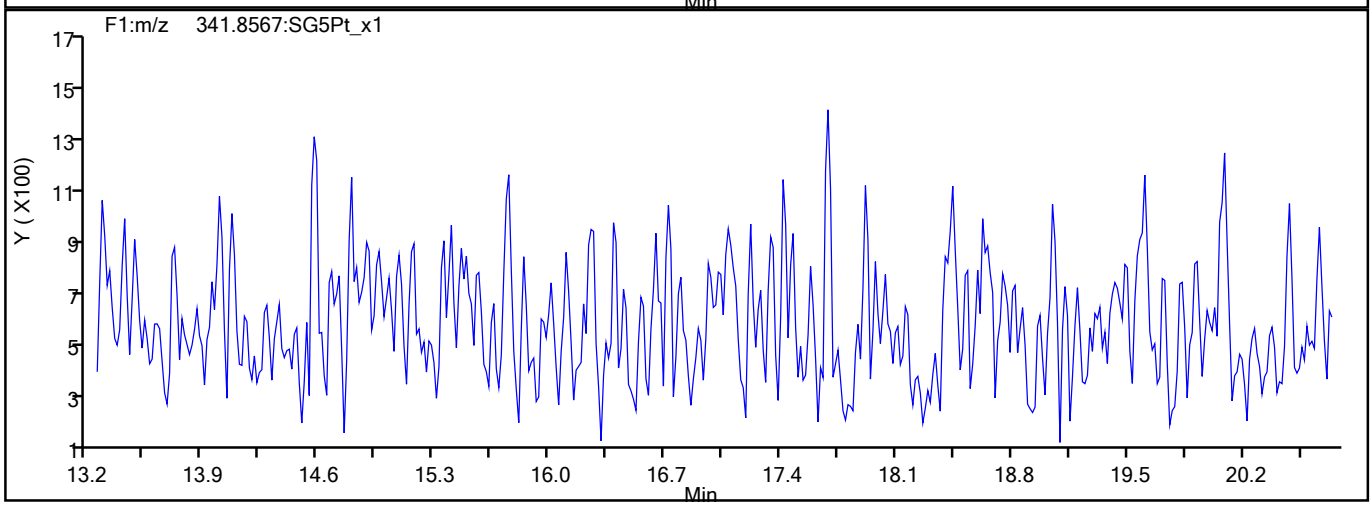

F1 PeCDFs Interference Mass

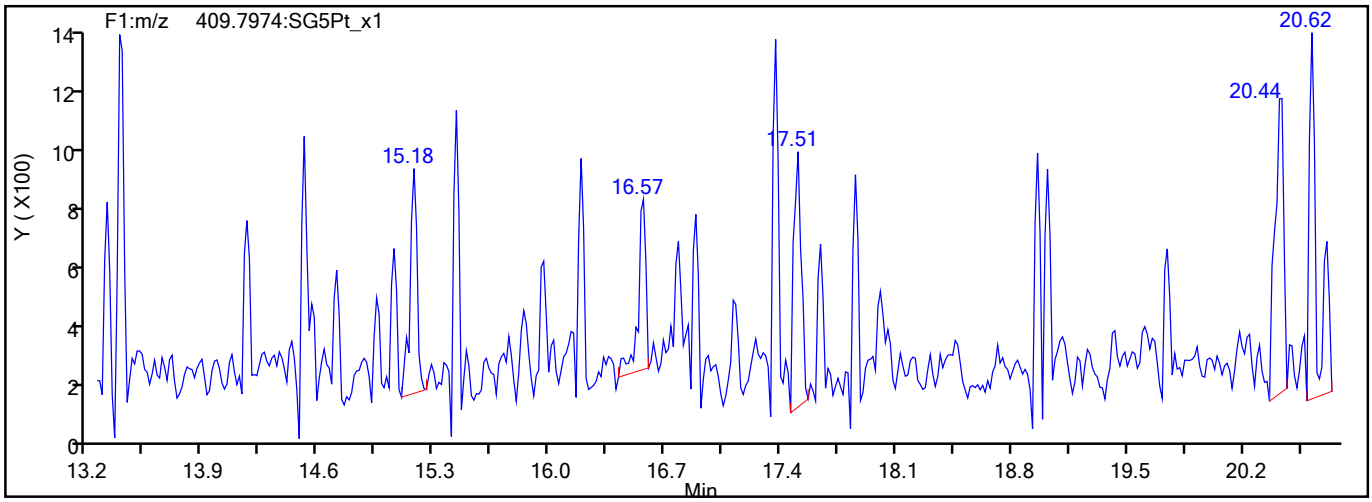

788766

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

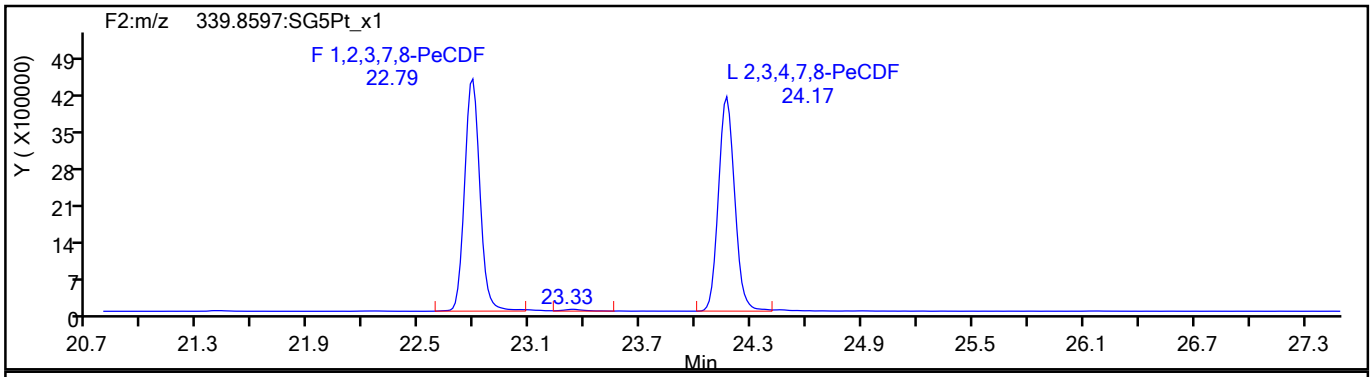

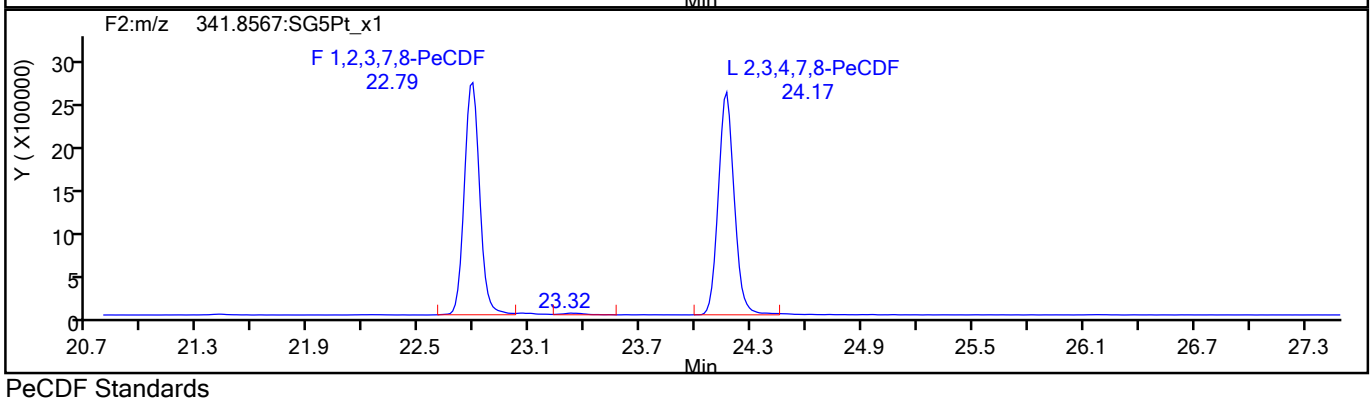

PeCDF Standards

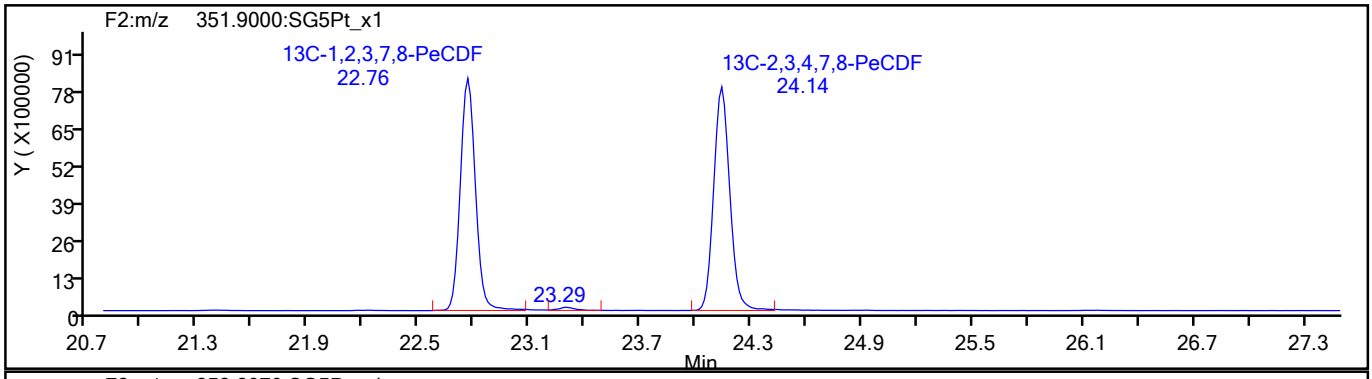

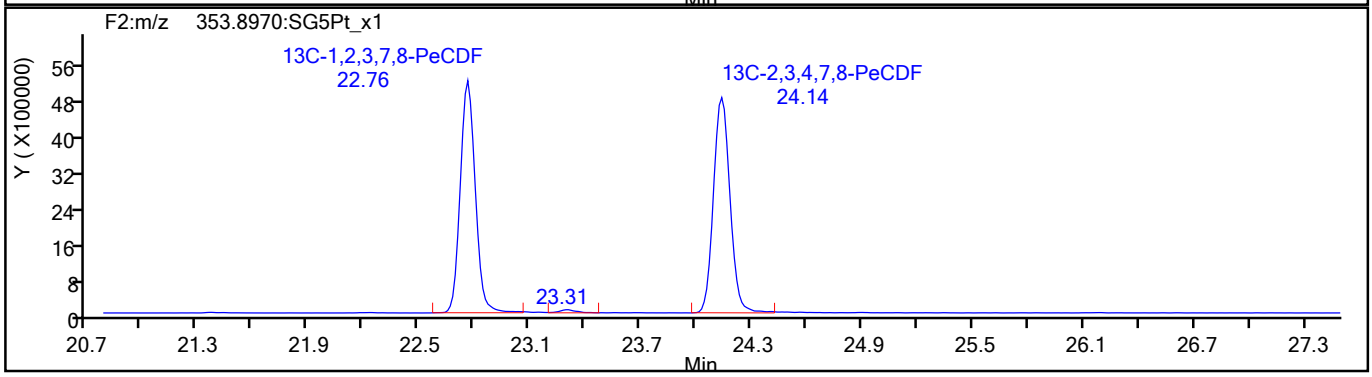

788767

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

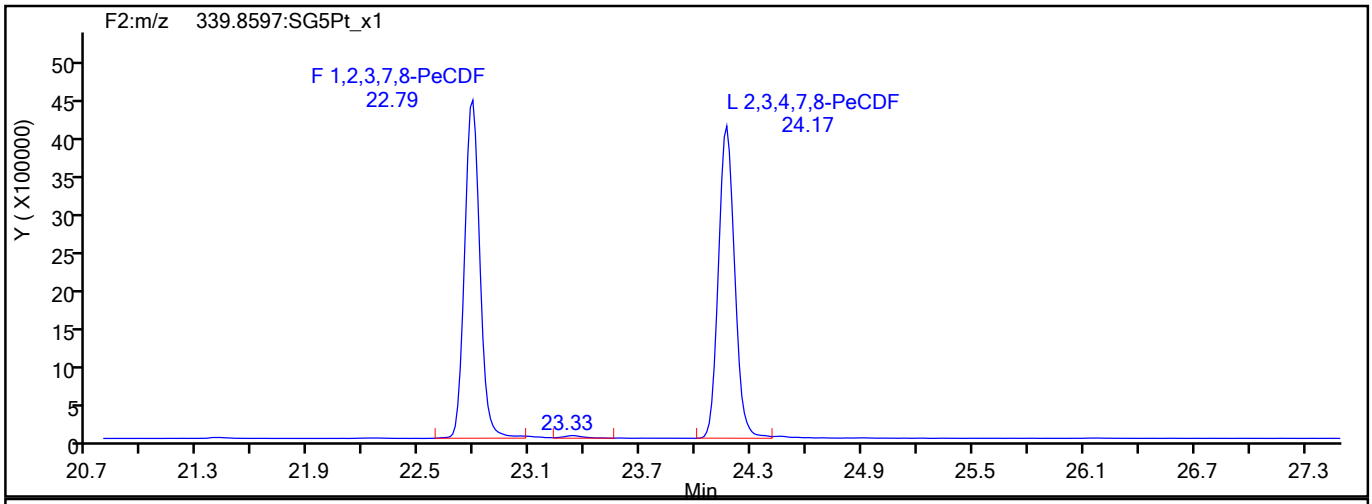

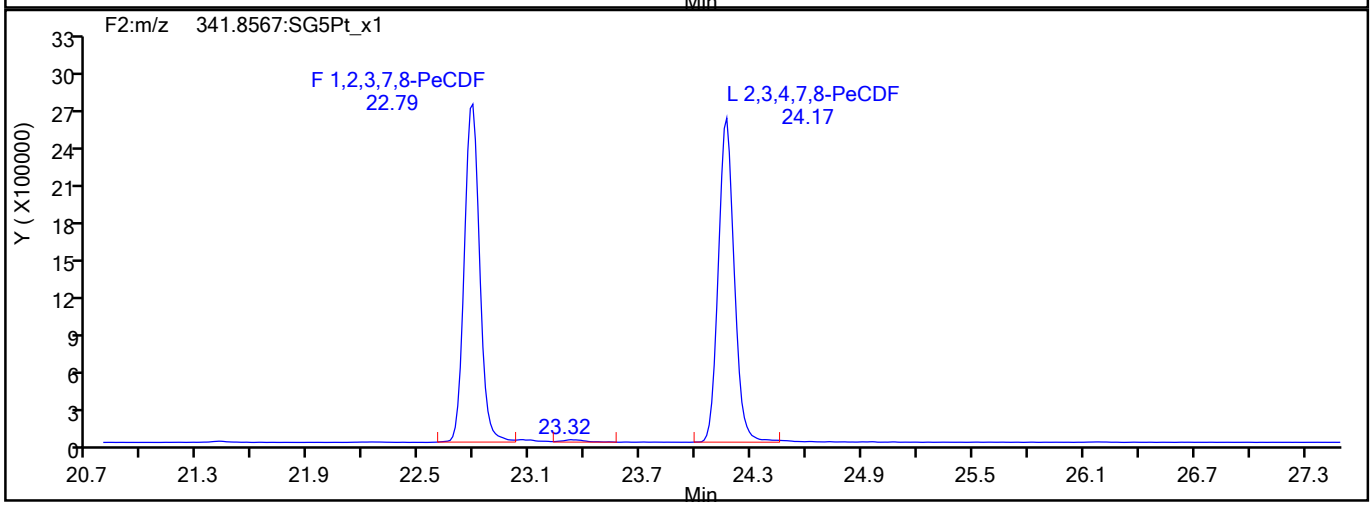

PeCDF Interference Mass

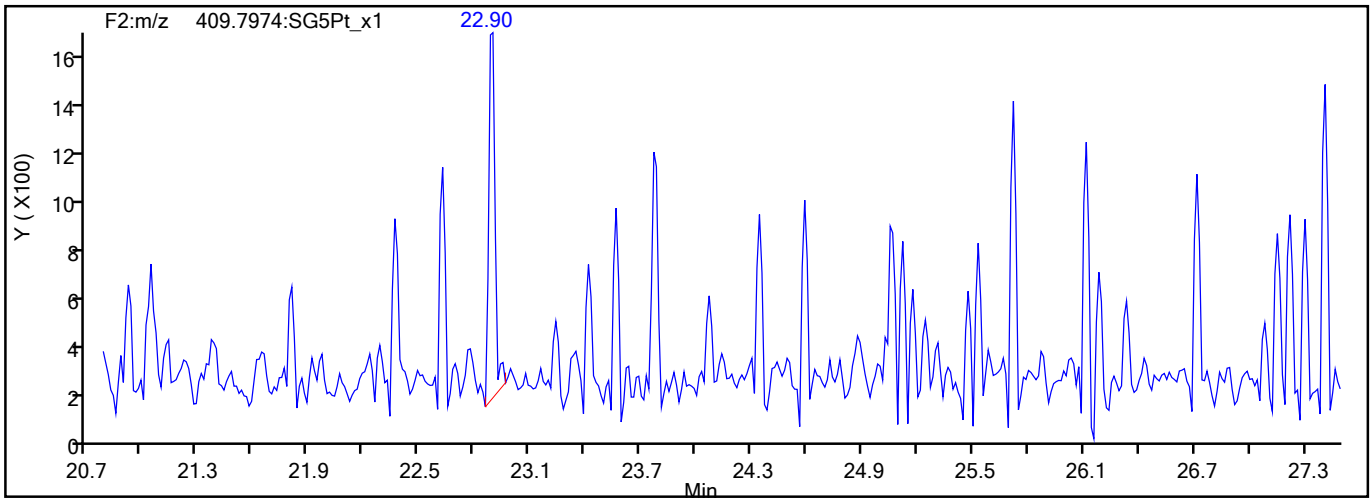

788768

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

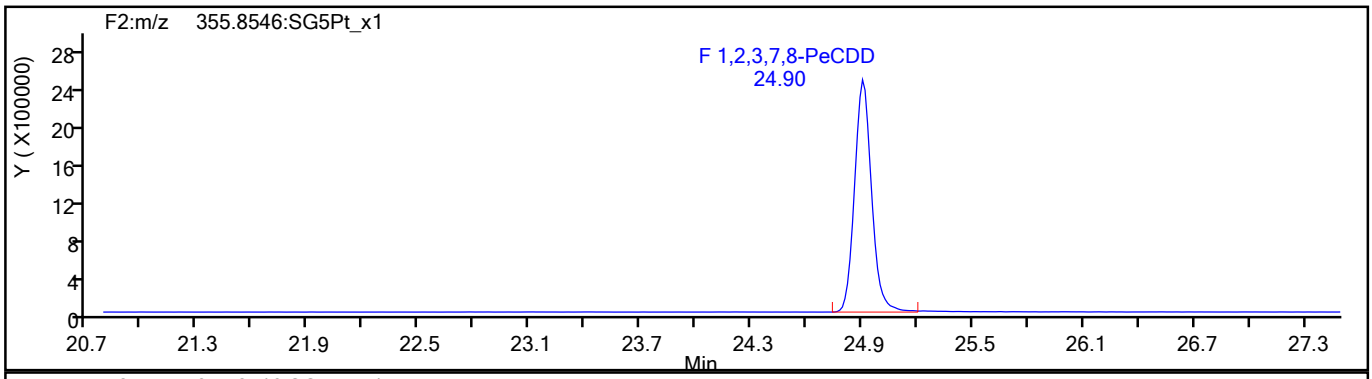

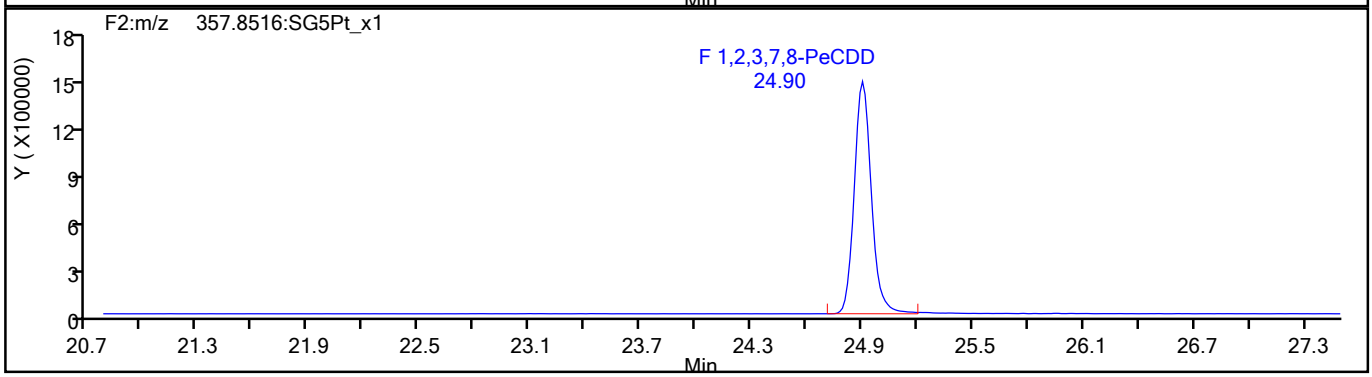

PeCDD Standards

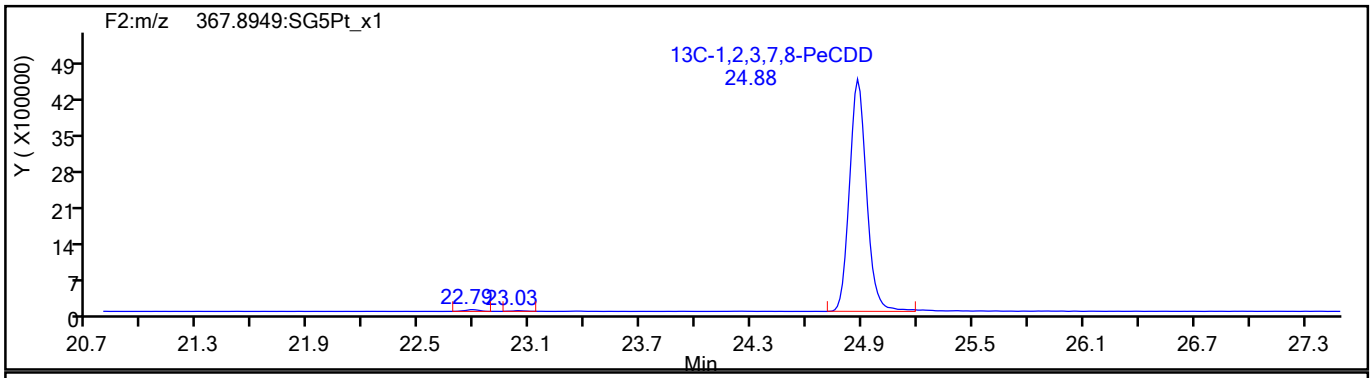

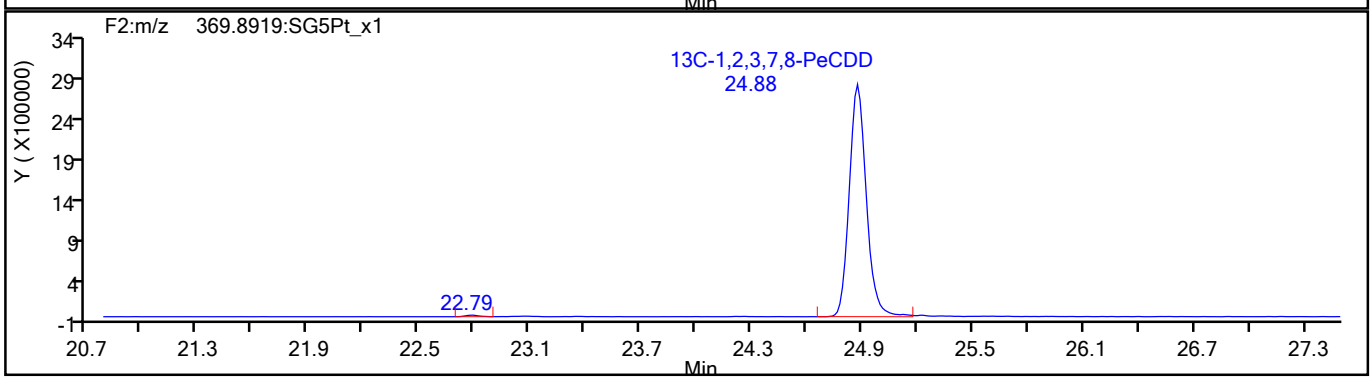

788769

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

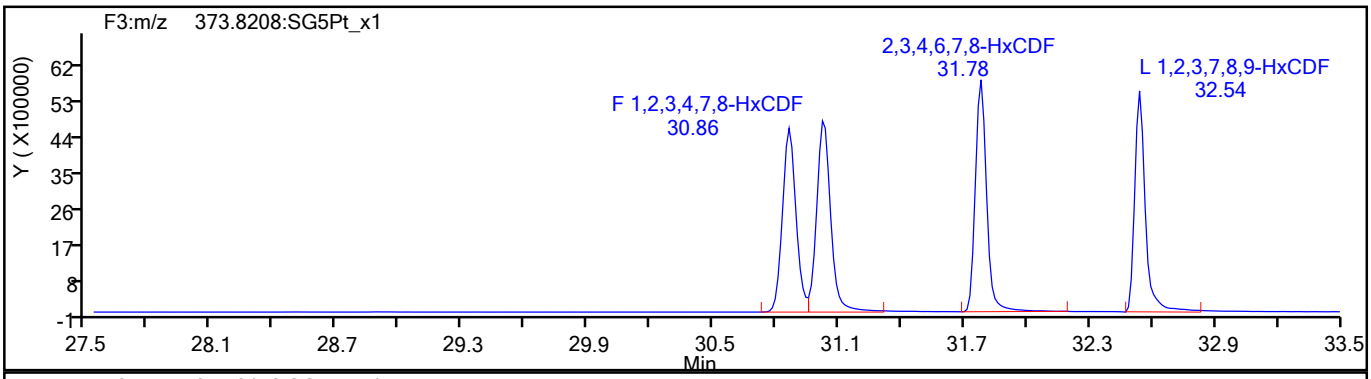

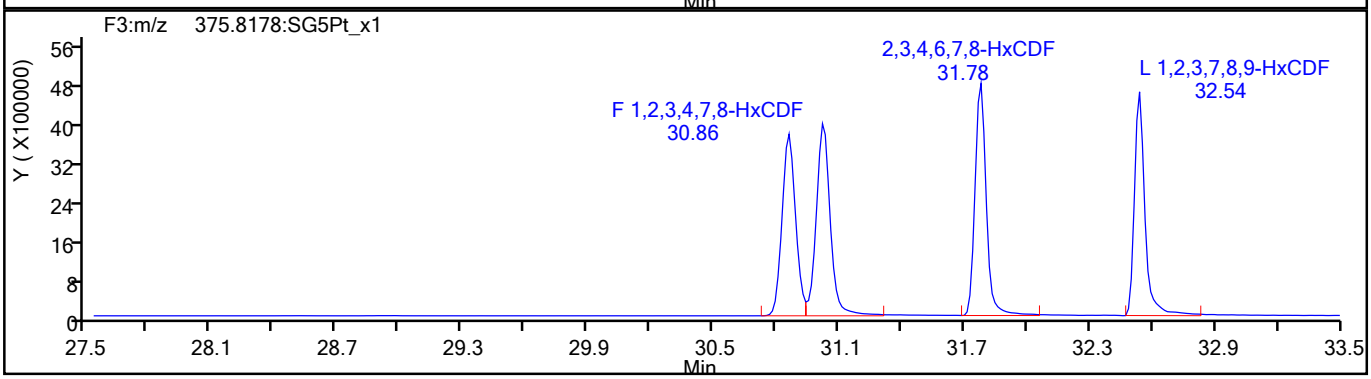

HxCDF Standards

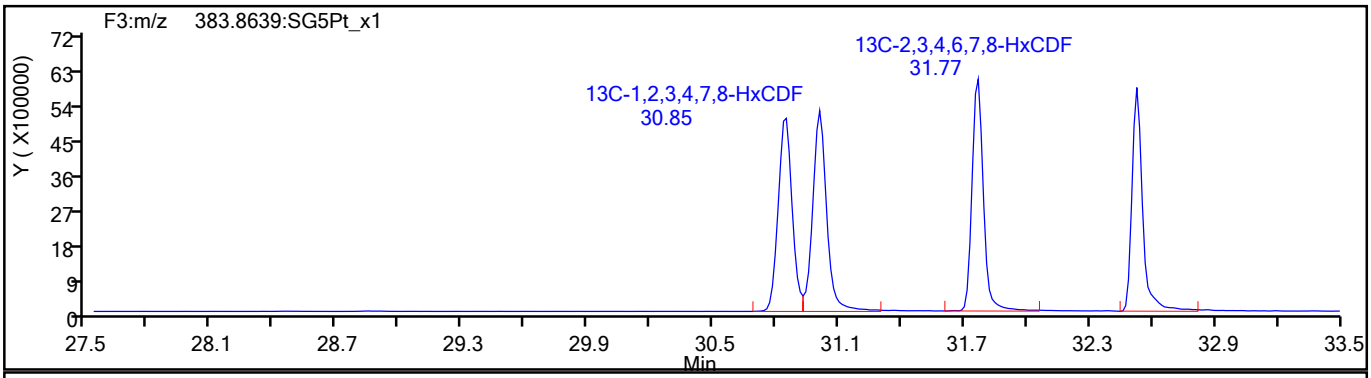

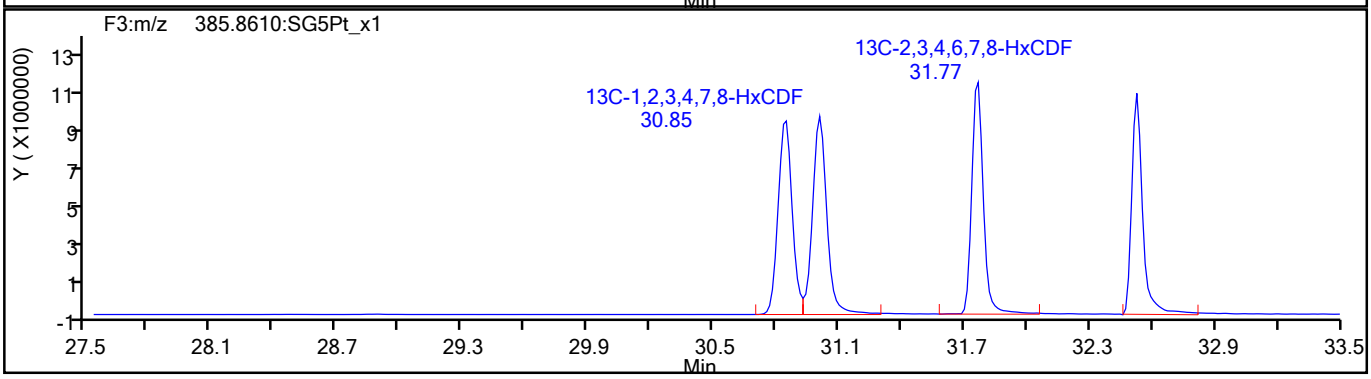

788770

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

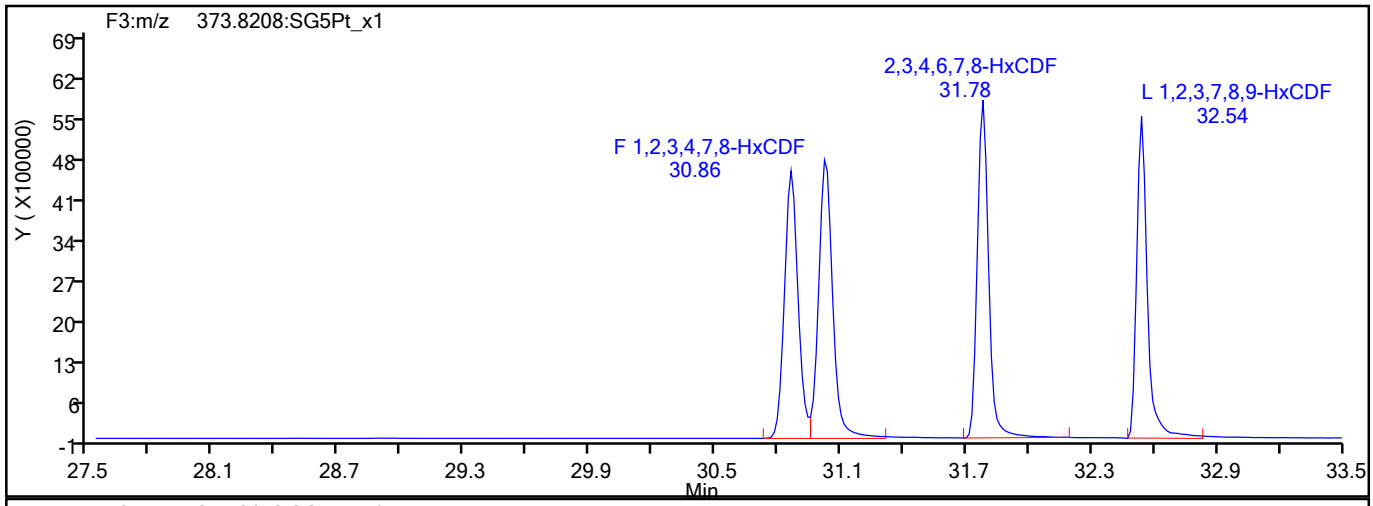

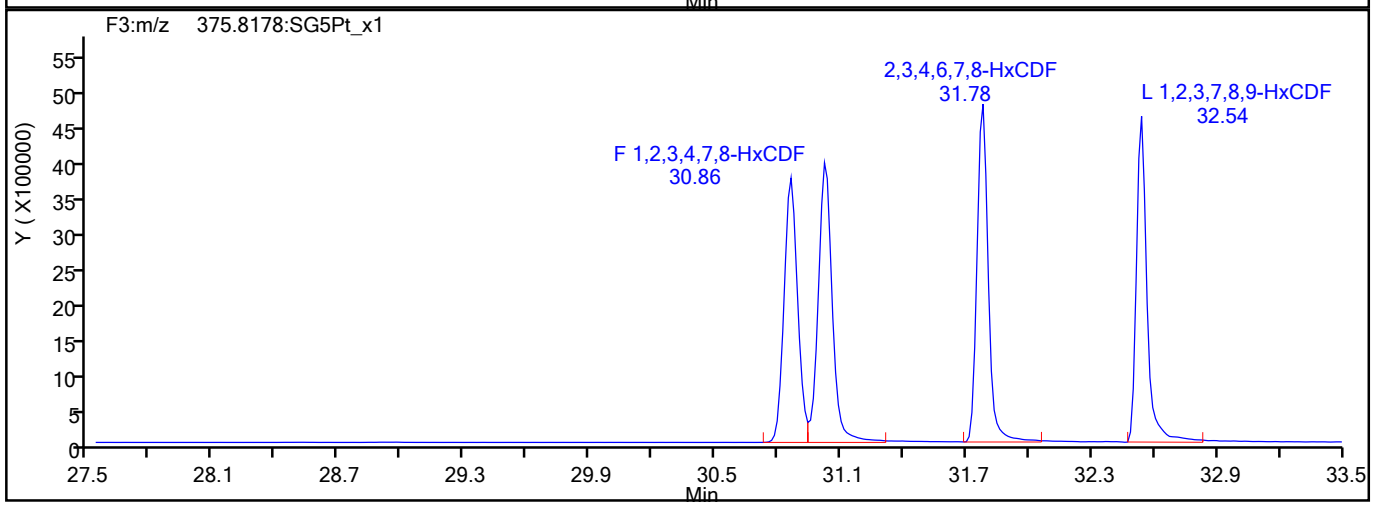

HxCDF Interference Mass

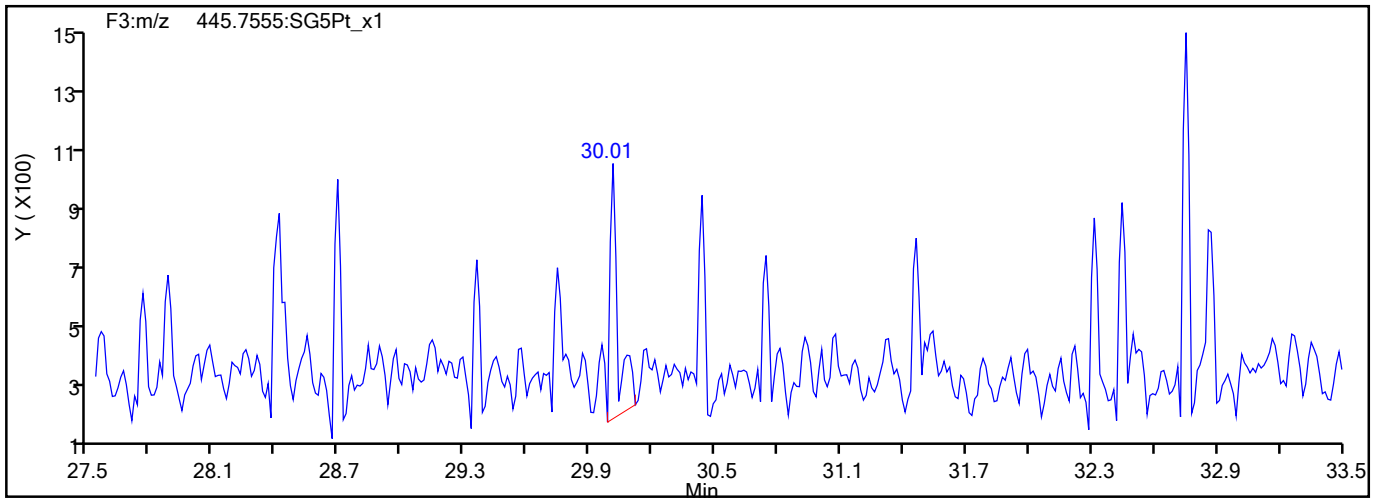

788771

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

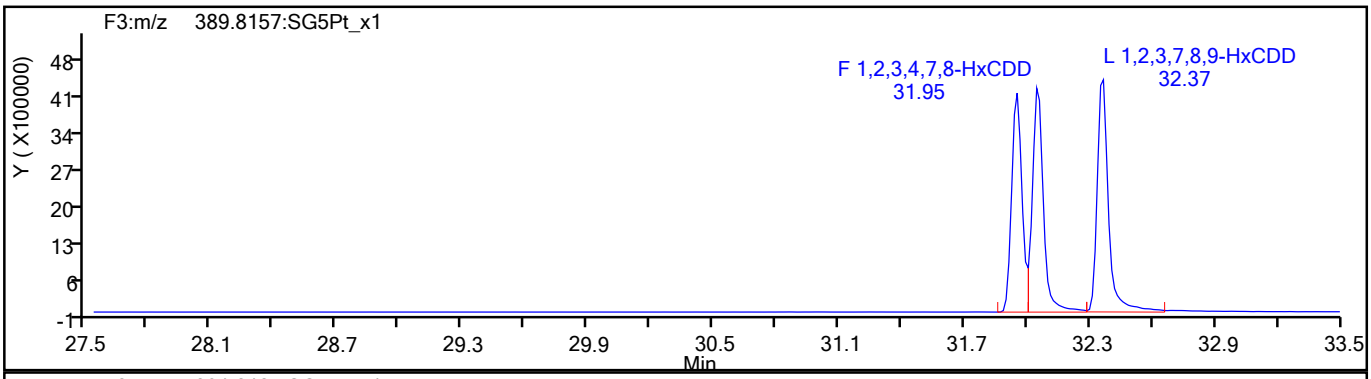

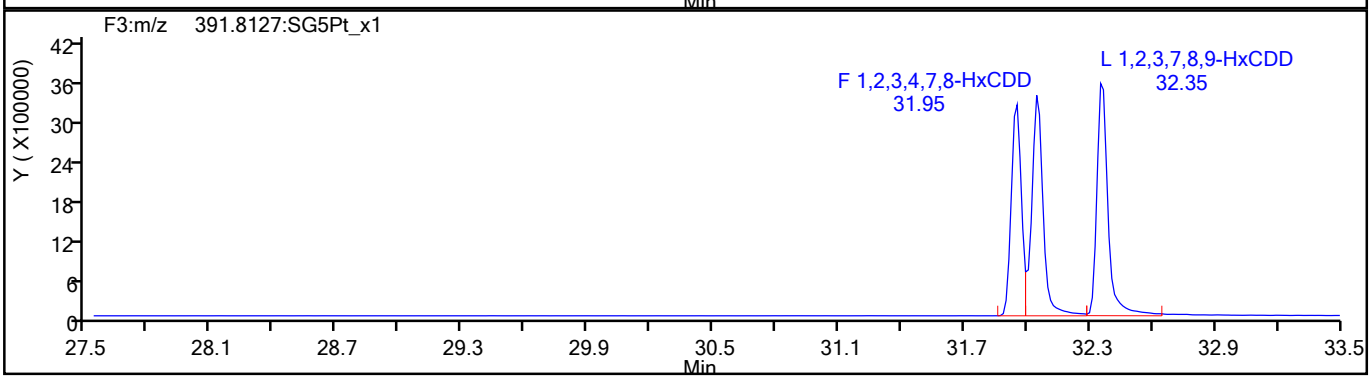

HxCDD Standards

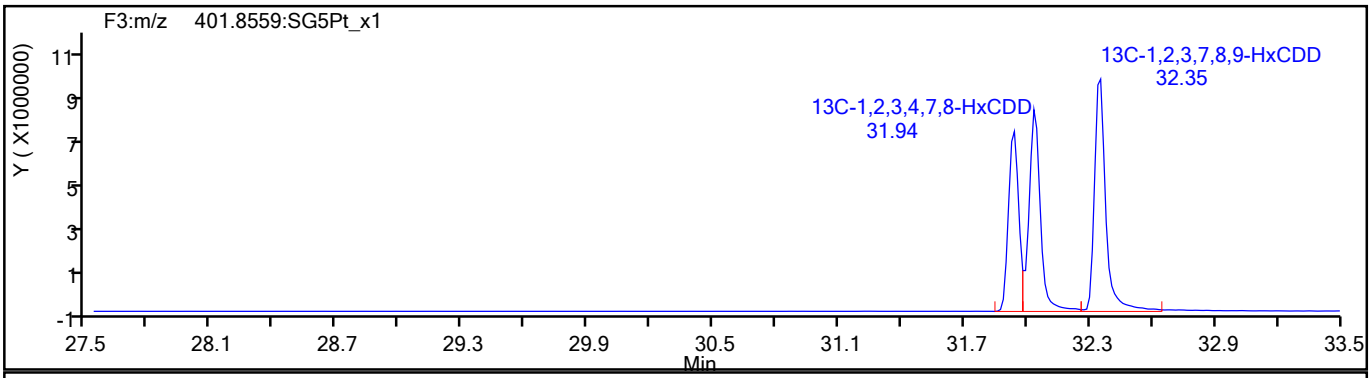

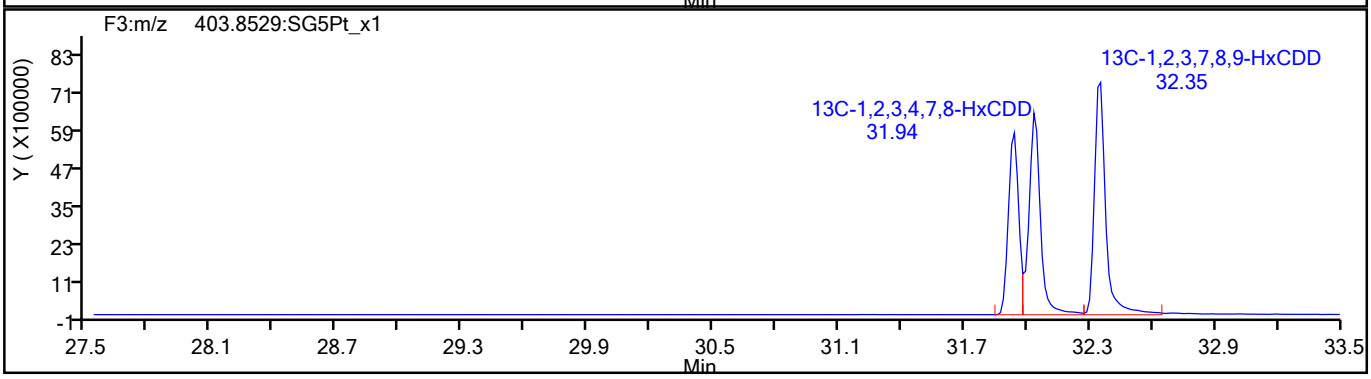

788772

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

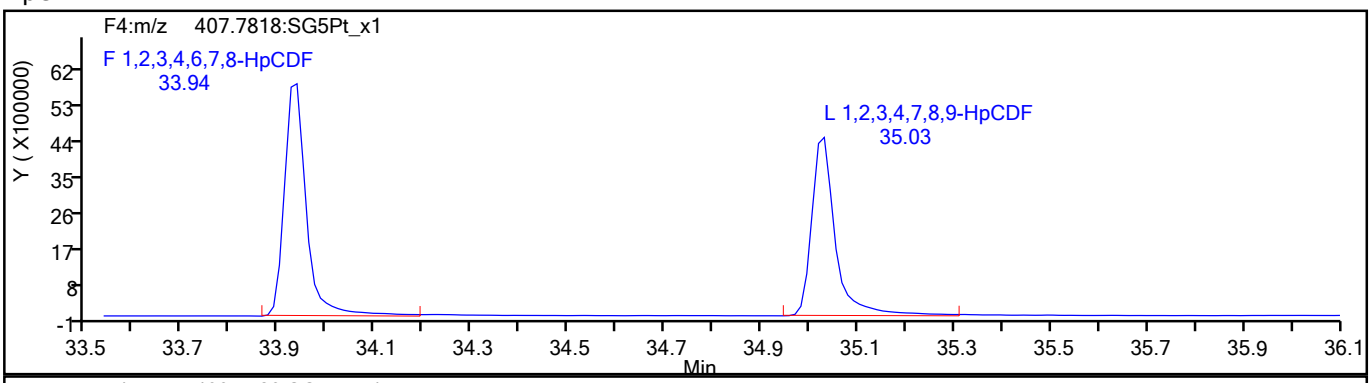

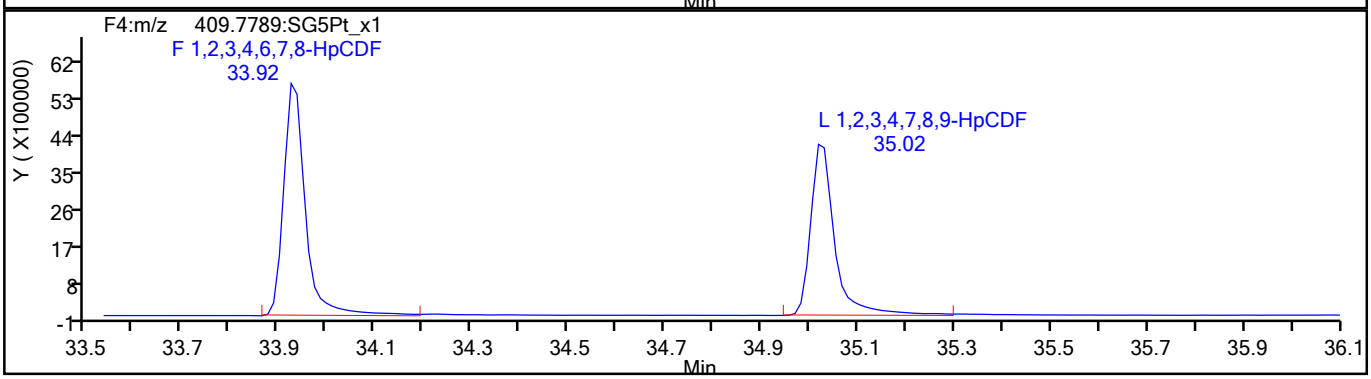

HpCDF Standards

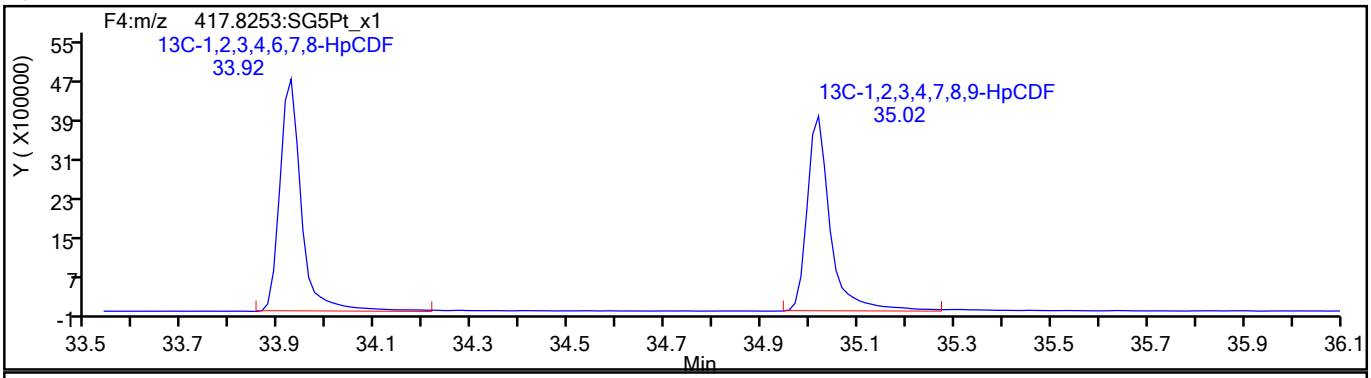

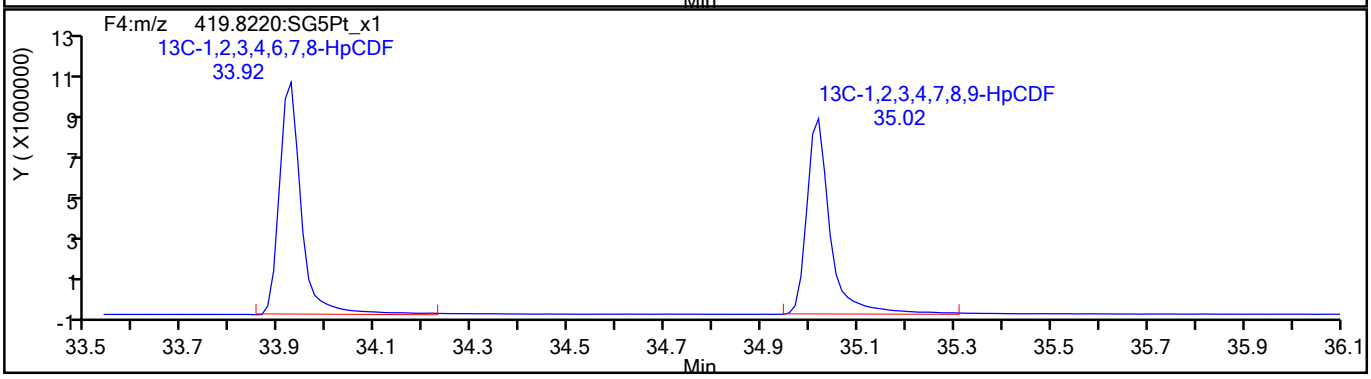

788773

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

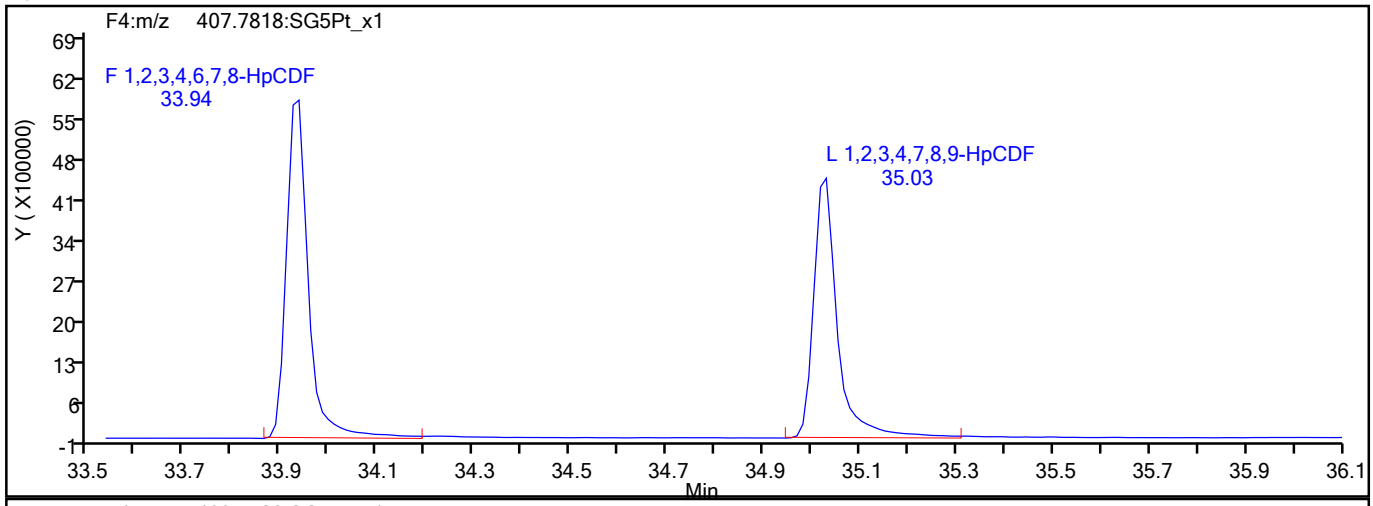

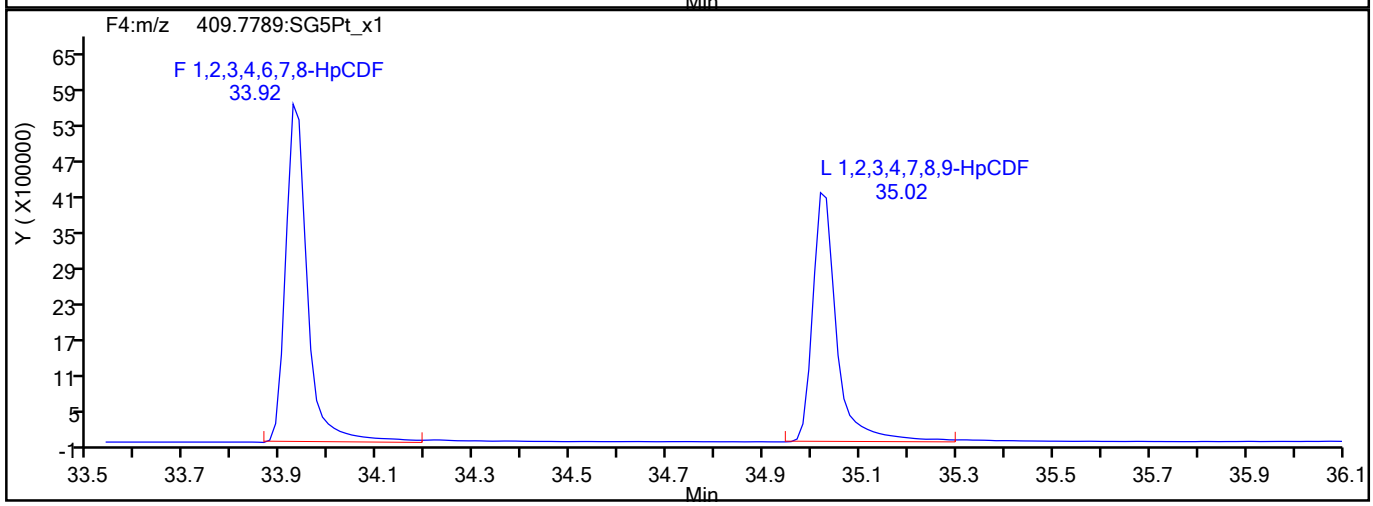

HpCDF Interference Mass

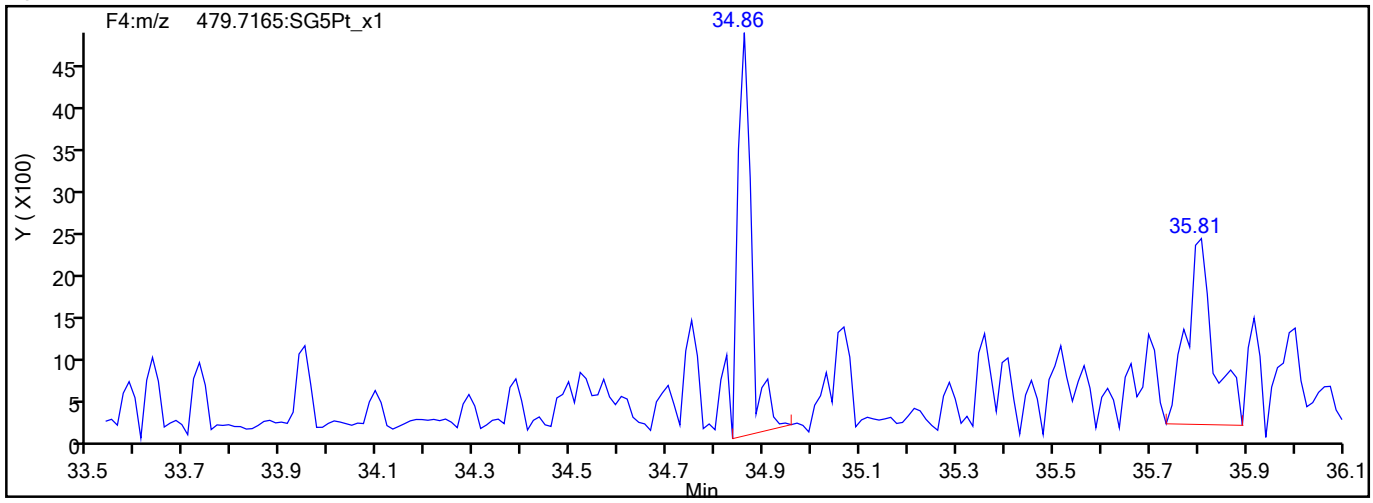

788774

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

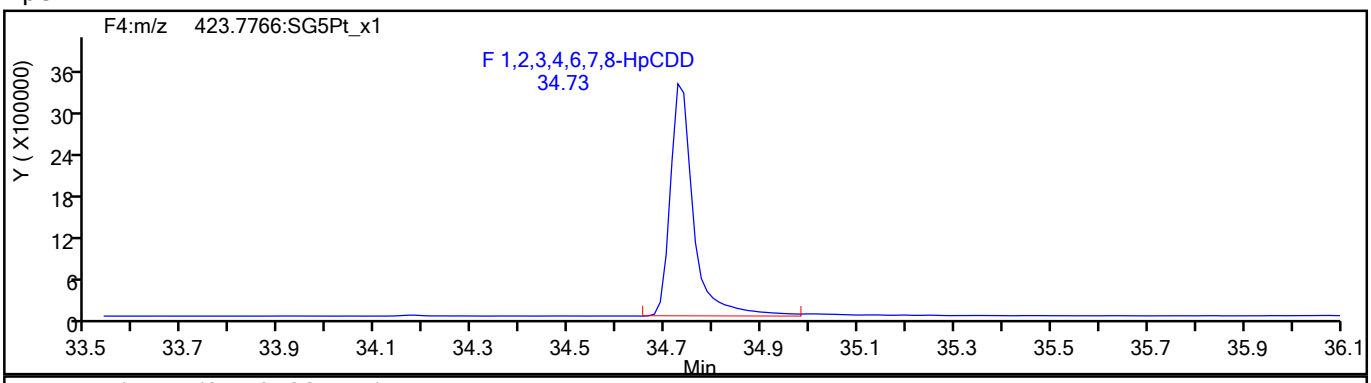

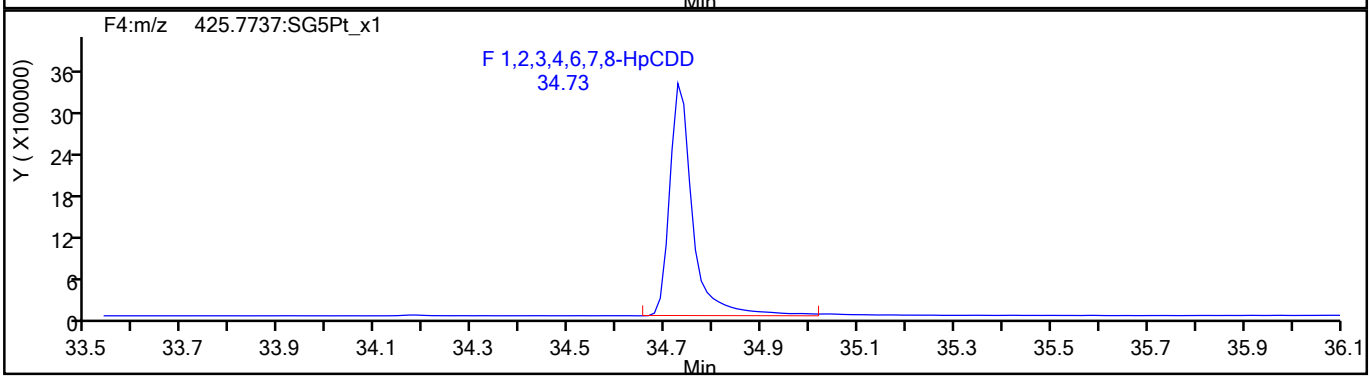

HpCDD Standards

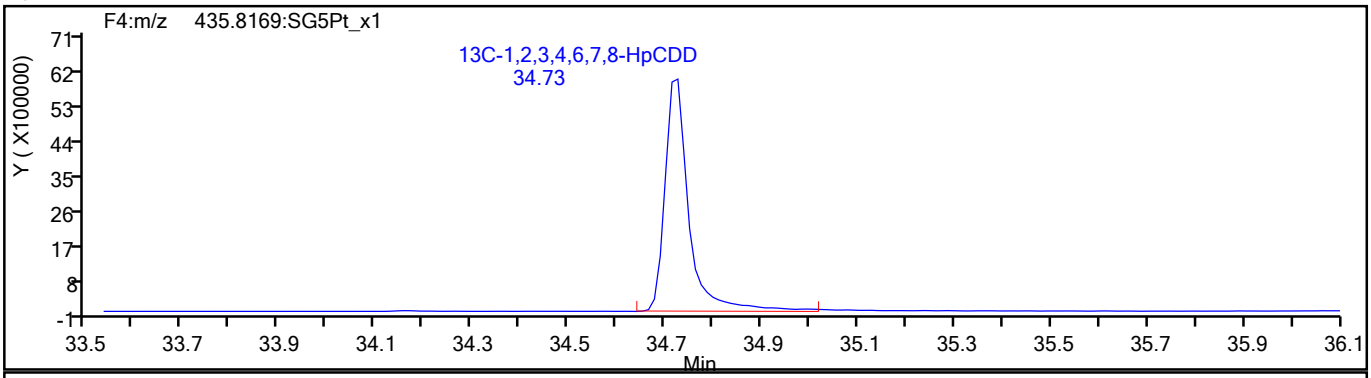

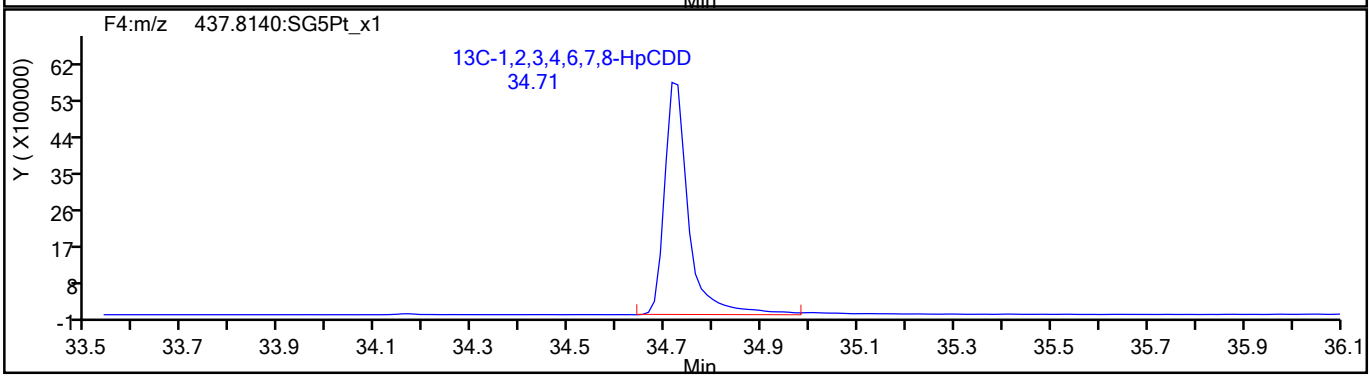

788775

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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OCDF

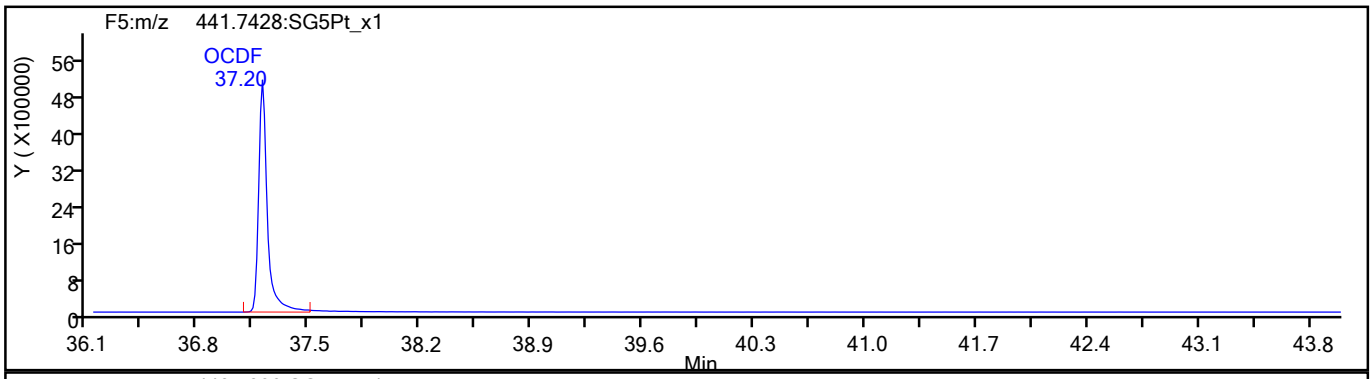

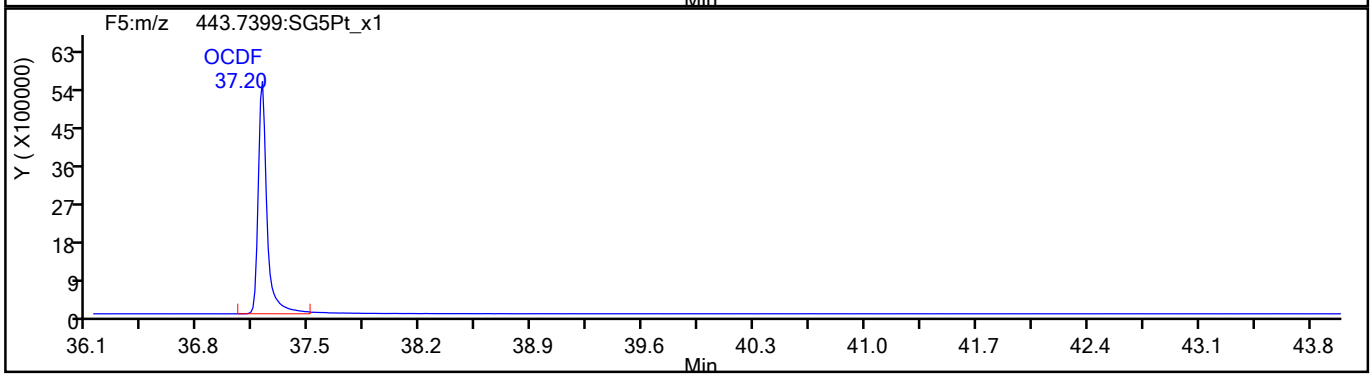

OCDF Standards

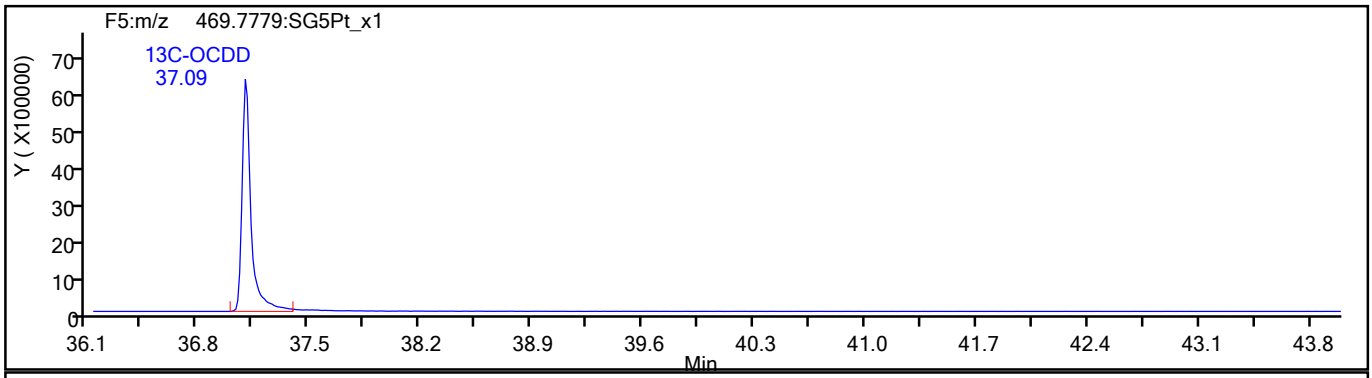

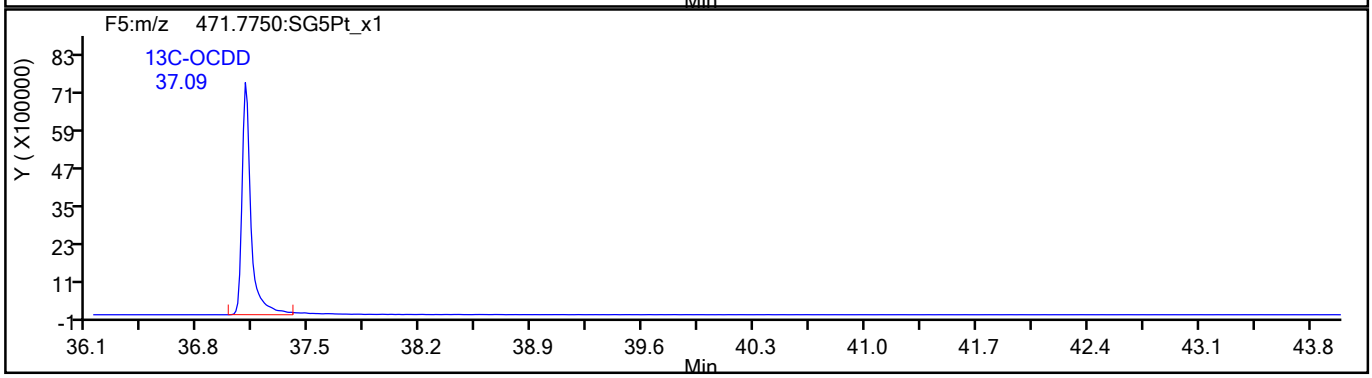

788776

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDF

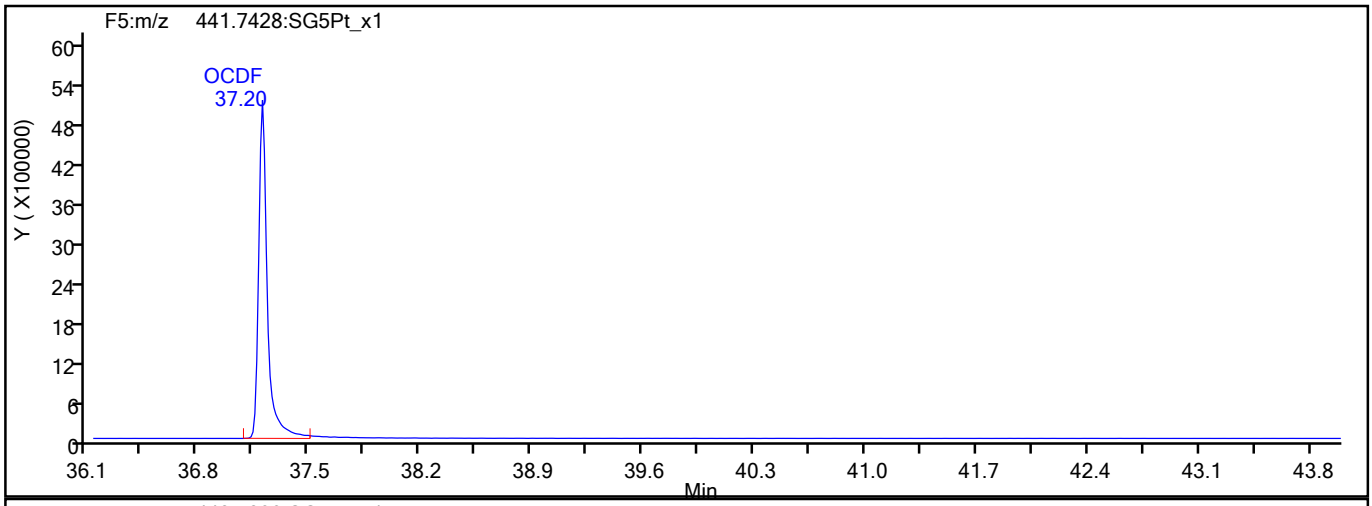

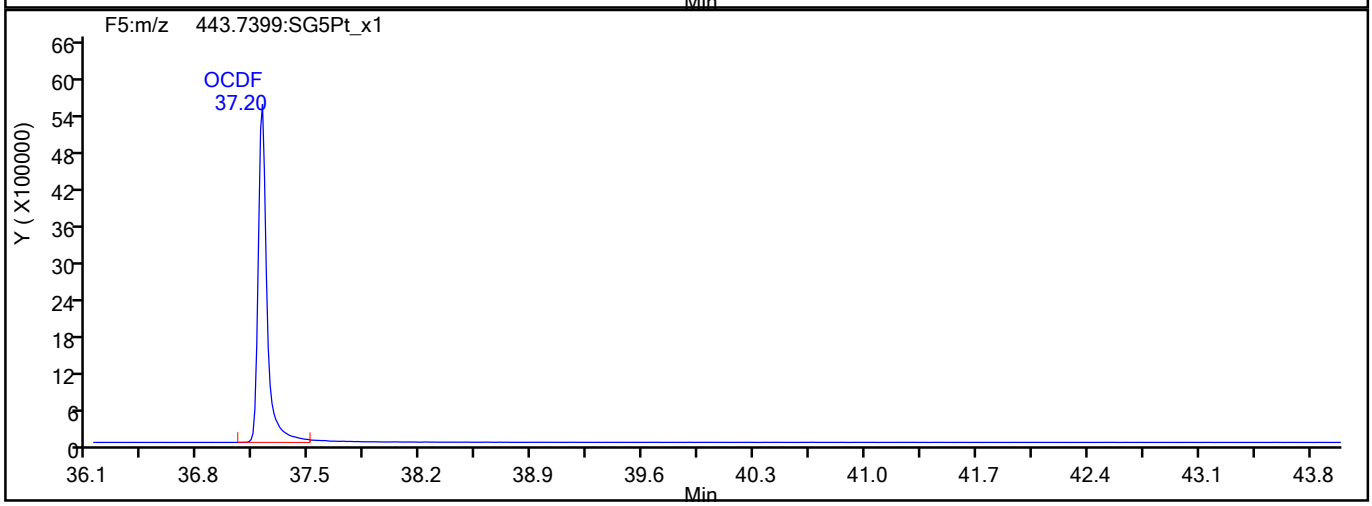

OCDF Interference Mass

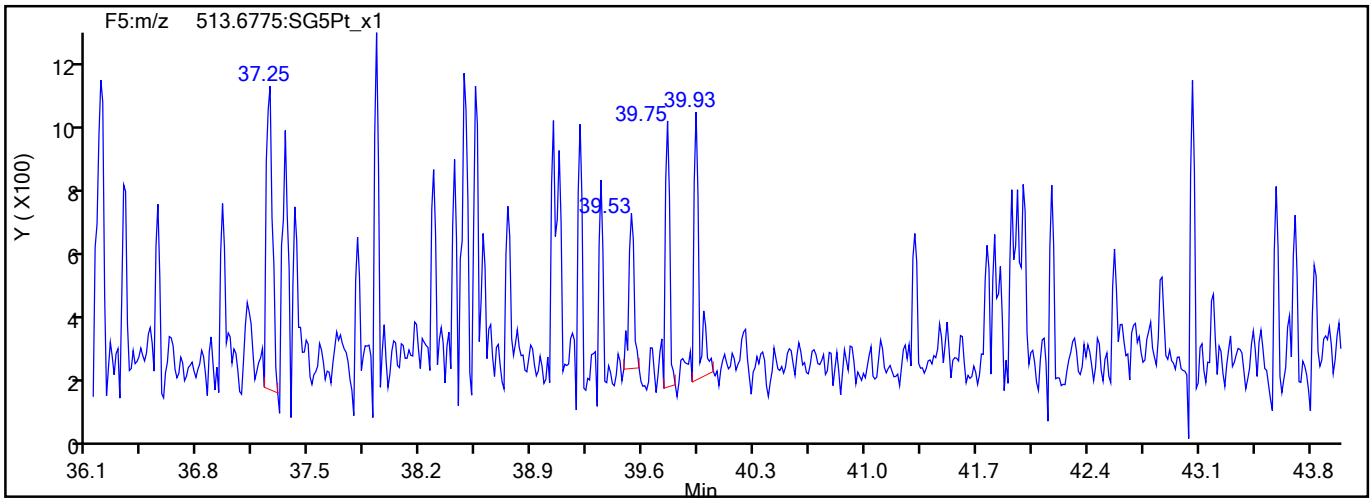

788777

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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OCDD

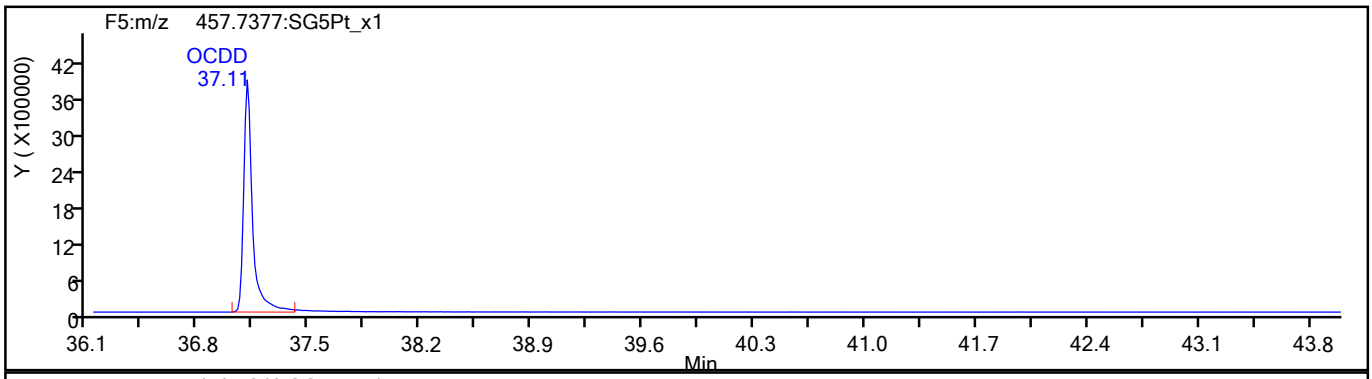

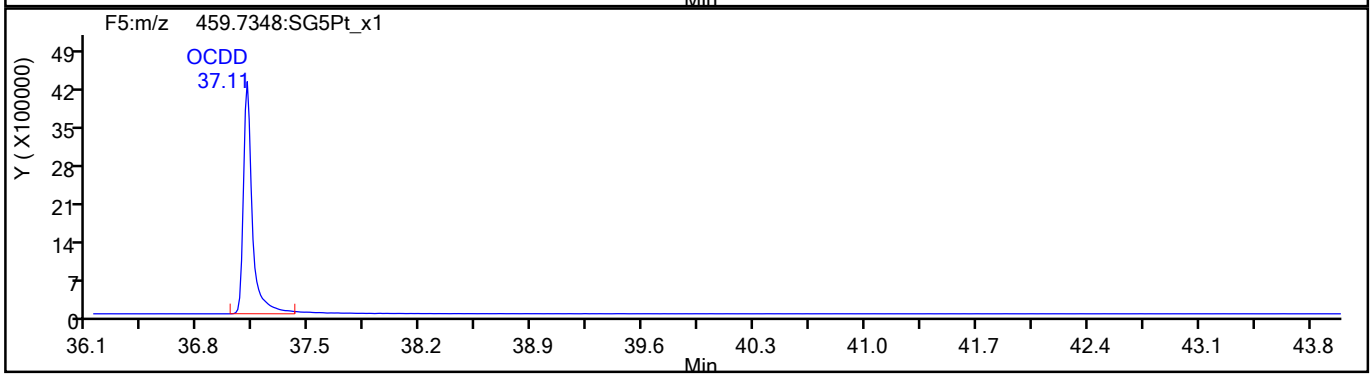

OCDD Standards

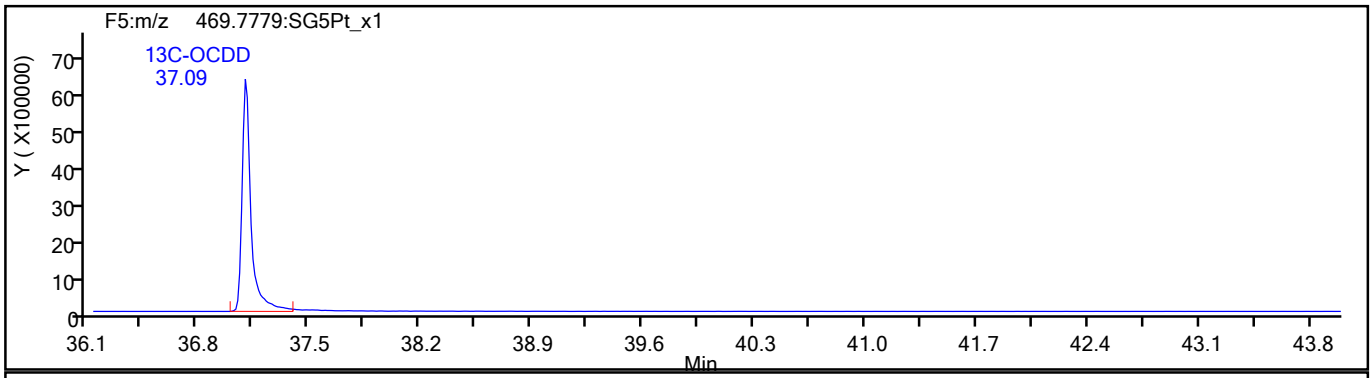

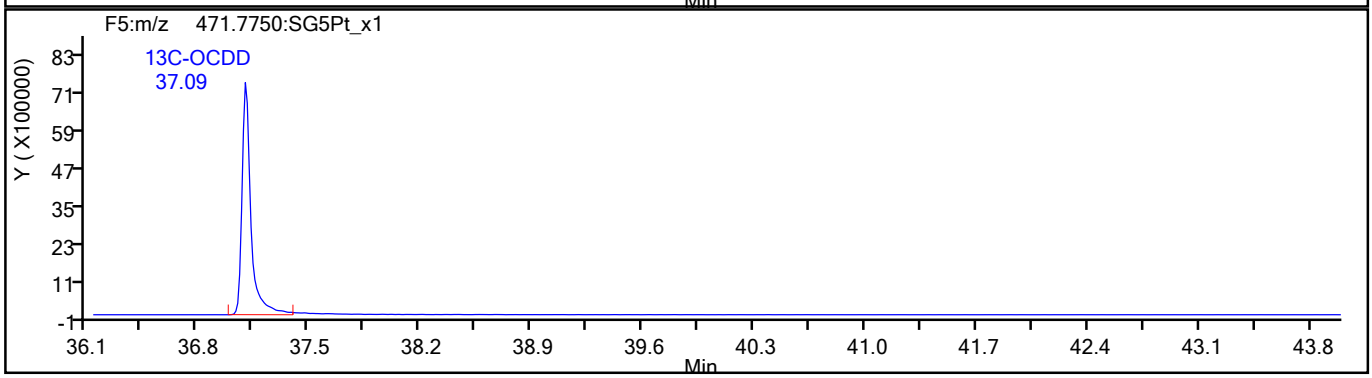

788778

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

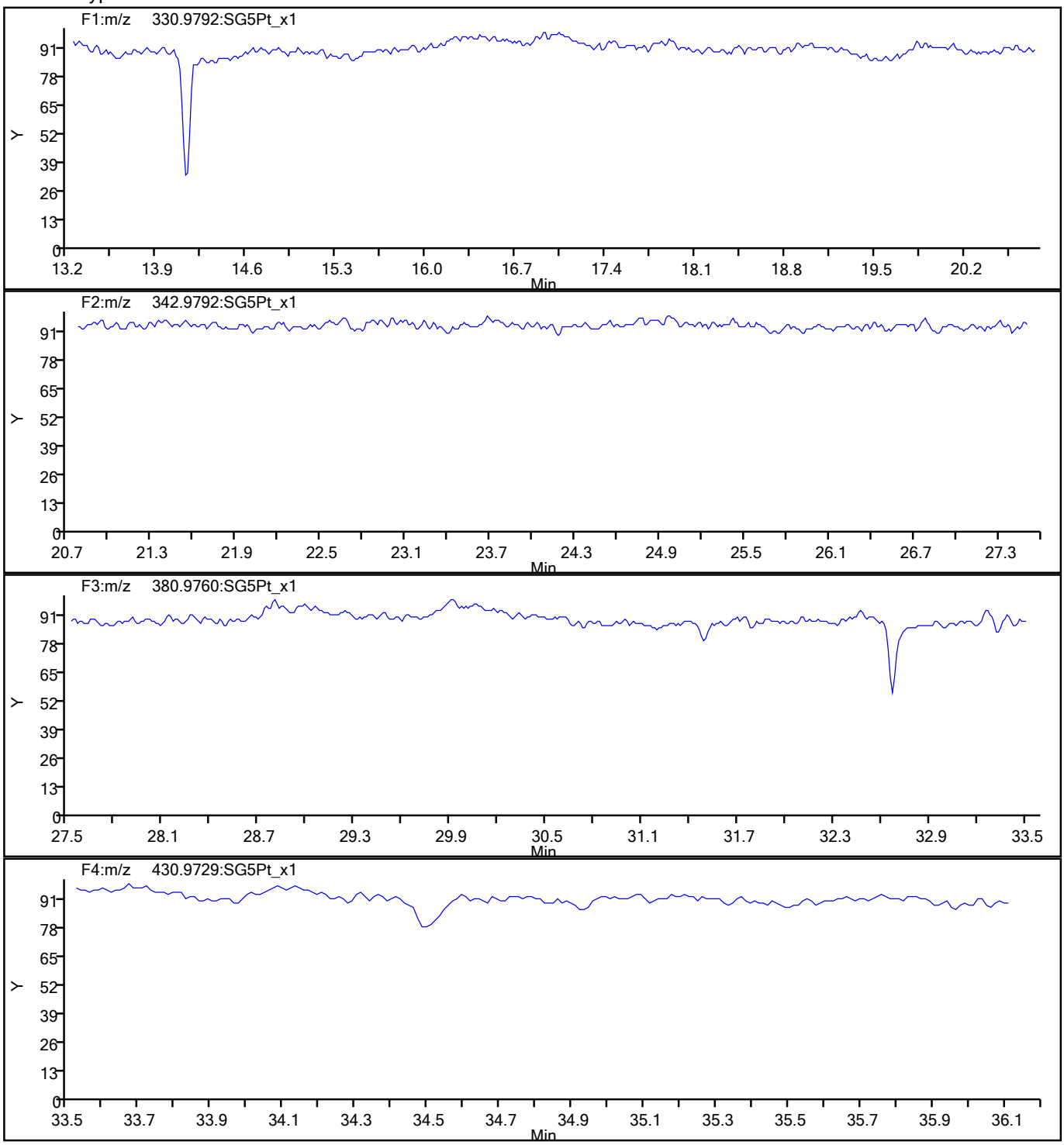

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Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

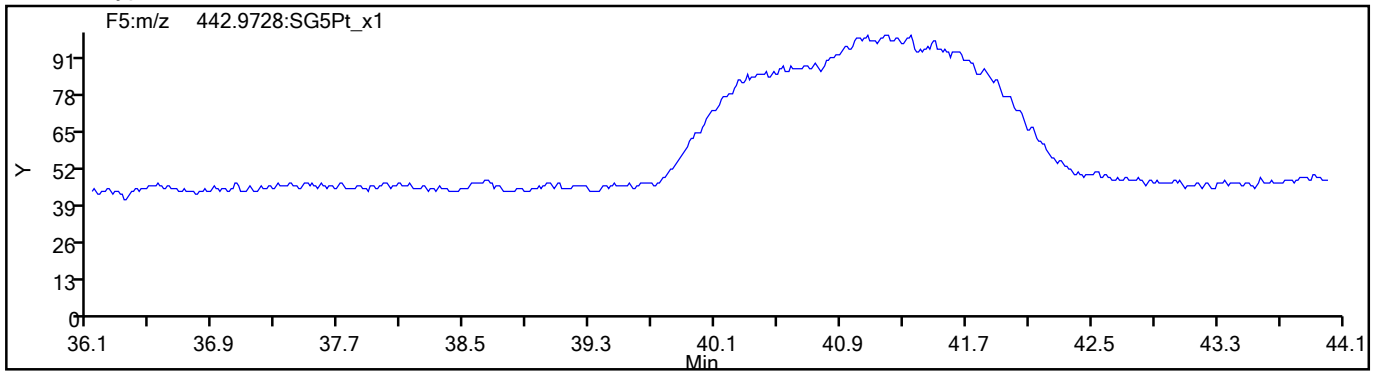

788780

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62046988	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	100332269	0.78	1.6249	99.5	99.5	0.1367	0.1367	99.52	
2,3,7,8-TCDF	17.628	44524782	0.76	1.0239	43.3	43.3	0.0503	0.0503	108	
S Total TCDF					43.3	43.3	0.0503	0.0503		
D 13C-2,3,7,8-TCDD	18.338	55471422	0.81	0.8993	99.4	99.4	0.1780	0.1780	99.41	
$ 37Cl4-2,3,7,8-TCDD	18.354	29474361		1.1071	42.9	42.9	0.0363	0.0363	107	
2,3,7,8-TCDD	18.354	29808948	0.78	1.2541	42.8	42.8	0.0471	0.0471	107	
S Total TCDD					42.8	42.8	0.0471	0.0471		
D 13C-1,2,3,7,8-PeCDF	22.762	75205597	1.60	1.2101	100.2	100.2	0.2087	0.2087	100	
1,2,3,7,8-PeCDF	22.776	171023920	1.60	1.0611	214.3	214.3	0.5904	0.5904	107	
D 13C-2,3,4,7,8-PeCDF	24.126	75259591	1.60	1.2395	97.9	97.9	0.2038	0.2038	97.86	
2,3,4,7,8-PeCDF	24.153	166805723	1.58	1.0184	217.6	217.6	0.6563	0.6563	109	
S Total PeCDF					431.9	431.9	0.6233	0.6233		
D 13C-1,2,3,7,8-PeCDD	24.862	46524396	1.64	0.7612	98.5	98.5	0.1093	0.1093	98.50	
1,2,3,7,8-PeCDD	24.889	105236005	1.57	1.0484	215.7	215.7	0.2317	0.2317	108	
S Total PeCDD					215.7	215.7	0.2317	0.2317		
D 13C-1,2,3,4,7,8-HxCDF	30.835	64951889	0.52	1.0837	95.7	95.7	0.4366	0.4366	95.70	
1,2,3,4,7,8-HxCDF	30.862	155057762	1.22	1.0851	220.0	220.0	1.165	1.165	110	
D 13C-1,2,3,6,7,8-HxCDF	31.008	70459920	0.52	1.1279	99.7	99.7	0.4194	0.4194	99.75	
1,2,3,6,7,8-HxCDF	31.022	168618976	1.23	1.1260	212.5	212.5	1.081	1.081	106	
D 13C-2,3,4,6,7,8-HxCDF	31.754	66145684	0.53	1.0637	99.3	99.3	0.4448	0.4448	99.29	
2,3,4,6,7,8-HxCDF	31.780	164241378	1.21	1.1675	212.7	212.7	0.8912	0.8912	106	
D 13C-1,2,3,7,8,9-HxCDF	32.526	59636084	0.52	0.9676	98.4	98.4	0.4890	0.4890	98.41	
1,2,3,7,8,9-HxCDF	32.539	148834491	1.23	1.1664	214.0	214.0	0.9364	0.9364	107	
S Total HxCDF					859.2	859.2	1.018	1.018		
* 13C-1,2,3,7,8,9-HxCDD	32.339	62627787	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44144841	1.25	0.7334	96.1	96.1	0.3745	0.3745	96.11	
1,2,3,4,7,8-HxCDD	31.953	103044220	1.27	1.0640	219.4	219.4	0.6488	0.6488	110	
D 13C-1,2,3,6,7,8-HxCDD	32.033	54392394	1.25	0.8802	98.7	98.7	0.3120	0.3120	98.67	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	118900298	1.28	1.0001	218.6	218.6	0.5965	0.5965	109	
1,2,3,7,8,9-HxCDD	32.353	122394998	1.26	1.1325	219.4	219.4	0.5651	0.5651	110	
S Total HxCDD					657.3	657.3	0.6034	0.6034		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	47752972	0.44	0.7730	98.6	98.6	1.001	1.001	98.64	
1,2,3,4,6,7,8-HpCDF	33.924	147892240	1.06	1.4413	214.9	214.9	2.024	2.024	107	
D 13C-1,2,3,4,7,8,9-HpCDF	35.017	42687625	0.44	0.7008	97.3	97.3	1.104	1.104	97.26	
1,2,3,4,7,8,9-HpCDF	35.017	123968724	1.06	1.3174	220.4	220.4	2.743	2.743	110	
S Total HpCDF					435.3	435.3	2.383	2.383		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	40442950	1.02	0.6472	99.8	99.8	0.5241	0.5241	99.77	
1,2,3,4,6,7,8-HpCDD	34.726	94435922	1.04	1.0943	213.4	213.4	0.9683	0.9683	107	
S Total HpCDD					213.4	213.4	0.9683	0.9683		
D 13C-OCDD	37.093	57303880	0.88	0.4472	204.6	204.6	0.2753	0.2753	102	
OCDF	37.201	181747068	0.91	1.4382	441.1	441.1	0.4159	0.4159	110	
OCDD	37.105	135570174	0.90	1.1070	427.4	427.4	0.4029	0.4029	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		27754917	7076779	4201	10502	1685		
333.9339	18.142	18.142	0		34292071	8691565	5896	14740	1474	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	43967601	10754823	8470	21175	1270		
317.9389	17.613	17.616	0	0.971	56364668	13840834	5538	13845	2499	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	19278962	4714580	2218	5545	2126		
305.8987	17.628	17.631	0	1.001	25245820	6261705	2854	7135	2194	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24807018	5848000	4201	10502	1392		
333.9339	18.338	18.338	0	1.011	30664404	7186127	5896	14740	1219	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	29474361	7040079	2537	6342	2775		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	13088265	3099418	1571	3927	1973		
321.8936	18.354	18.357	0	1.001	16720683	3961925	1508	3770	2627	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46265218	8069932	9479	23697	851		
353.8970	22.749	22.754	0	1.254	28940379	5072009	6452	16130	786	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	105236981	18677381	20013	50032	933		
341.8567	22.776	22.779	0	1.001	65786939	11693027	12919	32297	905	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46298187	7561650	9479	23697	798		
353.8970	24.126	24.129	0	1.330	28961404	4756017	6452	16130	737	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	102234081	17002363	20013	50032	850		
341.8567	24.153	24.156	0	1.001	64571642	10773383	12919	32297	834	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28884955	4397104	3175	7937	1385		
369.8919	24.862	24.865	0	1.370	17639441	2717935	2071	5177	1312	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	64347111	9837651	3945	9862	2494		
357.8516	24.889	24.892	0	1.001	40888894	6265054	2969	7422	2110	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	22237957	4900100	10775	26937	455		
385.8610	30.835	30.838	0	0.953	42713932	9213265	21190	52975	435	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	85201859	18424877	39257	98142	469		
375.8178	30.849	30.857	0	1.000	69855903	15011303	32096	80240	468	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	23996455	5001651	10775	26937	464		
385.8610	31.008	31.003	0	0.959	46463465	9659865	21190	52975	456	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	92842545	20075526	39257	98142	511		
375.8178	31.022	31.022	0	1.000	75776431	16178695	32096	80240	504	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	22792396	5861290	10775	26937	544		
385.8610	31.754	31.756	0	0.982	43353288	11282982	21190	52975	532	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.780	31.772	0	1.001	89865159	23412461	39257	98142	596		
375.8178	31.767	31.772	0	1.000	74376219	19191516	32096	80240	598	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20506438	5659225	10775	26937	525		
385.8610	32.526	32.523	0	1.006	39129646	10674002	21190	52975	504	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	82057134	22664755	39257	98142	577		
375.8178	32.539	32.534	0	1.000	66777357	17875439	32096	80240	557	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		34509982	9306847	9505	23762	979		
403.8529	32.339	32.342	0		28117805	7584182	9052	22630	838	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	24560847	6976899	9505	23762	734		
403.8529	31.927	31.929	0	0.987	19583994	5667072	9052	22630	626	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.953	31.945	0	1.001	57595942	16510469	19316	48290	855		
391.8127	31.940	31.945	0	1.000	45448278	13107381	15598	38995	840	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	30198617	8138784	9505	23762	856		
403.8529	32.033	32.033	0	0.991	24193777	6493948	9052	22630	717	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	66690137	17959920	19316	48290	930		
391.8127	32.047	32.047	0	1.000	52210161	14135061	15598	38995	906	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	68169382	18483699	19316	48290	957		
391.8127	32.353	32.355	0	1.013	54225616	14872863	15598	38995	954	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14610497	4589210	16388	40970	280		
419.8220	33.912	33.914	0	1.049	33142475	10497182	35883	89707	293	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	75936953	24520194	90693	226732	270		
409.7789	33.924	33.926	0	1.000	71955287	23549459	85368	213420	276	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.017	35.010	0	1.083	12971814	3739945	16388	40970	228		
419.8220	35.017	35.010	0	1.083	29715811	8442322	35883	89707	235	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	63647403	18553677	90693	226732	205		
409.7789	35.017	35.020	0	1.000	60321321	17850429	85368	213420	209	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	20381379	6053926	11567	28917	523		
437.8140	34.714	34.716	0	1.073	20061571	5957434	11351	28377	525	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	48165795	14539111	26079	65197	558		
425.7737	34.726	34.726	0	1.000	46270127	14041663	24831	62077	565	1.04(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26901378	6693523	3896	9740	1718		
471.7750	37.093	37.094	0	1.147	30402502	7661603	4420	11050	1733	0.88(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	86562223	22814939	9244	23110	2468		
443.7399	37.201	37.199	0	1.003	95184845	24785143	7929	19822	3126	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	64116469	16176091	6061	15152	2669		
459.7348	37.105	37.106	0	1.000	71453705	17977820	6746	16865	2665	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

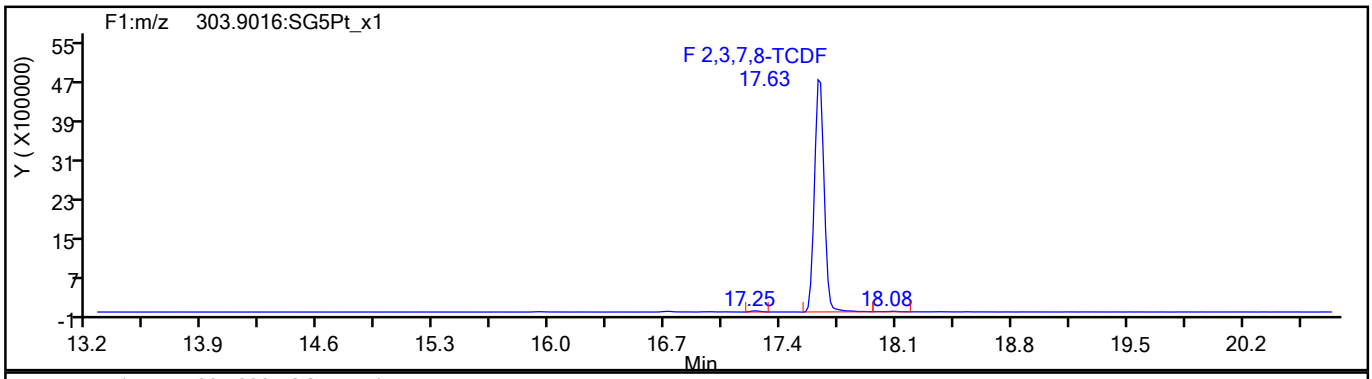

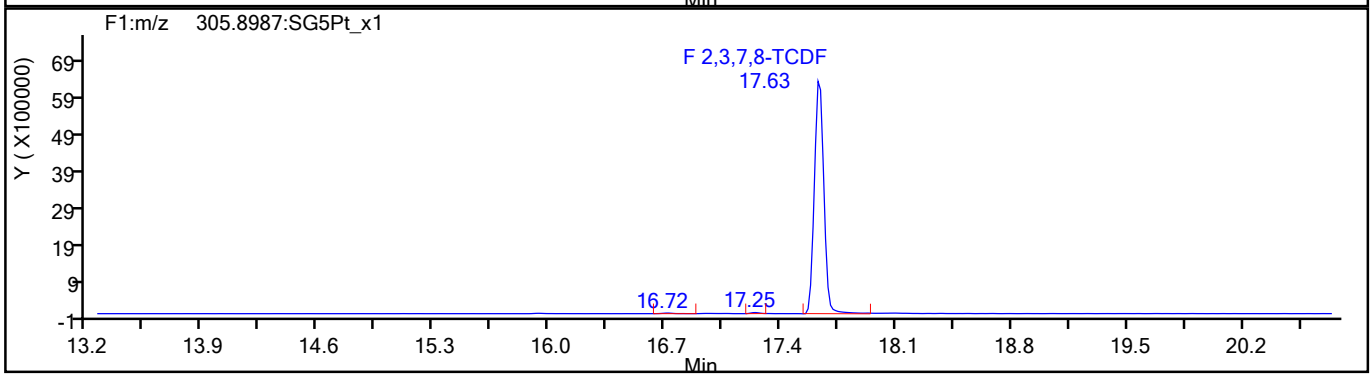

TCDF Standards

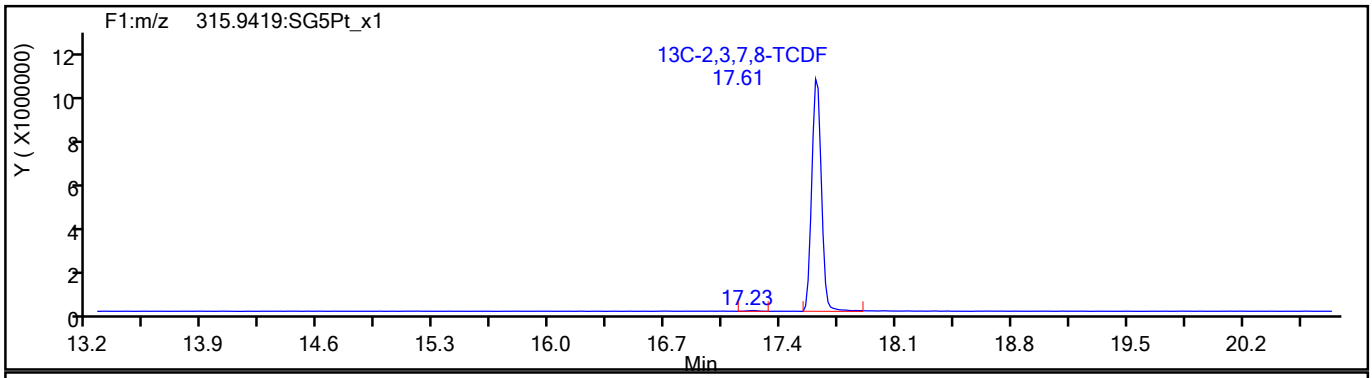

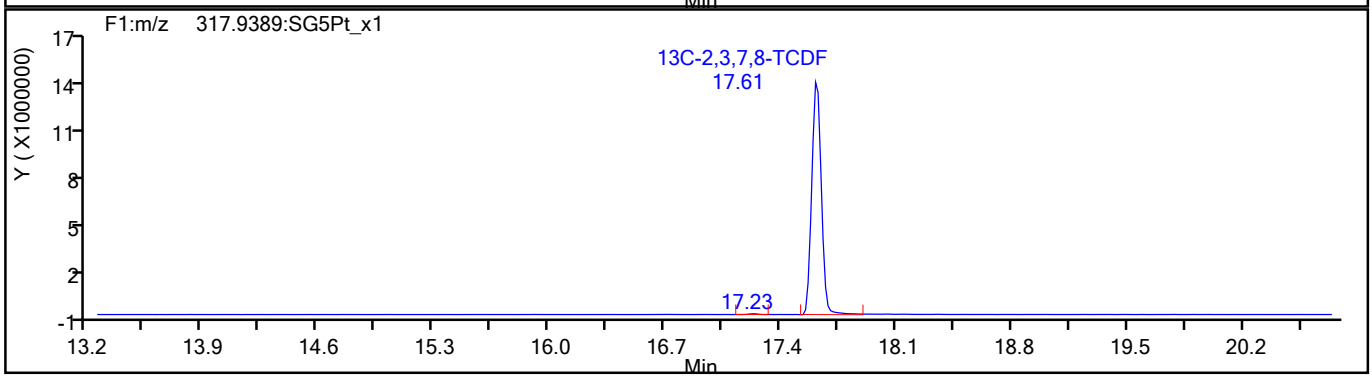

788786

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

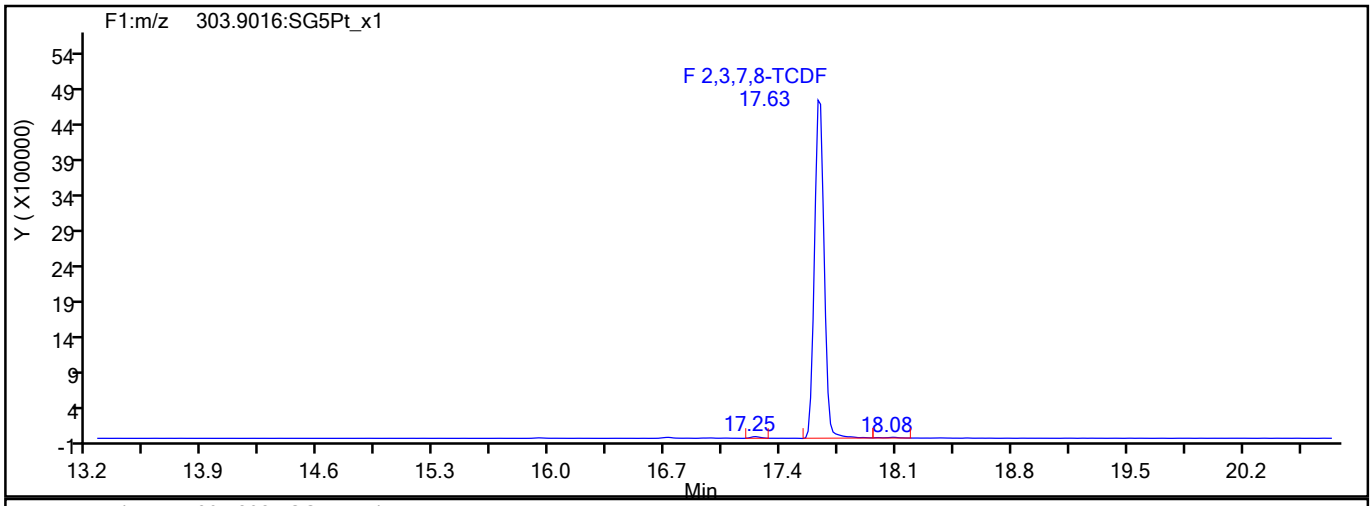

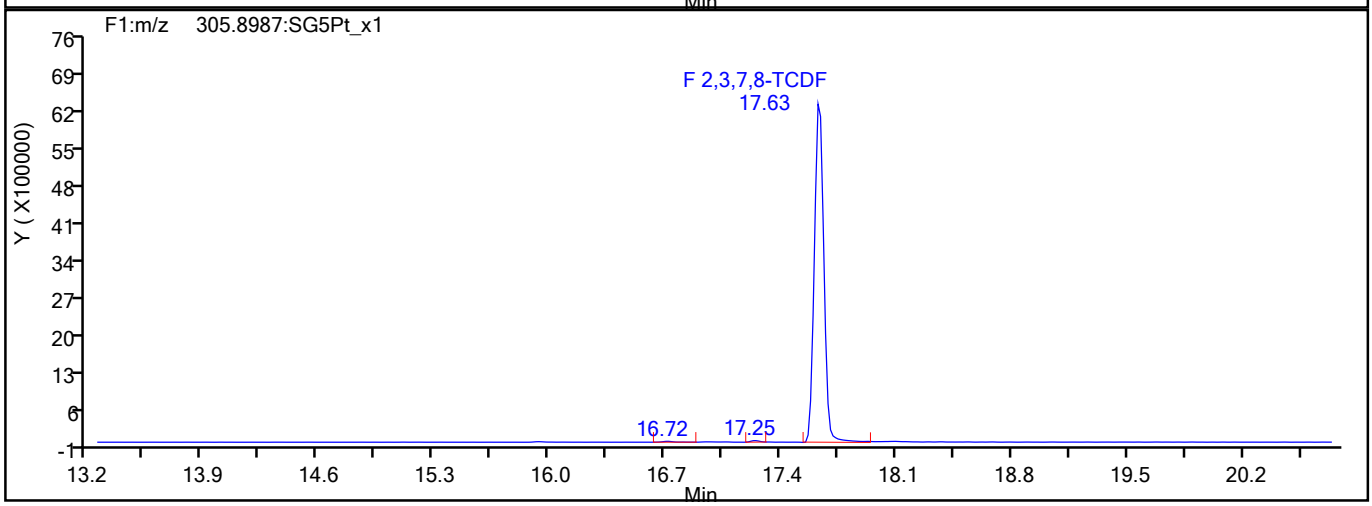

TCDF Interference Mass

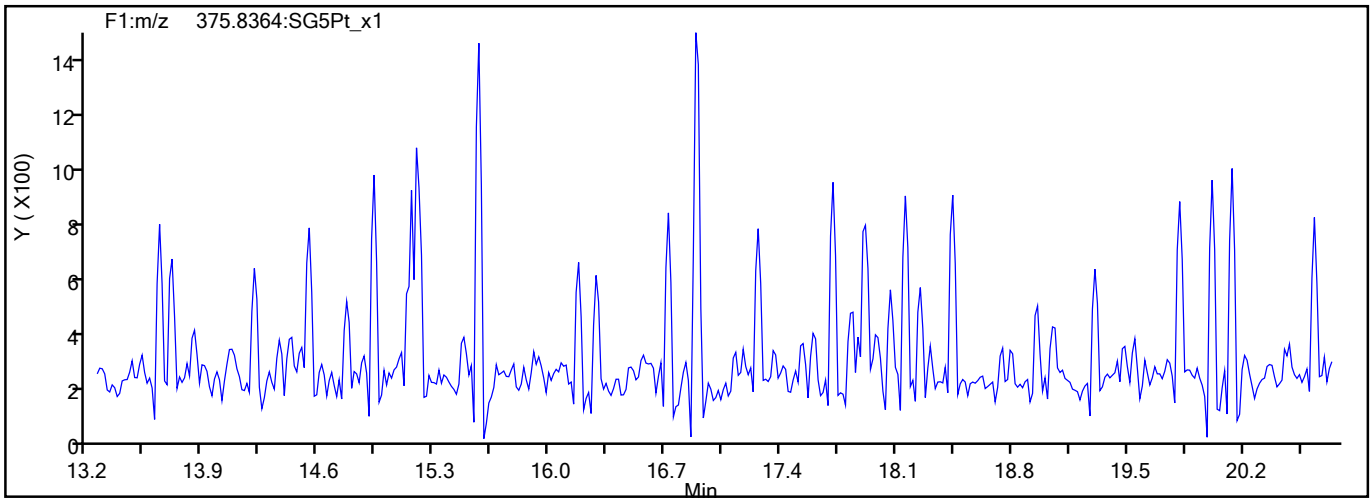

788787

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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TCDD

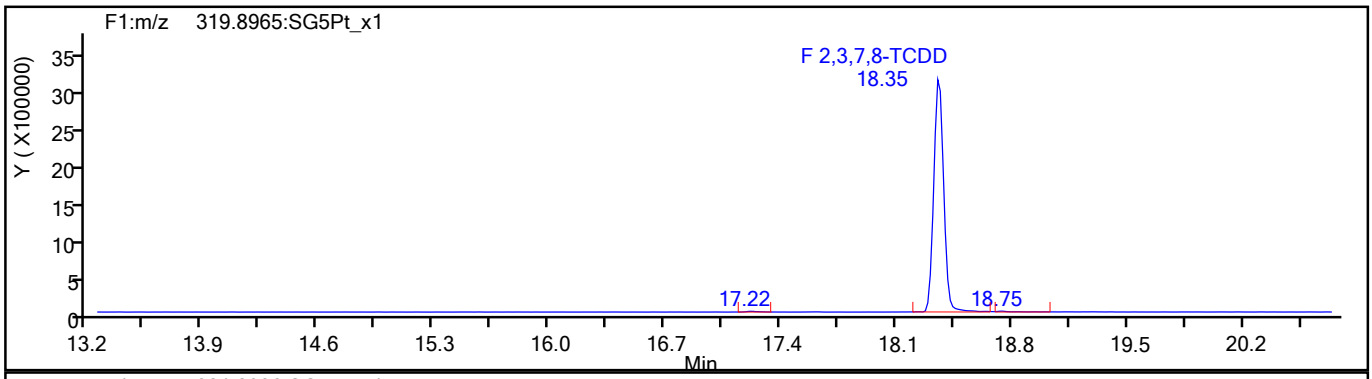

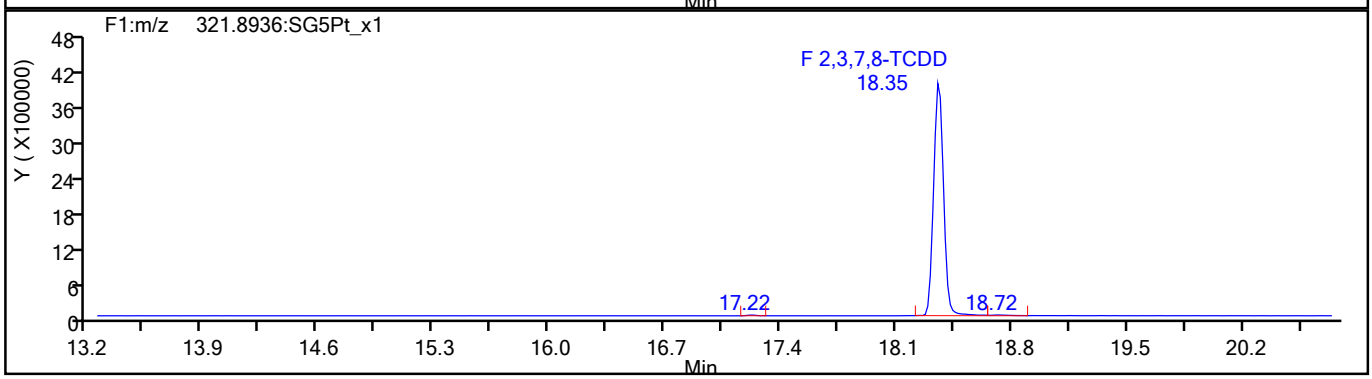

TCDD Standards

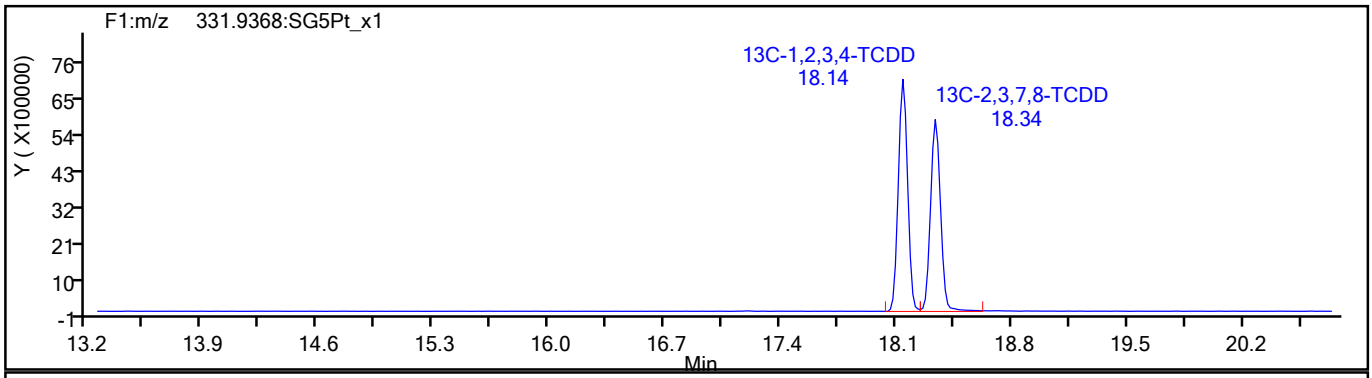

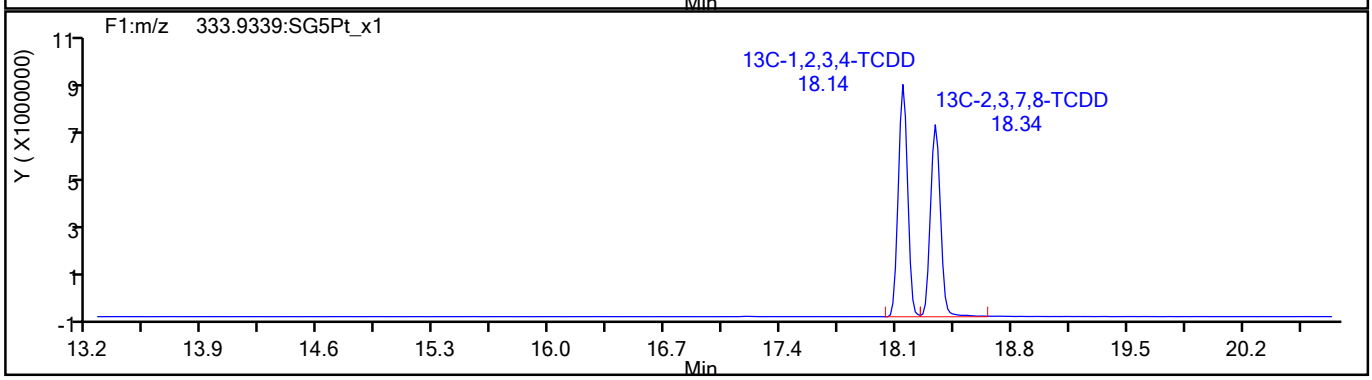

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Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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37Cl4-TCDD

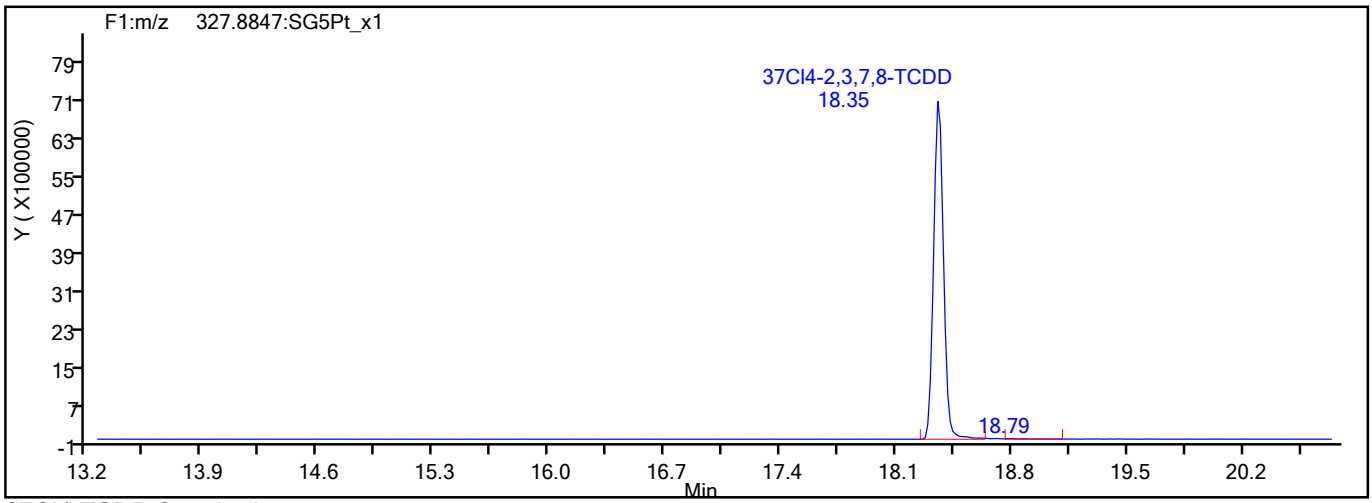

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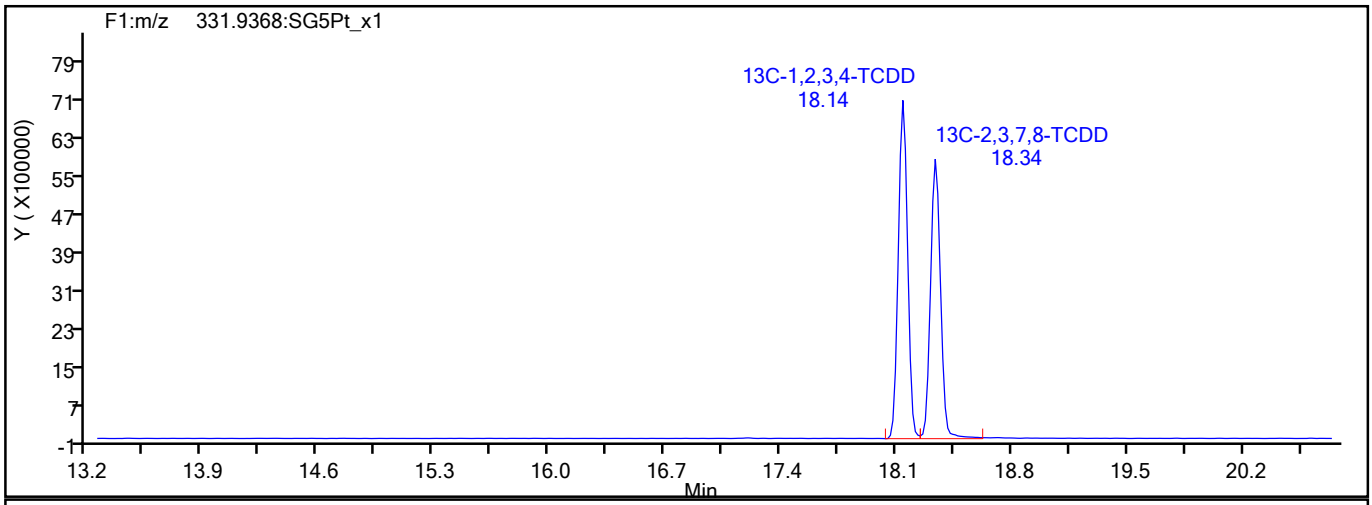

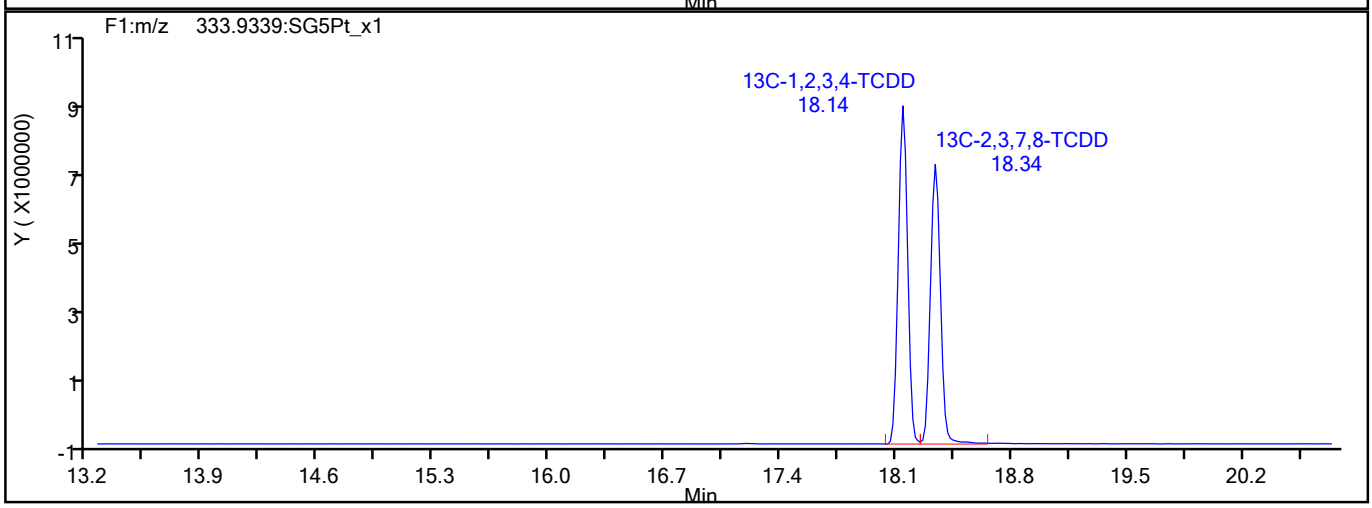

788789

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

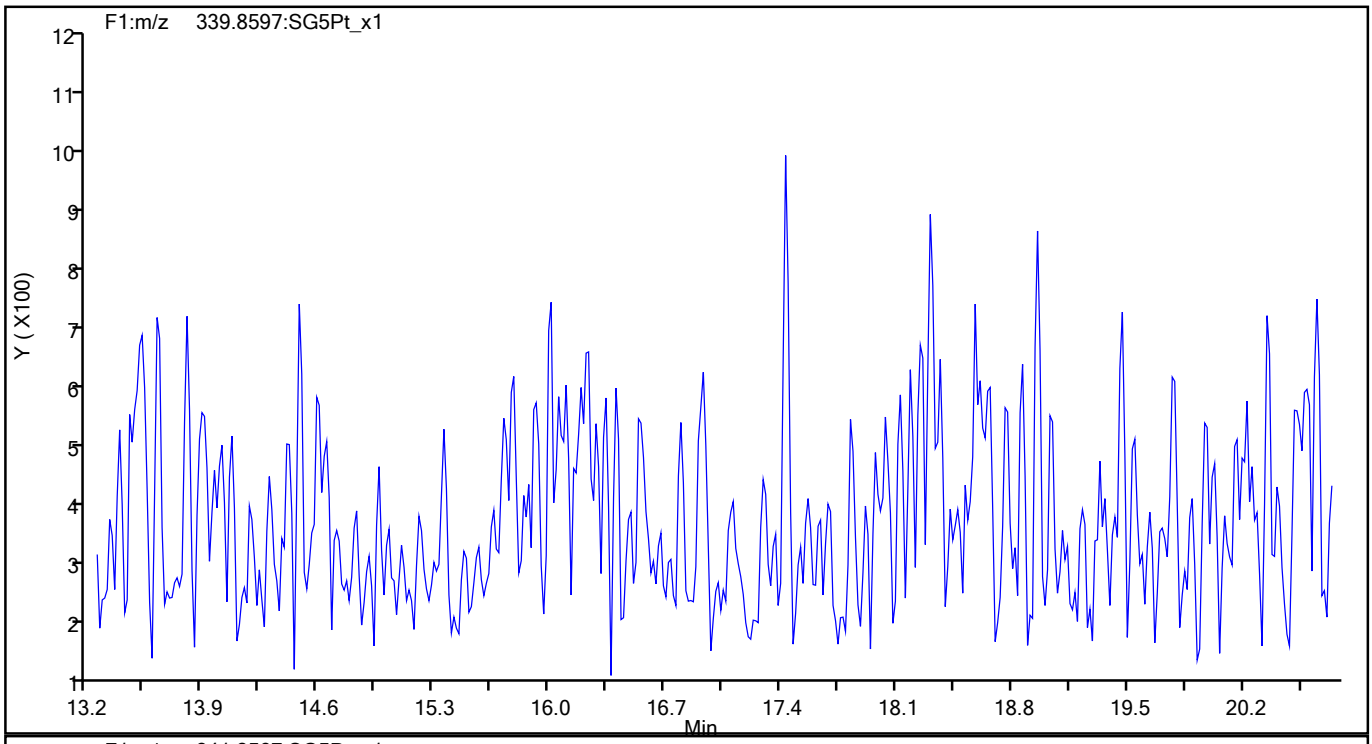

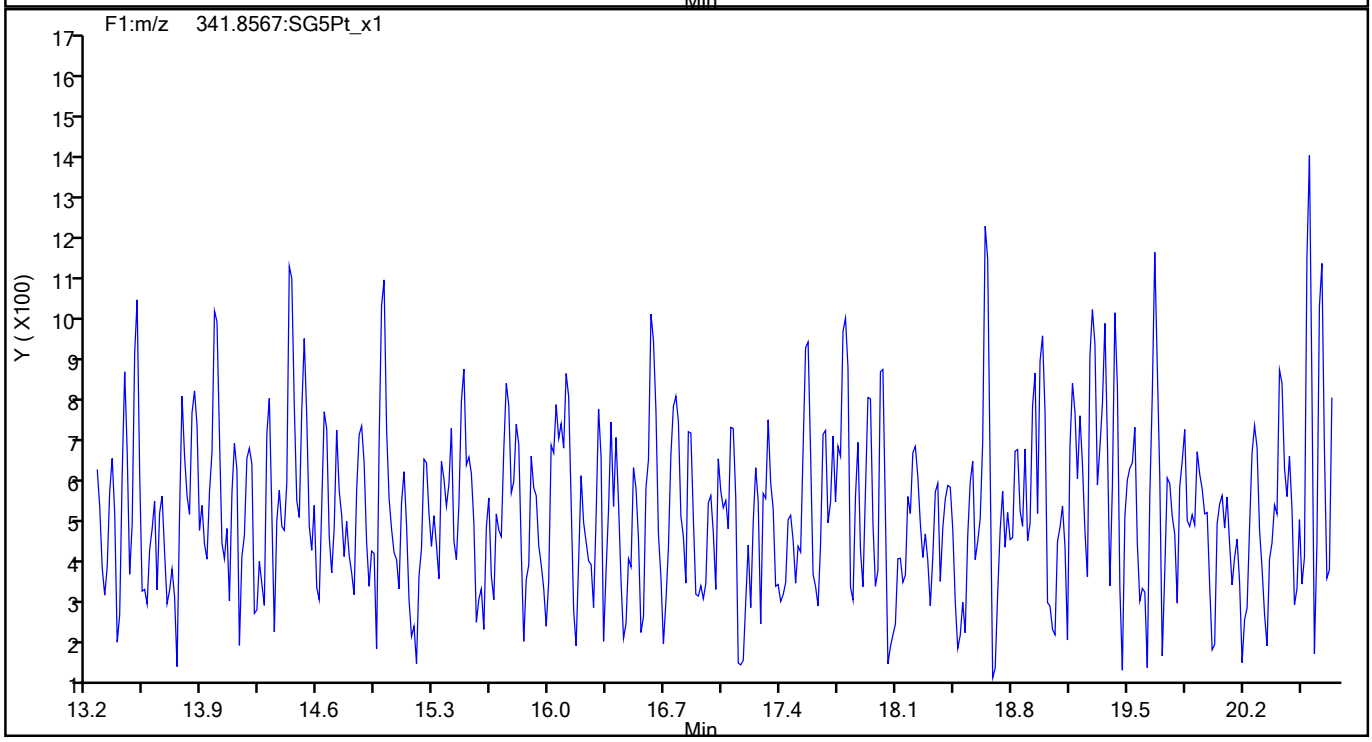

788790

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Eurofins TestAmerica, Sacramento

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F1 PeCDFs

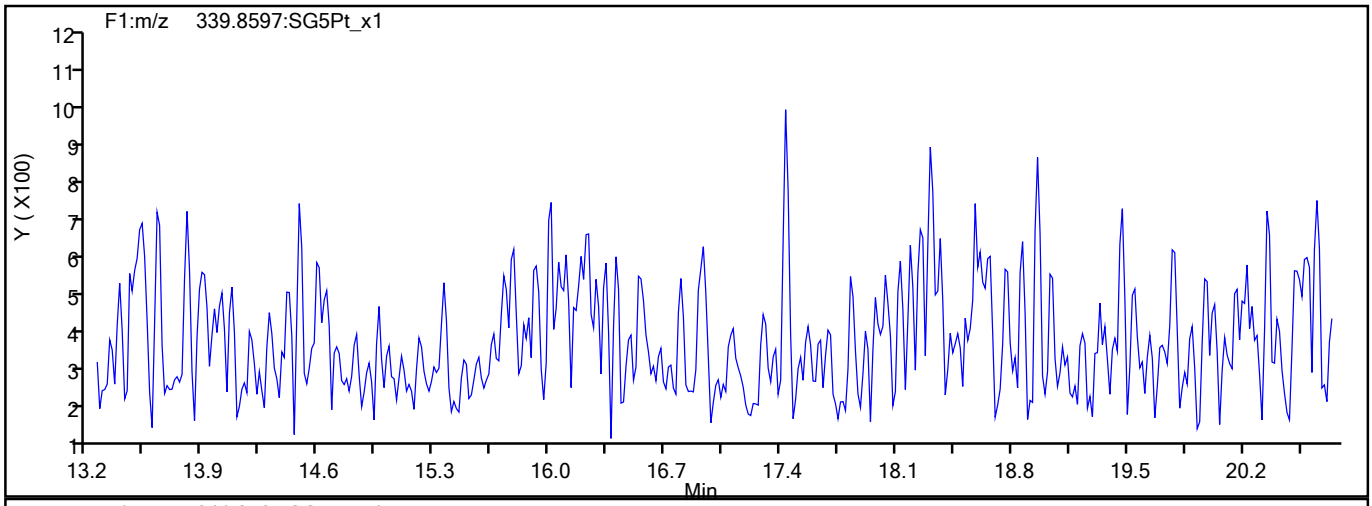

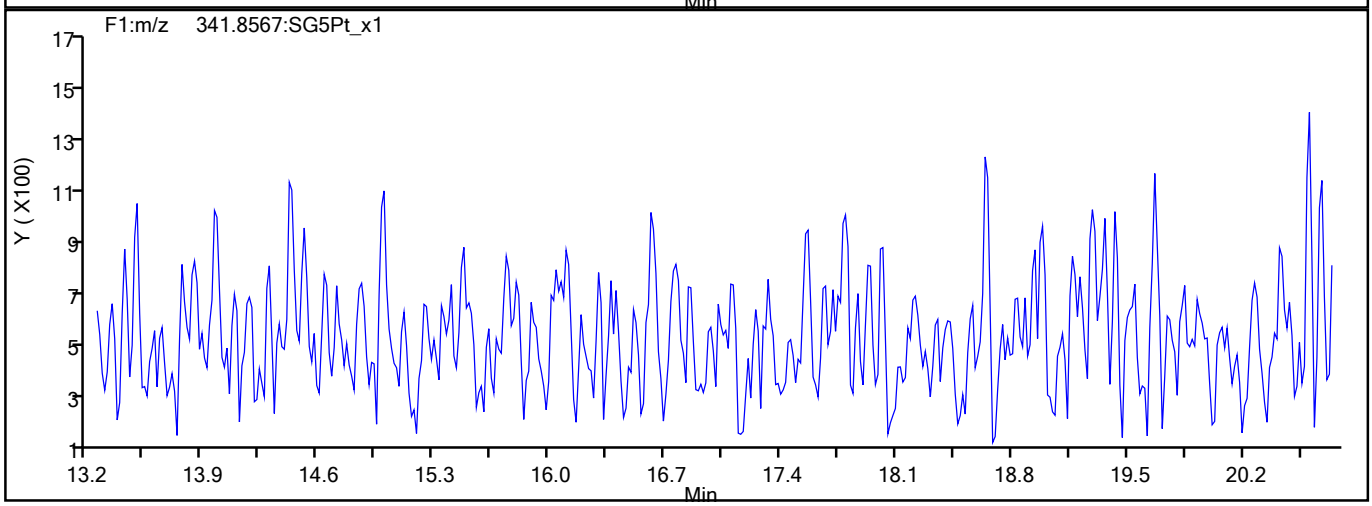

F1 PeCDFs Interference Mass

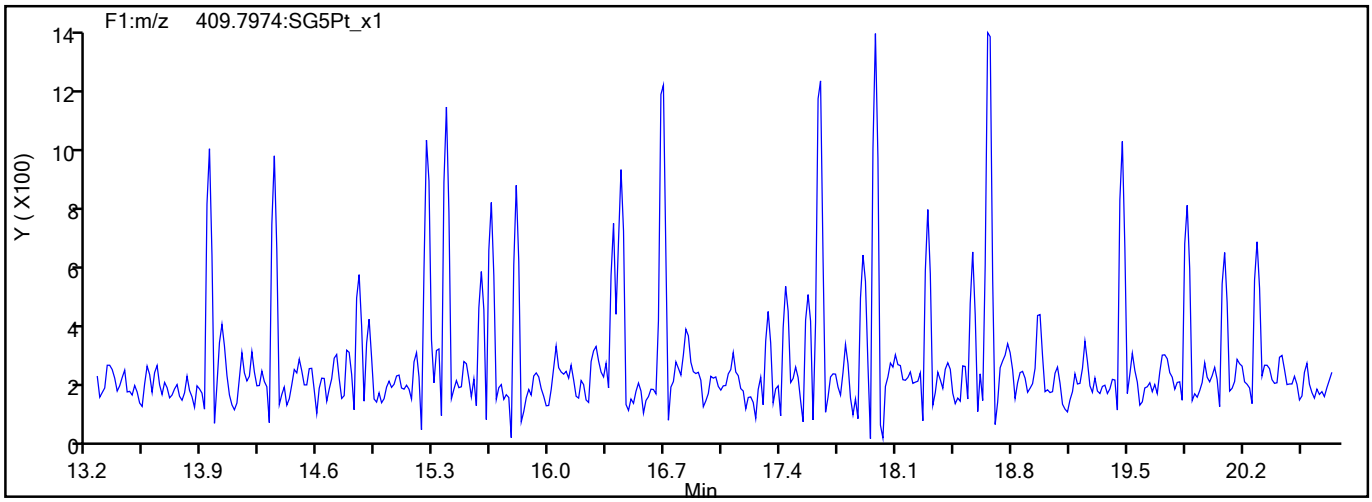

788791

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

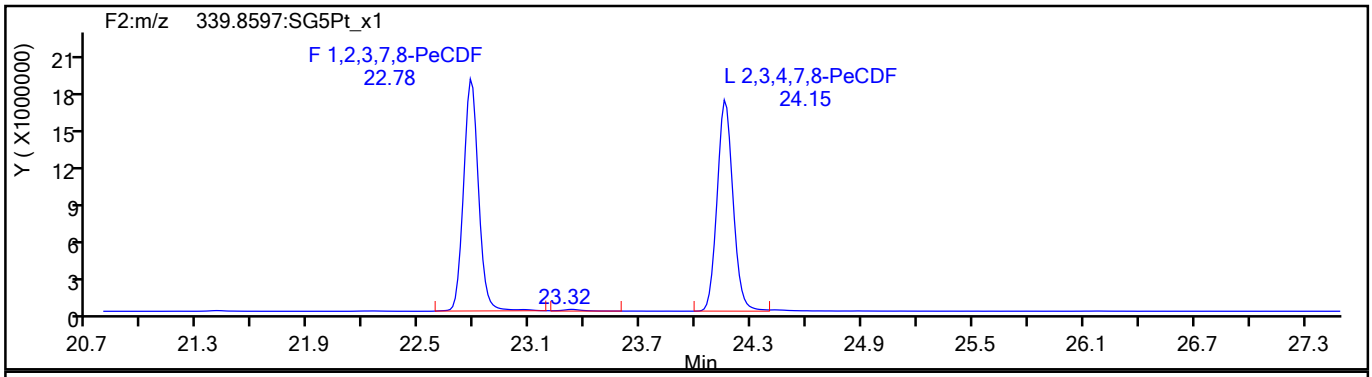

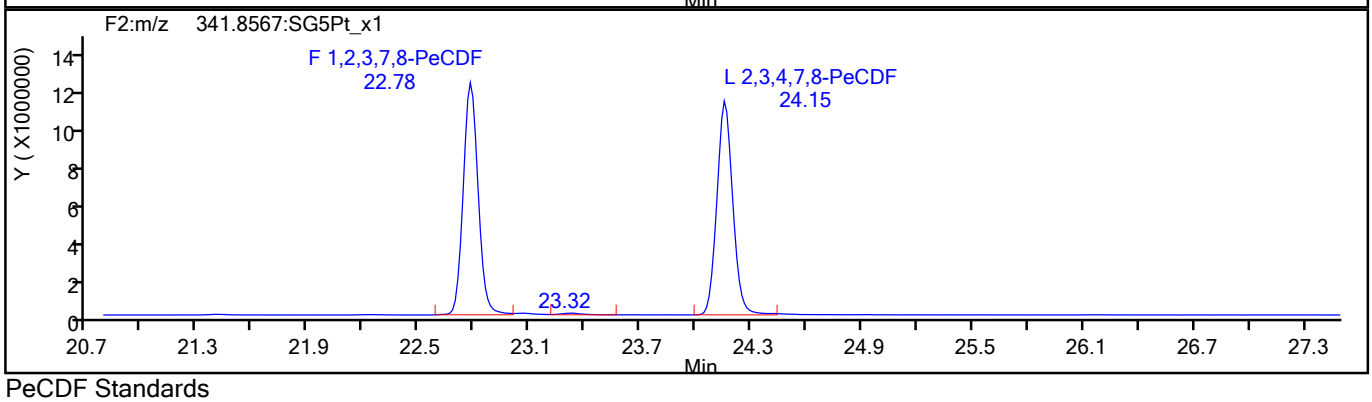

PeCDF Standards

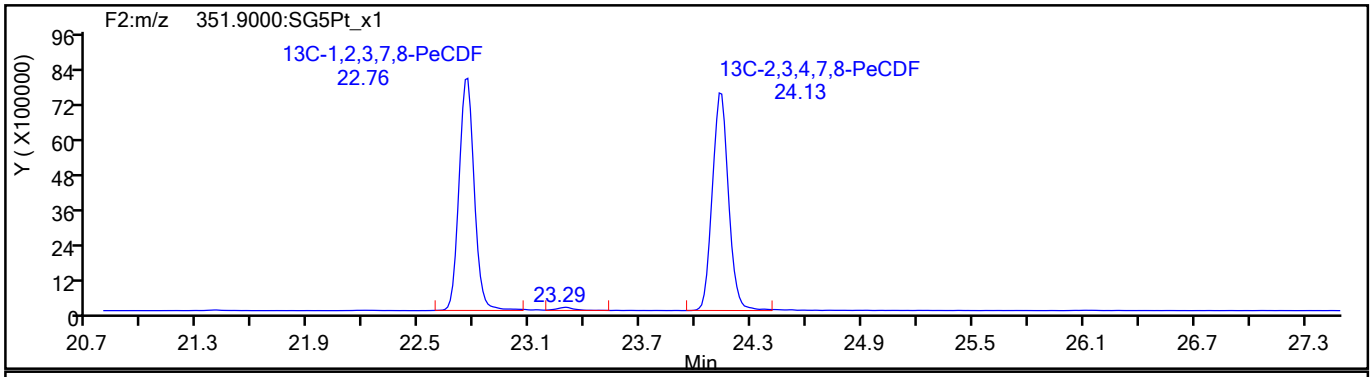

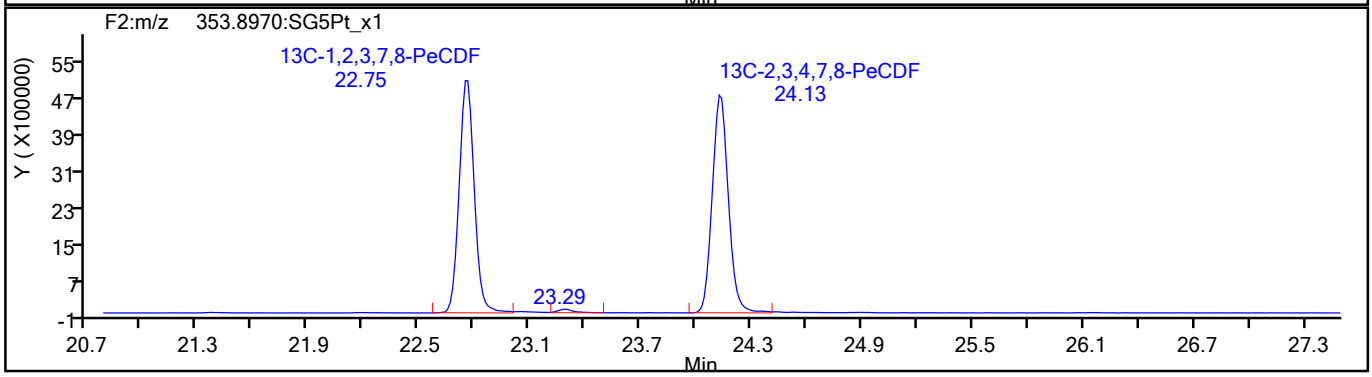

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Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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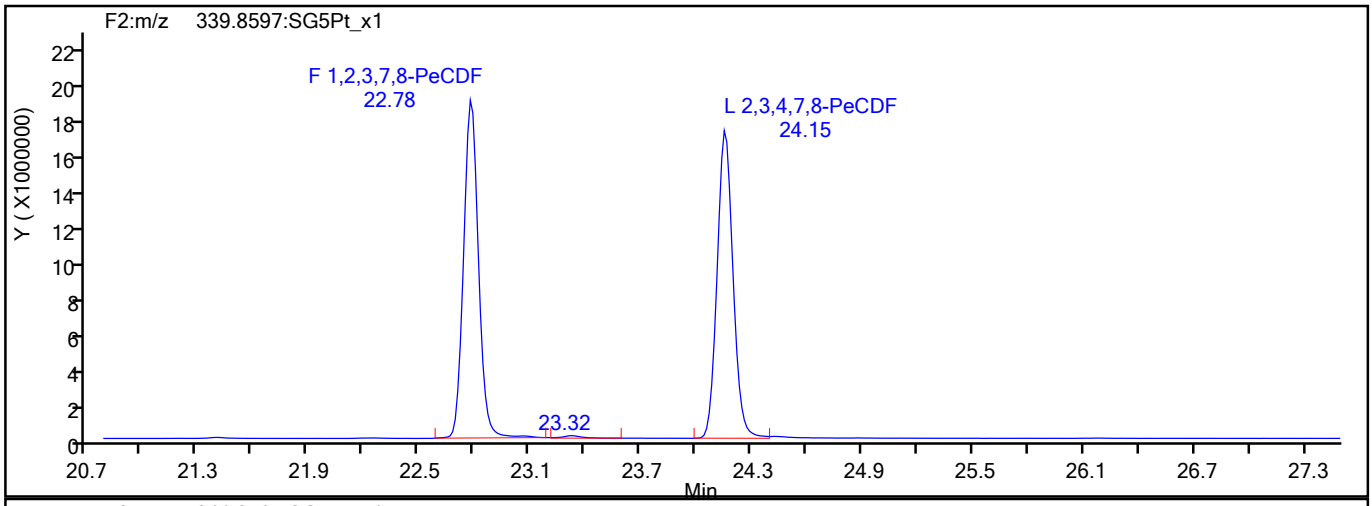

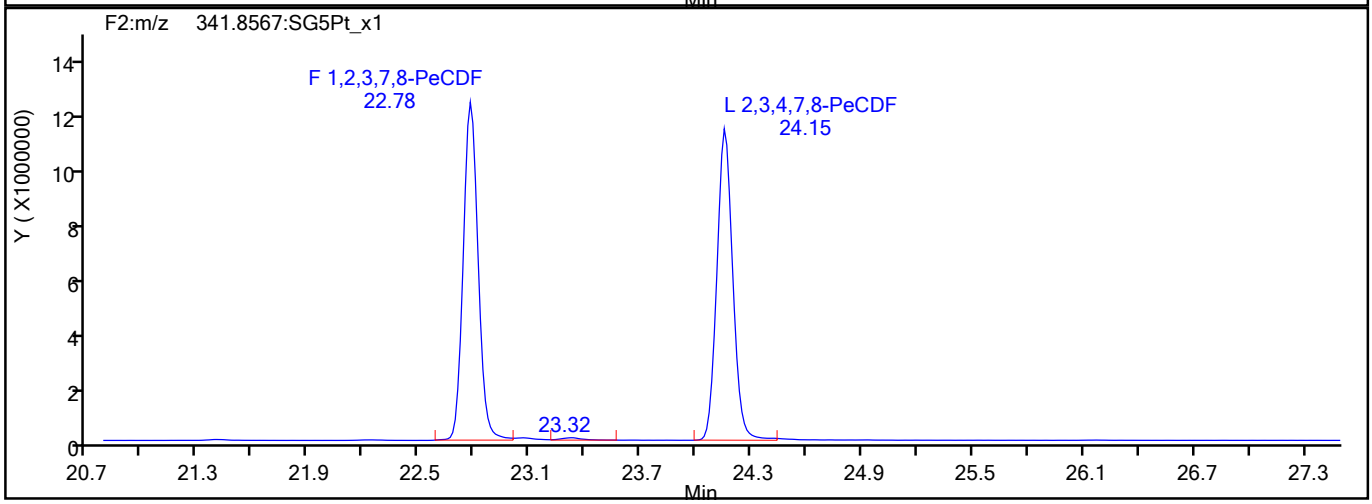

PeCDF Interference Mass

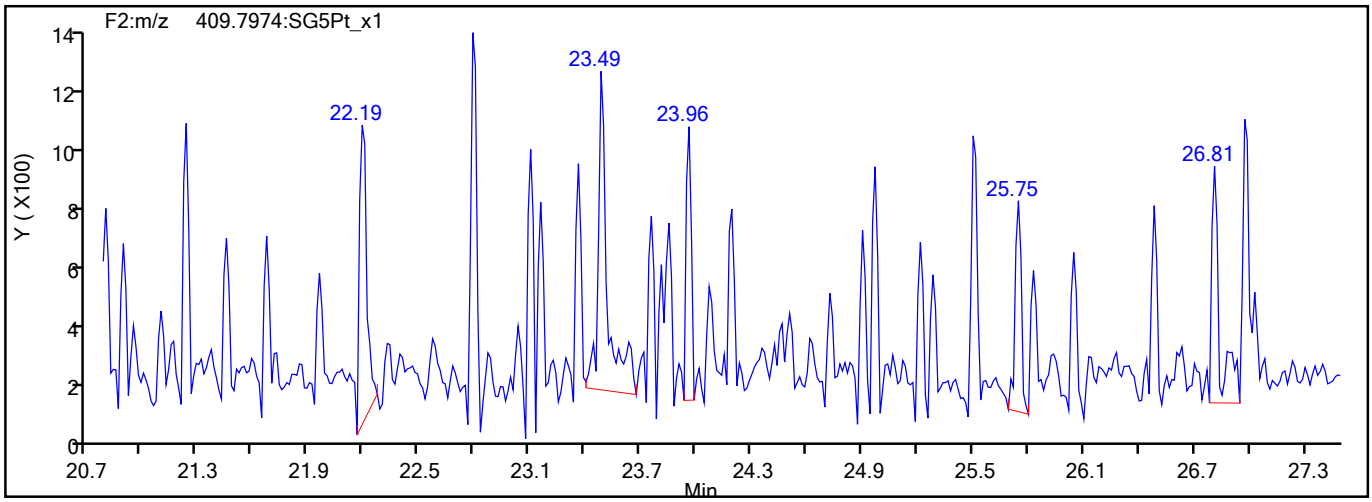

788793

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

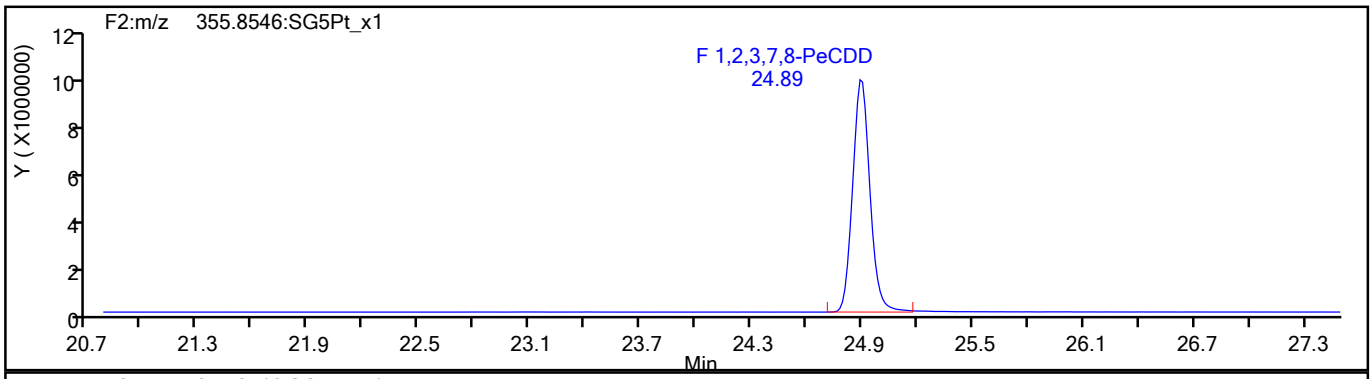

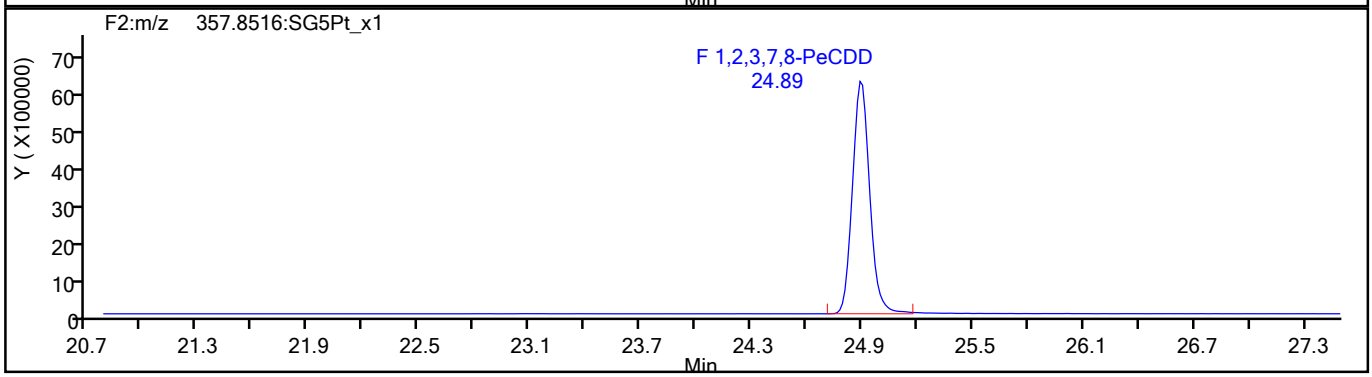

PeCDD Standards

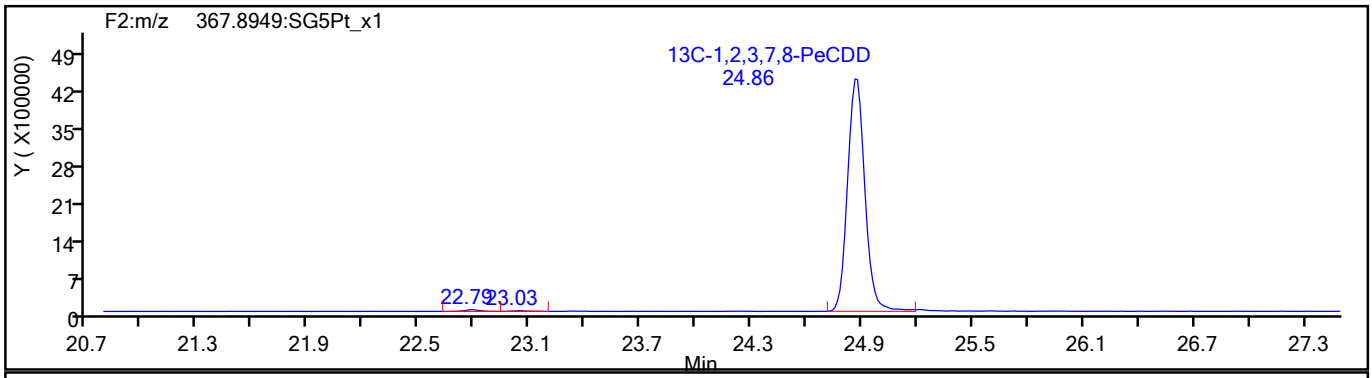

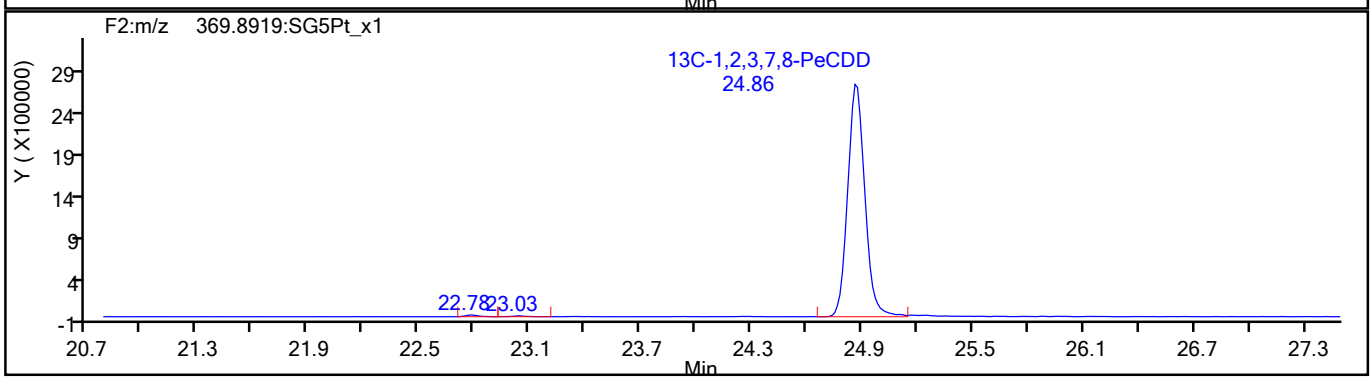

788794

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Eurofins TestAmerica, Sacramento

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HxCDF

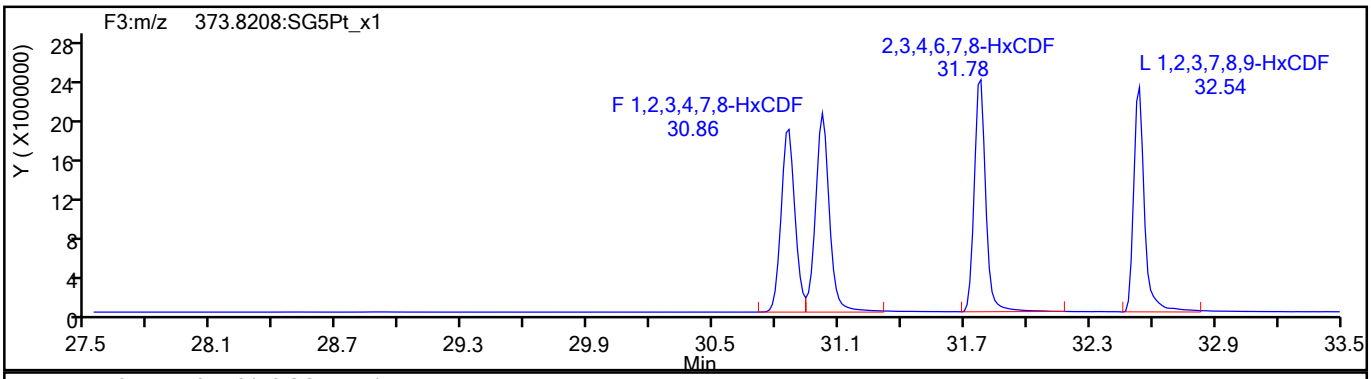

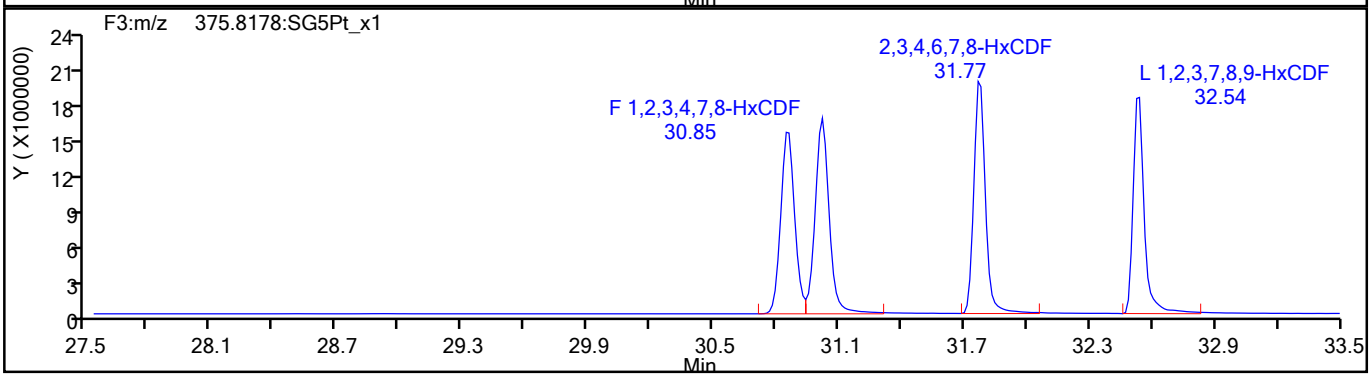

HxCDF Standards

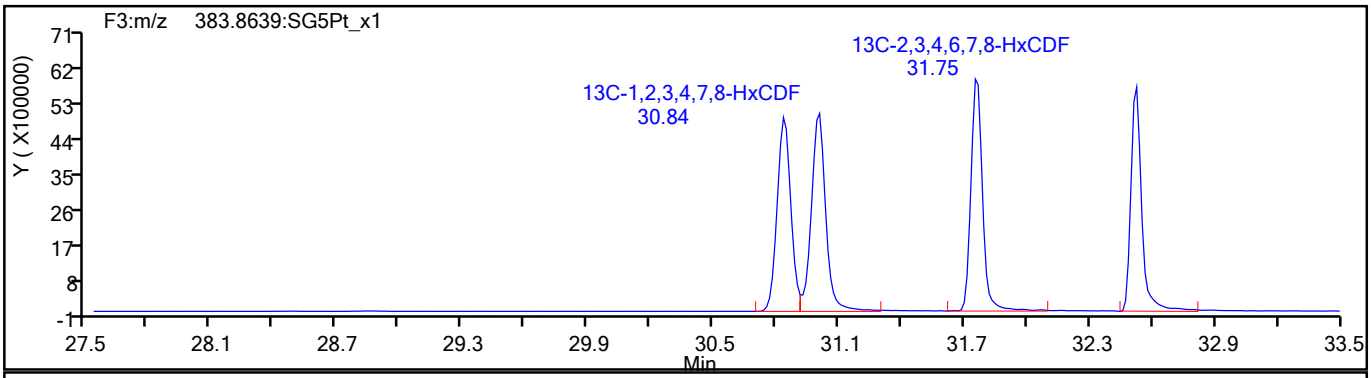

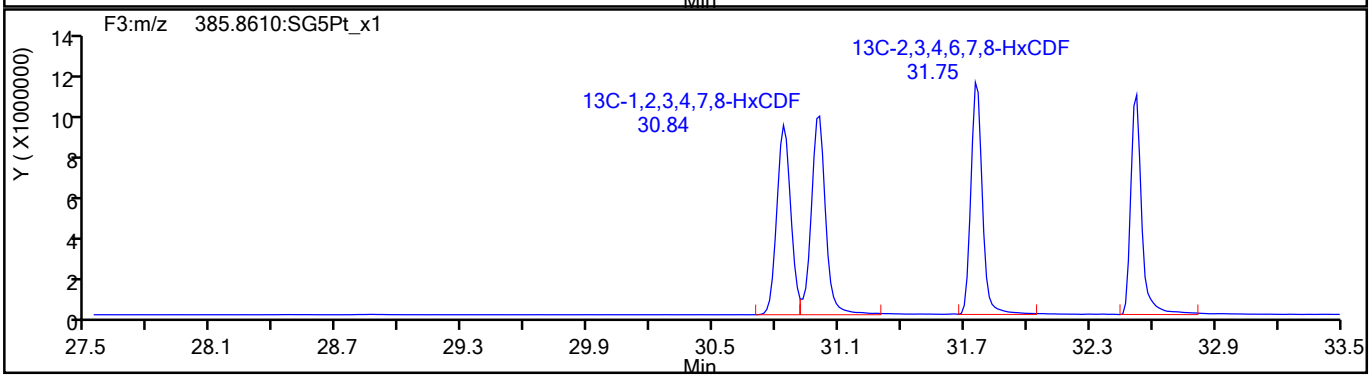

788795

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Eurofins TestAmerica, Sacramento

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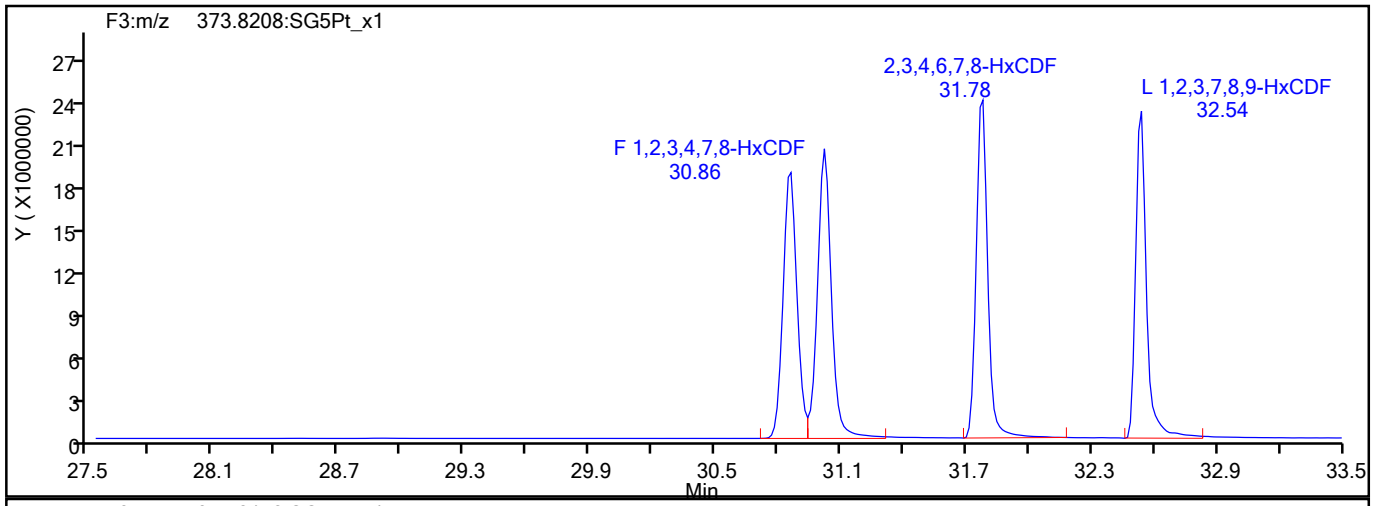

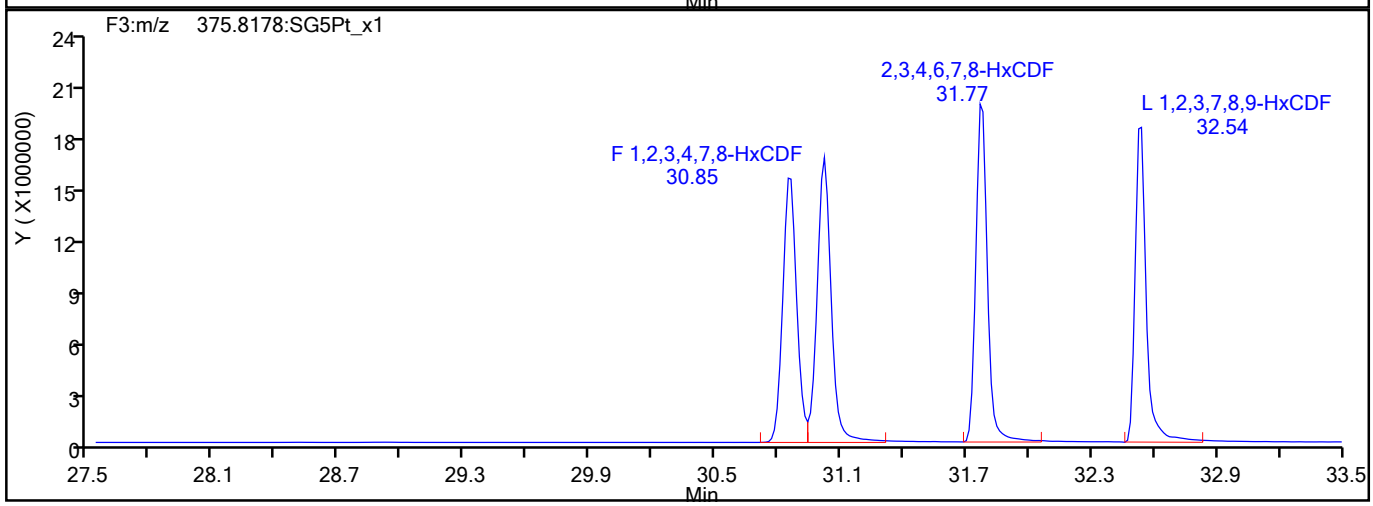

HxCDF Interference Mass

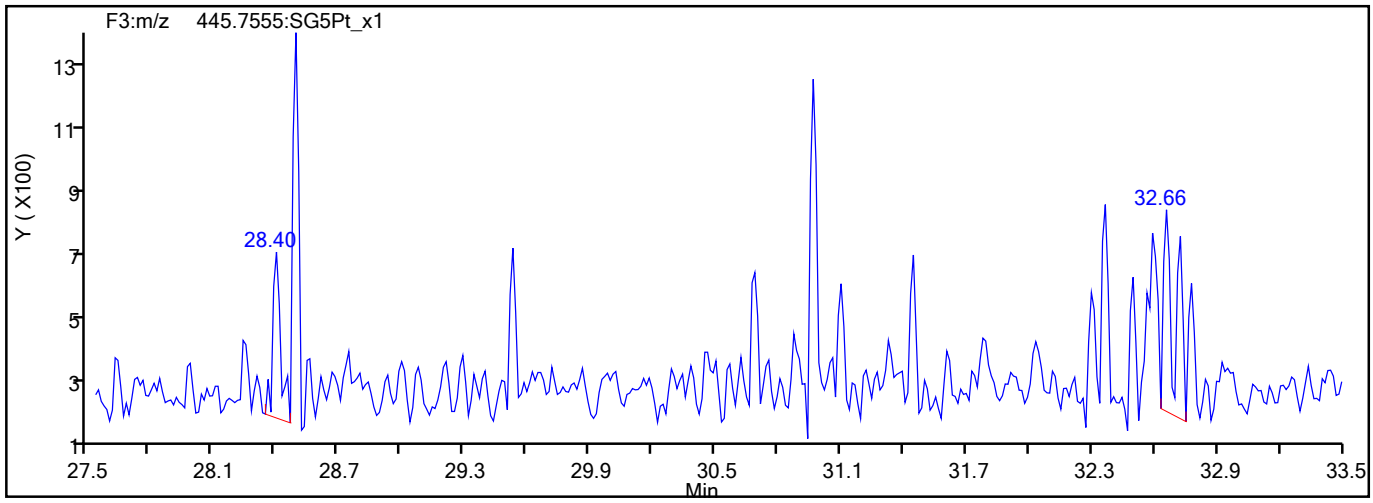

788796

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Eurofins TestAmerica, Sacramento

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HxCDD

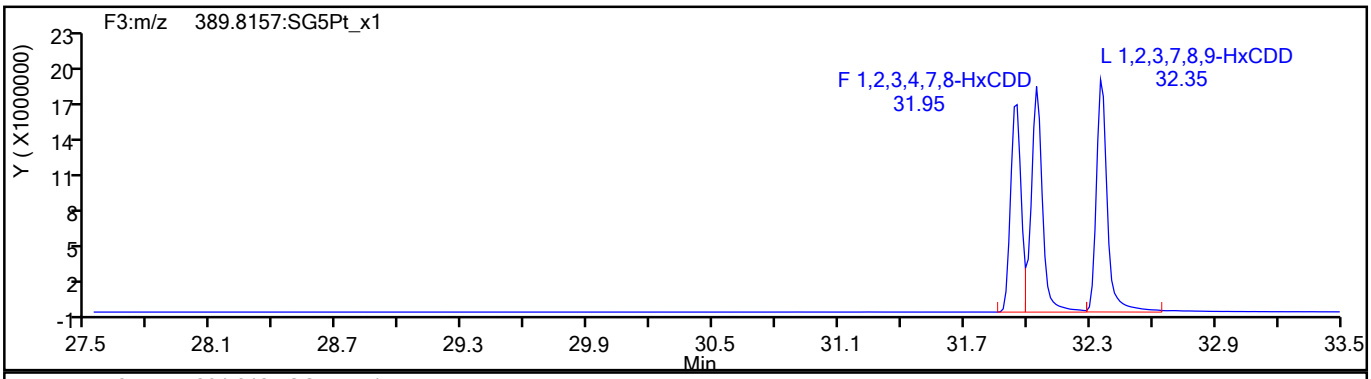

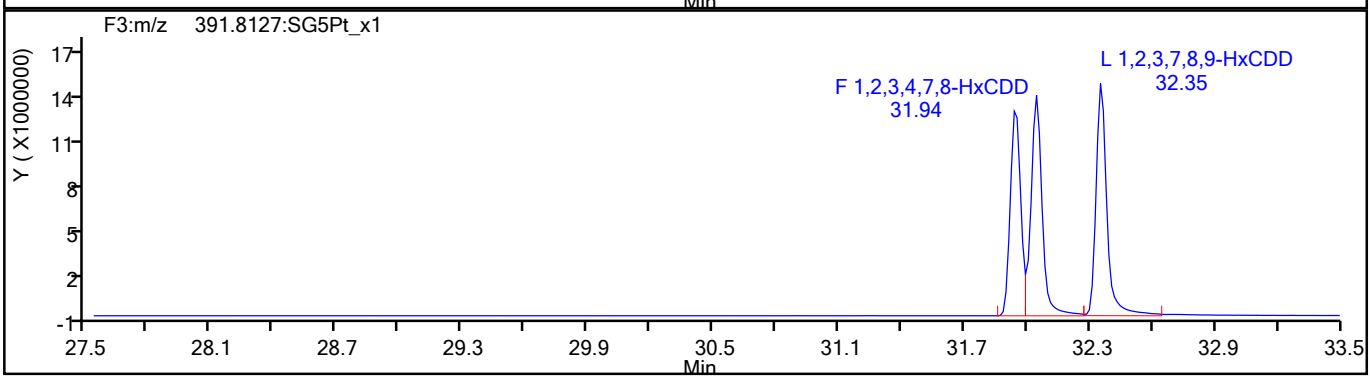

HxCDD Standards

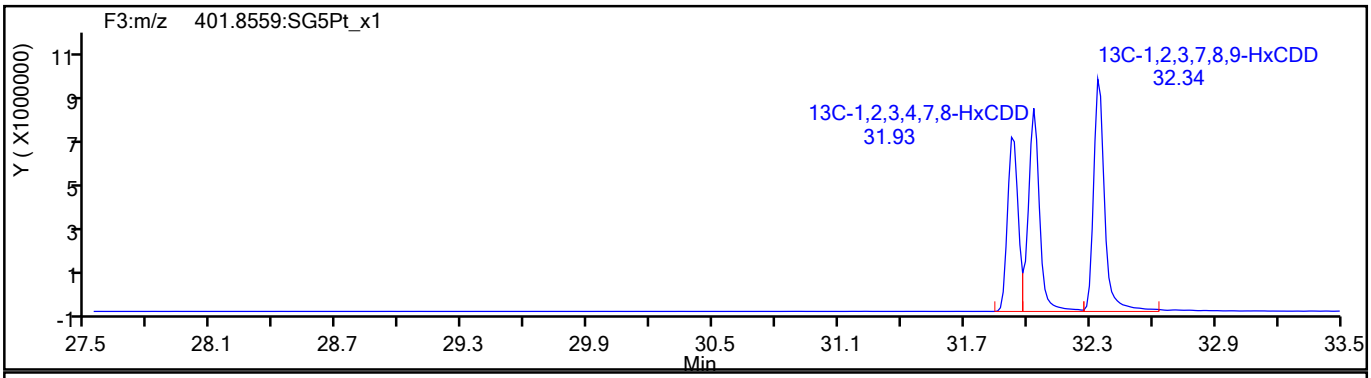

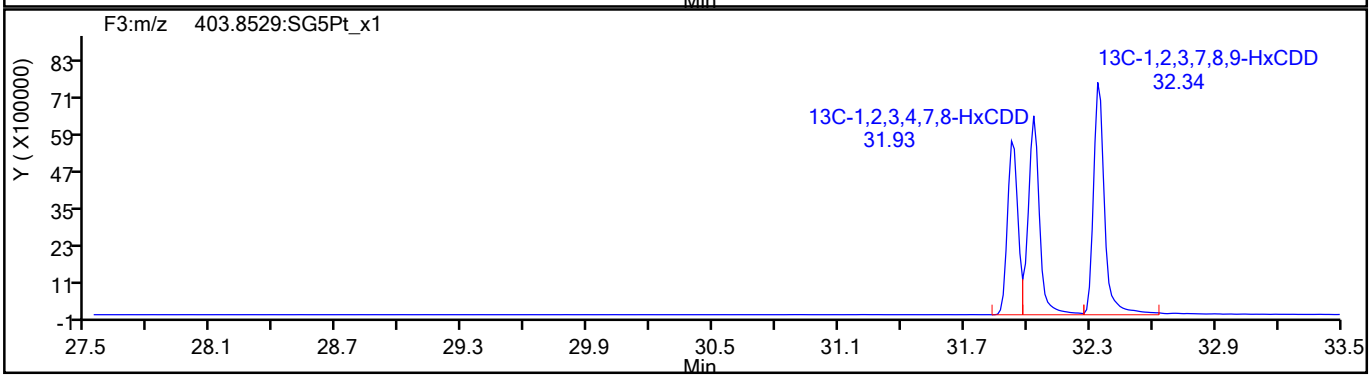

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

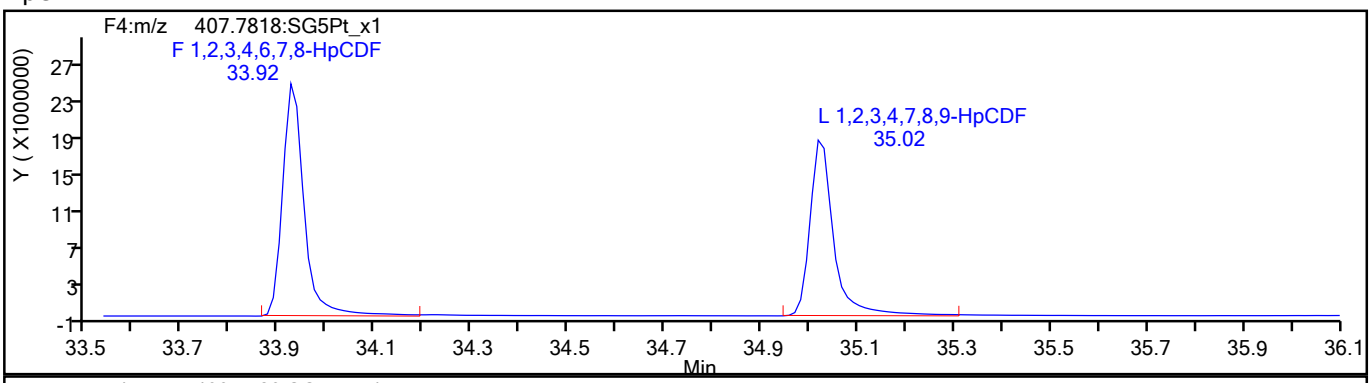

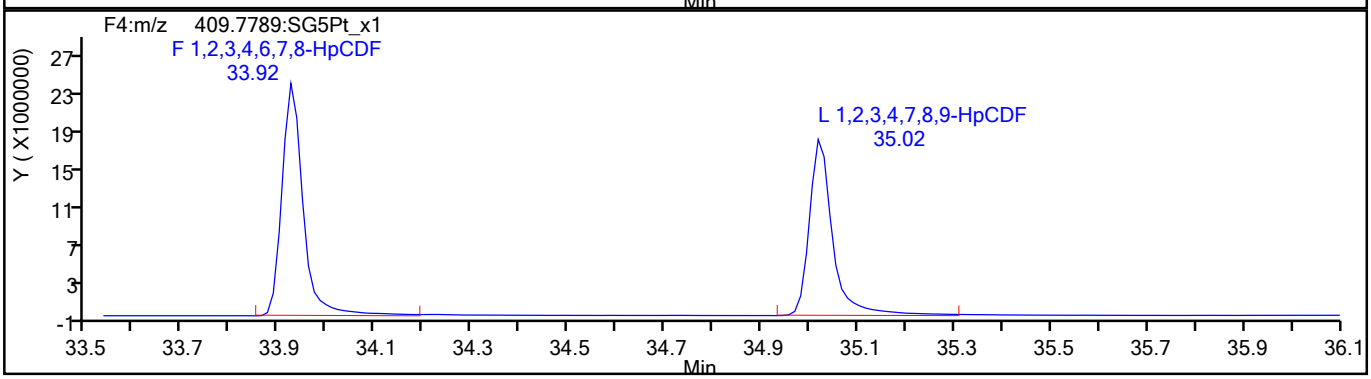

HpCDF Standards

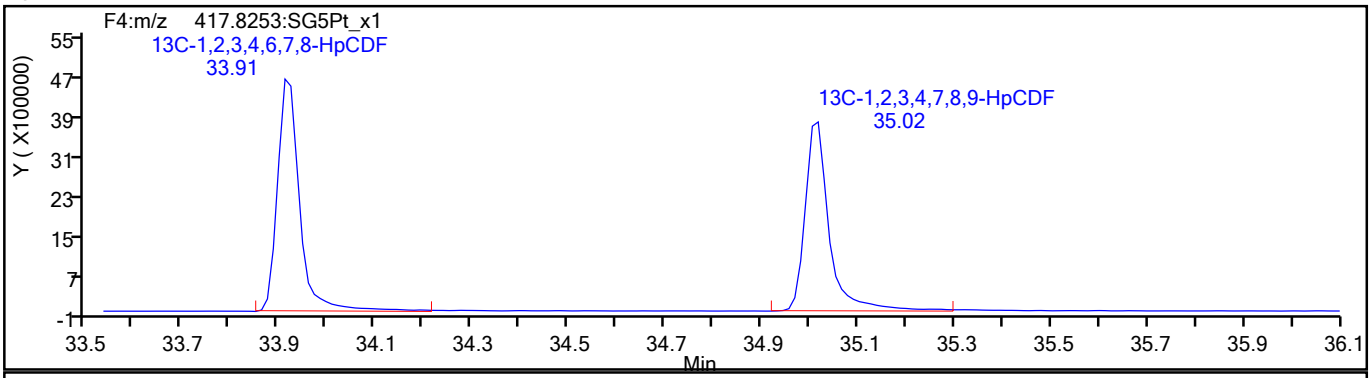

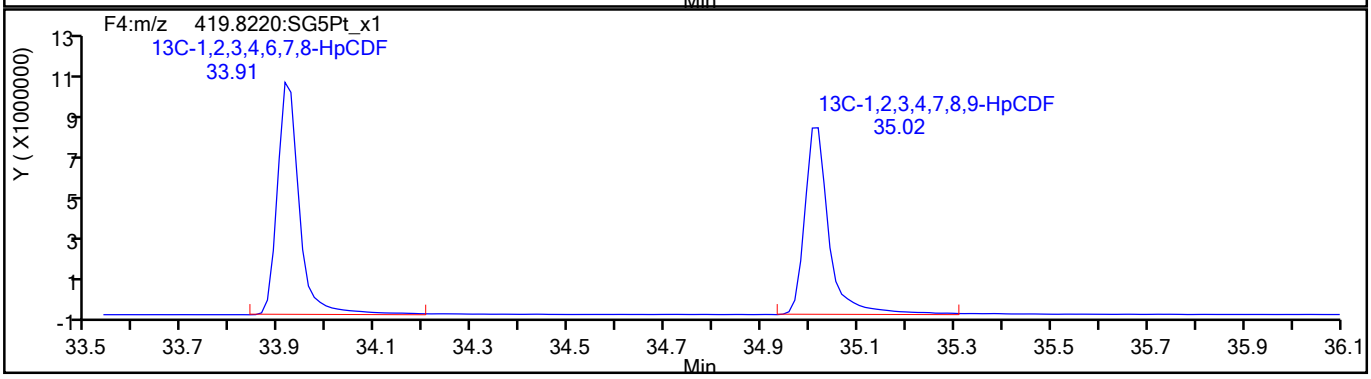

788798

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

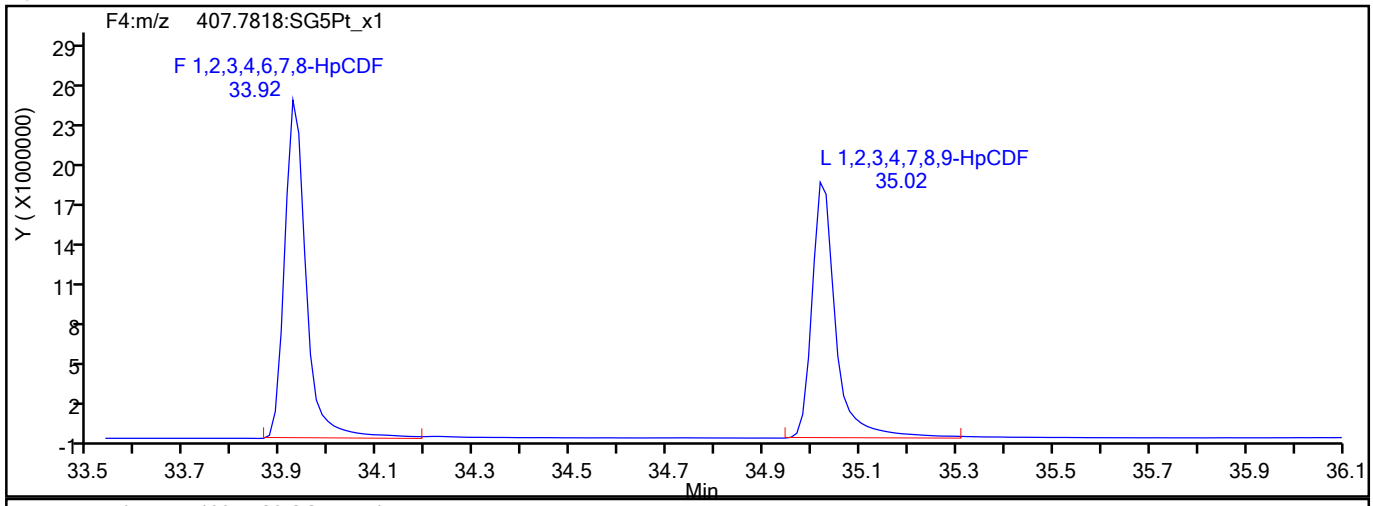

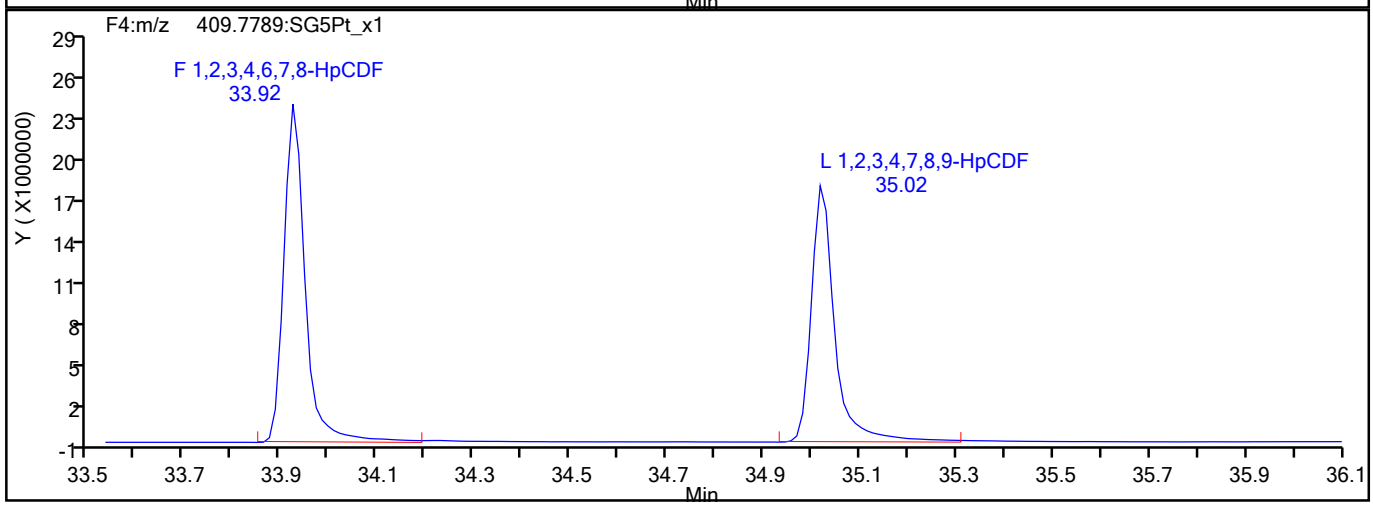

HpCDF Interference Mass

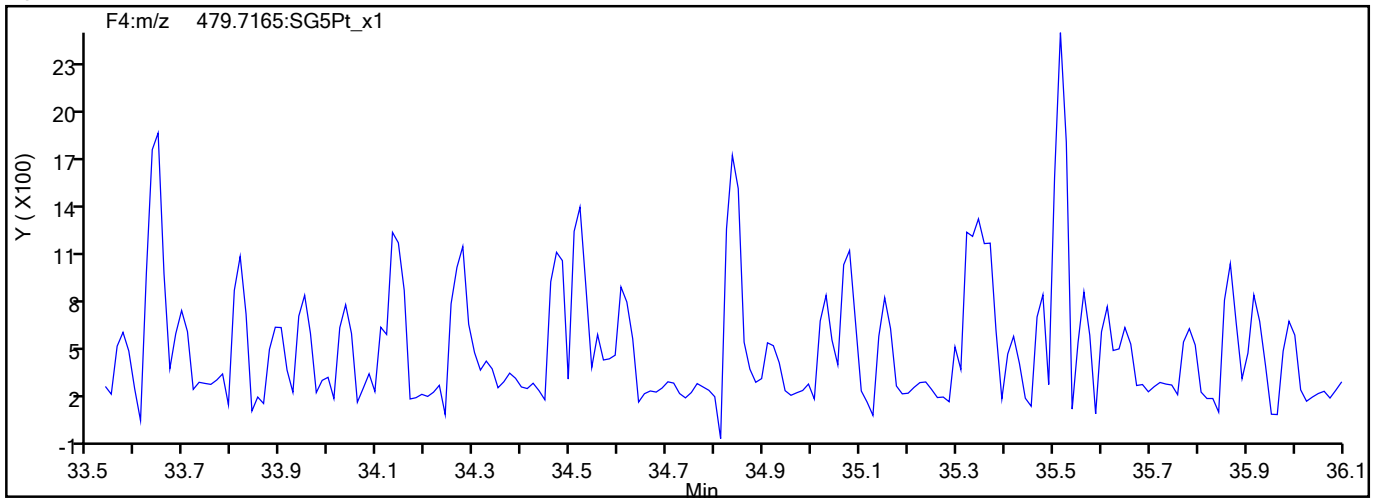

788799

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

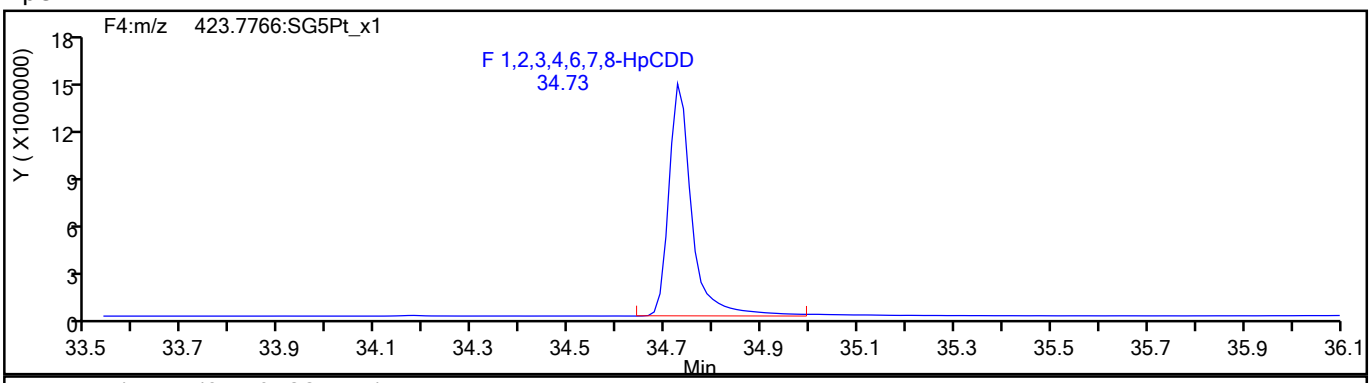

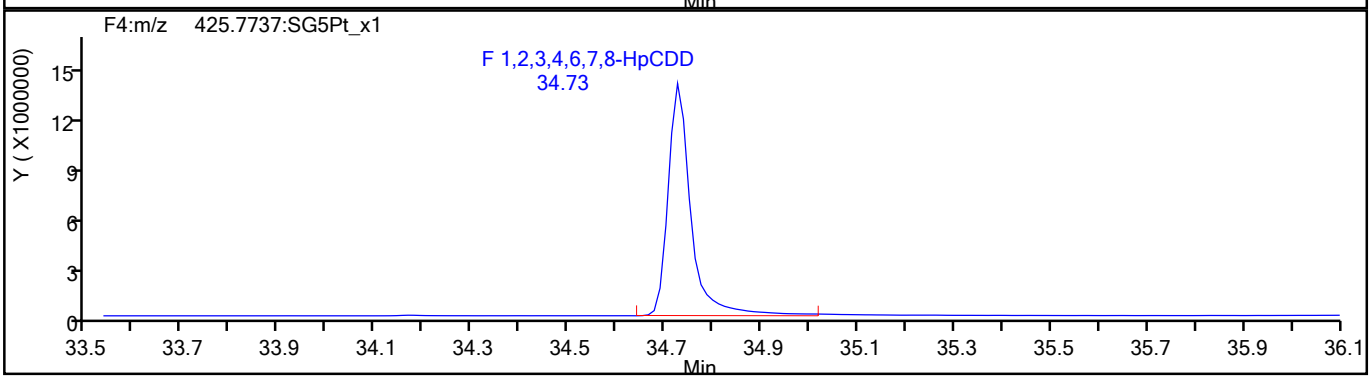

HpCDD Standards

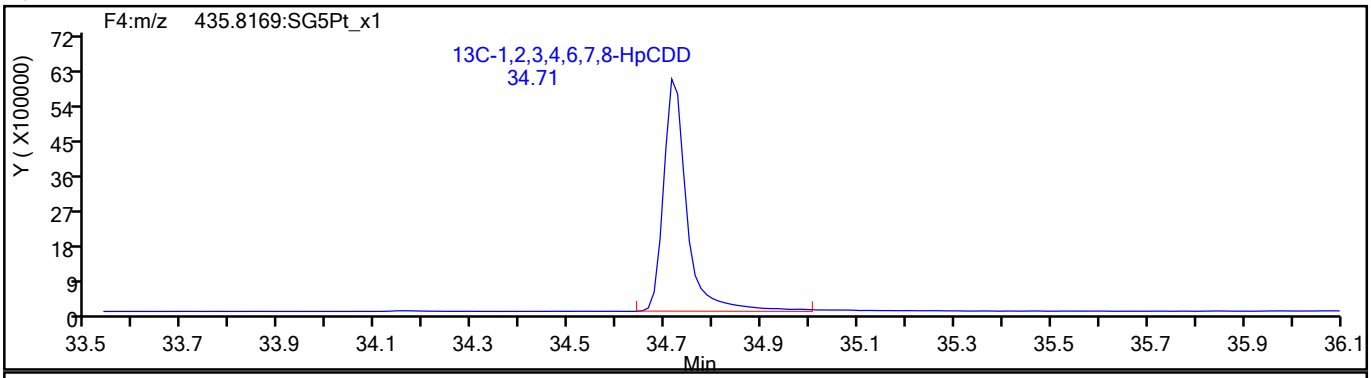

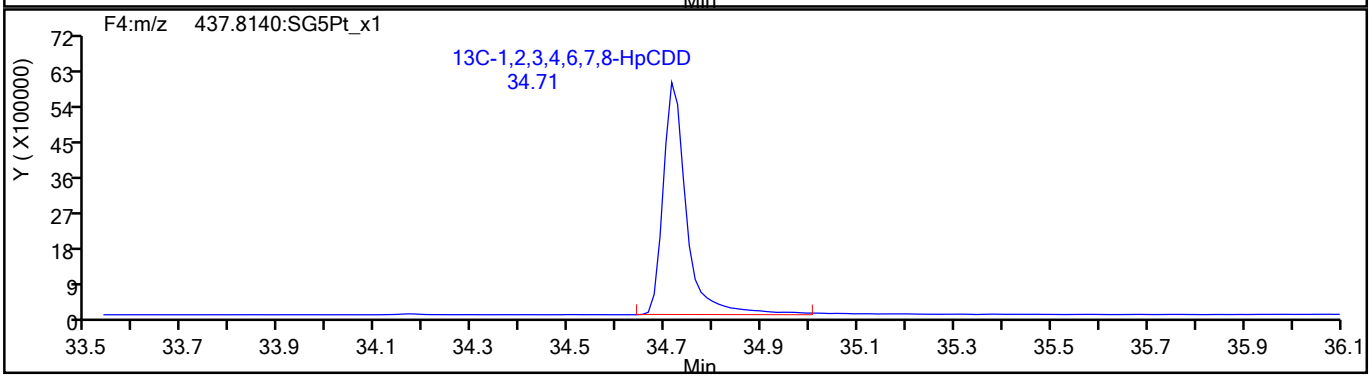

788800

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

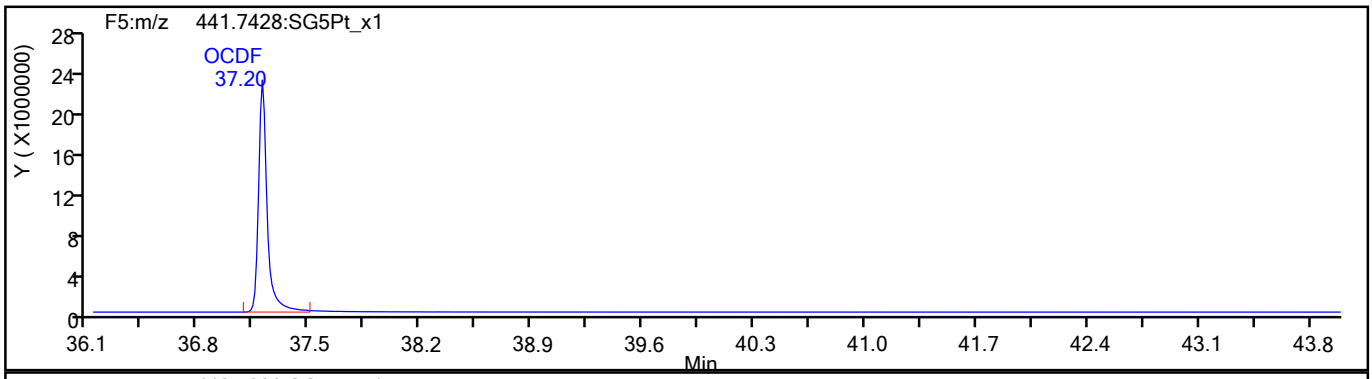

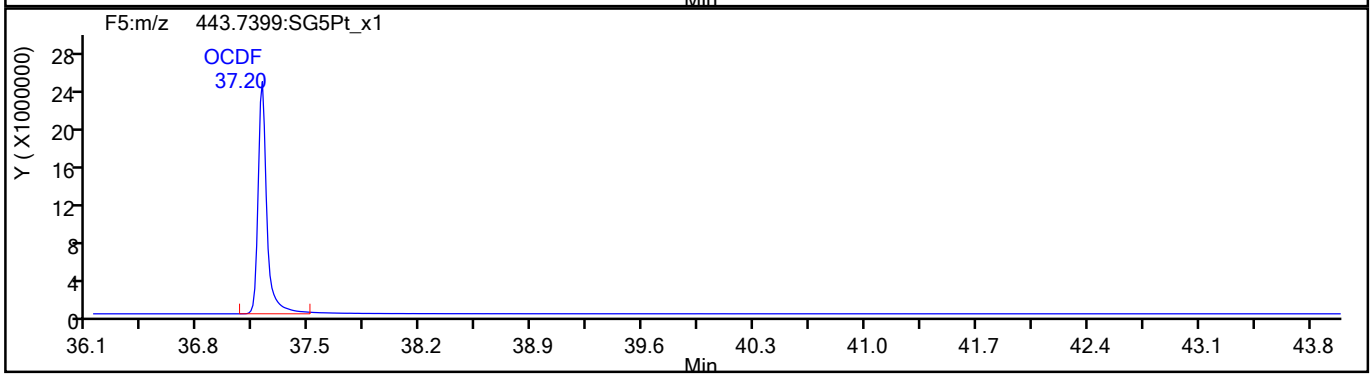

OCDF Standards

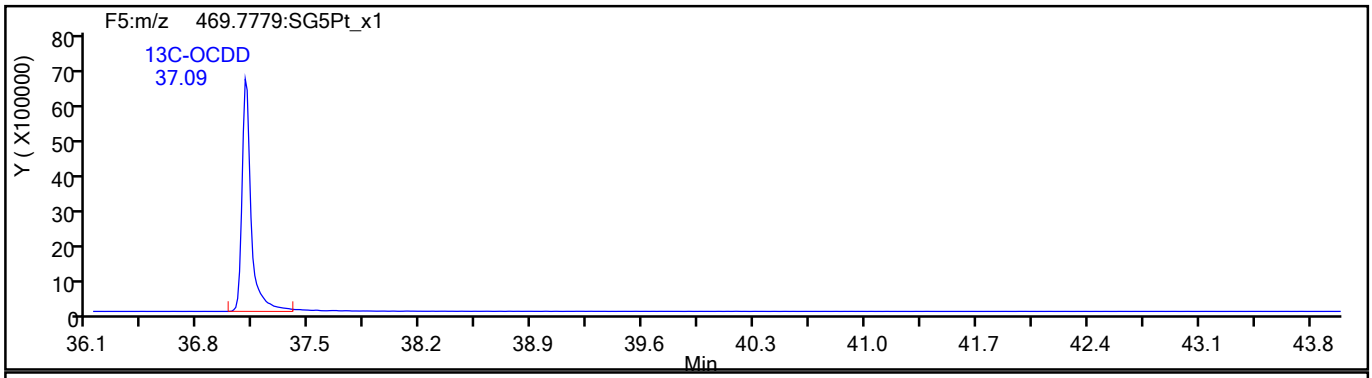

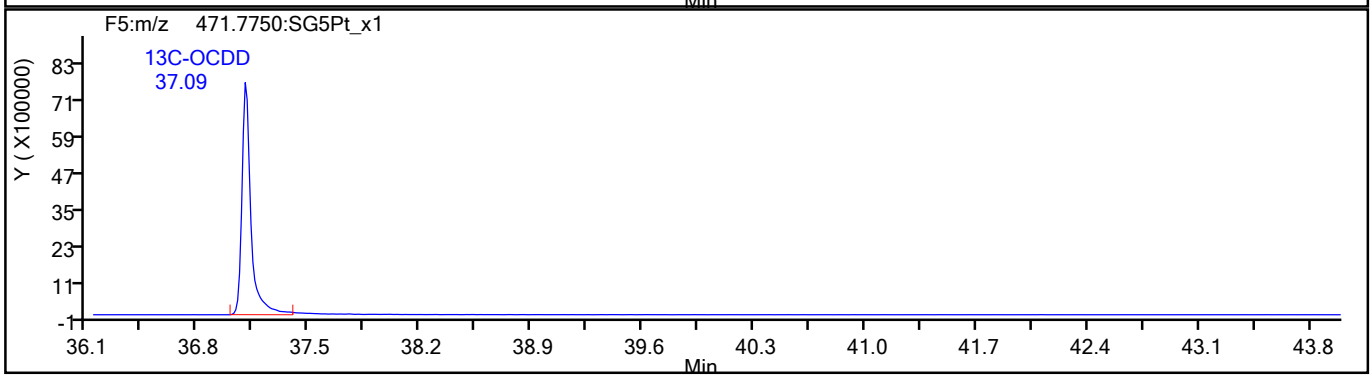

788801

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

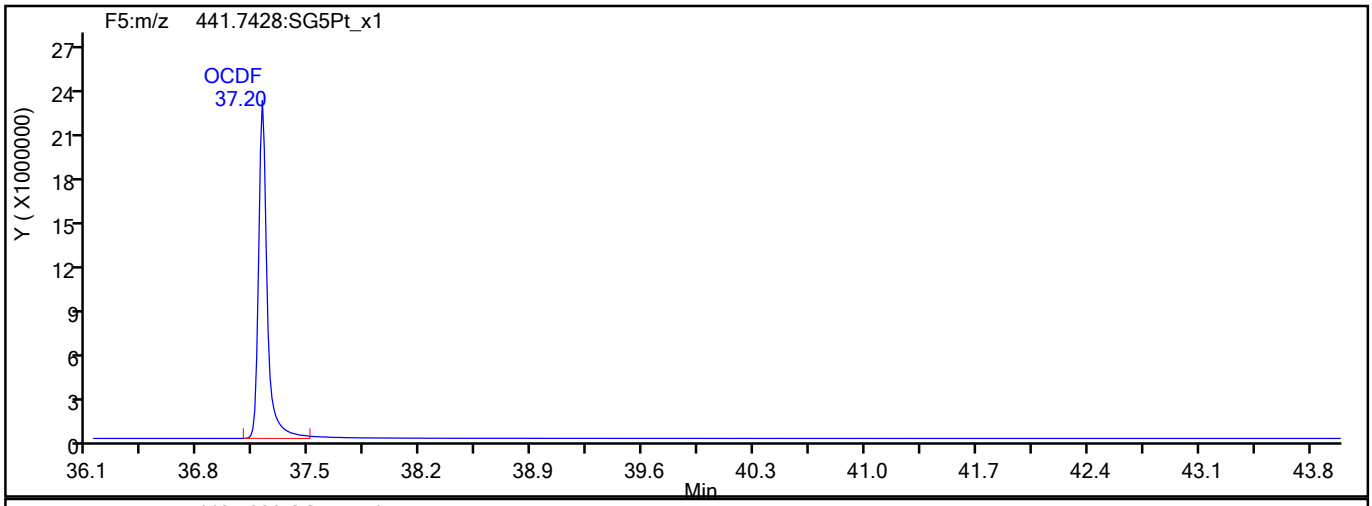

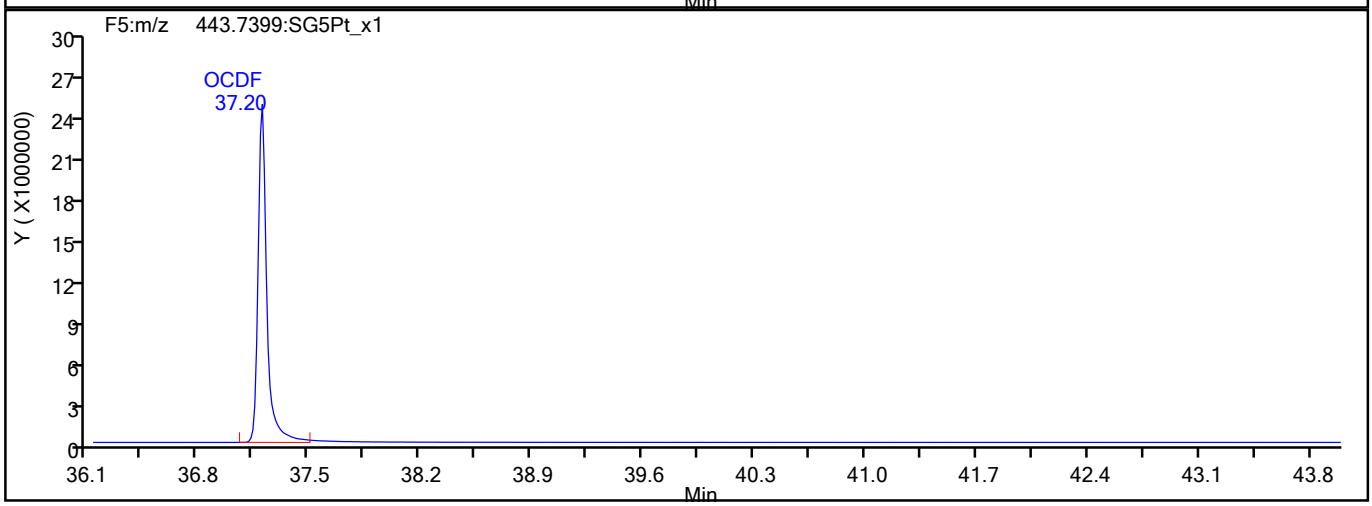

OCDF Interference Mass

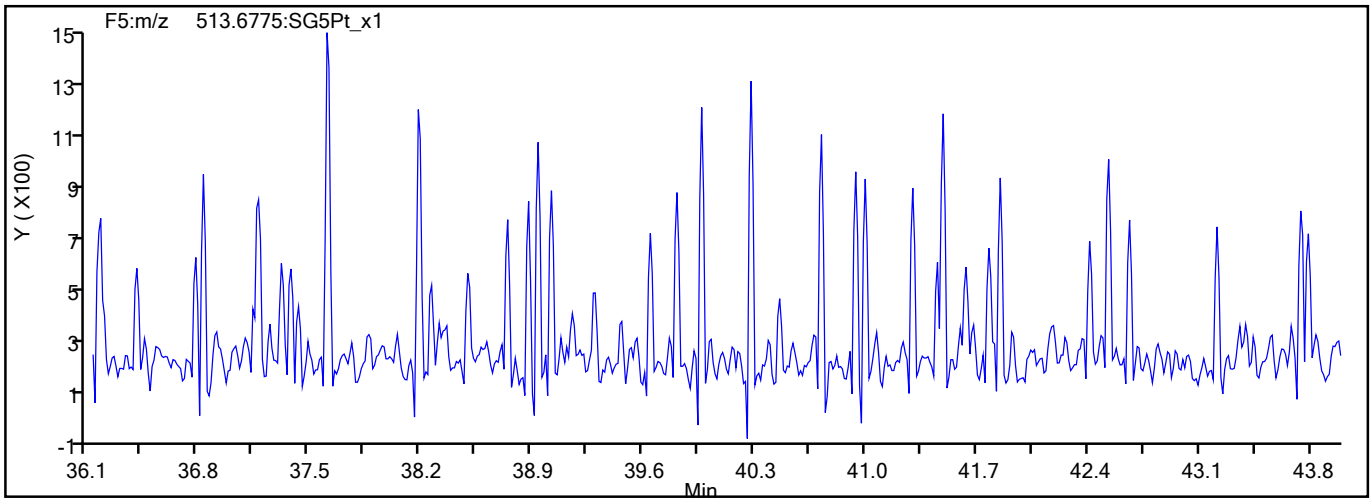

788802

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

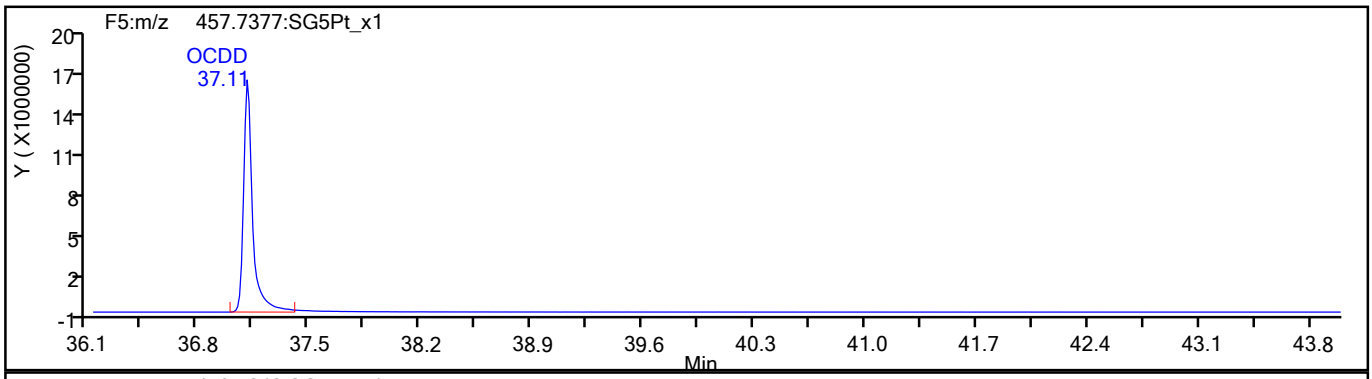

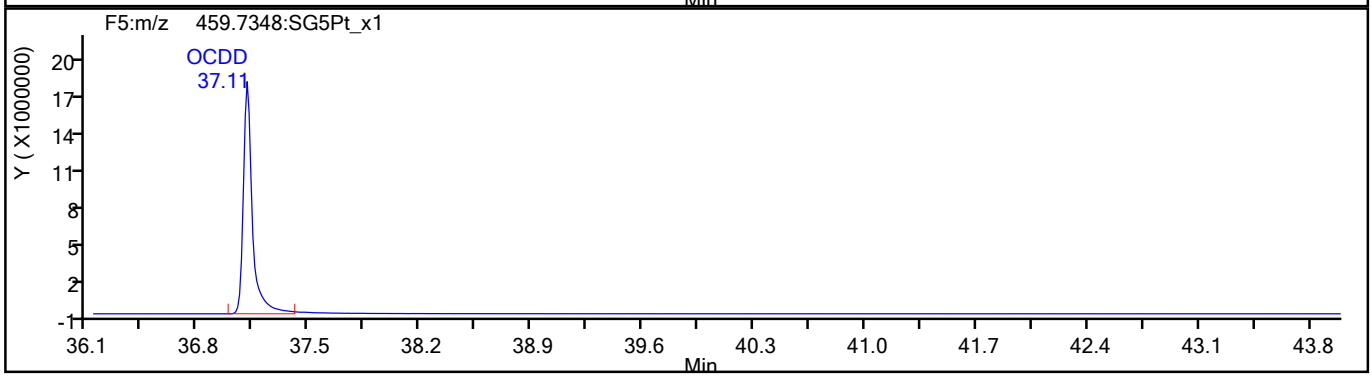

OCDD Standards

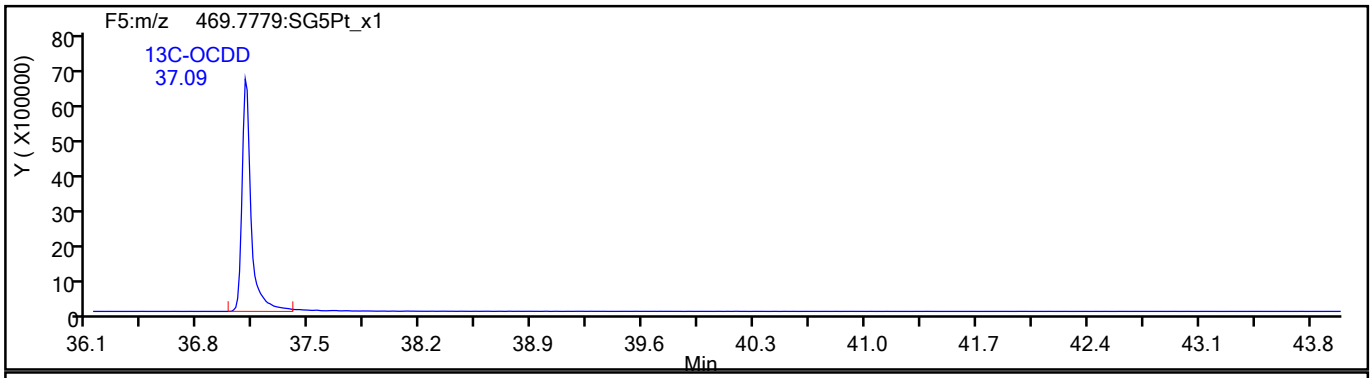

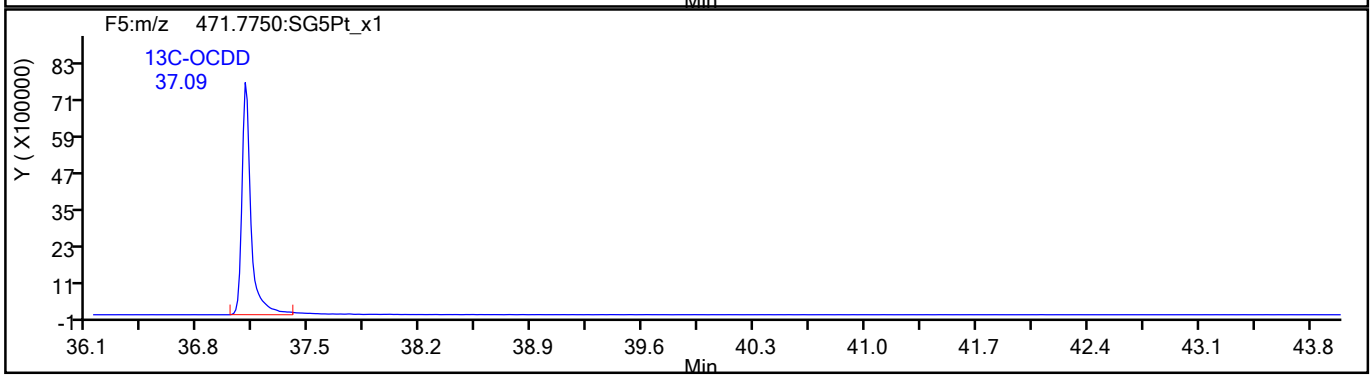

788803

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

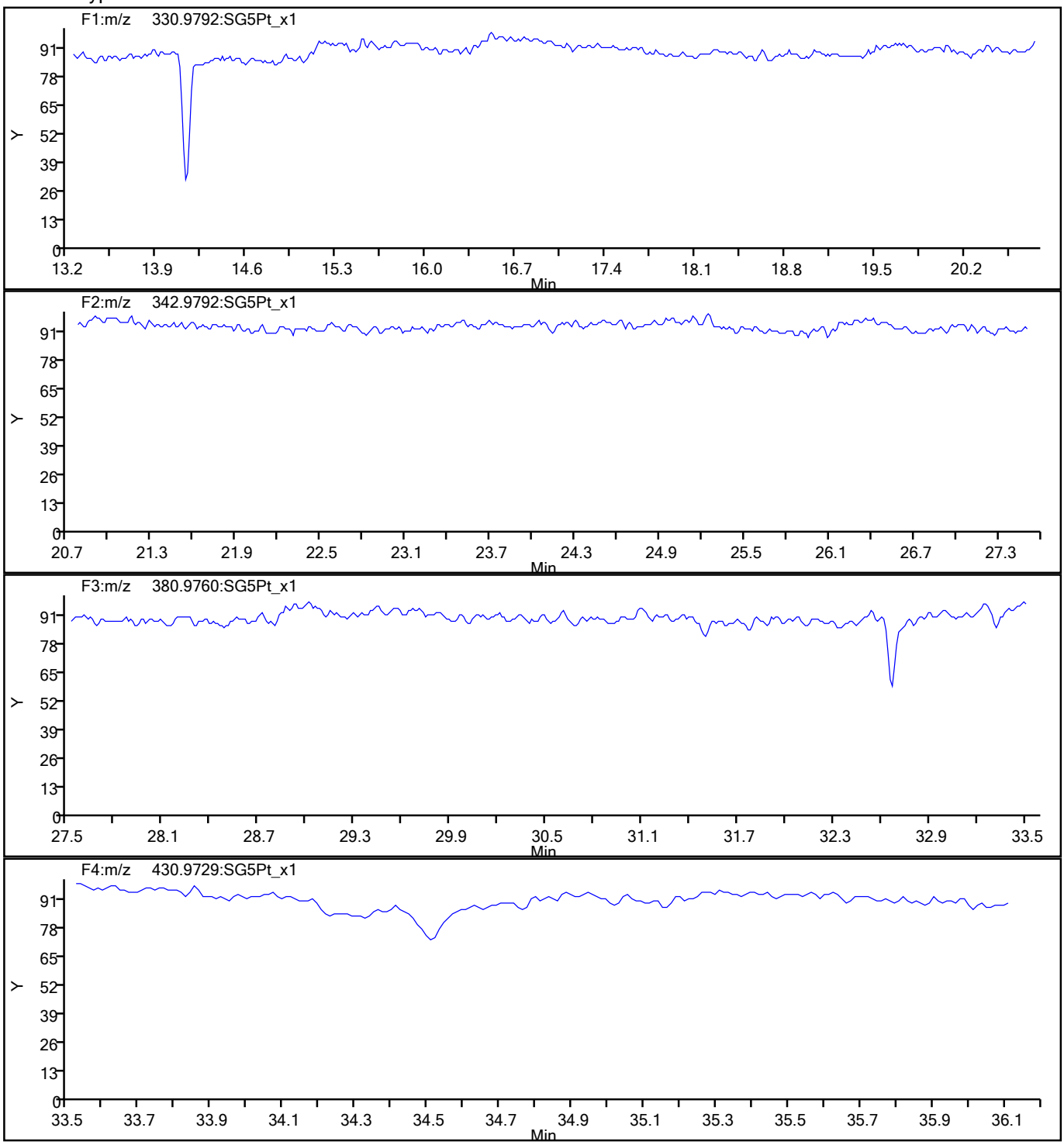

788804

Report Date: 27-Jul-2021 15:17:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

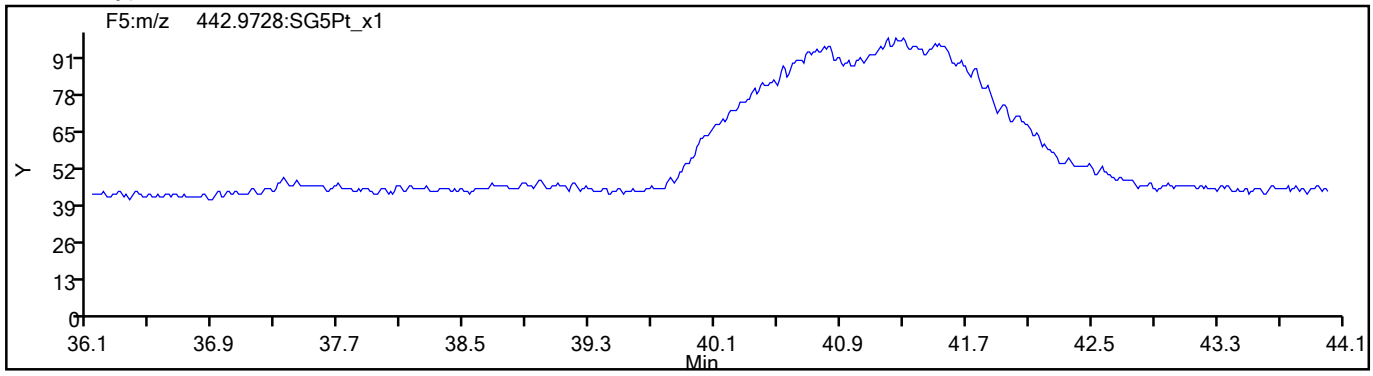

788805

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	57464333	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	95980421	0.79	1.6249	102.8	102.8	0.1660	0.1660	103	
2,3,7,8-TCDF	17.628	204575642	0.78	1.0239	208.2	208.2	0.2336	0.2336	104	
S Total TCDF					208.2	208.2	0.2336	0.2336		
D 13C-2,3,7,8-TCDD	18.338	53698206	0.83	0.8993	103.9	103.9	0.1396	0.1396	104	
$ 37Cl4-2,3,7,8-TCDD	18.354	140953034		1.1071	221.5	221.5	0.1318	0.1318	111	
2,3,7,8-TCDD	18.354	140421448	0.79	1.2541	208.5	208.5	0.1362	0.1362	104	
S Total TCDD					208.5	208.5	0.1362	0.1362		
D 13C-1,2,3,7,8-PeCDF	22.749	72829681	1.58	1.2101	104.7	104.7	0.2112	0.2112	105	
1,2,3,7,8-PeCDF	22.776	795873691	1.61	1.0611	1029.8	1029.8	2.482	2.482	103	
D 13C-2,3,4,7,8-PeCDF	24.126	75649463	1.61	1.2395	106.2	106.2	0.2062	0.2062	106	
2,3,4,7,8-PeCDF	24.153	783403837	1.59	1.0184	1016.8	1016.8	2.723	2.723	102	
S Total PeCDF					2046.7	2046.7	2.602	2.602		
D 13C-1,2,3,7,8-PeCDD	24.862	46251010	1.64	0.7612	105.7	105.7	0.1196	0.1196	106	
1,2,3,7,8-PeCDD	24.889	500555284	1.58	1.0484	1032.3	1032.3	0.8910	0.8910	103	
S Total PeCDD					1032.3	1032.3	0.8910	0.8910		
D 13C-1,2,3,4,7,8-HxCDF	30.835	67741189	0.53	1.0837	103.6	103.6	0.3784	0.3784	104	
1,2,3,4,7,8-HxCDF	30.862	737075796	1.21	1.0851	1002.7	1002.7	4.903	4.903	100	
D 13C-1,2,3,6,7,8-HxCDF	31.008	67363664	0.51	1.1279	99.0	99.0	0.3636	0.3636	98.97	
1,2,3,6,7,8-HxCDF	31.021	785709889	1.22	1.1260	1035.8	1035.8	4.873	4.873	104	
D 13C-2,3,4,6,7,8-HxCDF	31.754	63471184	0.52	1.0637	98.9	98.9	0.3855	0.3855	98.87	
2,3,4,6,7,8-HxCDF	31.767	762810877	1.21	1.1675	1029.4	1029.4	3.909	3.909	103	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58669892	0.52	0.9676	100.5	100.5	0.4238	0.4238	100	
1,2,3,7,8,9-HxCDF	32.539	708280047	1.22	1.1664	1035.0	1035.0	4.123	4.123	104	
S Total HxCDF					4103.0	4103.0	4.452	4.452		
* 13C-1,2,3,7,8,9-HxCDD	32.339	60348148	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	46886171	1.24	0.7334	105.9	105.9	0.3391	0.3391	106	
1,2,3,4,7,8-HxCDD	31.940	484857042	1.26	1.0640	971.9	971.9	2.786	2.786	97.19	
D 13C-1,2,3,6,7,8-HxCDD	32.033	53564396	1.27	0.8802	100.8	100.8	0.2826	0.2826	101	
1,2,3,6,7,8-HxCDD	32.047	543061818	1.27	1.0001	1013.8	1013.8	2.795	2.795	101	
1,2,3,7,8,9-HxCDD	32.353	563888565	1.26	1.1325	991.3	991.3	2.541	2.541	99.13	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDD					2977.0	2977.0	2.707	2.707		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	46328151	0.45	0.7730	99.3	99.3	0.9693	0.9693	99.31	
1,2,3,4,6,7,8-HpCDF	33.924	681312007	1.05	1.4413	1020.4	1020.4	8.187	8.187	102	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44333848	0.44	0.7008	104.8	104.8	1.069	1.069	105	
1,2,3,4,7,8,9-HpCDF	35.017	590555312	1.06	1.3174	1011.1	1011.1	10.5	10.5	101	
S Total HpCDF					2031.5	2031.5	9.356	9.356		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	39395832	1.02	0.6472	100.9	100.9	0.4739	0.4739	101	
1,2,3,4,6,7,8-HpCDD	34.726	441437476	1.05	1.0943	1024.0	1024.0	3.855	3.855	102	
S Total HpCDD					1024.0	1024.0	3.855	3.855		
D 13C-OCDD	37.093	56623863	0.89	0.4472	209.8	209.8	0.2327	0.2327	105	
OCDF	37.201	856685987	0.91	1.4382	2104.0	2104.0	1.905	1.905	105	
OCDD	37.105	635652839	0.90	1.1070	2028.1	2028.1	1.855	1.855	101	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		26125466	6597193	4577	11442	1441		
333.9339	18.142	18.142	0		31338867	7893522	2702	6755	2921	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42243137	10877420	7832	19580	1389		
317.9389	17.613	17.616	0	0.971	53737284	13863668	7802	19505	1777	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	89710432	22799700	10338	25845	2205		
305.8987	17.628	17.631	0	1.001	114865210	29189675	13335	33337	2189	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24360997	5757558	4577	11442	1258		
333.9339	18.338	18.338	0	1.011	29337209	6914283	2702	6755	2559	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	140953034	33738158	8459	21147	3988		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	62065087	14965631	3913	9782	3825		
321.8936	18.354	18.357	0	1.001	78356361	18744482	4747	11867	3949	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44649559	7939527	8573	21432	926		
353.8970	22.749	22.754	0	1.254	28180122	5062354	6242	15605	811	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	490871580	87021007	84135	210337	1034		
341.8567	22.776	22.779	0	1.001	305002111	54503599	52854	132135	1031	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46717935	7613965	8573	21432	888		
353.8970	24.126	24.129	0	1.330	28931528	4737188	6242	15605	759	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	480352978	79104825	84135	210337	940		
341.8567	24.153	24.156	0	1.001	303050859	50060127	52854	132135	947	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28720712	4433240	3087	7717	1436		
369.8919	24.862	24.865	0	1.370	17530298	2751802	2189	5472	1257	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	306292917	47311146	15348	38370	3083		
357.8516	24.889	24.892	0	1.001	194262367	30133208	11499	28747	2621	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23491874	5084915	9674	24185	526		
385.8610	30.835	30.838	0	0.953	44249315	9441190	17790	44475	531	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	404173144	87133654	170642	426605	511		
375.8178	30.848	30.857	0	1.000	332902652	71216591	138478	346195	514	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	22854682	4877346	9674	24185	504		
385.8610	31.008	31.003	0	0.959	44508982	9206926	17790	44475	518	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.000	431948071	93438031	170642	426605	548		
375.8178	31.021	31.022	0	1.000	353761818	76246532	138478	346195	551	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	21747421	5871662	9674	24185	607		
385.8610	31.754	31.756	0	0.982	41723763	11062051	17790	44475	622	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	417841952	110026703	170642	426605	645		
375.8178	31.767	31.772	0	1.000	344968925	92108448	138478	346195	665	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20172563	5575575	9674	24185	576		
385.8610	32.512	32.523	-1	1.005	38497329	10495423	17790	44475	590	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	388834443	107441652	170642	426605	630		
375.8178	32.526	32.534	0	1.000	319445604	89819128	138478	346195	649	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33485933	9289499	8951	22377	1038		
403.8529	32.339	32.342	0		26862215	7454274	7708	19270	967	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	25994948	7598983	8951	22377	849		
403.8529	31.927	31.929	0	0.987	20891223	6054958	7708	19270	786	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	270288224	77533273	86149	215372	900		
391.8127	31.940	31.945	0	1.000	214568818	61952830	75747	189367	818	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29946566	8106259	8951	22377	906		
403.8529	32.033	32.033	0	0.991	23617830	6373294	7708	19270	827	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	303387935	83103965	86149	215372	965		
391.8127	32.047	32.047	0	1.000	239673883	65565020	75747	189367	866	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	314172702	87971106	86149	215372	1021		
391.8127	32.353	32.355	0	1.013	249715863	70210414	75747	189367	927	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14282220	4787635	15981	39952	300		
419.8220	33.912	33.914	0	1.049	32045931	10687518	34202	85505	312	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	349397605	118035783	389676	974190	303		
409.7789	33.924	33.926	0	1.000	331914402	111658032	340706	851765	328	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13509696	4047534	15981	39952	253		
419.8220	35.005	35.010	0	1.082	30824152	9120201	34202	85505	267	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	303260617	91538482	389676	974190	235		
409.7789	35.017	35.020	0	1.000	287294695	87143866	340706	851765	256	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19890119	6131671	10444	26110	587		
437.8140	34.714	34.716	0	1.073	19505713	6051375	10100	25250	599	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	225857690	69087451	102453	256132	674		
425.7737	34.726	34.726	0	1.000	215579786	65898474	103127	257817	639	1.05(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26710485	6689918	2659	6647	2516		
471.7750	37.093	37.094	0	1.147	29913378	7452640	4311	10777	1729	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	409115360	108366645	37076	92690	2923		
443.7399	37.201	37.199	0	1.003	447570627	117808946	40434	101085	2914	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	300559615	76562352	27801	69502	2754		
459.7348	37.105	37.106	0	1.000	335093224	85854399	30277	75692	2836	0.90(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

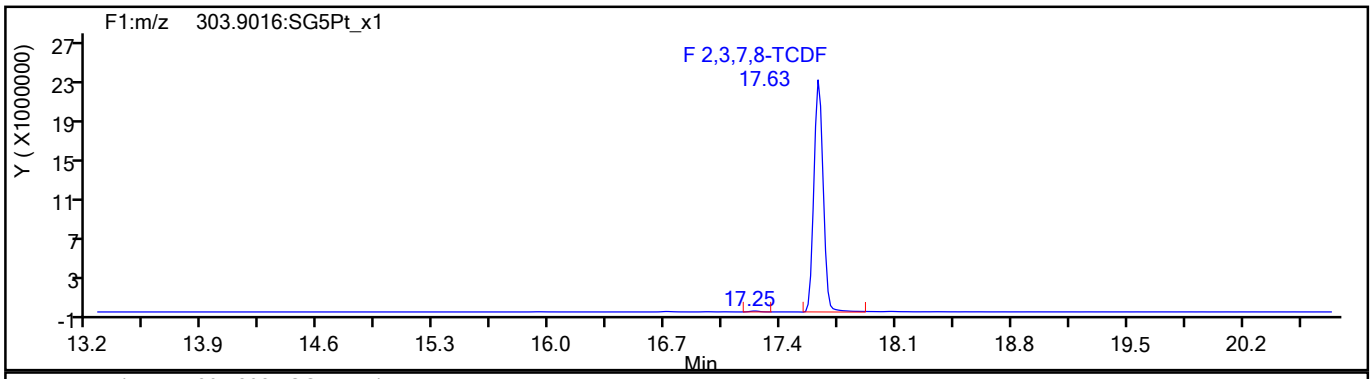

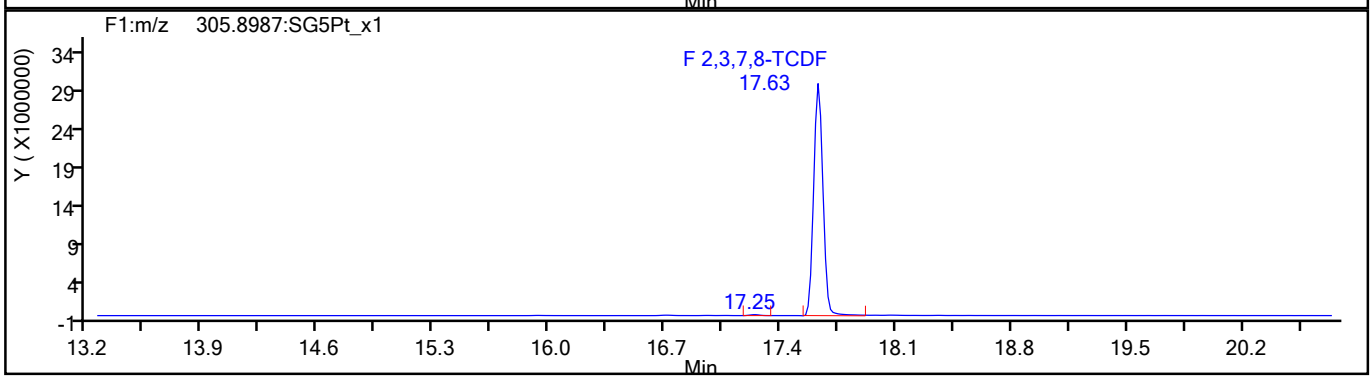

TCDF Standards

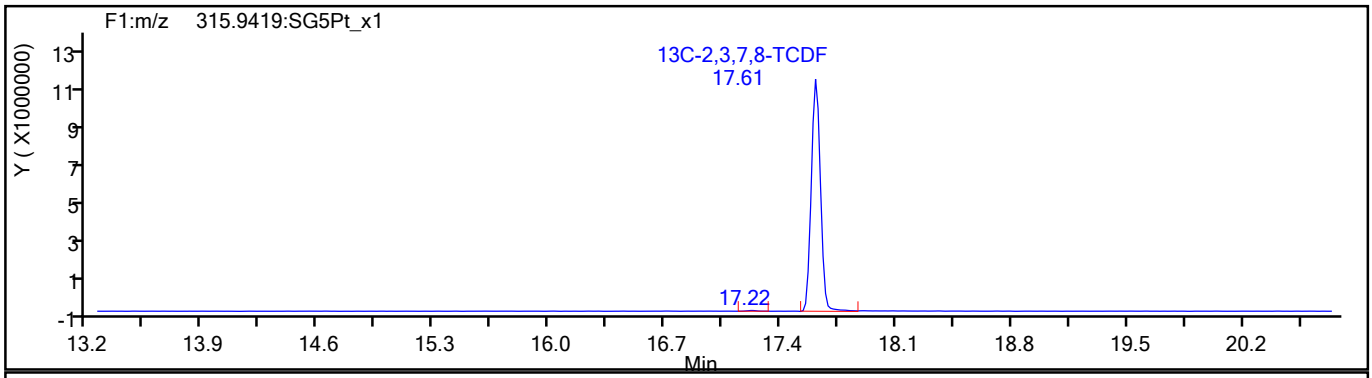

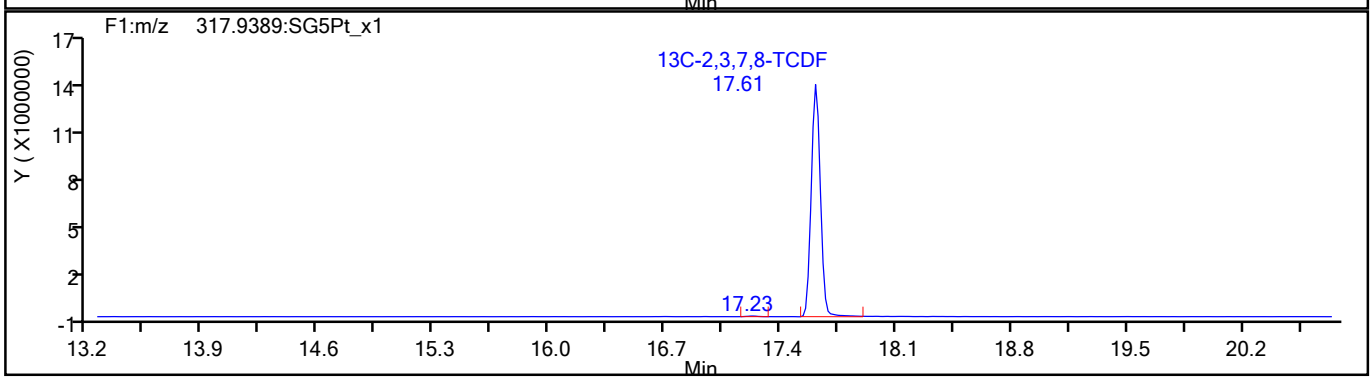

788811

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

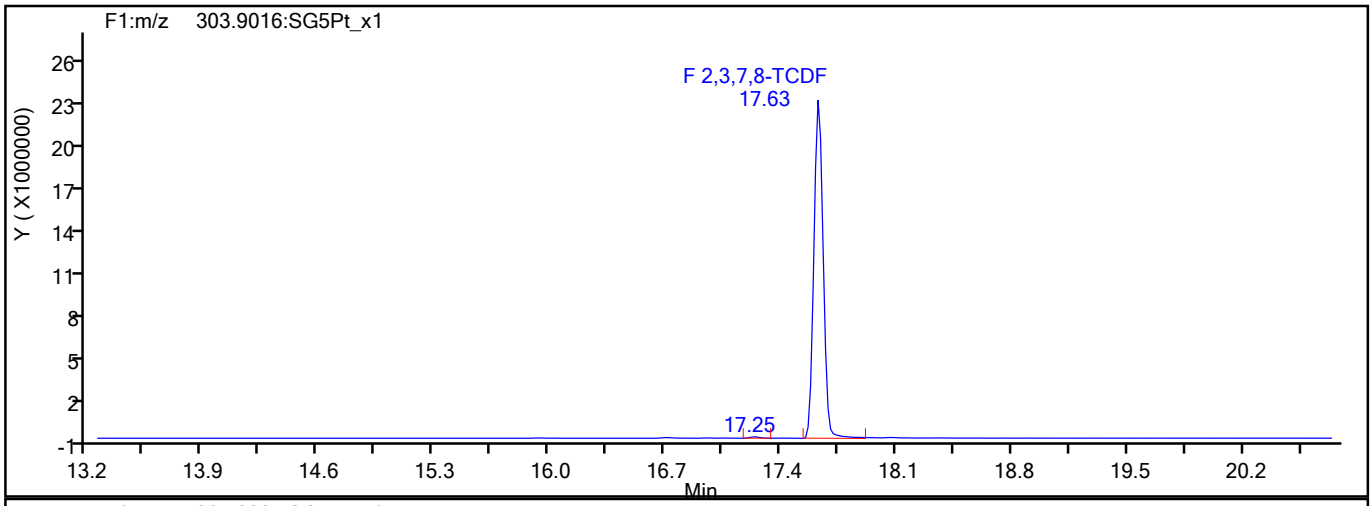

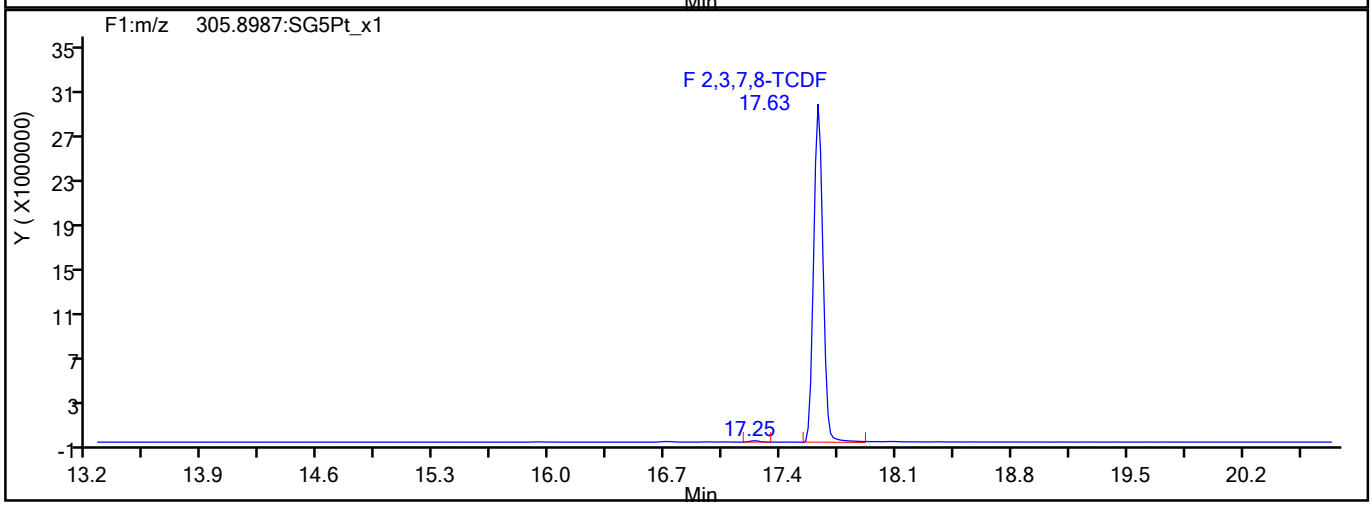

TCDF Interference Mass

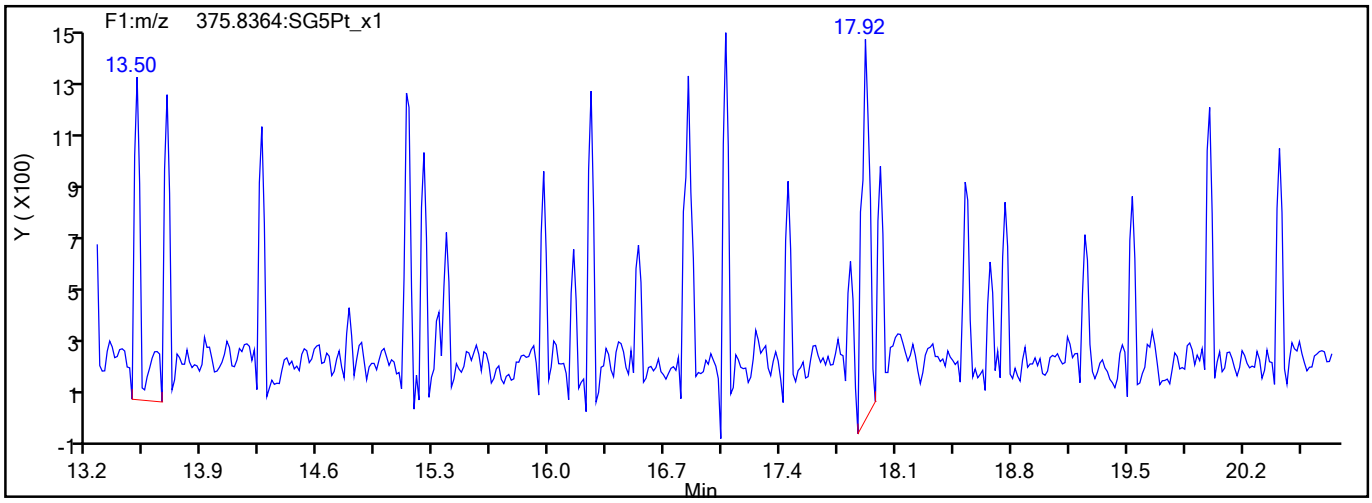

788812

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

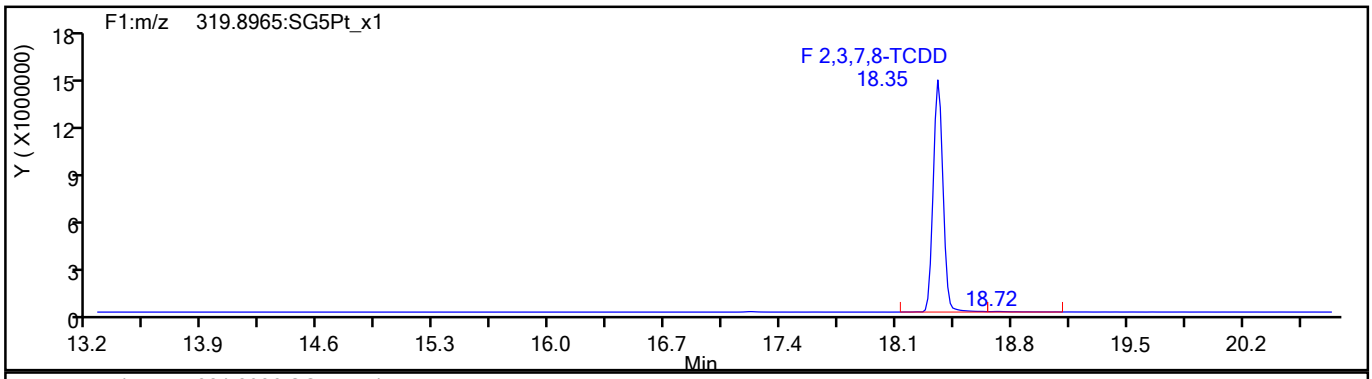

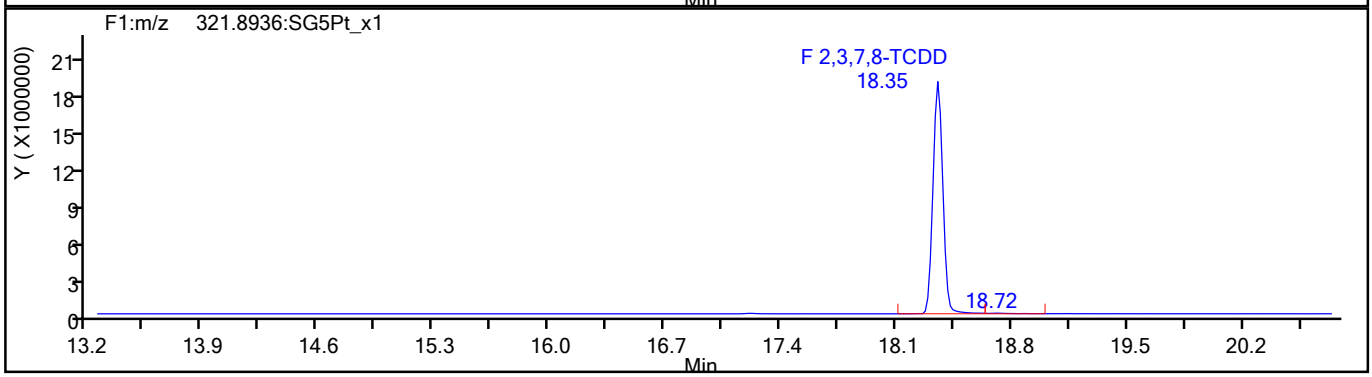

TCDD Standards

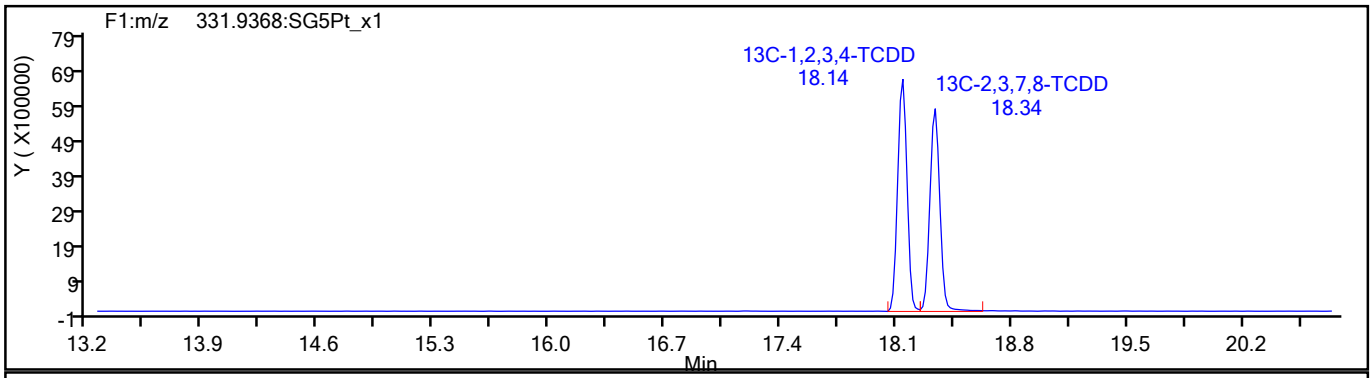

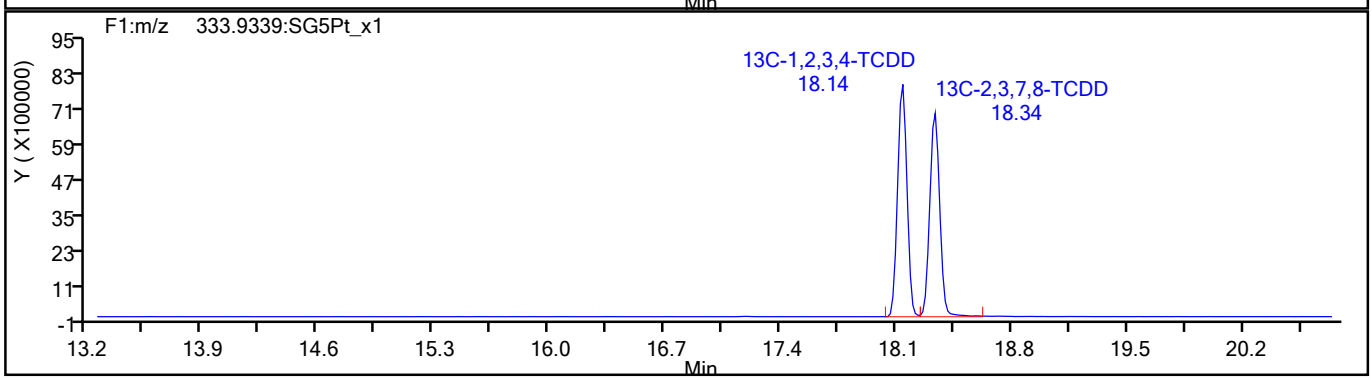

788813

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

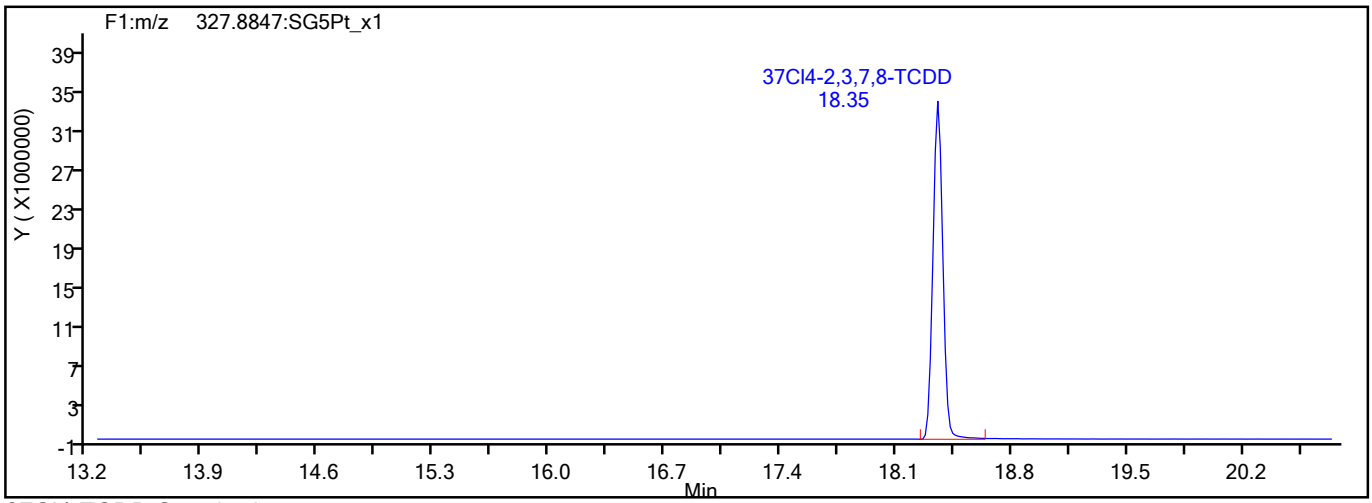

37Cl4-TCDD Standards

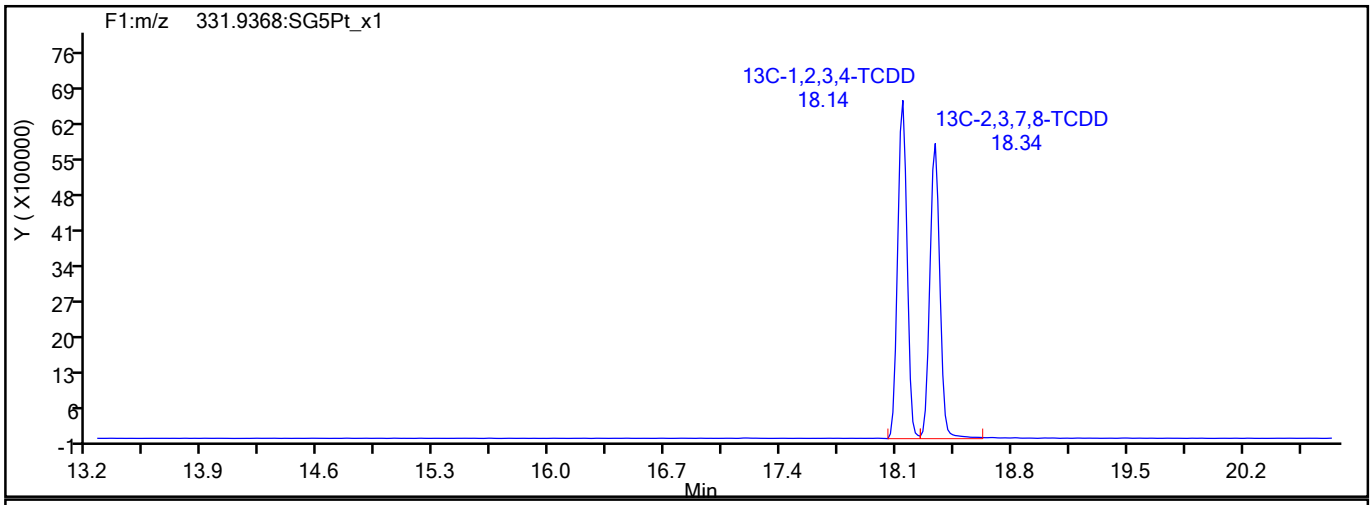

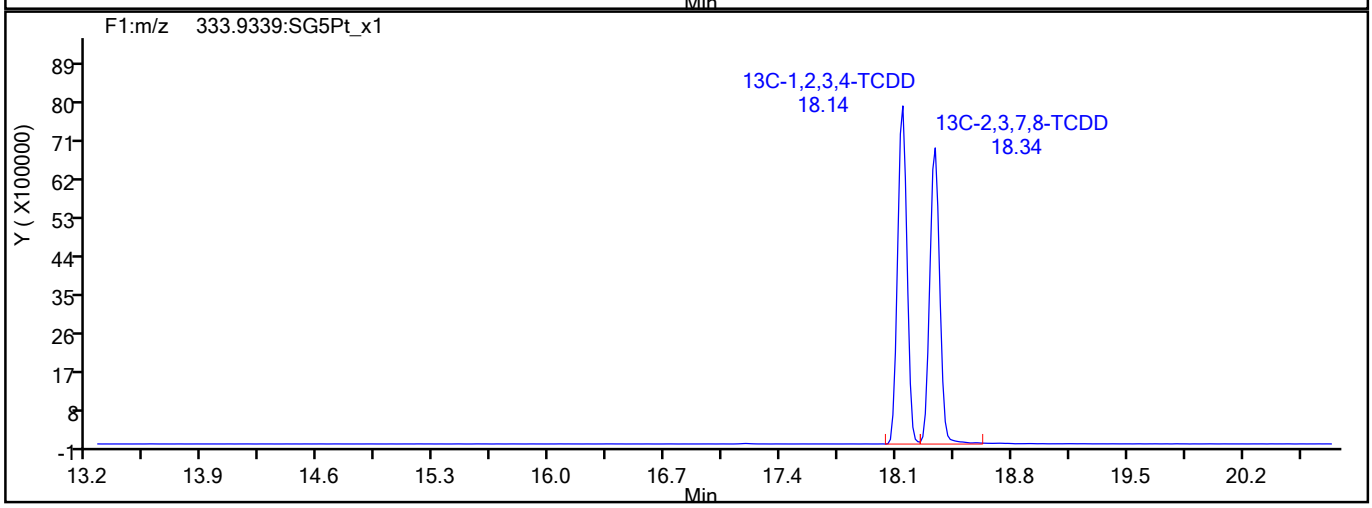

788814

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

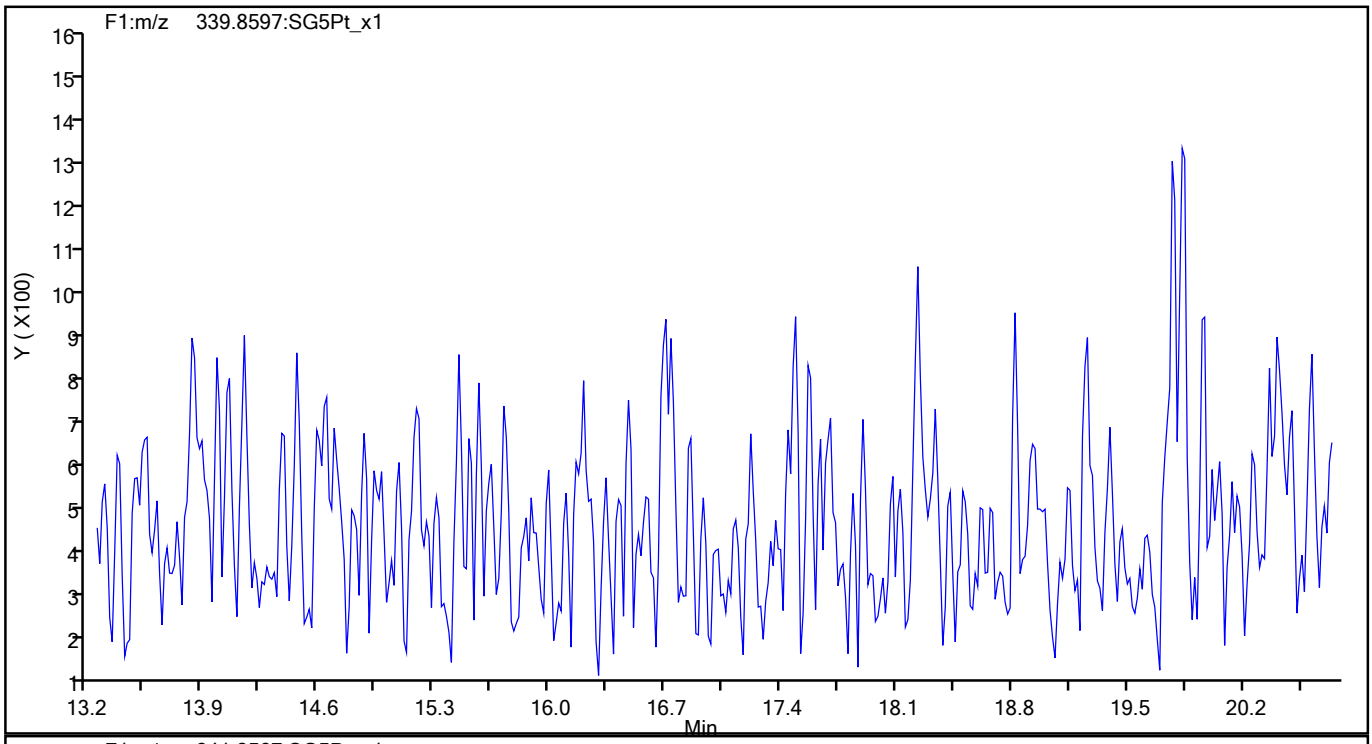

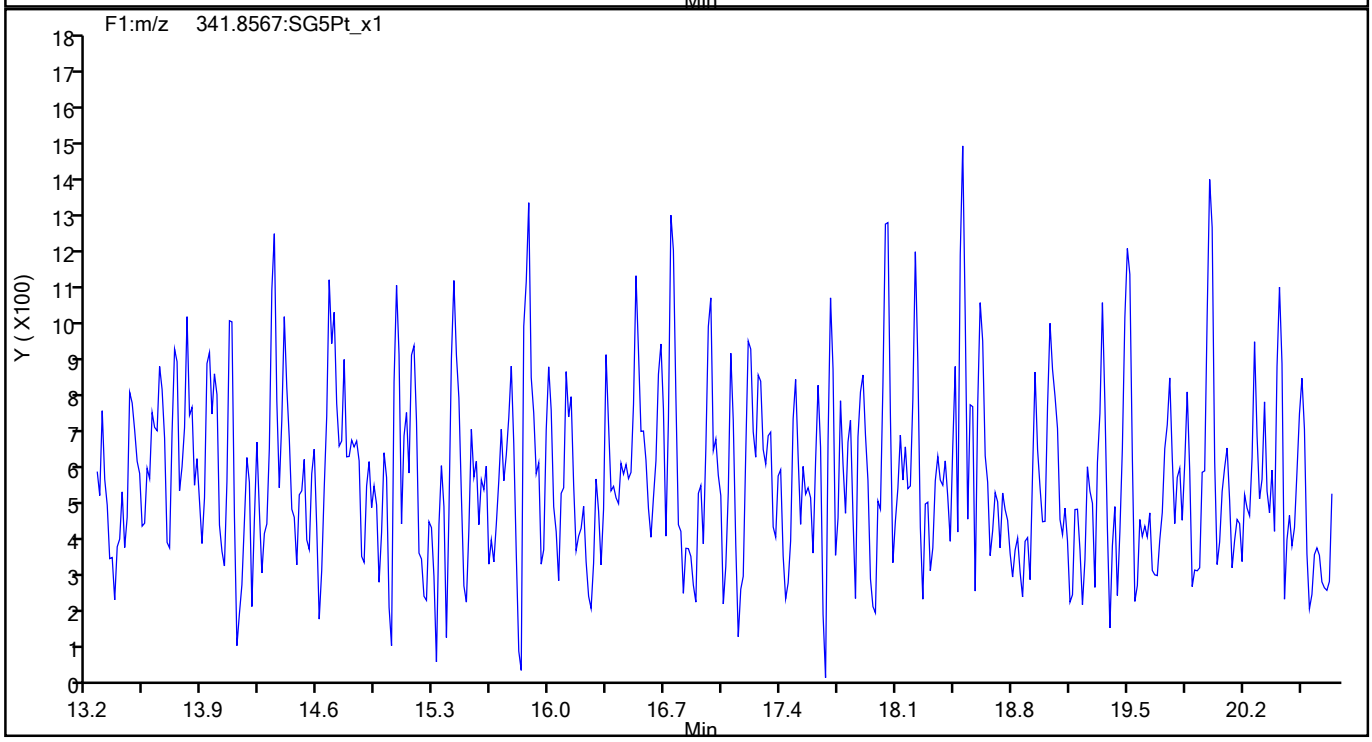

788815

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

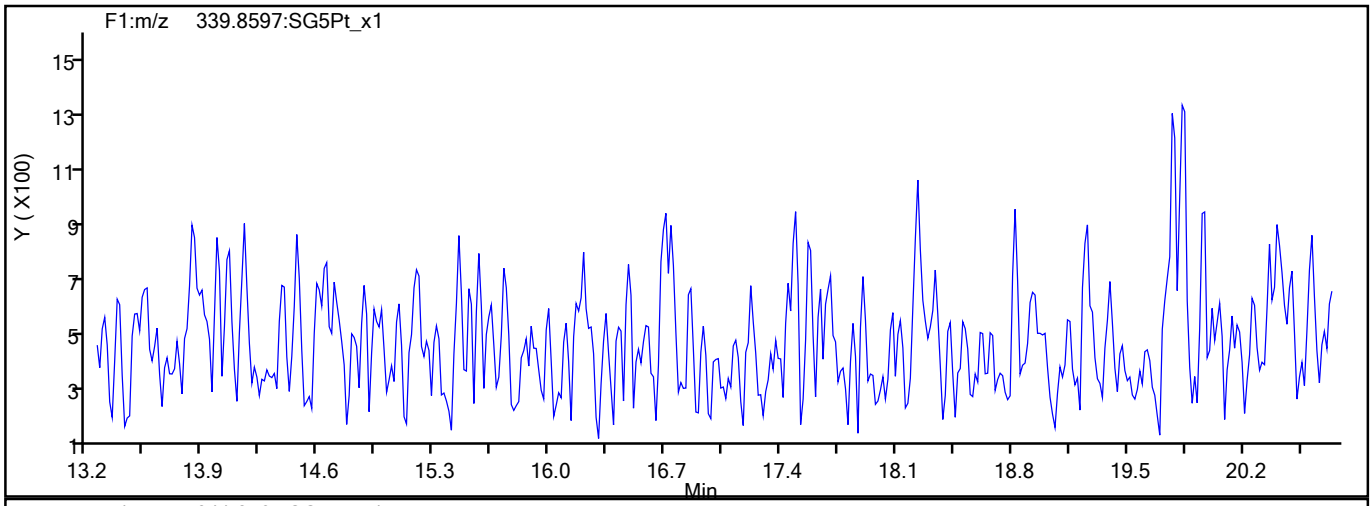

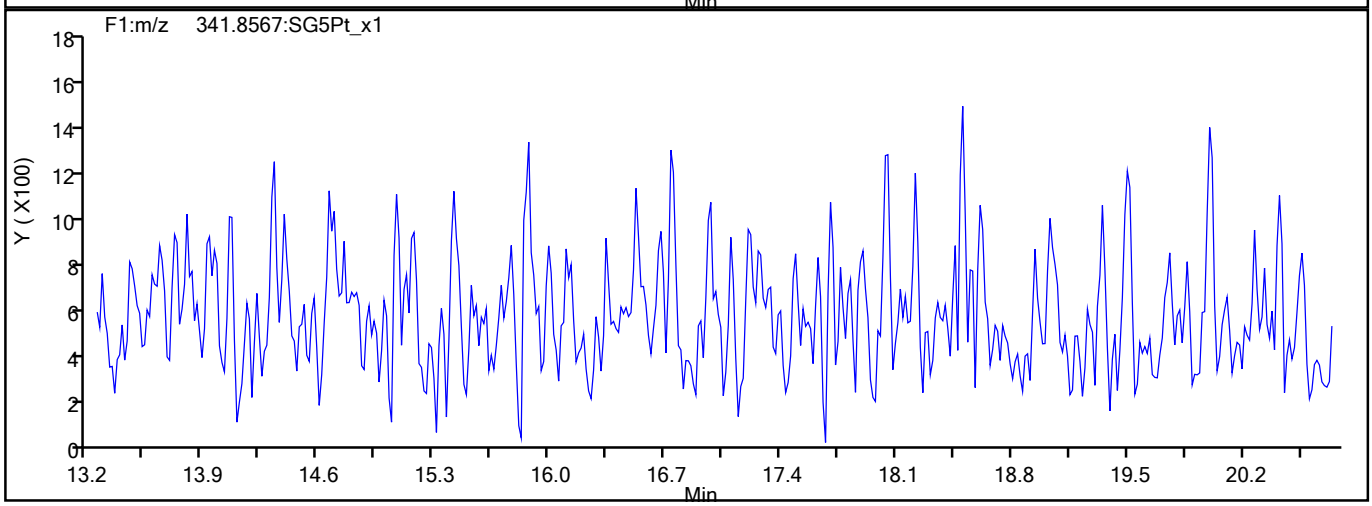

F1 PeCDFs Interference Mass

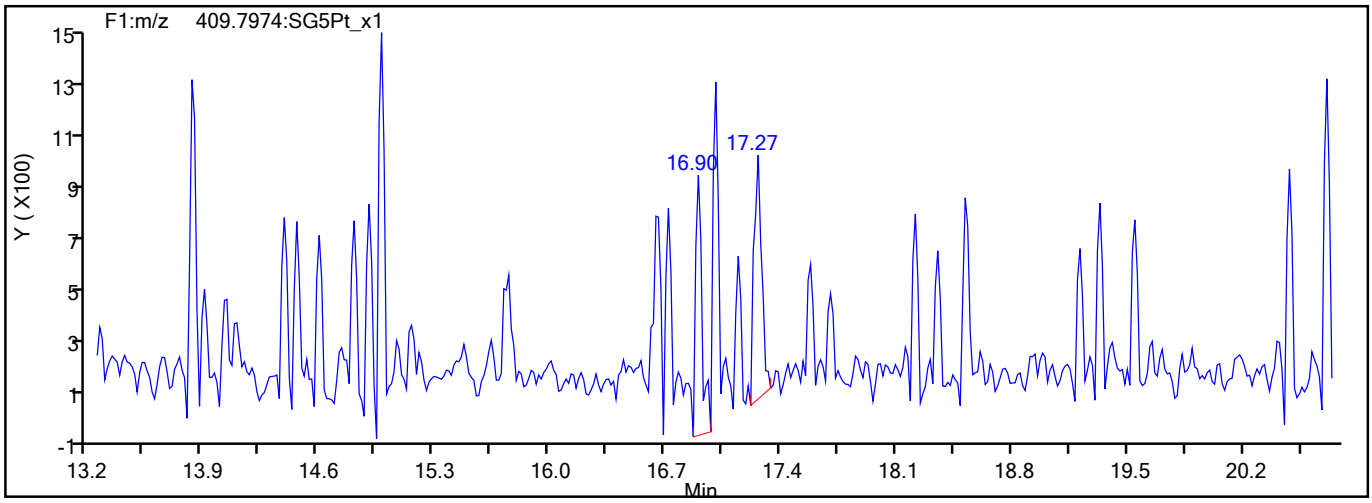

788816

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

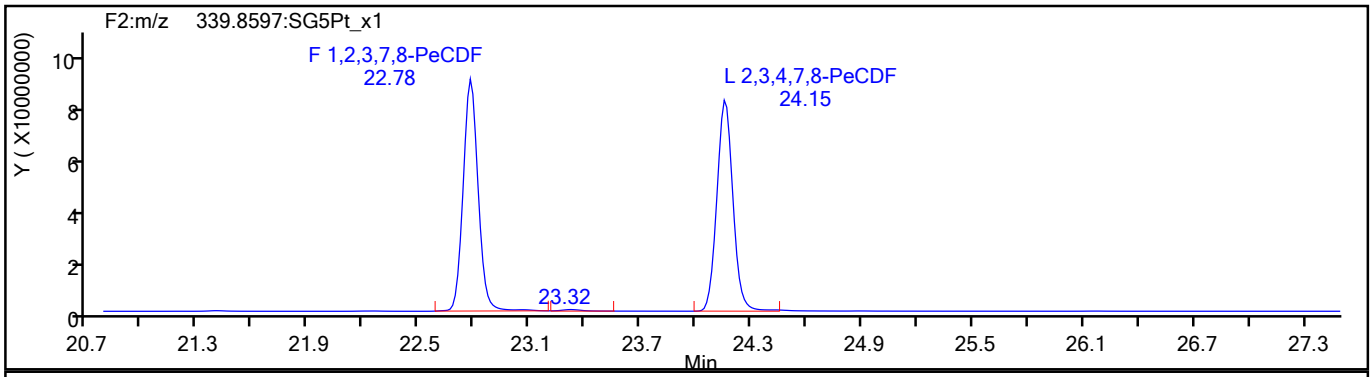

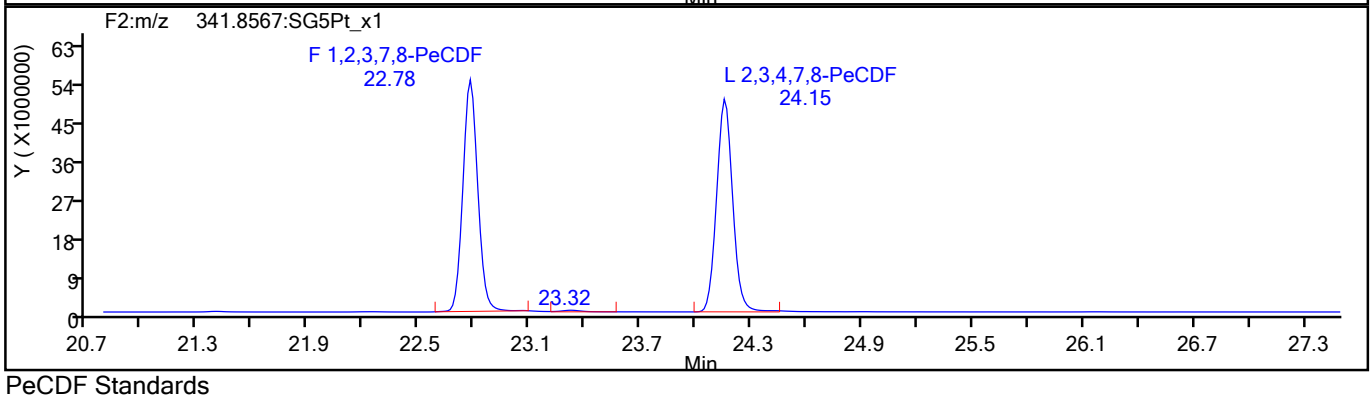

PeCDF Standards

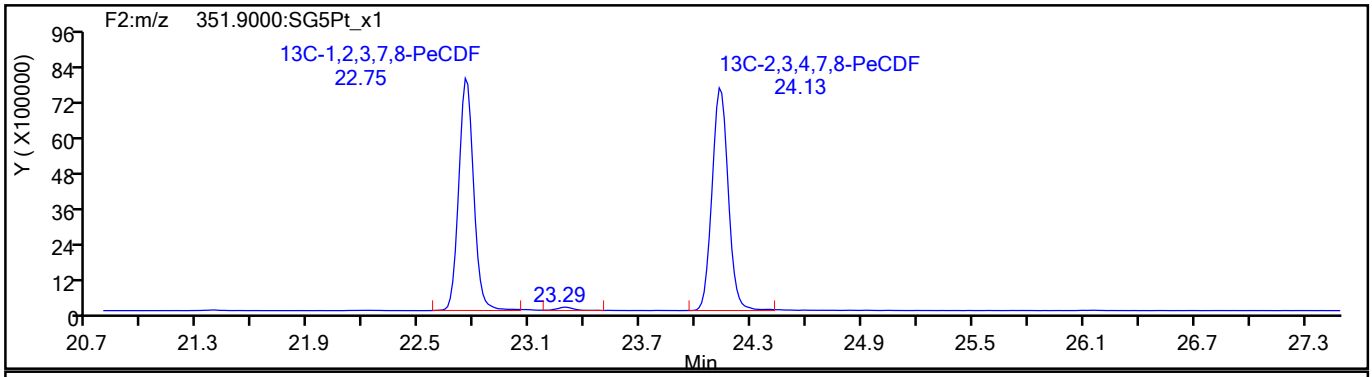

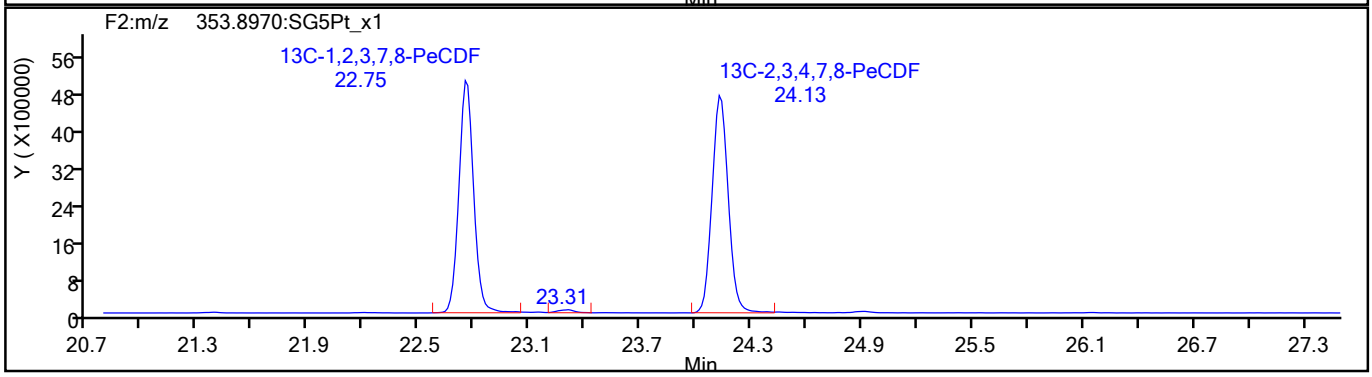

788817

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

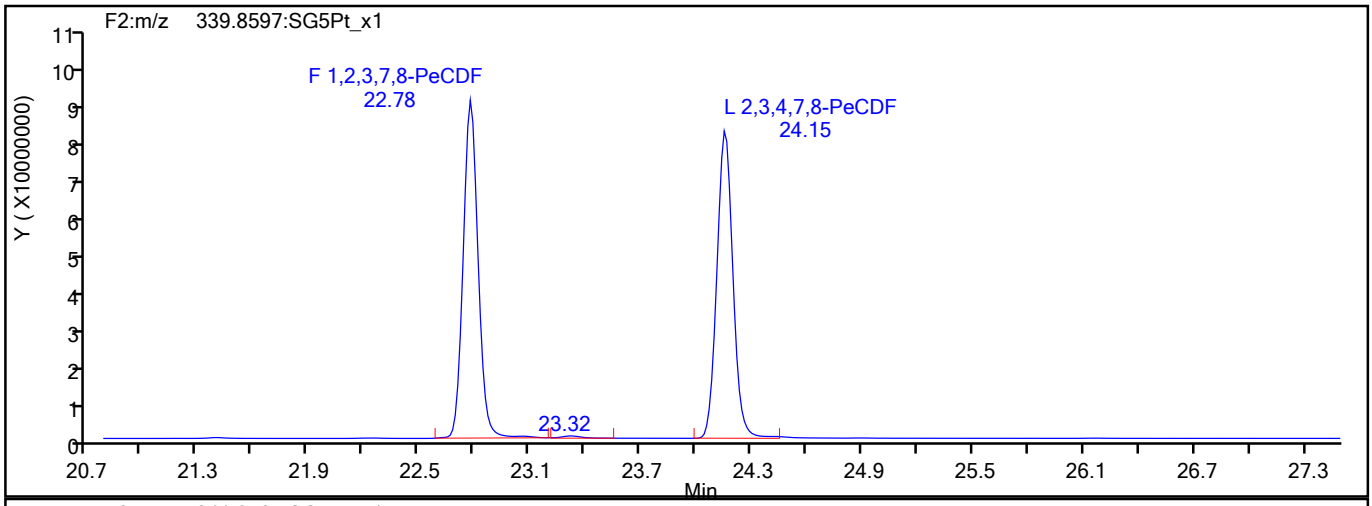

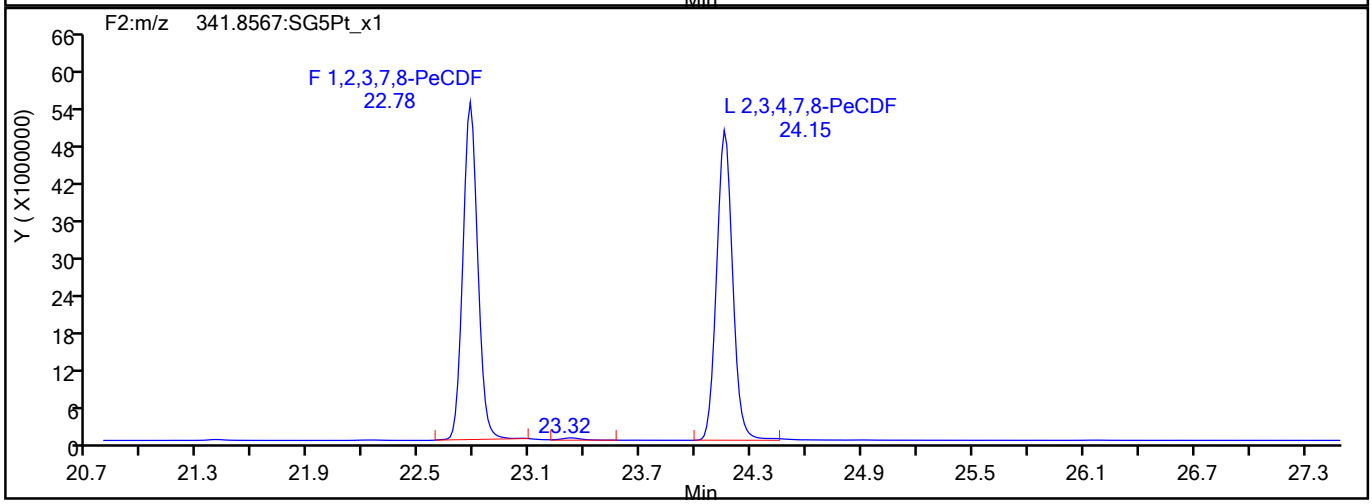

PeCDF Interference Mass

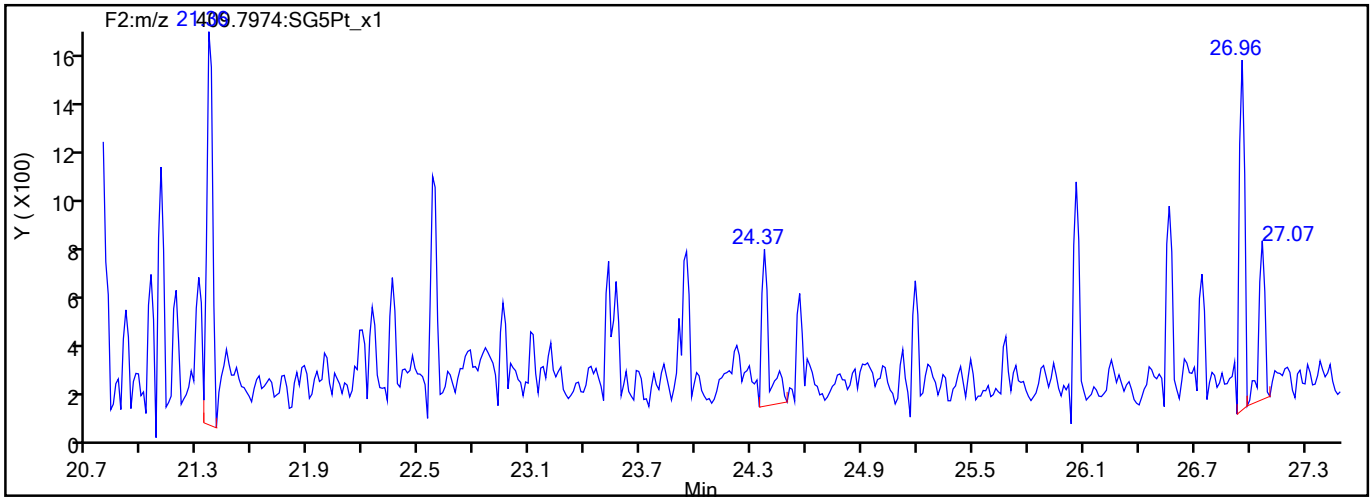

788818

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

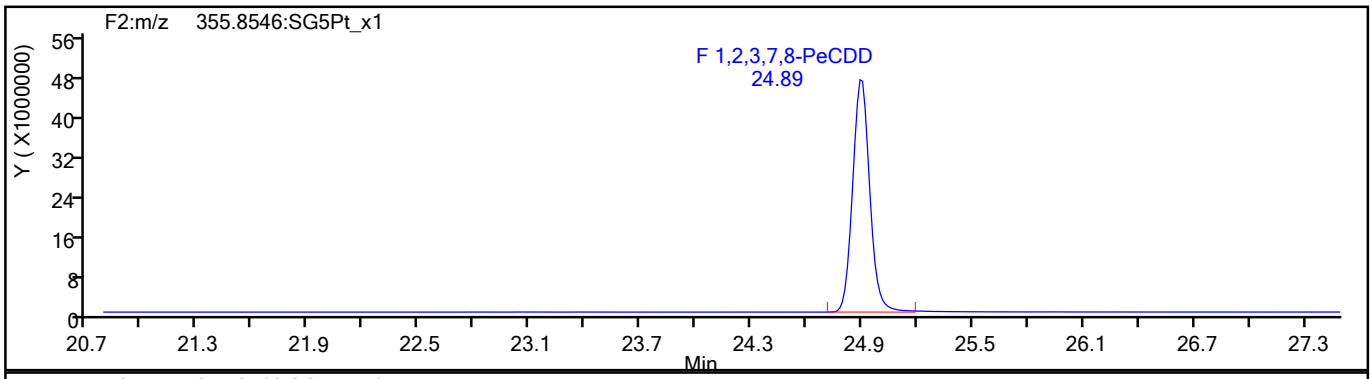

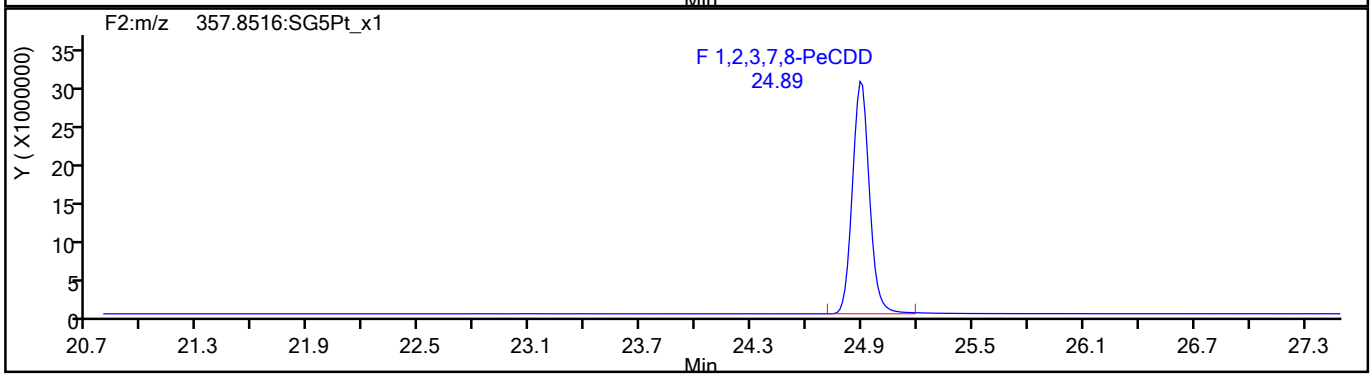

PeCDD Standards

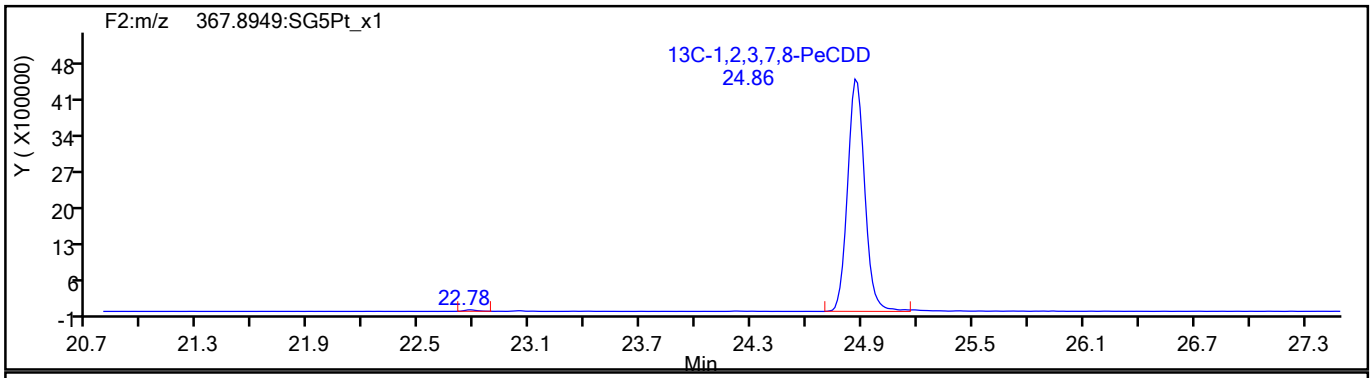

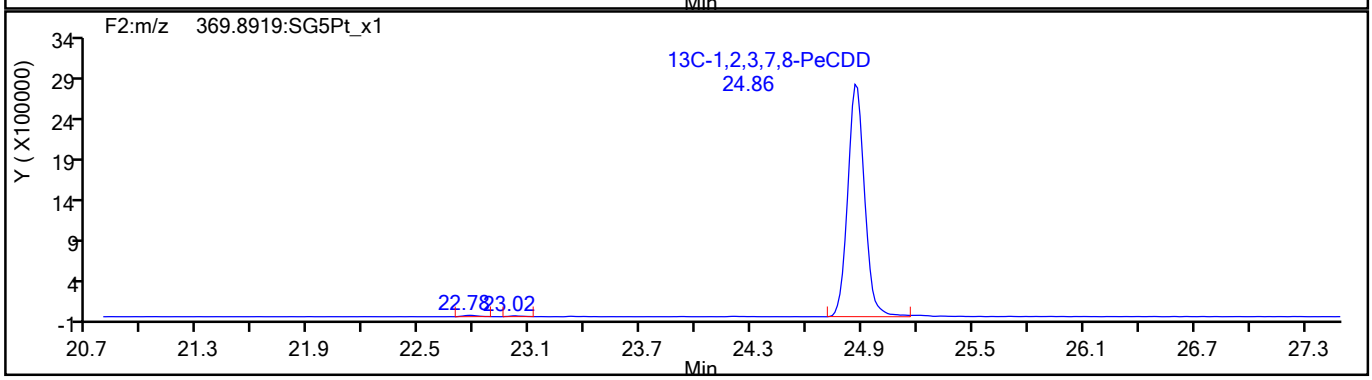

788819

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

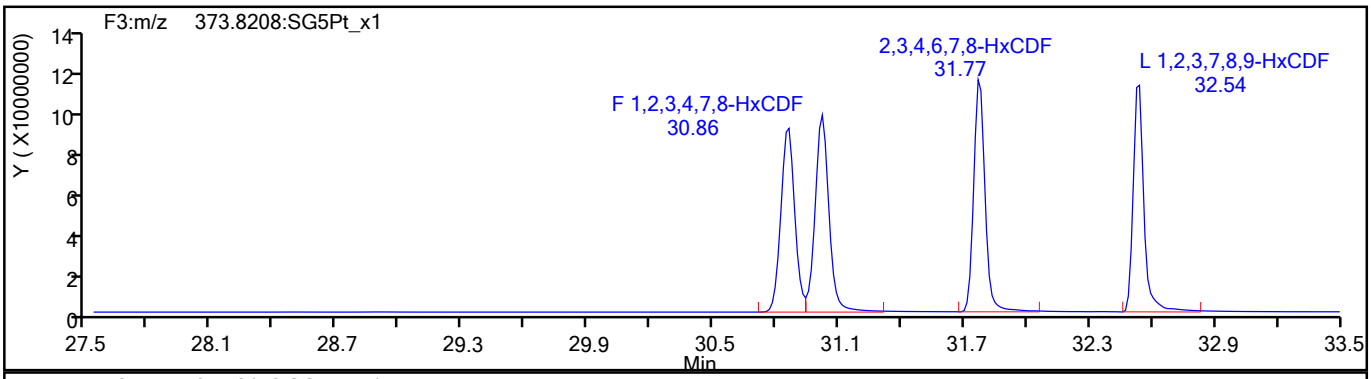

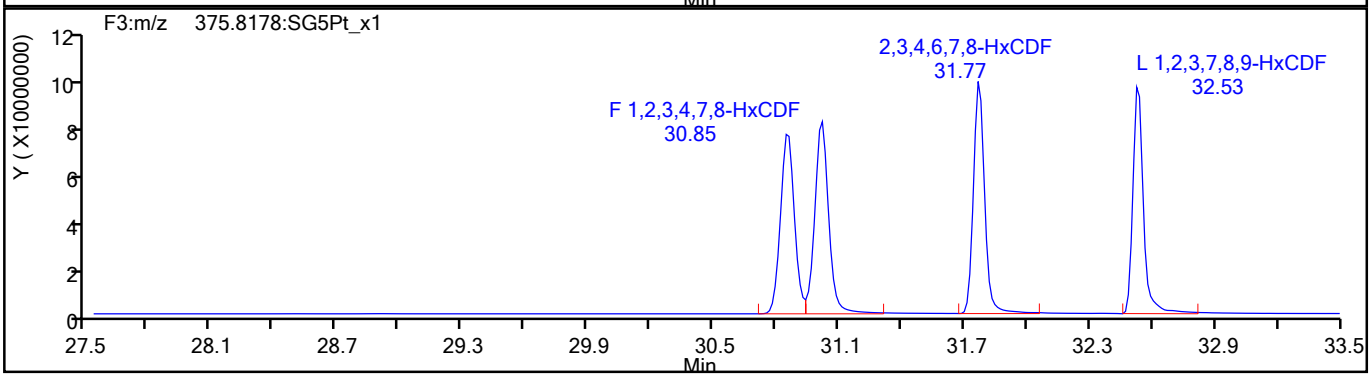

HxCDF Standards

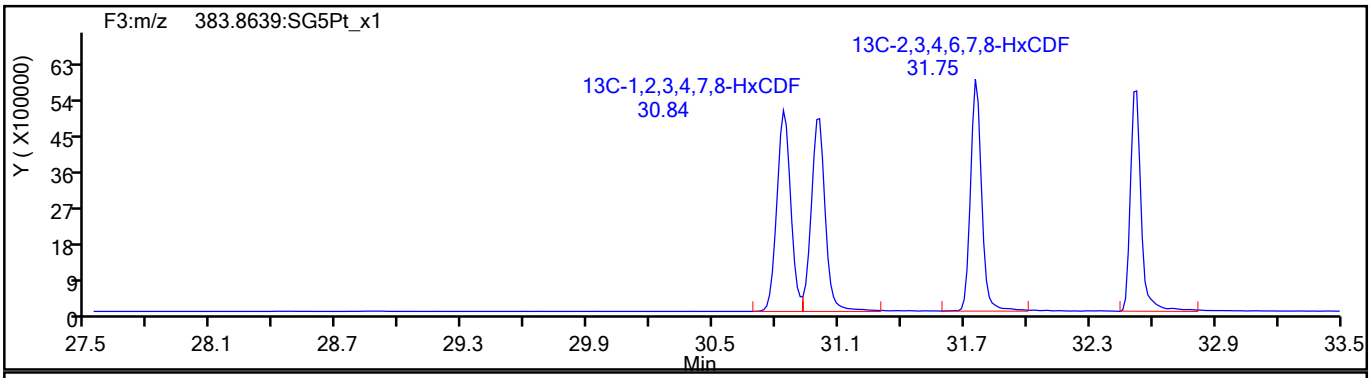

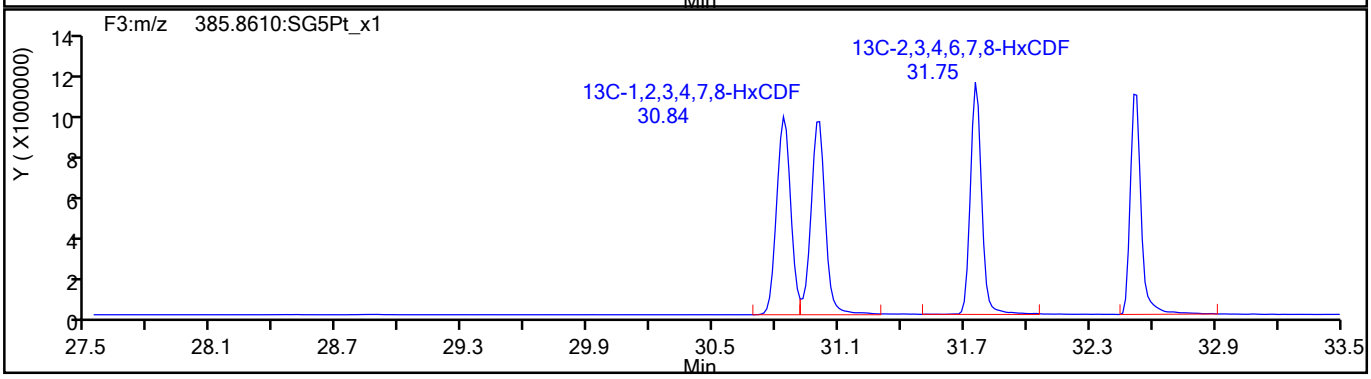

788820

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

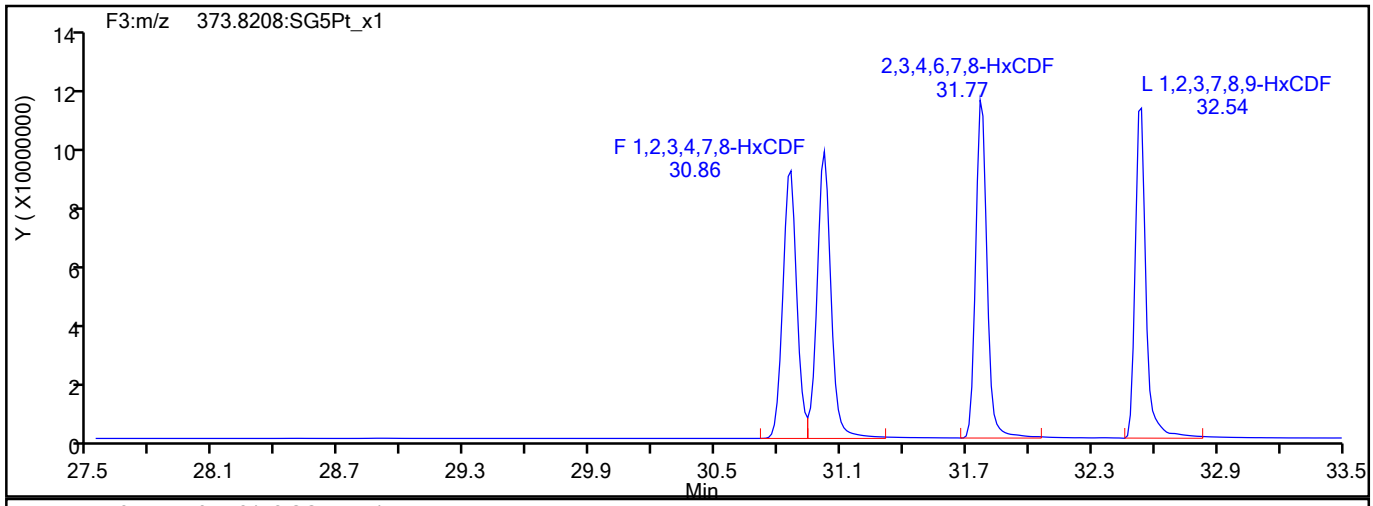

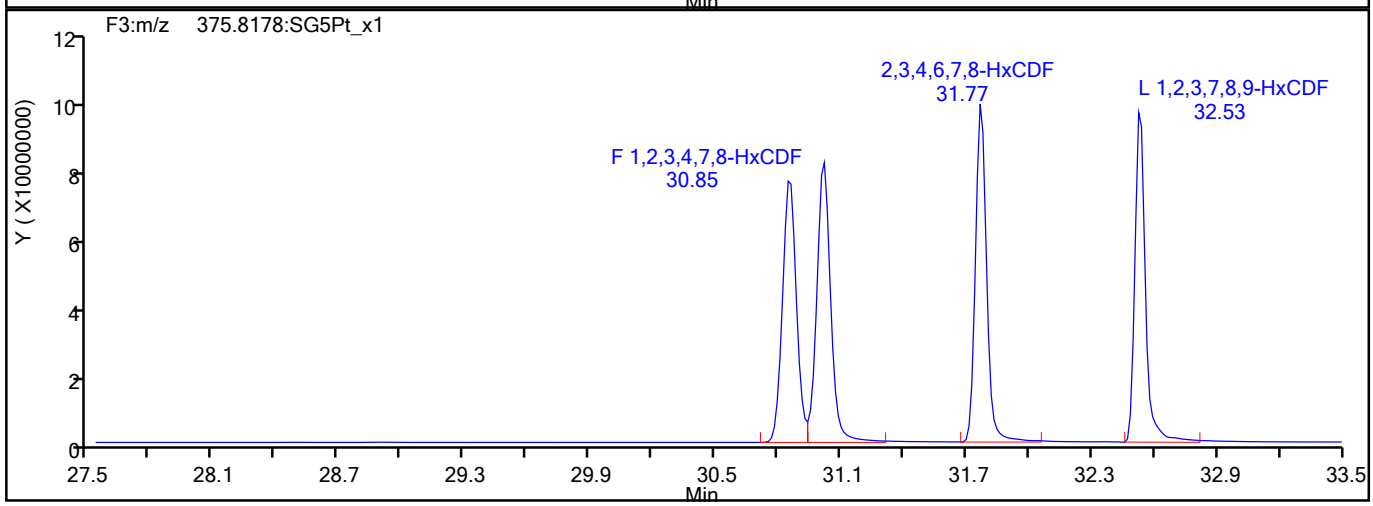

HxCDF Interference Mass

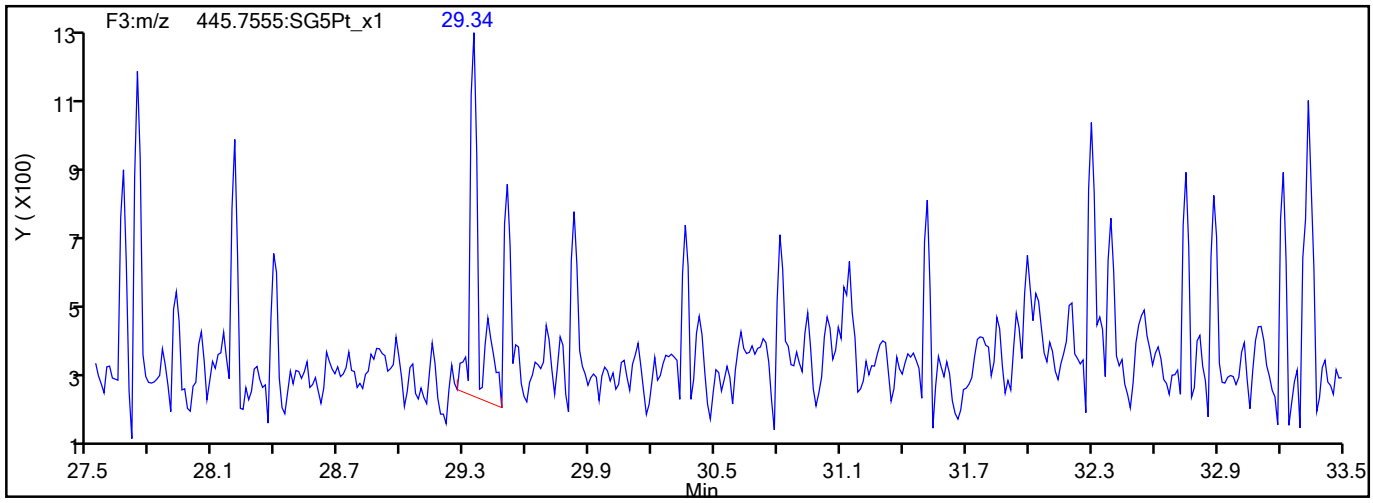

788821

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

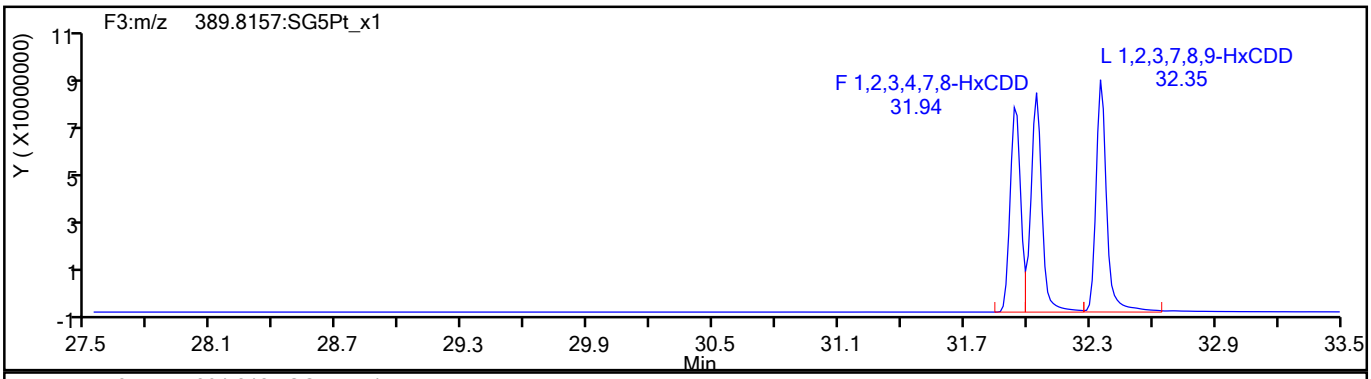

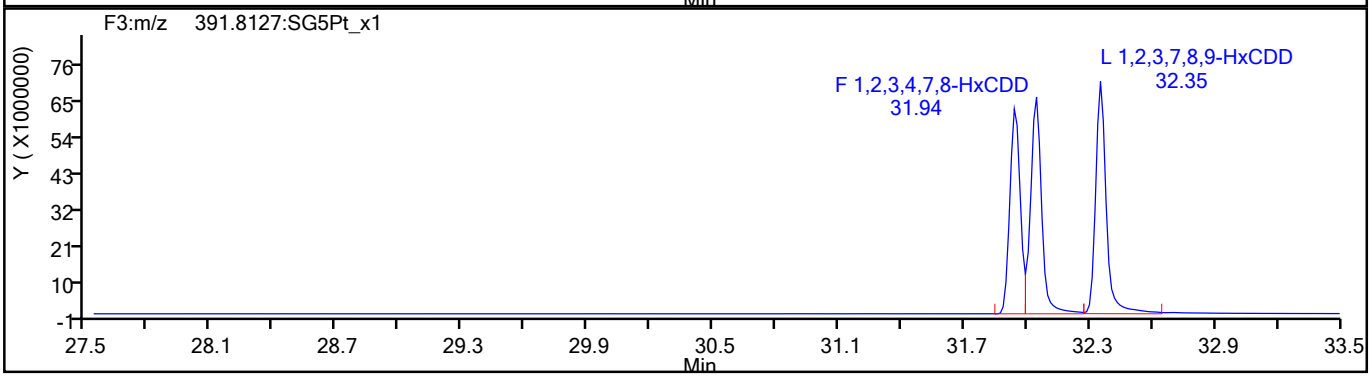

HxCDD Standards

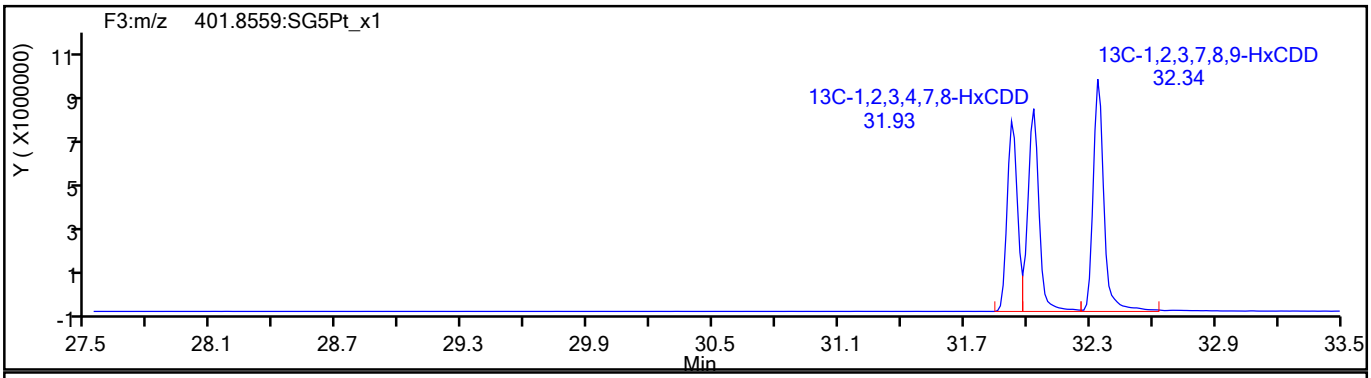

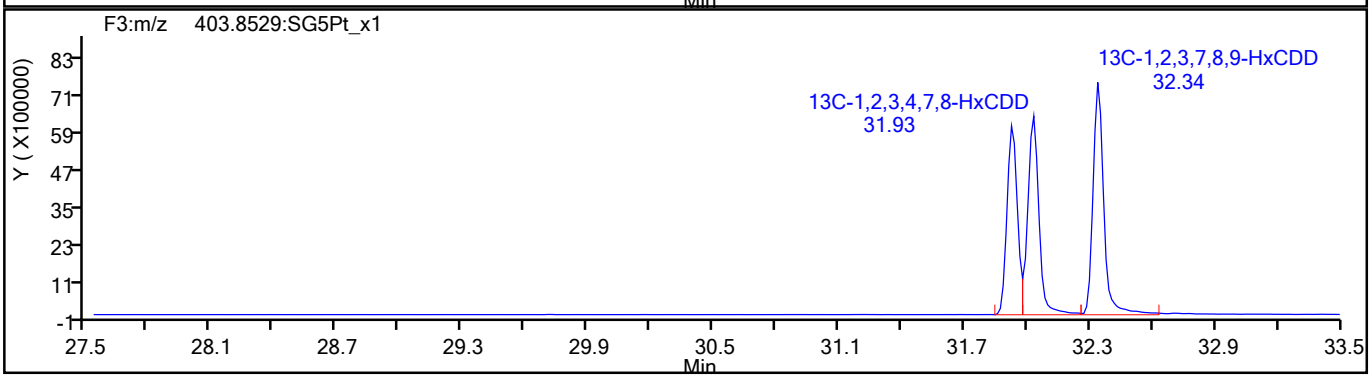

788822

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

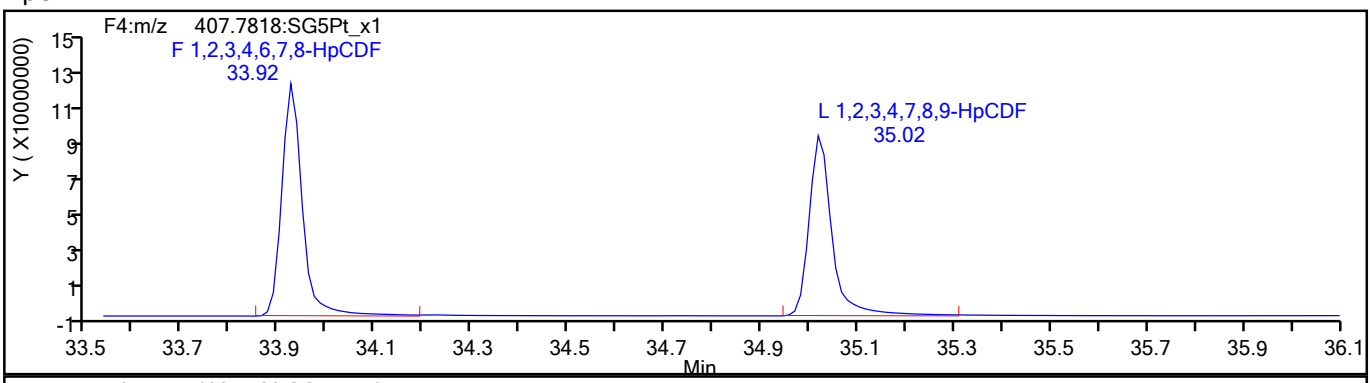

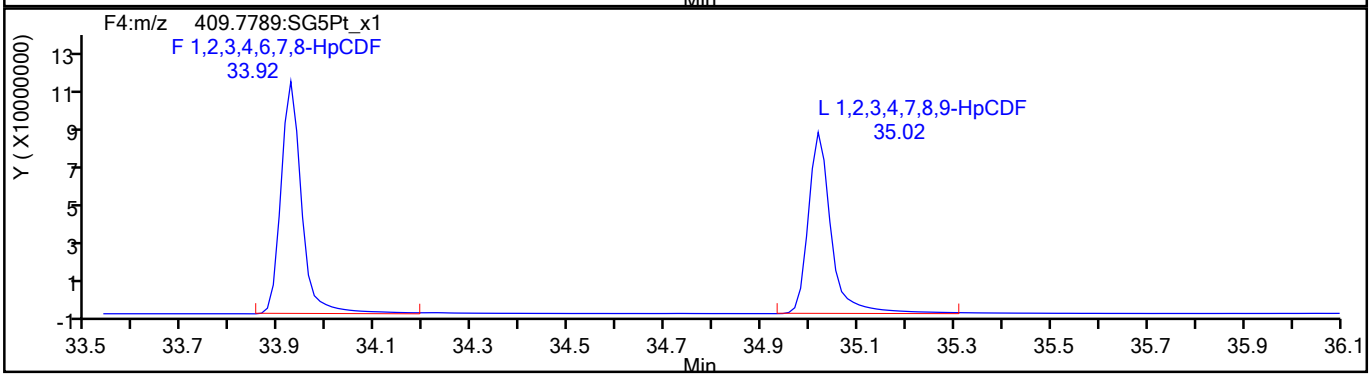

HpCDF Standards

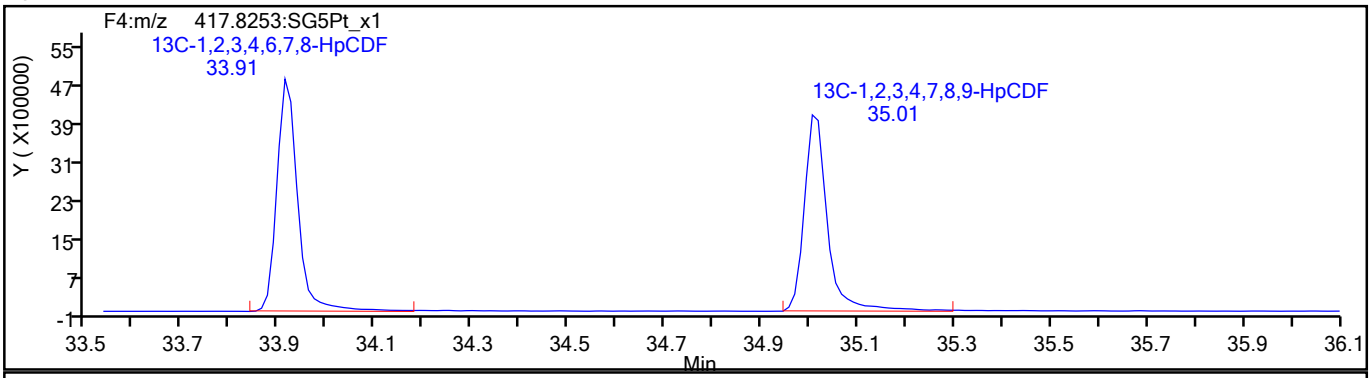

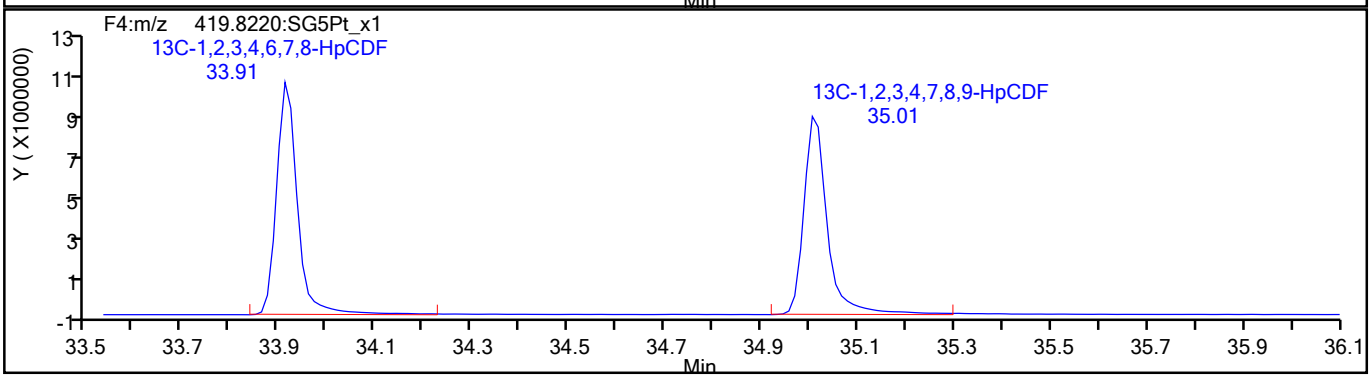

788823

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

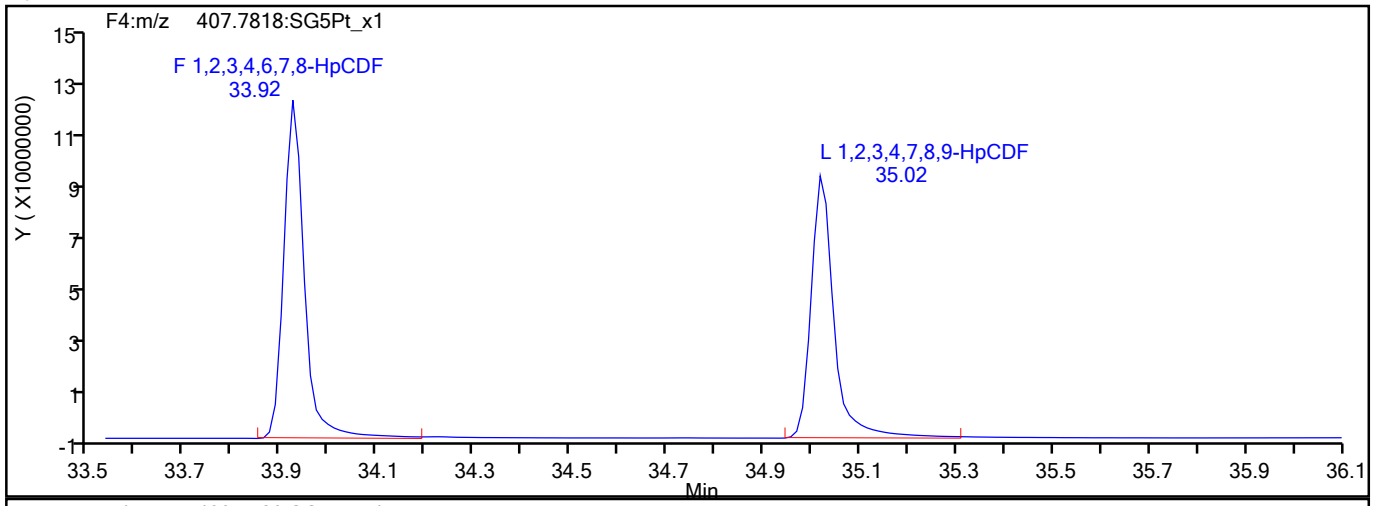

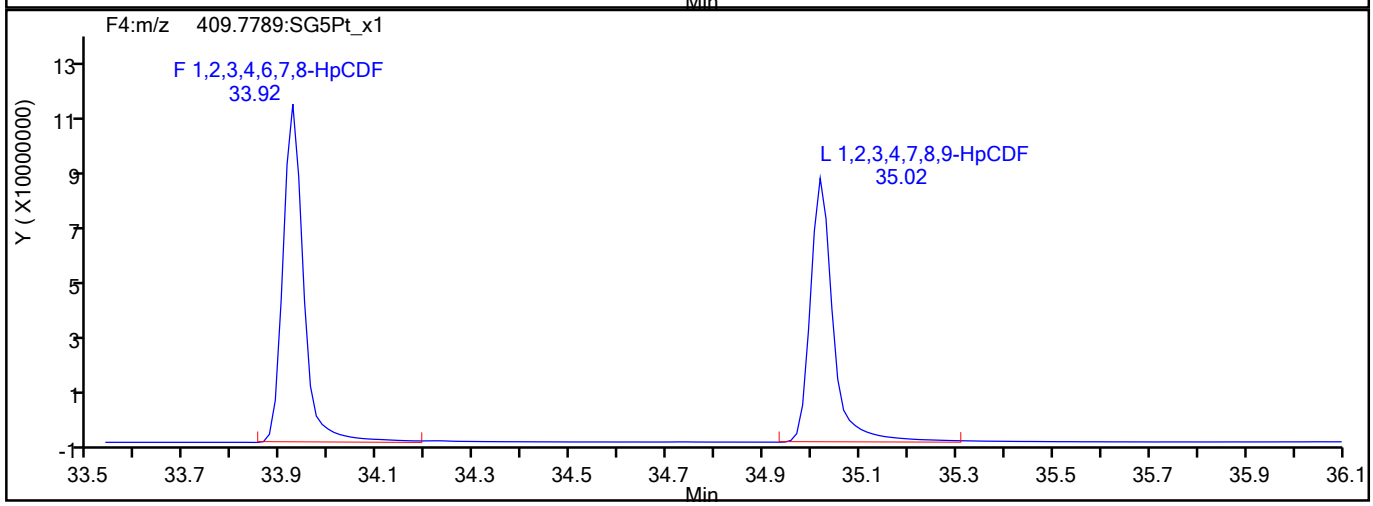

HpCDF Interference Mass

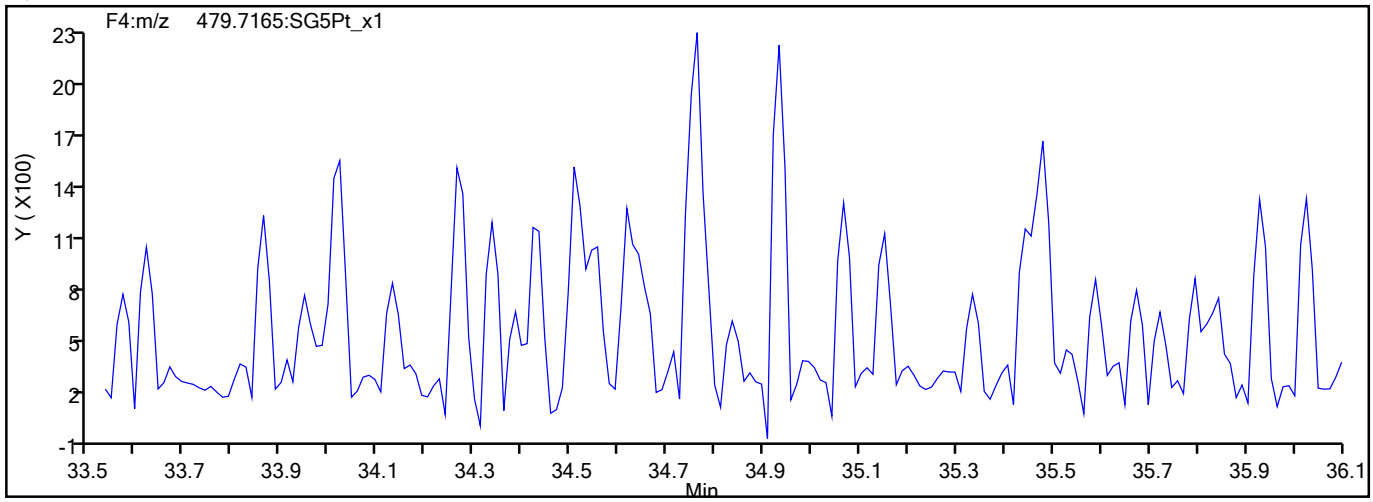

788824

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

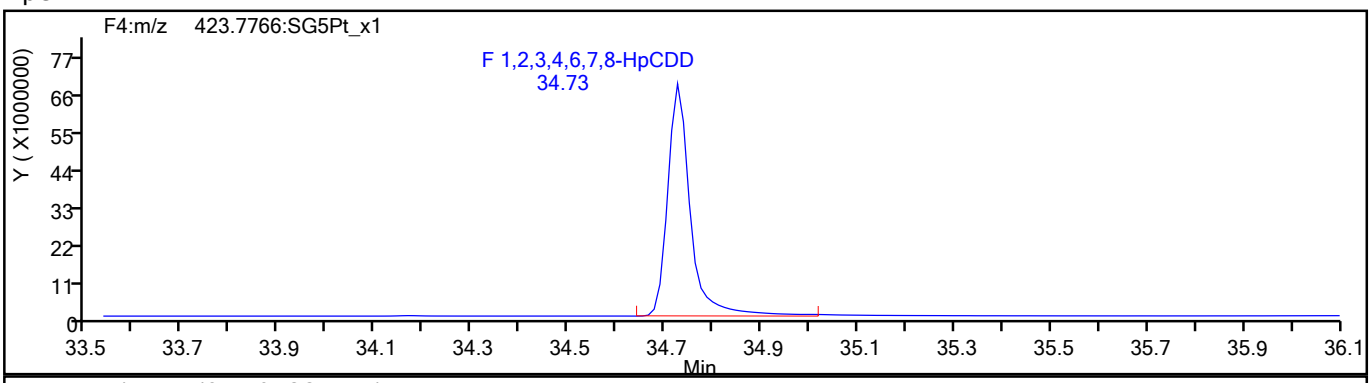

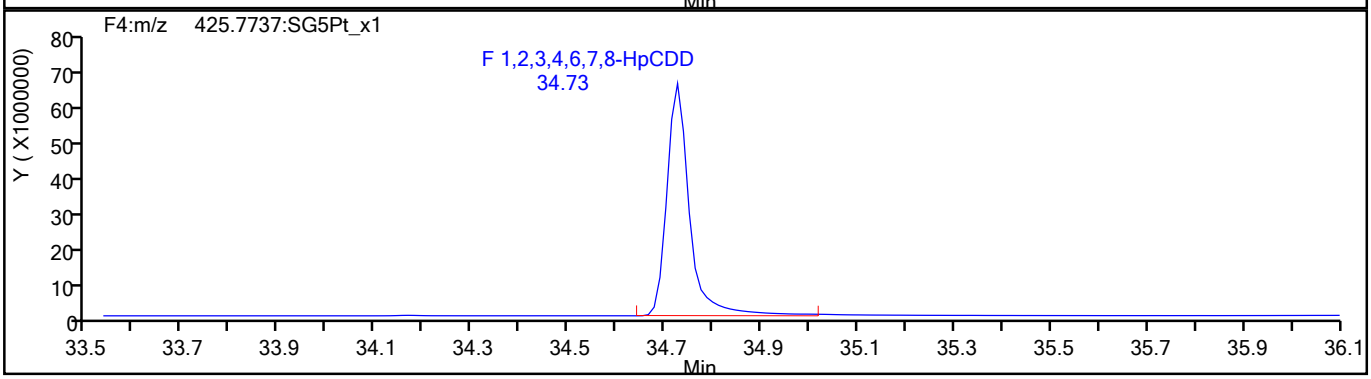

HpCDD Standards

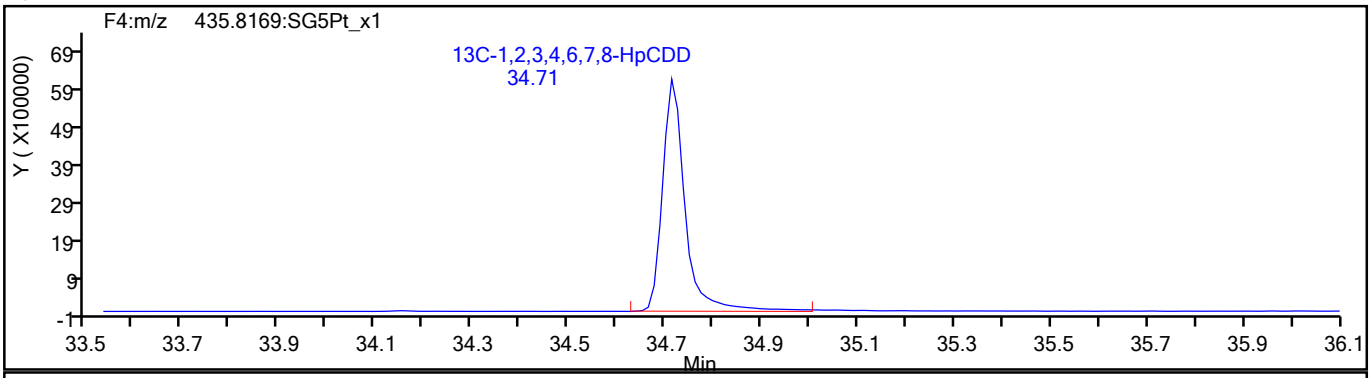

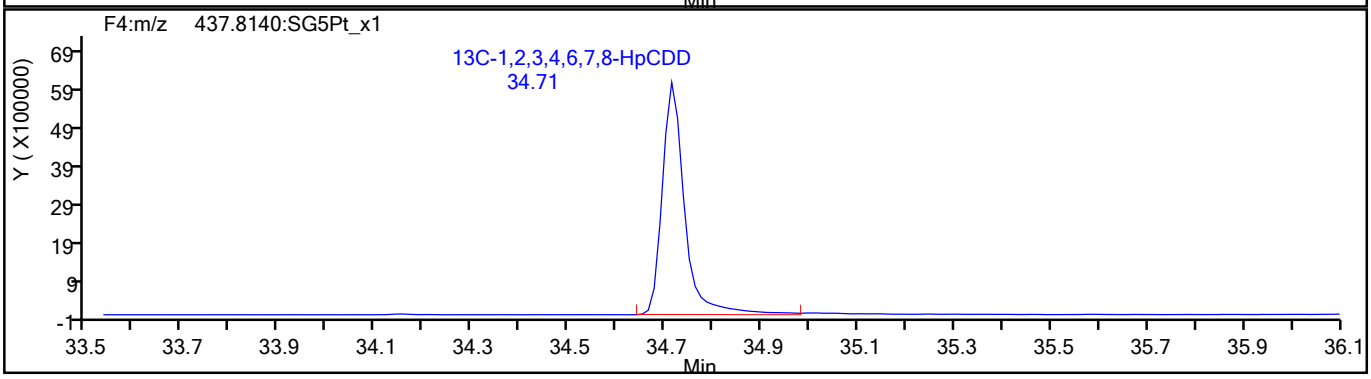

788825

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

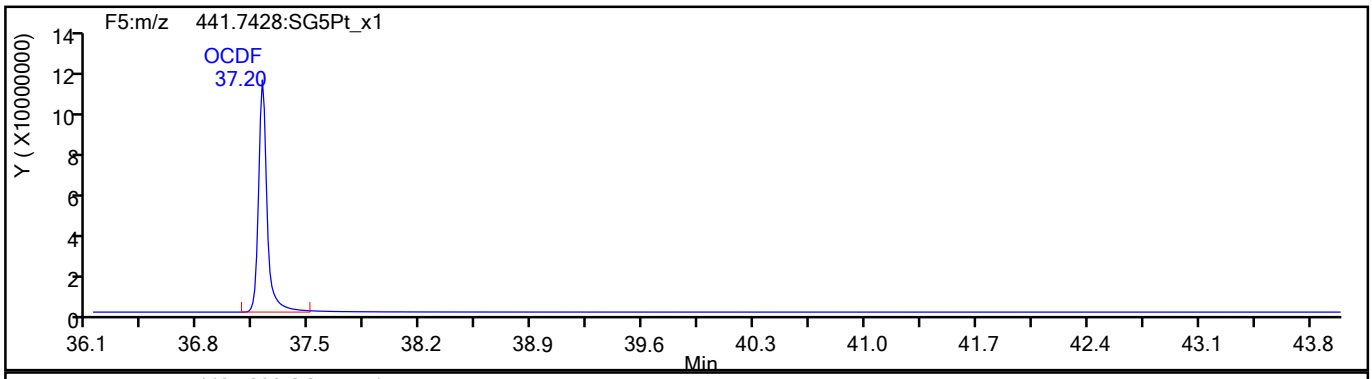

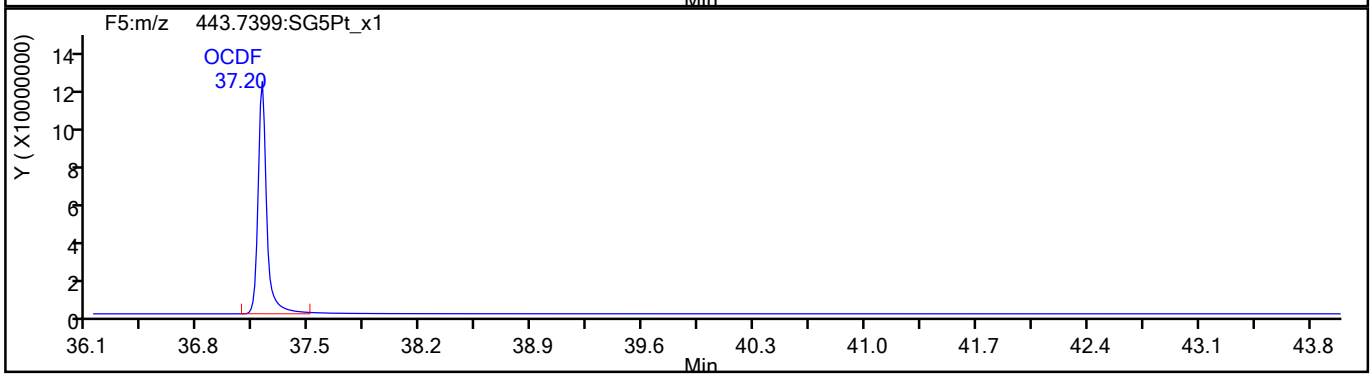

OCDF Standards

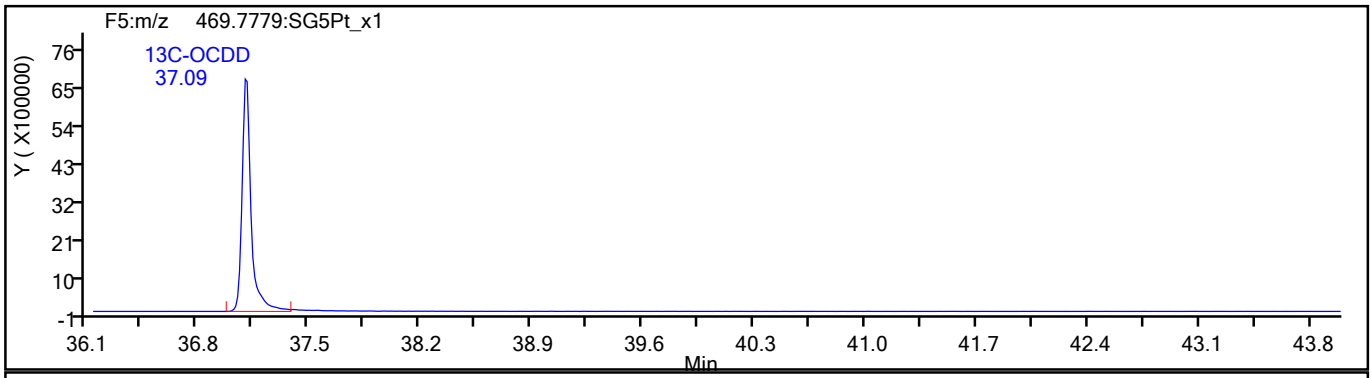

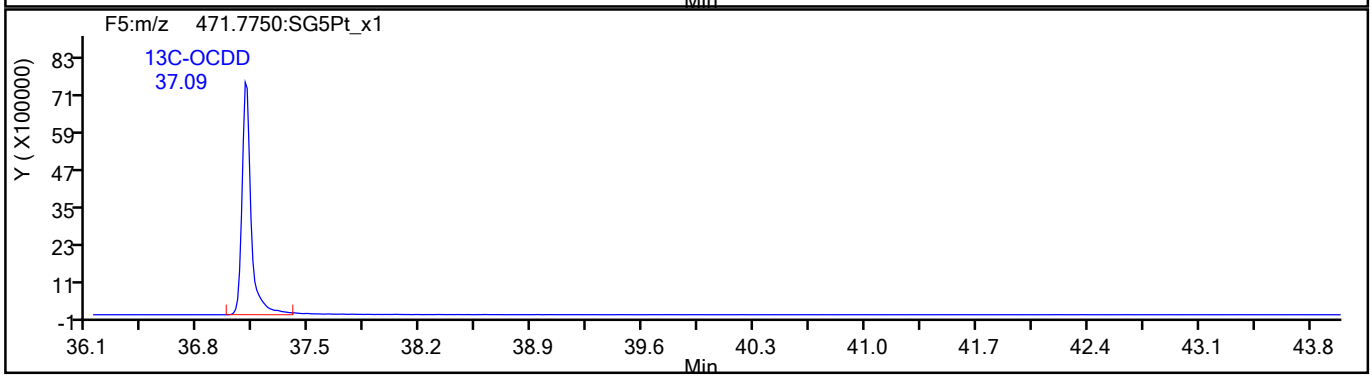

788826

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

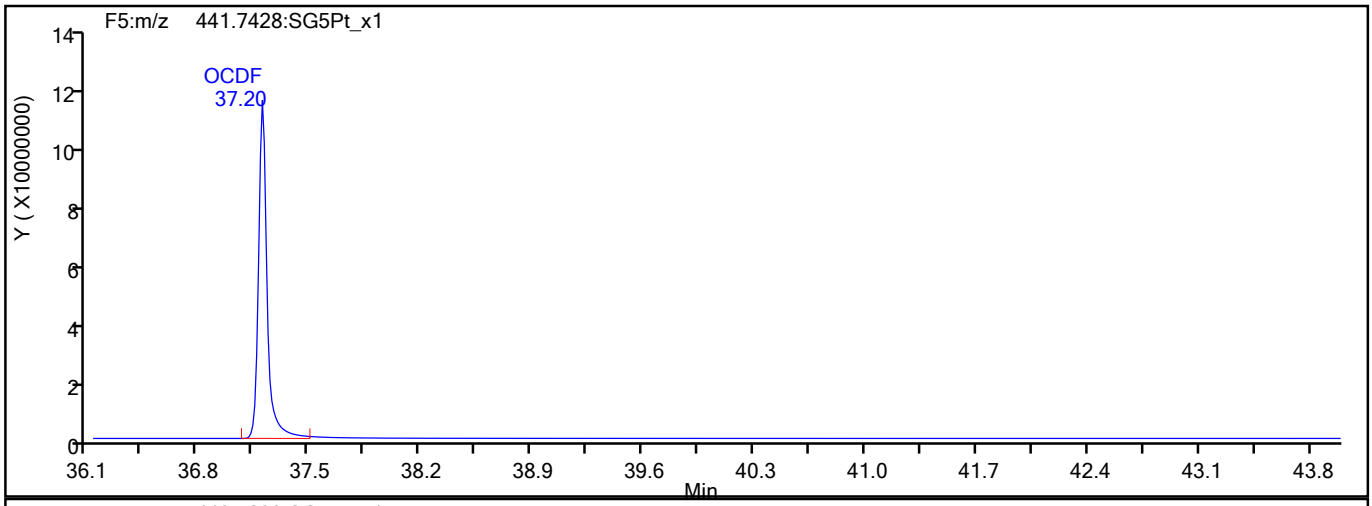

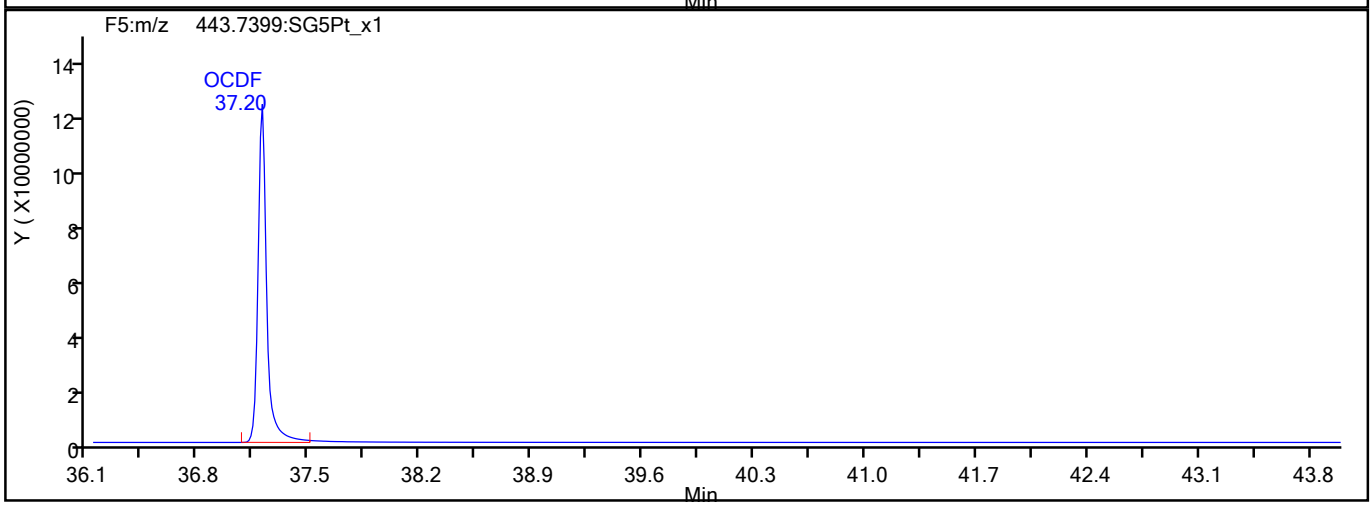

OCDF Interference Mass

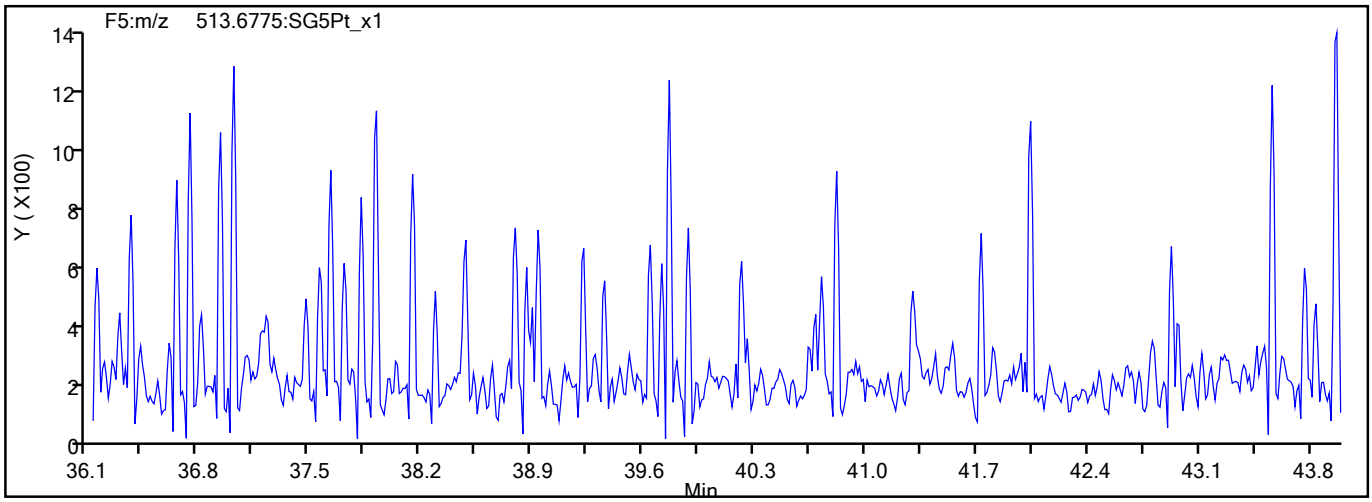

788827

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

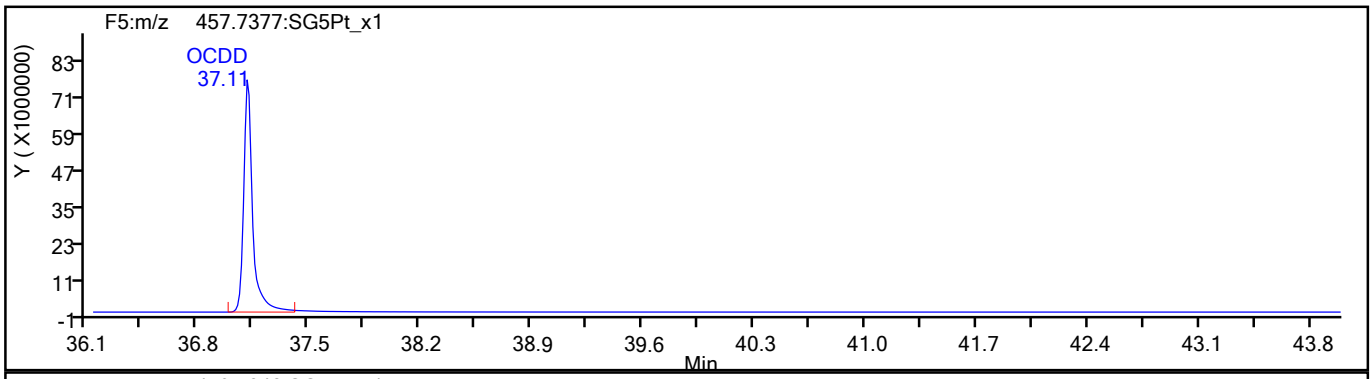

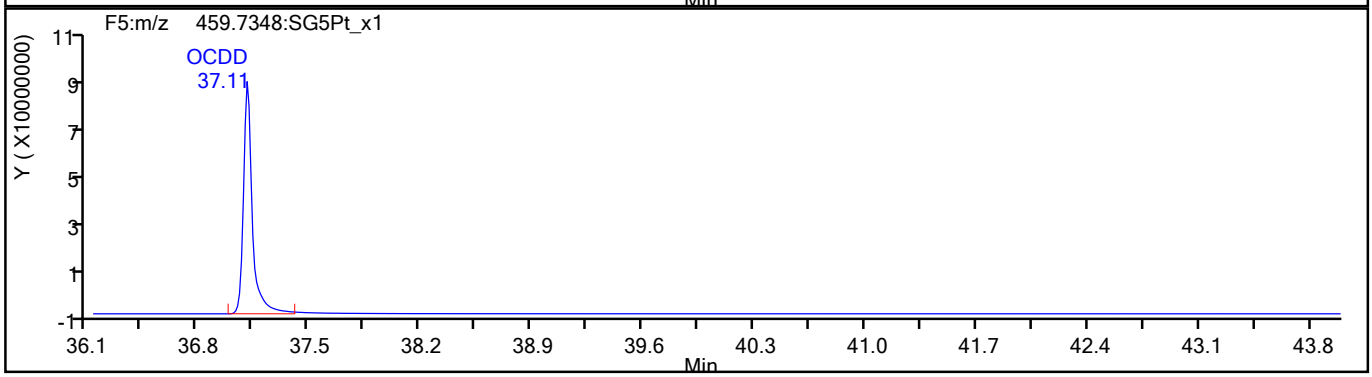

OCDD Standards

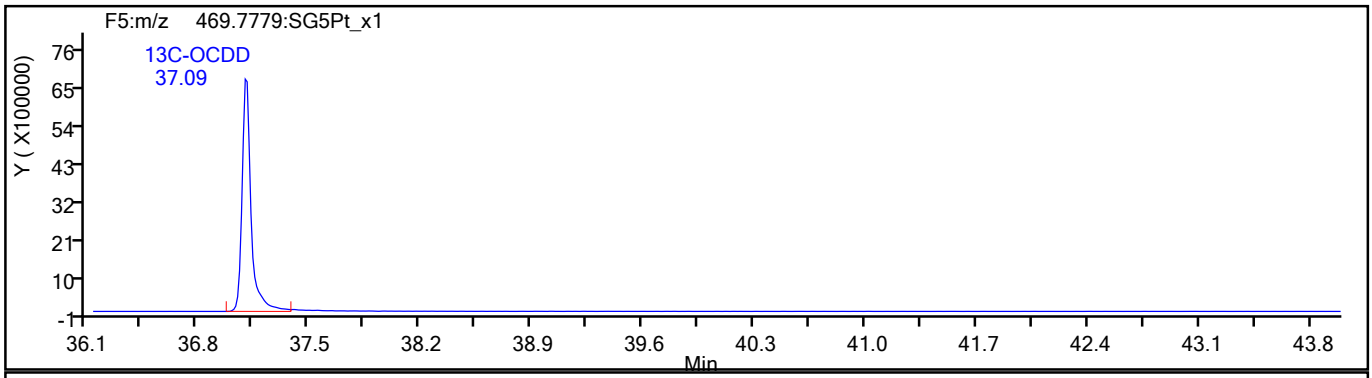

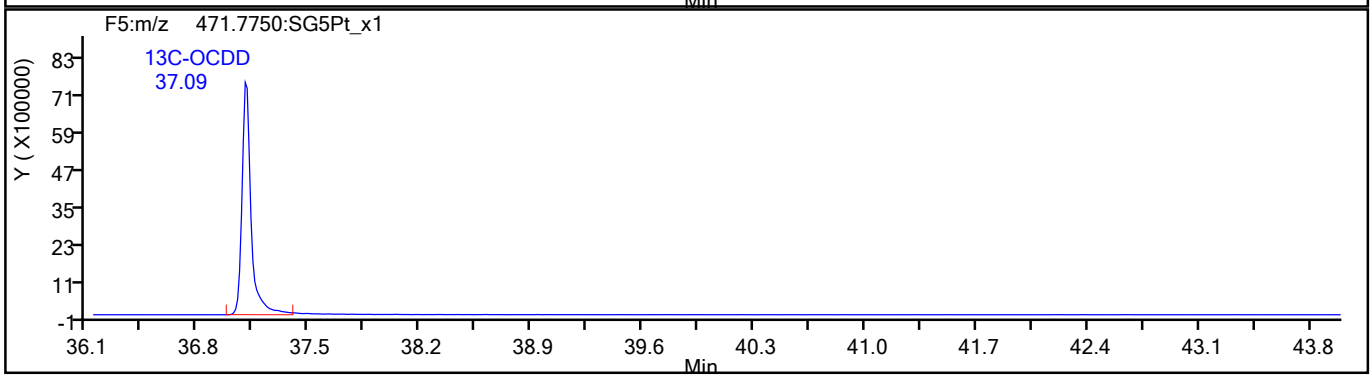

788828

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

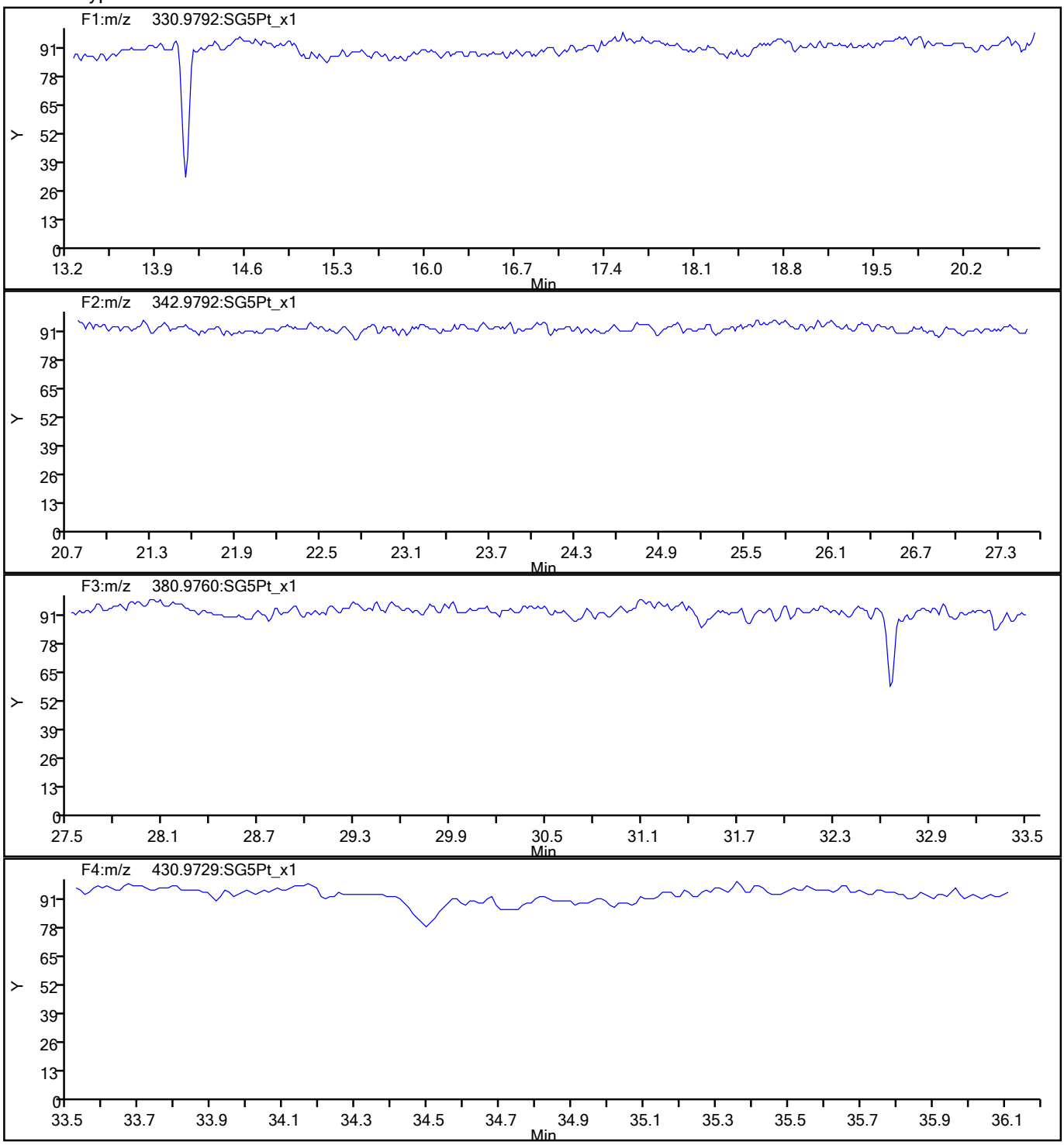

788829

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

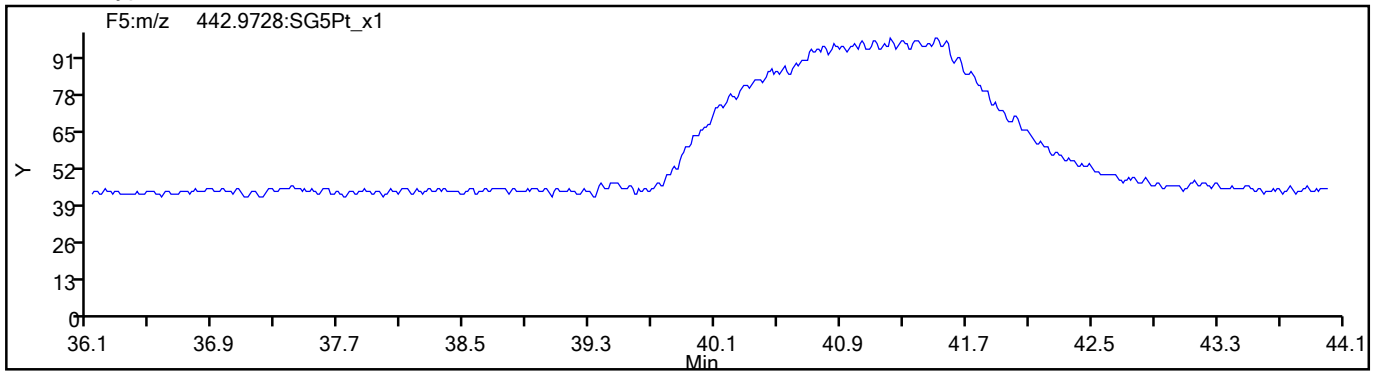

788830

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.094

Error Coefficients

Standard Error:	226000000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.779775	100.0	41876556.0	1.11191	Y
2	IC 320-510264/4	10.0	9.539499	100.0	38689128.0	0.95395	Y
3	IC 320-510264/5	50.0	55.880768	100.0	40333717.0	1.117615	Y
4	IC 320-510264/6	200.0	233.50404	100.0	40442950.0	1.16752	Y
5	IC 320-510264/7	1000.0	1120.518221	100.0	39395832.0	1.120518	Y

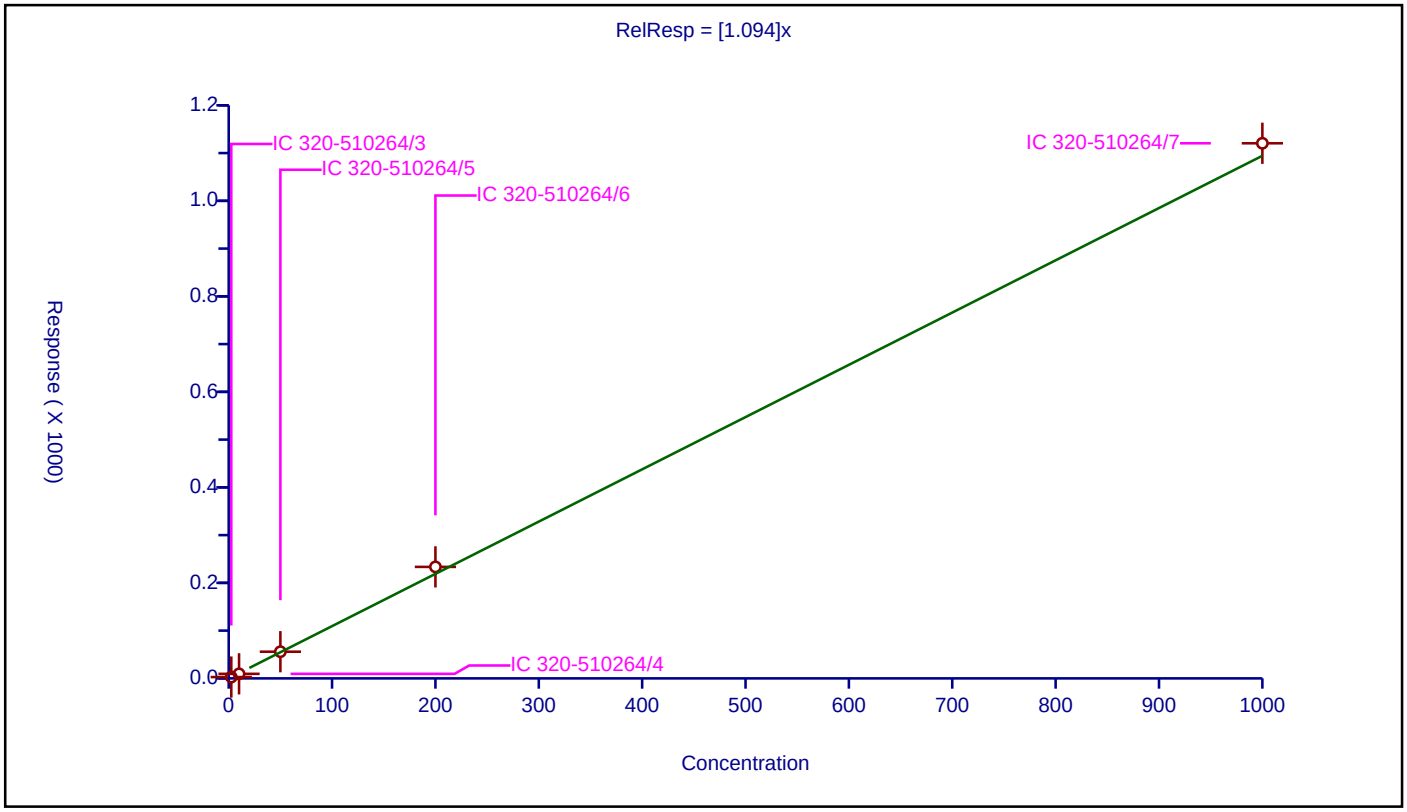

788831

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.441

Error Coefficients

Standard Error:	349000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.618521	100.0	51308225.0	1.447408	Y
2	IC 320-510264/4	10.0	12.412663	100.0	46691158.0	1.241266	Y
3	IC 320-510264/5	50.0	74.932304	100.0	47697671.0	1.498646	Y
4	IC 320-510264/6	200.0	309.702692	100.0	47752972.0	1.548513	Y
5	IC 320-510264/7	1000.0	1470.622057	100.0	46328151.0	1.470622	Y

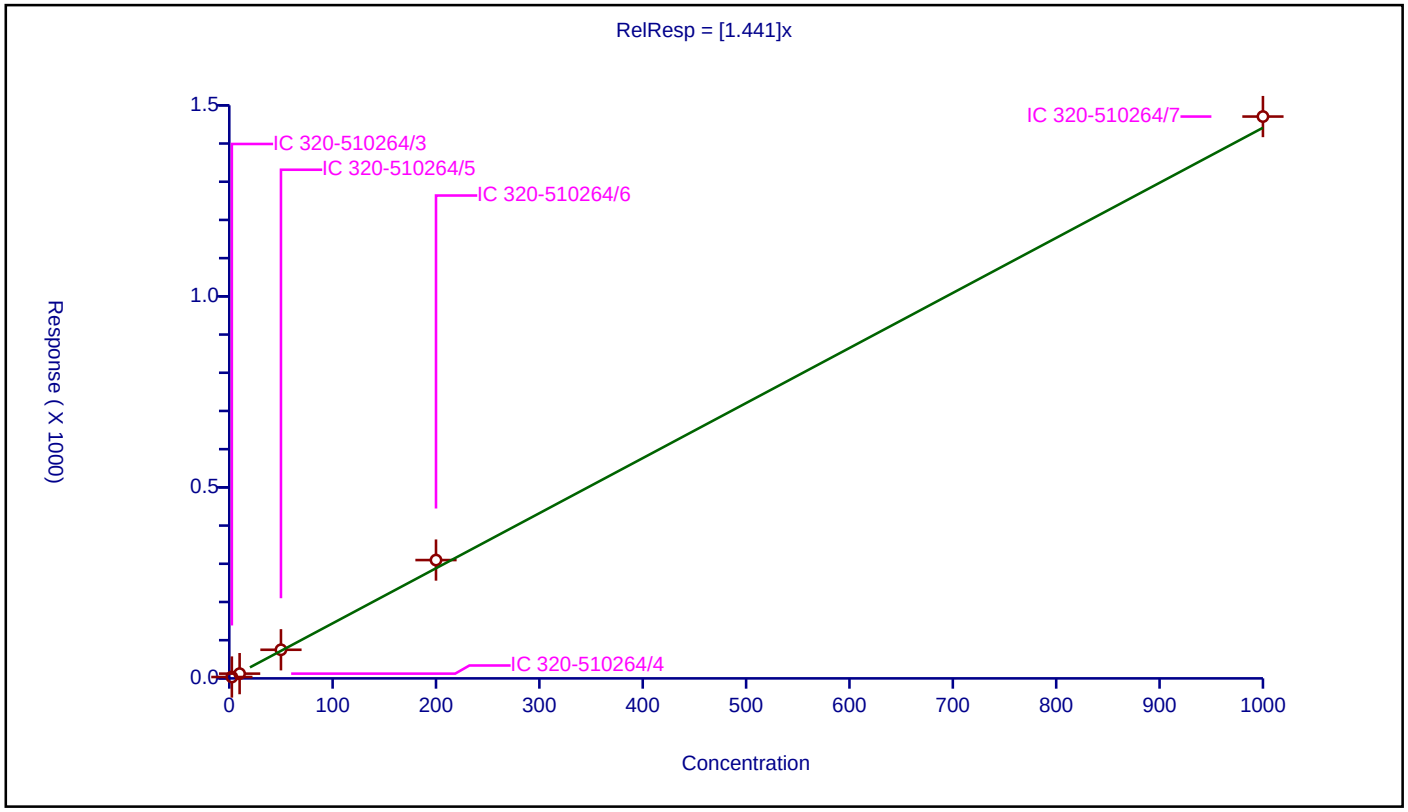

788832

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	302000000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.284087	100.0	44628352.0	1.313635	Y
2	IC 320-510264/4	10.0	11.269366	100.0	42362179.0	1.126937	Y
3	IC 320-510264/5	50.0	68.111875	100.0	43238622.0	1.362237	Y
4	IC 320-510264/6	200.0	290.409045	100.0	42687625.0	1.452045	Y
5	IC 320-510264/7	1000.0	1332.064187	100.0	44333848.0	1.332064	Y

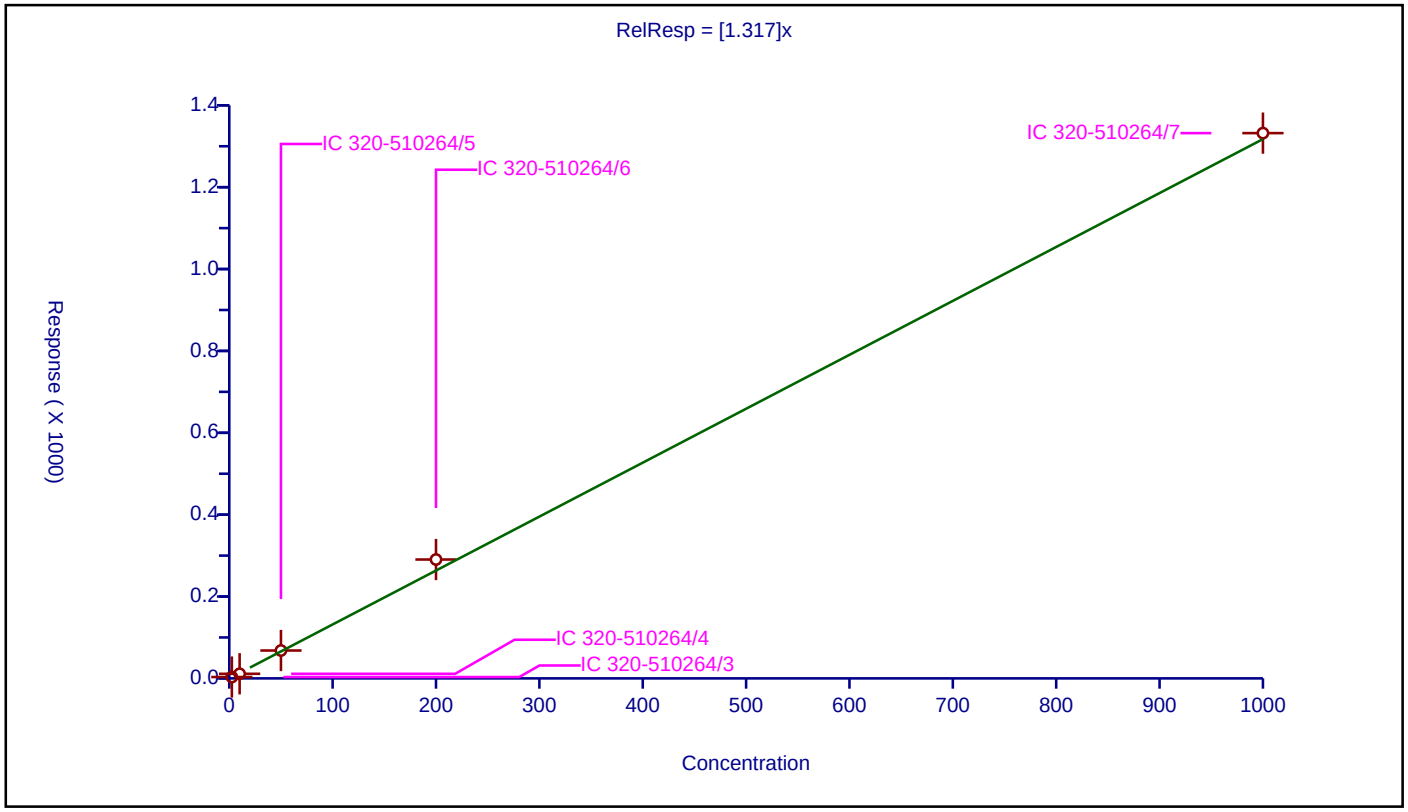

788833

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	248000000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.744793	100.0	47363504.0	1.097917	Y
2	IC 320-510264/4	10.0	8.90634	100.0	44877133.0	0.890634	Y
3	IC 320-510264/5	50.0	56.519553	100.0	44039927.0	1.130391	Y
4	IC 320-510264/6	200.0	233.423018	100.0	44144841.0	1.167115	Y
5	IC 320-510264/7	1000.0	1034.115245	100.0	46886171.0	1.034115	Y

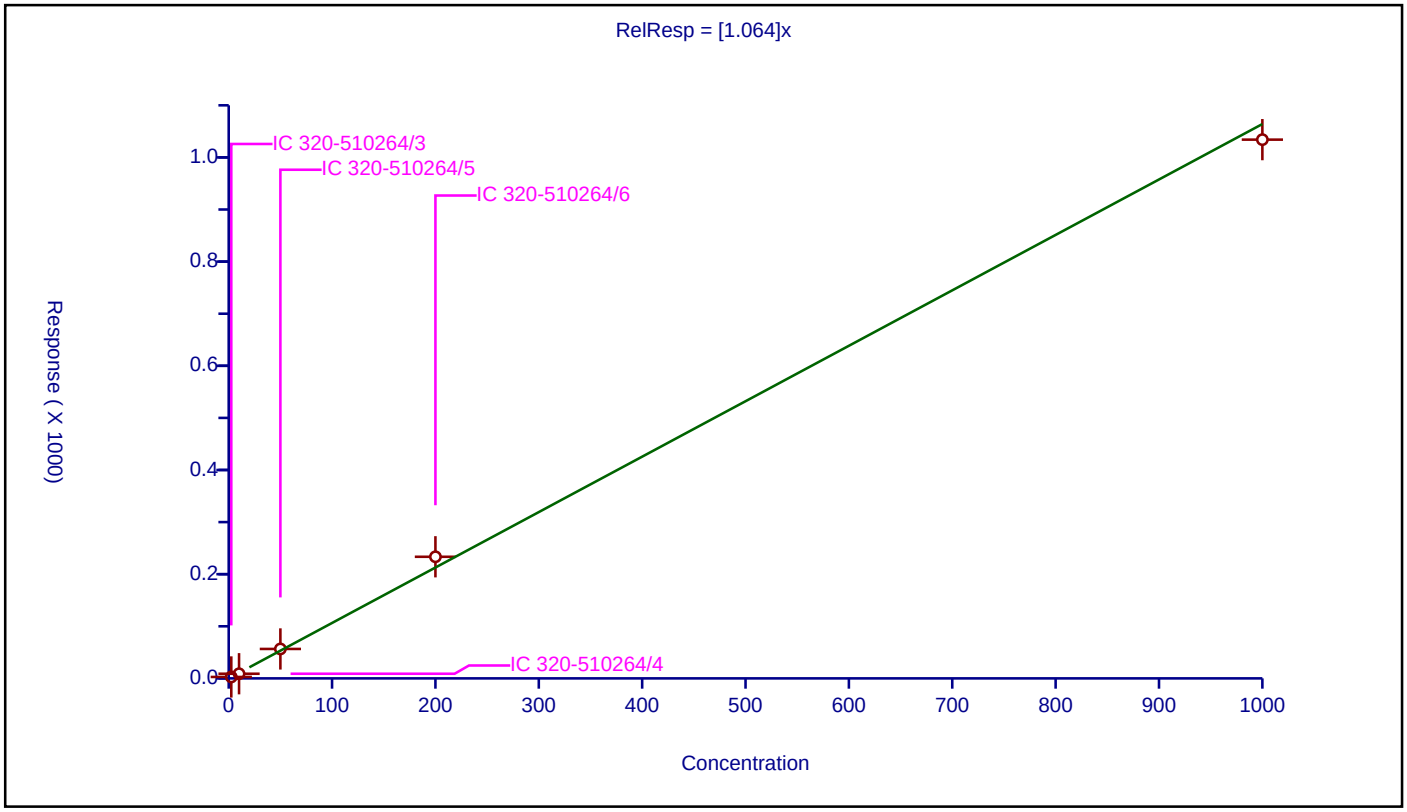

788834

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.085

Error Coefficients

Standard Error:	377000000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.805608	100.0	69484482.0	1.122243	Y
2	IC 320-510264/4	10.0	9.192224	100.0	65726932.0	0.919222	Y
3	IC 320-510264/5	50.0	55.122828	100.0	68075509.0	1.102457	Y
4	IC 320-510264/6	200.0	238.727102	100.0	64951889.0	1.193636	Y
5	IC 320-510264/7	1000.0	1088.07626	100.0	67741189.0	1.088076	Y

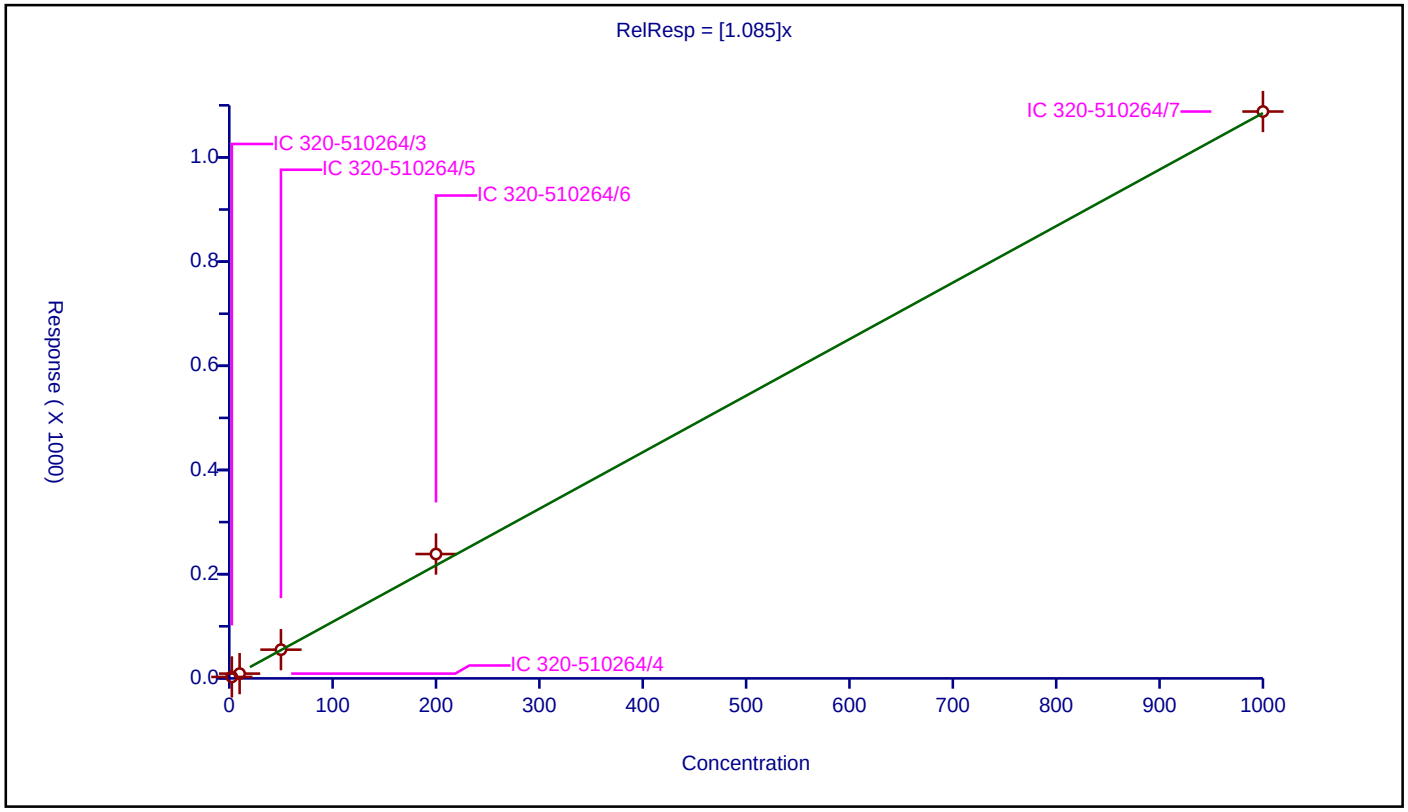

788835

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1

Error Coefficients

Standard Error:	278000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.57359	100.0	56759108.0	1.029436	Y
2	IC 320-510264/4	10.0	8.528531	100.0	52974056.0	0.852853	Y
3	IC 320-510264/5	50.0	50.563423	100.0	55284532.0	1.011268	Y
4	IC 320-510264/6	200.0	218.597288	100.0	54392394.0	1.092986	Y
5	IC 320-510264/7	1000.0	1013.848486	100.0	53564396.0	1.013848	Y

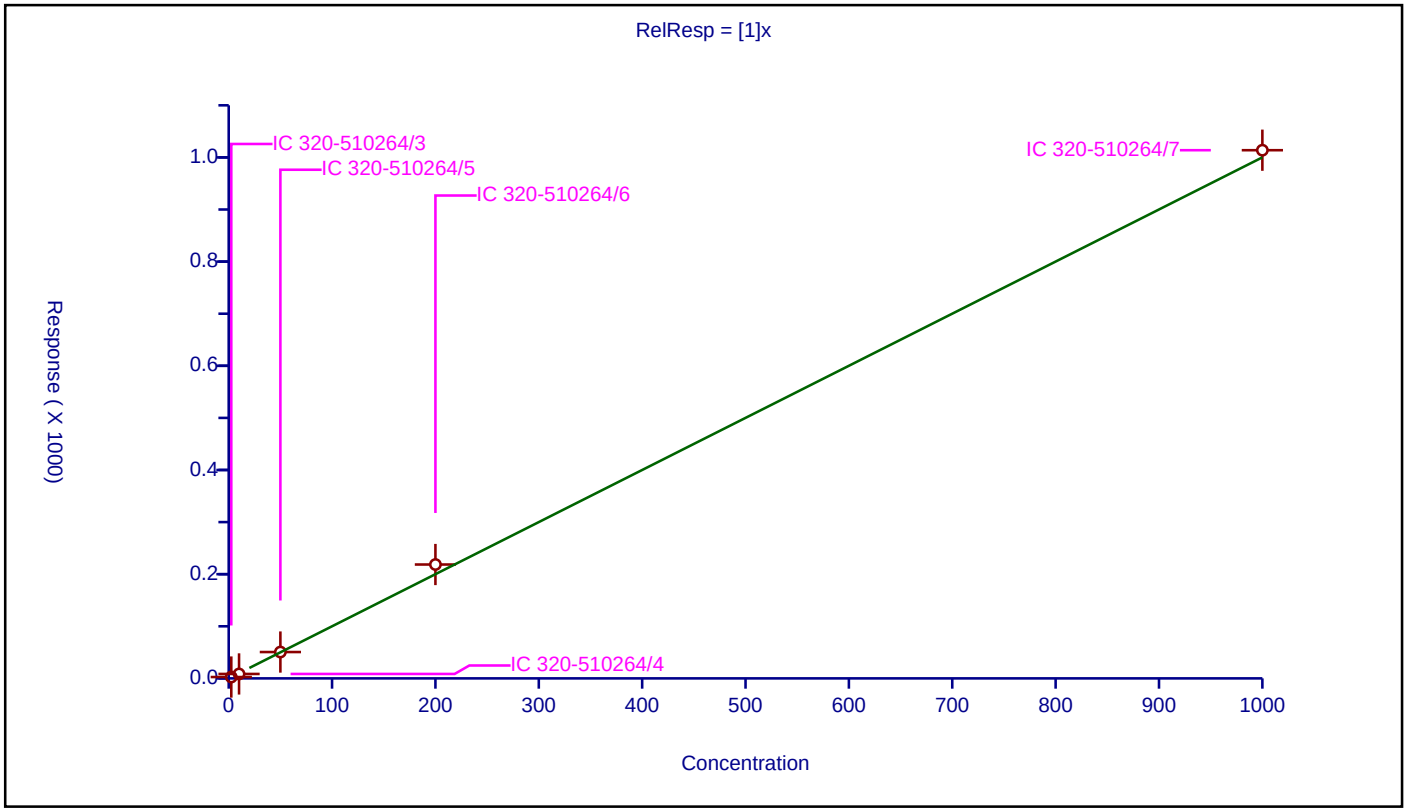

788836

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.126

Error Coefficients

Standard Error:	402000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.871987	100.0	73262388.0	1.148795	Y
2	IC 320-510264/4	10.0	9.63718	100.0	68089005.0	0.963718	Y
3	IC 320-510264/5	50.0	57.730945	100.0	70677463.0	1.154619	Y
4	IC 320-510264/6	200.0	239.311904	100.0	70459920.0	1.19656	Y
5	IC 320-510264/7	1000.0	1166.370477	100.0	67363664.0	1.16637	Y

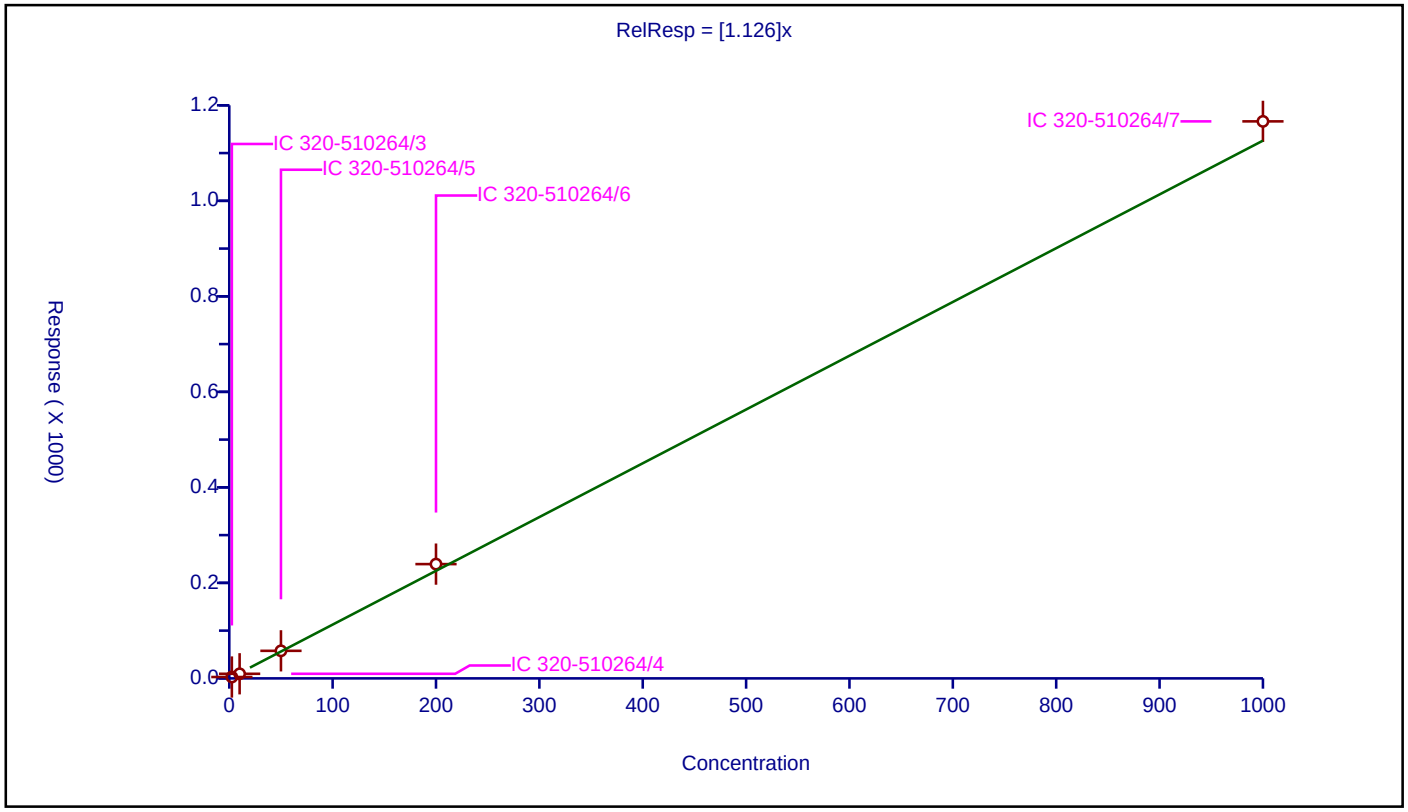

788837

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.248

Error Coefficients

Standard Error:	289000000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.174189	100.0	47363504.0	1.269675	Y
2	IC 320-510264/4	10.0	10.27817	100.0	44877133.0	1.027817	Y
3	IC 320-510264/5	50.0	67.654413	100.0	44039927.0	1.353088	Y
4	IC 320-510264/6	200.0	277.257762	100.0	44144841.0	1.386289	Y
5	IC 320-510264/7	1000.0	1202.675657	100.0	46886171.0	1.202676	Y

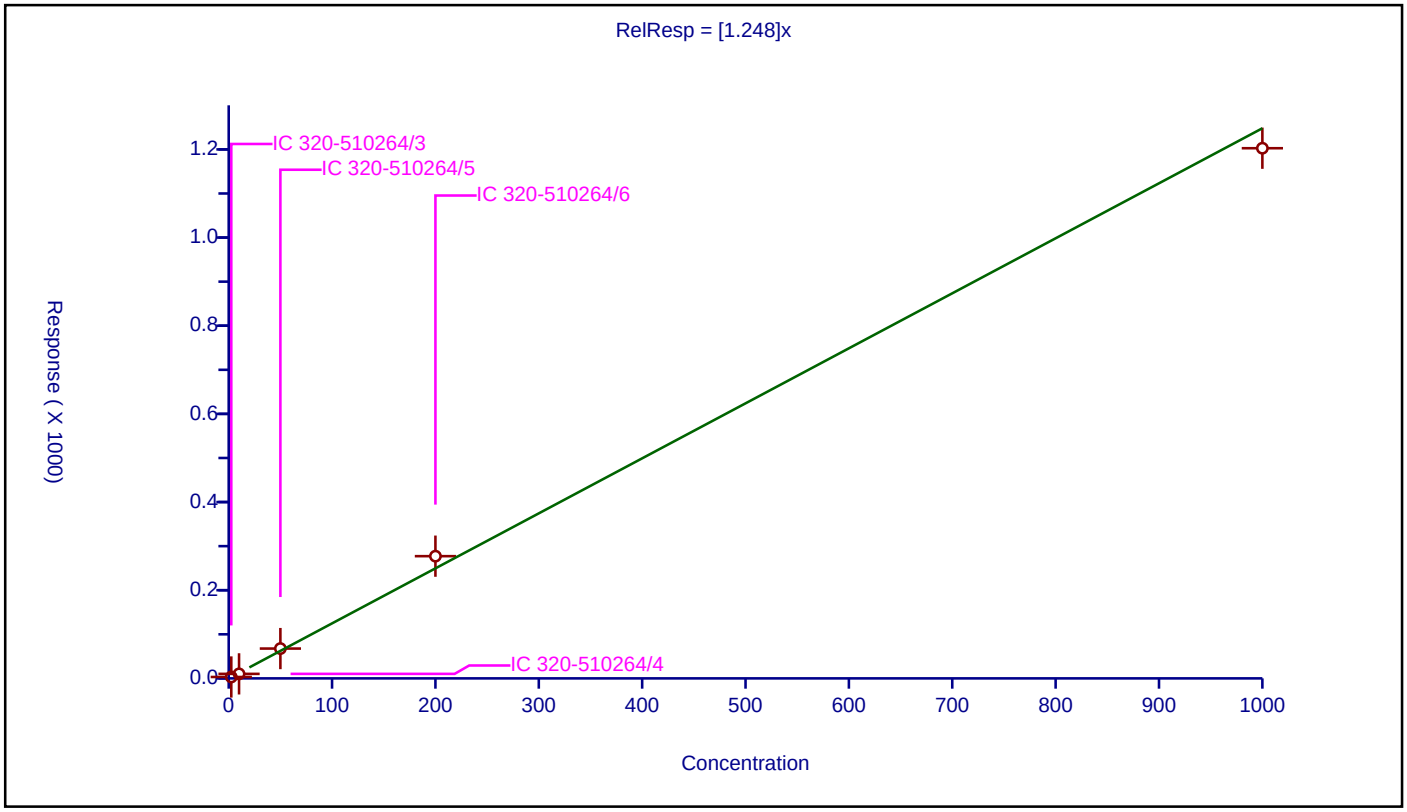

788838

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.166

Error Coefficients

Standard Error:	362000000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.933201	100.0	62528954.0	1.17328	Y
2	IC 320-510264/4	10.0	10.136374	100.0	58828058.0	1.013637	Y
3	IC 320-510264/5	50.0	59.48769	100.0	60389284.0	1.189754	Y
4	IC 320-510264/6	200.0	249.571201	100.0	59636084.0	1.247856	Y
5	IC 320-510264/7	1000.0	1207.229164	100.0	58669892.0	1.207229	Y

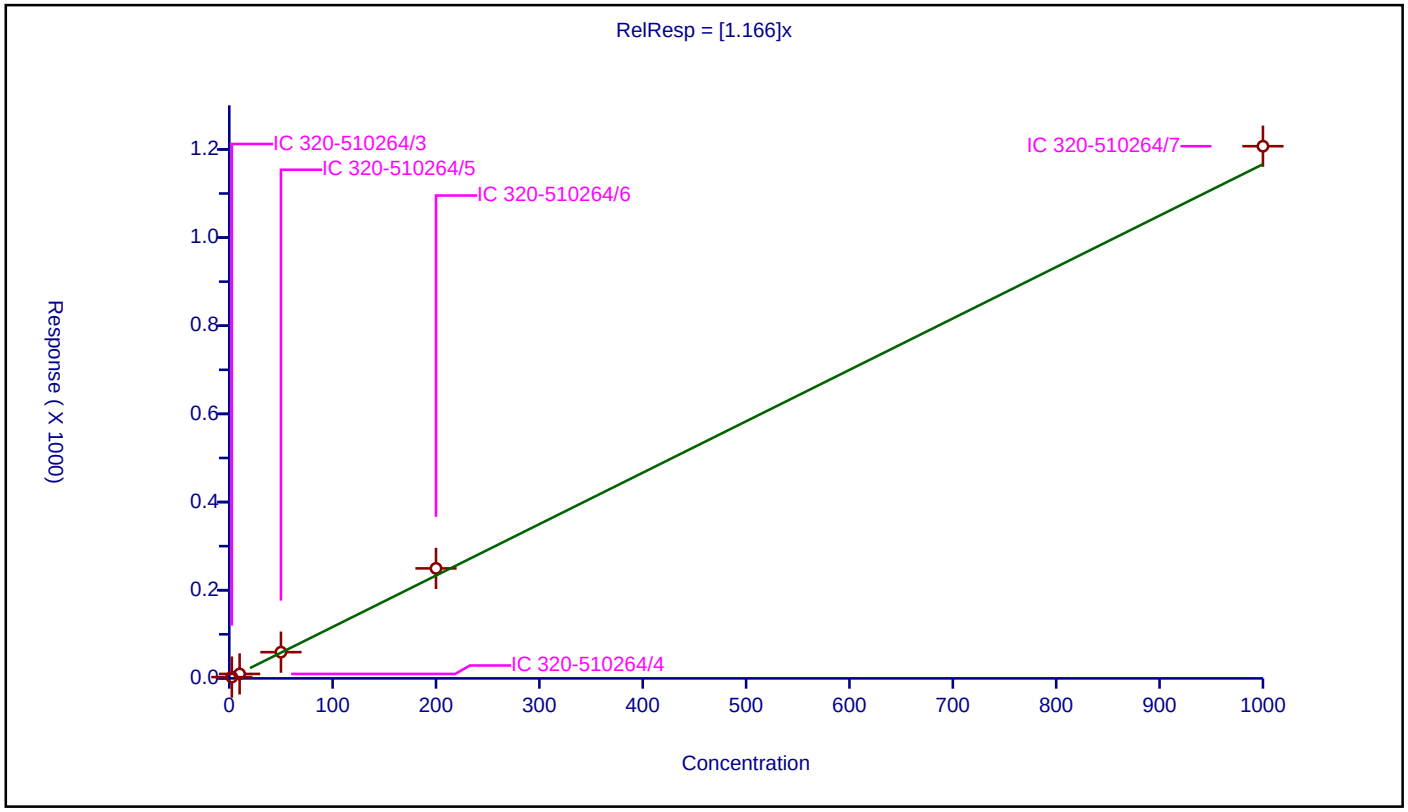

788839

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.048

Error Coefficients

Standard Error:	256000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.644408	100.0	49643581.0	1.057763	Y
2	IC 320-510264/4	10.0	9.031283	100.0	46721712.0	0.903128	Y
3	IC 320-510264/5	50.0	53.401309	100.0	47124414.0	1.068026	Y
4	IC 320-510264/6	200.0	226.195317	100.0	46524396.0	1.130977	Y
5	IC 320-510264/7	1000.0	1082.258061	100.0	46251010.0	1.082258	Y

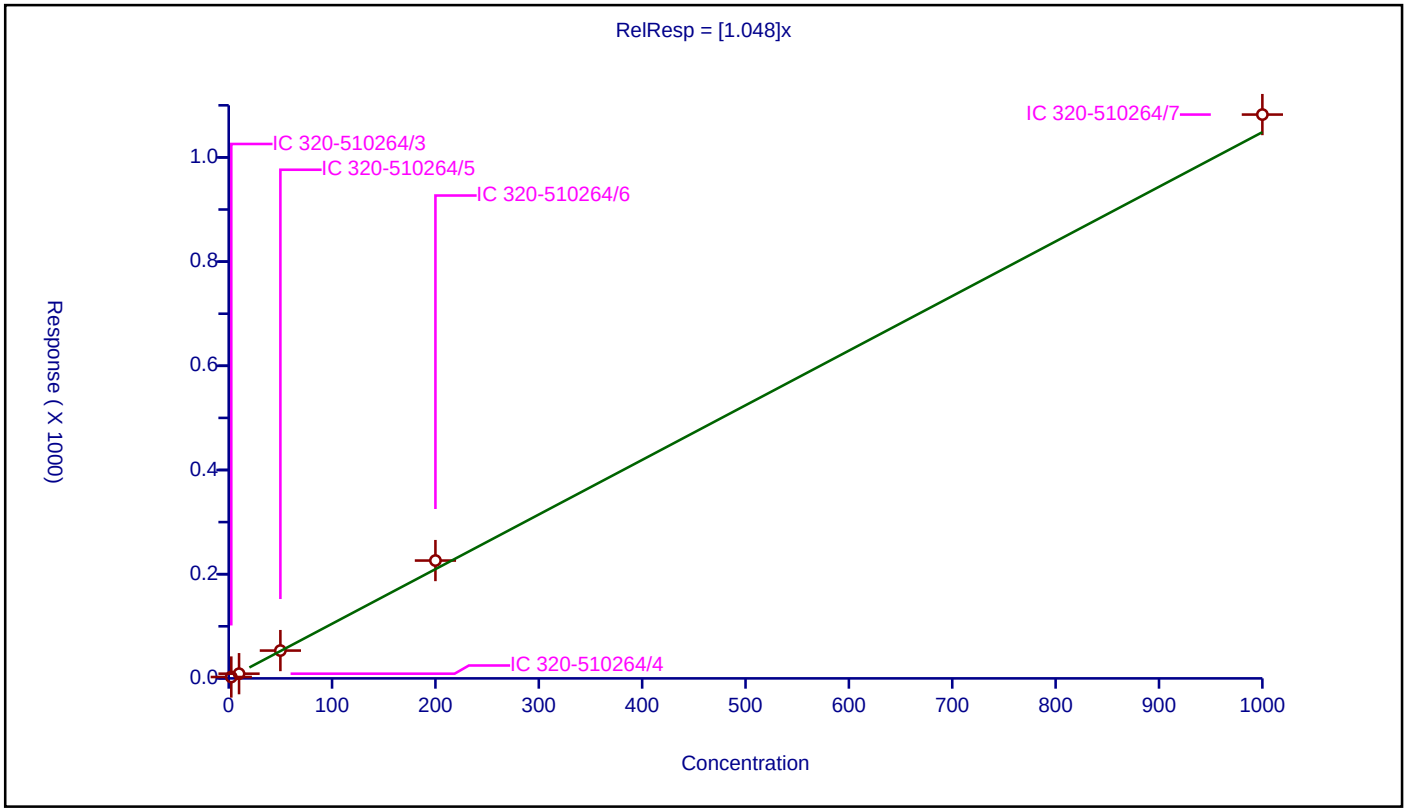

788840

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	408000000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.684664	100.0	78674290.0	1.073865	Y
2	IC 320-510264/4	10.0	9.128293	100.0	72525655.0	0.912829	Y
3	IC 320-510264/5	50.0	54.457439	100.0	76368219.0	1.089149	Y
4	IC 320-510264/6	200.0	227.4085	100.0	75205597.0	1.137042	Y
5	IC 320-510264/7	1000.0	1092.787556	100.0	72829681.0	1.092788	Y

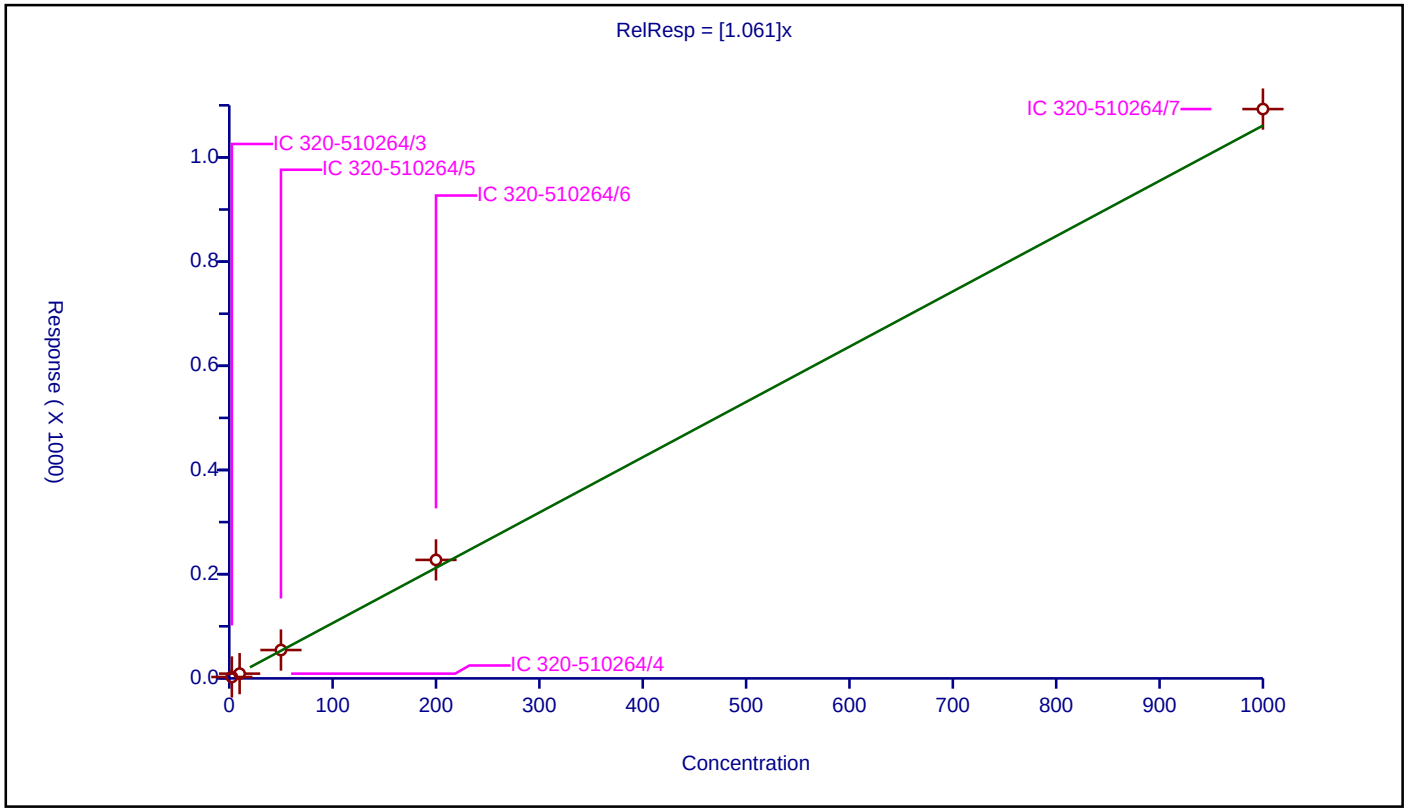

788841

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	391000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.05566	100.0	68885161.0	1.222264	Y
2	IC 320-510264/4	10.0	9.86292	100.0	64406928.0	0.986292	Y
3	IC 320-510264/5	50.0	59.290251	100.0	67028498.0	1.185805	Y
4	IC 320-510264/6	200.0	248.302486	100.0	66145684.0	1.241512	Y
5	IC 320-510264/7	1000.0	1201.822353	100.0	63471184.0	1.201822	Y

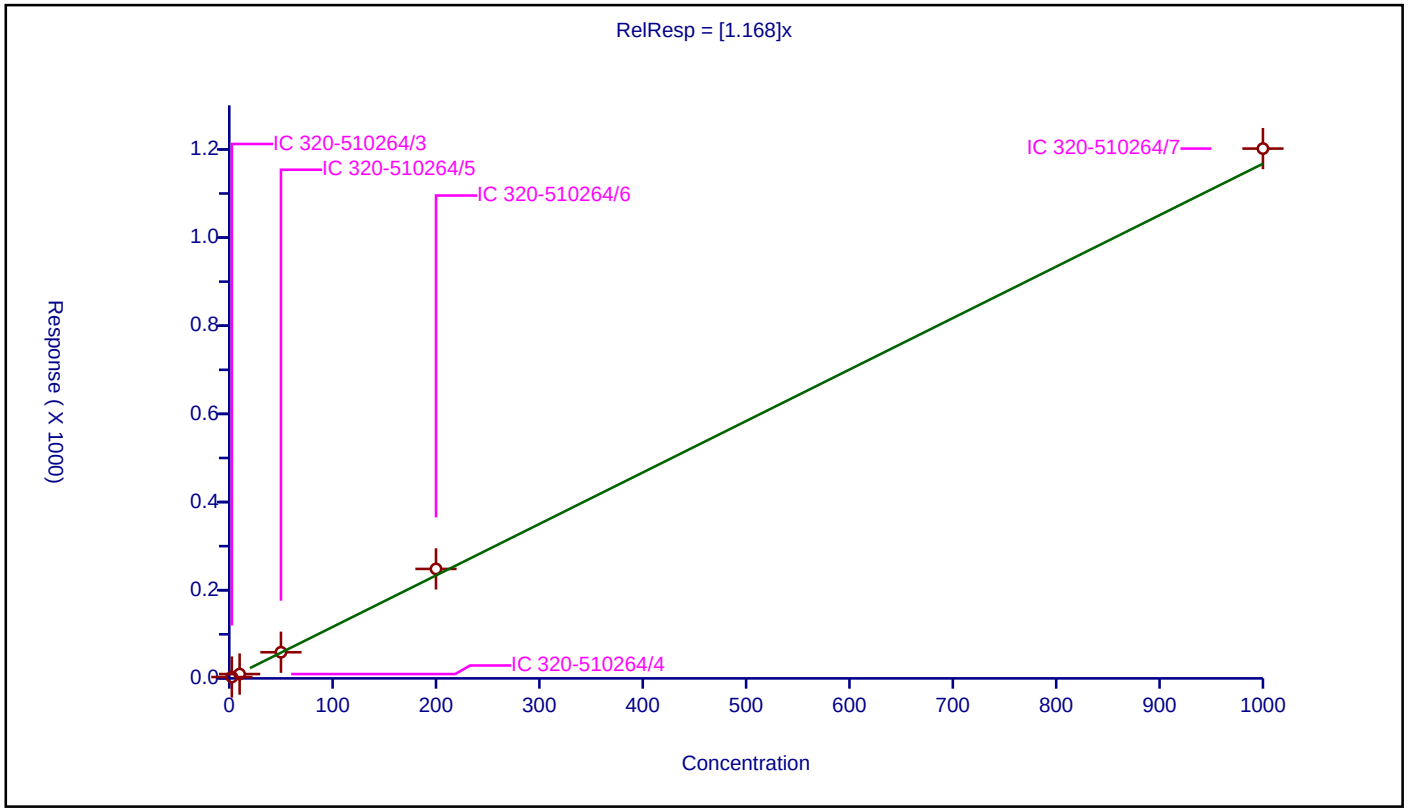

788842

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.018

Error Coefficients

Standard Error:	401000000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.601965	100.0	80591659.0	1.040786	Y
2	IC 320-510264/4	10.0	8.609629	100.0	74944110.0	0.860963	Y
3	IC 320-510264/5	50.0	52.328396	100.0	78214582.0	1.046568	Y
4	IC 320-510264/6	200.0	221.640486	100.0	75259591.0	1.108202	Y
5	IC 320-510264/7	1000.0	1035.570916	100.0	75649463.0	1.035571	Y

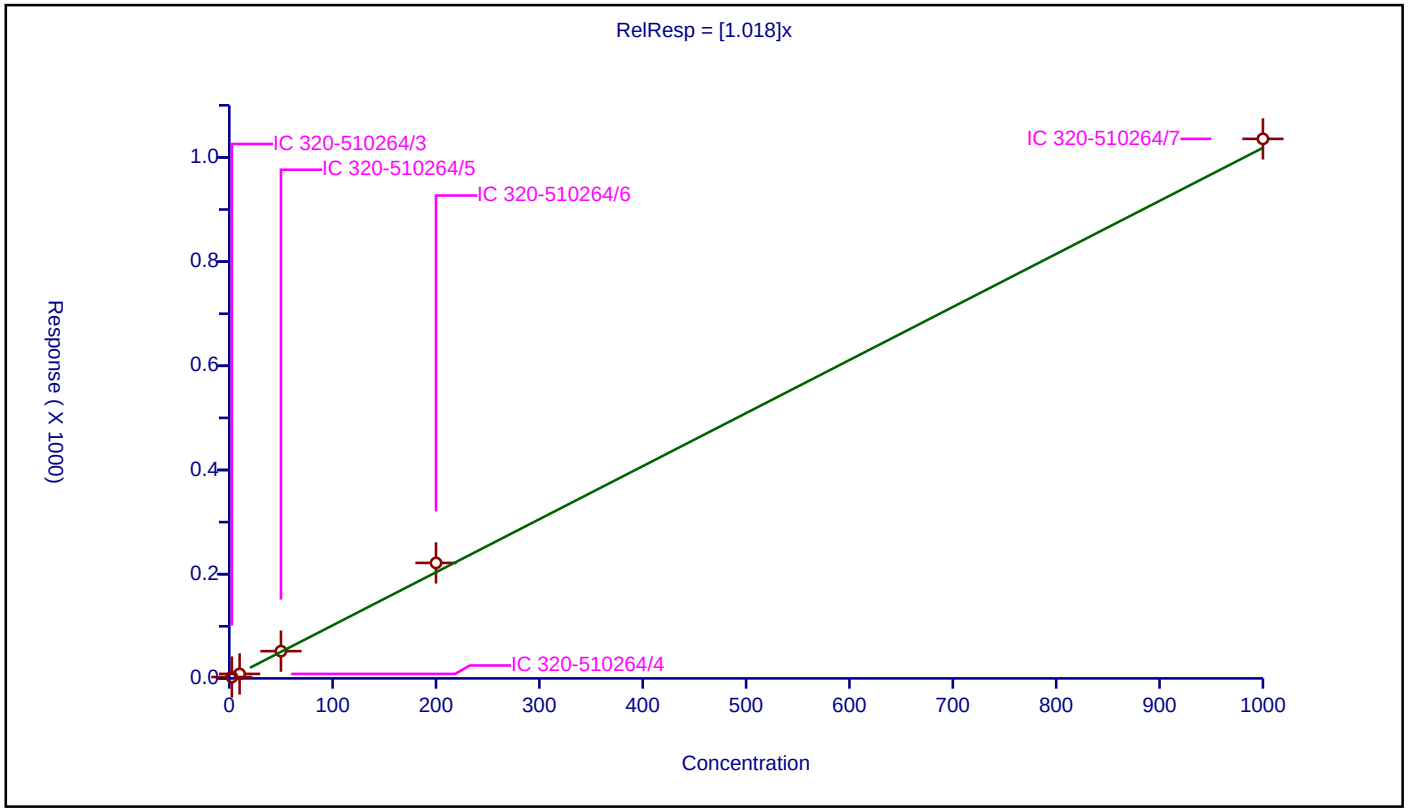

788843

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.254

Error Coefficients

Standard Error:	71900000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.62875	100.0	59957723.0	1.257499	Y
2	IC 320-510264/4	2.0	2.19411	100.0	53975587.0	1.097055	Y
3	IC 320-510264/5	10.0	12.651014	100.0	56155483.0	1.265101	Y
4	IC 320-510264/6	40.0	53.737487	100.0	55471422.0	1.343437	Y
5	IC 320-510264/7	200.0	261.501191	100.0	53698206.0	1.307506	Y

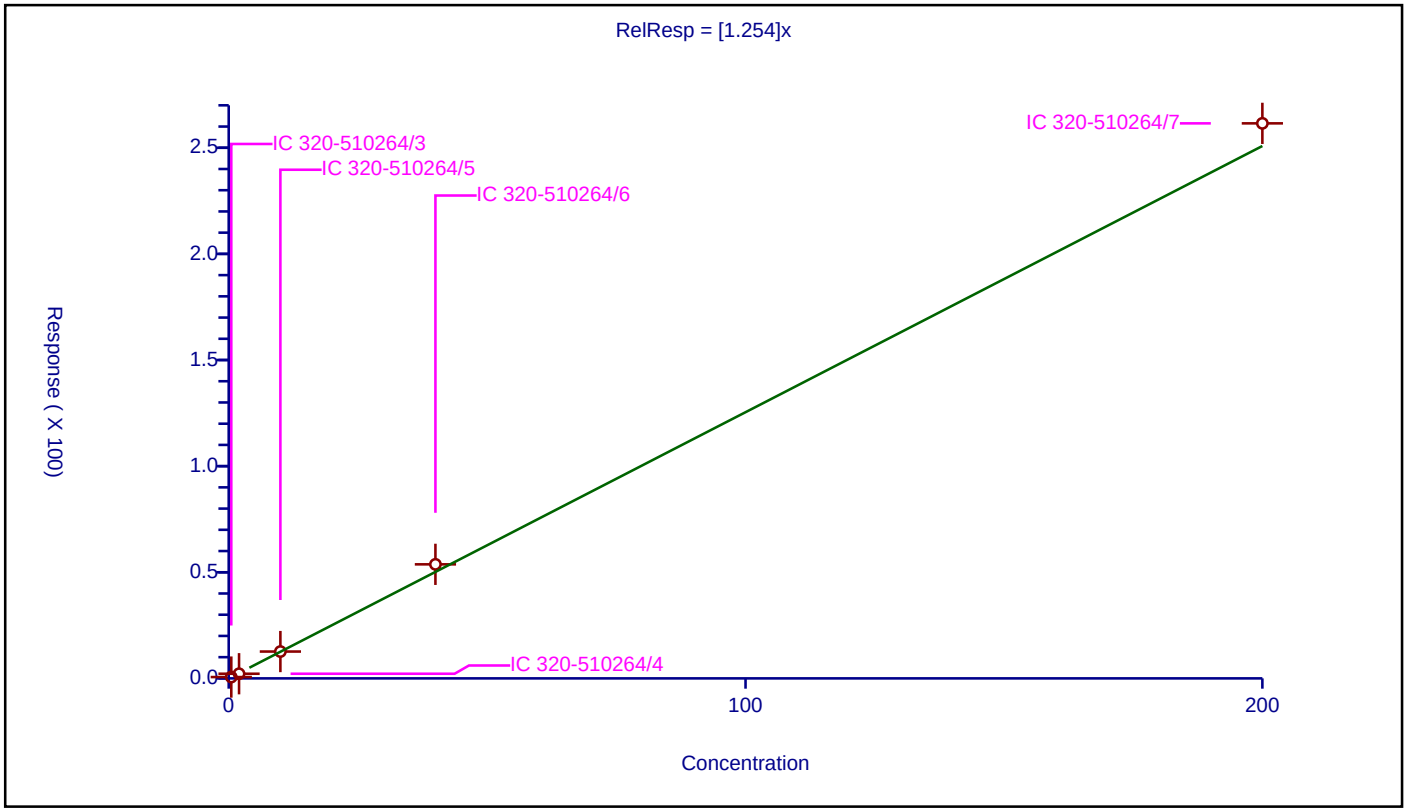

788844

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.024

Error Coefficients

Standard Error:	105000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.514358	100.0	108384725.0	1.028715	Y
2	IC 320-510264/4	2.0	1.739696	100.0	98246522.0	0.869848	Y
3	IC 320-510264/5	10.0	10.458407	100.0	101724636.0	1.045841	Y
4	IC 320-510264/6	40.0	44.37733	100.0	100332269.0	1.109433	Y
5	IC 320-510264/7	200.0	213.143097	100.0	95980421.0	1.065715	Y

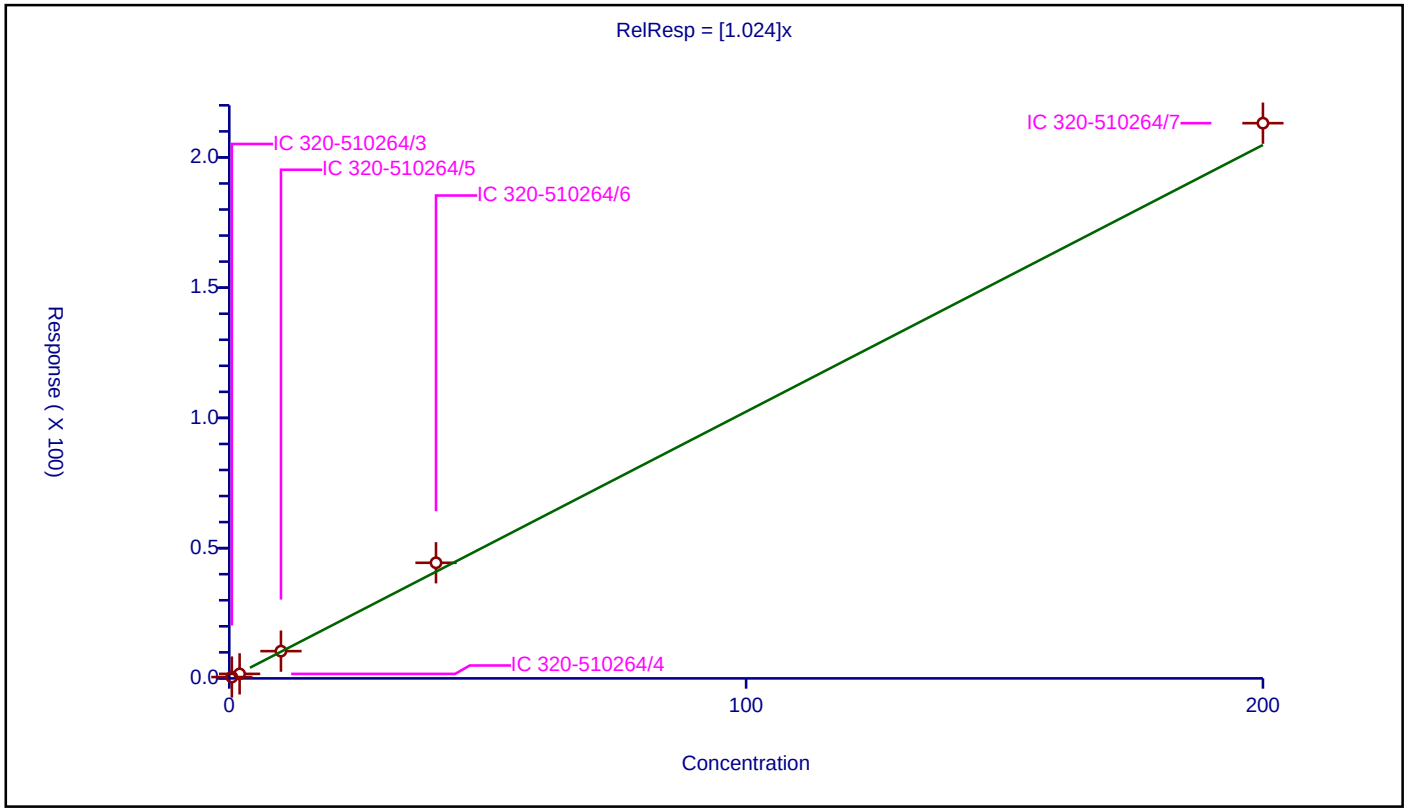

788845

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	72100000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.485229	100.0	65685883.0	0.970458	Y
2	IC 320-510264/4	2.0	1.95888	100.0	62853211.0	0.97944	Y
3	IC 320-510264/5	10.0	11.718119	100.0	62635225.0	1.171812	Y
4	IC 320-510264/6	40.0	47.503291	100.0	62046988.0	1.187582	Y
5	IC 320-510264/7	200.0	245.287862	100.0	57464333.0	1.226439	Y

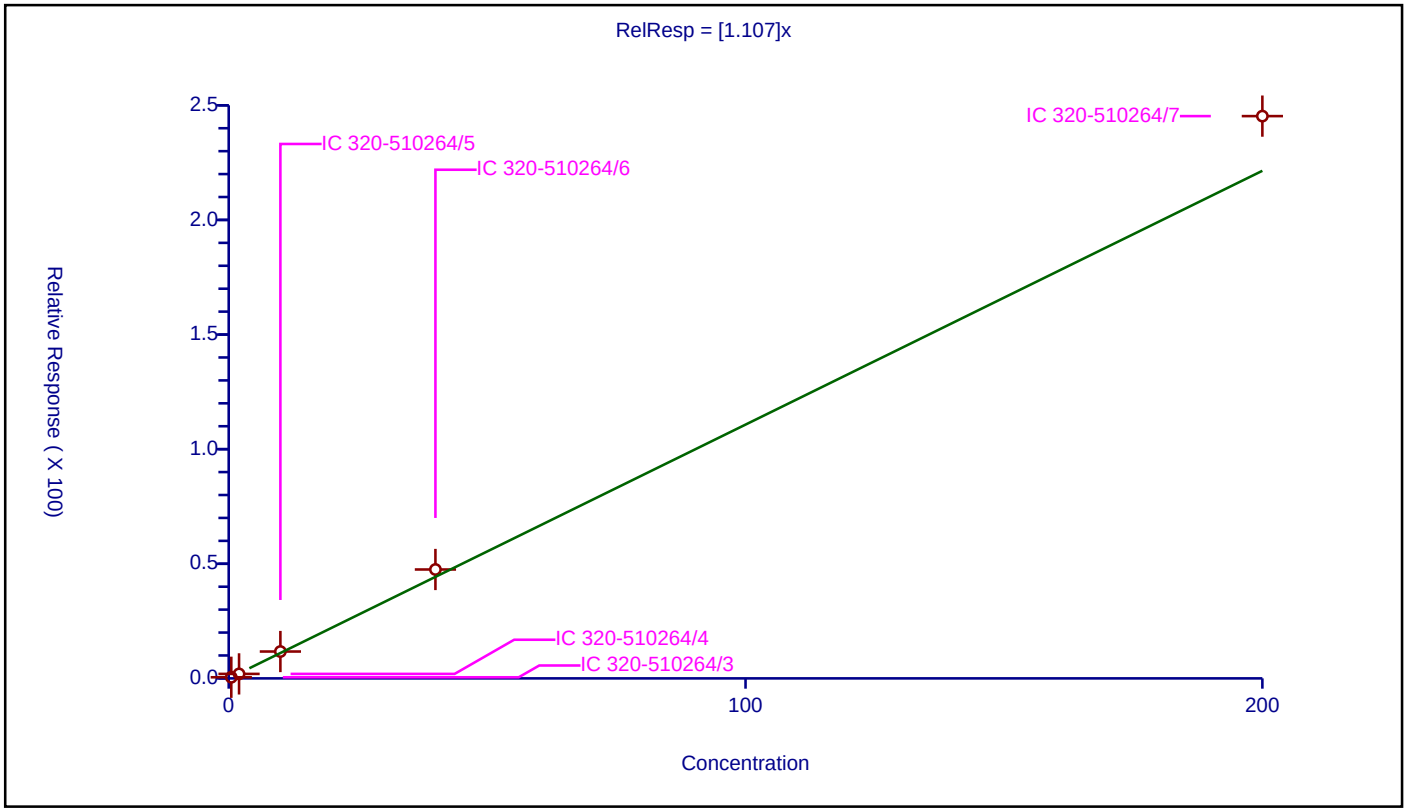

788846

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	325000000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	5.504666	200.0	57018462.0	1.100933	Y
2	IC 320-510264/4	20.0	19.269459	200.0	52034518.0	0.963473	Y
3	IC 320-510264/5	100.0	116.51708	200.0	54338243.0	1.165171	Y
4	IC 320-510264/6	400.0	473.162285	200.0	57303880.0	1.182906	Y
5	IC 320-510264/7	2000.0	2245.176522	200.0	56623863.0	1.122588	Y

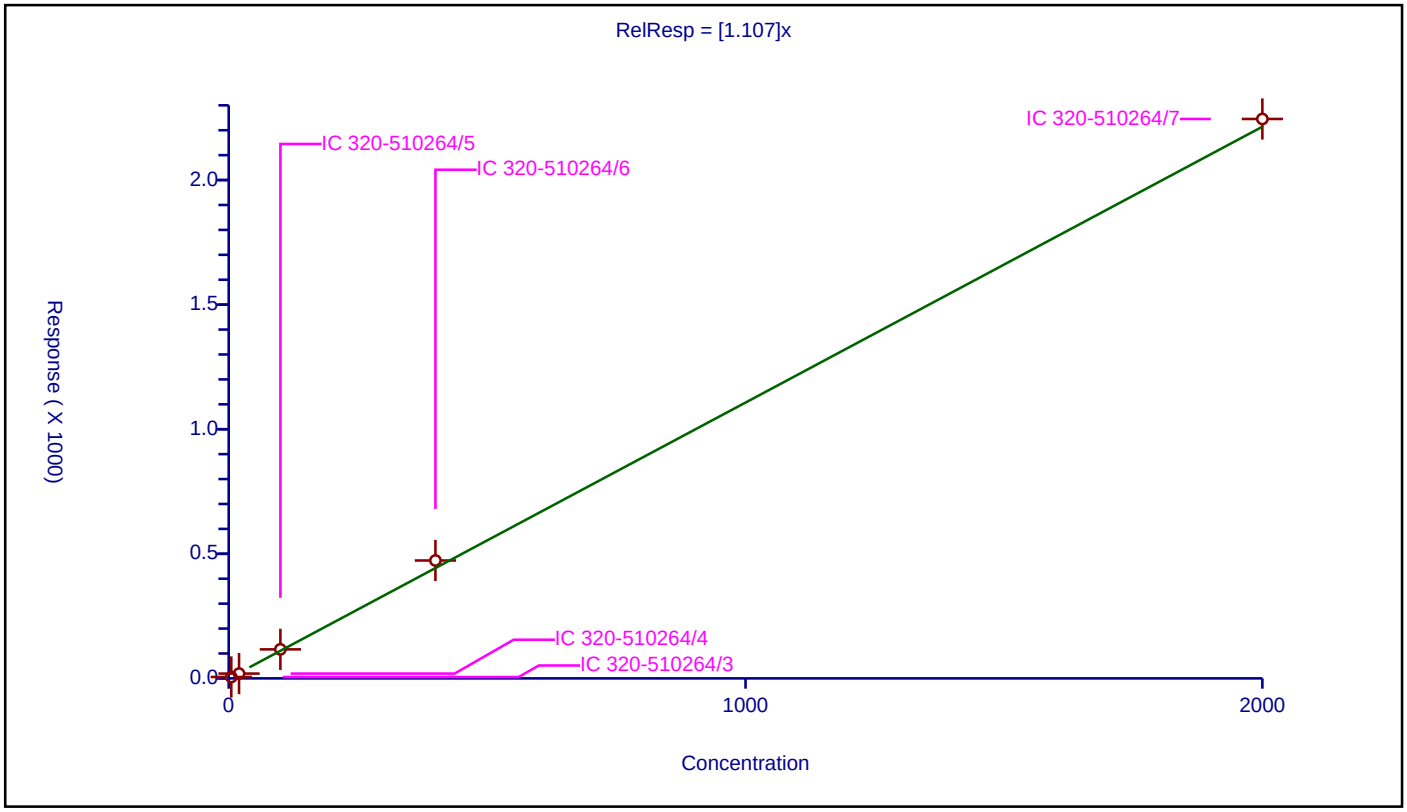

788847

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.438

Error Coefficients

Standard Error:	438000000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	6.931702	200.0	57018462.0	1.38634	Y
2	IC 320-510264/4	20.0	23.824451	200.0	52034518.0	1.191223	Y
3	IC 320-510264/5	100.0	151.448408	200.0	54338243.0	1.514484	Y
4	IC 320-510264/6	400.0	634.327267	200.0	57303880.0	1.585818	Y
5	IC 320-510264/7	2000.0	3025.883229	200.0	56623863.0	1.512942	Y

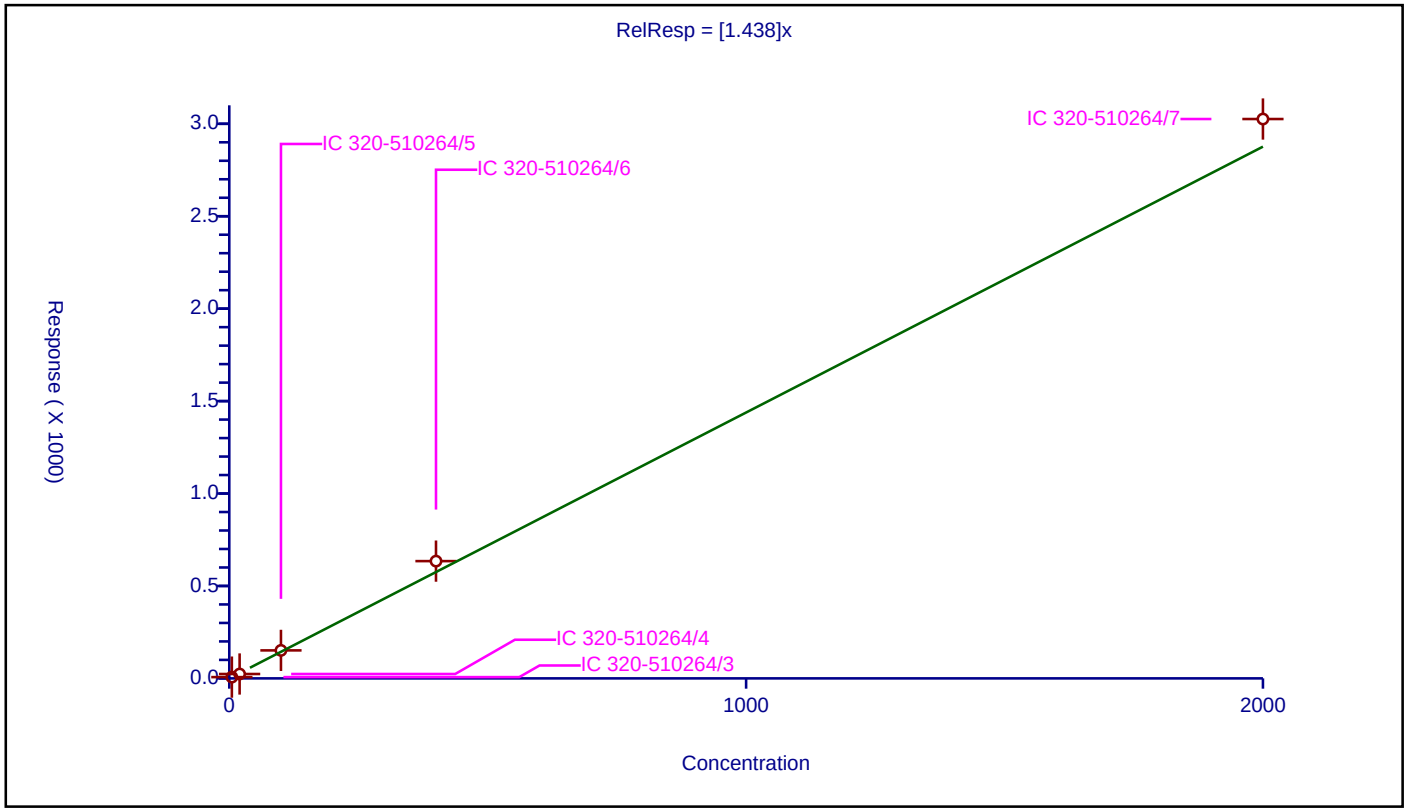

788848

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

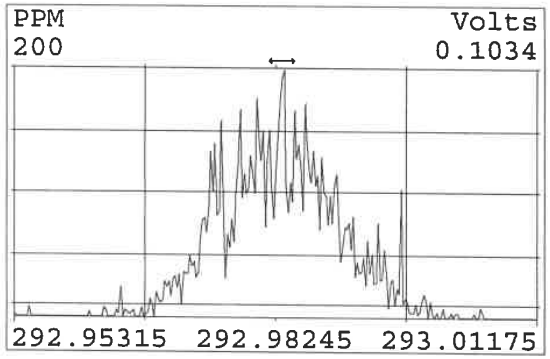

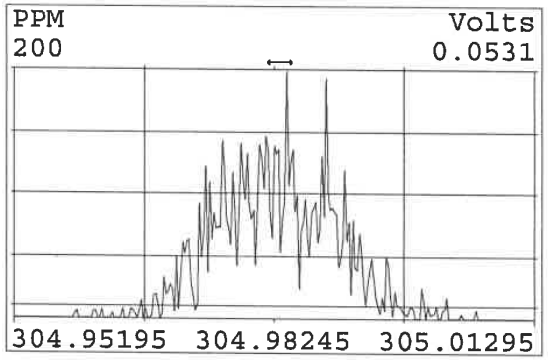

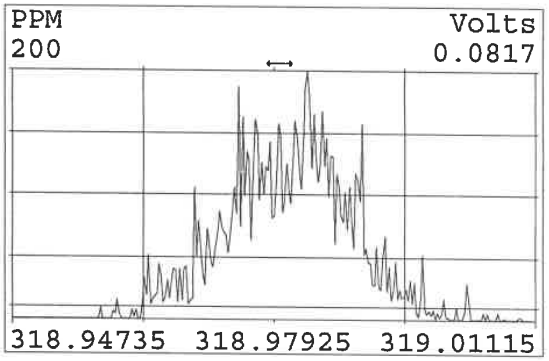

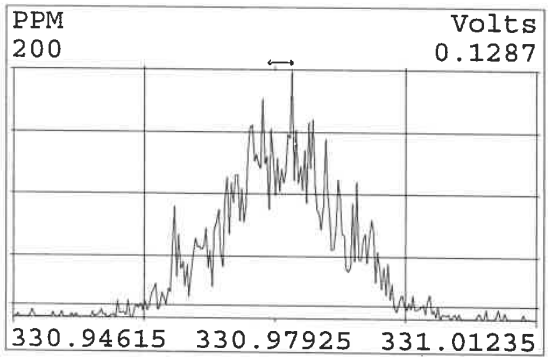

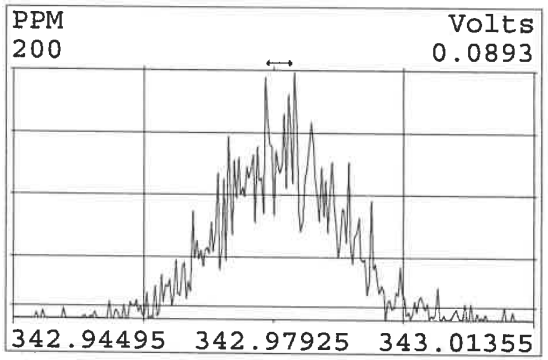

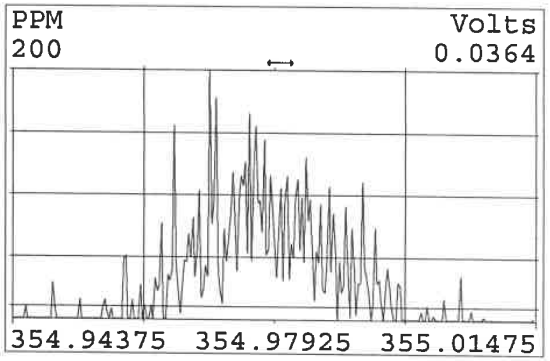

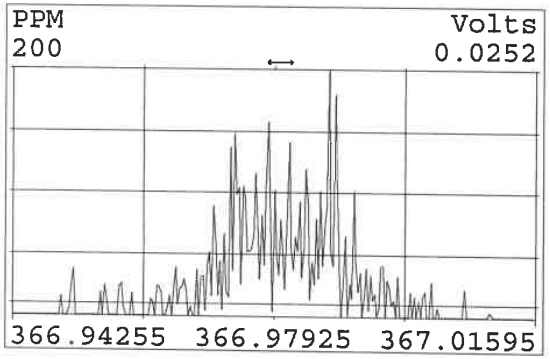

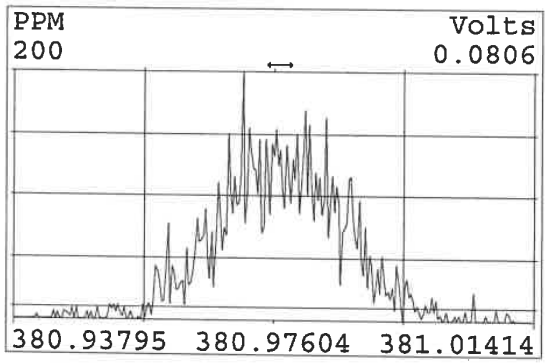

788852

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

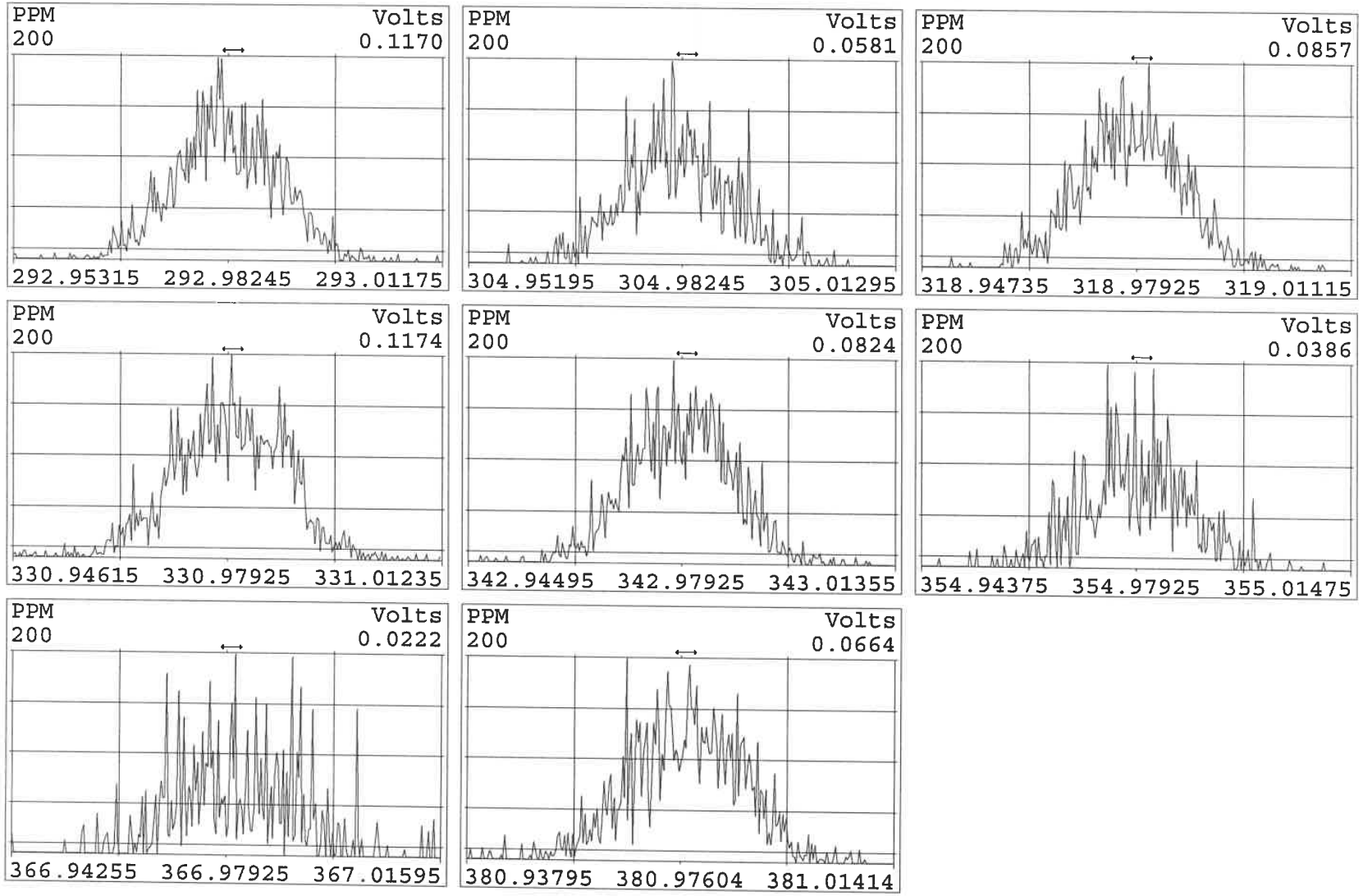

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

788854

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

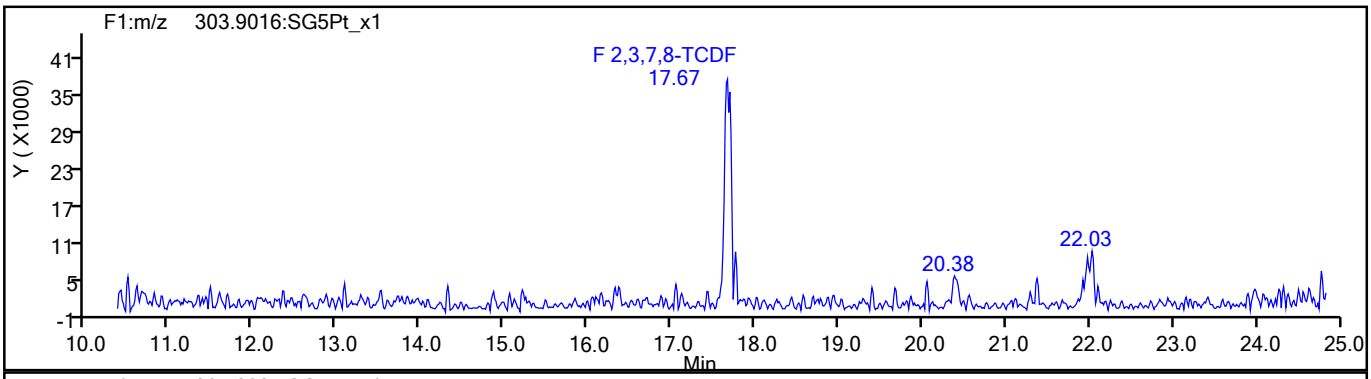

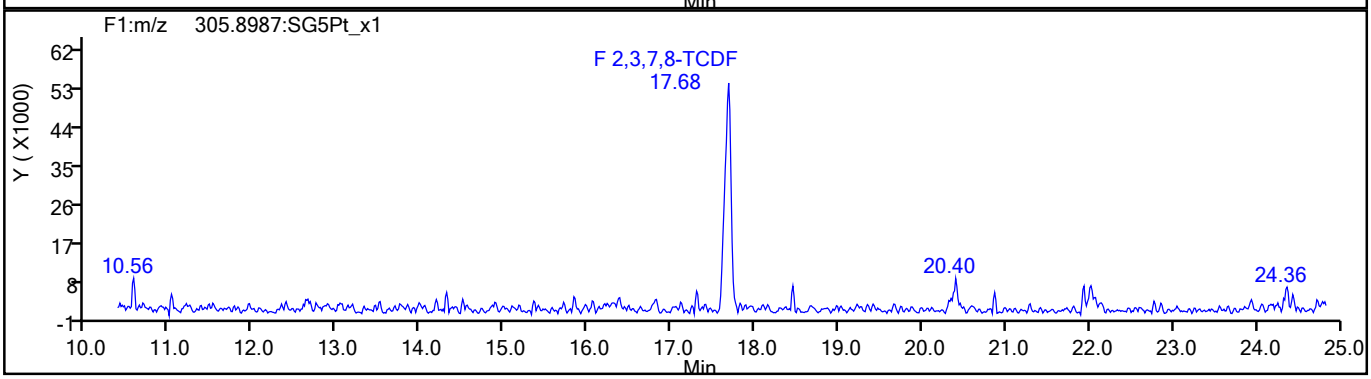

TCDF Standards

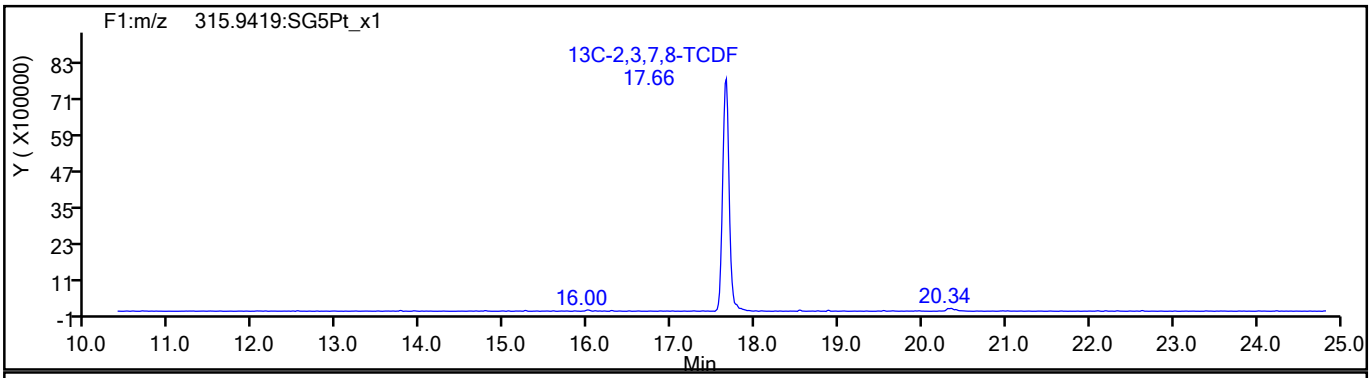

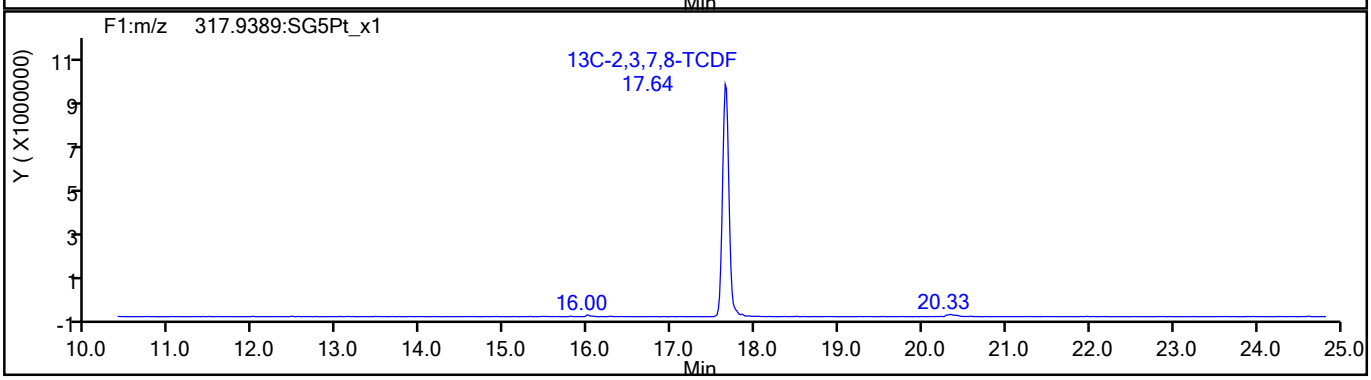

788856

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

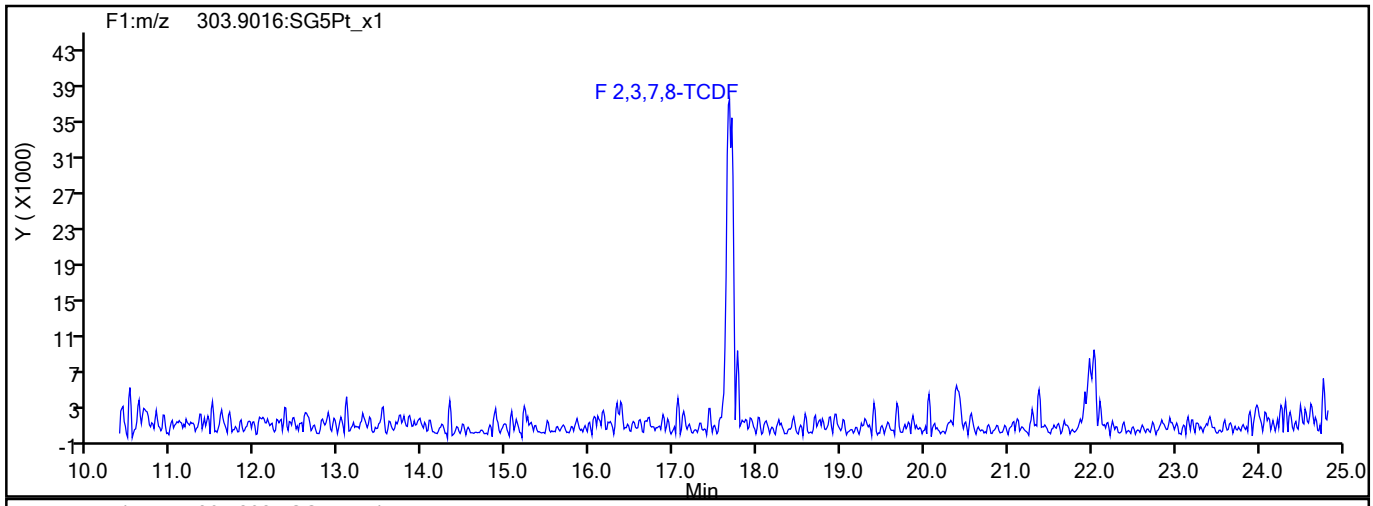

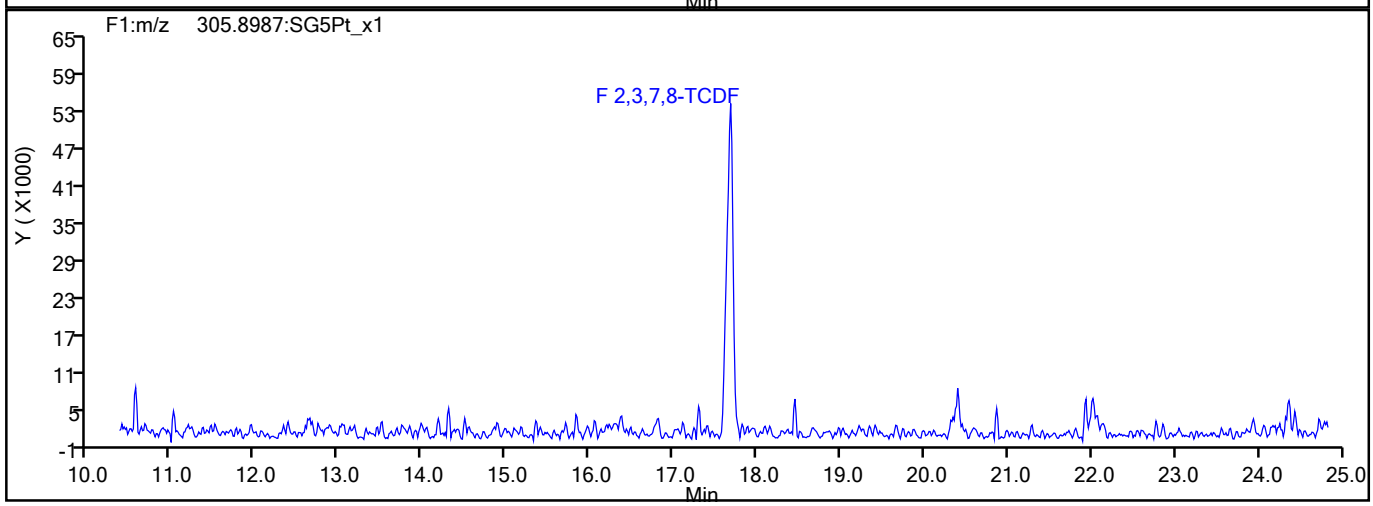

TCDF Interference Mass

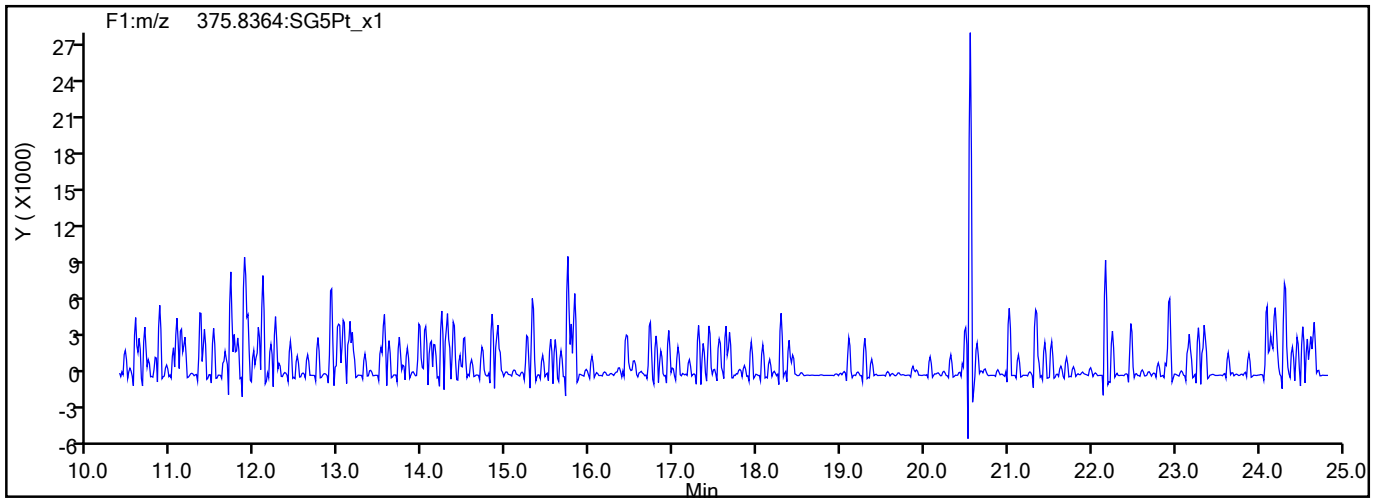

788857

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

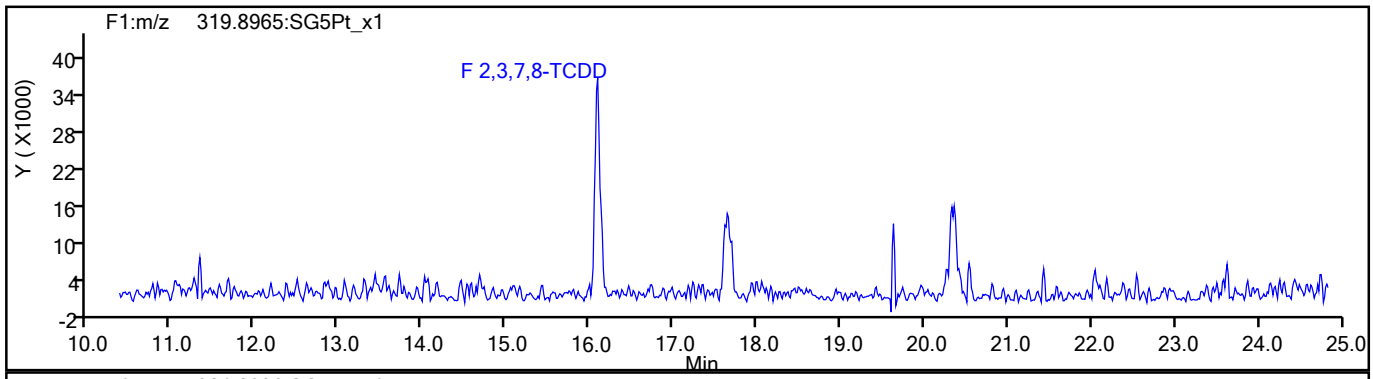

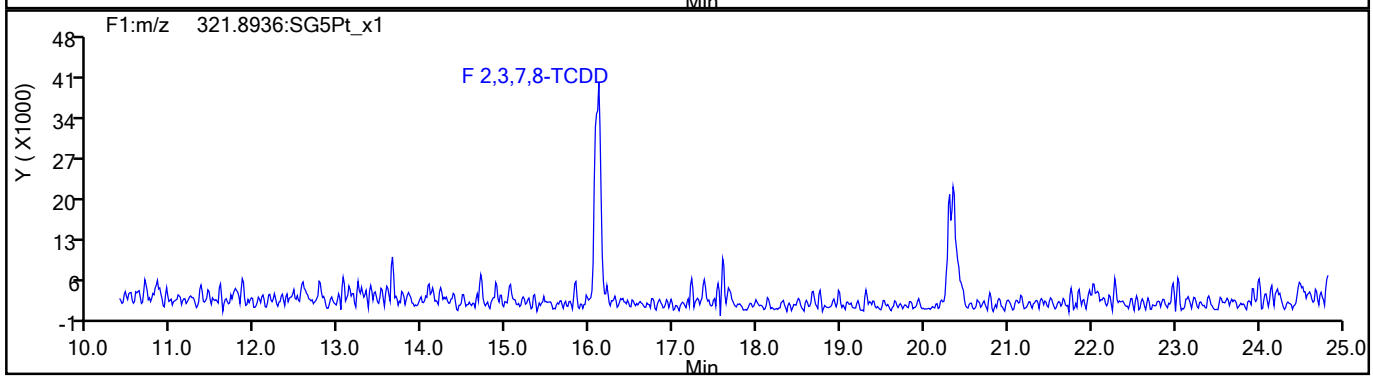

TCDD Standards

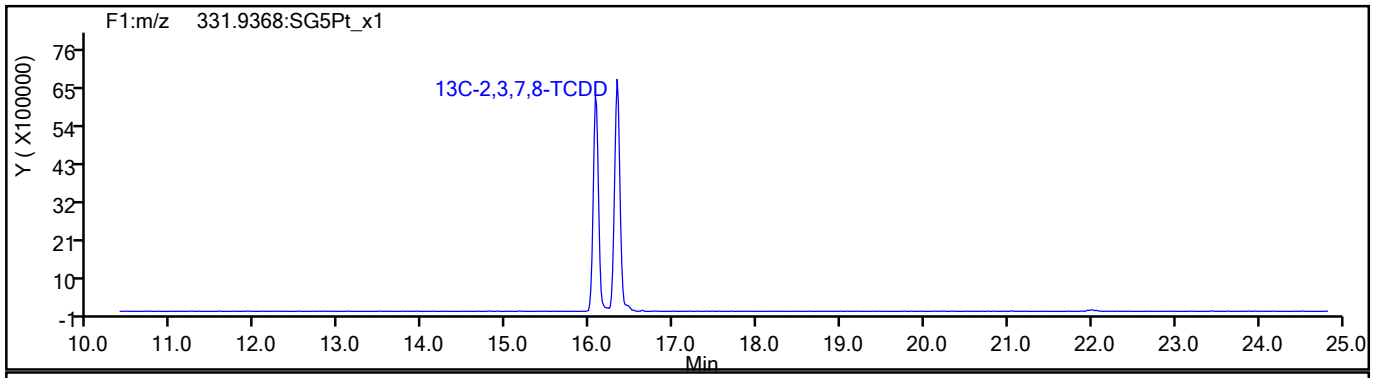

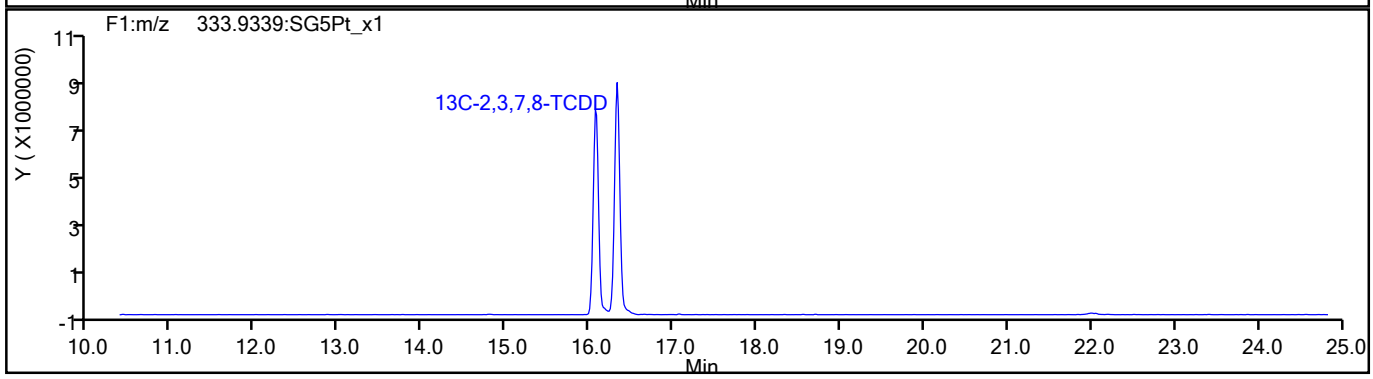

788858

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

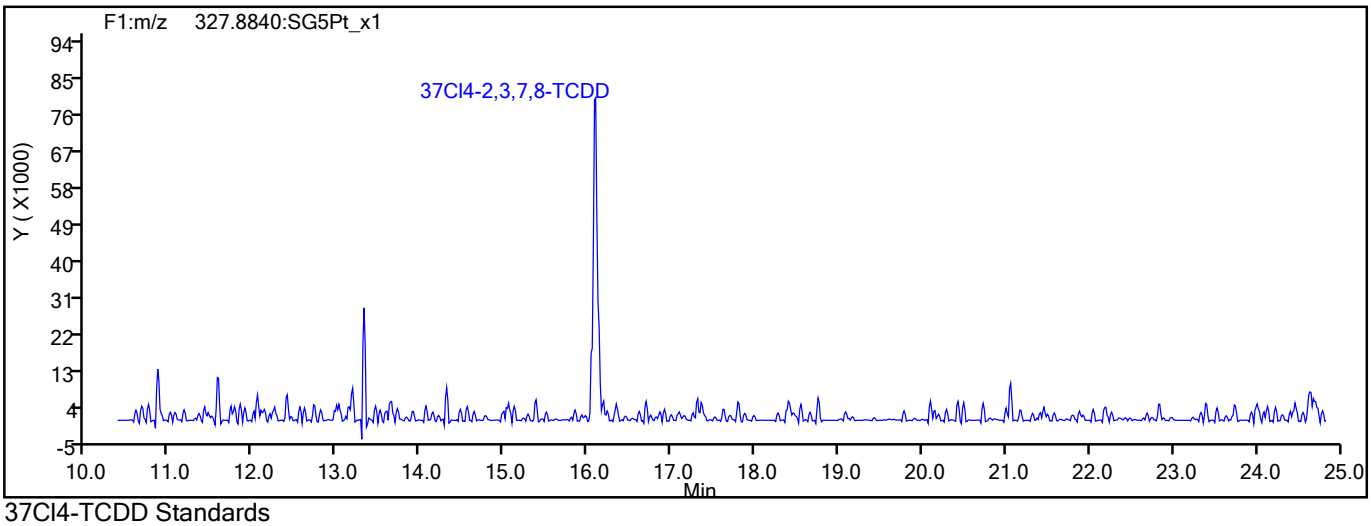

37Cl4-TCDD Standards

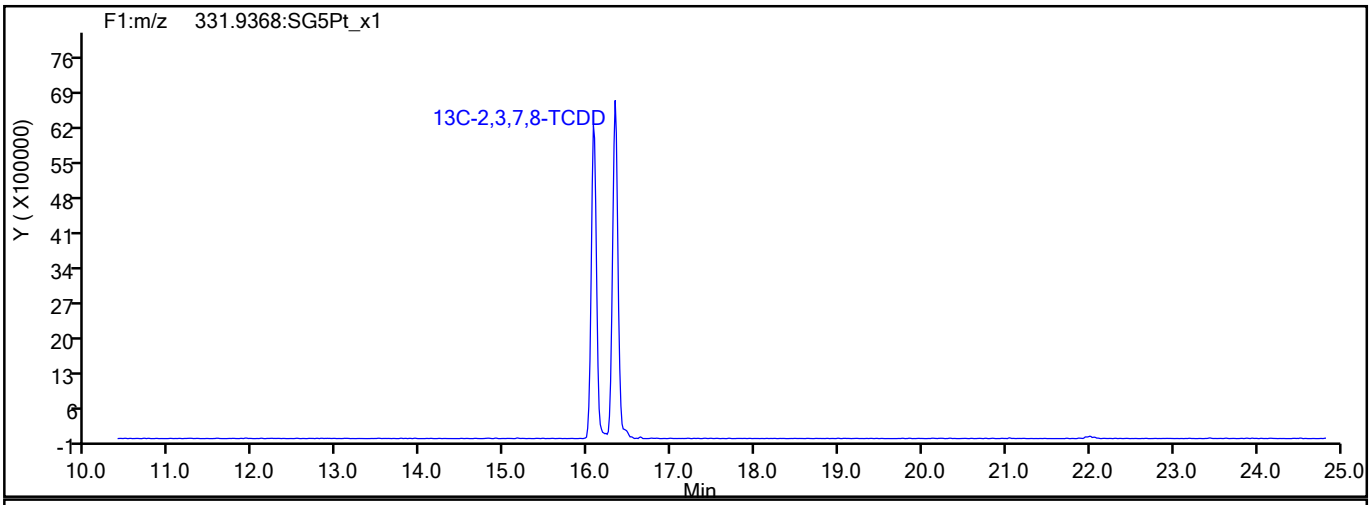

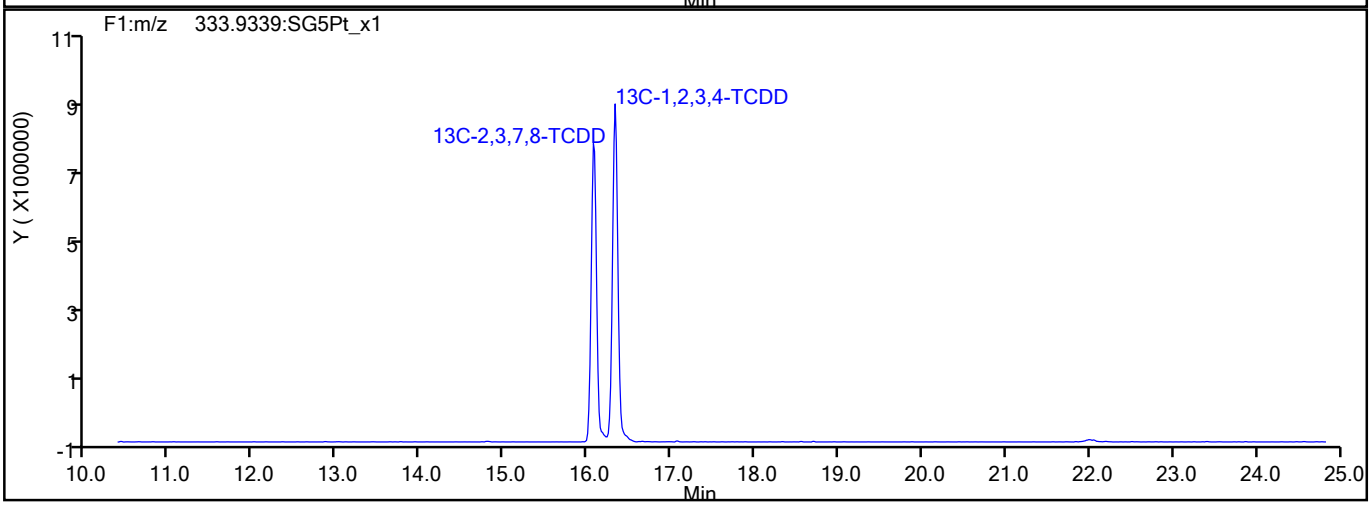

788859

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

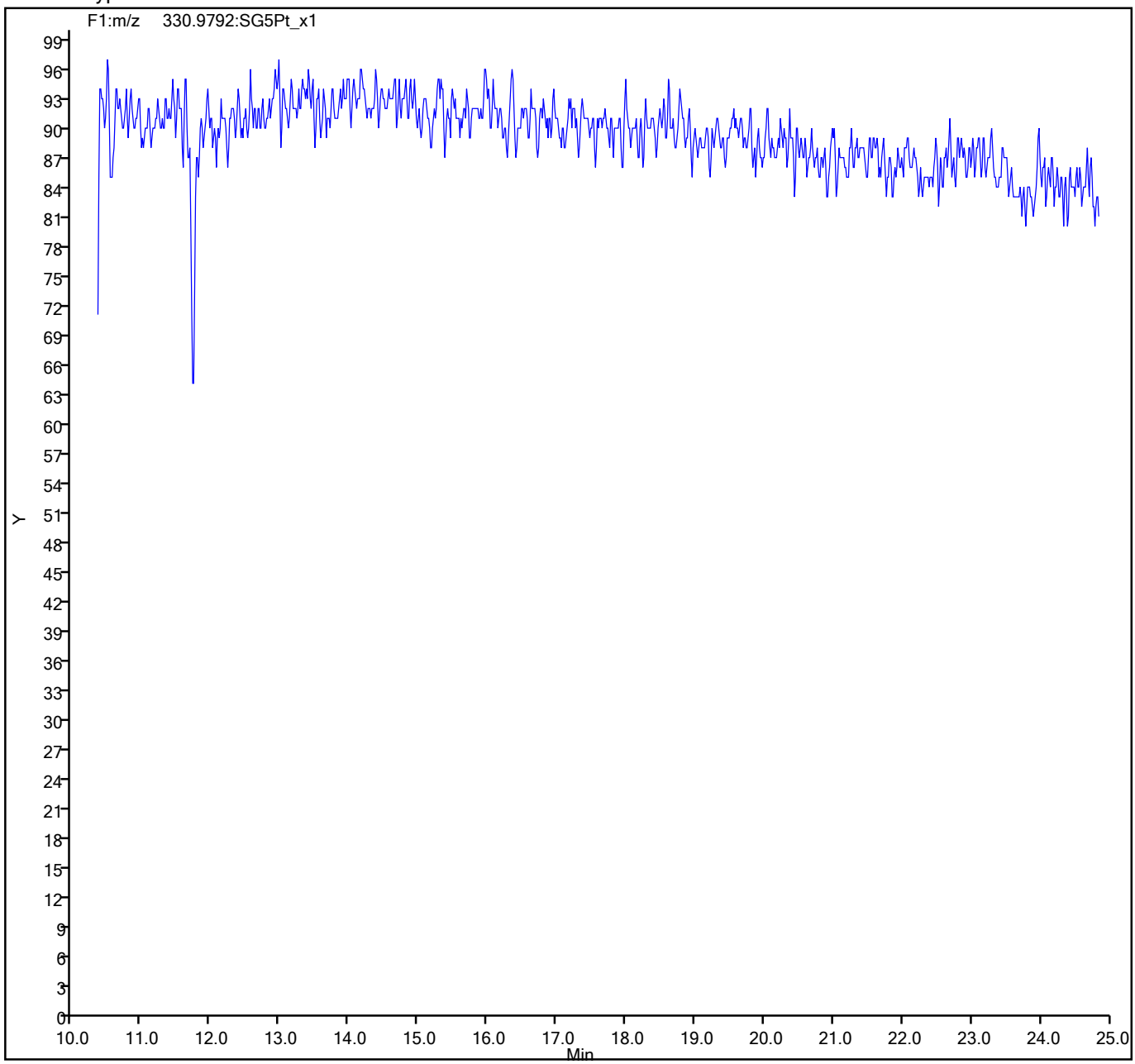

788860

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags
Review Flags
M - Manually Integrated

Reagents:
HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

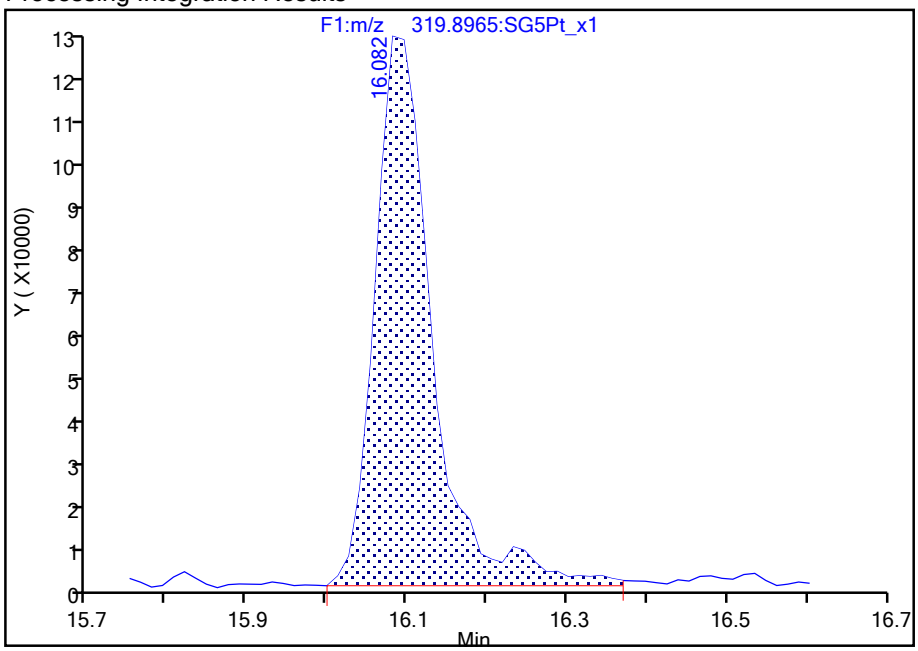

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

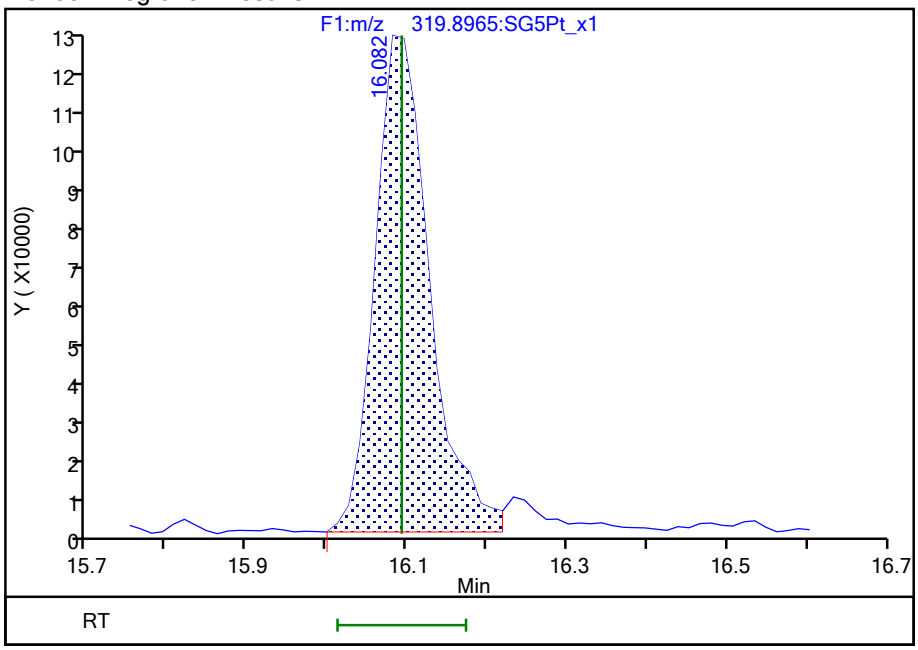

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

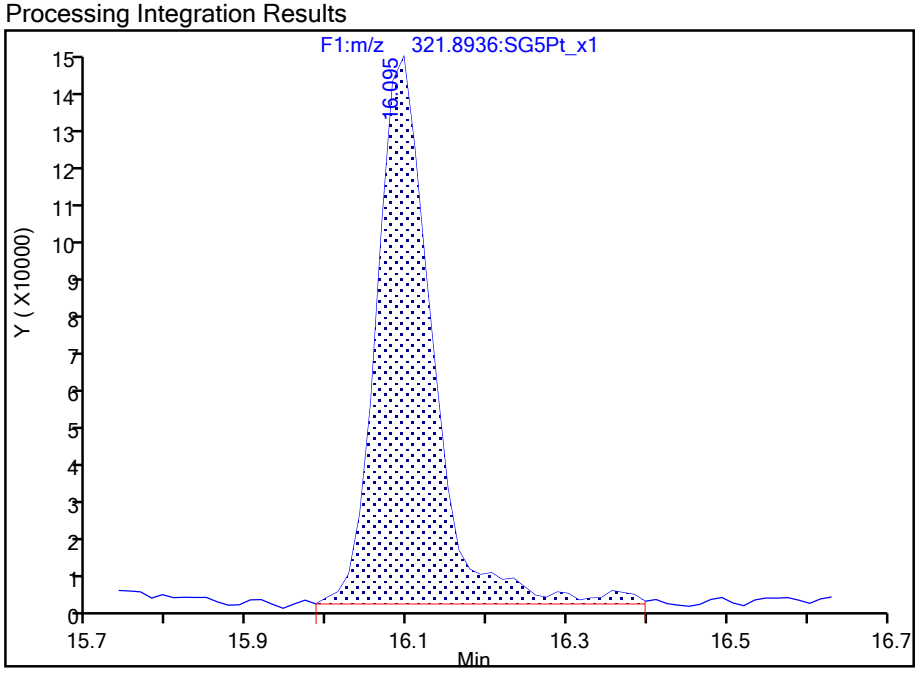

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

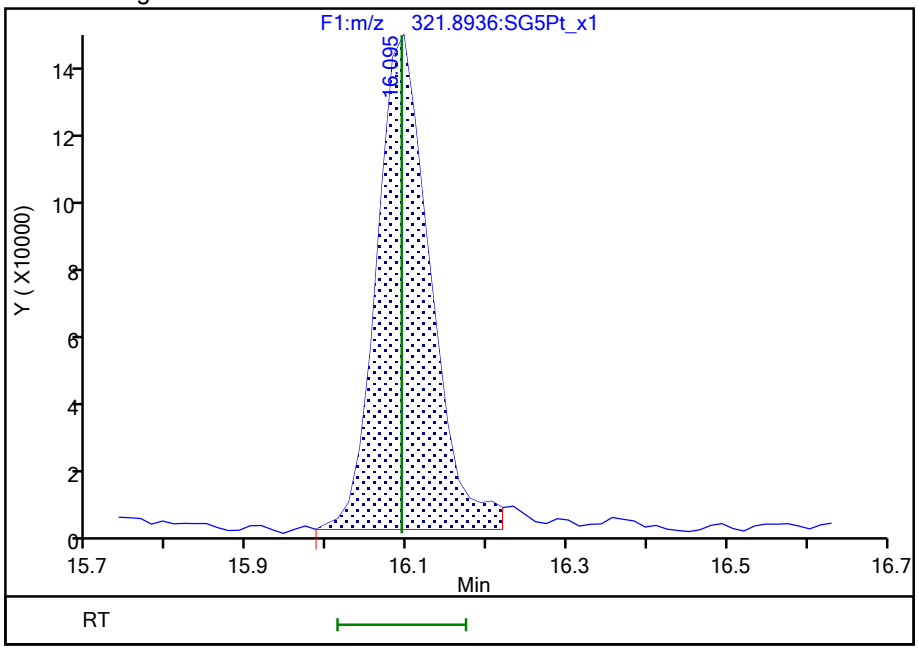

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

788864

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

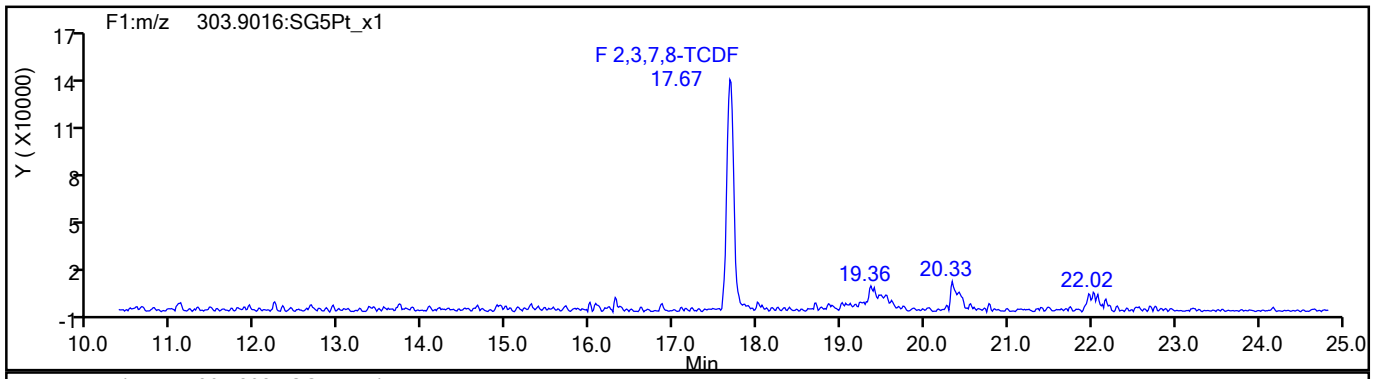

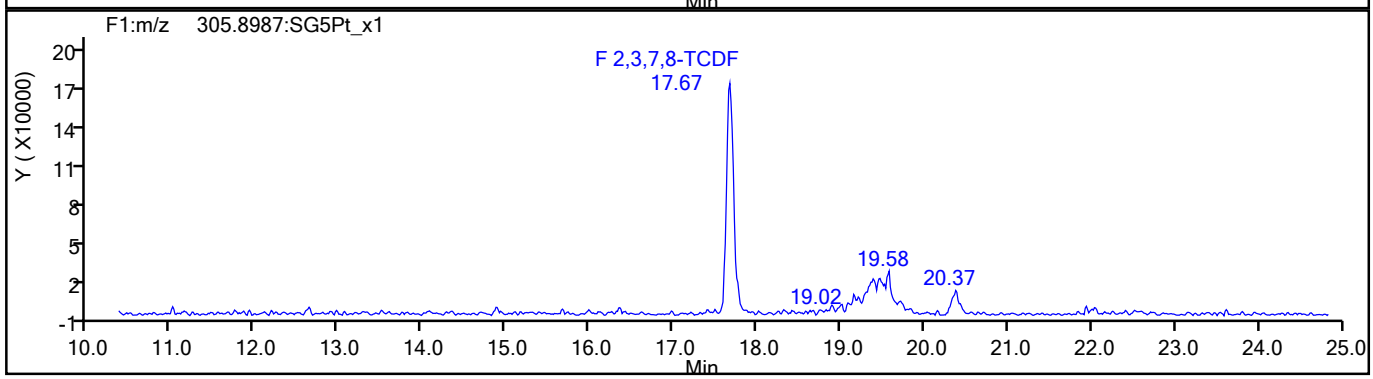

TCDF Standards

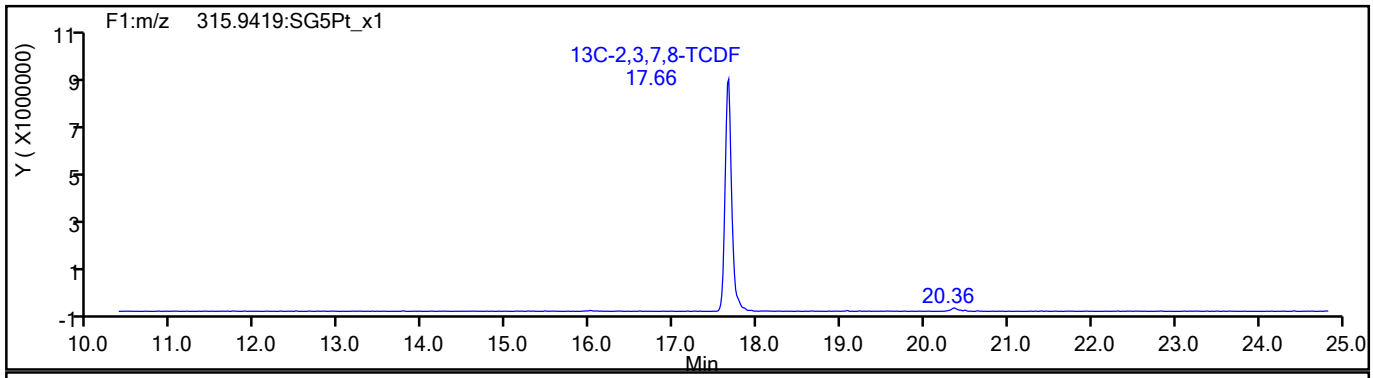

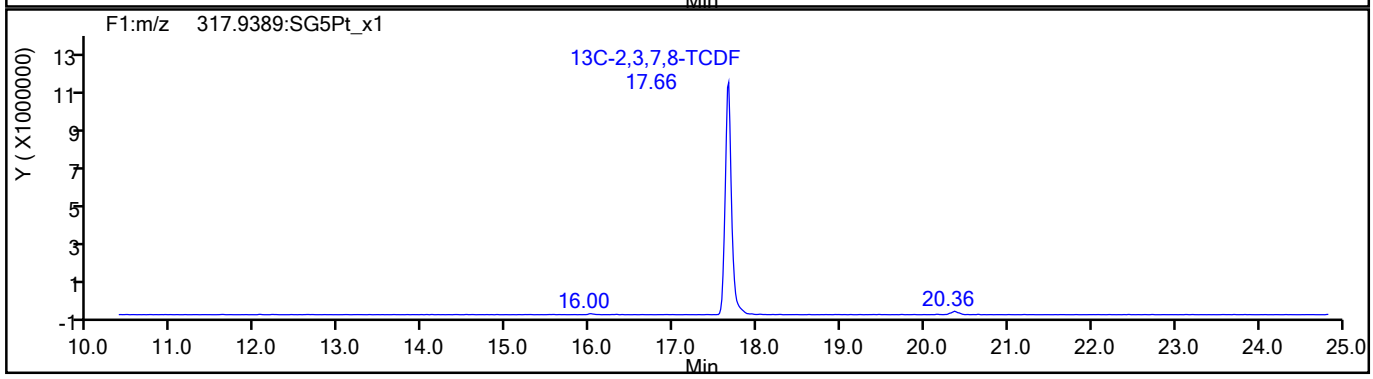

788865

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

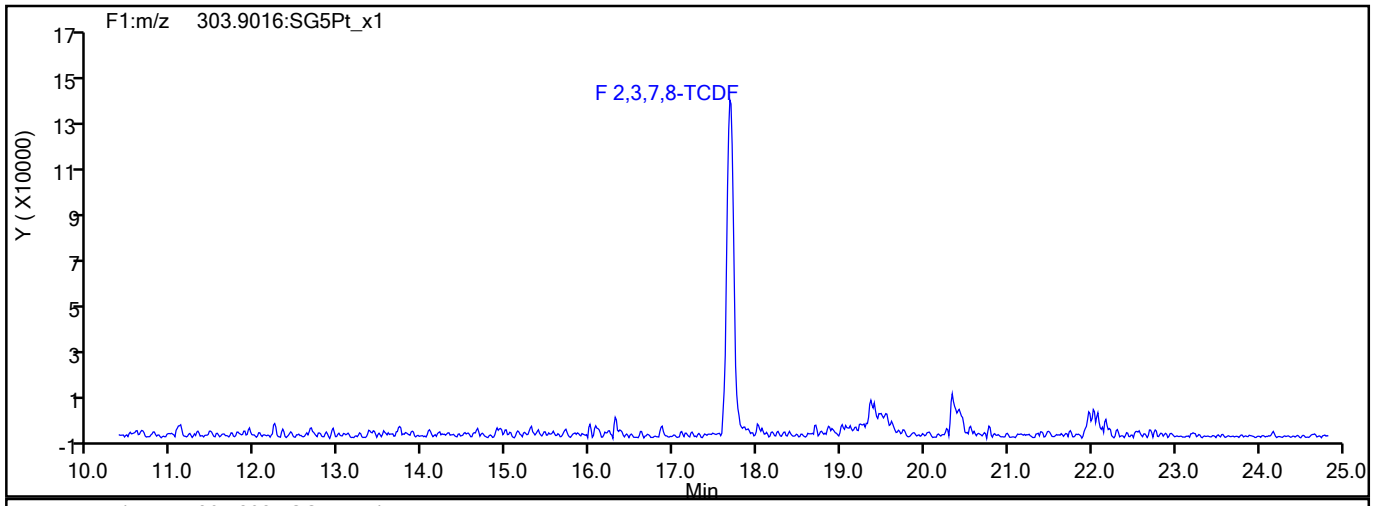

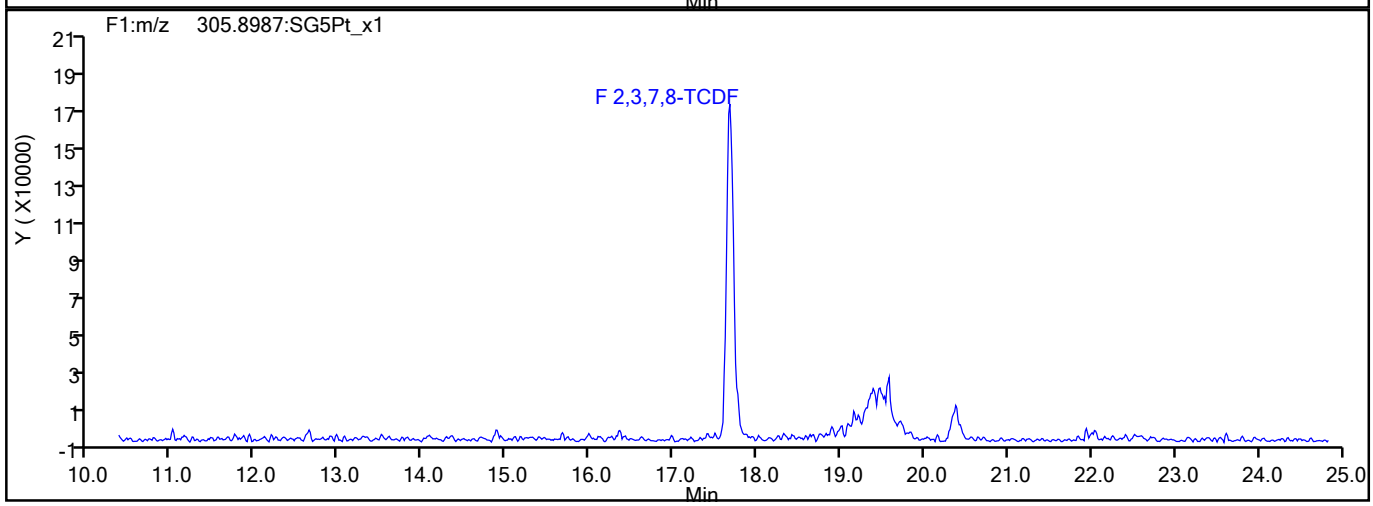

TCDF Interference Mass

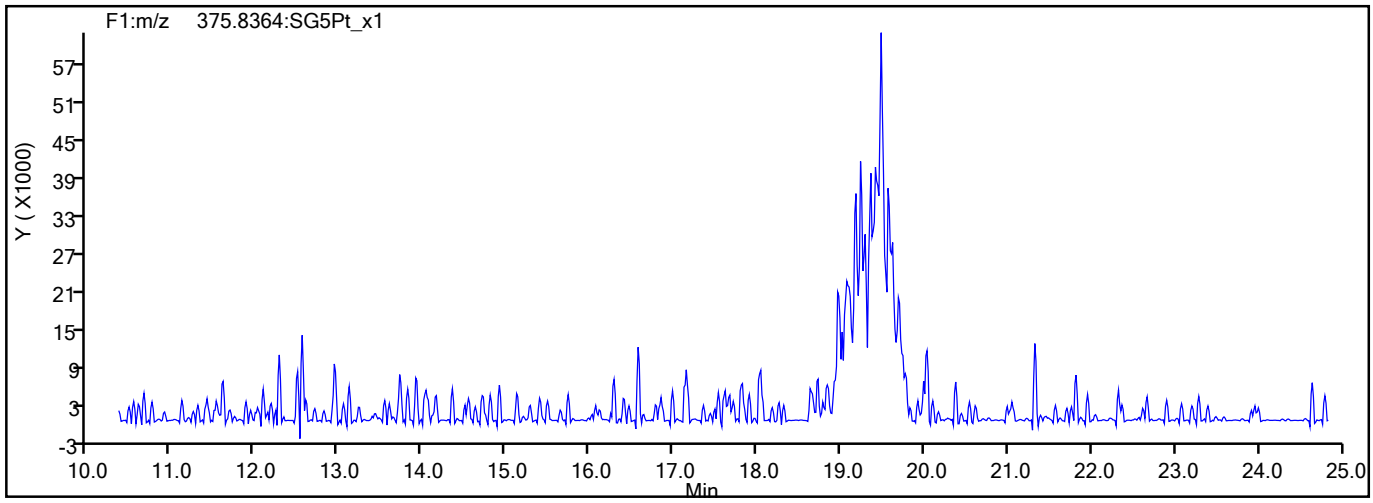

788866

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

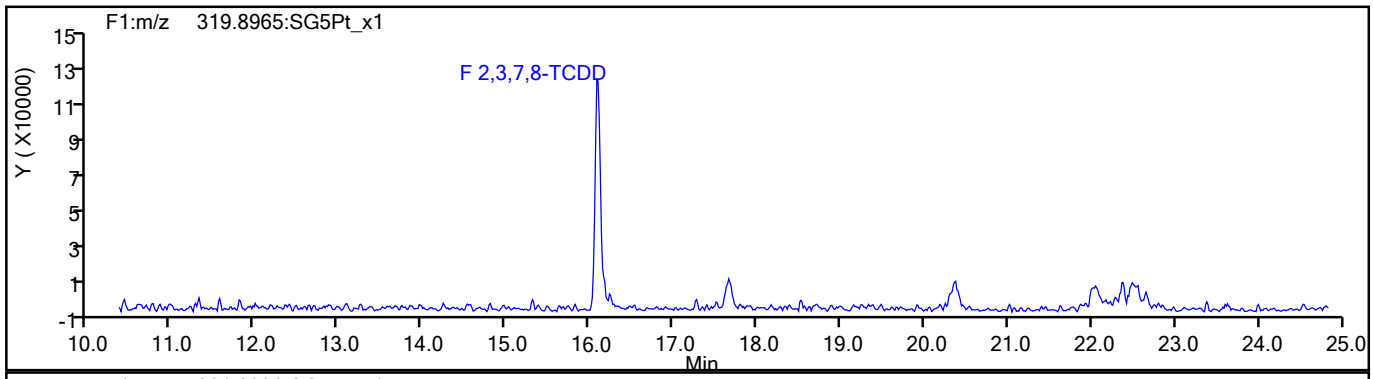

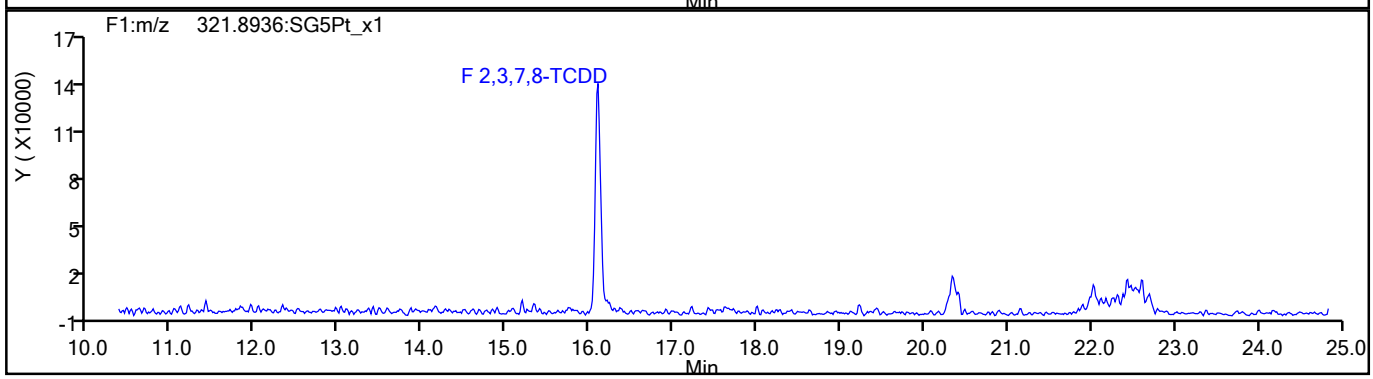

TCDD Standards

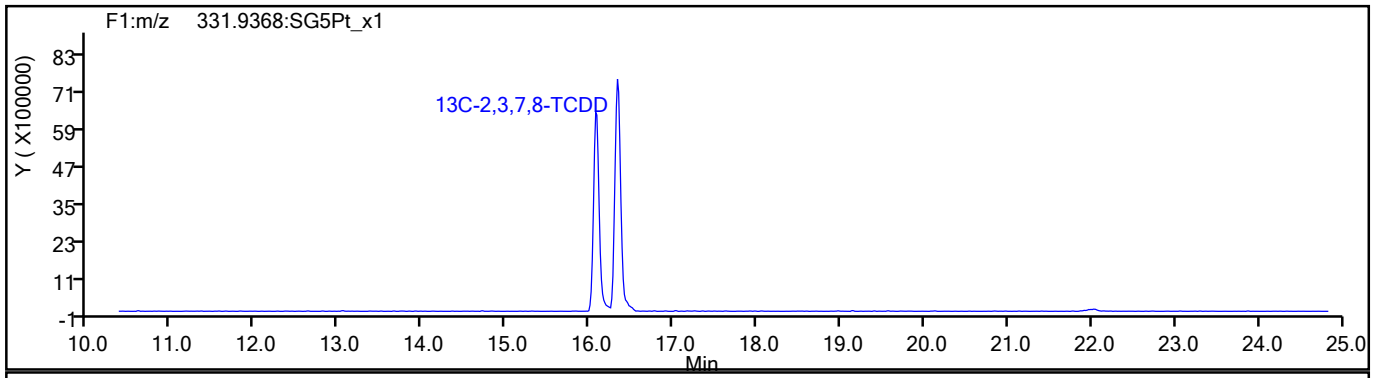

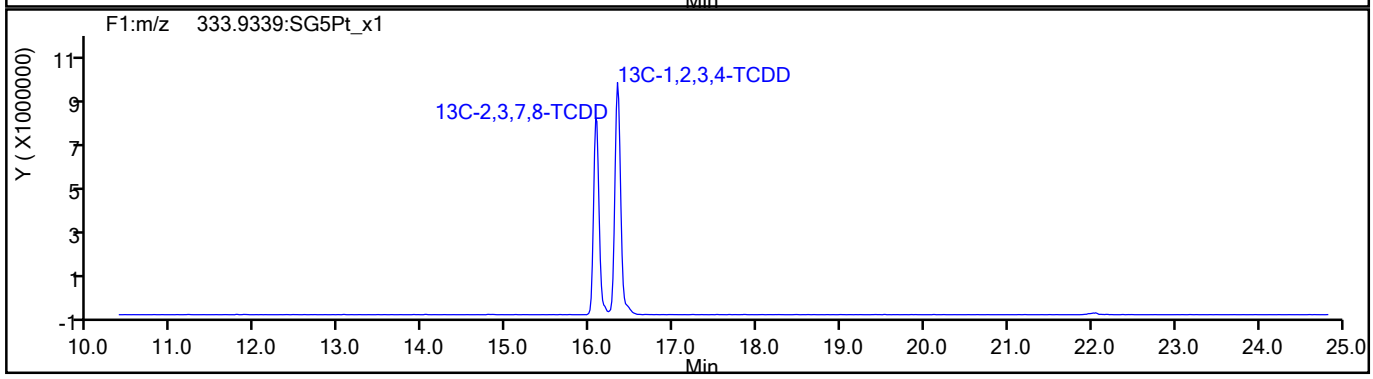

788867

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

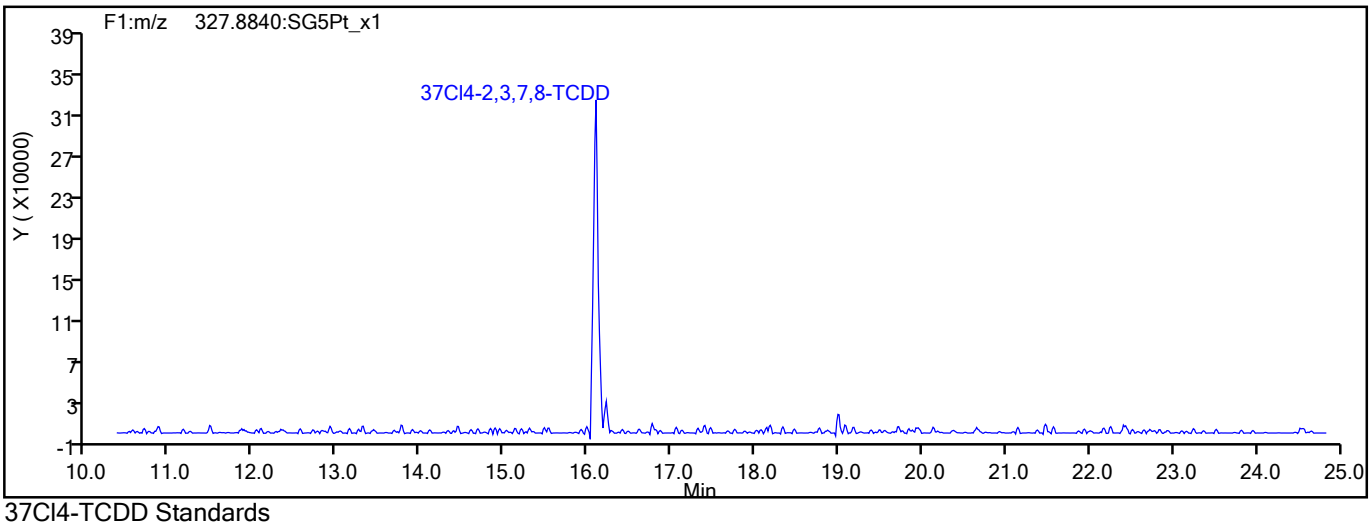

37Cl4-TCDD Standards

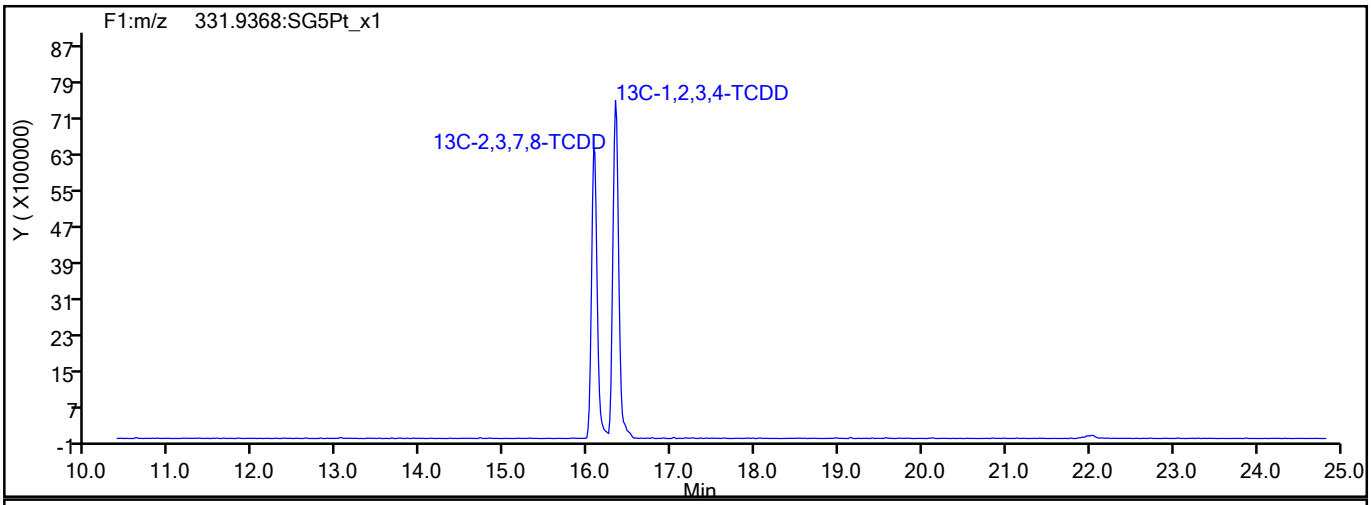

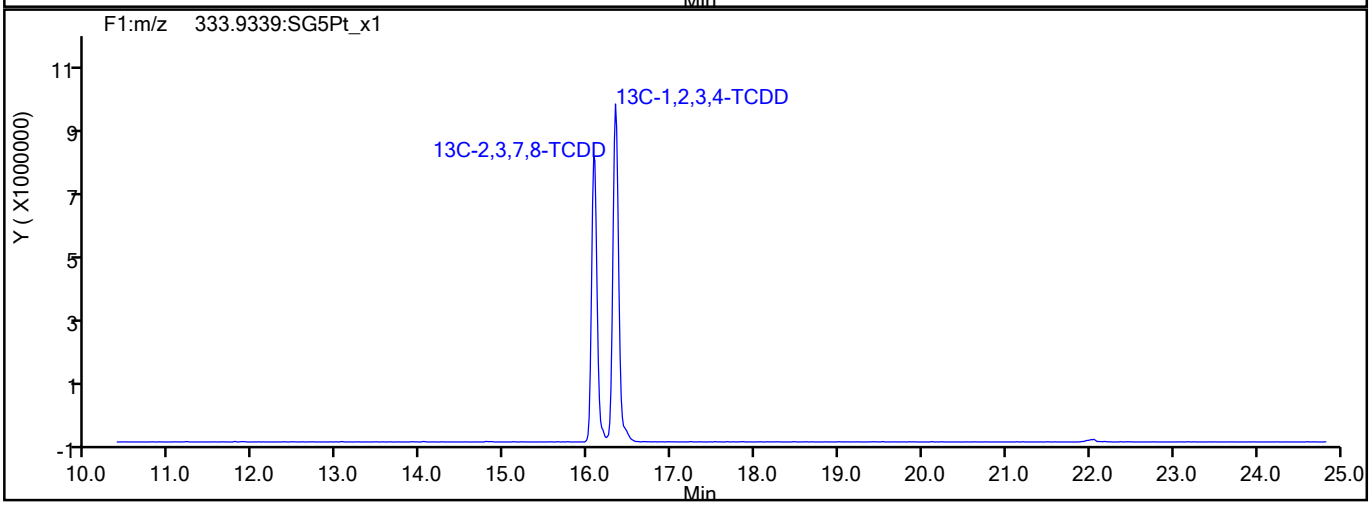

788868

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

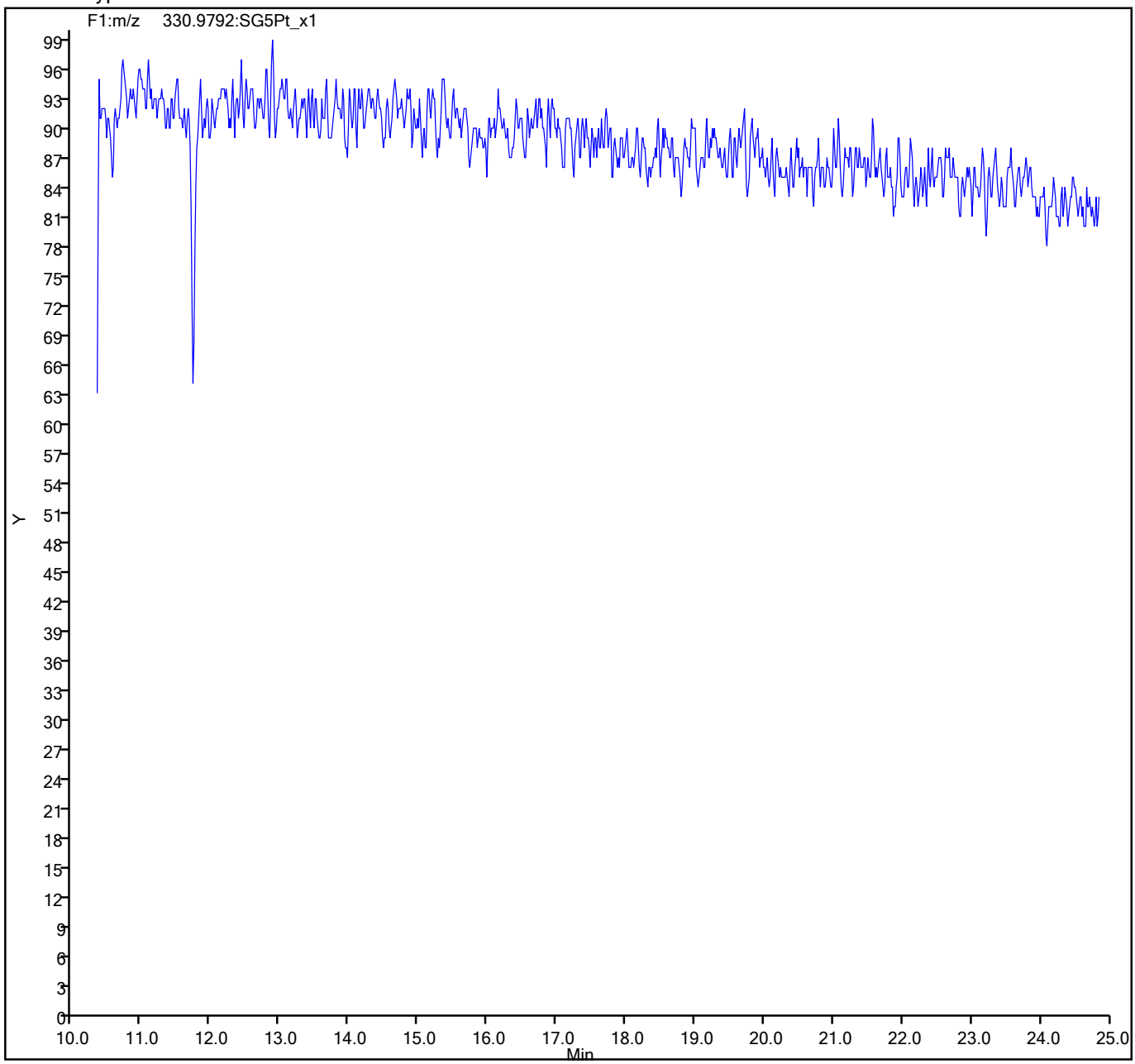

788869

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

788870

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

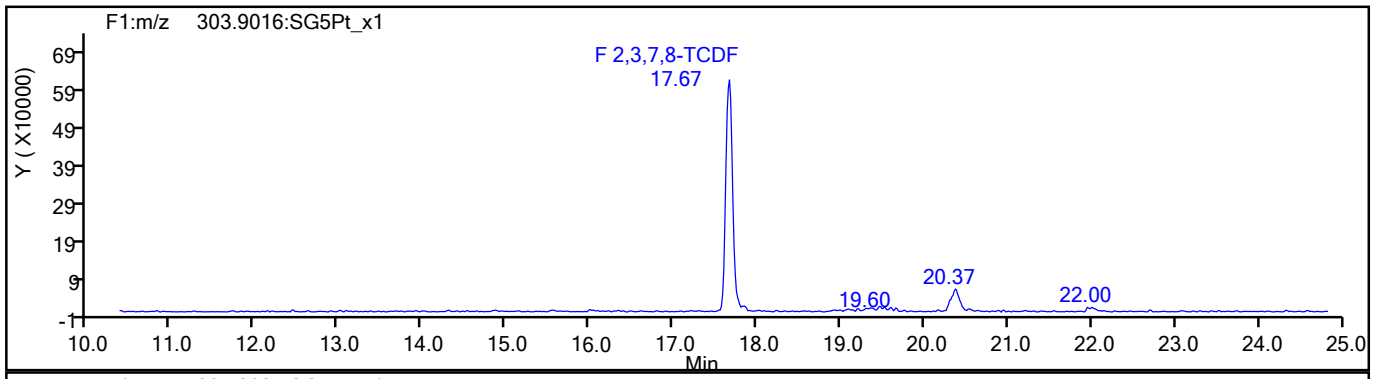

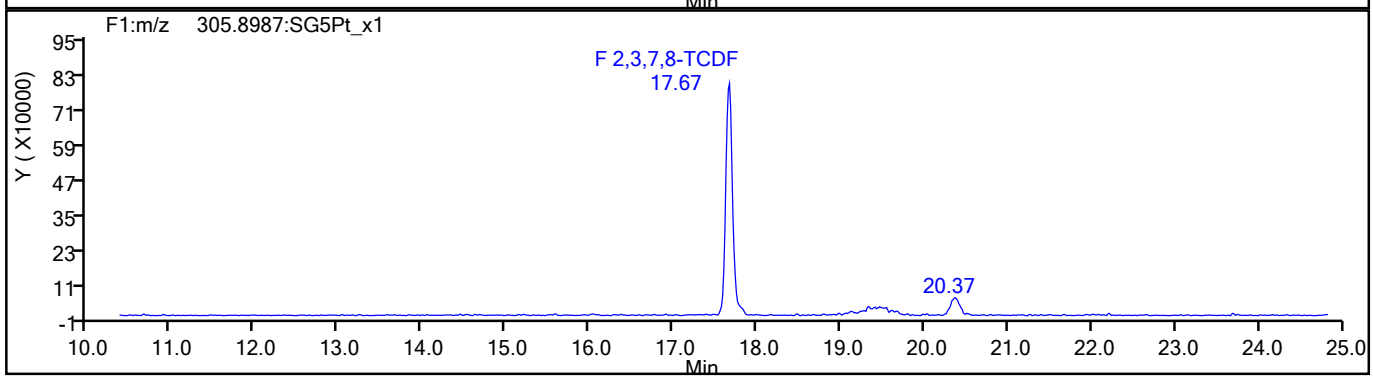

TCDF Standards

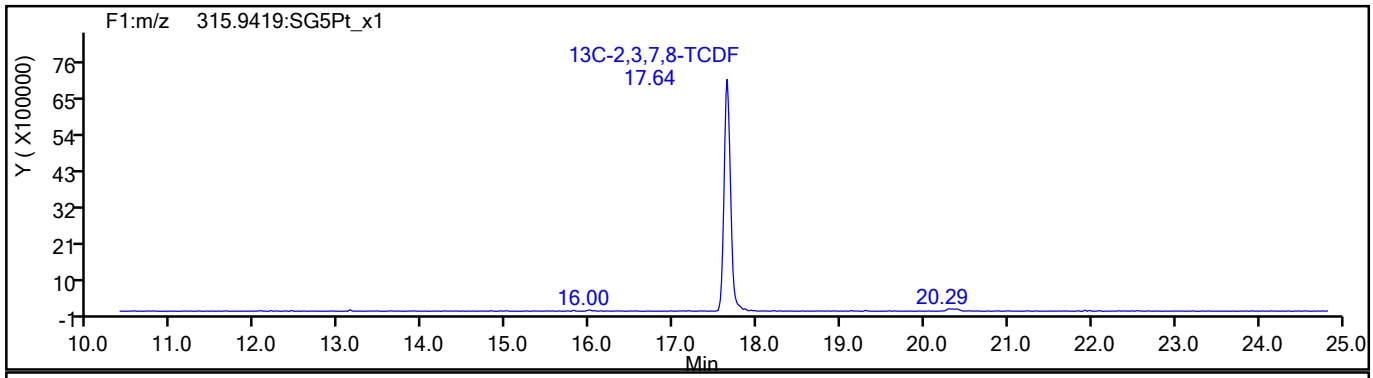

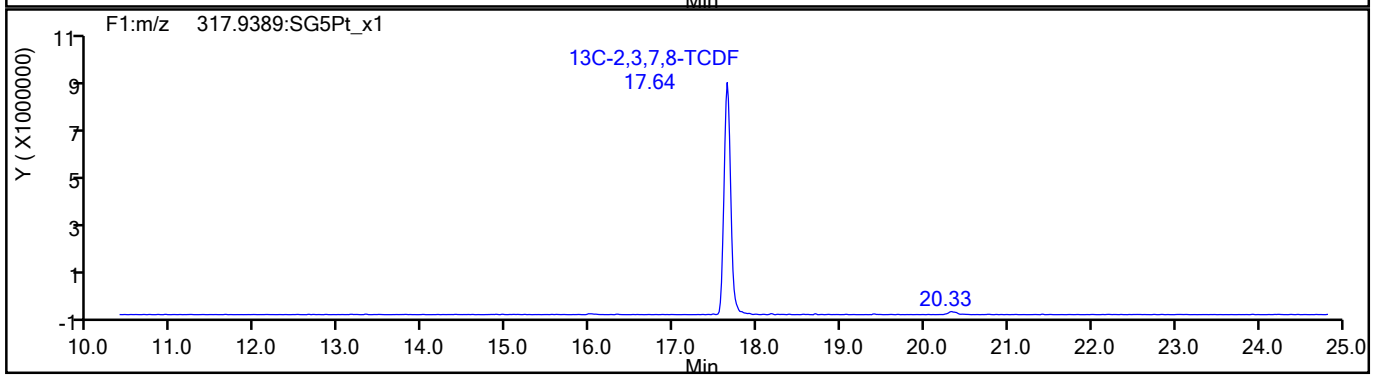

788872

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

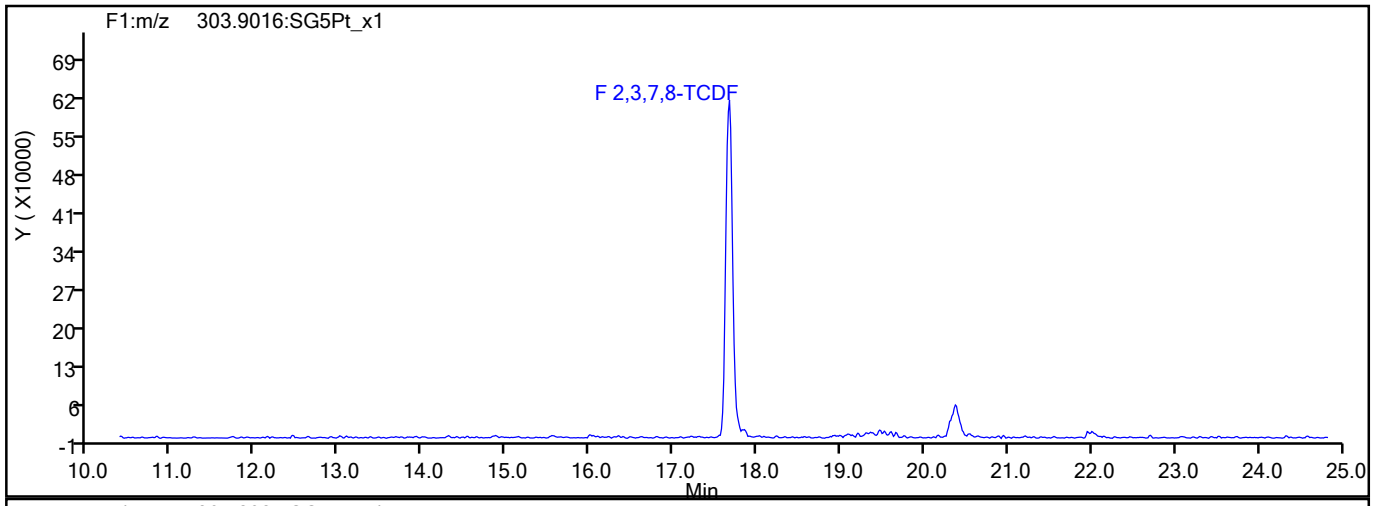

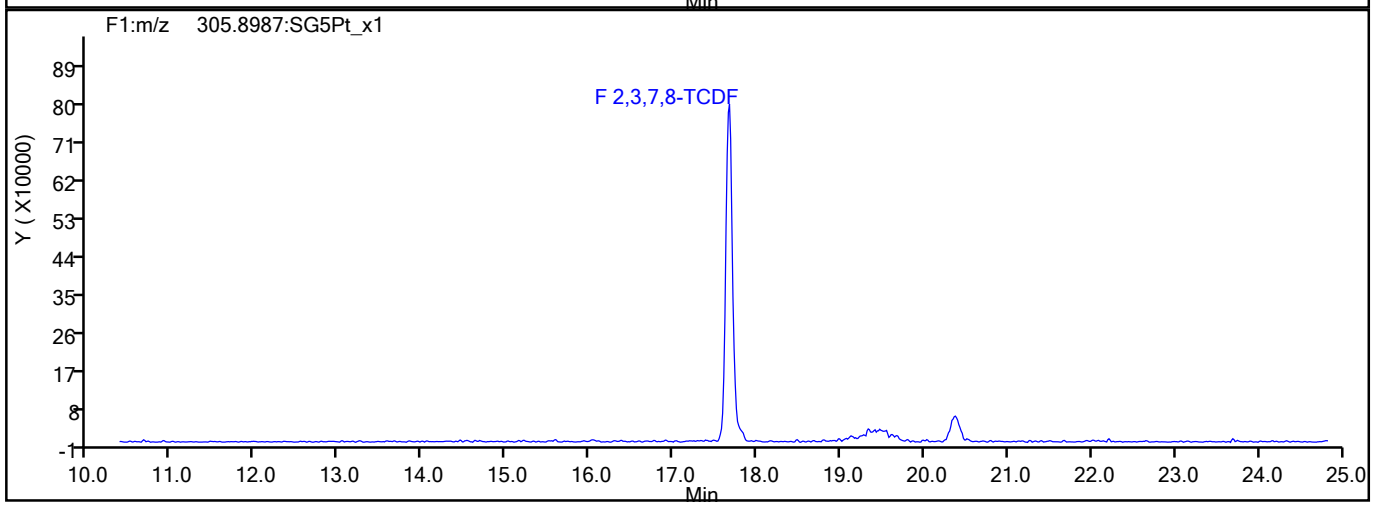

TCDF Interference Mass

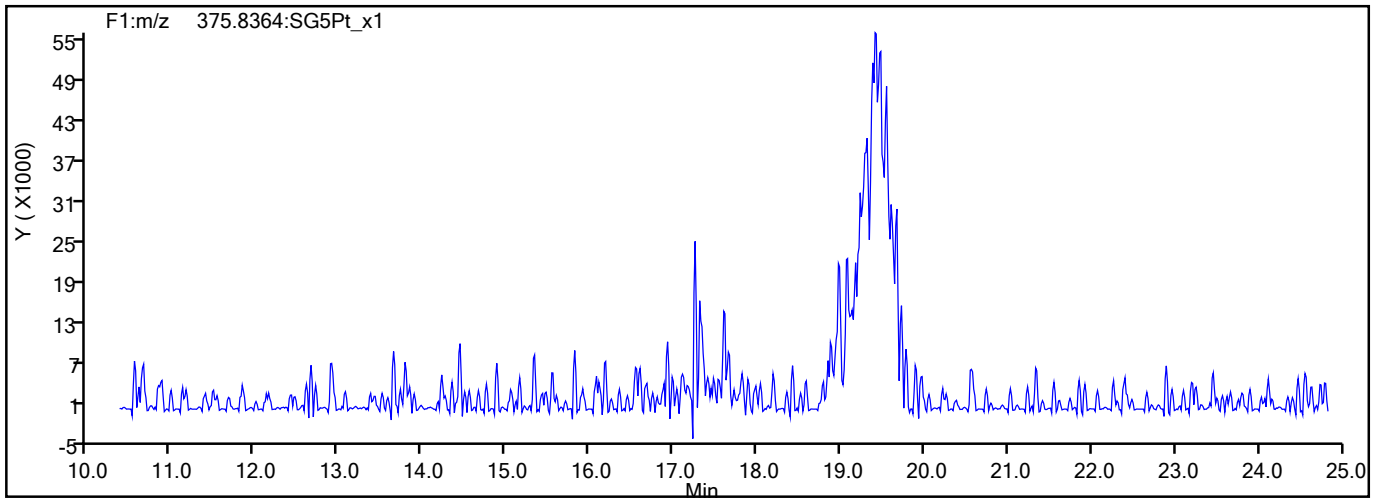

788873

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

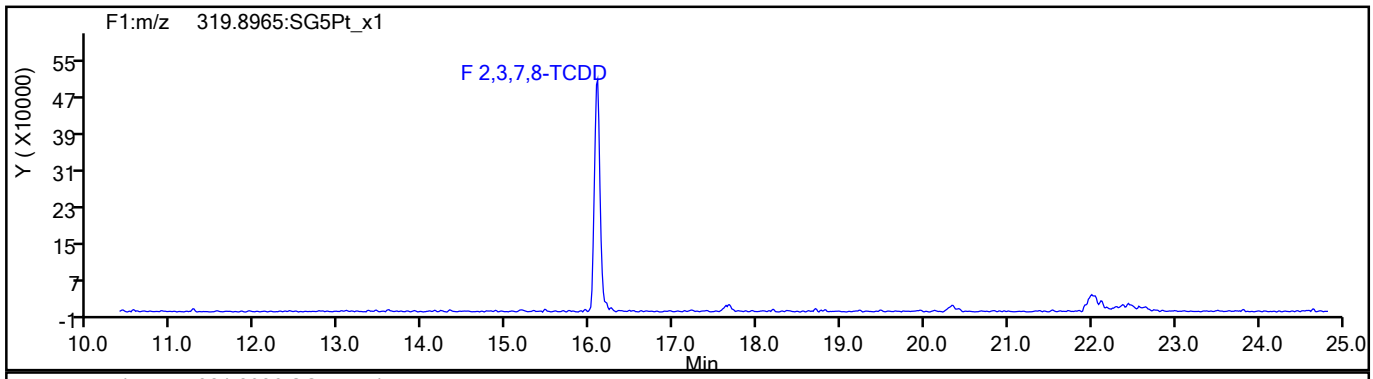

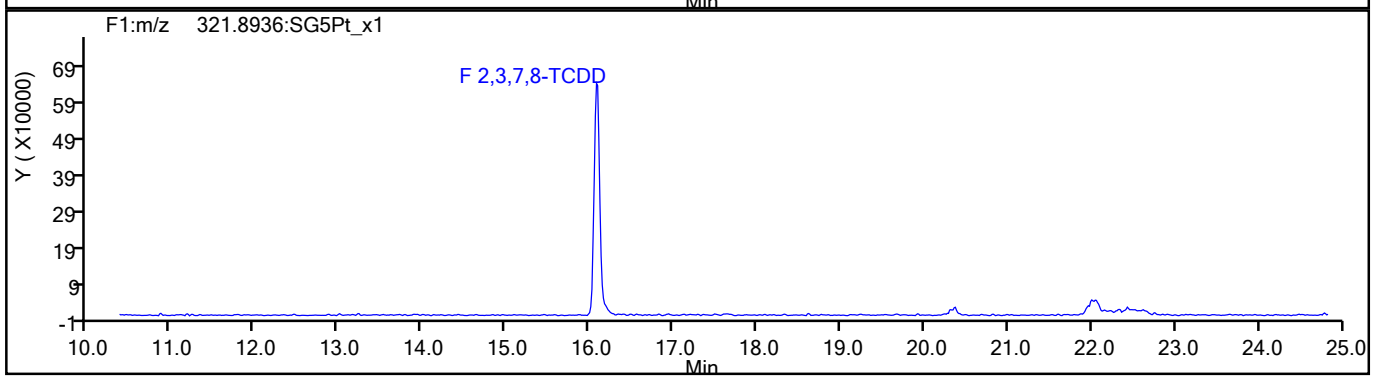

TCDD Standards

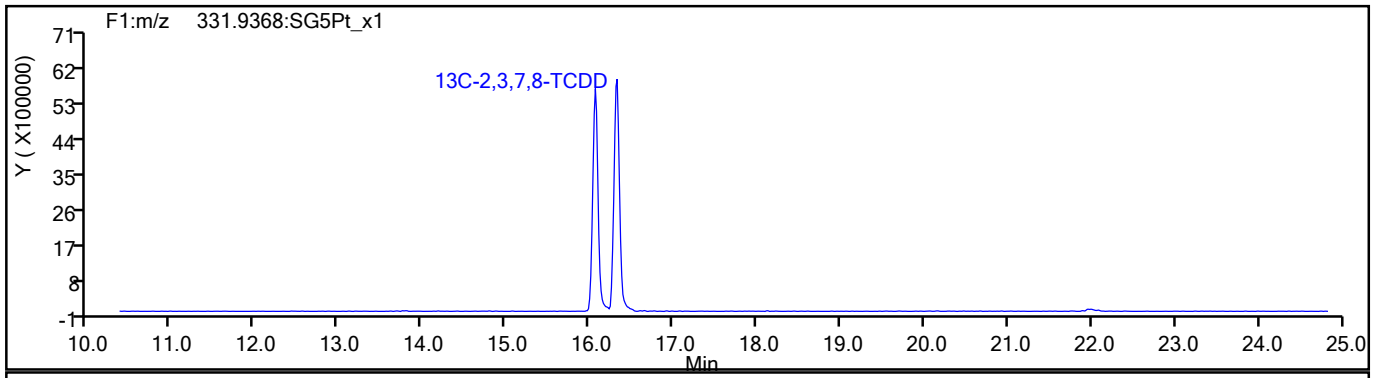

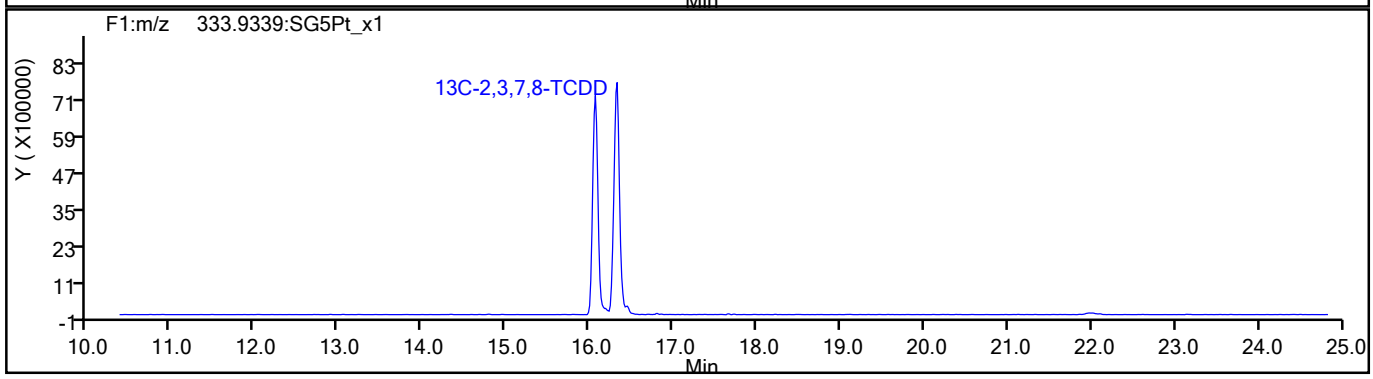

788874

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

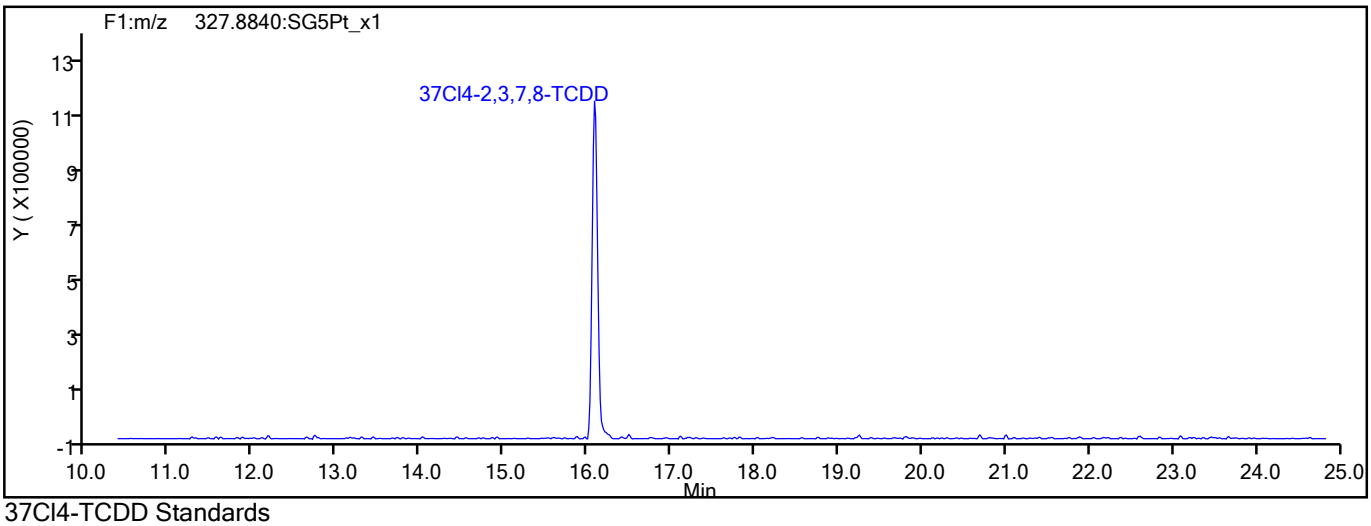

37Cl4-TCDD Standards

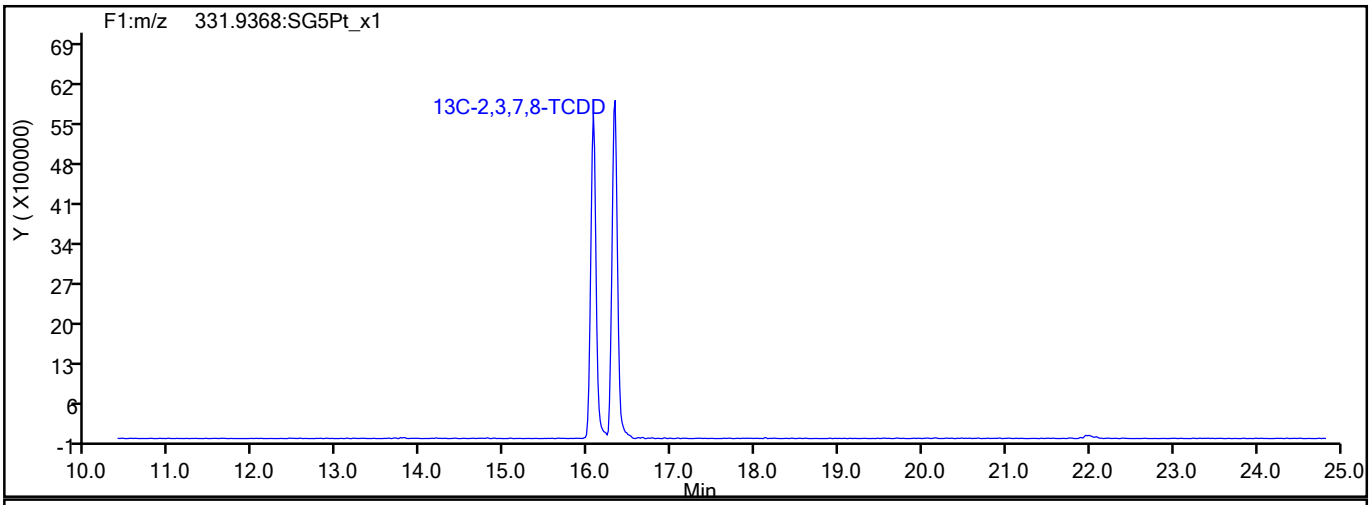

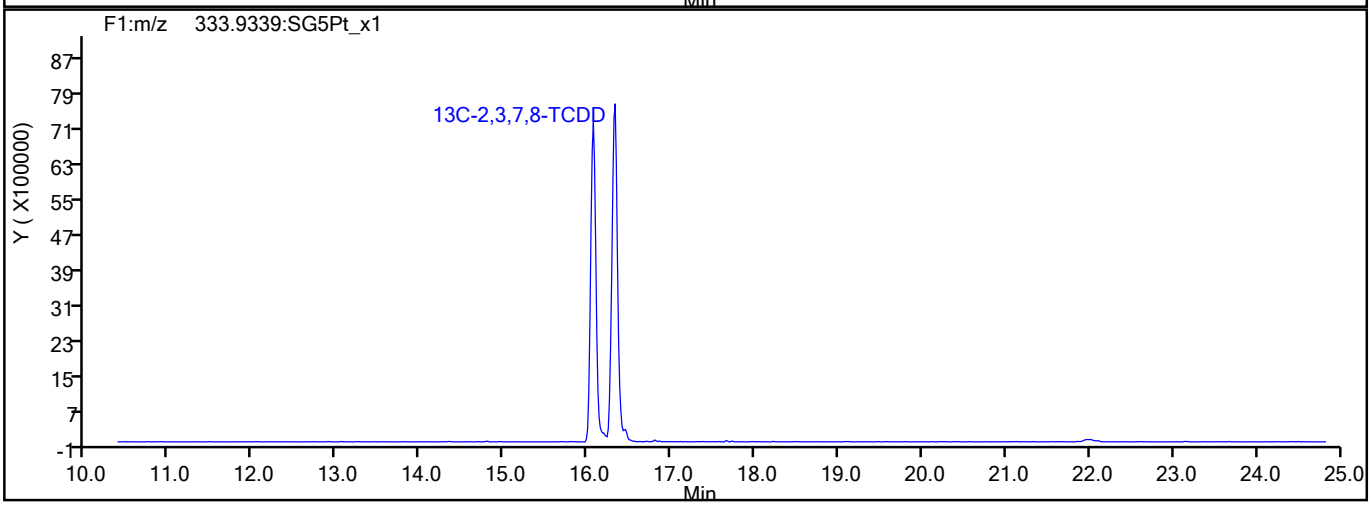

788875

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

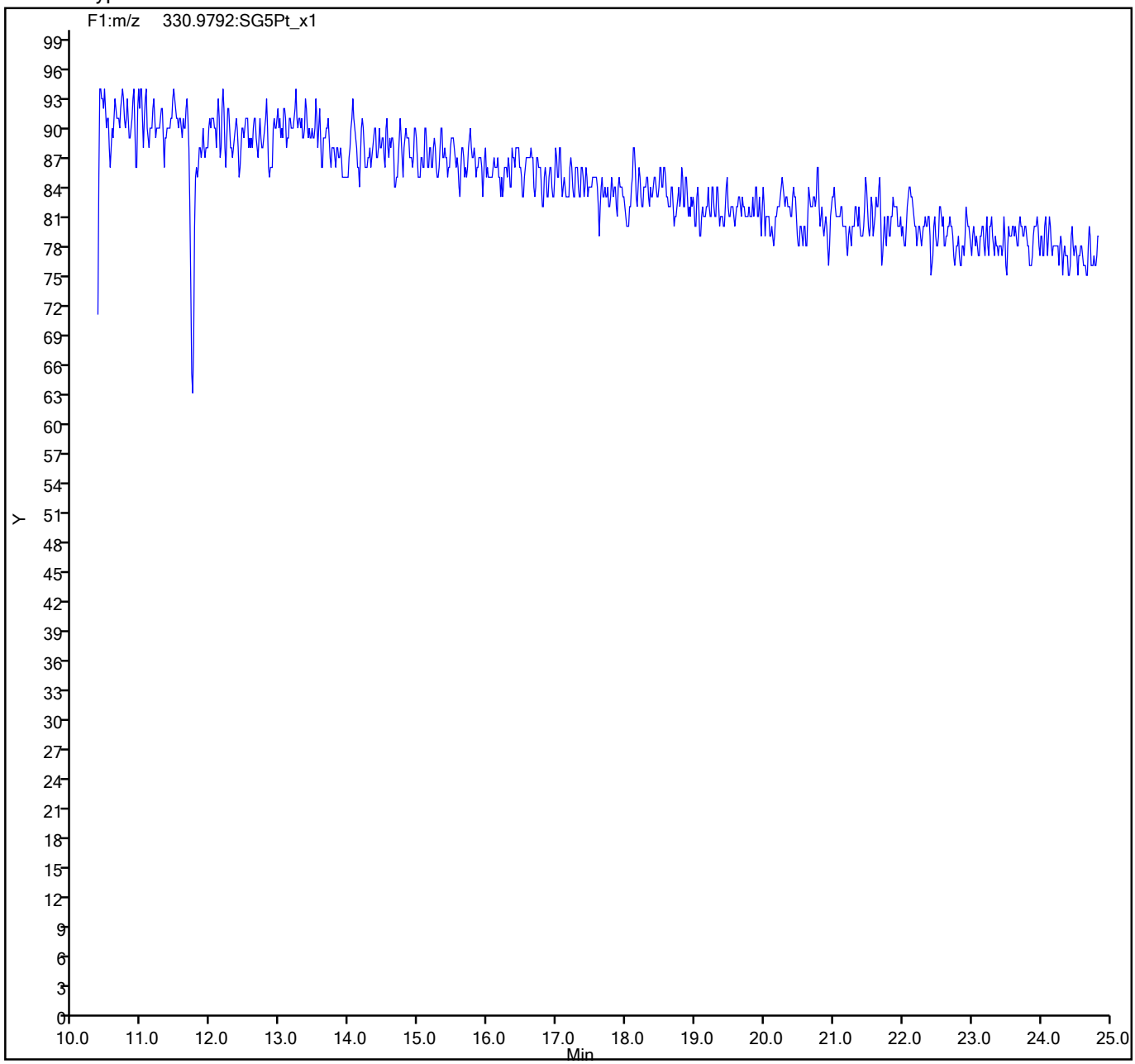

788876

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

788877

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

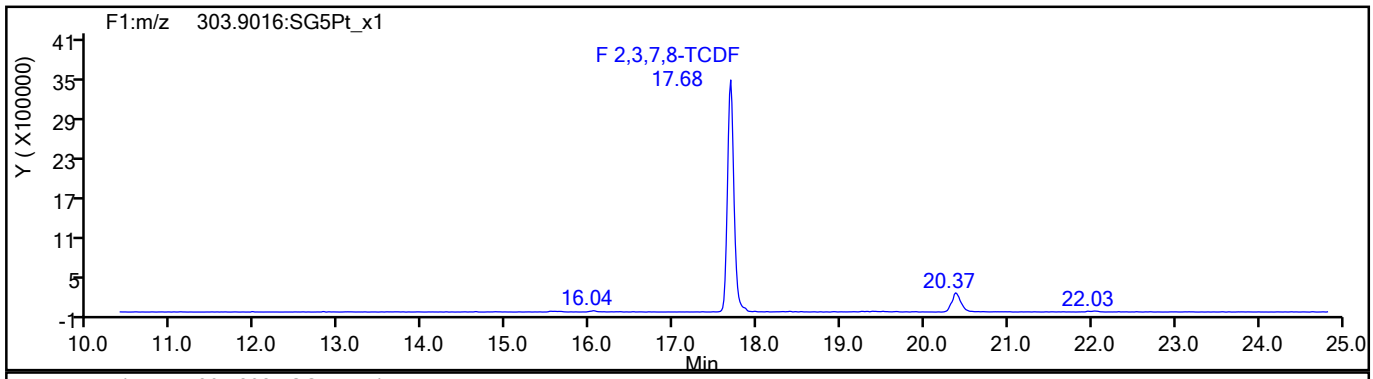

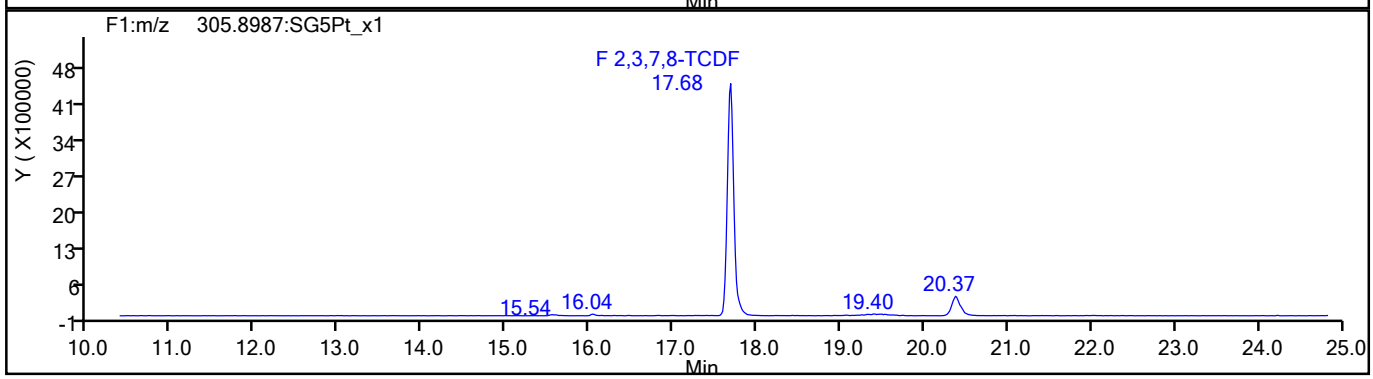

TCDF Standards

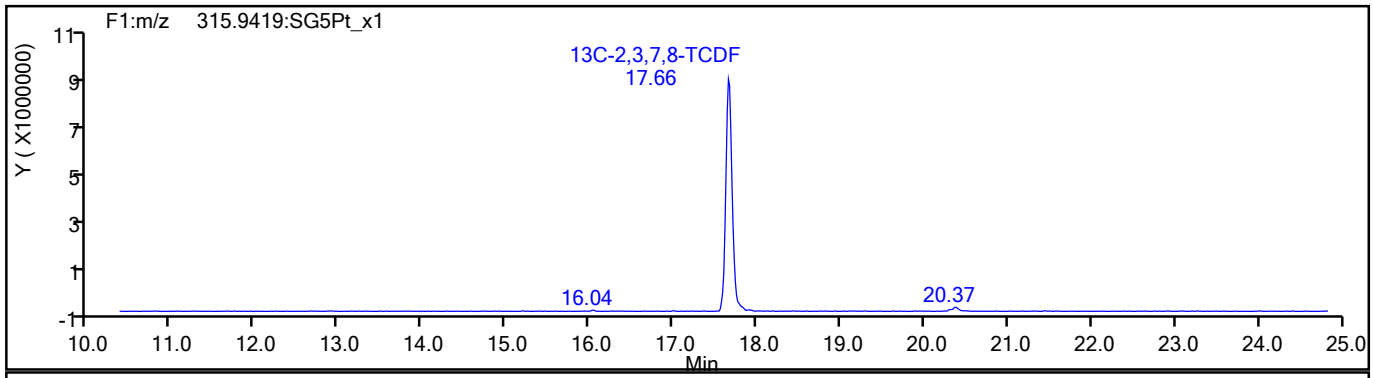

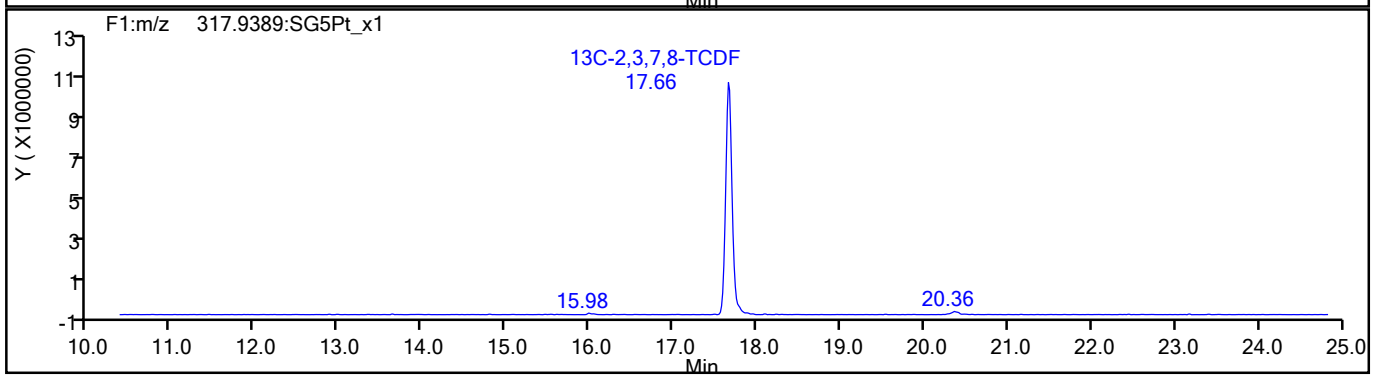

788879

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

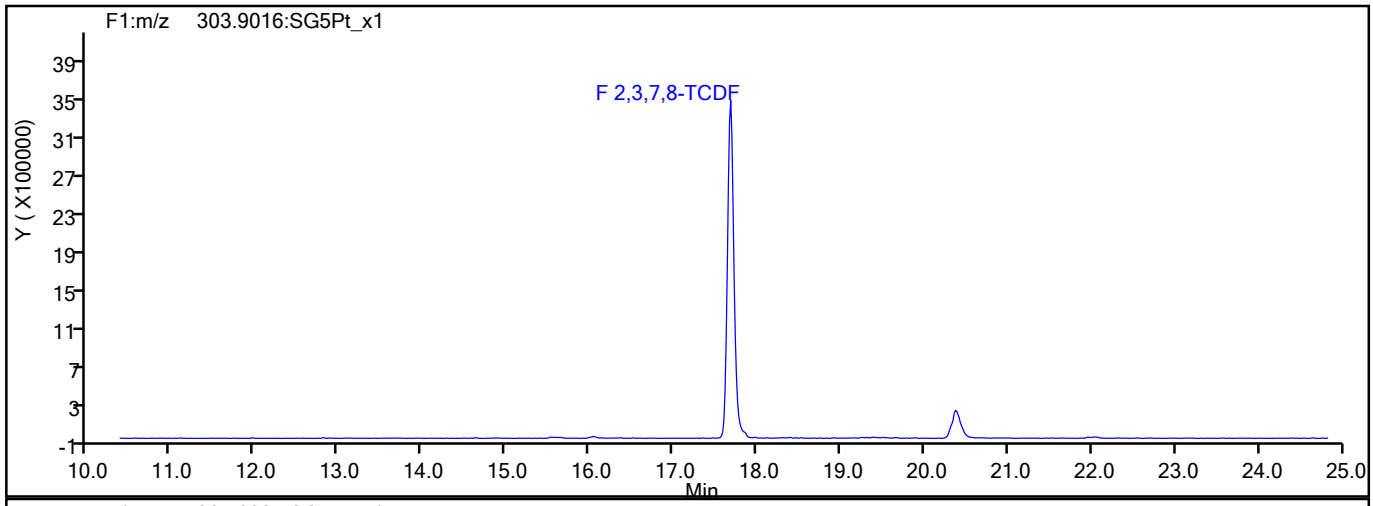

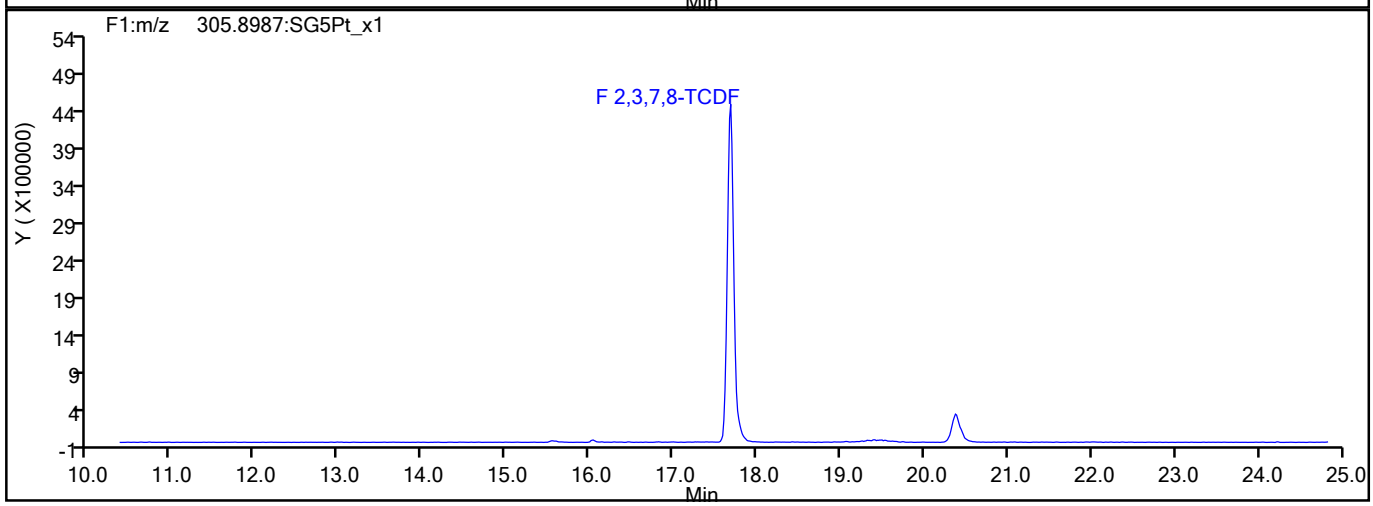

TCDF Interference Mass

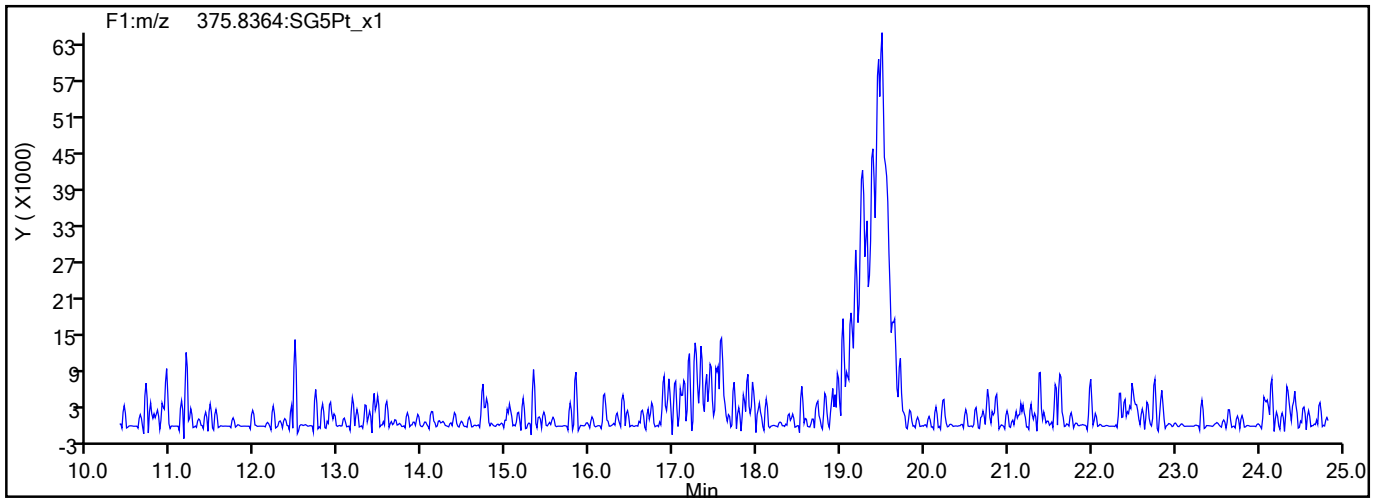

788880

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

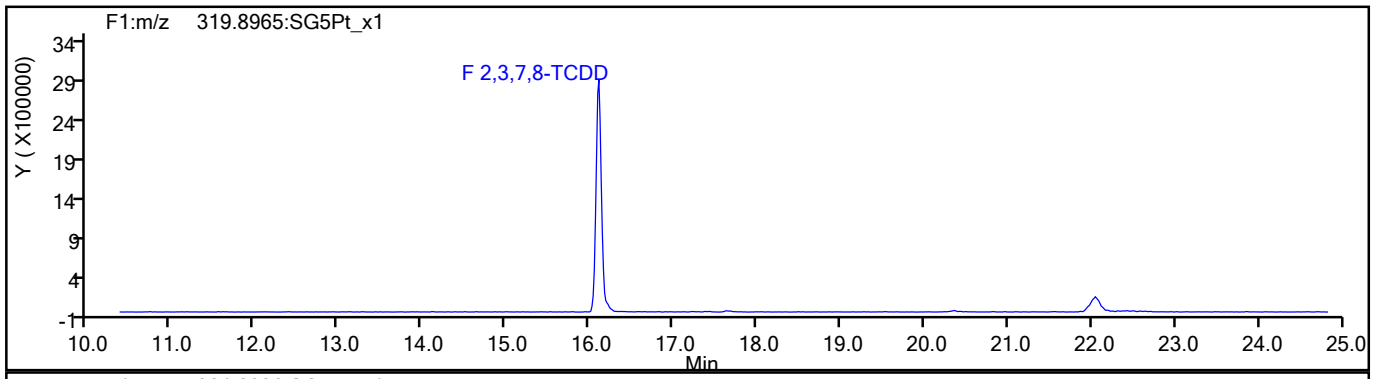

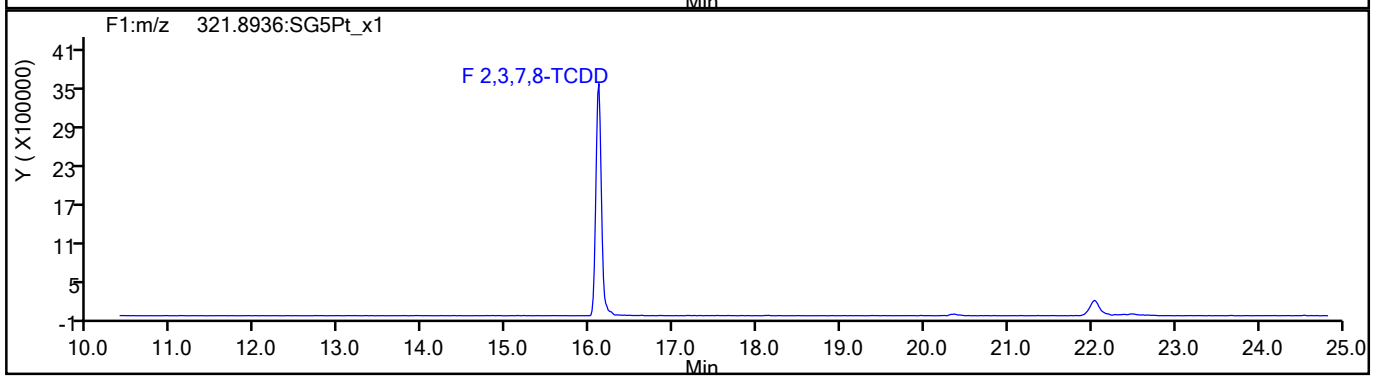

TCDD Standards

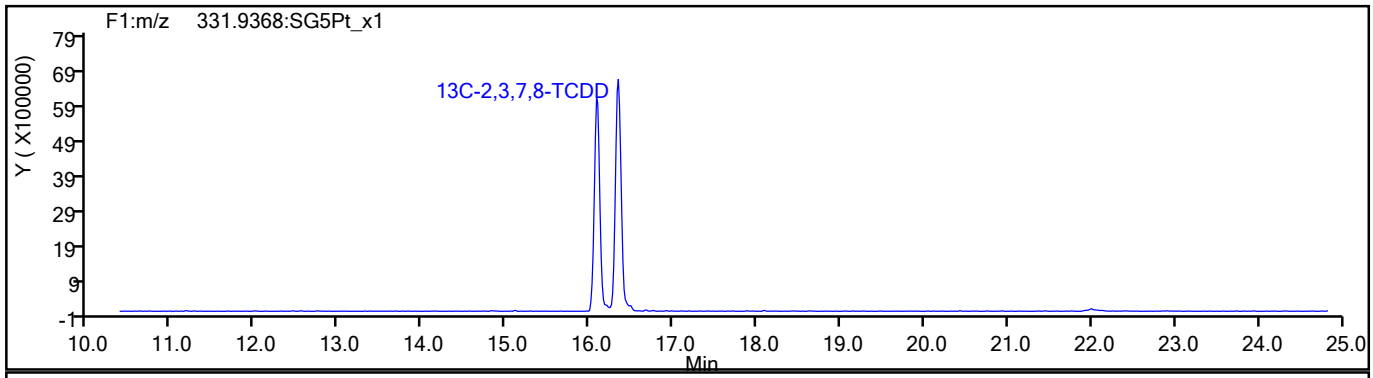

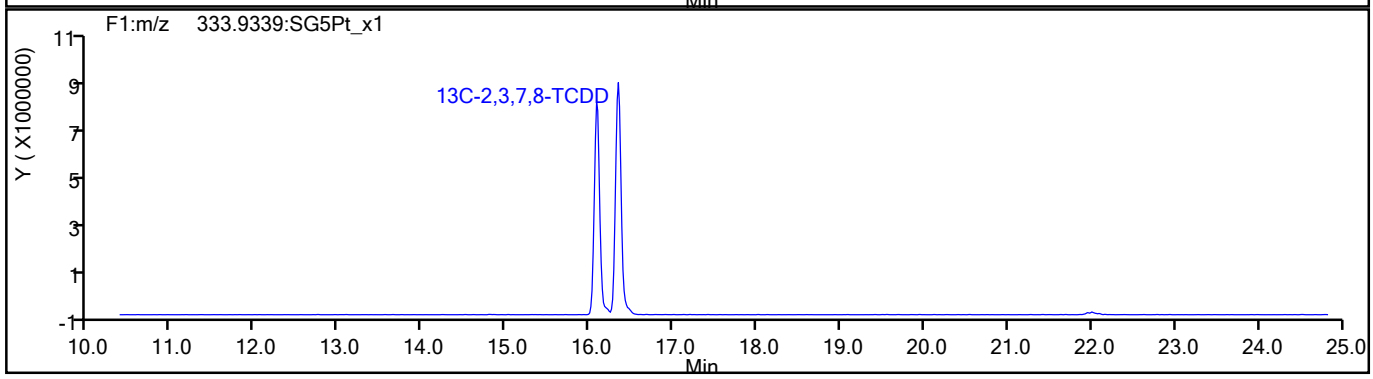

788881

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

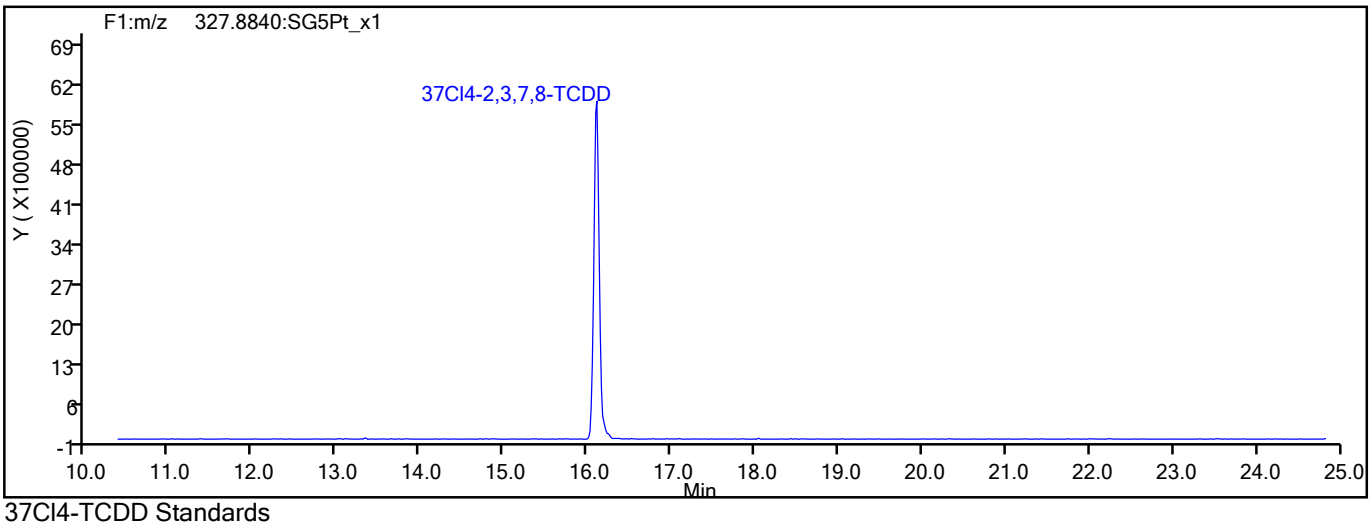

37Cl4-TCDD Standards

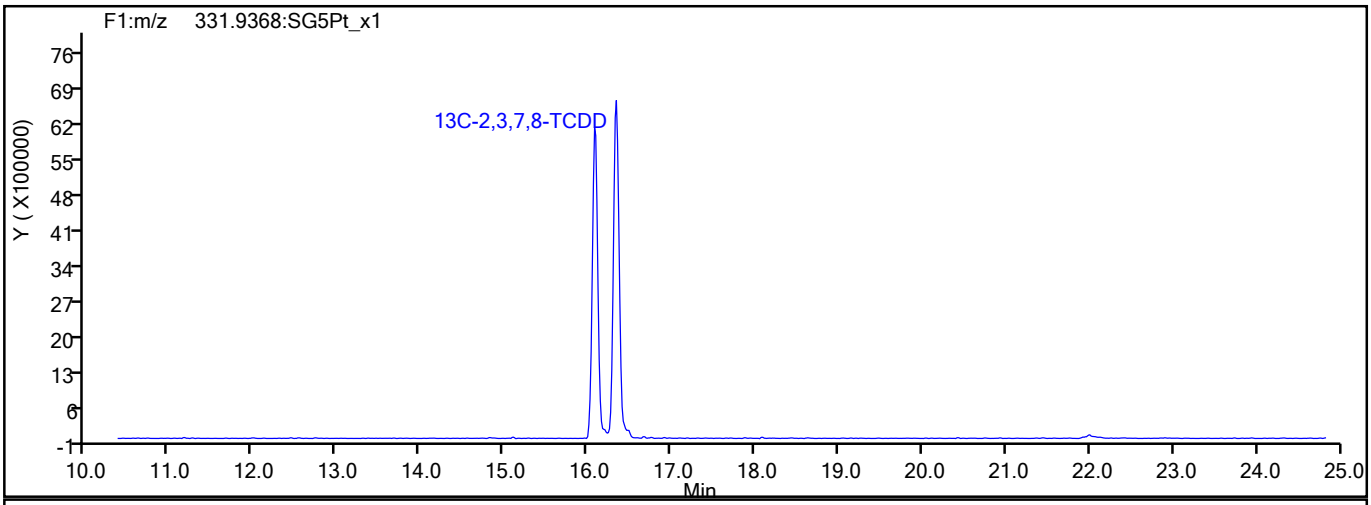

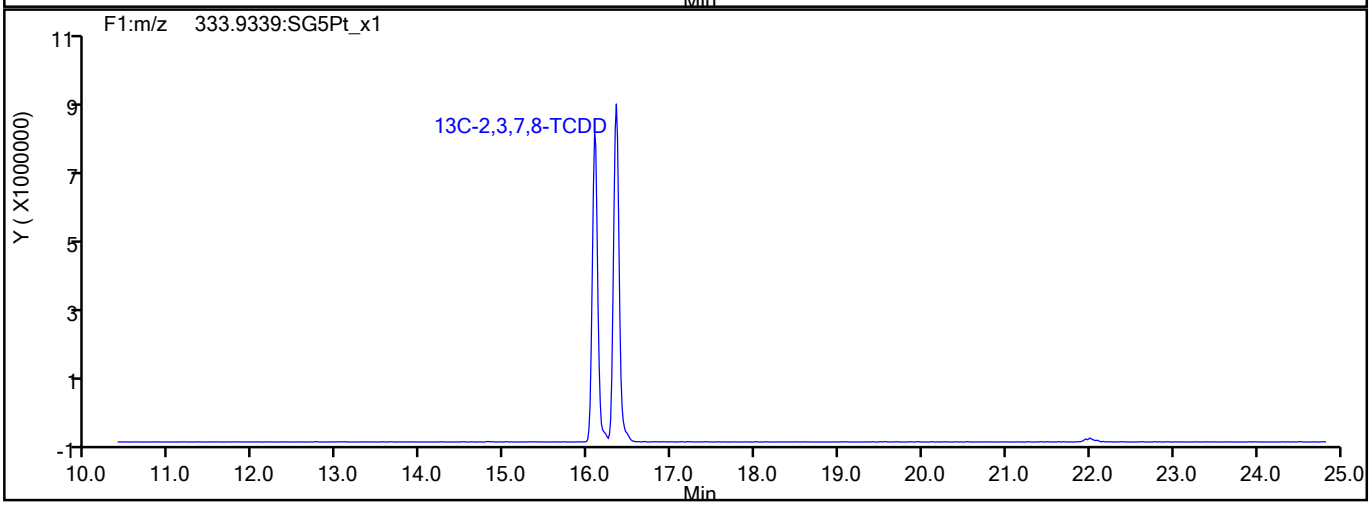

788882

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

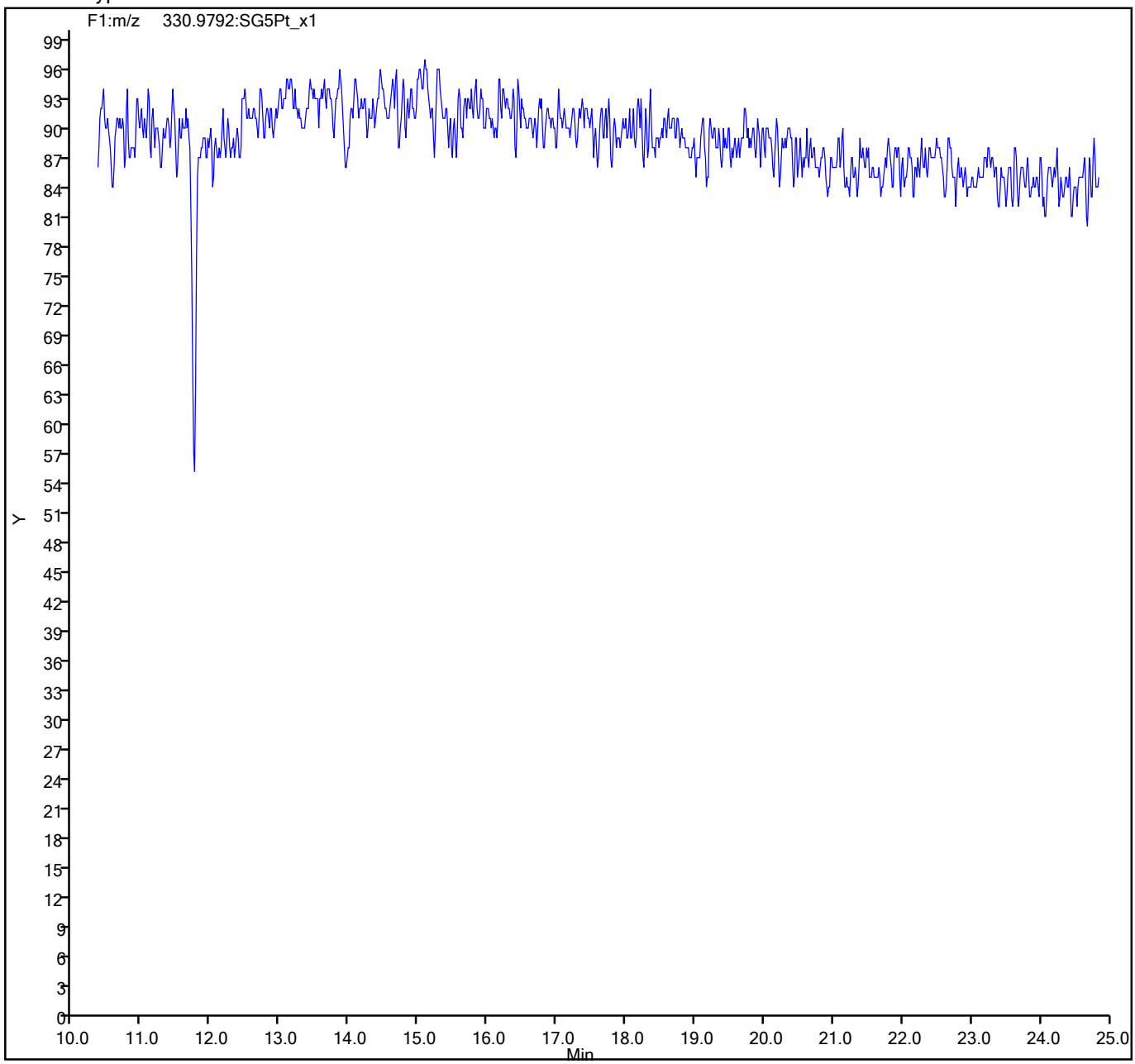

788883

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

788884

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

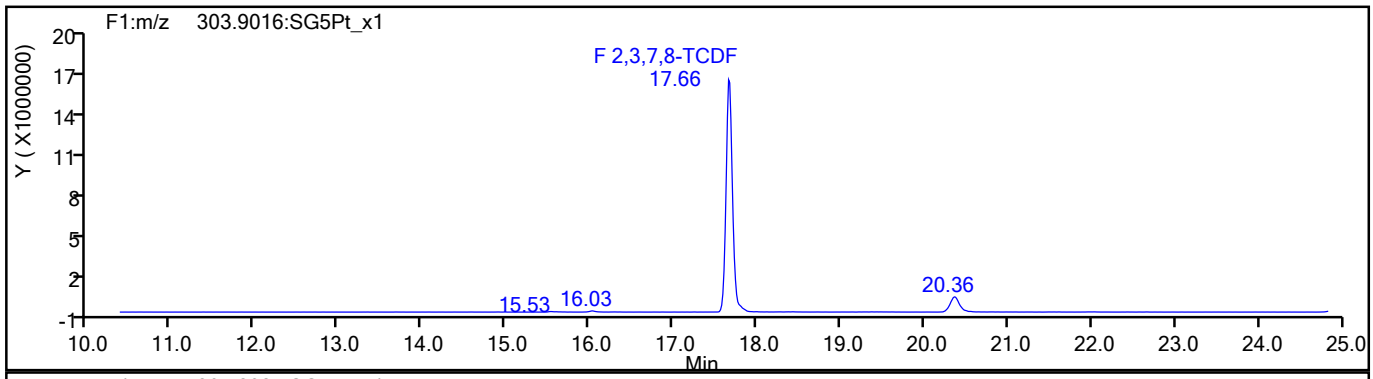

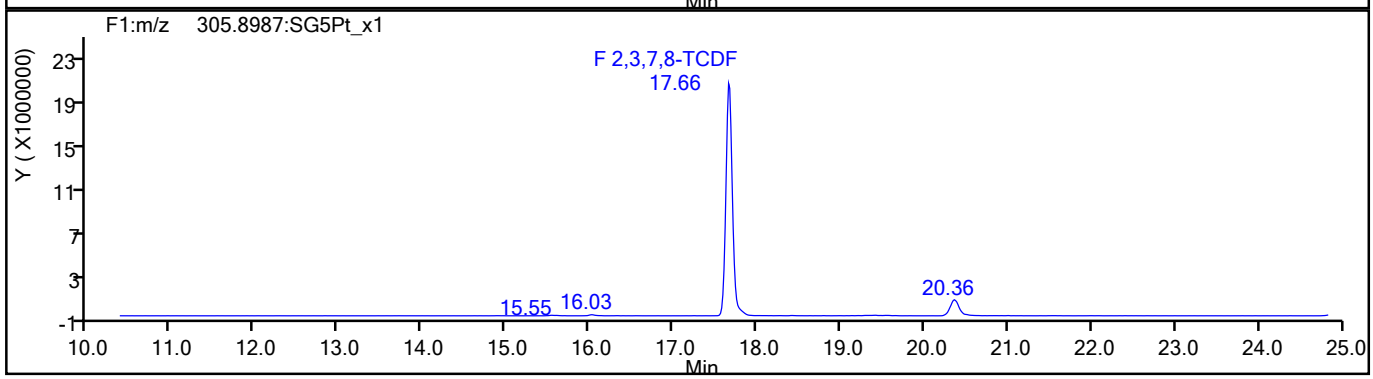

TCDF Standards

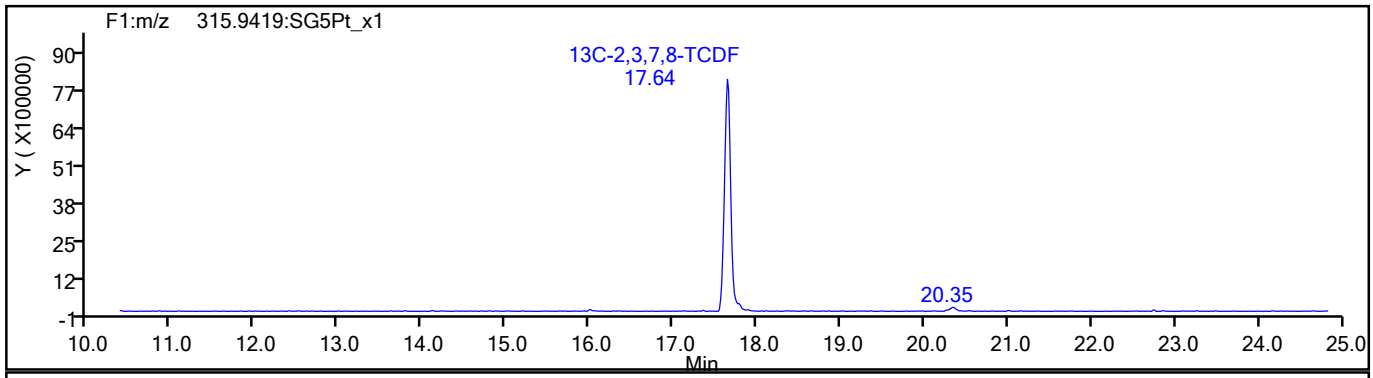

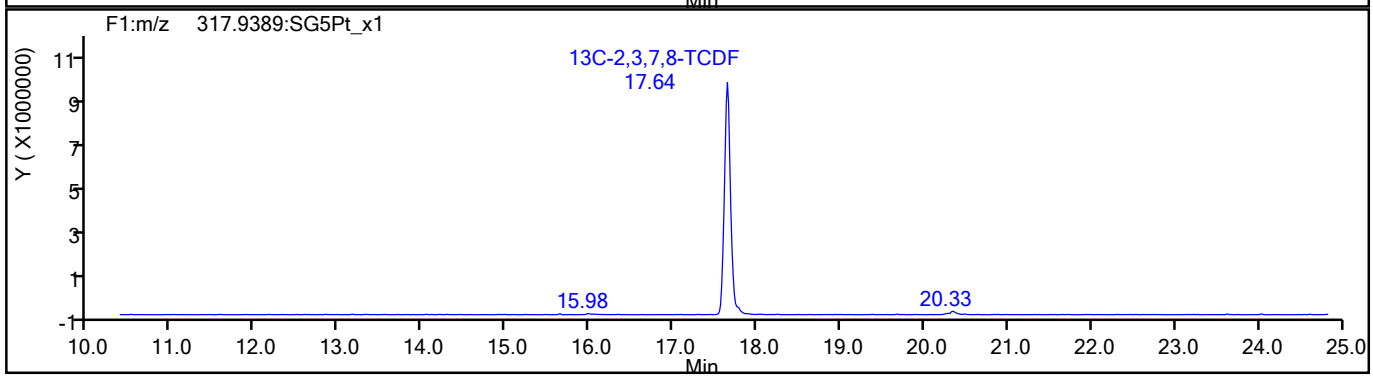

788886

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

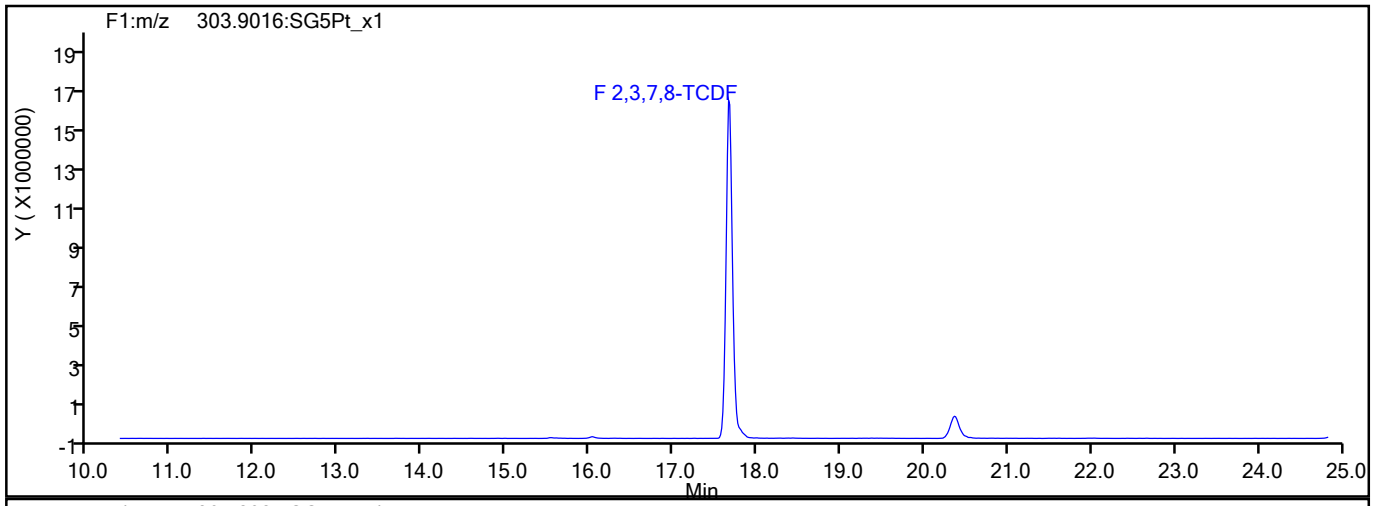

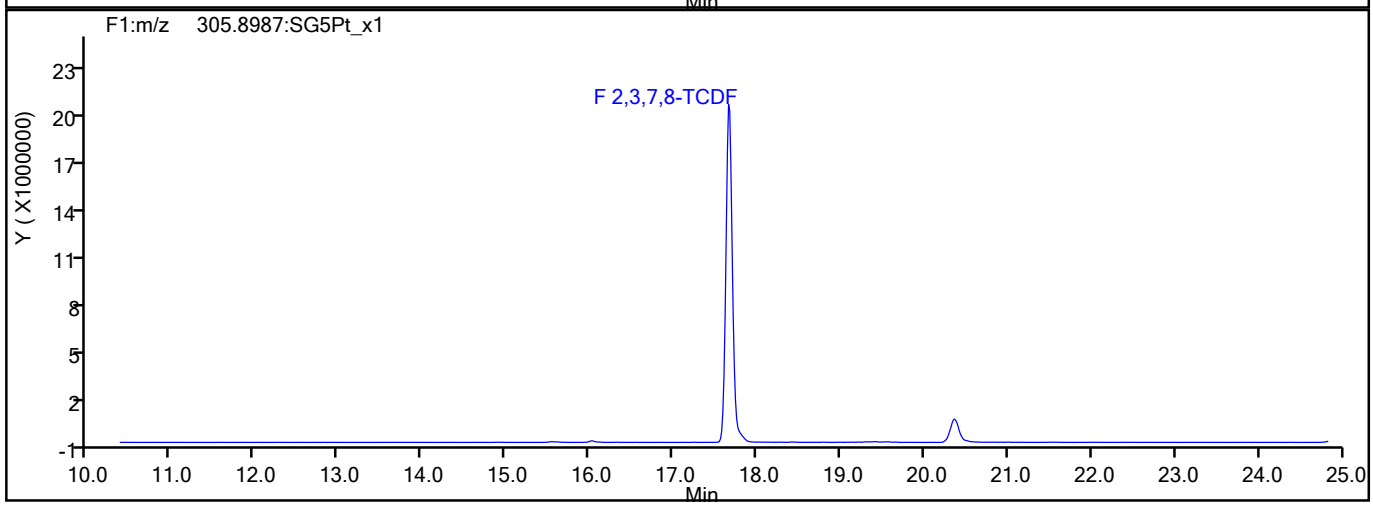

TCDF Interference Mass

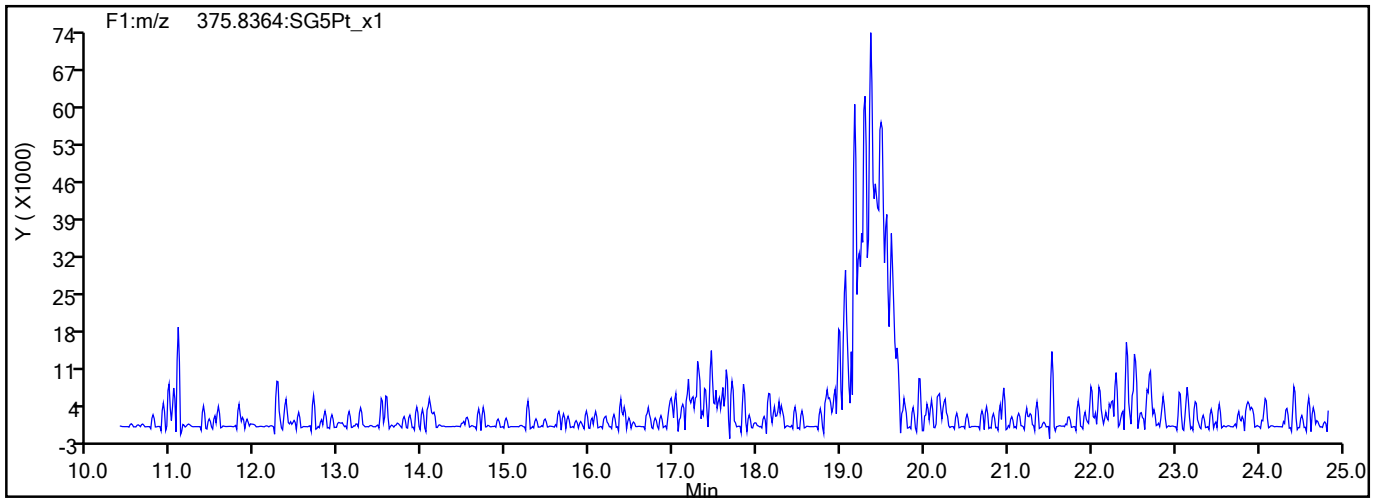

788887

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

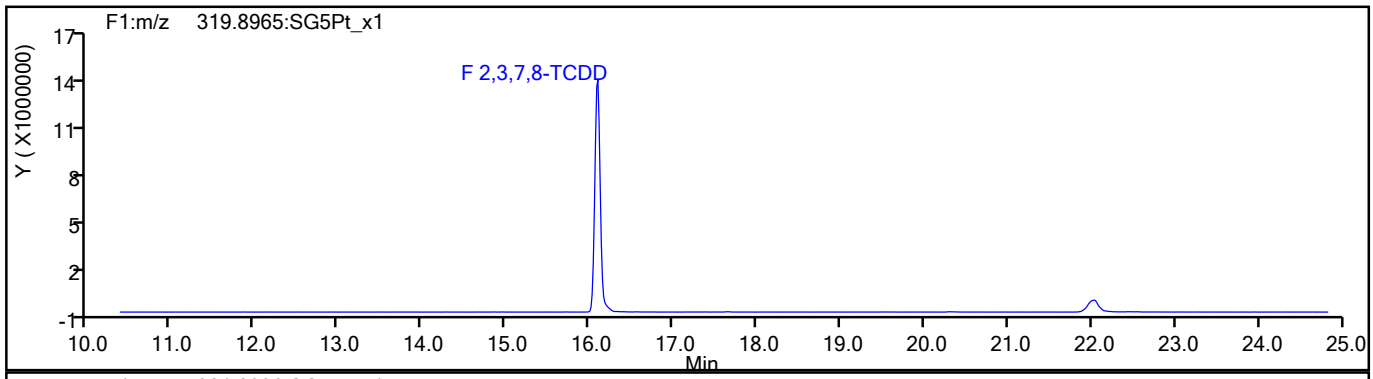

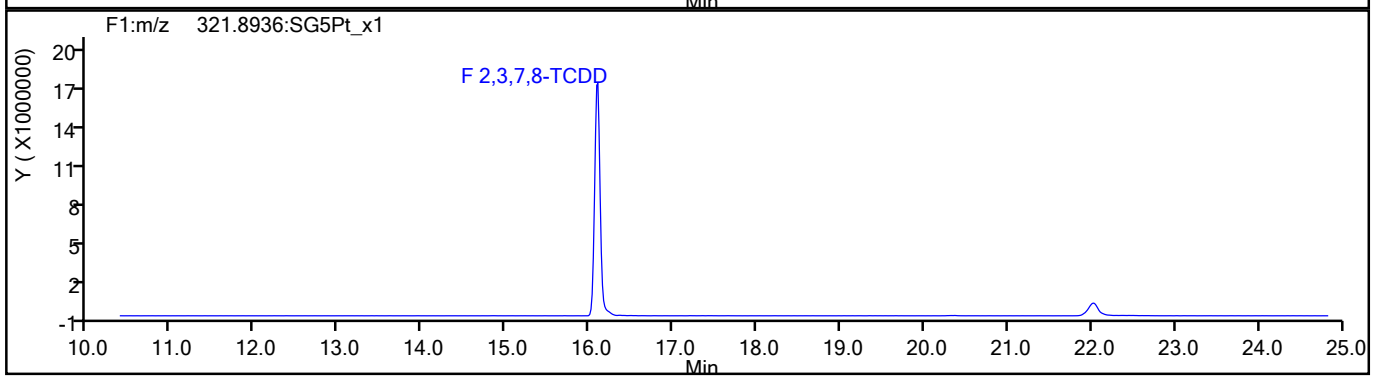

TCDD Standards

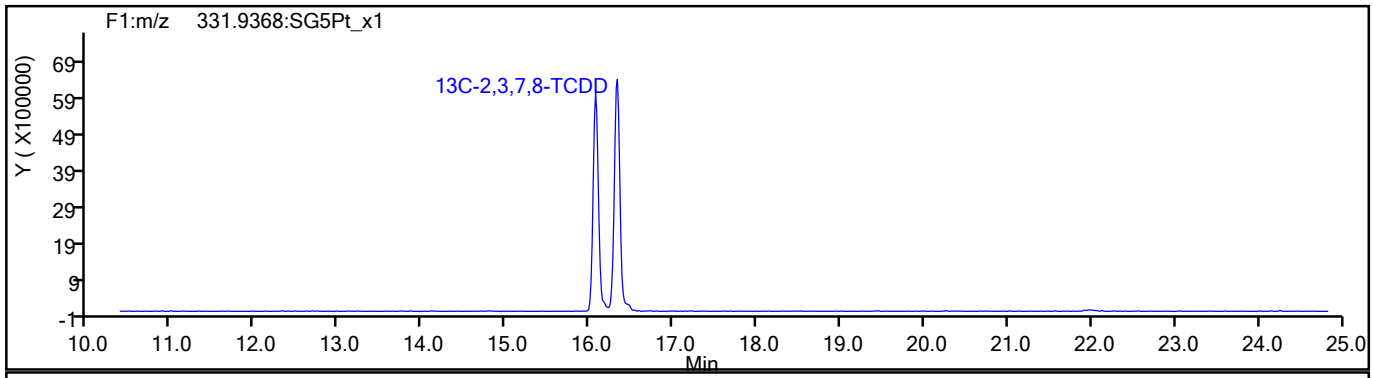

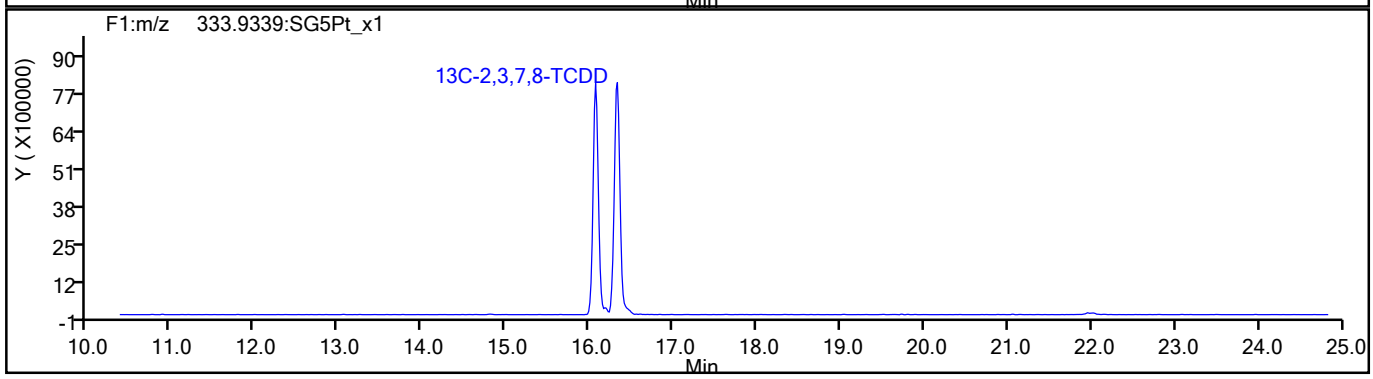

788888

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

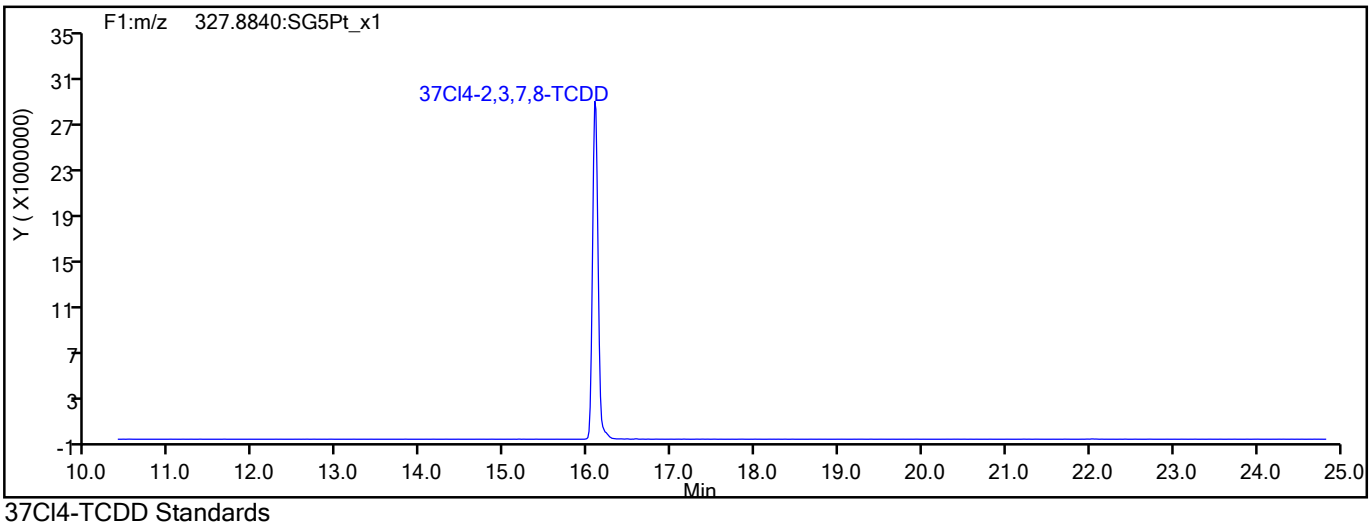

37Cl4-TCDD Standards

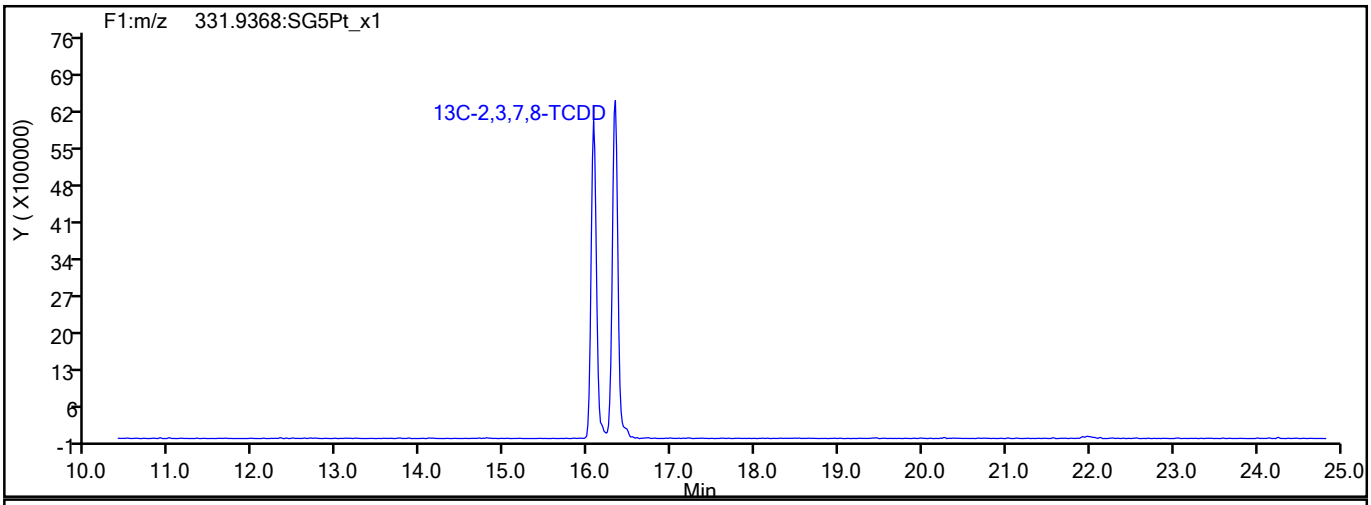

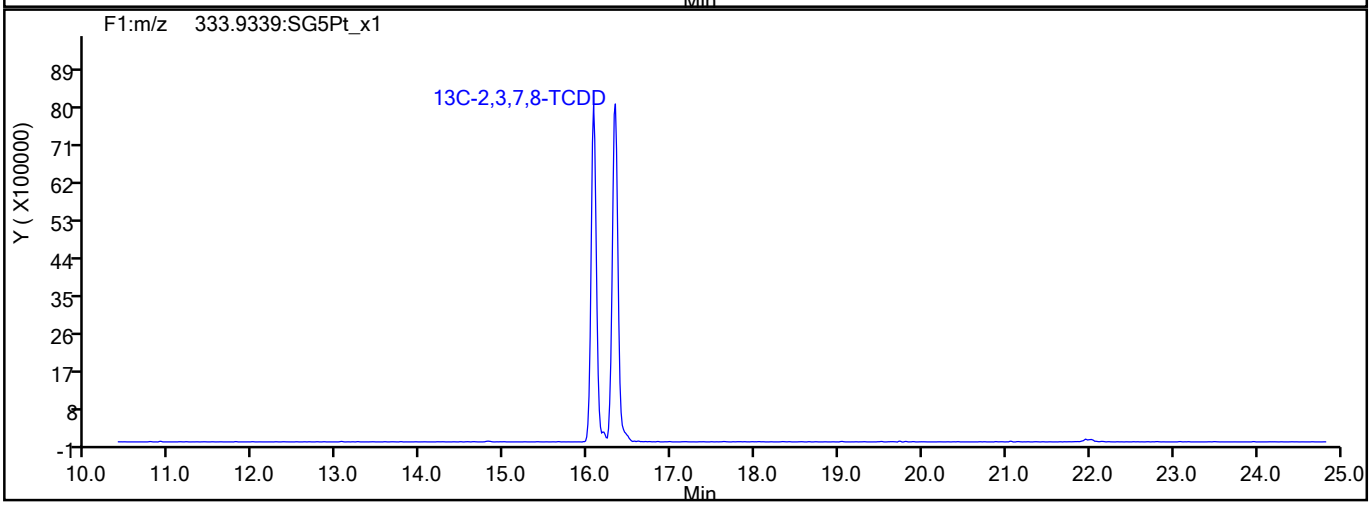

788889

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

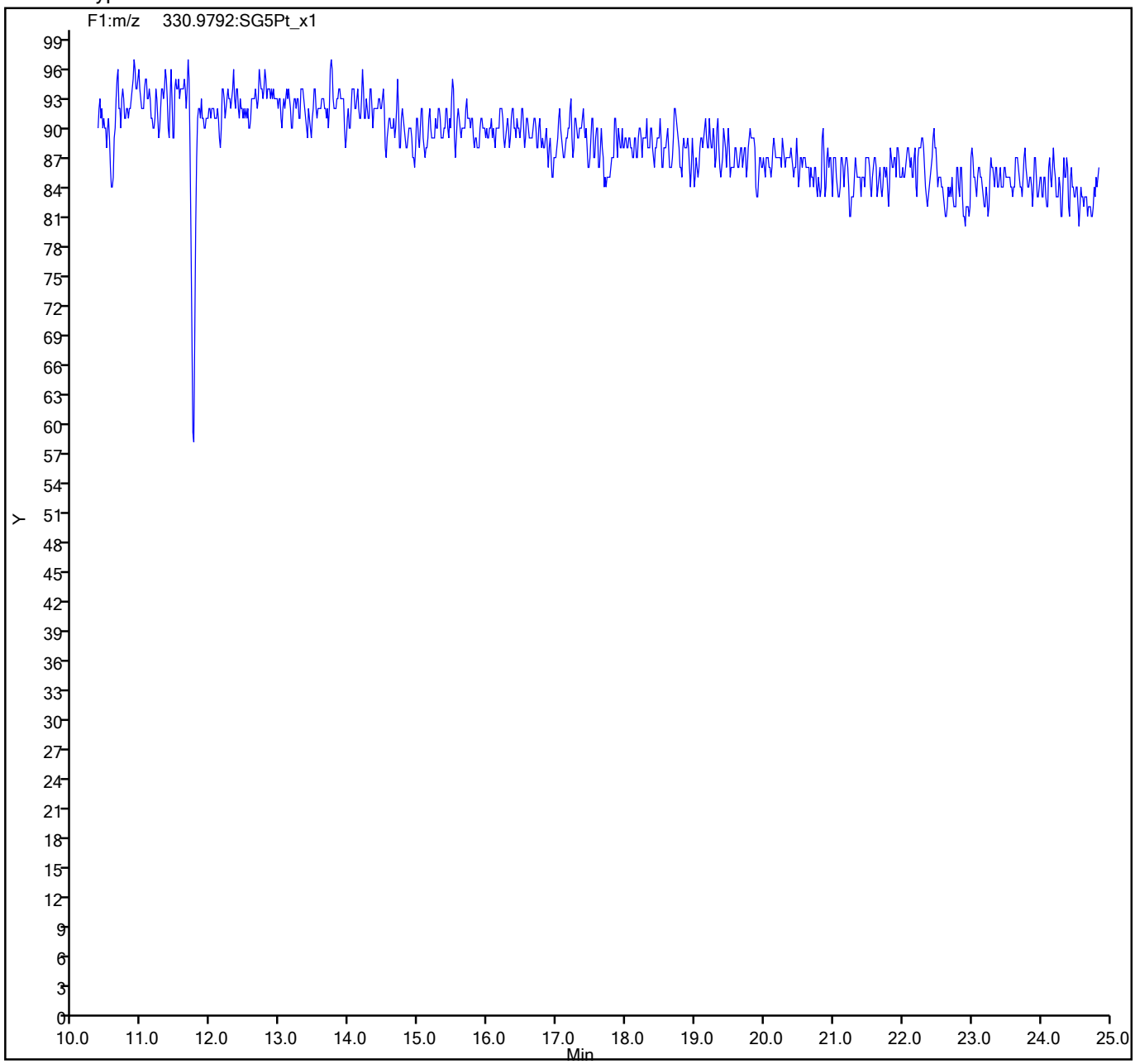

788890

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

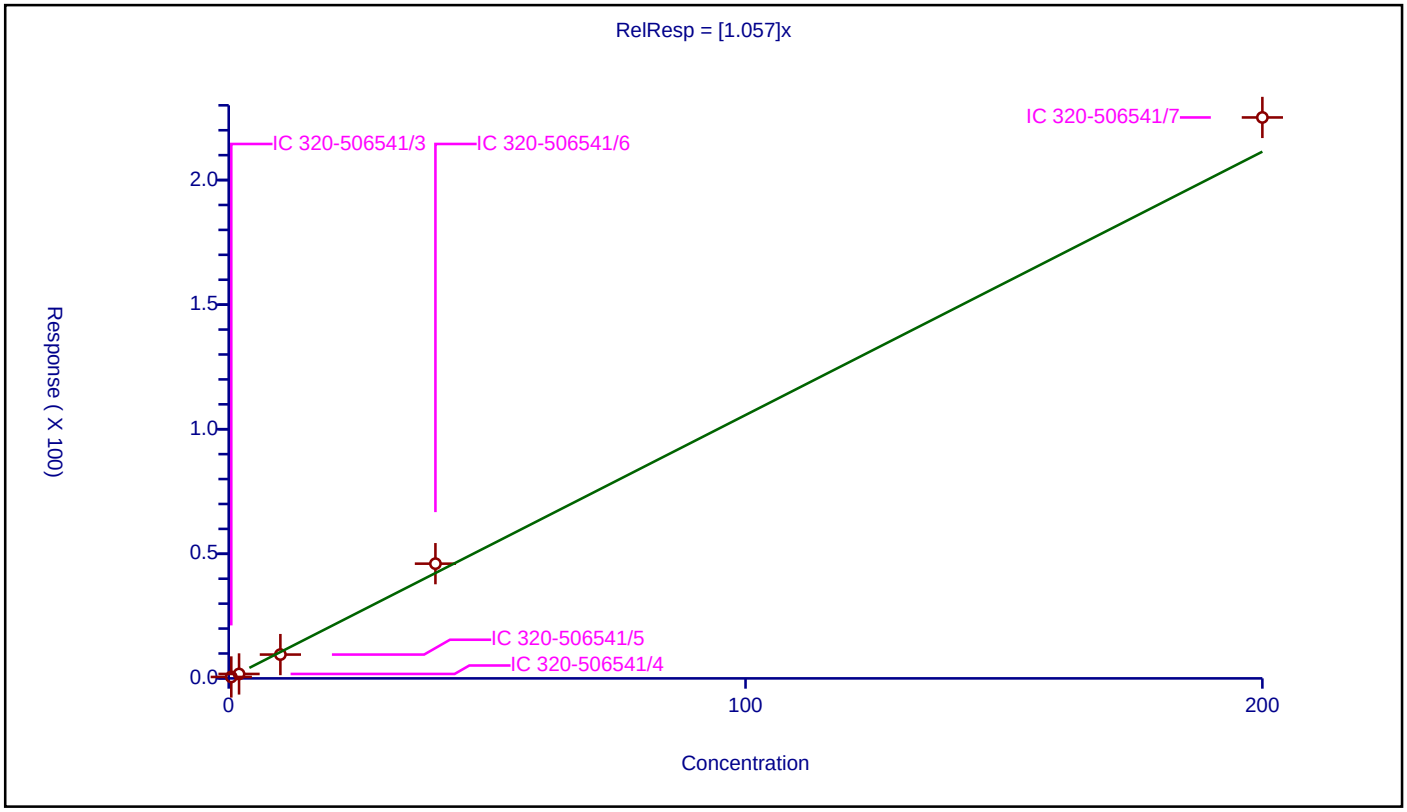

788891

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

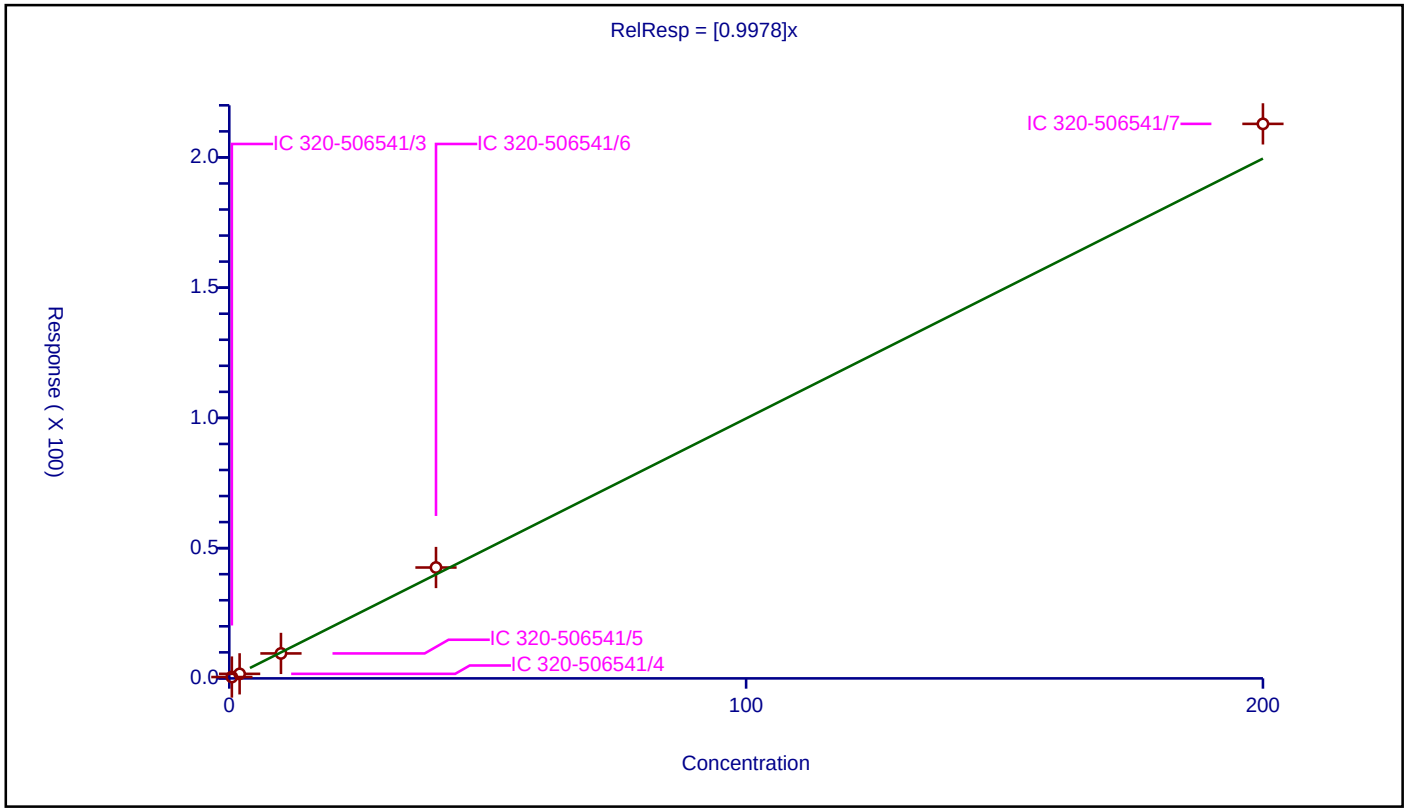

788892

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

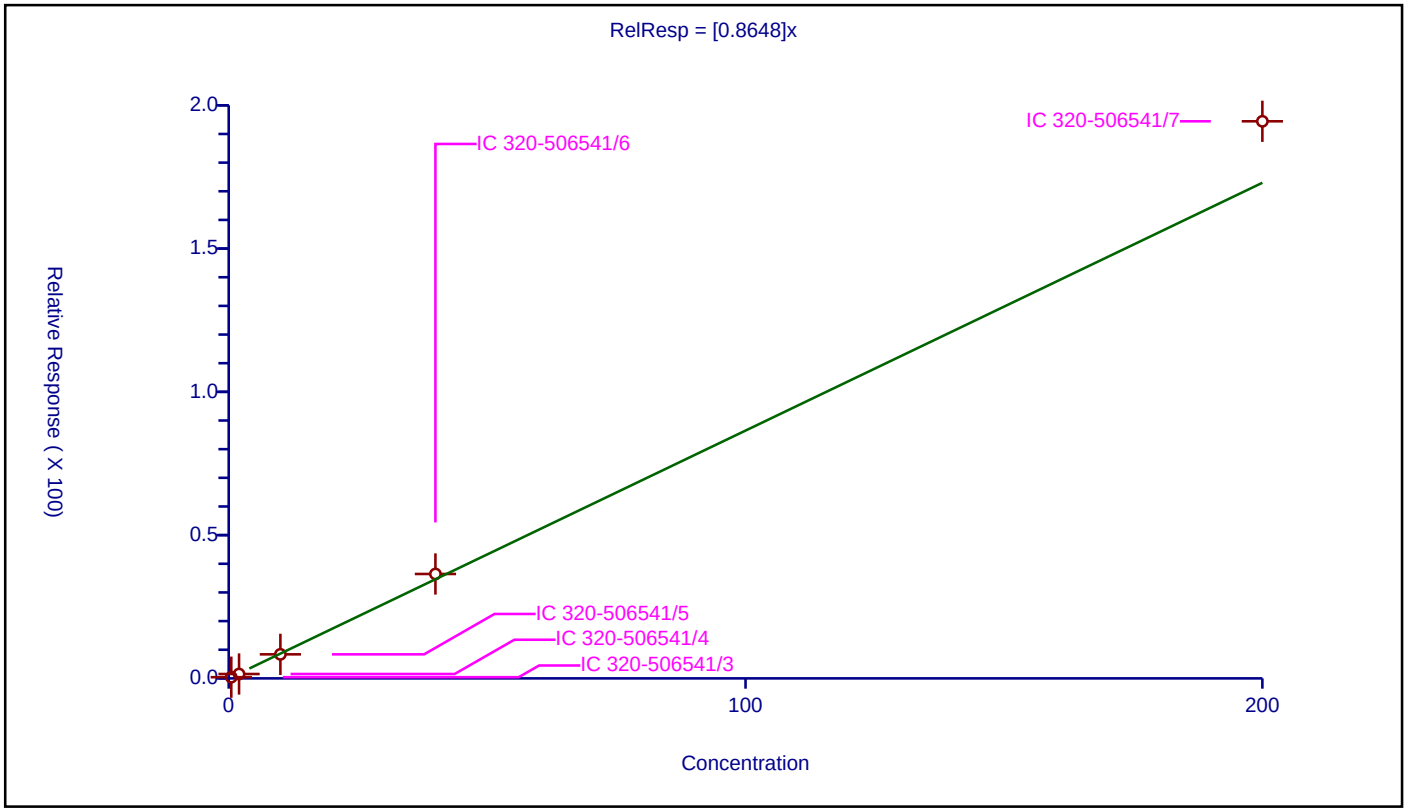

788893

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.2335	0.9635	1.0464	1.1217	1.0358	AveID		1.0802				9.5		20.0			
2,3,7,8-TCDD	1.1335	0.9559	1.0998	1.1237	1.0638	AveID		1.0753				6.7		20.0			
1,2,3,7,8-PeCDF	1.1920	0.9412	1.0373	1.0897	1.0112	AveID		1.0543				8.9		20.0			
2,3,4,7,8-PeCDF	1.1233	0.8984	0.9921	1.0636	0.9619	AveID		1.0079				8.7		20.0			
1,2,3,7,8-PeCDD	1.0719	0.9520	1.0685	1.1015	1.0385	AveID		1.0465				5.5		20.0			
1,2,3,4,7,8-HxCDF	1.2226	1.0072	1.1873	1.2073	1.1126	AveID		1.1474				7.8		20.0			
1,2,3,6,7,8-HxCDF	1.3374	1.0951	1.2359	1.2506	1.1700	AveID		1.2178				7.5		20.0			
2,3,4,6,7,8-HxCDF	1.3135	1.1007	1.2368	1.2623	1.1590	AveID		1.2145				7.0		20.0			
1,2,3,4,7,8-HxCDD	1.1235	0.9702	1.0749	1.1249	1.0104	AveID		1.0608				6.5		20.0			
1,2,3,6,7,8-HxCDD	1.0557	0.8863	1.0416	1.0264	0.9567	AveID		0.9933				7.1		20.0			
1,2,3,7,8,9-HxCDD	1.3093	0.9566	1.1202	1.1079	1.0532	AveID		1.1094				11.6		20.0			
1,2,3,7,8,9-HxCDF	1.3581	1.1239	1.2532	1.2757	1.1897	AveID		1.2401				7.1		20.0			
1,2,3,4,6,7,8-HpCDF	1.5412	1.2896	1.4855	1.5240	1.3700	AveID		1.4421				7.5		20.0			
1,2,3,4,6,7,8-HpCDD	1.1377	0.9531	1.0459	1.0970	1.0178	AveID		1.0503				6.8		20.0			
1,2,3,4,7,8,9-HpCDF	1.4057	1.1770	1.3459	1.3937	1.2235	AveID		1.3092				7.9		20.0			
OCDD	1.1328	0.9954	1.0870	1.1027	0.9920	AveID		1.0620				6.1		20.0			
OCDF	1.3392	1.1863	1.3349	1.3964	1.3271	AveID		1.3168				5.9		20.0			
13C-2,3,7,8-TCDF	1.3569	1.2925	1.2977	1.3484	1.4339	Ave		1.3459				4.2		35.0			
13C-2,3,7,8-TCDD	0.9164	0.8941	0.9478	0.9250	0.9750	Ave		0.9317				3.3		35.0			
13C-1,2,3,7,8-PeCDF	1.0773	1.0923	1.1314	1.1553	1.2461	Ave		1.1405				5.8		35.0			
13C-2,3,4,7,8-PeCDF	1.1109	1.0890	1.0480	1.1277	1.2510	Ave		1.1253				6.8		35.0			
13C-1,2,3,7,8-PeCDD	0.6866	0.6668	0.7308	0.7224	0.7758	Ave		0.7165				5.9		35.0			
13C-1,2,3,4,7,8-HxCDF	0.8656	0.8706	1.1172	0.9651	1.0057	Ave		0.9648				10.8		35.0			
13C-1,2,3,6,7,8-HxCDF	0.9280	0.9536	1.2227	1.0830	1.1668	Ave		1.0708				12.0		35.0			
13C-2,3,4,6,7,8-HxCDF	0.8692	0.9805	1.1292	1.1087	1.1190	Ave		1.0413				10.9		35.0			
13C-1,2,3,4,7,8-HxCDD	0.6435	0.7681	0.8180	0.7773	0.7866	Ave		0.7587				8.8		35.0			
13C-1,2,3,6,7,8-HxCDD	0.7368	0.8783	0.8857	0.9060	0.8896	Ave		0.8593				8.1		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9679	0.9781	1.0054	0.9456	0.9684	Ave		0.9731				2.2		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.7002	0.7170	0.7171	0.7555	0.7898	Ave		0.7359				4.9		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6351	0.6548	0.6640	0.7261	0.6926	Ave		0.6745				5.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6394	0.6623	0.6557	0.7259	0.7437	Ave		0.6854				6.8		35.0			
13C-OCDD	0.5202	0.5165	0.5084	0.5910	0.5871	Ave		0.5446				7.5		35.0			
37Cl4-2,3,7,8-TCDD	0.9654	0.9590	1.0722	1.0074	1.0375	Ave		1.0083				4.8					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	19533	50956	258022	1274052	6137031	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	12122	34971	198062	875630	4286034	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	74934	210335	1114982	5302236	26032333	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	72817	200175	987812	5051373	24861382	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	42943	129872	741897	3351337	16645947	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	46374	155611	1093397	4293581	21902419	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	54388	185321	1245549	4991420	26721257	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	50026	191527	1151149	5157631	25388405	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	31680	132244	724729	3222329	15558498	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	34082	138142	760446	3426727	16661405	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	39595	139741	786511	3436144	17279185	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	57602	195077	1038574	4445357	22553786	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	47287	164108	878086	4243438	21181967	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	31661	110761	572466	2935203	13800004	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	39382	138335	727362	3728415	17812004	2.50	10.0	50.0	200	1000
OCDD		AveID	51642	182470	910980	4803166	22803823	5.00	20.0	100	400	2000
OCDF		AveID	61051	217473	1118740	6082696	30505464	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	3167014	2644389	2465726	2839435	2962515	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	2138853	1829253	1800864	1948011	2014532	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	2514489	2234847	2149791	2432949	2574521	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	2592947	2228025	1991303	2374722	2584740	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	1602476	1364144	1388641	1521254	1602880	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	1517222	1545033	1841825	1778238	1968615	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	1626653	1692336	2015594	1995567	2283961	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	1523436	1740015	1861559	2042874	2190509	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	1127895	1363103	1348471	1432215	1539784	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	1291365	1558668	1460100	1669337	1741498	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	1696557	1735785	1657413	1742331	1895740	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	1227279	1272526	1182209	1392194	1546113	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	1113145	1162117	1094713	1337869	1355803	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	1120663	1175351	1080883	1337573	1455766	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	1823492	1833139	1676139	2177938	2298668	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	11266	39241	203726	848616	4287059	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	08JN21ADFS1_1	Resolution Check	RC 060821A	46			GRB	1.000	
2	08JN21ADFS1_2	WDM HRDXNCP_00042	WDM 060821A	1	Dioxin		GRB	1.000	
3	08JN21ADFS1_3	SB Solvent Blank C-14	SB 060821	3			GRB	1.000	
4	08JN21ADFS1_4	CS-2 HRDXNL2_00032	IC 060821	4	Dioxin		GRB	1.000	
5	08JN21ADFS1_5	CS-3 HRDXNL3_00029	IC 060821A	5	Dioxin		GRB	1.000	
6	08JN21ADFS1_6	CS-4 HRDXNL4_00099	IC 060821B	2	Dioxin		GRB	1.000	
7	08JN21ADFS1_7	CS-5 HRDXNL5_00032	IC 060821C	6	Dioxin		GRB	1.000	
8	08JN21ADFS1_8	CS-6 HRDXNL6_00028	IC 060821D	7	Dioxin		GRB	1.000	
9	08JN21ADFS1_9	Resolution Check	RC 060821B	46			GRB	1.000	
10	08JN21ADFS1_10	SB Solvent Blank C-14	SB 060821A	3			GRB	1.000	
11	08JN21ADFS1_11	ICV HRDXNIC_00047	ICV 060821	8	Dioxin		GRB	1.000	
12	08JN21ADFS1_12	Resolution Check	RC 060821C	46			GRB	1.000	
13	08JN21ADFS1_13	CCV CS-4 HRDXNL4_00099	CCV 060821A	2	Dioxin		GRB	1.000	
14	08JN21ADFS1_14	WDM HRDXNCP_00042	WDM 060821B	1	Dioxin		GRB	1.000	
15	08JN21ADFS1_15	mb 320-482224/1-a RI	mb 320-482224/1-a	10	8290/Solid	100	GRB	20.000	g
16	08JN21ADFS1_16	320-72057-a-23-a mdlv RI (7)	320-72057-a-23-a mdlv	11	8290/Solid		GRB	20.000	g
17	08JN21ADFS1_17	320-72057-a-24-a mdlv RI (8)	320-72057-a-24-a mdlv	12	8290/Solid		GRB	20.000	g
18	08JN21ADFS1_18	320-72057-a-25-a mdlv RI (9)	320-72057-a-25-a mdlv	13	8290/Solid		GRB	20.000	g
19	08JN21ADFS1_19	320-72057-a-26-a loqv RI (10)	320-72057-a-26-a loqv	14	8290/Solid		GRB	20.000	g
20	08JN21ADFS1_20	320-74542-b-3-a	320-74542-b-3-a	15	8290A/Solid	D245	GRB	10.000	g
21	08JN21ADFS1_21	320-74542-b-2-a	320-74542-b-2-a	16	8290A/Solid		GRB	10.000	g
22	08JN21ADFS1_22	320-74542-b-1-a	320-74542-b-1-a	17	8290A/Solid		GRB	10.000	g
23	08JN21ADFS1_23	lcs 320-496101/2-a	lcs 320-496101/2-a	18	8290A/Solid		GRB	10.000	g
24	08JN21ADFS1_24	lcsd 320-496101/3-a	lcsd 320-496101/3-a	19	8290A/Solid		GRB	10.000	g
25	08JN21ADFS1_25	mb 320-496101/1-a	mb 320-496101/1-a	20	8290A/Solid		GRB	10.000	
26	08JN21ADFS1_26	Resolution Check	RC 060821D	46			GRB	1.000	
27	08JN21ADFS1_27	CCV CS-4 HRDXNL4_00099	CCV 060821B	2	Dioxin		GRB	1.000	
28	08JN21ADFS1_28	Resolution Check	RC 060821E	46			GRB	1.000	
29	08JN21ADFS1_29	WDM HRDXNCP_00042	WDM 060821C	1	Dioxin		GRB	1.000	
30	08JN21ADFS1_30	SB Solvent Blank C-14	SB 060821B	3			GRB	1.000	
31	08JN21ADFS1_31	320-74542-b-4-a	320-74542-b-4-a	21	8290A/Solid	D245	GRB	10.000	g
32	08JN21ADFS1_32	320-74542-b-5-a	320-74542-b-5-a	22	8290A/Solid		GRB	10.000	g
33	08JN21ADFS1_33	320-74542-b-6-a	320-74542-b-6-a	23	8290A/Solid		GRB	10.000	g
34	08JN21ADFS1_34	320-74542-b-7-a	320-74542-b-7-a	24	8290A/Solid		GRB	10.000	g
35	08JN21ADFS1_35	320-74542-b-8-a	320-74542-b-8-a	25	8290A/Solid		GRB	10.000	g
36	08JN21ADFS1_36	320-74542-b-9-a	320-74542-b-9-a	26	8290A/Solid		GRB	10.000	g
37	08JN21ADFS1_37	SB Solvent Blank C-14	SB 060821C	3			GRB	1.000	
38	08JN21ADFS1_38	Resolution Check	RC 060821F	46			GRB	1.000	
39	08JN21ADFS1_39	CCV CS-4 HRDXNL4_00099	CCV 060821C	2	Dioxin		GRB	1.000	
40	08JN21ADFS1_40	Resolution Check	RC 060821G	46			GRB	1.000	

LOG FILE ✓'d
06/09/21
GRB

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 12:20
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10809 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10359 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10673 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10724 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10609 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10694 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10161 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10386 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10328 [5%height]

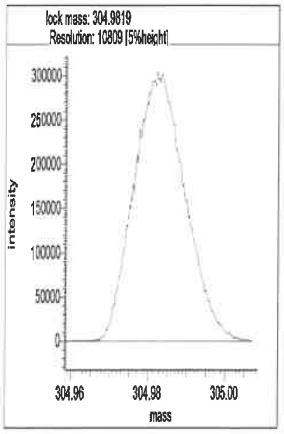

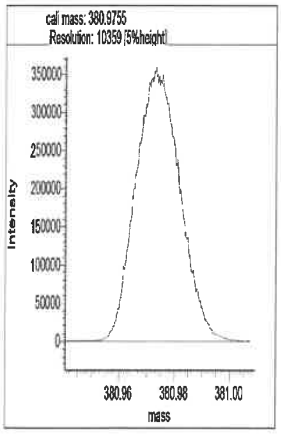

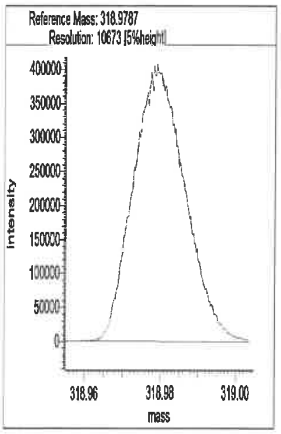

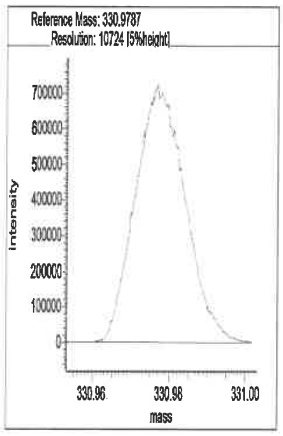

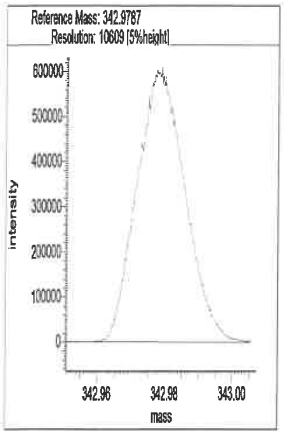

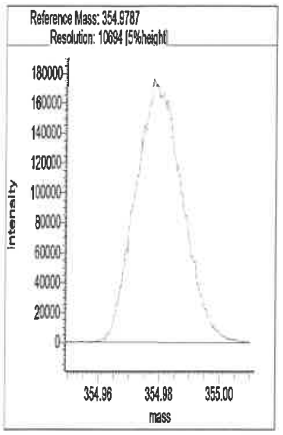

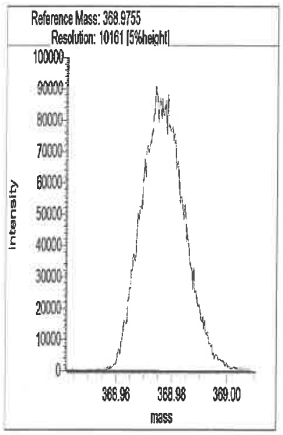

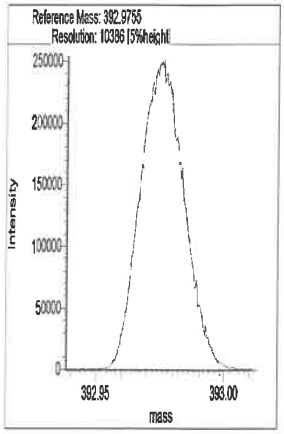

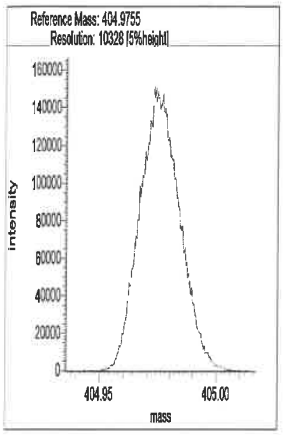

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10749 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10650 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10687 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10661 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10183 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10343 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10397 [5%height]

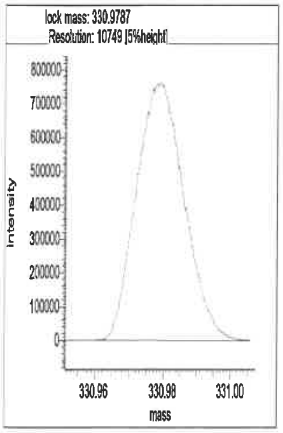

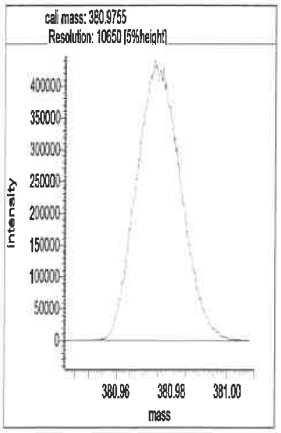

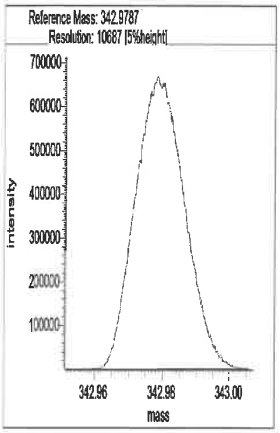

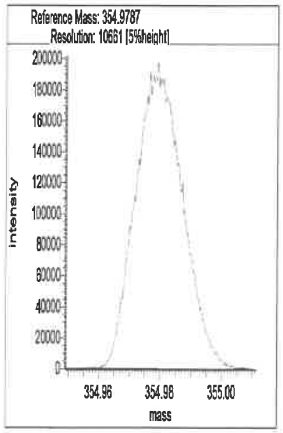

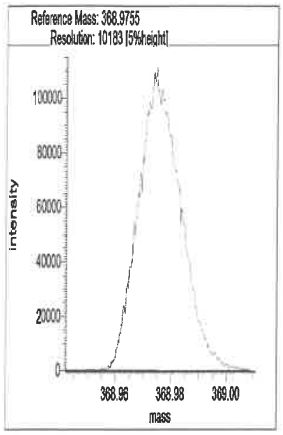

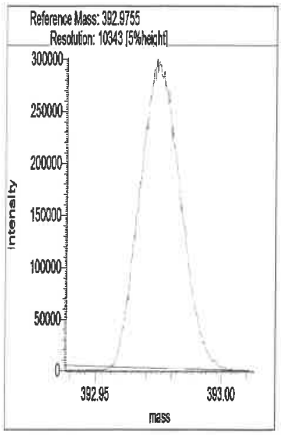

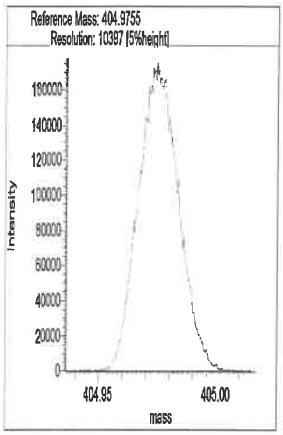

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10665 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10632 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10792 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10868 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10680 [5%height]

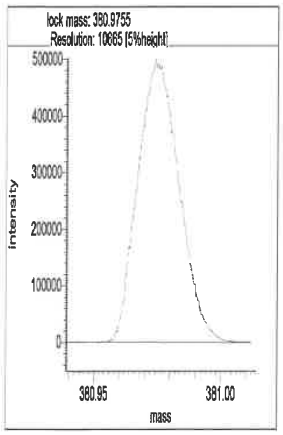

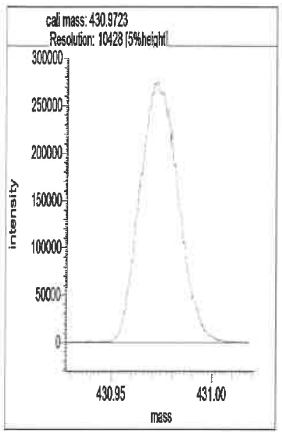

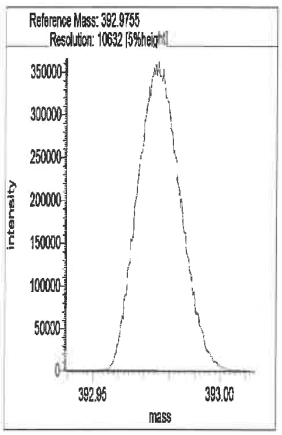

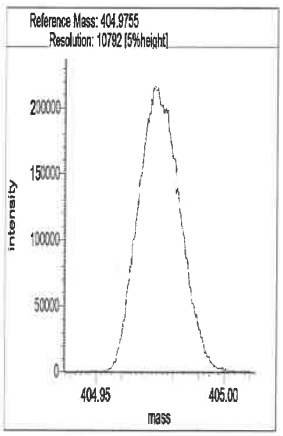

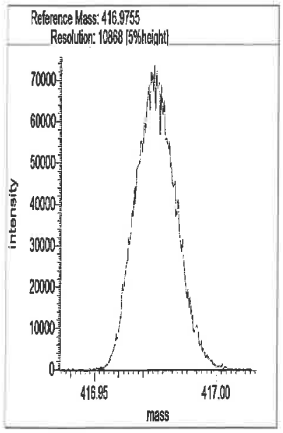

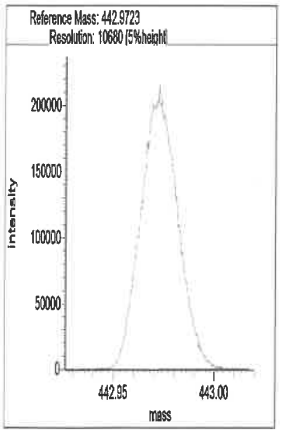

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10780 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10428 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10519 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10746 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10596 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10599 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10334 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10486 [5%height]

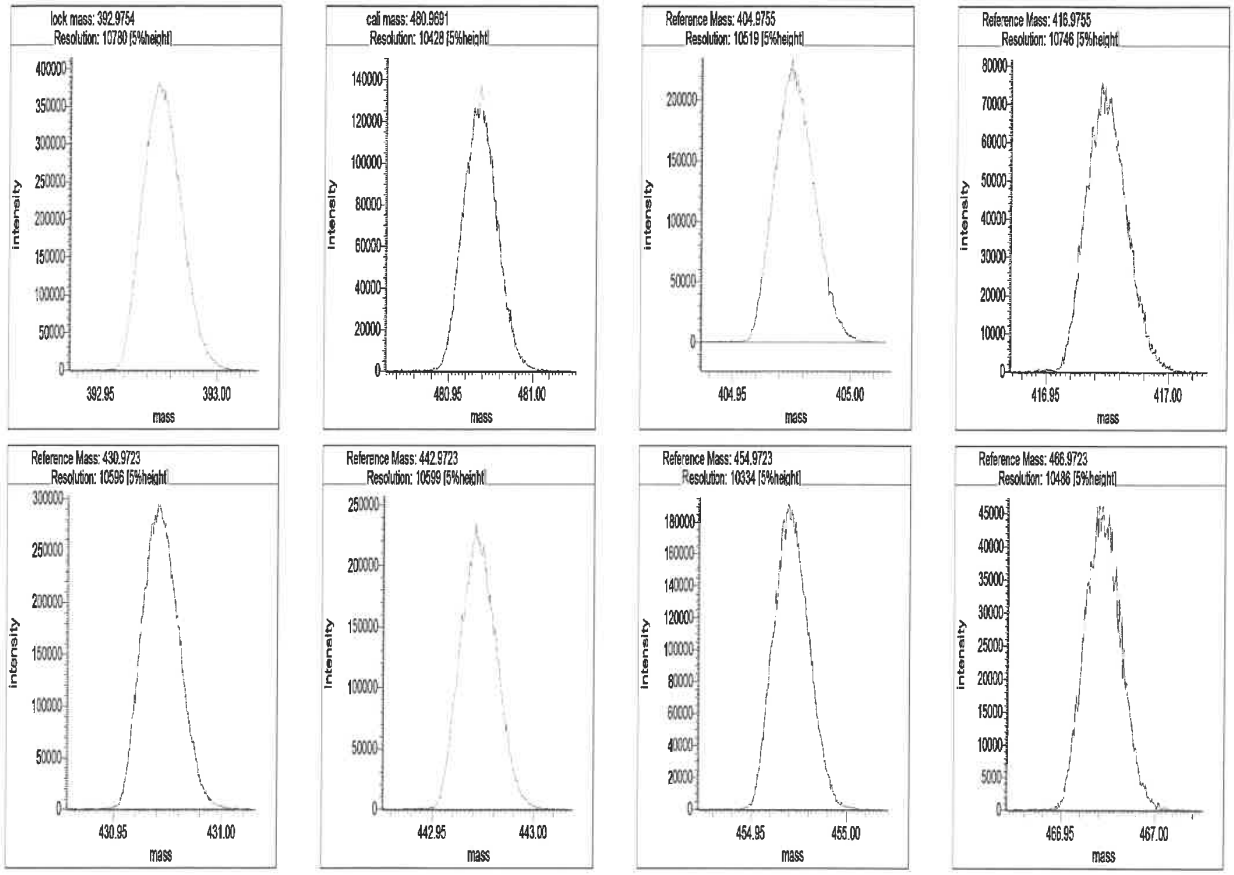

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10812 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10576 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10586 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10905 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10543 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10541 [5%height]

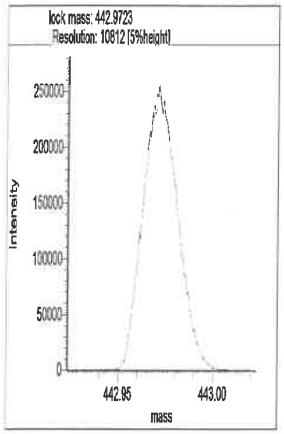
lock mass: 442.9723
Resolution: 10812 [5%height]
Intensity
mass

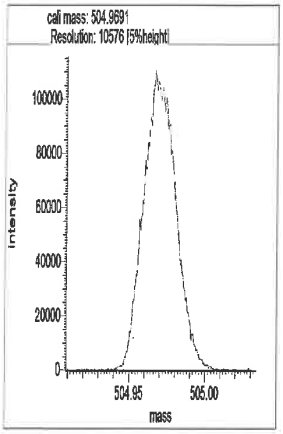
cali mass: 504.9691
Resolution: 10576 [5%height]
Intensity
mass

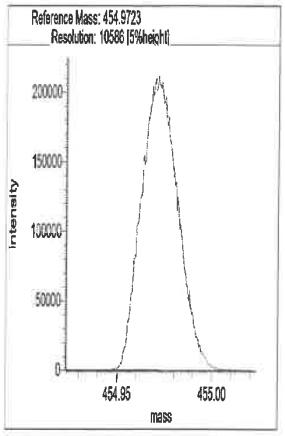
Reference Mass: 454.9723
Resolution: 10566 [5%height]
Intensity
mass

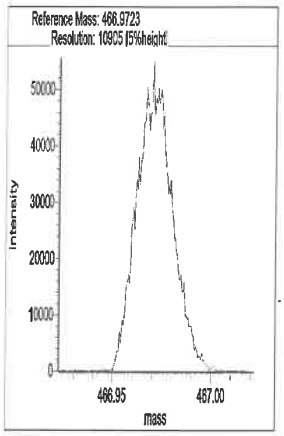
Reference Mass: 466.9723
Resolution: 10905 [5%height]
Intensity
mass

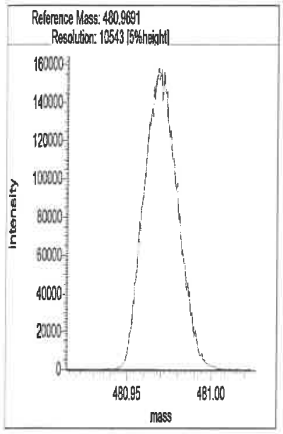
Reference Mass: 480.9691
Resolution: 10543 [5%height]
Intensity
mass

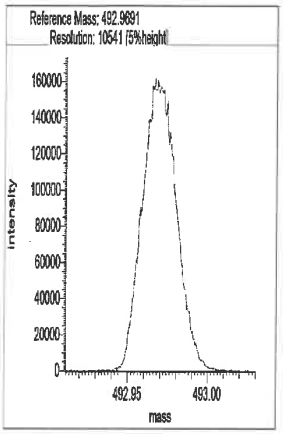
Reference Mass: 492.9691
Resolution: 10541 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 18:18
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11138 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10557 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10815 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11047 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10923 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10964 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10533 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10381 [5%height]

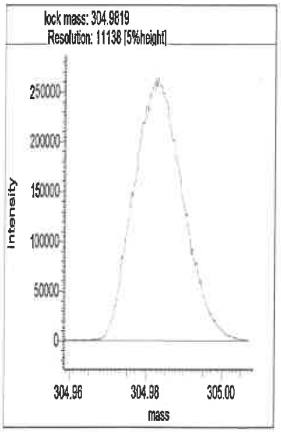

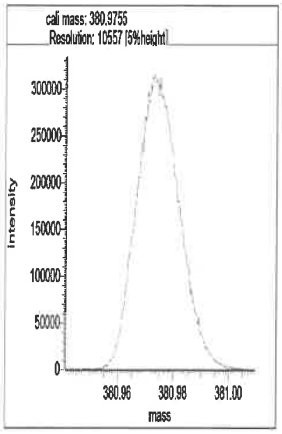

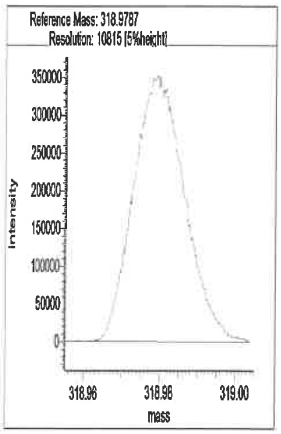

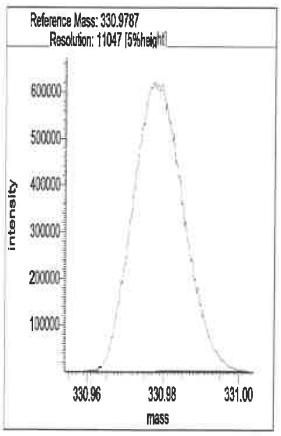

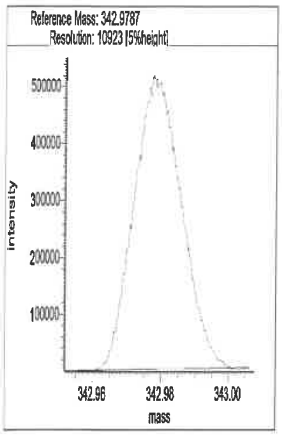

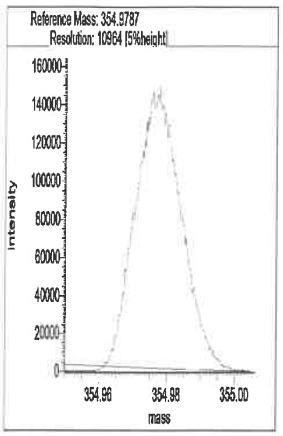

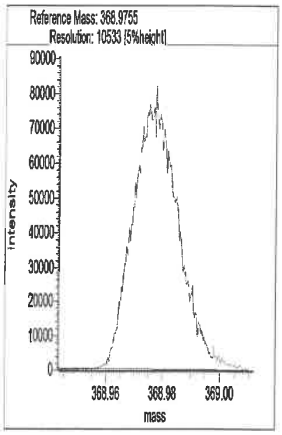

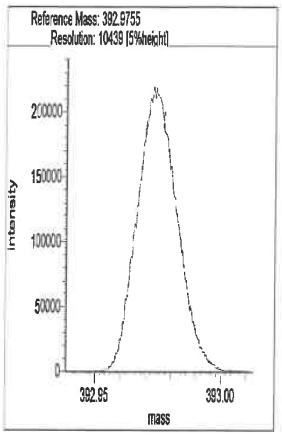

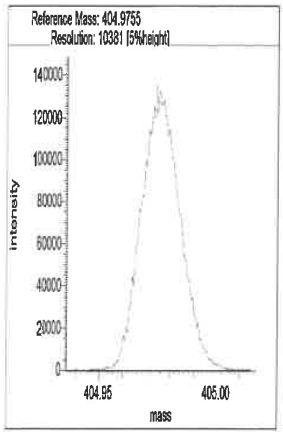

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10931 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10771 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11049 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10941 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10429 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10942 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10794 [5%height]

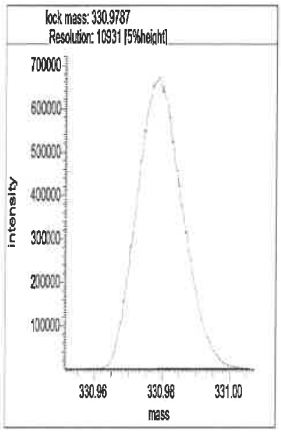

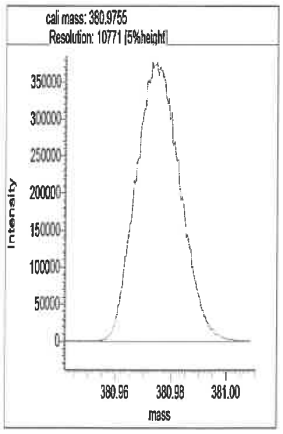

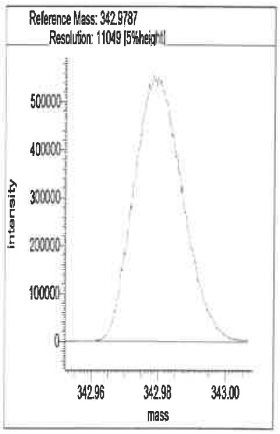

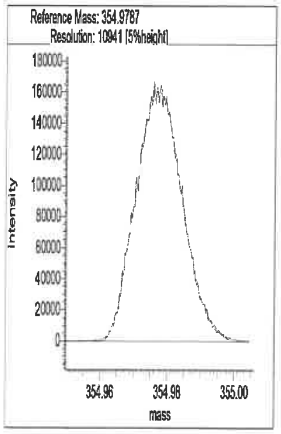

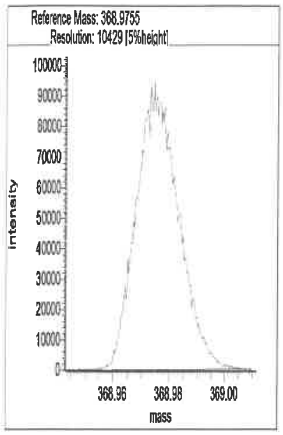

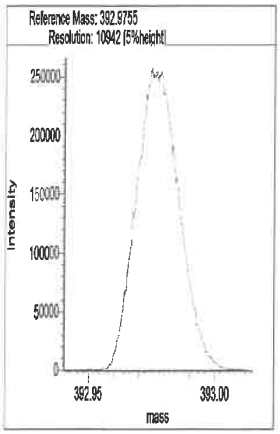

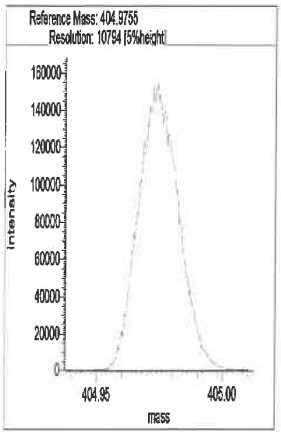

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10885 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10505 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10981 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10838 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11244 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10864 [5%height]

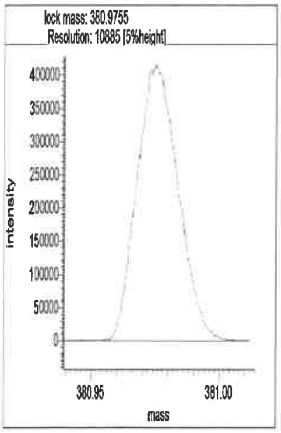

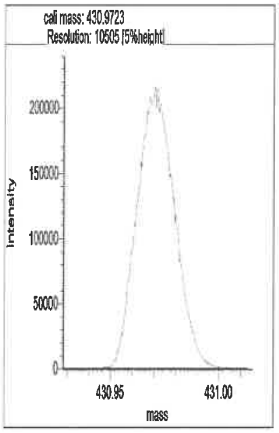

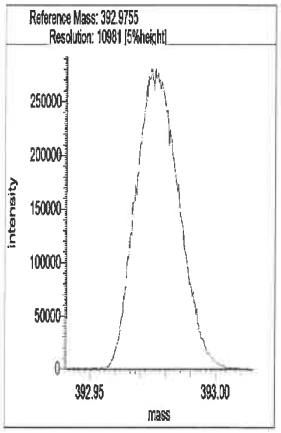

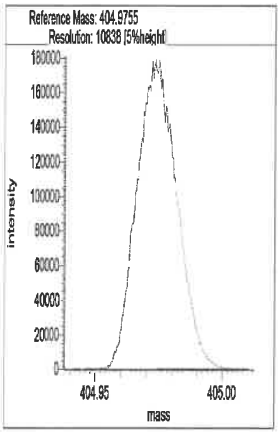

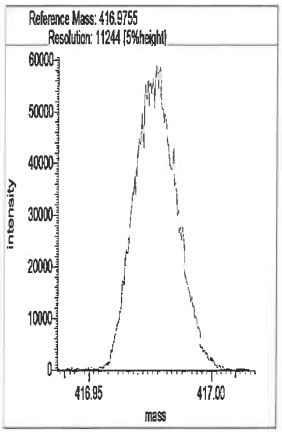

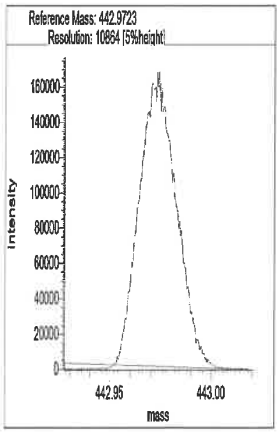

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10912 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10920 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10645 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11021 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10722 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10705 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10886 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11473 [5%height]

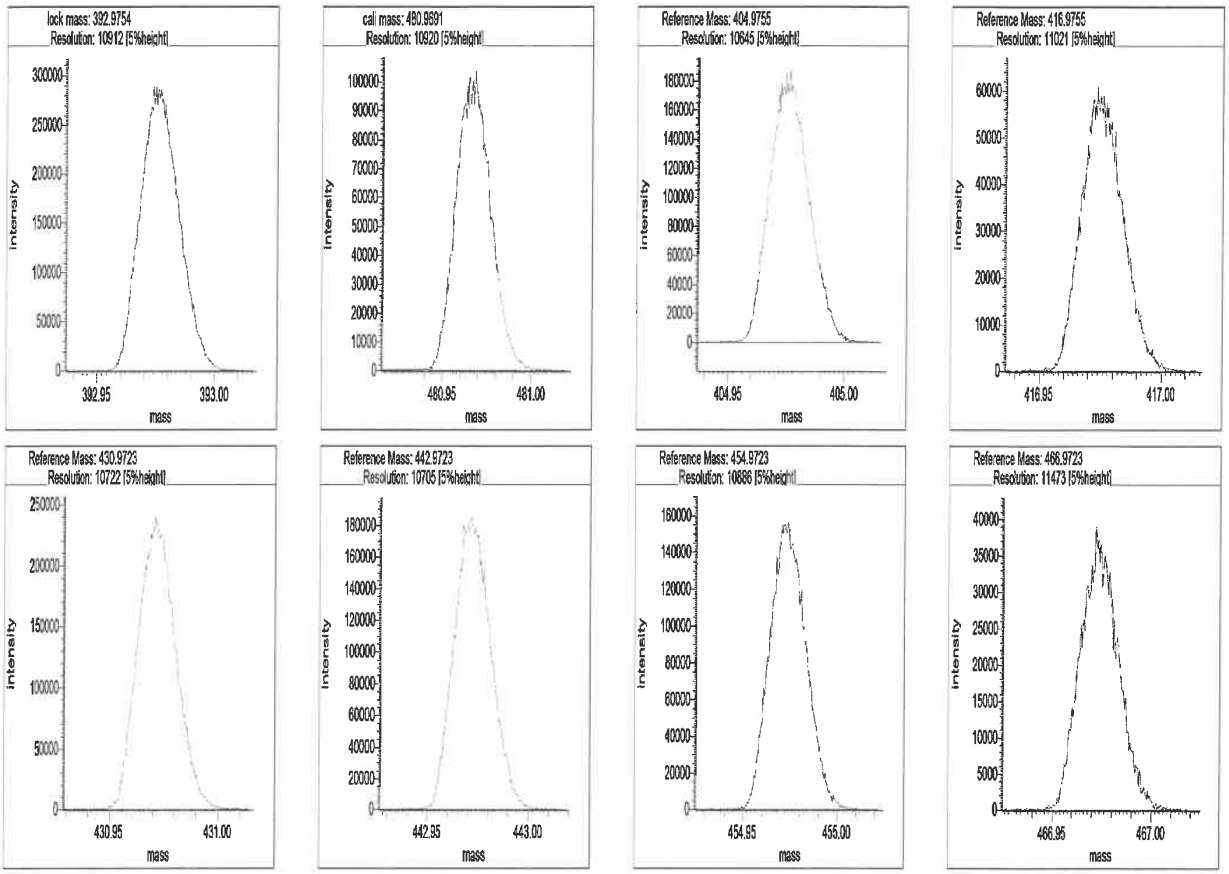

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11094 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10852 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11104 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11145 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10592 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10719 [5%height]

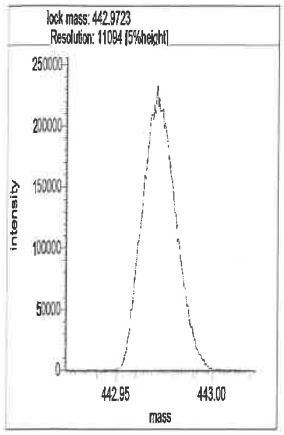
lock mass: 442.9723
Resolution: 11094 [5%height]
Intensity
mass

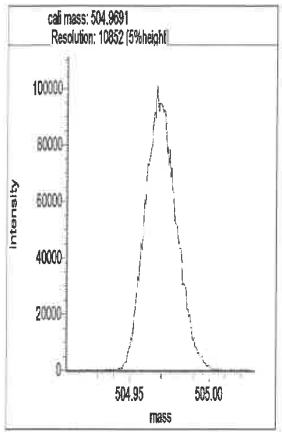
cali mass: 504.9691
Resolution: 10852 [5%height]
Intensity
mass

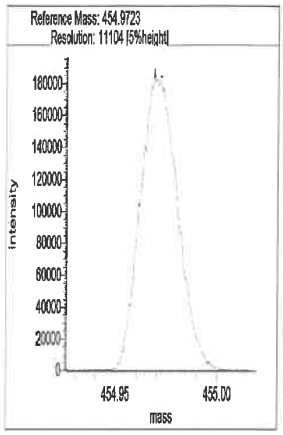
Reference Mass: 454.9723
Resolution: 11104 [5%height]
Intensity
mass

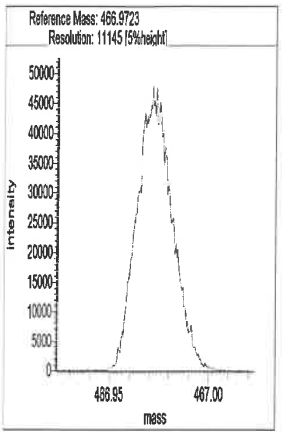
Reference Mass: 466.9723
Resolution: 11145 [5%height]
Intensity
mass

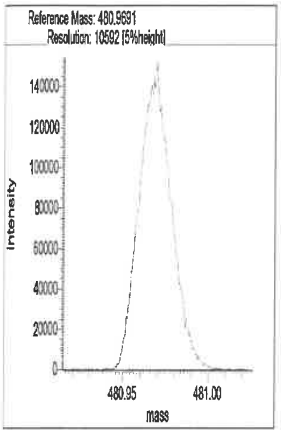
Reference Mass: 480.9691
Resolution: 10592 [5%height]
Intensity
mass

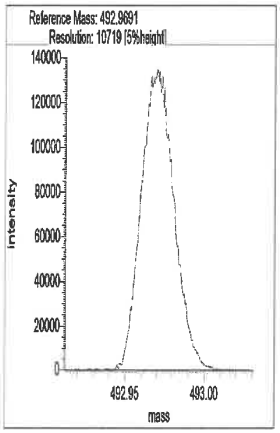
Reference Mass: 492.9691
Resolution: 10719 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 20:13
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11228 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10780 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10868 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10774 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10877 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10591 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10487 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10710 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10243 [5%height]

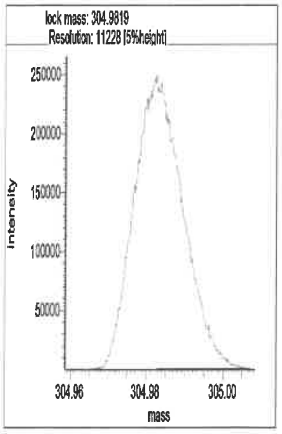

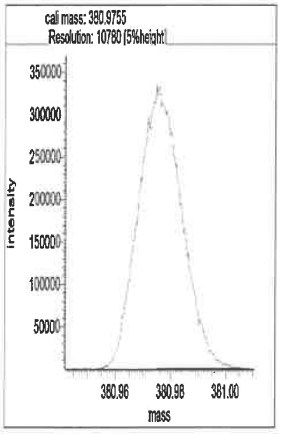

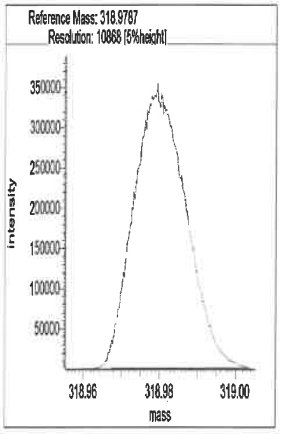

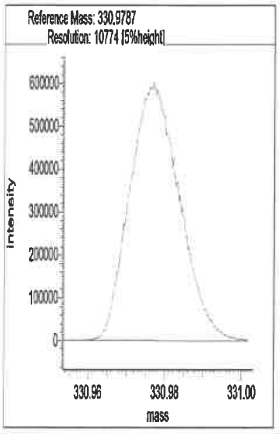

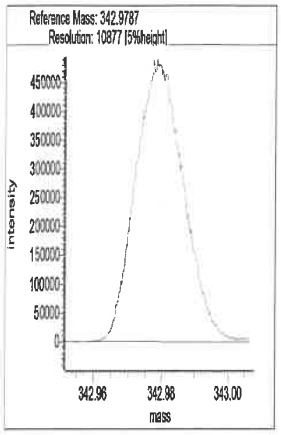

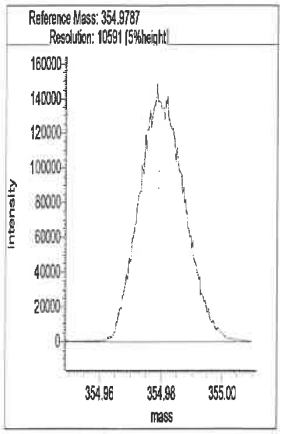

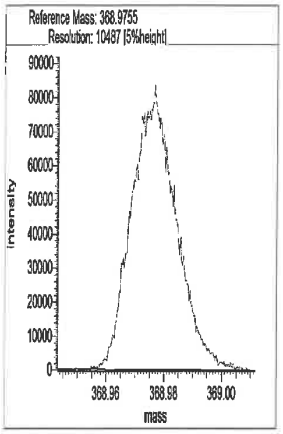

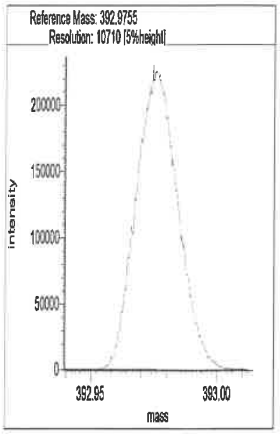

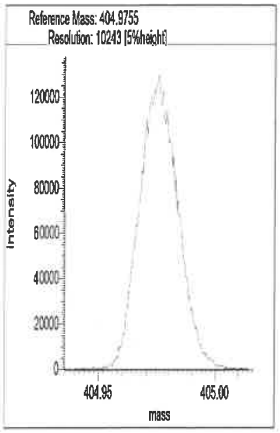

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10867 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10936 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10948 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10910 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10174 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10675 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10514 [5%height]

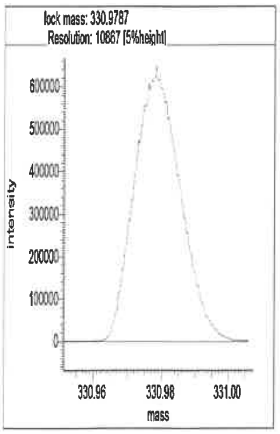

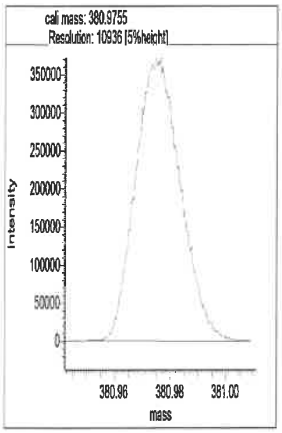

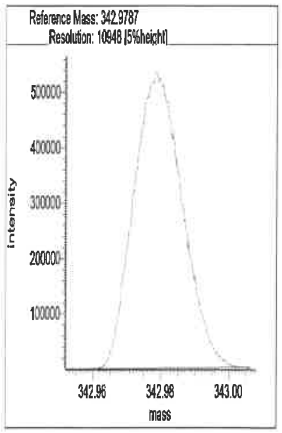

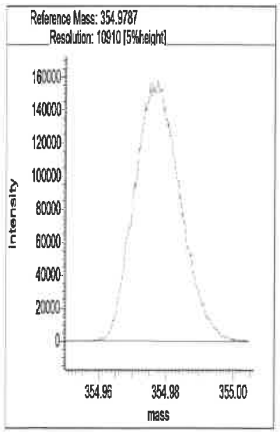

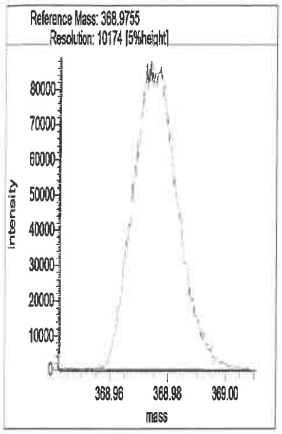

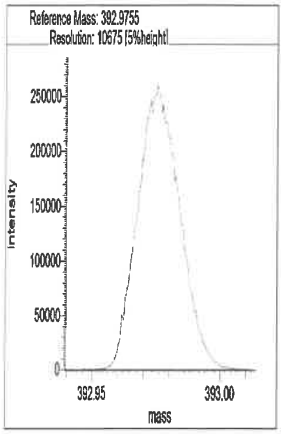

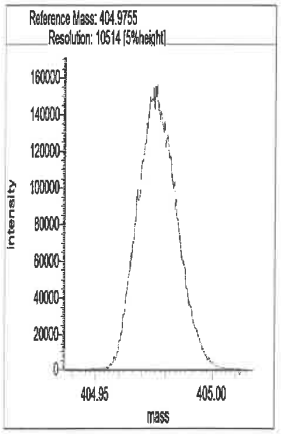

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10898 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10782 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11034 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11134 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10786 [5%height]

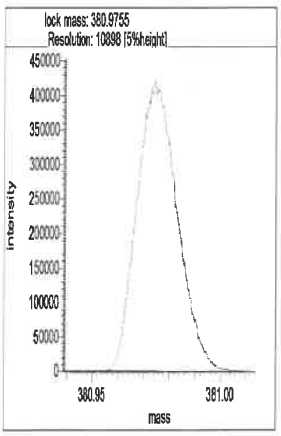

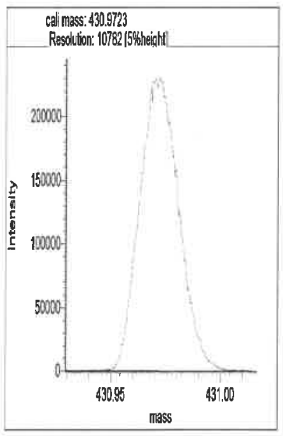

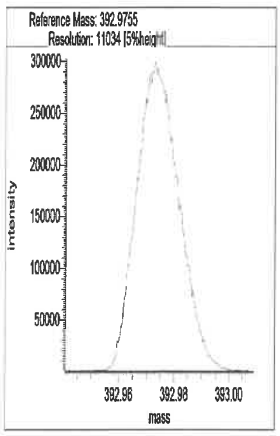

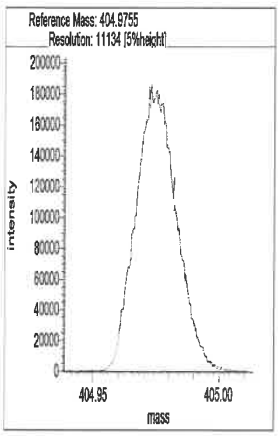

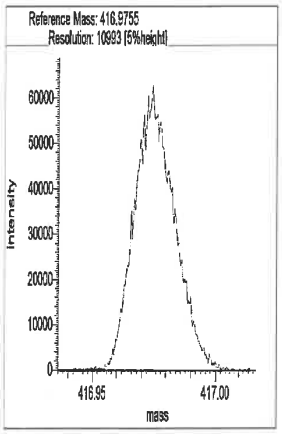

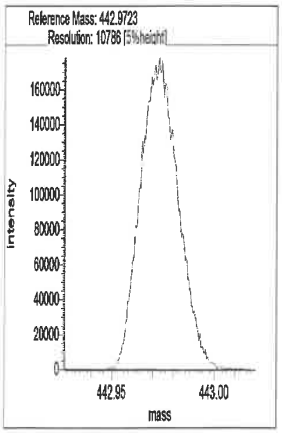

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11155 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10418 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10767 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10954 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10613 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11028 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10950 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10877 [5%height]

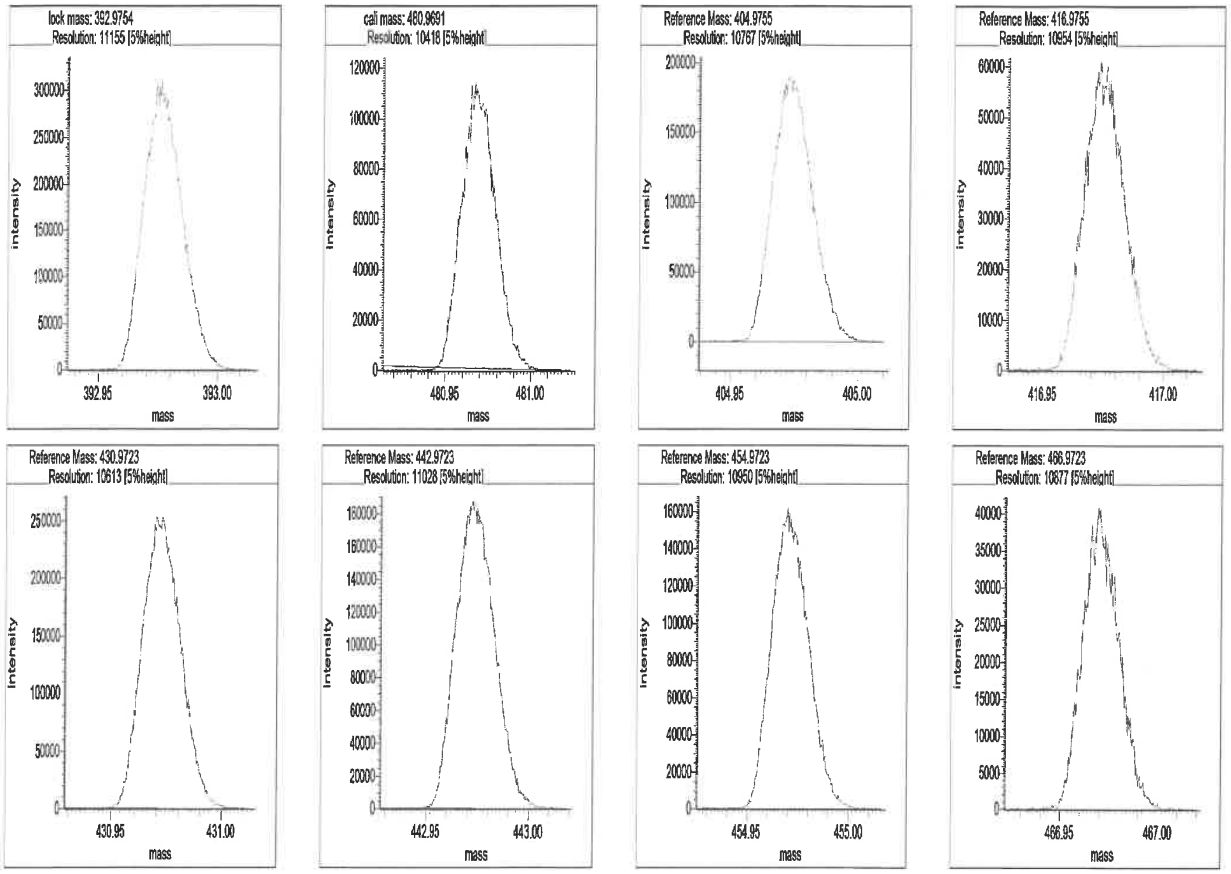

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10985 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10829 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11149 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11382 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11128 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11097 [5%height]

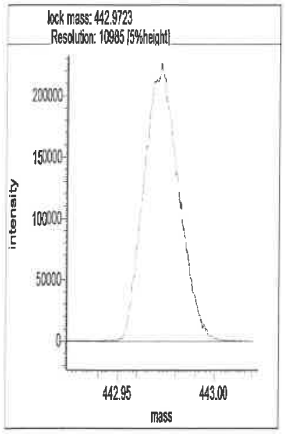
lock mass: 442.9723
Resolution: 10985 [5%height]
intensity
mass

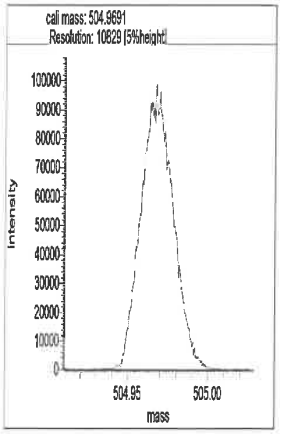
cali mass: 504.9691
Resolution: 10629 [5%height]
intensity
mass

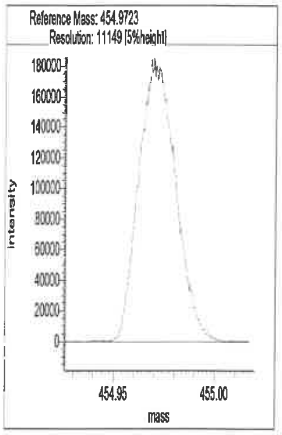
Reference Mass: 454.9723
Resolution: 11149 [5%height]
intensity
mass

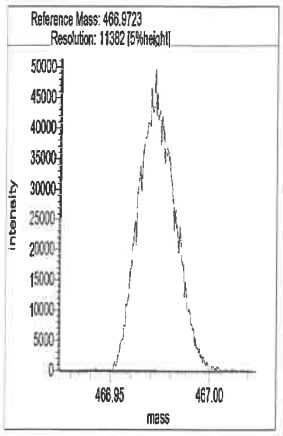
Reference Mass: 466.9723
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mass

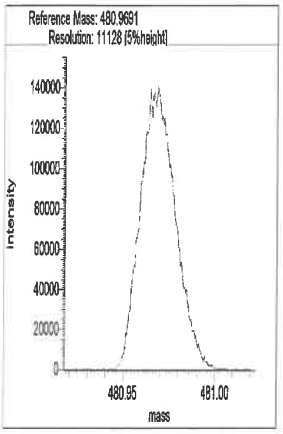
Reference Mass: 480.9691
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intensity
mass

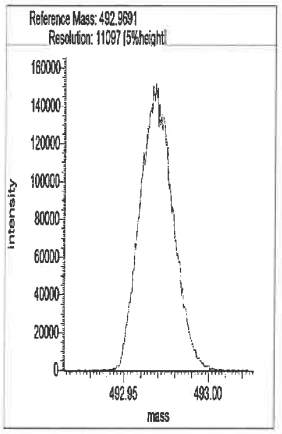
Reference Mass: 492.9691
Resolution: 11097 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.564	2334037	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.628	3167014	0.81	1.3459	100.8	100.8	0.1546	0.1546	101	
2,3,7,8-TCDF	19.662	19533	0.82	1.0802	0.5710	0.5710	0.007637	0.007637	114	
S Total TCDF					0.5710	0.5710	0.007637	0.007637		
D 13C-2,3,7,8-TCDD	20.933	2138853	0.81	0.9317	98.4	98.4	0.1772	0.1772	98.36	
$ 37Cl4-2,3,7,8-TCDD	20.941	11266		1.0083	0.4787	0.4787	0.005933	0.005933	95.74	
2,3,7,8-TCDD	20.967	12122	0.71	1.0753	0.5270	0.5270	0.0223	0.0223	105	
S Total TCDD					0.5270	0.5270	0.0223	0.0223		
D 13C-1,2,3,7,8-PeCDF	26.587	2514489	1.59	1.1405	94.5	94.5	0.3469	0.3469	94.46	
1,2,3,7,8-PeCDF	26.613	74934	1.71	1.0543	2.827	2.827	0.0199	0.0199	113	
D 13C-2,3,4,7,8-PeCDF	28.046	2592947	1.57	1.1253	98.7	98.7	0.3516	0.3516	98.72	
2,3,4,7,8-PeCDF	28.071	72817	1.61	1.0079	2.786	2.786	0.0219	0.0219	111	
S Total PeCDF					5.613	5.613	0.0209	0.0209		
D 13C-1,2,3,7,8-PeCDD	28.830	1602476	1.59	0.7165	95.8	95.8	0.1271	0.1271	95.83	
1,2,3,7,8-PeCDD	28.855	42943	1.72	1.0465	2.561	2.561	0.0215	0.0215	102	
S Total PeCDD					2.561	2.561	0.0215	0.0215		
D 13C-1,2,3,4,7,8-HxCDF	34.406	1517222	0.52	0.9648	89.7	89.7	0.3358	0.3358	89.72	
1,2,3,4,7,8-HxCDF	34.431	46374	1.30	1.1474	2.664	2.664	0.0219	0.0219	107	
D 13C-1,2,3,6,7,8-HxCDF	34.583	1626653	0.54	1.0708	86.7	86.7	0.3026	0.3026	86.67	
1,2,3,6,7,8-HxCDF	34.608	54388	1.19	1.2178	2.746	2.746	0.0201	0.0201	110	
D 13C-2,3,4,6,7,8-HxCDF	35.468	1523436	0.53	1.0413	83.5	83.5	0.3112	0.3112	83.47	
2,3,4,6,7,8-HxCDF	35.485	50026	1.25	1.2145	2.704	2.704	0.0183	0.0183	108	
D 13C-1,2,3,7,8,9-HxCDF	36.404	1696557	0.52	0.9731	99.5	99.5	0.3330	0.3330	99.47	
1,2,3,7,8,9-HxCDF	36.421	57602	1.21	1.2401	2.738	2.738	0.0145	0.0145	110	
S Total HxCDF					10.9	10.9	0.0187	0.0187		
* 13C-1,2,3,7,8,9-HxCDD	36.210	1752780	1.29	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.695	1127895	1.27	0.7587	84.8	84.8	0.2005	0.2005	84.82	
1,2,3,4,7,8-HxCDD	35.712	31680	1.20	1.0608	2.648	2.648	0.0198	0.0198	106	
D 13C-1,2,3,6,7,8-HxCDD	35.822	1291365	1.29	0.8593	85.7	85.7	0.1770	0.1770	85.74	
1,2,3,6,7,8-HxCDD	35.839	34082	1.16	0.9933	2.657	2.657	0.0196	0.0196	106	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.227	39595	1.15	1.1094	2.950	2.950	0.0182	0.0182	118	
S Total HxCDD					8.255	8.255	0.0192	0.0192		
D 13C-1,2,3,4,6,7,8-HpCDF	38.321	1227279	0.46	0.7359	95.1	95.1	0.3550	0.3550	95.14	
1,2,3,4,6,7,8-HpCDF	38.329	47287	1.05	1.4421	2.672	2.672	0.0138	0.0138	107	
D 13C-1,2,3,4,7,8,9-HpCDF	39.611	1120663	0.46	0.6854	93.3	93.3	0.3812	0.3812	93.29	
1,2,3,4,7,8,9-HpCDF	39.619	39382	1.04	1.3092	2.684	2.684	0.0149	0.0149	107	
S Total HpCDF					5.356	5.356	0.0144	0.0144		
D 13C-1,2,3,4,6,7,8-HpCDD	39.307	1113145	1.06	0.6745	94.2	94.2	0.2577	0.2577	94.15	
1,2,3,4,6,7,8-HpCDD	39.316	31661	0.99	1.0503	2.708	2.708	0.0190	0.0190	108	
S Total HpCDD					2.708	2.708	0.0190	0.0190		
D 13C-OCDD	41.797	1823492	0.90	0.5446	191.0	191.0	0.3325	0.3325	95.51	
OCDF	41.890	61051	0.95	1.3168	5.085	5.085	0.0322	0.0322	102	
OCDD	41.805	51642	0.88	1.0620	5.333	5.333	0.0182	0.0182	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.564	20.547	1		1041449	163457	148	370	1104		
333.9338	20.564	20.547	1		1292588	204311	95	237	2151	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.628	19.616	1	0.954	1415927	226149	197	492	1148		
317.9389	19.628	19.616	1	0.954	1751087	282985	109	272	2596	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.662	19.646	1	1.002	8785	1472	3	7	491		
305.8987	19.662	19.646	1	1.002	10748	1598	14	35	114	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.933	20.910	1	1.018	956834	140160	148	370	947		
333.9338	20.924	20.910	1	1.018	1182019	172842	95	237	1819	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.941	20.935	0	1.018	11266	1696	9	22	188		
2,3,7,8-TCDD											
319.8965	20.967	20.939	2	1.002	5046	703	25	62	28		
321.8936	20.950	20.939	1	1.001	7076	1165	5	12	233	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.587	26.560	2	1.293	1544614	271650	354	885	767		
353.8970	26.587	26.560	2	1.293	969875	166951	228	570	732	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.613	26.584	2	1.001	47325	8180	13	32	629		
341.8567	26.596	26.584	1	1.000	27609	5058	24	60	211	1.71(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.046	28.014	2	1.364	1584958	253357	354	885	716		
353.8970	28.037	28.014	1	1.363	1007989	162868	228	570	714	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.071	28.039	2	1.001	44929	7445	13	32	573		
341.8567	28.063	28.039	1	1.001	27888	4385	24	60	183	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.830	28.801	2	1.402	983567	149258	81	202	1843		
369.8919	28.830	28.801	2	1.402	618909	95647	53	132	1805	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.855	28.828	2	1.001	27146	4327	17	42	255		
357.8516	28.863	28.828	2	1.001	15797	2500	5	12	500	1.72(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.406	34.384	1	0.950	521957	103110	186	465	554		
385.8610	34.406	34.384	1	0.950	995265	195967	351	877	558	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.431	34.405	2	1.001	26220	5205	19	47	274		
375.8178	34.431	34.405	2	1.001	20154	4061	11	27	369	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.583	34.562	1	0.955	567371	107545	186	465	578		
385.8610	34.583	34.562	1	0.955	1059282	198264	351	877	565	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.608	34.582	2	1.001	29510	5690	19	47	299		
375.8178	34.600	34.582	1	1.000	24878	4701	11	27	427	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.468	35.444	1	0.980	527302	117266	186	465	630		
385.8610	35.468	35.444	1	0.980	996134	220962	351	877	630	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.485	35.461	1	1.000	27767	6035	19	47	318		
375.8178	35.476	35.461	1	1.000	22259	4941	11	27	449	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.404	36.388	1	1.005	582391	143633	186	465	772		
385.8610	36.404	36.388	1	1.005	1114166	273141	351	877	778	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.421	36.402	1	1.000	31508	7777	19	47	409		
375.8178	36.421	36.402	1	1.000	26094	6045	11	27	550	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.210	36.192	1		987922	232825	142	355	1640		
403.8529	36.210	36.192	1		764858	181339	110	275	1649	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.695	35.680	1	0.986	630506	153231	142	355	1079		
403.8529	35.695	35.680	1	0.986	497389	118761	110	275	1080	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.712	35.695	1	1.000	17291	4375	12	30	365		
391.8127	35.712	35.695	1	1.000	14389	3541	11	27	322	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.822	35.805	1	0.989	727495	166749	142	355	1174		
403.8529	35.822	35.805	1	0.989	563870	125792	110	275	1144	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.839	35.820	1	1.000	18295	4156	12	30	346		
391.8127	35.830	35.820	1	1.000	15787	3353	11	27	305	1.16(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.227	36.208	1	1.015	21159	5138	12	30	428		
391.8127	36.218	36.208	1	1.015	18436	4550	11	27	414	1.15(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.321	38.305	1	1.058	389255	110351	150	375	736		
419.8220	38.321	38.305	1	1.058	838024	240182	283	707	849	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.329	38.317	1	1.000	24164	7010	18	45	389		
409.7788	38.329	38.317	1	1.000	23123	6463	10	25	646	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.611	39.600	1	1.094	351407	112029	150	375	747		
419.8220	39.611	39.600	1	1.094	769256	246420	283	707	871	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.619	39.608	1	1.000	20064	6267	18	45	348		
409.7788	39.628	39.608	1	1.000	19318	5891	10	25	589	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.307	39.293	1	1.086	574080	172930	147	367	1176		
437.8140	39.307	39.293	1	1.086	539065	163690	141	352	1161	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.316	39.301	1	1.000	15770	4799	17	42	282		
425.7737	39.316	39.301	1	1.000	15891	4656	10	25	466	0.99(0.88-1.20)	
13C-OCDD											
469.7780	41.797	41.785	1	1.154	864827	245324	148	370	1658		
471.7750	41.797	41.785	1	1.154	958665	273299	152	380	1798	0.90(0.76-1.02)	
OCDF											
441.7428	41.890	41.875	1	1.002	29681	8172	14	35	584		
443.7399	41.881	41.875	0	1.002	31370	8963	30	75	299	0.95(0.76-1.02)	
OCDD											
457.7377	41.805	41.794	1	1.000	24122	6775	8	20	847		
459.7348	41.805	41.794	1	1.000	27520	7850	12	30	654	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

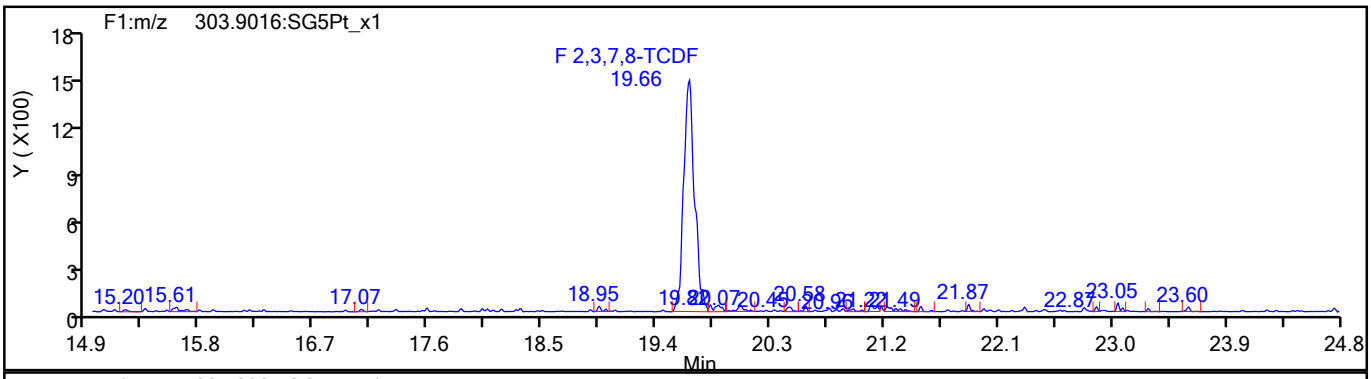

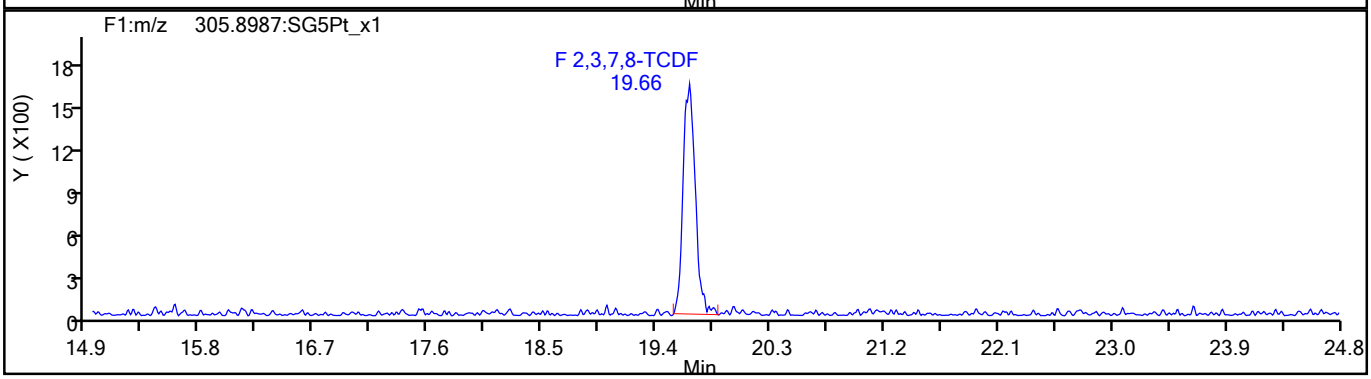

TCDF Standards

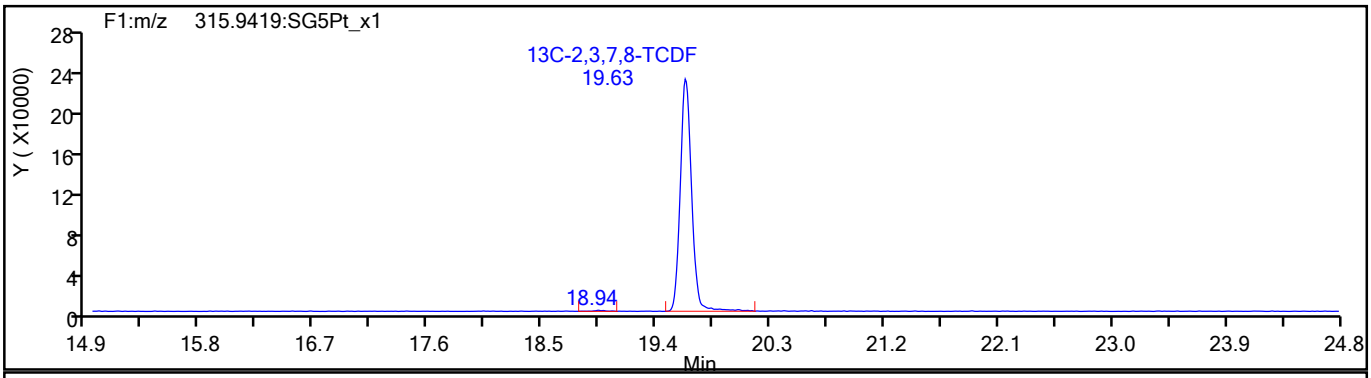

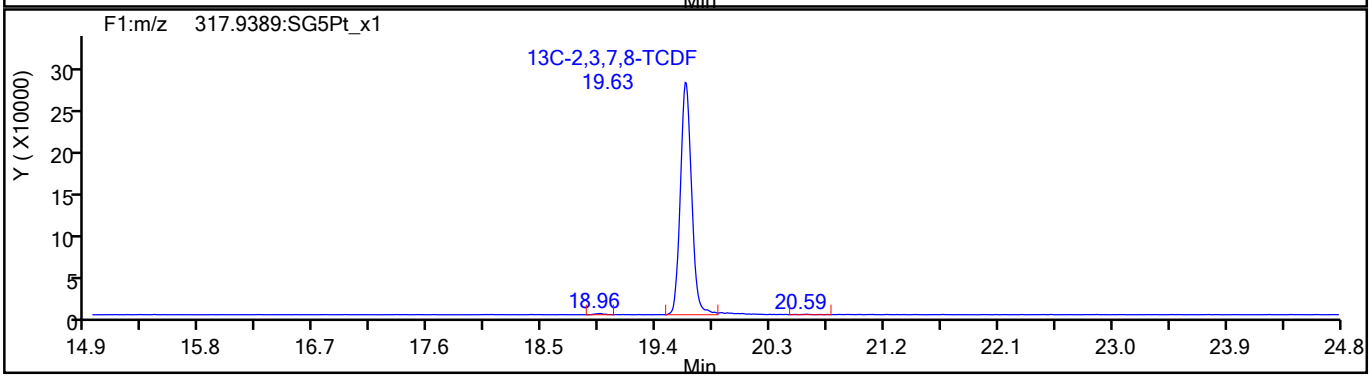

788920

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

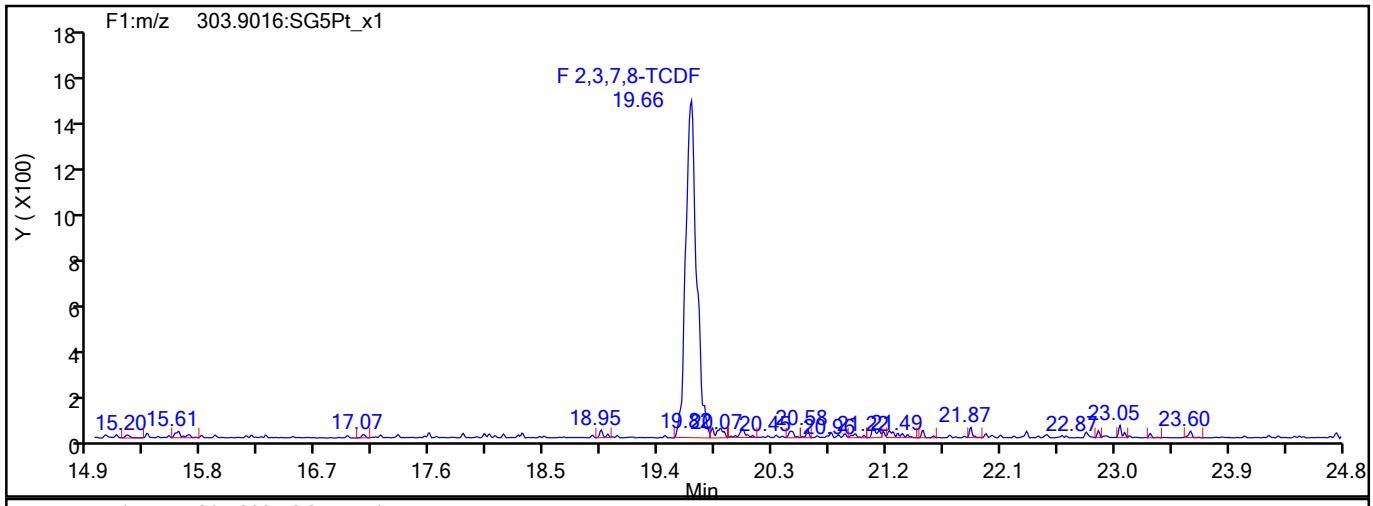

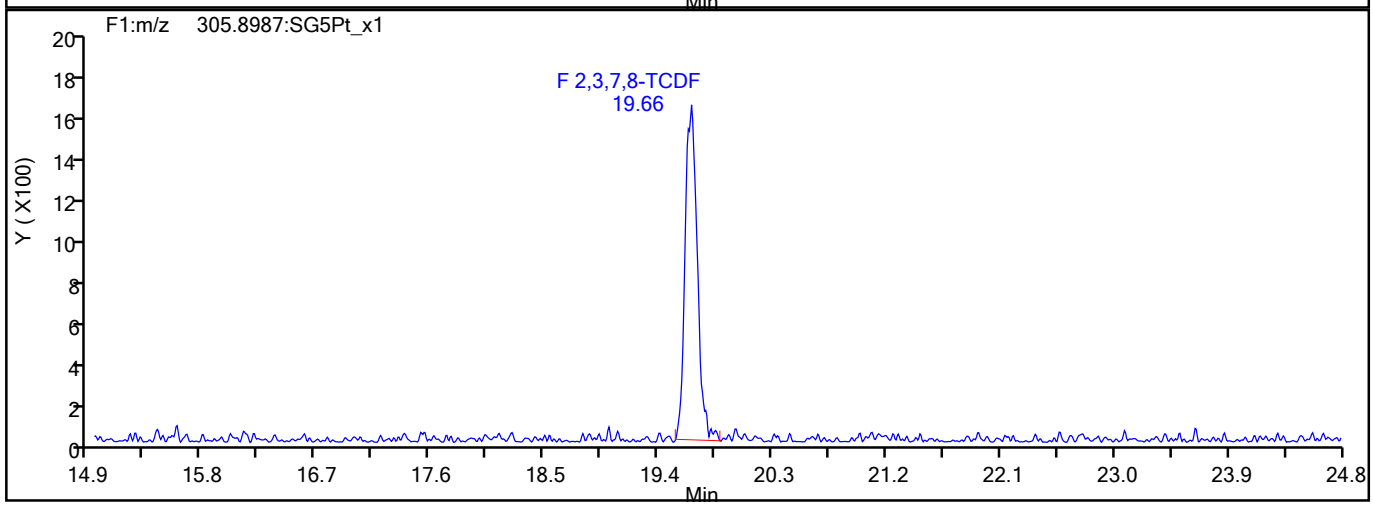

TCDF Interference Mass

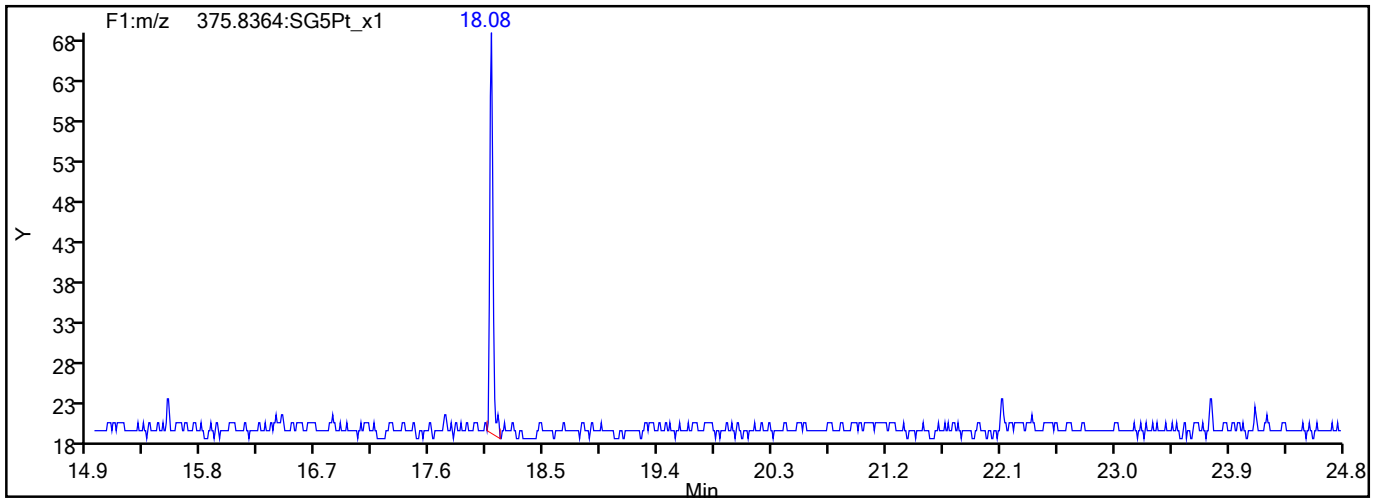

788921

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

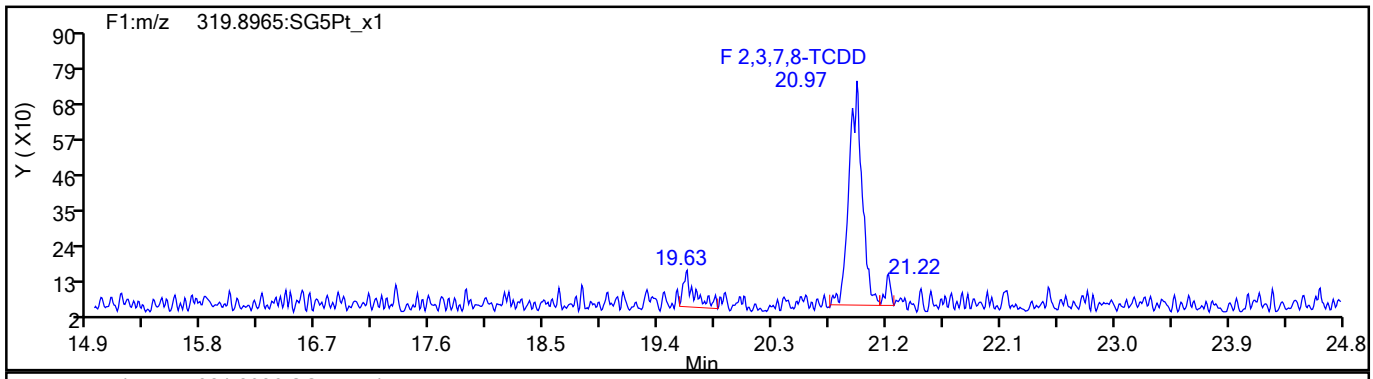

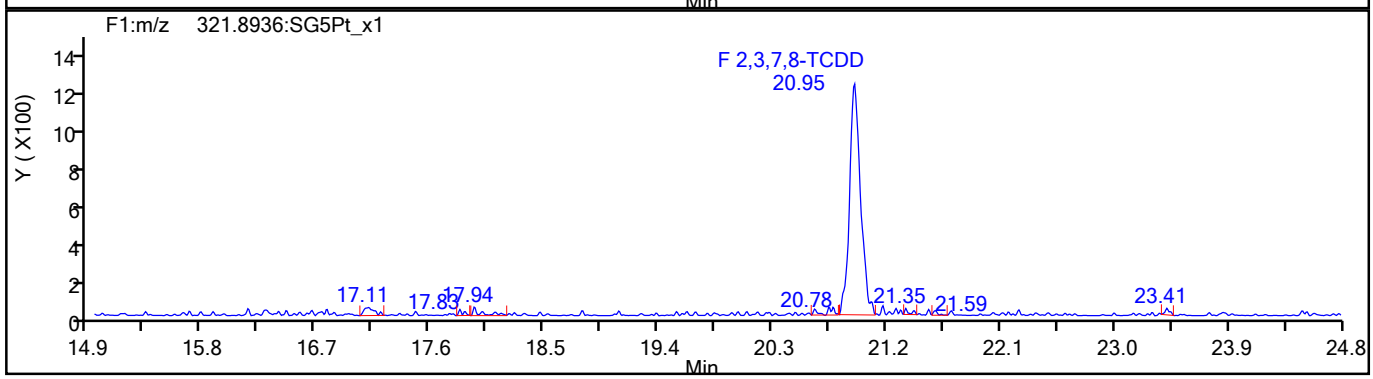

TCDD Standards

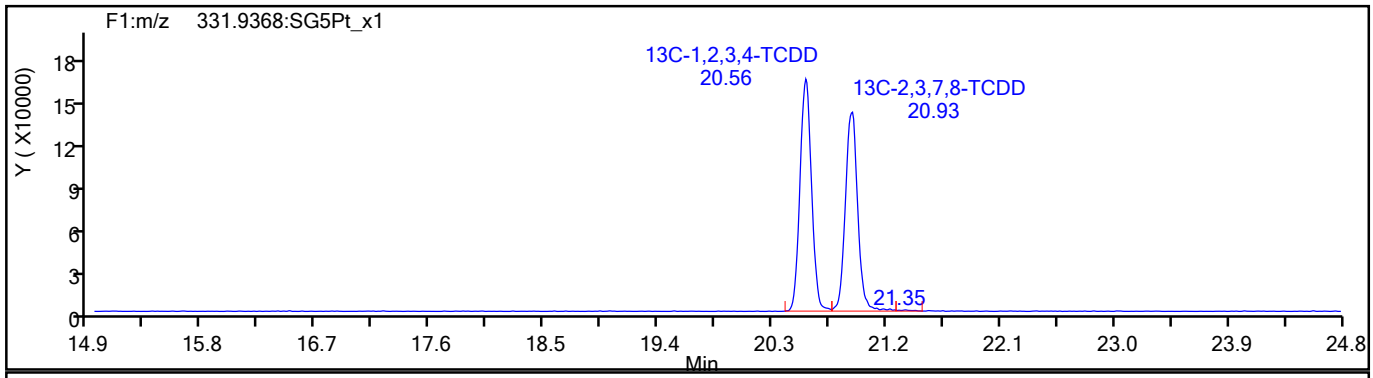

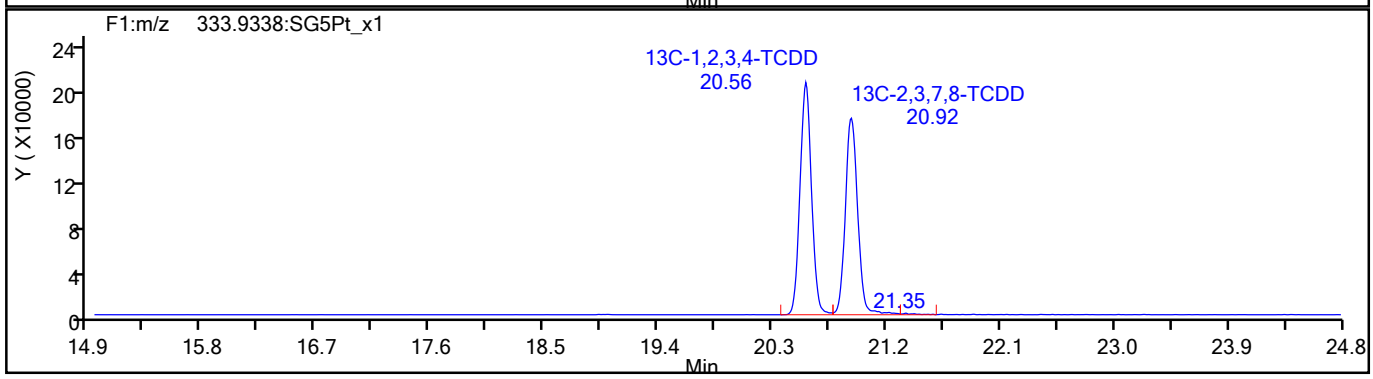

788922

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

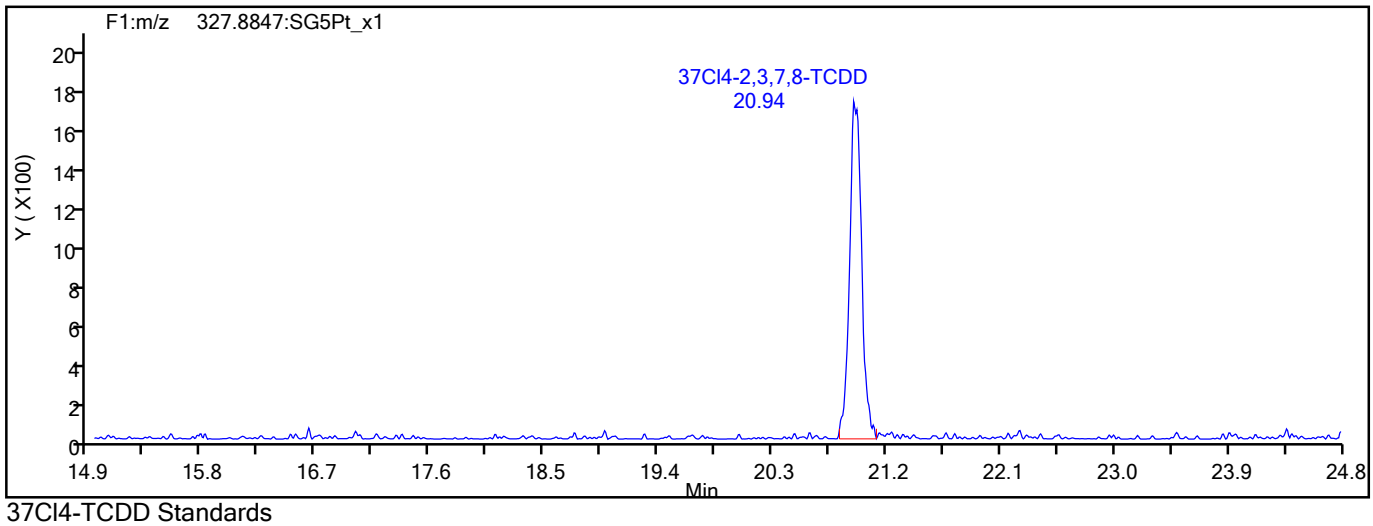

37Cl4-TCDD Standards

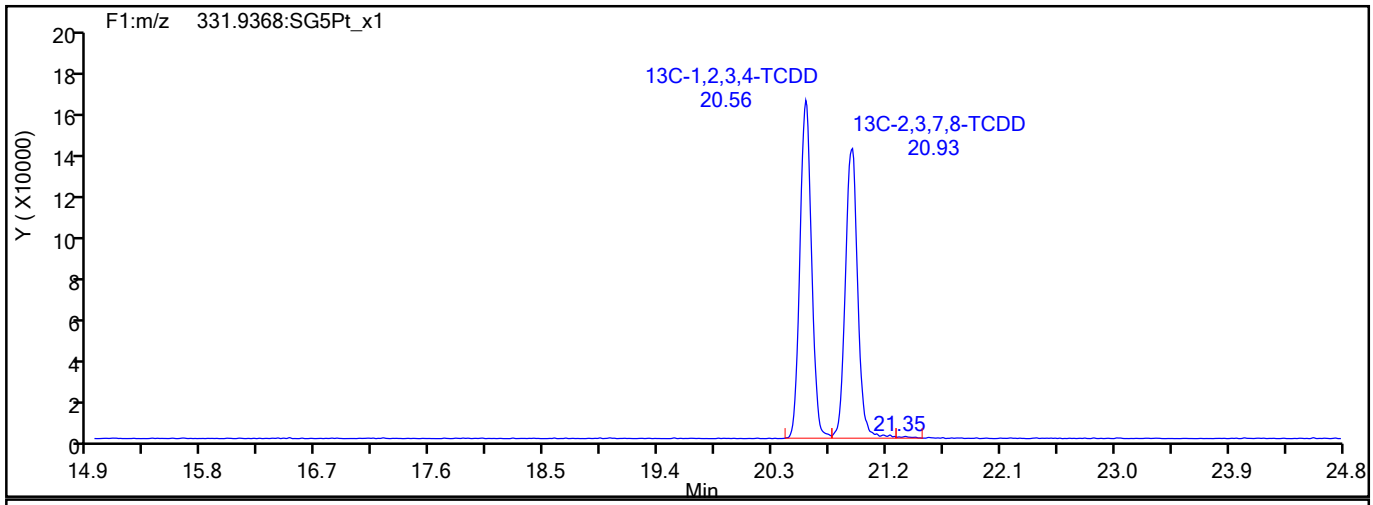

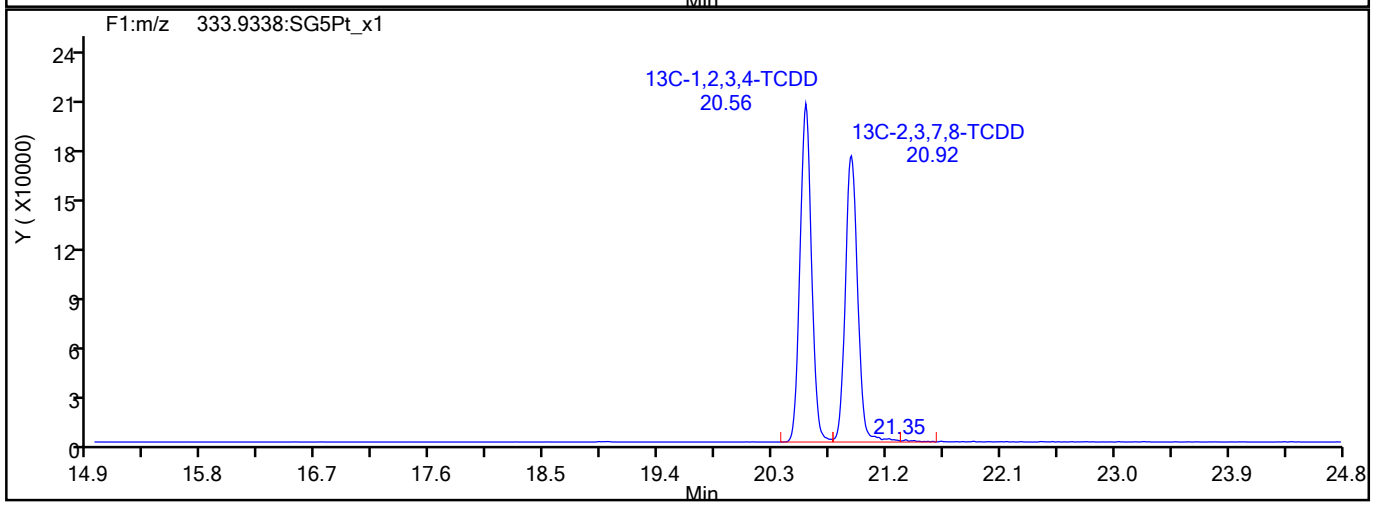

788923

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

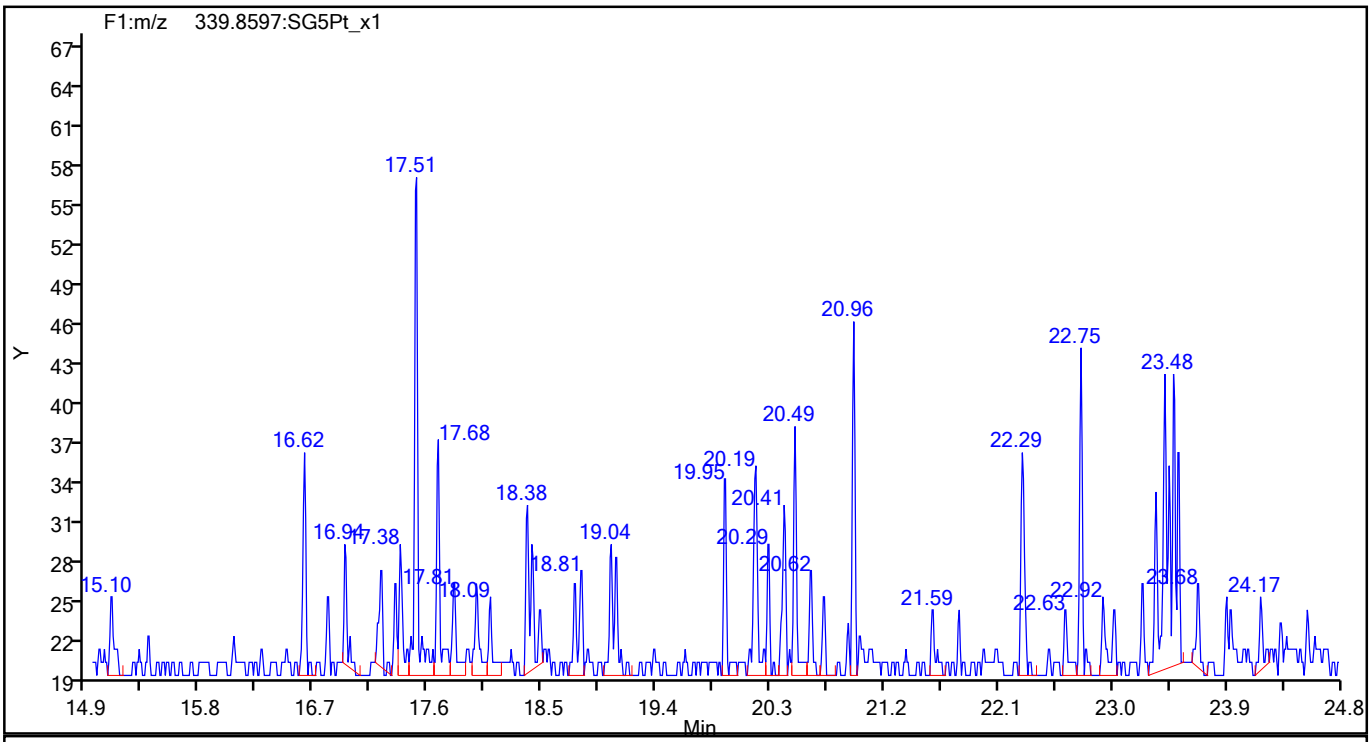

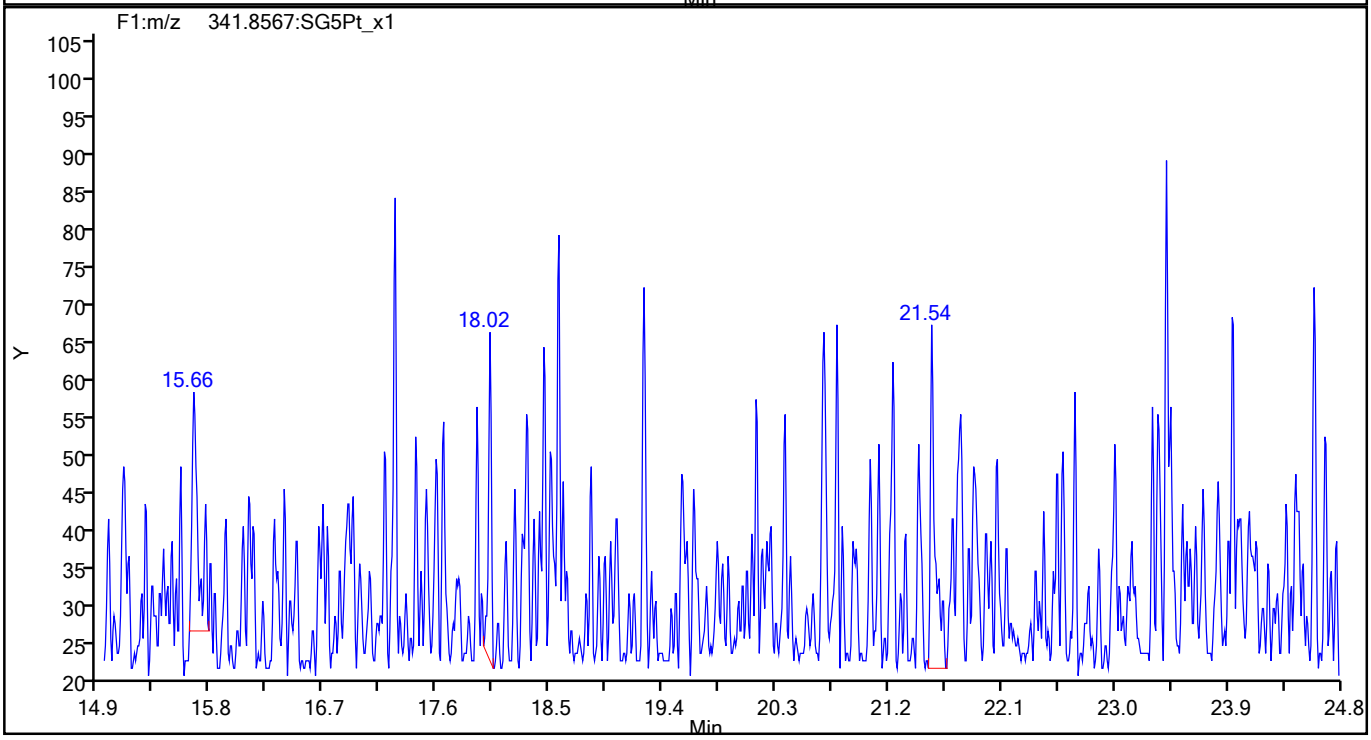

788924

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

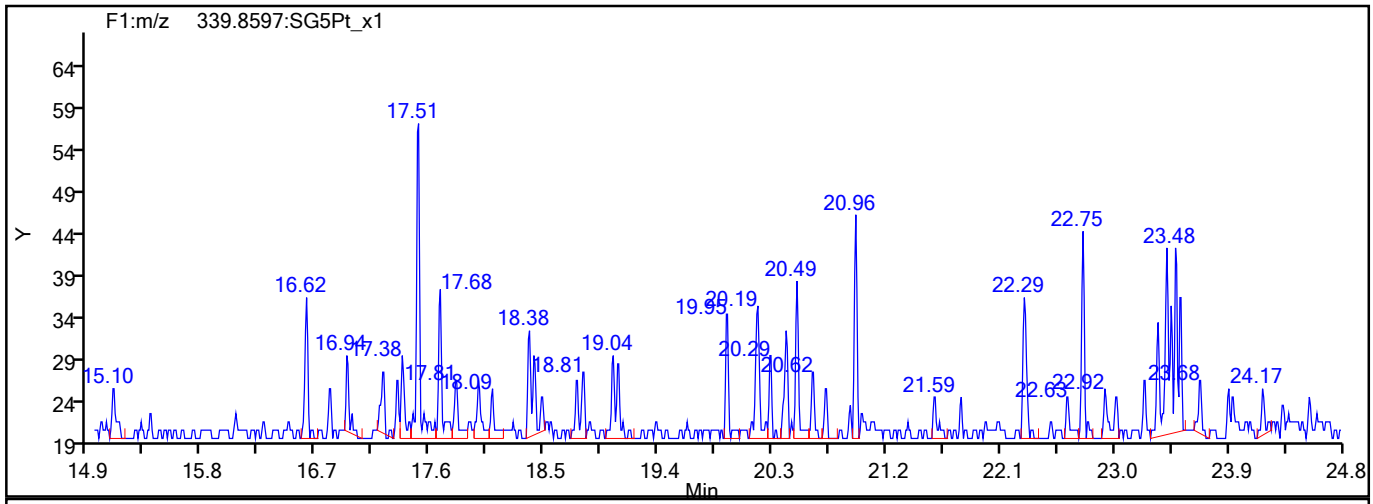

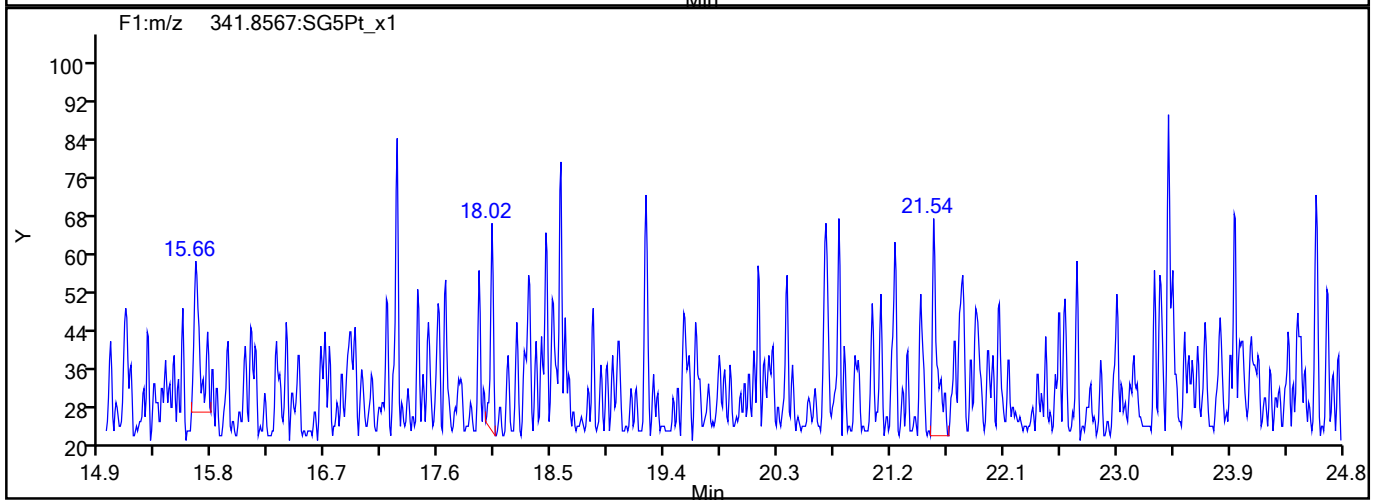

F1 PeCDFs Interference Mass

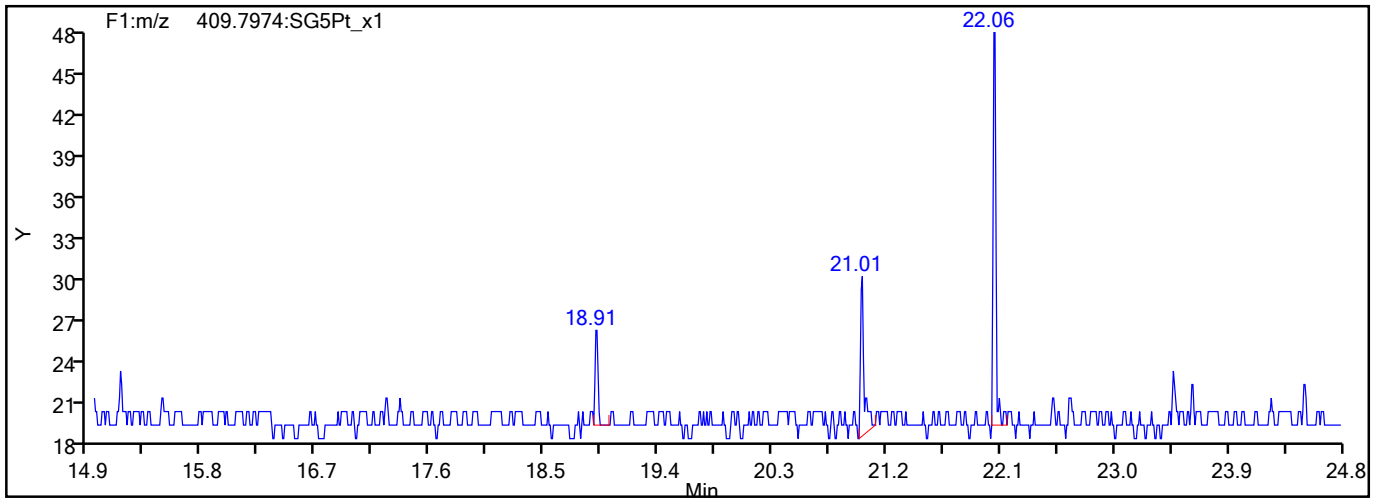

788925

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

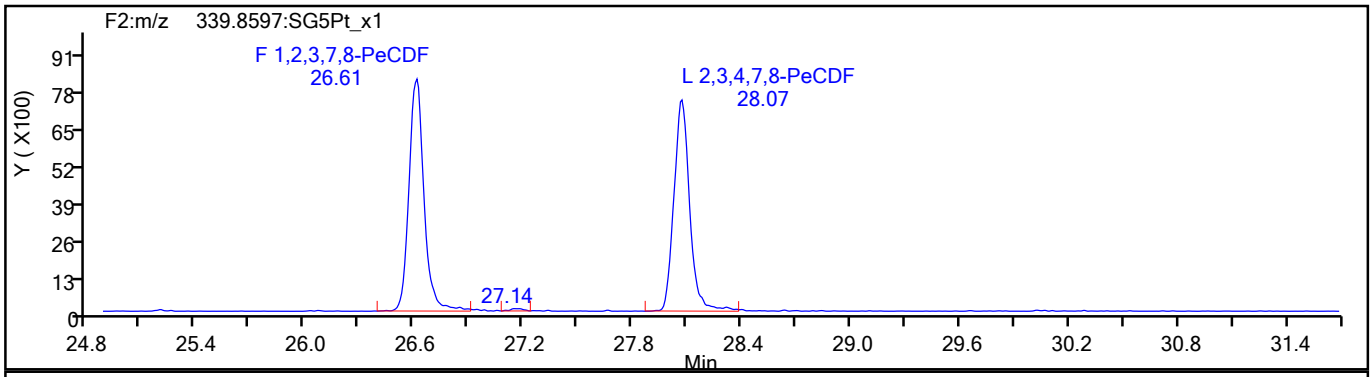

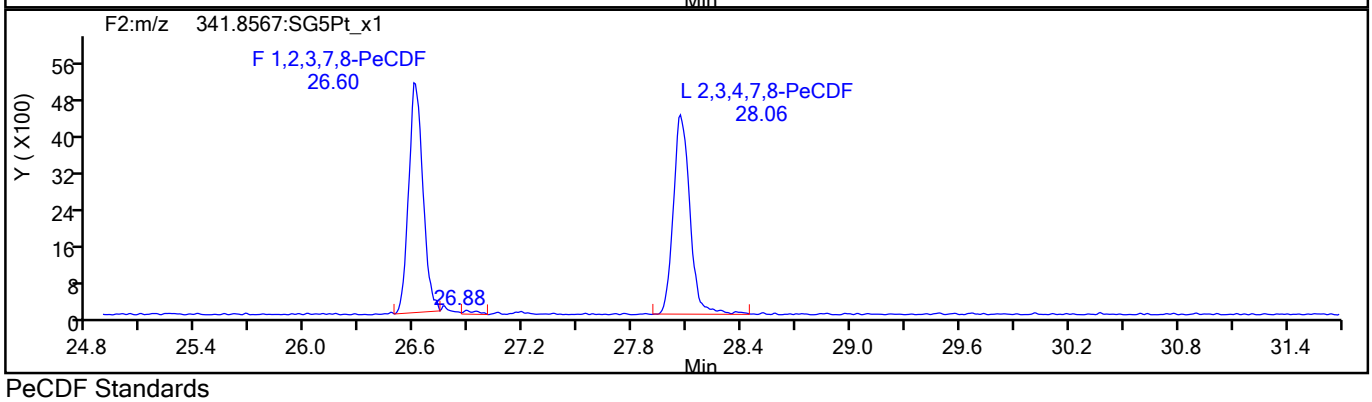

PeCDF Standards

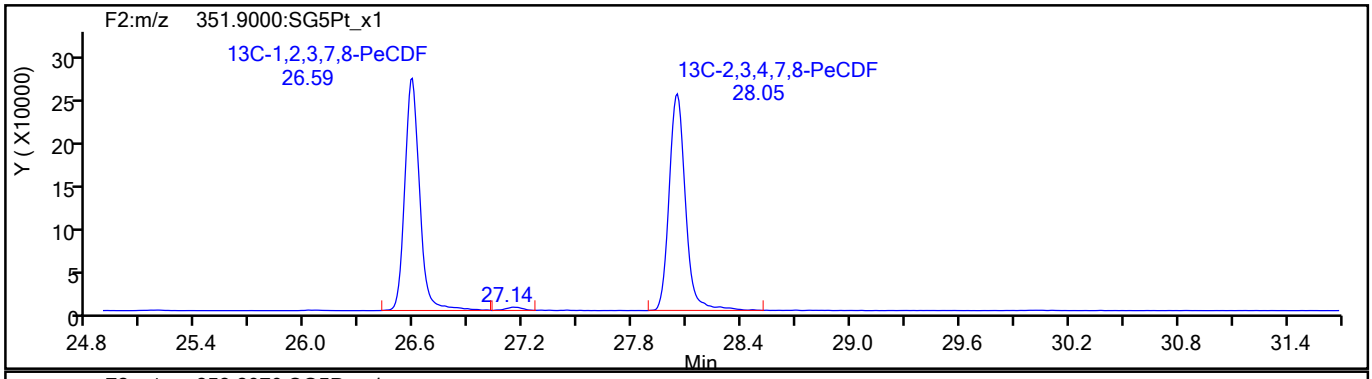

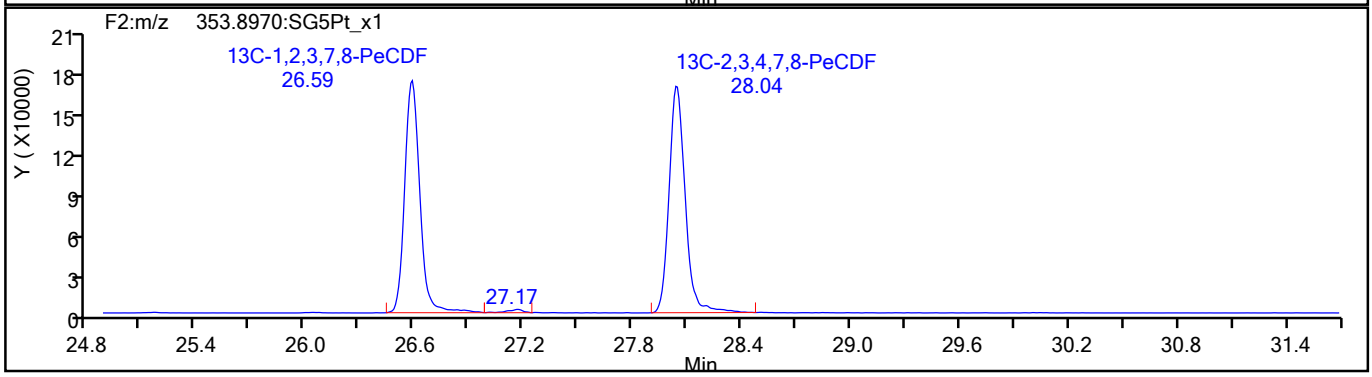

788926

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

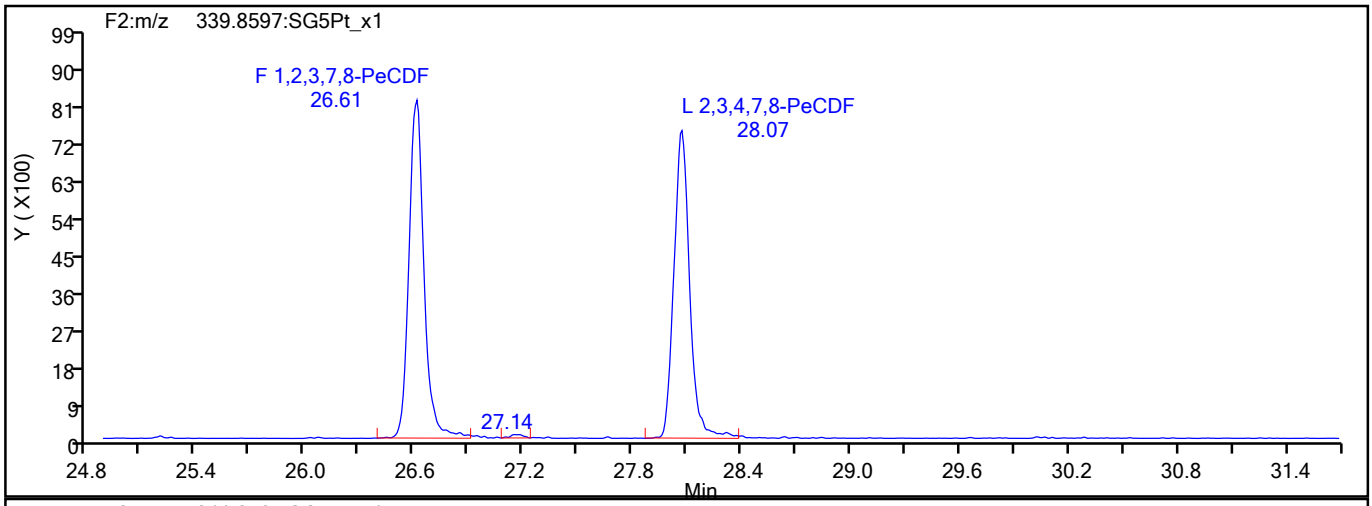

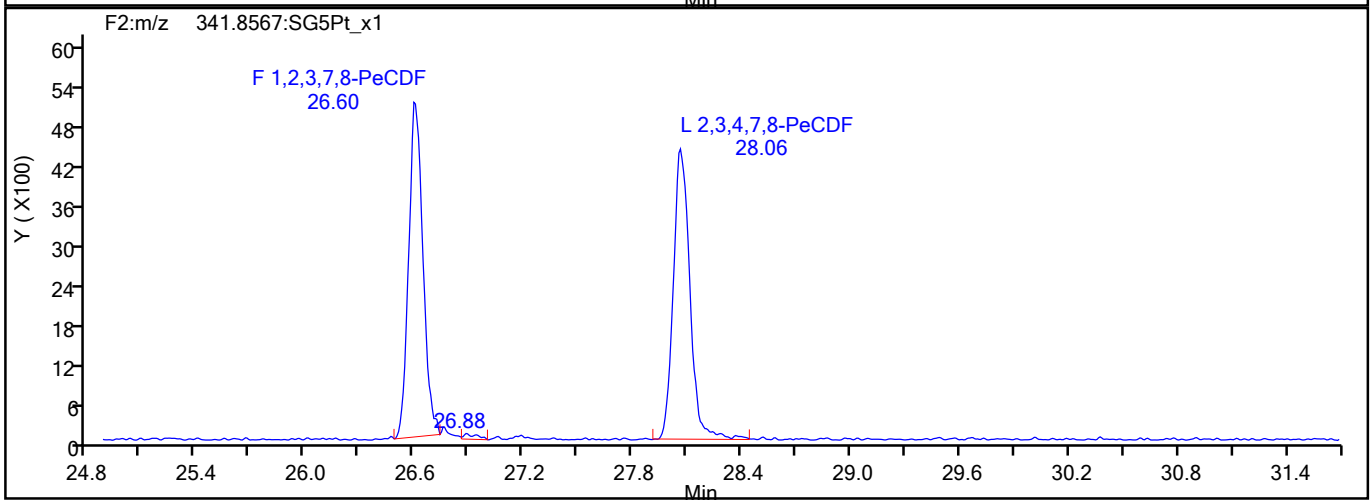

PeCDF Interference Mass

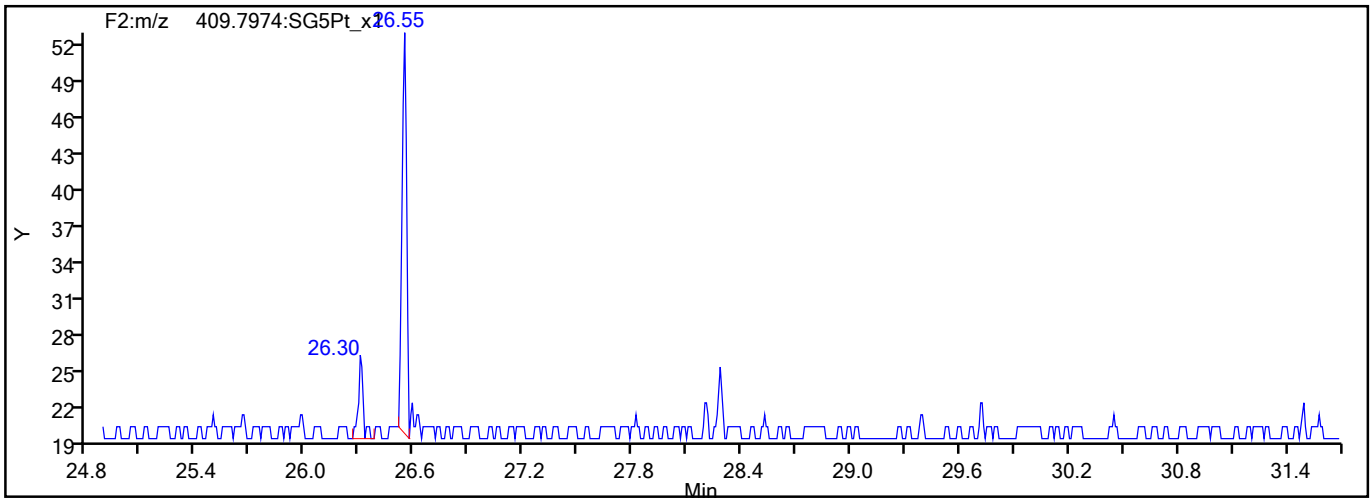

788927

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

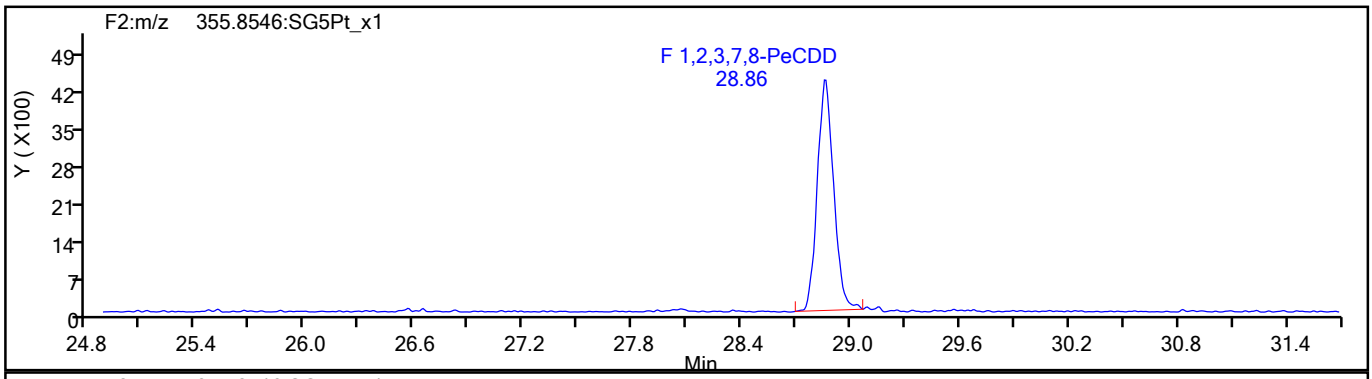

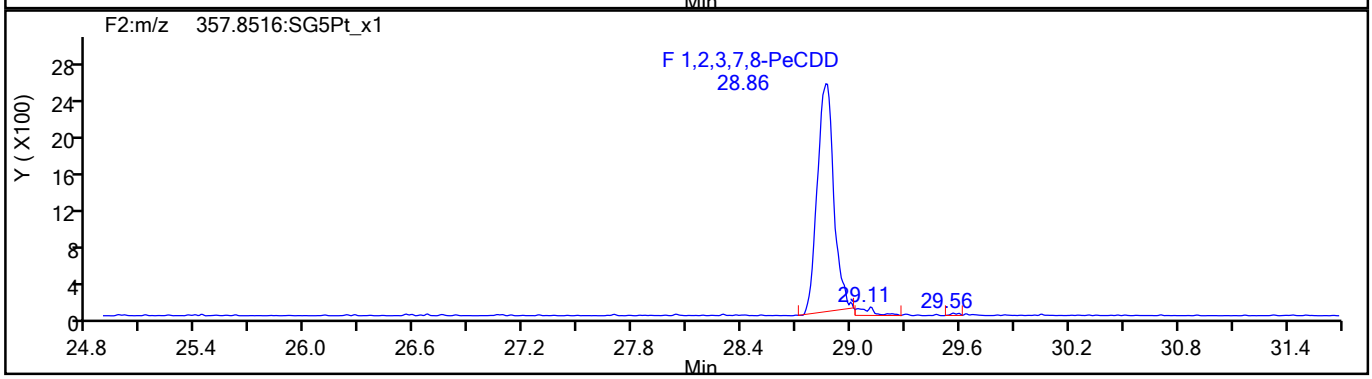

PeCDD Standards

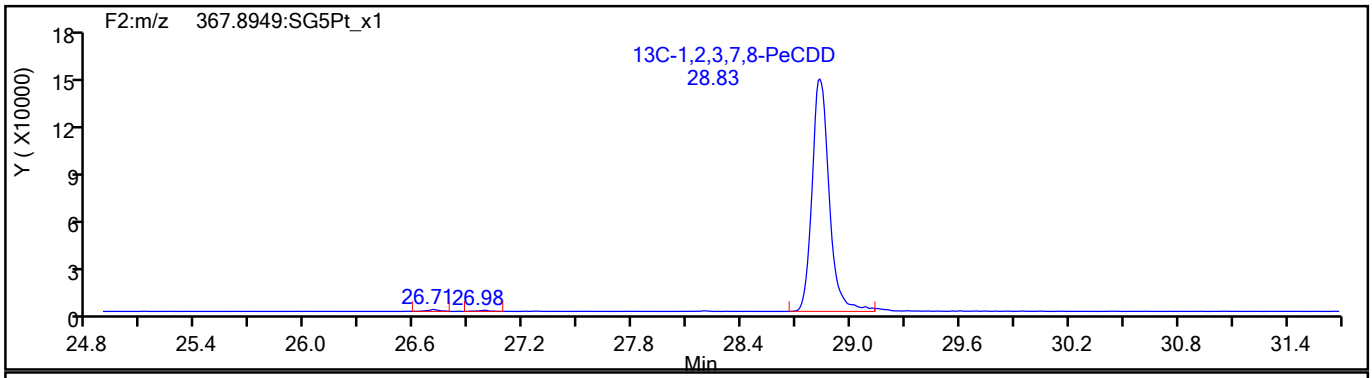

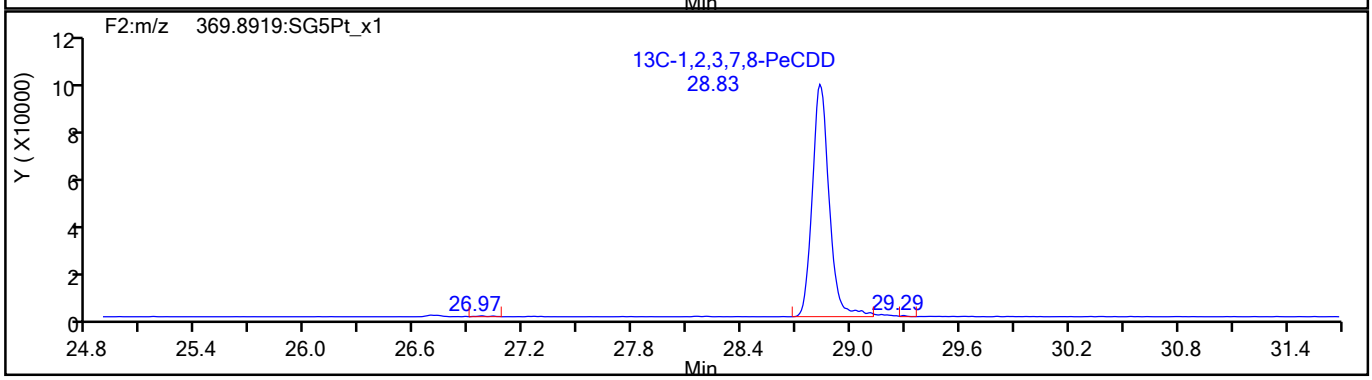

788928

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

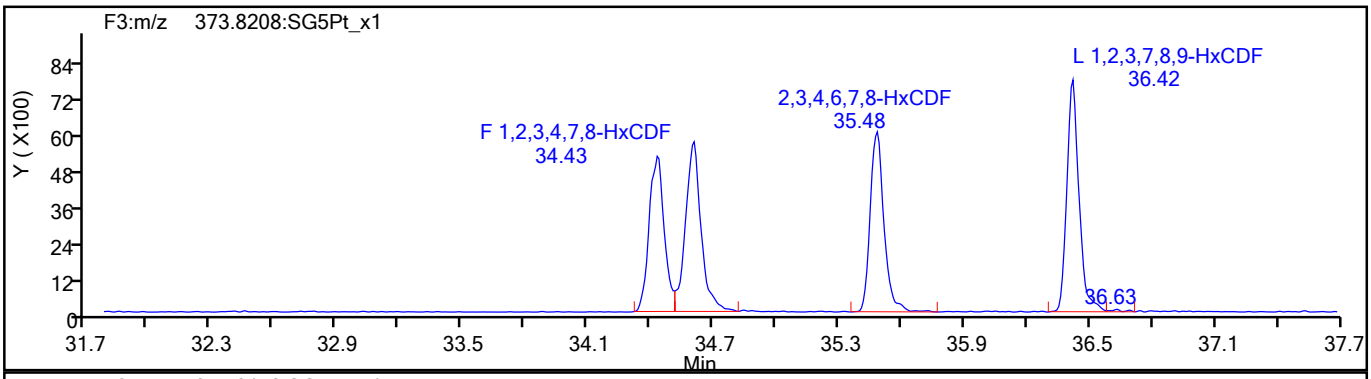

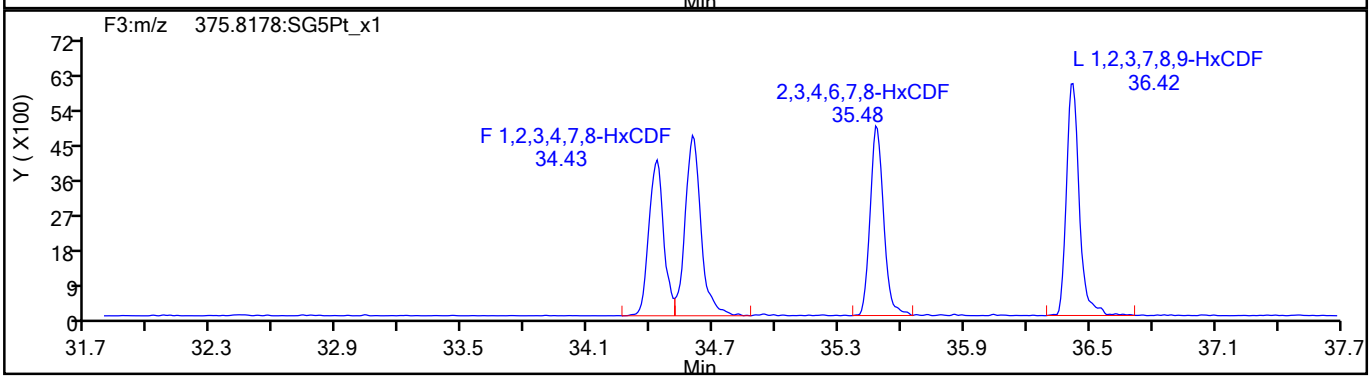

HxCDF Standards

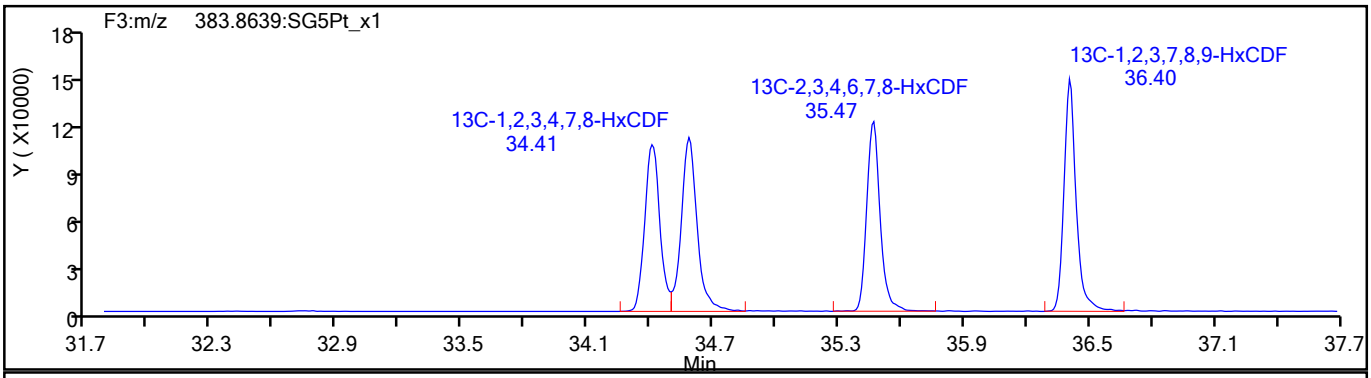

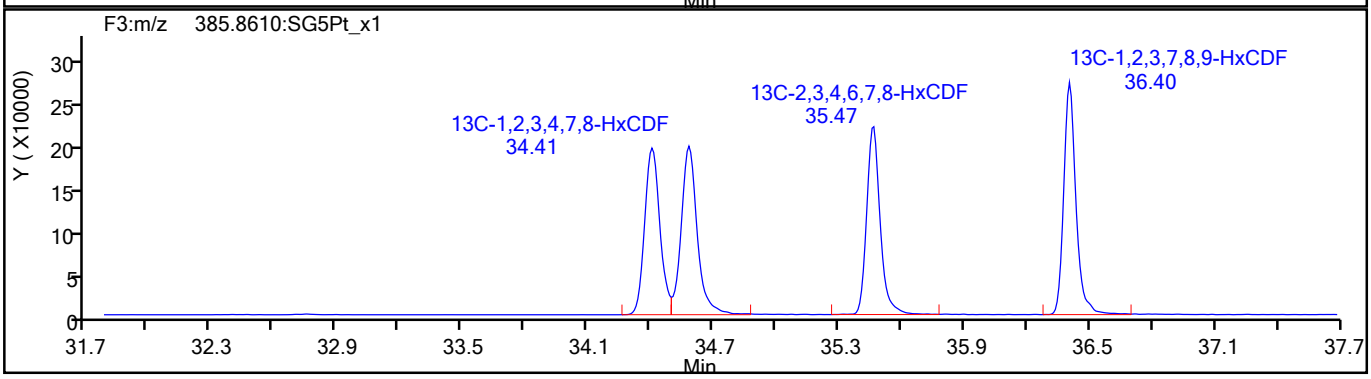

788929

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

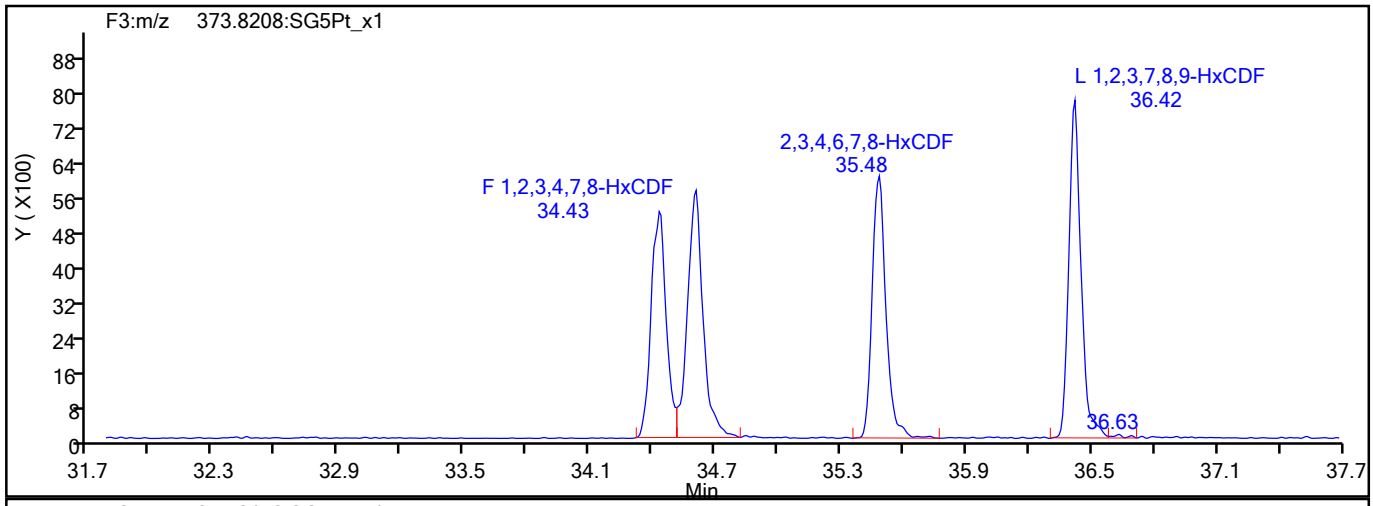

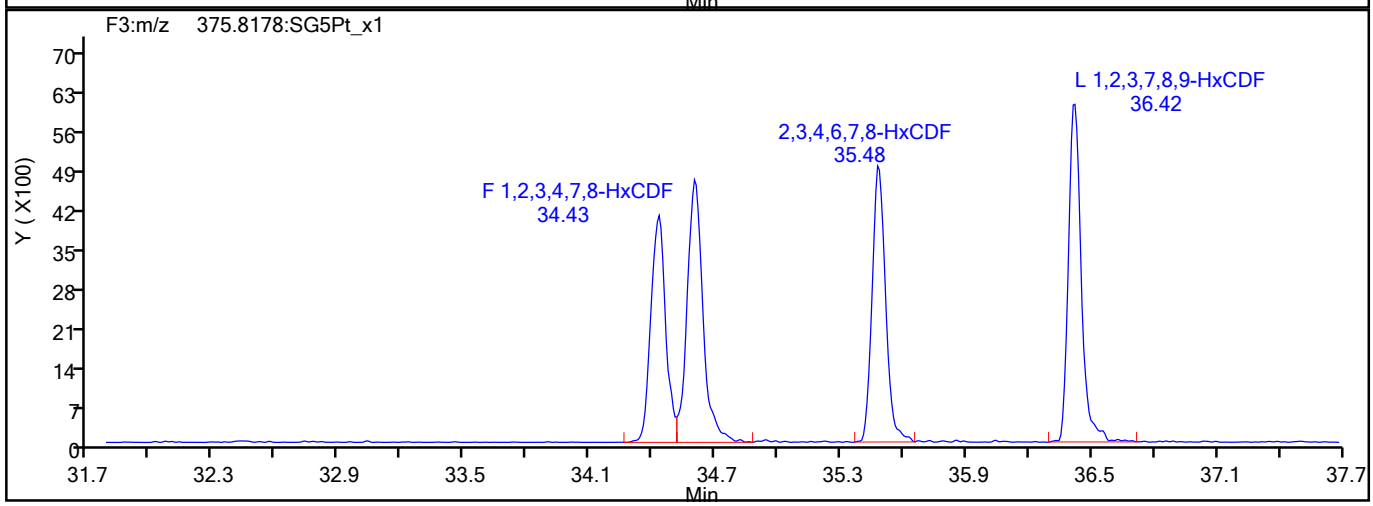

HxCDF Interference Mass

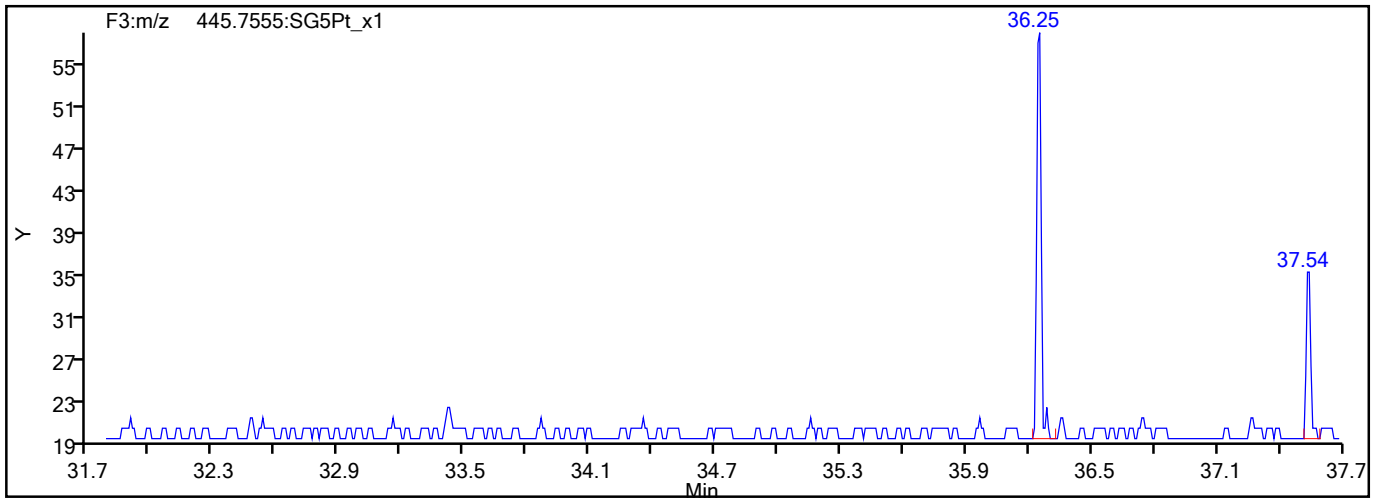

788930

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

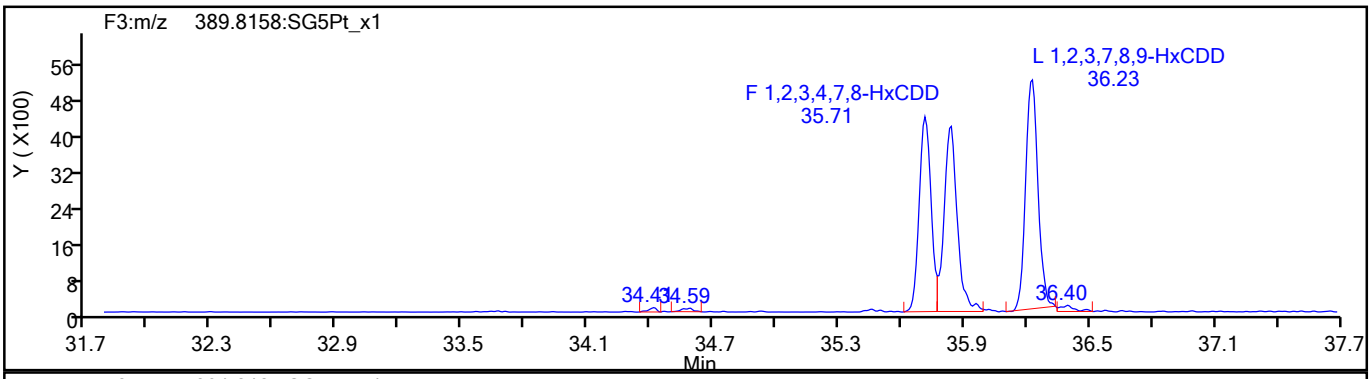

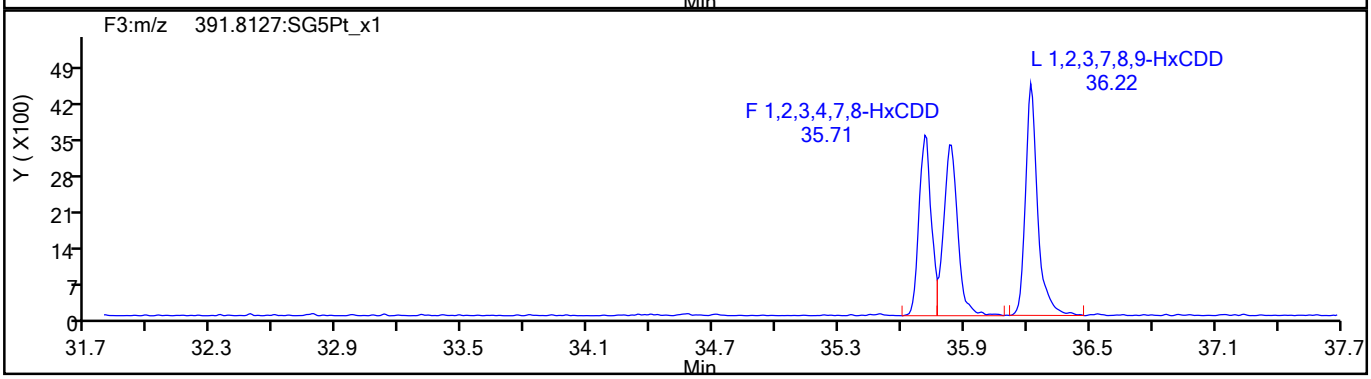

HxCDD Standards

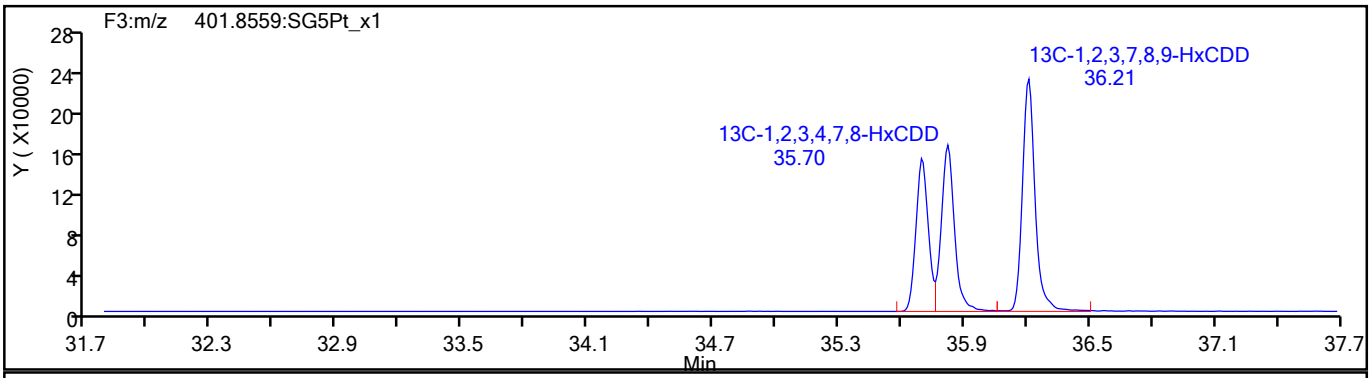

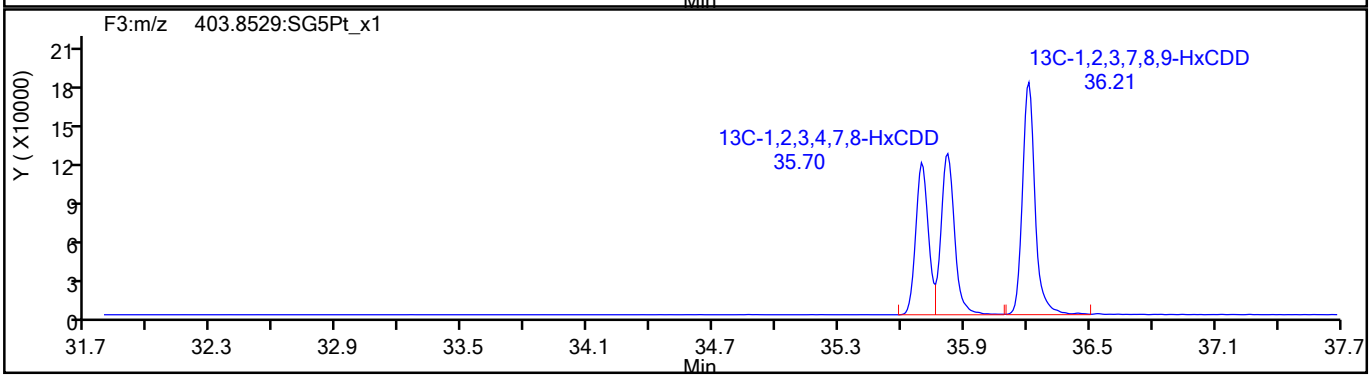

788931

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

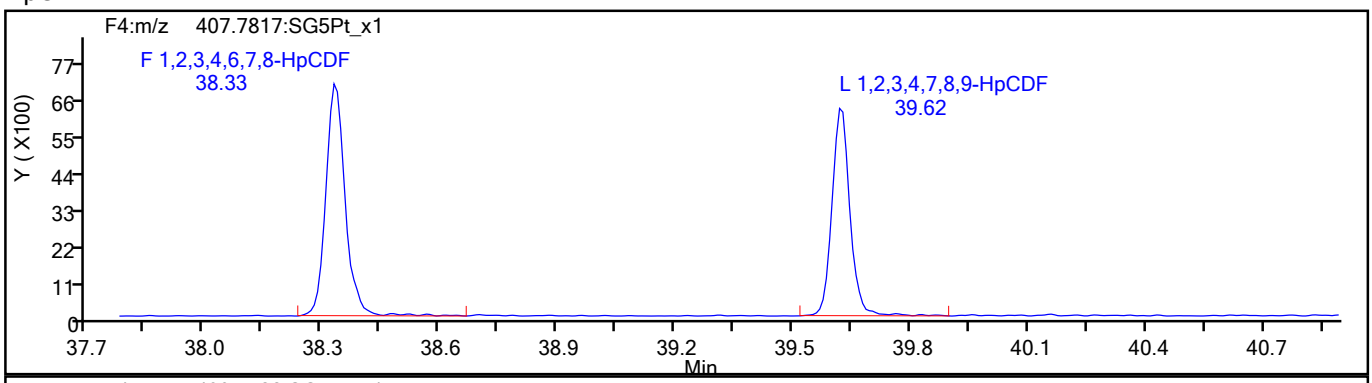

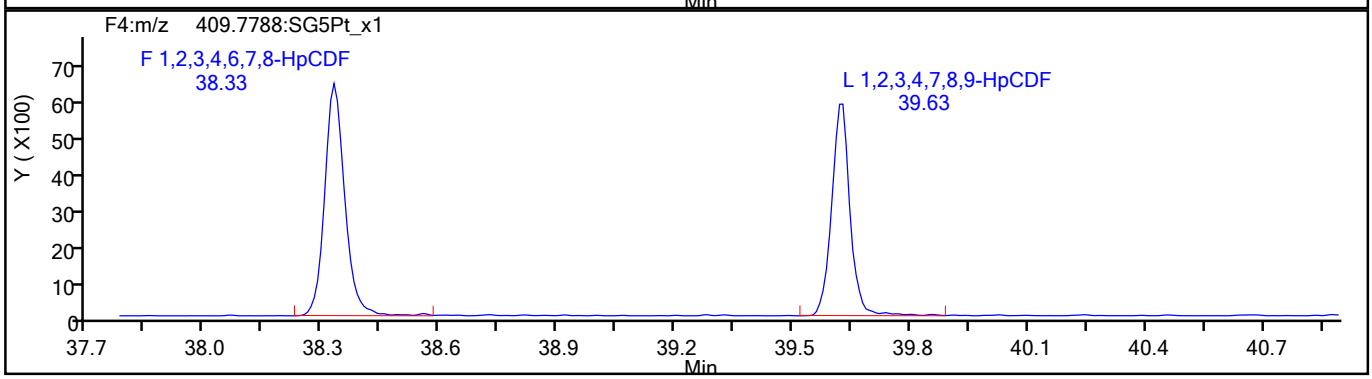

HpCDF Standards

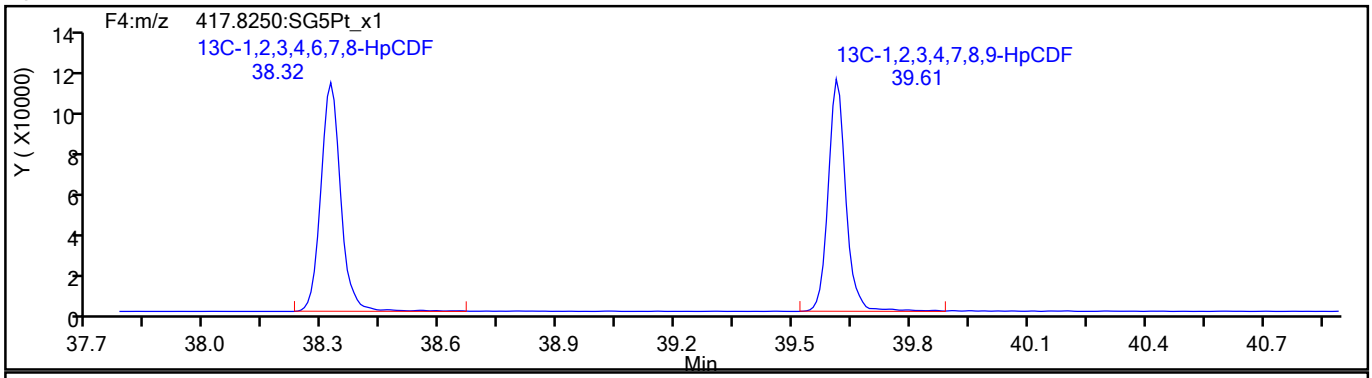

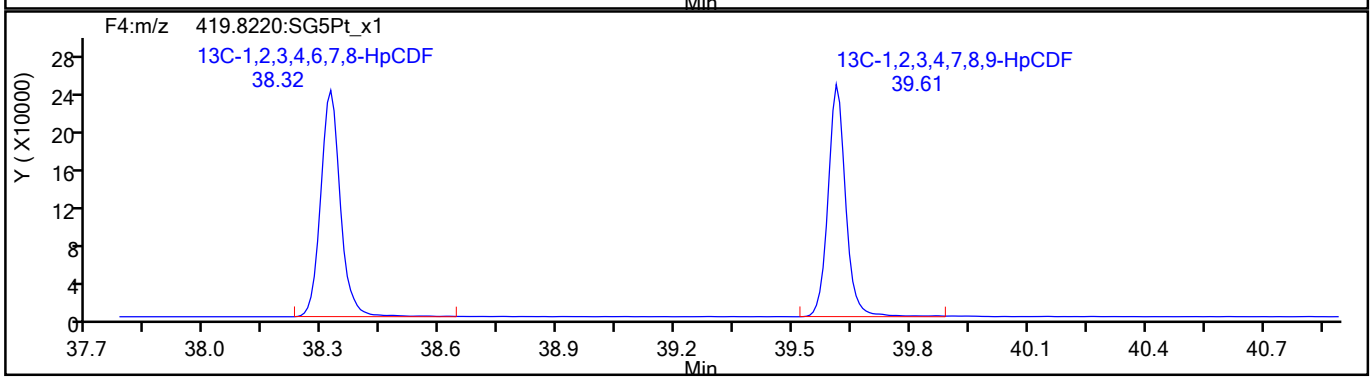

788932

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

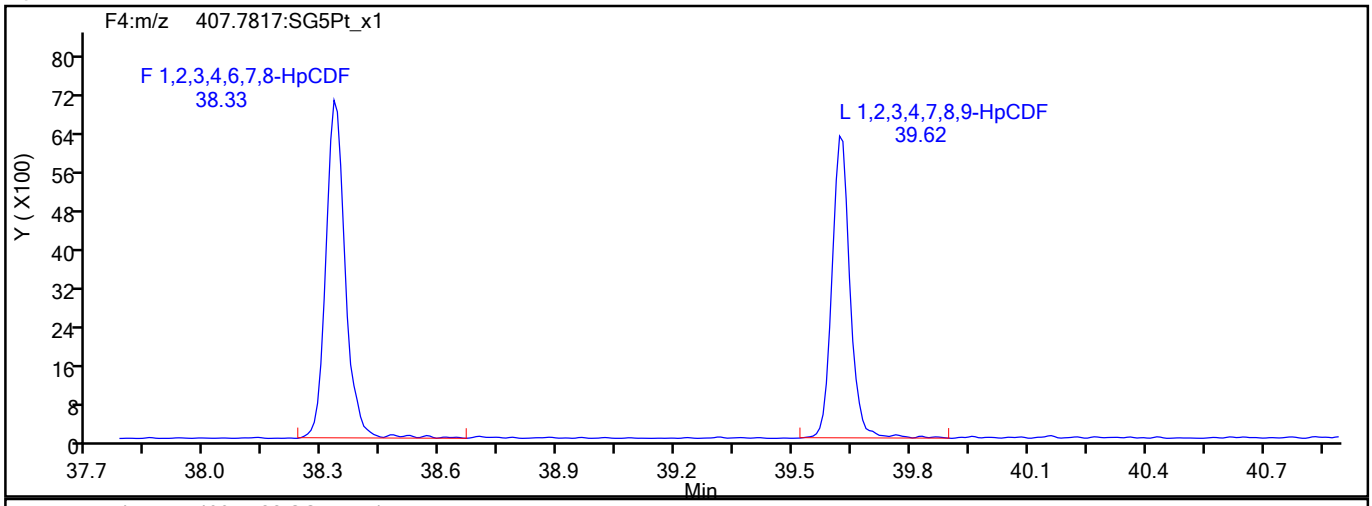

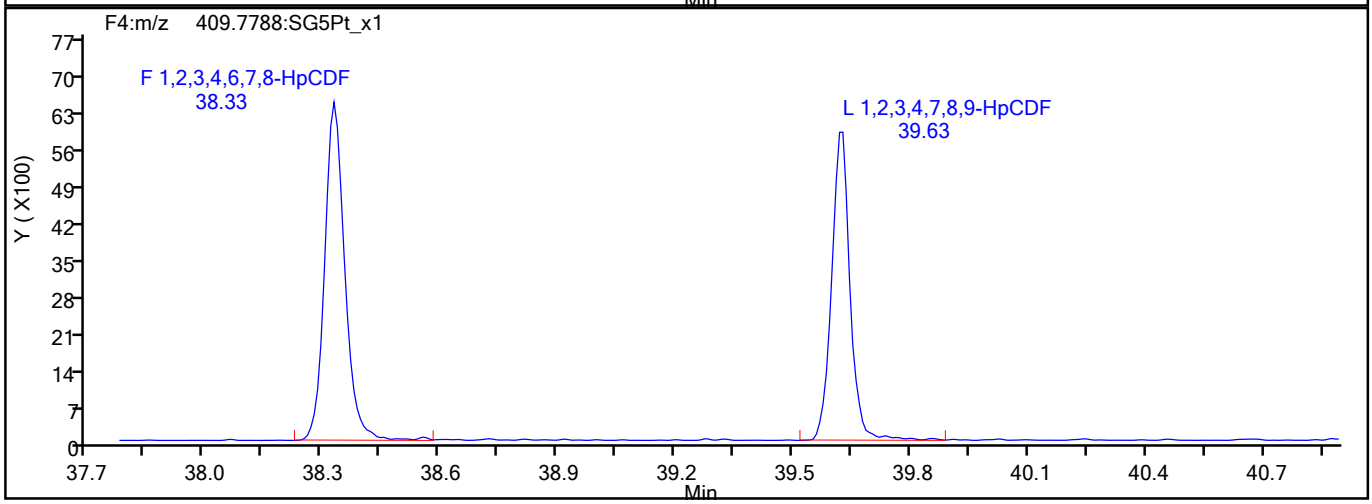

HpCDF Interference Mass

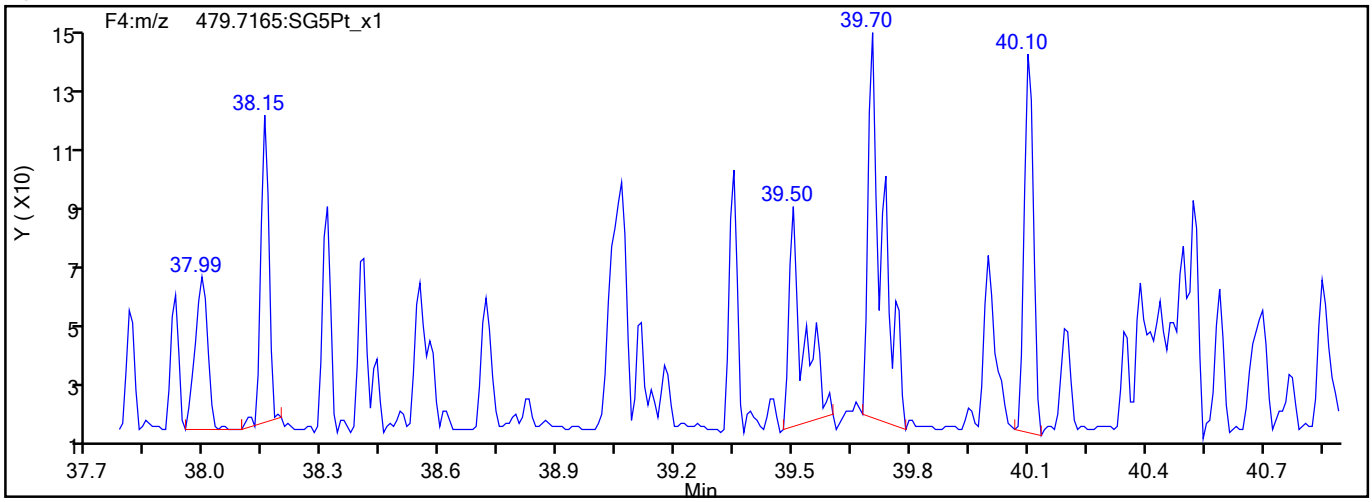

788933

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

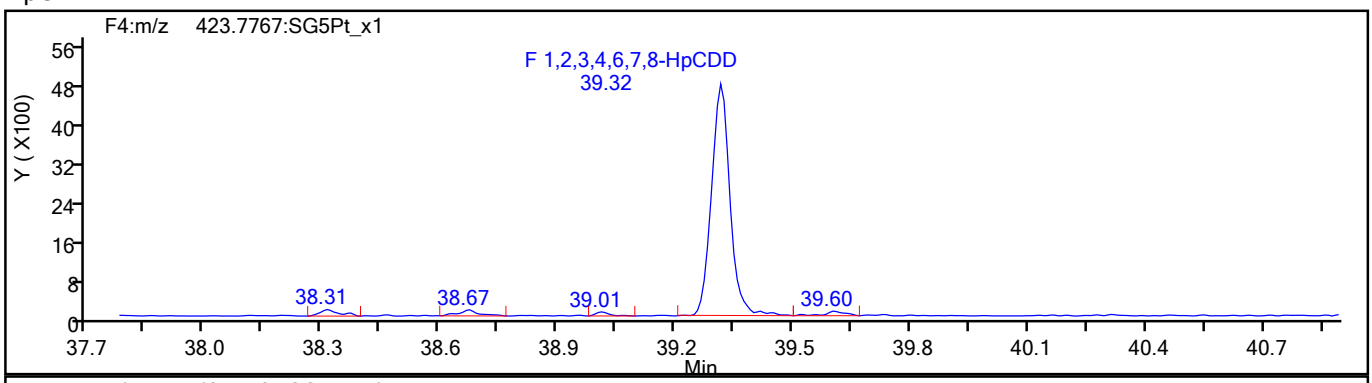

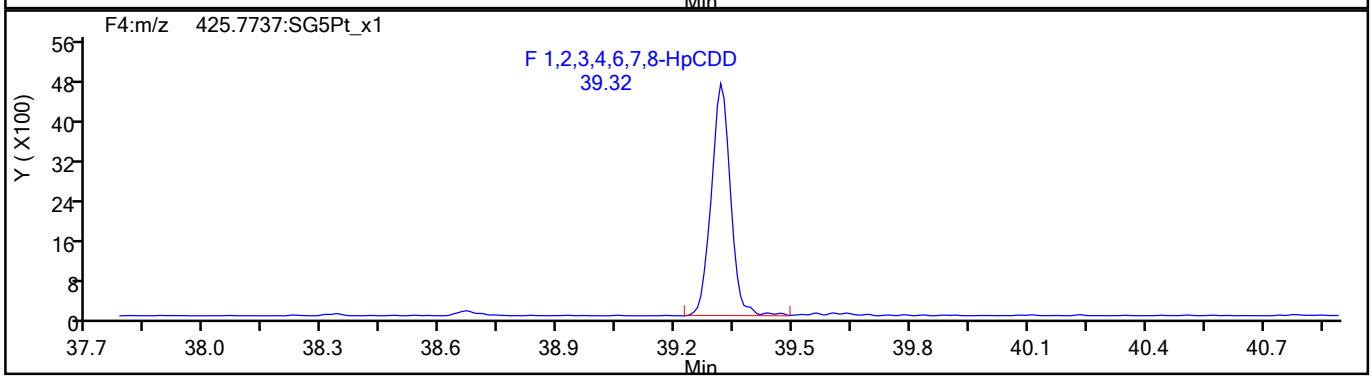

HpCDD Standards

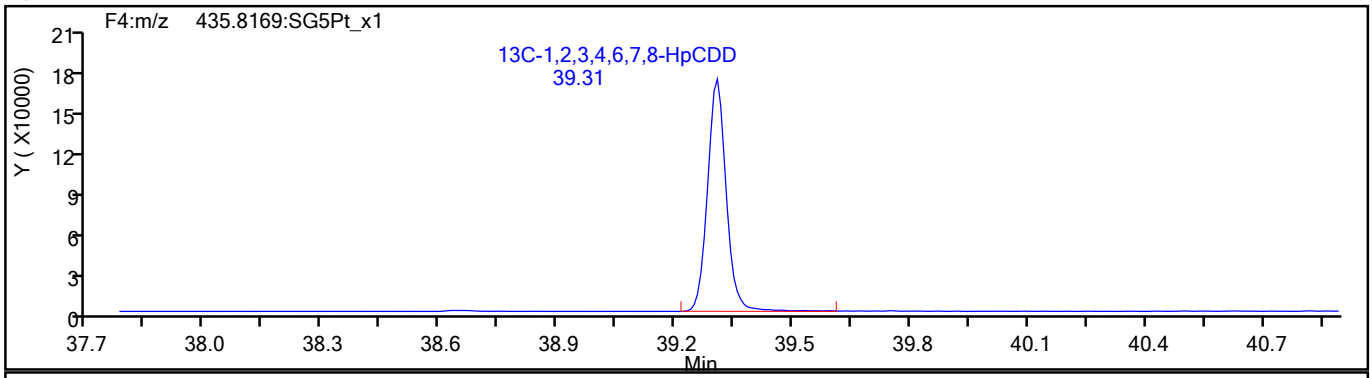

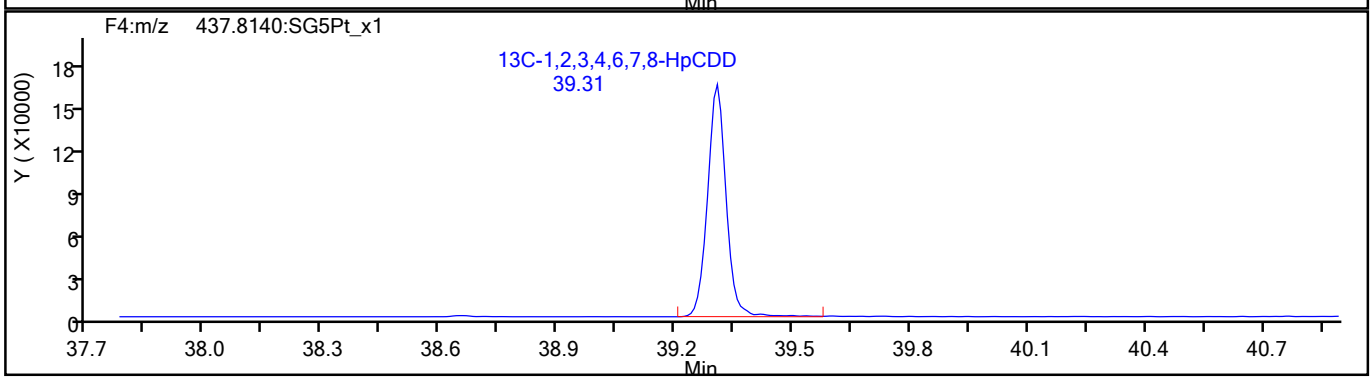

788934

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

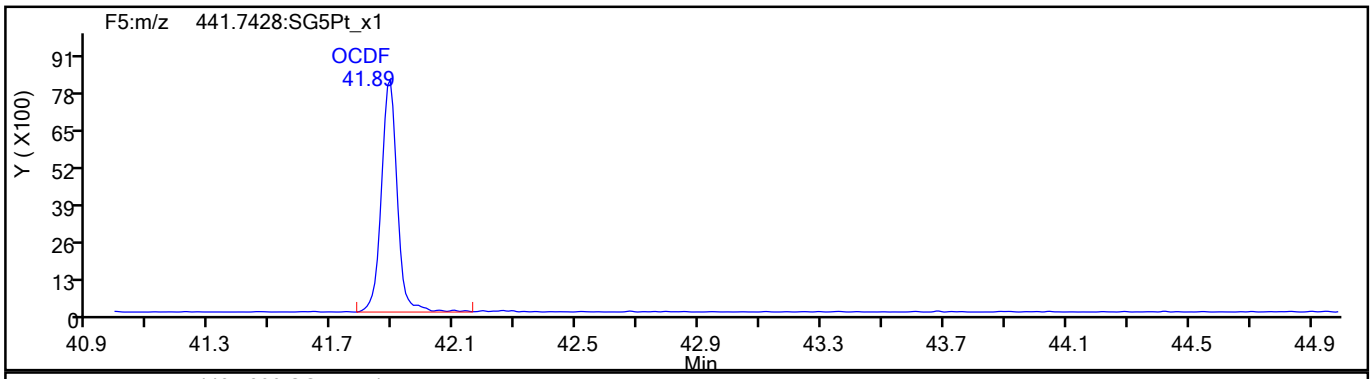

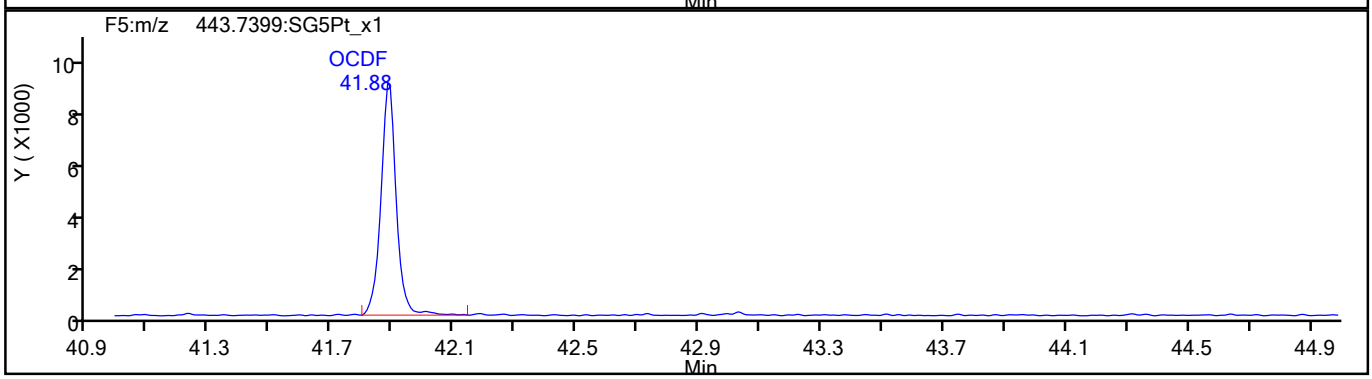

OCDF Standards

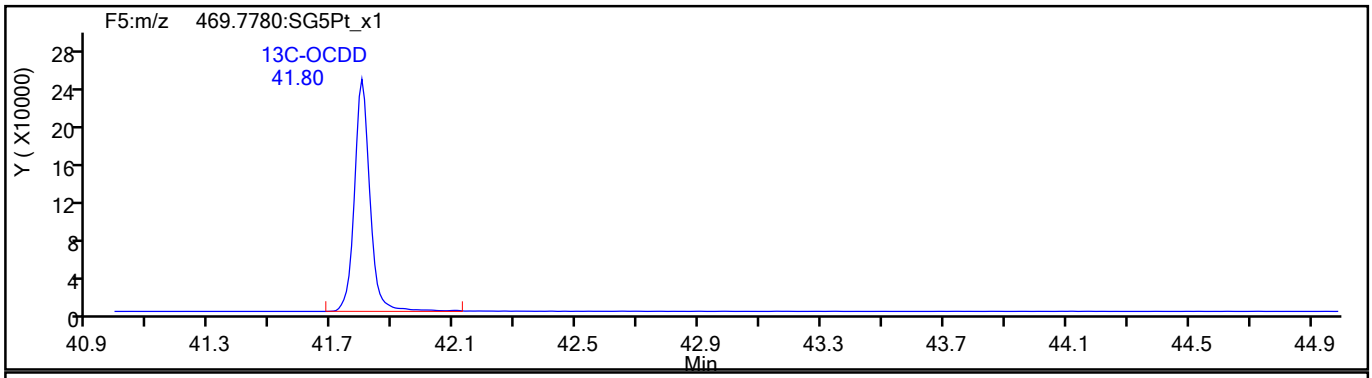

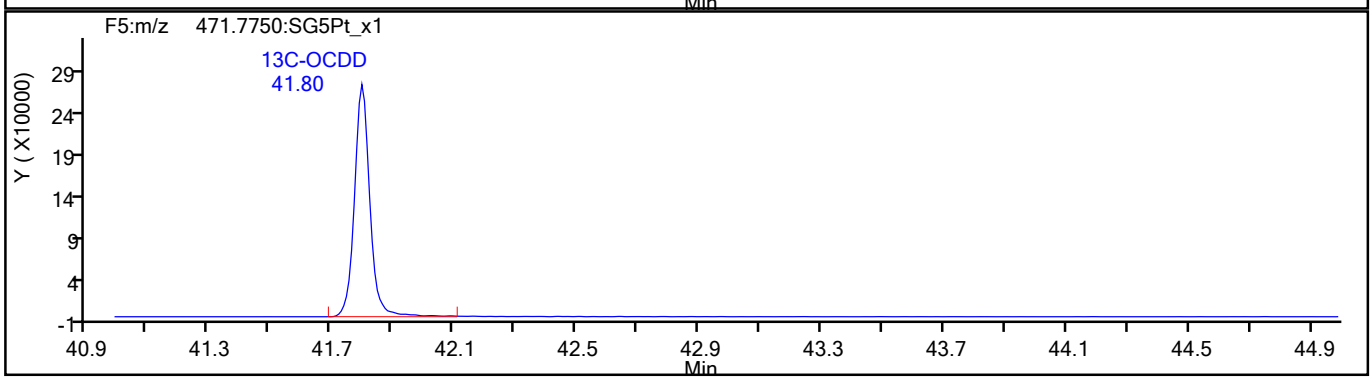

788935

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

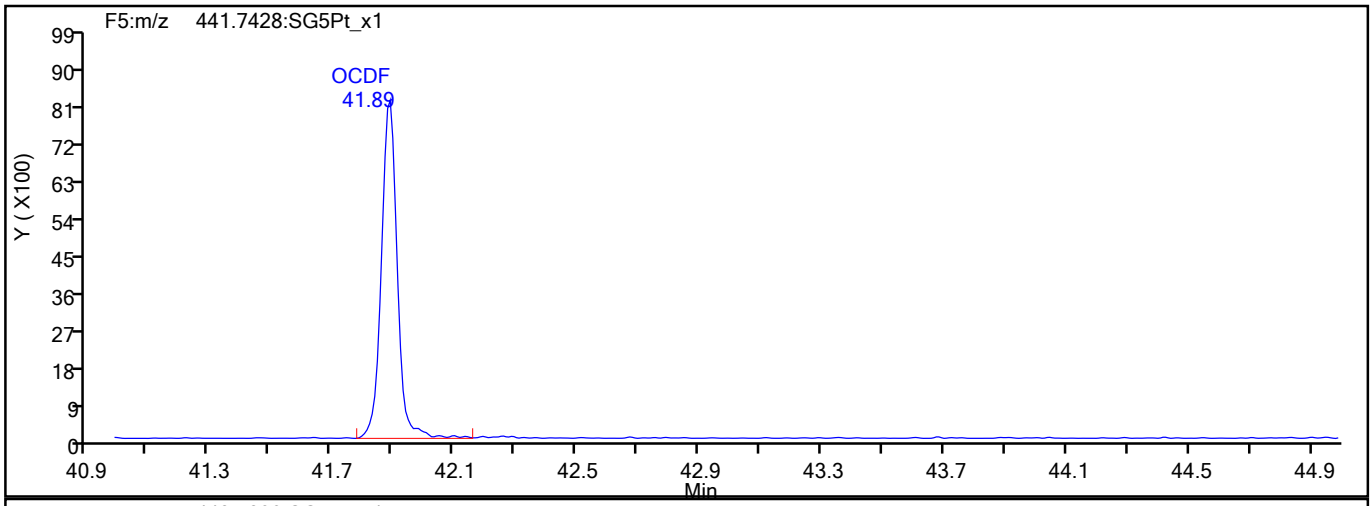

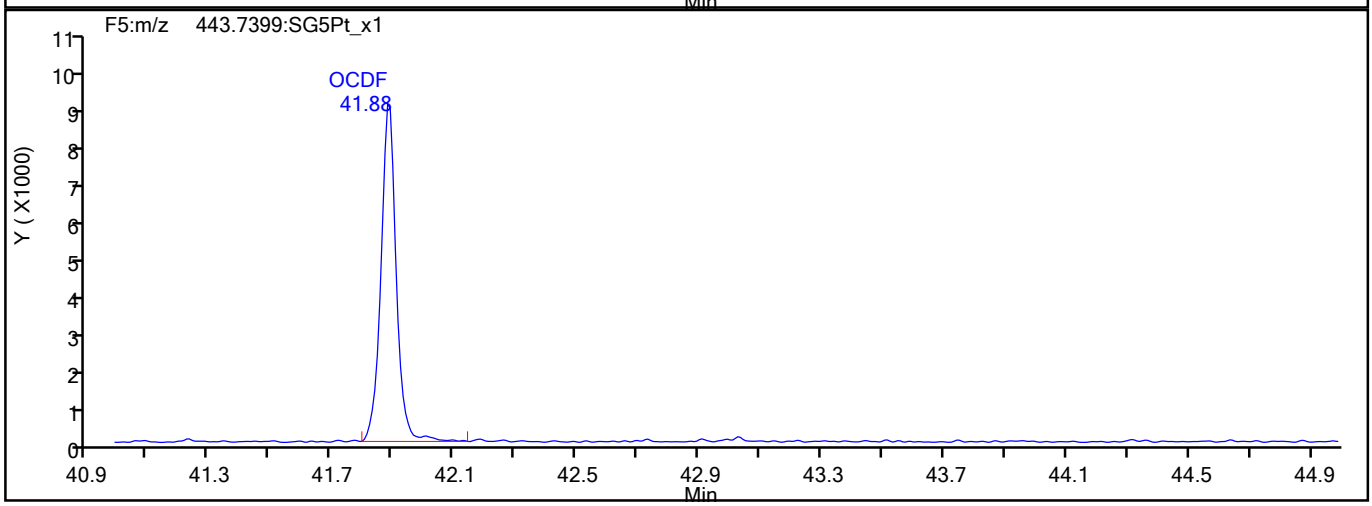

OCDF Interference Mass

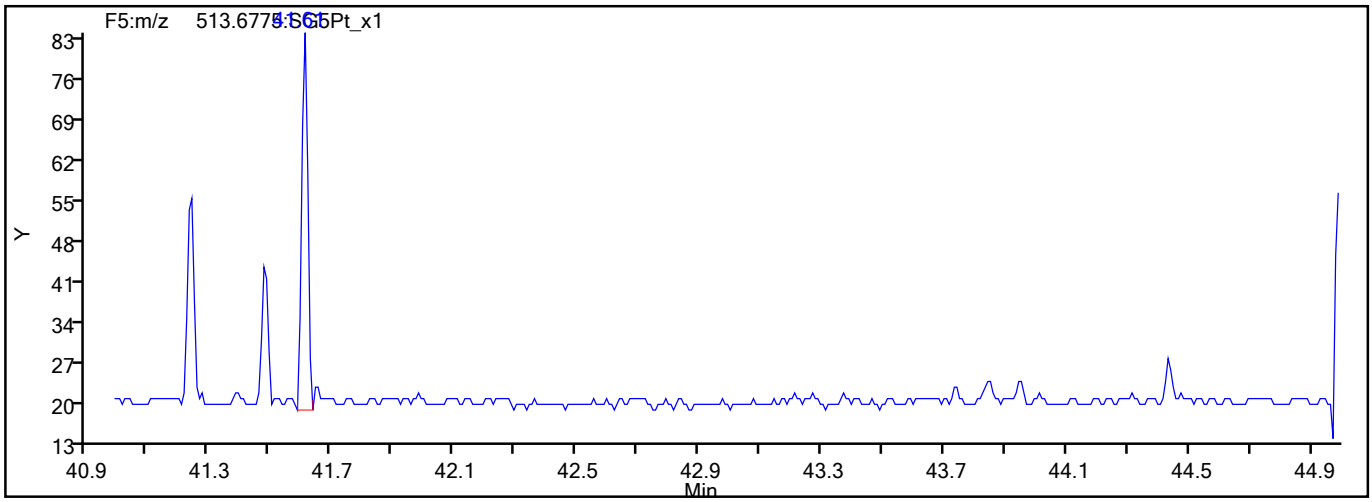

788936

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

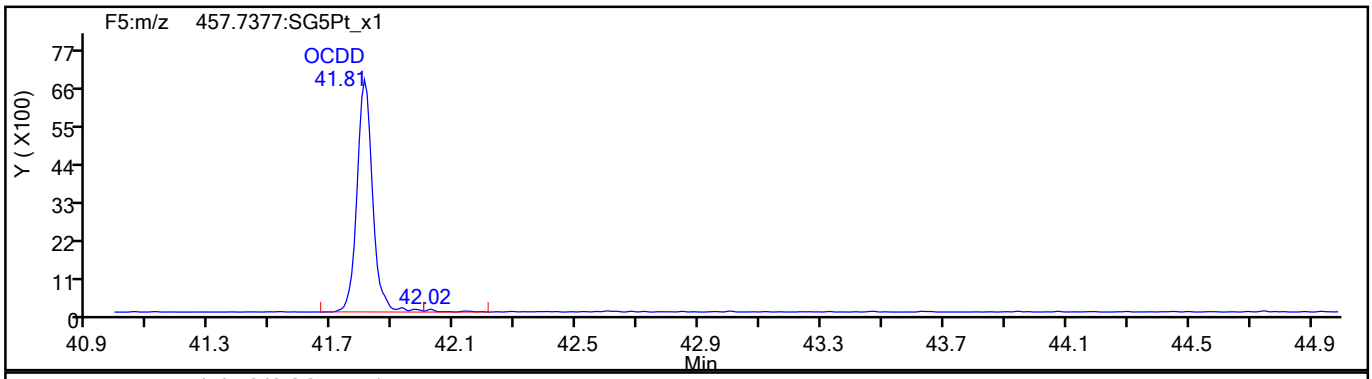

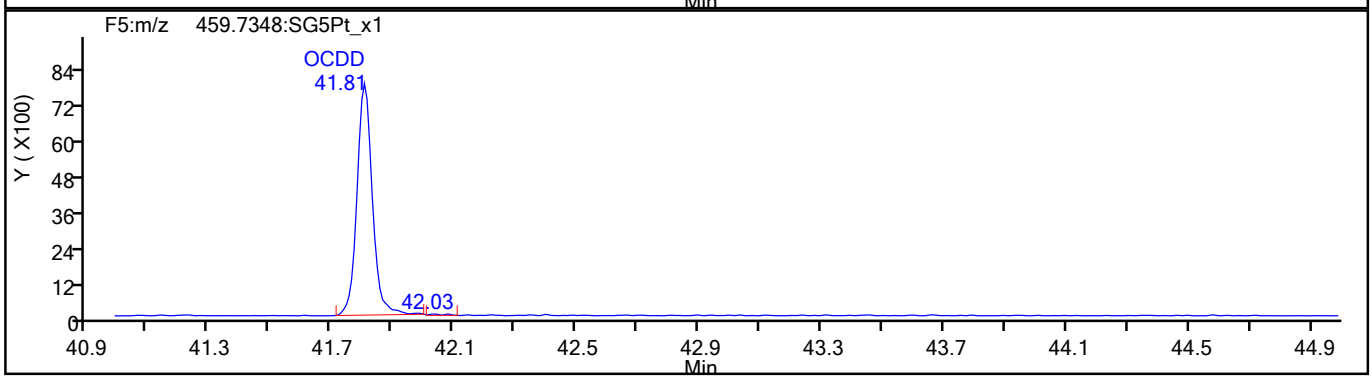

OCDD Standards

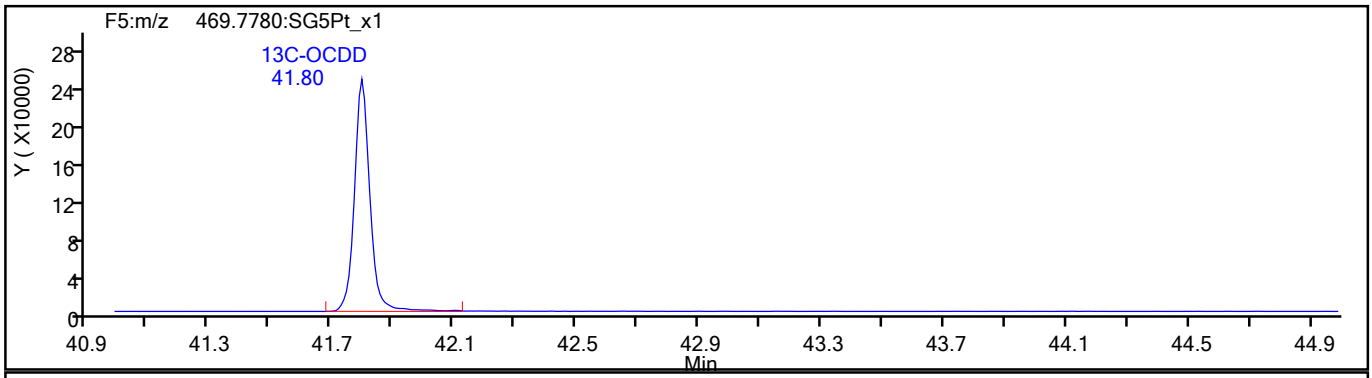

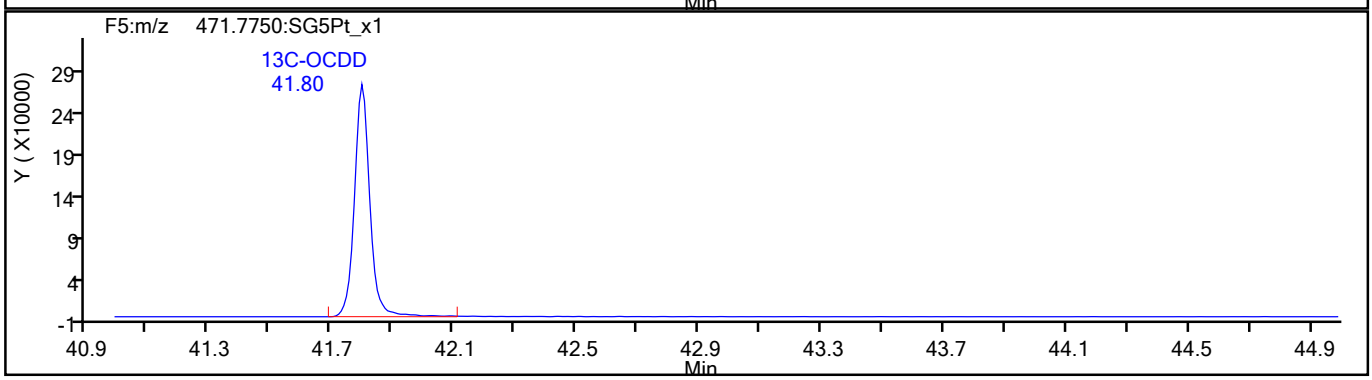

788937

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

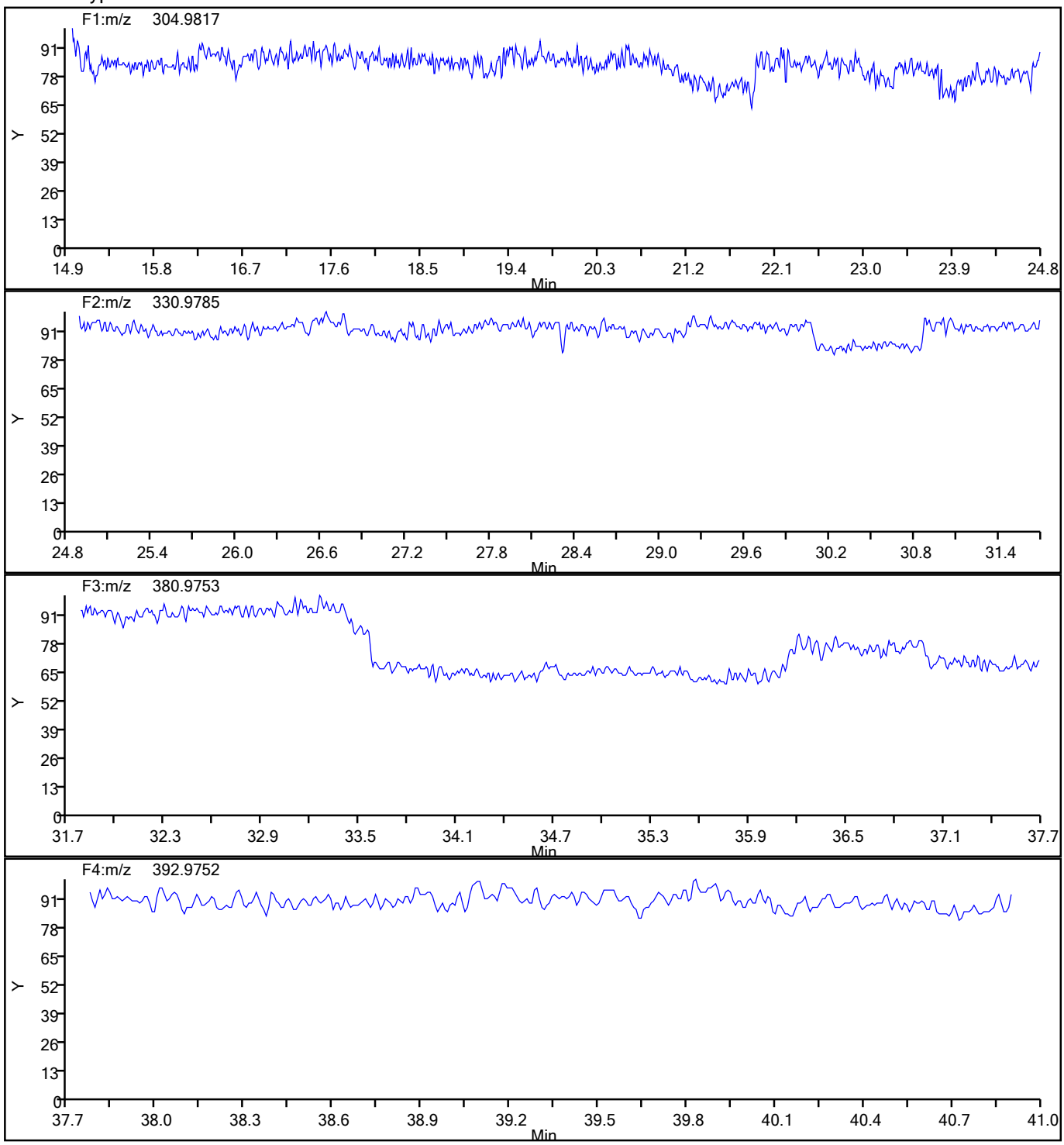

788938

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

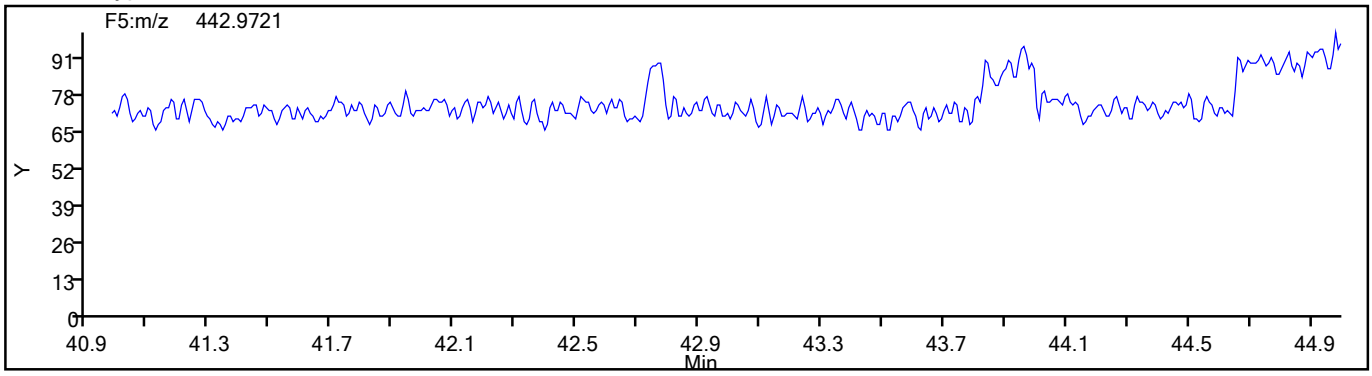

788939

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.534	2045939	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.606	2644389	0.79	1.3459	96.0	96.0	0.2067	0.2067	96.04	
2,3,7,8-TCDF	19.641	50956	0.80	1.0802	1.784	1.784	0.0111	0.0111	89.19	
S Total TCDF					1.784	1.784	0.0111	0.0111		
D 13C-2,3,7,8-TCDD	20.886	1829253	0.79	0.9317	96.0	96.0	0.1871	0.1871	95.97	
$ 37Cl4-2,3,7,8-TCDD	20.929	39241		1.0083	1.902	1.902	0.006151	0.006151	95.11	
2,3,7,8-TCDD	20.929	34971	0.82	1.0753	1.778	1.778	0.0298	0.0298	88.89	
S Total TCDD					1.778	1.778	0.0298	0.0298		
D 13C-1,2,3,7,8-PeCDF	26.541	2234847	1.61	1.1405	95.8	95.8	0.3208	0.3208	95.78	
1,2,3,7,8-PeCDF	26.566	210335	1.55	1.0543	8.927	8.927	0.0325	0.0325	89.27	
D 13C-2,3,4,7,8-PeCDF	27.991	2228025	1.61	1.1253	96.8	96.8	0.3252	0.3252	96.77	
2,3,4,7,8-PeCDF	28.016	200175	1.56	1.0079	8.914	8.914	0.0356	0.0356	89.14	
S Total PeCDF					17.8	17.8	0.0341	0.0341		
D 13C-1,2,3,7,8-PeCDD	28.784	1364144	1.60	0.7165	93.1	93.1	0.1177	0.1177	93.06	
1,2,3,7,8-PeCDD	28.809	129872	1.62	1.0465	9.097	9.097	0.0251	0.0251	90.97	
S Total PeCDD					9.097	9.097	0.0251	0.0251		
D 13C-1,2,3,4,7,8-HxCDF	34.367	1545033	0.52	0.9648	90.2	90.2	0.3810	0.3810	90.23	
1,2,3,4,7,8-HxCDF	34.384	155611	1.20	1.1474	8.778	8.778	0.0522	0.0522	87.78	
D 13C-1,2,3,6,7,8-HxCDF	34.544	1692336	0.52	1.0708	89.1	89.1	0.3433	0.3433	89.05	
1,2,3,6,7,8-HxCDF	34.569	185321	1.24	1.2178	8.992	8.992	0.0483	0.0483	89.92	
D 13C-2,3,4,6,7,8-HxCDF	35.429	1740015	0.54	1.0413	94.2	94.2	0.3530	0.3530	94.16	
2,3,4,6,7,8-HxCDF	35.446	191527	1.25	1.2145	9.063	9.063	0.0405	0.0405	90.63	
D 13C-1,2,3,7,8,9-HxCDF	36.374	1735785	0.52	0.9731	100.5	100.5	0.3778	0.3778	101	
1,2,3,7,8,9-HxCDF	36.390	195077	1.27	1.2401	9.062	9.062	0.0369	0.0369	90.62	
S Total HxCDF					35.9	35.9	0.0445	0.0445		
* 13C-1,2,3,7,8,9-HxCDD	36.180	1774694	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.665	1363103	1.28	0.7587	101.2	101.2	0.1971	0.1971	101	
1,2,3,4,7,8-HxCDD	35.682	132244	1.27	1.0608	9.146	9.146	0.0258	0.0258	91.46	
D 13C-1,2,3,6,7,8-HxCDD	35.792	1558668	1.27	0.8593	102.2	102.2	0.1740	0.1740	102	
1,2,3,6,7,8-HxCDD	35.809	138142	1.21	0.9933	8.922	8.922	0.0262	0.0262	89.22	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.196	139741	1.27	1.1094	8.622	8.622	0.0240	0.0240	86.22	
S Total HxCDD					26.7	26.7	0.0253	0.0253		
D 13C-1,2,3,4,6,7,8-HpCDF	38.291	1272526	0.47	0.7359	97.4	97.4	0.3733	0.3733	97.43	
1,2,3,4,6,7,8-HpCDF	38.308	164108	1.06	1.4421	8.943	8.943	0.0378	0.0378	89.43	
D 13C-1,2,3,4,7,8,9-HpCDF	39.589	1175351	0.46	0.6854	96.6	96.6	0.4008	0.4008	96.63	
1,2,3,4,7,8,9-HpCDF	39.598	138335	1.04	1.3092	8.990	8.990	0.0420	0.0420	89.90	
S Total HpCDF					17.9	17.9	0.0399	0.0399		
D 13C-1,2,3,4,6,7,8-HpCDD	39.286	1162117	1.05	0.6745	97.1	97.1	0.2422	0.2422	97.08	
1,2,3,4,6,7,8-HpCDD	39.294	110761	1.07	1.0503	9.075	9.075	0.0319	0.0319	90.75	
S Total HpCDD					9.075	9.075	0.0319	0.0319		
D 13C-OCDD	41.775	1833139	0.91	0.5446	189.7	189.7	0.2857	0.2857	94.83	
OCDF	41.868	217473	0.91	1.3168	18.0	18.0	0.0452	0.0452	90.09	
OCDD	41.784	182470	0.91	1.0620	18.7	18.7	0.0368	0.0368	93.73	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.534	20.547	-1		908781	140893	128	320	1101		
333.9338	20.542	20.547	0		1137158	181590	97	242	1872	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.606	19.616	-1	0.955	1167638	192853	232	580	831		
317.9389	19.615	19.616	0	0.955	1476751	240851	127	317	1896	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.641	19.646	0	1.002	22722	3787	5	12	757		
305.8987	19.632	19.646	-1	1.001	28234	4422	16	40	276	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.886	20.910	-1	1.017	809102	120100	128	320	938		
333.9338	20.895	20.910	-1	1.018	1020151	151021	97	242	1557	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.929	20.935	0	1.019	39241	6110	8	20	764		
2,3,7,8-TCDD											
319.8965	20.929	20.939	-1	1.002	15743	2433	27	67	90		
321.8936	20.929	20.939	-1	1.002	19228	3031	8	20	379	0.82(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.541	26.560	-1	1.293	1380136	237735	280	700	849		
353.8970	26.549	26.560	-1	1.293	854711	147619	192	480	769	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.566	26.584	-1	1.001	127910	22847	25	62	914		
341.8567	26.566	26.584	-1	1.001	82425	14553	28	70	520	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	27.991	28.014	-1	1.363	1373543	227507	280	700	813		
353.8970	27.991	28.014	-1	1.363	854482	140253	192	480	730	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.016	28.039	-1	1.001	121955	19987	25	62	799		
341.8567	28.016	28.039	-1	1.001	78220	12878	28	70	460	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.784	28.801	-1	1.402	839338	134094	55	137	2438		
369.8919	28.775	28.801	-2	1.401	524806	82953	54	135	1536	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.809	28.828	-1	1.001	80255	12276	18	45	682		
357.8516	28.809	28.828	-1	1.001	49617	7332	5	12	1466	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.367	34.384	-1	0.950	530041	107506	195	487	551		
385.8610	34.367	34.384	-1	0.950	1014992	209541	410	1025	511	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.384	34.405	-1	1.000	84954	17499	46	115	380		
375.8178	34.384	34.405	-1	1.000	70657	14926	30	75	498	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.544	34.562	-1	0.955	582468	111482	195	487	572		
385.8610	34.544	34.562	-1	0.955	1109868	211659	410	1025	516	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.569	34.582	-1	1.001	102510	19443	46	115	423		
375.8178	34.561	34.582	-1	1.000	82811	15785	30	75	526	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.429	35.444	-1	0.979	608469	136128	195	487	698		
385.8610	35.429	35.444	-1	0.979	1131546	250431	410	1025	611	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.446	35.461	-1	1.000	106373	23069	46	115	502		
375.8178	35.446	35.461	-1	1.000	85154	19256	30	75	642	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.374	36.388	-1	1.005	597532	142559	195	487	731		
385.8610	36.374	36.388	-1	1.005	1138253	273050	410	1025	666	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.390	36.402	-1	1.000	109103	26446	46	115	575		
375.8178	36.390	36.402	-1	1.000	85974	20436	30	75	681	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.180	36.192	-1		992912	228100	138	345	1653		
403.8529	36.180	36.192	-1		781782	183211	108	270	1696	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.665	35.680	-1	0.986	765726	187664	138	345	1360		
403.8529	35.665	35.680	-1	0.986	597377	148078	108	270	1371	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.682	35.695	-1	1.000	73908	17289	18	45	961		
391.8127	35.682	35.695	-1	1.000	58336	14382	19	47	757	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.792	35.805	-1	0.989	870562	199612	138	345	1446		
403.8529	35.792	35.805	-1	0.989	688106	154356	108	270	1429	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.809	35.820	-1	1.000	75558	17193	18	45	955		
391.8127	35.809	35.820	-1	1.000	62584	14006	19	47	737	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.196	36.208	-1	1.015	78157	18353	18	45	1020		
391.8127	36.196	36.208	-1	1.015	61584	14405	19	47	758	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.291	38.305	-1	1.058	404086	116332	150	375	776		
419.8220	38.291	38.305	-1	1.058	868440	254106	302	755	841	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.308	38.317	-1	1.000	84325	24268	44	110	552		
409.7788	38.299	38.317	-1	1.000	79783	22737	37	92	615	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.589	39.600	-1	1.094	368476	114509	150	375	763		
419.8220	39.589	39.600	-1	1.094	806875	252758	302	755	837	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	70636	21558	44	110	490		
409.7788	39.598	39.608	-1	1.000	67699	21216	37	92	573	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.286	39.293	0	1.086	594894	185269	137	342	1352		
437.8140	39.286	39.293	0	1.086	567223	172933	132	330	1310	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.294	39.301	0	1.000	57275	17734	30	75	591		
425.7737	39.294	39.301	0	1.000	53486	17016	18	45	945	1.07(0.88-1.20)	
13C-OCDD											
469.7780	41.775	41.785	-1	1.155	873143	243136	128	320	1900		
471.7750	41.775	41.785	-1	1.155	959996	268180	128	320	2095	0.91(0.76-1.02)	
OCDF											
441.7428	41.868	41.875	0	1.002	103359	30074	20	50	1504		
443.7399	41.859	41.875	-1	1.002	114114	32506	41	102	793	0.91(0.76-1.02)	
OCDD											
457.7377	41.784	41.794	-1	1.000	86745	24118	17	42	1419		
459.7348	41.784	41.794	-1	1.000	95725	27065	23	57	1177	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

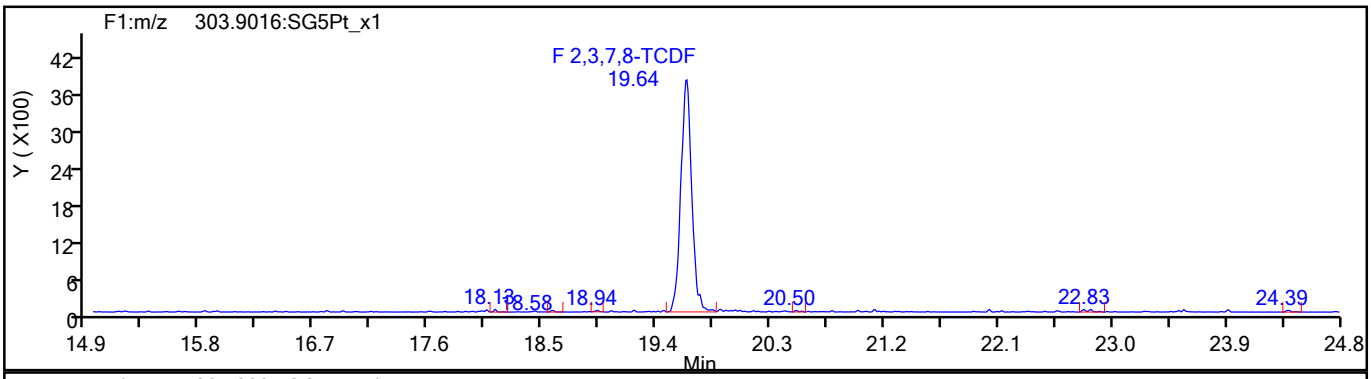

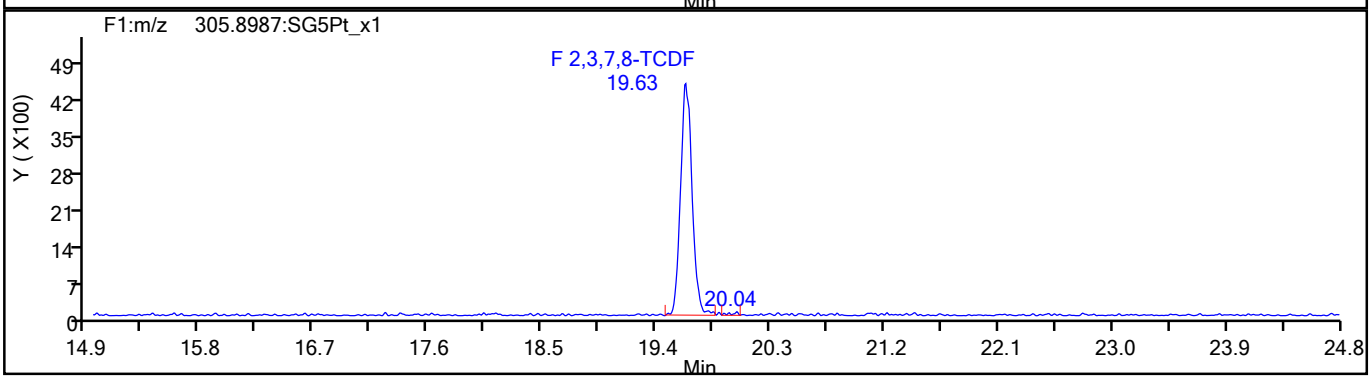

TCDF Standards

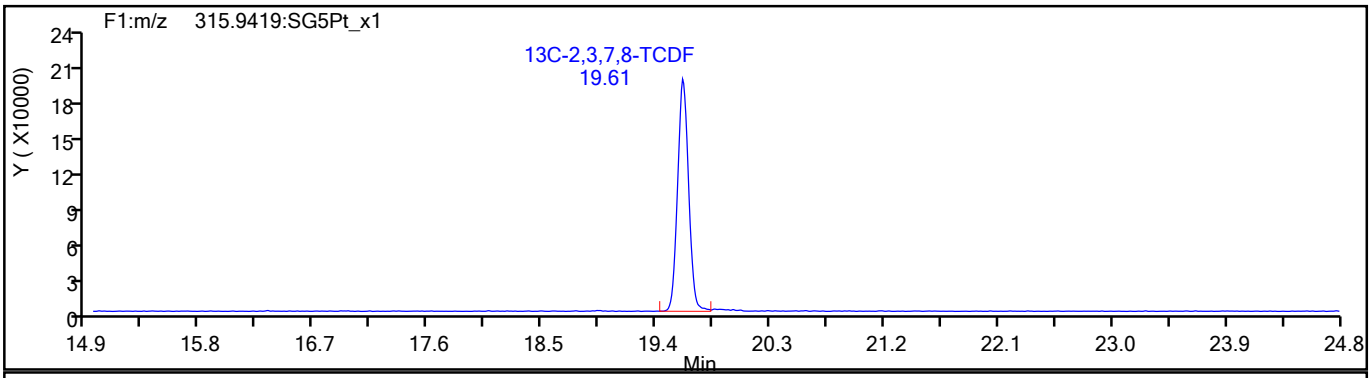

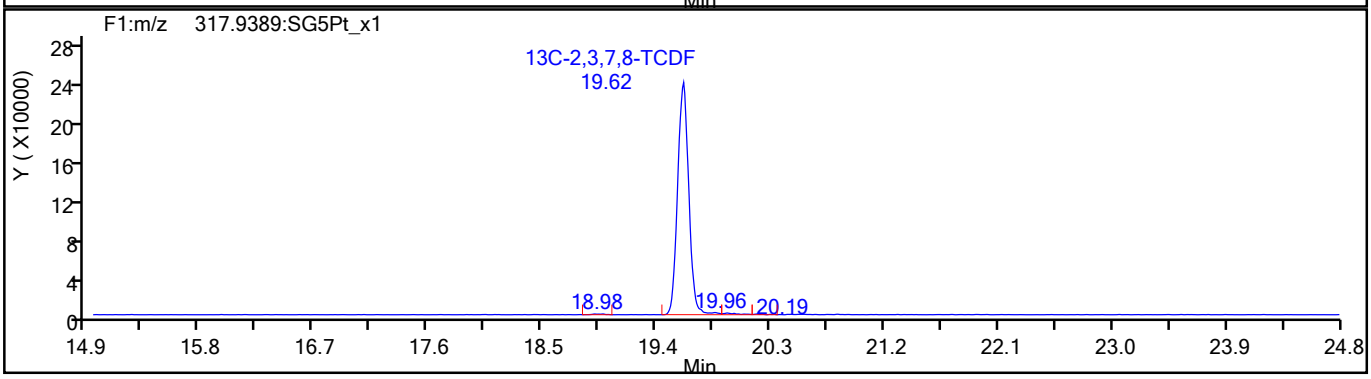

788945

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

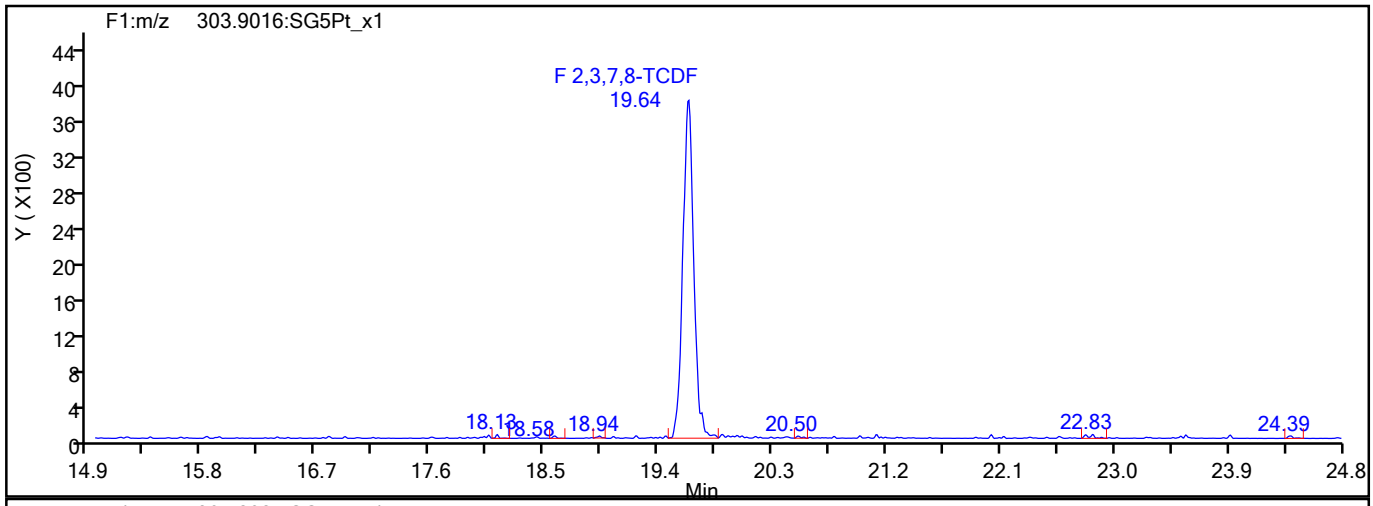

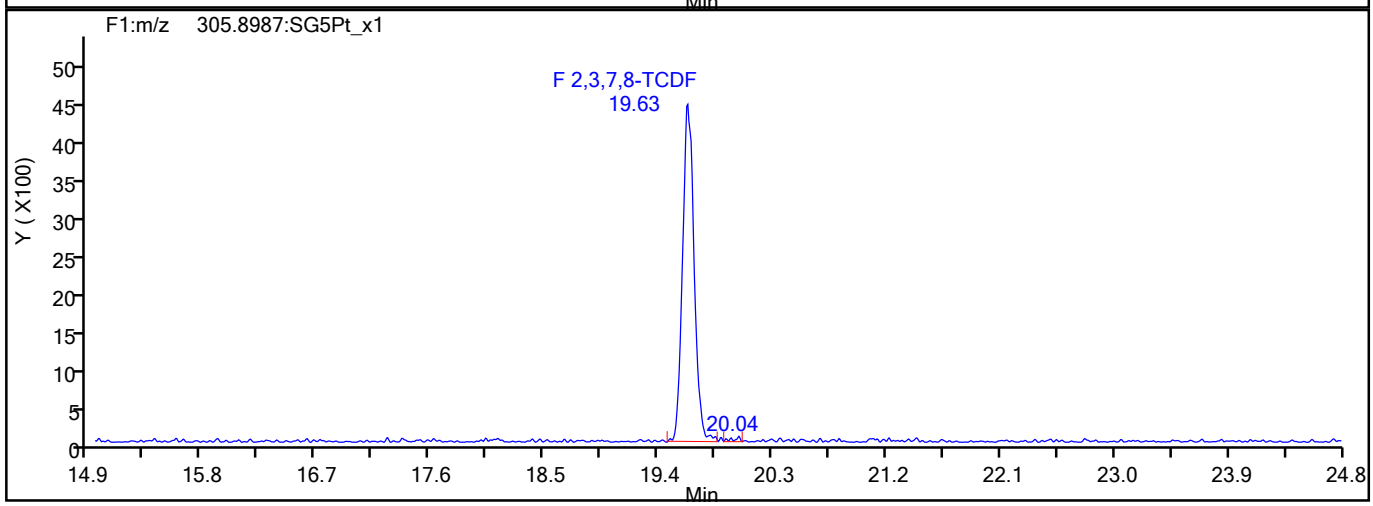

TCDF Interference Mass

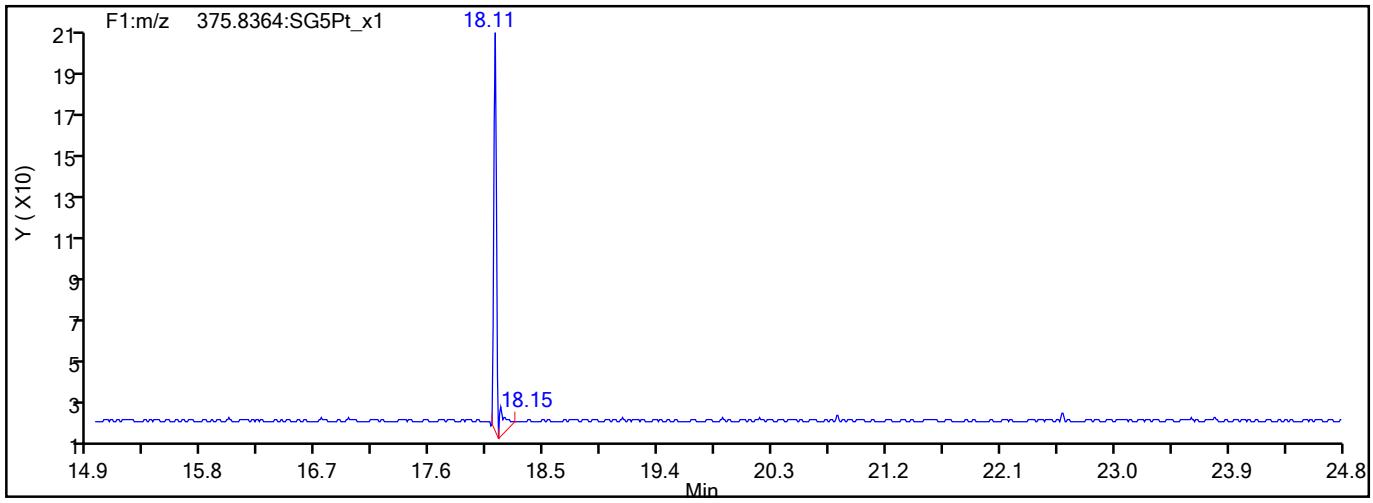

788946

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

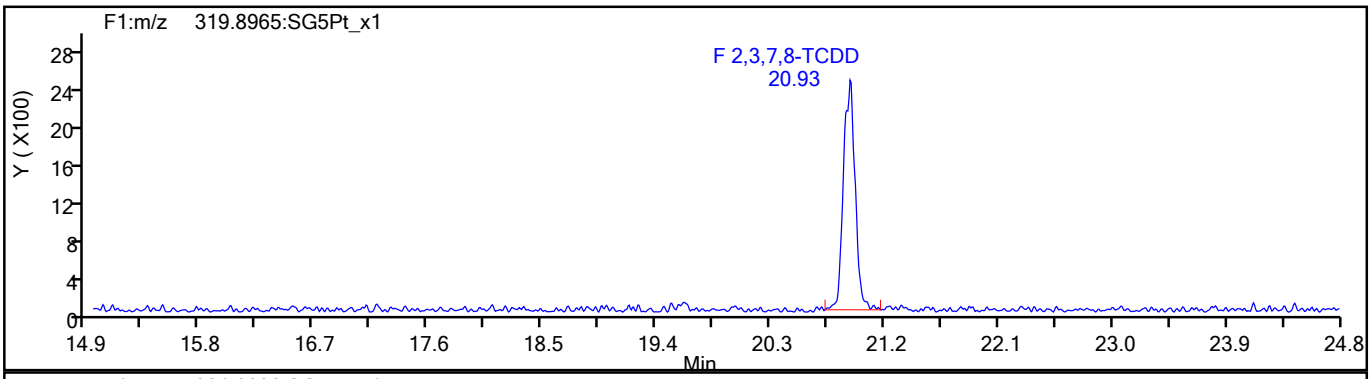

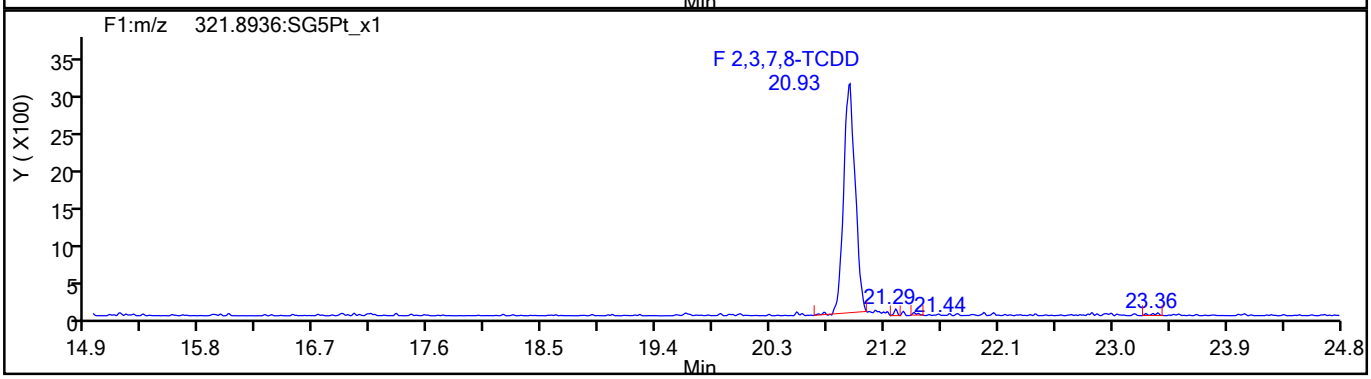

TCDD Standards

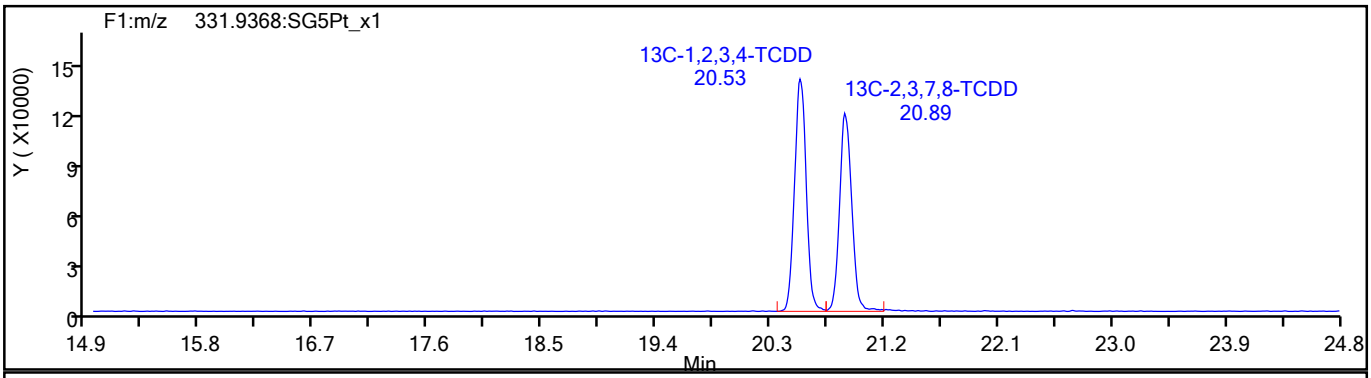

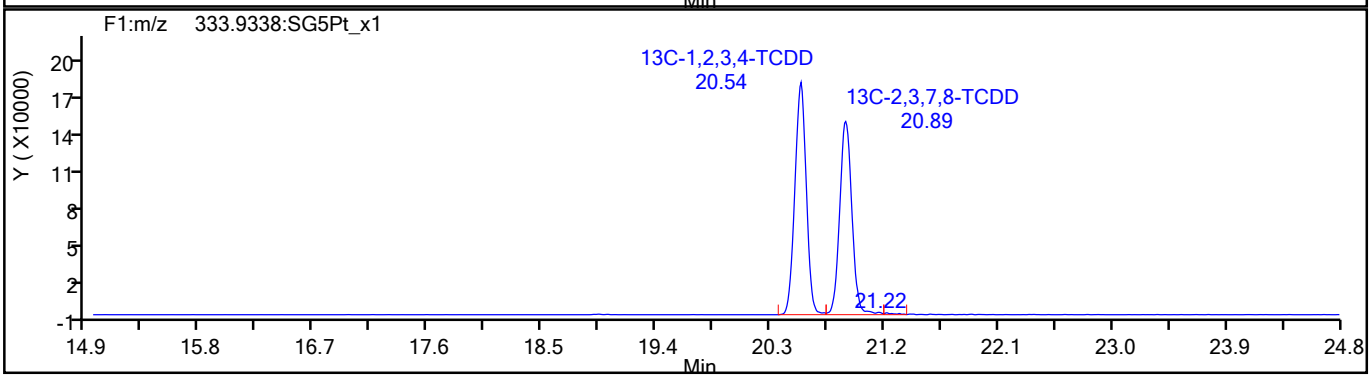

788947

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

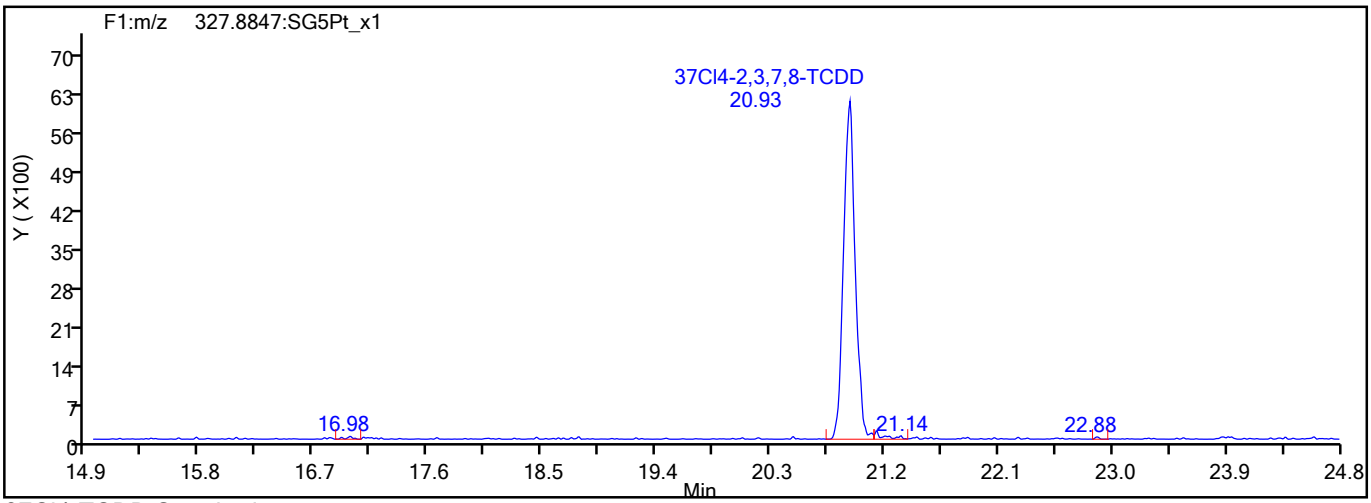

37Cl4-TCDD Standards

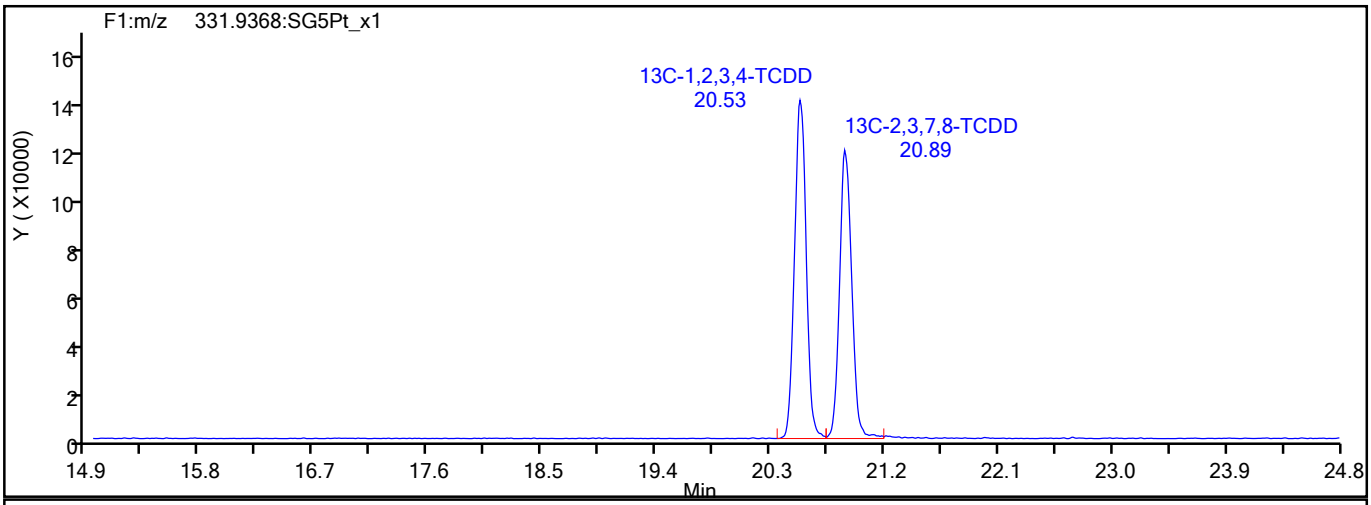

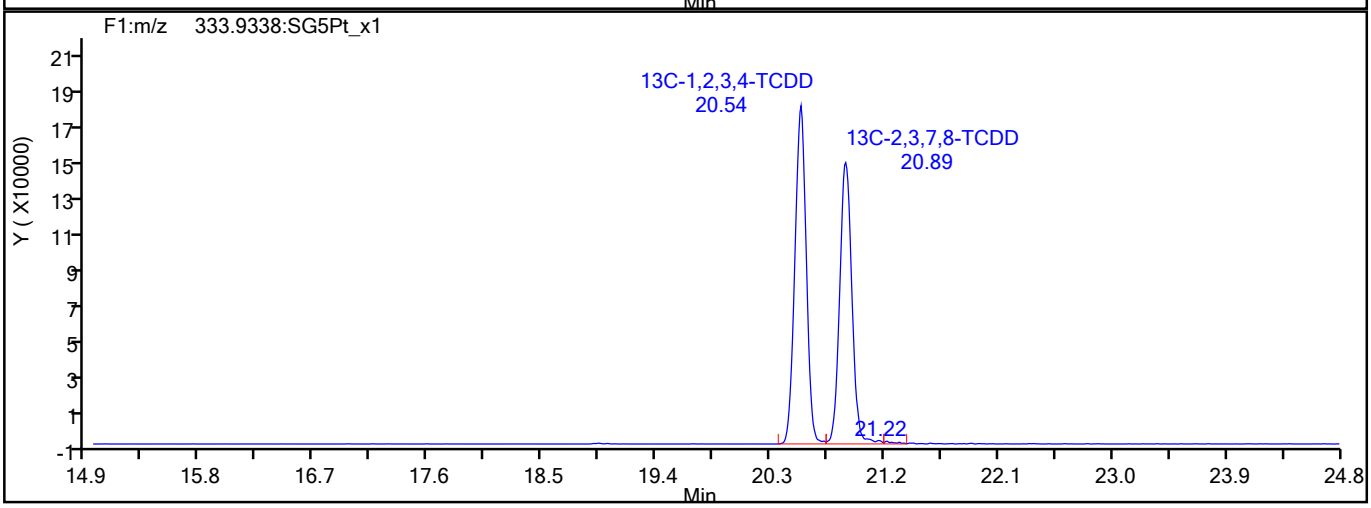

788948

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

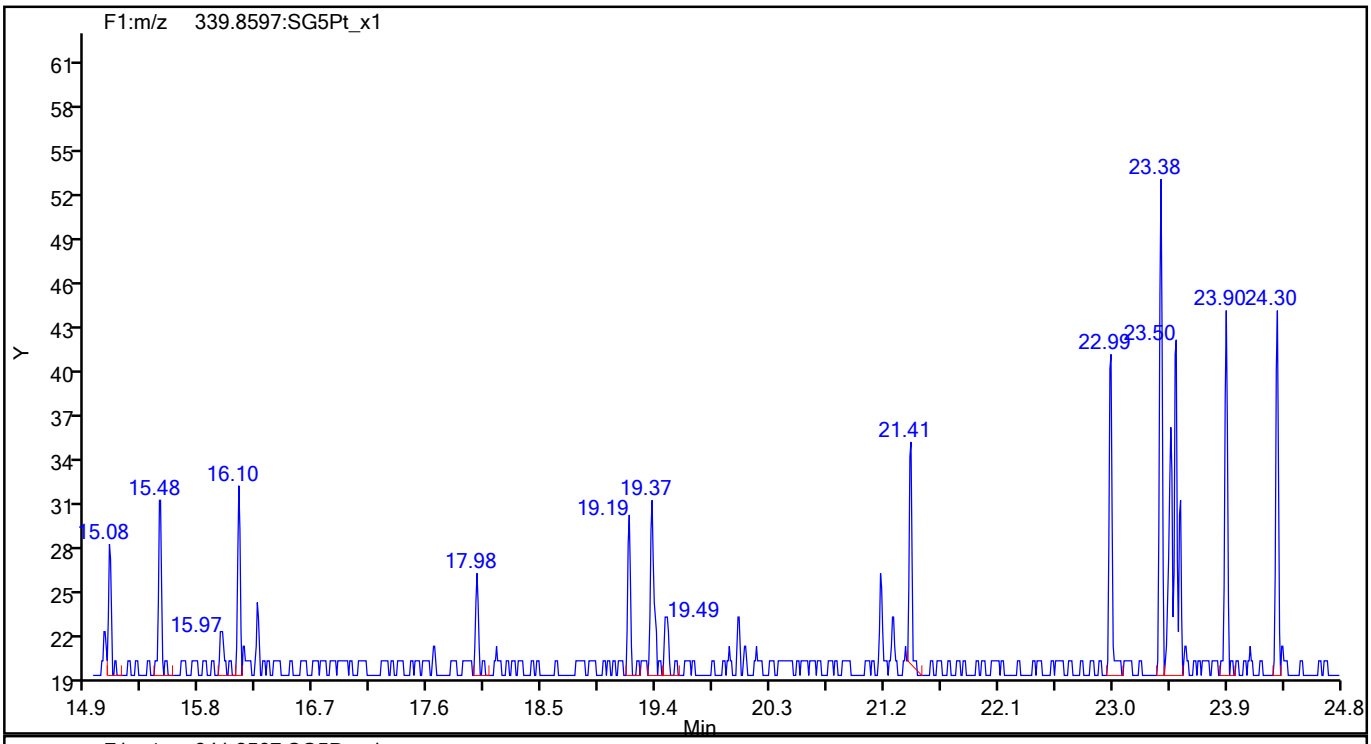

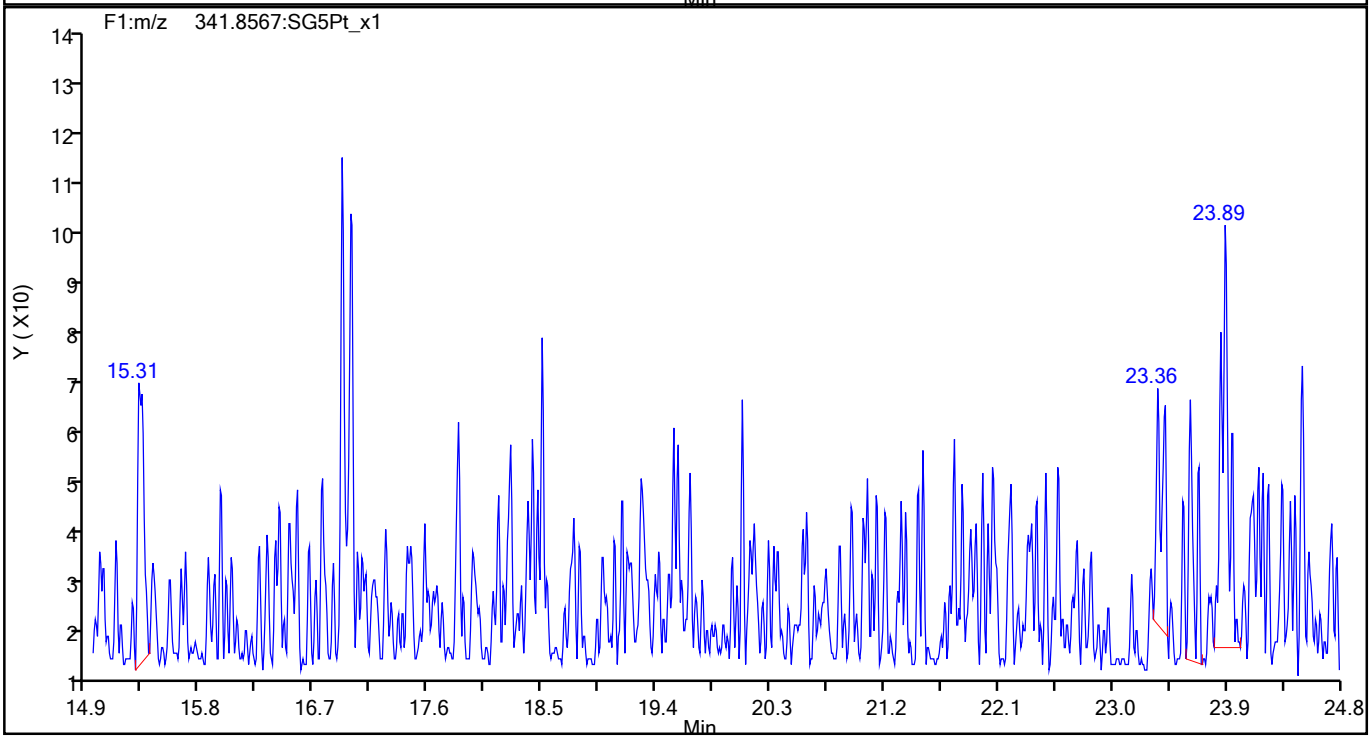

788949

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

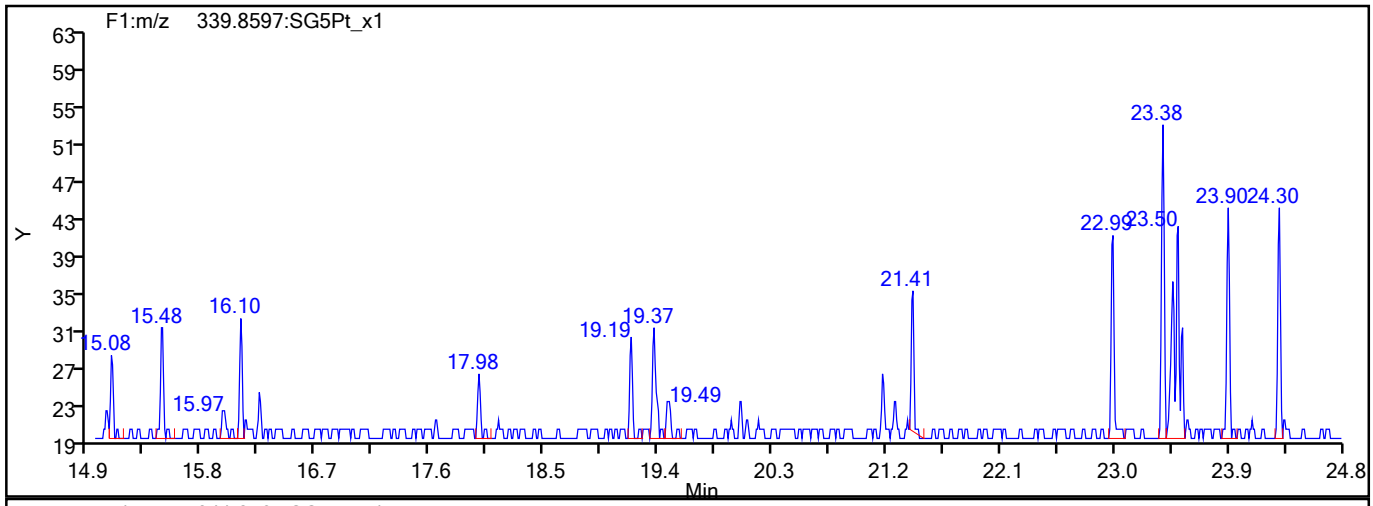

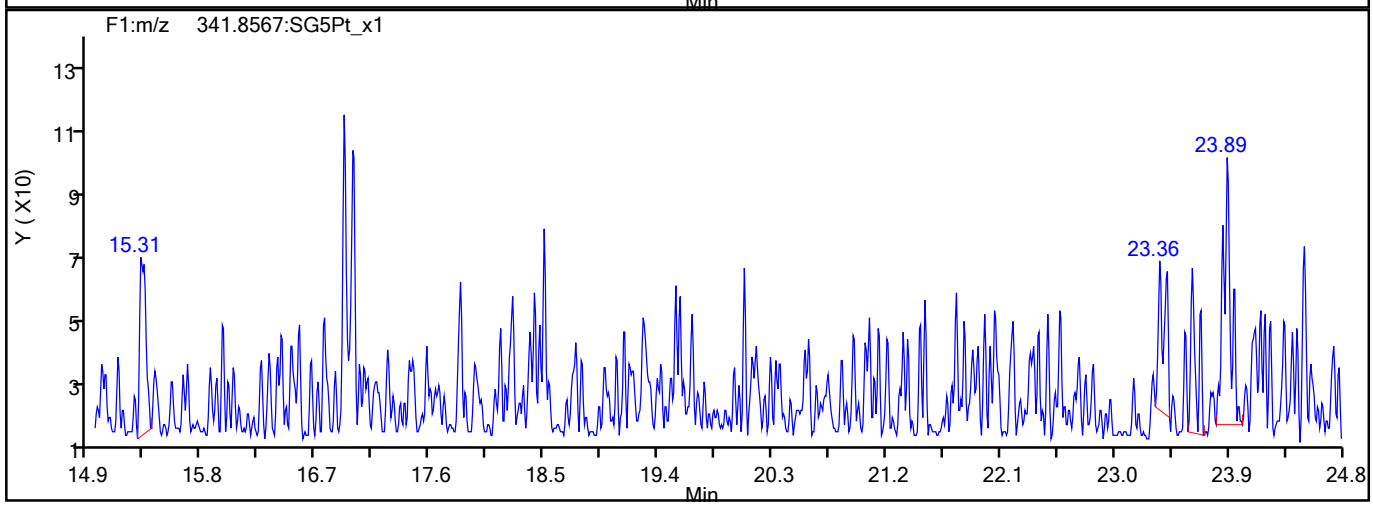

F1 PeCDFs Interference Mass

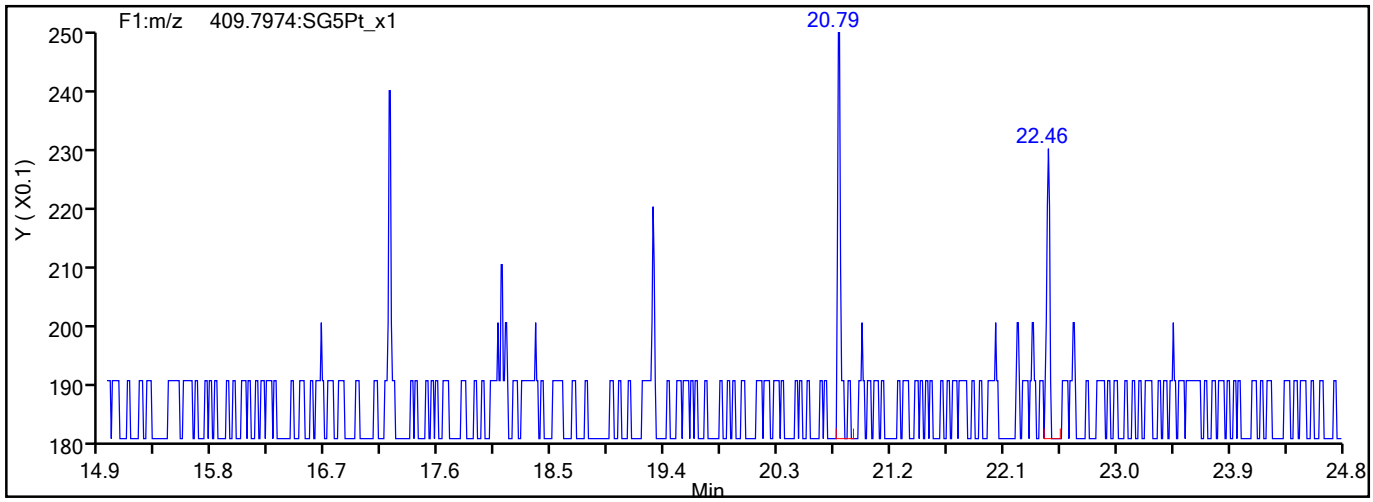

788950

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

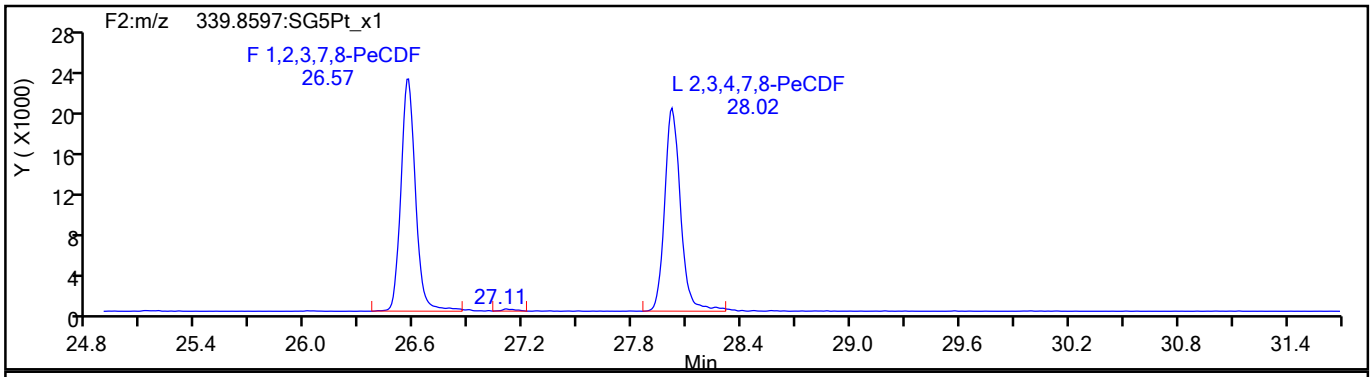

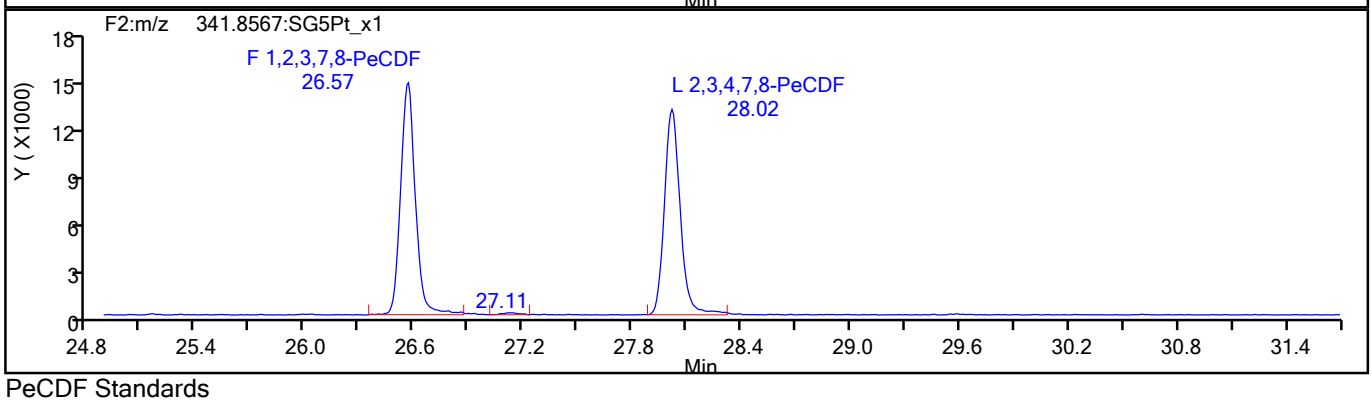

PeCDF Standards

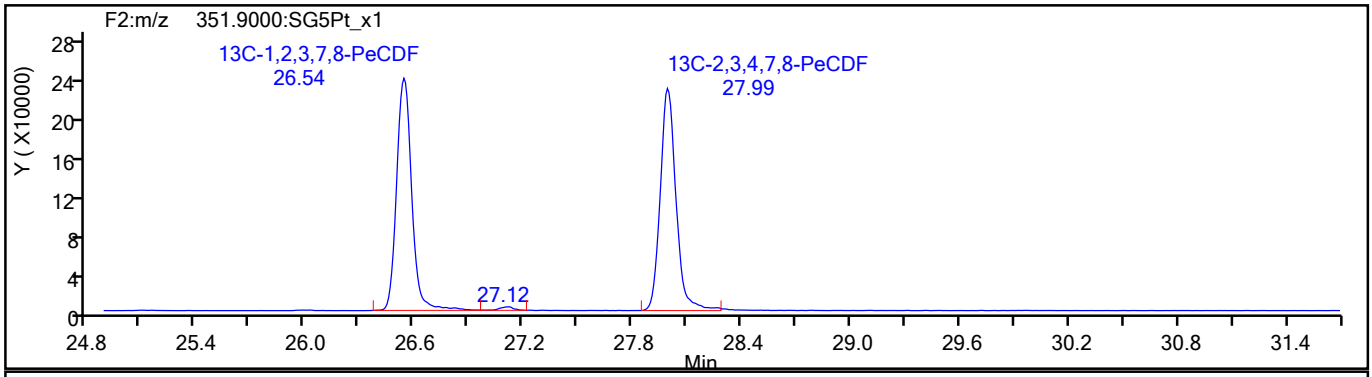

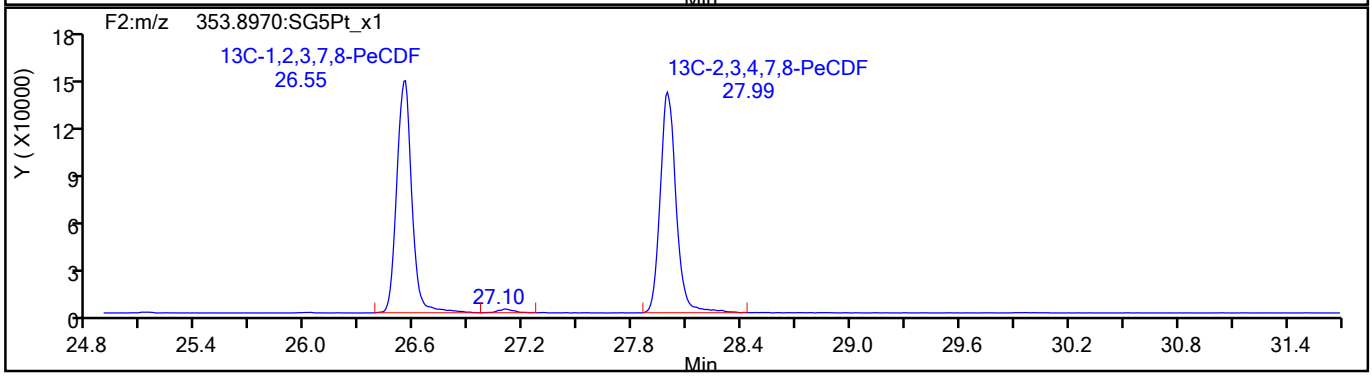

788951

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

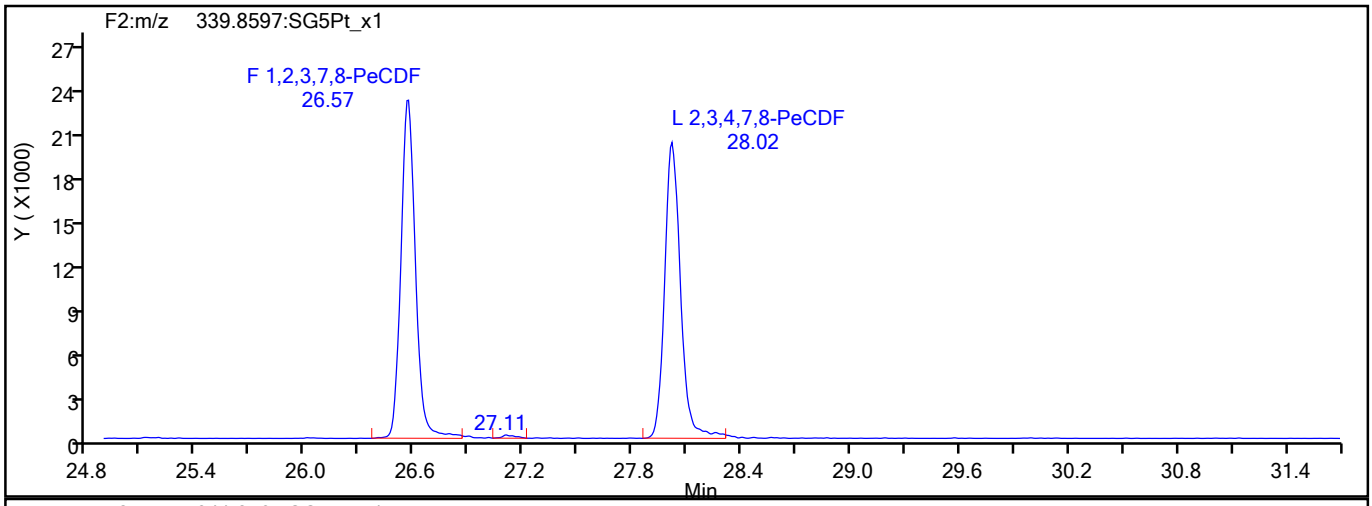

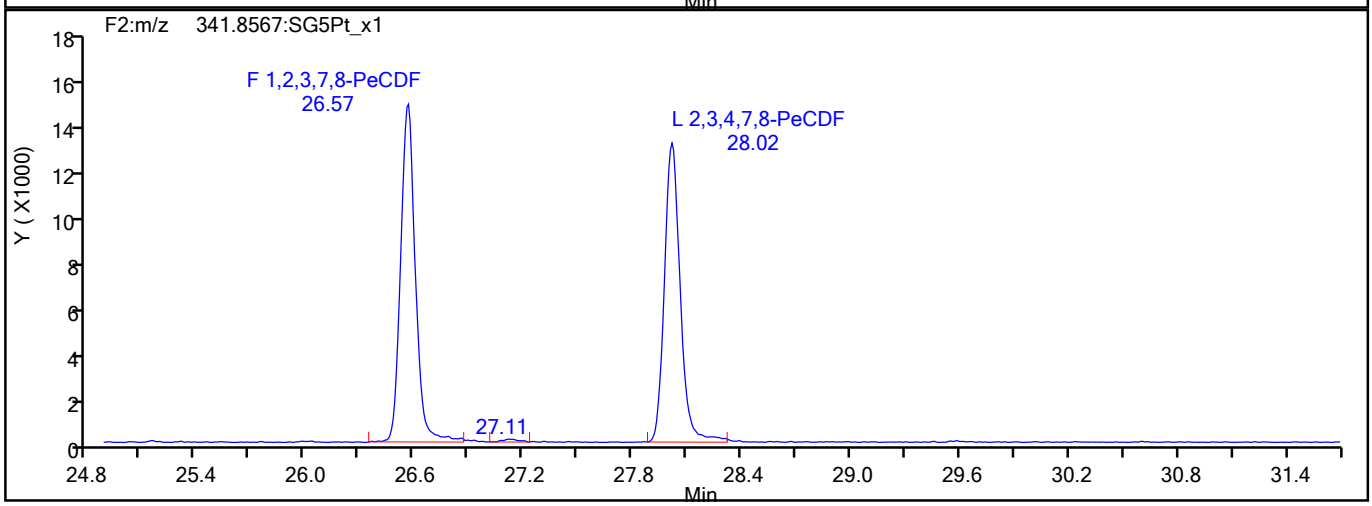

PeCDF Interference Mass

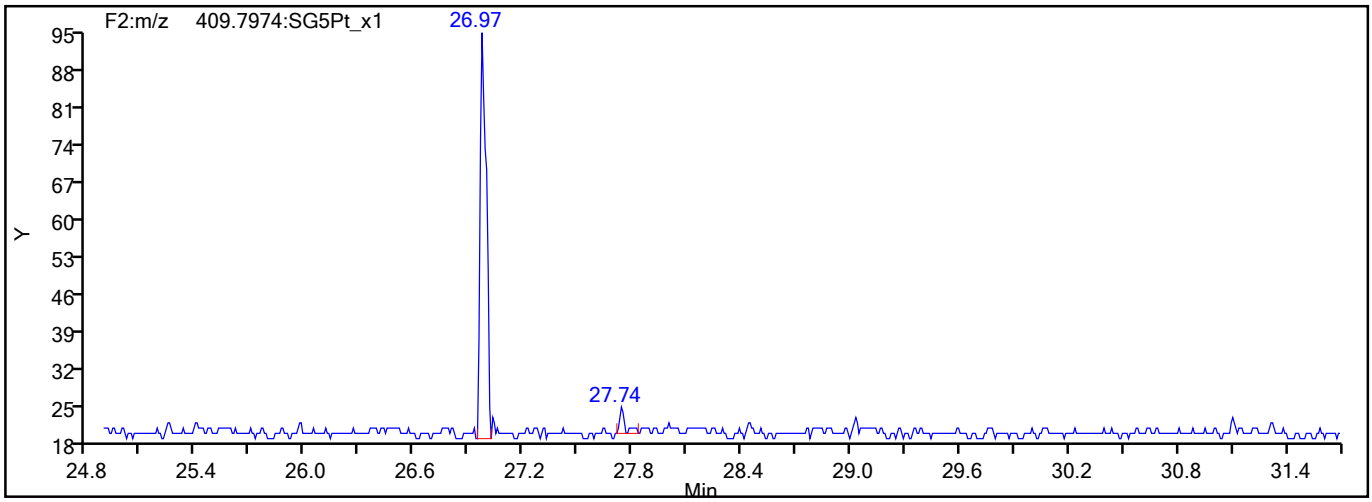

788952

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

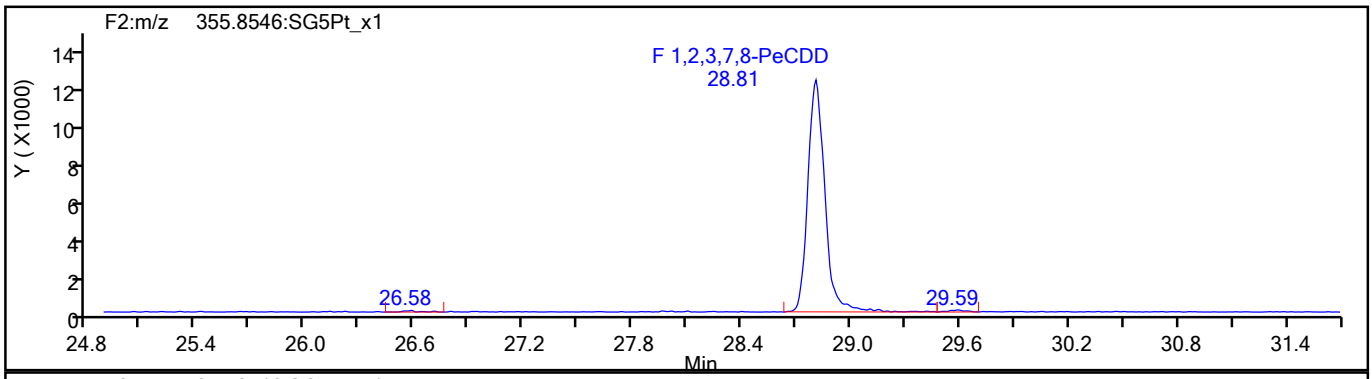

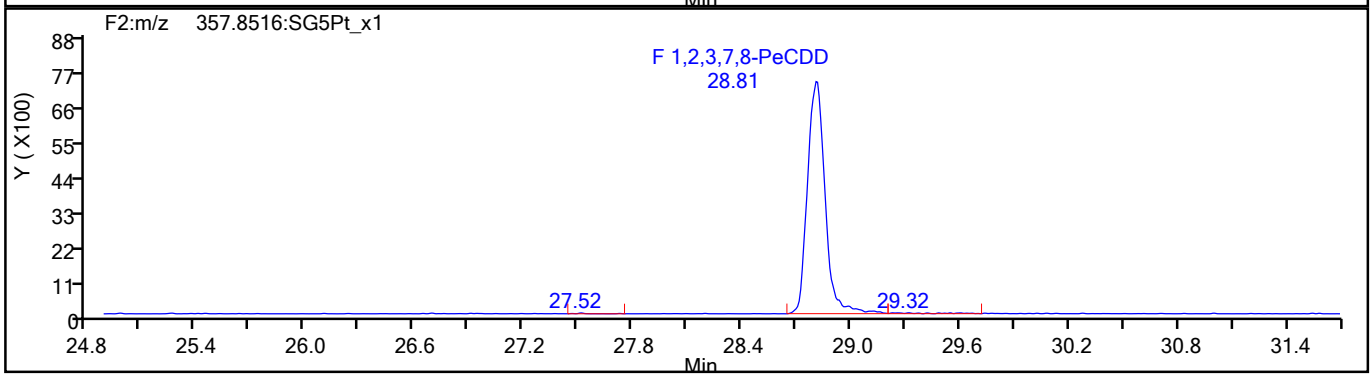

PeCDD Standards

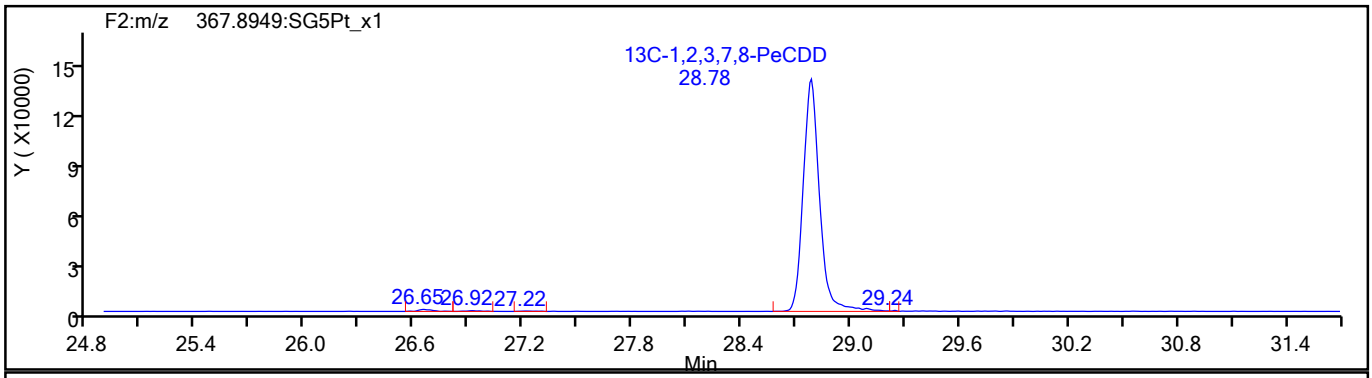

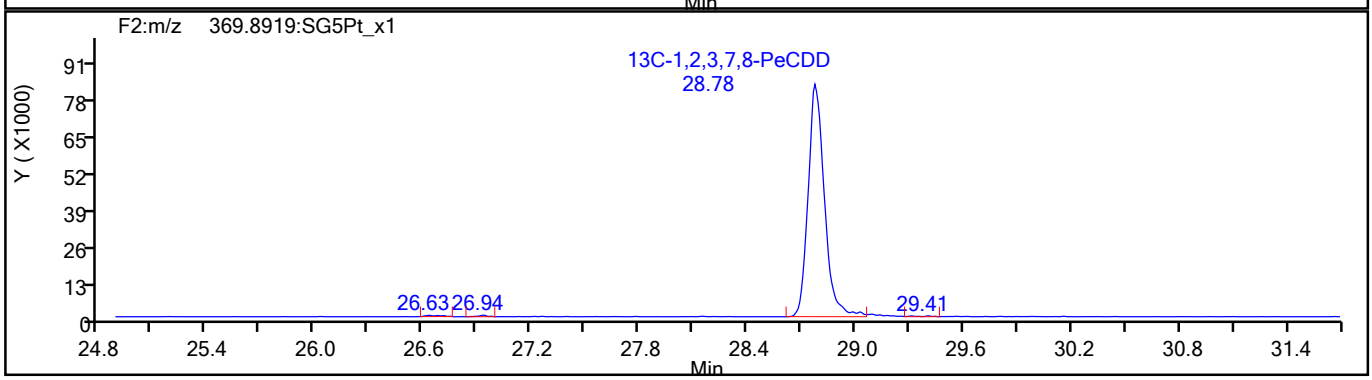

788953

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

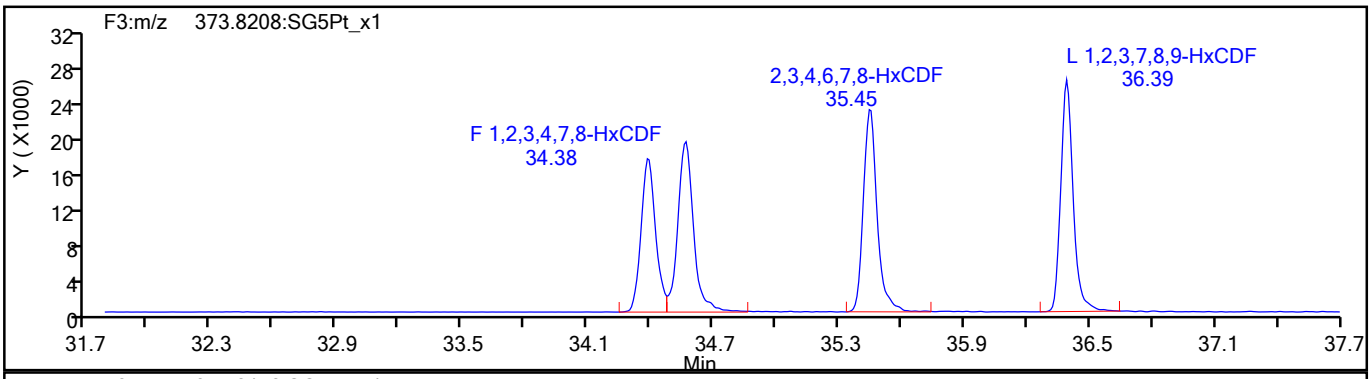

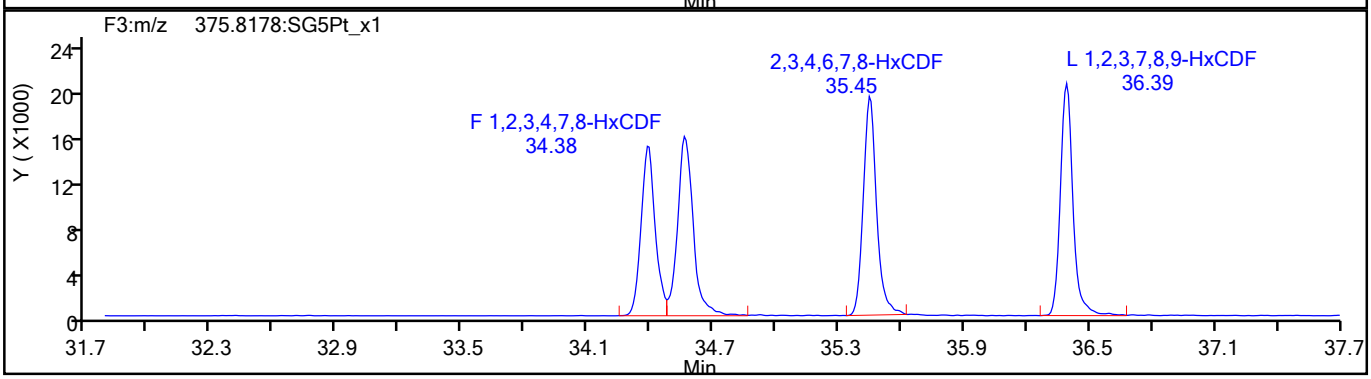

HxCDF Standards

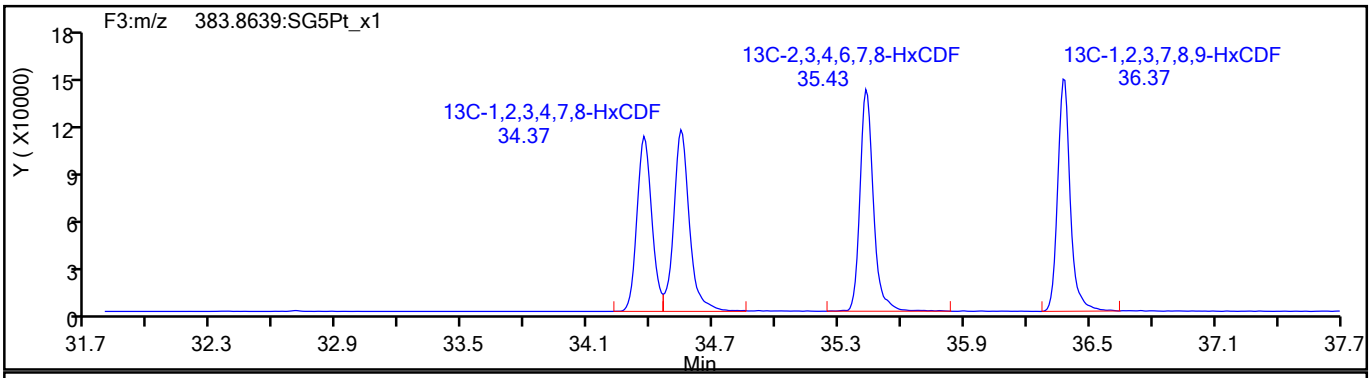

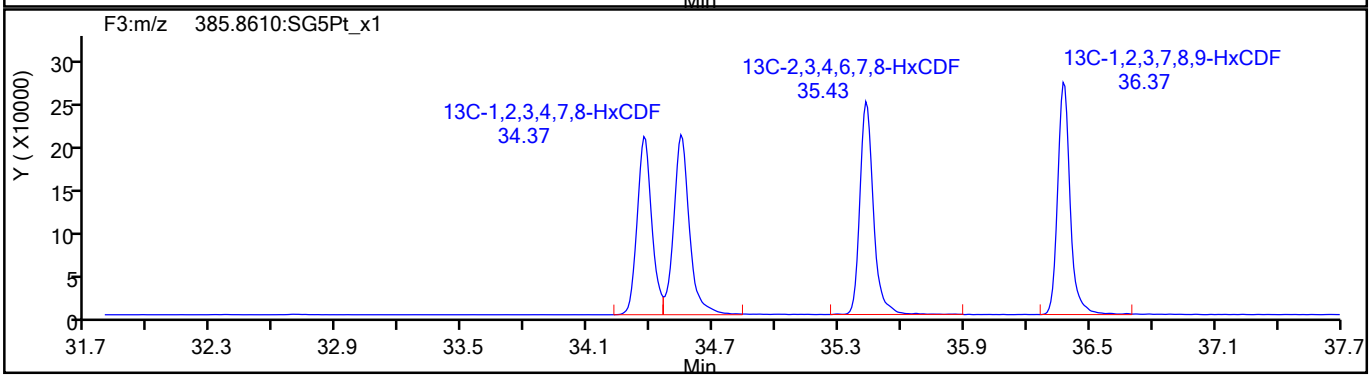

788954

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

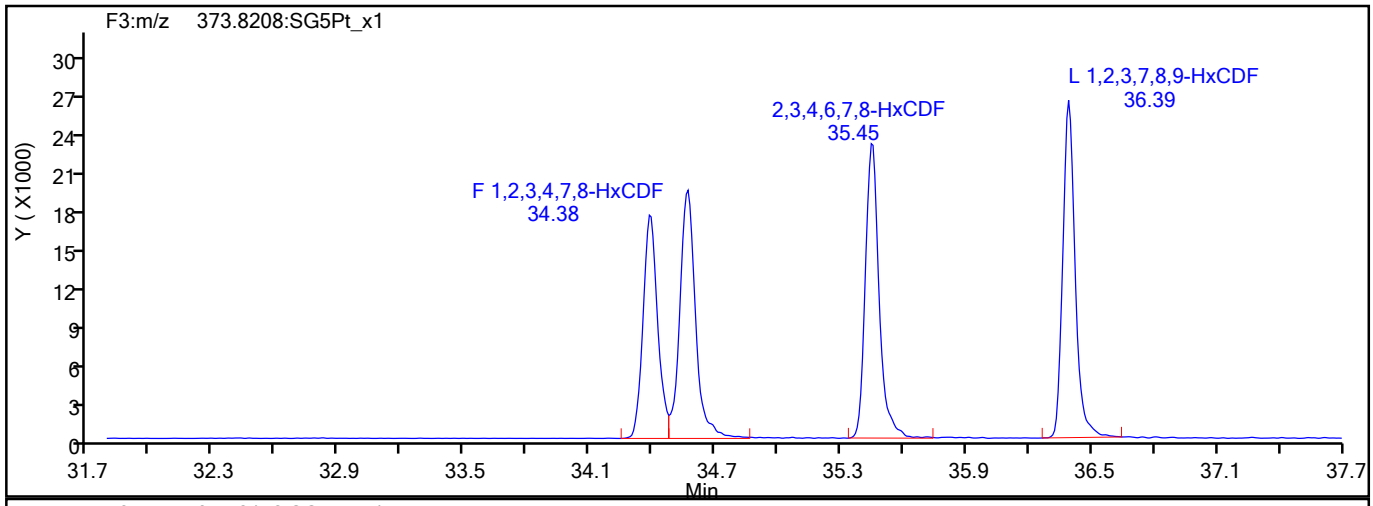

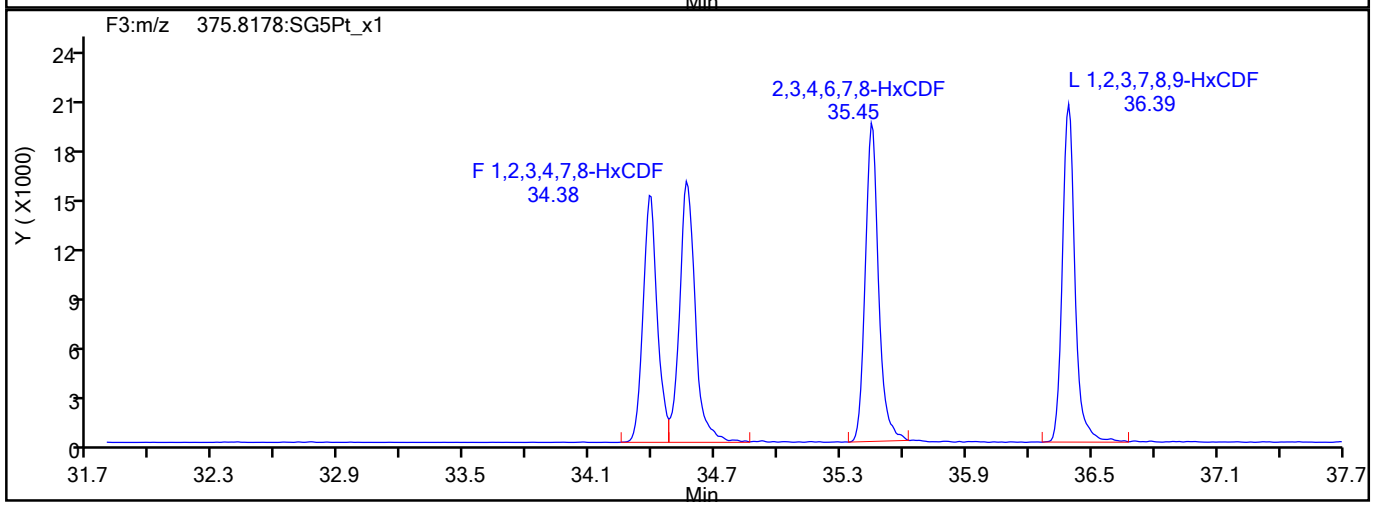

HxCDF Interference Mass

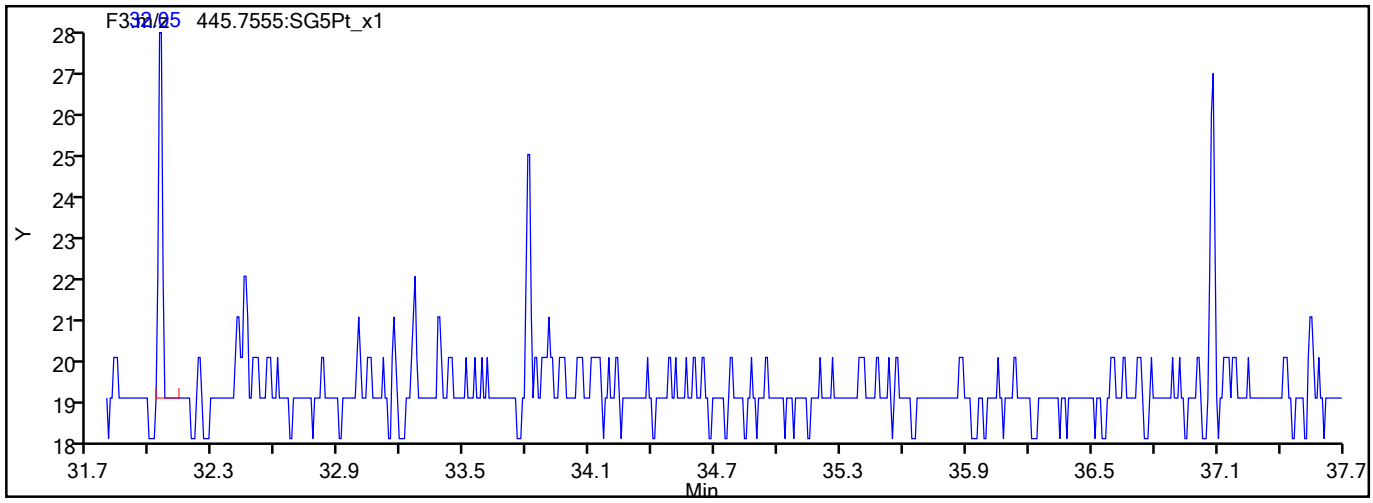

788955

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

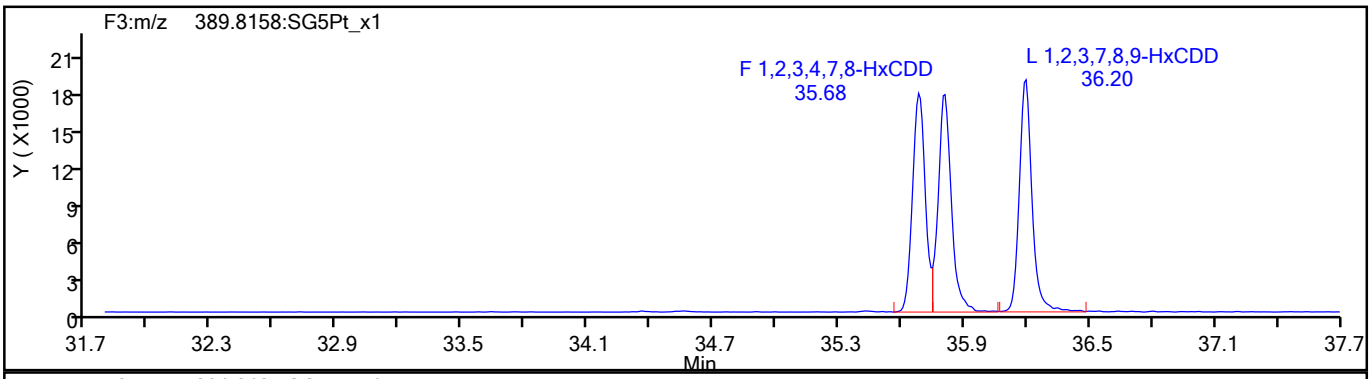

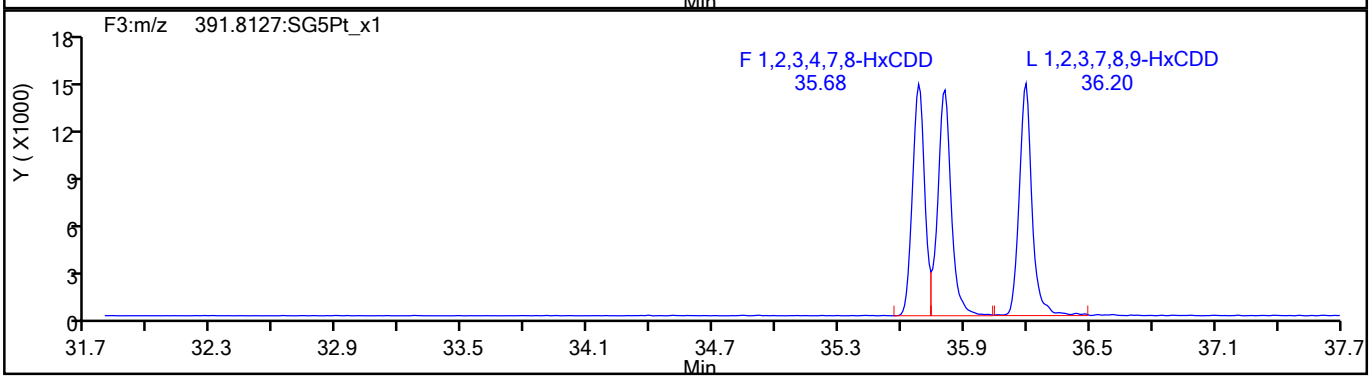

HxCDD Standards

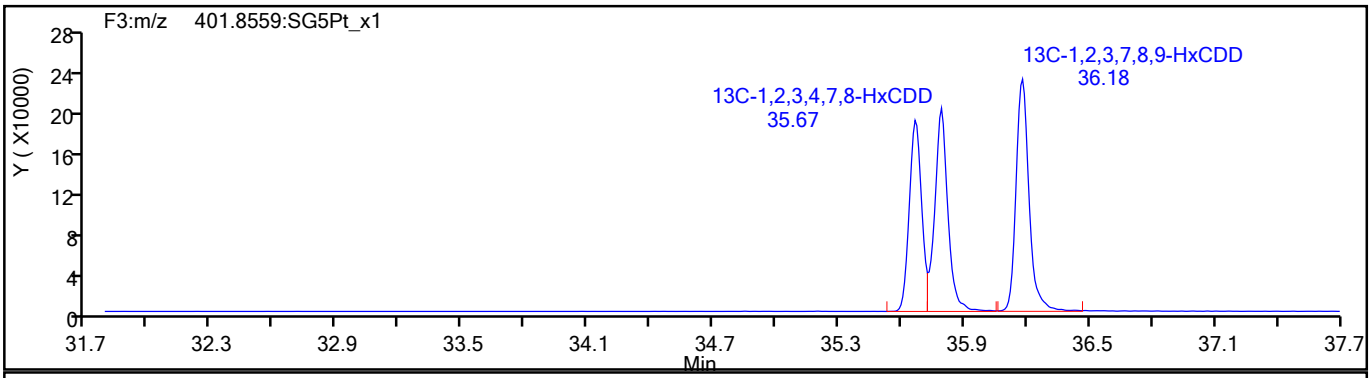

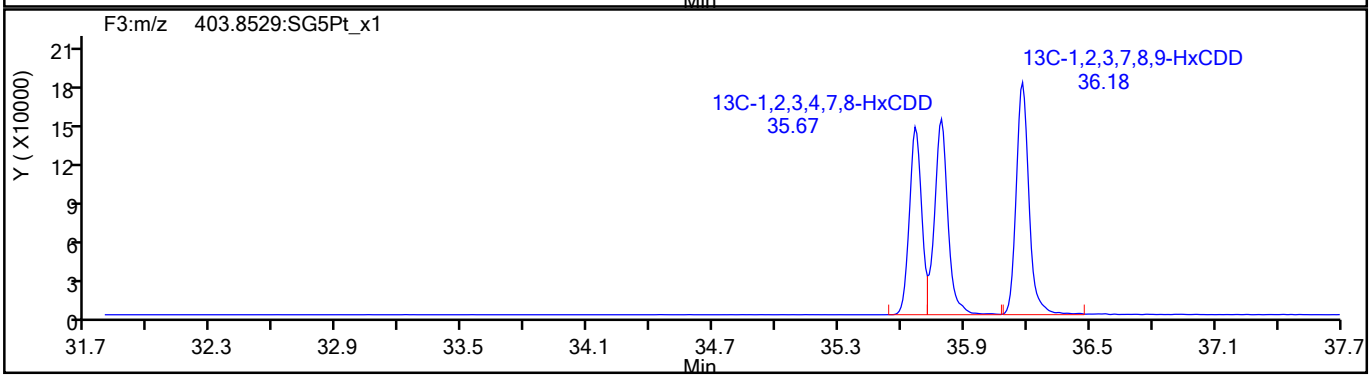

788956

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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HpCDF

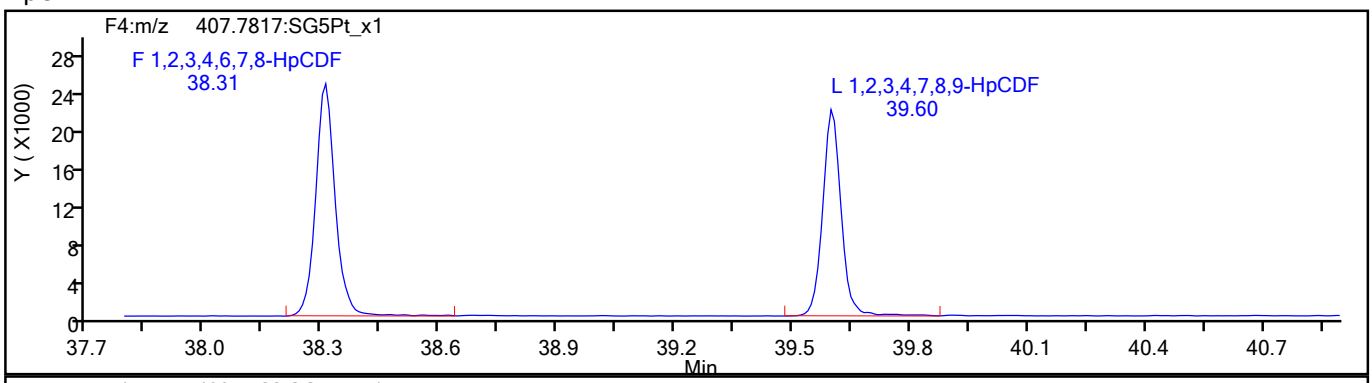

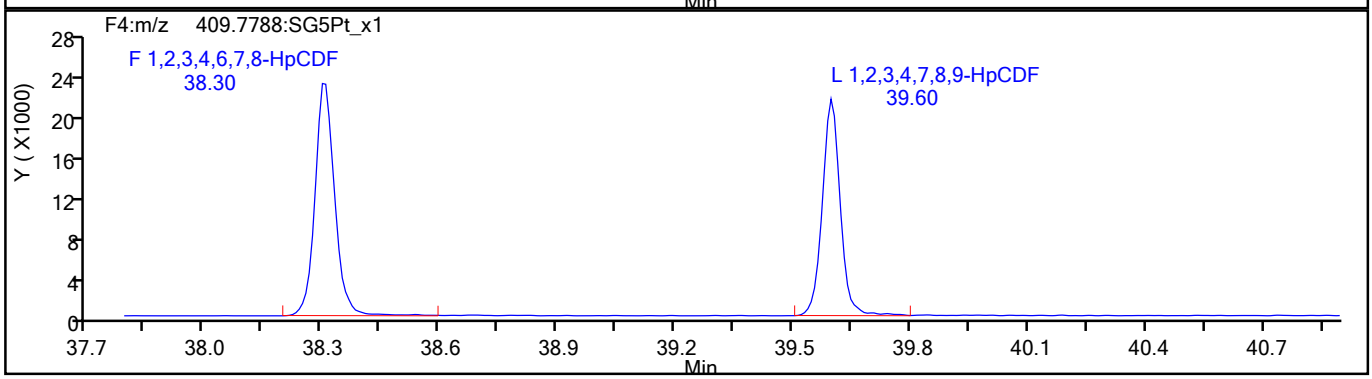

HpCDF Standards

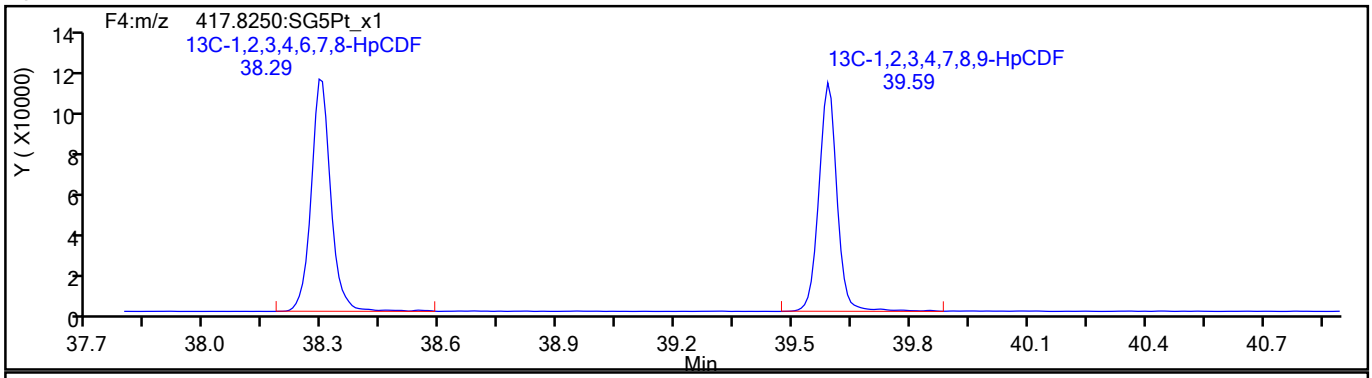

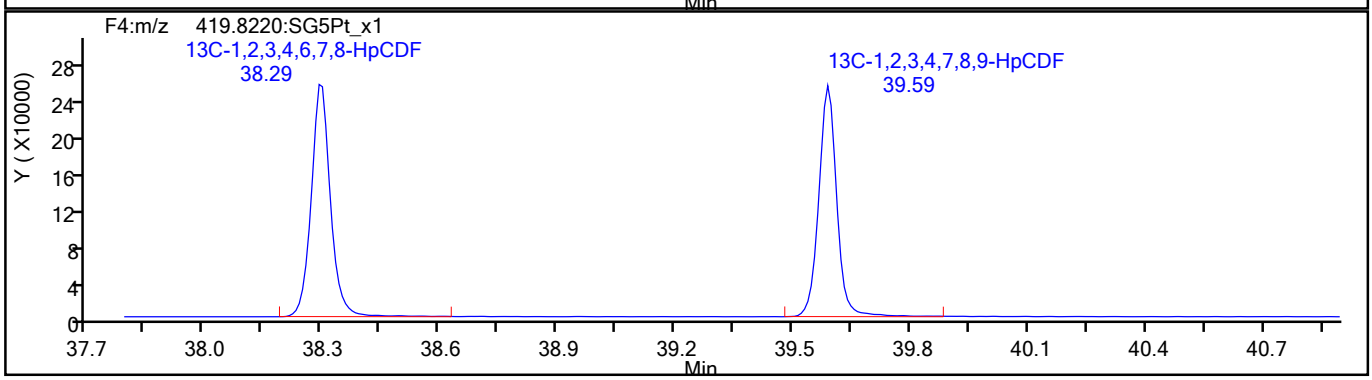

788957

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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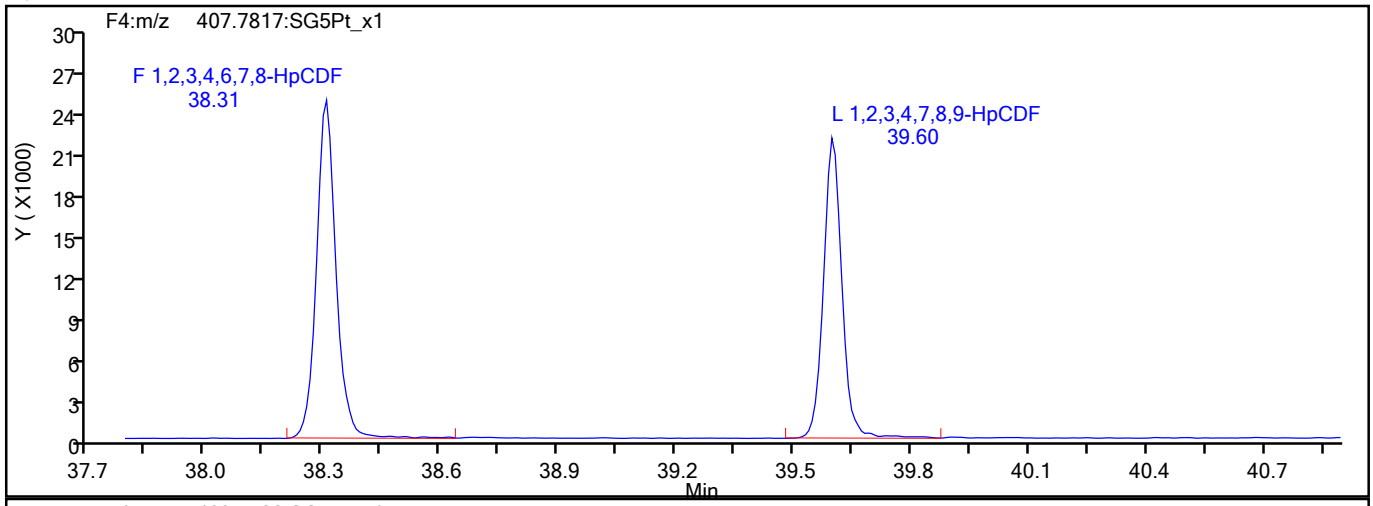

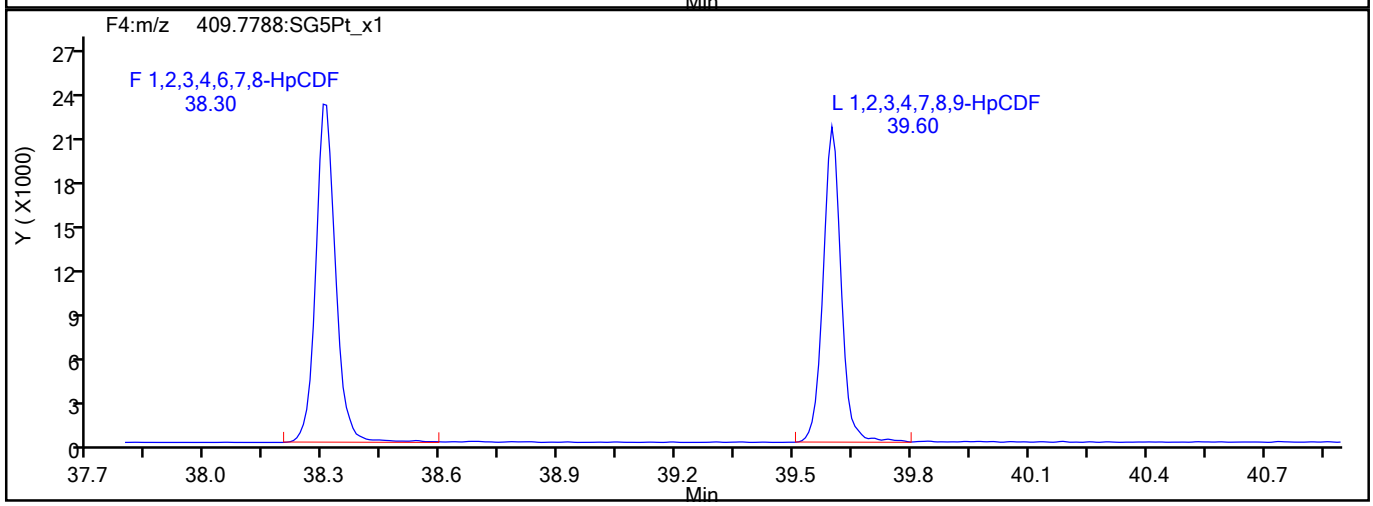

HpCDF Interference Mass

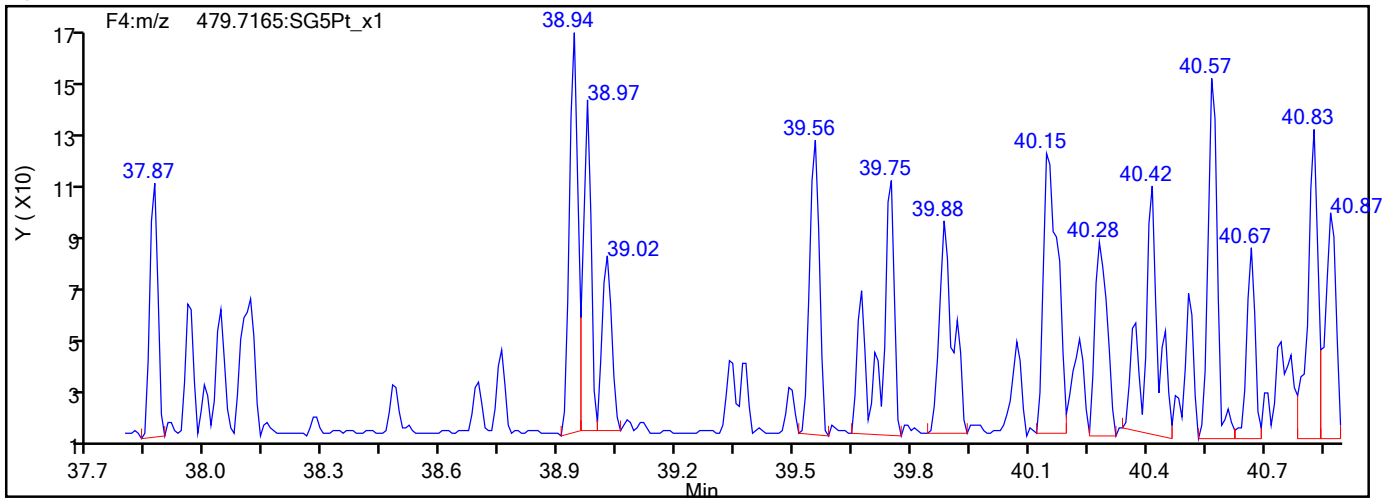

788958

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

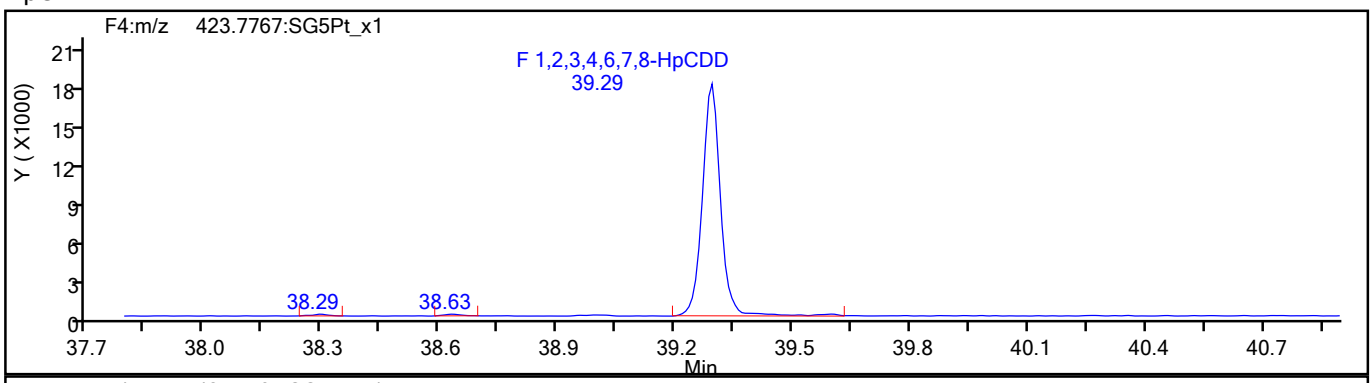

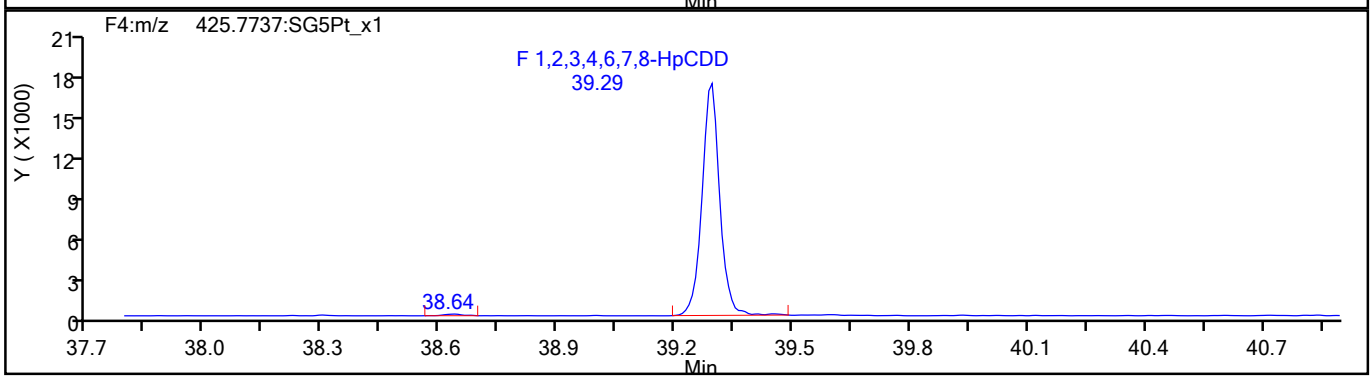

HpCDD Standards

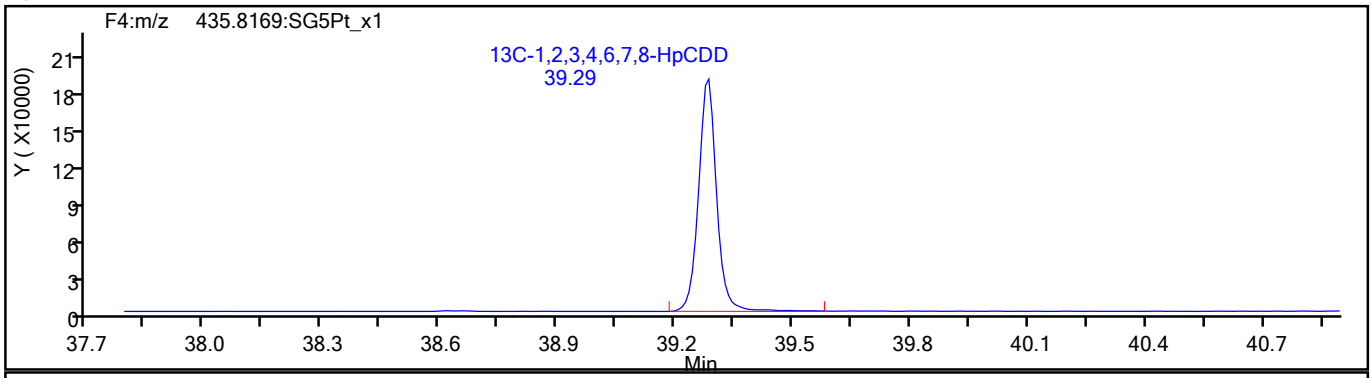

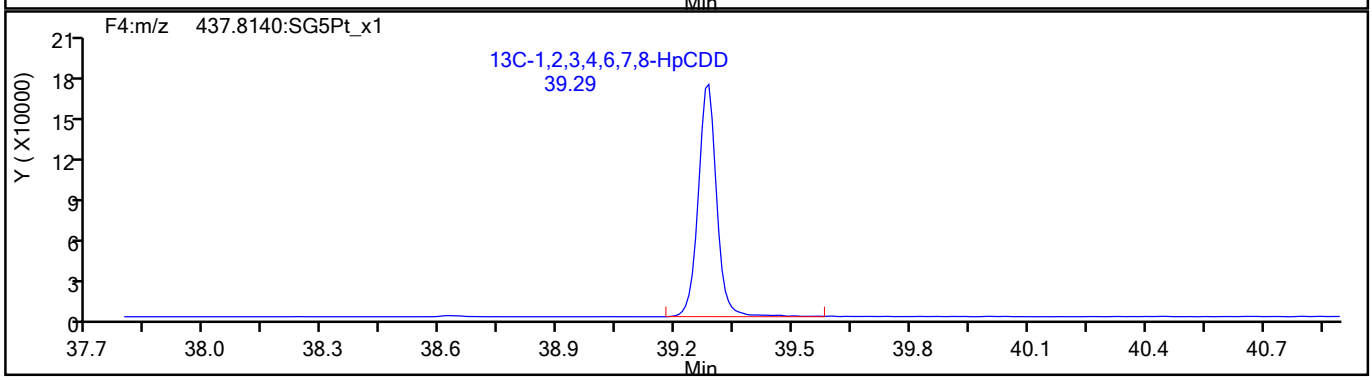

788959

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

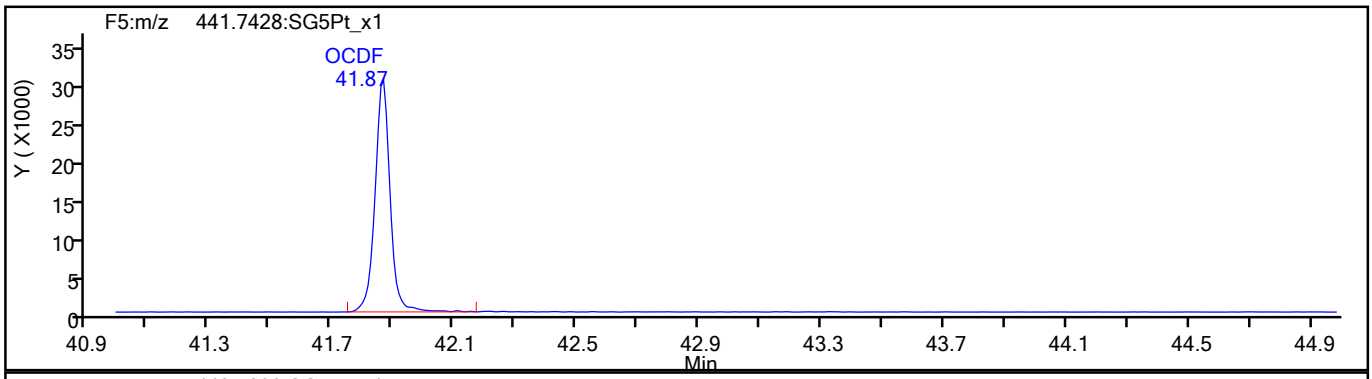

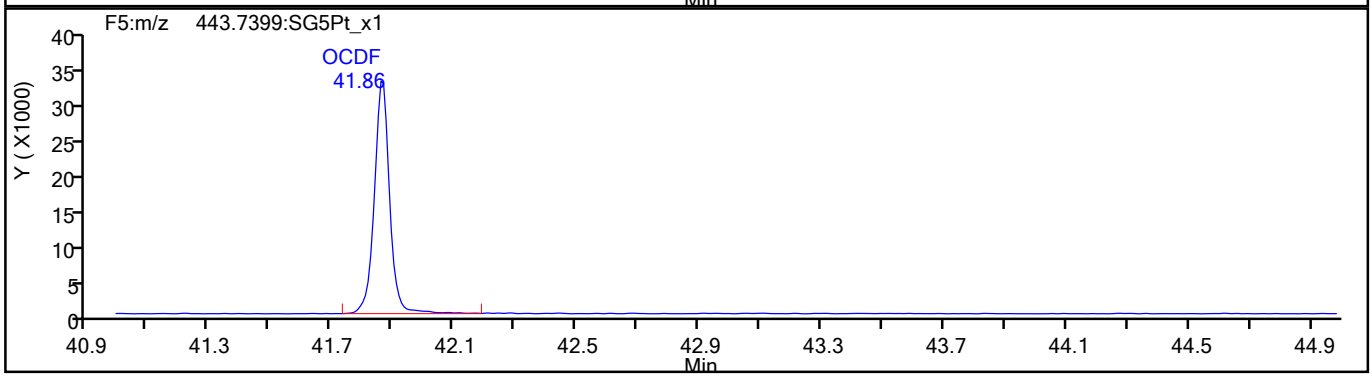

OCDF Standards

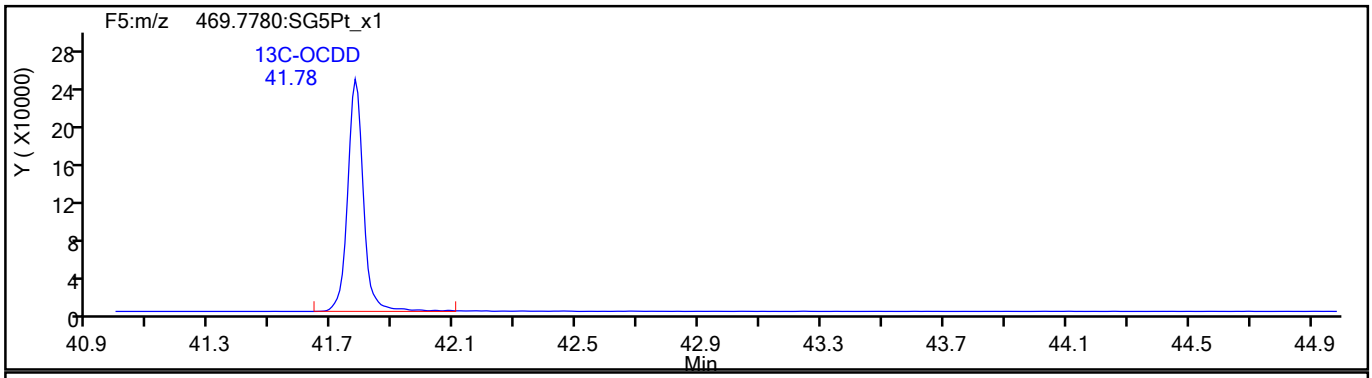

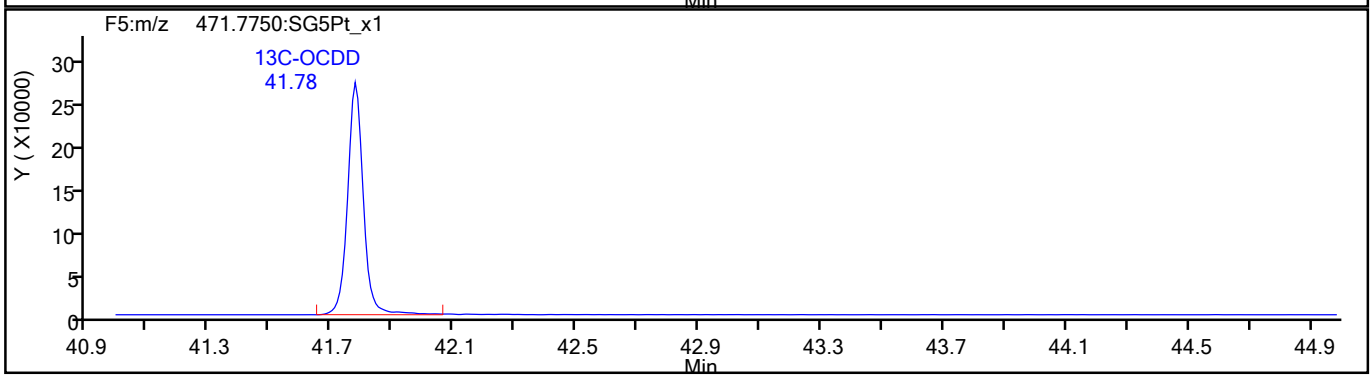

788960

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

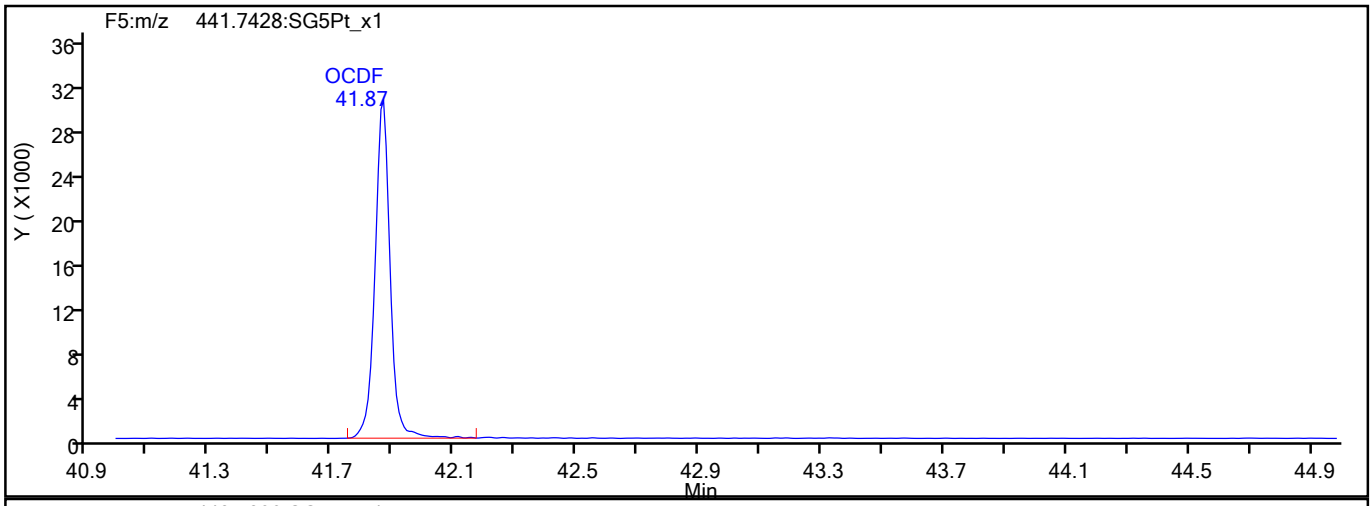

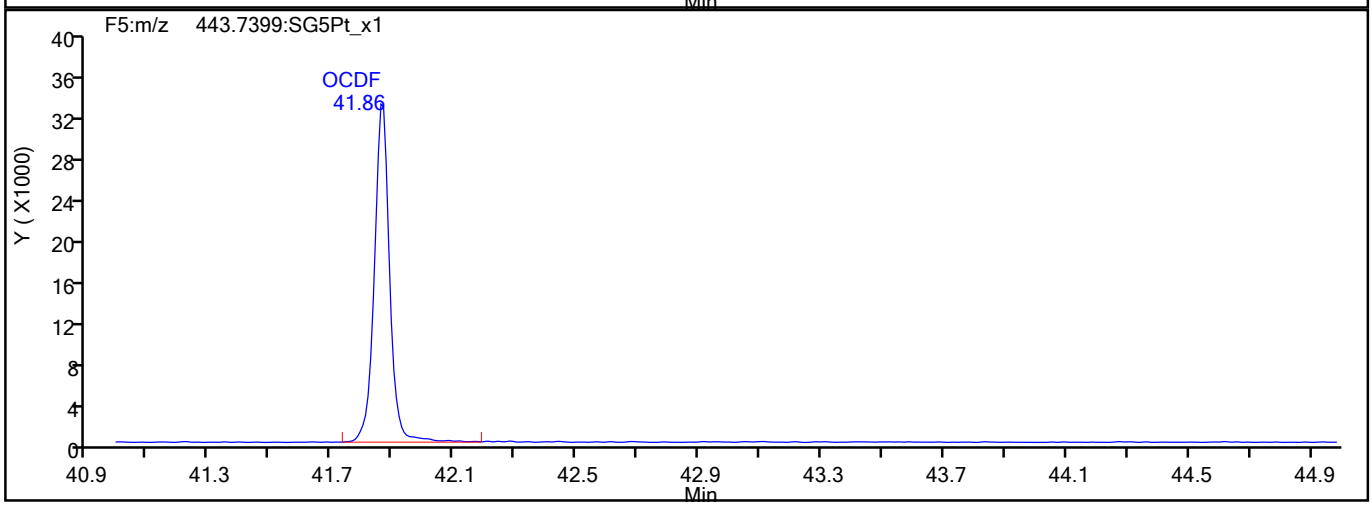

OCDF Interference Mass

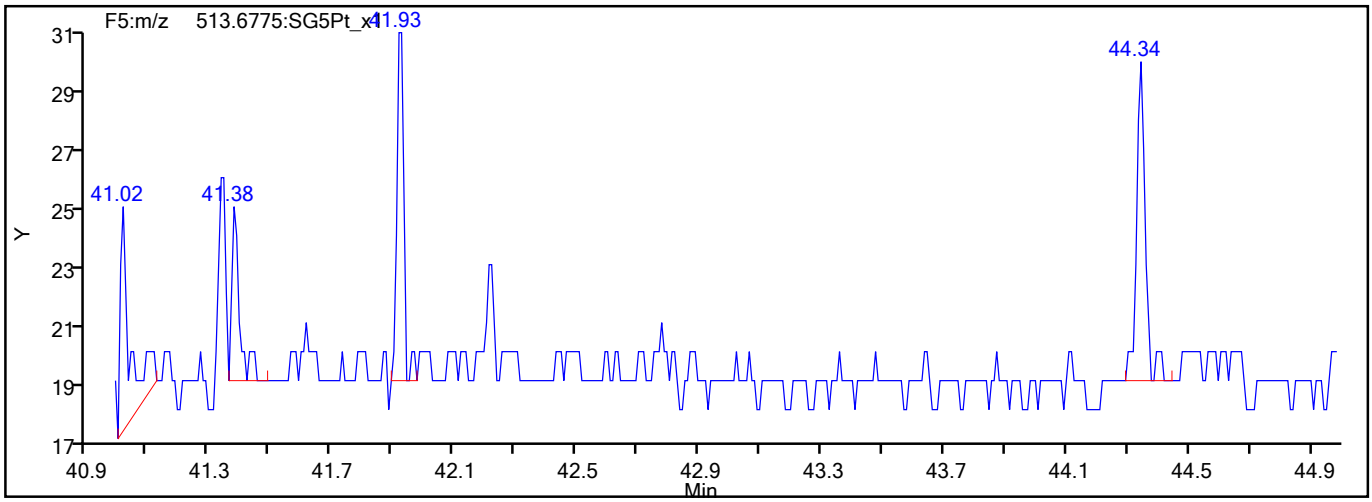

788961

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

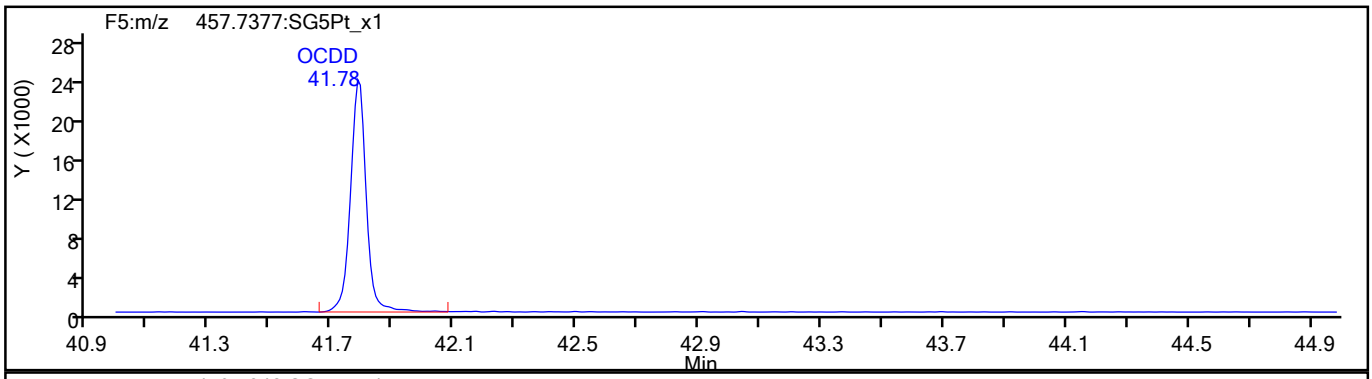

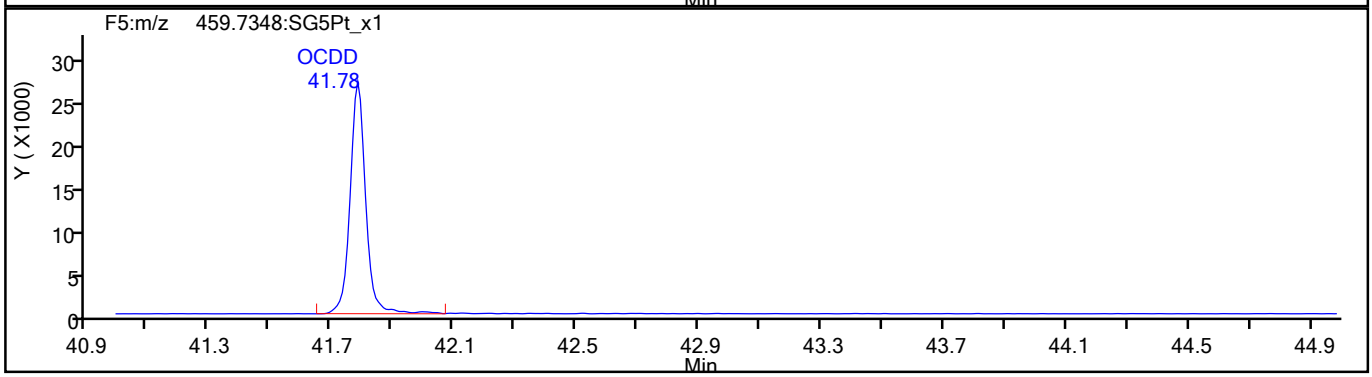

OCDD Standards

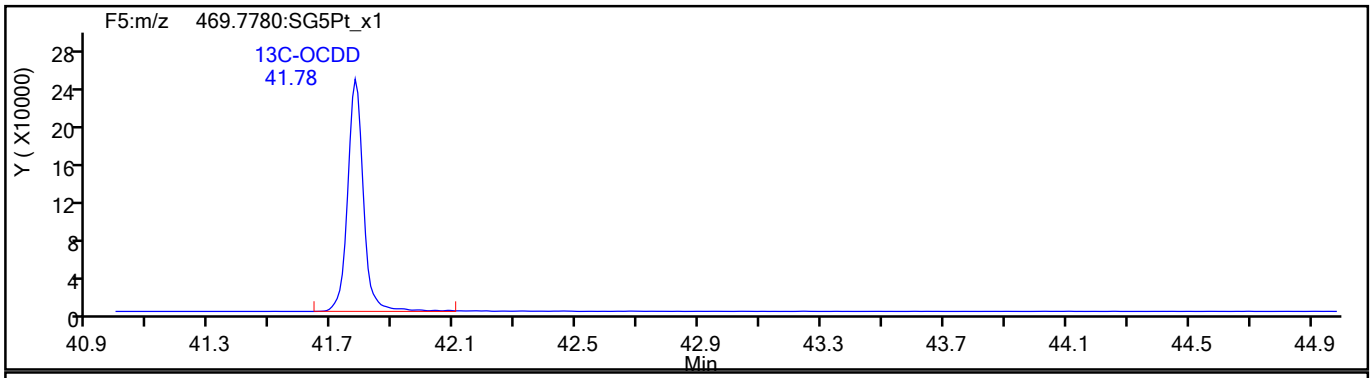

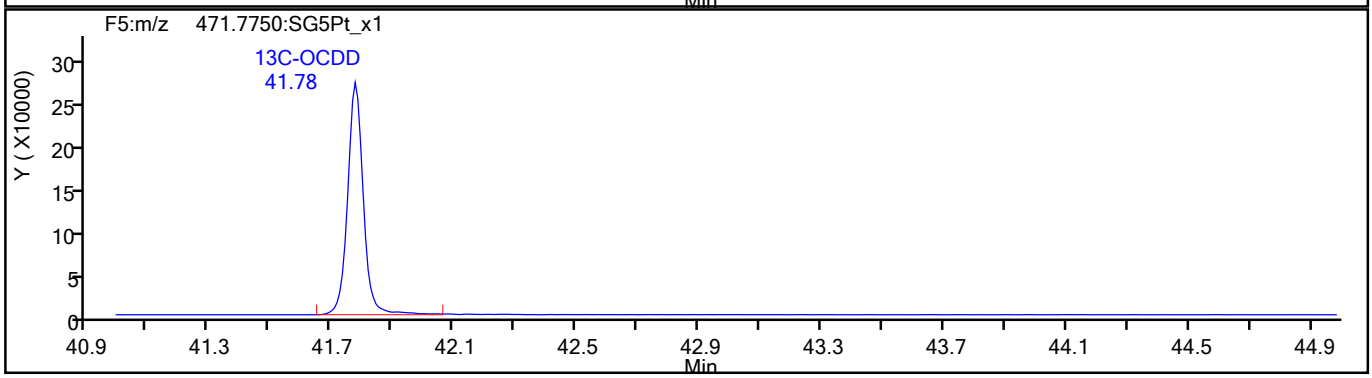

788962

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

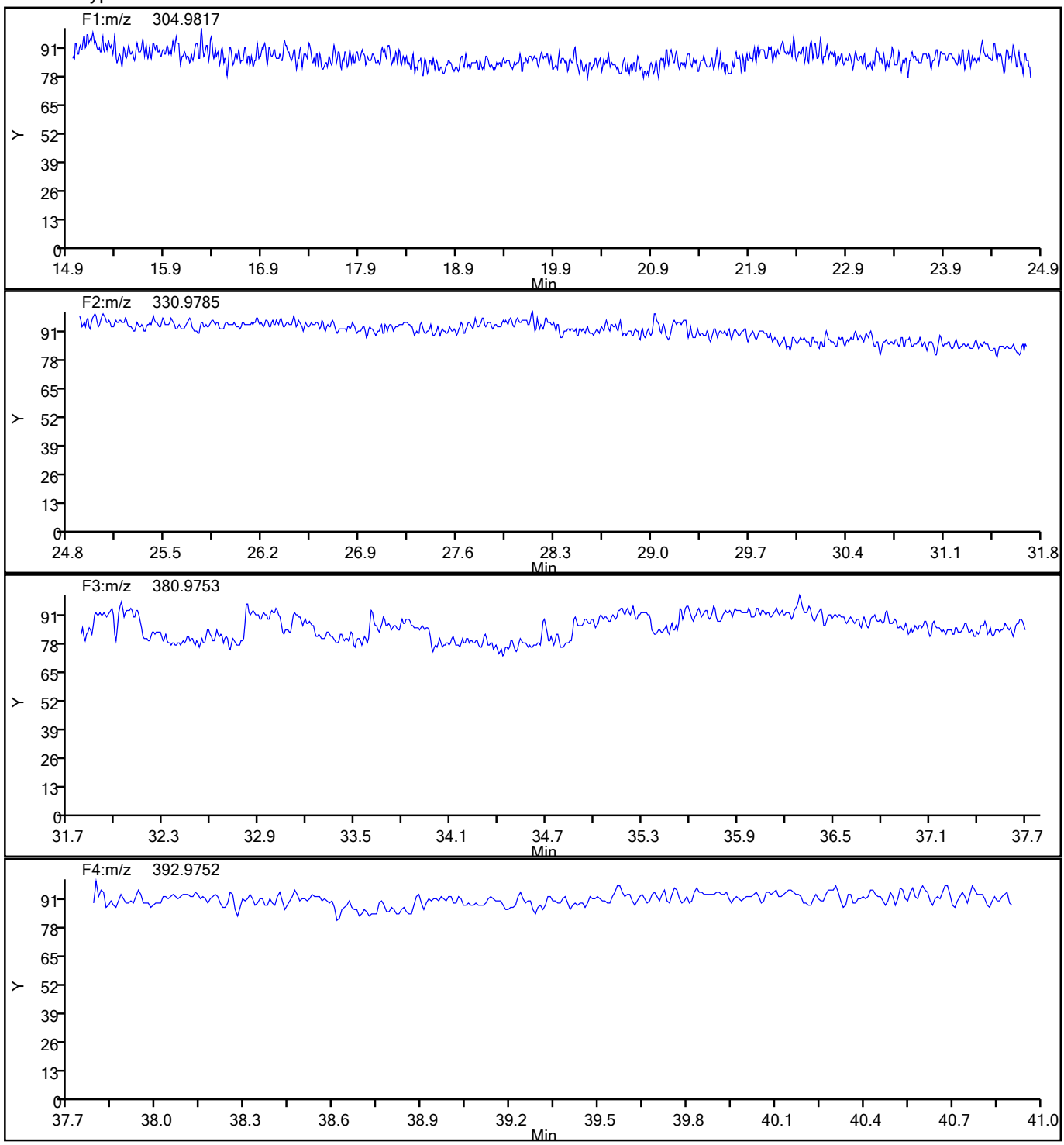

788963

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

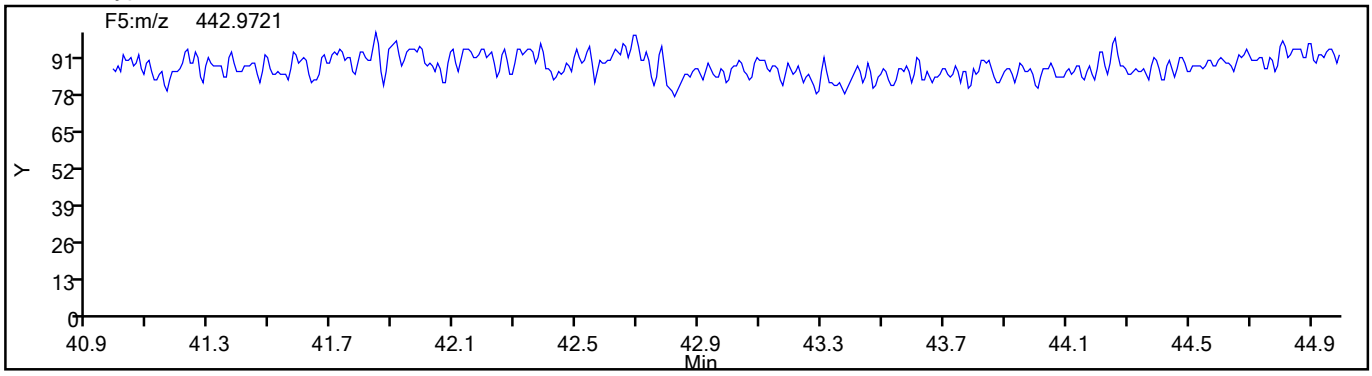

788964

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.546	1900111	0.78	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.619	2465726	0.79	1.3459	96.4	96.4	0.1978	0.1978	96.42	
2,3,7,8-TCDF	19.645	258022	0.78	1.0802	9.687	9.687	0.0168	0.0168	96.87	
S Total TCDF					9.687	9.687	0.0168	0.0168		
D 13C-2,3,7,8-TCDD	20.907	1800864	0.81	0.9317	101.7	101.7	0.1641	0.1641	102	
$ 37Cl4-2,3,7,8-TCDD	20.933	203726		1.0083	10.6	10.6	0.0134	0.0134	106	
2,3,7,8-TCDD	20.924	198062	0.75	1.0753	10.2	10.2	0.0351	0.0351	102	
S Total TCDD					10.2	10.2	0.0351	0.0351		
D 13C-1,2,3,7,8-PeCDF	26.556	2149791	1.60	1.1405	99.2	99.2	0.3269	0.3269	99.20	
1,2,3,7,8-PeCDF	26.573	1114982	1.57	1.0543	49.2	49.2	0.1379	0.1379	98.39	
D 13C-2,3,4,7,8-PeCDF	28.006	1991303	1.58	1.1253	93.1	93.1	0.3313	0.3313	93.13	
2,3,4,7,8-PeCDF	28.031	987812	1.58	1.0079	49.2	49.2	0.1665	0.1665	98.44	
S Total PeCDF					98.4	98.4	0.1522	0.1522		
D 13C-1,2,3,7,8-PeCDD	28.790	1388641	1.58	0.7165	102.0	102.0	0.1629	0.1629	102	
1,2,3,7,8-PeCDD	28.824	741897	1.57	1.0465	51.1	51.1	0.0499	0.0499	102	
S Total PeCDD					51.1	51.1	0.0499	0.0499		
D 13C-1,2,3,4,7,8-HxCDF	34.384	1841825	0.54	0.9648	115.8	115.8	0.3936	0.3936	116	
1,2,3,4,7,8-HxCDF	34.401	1093397	1.25	1.1474	51.7	51.7	0.1928	0.1928	103	
D 13C-1,2,3,6,7,8-HxCDF	34.561	2015594	0.53	1.0708	114.2	114.2	0.3547	0.3547	114	
1,2,3,6,7,8-HxCDF	34.578	1245549	1.24	1.2178	50.7	50.7	0.1720	0.1720	101	
D 13C-2,3,4,6,7,8-HxCDF	35.447	1861559	0.53	1.0413	108.4	108.4	0.3647	0.3647	108	
2,3,4,6,7,8-HxCDF	35.463	1151149	1.26	1.2145	50.9	50.9	0.1650	0.1650	102	
D 13C-1,2,3,7,8,9-HxCDF	36.399	1657413	0.54	0.9731	103.3	103.3	0.3903	0.3903	103	
1,2,3,7,8,9-HxCDF	36.408	1038574	1.24	1.2401	50.5	50.5	0.1718	0.1718	101	
S Total HxCDF					203.9	203.9	0.1754	0.1754		
* 13C-1,2,3,7,8,9-HxCDD	36.197	1648545	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.691	1348471	1.27	0.7587	107.8	107.8	0.2143	0.2143	108	
1,2,3,4,7,8-HxCDD	35.699	724729	1.28	1.0608	50.7	50.7	0.0918	0.0918	101	
D 13C-1,2,3,6,7,8-HxCDD	35.809	1460100	1.24	0.8593	103.1	103.1	0.1892	0.1892	103	
1,2,3,6,7,8-HxCDD	35.826	760446	1.23	0.9933	52.4	52.4	0.0967	0.0967	105	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.214	786511	1.27	1.1094	50.5	50.5	0.0872	0.0872	101	
S Total HxCDD					153.6	153.6	0.0919	0.0919		
D 13C-1,2,3,4,6,7,8-HpCDF	38.316	1182209	0.45	0.7359	97.4	97.4	0.3866	0.3866	97.44	
1,2,3,4,6,7,8-HpCDF	38.324	878086	1.05	1.4421	51.5	51.5	0.1699	0.1699	103	
D 13C-1,2,3,4,7,8,9-HpCDF	39.614	1080883	0.46	0.6854	95.7	95.7	0.4151	0.4151	95.66	
1,2,3,4,7,8,9-HpCDF	39.622	727362	1.05	1.3092	51.4	51.4	0.1875	0.1875	103	
S Total HpCDF					102.9	102.9	0.1787	0.1787		
D 13C-1,2,3,4,6,7,8-HpCDD	39.302	1094713	1.07	0.6745	98.4	98.4	0.2448	0.2448	98.45	
1,2,3,4,6,7,8-HpCDD	39.310	572466	1.05	1.0503	49.8	49.8	0.1044	0.1044	99.58	
S Total HpCDD					49.8	49.8	0.1044	0.1044		
D 13C-OCDD	41.794	1676139	0.90	0.5446	186.7	186.7	0.2845	0.2845	93.34	
OCDF	41.887	1118740	0.90	1.3168	101.4	101.4	0.1189	0.1189	101	
OCDD	41.803	910980	0.89	1.0620	102.4	102.4	0.1082	0.1082	102	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.546	20.547	0		832498	129736	116	290	1118		
333.9338	20.546	20.547	0		1067613	165878	65	162	2552	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.619	19.616	0	0.955	1091704	180342	213	532	847		
317.9389	19.619	19.616	0	0.955	1374022	217372	102	255	2131	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.645	19.646	0	1.001	113254	18239	10	25	1824		
305.8987	19.645	19.646	0	1.001	144768	23858	19	47	1256	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.907	20.910	0	1.018	803279	117913	116	290	1016		
333.9338	20.907	20.910	0	1.018	997585	152094	65	162	2340	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.933	20.935	0	1.019	203726	29833	16	40	1865		
2,3,7,8-TCDD											
319.8965	20.924	20.939	-1	1.001	85173	13080	31	77	422		
321.8936	20.941	20.939	0	1.002	112889	16258	10	25	1626	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.556	26.560	0	1.292	1323851	238814	266	665	898		
353.8970	26.556	26.560	0	1.292	825940	146442	175	437	837	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.573	26.584	-1	1.001	680306	120693	132	330	914		
341.8567	26.573	26.584	-1	1.001	434676	76404	92	230	830	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.006	28.014	0	1.363	1219332	203015	266	665	763		
353.8970	28.006	28.014	0	1.363	771971	130766	175	437	747	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.031	28.039	0	1.001	604266	98138	132	330	743		
341.8567	28.031	28.039	0	1.001	383546	62644	92	230	681	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.790	28.801	-1	1.401	851334	132655	82	205	1618		
369.8919	28.790	28.801	-1	1.401	537307	81623	56	140	1458	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.824	28.828	0	1.001	452903	70092	31	77	2261		
357.8516	28.824	28.828	0	1.001	288994	44853	14	35	3204	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.384	34.384	0	0.950	645542	131022	198	495	662		
385.8610	34.384	34.384	0	0.950	1196283	248690	400	1000	622	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.401	34.405	0	1.000	607111	119877	181	452	662		
375.8178	34.401	34.405	0	1.000	486286	95304	155	387	615	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.561	34.562	0	0.955	696119	139607	198	495	705		
385.8610	34.561	34.562	0	0.955	1319475	261396	400	1000	653	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.578	34.582	0	1.000	690624	134257	181	452	742		
375.8178	34.578	34.582	0	1.000	554925	106932	155	387	690	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.447	35.444	0	0.979	648311	145832	198	495	737		
385.8610	35.447	35.444	0	0.979	1213248	273234	400	1000	683	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.463	35.461	0	1.000	640849	139500	181	452	771		
375.8178	35.463	35.461	0	1.000	510300	111840	155	387	722	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.399	36.388	1	1.006	579583	134604	198	495	680		
385.8610	36.399	36.388	1	1.006	1077830	259553	400	1000	649	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.408	36.402	0	1.000	575769	139453	181	452	770		
375.8178	36.408	36.402	0	1.000	462805	111702	155	387	721	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.197	36.192	0		918631	219913	146	365	1506		
403.8529	36.197	36.192	0		729914	173739	110	275	1579	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.691	35.680	1	0.986	754120	185149	146	365	1268		
403.8529	35.691	35.680	1	0.986	594351	145418	110	275	1322	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.699	35.695	0	1.000	407415	100236	71	177	1412		
391.8127	35.699	35.695	0	1.000	317314	80745	58	145	1392	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.809	35.805	0	0.989	809032	182963	146	365	1253		
403.8529	35.809	35.805	0	0.989	651068	152224	110	275	1384	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.826	35.820	0	1.000	419224	96522	71	177	1359		
391.8127	35.826	35.820	0	1.000	341222	77256	58	145	1332	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.214	36.208	0	1.015	440686	104923	71	177	1478		
391.8127	36.214	36.208	0	1.015	345825	82846	58	145	1428	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.316	38.305	1	1.059	366846	105531	154	385	685		
419.8220	38.316	38.305	1	1.059	815363	231224	294	735	786	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.324	38.317	0	1.000	449936	128816	169	422	762		
409.7788	38.324	38.317	0	1.000	428150	123728	161	402	768	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.614	39.600	1	1.094	340338	106309	154	385	690		
419.8220	39.606	39.600	0	1.094	740545	229697	294	735	781	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.622	39.608	1	1.000	372140	117961	169	422	698		
409.7788	39.622	39.608	1	1.000	355222	111585	161	402	693	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.302	39.293	1	1.086	567057	176920	136	340	1301		
437.8140	39.302	39.293	1	1.086	527656	171361	124	310	1382	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.310	39.301	1	1.000	293602	91347	77	192	1186		
425.7737	39.310	39.301	1	1.000	278864	87962	76	190	1157	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.794	41.785	1	1.155	795323	226496	132	330	1716		
471.7750	41.794	41.785	1	1.155	880816	252365	112	280	2253	0.90(0.76-1.02)	
OCDF											
441.7428	41.887	41.875	1	1.002	530577	155278	73	182	2127		
443.7399	41.887	41.875	1	1.002	588163	168537	77	192	2189	0.90(0.76-1.02)	
OCDD											
457.7377	41.803	41.794	1	1.000	427984	122796	54	135	2274		
459.7348	41.803	41.794	1	1.000	482996	140394	56	140	2507	0.89(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

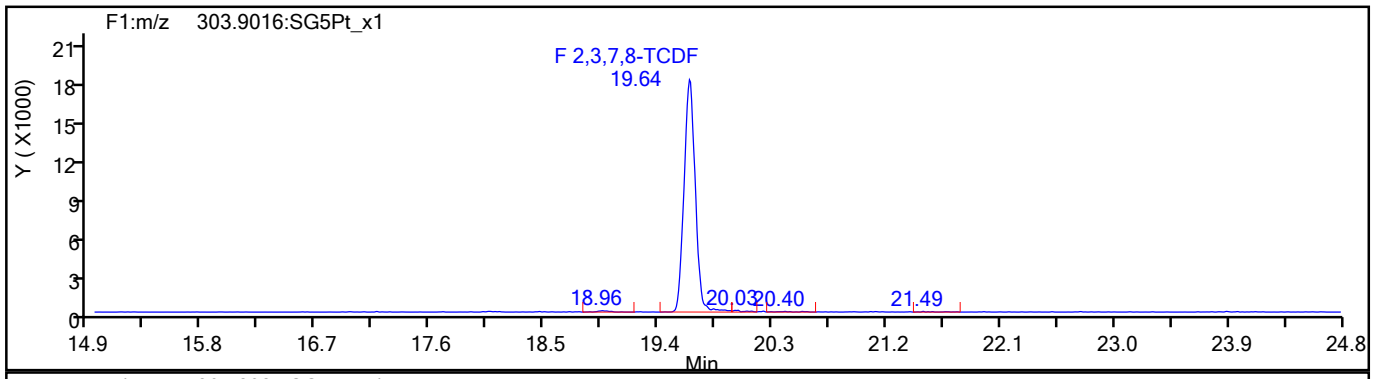

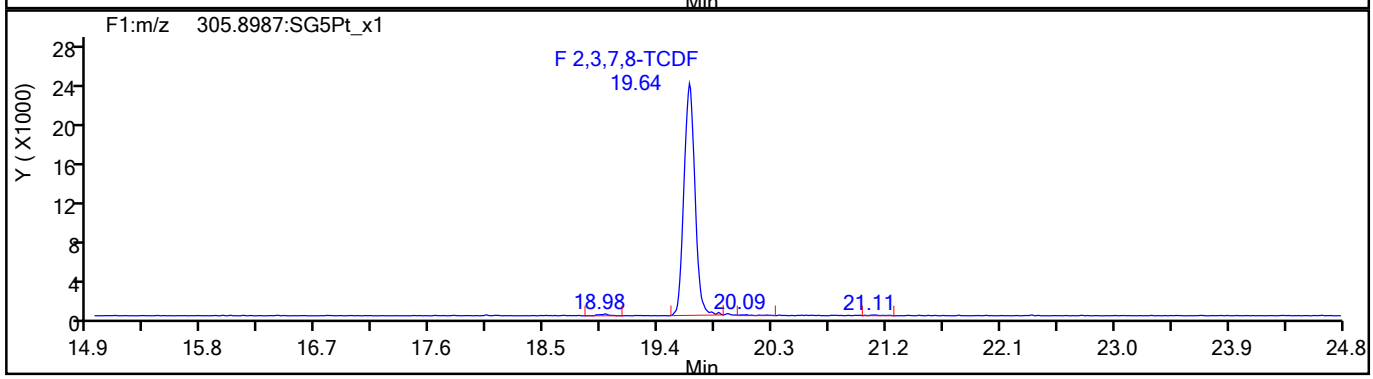

TCDF Standards

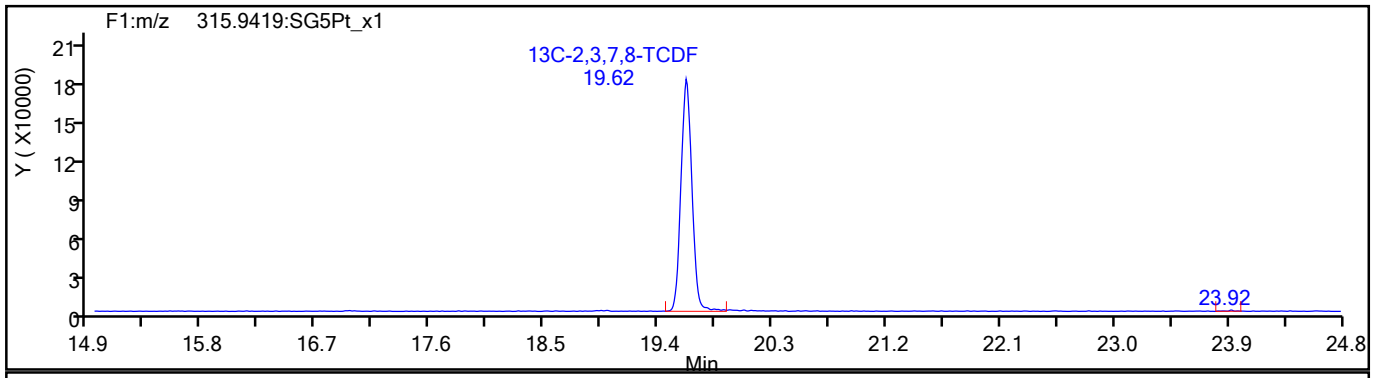

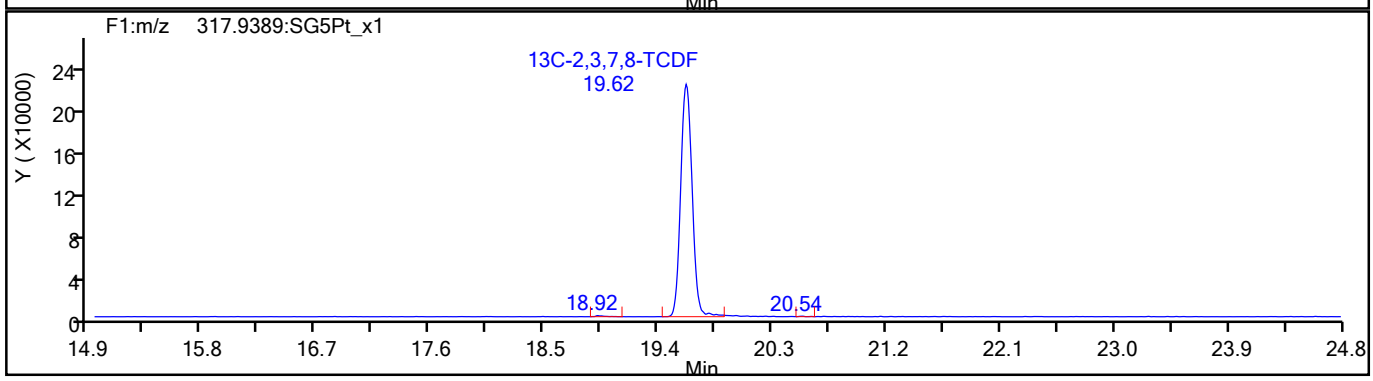

788970

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

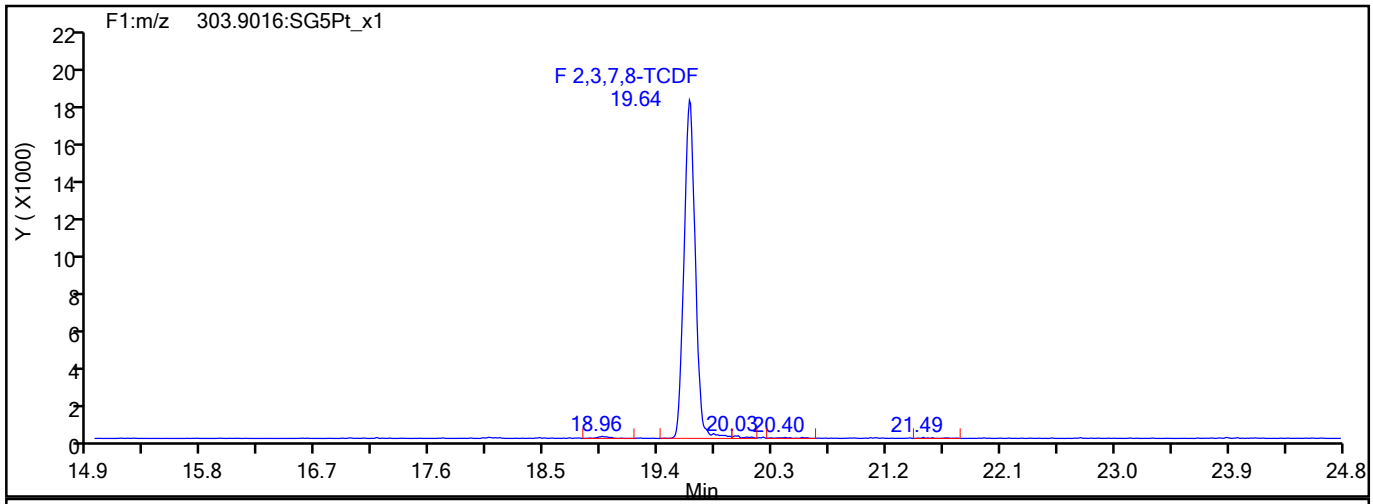

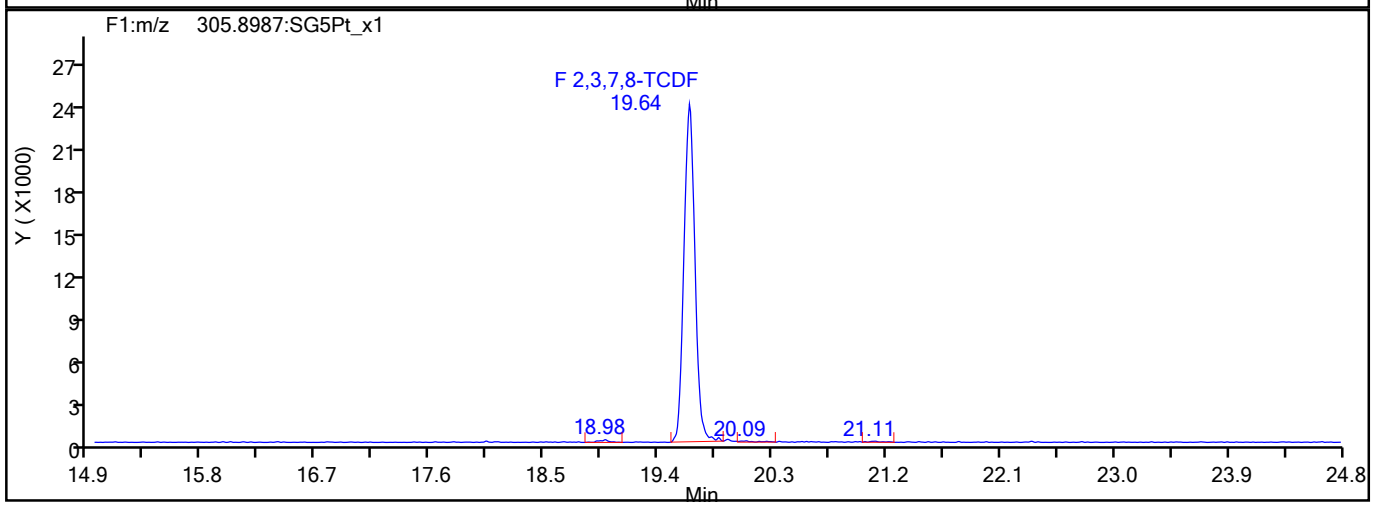

TCDF Interference Mass

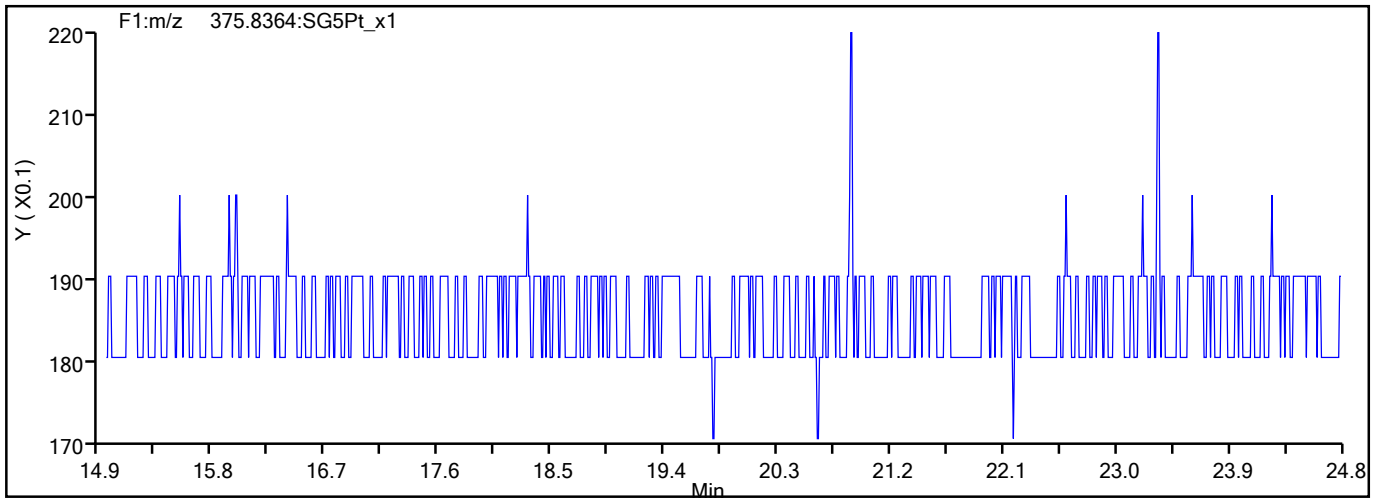

788971

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

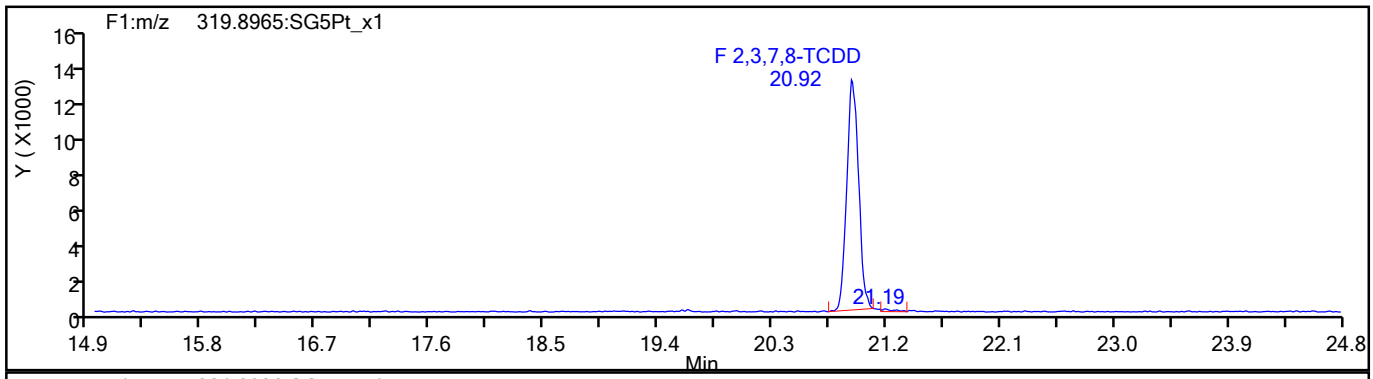

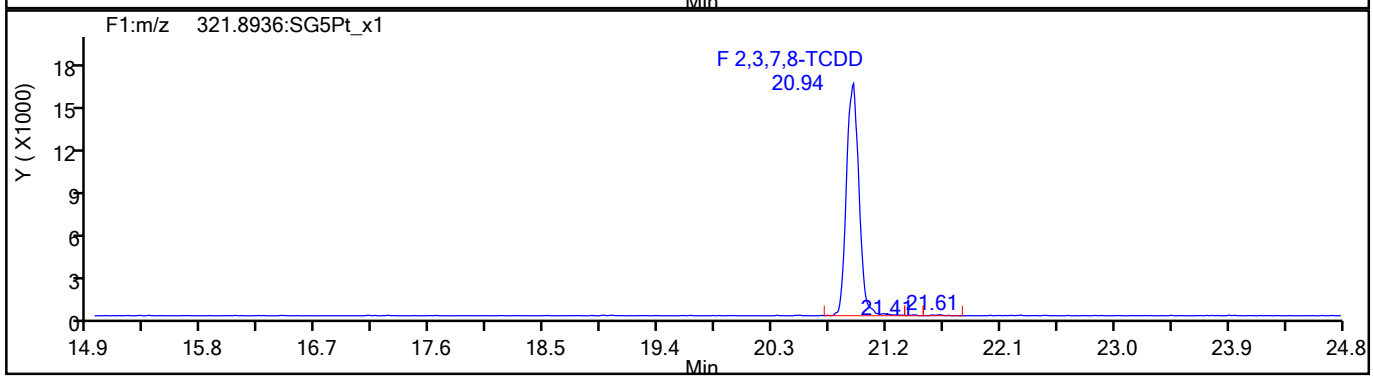

TCDD Standards

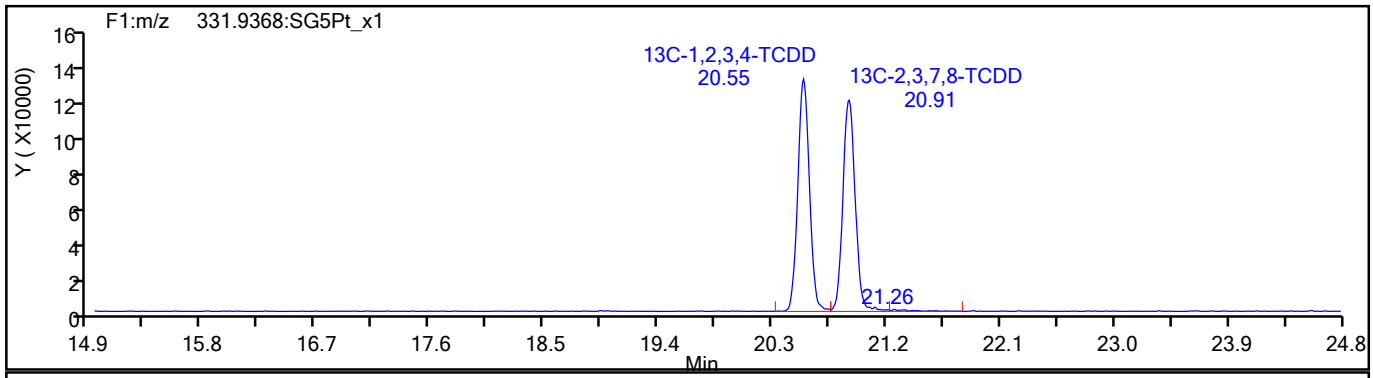

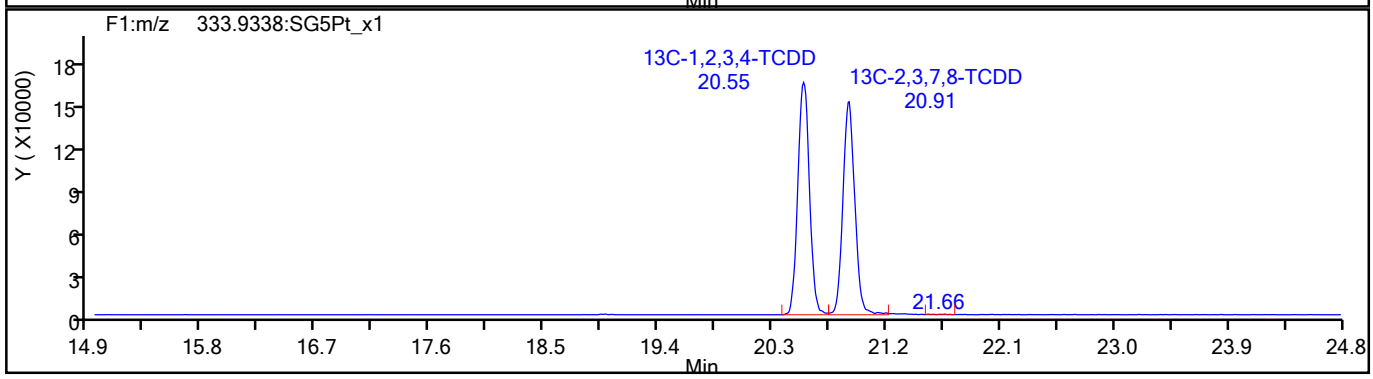

788972

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

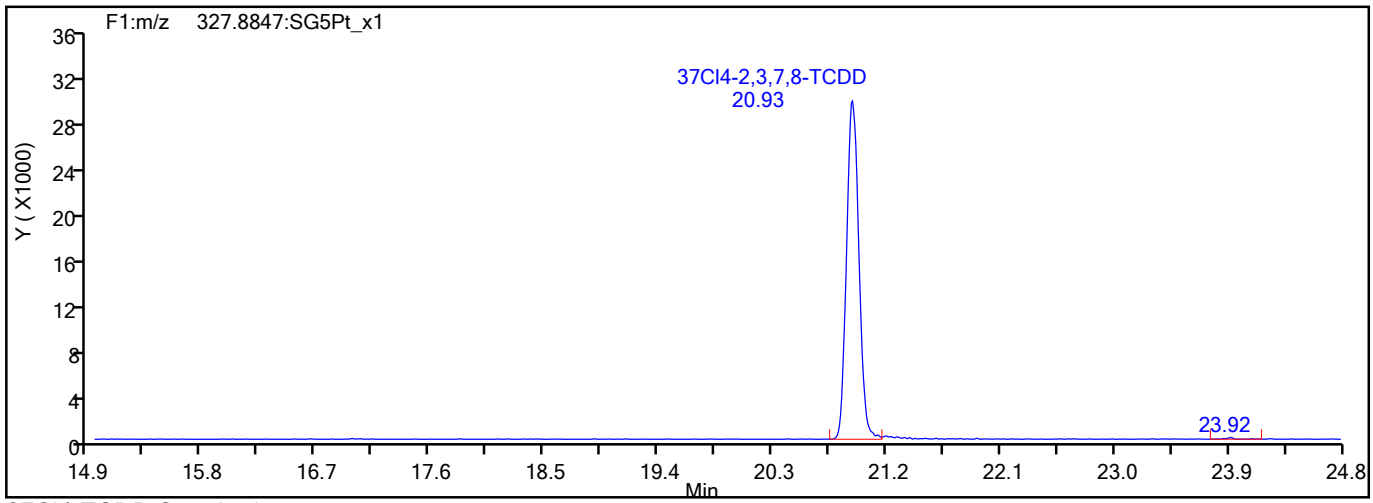

37Cl4-TCDD Standards

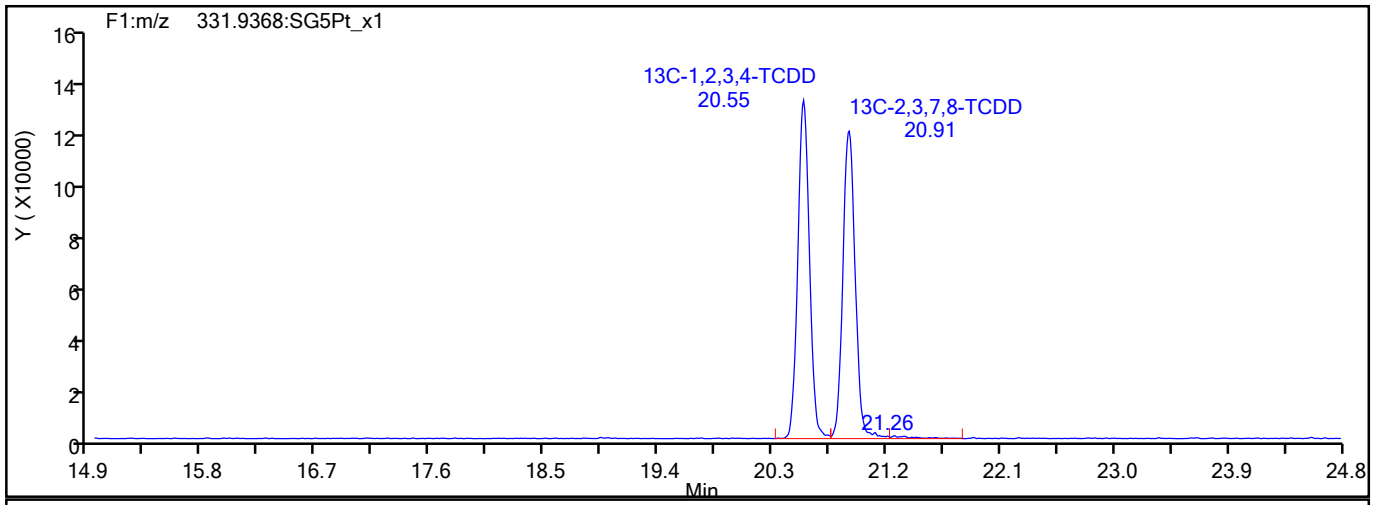

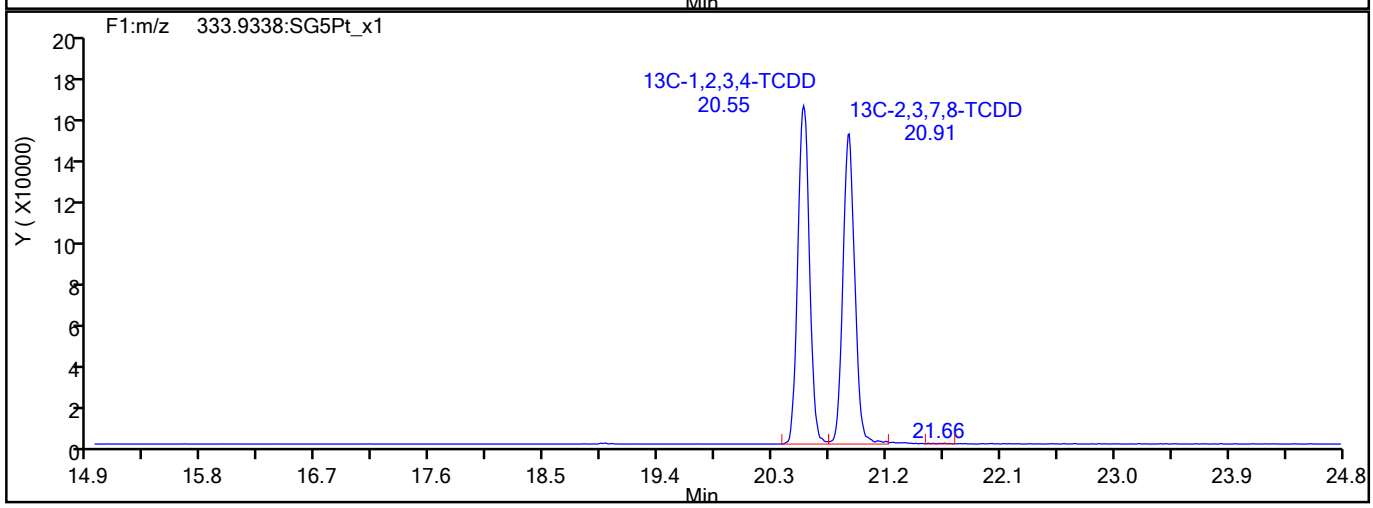

788973

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

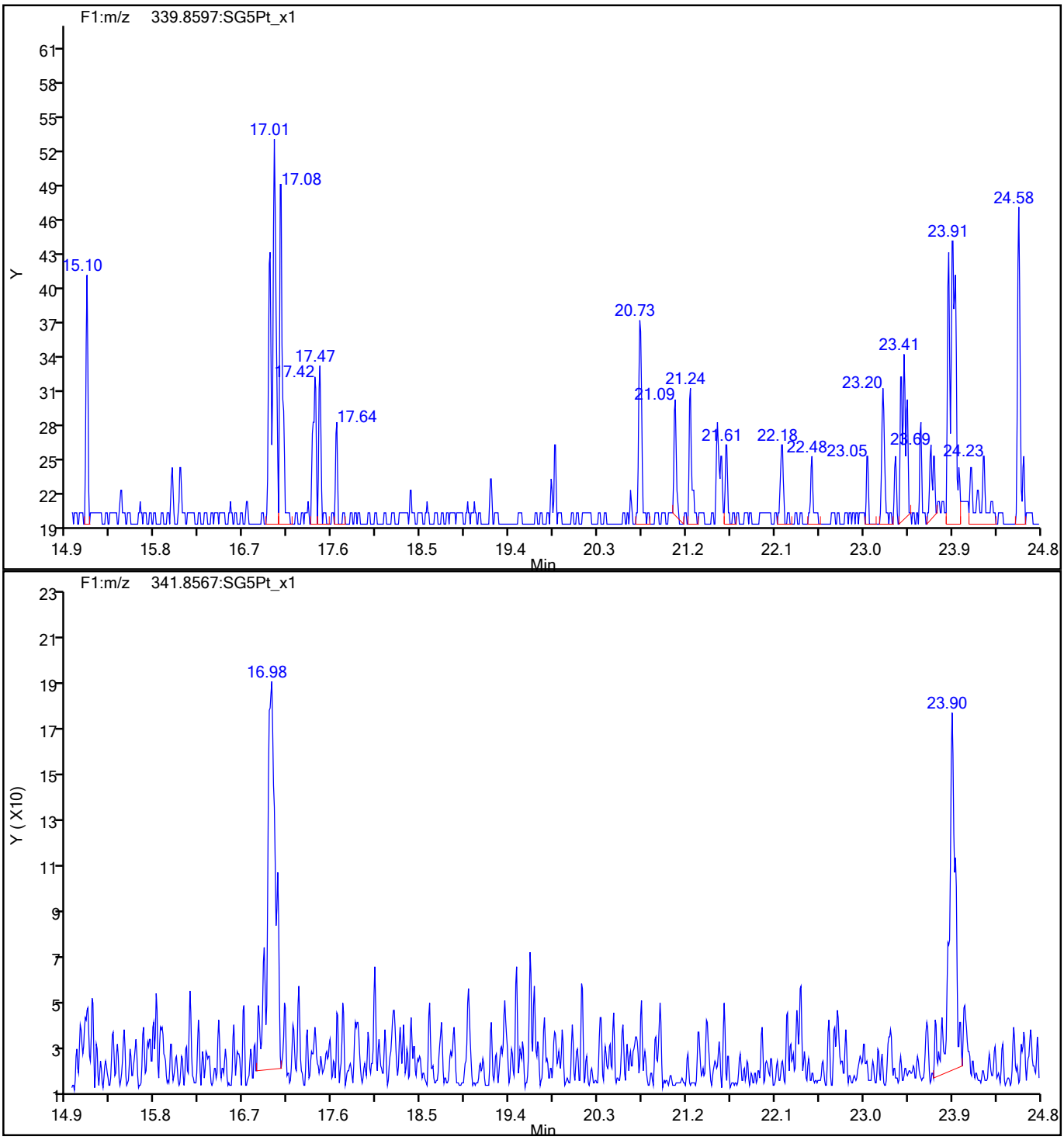

788974

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

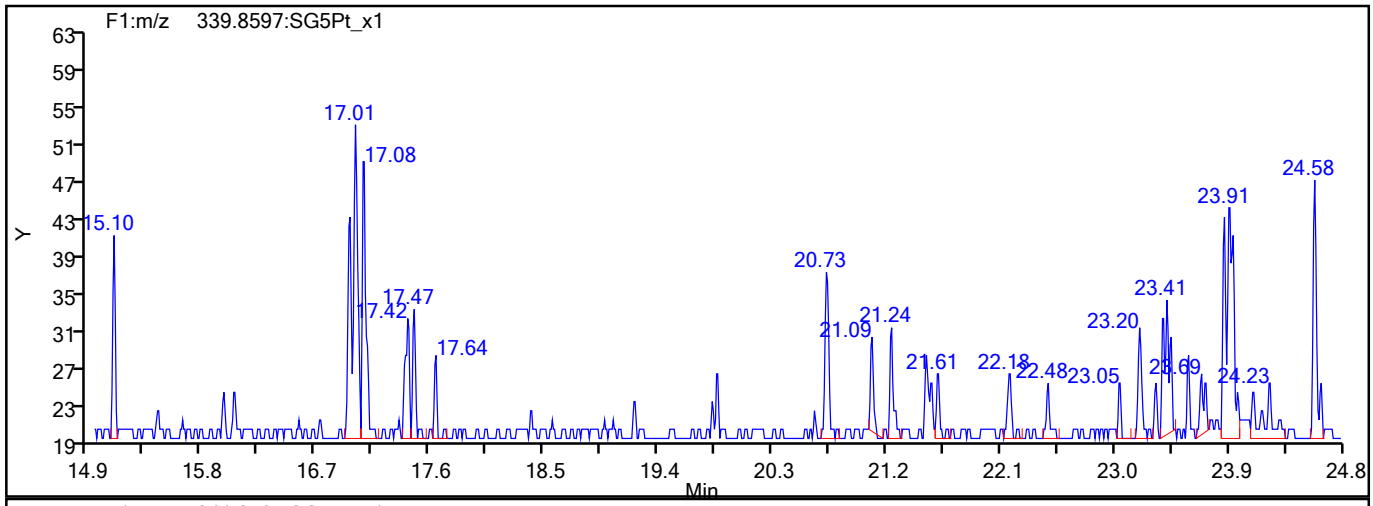

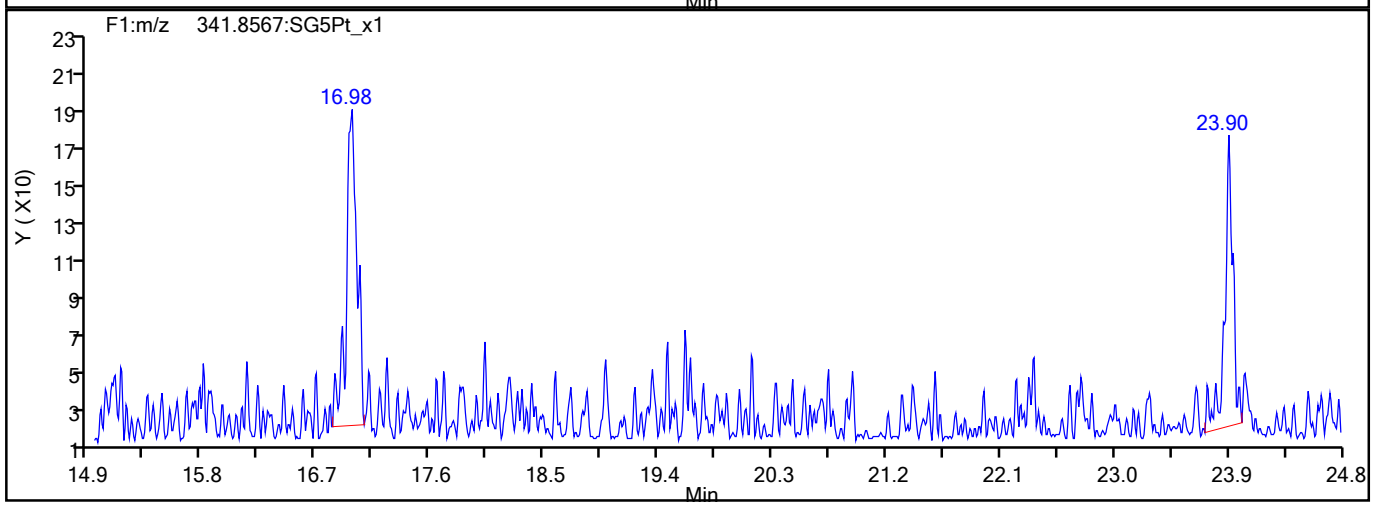

F1 PeCDFs Interference Mass

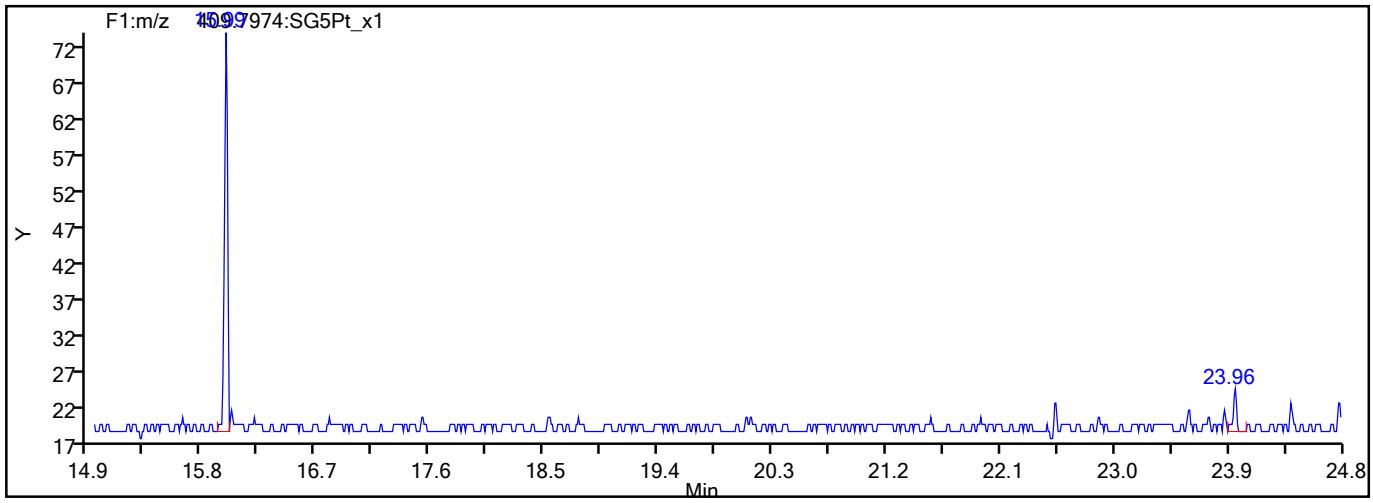

788975

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

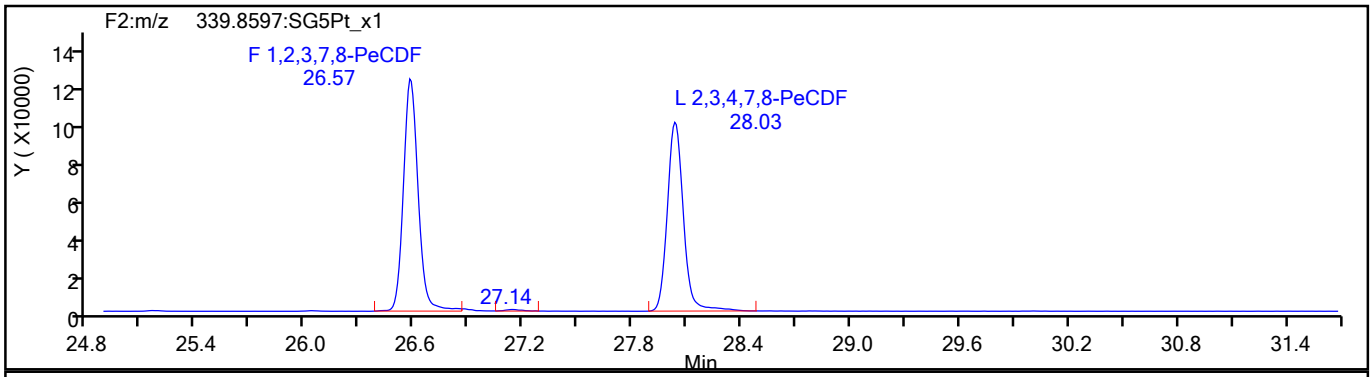

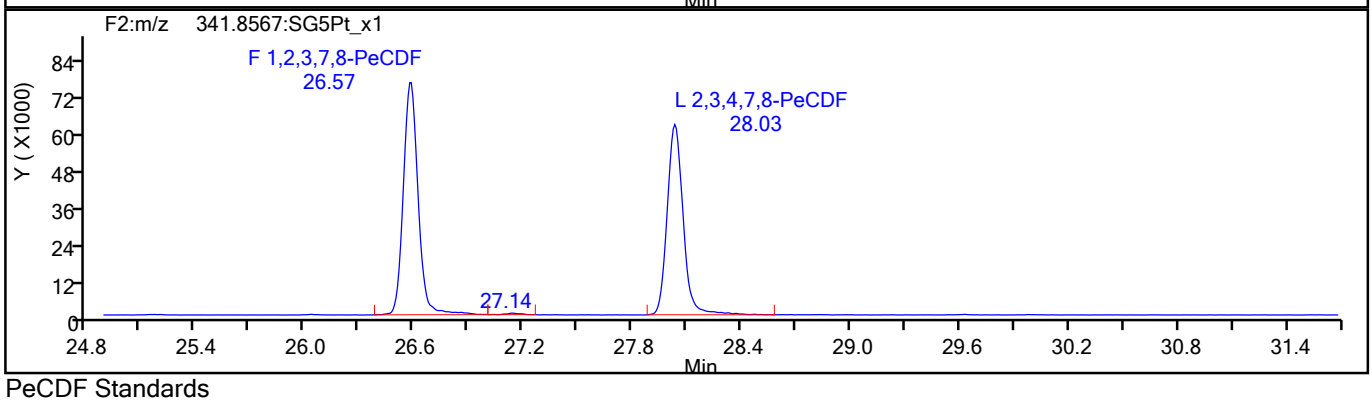

PeCDF Standards

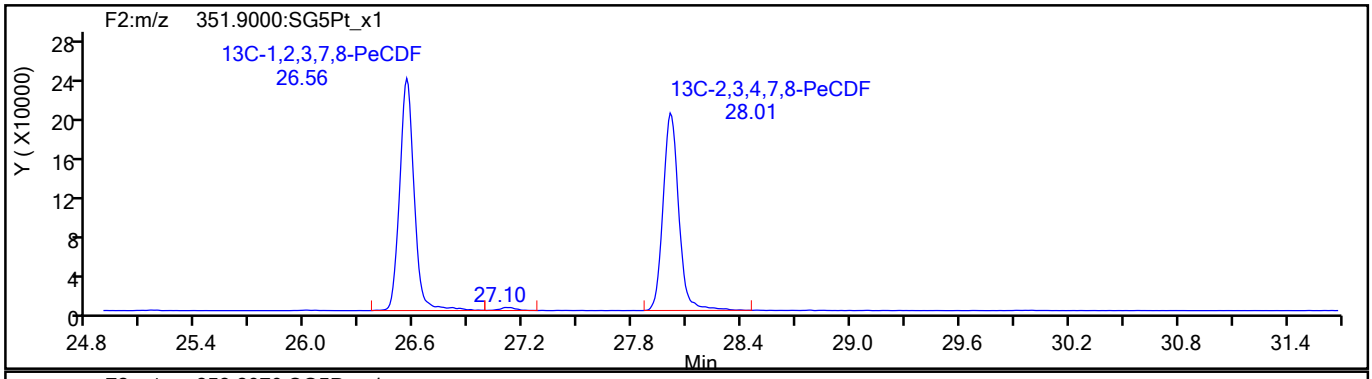

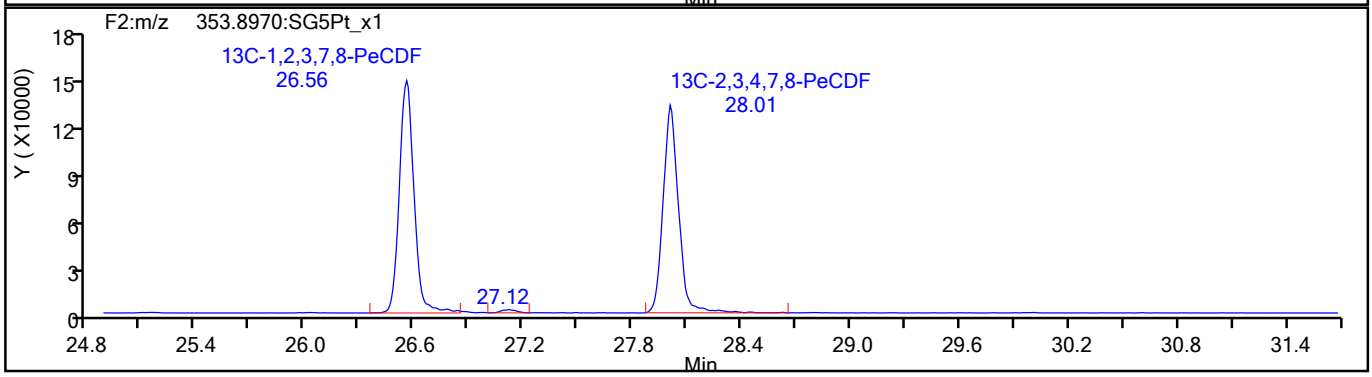

788976

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

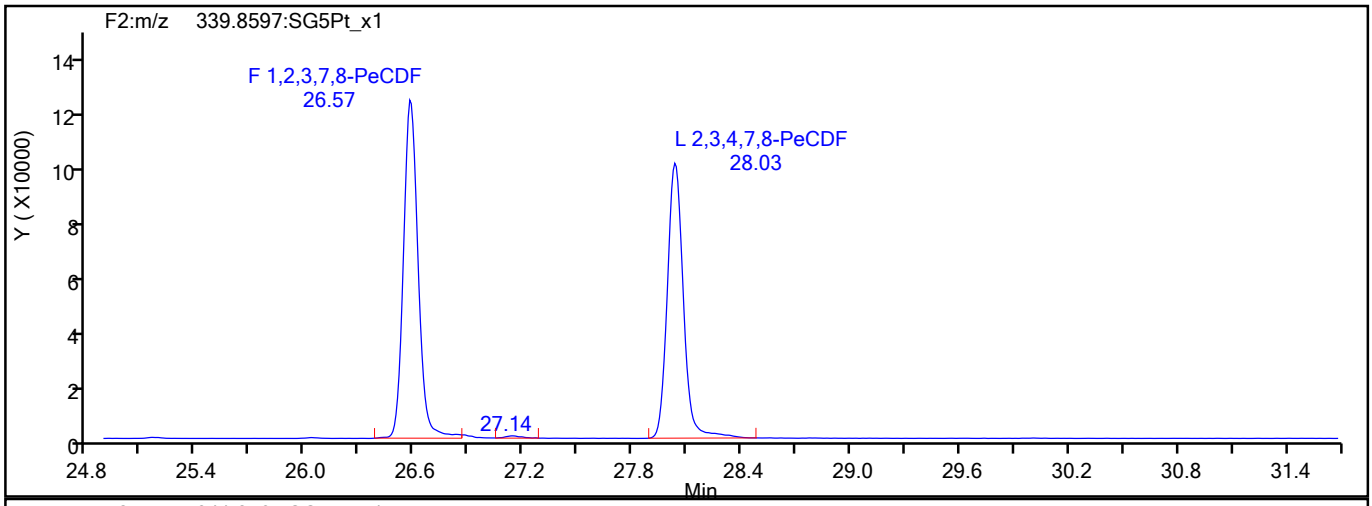

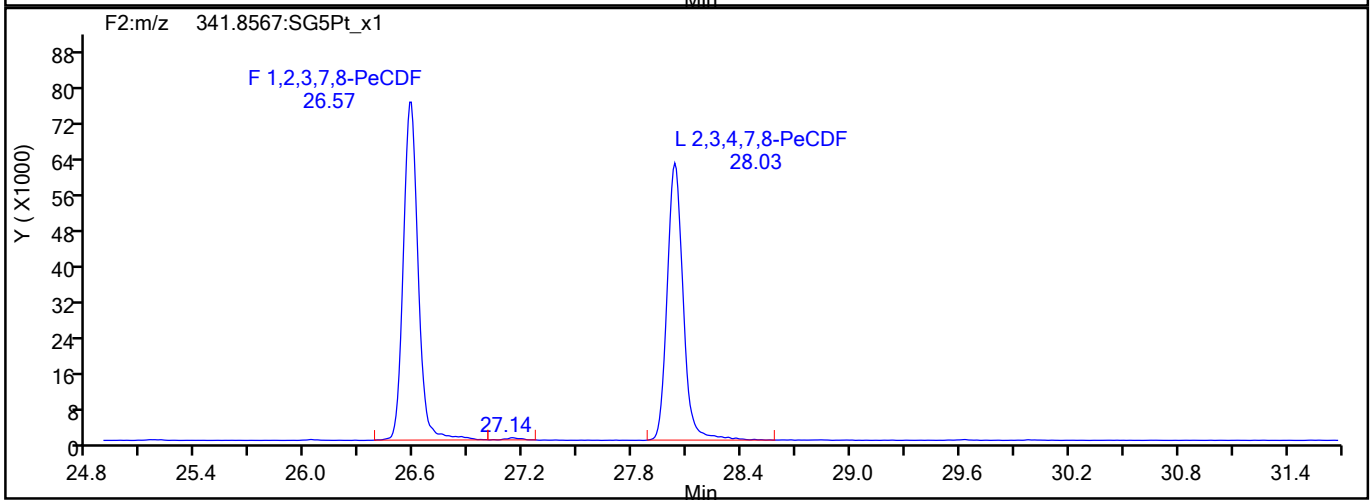

PeCDF Interference Mass

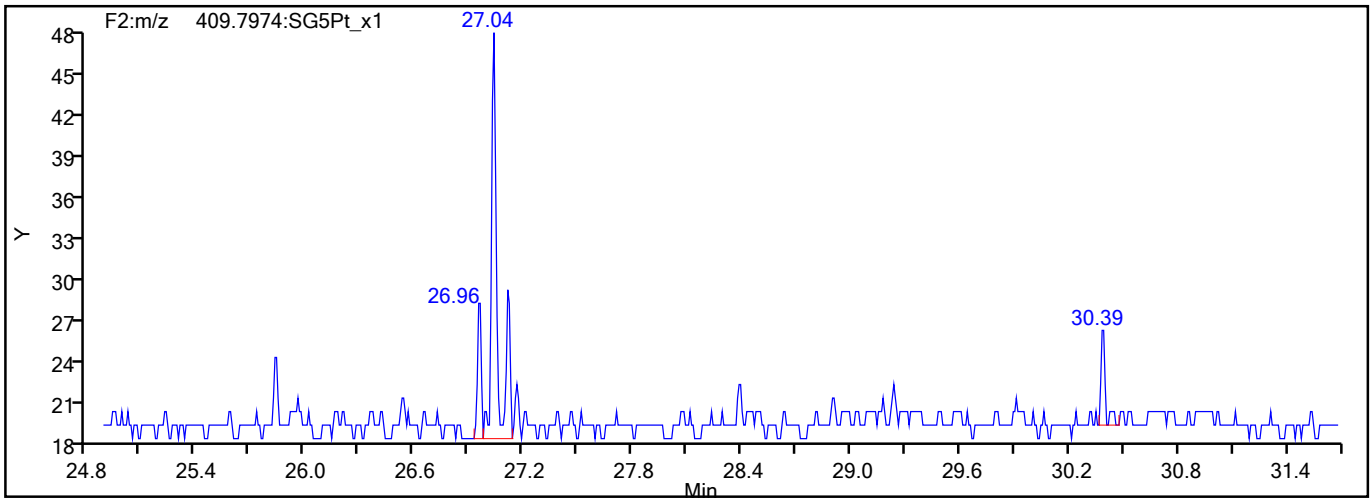

788977

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

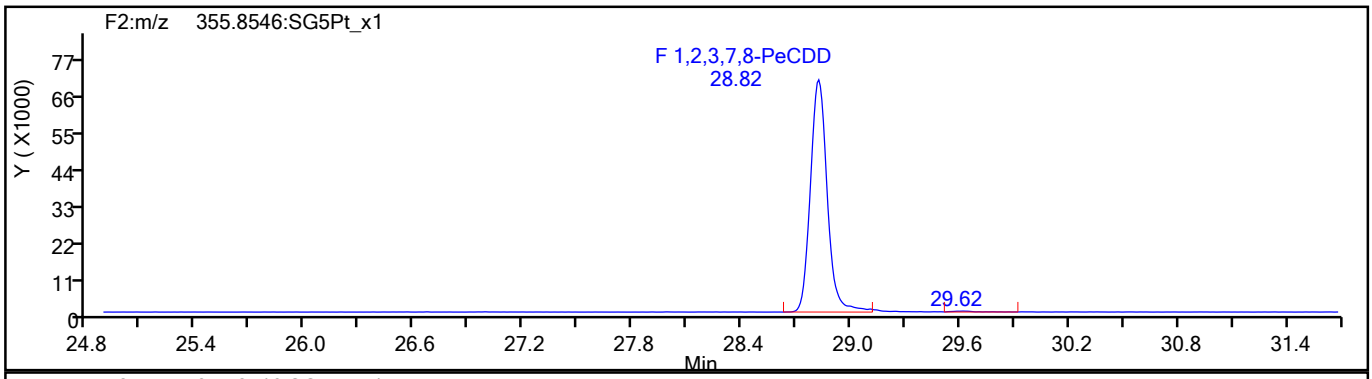

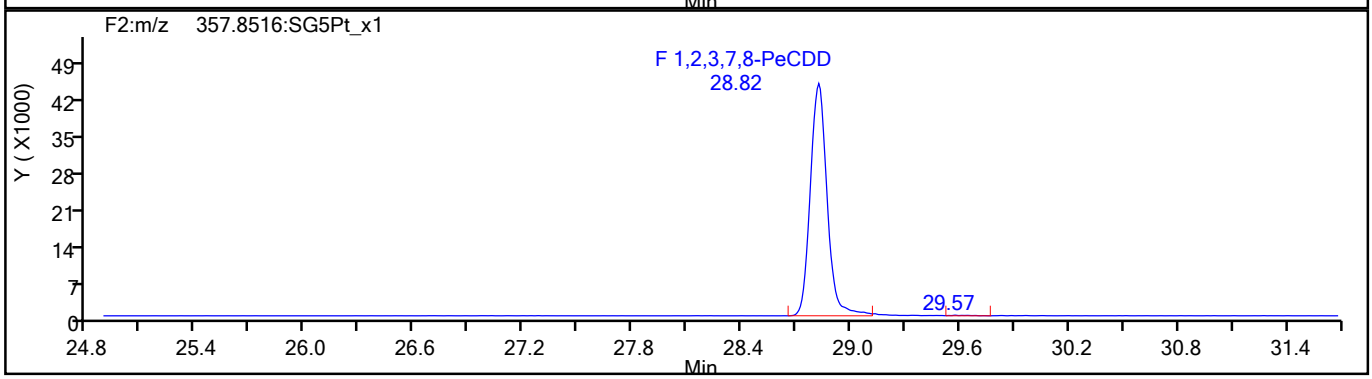

PeCDD Standards

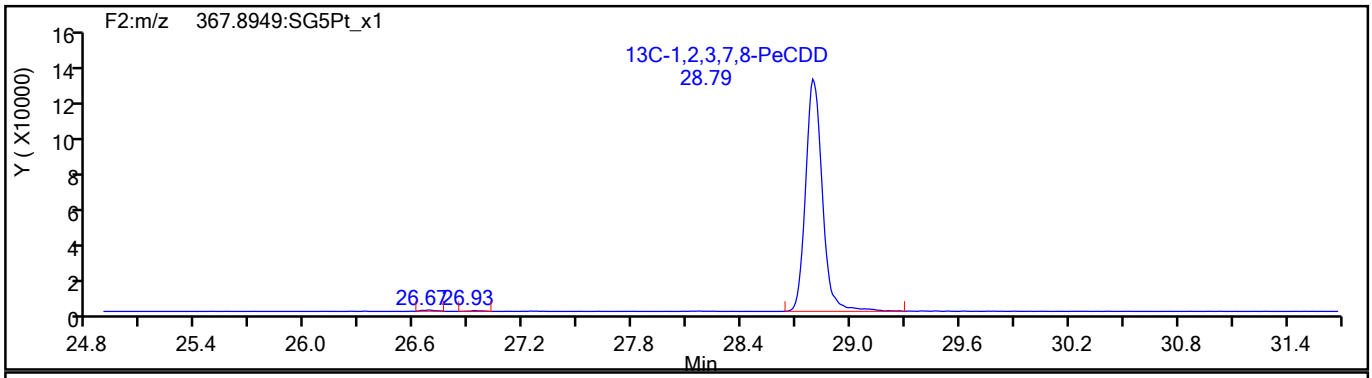

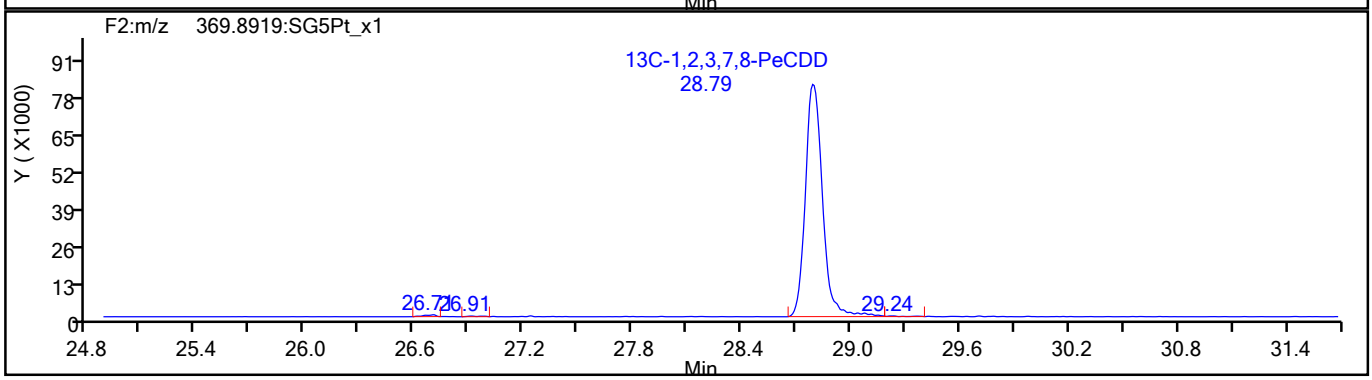

788978

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

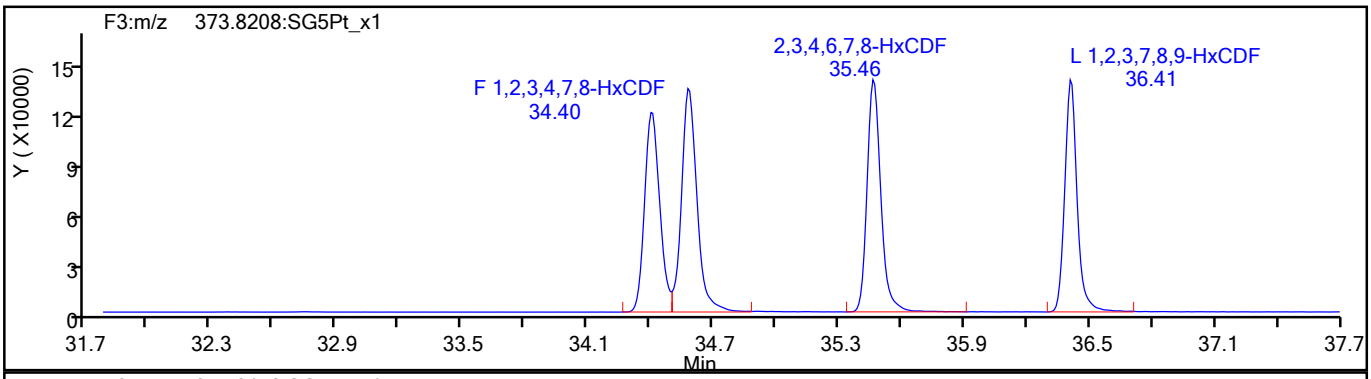

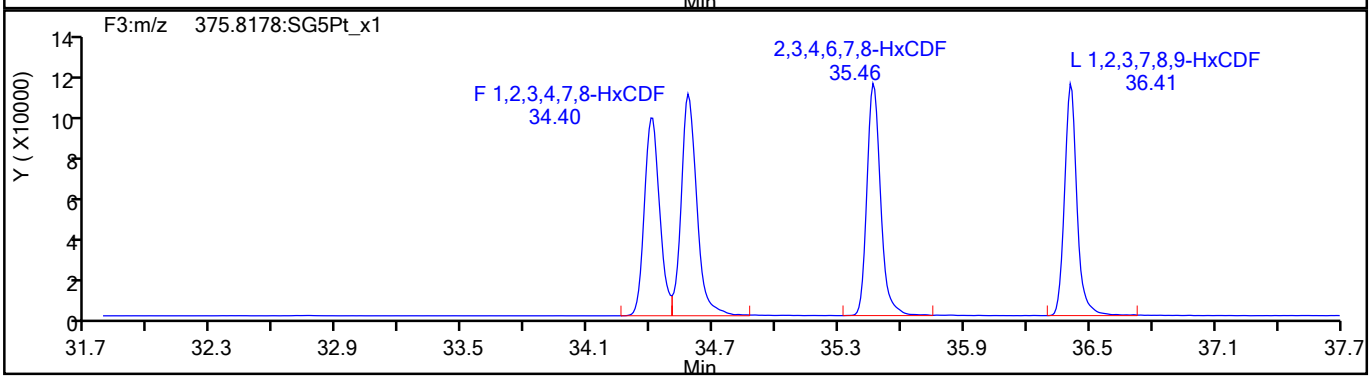

HxCDF Standards

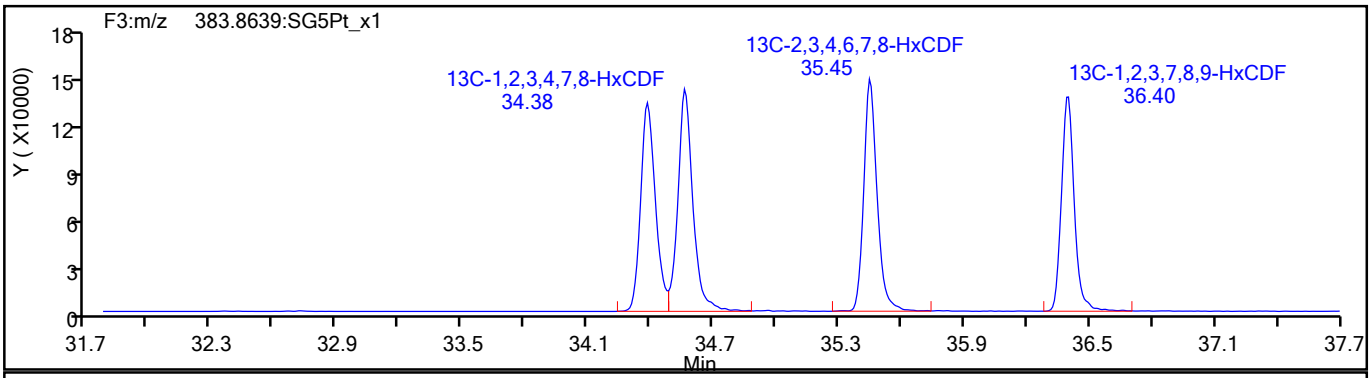

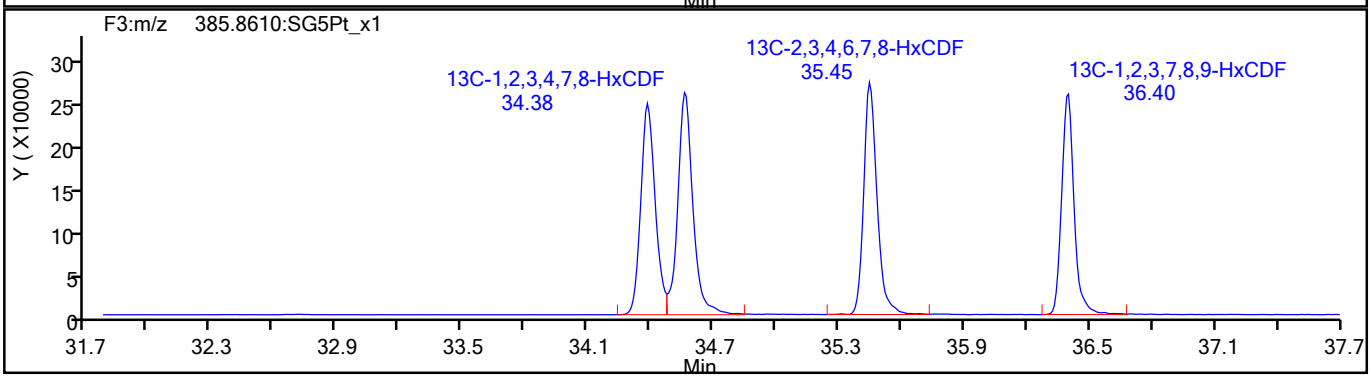

788979

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

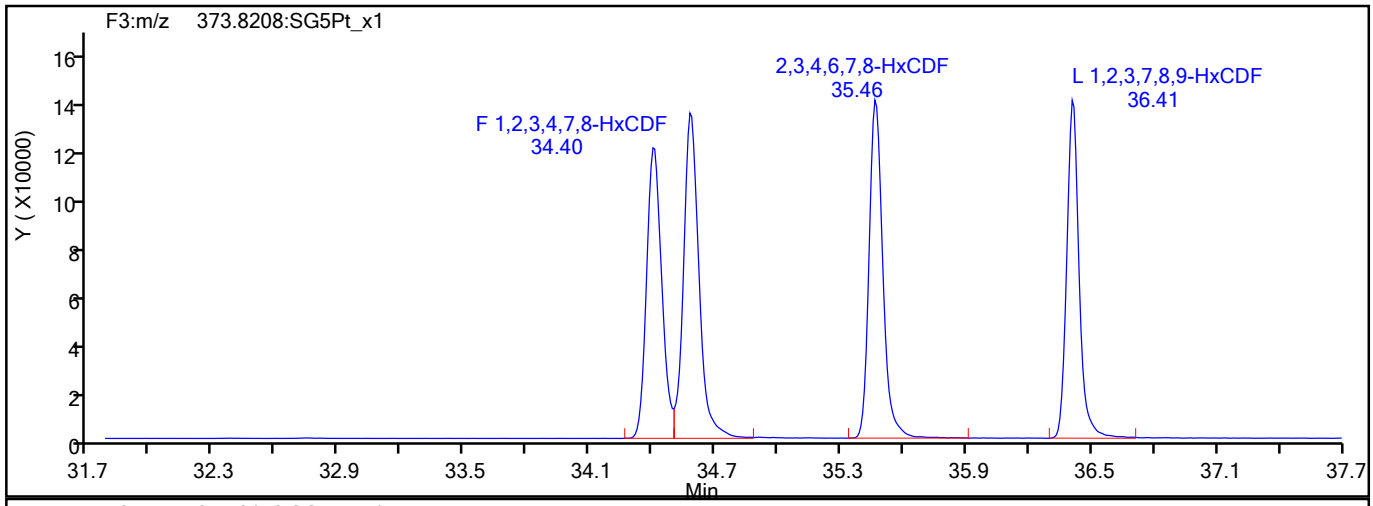

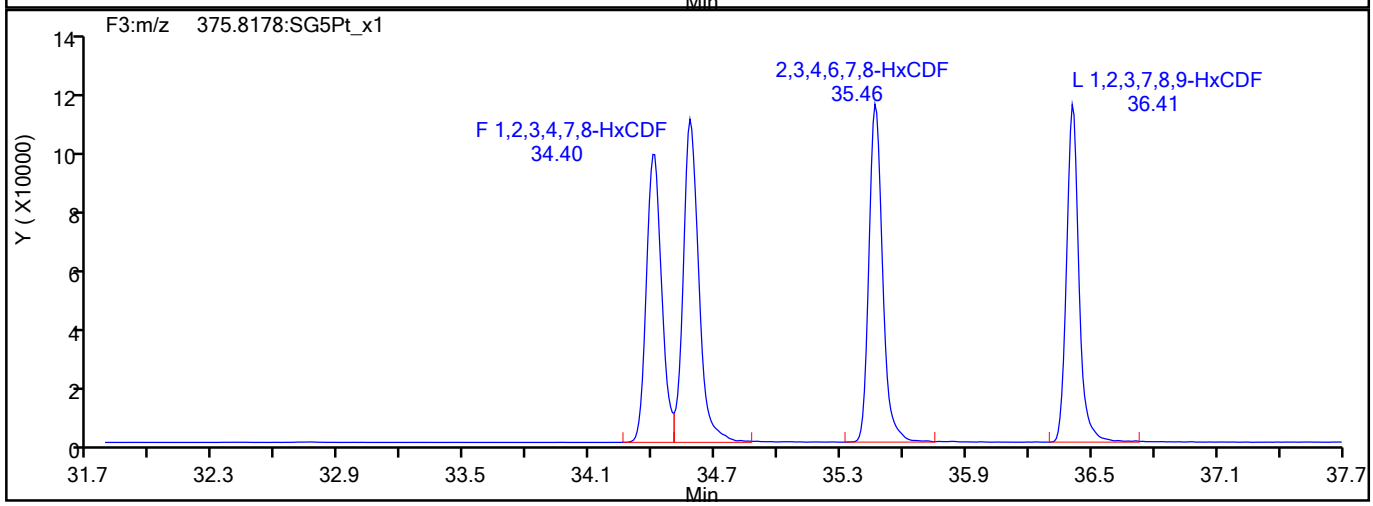

HxCDF Interference Mass

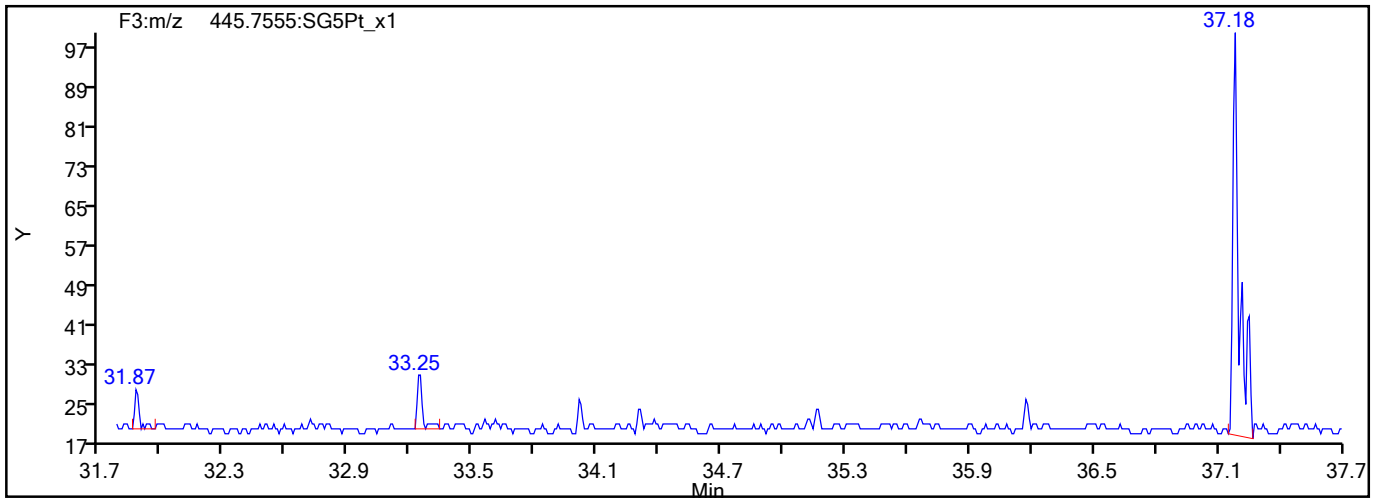

788980

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

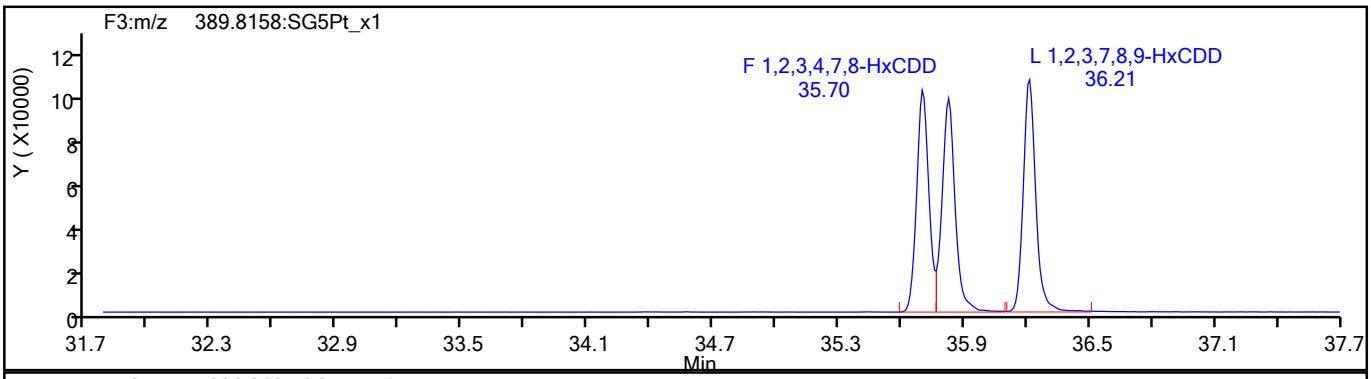

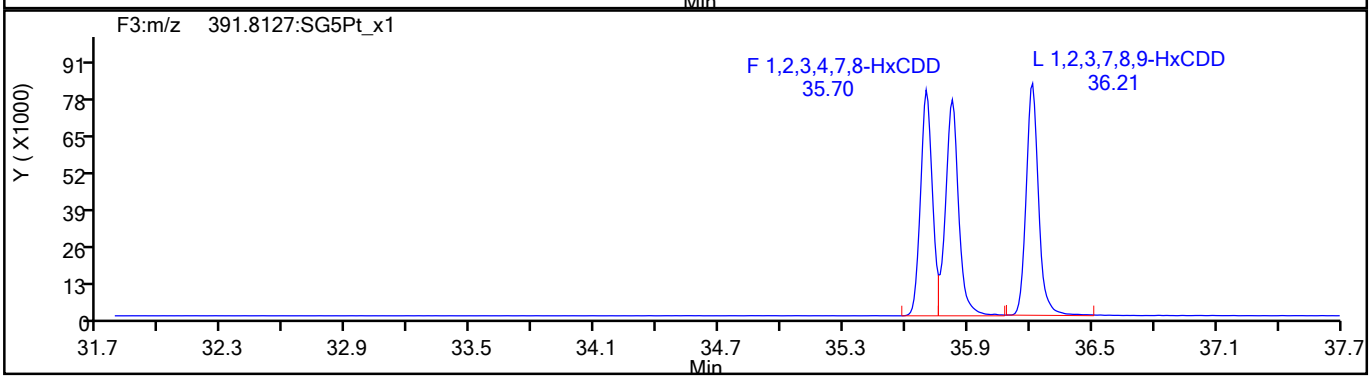

HxCDD Standards

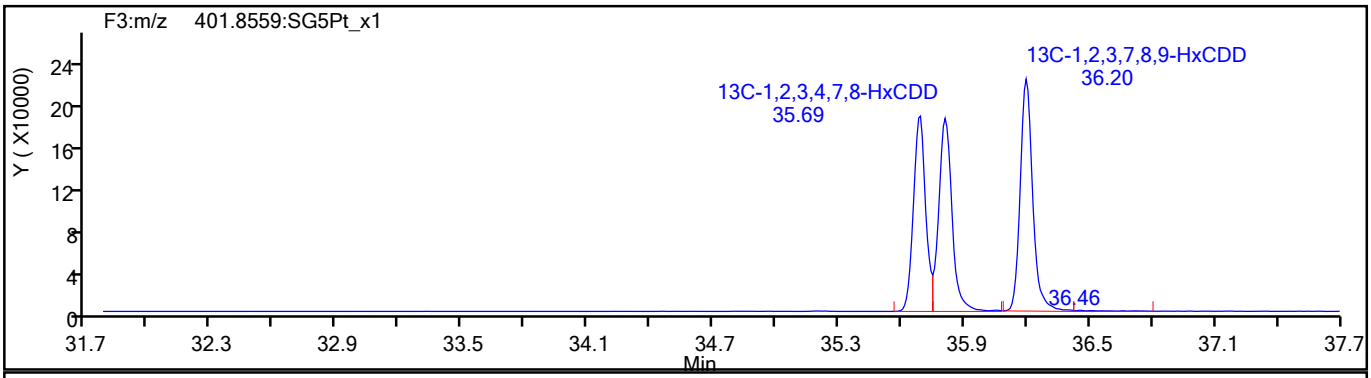

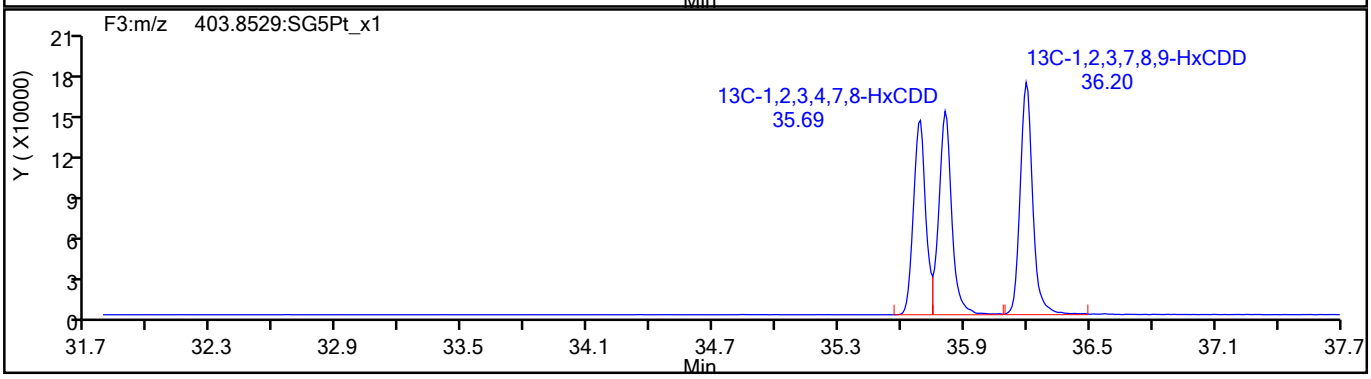

788981

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

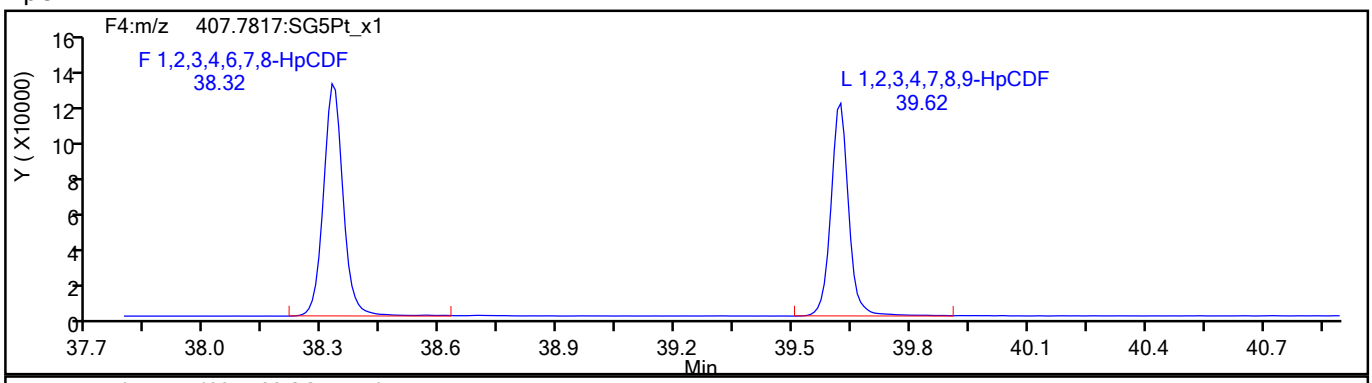

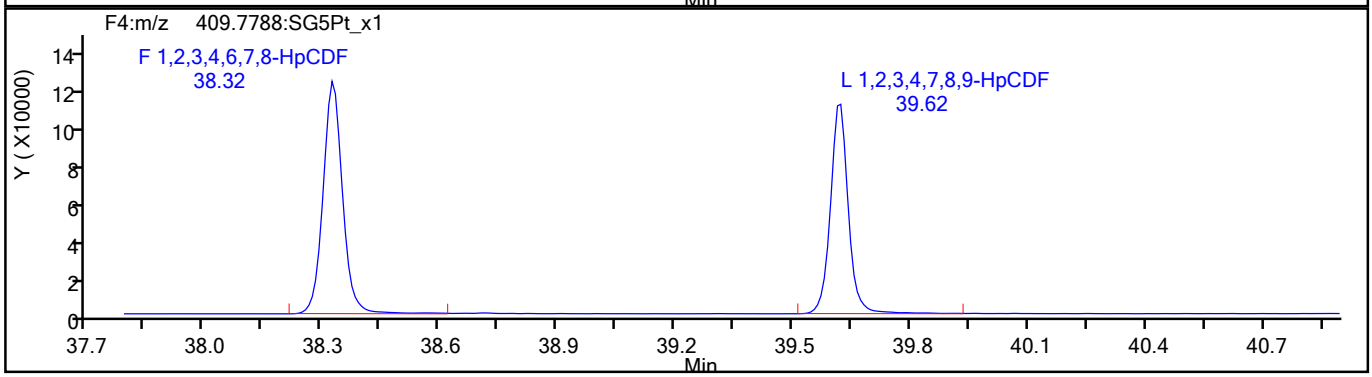

HpCDF Standards

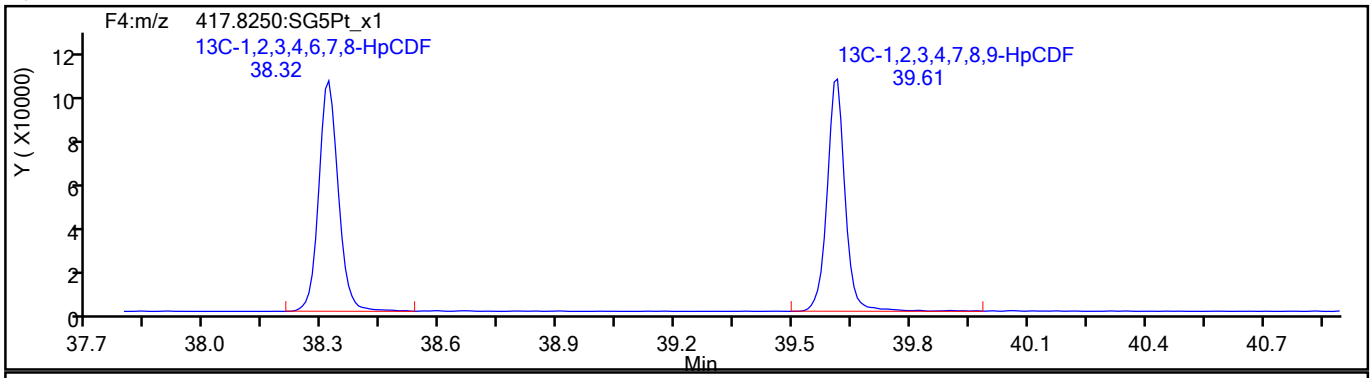

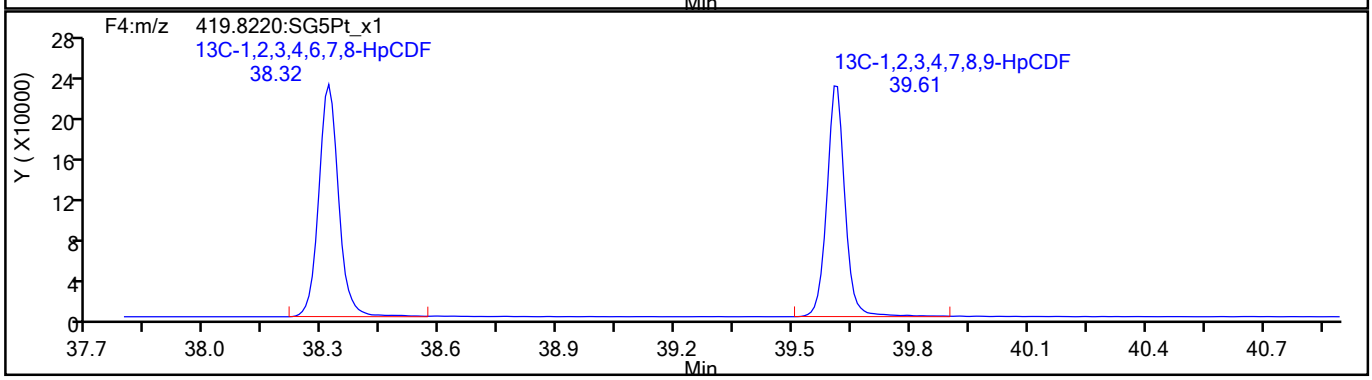

788982

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

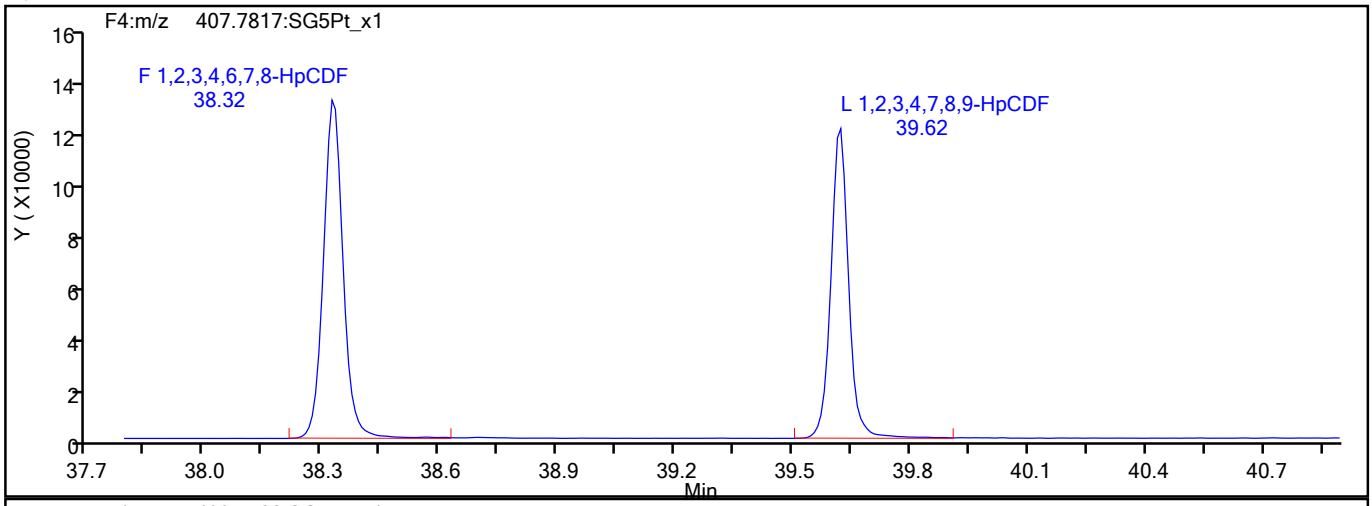

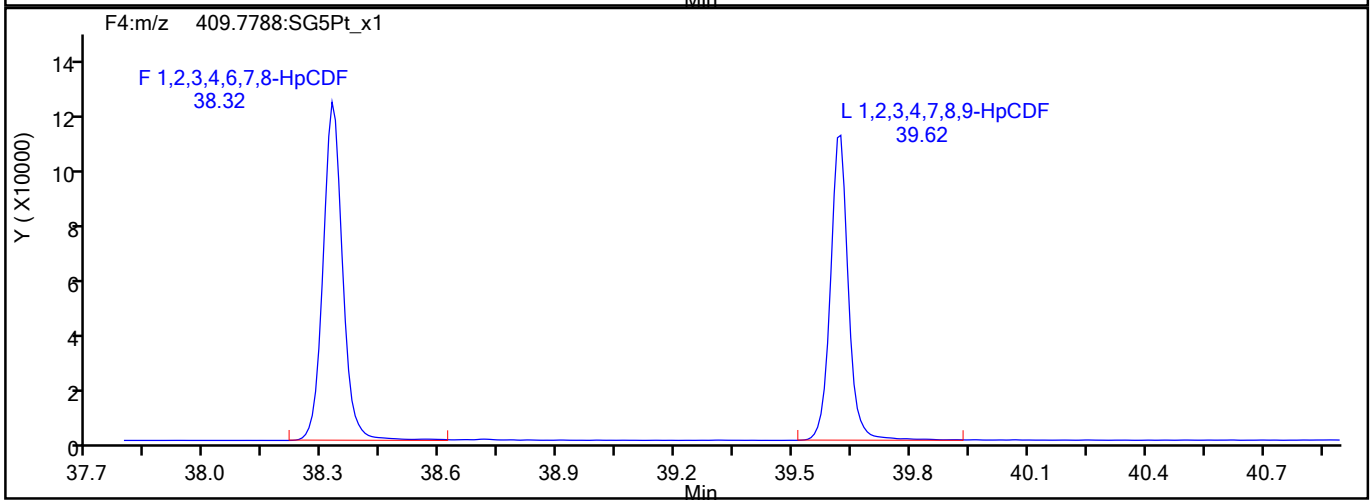

HpCDF Interference Mass

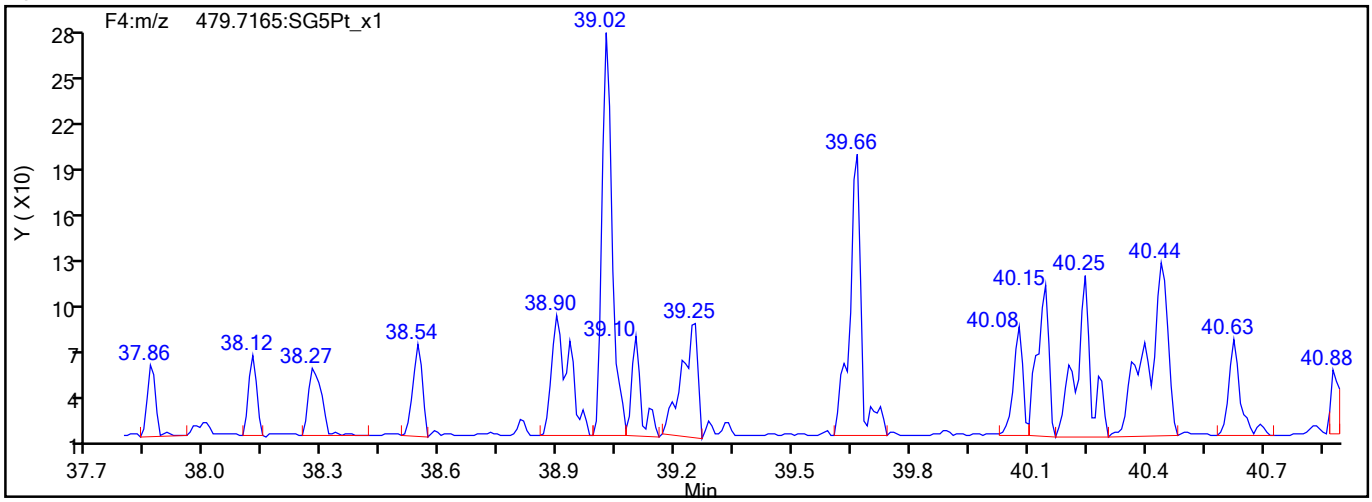

788983

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

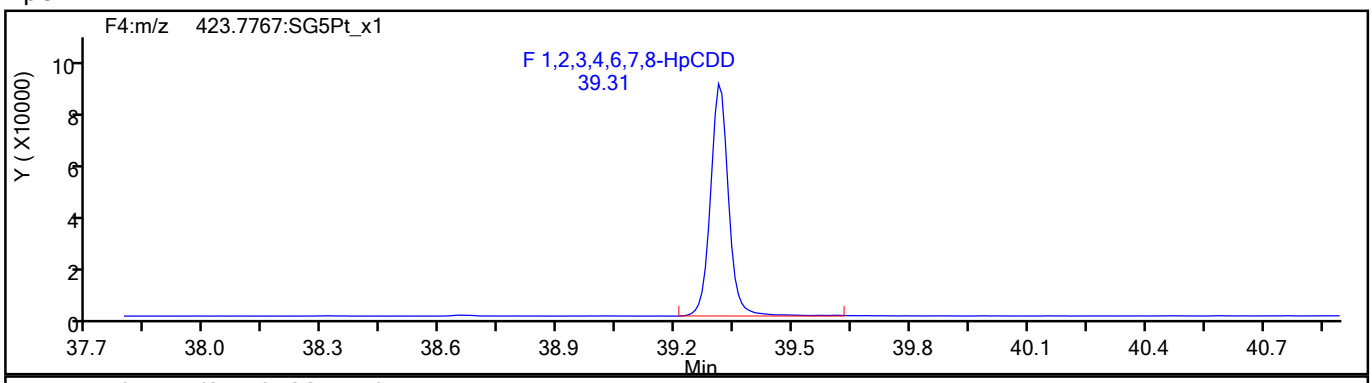

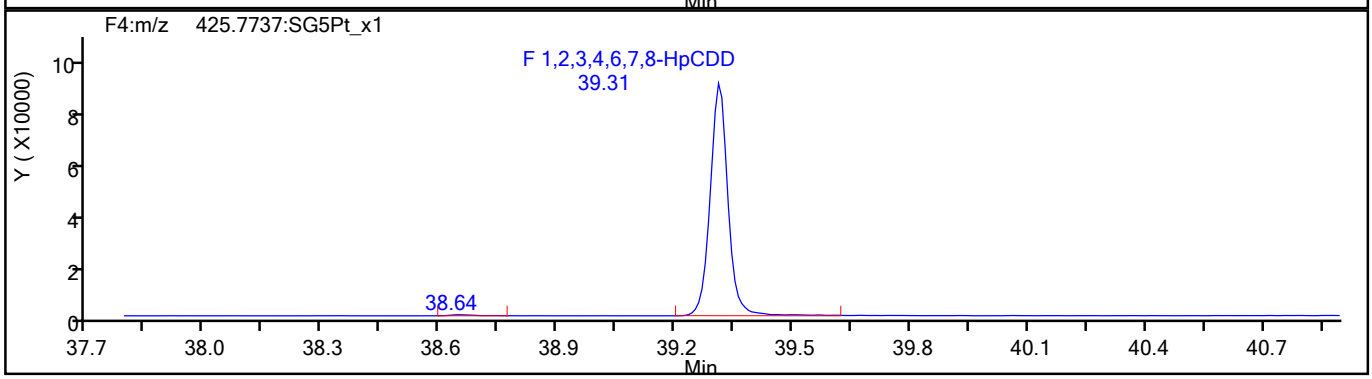

HpCDD Standards

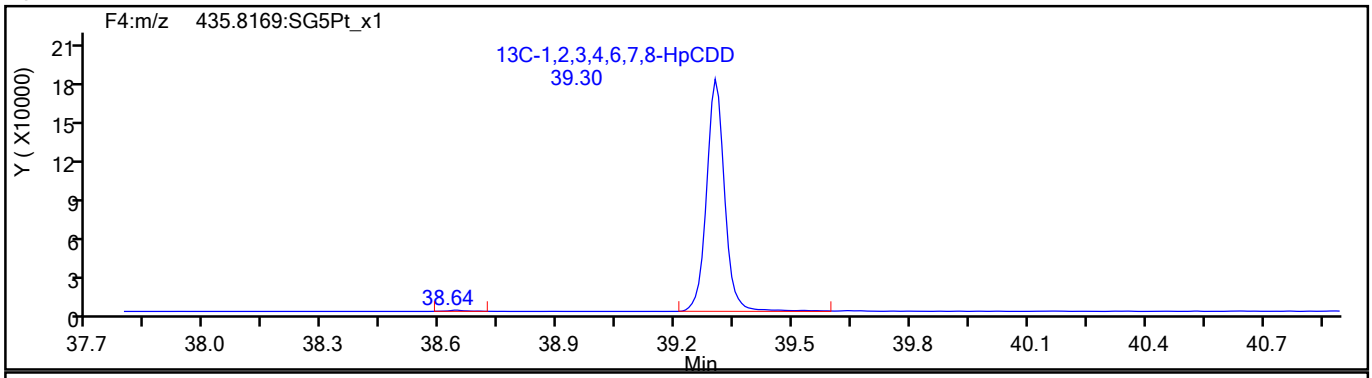

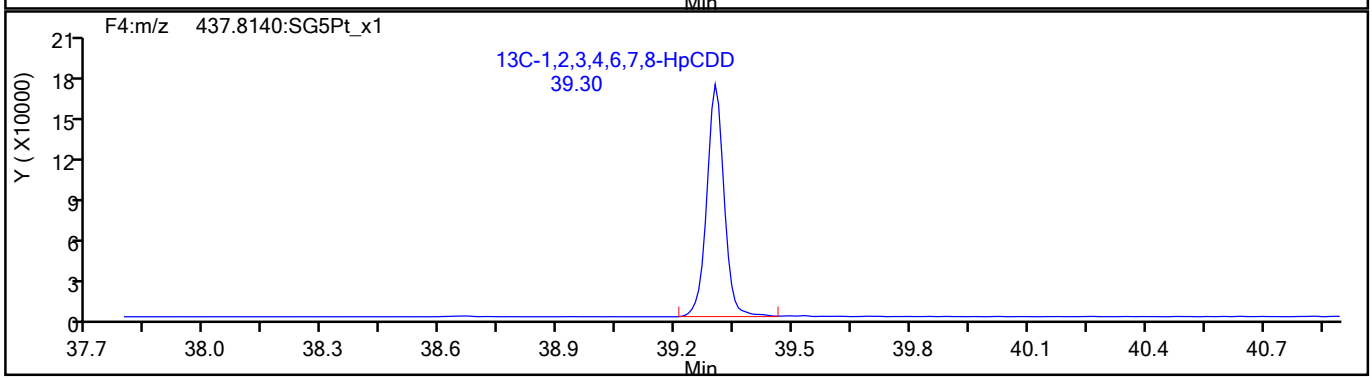

788984

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

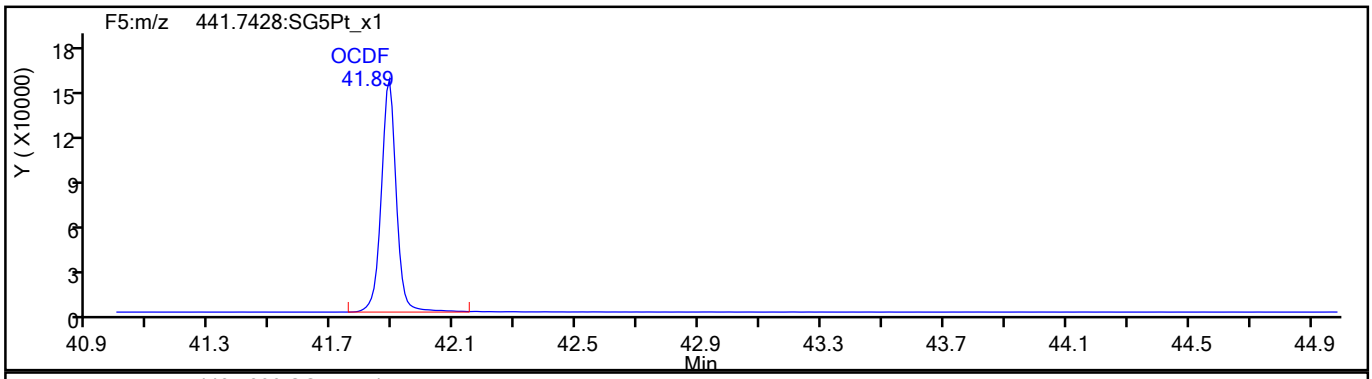

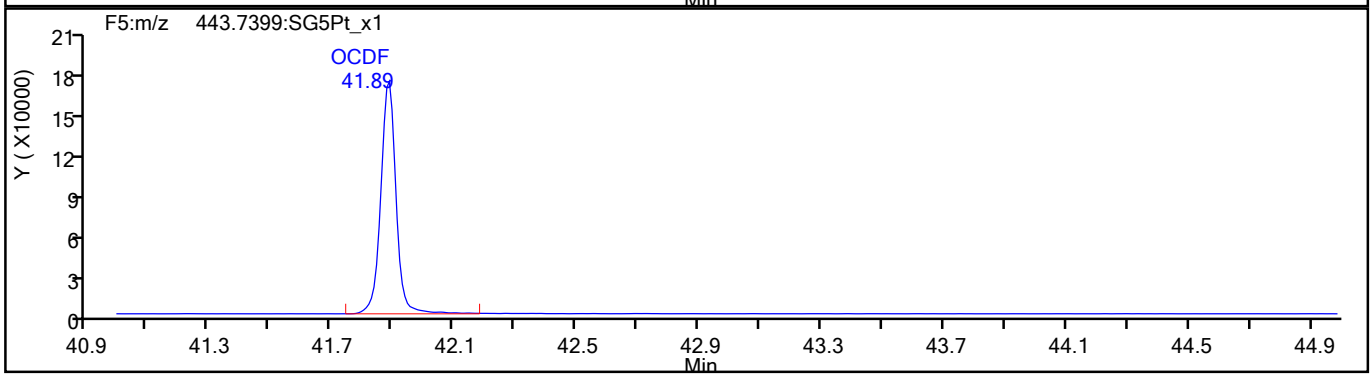

OCDF Standards

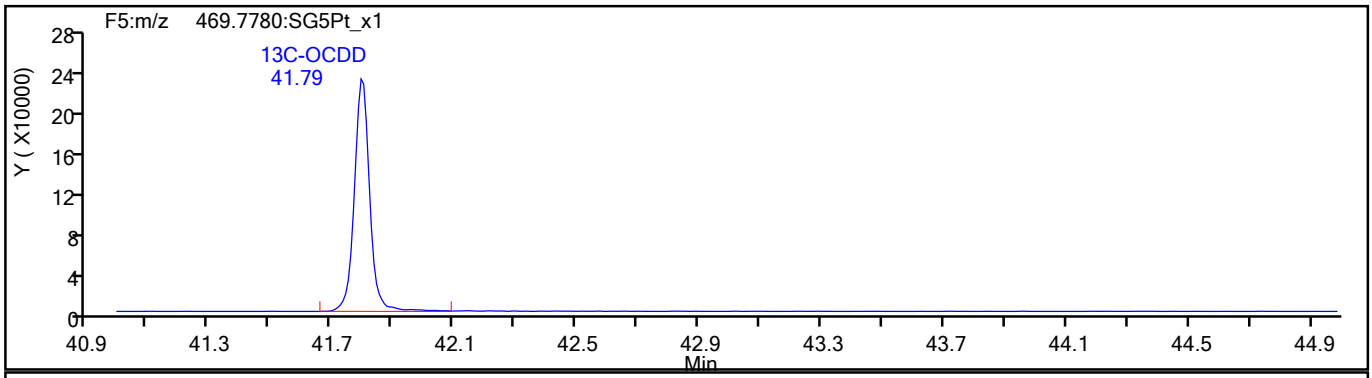

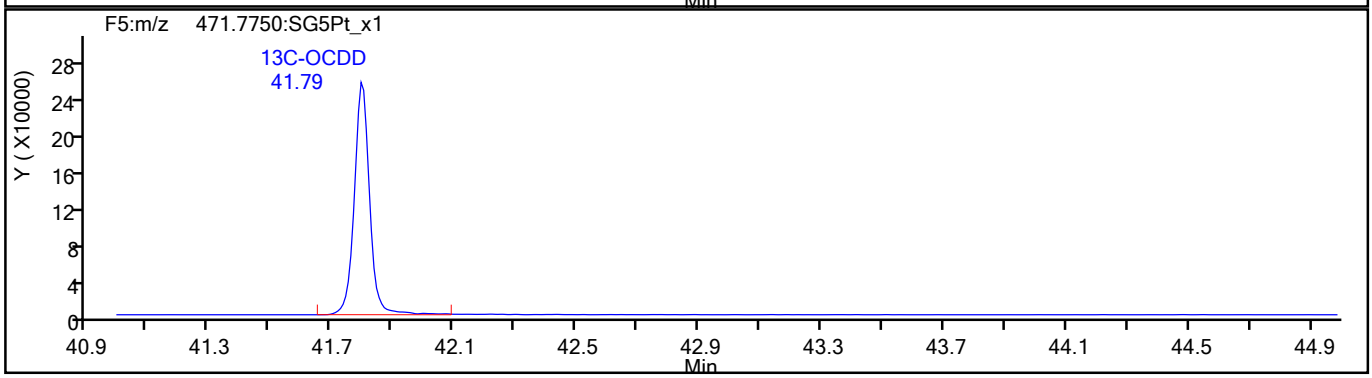

788985

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

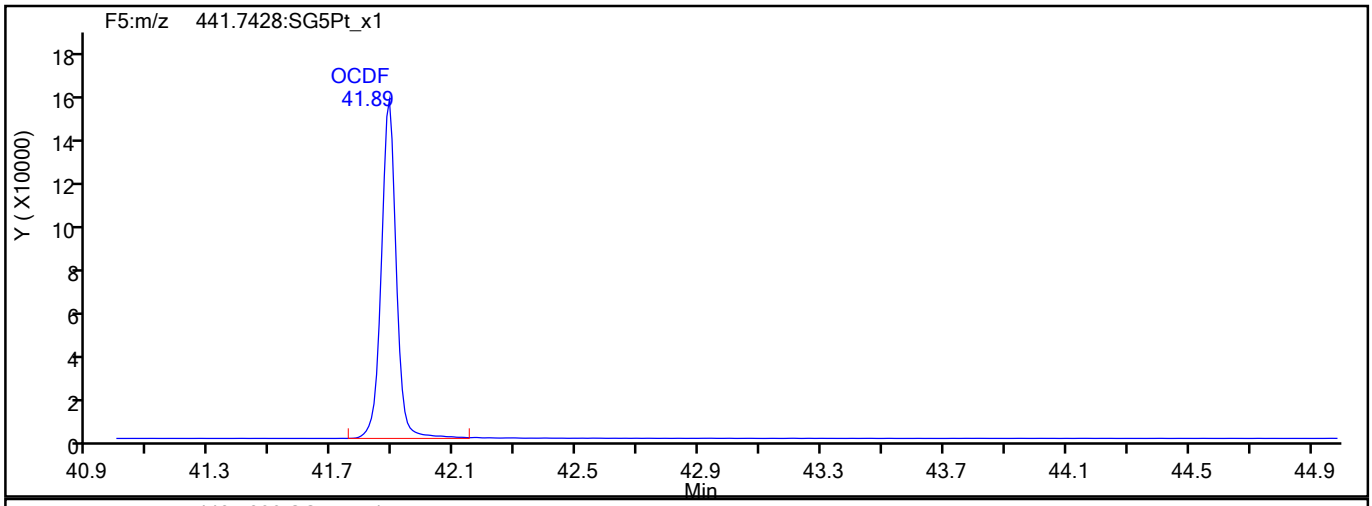

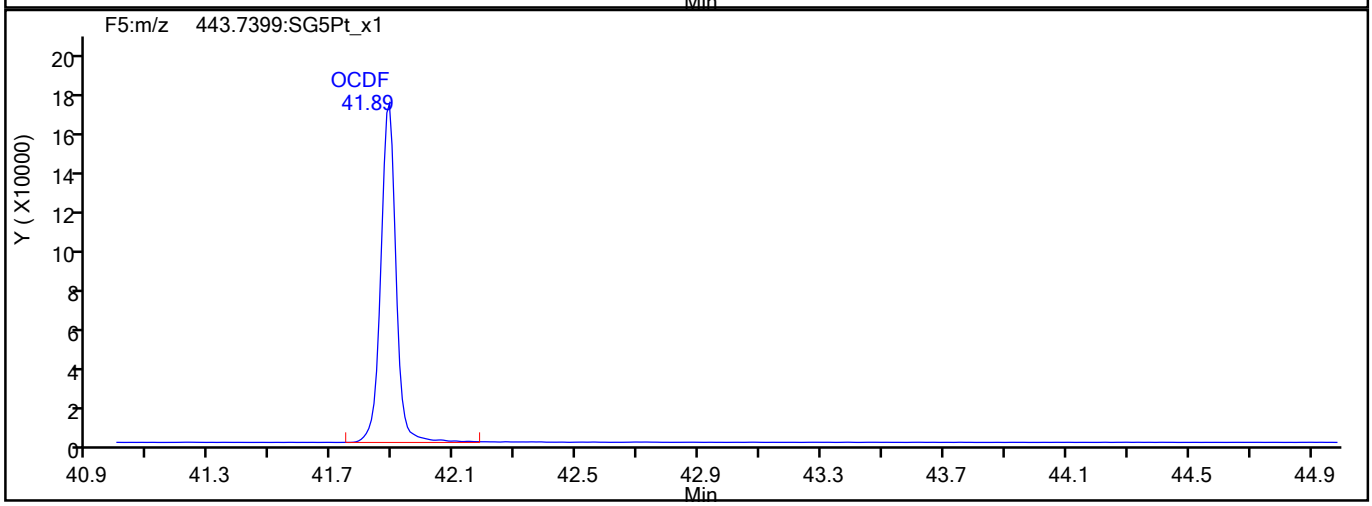

OCDF Interference Mass

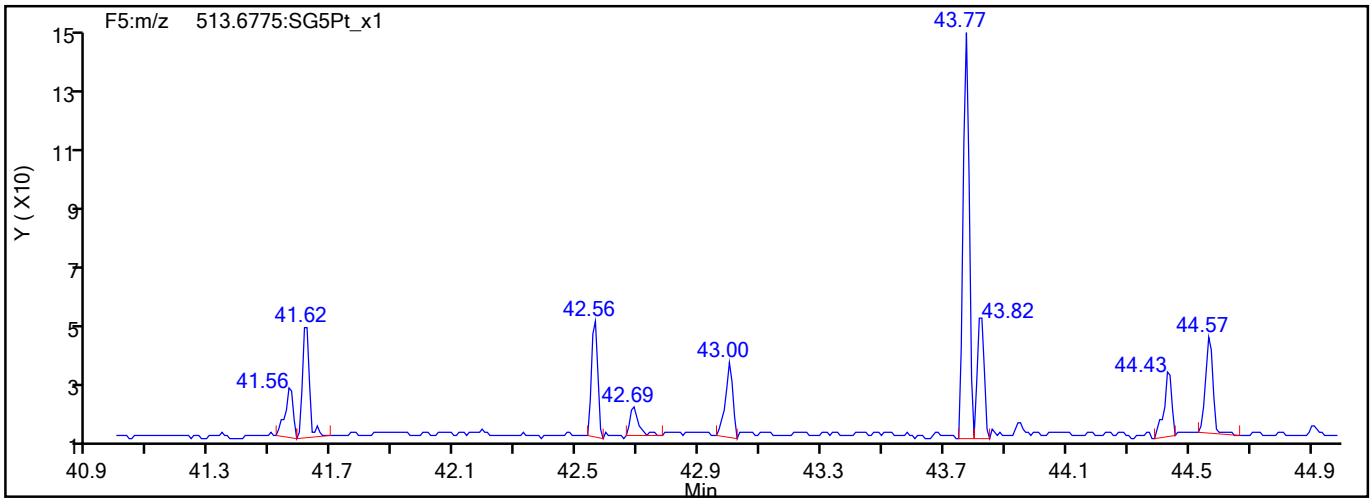

788986

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

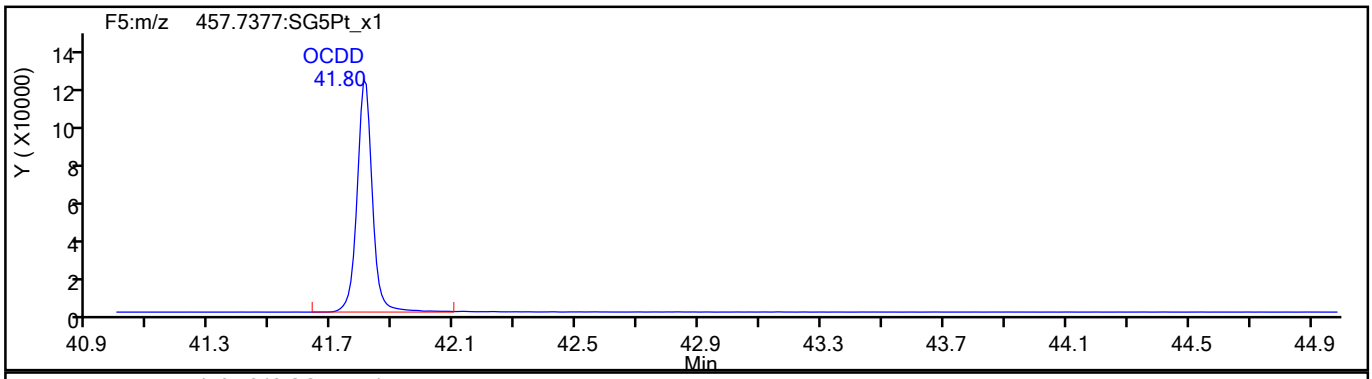

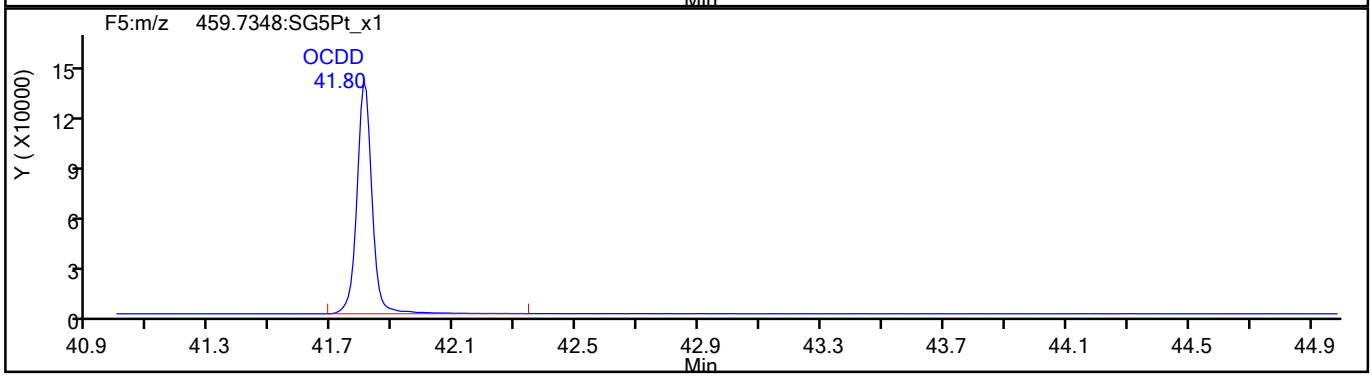

OCDD Standards

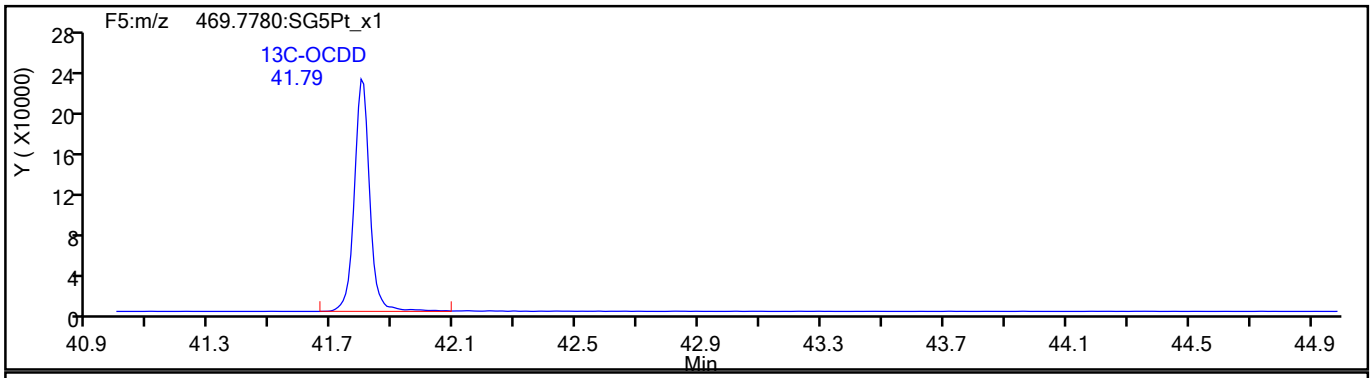

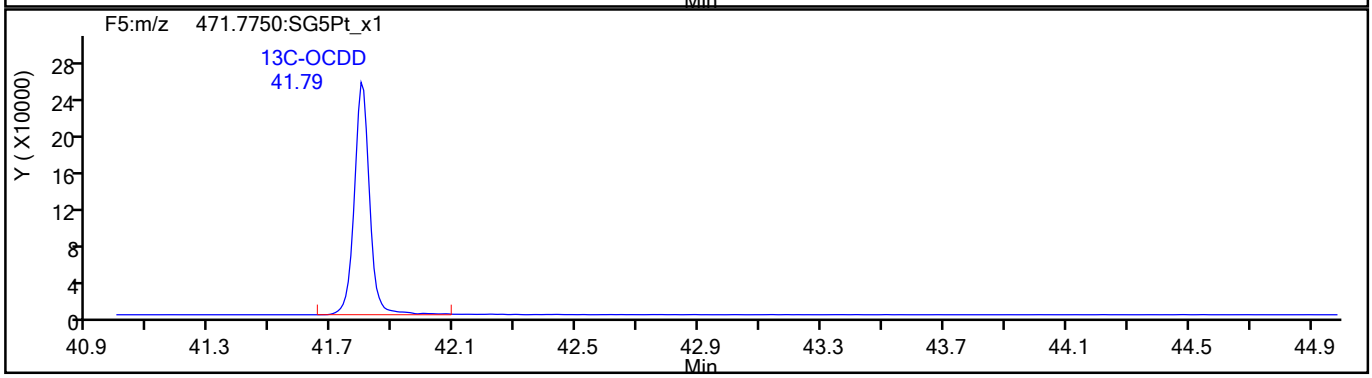

788987

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

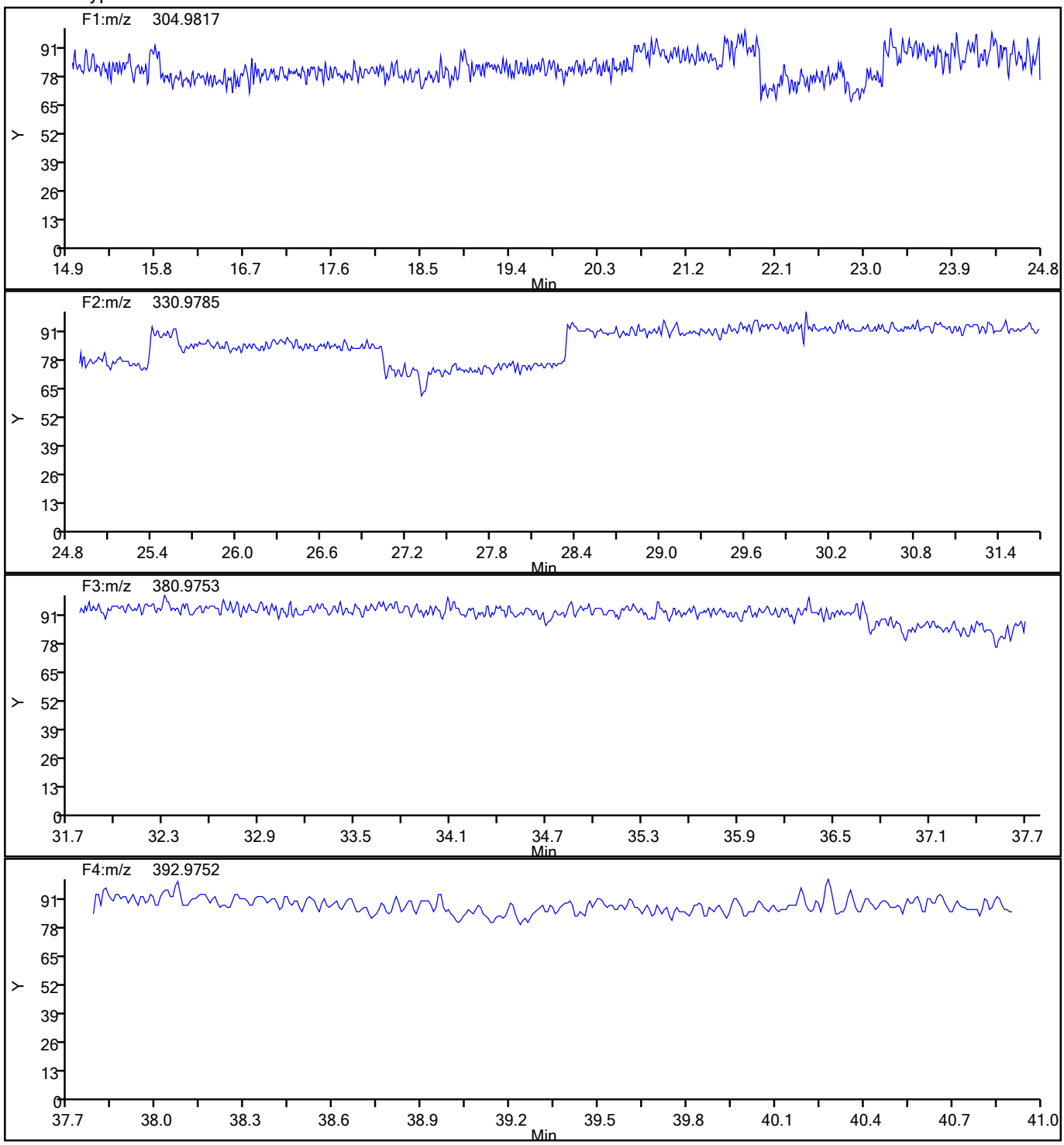

788988

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

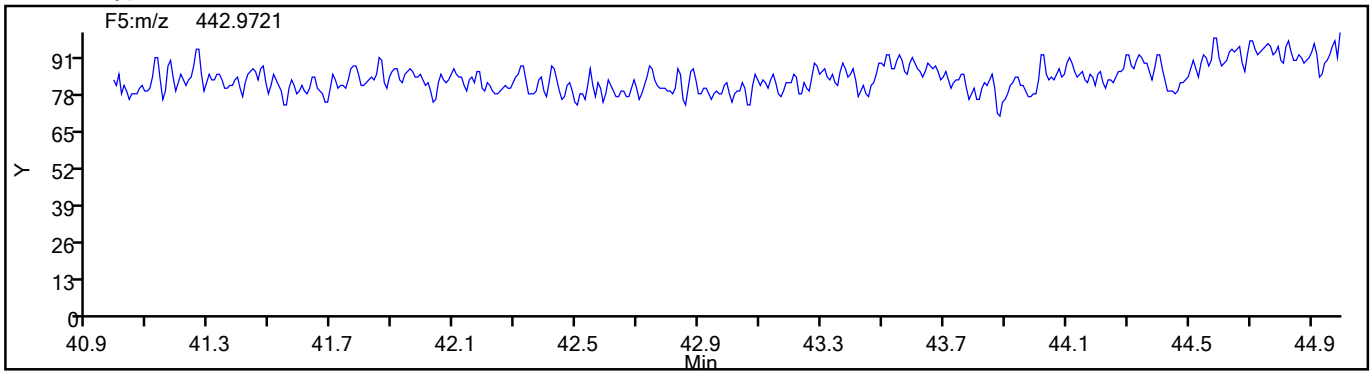

788989

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.548	2105852	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.612	2839435	0.79	1.3459	100.2	100.2	0.1786	0.1786	100	
2,3,7,8-TCDF	19.638	1274052	0.79	1.0802	41.5	41.5	0.0460	0.0460	104	
S Total TCDF					41.5	41.5	0.0460	0.0460		
D 13C-2,3,7,8-TCDD	20.909	1948011	0.81	0.9317	99.3	99.3	0.1662	0.1662	99.29	
$ 37Cl4-2,3,7,8-TCDD	20.935	848616		1.0083	40.0	40.0	0.0168	0.0168	99.92	
2,3,7,8-TCDD	20.935	875630	0.79	1.0753	41.8	41.8	0.0546	0.0546	105	
S Total TCDD					41.8	41.8	0.0546	0.0546		
D 13C-1,2,3,7,8-PeCDF	26.564	2432949	1.58	1.1405	101.3	101.3	0.3082	0.3082	101	
1,2,3,7,8-PeCDF	26.589	5302236	1.57	1.0543	206.7	206.7	0.5886	0.5886	103	
D 13C-2,3,4,7,8-PeCDF	28.023	2374722	1.60	1.1253	100.2	100.2	0.3123	0.3123	100	
2,3,4,7,8-PeCDF	28.048	5051373	1.58	1.0079	211.1	211.1	0.6756	0.6756	106	
S Total PeCDF					417.8	417.8	0.6321	0.6321		
D 13C-1,2,3,7,8-PeCDD	28.806	1521254	1.60	0.7165	100.8	100.8	0.1214	0.1214	101	
1,2,3,7,8-PeCDD	28.832	3351337	1.58	1.0465	210.5	210.5	0.1088	0.1088	105	
S Total PeCDD					210.5	210.5	0.1088	0.1088		
D 13C-1,2,3,4,7,8-HxCDF	34.391	1778238	0.53	0.9648	100.0	100.0	0.3266	0.3266	100	
1,2,3,4,7,8-HxCDF	34.407	4293581	1.24	1.1474	210.4	210.4	0.7958	0.7958	105	
D 13C-1,2,3,6,7,8-HxCDF	34.568	1995567	0.54	1.0708	101.1	101.1	0.2943	0.2943	101	
1,2,3,6,7,8-HxCDF	34.584	4991420	1.25	1.2178	205.4	205.4	0.6778	0.6778	103	
D 13C-2,3,4,6,7,8-HxCDF	35.444	2042874	0.53	1.0413	106.5	106.5	0.3026	0.3026	106	
2,3,4,6,7,8-HxCDF	35.461	5157631	1.25	1.2145	207.9	207.9	0.5811	0.5811	104	
D 13C-1,2,3,7,8,9-HxCDF	36.388	1742331	0.52	0.9731	97.2	97.2	0.3238	0.3238	97.17	
1,2,3,7,8,9-HxCDF	36.397	4445357	1.26	1.2401	205.7	205.7	0.6020	0.6020	103	
S Total HxCDF					829.5	829.5	0.6642	0.6642		
* 13C-1,2,3,7,8,9-HxCDD	36.194	1842630	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.680	1432215	1.28	0.7587	102.4	102.4	0.1598	0.1598	102	
1,2,3,4,7,8-HxCDD	35.697	3222329	1.26	1.0608	212.1	212.1	0.2911	0.2911	106	
D 13C-1,2,3,6,7,8-HxCDD	35.806	1669337	1.24	0.8593	105.4	105.4	0.1411	0.1411	105	
1,2,3,6,7,8-HxCDD	35.815	3426727	1.26	0.9933	206.7	206.7	0.2773	0.2773	103	

788990

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.203	3436144	1.26	1.1094	199.7	199.7	0.2625	0.2625	99.86	
S Total HxCDD					618.5	618.5	0.2770	0.2770		
D 13C-1,2,3,4,6,7,8-HpCDF	38.305	1392194	0.46	0.7359	102.7	102.7	0.3327	0.3327	103	
1,2,3,4,6,7,8-HpCDF	38.314	4243438	1.05	1.4421	211.4	211.4	0.6211	0.6211	106	
D 13C-1,2,3,4,7,8,9-HpCDF	39.595	1337573	0.45	0.6854	105.9	105.9	0.3573	0.3573	106	
1,2,3,4,7,8,9-HpCDF	39.603	3728415	1.05	1.3092	212.9	212.9	0.6974	0.6974	106	
S Total HpCDF					424.3	424.3	0.6592	0.6592		
D 13C-1,2,3,4,6,7,8-HpCDD	39.291	1337869	1.09	0.6745	107.6	107.6	0.2398	0.2398	108	
1,2,3,4,6,7,8-HpCDD	39.300	2935203	1.04	1.0503	208.9	208.9	0.3525	0.3525	104	
S Total HpCDD					208.9	208.9	0.3525	0.3525		
D 13C-OCDD	41.782	2177938	0.90	0.5446	217.0	217.0	0.3019	0.3019	109	
OCDF	41.866	6082696	0.91	1.3168	424.2	424.2	0.3916	0.3916	106	
OCDD	41.790	4803166	0.89	1.0620	415.3	415.3	0.3872	0.3872	104	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.548	20.547	0		944131	150571	127	317	1186		
333.9338	20.548	20.547	0		1161721	185169	81	202	2286	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.612	19.616	0	0.954	1253649	203983	215	537	949		
317.9389	19.621	19.616	0	0.955	1585786	258903	108	270	2397	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.638	19.646	0	1.001	561539	89311	44	110	2030		
305.8987	19.638	19.646	0	1.001	712513	111913	48	120	2332	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.909	20.910	0	1.018	869542	131887	127	317	1038		
333.9338	20.909	20.910	0	1.018	1078469	161266	81	202	1991	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.935	20.935	0	1.019	848616	126683	23	57	5508		
2,3,7,8-TCDD											
319.8965	20.935	20.939	0	1.001	385954	58537	36	90	1626		
321.8936	20.935	20.939	0	1.001	489676	72800	33	82	2206	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.564	26.560	0	1.293	1489826	258263	302	755	855		
353.8970	26.564	26.560	0	1.293	943123	164307	170	425	967	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.589	26.584	0	1.001	3241988	556504	638	1595	872		
341.8567	26.589	26.584	0	1.001	2060248	355863	411	1027	866	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.023	28.014	1	1.364	1460304	235761	302	755	781		
353.8970	28.023	28.014	1	1.364	914418	149333	170	425	878	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.048	28.039	1	1.001	3094556	515182	638	1595	807		
341.8567	28.048	28.039	1	1.001	1956817	323488	411	1027	787	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.806	28.801	0	1.402	936578	147383	82	205	1797		
369.8919	28.806	28.801	0	1.402	584676	95987	35	87	2742	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.832	28.828	0	1.001	2051590	320770	72	180	4455		
357.8516	28.832	28.828	0	1.001	1299747	208335	39	97	5342	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.391	34.384	0	0.950	617675	123602	191	477	647		
385.8610	34.382	34.384	0	0.950	1160563	234726	378	945	621	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.407	34.405	0	1.000	2381065	482843	745	1862	648		
375.8178	34.407	34.405	0	1.000	1912516	389022	564	1410	690	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.568	34.562	0	0.955	696940	140400	191	477	735		
385.8610	34.568	34.562	0	0.955	1298627	255987	378	945	677	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.584	34.582	0	1.000	2775629	556827	745	1862	747		
375.8178	34.584	34.582	0	1.000	2215791	440544	564	1410	781	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.444	35.444	0	0.979	707399	160237	191	477	839		
385.8610	35.444	35.444	0	0.979	1335475	303406	378	945	803	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.461	35.461	0	1.000	2866027	647502	745	1862	869		
375.8178	35.461	35.461	0	1.000	2291604	520419	564	1410	923	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.388	36.388	0	1.005	598306	148820	191	477	779		
385.8610	36.388	36.388	0	1.005	1144025	289476	378	945	766	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.397	36.402	0	1.000	2476452	605954	745	1862	813		
375.8178	36.397	36.402	0	1.000	1968905	483719	564	1410	858	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.194	36.192	0		1026134	250783	116	290	2162		
403.8529	36.186	36.192	0		816496	200495	103	257	1947	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.680	35.680	0	0.986	804332	193336	116	290	1667		
403.8529	35.680	35.680	0	0.986	627883	151493	103	257	1471	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.697	35.695	0	1.000	1795969	436602	241	602	1812		
391.8127	35.697	35.695	0	1.000	1426360	347066	185	462	1876	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.806	35.805	0	0.989	925744	214247	116	290	1847		
403.8529	35.806	35.805	0	0.989	743593	172424	103	257	1674	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.815	35.820	0	1.000	1911971	434863	241	602	1804		
391.8127	35.815	35.820	0	1.000	1514756	347831	185	462	1880	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.203	36.208	0	1.015	1913013	474198	241	602	1968		
391.8127	36.203	36.208	0	1.015	1523131	377483	185	462	2040	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.305	38.305	0	1.058	436356	136587	154	385	887		
419.8220	38.305	38.305	0	1.058	955838	295474	288	720	1026	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.314	38.317	0	1.000	2176116	664265	789	1972	842		
409.7788	38.314	38.317	0	1.000	2067322	632606	759	1897	833	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.595	39.600	0	1.094	416057	129213	154	385	839		
419.8220	39.595	39.600	0	1.094	921516	294690	288	720	1023	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.603	39.608	0	1.000	1911190	607125	789	1972	769		
409.7788	39.603	39.608	0	1.000	1817225	579552	759	1897	764	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.291	39.293	0	1.086	696483	219725	150	375	1465		
437.8140	39.291	39.293	0	1.086	641386	202177	142	355	1424	1.09(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.300	39.301	0	1.000	1499524	478443	315	787	1519		
425.7737	39.300	39.301	0	1.000	1435679	451932	310	775	1458	1.04(0.88-1.20)	
13C-OCDD											
469.7780	41.782	41.785	0	1.154	1033665	317462	144	360	2205		
471.7750	41.782	41.785	0	1.154	1144273	352280	153	382	2302	0.90(0.76-1.02)	
OCDF											
441.7428	41.866	41.875	-1	1.002	2905097	900371	326	815	2762		
443.7399	41.866	41.875	-1	1.002	3177599	981356	365	912	2689	0.91(0.76-1.02)	
OCDD											
457.7377	41.790	41.794	0	1.000	2268006	705330	257	642	2744		
459.7348	41.790	41.794	0	1.000	2535160	785518	294	735	2672	0.89(0.76-1.02)	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

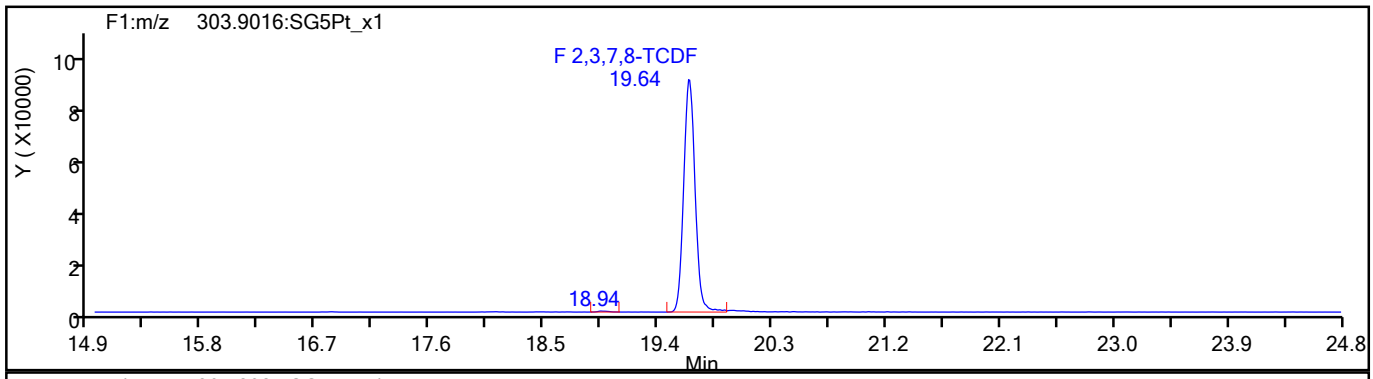

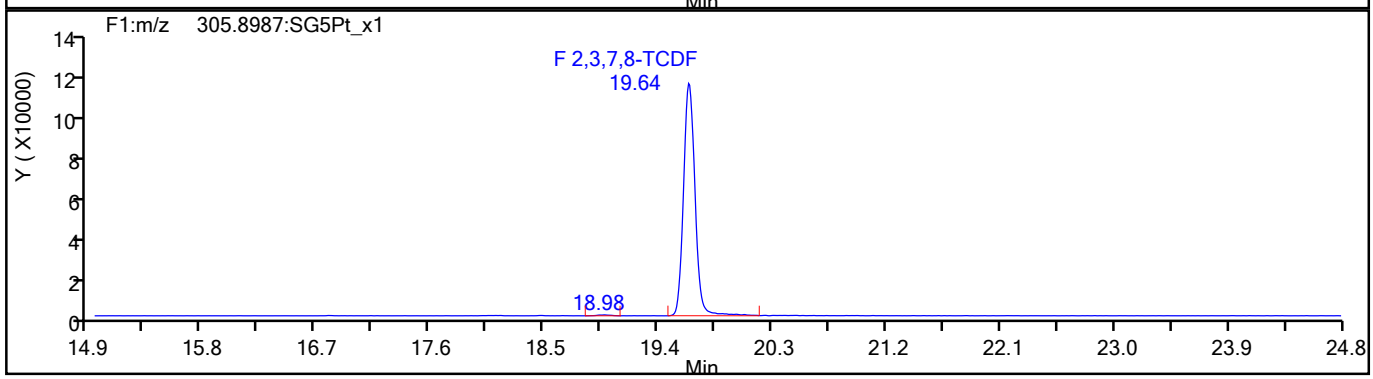

TCDF Standards

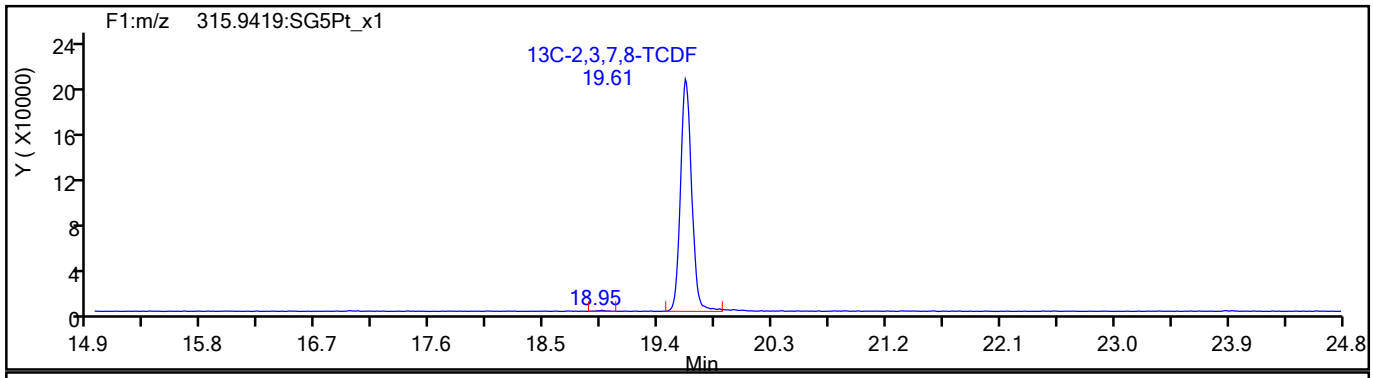

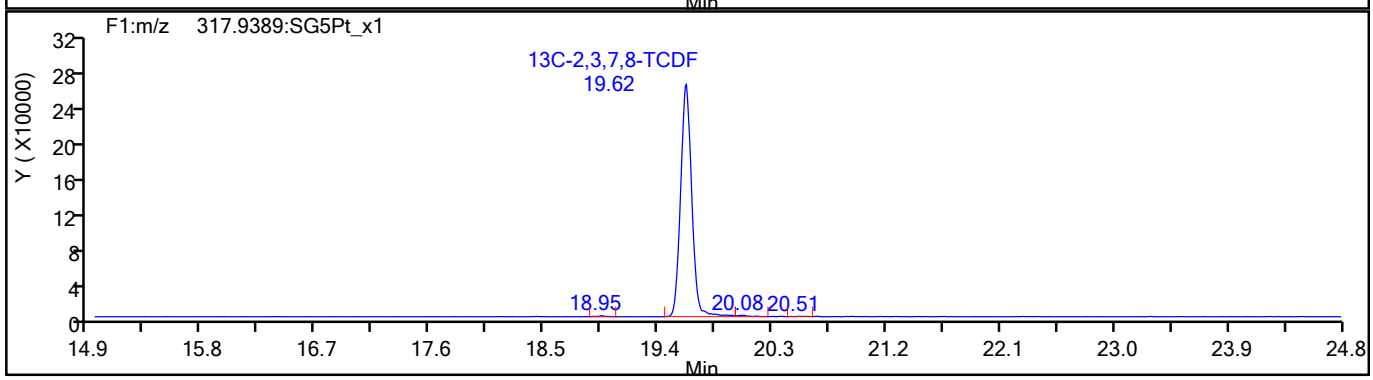

788995

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

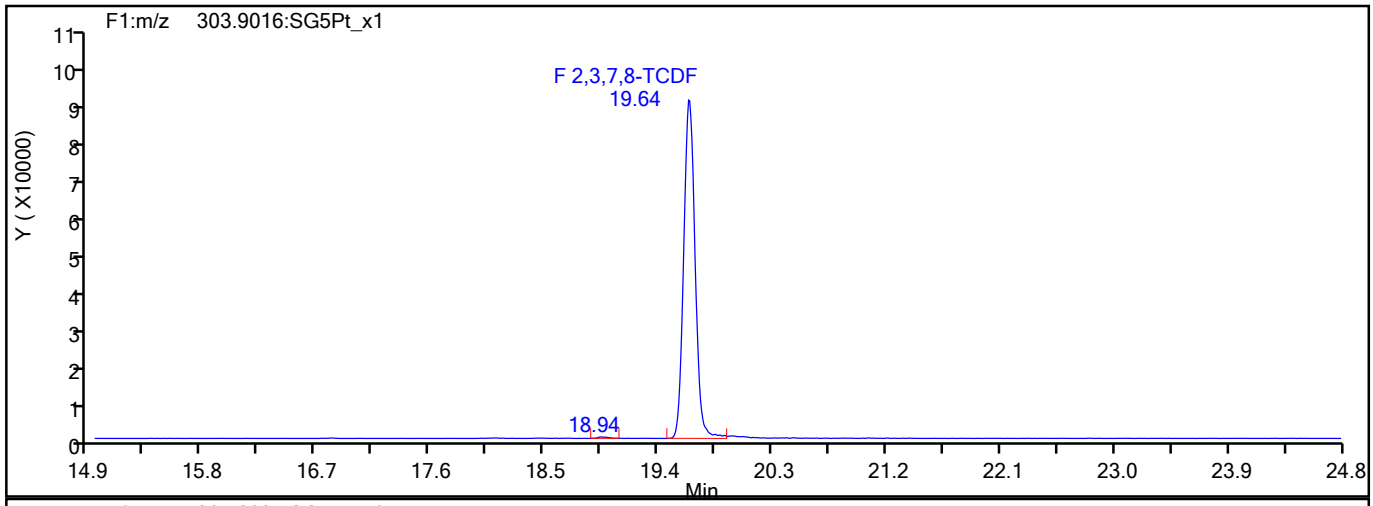

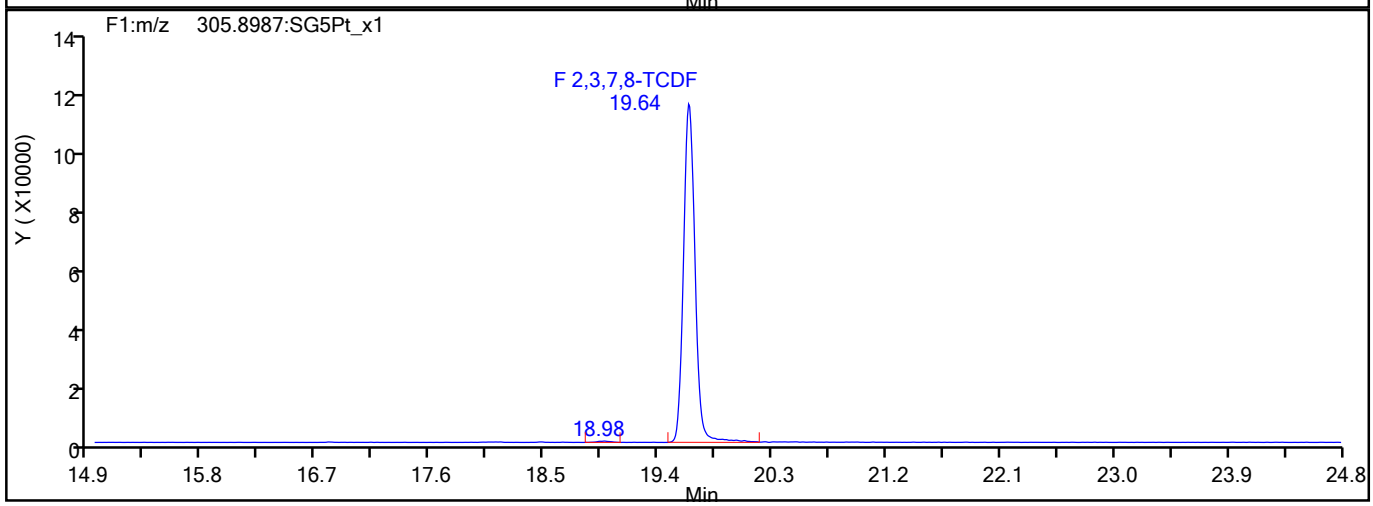

TCDF Interference Mass

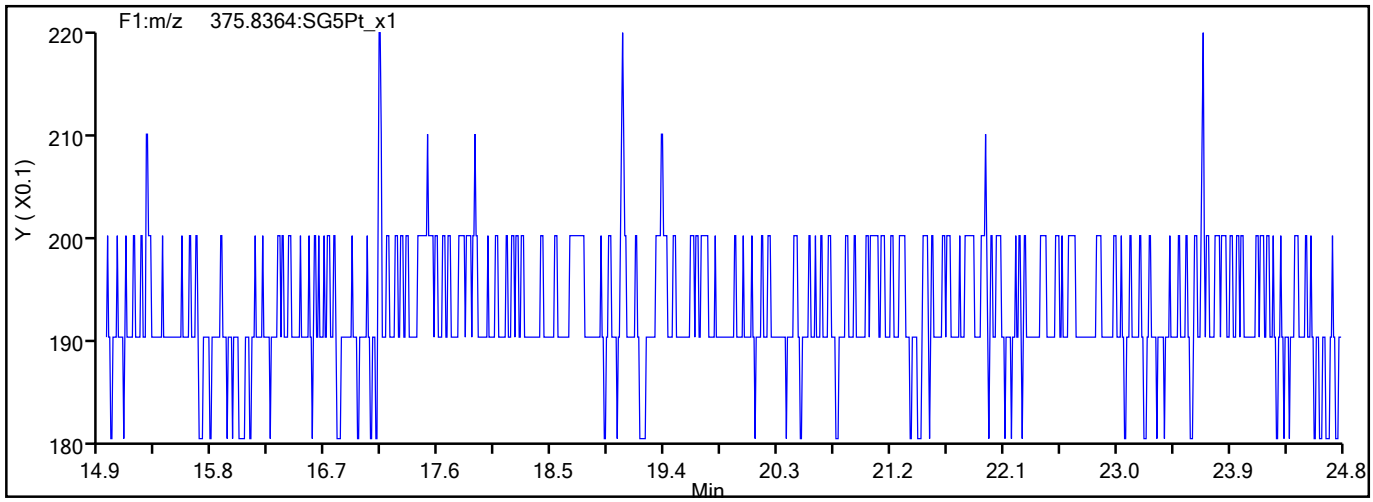

788996

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

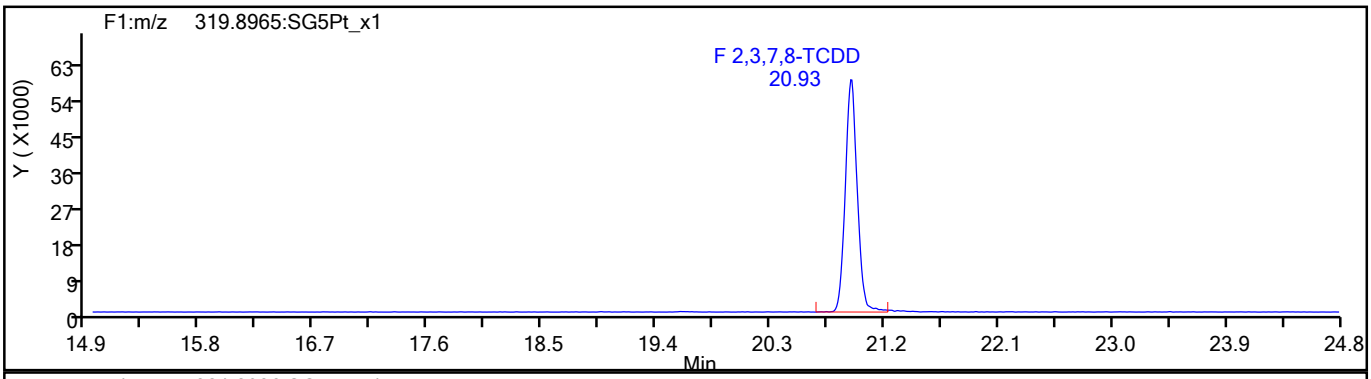

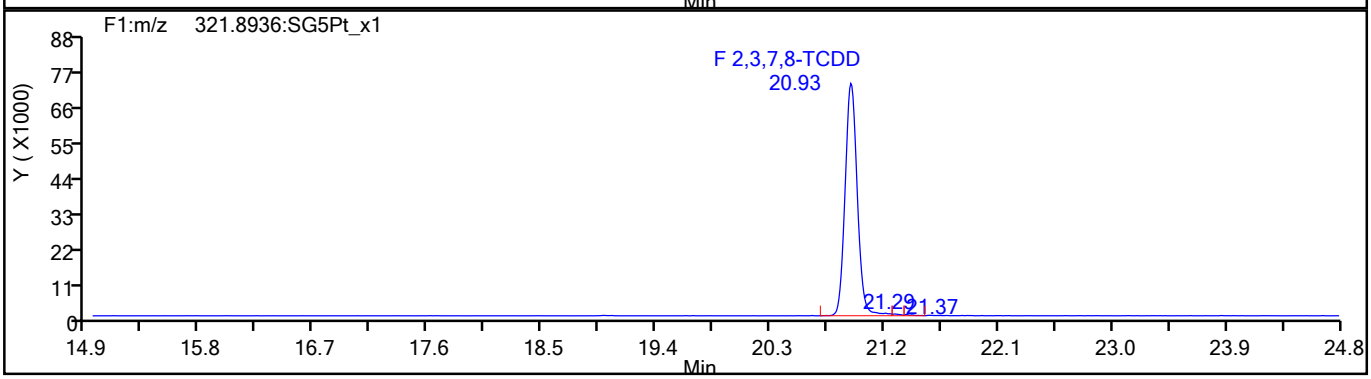

TCDD Standards

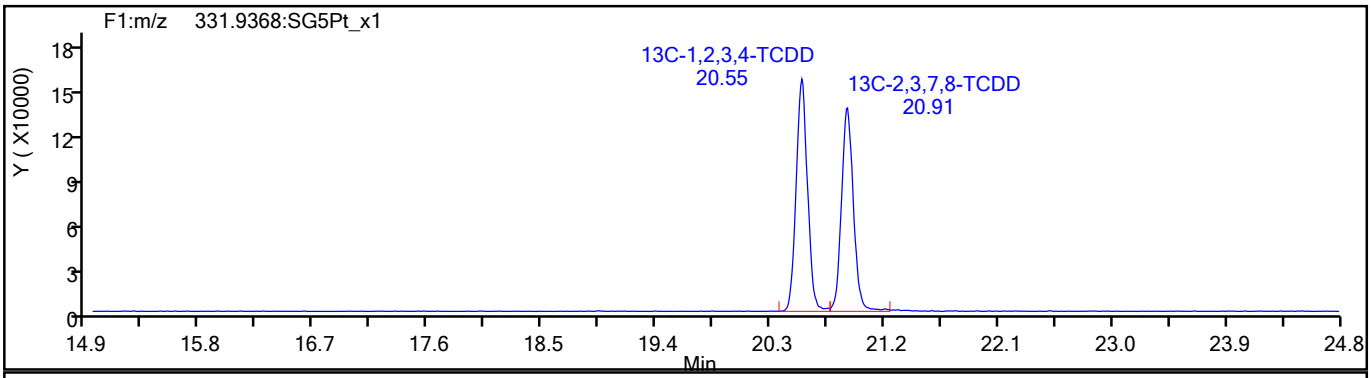

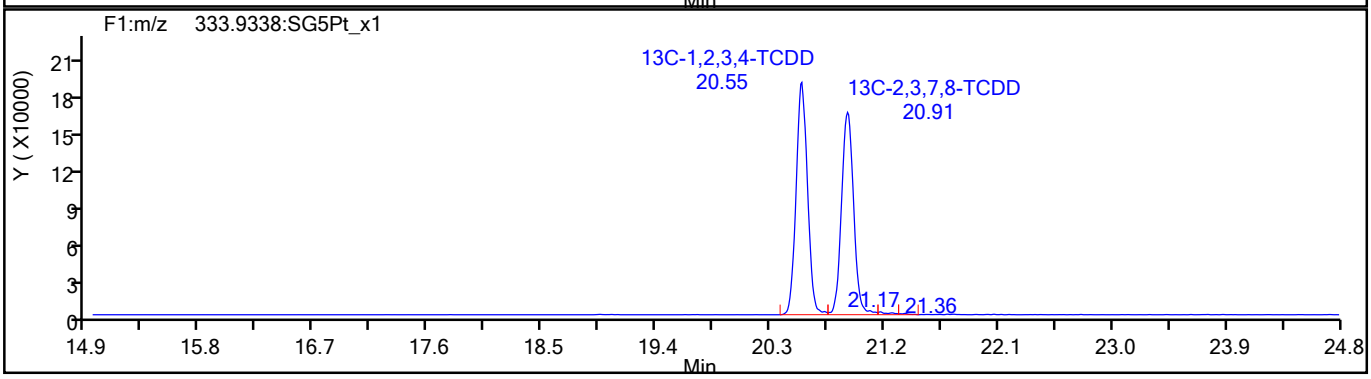

788997

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

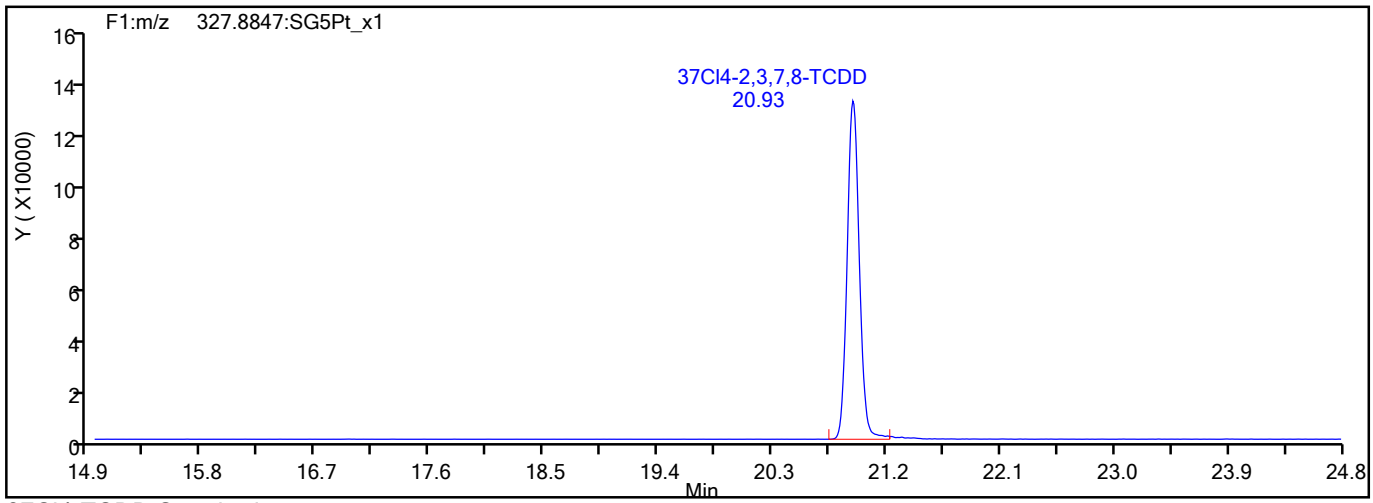

37Cl4-TCDD Standards

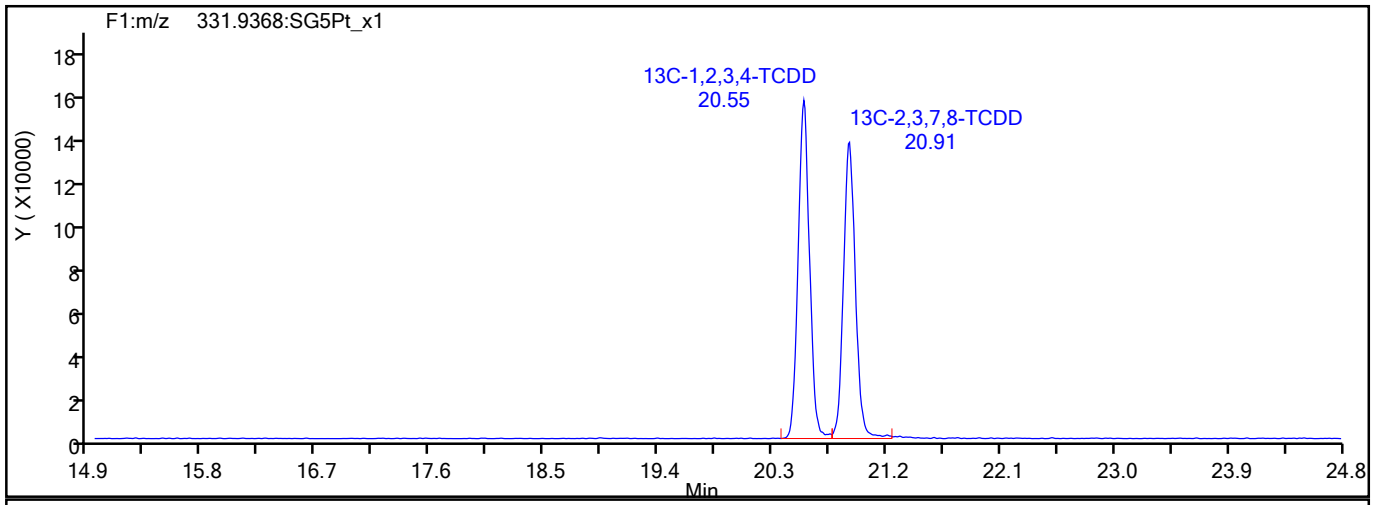

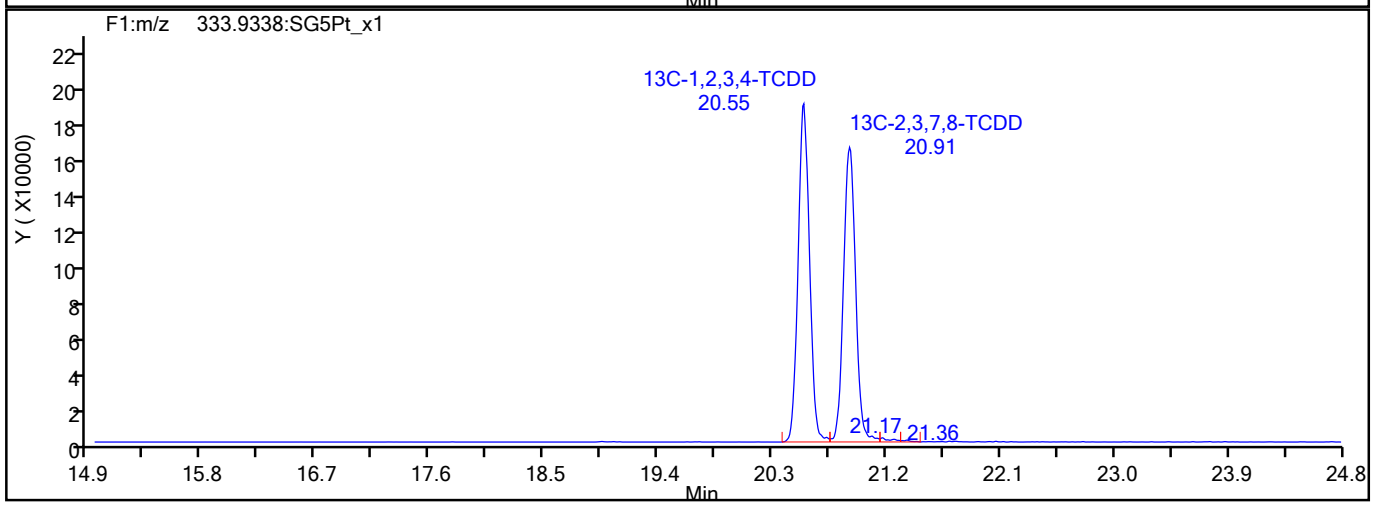

788998

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

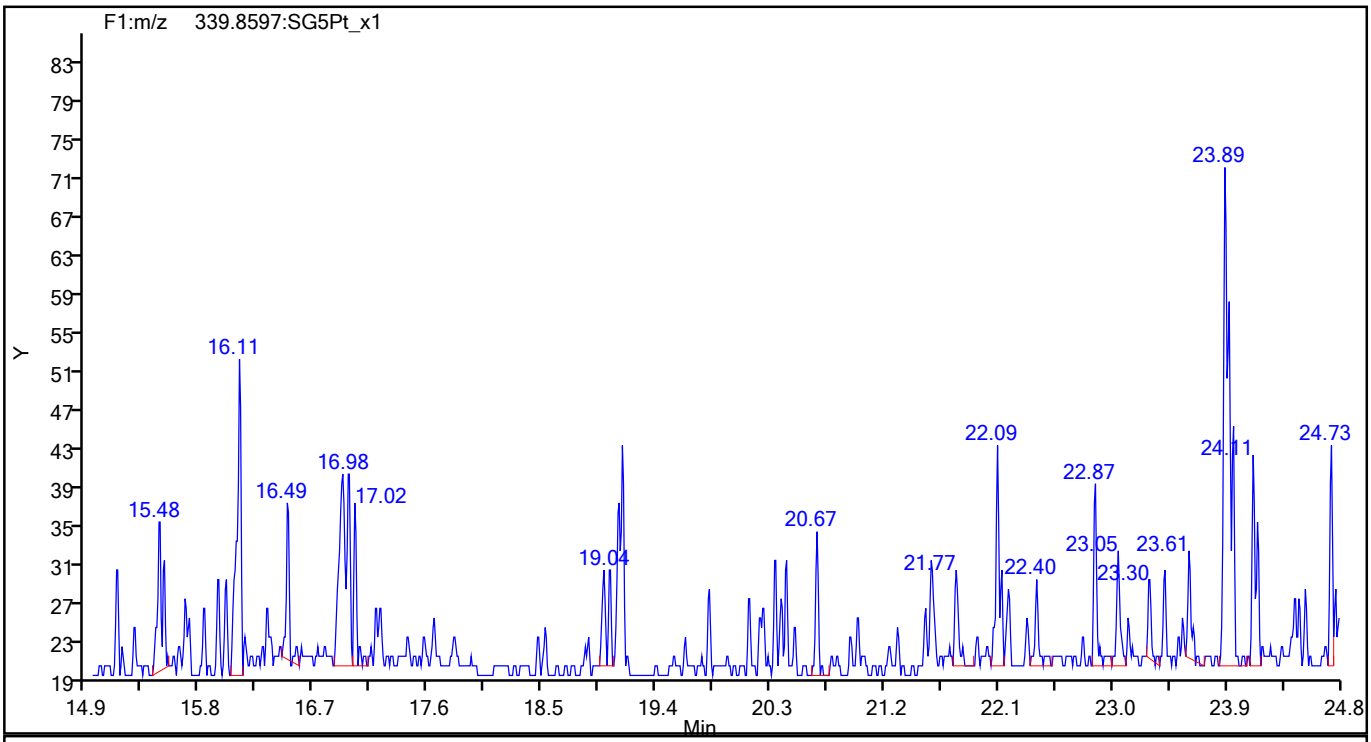

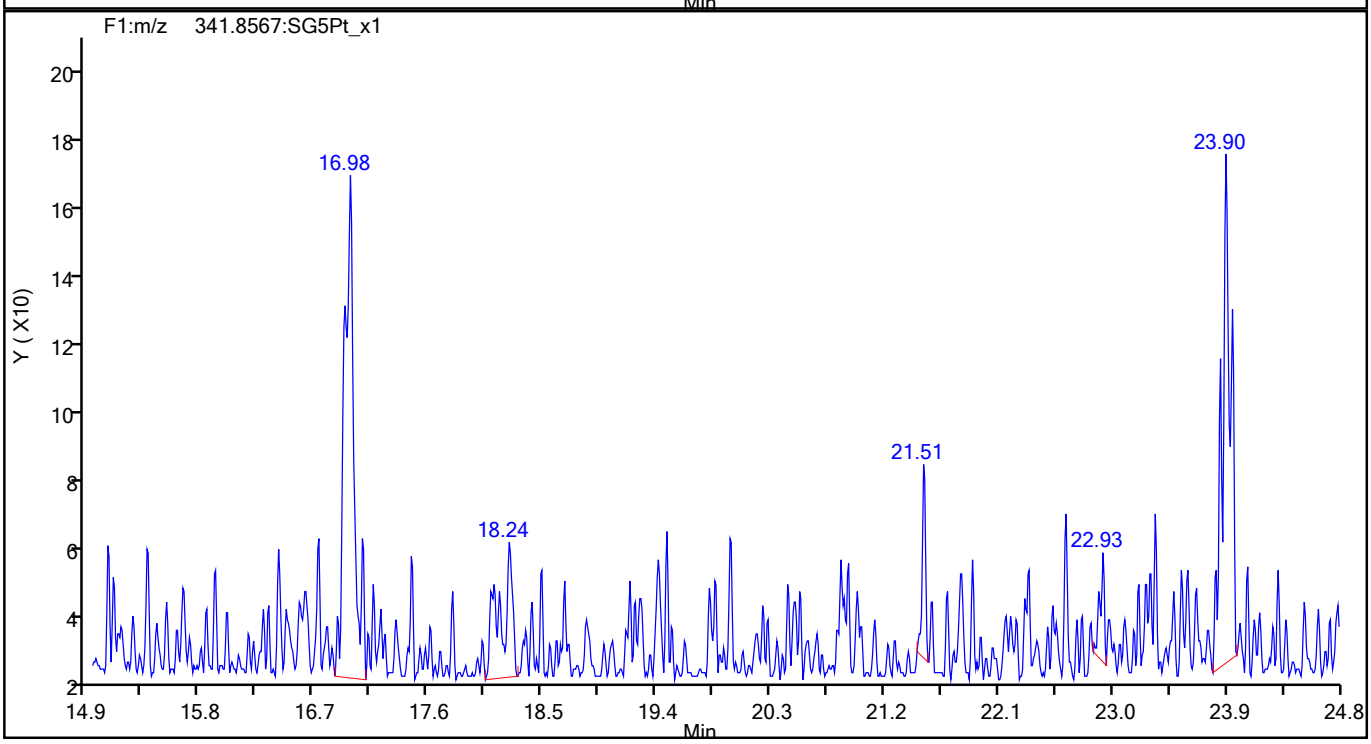

788999

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

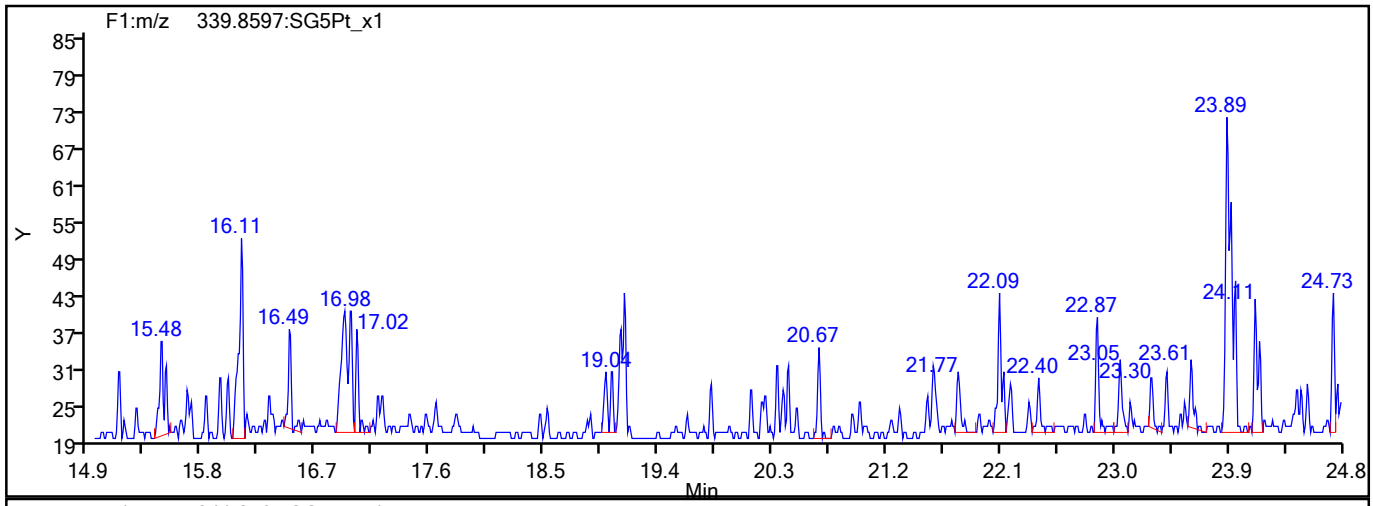

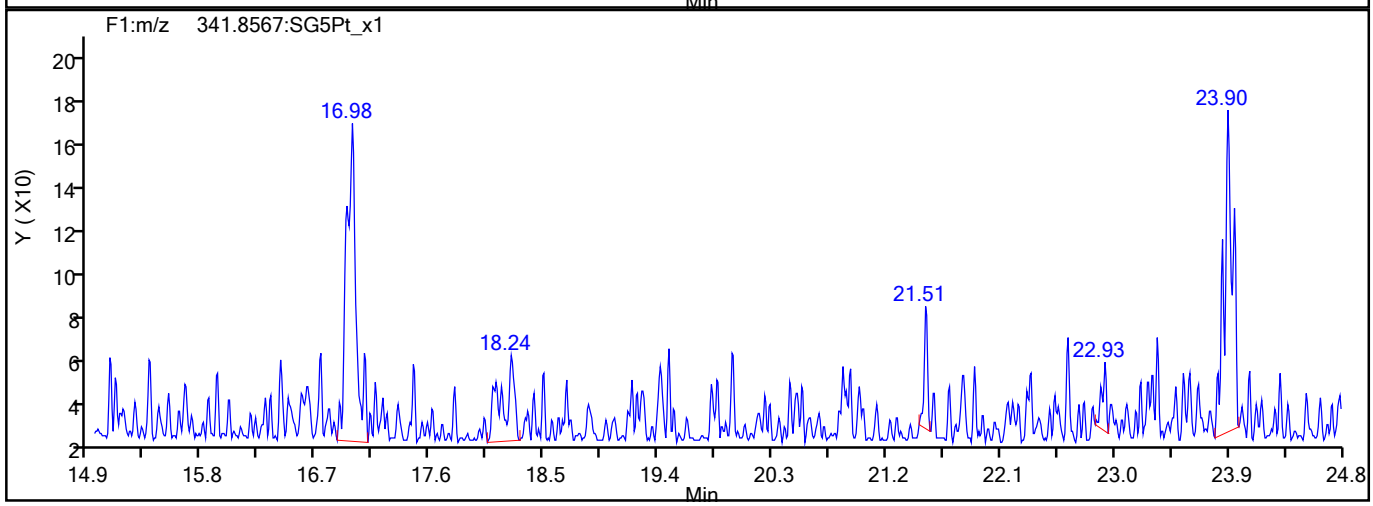

F1 PeCDFs Interference Mass

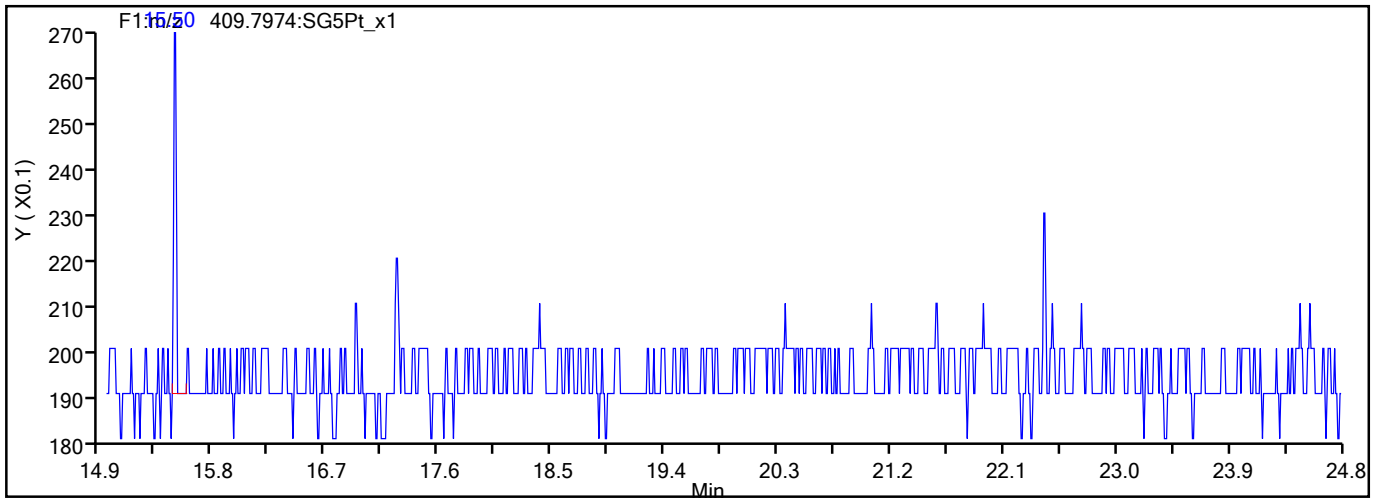

789000

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

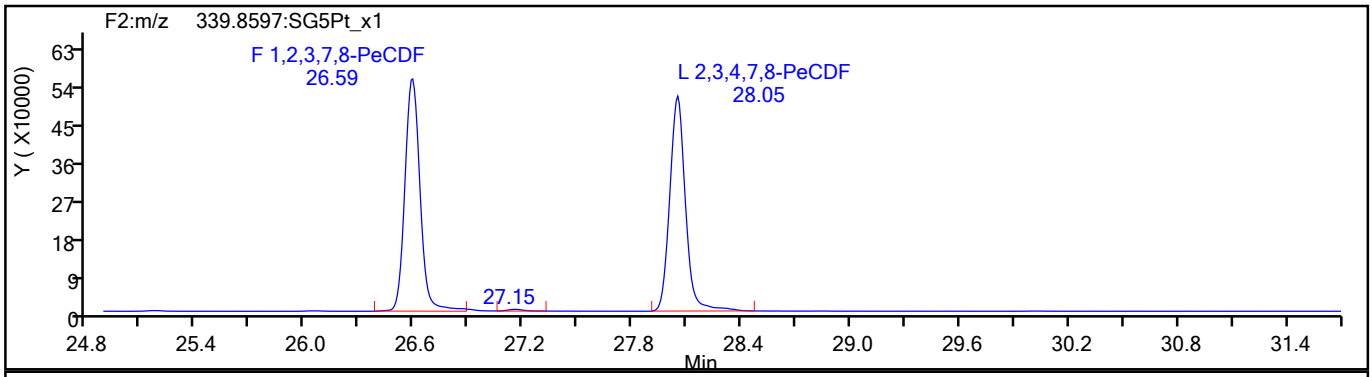

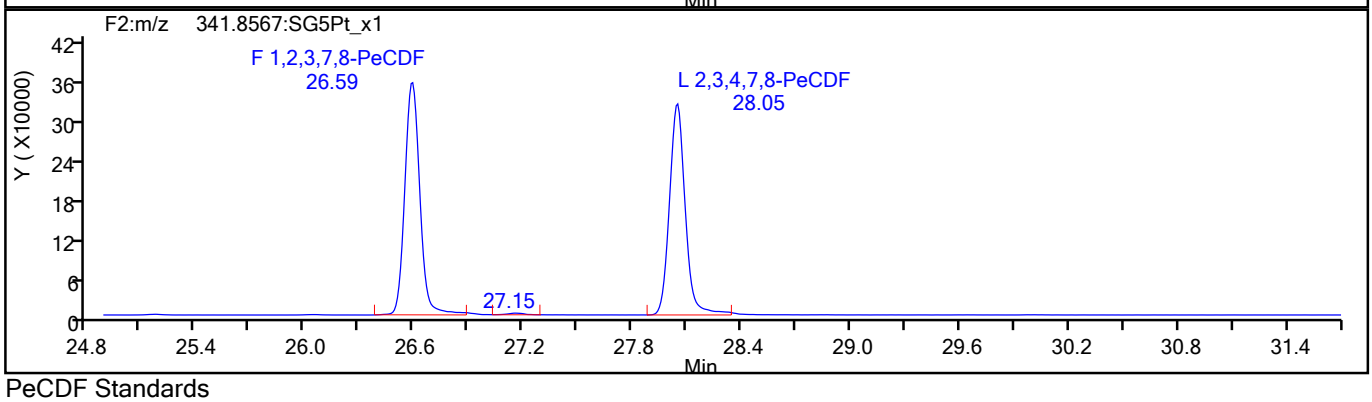

PeCDF Standards

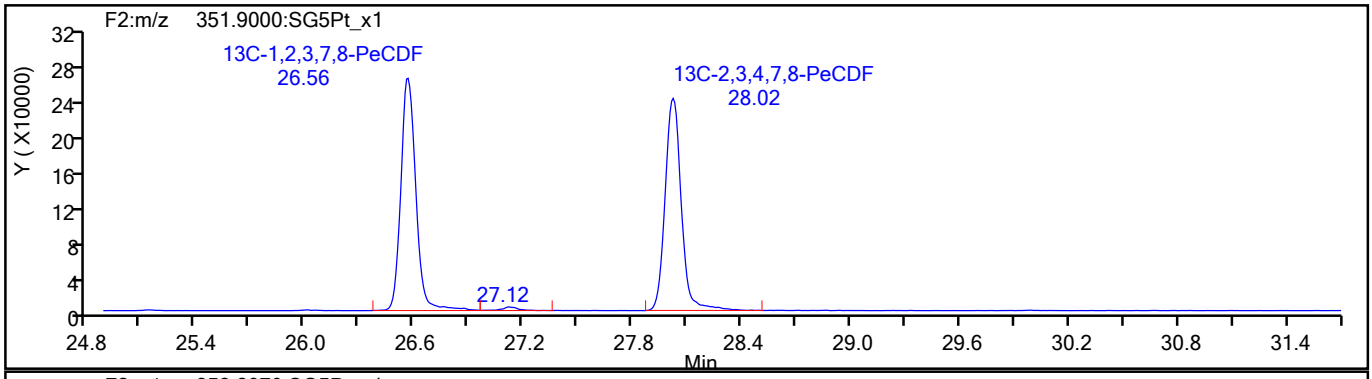

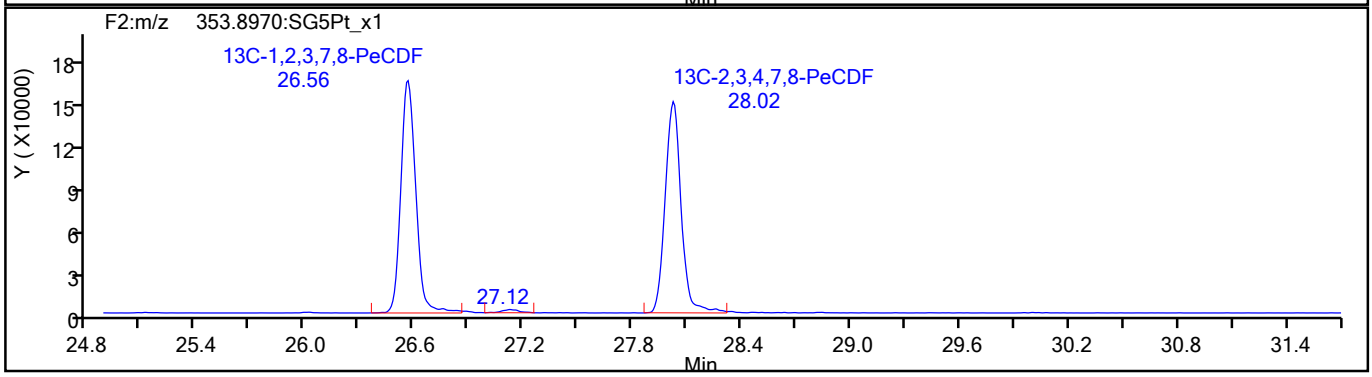

789001

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

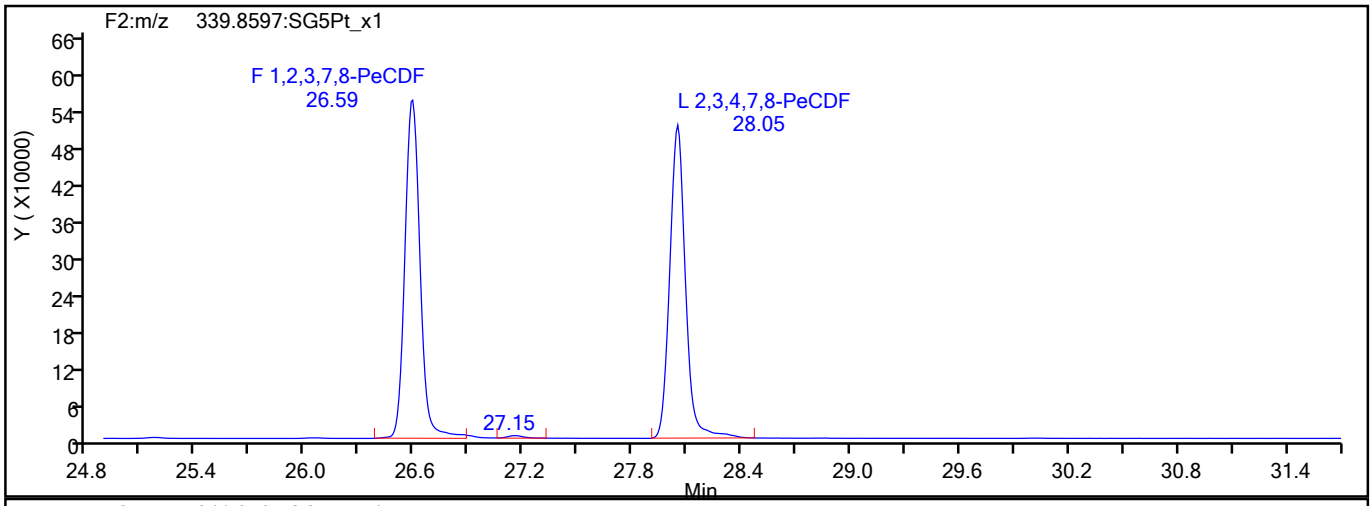

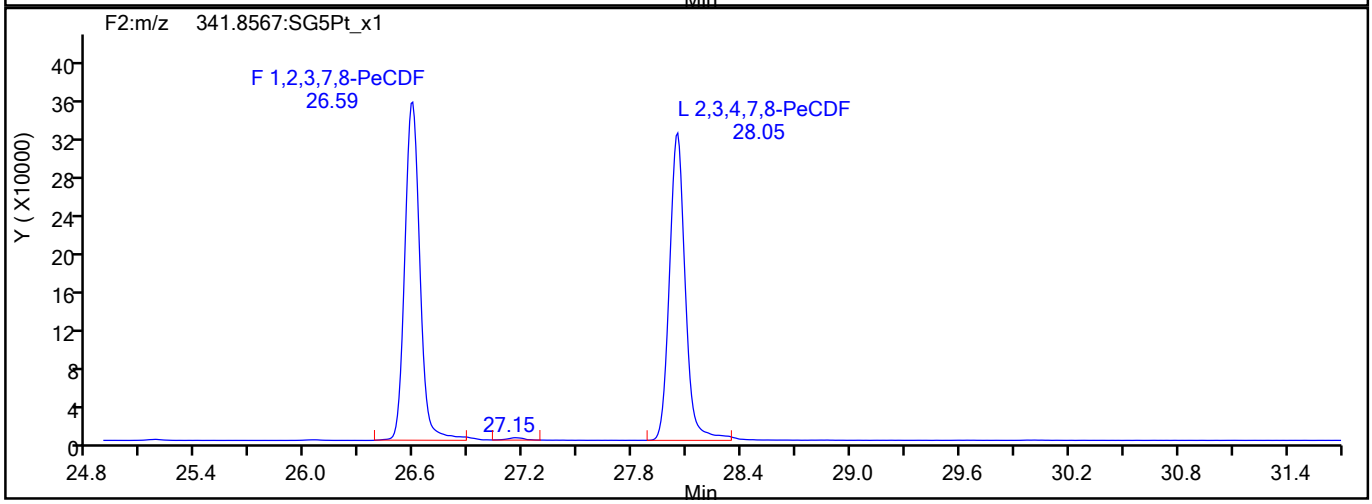

PeCDF Interference Mass

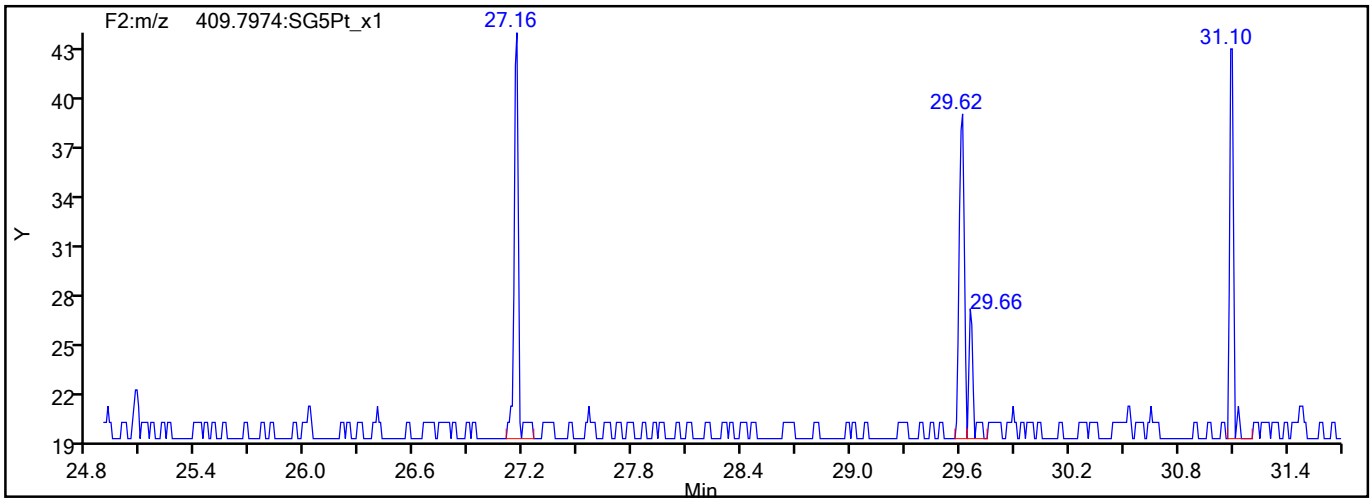

789002

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

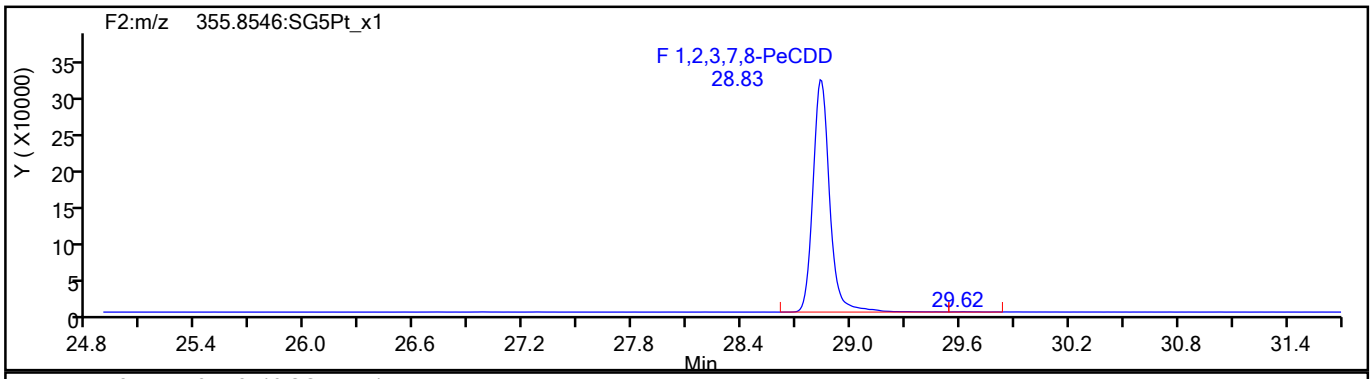

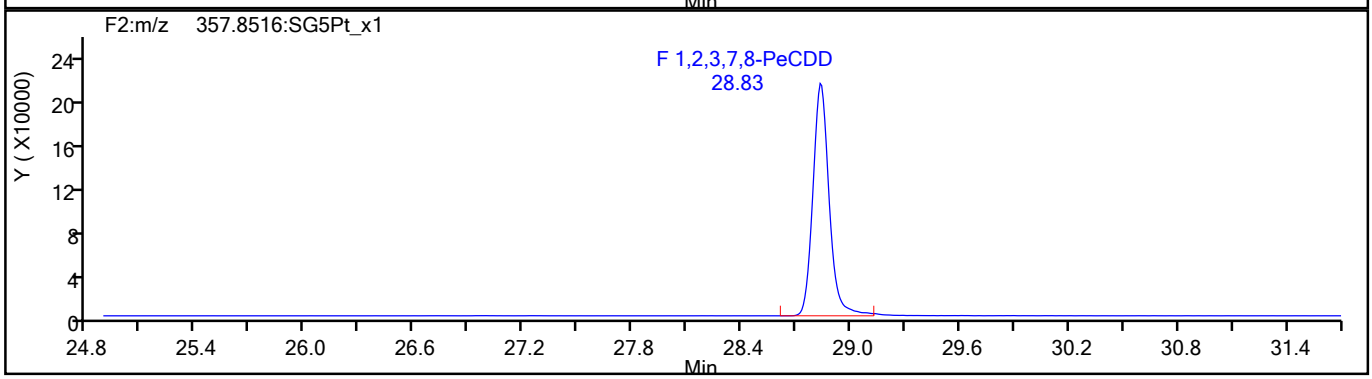

PeCDD Standards

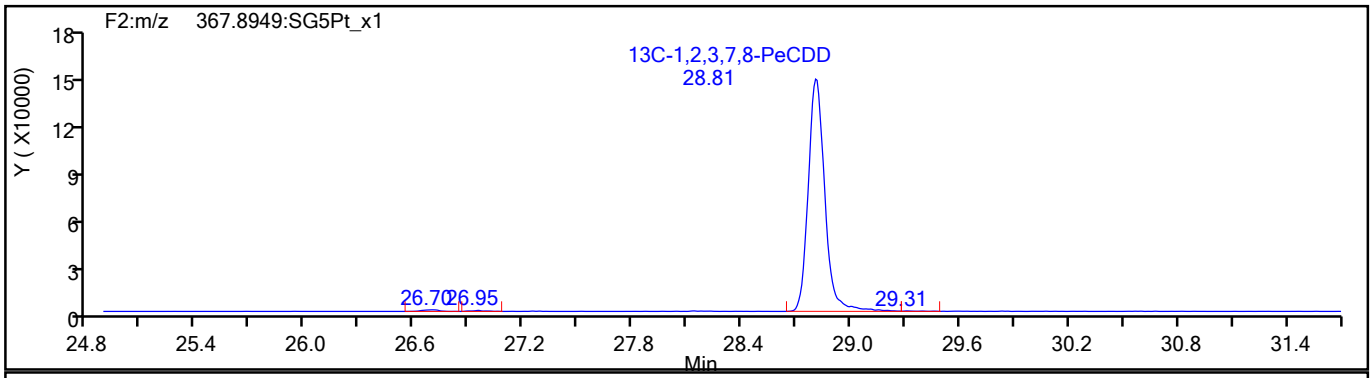

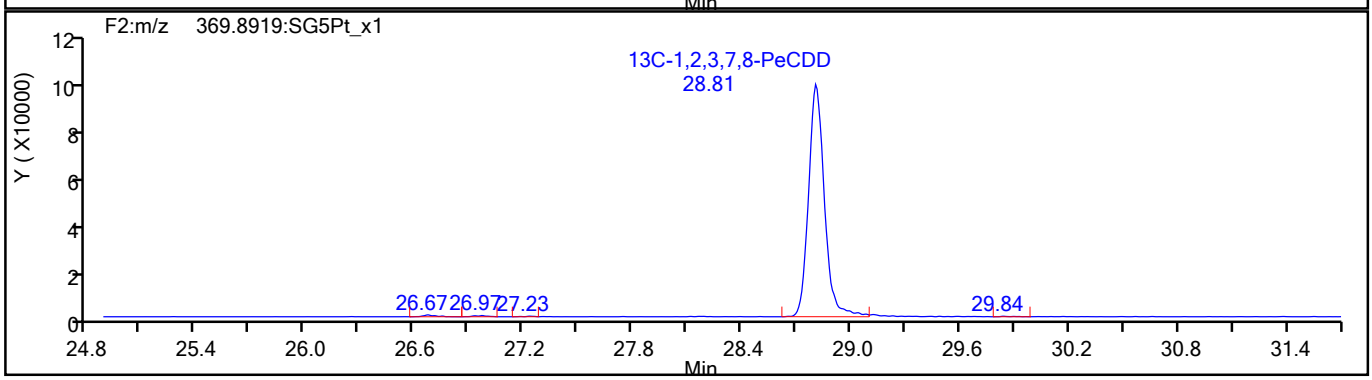

789003

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

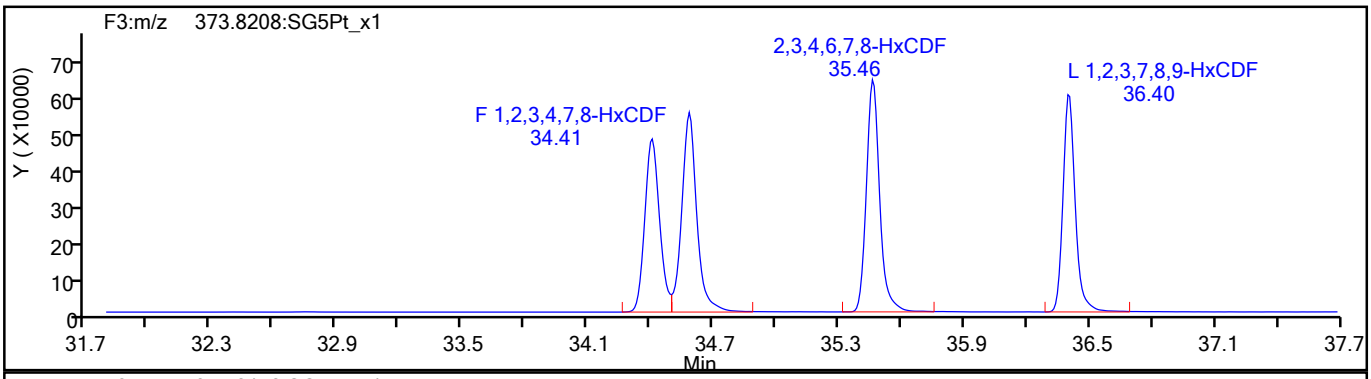

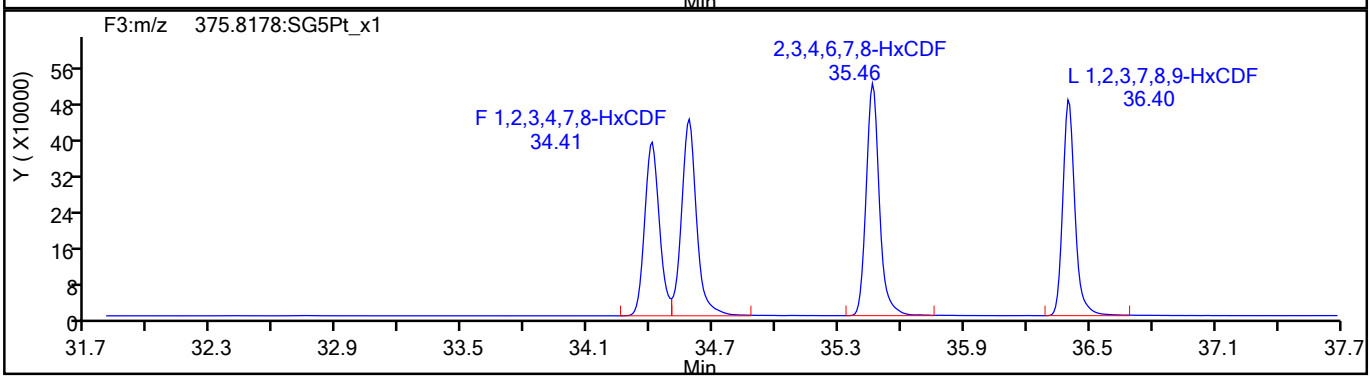

HxCDF Standards

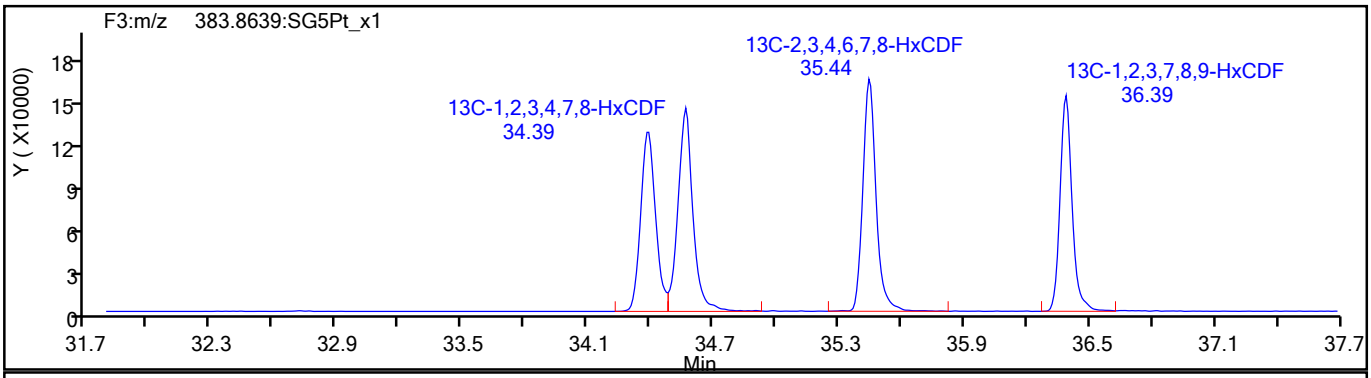

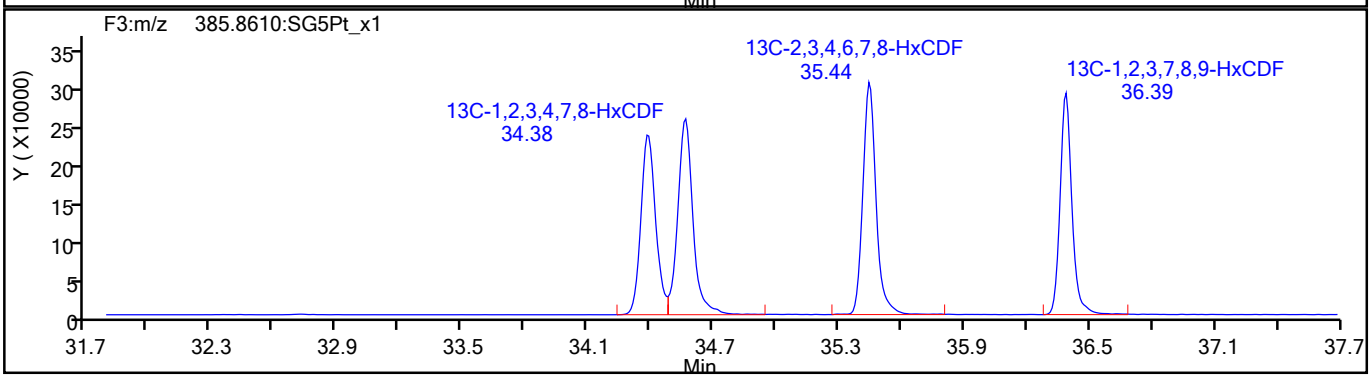

789004

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

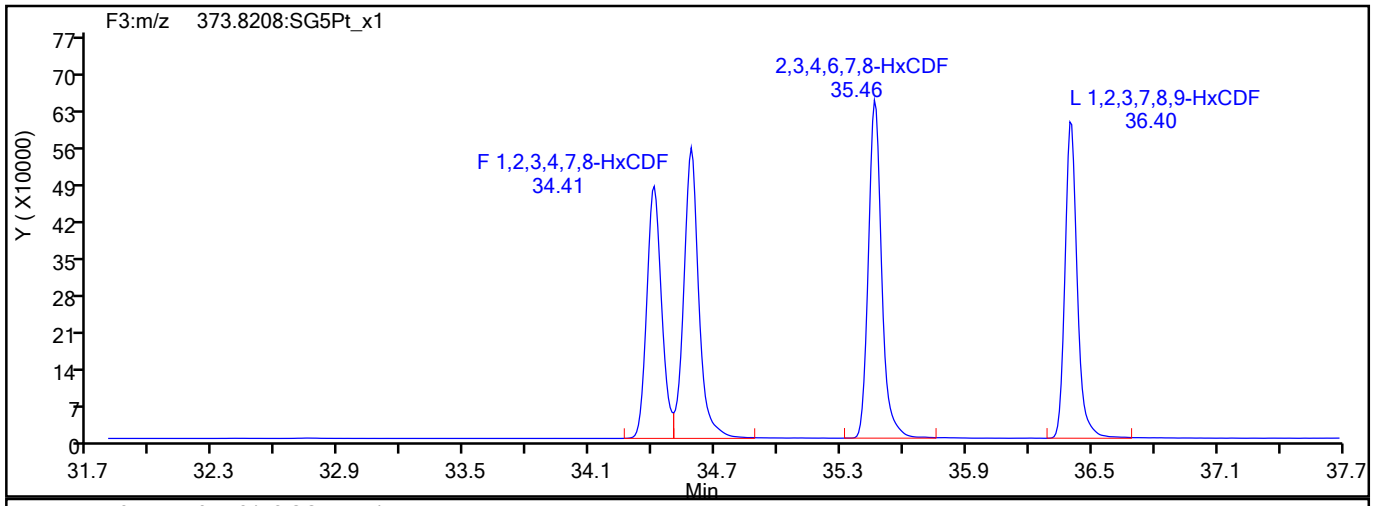

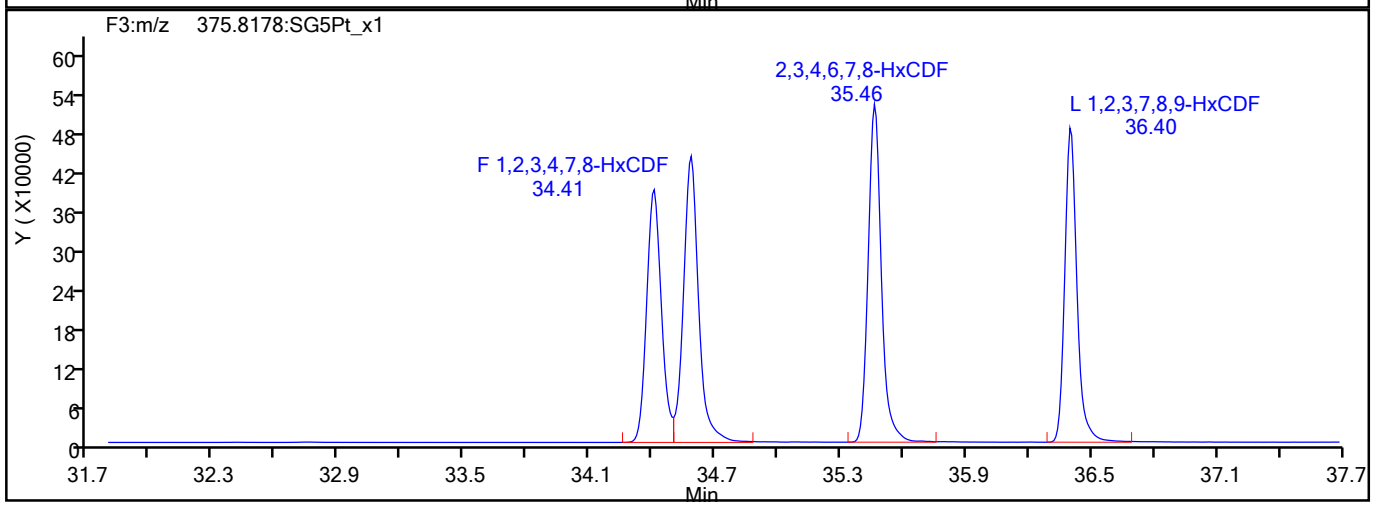

HxCDF Interference Mass

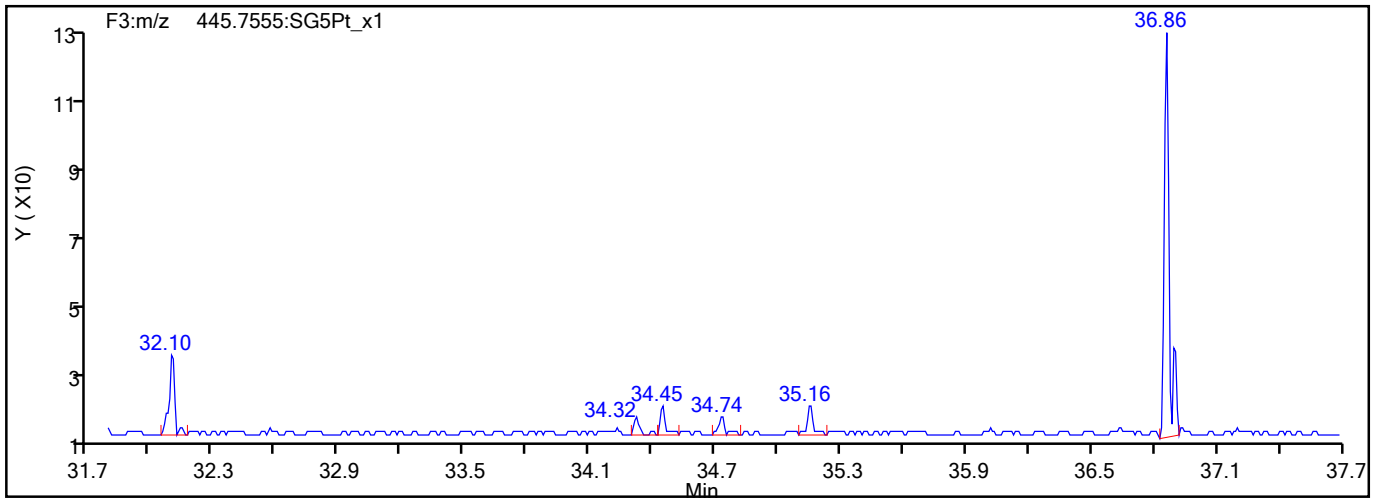

789005

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

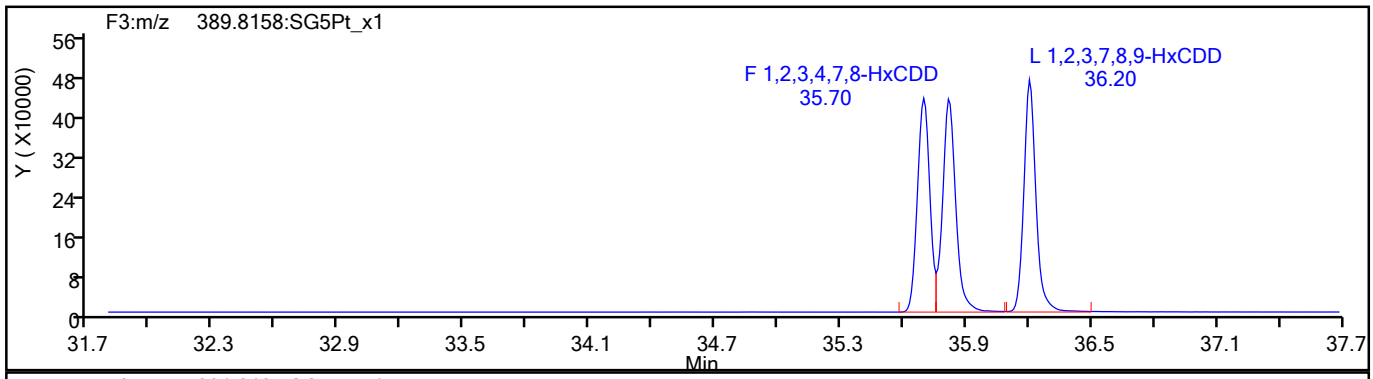

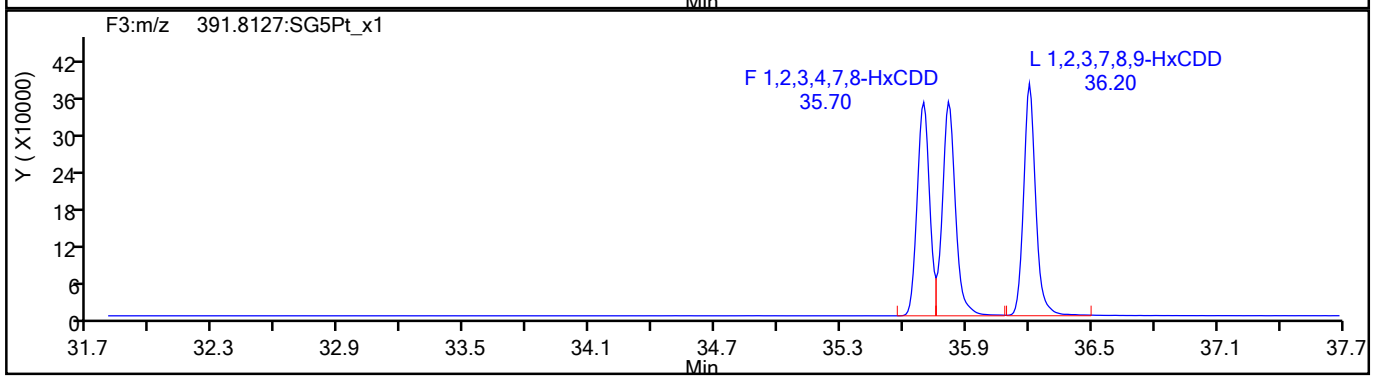

HxCDD Standards

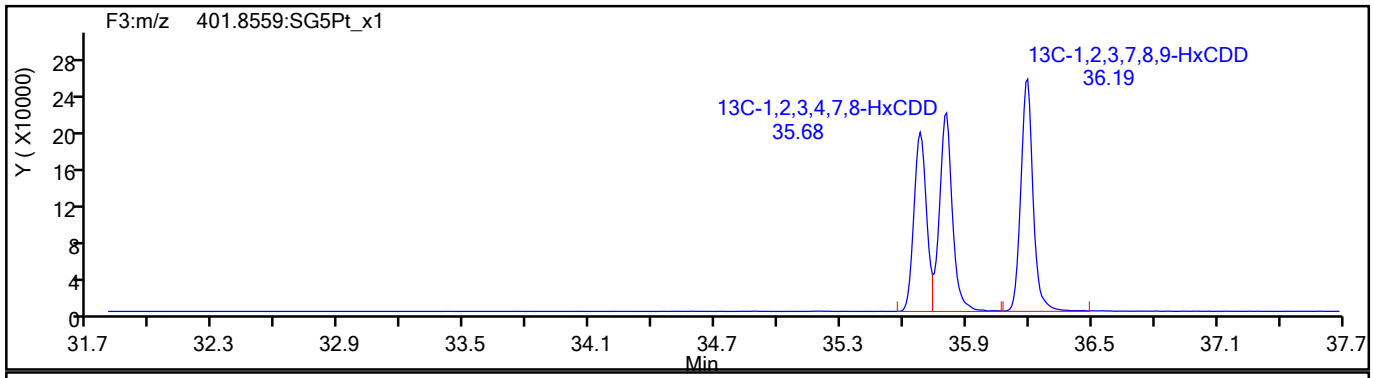

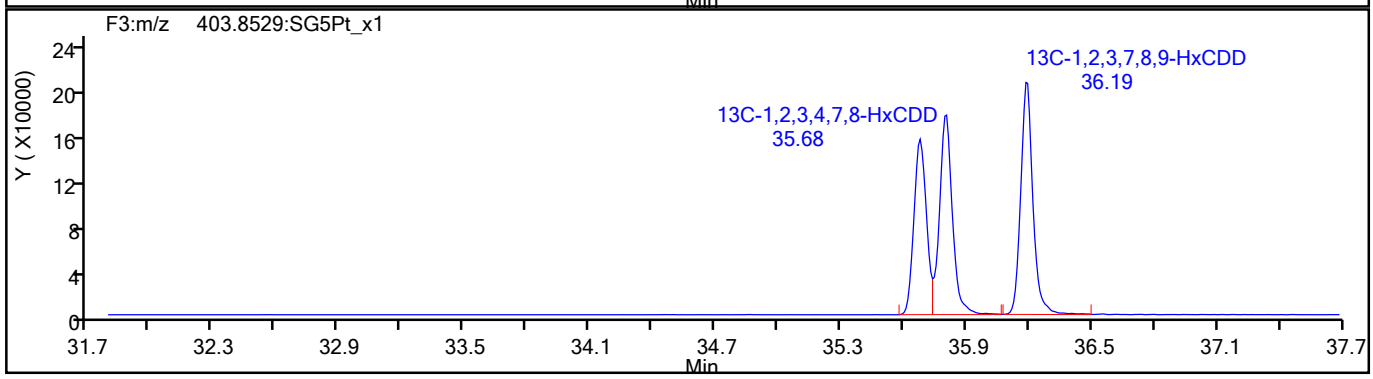

789006

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

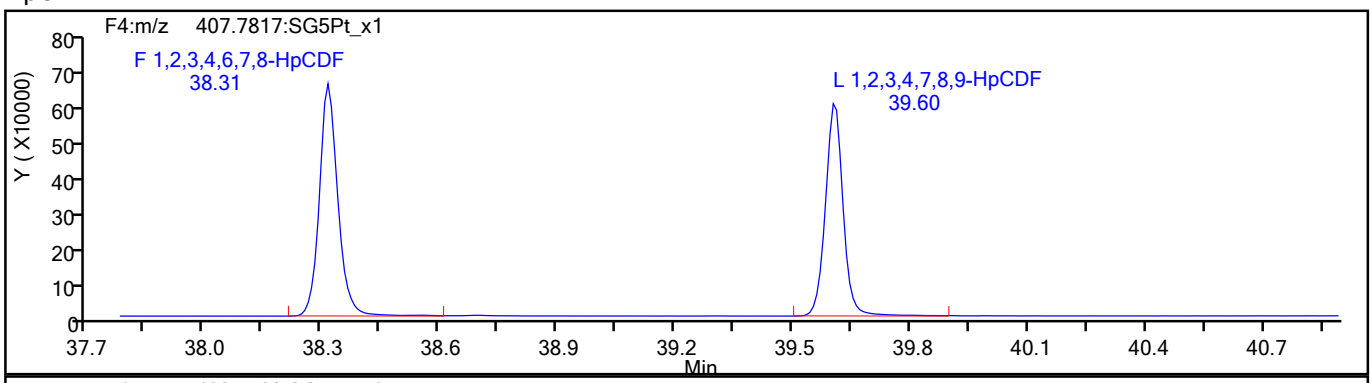

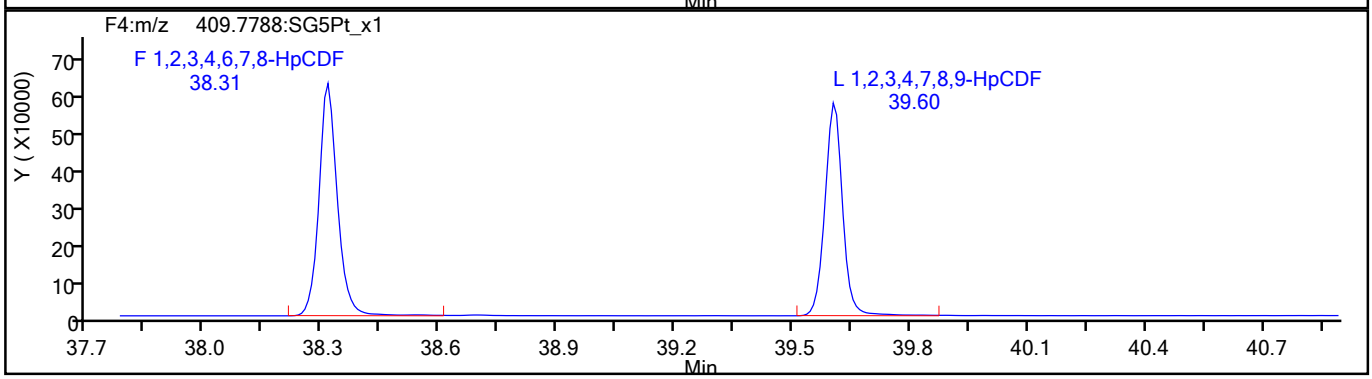

HpCDF Standards

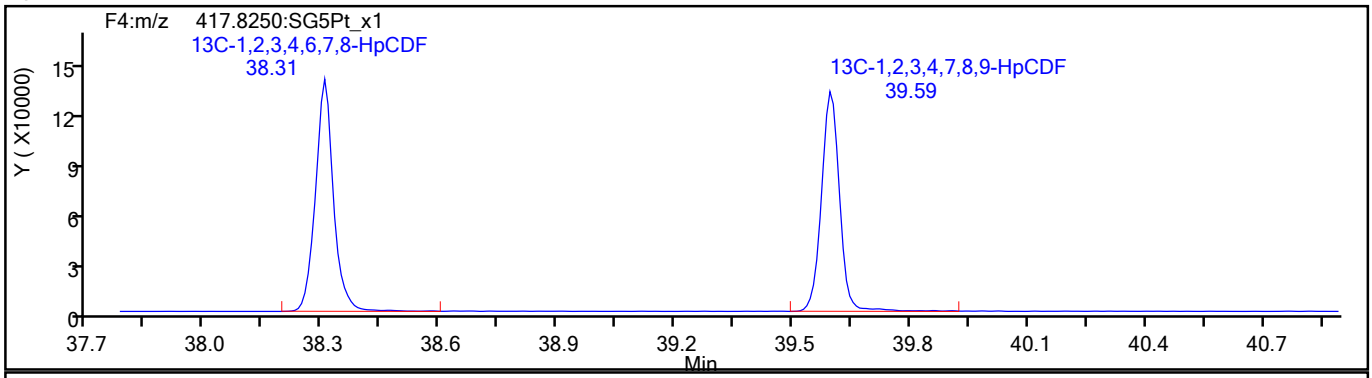

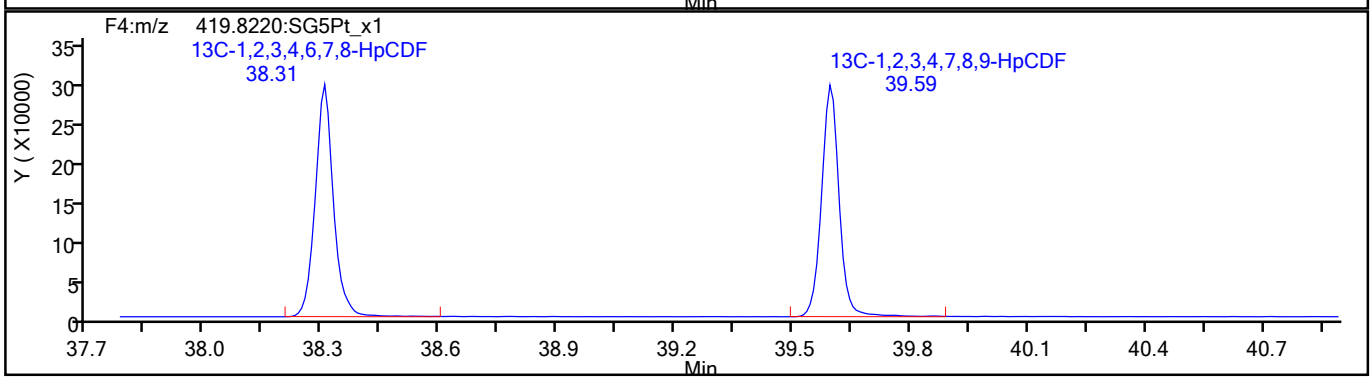

789007

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

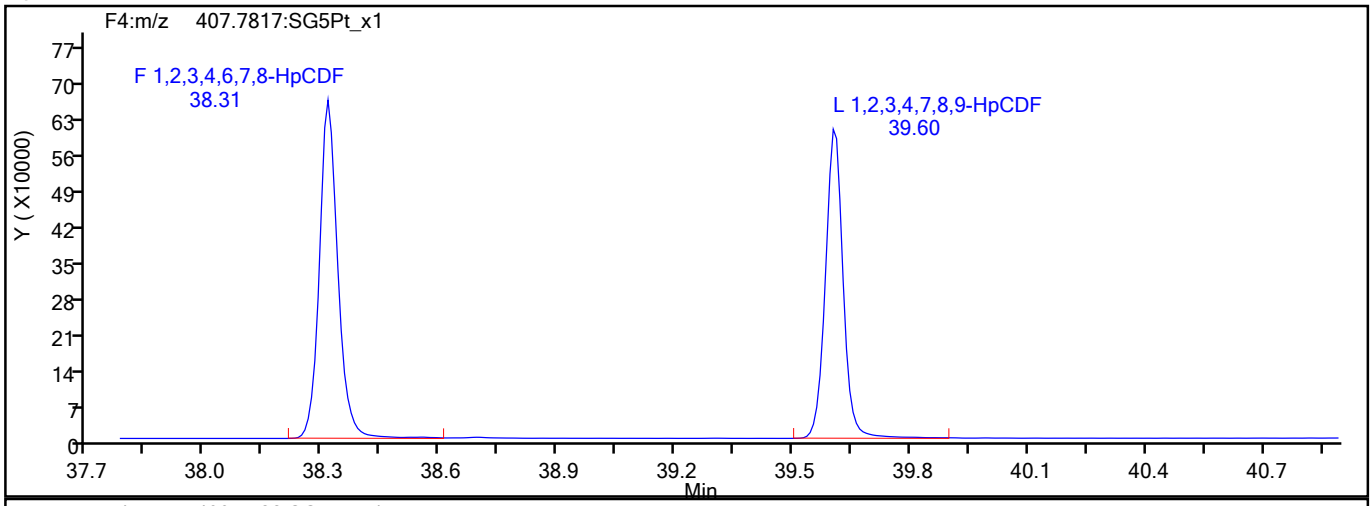

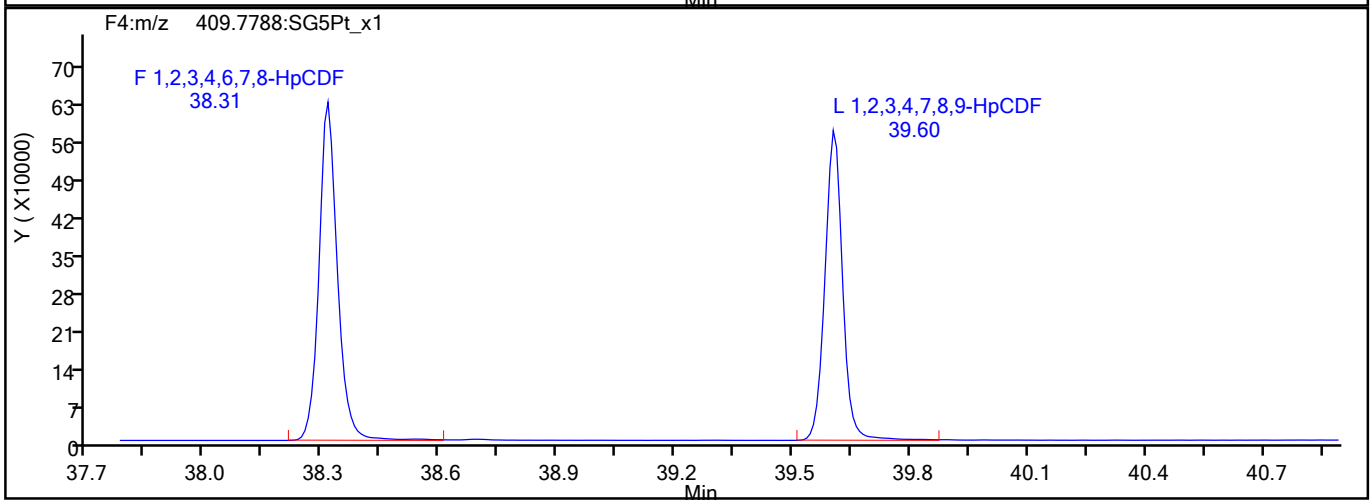

HpCDF Interference Mass

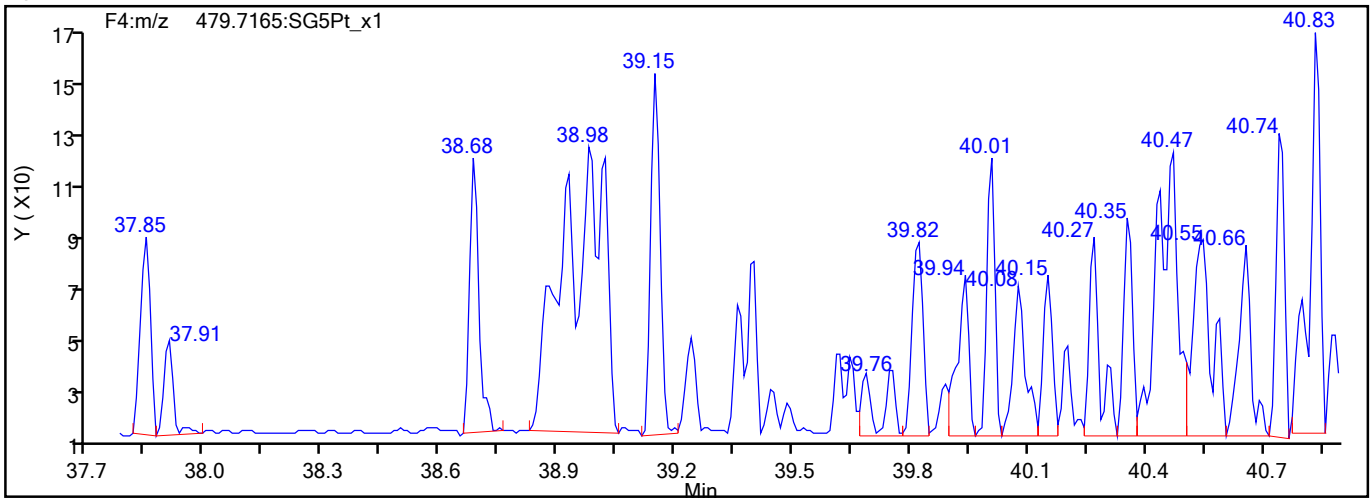

789008

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

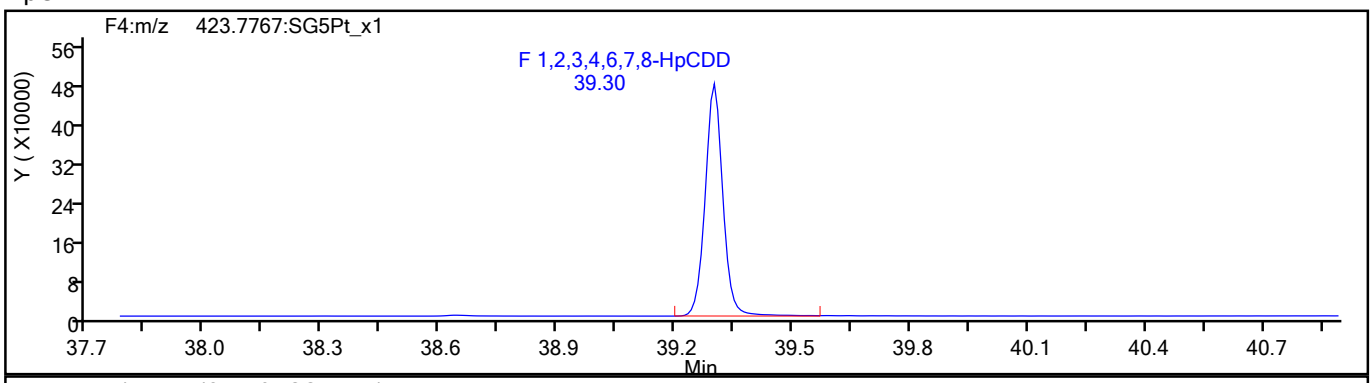

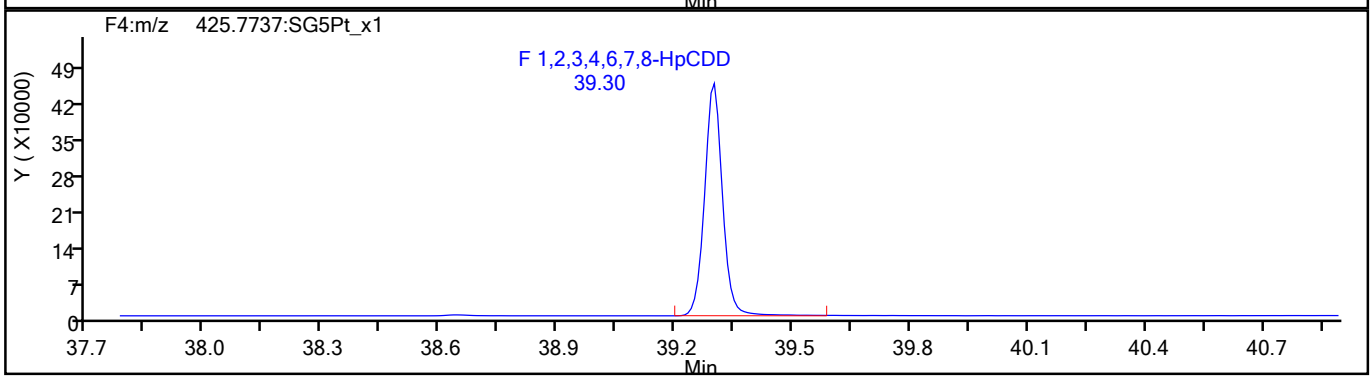

HpCDD Standards

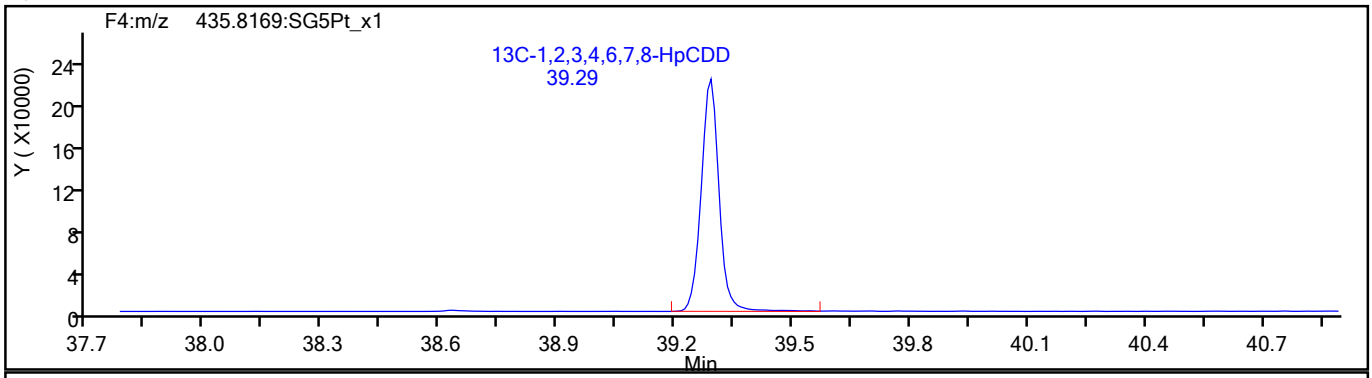

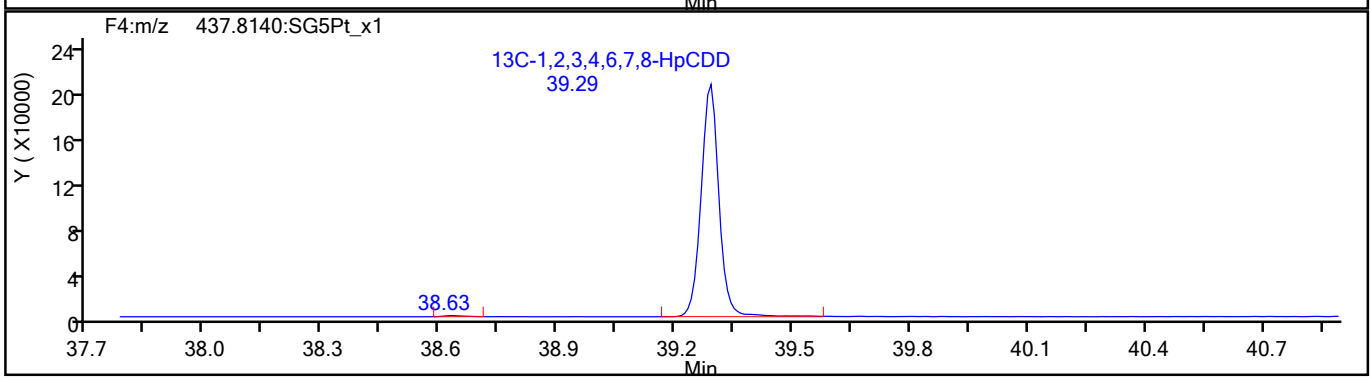

789009

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

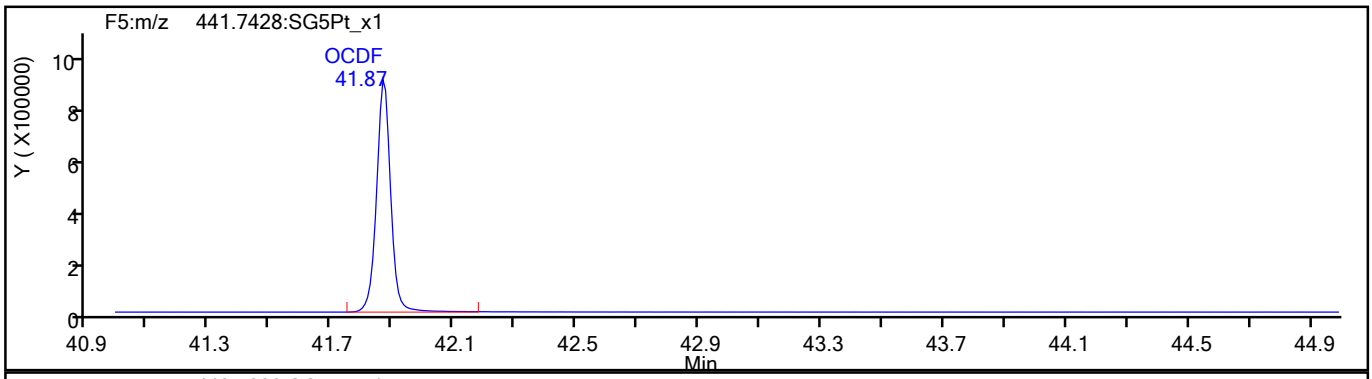

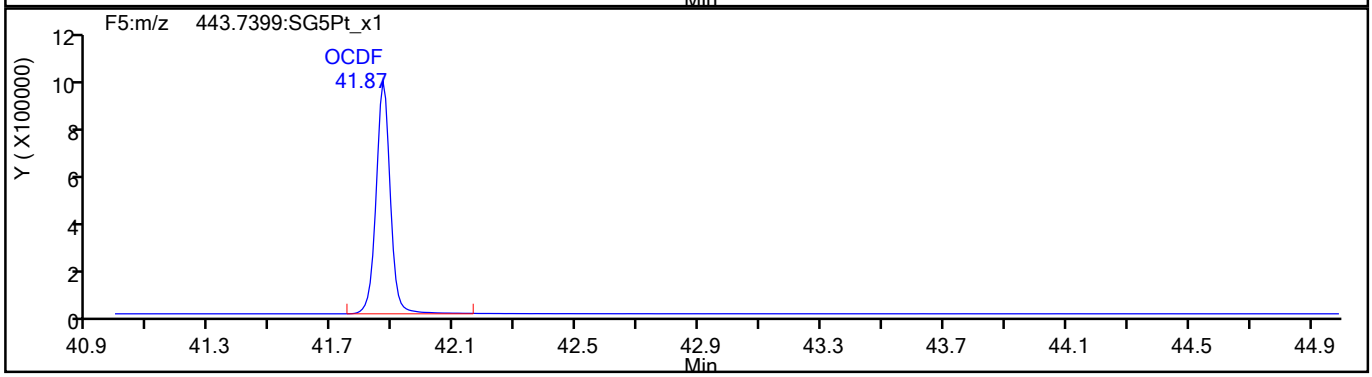

OCDF Standards

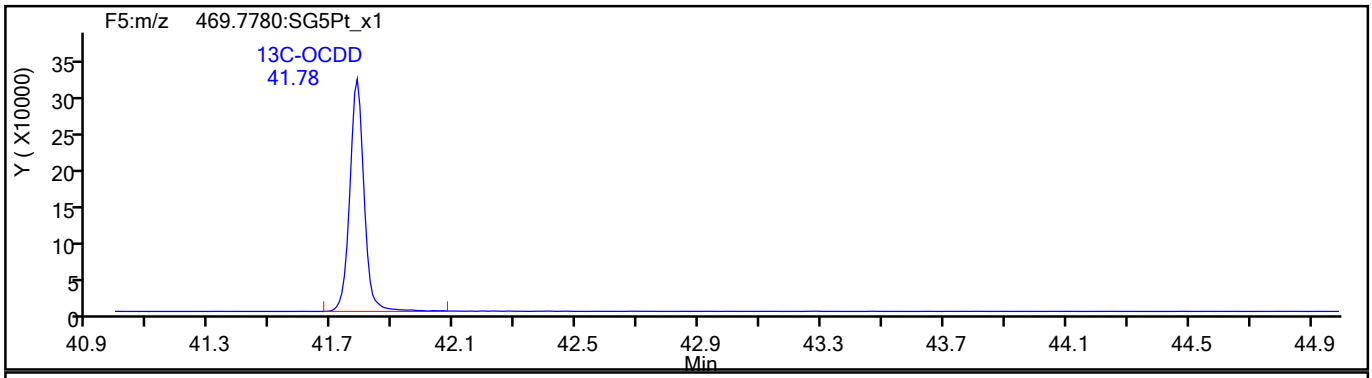

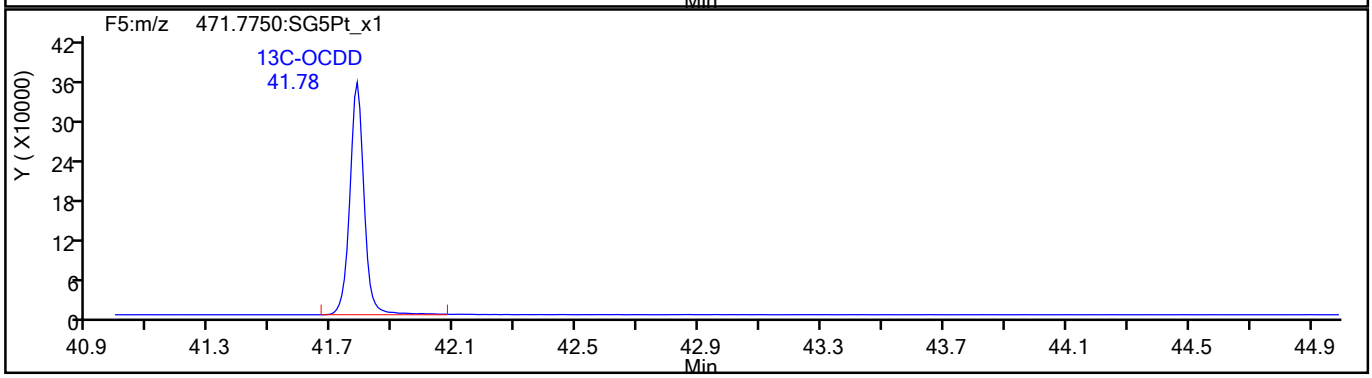

789010

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

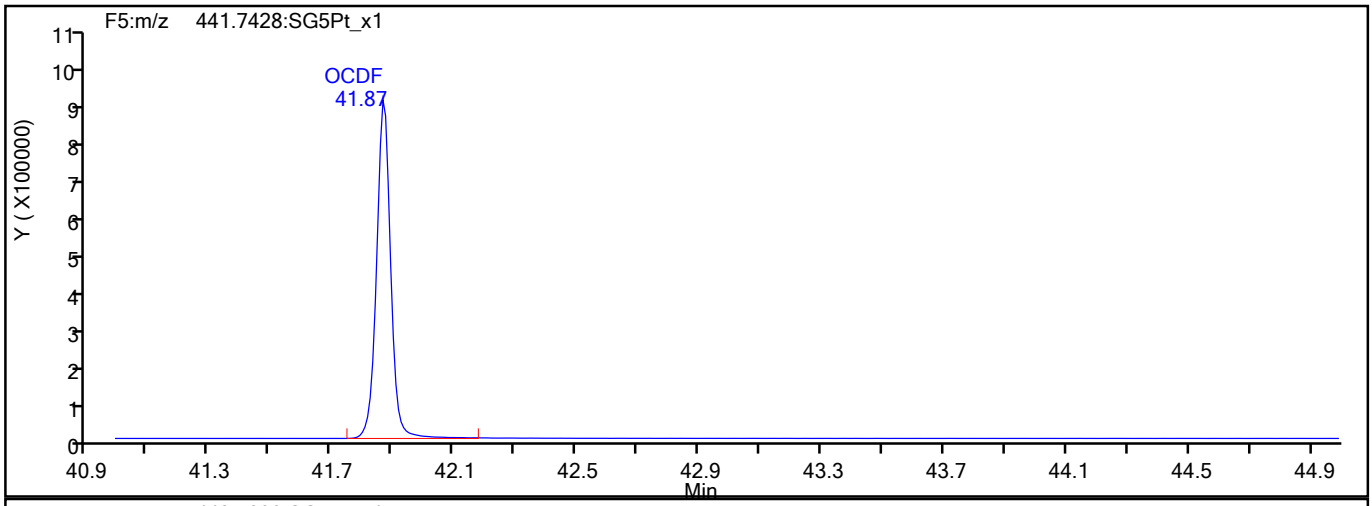

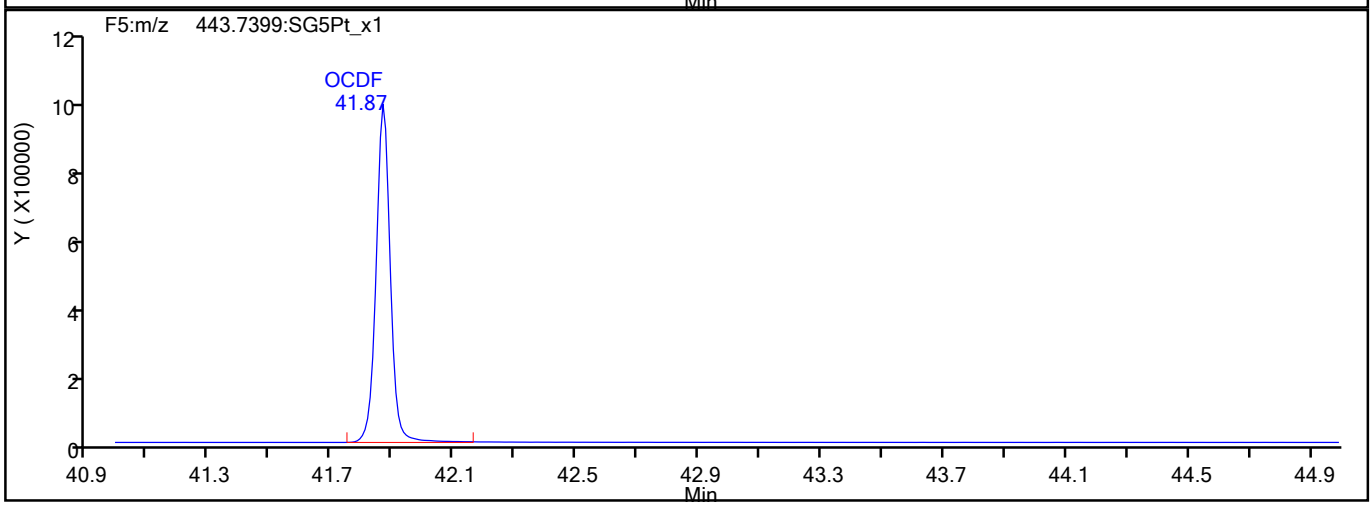

OCDF Interference Mass

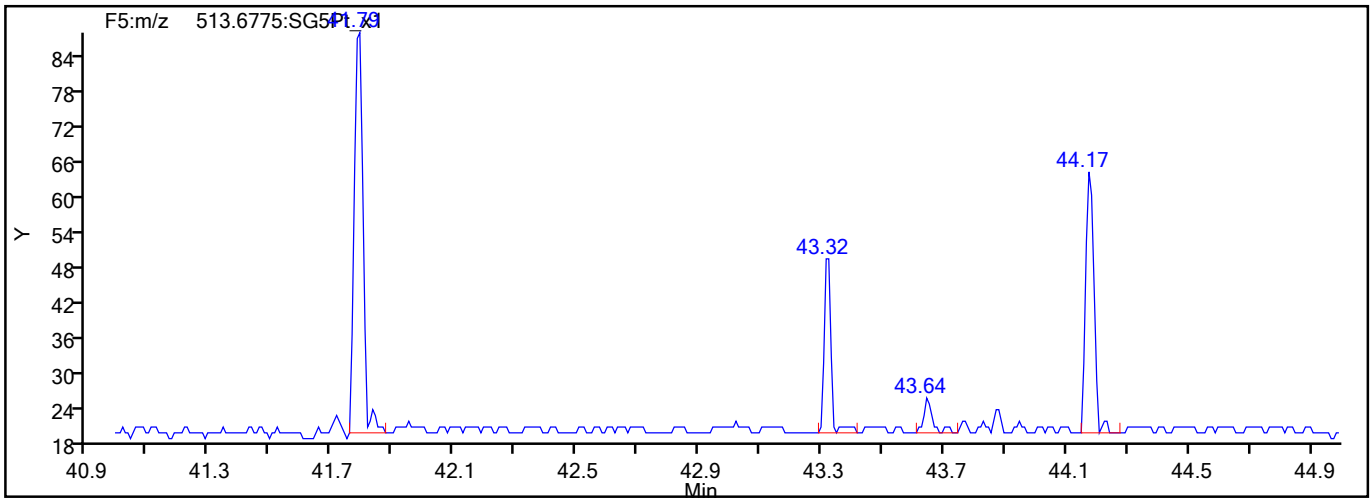

789011

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

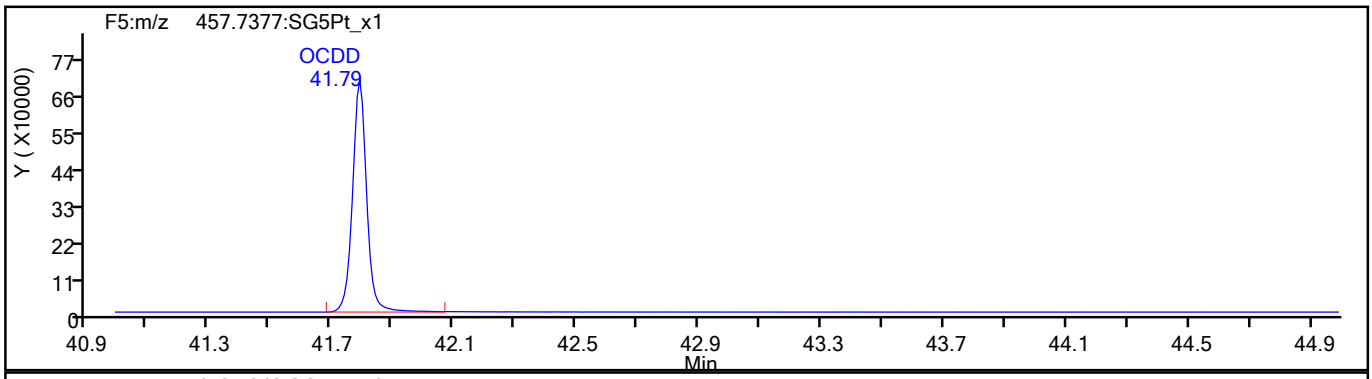

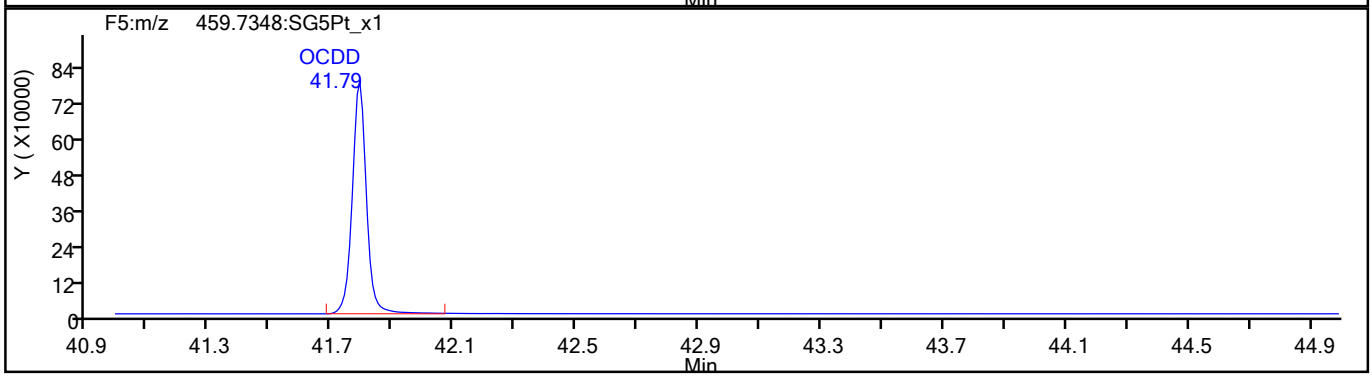

OCDD Standards

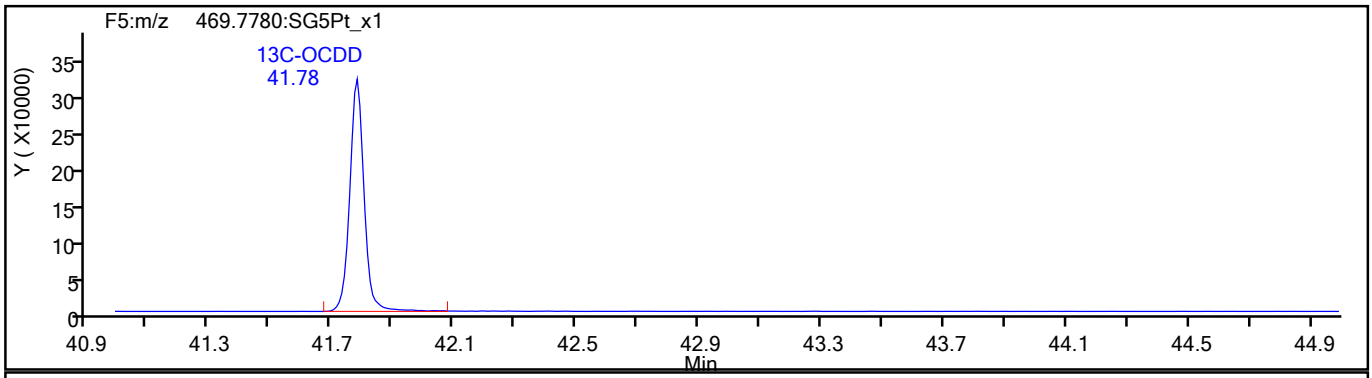

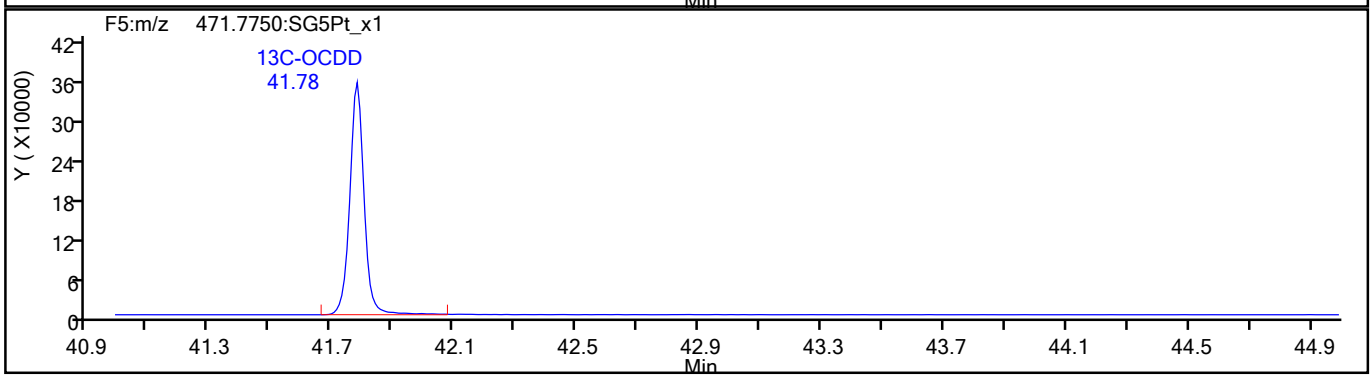

789012

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

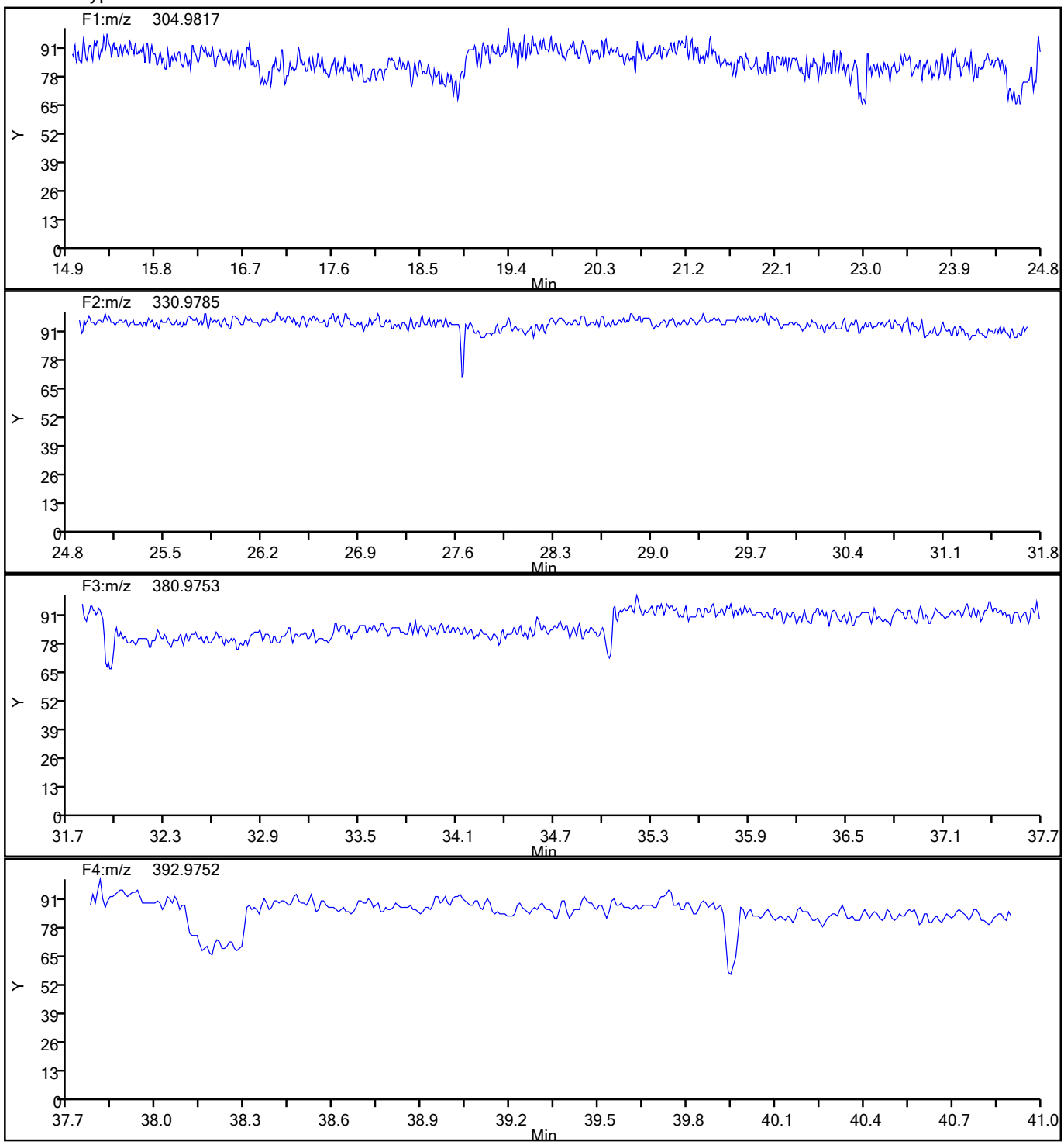

789013

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

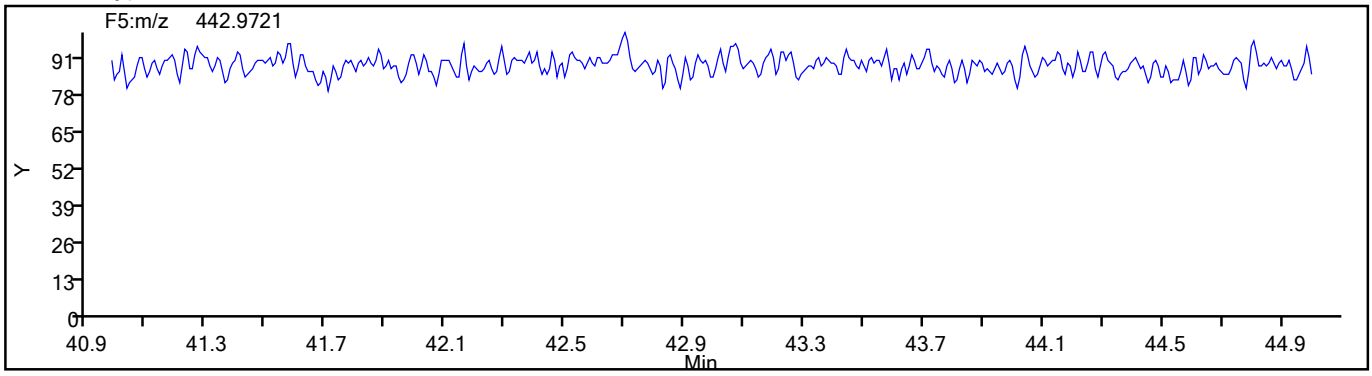

789014

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.544	2066088	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.616	2962515	0.80	1.3459	106.5	106.5	0.1844	0.1844	107	
2,3,7,8-TCDF	19.642	6137031	0.79	1.0802	191.8	191.8	0.1493	0.1493	95.89	
S Total TCDF					191.8	191.8	0.1493	0.1493		
D 13C-2,3,7,8-TCDD	20.913	2014532	0.80	0.9317	104.7	104.7	0.1455	0.1455	105	
$ 37Cl4-2,3,7,8-TCDD	20.939	4287059		1.0083	205.8	205.8	0.0958	0.0958	103	
2,3,7,8-TCDD	20.939	4286034	0.79	1.0753	197.8	197.8	0.1041	0.1041	98.92	
S Total TCDD					197.8	197.8	0.1041	0.1041		
D 13C-1,2,3,7,8-PeCDF	26.552	2574521	1.60	1.1405	109.3	109.3	0.2956	0.2956	109	
1,2,3,7,8-PeCDF	26.578	26032333	1.55	1.0543	959.1	959.1	2.101	2.101	95.91	
D 13C-2,3,4,7,8-PeCDF	28.002	2584740	1.63	1.1253	111.2	111.2	0.2996	0.2996	111	
2,3,4,7,8-PeCDF	28.028	24861382	1.54	1.0079	954.4	954.4	2.393	2.393	95.44	
S Total PeCDF					1913.5	1913.5	2.247	2.247		
D 13C-1,2,3,7,8-PeCDD	28.795	1602880	1.57	0.7165	108.3	108.3	0.1169	0.1169	108	
1,2,3,7,8-PeCDD	28.820	16645947	1.55	1.0465	992.4	992.4	0.3154	0.3154	99.24	
S Total PeCDD					992.4	992.4	0.3154	0.3154		
D 13C-1,2,3,4,7,8-HxCDF	34.370	1968615	0.53	0.9648	104.2	104.2	0.2764	0.2764	104	
1,2,3,4,7,8-HxCDF	34.404	21902419	1.26	1.1474	969.7	969.7	2.964	2.964	96.97	
D 13C-1,2,3,6,7,8-HxCDF	34.555	2283961	0.53	1.0708	109.0	109.0	0.2490	0.2490	109	
1,2,3,6,7,8-HxCDF	34.572	26721257	1.24	1.2178	960.7	960.7	2.280	2.280	96.07	
D 13C-2,3,4,6,7,8-HxCDF	35.432	2190509	0.53	1.0413	107.5	107.5	0.2561	0.2561	107	
2,3,4,6,7,8-HxCDF	35.449	25388405	1.26	1.2145	954.3	954.3	2.195	2.195	95.43	
D 13C-1,2,3,7,8,9-HxCDF	36.376	1895740	0.54	0.9731	99.5	99.5	0.2741	0.2741	99.52	
1,2,3,7,8,9-HxCDF	36.393	22553786	1.25	1.2401	959.4	959.4	2.206	2.206	95.94	
S Total HxCDF					3844.1	3844.1	2.411	2.411		
* 13C-1,2,3,7,8,9-HxCDD	36.182	1957513	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.668	1539784	1.30	0.7587	103.7	103.7	0.1260	0.1260	104	
1,2,3,4,7,8-HxCDD	35.685	15558498	1.24	1.0608	952.5	952.5	0.9710	0.9710	95.25	
D 13C-1,2,3,6,7,8-HxCDD	35.794	1741498	1.29	0.8593	103.5	103.5	0.1112	0.1112	104	
1,2,3,6,7,8-HxCDD	35.811	16661405	1.25	0.9933	963.1	963.1	0.9604	0.9604	96.31	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.198	17279185	1.24	1.1094	949.3	949.3	0.8929	0.8929	94.93	
S Total HxCDD					2865.0	2865.0	0.9414	0.9414		
D 13C-1,2,3,4,6,7,8-HpCDF	38.292	1546113	0.45	0.7359	107.3	107.3	0.2883	0.2883	107	
1,2,3,4,6,7,8-HpCDF	38.309	21181967	1.05	1.4421	950.0	950.0	2.277	2.277	95.00	
D 13C-1,2,3,4,7,8,9-HpCDF	39.591	1455766	0.46	0.6854	108.5	108.5	0.3095	0.3095	109	
1,2,3,4,7,8,9-HpCDF	39.600	17812004	1.04	1.3092	934.6	934.6	2.410	2.410	93.46	
S Total HpCDF					1884.6	1884.6	2.344	2.344		
D 13C-1,2,3,4,6,7,8-HpCDD	39.279	1355803	1.07	0.6745	102.7	102.7	0.1997	0.1997	103	
1,2,3,4,6,7,8-HpCDD	39.287	13800004	1.05	1.0503	969.1	969.1	1.263	1.263	96.91	
S Total HpCDD					969.1	969.1	1.263	1.263		
D 13C-OCDD	41.778	2298668	0.91	0.5446	215.6	215.6	0.2297	0.2297	108	
OCDF	41.862	30505464	0.91	1.3168	2015.6	2015.6	1.318	1.318	101	
OCDD	41.786	22803823	0.89	1.0620	1868.3	1868.3	1.408	1.408	93.41	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.544	20.547	0		920603	150087	115	287	1305		
333.9338	20.544	20.547	0		1145485	178229	63	157	2829	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.616	19.616	0	0.955	1315625	222528	203	507	1096		
317.9389	19.625	19.616	1	0.955	1646890	273662	123	307	2225	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.642	19.646	0	1.001	2713655	446561	138	345	3236		
305.8987	19.642	19.646	0	1.001	3423376	567597	182	455	3119	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.913	20.910	0	1.018	893612	134635	115	287	1171		
333.9338	20.913	20.910	0	1.018	1120920	170916	63	157	2713	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.939	20.935	0	1.019	4287059	670067	127	317	5276		
2,3,7,8-TCDD											
319.8965	20.939	20.939	0	1.001	1891754	292983	63	157	4651		
321.8936	20.939	20.939	0	1.001	2394280	370217	74	185	5003	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.552	26.560	0	1.292	1583459	282119	248	620	1138		
353.8970	26.552	26.560	0	1.292	991062	177690	195	487	911	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.578	26.584	0	1.001	15809872	2840843	2484	6210	1144		
341.8567	26.578	26.584	0	1.001	10222461	1821485	1590	3975	1146	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.002	28.014	-1	1.363	1602860	260320	248	620	1050		
353.8970	28.002	28.014	-1	1.363	981880	162024	195	487	831	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.028	28.039	-1	1.001	15085675	2478093	2484	6210	998		
341.8567	28.028	28.039	-1	1.001	9775707	1618127	1590	3975	1018	1.54(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.795	28.801	0	1.402	978472	153717	62	155	2479		
369.8919	28.795	28.801	0	1.402	624408	97747	48	120	2036	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.820	28.828	0	1.001	10130500	1566899	211	527	7426		
357.8516	28.820	28.828	0	1.001	6515447	1012500	121	302	8368	1.55(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.370	34.384	-1	0.950	681535	131177	206	515	637		
385.8610	34.370	34.384	-1	0.950	1287080	241920	293	732	826	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.404	34.405	0	1.001	12221224	2429393	2850	7125	852		
375.8178	34.404	34.405	0	1.001	9681195	1938109	2226	5565	871	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.555	34.562	0	0.955	787279	159086	206	515	772		
385.8610	34.555	34.562	0	0.955	1496682	297889	293	732	1017	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.572	34.582	-1	1.000	14789206	2955884	2850	7125	1037		
375.8178	34.572	34.582	-1	1.000	11932051	2355841	2226	5565	1058	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.432	35.444	-1	0.979	755749	165004	206	515	801		
385.8610	35.432	35.444	-1	0.979	1434760	311089	293	732	1062	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.449	35.461	-1	1.000	14140079	3143736	2850	7125	1103		
375.8178	35.449	35.461	-1	1.000	11248326	2509936	2226	5565	1128	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.376	36.388	-1	1.005	661276	161798	206	515	785		
385.8610	36.376	36.388	-1	1.005	1234464	302164	293	732	1031	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.393	36.402	-1	1.000	12520528	3053286	2850	7125	1071		
375.8178	36.393	36.402	-1	1.000	10033258	2435227	2226	5565	1094	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.182	36.192	-1		1094886	260943	101	252	2584		
403.8529	36.182	36.192	-1		862627	206665	78	195	2650	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.668	35.680	-1	0.986	871516	210376	101	252	2083		
403.8529	35.668	35.680	-1	0.986	668268	161161	78	195	2066	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.685	35.695	-1	1.000	8624435	2104573	873	2182	2411		
391.8127	35.685	35.695	-1	1.000	6934063	1696812	658	1645	2579	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.794	35.805	-1	0.989	980230	223296	101	252	2211		
403.8529	35.794	35.805	-1	0.989	761268	177860	78	195	2280	1.29(1.05-1.43)	

Report Date: 09-Jun-2021 08:54:15 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.811	35.820	-1	1.000	9246987	2090881	873	2182	2395		
391.8127	35.811	35.820	-1	1.000	7414418	1678531	658	1645	2551	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.198	36.208	-1	1.015	9564246	2295203	873	2182	2629		
391.8127	36.198	36.208	-1	1.015	7714939	1845750	658	1645	2805	1.24(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.292	38.305	-1	1.058	482843	137759	141	352	977		
419.8220	38.292	38.305	-1	1.058	1063270	304088	256	640	1188	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	10831802	3065791	3002	7505	1021		
409.7788	38.309	38.317	0	1.000	10350165	2906390	2802	7005	1037	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.591	39.600	-1	1.094	458518	146875	141	352	1042		
419.8220	39.591	39.600	-1	1.094	997248	313009	256	640	1223	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.600	39.608	-1	1.000	9086557	2852631	3002	7505	950		
409.7788	39.600	39.608	-1	1.000	8725447	2728020	2802	7005	974	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.279	39.293	-1	1.086	700550	219811	138	345	1593		
437.8140	39.279	39.293	-1	1.086	655253	202475	114	285	1776	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.287	39.301	-1	1.000	7071387	2141109	1133	2832	1890		
425.7737	39.287	39.301	-1	1.000	6728617	2063900	1107	2767	1864	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.778	41.785	0	1.155	1096060	330168	115	287	2871		
471.7750	41.778	41.785	0	1.155	1202608	365220	119	297	3069	0.91(0.76-1.02)	
OCDF											
441.7428	41.862	41.875	-1	1.002	14551716	4304688	1153	2882	3733		
443.7399	41.862	41.875	-1	1.002	15953748	4798066	1261	3152	3805	0.91(0.76-1.02)	
OCDD											
457.7377	41.786	41.794	0	1.000	10735225	3226535	983	2457	3282		
459.7348	41.786	41.794	0	1.000	12068598	3663774	1097	2742	3340	0.89(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

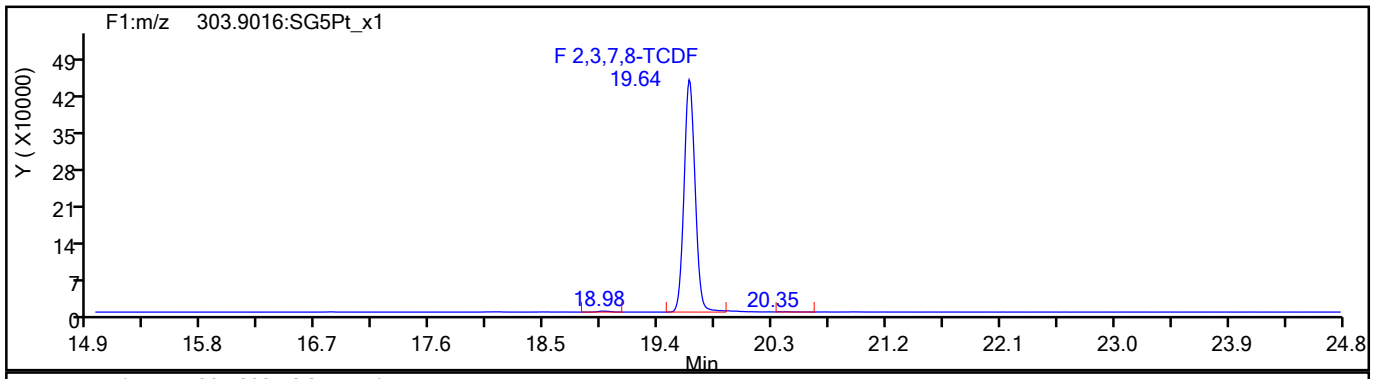

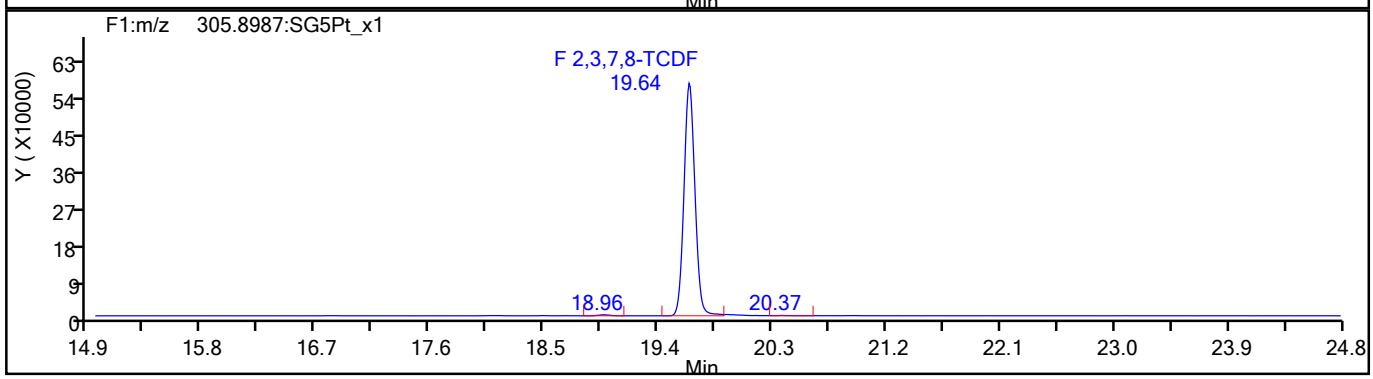

TCDF Standards

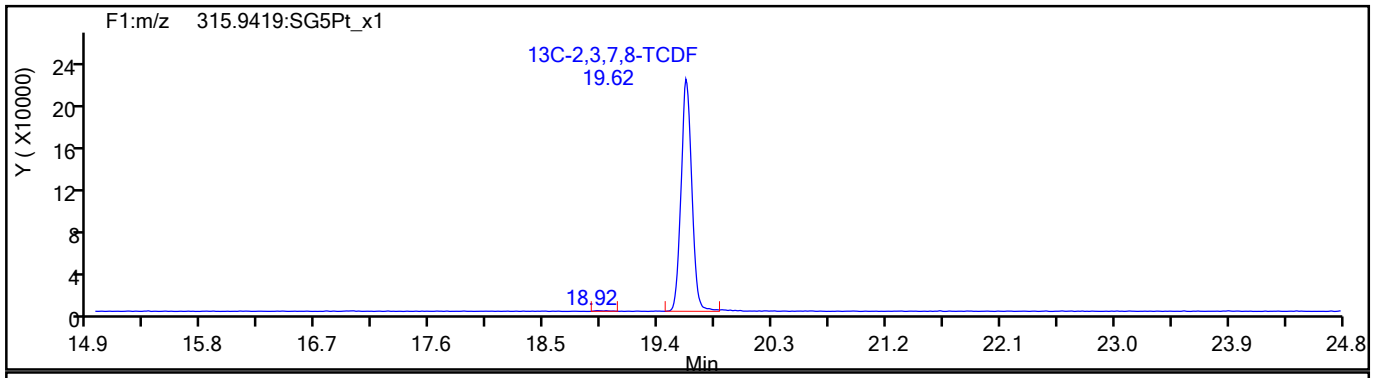

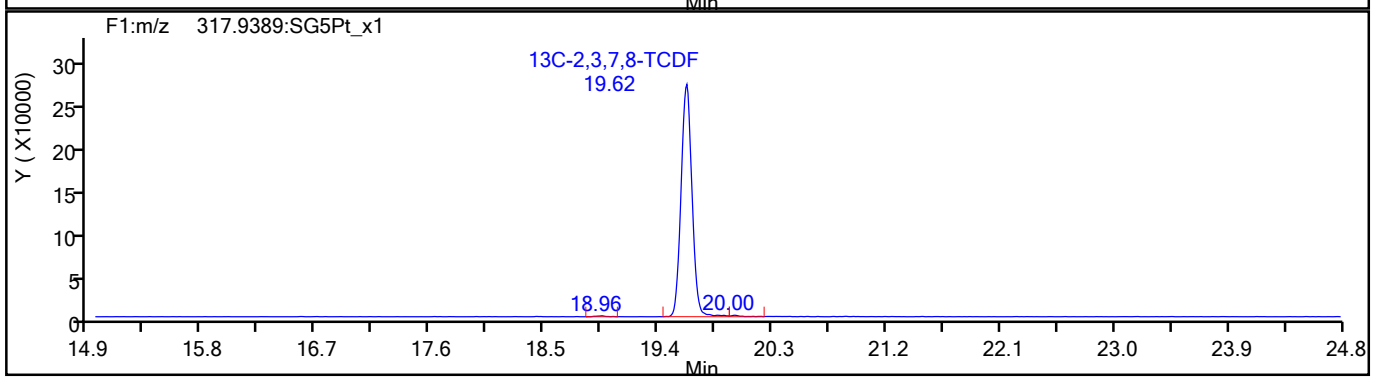

789020

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

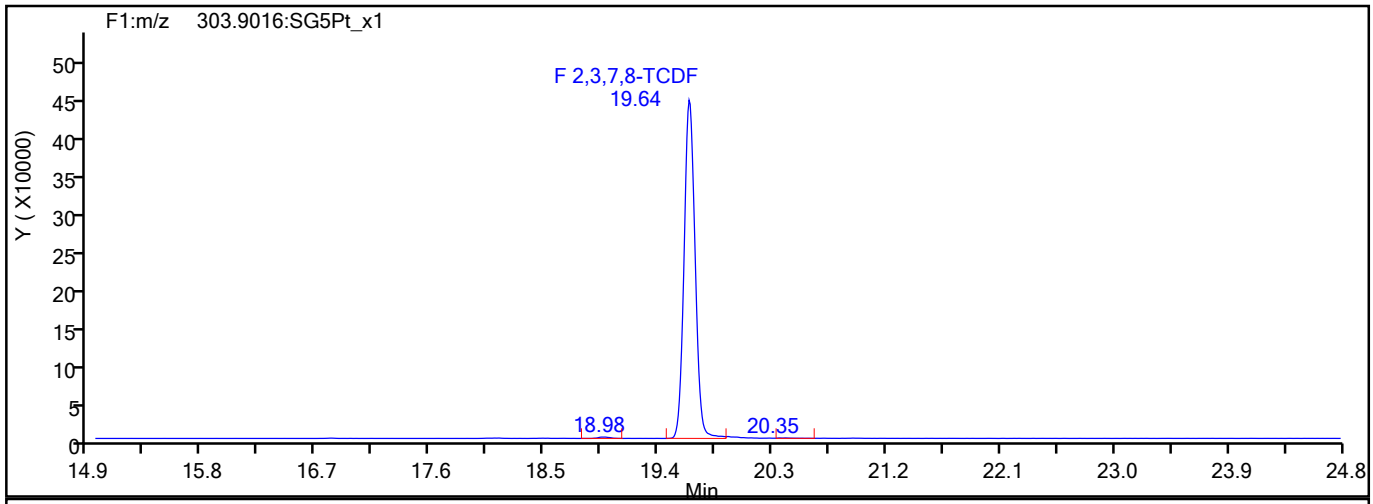

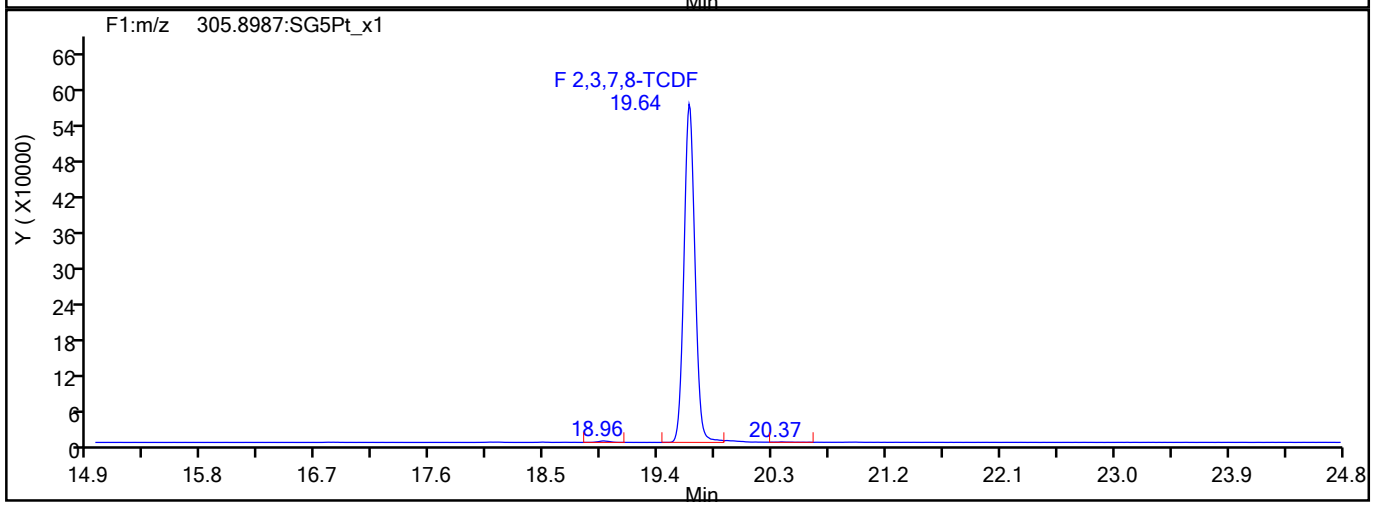

TCDF Interference Mass

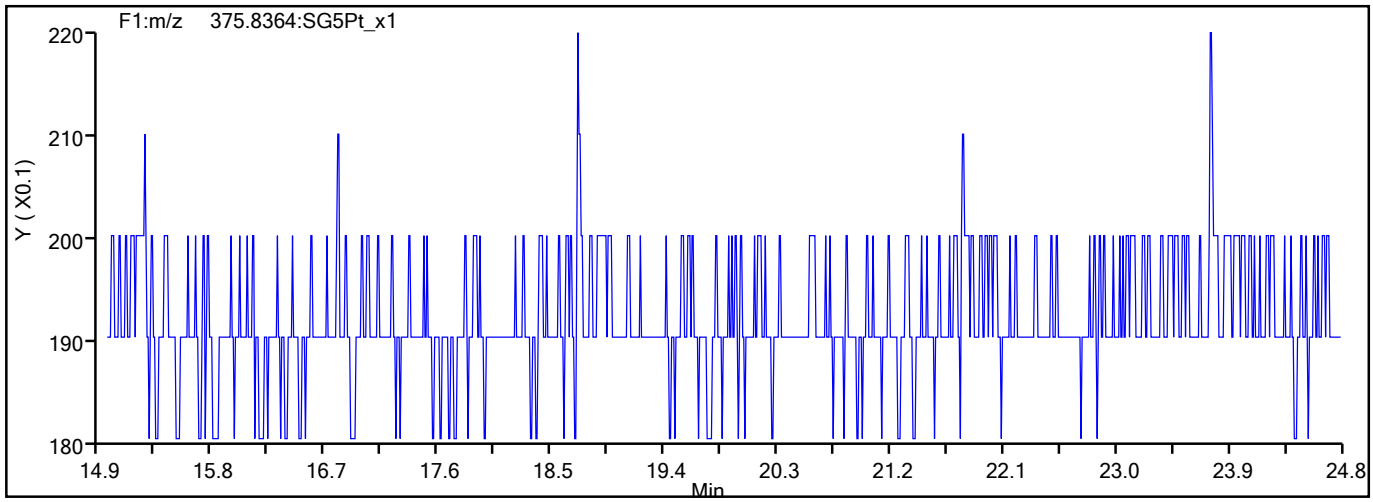

789021

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

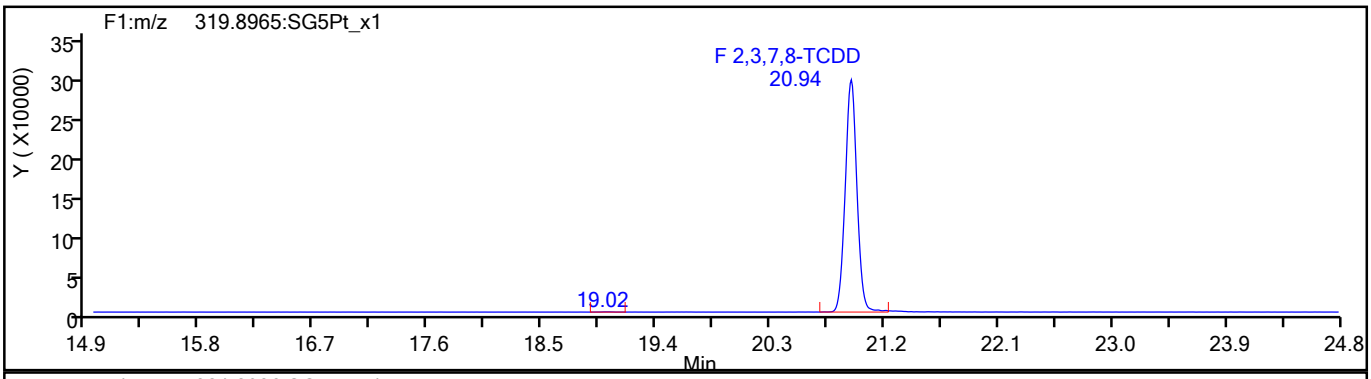

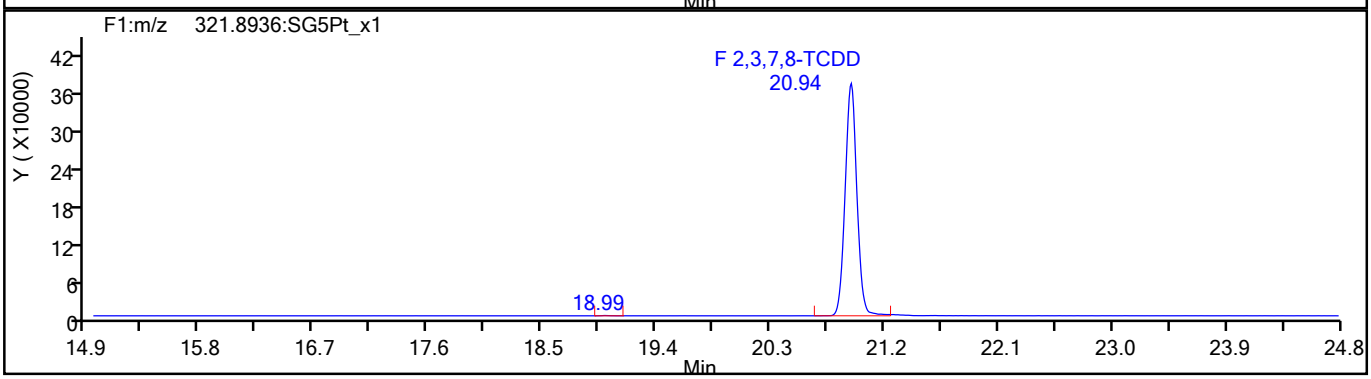

TCDD Standards

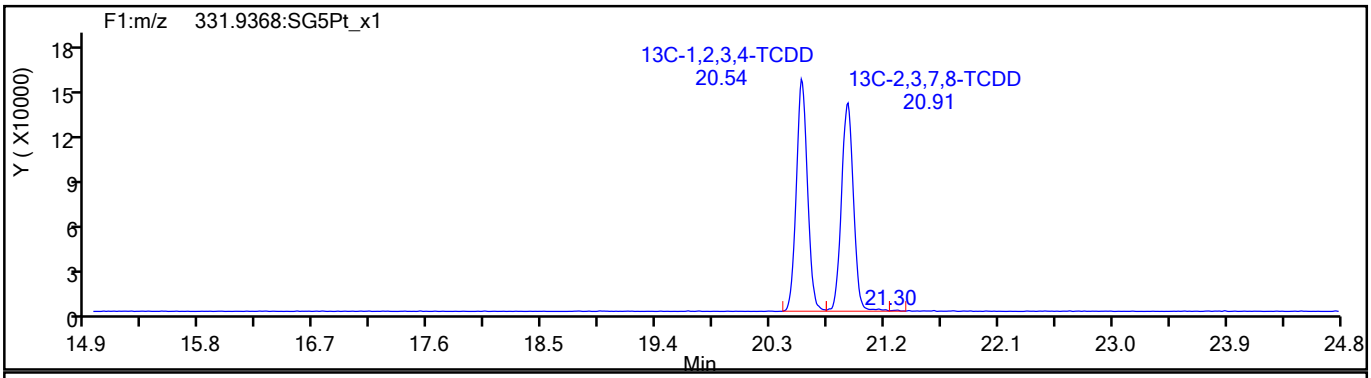

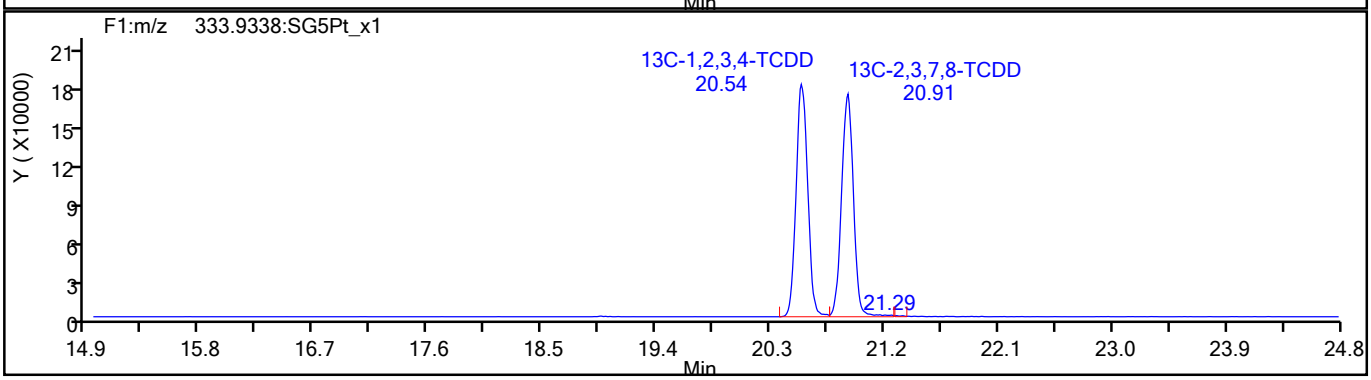

789022

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

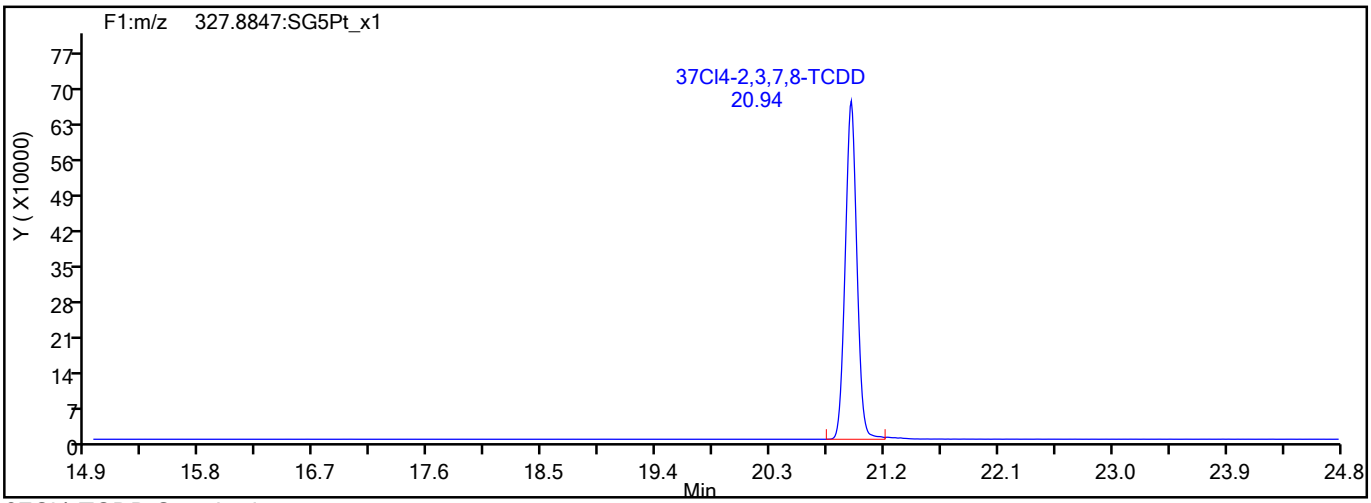

37Cl4-TCDD Standards

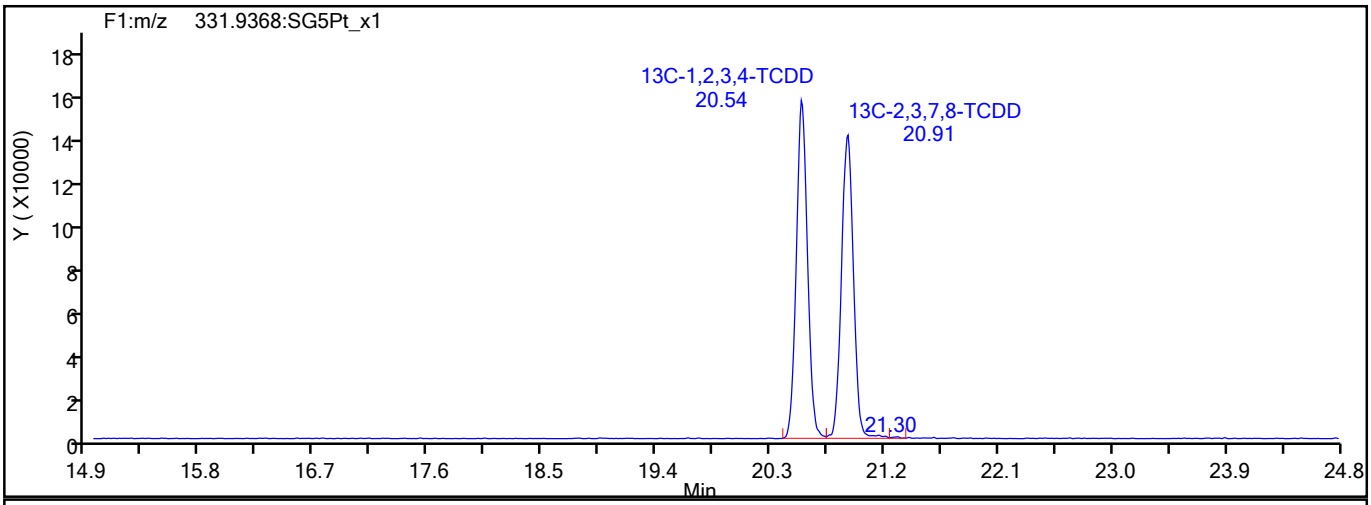

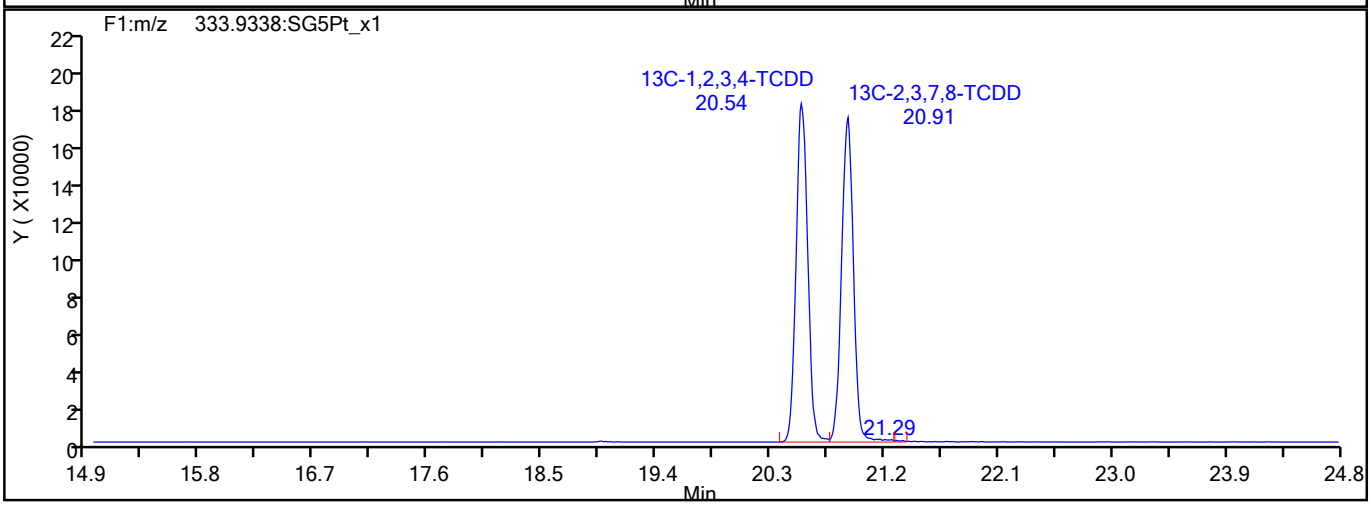

789023

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

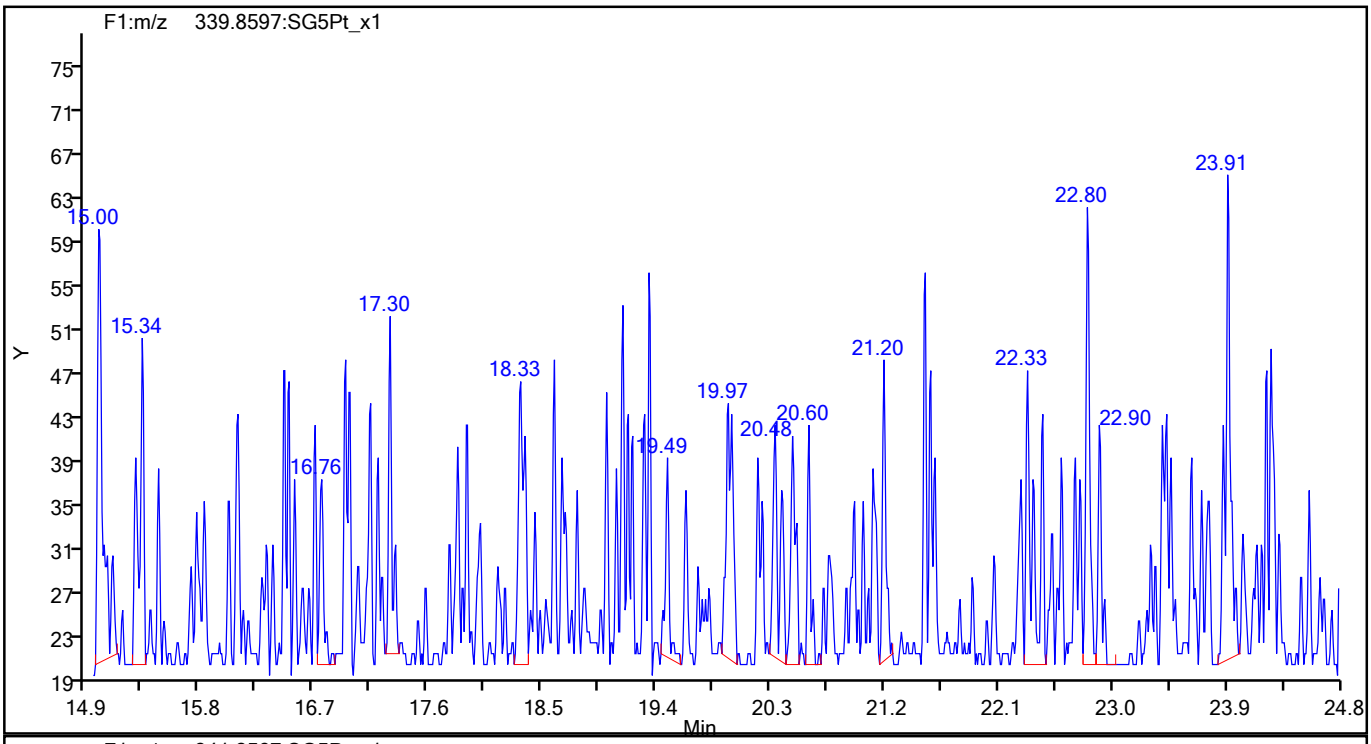

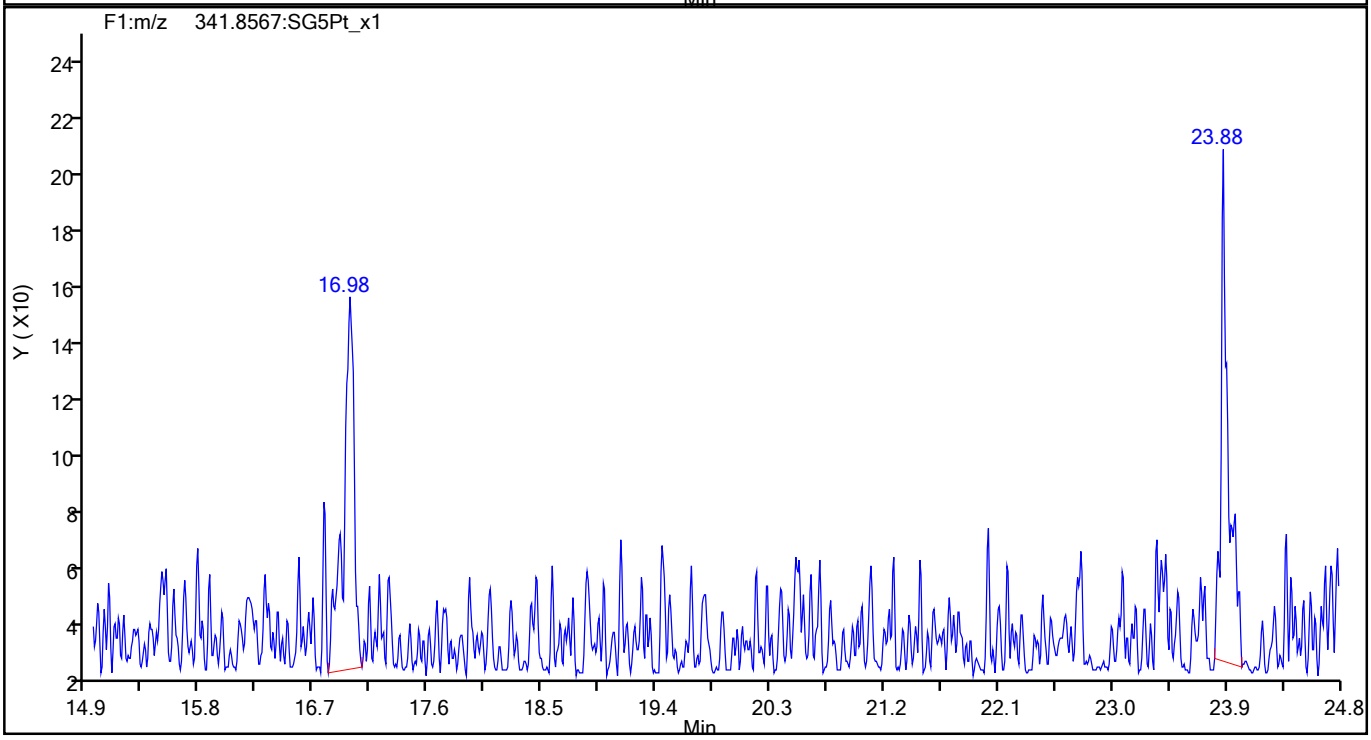

789024

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

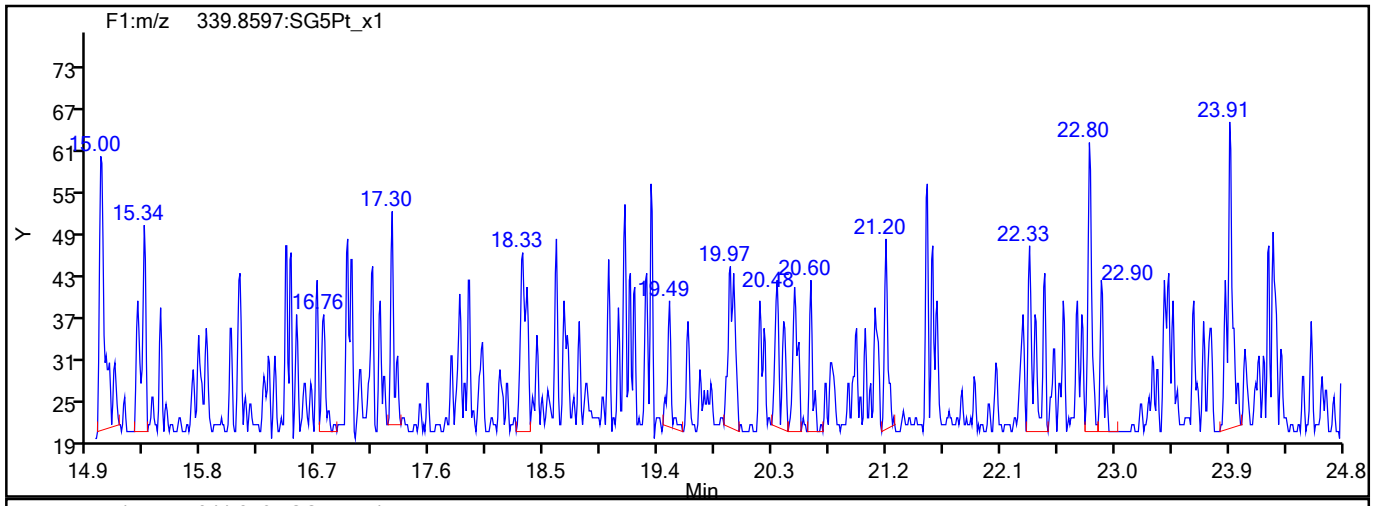

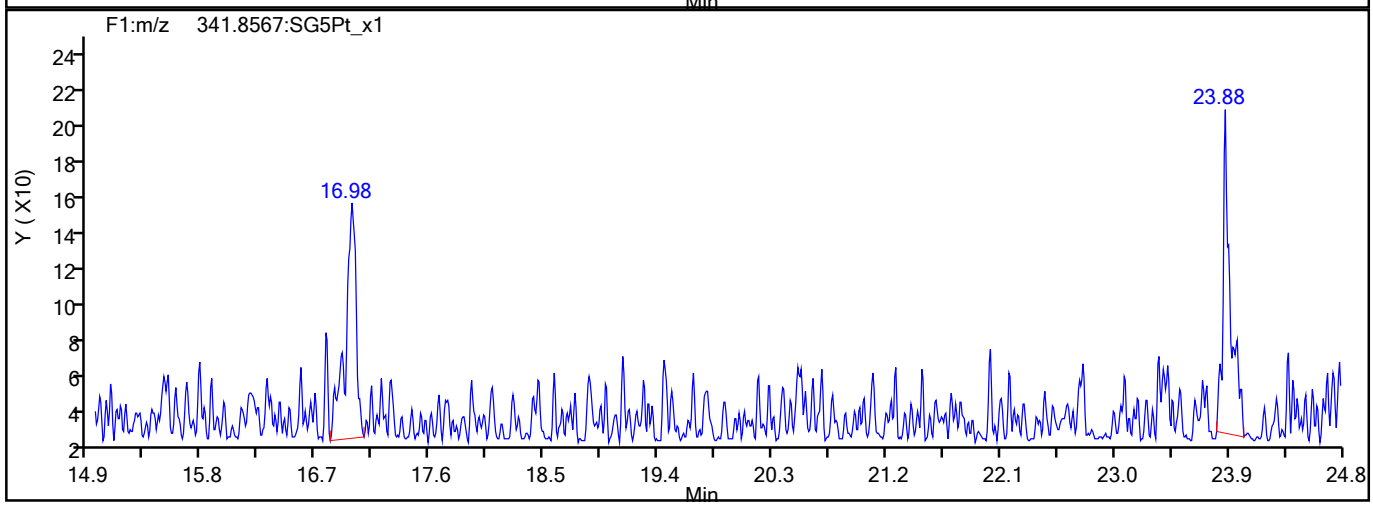

F1 PeCDFs Interference Mass

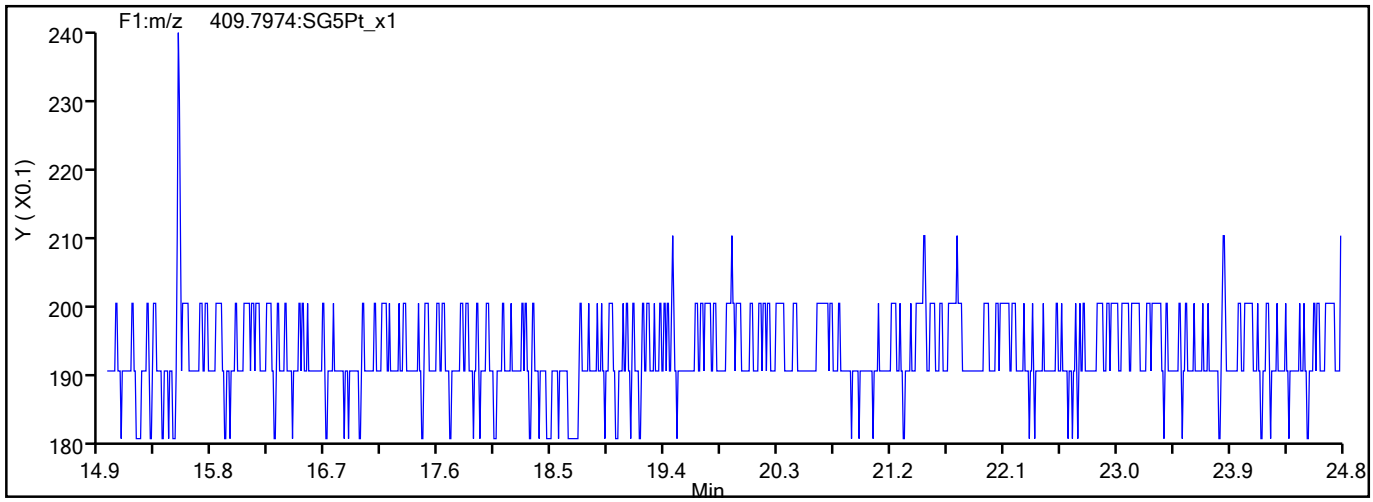

789025

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

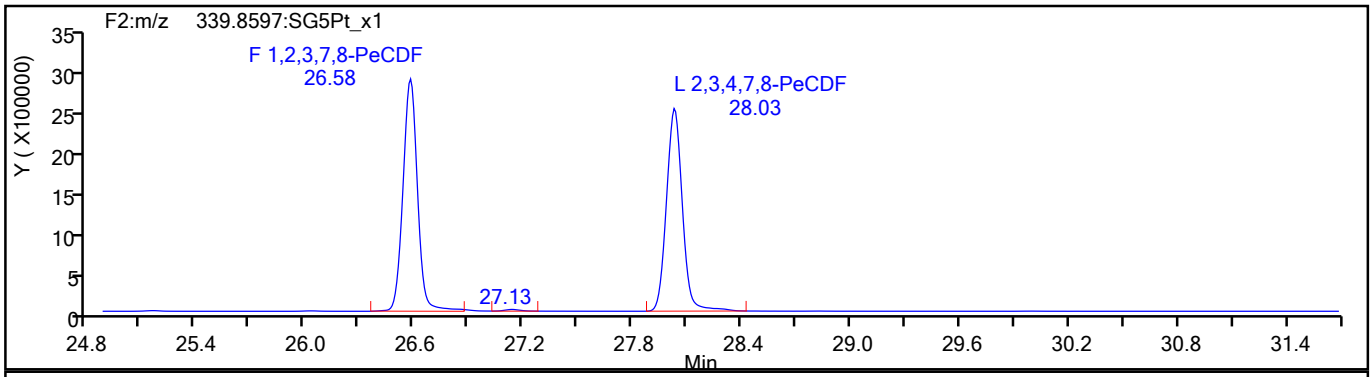

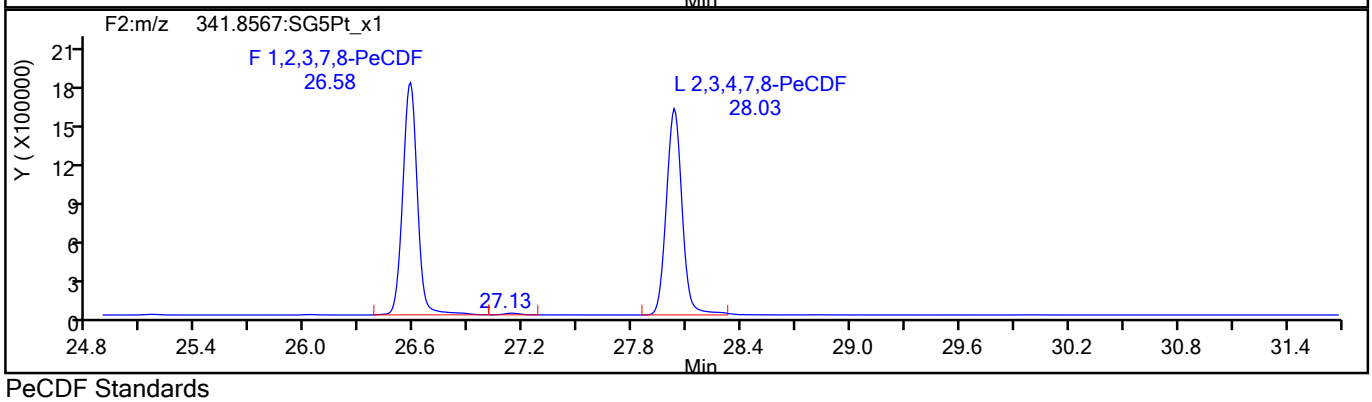

PeCDF Standards

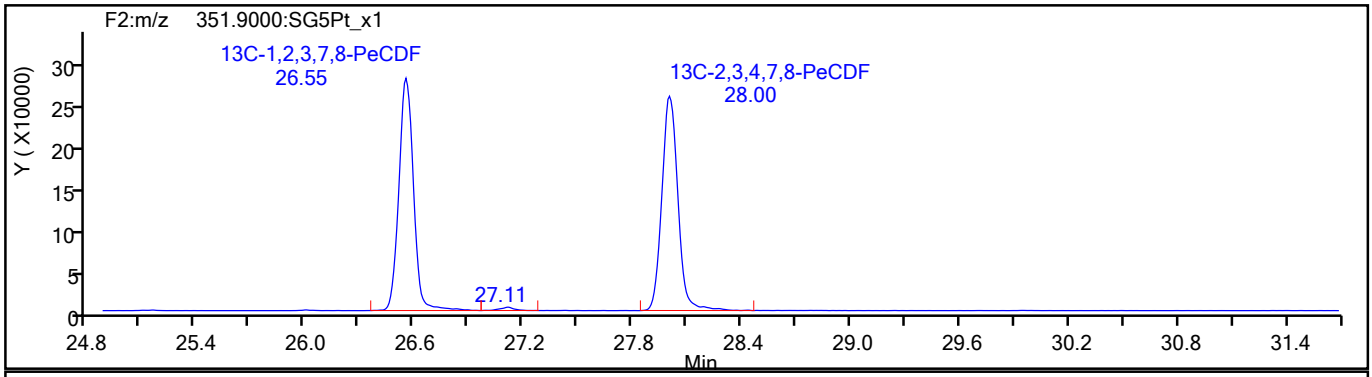

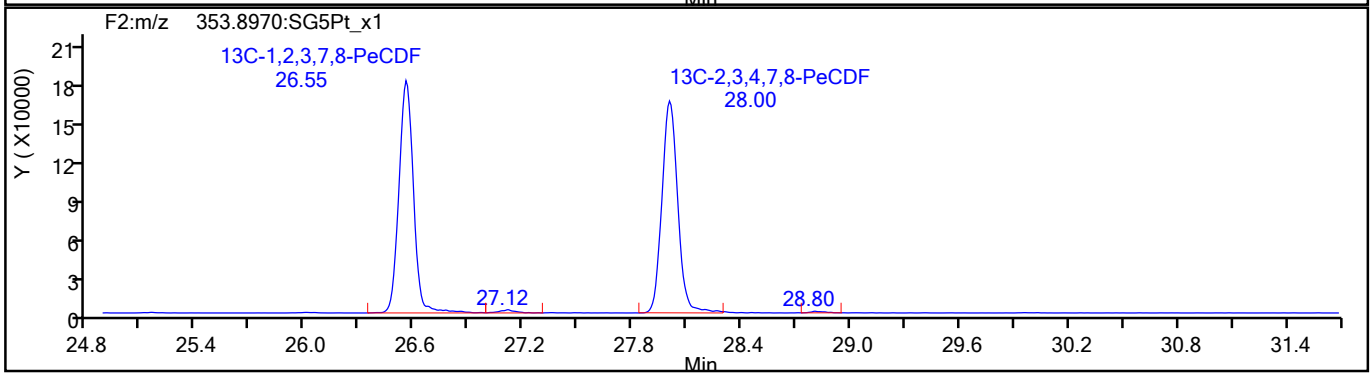

789026

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
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PeCDF

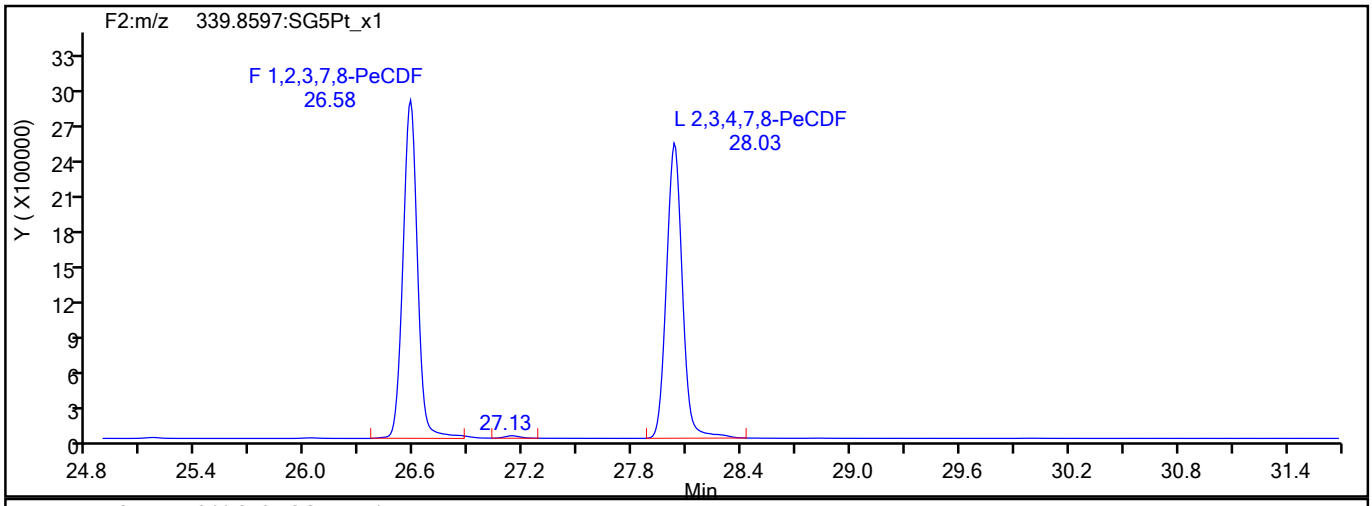

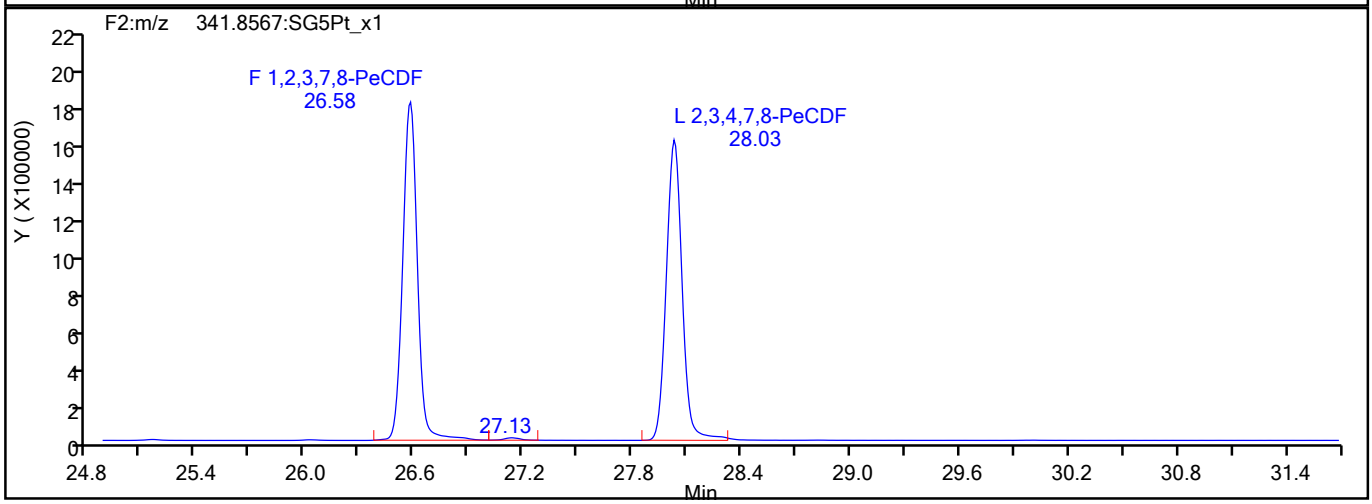

PeCDF Interference Mass

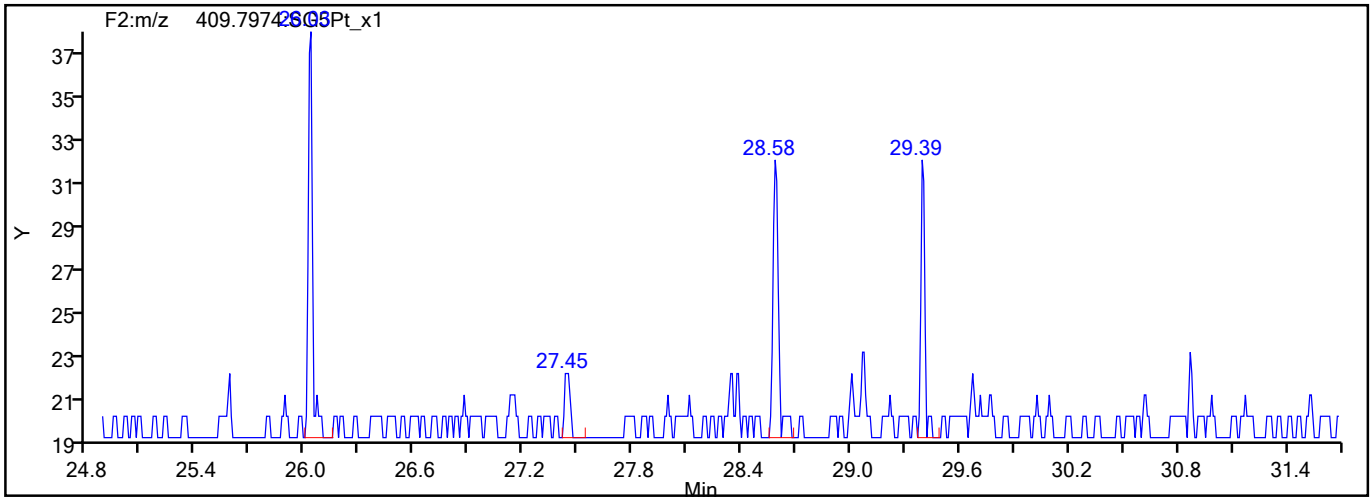

789027

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

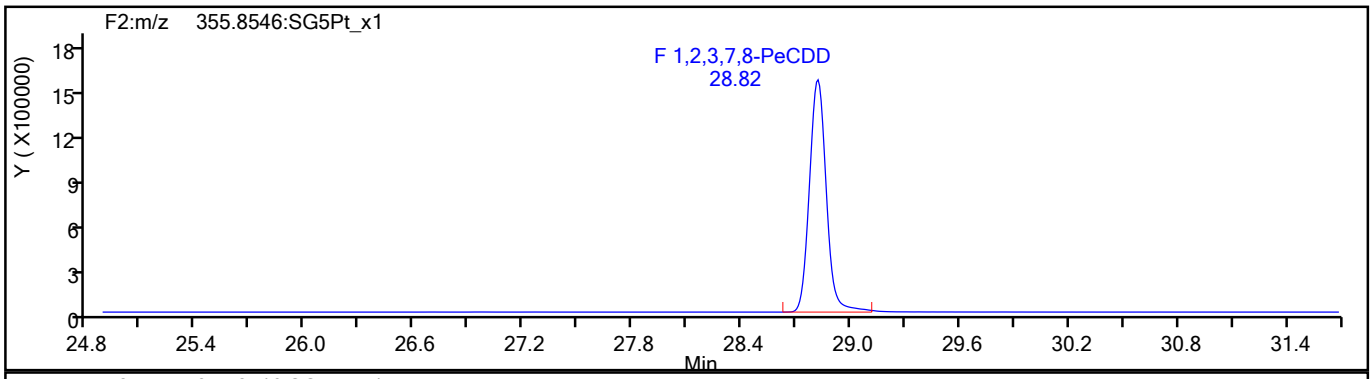

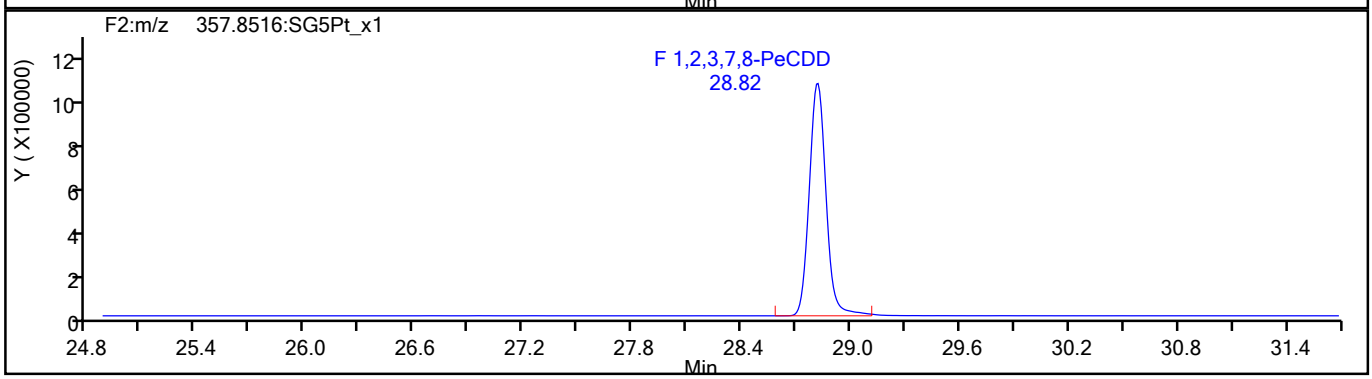

PeCDD Standards

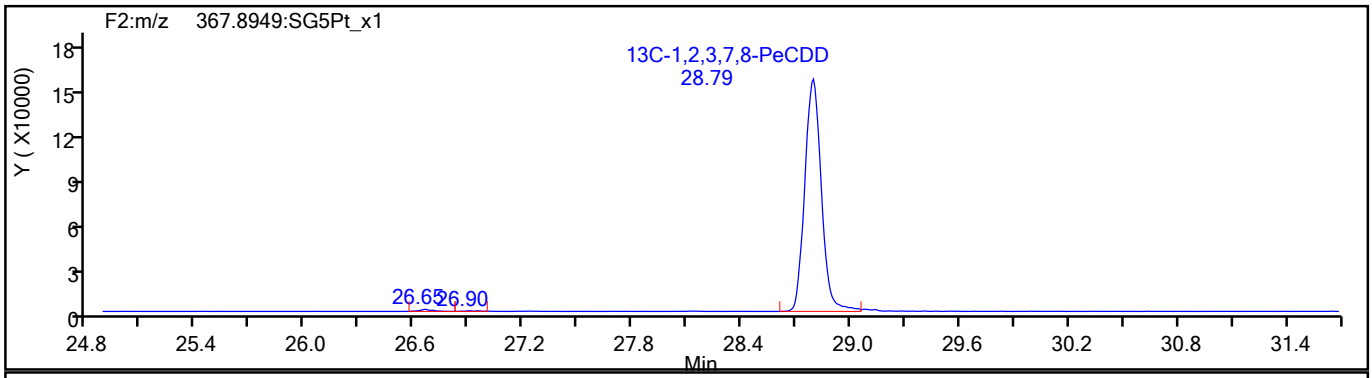

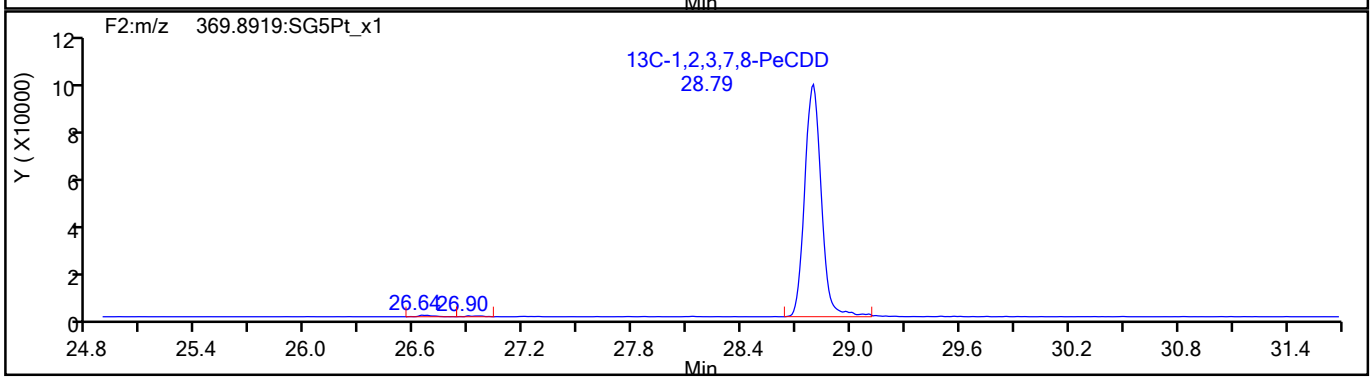

789028

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

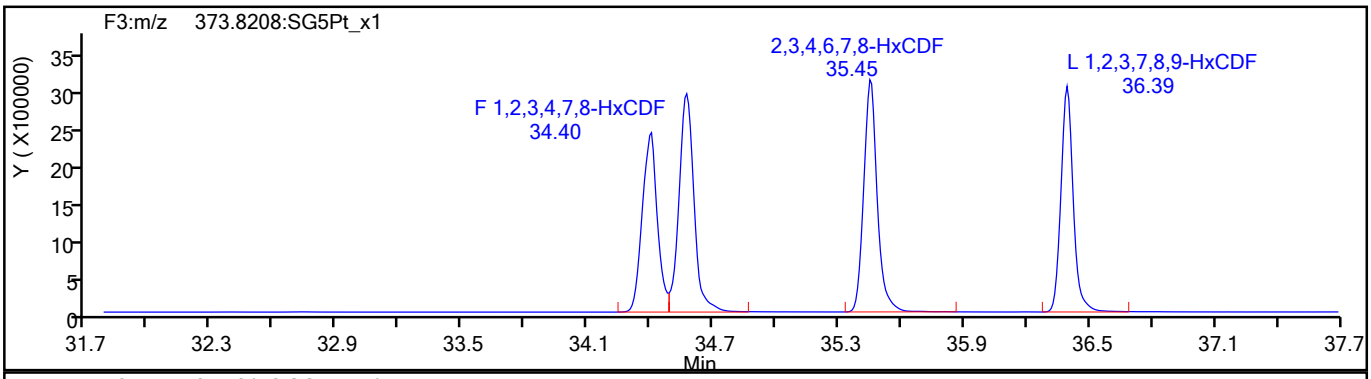

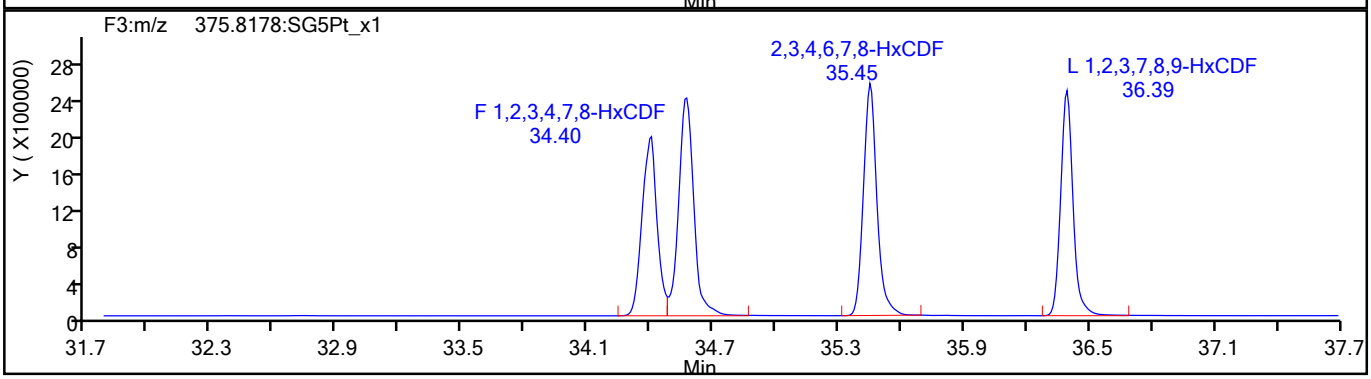

HxCDF Standards

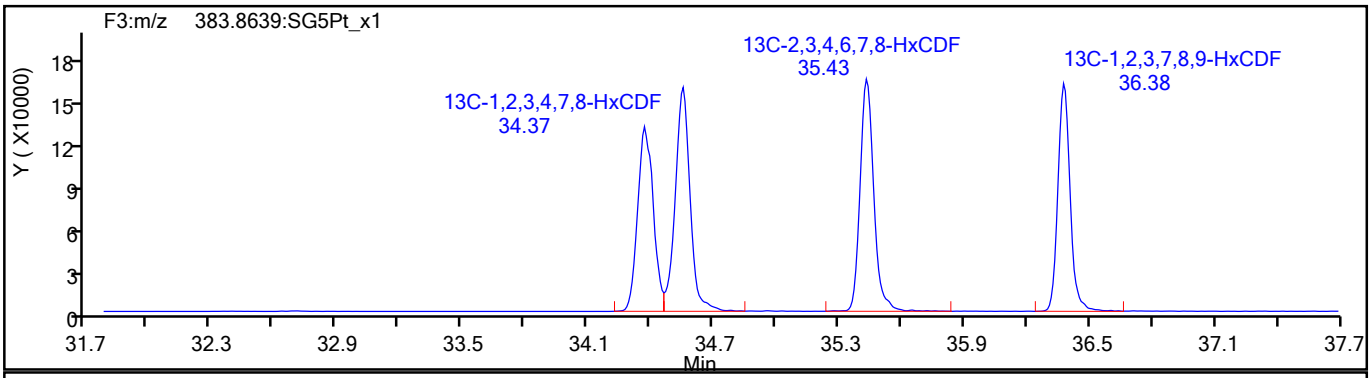

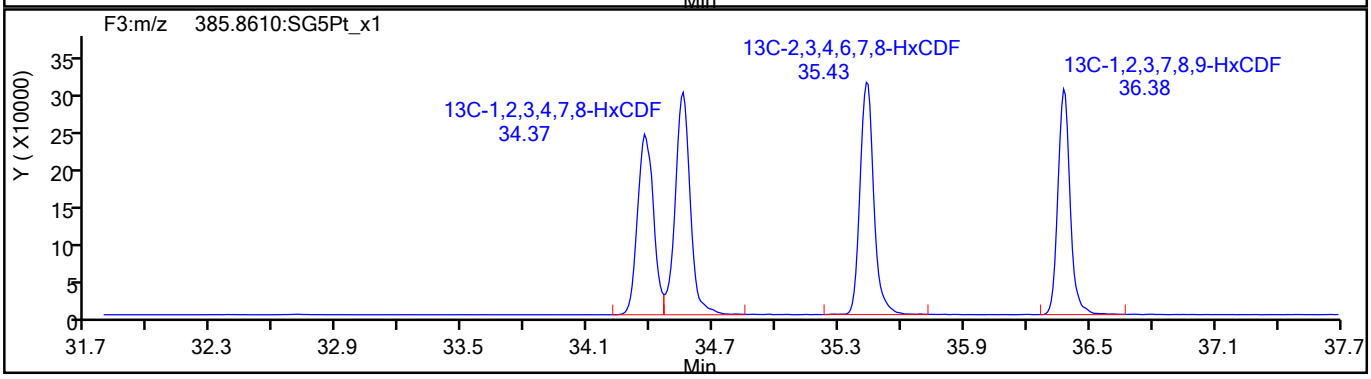

789029

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

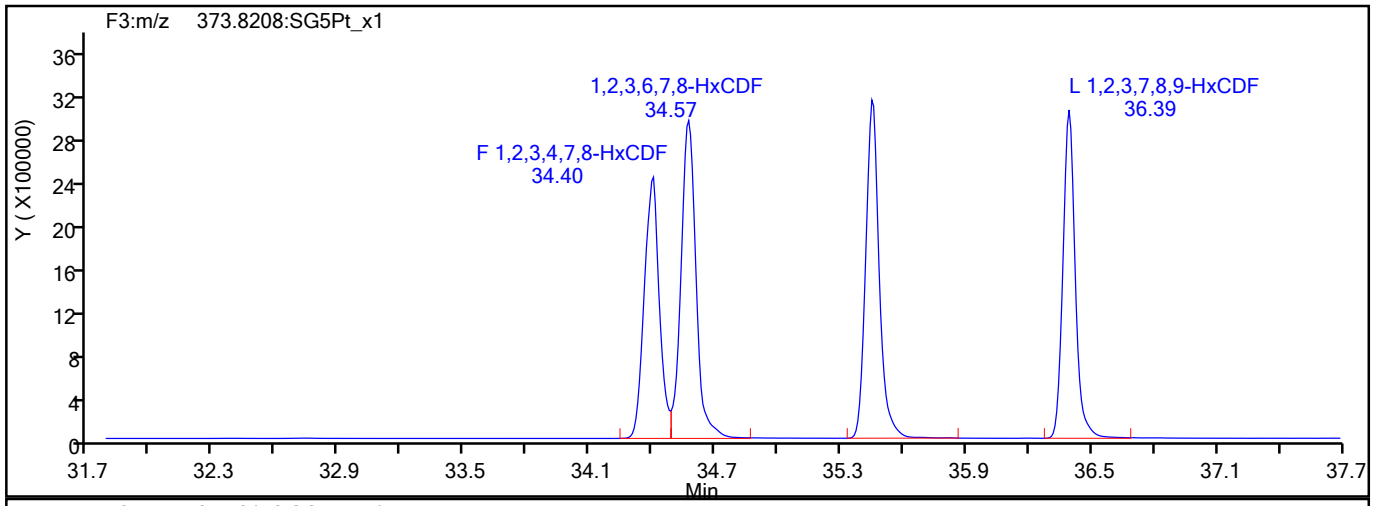

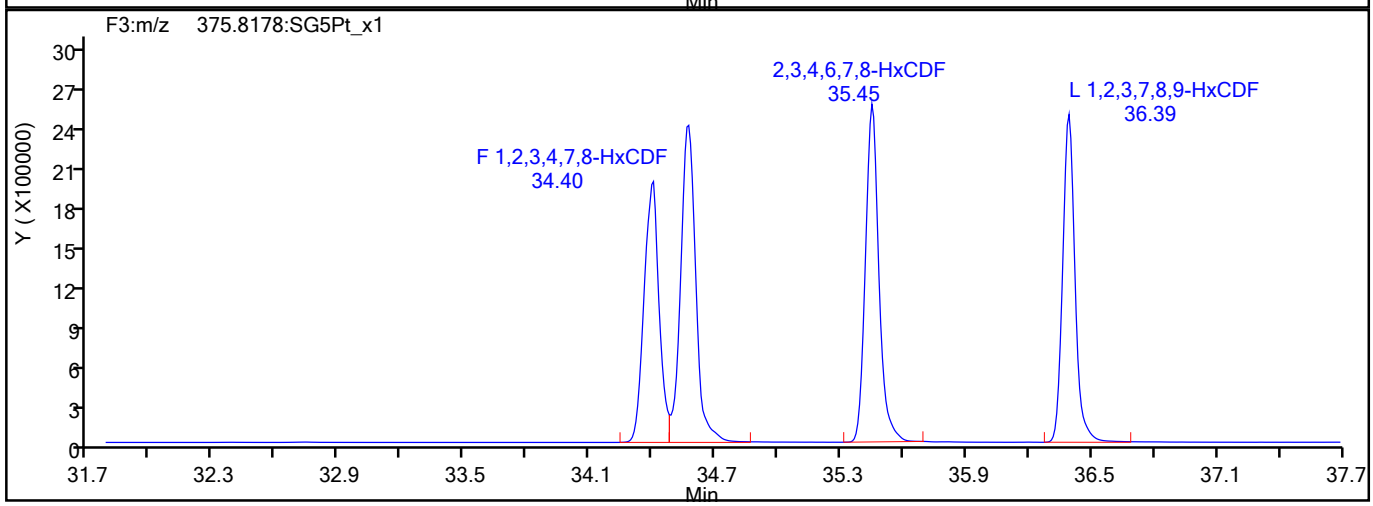

HxCDF Interference Mass

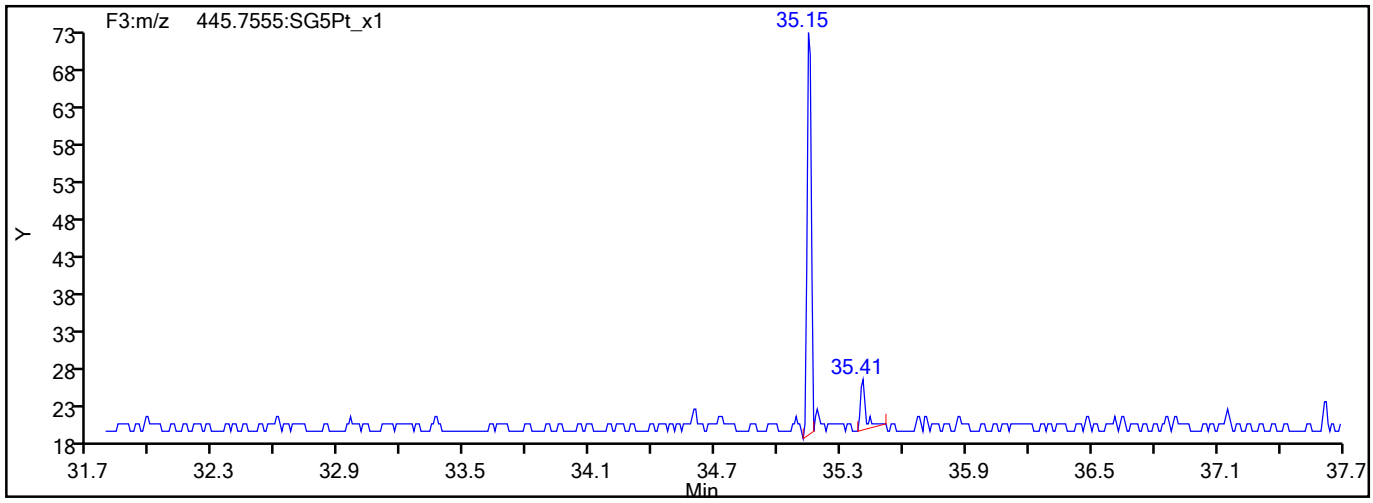

789030

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

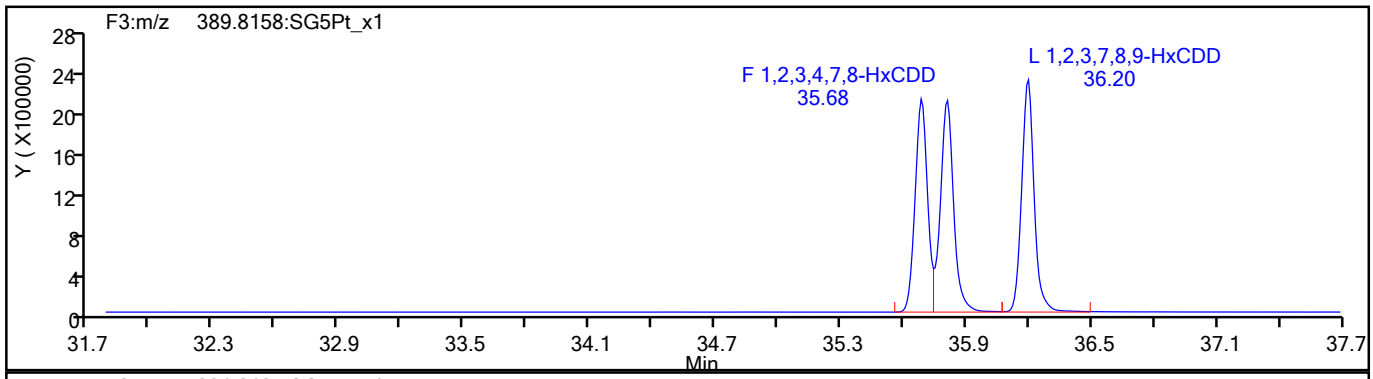

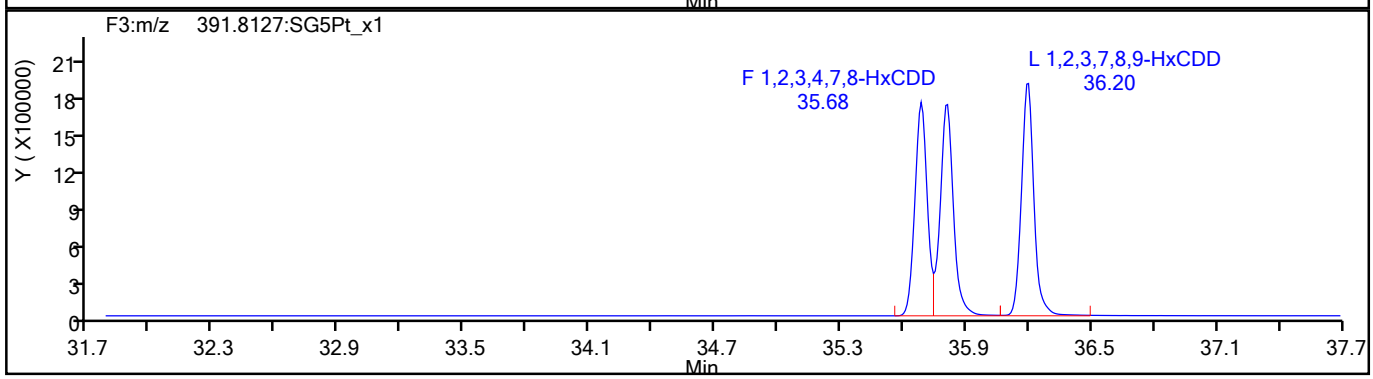

HxCDD Standards

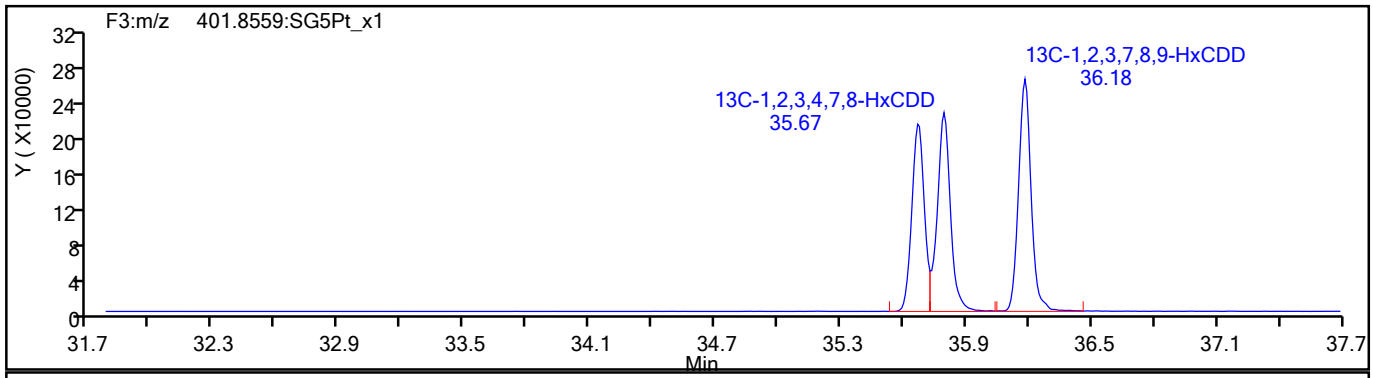

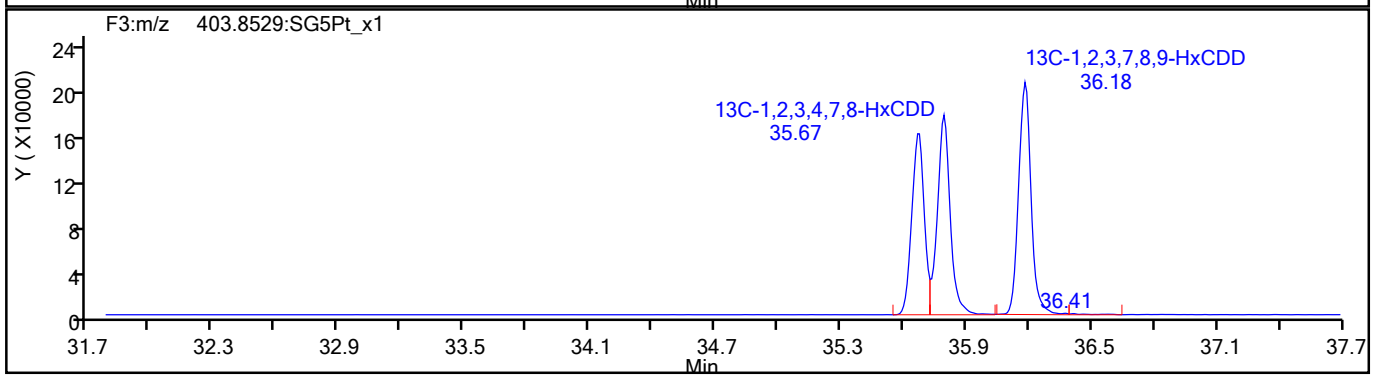

789031

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

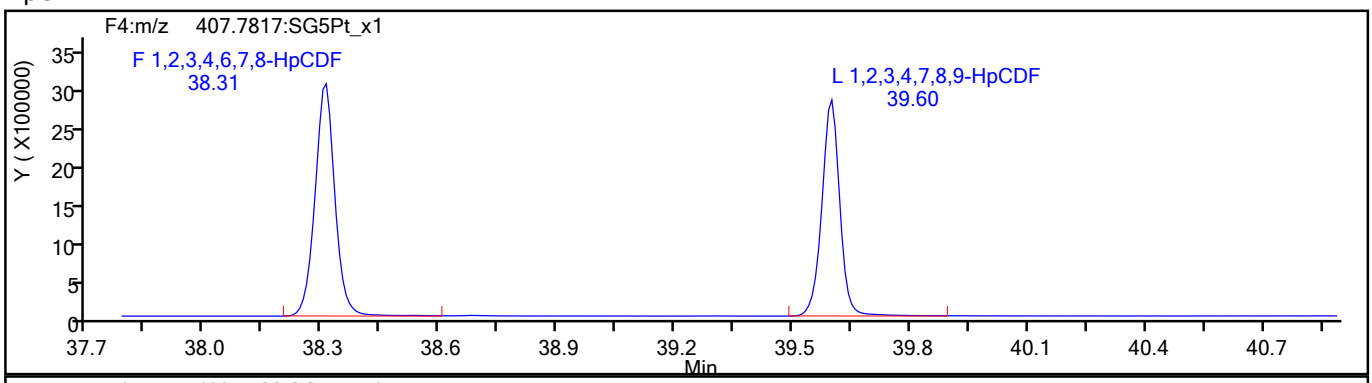

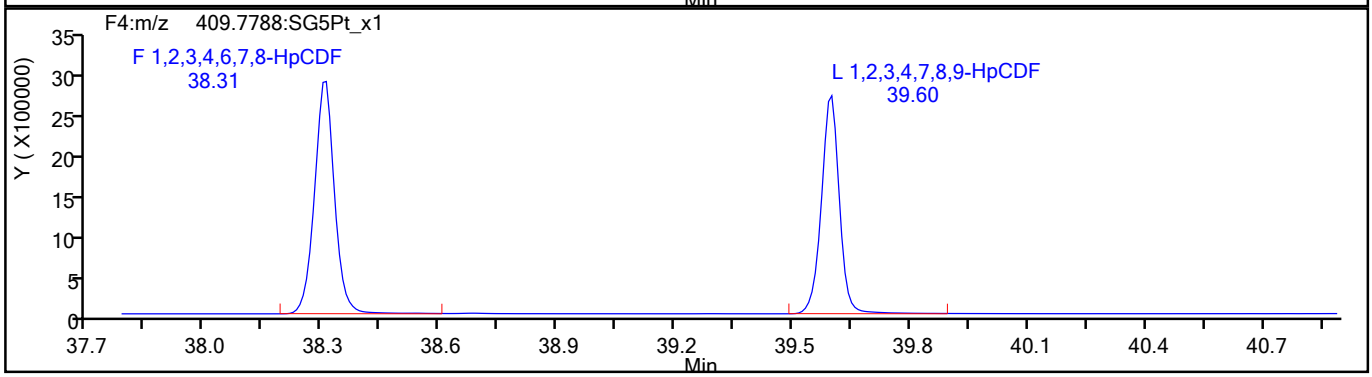

HpCDF Standards

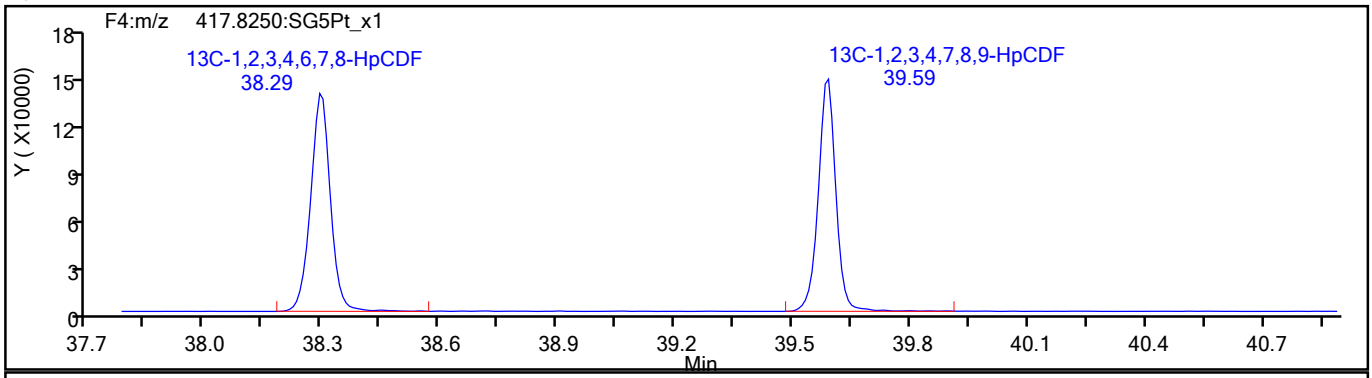

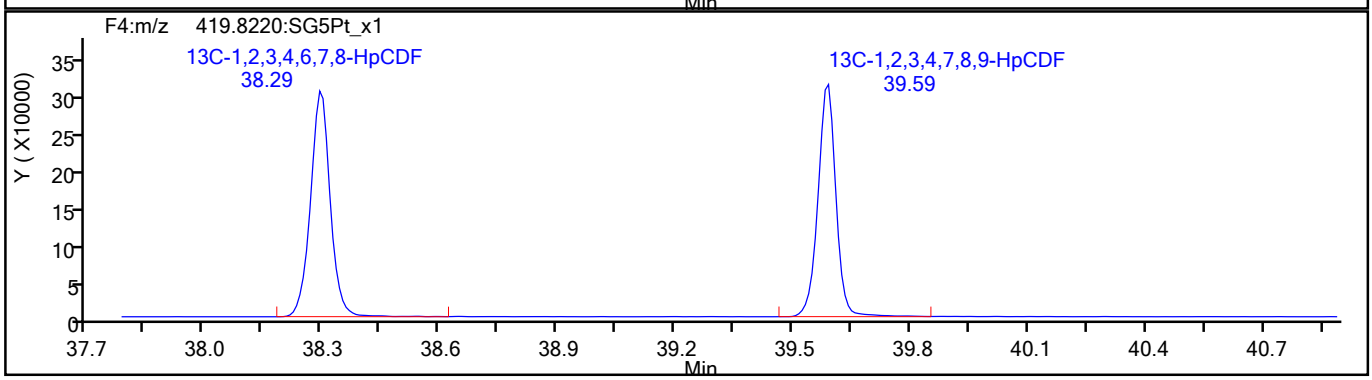

789032

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

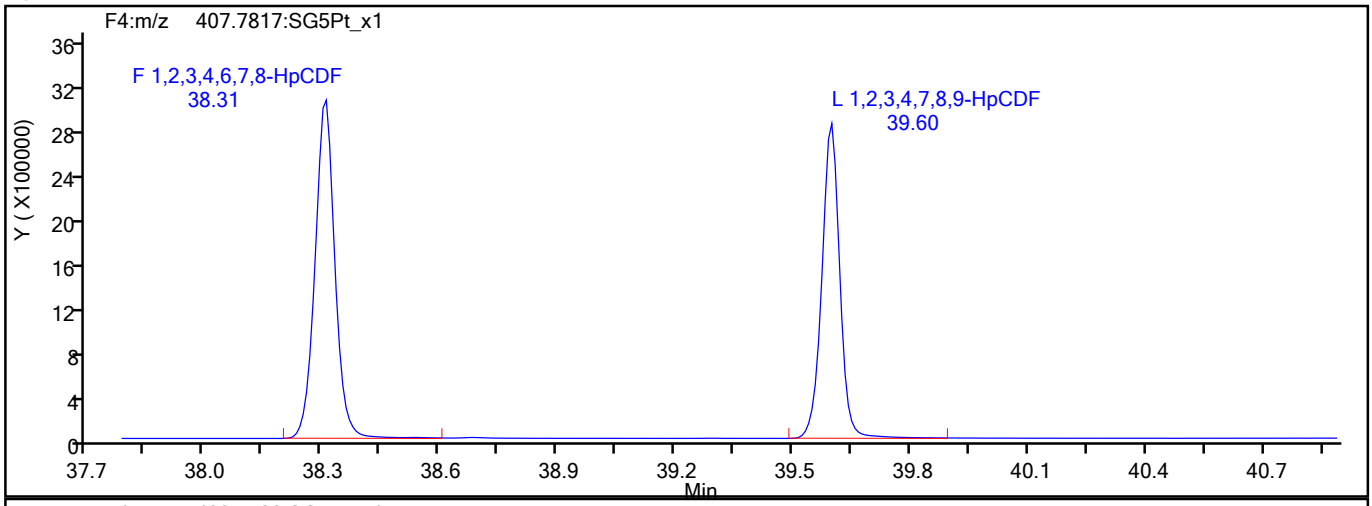

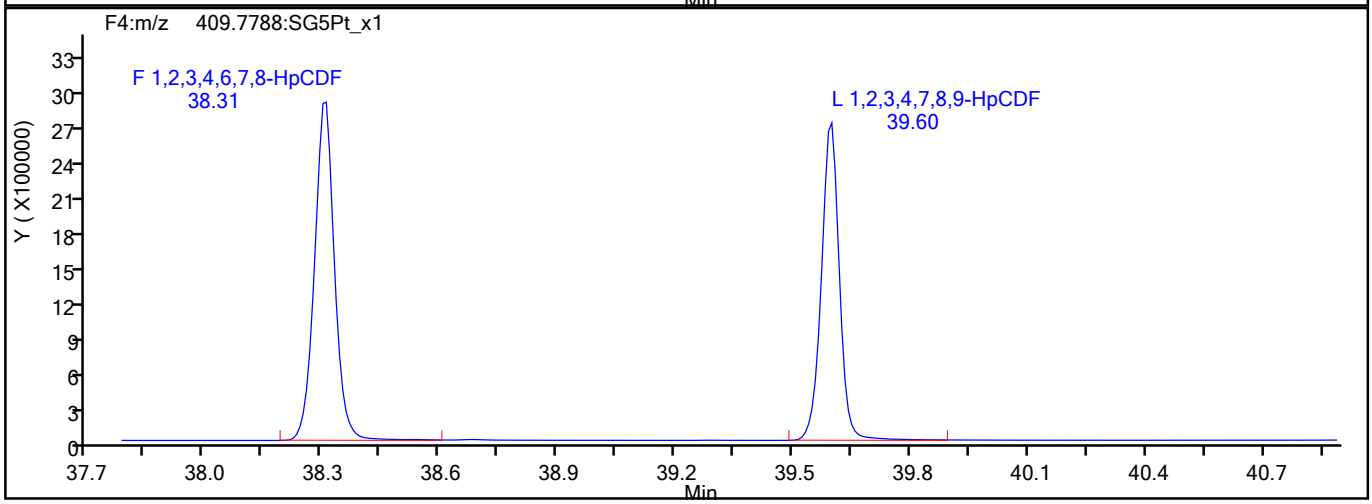

HpCDF Interference Mass

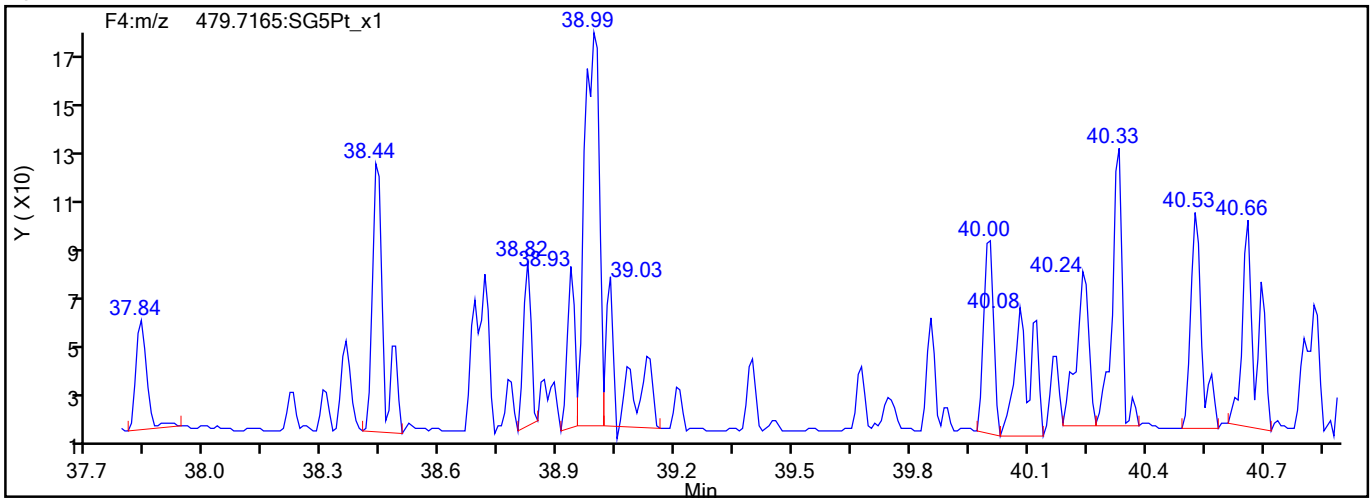

789033

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

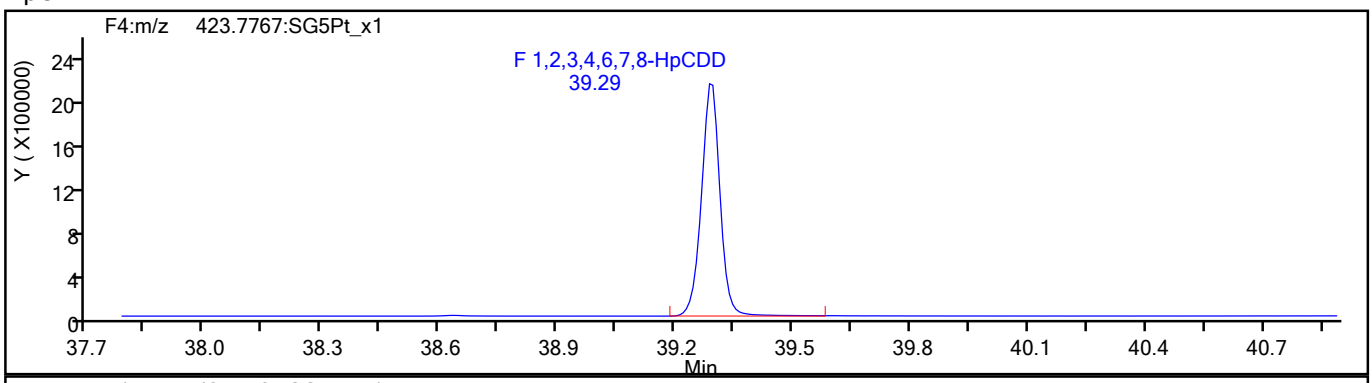

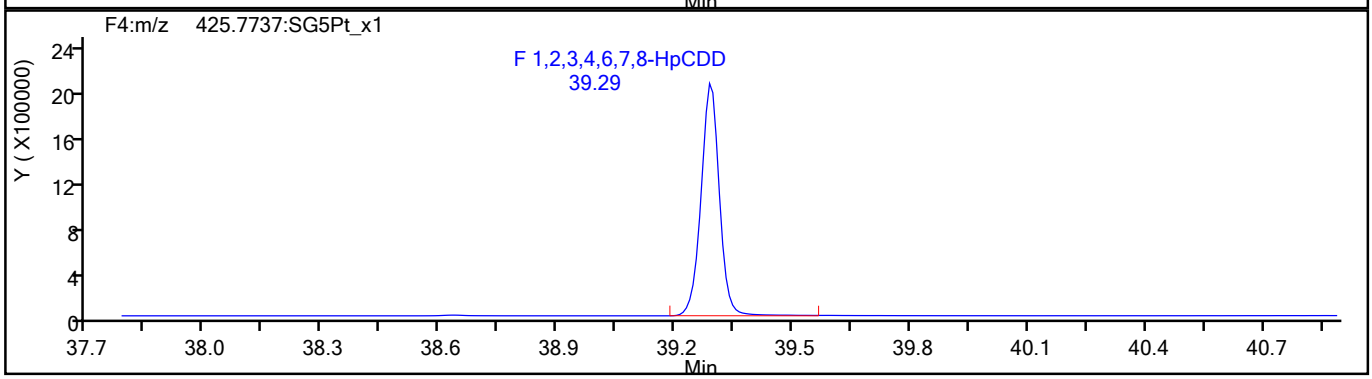

HpCDD Standards

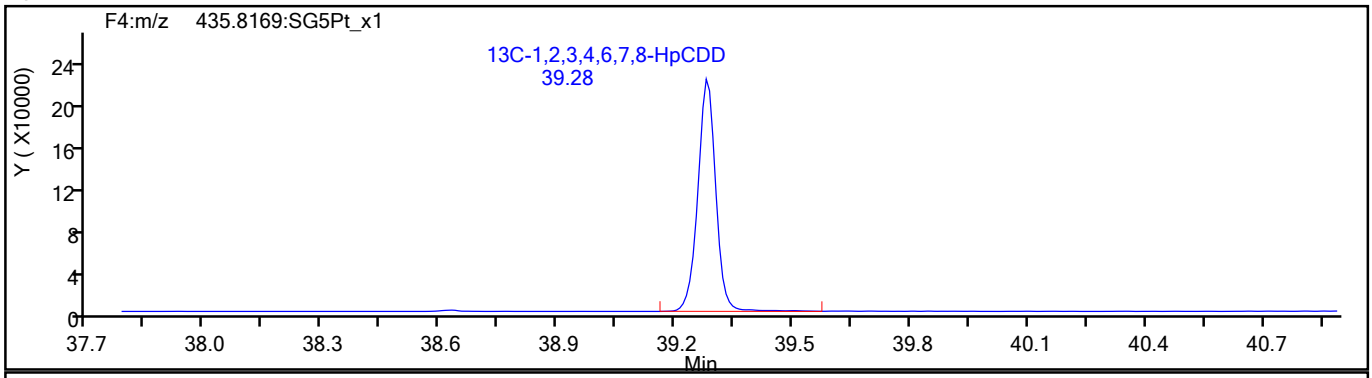

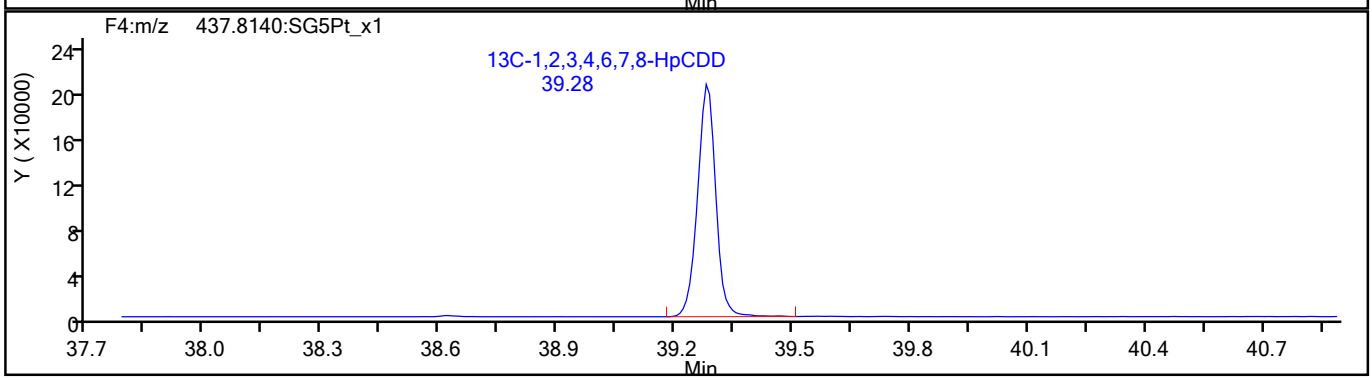

789034

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

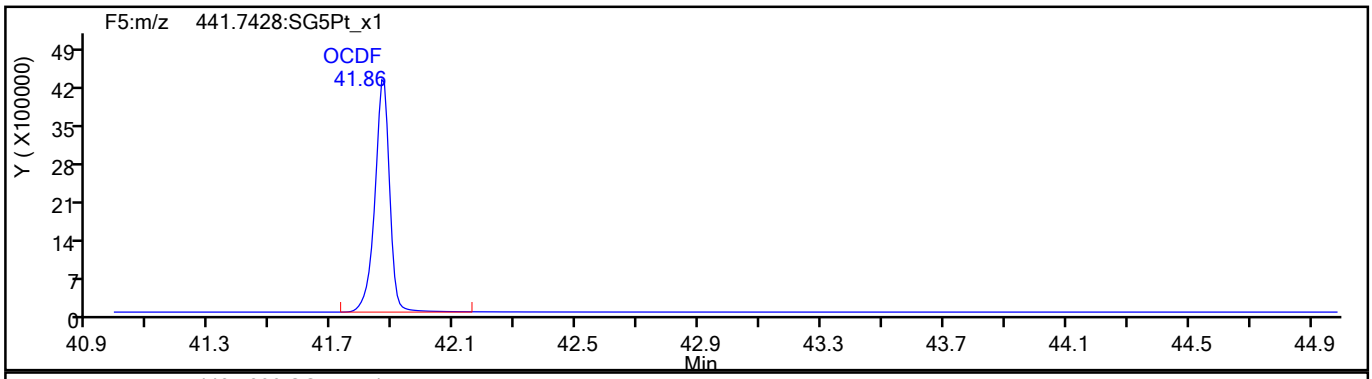

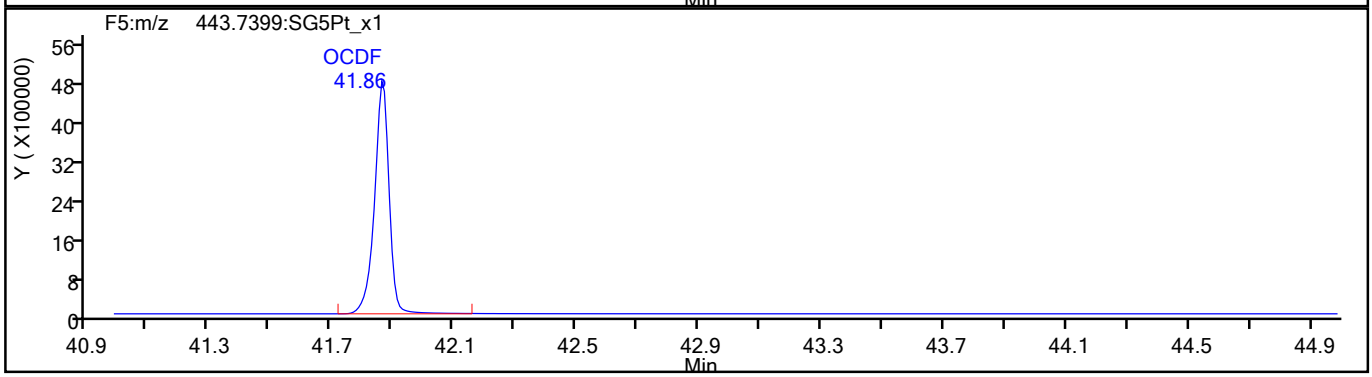

OCDF Standards

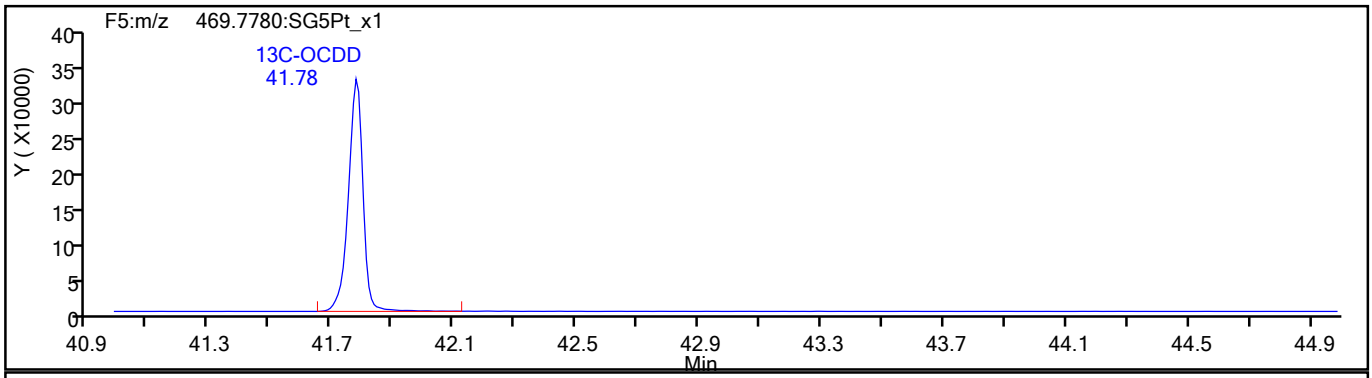

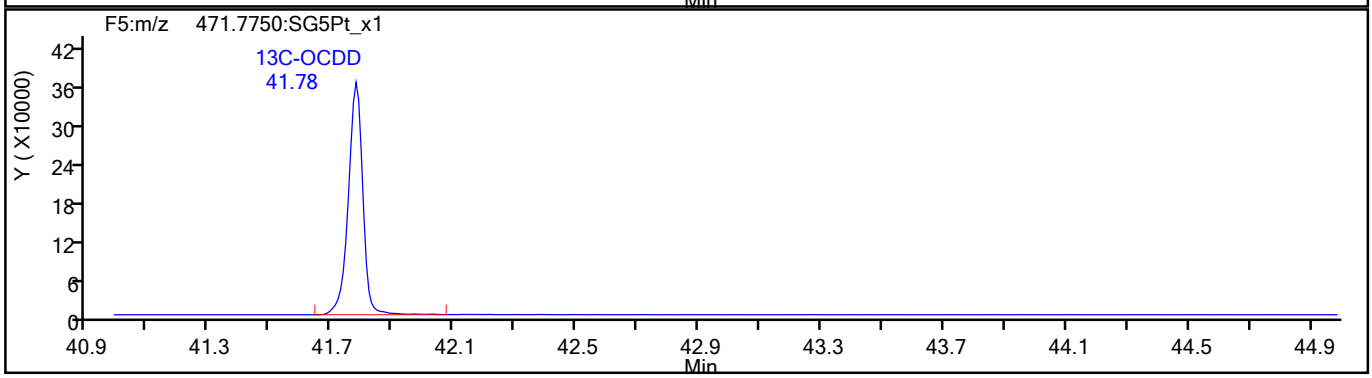

789035

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

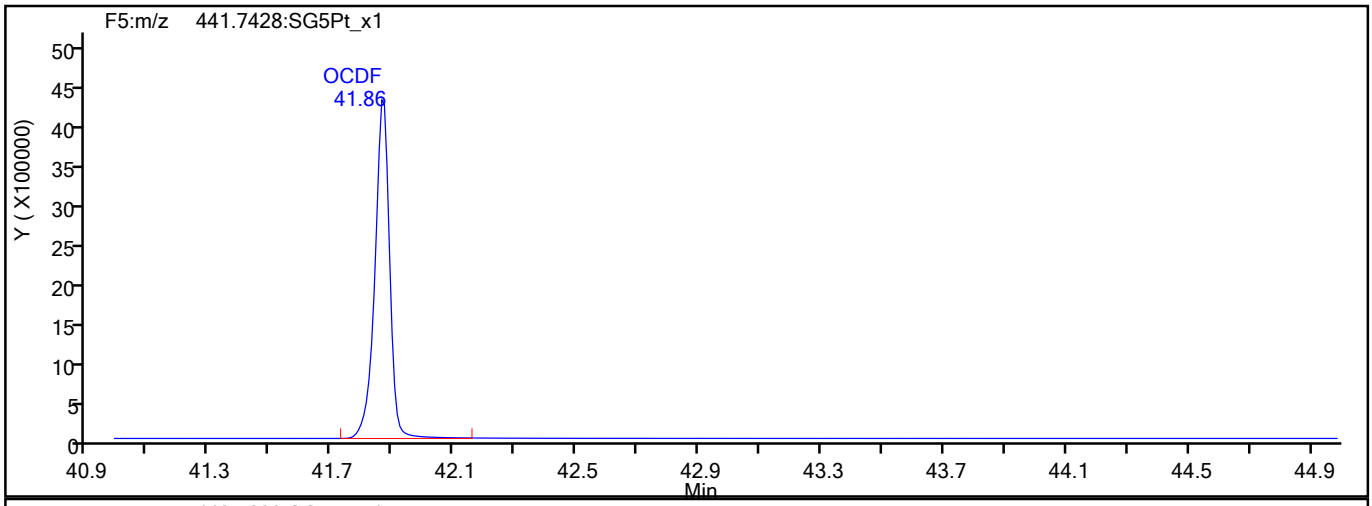

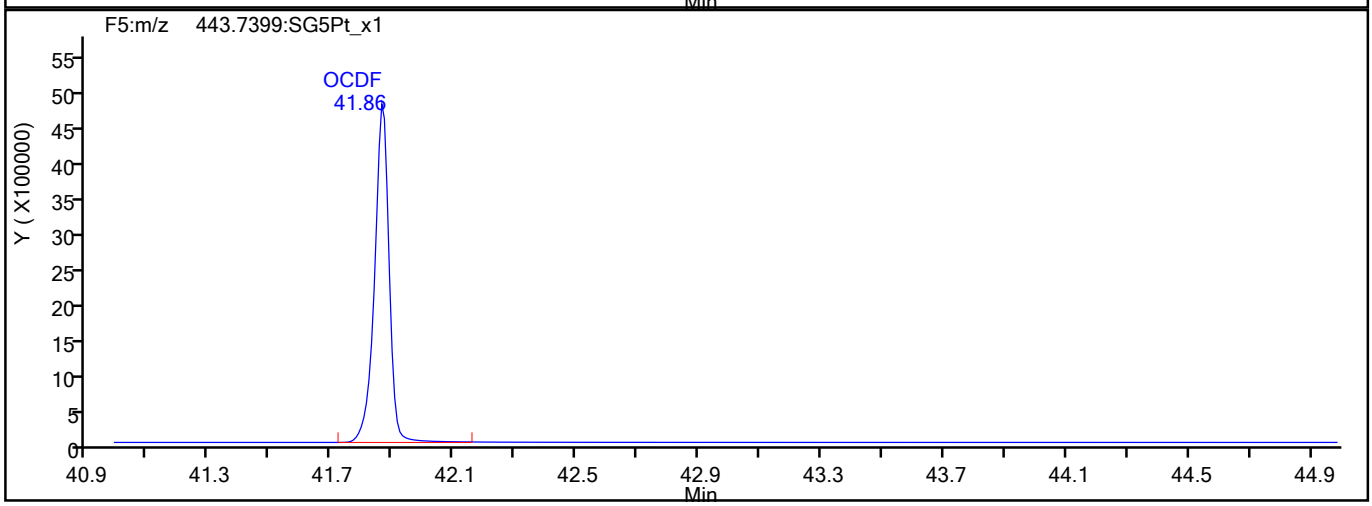

OCDF Interference Mass

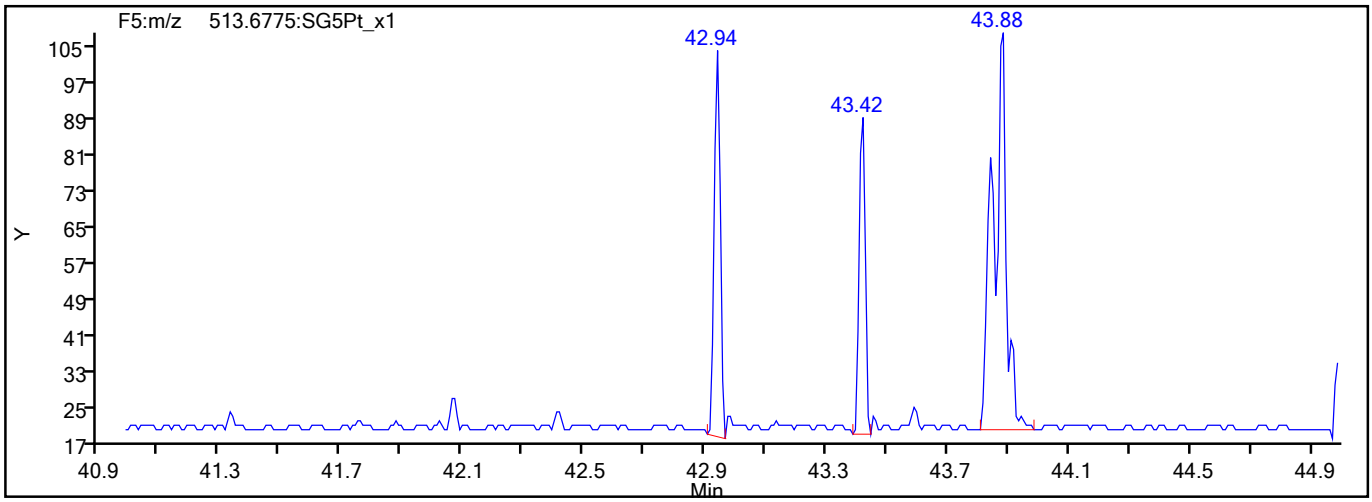

789036

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

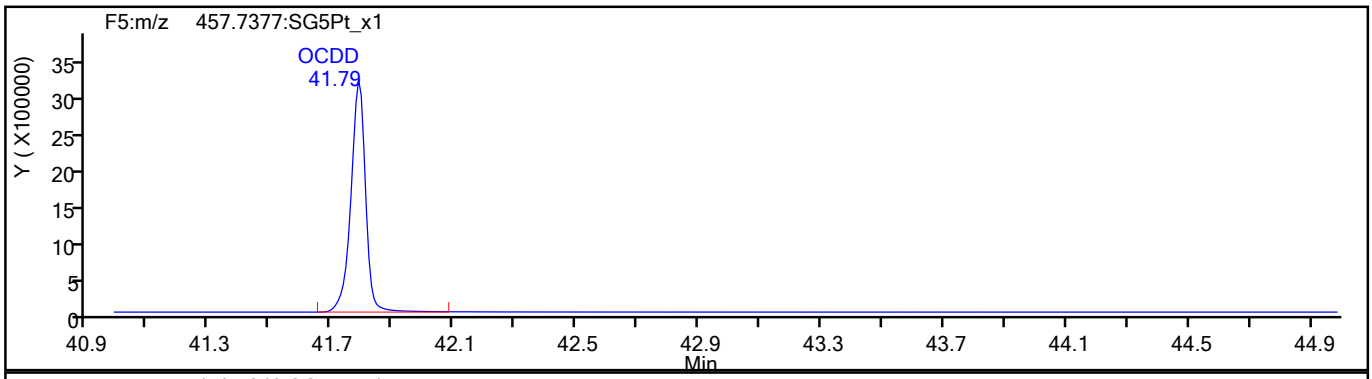

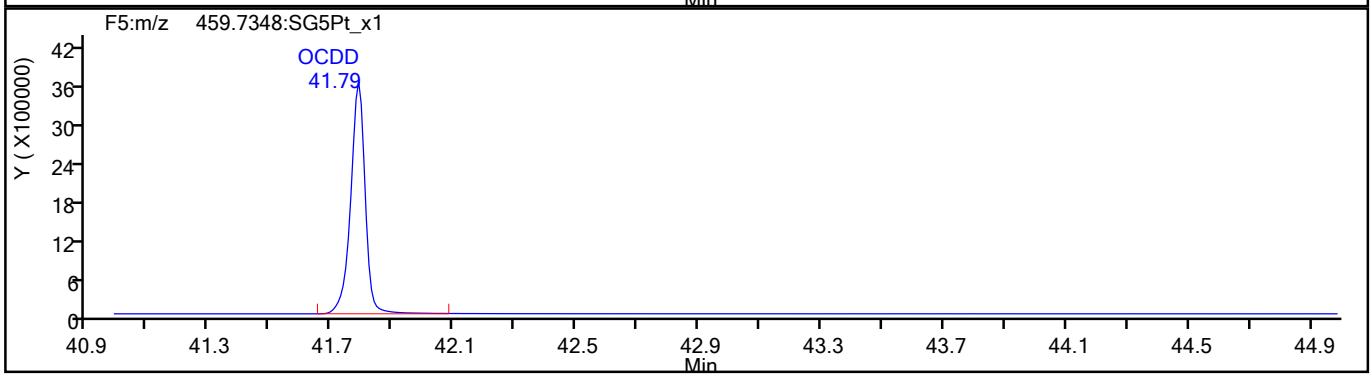

OCDD Standards

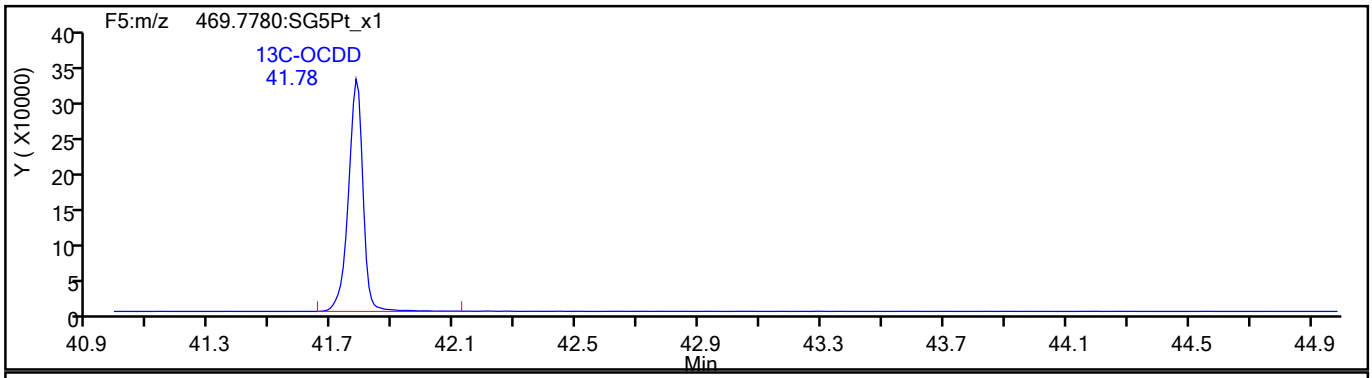

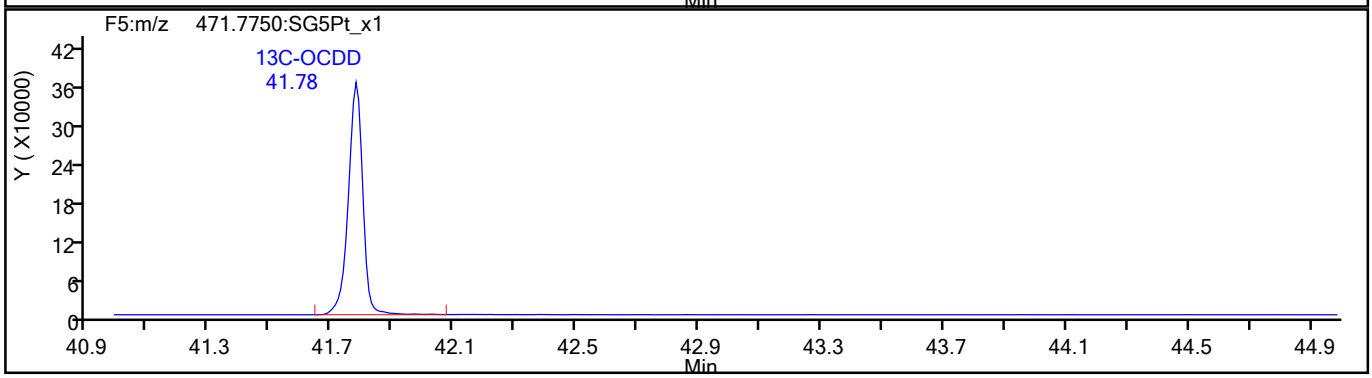

789037

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

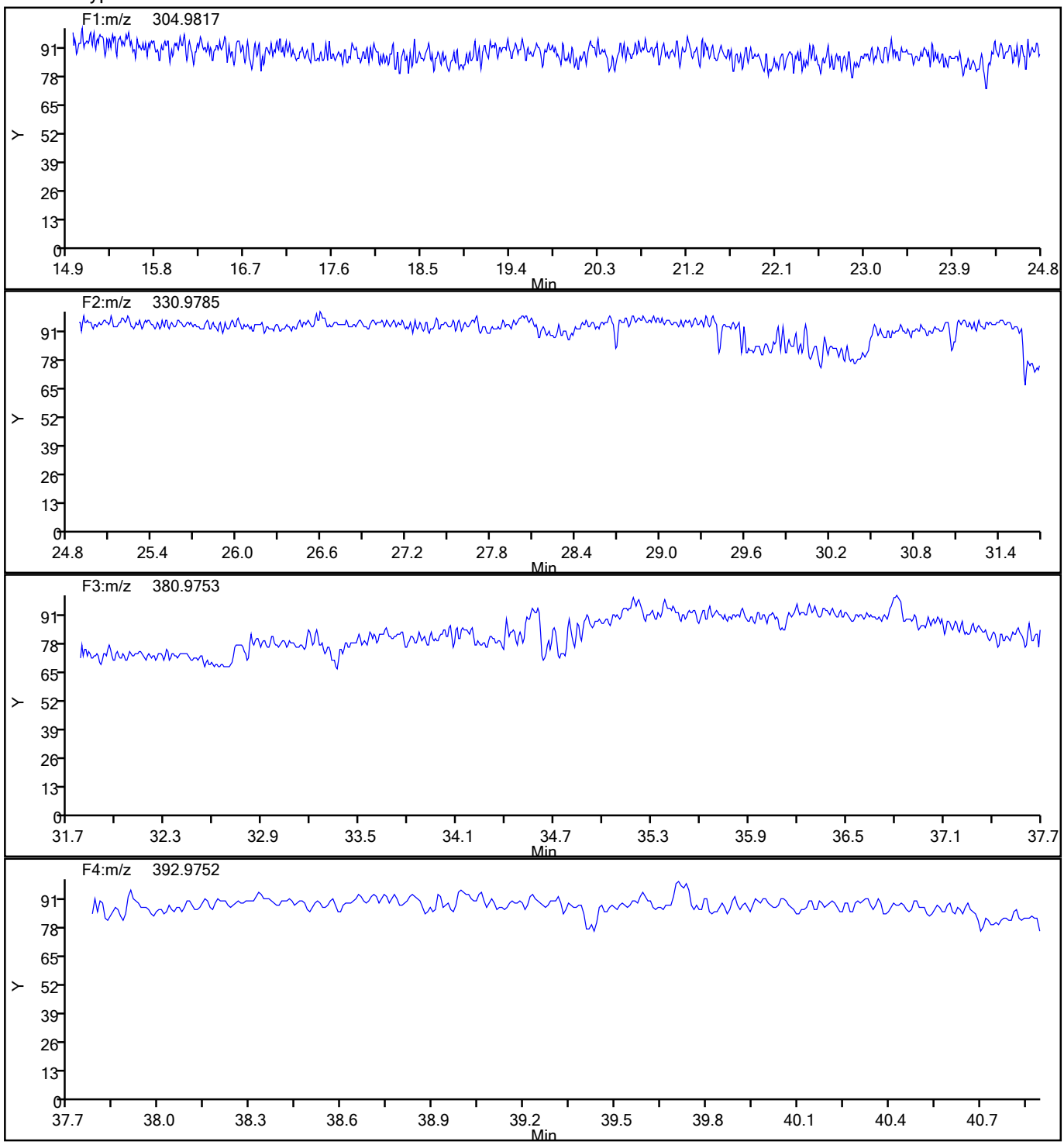

789038

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

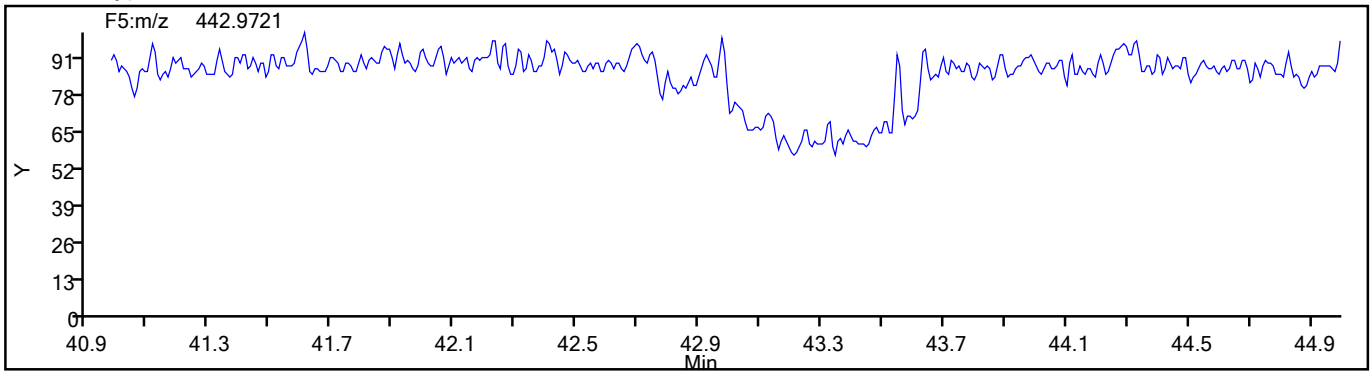

789039

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.05

Error Coefficients

Standard Error:	7060000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.844284	100.0	1113145.0	1.137713	Y
2	IC 320-496688/4	10.0	9.530968	100.0	1162117.0	0.953097	Y
3	IC 320-496688/5	50.0	52.293706	100.0	1094713.0	1.045874	Y
4	IC 320-496688/6	200.0	219.393902	100.0	1337869.0	1.09697	Y
5	IC 320-496688/7	1000.0	1017.847283	100.0	1355803.0	1.017847	Y

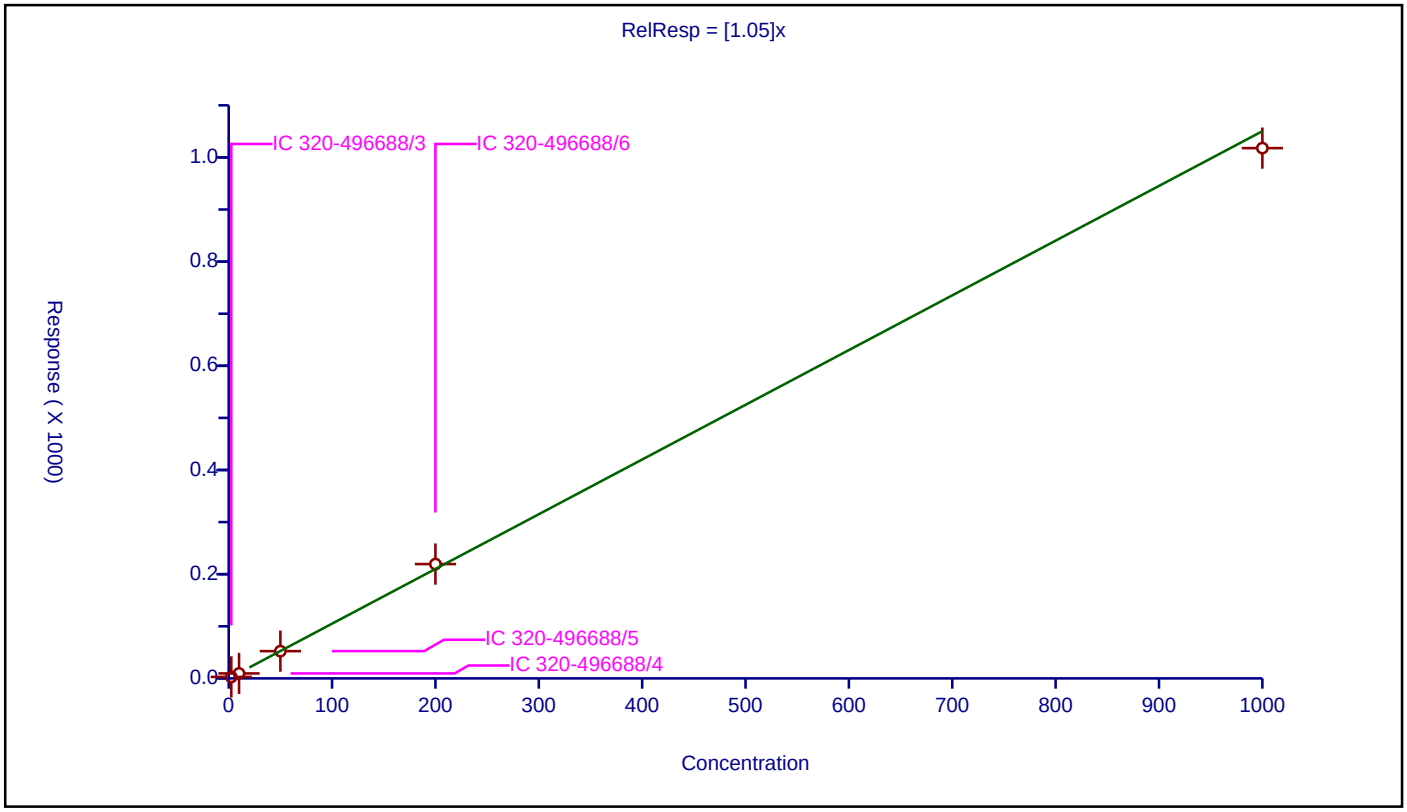

789040

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.442

Error Coefficients

Standard Error:	10800000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.852995	100.0	1227279.0	1.541198	Y
2	IC 320-496688/4	10.0	12.896239	100.0	1272526.0	1.289624	Y
3	IC 320-496688/5	50.0	74.275022	100.0	1182209.0	1.4855	Y
4	IC 320-496688/6	200.0	304.802204	100.0	1392194.0	1.524011	Y
5	IC 320-496688/7	1000.0	1370.014158	100.0	1546113.0	1.370014	Y

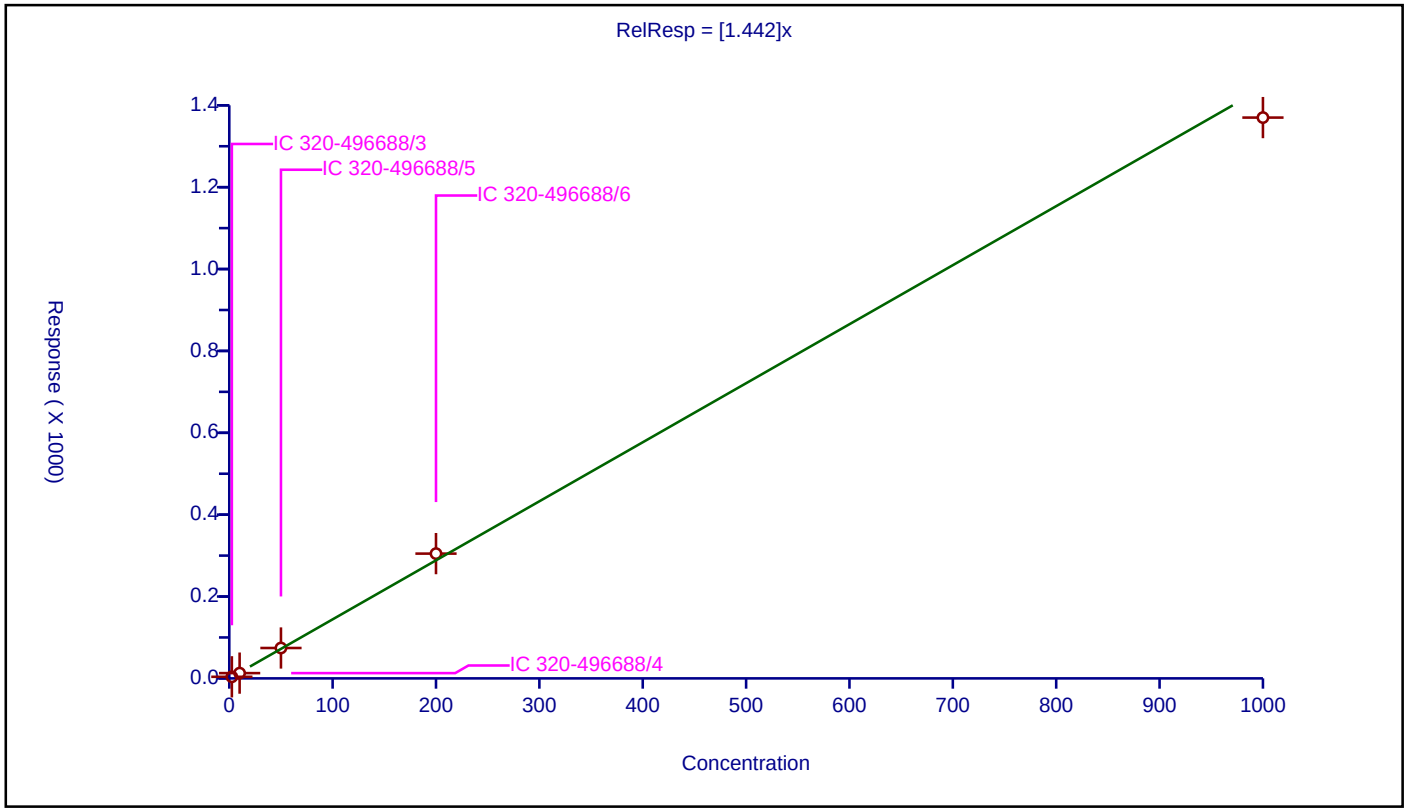

789041

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.309

Error Coefficients

Standard Error:	9110000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.51417	100.0	1120663.0	1.405668	Y
2	IC 320-496688/4	10.0	11.769676	100.0	1175351.0	1.176968	Y
3	IC 320-496688/5	50.0	67.293315	100.0	1080883.0	1.345866	Y
4	IC 320-496688/6	200.0	278.744786	100.0	1337573.0	1.393724	Y
5	IC 320-496688/7	1000.0	1223.548565	100.0	1455766.0	1.223549	Y

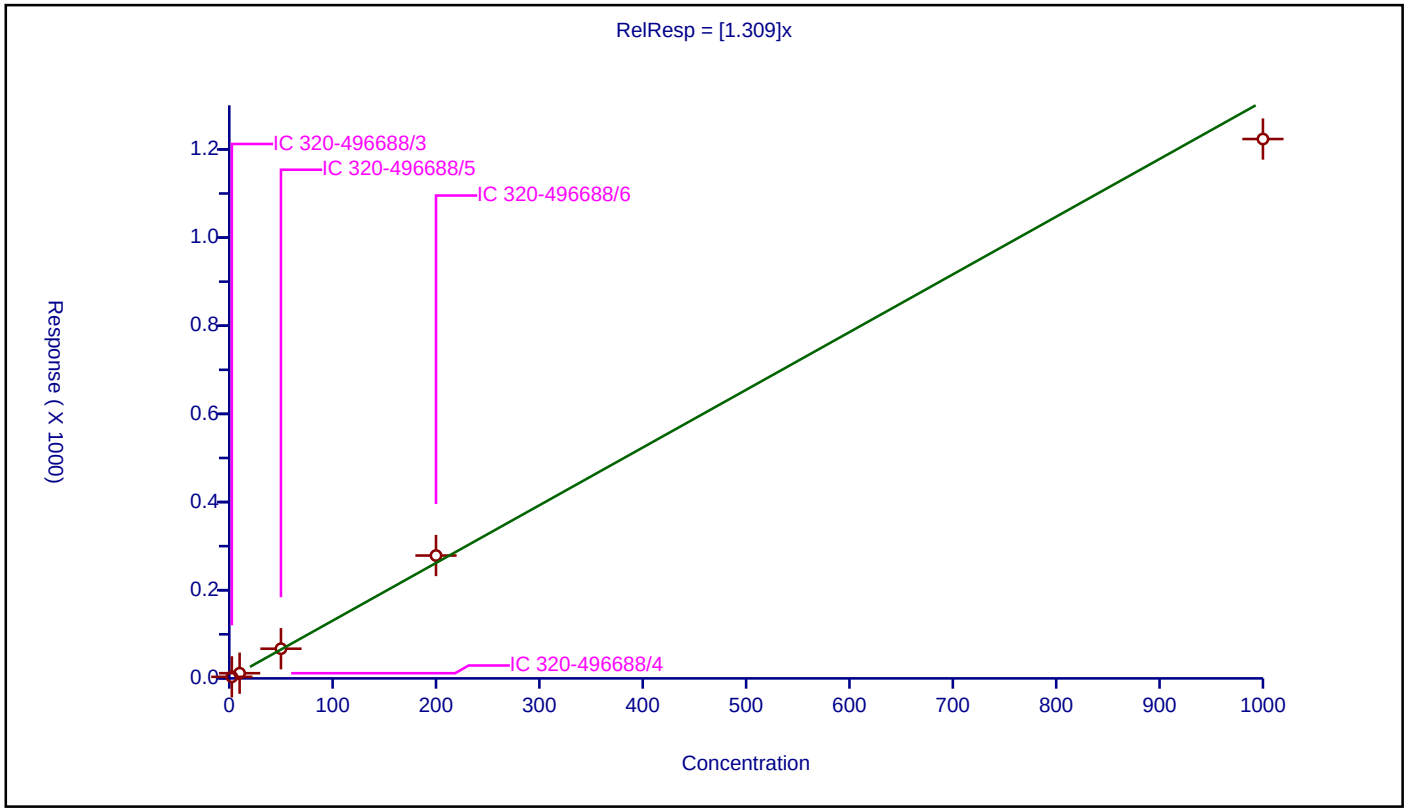

789042

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	7950000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808772	100.0	1127895.0	1.123509	Y
2	IC 320-496688/4	10.0	9.701688	100.0	1363103.0	0.970169	Y
3	IC 320-496688/5	50.0	53.7445	100.0	1348471.0	1.07489	Y
4	IC 320-496688/6	200.0	224.989195	100.0	1432215.0	1.124946	Y
5	IC 320-496688/7	1000.0	1010.433801	100.0	1539784.0	1.010434	Y

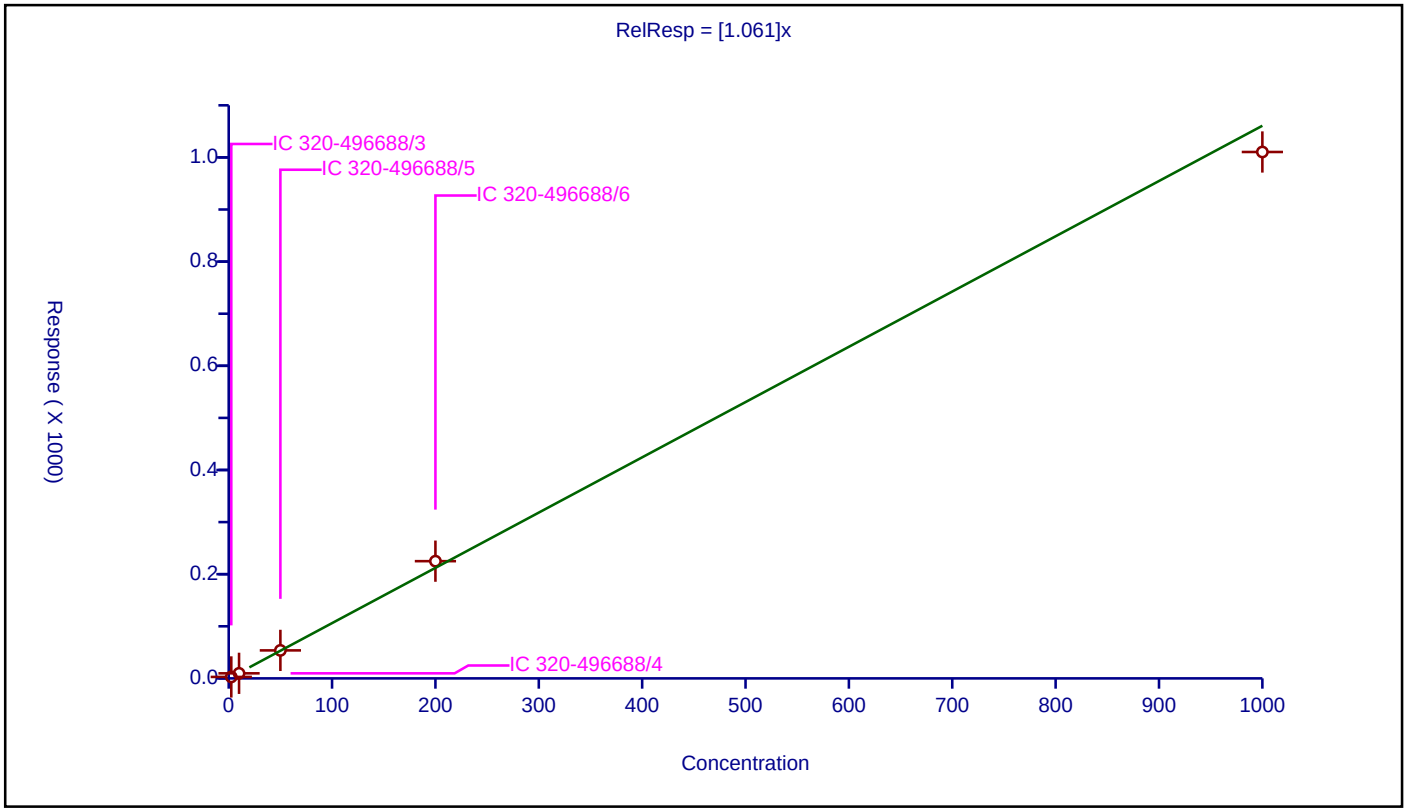

789043

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.147

Error Coefficients

Standard Error:	11200000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.056507	100.0	1517222.0	1.222603	Y
2	IC 320-496688/4	10.0	10.071694	100.0	1545033.0	1.007169	Y
3	IC 320-496688/5	50.0	59.364869	100.0	1841825.0	1.187297	Y
4	IC 320-496688/6	200.0	241.451426	100.0	1778238.0	1.207257	Y
5	IC 320-496688/7	1000.0	1112.580113	100.0	1968615.0	1.11258	Y

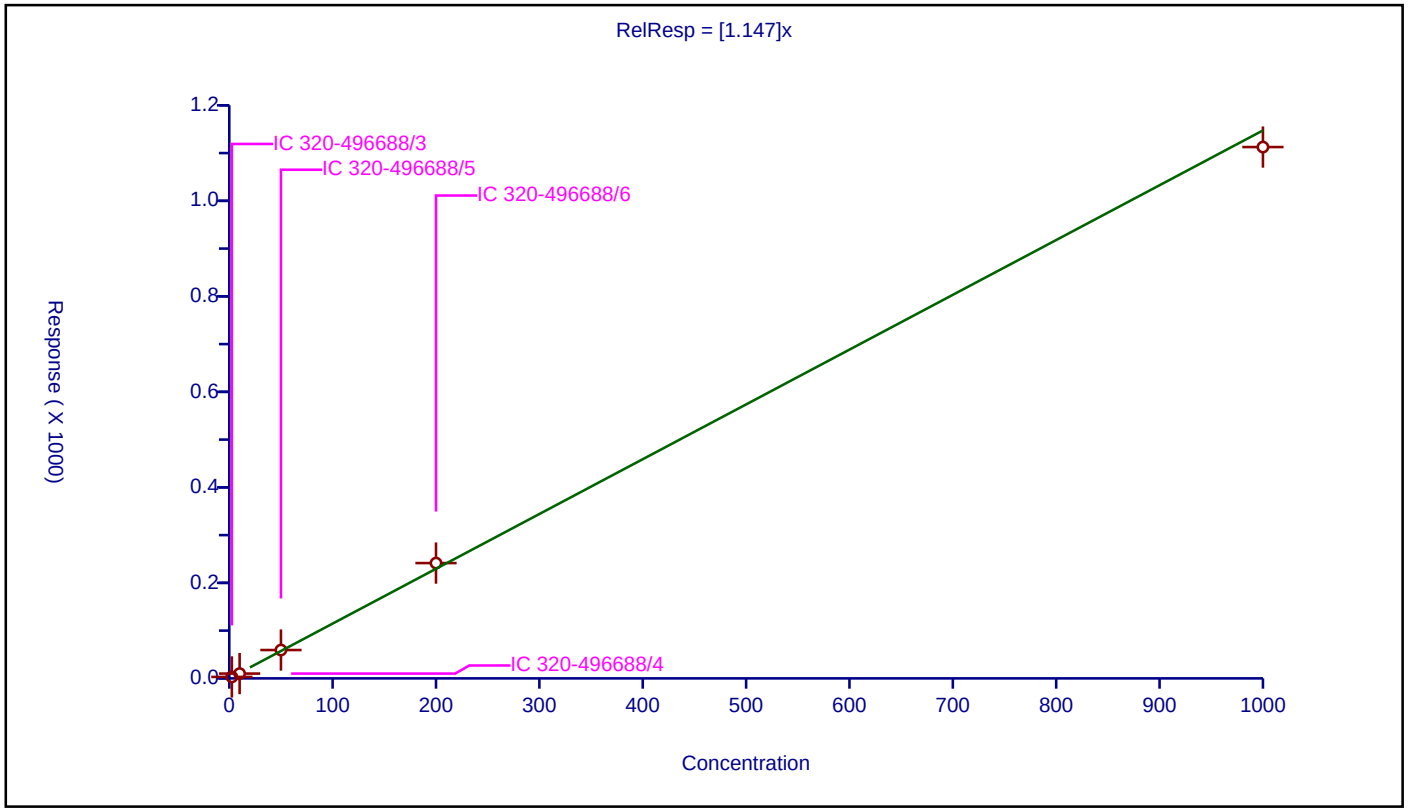

789044

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9933

Error Coefficients

Standard Error:	8510000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.639223	100.0	1291365.0	1.055689	Y
2	IC 320-496688/4	10.0	8.862824	100.0	1558668.0	0.886282	Y
3	IC 320-496688/5	50.0	52.081775	100.0	1460100.0	1.041636	Y
4	IC 320-496688/6	200.0	205.274729	100.0	1669337.0	1.026374	Y
5	IC 320-496688/7	1000.0	956.728345	100.0	1741498.0	0.956728	Y

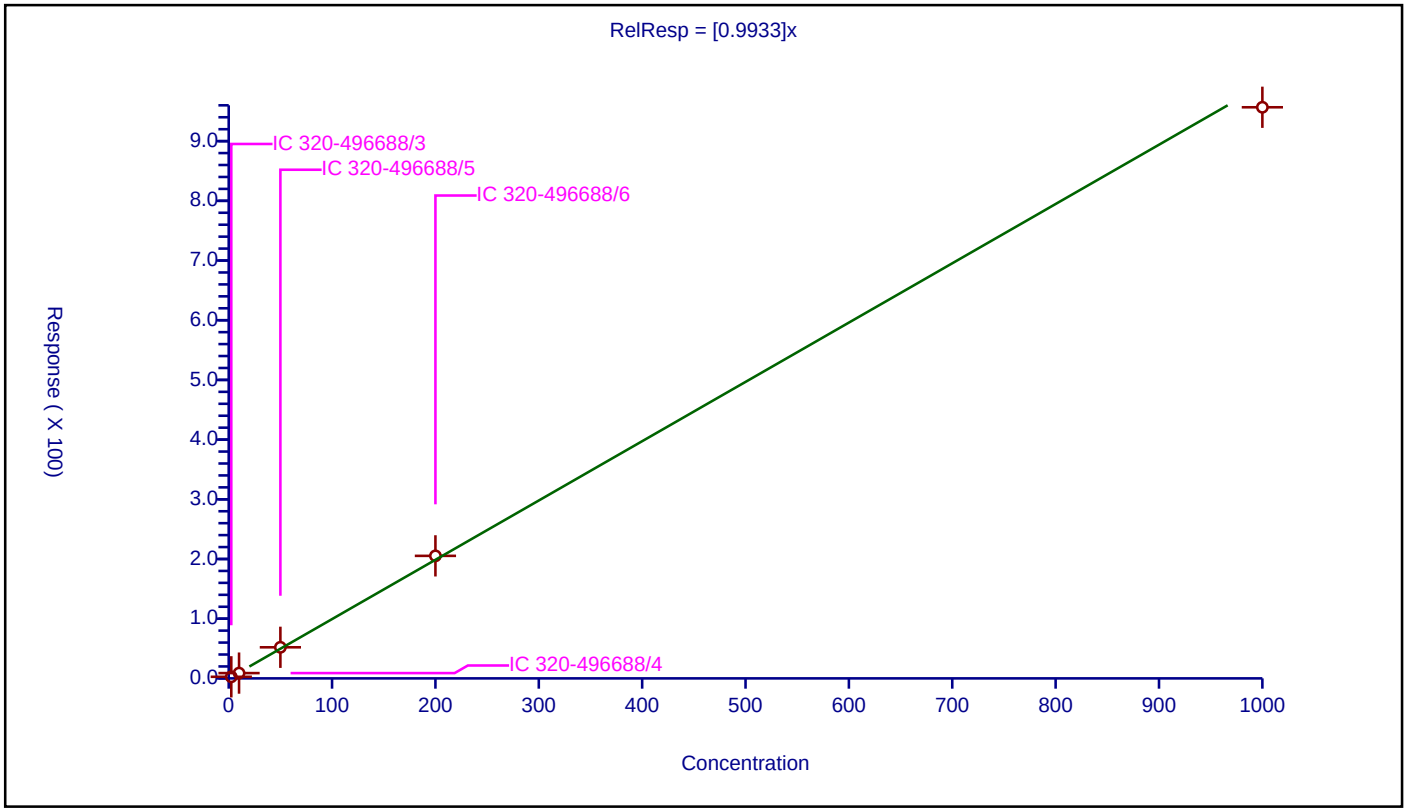

789045

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.218

Error Coefficients

Standard Error:	13600000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.343553	100.0	1626653.0	1.337421	Y
2	IC 320-496688/4	10.0	10.950603	100.0	1692336.0	1.09506	Y
3	IC 320-496688/5	50.0	61.795629	100.0	2015594.0	1.235913	Y
4	IC 320-496688/6	200.0	250.125403	100.0	1995567.0	1.250627	Y
5	IC 320-496688/7	1000.0	1169.95242	100.0	2283961.0	1.169952	Y

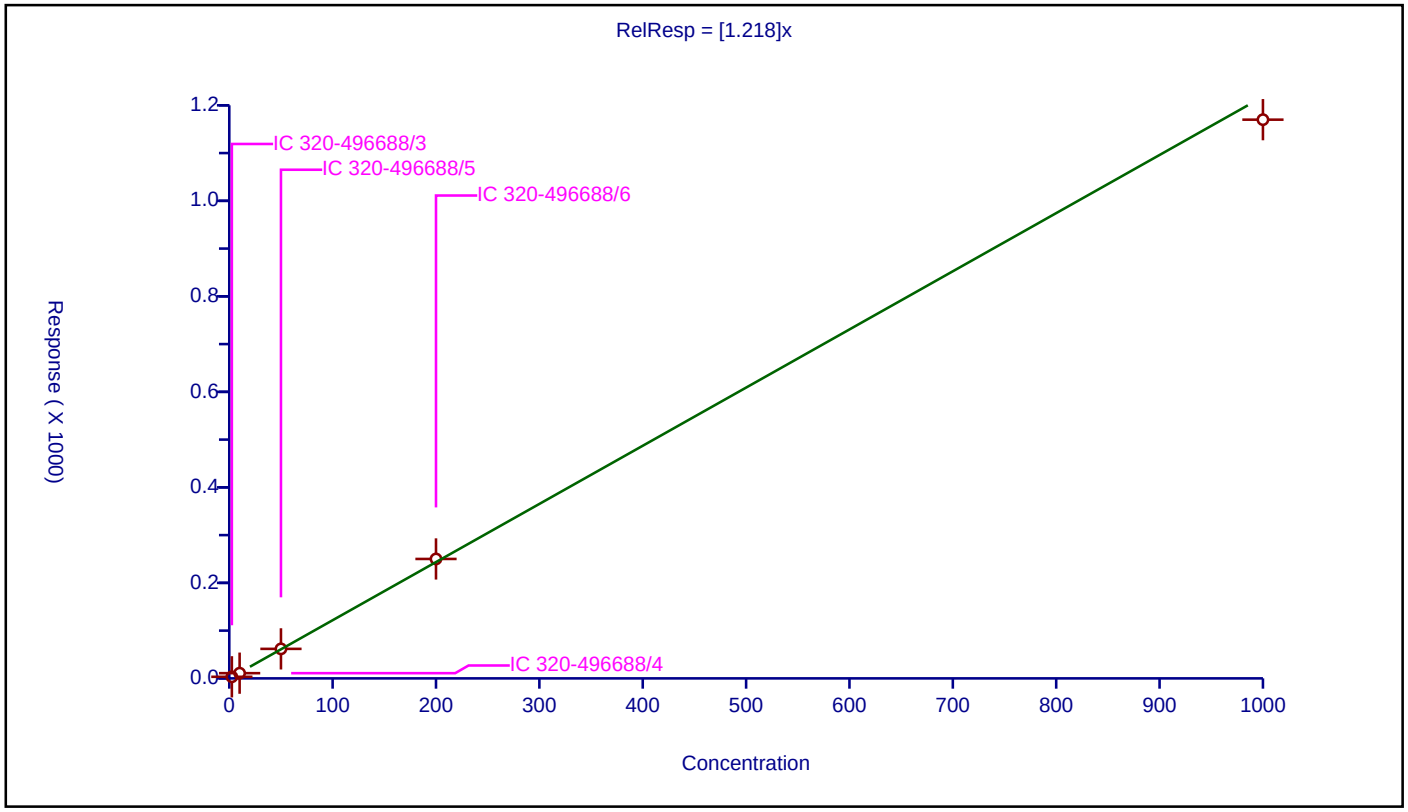

789046

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.184

Error Coefficients

Standard Error:	8820000
Relative Standard Error:	11.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.510522	100.0	1127895.0	1.404209	Y
2	IC 320-496688/4	10.0	10.251683	100.0	1363103.0	1.025168	Y
3	IC 320-496688/5	50.0	58.326134	100.0	1348471.0	1.166523	Y
4	IC 320-496688/6	200.0	239.918169	100.0	1432215.0	1.199591	Y
5	IC 320-496688/7	1000.0	1122.182397	100.0	1539784.0	1.122182	Y

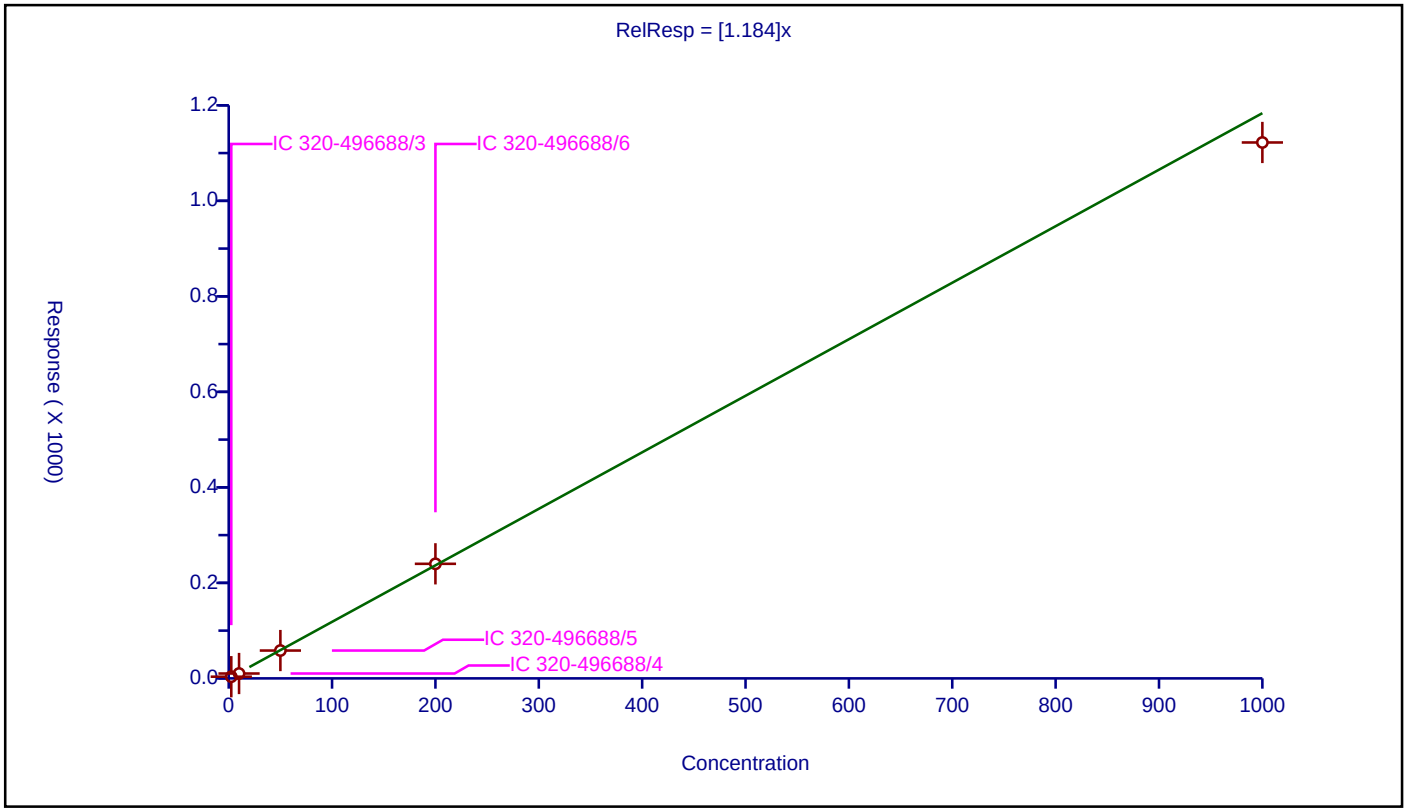

789047

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.24

Error Coefficients

Standard Error:	11500000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.395229	100.0	1696557.0	1.358092	Y
2	IC 320-496688/4	10.0	11.238546	100.0	1735785.0	1.123855	Y
3	IC 320-496688/5	50.0	62.662354	100.0	1657413.0	1.253247	Y
4	IC 320-496688/6	200.0	255.13849	100.0	1742331.0	1.275692	Y
5	IC 320-496688/7	1000.0	1189.708821	100.0	1895740.0	1.189709	Y

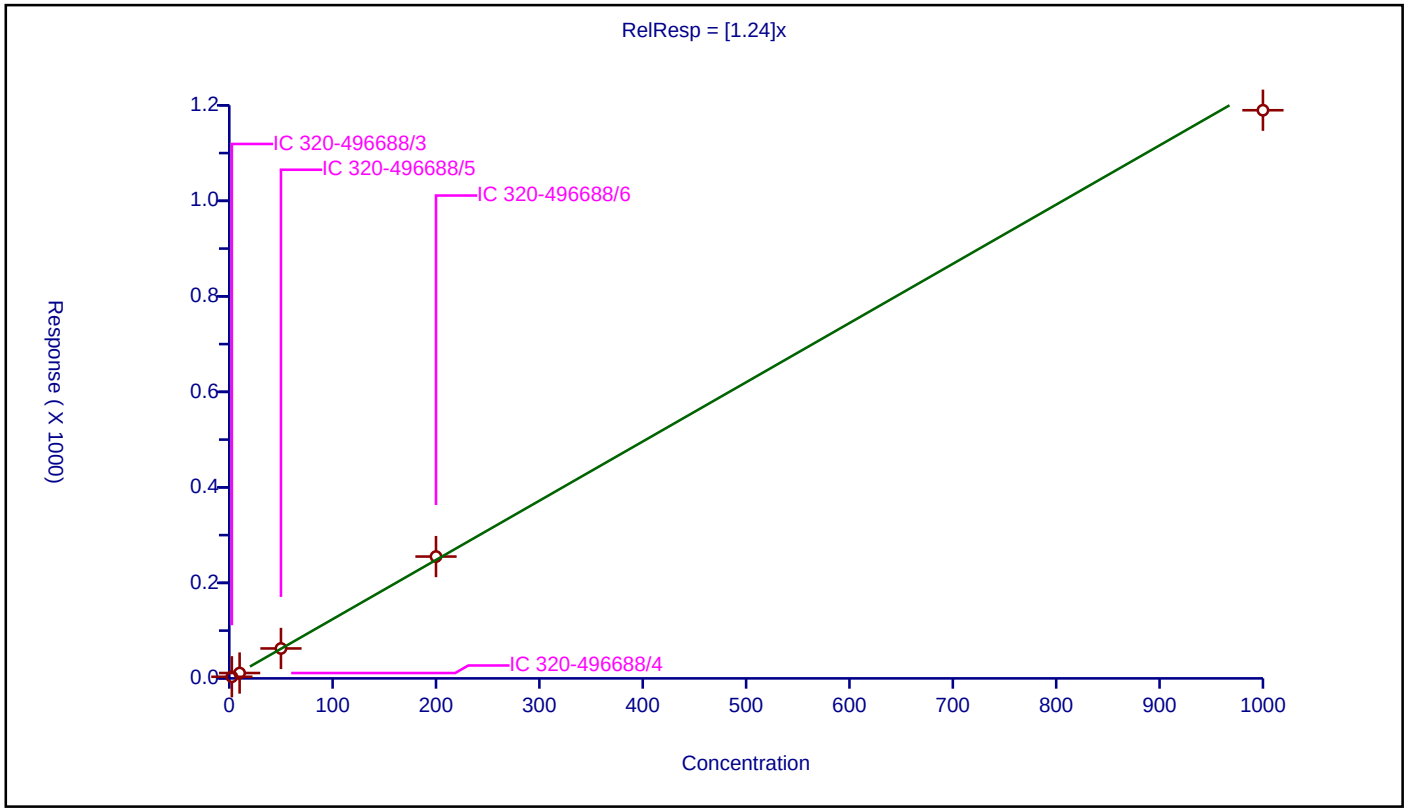

789048

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.046

Error Coefficients

Standard Error:	8500000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.679791	100.0	1602476.0	1.071916	Y
2	IC 320-496688/4	10.0	9.520403	100.0	1364144.0	0.95204	Y
3	IC 320-496688/5	50.0	53.426119	100.0	1388641.0	1.068522	Y
4	IC 320-496688/6	200.0	220.300949	100.0	1521254.0	1.101505	Y
5	IC 320-496688/7	1000.0	1038.502383	100.0	1602880.0	1.038502	Y

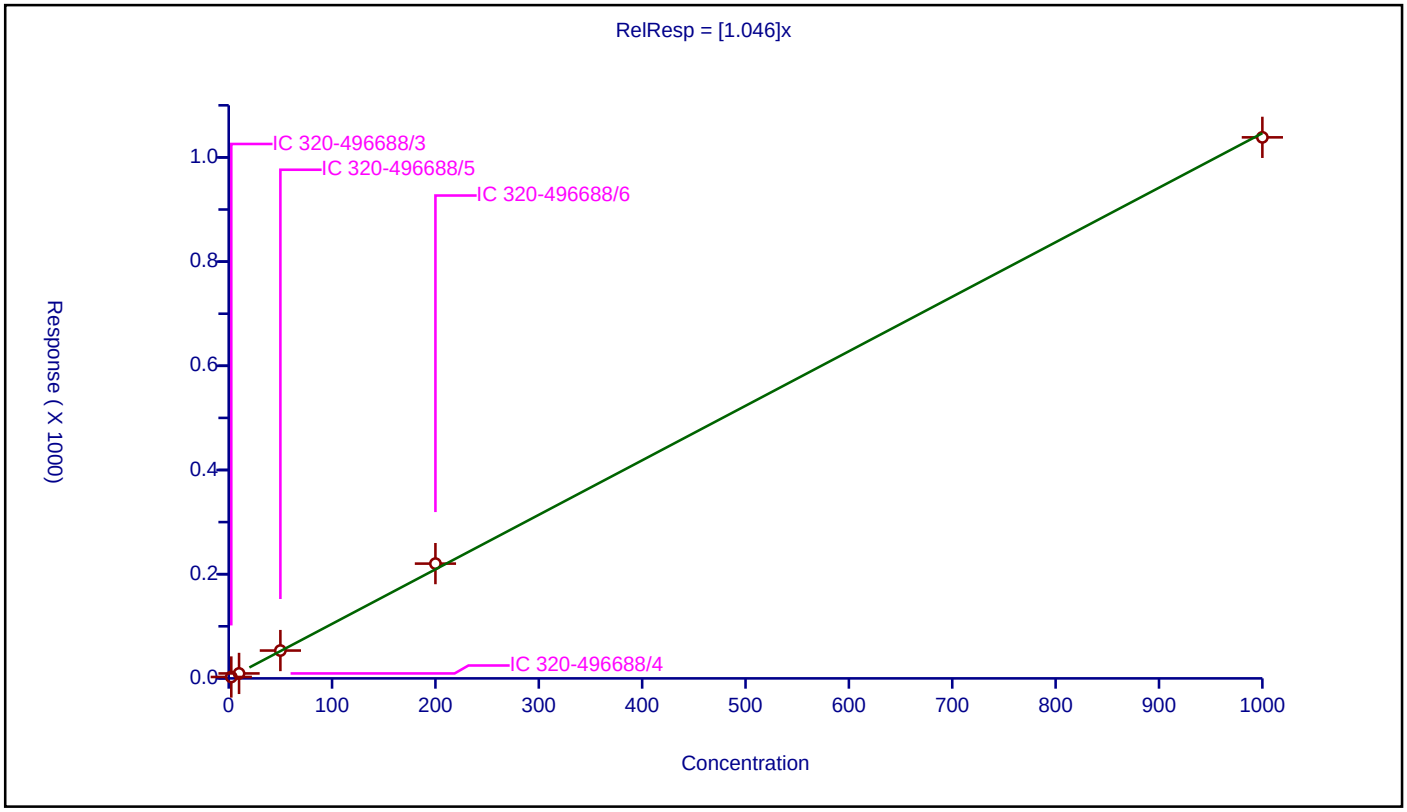

789049

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.054

Error Coefficients

Standard Error:	13300000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.980089	100.0	2514489.0	1.192035	Y
2	IC 320-496688/4	10.0	9.411606	100.0	2234847.0	0.941161	Y
3	IC 320-496688/5	50.0	51.86467	100.0	2149791.0	1.037293	Y
4	IC 320-496688/6	200.0	217.934531	100.0	2432949.0	1.089673	Y
5	IC 320-496688/7	1000.0	1011.152482	100.0	2574521.0	1.011152	Y

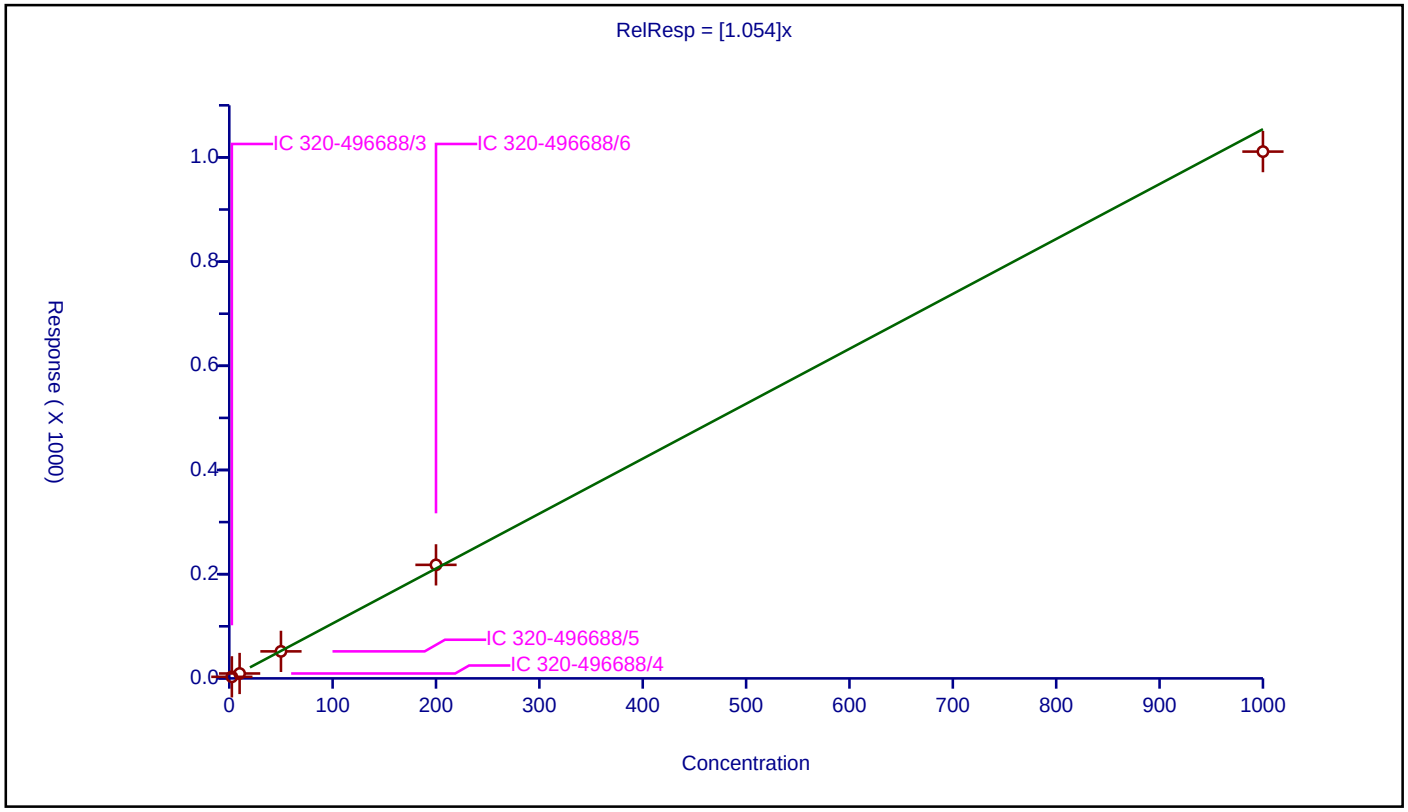

789050

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.214

Error Coefficients

Standard Error:	13000000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.283761	100.0	1523436.0	1.313504	Y
2	IC 320-496688/4	10.0	11.007204	100.0	1740015.0	1.10072	Y
3	IC 320-496688/5	50.0	61.8379	100.0	1861559.0	1.236758	Y
4	IC 320-496688/6	200.0	252.469364	100.0	2042874.0	1.262347	Y
5	IC 320-496688/7	1000.0	1159.01852	100.0	2190509.0	1.159019	Y

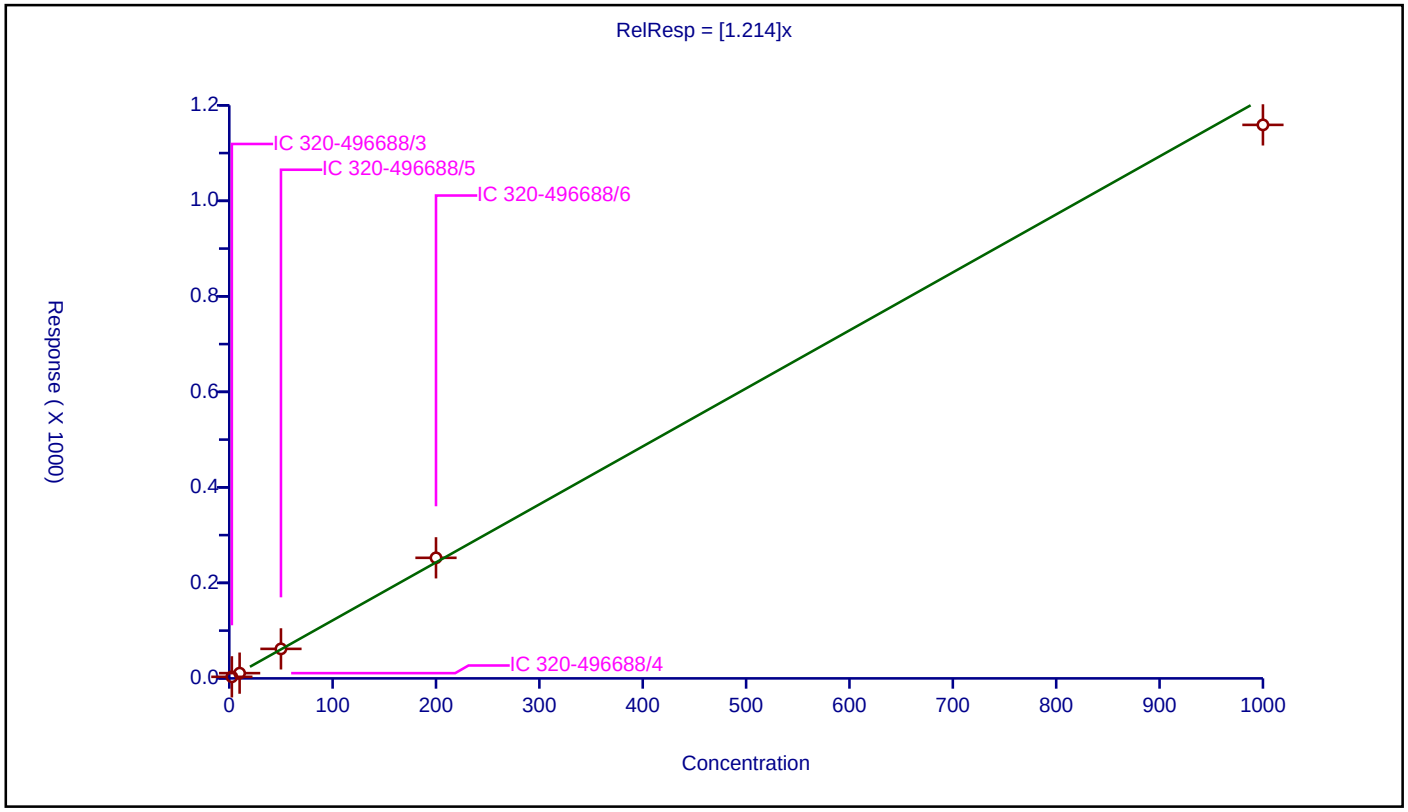

789051

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	12700000
Relative Standard Error:	8.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808272	100.0	2592947.0	1.123309	Y
2	IC 320-496688/4	10.0	8.984414	100.0	2228025.0	0.898441	Y
3	IC 320-496688/5	50.0	49.606313	100.0	1991303.0	0.992126	Y
4	IC 320-496688/6	200.0	212.714288	100.0	2374722.0	1.063571	Y
5	IC 320-496688/7	1000.0	961.852333	100.0	2584740.0	0.961852	Y

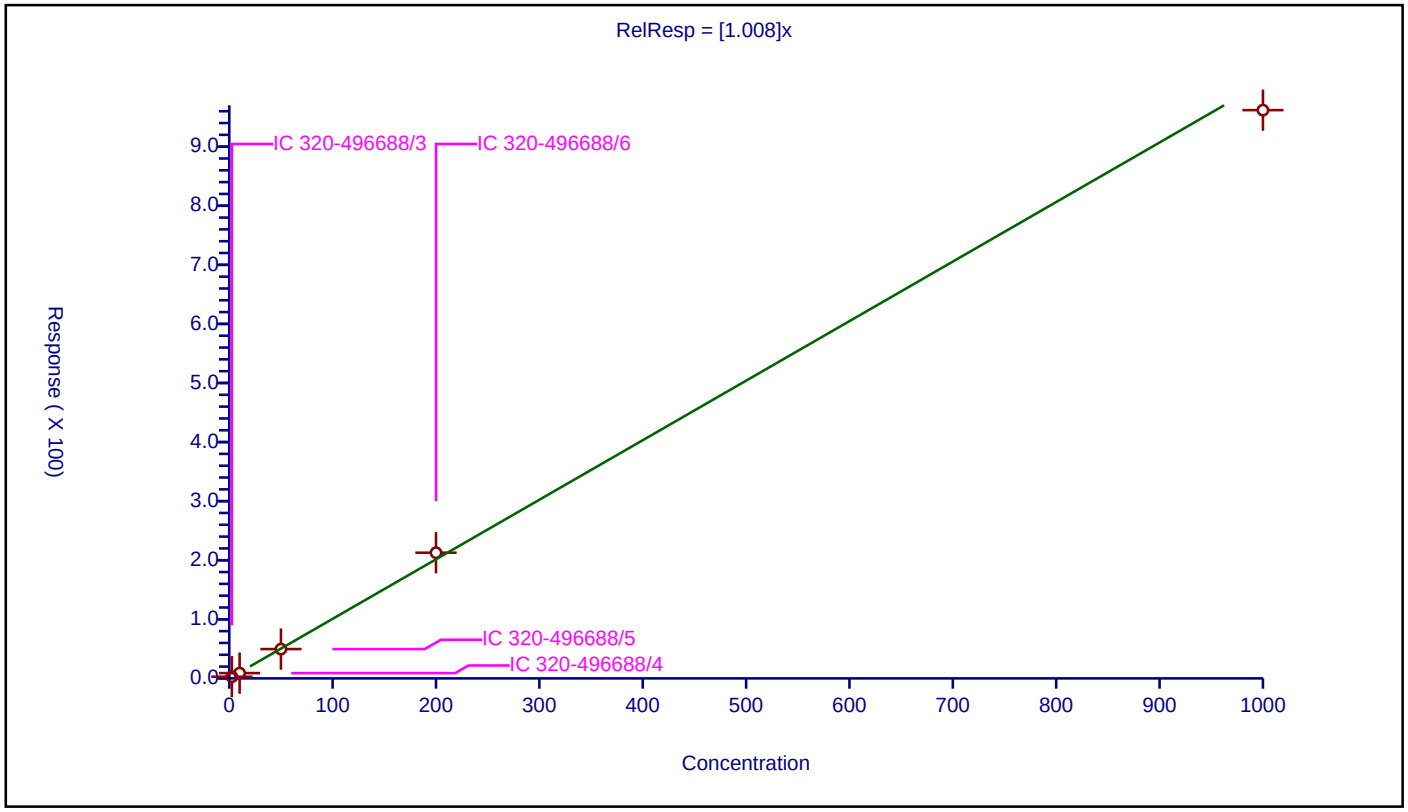

789052

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.075

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.566752	100.0	2138853.0	1.133505	Y
2	IC 320-496688/4	2.0	1.911764	100.0	1829253.0	0.955882	Y
3	IC 320-496688/5	10.0	10.998165	100.0	1800864.0	1.099817	Y
4	IC 320-496688/6	40.0	44.949952	100.0	1948011.0	1.123749	Y
5	IC 320-496688/7	200.0	212.755816	100.0	2014532.0	1.063779	Y

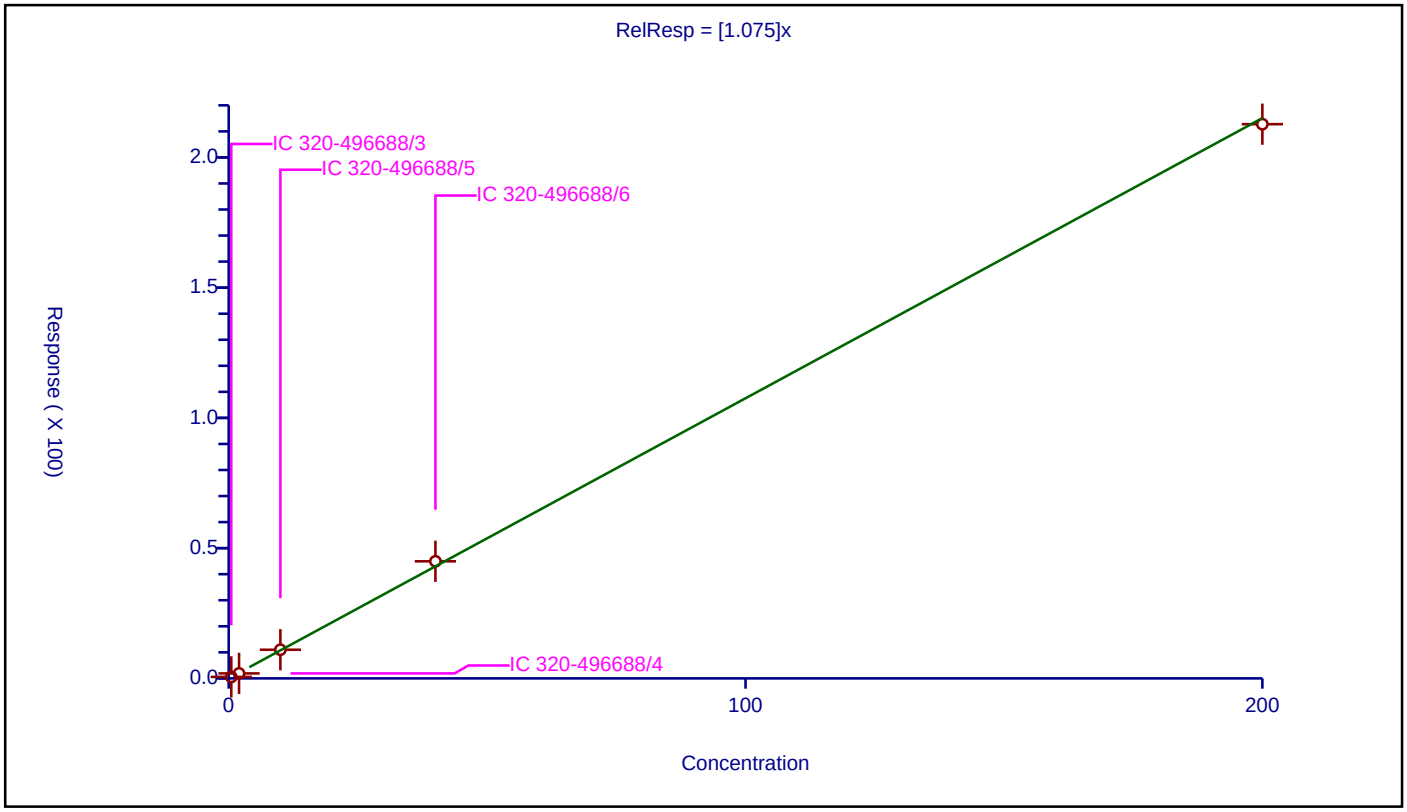

789053

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.08

Error Coefficients

Standard Error:	3140000
Relative Standard Error:	9.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.616764	100.0	3167014.0	1.233528	Y
2	IC 320-496688/4	2.0	1.926948	100.0	2644389.0	0.963474	Y
3	IC 320-496688/5	10.0	10.464342	100.0	2465726.0	1.046434	Y
4	IC 320-496688/6	40.0	44.869913	100.0	2839435.0	1.121748	Y
5	IC 320-496688/7	200.0	207.156116	100.0	2962515.0	1.035781	Y

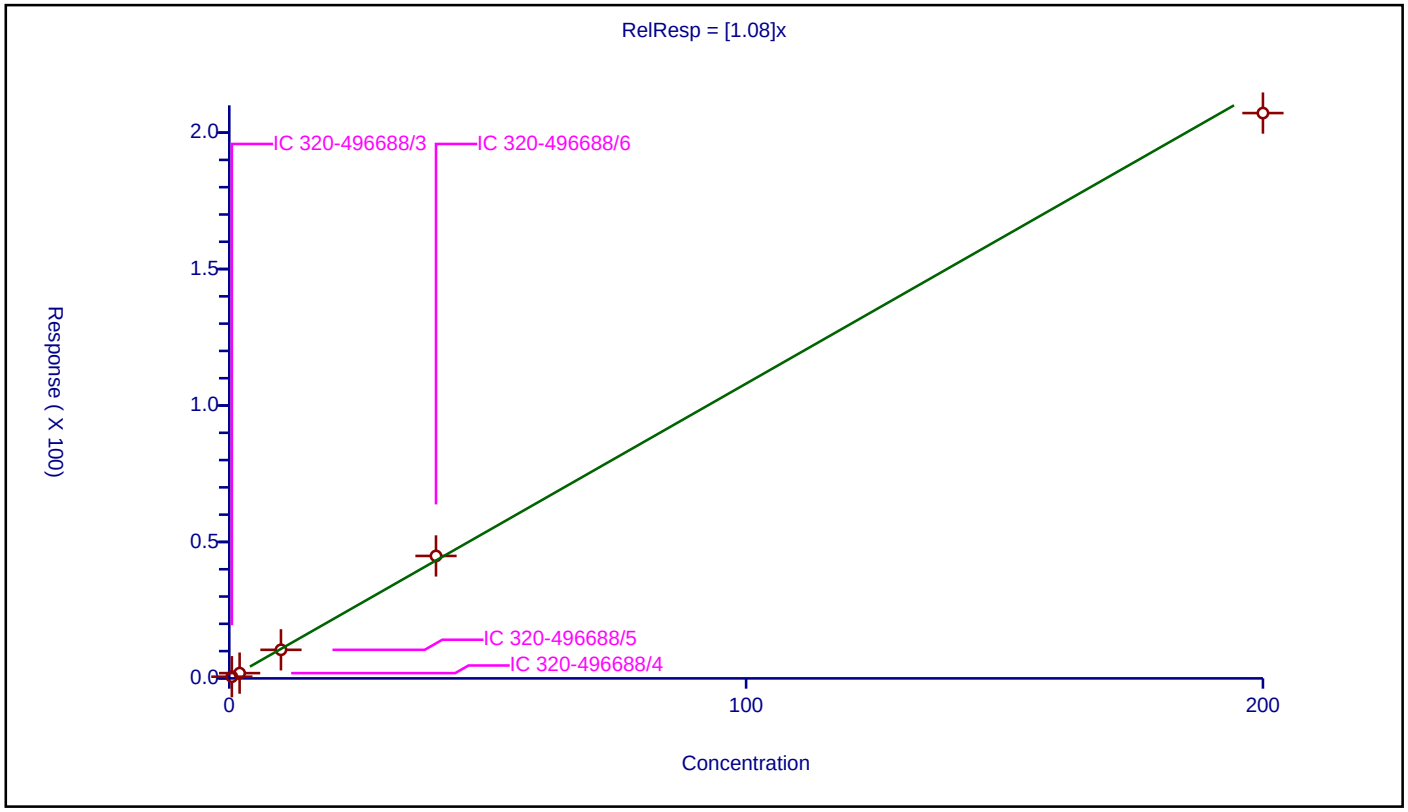

789054

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.482683	100.0	2334037.0	0.965366	Y
2	IC 320-496688/4	2.0	1.917995	100.0	2045939.0	0.958997	Y
3	IC 320-496688/5	10.0	10.721795	100.0	1900111.0	1.072179	Y
4	IC 320-496688/6	40.0	40.297989	100.0	2105852.0	1.00745	Y
5	IC 320-496688/7	200.0	207.496438	100.0	2066088.0	1.037482	Y

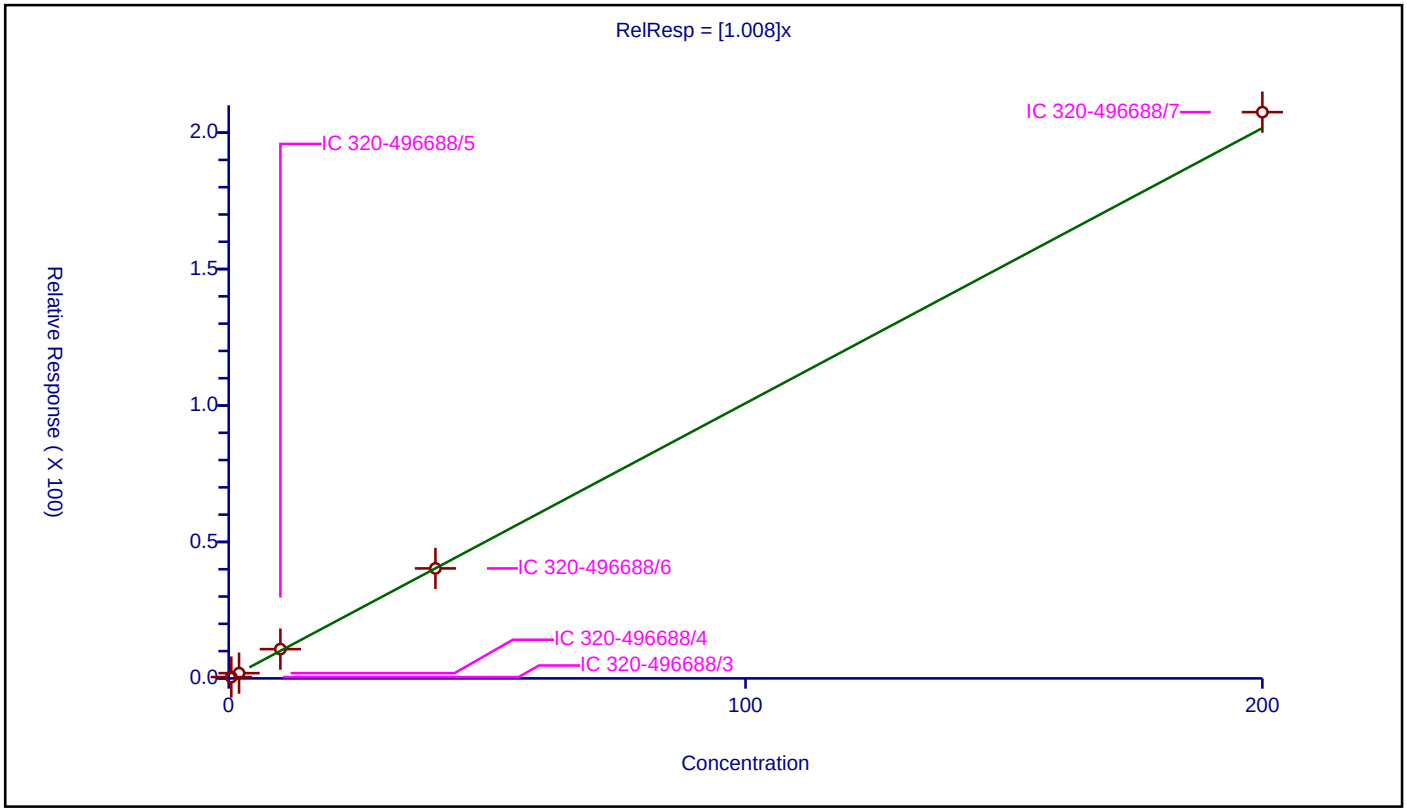

789055

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.062

Error Coefficients

Standard Error:	11700000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	5.664077	200.0	1823492.0	1.132815	Y
2	IC 320-496688/4	20.0	19.907928	200.0	1833139.0	0.995396	Y
3	IC 320-496688/5	100.0	108.699815	200.0	1676139.0	1.086998	Y
4	IC 320-496688/6	400.0	441.074631	200.0	2177938.0	1.102687	Y
5	IC 320-496688/7	2000.0	1984.090177	200.0	2298668.0	0.992045	Y

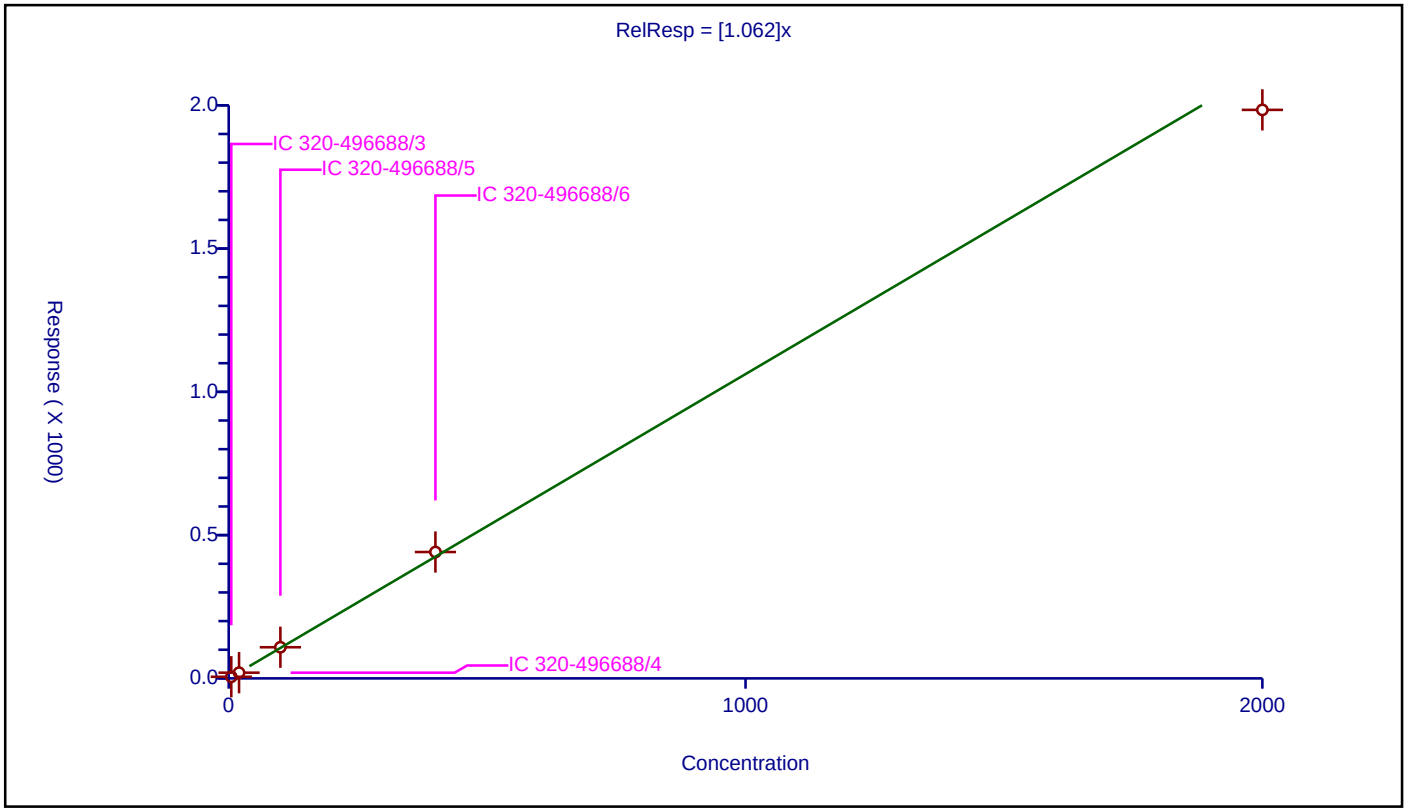

789056

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	15600000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	6.696054	200.0	1823492.0	1.339211	Y
2	IC 320-496688/4	20.0	23.726842	200.0	1833139.0	1.186342	Y
3	IC 320-496688/5	100.0	133.490122	200.0	1676139.0	1.334901	Y
4	IC 320-496688/6	400.0	558.573844	200.0	2177938.0	1.396435	Y
5	IC 320-496688/7	2000.0	2654.186163	200.0	2298668.0	1.327093	Y

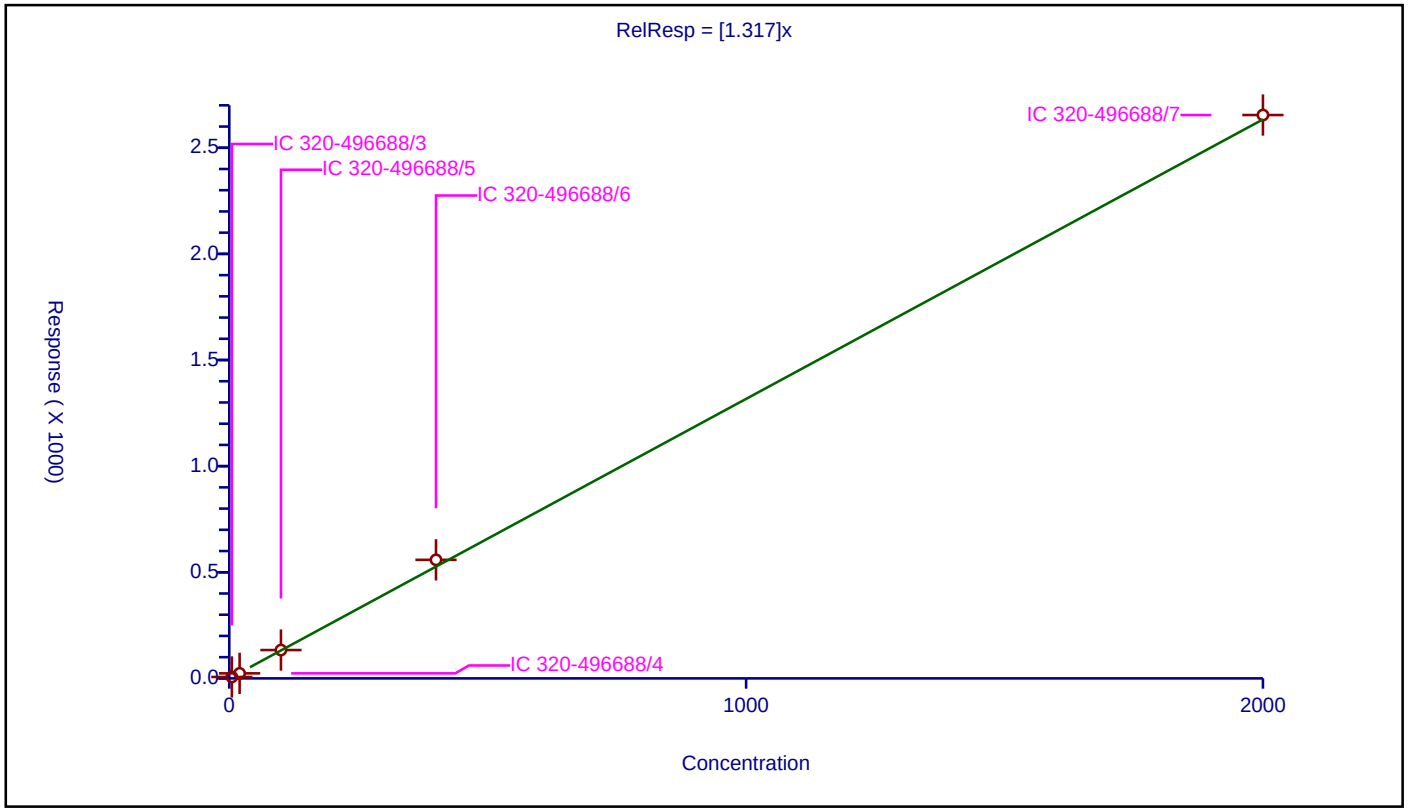

789057

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID (1): WDM 320-496688/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 06/08/2021 12:40

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	20.95	13

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d				
Injection Date:	08-Jun-2021 12:40:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 7095
H (Peak Height) = 55991

%R = 13 <= 25
Passed

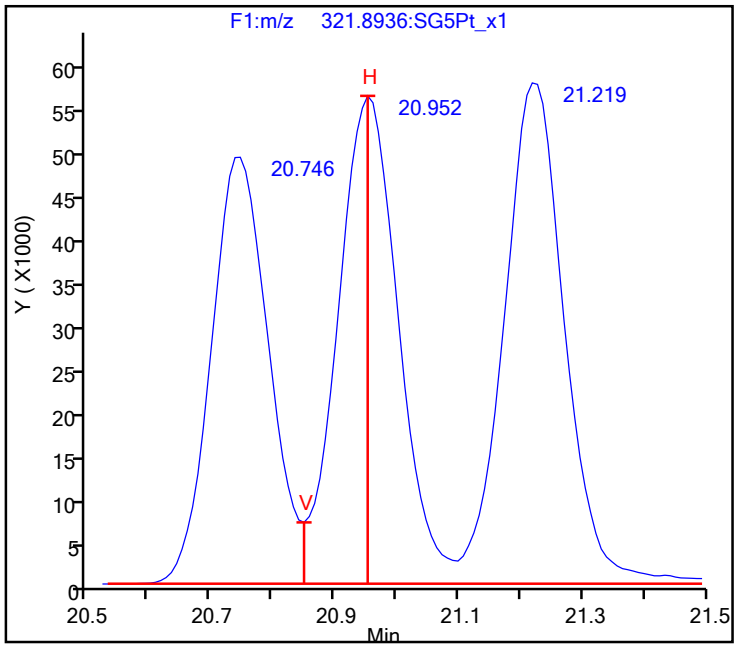

789059

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

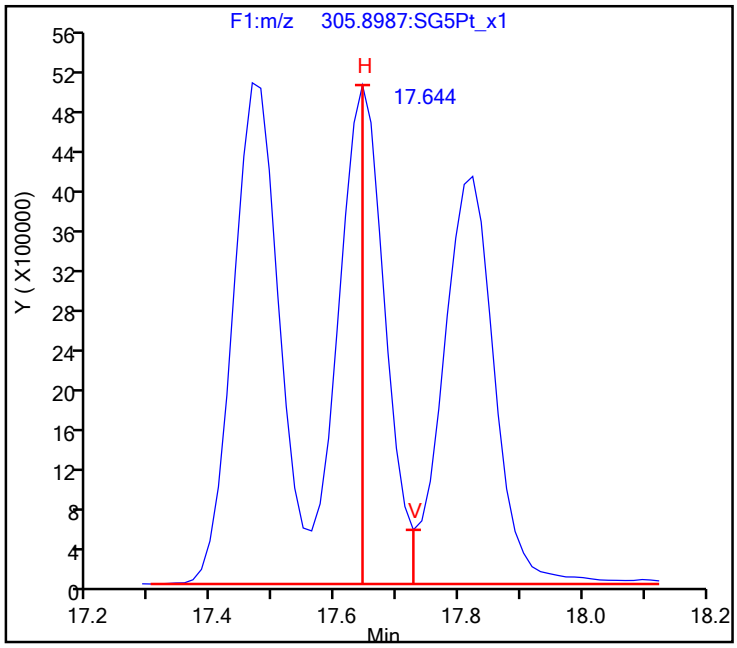

789061

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID (1): WDM 320-510264/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 07/26/2021 09:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.34	18

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d				
Injection Date:	26-Jul-2021 09:21:58	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 725696
H (Peak Height) = 4136533

%R = 18 <= 25
Passed

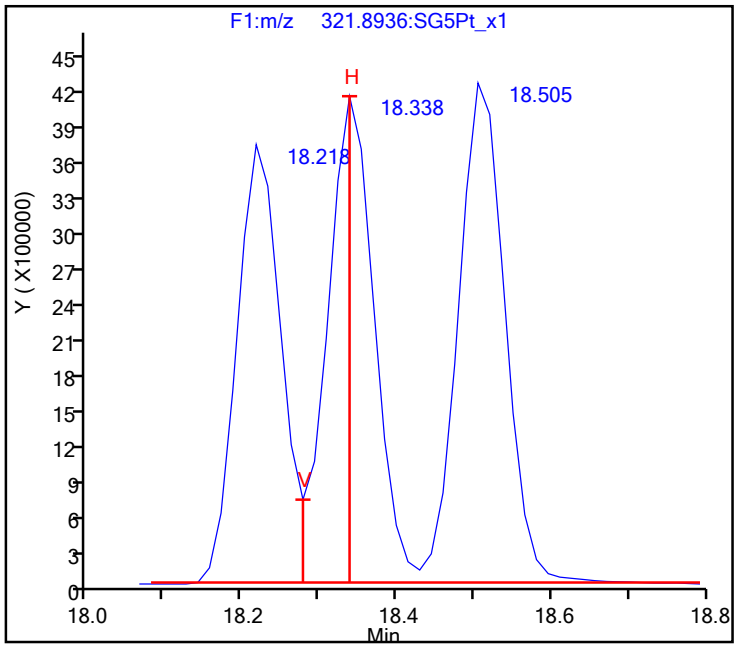

789063

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID (1): WDM 320-517462/44 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/19/2021 02:19

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.78	21

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d				
Injection Date:	19-Aug-2021 02:19:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	44
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 5301
H (Peak Height) = 24781

%R = 21 <= 25
Passed

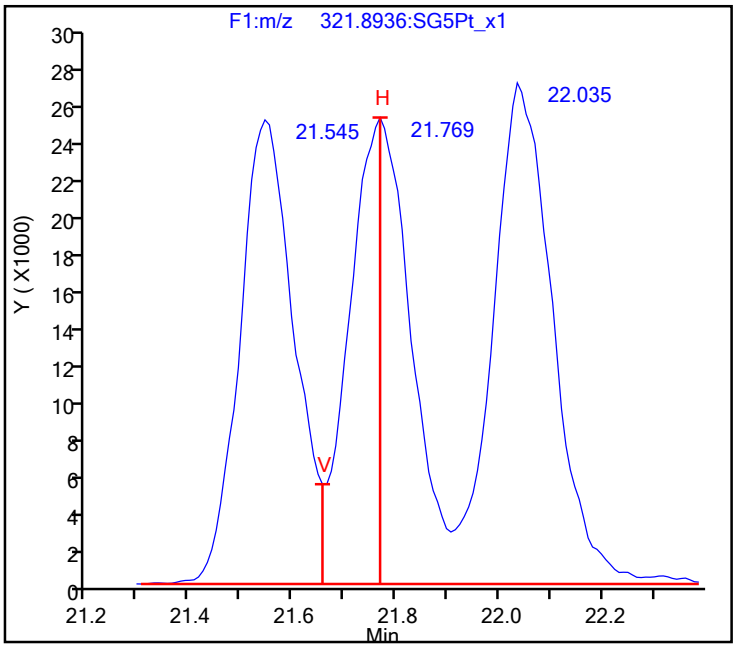

789065

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID (1): WDM 320-517891/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/19/2021 13:59

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.84	22

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d				
Injection Date:	19-Aug-2021 13:59:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 916
H (Peak Height) = 4212

%R = 22 <= 25
Passed

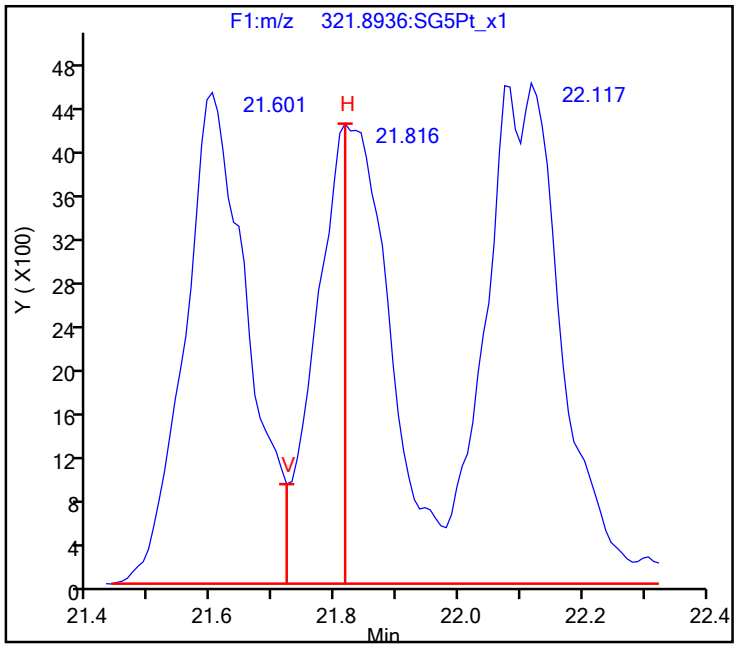

789067

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID (1): WDM 320-518043/16 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/20/2021 02:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.73	20

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d				
Injection Date:	20-Aug-2021 02:21:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 5211
H (Peak Height) = 25746

%R = 20 <= 25
Passed

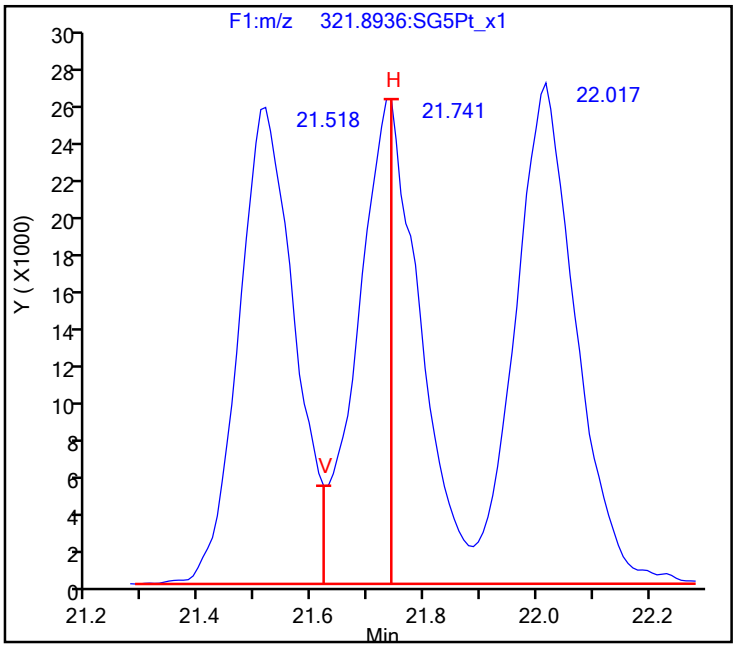

789069

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID (1): CPS 320-519438/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/24/2021 08:28

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	13

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d				
Injection Date:	24-Aug-2021 08:28:58	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 298756
H (Peak Height) = 2238451

%R = 13 <= 25
Passed

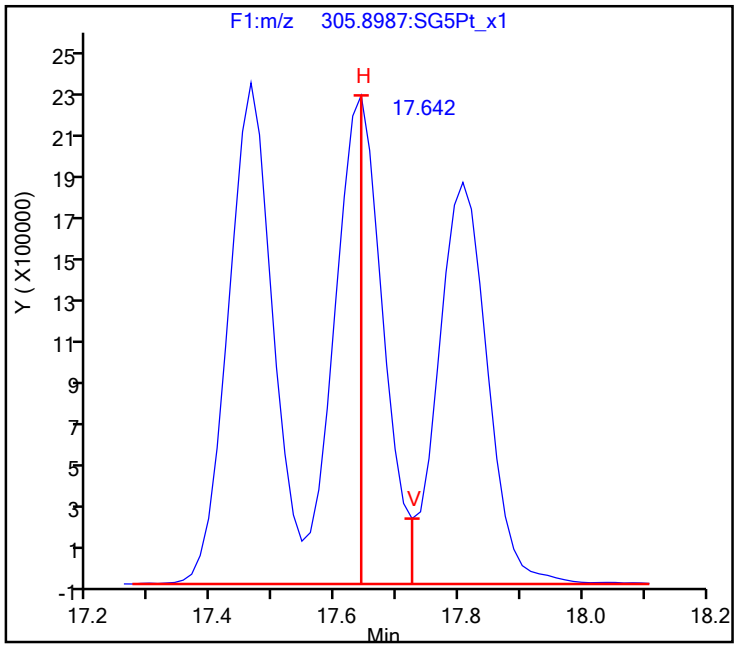

789071

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d				
Injection Date:	24-Aug-2021 08:28:58	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID (1): CPS 320-520438/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/27/2021 08:59

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	11

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d				
Injection Date:	27-Aug-2021 08:59:39	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 444126
H (Peak Height) = 3930424

%R = 11 <= 25
Passed

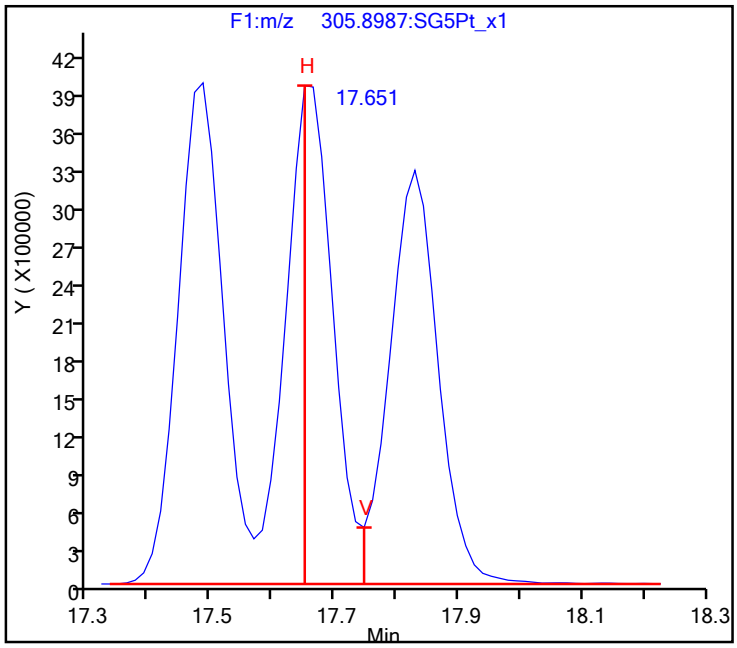

789074

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID (1): CPS 320-520456/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/27/2021 15:38

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	12

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d				
Injection Date:	27-Aug-2021 15:38:16	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 527494
H (Peak Height) = 4488549

%R = 12 <= 25
Passed

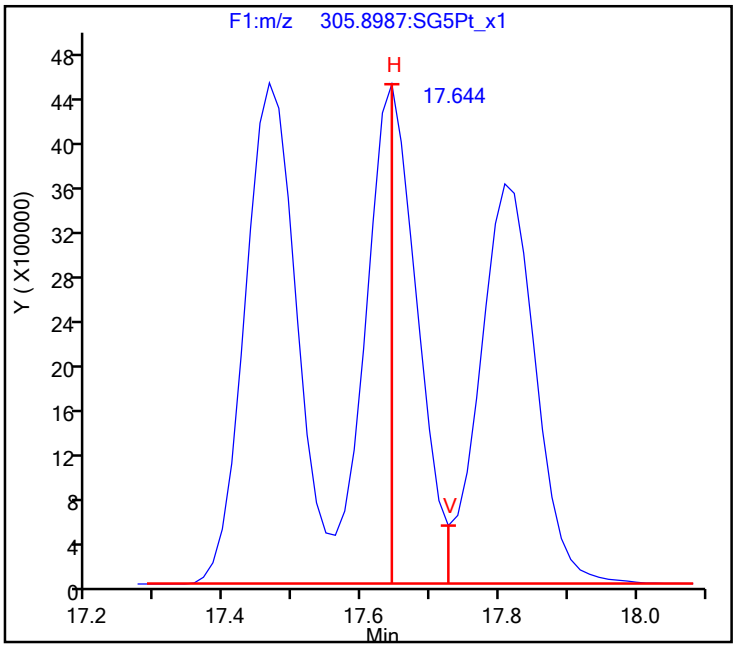

789076

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID (1): WDM 320-521465/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/30/2021 21:15

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	17.75	18

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d				
Injection Date:	30-Aug-2021 21:15:40	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	2	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1062484
H (Peak Height) = 5774517

%R = 18 <= 25
Passed

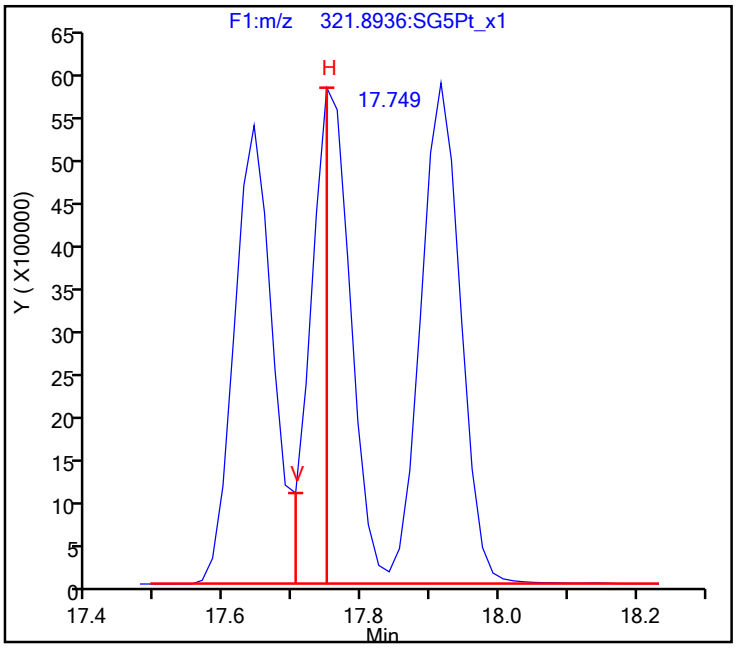

789078

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID: ICV 320-510264/9 Calibration Date: 07/26/2021 15:31

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 26JL2110D5_9.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.105		43.2	40.0	108	70-130
2,3,7,8-TCDD	AveID	1.254	1.380		44.0	40.0	110	70-130
1,2,3,7,8-PeCDF	AveID	1.061	1.081		204	200	102	70-130
2,3,4,7,8-PeCDF	AveID	1.018	1.151		226	200	113	70-130
1,2,3,7,8-PeCDD	AveID	1.048	1.044		199	200	100	70-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.128		208	200	104	70-130
1,2,3,6,7,8-HxCDF	AveID	1.126	1.227		218	200	109	70-130
2,3,4,6,7,8-HxCDF	AveID	1.168	1.283		220	200	110	70-130
1,2,3,4,7,8-HxCDD	AveID	1.064	1.151		216	200	108	70-130
1,2,3,6,7,8-HxCDD	AveID	1.000	1.082		216	200	108	70-130
1,2,3,7,8,9-HxCDD	AveID	1.133	1.182		209	200	104	70-130
1,2,3,7,8,9-HxCDF	AveID	1.166	1.200		206	200	103	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.576		219	200	109	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.167		213	200	107	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.373		209	200	104	70-130
OCDD	AveID	1.107	1.211		438	400	109	70-130
OCDF	AveID	1.438	1.574		438	400	109	70-130
13C-2,3,7,8-TCDF	Ave	1.625	1.611		99.2	100	99	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9123		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.236		102	100	102	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.300		105	100	105	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7764		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.089		101	100	101	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.093		96.9	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.036		97.4	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7216		98.4	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8697		98.8	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9447		97.6	100	98	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7492		96.9	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6354		98.2	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7065		101	100	101	77-129
13C-OCDD	Ave	0.4472	0.4464		200	200	100	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.177		42.5	40.0	106	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	55225241	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.598	88976883	0.79	1.6249	99.2	99.2	0.1479	0.1479	99.15	
2,3,7,8-TCDF	17.613	39324874	0.78	1.0239	43.2	43.2	0.0666	0.0666	108	
A Non-2,3,7,8-sub-TCDF	17.311	524958	0.77	1.0239	0.6411	0.5762	0.0666	0.3057		RQ
S Total TCDF					43.8	43.7	0.0666	0.0666		RQ
D 13C-2,3,7,8-TCDD	18.323	50383801	0.80	0.8993	101.4	101.4	0.1314	0.1314	101	
2,3,7,8-TCDD	18.338	27801852	0.78	1.2541	44.0	44.0	0.0443	0.0443	110	
$ 37Cl4-2,3,7,8-TCDD	18.338	26006351		1.1071	42.5	42.5	0.0388	0.0388	106	
A Non-2,3,7,8-sub-TCDD	17.772	551726	0.77	1.2541	0.8732	0.8732	0.0443	0.8732		
S Total TCDD					44.9	44.9	0.0443	0.0443		
D 13C-1,2,3,7,8-PeCDF	22.749	68252478	1.57	1.2101	102.1	102.1	0.2097	0.2097	102	
1,2,3,7,8-PeCDF	22.762	147560573	1.57	1.0611	203.7	203.7	0.7454	0.7454	102	
D 13C-2,3,4,7,8-PeCDF	24.126	71797373	1.60	1.2395	104.9	104.9	0.2047	0.2047	105	
2,3,4,7,8-PeCDF	24.153	165293469	1.59	1.0184	226.1	226.1	0.7930	0.7930	113	
A F1 PeCDFs	20.244						0.0162	0.0162		
A Non-2,3,7,8-sub-PeCDF	23.473	3443801	1.55	1.0398	4.730	4.730	0.7686	4.730		
S Total PeCDF					434.5	434.5	0.7692	0.7692		
D 13C-1,2,3,7,8-PeCDD	24.862	42878117	1.62	0.7612	102.0	102.0	0.1090	0.1090	102	
1,2,3,7,8-PeCDD	24.889	89555111	1.58	1.0484	199.2	199.2	0.2271	0.2271	99.61	
A Non-2,3,7,8-sub-PeCDD	23.744						0.2271	0.2271		
S Total PeCDD					199.2	199.2	0.2271	0.2271		
D 13C-1,2,3,4,7,8-HxCDF	30.836	62488487	0.52	1.0837	100.5	100.5	0.4386	0.4386	101	
1,2,3,4,7,8-HxCDF	30.849	141029922	1.22	1.0851	208.0	208.0	1.073	1.073	104	
D 13C-1,2,3,6,7,8-HxCDF	30.995	62719524	0.52	1.1279	96.9	96.9	0.4214	0.4214	96.91	
1,2,3,6,7,8-HxCDF	31.008	153925065	1.22	1.1260	218.0	218.0	1.035	1.035	109	
D 13C-2,3,4,6,7,8-HxCDF	31.754	59440166	0.52	1.0637	97.4	97.4	0.4468	0.4468	97.39	
2,3,4,6,7,8-HxCDF	31.767	152499923	1.22	1.1675	219.7	219.7	0.8510	0.8510	110	
D 13C-1,2,3,7,8,9-HxCDF	32.513	54205090	0.51	0.9676	97.6	97.6	0.4912	0.4912	97.64	
1,2,3,7,8,9-HxCDF	32.526	130040433	1.23	1.1664	205.7	205.7	0.8755	0.8755	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
A Non-2,3,7,8-sub-HxCDF	30.542						0.9509	0.9509		
S Total HxCDF					851.4	851.4	0.9587	0.9587		
* 13C-1,2,3,7,8,9-HxCDD	32.340	57376962	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	41405543	1.26	0.7334	98.4	98.4	0.3599	0.3599	98.39	
1,2,3,4,7,8-HxCDD	31.940	95311816	1.31	1.0640	216.3	216.3	0.7396	0.7396	108	
D 13C-1,2,3,6,7,8-HxCDD	32.020	49899921	1.25	0.8802	98.8	98.8	0.2999	0.2999	98.81	
1,2,3,6,7,8-HxCDD	32.034	107959577	1.21	1.0001	216.3	216.3	0.7456	0.7456	108	
1,2,3,7,8,9-HxCDD	32.340	107964188	1.26	1.1325	208.8	208.8	0.6762	0.6762	104	
A Non-2,3,7,8-sub-HxCDD	31.215						0.7187	0.7187		
S Total HxCDD					641.5	641.5	0.7205	0.7205		
1,2,3,4,6,7,8-HpCDF	33.912	135529943	1.05	1.4413	218.8	218.8	2.088	2.088	109	
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	42985413	0.44	0.7730	96.9	96.9	0.9749	0.9749	96.91	
D 13C-1,2,3,4,7,8,9-HpCDF	35.006	40537577	0.44	0.7008	100.8	100.8	1.075	1.075	101	
1,2,3,4,7,8,9-HpCDF	35.018	111348980	1.06	1.3174	208.5	208.5	2.580	2.580	104	
A Non-2,3,7,8-sub-HpCDF	34.458						2.314	2.314		
S Total HpCDF					427.3	427.3	2.334	2.334		
D 13C-1,2,3,4,6,7,8-HpCDD	34.702	36455330	1.02	0.6472	98.2	98.2	0.5132	0.5132	98.17	
1,2,3,4,6,7,8-HpCDD	34.714	85115851	1.05	1.0943	213.4	213.4	1.044	1.044	107	
A Non-2,3,7,8-sub-HpCDD	33.504						1.044	1.044		
S Total HpCDD					213.4	213.4	1.044	1.044		
D 13C-OCDD	37.082	51228940	0.89	0.4472	199.7	199.7	0.2232	0.2232	99.84	
OCDF	37.189	161294219	0.91	1.4382	437.9	437.9	0.4409	0.4409	109	
OCDD	37.094	124067491	0.90	1.1070	437.5	437.5	0.5859	0.5859	109	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.127	18.142	-1		24811260	6334063	3297	8242	1921		
333.9339	18.127	18.142	-1		30413981	7612051	3296	8240	2309	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	0.971	39276583	9941961	7868	19670	1264		
317.9389	17.598	17.598	0	0.971	49700300	12596795	5536	13840	2275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.613	17.628	-1	1.001	17265923	4373947	2358	5895	1855		
305.8987	17.613	17.628	-1	1.001	22058951	5573170	3788	9470	1471	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.933	17.311	-23	0.962	161517	37808	2358	5895	16		
	Empc Correction				121157	34090	2358	5895	14		
305.8987	16.933	17.311	-23	0.962	157347	44274	3788	9470	12	1.03(0.65-0.89)	
303.9016	17.235	17.311	-5	0.979	125955	28258	2358	5895	12		
	Empc Correction				107214	28155	2358	5895	12		
305.8987	17.220	17.311	-5	0.979	139240	36566	3788	9470	10	0.90(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.011	22418240	5434734	3297	8242	1648		
333.9339	18.323	18.323	0	1.011	27965561	6697610	3296	8240	2032	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.338	0	1.001	12170563	2933733	1303	3257	2252		
321.8936	18.338	18.338	0	1.001	15631289	3775919	1394	3485	2709	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.012	26006351	6295077	2398	5995	2625		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											
319.8965	18.233	17.772	28	0.995	239239	60004	1303	3257	46		
321.8936	18.233	17.772	28	0.995	312487	80578	1394	3485	58	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.749	0	1.255	41668599	7333690	8485	21212	864		
353.8970	22.749	22.749	0	1.255	26583879	4652625	5670	14175	821	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.762	22.776	-1	1.001	90206138	15696498	23147	57867	678		
341.8567	22.762	22.776	-1	1.001	57354435	10012296	14777	36942	678	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.126	0	1.331	44217600	7271382	8485	21212	857		
353.8970	24.126	24.126	0	1.331	27579773	4468756	5670	14175	788	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.153	0	1.001	101392394	16526277	23147	57867	714		
341.8567	24.153	24.153	0	1.001	63901075	10428415	14777	36942	706	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.244						338	845			
341.8567	20.244						462	1155			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.308	23.473	-10	1.025	2092429	352488	23147	57867	15		
341.8567	23.308	23.473	-10	1.025	1351372	223195	14777	36942	15	1.55(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.862	0	1.372	26514155	4045355	2631	6577	1538		
369.8919	24.862	24.862	0	1.372	16363962	2537743	2000	5000	1269	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.889	0	1.001	54803563	8416527	3860	9650	2180		
357.8516	24.889	24.889	0	1.001	34751548	5423049	2410	6025	2250	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.744						3860	9650			
357.8516	23.744						2410	6025			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.836	30.835	0	0.953	21423741	4602993	10138	25345	454		
385.8610	30.836	30.835	0	0.953	41064746	8805011	18904	47260	466	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.862	-1	1.000	77446041	17056861	34028	85070	501		
375.8178	30.849	30.862	-1	1.000	63583881	14029731	28421	71052	494	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.008	-1	0.958	21527343	4645676	10138	25345	458		
385.8610	30.995	31.008	-1	0.958	41192181	8744916	18904	47260	463	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.008	31.021	-1	1.000	84458486	18178004	34028	85070	534		
375.8178	31.008	31.021	-1	1.000	69466579	15063201	28421	71052	530	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.754	0	0.982	20418672	5425134	10138	25345	535		
385.8610	31.754	31.754	0	0.982	39021494	10287607	18904	47260	544	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.767	0	1.000	83657687	22340712	34028	85070	657		
375.8178	31.767	31.767	0	1.000	68842236	18269489	28421	71052	643	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.513	32.526	-1	1.005	18351639	5227320	10138	25345	516		
385.8610	32.513	32.526	-1	1.005	35853451	10061715	18904	47260	532	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.539	-1	1.000	71665418	20282625	34028	85070	596		
375.8178	32.526	32.539	-1	1.000	58375015	16239209	28421	71052	571	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.542						34028	85070			
375.8178	30.542						28421	71052			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.340	32.339	0		32156760	8544429	8352	20880	1023		
403.8529	32.326	32.339	-1		25220202	6731682	7778	19445	865	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.927	0	0.987	23052563	6987052	8352	20880	837		
403.8529	31.927	31.927	0	0.987	18352980	5468630	7778	19445	703	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.940	0	1.000	54057818	15589077	22398	55995	696		
391.8127	31.940	31.940	0	1.000	41253998	12285721	16811	42027	731	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.020	32.033	-1	0.990	27736555	7273068	8352	20880	871		
403.8529	32.020	32.033	-1	0.990	22163366	5871752	7778	19445	755	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.034	32.047	-1	1.000	59116629	16185483	22398	55995	723		
391.8127	32.034	32.047	-1	1.000	48842948	13061351	16811	42027	777	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.340	32.353	-1	1.013	60106510	15800454	22398	55995	705		
391.8127	32.340	32.353	-1	1.013	47857678	12979231	16811	42027	772	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	31.215						22398	55995			
391.8127	31.215						16811	42027			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.912	33.911	0	1.000	69518297	21985720	82461	206152	267		
409.7789	33.912	33.911	0	1.000	66011646	21358881	78734	196835	271	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.912	0	1.049	13138473	4149229	14216	35540	292		
419.8220	33.900	33.912	-1	1.048	29846940	9243997	31835	79587	290	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.006	35.005	0	1.082	12375038	3705586	14216	35540	261		
419.8220	35.006	35.005	0	1.082	28162539	8151296	31835	79587	256	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.018	35.005	1	1.000	57298984	16523888	82461	206152	200		
409.7789	35.006	35.005	0	1.000	54049996	15559126	78734	196835	198	1.06(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						82461	206152			
409.7789	34.458						78734	196835			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.702	34.714	-1	1.073	18400619	5331850	10315	25787	517		
437.8140	34.702	34.714	-1	1.073	18054711	5313047	9982	24955	532	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.714	0	1.000	43603241	12970820	24860	62150	522		
425.7737	34.714	34.714	0	1.000	41512610	12528364	23796	59490	526	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						24860	62150			
425.7737	33.504						23796	59490			
13C-OCDD											
469.7779	37.082	37.093	-1	1.147	24118371	6015882	2552	6380	2357		
471.7750	37.082	37.093	-1	1.147	27110569	6692443	3547	8867	1887	0.89(0.76-1.02)	
OCDF											
441.7428	37.189	37.201	-1	1.003	76746145	20468133	7616	19040	2688		
443.7399	37.189	37.201	-1	1.003	84548074	22394214	8501	21252	2634	0.91(0.76-1.02)	
OCDD											
457.7377	37.094	37.105	-1	1.000	58682484	14688537	7599	18997	1933		
459.7348	37.094	37.105	-1	1.000	65385007	16510536	8885	22212	1858	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	88976883	22538756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	88976883	22538756

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.933	161517	37808	157347	44274	0.3500	1.03	RQ
16.933	121157	34090	157347	44274	0.3057		Empc Correction
17.235	125955	28258	139240	36566	0.2911	0.90	RnQ
17.235	107214	28155	139240	36566	0.2705		Empc Correction
Signal Totals:							
	228371	62245	296587	80840			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	584059	146906				0.97	RQ
	524958	143085					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6411 = (584059 * 100.000) / (88976883 * 1.024)
Empc Amount: 0.5762 = (524958 * 100.000) / (88976883 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50383801	12132344

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50383801	12132344

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.233	239239	60004	312487	80578	0.8732	0.77	
Signal Totals:							
	239239	60004	312487	80578			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	551726	140582				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8732 = (551726 * 100.000) / (50383801 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68252478	11986315
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71797373	11740138

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70024925	11863226

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
23.308	2092429	352488	1351372	223195	4.73	1.55	
Signal Totals:							
	2092429	352488	1351372	223195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3443801	575683				1.55	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.730 = (3443801 * 100.000) / (70024925 * 1.040)

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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TCDF

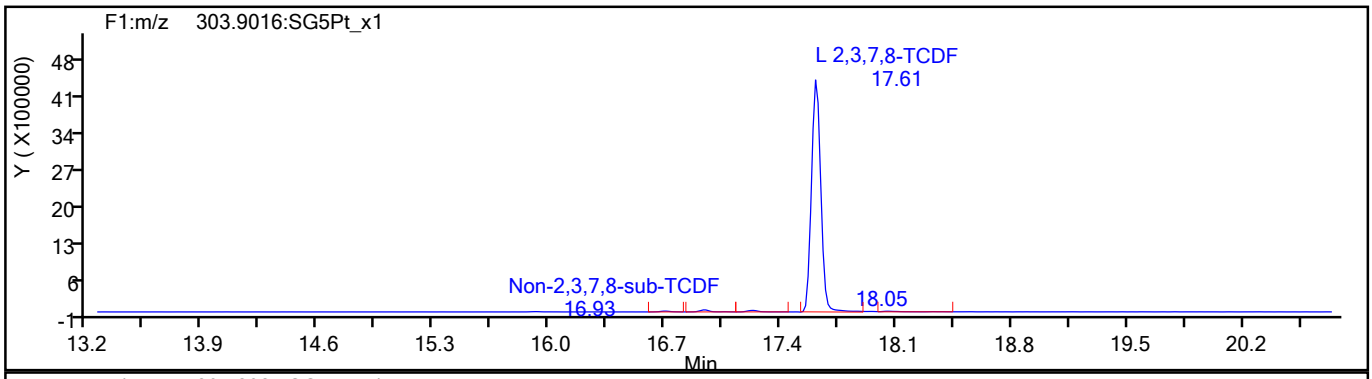

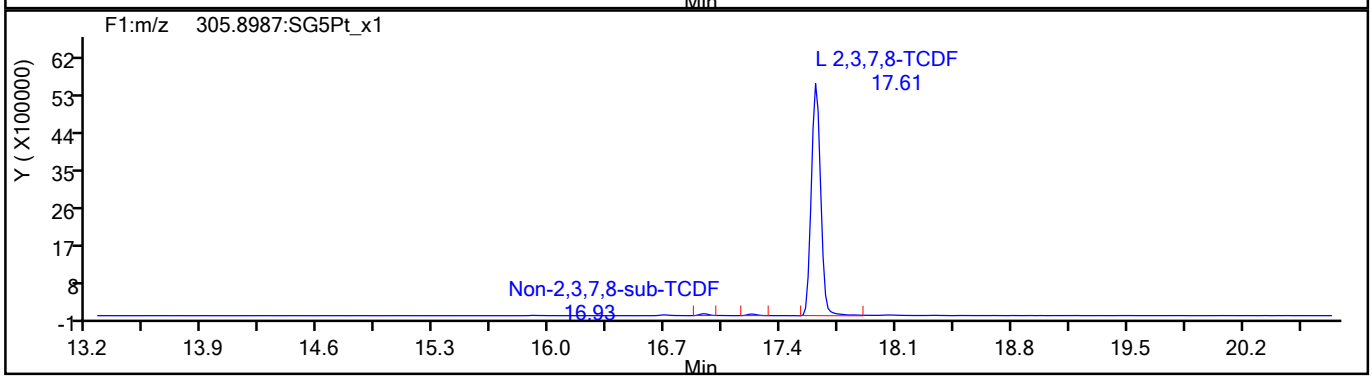

TCDF Standards

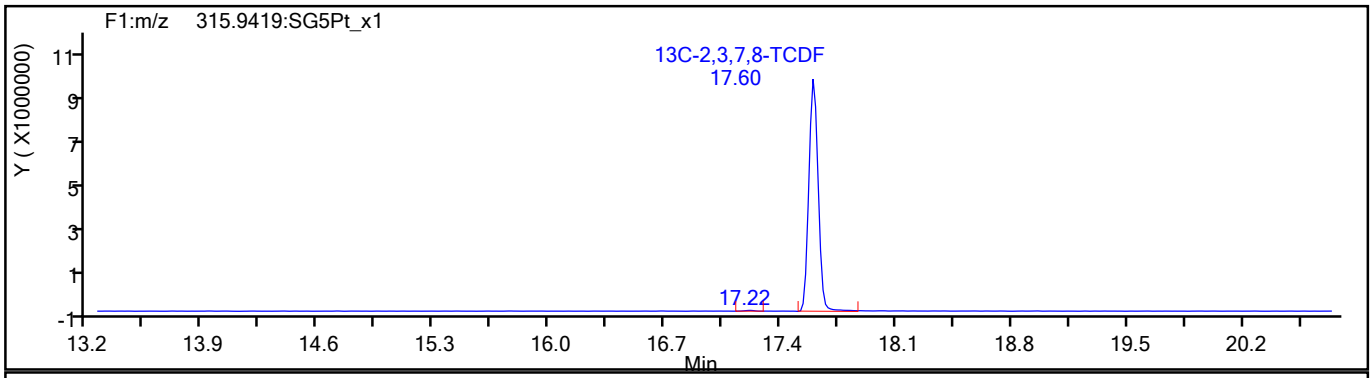

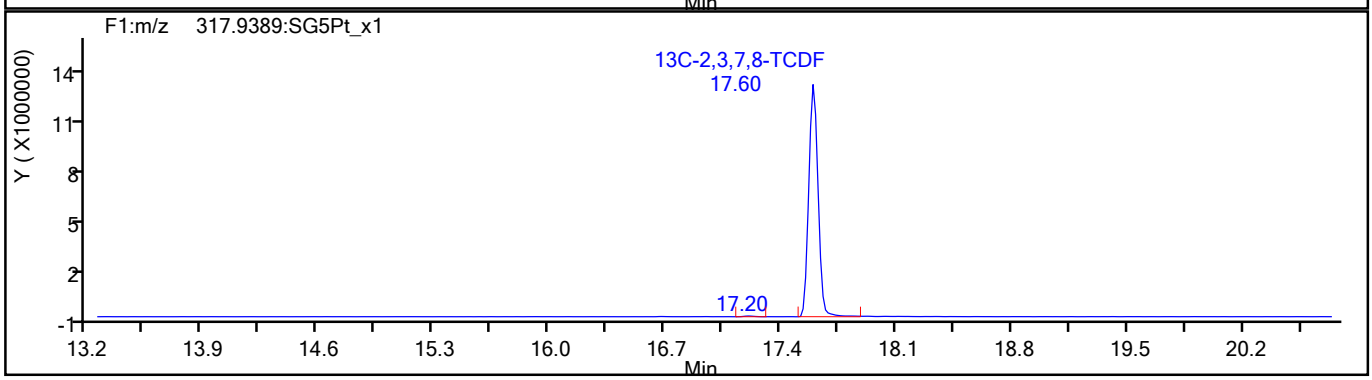

789089

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

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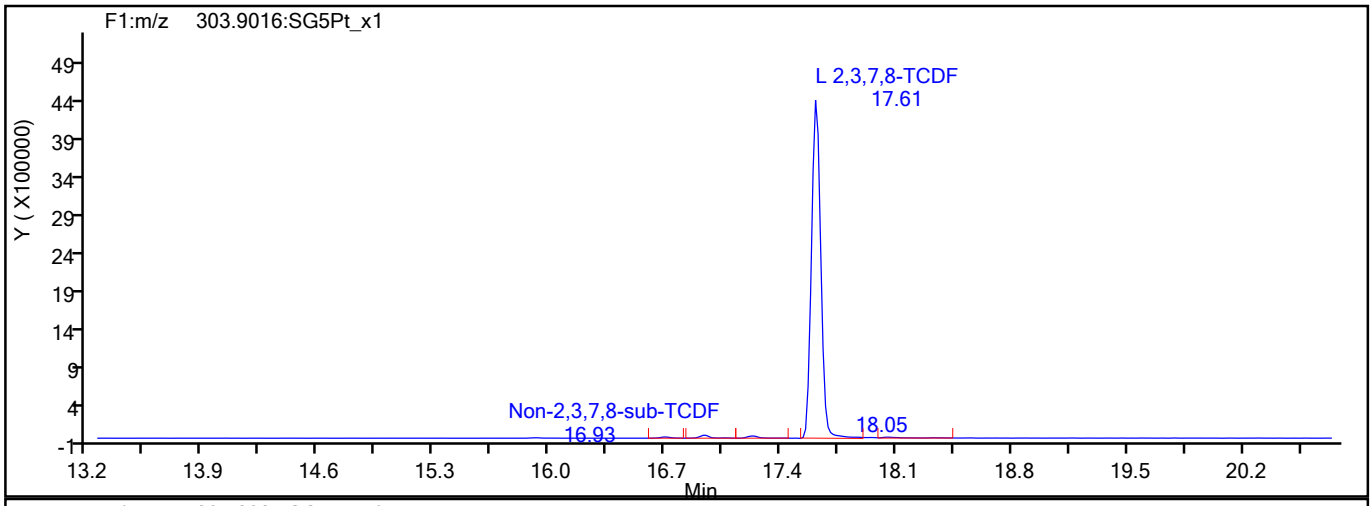

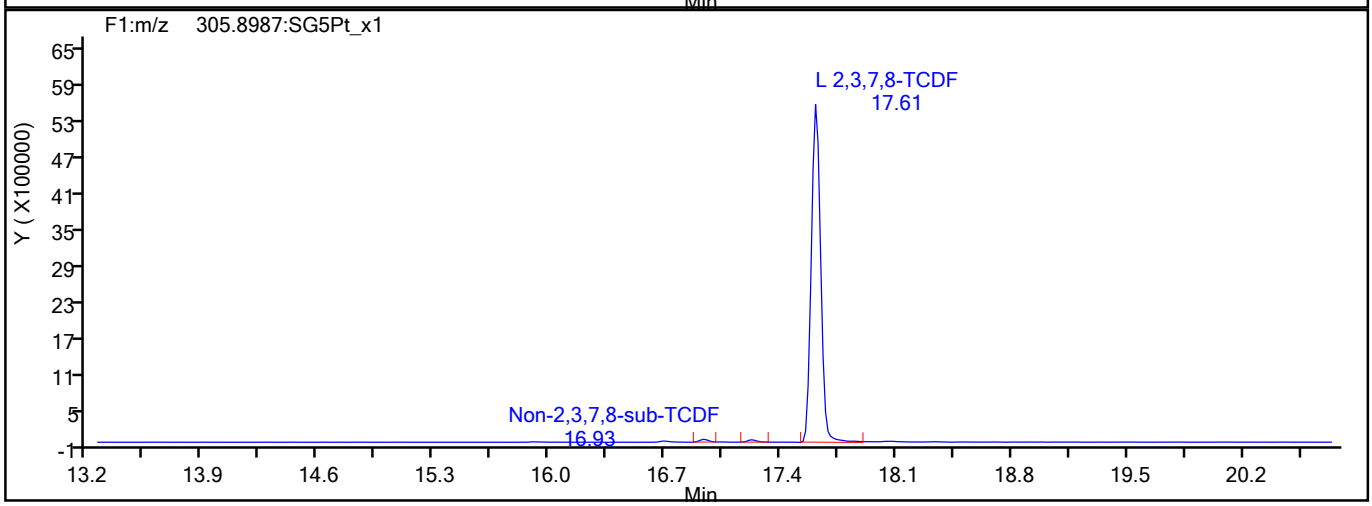

TCDF Interference Mass

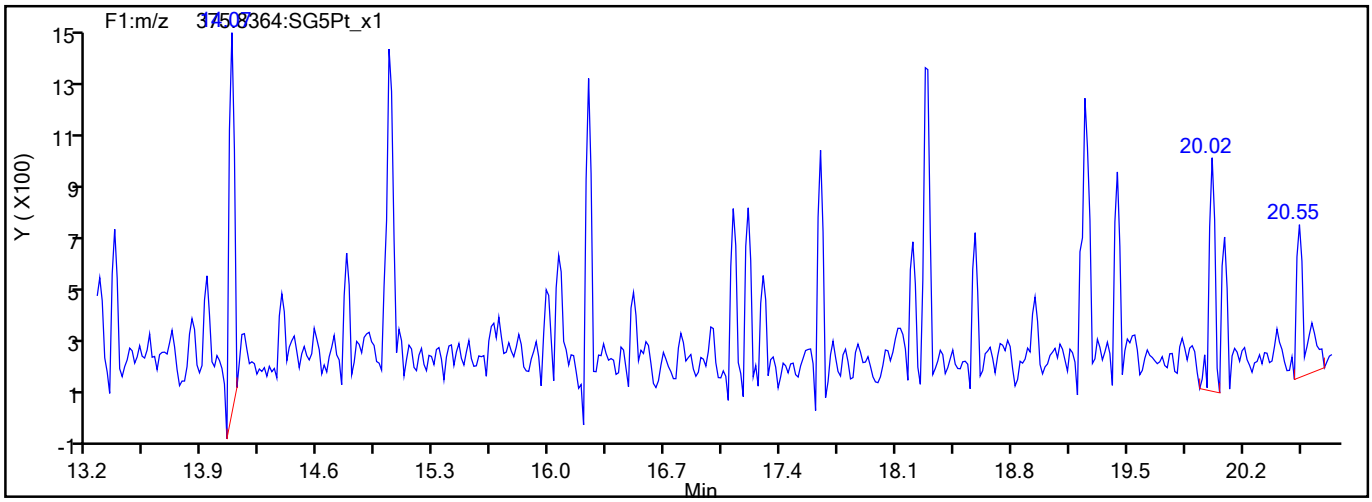

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Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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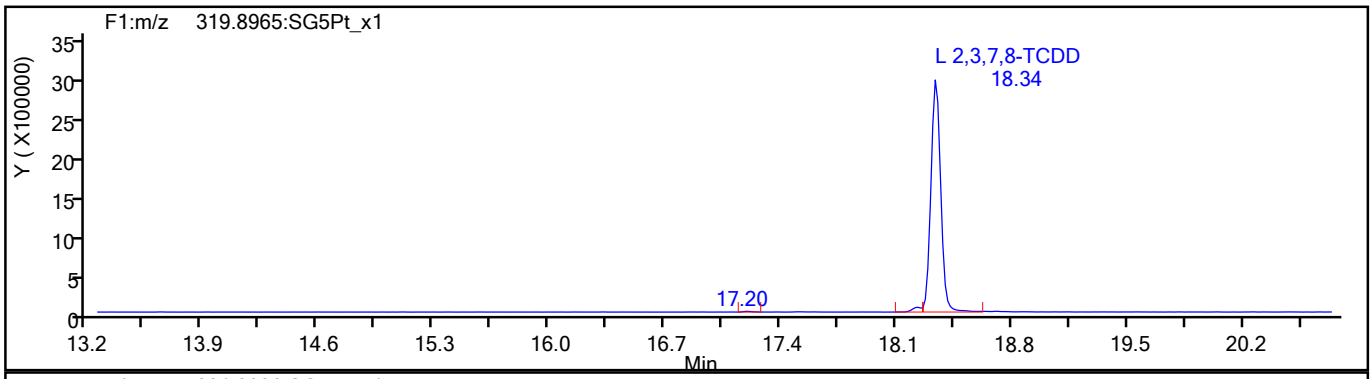

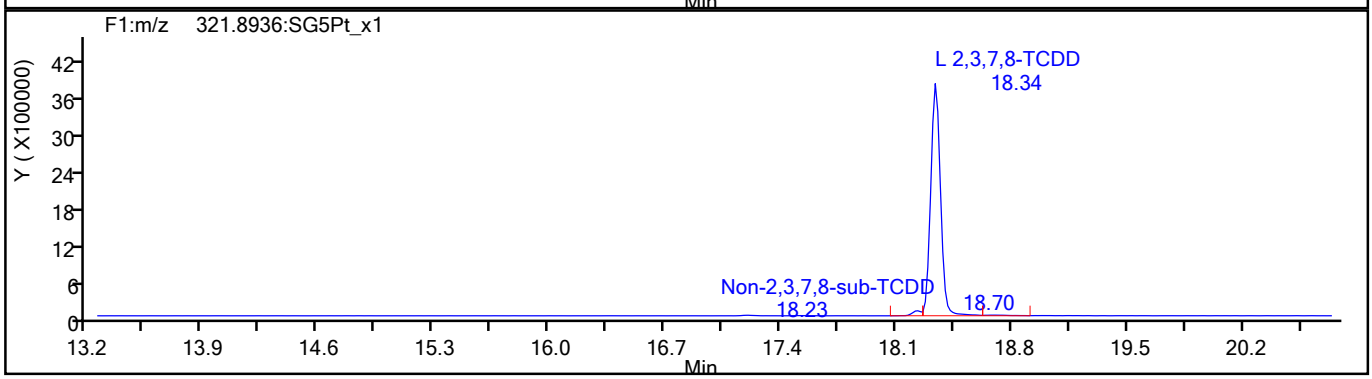

TCDD Standards

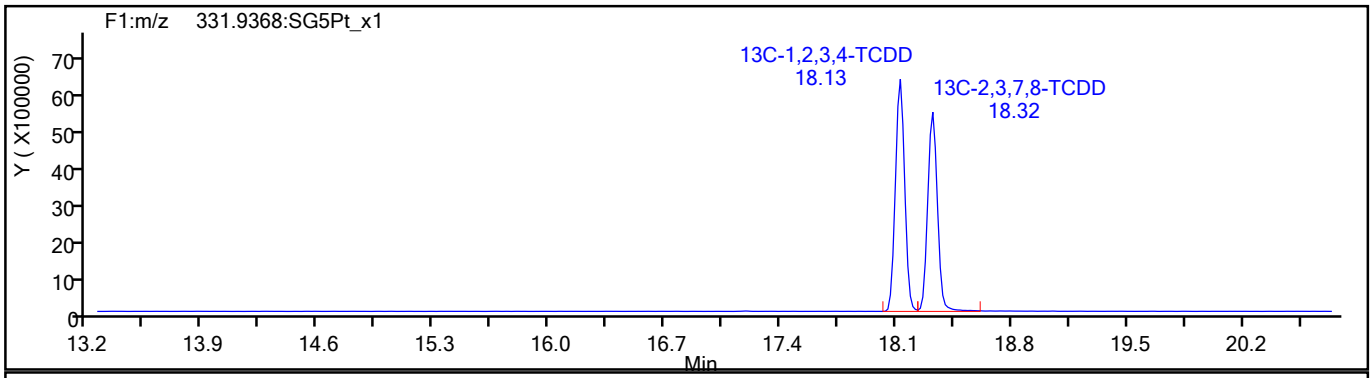

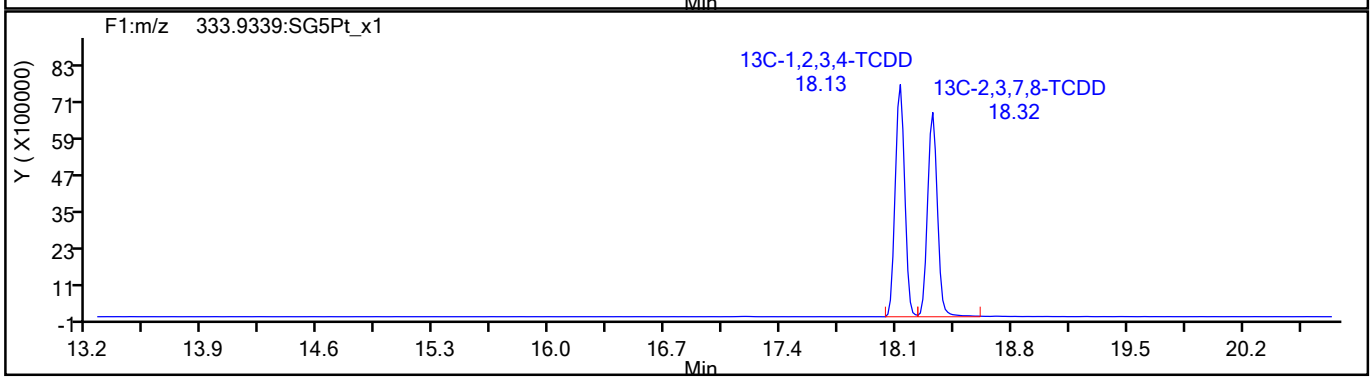

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Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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37Cl4-TCDD

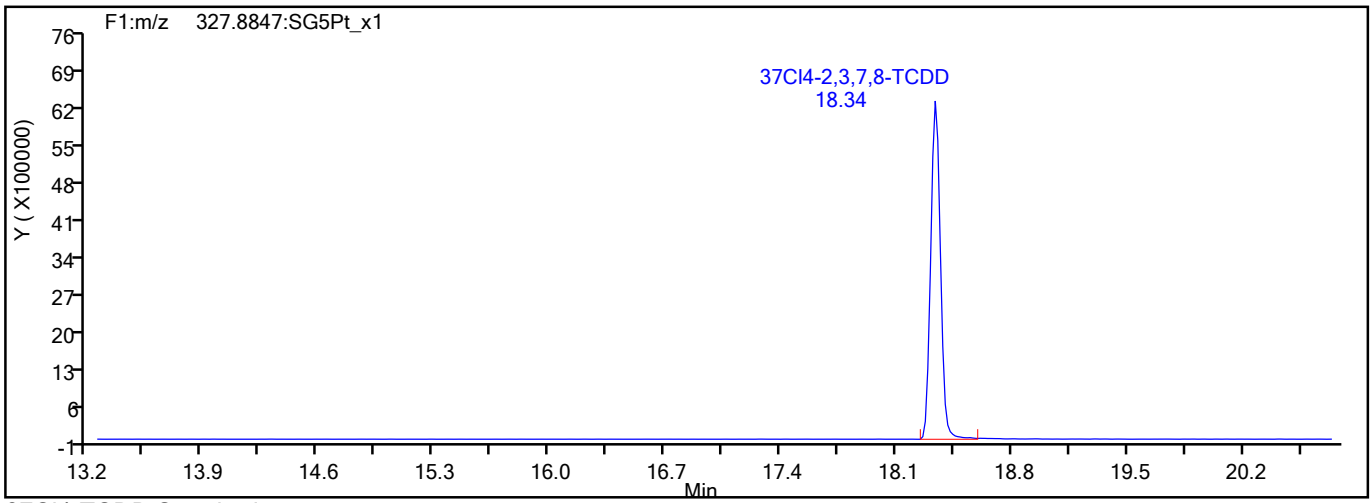

37Cl4-TCDD Standards

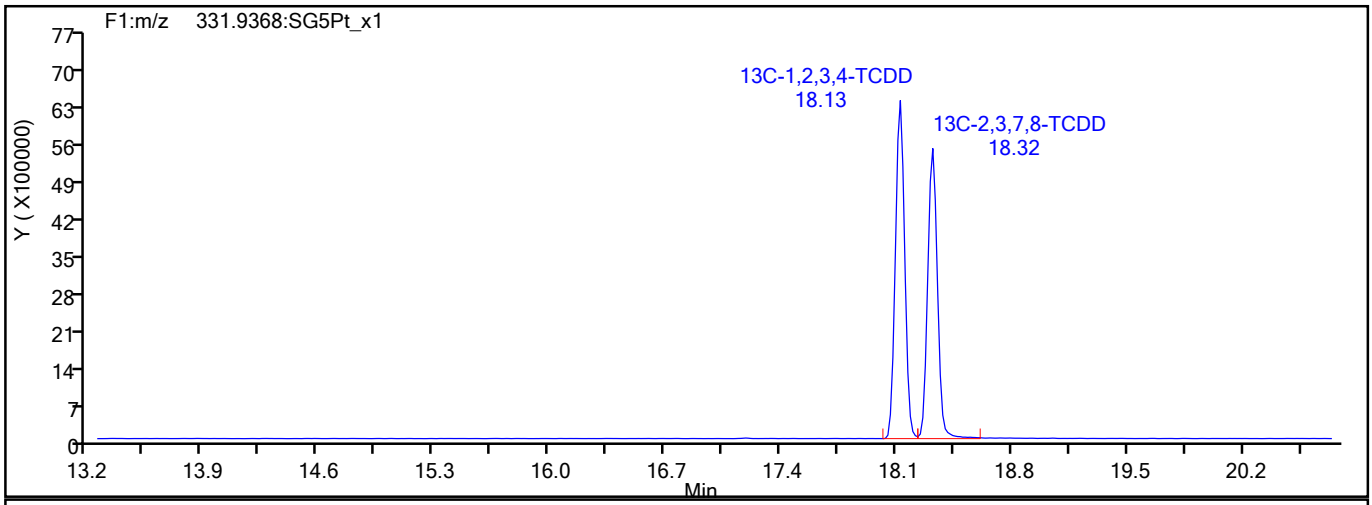

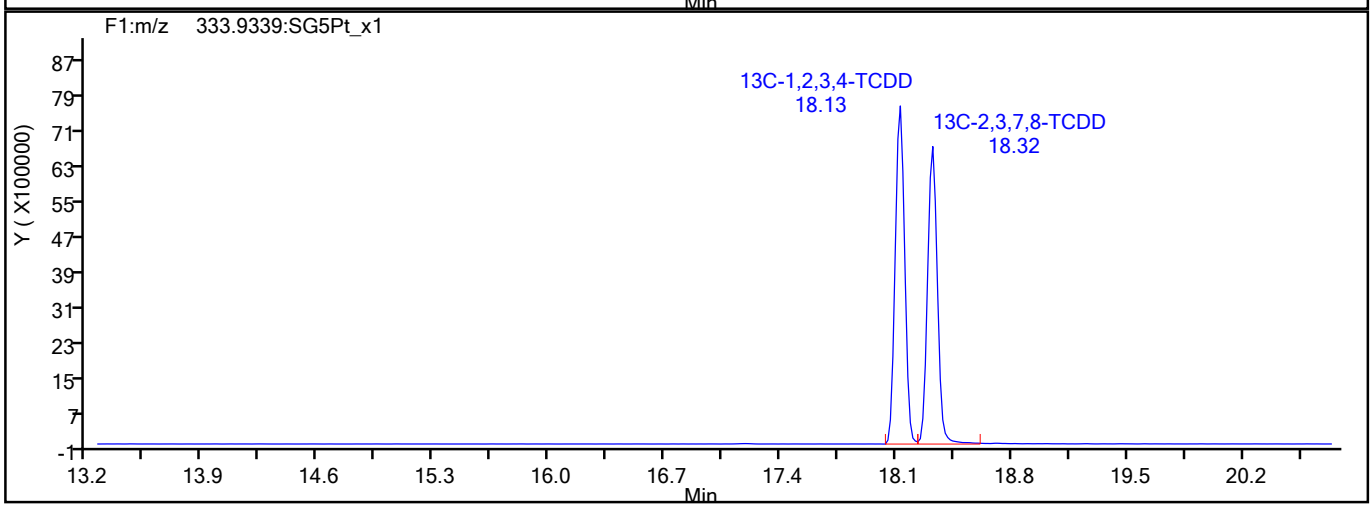

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Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

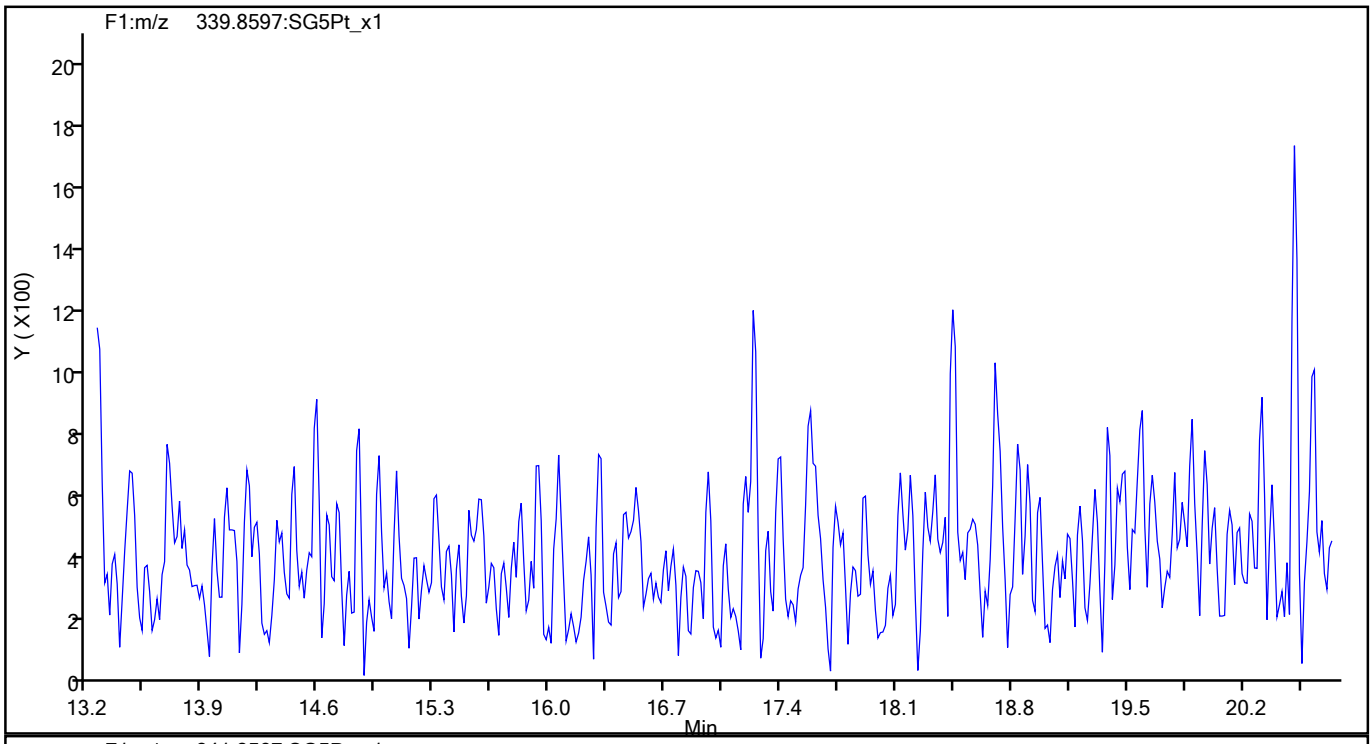

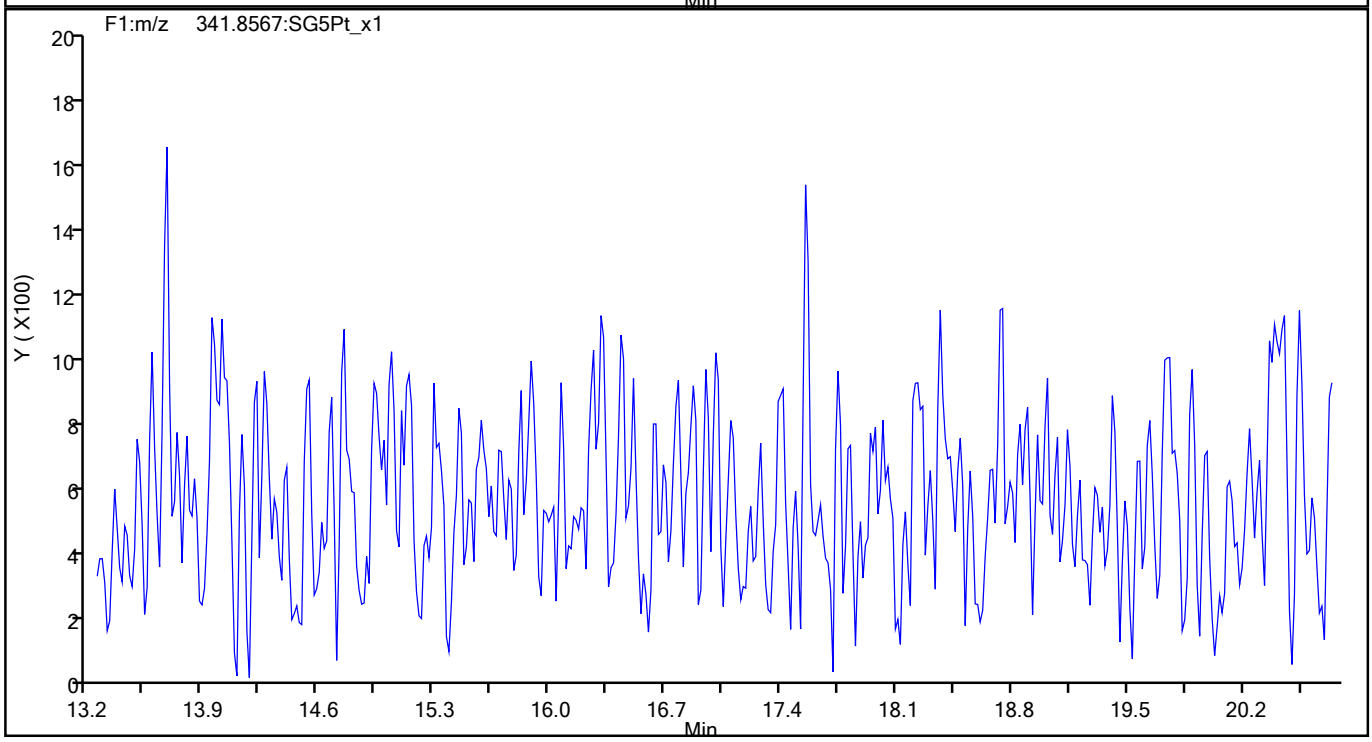

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Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

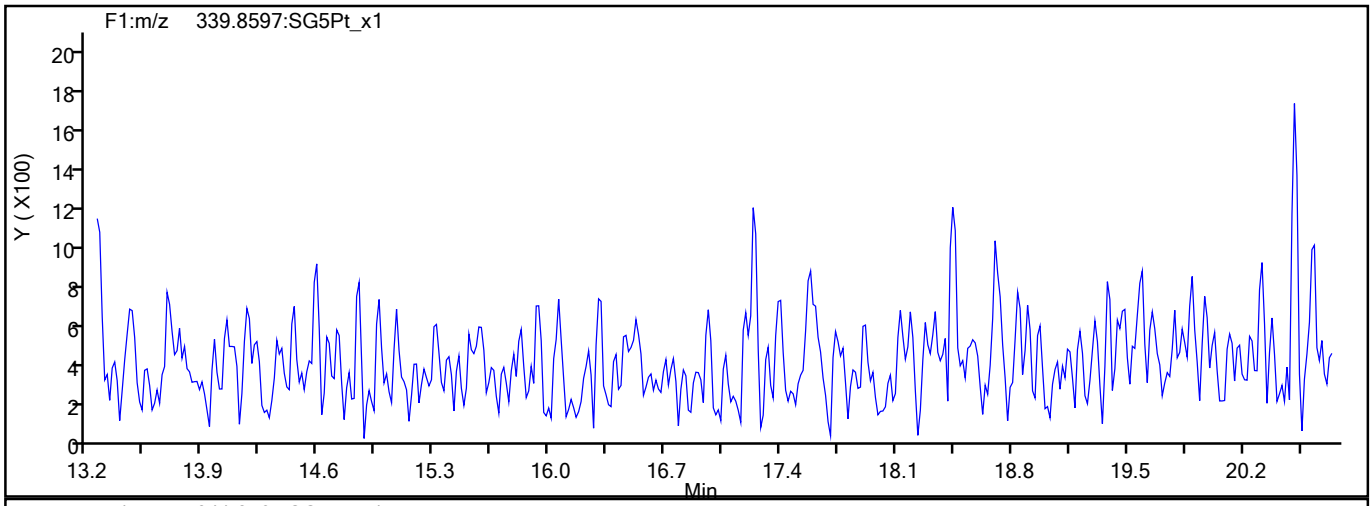

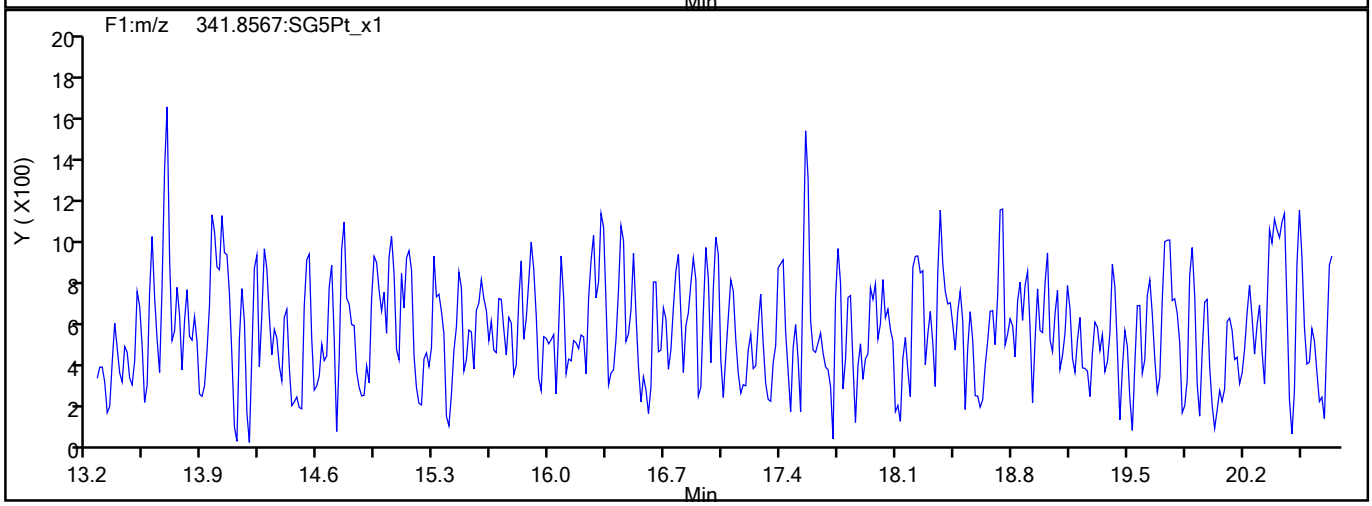

F1 PeCDFs Interference Mass

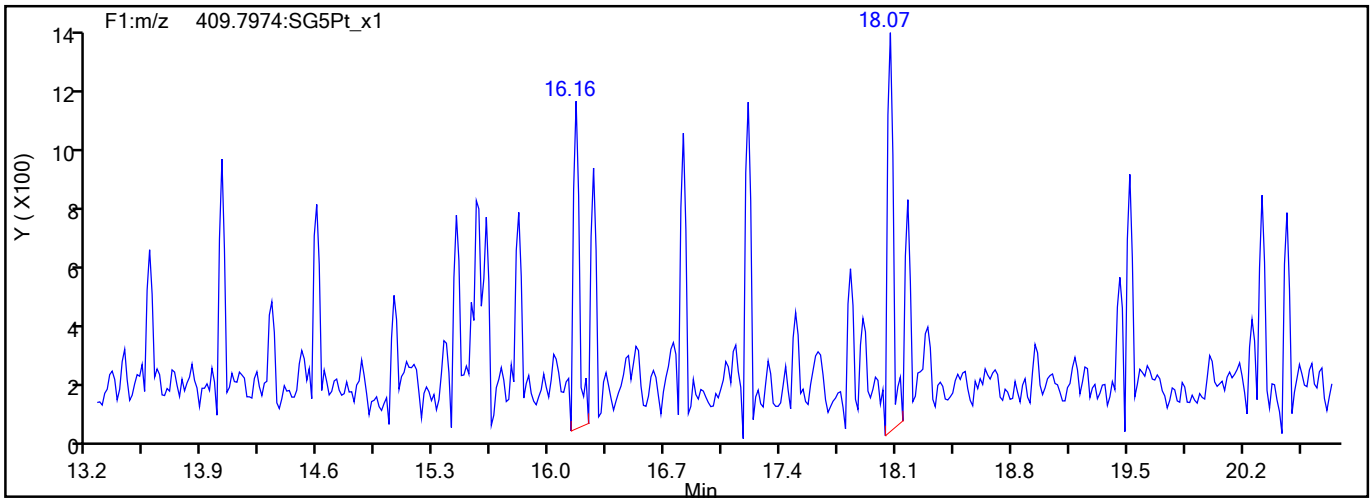

789094

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

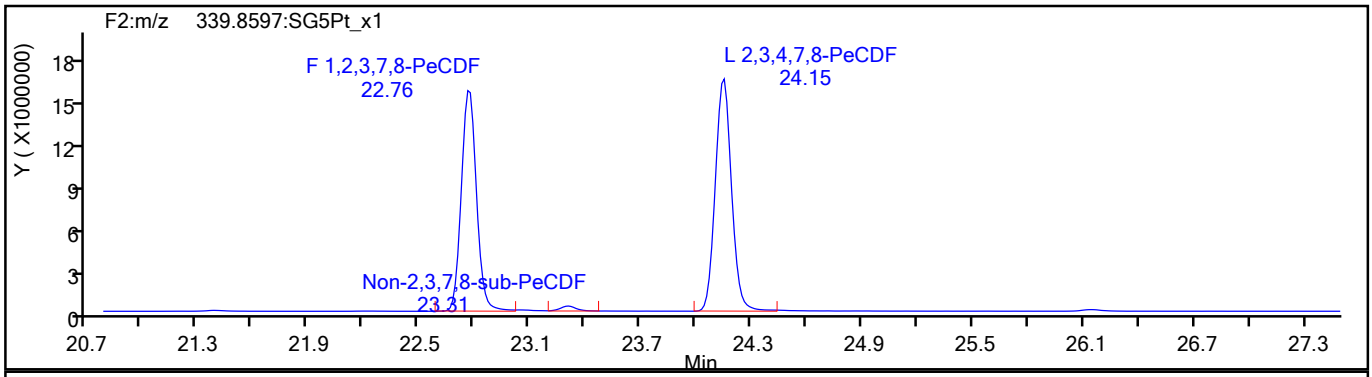

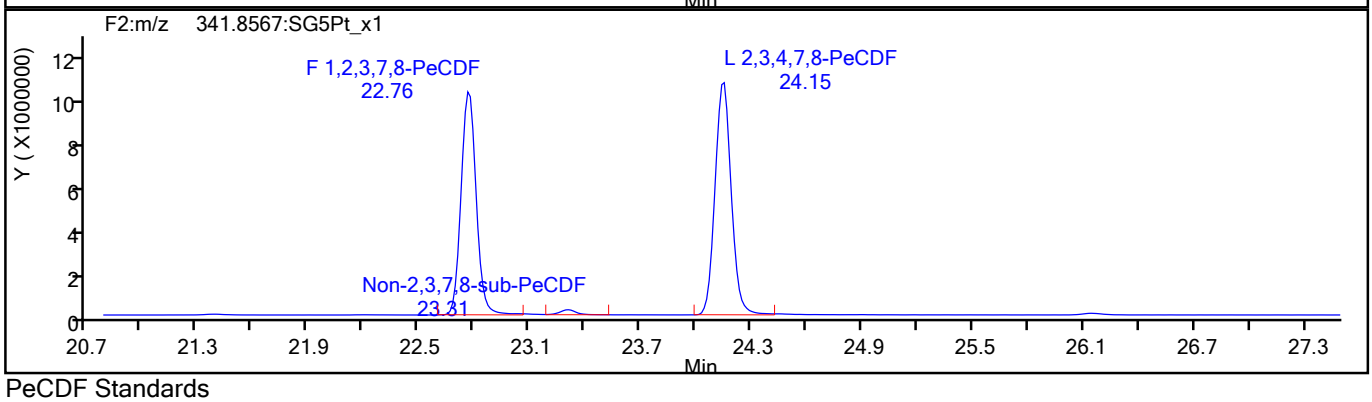

PeCDF Standards

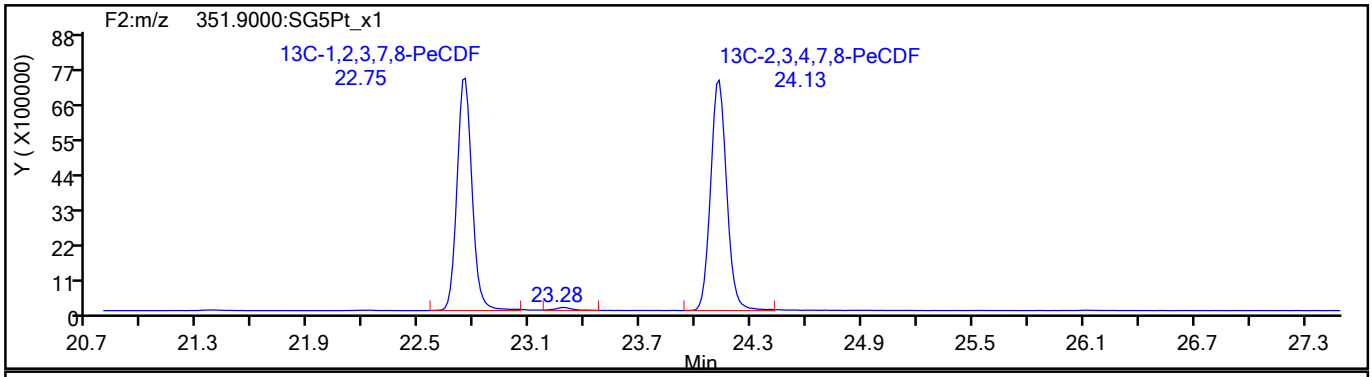

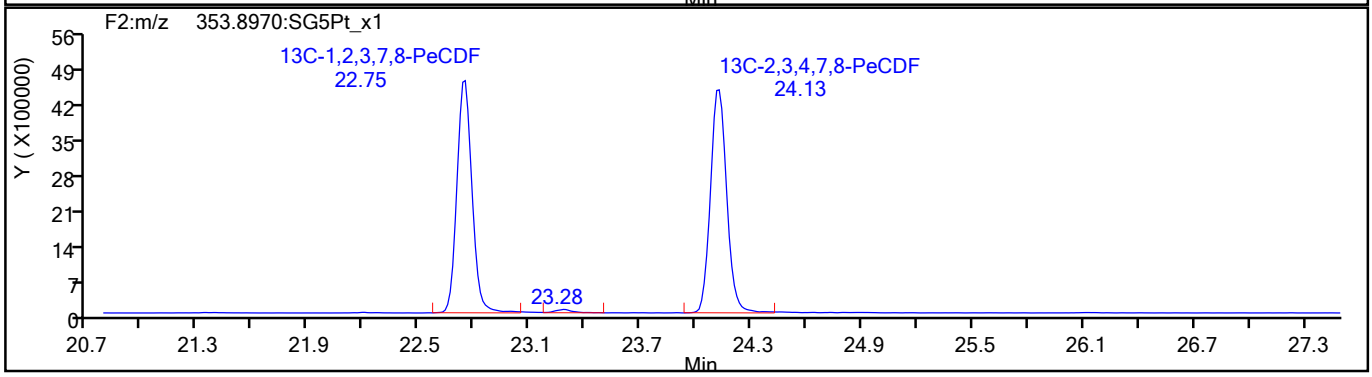

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Eurofins TestAmerica, Sacramento

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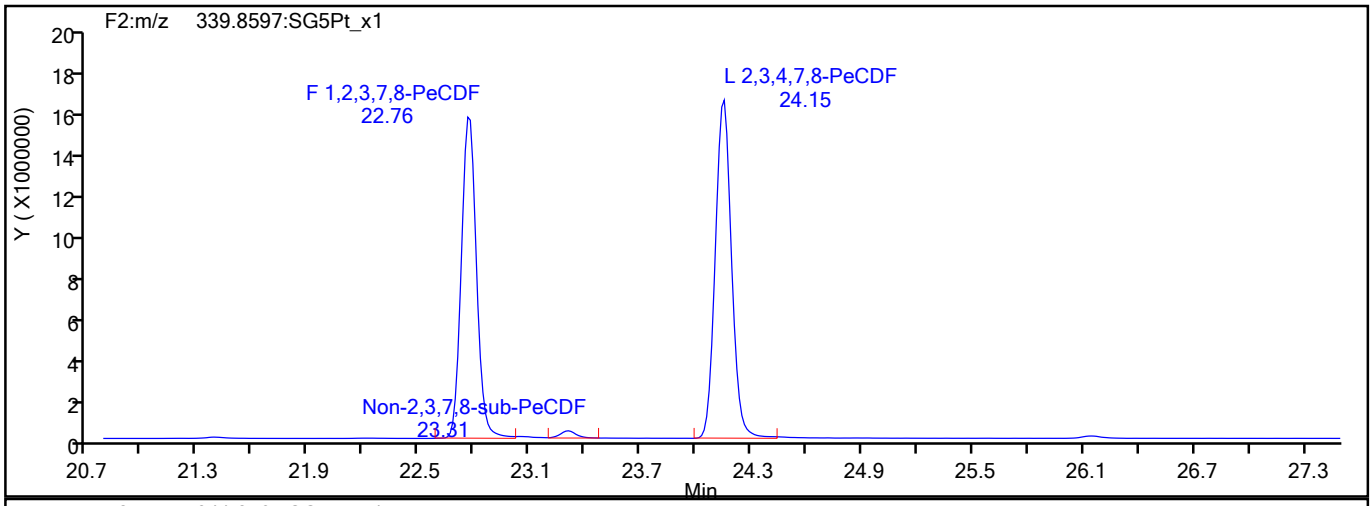

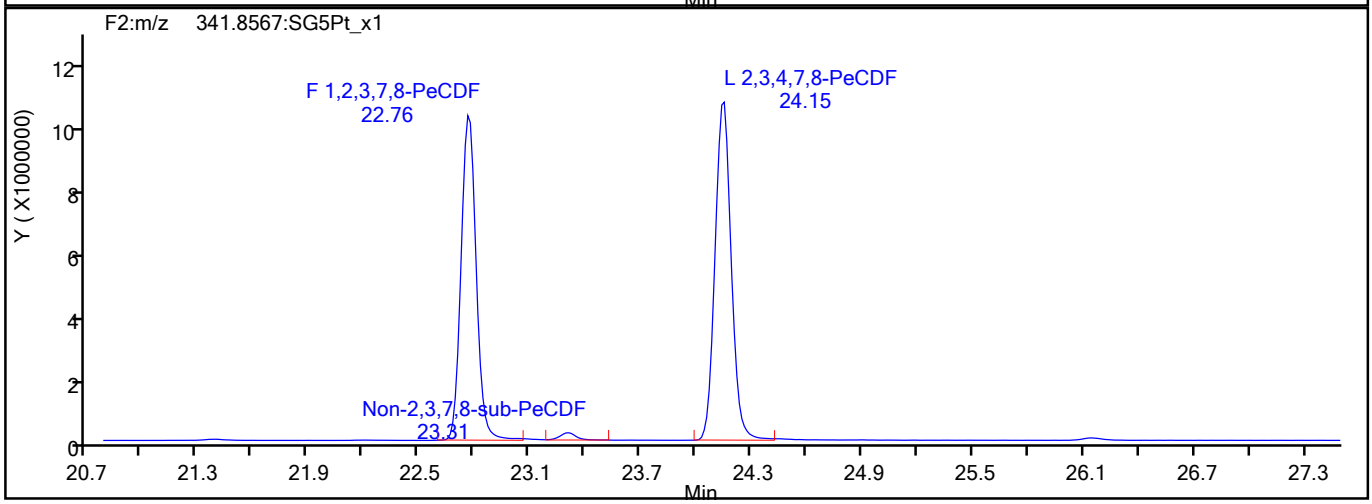

PeCDF Interference Mass

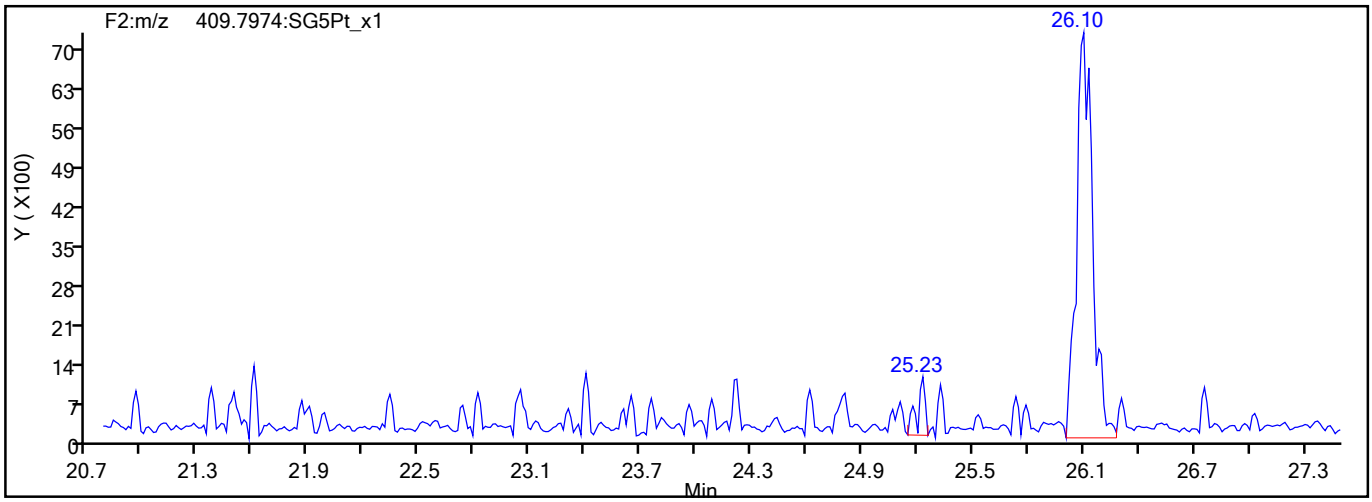

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Eurofins TestAmerica, Sacramento

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PeCDD

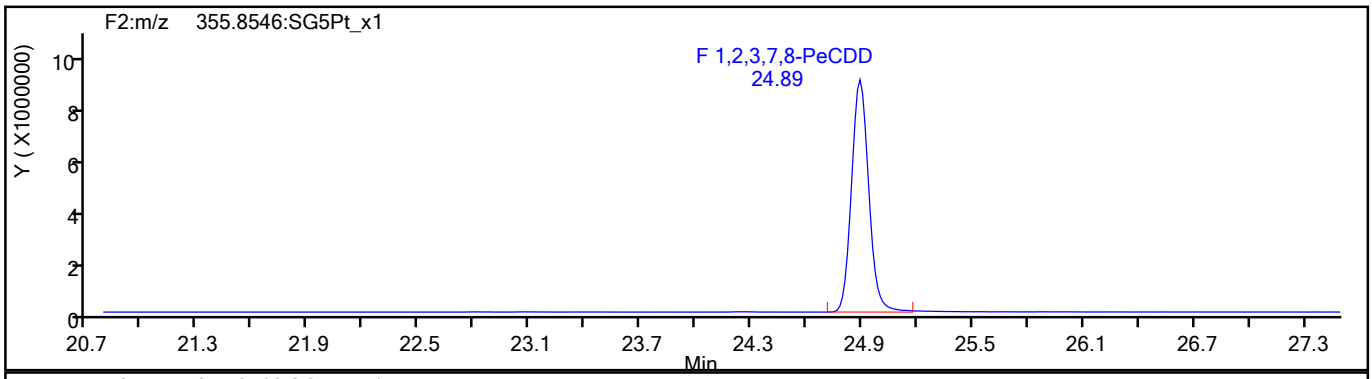

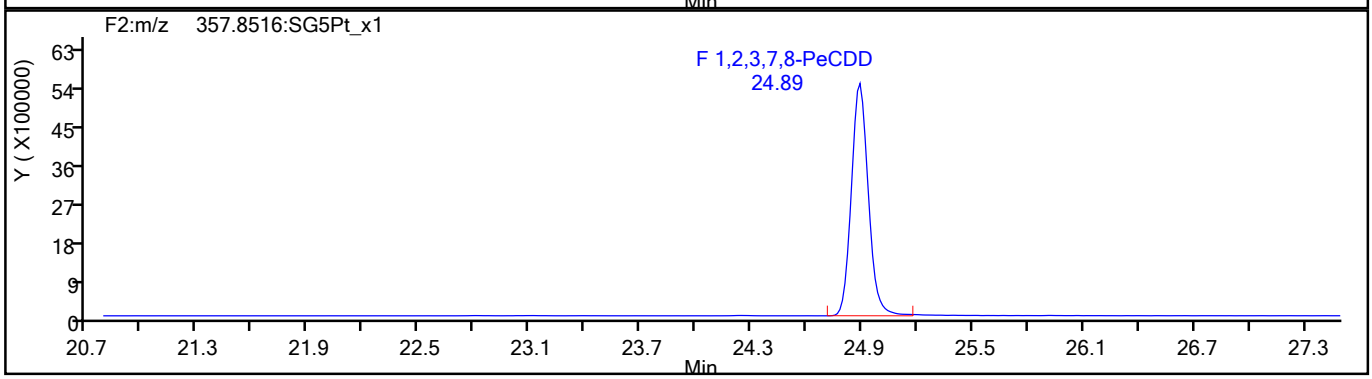

PeCDD Standards

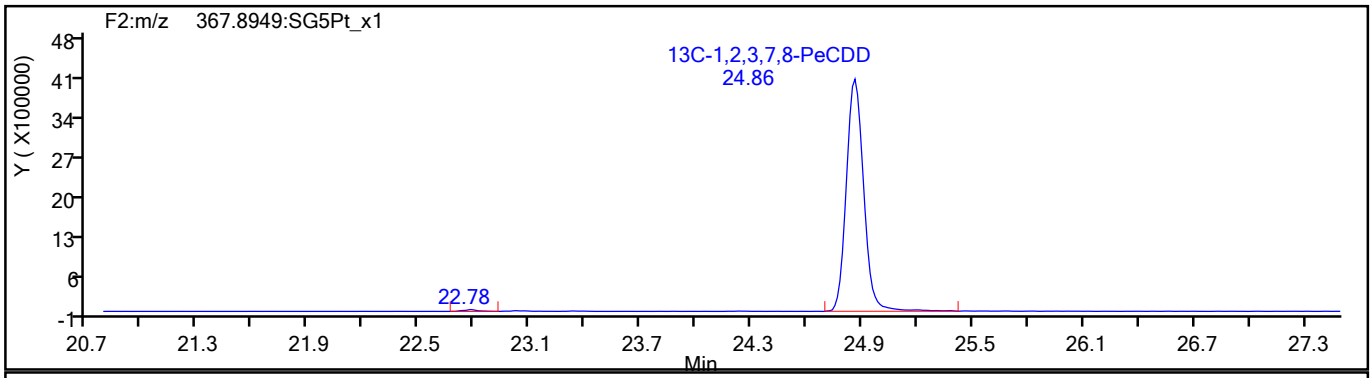

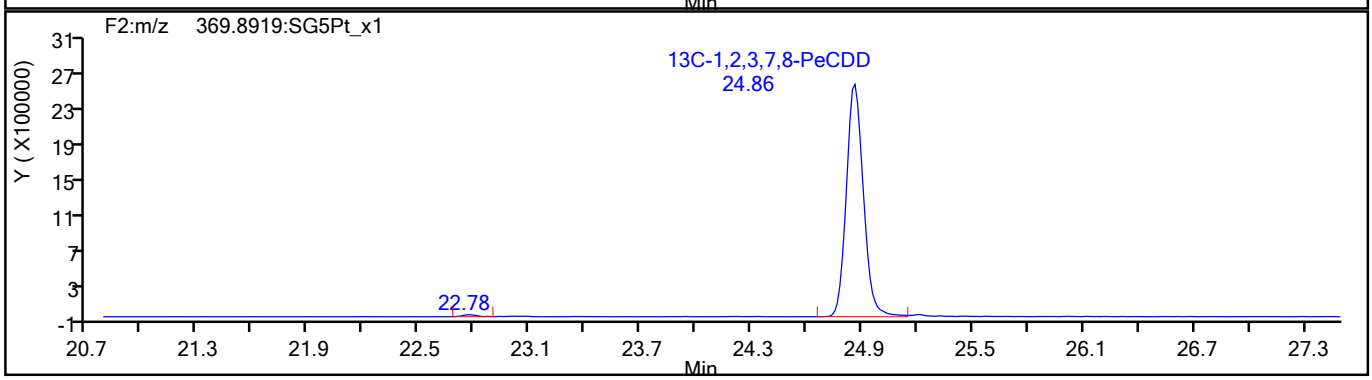

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Eurofins TestAmerica, Sacramento

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HxCDF

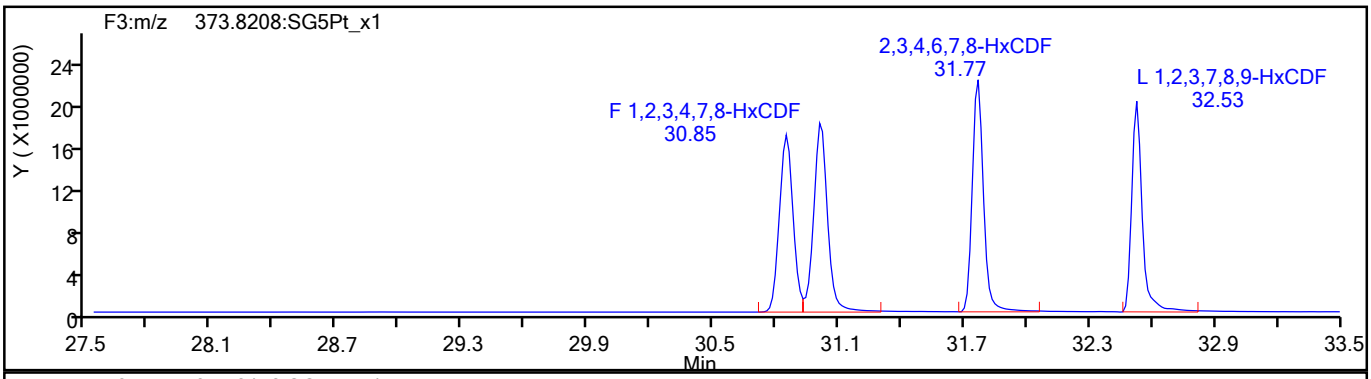

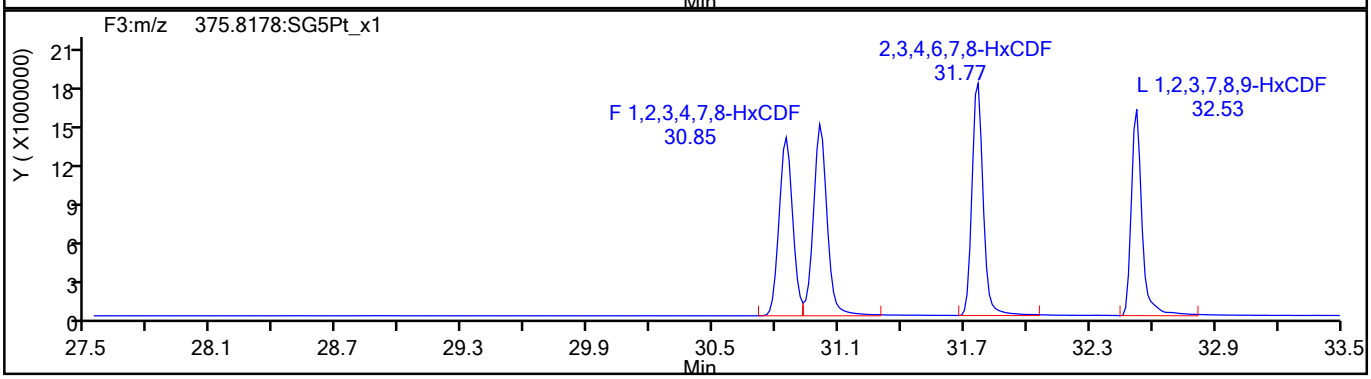

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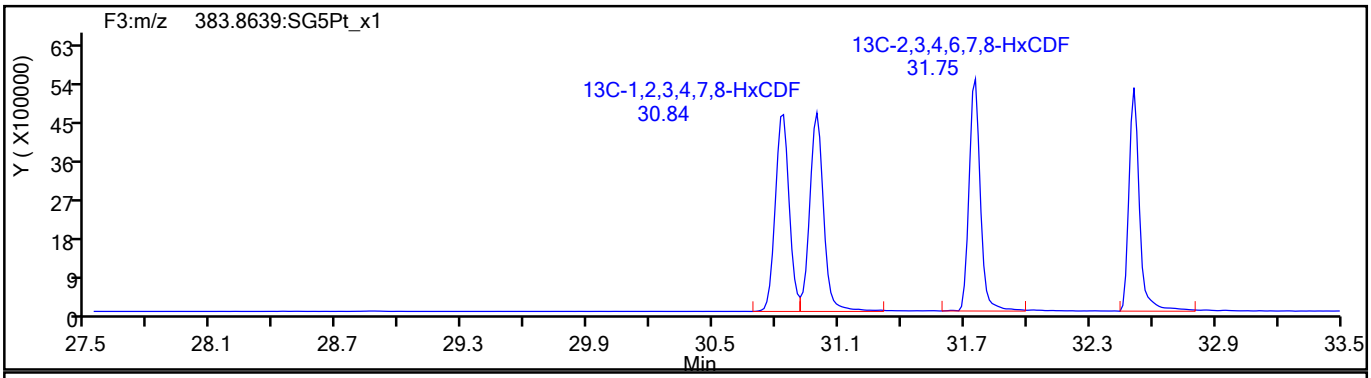

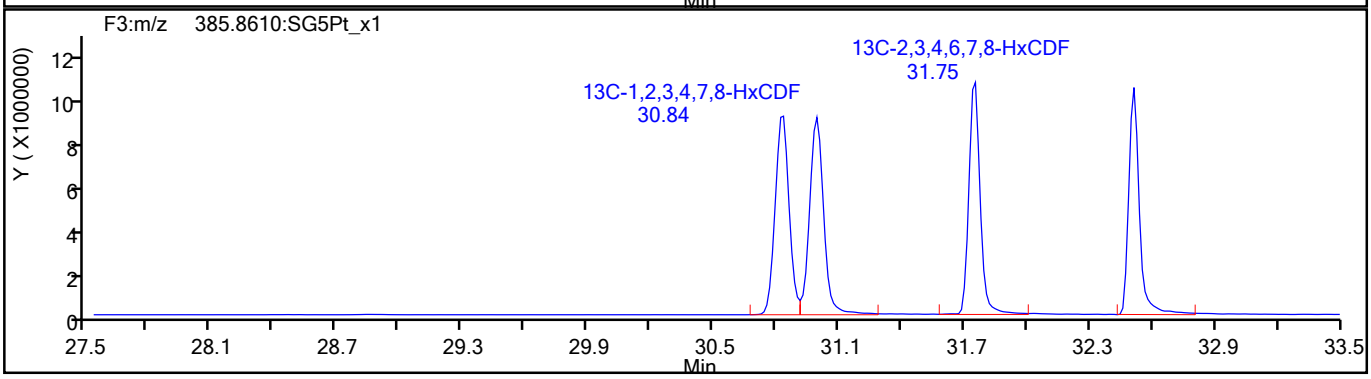

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Eurofins TestAmerica, Sacramento

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HxCDF

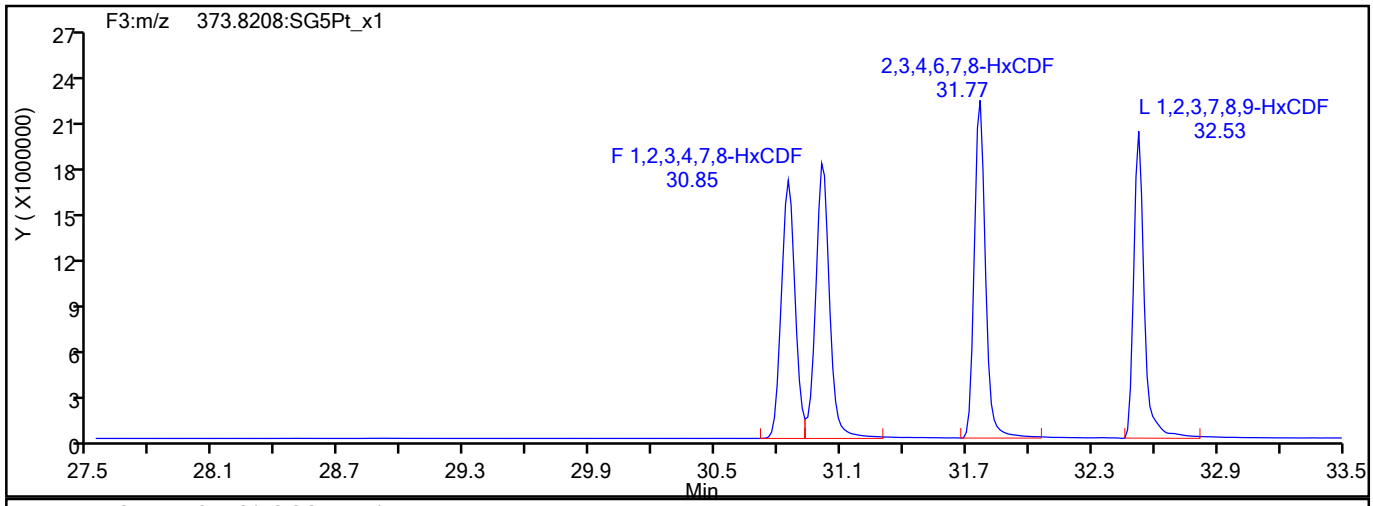

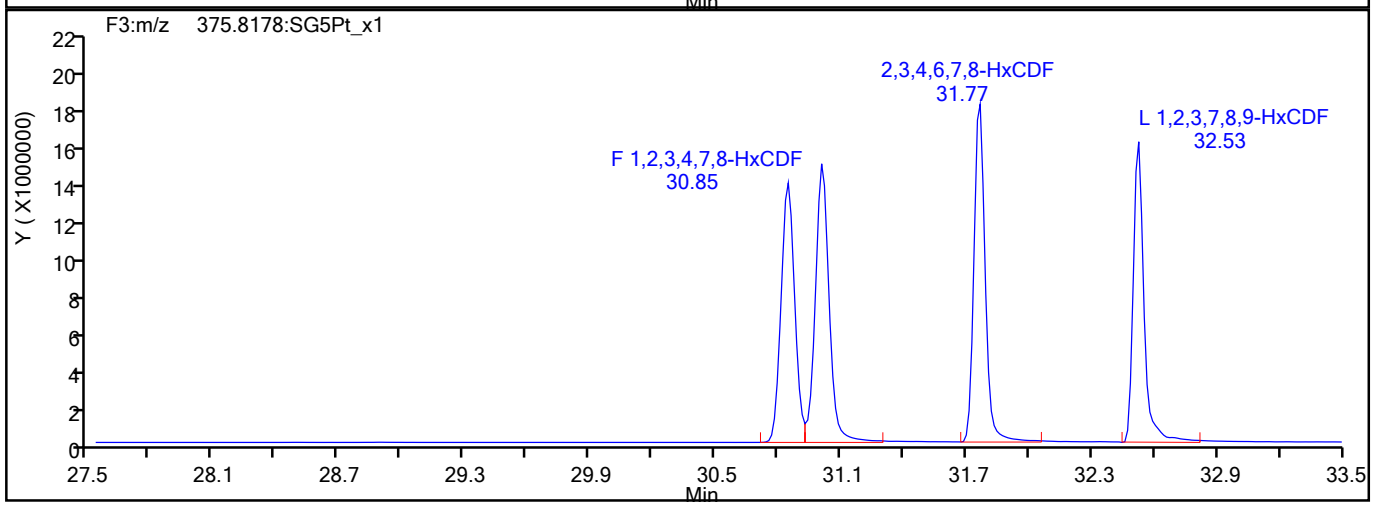

HxCDF Interference Mass

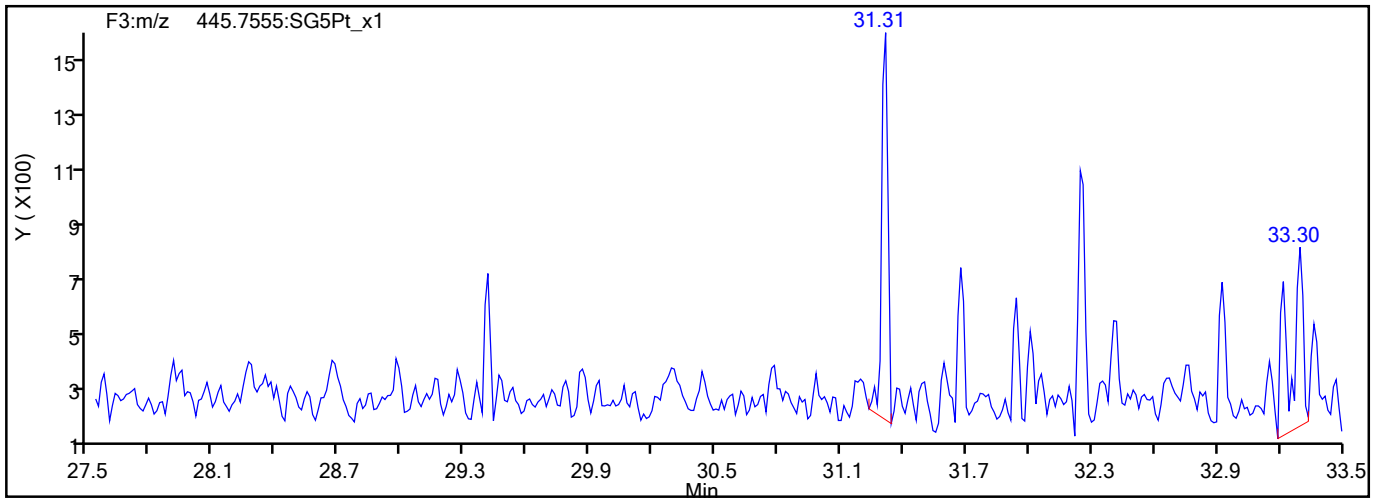

789099

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Eurofins TestAmerica, Sacramento

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HxCDD

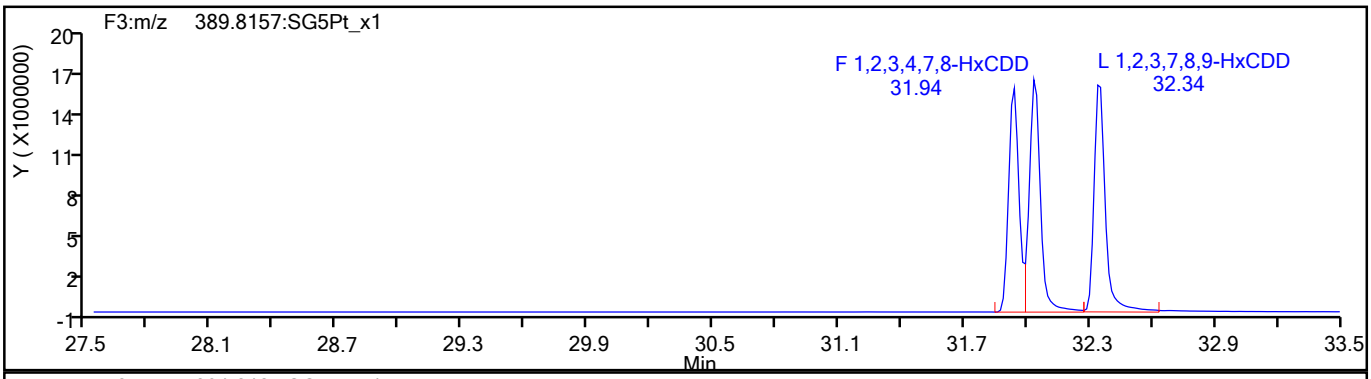

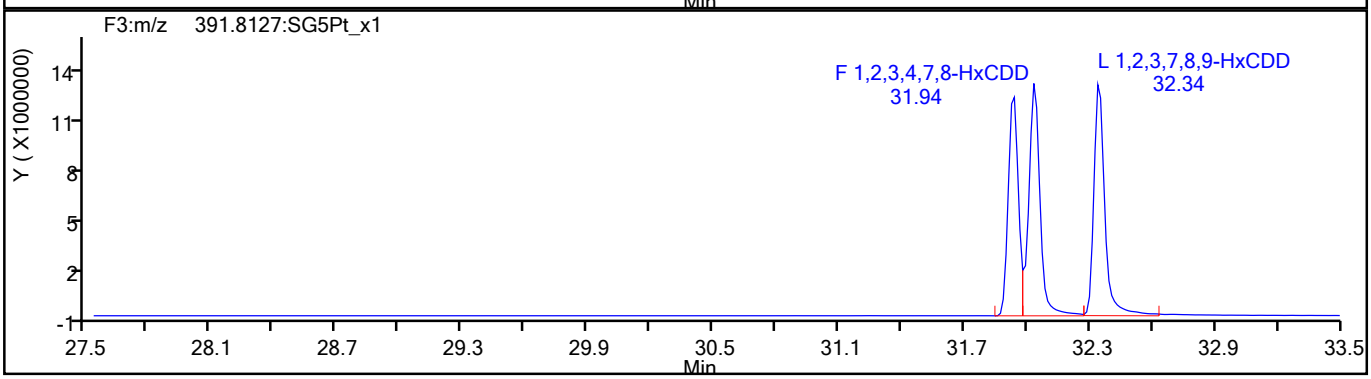

HxCDD Standards

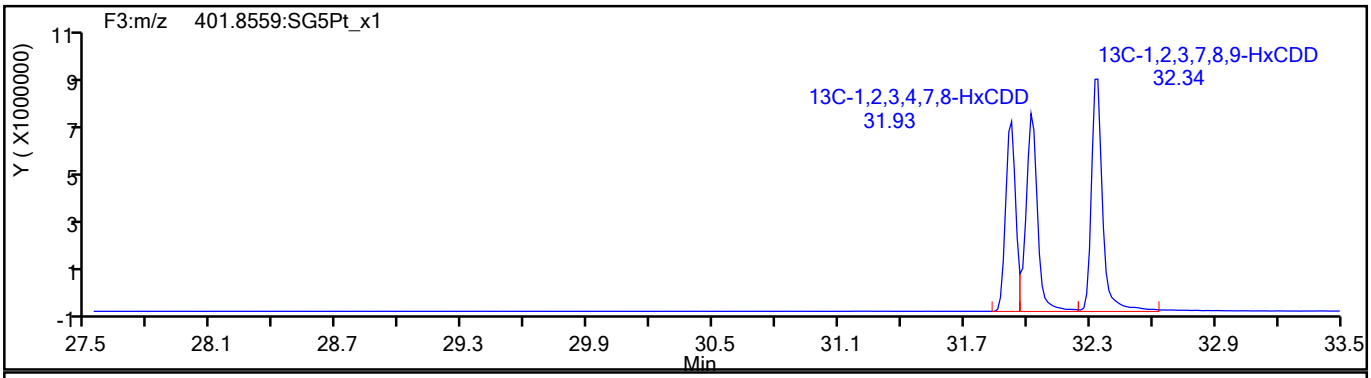

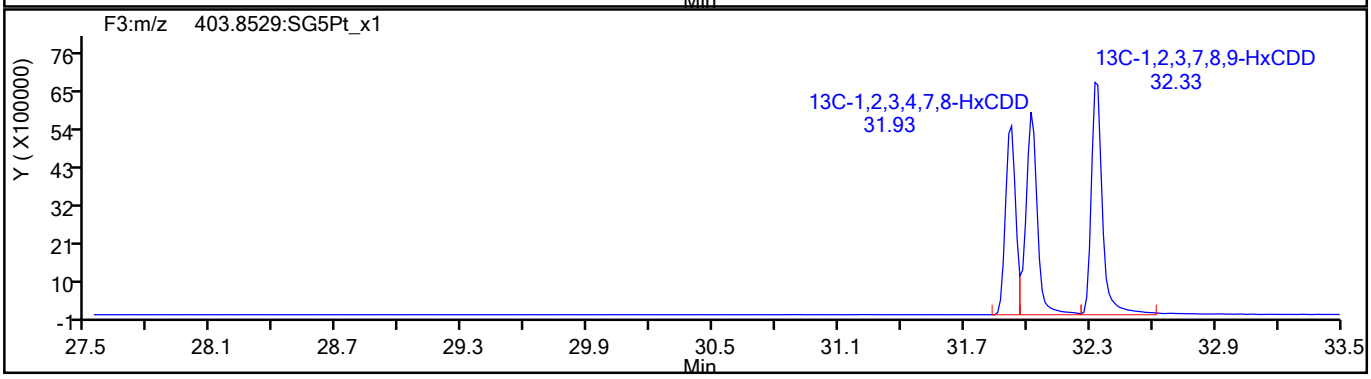

789100

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

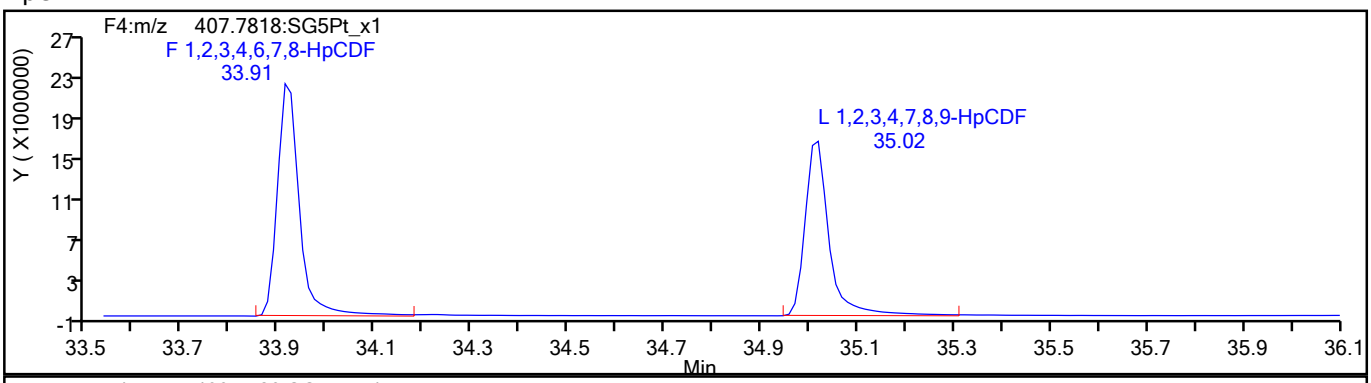

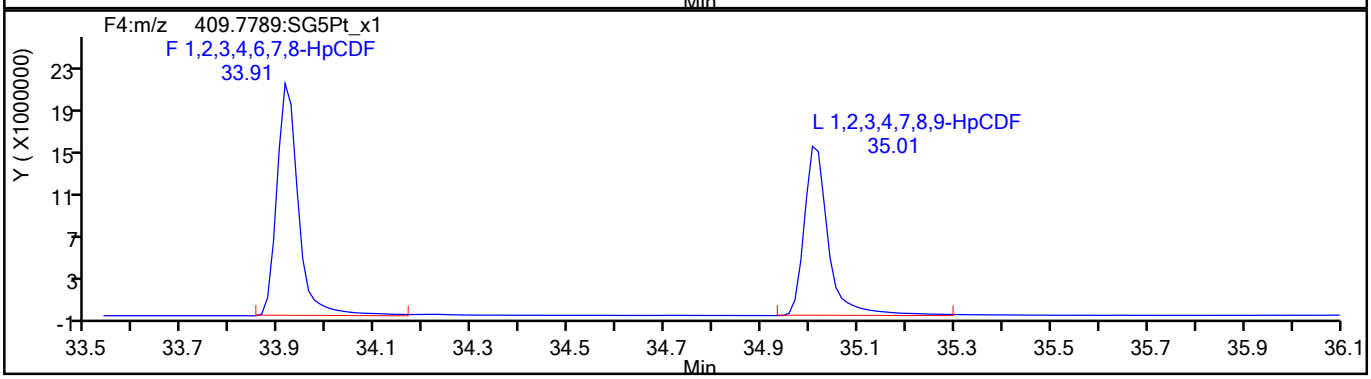

HpCDF Standards

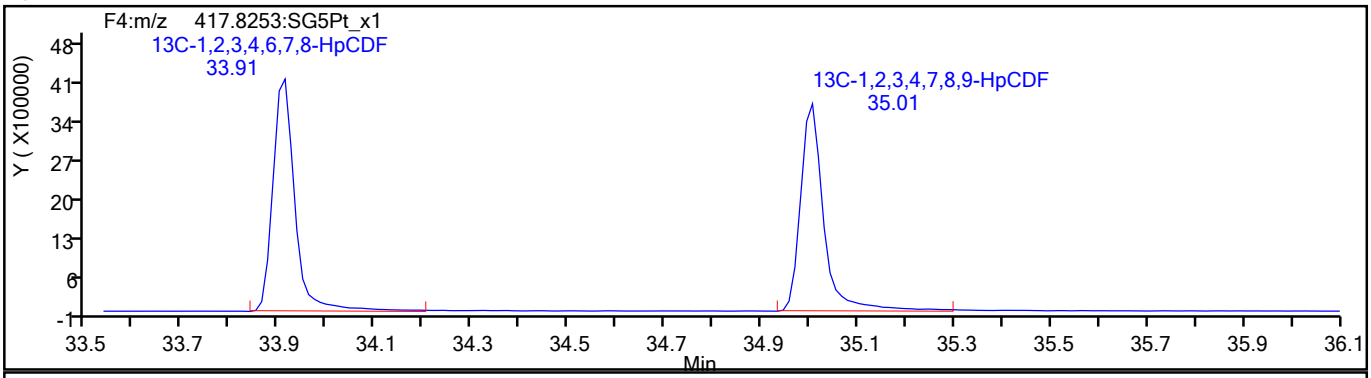

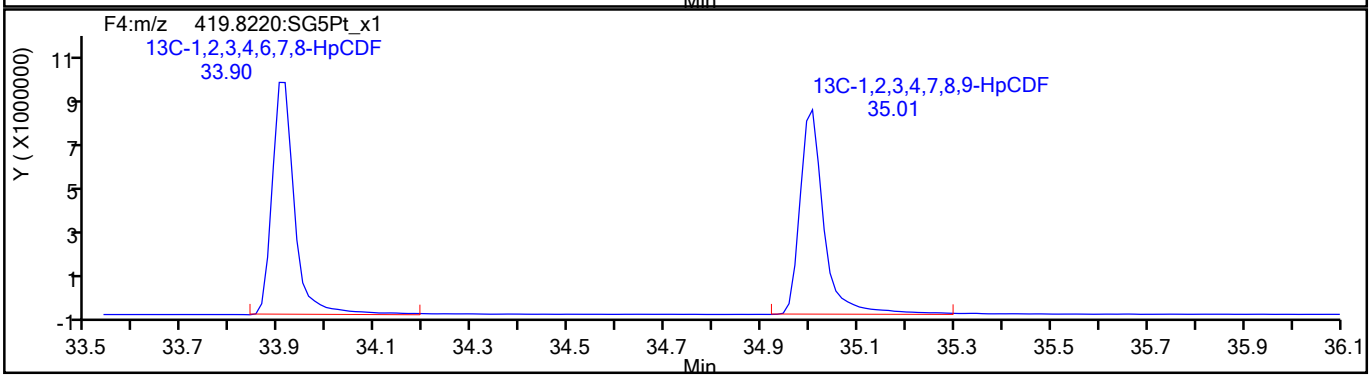

789101

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

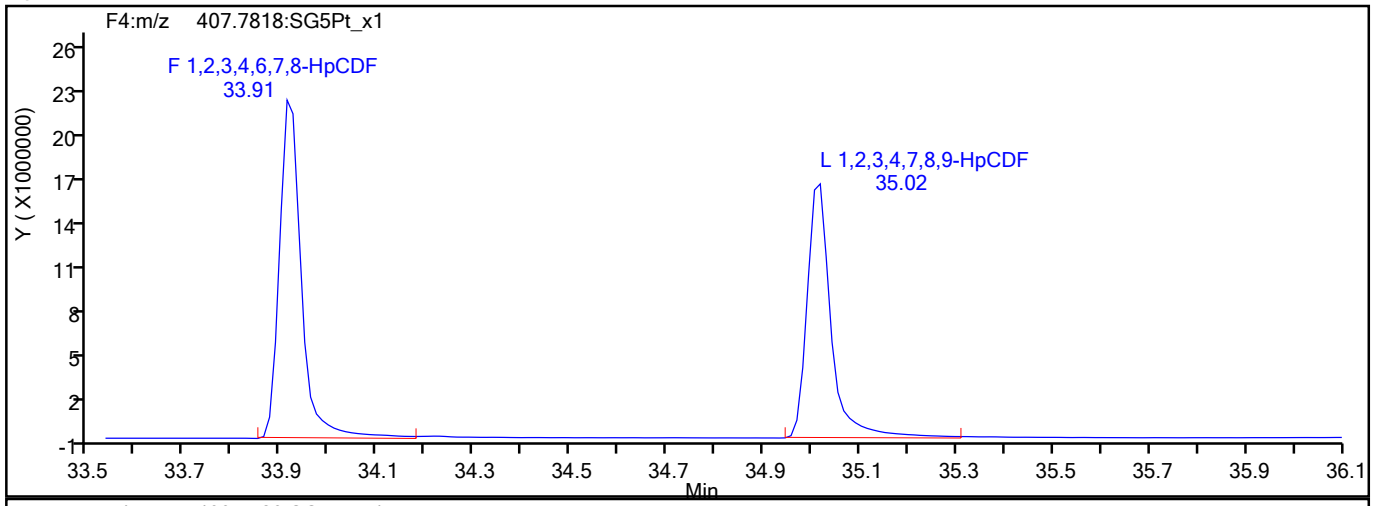

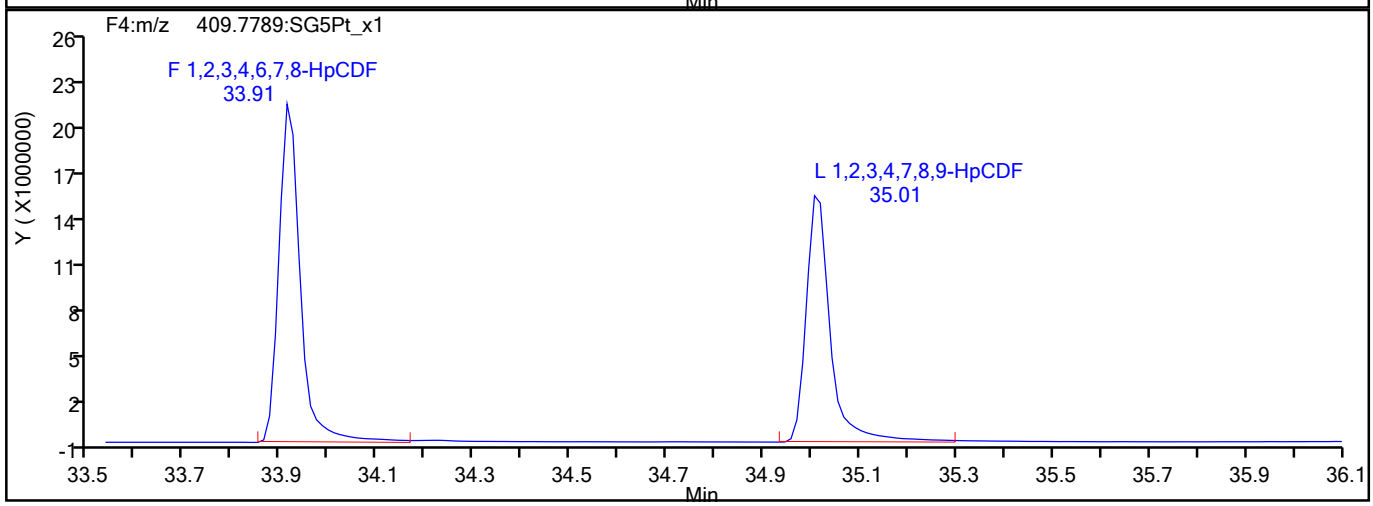

HpCDF Interference Mass

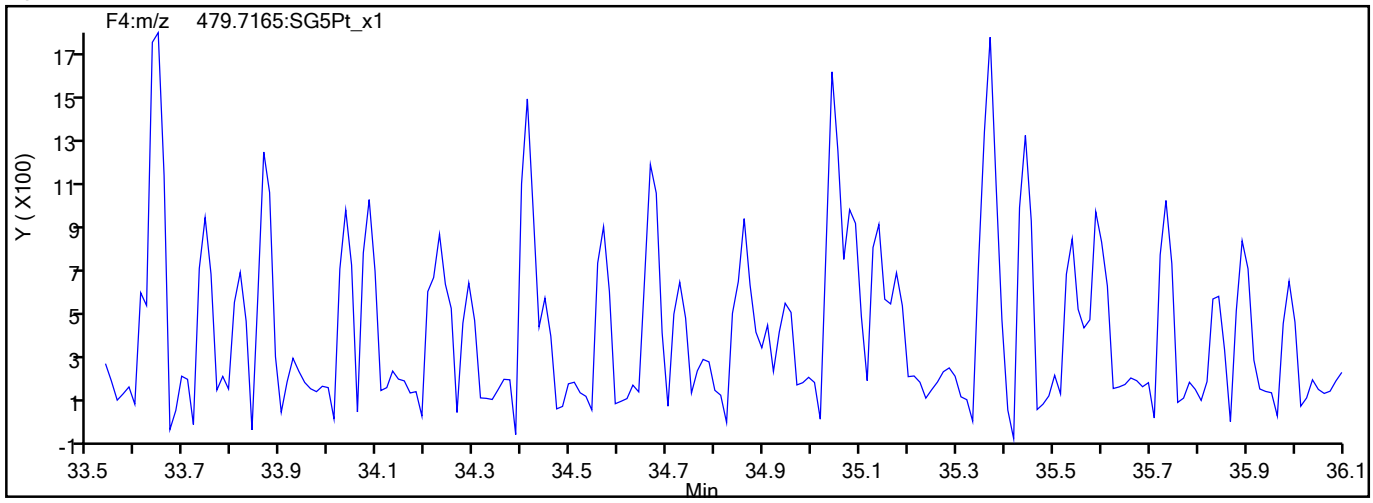

789102

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

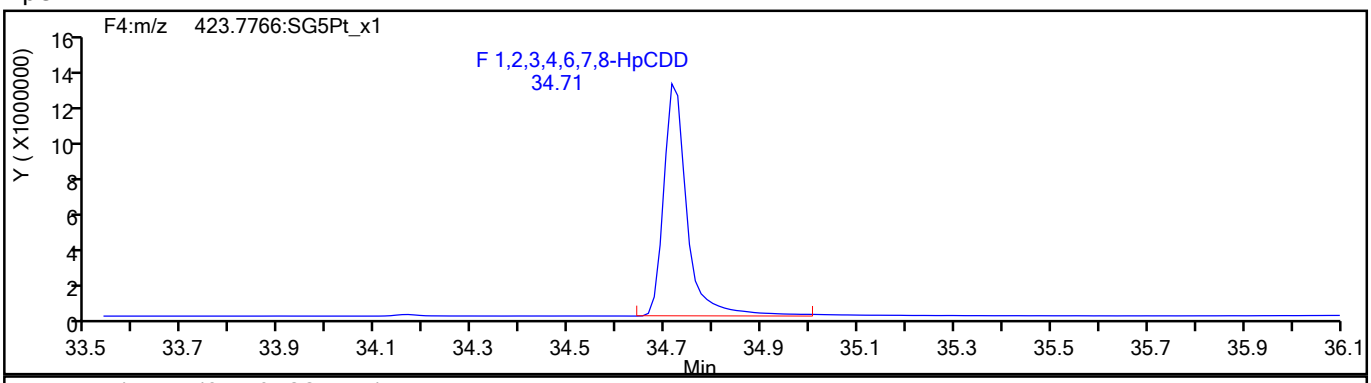

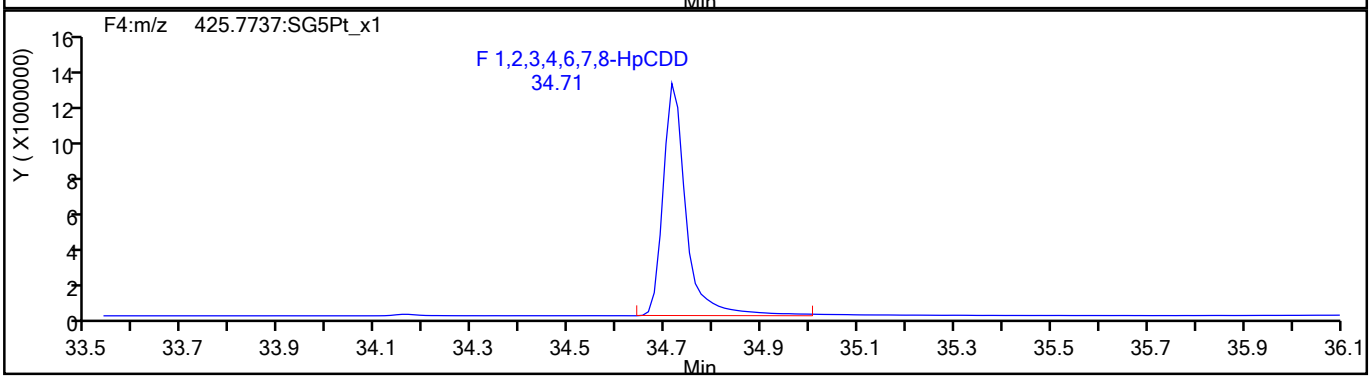

HpCDD Standards

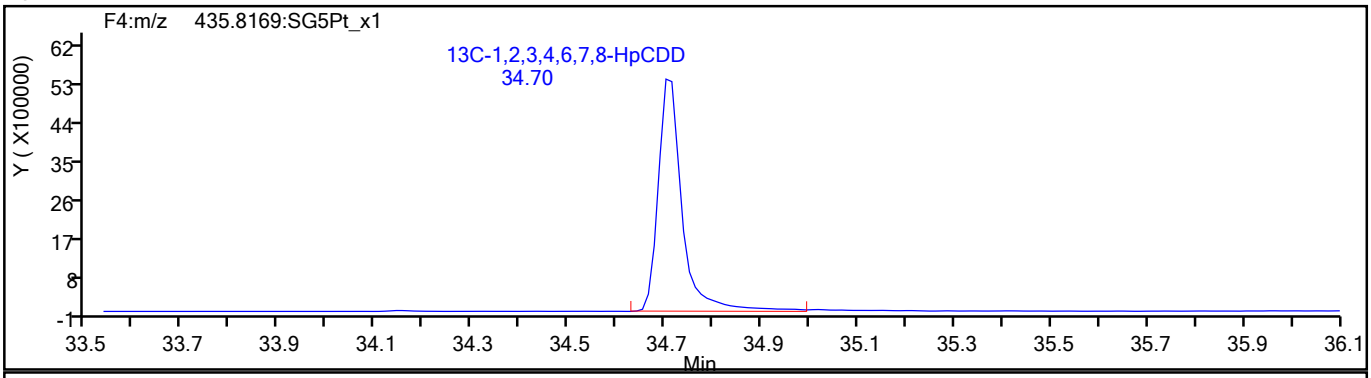

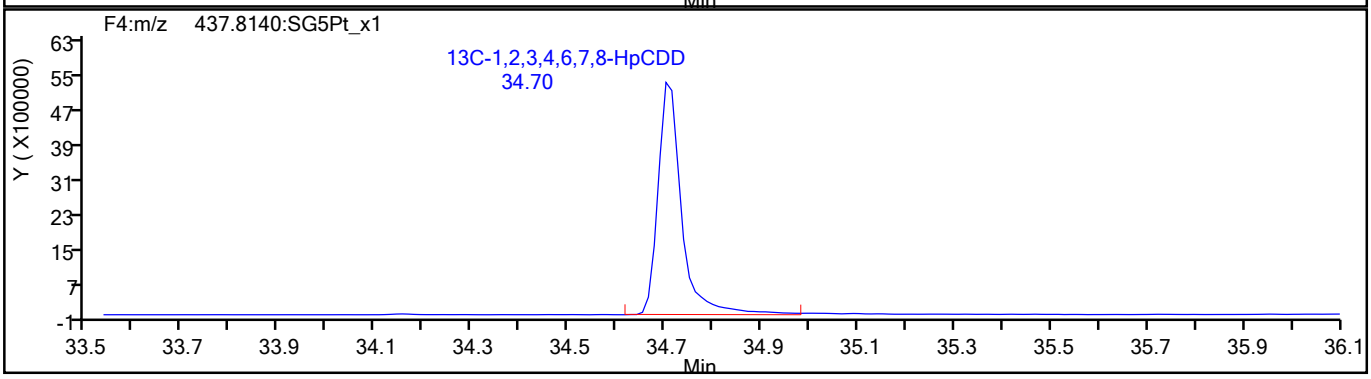

789103

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

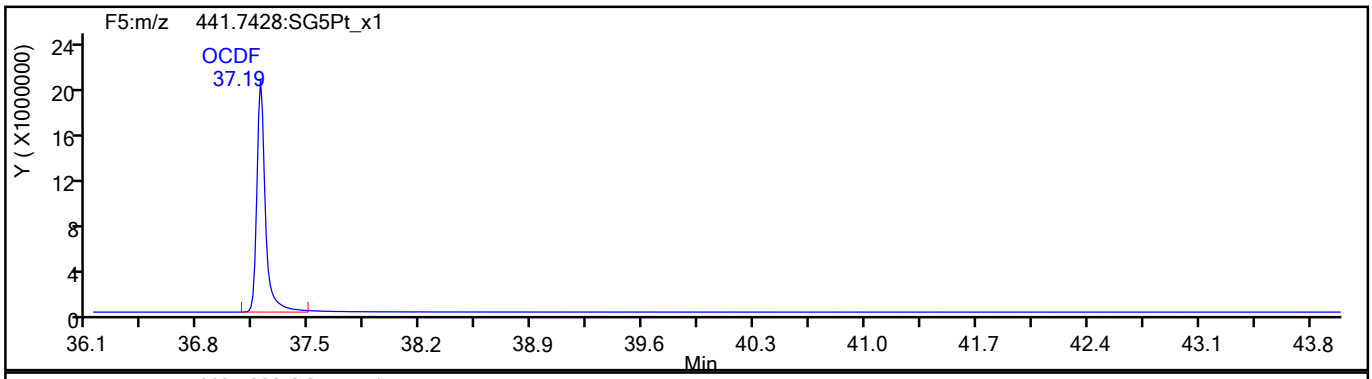

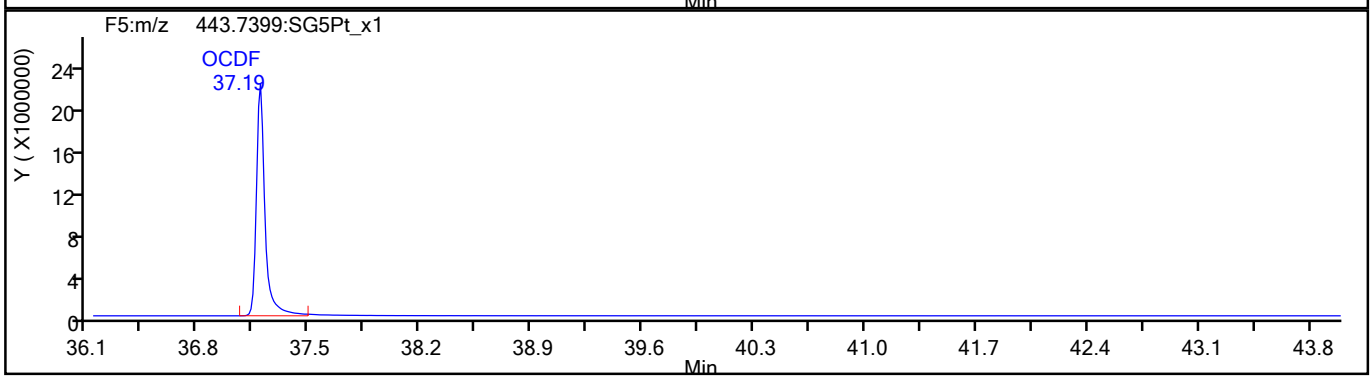

OCDF Standards

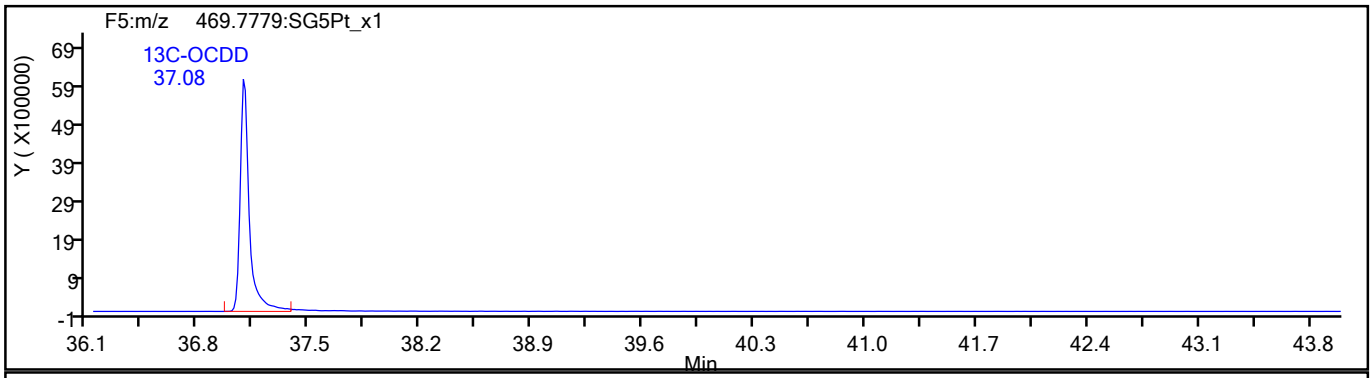

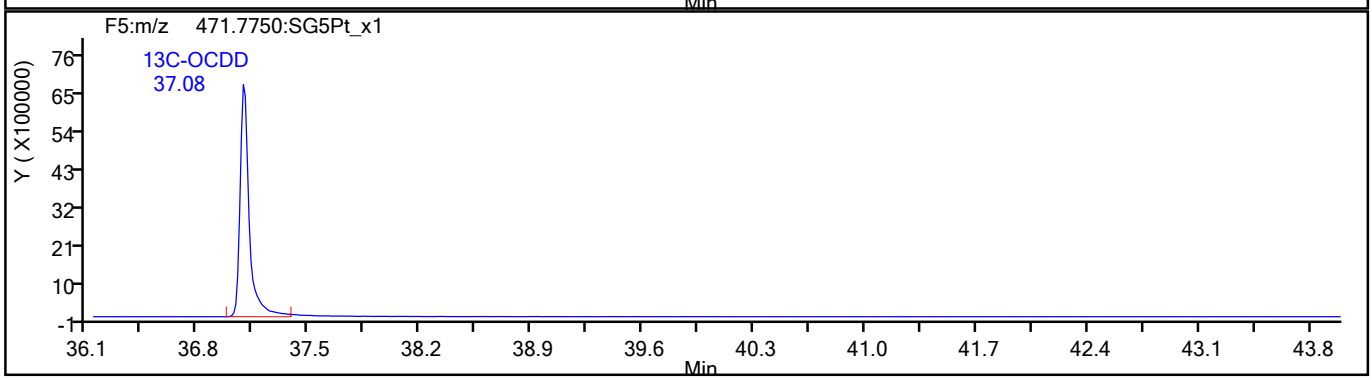

789104

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

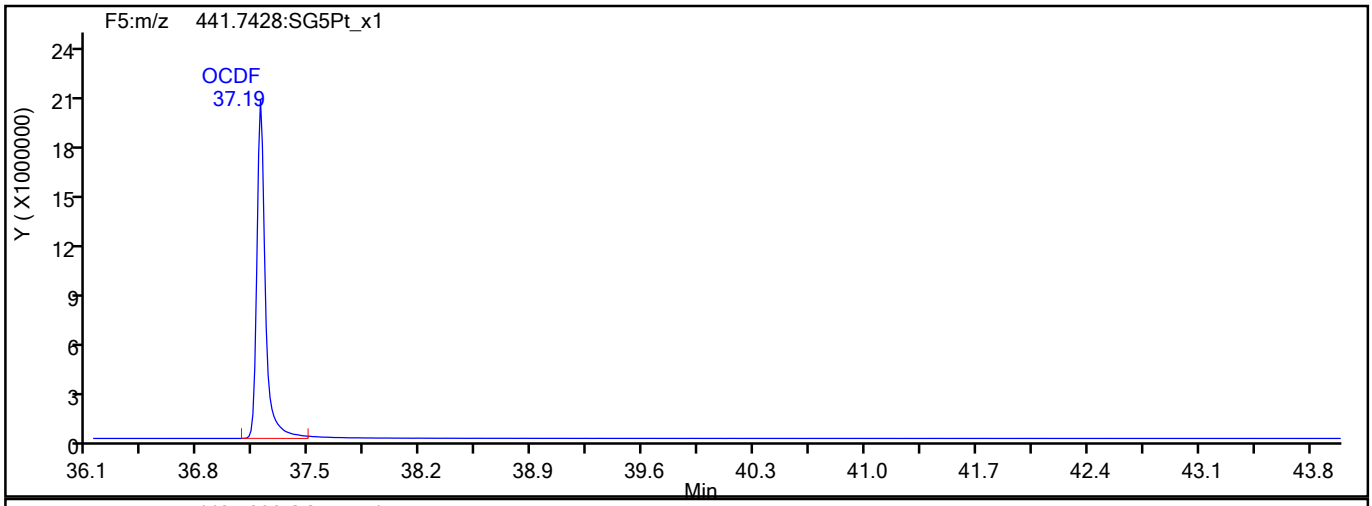

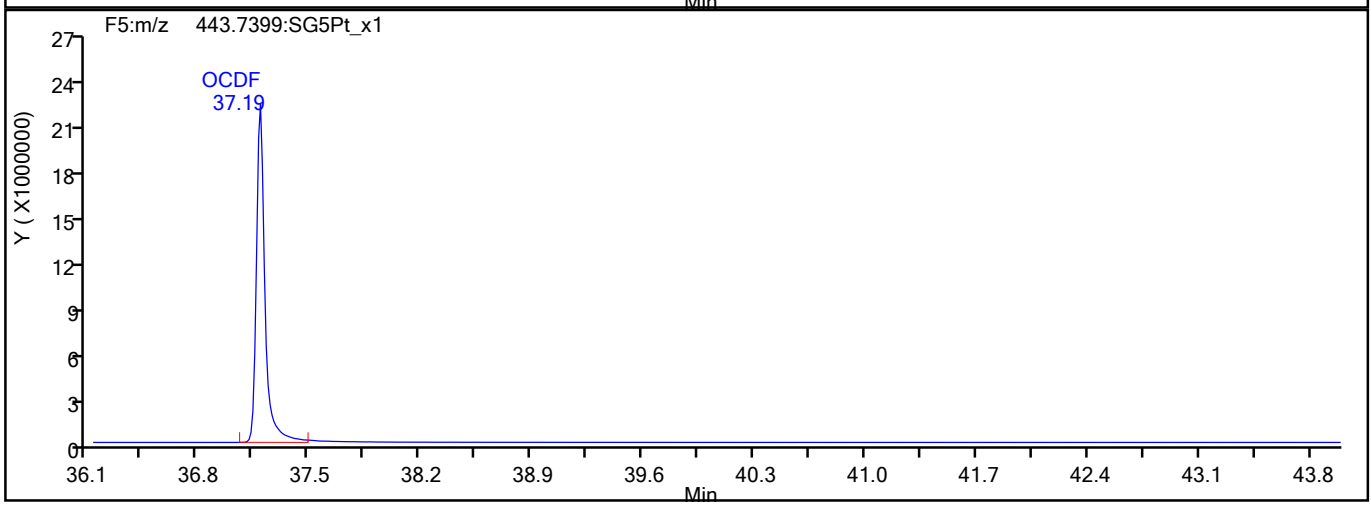

OCDF Interference Mass

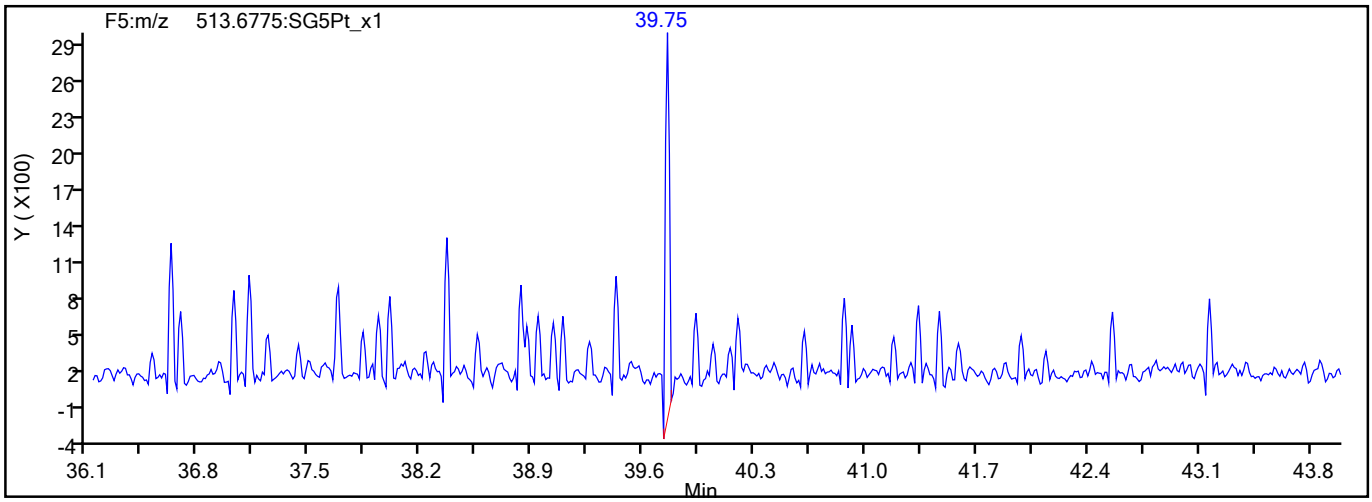

789105

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

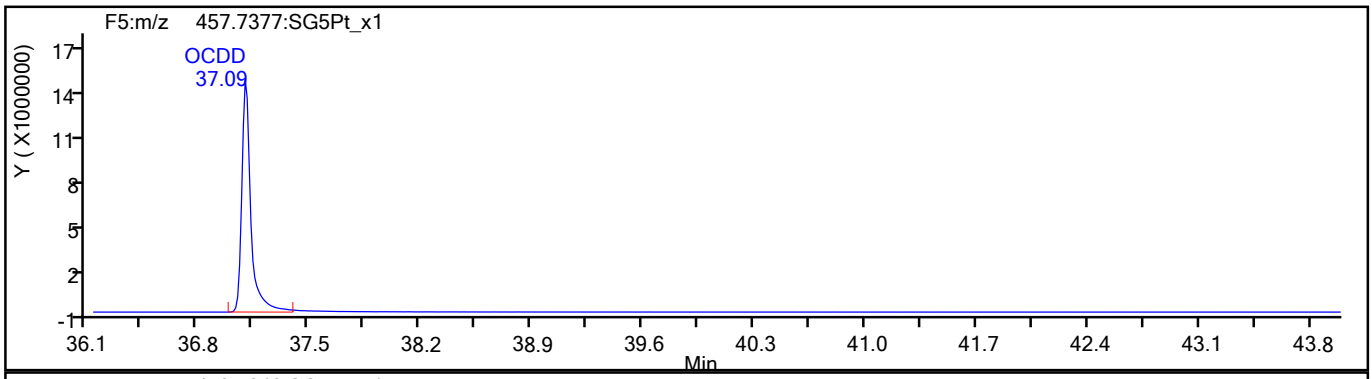

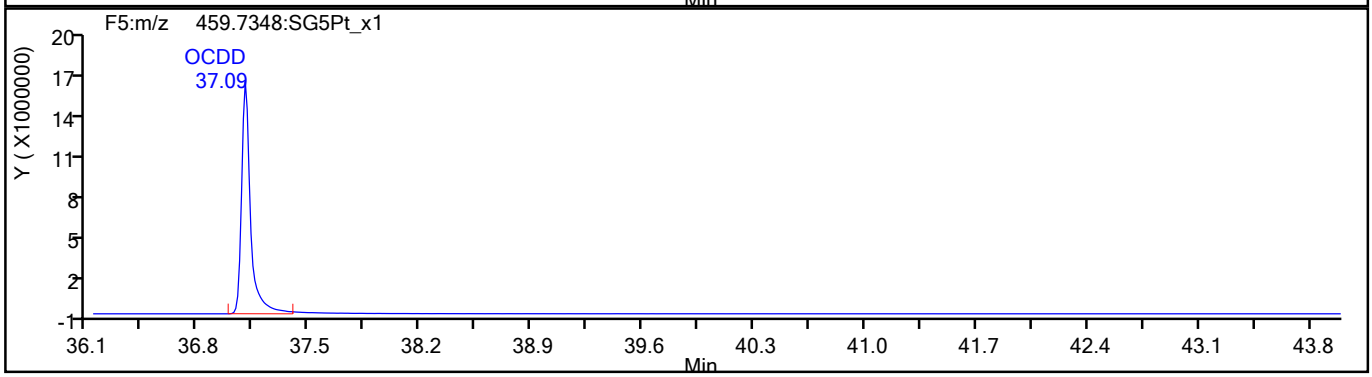

OCDD Standards

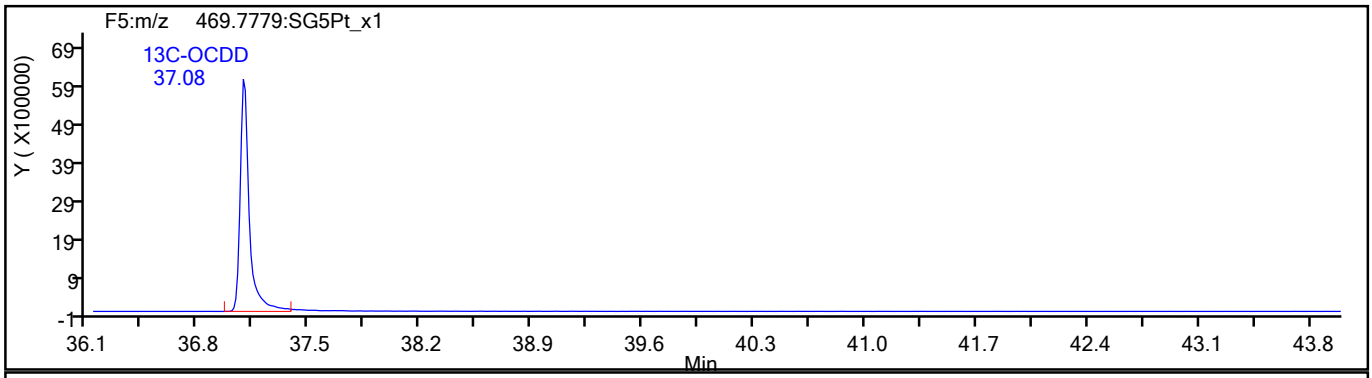

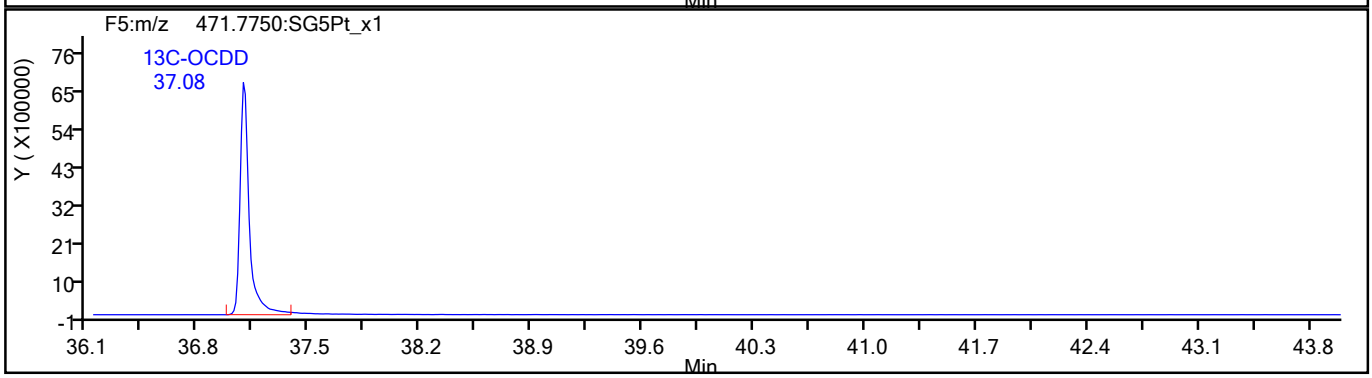

789106

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

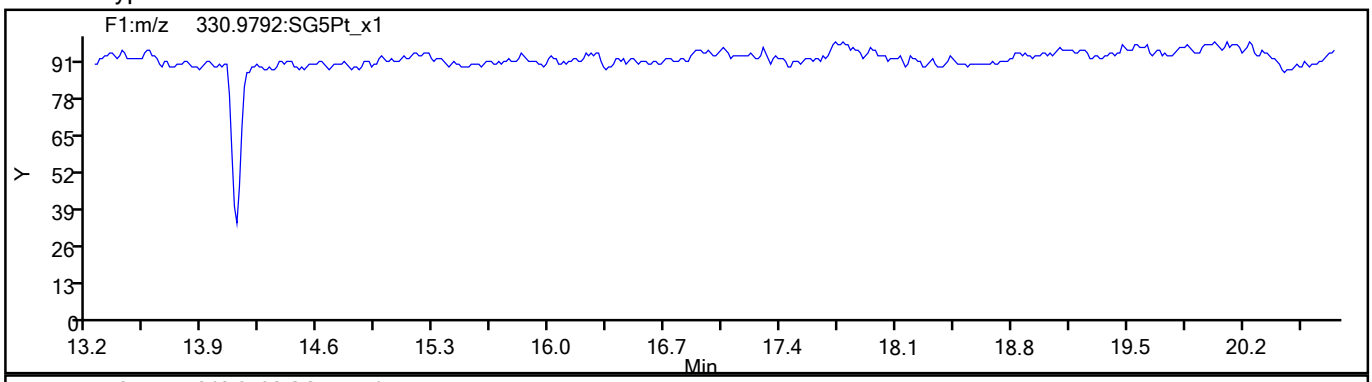

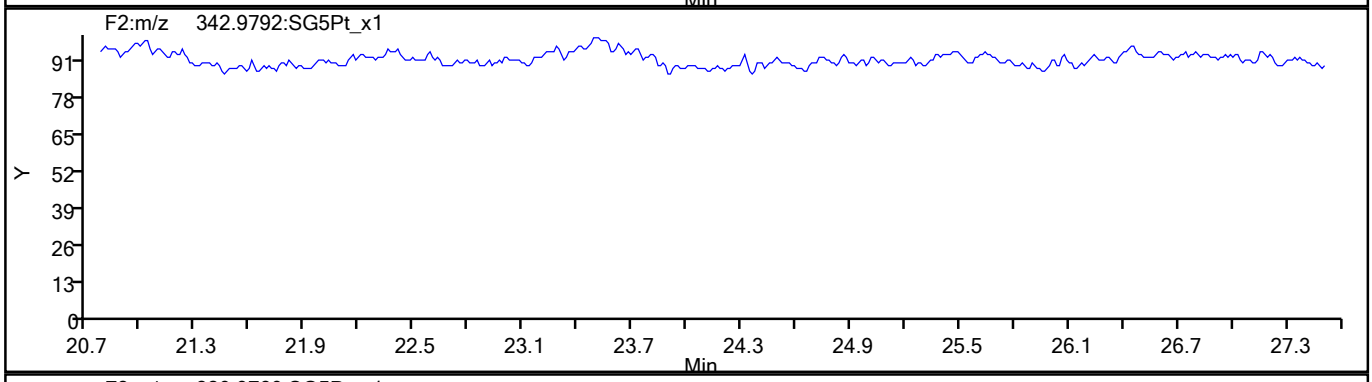

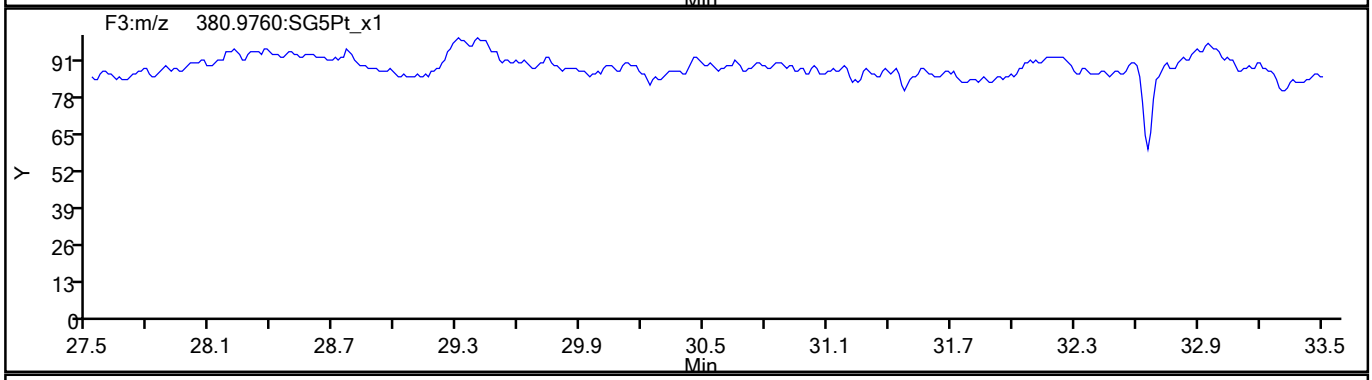

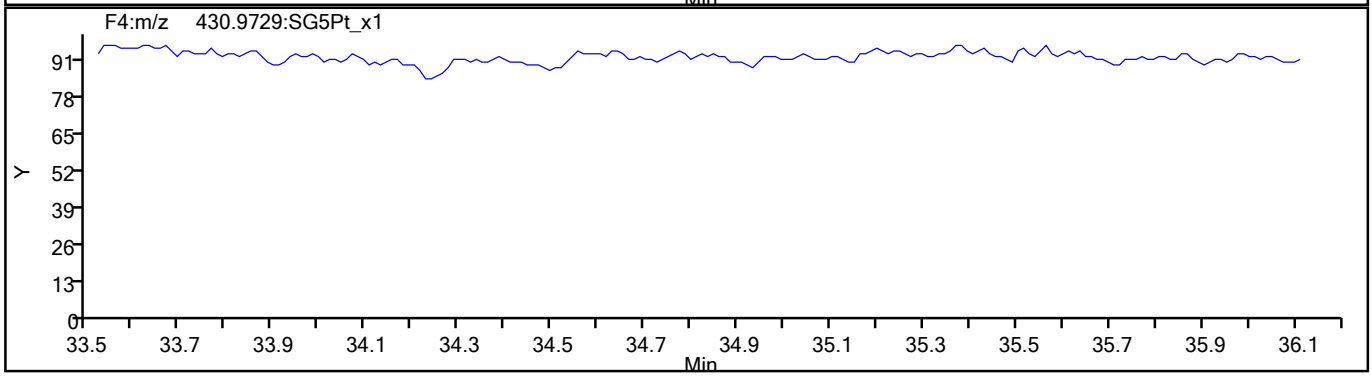

789107

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

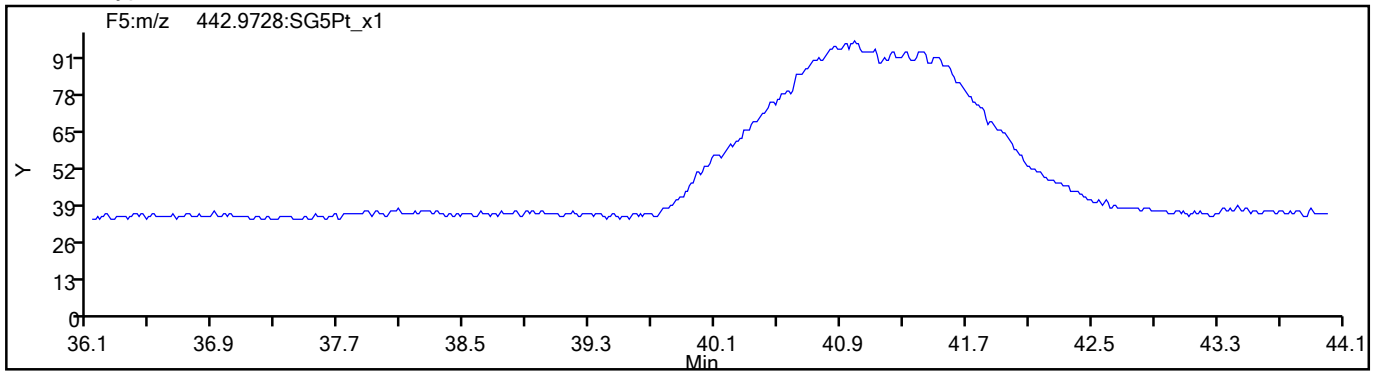

789108

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID: CCV 320-521465/2 Calibration Date: 08/30/2021 22:10

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 30AU2110D5_15.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.036		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.255		10.0	10.0	100	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.089		51.3	50.0	103	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.044		51.2	50.0	102	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.040		49.6	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.083		49.9	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.142		50.7	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.150		49.3	50.0	99	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.079		50.7	50.0	101	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.054		52.7	50.0	105	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.195		52.8	50.0	106	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.168		50.1	50.0	100	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.531		53.1	50.0	106	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.110		50.7	50.0	101	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.357		51.5	50.0	103	86-116
OCDD	AveID	1.107	1.127		102	100	102	79-126
OCDF	AveID	1.438	1.418		98.6	100	99	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.570		96.6	100	97	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9136		102	100	102	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.243		103	100	103	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.283		104	100	104	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8433		111	100	111	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.078		99.5	100	99	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.060		94.0	100	94	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.035		97.3	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7583		103	100	103	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8424		95.7	100	96	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9767		101	100	101	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7770		101	100	101	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6948		107	100	107	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7153		102	100	102	77-129
13C-OCDD	Ave	0.4472	0.5159		231	200	115	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.182		10.7	10.0	107	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\30AU2110D5.SPL

Last Modified: Tuesday, August 31, 2021 15:05:24 Pacific Daylight Time

Printed: Tuesday, August 31, 2021 15:05:29 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #
1	30AU2110D5_1	CS-4 HRDXNL4_00100	CCV 083021	Tray01:1	Dioxin	
2	30AU2110D5_2	WDM HRDXNCP_00044	WDM 083021	Tray01:2	Dioxin	
3	30AU2110D5_3	MB 320-515851/1-A	MB 320-515492/1-A 1613 CCV out	Tray01:4	1613B/Solid	D271
4	30AU2110D5_4	LCS 320-515851/2-A	LCS 320-515851/2-A 1613 CCV out	Tray01:5	1613B/Solid	---
5	30AU2110D5_5	MB 320-515615/1-A	MB 320-515615/1-A	Tray01:6	8290/Water	106
6	30AU2110D5_6	LCS 320-515615/2-A	LCS 320-515615/2-A	Tray01:7	8290/Water	---
7	30AU2110D5_7	LCSD 320-515615/3-A	LCSD 320-515615/3-A	Tray01:8	8290/Water	---
8	30AU2110D5_8	320-77067-B-1-A	320-77067-B-1-A	Tray01:9	8290/Water	
9	30AU2110D5_9	320-77067-A-2-A	320-77067-A-2-A	Tray01:10	8290/Water	---
10	30AU2110D5_10	320-77067-A-3-A	320-77067-A-3-A	Tray01:11	8290/Water	---
11	30AU2110D5_11	320-77067-B-4-A	320-77067-B-4-A	Tray01:15	8290/Water	
12	30AU2110D5_12	320-77067-B-5-A	320-77067-B-5-A	Tray01:16	8290/Water	
13	30AU2110D5_13	SB Solvent Blank C-14	SB 083021	Tray01:3		
14	30AU2110D5_14	WDM HRDXNCP_00044	WDM 083021A	Tray01:1	Dioxin	
15	30AU2110D5_15	CS-4 HRDXNL4_00099	CCV 083021A	Tray01:2	Dioxin	---
16	30AU2110D5_16	MB 320-515851/1-A RI	MB 320-515851/1-A RI	Tray01:17	1613B/Solid	D271
17	30AU2110D5_17	LCS 320-515851/2-A RI	LCS 320-515851/2-A RI	Tray01:18	1613B/Solid	---
18	30AU2110D5_18	320-76901-A-8-A RI	320-76901-A-8-A RI	Tray01:19	1613B/Solid	D267
19	30AU2110D5_19	320-77315-A-1-A	320-77315-A-1-A	Tray01:20	1613B/Solid	D271
20	30AU2110D5_20	320-77315-A-2-A	320-77315-A-2-A	Tray01:21	1613B/Solid	---
21	30AU2110D5_21	320-77315-A-2-B MS	320-77315-A-2-B MS	Tray01:22	1613B/Solid	---
22	30AU2110D5_22	320-77315-A-2-C MSD	320-77315-A-2-C MSD	Tray01:23	1613B/Solid	---
23	30AU2110D5_23	320-77315-A-3-A	320-77315-A-3-A	Tray01:24	1613B/Solid	---
24	30AU2110D5_24	320-77315-A-4-A	320-77315-A-4-A	Tray01:25	1613B/Solid	---
25	30AU2110D5_25	320-77315-A-5-A	320-77315-A-5-A	Tray01:26	1613B/Solid	---
26	30AU2110D5_26	SB Solvent Blank C-14	SB 083021B	Tray01:3		
27	30AU2110D5_27	WDM HRDXNCP_00044	WDM 083021B	Tray01:1	Dioxin	
28	30AU2110D5_28	CS-4 HRDXNL4_00099	CCV 083021B	Tray01:2	Dioxin	---
29	30AU2110D5_29	320-77315-A-5-A	320-77315-A-5-A	Tray01:26	1613B/Solid	D271
30	30AU2110D5_30	320-77315-A-6-A	320-77315-A-6-A	Tray01:29	1613B/Solid	---
31	30AU2110D5_31	320-77315-A-7-A	320-77315-A-7-A	Tray01:30	1613B/Solid	---
32	30AU2110D5_32	320-77315-A-8-A	320-77315-A-8-A	Tray01:31	1613B/Solid	---
33	30AU2110D5_33	320-77315-A-9-A	320-77315-A-9-A	Tray01:32	1613B/Solid	---
34	30AU2110D5_34	320-77315-A-13-A	320-77315-A-13-A	Tray01:33	1613B/Solid	---
35	30AU2110D5_35	320-77421-A-7-A	320-77421-A-7-A	Tray01:34	1613B/Solid	---
36	30AU2110D5_36	320-77421-A-8-A	320-77421-A-8-A	Tray01:35	1613B/Solid	---
37	30AU2110D5_37	320-77421-A-9-A	320-77421-A-9-A	Tray01:36	1613B/Solid	---
38	30AU2110D5_38	SB Solvent Blank C-14	SB 083021C	Tray01:3		
39	30AU2110D5_39	CS-4 HRDXNL4_00099	CCV 083021C	Tray01:2	Dioxin	
40	30AU2110D5_40	WDM HRDXNCP_00044	WDM 083021C	Tray01:1	Dioxin	---

LOGFILE CHECKED
DB 8/31/21

789110

User	Sample Size	Units	MS File	Inlet File	Inject Volume	Process
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SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	1.000000	L	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover

Process Options	Action On Error	s5
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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Printed: Monday, August 30, 2021 21:15:30 Pacific Daylight Time

M 292.9824_R 11711

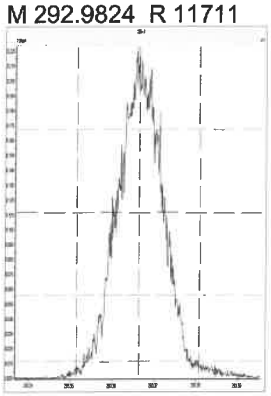

M 304.9824_R 12412

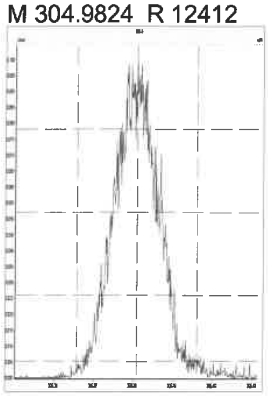

M 318.9792_R 12594

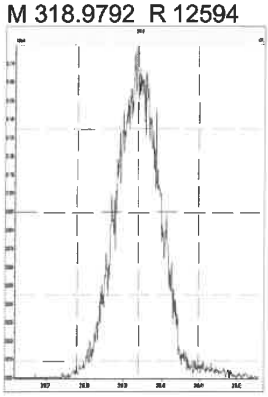

M 330.9792_R 11576

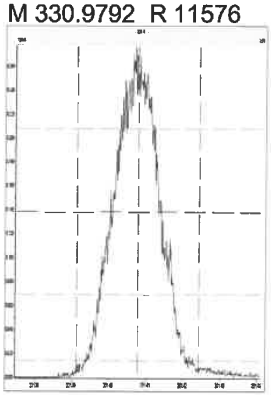

M 342.9792_R 12345

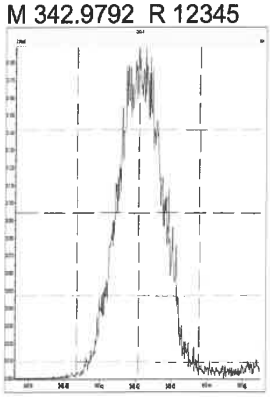

M 354.9792_R 12358

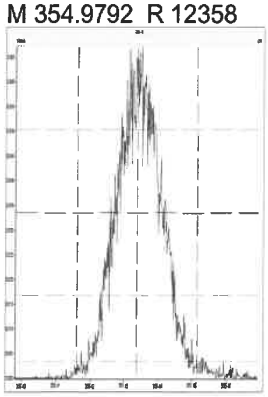

M 366.9792_R 13227

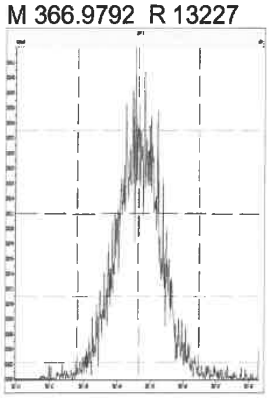

M 380.9760_R 12049

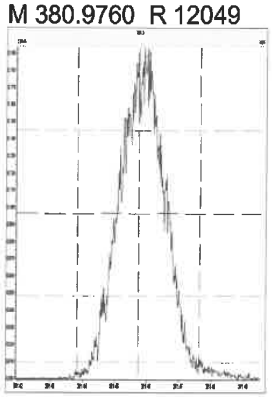

M 392.9760_R 11932

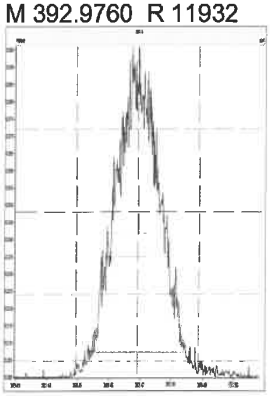

M 404.9760_R 13812

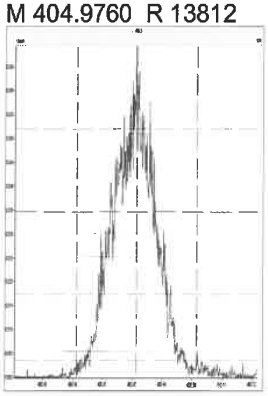

M 416.9760_R 13273

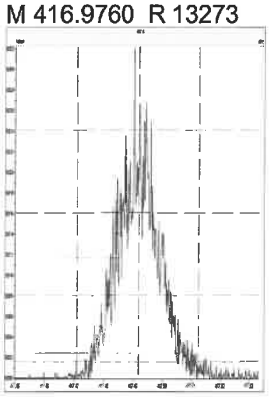

M 318.9792_R 12301

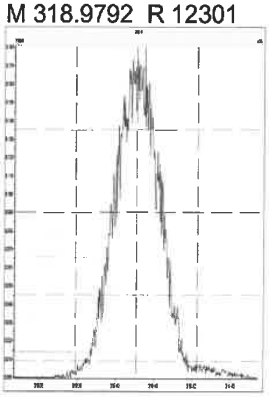

M 330.9792_R 12325

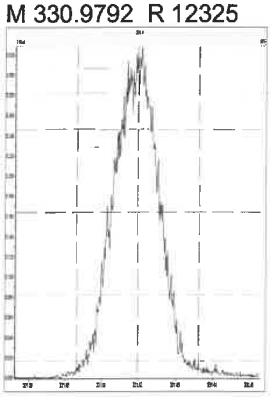

M 342.9792_R 12631

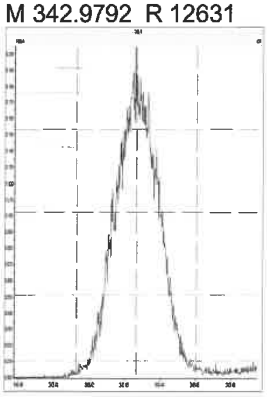

M 354.9792_R 12596

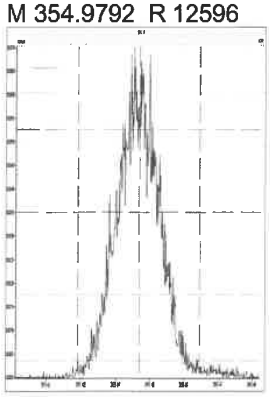

M 366.9792_R 13596

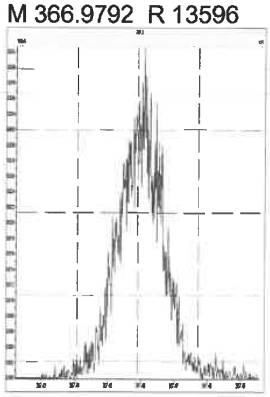

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M 380.9760 R 12197

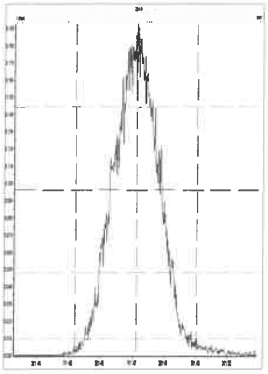

M 392.9760 R 12695

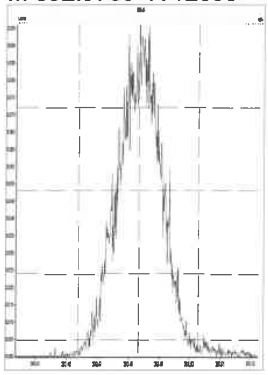

M 404.9760 R 12993

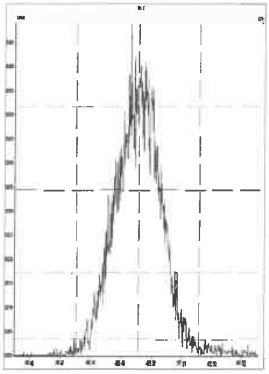

M 416.9760 R 13710

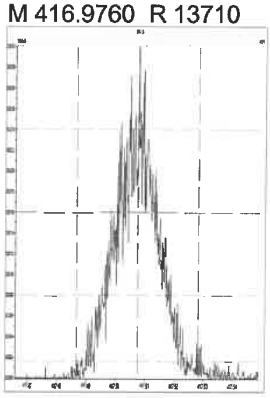

M 366.9792 R 13192

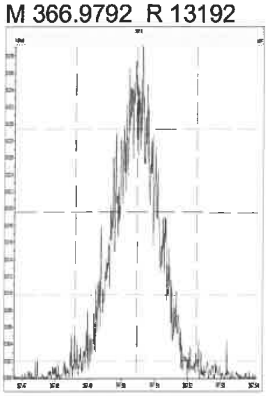

M 380.9760 R 12787

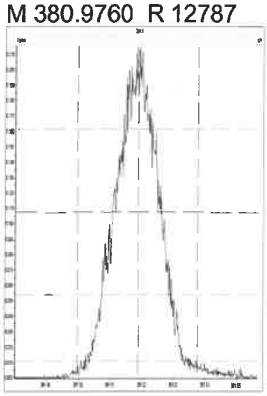

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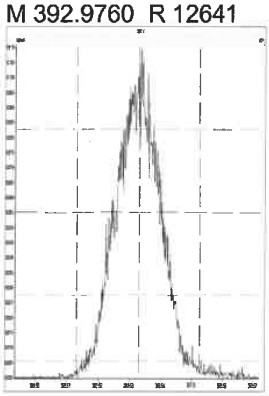

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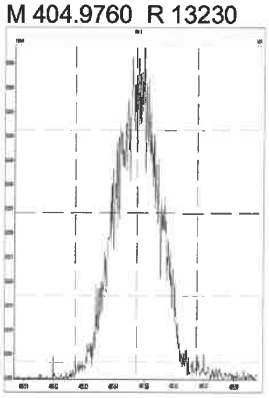

M 416.9760 R 14205

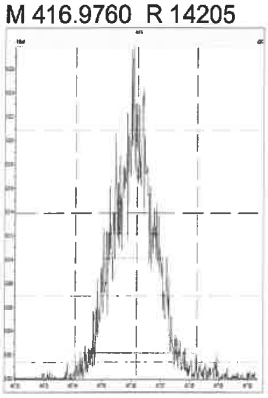

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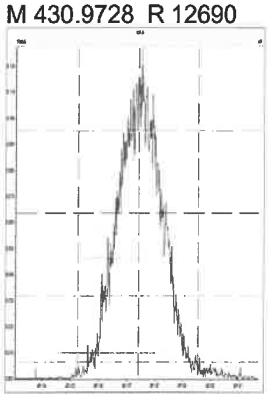

M 442.9728 R 13101

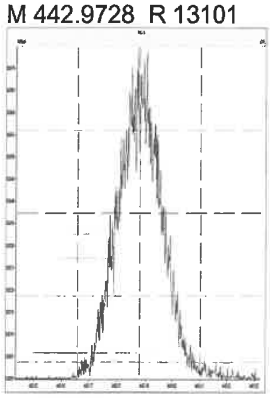

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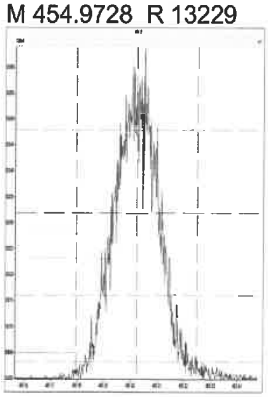

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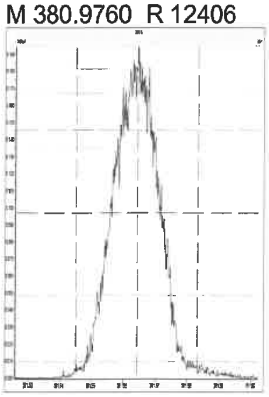

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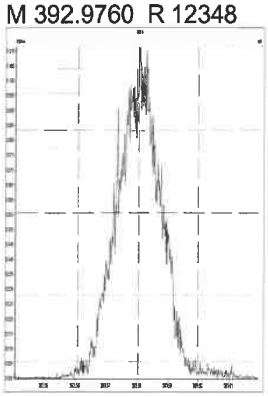

M 404.9760 R 12756

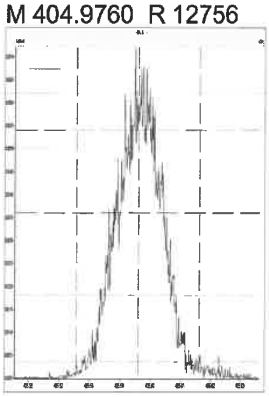

M 416.9760 R 13412

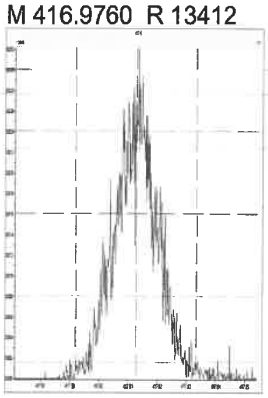

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M 430.9728 R 12828

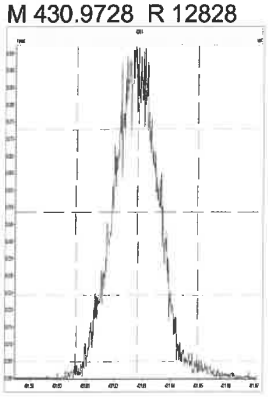

M 442.9728 R 13088

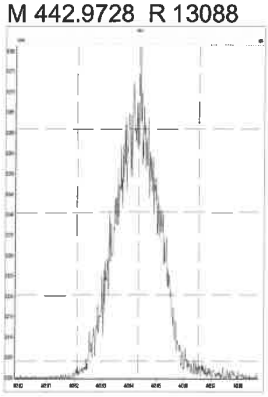

M 454.9728 R 12659

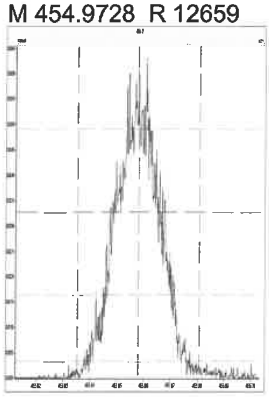

M 466.9728 R 13855

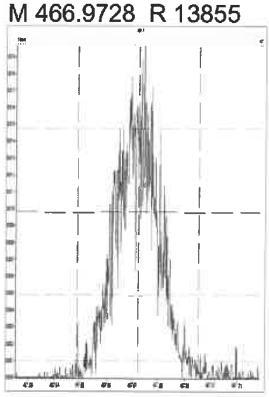

M 480.9696 R 12823

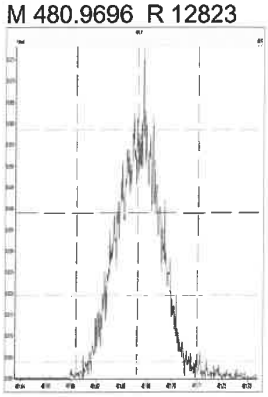

M 380.9760 R 12692

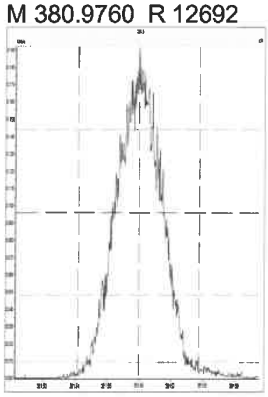

M 392.9760 R 12600

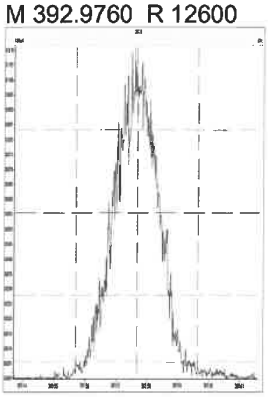

M 404.9760 R 12259

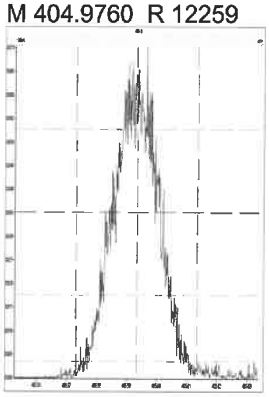

M 416.9760 R 13130

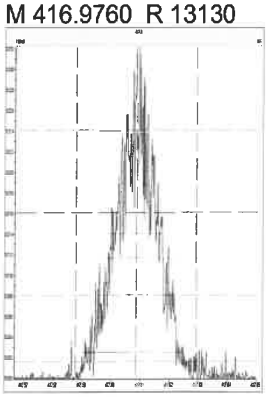

M 430.9728 R 12502

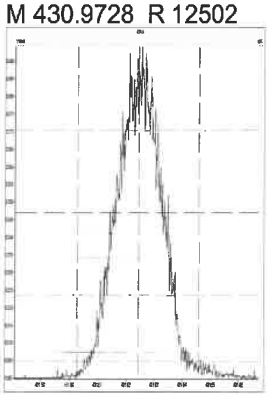

M 442.9728 R 13149

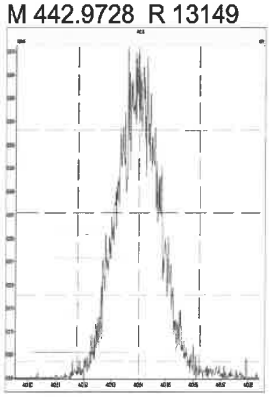

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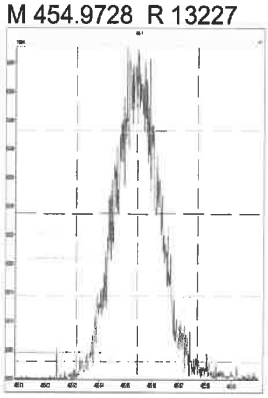

M 466.9728 R 13426

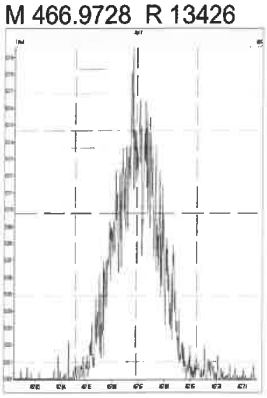

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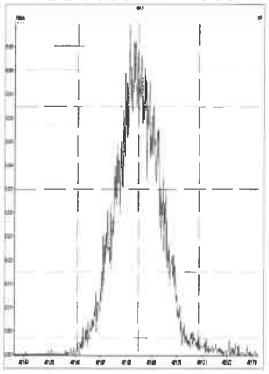

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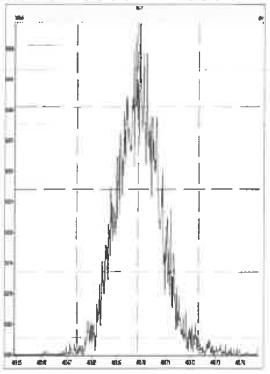

M 504.9696 R 12724

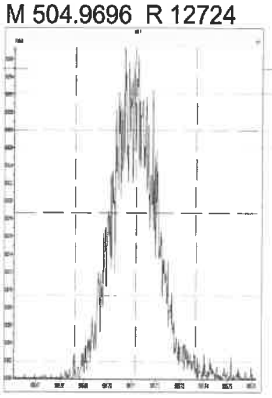

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M 516.9697 R 13812

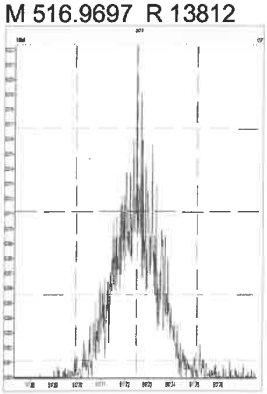

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M 292.9824_R 12168

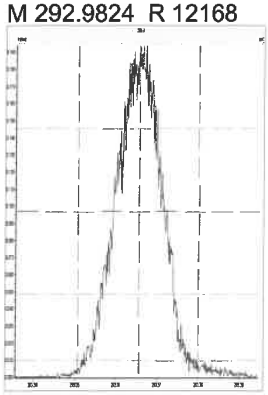

M 304.9824_R 12265

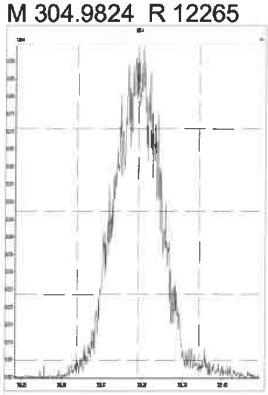

M 318.9792_R 12255

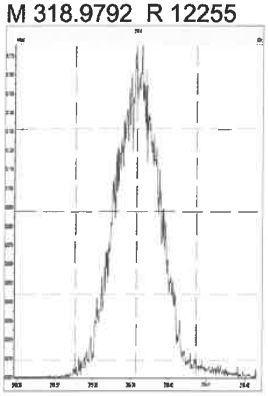

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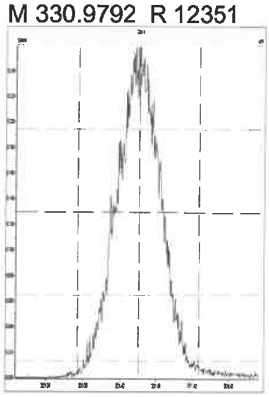

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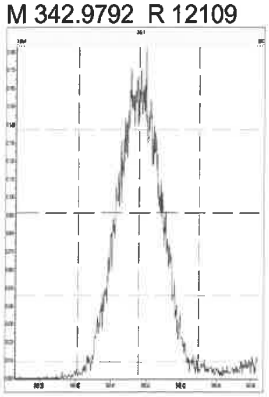

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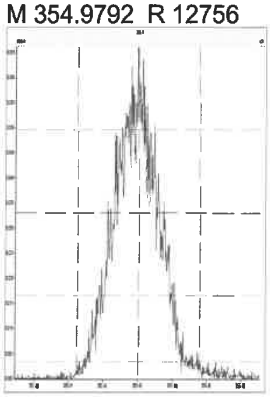

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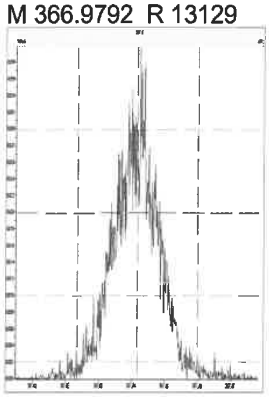

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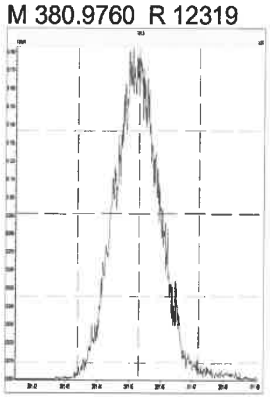

M 392.9760_R 12316

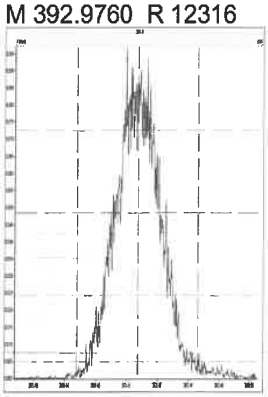

M 404.9760_R 12887

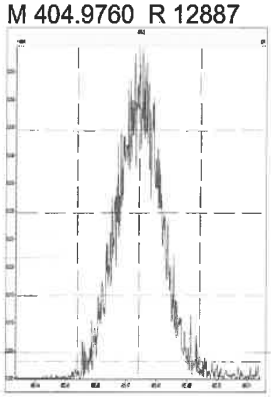

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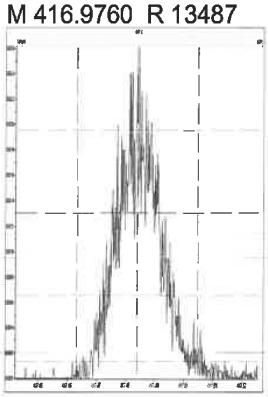

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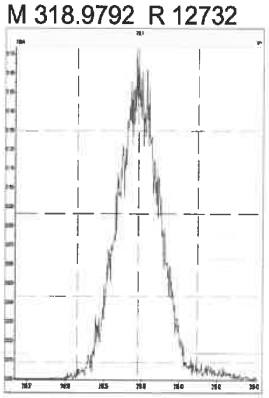

M 330.9792_R 12077

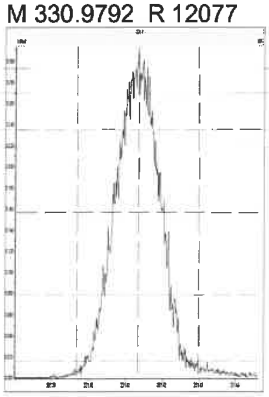

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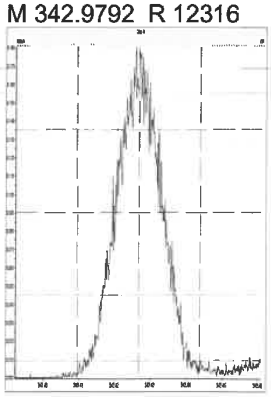

M 354.9792_R 13450

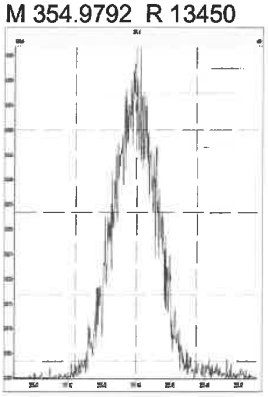

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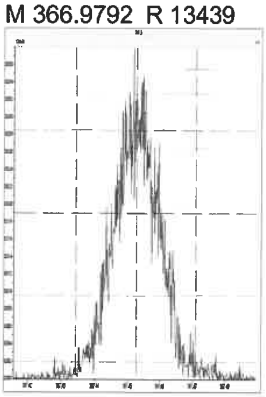

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M 380.9760 R 12442

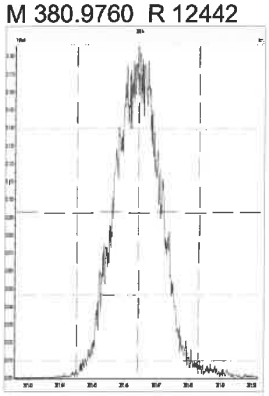

M 392.9760 R 12347

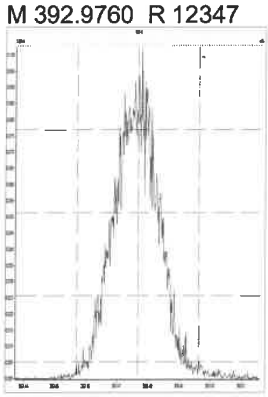

M 404.9760 R 12554

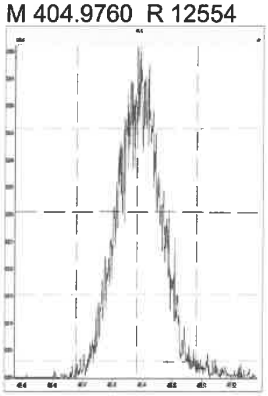

M 416.9760 R 13402

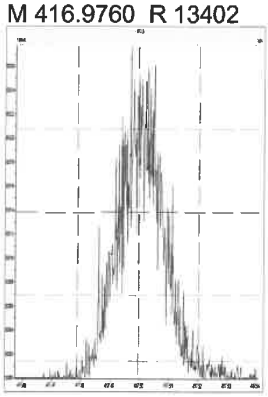

M 366.9792 R 13196

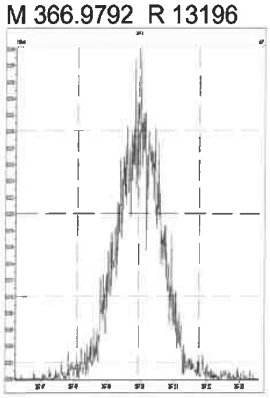

M 380.9760 R 12554

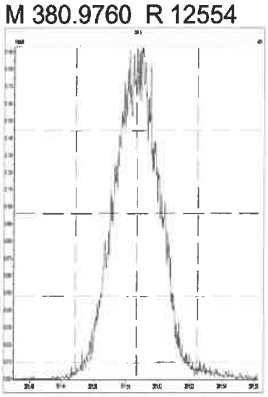

M 392.9760 R 12821

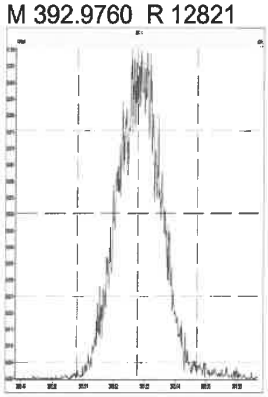

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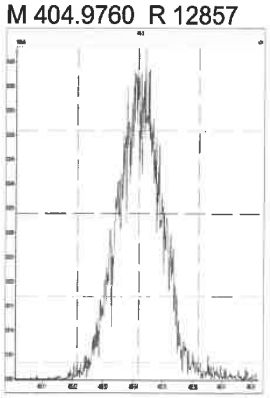

M 416.9760 R 13813

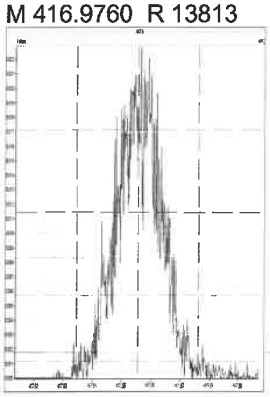

M 430.9728 R 12760

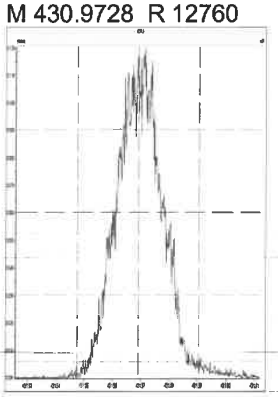

M 442.9728 R 12726

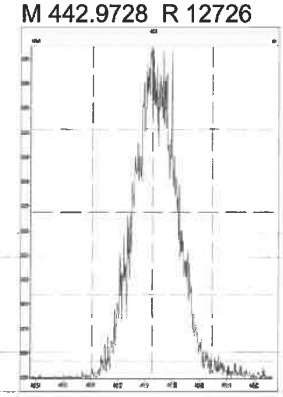

M 454.9728 R 12763

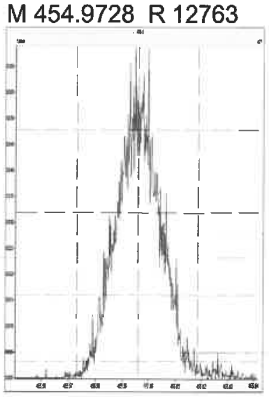

M 380.9760 R 12889

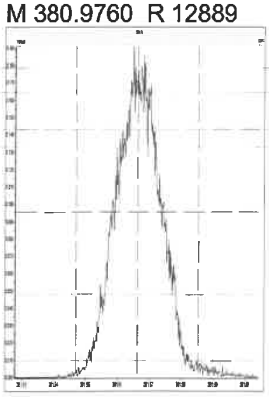

M 392.9760 R 12387

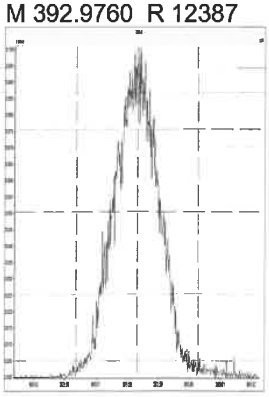

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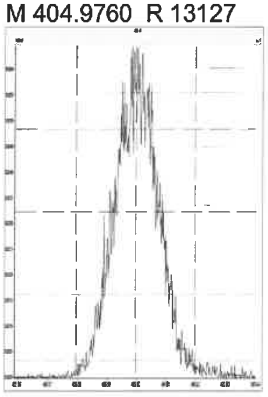

M 416.9760 R 13698

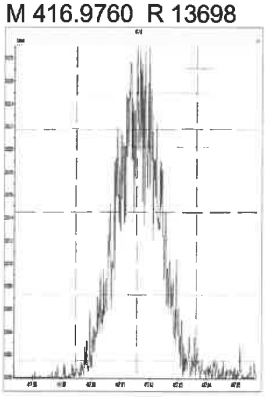

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M 430.9728_R 12457

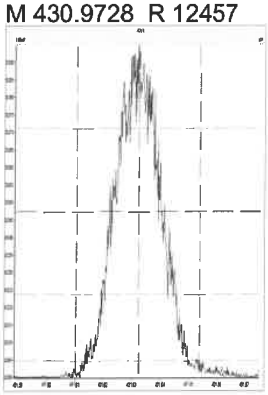

M 442.9728_R 12631

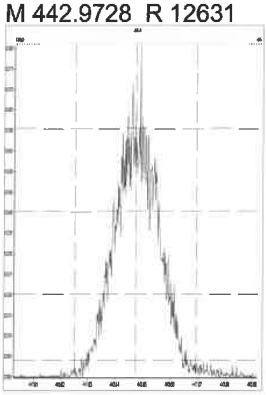

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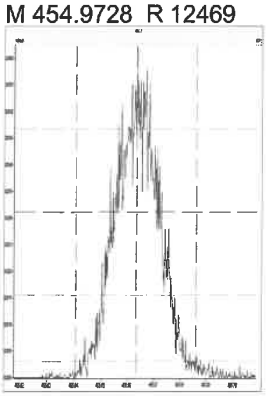

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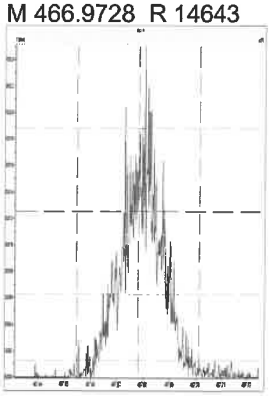

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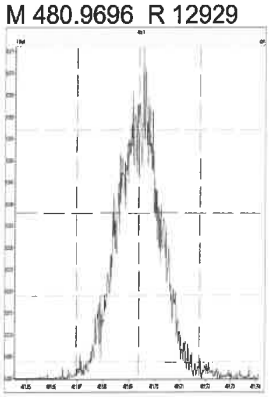

M 380.9760_R 12290

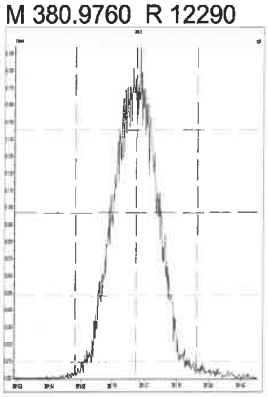

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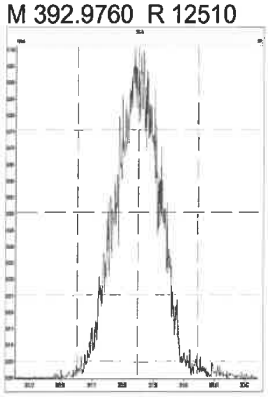

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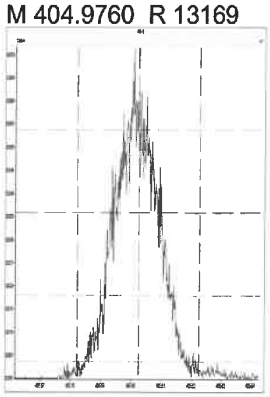

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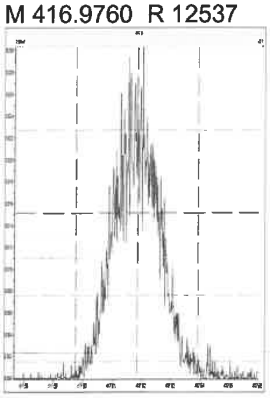

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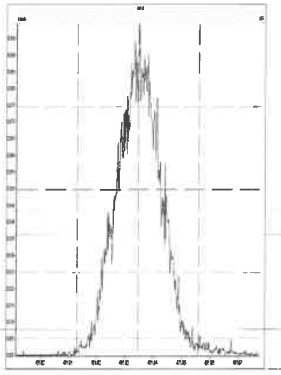

M 442.9728_R 12628

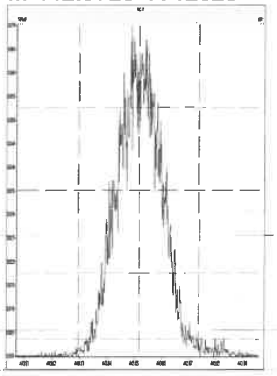

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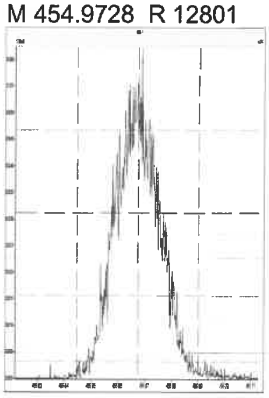

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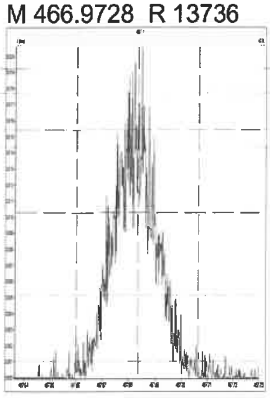

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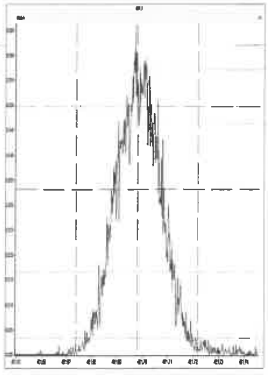

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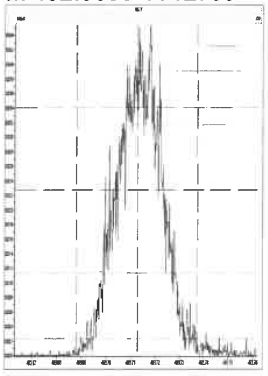

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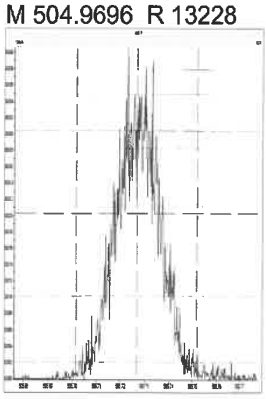

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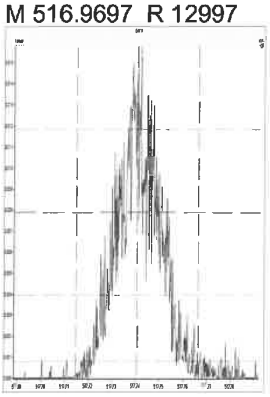

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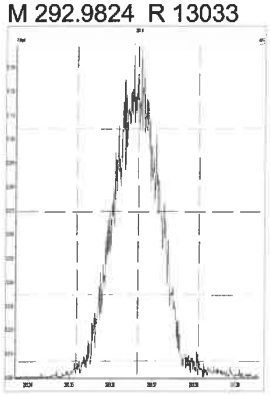

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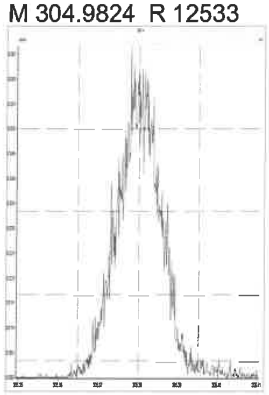

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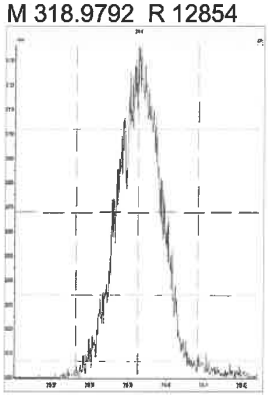

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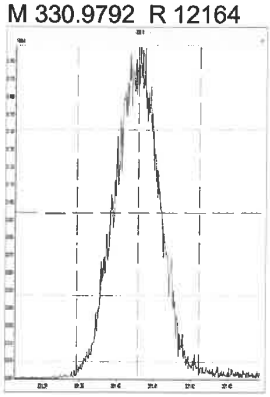

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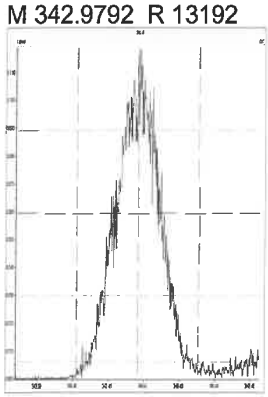

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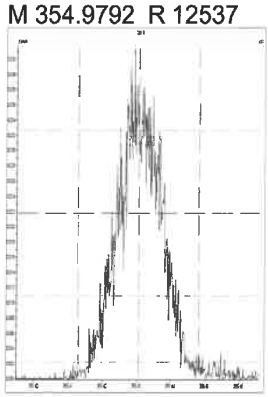

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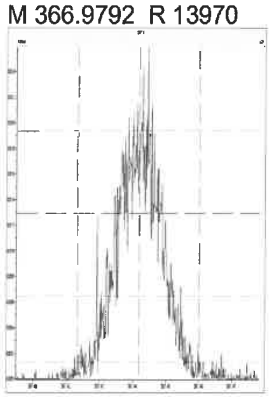

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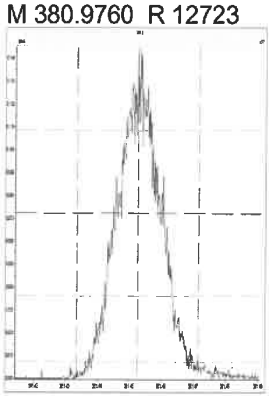

M 392.9760_R 12661

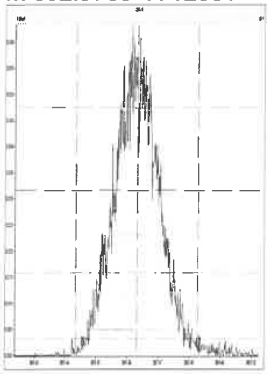

M 404.9760_R 12953

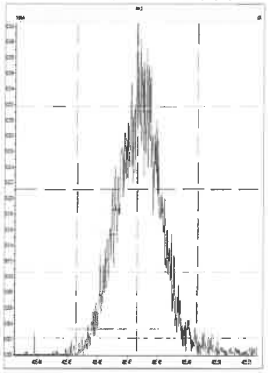

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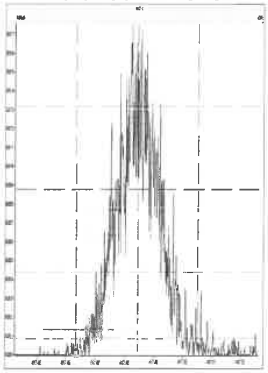

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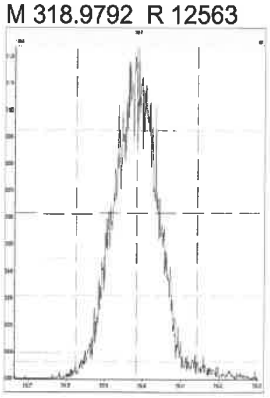

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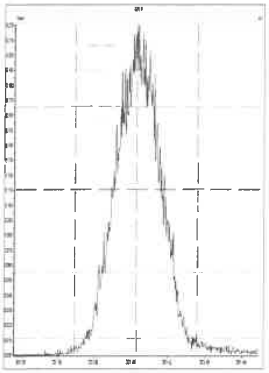

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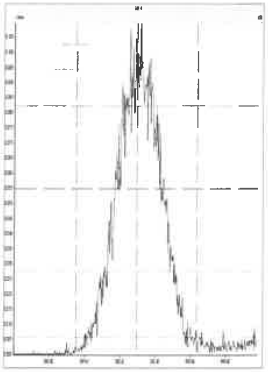

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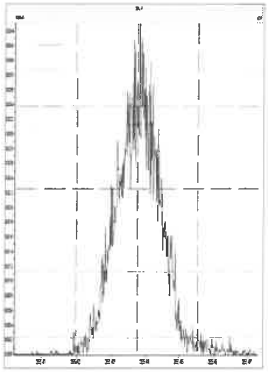

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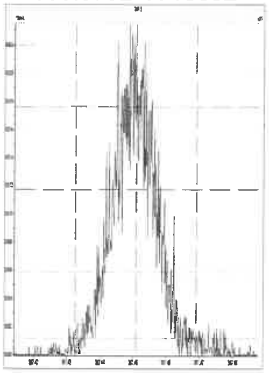

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M 380.9760 R 12500

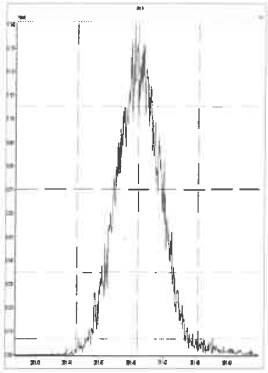

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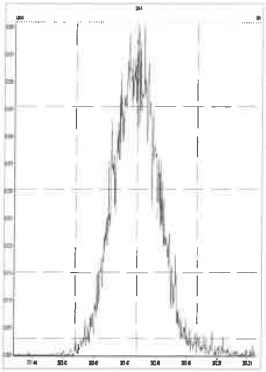

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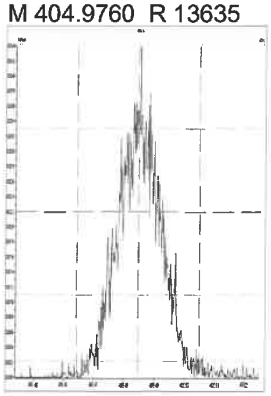

M 416.9760 R 14844

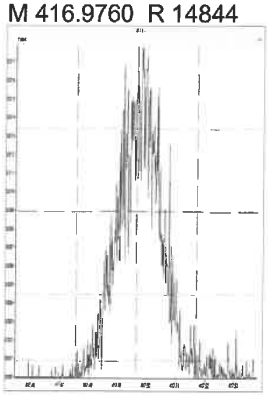

M 366.9792 R 13050

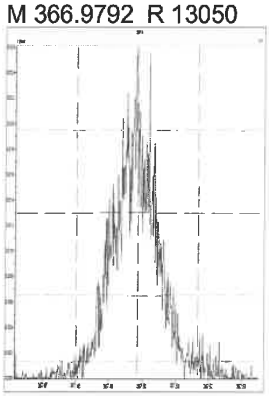

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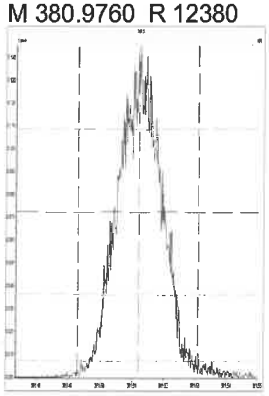

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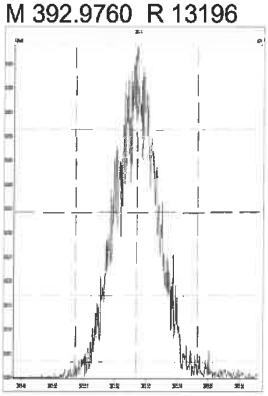

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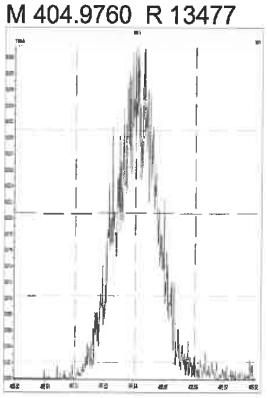

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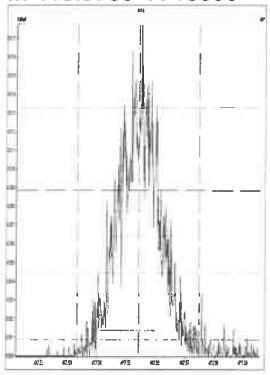

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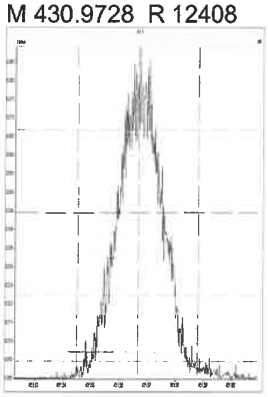

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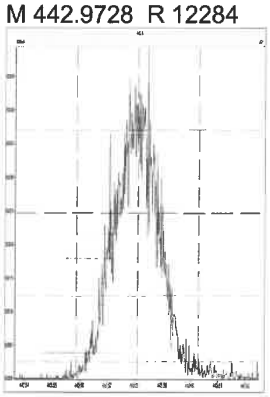

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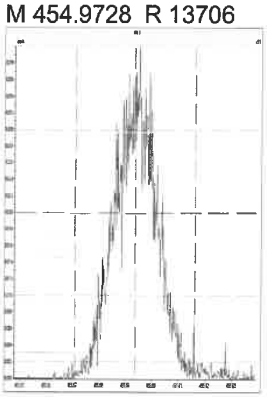

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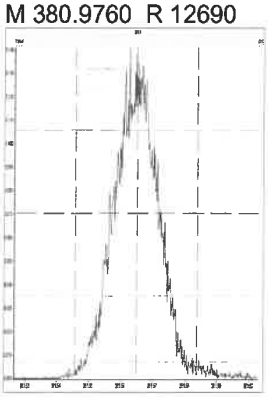

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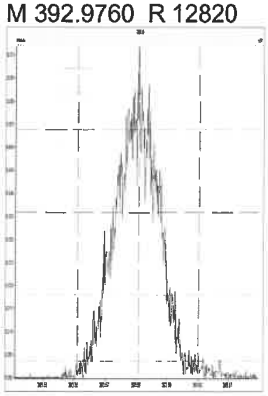

M 404.9760 R 13230

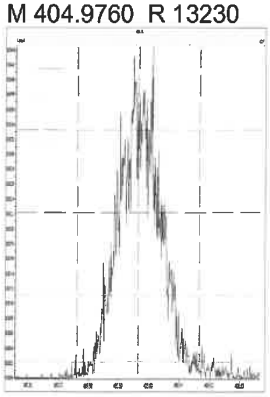

M 416.9760 R 13664

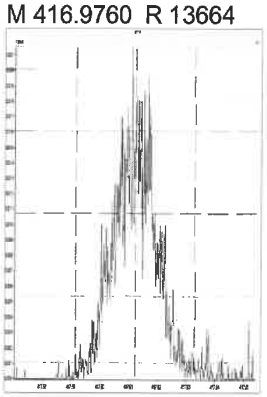

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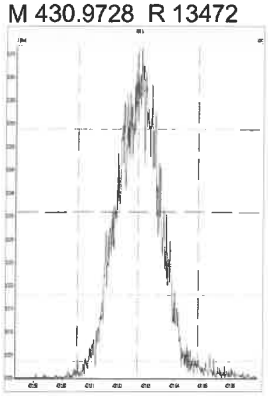

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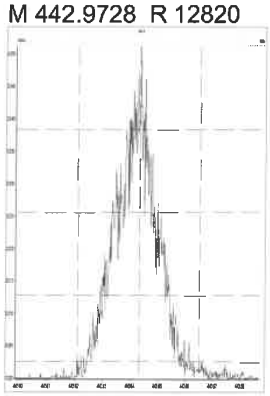

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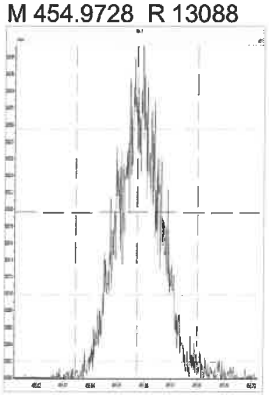

M 466.9728 R 14825

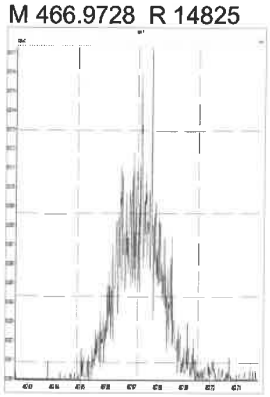

M 480.9696 R 13056

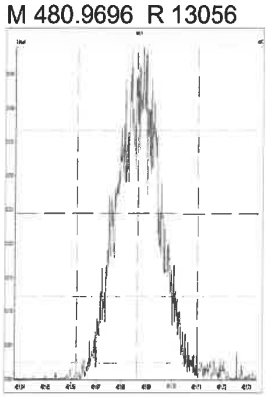

M 380.9760 R 12315

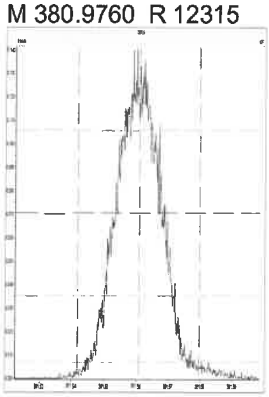

M 392.9760 R 12993

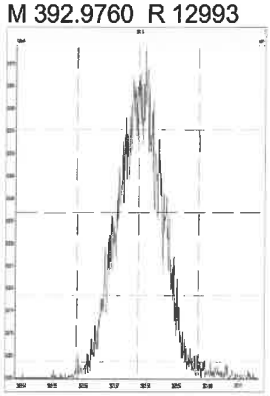

M 404.9760 R 13927

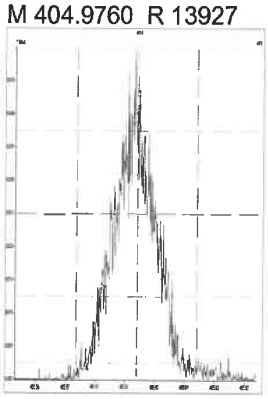

M 416.9760 R 12993

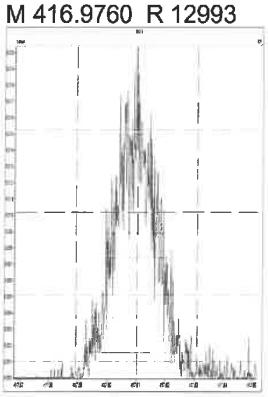

M 430.9728 R 13130

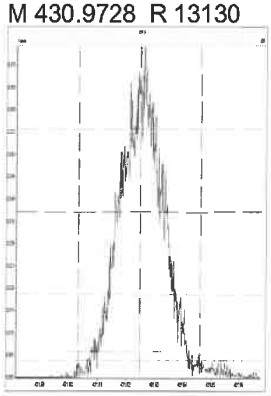

M 442.9728 R 13230

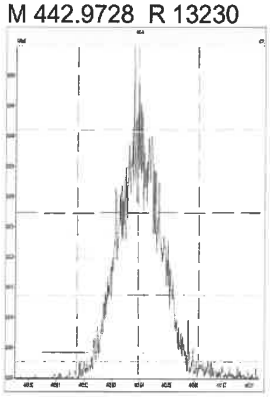

M 454.9728 R 13715

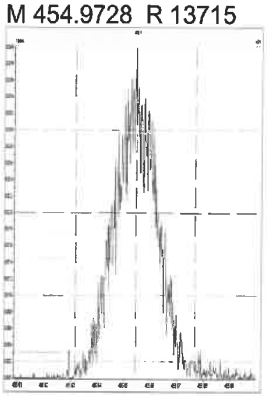

M 466.9728 R 15017

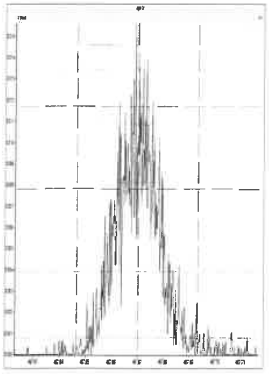

M 480.9696 R 12863

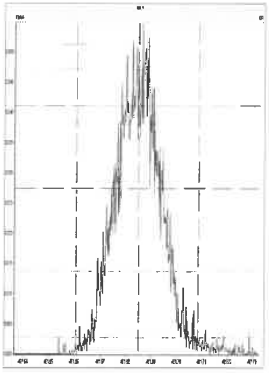

M 492.9696 R 13055

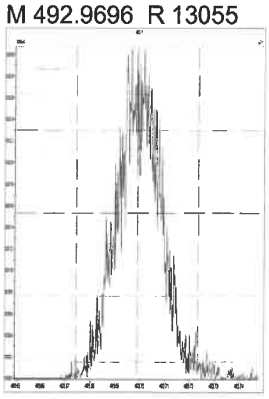

M 504.9696 R 13710

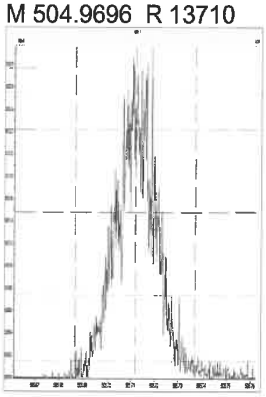

789123

Printed: Tuesday, August 31, 2021 06:35:46 Pacific Daylight Time

M 516.9697 R 14872

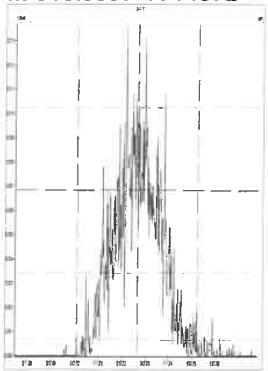

789124

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_15.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 30-Aug-2021 22:10:48 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 083021A CS-4 HRDXNL4_00099
Misc. Info.: 30AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 31-Aug-2021 16:05:24 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1682

First Level Reviewer: bennettd Date: 31-Aug-2021 16:02:15

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.552	83416315	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.053	130988304	0.78	1.6249	96.6	96.6	0.1460	0.1460	96.64	
2,3,7,8-TCDF	17.069	13569621	0.78	1.0239	10.1	10.1	0.0153	0.0153	101	
A Non-2,3,7,8-sub-TCDF	17.061						0.0153	0.0153		Rn
S Total TCDF					10.1	10.1	0.0153	0.0153		
D 13C-2,3,7,8-TCDD	17.749	76207351	0.81	0.8993	101.6	101.6	0.1022	0.1022	102	
2,3,7,8-TCDD	17.764	9563441	0.78	1.2541	10.0	10.0	0.0120	0.0120	100	
$ 37Cl4-2,3,7,8-TCDD	17.764	9855847		1.1071	10.7	10.7	0.0117	0.0117	107	
A Non-2,3,7,8-sub-TCDD	17.515						0.0120	0.0120		
S Total TCDD					10.0	10.0	0.0120	0.0120		
D 13C-1,2,3,7,8-PeCDF	21.952	103695519	1.55	1.2101	102.7	102.7	0.1494	0.1494	103	
1,2,3,7,8-PeCDF	21.979	56455209	1.59	1.0611	51.3	51.3	0.1021	0.1021	103	
D 13C-2,3,4,7,8-PeCDF	23.261	107061470	1.56	1.2395	103.5	103.5	0.1459	0.1459	104	
2,3,4,7,8-PeCDF	23.288	55870358	1.58	1.0184	51.2	51.2	0.1104	0.1104	102	
A F1 PeCDFs	19.851						0.006743	0.006743		
A Non-2,3,7,8-sub-PeCDF	23.067						0.1061	0.1061		n
S Total PeCDF					102.5	102.5	0.1063	0.1063		
D 13C-1,2,3,7,8-PeCDD	23.970	70347678	1.61	0.7612	110.8	110.8	0.0839	0.0839	111	
1,2,3,7,8-PeCDD	23.997	36583877	1.59	1.0484	49.6	49.6	0.0407	0.0407	99.20	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0407	0.0407		
S Total PeCDD					49.6	49.6	0.0407	0.0407		
D 13C-1,2,3,4,7,8-HxCDF	30.093	97858243	0.52	1.0837	99.5	99.5	0.2485	0.2485	99.48	
1,2,3,4,7,8-HxCDF	30.120	53002460	1.22	1.0851	49.9	49.9	0.2083	0.2083	99.83	
D 13C-1,2,3,6,7,8-HxCDF	30.319	96255394	0.52	1.1279	94.0	94.0	0.2388	0.2388	94.01	
1,2,3,6,7,8-HxCDF	30.346	54942064	1.21	1.1260	50.7	50.7	0.1914	0.1914	101	
D 13C-2,3,4,6,7,8-HxCDF	31.238	93937504	0.53	1.0637	97.3	97.3	0.2532	0.2532	97.28	
2,3,4,6,7,8-HxCDF	31.264	54025953	1.21	1.1675	49.3	49.3	0.1377	0.1377	98.52	
D 13C-1,2,3,7,8,9-HxCDF	32.103	88659351	0.52	0.9676	100.9	100.9	0.2783	0.2783	101	
1,2,3,7,8,9-HxCDF	32.116	51769966	1.20	1.1664	50.1	50.1	0.1243	0.1243	100	
A Non-2,3,7,8-sub-HxCDF	30.311						0.1587	0.1587		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					199.9	199.9	0.1654	0.1654		
* 13C-1,2,3,7,8,9-HxCDD	31.903	90776923	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.451	68839531	1.24	0.7334	103.4	103.4	0.2181	0.2181	103	
1,2,3,4,7,8-HxCDD	31.464	37139065	1.27	1.0640	50.7	50.7	0.1177	0.1177	101	
D 13C-1,2,3,6,7,8-HxCDD	31.557	76473267	1.24	0.8802	95.7	95.7	0.1818	0.1818	95.71	
1,2,3,6,7,8-HxCDD	31.584	40291943	1.27	1.0001	52.7	52.7	0.1232	0.1232	105	
1,2,3,7,8,9-HxCDD	31.930	43422227	1.26	1.1325	52.8	52.8	0.1097	0.1097	106	
A Non-2,3,7,8-sub-HxCDD	30.432						0.1166	0.1166		
S Total HxCDD					156.2	156.2	0.1169	0.1169		
D 13C-1,2,3,4,6,7,8-HpCDF	33.579	70534853	0.45	0.7730	100.5	100.5	1.088	1.088	101	
1,2,3,4,6,7,8-HpCDF	33.591	53992536	1.06	1.4413	53.1	53.1	0.5119	0.5119	106	
D 13C-1,2,3,4,7,8,9-HpCDF	34.648	64928942	0.44	0.7008	102.1	102.1	1.200	1.200	102	
1,2,3,4,7,8,9-HpCDF	34.661	44064394	1.05	1.3174	51.5	51.5	0.6495	0.6495	103	
A Non-2,3,7,8-sub-HpCDF	34.120						0.5745	0.5745		
S Total HpCDF					104.6	104.6	0.5807	0.5807		
D 13C-1,2,3,4,6,7,8-HpCDD	34.369	63076227	1.00	0.6472	107.4	107.4	0.4793	0.4793	107	
1,2,3,4,6,7,8-HpCDD	34.381	35007297	1.04	1.0943	50.7	50.7	0.1960	0.1960	101	
A Non-2,3,7,8-sub-HpCDD	34.223						0.1960	0.1960		
S Total HpCDD					50.7	50.7	0.1960	0.1960		
D 13C-OCDD	36.678	93665479	0.87	0.4472	230.8	230.8	0.2848	0.2848	115	
OCDF	36.773	66394728	0.91	1.4382	98.6	98.6	0.0630	0.0630	98.58	
OCDD	36.689	52783505	0.90	1.1070	101.8	101.8	0.1079	0.1079	102	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_15.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 30-Aug-2021 22:10:48 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 083021A CS-4 HRDXNL4_00099
Misc. Info.: 30AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 31-Aug-2021 16:05:24 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1682

First Level Reviewer: bennettd Date: 31-Aug-2021 16:02:15

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.552	17.552	0		37311858	9717764	4748	11870	2047		
333.9339	17.552	17.552	0		46104457	11837403	3178	7945	3725	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.053	17.053	0	0.972	57245438	14973367	8361	20902	1791		
317.9389	17.053	17.053	0	0.972	73742866	19099171	12092	30230	1579	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.069	17.069	0	1.001	5964719	1561944	788	1970	1982		
305.8987	17.069	17.069	0	1.001	7604902	1981980	1341	3352	1478	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.691	17.061	-22	0.979	22461	6778	788	1970	9		
305.8987	16.691	17.061	-22	0.979	38414	11919	1341	3352	9	0.58(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.749	17.749	0	1.011	34015721	8211420	4748	11870	1729		
333.9339	17.734	17.749	-1	1.010	42191630	10097090	3178	7945	3177	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.764	17.764	0	1.001	4177603	1052200	627	1567	1678		
321.8936	17.764	17.764	0	1.001	5385838	1357725	479	1197	2834	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.764	17.764	0	1.012	9855847	2450342	1117	2792	2194		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.515						627	1567			
321.8936	17.515						479	1197			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	21.952	21.952	0	1.251	63110076	11639463	9264	23160	1256		
353.8970	21.952	21.952	0	1.251	40585443	7492301	6324	15810	1185	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	21.979	21.979	0	1.001	34685601	6304380	4953	12382	1273		
341.8567	21.979	21.979	0	1.001	21769608	3943472	3339	8347	1181	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.261	23.261	0	1.325	65225171	11222983	9264	23160	1211		
353.8970	23.261	23.261	0	1.325	41836299	7214635	6324	15810	1141	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.288	23.288	0	1.001	34183426	5967408	4953	12382	1205		
341.8567	23.288	23.288	0	1.001	21686932	3764452	3339	8347	1127	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						105	262			
341.8567	19.851						422	1055			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.497	23.067	-34	1.025	241763	44689	4953	12382	9		
341.8567	22.484	23.067	-35	1.024	168466	28023	3339	8347	8	1.44(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	23.970	23.970	0	1.366	43413448	7041698	3248	8120	2168		
369.8919	23.970	23.970	0	1.366	26934230	4490737	2260	5650	1987	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	23.997	23.997	0	1.001	22444738	3659487	1205	3012	3037		
357.8516	23.984	23.997	-1	1.001	14139139	2362272	763	1907	3096	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1205	3012			
357.8516	23.696						763	1907			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.093	30.093	0	0.943	33421159	5654224	9034	22585	626		
385.8610	30.093	30.093	0	0.943	64437084	10738934	17549	43872	612	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.120	30.120	0	1.001	29099358	4881492	8133	20332	600		
375.8178	30.120	30.120	0	1.001	23903102	4071845	6686	16715	609	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.319	30.319	0	0.950	32860076	5951711	9034	22585	659		
385.8610	30.319	30.319	0	0.950	63395318	11241261	17549	43872	641	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.346	30.346	0	1.001	30089993	5334962	8133	20332	656		
375.8178	30.333	30.346	-1	1.000	24852071	4398817	6686	16715	658	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.238	31.238	0	0.979	32532261	7957441	9034	22585	881		
385.8610	31.238	31.238	0	0.979	61405243	15084816	17549	43872	860	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.264	31.264	0	1.001	29544332	7469840	8133	20332	918		
375.8178	31.264	31.264	0	1.001	24481621	6135988	6686	16715	918	1.21(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.103	32.103	0	1.006	30480769	8823948	9034	22585	977		
385.8610	32.103	32.103	0	1.006	58178582	16722463	17549	43872	953	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.116	32.116	0	1.000	28268477	8193179	8133	20332	1007		
375.8178	32.116	32.116	0	1.000	23501489	6760497	6686	16715	1011	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.311						8133	20332			
375.8178	30.311						6686	16715			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.903	31.903	0		50443431	13649100	8681	21702	1572		
403.8529	31.903	31.903	0		40333492	11026759	7110	17775	1551	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.451	31.451	0	0.986	38075754	10553970	8681	21702	1216		
403.8529	31.451	31.451	0	0.986	30763777	8522915	7110	17775	1199	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.464	31.464	0	1.000	20744930	5723614	5312	13280	1077		
391.8127	31.464	31.464	0	1.000	16394135	4558149	4244	10610	1074	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.557	31.557	0	0.989	42309829	10727316	8681	21702	1236		
403.8529	31.557	31.557	0	0.989	34163438	8655616	7110	17775	1217	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.584	31.584	0	1.001	22510357	5801283	5312	13280	1092		
391.8127	31.584	31.584	0	1.001	17781586	4551640	4244	10610	1072	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.930	31.930	0	1.015	24187747	6657146	5312	13280	1253		
391.8127	31.917	31.930	-1	1.015	19234480	5285870	4244	10610	1245	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.432						5312	13280			
391.8127	30.432						4244	10610			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.579	33.579	0	1.053	21839245	7995111	24639	61597	324		
419.8220	33.579	33.579	0	1.053	48695608	17962634	58359	145897	308	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.591	33.591	0	1.000	27758357	10203915	38293	95732	266		
409.7789	33.591	33.591	0	1.000	26234179	9722970	38320	95800	254	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.648	34.648	0	1.086	19862577	6899382	24639	61597	280		
419.8220	34.648	34.648	0	1.086	45066365	15486107	58359	145897	265	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.661	34.661	0	1.000	22569745	7835921	38293	95732	205		
409.7789	34.661	34.661	0	1.000	21494649	7446312	38320	95800	194	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.120						38293	95732			
409.7789	34.120						38320	95800			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.369	34.369	0	1.077	31611601	11010395	14133	35332	779		
437.8140	34.369	34.369	0	1.077	31464626	10956778	16486	41215	665	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.381	34.381	0	1.000	17836342	6278107	9117	22792	689		
425.7737	34.381	34.381	0	1.000	17170955	5908002	9727	24317	607	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						9117	22792			
425.7737	34.223						9727	24317			
13C-OCDD											
469.7779	36.678	36.678	0	1.150	43618247	12770524	5861	14652	2179		
471.7750	36.678	36.678	0	1.150	50047232	14726006	6708	16770	2195	0.87(0.76-1.02)	
OCDF											
441.7428	36.773	36.773	0	1.003	31614488	9495182	2580	6450	3680		
443.7399	36.773	36.773	0	1.003	34780240	10670445	2402	6005	4442	0.91(0.76-1.02)	
OCDD											
457.7377	36.689	36.689	0	1.000	24934471	7483468	3734	9335	2004		
459.7348	36.689	36.689	0	1.000	27849034	8401123	2835	7087	2963	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_15.d		
Injection Date:	30-Aug-2021 22:10:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

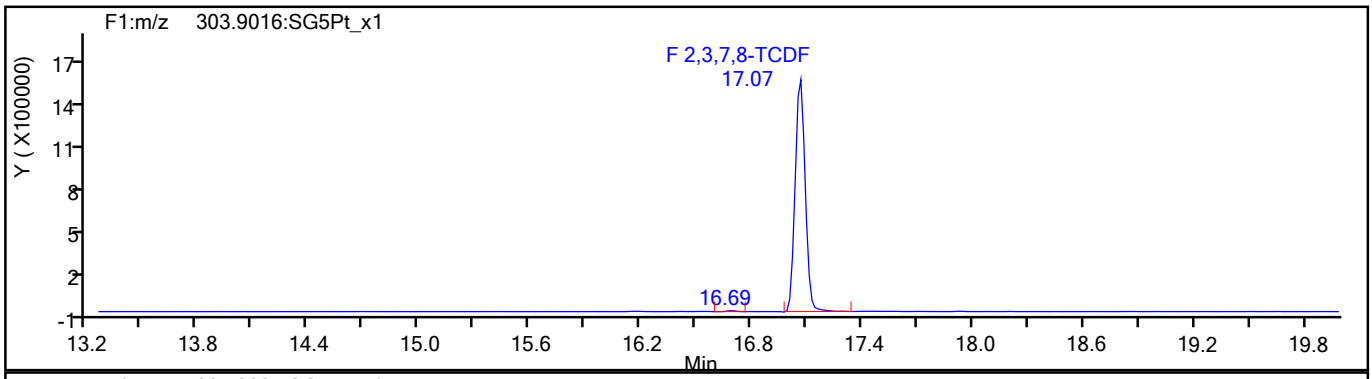

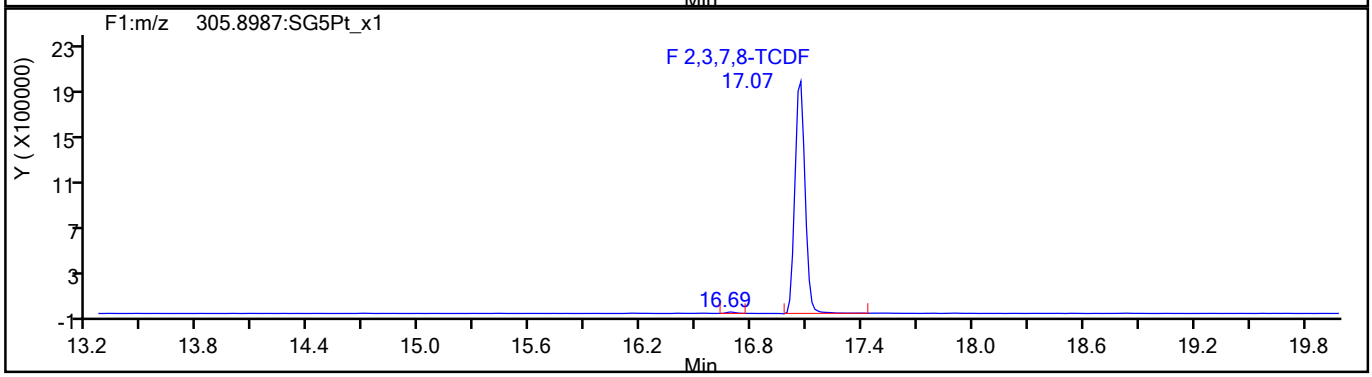

TCDF Standards

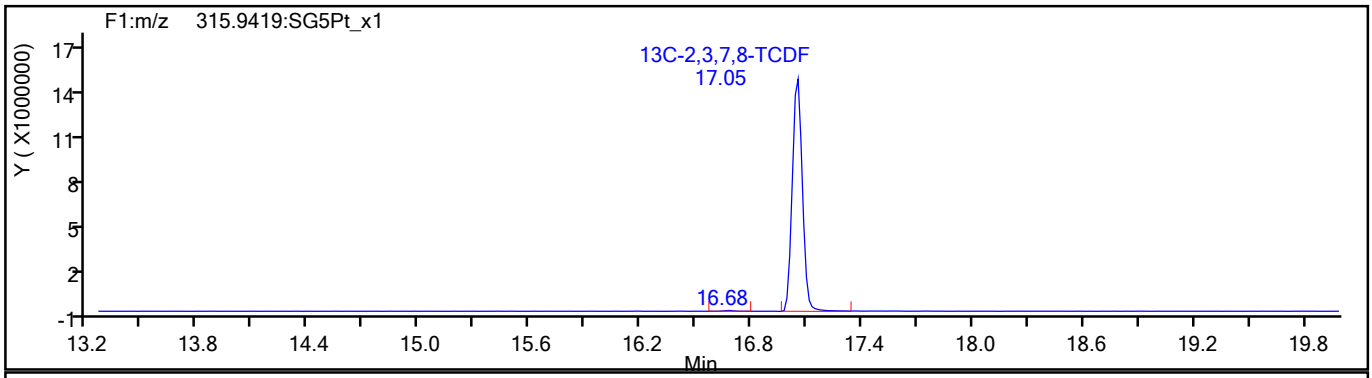

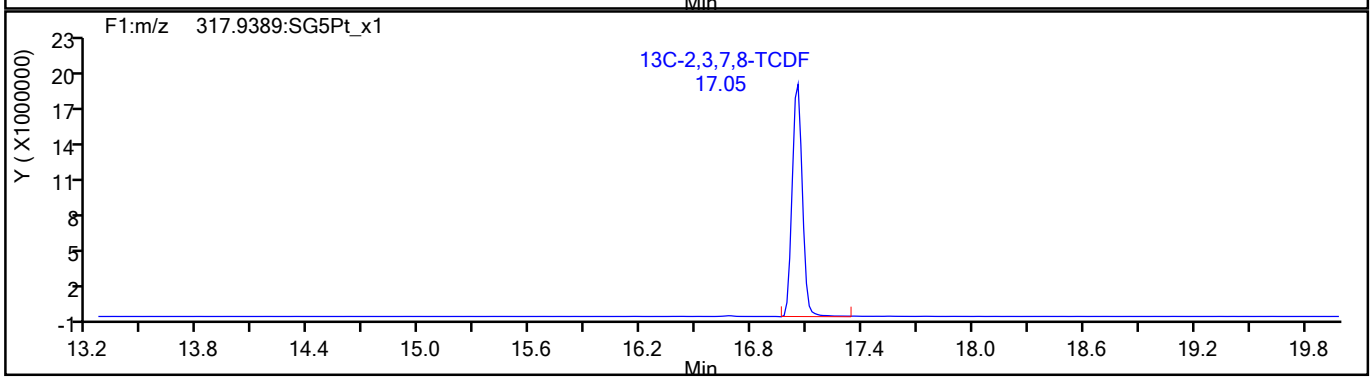

789131

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

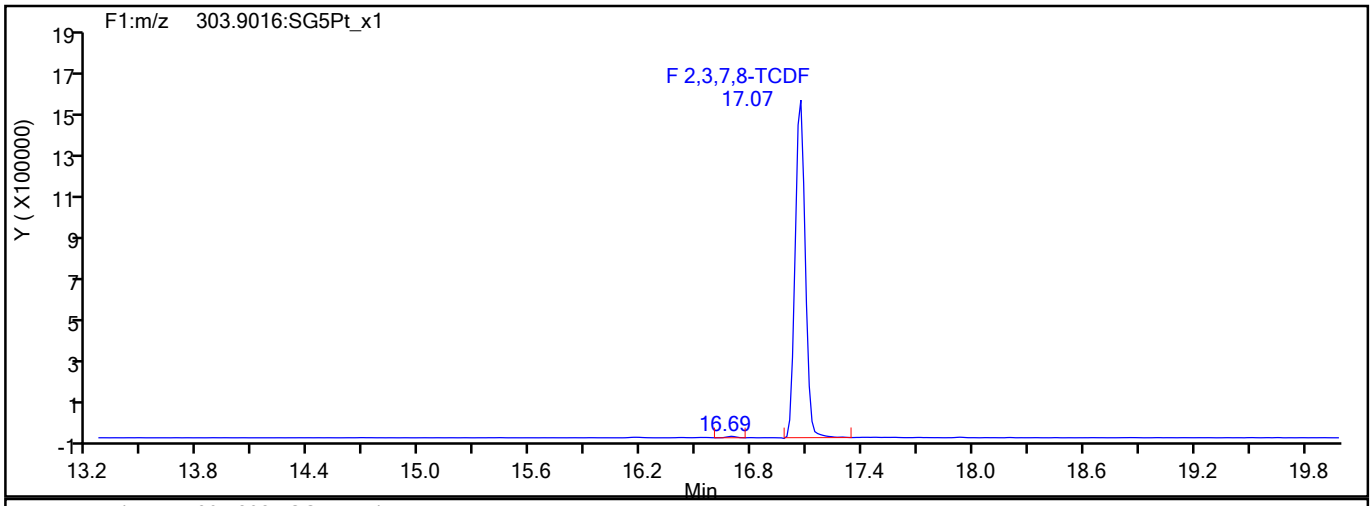

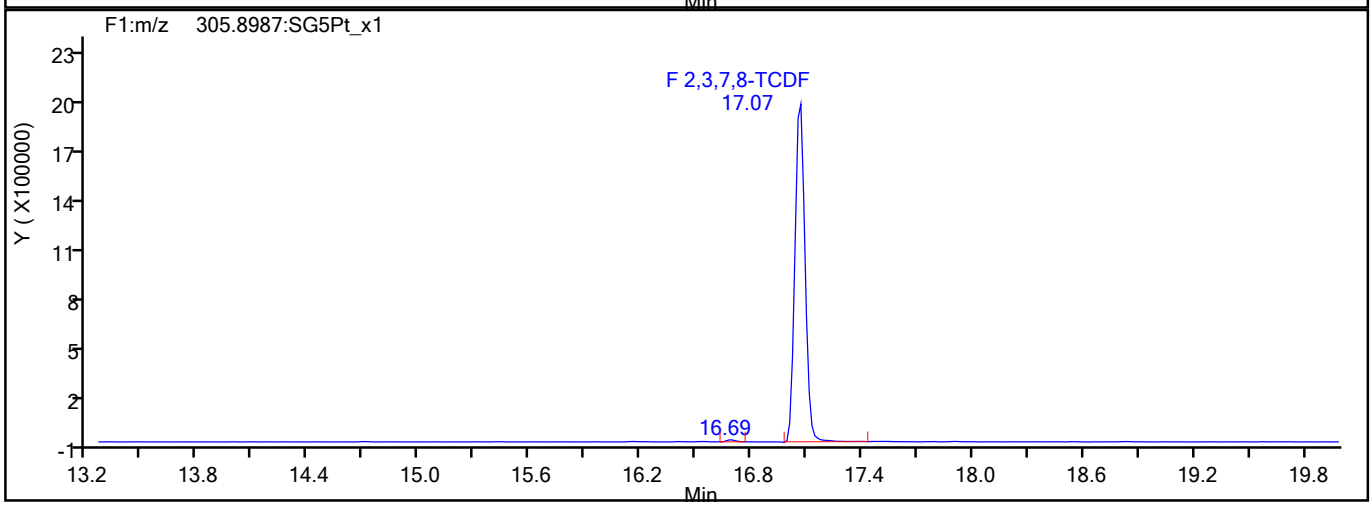

TCDF Interference Mass

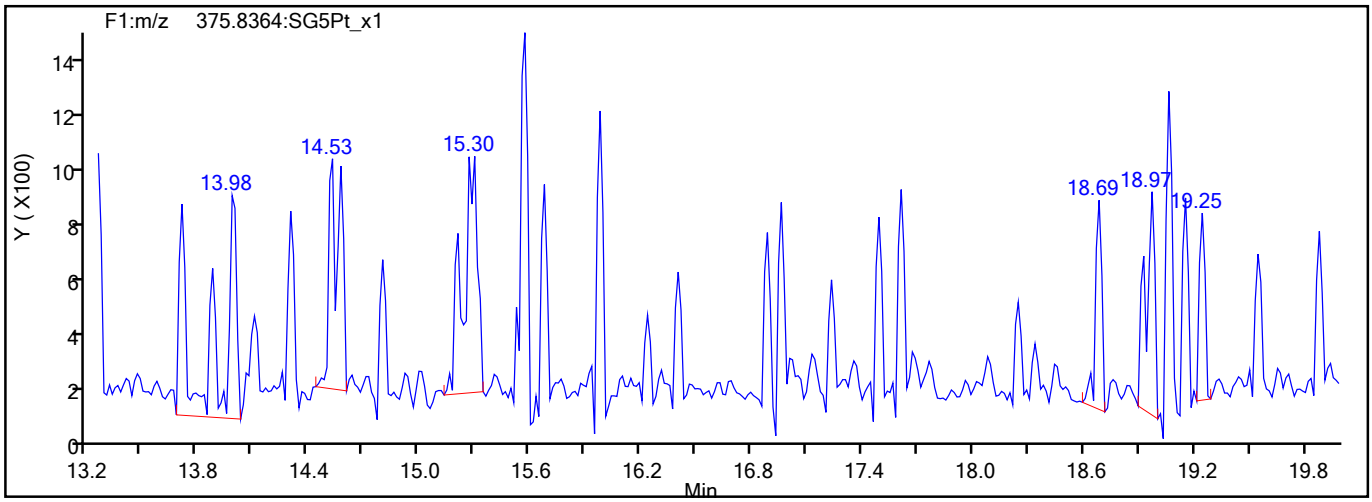

789132

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_15.d		
Injection Date:	30-Aug-2021 22:10:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

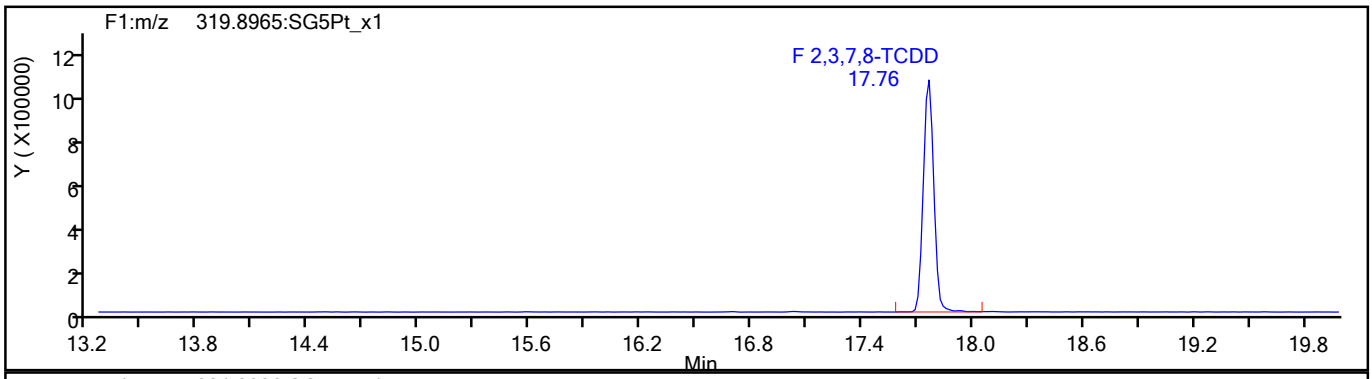

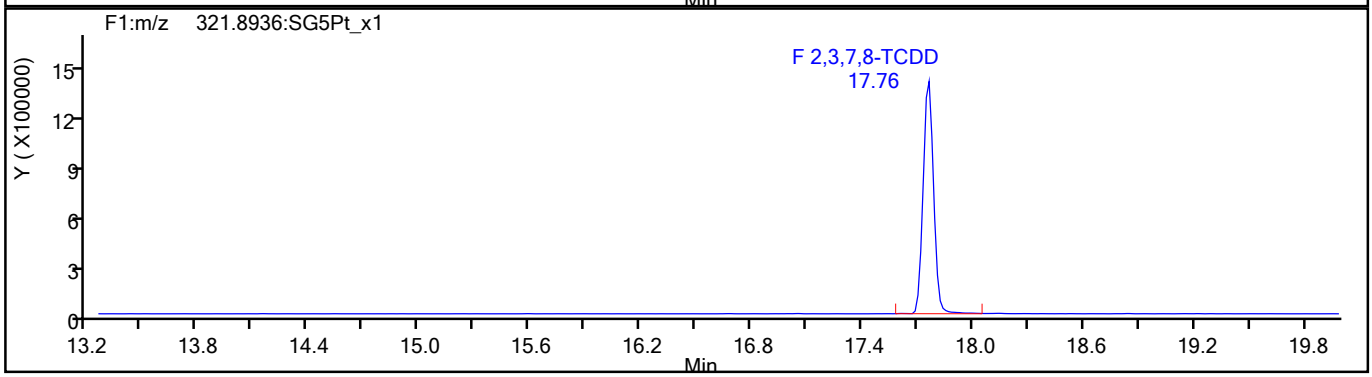

TCDD Standards

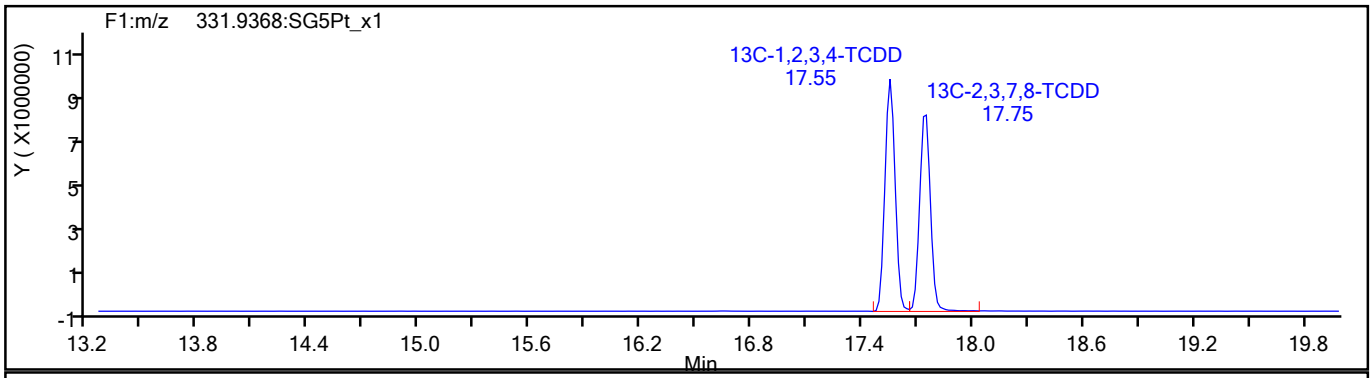

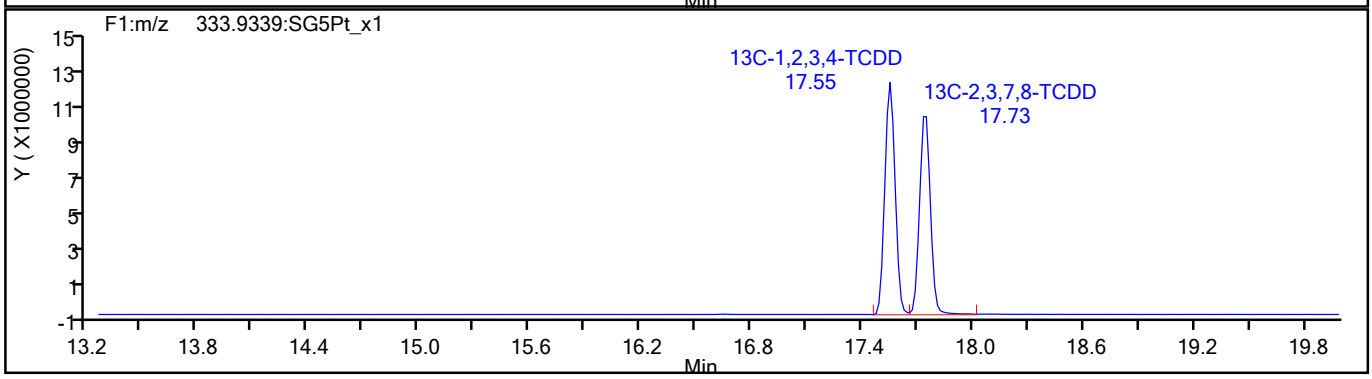

789133

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

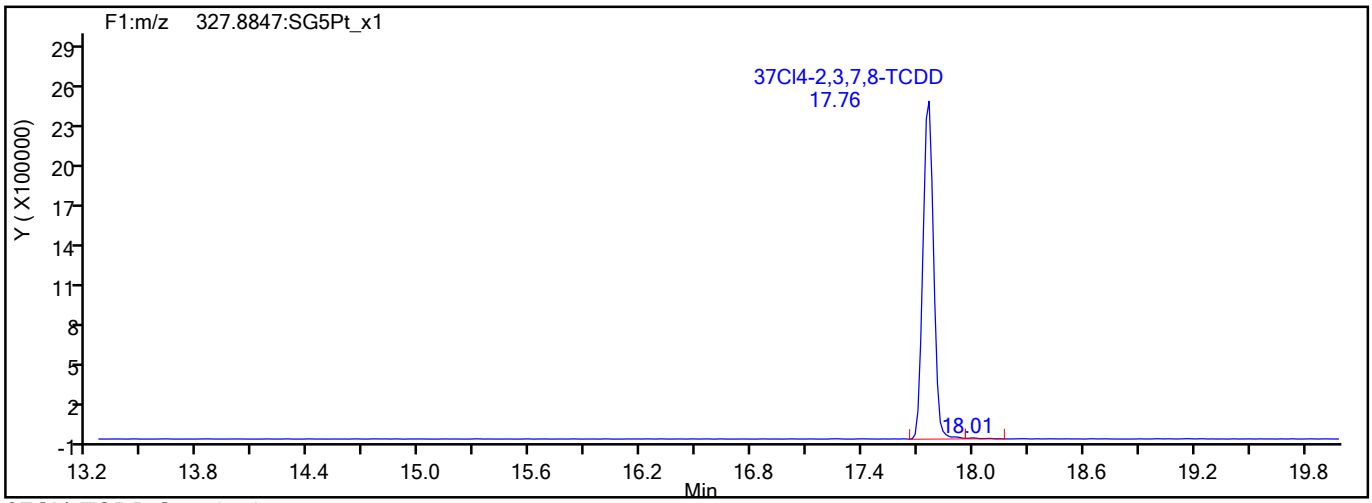

37Cl4-TCDD Standards

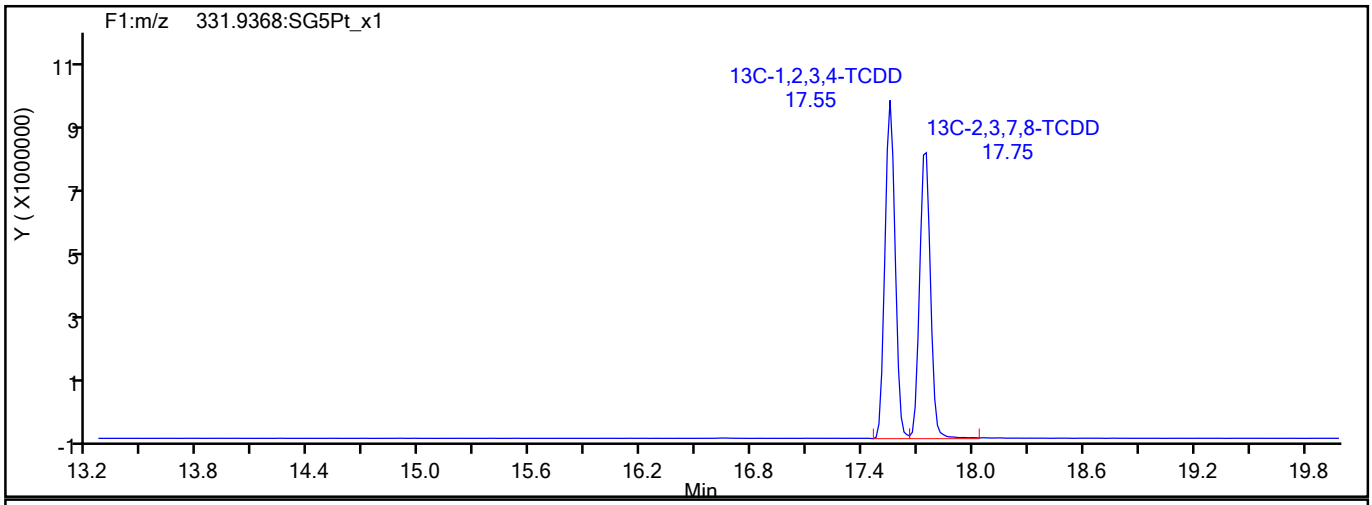

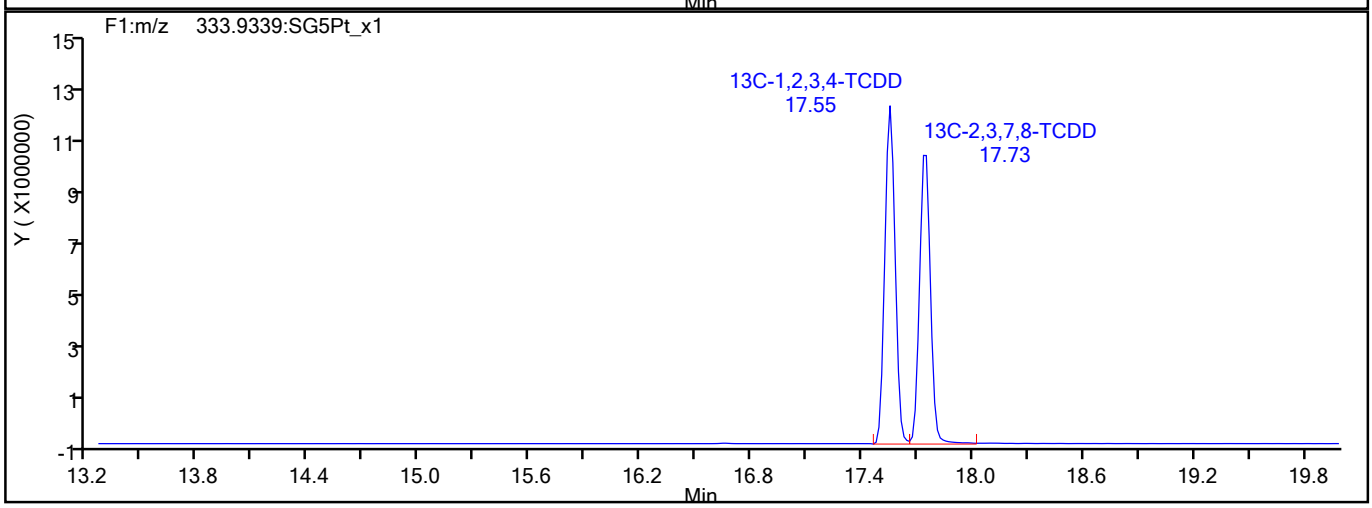

789134

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

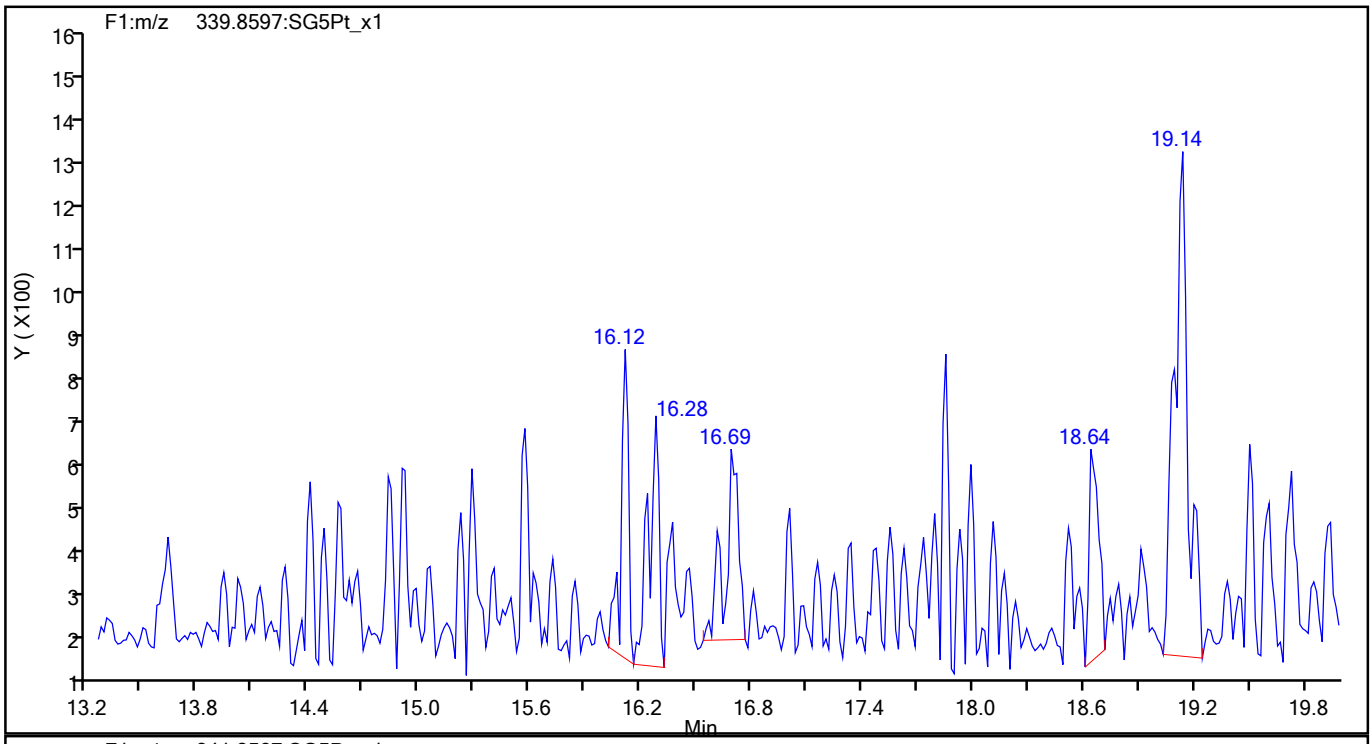

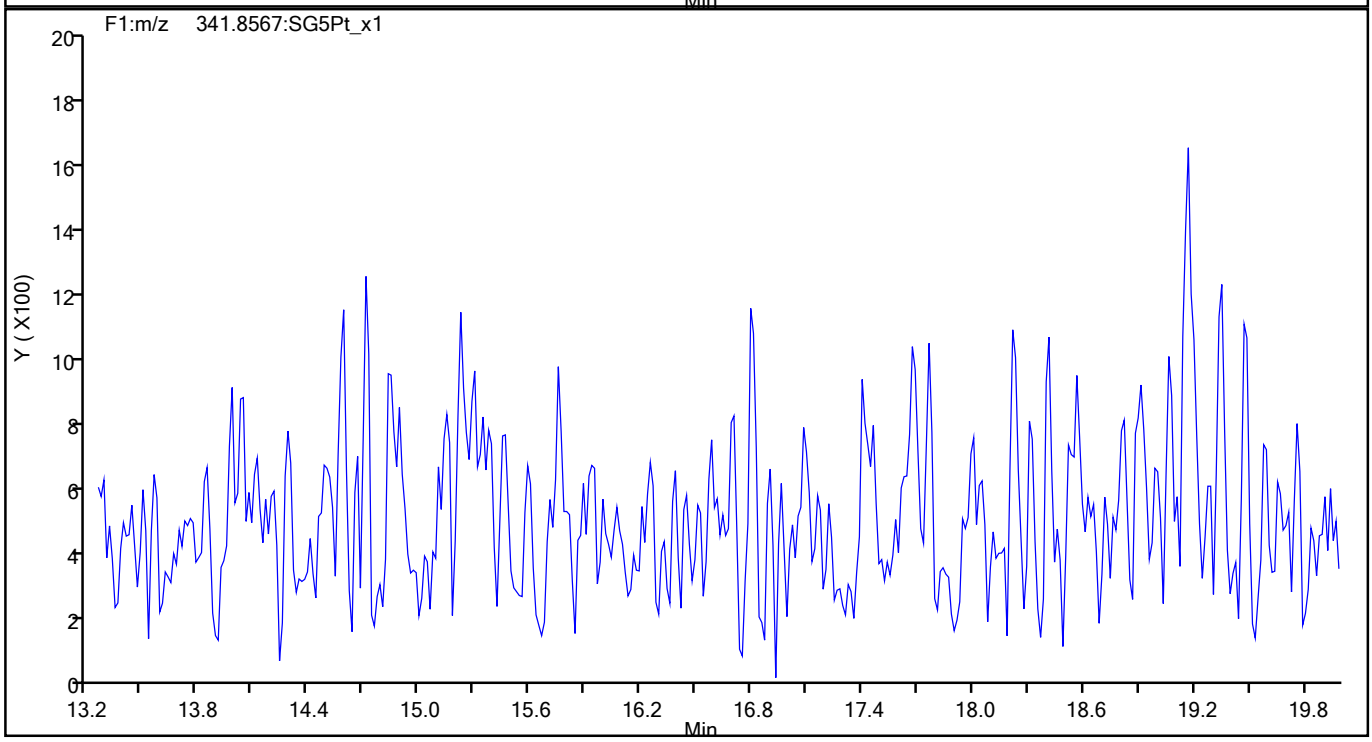

789135

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

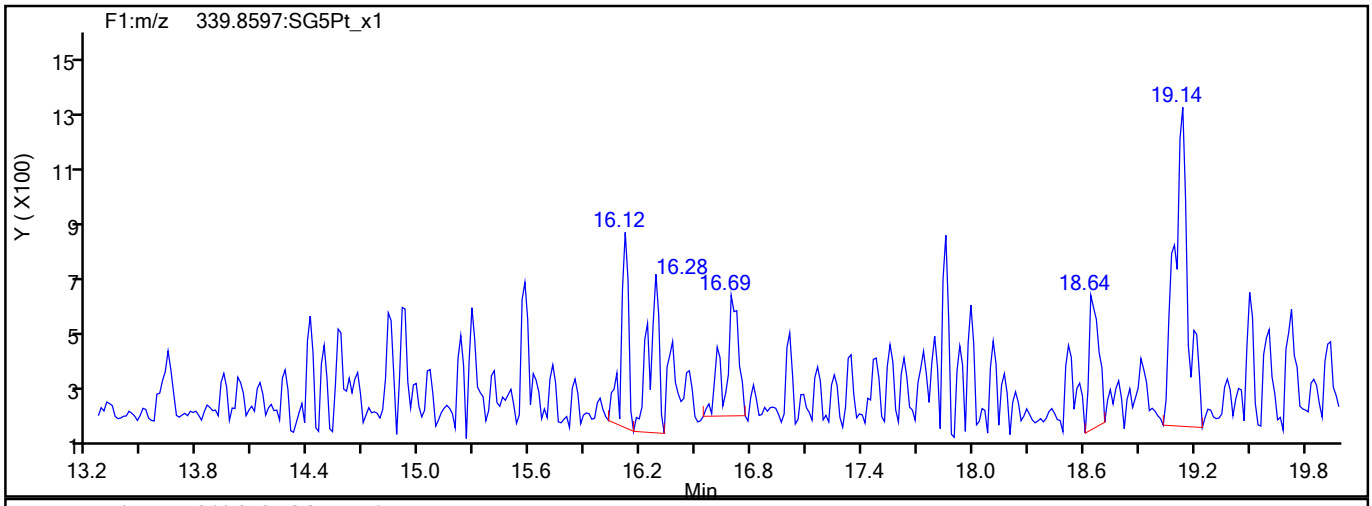

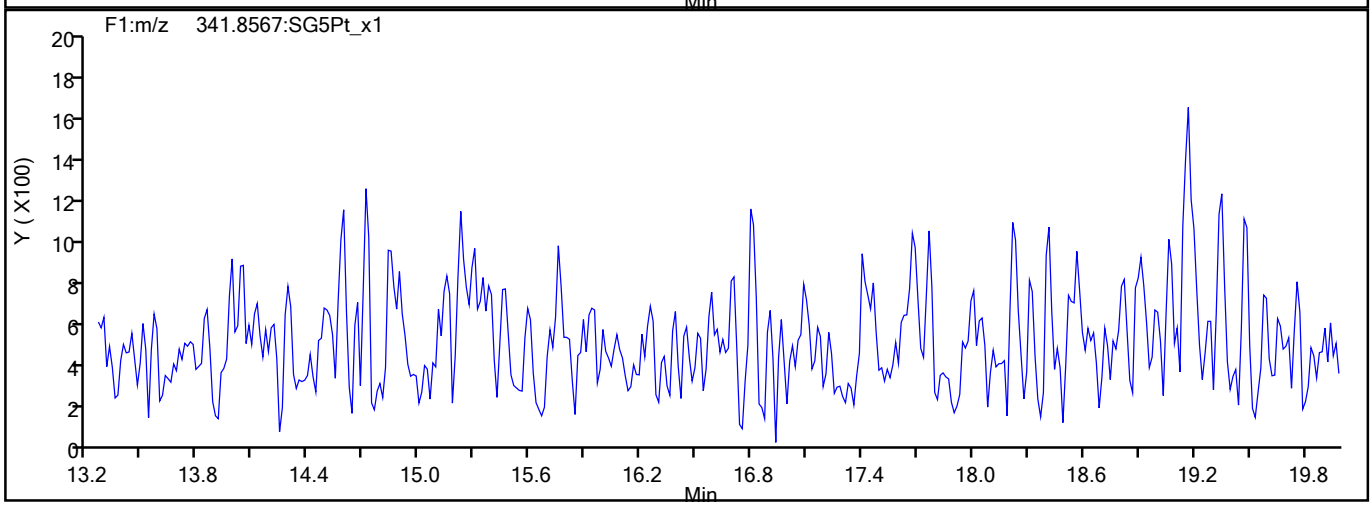

F1 PeCDFs Interference Mass

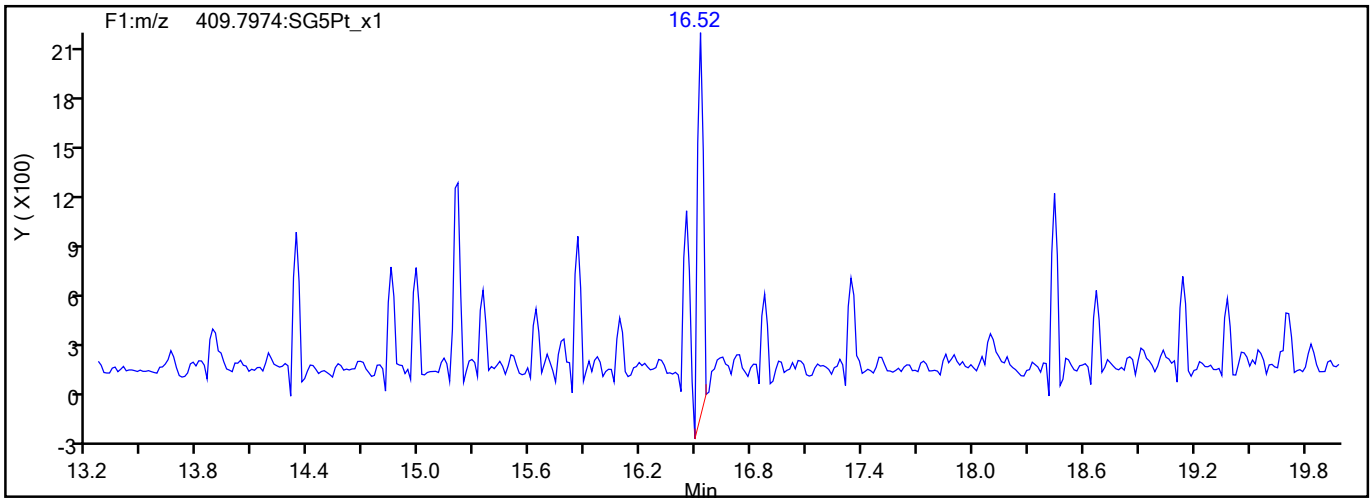

789136

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_15.d		
Injection Date:	30-Aug-2021 22:10:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

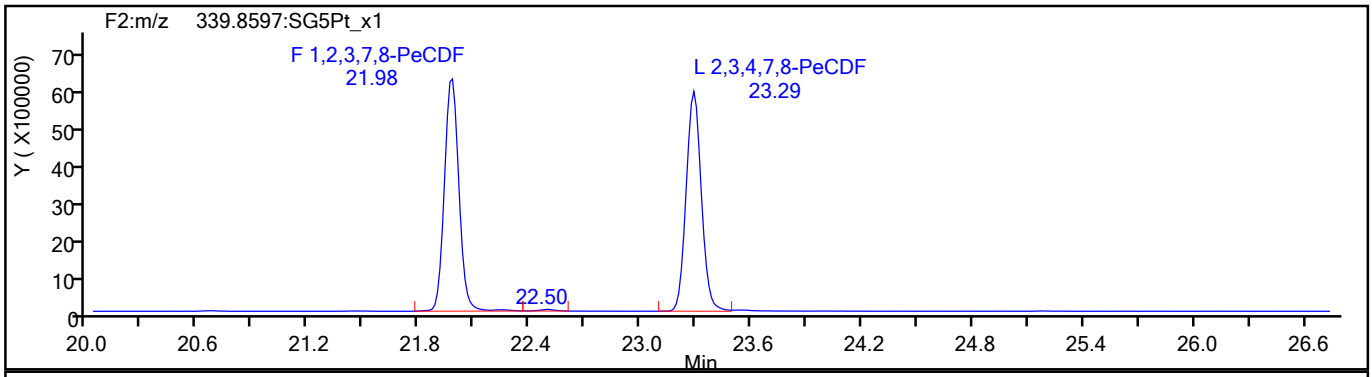

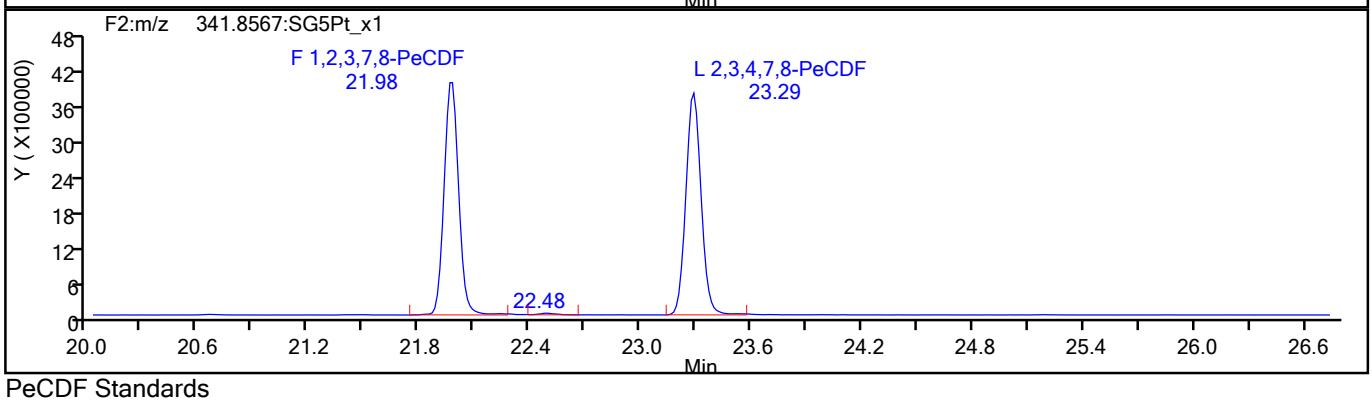

PeCDF Standards

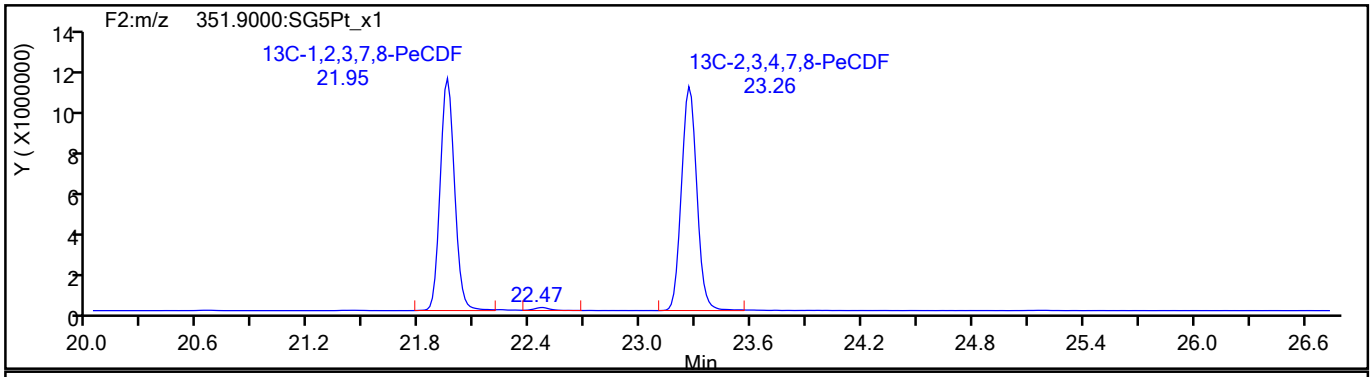

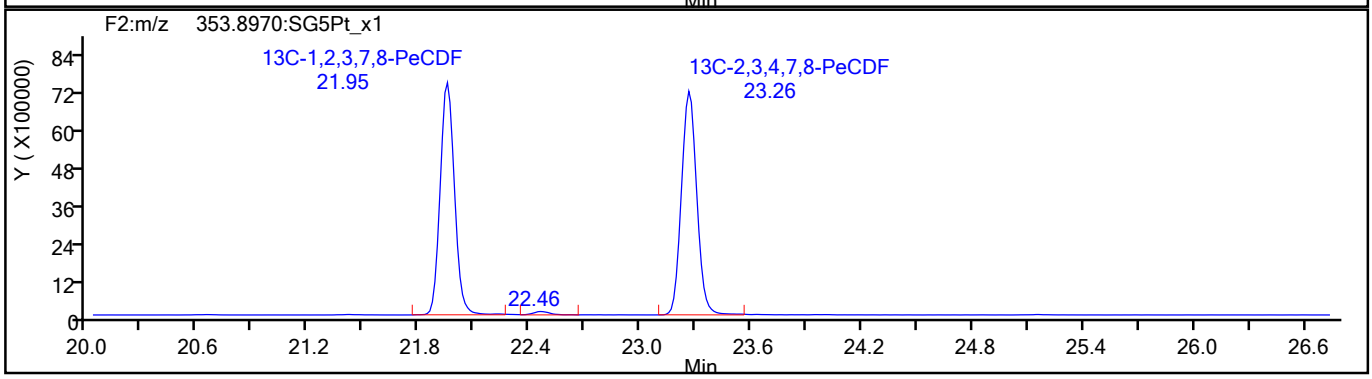

789137

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

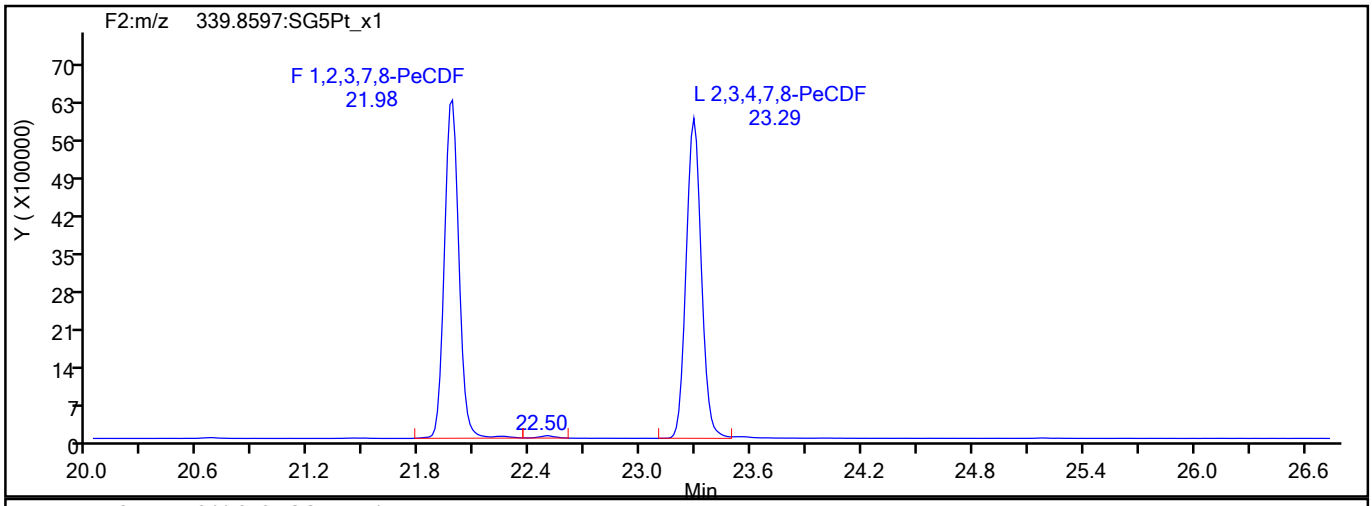

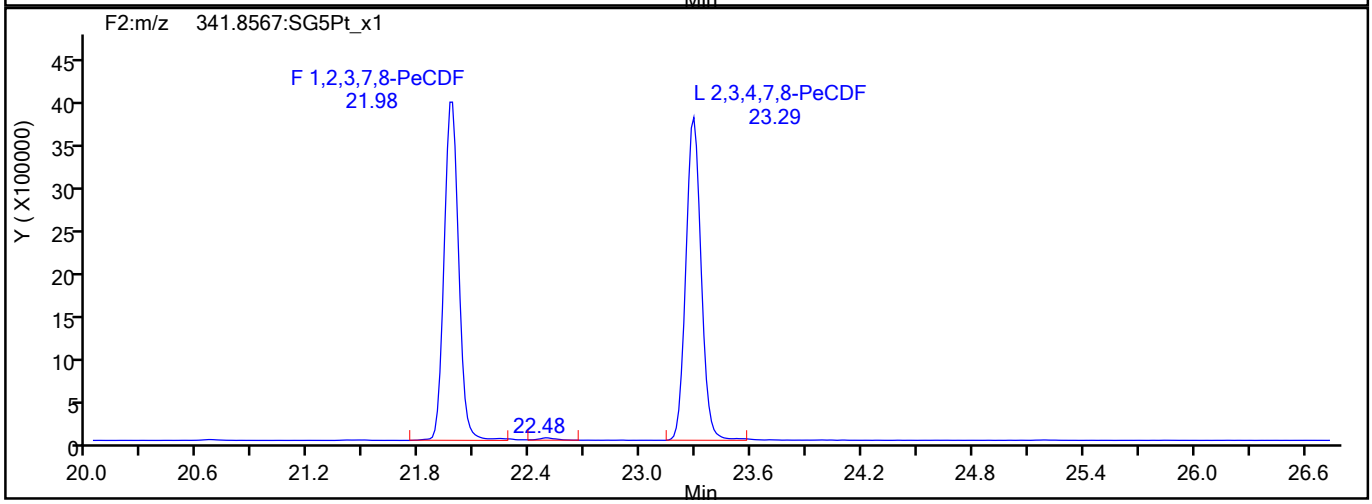

PeCDF Interference Mass

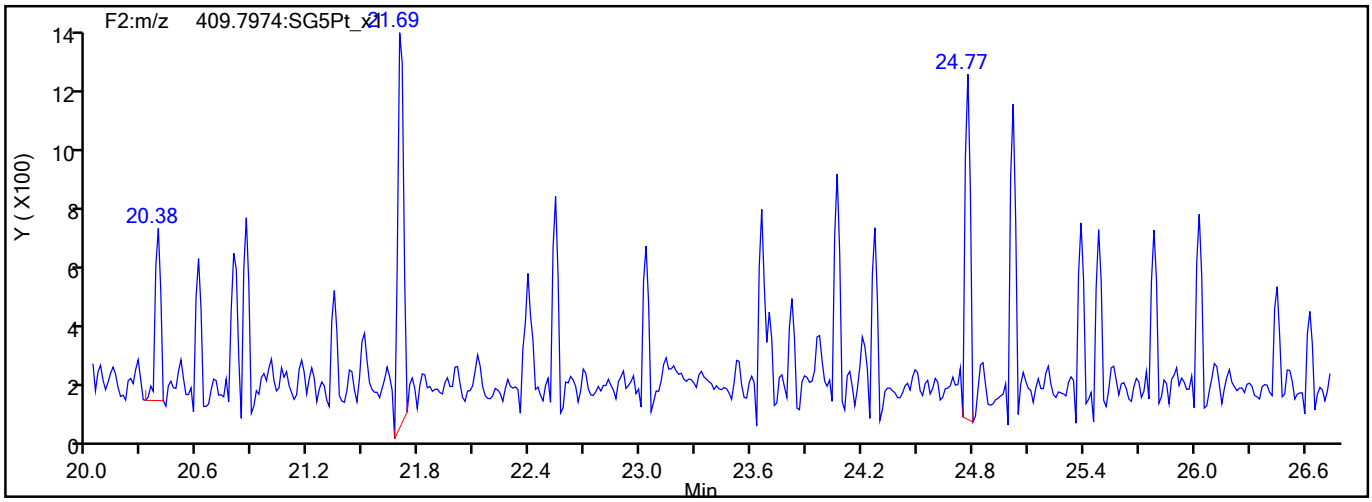

789138

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	30-Aug-2021 22:10:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

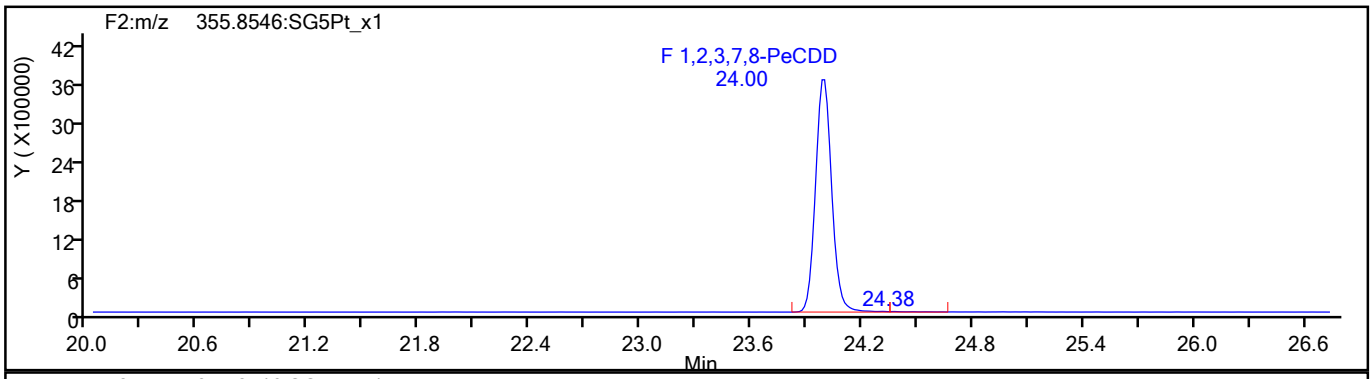

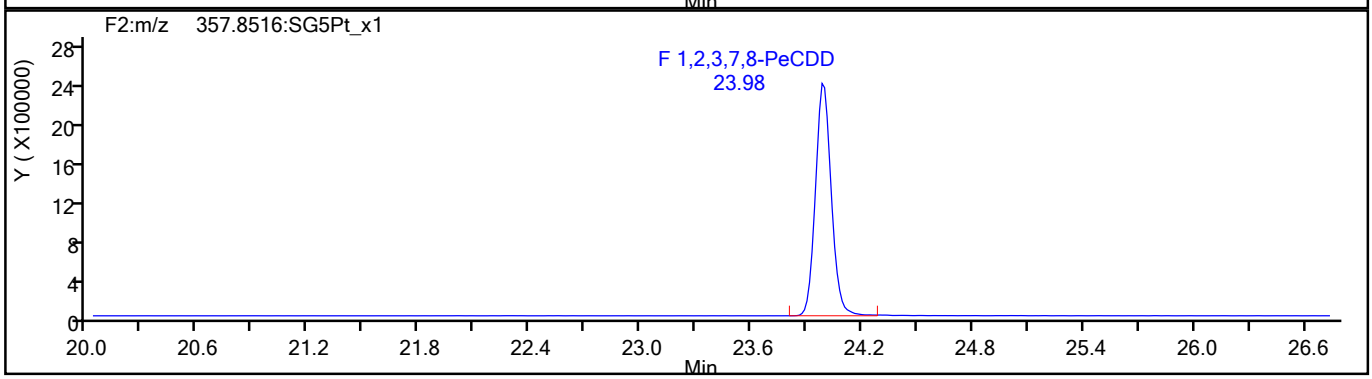

PeCDD Standards

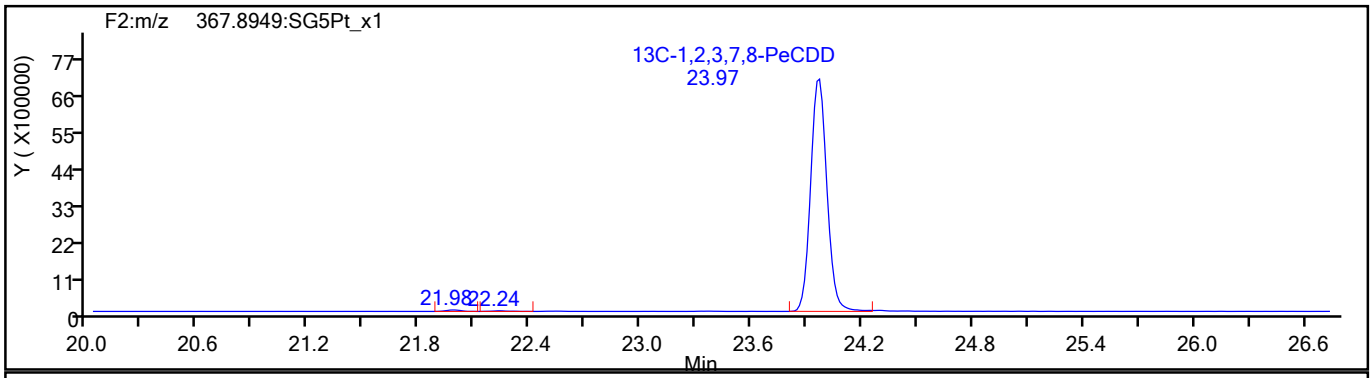

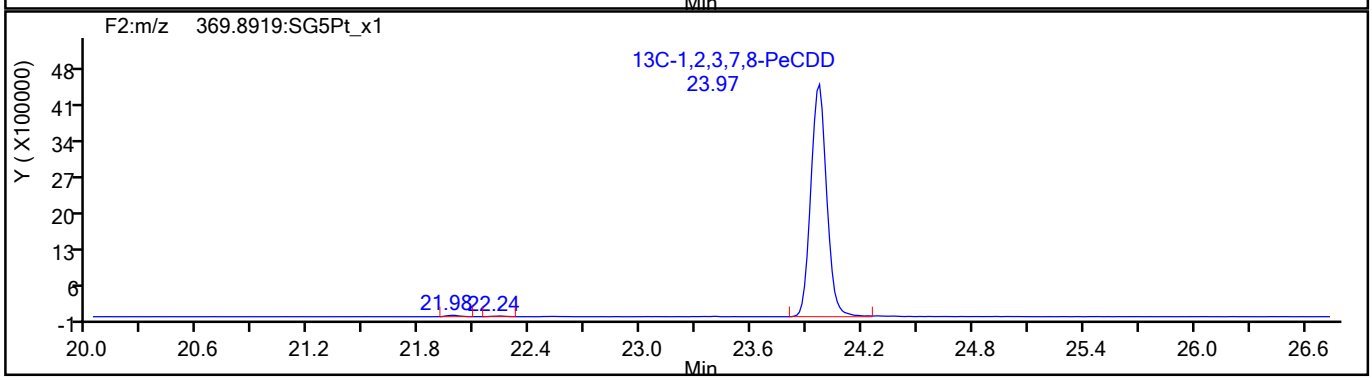

789139

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_15.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

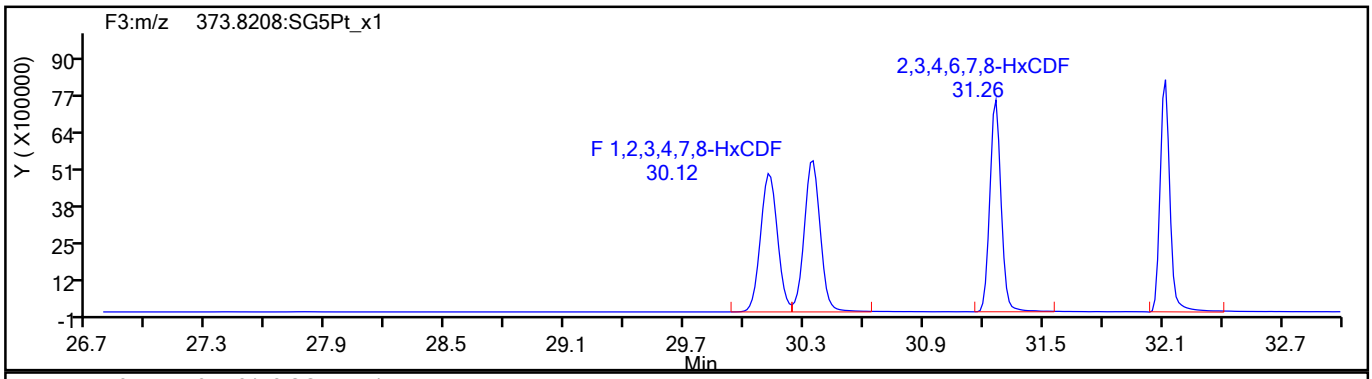

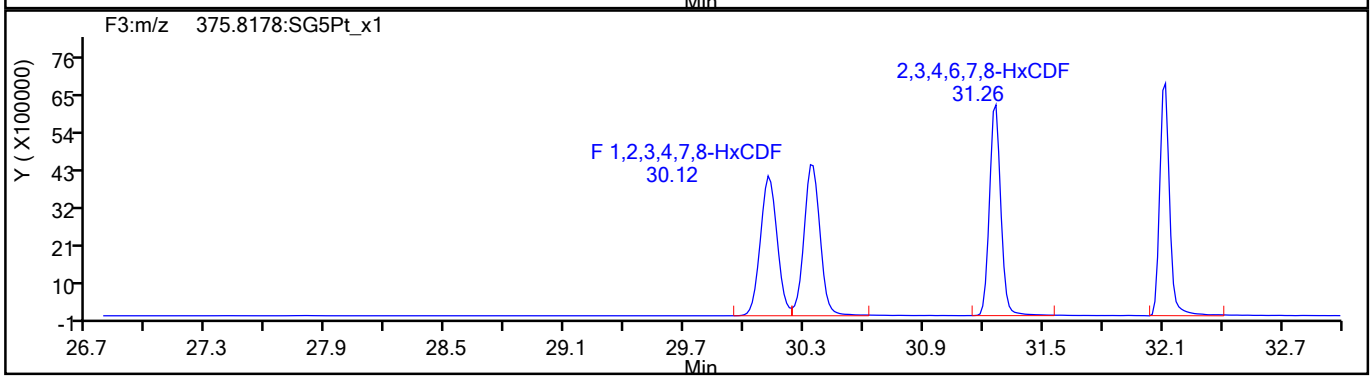

HxCDF Standards

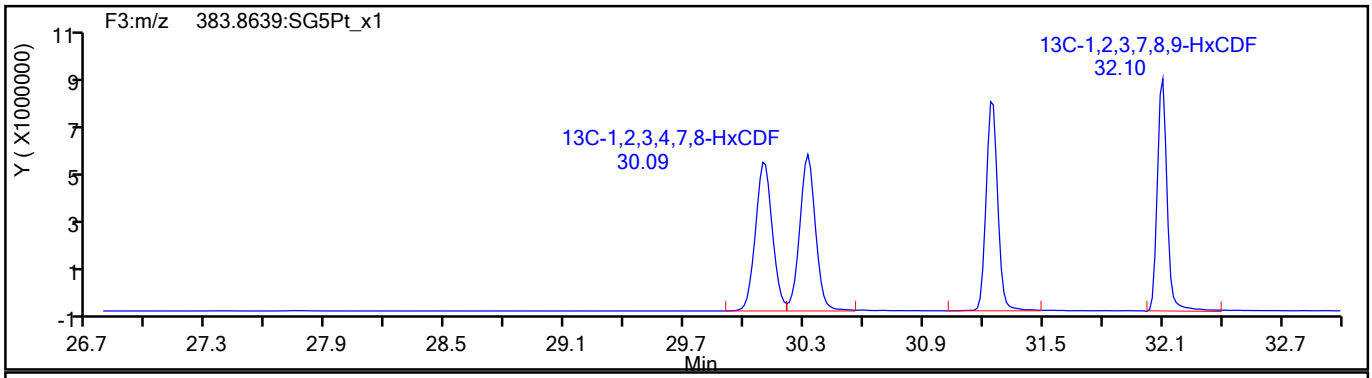

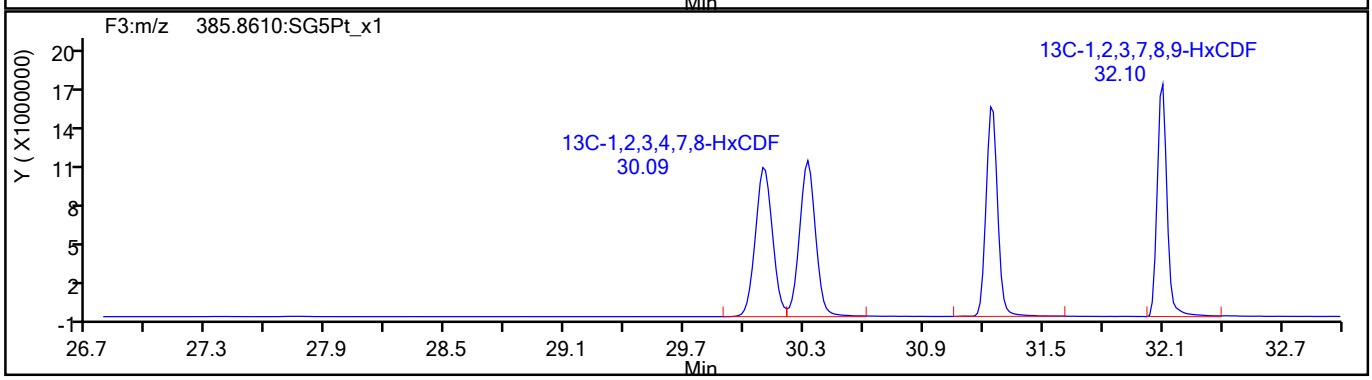

789140

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

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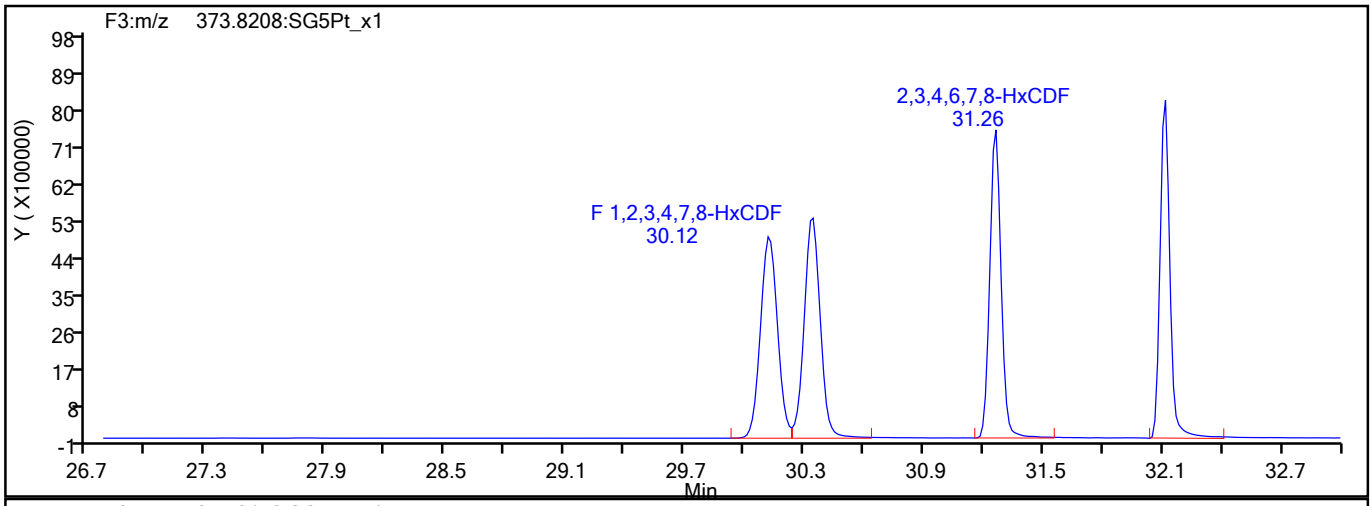

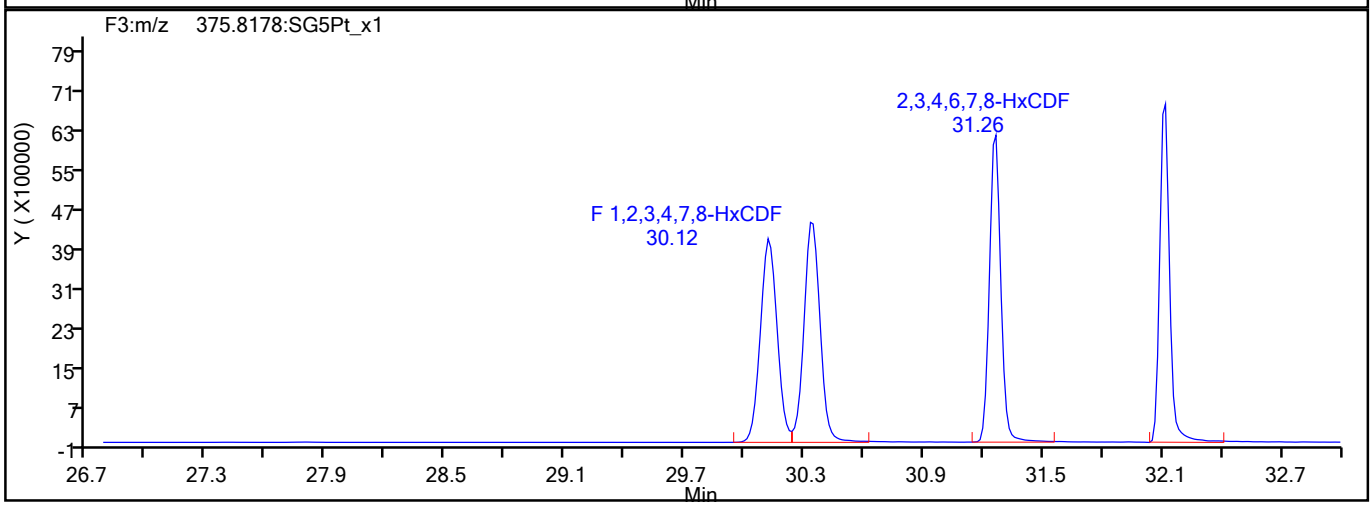

HxCDF Interference Mass

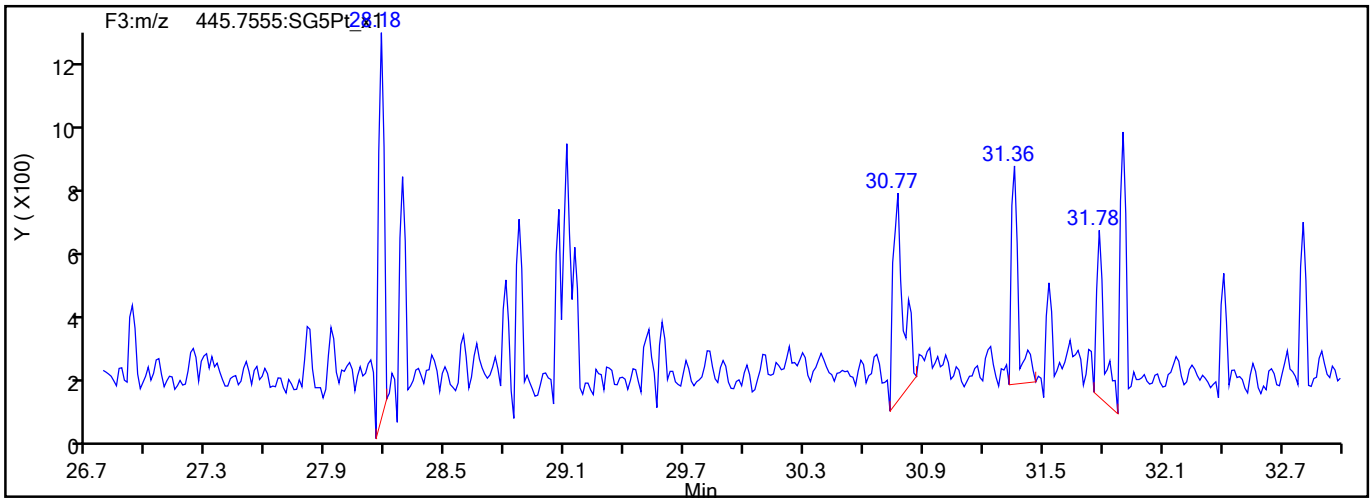

789141

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

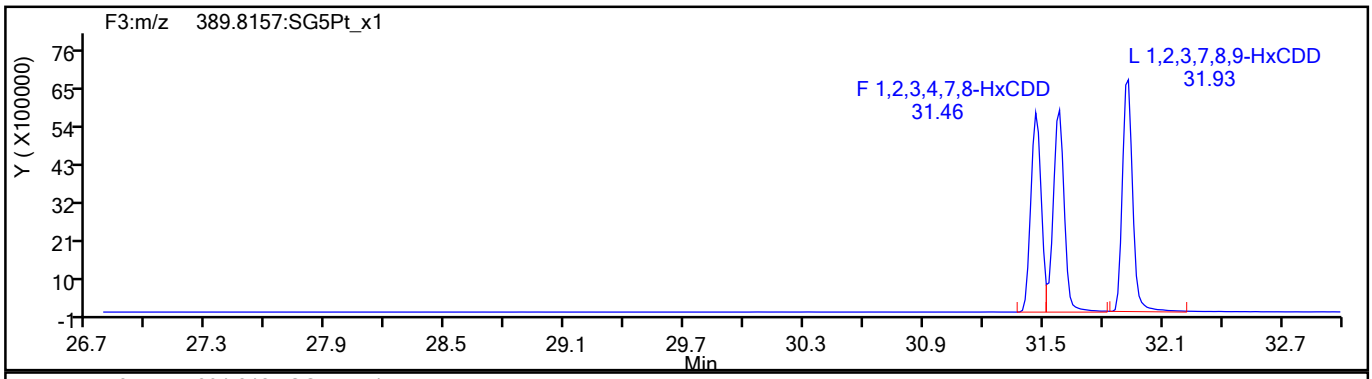

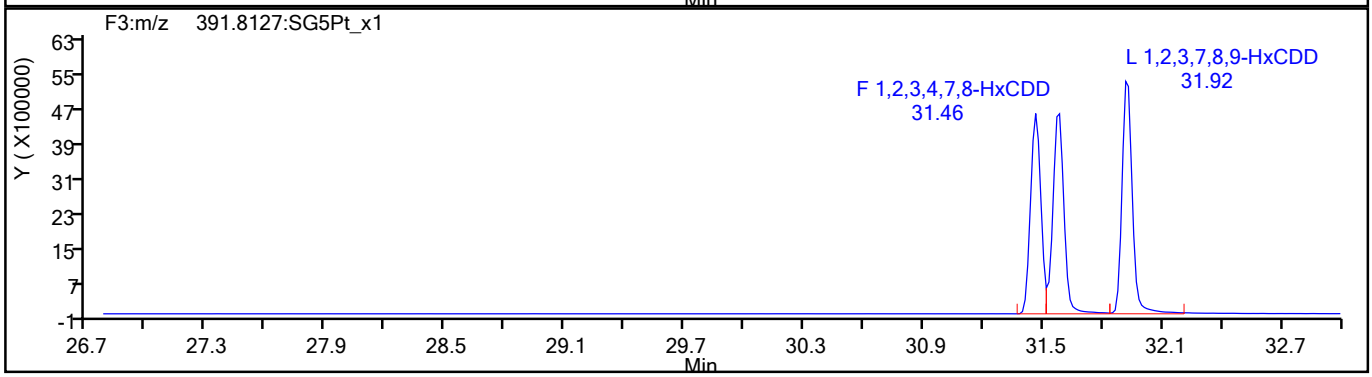

HxCDD Standards

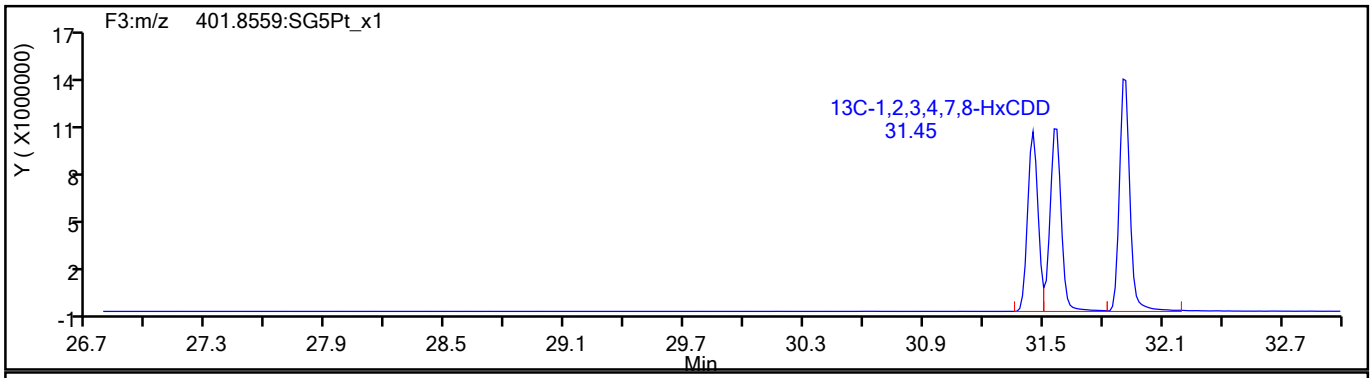

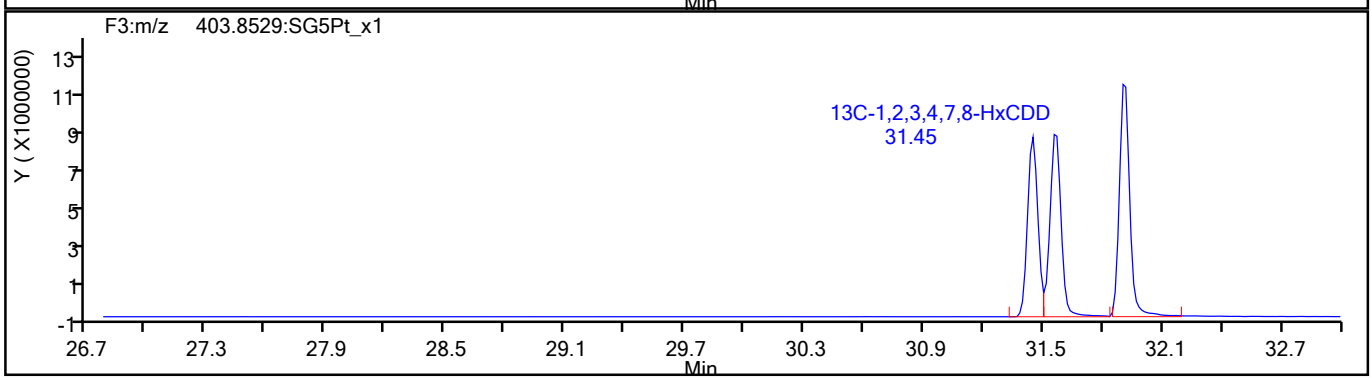

789142

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

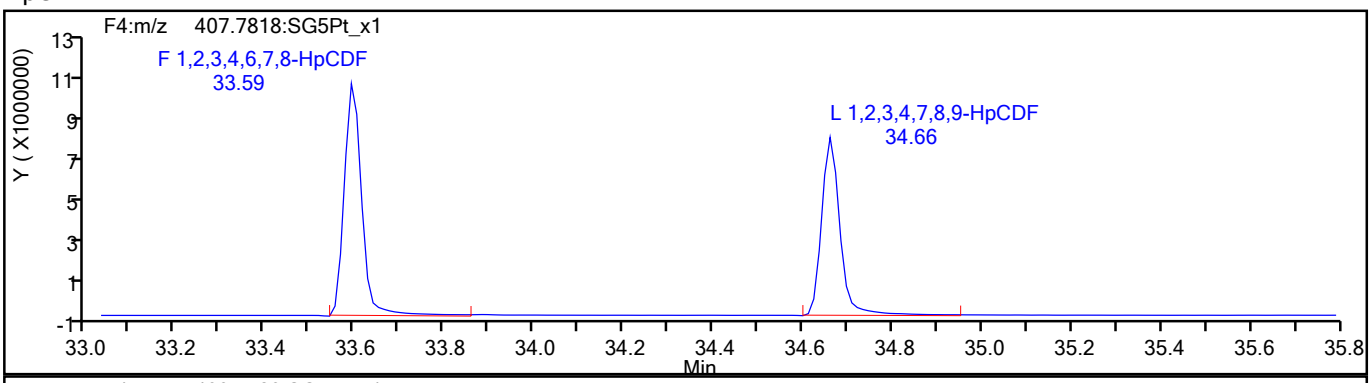

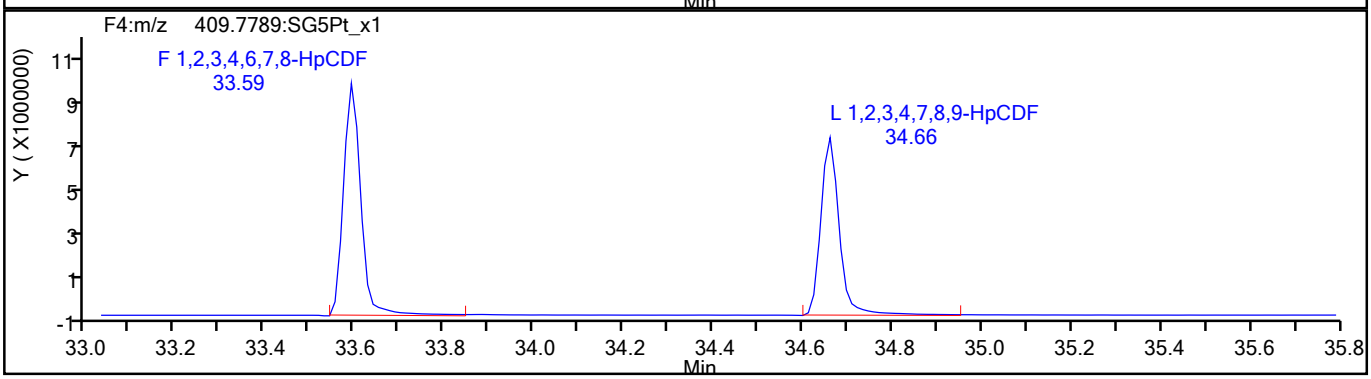

HpCDF Standards

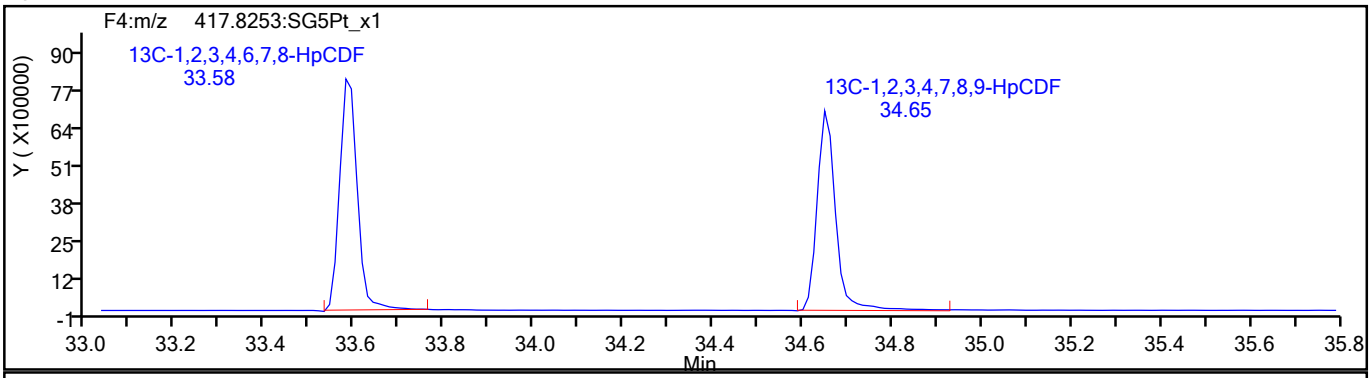

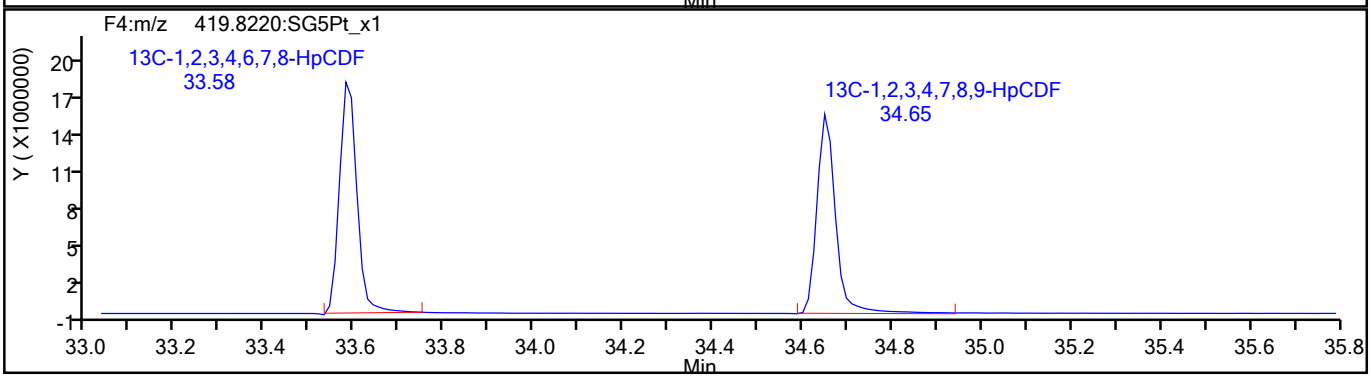

789143

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

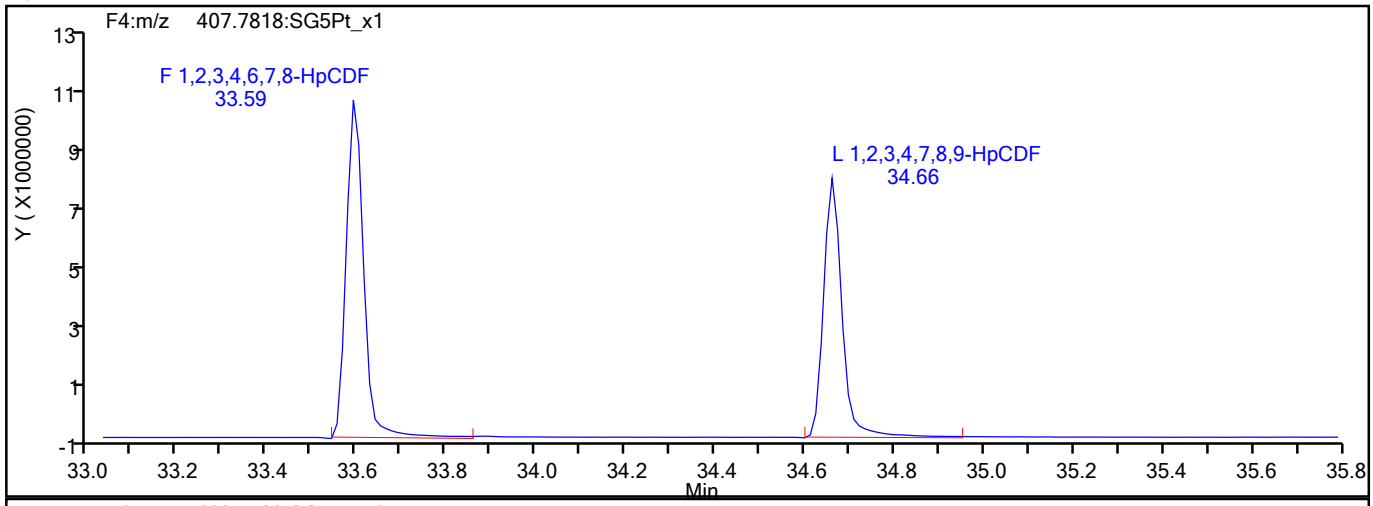

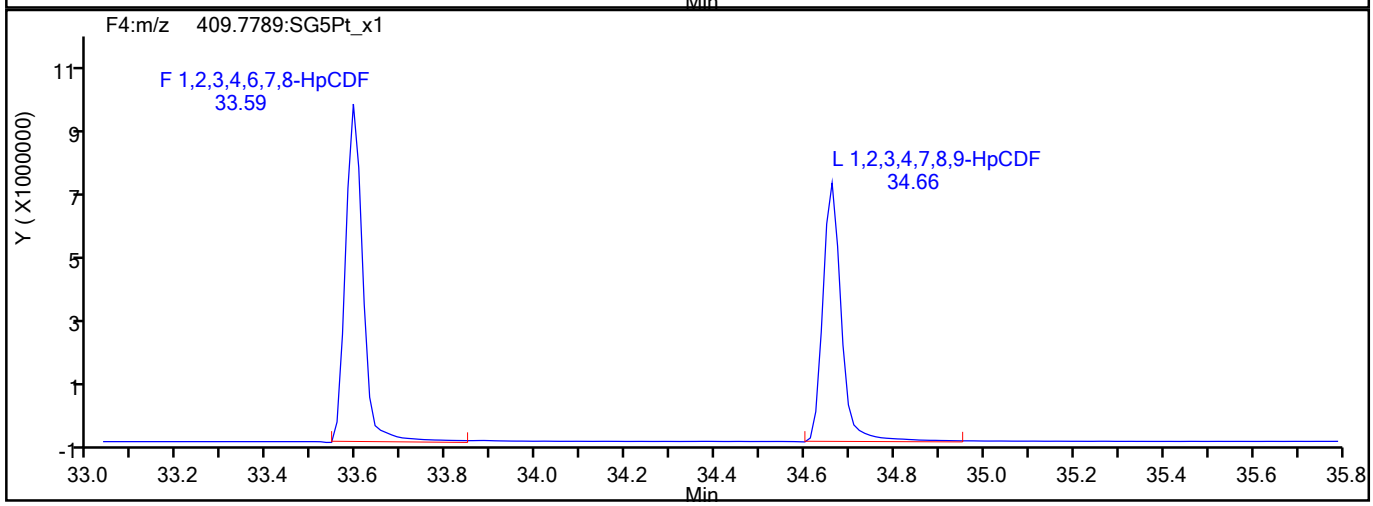

HpCDF Interference Mass

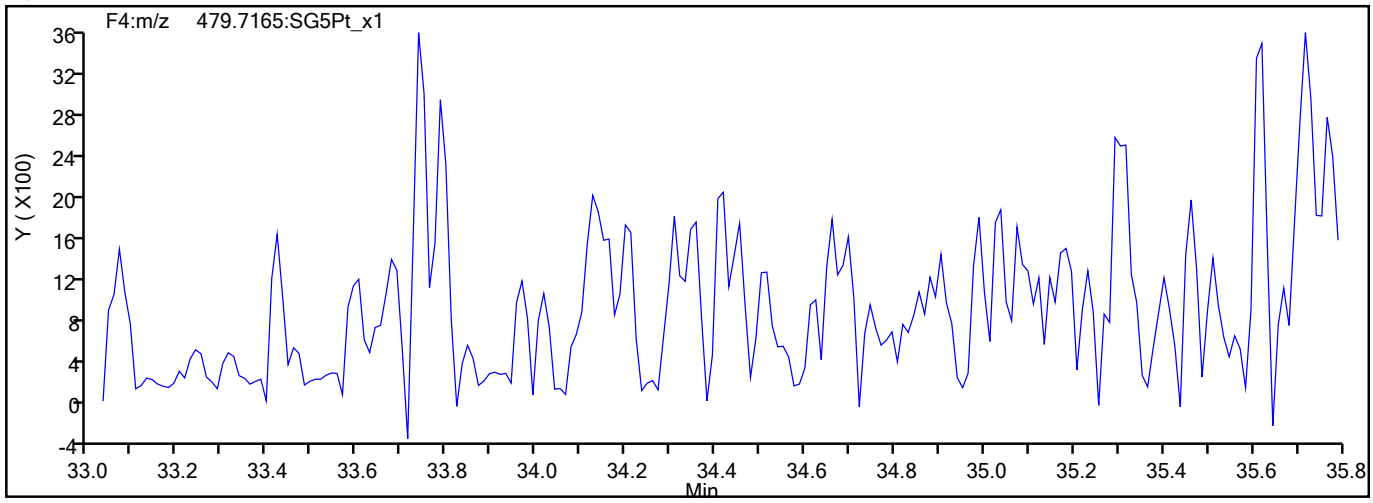

789144

Report Date: 31-Aug-2021 16:05:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDD

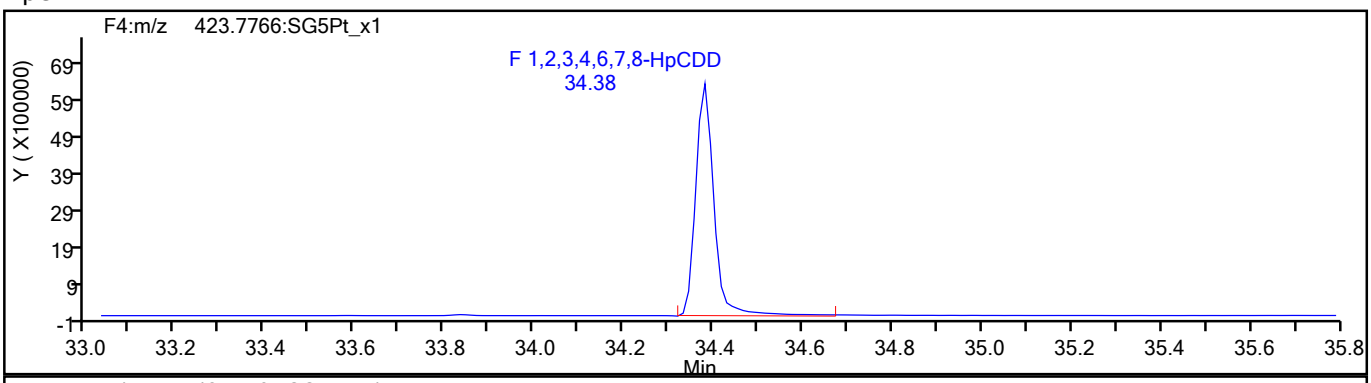

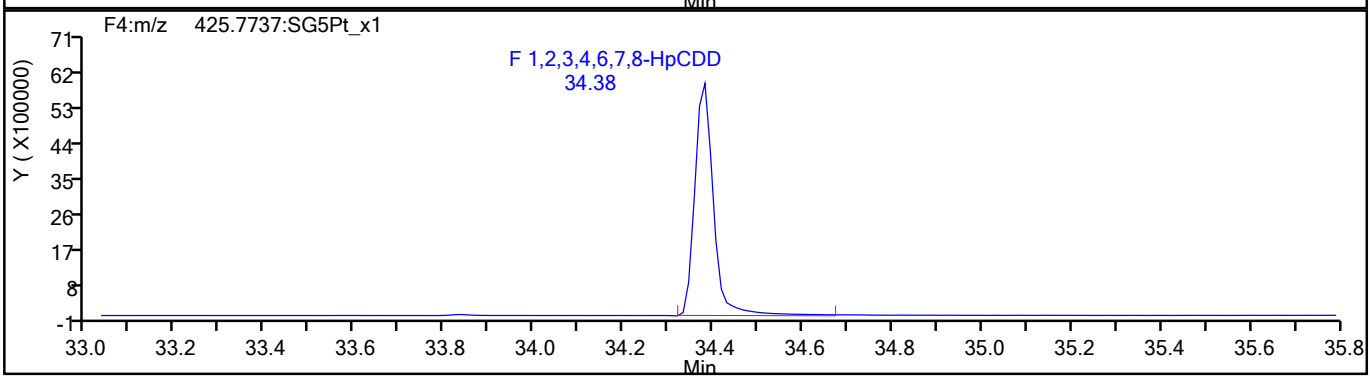

HpCDD Standards

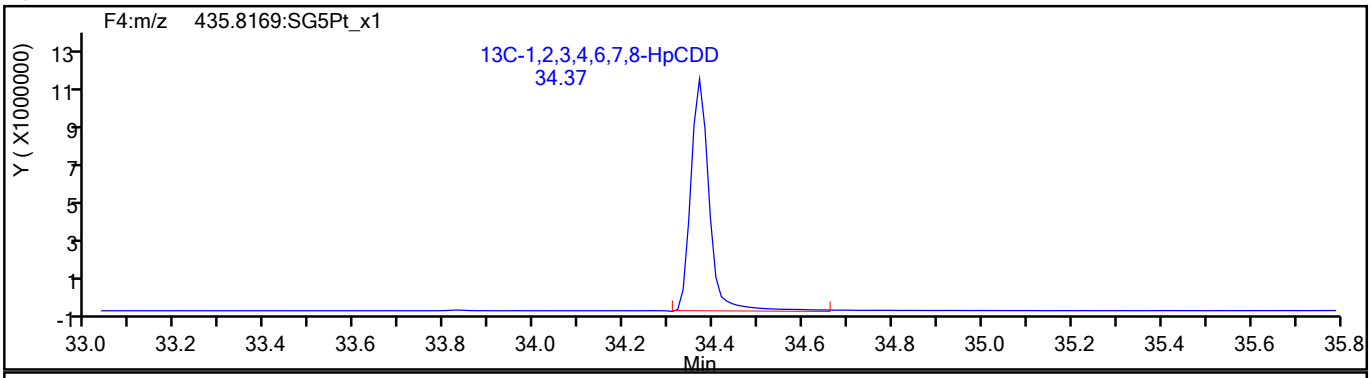

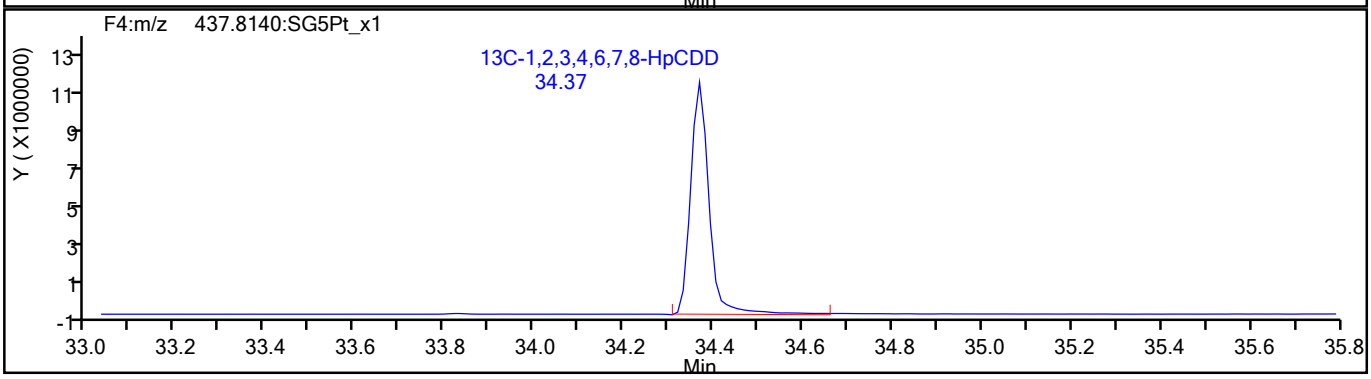

789145

Report Date: 31-Aug-2021 16:05:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

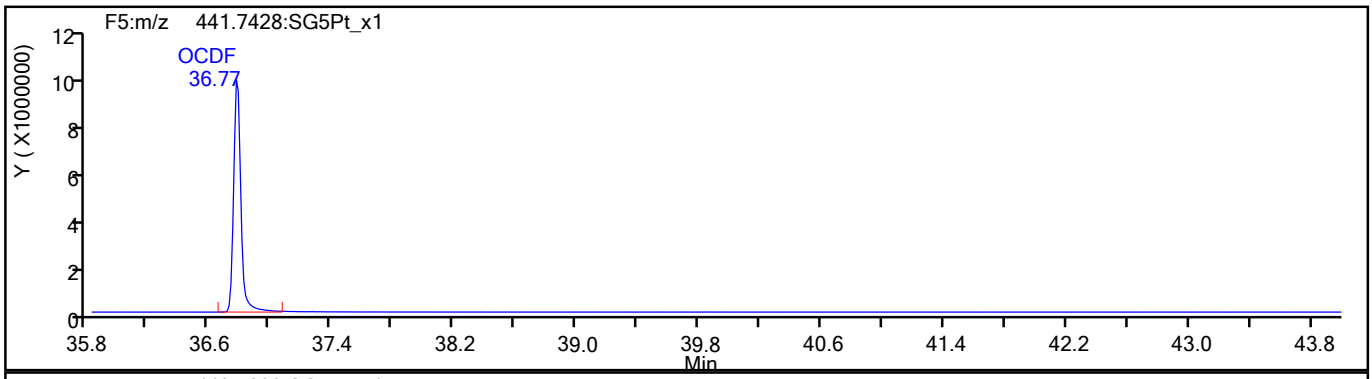

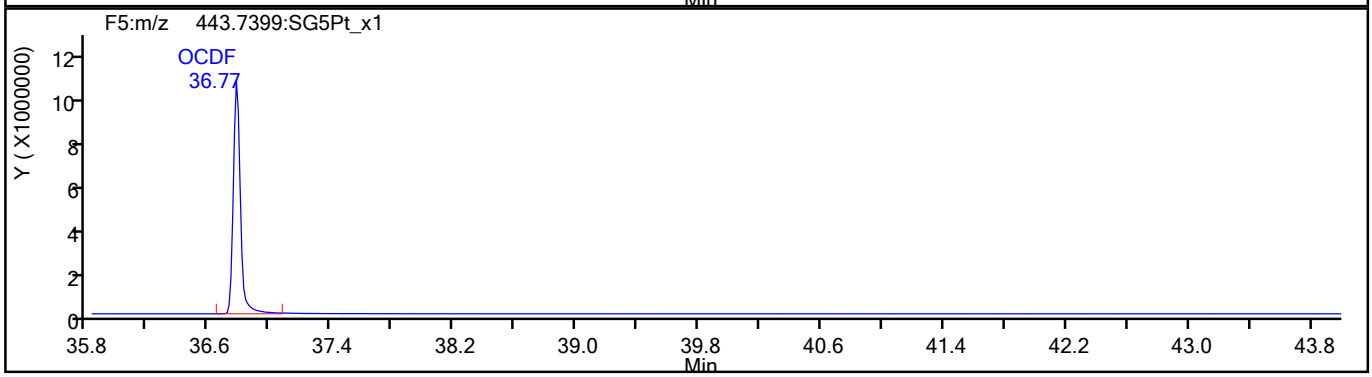

OCDF Standards

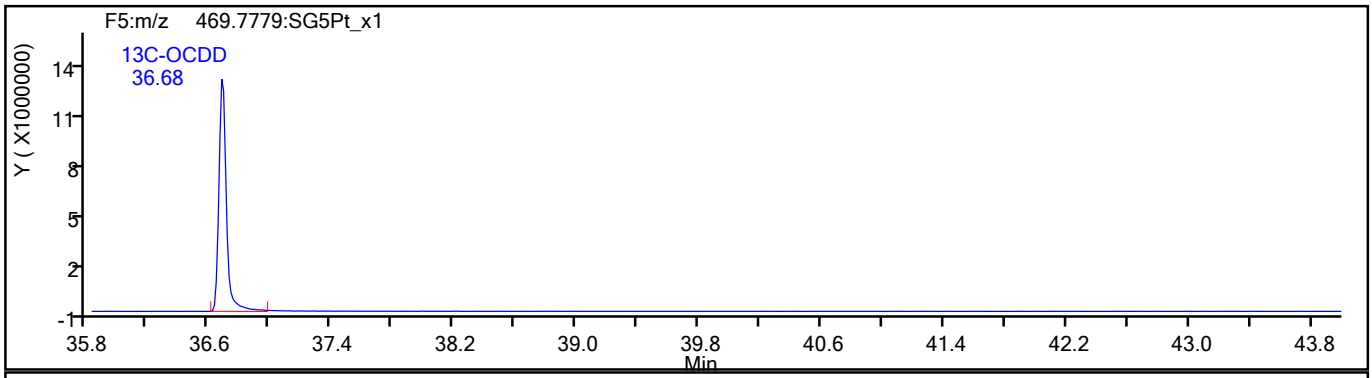

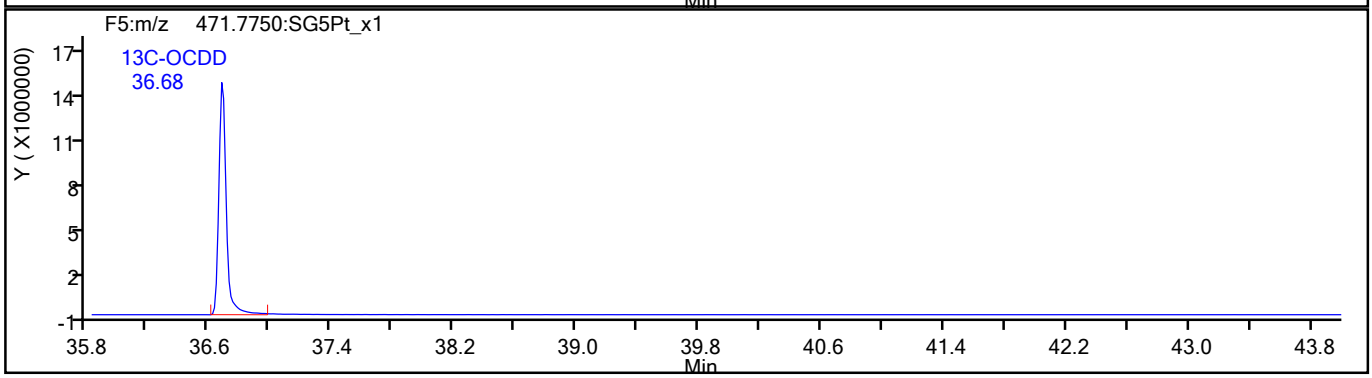

789146

Report Date: 31-Aug-2021 16:05:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

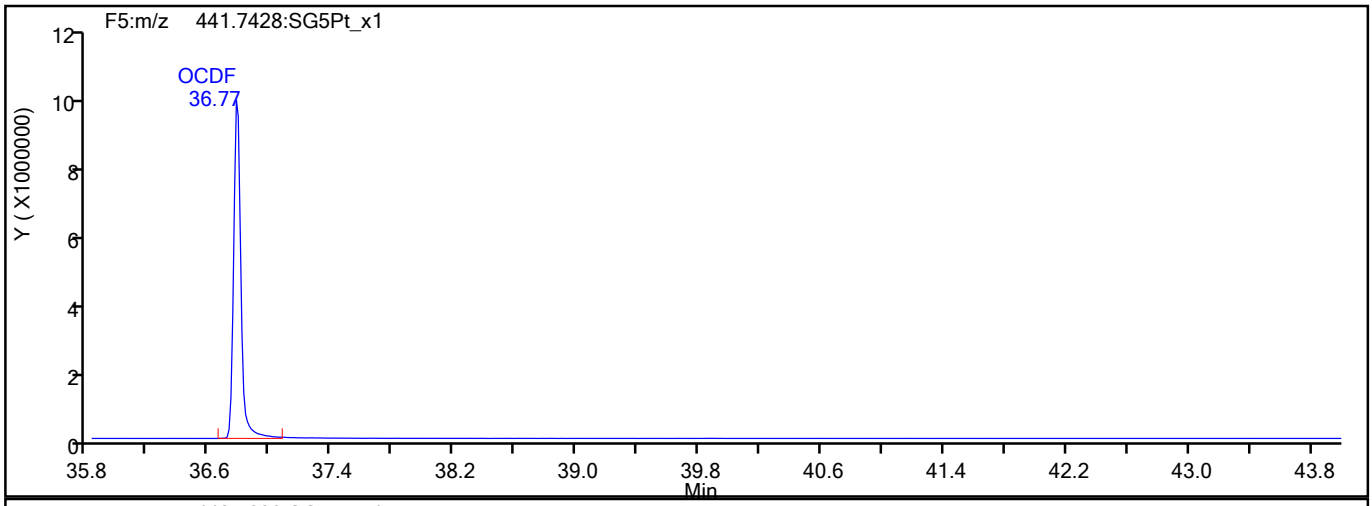

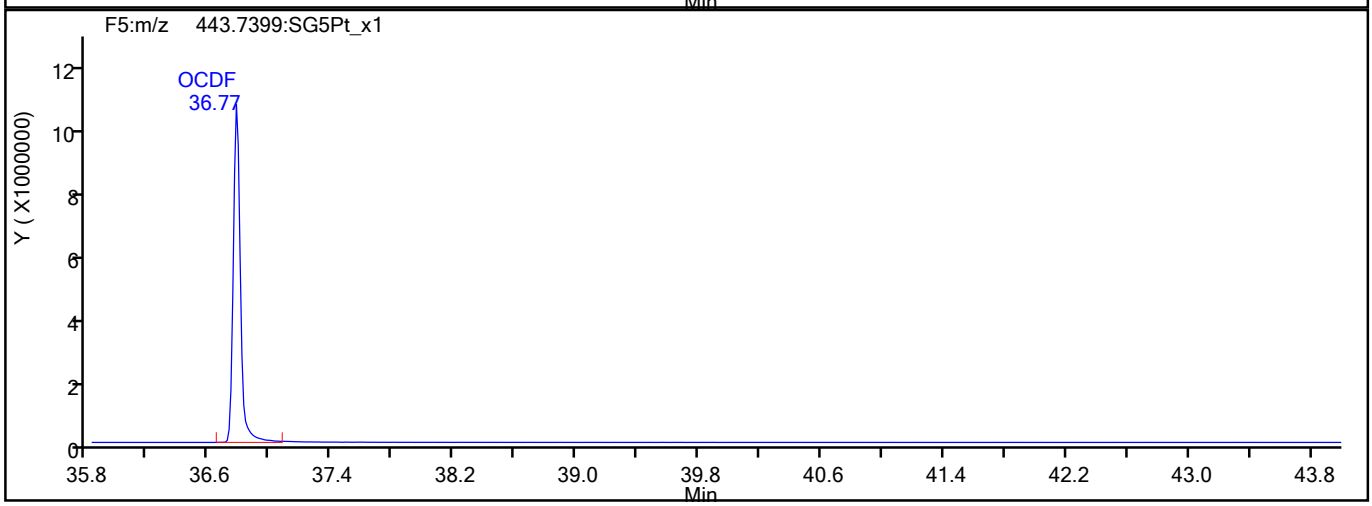

OCDF Interference Mass

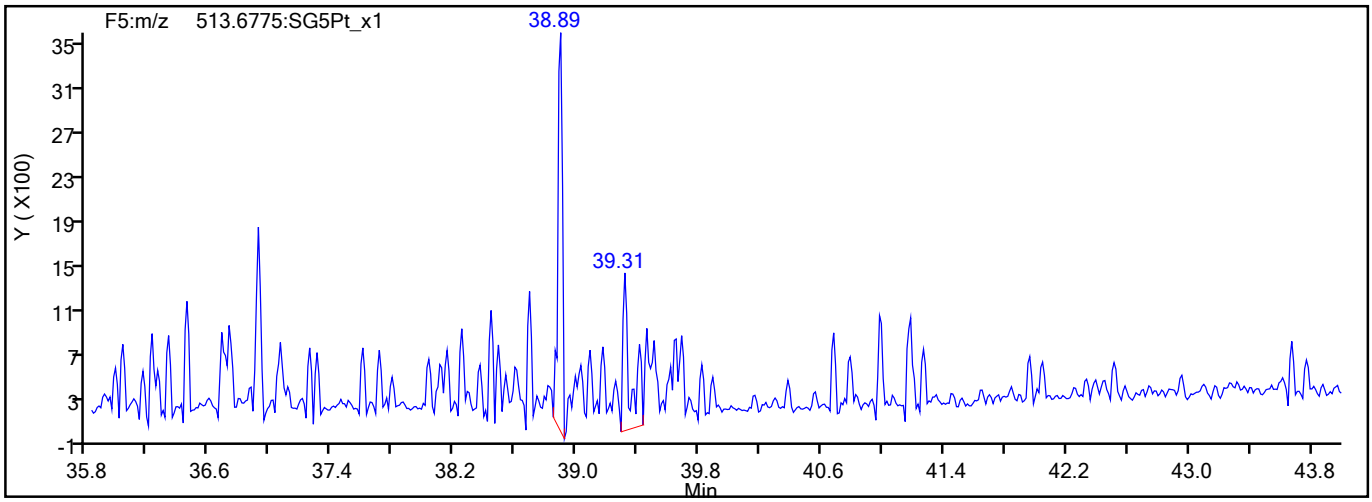

789147

Report Date: 31-Aug-2021 16:05:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

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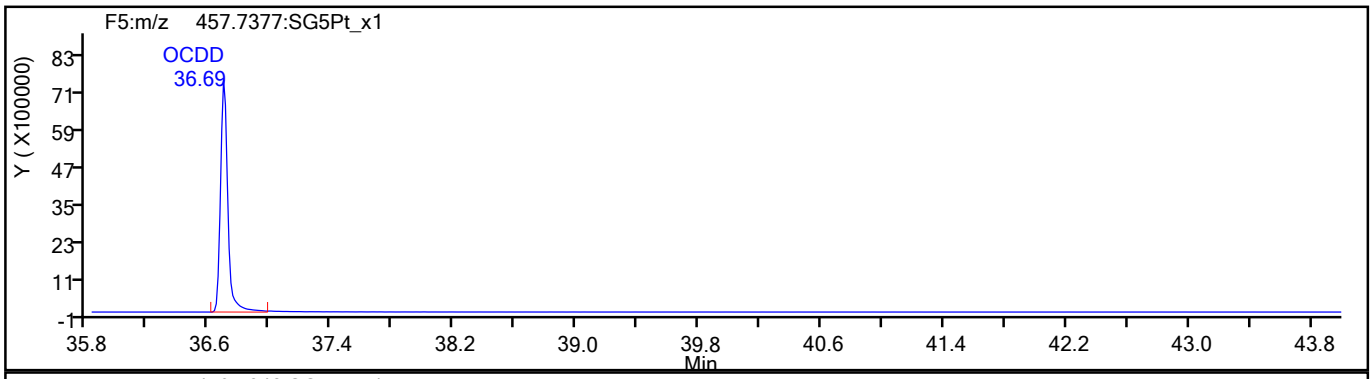

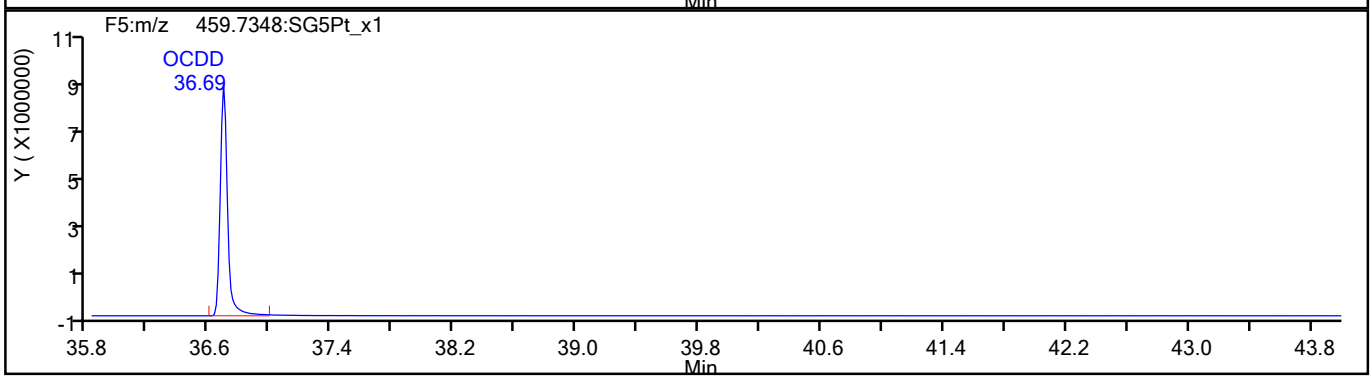

OCDD Standards

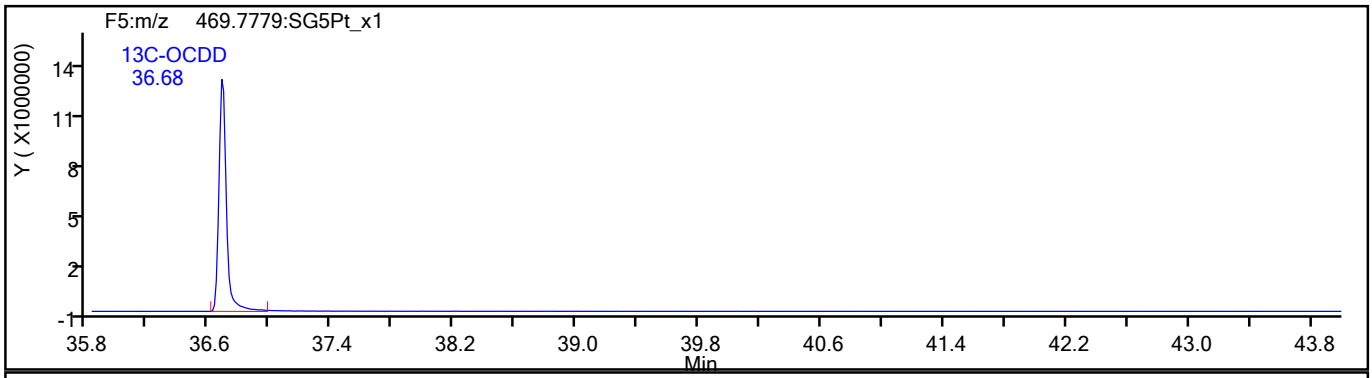

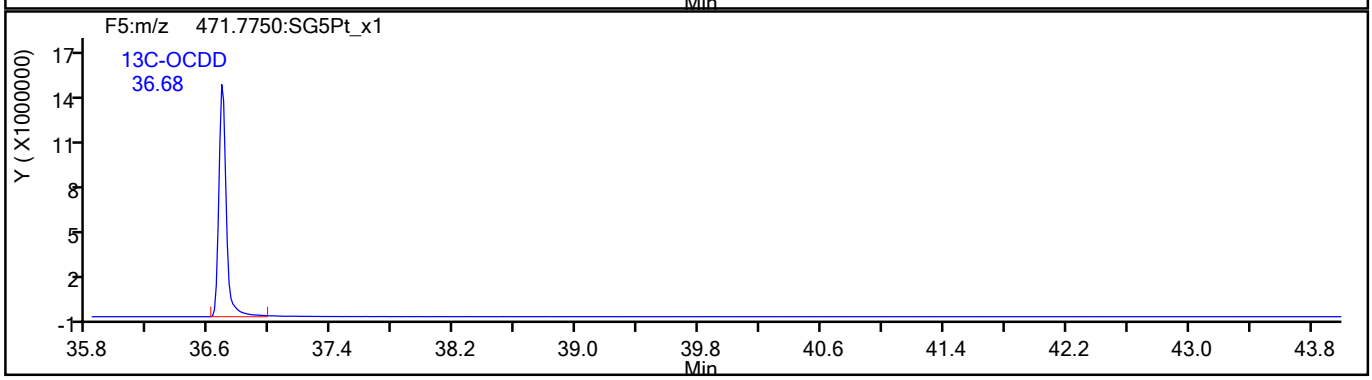

789148

Report Date: 31-Aug-2021 16:05:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

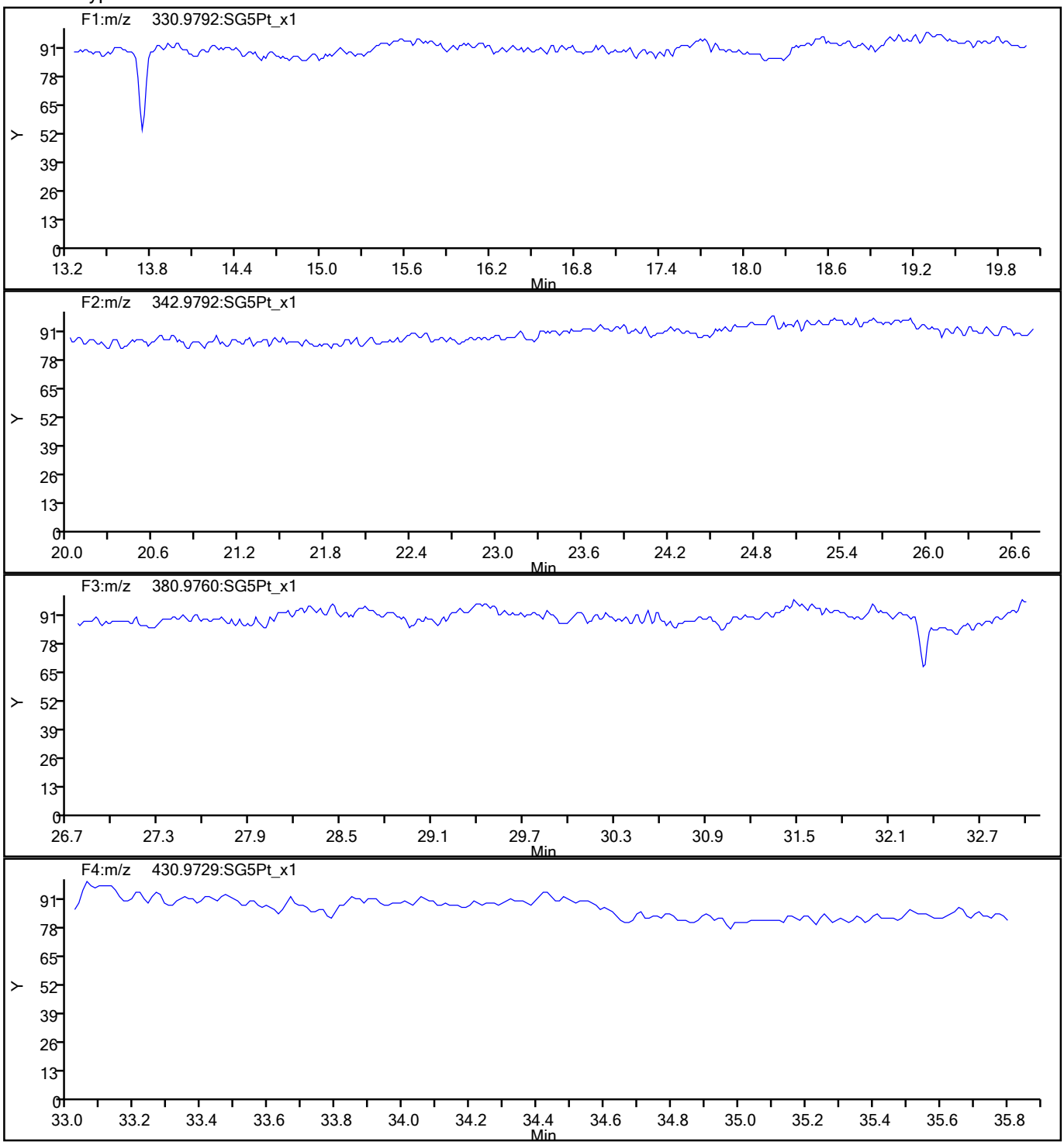

789149

Report Date: 31-Aug-2021 16:05:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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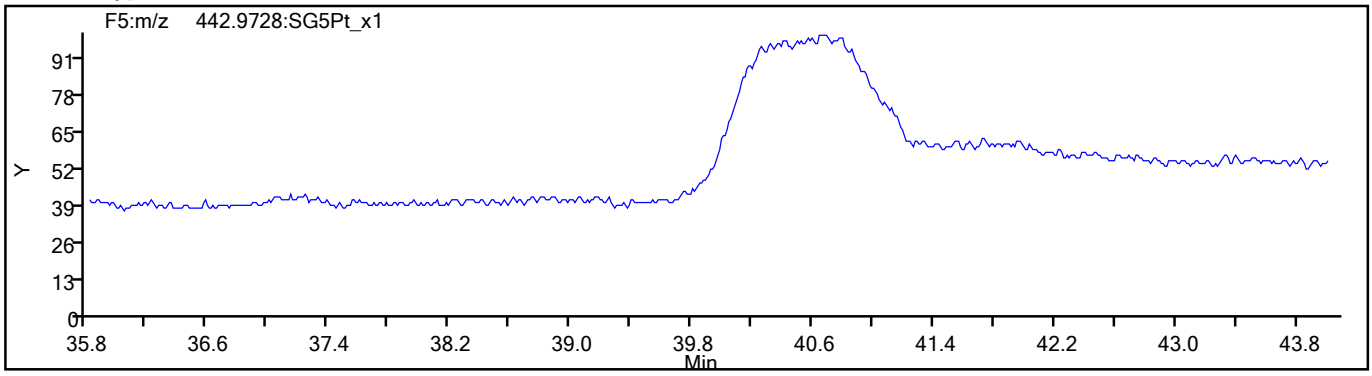

789150

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

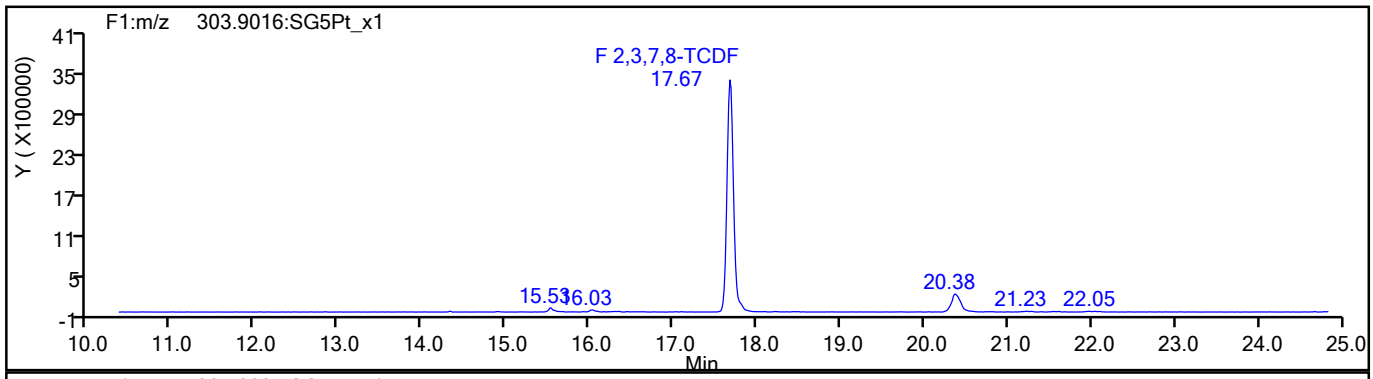

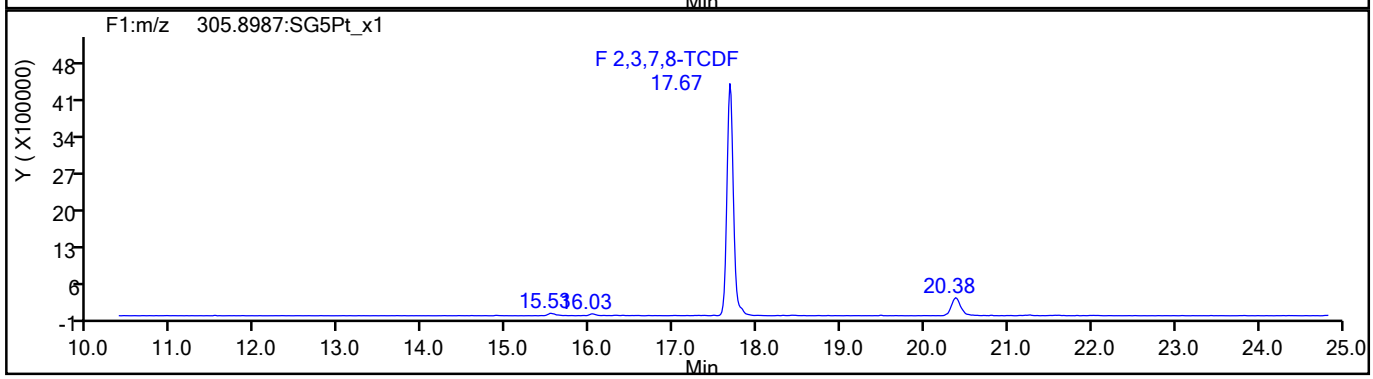

TCDF Standards

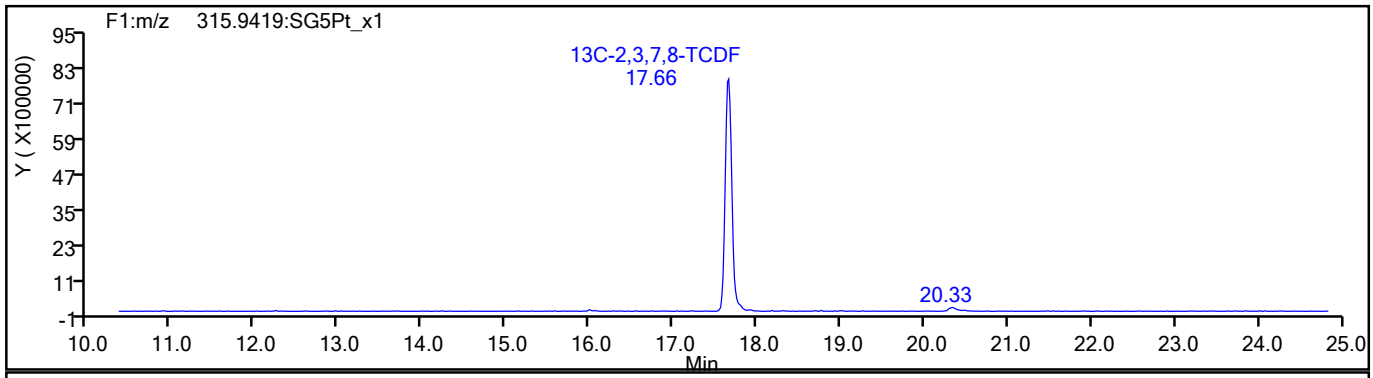

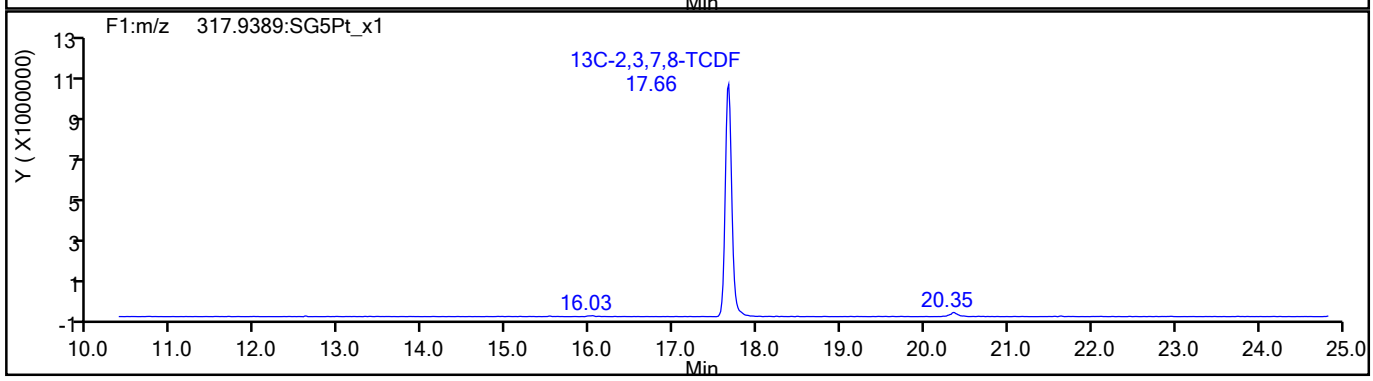

789154

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

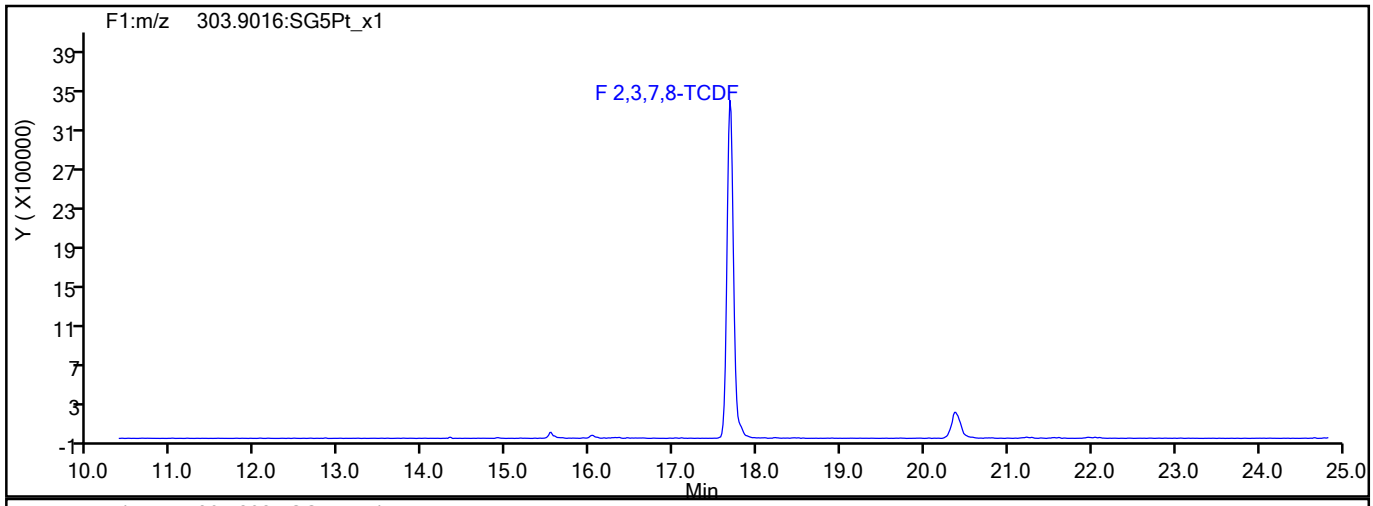

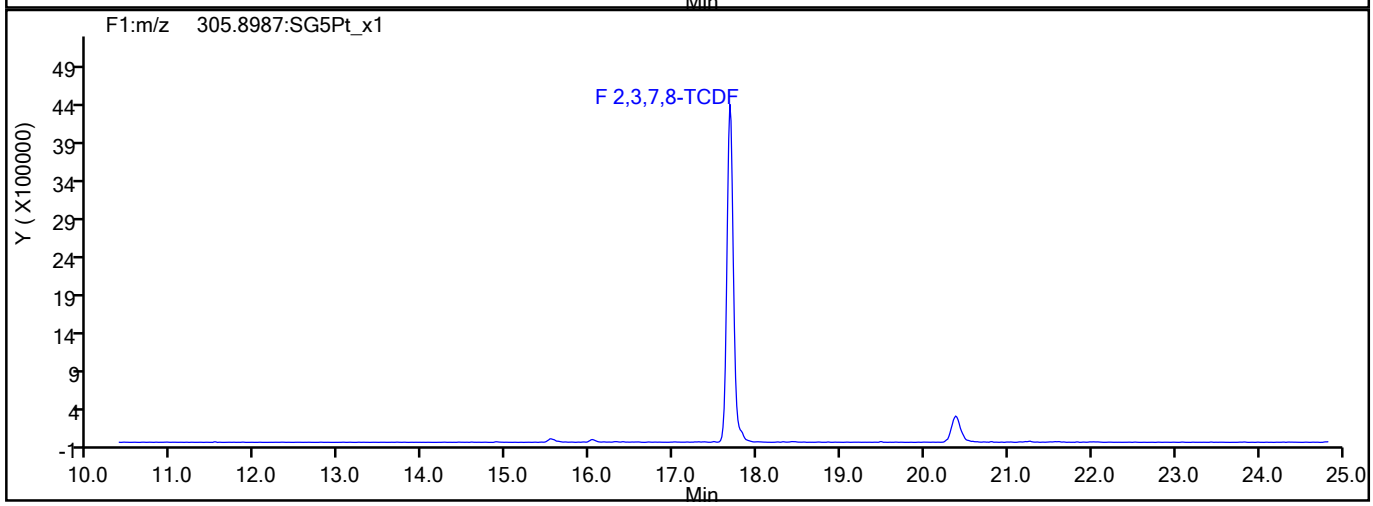

TCDF Interference Mass

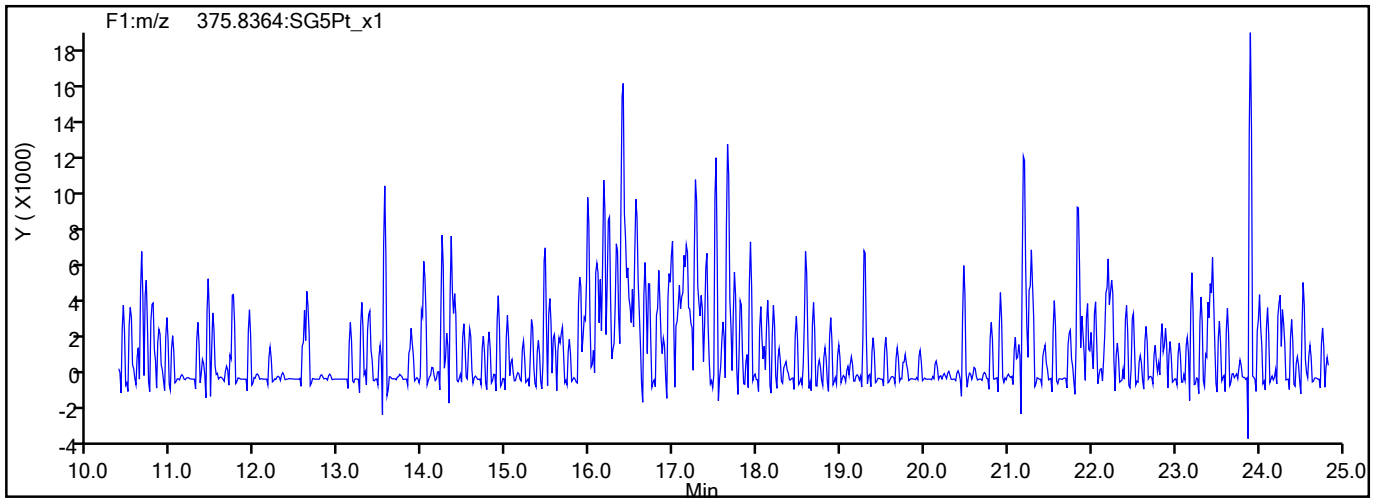

789155

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

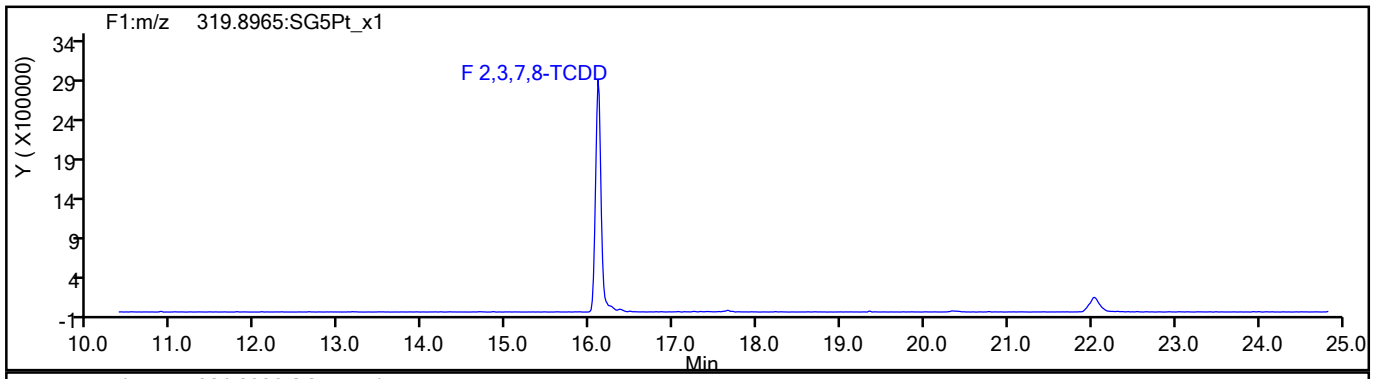

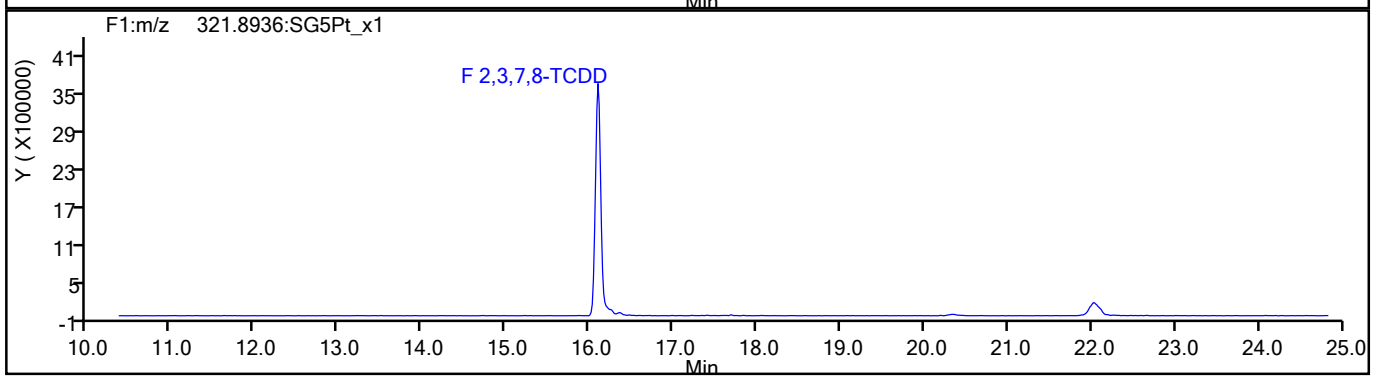

TCDD Standards

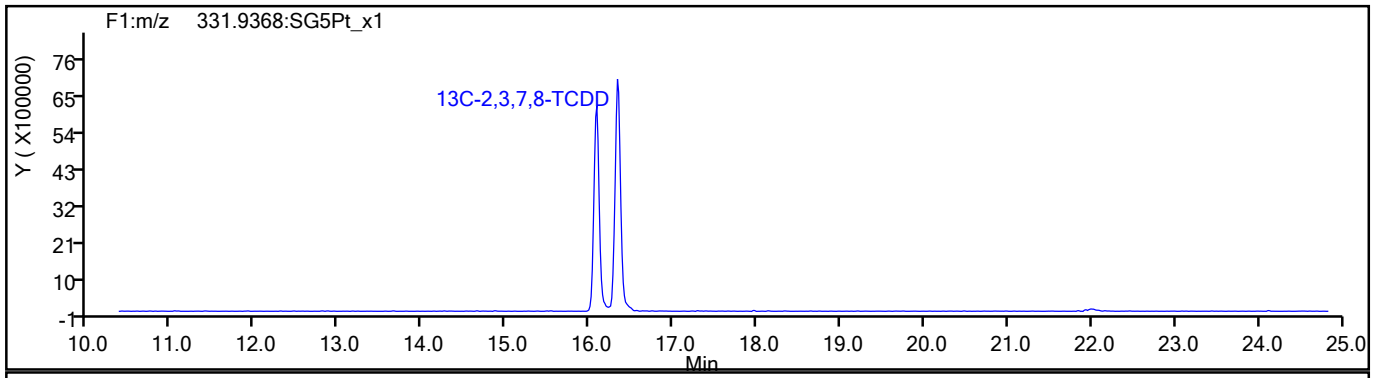

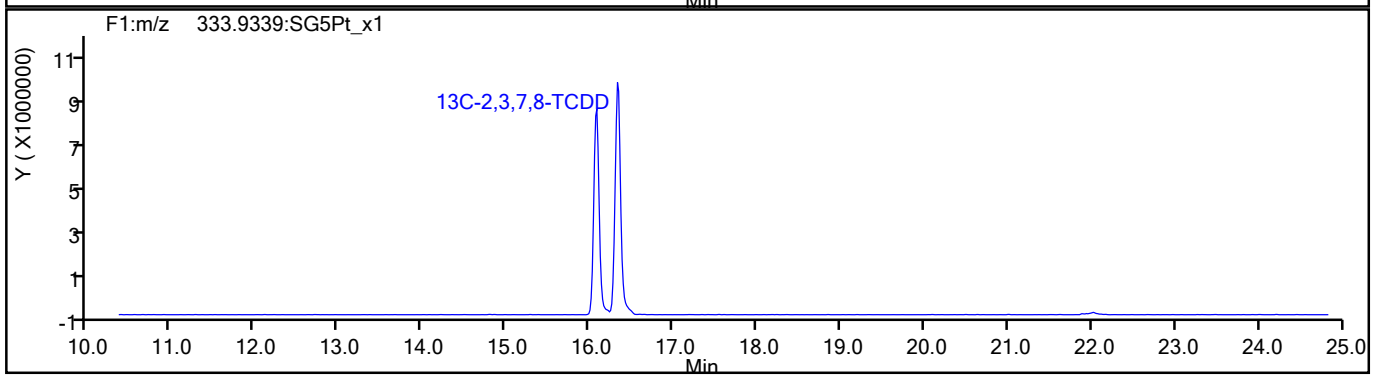

789156

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

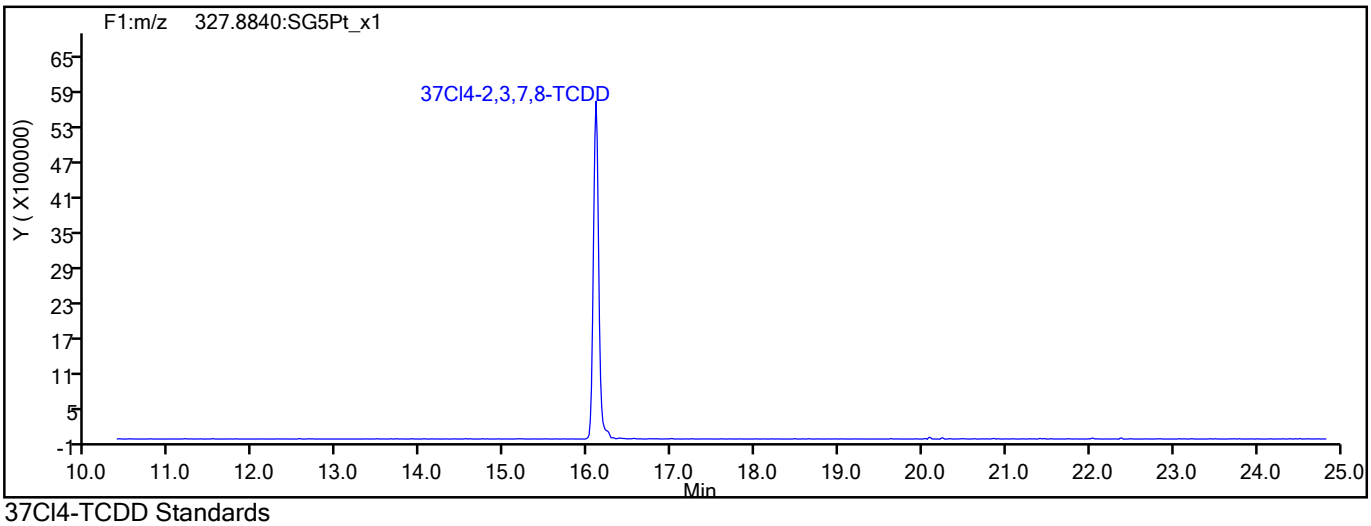

37Cl4-TCDD Standards

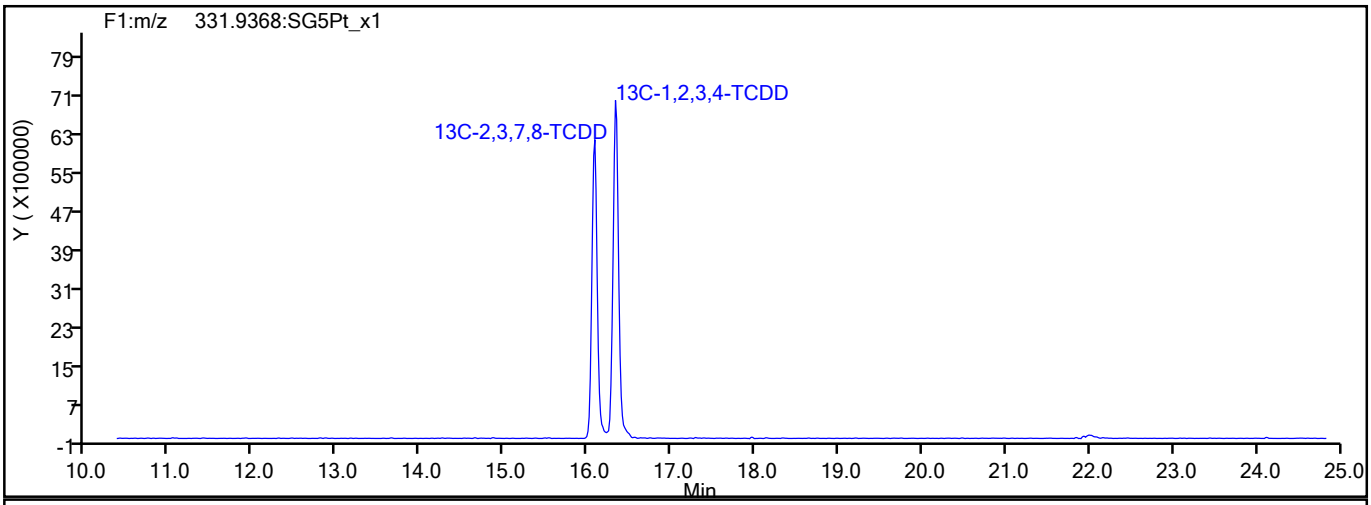

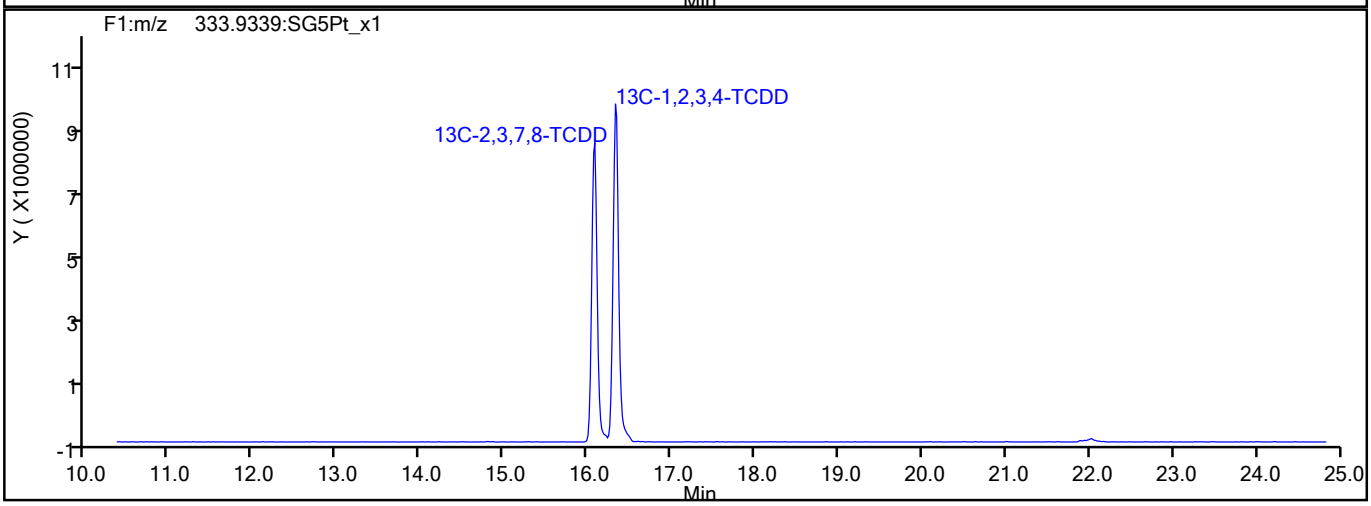

789157

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

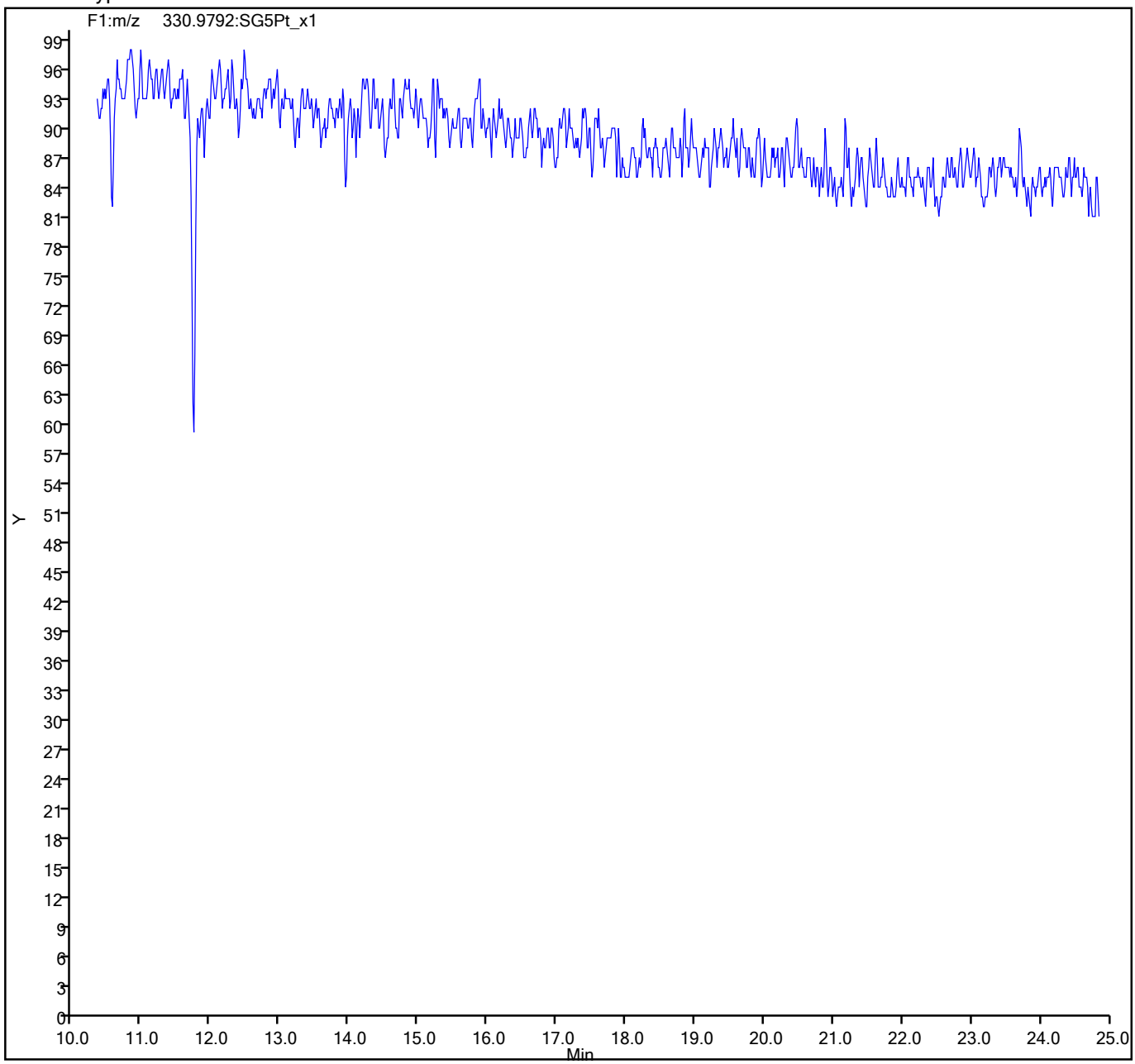

789158

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID: CCV 320-519438/2 Calibration Date: 08/24/2021 09:07

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 24AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.028		9.73	10.0	97	78-129
2,3,7,8-TCDF	AveID	0.998	0.9203		9.22	10.0	92	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9731		111	100	111	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.568		118	100	118	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9663		11.2	10.0	112	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
24AU2111D2	1	CPS 082421	CPS HRDXNCP_00044				1.00000	
24AU2111D2	2	CCV 082421	CCV CS-4 HRDXNL4_00100				1.00000	
24AU2111D2	3	SB 082421	Solvent Blank C-14				1.00000	
24AU2111D2	4	320-513879	MB 320-513879/1-A	20	1613B/Solid	D267	10.00000	g
24AU2111D2	5	320-513585	320-76769-A-18-A	20	1613B/Solid	D265	10.00000	g
24AU2111D2	6	320-513585	320-76769-A-2-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	7	320-513585	320-76769-A-14-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	8	320-513585	320-76769-A-26-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	9	320-513585	320-76769-A-28-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	10	320-513586	320-76769-A-27-A	20	1613B/Solid	D266	10.00000	g
24AU2111D2	11	320-513586	320-76769-A-27-B MS	20	1613B/Solid		10.00000	g
24AU2111D2	12	320-513586	320-76769-A-27-C MSD	20	1613B/Solid		10.00000	g
24AU2111D2	13						1.00000	
24AU2111D2	14						1.00000	
24AU2111D2	15						1.00000	
24AU2111D2	16						1.00000	
24AU2111D2	17						1.00000	
24AU2111D2	18		KSS 08-24-21				1.00000	
24AU2111D2	19						1.00000	

LOGFILE CHECKED
DB 8/24/21

789160

Peak Locate Examination:24-AUG-2021:08:27 File:24AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

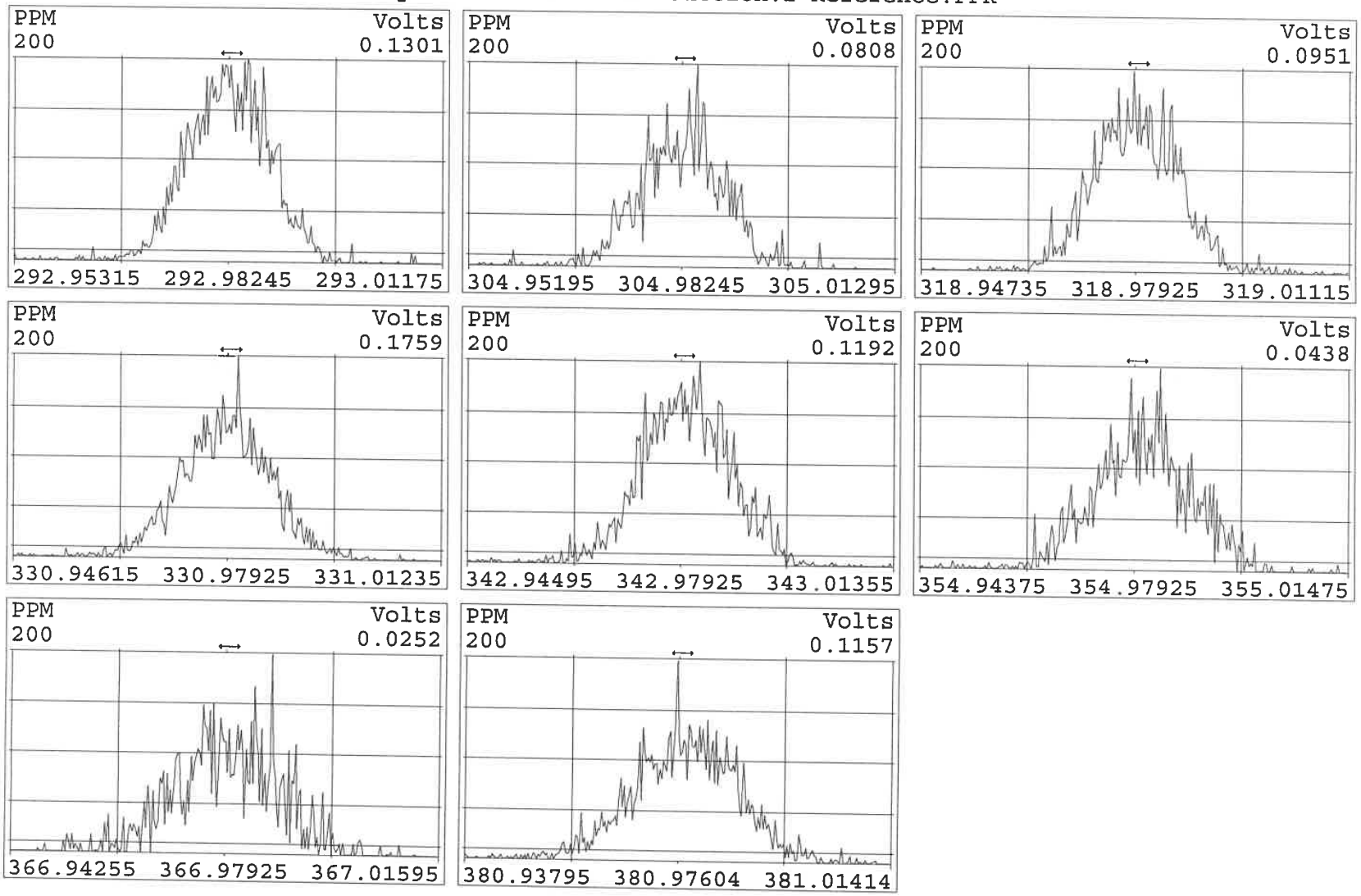

789161

Peak Locate Examination:24-AUG-2021:16:14 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

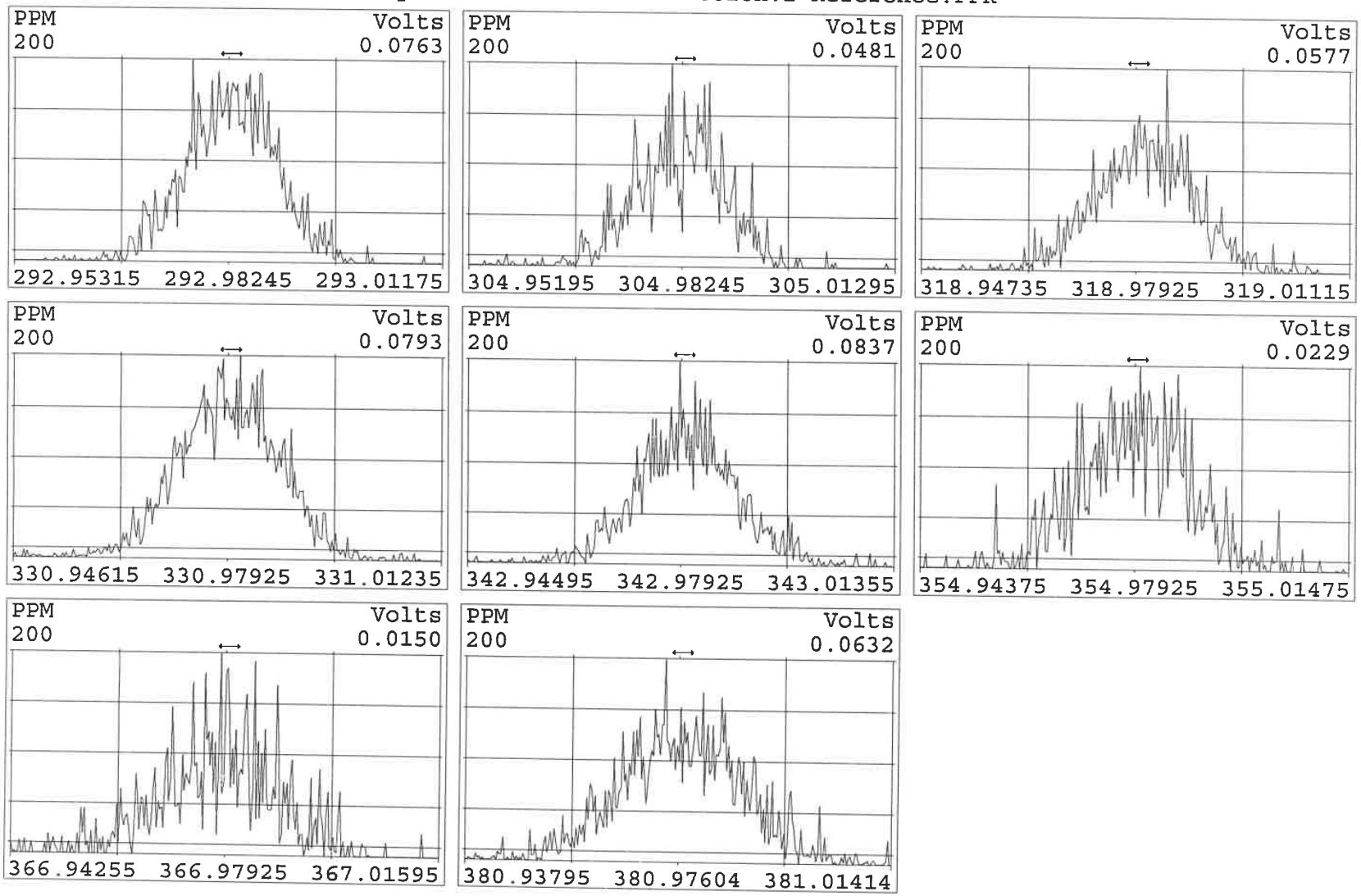

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 09:07:16 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:42

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.283	33559774	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	52629254	0.80	1.3327	117.7	117.7	0.2512	0.2512	118	
2,3,7,8-TCDF	17.641	4843376	0.77	0.9978	9.223	9.223	0.0442	0.0442	92.23	
D 13C-2,3,7,8-TCDD	16.050	32656269	0.76	0.8749	111.2	111.2	0.4262	0.4262	111	
$ 37Cl4-2,3,7,8-TCDD	16.063	3242735		0.8648	11.2	11.2	0.0810	0.0810	112	
2,3,7,8-TCDD	16.077	3357078	0.83	1.0570	9.726	9.726	0.0680	0.0680	97.26	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 09:07:16 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:42

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.283	16.283	0		14514242	3109306	5198	12995	598		
333.9339	16.283	16.283	0		19045532	4067992	5508	13770	739	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.613	0	1.082	23419943	4217062	5707	14267	739		
317.9389	17.599	17.613	-1	1.081	29209311	5613115	3903	9757	1438	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.641	17.641	0	1.002	2101458	376732	657	1642	573		
305.8987	17.627	17.641	-1	1.001	2741918	507422	1079	2697	470	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.050	16.050	0	0.986	14062884	3232967	5198	12995	622		
333.9339	16.050	16.050	0	0.986	18593385	4326423	5508	13770	785	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.063	16.063	0	0.987	3242735	728649	2011	5027	362		
2,3,7,8-TCDD											
319.8965	16.077	16.077	0	1.002	1524098	338203	902	2255	375		
321.8936	16.077	16.077	0	1.002	1832980	395830	1270	3175	312	0.83(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

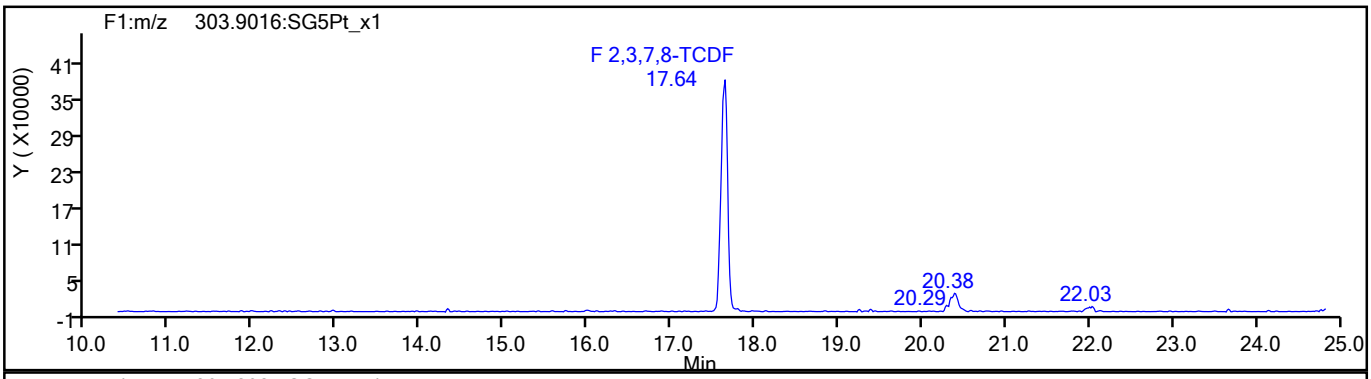

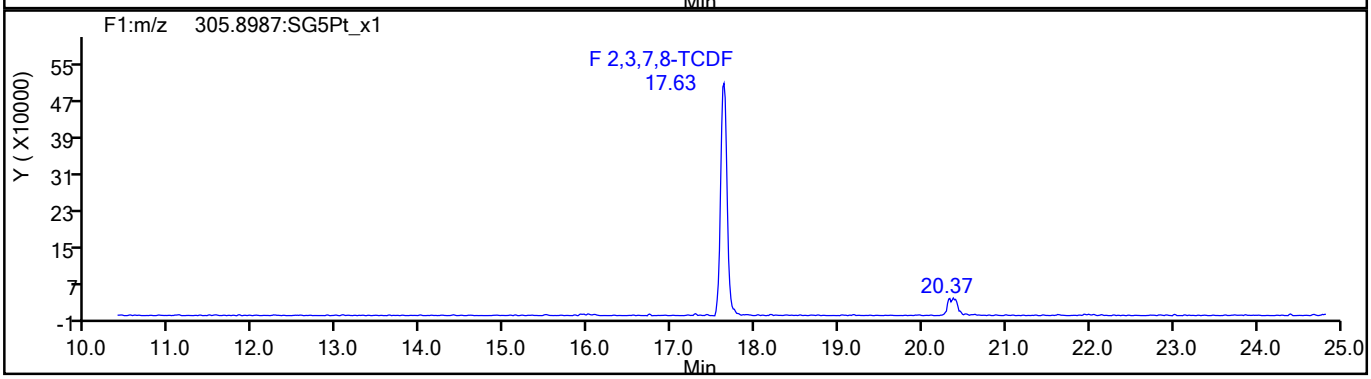

TCDF Standards

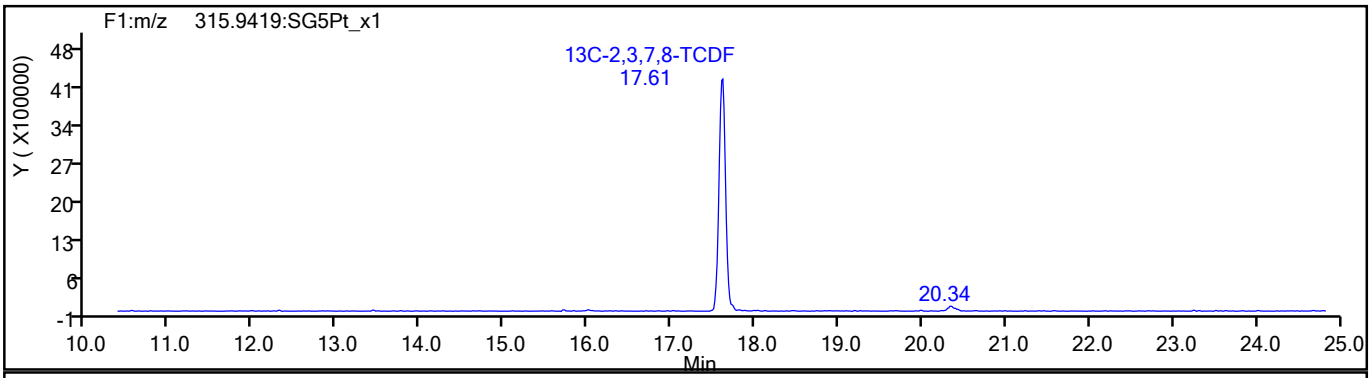

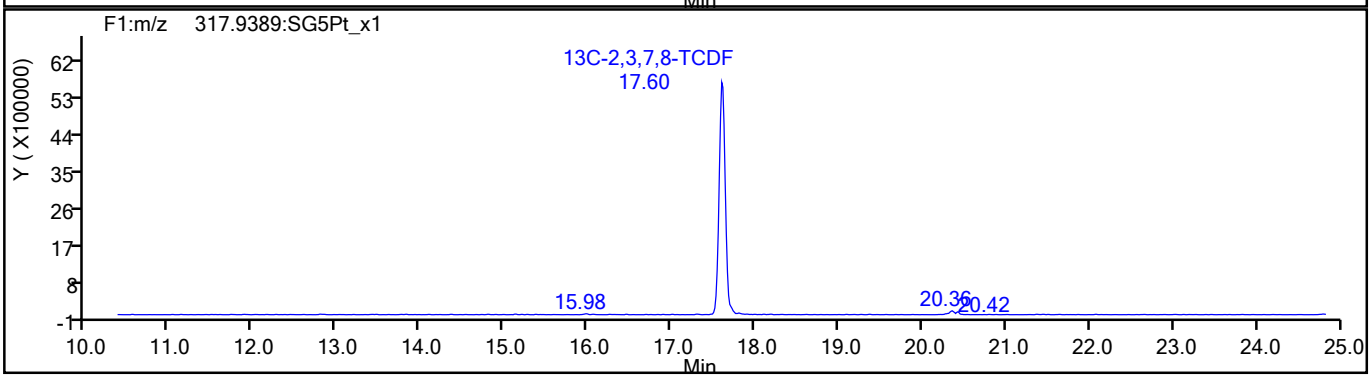

789165

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

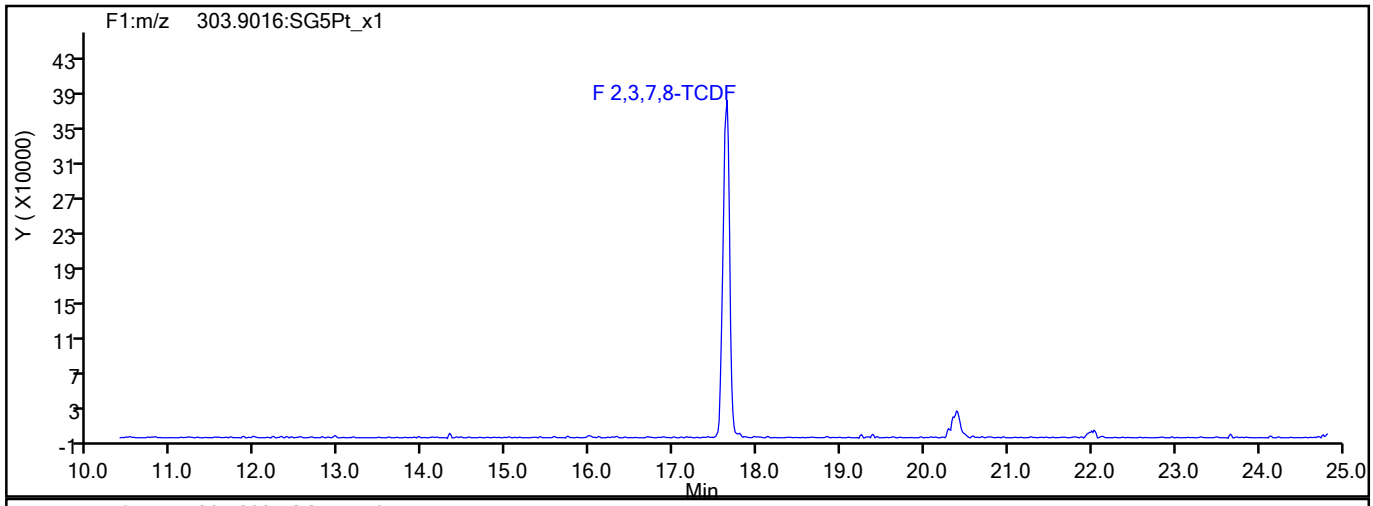

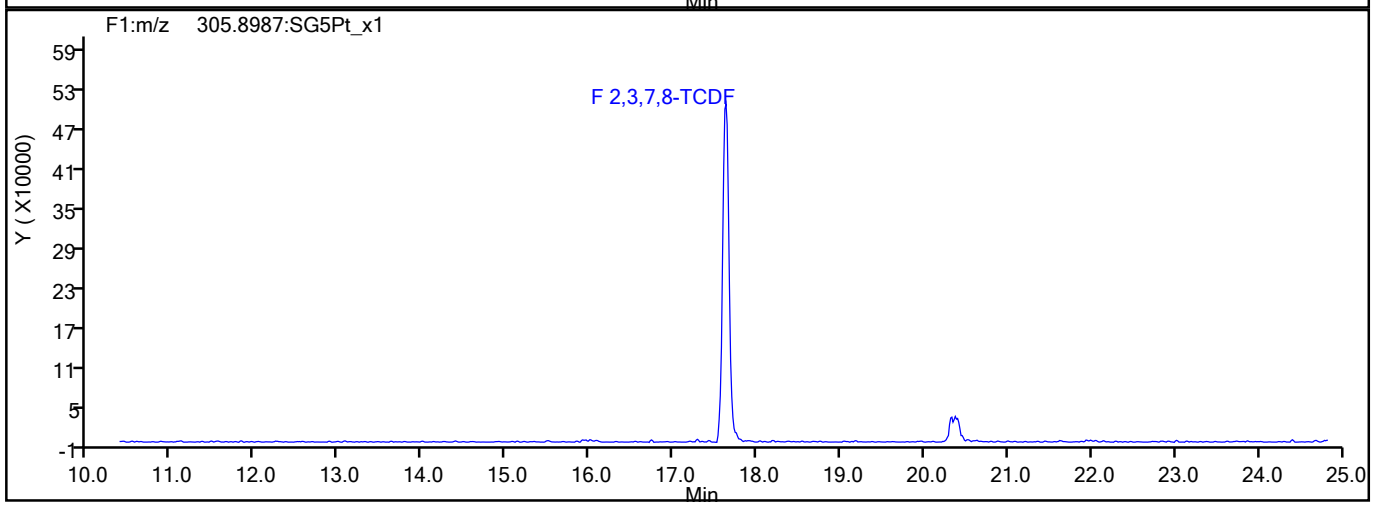

TCDF Interference Mass

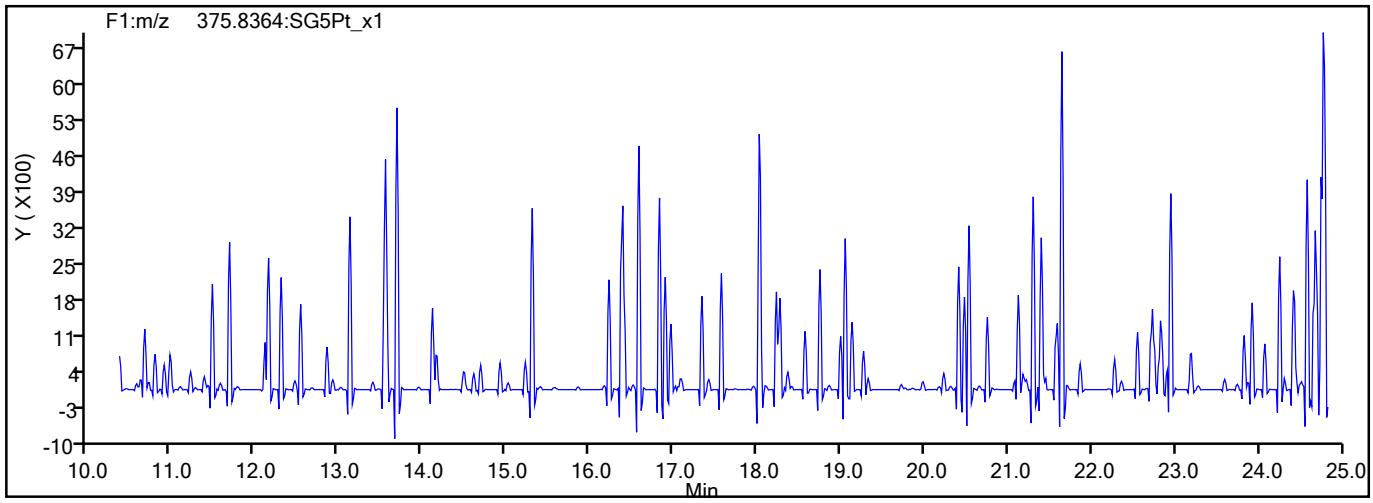

789166

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

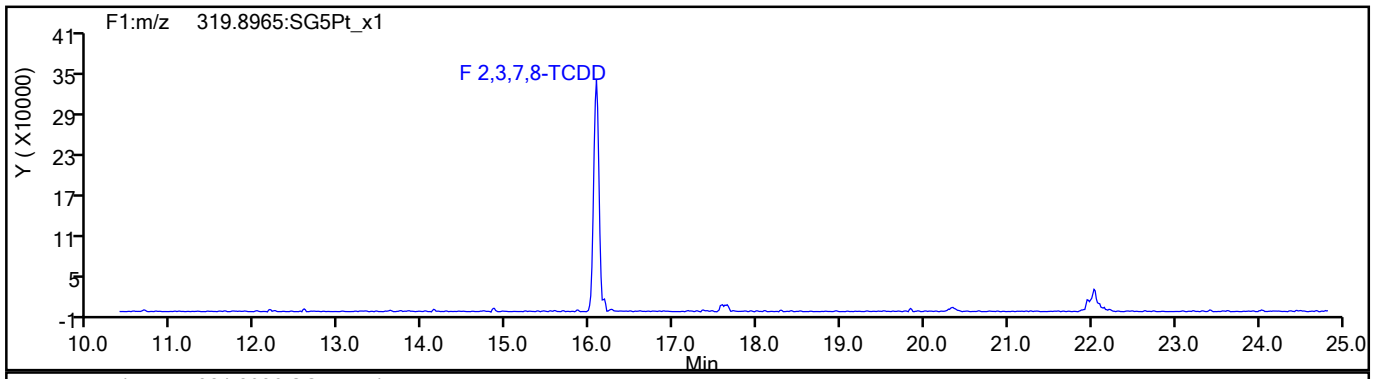

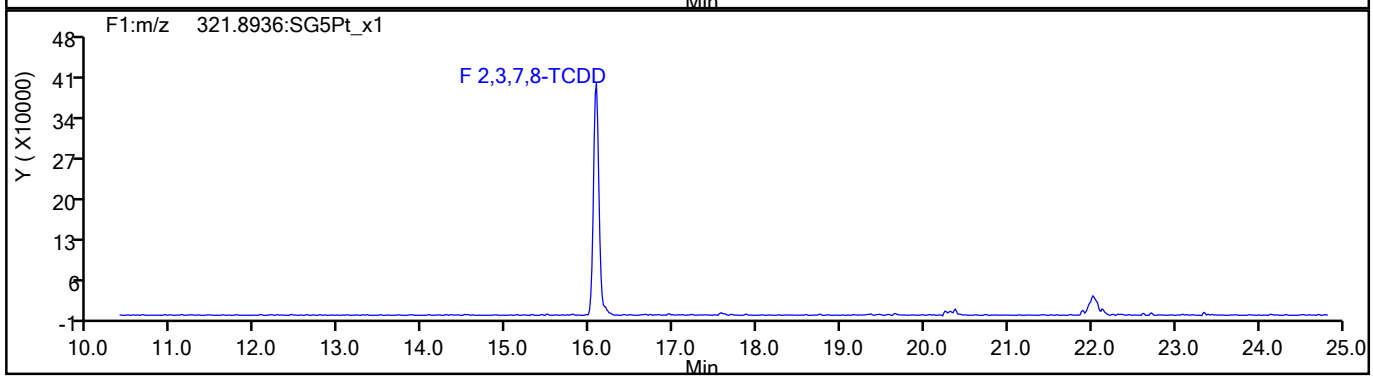

TCDD Standards

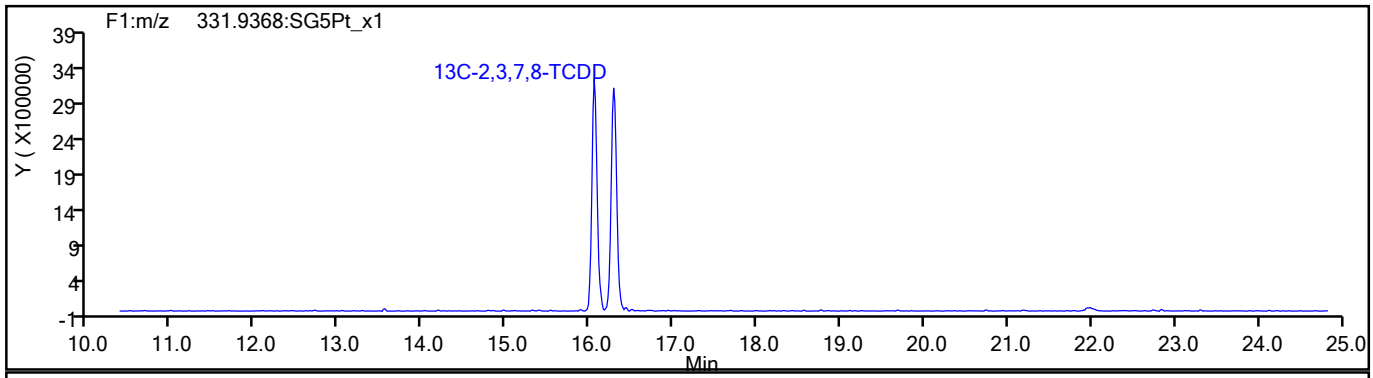

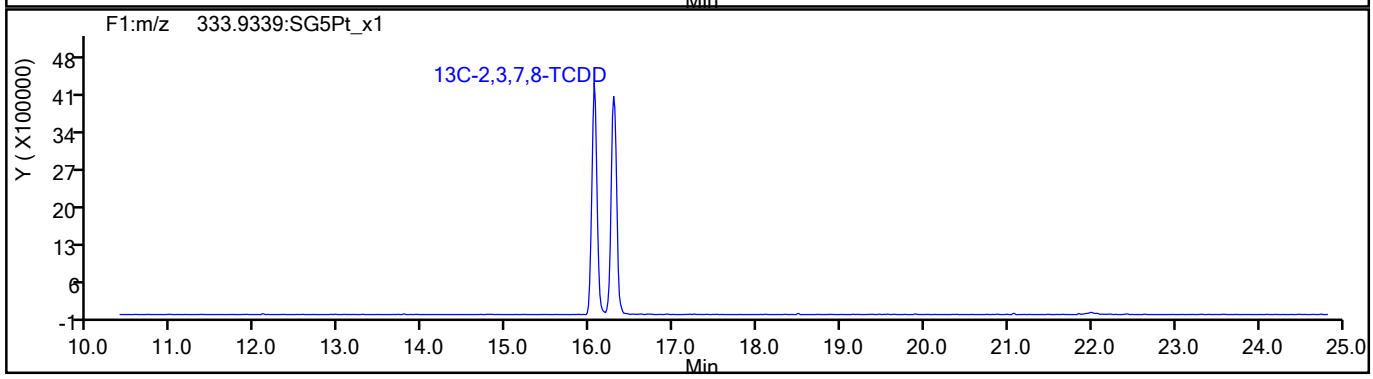

789167

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

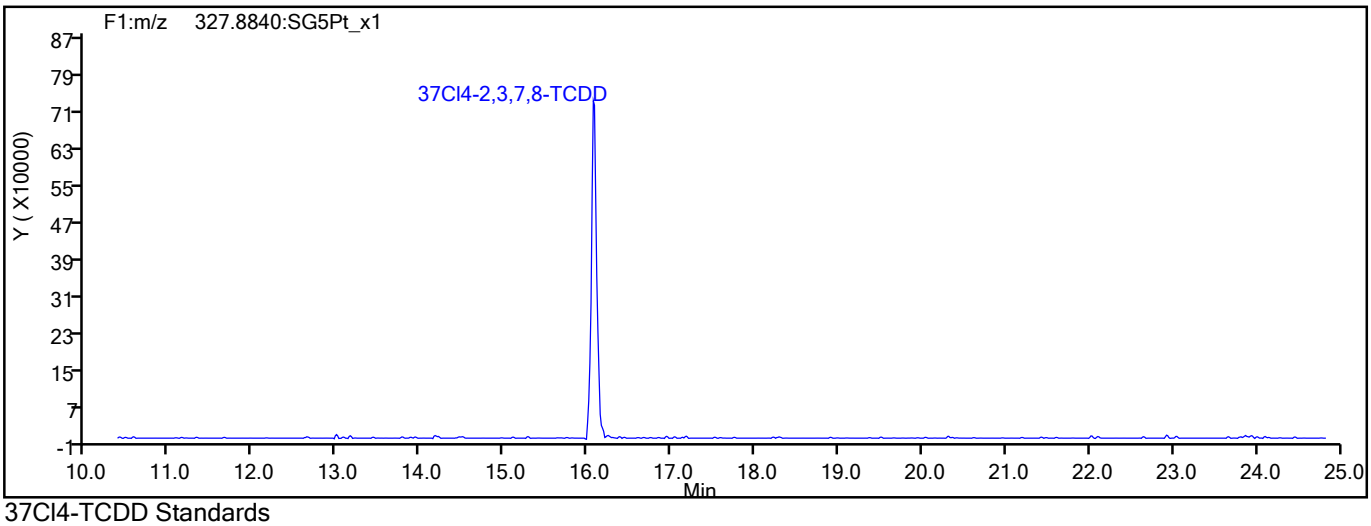

37Cl4-TCDD Standards

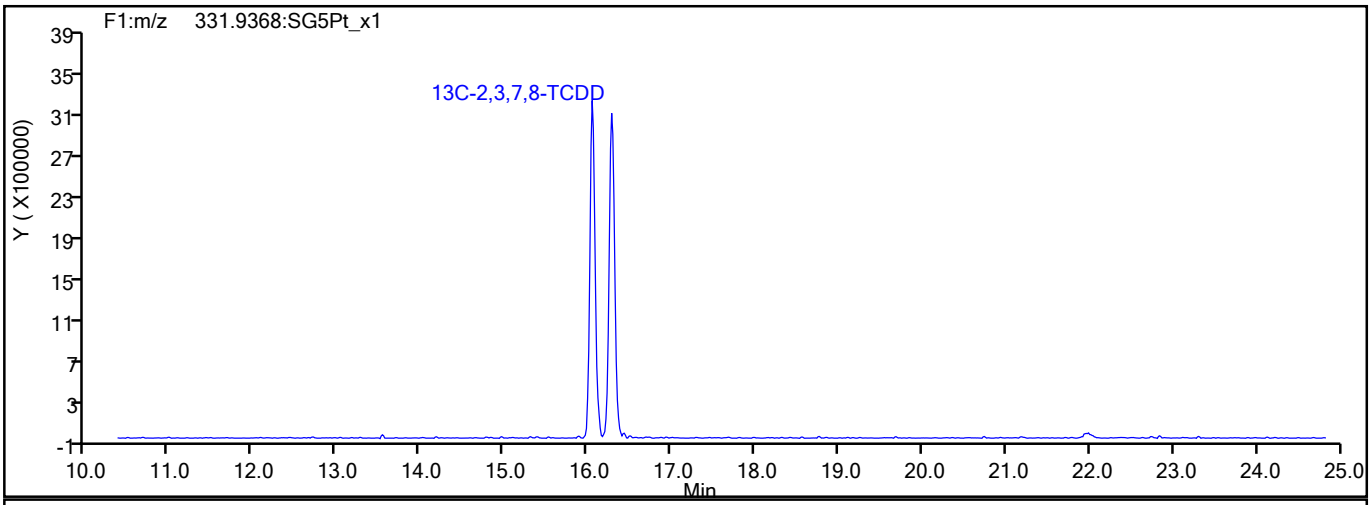

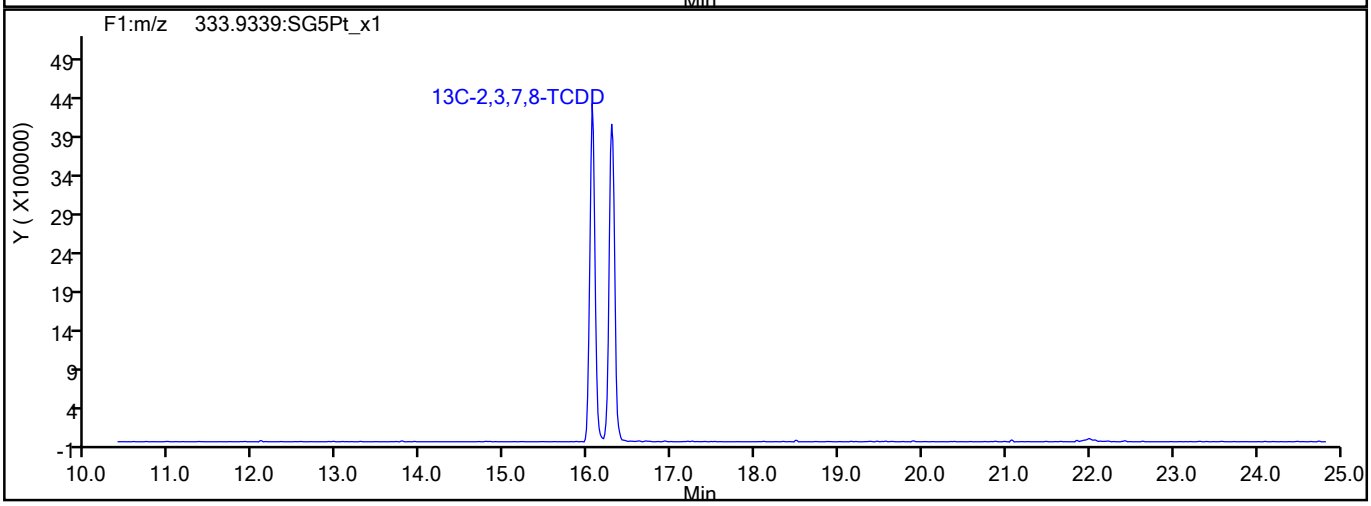

789168

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

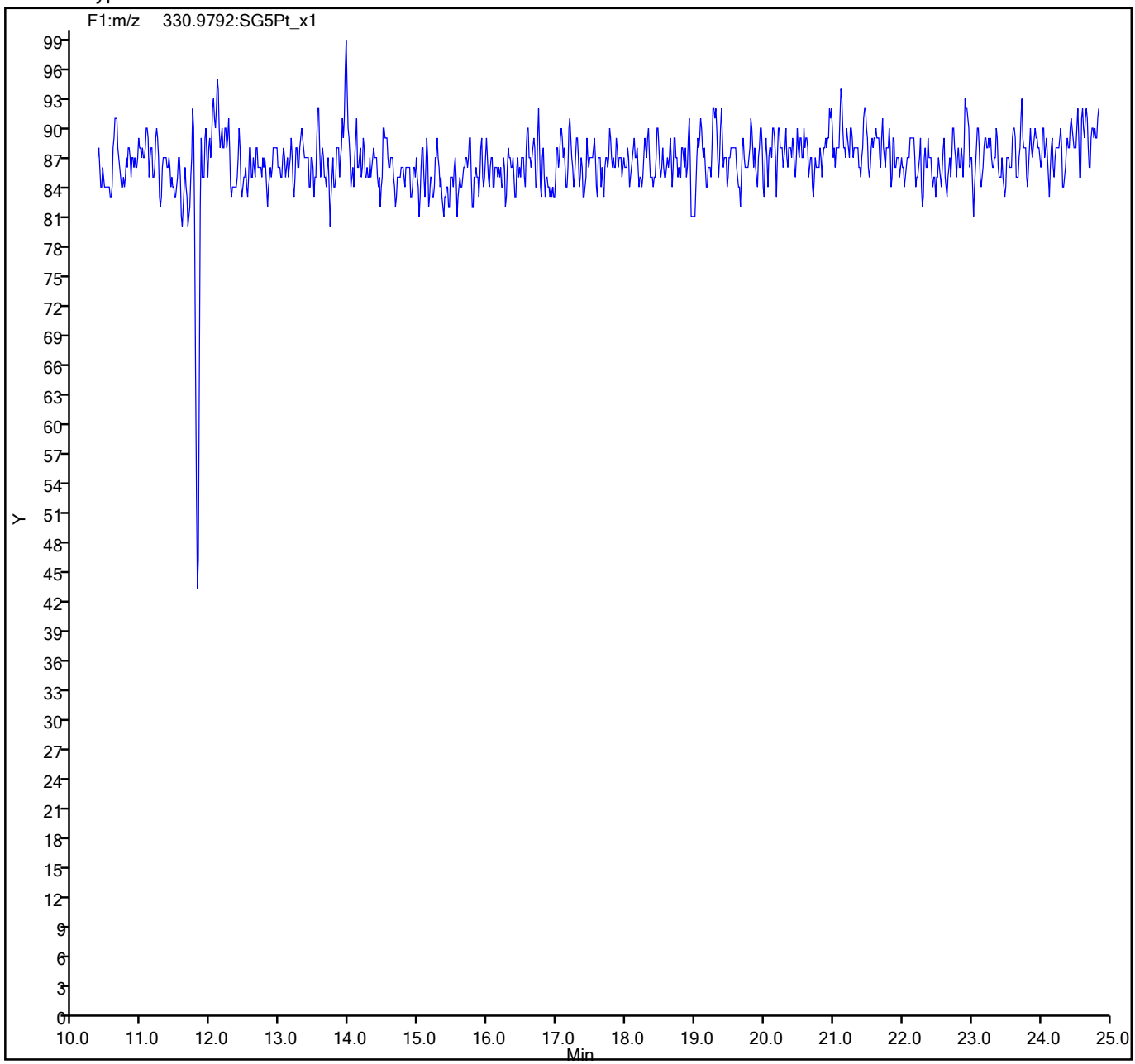

789169

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID: CCV 320-520438/2 Calibration Date: 08/27/2021 09:37

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 27AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.031		9.75	10.0	97	78-129
2,3,7,8-TCDF	AveID	0.998	0.8964		8.98	10.0	90	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9556		109	100	109	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.511		113	100	113	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8788		10.2	10.0	102	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
27AU2111D2	1	CPS 082721	CPS HRDXNCP_00044				1.00000	
27AU2111D2	2	CCV 082721	CCV CS-4 HRDXNL4_00100				1.00000	
27AU2111D2	3	SB 082721	Solvent Blank C-14				1.00000	
27AU2111D2	4	320-513879	320-76901-A-13-A	20	1613B/Solid	D267	10.00000	g
27AU2111D2	5	320-513879	320-76901-A-6-A	20	1613B/Solid		10.00000	g
27AU2111D2	6	320-513879	320-76901-A-2-A	20	1613B/Solid		10.00000	g
27AU2111D2	7	320-513879	320-76901-A-2-B MS	20	1613B/Solid		10.00000	g
27AU2111D2	8	320-513879	320-76901-A-2-C MSD	20	1613B/Solid		10.00000	g
27AU2111D2	9	320-513879	320-76888-A-7-A	20	1613B/Solid		10.00000	g
27AU2111D2	10	320-513879	320-76888-A-8-A	20	1613B/Solid		10.00000	g
27AU2111D2	11						1.00000	
27AU2111D2	12						1.00000	
27AU2111D2	13						1.00000	
27AU2111D2	14						1.00000	
27AU2111D2	15		DB 08-28-21				1.00000	
27AU2111D2	16						1.00000	

LOGFILE CHECKED
DB 8/27/21

Peak Locate Examination:27-AUG-2021:08:58 File:27AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

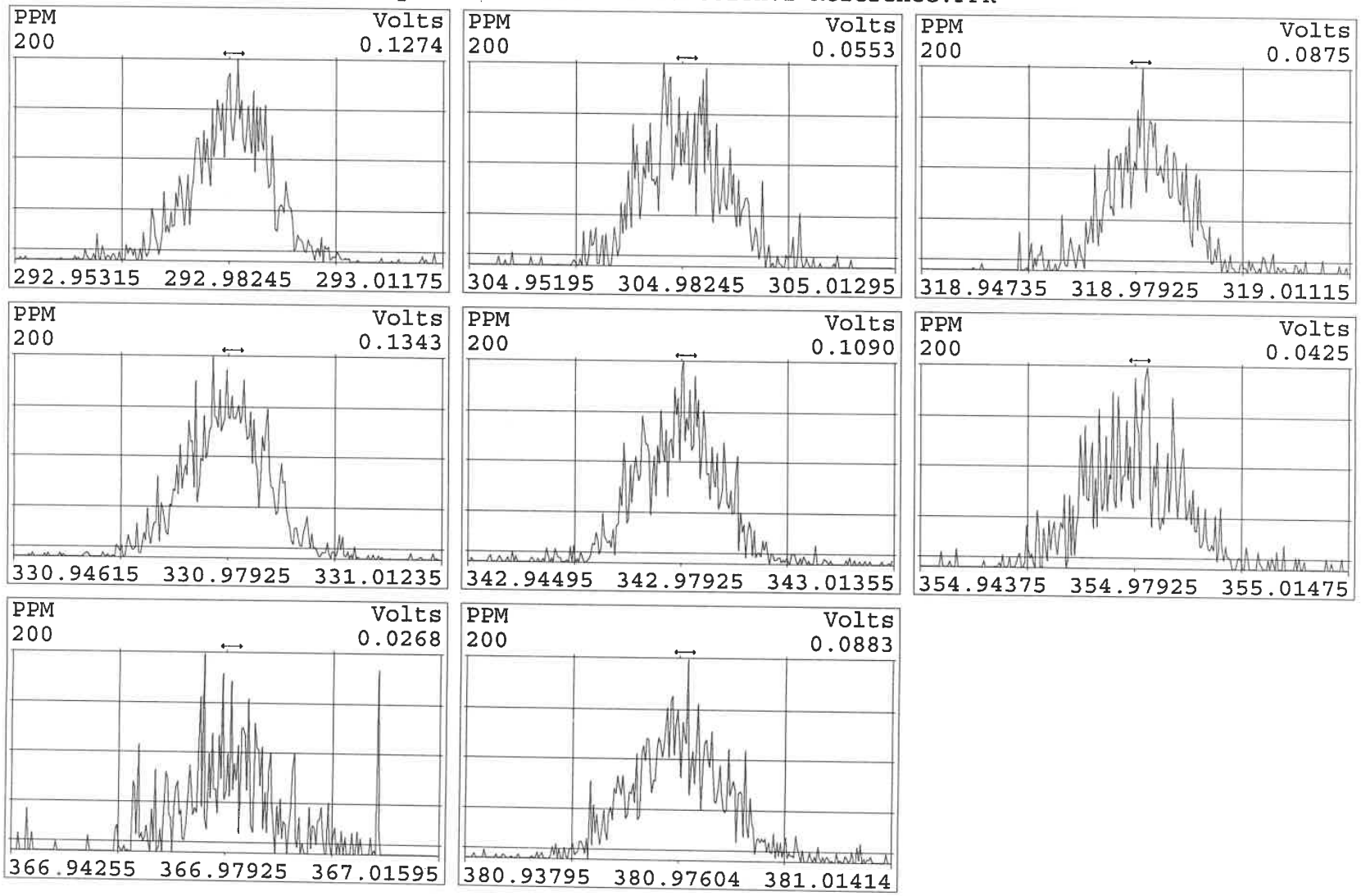

Peak Locate Examination:27-AUG-2021:15:32 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

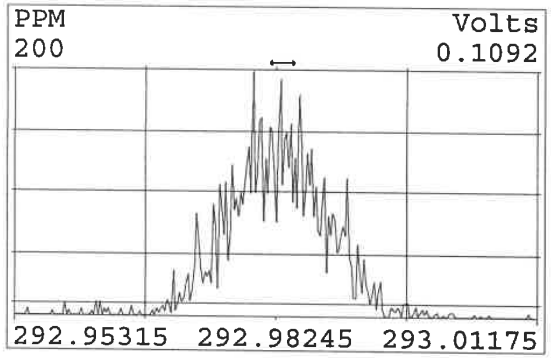

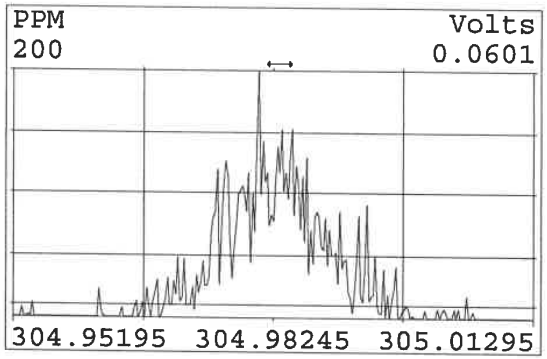

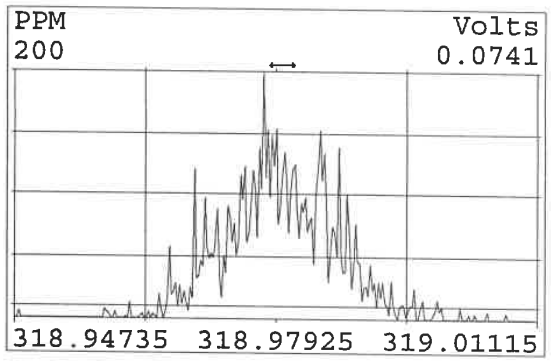

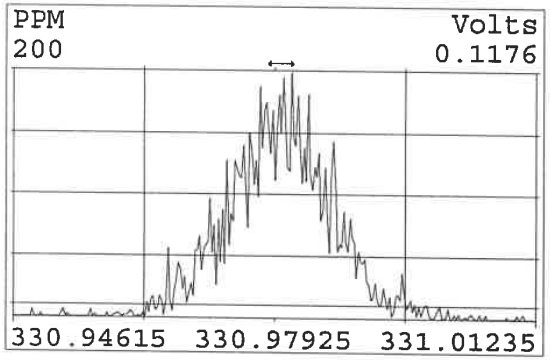

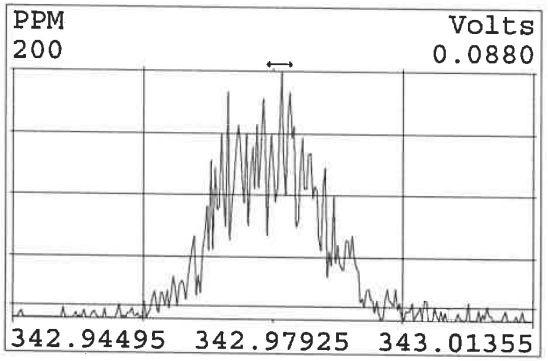

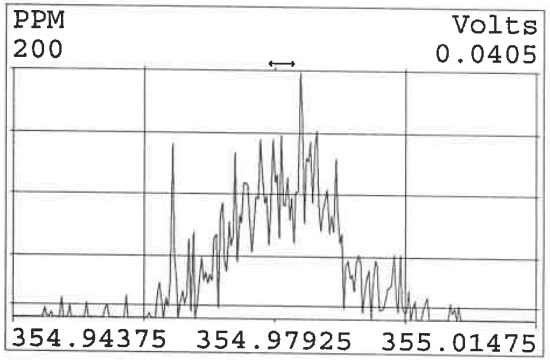

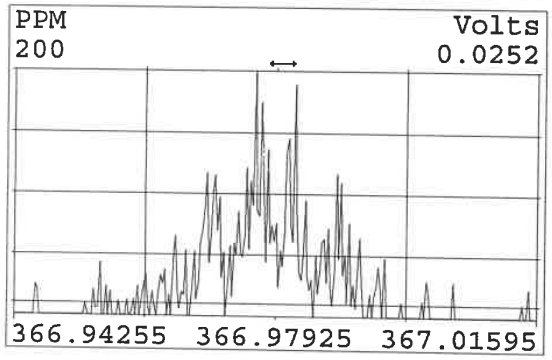

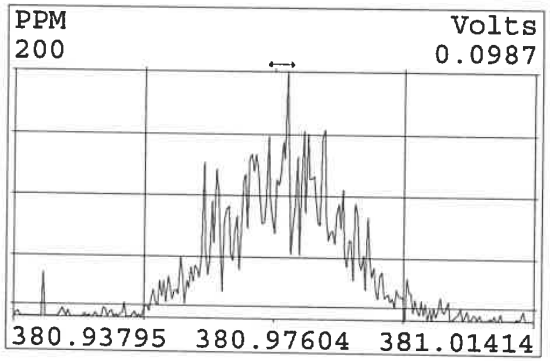

789173

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 09:37:57 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:48:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.284	57069656	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.614	86240244	0.76	1.3327	113.4	113.4	0.2571	0.2571	113	
2,3,7,8-TCDF	17.628	7730382	0.81	0.9978	8.983	8.983	0.0324	0.0324	89.83	
D 13C-2,3,7,8-TCDD	16.064	54534600	0.79	0.8749	109.2	109.2	0.2932	0.2932	109	
2,3,7,8-TCDD	16.078	5619957	0.82	1.0570	9.750	9.750	0.0472	0.0472	97.50	
$ 37Cl4-2,3,7,8-TCDD	16.078	5015089		0.8648	10.2	10.2	0.0341	0.0341	102	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

789174

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 09:37:57 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:48:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.284	16.284	0		25007159	5610326	8221	20552	682		
333.9339	16.297	16.284	1		32062497	6929297	4645	11612	1492	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.614	17.614	0	1.082	37188579	7168347	8551	21377	838		
317.9389	17.600	17.614	-1	1.081	49051665	9433887	8633	21582	1093	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.628	0	1.001	3452785	630428	1003	2507	629		
305.8987	17.628	17.628	0	1.001	4277597	811560	1141	2852	711	0.81(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.064	0	0.987	24091403	5572015	8221	20552	678		
333.9339	16.064	16.064	0	0.987	30443197	6988447	4645	11612	1505	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.078	16.078	0	1.001	2525483	543598	891	2227	610		
321.8936	16.078	16.078	0	1.001	3094474	688607	1617	4042	426	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.078	0	0.987	5015089	1139283	1480	3700	770		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

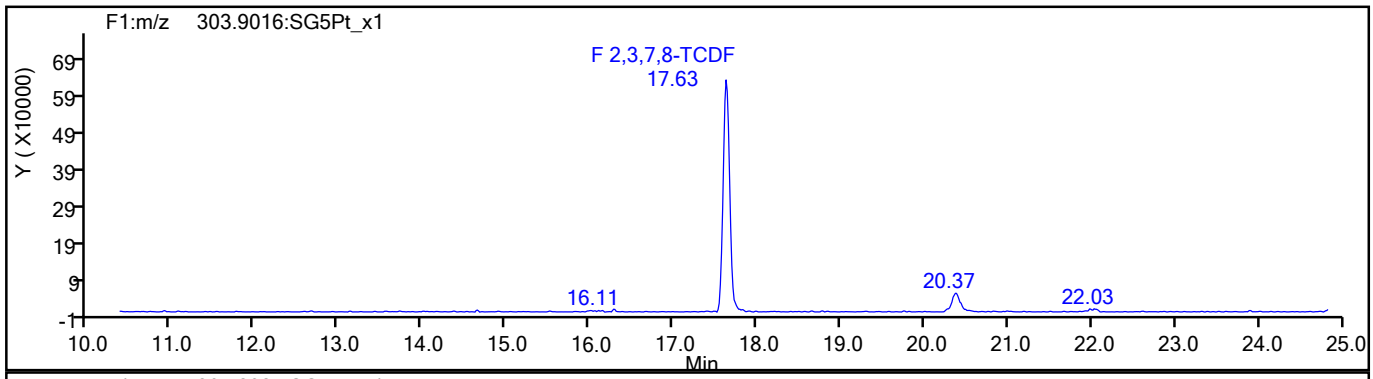

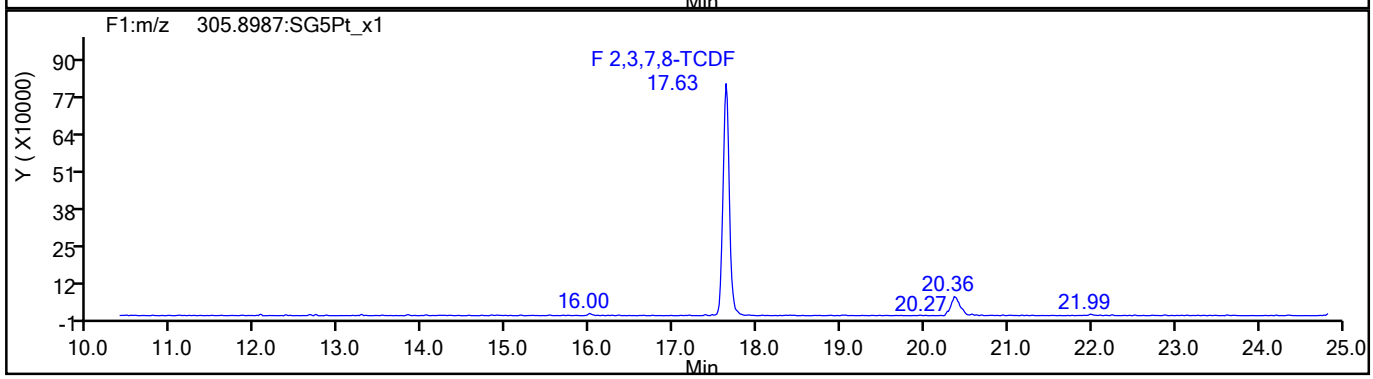

TCDF Standards

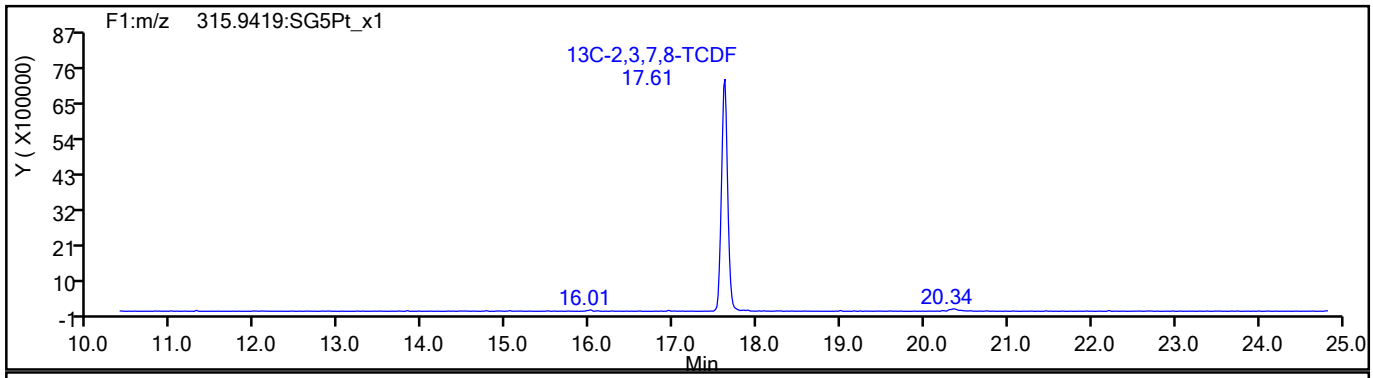

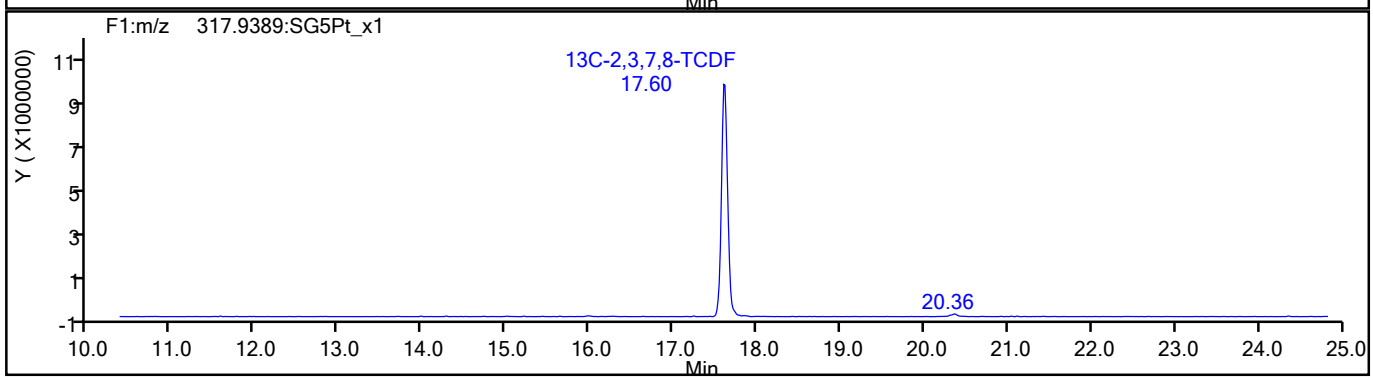

789176

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

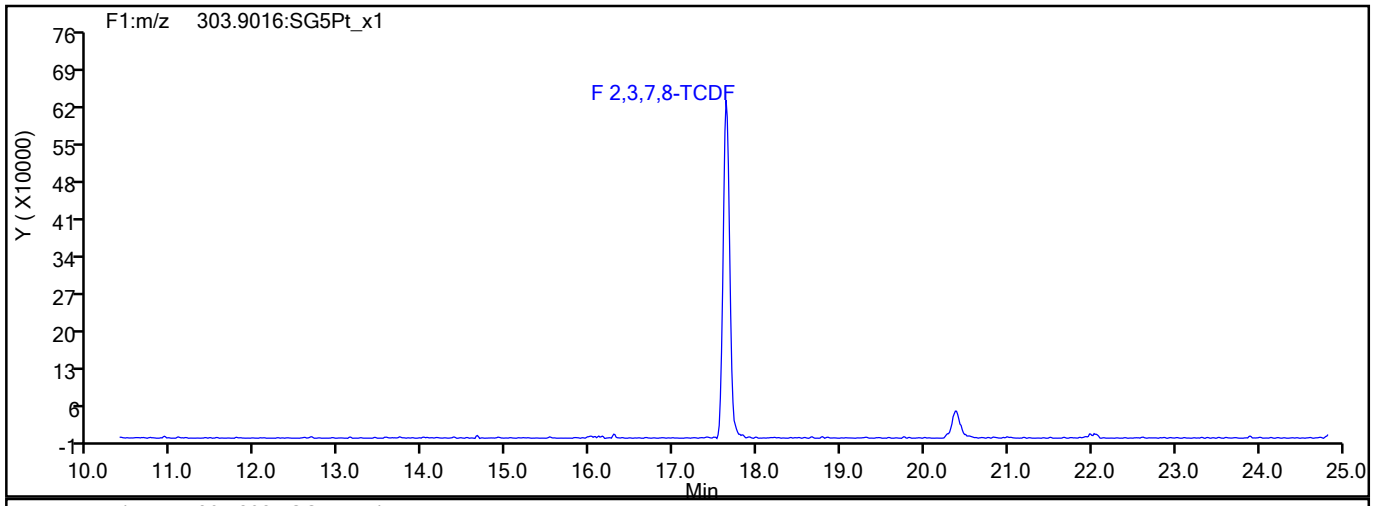

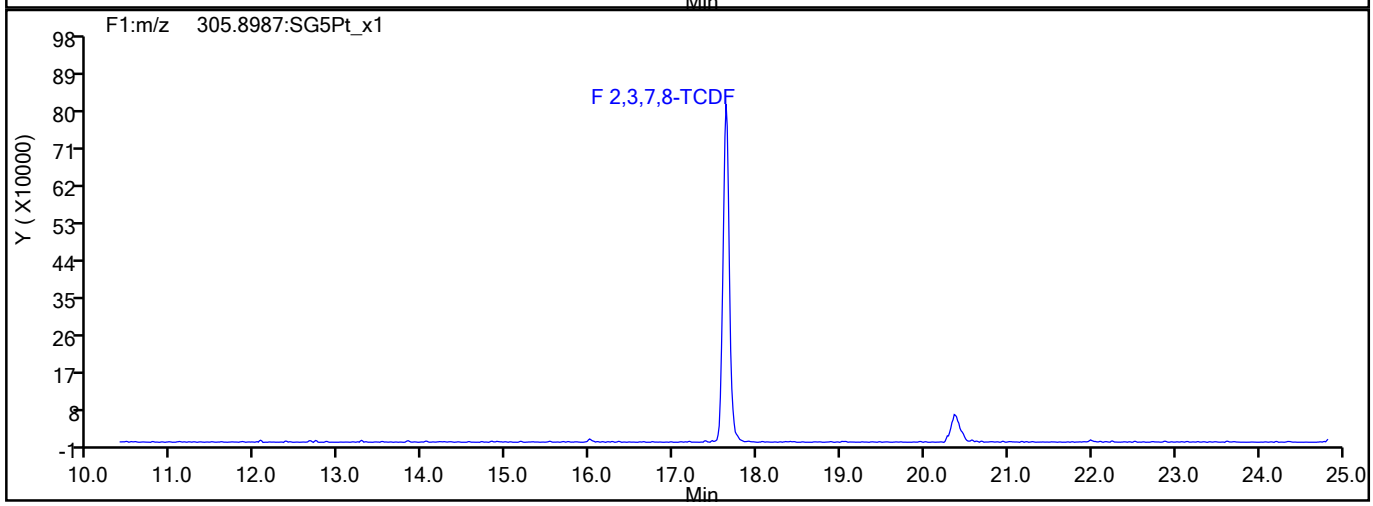

TCDF Interference Mass

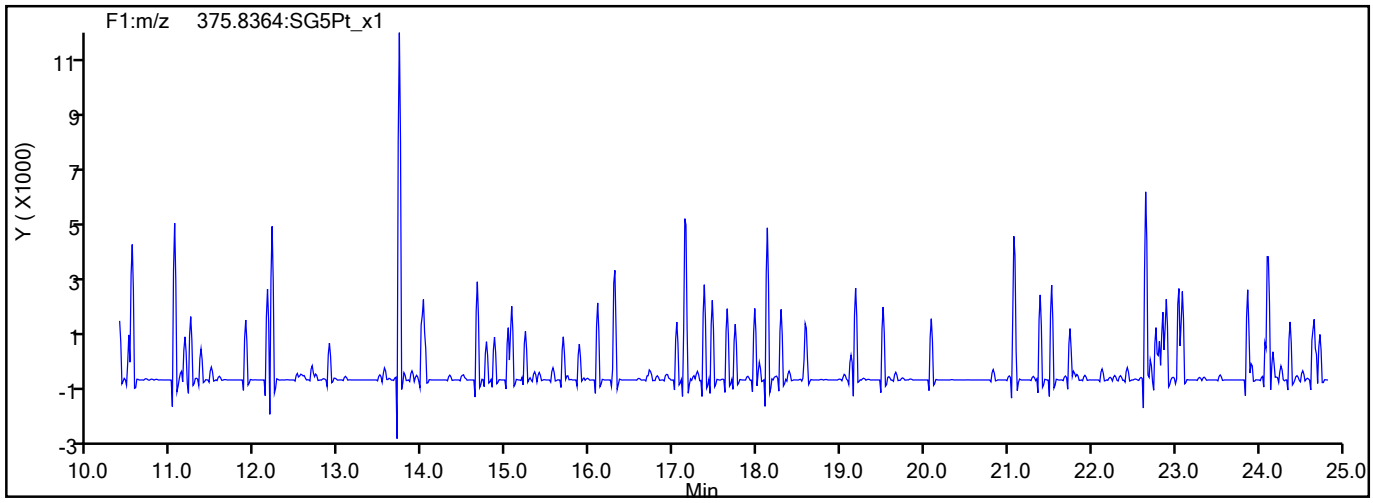

789177

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

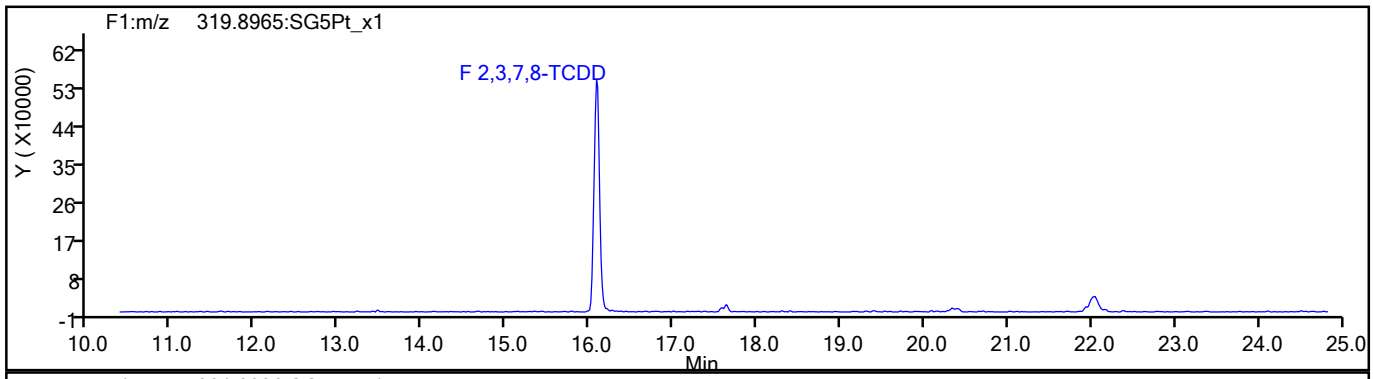

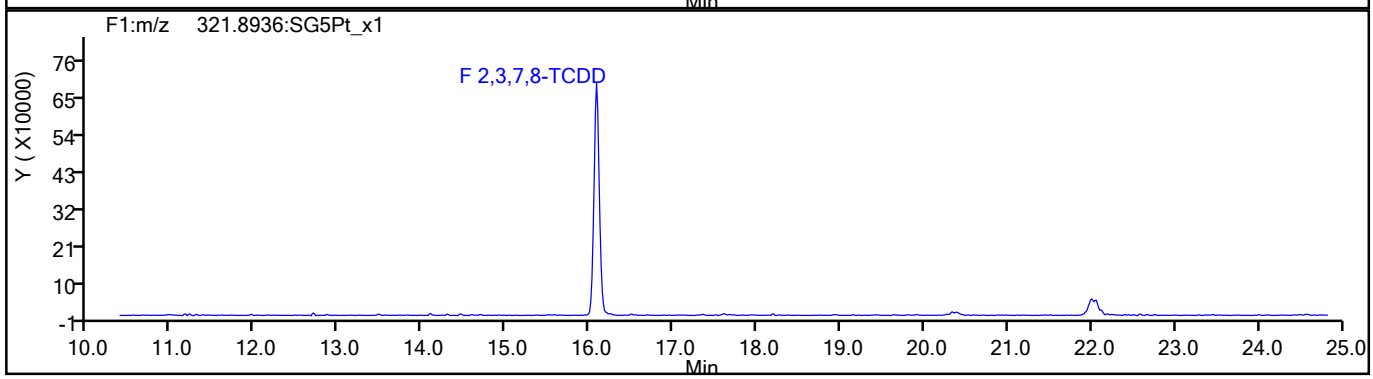

TCDD Standards

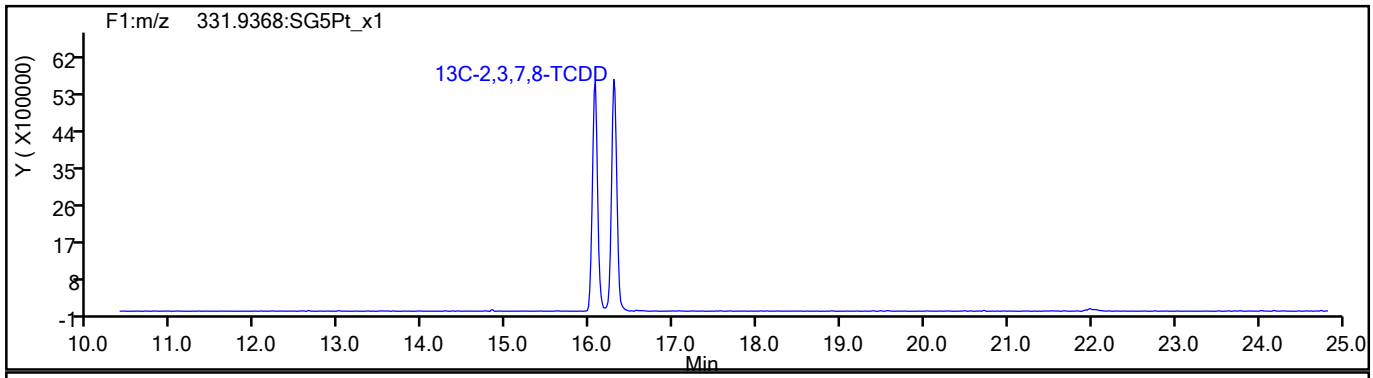

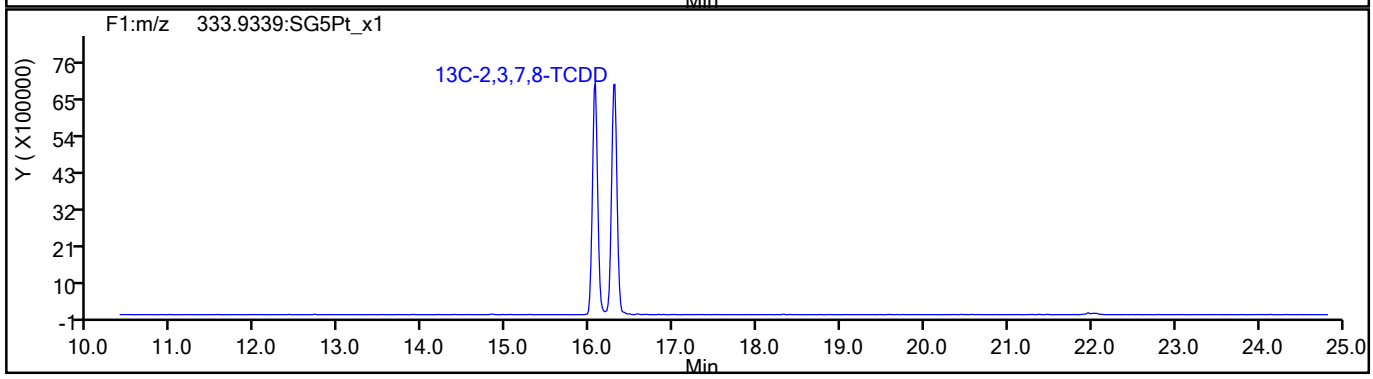

789178

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

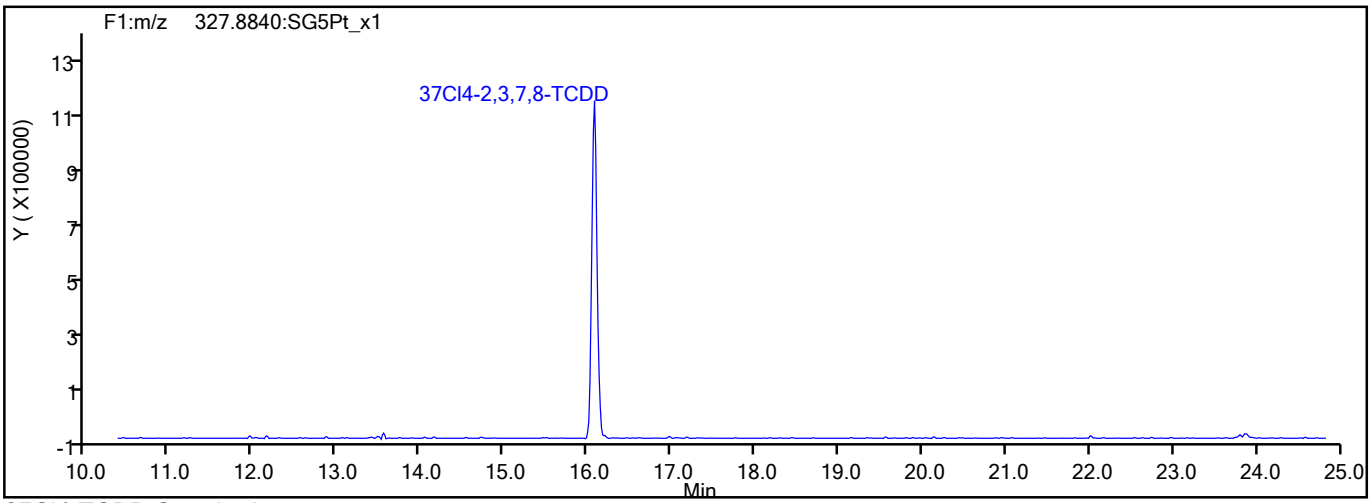

37Cl4-TCDD Standards

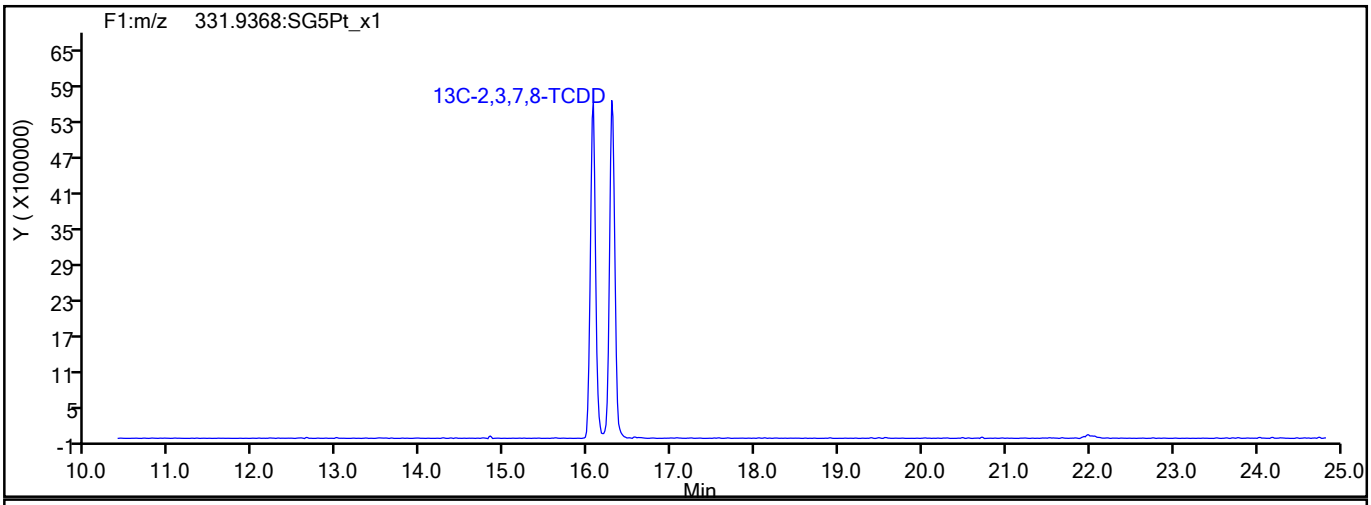

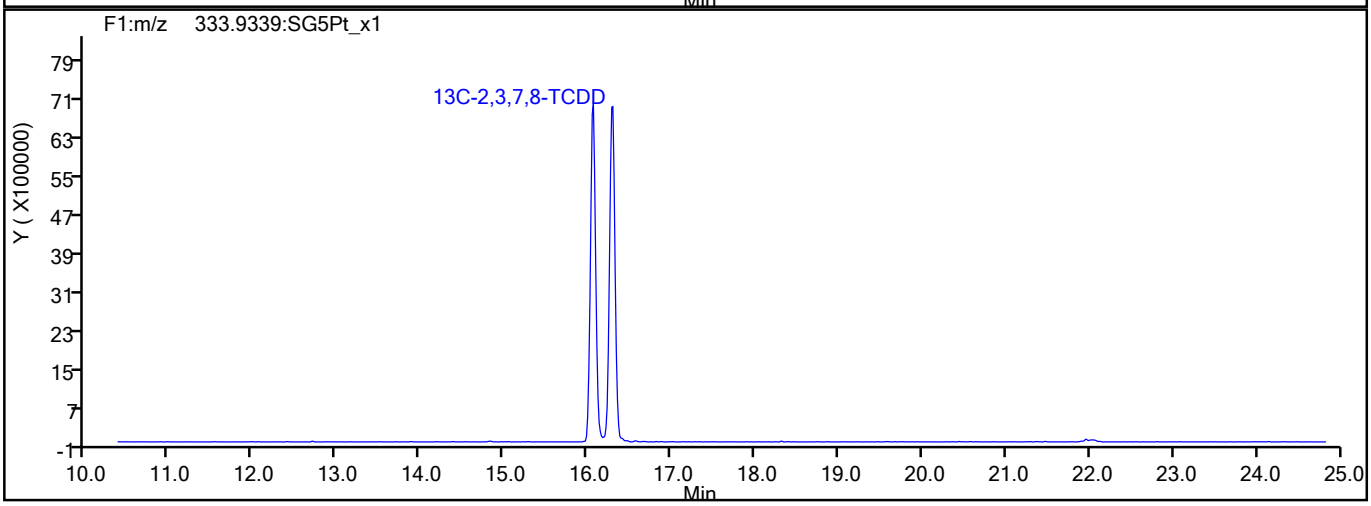

789179

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

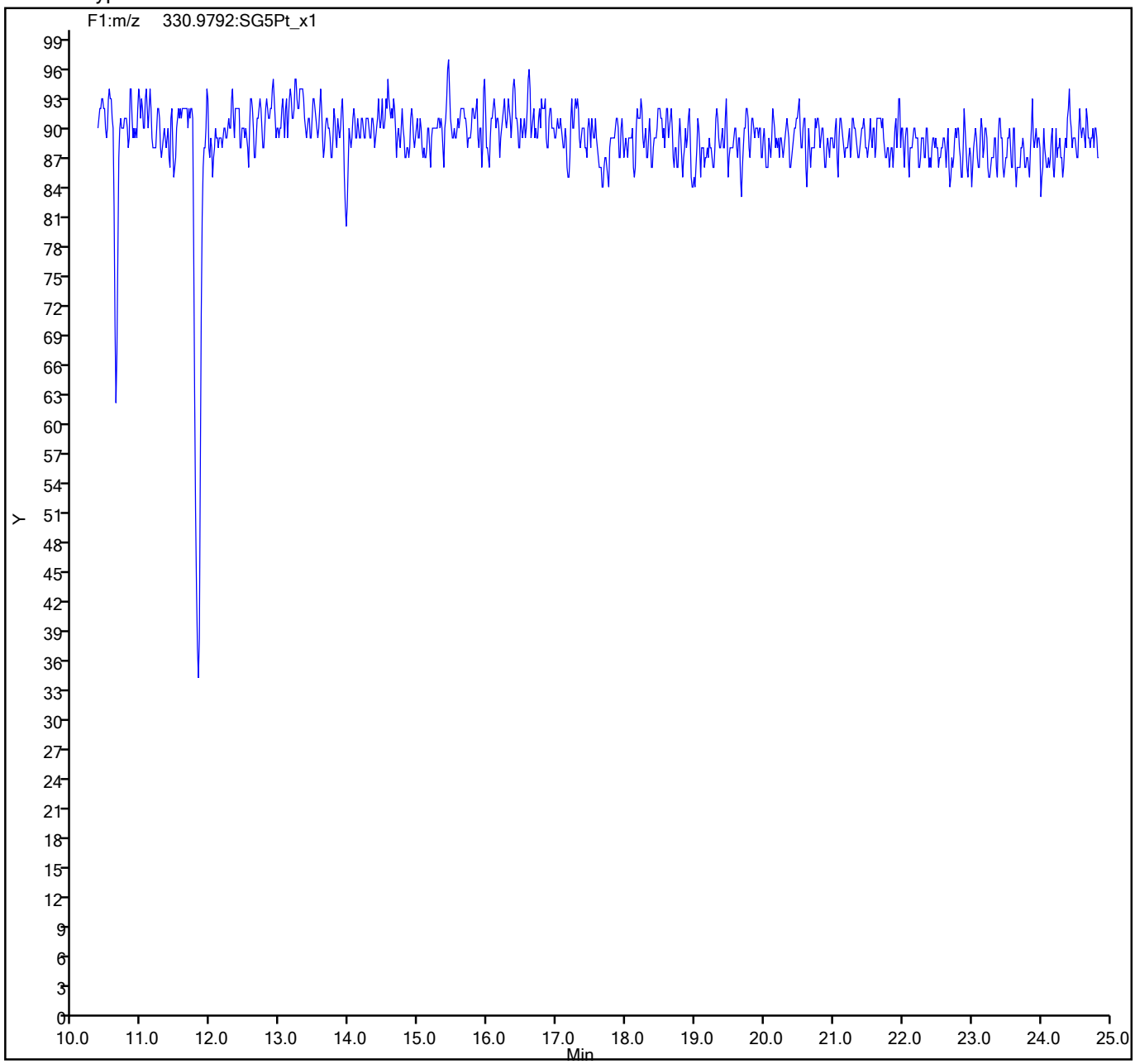

789180

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID: CCV 320-520456/2 Calibration Date: 08/27/2021 16:16

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 27AU21A11D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.015		9.60	10.0	96	78-129
2,3,7,8-TCDF	AveID	0.998	0.9289		9.31	10.0	93	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9723		111	100	111	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.539		116	100	116	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9437		10.9	10.0	109	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
27AU21A11D2	1	CPS 082721	CPS HRDXNCP_00044				1.00000	
27AU21A11D2	2	CCV 082721	CCV CS-4 HRDXNL4_00100				1.00000	
27AU21A11D2	3	SB 082721	Solvent Blank C-14				1.00000	
27AU21A11D2	4	320-513879	320-76901-A-3-A	20	1613B/Solid	D267	10.00000	g
27AU21A11D2	5	320-513879	320-76901-A-4-A	20	1613B/Solid		10.00000	g
27AU21A11D2	6	320-513879	320-76901-A-7-A	20	1613B/Solid		10.00000	g
27AU21A11D2	7	320-513879	320-76901-A-8-A	20	1613B/Solid		10.00000	g
27AU21A11D2	8	320-513879	320-76901-A-9-A	20	1613B/Solid		10.00000	g
27AU21A11D2	9	320-515492	320-77214-A-9-A	20	1613B/Solid	D270	10.00000	g
27AU21A11D2	10	320-515492	320-77214-A-13-A	20	1613B/Solid		10.00000	g
27AU21A11D2	11	320-515492	320-77214-A-6-A	20	1613B/Solid		10.00000	g
27AU21A11D2	12	320-515492	320-77214-A-8-A	20	1613B/Solid		10.00000	g
27AU21A11D2	13	320-515492	320-77214-A-4-A	20	1613B/Solid		10.00000	g
27AU21A11D2	14	320-515492	320-77214-A-7-A	20	1613B/Solid		10.00000	g
27AU21A11D2	15	320-515492	320-77214-A-5-A	20	1613B/Solid		10.00000	g
27AU21A11D2	16	320-515492	320-77214-A-3-A	20	1613B/Solid		10.00000	g
27AU21A11D2	17	320-513879	320-76901-A-5-A	20	1613B/Solid	D267	10.00000	g
27AU21A11D2	18	320-513879	320-76901-A-1-A	20	1613B/Solid		10.00000	g
27AU21A11D2	19						1.00000	
27AU21A11D2	20						1.00000	
27AU21A11D2	21						1.00000	
27AU21A11D2	22						1.00000	
27AU21A11D2	23		DB 08-28-21				1.00000	
27AU21A11D2	24						1.00000	

Logfile ✓ id
8/30/21
KSS

789182

Peak Locate Examination:27-AUG-2021:15:37 File:27AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

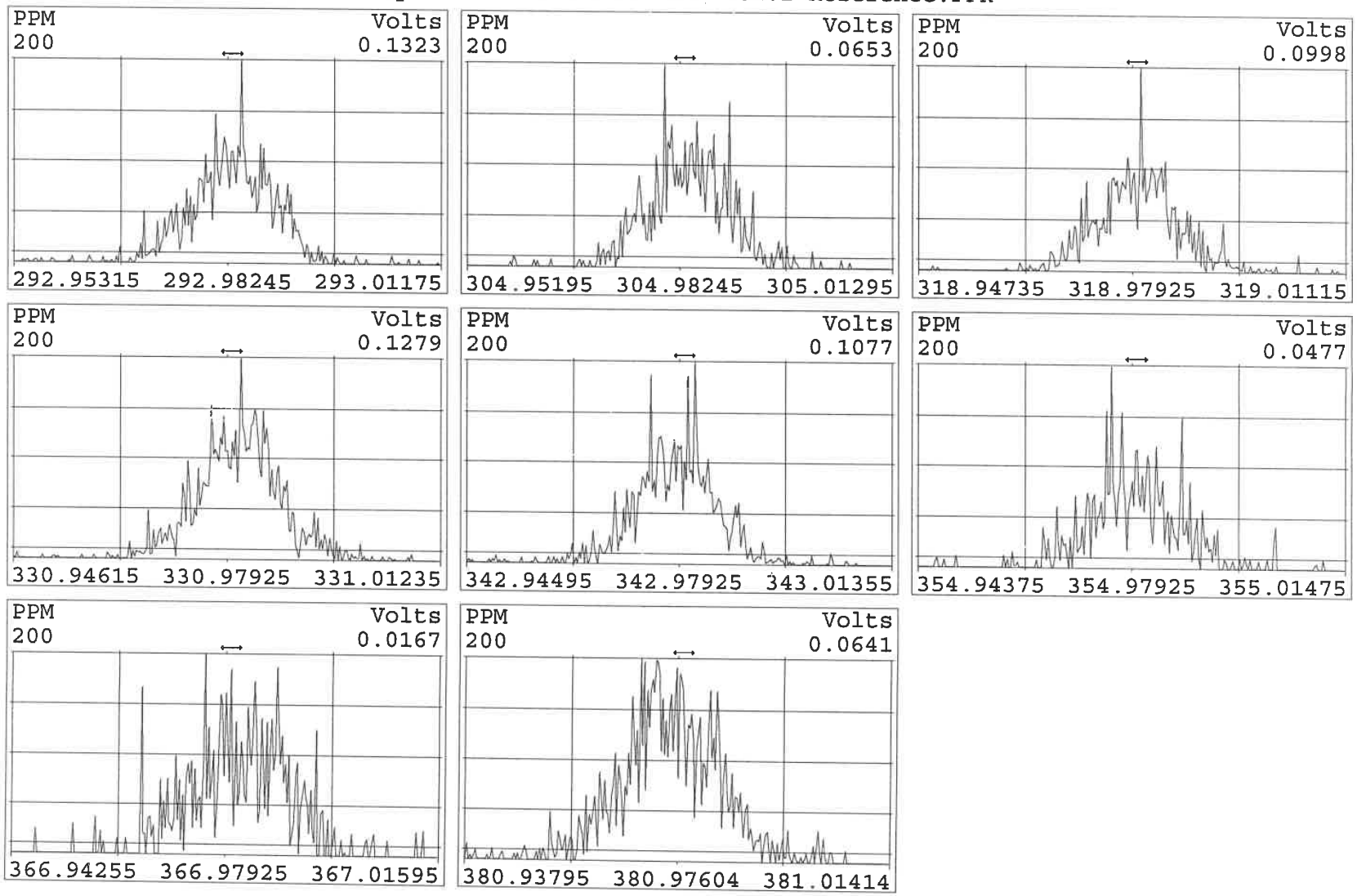

789183

Peak Locate Examination:30-AUG-2021:09:20 File:30AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

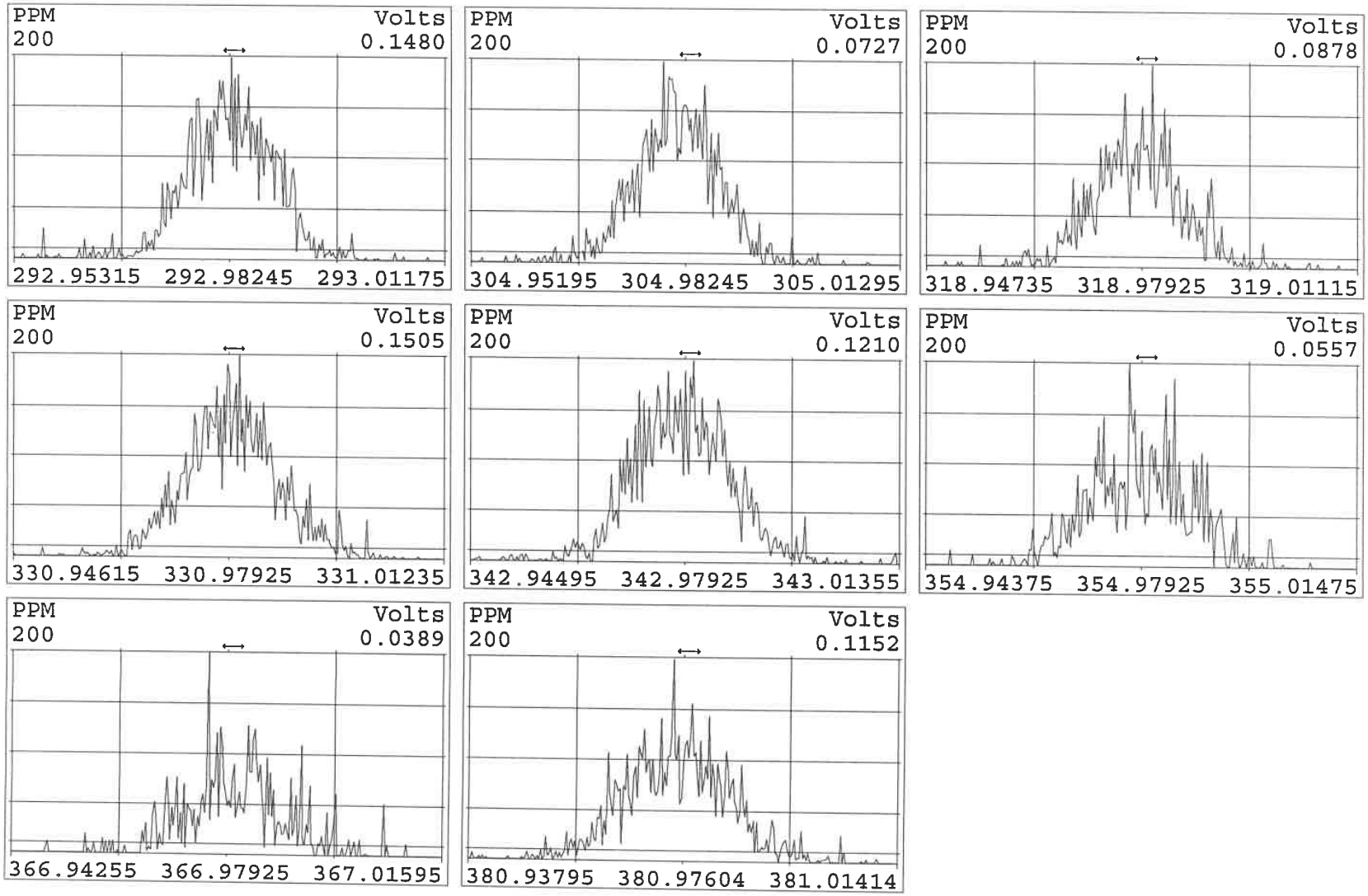

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 16:16:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:56

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.300	59556751	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.616	91683910	0.79	1.3327	115.5	115.5	0.2031	0.2031	116	
2,3,7,8-TCDF	17.644	8516074	0.75	0.9978	9.309	9.309	0.0439	0.0439	93.09	
D 13C-2,3,7,8-TCDD	16.066	57904157	0.76	0.8749	111.1	111.1	0.2489	0.2489	111	
2,3,7,8-TCDD	16.080	5876060	0.77	1.0570	9.601	9.601	0.0419	0.0419	96.01	
$ 37Cl4-2,3,7,8-TCDD	16.080	5620446		0.8648	10.9	10.9	0.0372	0.0372	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 16:16:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:56

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.300	16.300	0		26013127	5710640	6230	15575	917		
333.9339	16.300	16.300	0		33543624	7492944	5271	13177	1422	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.616	17.616	0	1.081	40596412	7743193	6996	17490	1107		
317.9389	17.616	17.616	0	1.081	51087498	9604898	7298	18245	1316	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.644	0	1.002	3658590	684488	1314	3285	521		
305.8987	17.644	17.644	0	1.002	4857484	875548	1725	4312	508	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	0.986	24957849	5501958	6230	15575	883		
333.9339	16.066	16.066	0	0.986	32946308	7425811	5271	13177	1409	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.080	16.080	0	1.001	2562809	565022	1197	2992	472		
321.8936	16.080	16.080	0	1.001	3313251	720270	1091	2727	660	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.080	0	0.987	5620446	1244371	1700	4250	732		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

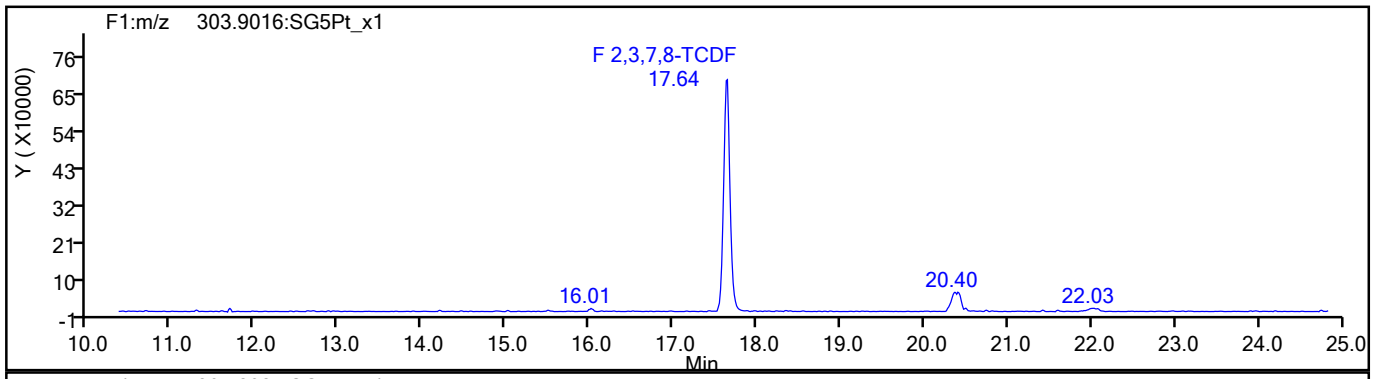

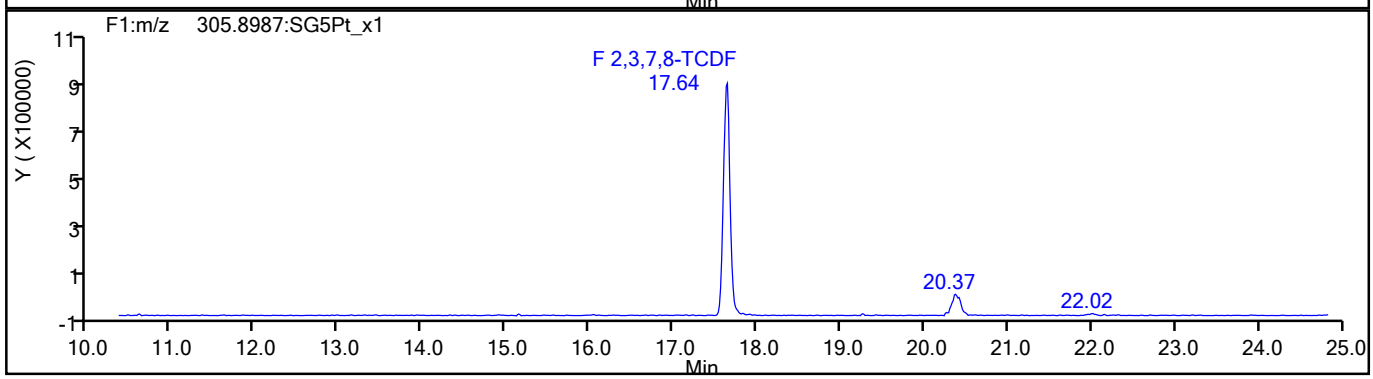

TCDF Standards

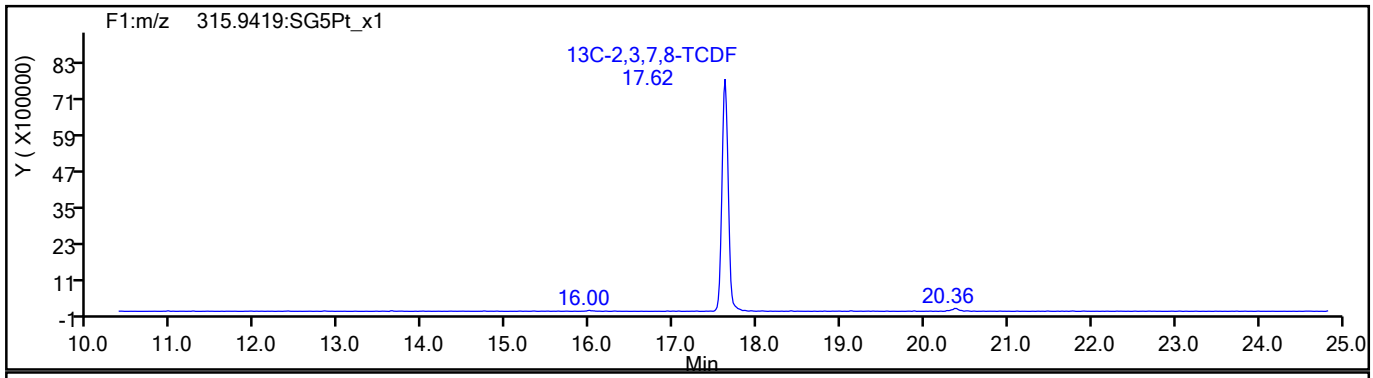

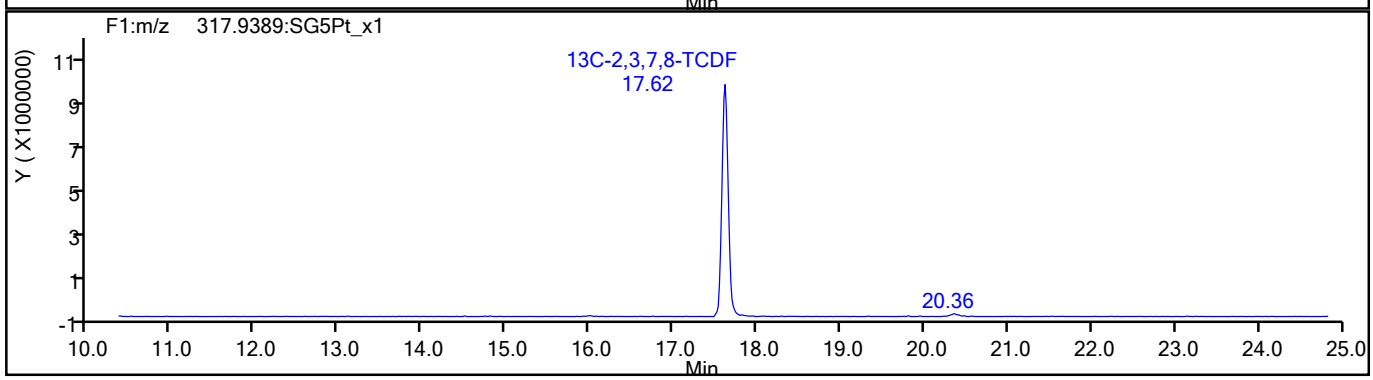

789187

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

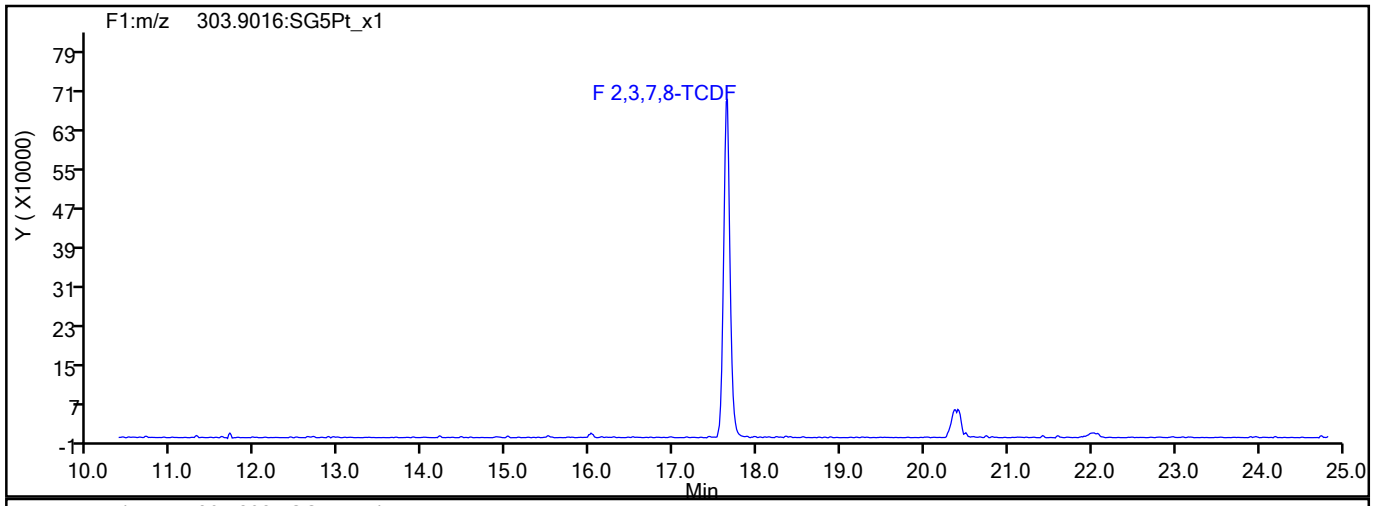

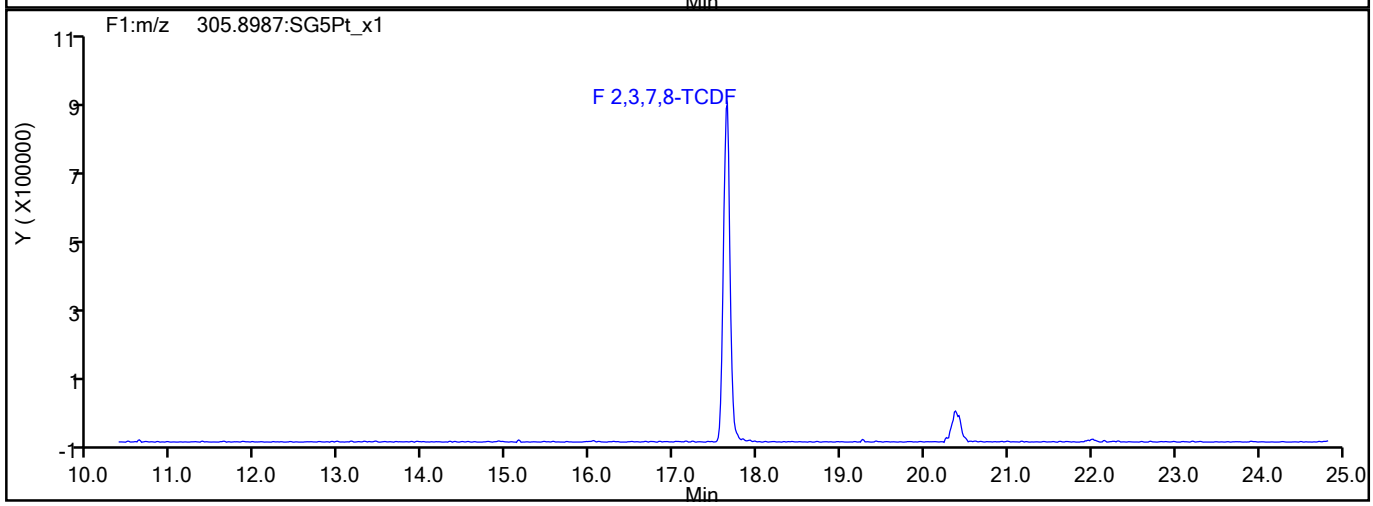

TCDF Interference Mass

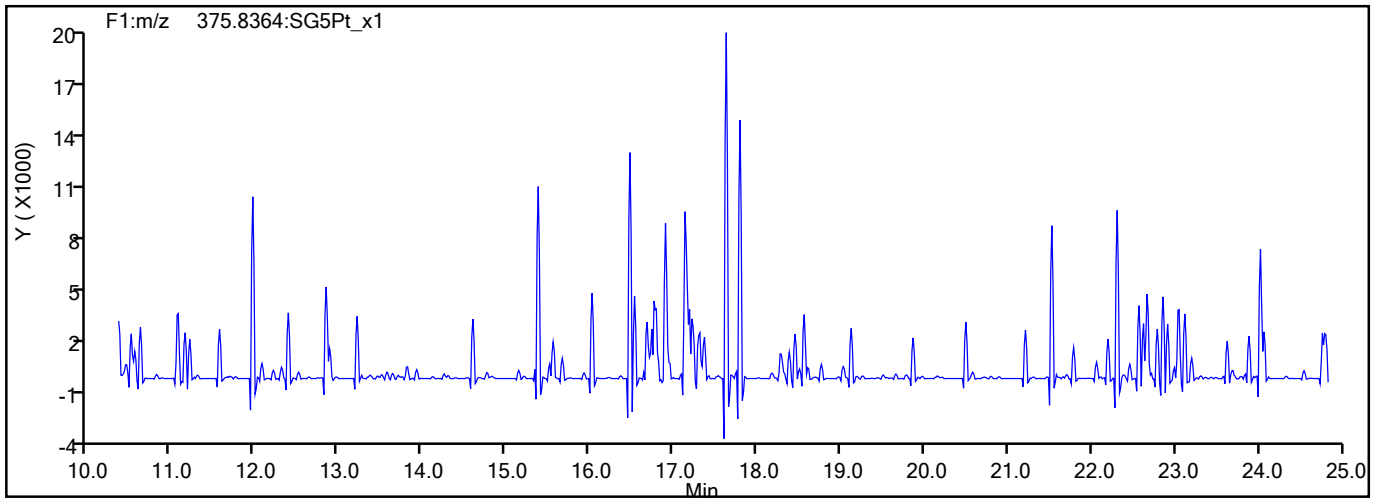

789188

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

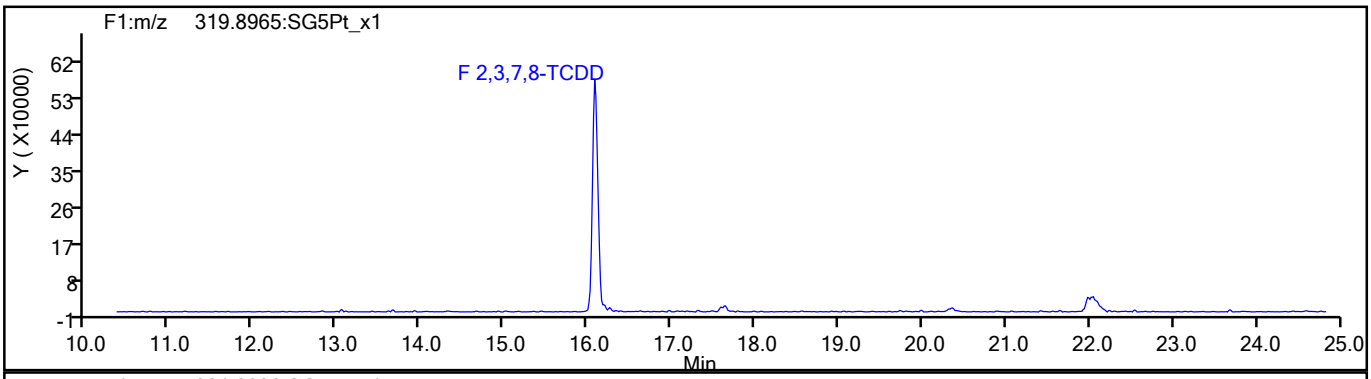

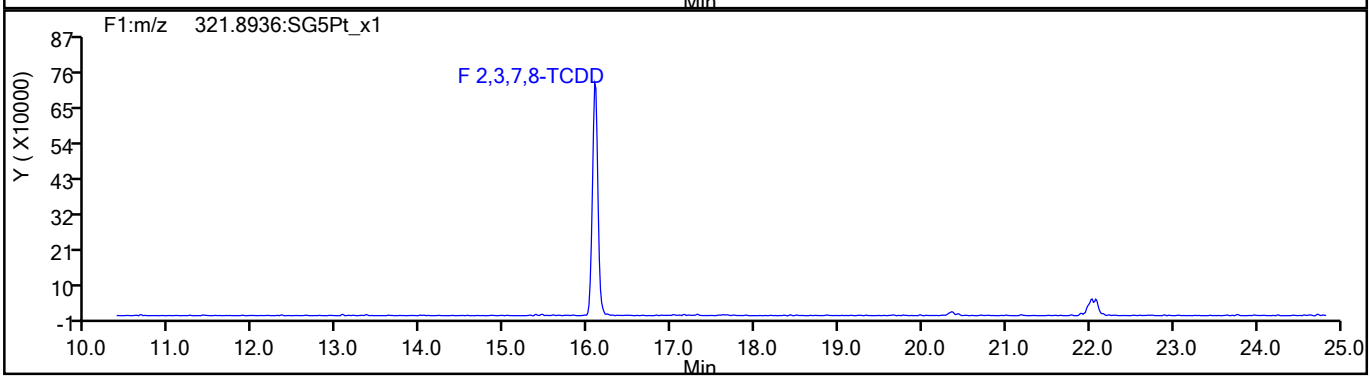

TCDD Standards

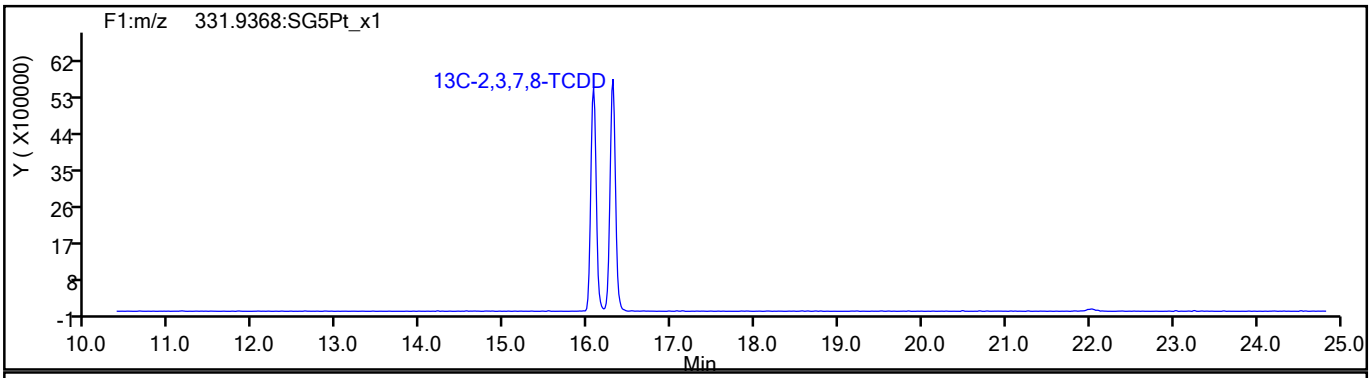

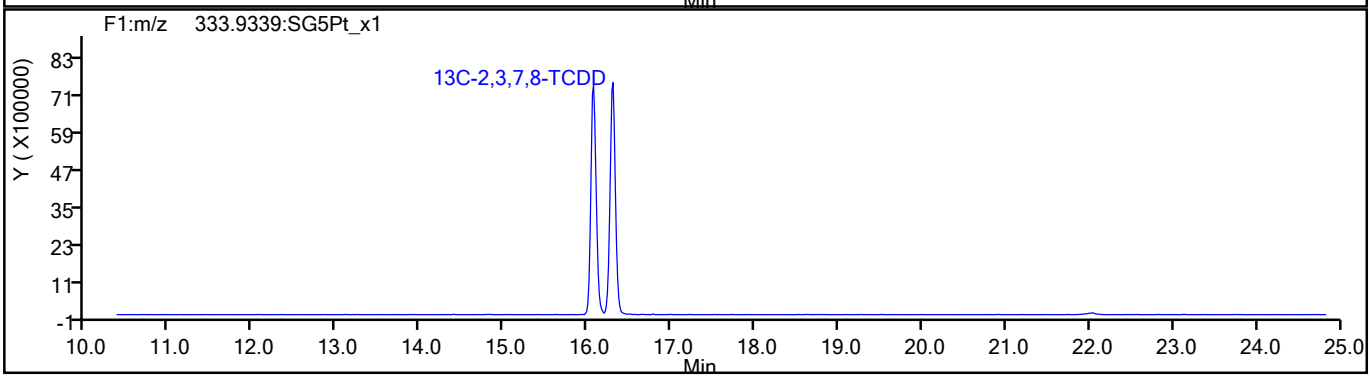

789189

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

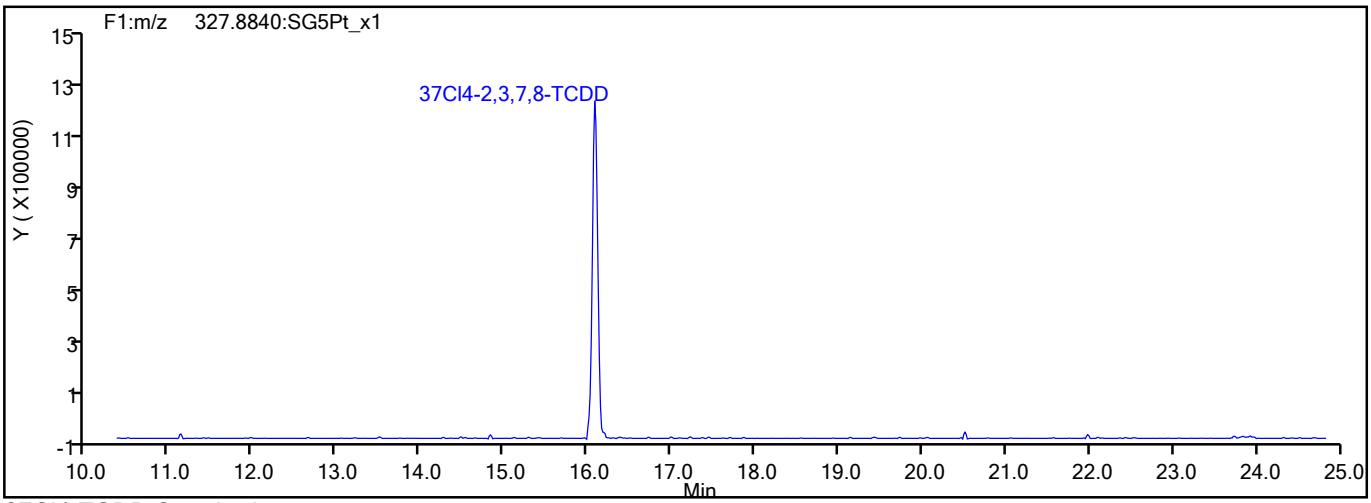

37Cl4-TCDD Standards

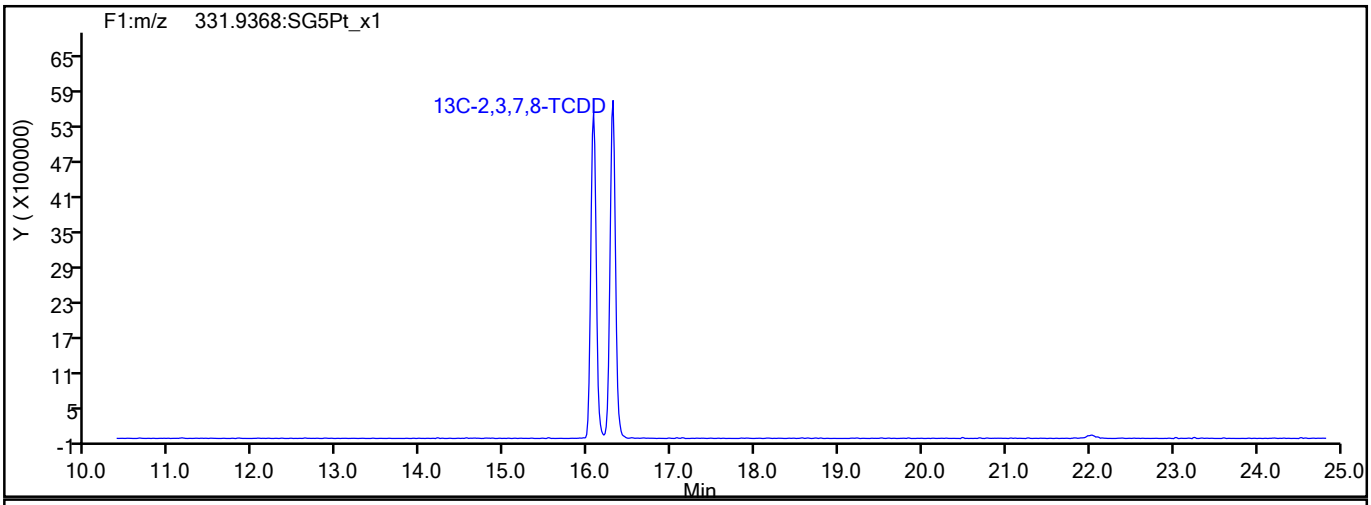

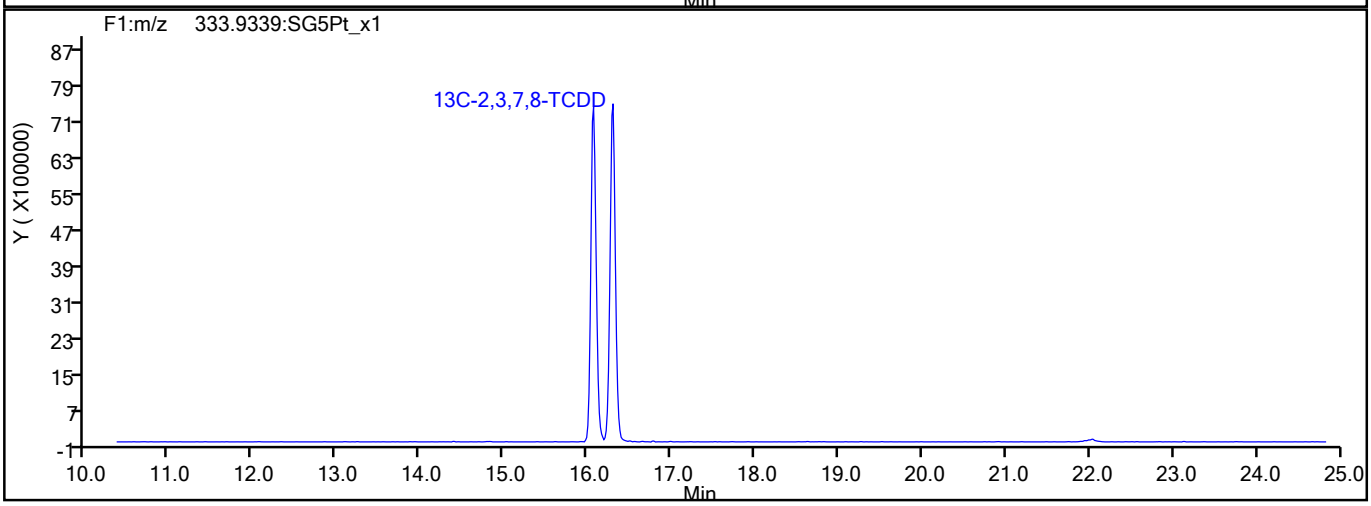

789190

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

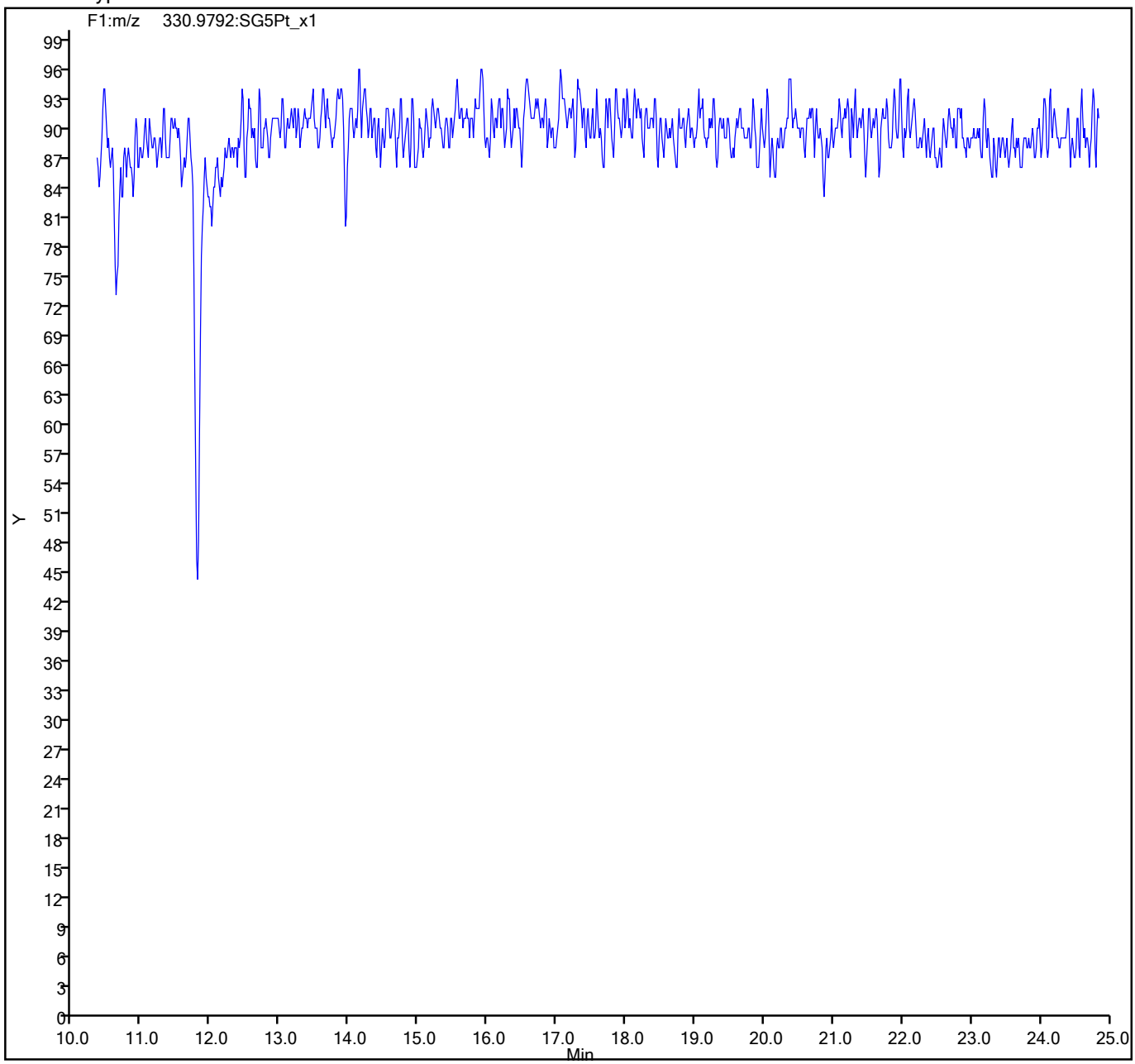

789191

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID: ICV 320-496688/9 Calibration Date: 06/08/2021 19:25

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 08jn21adfs1_11.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.086		40.2	40.0	101	70-130
2,3,7,8-TCDD	AveID	1.075	1.121		41.7	40.0	104	70-130
1,2,3,7,8-PeCDF	AveID	1.054	1.024		194	200	97	70-130
2,3,4,7,8-PeCDF	AveID	1.008	1.118		222	200	111	70-130
1,2,3,7,8-PeCDD	AveID	1.046	1.030		197	200	98	70-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.173		204	200	102	70-130
1,2,3,6,7,8-HxCDF	AveID	1.218	1.270		209	200	104	70-130
2,3,4,6,7,8-HxCDF	AveID	1.214	1.289		212	200	106	70-130
1,2,3,4,7,8-HxCDD	AveID	1.061	1.071		202	200	101	70-130
1,2,3,6,7,8-HxCDD	AveID	0.9933	1.055		212	200	106	70-130
1,2,3,7,8,9-HxCDD	AveID	1.109	1.001		180	200	90	70-130
1,2,3,7,8,9-HxCDF	AveID	1.240	1.220		197	200	98	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.505		209	200	104	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.076		205	200	102	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.299		198	200	99	70-130
OCDD	AveID	1.062	1.116		420	400	105	70-130
OCDF	AveID	1.317	1.367		415	400	104	70-130
13C-2,3,7,8-TCDF	Ave	1.346	1.311		97.4	100	97	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9331		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.095		96.0	100	96	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.137		101	100	101	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.7038		98.2	100	98	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.080		112	100	112	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.244		116	100	116	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.134		109	100	109	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8428		111	100	111	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9479		110	100	110	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9309		95.7	100	96	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7732		105	100	105	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7344		109	100	109	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7385		108	100	108	77-129
13C-OCDD	Ave	0.5446	0.5501		202	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.000		39.7	40.0	99	79-127

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.559	1125768	0.79	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.623	1476391	0.81	1.3459	97.4	97.4	0.3116	0.3116	97.44	
2,3,7,8-TCDF	19.648	641186	0.78	1.0802	40.2	40.2	0.0827	0.0827	101	
A Non-2,3,7,8-sub-TCDF	19.213	10768	0.77	1.0802	0.7248	0.6752	0.0827	0.3523		RQ
S Total TCDF					40.9	40.9	0.0827	0.0827		RQ
D 13C-2,3,7,8-TCDD	20.928	1050504	0.81	0.9317	100.2	100.2	0.3032	0.3032	100	
$ 37Cl4-2,3,7,8-TCDD	20.946	450121		1.0083	39.7	39.7	0.0185	0.0185	99.14	
2,3,7,8-TCDD	20.946	471118	0.76	1.0753	41.7	41.7	0.1073	0.1073	104	
A Non-2,3,7,8-sub-TCDD	20.025	9415	0.75	1.0753	0.8334	0.8334	0.1073	0.8334		
S Total TCDD					42.5	42.5	0.1073	0.1073		
D 13C-1,2,3,7,8-PeCDF	26.596	1232285	1.59	1.1405	96.0	96.0	0.3457	0.3457	95.98	
1,2,3,7,8-PeCDF	26.612	2524406	1.56	1.0543	194.3	194.3	0.8579	0.8579	97.16	
D 13C-2,3,4,7,8-PeCDF	28.053	1280265	1.57	1.1253	101.1	101.1	0.3504	0.3504	101	
2,3,4,7,8-PeCDF	28.079	2861521	1.56	1.0079	221.8	221.8	0.9445	0.9445	111	
A F1 PeCDFs	24.098						0.0158	0.0158		
A Non-2,3,7,8-sub-PeCDF	27.473	63446	1.59	1.0311	4.898	4.898	0.8996	4.898		
S Total PeCDF					421.0	421.0	0.9012	0.9012		
D 13C-1,2,3,7,8-PeCDD	28.846	792316	1.60	0.7165	98.2	98.2	0.1154	0.1154	98.23	
1,2,3,7,8-PeCDD	28.871	1631677	1.56	1.0465	196.8	196.8	0.1550	0.1550	98.39	
A Non-2,3,7,8-sub-PeCDD	27.656						0.1550	0.1550		n
S Total PeCDD					196.8	196.8	0.1550	0.1550		
D 13C-1,2,3,4,7,8-HxCDF	34.420	999392	0.53	0.9648	111.9	111.9	0.3215	0.3215	112	
1,2,3,4,7,8-HxCDF	34.437	2343900	1.24	1.1474	204.4	204.4	0.8372	0.8372	102	
D 13C-1,2,3,6,7,8-HxCDF	34.597	1151145	0.54	1.0708	116.1	116.1	0.2896	0.2896	116	
1,2,3,6,7,8-HxCDF	34.614	2923094	1.25	1.2178	208.5	208.5	0.6918	0.6918	104	
D 13C-2,3,4,6,7,8-HxCDF	35.473	1049318	0.52	1.0413	108.9	108.9	0.2978	0.2978	109	
2,3,4,6,7,8-HxCDF	35.490	2704850	1.25	1.2145	212.3	212.3	0.6697	0.6697	106	
D 13C-1,2,3,7,8,9-HxCDF	36.409	861729	0.52	0.9731	95.7	95.7	0.3187	0.3187	95.67	
1,2,3,7,8,9-HxCDF	36.425	2103282	1.26	1.2401	196.8	196.8	0.7295	0.7295	98.41	
A Non-2,3,7,8-sub-HxCDF	34.470						0.7275	0.7275		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					822.0	822.0	0.7320	0.7320		
* 13C-1,2,3,7,8,9-HxCDD	36.215	925657	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.709	780111	1.25	0.7587	111.1	111.1	0.1965	0.1965	111	
1,2,3,4,7,8-HxCDD	35.726	1671580	1.25	1.0608	202.0	202.0	0.2912	0.2912	101	
D 13C-1,2,3,6,7,8-HxCDD	35.827	877428	1.29	0.8593	110.3	110.3	0.1735	0.1735	110	
1,2,3,6,7,8-HxCDD	35.844	1852033	1.25	0.9933	212.5	212.5	0.2936	0.2936	106	
1,2,3,7,8,9-HxCDD	36.232	1658680	1.25	1.1094	180.4	180.4	0.2704	0.2704	90.20	
A Non-2,3,7,8-sub-HxCDD	34.896						0.2845	0.2845		
S Total HxCDD					594.9	594.9	0.2851	0.2851		
D 13C-1,2,3,4,6,7,8-HpCDF	38.325	715749	0.46	0.7359	105.1	105.1	0.4232	0.4232	105	
1,2,3,4,6,7,8-HpCDF	38.334	2154882	1.05	1.4421	208.8	208.8	0.7056	0.7056	104	
D 13C-1,2,3,4,7,8,9-HpCDF	39.615	683594	0.46	0.6854	107.8	107.8	0.4545	0.4545	108	
1,2,3,4,7,8,9-HpCDF	39.623	1775948	1.06	1.3092	198.4	198.4	0.7773	0.7773	99.22	
A Non-2,3,7,8-sub-HpCDF	38.954						0.7397	0.7397		
S Total HpCDF					407.2	407.2	0.7415	0.7415		
D 13C-1,2,3,4,6,7,8-HpCDD	39.311	679765	1.07	0.6745	108.9	108.9	0.3101	0.3101	109	
1,2,3,4,6,7,8-HpCDD	39.320	1462615	1.05	1.0503	204.9	204.9	0.4465	0.4465	102	
A Non-2,3,7,8-sub-HpCDD	38.962						0.4465	0.4465		n
S Total HpCDD					204.9	204.9	0.4465	0.4465		
D 13C-OCDD	41.801	1018443	0.90	0.5446	202.0	202.0	0.2655	0.2655	101	
OCDF	41.885	2784055	0.91	1.3168	415.2	415.2	0.4728	0.4728	104	
OCDD	41.809	2272994	0.89	1.0620	420.3	420.3	0.4613	0.4613	105	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 08-Jun-2021 19:25:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV HRDXNIC_00047
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist:

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 08:43:04

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.559	20.544	1		497786	76231	115	287	663		
333.9338	20.550	20.544	0		627982	95455	79	197	1208	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.623	19.630	0	0.954	658944	105750	176	440	601		
317.9389	19.623	19.630	0	0.954	817447	135001	112	280	1205	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.648	19.673	-1	1.001	281905	45248	31	77	1460		
305.8987	19.648	19.673	-1	1.001	359281	56056	55	137	1019	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.489	19.213	-43	0.942	2444	489	31	77	16		
305.8987	18.489	19.213	-43	0.942	3965	647	55	137	12	0.62(0.65-0.89)	
	Empc Correction				3174	635	55	137	12		
303.9016	18.961	19.213	-15	0.966	2103	355	31	77	11		
305.8987	18.961	19.213	-15	0.966	3047	540	55	137	10	0.69(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.928	20.918	1	1.018	469892	68601	115	287	597		
333.9338	20.920	20.918	0	1.018	580612	84734	79	197	1073	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.946	20.939	0	1.019	450121	64795	13	32	4984		
2,3,7,8-TCDD											
319.8965	20.946	20.952	0	1.001	203710	30841	43	107	717		
321.8936	20.946	20.952	0	1.001	267408	39251	28	70	1402	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	20.748	20.025	43	0.991	4027	748	43	107	17		
321.8936	20.748	20.025	43	0.991	5388	912	28	70	33	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.596	26.552	3	1.294	756622	134257	176	440	763		
353.8970	26.596	26.552	3	1.294	475663	85437	95	237	899	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.612	26.578	2	1.001	1538811	266495	482	1205	553		
341.8567	26.612	26.578	2	1.001	985595	170105	313	782	543	1.56(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.053	28.002	3	1.365	781677	129402	176	440	735		
353.8970	28.062	28.002	4	1.365	498588	79335	95	237	835	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.079	28.028	3	1.001	1744490	280566	482	1205	582		
341.8567	28.079	28.028	3	1.001	1117031	182233	313	782	582	1.56(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.098						3	7			
341.8567	24.098						11	27			
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.186	27.473	-17	1.022	38961	6595	482	1205	14		
341.8567	27.177	27.473	-18	1.022	24485	4217	313	782	13	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.846	28.795	3	1.403	487930	72898	31	77	2352		
369.8919	28.846	28.795	3	1.403	304386	45466	26	65	1749	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.871	28.820	3	1.001	995242	153111	50	125	3062		
357.8516	28.871	28.820	3	1.001	636435	96130	27	67	3560	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.214	27.656	33	0.978	1514	293	50	125	6		
357.8516	28.197	27.656	32	0.978	953	151	27	67	6	1.59(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.420	34.370	3	0.950	347982	68430	100	250	684		
385.8610	34.411	34.370	2	0.950	651410	129057	179	447	721	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.437	34.404	2	1.000	1299118	260435	435	1087	599		
375.8178	34.437	34.404	2	1.000	1044782	207176	324	810	639	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.597	34.555	2	0.955	402116	75630	100	250	756		
385.8610	34.597	34.555	2	0.955	749029	149555	179	447	836	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.614	34.572	2	1.000	1625084	318250	435	1087	732		
375.8178	34.614	34.572	2	1.000	1298010	254878	324	810	787	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.473	35.432	2	0.980	359196	80141	100	250	801		
385.8610	35.473	35.432	2	0.980	690122	153108	179	447	855	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.490	35.449	2	1.000	1504442	338765	435	1087	779		
375.8178	35.490	35.449	2	1.000	1200408	271192	324	810	837	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.409	36.376	2	1.005	295983	71192	100	250	712		
385.8610	36.409	36.376	2	1.005	565746	138504	179	447	774	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.425	36.393	2	1.000	1172455	286668	435	1087	659		
375.8178	36.425	36.393	2	1.000	930827	227290	324	810	702	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						435	1087			
375.8178	34.470						324	810			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.215	36.182	2		517474	125327	80	200	1567		
403.8529	36.215	36.182	2		408183	99401	54	135	1841	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.709	35.668	2	0.986	434094	107490	80	200	1344		
403.8529	35.709	35.668	2	0.986	346017	85806	54	135	1589	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.726	35.685	2	1.000	928783	231750	132	330	1756		
391.8127	35.726	35.685	2	1.000	742797	185332	107	267	1732	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.827	35.794	2	0.989	493784	113946	80	200	1424		
403.8529	35.827	35.794	2	0.989	383644	90754	54	135	1681	1.29(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	35.844	35.811	2	1.000	1030480	241468	132	330	1829		
391.8127	35.844	35.811	2	1.000	821553	192627	107	267	1800	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.232	36.198	2	1.015	920944	222717	132	330	1687		
391.8127	36.223	36.198	1	1.014	737736	175856	107	267	1644	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.896						132	330			
391.8127	34.896						107	267			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.325	38.292	2	1.058	225843	65327	102	255	640		
419.8220	38.325	38.292	2	1.058	489906	143703	178	445	807	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.334	38.309	1	1.000	1104308	315033	437	1092	721		
409.7788	38.334	38.309	1	1.000	1050574	298985	414	1035	722	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.615	39.591	1	1.094	215253	65848	102	255	646		
419.8220	39.615	39.591	1	1.094	468341	143162	178	445	804	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.623	39.598	1	1.000	914515	283964	437	1092	650		
409.7788	39.623	39.598	1	1.000	861433	268143	414	1035	648	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						437	1092			
409.7788	38.954						414	1035			

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.311	39.279	2	1.086	351100	106957	105	262	1019		
437.8140	39.311	39.279	2	1.086	328665	103097	83	207	1242	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.320	39.295	1	1.000	749316	235728	209	522	1128		
425.7737	39.320	39.295	1	1.000	713299	221333	185	462	1196	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.662	38.962	-18	0.983	5341	1580	209	522	8		
425.7737	38.662	38.962	-18	0.983	5423	1624	185	462	9	0.98(0.88-1.20)	
13C-OCDD											
469.7780	41.801	41.778	1	1.154	483015	136908	66	165	2074		
471.7750	41.801	41.778	1	1.154	535428	149653	64	160	2338	0.90(0.76-1.02)	
OCDF											
441.7428	41.885	41.862	1	1.002	1324086	386680	165	412	2344		
443.7399	41.885	41.862	1	1.002	1459969	425131	192	480	2214	0.91(0.76-1.02)	
OCDD											
457.7377	41.809	41.786	1	1.000	1072812	307543	147	367	2092		
459.7348	41.809	41.786	1	1.000	1200182	343135	134	335	2561	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1476391	240751

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1476391	240751

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.489	2444	489	3965	647	0.4019	0.62	RQ
18.489	2444	489	3174	635	0.3523		Empc Correction
18.961	2103	355	3047	540	0.3229	0.69	n
Signal Totals:							
	4547	844	6221	1175			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11559	2031				0.65	RQ
	10768	2019					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7248 = (11559 * 100.000) / (1476391 * 1.080)
Empc Amount: 0.6752 = (10768 * 100.000) / (1476391 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-TCDD, RT: 20.025

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	1050504	153335

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	1050504	153335

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
20.748	4027	748	5388	912	0.8334	0.75	
Signal Totals:							
	4027	748	5388	912			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9415	1660				0.75	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8334 = (9415 * 100.000) / (1050504 * 1.075)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d
Lims ID: ICV
Client ID:
Inject. Date: 08-Jun-2021 19:25:00 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 9
Sublist:

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1232285	219694
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1280265	208737

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1256275	214215

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.186	38961	6595	24485	4217	4.90	1.59	
Signal Totals:							
	38961	6595	24485	4217			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	63446	10812				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.898 = (63446 * 100.000) / (1256275 * 1.031)

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

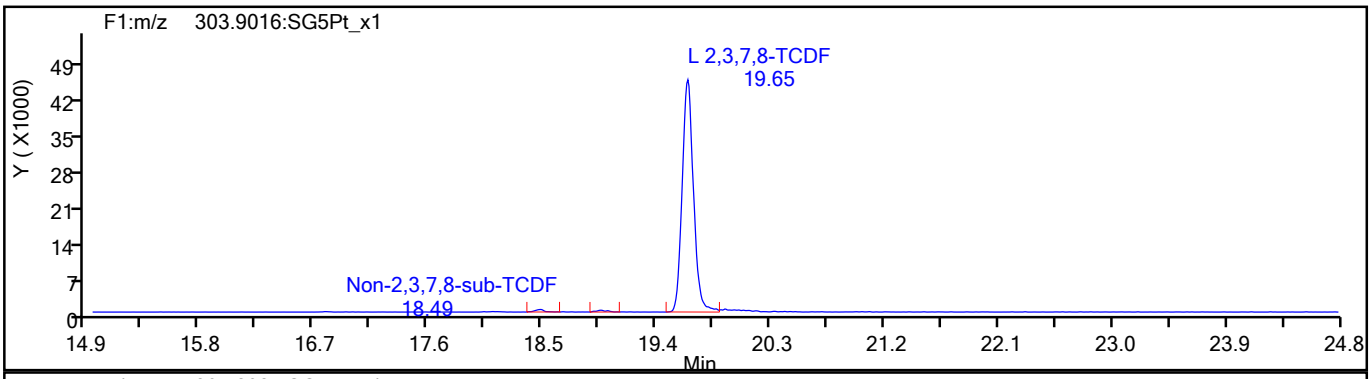

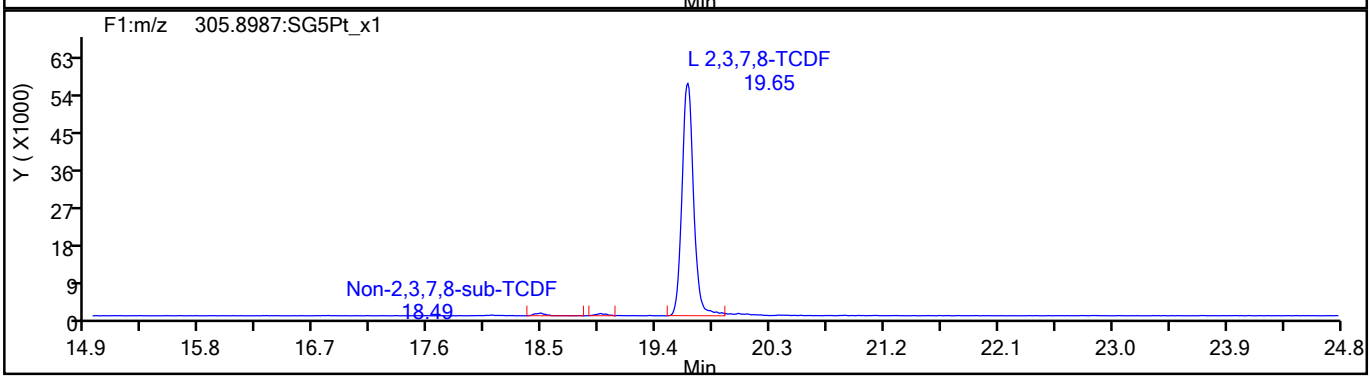

TCDF Standards

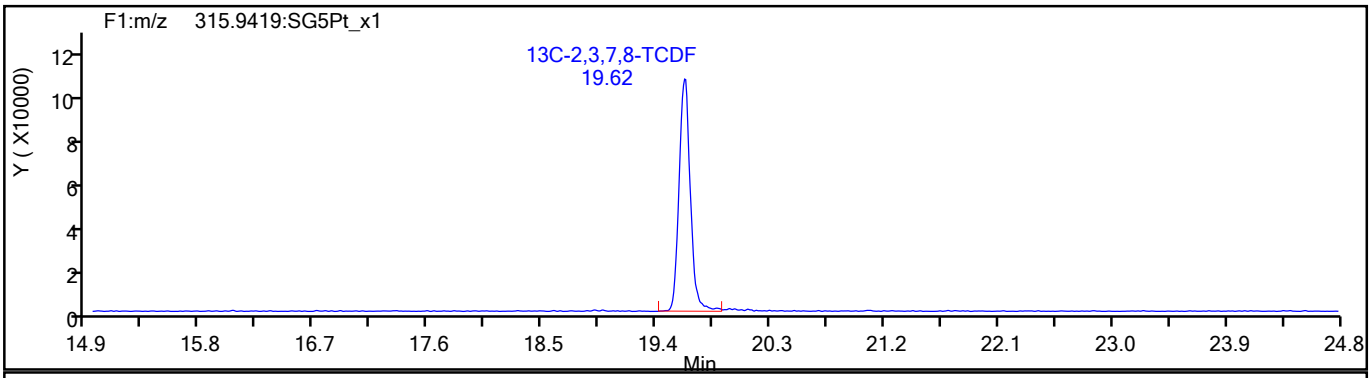

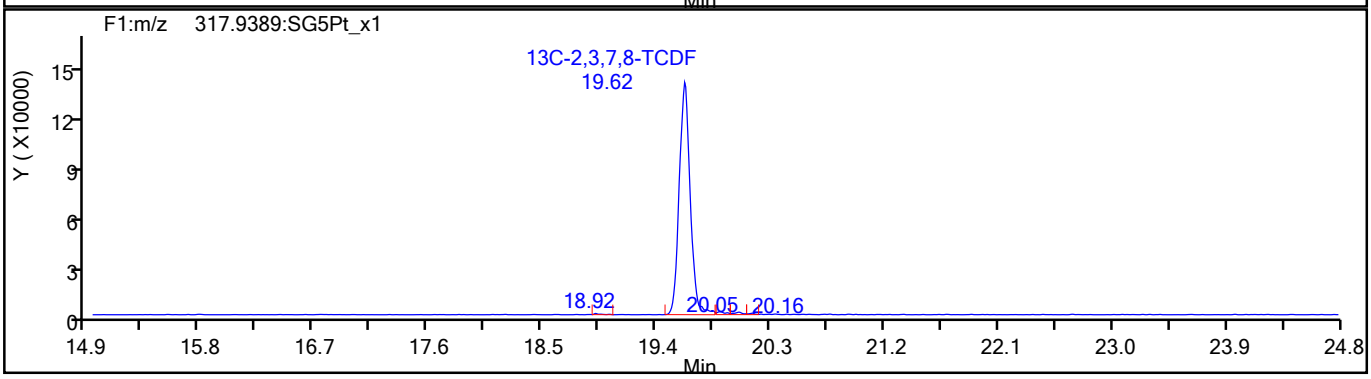

789202

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

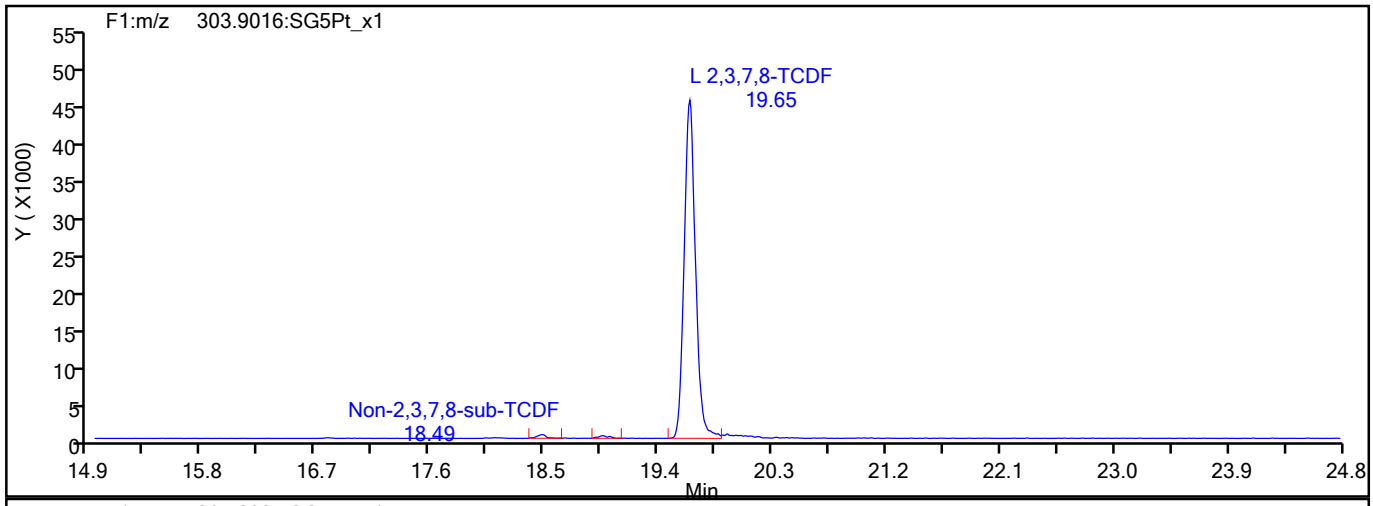

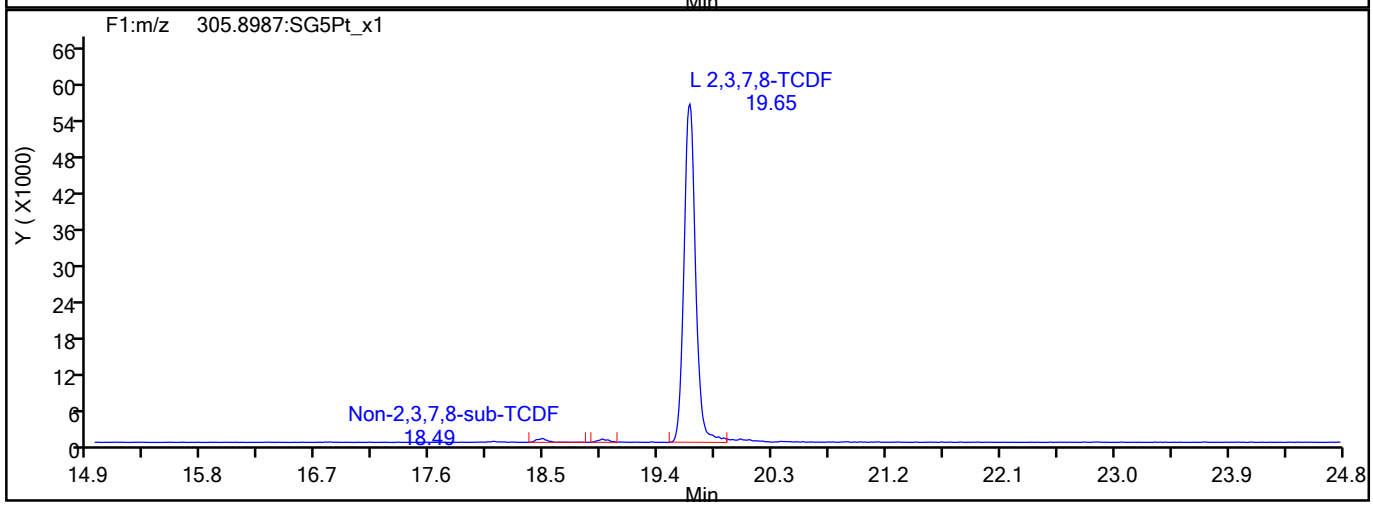

TCDF Interference Mass

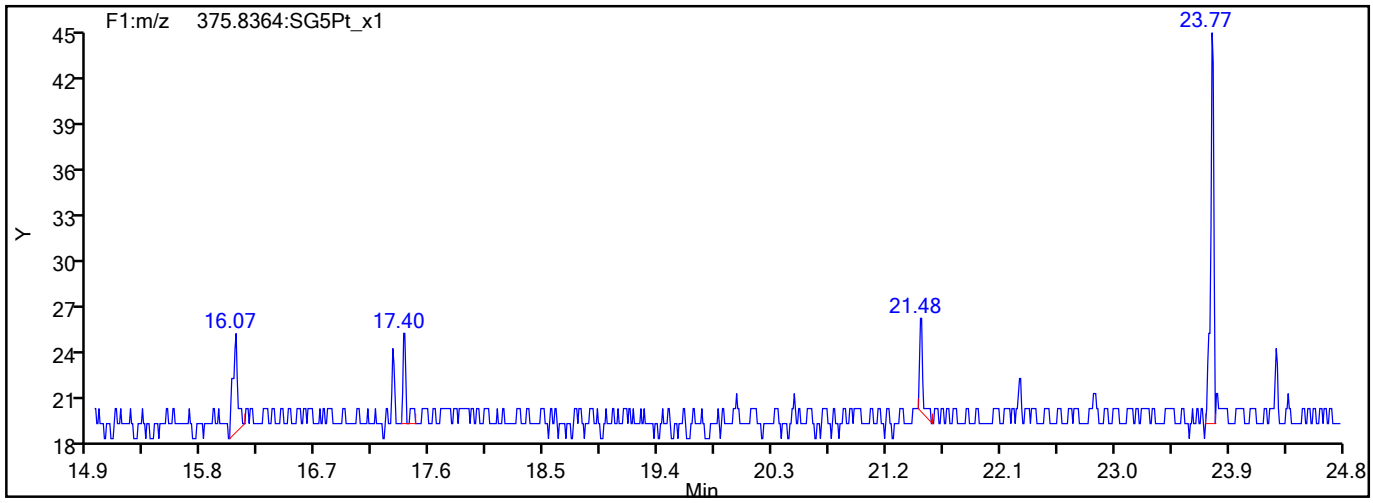

789203

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

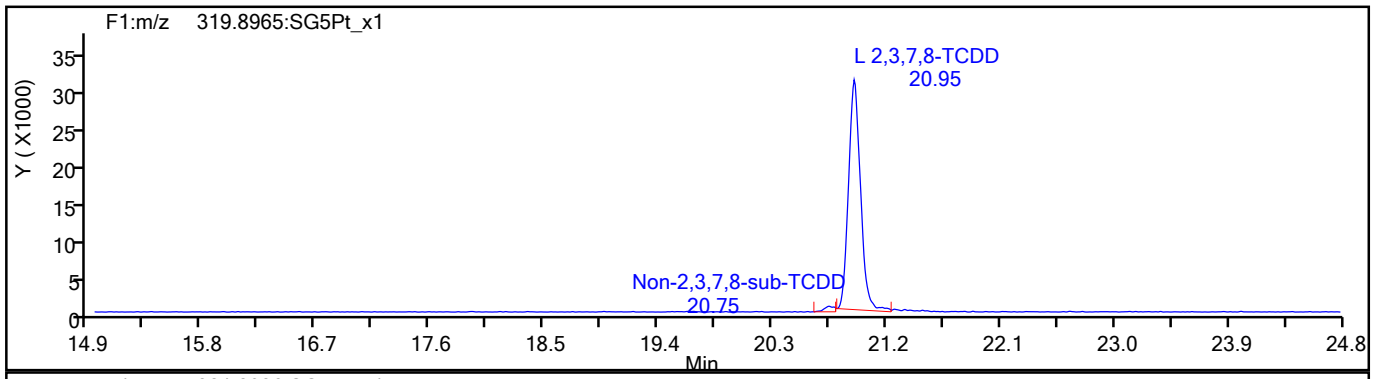

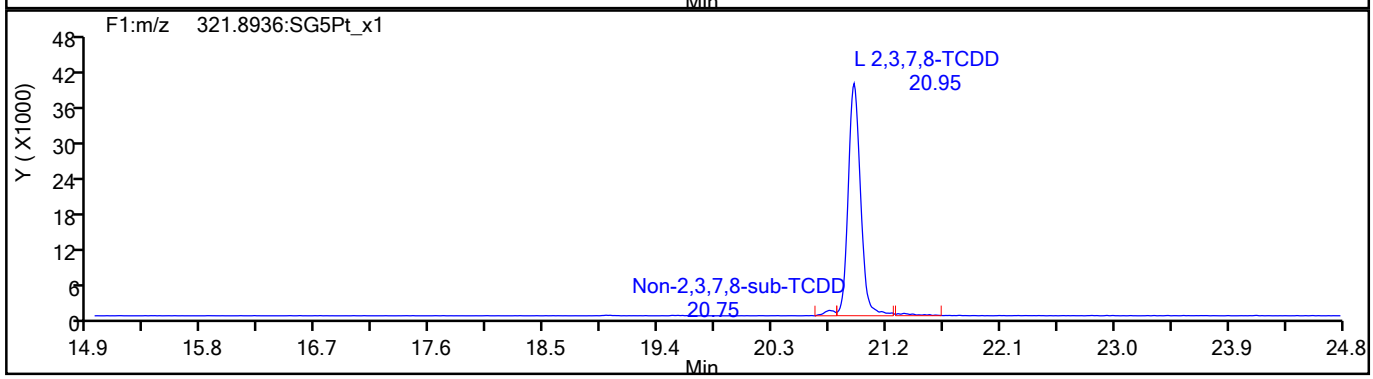

TCDD Standards

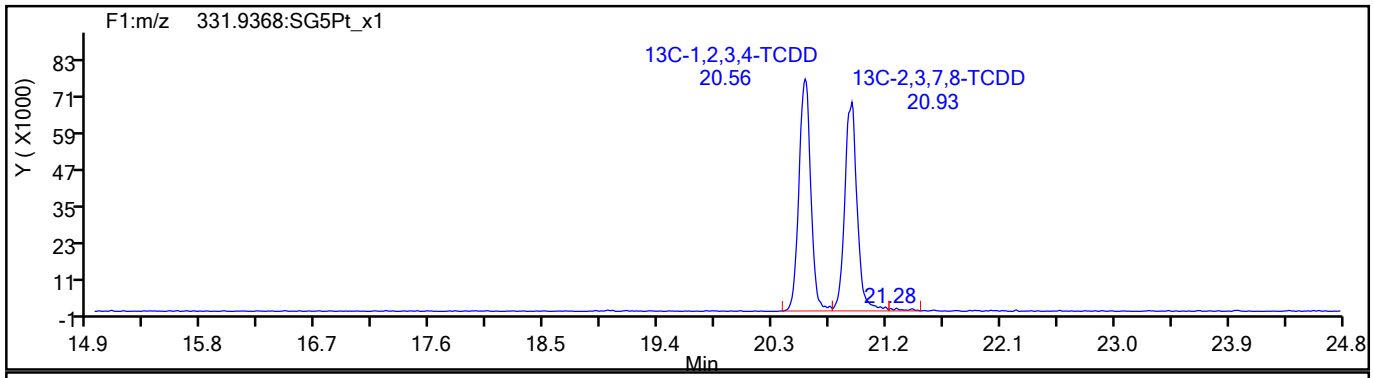

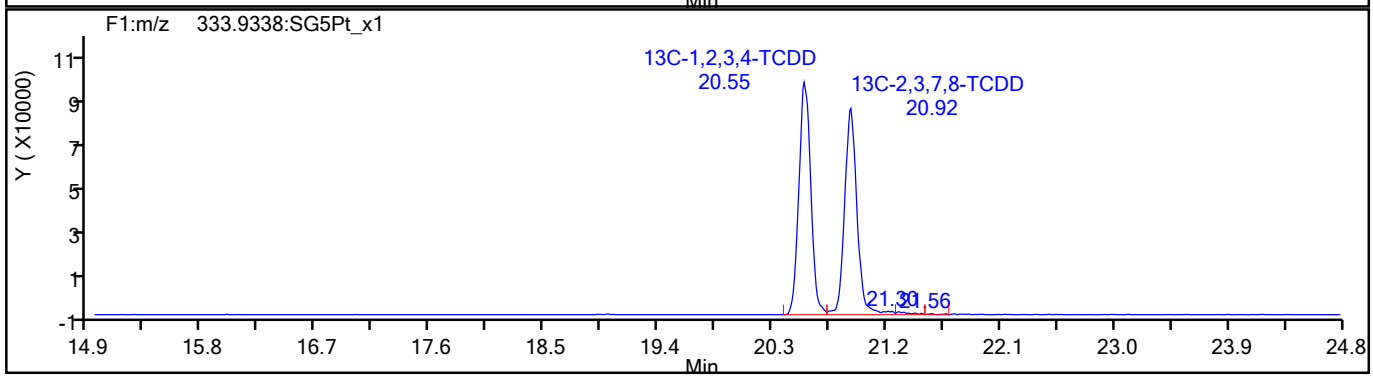

789204

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

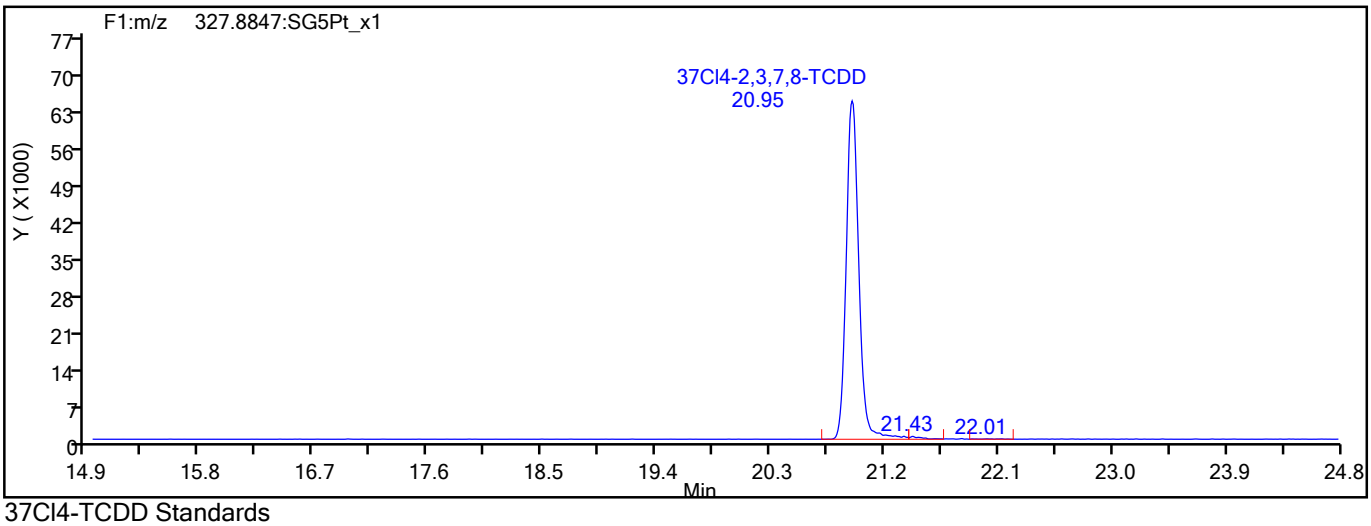

37Cl4-TCDD Standards

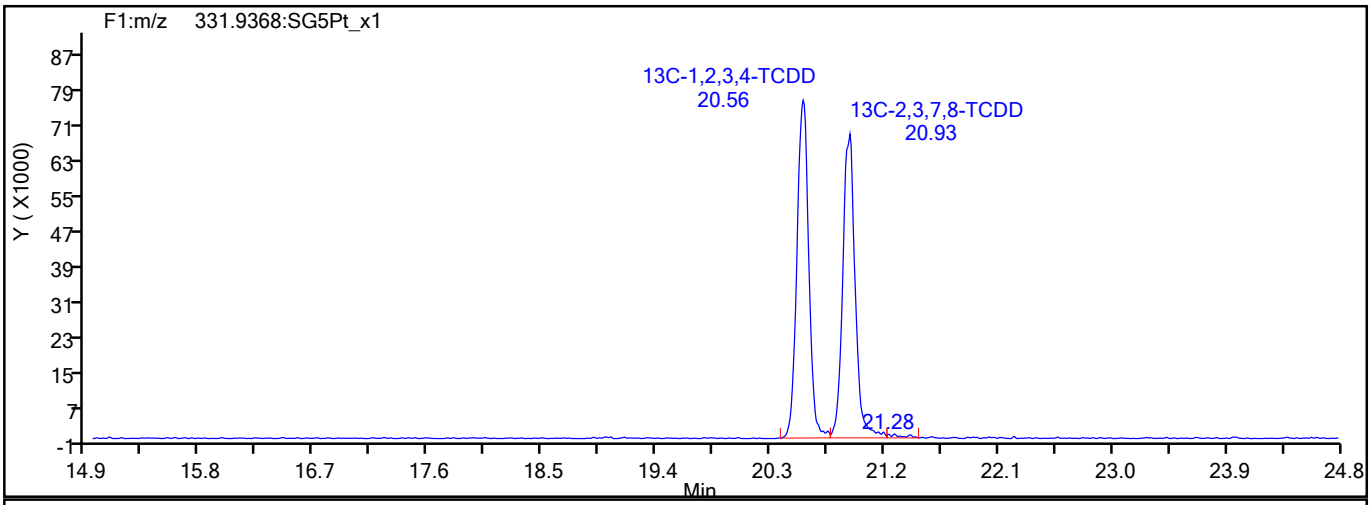

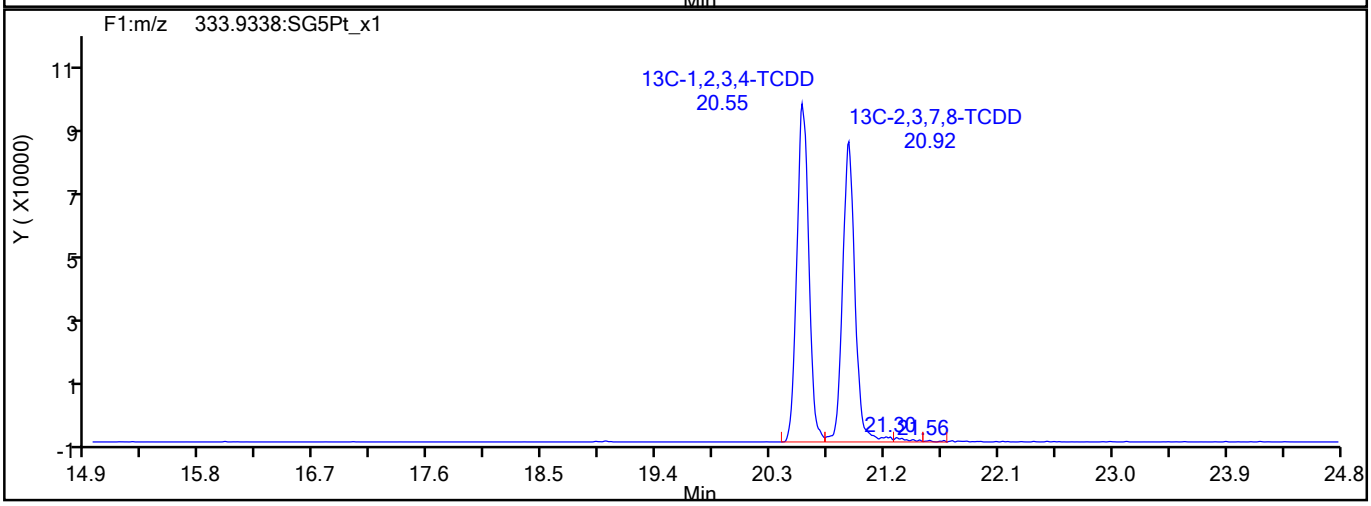

789205

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

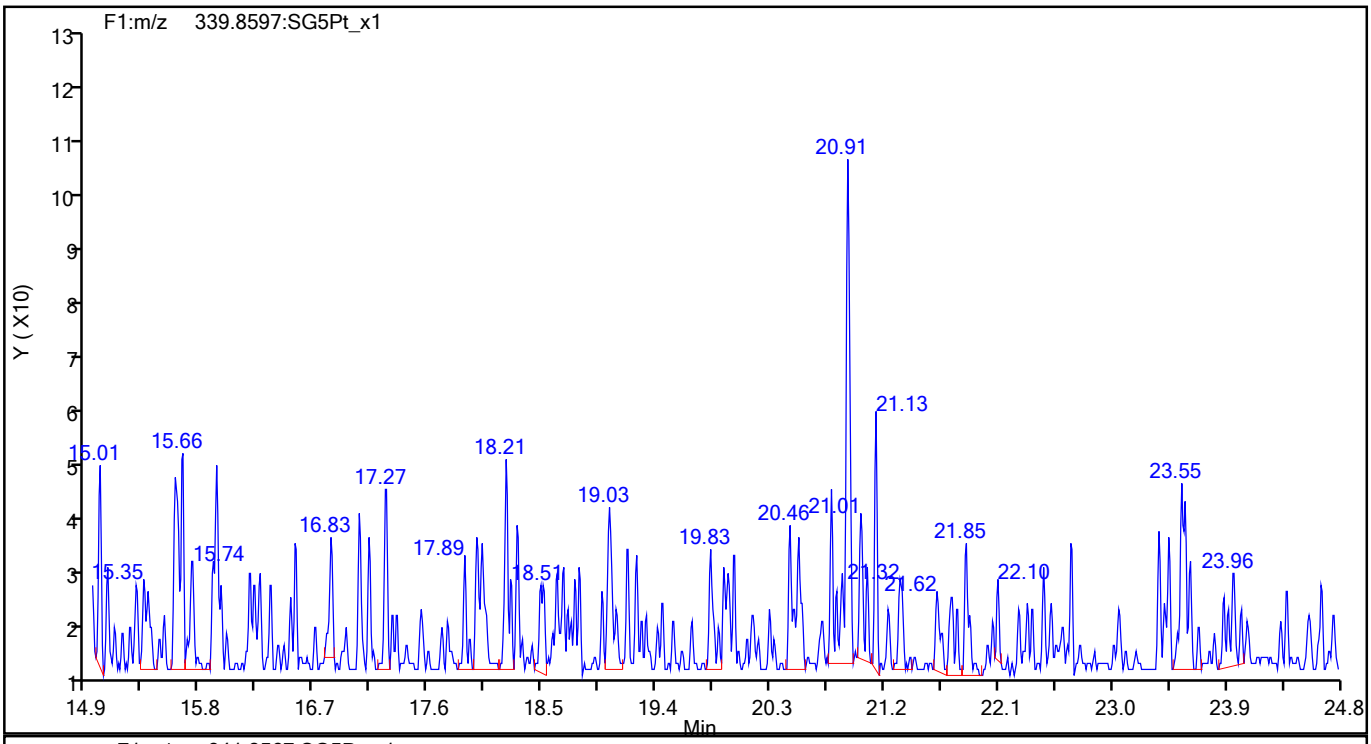

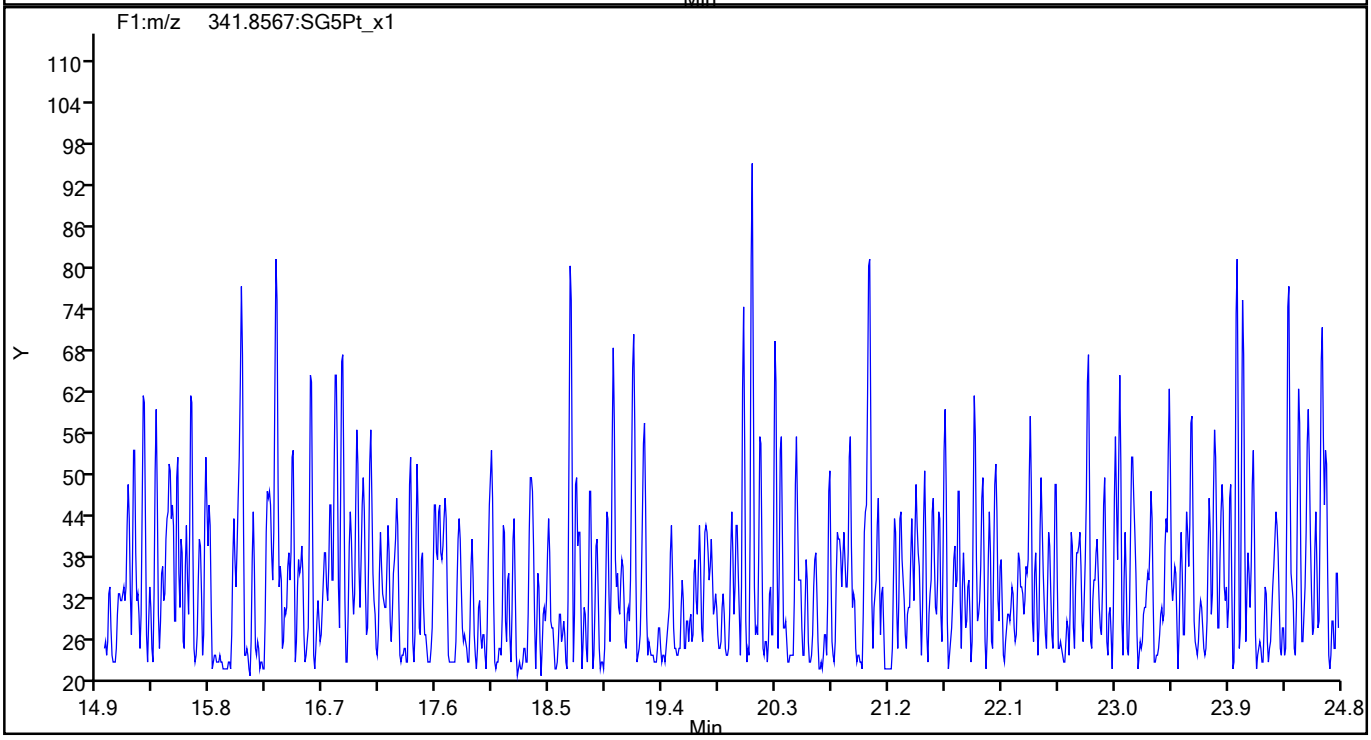

789206

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

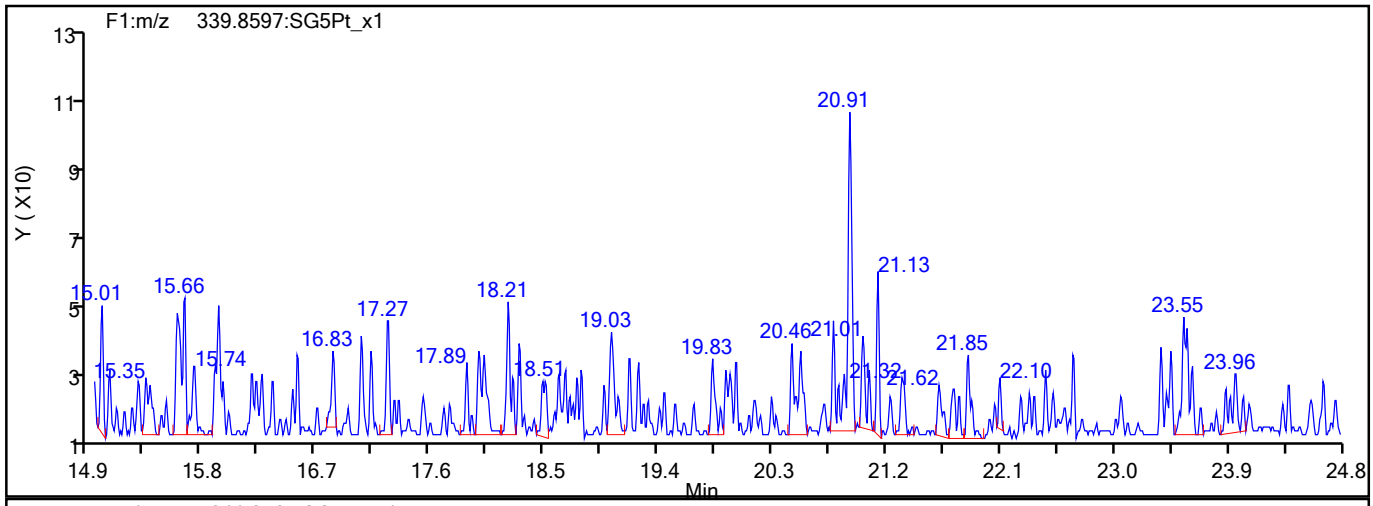

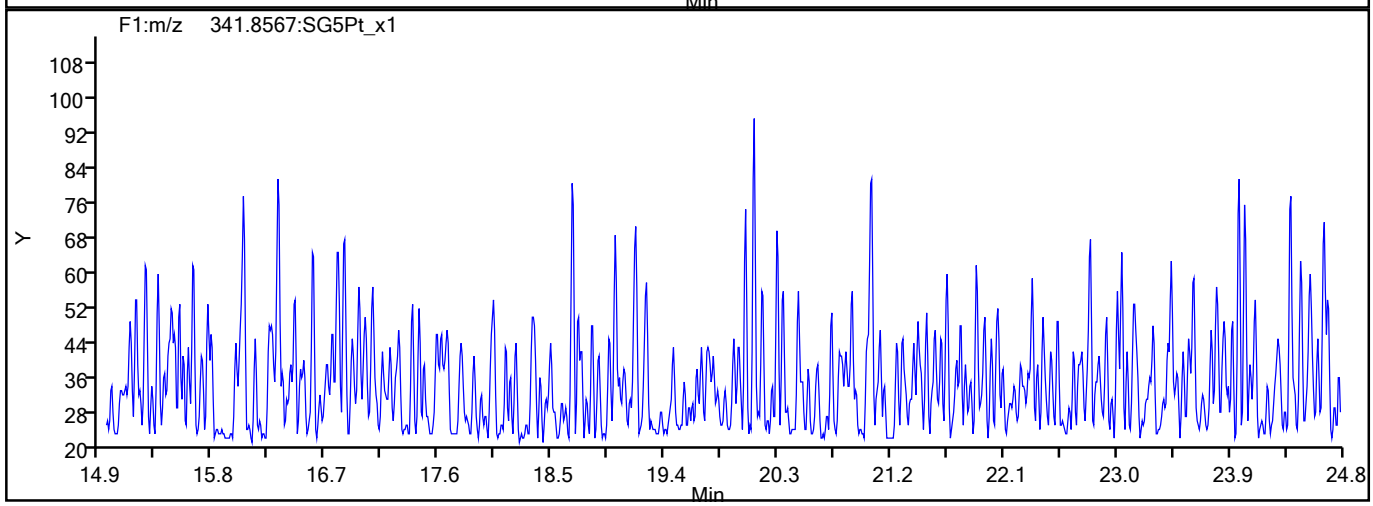

F1 PeCDFs Interference Mass

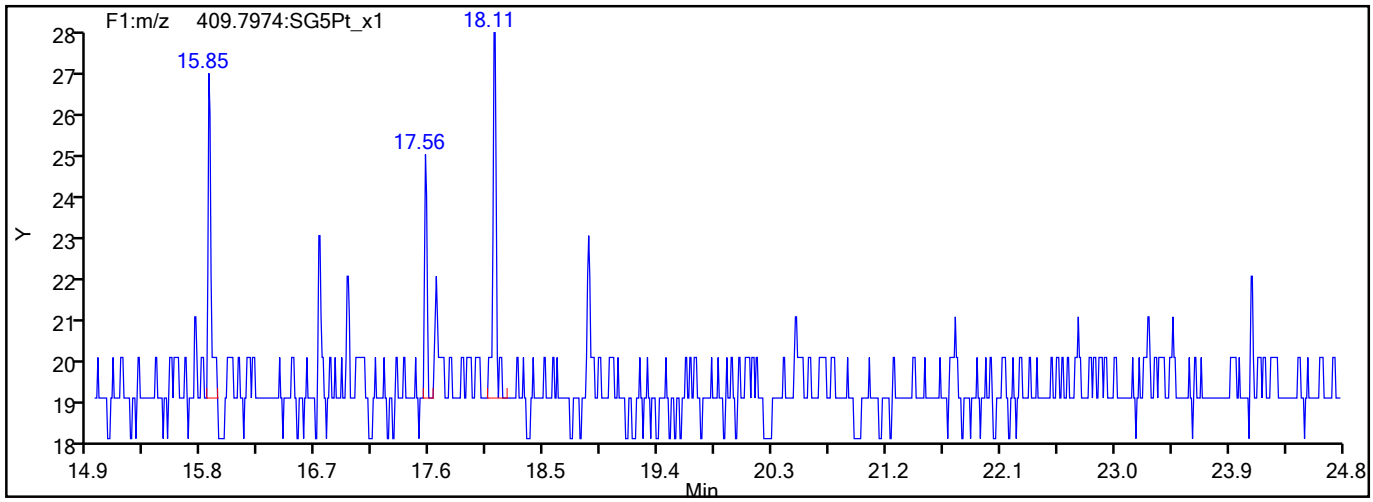

789207

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

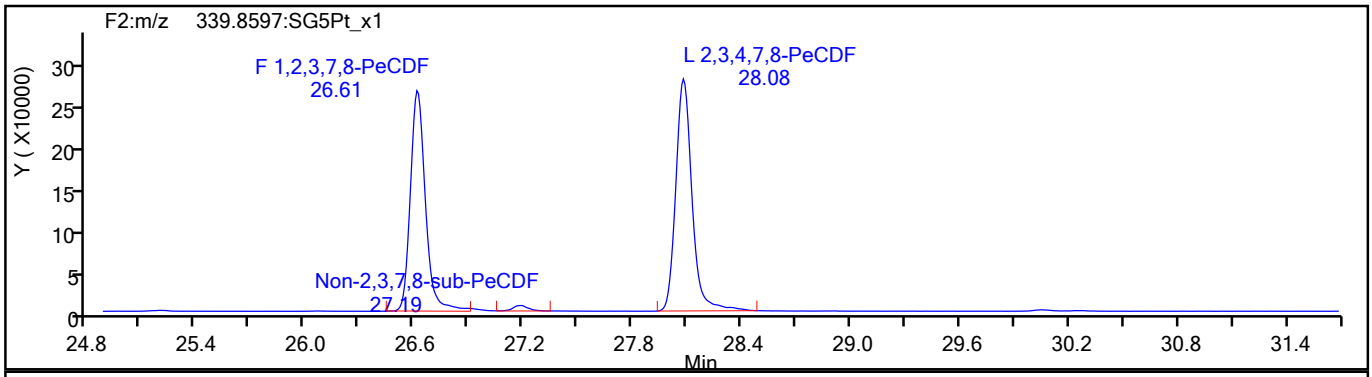

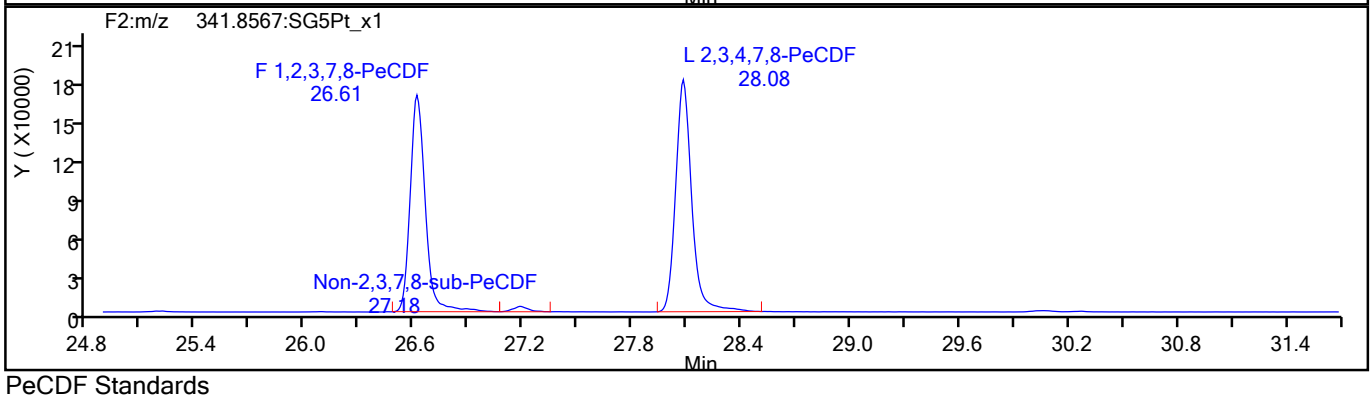

PeCDF Standards

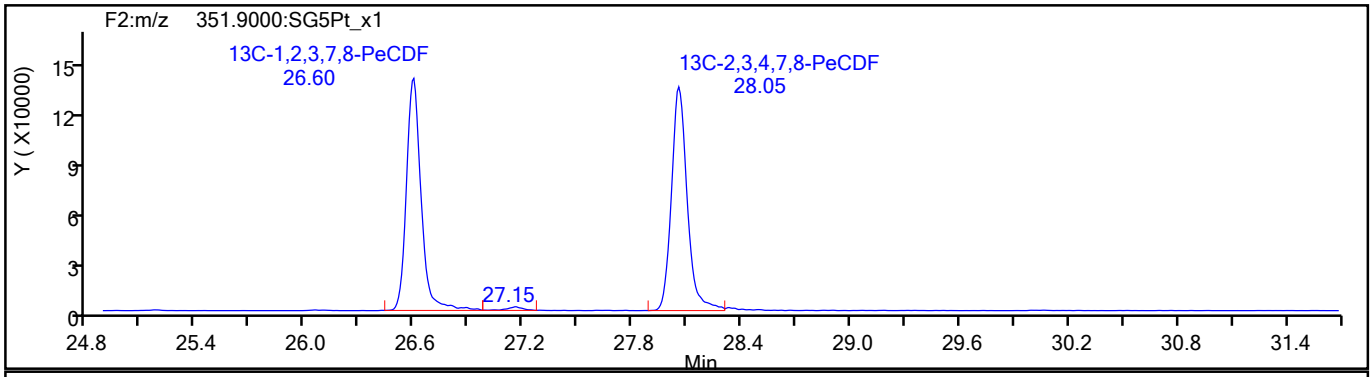

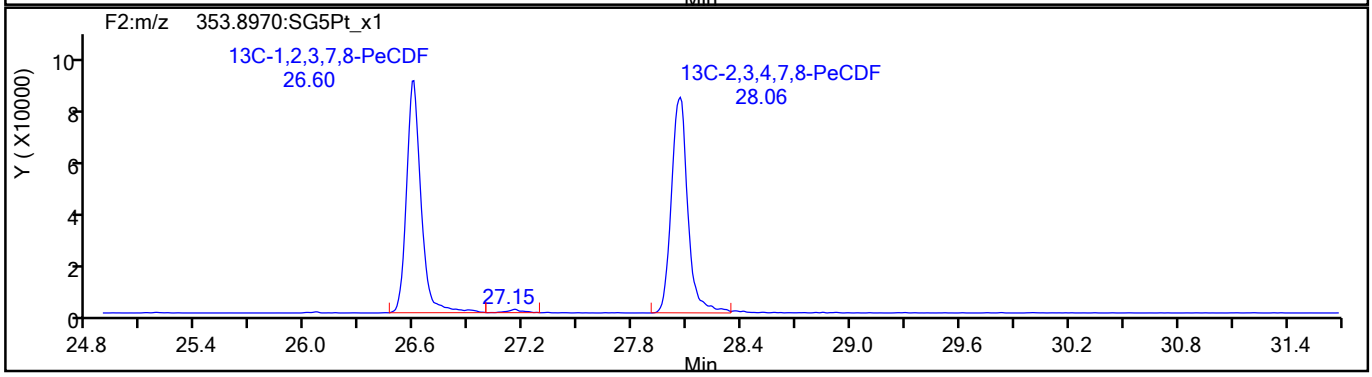

789208

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

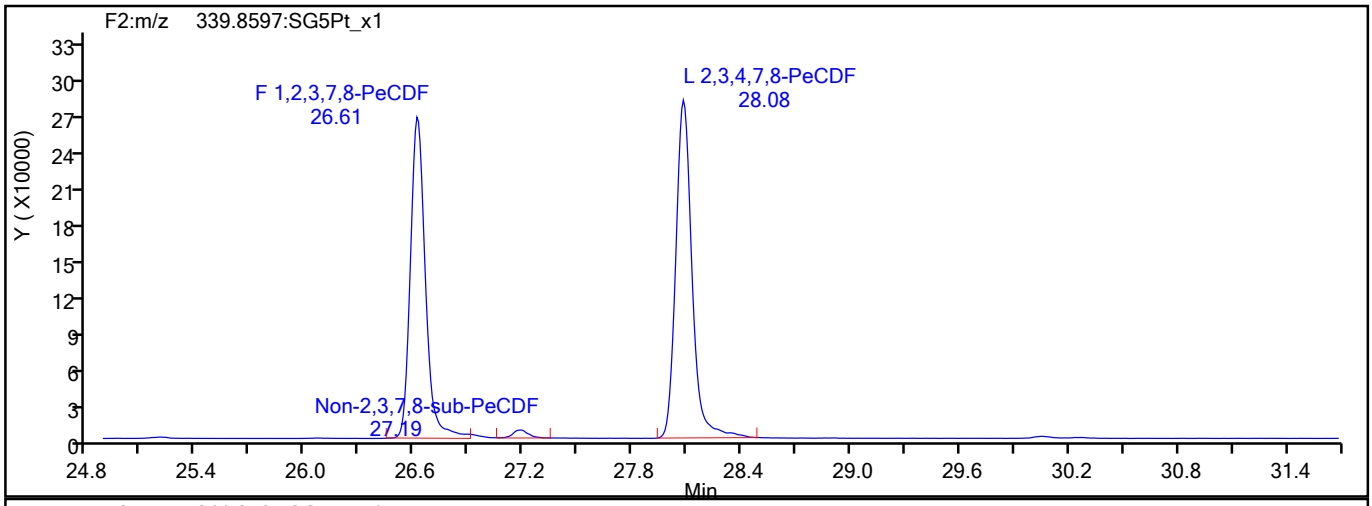

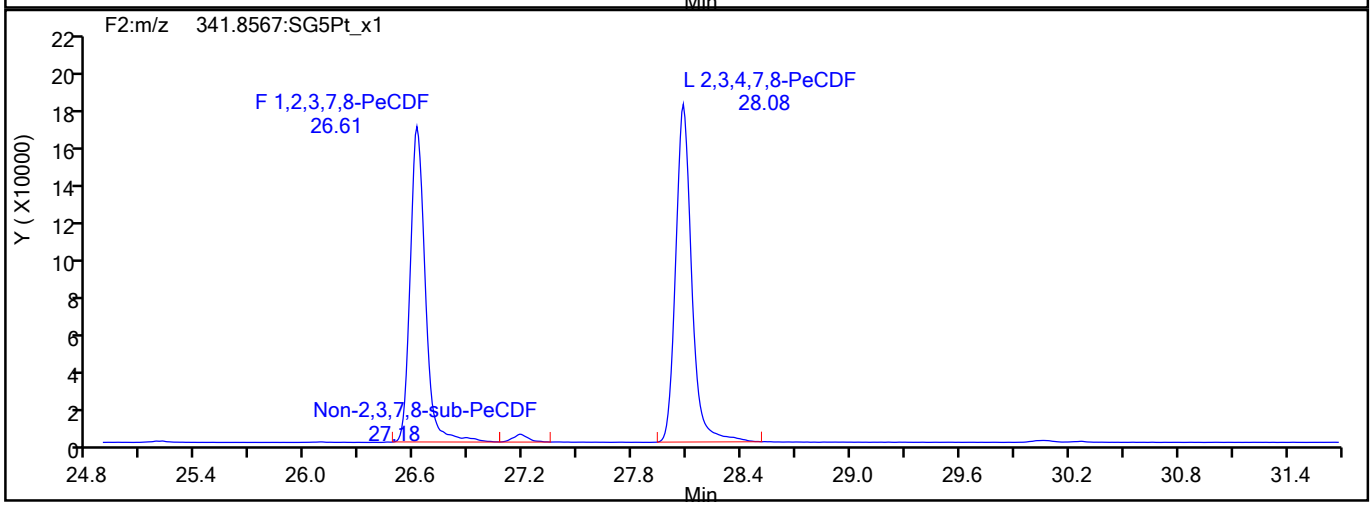

PeCDF Interference Mass

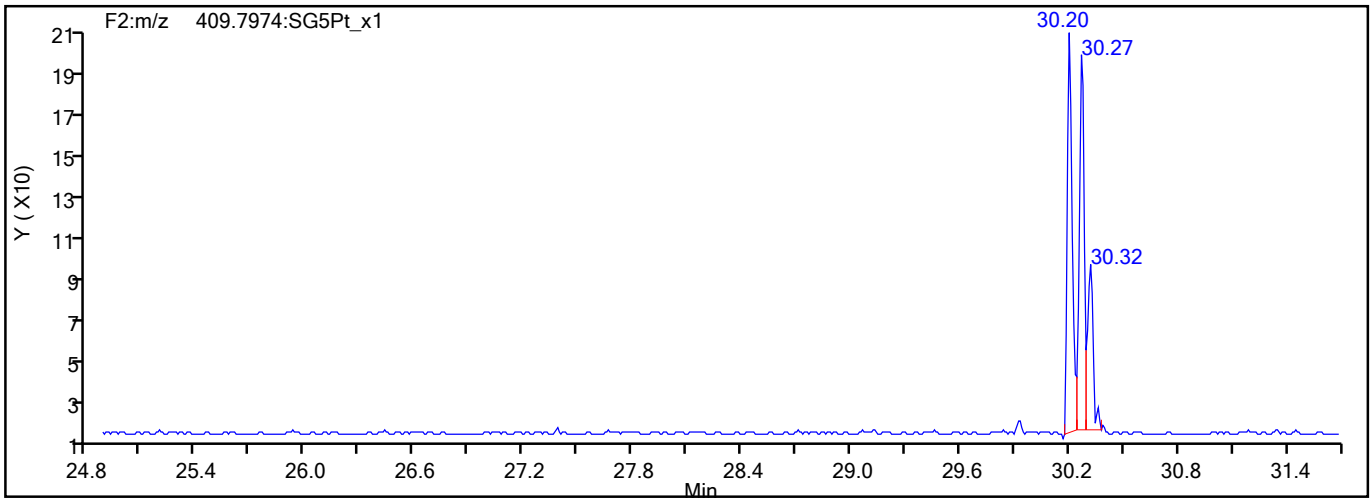

789209

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDD

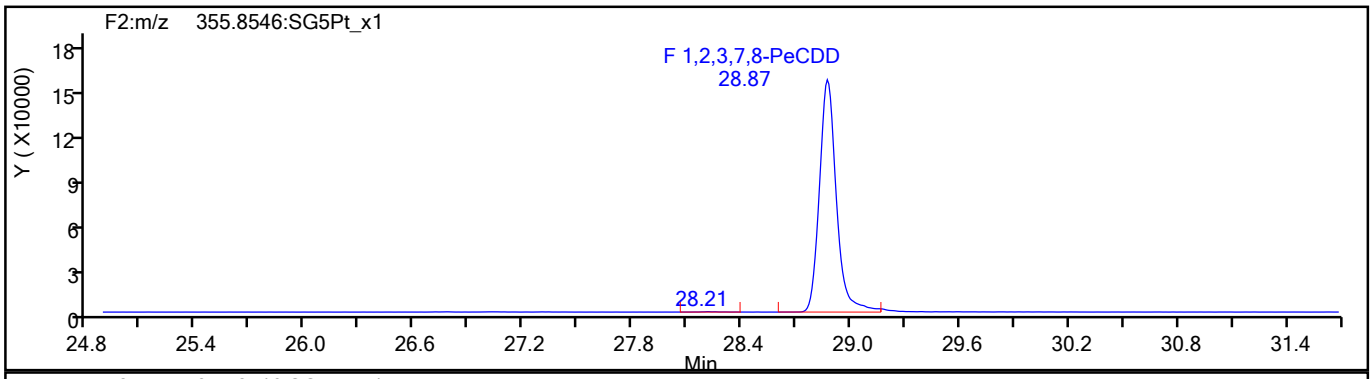

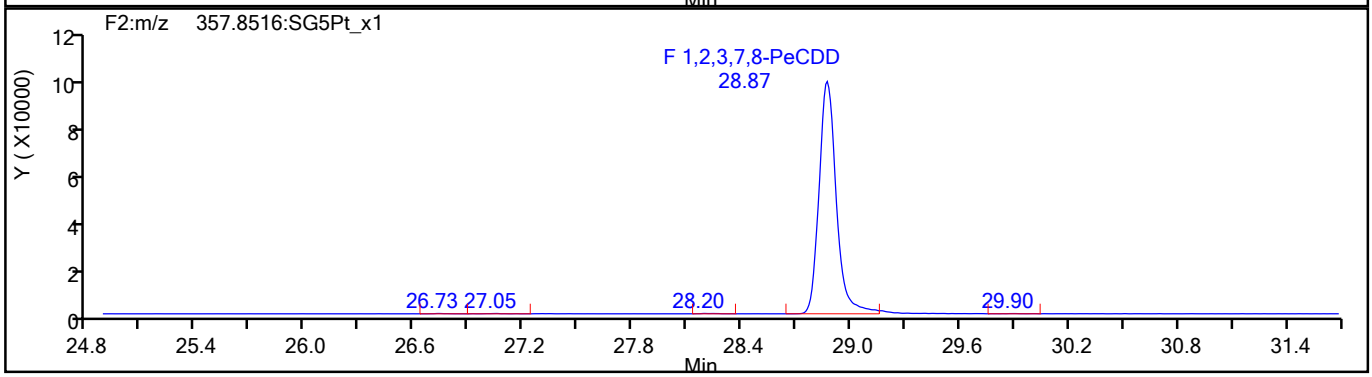

PeCDD Standards

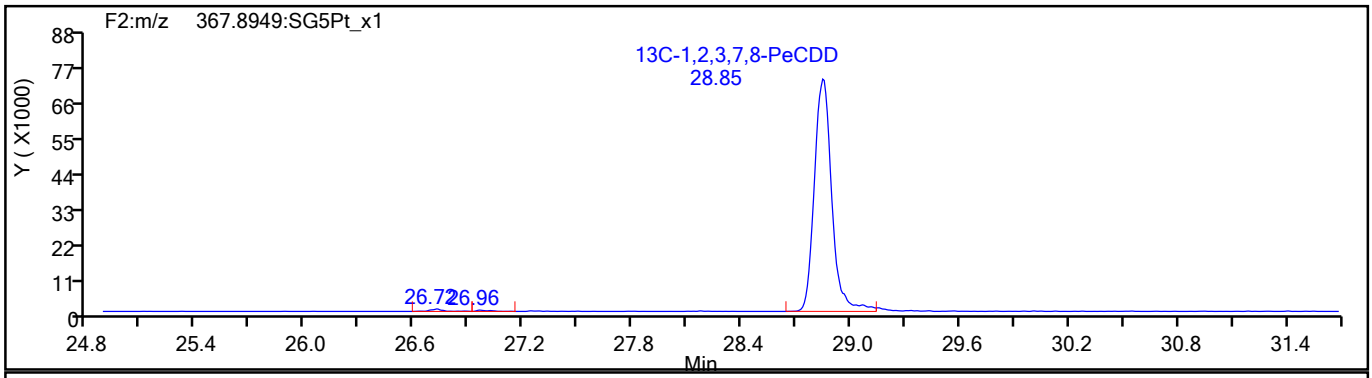

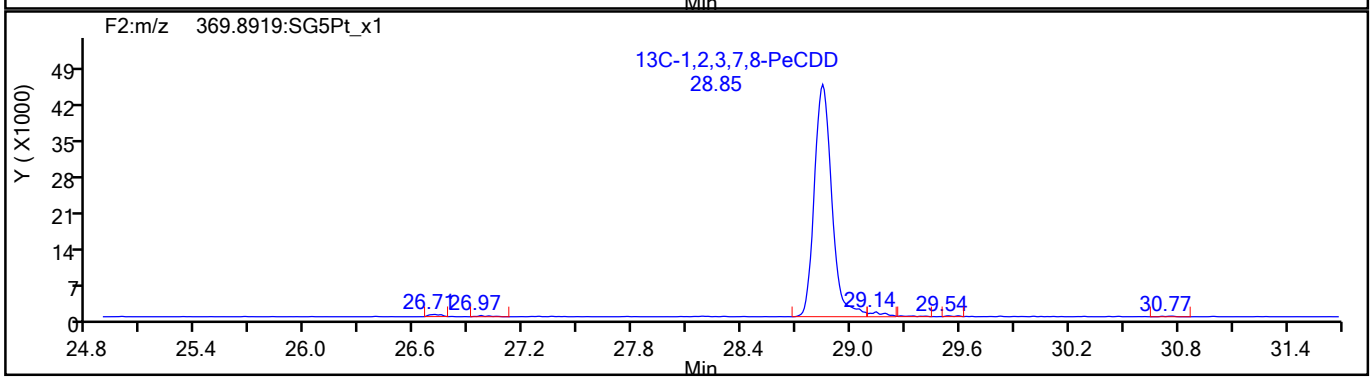

789210

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

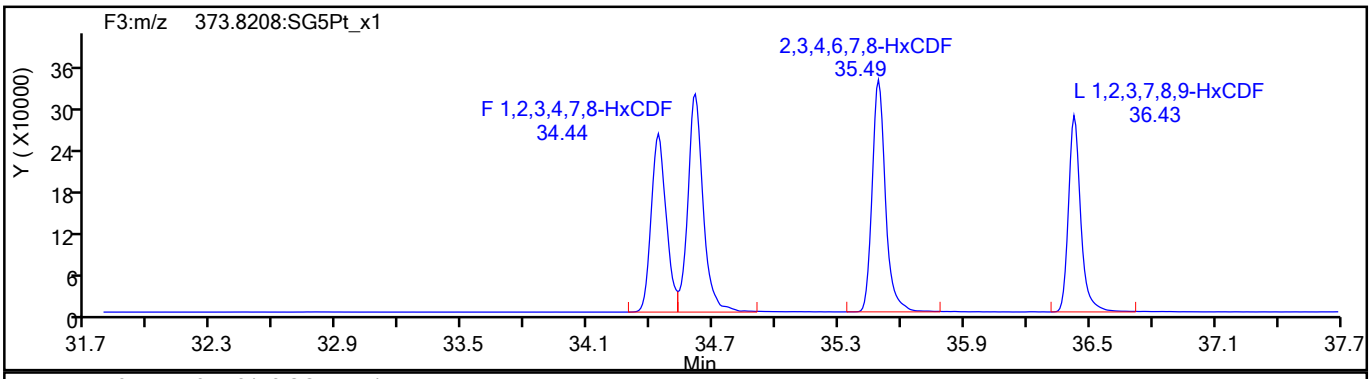

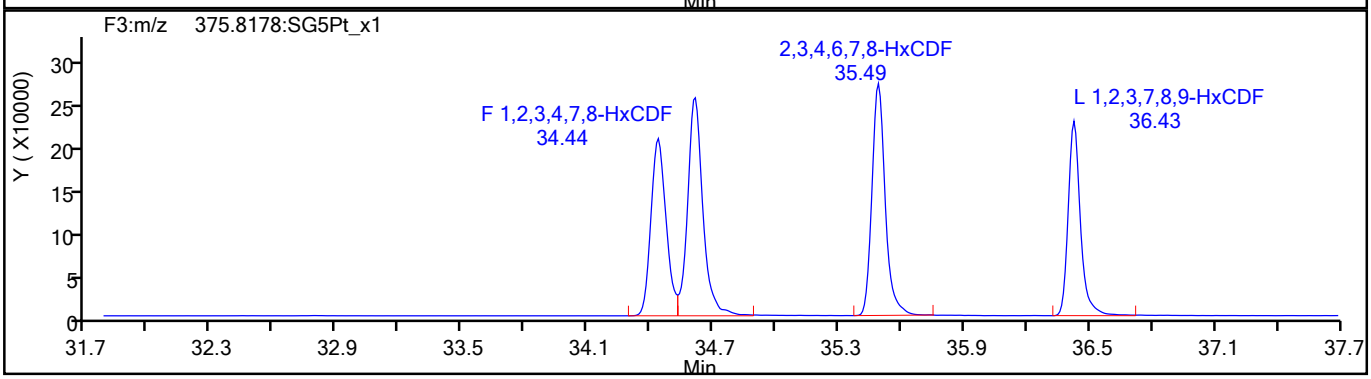

HxCDF Standards

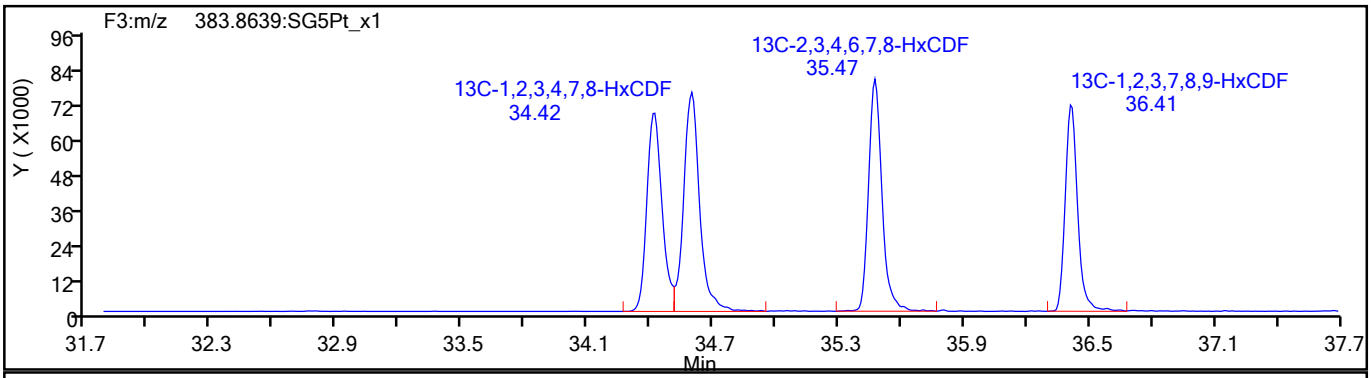

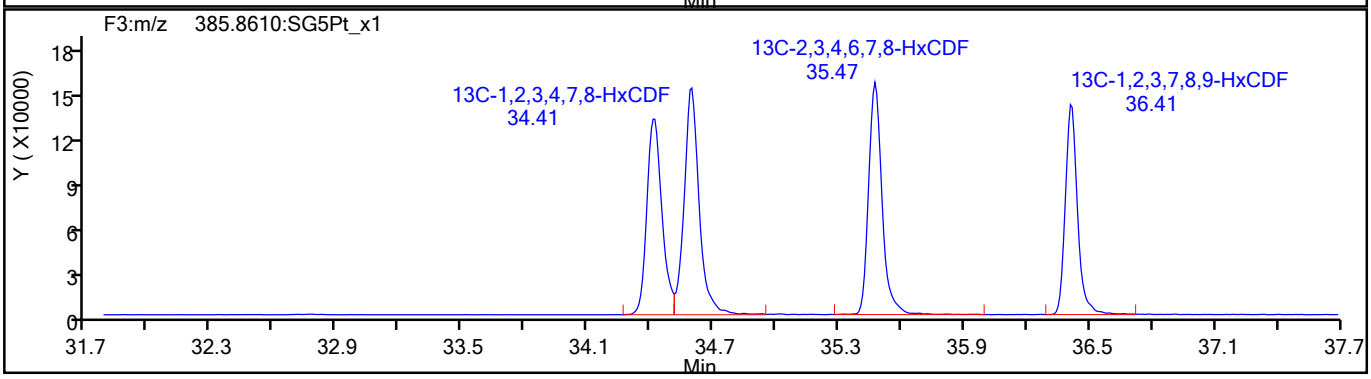

789211

Report Date: 09-Jun-2021 09:24:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

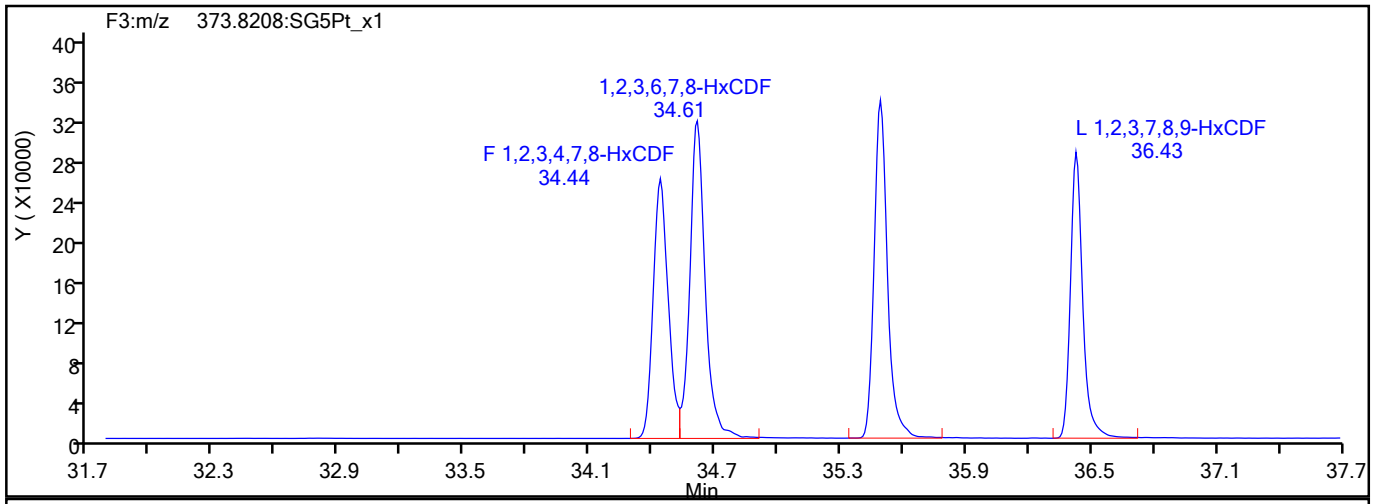

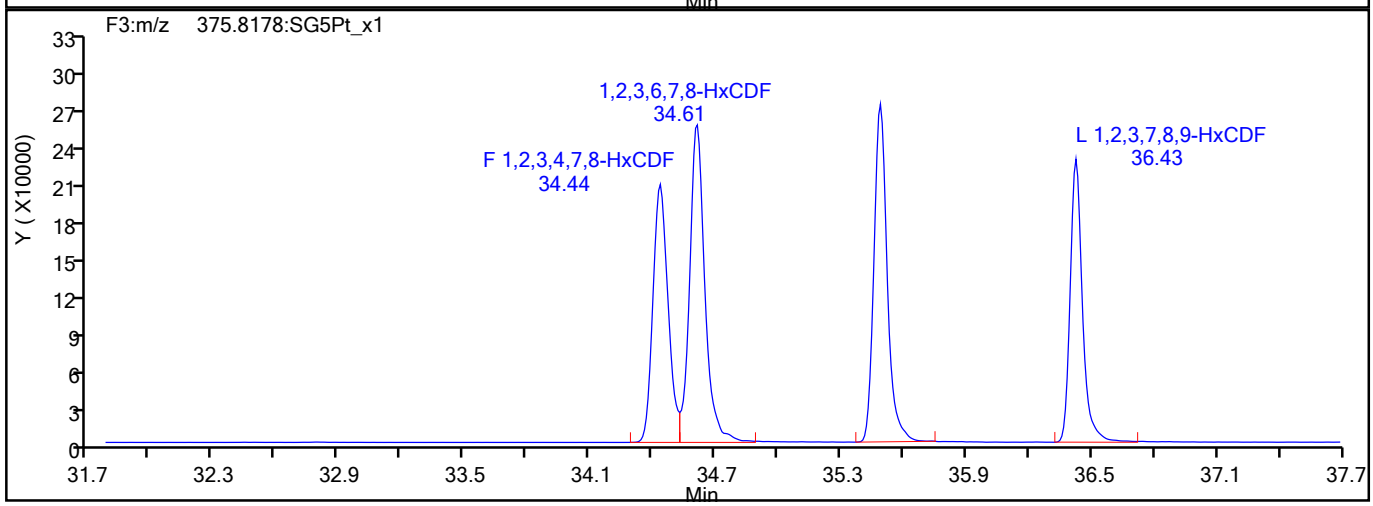

HxCDF Interference Mass

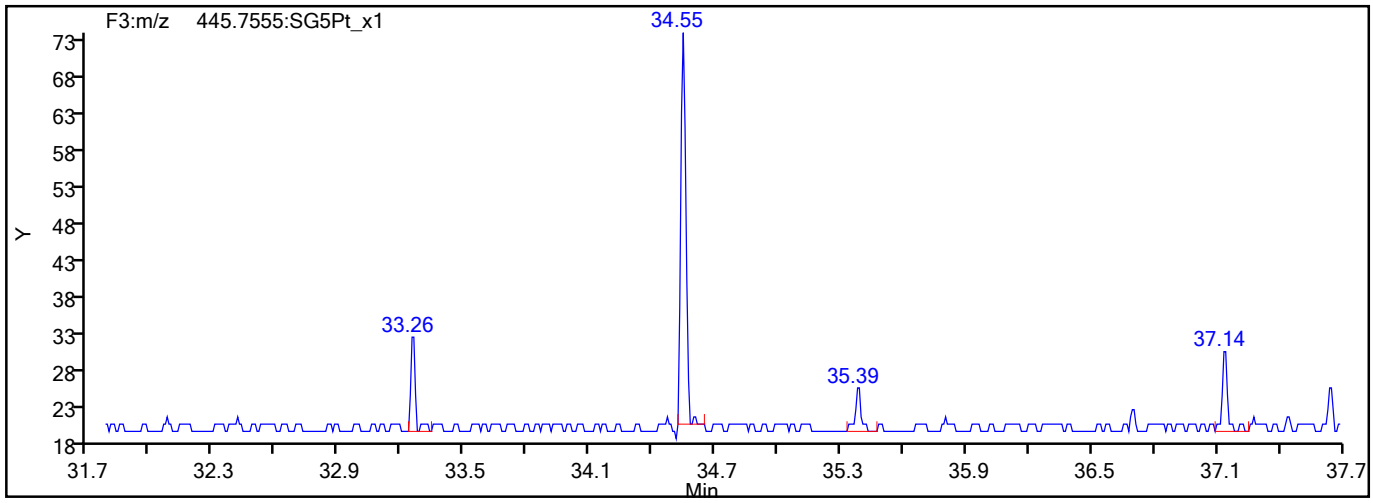

789212

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

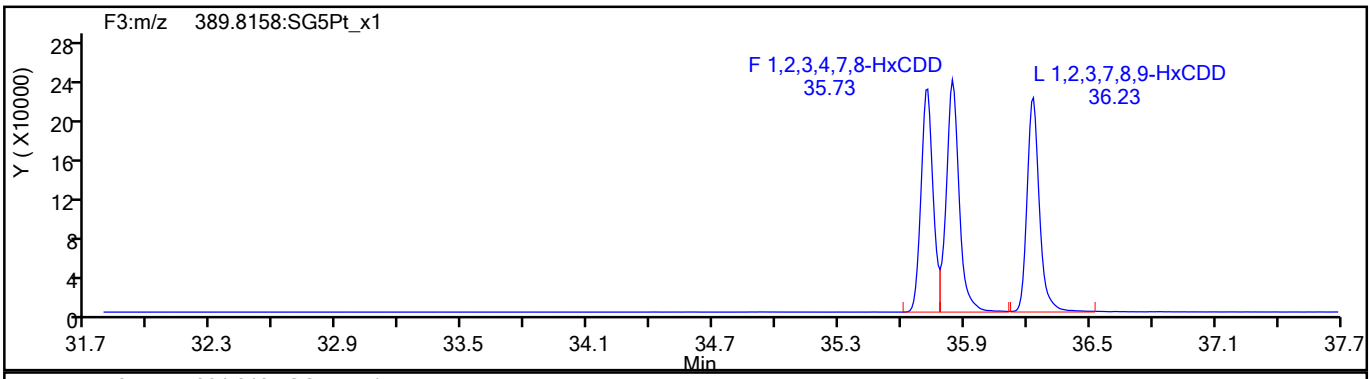

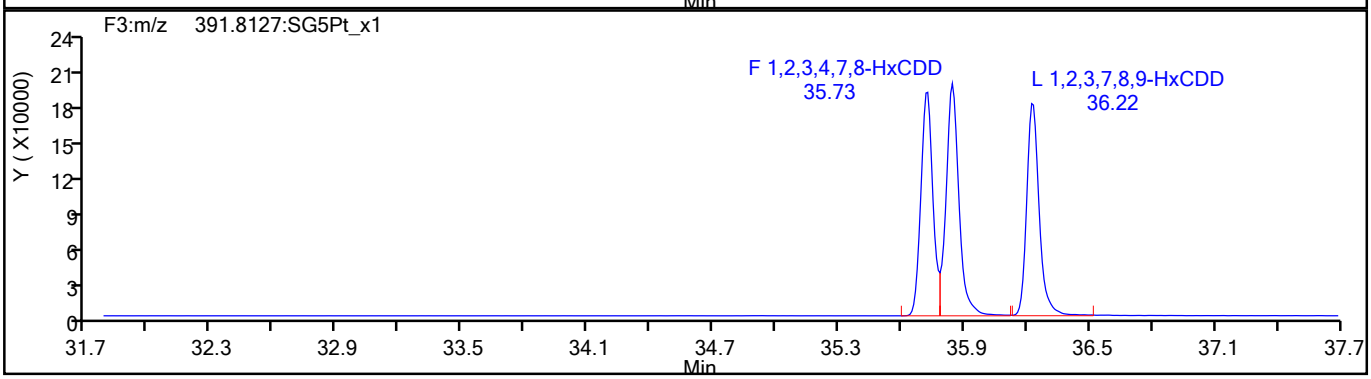

HxCDD Standards

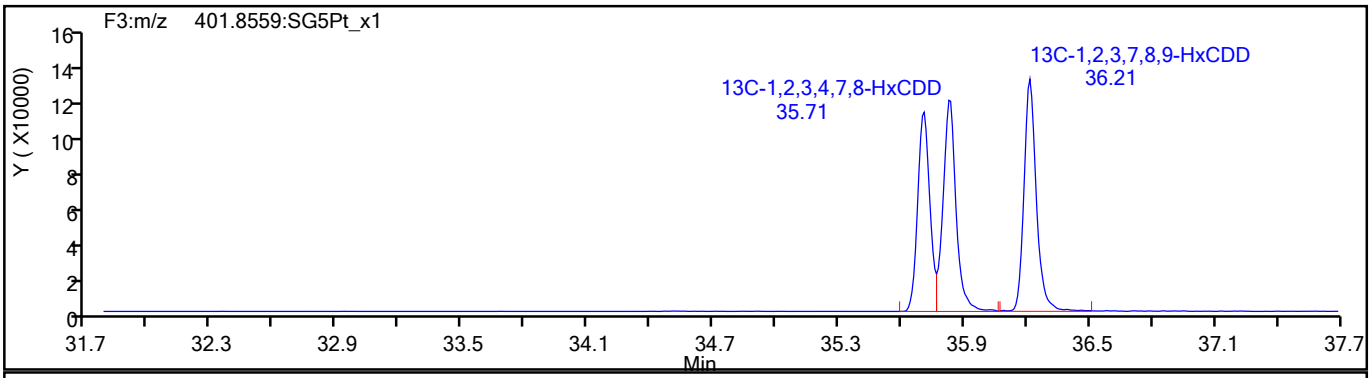

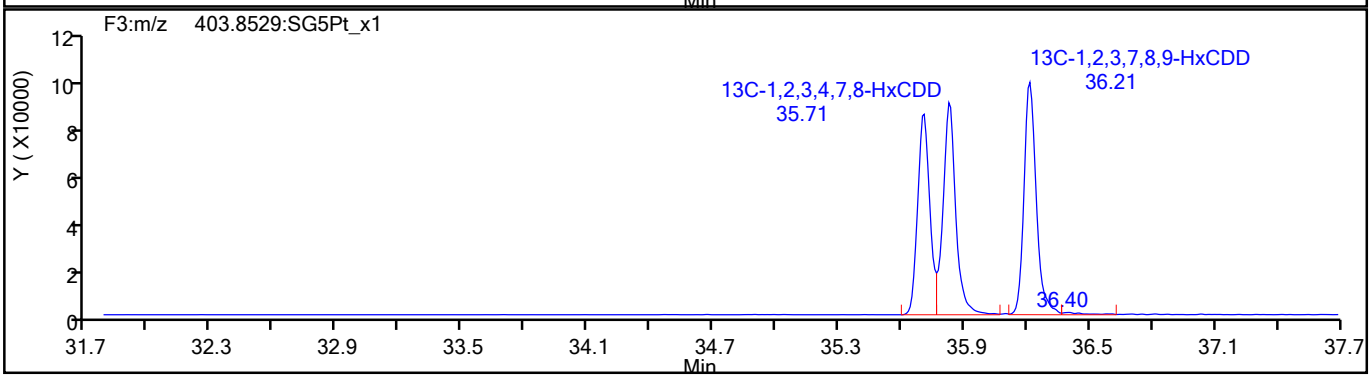

789213

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Eurofins TestAmerica, Sacramento

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HpCDF

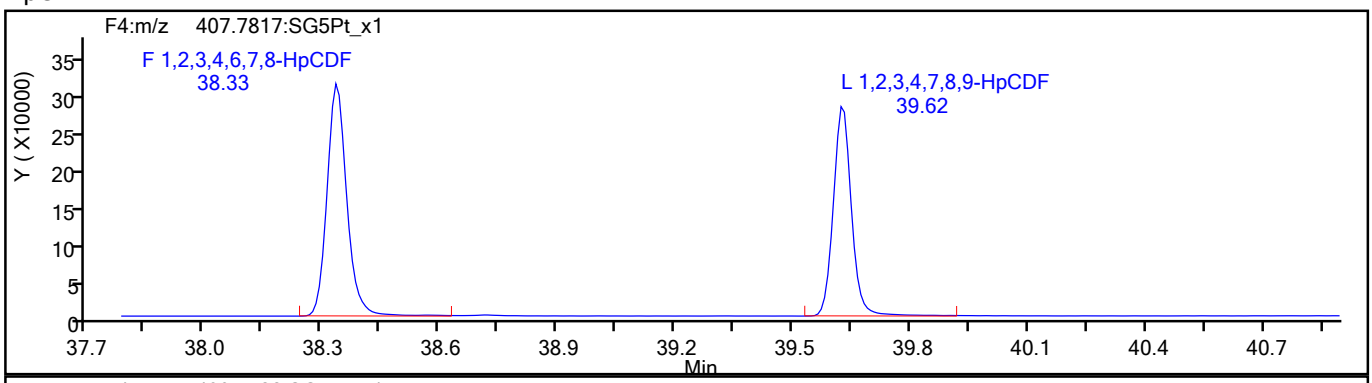

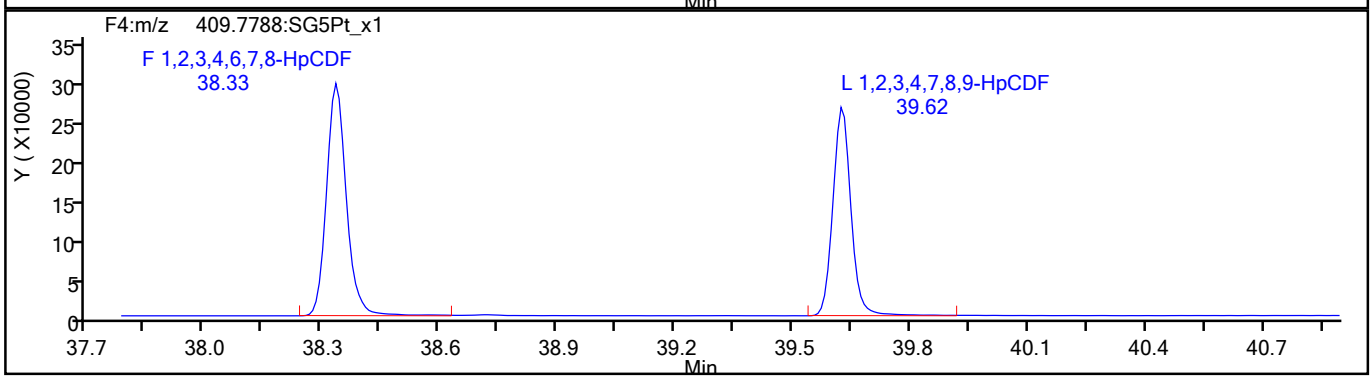

HpCDF Standards

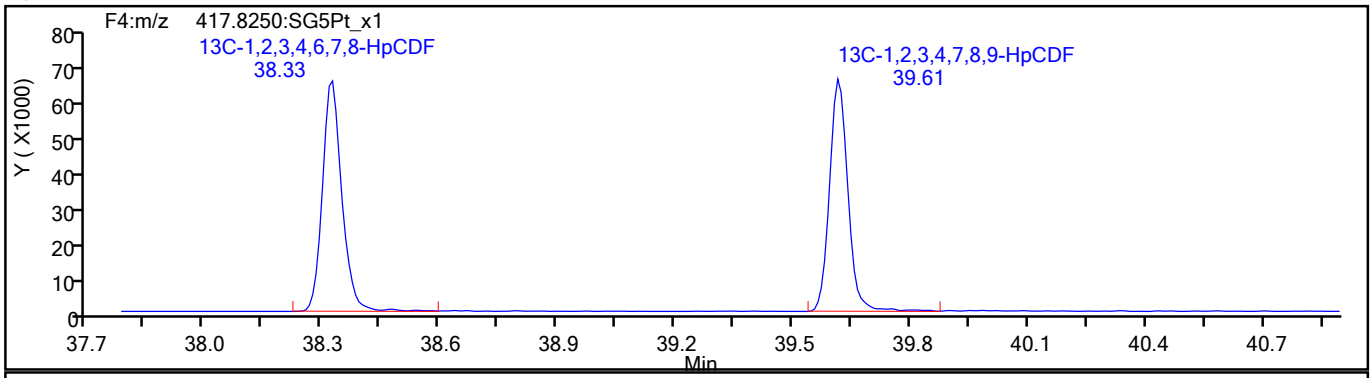

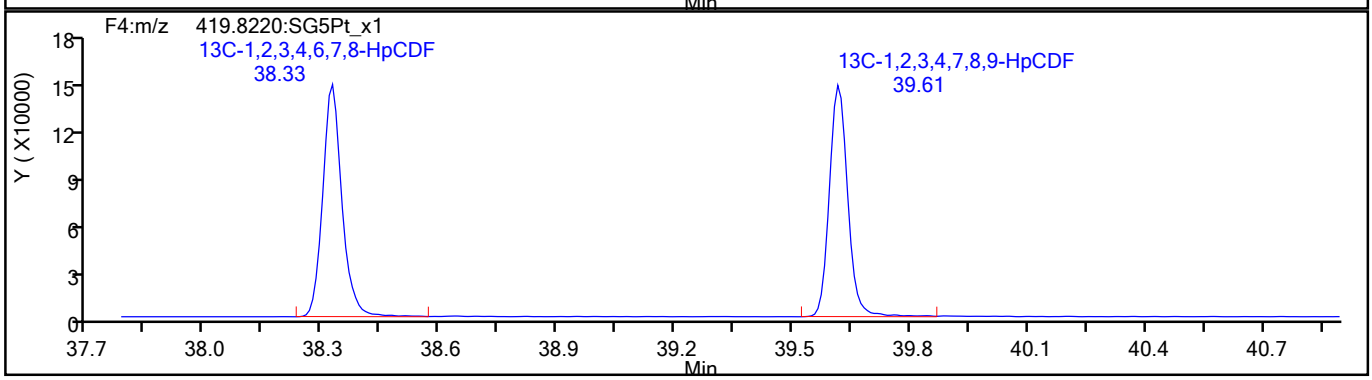

789214

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

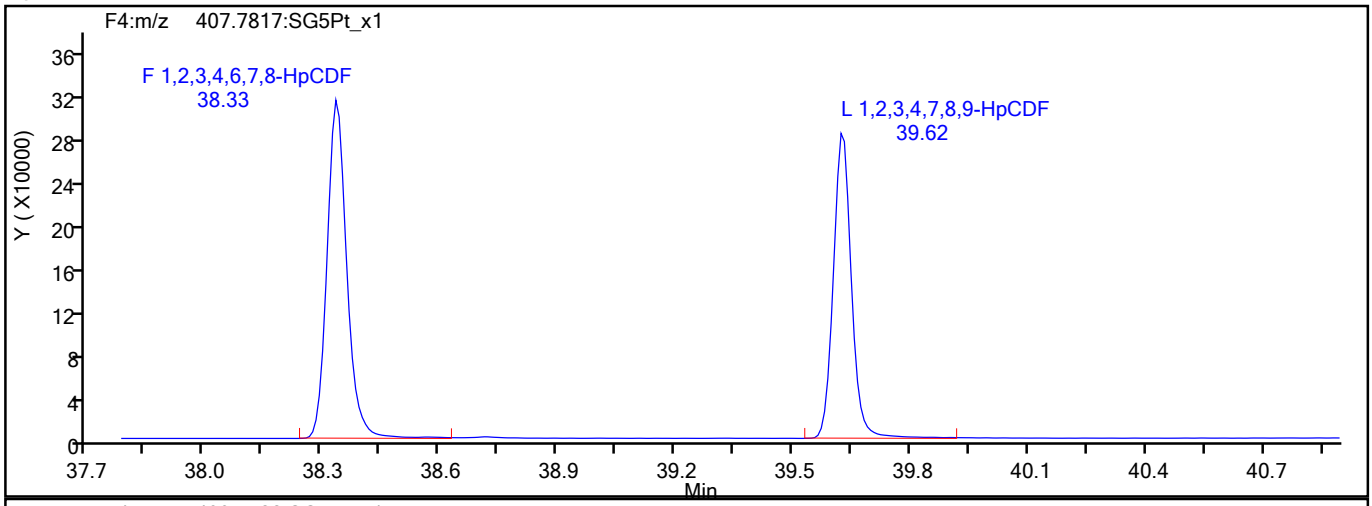

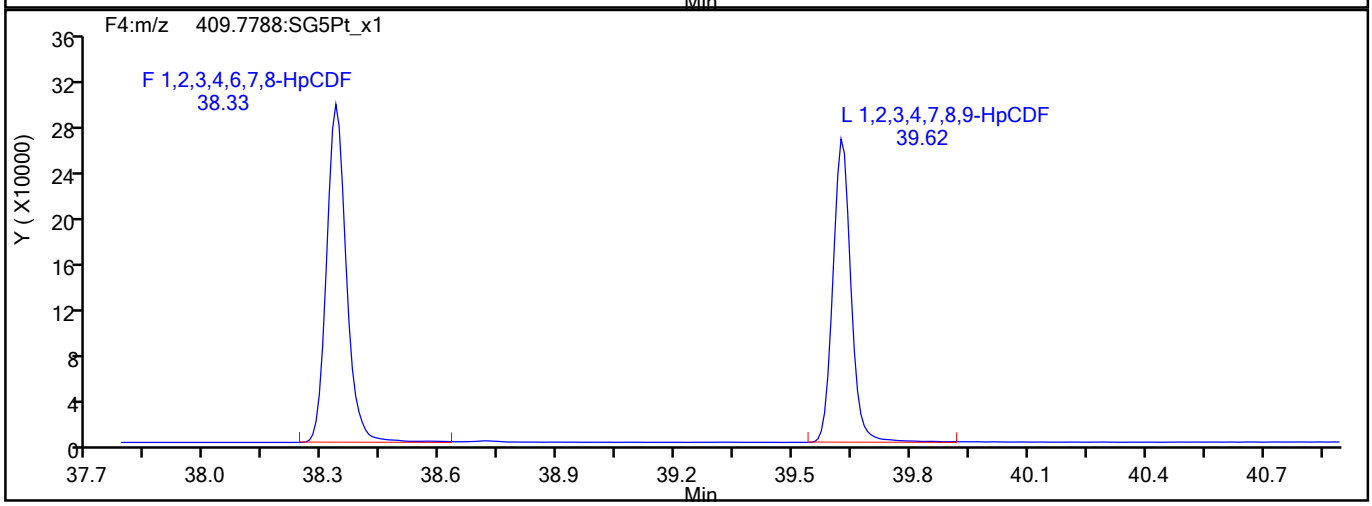

HpCDF Interference Mass

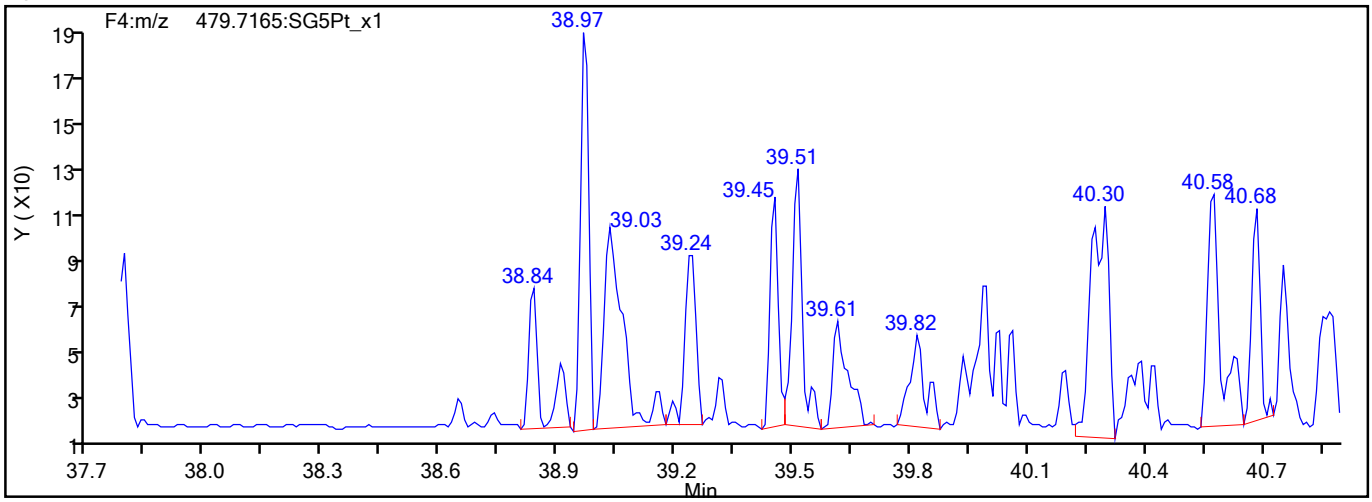

789215

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

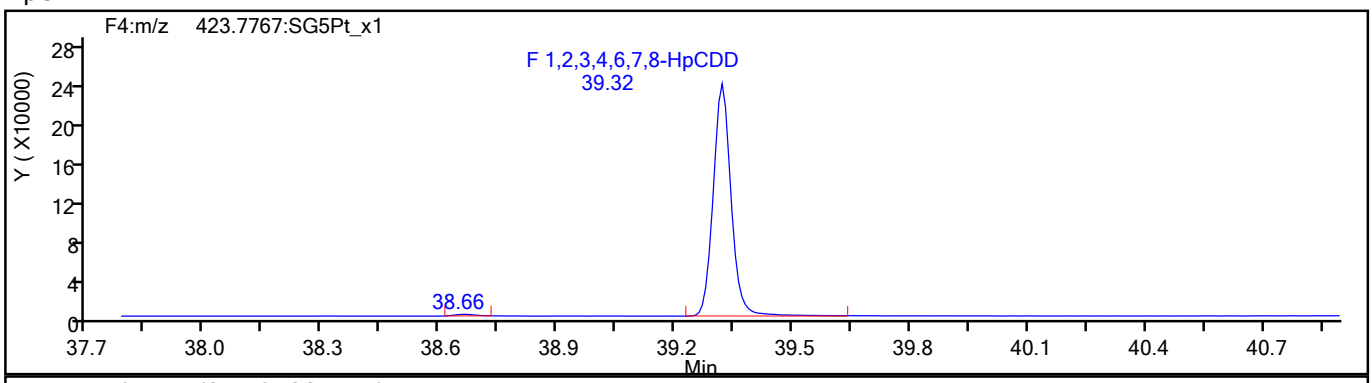

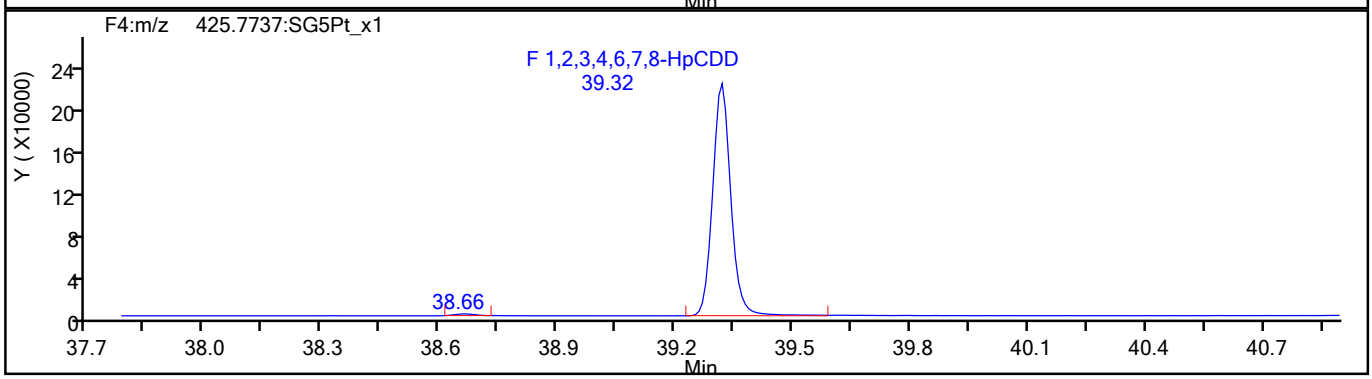

HpCDD Standards

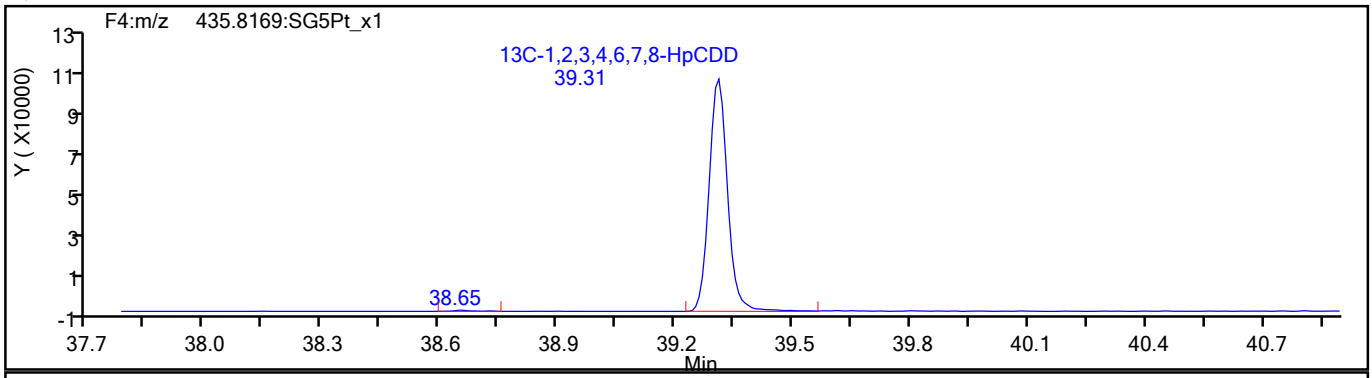

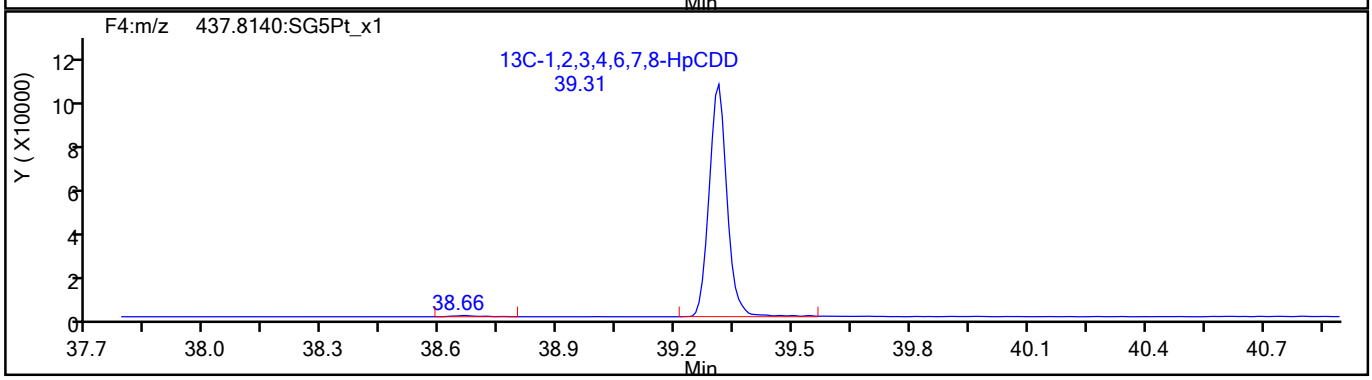

789216

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

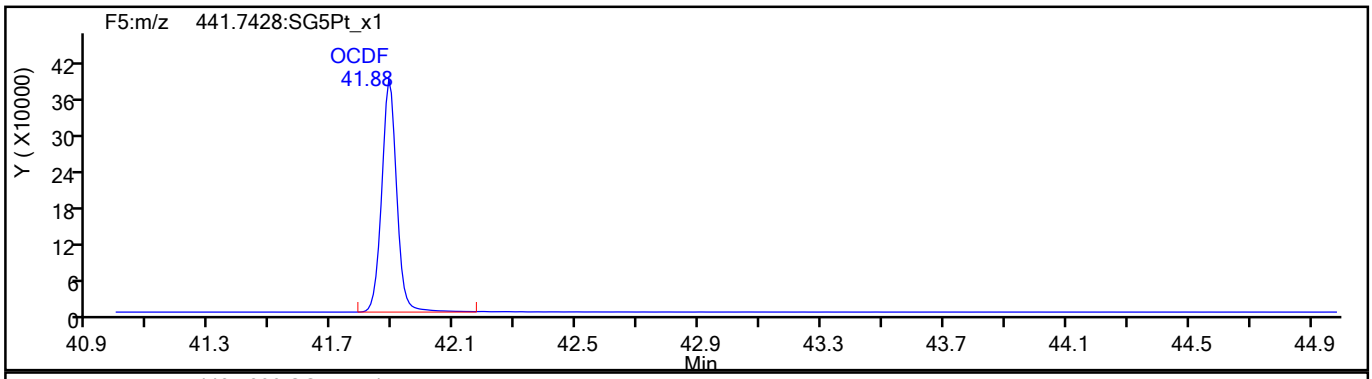

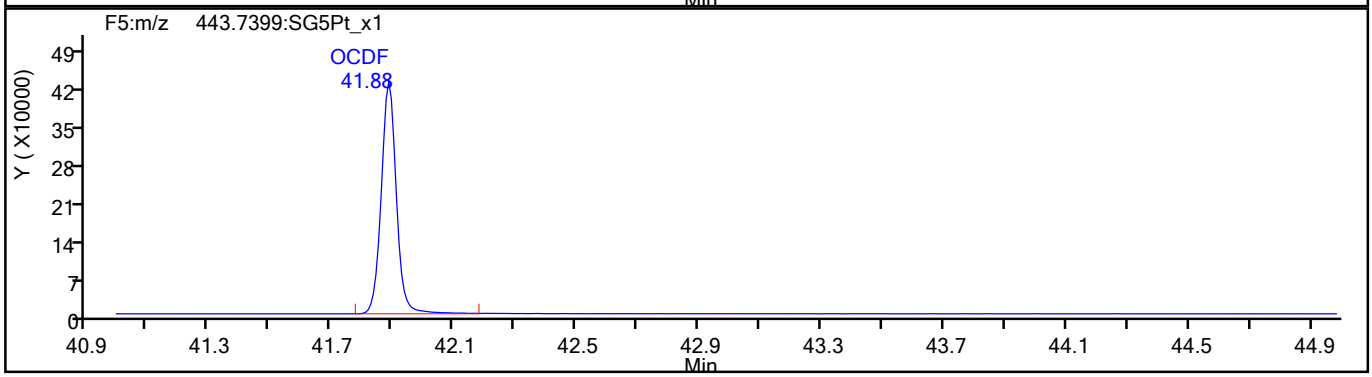

OCDF Standards

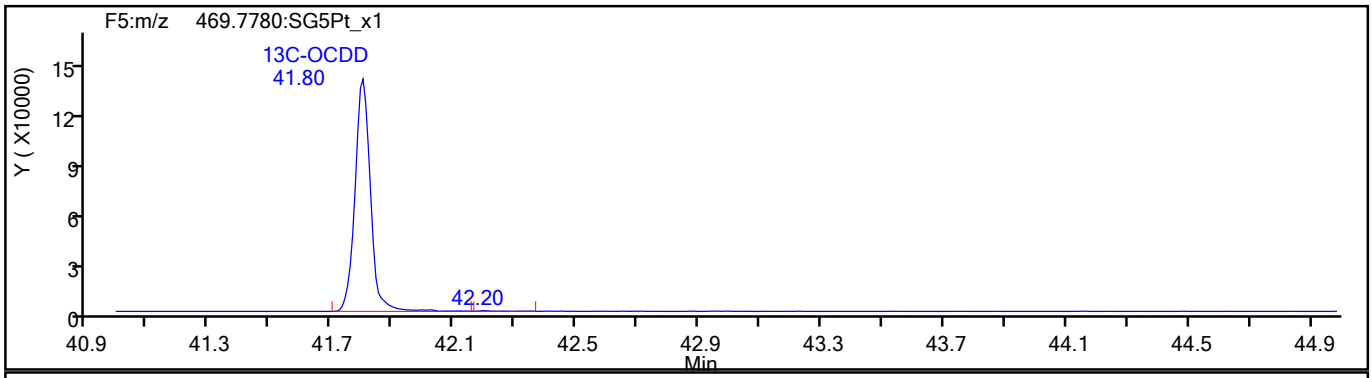

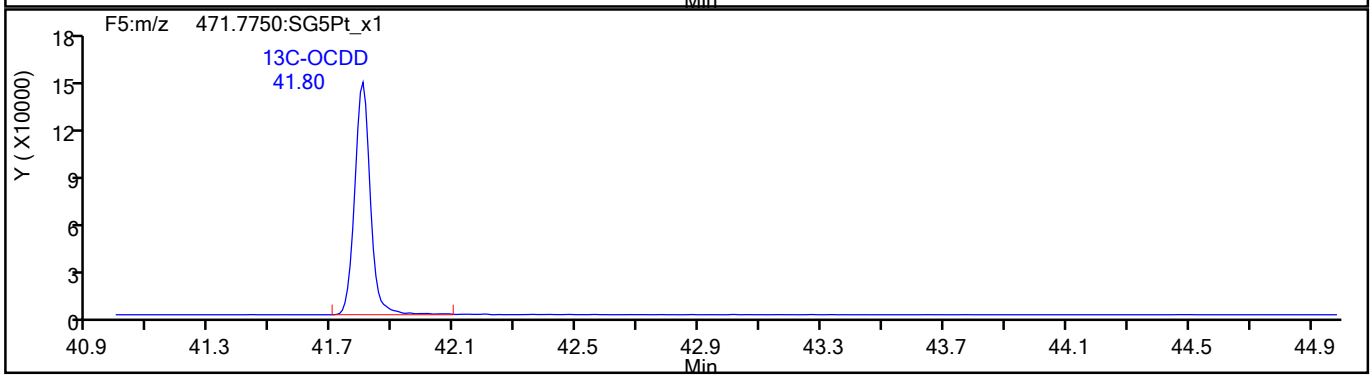

789217

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

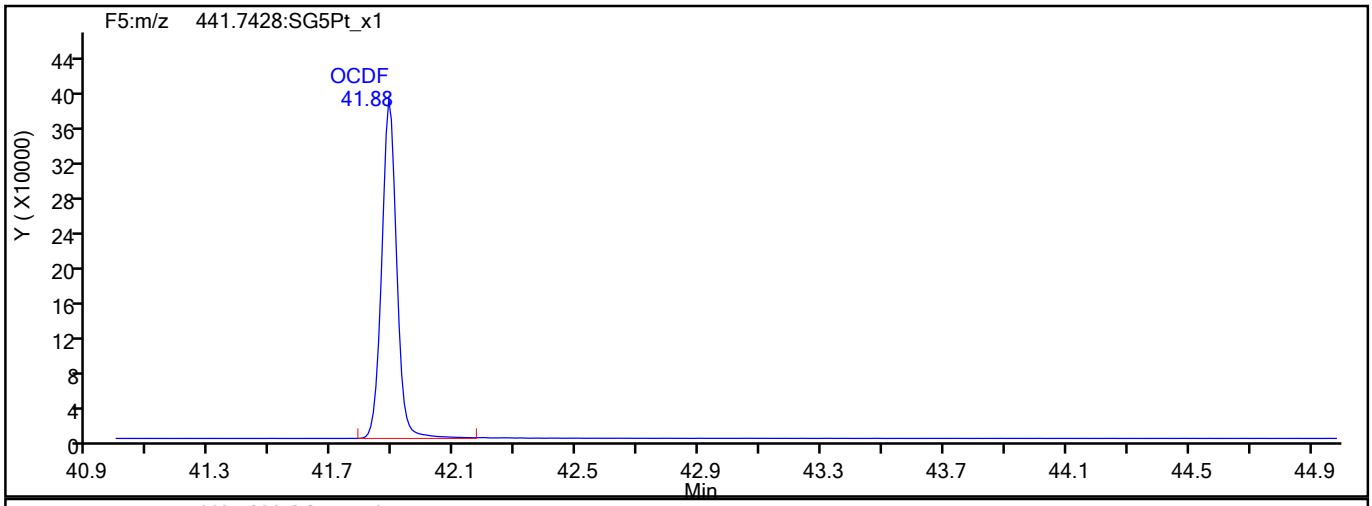

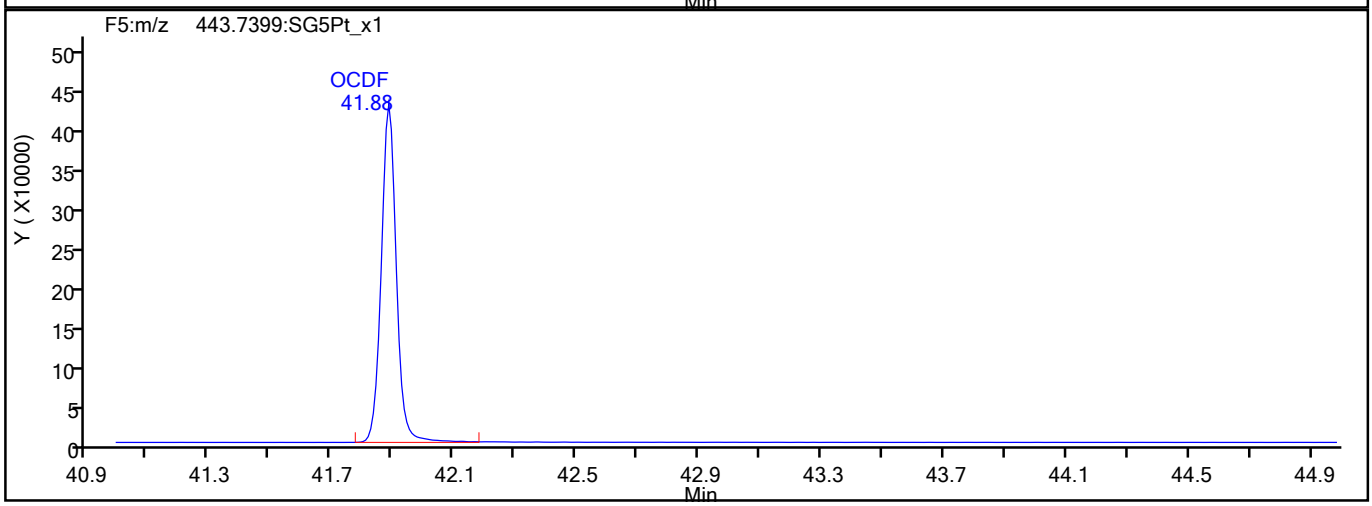

OCDF Interference Mass

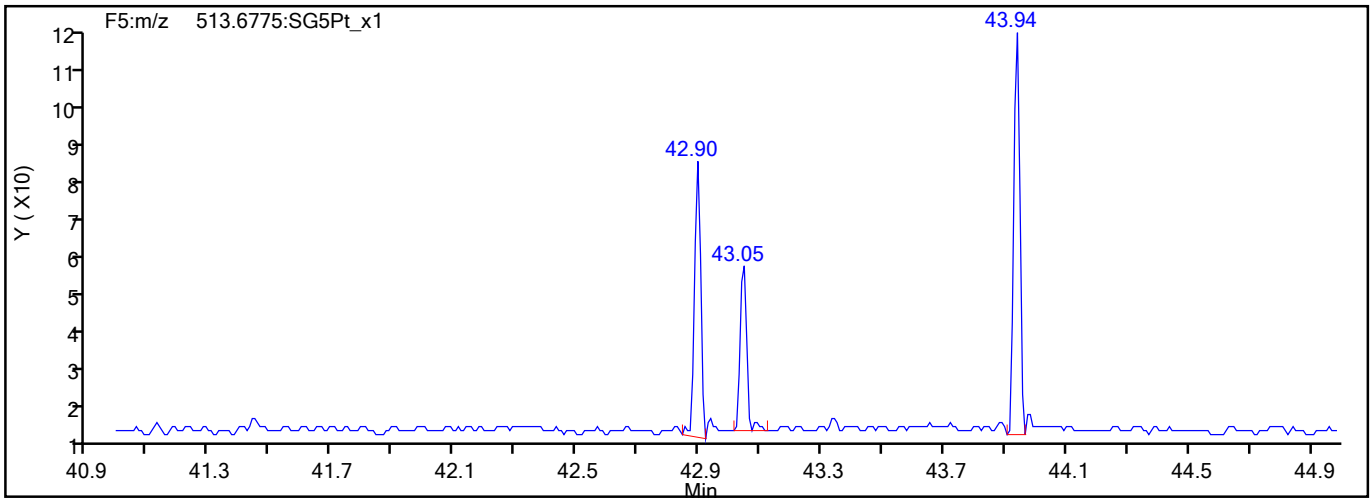

789218

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

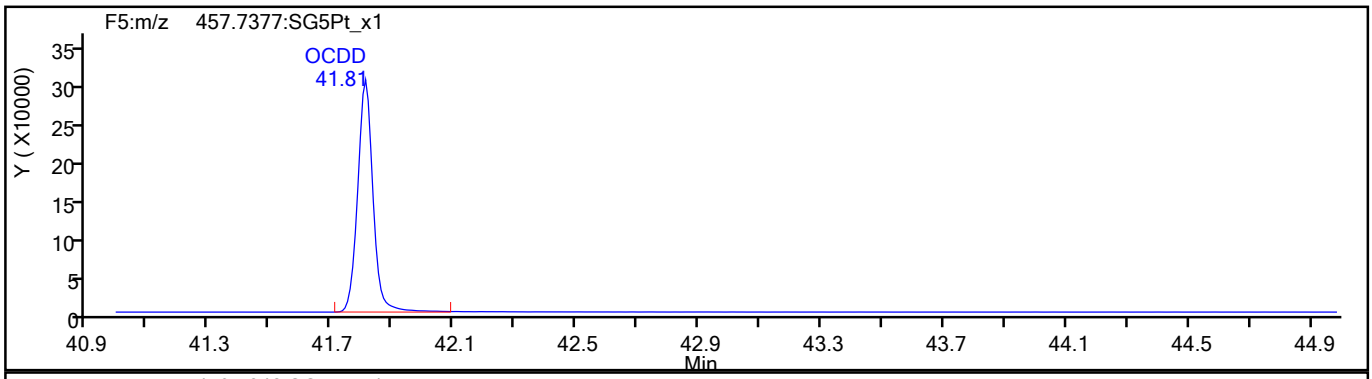

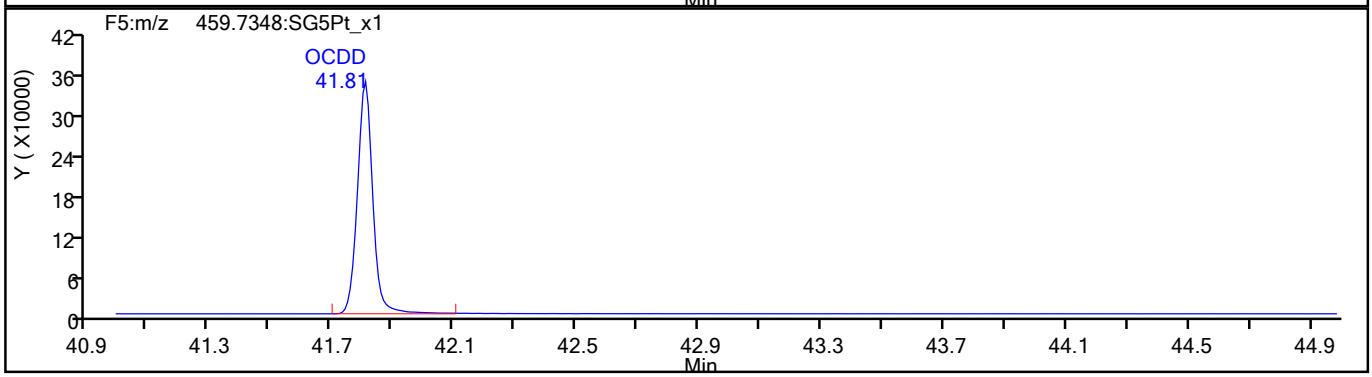

OCDD Standards

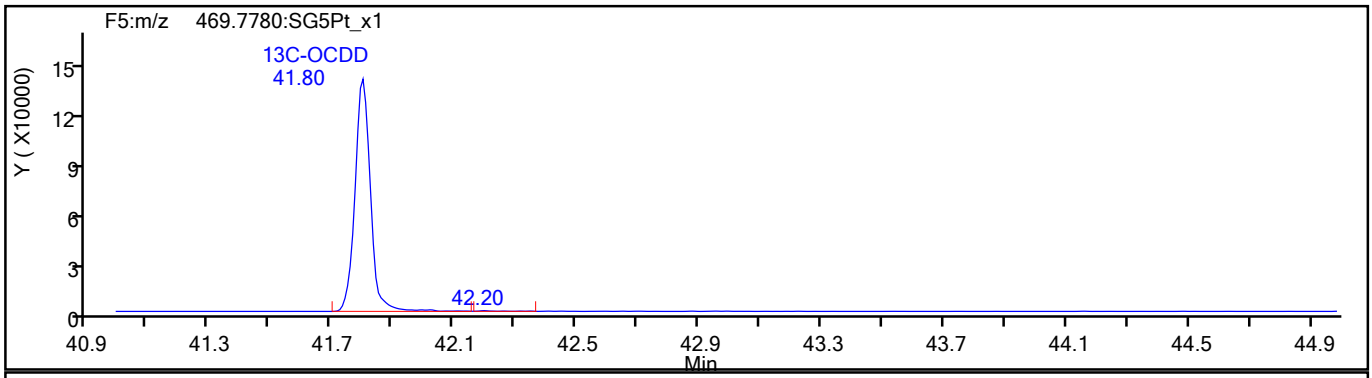

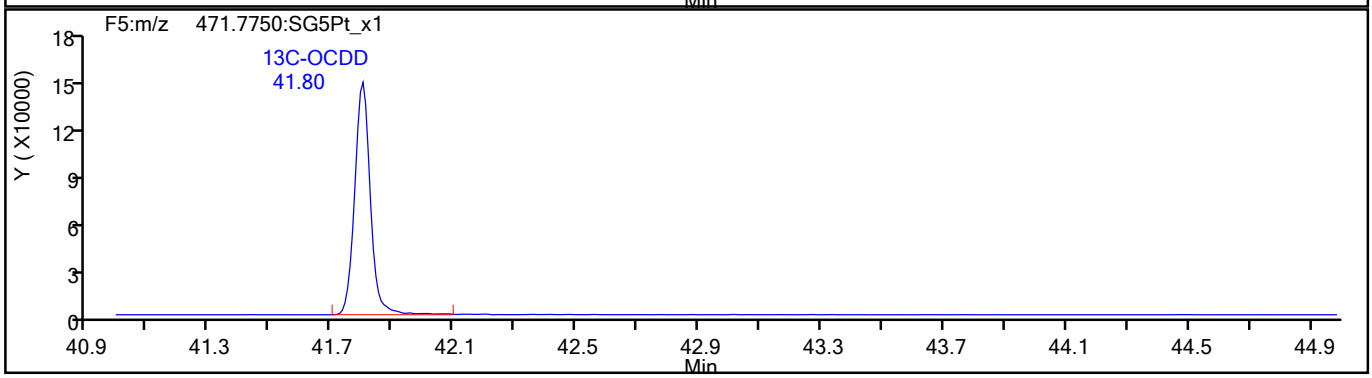

789219

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

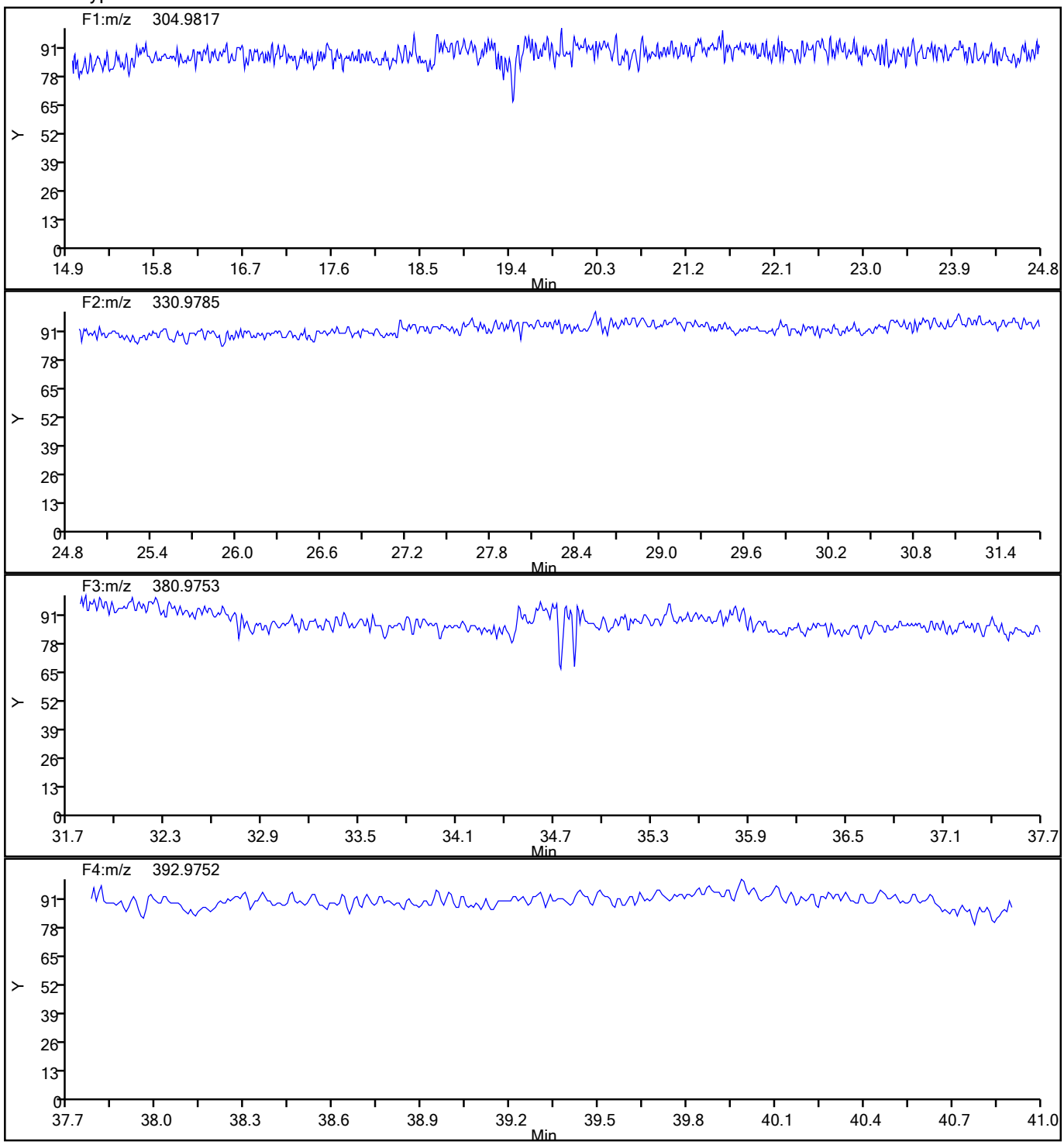

789220

Report Date: 09-Jun-2021 09:24:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_11.d		
Injection Date:	08-Jun-2021 19:25:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

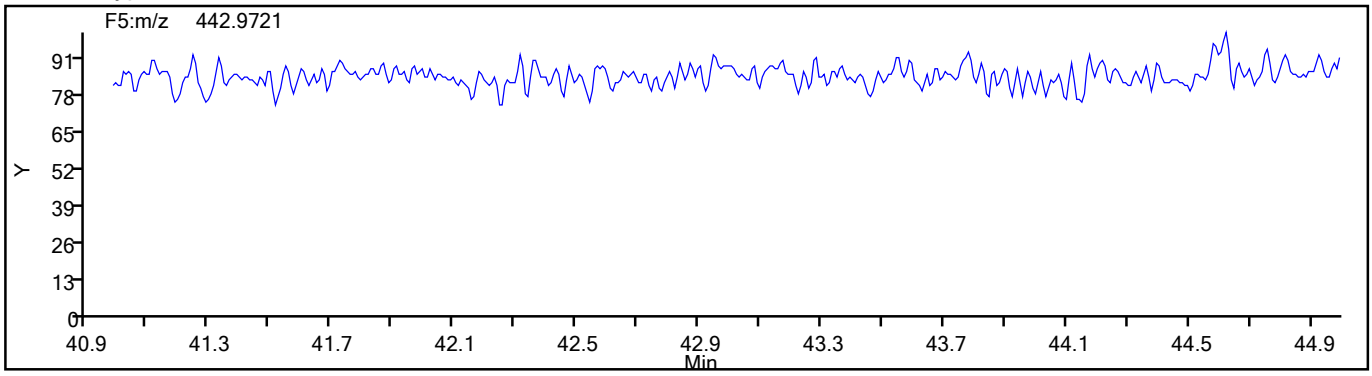

789221

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID: CCV 320-517462/43 Calibration Date: 08/19/2021 01:32

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_47.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.245		11.5	10.0	115	84-120
2,3,7,8-TCDD	AveID	1.075	1.091		10.1	10.0	101	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.086		51.5	50.0	103	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9679		48.0	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.034		49.4	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.177		51.3	50.0	103	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.349		55.4	50.0	111	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.333		54.9	50.0	110	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9806		46.2	50.0	92	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9110		45.9	50.0	92	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.012		45.6	50.0	91	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.321		53.3	50.0	107	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.388		48.1	50.0	96	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.035		49.3	50.0	99	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.305		49.8	50.0	100	86-116
OCDD	AveID	1.062	1.020		96.0	100	96	79-126
OCDF	AveID	1.317	1.321		100	100	100	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.297		96.4	100	96	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9349		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.121		98.3	100	98	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.082		96.1	100	96	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6859		95.7	100	96	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.092		113	100	113	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.016		94.9	100	95	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	0.9659		92.8	100	93	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8144		107	100	107	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9636		112	100	112	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9078		93.3	100	93	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7453		101	100	101	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7361		109	100	109	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.6807		99.3	100	99	77-129
13C-OCDD	Ave	0.5446	0.6101		224	200	112	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	0.9902		9.82	10.0	98	79-127

31	17AU21DFS1_31	Resolution Check	RC 081721B		46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B		2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B		1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D		3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A	b.i. NU	12	1613B/Solid	D266	KSS	10.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A		24	1613B/Solid		KSS	10.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A		25	1613B/Solid		KSS	10.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A		26	1613B/Solid		KSS	10.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A	bad inj.	27	1613B/Solid		KSS	10.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A		28	1613B/Solid		KSS	10.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS		29	1613B/Solid		KSS	10.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD		30	1613B/Solid		KSS	10.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A	needs 20x	31	1613B/Solid		KSS	10.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A		32	1613B/Solid		KSS	10.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E		3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C		46			KSS	1.000	
47	17AU21DFS1_47	CCV CS-4 HRDXNL4_00100	CCV 081721C		2	Dioxin		KSS	1.000	
48	17AU21DFS1_48	WDM HRDXNCP_00044	WDM 081721C		1	Dioxin		KSS	1.000	
49	17AU21DFS1_49	SB Solvent Blank C14	SB 081721F		3	Dioxin		KSS	1.000	
50	17AU21DFS1_50	mb 320-513879/1-a	mb 320-513879/1-a		33	1613B/Solid	D267	KSS	10.000	g
51	17AU21DFS1_51	lcs 320-513879/2-a	lcs 320-513879/2-a		34	1613B/Solid		KSS	10.000	g
52	17AU21DFS1_52	320-76901-a-2-a	320-76901-a-2-a		35	1613B/Solid		KSS	10.000	g
53	17AU21DFS1_53	320-76901-a-2-b ms	320-76901-a-2-b ms		36	1613B/Solid		KSS	10.000	g
54	17AU21DFS1_54	320-76901-a-2-c msd	320-76901-a-2-c msd		37	1613B/Solid		KSS	10.000	g
55	17AU21DFS1_55	320-76769-a-4-b	320-76769-a-4-b		38	1613B/Solid		KSS	10.000	g
56	17AU21DFS1_56	320-76888-a-6-a	320-76888-a-6-a		39	1613B/Solid		KSS	10.000	g
57	17AU21DFS1_57	320-76888-a-7-a	320-76888-a-7-a		40	1613B/Solid		KSS	10.000	g
58	17AU21DFS1_58	320-76888-a-8-a	320-76888-a-8-a		41	1613B/Solid		KSS	10.000	g
59	17AU21DFS1_59	320-76888-a-9-a	320-76888-a-9-a		42	1613B/Solid		KSS	10.000	g
60	17AU21DFS1_60	SB Solvent Blank C14	SB 081721G		3	Dioxin		KSS	1.000	
61	17AU21DFS1_61	Resolution Check	RC 081721D		46			KSS	1.000	

LOGFILE CHECKED
DB 8/18/21

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

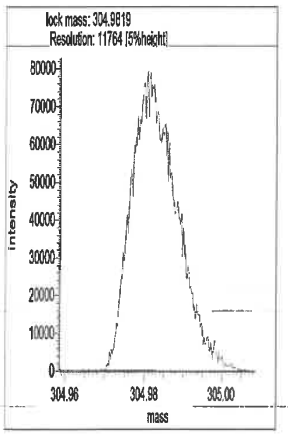

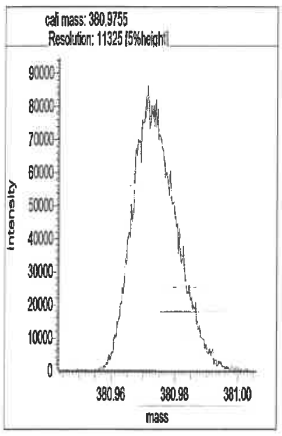

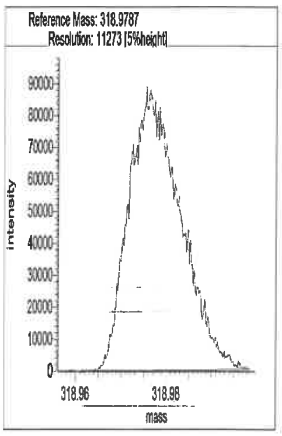

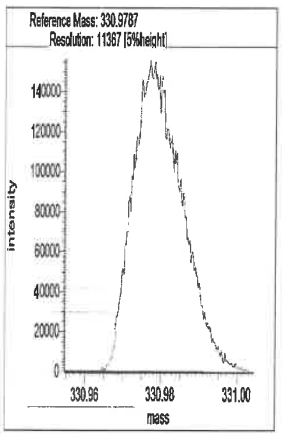

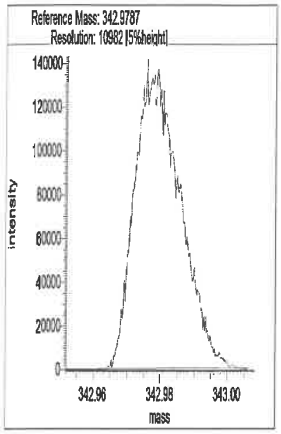

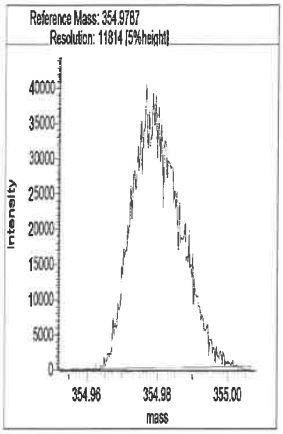

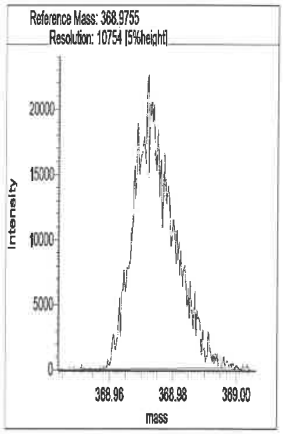

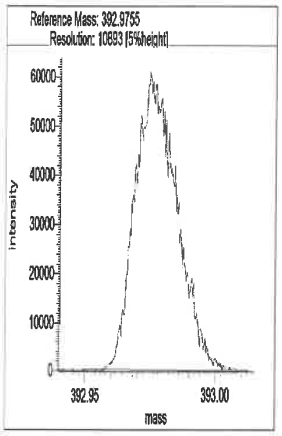

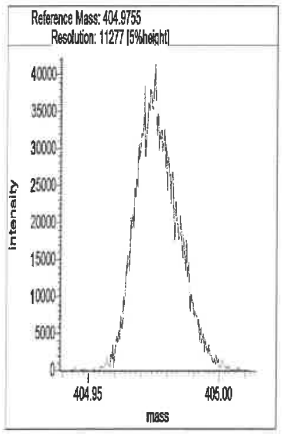

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

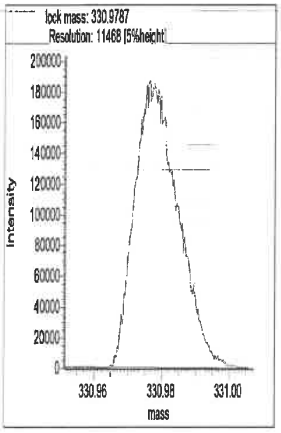

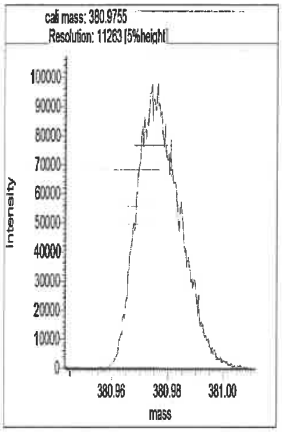

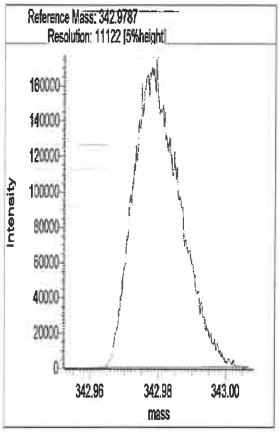

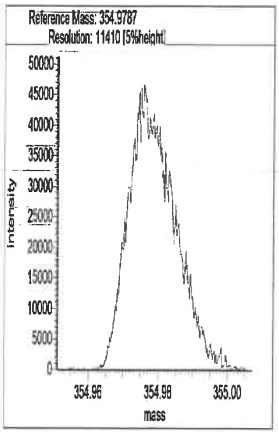

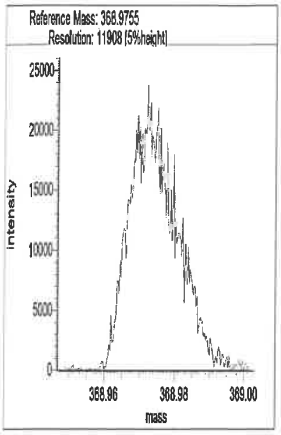

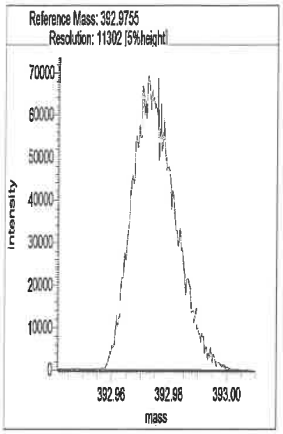

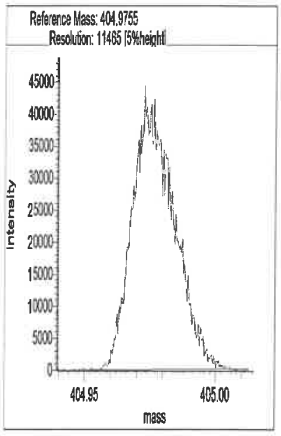

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

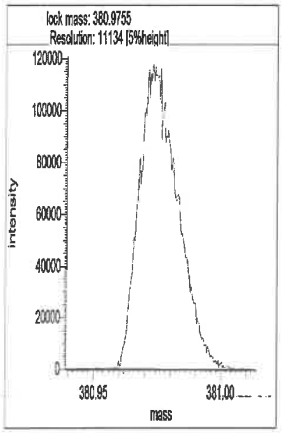

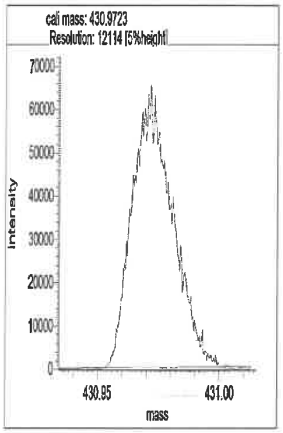

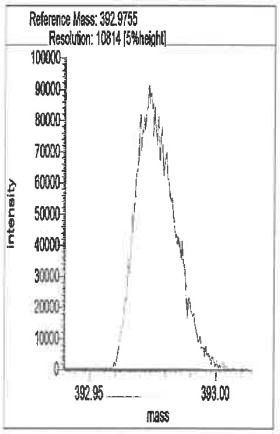

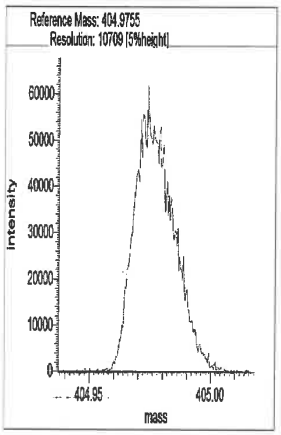

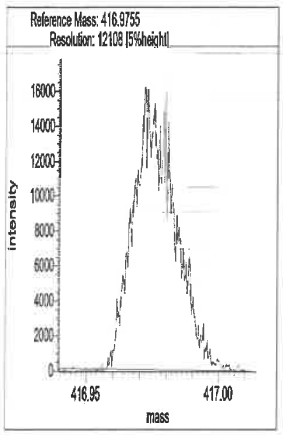

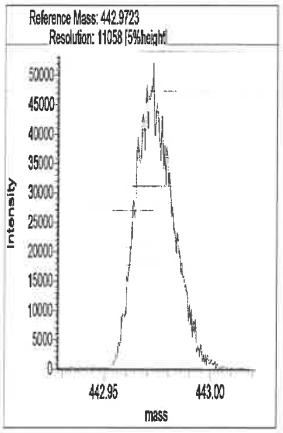

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

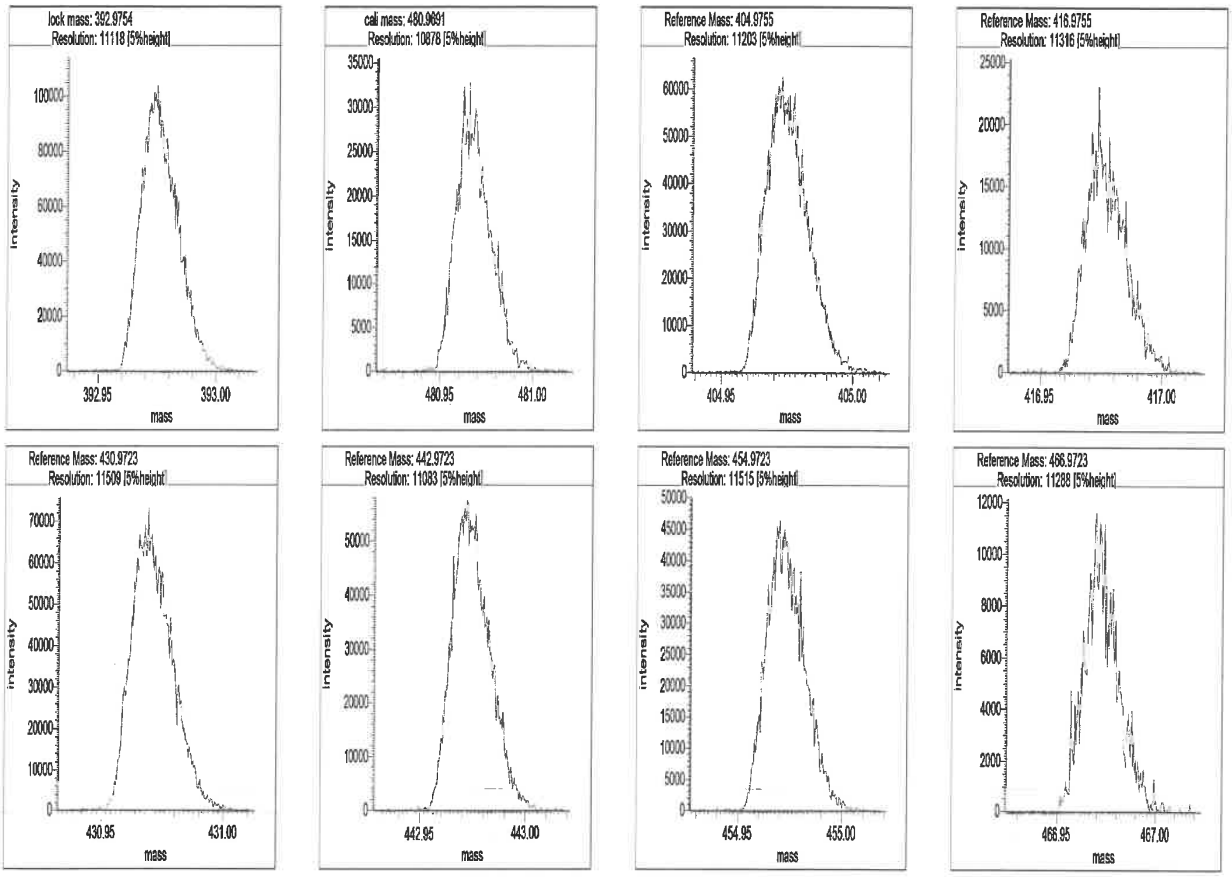

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

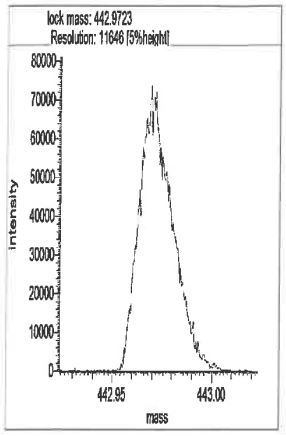
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

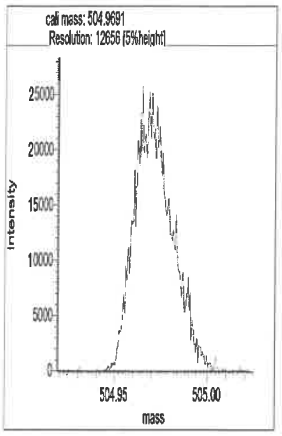
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

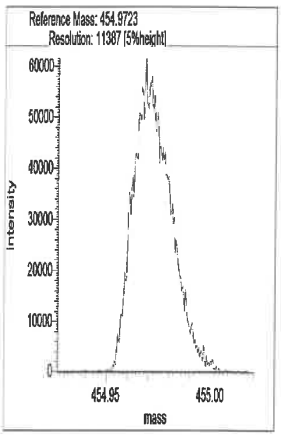
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

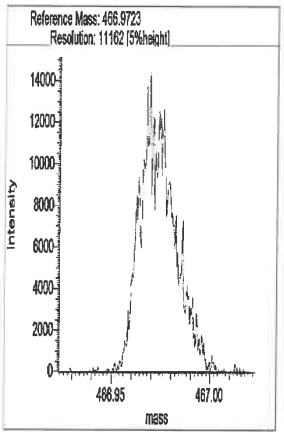
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

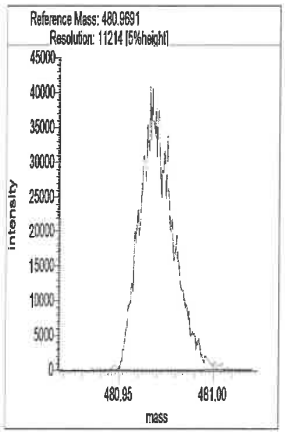
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

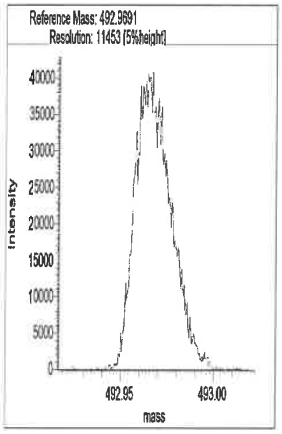
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 01:12
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10755 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10064 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11004 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10862 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10493 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11020 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10113 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10231 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9724 [5%height] ✓ ok 8/19/21

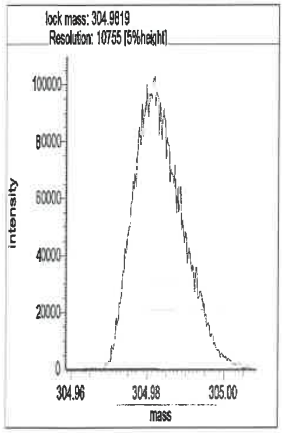

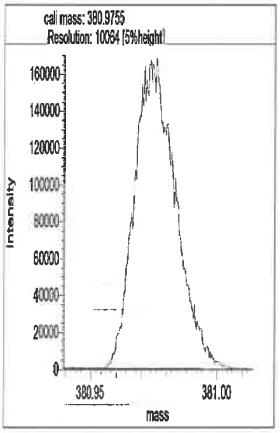

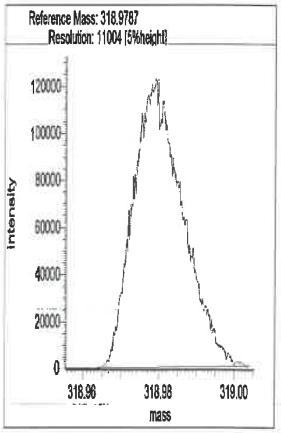

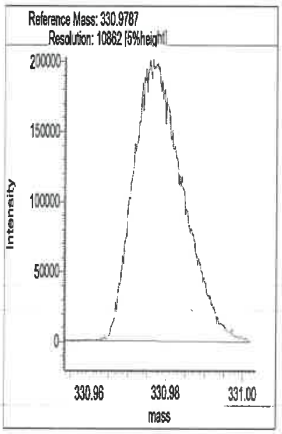

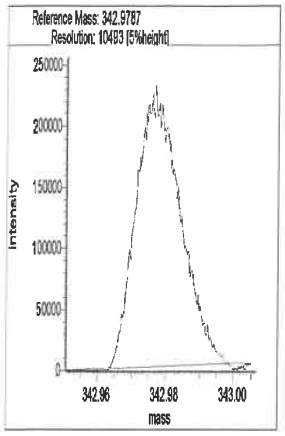

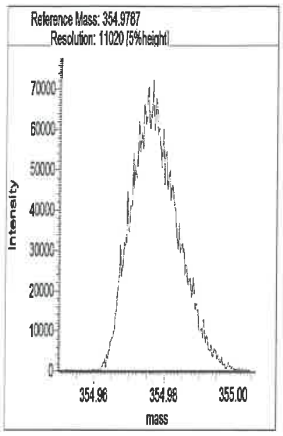

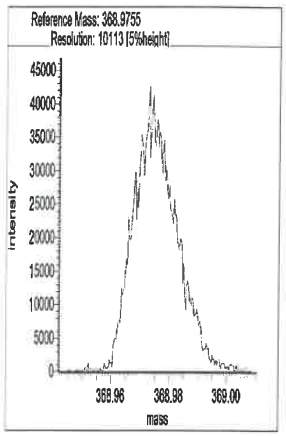

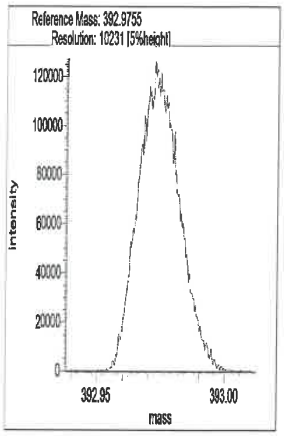

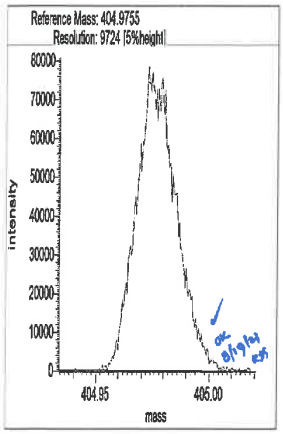

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10868 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10796 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10893 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11154 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10747 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10242 [5%height]

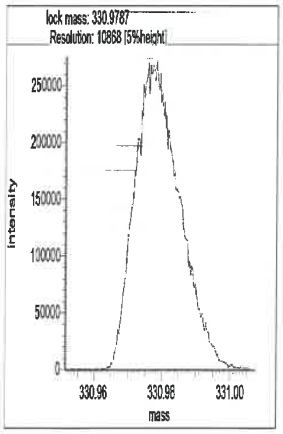

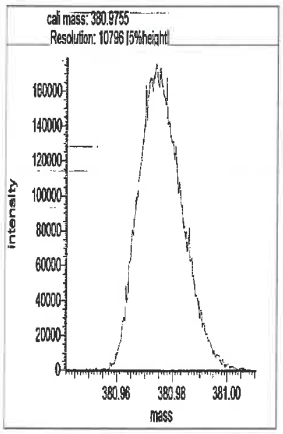

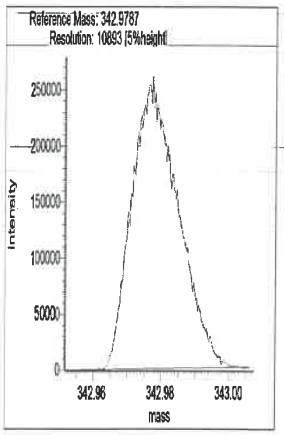

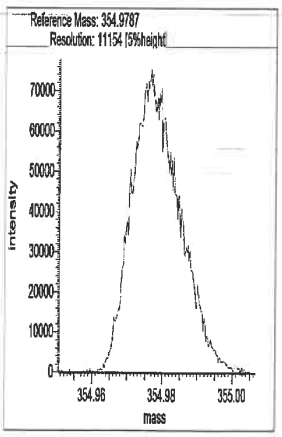

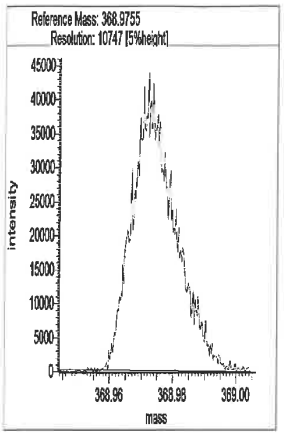

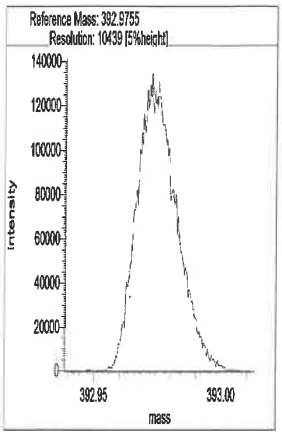

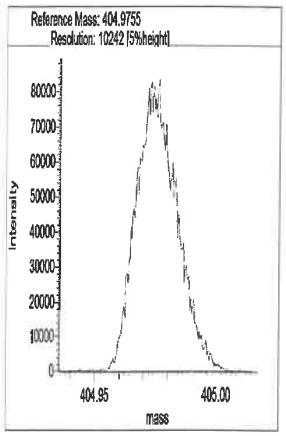

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11012 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10577 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11026 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10658 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11077 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10816 [5%height]

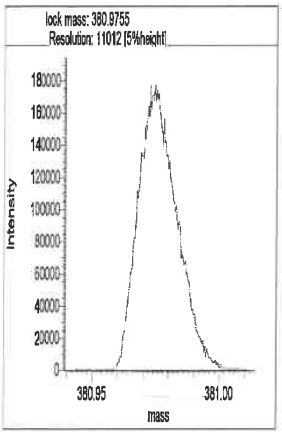

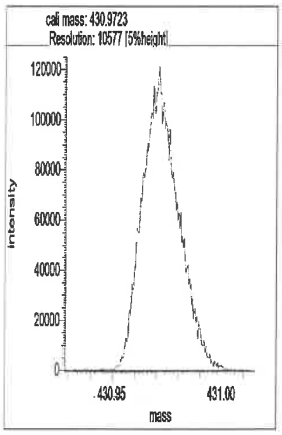

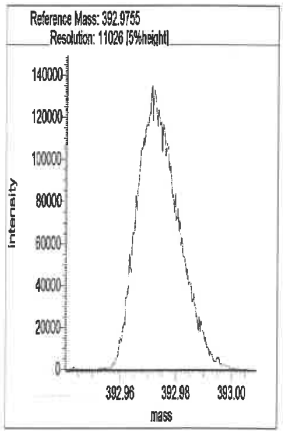

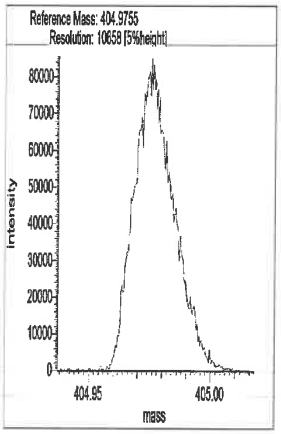

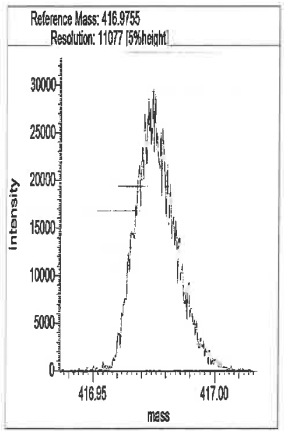

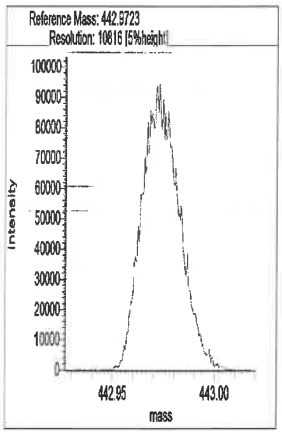

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11599 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10409 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11028 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11067 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10523 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10883 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10838 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11180 [5%height]

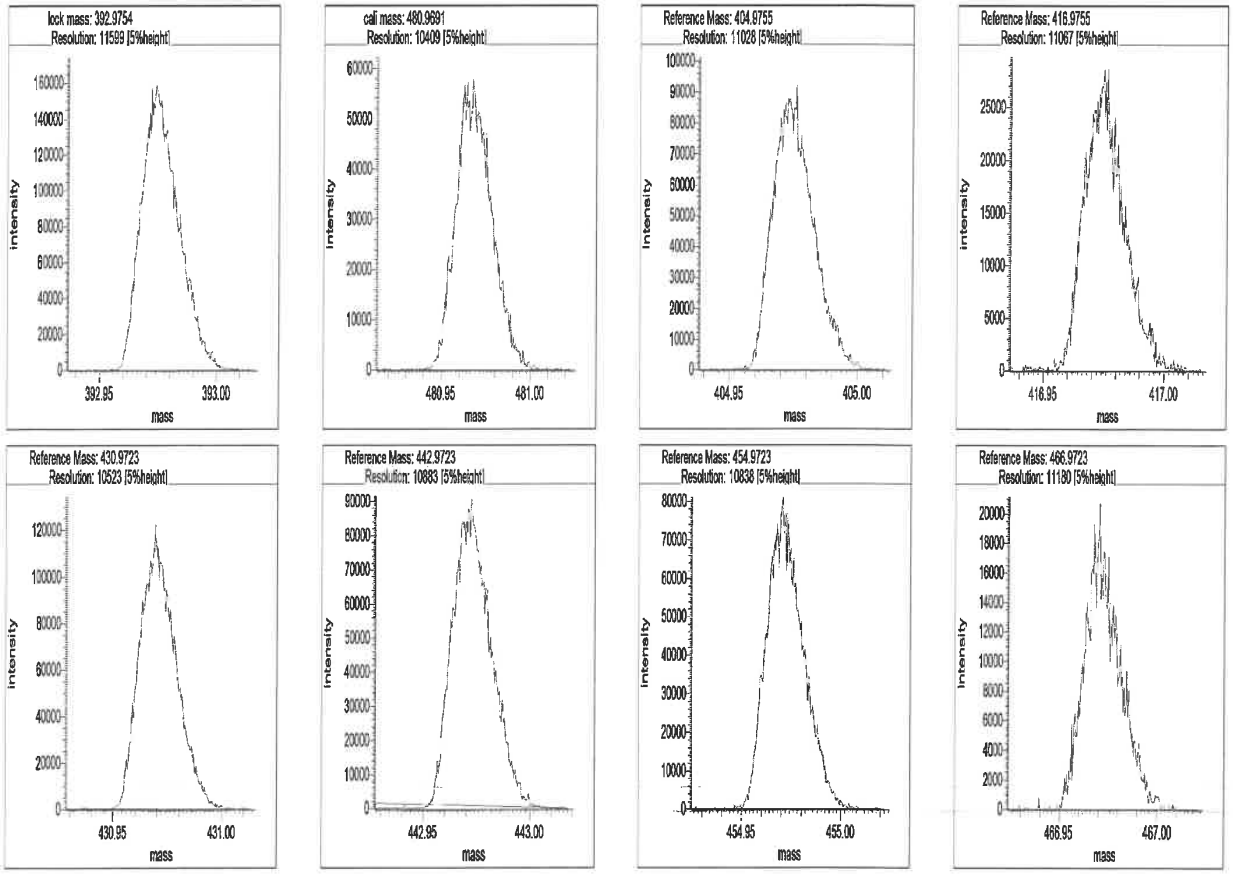

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11216 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10772 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11002 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11259 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10778 [5%height]

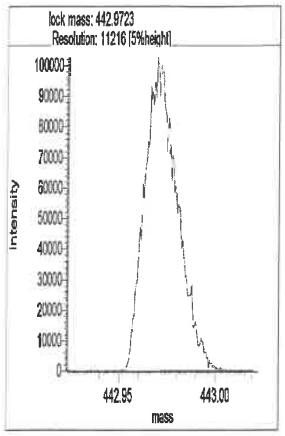
lock mass: 442.9723
Resolution: 11216 [5%height]
Intensity
mass

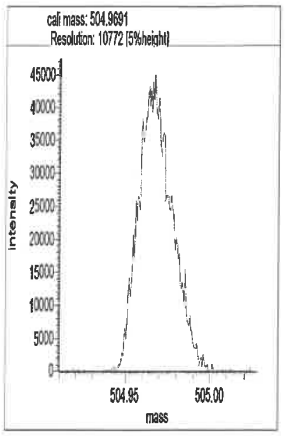
cali mass: 504.9691
Resolution: 10772 [5%height]
Intensity
mass

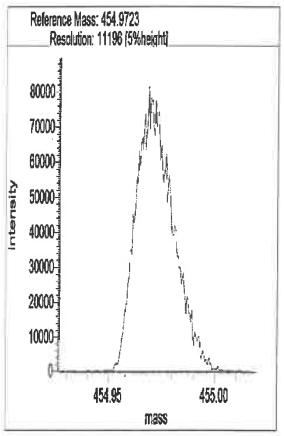
Reference Mass: 454.9723
Resolution: 11196 [5%height]
Intensity
mass

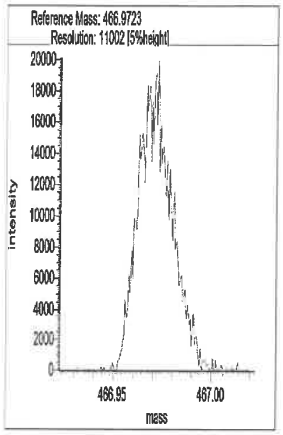
Reference Mass: 466.9723
Resolution: 11002 [5%height]
Intensity
mass

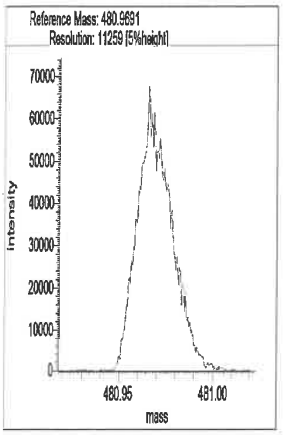
Reference Mass: 480.9691
Resolution: 11259 [5%height]
Intensity
mass

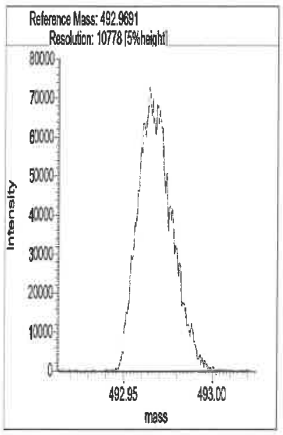
Reference Mass: 492.9691
Resolution: 10778 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 12:47
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11862 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10668 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11408 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11603 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11057 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11275 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11232 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10101 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9688 [5%height] ✓ 8/19/21 KCF

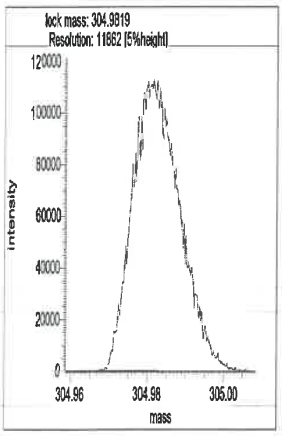

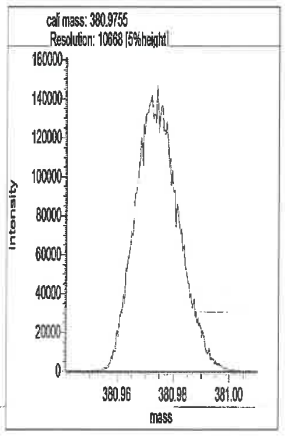

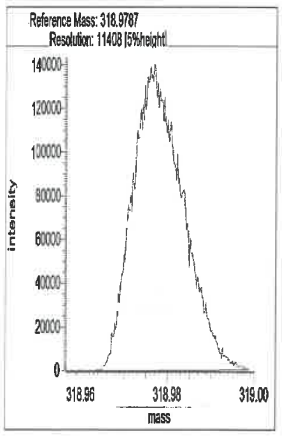

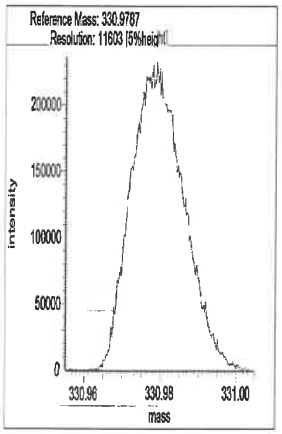

789234

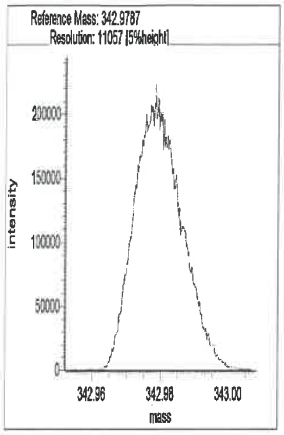

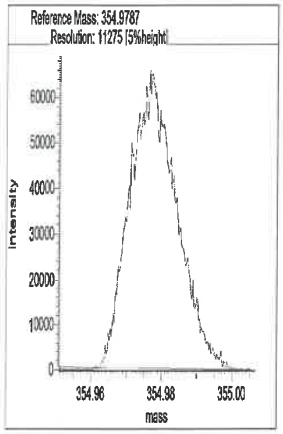

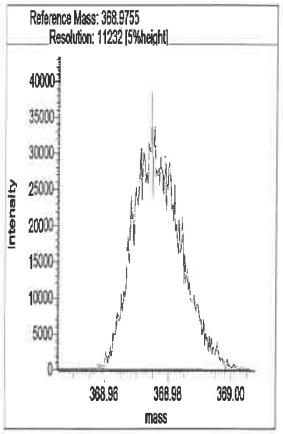

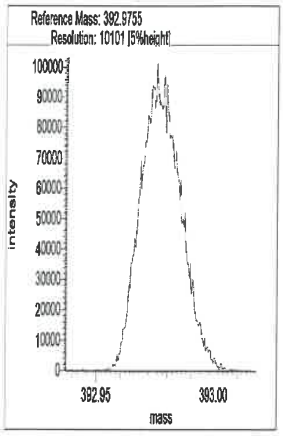

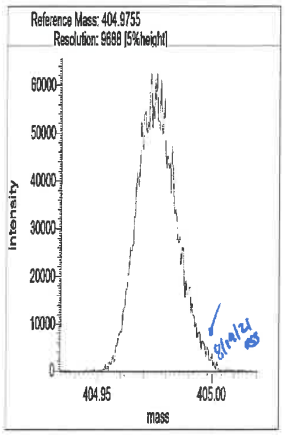

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11409 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11096 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11275 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10877 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10816 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11177 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10770 [5%height]

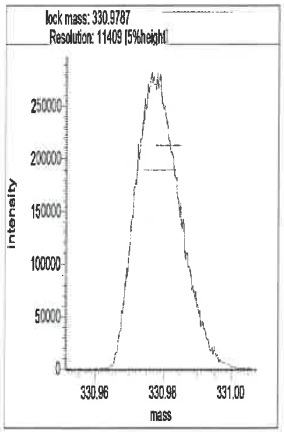

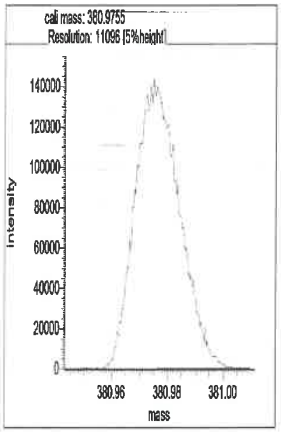

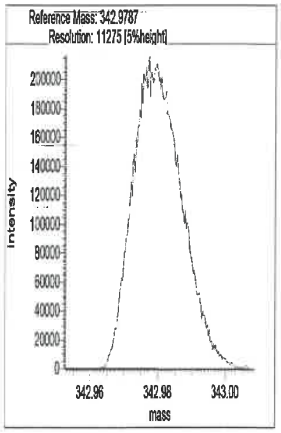

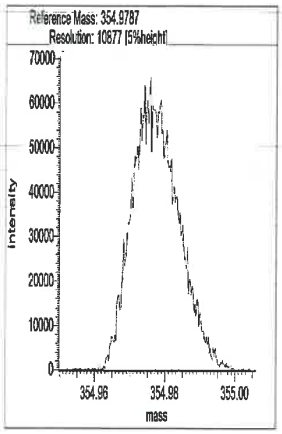

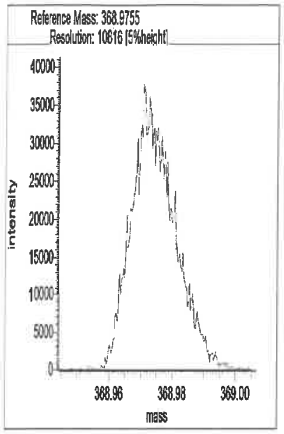

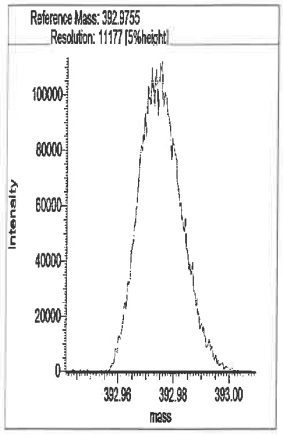

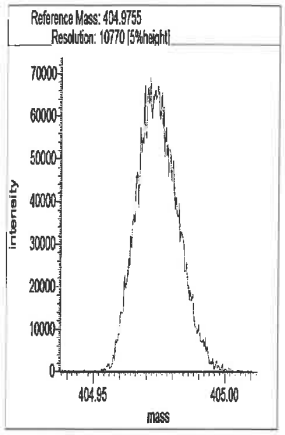

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11068 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11154 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11414 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11295 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10788 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10614 [5%height]

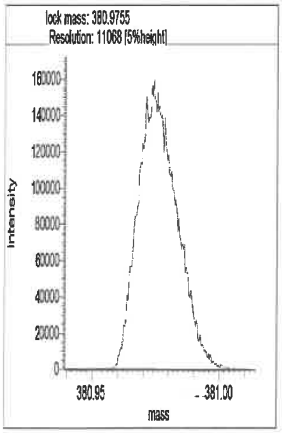

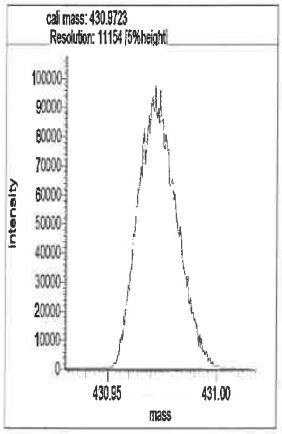

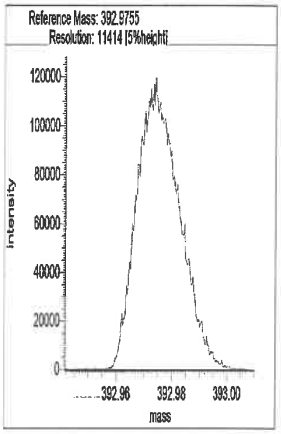

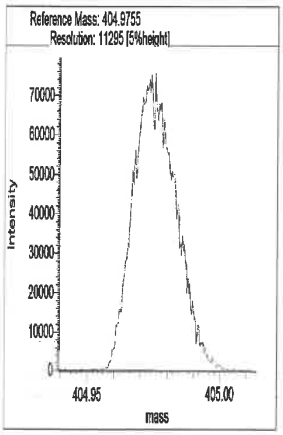

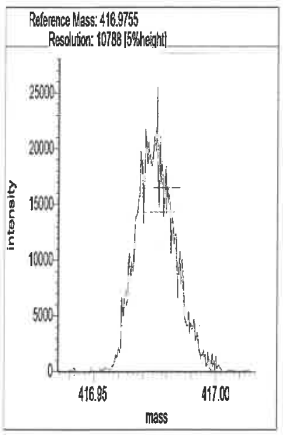

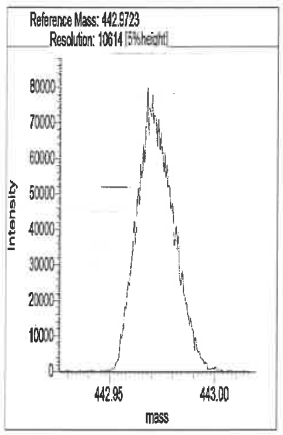

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11418 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11823 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11599 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11335 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10811 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11056 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10732 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10827 [5%height]

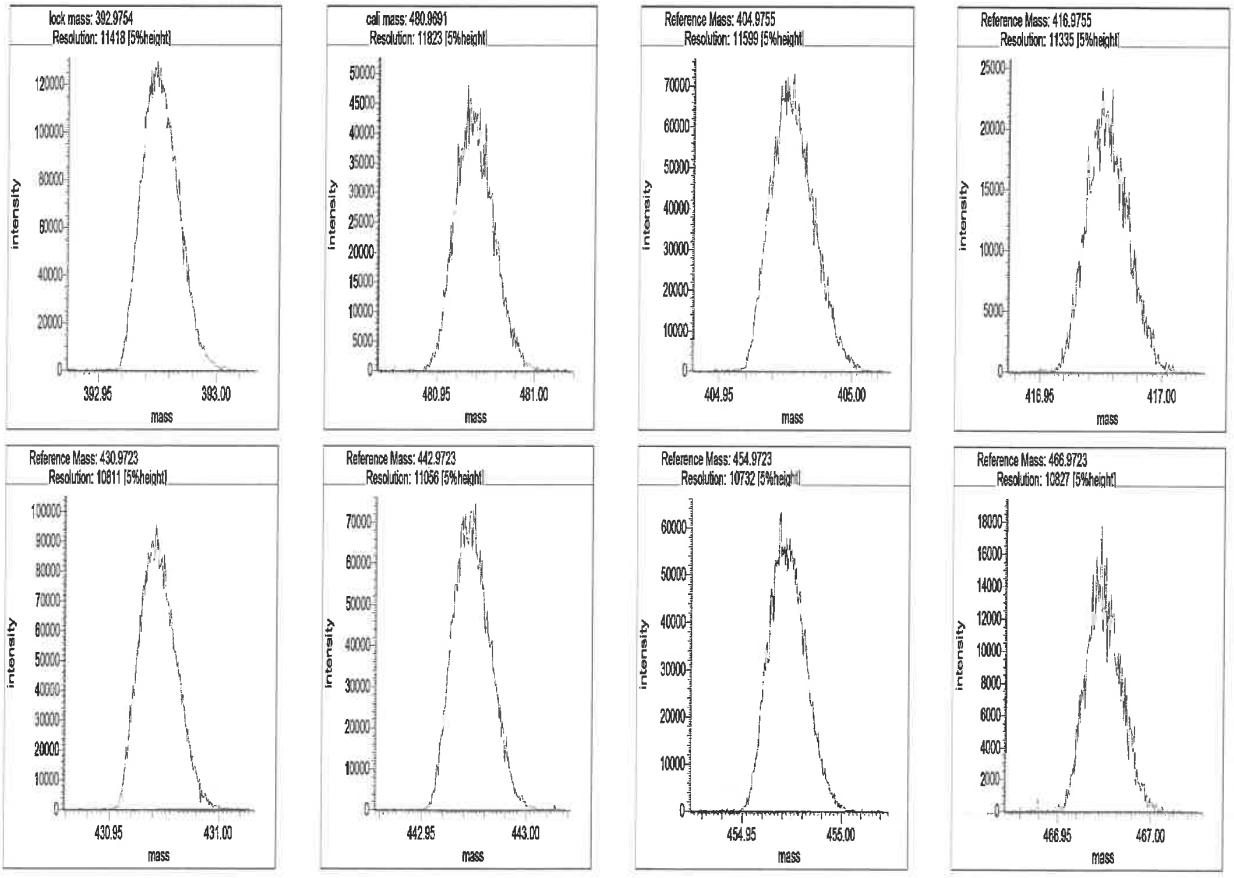

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11579 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11377 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11119 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12204 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10698 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10928 [5%height]

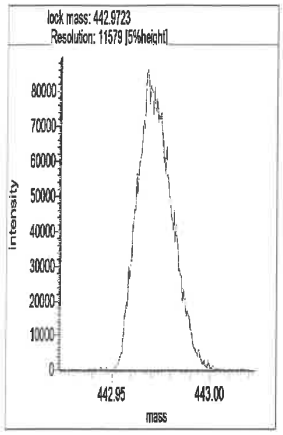
lock mass: 442.9723
Resolution: 11579 [5%height]
Intensity
mass

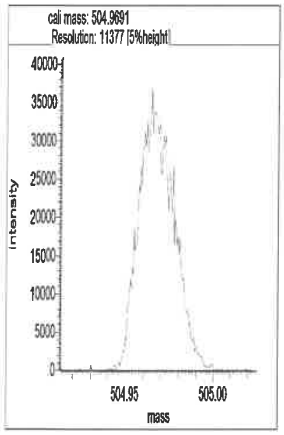
cali mass: 504.9691
Resolution: 11377 [5%height]
Intensity
mass

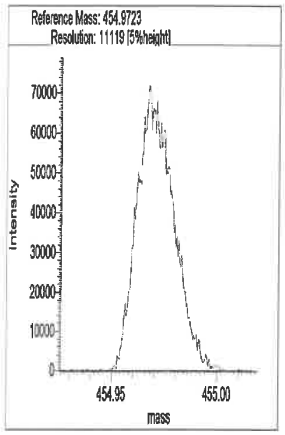
Reference Mass: 454.9723
Resolution: 11119 [5%height]
Intensity
mass

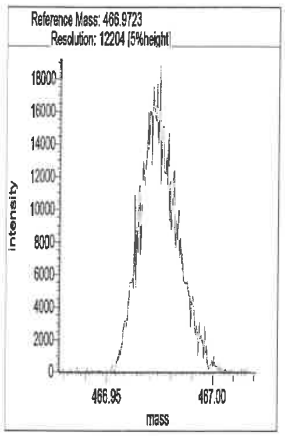
Reference Mass: 466.9723
Resolution: 12204 [5%height]
Intensity
mass

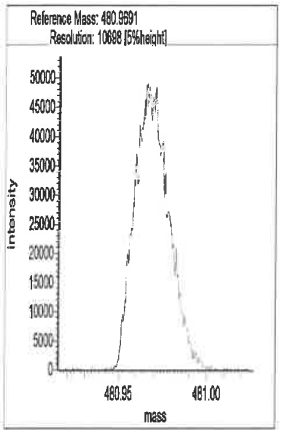
Reference Mass: 480.9691
Resolution: 10628 [5%height]
Intensity
mass

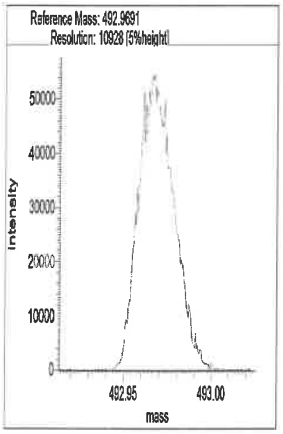
Reference Mass: 492.9691
Resolution: 10928 [5%height]
Intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 01:32:00 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:22:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.427	984489	0.83	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.464	1276686	0.81	1.3459	96.4	96.4	0.2841	0.2841	96.35	
2,3,7,8-TCDF	20.490	158938	0.88	1.0802	11.5	11.5	0.1590	0.1590	115	M
A Non-2,3,7,8-sub-TCDF	19.946						0.1590	0.1590		
S Total TCDF					11.5	11.5	0.1590	0.1590		
D 13C-2,3,7,8-TCDD	21.806	920353	0.75	0.9317	100.3	100.3	0.5973	0.5973	100	
2,3,7,8-TCDD	21.840	100432	0.75	1.0753	10.1	10.1	0.0654	0.0654	101	M
$ 37Cl4-2,3,7,8-TCDD	21.849	97480		1.0083	9.820	9.820	0.0128	0.0128	98.20	
A Non-2,3,7,8-sub-TCDD	20.781						0.0654	0.0654		
S Total TCDD					10.1	10.1	0.0654	0.0654		
D 13C-1,2,3,7,8-PeCDF	27.288	1103721	1.59	1.1405	98.3	98.3	0.2569	0.2569	98.30	
1,2,3,7,8-PeCDF	27.313	599354	1.65	1.0543	51.5	51.5	0.1124	0.1124	103	
D 13C-2,3,4,7,8-PeCDF	28.795	1065050	1.63	1.1253	96.1	96.1	0.2604	0.2604	96.13	
2,3,4,7,8-PeCDF	28.820	515414	1.63	1.0079	48.0	48.0	0.1284	0.1284	96.03	
A F1 PeCDFs	24.697	361	1.55	1.0311	0.0544	0.0323	0.004263	0.0291	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.194	6323	1.61	1.0311	0.5655	0.5655	0.1200	0.5655	0.00	
S Total PeCDF					100.1	100.1	0.1204	0.1204		RQ
D 13C-1,2,3,7,8-PeCDD	29.612	675256	1.54	0.7165	95.7	95.7	0.2875	0.2875	95.73	M
1,2,3,7,8-PeCDD	29.637	349091	1.55	1.0465	49.4	49.4	0.2994	0.2994	98.80	
A Non-2,3,7,8-sub-PeCDD	28.489						0.2994	0.2994		
S Total PeCDD					49.4	49.4	0.2994	0.2994		
D 13C-1,2,3,4,7,8-HxCDF	34.942	961464	0.54	0.9648	113.2	113.2	0.2217	0.2217	113	
1,2,3,4,7,8-HxCDF	34.959	565917	1.34	1.1474	51.3	51.3	0.1626	0.1626	103	
D 13C-1,2,3,6,7,8-HxCDF	35.111	894964	0.54	1.0708	94.9	94.9	0.1997	0.1997	94.92	
1,2,3,6,7,8-HxCDF	35.119	603750	1.33	1.2178	55.4	55.4	0.1845	0.1845	111	
D 13C-2,3,4,6,7,8-HxCDF	35.919	850492	0.53	1.0413	92.8	92.8	0.2054	0.2054	92.76	
2,3,4,6,7,8-HxCDF	35.936	566662	1.32	1.2145	54.9	54.9	0.1693	0.1693	110	
D 13C-1,2,3,7,8,9-HxCDF	36.811	799349	0.53	0.9731	93.3	93.3	0.2198	0.2198	93.29	
1,2,3,7,8,9-HxCDF	36.828	528030	1.35	1.2401	53.3	53.3	0.1512	0.1512	107	
A Non-2,3,7,8-sub-HxCDF	35.107						0.1659	0.1659		
S Total HxCDF					214.8	214.8	0.1669	0.1669		

789239

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.609	880537	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.129	717142	1.25	0.7587	107.3	107.3	0.1846	0.1846	107	
1,2,3,4,7,8-HxCDD	36.146	351624	1.23	1.0608	46.2	46.2	0.0806	0.0806	92.44	
D 13C-1,2,3,6,7,8-HxCDD	36.247	848519	1.22	0.8593	112.1	112.1	0.1630	0.1630	112	
1,2,3,6,7,8-HxCDD	36.264	386501	1.24	0.9933	45.9	45.9	0.0800	0.0800	91.71	
1,2,3,7,8,9-HxCDD	36.626	395938	1.20	1.1094	45.6	45.6	0.0743	0.0743	91.18	
A Non-2,3,7,8-sub-HxCDD	35.460						0.0781	0.0781		
S Total HxCDD					137.7	137.7	0.0783	0.0783		
D 13C-1,2,3,4,6,7,8-HpCDF	38.626	656274	0.44	0.7359	101.3	101.3	0.2851	0.2851	101	
1,2,3,4,6,7,8-HpCDF	38.634	455320	1.06	1.4421	48.1	48.1	0.1685	0.1685	96.22	
D 13C-1,2,3,4,7,8,9-HpCDF	39.880	599385	0.45	0.6854	99.3	99.3	0.3061	0.3061	99.32	
1,2,3,4,7,8,9-HpCDF	39.888	390971	1.08	1.3092	49.8	49.8	0.1885	0.1885	99.65	
A Non-2,3,7,8-sub-HpCDF	39.288						0.1780	0.1780		
S Total HpCDF					97.9	97.9	0.1785	0.1785		
D 13C-1,2,3,4,6,7,8-HpCDD	39.569	648199	1.06	0.6745	109.1	109.1	0.2831	0.2831	109	
1,2,3,4,6,7,8-HpCDD	39.577	335357	1.04	1.0503	49.3	49.3	0.1045	0.1045	98.52	
A Non-2,3,7,8-sub-HpCDD	39.288	3567	1.04	1.0503	0.5786	0.5239	0.1045	0.5239	0.00	RQ
S Total HpCDD					49.8	49.8	0.1045	0.1045		RQ
D 13C-OCDD	42.072	1074471	0.91	0.5446	224.1	224.1	0.2244	0.2244	112	
OCDF	42.165	709884	0.97	1.3168	100.3	100.3	0.1011	0.1011	100	
OCDD	42.081	547805	0.90	1.0620	96.0	96.0	0.1077	0.1077	96.02	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 01:32:00 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:22:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.427	21.427	0		445977	61730	165	412	374		
333.9338	21.444	21.427	1		538512	70339	129	322	545	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.464	20.464	0	0.955	572920	76535	109	272	702		
317.9389	20.464	20.464	0	0.955	703766	101095	93	232	1087	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.490	20.490	0	1.001	74325	10071	54	135	187		M
305.8987	20.490	20.490	0	1.001	84613	12394	68	170	182	0.88(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	19.946						54	135			
305.8987	19.946						68	170			
13C-2,3,7,8-TCDD											
331.9368	21.806	21.806	0	1.018	395703	49232	165	412	298		
333.9338	21.806	21.806	0	1.018	524650	67347	129	322	522	0.75(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.840	21.840	0	1.002	43022	5107	20	50	255		M
321.8936	21.840	21.840	0	1.002	57410	7402	13	32	569	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.849	21.849	0	1.020	97480	12477	7	17	1782		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.781						20	50			
321.8936	20.781						13	32			
13C-1,2,3,7,8-PeCDF											
351.9000	27.288	27.288	0	1.274	677865	102468	92	230	1114		
353.8970	27.279	27.288	-1	1.273	425856	63812	63	157	1013	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.313	27.313	0	1.001	373055	54148	41	102	1321		
341.8567	27.313	27.313	0	1.001	226299	33164	38	95	873	1.65(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.795	28.795	0	1.344	659478	94038	92	230	1022		
353.8970	28.795	28.795	0	1.344	405572	58215	63	157	924	1.63(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.820	28.820	0	1.001	319323	44133	41	102	1076		
341.8567	28.820	28.820	0	1.001	196091	26521	38	95	698	1.63(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.267	24.697	-26	0.889	22	14	1	2	14		
341.8567	24.250	24.697	-27	0.889	64	21	2	5	11	0.34(1.32-1.78)	
	Empc Correction				14	9	2	5	5		
339.8597	24.379	24.697	-19	0.893	198	49	1	2	49		
341.8567	24.379	24.697	-19	0.893	324	81	2	5	41	0.61(1.32-1.78)	
	Empc Correction				127	31	2	5	16		
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.894	28.194	-18	1.022	3897	465	41	102	11		
341.8567	27.877	28.194	-19	1.022	2426	361	38	95	10	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											M
367.8949	29.612	29.612	0	1.382	408922	48749	62	155	786		
369.8919	29.628	29.612	1	1.383	266334	33288	47	117	708	1.54(1.32-1.78)	M
1,2,3,7,8-PeCDD											
355.8546	29.637	29.637	0	1.001	212257	27310	81	202	337		
357.8516	29.637	29.637	0	1.001	136834	17949	22	55	816	1.55(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						81	202			
357.8516	28.489						22	55			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.942	34.942	0	0.954	336469	68825	57	142	1207		
385.8610	34.942	34.942	0	0.954	624995	114454	111	277	1031	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.959	34.959	0	1.000	323795	64220	78	195	823		
375.8178	34.959	34.959	0	1.000	242122	47319	59	147	802	1.34(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.111	35.111	0	0.959	313436	52098	57	142	914		
385.8610	35.111	35.111	0	0.959	581528	100114	111	277	902	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.119	35.119	0	1.000	344594	62612	78	195	803		
375.8178	35.119	35.119	0	1.000	259156	47352	59	147	803	1.33(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.919	35.919	0	0.981	293056	57881	57	142	1015		
385.8610	35.919	35.919	0	0.981	557436	108473	111	277	977	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.936	35.936	0	1.000	321979	63834	78	195	818		
375.8178	35.936	35.936	0	1.000	244683	48323	59	147	819	1.32(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.811	36.811	0	1.006	276711	60371	57	142	1059		
385.8610	36.811	36.811	0	1.006	522638	121974	111	277	1099	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.828	36.828	0	1.000	302880	64959	78	195	833		
375.8178	36.828	36.828	0	1.000	225150	48893	59	147	829	1.35(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.107						78	195			
375.8178	35.107						59	147			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.609	36.609	0		486696	109333	53	132	2063		
403.8529	36.617	36.609	1		393841	87046	57	142	1527	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.129	36.129	0	0.987	398284	87752	53	132	1656		
403.8529	36.129	36.129	0	0.987	318858	70052	57	142	1229	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.146	36.146	0	1.000	194100	42368	32	80	1324		
391.8127	36.146	36.146	0	1.000	157524	35287	22	55	1604	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.247	36.247	0	0.990	466694	92606	53	132	1747		
403.8529	36.247	36.247	0	0.990	381825	77360	57	142	1357	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.264	36.264	0	1.000	214301	44193	32	80	1381		
391.8127	36.255	36.264	-1	1.000	172200	36180	22	55	1645	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.626	36.626	0	1.014	215900	47500	32	80	1484		
391.8127	36.626	36.626	0	1.014	180038	40127	22	55	1824	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.460						32	80			
391.8127	35.460						22	55			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.626	38.626	0	1.055	200757	51554	47	117	1097		
419.8220	38.626	38.626	0	1.055	455517	113911	118	295	965	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.634	38.634	0	1.000	234238	59520	82	205	726		
409.7788	38.634	38.634	0	1.000	221082	55709	79	197	705	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.880	39.880	0	1.089	186100	51202	47	117	1089		
419.8220	39.880	39.880	0	1.089	413285	111683	118	295	946	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.888	39.888	0	1.000	203424	55186	82	205	673		
409.7788	39.888	39.888	0	1.000	187547	51038	79	197	646	1.08(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.288						82	205			
409.7788	39.288						79	197			

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.569	39.569	0	1.081	333648	91786	80	200	1147		
437.8140	39.569	39.569	0	1.081	314551	90360	70	175	1291	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.577	39.577	0	1.000	170747	48038	40	100	1201		
425.7737	39.577	39.577	0	1.000	164610	46442	40	100	1161	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.946	39.288	-21	0.984	2190	476	40	100	12		
	Empc Correction				1818	545	40	100	14		
425.7737	38.946	39.288	-21	0.984	1749	525	40	100	13	1.25(0.88-1.20)	
13C-OCDD											
469.7780	42.072	42.072	0	1.149	513322	127575	59	147	2162		
471.7750	42.064	42.072	-1	1.149	561149	138295	37	92	3738	0.91(0.76-1.02)	
OCDF											
441.7428	42.165	42.165	0	1.002	349557	84896	33	82	2573		
443.7399	42.165	42.165	0	1.002	360327	89931	38	95	2367	0.97(0.76-1.02)	
OCDD											
457.7377	42.081	42.081	0	1.000	259339	62403	31	77	2013		
459.7348	42.072	42.081	-1	1.000	288466	70332	30	75	2344	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.697

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1103721	166280
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1065050	152253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1084385	159266

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.267	22	14	64	21	0.007692	0.34	RQ
24.267	22	14	14	9	0.003220		Empc Correction
24.379	198	49	324	81	0.0467	0.61	RQ
24.379	198	49	127	31	0.0291		Empc Correction
Signal Totals:							
	220	63	141	40			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	608	165				0.57	RQ
	361	103					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0544 = (608 * 100.000) / (1084385 * 1.031)
Empc Amount: 0.0323 = (361 * 100.000) / (1084385 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.194

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1103721	166280
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1065050	152253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1084385	159266

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.894	3897	465	2426	361	0.5655	1.61	n
Signal Totals:							
	3897	465	2426	361			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6323	826				1.61	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5655 = (6323 * 100.000) / (1084385 * 1.031)

QC Flag Legend

Processing Flags
n - Failed Sig-To-Noise Test

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.288

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	648199	182146

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	648199	182146

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.946	2190	476	1749	525	0.5786	1.25	RQ
38.946	1818	545	1749	525	0.5239		Empc Correction
Signal Totals:							
	1818	545	1749	525			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3939	1001				1.25	RQ
	3567	1070					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5786 = (3939 * 100.000) / (648199 * 1.050)
Empc Amount: 0.5239 = (3567 * 100.000) / (648199 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.49
Area: 70726
Amount: 11.264064
Amount Units: pg/ul

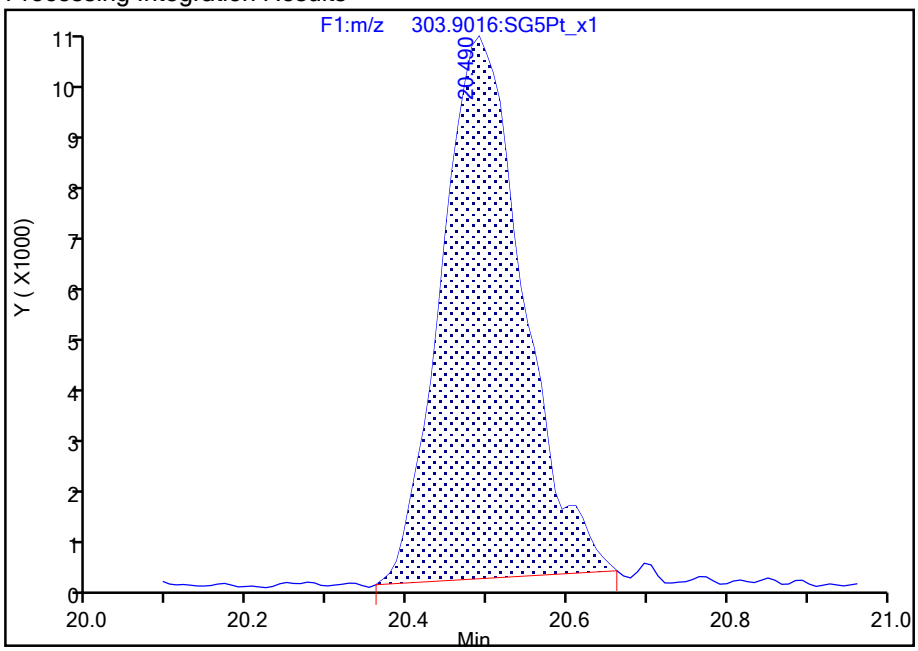

Manual Integration Results

RT: 20.49
Area: 74325
Amount: 11.525037
Amount Units: pg/ul

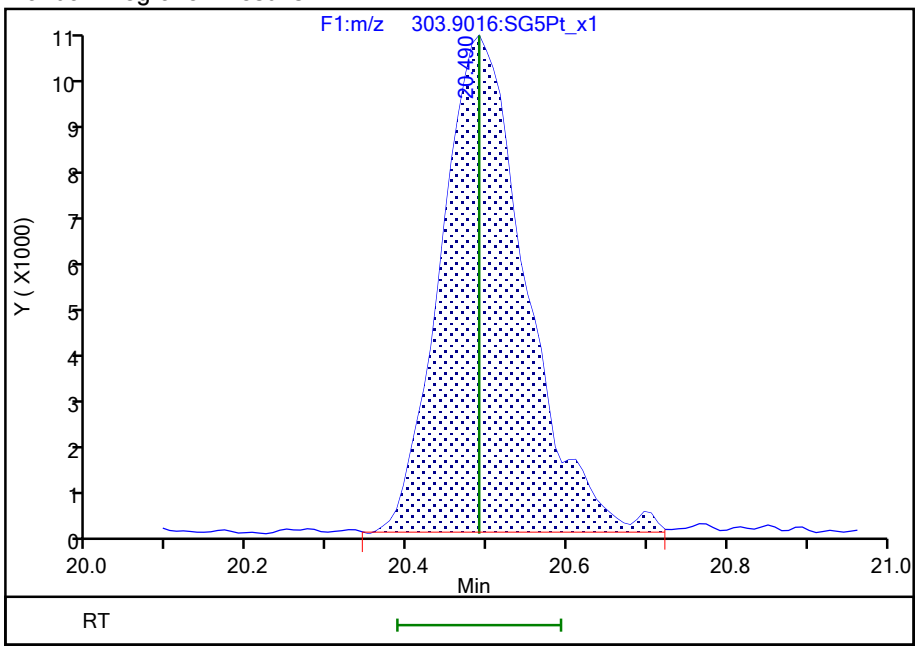

Reviewer: stephensk, 19-Aug-2021 09:20:42

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.84
Area: 41863
Amount: 10.030634
Amount Units: pg/ul

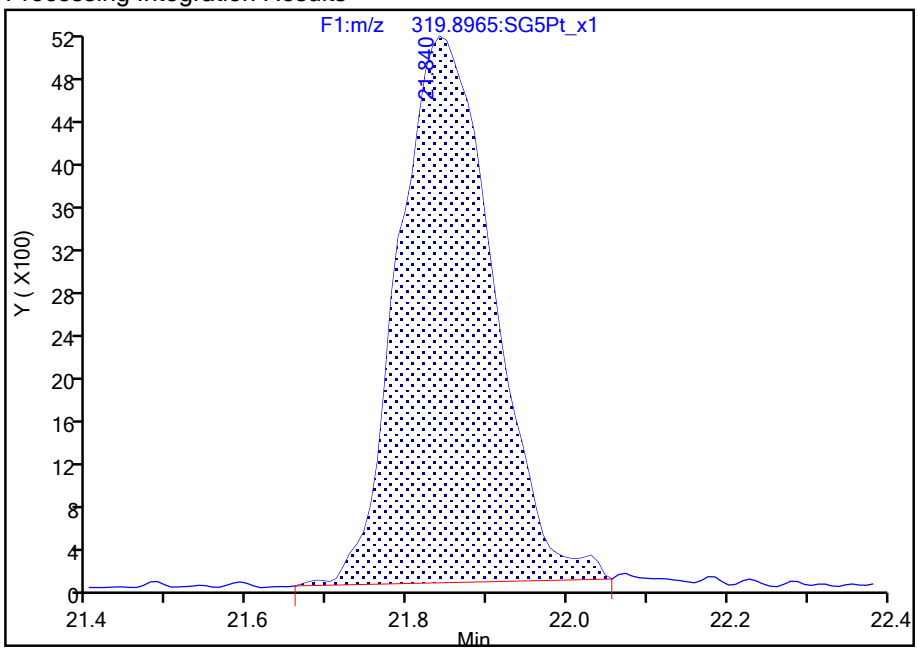

Manual Integration Results

RT: 21.84
Area: 43022
Amount: 10.147741
Amount Units: pg/ul

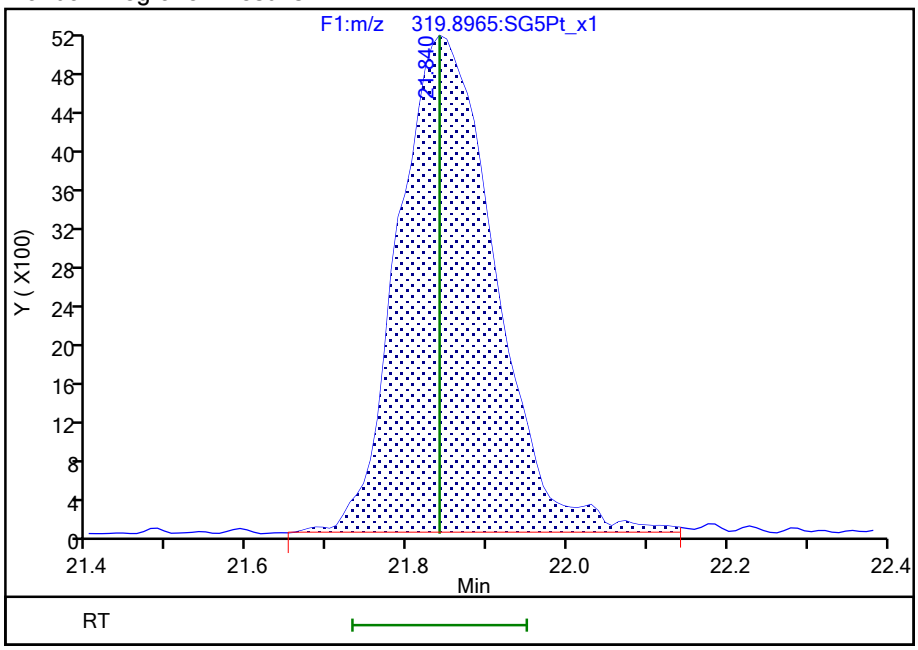

Reviewer: stephensk, 19-Aug-2021 09:21:00

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
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Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 2

Processing Integration Results

RT: 29.63
Area: 252502
Amount: 93.771696
Amount Units: pg/ul

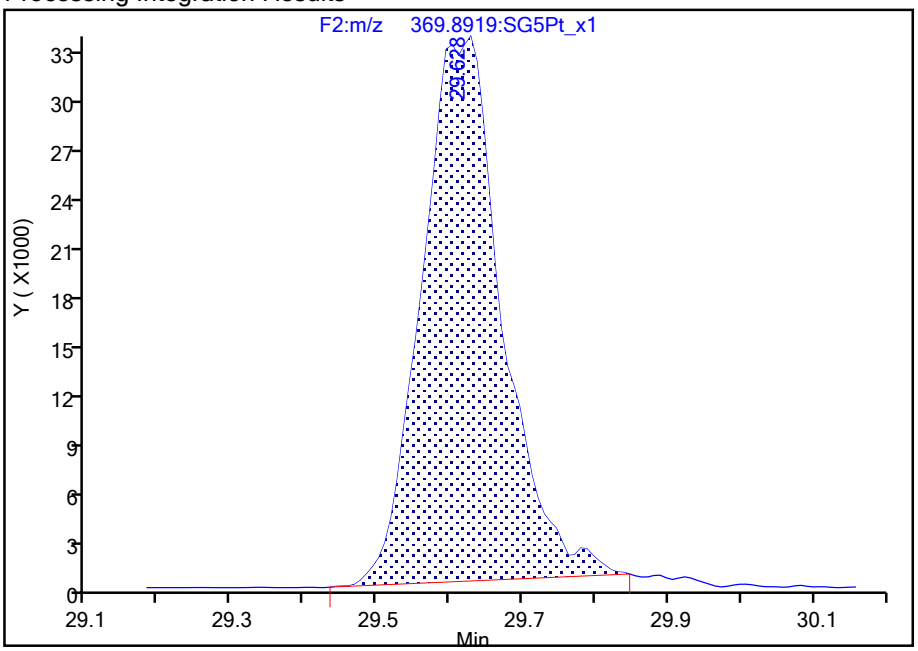

Manual Integration Results

RT: 29.63
Area: 266334
Amount: 95.732693
Amount Units: pg/ul

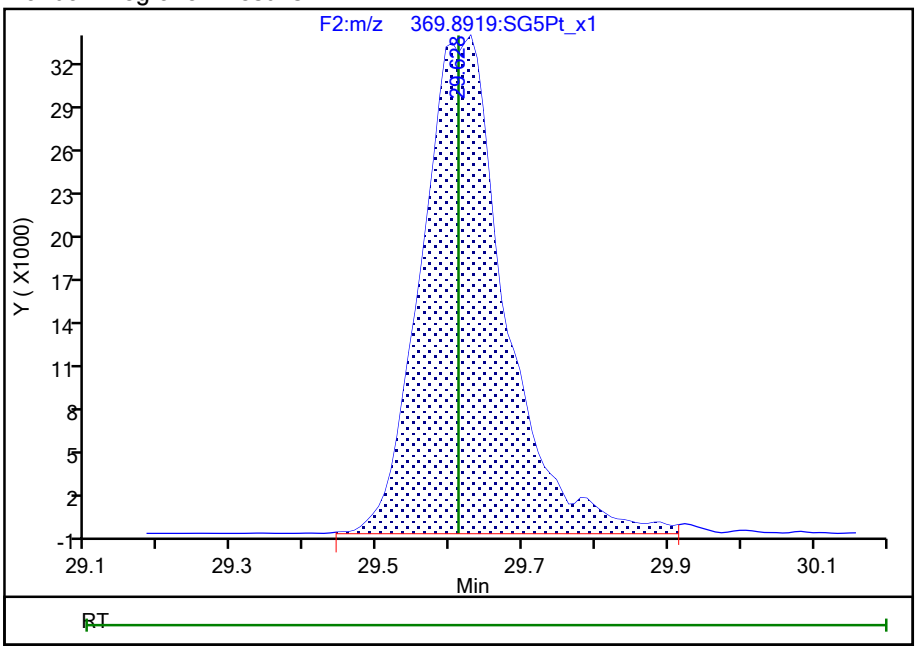

Reviewer: stephensk, 19-Aug-2021 09:21:19

Audit Action: Manually Integrated Audit Reason: Baseline

789250

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

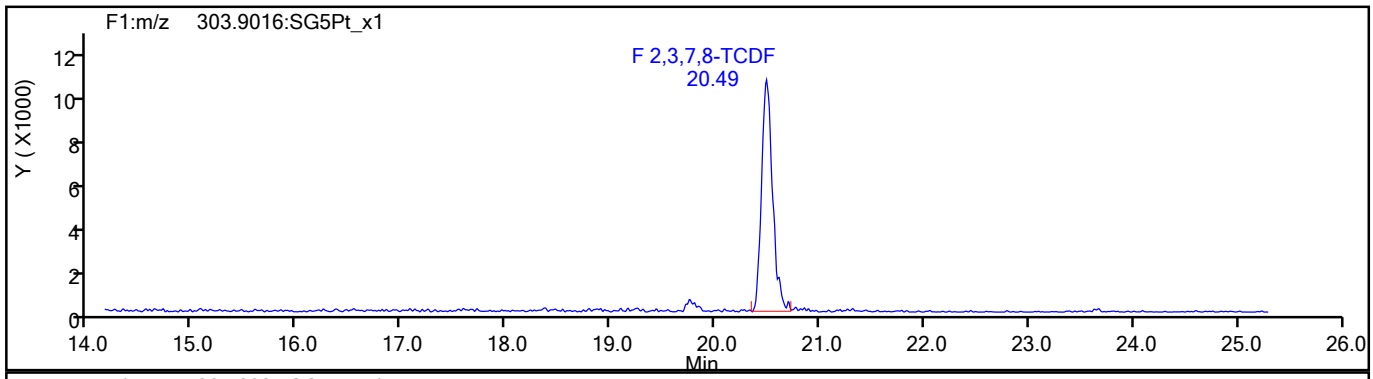

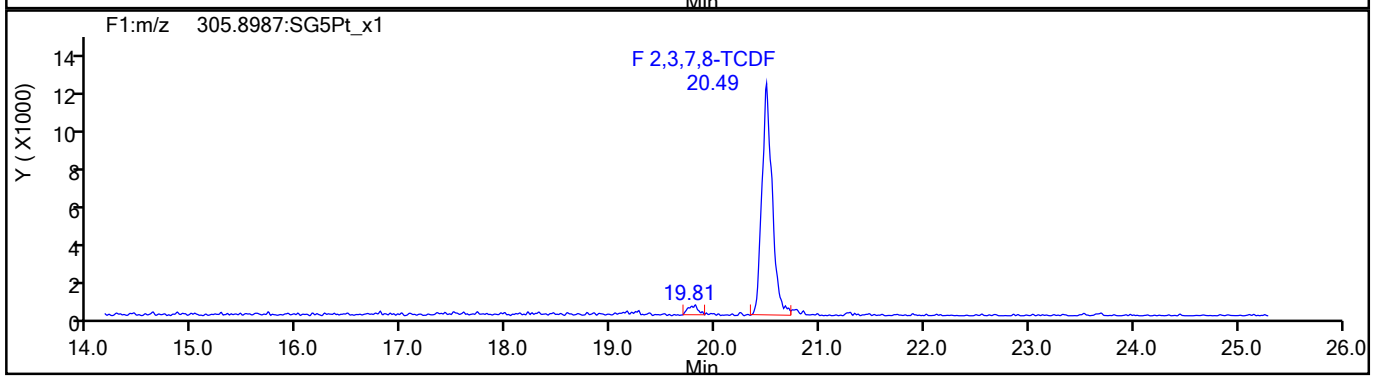

TCDF Standards

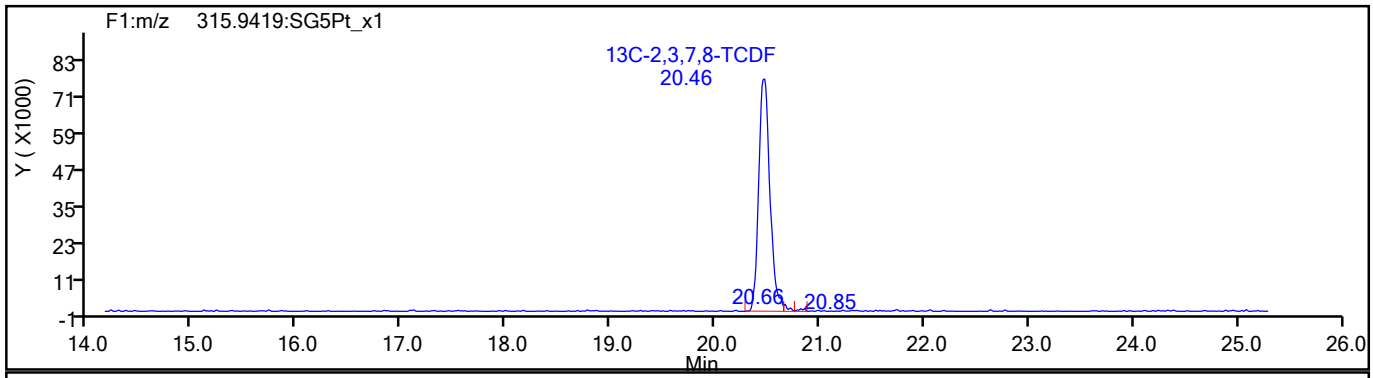

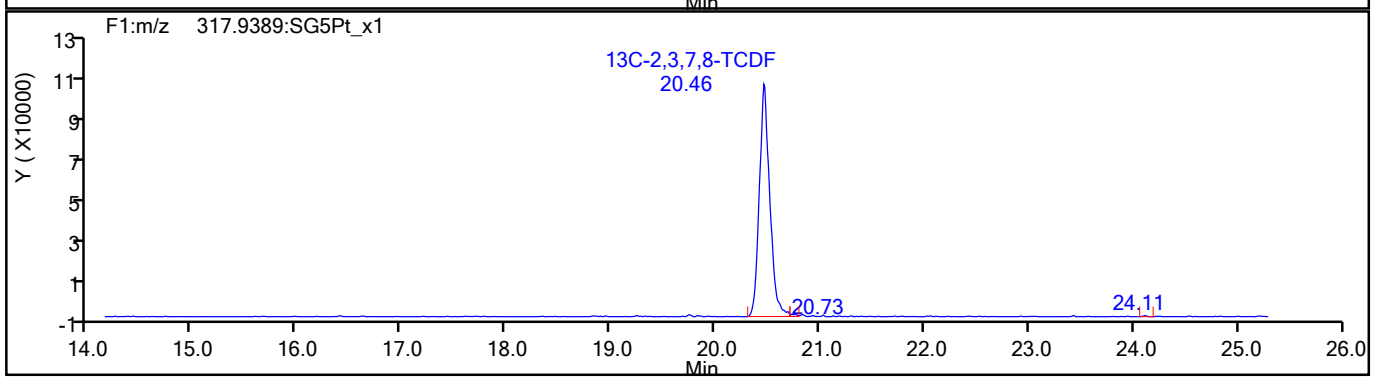

789251

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

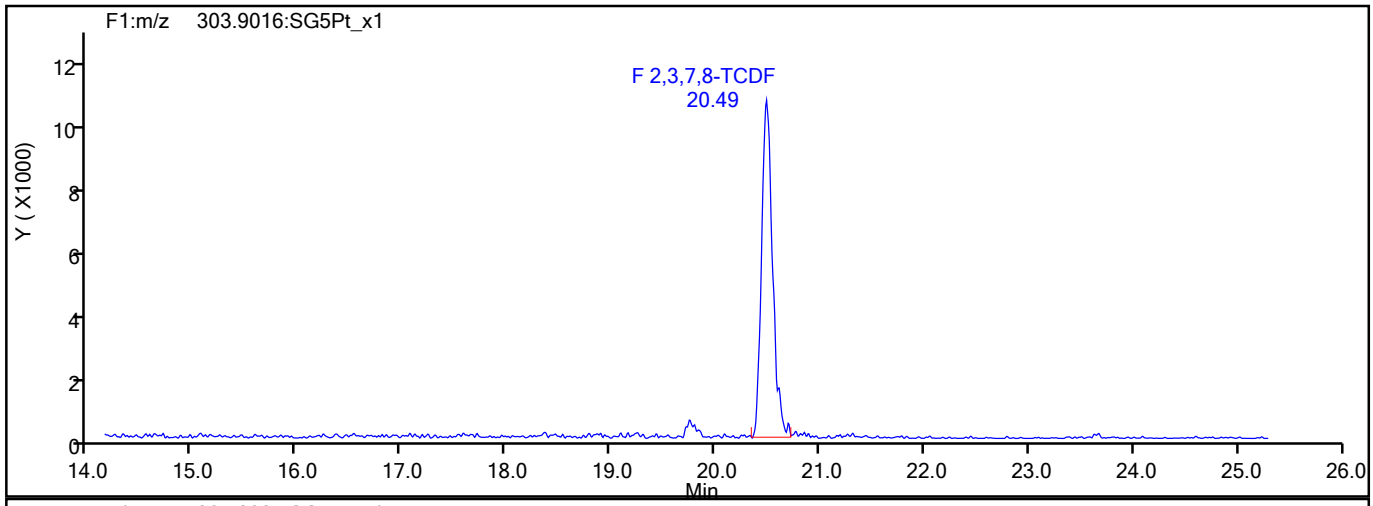

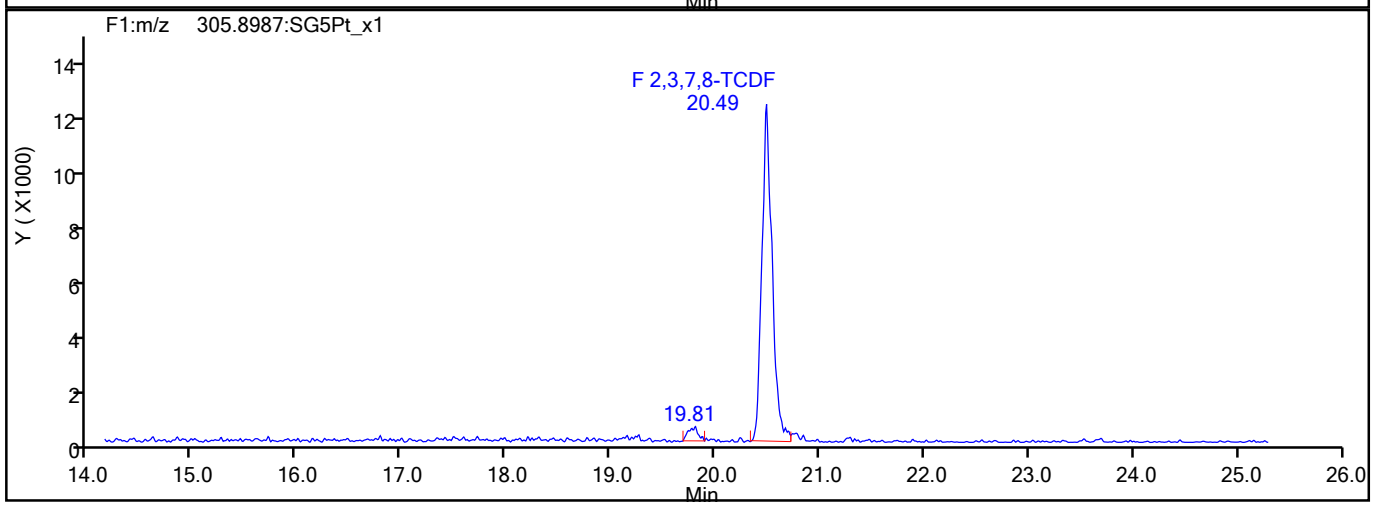

TCDF Interference Mass

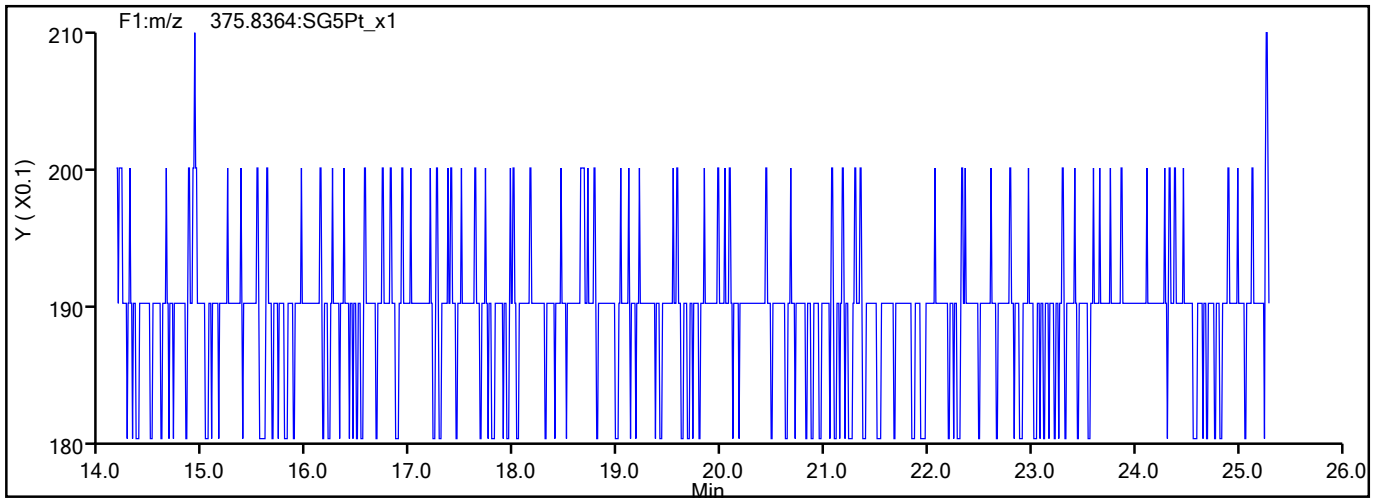

789252

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

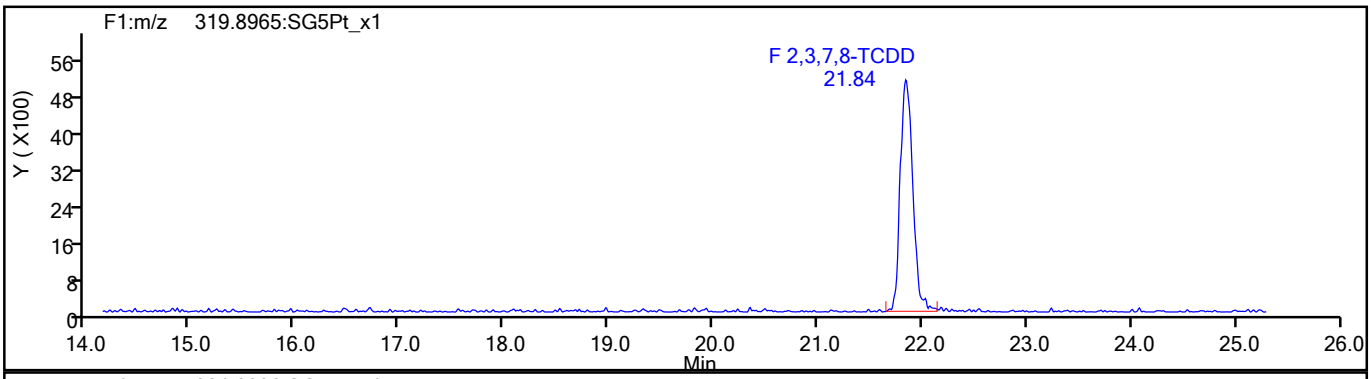

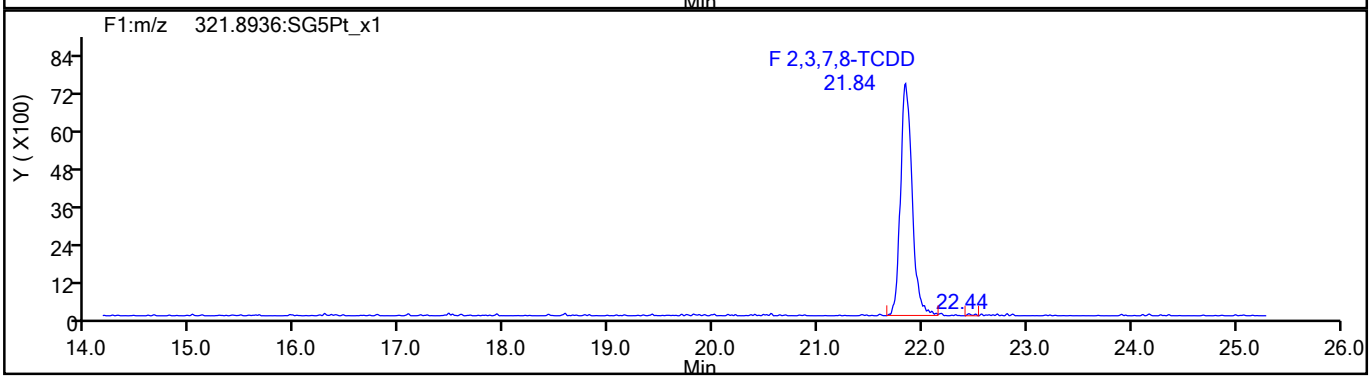

TCDD Standards

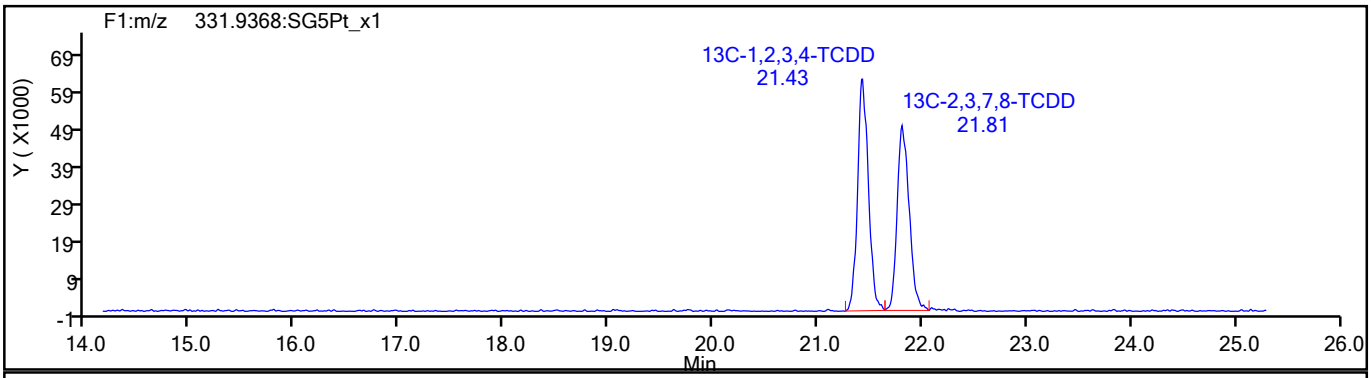

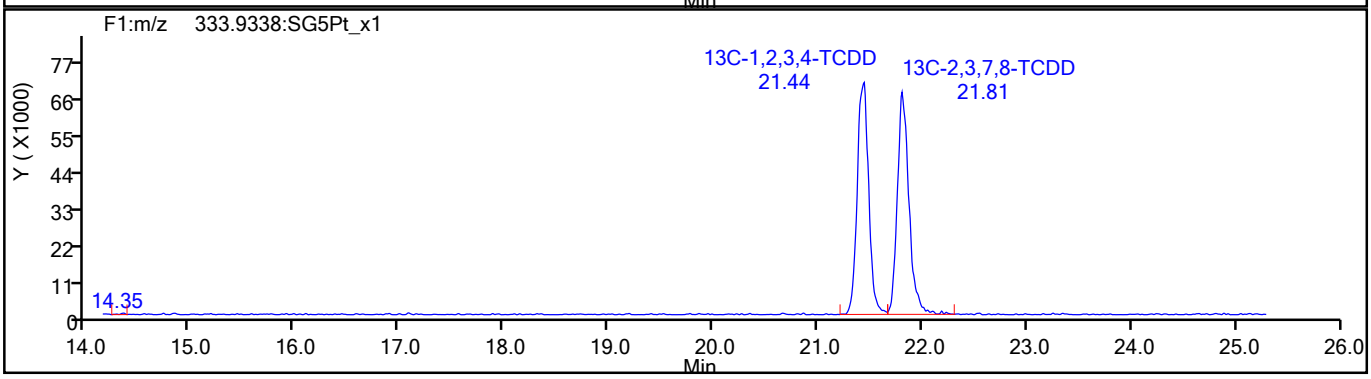

789253

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

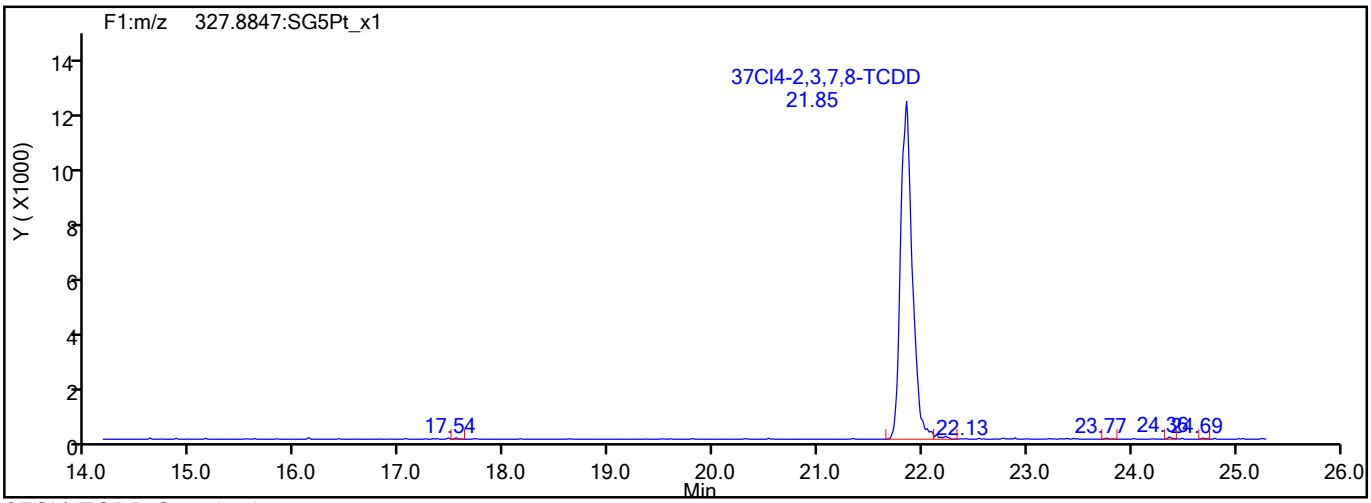

37Cl4-TCDD Standards

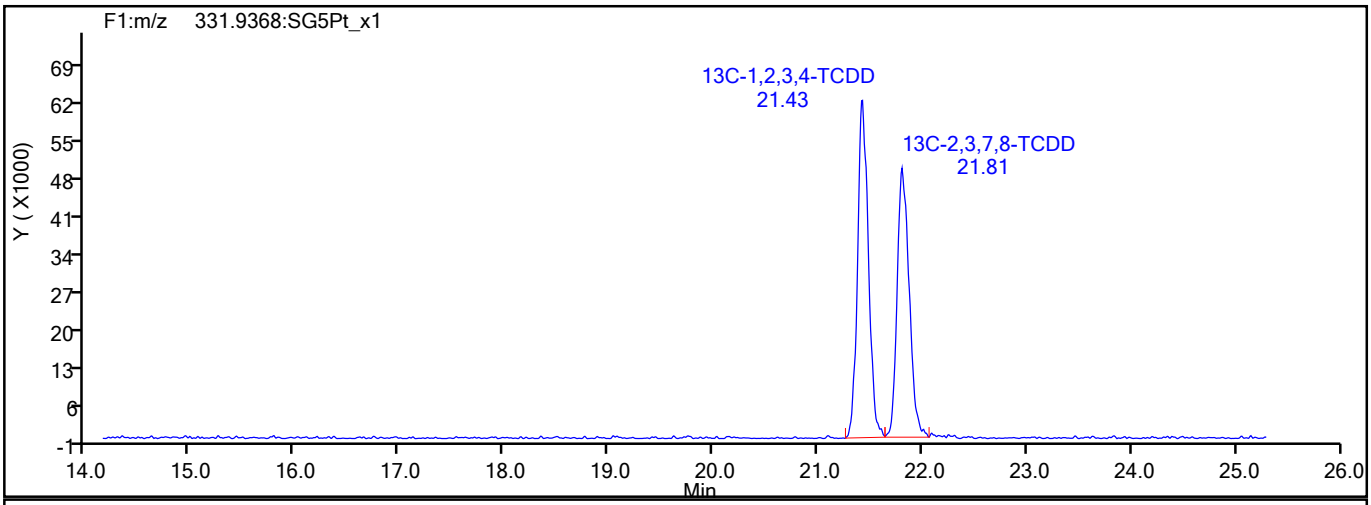

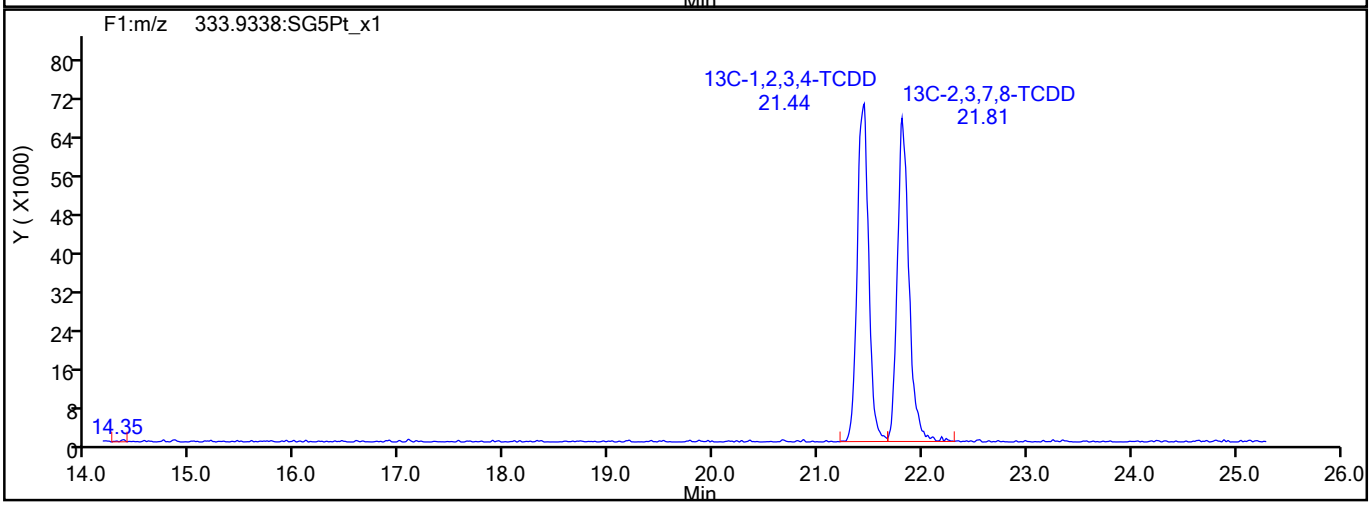

789254

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

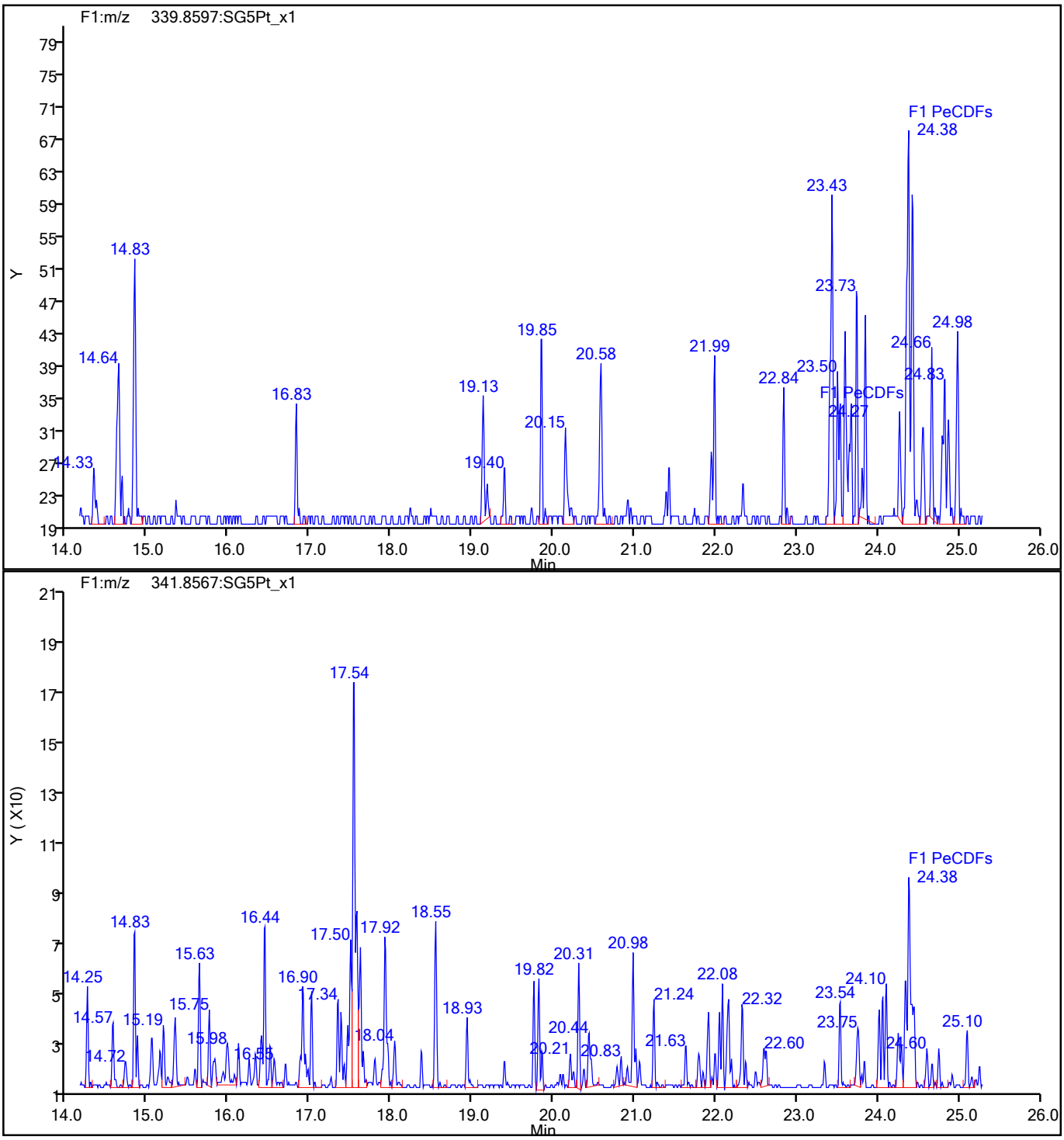

789255

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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F1 PeCDFs

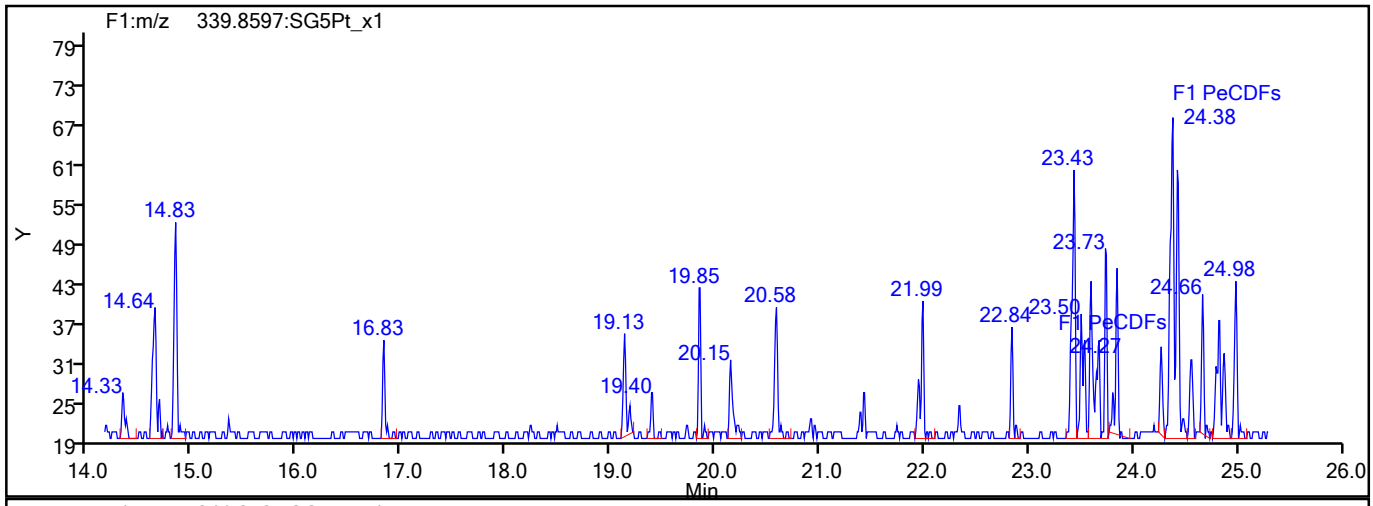

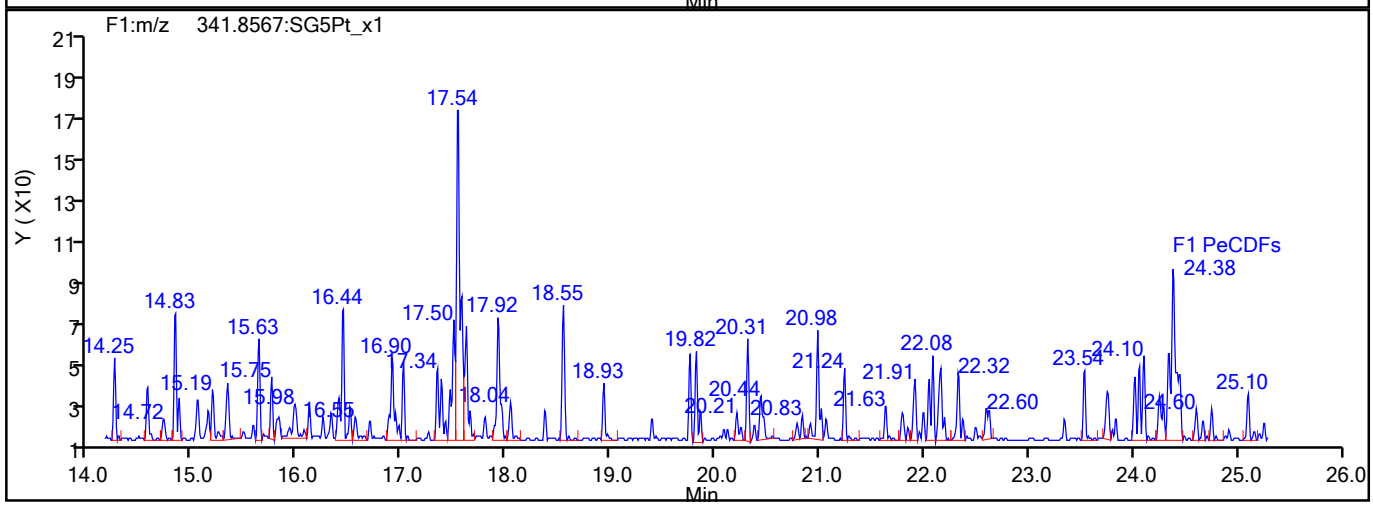

F1 PeCDFs Interference Mass

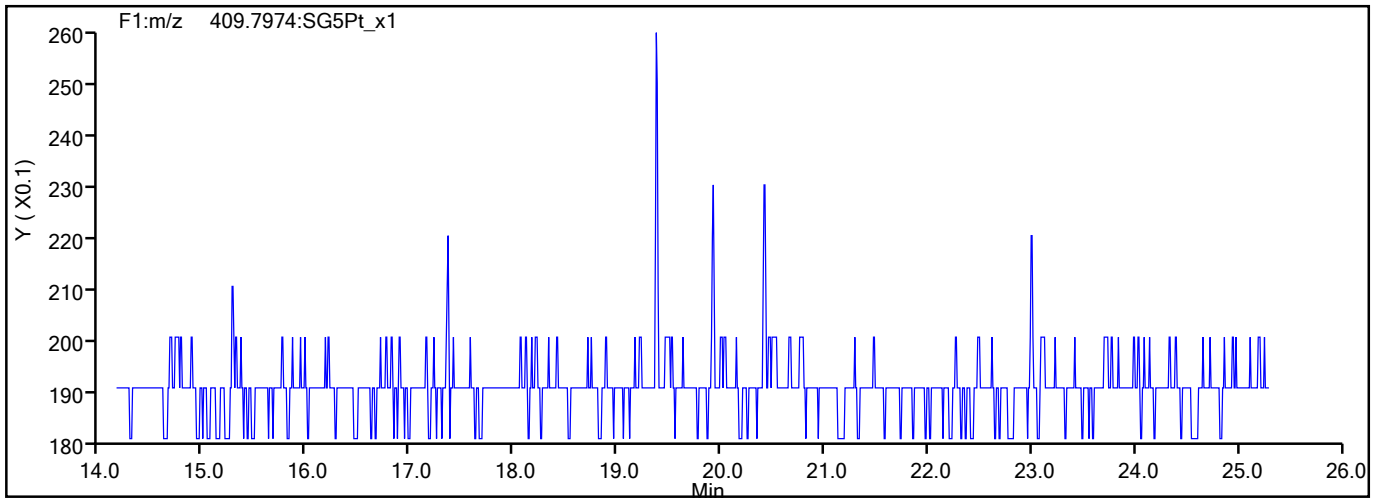

789256

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

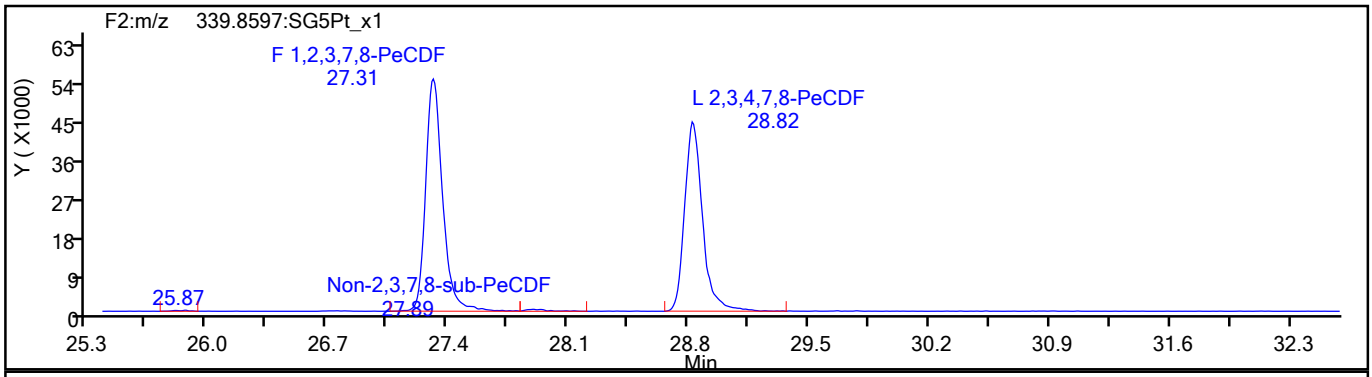

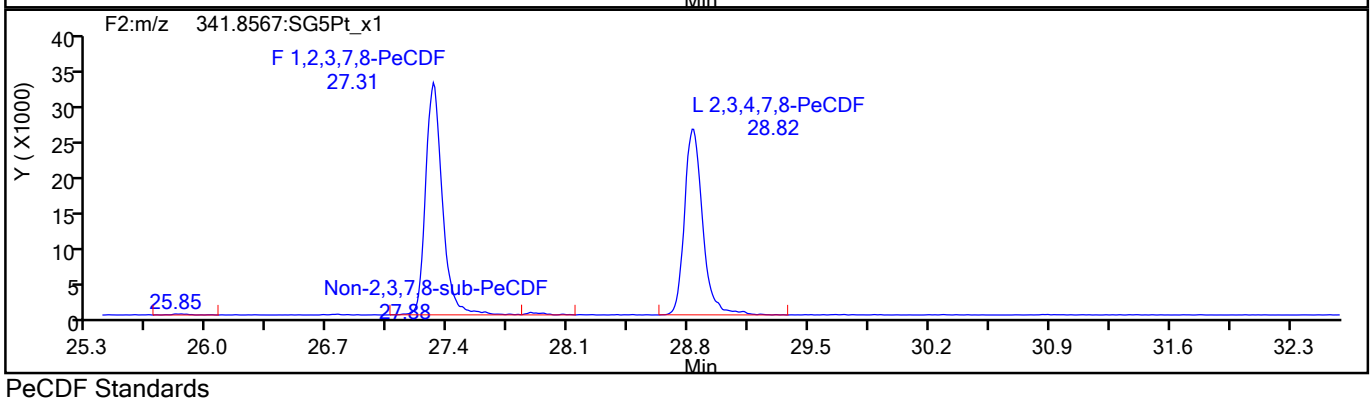

PeCDF Standards

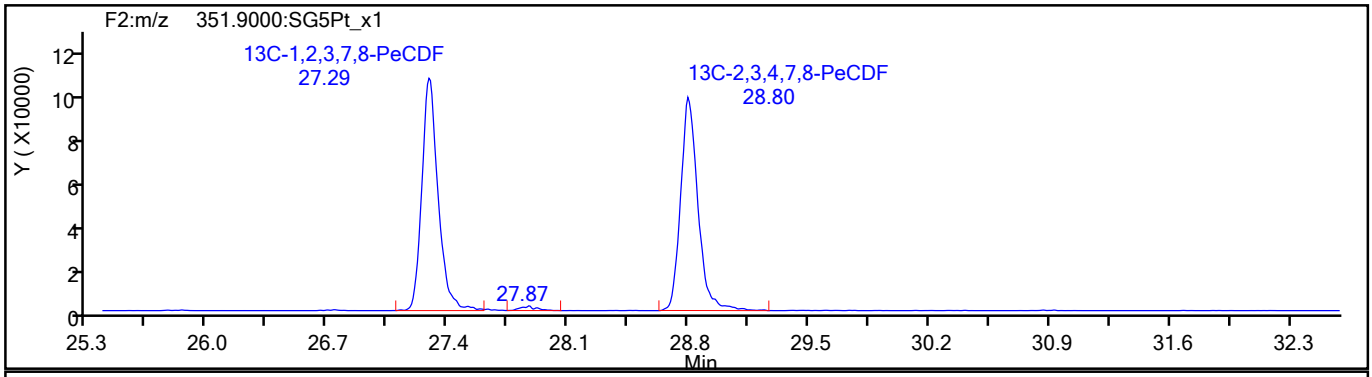

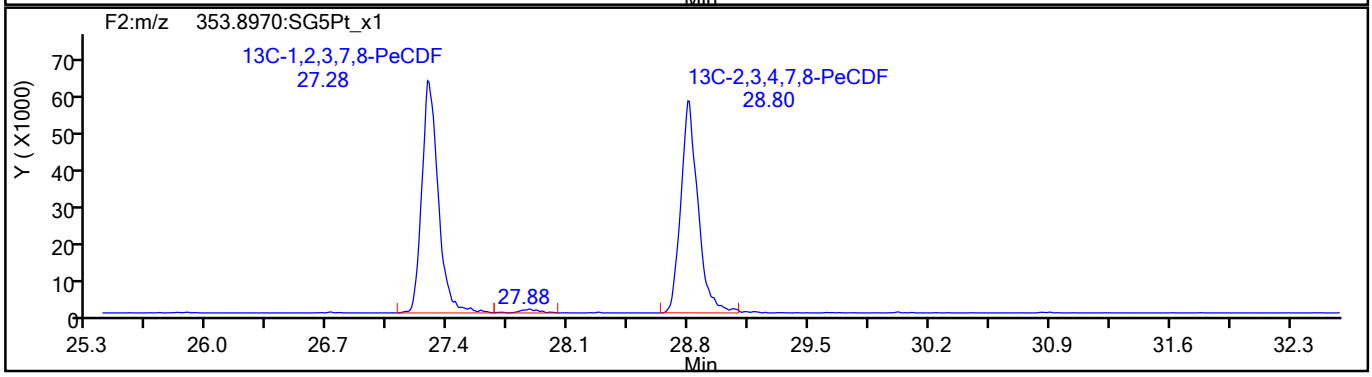

789257

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

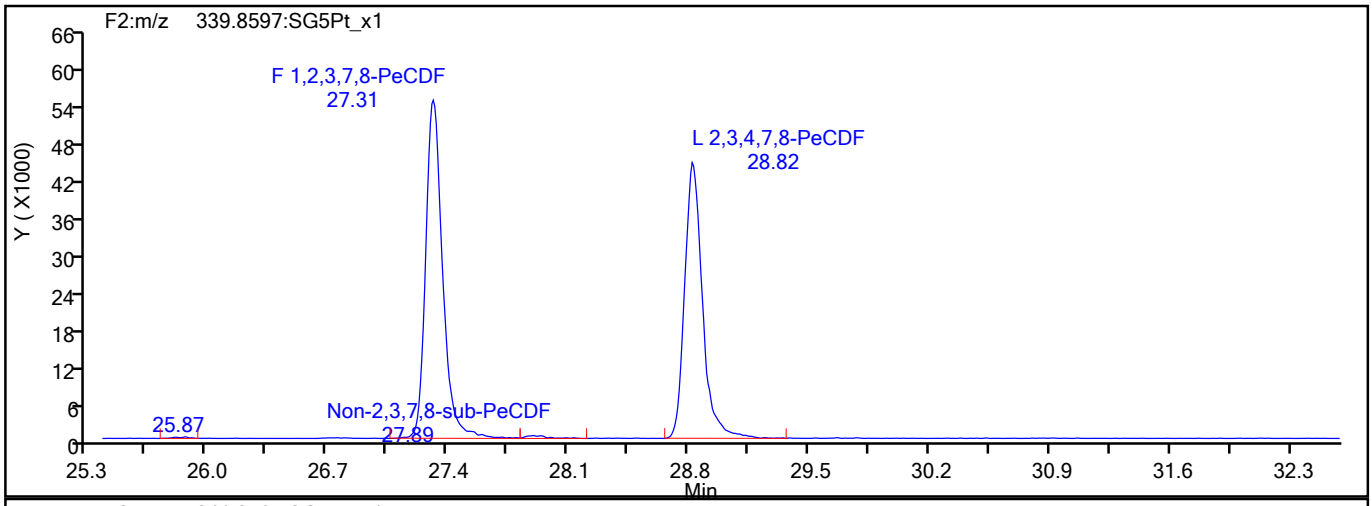

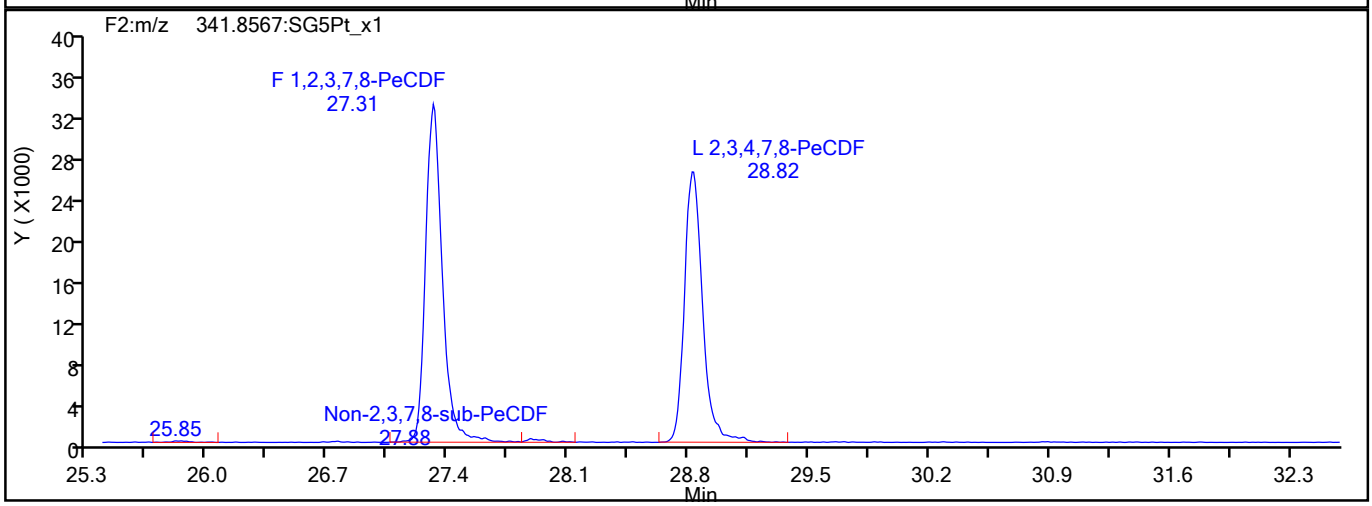

PeCDF Interference Mass

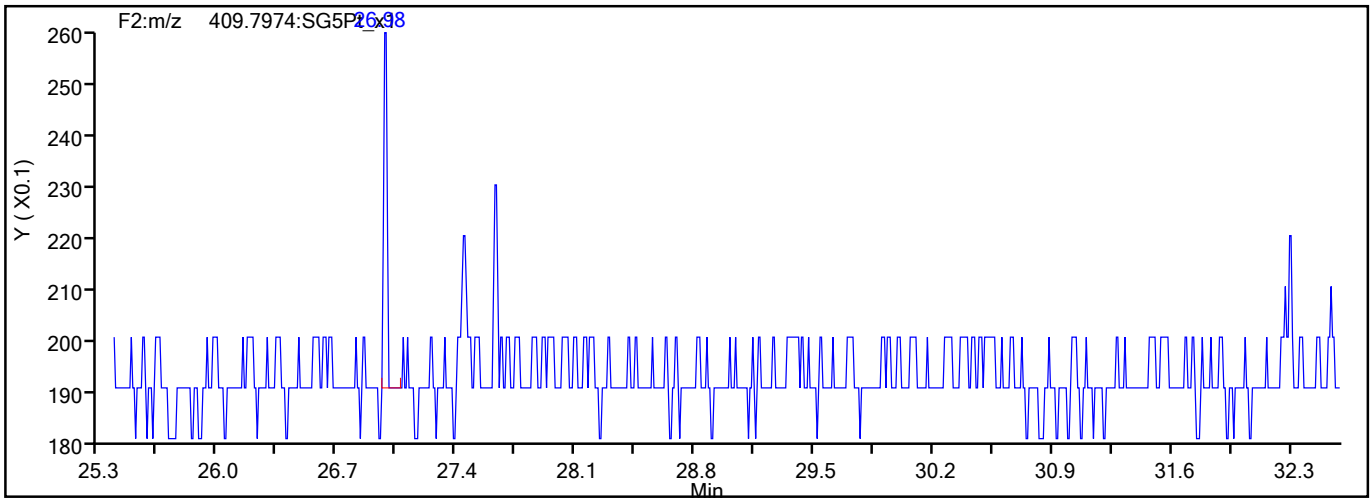

789258

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

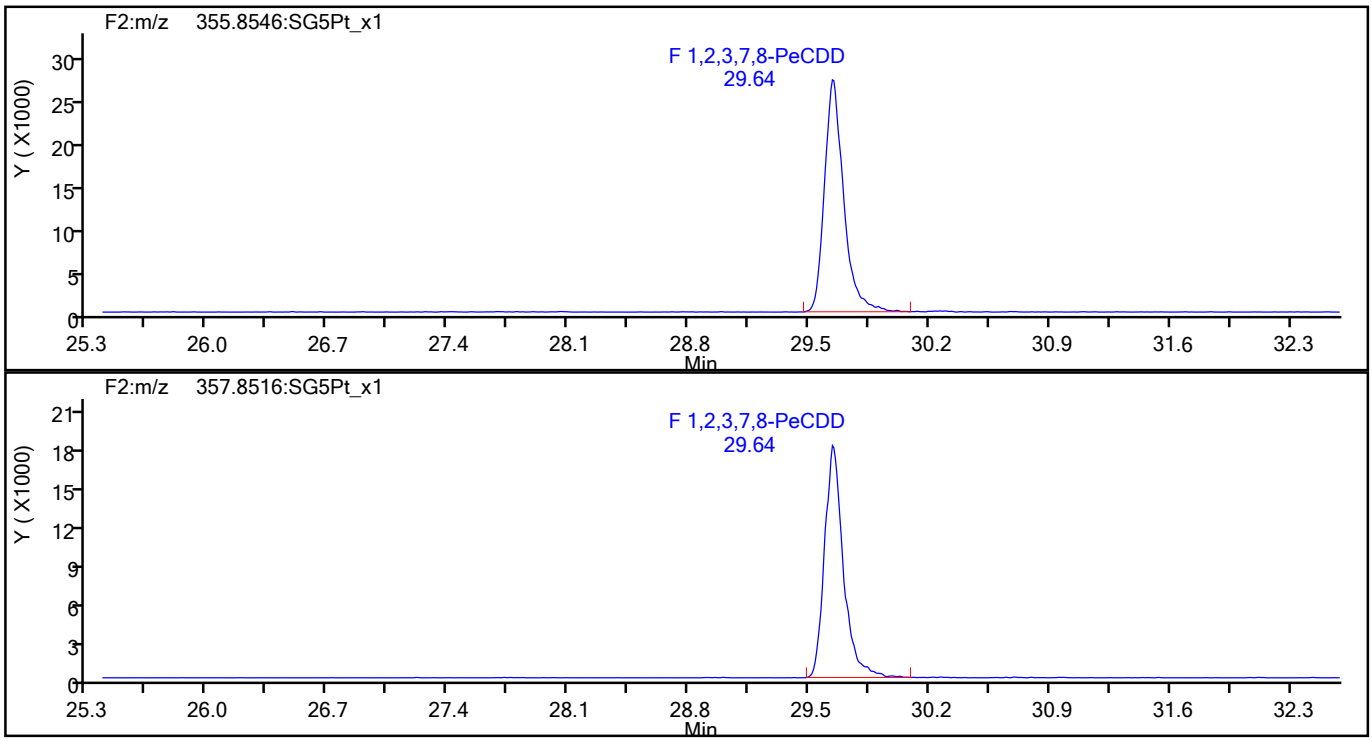

PeCDD Standards

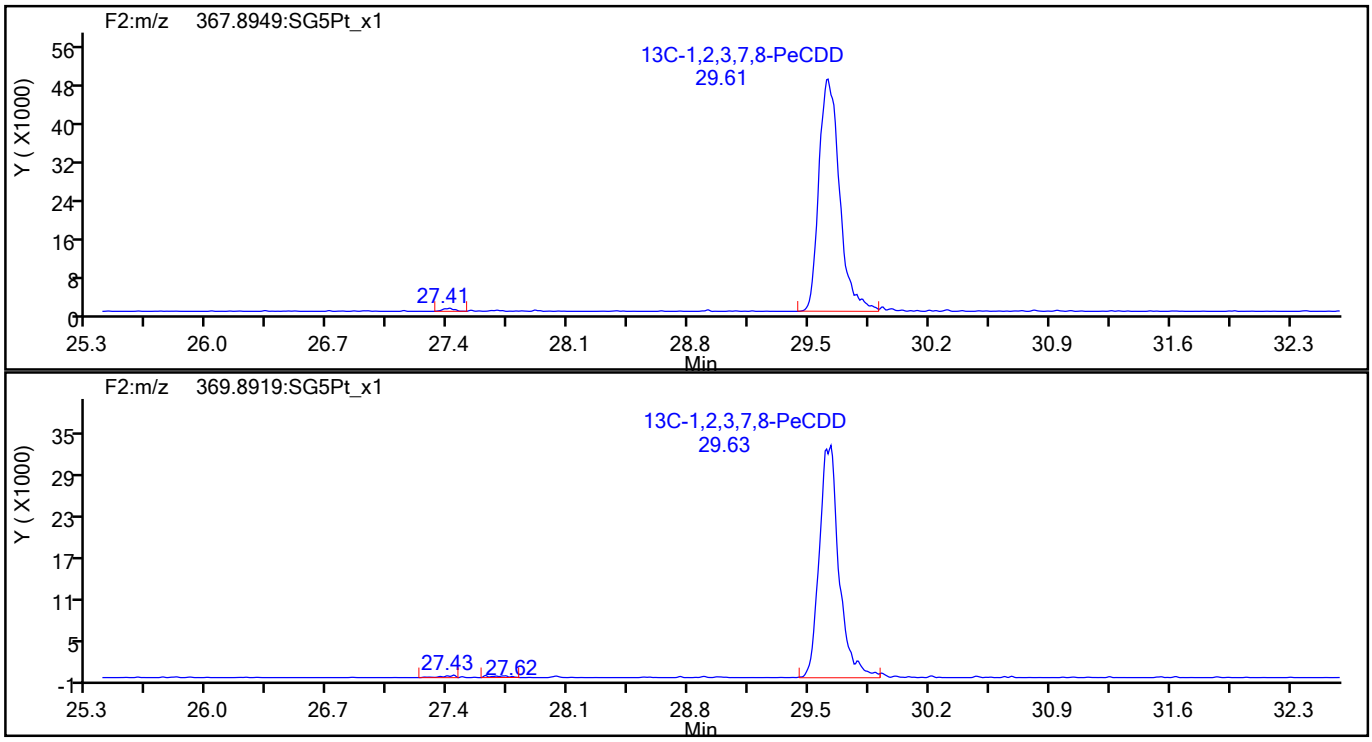

789259

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

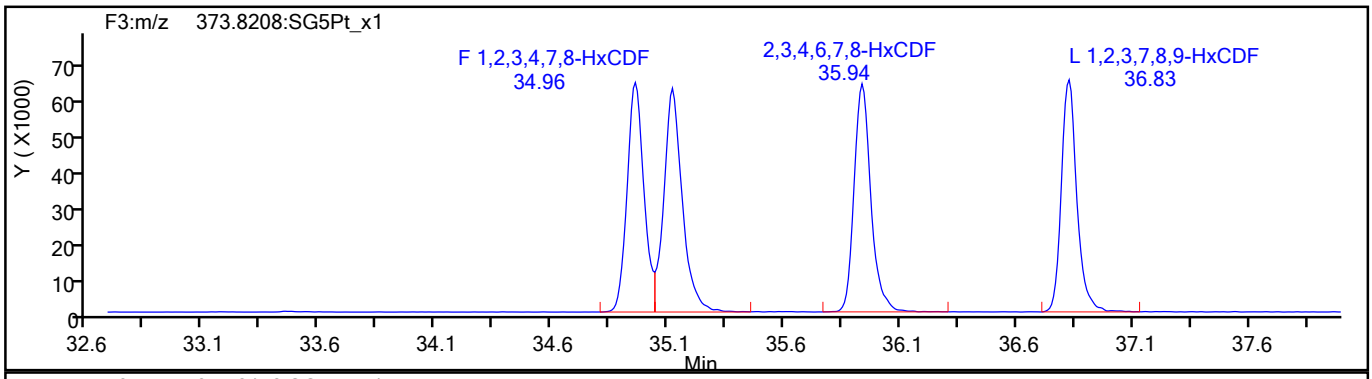

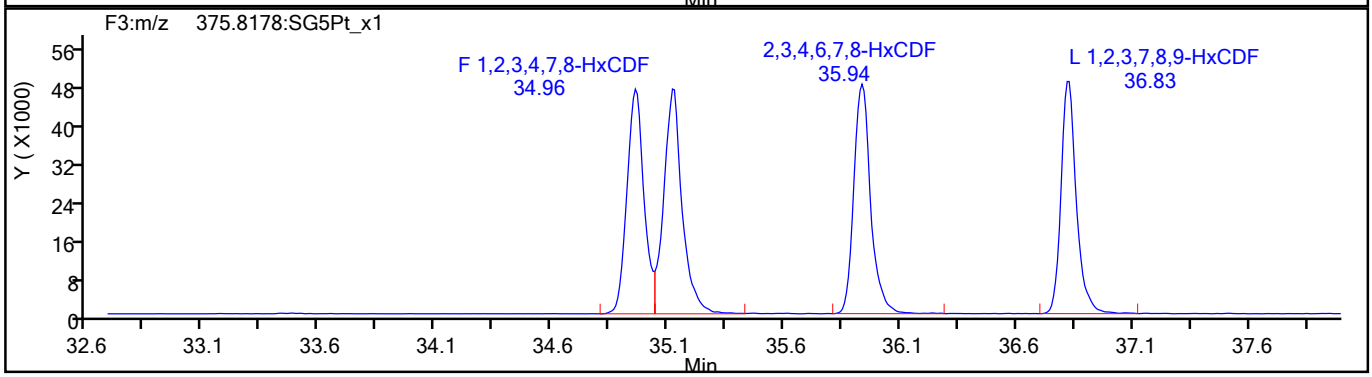

HxCDF Standards

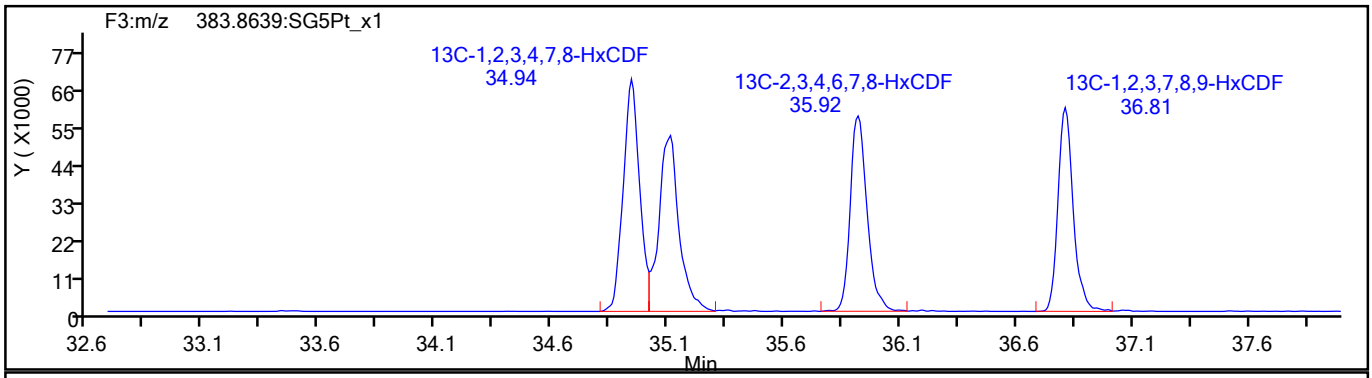

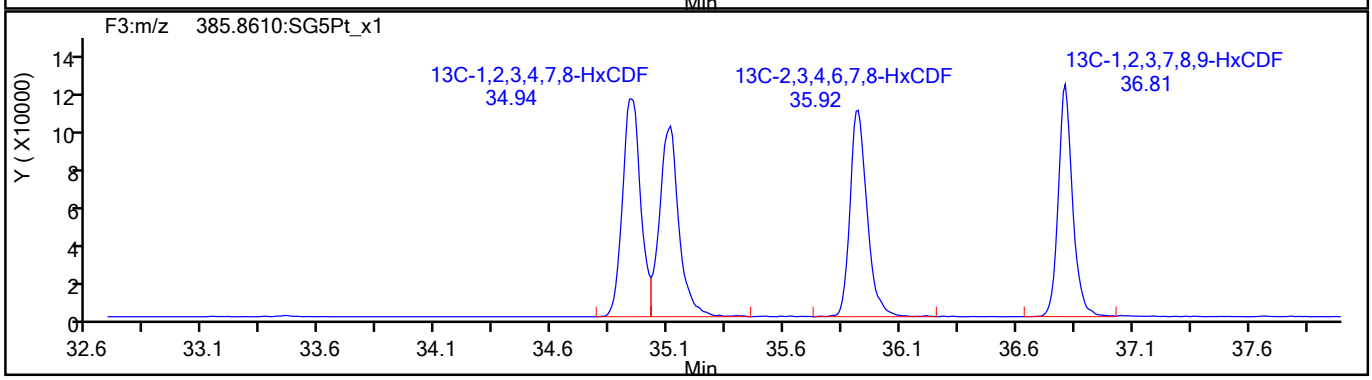

789260

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

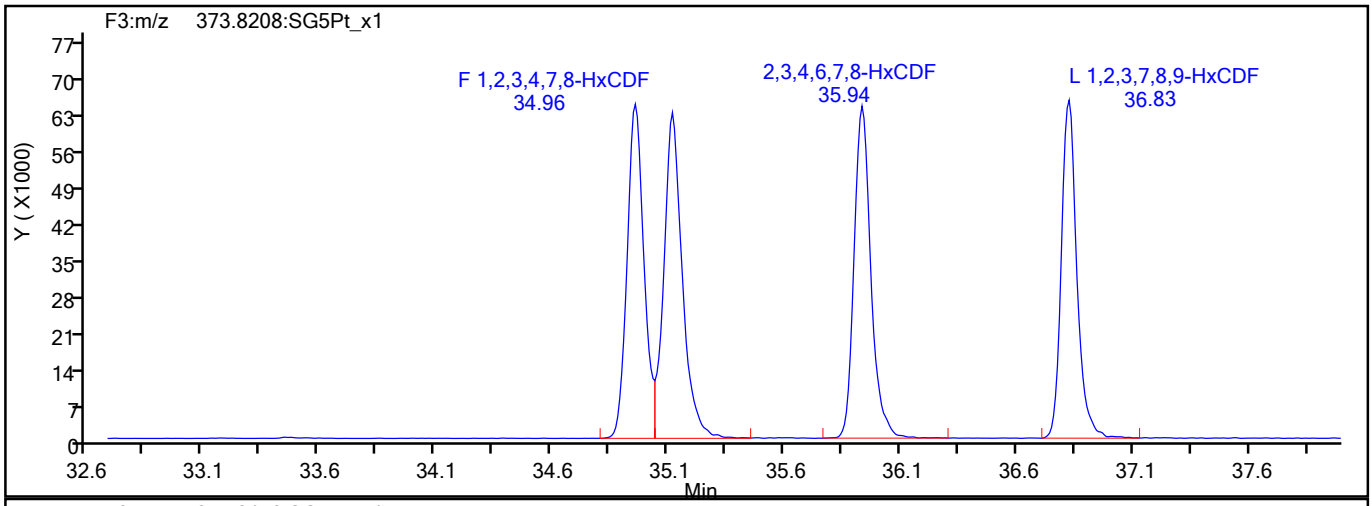

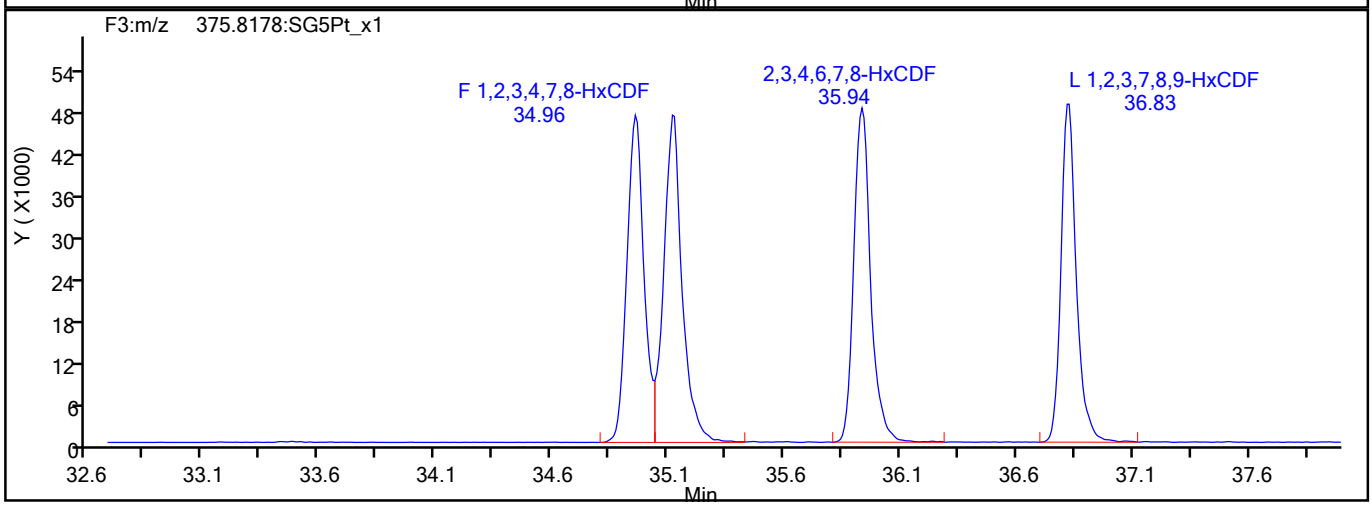

HxCDF Interference Mass

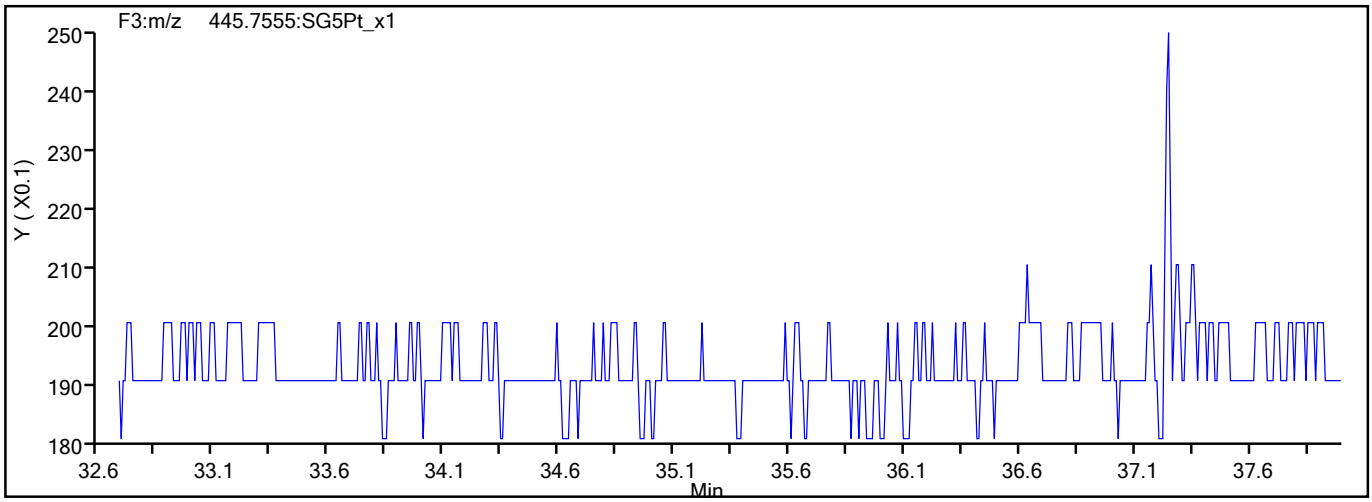

789261

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

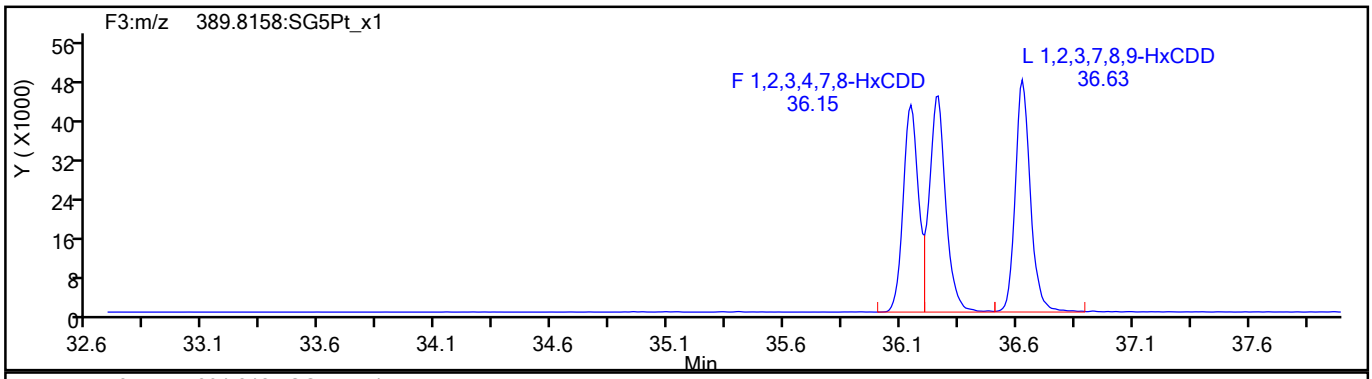

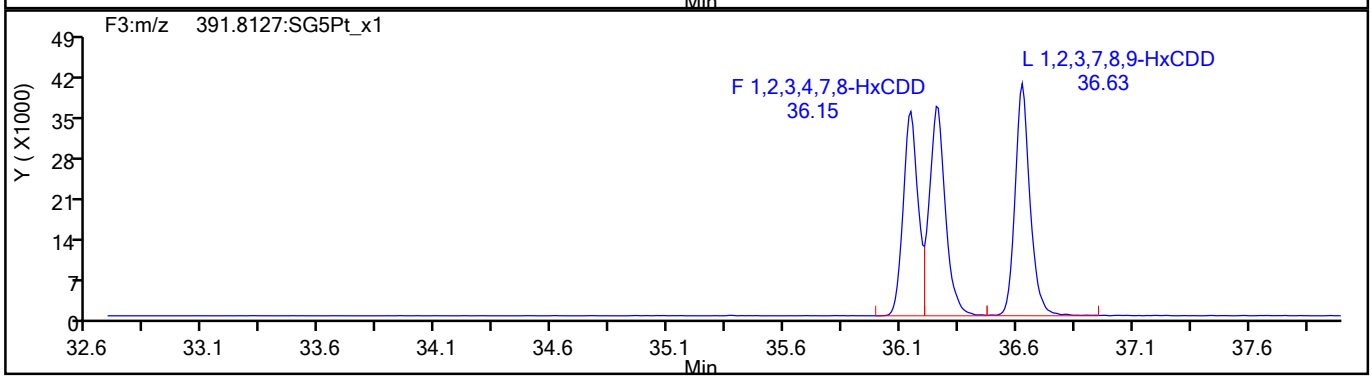

HxCDD Standards

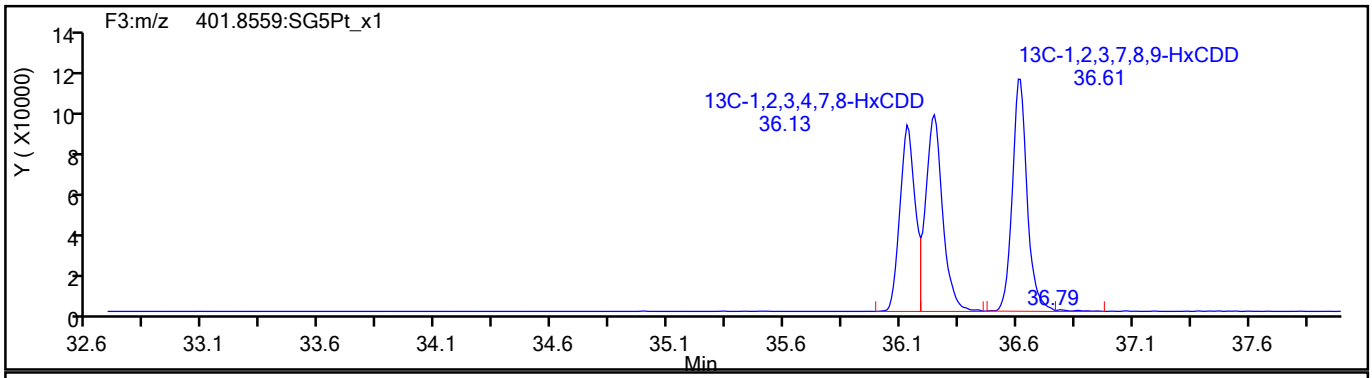

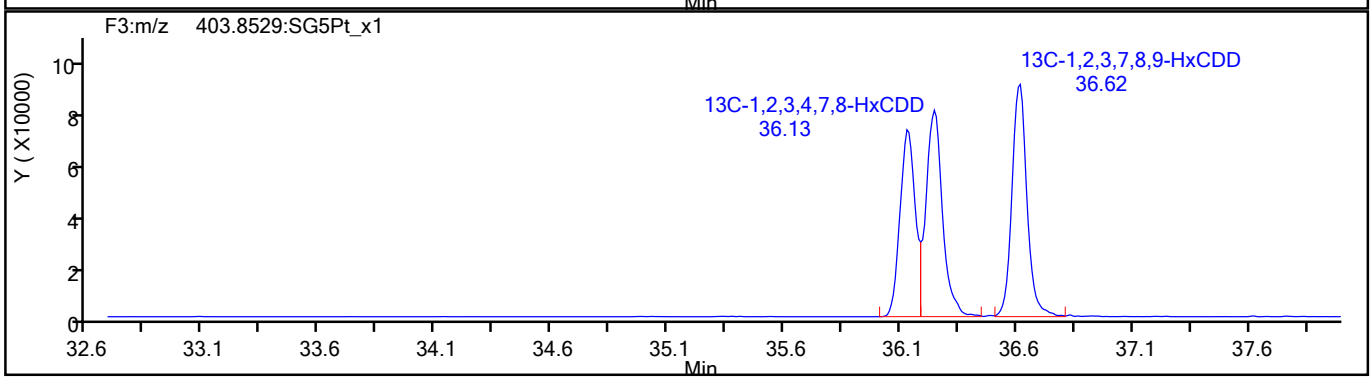

789262

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

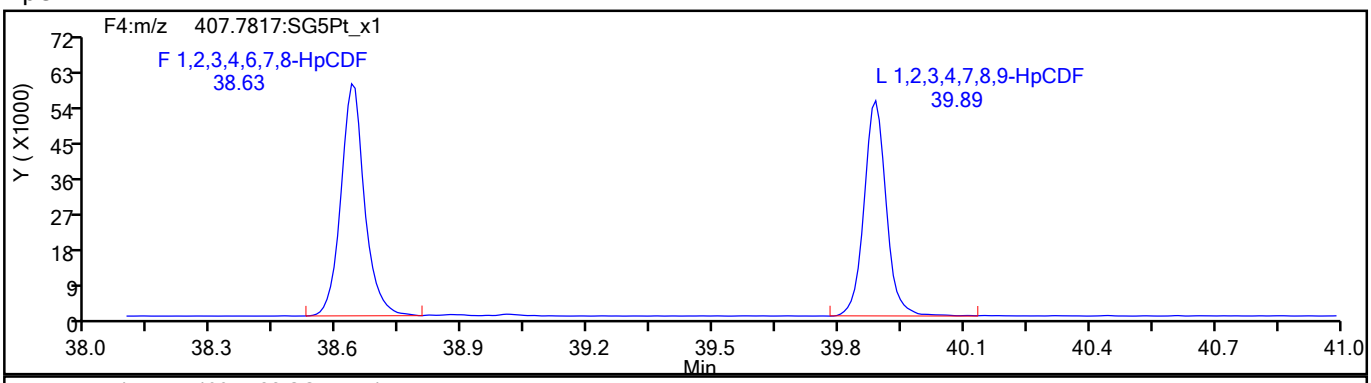

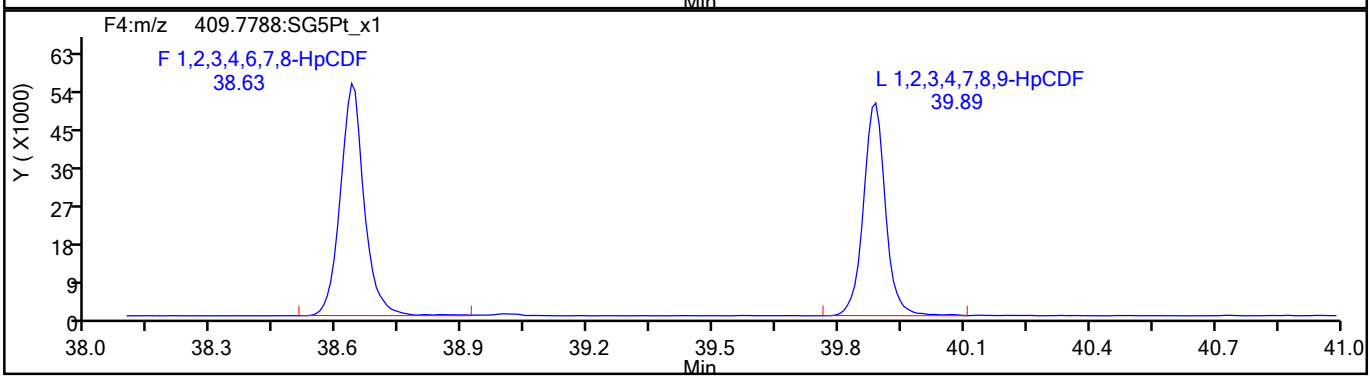

HpCDF Standards

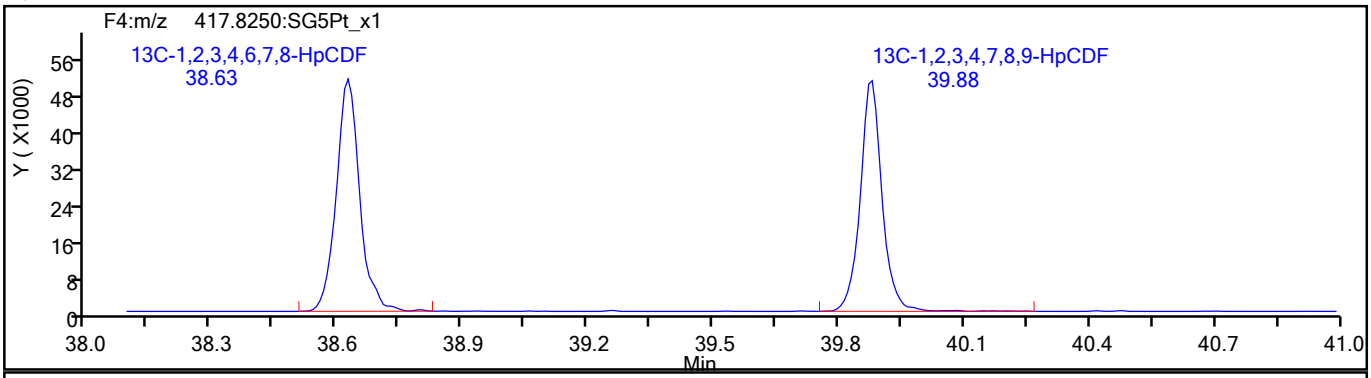

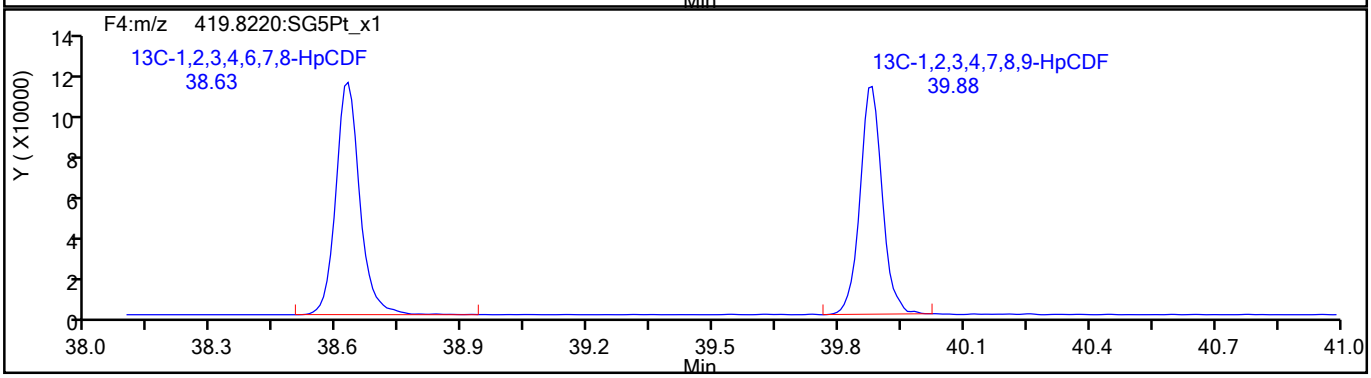

789263

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

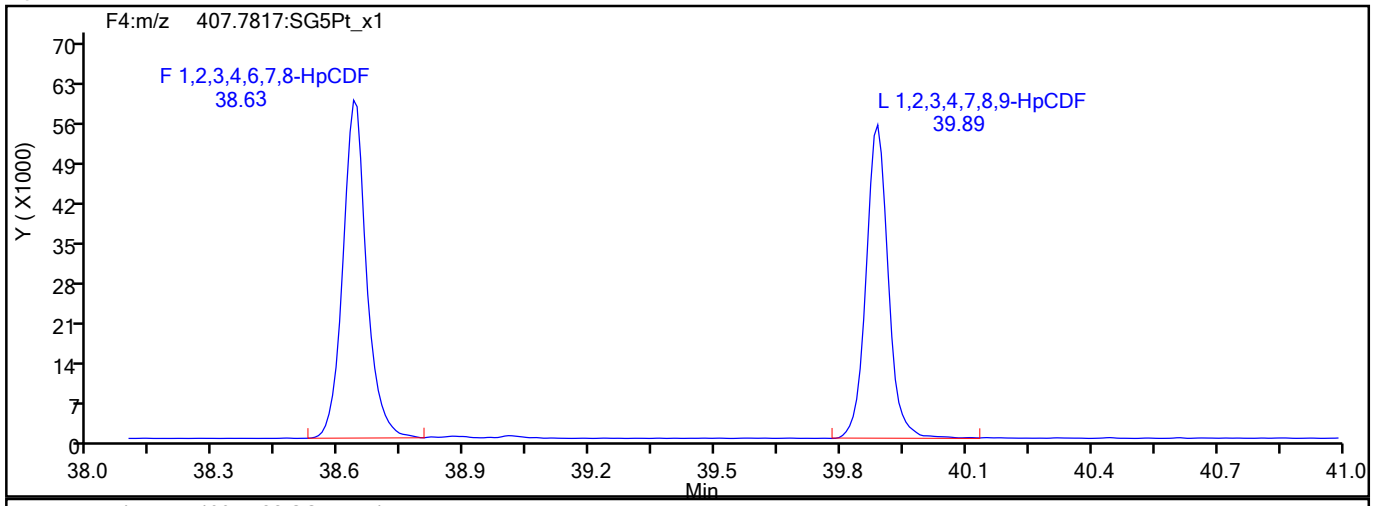

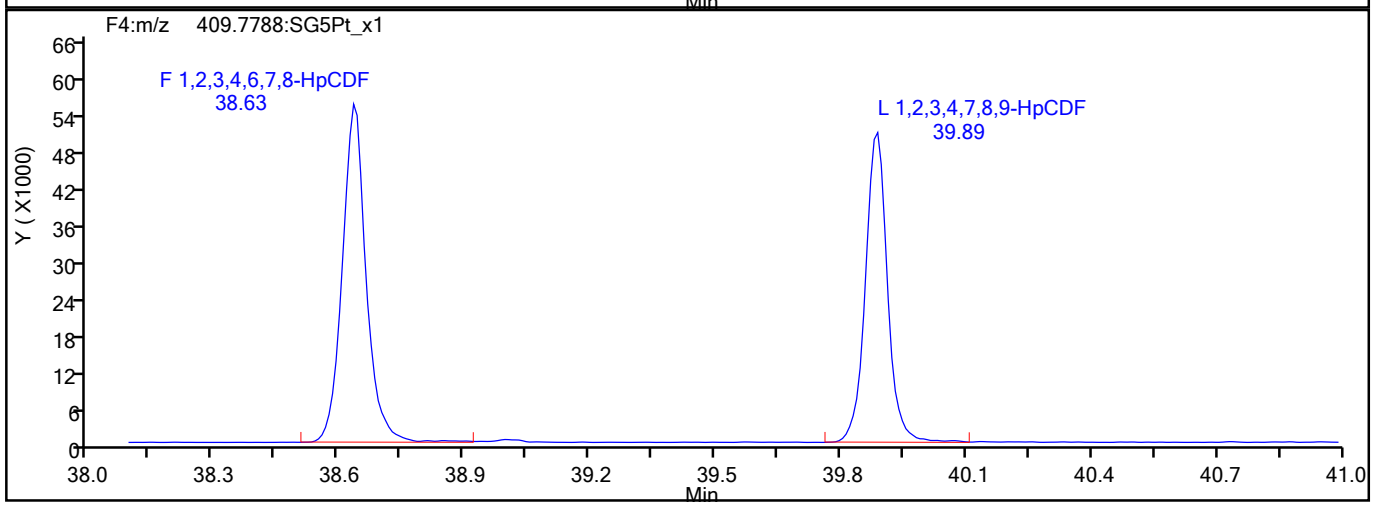

HpCDF Interference Mass

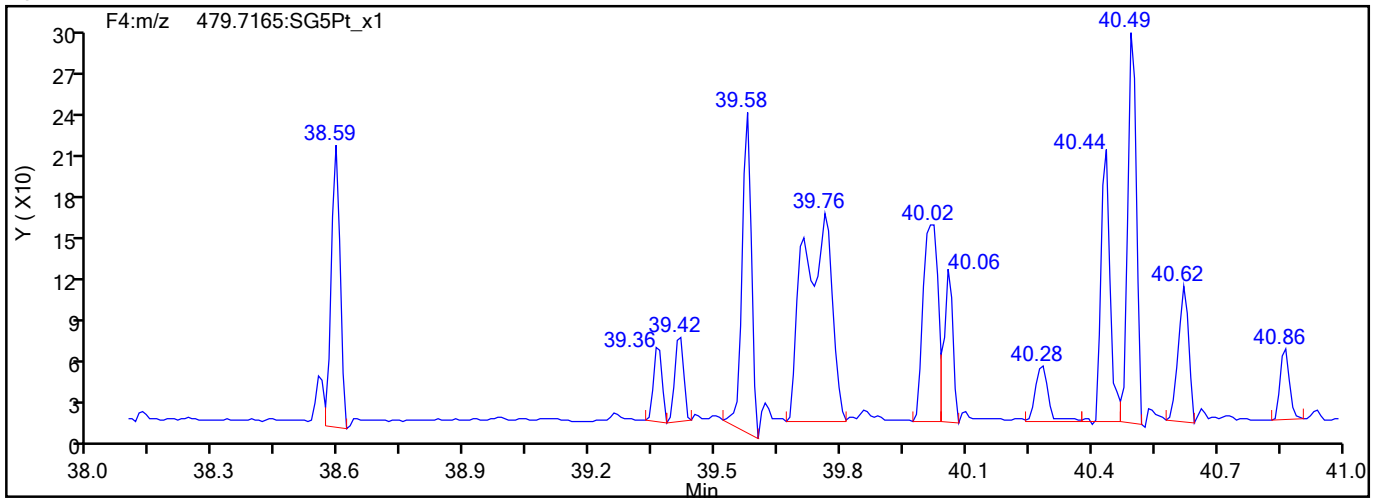

789264

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

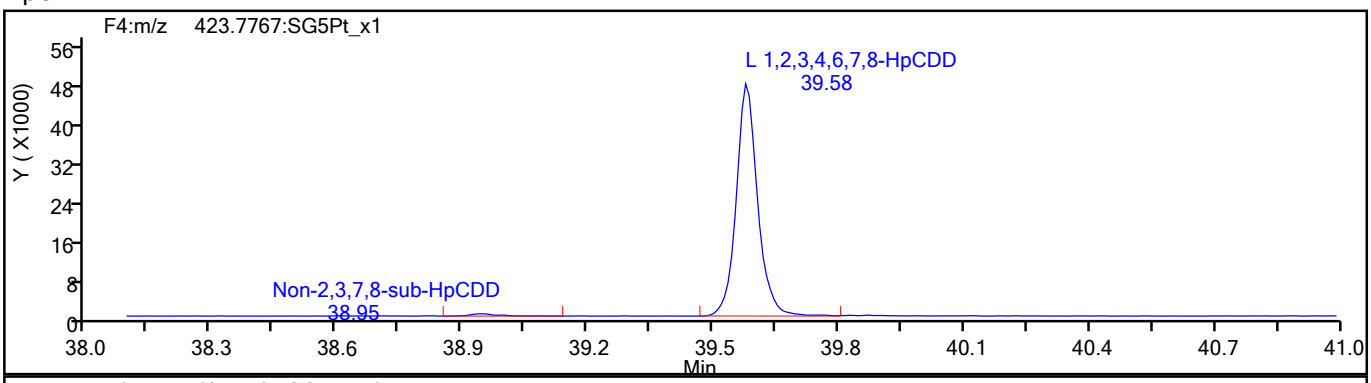

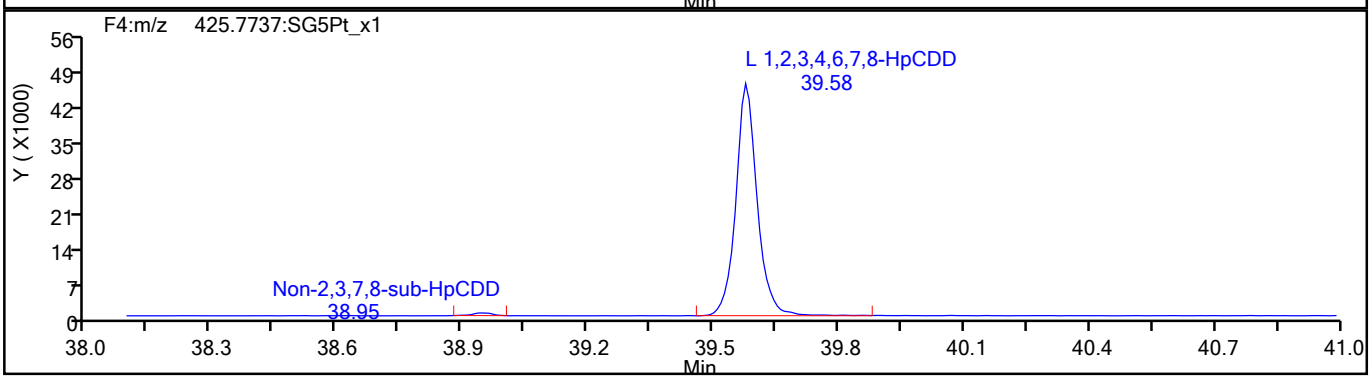

HpCDD Standards

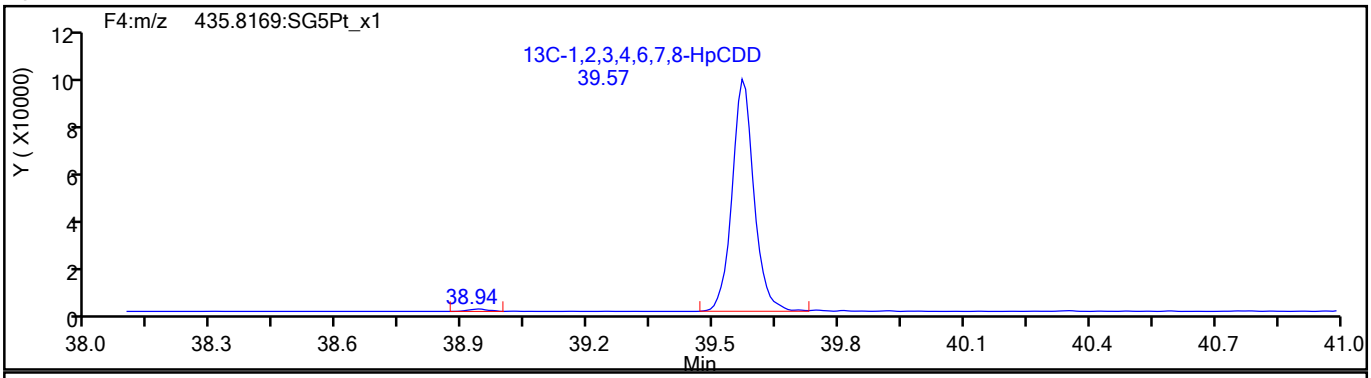

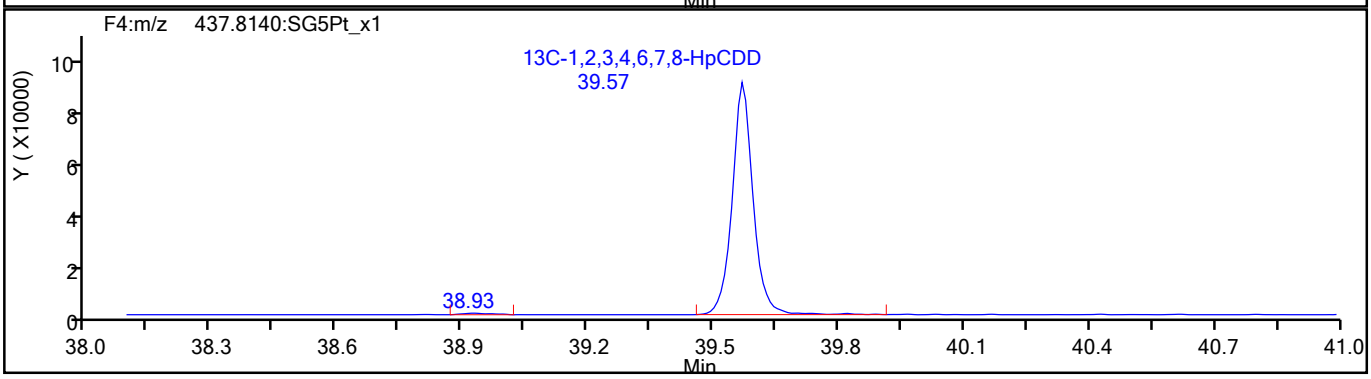

789265

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

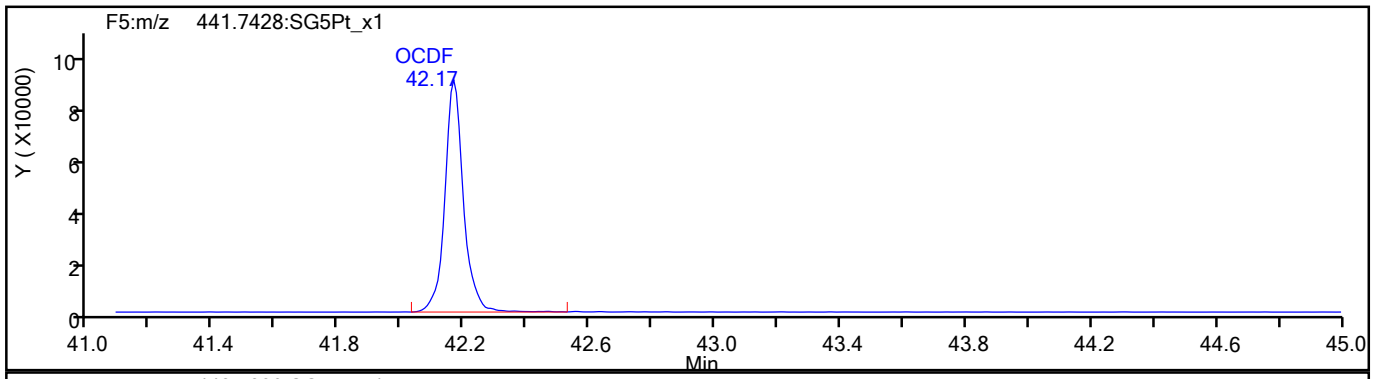

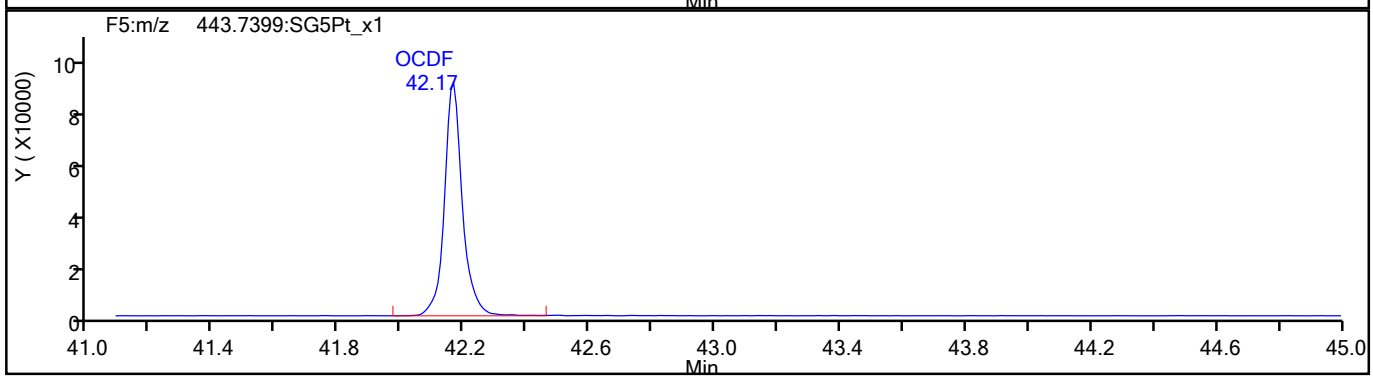

OCDF Standards

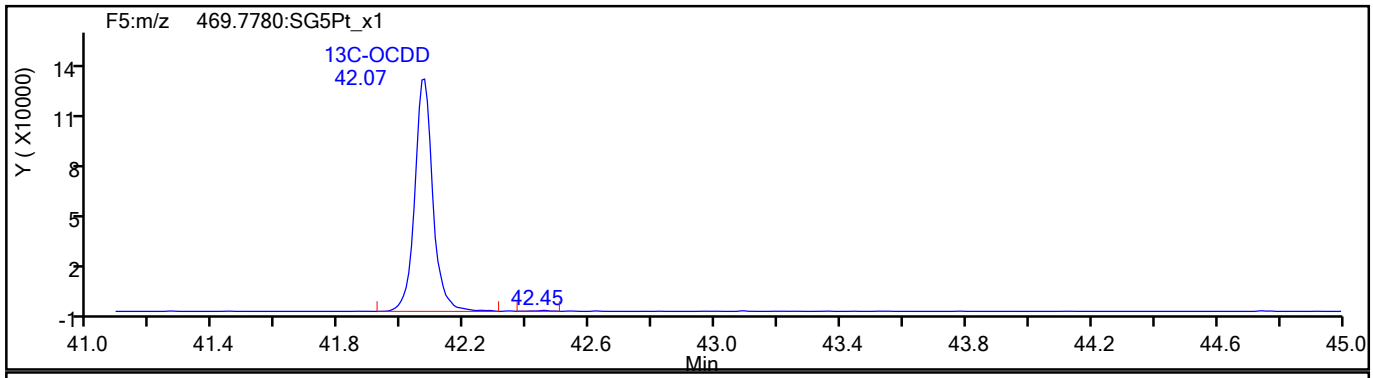

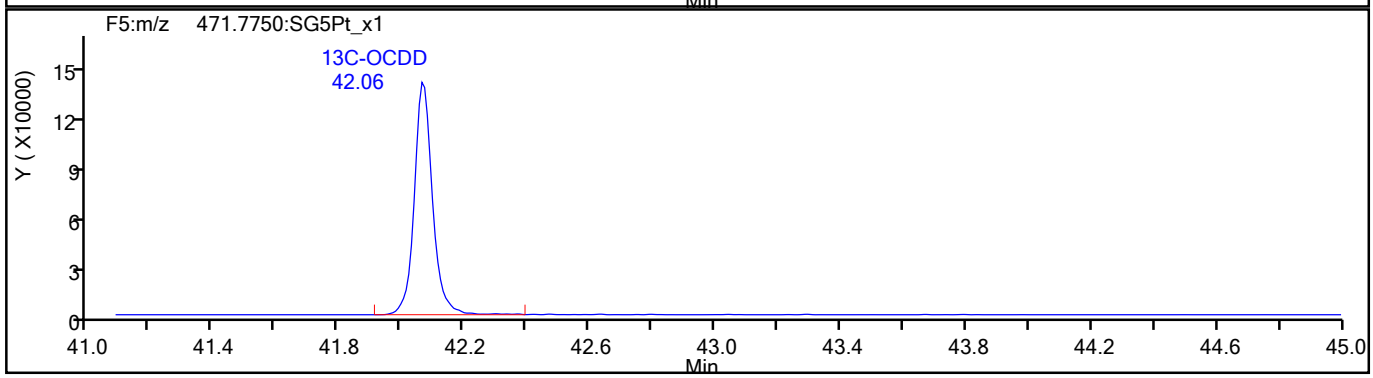

789266

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

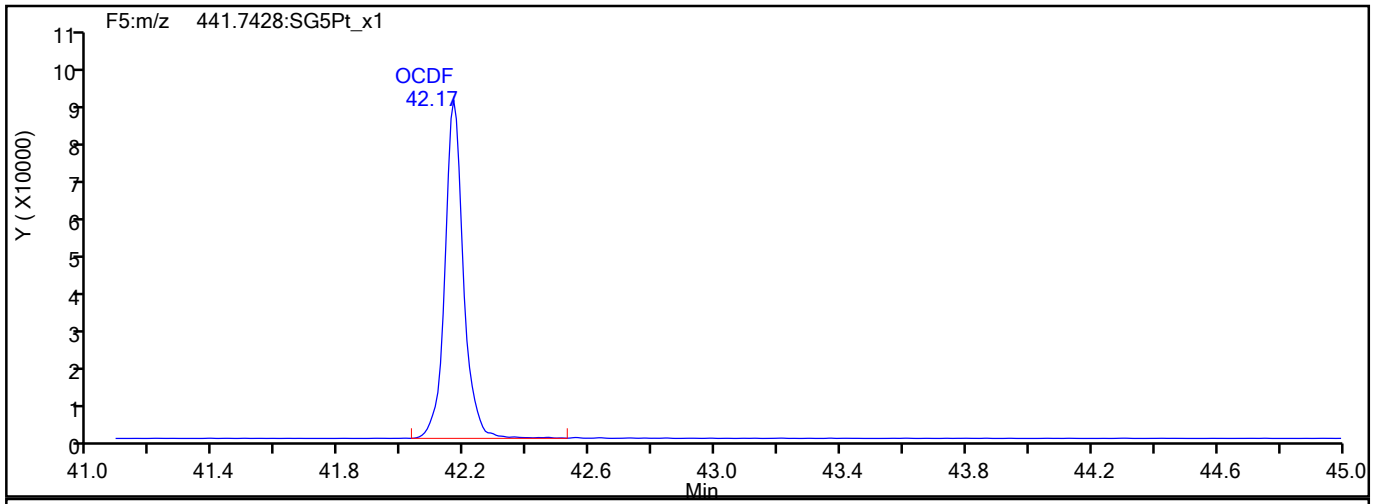

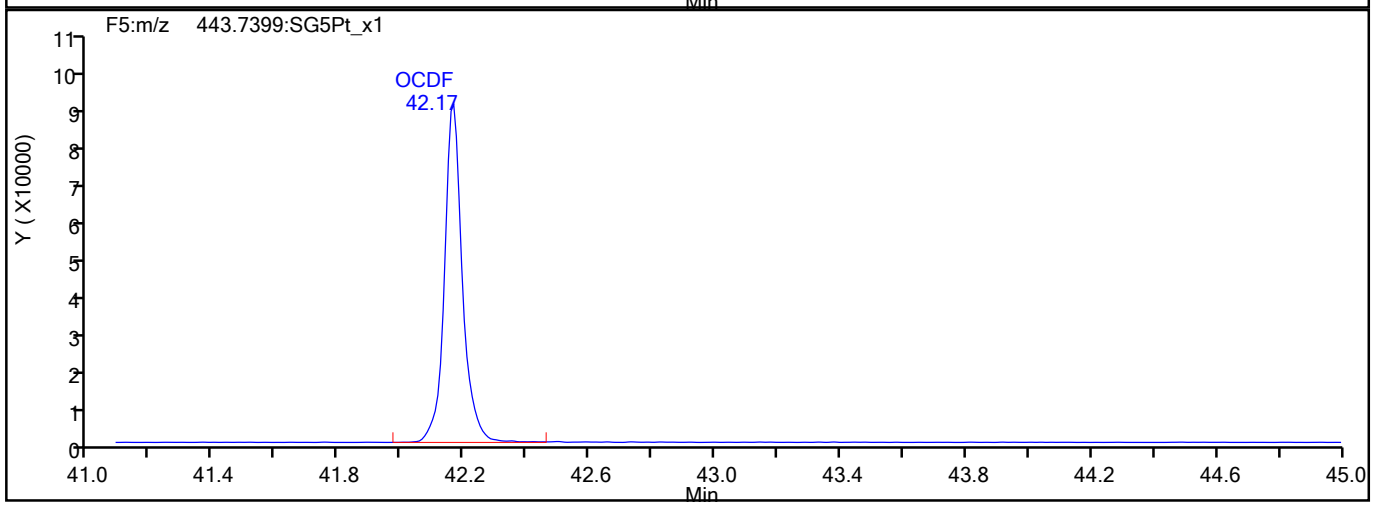

OCDF Interference Mass

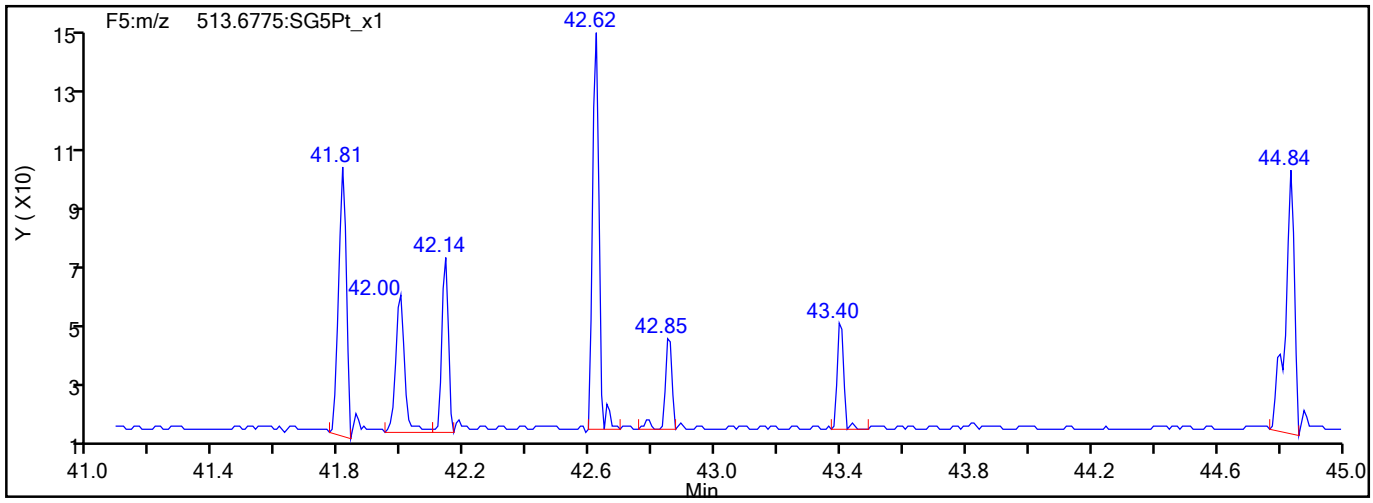

789267

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

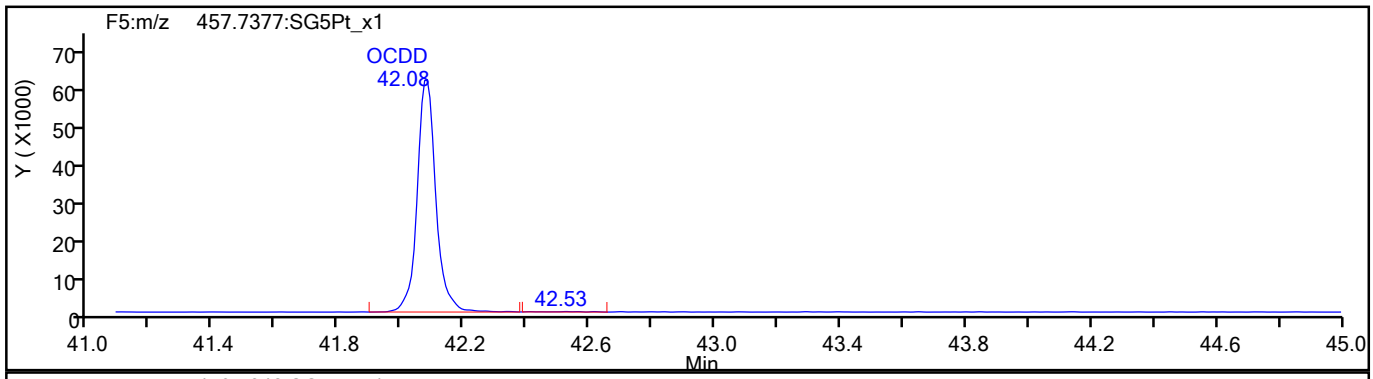

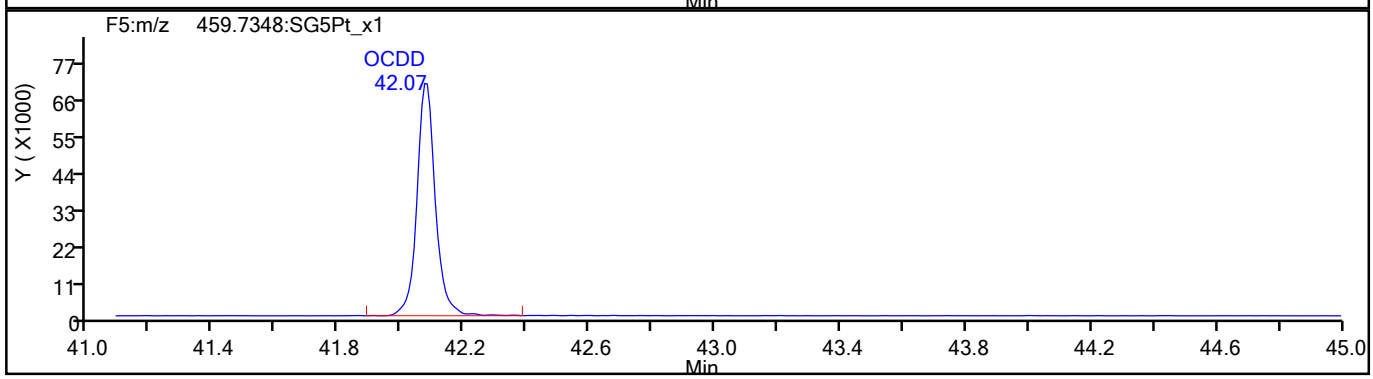

OCDD Standards

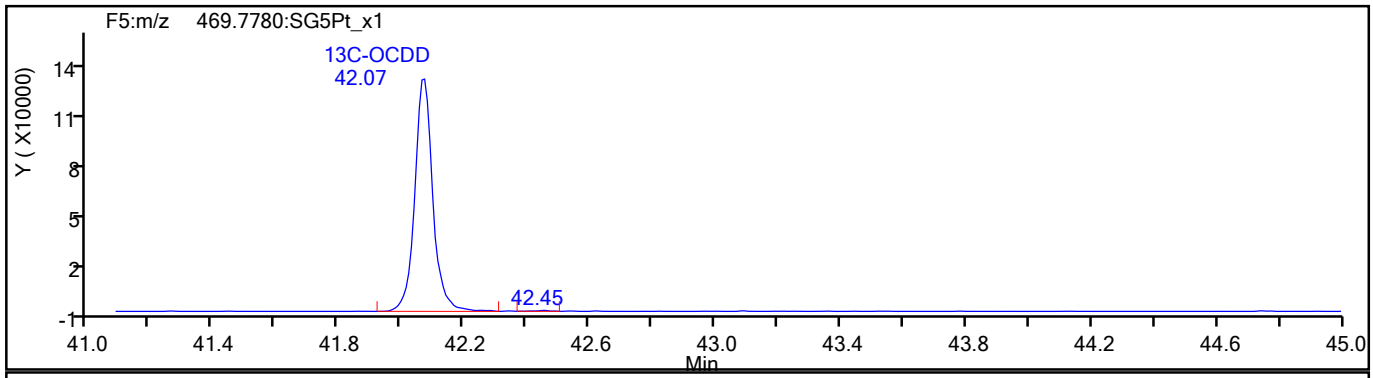

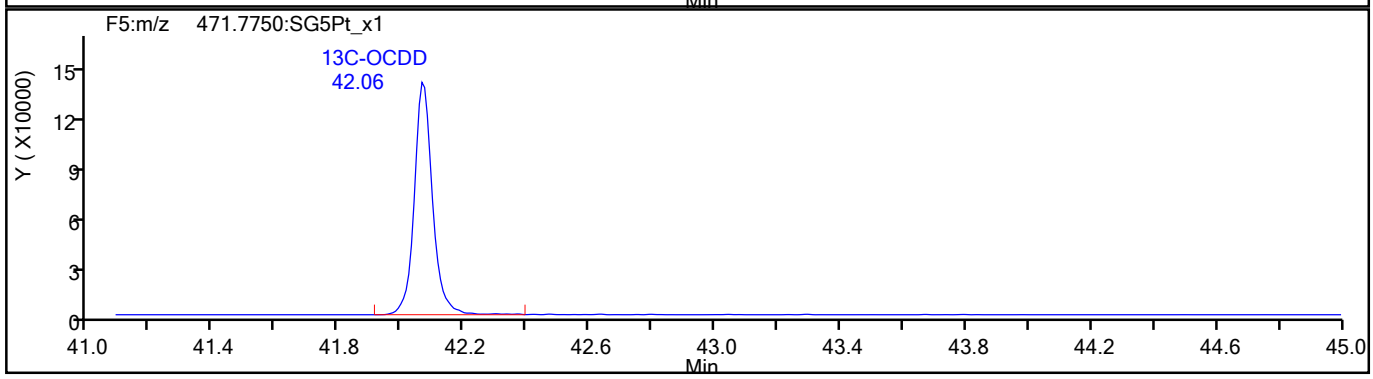

789268

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

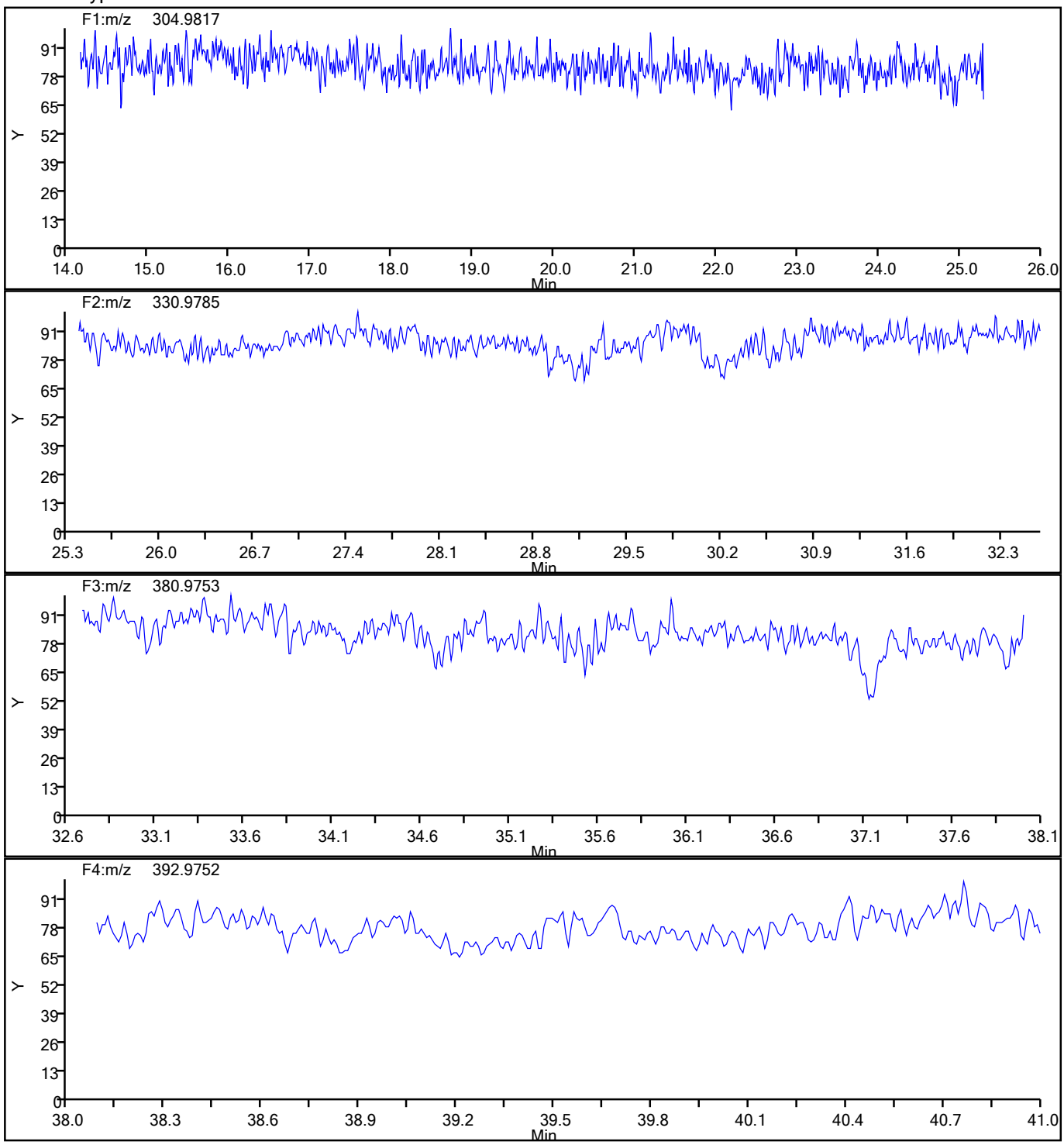

789269

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

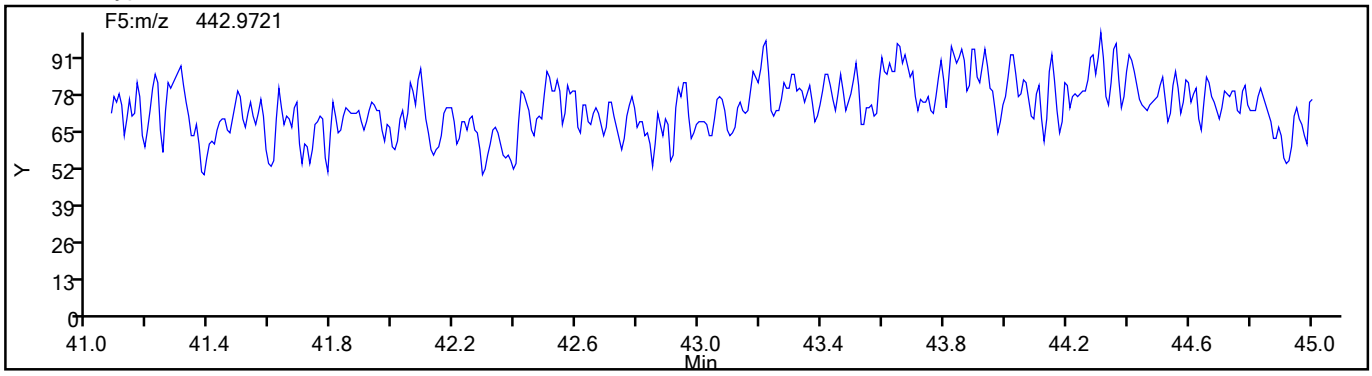

789270

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID: CCV 320-517891/2 Calibration Date: 08/19/2021 14:46

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 19au21dfs1_3.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.050		9.72	10.0	97	84-120
2,3,7,8-TCDD	AveID	1.075	1.033		9.60	10.0	96	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.077		51.1	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9629		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.051		50.2	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.164		50.7	50.0	101	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.285		52.8	50.0	106	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.306		53.7	50.0	107	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9728		45.9	50.0	92	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9017		45.4	50.0	91	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.036		46.7	50.0	93	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.311		52.8	50.0	106	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.348		46.7	50.0	93	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.013		48.2	50.0	96	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.260		48.1	50.0	96	86-116
OCDD	AveID	1.062	1.013		95.4	100	95	79-126
OCDF	AveID	1.317	1.434		109	100	109	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.419		105	100	105	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9767		105	100	105	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	0.996		87.4	100	87	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.099		97.7	100	98	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6618		92.4	100	92	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.074		111	100	111	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.086		101	100	101	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.008		96.8	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7840		103	100	103	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9106		106	100	106	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9343		96.0	100	96	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7901		107	100	107	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7627		113	100	113	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7751		113	100	113	77-129
13C-OCDD	Ave	0.5446	0.6405		235	200	118	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.001		9.93	10.0	99	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	19AU21DFS1_1	Resolution Check	RC 081921	46			KSS	1.000	
2	19AU21DFS1_2	WDM HRDXNCP_00044	WDM 081921	1	Dioxin		KSS	1.000	
3	19AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081921	2	Dioxin		KSS	1.000	
4	19AU21DFS1_4	SB Solvent Blank C14	SB 081921	3	Dioxin		KSS	1.000	
5	19AU21DFS1_5	mb 320-513879/1-a RI	mb 320-513879/1-a	4	1613B/Solid	D267	KSS	10.000	g
6	19AU21DFS1_6	320-76888-a-13-a RI	320-76888-a-13-a	5	1613B/Solid	D266	KSS	10.000	g
7	19AU21DFS1_7	320-76901-a-3-a	320-76901-a-3-a	6	1613B/Solid	D267	KSS	10.000	g
8	19AU21DFS1_8	320-76901-a-4-a	320-76901-a-4-a	7	1613B/Solid		KSS	10.000	g
9	19AU21DFS1_9	320-76901-a-5-a	320-76901-a-5-a	8	1613B/Solid		KSS	10.000	g
10	19AU21DFS1_10	320-76901-a-6-a	320-76901-a-6-a	9	1613B/Solid		KSS	10.000	g
11	19AU21DFS1_11	320-76901-a-7-a	320-76901-a-7-a	10	1613B/Solid		KSS	10.000	g
12	19AU21DFS1_12	320-76901-a-8-a	320-76901-a-8-a	11	1613B/Solid		KSS	10.000	g
13	19AU21DFS1_13	320-76901-a-9-a	320-76901-a-9-a	12	1613B/Solid		KSS	10.000	g
14	19AU21DFS1_14	320-76901-a-13-a	320-76901-a-13-a	13	1613B/Solid		KSS	10.000	g
15	19AU21DFS1_15	SB Solvent Blank C14	SB 081921A	3	Dioxin		KSS	1.000	
16	19AU21DFS1_16	Resolution Check	RC 081921A	46			KSS	1.000	
17	19AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081921A	2	Dioxin		KSS	1.000	
18	19AU21DFS1_18	WDM HRDXNCP_00044	WDM 081921A	1	Dioxin		KSS	1.000	
19	19AU21DFS1_19	SB Solvent Blank C14	SB 081921B	3	Dioxin		KSS	1.000	
20	19AU21DFS1_20	320-76888-a-5-a 5X	320-76888-a-5-a	14	1613B/Solid	D267	KSS	10.000	g
21	19AU21DFS1_21	320-76888-a-1-a 10X	320-76888-a-1-a	15	1613B/Solid		KSS	10.000	g
22	19AU21DFS1_22	320-76888-a-1-b ms 10X	320-76888-a-1-b ms	16	1613B/Solid		KSS	10.000	g
23	19AU21DFS1_23	320-76888-a-1-c msd 10X	320-76888-a-1-c msd	17	1613B/Solid		KSS	10.000	g
24	19AU21DFS1_24	320-76888-a-4-a 10X	320-76888-a-4-a	18	1613B/Solid		KSS	10.000	g
25	19AU21DFS1_25	320-76888-a-2-a 10X	320-76888-a-2-a	19	1613B/Solid		KSS	10.000	g
26	19AU21DFS1_26	320-76901-a-1-a 10X	320-76901-a-1-a	20	1613B/Solid		KSS	10.000	g
27	19AU21DFS1_27	320-76888-a-3-a 10X	320-76888-a-3-a	21	1613B/Solid		KSS	10.000	g
28	19AU21DFS1_28	SB Solvent Blank C14	SB 081921C	3	Dioxin		KSS	1.000	
29	19AU21DFS1_29	SB Solvent Blank C14	SB 081921D	3	Dioxin		KSS	1.000	
30	19AU21DFS1_30	Resolution Check	RC 081921B	46			KSS	1.000	

Logfile ✓'d
8/21/21
KSS

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 13:39
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11552 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10549 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11385 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11272 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11335 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11001 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11059 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10420 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10449 [5%height]

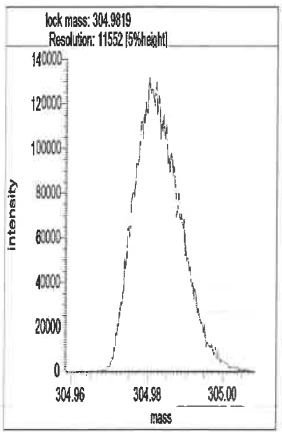

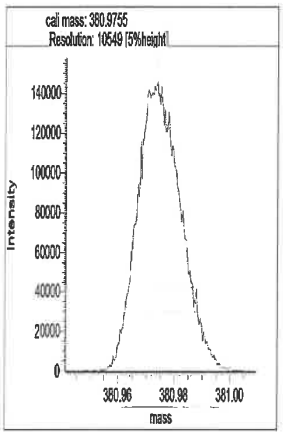

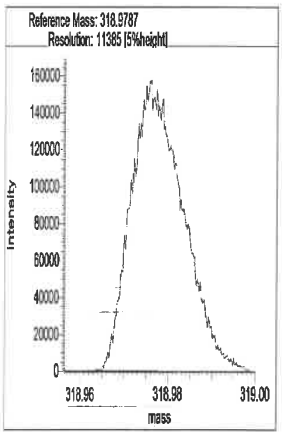

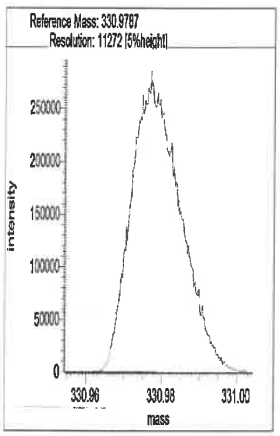

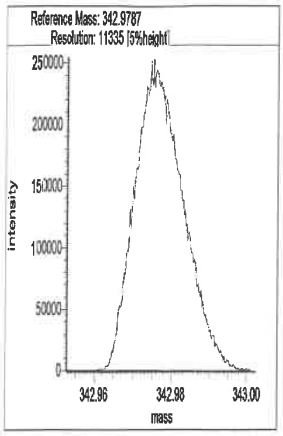

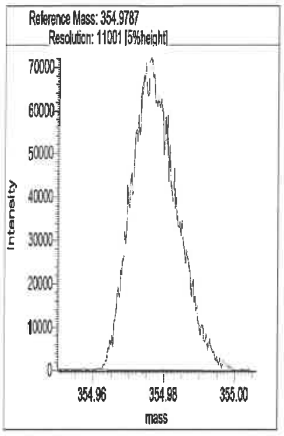

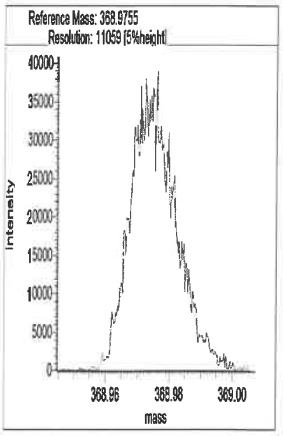

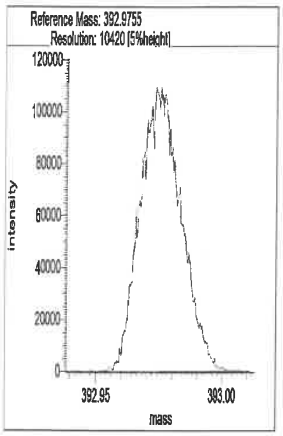

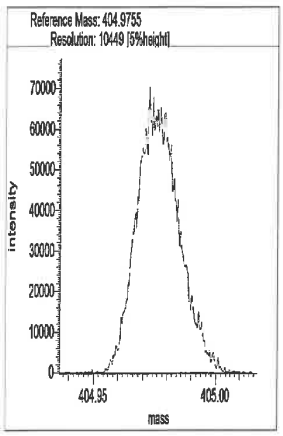

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11485 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10793 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11226 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11398 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10683 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10785 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10698 [5%height]

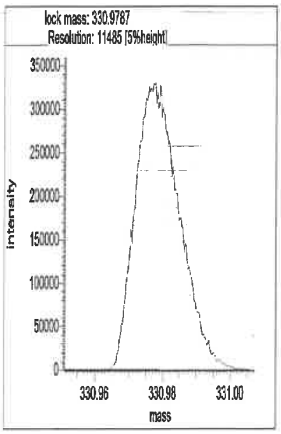

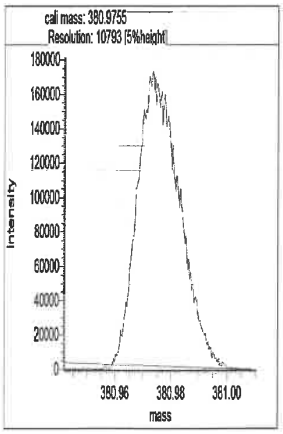

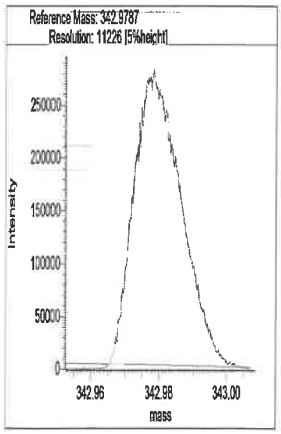

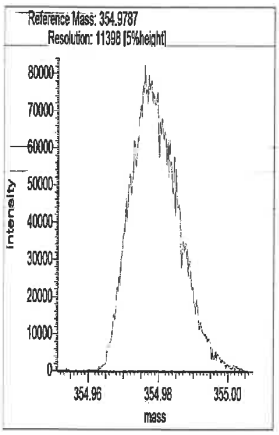

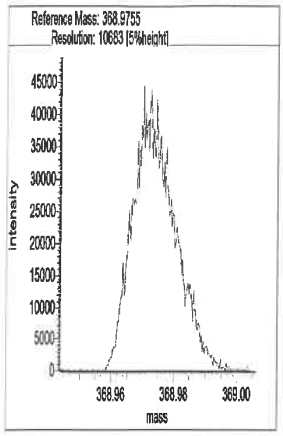

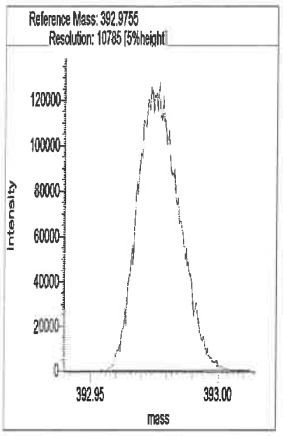

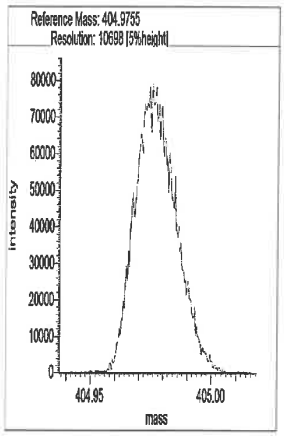

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11415 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10771 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11020 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11042 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12007 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10745 [5%height]

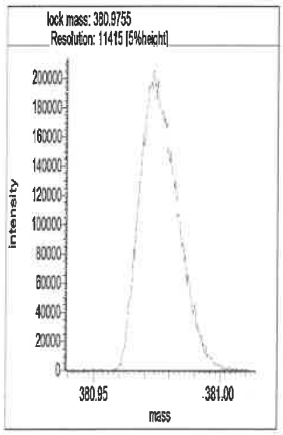

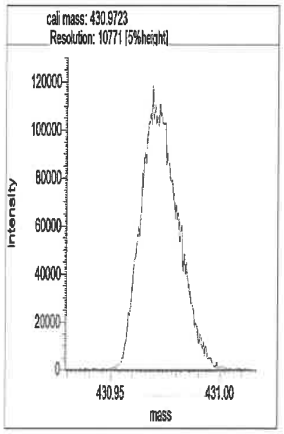

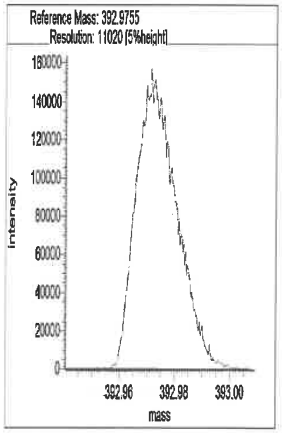

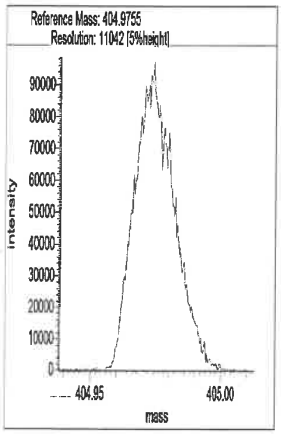

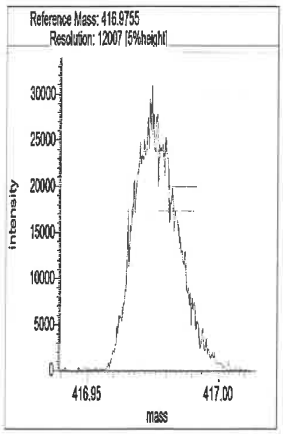

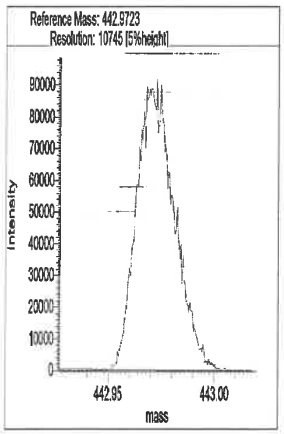

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11386 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10623 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11300 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10989 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11023 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10728 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10731 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10778 [5%height]

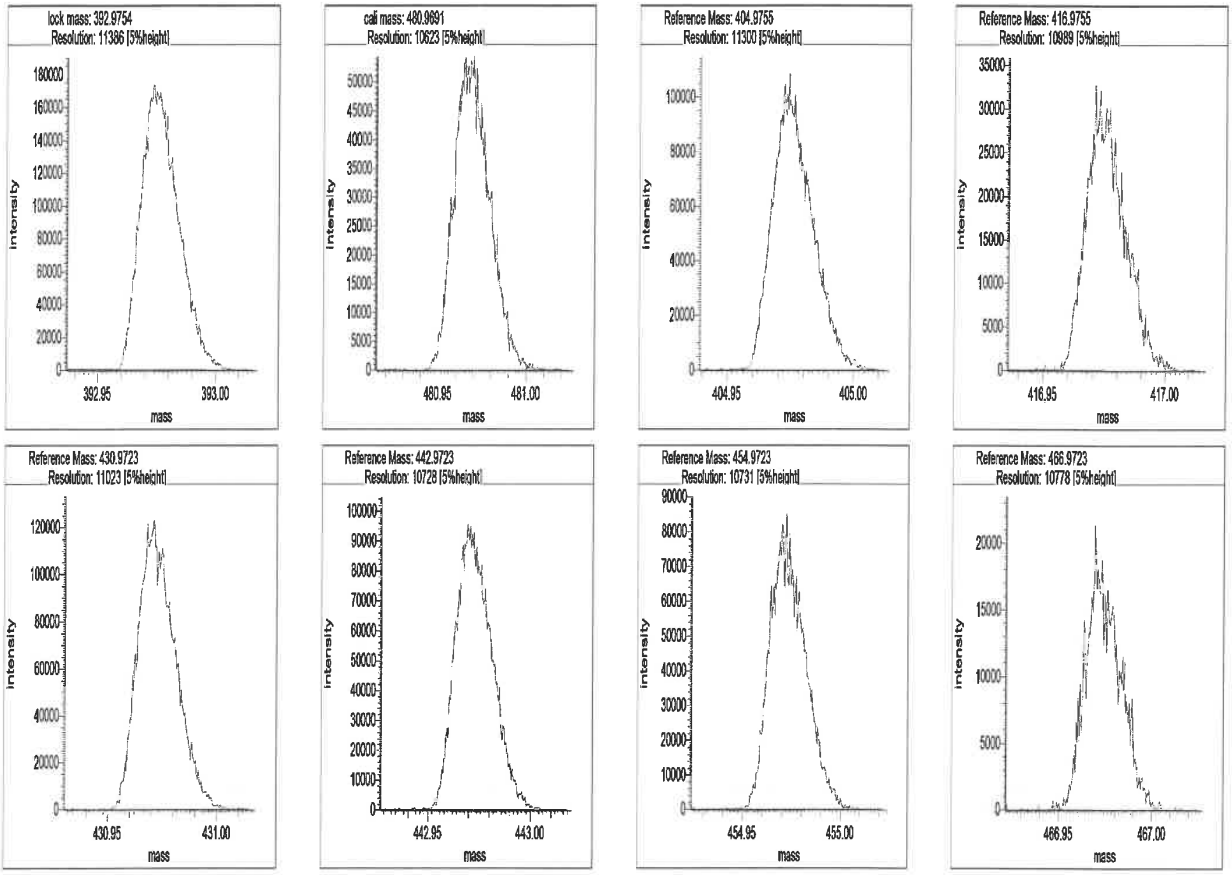

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11445 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11134 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11159 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10809 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11068 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10706 [5%height]

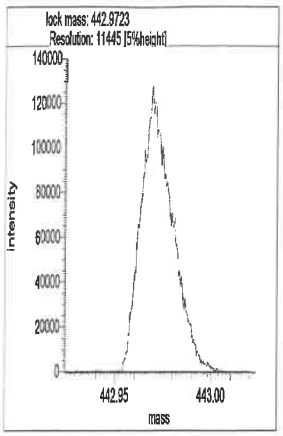
lock mass: 442.9723
Resolution: 11445 [5%height]
Intensity
mass

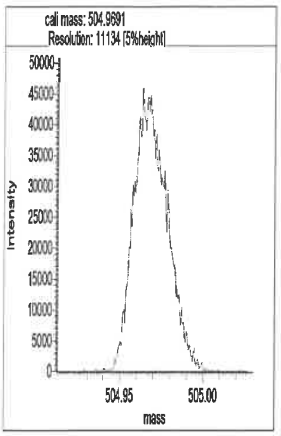
cali mass: 504.9691
Resolution: 11134 [5%height]
Intensity
mass

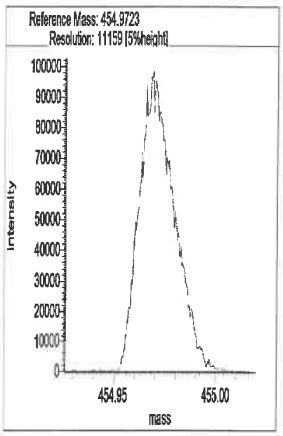
Reference Mass: 454.9723
Resolution: 11159 [5%height]
Intensity
mass

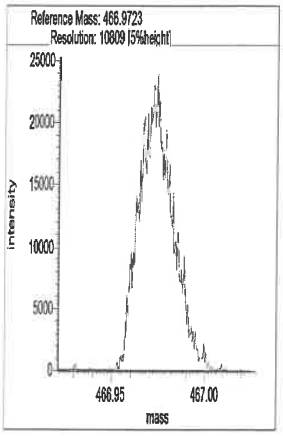
Reference Mass: 466.9723
Resolution: 10809 [5%height]
Intensity
mass

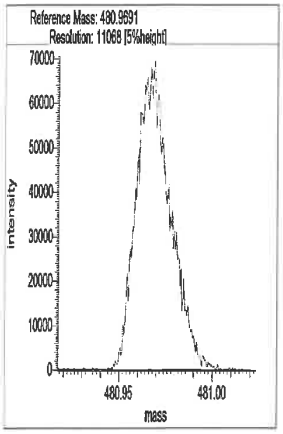
Reference Mass: 480.9691
Resolution: 11068 [5%height]
Intensity
mass

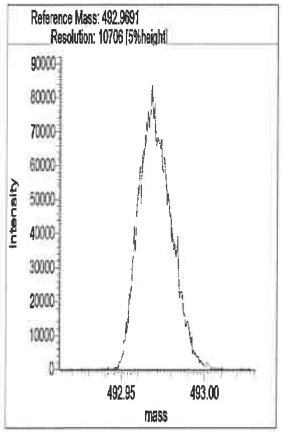
Reference Mass: 492.9691
Resolution: 10706 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 01:14
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10904 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10388 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10733 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10622 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10608 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10712 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10070 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9982 [5%height] ✓ DK 8/21/21
Ref. mass 404.9755 [m/z] Resolution: 10023 [5%height]

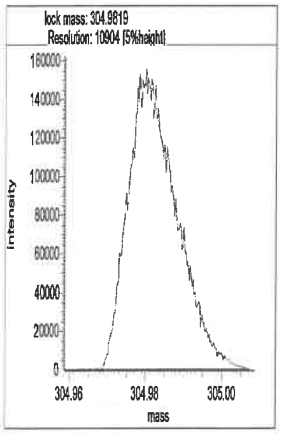

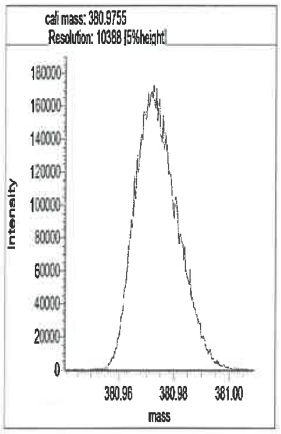

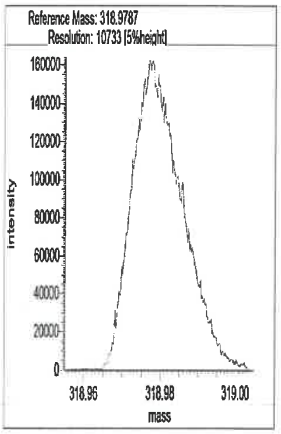

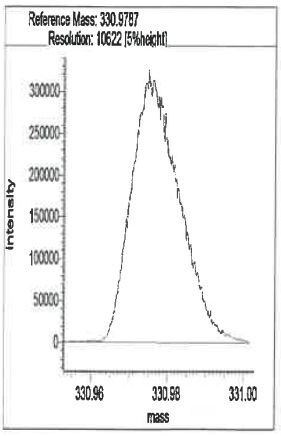

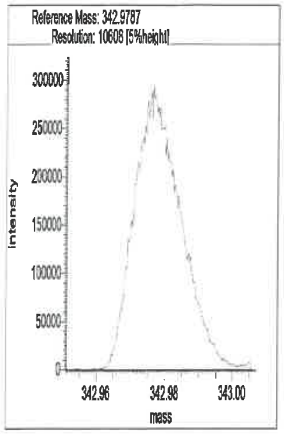

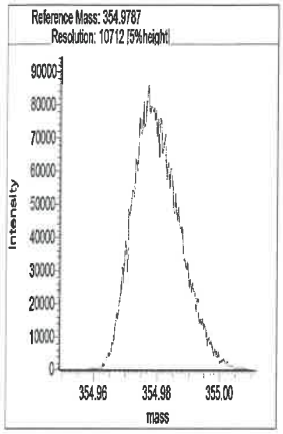

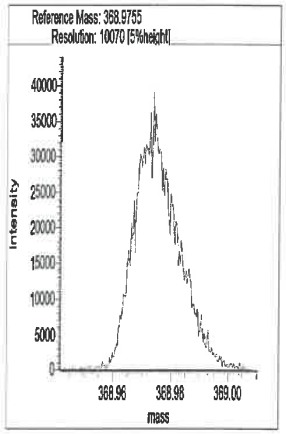

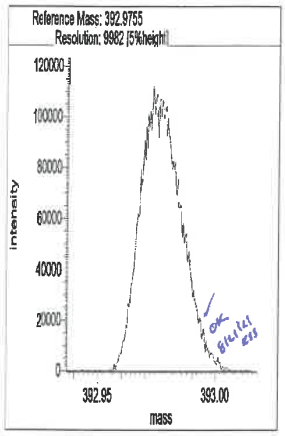

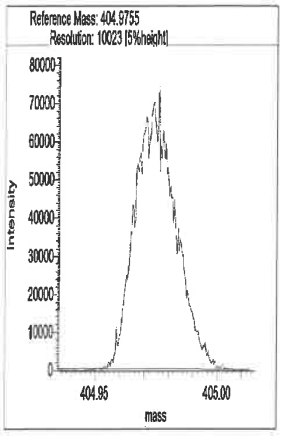

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10787 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10782 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11025 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11013 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10635 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10603 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10396 [5%height]

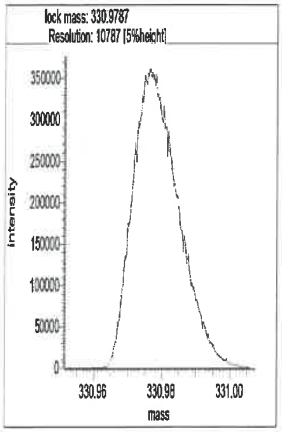

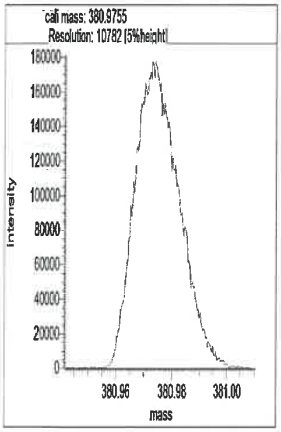

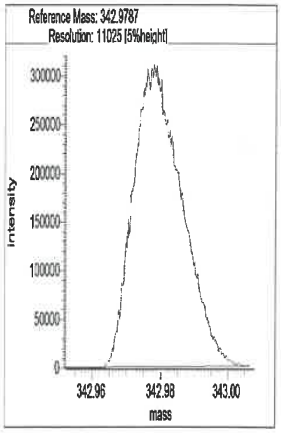

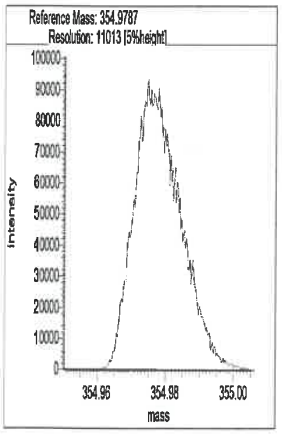

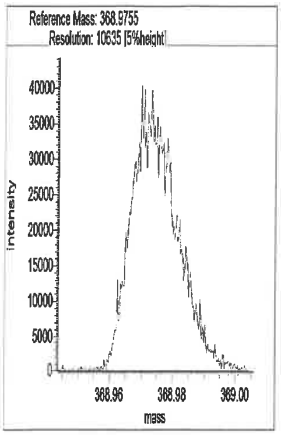

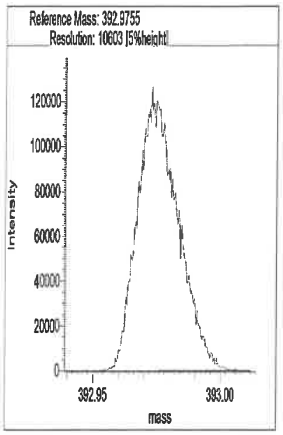

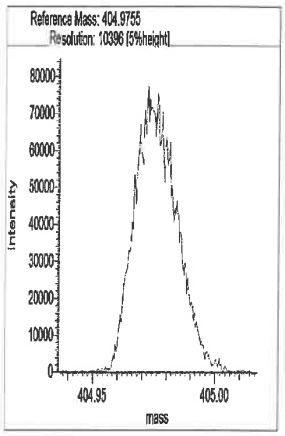

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11029 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10564 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10871 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10418 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11260 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10446 [5%height]

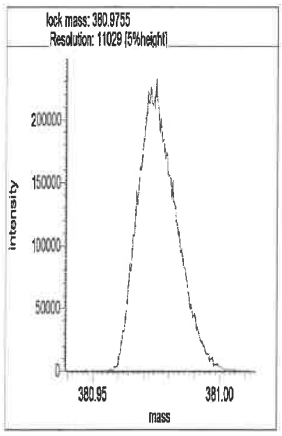

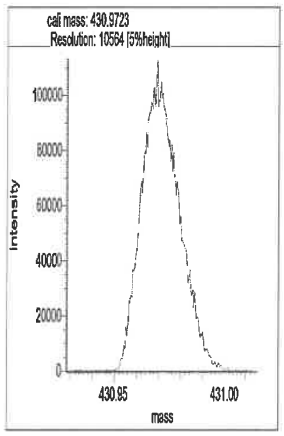

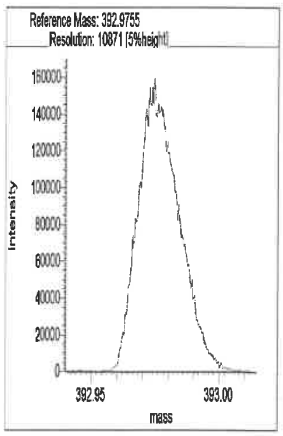

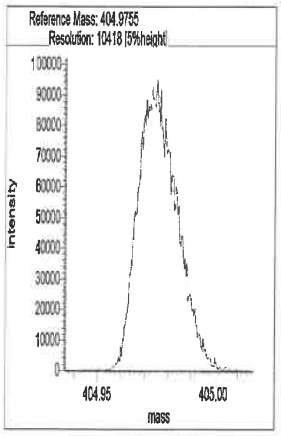

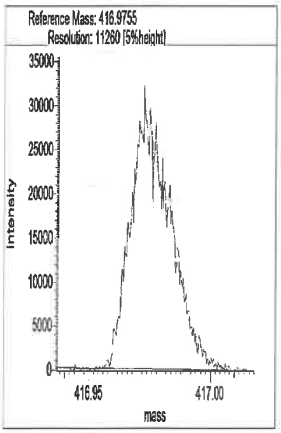

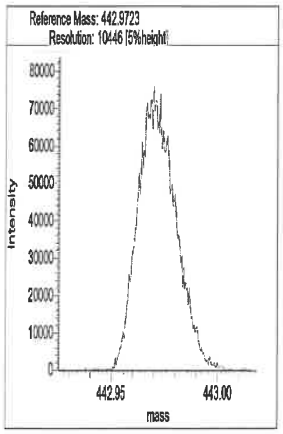

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10922 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10352 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10773 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12243 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10710 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11096 [5%height]

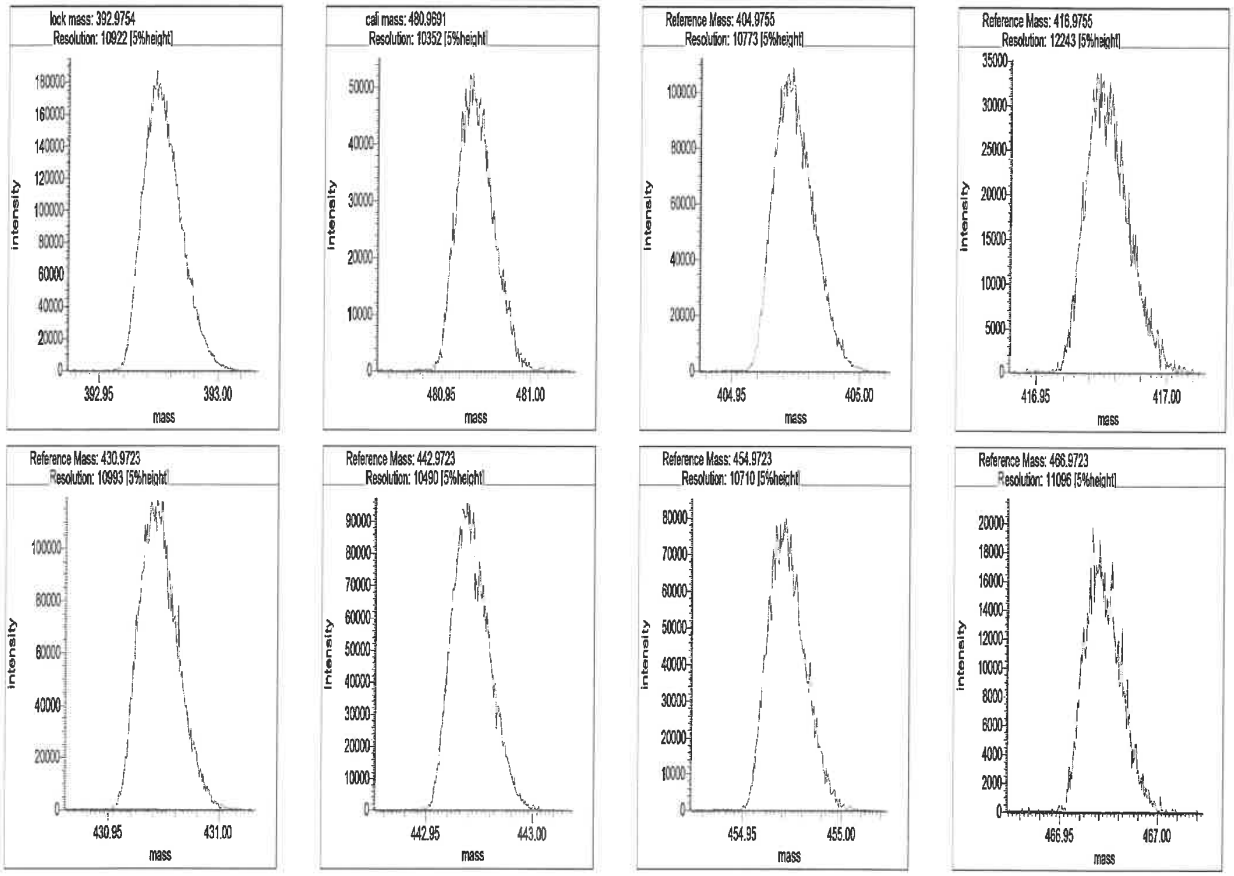

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11165 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10856 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11100 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10488 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11155 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10611 [5%height]

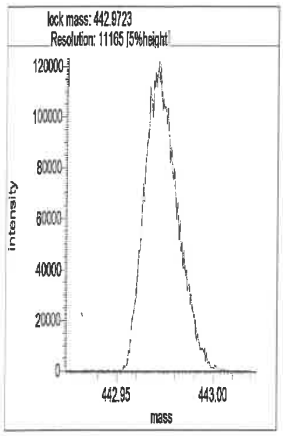
lock mass: 442.9723
Resolution: 11165 [5%height]
intensity
mass

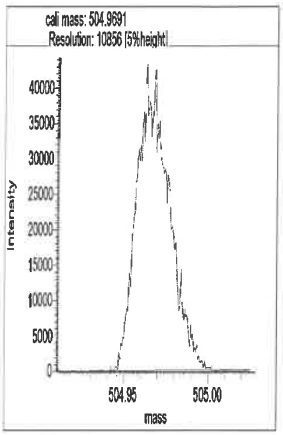
cali mass: 504.9691
Resolution: 10856 [5%height]
intensity
mass

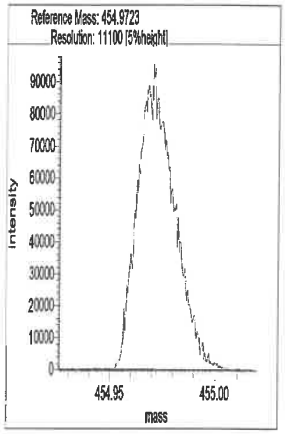
Reference Mass: 454.9723
Resolution: 11100 [5%height]
intensity
mass

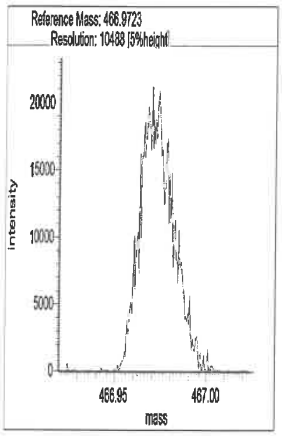
Reference Mass: 466.9723
Resolution: 10488 [5%height]
intensity
mass

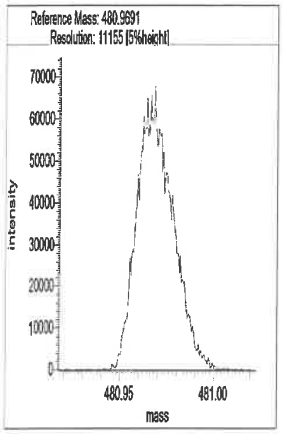
Reference Mass: 480.9691
Resolution: 11155 [5%height]
intensity
mass

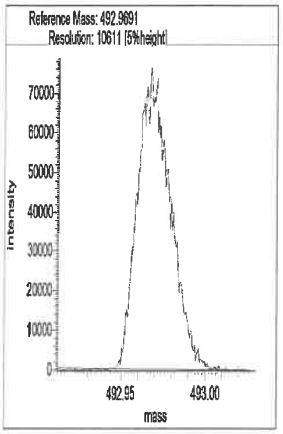
Reference Mass: 492.9691
Resolution: 10611 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 11:56
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10511 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10099 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 10342 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 10503 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10344 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 27776 [5%height] ? software glitch. [illegible]

Ref. mass 368.9755 [m/z] Resolution: 10394 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 9749 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9682 [5%height]

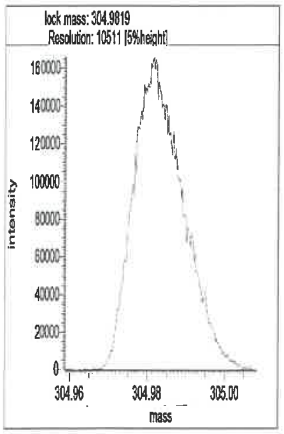

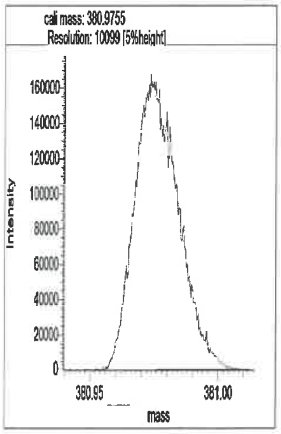

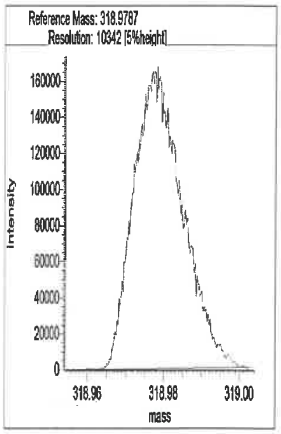

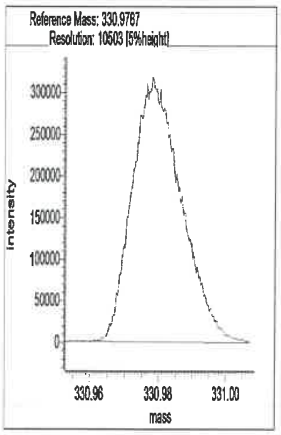

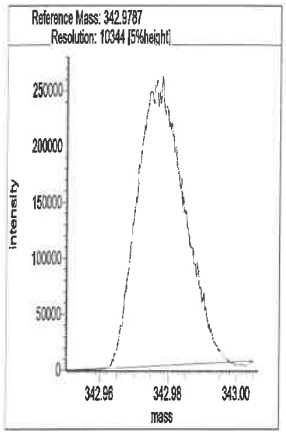

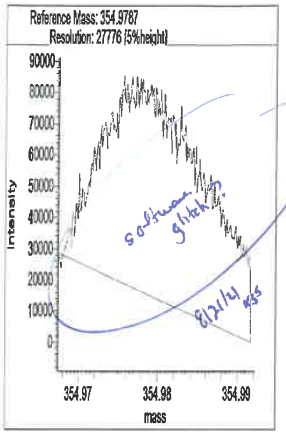

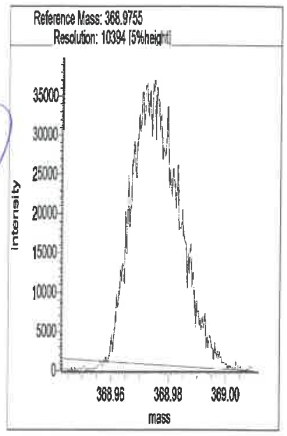

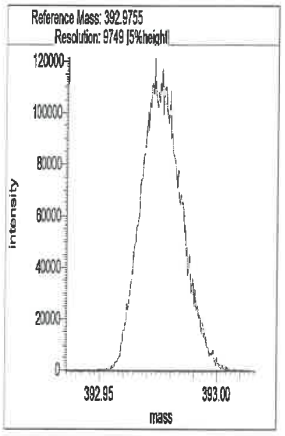

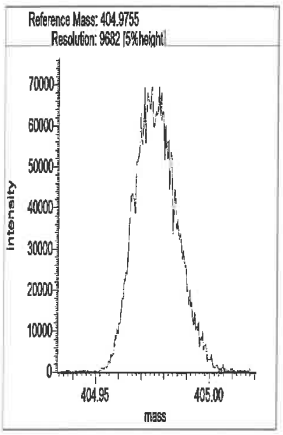

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10733 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10393 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10683 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10545 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10150 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10185 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10040 [5%height]

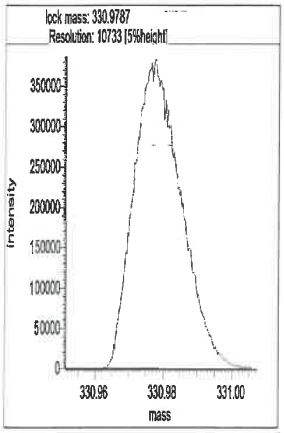

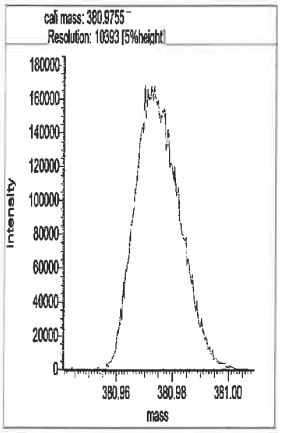

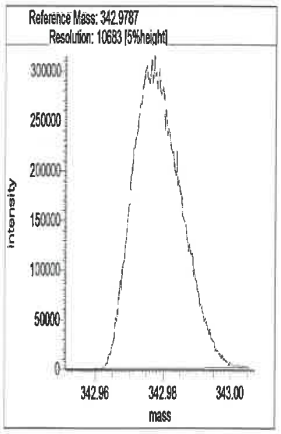

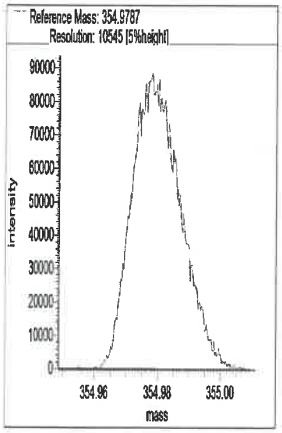

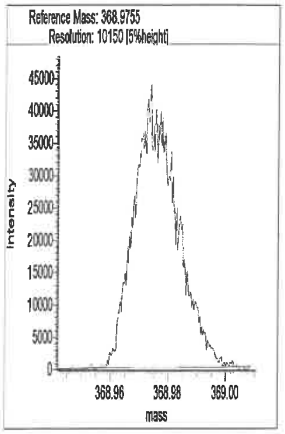

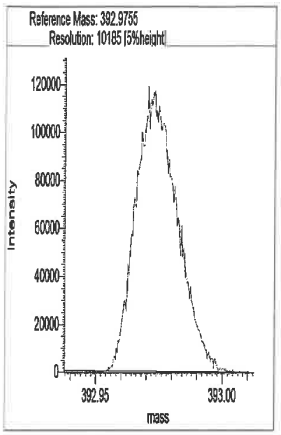

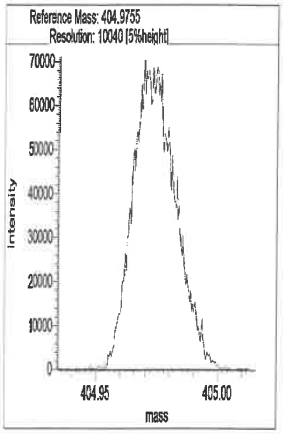

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10536 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10403 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10410 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10419 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10244 [5%height]

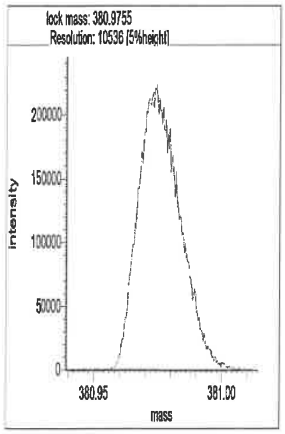

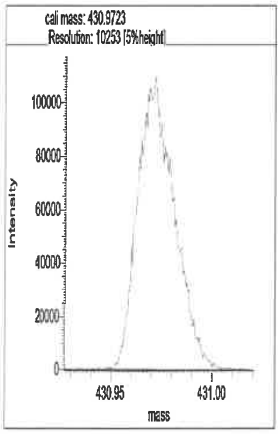

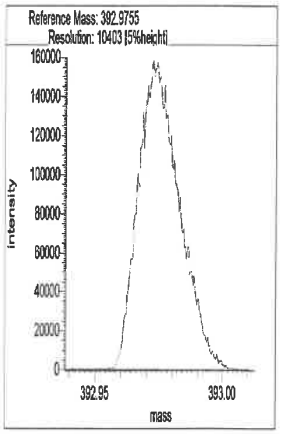

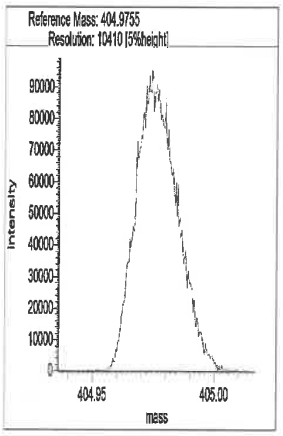

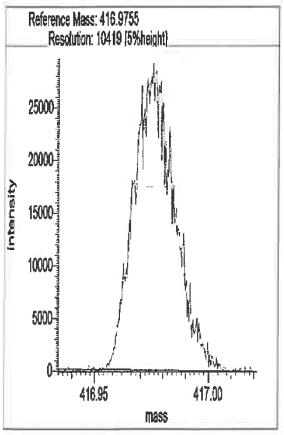

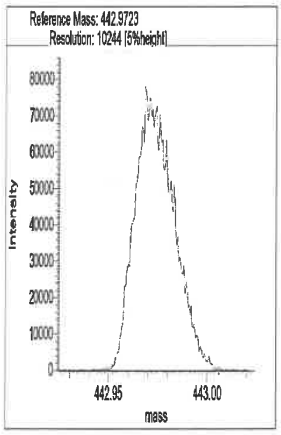

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10914 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 9523 [5%height] ✓ OK 8/21/21 KD

Ref. mass 404.9755 [m/z] Resolution: 10727 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10613 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10522 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10235 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10314 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10509 [5%height]

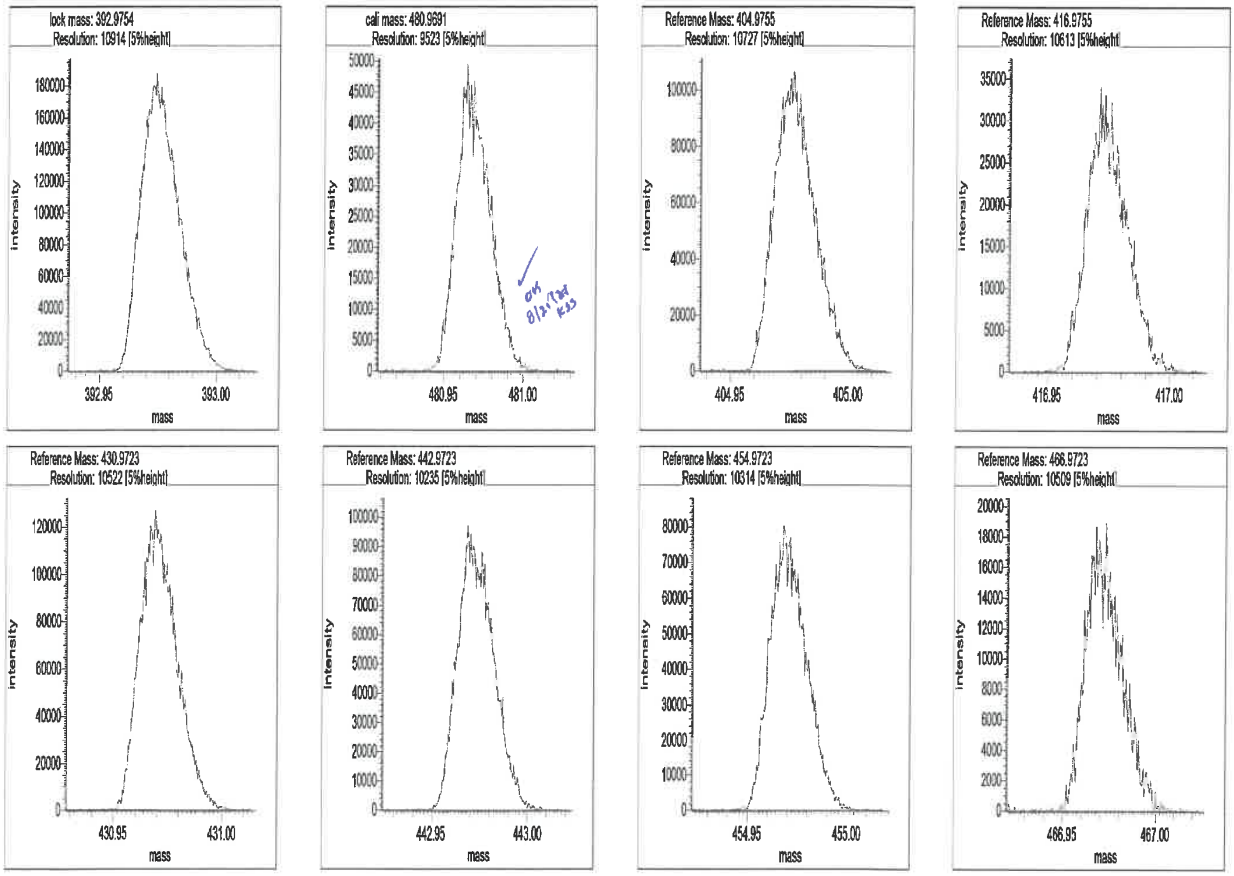

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10927 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10443 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10654 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11221 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10354 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10748 [5%height]

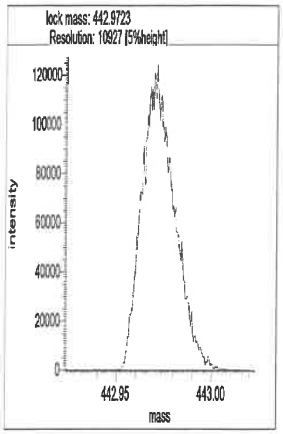
lock mass: 442.9723
Resolution: 10927 [5%height]
intensity
mass

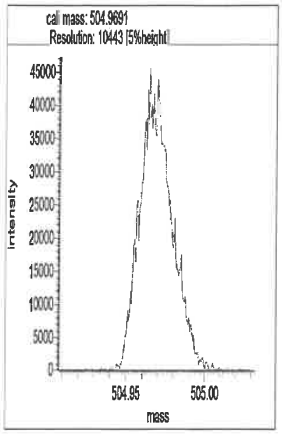
cali mass: 504.9691
Resolution: 10443 [5%height]
intensity
mass

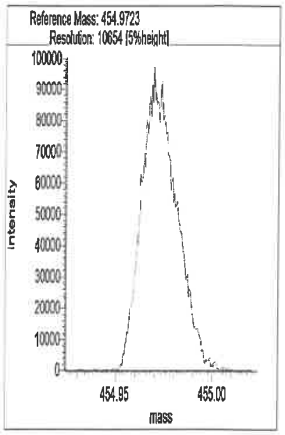
Reference Mass: 454.9723
Resolution: 10654 [5%height]
intensity
mass

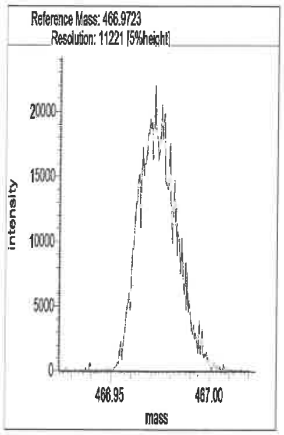
Reference Mass: 466.9723
Resolution: 11221 [5%height]
intensity
mass

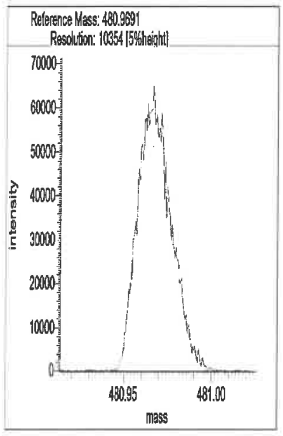
Reference Mass: 480.9691
Resolution: 10354 [5%height]
intensity
mass

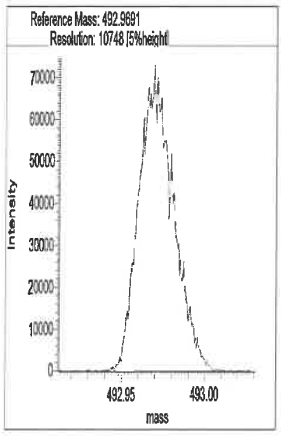
Reference Mass: 492.9691
Resolution: 10748 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 14:46:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:38:43

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.350	880144	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.395	1248688	0.81	1.3459	105.4	105.4	0.3439	0.3439	105	
2,3,7,8-TCDF	20.421	131092	0.83	1.0802	9.719	9.719	0.0187	0.0187	97.19	
A Non-2,3,7,8-sub-TCDF	19.885	2548	0.77	1.0802	0.2183	0.1889	0.0187	0.0708	0.00	RQ
S Total TCDF					9.937	9.908	0.0187	0.0187		RQ
D 13C-2,3,7,8-TCDD	21.746	859664	0.80	0.9317	104.8	104.8	0.2310	0.2310	105	
2,3,7,8-TCDD	21.754	88765	0.76	1.0753	9.602	9.602	0.0289	0.0289	96.02	M
$ 37Cl4-2,3,7,8-TCDD	21.772	88098		1.0083	9.927	9.927	0.0148	0.0148	99.27	
A Non-2,3,7,8-sub-TCDD	20.727						0.0289	0.0289		
S Total TCDD					9.602	9.602	0.0289	0.0289		
D 13C-1,2,3,7,8-PeCDF	27.246	876942	1.58	1.1405	87.4	87.4	0.2980	0.2980	87.36	
1,2,3,7,8-PeCDF	27.263	472088	1.57	1.0543	51.1	51.1	0.1254	0.1254	102	
D 13C-2,3,4,7,8-PeCDF	28.762	967288	1.58	1.1253	97.7	97.7	0.3020	0.3020	97.66	
2,3,4,7,8-PeCDF	28.787	465705	1.60	1.0079	47.8	47.8	0.1325	0.1325	95.54	
A F1 PeCDFs	24.666	72	1.55	1.0311	0.0354	0.007573	0.007281	0.007281	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.176	3649	1.55	1.0311	0.4206	0.3838	0.1289	0.3838	0.00	RQ
S Total PeCDF					99.3	99.2	0.1289	0.1289		RQ
D 13C-1,2,3,7,8-PeCDD	29.570	582520	1.58	0.7165	92.4	92.4	0.1287	0.1287	92.38	
1,2,3,7,8-PeCDD	29.595	305999	1.58	1.0465	50.2	50.2	0.2556	0.2556	100	
A Non-2,3,7,8-sub-PeCDD	28.536						0.2556	0.2556		
S Total PeCDD					50.2	50.2	0.2556	0.2556		
D 13C-1,2,3,4,7,8-HxCDF	34.922	857555	0.54	0.9648	111.3	111.3	0.3425	0.3425	111	
1,2,3,4,7,8-HxCDF	34.938	499173	1.30	1.1474	50.7	50.7	0.1885	0.1885	101	
D 13C-1,2,3,6,7,8-HxCDF	35.073	867107	0.50	1.0708	101.4	101.4	0.3086	0.3086	101	
1,2,3,6,7,8-HxCDF	35.099	557239	1.26	1.2178	52.8	52.8	0.1873	0.1873	106	
D 13C-2,3,4,6,7,8-HxCDF	35.899	805042	0.53	1.0413	96.8	96.8	0.3173	0.3173	96.79	
2,3,4,6,7,8-HxCDF	35.916	525498	1.33	1.2145	53.7	53.7	0.1797	0.1797	107	
D 13C-1,2,3,7,8,9-HxCDF	36.800	746273	0.55	0.9731	96.0	96.0	0.3396	0.3396	96.01	
1,2,3,7,8,9-HxCDF	36.808	489075	1.31	1.2401	52.8	52.8	0.1691	0.1691	106	
A Non-2,3,7,8-sub-HxCDF	35.073						0.1808	0.1808		

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Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					210.1	210.1	0.1812	0.1812		
* 13C-1,2,3,7,8,9-HxCDD	36.598	798781	1.28	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.109	626230	1.27	0.7587	103.3	103.3	0.1789	0.1789	103	
1,2,3,4,7,8-HxCDD	36.126	304605	1.24	1.0608	45.9	45.9	0.0786	0.0786	91.71	
D 13C-1,2,3,6,7,8-HxCDD	36.227	727407	1.24	0.8593	106.0	106.0	0.1580	0.1580	106	
1,2,3,6,7,8-HxCDD	36.244	327966	1.26	0.9933	45.4	45.4	0.0820	0.0820	90.78	
1,2,3,7,8,9-HxCDD	36.606	350583	1.24	1.1094	46.7	46.7	0.0743	0.0743	93.38	
A Non-2,3,7,8-sub-HxCDD	35.427						0.0781	0.0781		
S Total HxCDD					137.9	137.9	0.0783	0.0783		
D 13C-1,2,3,4,6,7,8-HpCDF	38.614	631083	0.46	0.7359	107.4	107.4	0.3595	0.3595	107	
1,2,3,4,6,7,8-HpCDF	38.622	425207	1.05	1.4421	46.7	46.7	0.1807	0.1807	93.45	
D 13C-1,2,3,4,7,8,9-HpCDF	39.869	619112	0.44	0.6854	113.1	113.1	0.3861	0.3861	113	
1,2,3,4,7,8,9-HpCDF	39.877	390127	1.03	1.3092	48.1	48.1	0.1991	0.1991	96.27	
A Non-2,3,7,8-sub-HpCDF	39.253						0.1894	0.1894		
S Total HpCDF					94.9	94.9	0.1899	0.1899		
D 13C-1,2,3,4,6,7,8-HpCDD	39.557	609233	1.02	0.6745	113.1	113.1	0.2887	0.2887	113	
1,2,3,4,6,7,8-HpCDD	39.574	308551	1.04	1.0503	48.2	48.2	0.1086	0.1086	96.44	
A Non-2,3,7,8-sub-HpCDD	39.253	2712	1.04	1.0503	0.4815	0.4238	0.1086	0.4238	0.00	RQ
S Total HpCDD					48.7	48.6	0.1086	0.1086		RQ
D 13C-OCDD	42.064	1023273	0.90	0.5446	235.2	235.2	0.2892	0.2892	118	
OCDF	42.157	733525	0.95	1.3168	108.9	108.9	0.1126	0.1126	109	
OCDD	42.073	518459	0.87	1.0620	95.4	95.4	0.1218	0.1218	95.42	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 14:46:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:38:43

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.350	21.350	0		392365	50129	68	170	737		a
333.9338	21.359	21.350	1		487779	63734	30	75	2124	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.395	20.395	0	0.955	557813	78278	117	292	669		
317.9389	20.387	20.395	-1	0.955	690875	94571	94	235	1006	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.421	20.421	0	1.001	59271	8014	5	12	1603		
305.8987	20.421	20.421	0	1.001	71821	9716	9	22	1080	0.83(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.717	19.885	-70	0.918	165	55	5	12	11		
305.8987	18.760	19.885	-67	0.920	328	106	9	22	12	0.50(0.65-0.89)	
	Empc Correction				214	71	9	22	8		
303.9016	19.724	19.885	-10	0.967	539	104	5	12	21		
	Empc Correction				415	97	5	12	19		
305.8987	19.689	19.885	-12	0.965	540	127	9	22	14	1.00(0.65-0.89)	
303.9016	20.696	19.885	49	1.015	334	82	5	12	16		
305.8987	20.696	19.885	49	1.015	398	183	9	22	20	0.84(0.65-0.89)	
303.9016	20.808	19.885	55	1.020	210	86	5	12	17		
305.8987	20.757	19.885	52	1.018	431	109	9	22	12	0.49(0.65-0.89)	
	Empc Correction				272	111	9	22	12		
13C-2,3,7,8-TCDD											
331.9368	21.746	21.746	0	1.019	380761	50135	68	170	737		
333.9338	21.737	21.746	-1	1.018	478903	62607	30	75	2087	0.80(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.754	21.754	0	1.000	38393	4783	10	25	478		M
321.8936	21.772	21.754	1	1.001	50372	6262	4	10	1566	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											
327.8847	21.772	21.772	0	1.020	88098	11715	7	17	1674		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.727						10	25			
321.8936	20.727						4	10			
13C-1,2,3,7,8-PeCDF											
351.9000	27.246	27.246	0	1.276	537093	80730	85	212	950		
353.8970	27.246	27.246	0	1.276	339849	53122	70	175	759	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.263	27.263	0	1.001	288515	42689	34	85	1256		
341.8567	27.263	27.263	0	1.001	183573	26170	37	92	707	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.762	28.762	0	1.347	592788	80849	85	212	951		
353.8970	28.753	28.762	-1	1.347	374500	51726	70	175	739	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.787	28.787	0	1.001	286668	39229	34	85	1154		
341.8567	28.787	28.787	0	1.001	179037	24246	37	92	655	1.60(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.352	24.666	-19	0.894	30	12	1	2	12		
341.8567	24.343	24.666	-19	0.893	194	92	3	7	31	0.15(1.32-1.78)	
	Empc Correction				19	7	3	7	2		
339.8597	25.005	24.666	20	0.918	14	8	1	2	8		
341.8567	25.023	24.666	21	0.918	99	47	3	7	16	0.14(1.32-1.78)	
	Empc Correction				9	5	3	7	2		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.869	28.176	-18	1.023	2568	448	34	85	13		
	Empc Correction				2218	396	34	85	12		
341.8567	27.877	28.176	-18	1.023	1431	256	37	92	7	1.79(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.570	29.570	0	1.385	356741	48302	23	57	2100		
369.8919	29.562	29.570	-1	1.385	225779	30199	19	47	1589	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.595	29.595	0	1.001	187317	23303	59	147	395		
357.8516	29.604	29.595	1	1.001	118682	15295	25	62	612	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.536						59	147			
357.8516	28.536						25	62			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.922	34.922	0	0.954	301743	58450	70	175	835		
385.8610	34.922	34.922	0	0.954	555812	106606	161	402	662	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.938	34.938	0	1.000	282106	53539	84	210	637		
375.8178	34.930	34.938	-1	1.000	217067	41553	59	147	704	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.073	35.073	0	0.958	289842	54372	70	175	777		
385.8610	35.082	35.073	1	0.959	577265	102104	161	402	634	0.50(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDF											
373.8208	35.099	35.099	0	1.001	311153	56921	84	210	678		
375.8178	35.099	35.099	0	1.001	246086	45717	59	147	775	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.899	35.899	0	0.981	279239	55912	70	175	799		
385.8610	35.899	35.899	0	0.981	525803	107690	161	402	669	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.916	35.916	0	1.000	300256	62548	84	210	745		
375.8178	35.916	35.916	0	1.000	225242	47171	59	147	800	1.33(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.800	36.800	0	1.006	263890	60577	70	175	865		
385.8610	36.791	36.800	-1	1.005	482383	109655	161	402	681	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.808	36.808	0	1.000	276925	62991	84	210	750		
375.8178	36.808	36.808	0	1.000	212150	48219	59	147	817	1.31(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						84	210			
375.8178	35.073						59	147			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.598	36.598	0		447919	95381	56	140	1703		
403.8529	36.598	36.598	0		350862	79228	39	97	2031	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.109	36.109	0	0.987	350834	84152	56	140	1503		
403.8529	36.109	36.109	0	0.987	275396	65709	39	97	1685	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.126	36.126	0	1.000	168355	39063	26	65	1502		
391.8127	36.126	36.126	0	1.000	136250	30911	24	60	1288	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.227	36.227	0	0.990	402538	84276	56	140	1505		
403.8529	36.227	36.227	0	0.990	324869	69268	39	97	1776	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.244	36.244	0	1.000	182565	37967	26	65	1460		
391.8127	36.236	36.244	-1	1.000	145401	30482	24	60	1270	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.606	36.606	0	1.014	194341	42531	26	65	1636		
391.8127	36.606	36.606	0	1.014	156242	33894	24	60	1412	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.427						26	65			
391.8127	35.427						24	60			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.614	38.614	0	1.055	199982	53427	62	155	862		
419.8220	38.614	38.614	0	1.055	431101	110427	123	307	898	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.622	38.622	0	1.000	218080	55878	91	227	614		
409.7788	38.622	38.622	0	1.000	207127	52397	80	200	655	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.869	39.869	0	1.089	188242	48045	62	155	775		
419.8220	39.869	39.869	0	1.089	430870	115800	123	307	941	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.877	39.877	0	1.000	198124	52467	91	227	577		
409.7788	39.877	39.877	0	1.000	192003	50350	80	200	629	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						91	227			
409.7788	39.253						80	200			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.557	39.557	0	1.081	307328	83776	71	177	1180		
437.8140	39.557	39.557	0	1.081	301905	84577	65	162	1301	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.574	39.574	0	1.000	157219	41341	38	95	1088		
425.7737	39.574	39.574	0	1.000	151332	41049	39	97	1053	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.950	39.253	-18	0.985	1383	343	38	95	9		
425.7737	38.925	39.253	-20	0.984	1698	522	39	97	13	0.81(0.88-1.20)	
	Empc Correction				1329	329	39	97	8		
13C-OCDD											
469.7780	42.064	42.064	0	1.149	483730	114644	56	140	2047		
471.7750	42.064	42.064	0	1.149	539543	128072	54	135	2372	0.90(0.76-1.02)	
OCDF											
441.7428	42.157	42.157	0	1.002	357311	85331	29	72	2942		
443.7399	42.157	42.157	0	1.002	376214	89559	43	107	2083	0.95(0.76-1.02)	
OCDD											
457.7377	42.073	42.073	0	1.000	241071	58376	32	80	1824		
459.7348	42.073	42.073	0	1.000	277388	67400	31	77	2174	0.87(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	19-Aug-2021 14:46:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1248688	172849

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1248688	172849

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.717	165	55	328	106	0.0366	0.50	RQ
18.717	165	55	214	71	0.0281		Empc Correction
19.724	539	104	540	127	0.0800	1.00	RQ
19.724	415	97	540	127	0.0708		Empc Correction
20.696	334	82	398	183	0.0543	0.84	
20.808	210	86	431	109	0.0475	0.49	RQ
20.808	210	86	272	111	0.0357		Empc Correction
Signal Totals:							
	1124	320	1424	492			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2945	852				0.74	RQ
	2548	812					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.2183 = (2945 * 100.000) / (1248688 * 1.080)

Empc Amount: 0.1889 = (2548 * 100.000) / (1248688 * 1.080)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 14:46:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.666

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	876942	133852
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	967288	132575

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	922115	133213

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.352	30	12	194	92	0.0236	0.15	RQ
24.352	30	12	19	7	0.005154		Empc Correction
25.005	14	8	99	47	0.0119	0.14	RnQ
25.005	14	8	9	5	0.002419		Empc Correction
Signal Totals:							
	44	20	28	12			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	337	159				0.15	RQ
	72	32					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0354 = (337 * 100.000) / (922115 * 1.031)
Empc Amount: 0.007573 = (72 * 100.000) / (922115 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 14:46:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	876942	133852
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	967288	132575

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	922115	133213

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.869	2568	448	1431	256	0.4206	1.79	RnQ
27.869	2218	396	1431	256	0.3838		Empc Correction
Signal Totals:							
	2218	396	1431	256			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3999	704				1.79	RQ
	3649	652					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4206 = (3999 * 100.000) / (922115 * 1.031)
Empc Amount: 0.3838 = (3649 * 100.000) / (922115 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Lims ID:	CCV		
Client ID:			
Inject. Date:	19-Aug-2021 14:46:00	Dil. Factor:	1.0000
Sample Type:	CCV, Cal Verification		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	2
Sublist:	chrom-Dioxin_DFS1*sub1		

Non-2,3,7,8-sub-HpCDD, RT: 39.253

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	609233	168353

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	609233	168353

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.950	1383	343	1698	522	0.4815	0.81	RnQ
38.950	1383	343	1329	329	0.4238		Empc Correction
Signal Totals:							
	1383	343	1329	329			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3081	865				0.81	RQ
	2712	672					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4815 = (3081 * 100.000) / (609233 * 1.050)
Empc Amount: 0.4238 = (2712 * 100.000) / (609233 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d				
Injection Date:	19-Aug-2021 14:46:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Not Detected
Expected RT: 21.35

Processing Integration Results

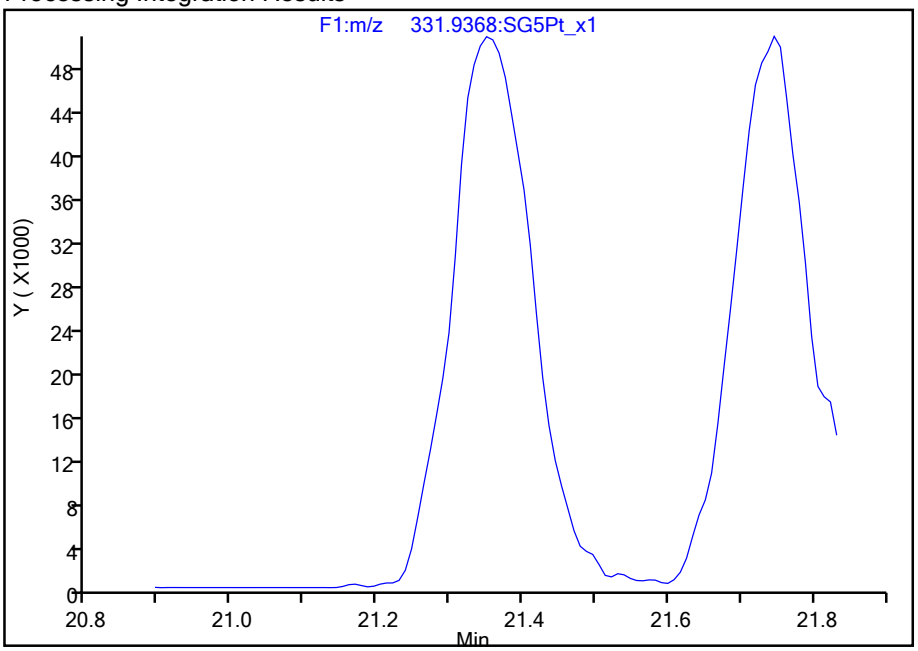

Manual Integration Results

RT: 21.35
Area: 392365
Amount: 100.0000
Amount Units: pg/ul

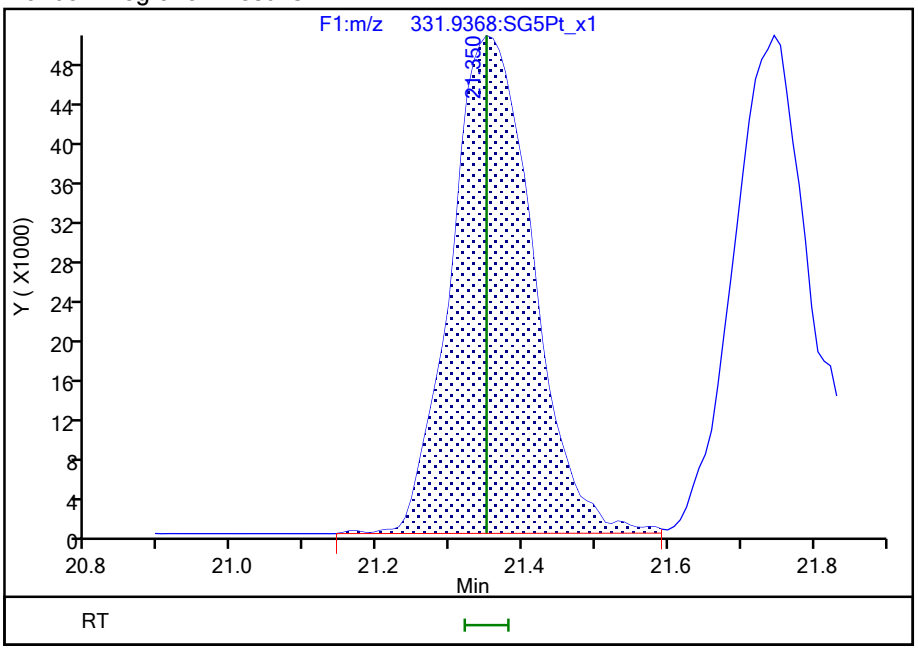

Reviewer: stephensk, 19-Aug-2021 15:37:52
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

789298

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d				
Injection Date:	19-Aug-2021 14:46:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.75
Area: 36392
Amount: 9.385610
Amount Units: pg/ul

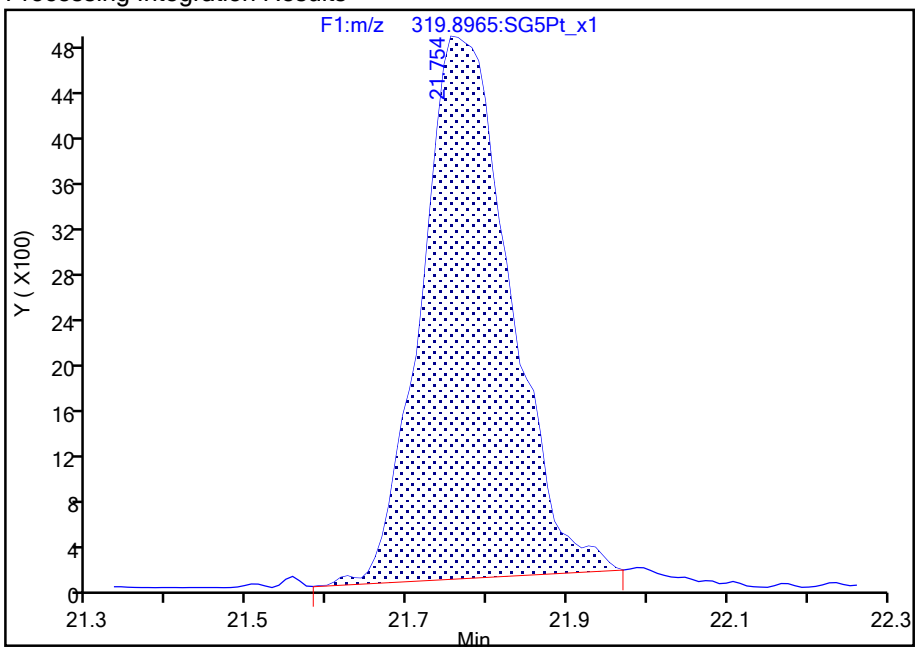

Manual Integration Results

RT: 21.75
Area: 38393
Amount: 9.602066
Amount Units: pg/ul

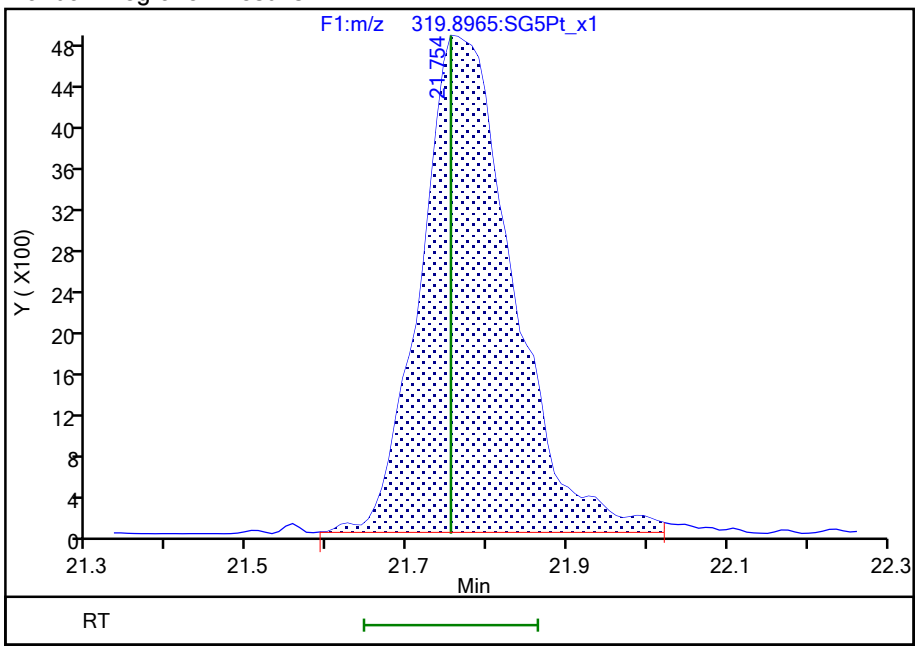

Reviewer: stephensk, 19-Aug-2021 15:38:12

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

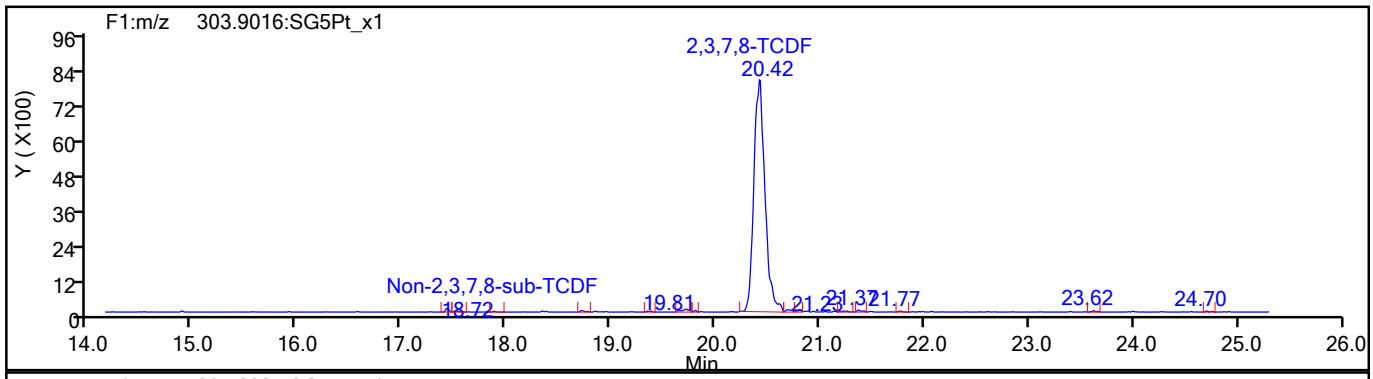

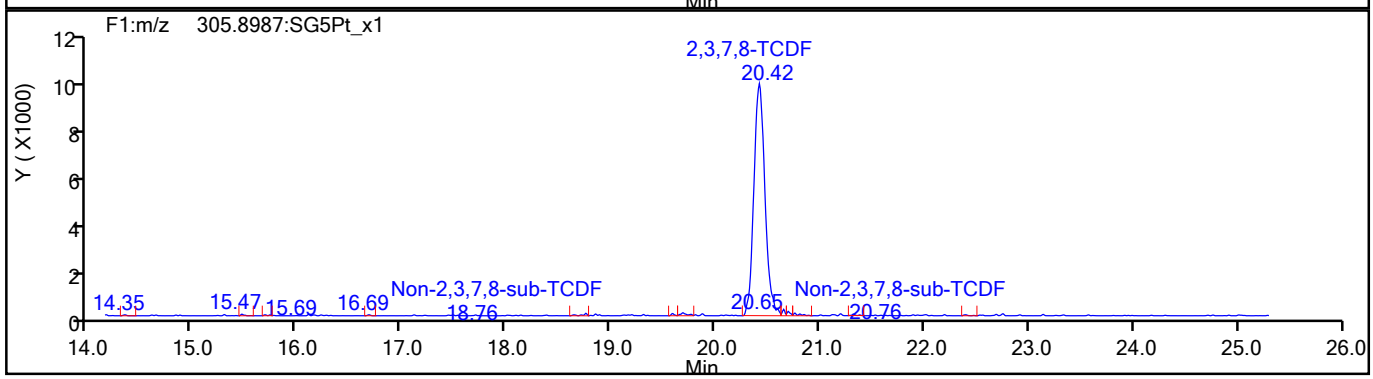

TCDF Standards

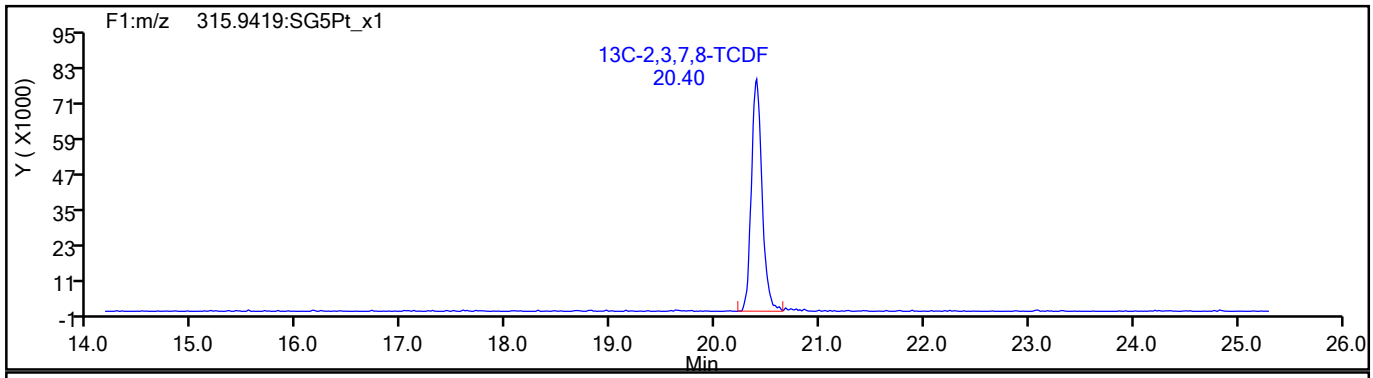

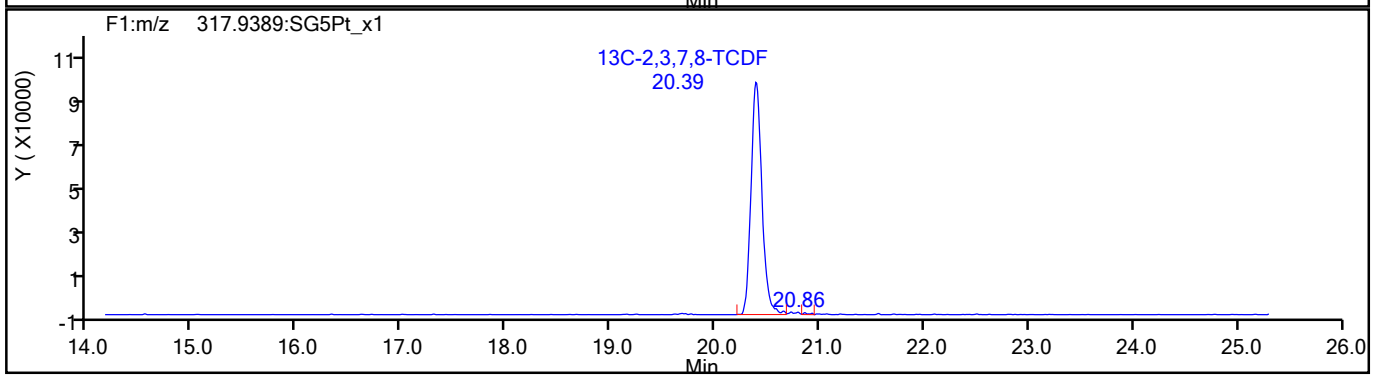

789300

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

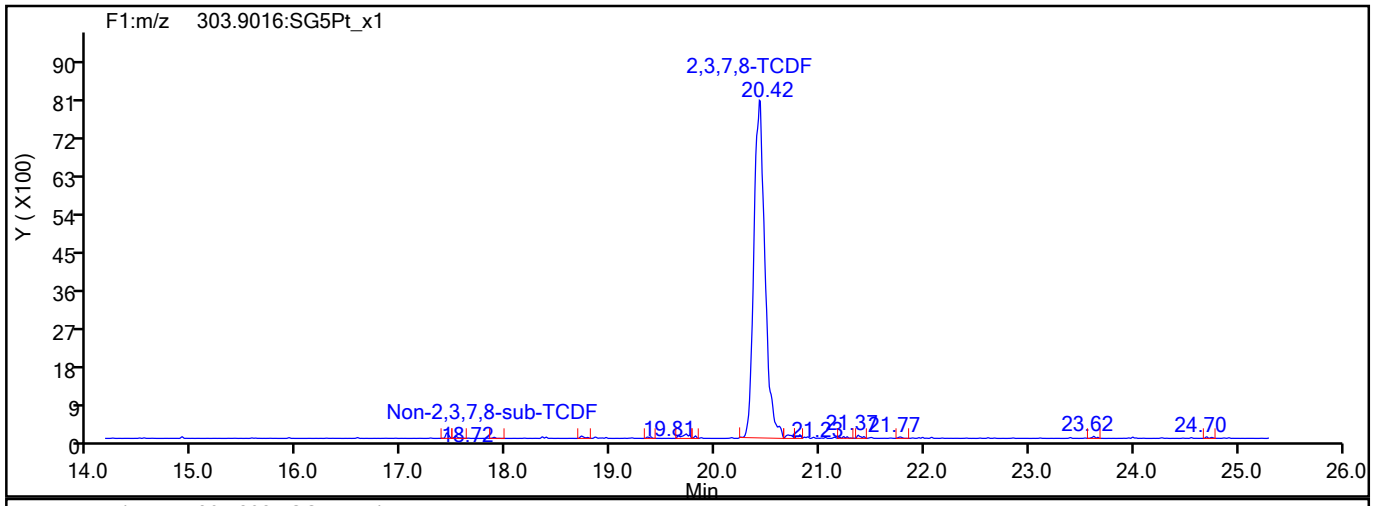

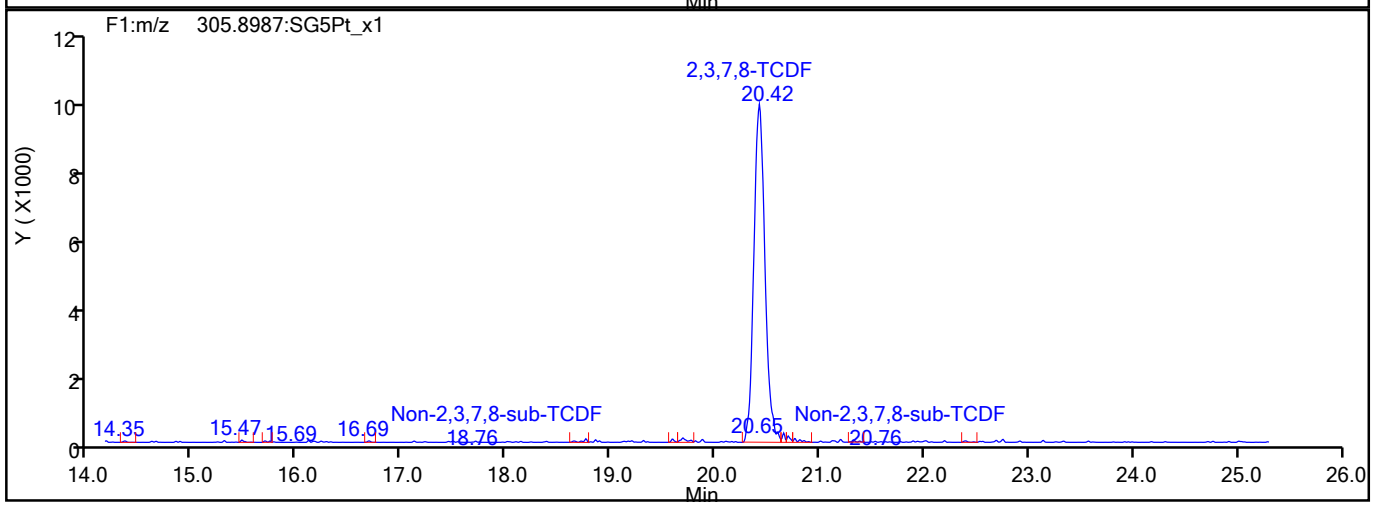

TCDF Interference Mass

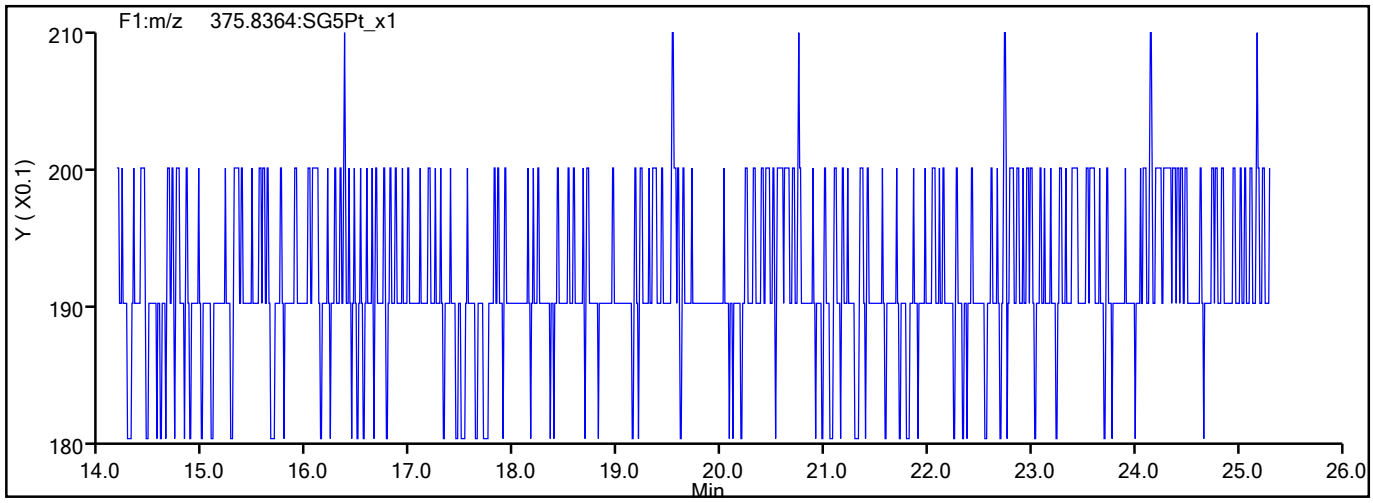

789301

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

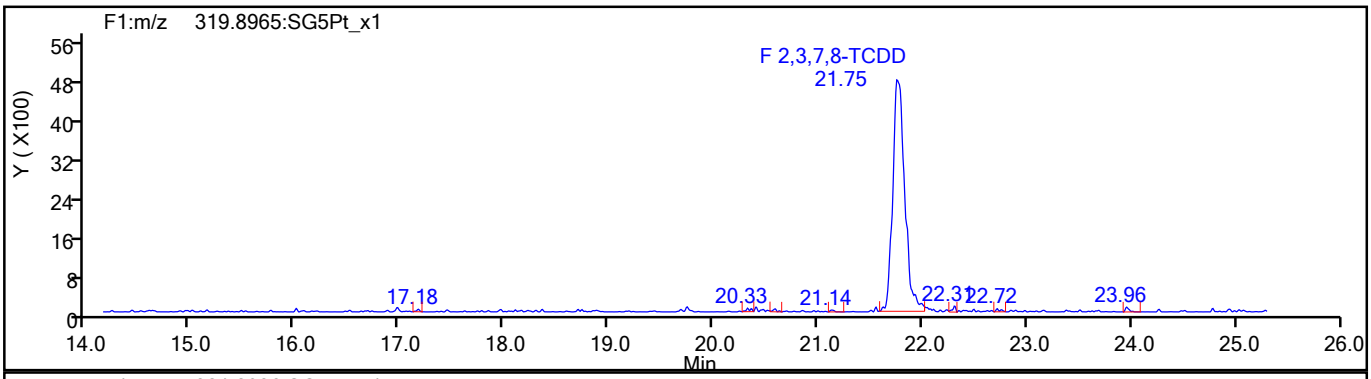

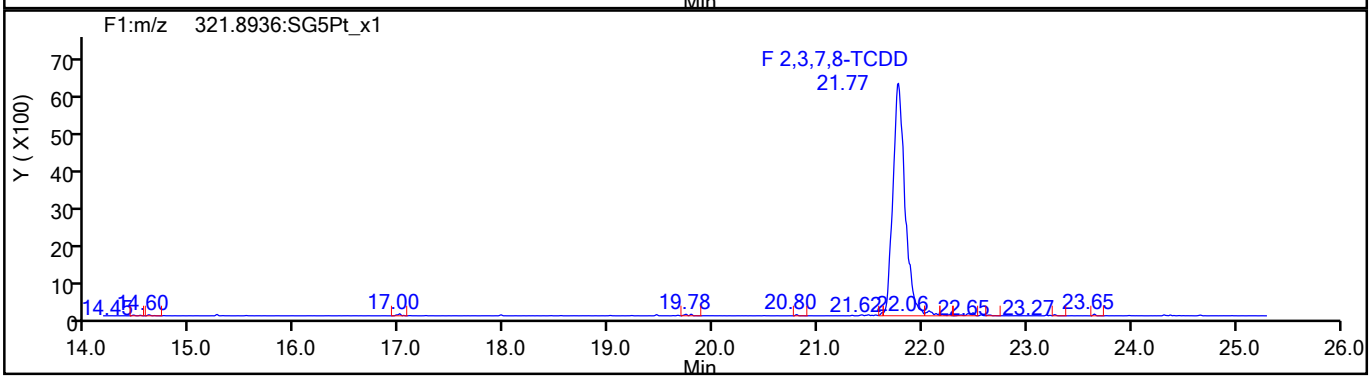

TCDD Standards

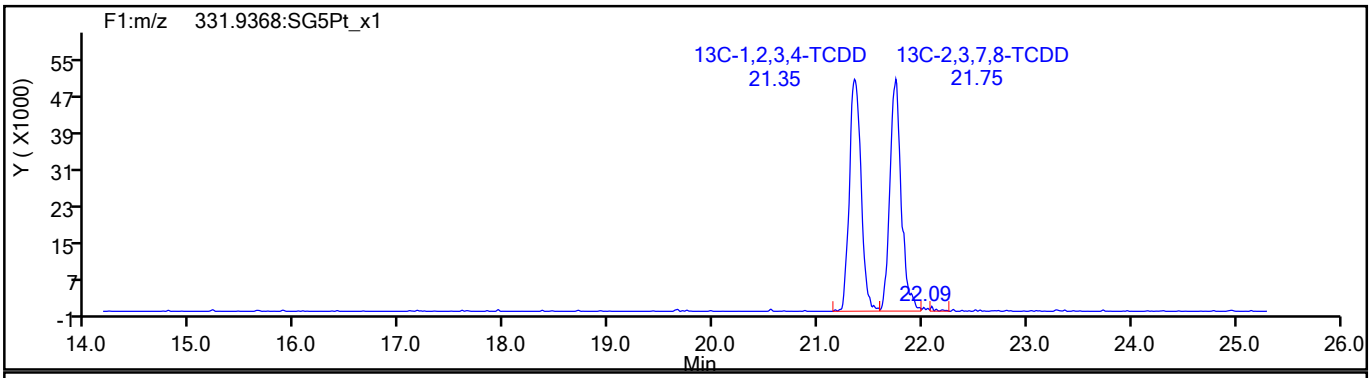

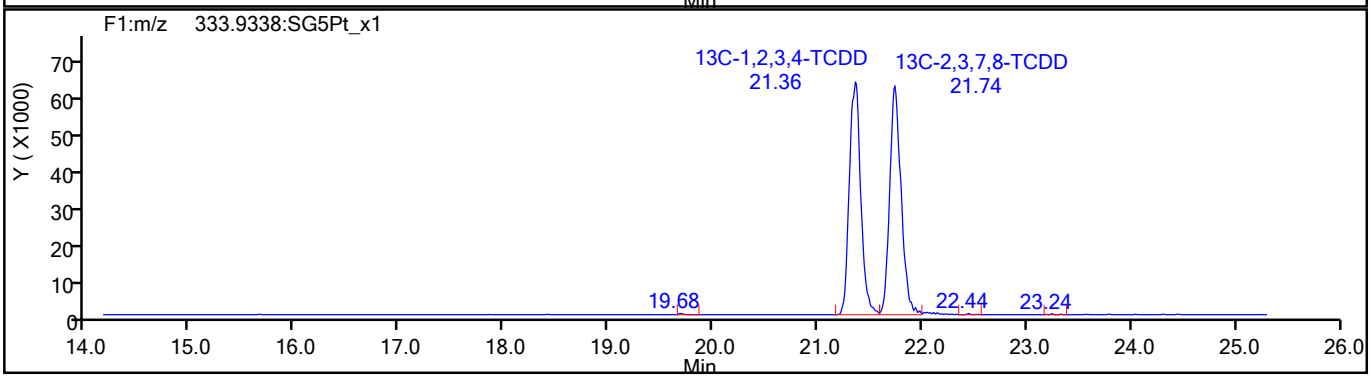

789302

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

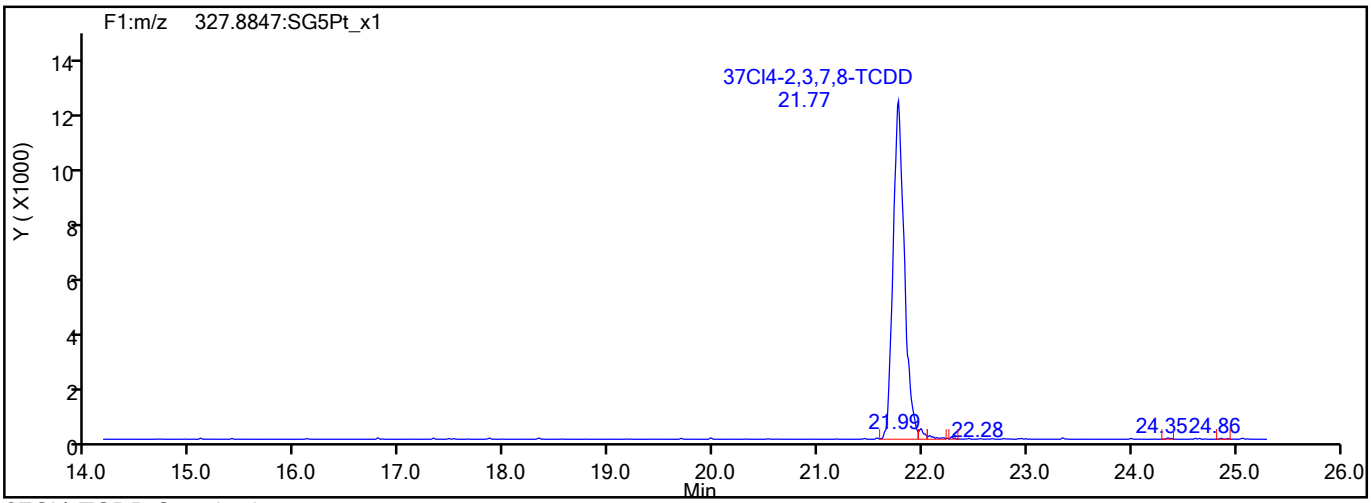

37Cl4-TCDD Standards

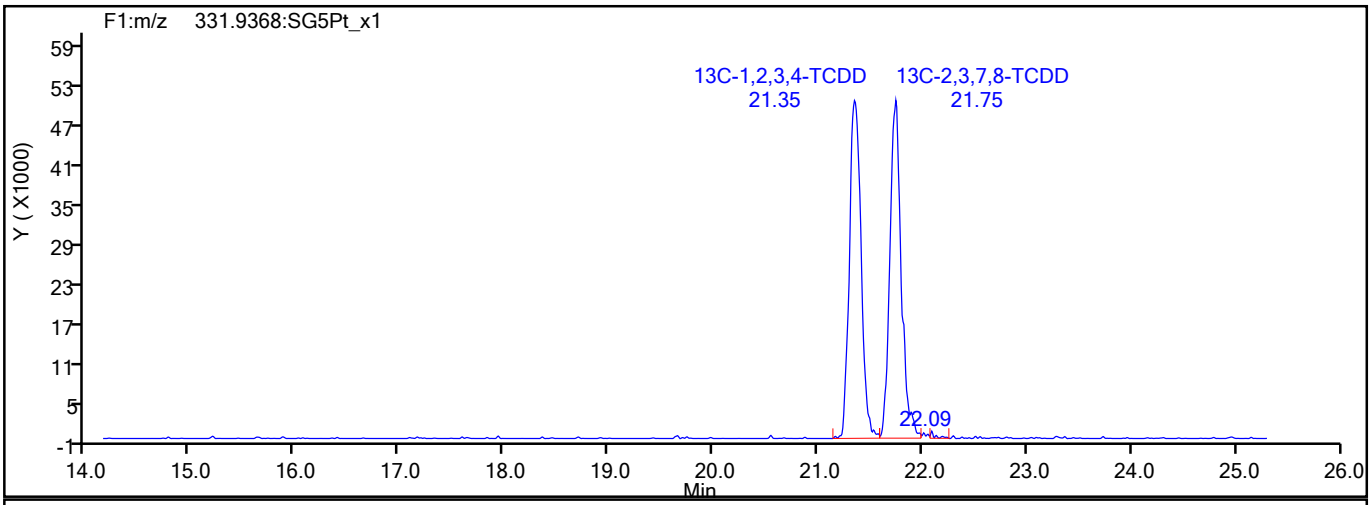

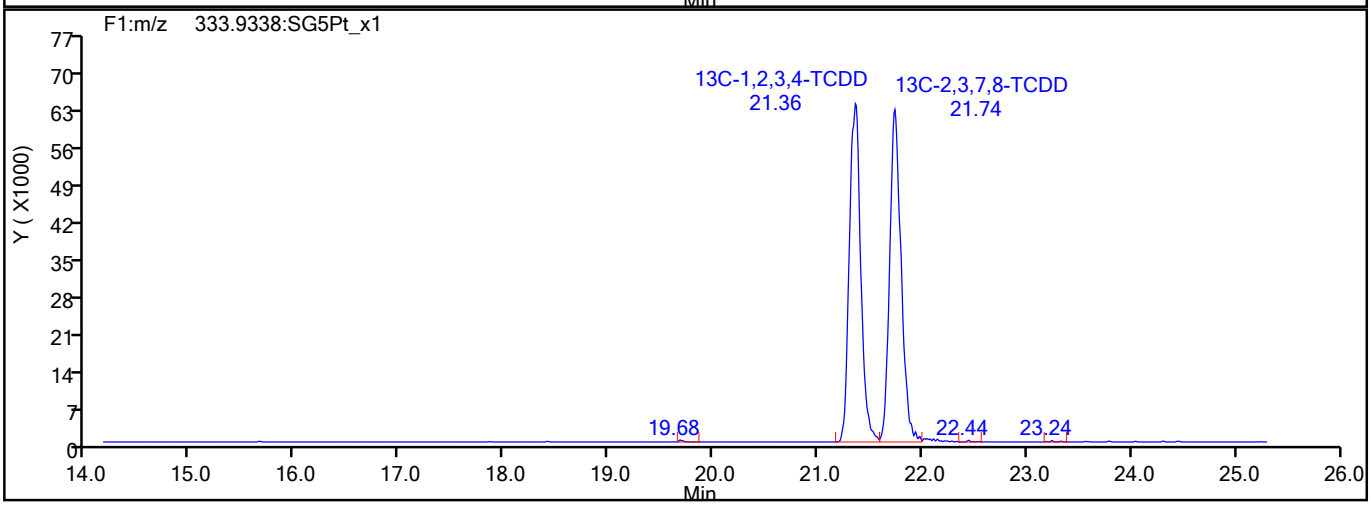

789303

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

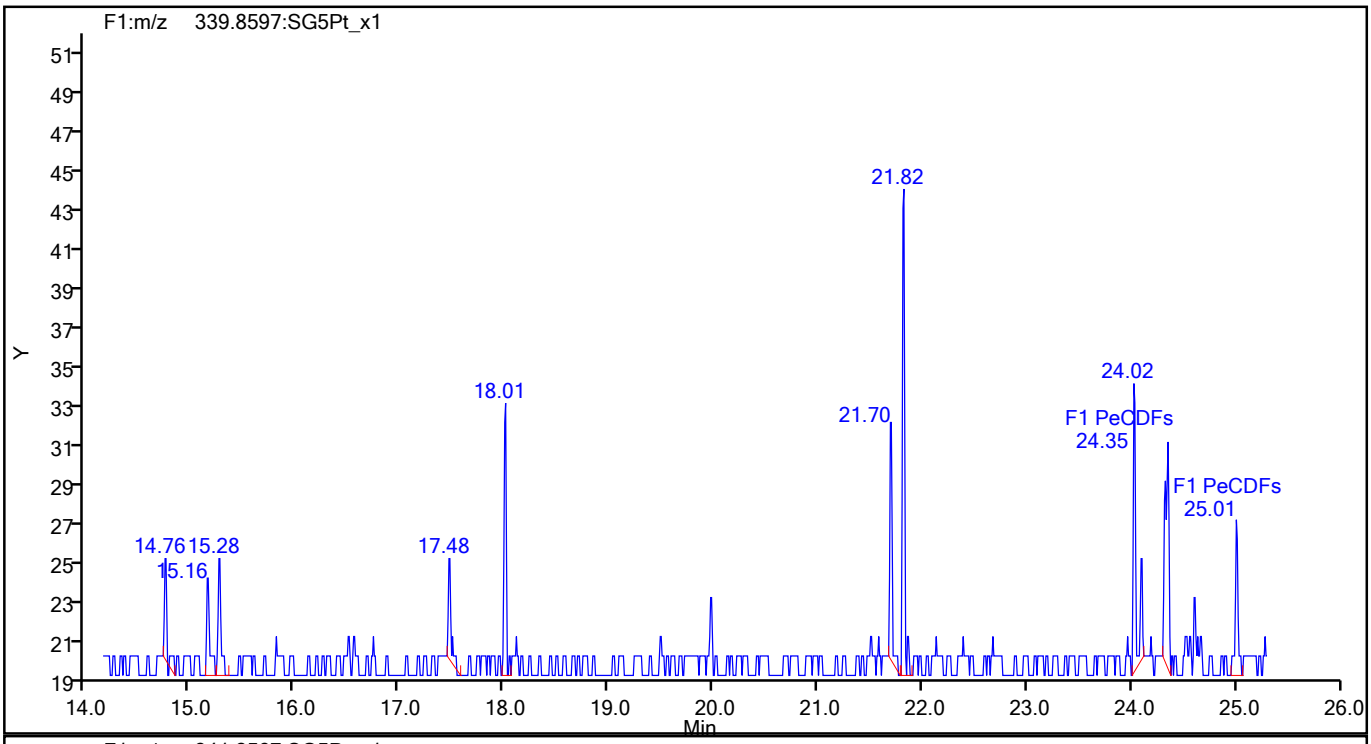

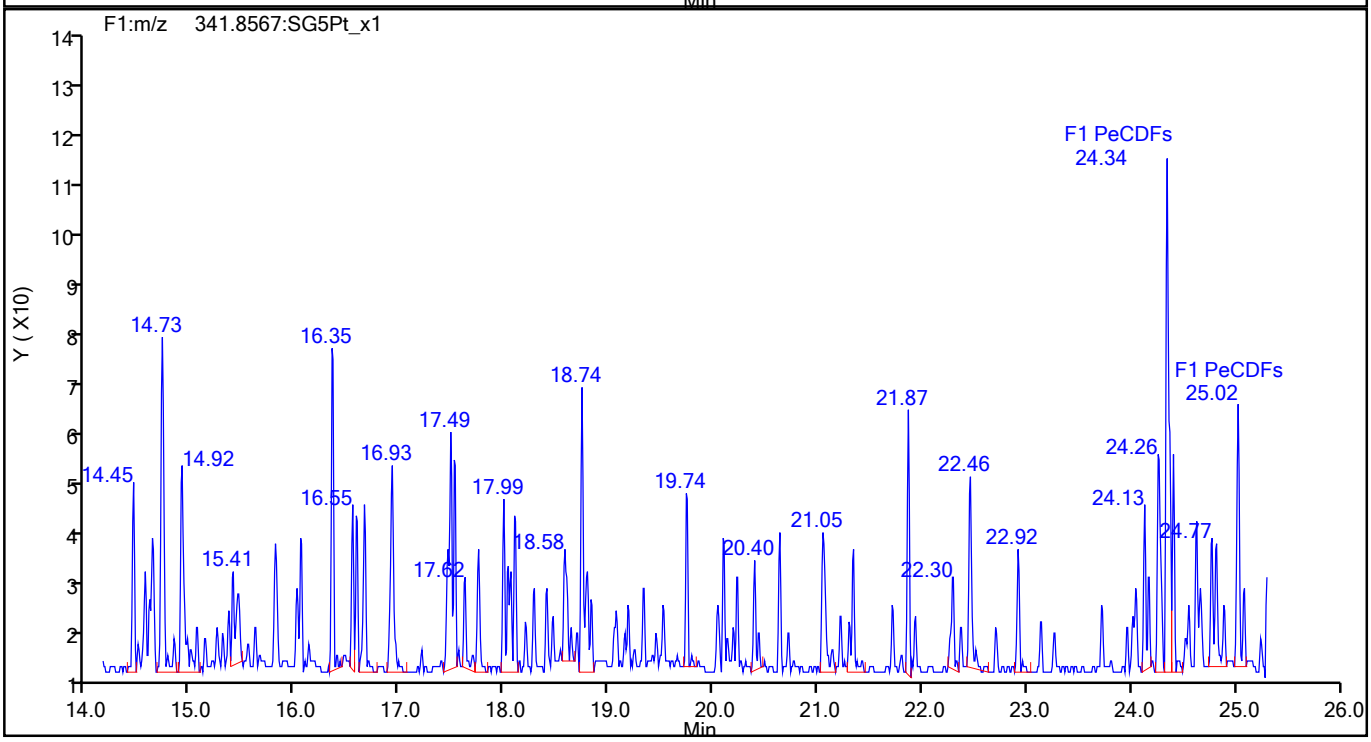

789304

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

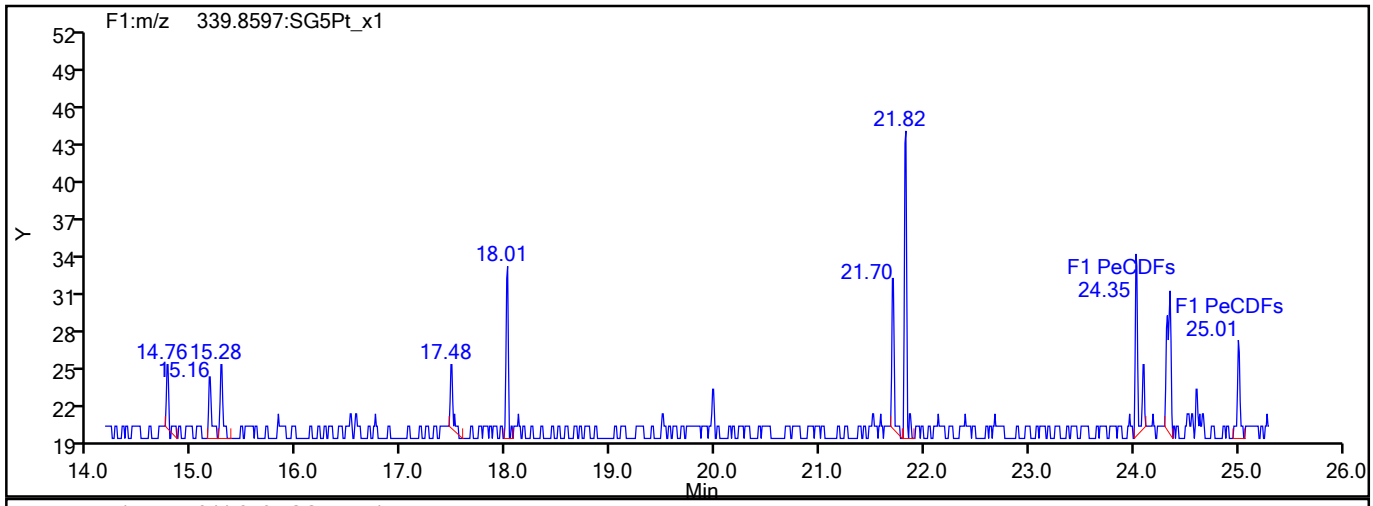

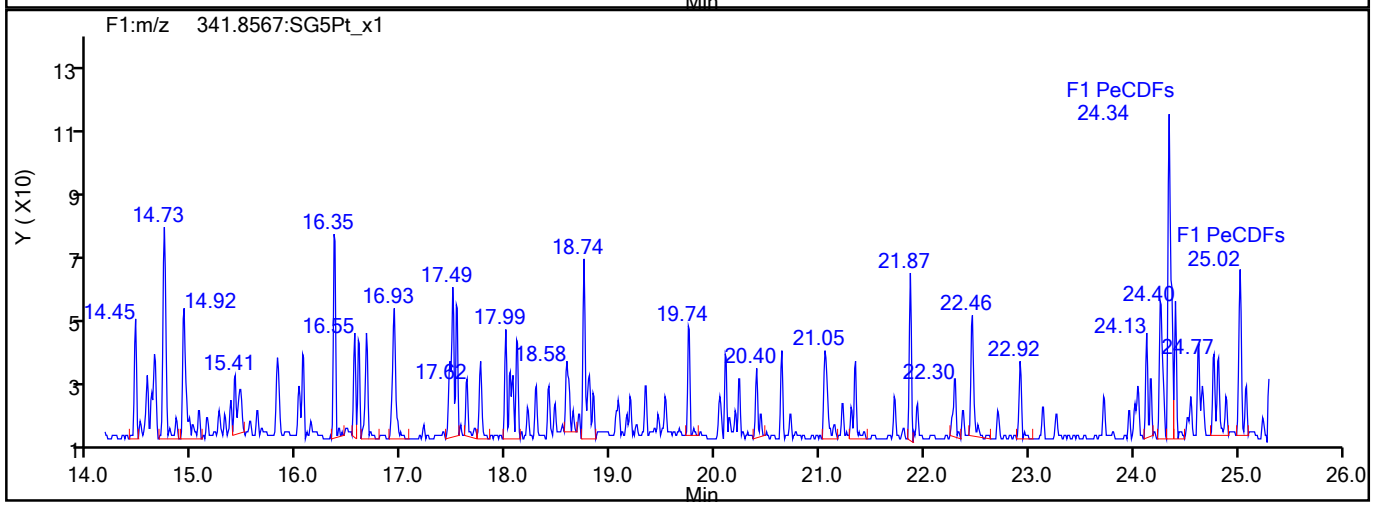

F1 PeCDFs Interference Mass

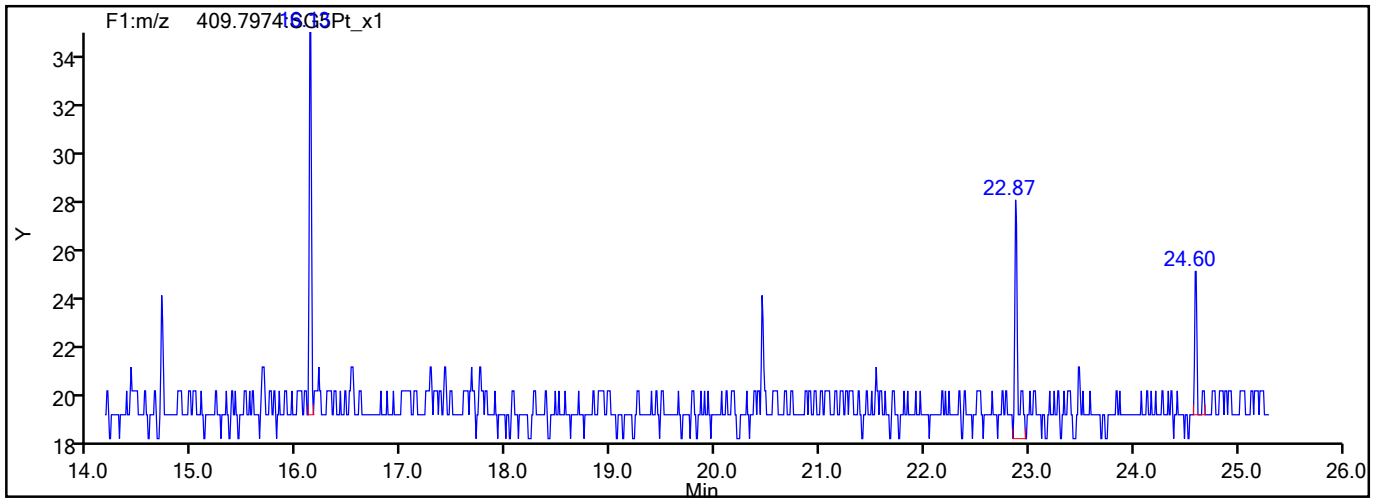

789305

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

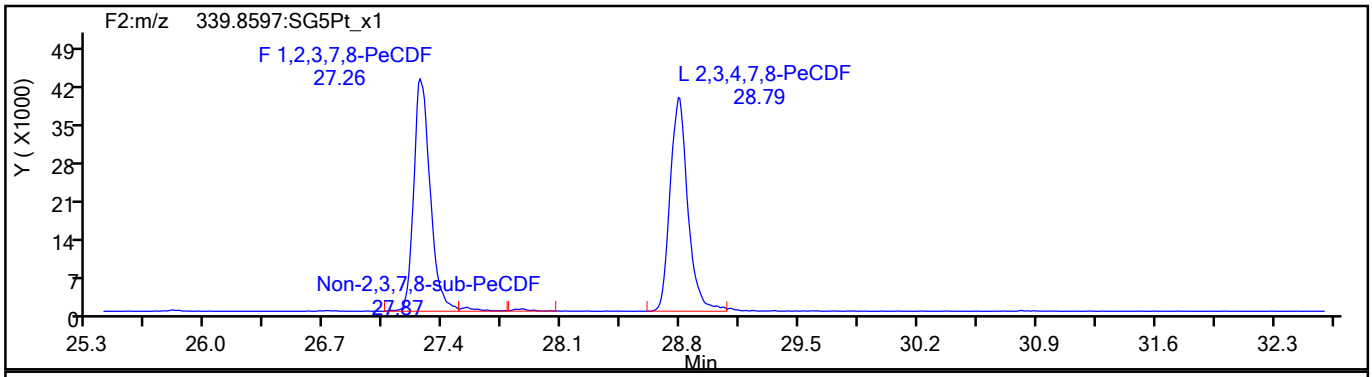

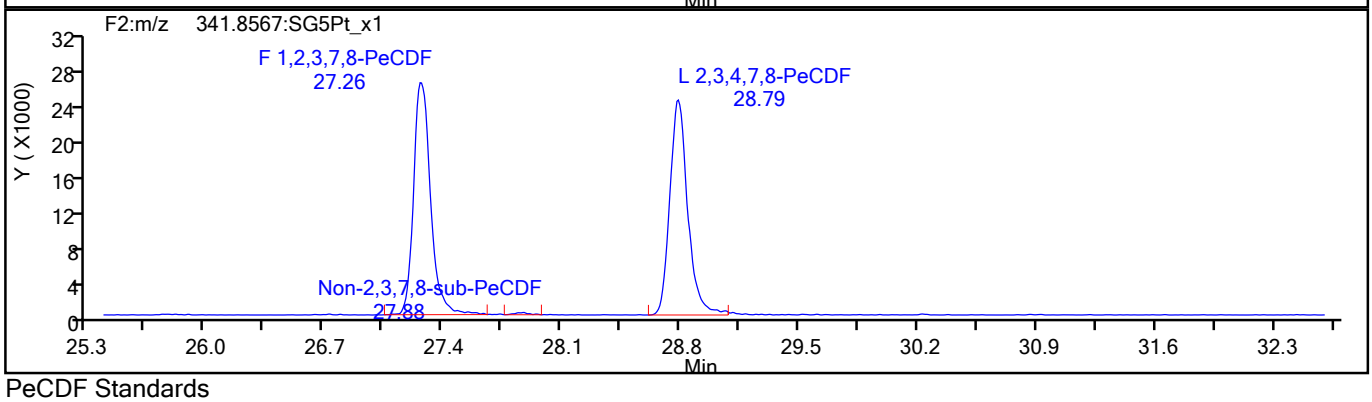

PeCDF Standards

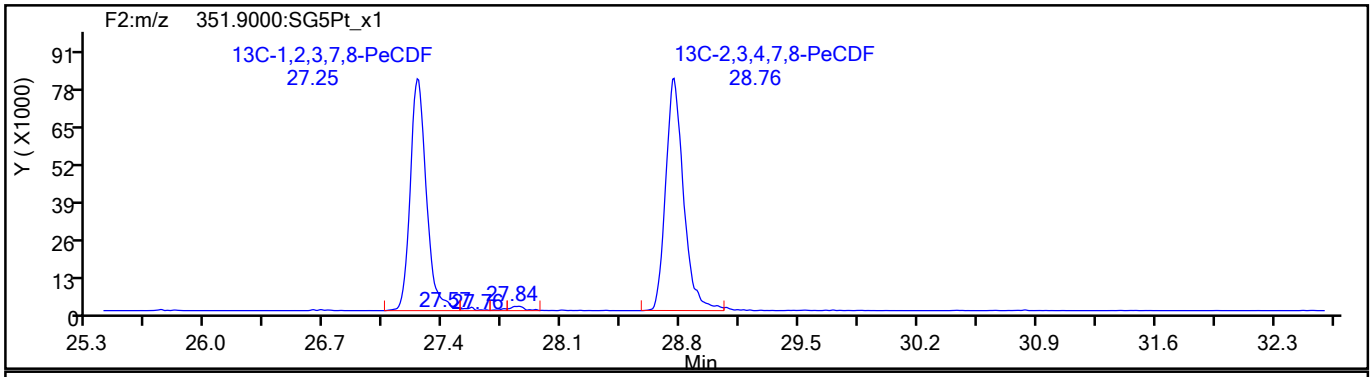

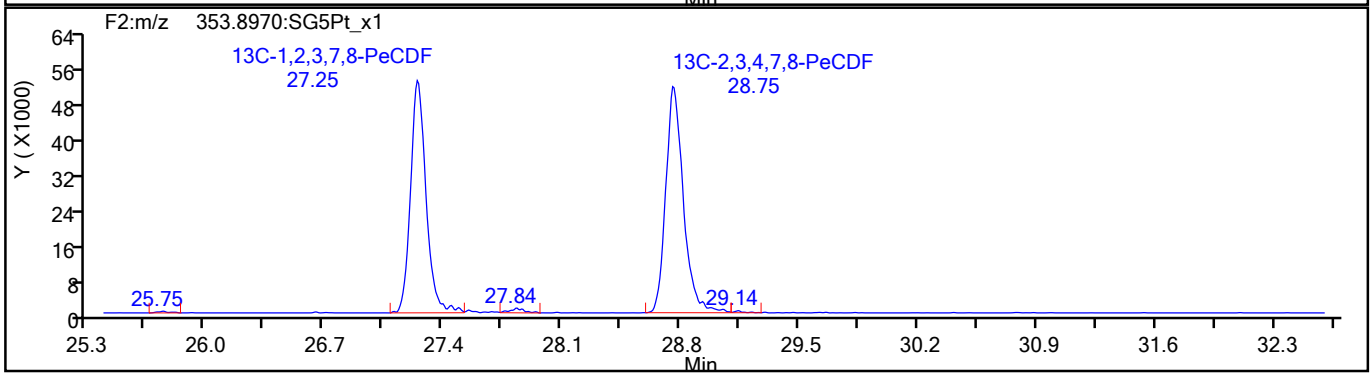

789306

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

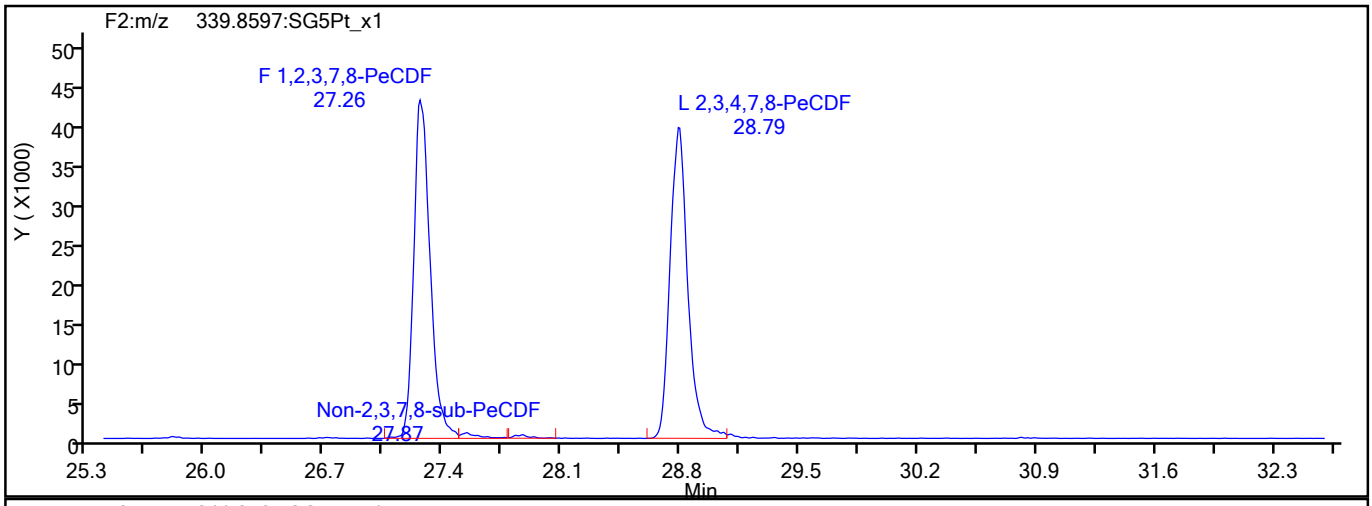

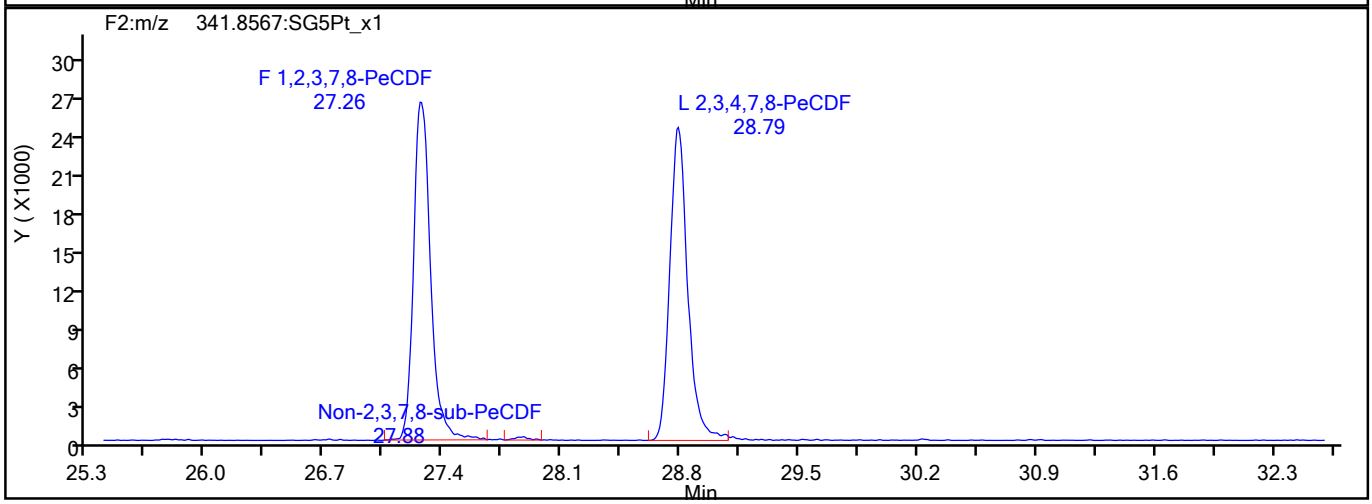

PeCDF Interference Mass

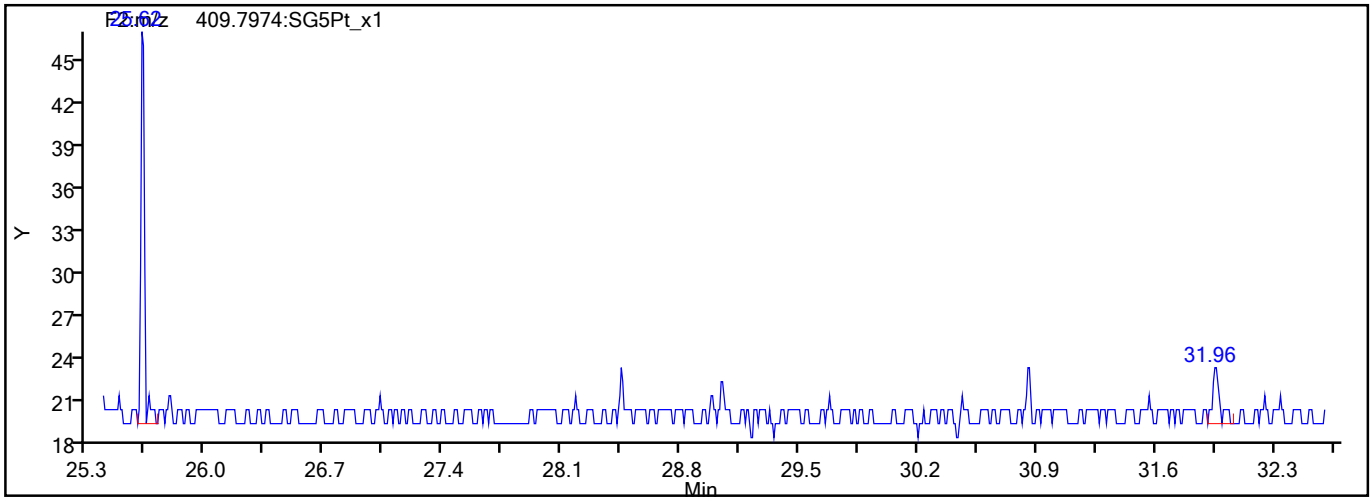

789307

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

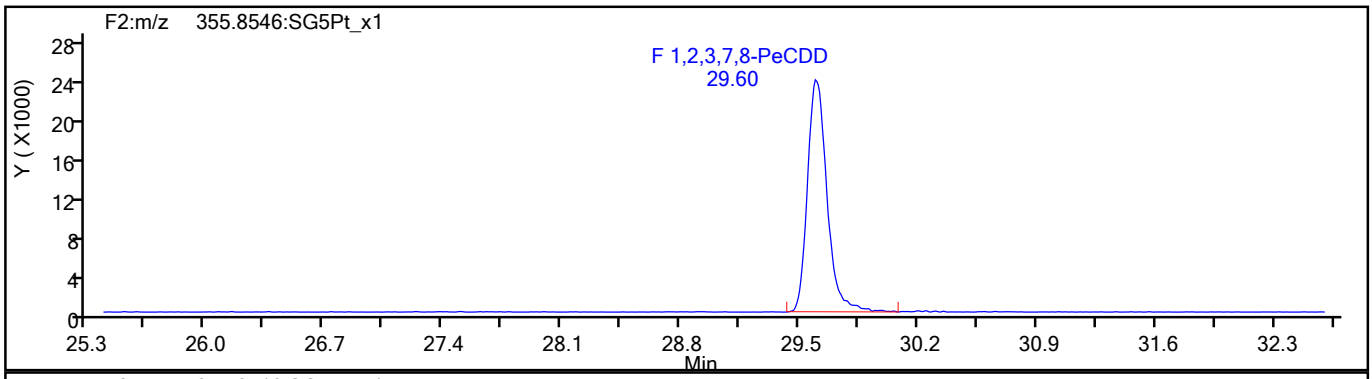

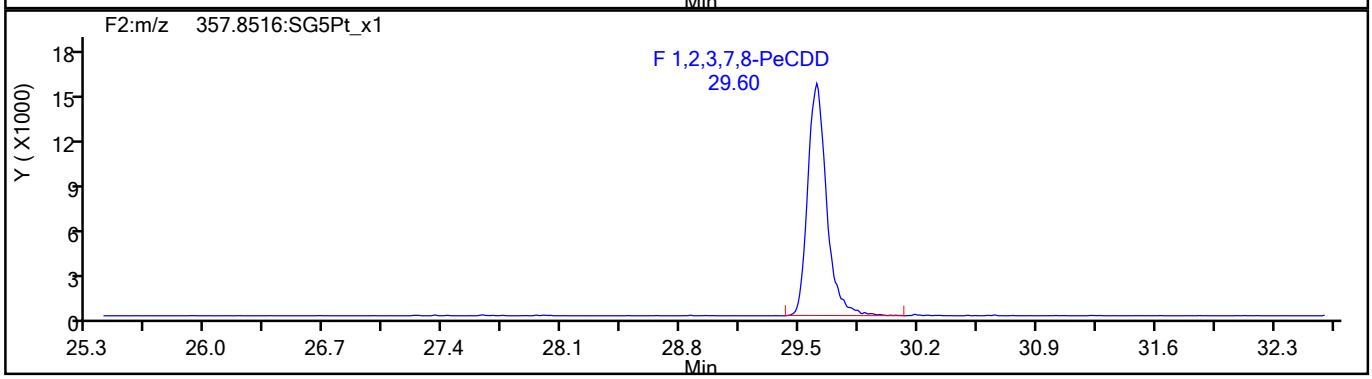

PeCDD Standards

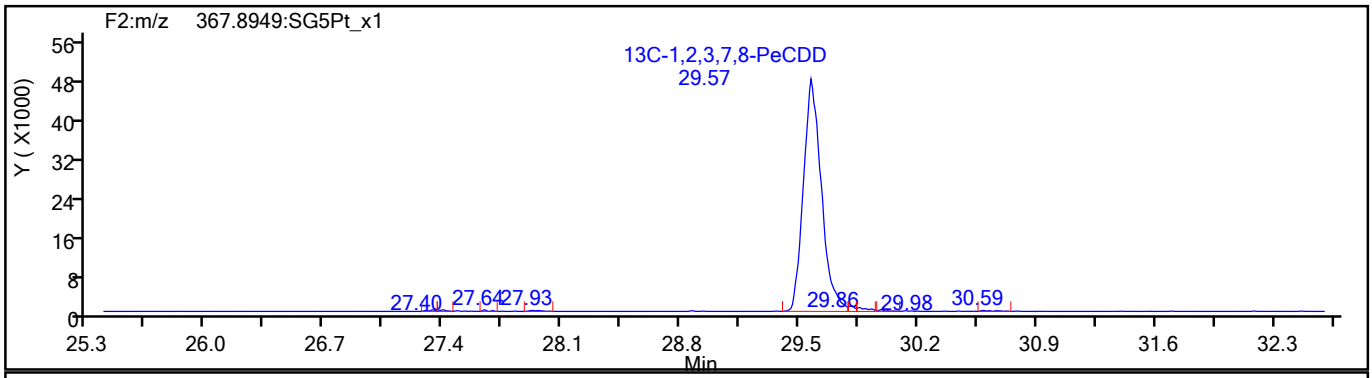

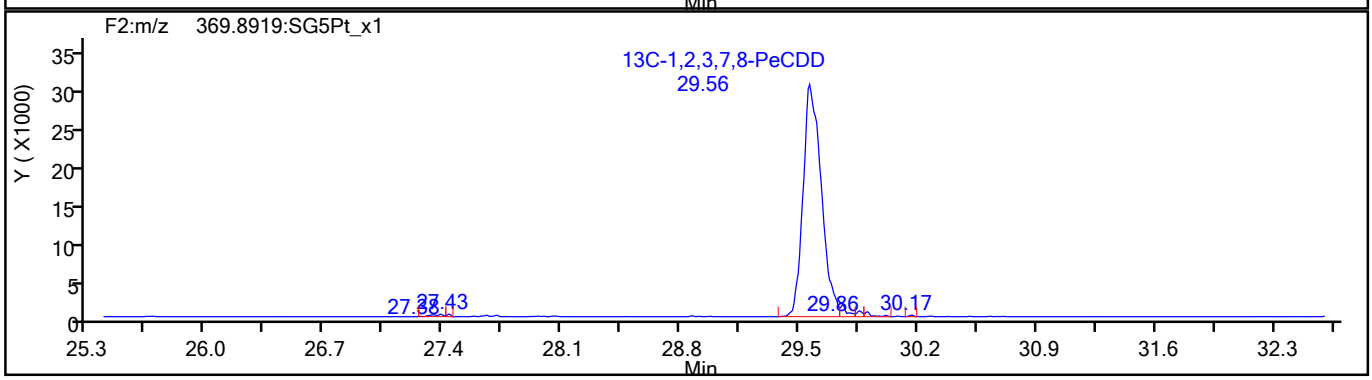

789308

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

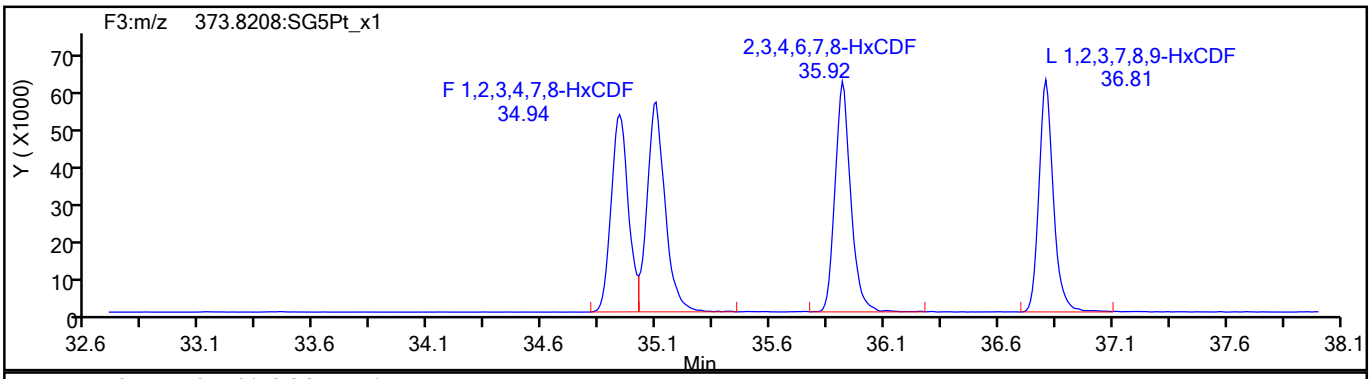

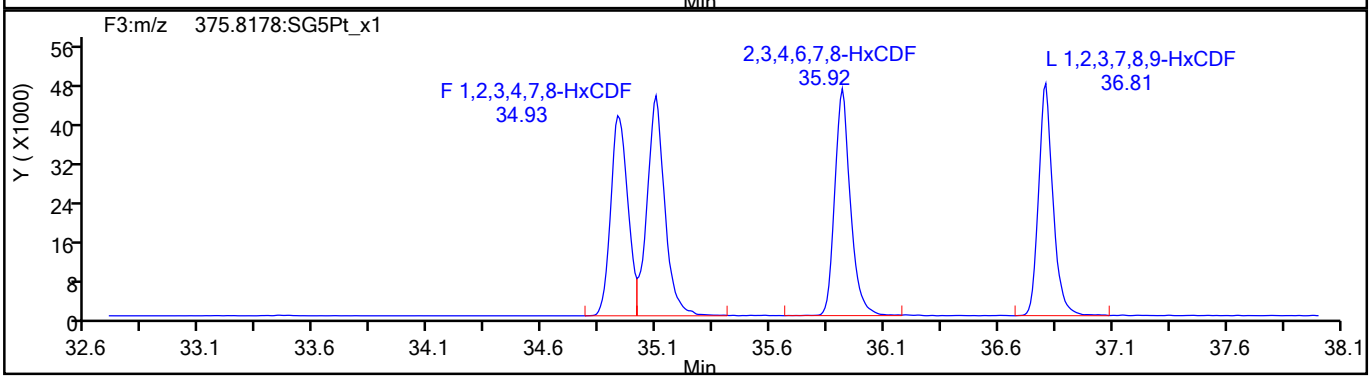

HxCDF Standards

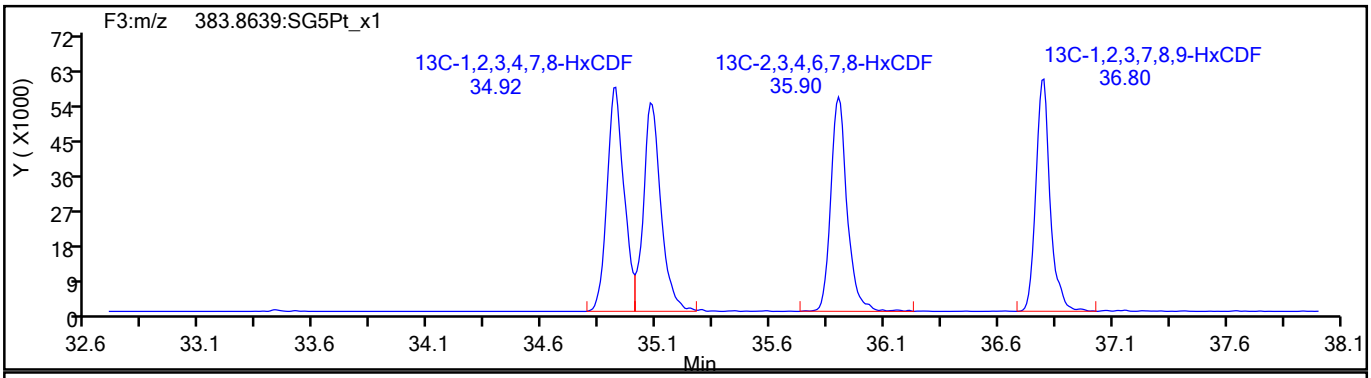

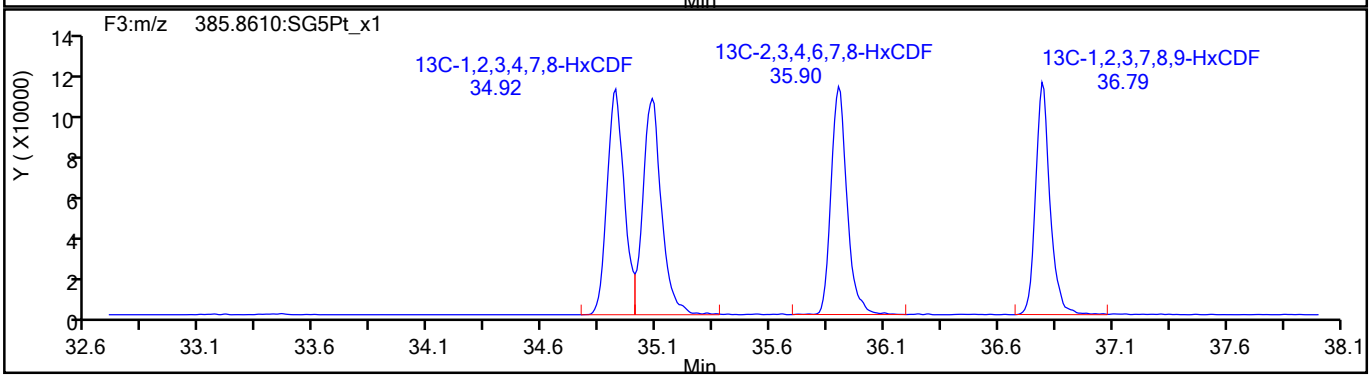

789309

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

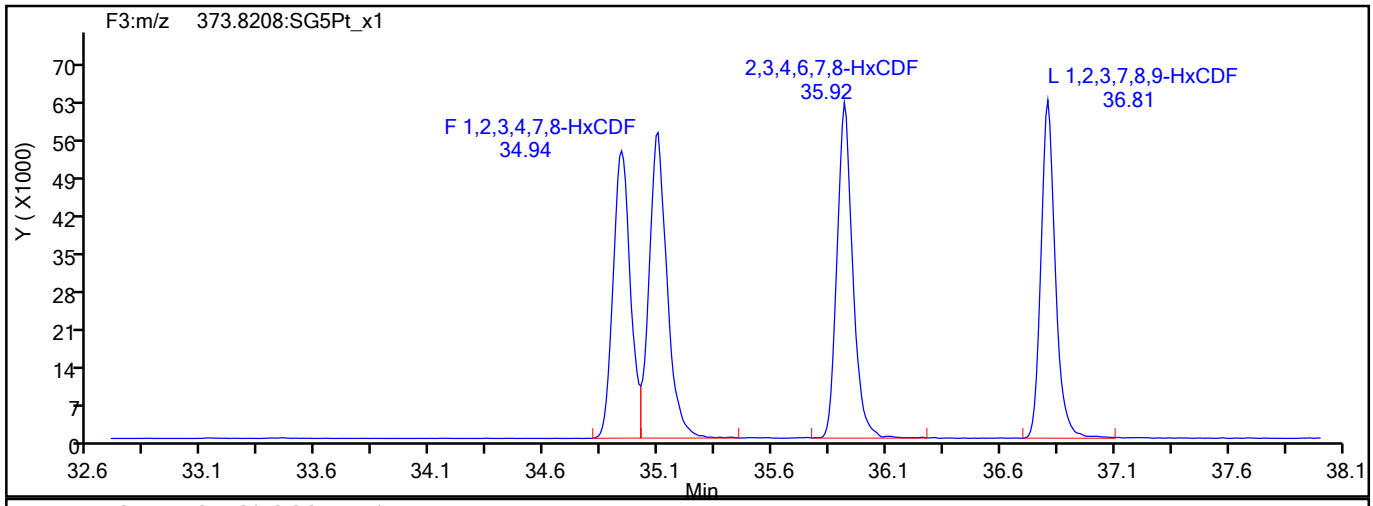

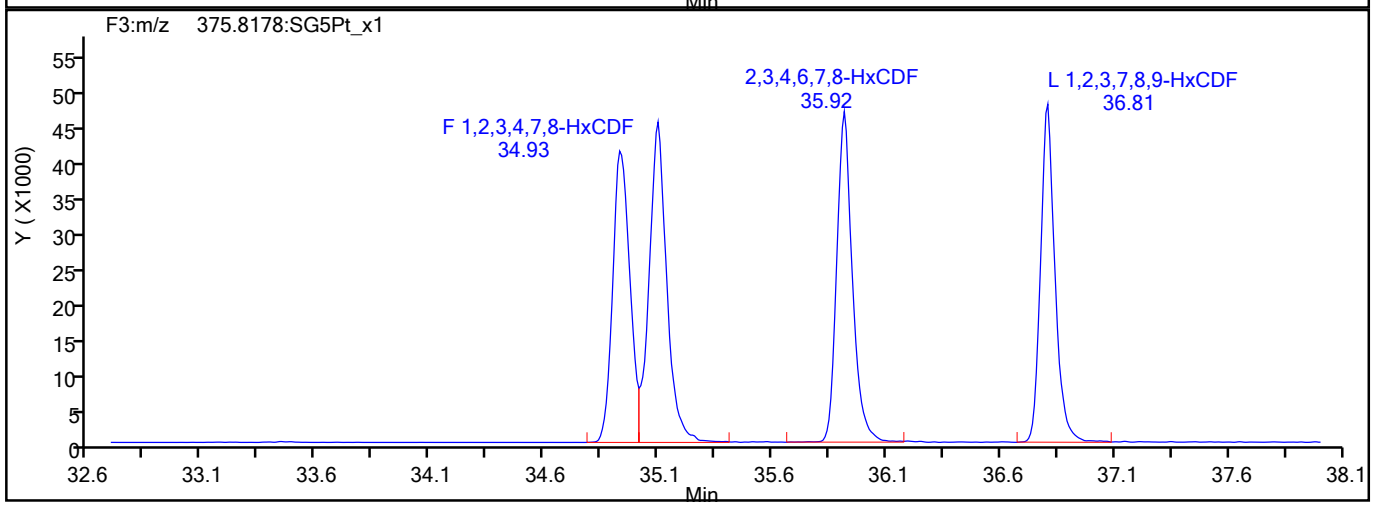

HxCDF Interference Mass

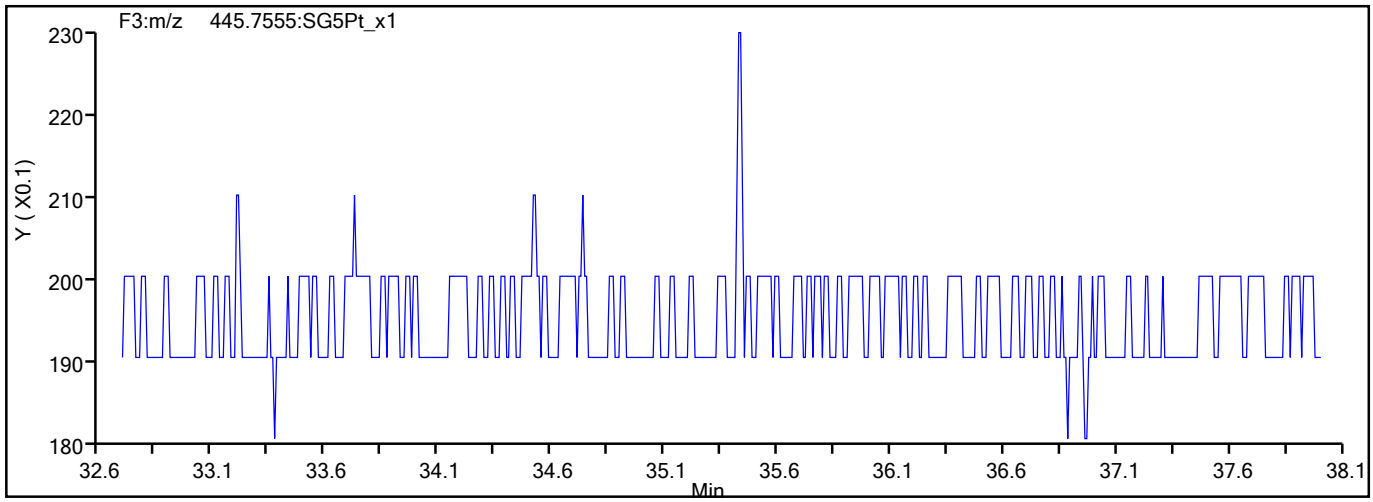

789310

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

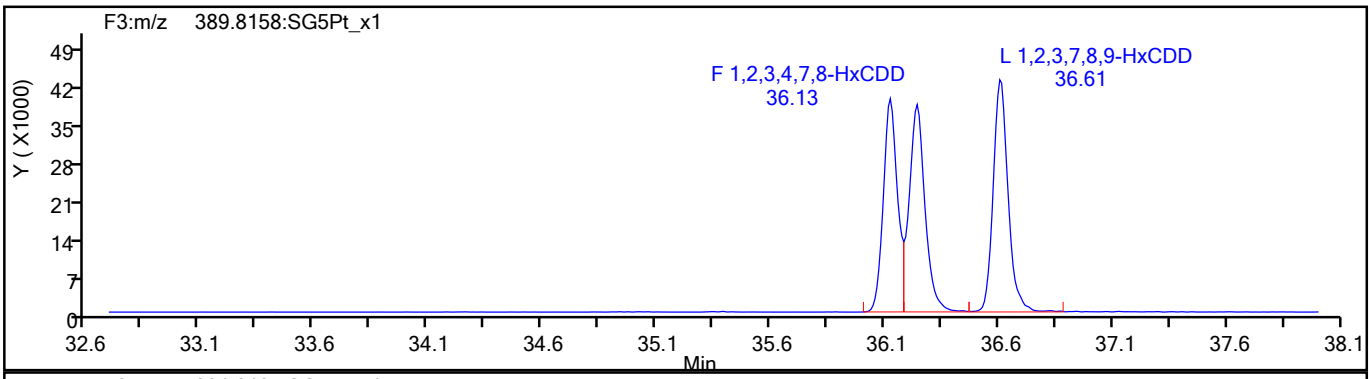

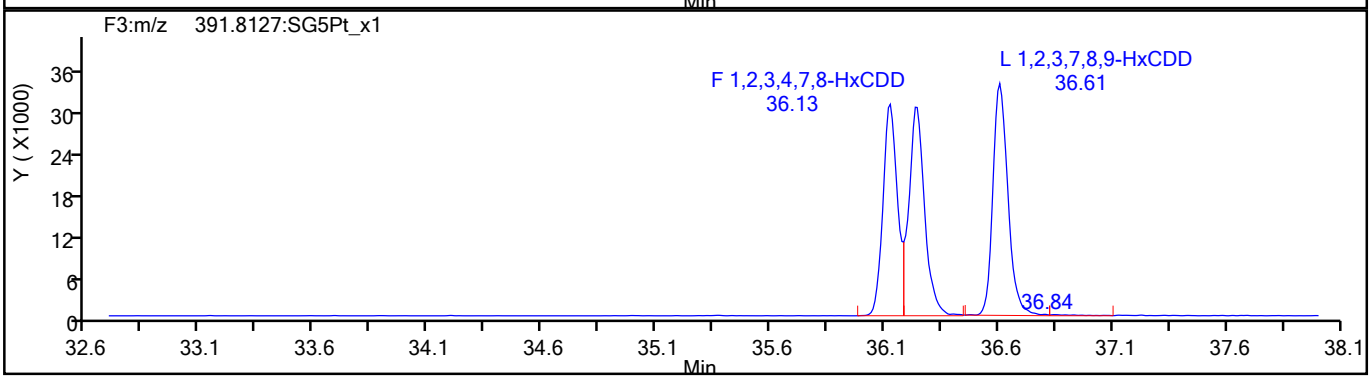

HxCDD Standards

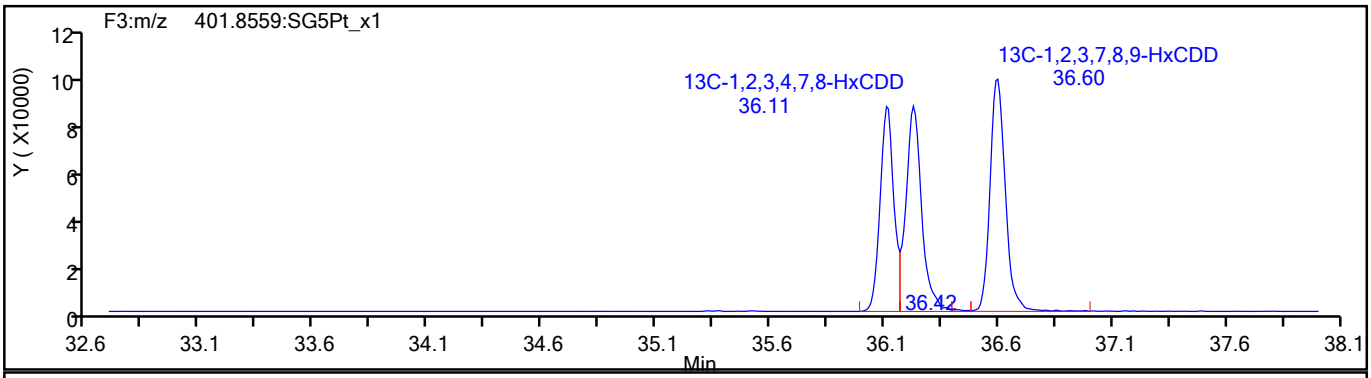

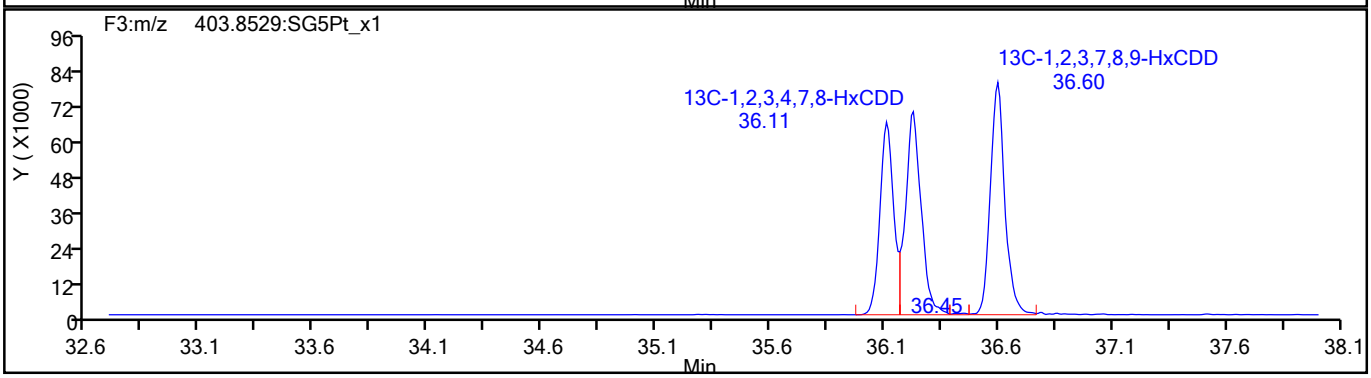

789311

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

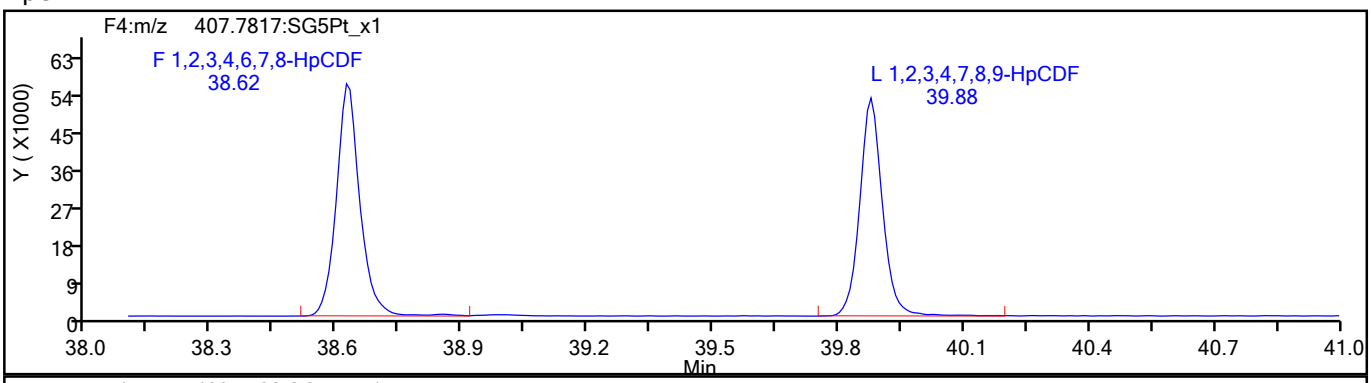

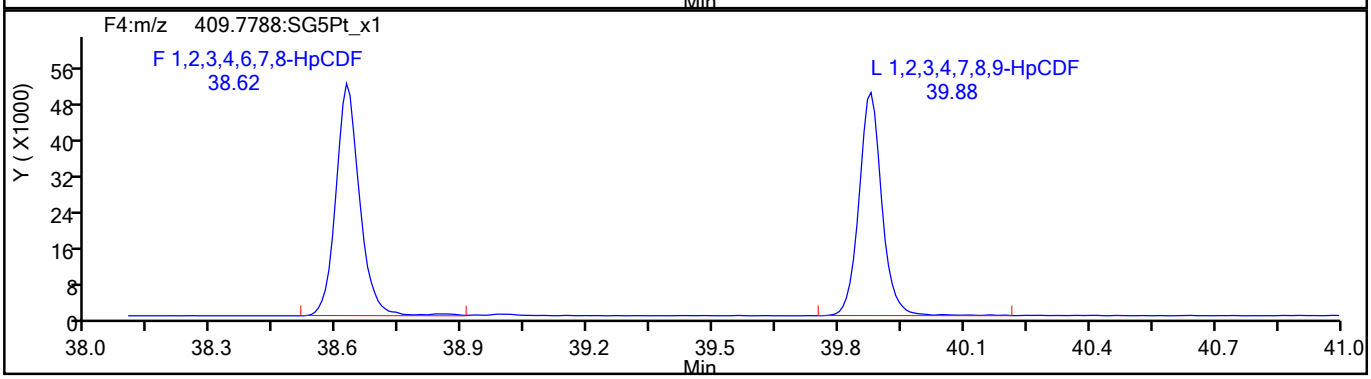

HpCDF Standards

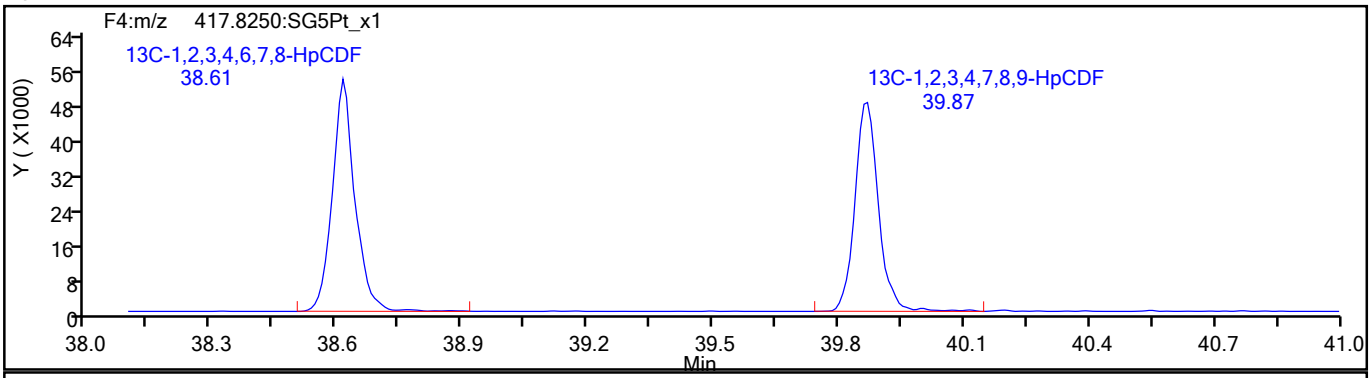

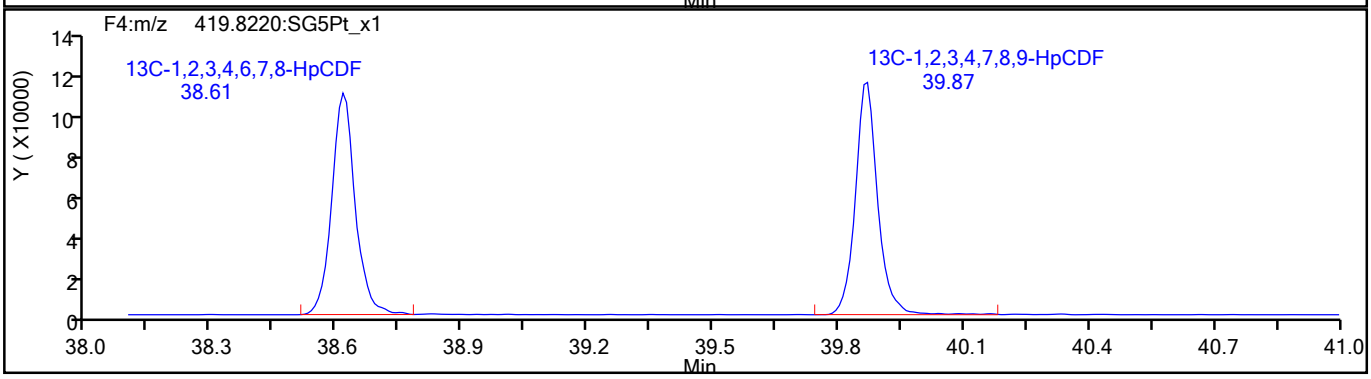

789312

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

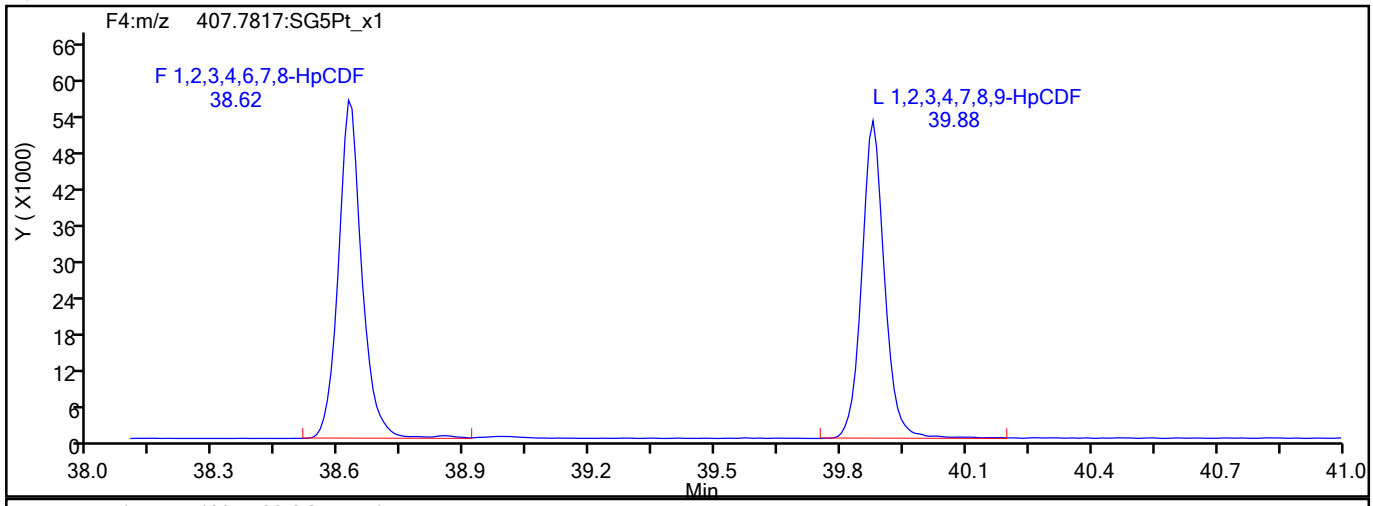

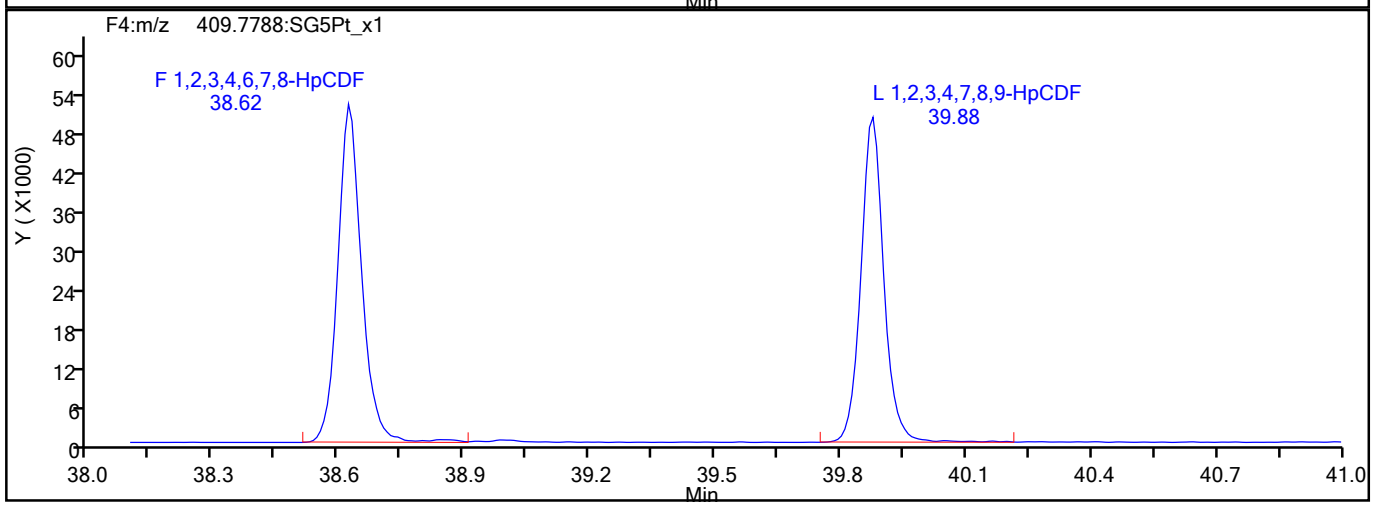

HpCDF Interference Mass

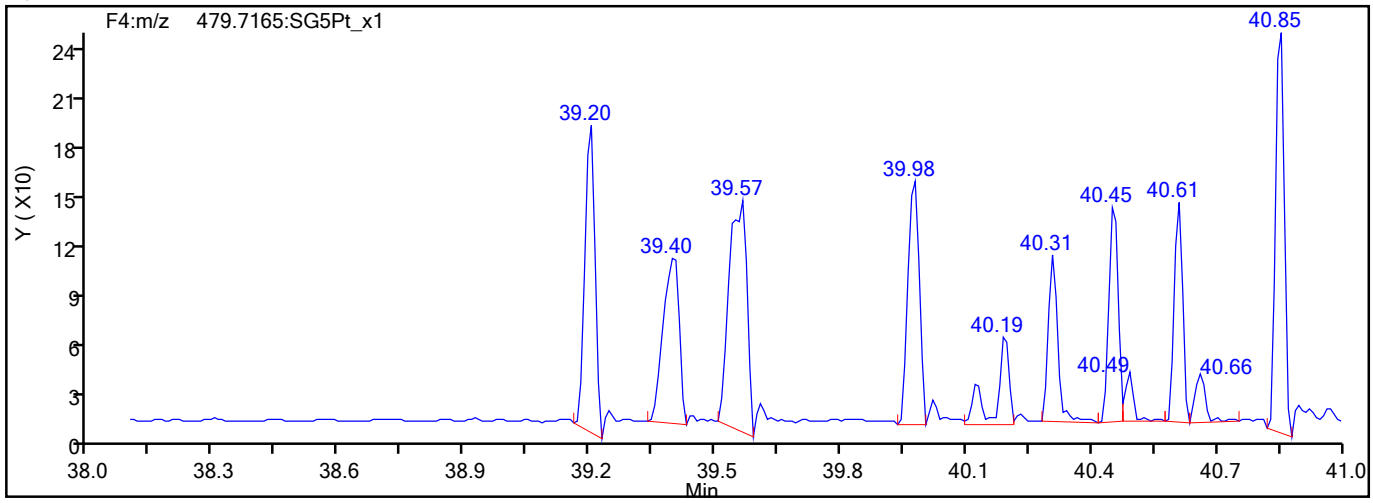

789313

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

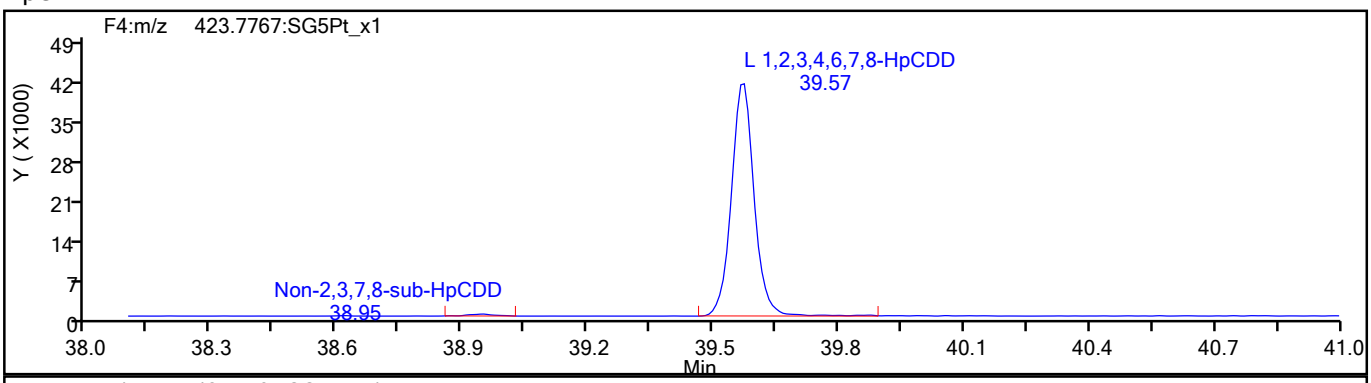

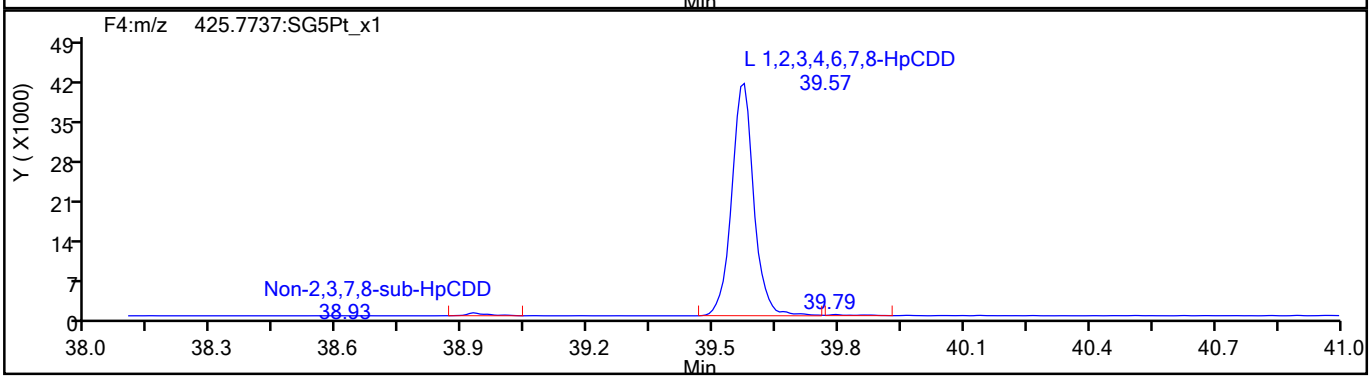

HpCDD Standards

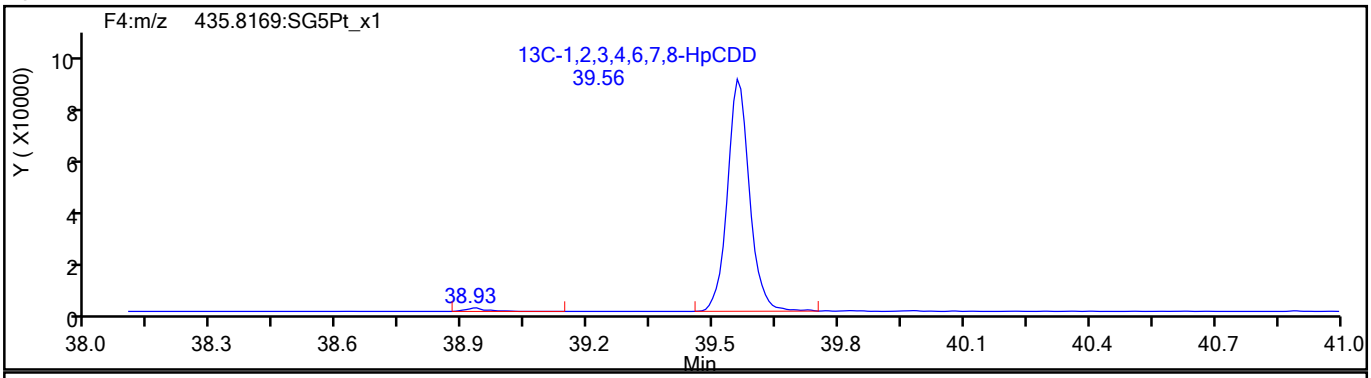

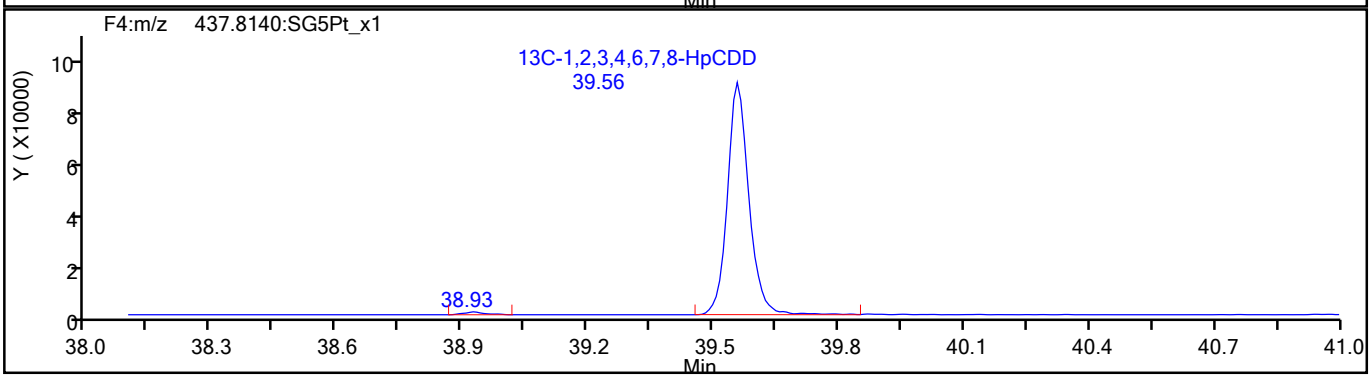

789314

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

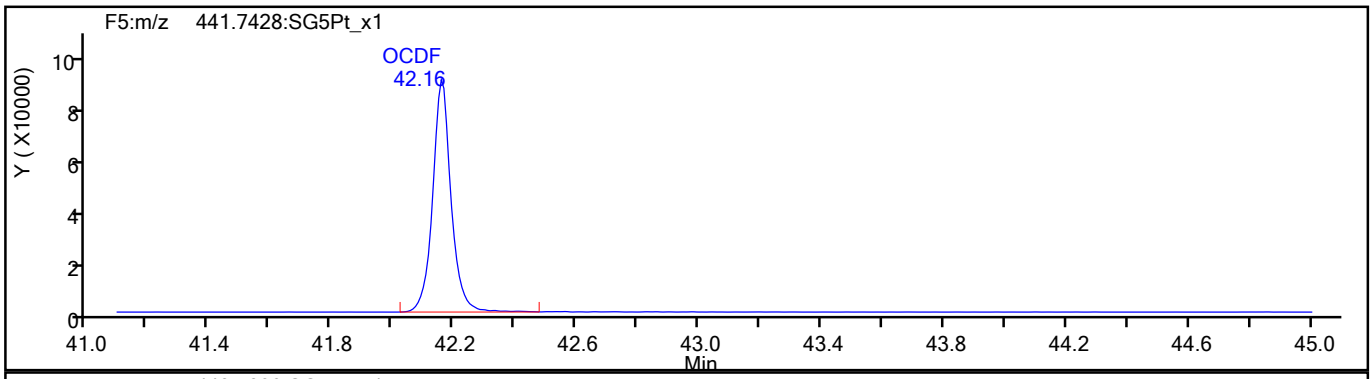

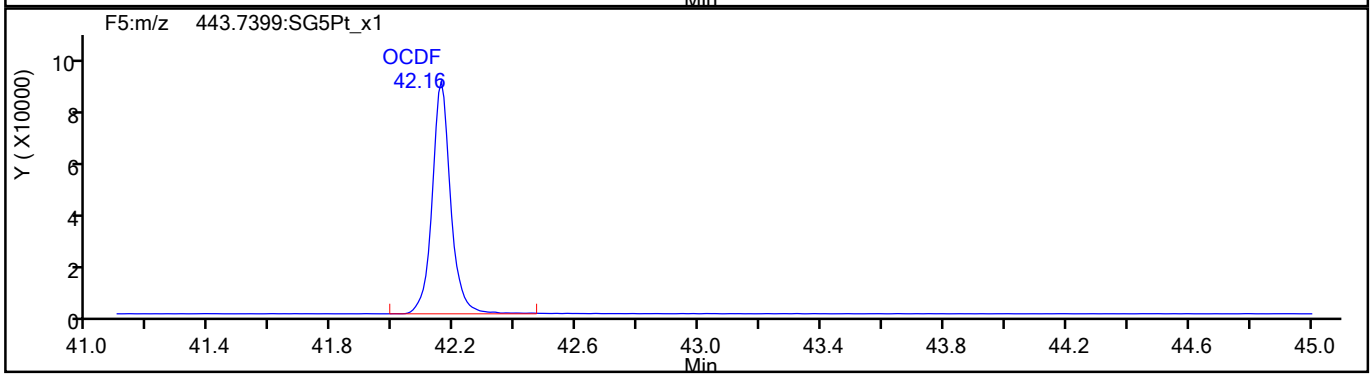

OCDF Standards

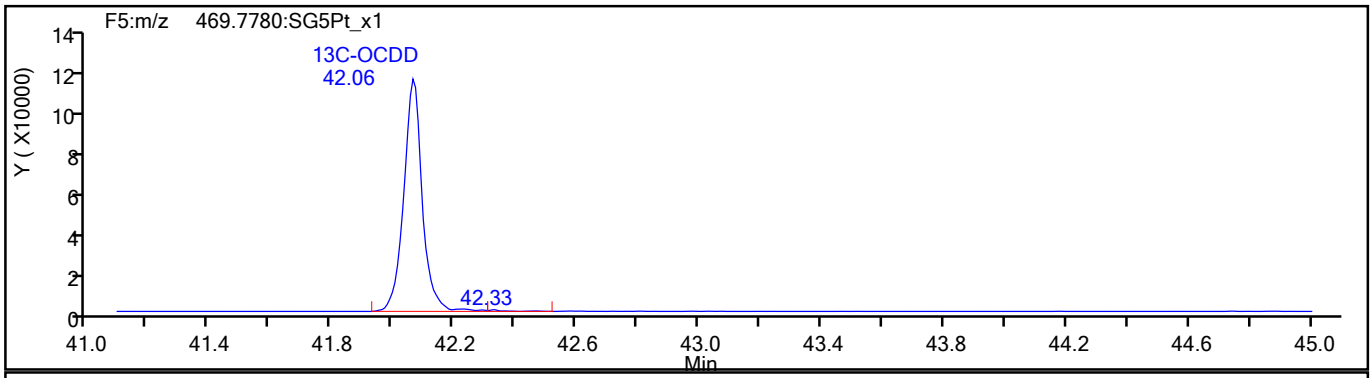

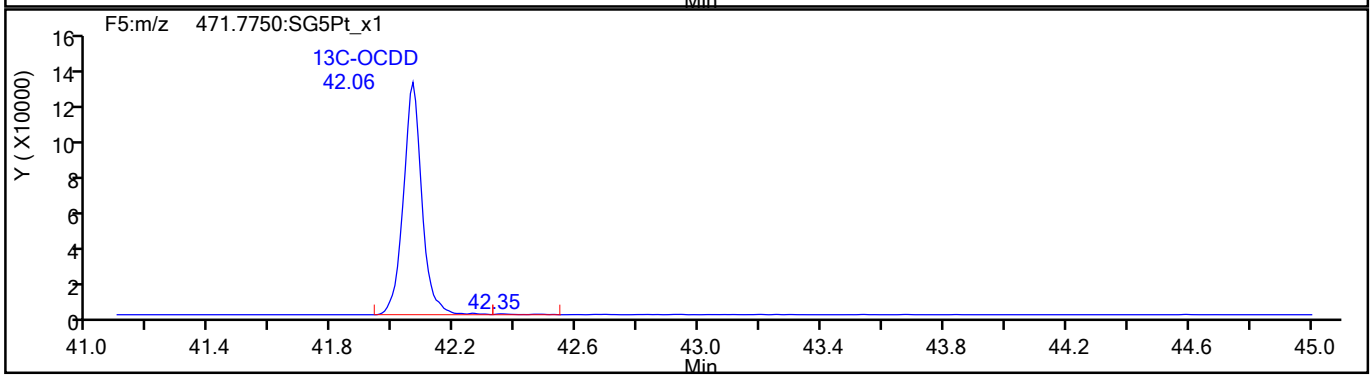

789315

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

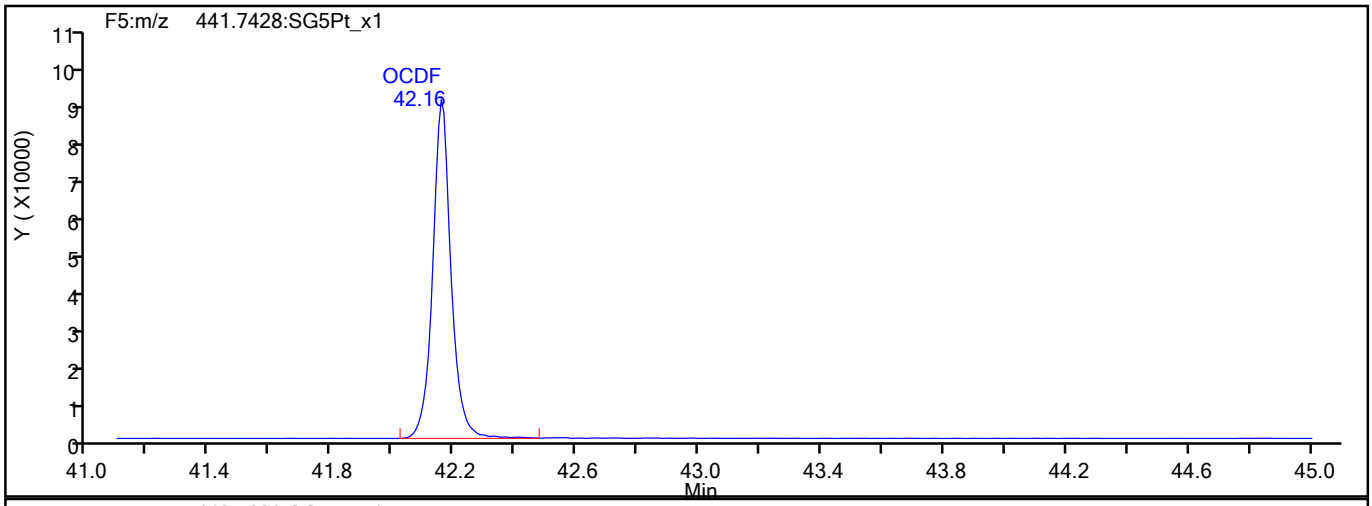

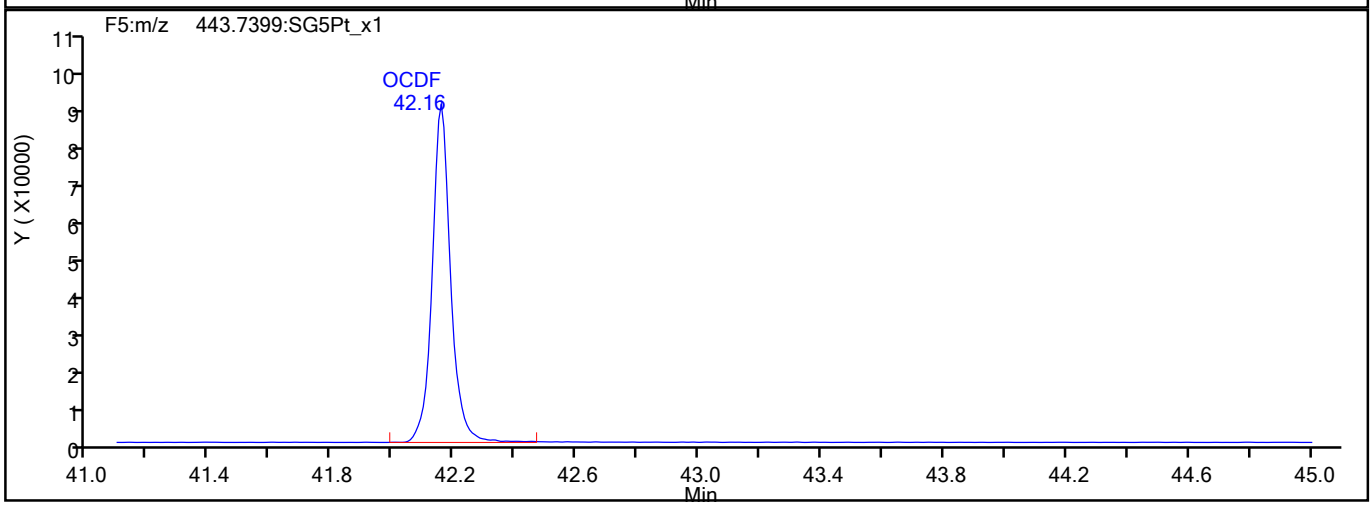

OCDF Interference Mass

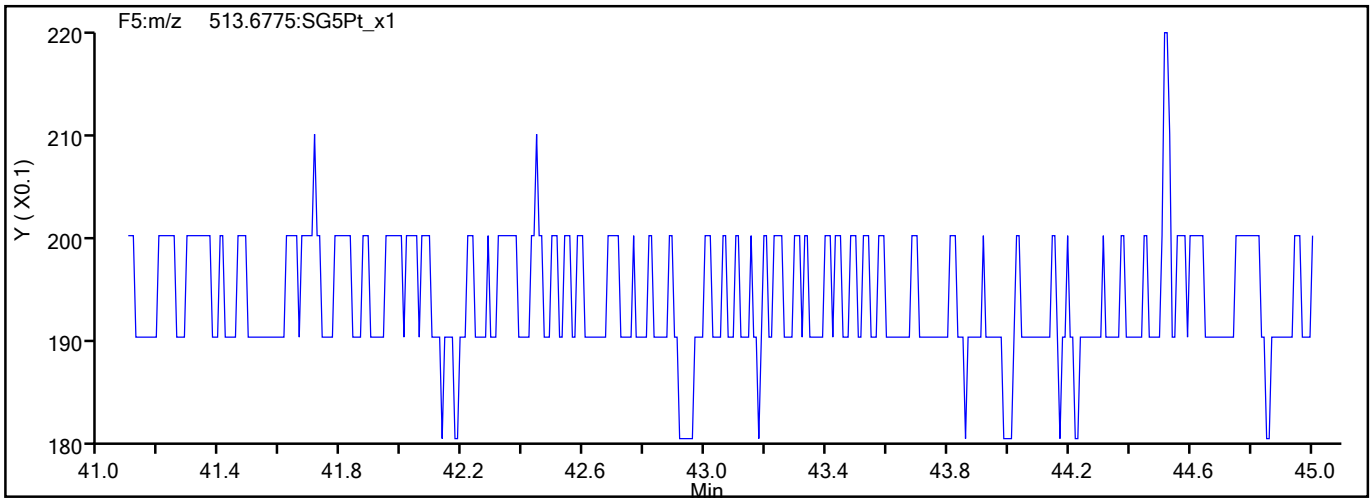

789316

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

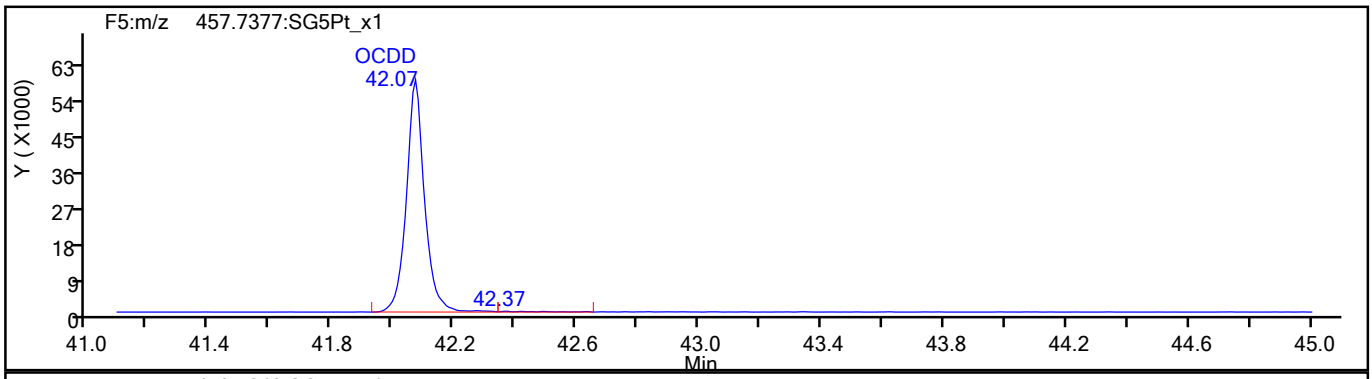

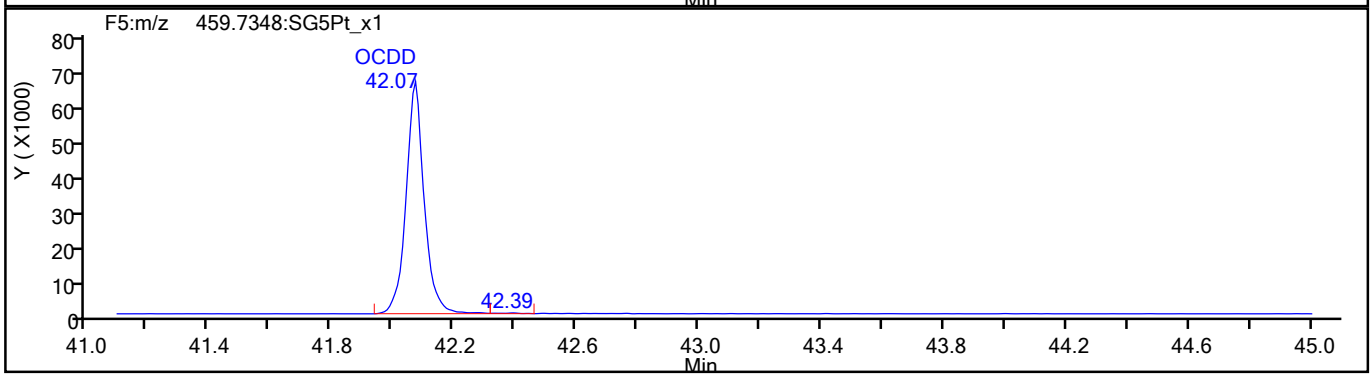

OCDD Standards

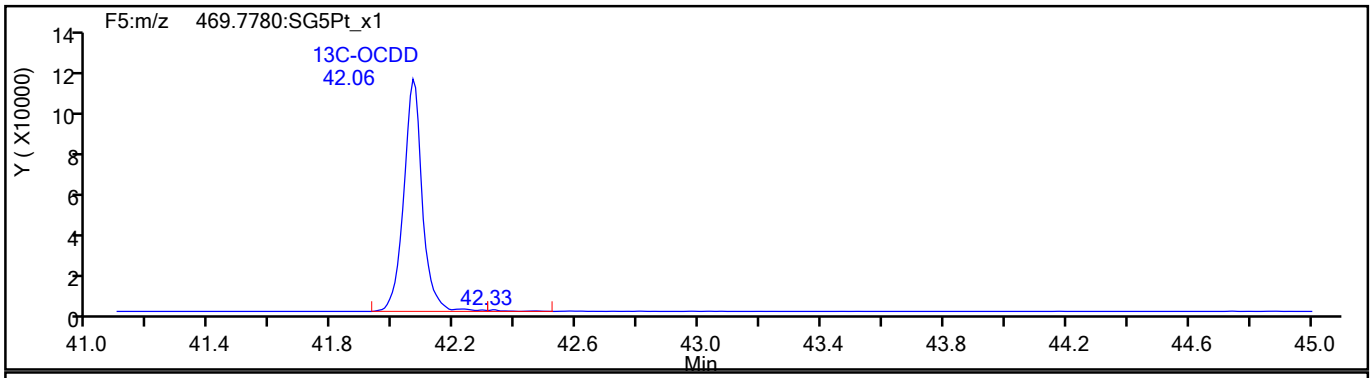

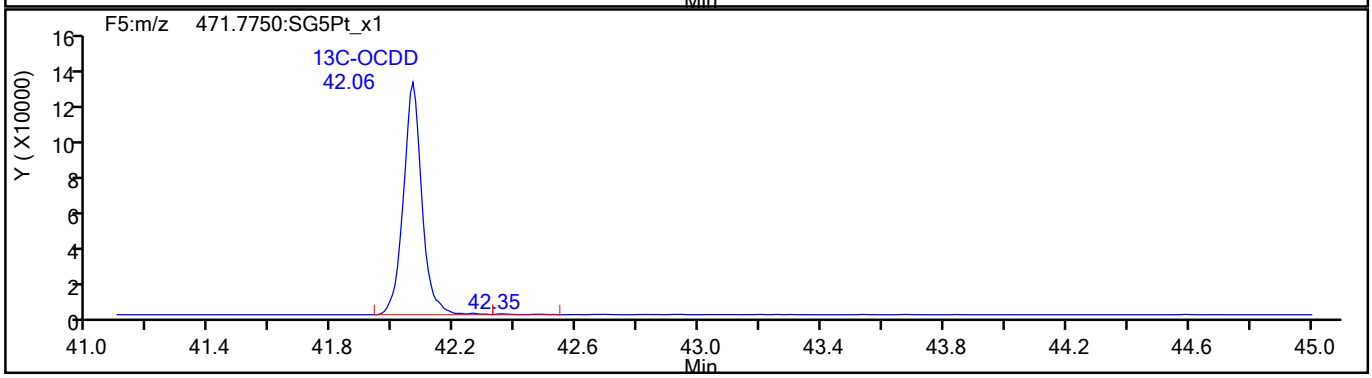

789317

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

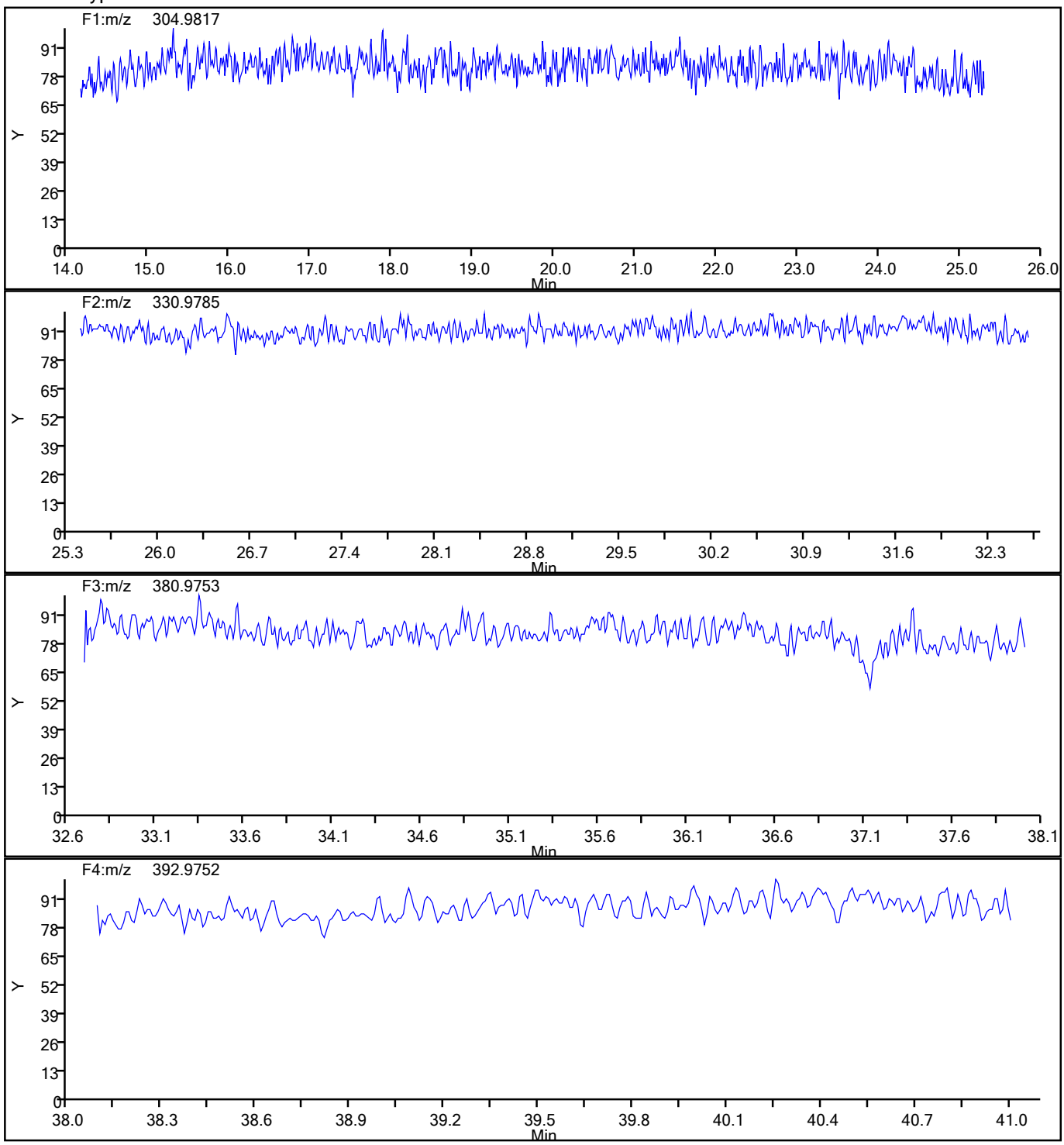

789318

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

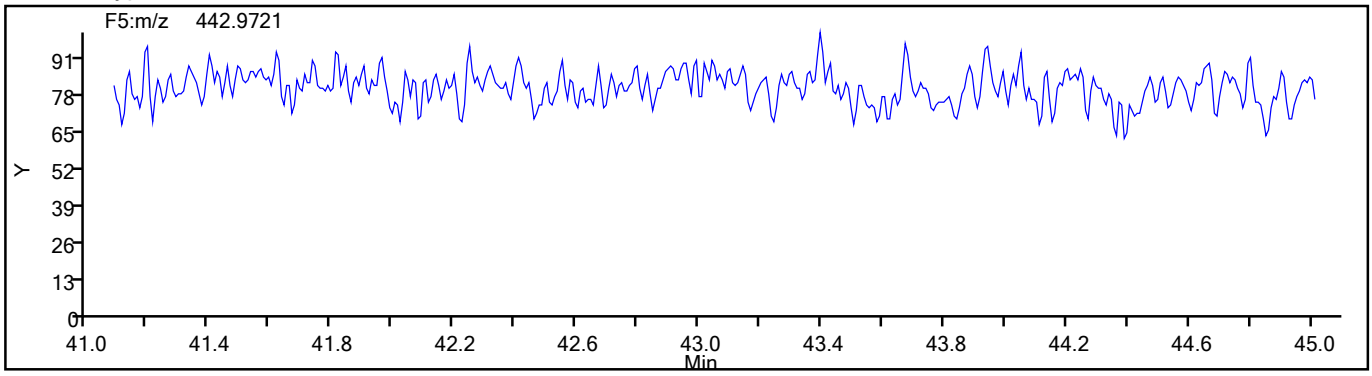

789319

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Lab Sample ID: CCV 320-518043/15 Calibration Date: 08/20/2021 01:34

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 19au21dfs1_17.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.048		9.71	10.0	97	84-120
2,3,7,8-TCDD	AveID	1.075	1.025		9.54	10.0	95	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.061		50.3	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9636		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.060		50.7	50.0	101	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.159		50.5	50.0	101	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.243		51.0	50.0	102	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.301		53.5	50.0	107	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9540		45.0	50.0	90	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9885		49.8	50.0	100	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.141		51.4	50.0	103	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.300		52.4	50.0	105	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.388		48.1	50.0	96	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.034		49.2	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.281		48.9	50.0	98	86-116
OCDD	AveID	1.062	1.054		99.3	100	99	79-126
OCDF	AveID	1.317	1.471		112	100	112	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.409		105	100	105	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9327		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.157		101	100	101	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.165		103	100	103	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6996		97.6	100	98	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.060		110	100	110	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.105		103	100	103	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.008		96.8	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8016		106	100	106	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.8667		101	100	101	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	1.116		115	100	115	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.9098		124	100	124	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.6899		102	100	102	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7820		114	100	114	77-129
13C-OCDD	Ave	0.5446	0.6551		241	200	120	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	0.9918		9.84	10.0	98	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	19AU21DFS1_1	Resolution Check	RC 081921	46			KSS	1.000	
2	19AU21DFS1_2	WDM HRDXNCP_00044	WDM 081921	1	Dioxin		KSS	1.000	
3	19AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081921	2	Dioxin		KSS	1.000	
4	19AU21DFS1_4	SB Solvent Blank C14	SB 081921	3	Dioxin		KSS	1.000	
5	19AU21DFS1_5	mb 320-513879/1-a RI	mb 320-513879/1-a	4	1613B/Solid	D267	KSS	10.000	g
6	19AU21DFS1_6	320-76888-a-13-a RI	320-76888-a-13-a	5	1613B/Solid	D266	KSS	10.000	g
7	19AU21DFS1_7	320-76901-a-3-a	320-76901-a-3-a	6	1613B/Solid	D267	KSS	10.000	g
8	19AU21DFS1_8	320-76901-a-4-a	320-76901-a-4-a	7	1613B/Solid		KSS	10.000	g
9	19AU21DFS1_9	320-76901-a-5-a	320-76901-a-5-a	8	1613B/Solid		KSS	10.000	g
10	19AU21DFS1_10	320-76901-a-6-a	320-76901-a-6-a	9	1613B/Solid		KSS	10.000	g
11	19AU21DFS1_11	320-76901-a-7-a	320-76901-a-7-a	10	1613B/Solid		KSS	10.000	g
12	19AU21DFS1_12	320-76901-a-8-a	320-76901-a-8-a	11	1613B/Solid		KSS	10.000	g
13	19AU21DFS1_13	320-76901-a-9-a	320-76901-a-9-a	12	1613B/Solid		KSS	10.000	g
14	19AU21DFS1_14	320-76901-a-13-a	320-76901-a-13-a	13	1613B/Solid		KSS	10.000	g
15	19AU21DFS1_15	SB Solvent Blank C14	SB 081921A	3	Dioxin		KSS	1.000	
16	19AU21DFS1_16	Resolution Check	RC 081921A	46			KSS	1.000	
17	19AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081921A	2	Dioxin		KSS	1.000	
18	19AU21DFS1_18	WDM HRDXNCP_00044	WDM 081921A	1	Dioxin		KSS	1.000	
19	19AU21DFS1_19	SB Solvent Blank C14	SB 081921B	3	Dioxin		KSS	1.000	
20	19AU21DFS1_20	320-76888-a-5-a 5X	320-76888-a-5-a	14	1613B/Solid	D267	KSS	10.000	g
21	19AU21DFS1_21	320-76888-a-1-a 10X	320-76888-a-1-a	15	1613B/Solid		KSS	10.000	g
22	19AU21DFS1_22	320-76888-a-1-b ms 10X	320-76888-a-1-b ms	16	1613B/Solid		KSS	10.000	g
23	19AU21DFS1_23	320-76888-a-1-c msd 10X	320-76888-a-1-c msd	17	1613B/Solid		KSS	10.000	g
24	19AU21DFS1_24	320-76888-a-4-a 10X	320-76888-a-4-a	18	1613B/Solid		KSS	10.000	g
25	19AU21DFS1_25	320-76888-a-2-a 10X	320-76888-a-2-a	19	1613B/Solid		KSS	10.000	g
26	19AU21DFS1_26	320-76901-a-1-a 10X	320-76901-a-1-a	20	1613B/Solid		KSS	10.000	g
27	19AU21DFS1_27	320-76888-a-3-a 10X	320-76888-a-3-a	21	1613B/Solid		KSS	10.000	g
28	19AU21DFS1_28	SB Solvent Blank C14	SB 081921C	3	Dioxin		KSS	1.000	
29	19AU21DFS1_29	SB Solvent Blank C14	SB 081921D	3	Dioxin		KSS	1.000	
30	19AU21DFS1_30	Resolution Check	RC 081921B	46			KSS	1.000	

Logfile ✓'d
8/21/21
KSS

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 13:39
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11552 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10549 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11385 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11272 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11335 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11001 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11059 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10420 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10449 [5%height]

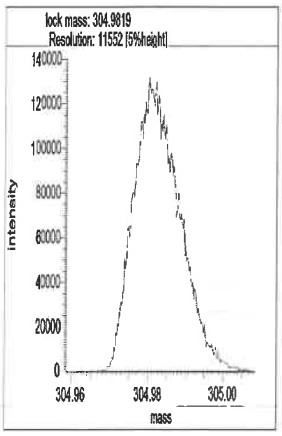

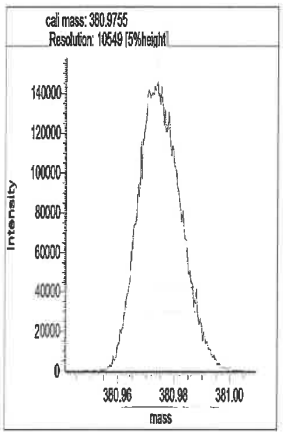

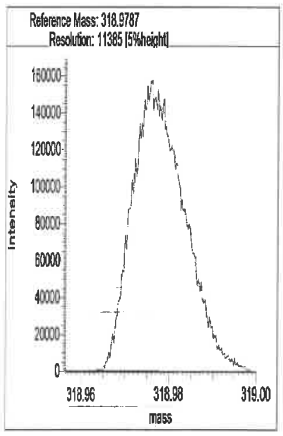

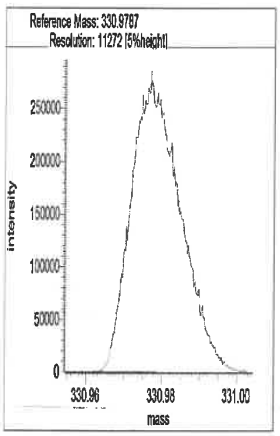

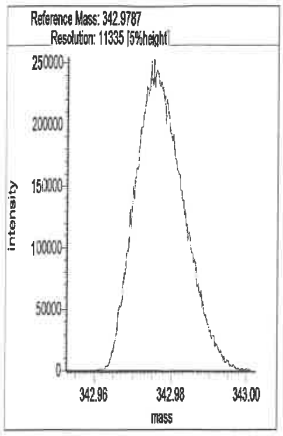

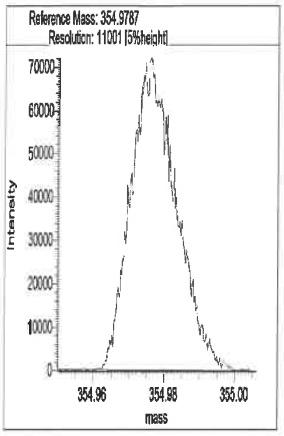

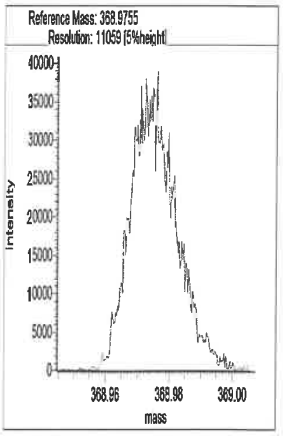

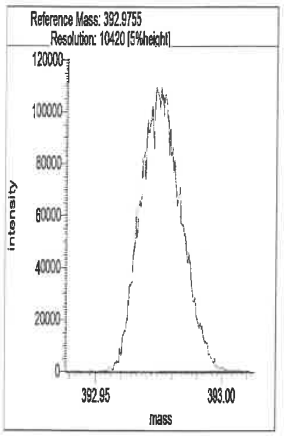

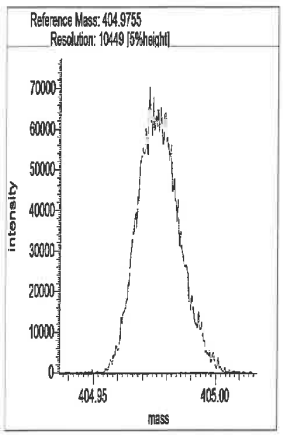

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11485 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10793 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11226 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11398 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10683 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10785 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10698 [5%height]

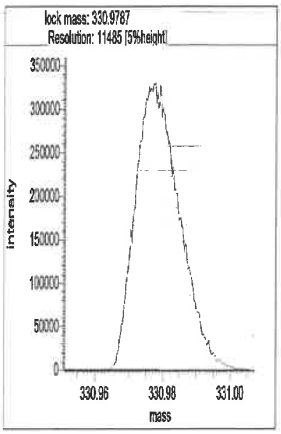

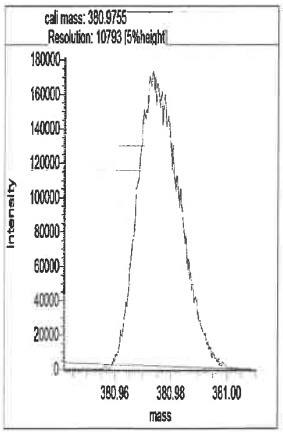

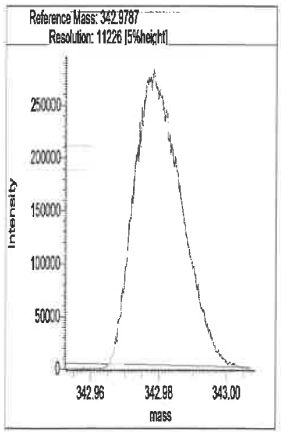

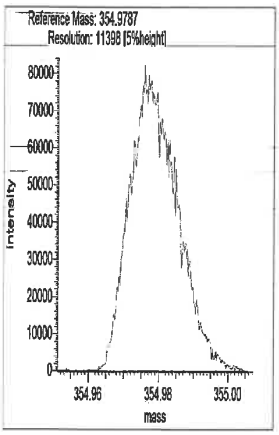

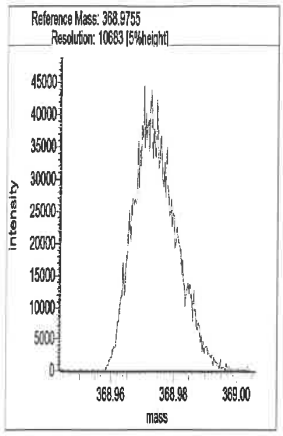

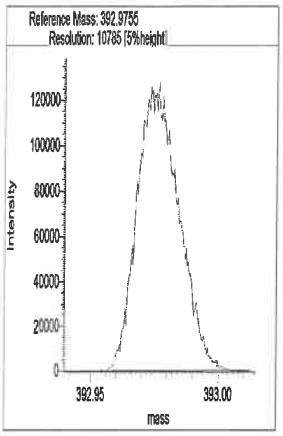

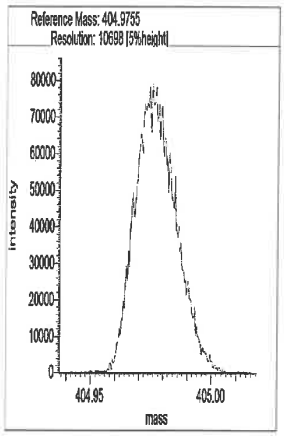

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11415 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10771 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11020 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11042 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12007 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10745 [5%height]

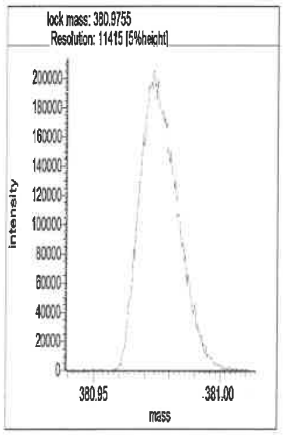

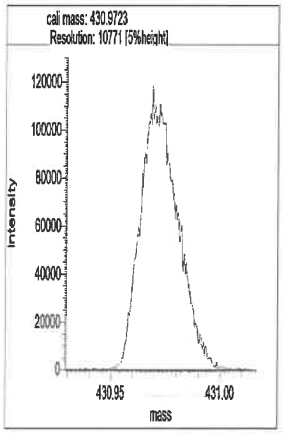

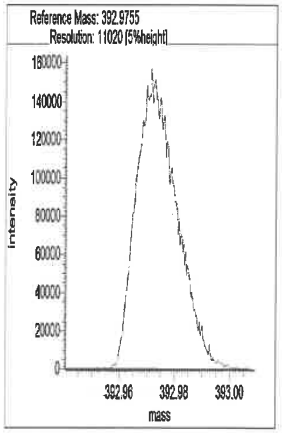

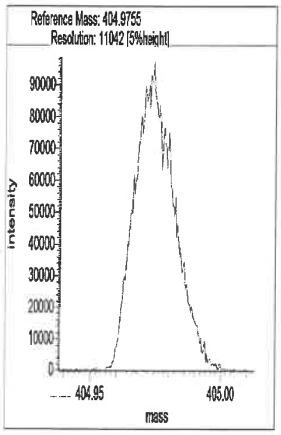

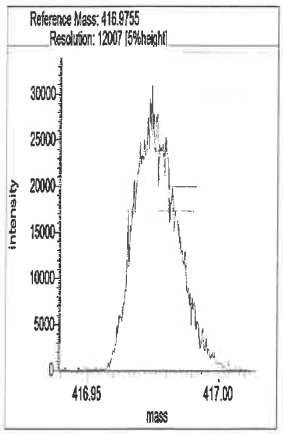

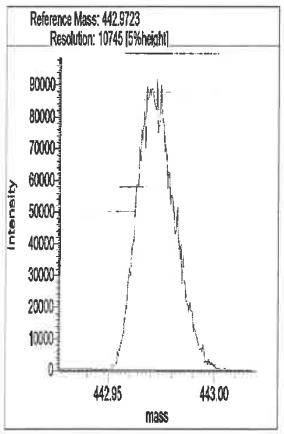

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11386 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10623 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11300 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10989 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11023 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10728 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10731 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10778 [5%height]

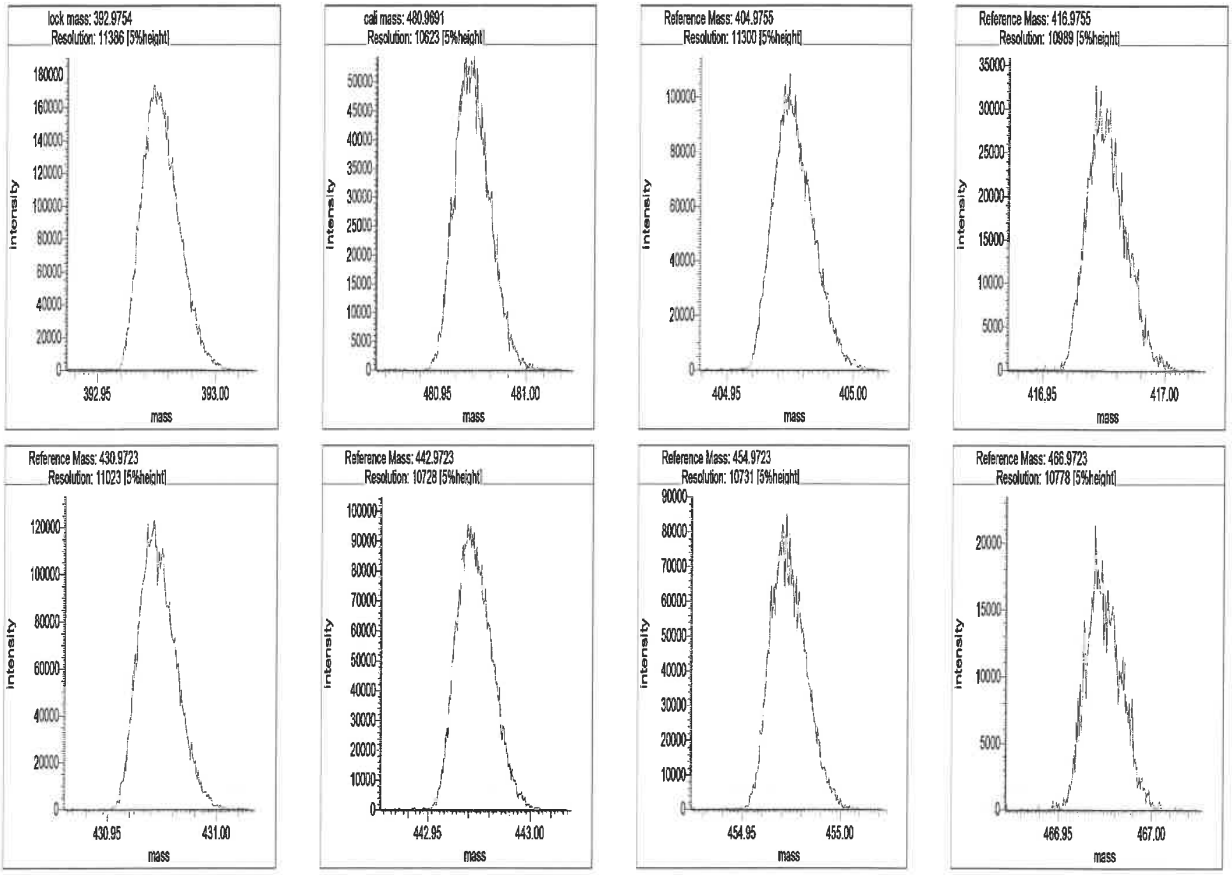

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11445 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11134 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11159 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10809 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11068 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10706 [5%height]

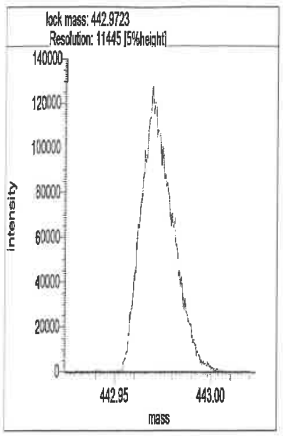
lock mass: 442.9723
Resolution: 11445 [5%height]
Intensity
mass

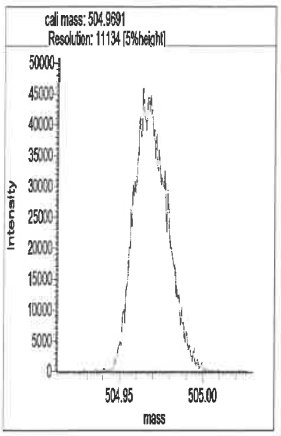
cali mass: 504.9691
Resolution: 11134 [5%height]
Intensity
mass

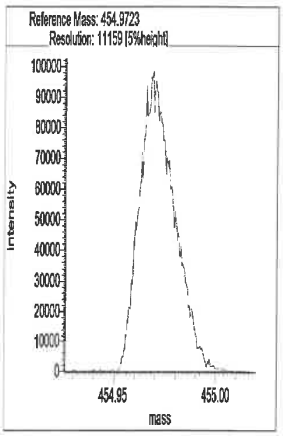
Reference Mass: 454.9723
Resolution: 11159 [5%height]
Intensity
mass

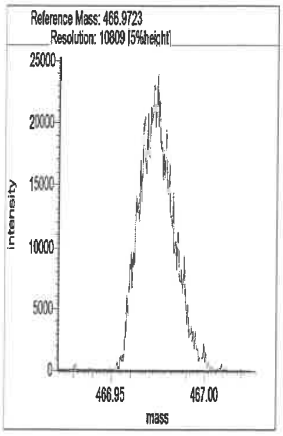
Reference Mass: 466.9723
Resolution: 10809 [5%height]
Intensity
mass

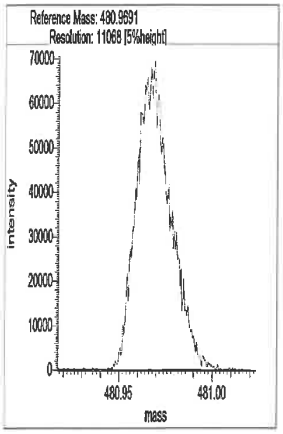
Reference Mass: 480.9691
Resolution: 11068 [5%height]
Intensity
mass

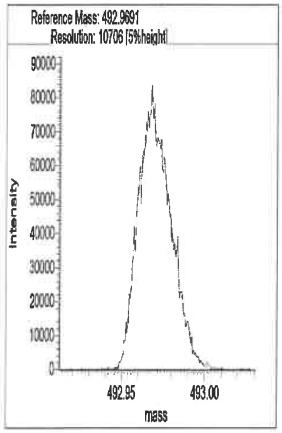
Reference Mass: 492.9691
Resolution: 10706 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 01:14
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10904 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10388 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10733 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10622 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10608 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10712 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10070 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9982 [5%height] ✓ DK 8/21/21
Ref. mass 404.9755 [m/z] Resolution: 10023 [5%height]

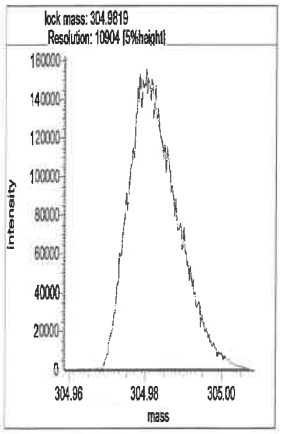

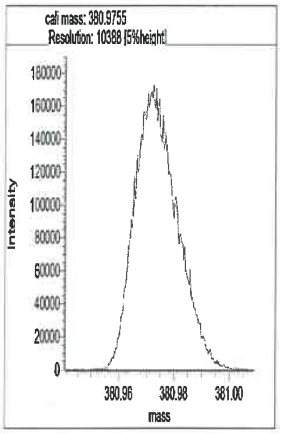

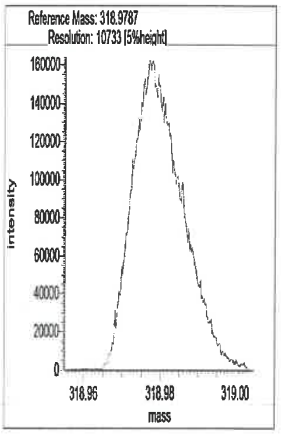

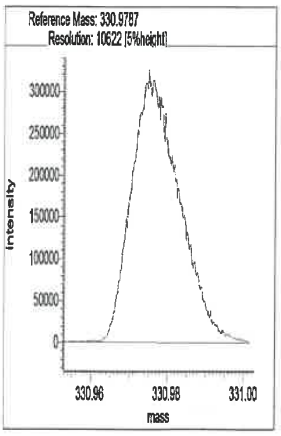

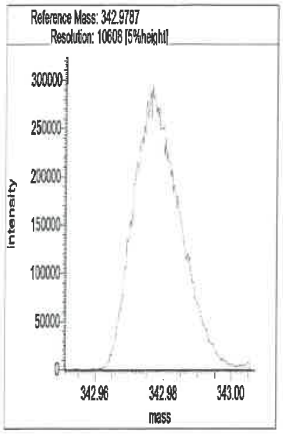

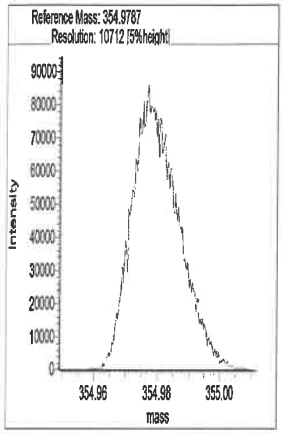

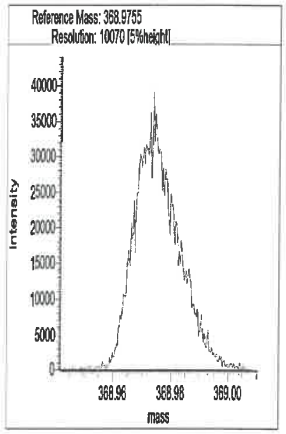

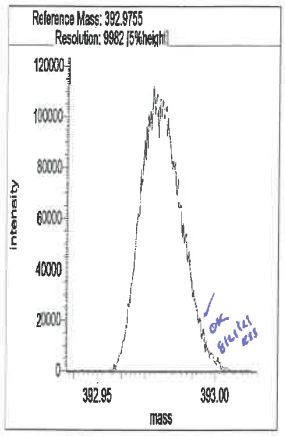

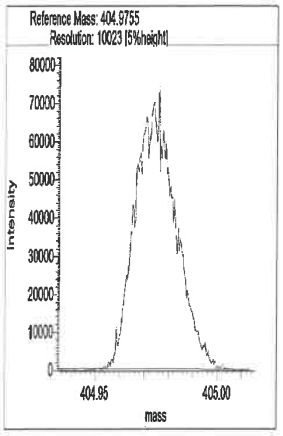

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10787 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10782 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11025 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11013 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10635 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10603 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10396 [5%height]

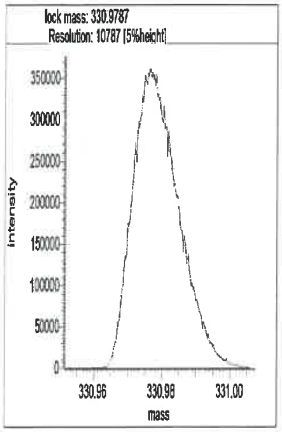

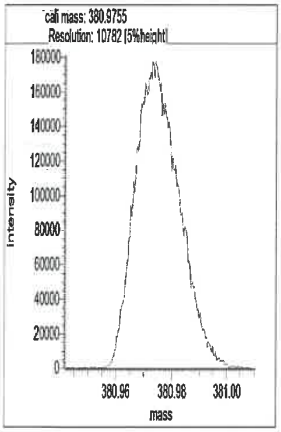

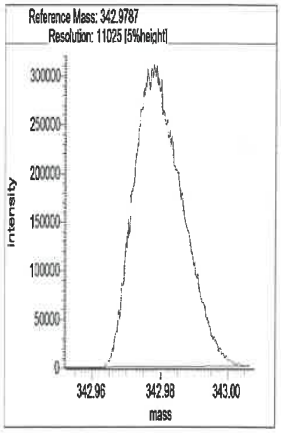

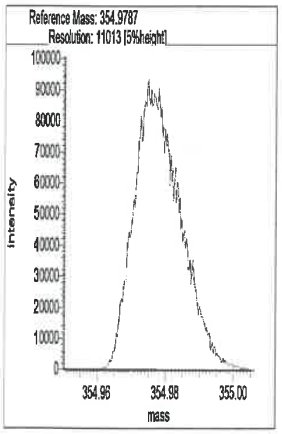

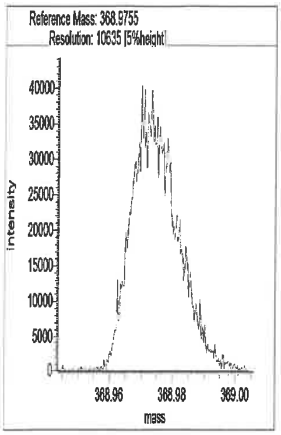

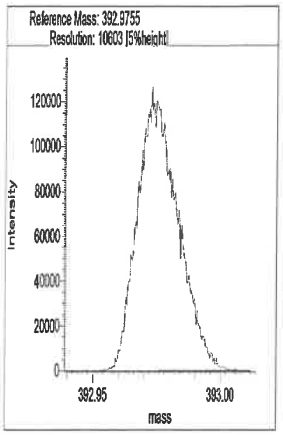

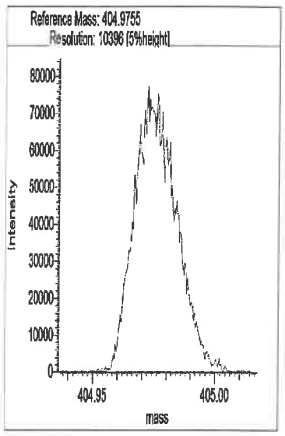

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11029 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10564 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10871 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10418 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11260 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10446 [5%height]

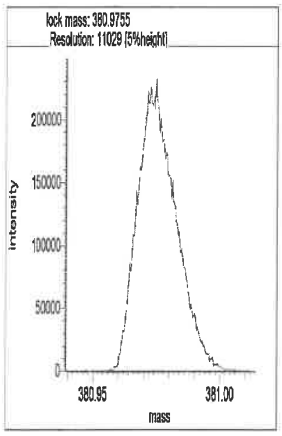

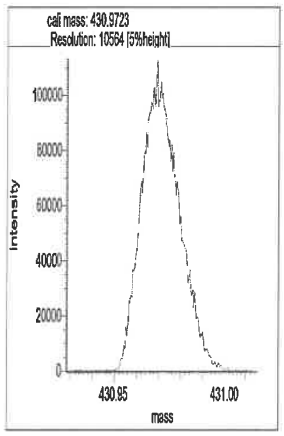

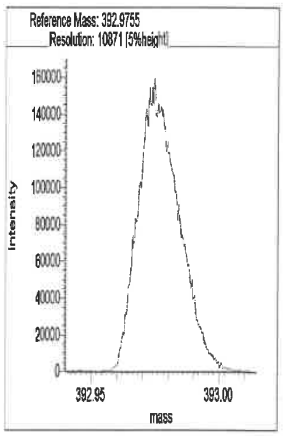

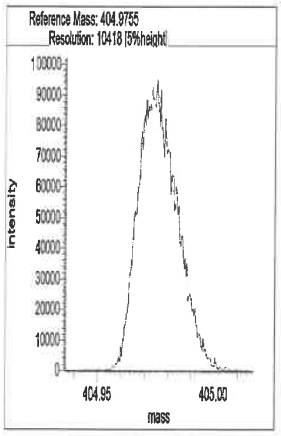

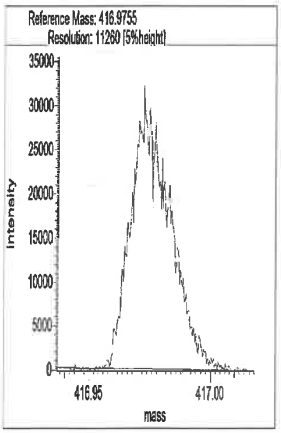

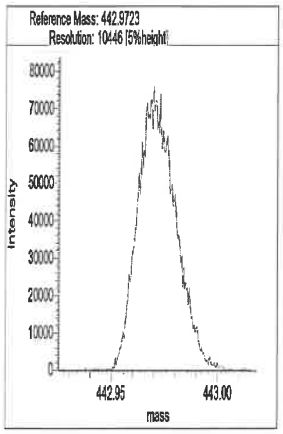

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10922 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10352 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10773 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12243 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10710 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11096 [5%height]

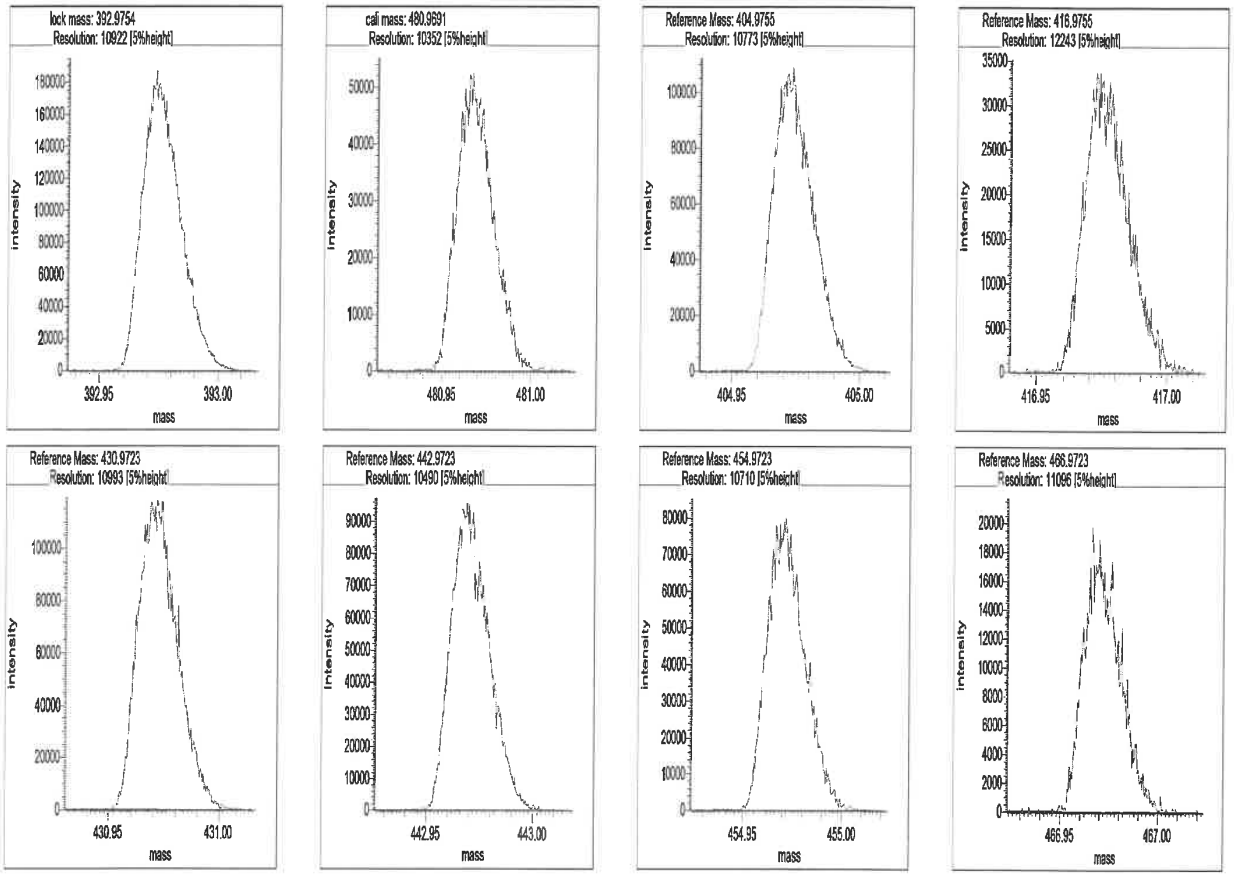

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11165 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10856 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11100 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10488 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11155 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10611 [5%height]

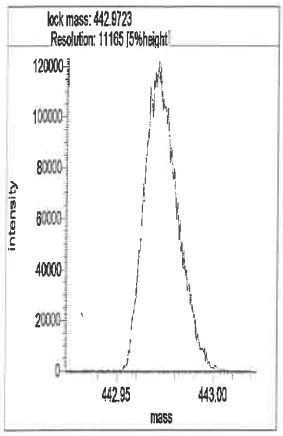
lock mass: 442.9723
Resolution: 11165 [5%height]
intensity
mass

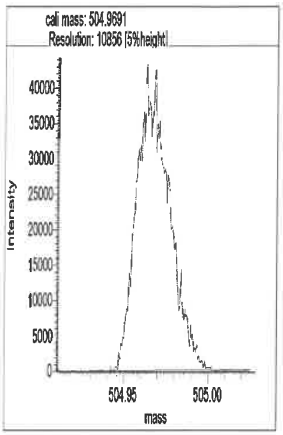
cali mass: 504.9691
Resolution: 10856 [5%height]
intensity
mass

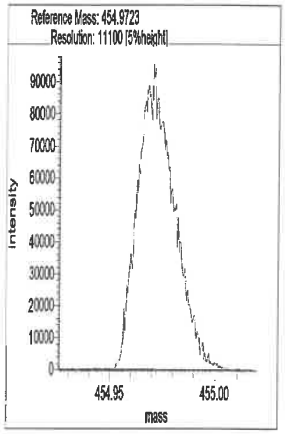
Reference Mass: 454.9723
Resolution: 11100 [5%height]
intensity
mass

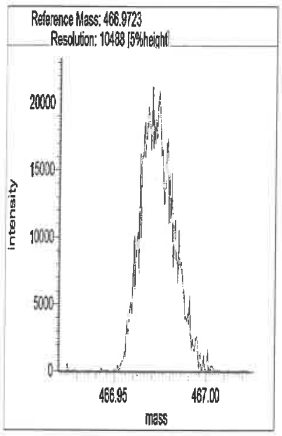
Reference Mass: 466.9723
Resolution: 10488 [5%height]
intensity
mass

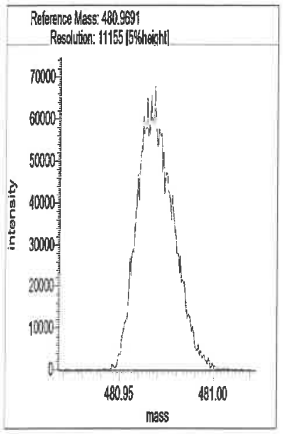
Reference Mass: 480.9691
Resolution: 11155 [5%height]
intensity
mass

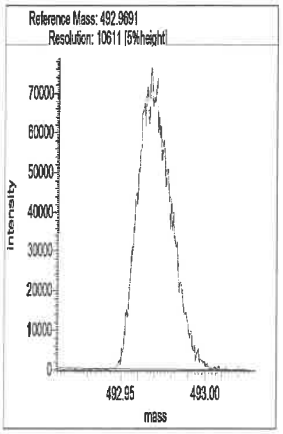
Reference Mass: 492.9691
Resolution: 10611 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 11:56
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10511 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10099 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 10342 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 10503 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10344 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 27776 [5%height] ? software glitch. [illegible]

Ref. mass 368.9755 [m/z] Resolution: 10394 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 9749 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9682 [5%height]

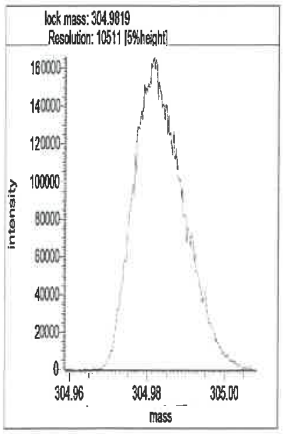

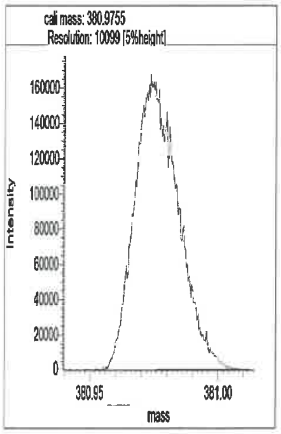

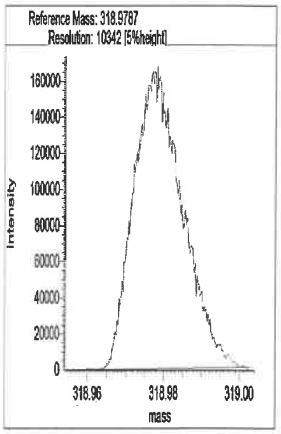

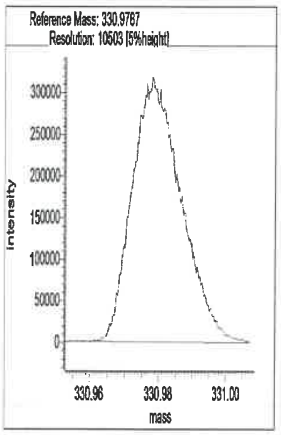

789332

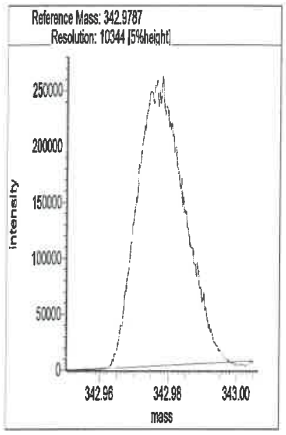

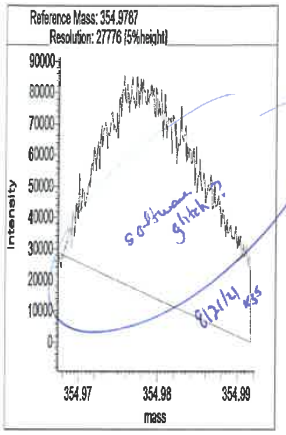

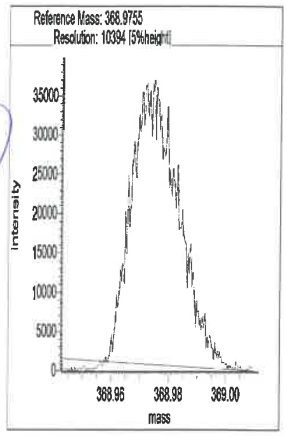

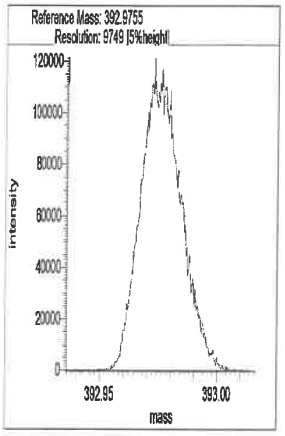

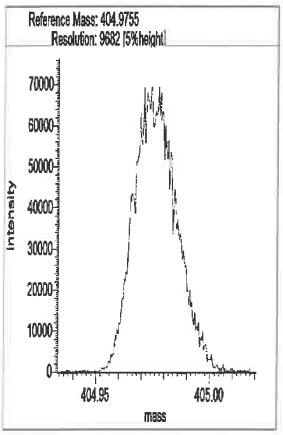

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10733 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10393 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10683 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10545 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10150 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10185 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10040 [5%height]

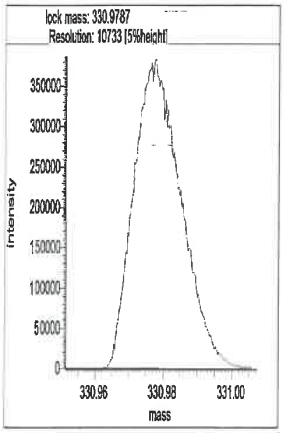

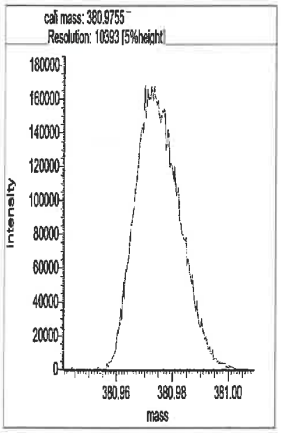

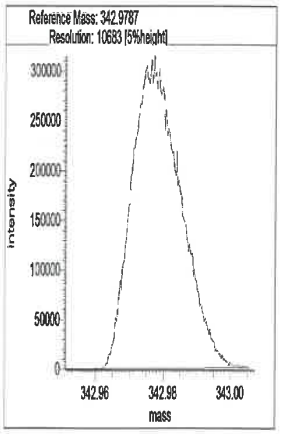

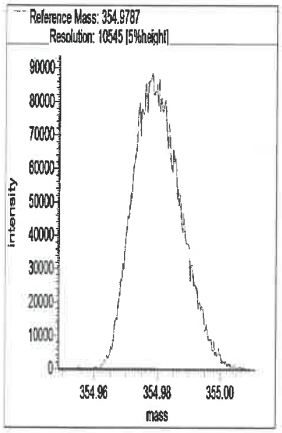

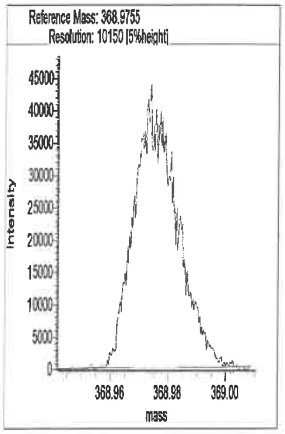

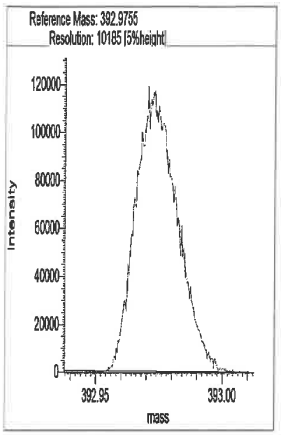

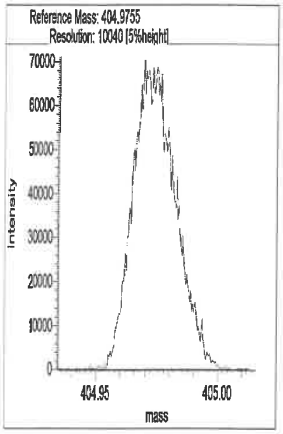

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10536 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10403 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10410 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10419 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10244 [5%height]

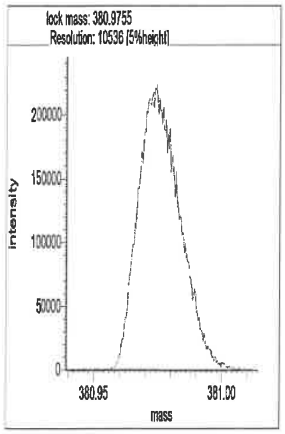

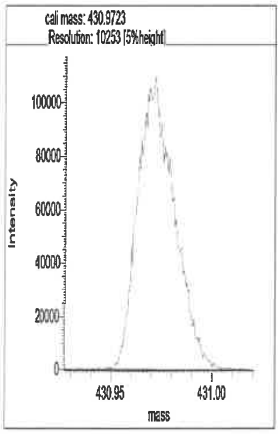

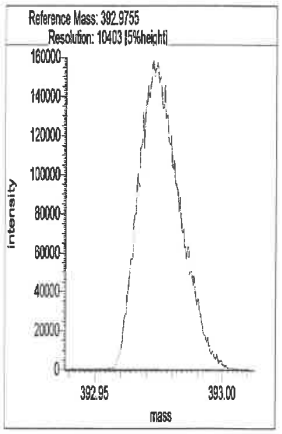

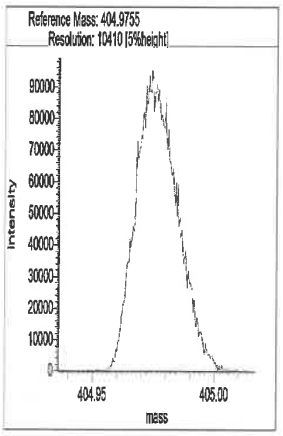

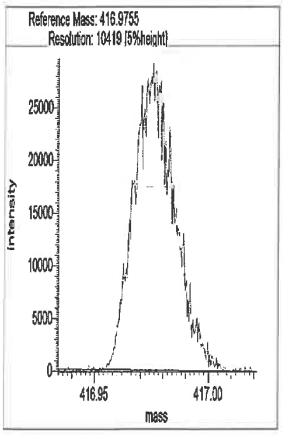

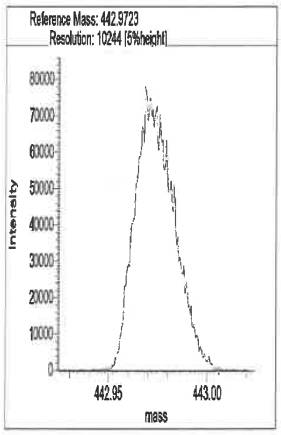

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10914 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 9523 [5%height] ✓ OK 8/21/21 KD

Ref. mass 404.9755 [m/z] Resolution: 10727 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10613 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10522 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10235 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10314 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10509 [5%height]

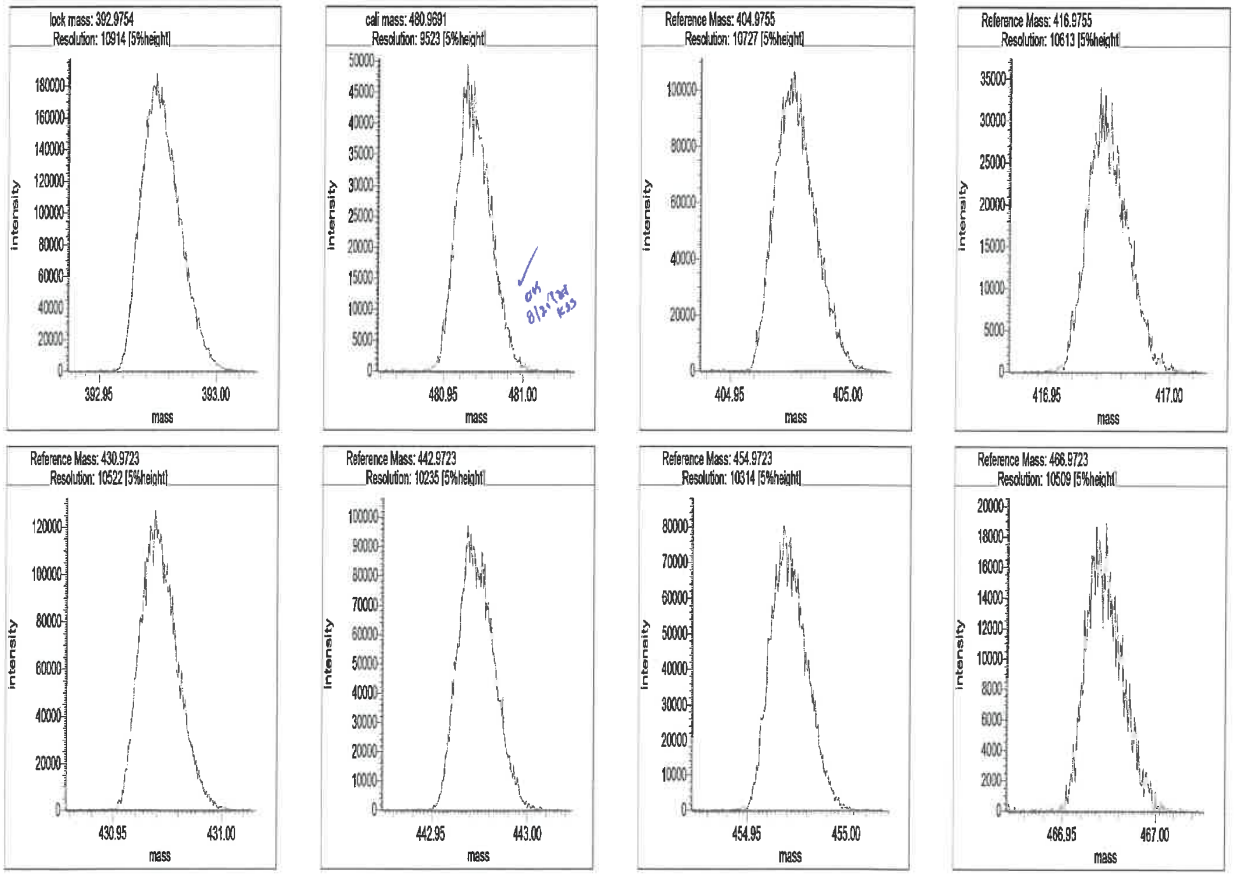

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10927 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10443 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10654 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11221 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10354 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10748 [5%height]

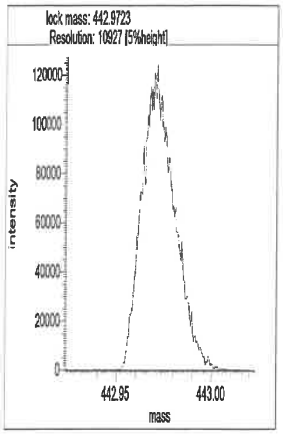
lock mass: 442.9723
Resolution: 10927 [5%height]
intensity
mass

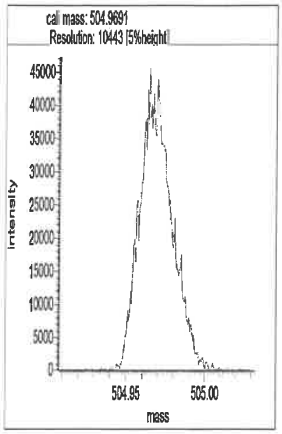
cali mass: 504.9691
Resolution: 10443 [5%height]
intensity
mass

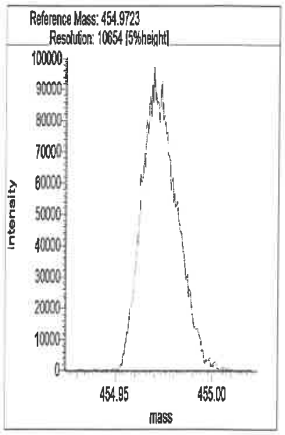
Reference Mass: 454.9723
Resolution: 10654 [5%height]
intensity
mass

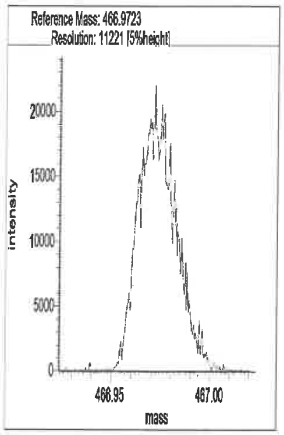
Reference Mass: 466.9723
Resolution: 11221 [5%height]
intensity
mass

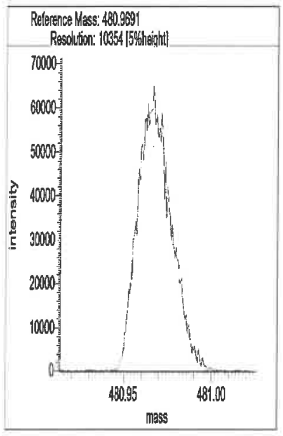
Reference Mass: 480.9691
Resolution: 10354 [5%height]
intensity
mass

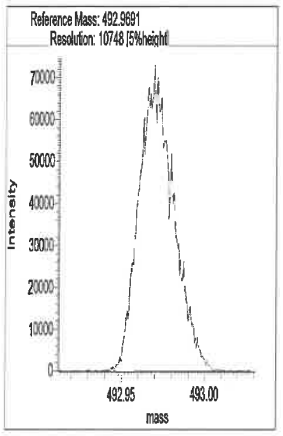
Reference Mass: 492.9691
Resolution: 10748 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 20-Aug-2021 01:34:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:09:19

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.395	870777	0.77	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.432	1227122	0.85	1.3459	104.7	104.7	0.2055	0.2055	105	
2,3,7,8-TCDF	20.458	128655	0.70	1.0802	9.706	9.706	0.0217	0.0217	97.06	
A Non-2,3,7,8-sub-TCDF	19.885	2870	0.77	1.0802	0.2742	0.2165	0.0217	0.0967	0.00	RQ
S Total TCDF					9.980	9.922	0.0217	0.0217		RQ
D 13C-2,3,7,8-TCDD	21.782	812184	0.79	0.9317	100.1	100.1	0.1327	0.1327	100	
2,3,7,8-TCDD	21.799	83283	0.83	1.0753	9.536	9.536	0.0291	0.0291	95.36	
$ 37Cl4-2,3,7,8-TCDD	21.799	86367		1.0083	9.837	9.837	0.008068	0.008068	98.37	
A Non-2,3,7,8-sub-TCDD	20.727	1705	0.77	1.0753	0.2671	0.1952	0.0291	0.0876	0.00	RQ
S Total TCDD					9.803	9.731	0.0291	0.0291		RQ
D 13C-1,2,3,7,8-PeCDF	27.251	1007111	1.60	1.1405	101.4	101.4	0.2068	0.2068	101	
1,2,3,7,8-PeCDF	27.276	534435	1.55	1.0543	50.3	50.3	0.1177	0.1177	101	
D 13C-2,3,4,7,8-PeCDF	28.757	1014118	1.65	1.1253	103.5	103.5	0.2096	0.2096	103	
2,3,4,7,8-PeCDF	28.791	488593	1.55	1.0079	47.8	47.8	0.1348	0.1348	95.61	
A F1 PeCDFs	24.666						0.003311	0.003311		
A Non-2,3,7,8-sub-PeCDF	28.176	4461	1.55	1.0311	0.4954	0.4281	0.1258	0.4281	0.00	RQ
S Total PeCDF					98.6	98.6	0.1263	0.1263		RQ
D 13C-1,2,3,7,8-PeCDD	29.574	609217	1.61	0.7165	97.6	97.6	0.0965	0.0965	97.65	
1,2,3,7,8-PeCDD	29.616	322963	1.59	1.0465	50.7	50.7	0.3115	0.3115	101	
A Non-2,3,7,8-sub-PeCDD	28.536						0.3115	0.3115		
S Total PeCDD					50.7	50.7	0.3115	0.3115		
D 13C-1,2,3,4,7,8-HxCDF	34.906	957306	0.54	0.9648	109.9	109.9	0.3367	0.3367	110	
1,2,3,4,7,8-HxCDF	34.922	554867	1.23	1.1474	50.5	50.5	0.2017	0.2017	101	
D 13C-1,2,3,6,7,8-HxCDF	35.066	997413	0.54	1.0708	103.2	103.2	0.3034	0.3034	103	
1,2,3,6,7,8-HxCDF	35.082	619855	1.26	1.2178	51.0	51.0	0.1914	0.1914	102	
D 13C-2,3,4,6,7,8-HxCDF	35.890	910006	0.53	1.0413	96.8	96.8	0.3120	0.3120	96.79	
2,3,4,6,7,8-HxCDF	35.907	591761	1.24	1.2145	53.5	53.5	0.1763	0.1763	107	
D 13C-1,2,3,7,8,9-HxCDF	36.782	1007667	0.55	0.9731	114.7	114.7	0.3339	0.3339	115	
1,2,3,7,8,9-HxCDF	36.791	654973	1.28	1.2401	52.4	52.4	0.1413	0.1413	105	
A Non-2,3,7,8-sub-HxCDF	35.073						0.1748	0.1748		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					207.5	207.5	0.1777	0.1777		
* 13C-1,2,3,7,8,9-HxCDD	36.581	902938	1.25	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.092	723760	1.28	0.7587	105.7	105.7	0.2345	0.2345	106	
1,2,3,4,7,8-HxCDD	36.109	345231	1.23	1.0608	45.0	45.0	0.0877	0.0877	89.93	
D 13C-1,2,3,6,7,8-HxCDD	36.210	782596	1.27	0.8593	100.9	100.9	0.2070	0.2070	101	
1,2,3,6,7,8-HxCDD	36.227	386782	1.25	0.9933	49.8	49.8	0.0944	0.0944	99.51	
1,2,3,7,8,9-HxCDD	36.597	429511	1.25	1.1094	51.4	51.4	0.0842	0.0842	103	
A Non-2,3,7,8-sub-HxCDD	35.427						0.0886	0.0886		
S Total HxCDD					146.1	146.1	0.0888	0.0888		
D 13C-1,2,3,4,6,7,8-HpCDF	38.596	821510	0.47	0.7359	123.6	123.6	0.3385	0.3385	124	
1,2,3,4,6,7,8-HpCDF	38.613	569968	1.06	1.4421	48.1	48.1	0.1682	0.1682	96.22	
D 13C-1,2,3,4,7,8,9-HpCDF	39.850	706137	0.47	0.6854	114.1	114.1	0.3635	0.3635	114	
1,2,3,4,7,8,9-HpCDF	39.859	452390	1.04	1.3092	48.9	48.9	0.1894	0.1894	97.87	
A Non-2,3,7,8-sub-HpCDF	39.253						0.1782	0.1782		
S Total HpCDF					97.0	97.0	0.1788	0.1788		
D 13C-1,2,3,4,6,7,8-HpCDD	39.547	622968	1.07	0.6745	102.3	102.3	0.3007	0.3007	102	
1,2,3,4,6,7,8-HpCDD	39.556	322055	1.03	1.0503	49.2	49.2	0.1146	0.1146	98.44	
A Non-2,3,7,8-sub-HpCDD	39.253	3653	0.97	1.0503	0.5583	0.5583	0.1146	0.5583	0.00	
S Total HpCDD					49.8	49.8	0.1146	0.1146		
D 13C-OCDD	42.036	1182987	0.89	0.5446	240.6	240.6	0.2013	0.2013	120	
OCDF	42.137	870176	0.93	1.3168	111.7	111.7	0.1096	0.1096	112	
OCDD	42.053	623449	0.91	1.0620	99.3	99.3	0.0862	0.0862	99.25	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 20-Aug-2021 01:34:00 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:39 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:09:19

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.395	21.395	0		378196	54432	46	115	1183		a
333.9338	21.395	21.395	0		492581	68496	15	37	4566	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.432	20.432	0	0.955	563293	79642	82	205	971		
317.9389	20.432	20.432	0	0.955	663829	90836	54	135	1682	0.85(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.458	20.458	0	1.001	52907	7930	3	7	2643		
305.8987	20.449	20.458	-1	1.001	75748	10580	13	32	814	0.70(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.254	19.885	-38	0.942	158	58	3	7	19		
305.8987	19.202	19.885	-41	0.940	283	105	13	32	8	0.56(0.65-0.89)	
	Empc Correction				205	75	13	32	6		
303.9016	19.727	19.885	-9	0.965	558	160	3	7	53		
305.8987	19.727	19.885	-9	0.965	1084	193	13	32	15	0.51(0.65-0.89)	
	Empc Correction				724	207	13	32	16		
303.9016	20.733	19.885	51	1.015	533	92	3	7	31		
305.8987	20.741	19.885	51	1.015	1018	140	13	32	11	0.52(0.65-0.89)	
	Empc Correction				692	119	13	32	9		
13C-2,3,7,8-TCDD											
331.9368	21.782	21.782	0	1.018	359415	45756	46	115	995		
333.9338	21.774	21.782	-1	1.018	452769	56603	15	37	3774	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.799	21.799	0	1.001	37679	5159	11	27	469		
321.8936	21.817	21.799	1	1.002	45604	5681	2	5	2841	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.799	21.799	0	1.019	86367	10928	4	10	2732		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	19.727	20.727	-60	0.906	309	131	11	27	12		
	Empc Correction				36	20	11	27	2		
321.8936	19.753	20.727	-58	0.907	48	26	2	5	13	6.44(0.65-0.89)	
319.8965	20.380	20.727	-21	0.936	408	89	11	27	8		
	Empc Correction				53	28	11	27	3		
321.8936	20.363	20.727	-22	0.935	70	37	2	5	19	5.83(0.65-0.89)	
319.8965	22.014	20.727	77	1.011	354	122	11	27	11		
321.8936	22.092	20.727	82	1.014	411	123	2	5	62	0.86(0.65-0.89)	
319.8965	22.118	20.727	83	1.015	322	96	11	27	9		
321.8936	22.092	20.727	82	1.014	411	123	2	5	62	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.251	27.251	0	1.274	619620	94605	72	180	1314		
353.8970	27.259	27.251	1	1.274	387491	58543	44	110	1331	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.276	27.276	0	1.001	325227	47467	43	107	1104		
341.8567	27.276	27.276	0	1.001	209208	30740	33	82	932	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.757	28.757	0	1.344	630965	86581	72	180	1203		
353.8970	28.766	28.757	1	1.344	383153	53222	44	110	1210	1.65(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.791	28.791	0	1.001	296979	39367	43	107	916		
341.8567	28.791	28.791	0	1.001	191614	26294	33	82	797	1.55(1.32-1.78)	
A F1 PeCDFs											
339.8597	24.666						1	2			
341.8567	24.666						1	2			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.882	28.176	-18	1.023	2712	384	43	107	9		
341.8567	27.857	28.176	-19	1.022	2450	331	33	82	10	1.11(1.32-1.78)	
	Empc Correction				1749	247	33	82	7		
13C-1,2,3,7,8-PeCDD											
367.8949	29.574	29.574	0	1.382	375736	50925	22	55	2315		
369.8919	29.574	29.574	0	1.382	233481	32502	12	30	2709	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616	29.616	0	1.001	198400	24604	104	260	237		
357.8516	29.616	29.616	0	1.001	124563	16634	5	12	3327	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.536						104	260			
357.8516	28.536						5	12			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.906	34.906	0	0.954	335150	62206	104	260	598		
385.8610	34.906	34.906	0	0.954	622156	117085	157	392	746	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.922	34.922	0	1.000	306264	56530	98	245	577		
375.8178	34.931	34.922	1	1.001	248603	46439	68	170	683	1.23(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.066	35.066	0	0.959	349001	62636	104	260	602		
385.8610	35.066	35.066	0	0.959	648412	115434	157	392	735	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.082	35.082	0	1.000	345877	63685	98	245	650		
375.8178	35.082	35.082	0	1.000	273978	49689	68	170	731	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.890	35.890	0	0.981	315886	69314	104	260	666		
385.8610	35.890	35.890	0	0.981	594120	124533	157	392	793	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.907	35.907	0	1.000	327418	70468	98	245	719		
375.8178	35.907	35.907	0	1.000	264343	55699	68	170	819	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.782	36.782	0	1.006	355986	85136	104	260	819		
385.8610	36.782	36.782	0	1.006	651681	151674	157	392	966	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791	36.791	0	1.000	367965	84048	98	245	858		
375.8178	36.791	36.791	0	1.000	287008	65537	68	170	964	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						98	245			
375.8178	35.073						68	170			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.581	36.581	0		500778	110918	96	240	1155		
403.8529	36.589	36.581	1		402160	89771	47	117	1910	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.092	36.092	0	0.987	406606	94681	96	240	986		
403.8529	36.092	36.092	0	0.987	317154	74046	47	117	1575	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.109	36.109	0	1.000	190473	44726	32	80	1398		
391.8127	36.117	36.109	1	1.001	154758	35613	31	77	1149	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.210	36.210	0	0.990	437873	93109	96	240	970		
403.8529	36.210	36.210	0	0.990	344723	74267	47	117	1580	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.227	36.227	0	1.000	214850	43622	32	80	1363		
391.8127	36.227	36.227	0	1.000	171932	35324	31	77	1139	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.597	36.597	0	1.014	238372	51108	32	80	1597		
391.8127	36.597	36.597	0	1.014	191139	41299	31	77	1332	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.427						32	80			
391.8127	35.427						31	77			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.596	38.596	0	1.055	262759	61898	82	205	755		
419.8220	38.596	38.596	0	1.055	558751	138925	118	295	1177	0.47(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											
407.7817	38.613	38.613	0	1.000	292766	74037	102	255	726		
409.7788	38.605	38.613	-1	1.000	277202	69784	93	232	750	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.850	39.850	0	1.089	225724	63173	82	205	770		
419.8220	39.850	39.850	0	1.089	480413	133267	118	295	1129	0.47(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.859	39.859	0	1.000	230887	65916	102	255	646		
409.7788	39.859	39.859	0	1.000	221503	62046	93	232	667	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						102	255			
409.7788	39.253						93	232			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.547	39.547	0	1.081	322605	89433	92	230	972		
437.8140	39.547	39.547	0	1.081	300363	82619	71	177	1164	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.556	39.556	0	1.000	163232	44143	41	102	1077		
425.7737	39.547	39.556	-1	1.000	158823	43134	42	105	1027	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.916	39.253	-20	0.984	1800	475	41	102	12		
425.7737	38.916	39.253	-20	0.984	1853	453	42	105	11	0.97(0.88-1.20)	
13C-OCDD											
469.7780	42.036	42.036	0	1.149	557785	137107	35	87	3917		
471.7750	42.036	42.036	0	1.149	625202	146861	53	132	2771	0.89(0.76-1.02)	
OCDF											
441.7428	42.137	42.137	0	1.002	419758	104739	35	87	2993		
443.7399	42.137	42.137	0	1.002	450418	110462	47	117	2350	0.93(0.76-1.02)	
OCDD											
457.7377	42.053	42.053	0	1.000	297170	72135	25	62	2885		
459.7348	42.053	42.053	0	1.000	326279	80759	27	67	2991	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1227122	170478

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1227122	170478

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.254	158	58	283	105	0.0333	0.56	RnQ
19.254	158	58	205	75	0.0274		Empc Correction
19.727	558	160	1084	193	0.1239	0.51	RQ
19.727	558	160	724	207	0.0967		Empc Correction
20.733	533	92	1018	140	0.1170	0.52	RQ
20.733	533	92	692	119	0.0924		Empc Correction
Signal Totals:							
	1249	310	1621	401			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3634	748				0.52	RQ
	2870	711					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2742 = (3634 * 100.000) / (1227122 * 1.080)
Empc Amount: 0.2165 = (2870 * 100.000) / (1227122 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDD, RT: 20.727

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	812184	102359

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	812184	102359

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.727	309	131	48	26	0.0409	6.44	RQ
19.727	36	20	48	26	0.009618		Empc Correction
20.380	408	89	70	37	0.0547	5.83	RnQ
20.380	53	28	70	37	0.0141		Empc Correction
22.014	354	122	411	123	0.0876	0.86	
22.118	322	96	411	123	0.0839	0.78	n
Signal Totals:							
	765	266	940	309			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2333	747				1.48	RQ
	1705	575					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2671 = (2333 * 100.000) / (812184 * 1.075)
Empc Amount: 0.1952 = (1705 * 100.000) / (812184 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1007111	153148
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1014118	139803

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1010614	146475

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.882	2712	384	2450	331	0.4954	1.11	RnQ
27.882	2712	384	1749	247	0.4281		Empc Correction
Signal Totals:							
	2712	384	1749	247			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5162	715				1.11	RQ
	4461	631					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4954 = (5162 * 100.000) / (1010614 * 1.031)
Empc Amount: 0.4281 = (4461 * 100.000) / (1010614 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d
Lims ID: CCV
Client ID:
Inject. Date: 20-Aug-2021 01:34:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 518043 Lims Sample ID: 15
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.253

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	622968	172052

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	622968	172052

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.916	1800	475	1853	453	0.5583	0.97	
Signal Totals:							
	1800	475	1853	453			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3653	928				0.97	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5583 = (3653 * 100.000) / (622968 * 1.050)

789346

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d				
Injection Date:	20-Aug-2021 01:34:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 21.40

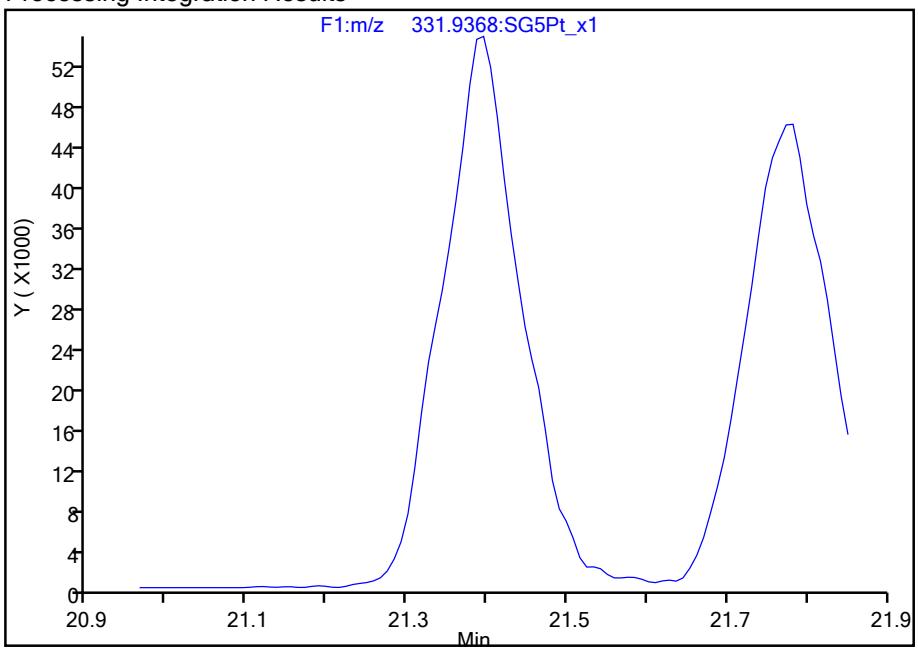

Manual Integration Results

RT: 21.40
Area: 378196
Amount: 100.0000
Amount Units: pg/ul

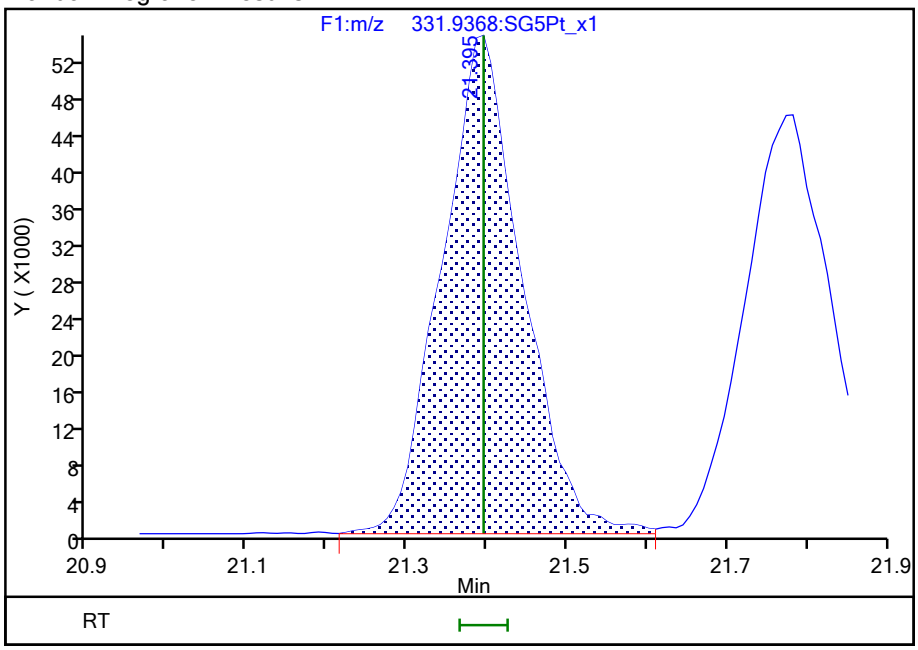

Reviewer: arghestanis, 20-Aug-2021 09:08:31
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 21-Aug-2021 17:06:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

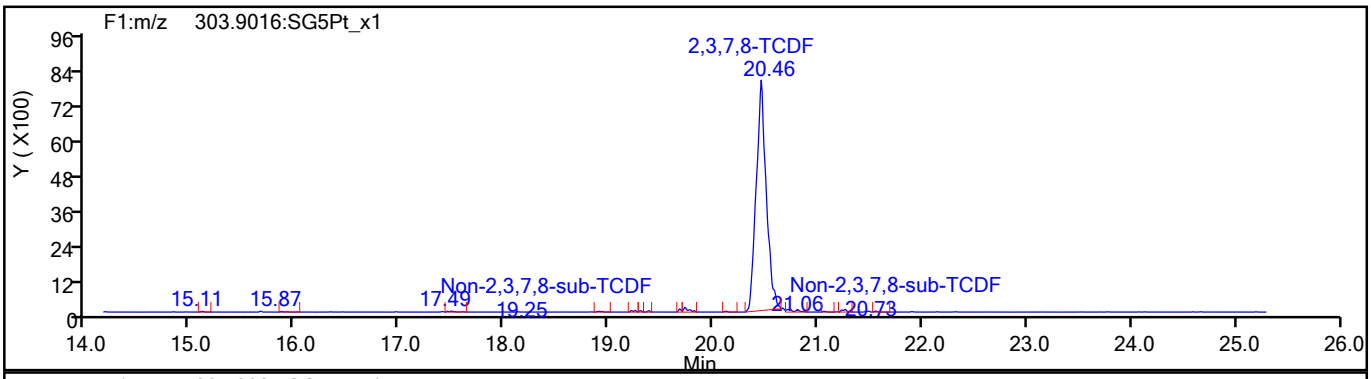

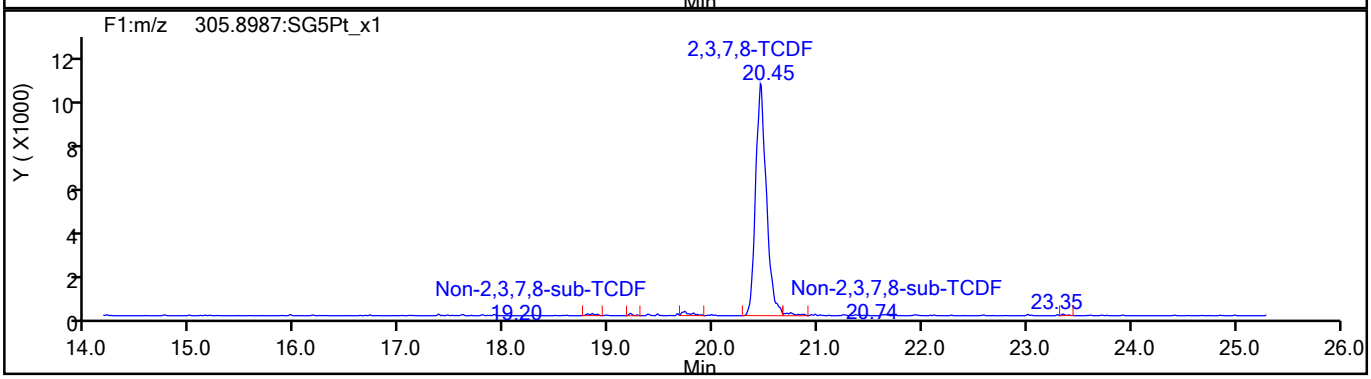

TCDF Standards

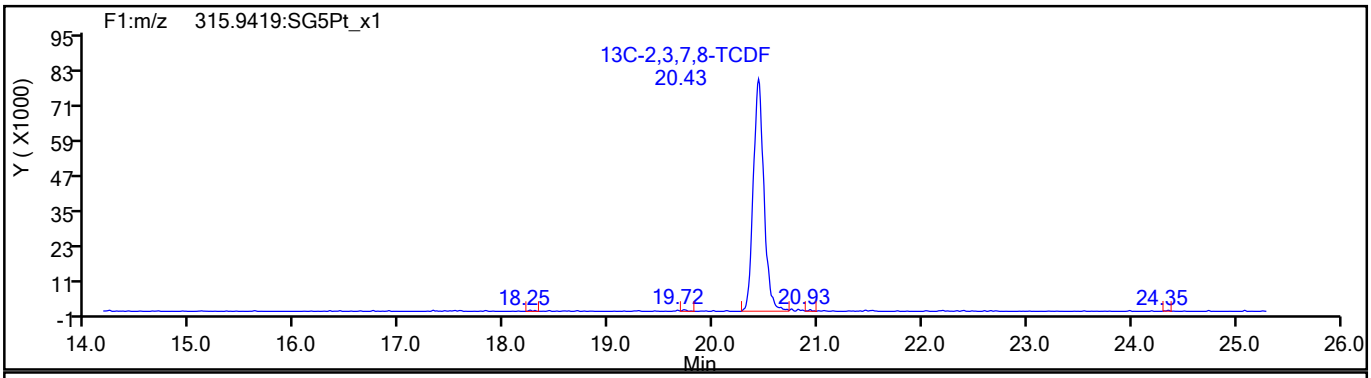

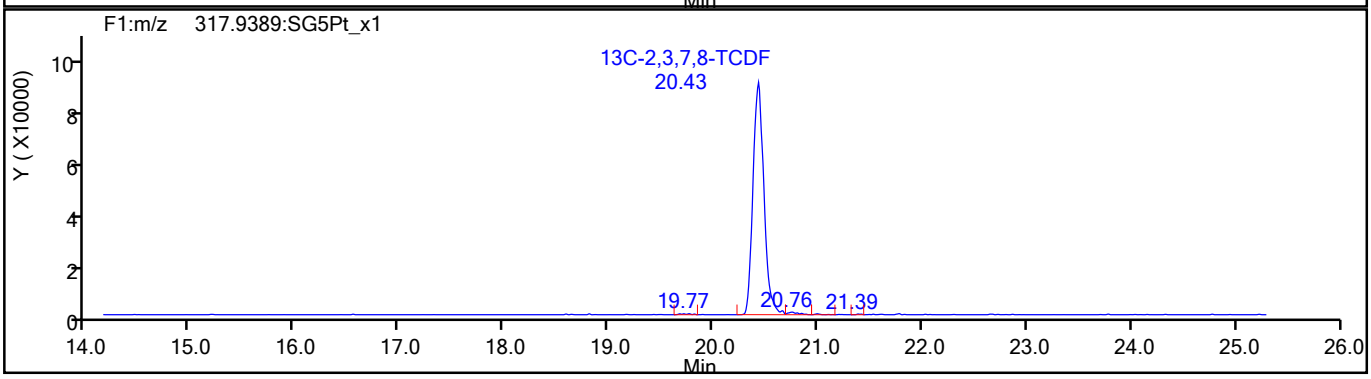

789348

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

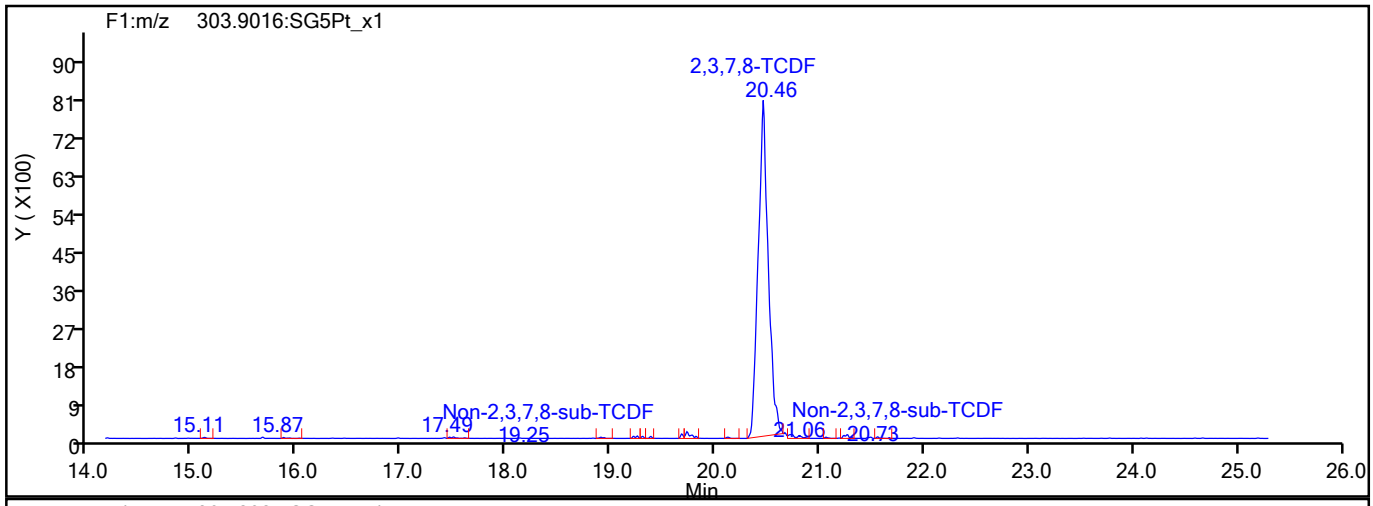

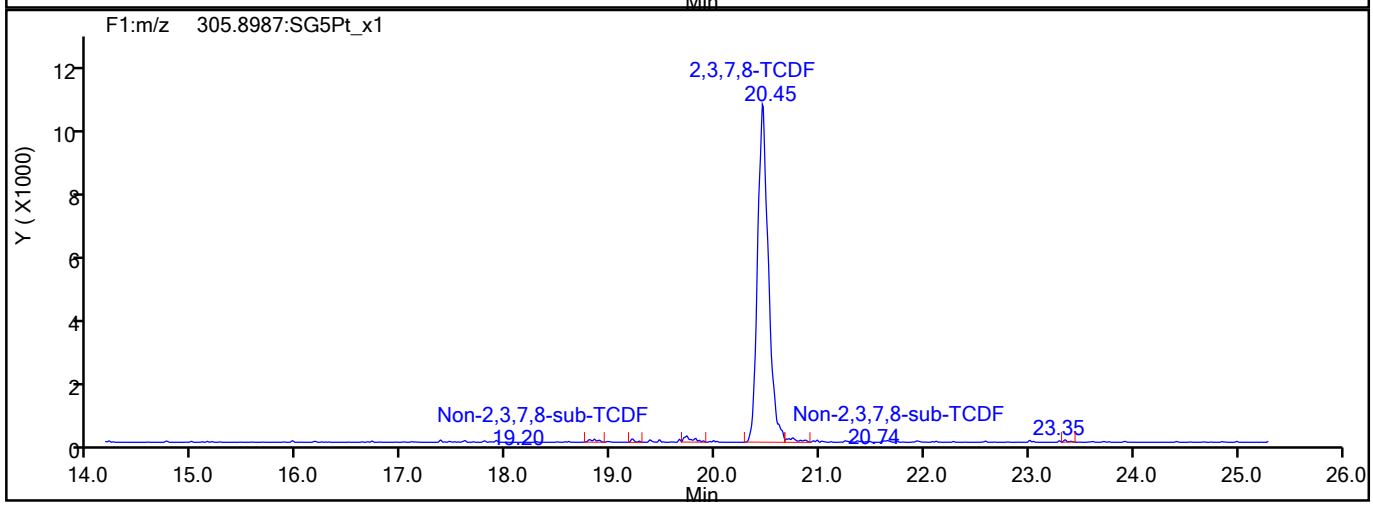

TCDF Interference Mass

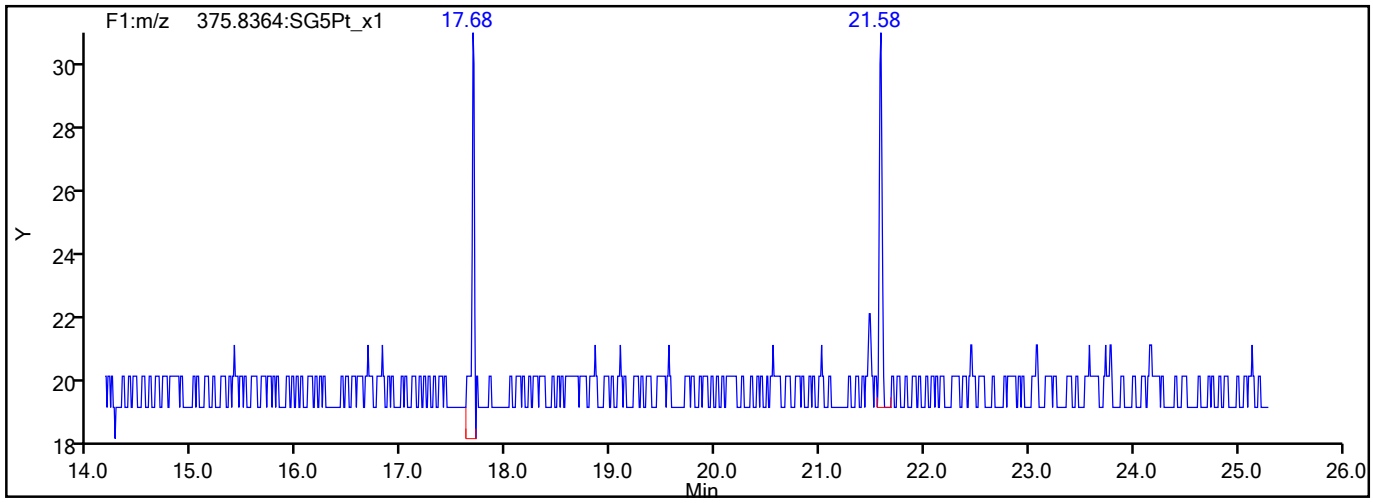

789349

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

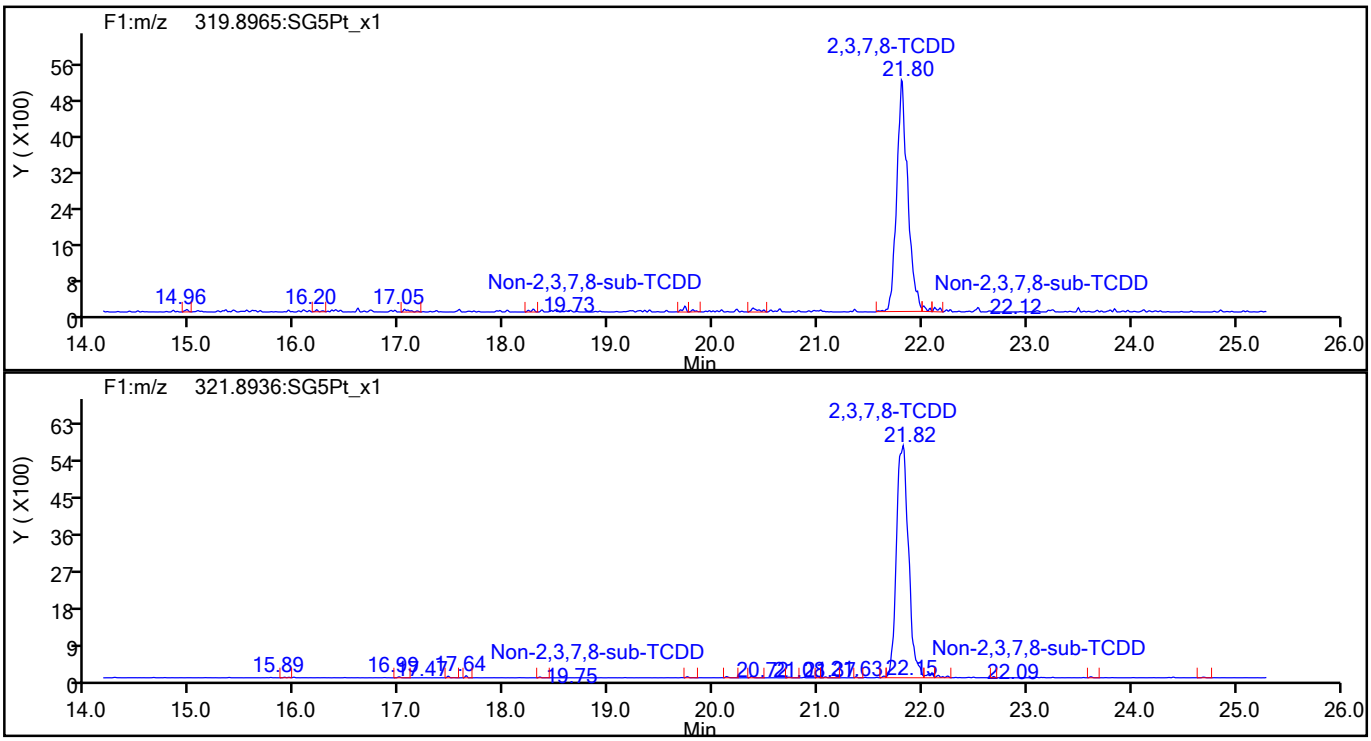

TCDD Standards

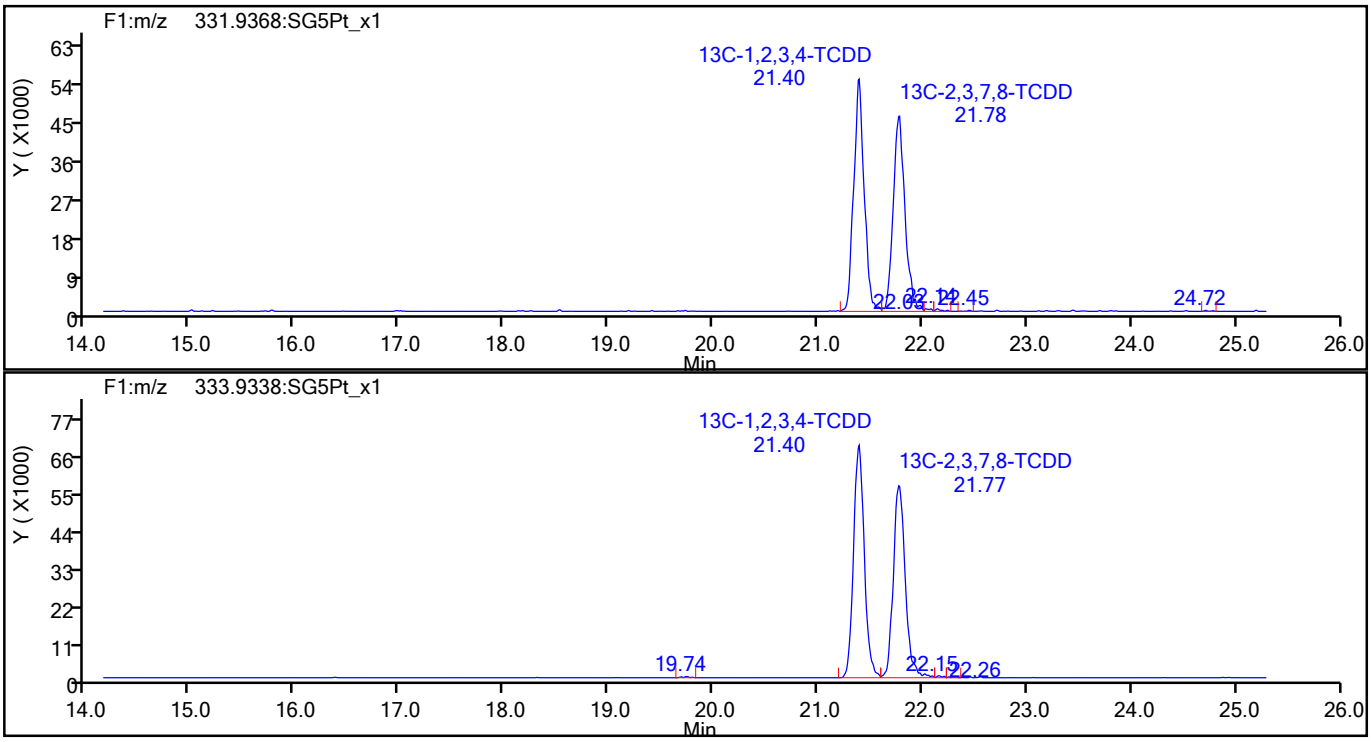

789350

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

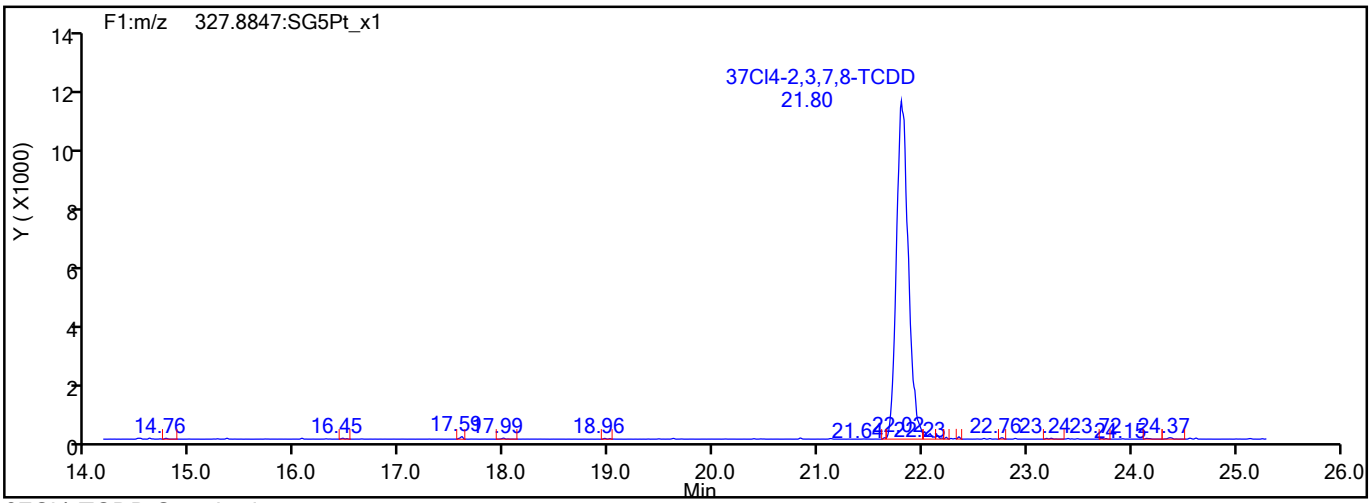

37Cl4-TCDD Standards

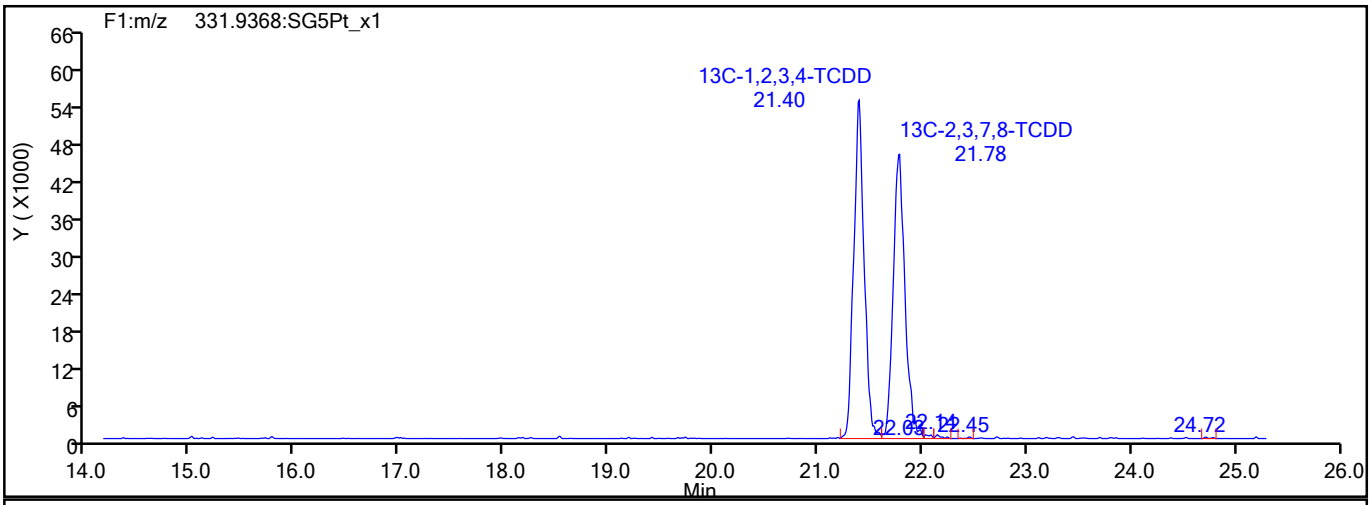

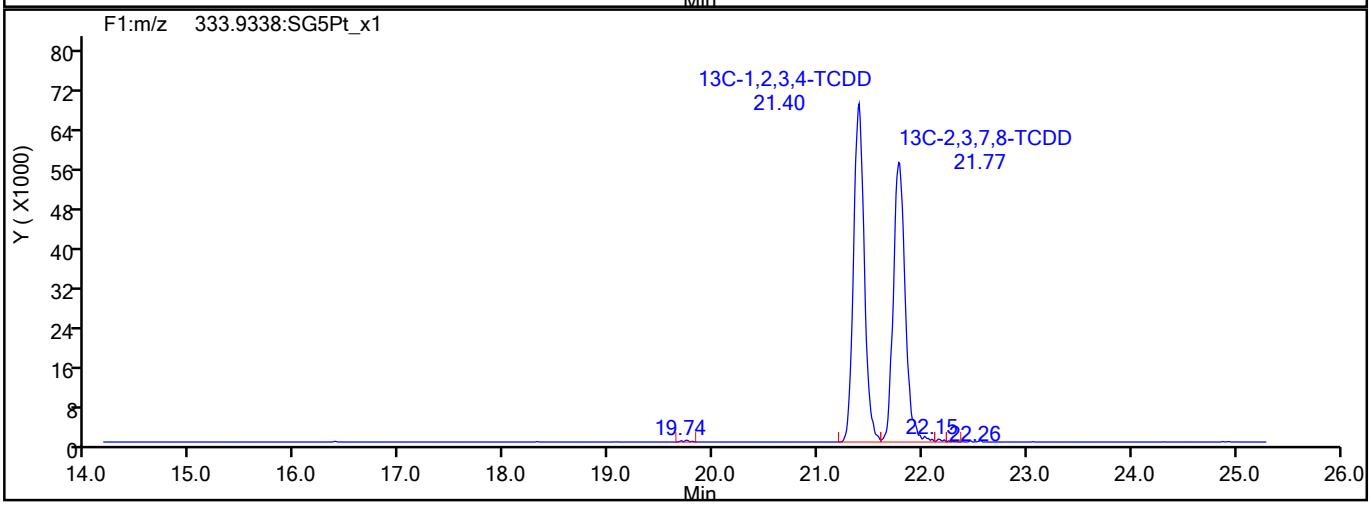

789351

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

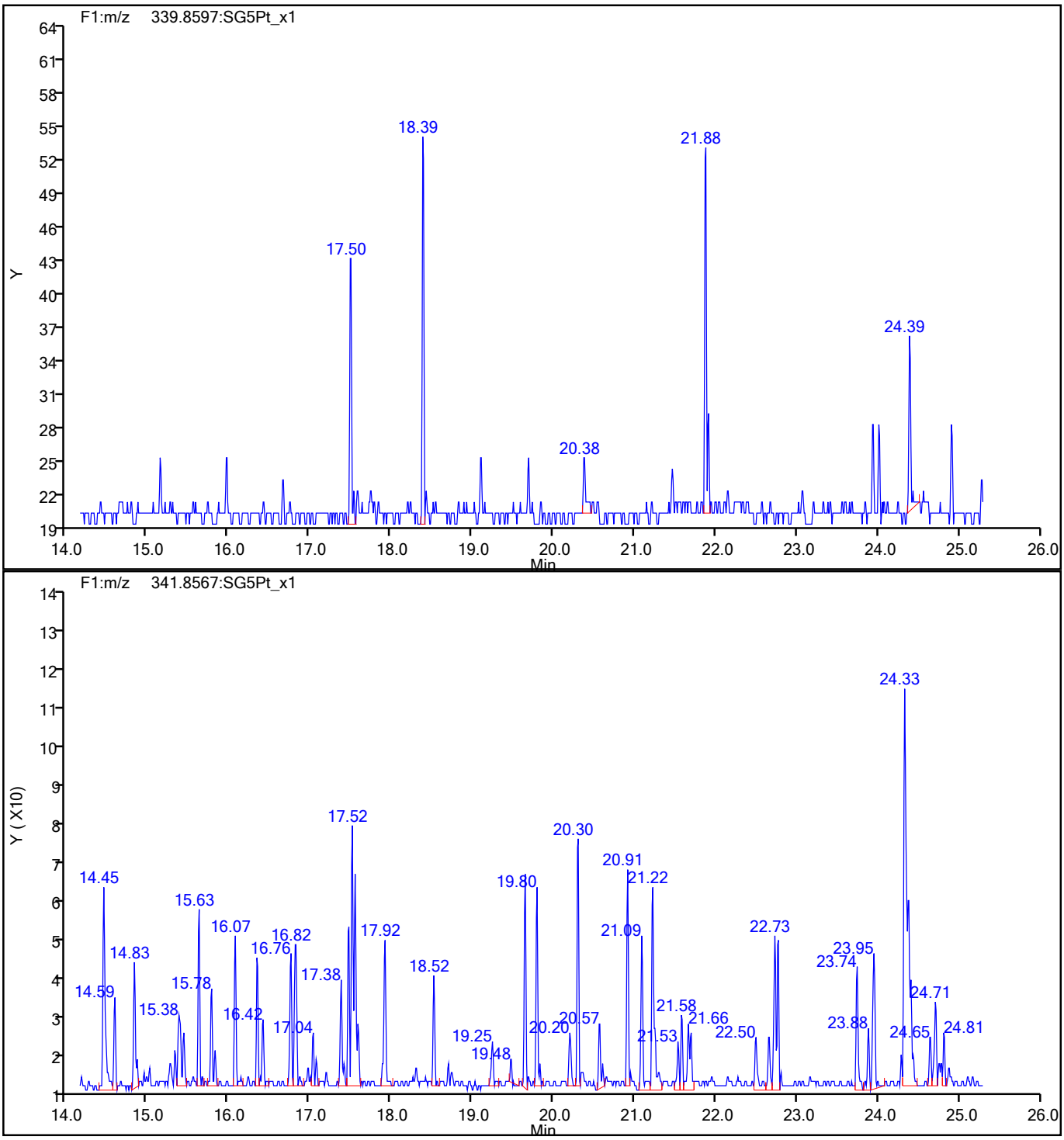

789352

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

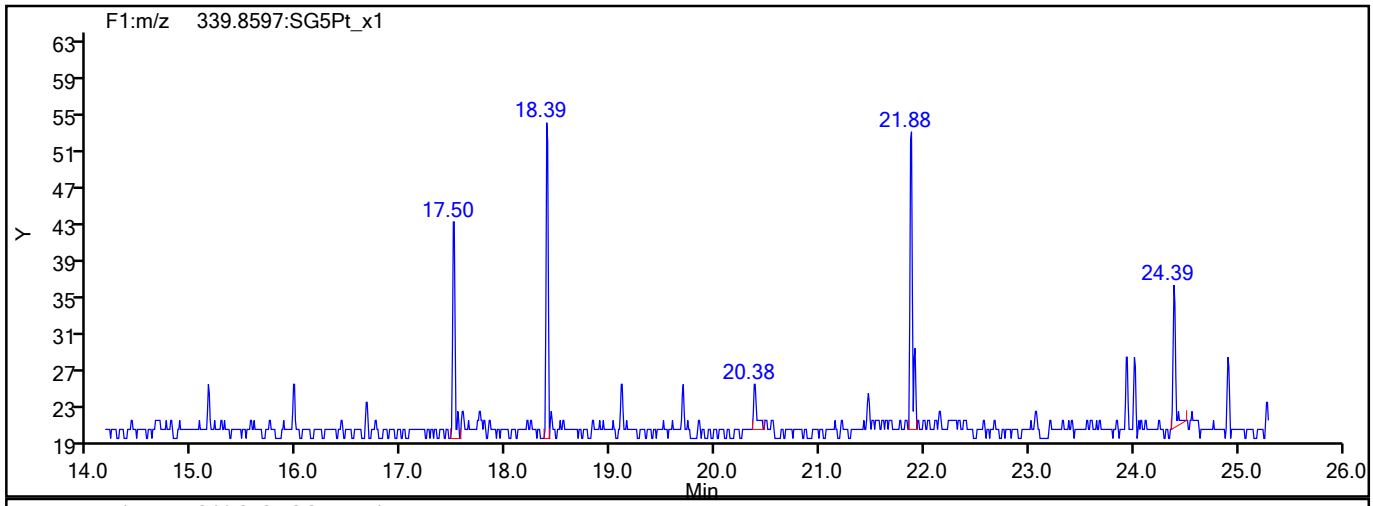

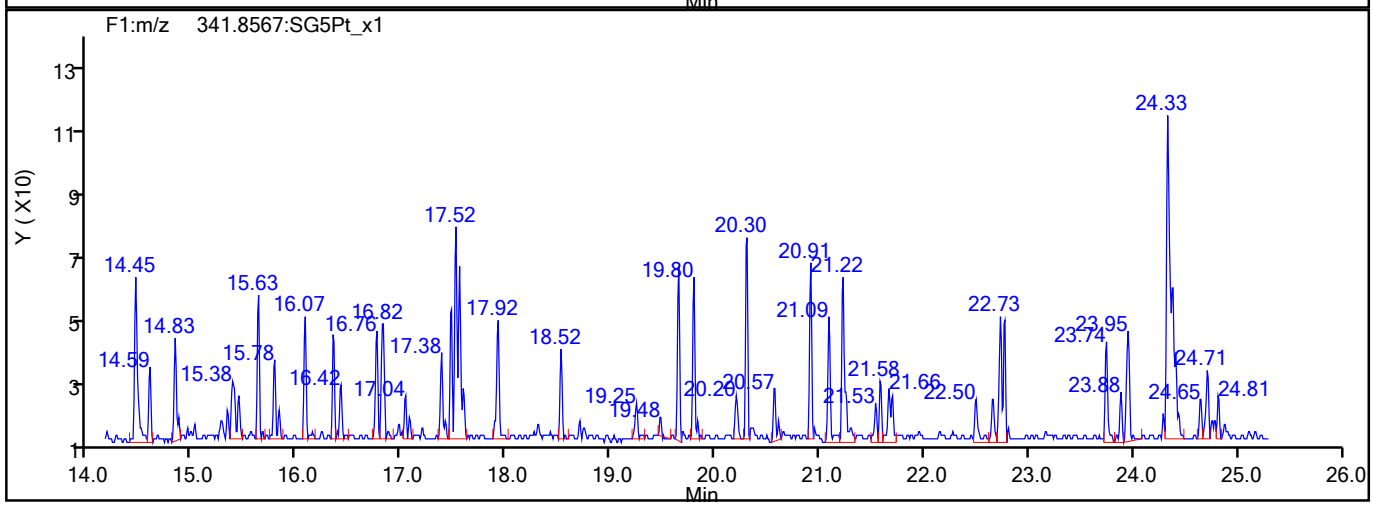

F1 PeCDFs Interference Mass

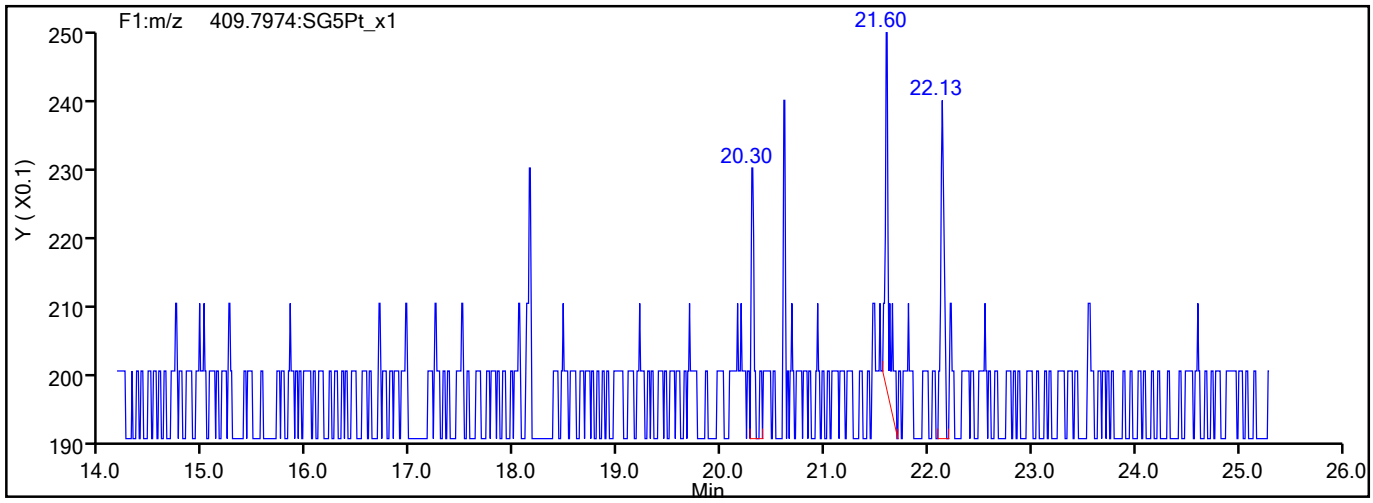

789353

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

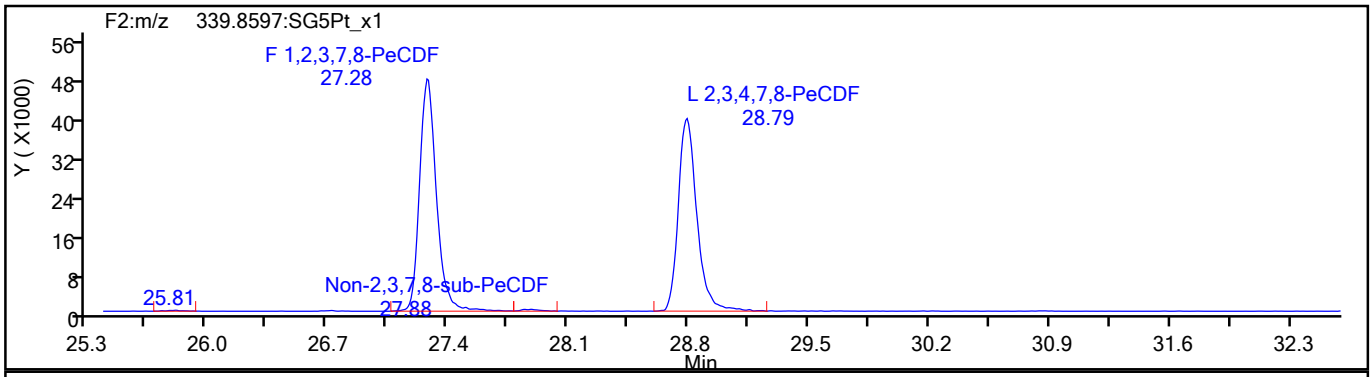

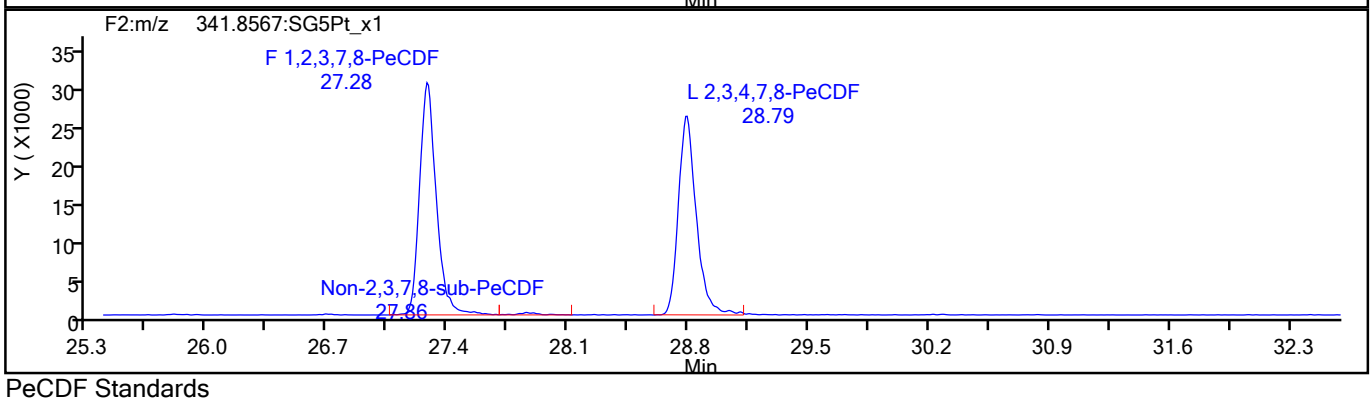

PeCDF Standards

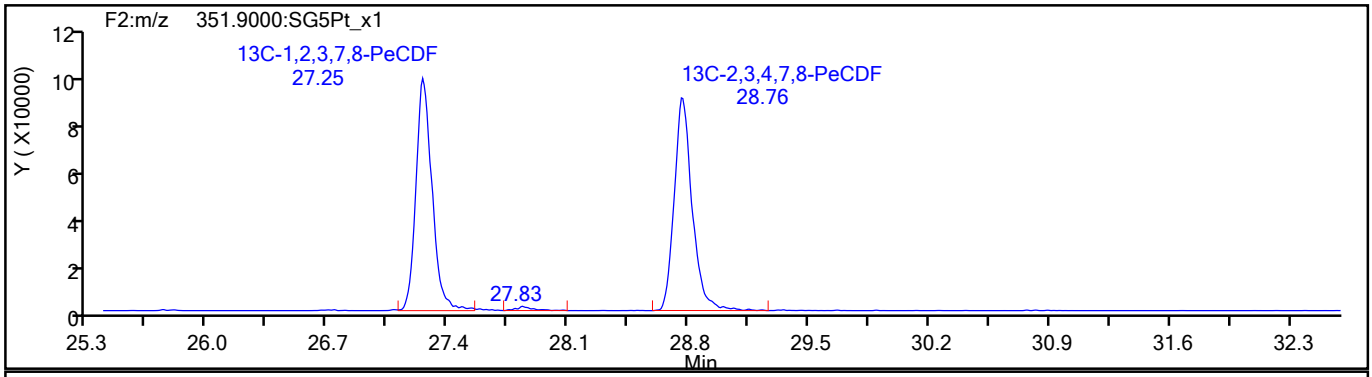

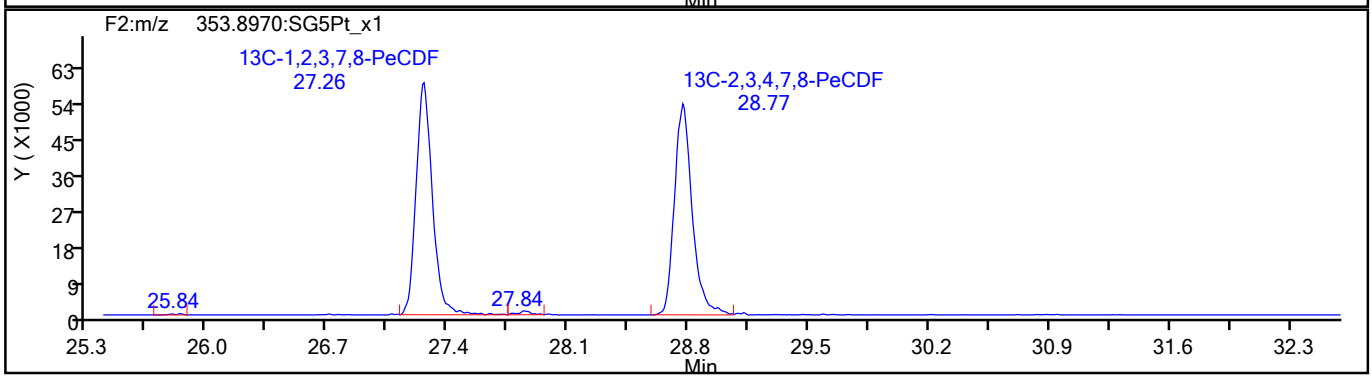

789354

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

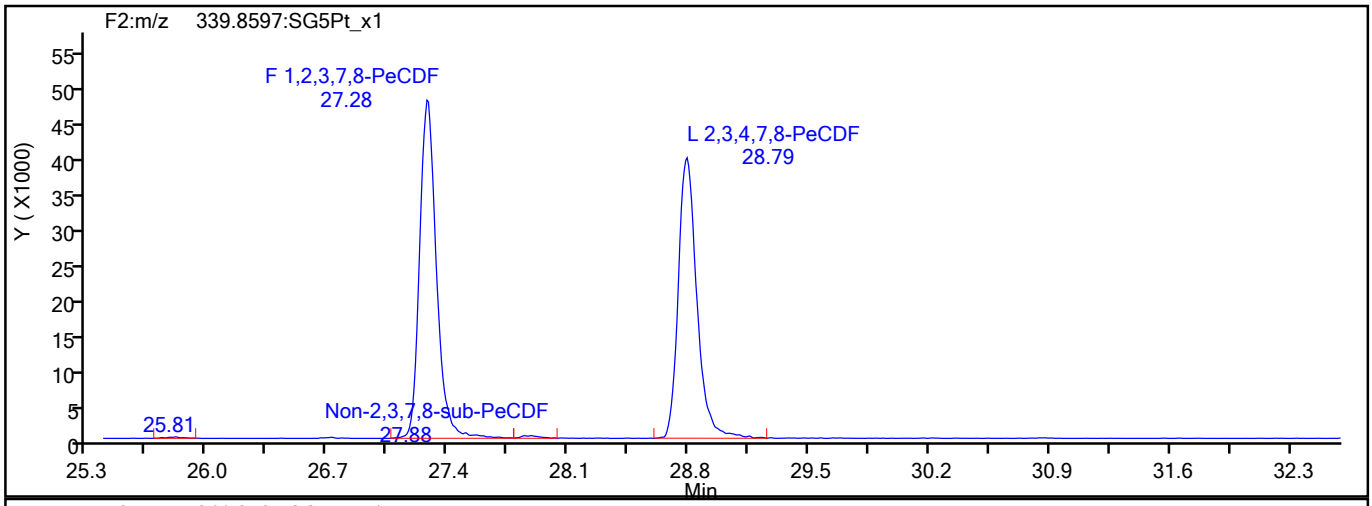

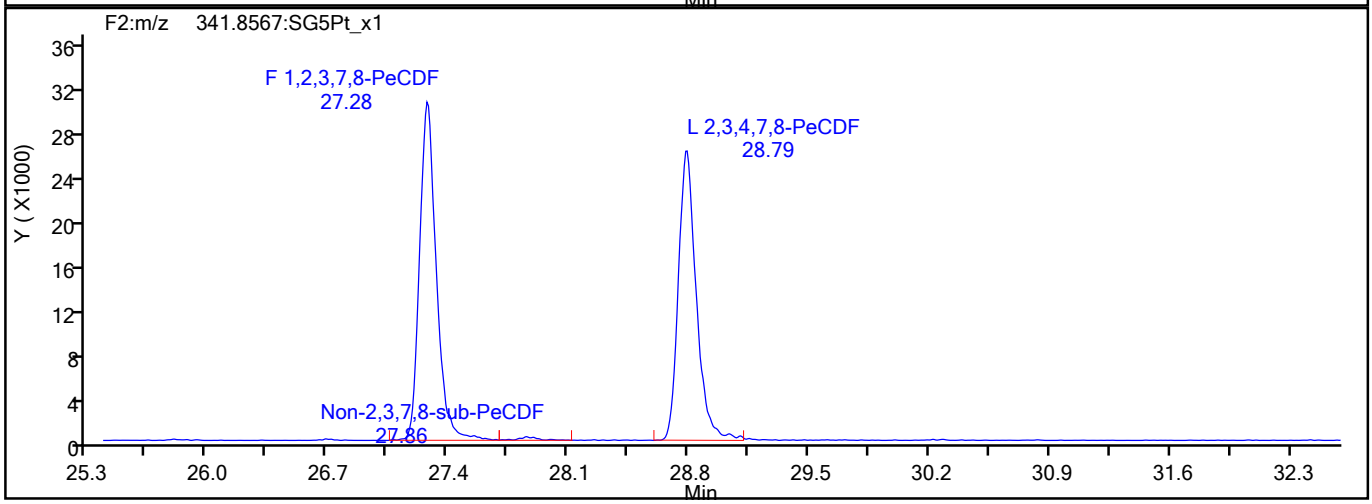

PeCDF Interference Mass

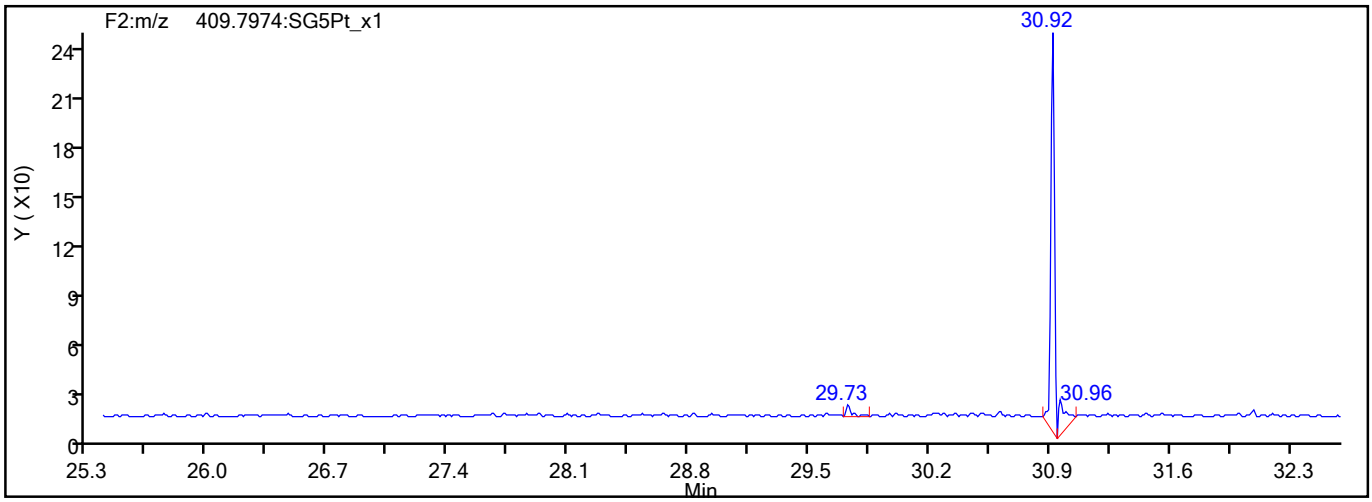

789355

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

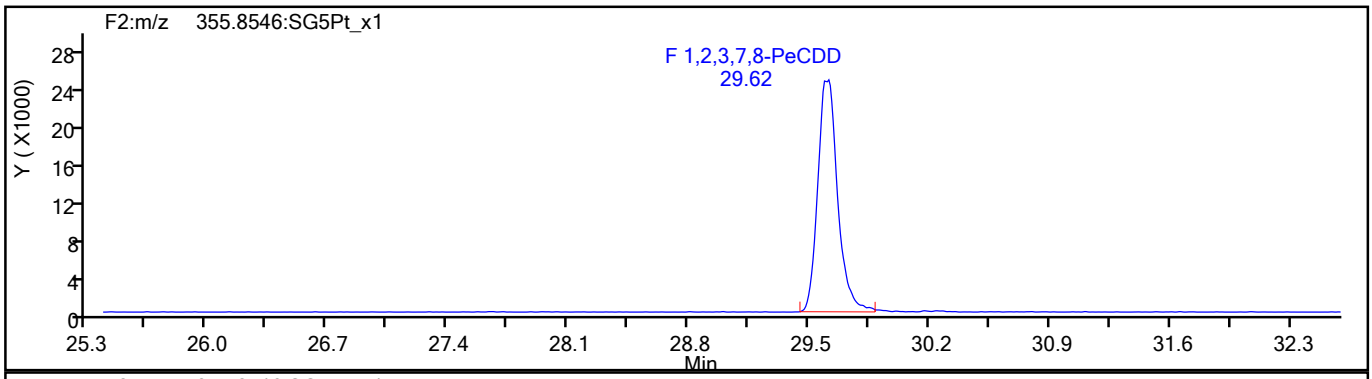

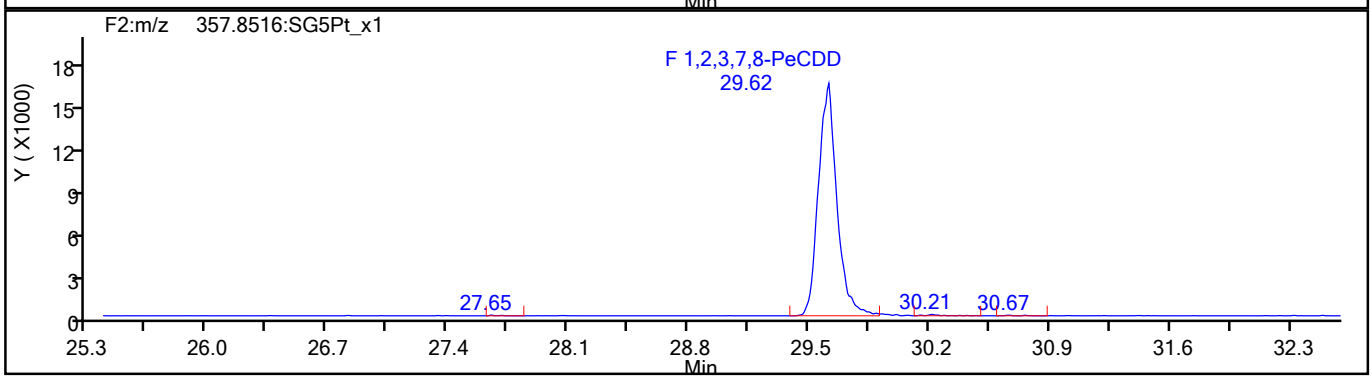

PeCDD Standards

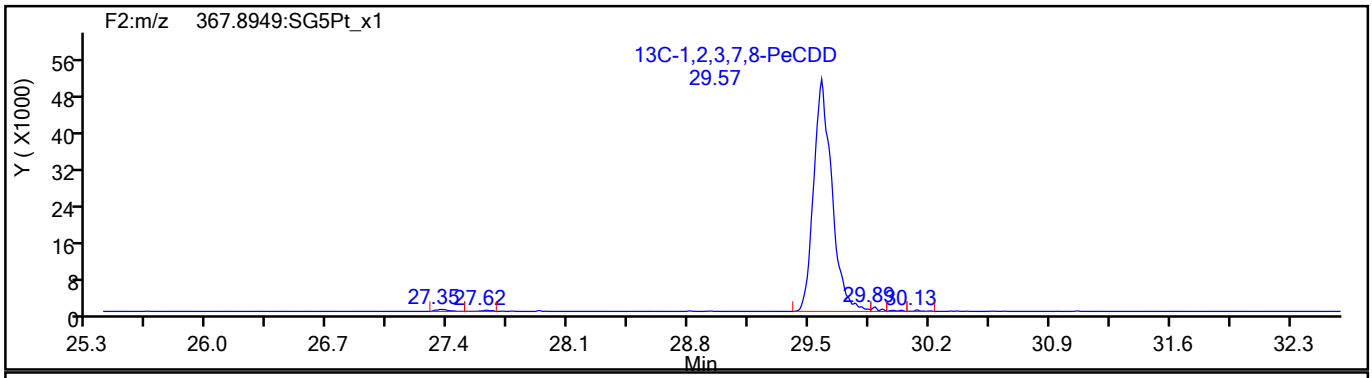

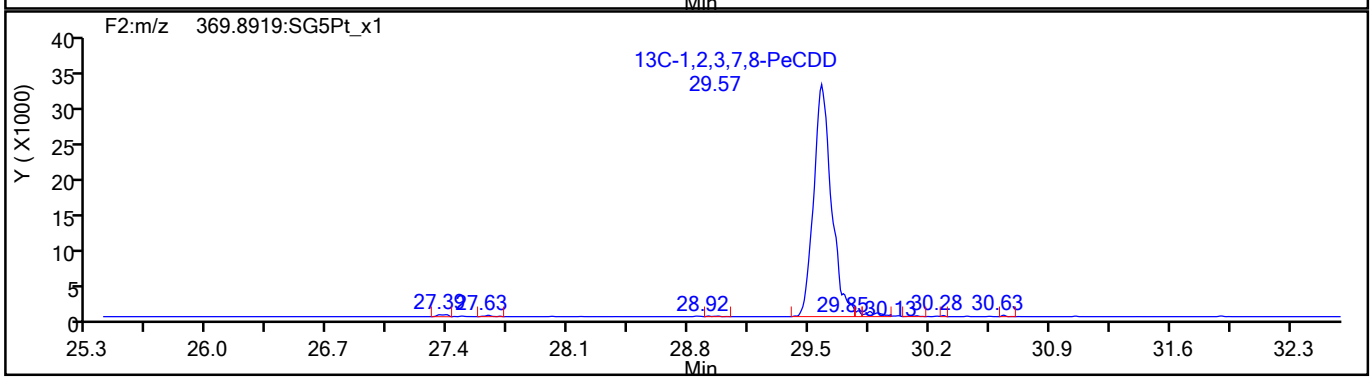

789356

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

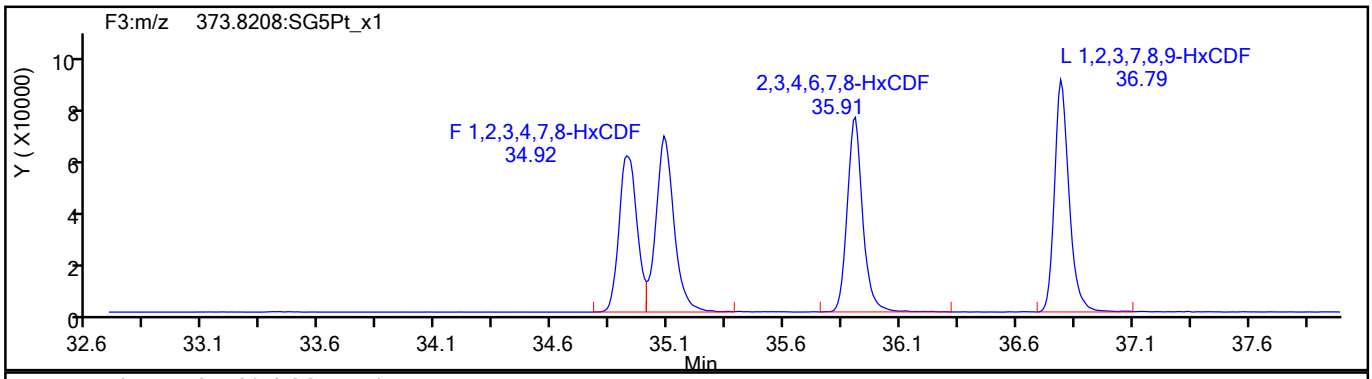

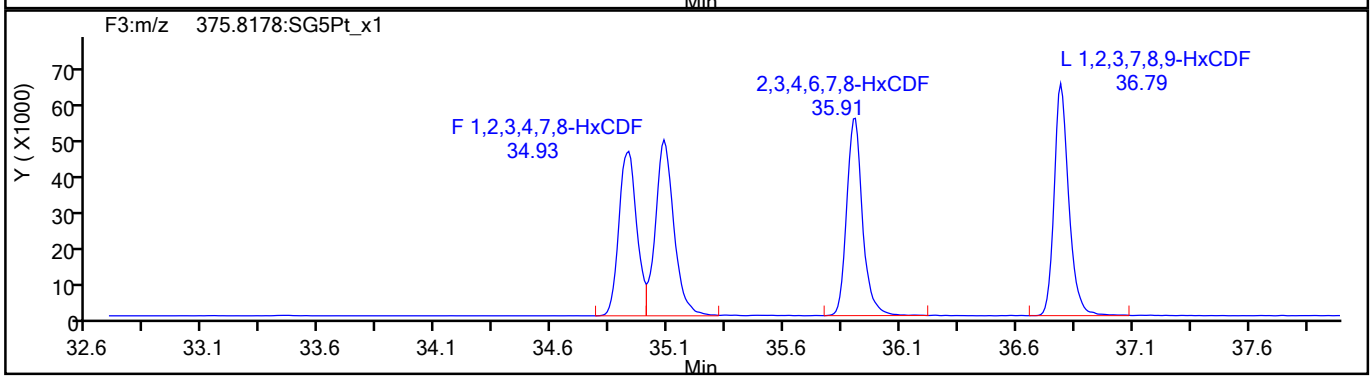

HxCDF Standards

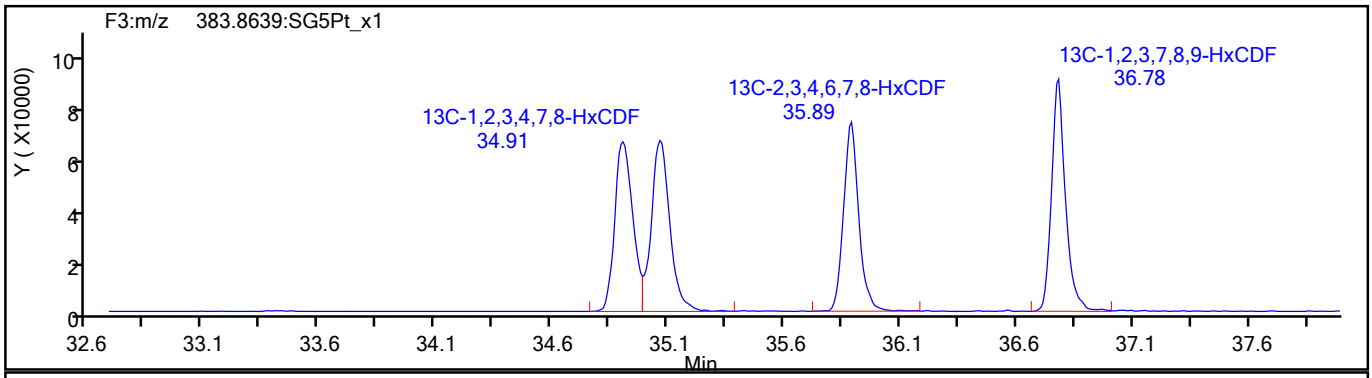

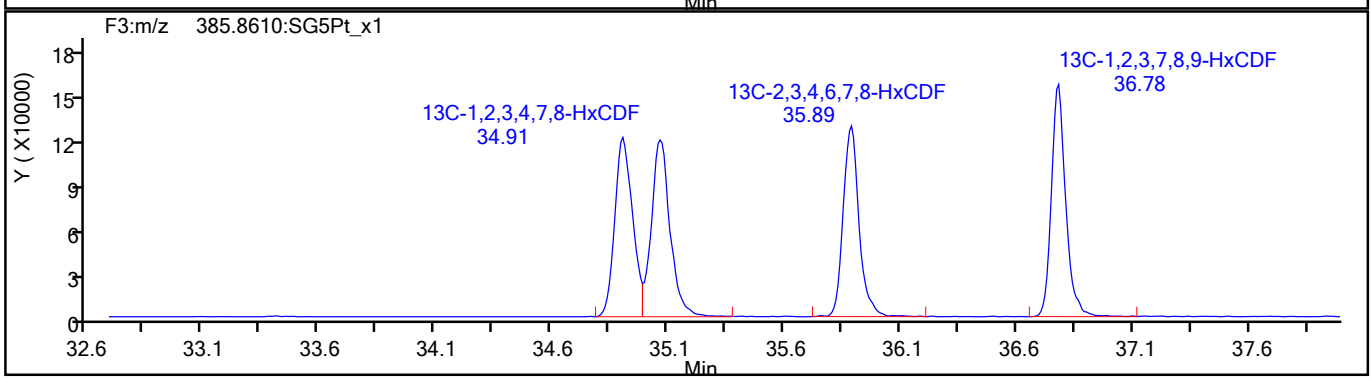

789357

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

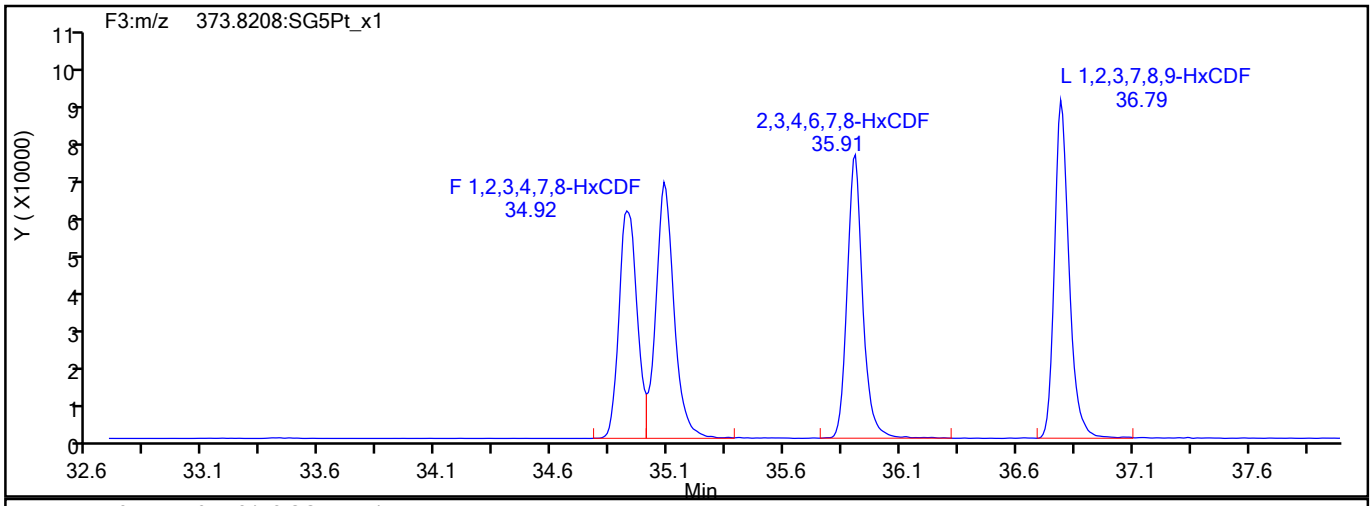

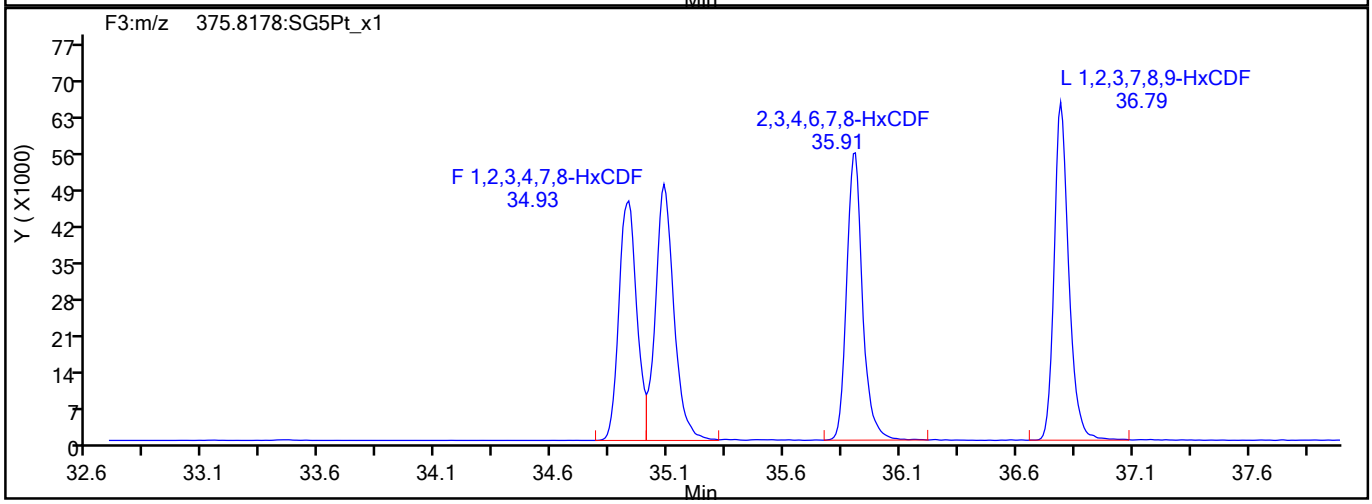

HxCDF Interference Mass

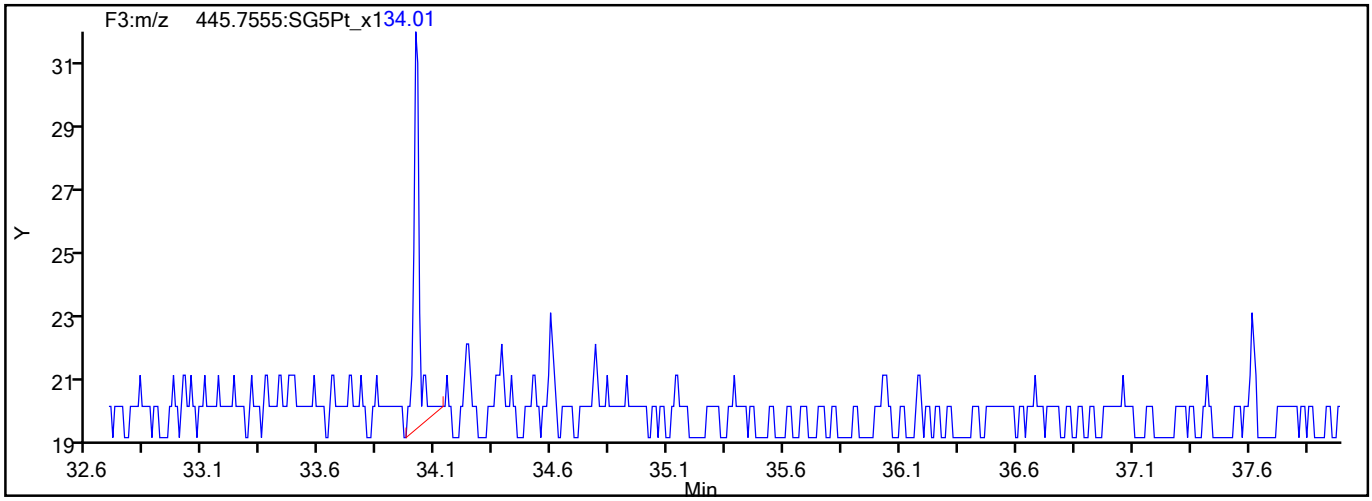

789358

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

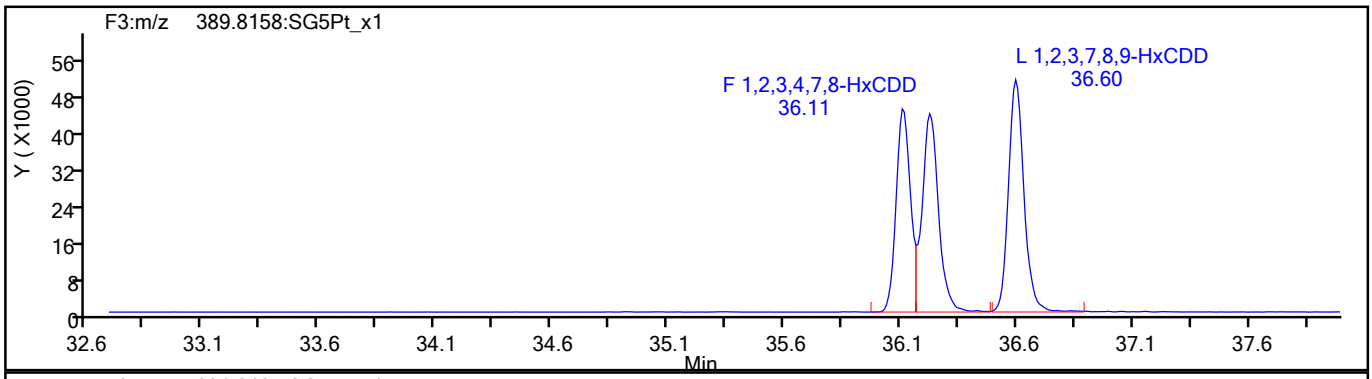

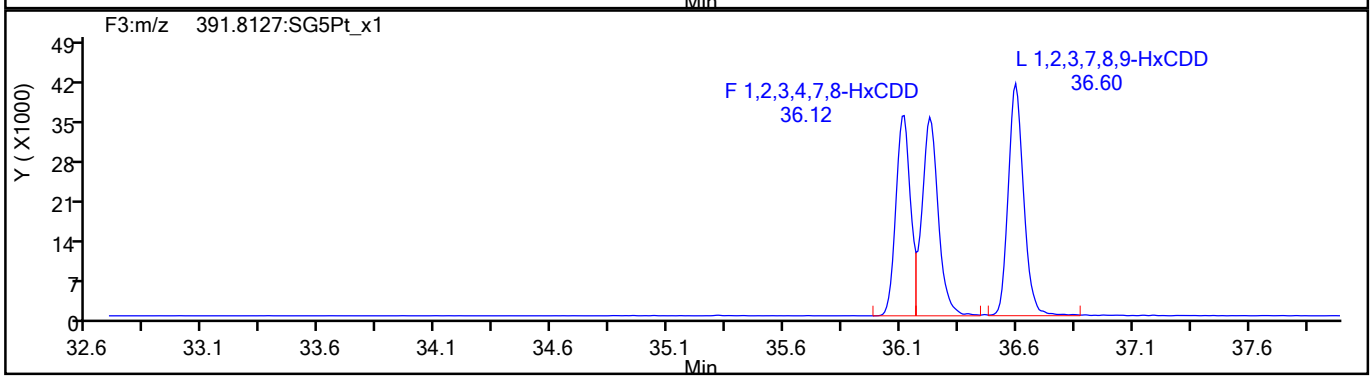

HxCDD Standards

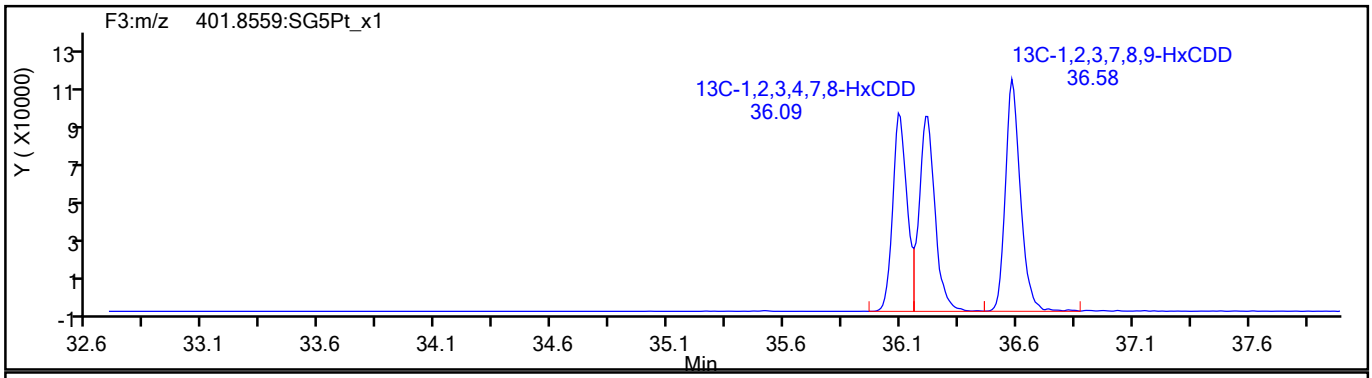

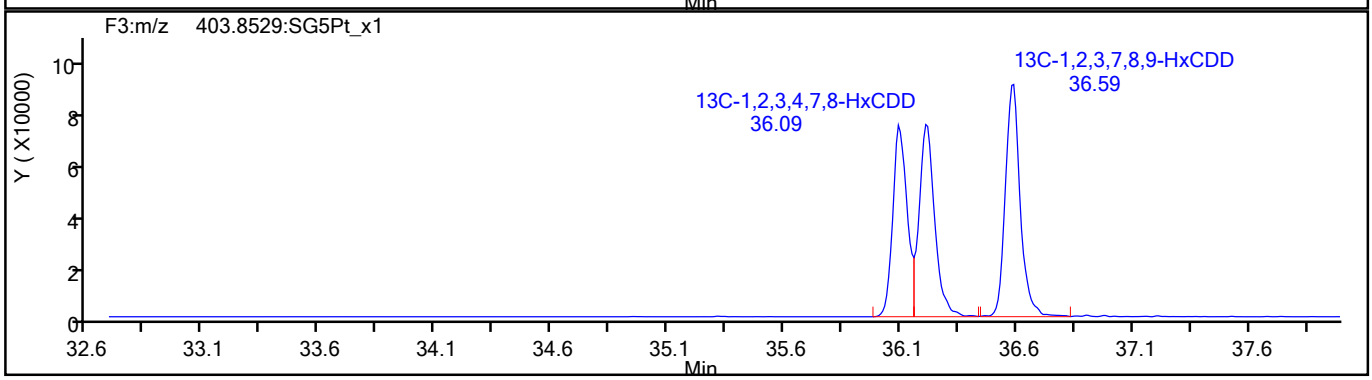

789359

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

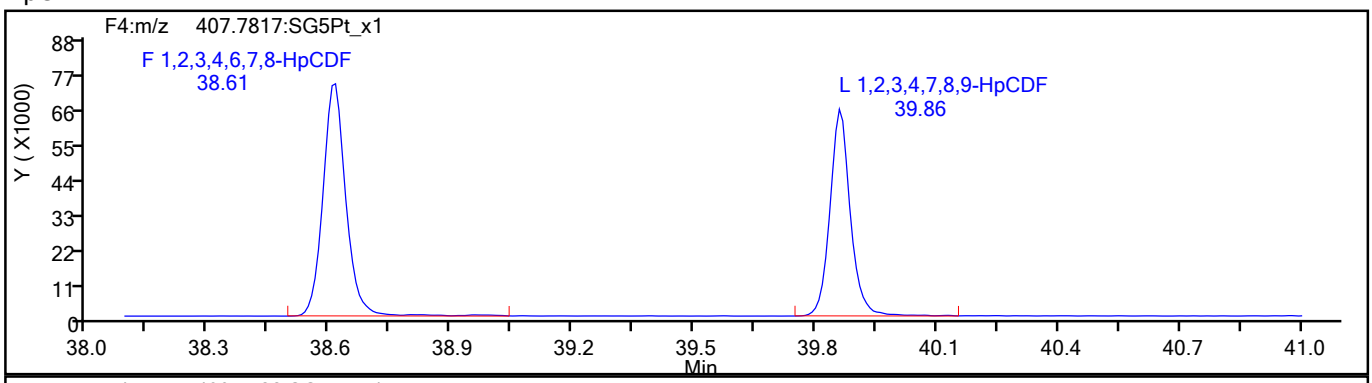

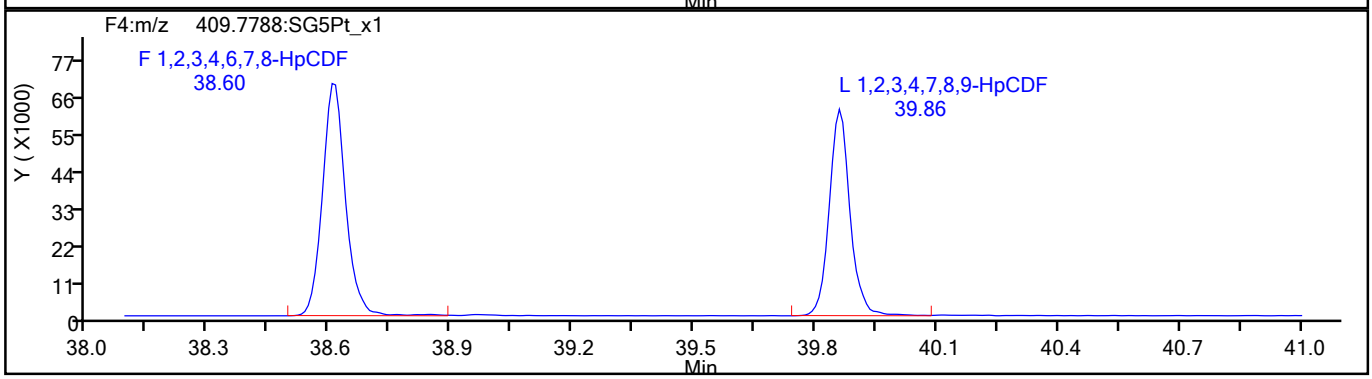

HpCDF Standards

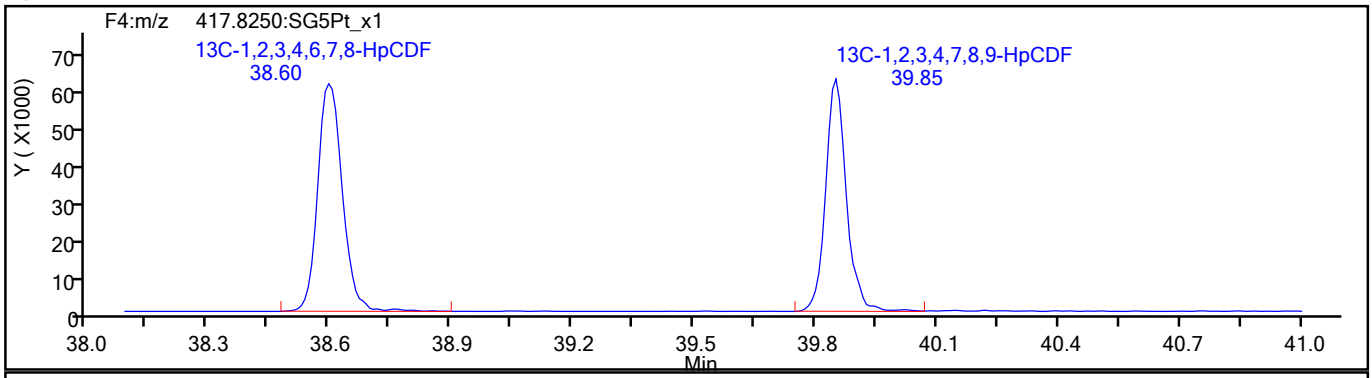

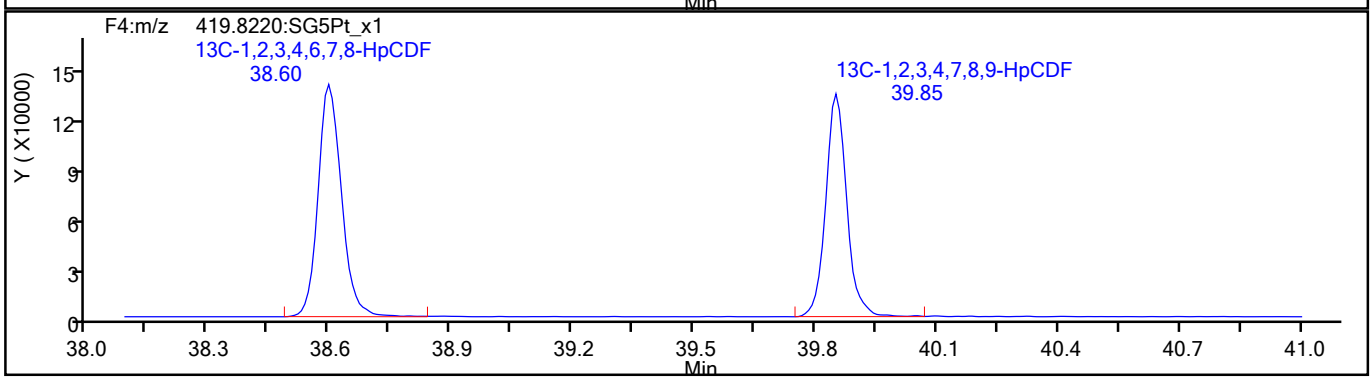

789360

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

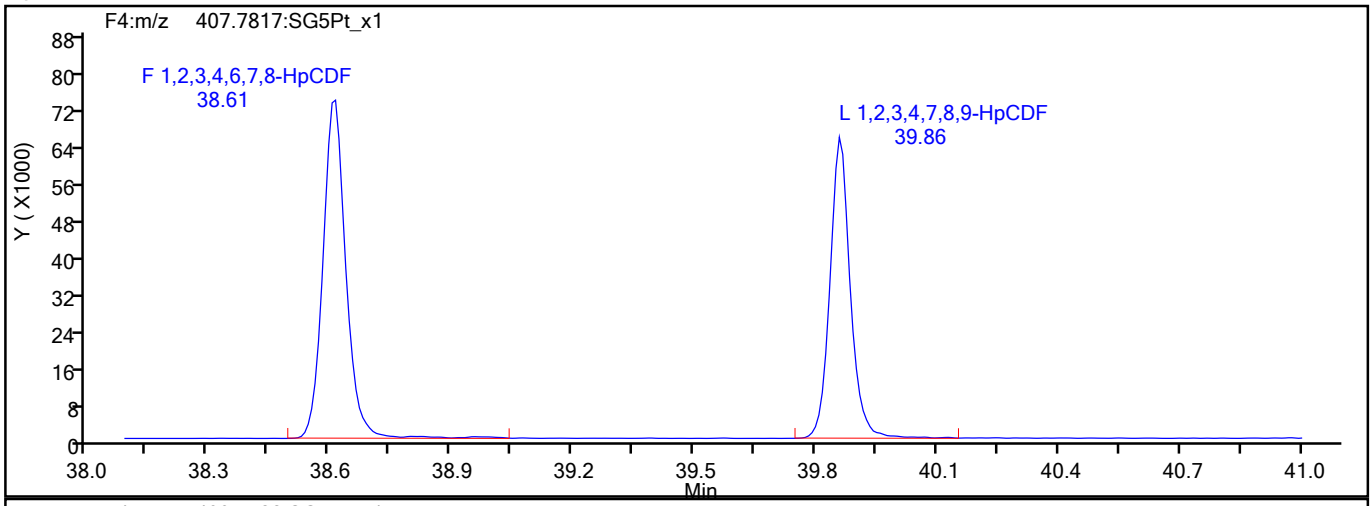

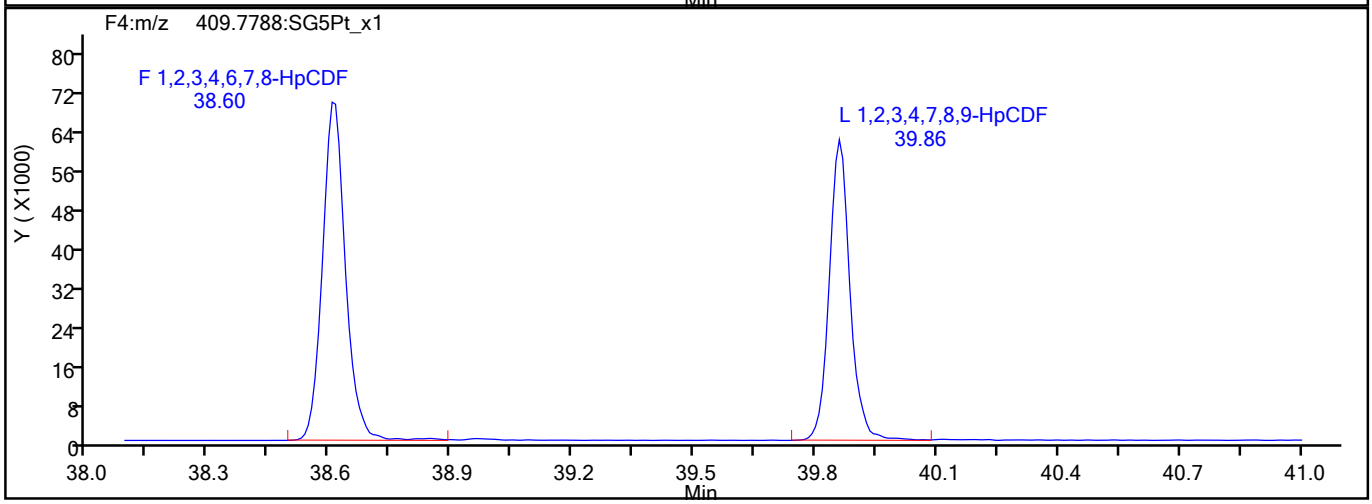

HpCDF Interference Mass

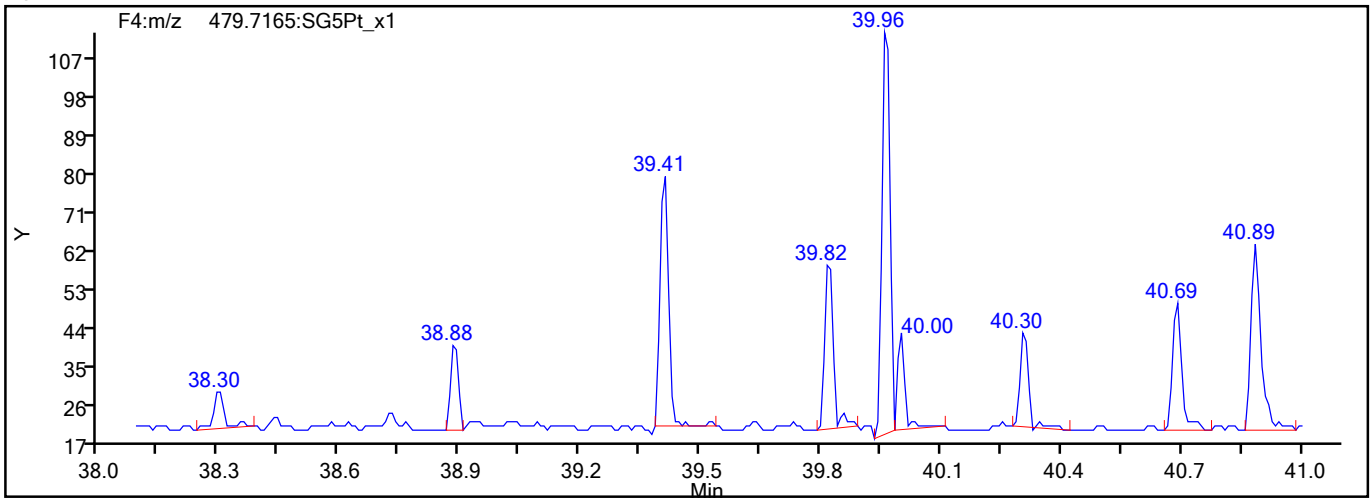

789361

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

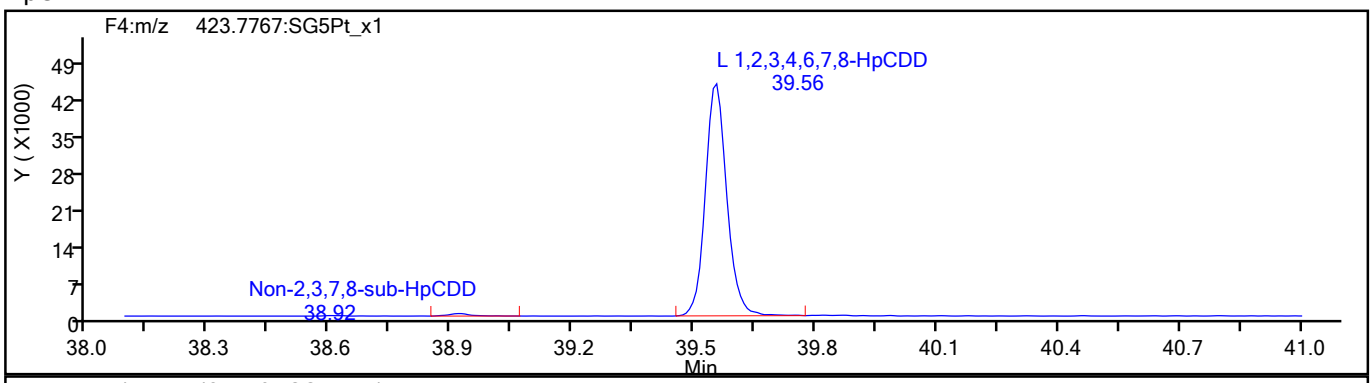

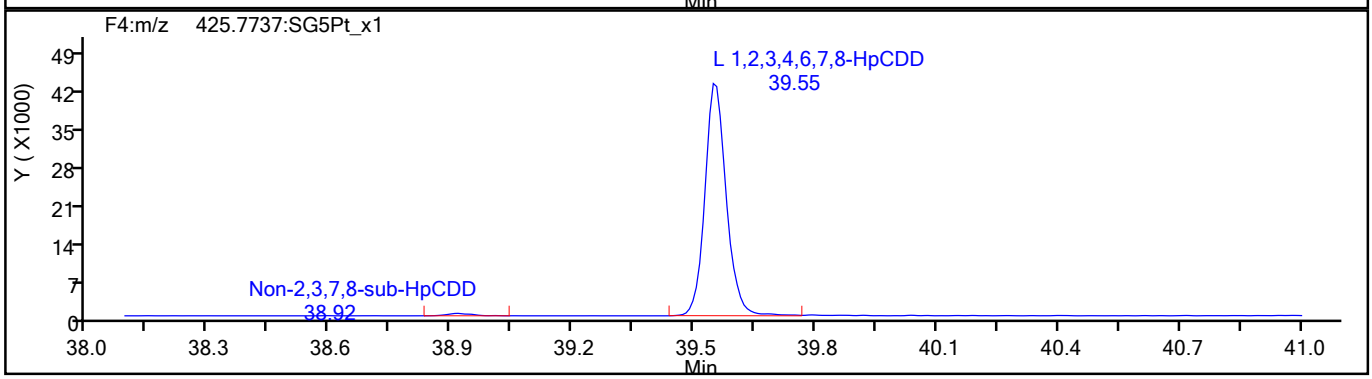

HpCDD Standards

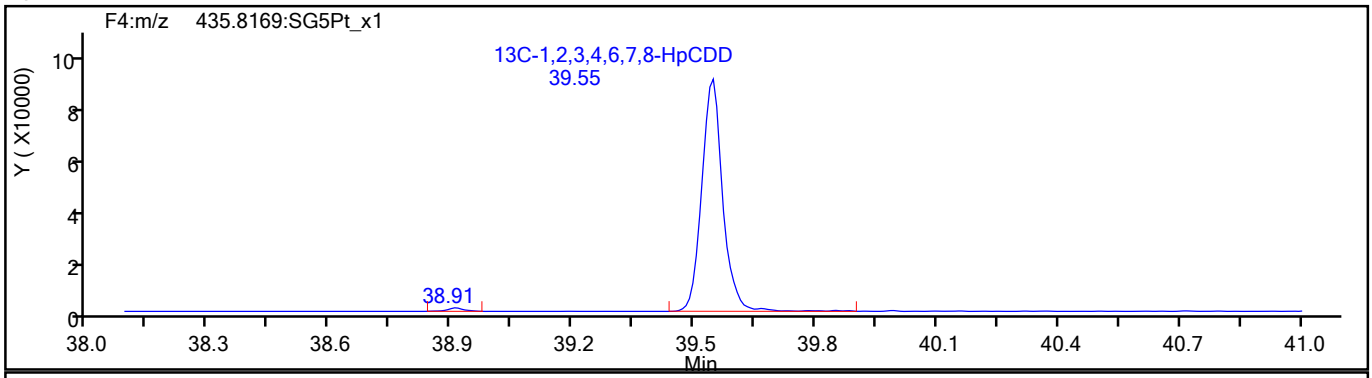

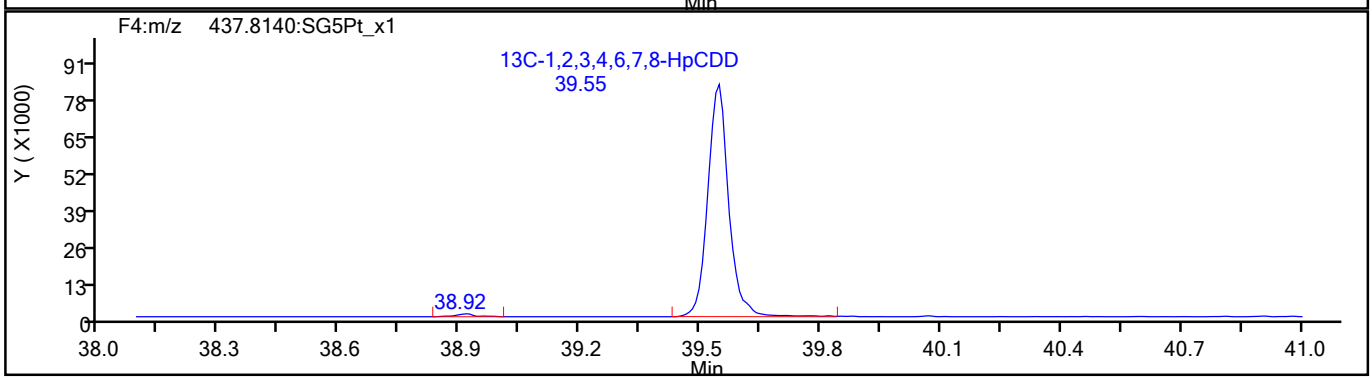

789362

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

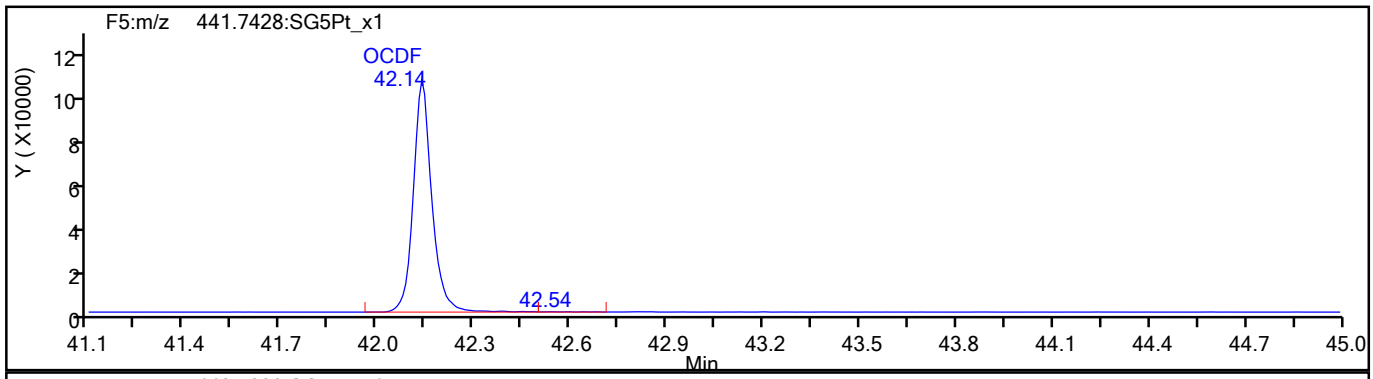

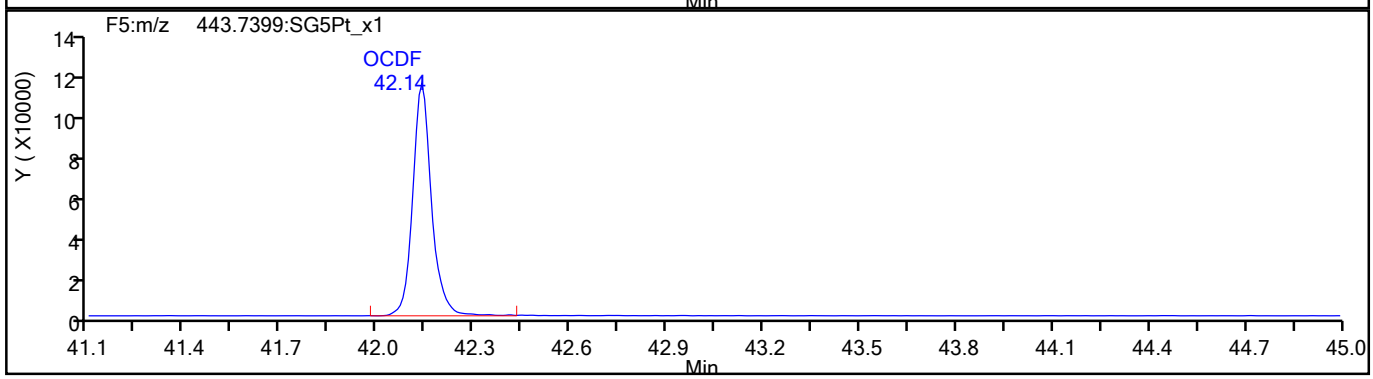

OCDF Standards

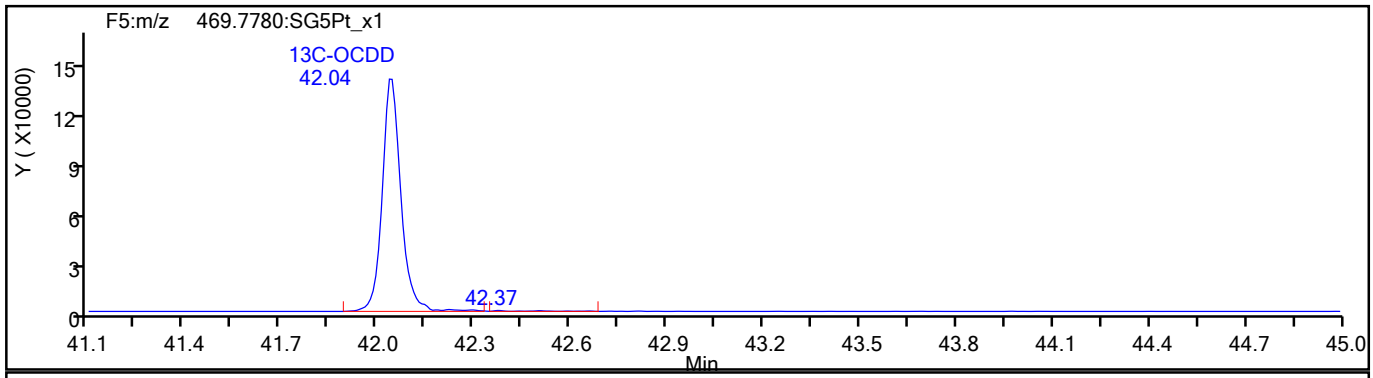

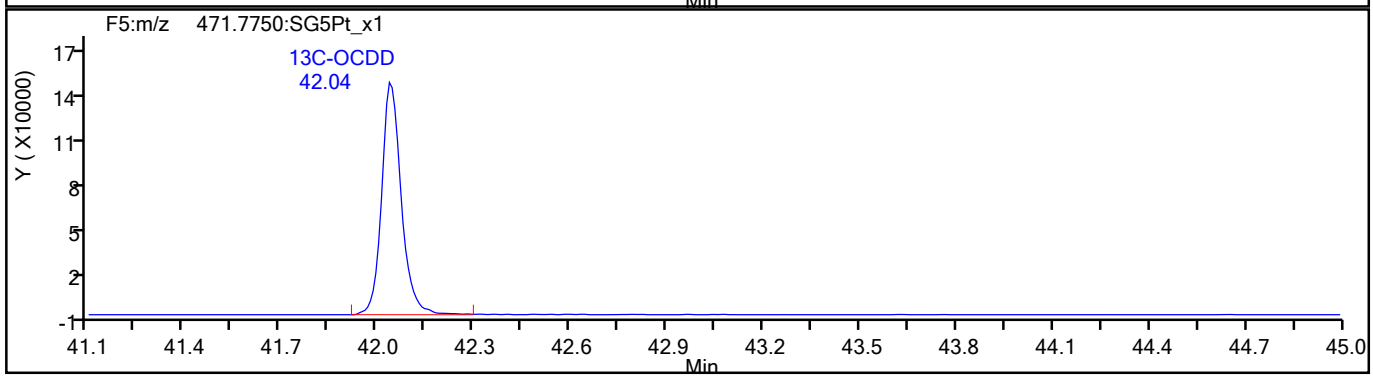

789363

Report Date: 21-Aug-2021 17:06:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

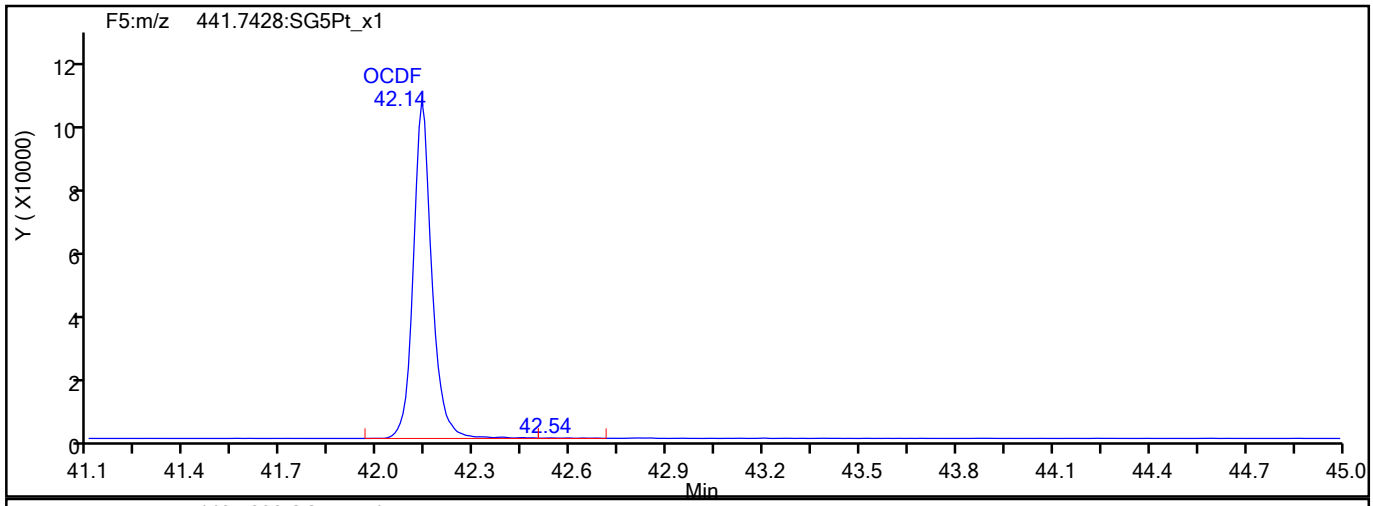

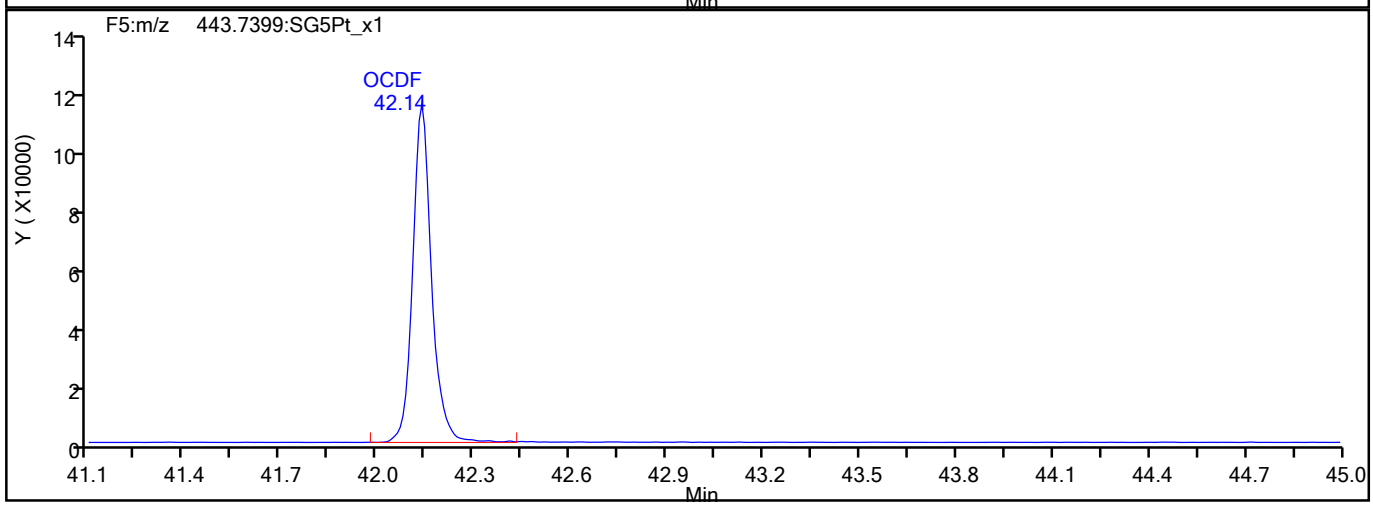

OCDF Interference Mass

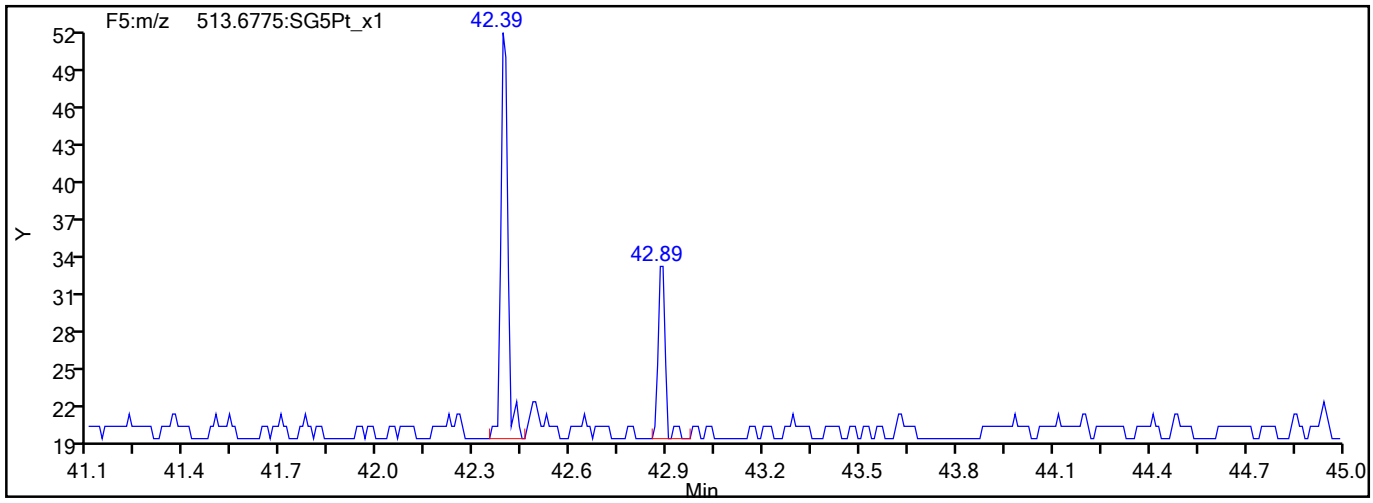

789364

Report Date: 21-Aug-2021 17:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

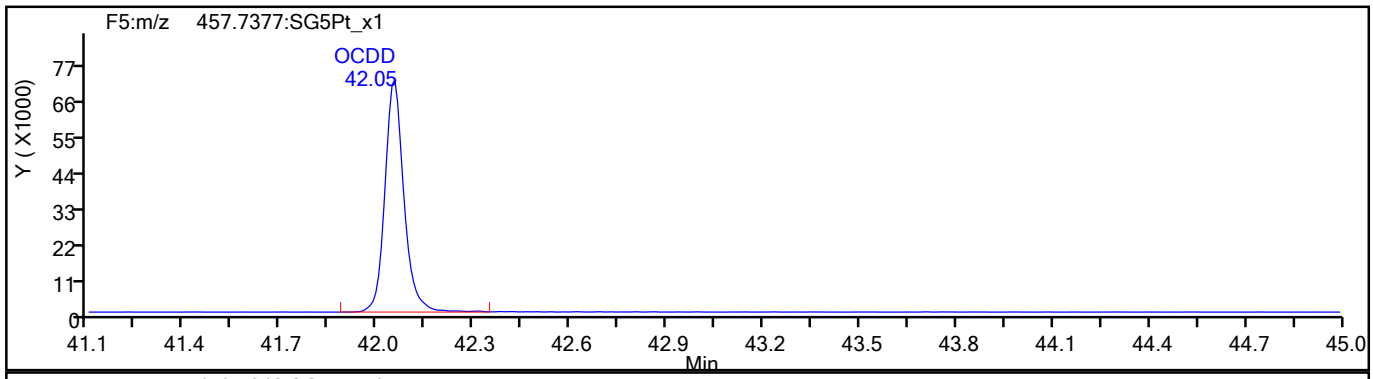

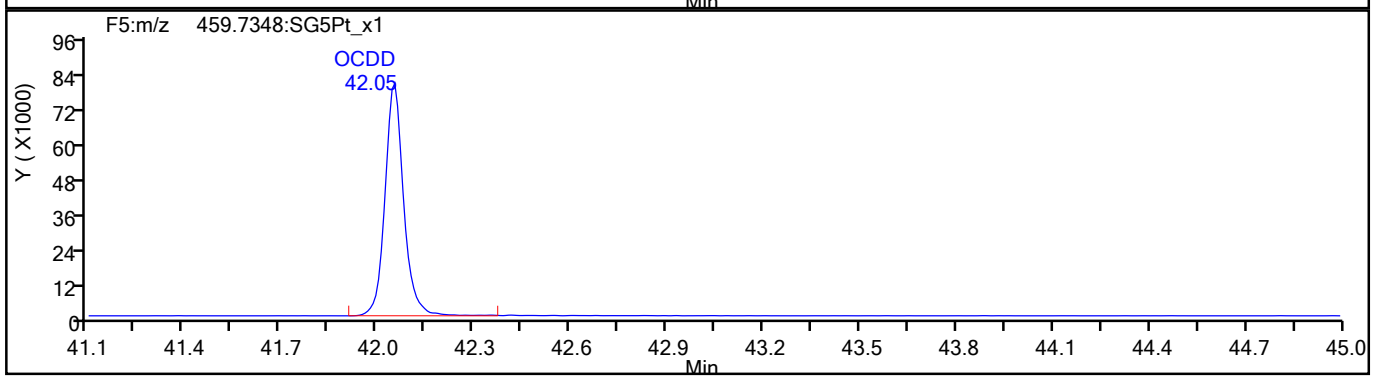

OCDD Standards

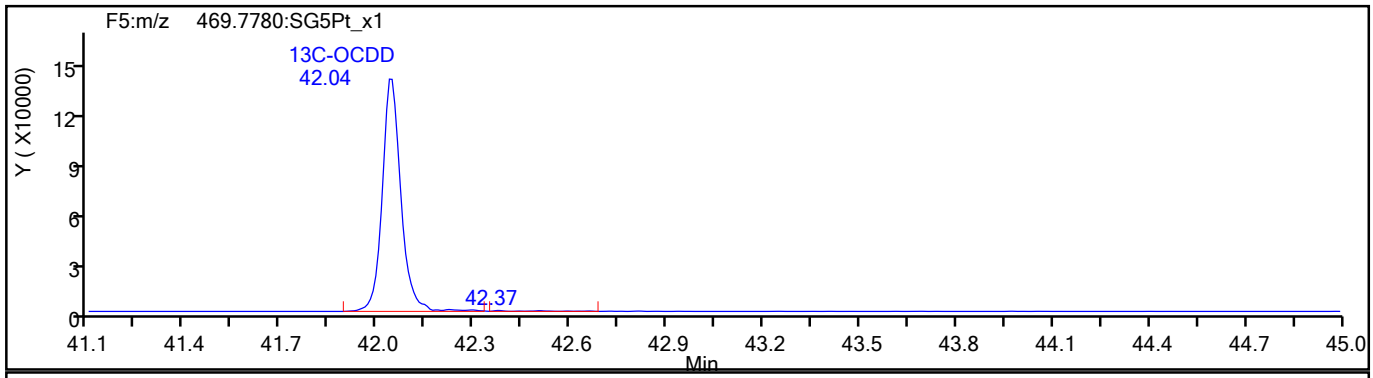

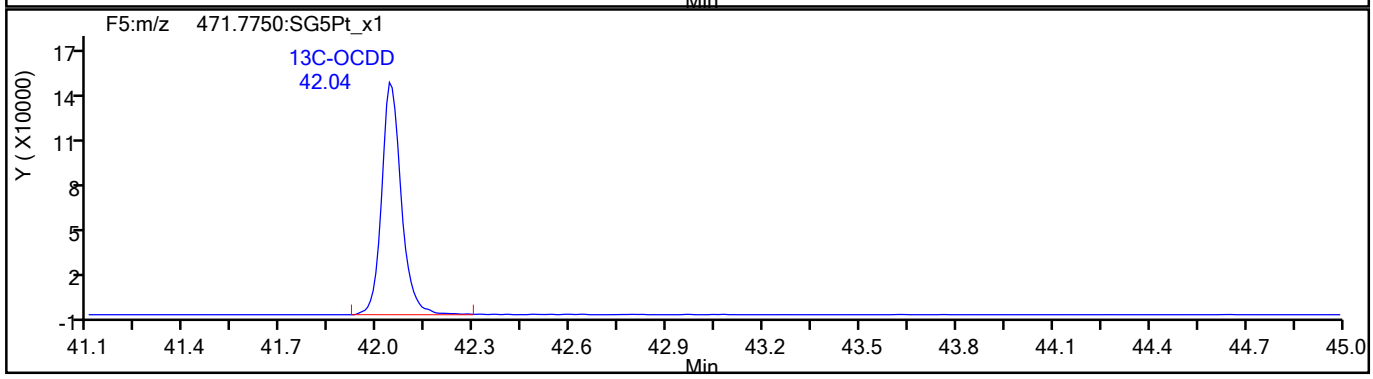

789365

Report Date: 21-Aug-2021 17:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

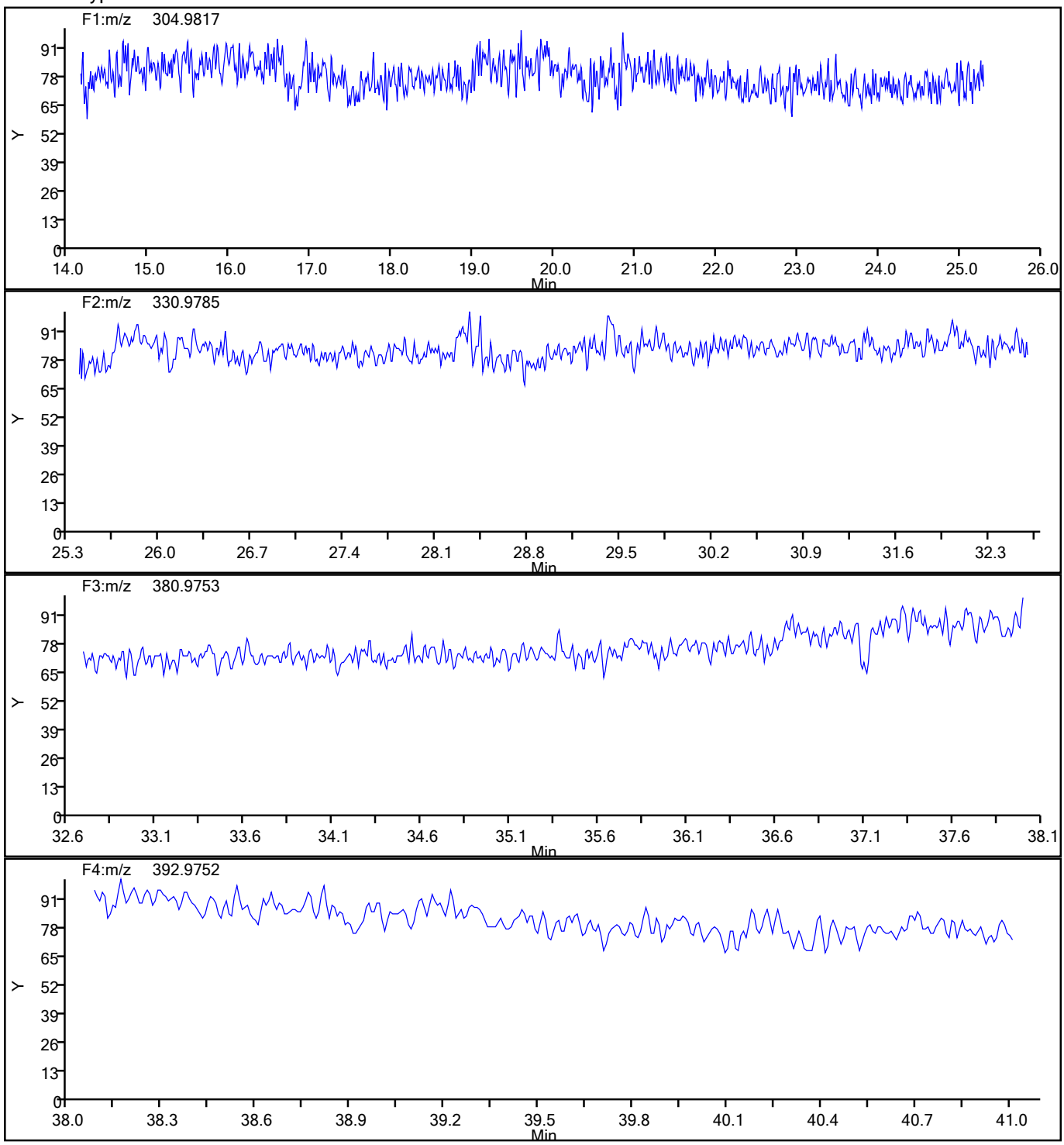

789366

Report Date: 21-Aug-2021 17:06:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_17.d		
Injection Date:	20-Aug-2021 01:34:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	15
Column Type:	DB-5	Column Dia:	0.32 mm

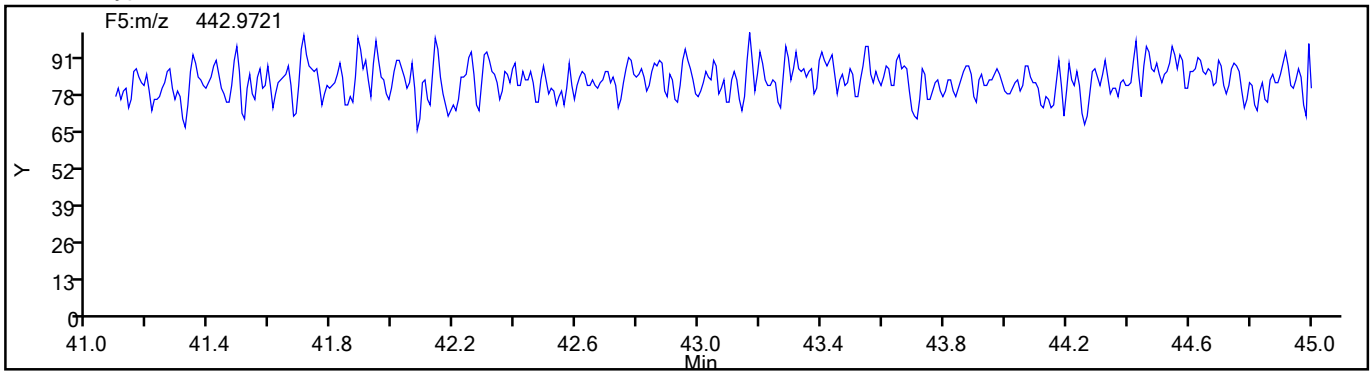

789367

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.598	43192451	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.628	95812265	0.77	1.0239	86.7	86.7	0.4368	0.4368		
A Non-2,3,7,8-sub-TCDF	17.311	141340622	0.77	1.0239	127.8	127.8	0.4368	50.4		
S Total TCDF					214.5	214.5	0.4368	0.4368		
D 13C-2,3,7,8-TCDD	18.323	22643725	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.338	31002300	0.78	1.2541	43.7	43.7	0.2199	0.2199		
A Non-2,3,7,8-sub-TCDD	17.772	120319254	0.78	1.2541	169.5	169.5	0.2199	46.0		
S Total TCDD					213.1	213.1	0.2199	0.2199		
A F1 PeCDFs	20.244	36548211	1.59	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.473	28699153	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.744	44367204	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.542	988216341	1.23	0.0000						
A Non-2,3,7,8-sub-HxCDF	30.542	1016402527	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	31.215	43254937	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.911	28490431	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	35.005	21744380	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.458						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.714	17168827	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.133	55744963	0.78							a
1,3,6,8-TCDD	16.071	32157911	0.78							a
2,3,4,7-TCDF	17.628	95812265	0.77							a
1,2,3,7-TCDD	18.218	26254918	0.77							a
1,2,3,9-TCDF	18.505	41465019	0.77							a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,9-TCDD	18.505	32677146	0.79							a
1,2,8,9-TCDD	19.472	12707183								a
1,2,8,9-TCDF	19.488	41982512	0.76							a
1,3,4,6,8-PeCDF	19.760	36548211	1.59							a
1,2,4,7,9-PeCDD	21.576	23369968	1.58							a
1,2,3,8,9-PeCDD	25.912	20997236	1.59							a
1,2,3,8,9-PeCDF	26.144	28026312	1.61							a
1,2,3,4,6,8-HxCDF	28.479	29886017	1.22							a
1,2,4,6,7,9-HxCDD	30.023	21768457	1.27							a
1,2,3,4,6,7-HxCDD	32.299	21486480	1.24							a
1,2,3,4,8,9-HxCDF	32.605	28186186	1.23							a
1,2,3,4,6,7,9-HpCDD	34.154						0.0	0.0		U

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	1.000	18796968	4666881	8168	20420	571		
317.9389	17.598	17.598	0	1.000	24395483	6066397	3473	8682	1747	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.002	41629702	9682578	19585	48962	494		
305.8987	17.628	17.631	0	1.002	54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.133	17.311	-130	0.860	24509538	7569037	19585	48962	386		
305.8987	15.133	17.311	-130	0.860	31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
303.9016	18.505	17.311	72	1.052	18061189	4195885	19585	48962	214		
305.8987	18.505	17.311	72	1.052	23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
303.9016	19.488	17.311	130	1.107	18098944	4035450	19585	48962	206		
305.8987	19.488	17.311	130	1.107	23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
303.9016	19.775	17.311	148	1.124	944774	152570	19585	48962	8		
305.8987	19.775	17.311	148	1.124	1203354	204203	28414	71035	7	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.000	10063481	2396990	3086	7715	777		
333.9339	18.323	18.323	0	1.000	12580244	3018588	1527	3817	1977	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.357	-1	1.001	13597515	3193209	6116	15290	522		
321.8936	18.338	18.357	-1	1.001	17404785	4135946	8817	22042	469	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	16.071	17.772	-102	0.877	14103074	4061475	6116	15290	664		
321.8936	16.071	17.772	-102	0.877	18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
319.8965	18.218	17.772	27	0.994	11446127	2829889	6116	15290	463		
321.8936	18.218	17.772	27	0.994	14808791	3726958	8817	22042	423	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	18.505	17.772	44	1.010	14439496	3301963	6116	15290	540		
321.8936	18.505	17.772	44	1.010	18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
319.8965	19.472	17.772	102	1.063	12707183	2751784	6116	15290	450		
321.8936	19.472	17.772	102	1.063	16522096	3661962	8817	22042	415	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.760	20.244	-29	1.000	22414023	4920048	649	1622	7581		
341.8567	19.760	20.244	-29	1.000	14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.344	23.473	-127	1.000	84191	14080	2633	6582	5		
341.8567	21.344	23.473	-127	1.000	53909	7615	1950	4875	4	1.56(1.32-1.78)	
339.8597	22.176	23.473	-78	1.000	88076	13805	2633	6582	5		
341.8567	22.190	23.473	-77	1.000	48170	9635	1950	4875	5	1.83(1.32-1.78)	
339.8597	22.749	23.473	-43	1.000	168309	20506	2633	6582	8		
341.8567	22.762	23.473	-43	1.000	82177	12827	1950	4875	7	2.05(1.32-1.78)	
339.8597	23.321	23.473	-9	1.000	142716	22963	2633	6582	9		
341.8567	23.321	23.473	-9	1.000	79356	11480	1950	4875	6	1.80(1.32-1.78)	
339.8597	26.144	23.473	160	1.000	17301746	2425915	2633	6582	921		
341.8567	26.144	23.473	160	1.000	10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.576	23.744	-130	1.000	14314296	2552271	2414	6035	1057		
357.8516	21.576	23.744	-130	1.000	9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
355.8546	25.912	23.744	130	1.000	12881489	1801570	2414	6035	746		
357.8516	25.912	23.744	130	1.000	8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	32.605	30.542	124	1.000	15534015	4607321	4603	11507	1001		
375.8178	32.605	30.542	124	1.000	12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.023	31.215	-71	1.000	12175655	1922535	6506	16265	296		
391.8127	30.023	31.215	-71	1.000	9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
389.8157	32.299	31.215	65	1.000	11903453	3254284	6506	16265	500		
391.8127	32.299	31.215	65	1.000	9583027	2649988	5715	14287	464	1.24(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.911	33.926	-1	1.000	14581587	4505694	20273	50682	222		
409.7789	33.911	33.926	-1	1.000	13908844	4348275	17441	43602	249	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.005	35.020	-1	1.000	11106344	3153936	20273	50682	156		
409.7789	35.005	35.020	-1	1.000	10638036	3040493	17441	43602	174	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						20273	50682			
409.7789	34.458						17441	43602			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.726	-1	1.000	8809155	2526480	13831	34577	183		
425.7737	34.714	34.726	-1	1.000	8359672	2427581	13744	34360	177	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						13831	34577			
425.7737	33.504						13744	34360			
1,3,6,8-TCDF											a
303.9016	15.133	15.133	0		24509538	7569037	19585	48962	386		a
305.8987	15.133	15.133	0		31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
1,3,6,8-TCDD											a
319.8965	16.071	16.071	0		14103074	4061475	6116	15290	664		a
321.8936	16.071	16.071	0		18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
2,3,4,7-TCDF											a
303.9016	17.628	17.628	0		41629702	9682578	19585	48962	494		a
305.8987	17.628	17.628	0		54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
1,2,3,7-TCDD											a
319.8965	18.218	18.218	0		11446127	2829889	6116	15290	463		a
321.8936	18.218	18.218	0		14808791	3726958	8817	22042	423	0.77(0.65-0.89)	
1,2,3,9-TCDF											a
303.9016	18.505	18.505	0		18061189	4195885	19585	48962	214		a
305.8987	18.505	18.505	0		23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
1,2,3,9-TCDD											a
319.8965	18.505	18.505	0		14439496	3301963	6116	15290	540		a
321.8936	18.505	18.505	0		18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
1,2,8,9-TCDD											a
319.8965	19.472	19.472	0		12707183	2751784	6116	15290	450		a
1,2,8,9-TCDF											a
303.9016	19.488	19.488	0		18098944	4035450	19585	48962	206		a
305.8987	19.488	19.488	0		23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
1,3,4,6,8-PeCDF											a
339.8597	19.760	19.760	0		22414023	4920048	649	1622	7581		a
341.8567	19.760	19.760	0		14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	21.576	21.576	0		14314296	2552271	2414	6035	1057		a
357.8516	21.576	21.576	0		9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											a
355.8546	25.912	25.912	0		12881489	1801570	2414	6035	746		a
357.8516	25.912	25.912	0		8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	26.144	26.144	0		17301746	2425915	2633	6582	921		a
341.8567	26.144	26.144	0		10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											a
373.8208	28.479	28.479	0		16406487	2121744	4603	11507	461		a
375.8178	28.479	28.479	0		13479530	1752621	3729	9322	470	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											a
389.8157	30.023	30.023	0		12175655	1922535	6506	16265	296		a
391.8127	30.023	30.023	0		9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											a
389.8157	32.299	32.299	0		11903453	3254284	6506	16265	500		a
391.8127	32.299	32.299	0		9583027	2649988	5715	14287	464	1.24(1.05-1.43)	

Report Date: 27-Jul-2021 15:09:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,8,9-HxCDF											a
373.8208	32.605	32.605	0		15534015	4607321	4603	11507	1001		a
375.8178	32.605	32.605	0		12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.154						13831	34577			
425.7737	34.154						13744	34360			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	43192451	10733278

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	43192451	10733278

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.133	24509538	7569037	31235425	9722736	50.4	0.78	
18.505	18061189	4195885	23403830	5509968	37.5	0.77	
19.488	18098944	4035450	23883568	5304928	38.0	0.76	
19.775	944774	152570	1203354	204203	1.94	0.79	
Signal Totals:	61614445	15952942	79726177	20741835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141340622	36694777				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 127.837 = (141340622 * 40.000) / (43192451 * 1.024)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	22643725	5415578

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	22643725	5415578

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.071	14103074	4061475	18054837	5166402	45.3	0.78	
18.218	11446127	2829889	14808791	3726958	37.0	0.77	
18.505	14439496	3301963	18237650	4248308	46.0	0.79	
19.472	12707183	2751784	16522096	3661962	41.2	0.77	
Signal Totals:							
	52695880	12945111	67623374	16803630			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	120319254	29748741				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 169.476 = (120319254 * 40.000) / (22643725 * 1.254)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

F1 PeCDFs, RT: 20.244

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.760	22414023	4920048	14134188	3116108		1.59	
Signal Totals:							
	22414023	4920048	14134188	3116108			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	36548211	8036156				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (36548211 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.344	84191	14080	53909	7615		1.56	
22.176	88076	13805	48170	9635		1.83	R
22.749	168309	20506	82177	12827		2.05	R
23.321	142716	22963	79356	11480		1.80	R
26.144	17301746	2425915	10724566	1530575		1.61	
Signal Totals:							
	17785038	2497269	10988178	1572132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28773216	4069401				1.62	RQ
	28699153	4064735					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (28773216 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (28699153 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.744

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.576	14314296	2552271	9055672	1599456		1.58	
25.912	12881489	1801570	8115747	1169053		1.59	
Signal Totals:							
	27195785	4353841	17171419	2768509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	44367204	7122350				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (44367204 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.542

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
32.605	15534015	4607321	12652171	3734547		1.23	
Signal Totals:							
	15534015	4607321	12652171	3734547			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	988216341	287497877				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (988216341 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 31.215

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.023	12175655	1922535	9592802	1497827		1.27	
32.299	11903453	3254284	9583027	2649988		1.24	
Signal Totals:							
	24079108	5176819	19175829	4147815			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43254937	9324634				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43254937 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

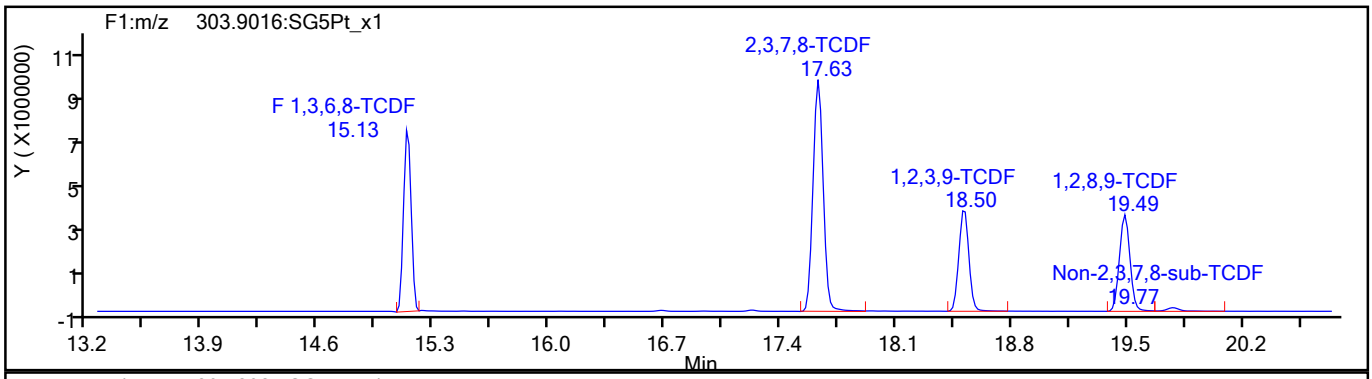

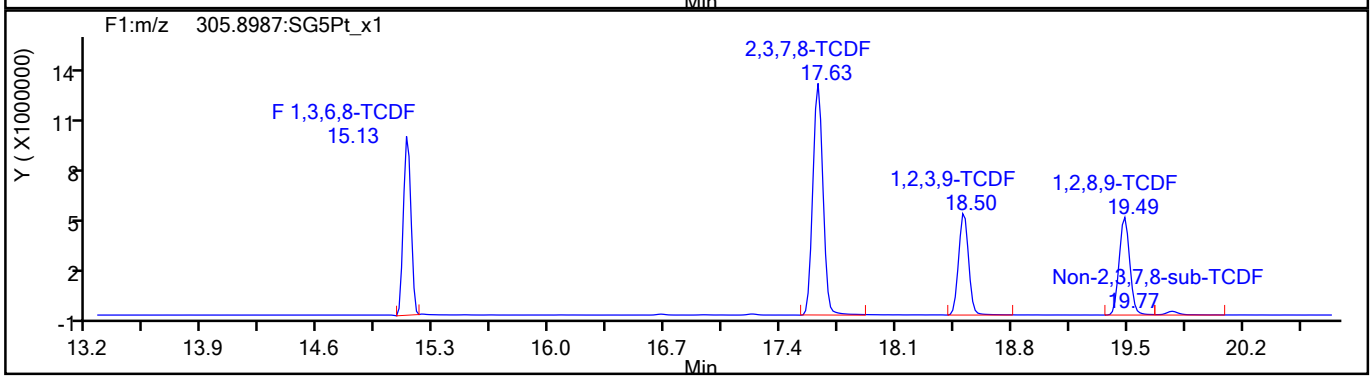

TCDF Standards

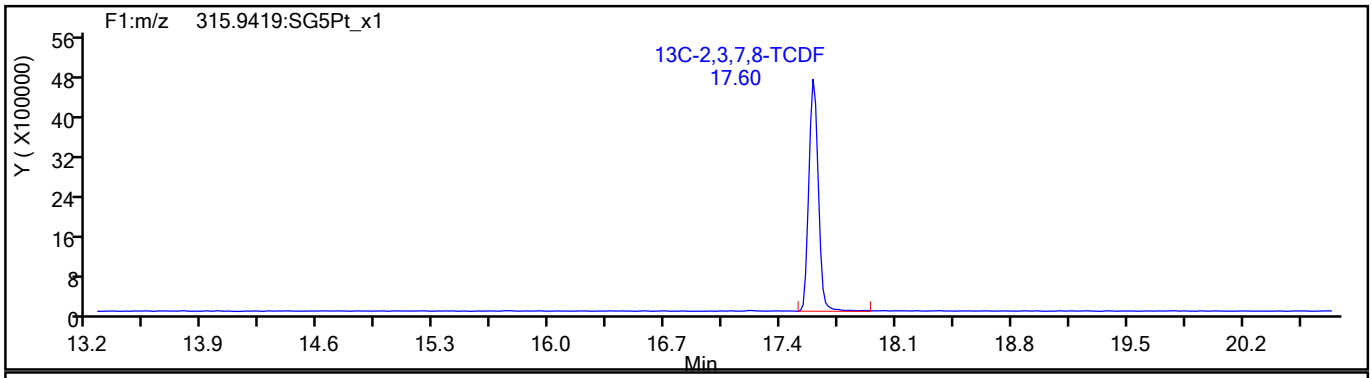

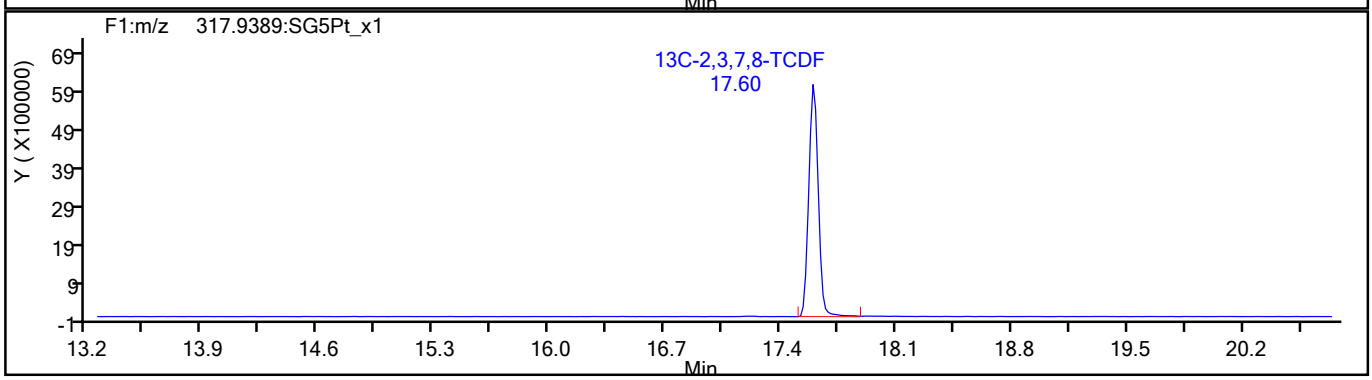

789382

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

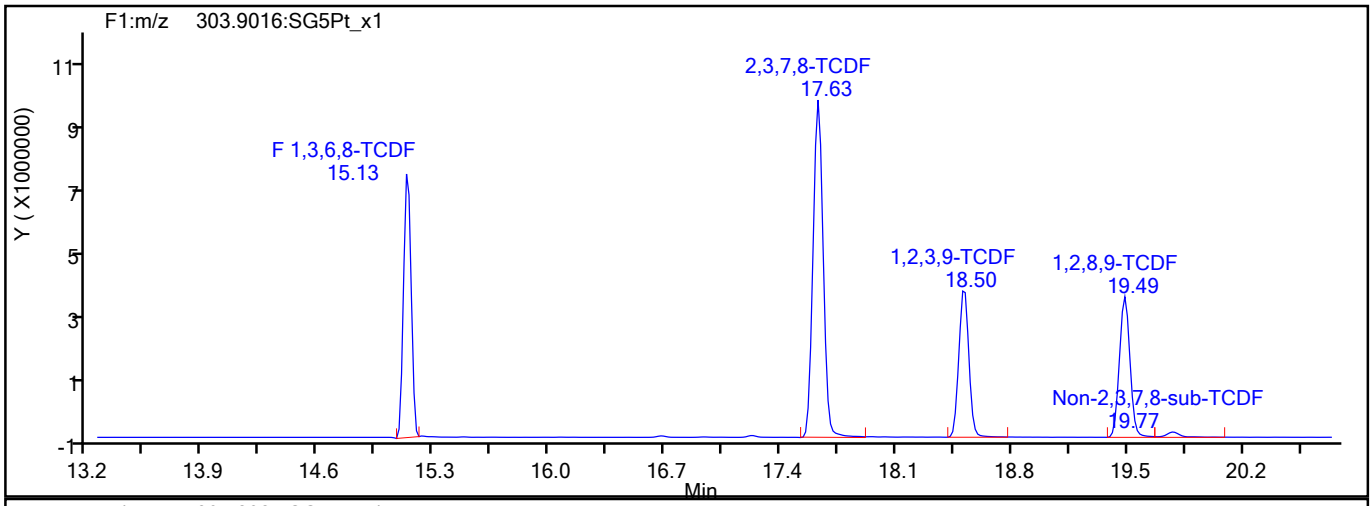

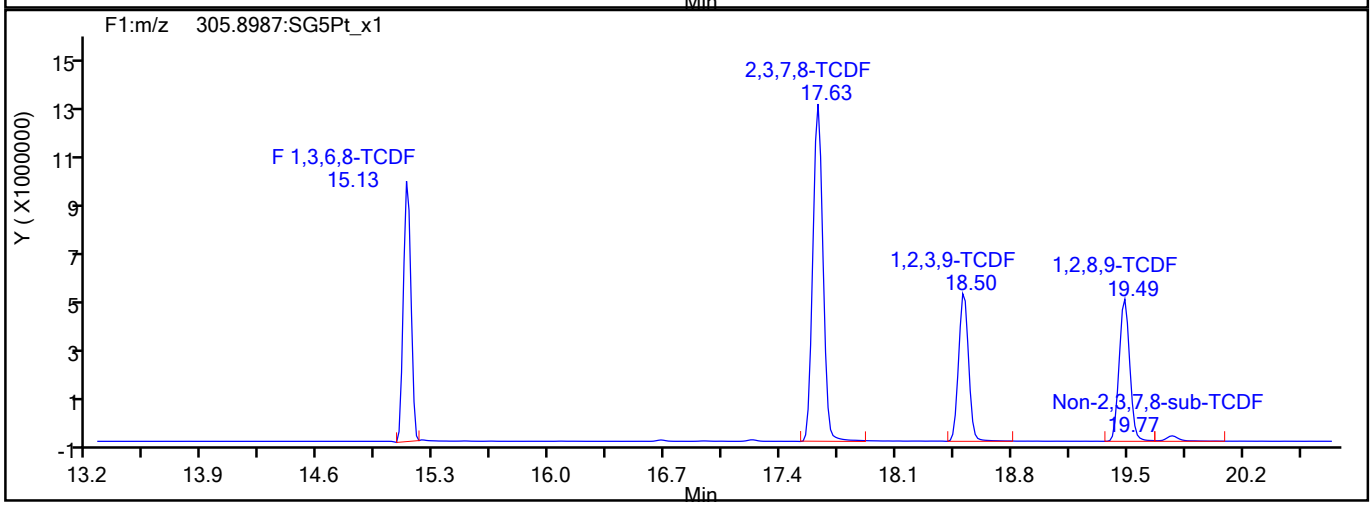

TCDF Interference Mass

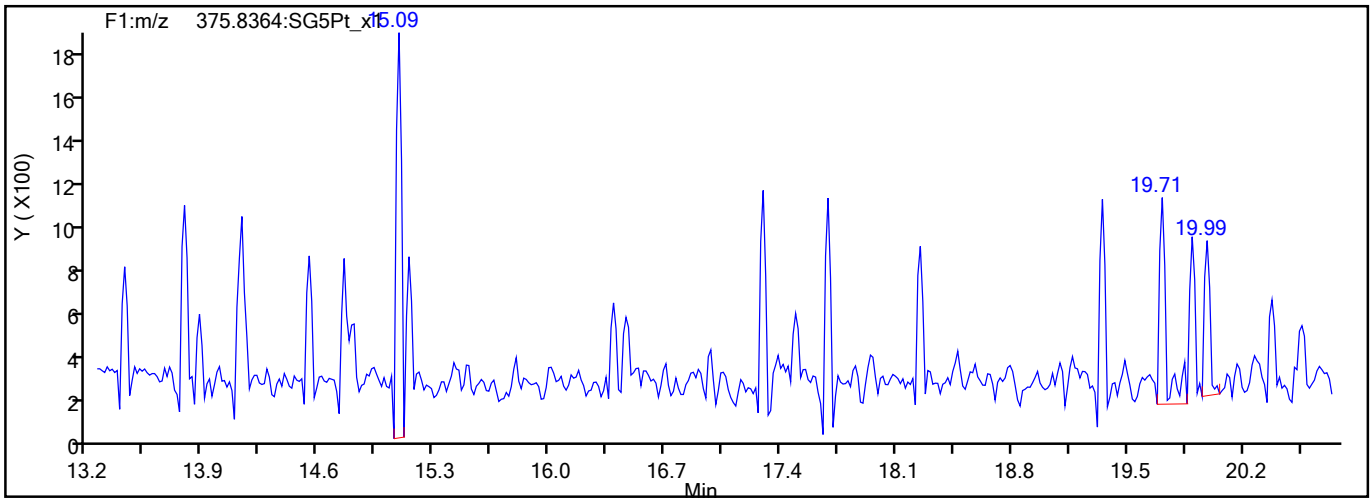

789383

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

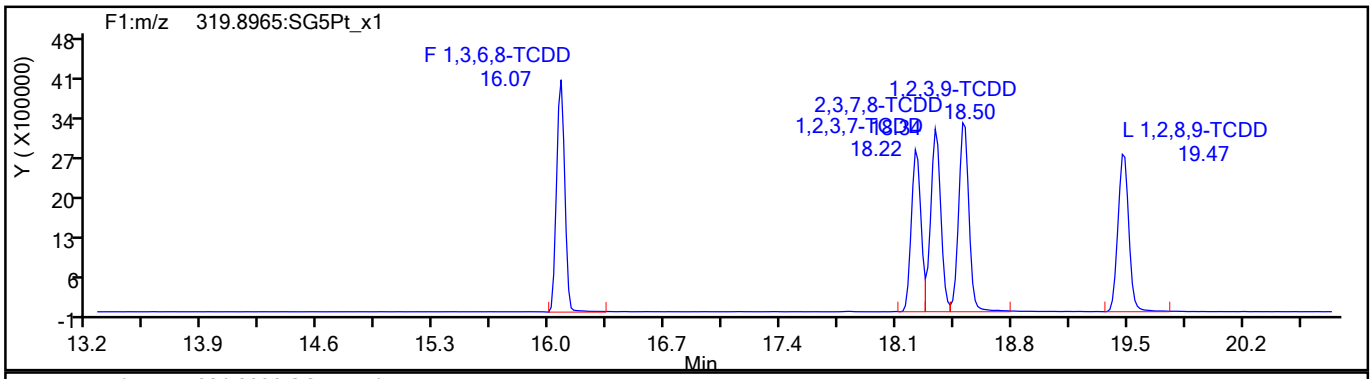

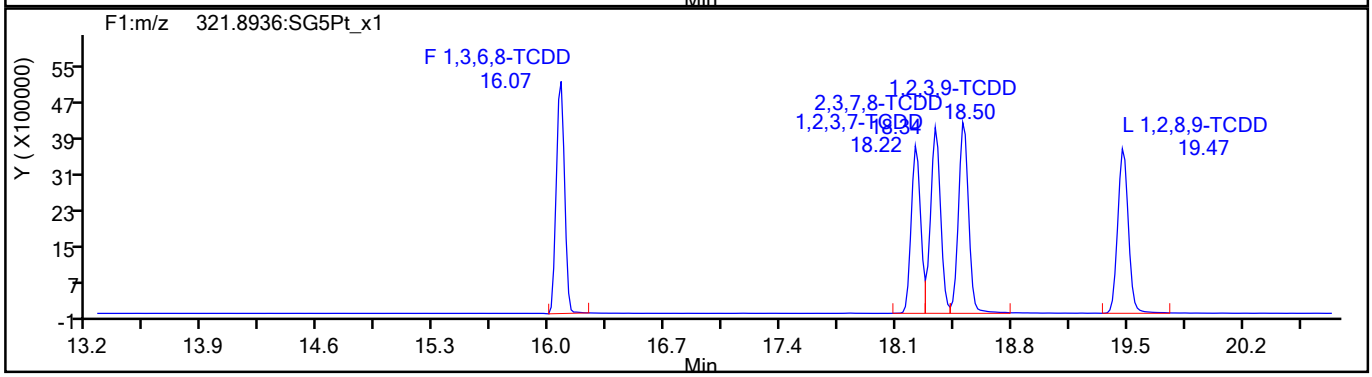

TCDD Standards

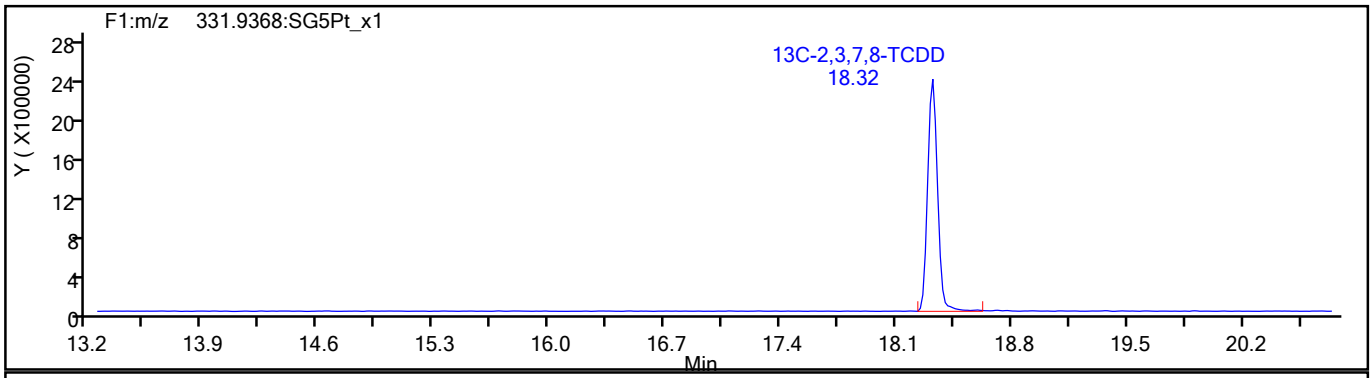

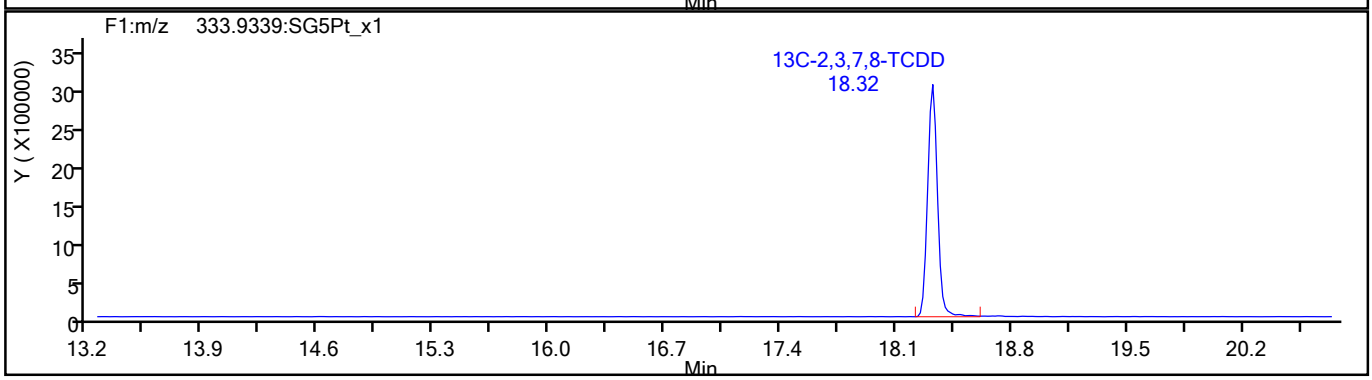

789384

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

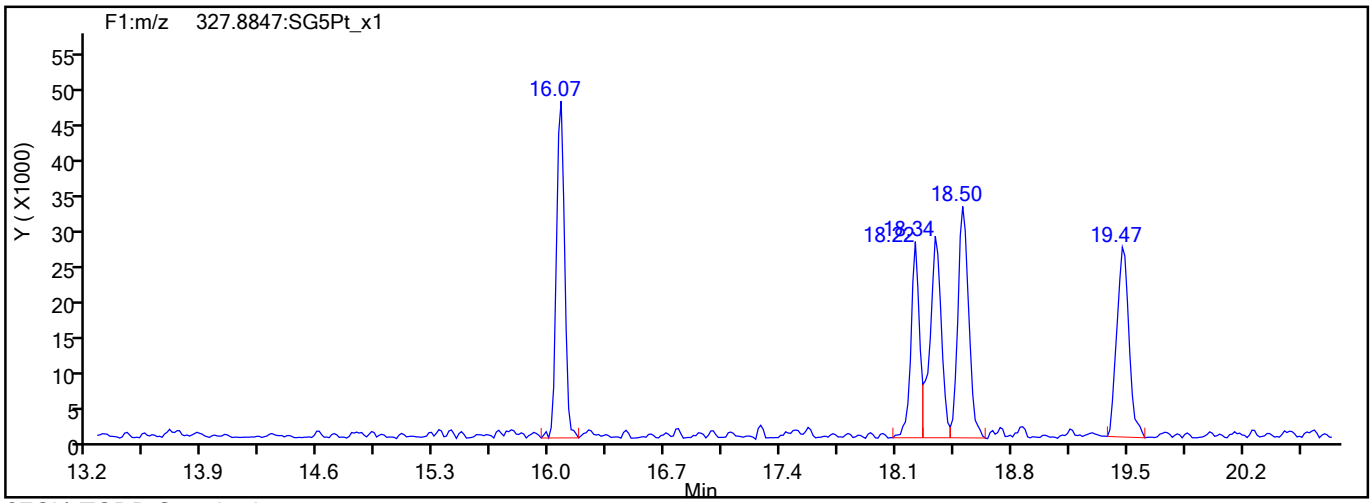

37Cl4-TCDD Standards

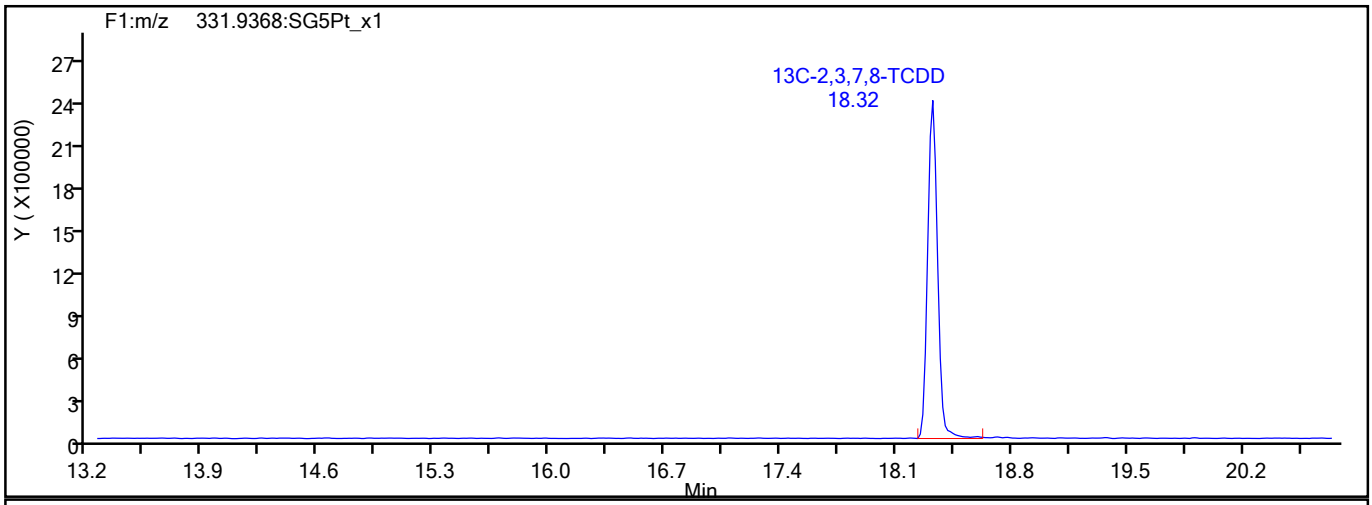

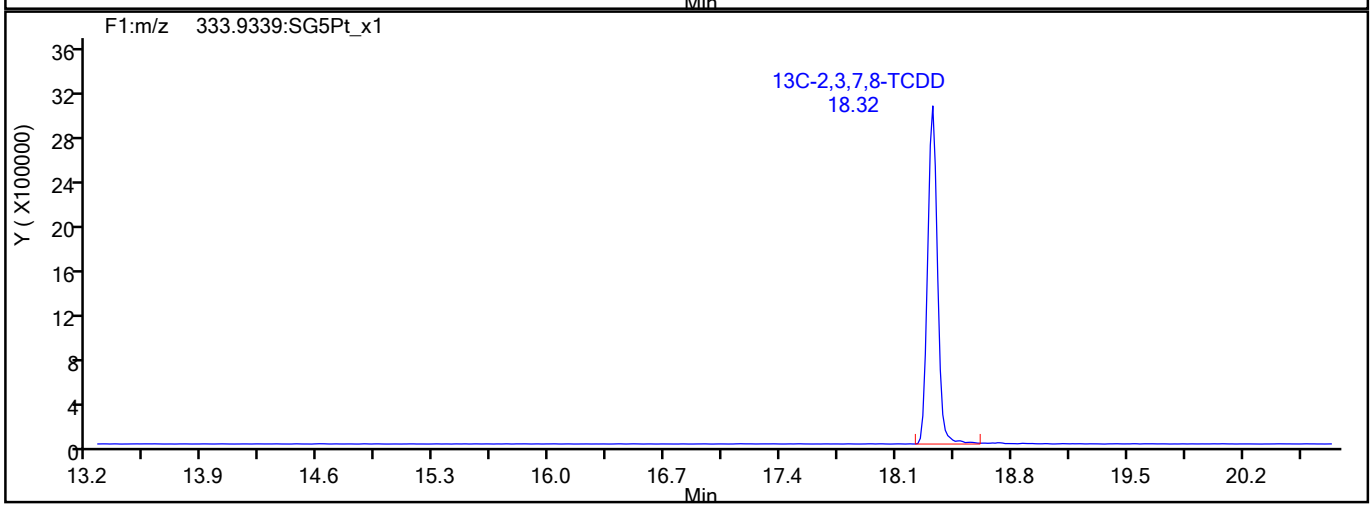

789385

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

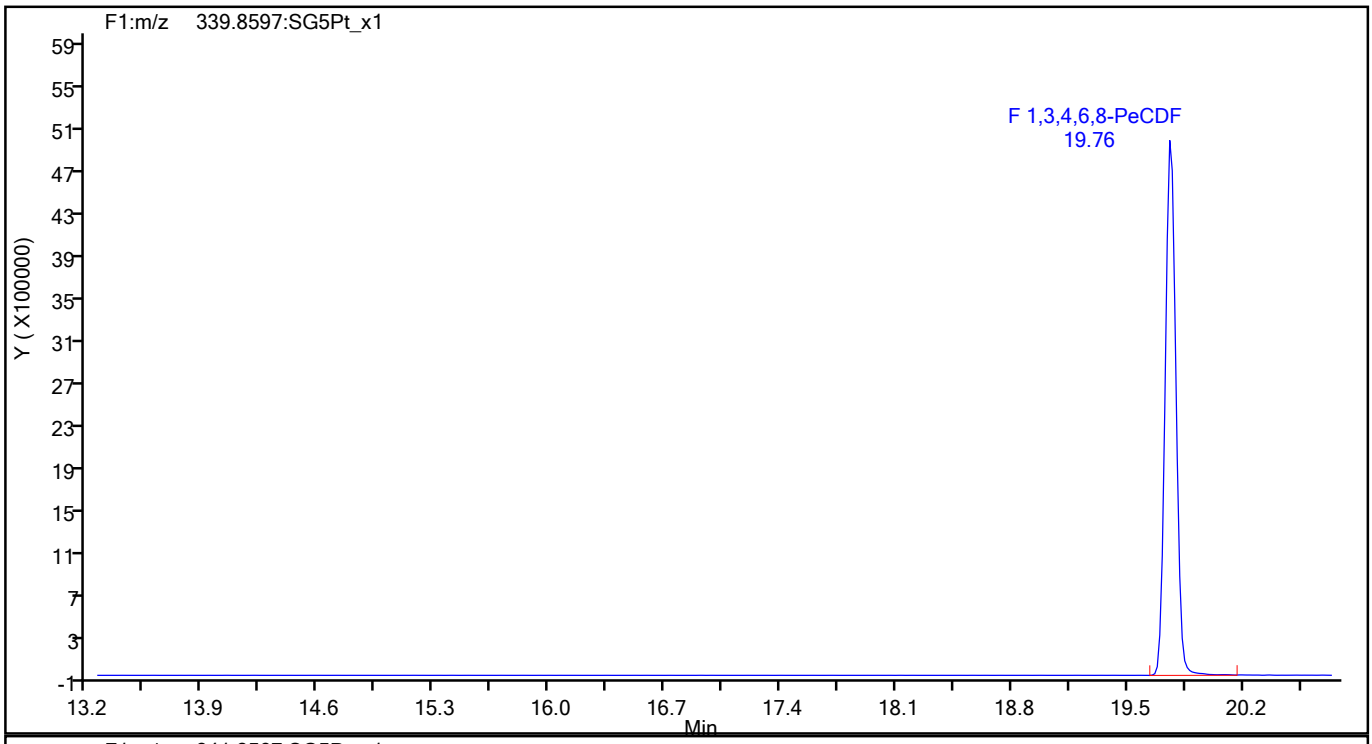

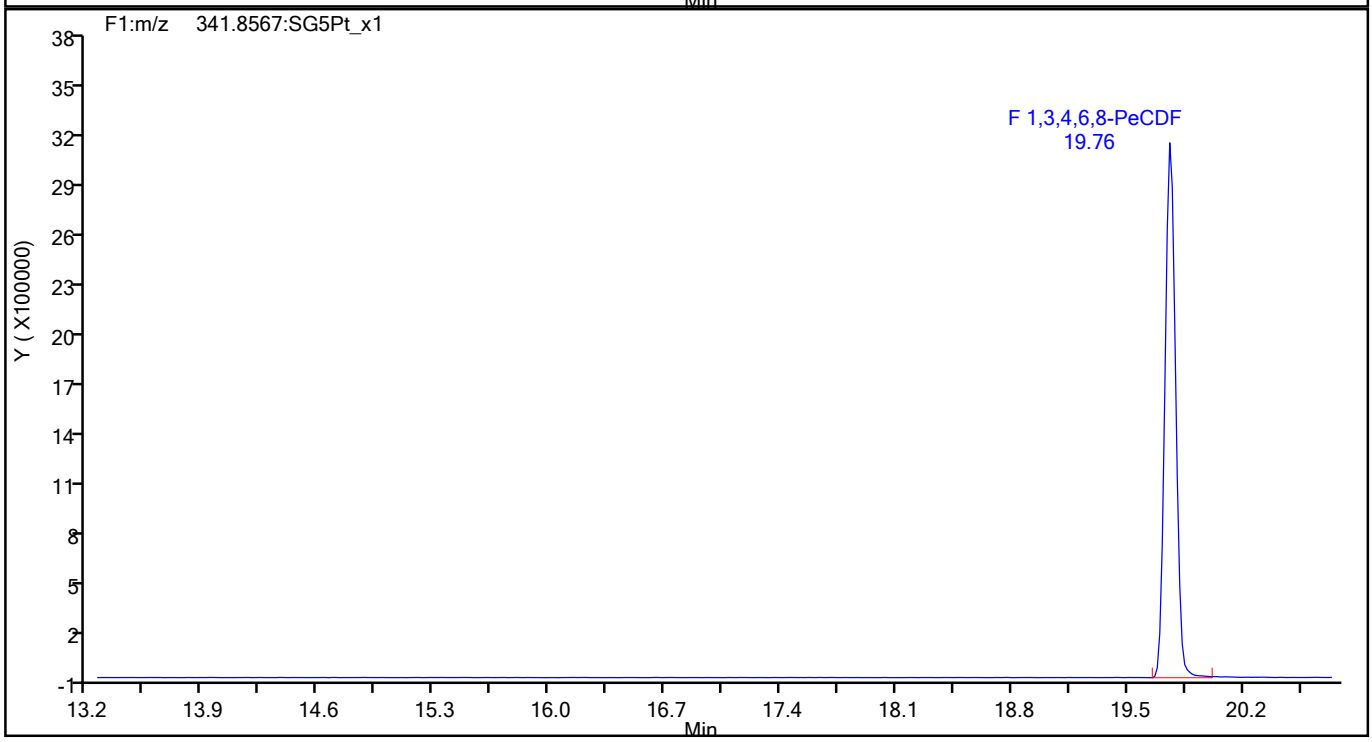

789386

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

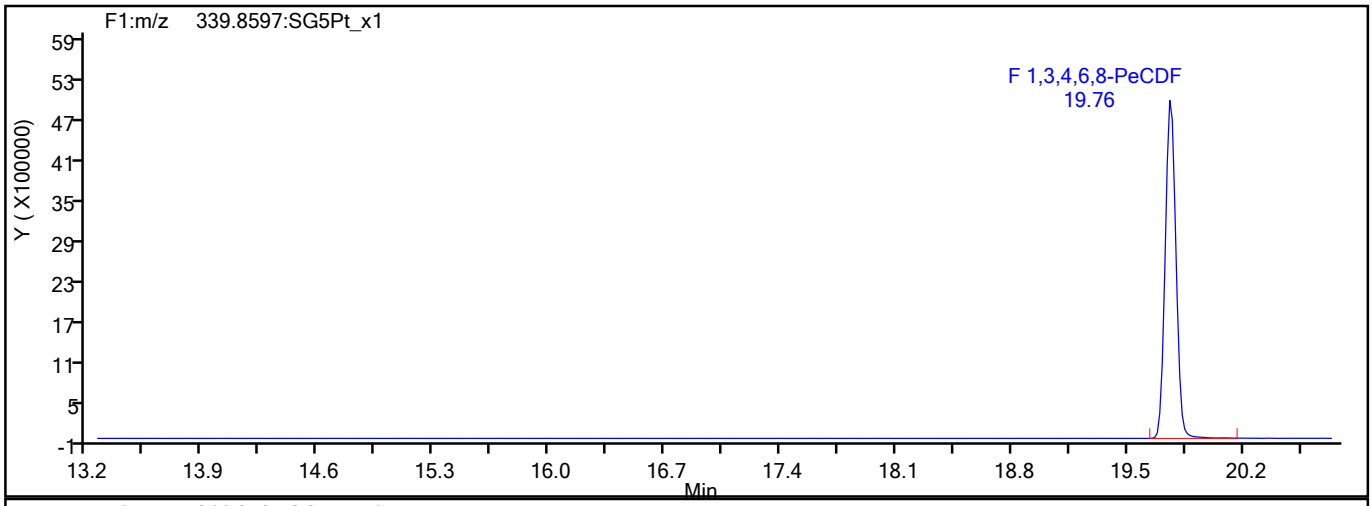

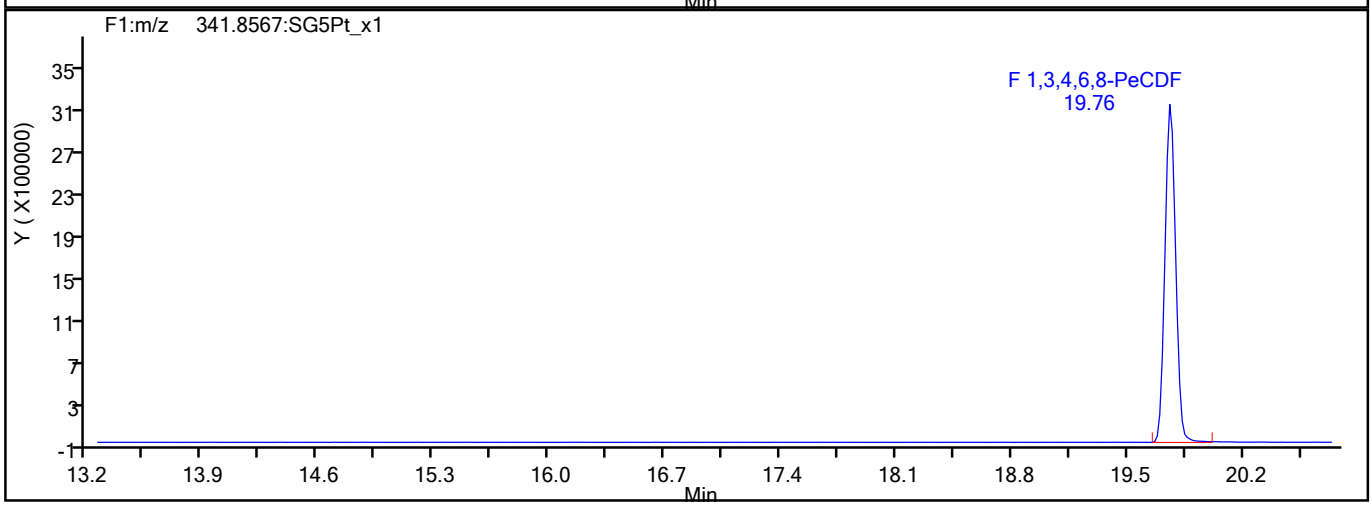

F1 PeCDFs Interference Mass

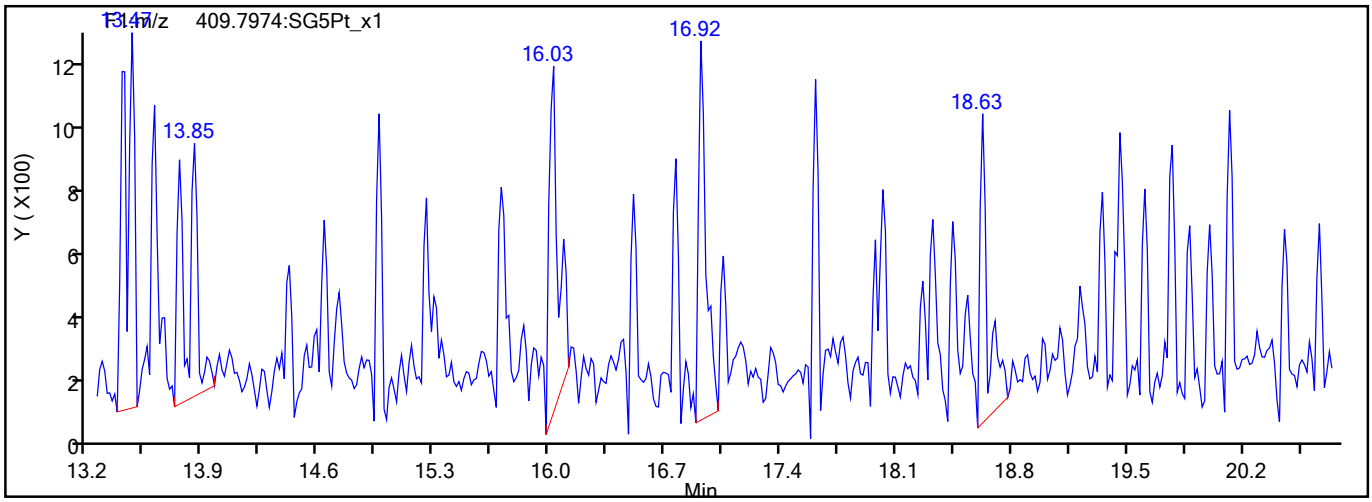

789387

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

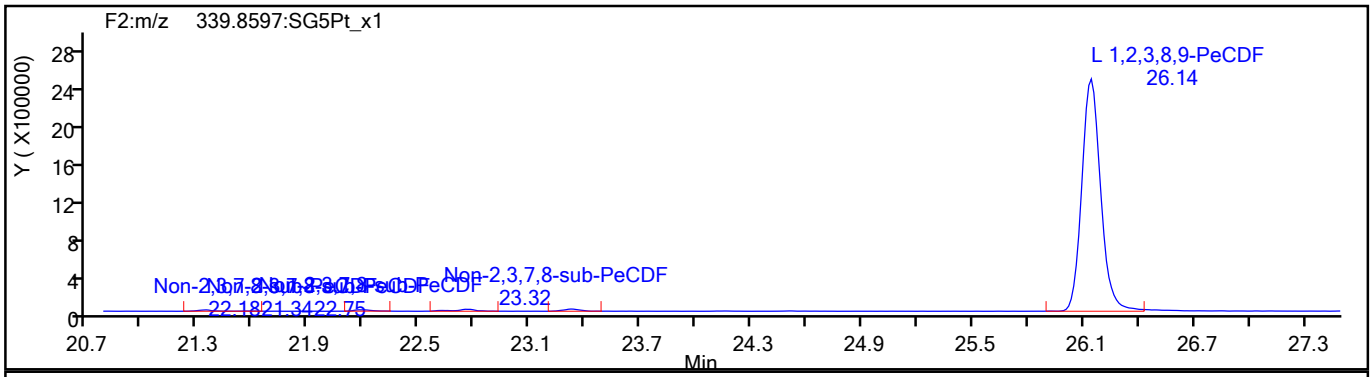

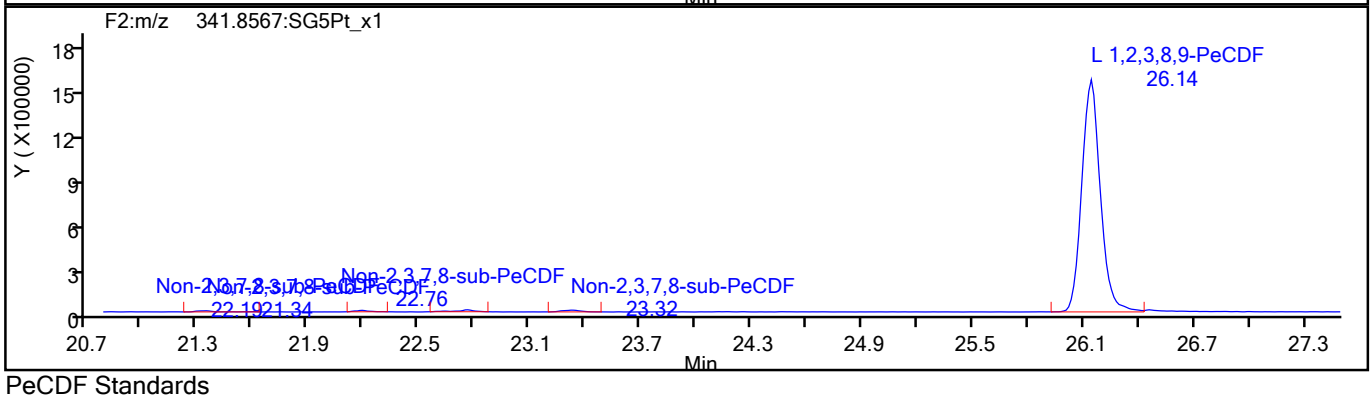

PeCDF Standards

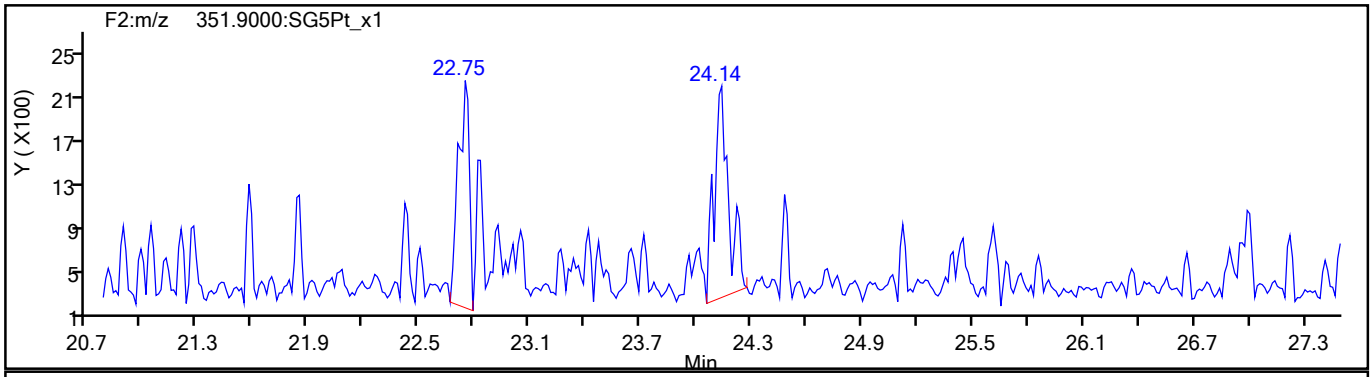

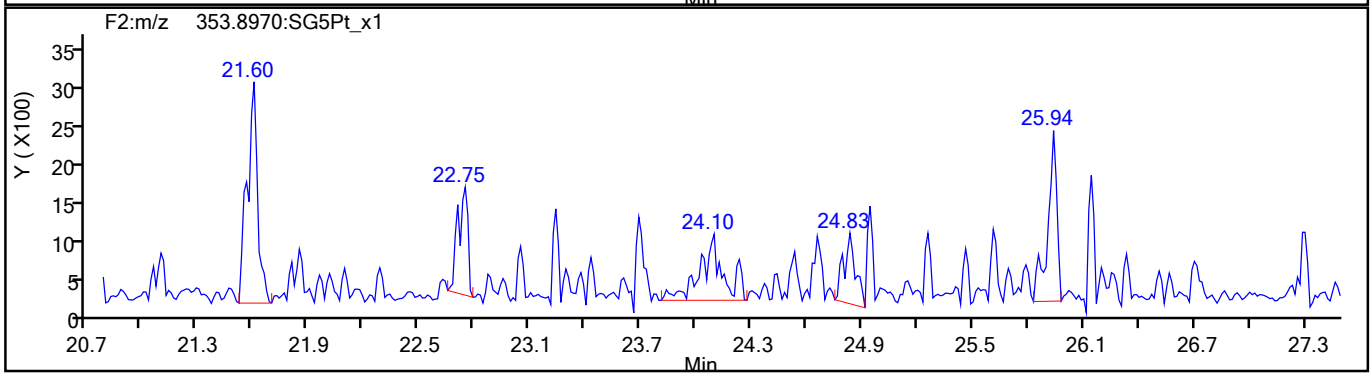

789388

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

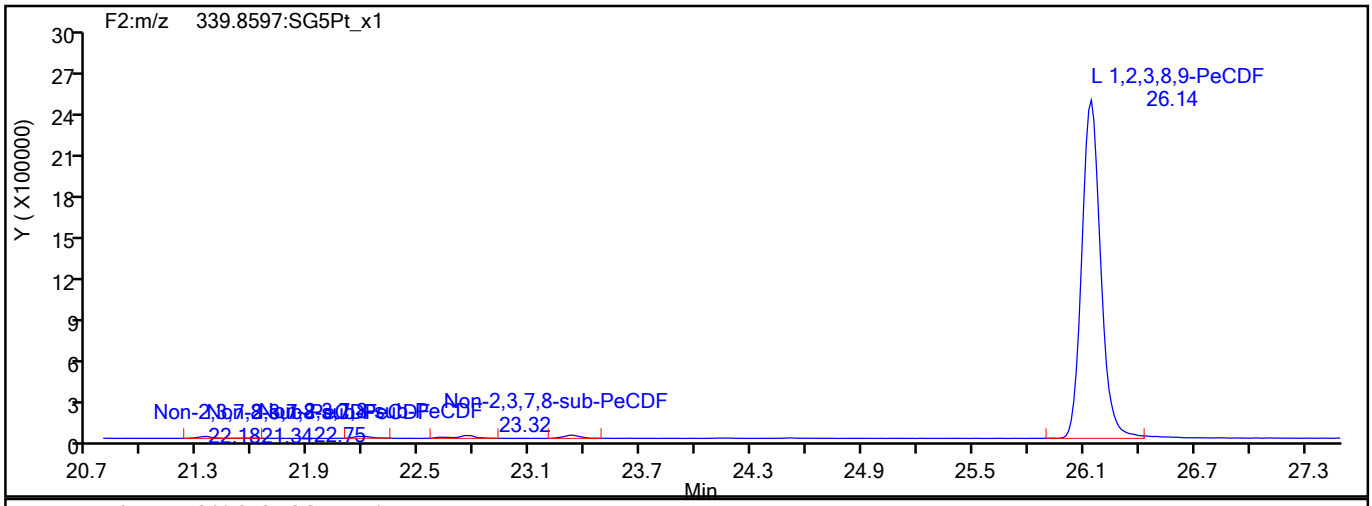

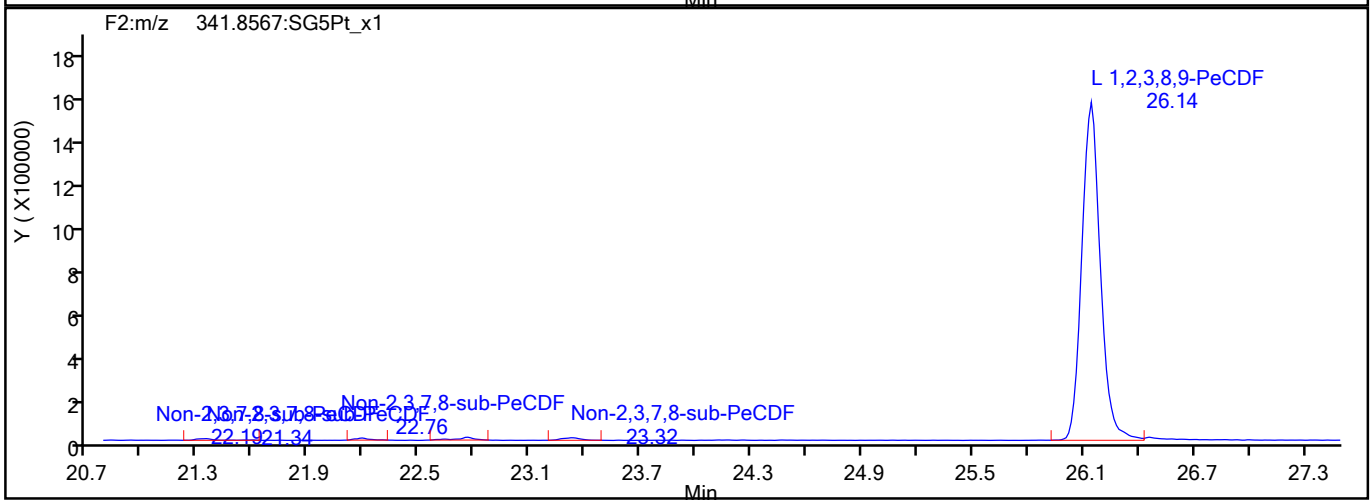

PeCDF Interference Mass

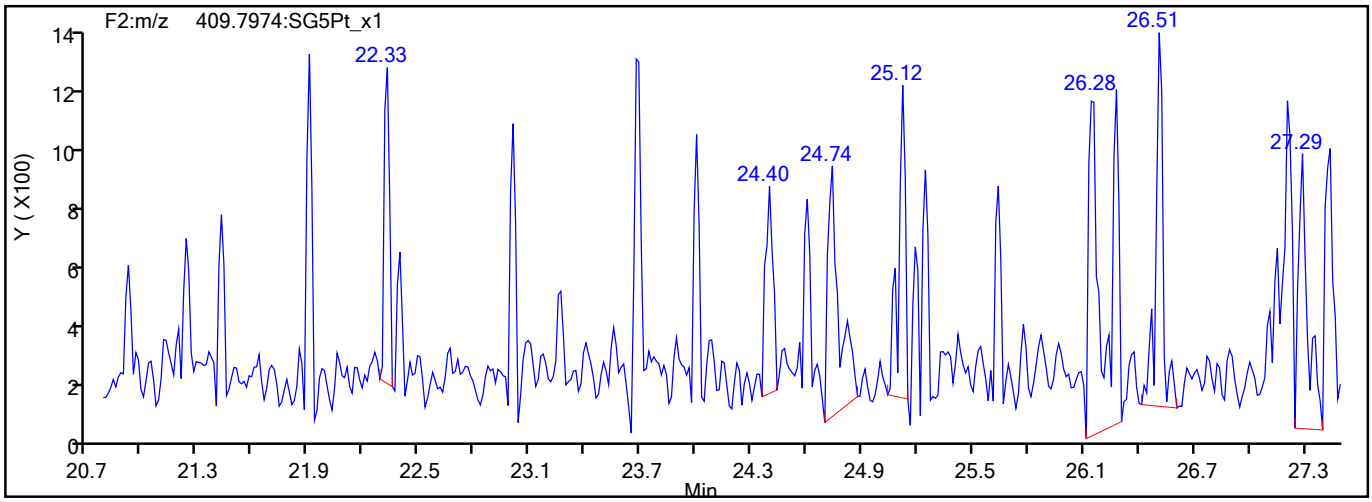

789389

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

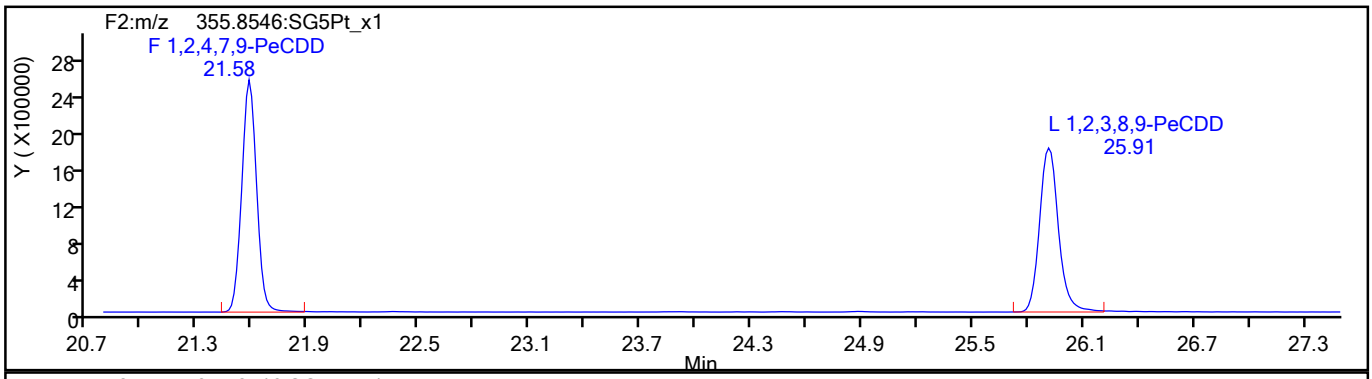

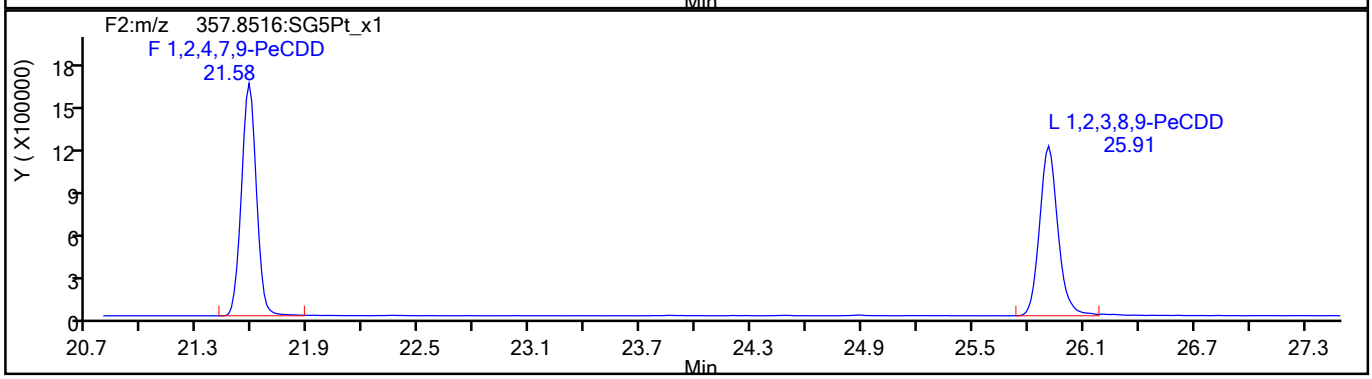

PeCDD Standards

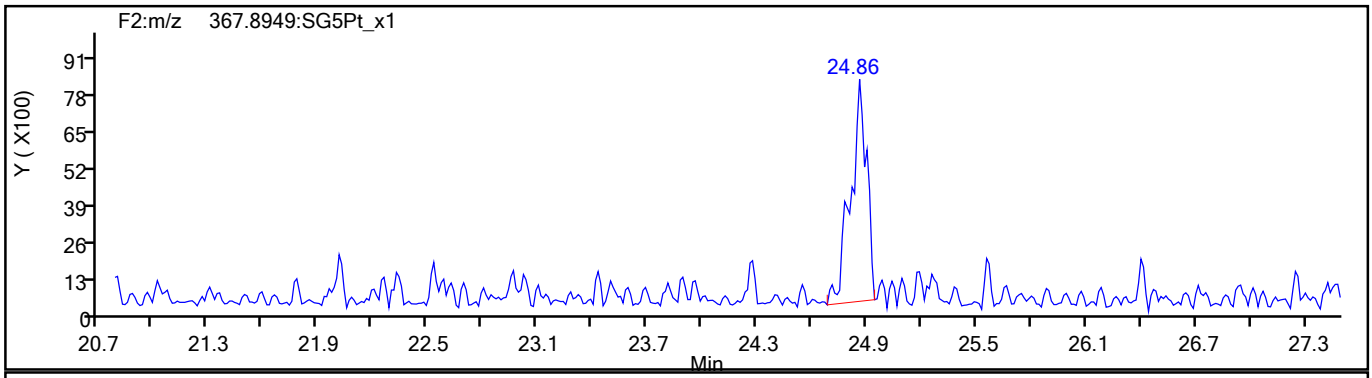

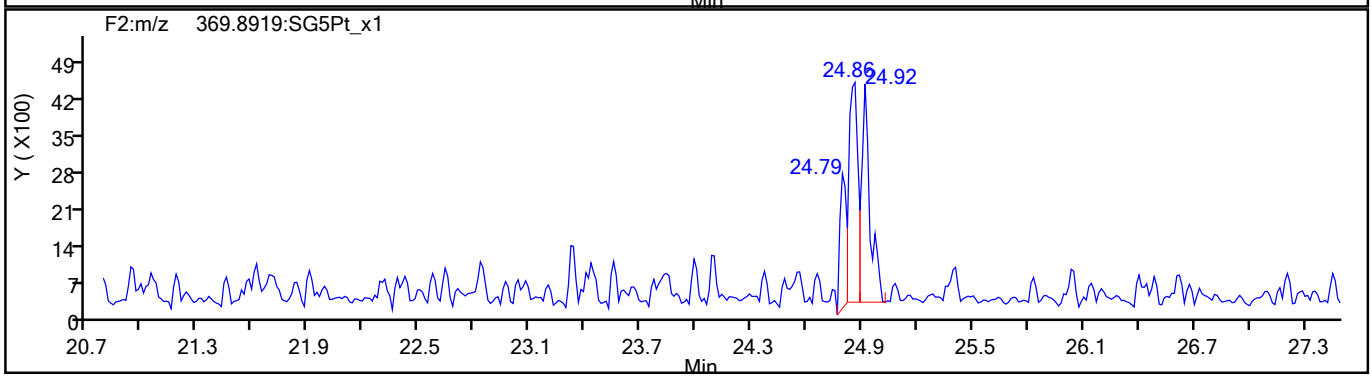

789390

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

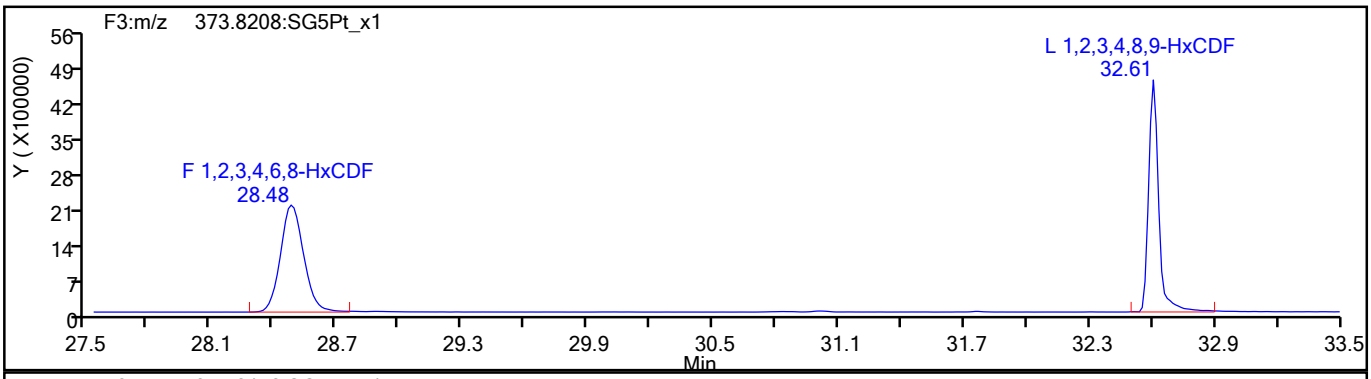

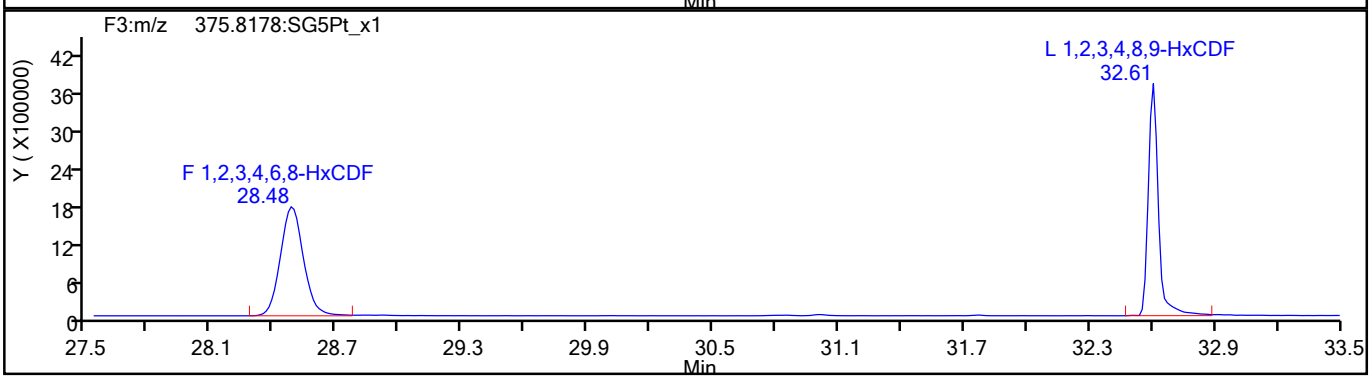

HxCDF Standards

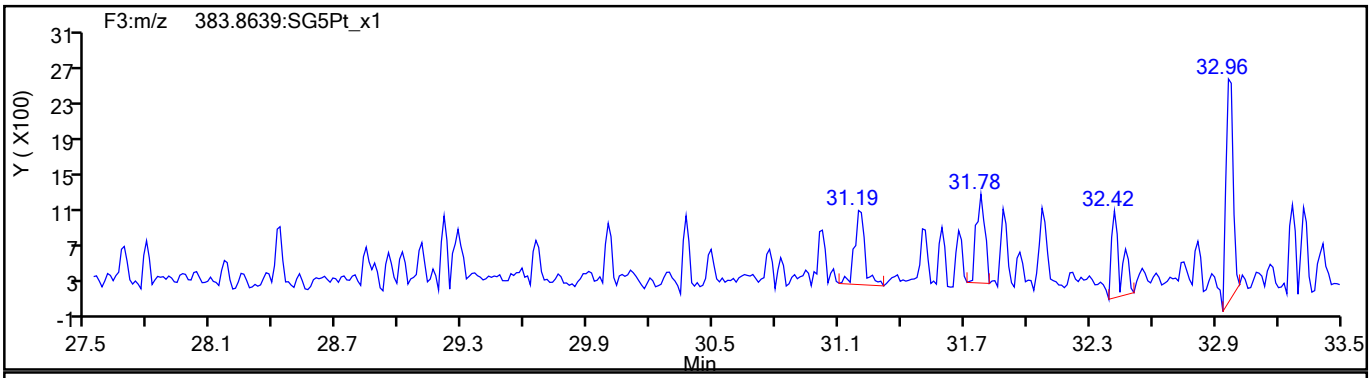

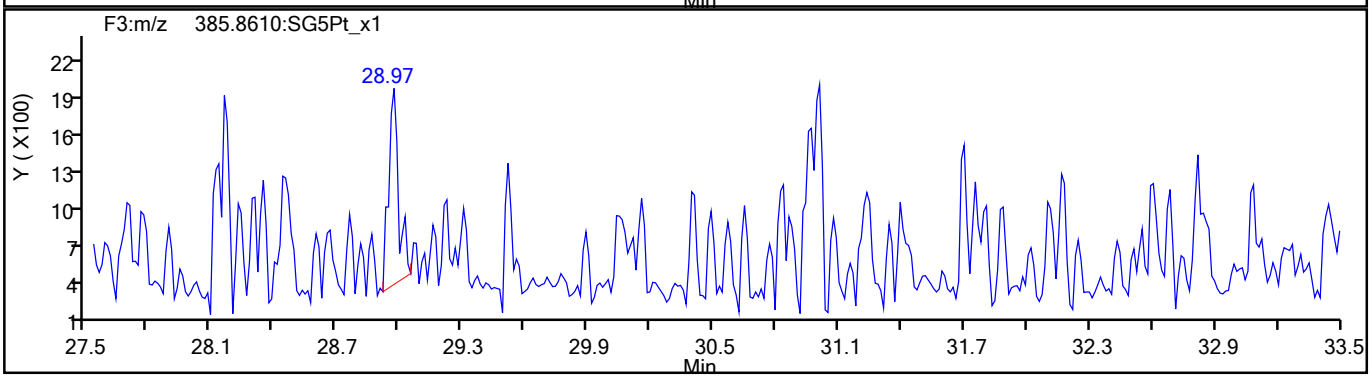

789391

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

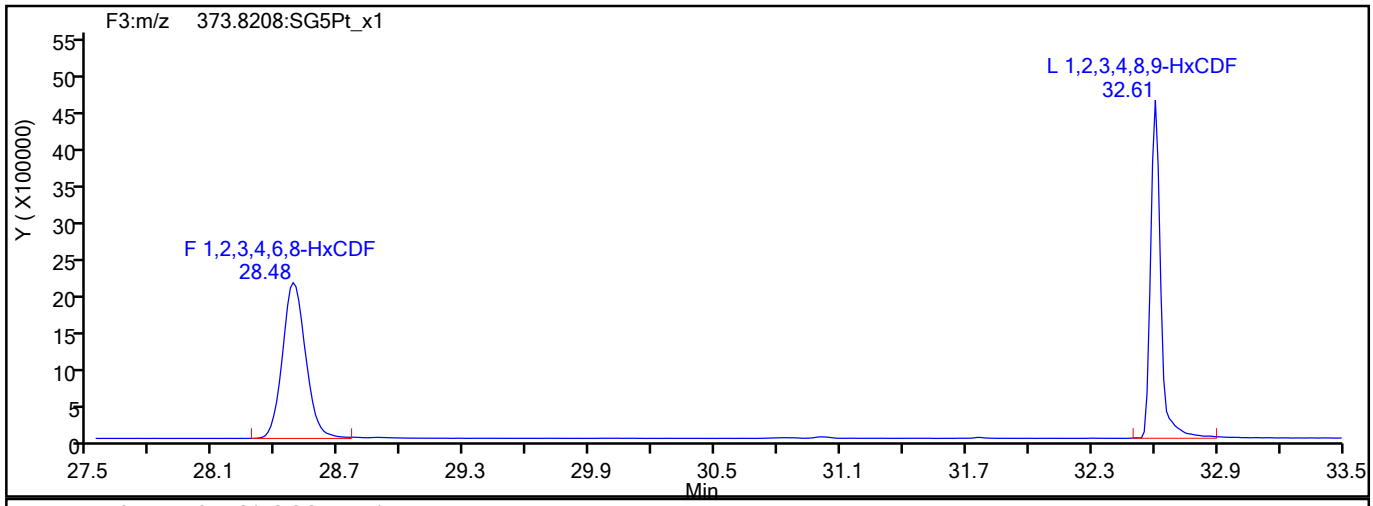

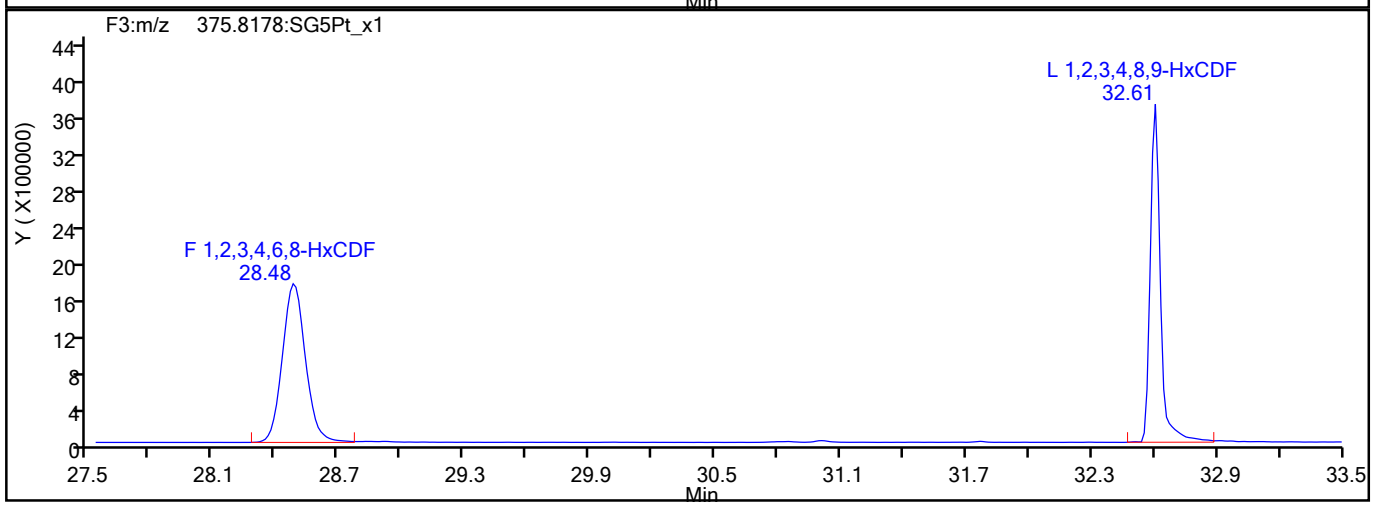

HxCDF Interference Mass

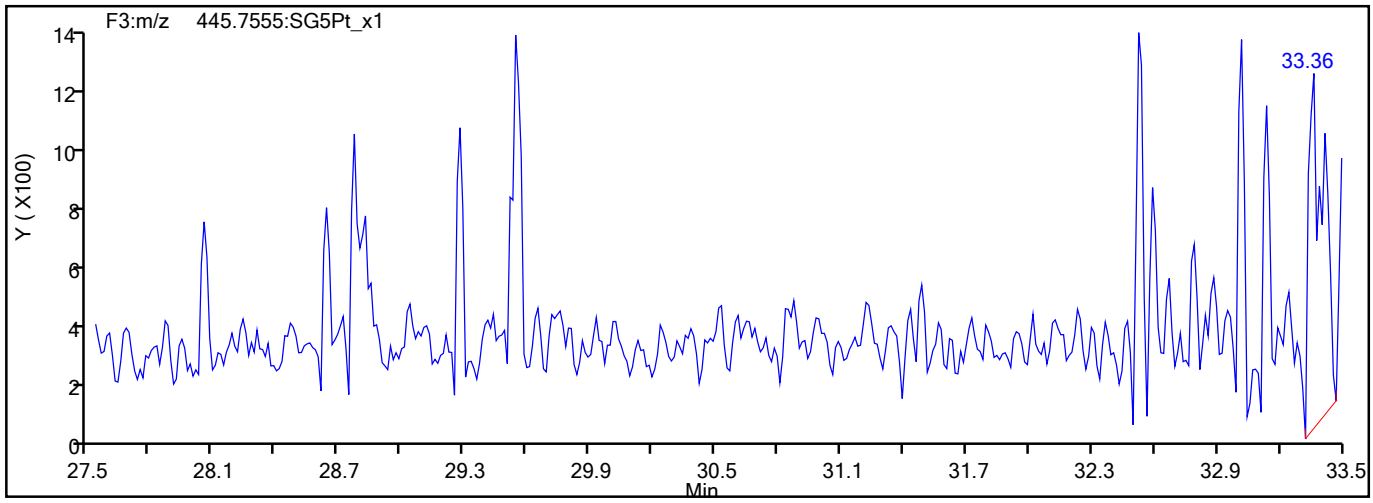

789392

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

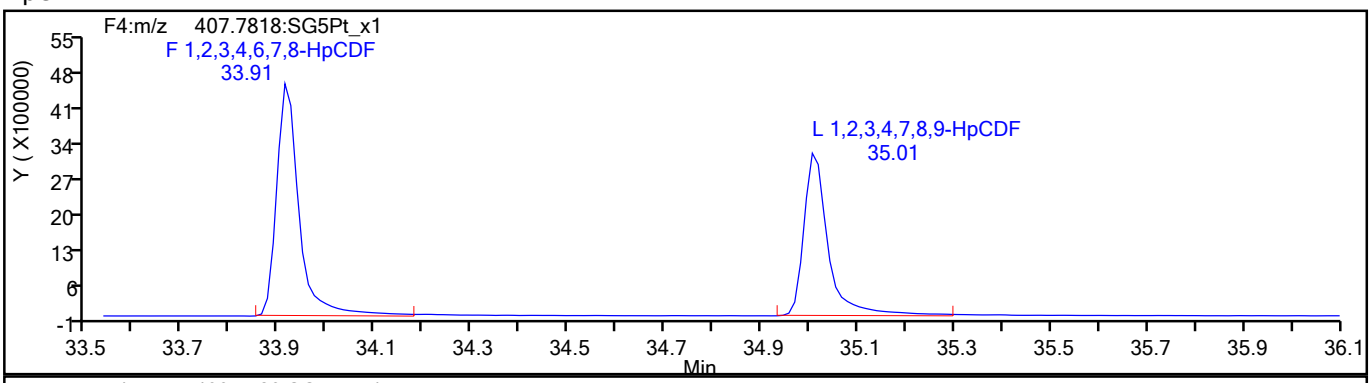

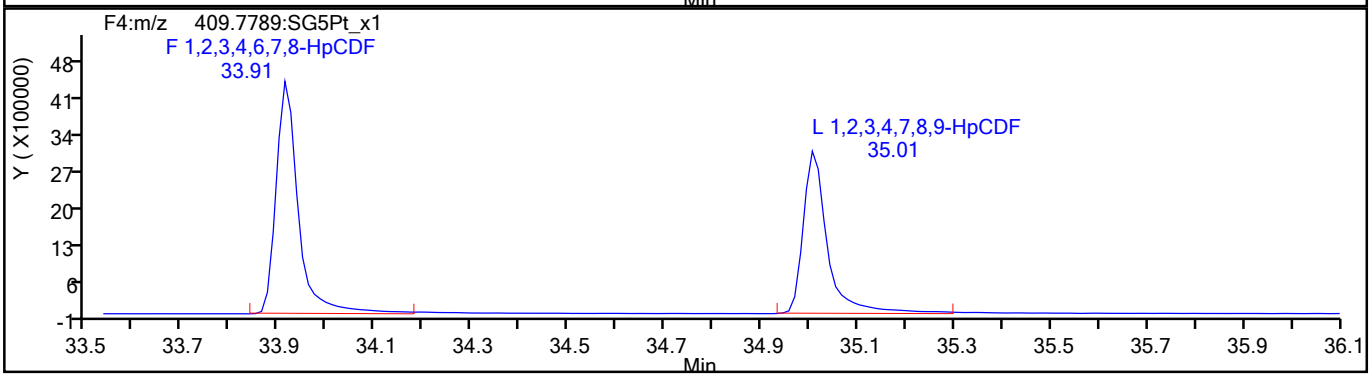

HpCDF Standards

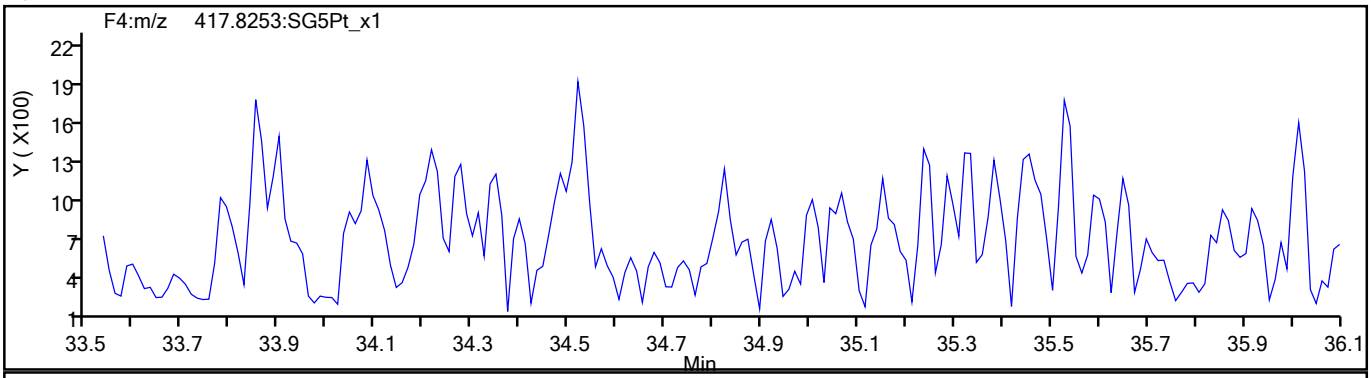

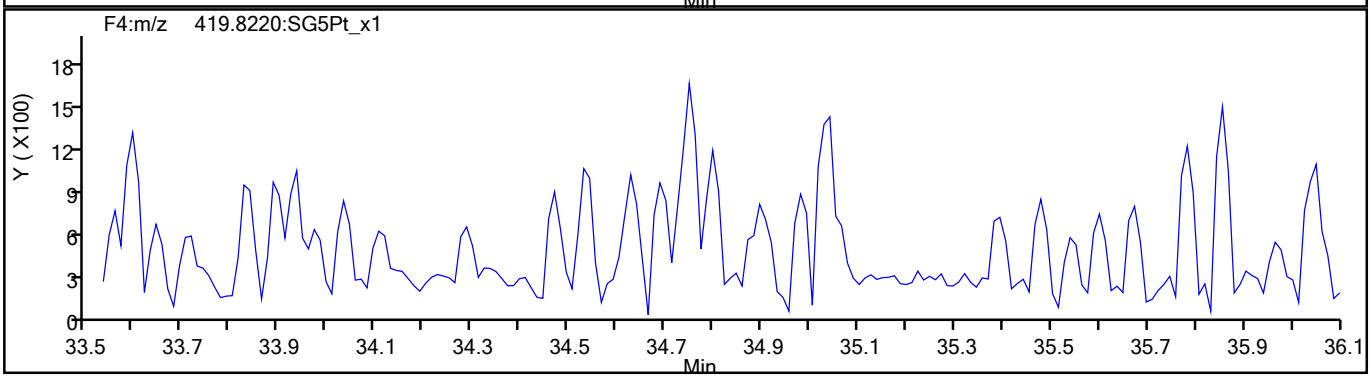

789393

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

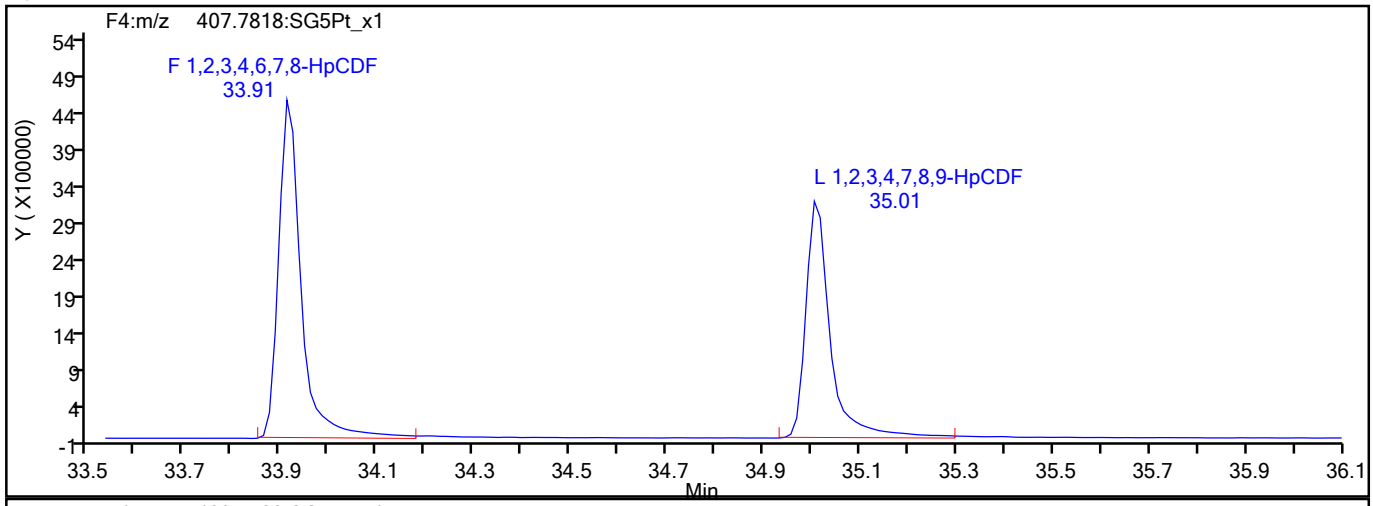

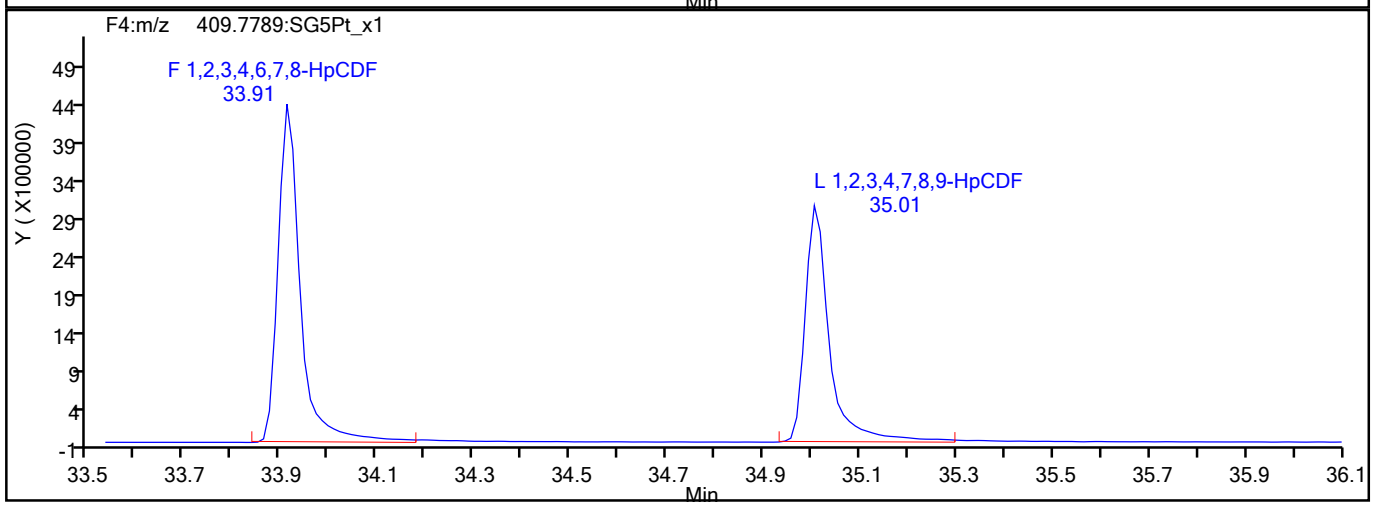

HpCDF Interference Mass

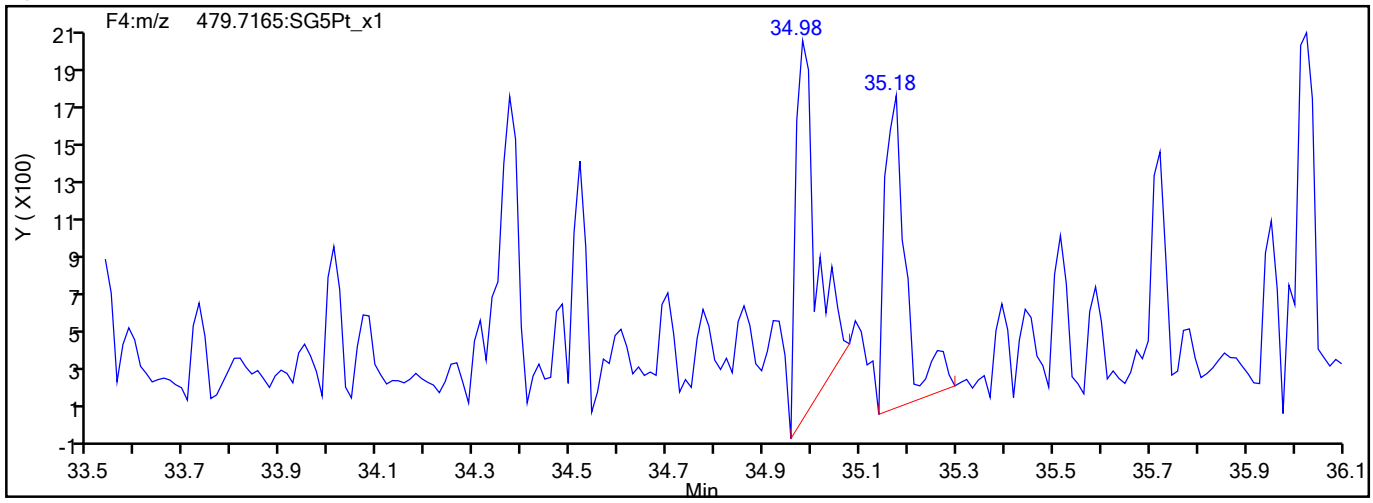

789394

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

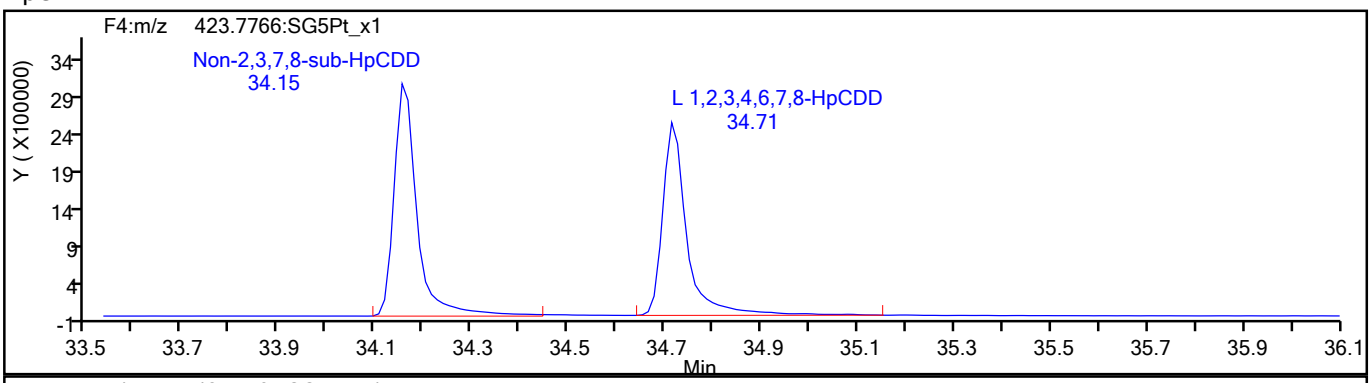

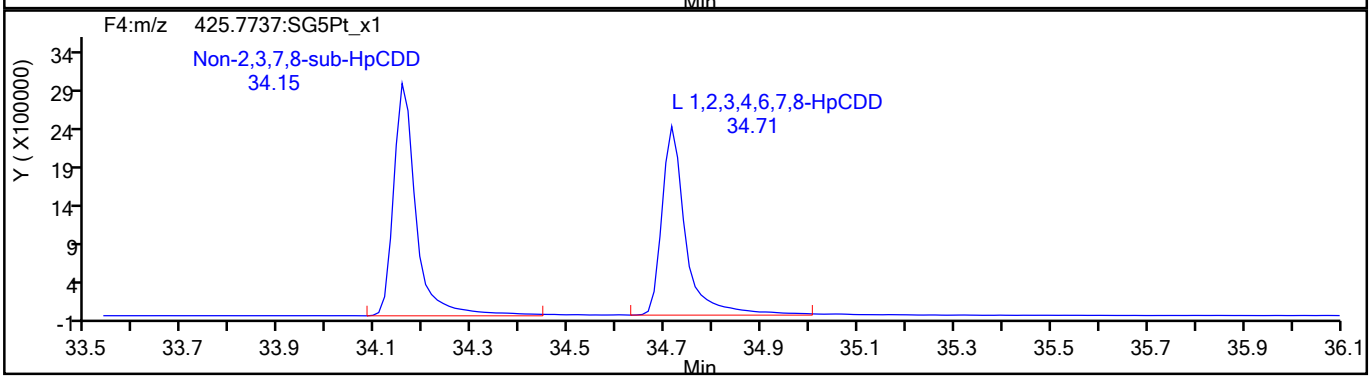

HpCDD Standards

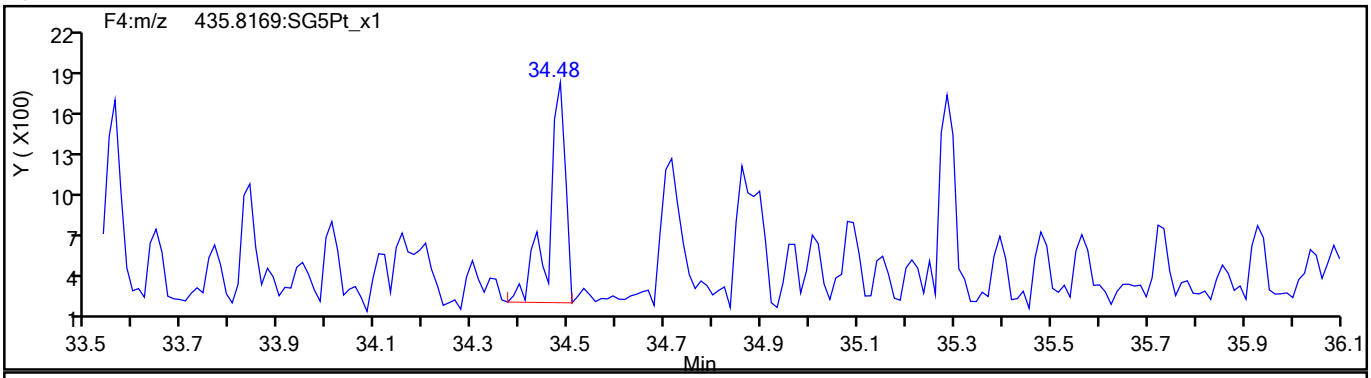

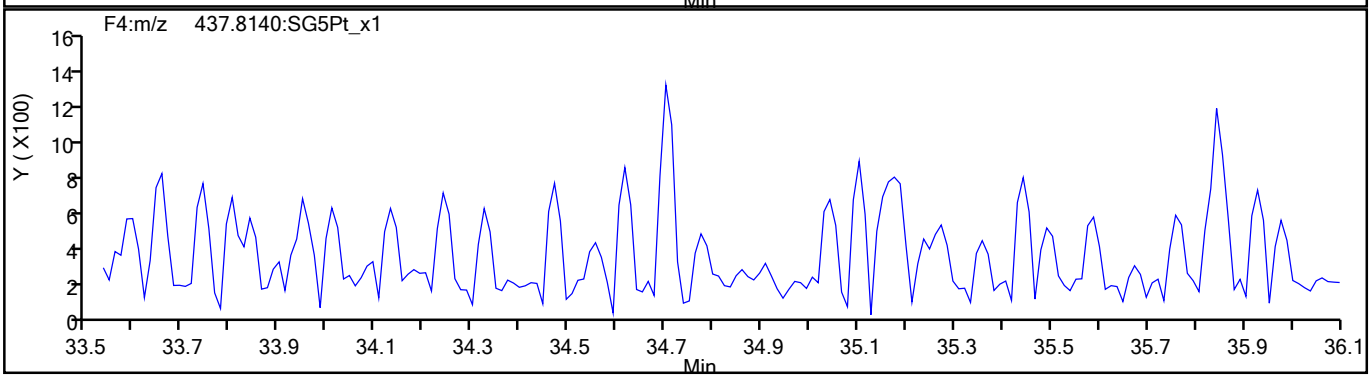

789395

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

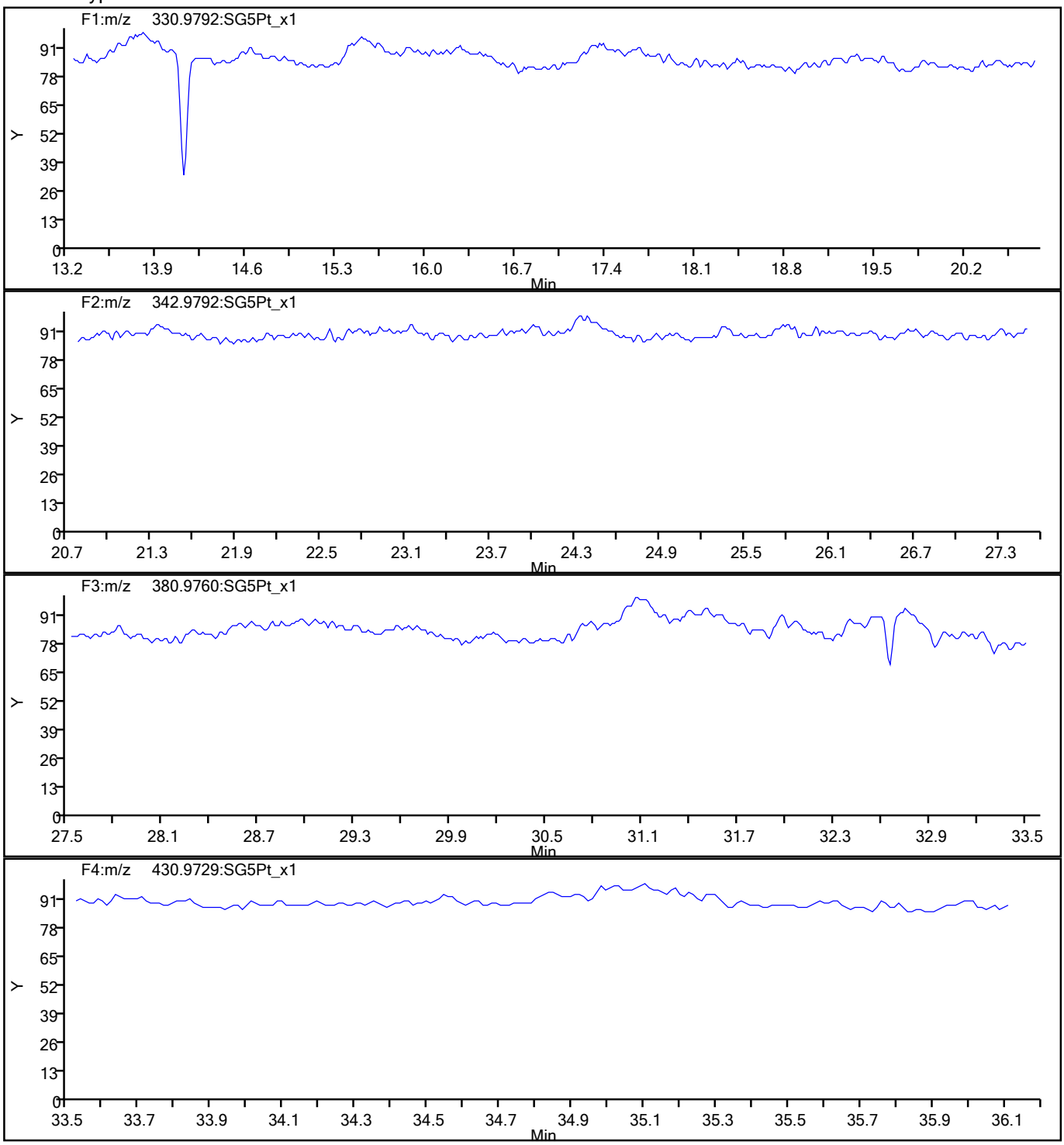

789396

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

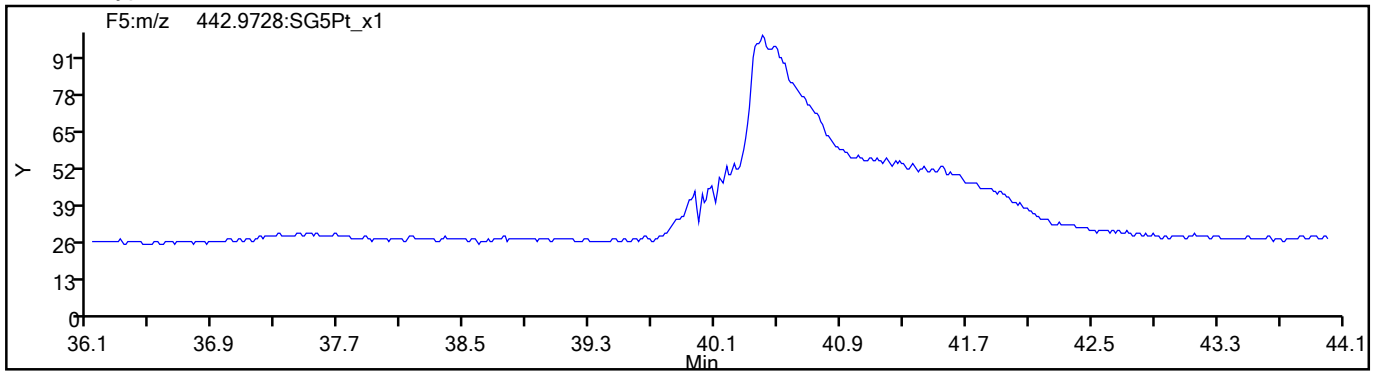

789397

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 30-Aug-2021 21:15:40 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 083021A WDM HRDXNCP_00044
Misc. Info.: 30AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 31-Aug-2021 16:05:22 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1682

First Level Reviewer: bennettd Date: 31-Aug-2021 16:01:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.053	55744726	0.76	1.6249					0.00	
2,3,7,8-TCDF	17.069	121696489	0.77	1.0239	85.3	85.3	0.3291	0.3291		
A Non-2,3,7,8-sub-TCDF	17.061	107997487	0.77	1.0239	75.7	75.7	0.3291	38.3		
S Total TCDF					161.0	161.0	0.3291	0.3291		
D 13C-2,3,7,8-TCDD	17.734	29900309	0.80	0.8993					0.00	
2,3,7,8-TCDD	17.749	40785029	0.79	1.2541	43.5	43.5	0.1495	0.1495		
A Non-2,3,7,8-sub-TCDD	17.515	118537803	0.78	1.2541	126.4	126.4	0.1495	44.9		
S Total TCDD					170.0	170.0	0.1495	0.1495		
A F1 PeCDFs	19.851	48889055	1.57	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.067	42662806	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.696	64765366	1.57	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.311	43727298	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.432	33548636	1.29	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.591	43400433	1.04	1.4413						
1,2,3,4,7,8,9-HpCDF	34.648	34169398	1.05	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.120						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.369	27218277	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.223						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.695	66950295	0.77							
1,3,6,8-TCDD	15.587	41239107	0.79							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.172						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.863	34136529	1.26							
1,2,3,4,8,9-HxCDF	32.196	41232955	1.23							
1,2,3,4,6,7,9-HpCDD	33.822	30929415	1.03							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 30-Aug-2021 21:15:40 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 083021A WDM HRDXNCP_00044
Misc. Info.: 30AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 31-Aug-2021 16:05:22 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1682

First Level Reviewer: bennettd Date: 31-Aug-2021 16:01:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.053	17.053	0	1.000	24049858	6297391	5813	14532	1083		
317.9389	17.053	17.053	0	1.000	31694868	8179702	5329	13322	1535	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.069	17.069	0	1.001	52938130	12989311	33332	83330	390		
305.8987	17.069	17.069	0	1.001	68758359	16791953	15445	38612	1087	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.915	17.061	51	1.051	22641776	5646858	33332	83330	169		
305.8987	17.915	17.061	51	1.051	29600392	7322925	15445	38612	474	0.76(0.65-0.89)	
303.9016	18.838	17.061	106	1.105	23767766	5605450	33332	83330	168		
305.8987	18.838	17.061	106	1.105	30819221	7277901	15445	38612	471	0.77(0.65-0.89)	
303.9016	19.125	17.061	124	1.121	503389	118913	33332	83330	4		
305.8987	19.125	17.061	124	1.121	664943	143481	15445	38612	9	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.734	17.734	0	1.000	13255943	3390667	2288	5720	1482		
333.9339	17.734	17.734	0	1.000	16644366	4260500	1125	2812	3787	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.749	17.749	0	1.001	17968144	4484423	5946	14865	754		
321.8936	17.749	17.749	0	1.001	22816885	5774570	8400	21000	687	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.643	17.515	8	0.995	16091477	4159072	5946	14865	699		
321.8936	17.643	17.515	8	0.995	20702487	5334774	8400	21000	635	0.78(0.65-0.89)	
319.8965	17.915	17.515	24	1.010	18580300	4622377	5946	14865	777		
321.8936	17.915	17.515	24	1.010	23542248	5830228	8400	21000	694	0.79(0.65-0.89)	
319.8965	18.838	17.515	79	1.062	17438382	4090745	5946	14865	688		
321.8936	18.838	17.515	79	1.062	22182909	5216131	8400	21000	621	0.79(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A F1 PeCDFs											
339.8597	19.110	19.851	-44	1.000	29902230	6951112	765	1912	9086		
341.8567	19.110	19.851	-44	1.000	18986825	4448104	596	1490	7463	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.602	23.067	-148	1.000	60791	13099	2960	7400	4		
341.8567	20.588	23.067	-148	1.000	39154	9297	2187	5467	4	1.55(1.32-1.78)	
339.8597	21.406	23.067	-99	1.000	120039	20470	2960	7400	7		
341.8567	21.420	23.067	-99	1.000	76913	13257	2187	5467	6	1.56(1.32-1.78)	
339.8597	21.965	23.067	-66	1.000	167880	28590	2960	7400	10		
341.8567	21.965	23.067	-66	1.000	138637	19653	2187	5467	9	1.21(1.32-1.78)	
339.8597	22.511	23.067	-33	1.000	123725	21737	2960	7400	7		
341.8567	22.484	23.067	-35	1.000	94954	14651	2187	5467	7	1.30(1.32-1.78)	
339.8597	25.156	23.067	125	1.000	25630012	3804509	2960	7400	1285		
341.8567	25.156	23.067	125	1.000	16256161	2400507	2187	5467	1098	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	20.847	23.696	-171	1.000	20205550	3749024	2155	5387	1740		
357.8516	20.834	23.696	-171	1.000	12735771	2334534	1399	3497	1669	1.59(1.32-1.78)	
355.8546	24.952	23.696	75	1.000	19405430	2987895	2155	5387	1386		
357.8516	24.952	23.696	75	1.000	12418615	1887052	1399	3497	1349	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.391	30.311	-175	1.000	24091999	3273502	3887	9717	842		
375.8178	27.391	30.311	-175	1.000	19635299	2658180	2955	7387	900	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	28.935	30.432	-90	1.000	18687920	2428768	4354	10885	558		
391.8127	28.935	30.432	-90	1.000	14511510	1890581	4070	10175	465	1.29(1.05-1.43)	
389.8157	30.625	30.432	12	1.000	190693	37340	4354	10885	9		
391.8127	30.625	30.432	12	1.000	158513	26914	4070	10175	7	1.20(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.591	33.591	0	1.000	22169180	7867474	22456	56140	350		
409.7789	33.579	33.591	-1	1.000	21231253	7597046	22158	55395	343	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.648	34.648	0	1.000	17468663	5781709	22456	56140	257		
409.7789	34.648	34.648	0	1.000	16700735	5690763	22158	55395	257	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.120						22456	56140			
409.7789	34.120						22158	55395			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.369	34.369	0	1.000	13911928	4902233	15905	39762	308		
425.7737	34.369	34.369	0	1.000	13306349	4726872	9571	23927	494	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						15905	39762			
425.7737	34.223						9571	23927			
1,3,6,8-TCDF											
303.9016	14.695	14.695	0		29158073	9517541	33332	83330	286		
305.8987	14.695	14.695	0		37792222	12344924	15445	38612	799	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,3,6,8-TCDD											
319.8965	15.587	15.587	0		18202864	5562835	5946	14865	936		
321.8936	15.587	15.587	0		23036243	7025834	8400	21000	836	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.537						33332	83330			
305.8987	17.537						15445	38612			
1,2,3,7-TCDD											
319.8965	18.172						5946	14865			
321.8936	18.172						8400	21000			
1,2,3,9-TCDD											
319.8965	18.414						5946	14865			
321.8936	18.414						8400	21000			
1,2,3,9-TCDF											
303.9016	18.414						33332	83330			
305.8987	18.414						15445	38612			
1,2,8,9-TCDD											
319.8965	19.382						5946	14865			
1,2,8,9-TCDF											
303.9016	19.427						33332	83330			
305.8987	19.427						15445	38612			
1,3,4,6,8-PeCDF											
339.8597	19.669						765	1912			
341.8567	19.669						596	1490			
1,2,4,7,9-PeCDD											
355.8546	21.480						2155	5387			
357.8516	21.480						1399	3497			
1,2,3,8,9-PeCDD											
355.8546	25.790						2155	5387			
357.8516	25.790						1399	3497			
1,2,3,8,9-PeCDF											
339.8597	26.021						2960	7400			
341.8567	26.021						2187	5467			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						3887	9717			
375.8178	28.333						2955	7387			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						4354	10885			
391.8127	29.890						4070	10175			
1,2,3,4,6,7-HxCDD											
389.8157	31.863	31.863	0		19002834	5396404	4354	10885	1239		
391.8127	31.863	31.863	0		15133695	4356416	4070	10175	1070	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.196	32.196	0		22705003	6994233	3887	9717	1799		
375.8178	32.196	32.196	0		18527952	5738803	2955	7387	1942	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.822	33.822	0		15726194	5707123	15905	39762	359		
425.7737	33.822	33.822	0		15203221	5609293	9571	23927	586	1.03(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d
Lims ID: WDM
Client ID:
Inject. Date: 30-Aug-2021 21:15:40 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 521465 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.061

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	55744726	14477093

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	55744726	14477093

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.915	22641776	5646858	29600392	7322925	36.6	0.76	
18.838	23767766	5605450	30819221	7277901	38.3	0.77	
19.125	503389	118913	664943	143481	0.8188	0.76	
Signal Totals:							
	46912931	11371221	61084556	14744307			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	107997487	26115528				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 75.685 = (107997487 * 40.000) / (55744726 * 1.024)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d
Lims ID: WDM
Client ID:
Inject. Date: 30-Aug-2021 21:15:40 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 521465 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.515

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	29900309	7651167

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	29900309	7651167

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.643	16091477	4159072	20702487	5334774	39.2	0.78	
17.915	18580300	4622377	23542248	5830228	44.9	0.79	
18.838	17438382	4090745	22182909	5216131	42.3	0.79	
Signal Totals:							
	52110159	12872194	66427644	16381133			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	118537803	29253327				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 126.445 = (118537803 * 40.000) / (29900309 * 1.254)

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d
Lims ID: WDM
Client ID:
Inject. Date: 30-Aug-2021 21:15:40 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 521465 Lims Sample ID: 1

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.110	29902230	6951112	18986825	4448104		1.57	
Signal Totals:							
	29902230	6951112	18986825	4448104			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	48889055	11399216				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (48889055 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d
Lims ID: WDM
Client ID:
Inject. Date: 30-Aug-2021 21:15:40 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 521465 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.602	60791	13099	39154	9297		1.55	
21.406	120039	20470	76913	13257		1.56	
21.965	167880	28590	138637	19653		1.21	R
22.511	123725	21737	94954	14651		1.30	R
25.156	25630012	3804509	16256161	2400507		1.58	
Signal Totals:							
	26102447	3888405	16605819	2457365			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	42708266	6345770				1.57	RQ
	42662806	6343934					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (42708266 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (42662806 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d
Lims ID: WDM
Client ID:
Inject. Date: 30-Aug-2021 21:15:40 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 521465 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.847	20205550	3749024	12735771	2334534		1.59	
24.952	19405430	2987895	12418615	1887052		1.56	
Signal Totals:							
	39610980	6736919	25154386	4221586			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	64765366	10958505				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (64765366 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d
Lims ID: WDM
Client ID:
Inject. Date: 30-Aug-2021 21:15:40 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 521465 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.391	24091999	3273502	19635299	2658180		1.23	
Signal Totals:							
	24091999	3273502	19635299	2658180			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43727298	5931682				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43727298 * 0.0) / (0 * 0.000)

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d
Lims ID: WDM
Client ID:
Inject. Date: 30-Aug-2021 21:15:40 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 521465 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 30.432

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
28.935	18687920	2428768	14511510	1890581		1.29	
30.625	190693	37340	158513	26914		1.20	
Signal Totals:							
	18878613	2466108	14670023	1917495			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	33548636	4383603				1.29	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (33548636 * 0.0) / (0 * 0.000)

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d		
Injection Date:	30-Aug-2021 21:15:40	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

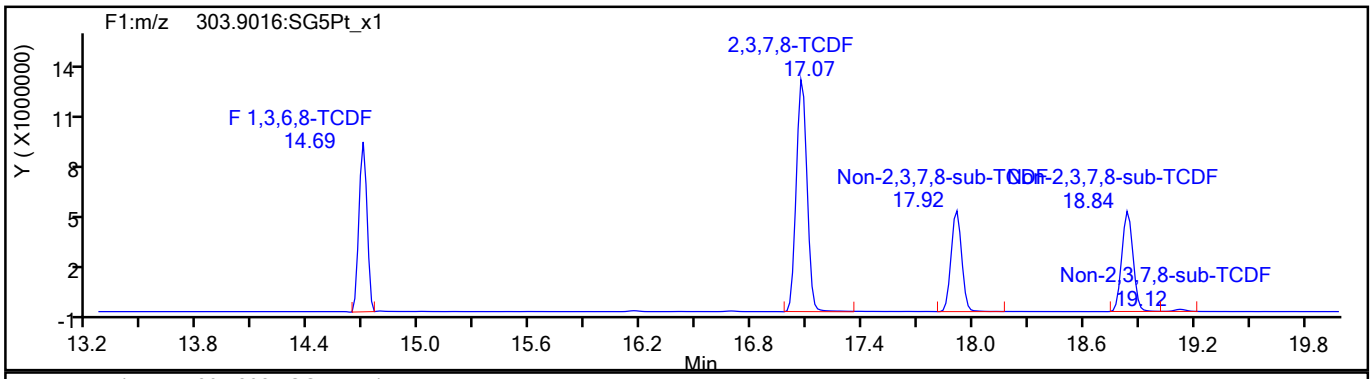

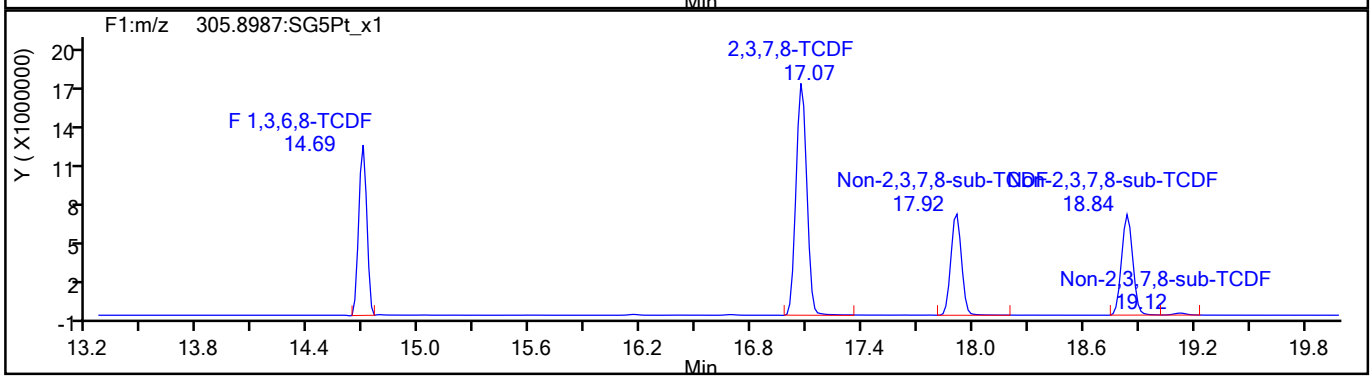

TCDF Standards

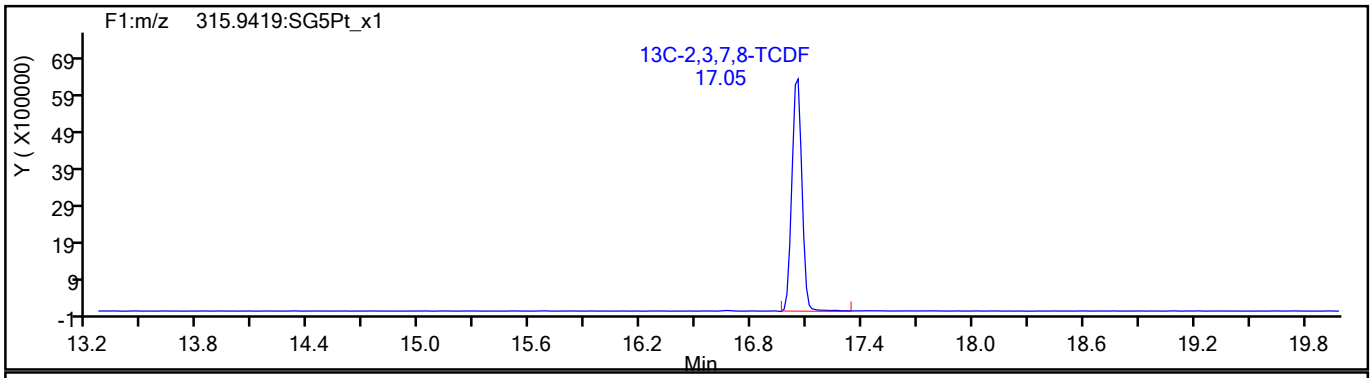

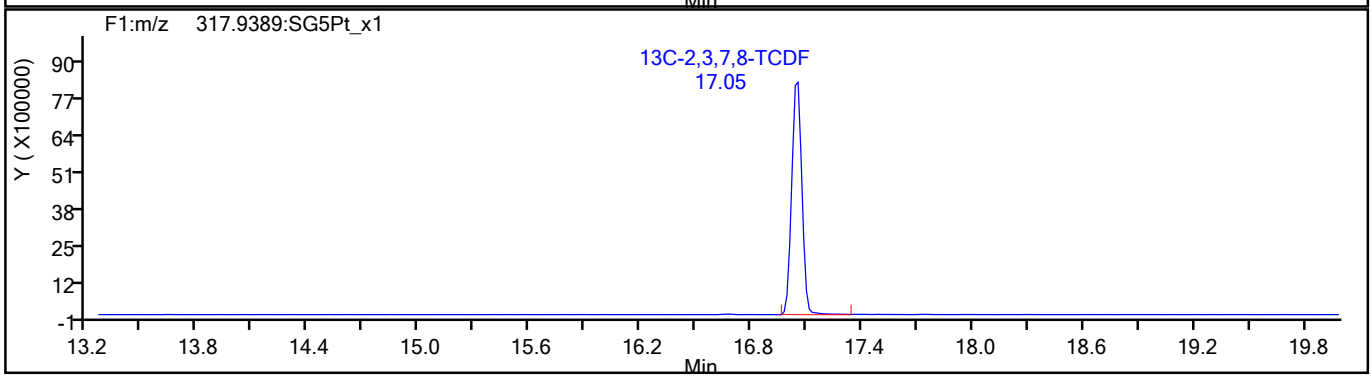

789411

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d		
Injection Date:	30-Aug-2021 21:15:40	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

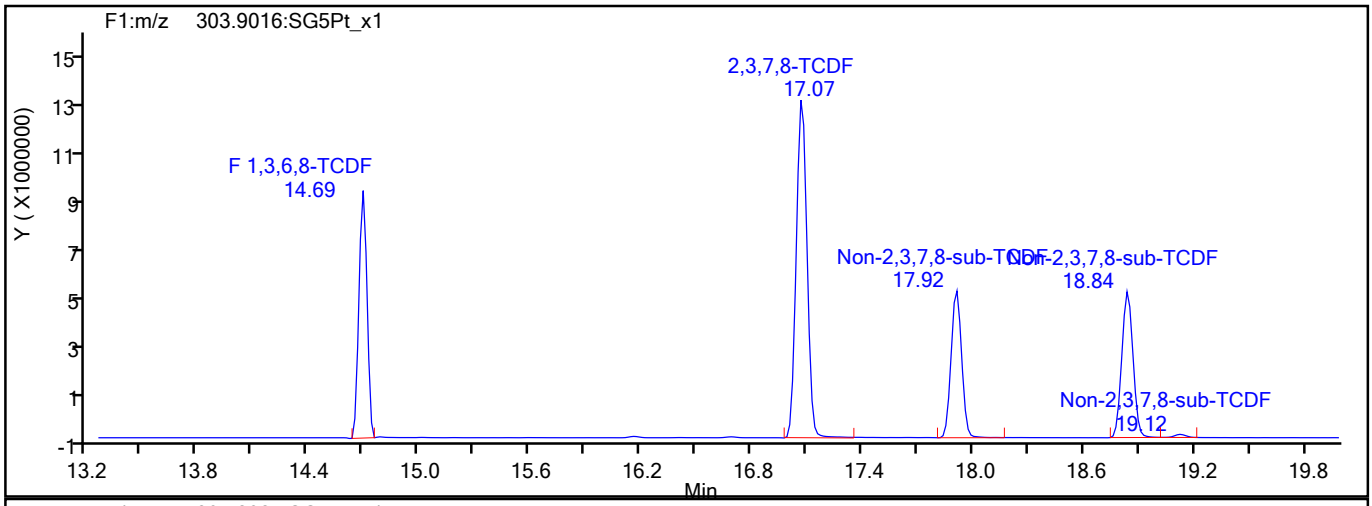

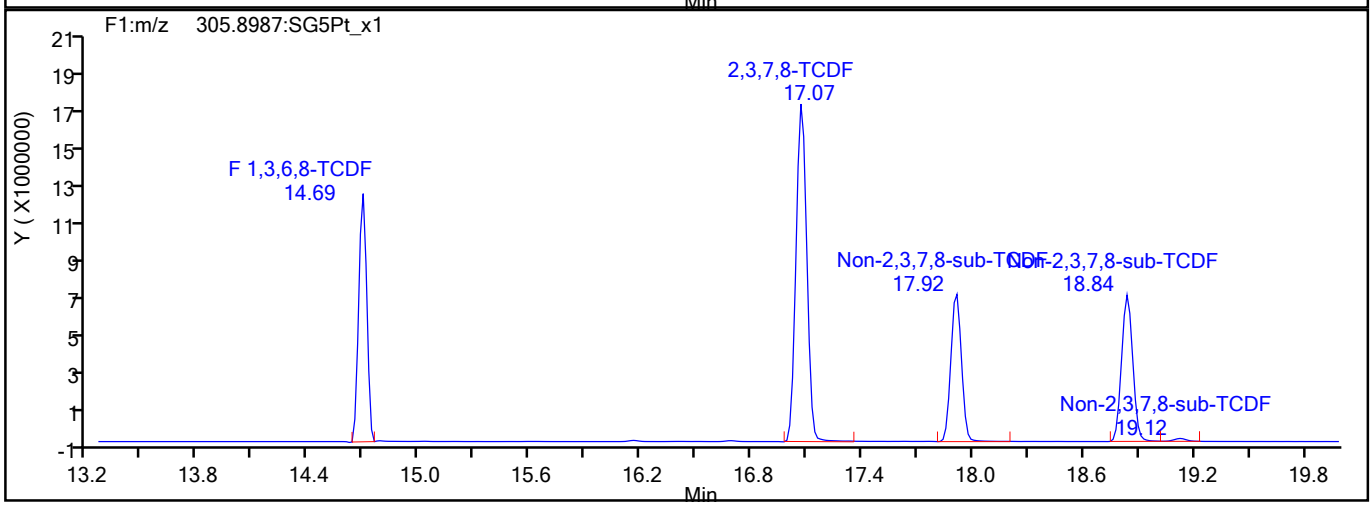

TCDF Interference Mass

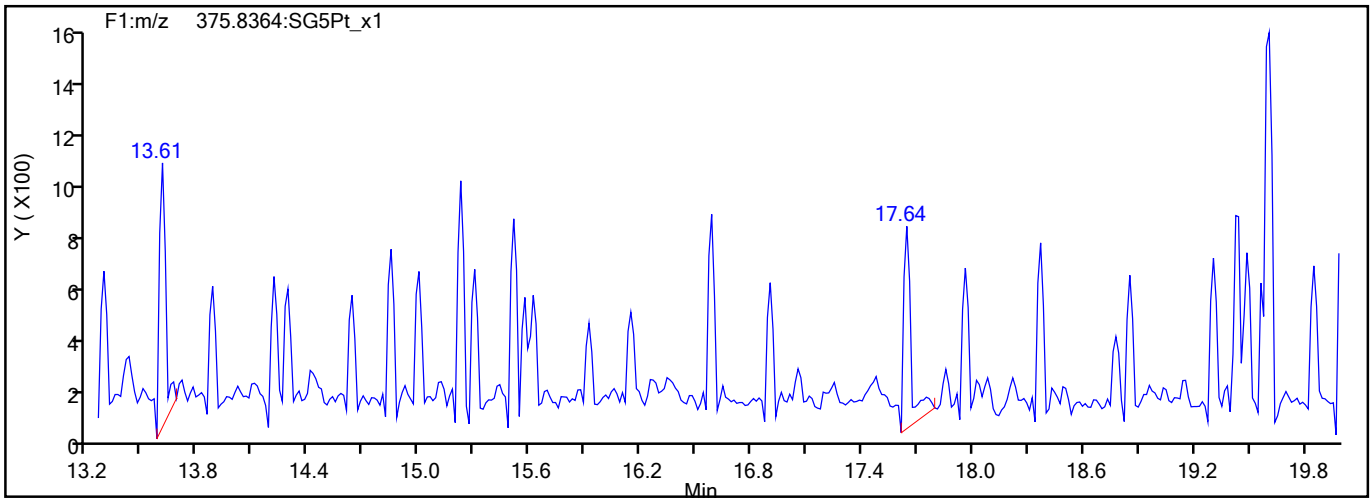

789412

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d		
Injection Date:	30-Aug-2021 21:15:40	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

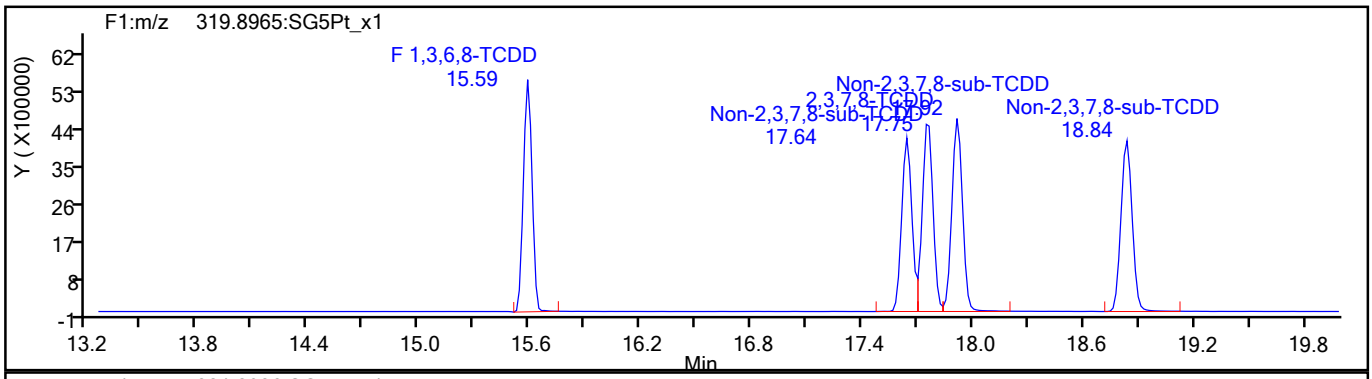

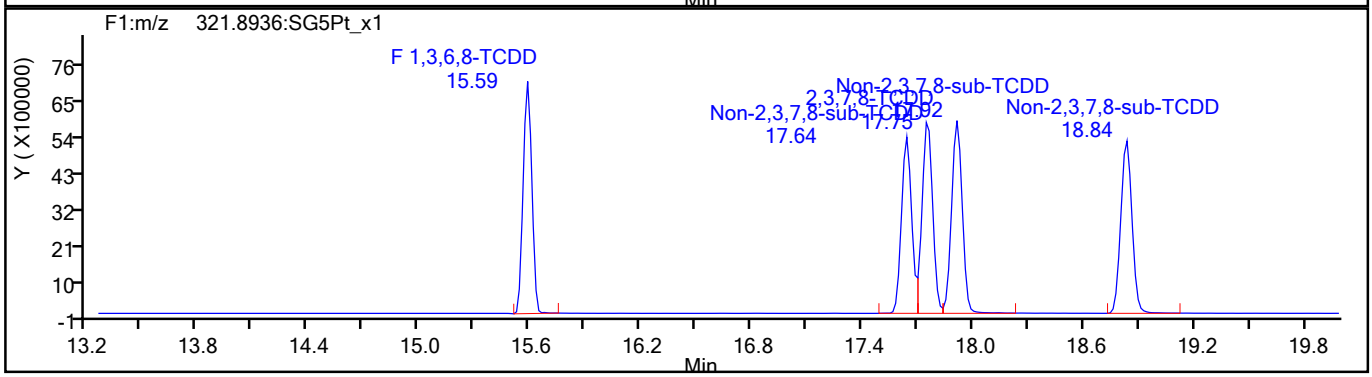

TCDD Standards

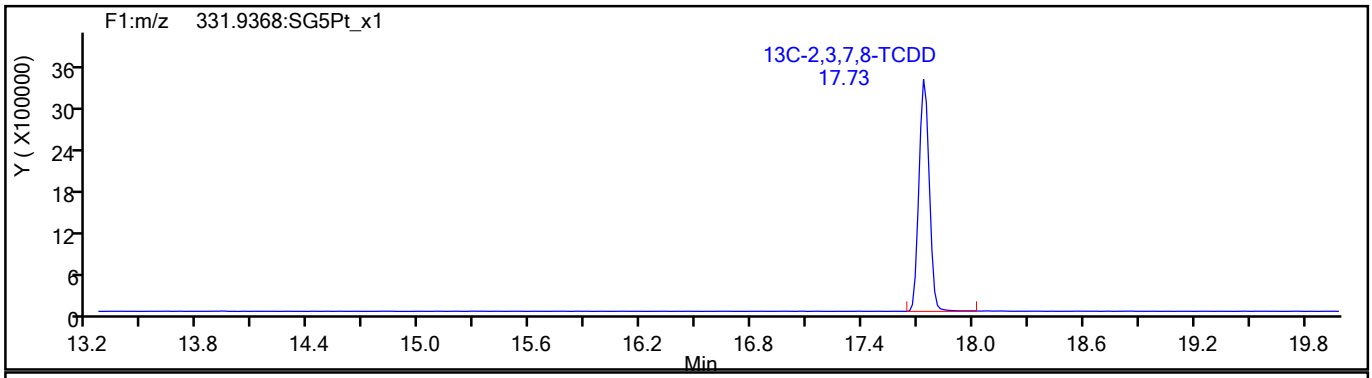

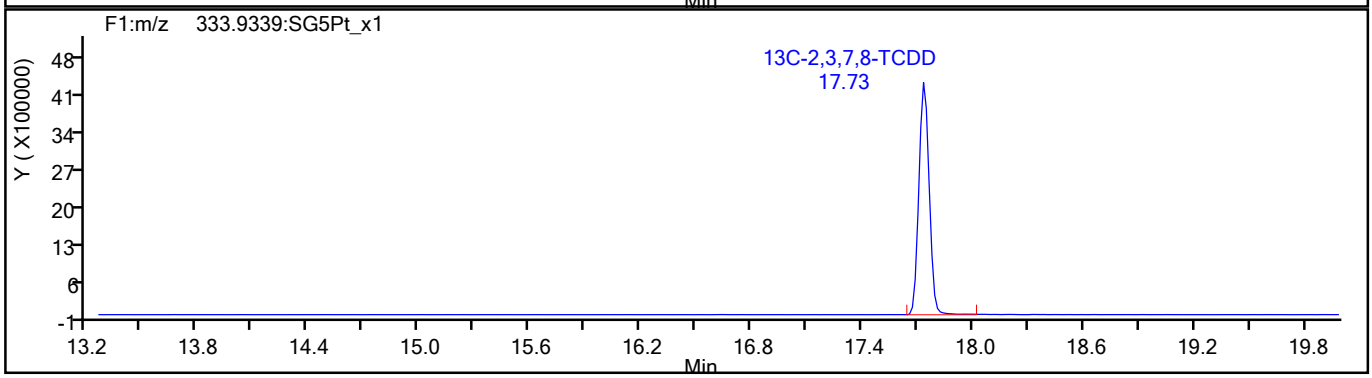

789413

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d		
Injection Date:	30-Aug-2021 21:15:40	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

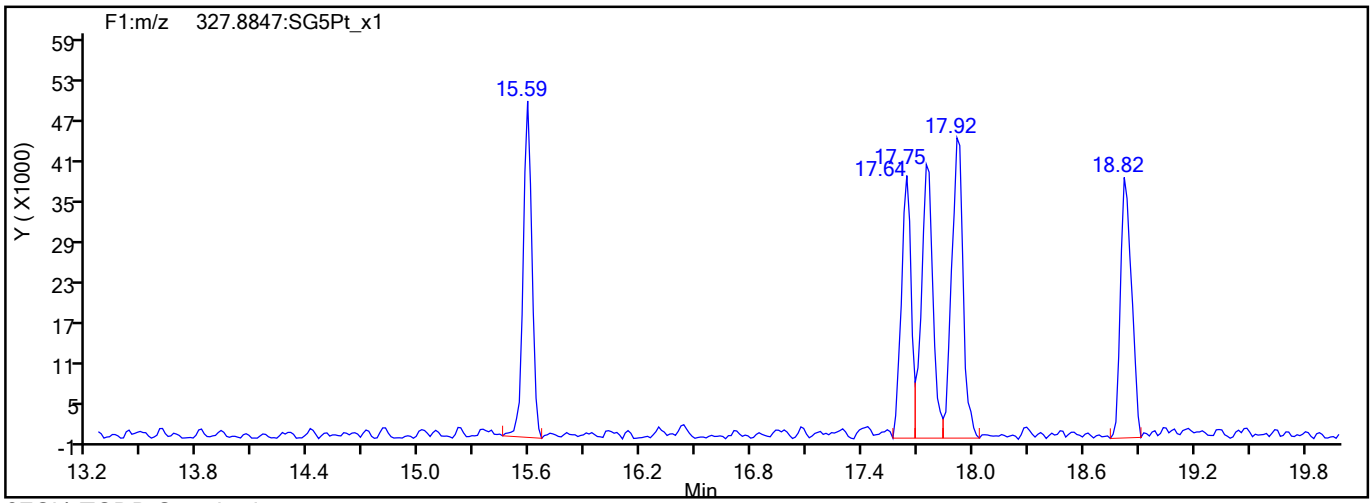

37Cl4-TCDD Standards

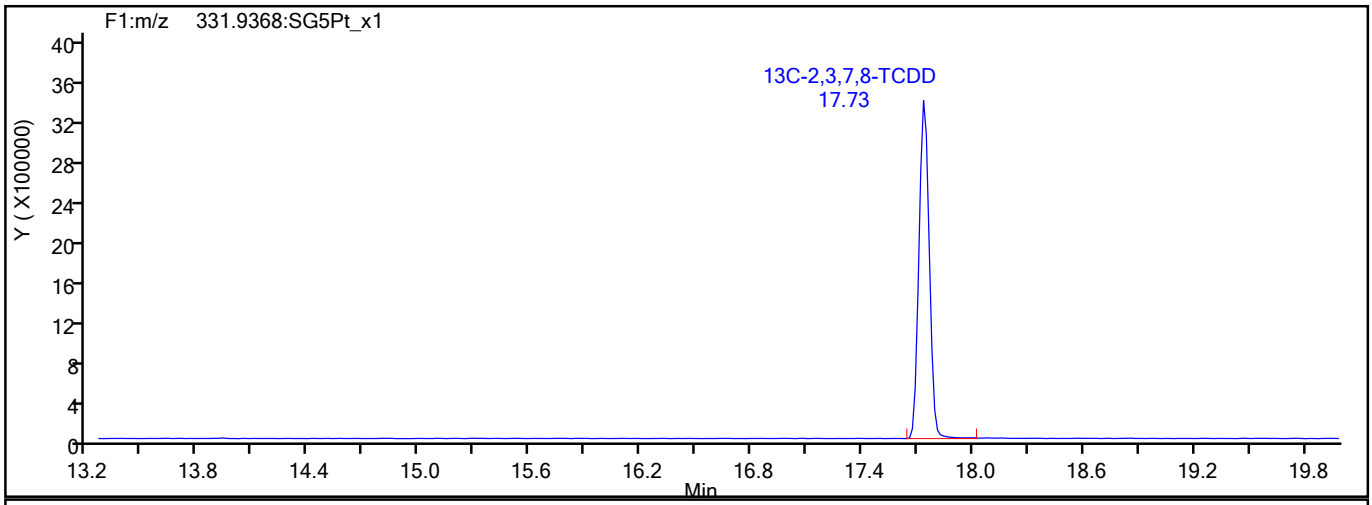

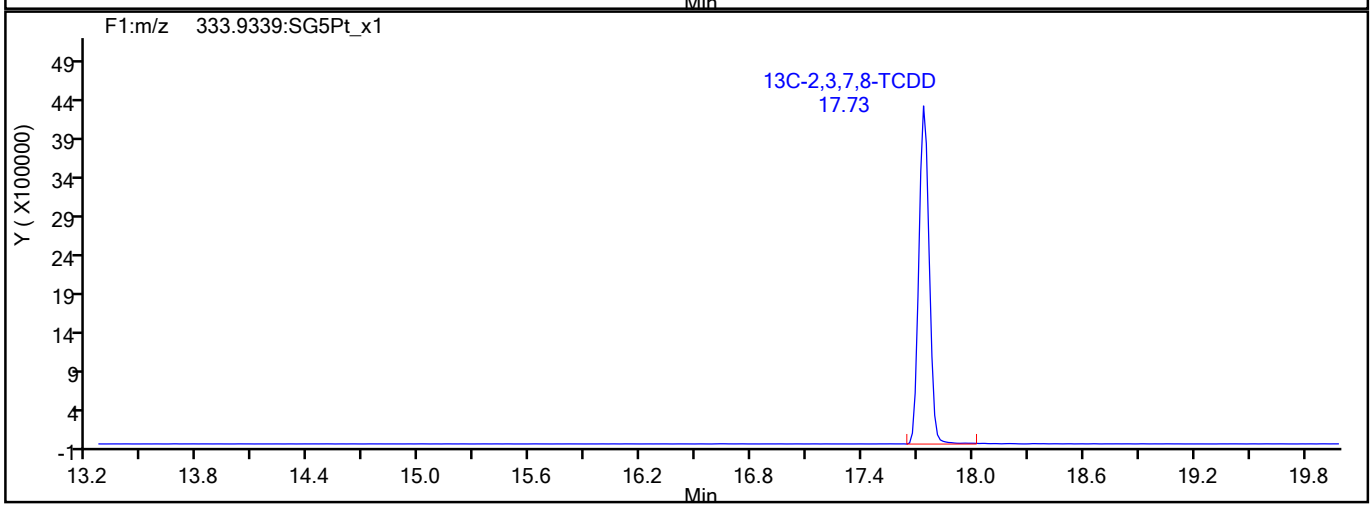

789414

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

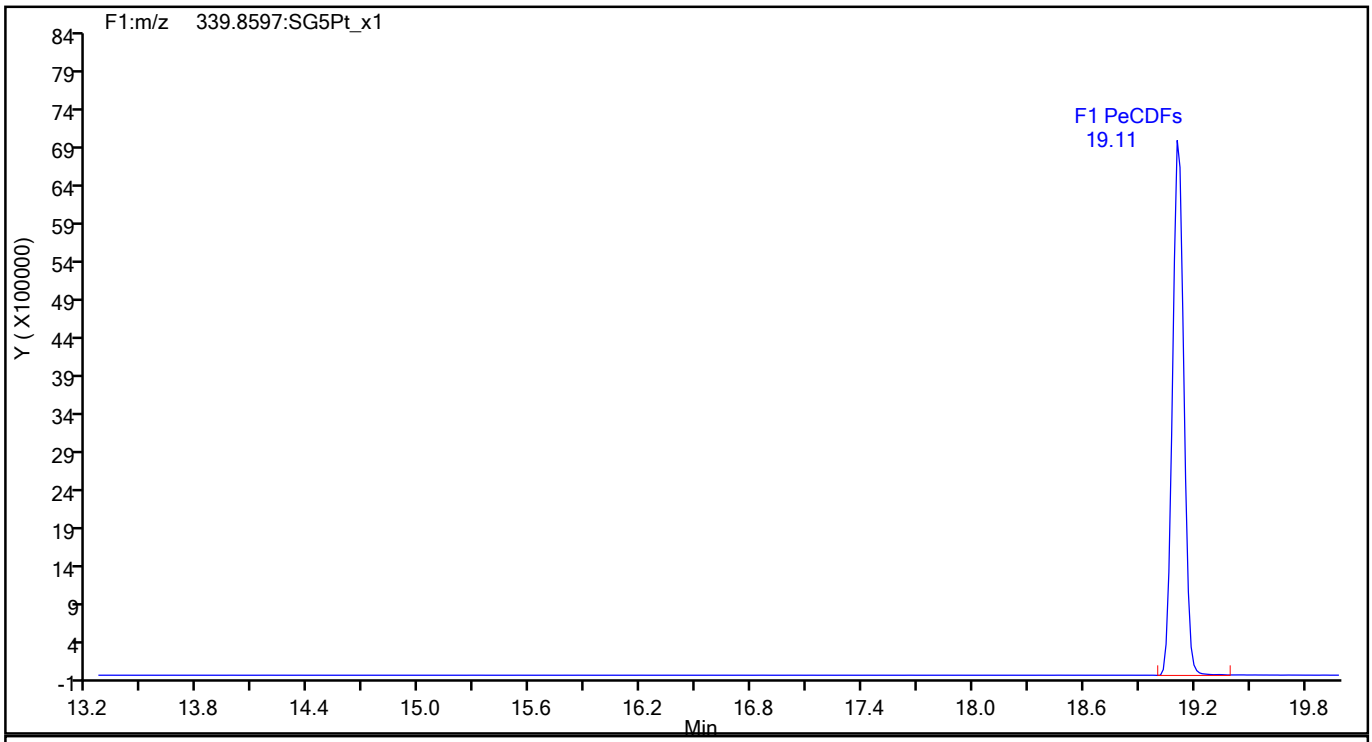

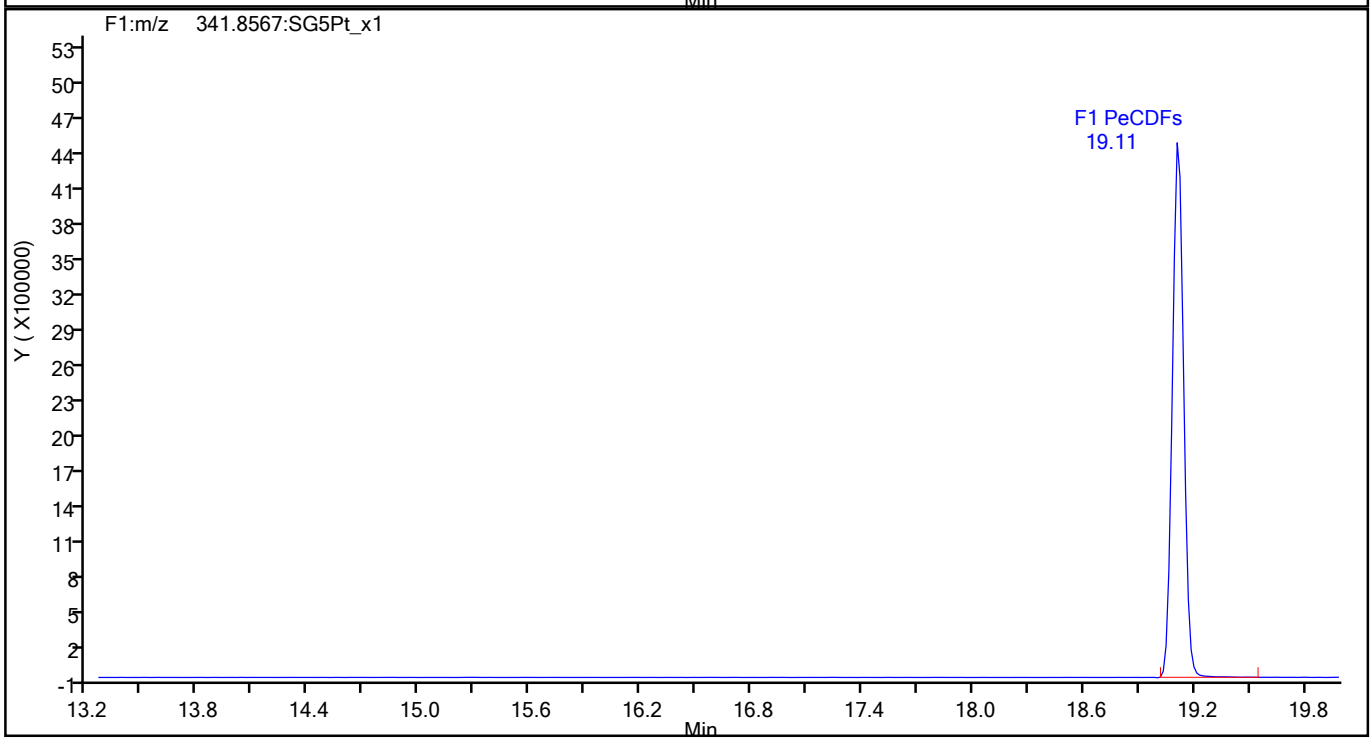

789415

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

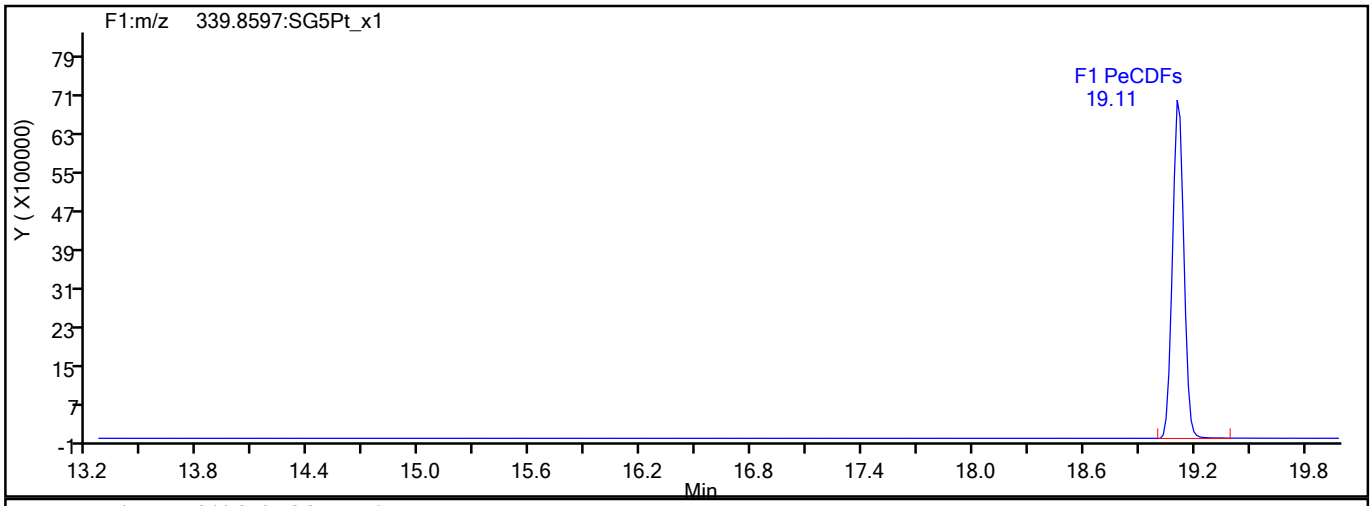

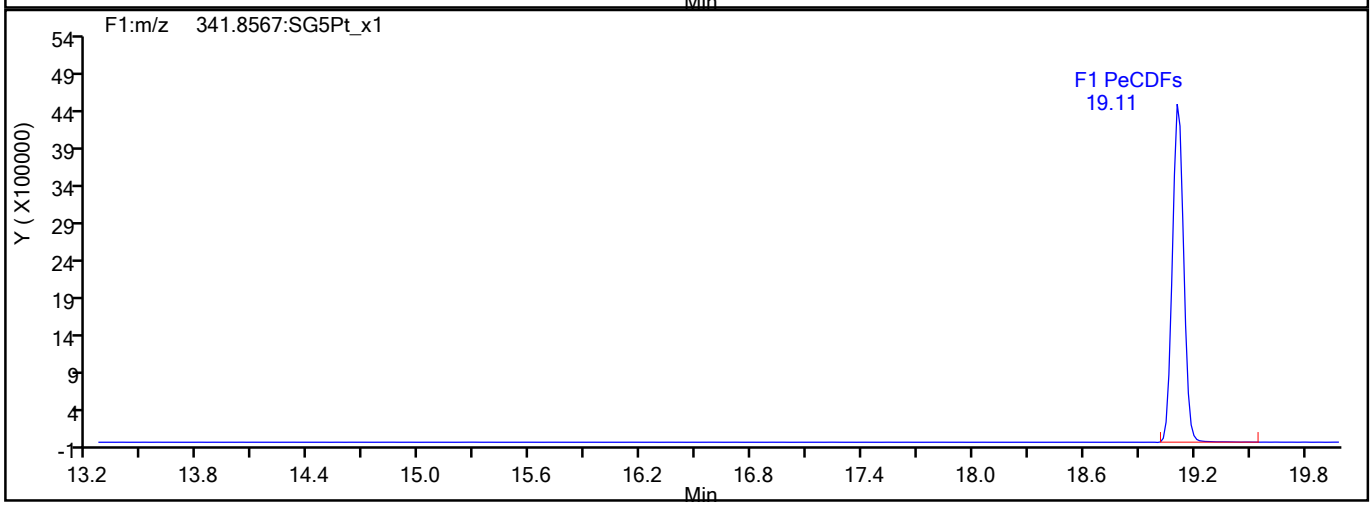

F1 PeCDFs Interference Mass

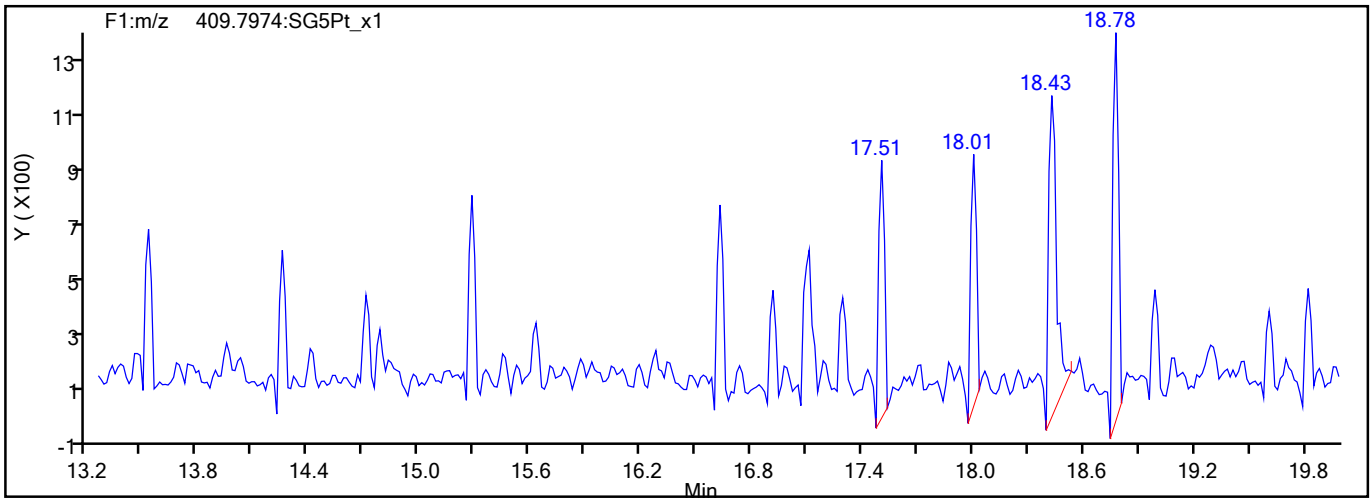

789416

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

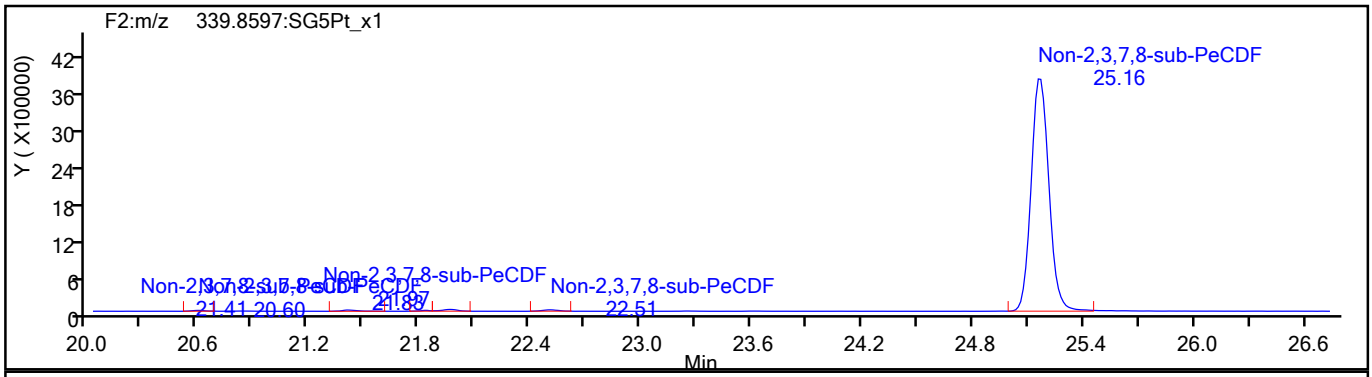

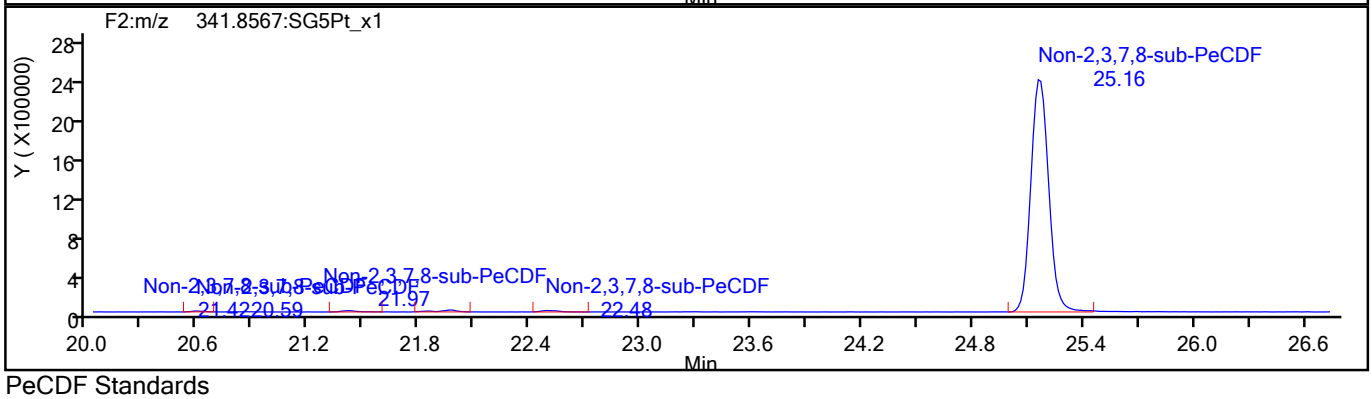

PeCDF Standards

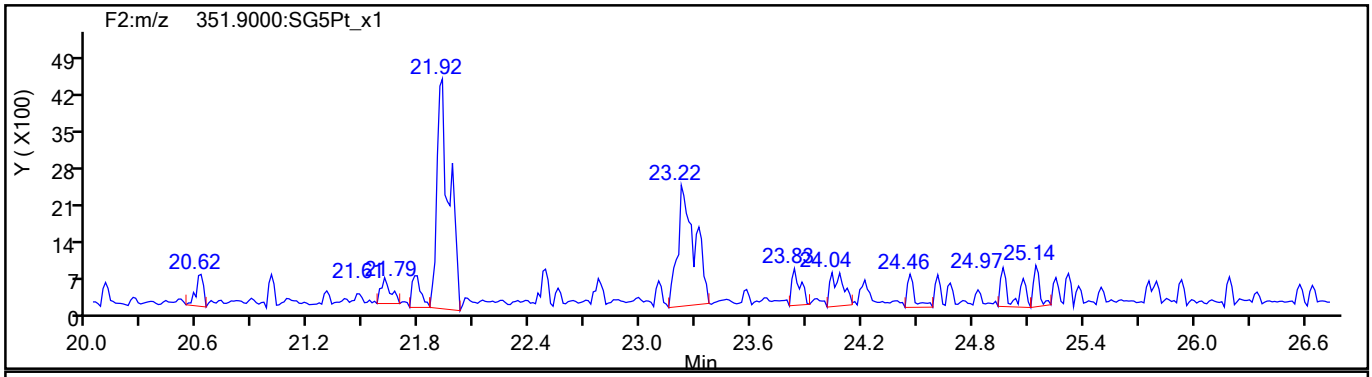

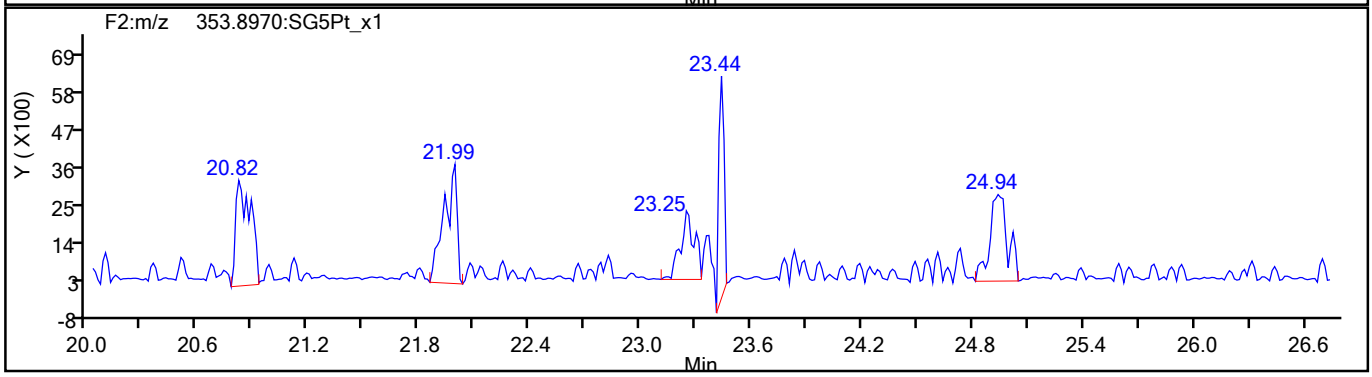

789417

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

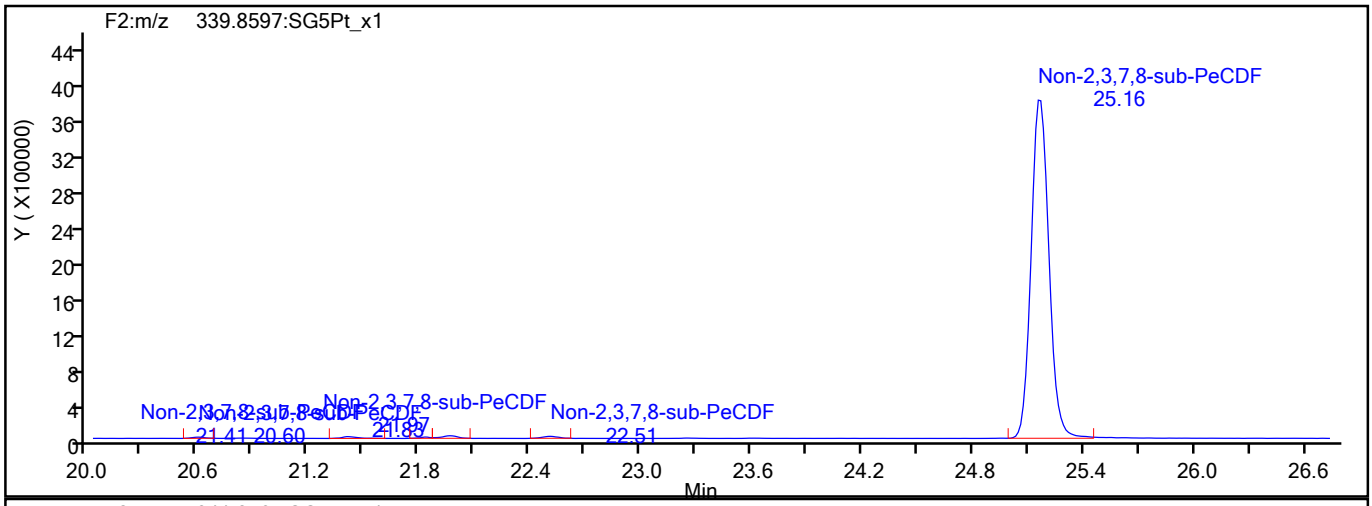

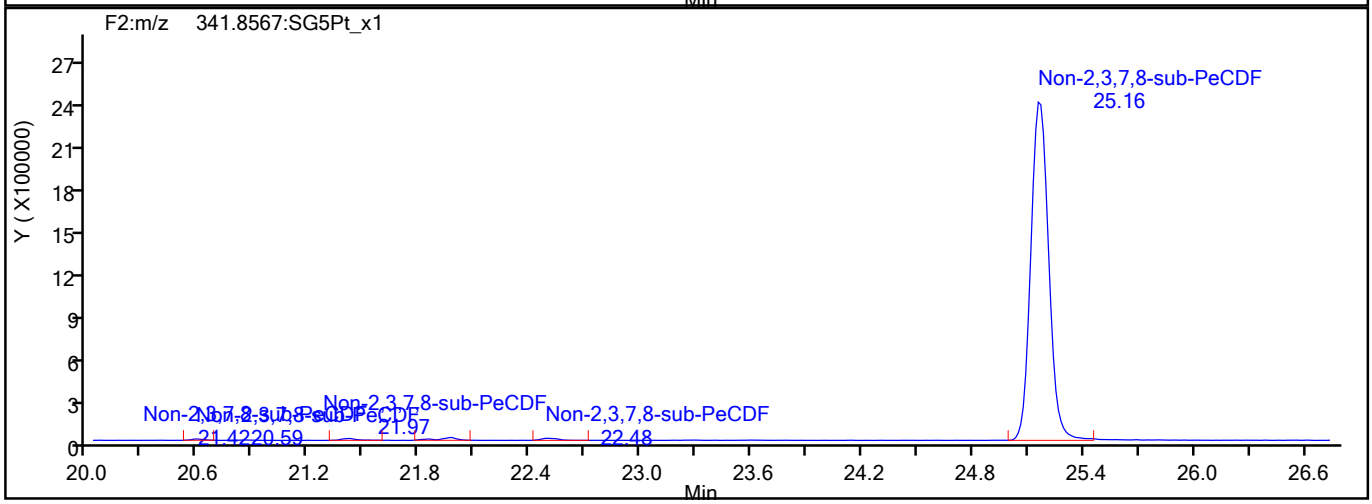

PeCDF Interference Mass

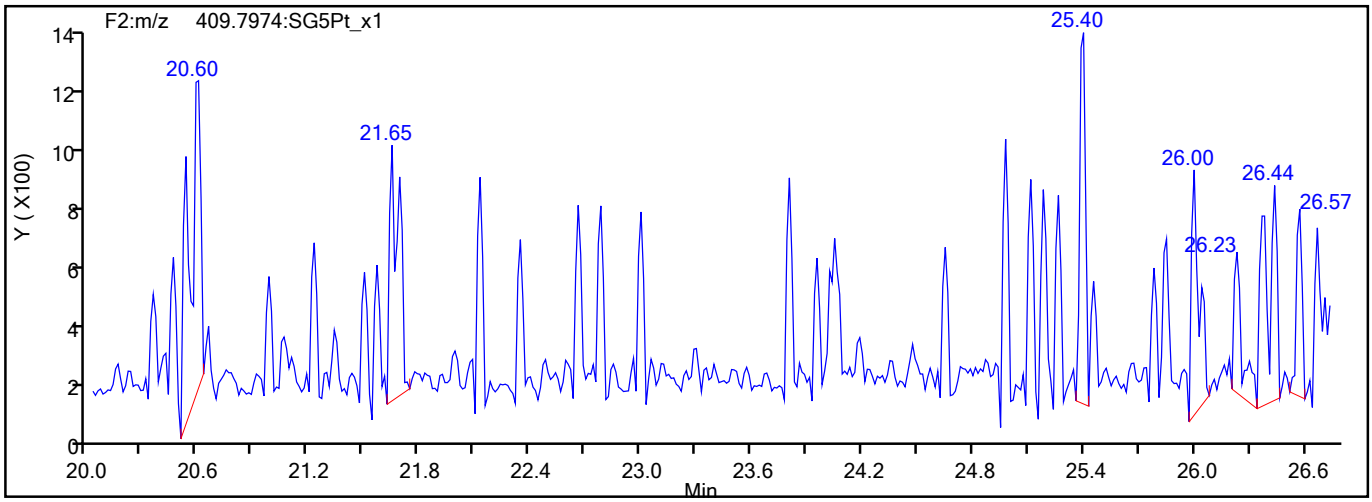

789418

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

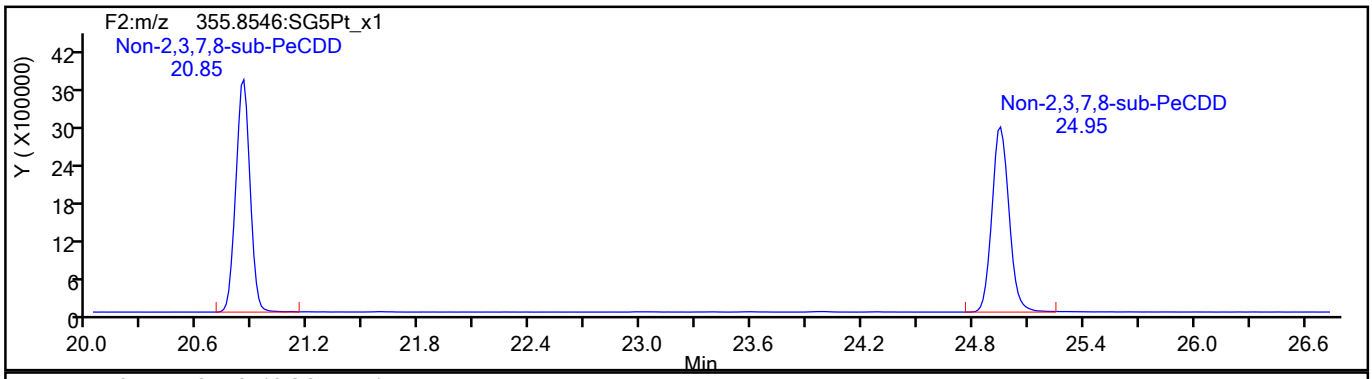

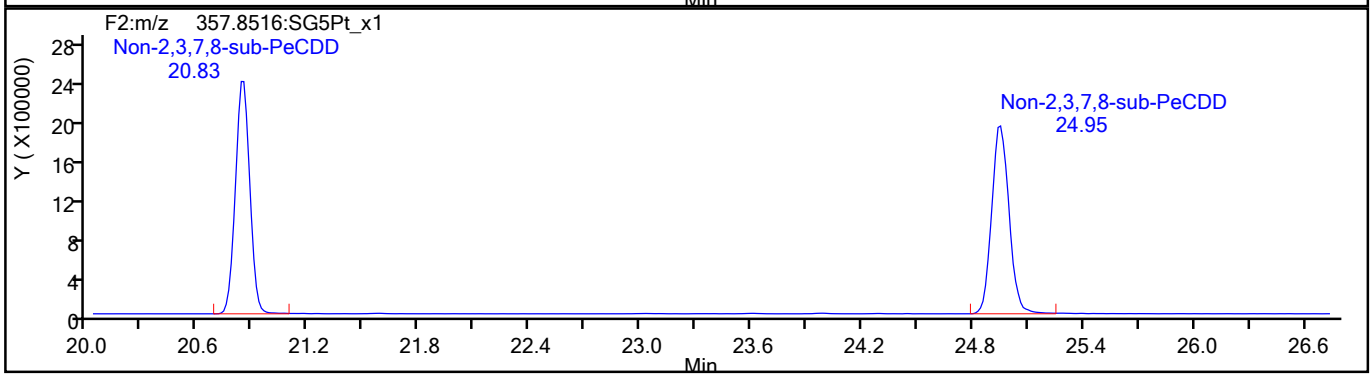

PeCDD Standards

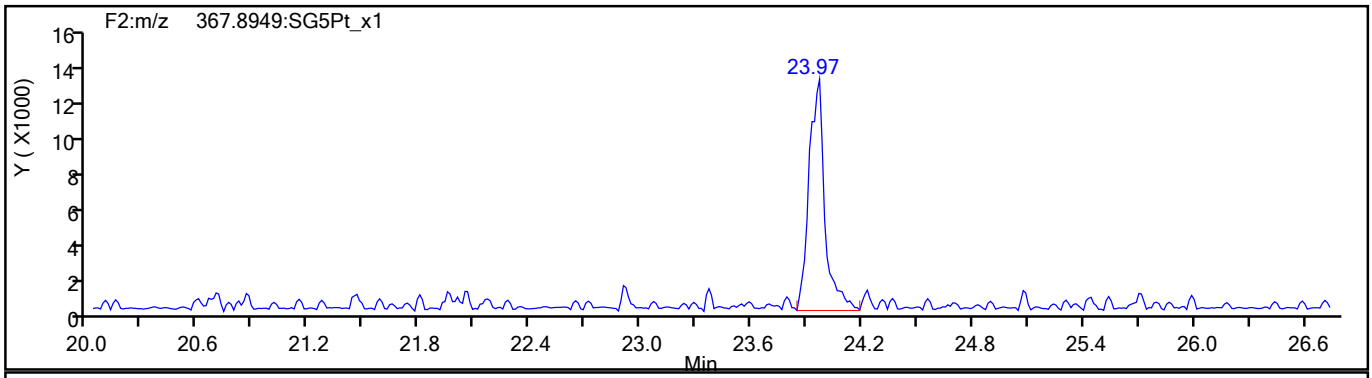

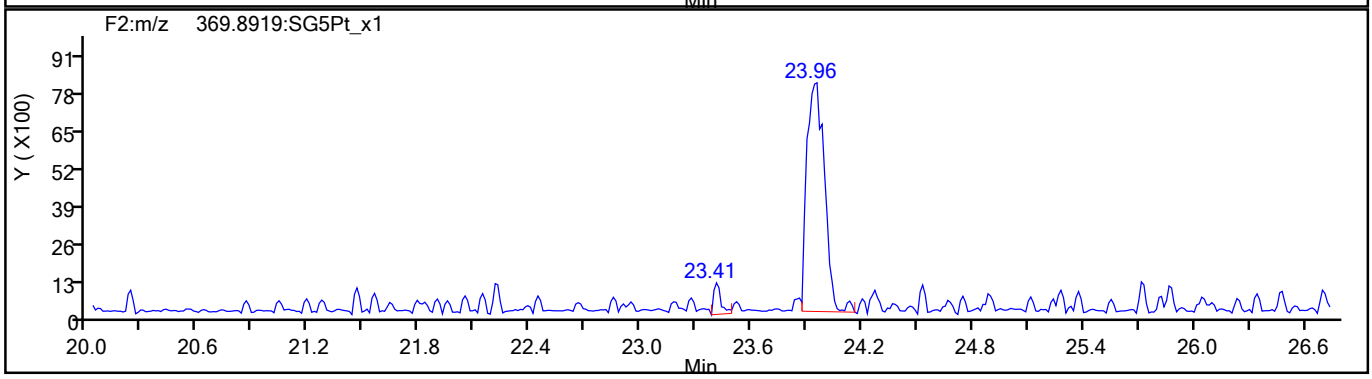

789419

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

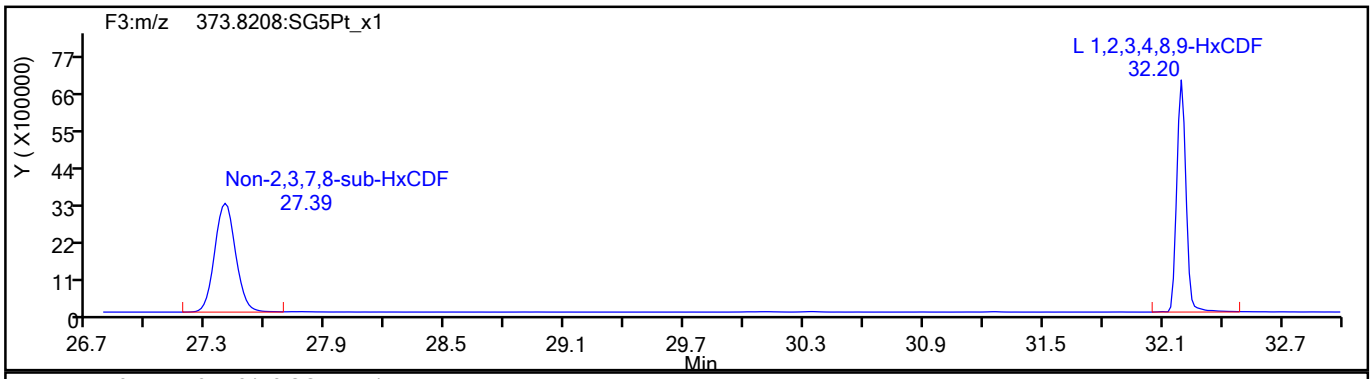

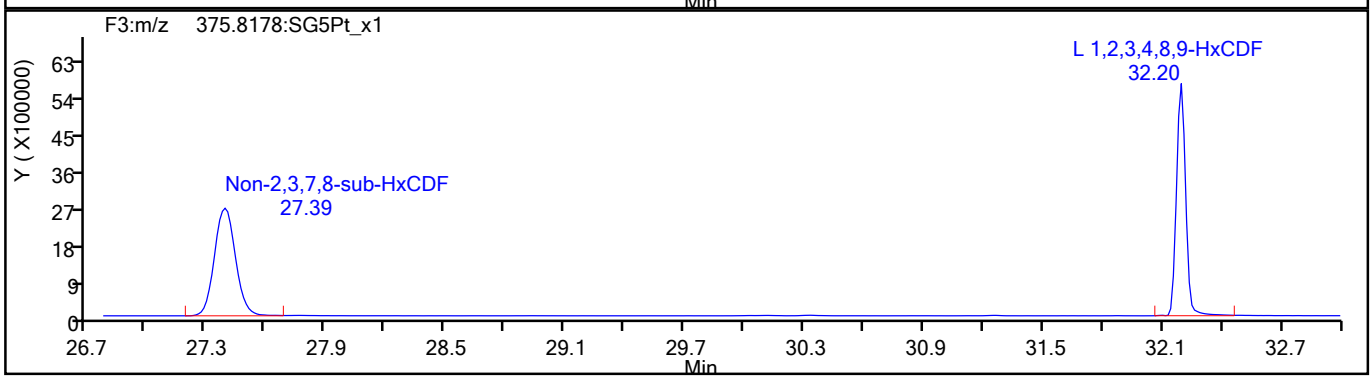

HxCDF Standards

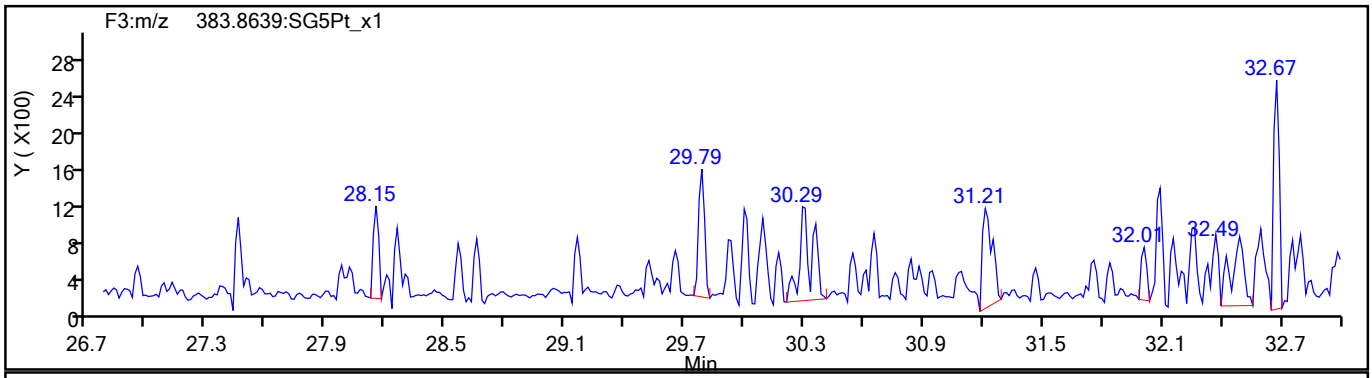

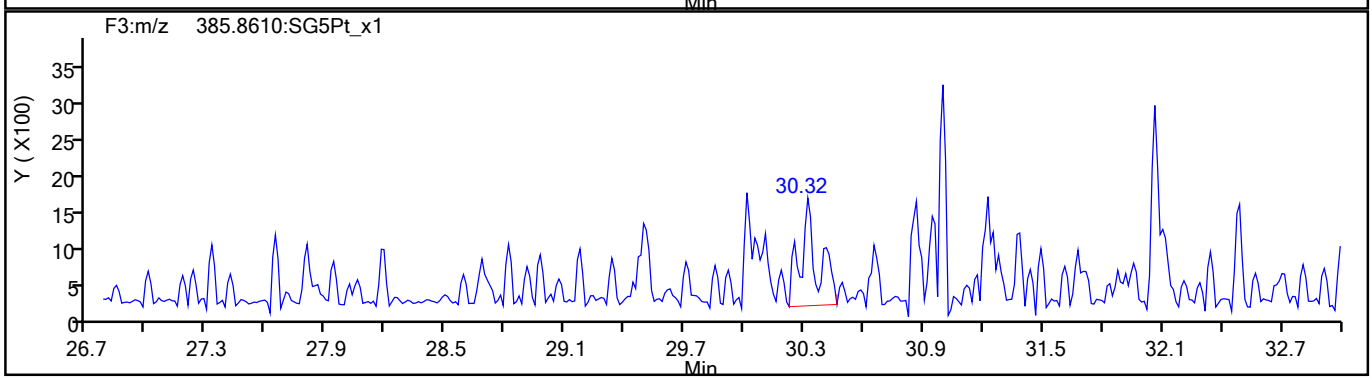

789420

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

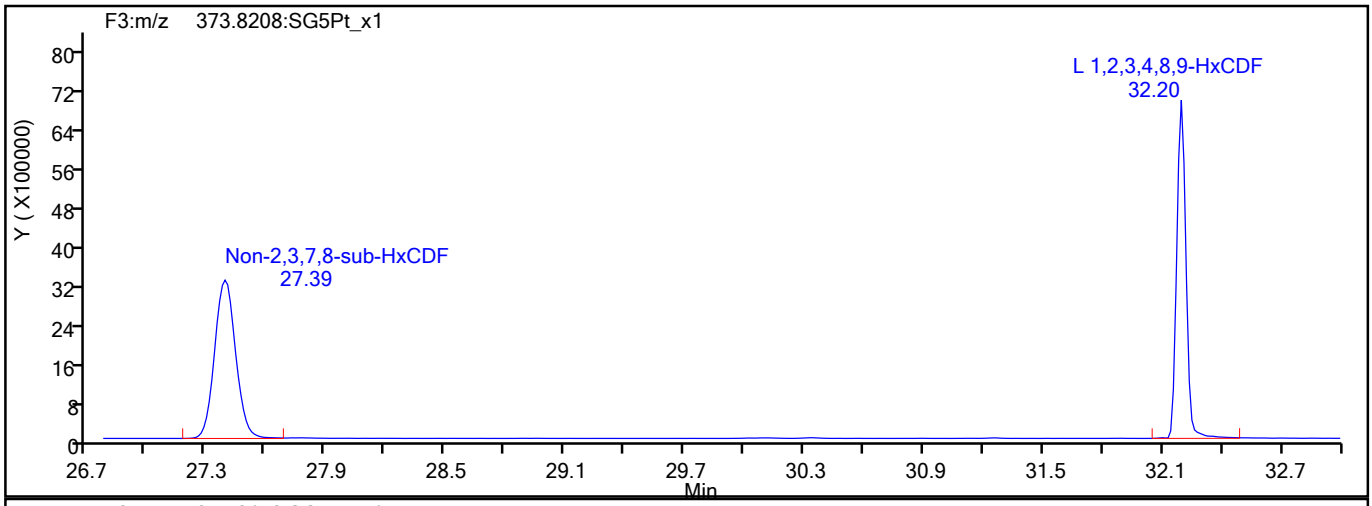

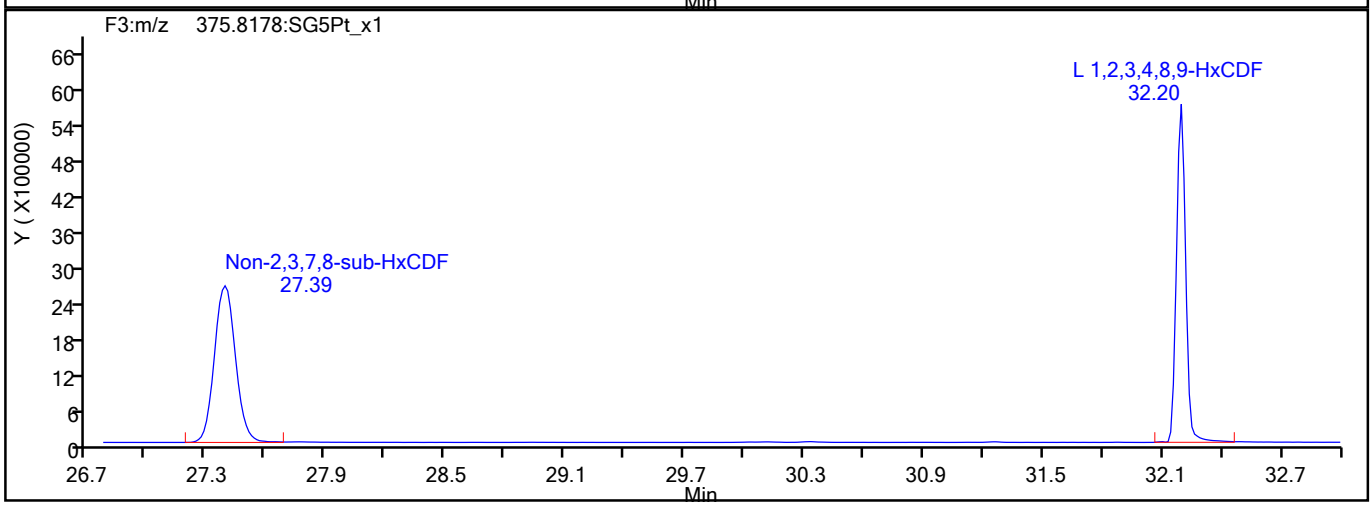

HxCDF Interference Mass

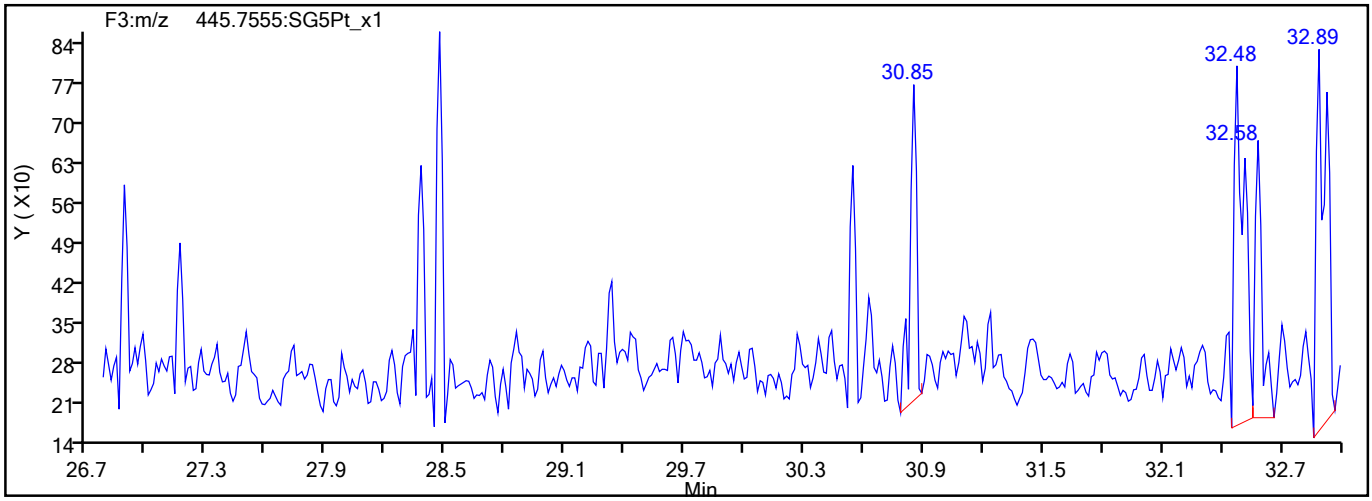

789421

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

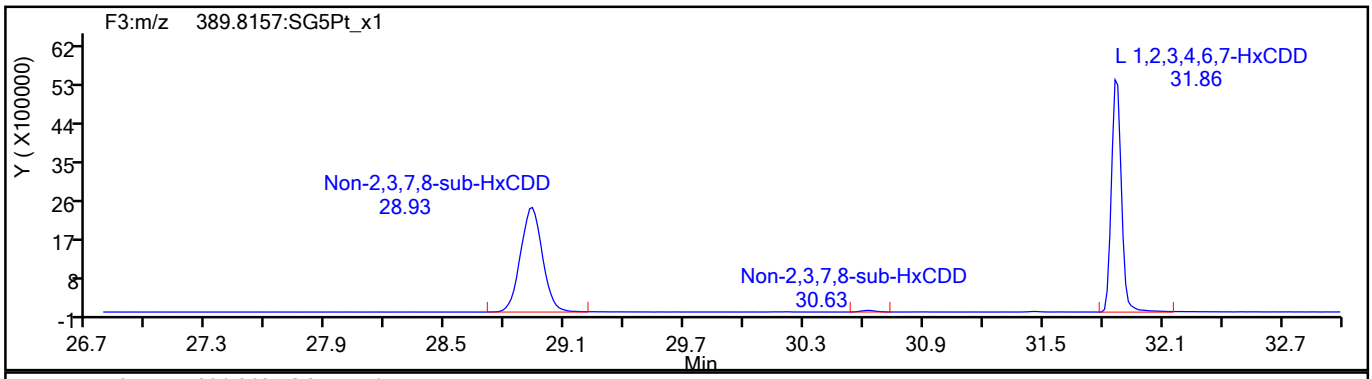

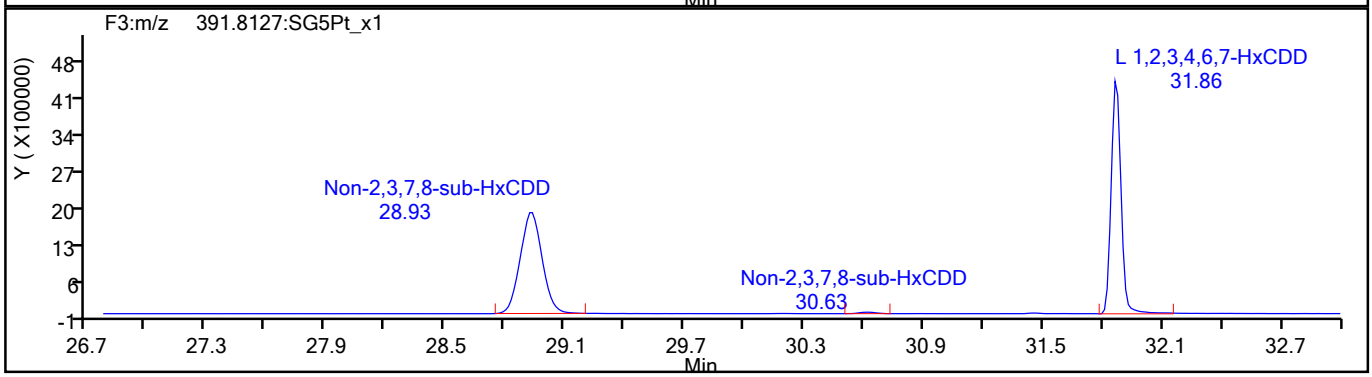

HxCDD Standards

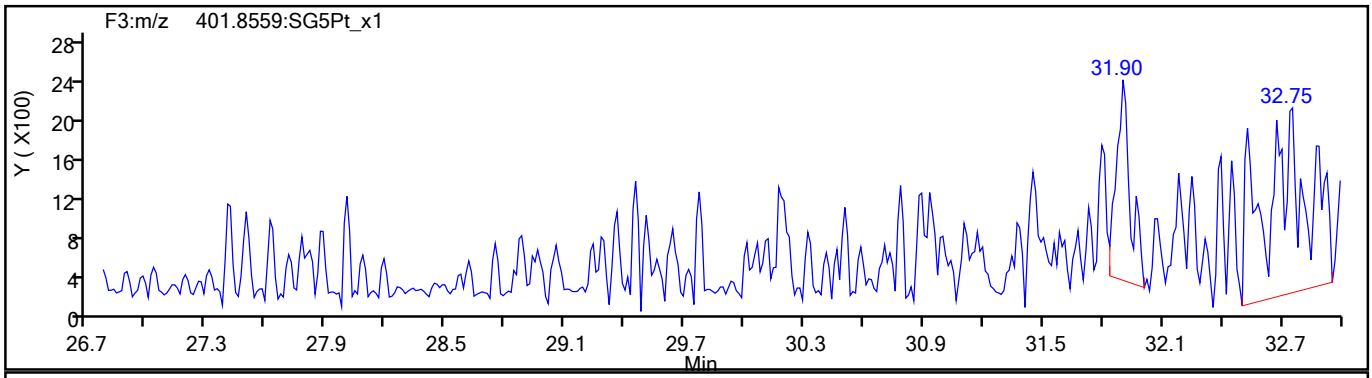

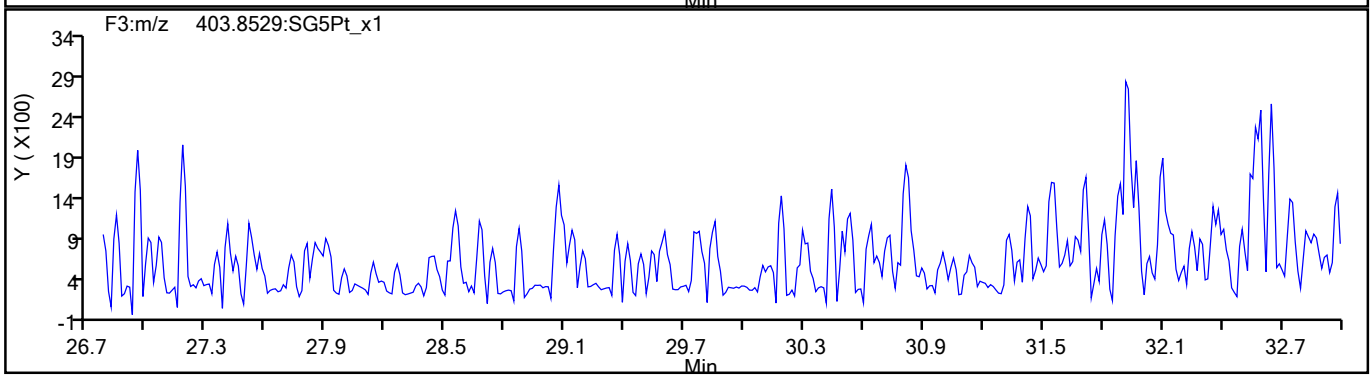

789422

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

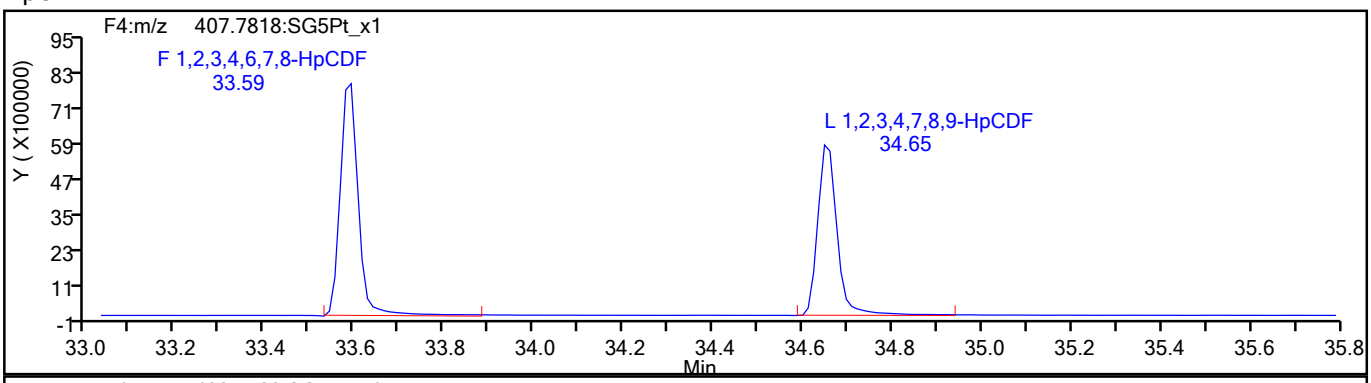

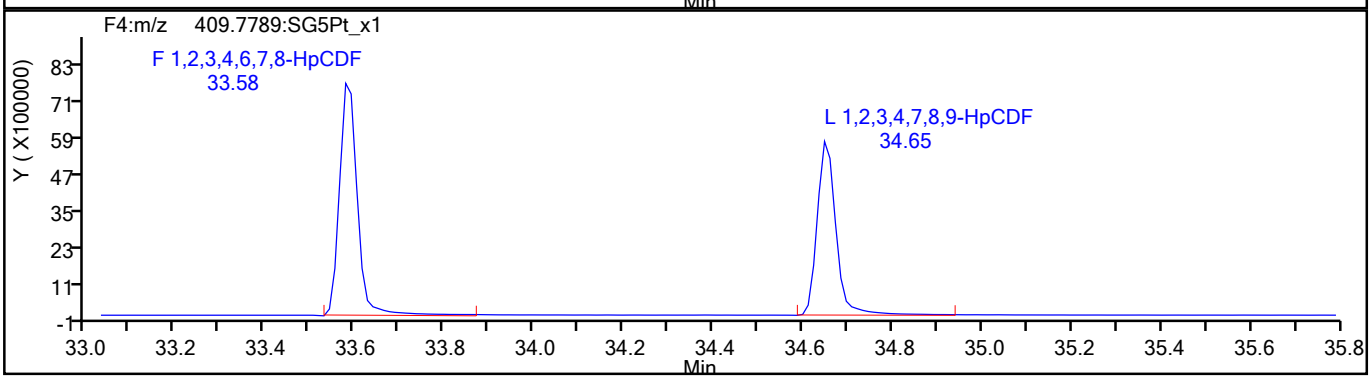

HpCDF Standards

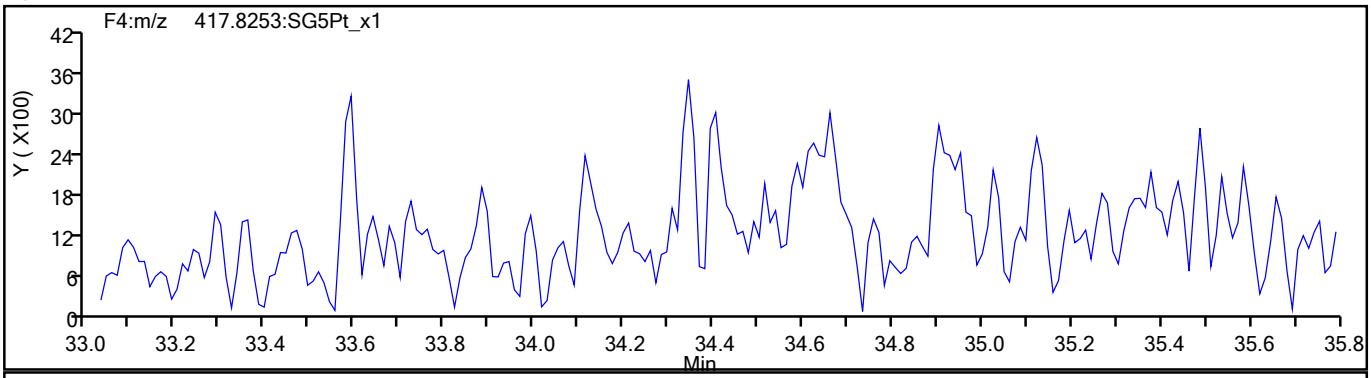

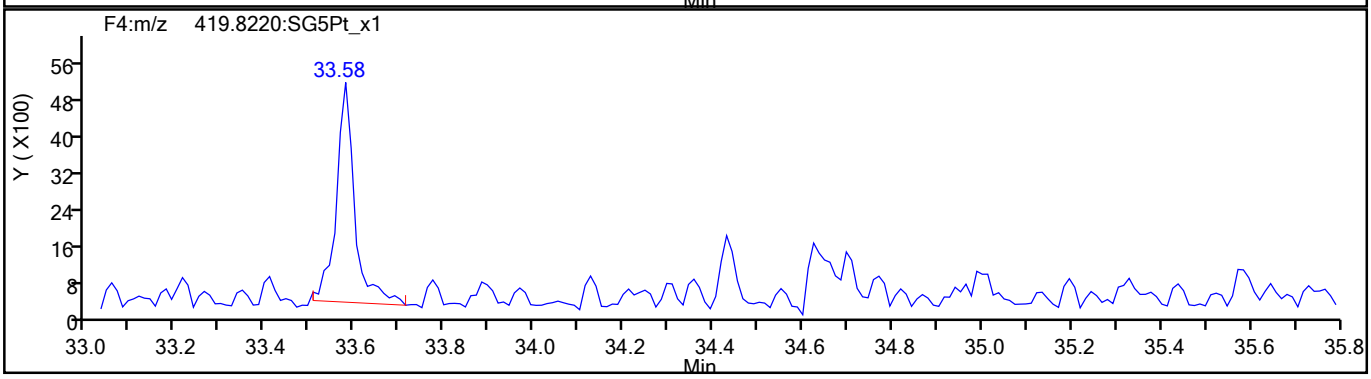

789423

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

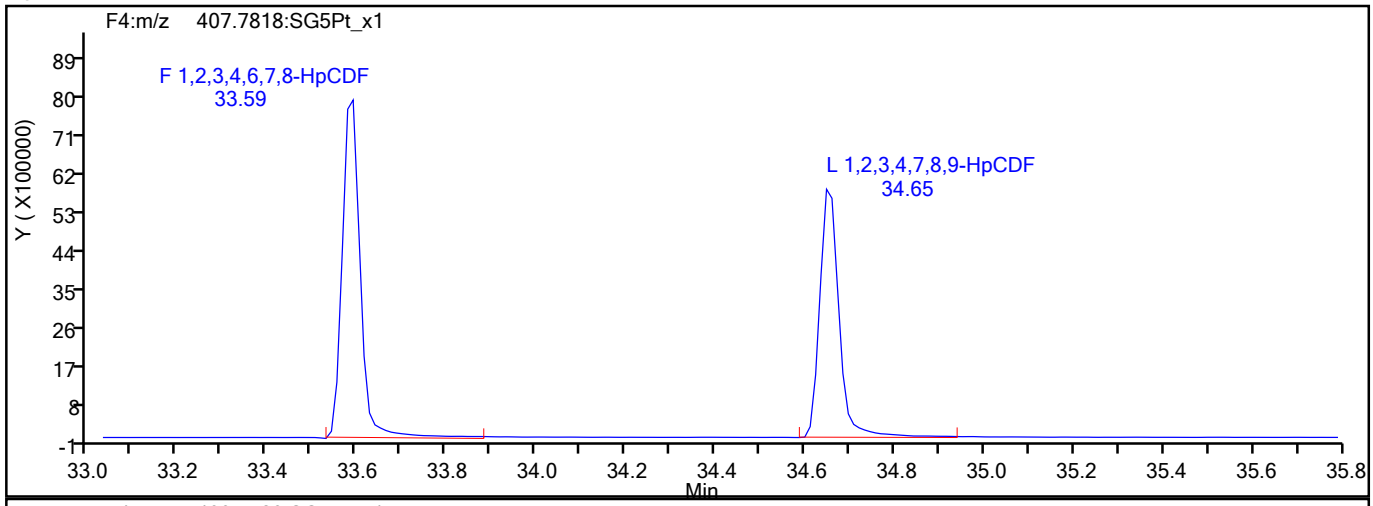

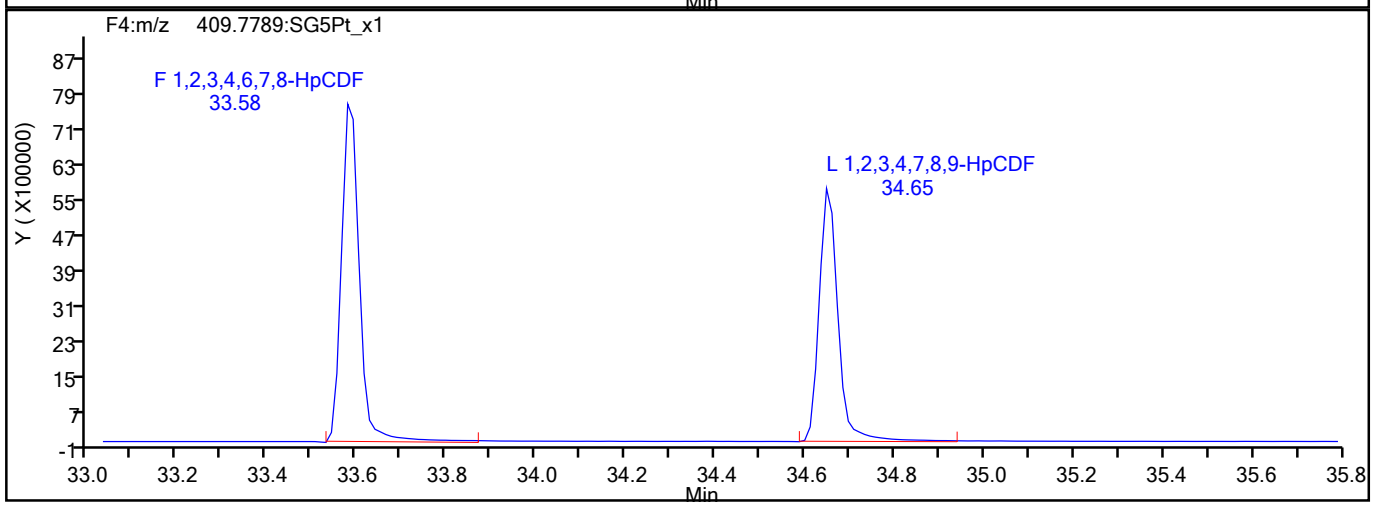

HpCDF Interference Mass

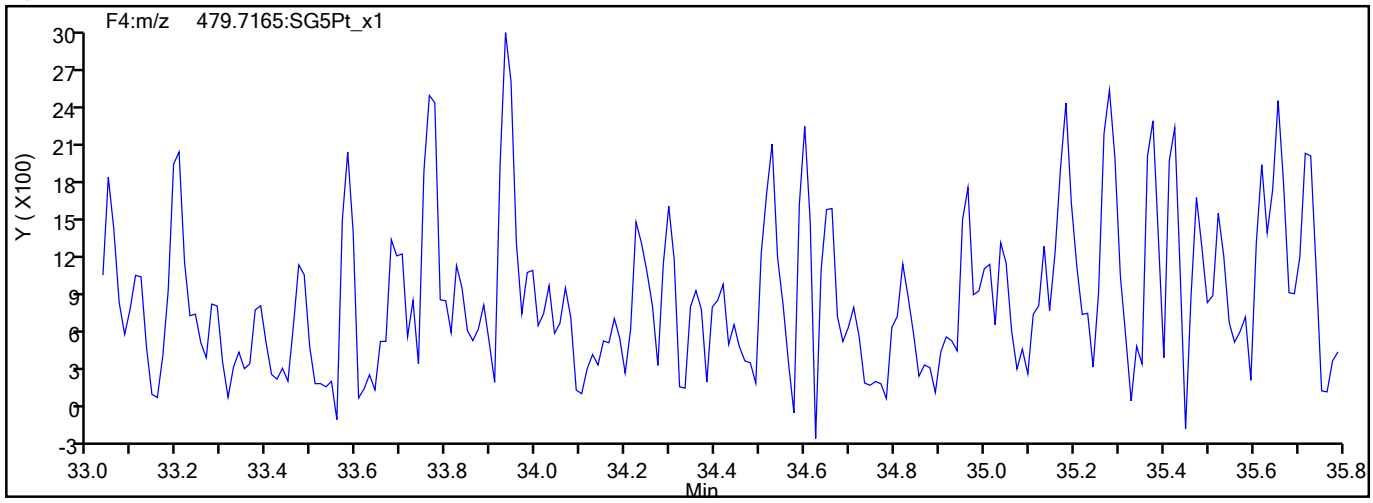

789424

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

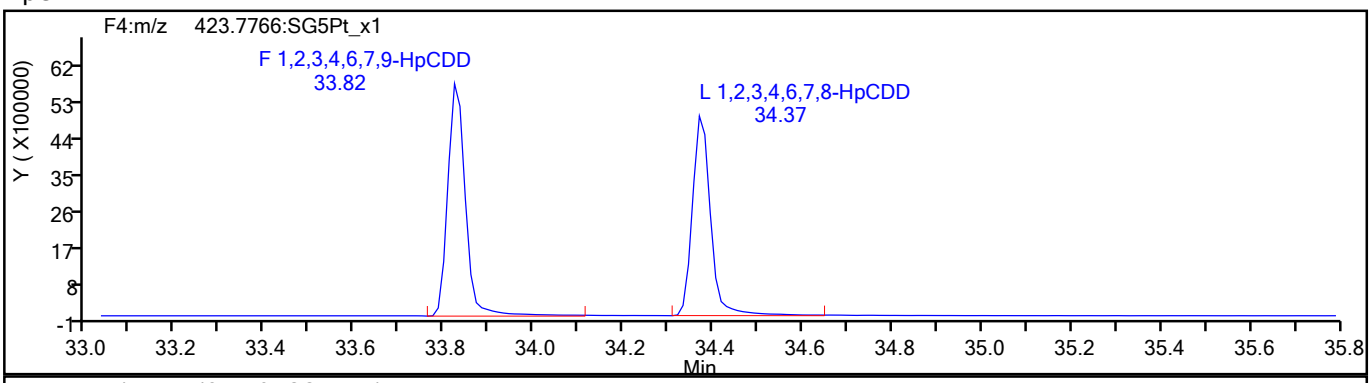

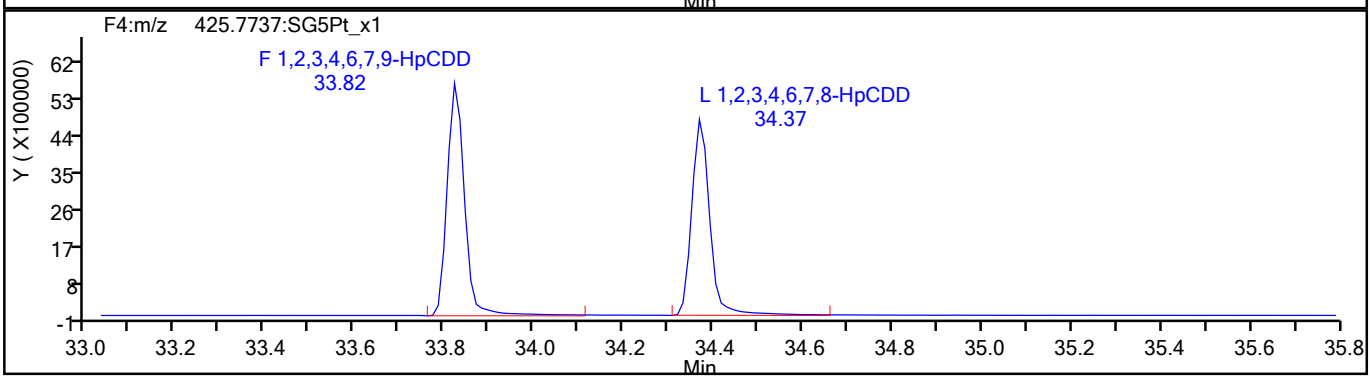

HpCDD Standards

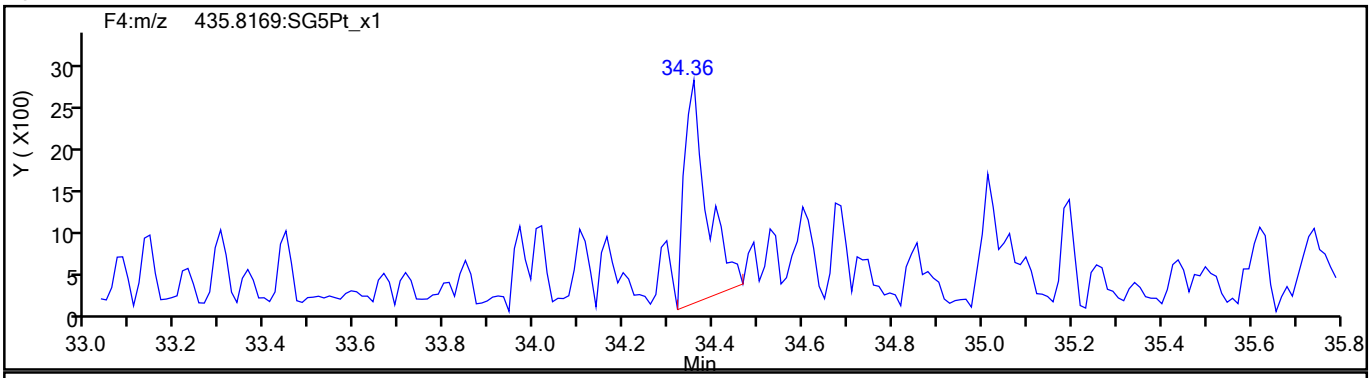

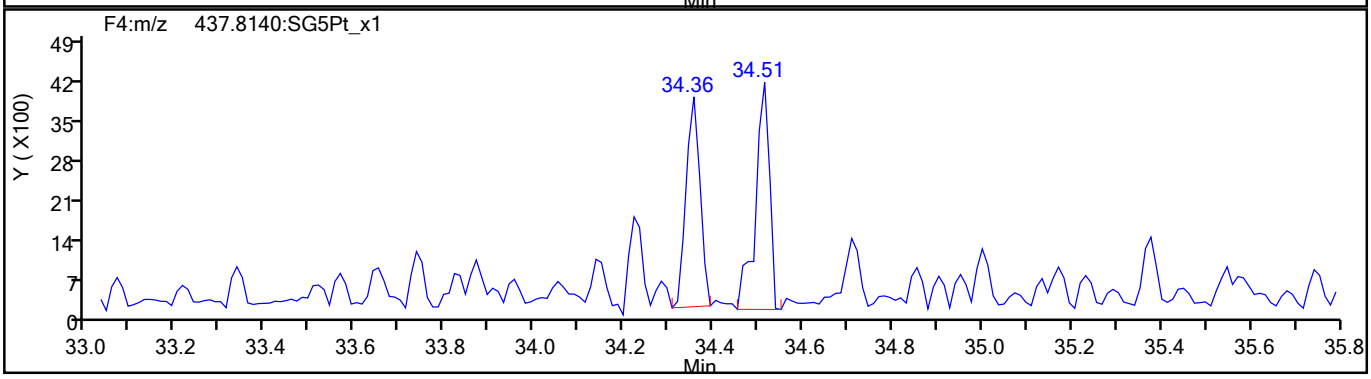

789425

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d		
Injection Date:	30-Aug-2021 21:15:40	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

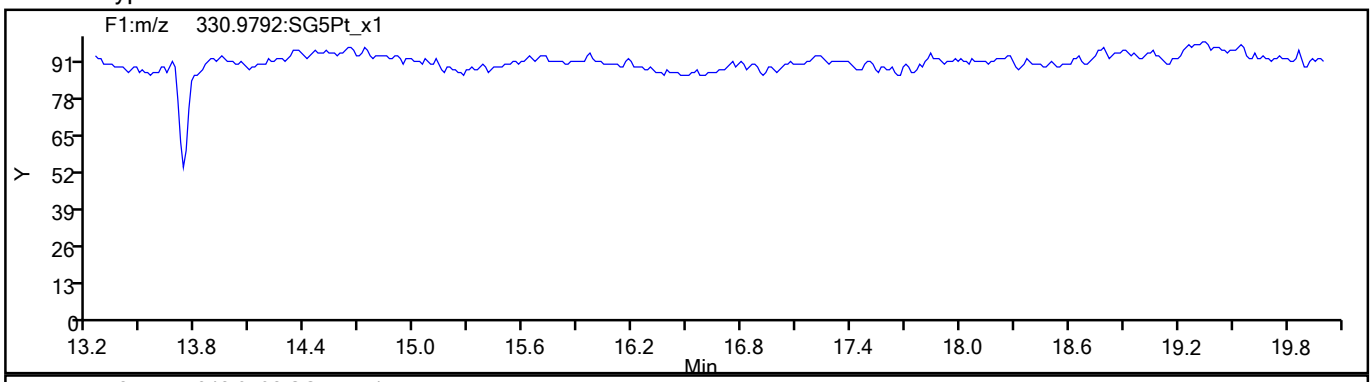

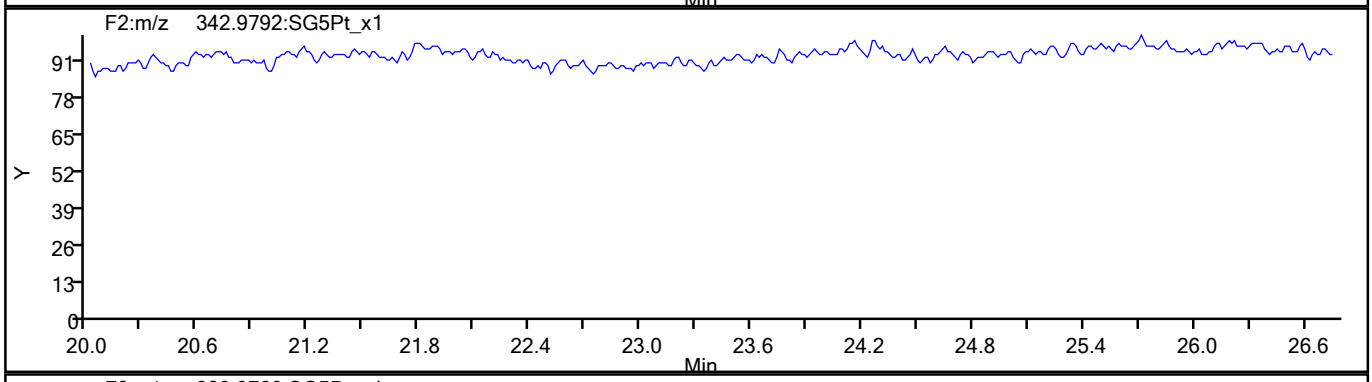

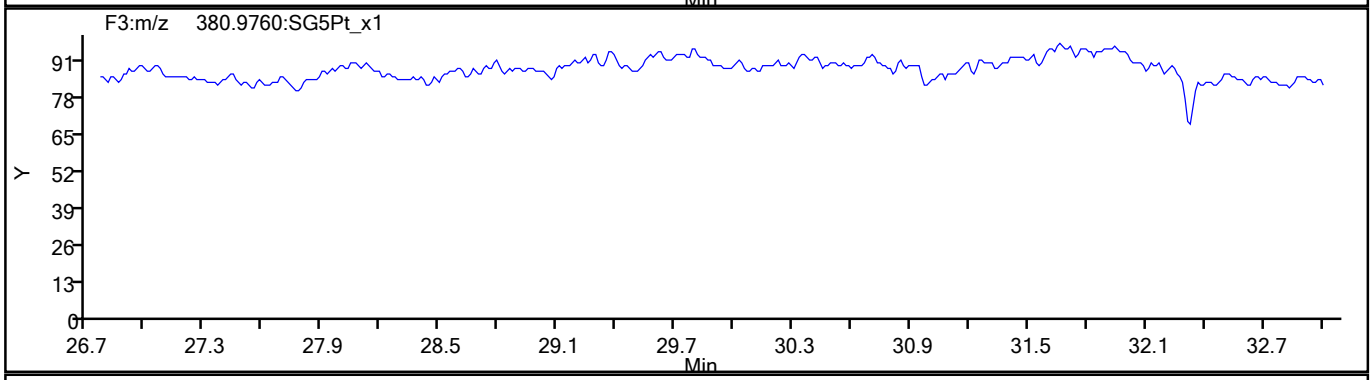

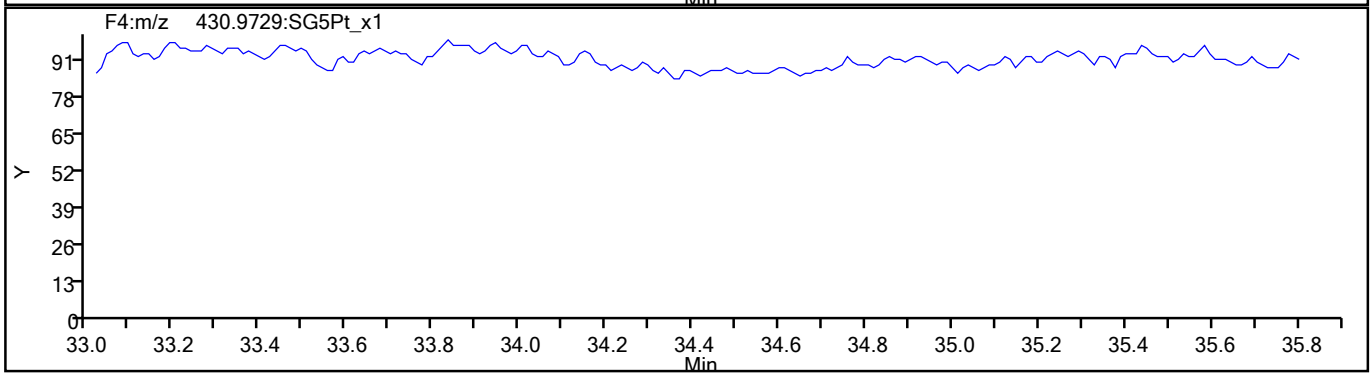

789426

Report Date: 31-Aug-2021 16:05:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210831-126126.b\30AU2110D5_14.d		
Injection Date:	30-Aug-2021 21:15:40	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521465	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

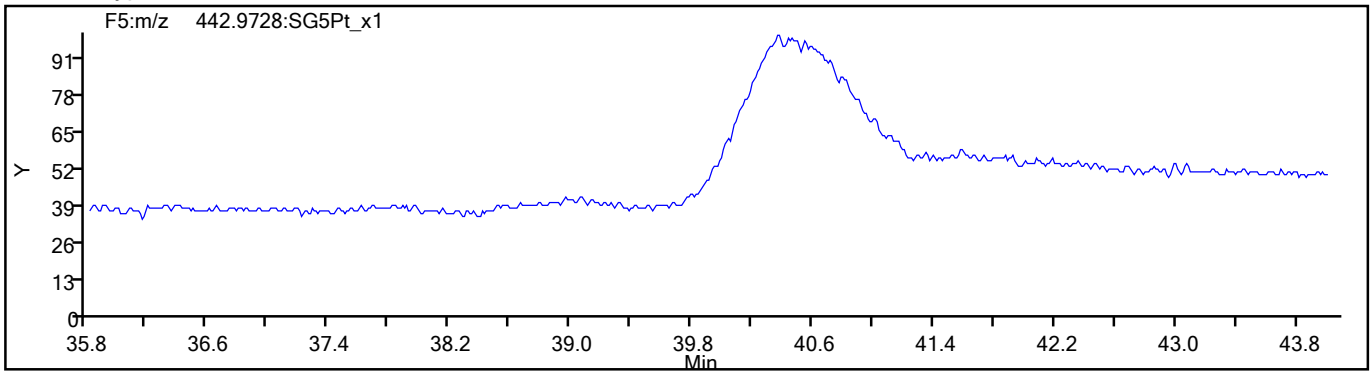

789427

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

789428

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

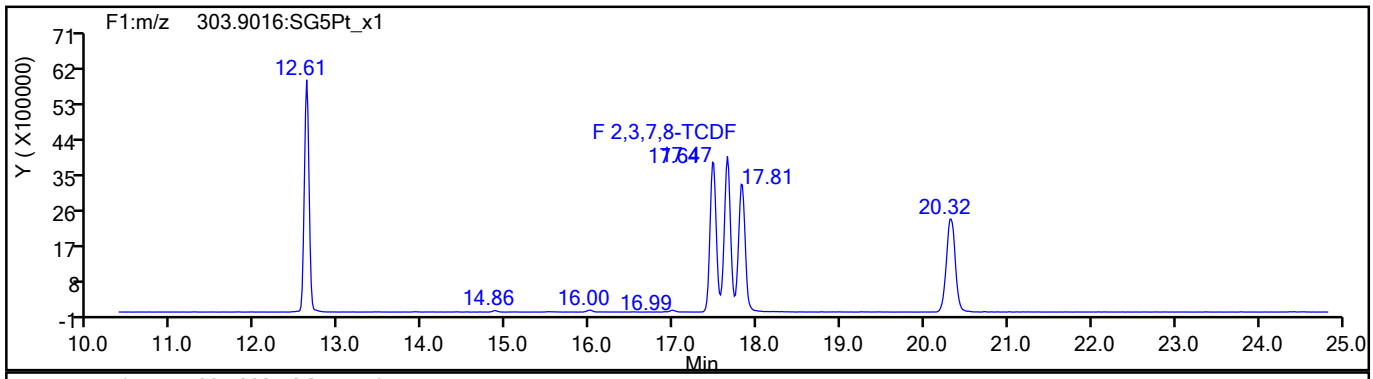

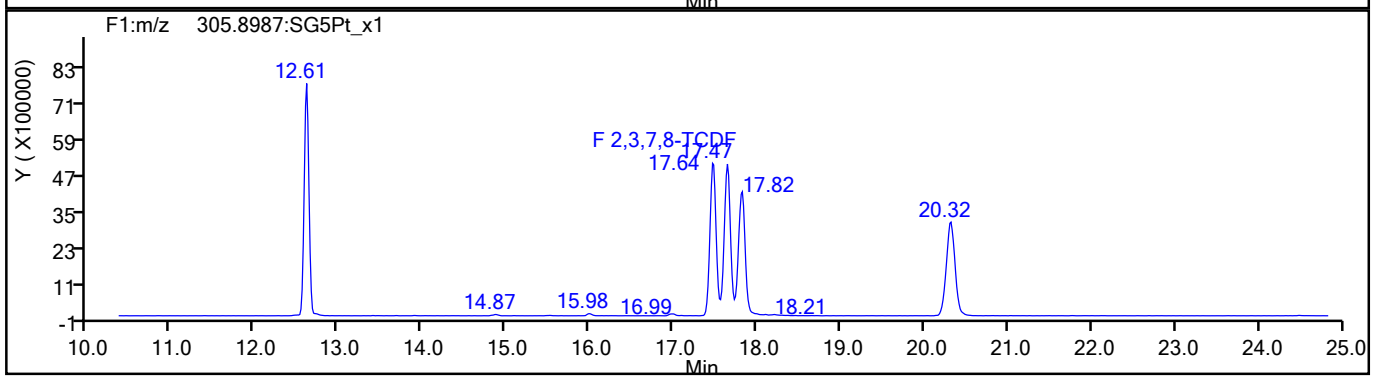

TCDF Standards

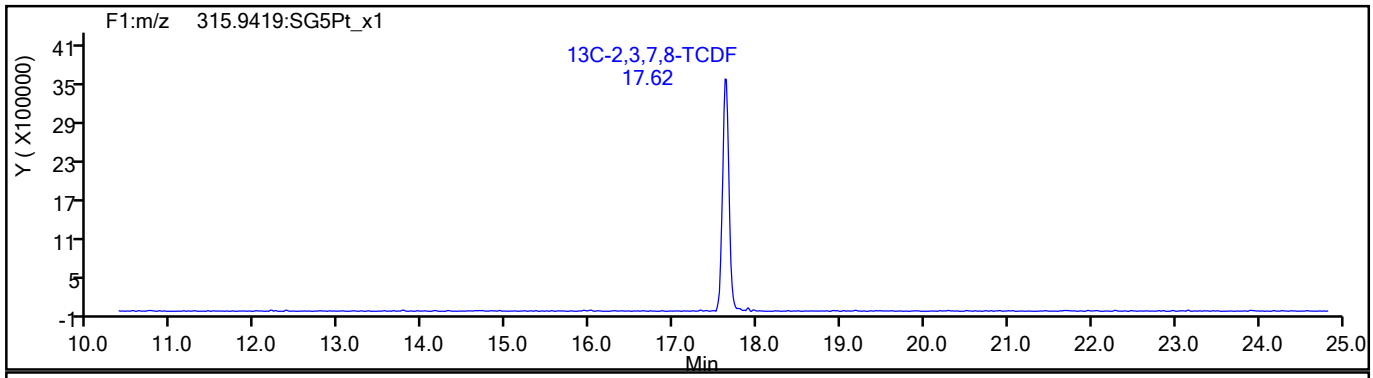

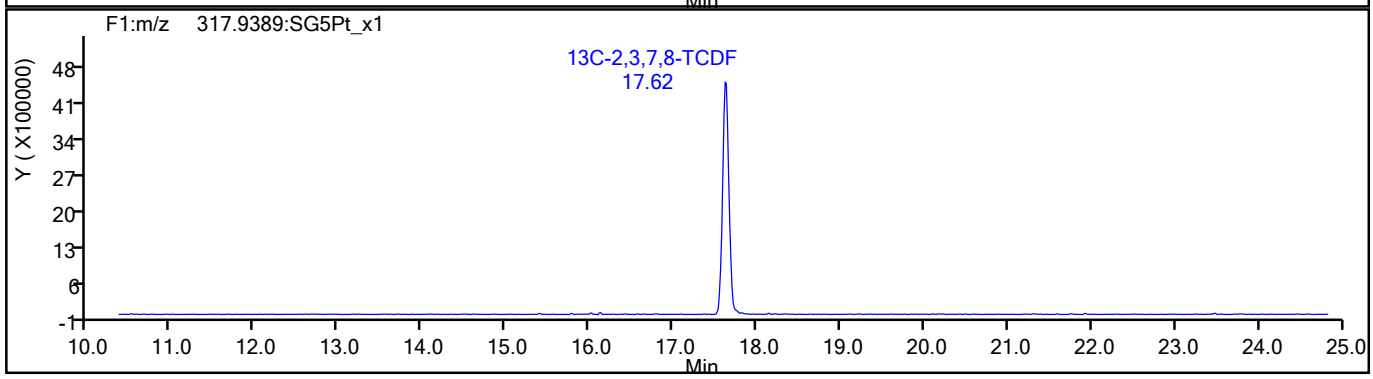

789430

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

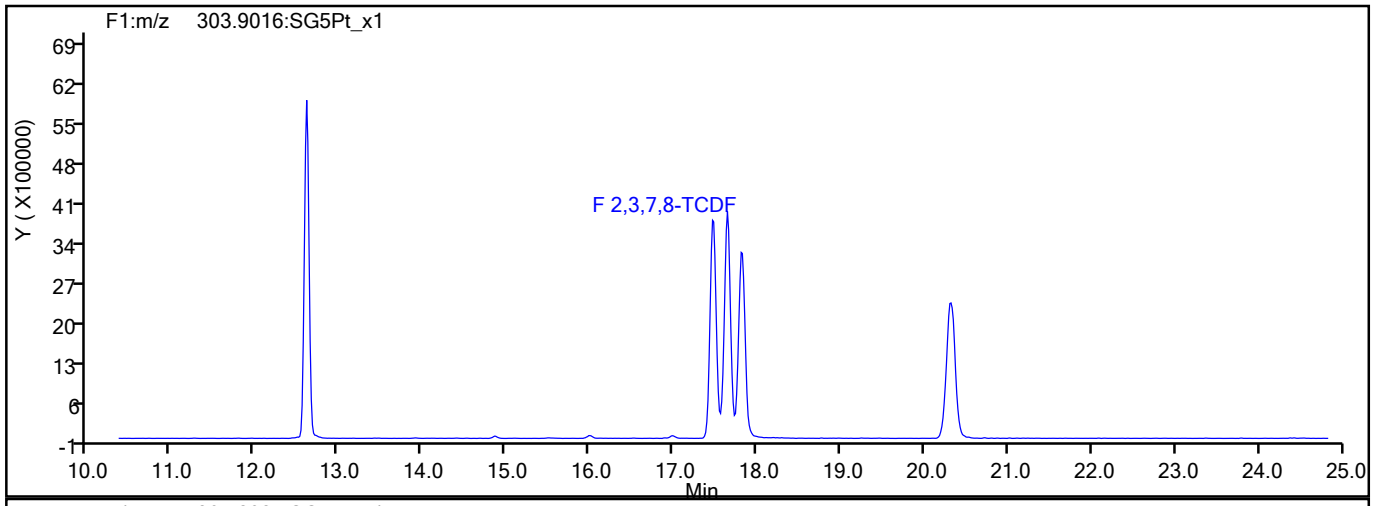

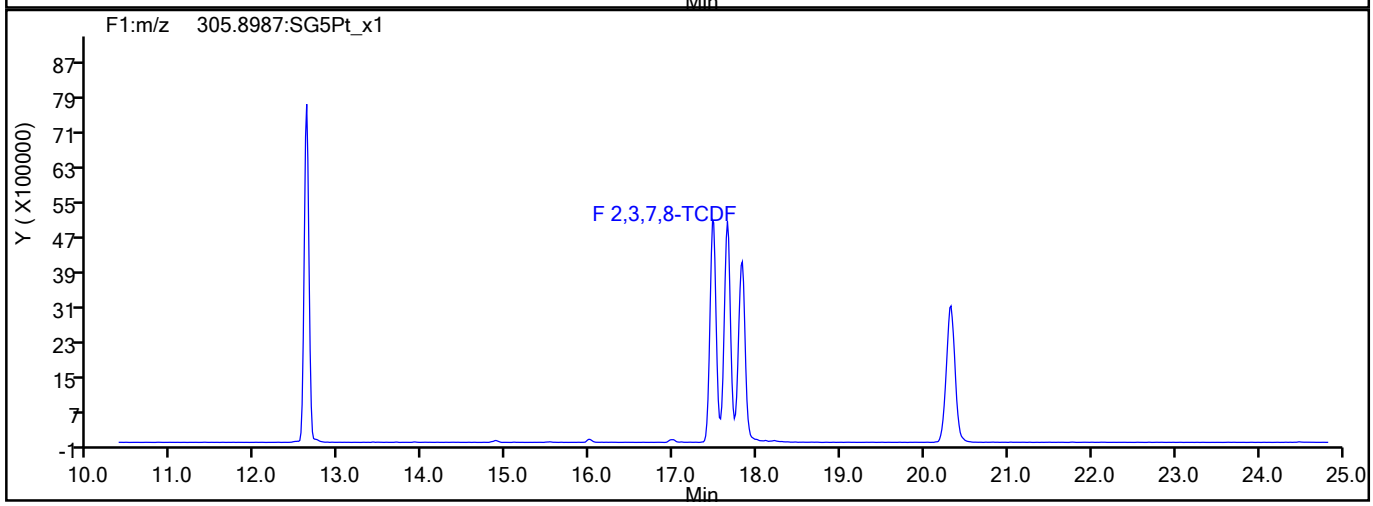

TCDF Interference Mass

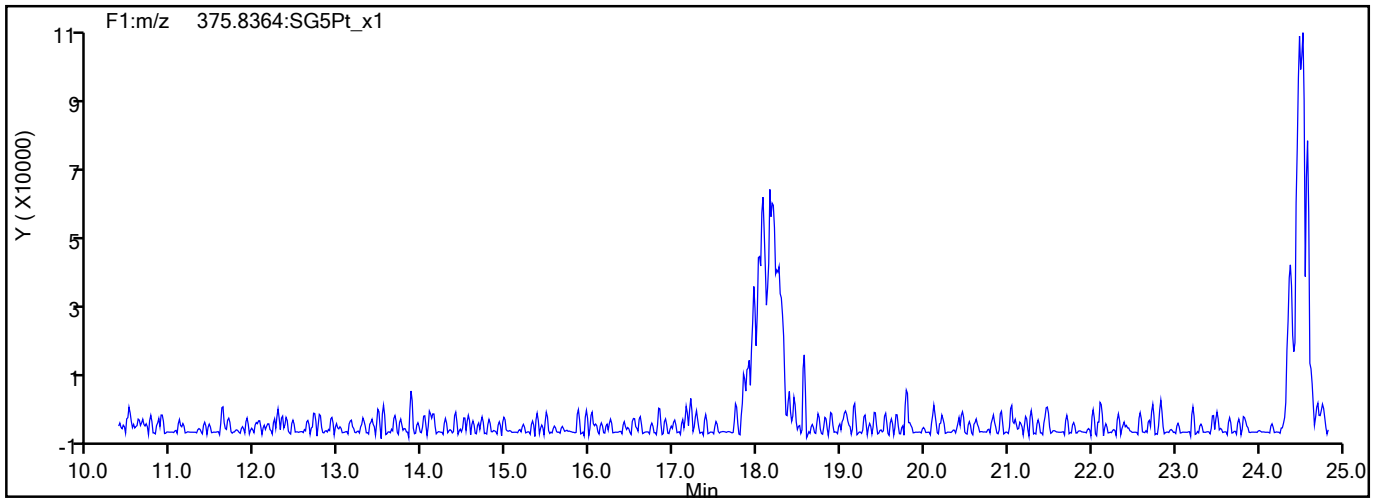

789431

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

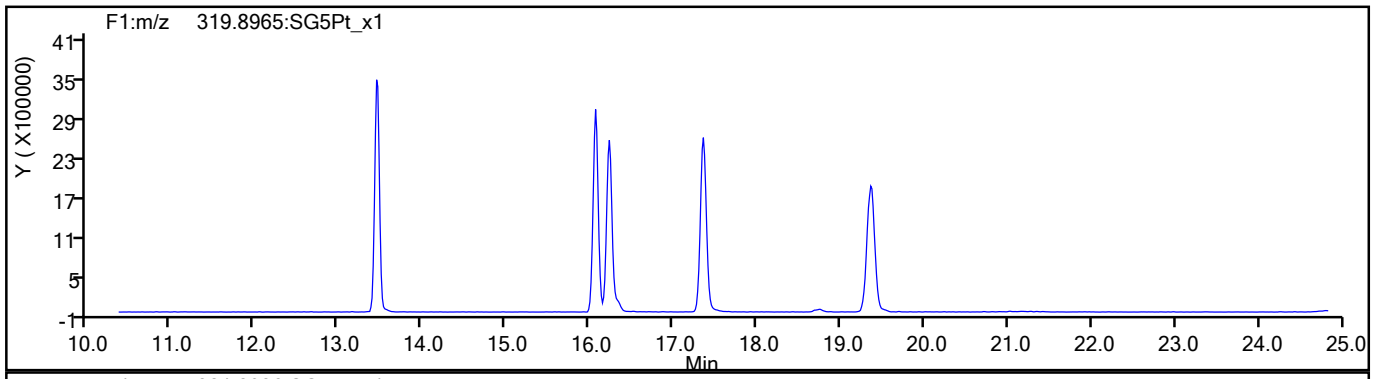

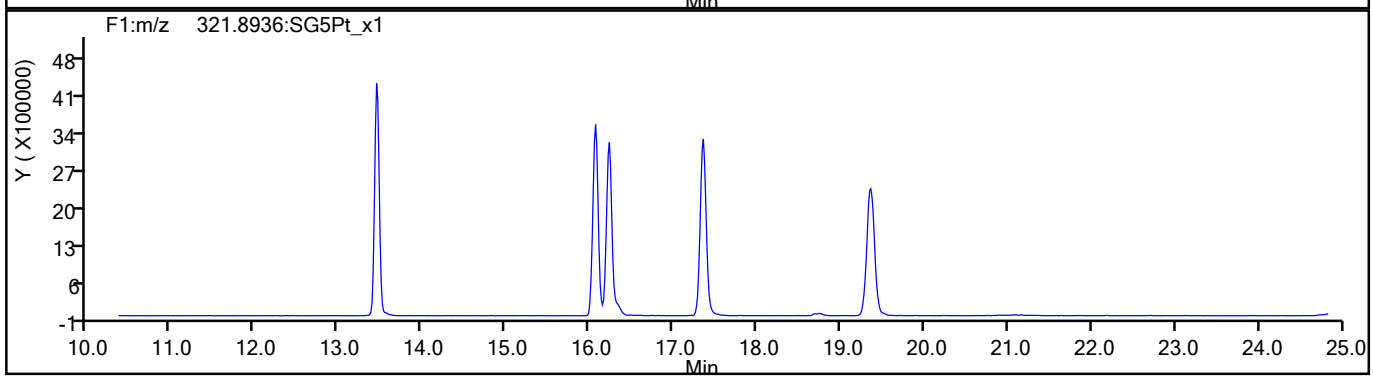

TCDD Standards

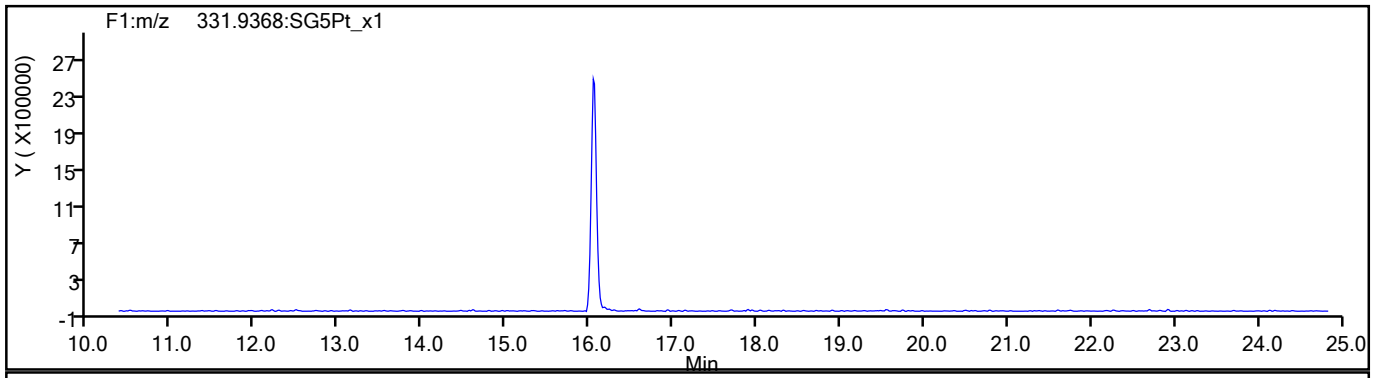

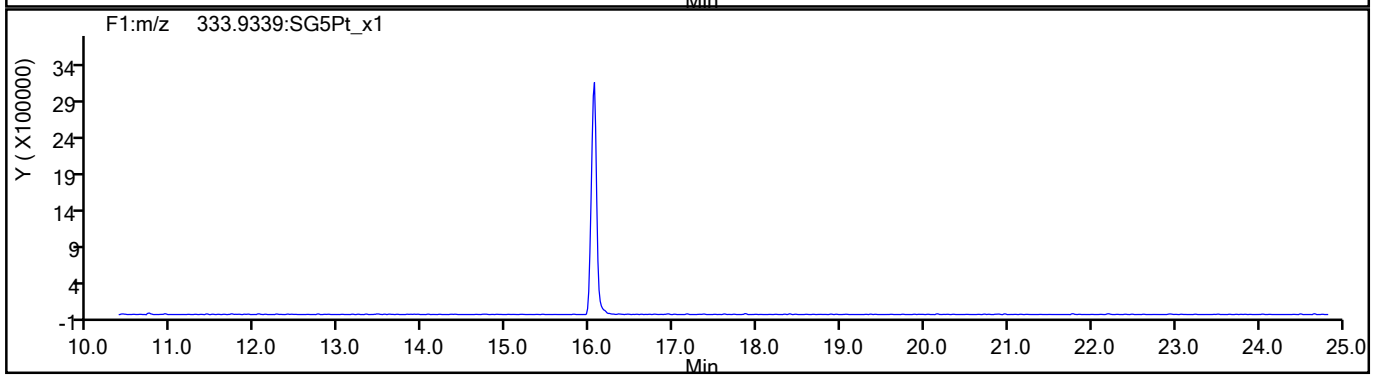

789432

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

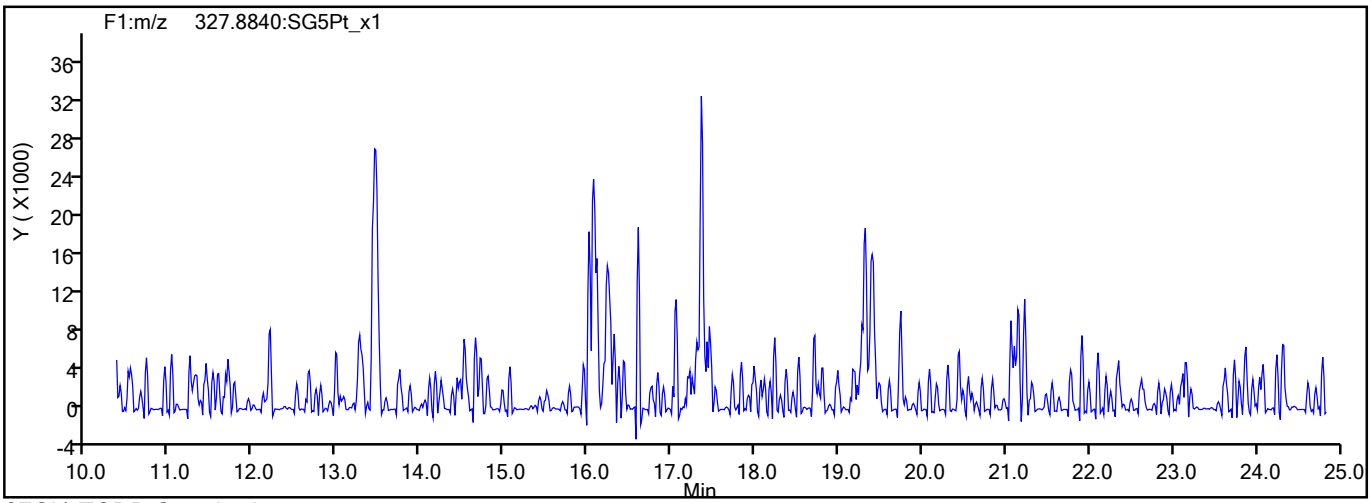

37Cl4-TCDD Standards

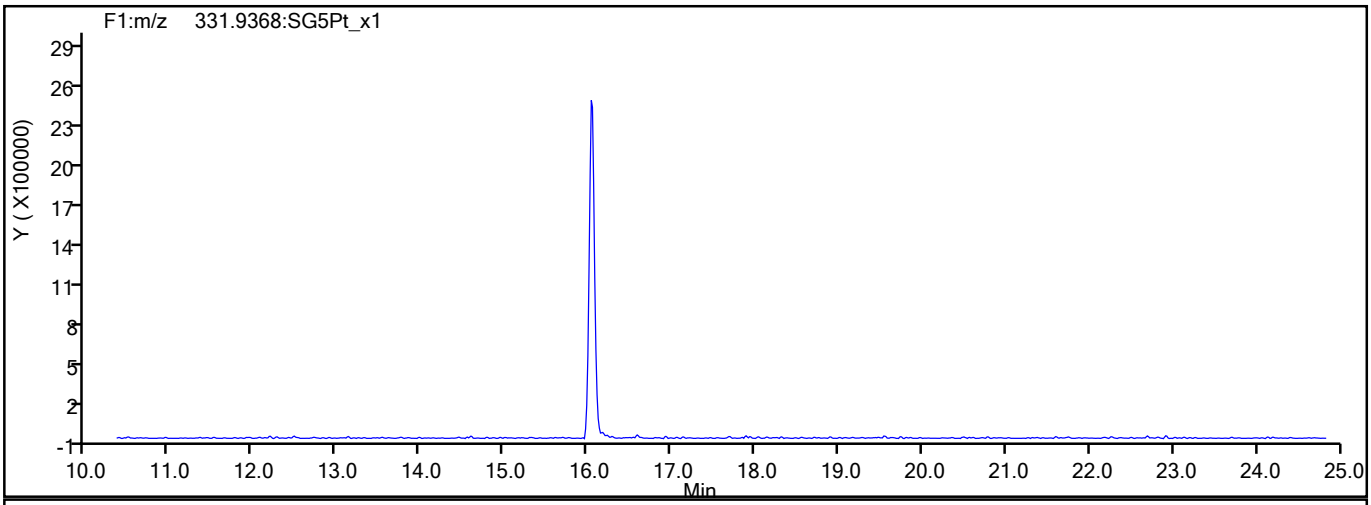

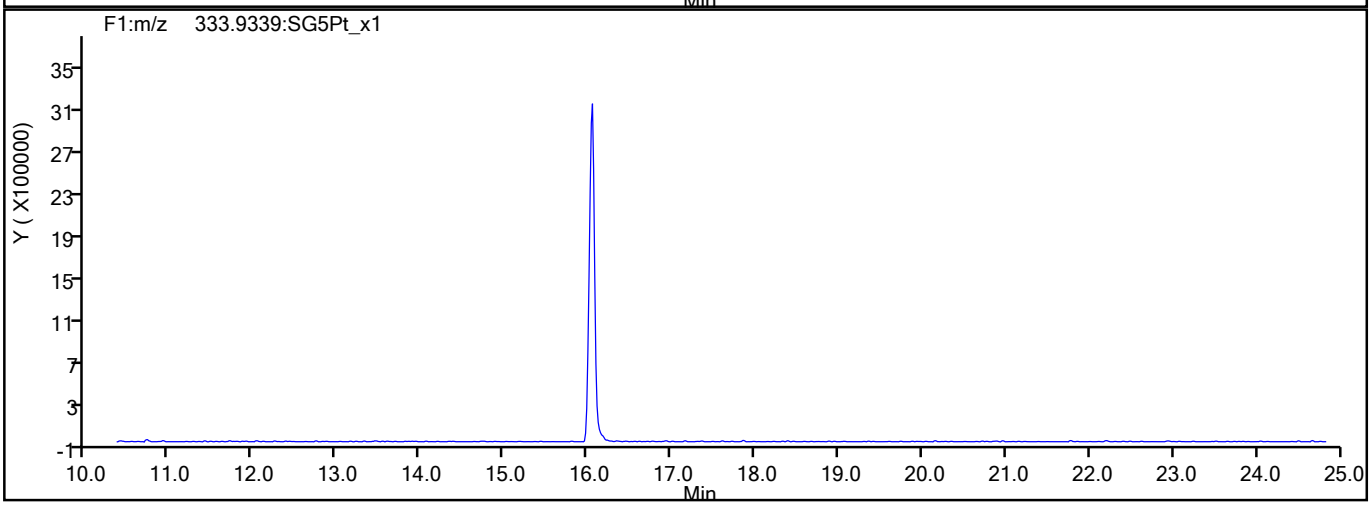

789433

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

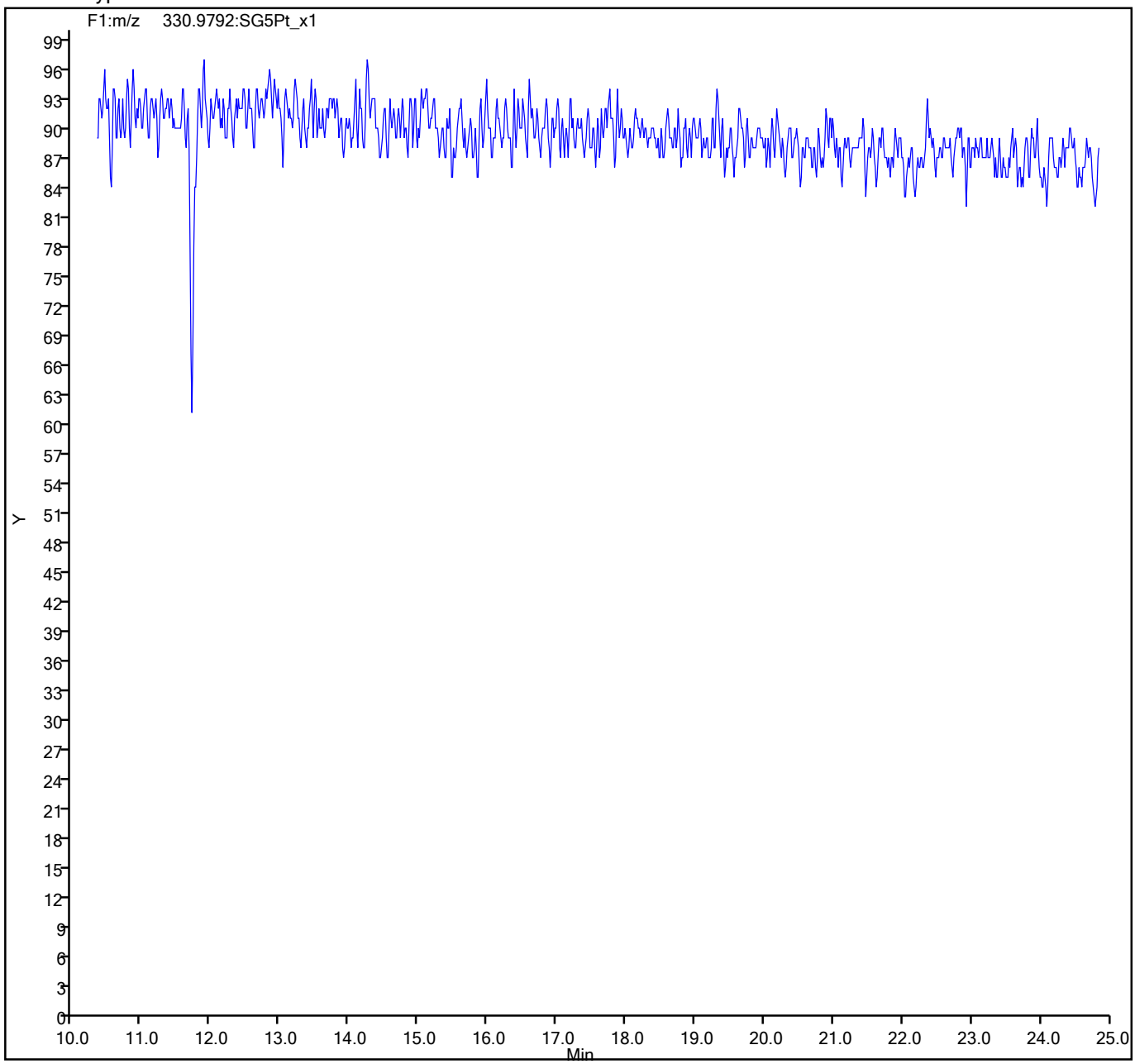

789434

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 08:28:58 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:02

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.615	20166287	0.80	1.3327					0.00	
2,3,7,8-TCDF	17.642	21336126	0.77	0.9978	42.4	42.4	0.0930	0.0930		
D 13C-2,3,7,8-TCDD	16.065	11857898	0.79	0.8749					0.00	
2,3,7,8-TCDD	16.092	14178098	0.79	1.0570	45.2	45.2	0.1126	0.1126		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

789435

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 08:28:58 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:02

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.000	8953190	1656694	4027	10067	411		
317.9389	17.615	17.615	0	1.000	11213097	2115870	3038	7595	696	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.642	17.642	0	1.002	9272598	1746650	1553	3882	1125		
305.8987	17.642	17.642	0	1.002	12063528	2238983	1948	4870	1149	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	1.000	5225809	1131264	4006	10015	282		
333.9339	16.065	16.065	0	1.000	6632089	1437296	1641	4102	876	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.092	16.092	0	1.002	6258759	1439127	1606	4015	896		
321.8936	16.078	16.092	-1	1.001	7919339	1769891	1451	3627	1220	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

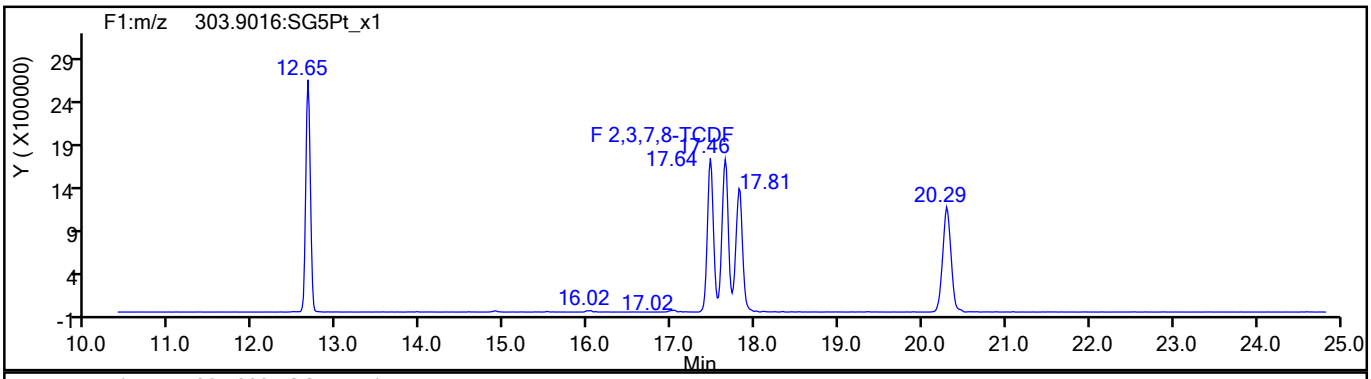

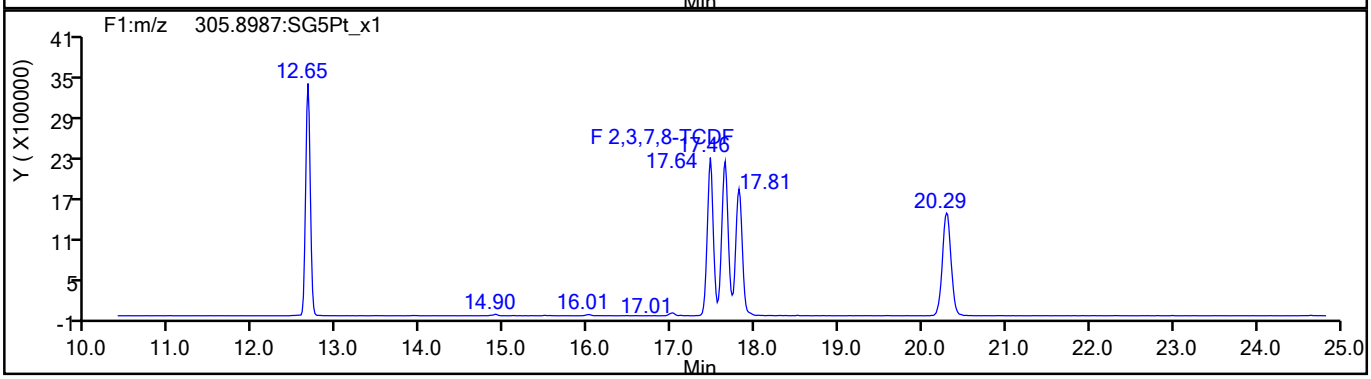

TCDF Standards

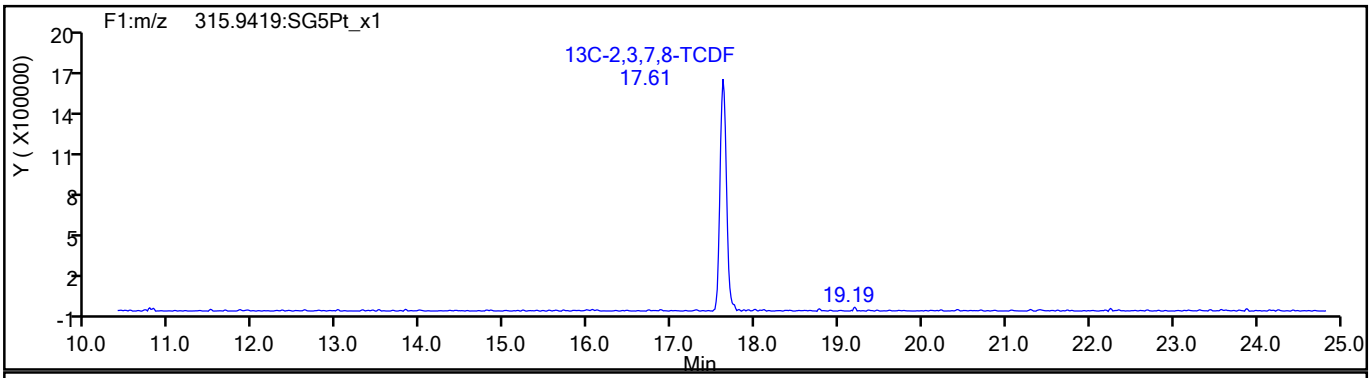

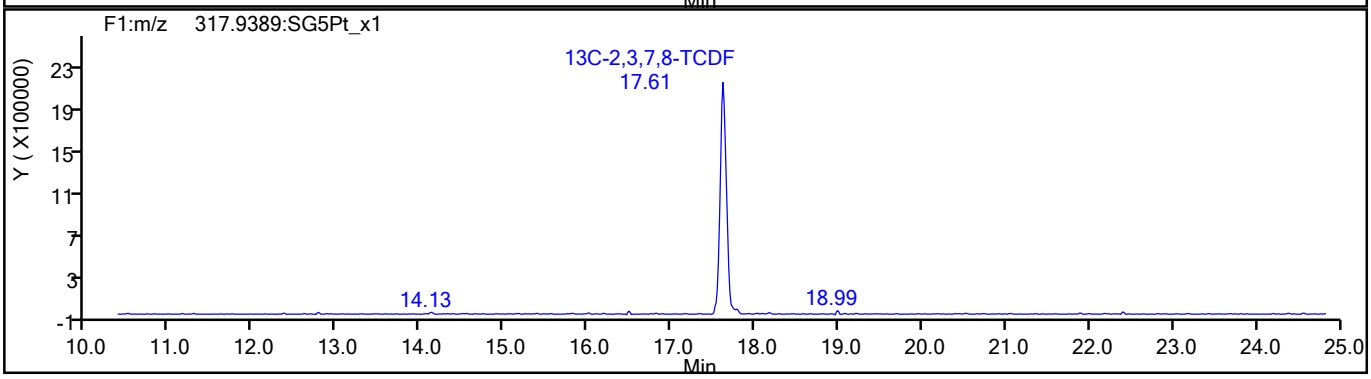

789437

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

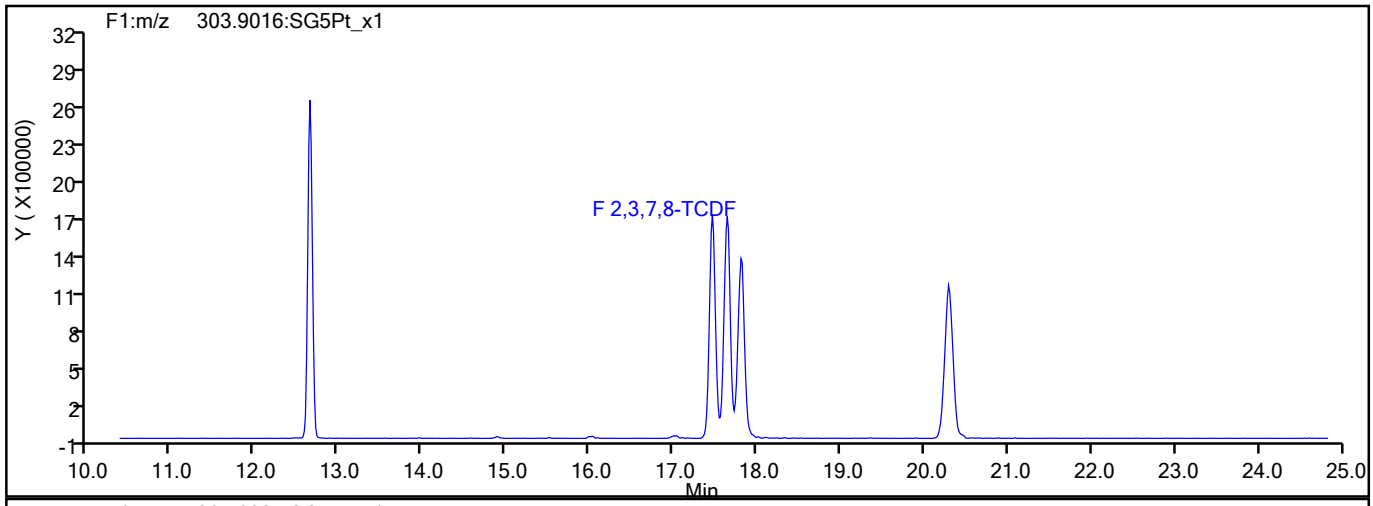

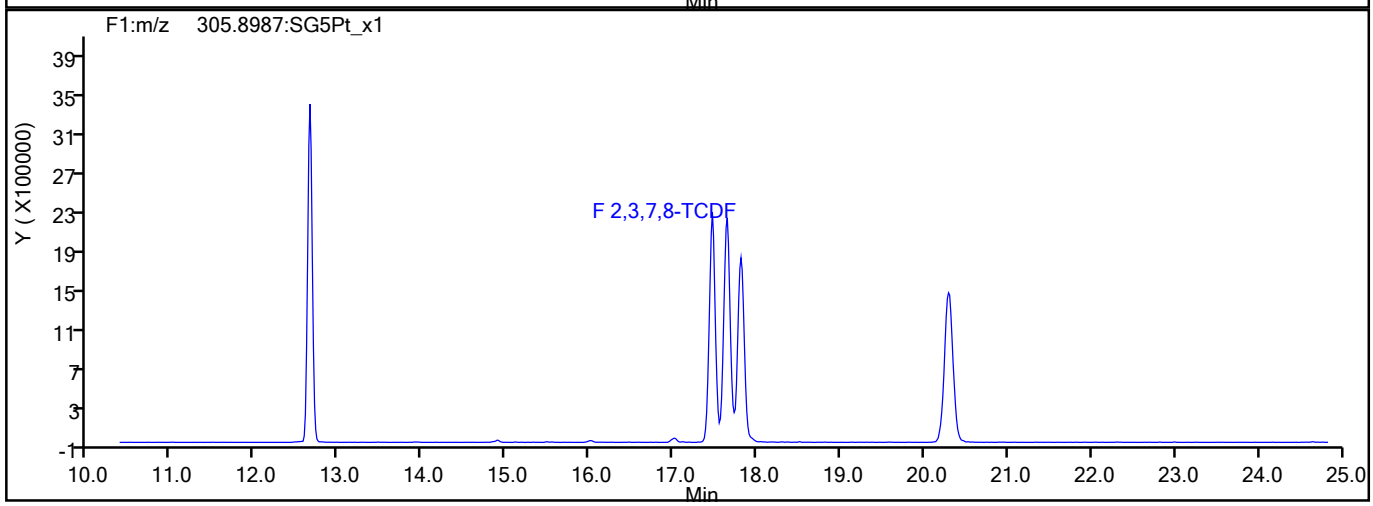

TCDF Interference Mass

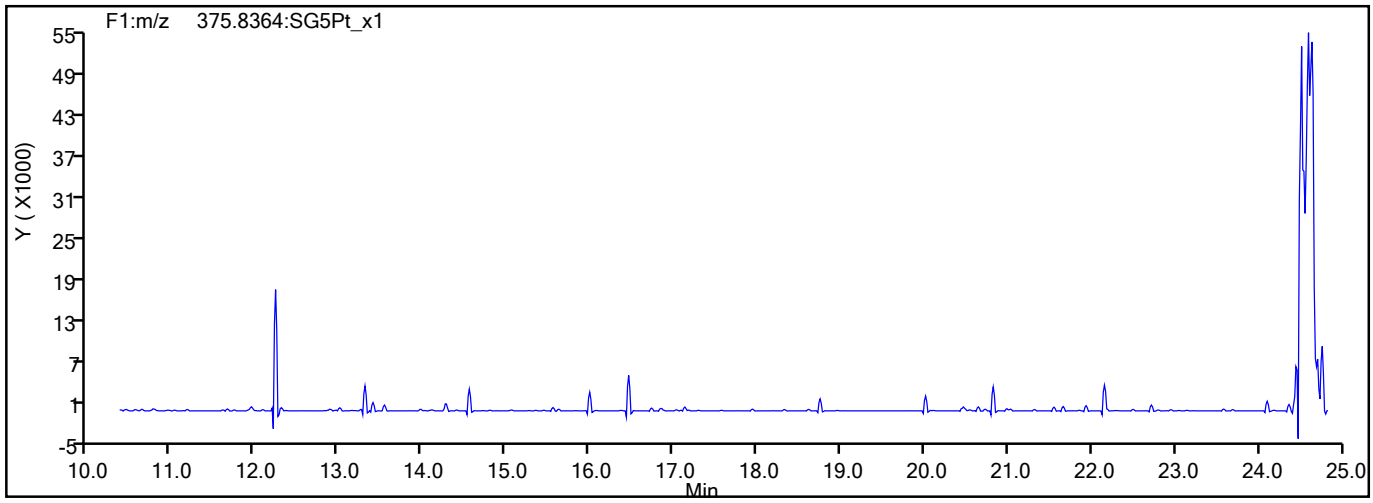

789438

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

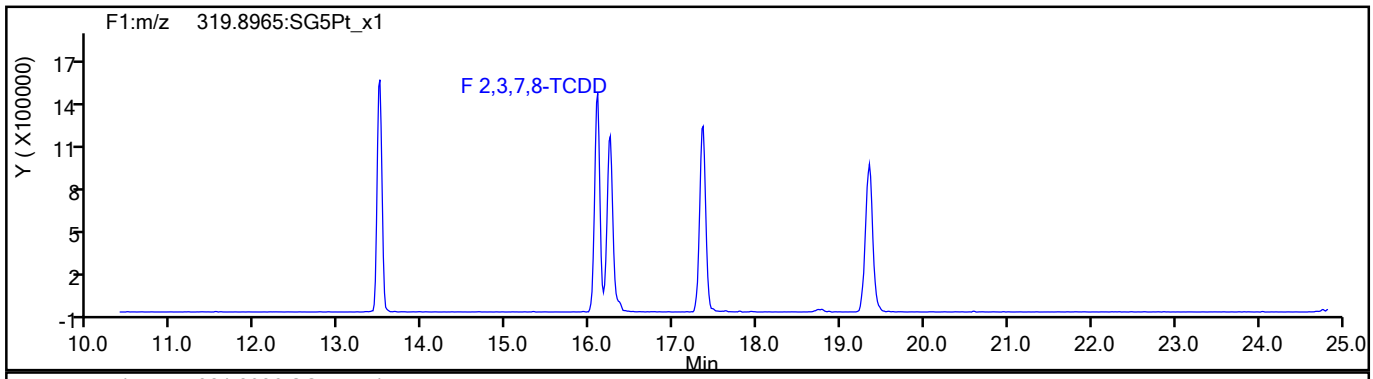

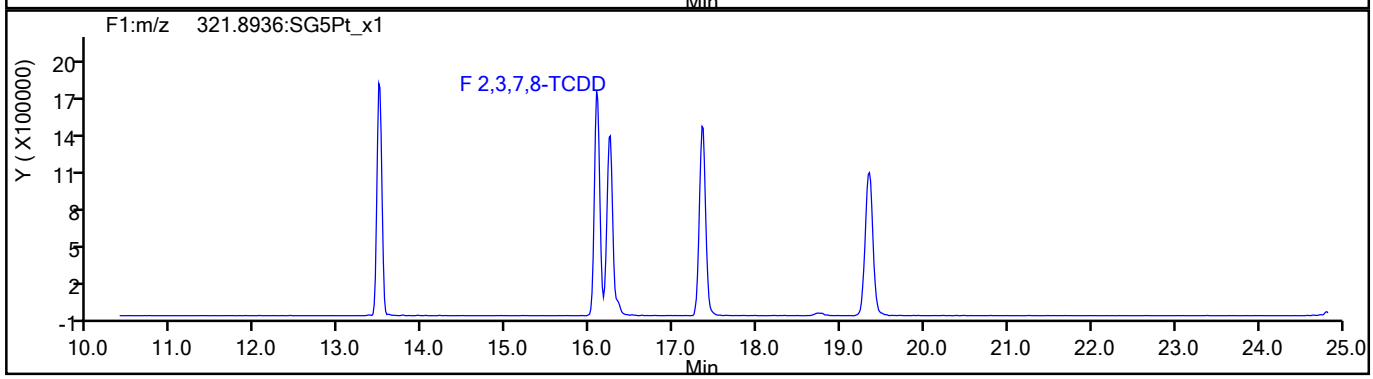

TCDD Standards

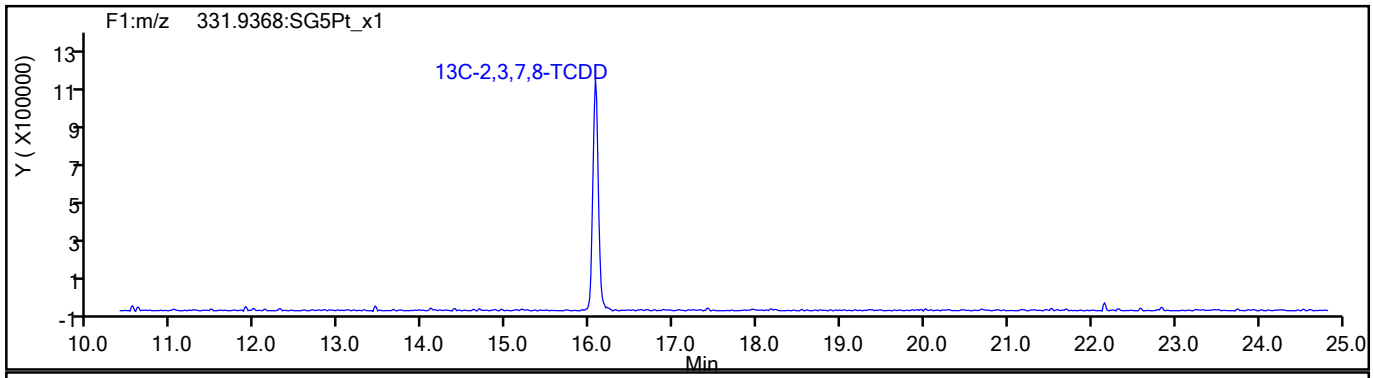

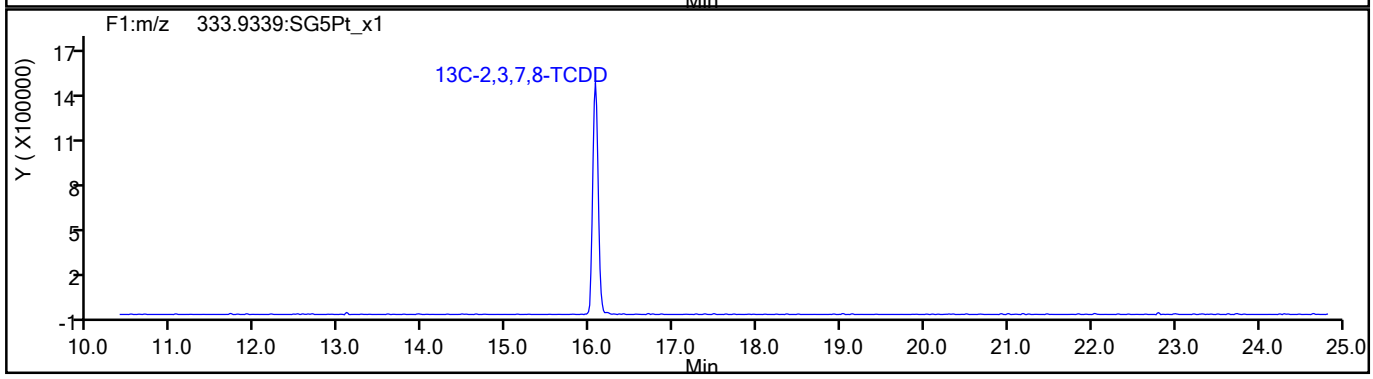

789439

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

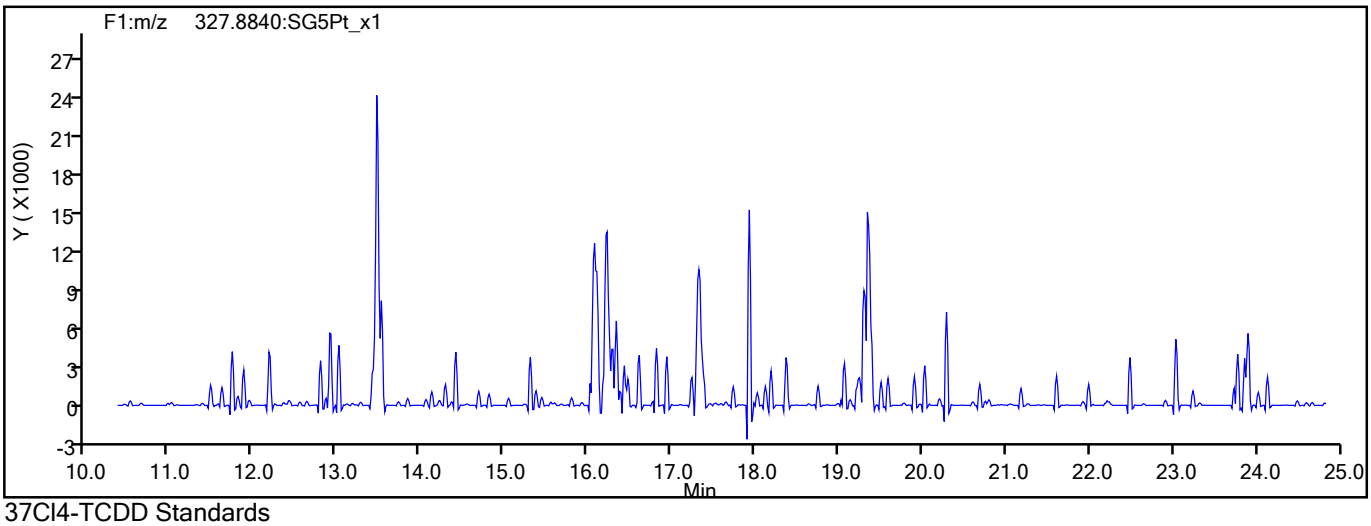

37Cl4-TCDD Standards

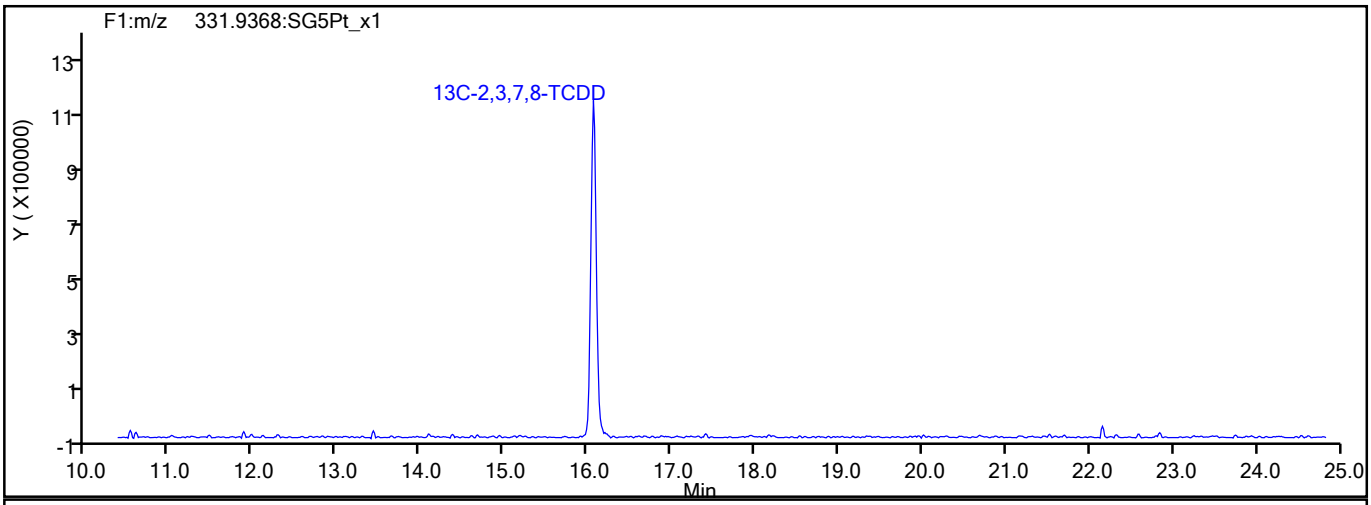

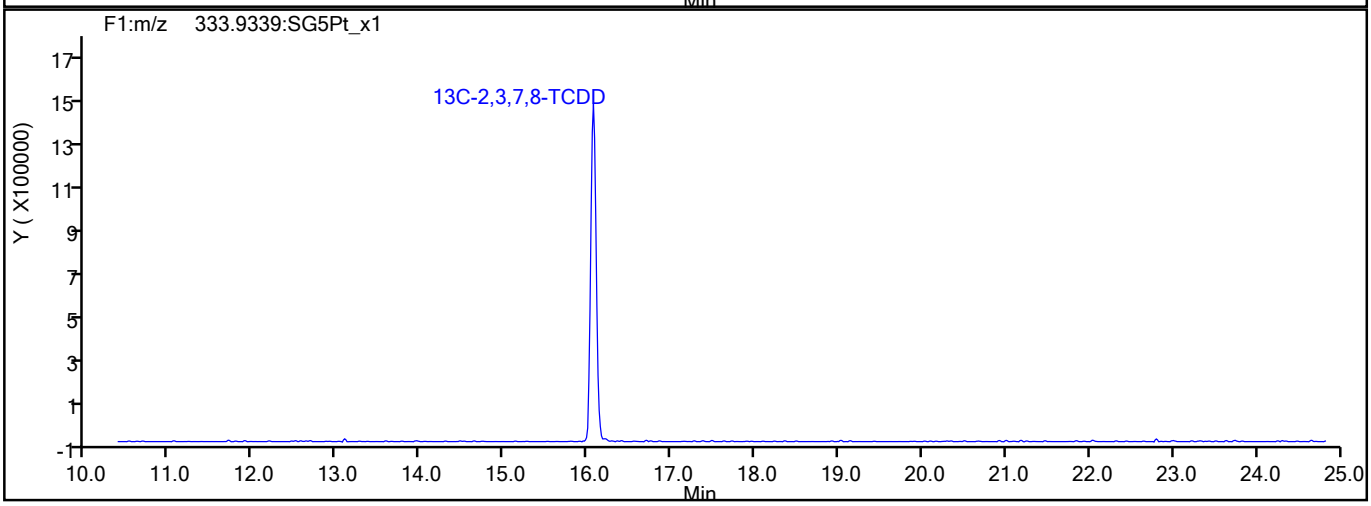

789440

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

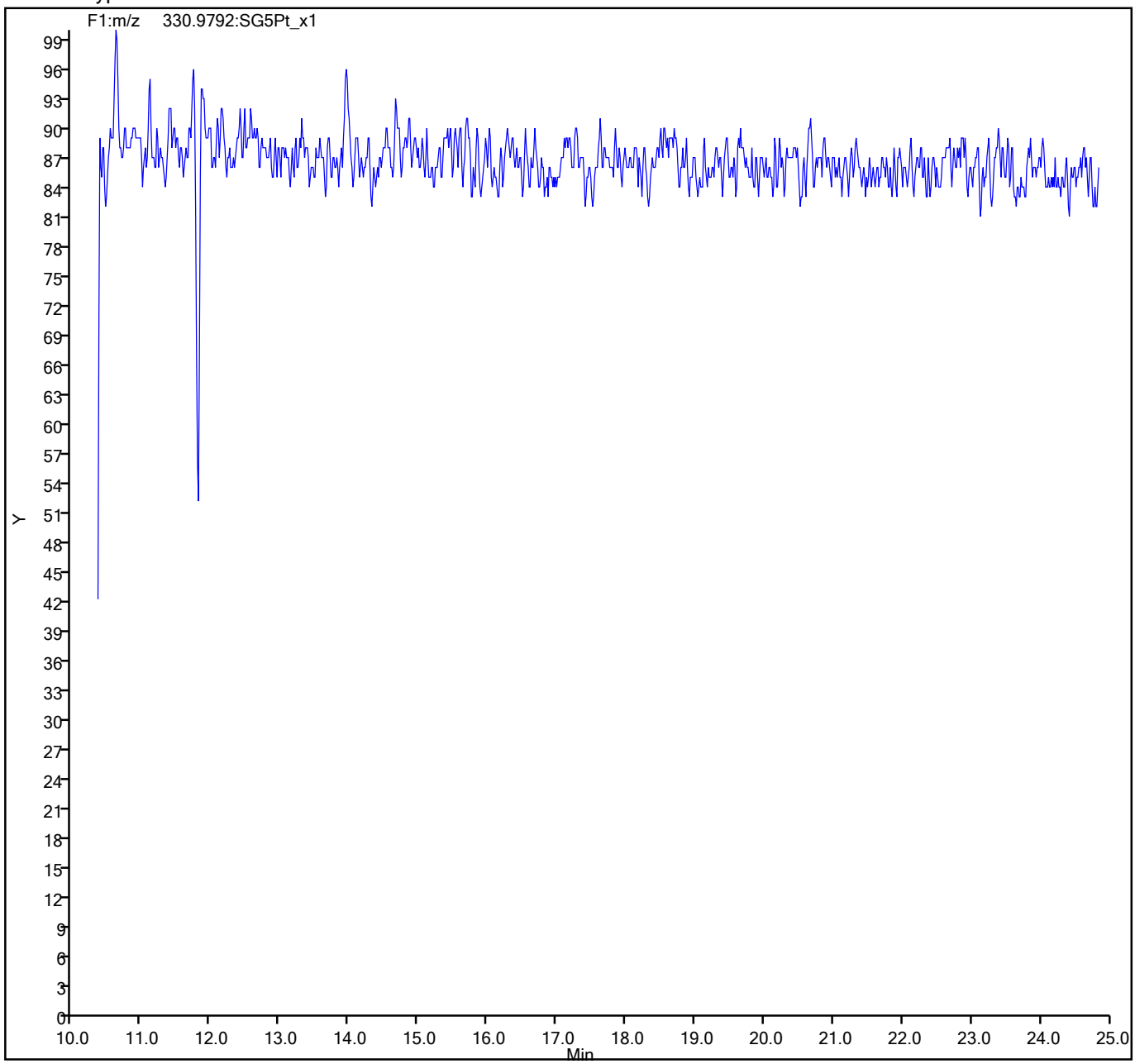

789441

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 08:59:39 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:48:00

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.637	35431848	0.77	1.3327					0.00	
2,3,7,8-TCDF	17.664	37045761	0.78	0.9978	41.9	41.9	0.0744	0.0744		
D 13C-2,3,7,8-TCDD	16.087	21057076	0.77	0.8749					0.00	
2,3,7,8-TCDD	16.101	24884372	0.77	1.0570	44.7	44.7	0.0846	0.0846		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 08:59:39 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:48:00

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.637	17.637	0	1.000	15459314	2940845	6227	15567	472		
317.9389	17.637	17.637	0	1.000	19972534	3794757	4880	12200	778	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.664	17.664	0	1.002	16254265	3079391	2319	5797	1328		
305.8987	17.651	17.664	-1	1.001	20791496	3931055	2679	6697	1467	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.087	16.087	0	1.000	9175721	2009725	4286	10715	469		
333.9339	16.087	16.087	0	1.000	11881355	2546873	2779	6947	916	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.101	16.101	0	1.001	10861375	2477041	1751	4377	1415		
321.8936	16.101	16.101	0	1.001	14022997	3266493	2324	5810	1406	0.77(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d		
Injection Date:	27-Aug-2021 08:59:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

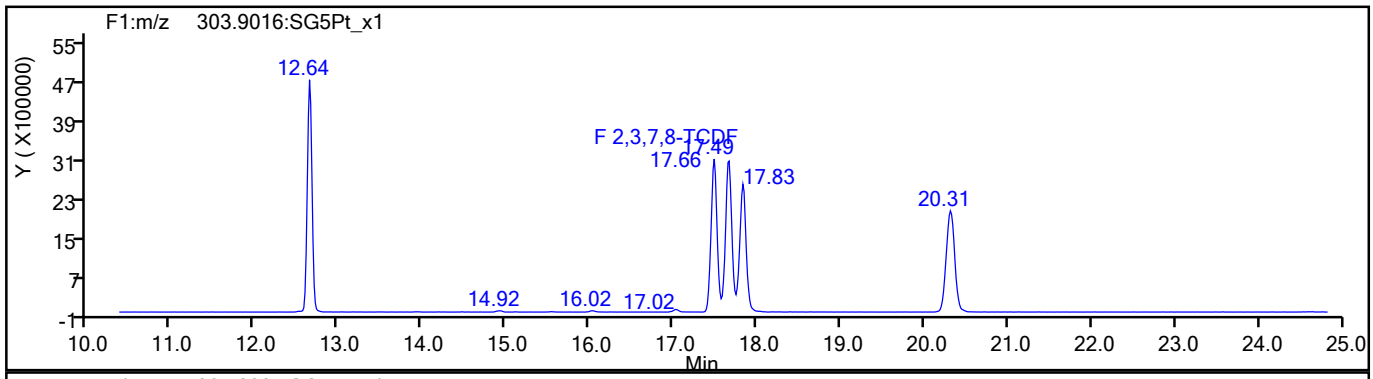

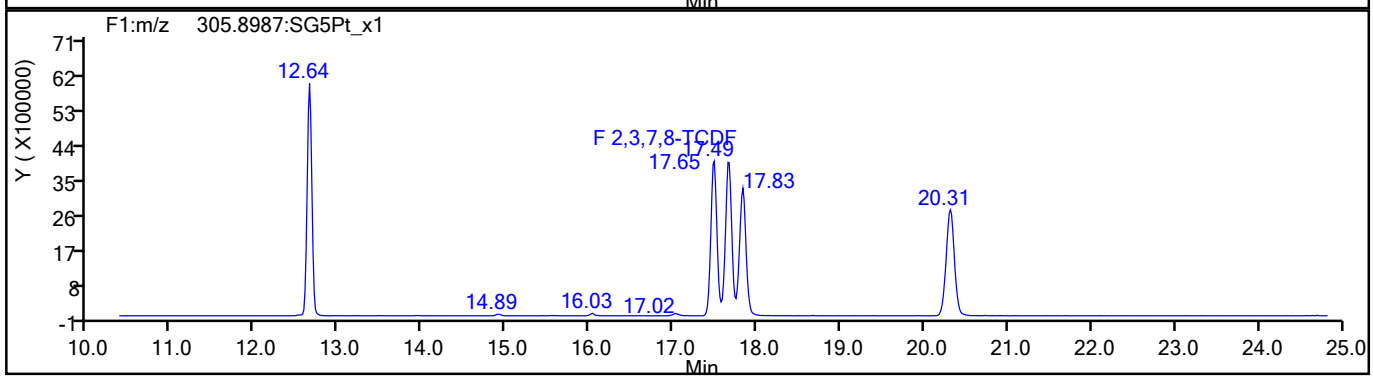

TCDF Standards

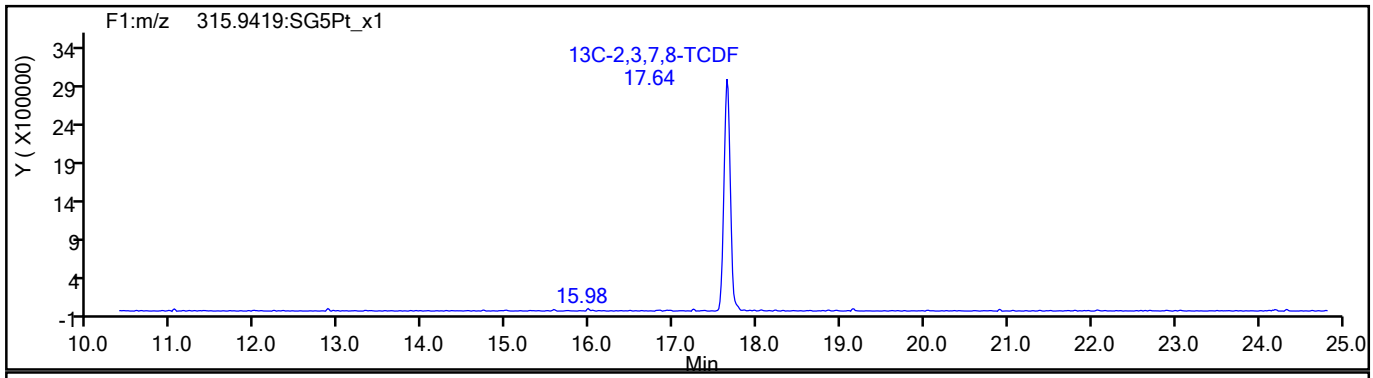

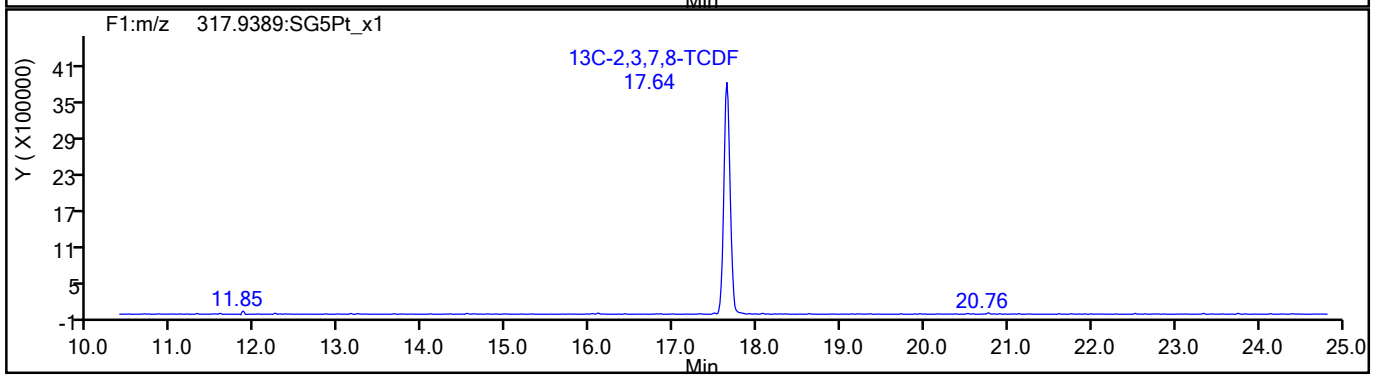

789444

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d		
Injection Date:	27-Aug-2021 08:59:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

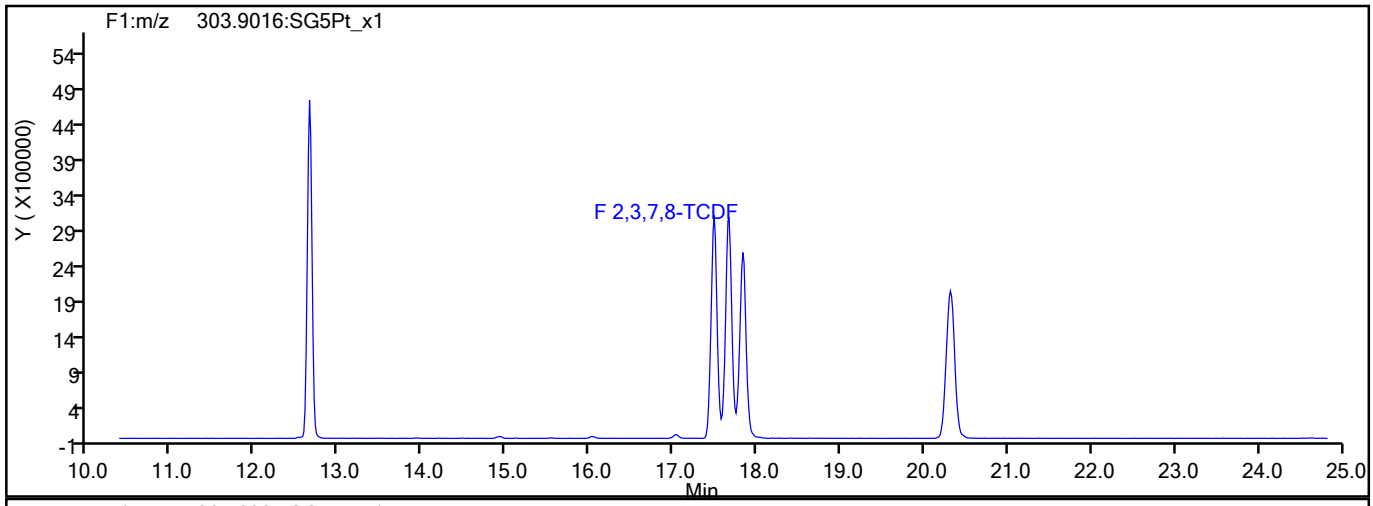

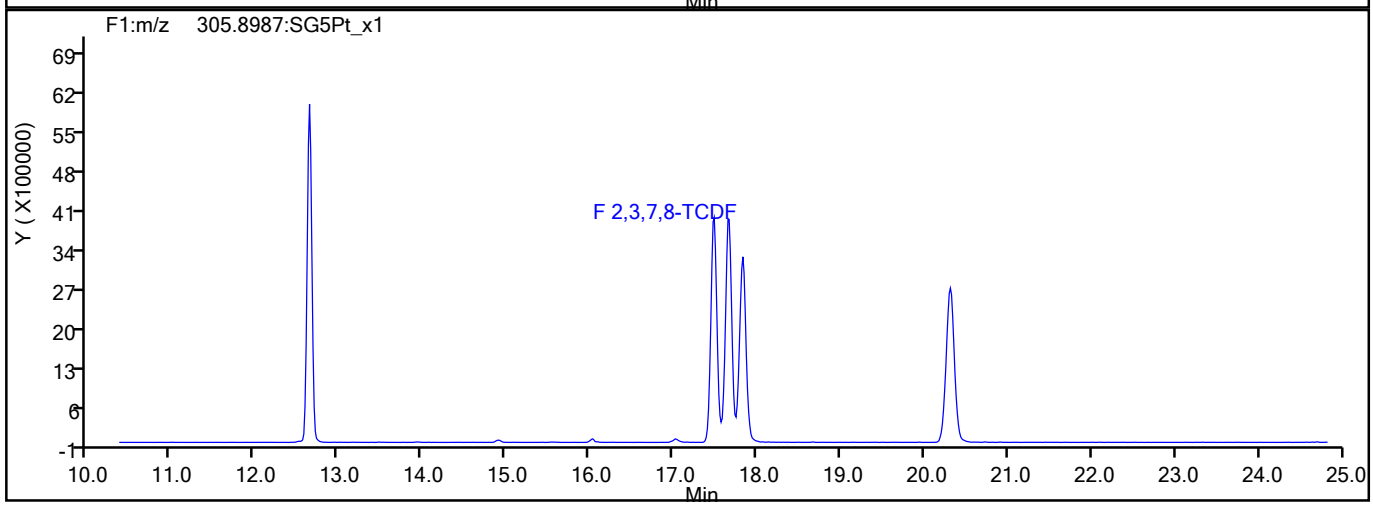

TCDF Interference Mass

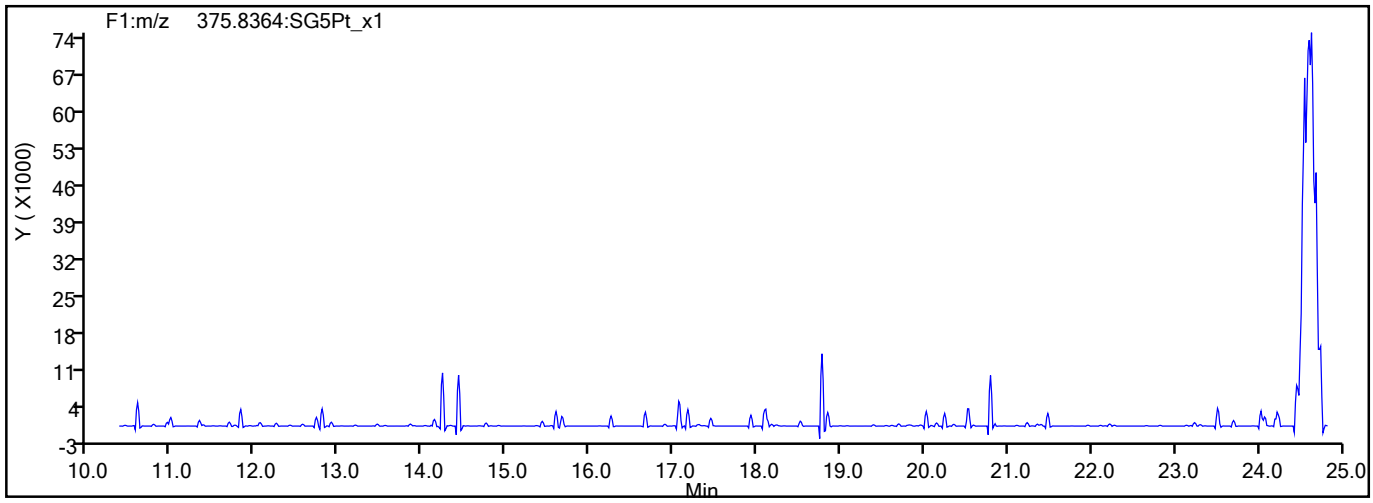

789445

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d		
Injection Date:	27-Aug-2021 08:59:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

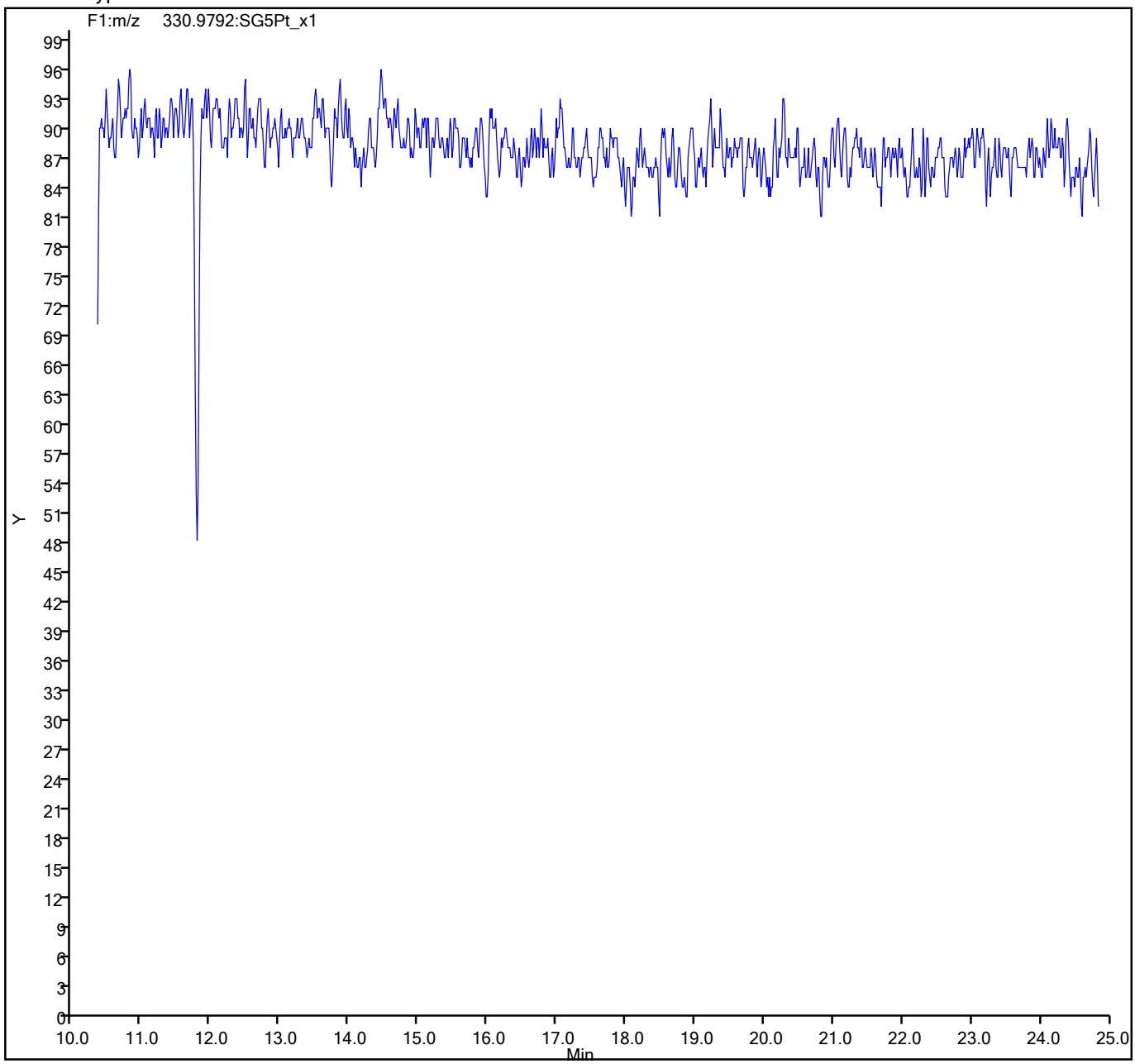

789446

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 15:38:16 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:34

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.630	38788235	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	40896159	0.78	0.9978	42.3	42.3	0.0758	0.0758		
D 13C-2,3,7,8-TCDD	16.066	22001037	0.78	0.8749					0.00	
2,3,7,8-TCDD	16.094	27039314	0.77	1.0570	46.5	46.5	0.0922	0.0922		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 15:38:16 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:34

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.630	17.630	0	1.000	17459073	3357288	5103	12757	658		
317.9389	17.630	17.630	0	1.000	21329162	3970010	4724	11810	840	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.644	0	1.001	17951435	3500124	2560	6400	1367		
305.8987	17.644	17.644	0	1.001	22944724	4488937	2979	7447	1507	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	1.000	9618318	2124266	3723	9307	571		
333.9339	16.066	16.066	0	1.000	12382719	2869762	3053	7632	940	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.094	16.094	0	1.002	11755596	2658333	2029	5072	1310		
321.8936	16.094	16.094	0	1.002	15283718	3448816	2838	7095	1215	0.77(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d		
Injection Date:	27-Aug-2021 15:38:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

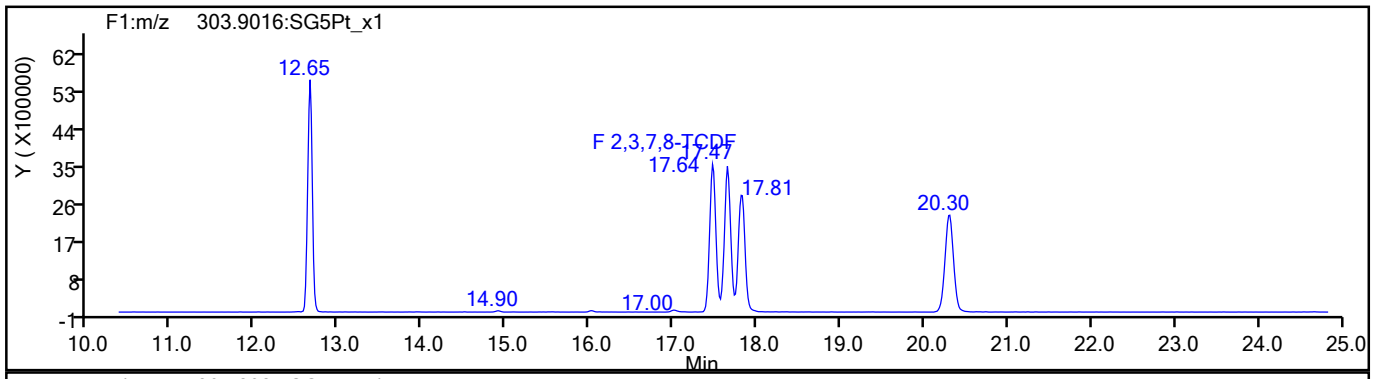

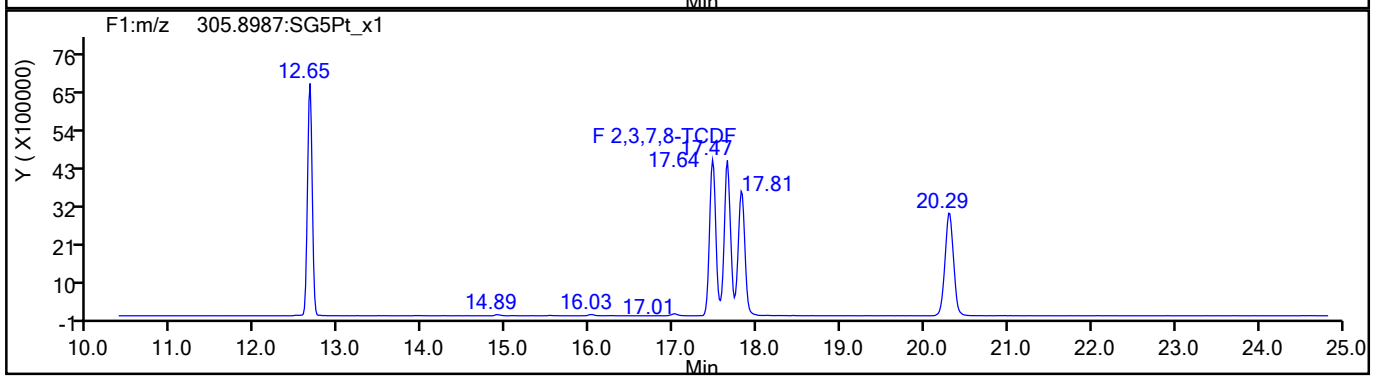

TCDF Standards

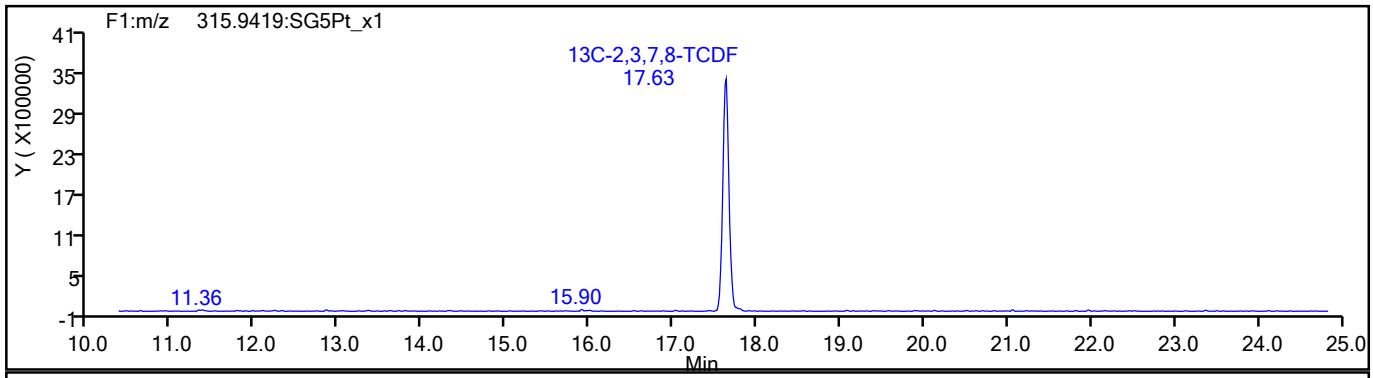

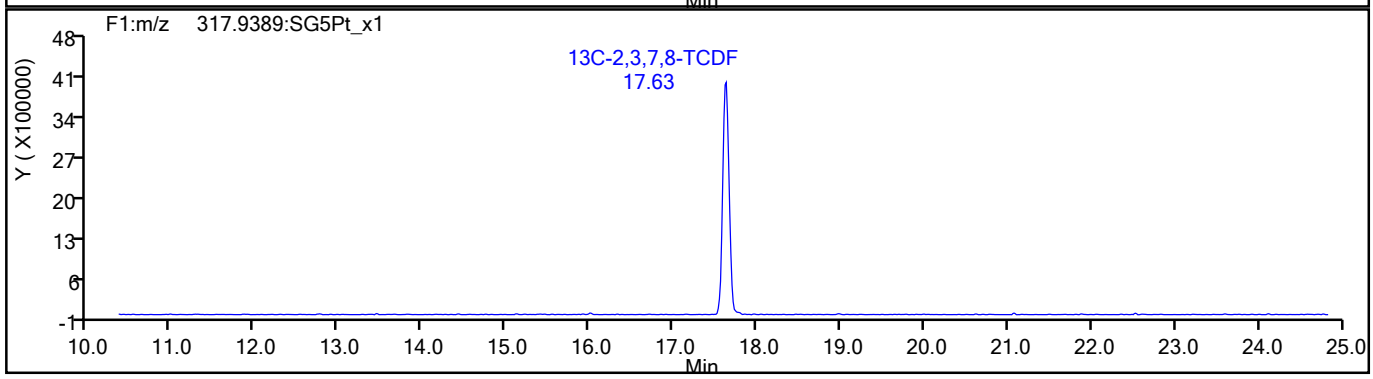

789449

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d		
Injection Date:	27-Aug-2021 15:38:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

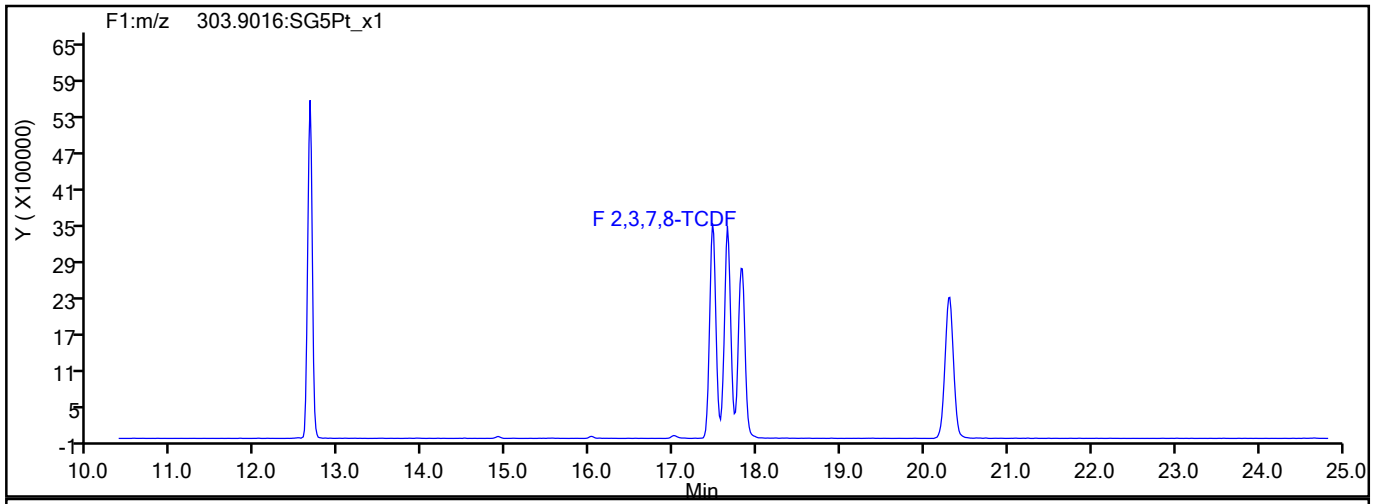

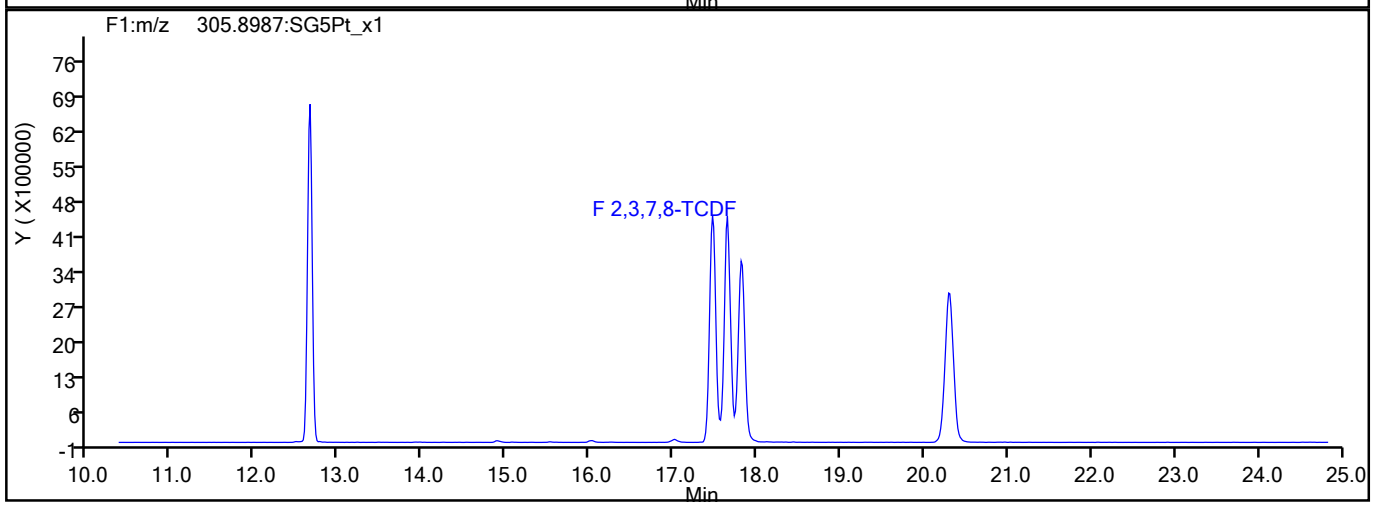

TCDF Interference Mass

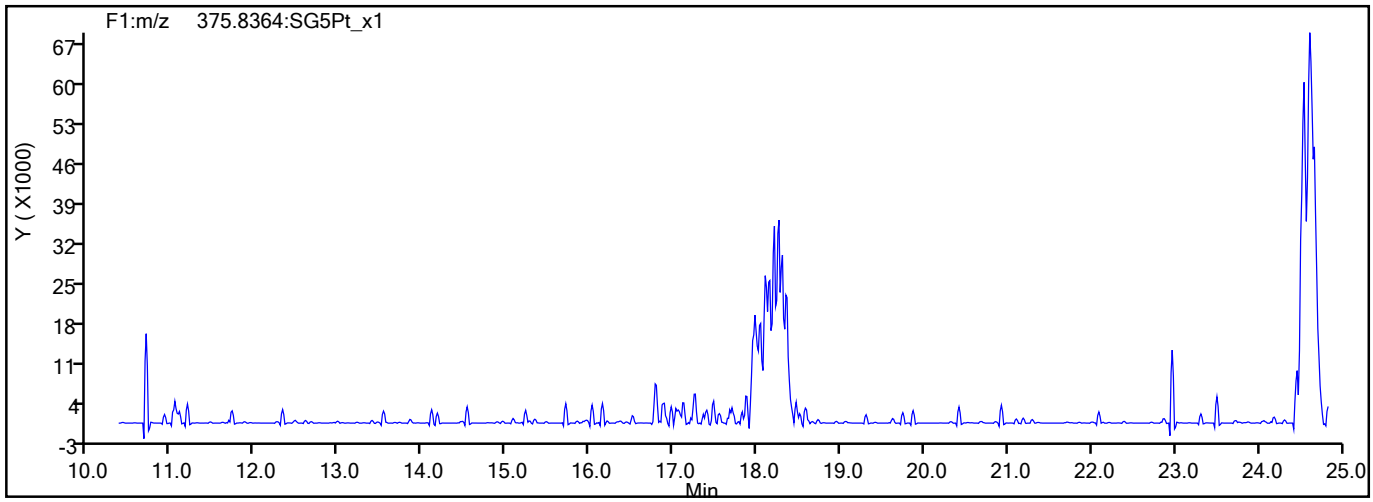

789450

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d		
Injection Date:	27-Aug-2021 15:38:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

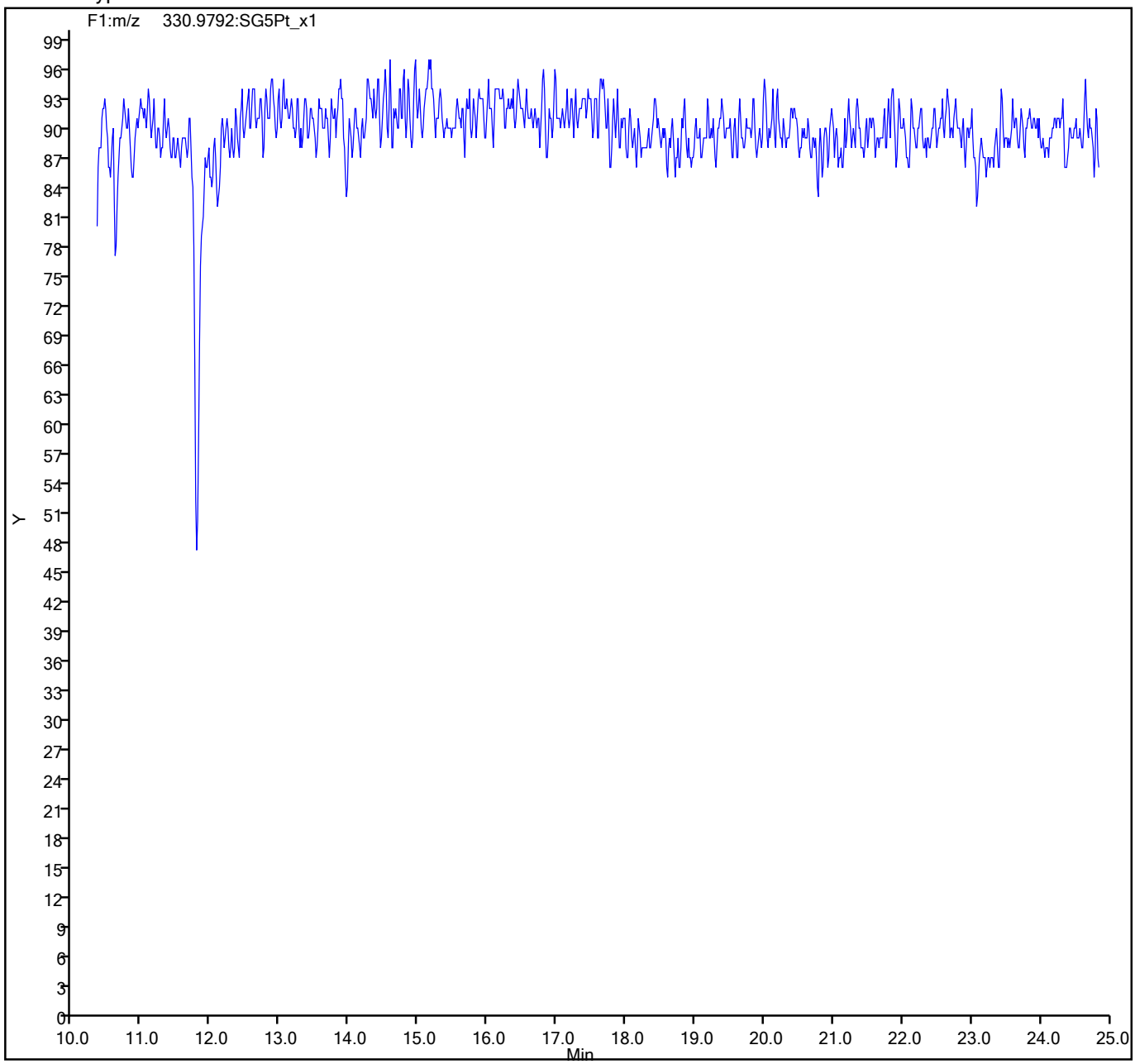

789451

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	19.630	956054	0.80	1.3459					0.00	
2,3,7,8-TCDF	19.673	1998250	0.78	1.0802	77.4	77.4	0.2129	0.2129		
A Non-2,3,7,8-sub-TCDF	19.213	12503	0.80	1.0802	0.4843	0.4843	0.2129	0.4843		
S Total TCDF					77.9	77.9	0.2129	0.2129		
D 13C-2,3,7,8-TCDD	20.918	596833	0.84	0.9317					0.00	
2,3,7,8-TCDD	20.952	682873	0.80	1.0753	42.6	42.6	0.1742	0.1742		
A Non-2,3,7,8-sub-TCDD	20.025						0.1742	0.1742		
S Total TCDD					42.6	42.6	0.1742	0.1742		
A F1 PeCDFs	24.098						0.0	0.0		
A Non-2,3,7,8-sub-PeCDF	27.473	14452	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	27.656						0.0	0.0		
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	34.470						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	34.896	7360	1.11	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	38.309	643675	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.598	537364	1.05	1.3092						
A Non-2,3,7,8-sub-HpCDF	38.954						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.295	435480	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	38.962						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.592	1199920	0.78							
1,3,6,8-TCDD	17.122	706482	0.80							
2,3,4,7-TCDF	19.673	1998250	0.78							
1,2,3,7-TCDD	20.746	567957	0.79							
1,2,3,9-TCDF	21.124	860286	0.78							
1,2,3,9-TCDD	21.227	705730	0.80							
1,2,8,9-TCDF	22.833	906629	0.79							

789452

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	22.927	290535								
1,3,4,6,8-PeCDF	23.417	833719	1.57							
1,2,4,7,9-PeCDD	25.443	580592	1.56							
1,2,3,8,9-PeCDD	29.870	532099	1.58							
1,2,3,8,9-PeCDF	30.030	680377	1.58							
1,2,3,4,6,8-HxCDF	32.430	811785	1.23							
1,2,4,6,7,9-HxCDD	33.644	577087	1.25							
1,2,3,4,6,7-HxCDD	36.148	580699	1.24							
1,2,3,4,8,9-HxCDF	36.510	710754	1.25							
1,2,3,4,6,7,9-HpCDD	38.629	486479	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 08-Jun-2021 12:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00042
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 09:24:03 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 13:47:59

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	19.630	19.630	0	1.000	423520	68874	224	560	307		
317.9389	19.639	19.630	1	1.000	532534	85912	93	232	924	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.673	19.646	2	1.002	874984	129163	148	370	873		
305.8987	19.673	19.646	2	1.002	1123266	166698	208	520	801	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	23.417	19.213	252	1.193	5547	1019	148	370	7		
305.8987	23.417	19.213	252	1.193	6956	1132	208	520	5	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.918	20.918	0	1.000	272607	40247	106	265	380		
333.9338	20.927	20.918	1	1.000	324226	50518	46	115	1098	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	20.952	20.939	1	1.002	302613	44836	90	225	498		
321.8936	20.952	20.939	1	1.002	380260	55991	80	200	700	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.025						90	225			
321.8936	20.025						80	200			
A F1 PeCDFs											
339.8597	24.098						6	15			
341.8567	24.098						22	55			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.114	27.473	-141	1.000	1272	231	55	137	4		
341.8567	25.123	27.473	-141	1.000	842	169	40	100	4	1.51(1.32-1.78)	
339.8597	26.033	27.473	-86	1.000	1834	347	55	137	6		
341.8567	26.067	27.473	-84	1.000	1408	247	40	100	6	1.30(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	26.623	27.473	-51	1.000	3412	452	55	137	8		
341.8567	26.606	27.473	-52	1.000	2424	350	40	100	9	1.41(1.32-1.78)	
339.8597	27.205	27.473	-16	1.000	2495	380	55	137	7		
341.8567	27.188	27.473	-17	1.000	1367	235	40	100	6	1.83(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	27.656						71	177			
357.8516	27.656						35	87			
A Non-2,3,7,8-sub-HxCDF											
373.8208	34.470						89	222			
375.8178	34.470						66	165			
A Non-2,3,7,8-sub-HxCDD											
389.8158	34.875	34.896	-1	1.000	3879	711	57	142	12		
391.8127	34.866	34.896	-2	1.000	3481	707	48	120	15	1.11(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	330574	91984	132	330	697		
409.7788	38.309	38.317	0	1.000	313101	85674	117	292	732	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	275340	83564	132	330	633		
409.7788	39.598	39.608	-1	1.000	262024	79894	117	292	683	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.954						132	330			
409.7788	38.954						117	292			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.295	39.301	0	1.000	225083	68745	95	237	724		
425.7737	39.295	39.301	0	1.000	210397	63713	87	217	732	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.962						95	237			
425.7737	38.962						87	217			
1,3,6,8-TCDF											
303.9016	15.592	15.592	0		526894	111834	148	370	756		
305.8987	15.583	15.592	-1		673026	142703	208	520	686	0.78(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.122	17.122	0		313043	59426	90	225	660		
321.8936	17.122	17.122	0		393439	76022	80	200	950	0.80(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	19.673	19.673	0		874984	129163	148	370	873		
305.8987	19.673	19.673	0		1123266	166698	208	520	801	0.78(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	20.746	20.746	0		250988	38559	90	225	428		
321.8936	20.746	20.746	0		316969	48950	80	200	612	0.79(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.124	21.124	0		377767	55151	148	370	373		
305.8987	21.124	21.124	0		482519	70000	208	520	337	0.78(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	21.227	21.227	0		313060	44546	90	225	495		
321.8936	21.219	21.227	-1		392670	57474	80	200	718	0.80(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,8,9-TCDF											
303.9016	22.833	22.833	0		399193	52133	148	370	352		
305.8987	22.833	22.833	0		507436	68524	208	520	329	0.79(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	22.927	22.927	0		290535	38894	90	225	432		
1,3,4,6,8-PeCDF											
339.8597	23.417	23.417	0		509034	87286	6	15	14548		
341.8567	23.417	23.417	0		324685	55380	22	55	2517	1.57(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	25.443	25.443	0		354036	58724	71	177	827		
357.8516	25.443	25.443	0		226556	37367	35	87	1068	1.56(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	29.870	29.870	0		325767	47119	71	177	664		
357.8516	29.870	29.870	0		206332	29856	35	87	853	1.58(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.030	30.030	0		416382	57063	55	137	1038		
341.8567	30.030	30.030	0		263995	36391	40	100	910	1.58(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	32.430	32.430	0		447956	61361	89	222	689		
375.8178	32.421	32.430	-1		363829	50870	66	165	771	1.23(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	33.644	33.644	0		320872	55052	57	142	966		
391.8127	33.644	33.644	0		256215	45045	48	120	938	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.148	36.148	0		321739	75271	57	142	1321		
391.8127	36.148	36.148	0		258960	61340	48	120	1278	1.24(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.510	36.510	0		394836	96545	89	222	1085		
375.8178	36.510	36.510	0		315918	78144	66	165	1184	1.25(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.629	38.629	0		248662	72309	95	237	761		
425.7737	38.629	38.629	0		237817	69783	87	217	802	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00042 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.213

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	956054	154786

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	956054	154786

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
23.417	5547	1019	6956	1132	0.4843	0.80	
Signal Totals:							
	5547	1019	6956	1132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12503	2151				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4843 = (12503 * 40.000) / (956054 * 1.080)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	08-Jun-2021 12:40:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	496688	Lims Sample ID:	1

Non-2,3,7,8-sub-PeCDF, RT: 27.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.114	1272	231	842	169		1.51	
26.033	1834	347	1408	247		1.30	R
26.623	3412	452	2424	350		1.41	
27.205	2495	380	1367	235		1.83	R
Signal Totals:							
	9013	1410	6041	1001			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15054	2411				1.49	RQ
	14452	2371					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (15054 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (14452 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 08-Jun-2021 12:40:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 496688 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 34.896

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.875	3879	711	3481	707		1.11	
Signal Totals:							
	3879	711	3481	707			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7360	1418				1.11	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (7360 * 0.0) / (0 * 0.000)

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

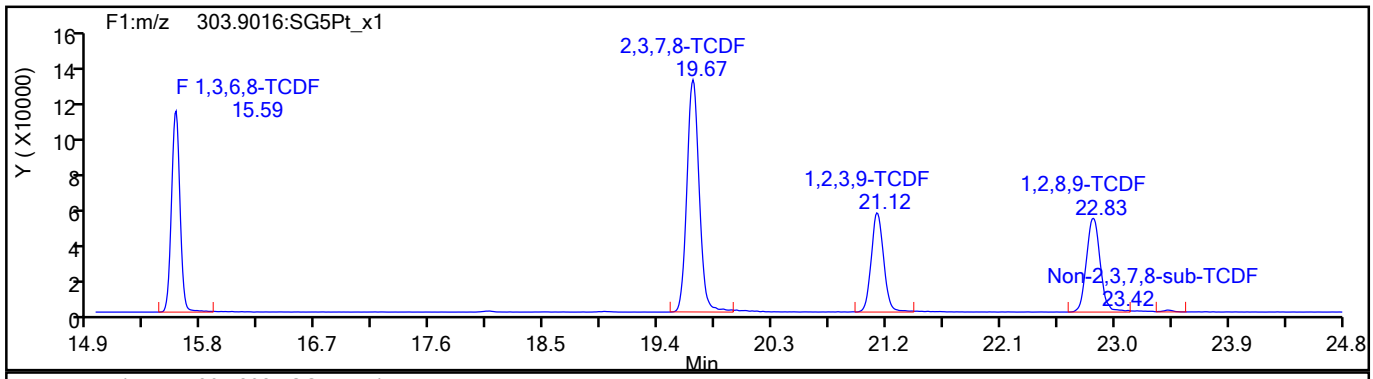

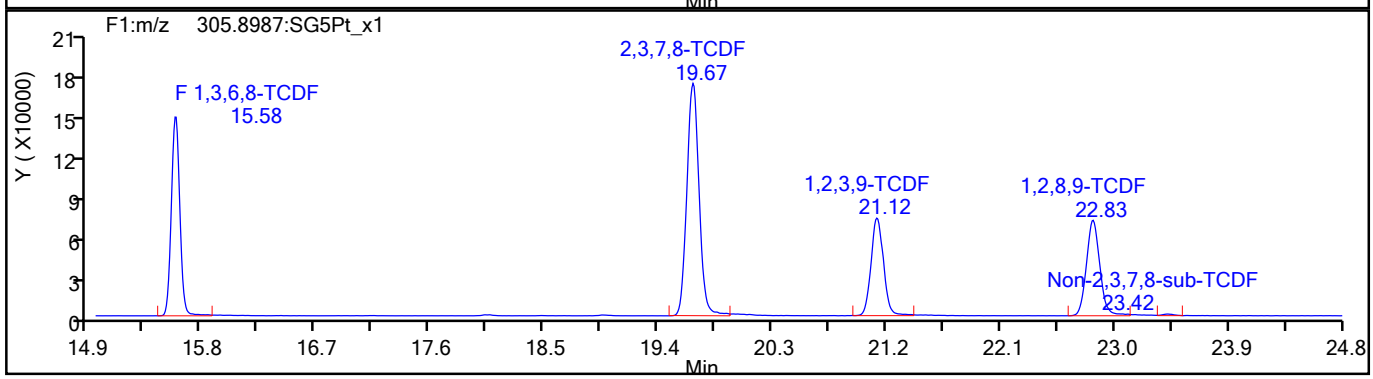

TCDF Standards

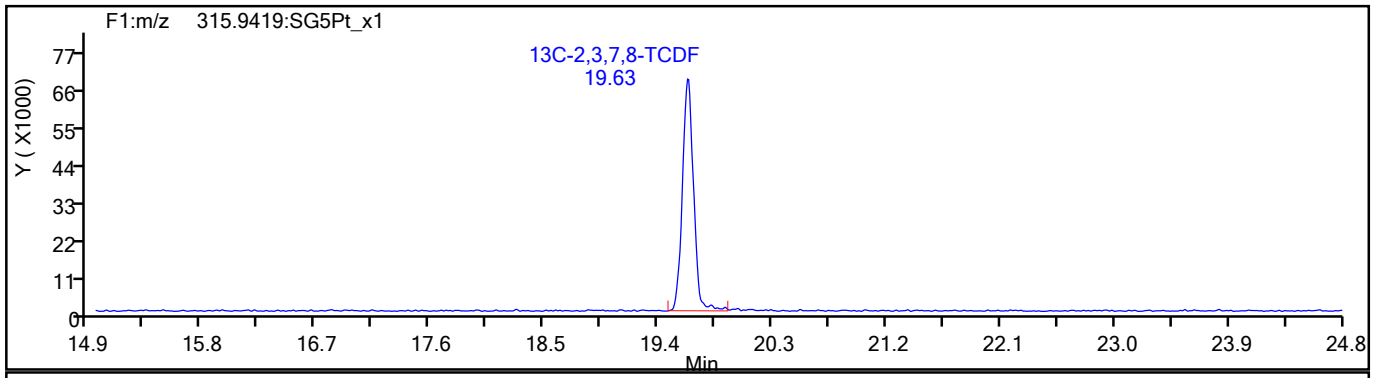

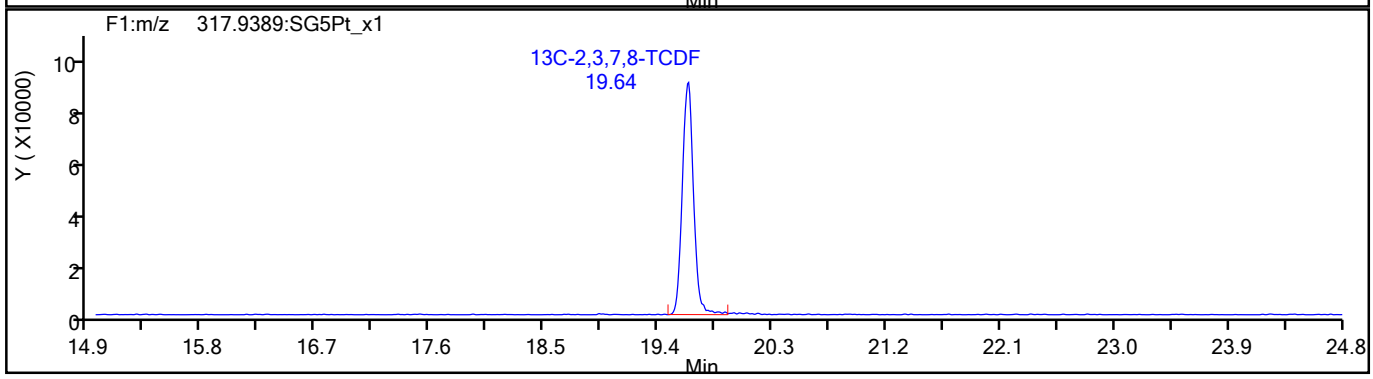

789460

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

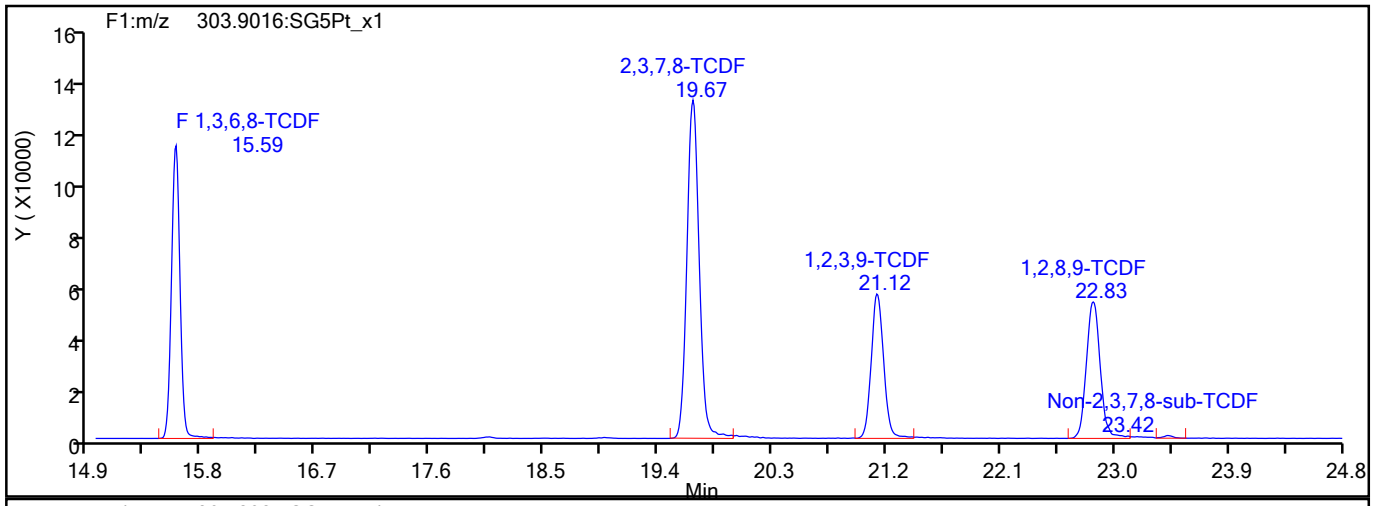

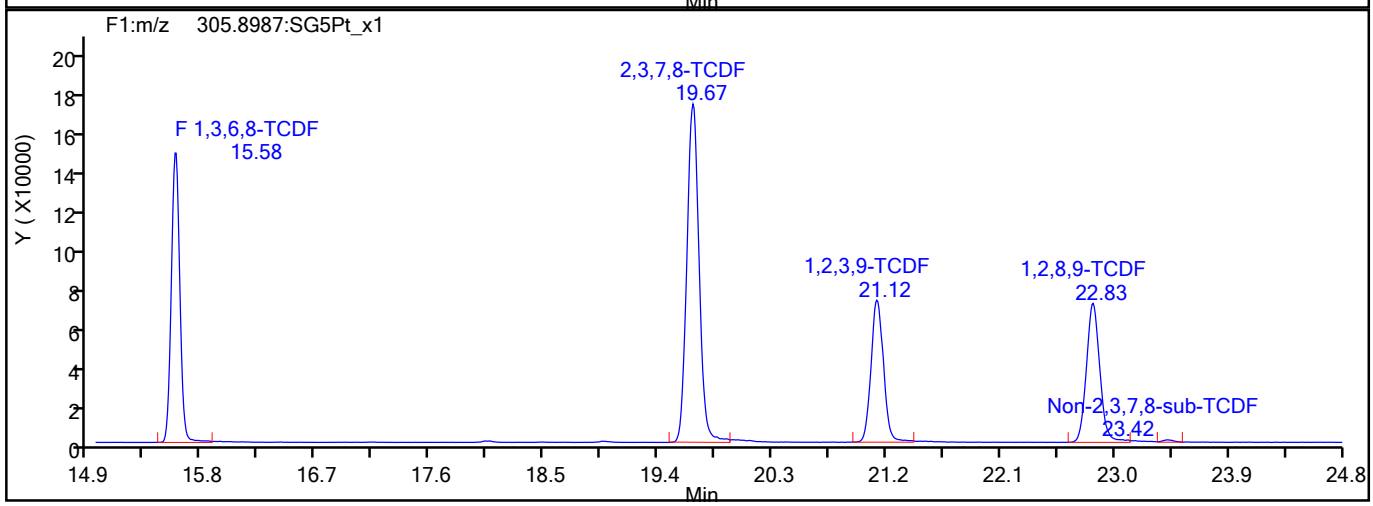

TCDF Interference Mass

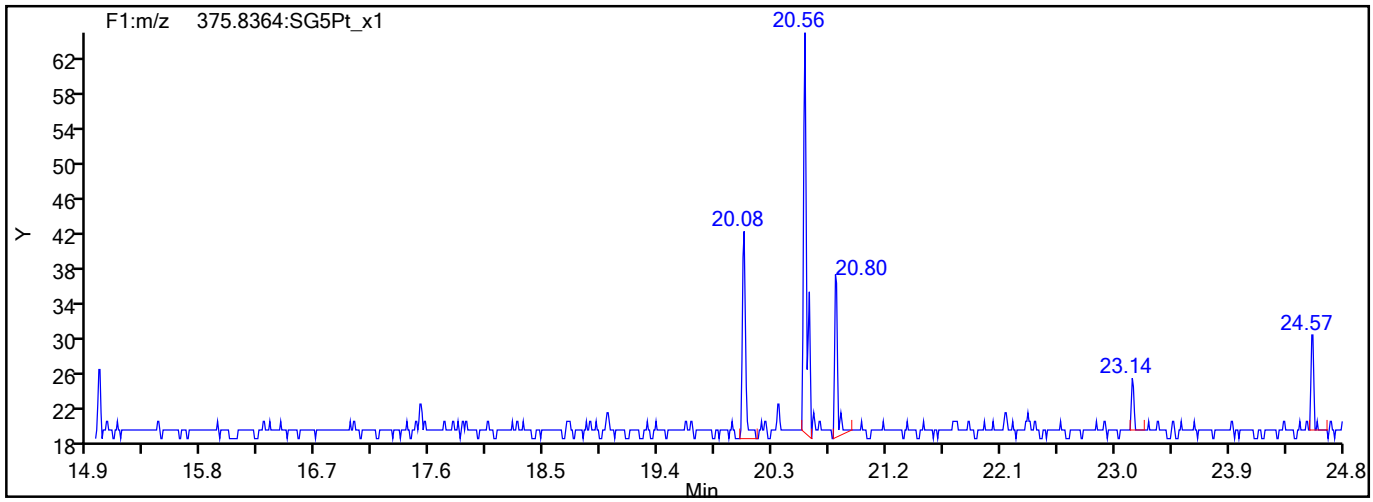

789461

Report Date: 09-Jun-2021 09:24:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

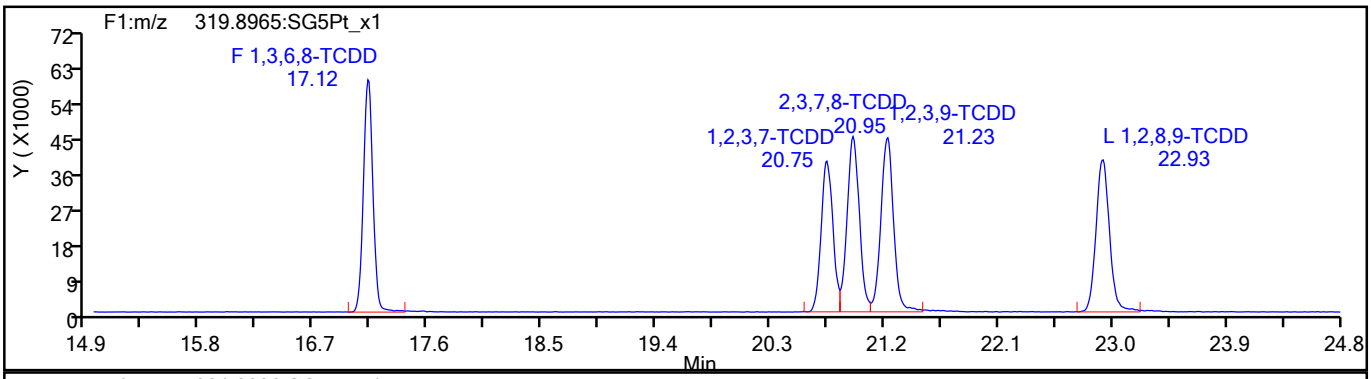

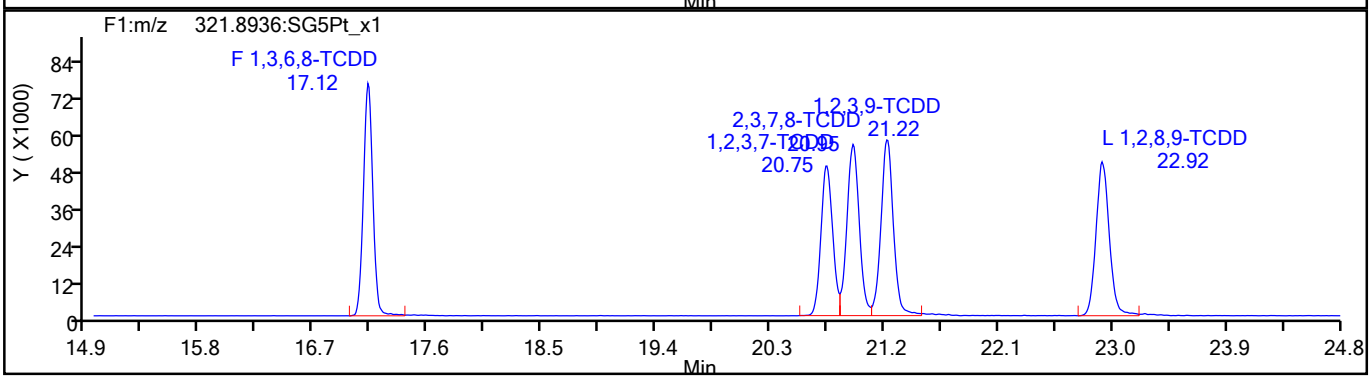

TCDD Standards

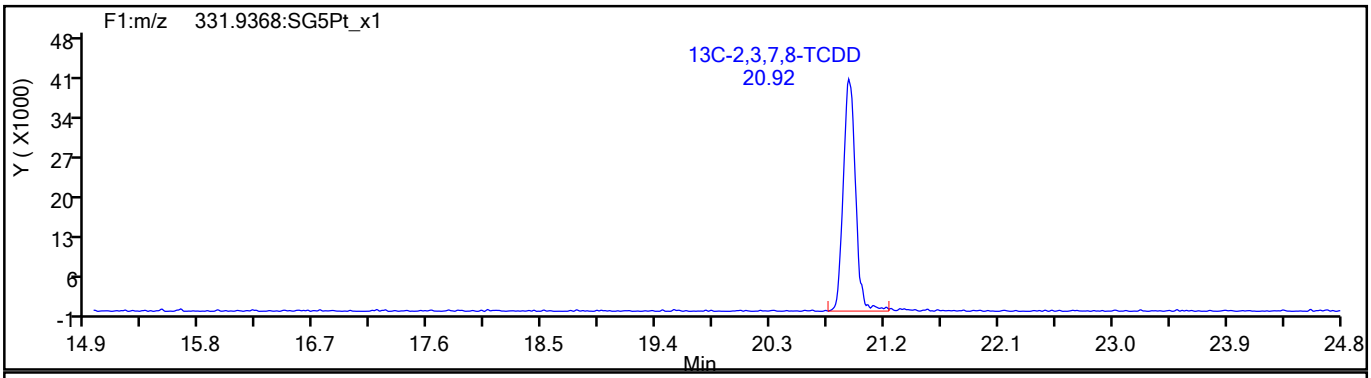

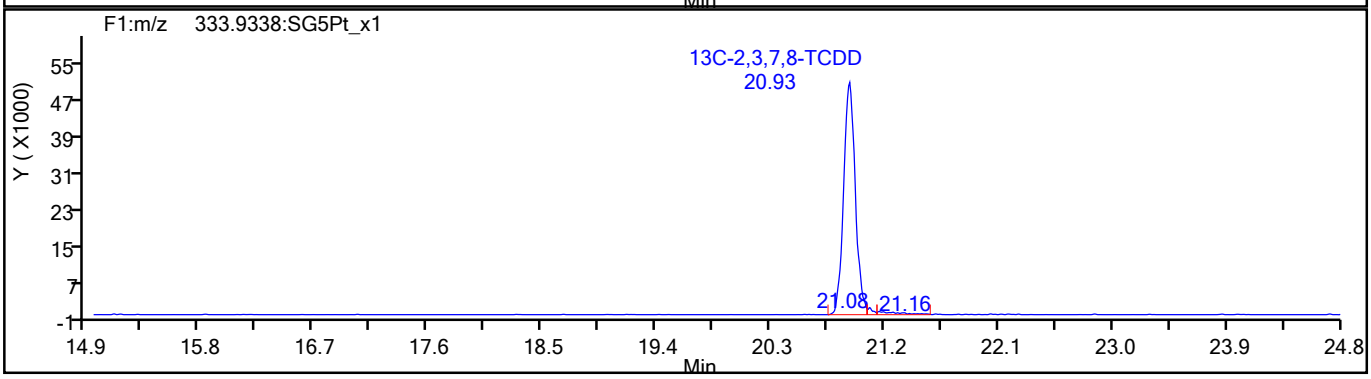

789462

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

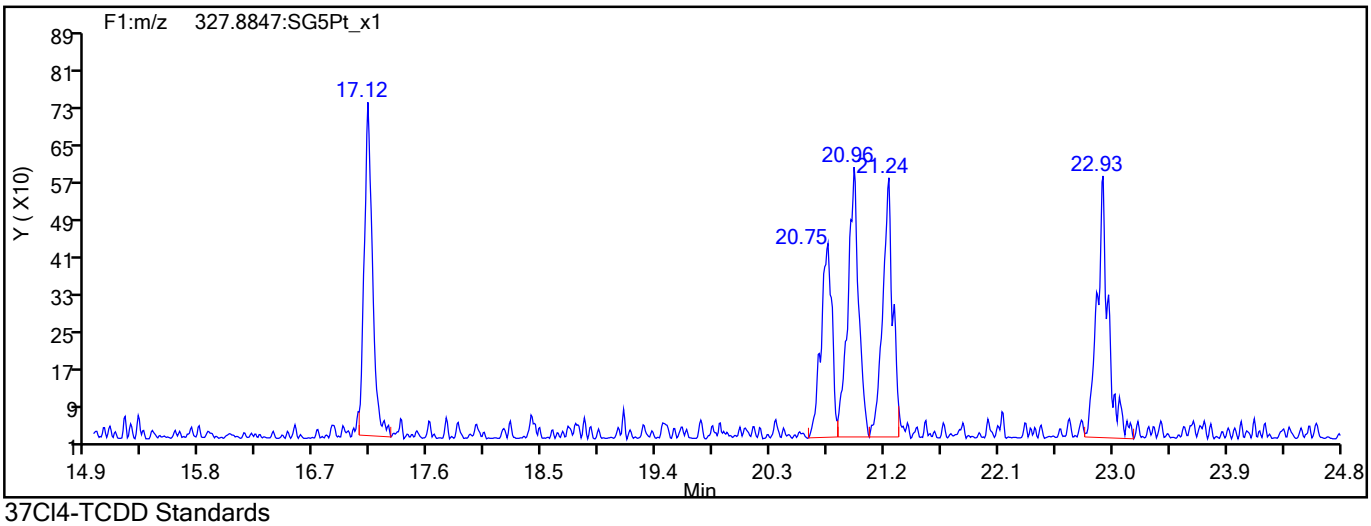

37Cl4-TCDD Standards

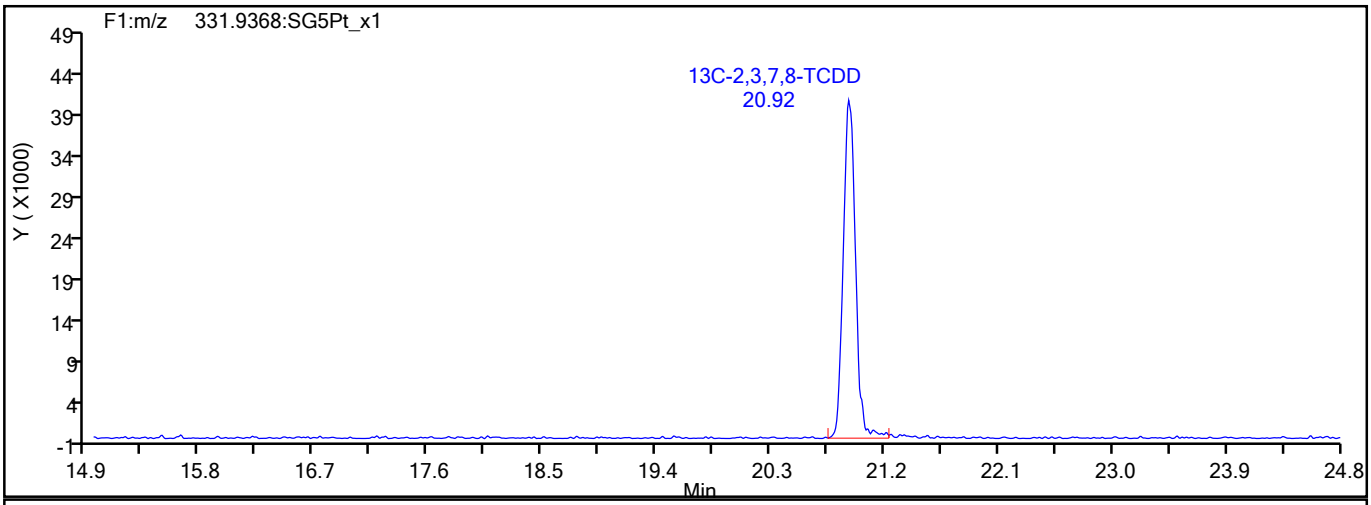

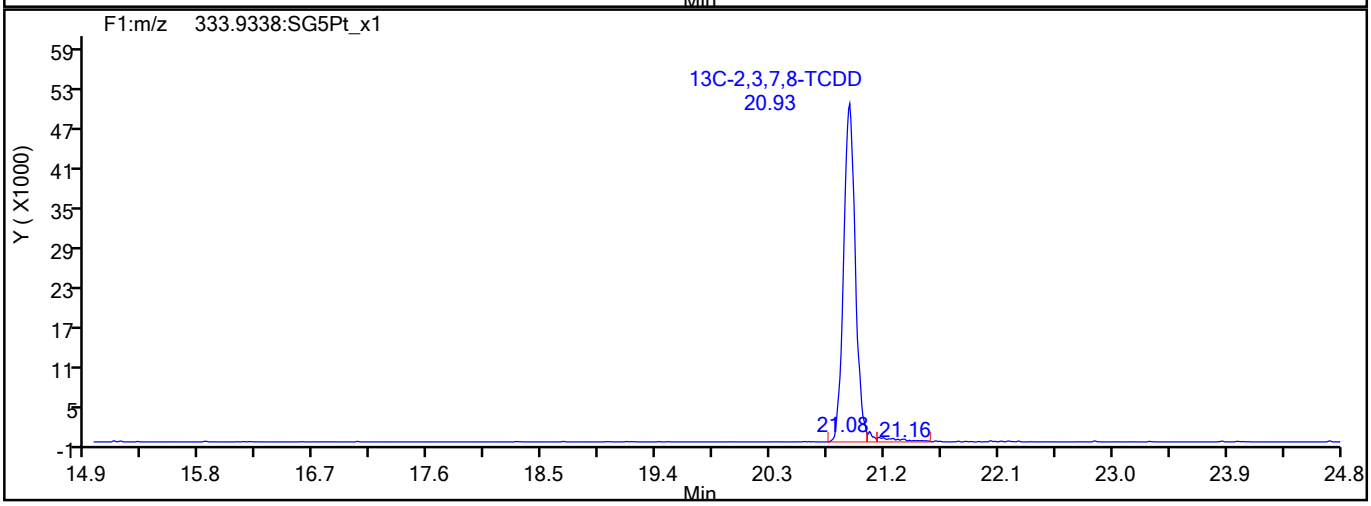

789463

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

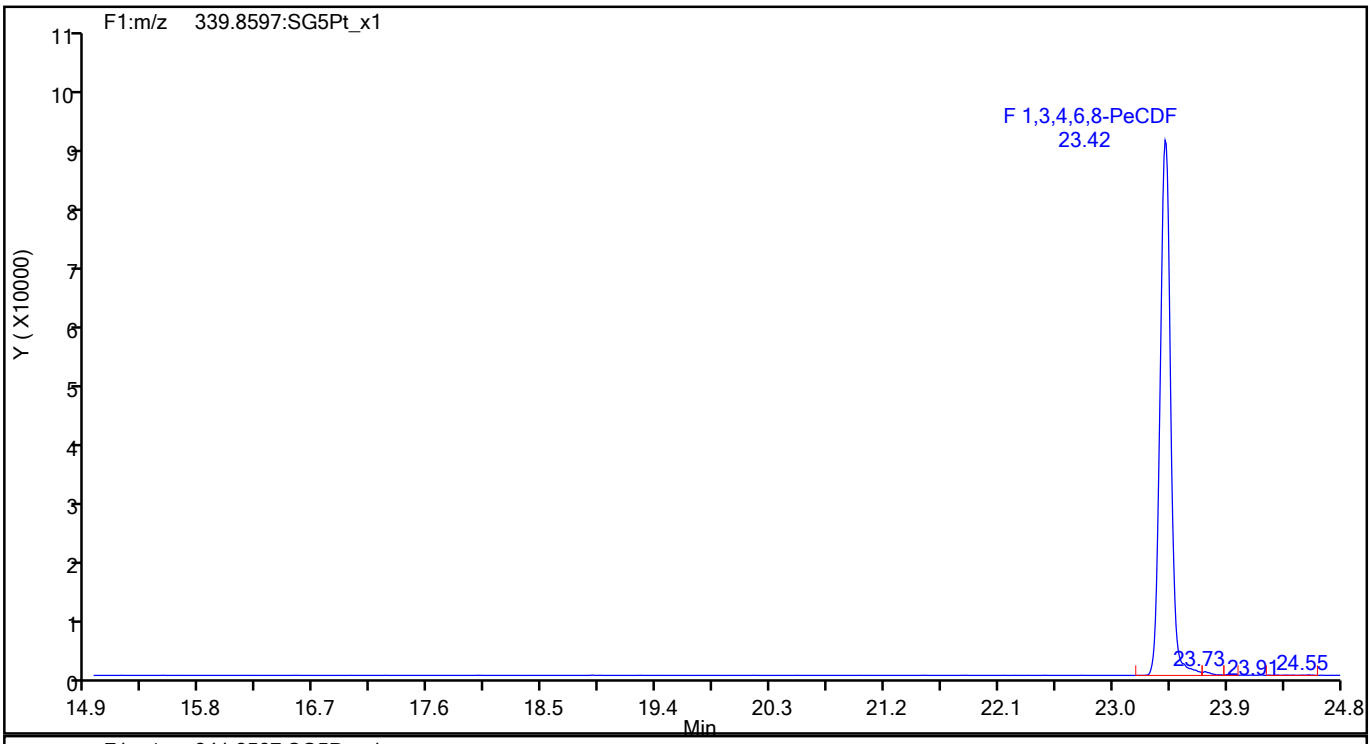

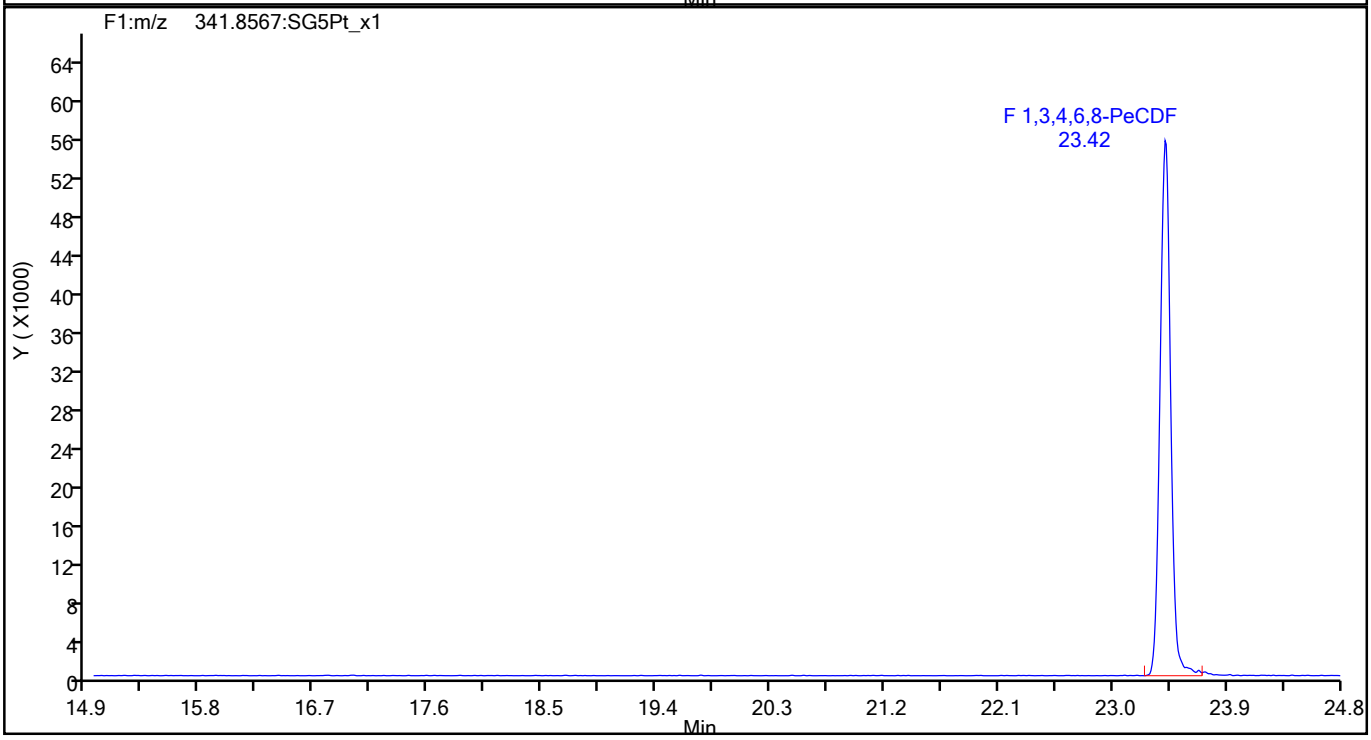

789464

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

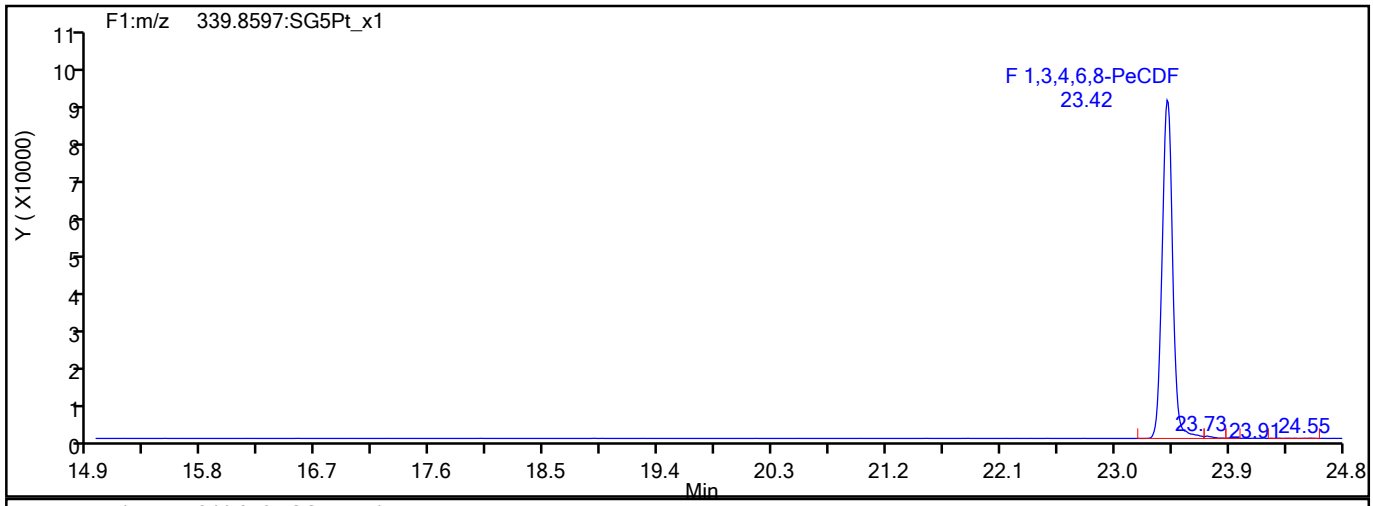

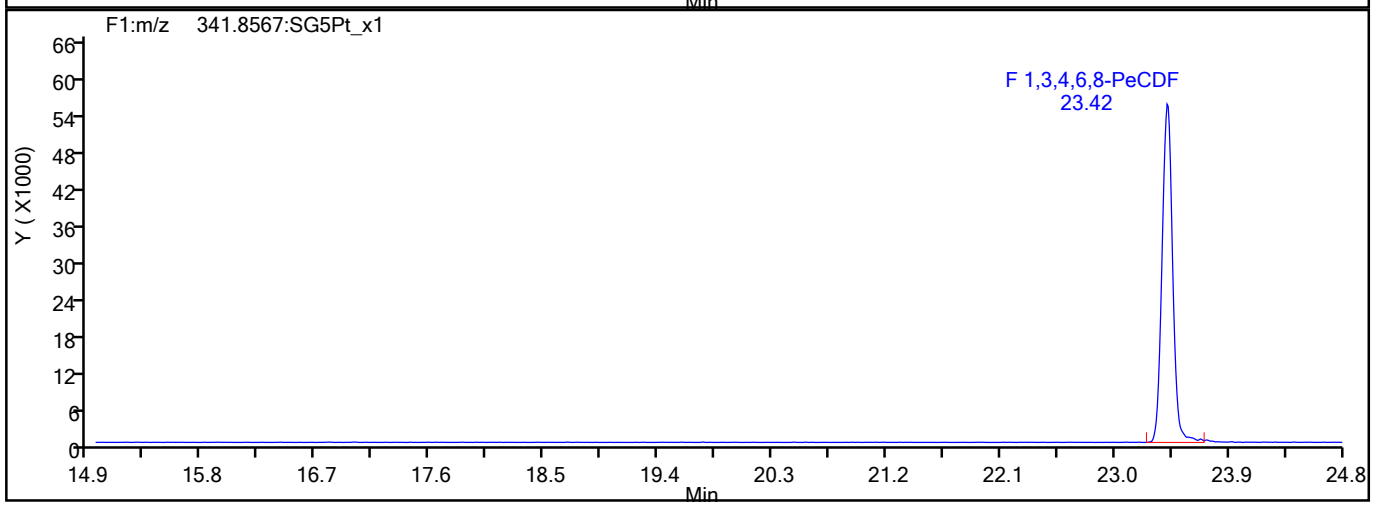

F1 PeCDFs Interference Mass

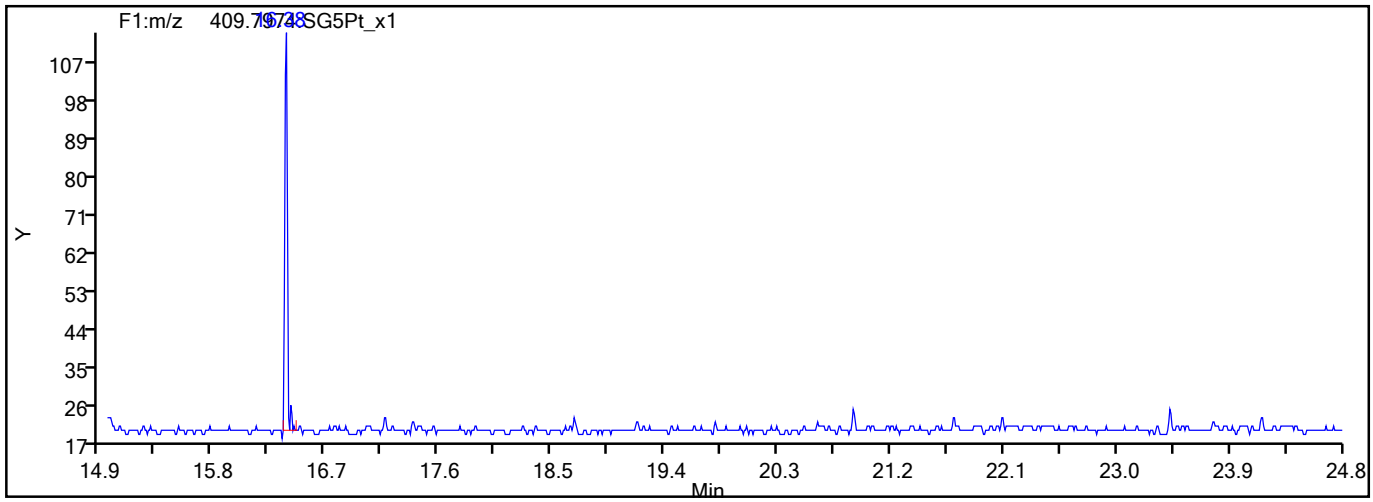

789465

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

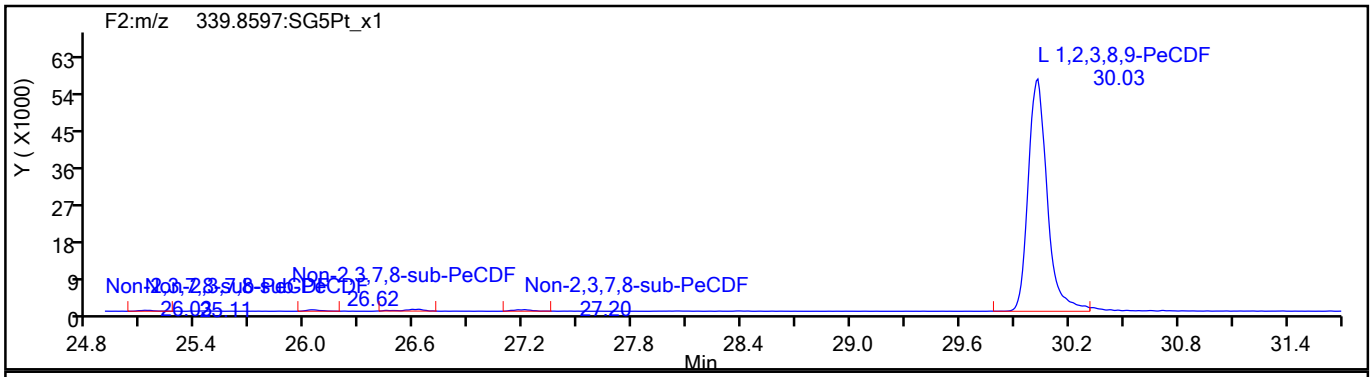

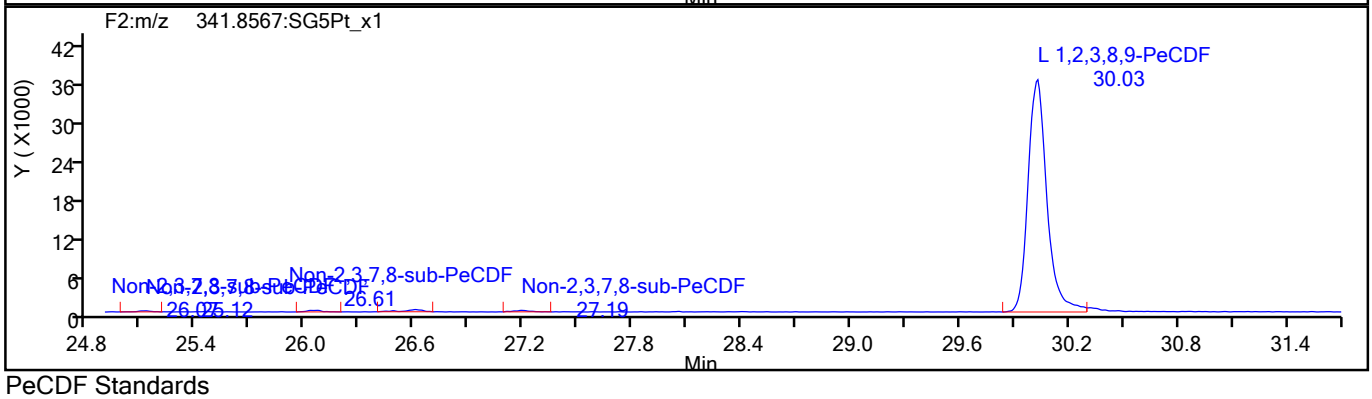

PeCDF Standards

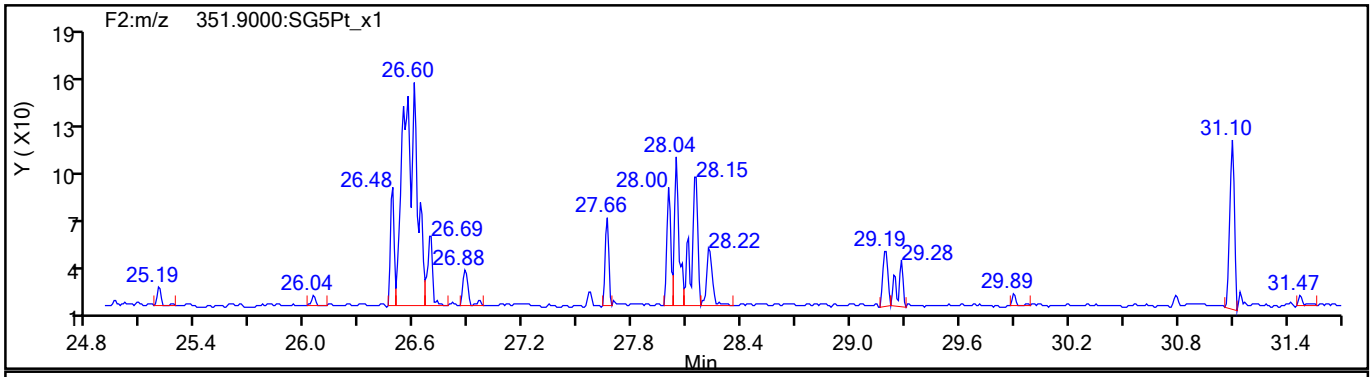

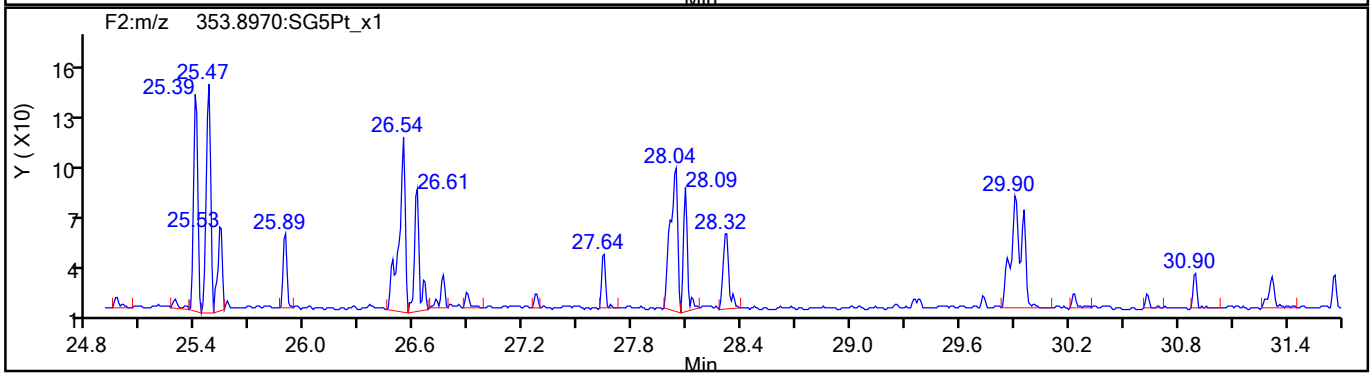

789466

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

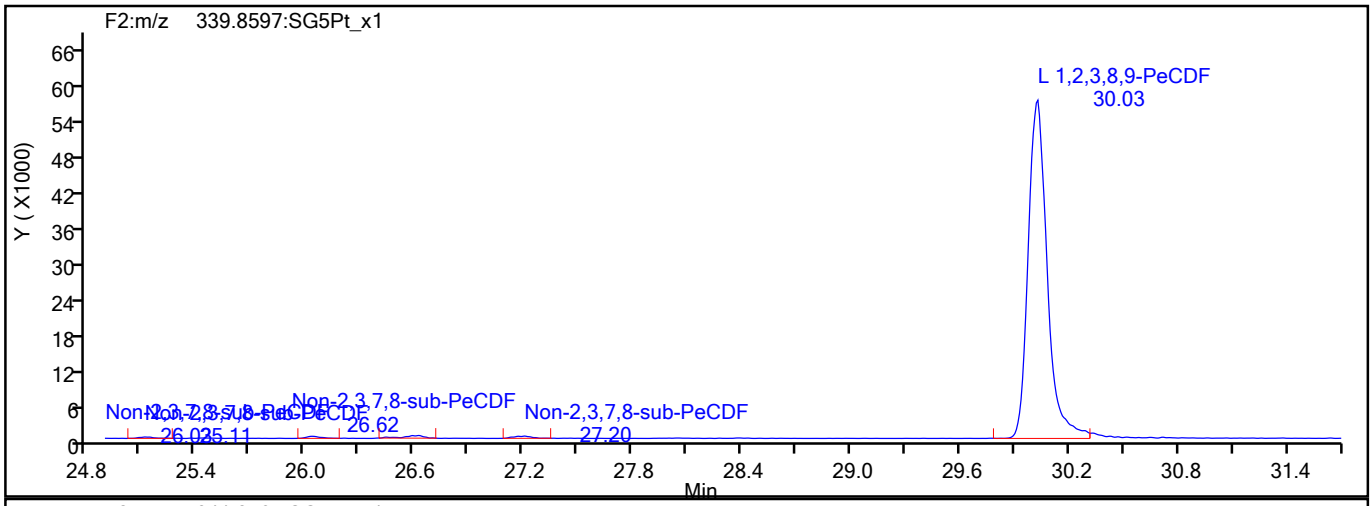

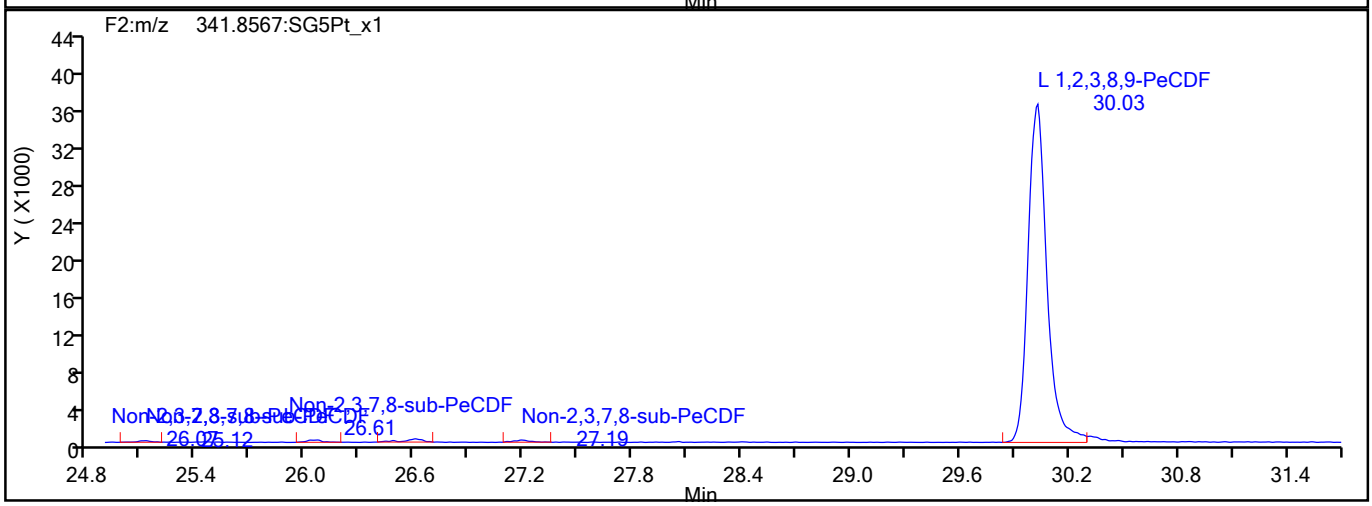

PeCDF Interference Mass

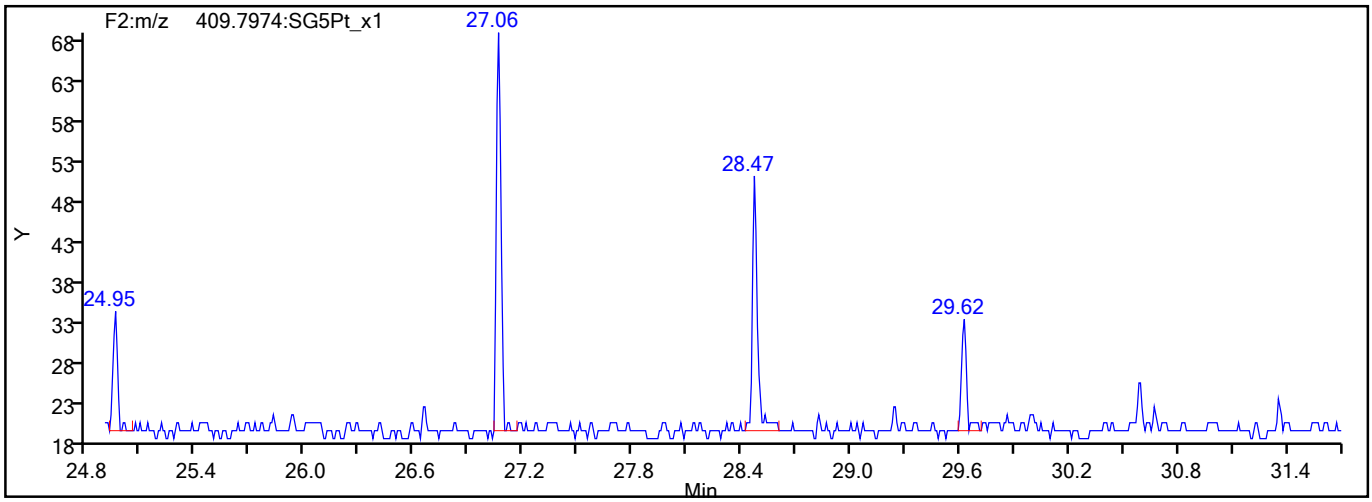

789467

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

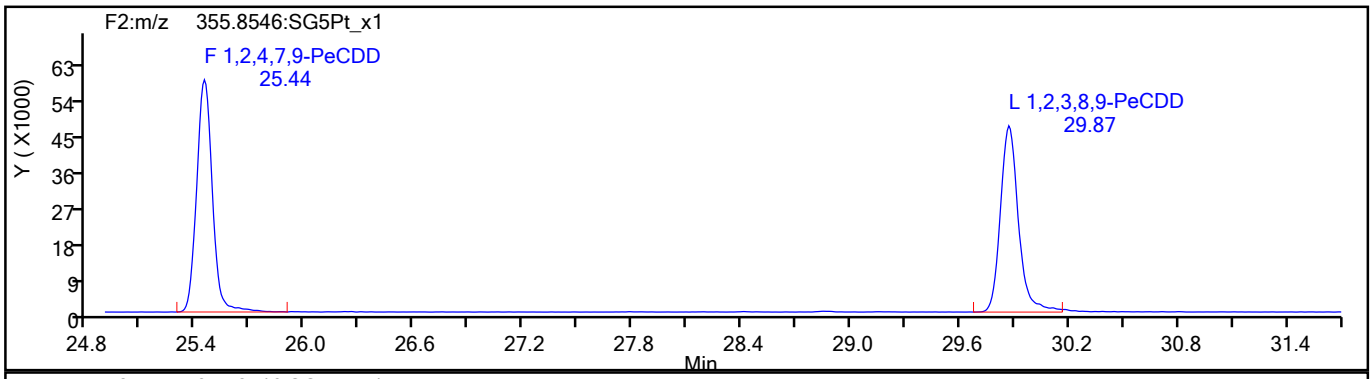

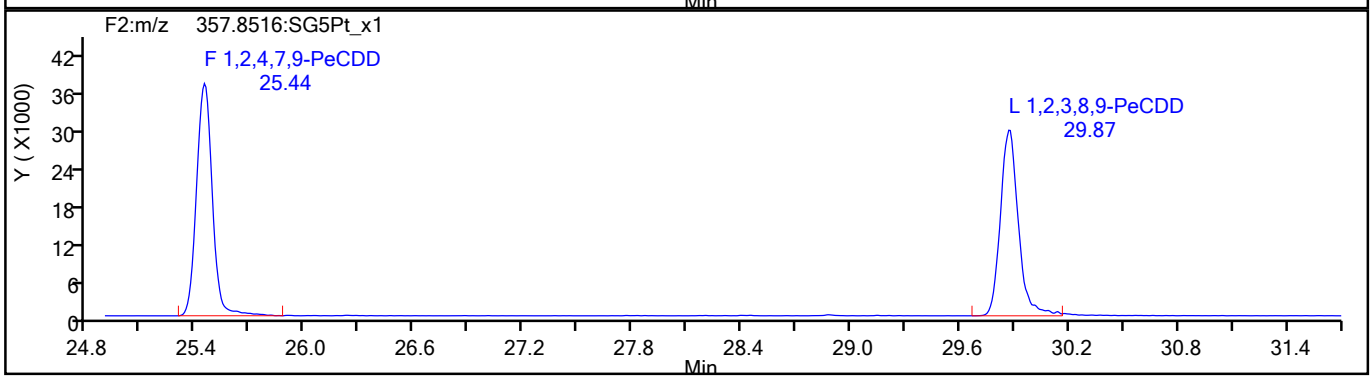

PeCDD Standards

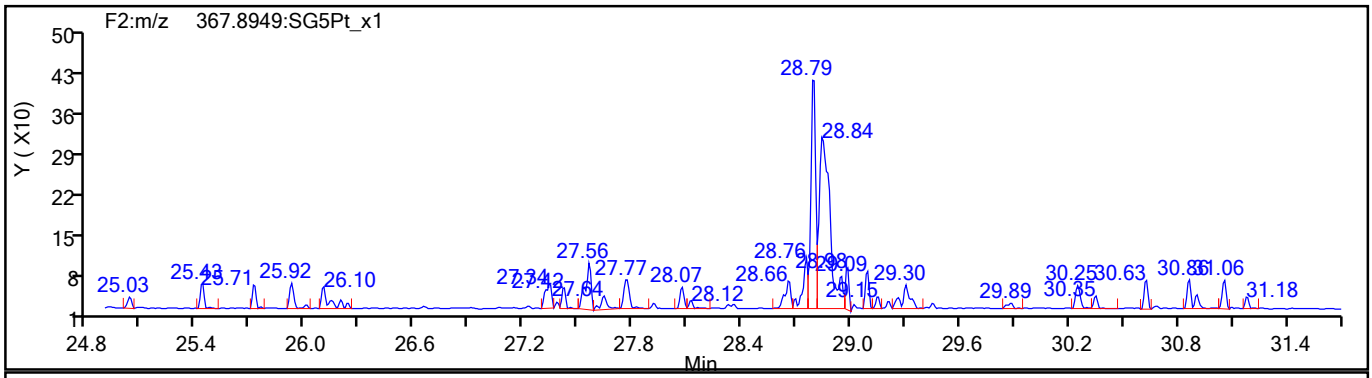

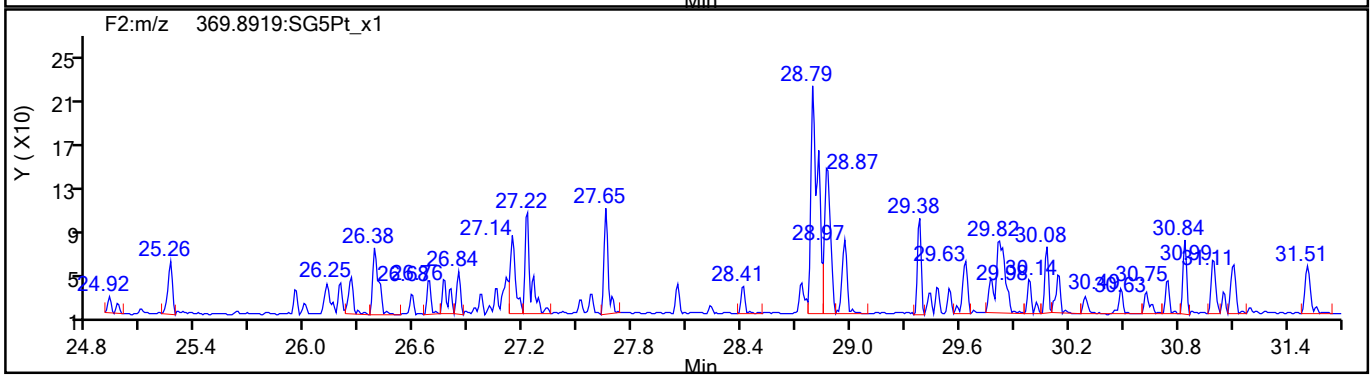

789468

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

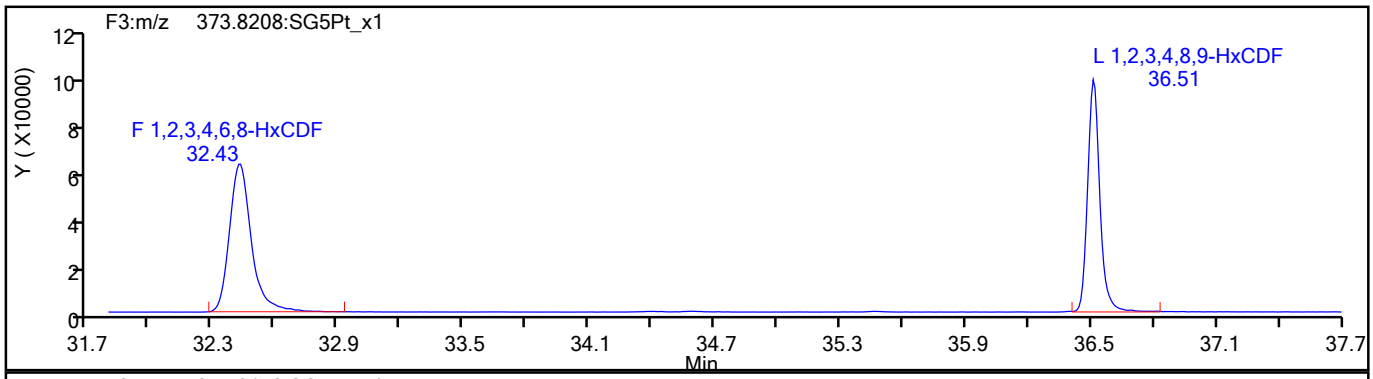

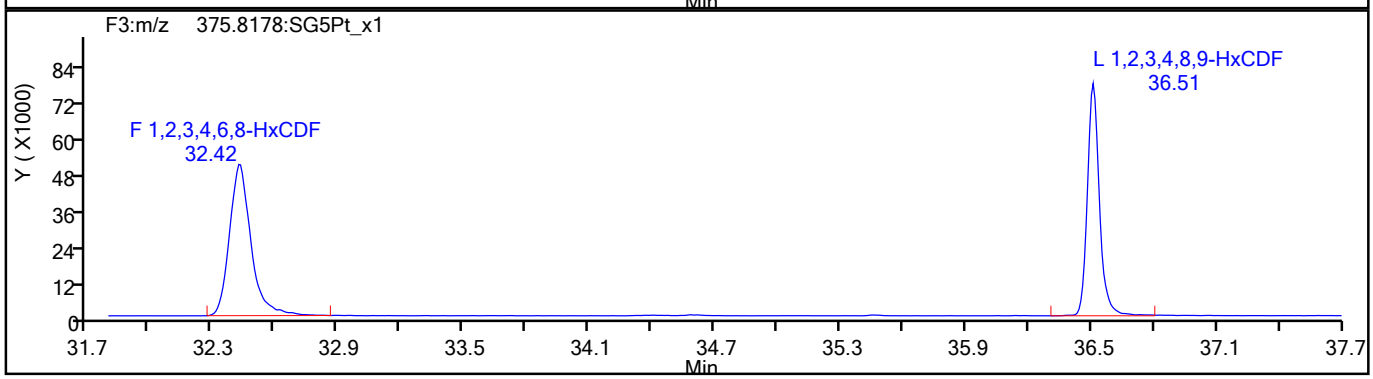

HxCDF Standards

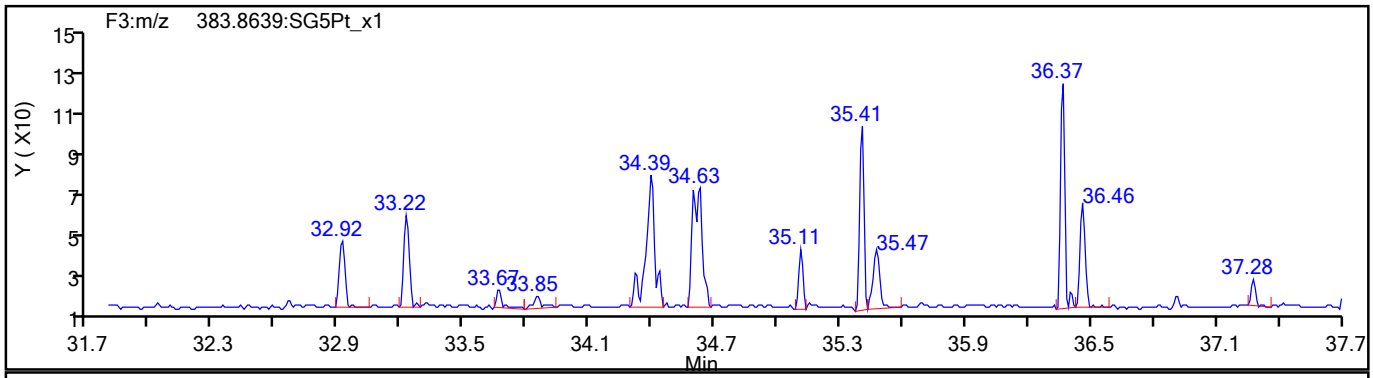

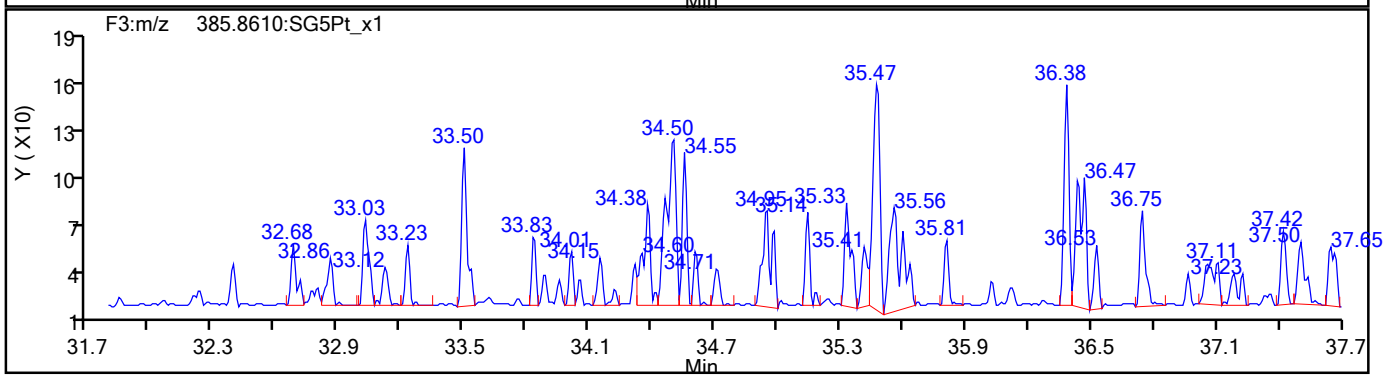

789469

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

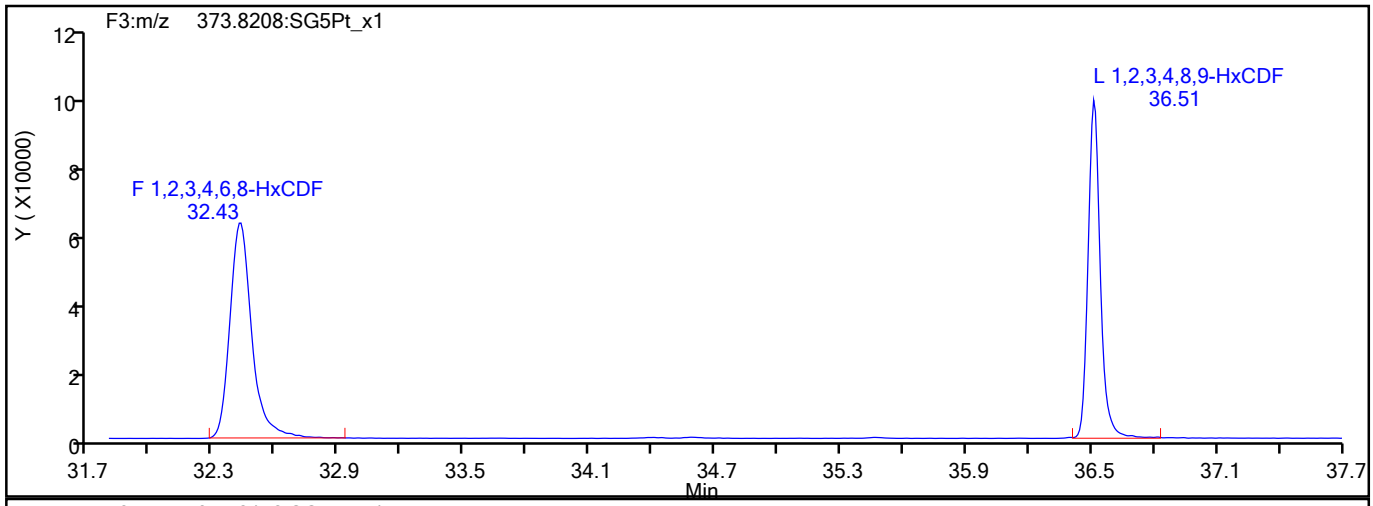

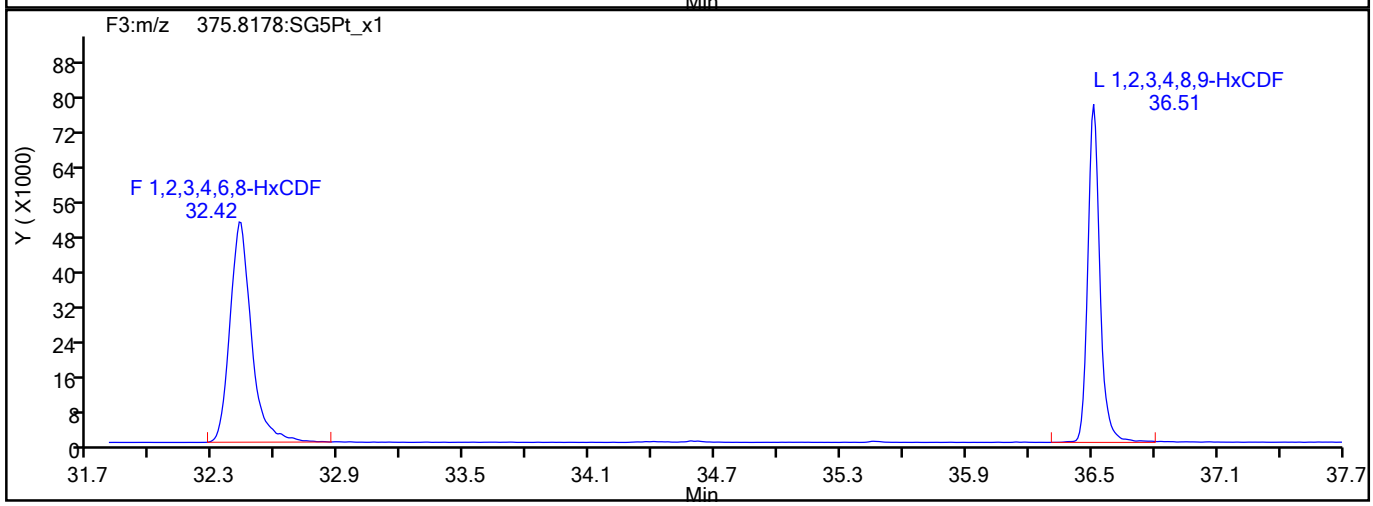

HxCDF Interference Mass

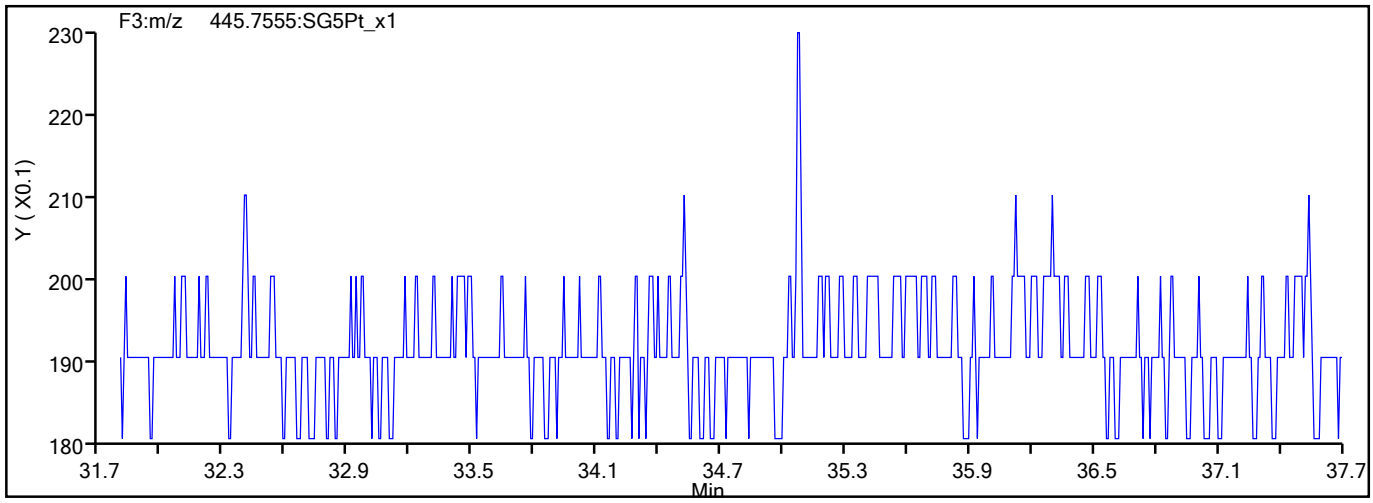

789470

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

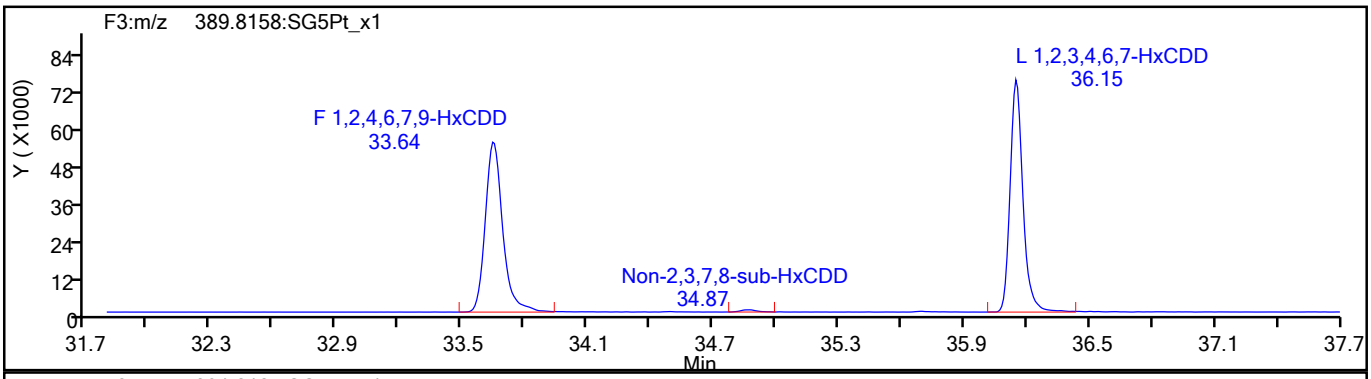

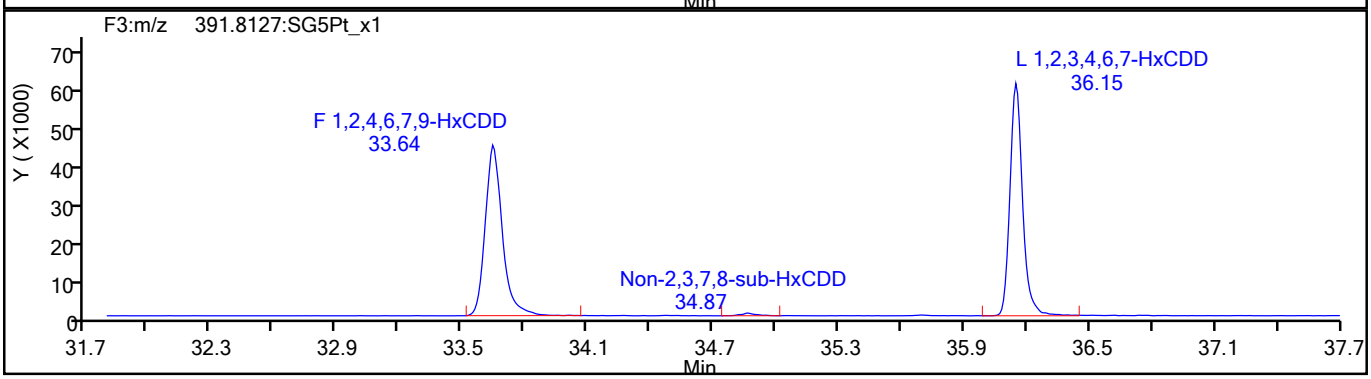

HxCDD Standards

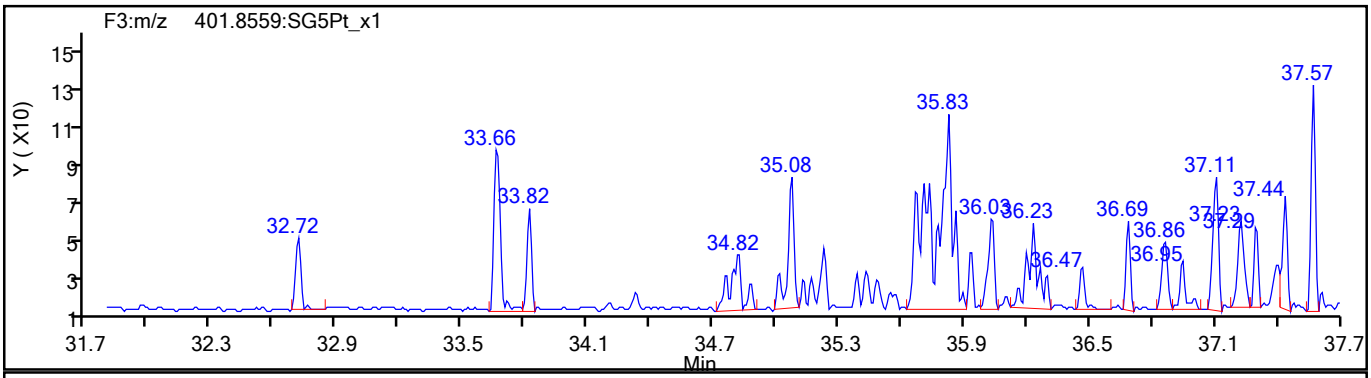

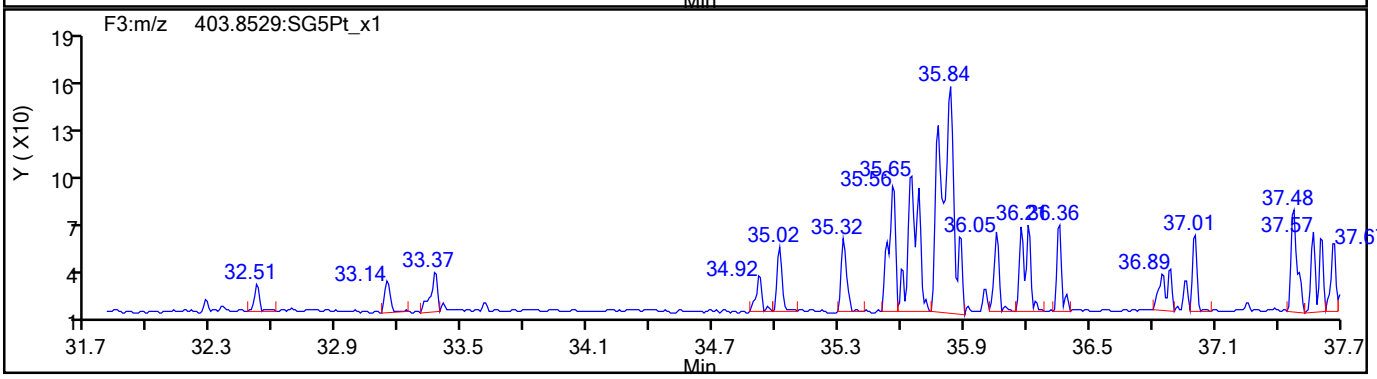

789471

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

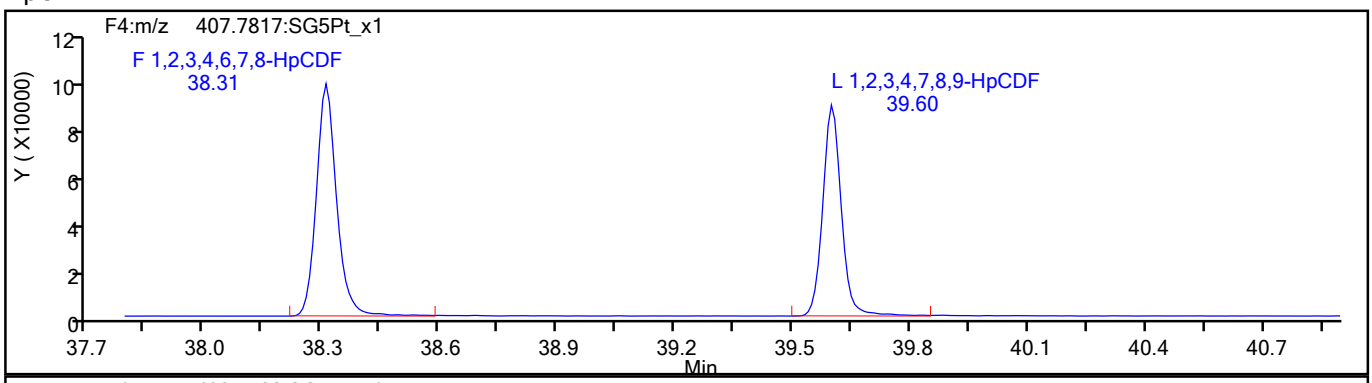

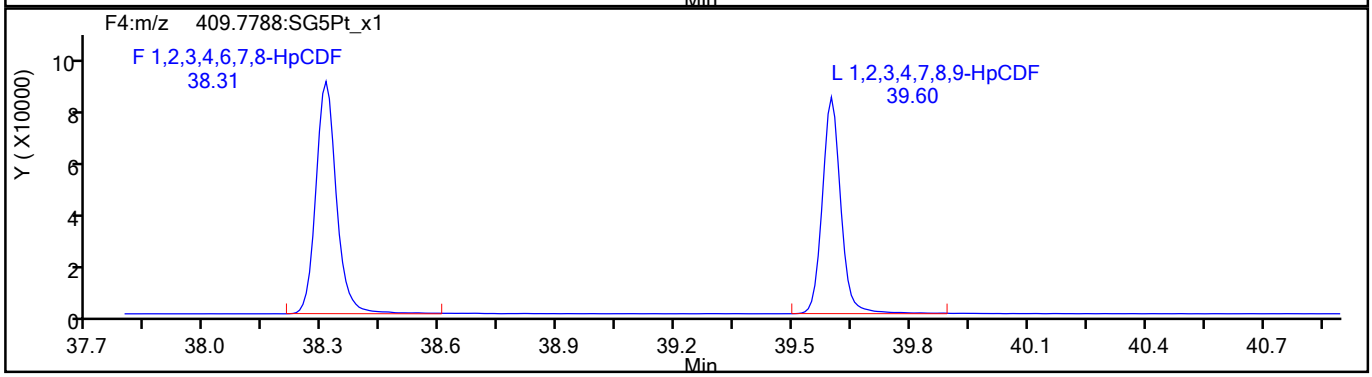

HpCDF Standards

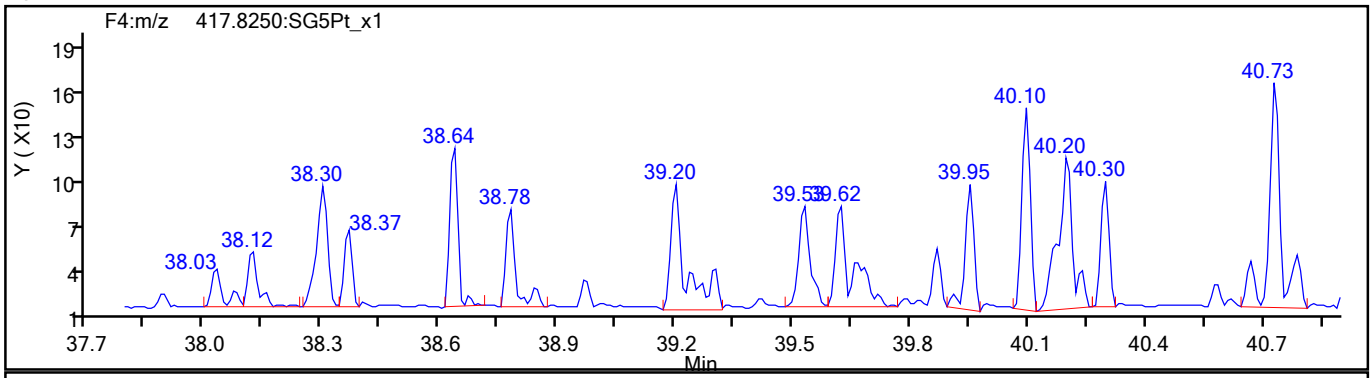

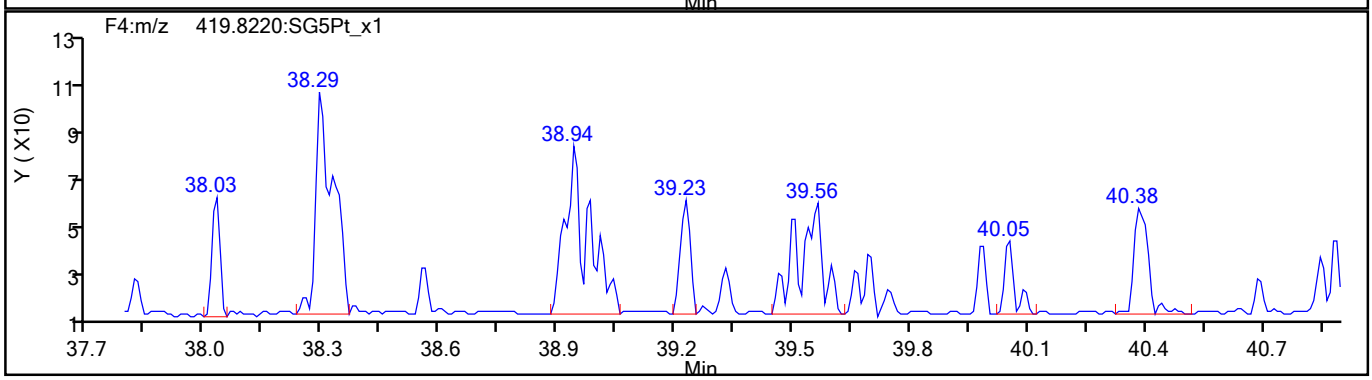

789472

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

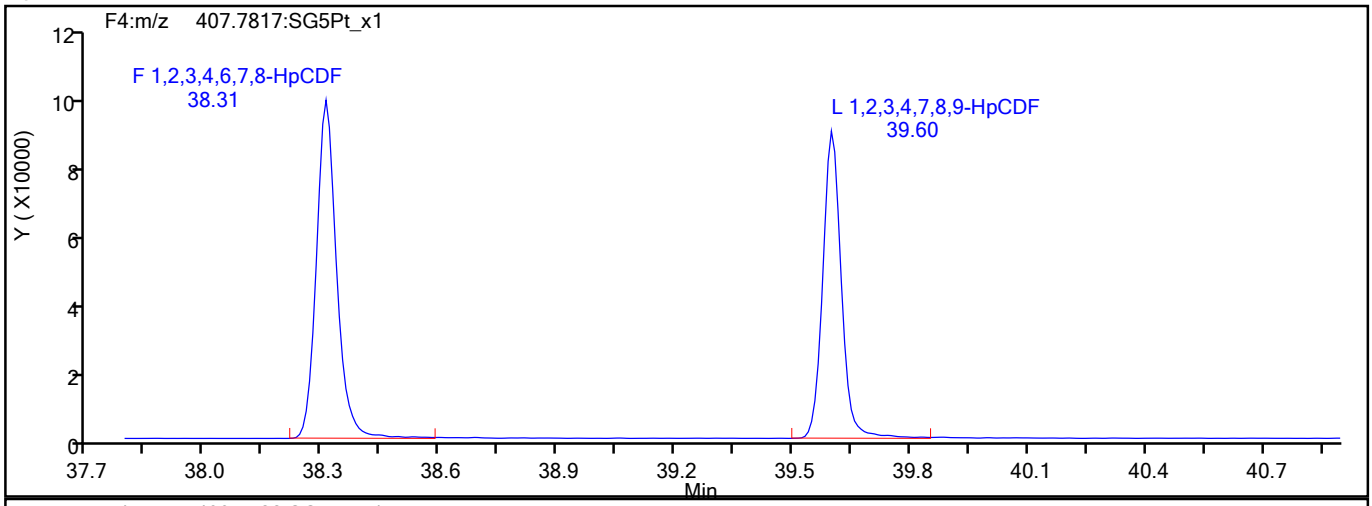

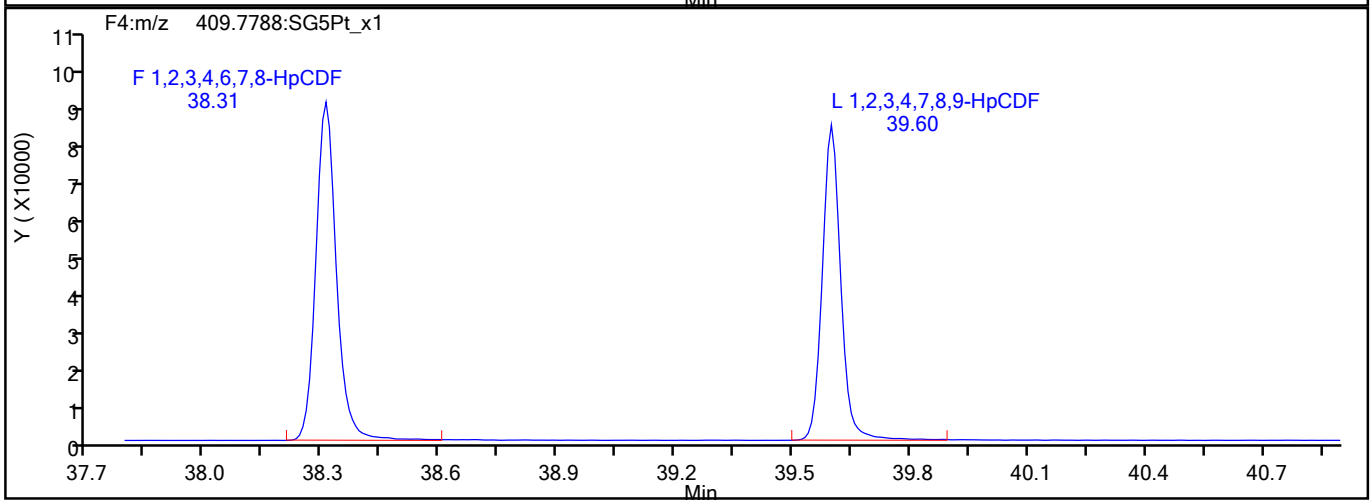

HpCDF Interference Mass

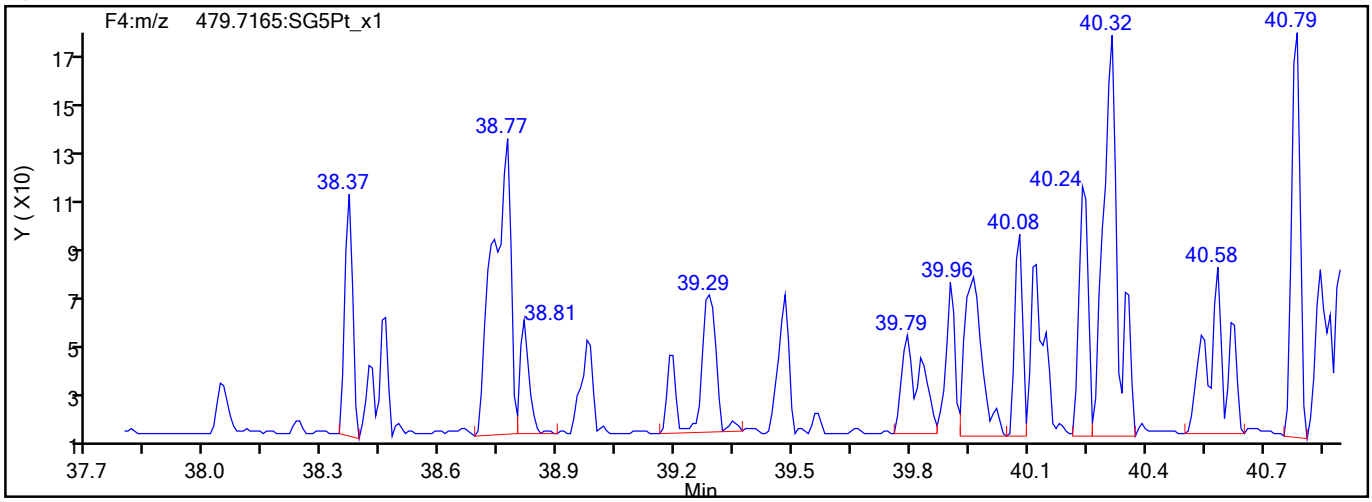

789473

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

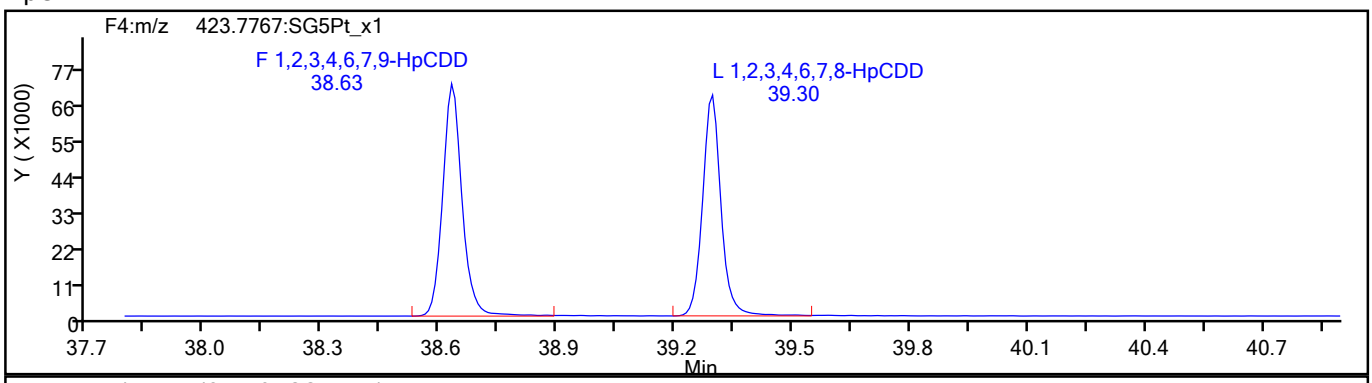

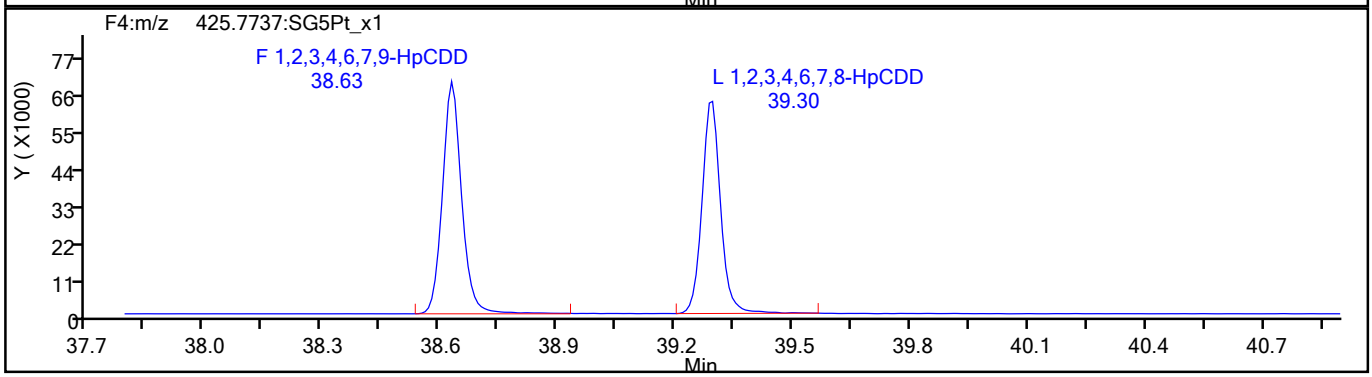

HpCDD Standards

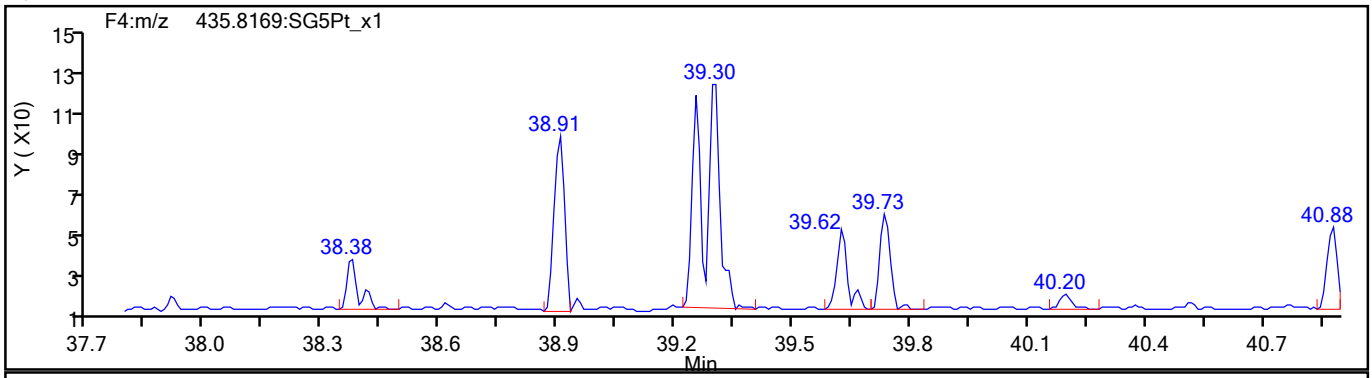

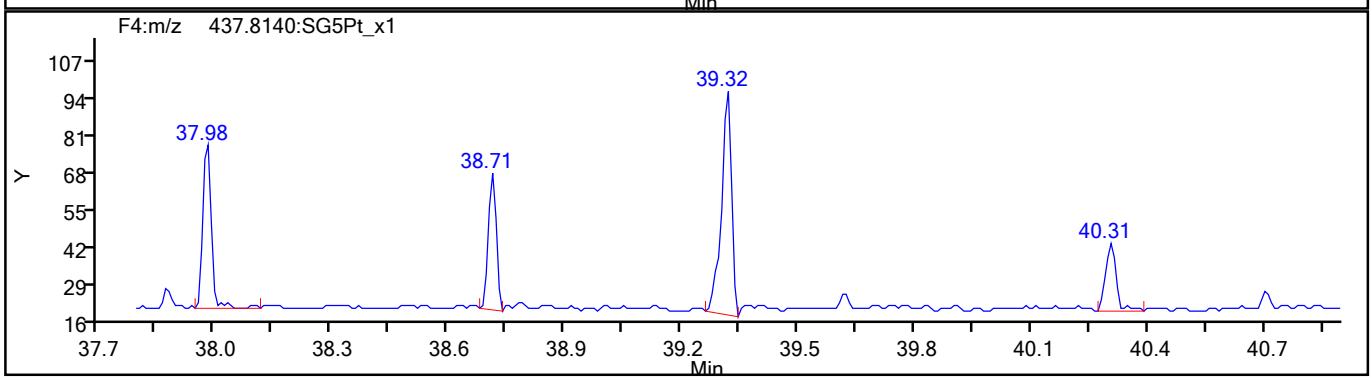

789474

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

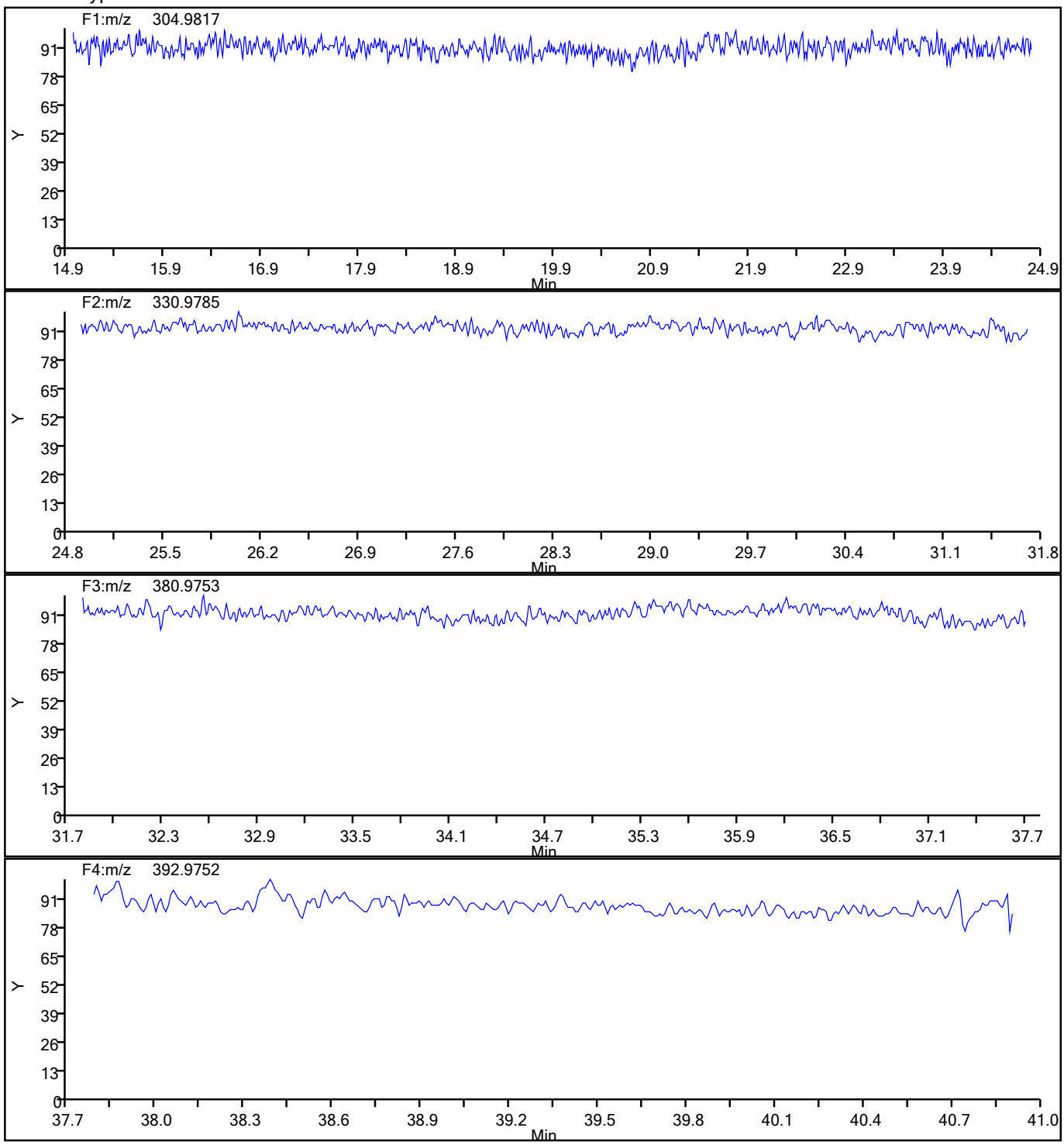

789475

Report Date: 09-Jun-2021 09:24:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_2.d		
Injection Date:	08-Jun-2021 12:40:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

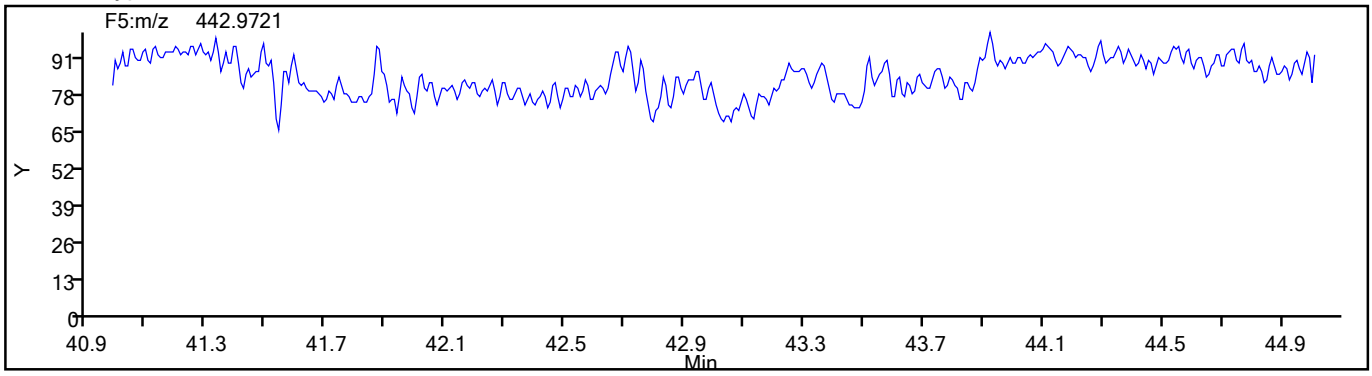

789476

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 02:19:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:24:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.401	485361	0.82	1.3459					0.00	
2,3,7,8-TCDF	20.436	1188413	0.84	1.0802	90.7	90.7	0.2813	0.2813		
A Non-2,3,7,8-sub-TCDF	19.878	19901	0.77	1.0802	1.727	1.518	0.2813	0.7822		RQ
S Total TCDF					92.4	92.2	0.2813	0.2813		RQ
D 13C-2,3,7,8-TCDD	21.743	329600	0.81	0.9317					0.00	
2,3,7,8-TCDD	21.777	370047	0.80	1.0753	41.8	41.8	0.1249	0.1249		
A Non-2,3,7,8-sub-TCDD	20.707	3685	0.77	1.0753	0.5012	0.4159	0.1249	0.4159		RQ
S Total TCDD					42.3	42.2	0.1249	0.1249		RQ
A F1 PeCDFs	24.648	904	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.125						0.0	0.0		
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.489	1055	1.45	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.028	10297	1.24	0.0000						RQ
S Total HxCDF										RQ
A Non-2,3,7,8-sub-HxCDD	35.394	4006	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.630	364225	1.07	1.4421						
1,2,3,4,7,8,9-HpCDF	39.885	322997	1.06	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.258						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.582	244067	1.05	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.258						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.156	689898	0.82							
1,3,6,8-TCDD	17.754	384589	0.80							
2,3,4,7-TCDF	20.436	1190538	0.84							
1,2,3,7-TCDD	21.545	321799	0.78							
1,2,3,9-TCDF	21.958	518792	0.84							
1,2,3,9-TCDD	22.035	386037	0.78							
1,2,8,9-TCDF	23.600	554349	0.82							

789477

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.660	159041								
1,3,4,6,8-PeCDF	24.022	462305	1.58							
1,2,3,8,9-PeCDD	26.056	316607	1.54							
1,2,4,7,9-PeCDD	30.652	304812	1.54							
1,2,3,8,9-PeCDF	30.838	407641	1.63							
1,2,3,4,6,8-HxCDF	33.138	482293	1.31							
1,2,4,6,7,9-HxCDD	34.224	313209	1.25							
1,2,3,4,6,7-HxCDD	36.564	309337	1.23							
1,2,3,4,8,9-HxCDF	36.918	413489	1.31							
1,2,3,4,6,7,9-HpCDD	38.934	270894	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 02:19:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:24:20

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.401	20.401	0	1.000	219196	29055	85	212	342		
317.9389	20.393	20.401	-1	1.000	266165	33471	26	65	1287	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.436	20.436	0	1.002	544208	70535	85	212	830		
305.8987	20.436	20.436	0	1.002	644205	86812	105	262	827	0.84(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.713	19.878	-10	0.966	6415	874	85	212	10		
	Empc Correction				4460	790	85	212	9		
305.8987	19.678	19.878	-12	0.965	5793	1027	105	262	10	1.11(0.65-0.89)	
303.9016	24.013	19.878	248	1.177	4973	730	85	212	9		
	Empc Correction				4197	736	85	212	9		
305.8987	24.004	19.878	247	1.177	5451	956	105	262	9	0.91(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.743	21.743	0	1.000	147378	19307	97	242	199		
333.9338	21.734	21.743	-1	1.000	182222	24457	55	137	445	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.777	21.777	0	1.002	164836	19708	37	92	533		
321.8936	21.769	21.777	-1	1.001	205211	24772	22	55	1126	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.396	20.707	101	1.030	2359	261	37	92	7		
	Empc Correction				1603	201	37	92	5		
321.8936	22.457	20.707	105	1.033	2082	262	22	55	12	1.13(0.65-0.89)	
A F1 PeCDFs											RQ
339.8597	24.434	24.648	-13	1.000	323	113	8	20	14		
341.8567	24.486	24.648	-10	1.000	477	79	7	17	11	0.68(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	24.873	24.648	14	1.000	227	52	8	20	7		
341.8567	24.890	24.648	15	1.000	236	71	7	17	10	0.96(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.125						28	70			
341.8567	28.125						115	287			
A Non-2,3,7,8-sub-PeCDD											
355.8546	26.898	28.489	-95	1.000	625	122	24	60	5		
357.8516	26.856	28.489	-98	1.000	430	72	13	32	6	1.45(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	34.973	35.028	-3	1.000	2250	338	67	167	5		
375.8178	34.956	35.028	-4	1.000	1567	325	45	112	7	1.44(1.05-1.43)	
373.8208	35.116	35.028	5	1.000	3879	551	67	167	8		
375.8178	35.125	35.028	6	1.000	2908	527	45	112	12	1.33(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.344	35.394	-3	1.000	2218	414	33	82	13		
391.8127	35.335	35.394	-4	1.000	2261	396	31	77	13	0.98(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.630	38.630	0	1.000	188441	47249	63	157	750		
409.7788	38.630	38.630	0	1.000	175784	44386	54	135	822	1.07(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885	39.885	0	1.000	166495	43364	63	157	688		
409.7788	39.877	39.885	-1	1.000	156502	41246	54	135	764	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						63	157			
409.7788	39.258						54	135			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.582	39.582	0	1.000	125253	34507	41	102	842		
425.7737	39.573	39.582	-1	1.000	118814	33009	40	100	825	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.258						41	102			
425.7737	39.258						40	100			
1,3,6,8-TCDF											
303.9016	16.156	16.156	0		310778	57406	85	212	675		
305.8987	16.148	16.156	-1		379120	70718	105	262	674	0.82(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.754	17.754	0		170993	27785	37	92	751		
321.8936	17.754	17.754	0		213596	36009	22	55	1637	0.80(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.436	20.436	0		545121	70571	85	212	830		
305.8987	20.436	20.436	0		645417	86859	105	262	827	0.84(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.545	21.545	0		141111	18226	37	92	493		
321.8936	21.545	21.545	0		180688	24656	22	55	1121	0.78(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.958	21.958	0		236345	29756	85	212	350		
305.8987	21.949	21.958	-1		282447	37233	105	262	355	0.84(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,9-TCDD											
319.8965	22.035	22.035	0		168553	20335	37	92	550		
321.8936	22.035	22.035	0		217484	26622	22	55	1210	0.78(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.600	23.600	0		249931	41792	85	212	492		
305.8987	23.609	23.600	1		304418	49051	105	262	467	0.82(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.660	23.660	0		159041	26777	37	92	724		
1,3,4,6,8-PeCDF											
339.8597	24.022	24.022	0		282879	51764	8	20	6471		
341.8567	24.022	24.022	0		179426	33084	7	17	4726	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.056	26.056	0		191787	27480	24	60	1145		
357.8516	26.056	26.056	0		124820	18312	13	32	1409	1.54(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.652	30.652	0		184760	22522	24	60	938		
357.8516	30.661	30.652	1		120052	14042	13	32	1080	1.54(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.838	30.838	0		252442	29783	28	70	1064		
341.8567	30.846	30.838	1		155199	17958	115	287	156	1.63(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.138	33.138	0		273839	36209	67	167	540		
375.8178	33.138	33.138	0		208454	28574	45	112	635	1.31(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.224	34.224	0		173942	30009	33	82	909		
391.8127	34.224	34.224	0		139267	24561	31	77	792	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.564	36.564	0		170654	37355	33	82	1132		
391.8127	36.556	36.564	-1		138683	30201	31	77	974	1.23(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.918	36.918	0		234506	51404	67	167	767		
375.8178	36.918	36.918	0		178983	40201	45	112	893	1.31(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.934	38.934	0		137960	35037	41	102	855		
425.7737	38.934	38.934	0		132934	34741	40	100	869	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	485361	62526

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	485361	62526

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.713	6415	874	5793	1027	0.9314	1.11	RQ
19.713	4460	790	5793	1027	0.7822		Empc Correction
24.013	4973	730	5451	956	0.7953	0.91	RQ
24.013	4197	736	5451	956	0.7361		Empc Correction
Signal Totals:							
	8657	1526	11244	1983			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	22632	3587				1.01	RQ
	19901	3509					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.727 = (22632 * 40.000) / (485361 * 1.080)
Empc Amount: 1.518 = (19901 * 40.000) / (485361 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	40.000	329600	43764

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		40.000	329600	43764

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.396	2359	261	2082	262	0.5012	1.13	RQ
22.396	1603	201	2082	262	0.4159		Empc Correction
Signal Totals:							
	1603	201	2082	262			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4441	523				1.13	RQ
	3685	463					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5012 = (4441 * 40.000) / (329600 * 1.075)

Empc Amount: 0.4159 = (3685 * 40.000) / (329600 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.434	323	113	477	79		0.68	R
24.873	227	52	236	71		0.96	R
Signal Totals:							
	550	165	713	150			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1263	315				0.77	RQ
	904	270					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1263 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (904 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.898	625	122	430	72		1.45	
Signal Totals:							
	625	122	430	72			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1055	194				1.45	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (1055 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
34.973	2250	338	1567	325		1.44	R
35.116	3879	551	2908	527		1.33	
Signal Totals:							
	6129	889	4475	852			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10604	1741				1.37	RQ
	10297	1806					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (10604 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (10297 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.344	2218	414	2261	396		0.98	R
Signal Totals:							
	2218	414	2261	396			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4479	810				0.98	RQ
	4006	747					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4479 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (4006 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

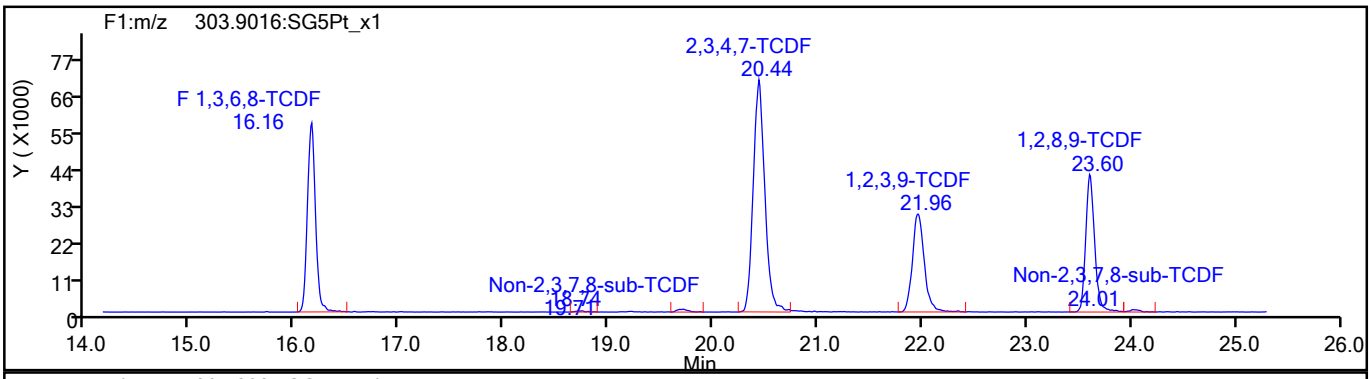

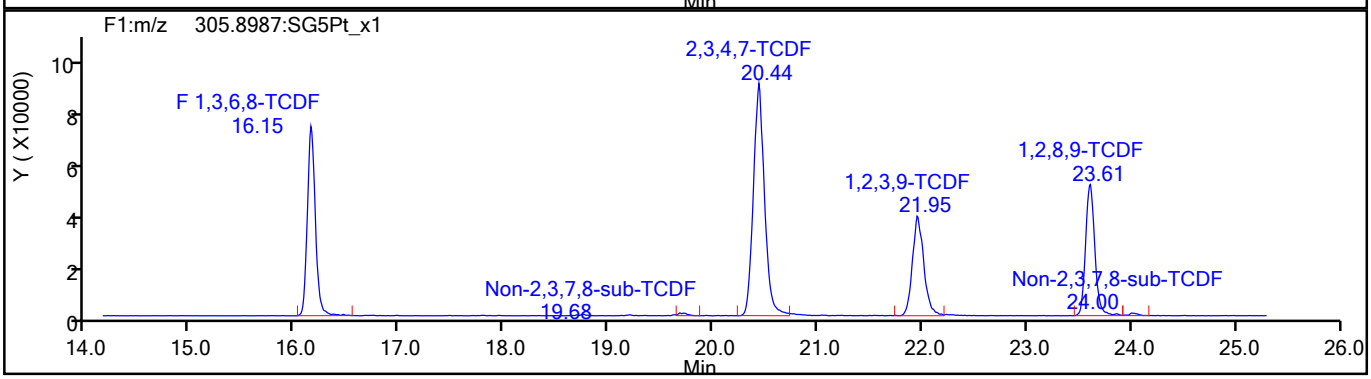

TCDF Standards

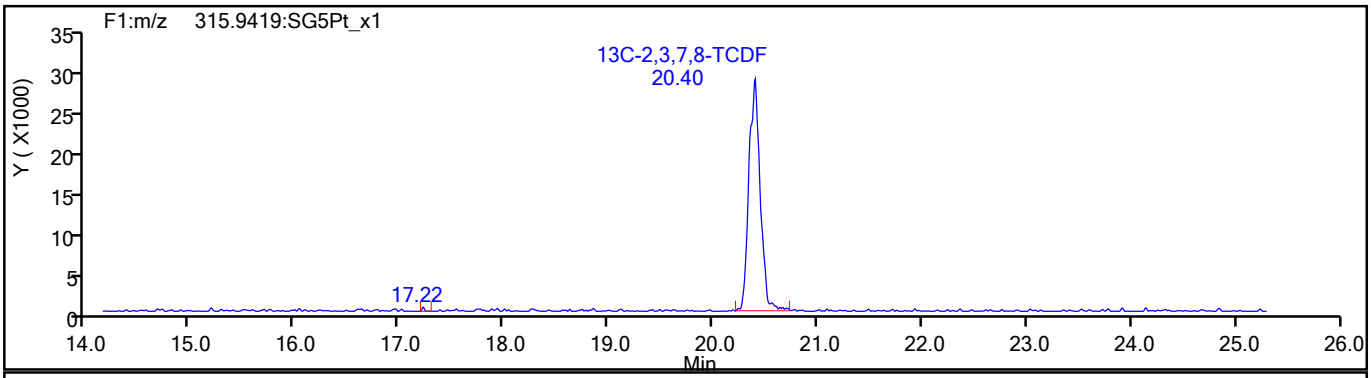

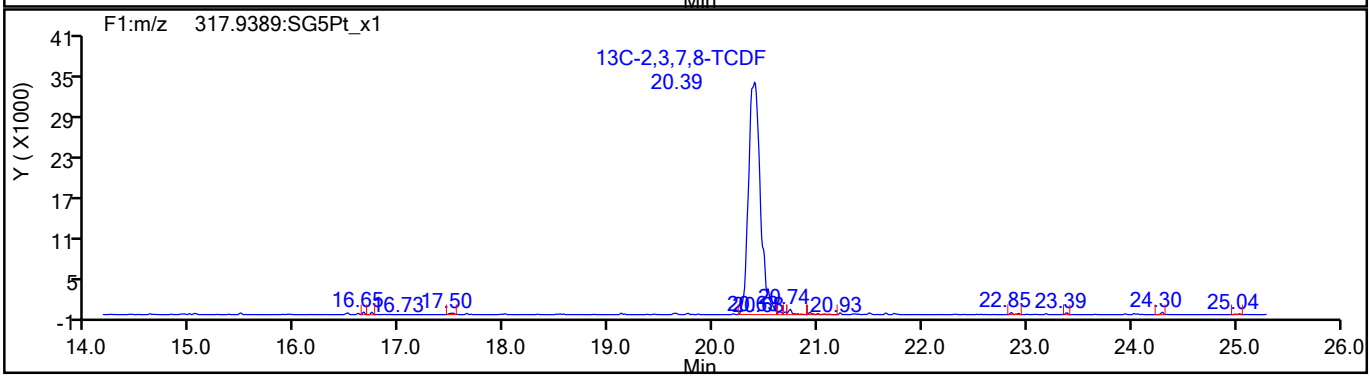

789488

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

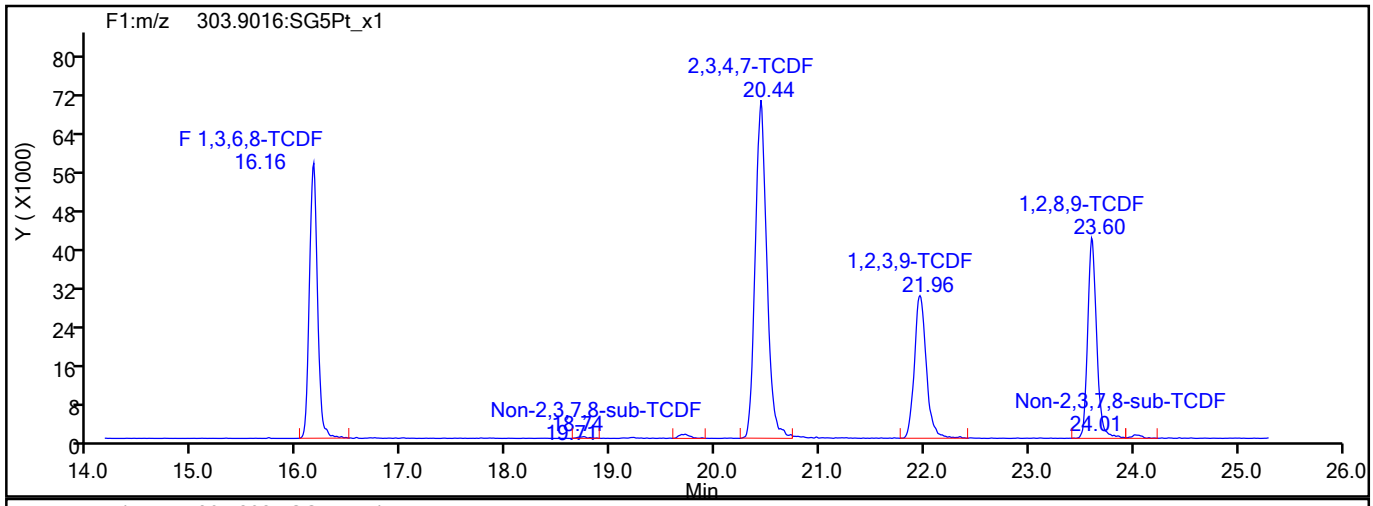

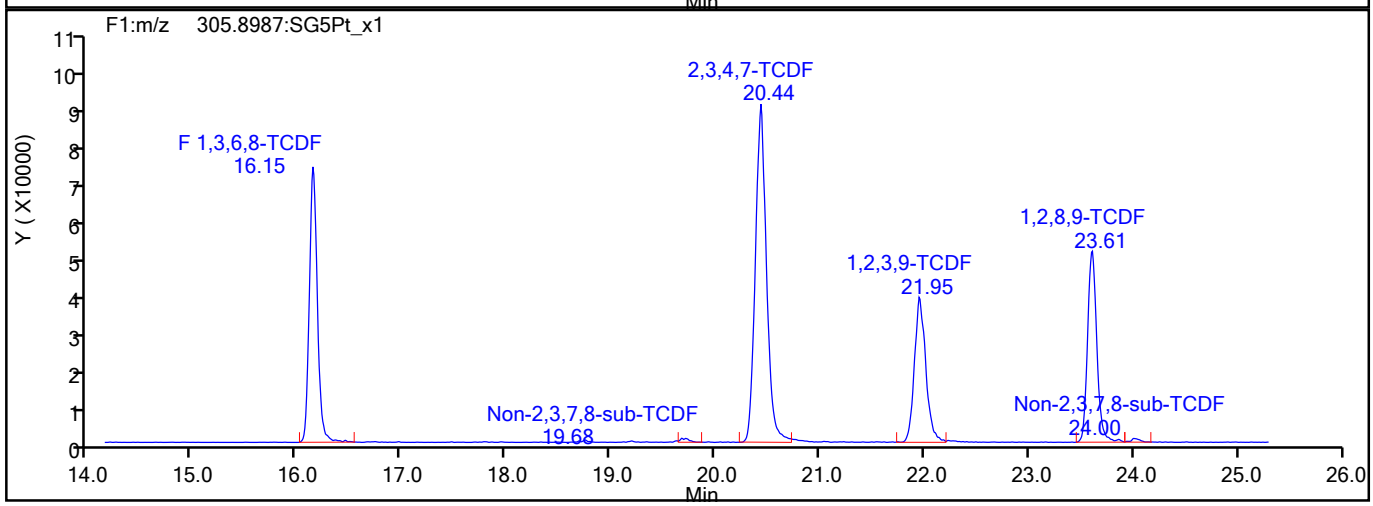

TCDF Interference Mass

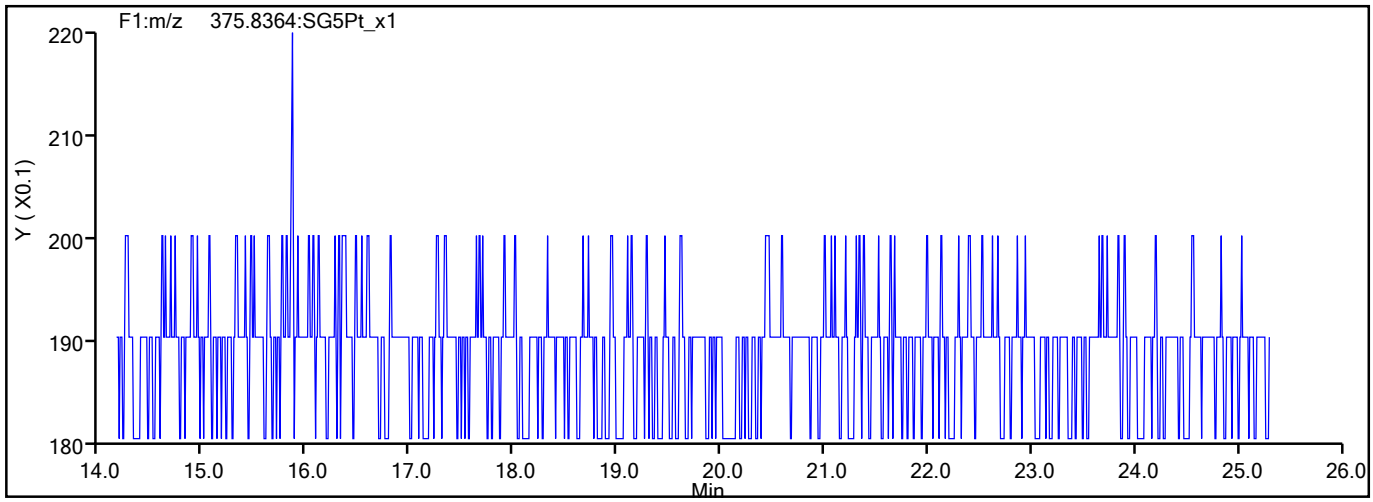

789489

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

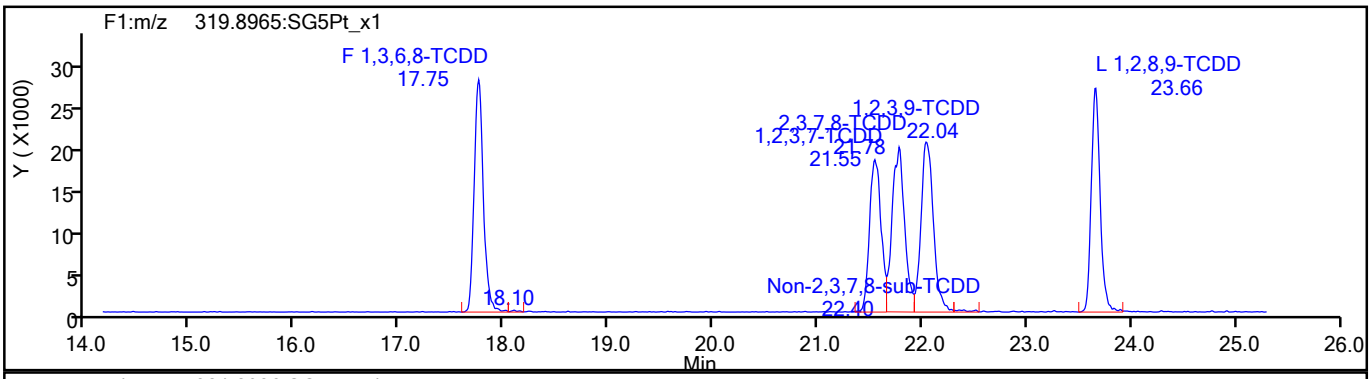

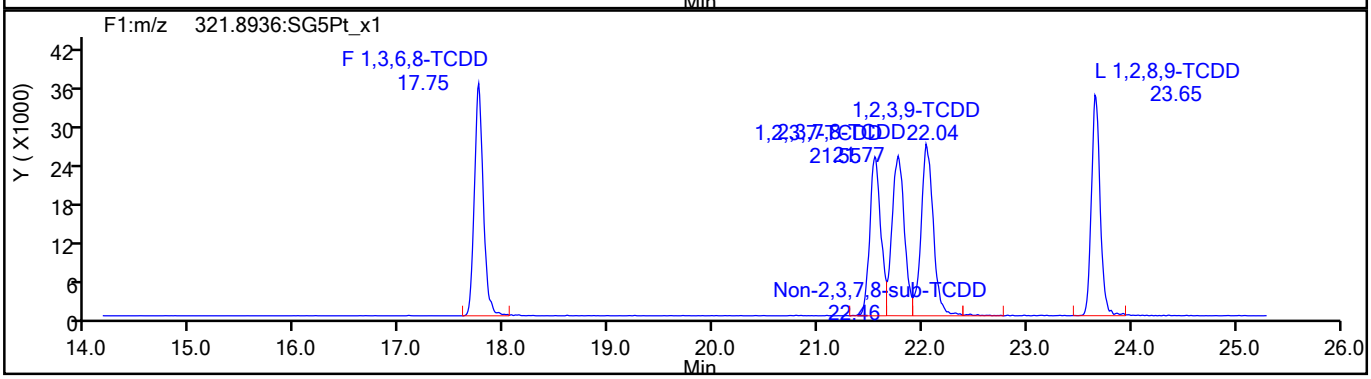

TCDD Standards

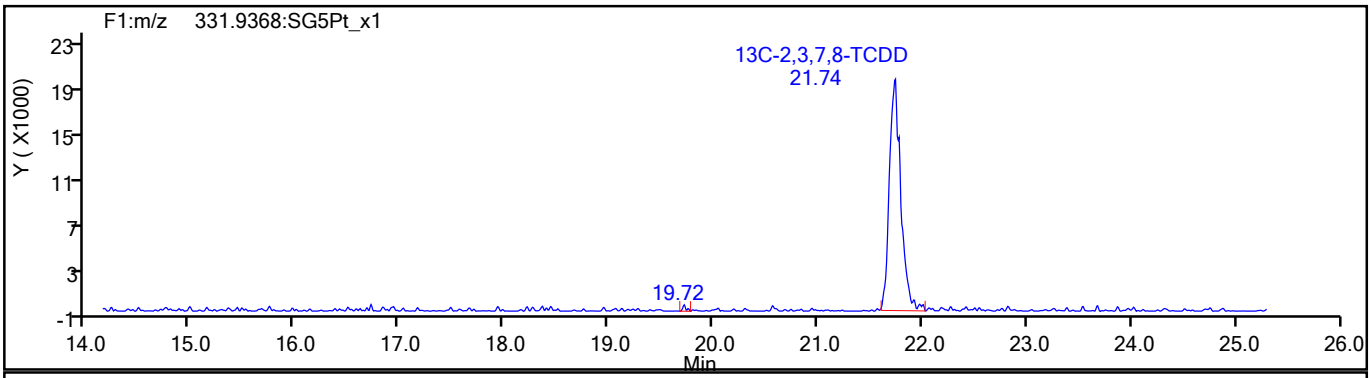

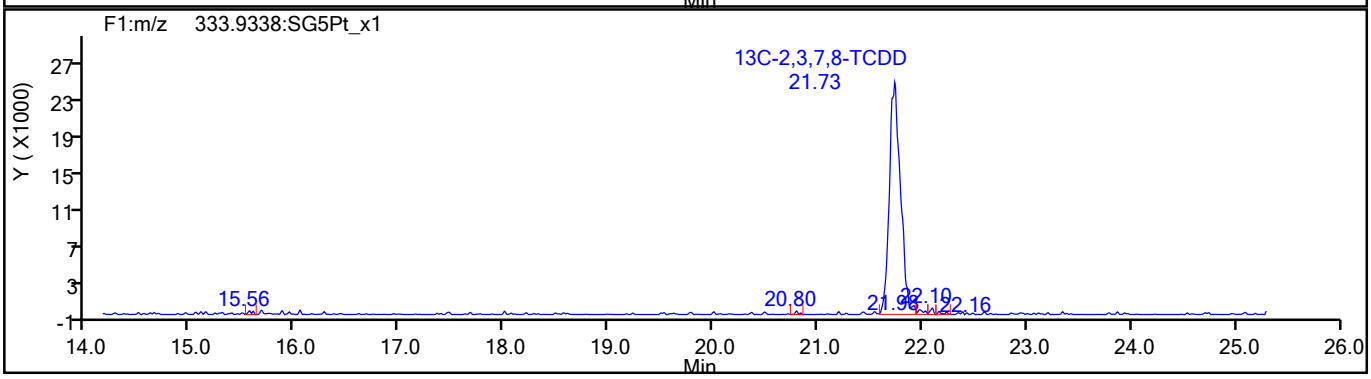

789490

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

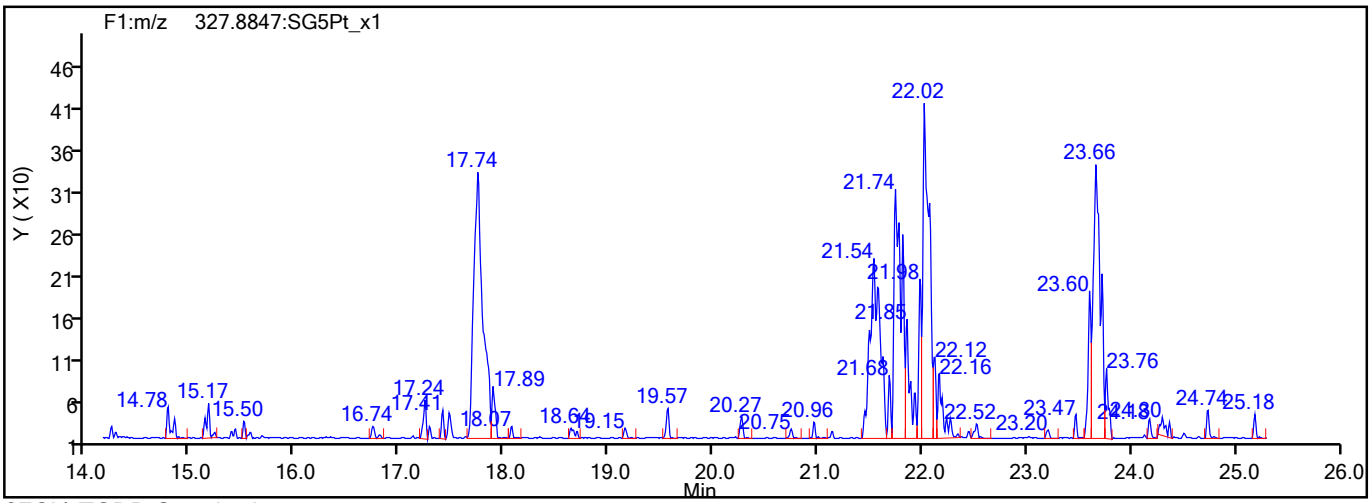

37Cl4-TCDD Standards

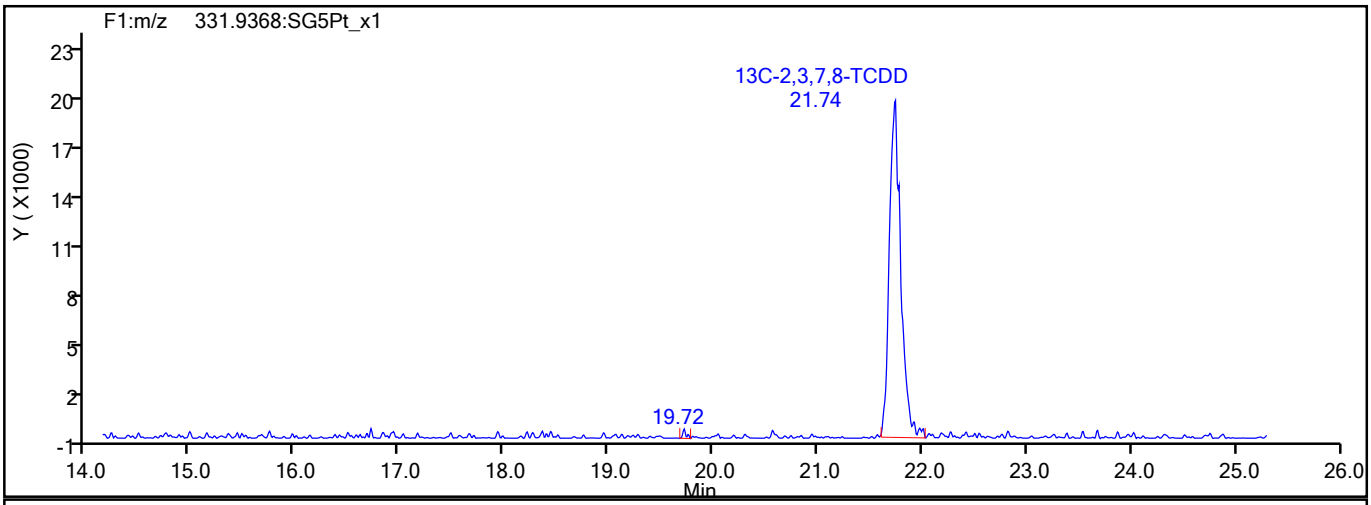

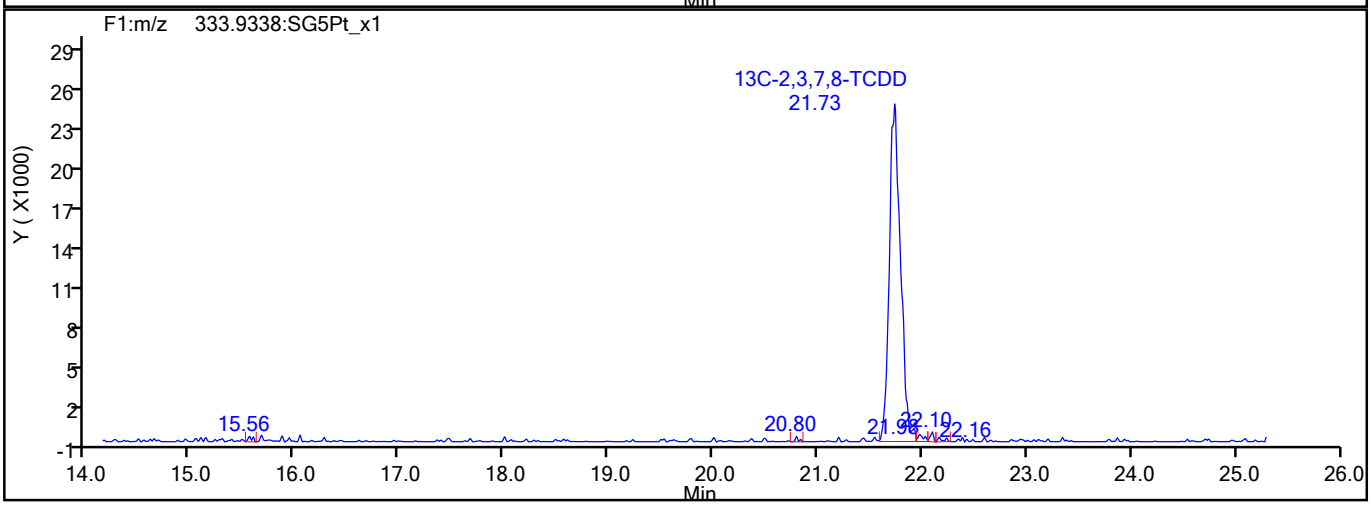

789491

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

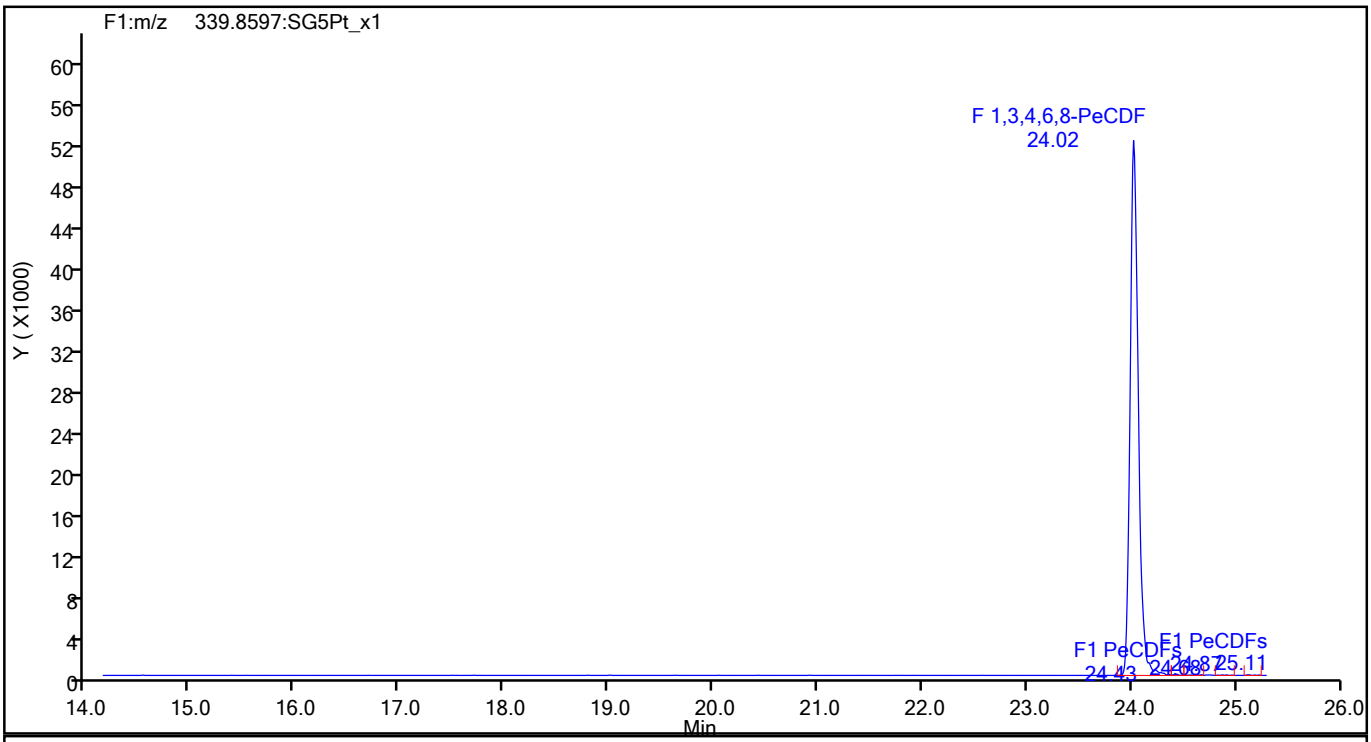

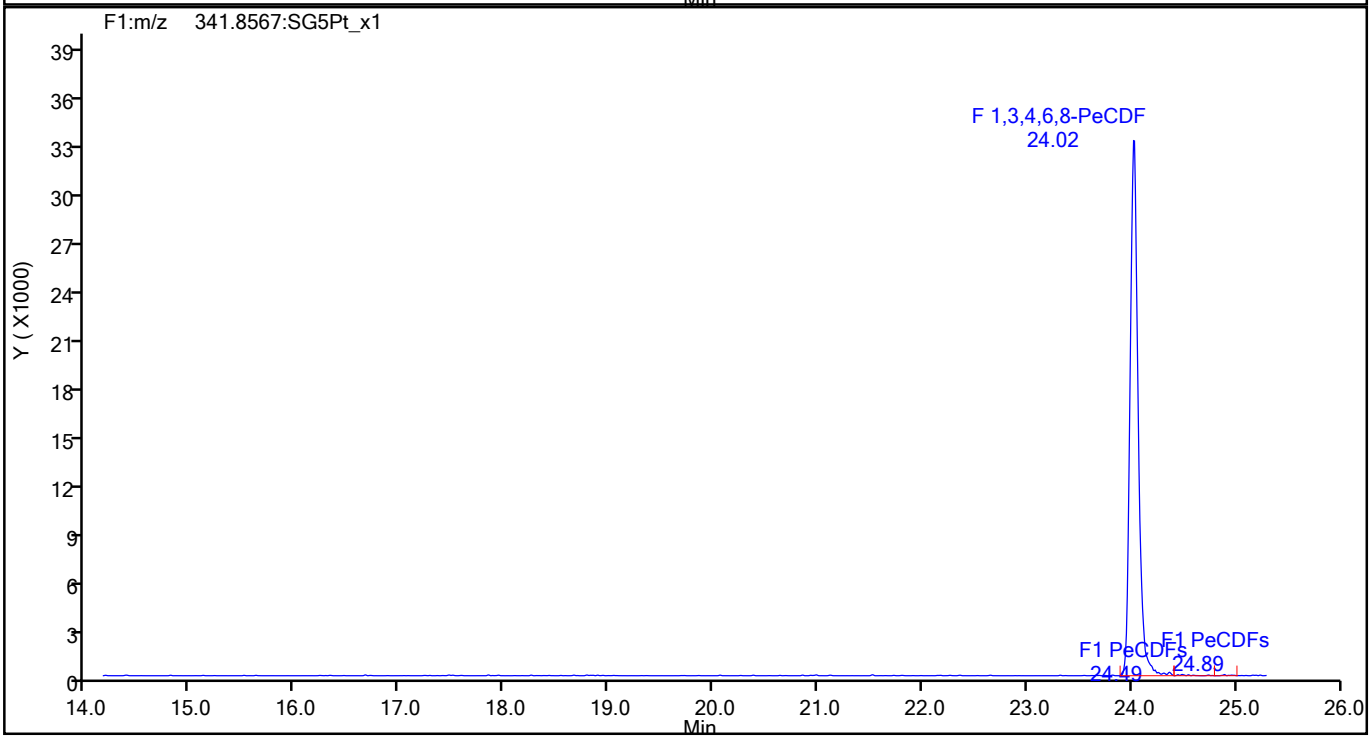

789492

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

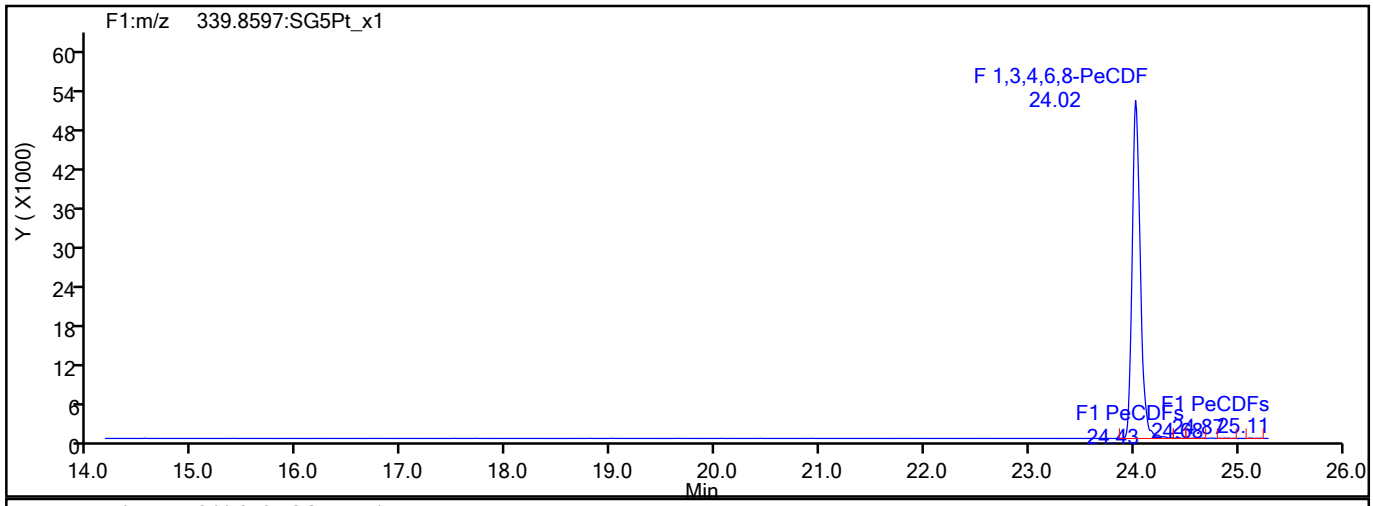

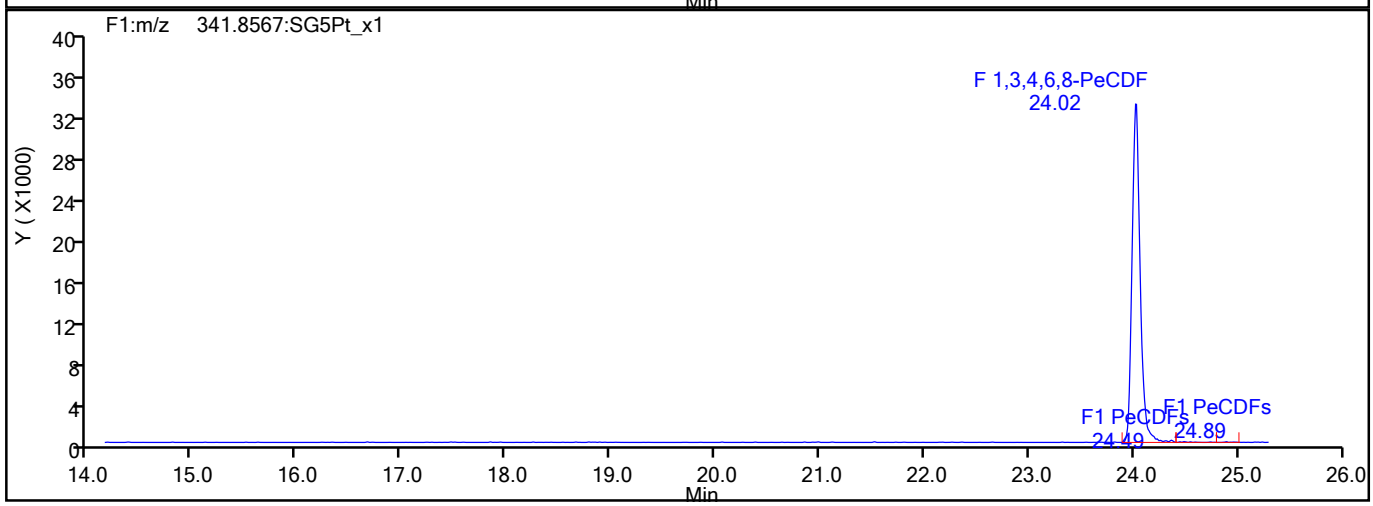

F1 PeCDFs Interference Mass

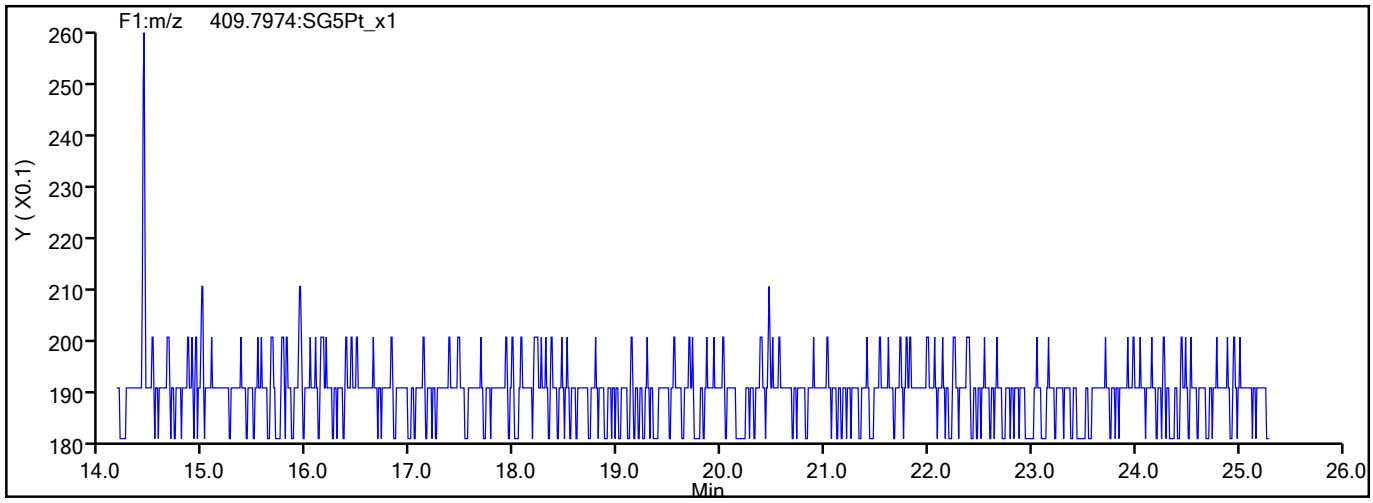

789493

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

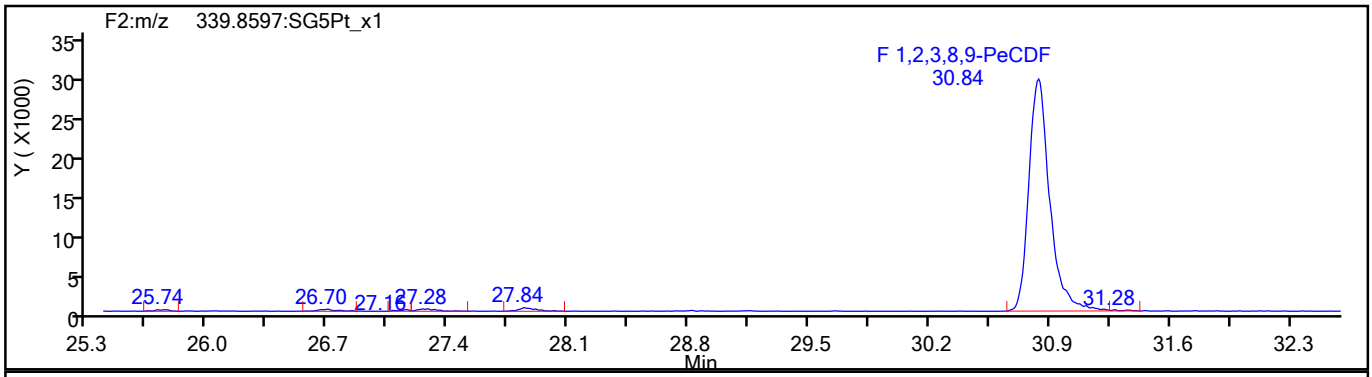

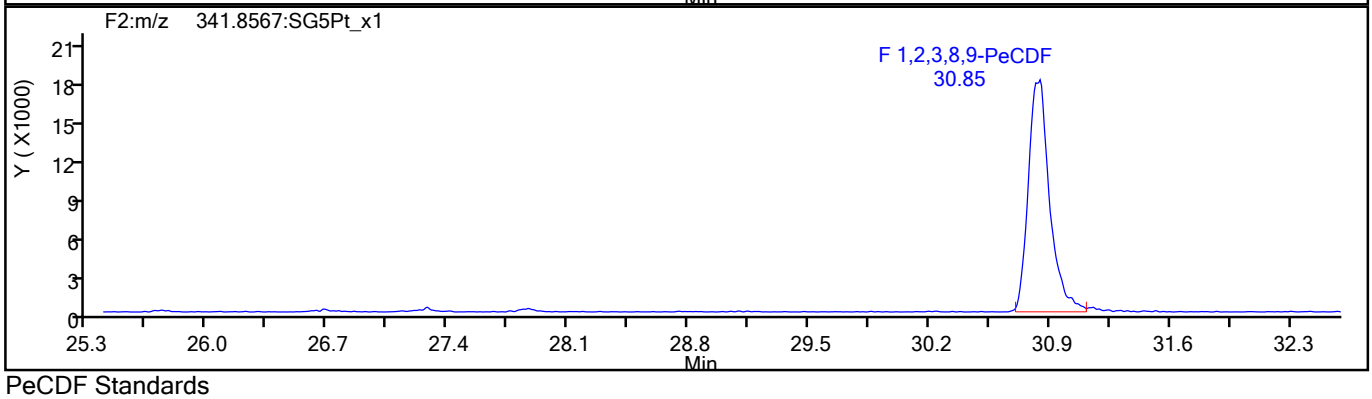

PeCDF Standards

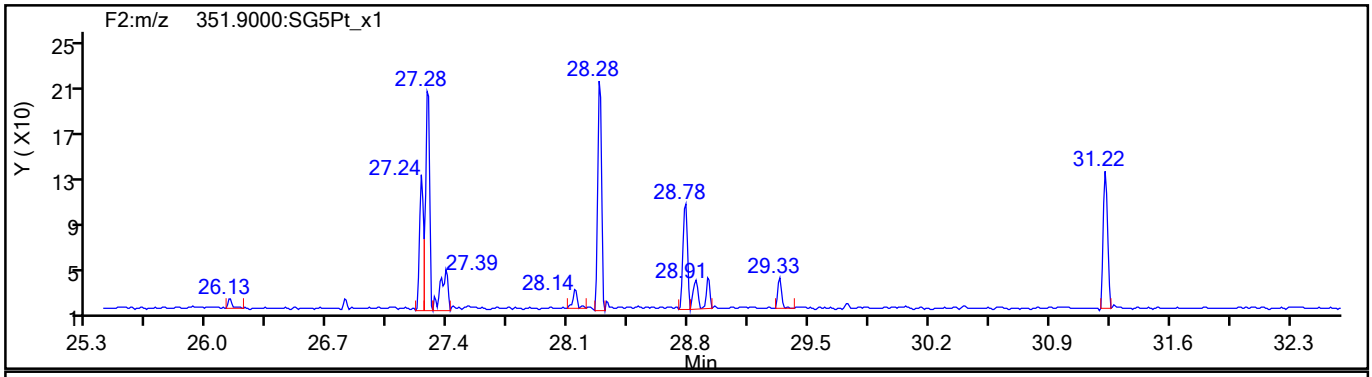

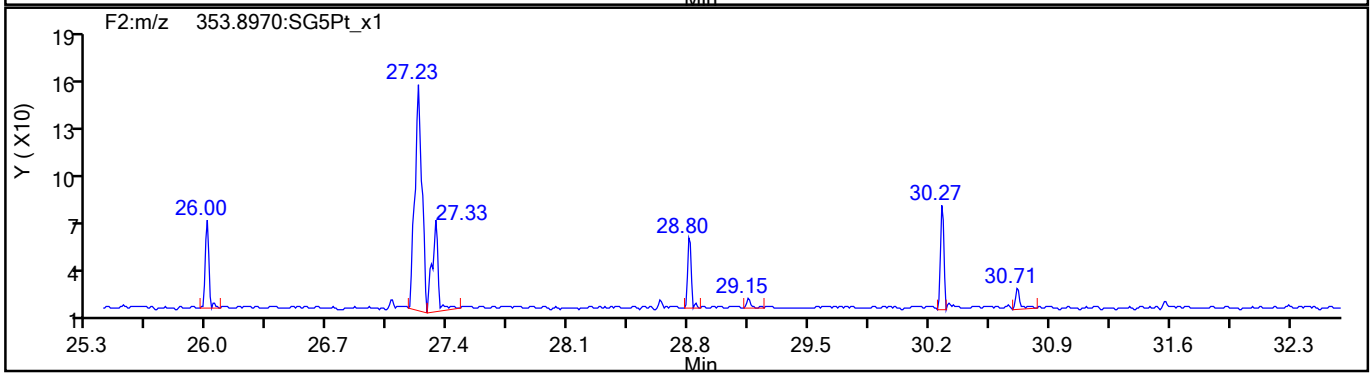

789494

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

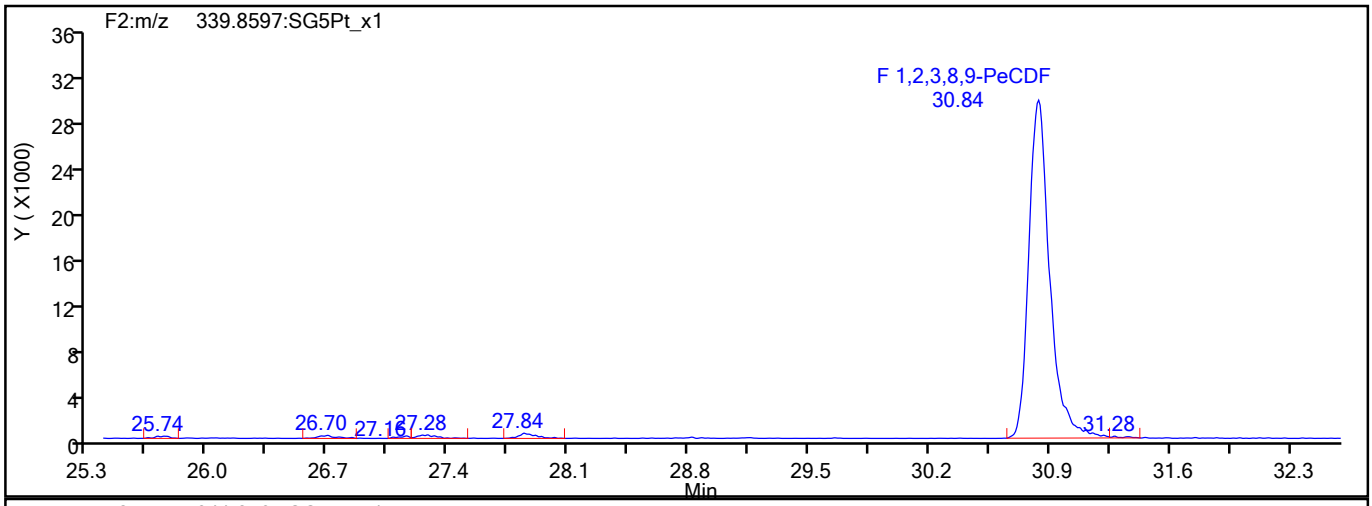

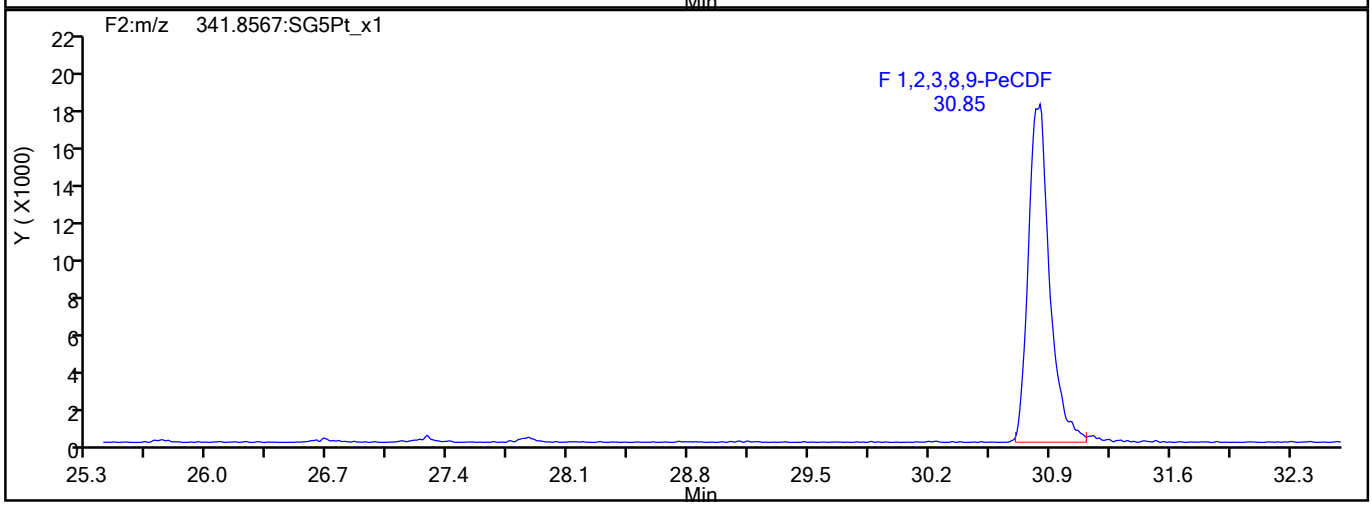

PeCDF Interference Mass

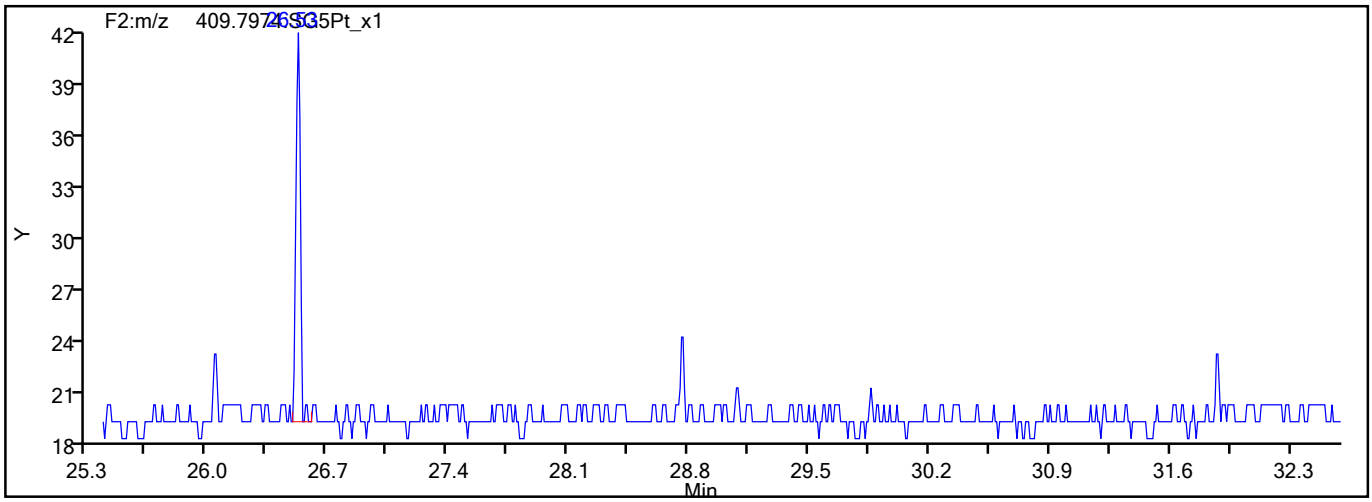

789495

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

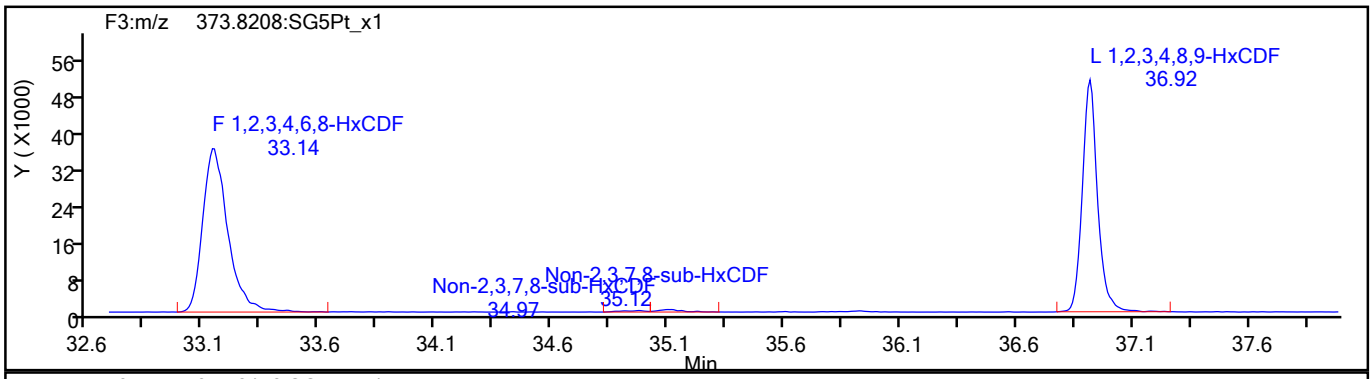

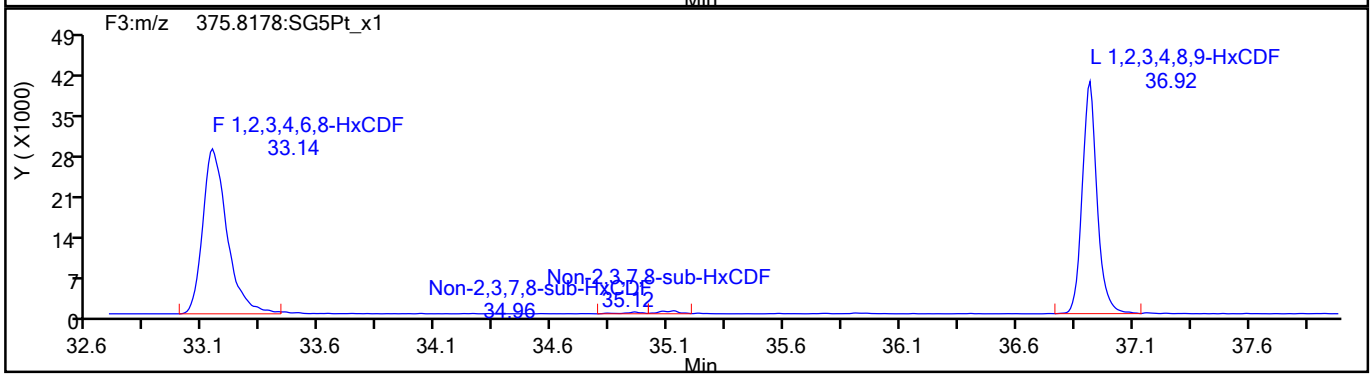

HxCDF Standards

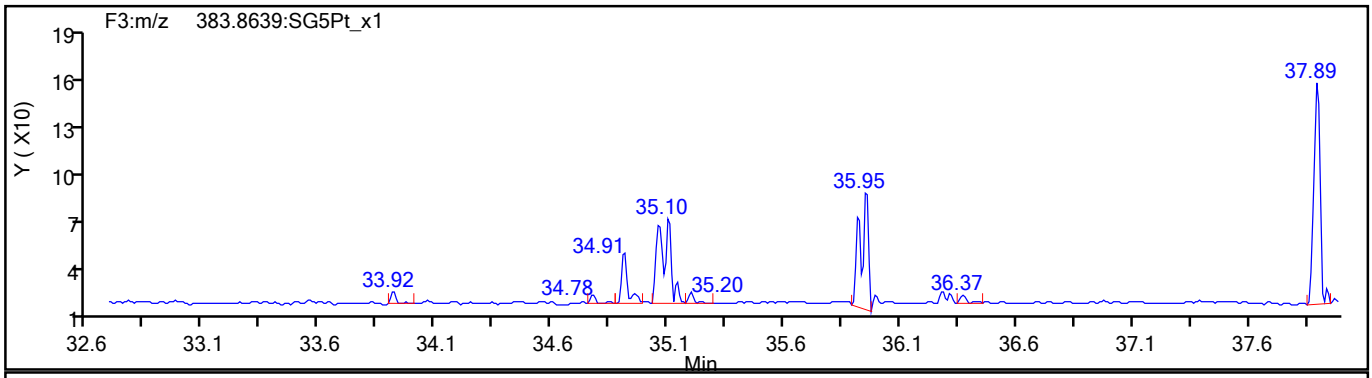

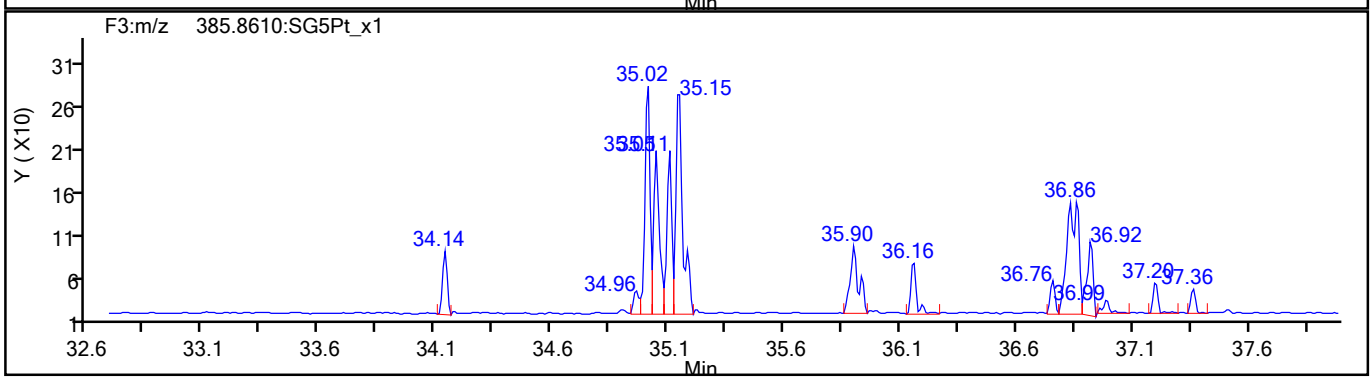

789496

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

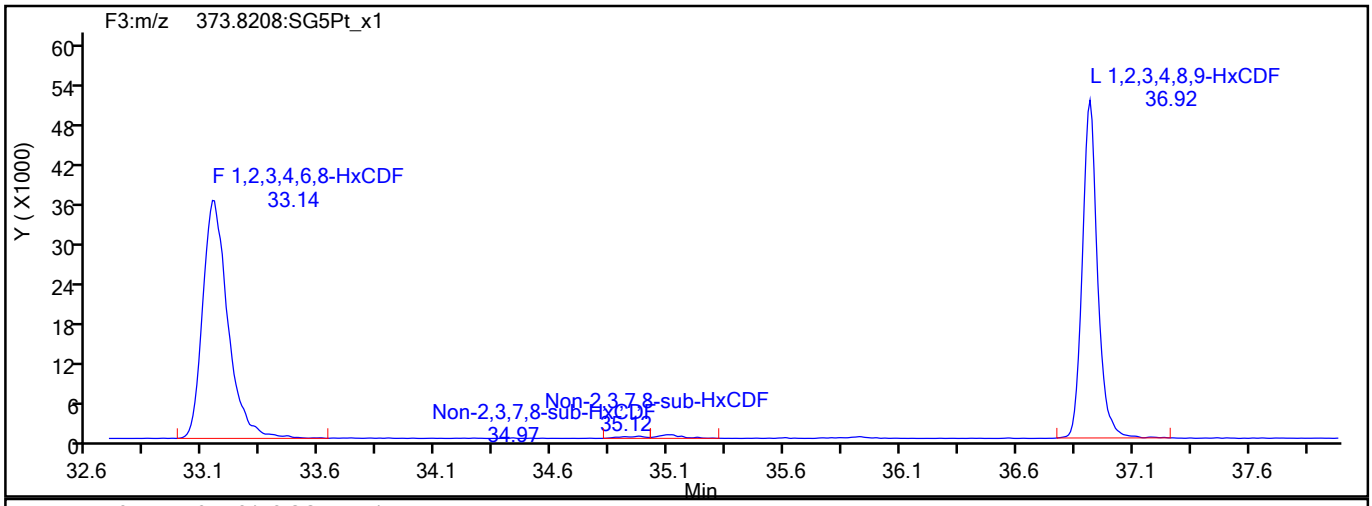

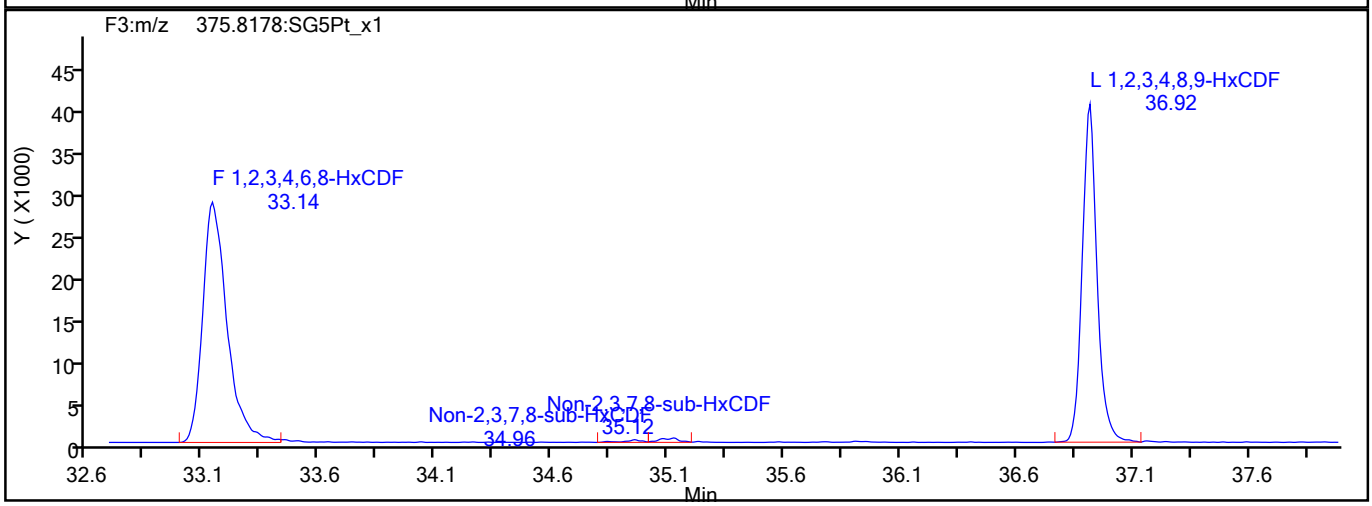

HxCDF Interference Mass

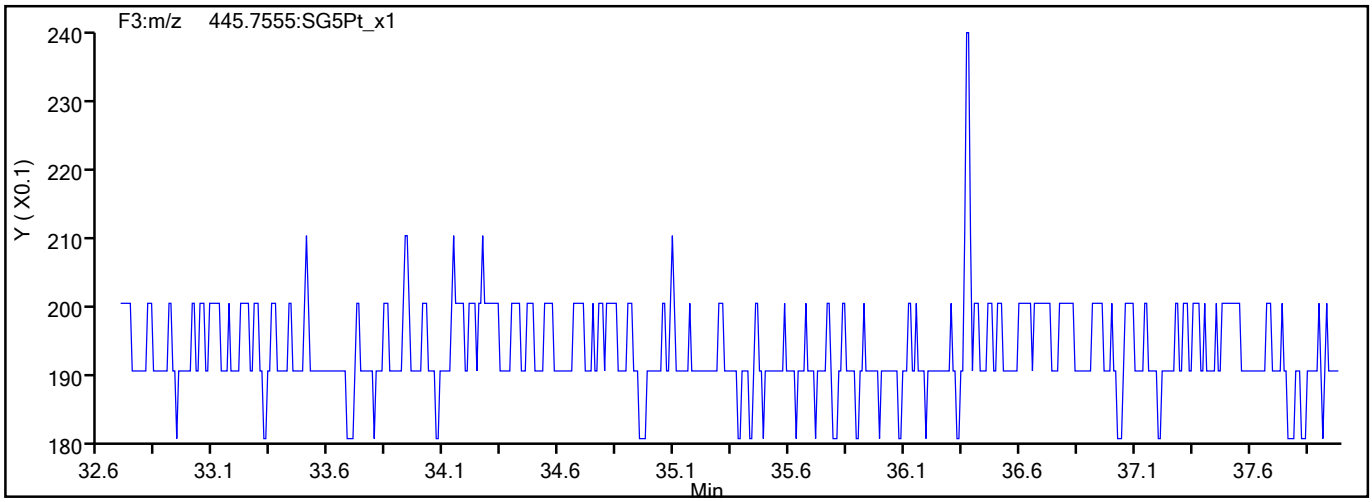

789497

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

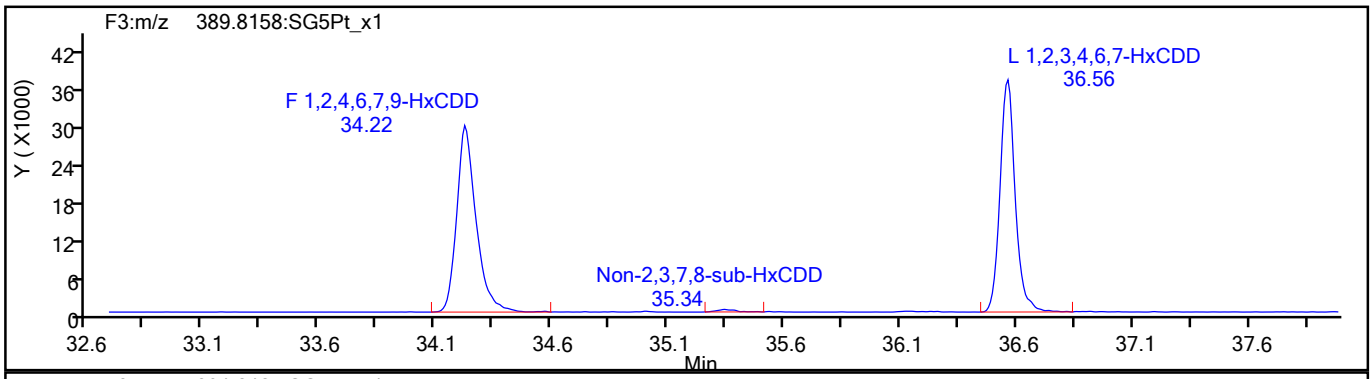

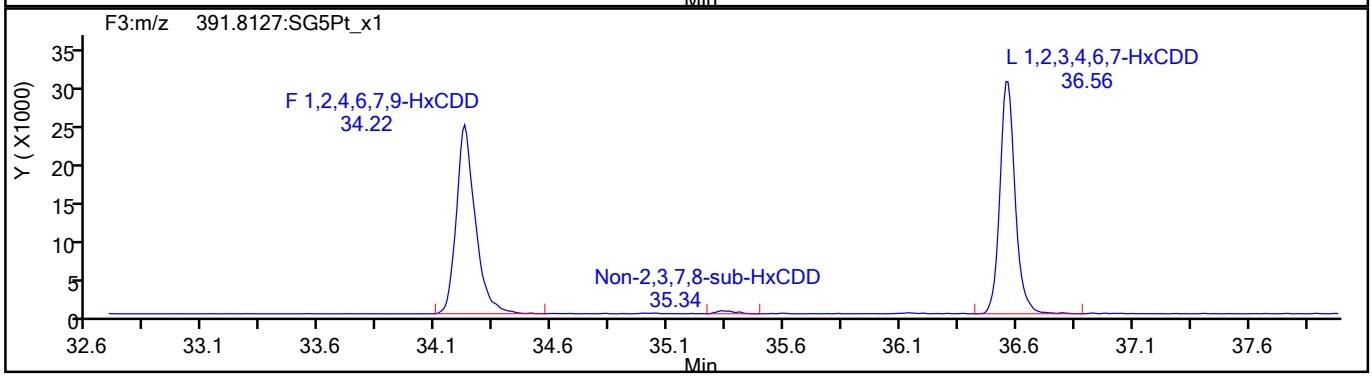

HxCDD Standards

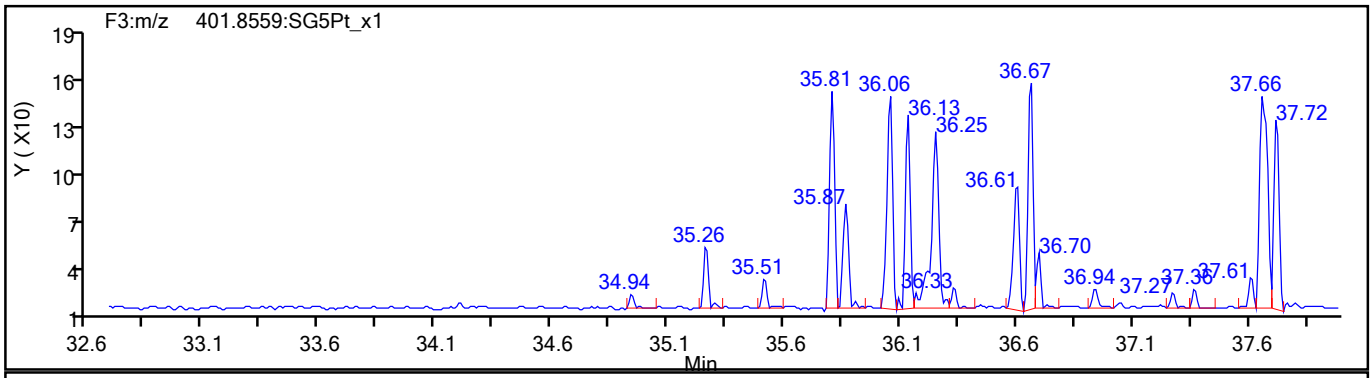

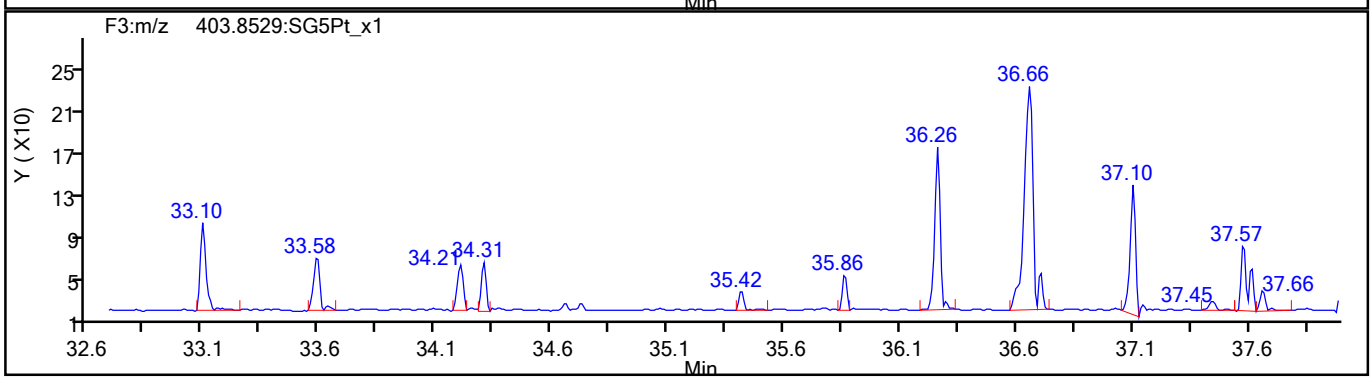

789498

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

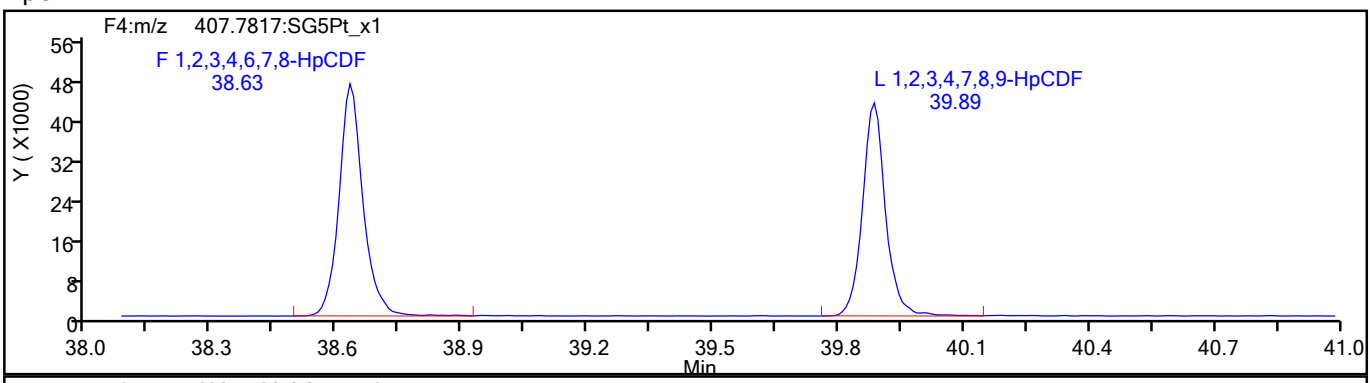

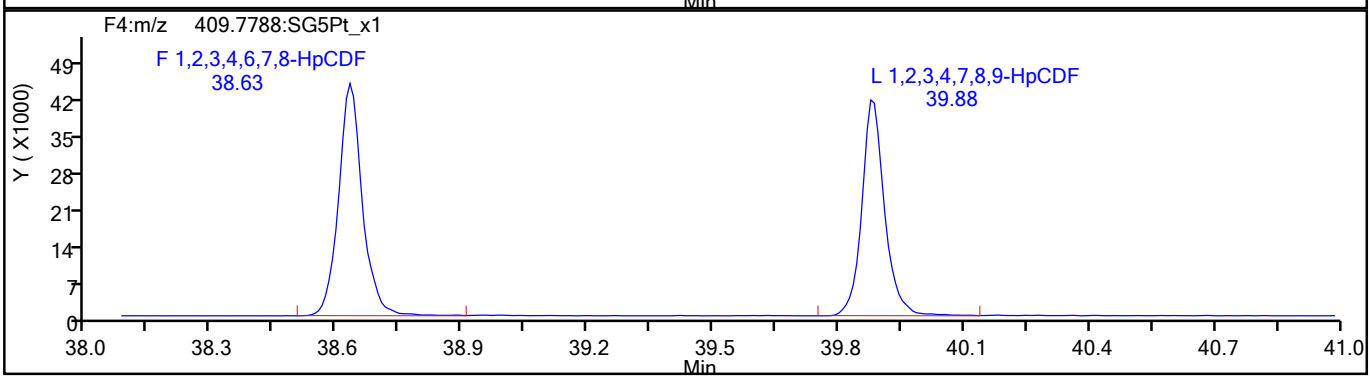

HpCDF Standards

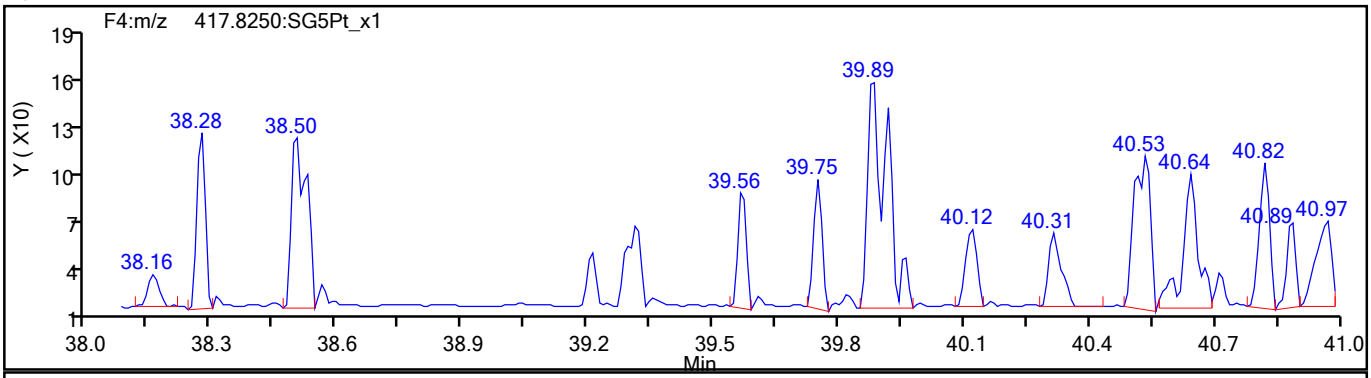

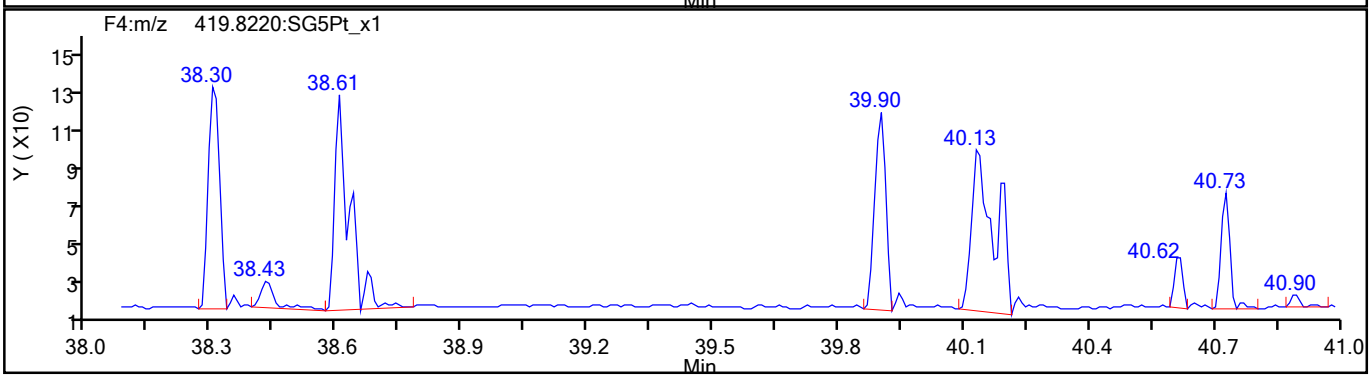

789499

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

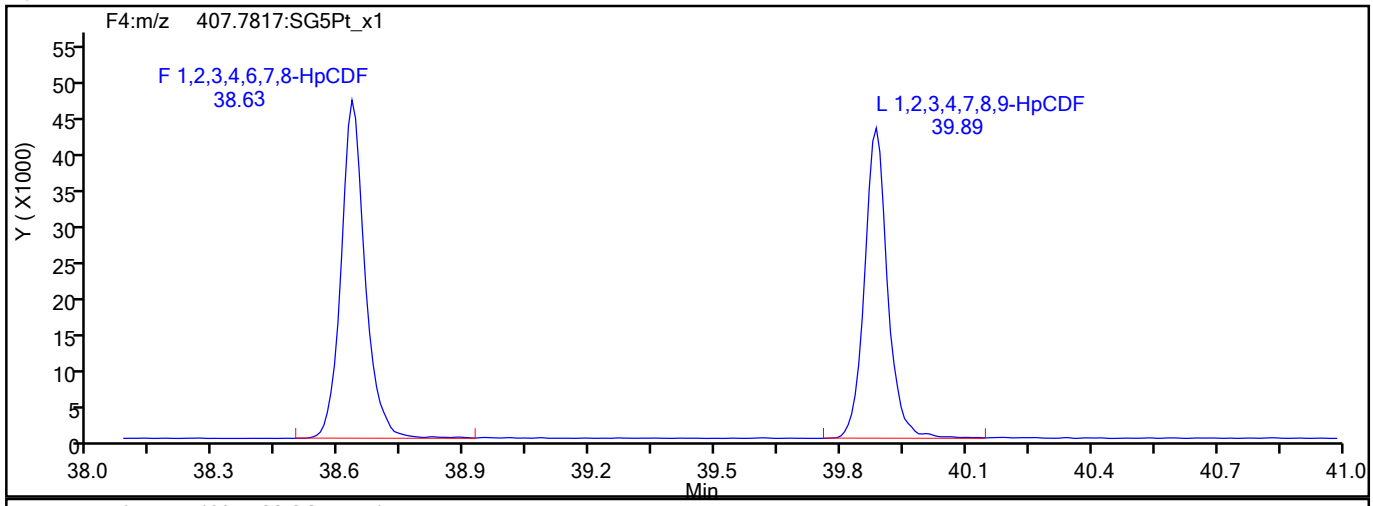

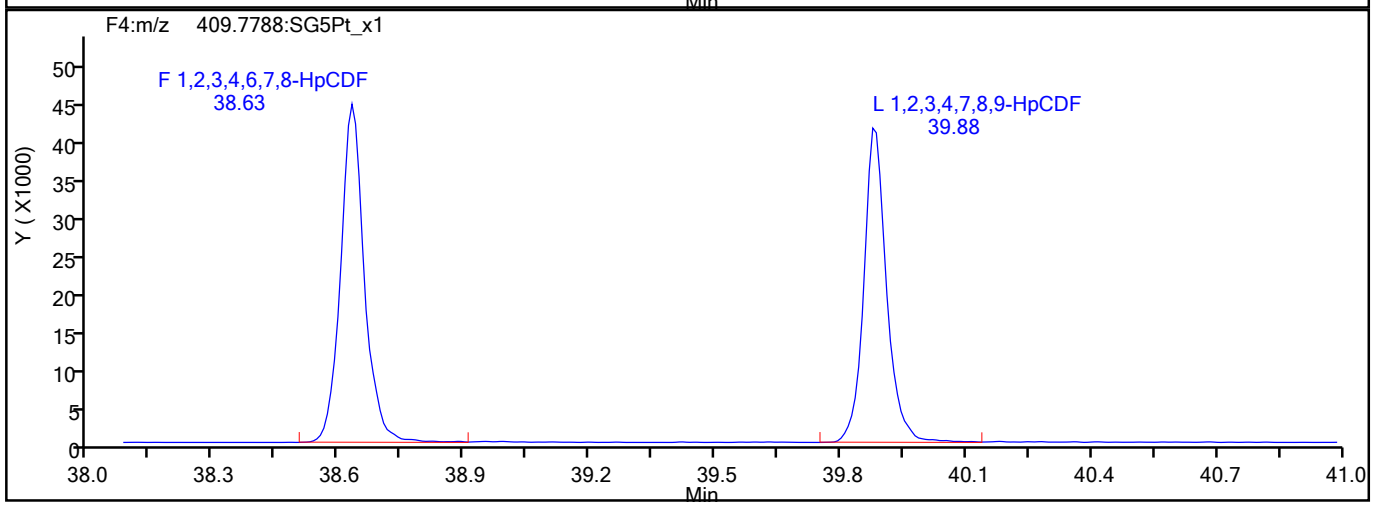

HpCDF Interference Mass

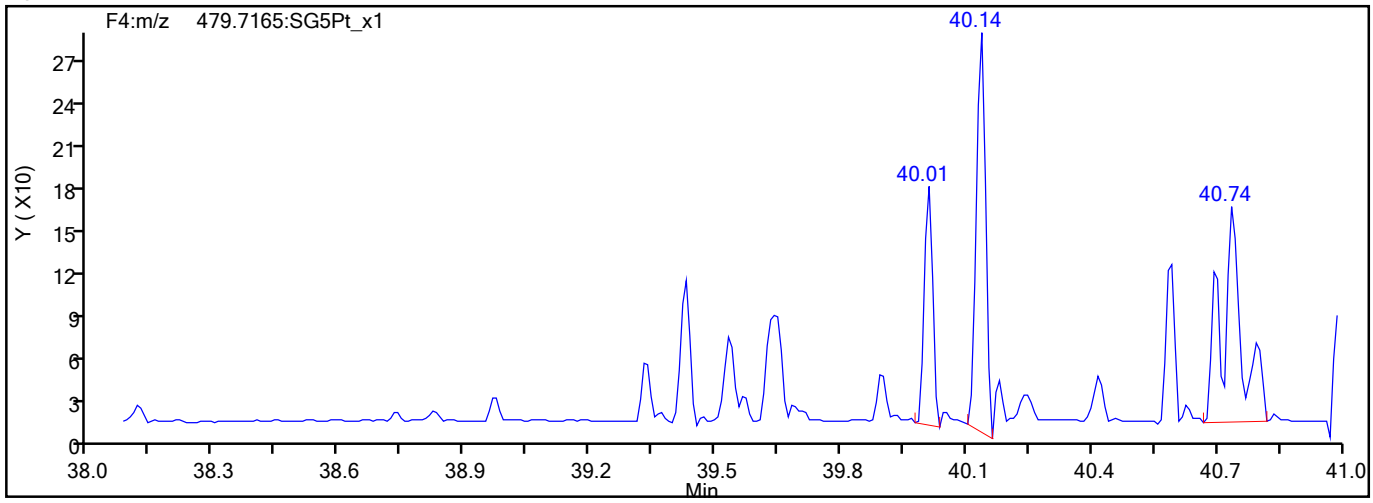

789500

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

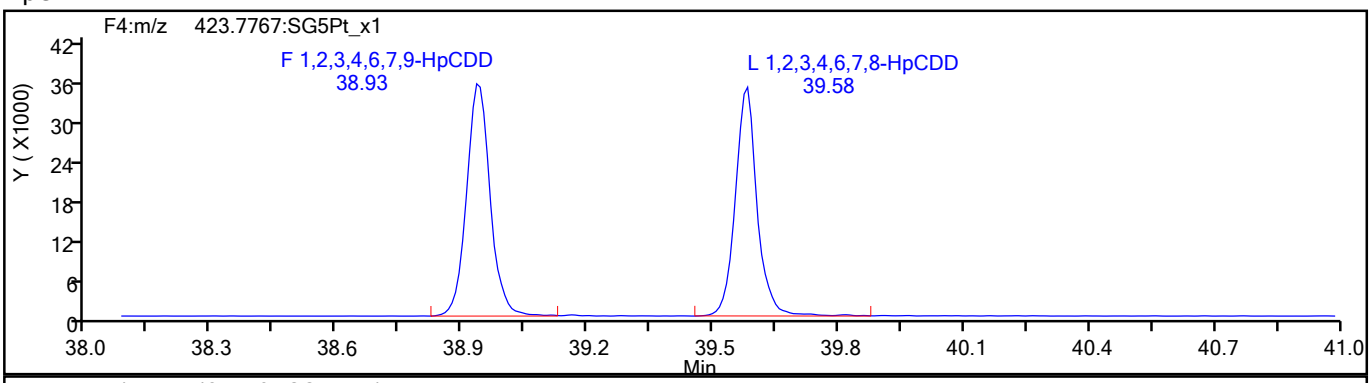

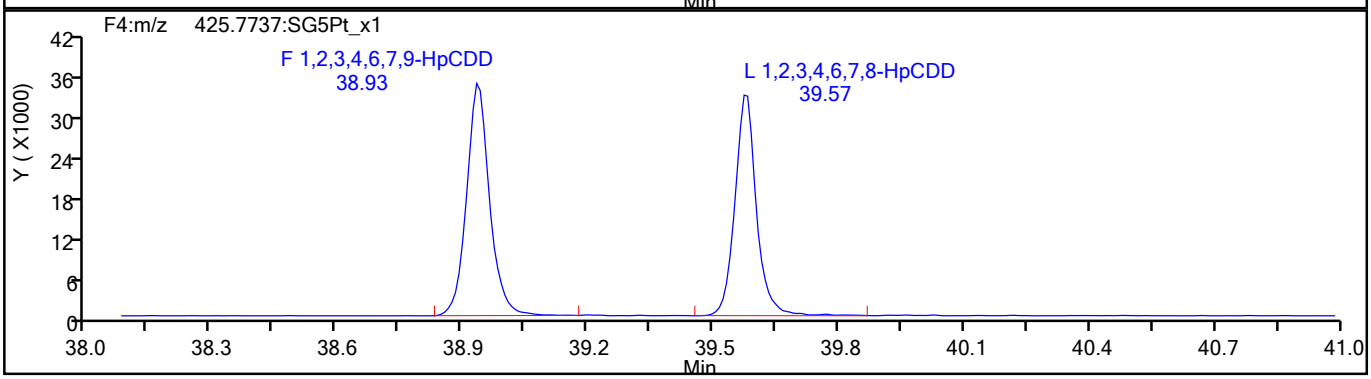

HpCDD Standards

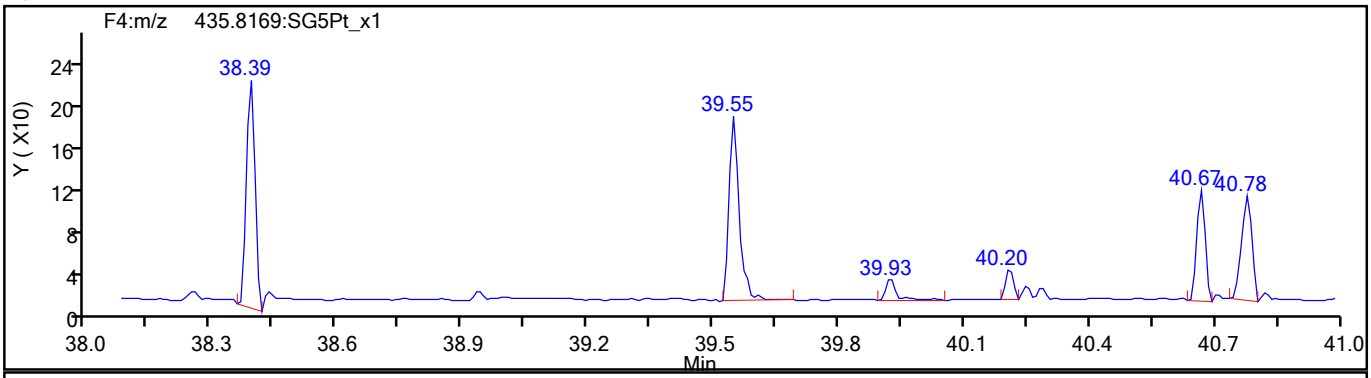

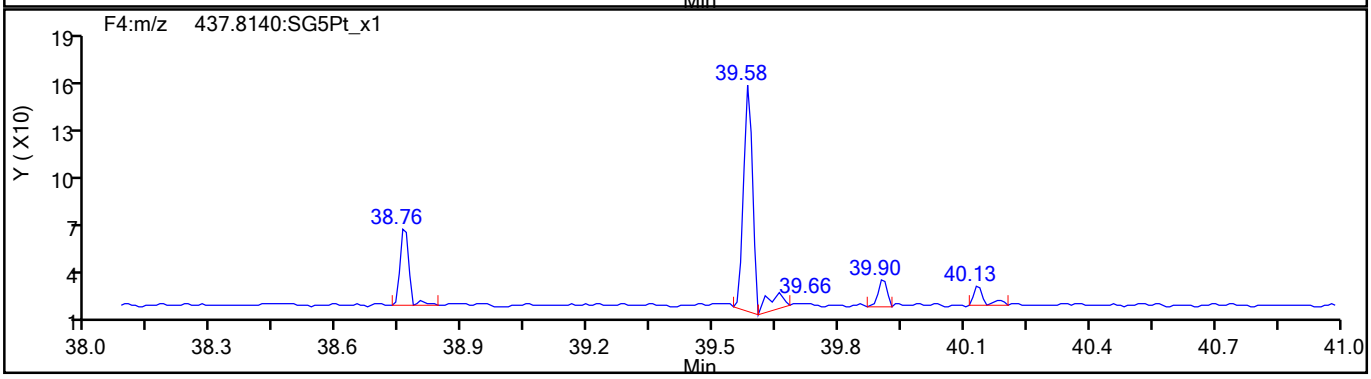

789501

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

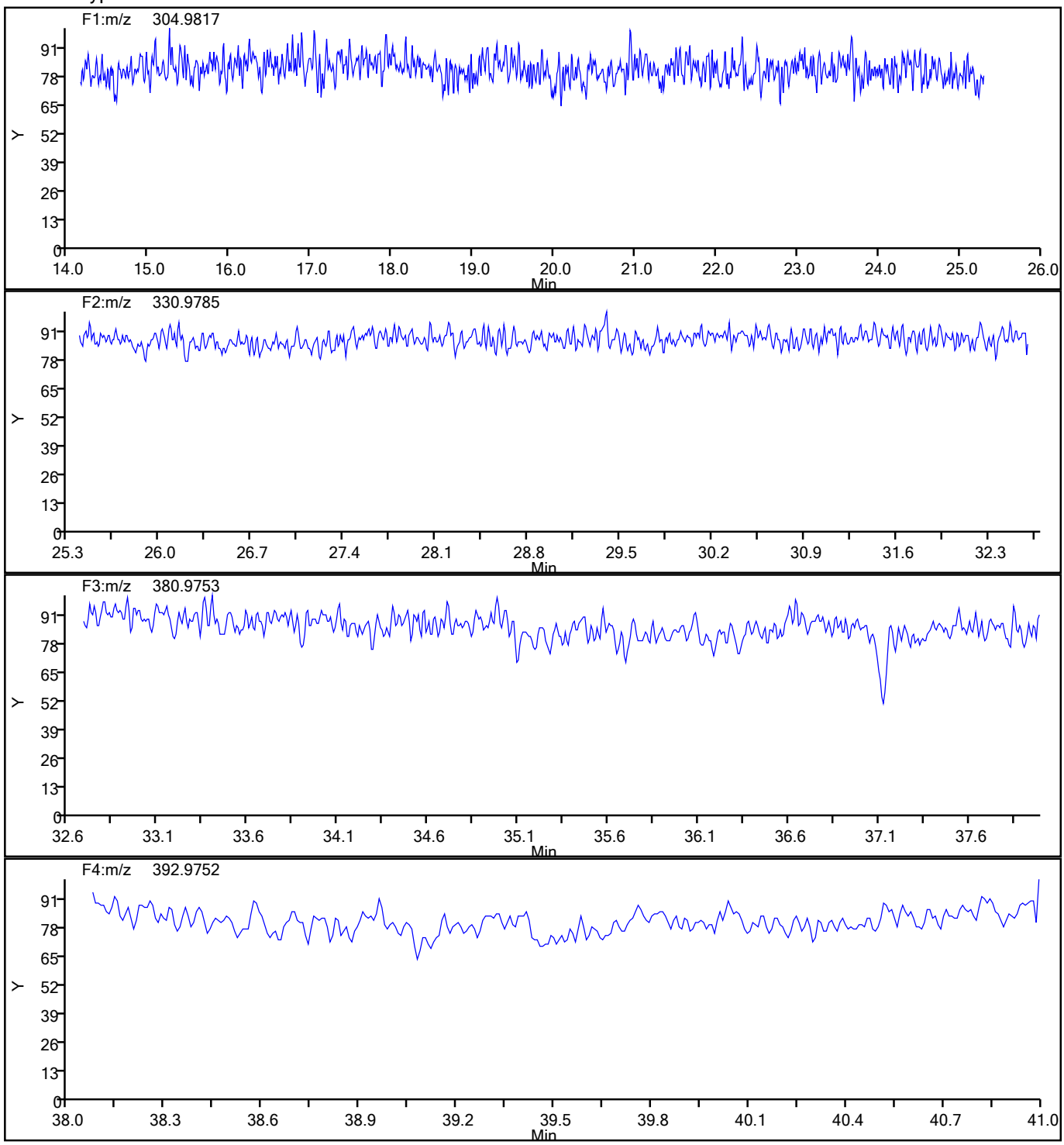

789502

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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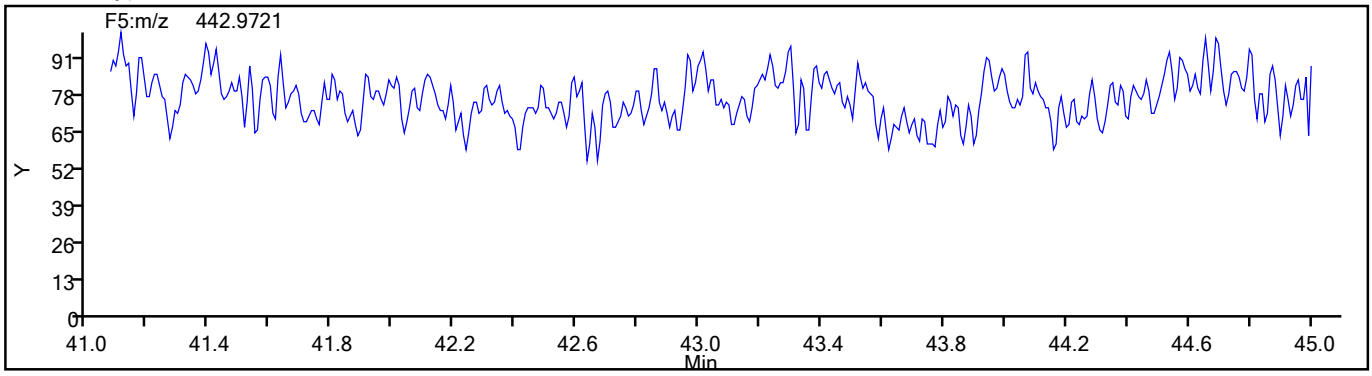

789503

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 13:59:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:08 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:37:44

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.414	82325	0.77	1.3459					0.00	
2,3,7,8-TCDF	20.465	207971	0.79	1.0802	93.5	93.5	0.3796	0.3796		
A Non-2,3,7,8-sub-TCDF	19.885	7691	0.77	1.0802	4.296	3.459	0.3796	0.998		RQ
S Total TCDF					97.8	97.0	0.3796	0.3796		RQ
D 13C-2,3,7,8-TCDD	21.782	52515	0.84	0.9317					0.00	
2,3,7,8-TCDD	21.842	61999	0.78	1.0753	43.9	43.9	0.8255	0.8255		
A Non-2,3,7,8-sub-TCDD	20.727	1960	0.77	1.0753	1.960	1.388	0.8255	1.388		RQ
S Total TCDD					45.9	45.3	0.8255	0.8255		RQ
A F1 PeCDFs	24.666	2431	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.176	71975	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.536	53316	1.56	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.073						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.427	1106	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.630	78952	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.876	71095	1.09	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.253						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.573	55161	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.253						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.121	116172	0.79							
1,3,6,8-TCDD	17.755	65500	0.83							
2,3,4,7-TCDF	20.465	207971	0.79							
1,2,3,7-TCDD	21.584	55945	0.75							
1,2,3,9-TCDF	22.005	88819	0.75							
1,2,3,9-TCDD	22.100	69760	0.77							
1,2,8,9-TCDF	23.649	94787	0.80							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.700	26243								
1,3,4,6,8-PeCDF	24.062	81931	1.50							
1,2,3,8,9-PeCDD	26.119	58169	1.69							
1,2,4,7,9-PeCDD	30.776	53316	1.56							a
1,2,3,8,9-PeCDF	30.944	68306	1.60							a
1,2,3,4,6,8-HxCDF	33.212	94798	1.31							
1,2,4,6,7,9-HxCDD	34.273	63223	1.25							
1,2,3,4,6,7-HxCDD	36.581	60887	1.16							
1,2,3,4,8,9-HxCDF	36.934	83283	1.29							
1,2,3,4,6,7,9-HpCDD	38.933	59370	1.04							

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 13:59:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:08 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:37:44

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.414	20.414	0	1.000	35682	5599	44	110	127		
317.9389	20.414	20.414	0	1.000	46643	6790	11	27	617	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.465	20.465	0	1.003	91905	11730	19	47	617		
305.8987	20.474	20.465	1	1.003	116066	13607	32	80	425	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.708	19.885	-11	0.965	1142	200	19	47	11		
	Empc Correction				920	249	19	47	13		
305.8987	19.742	19.885	-9	0.967	1195	324	32	80	10	0.96(0.65-0.89)	
303.9016	20.982	19.885	66	1.028	799	152	19	47	8		
305.8987	20.982	19.885	66	1.028	2231	334	32	80	10	0.36(0.65-0.89)	
	Empc Correction				1037	197	32	80	6		
303.9016	22.324	19.885	146	1.094	951	173	19	47	9		
305.8987	22.393	19.885	150	1.097	1268	204	32	80	6	0.75(0.65-0.89)	
303.9016	24.053	19.885	250	1.178	662	199	19	47	10		
305.8987	24.036	19.885	249	1.177	1302	181	32	80	6	0.51(0.65-0.89)	
	Empc Correction				859	258	32	80	8		
13C-2,3,7,8-TCDD											
331.9368	21.782	21.782	0	1.000	23953	3420	22	55	155		
333.9338	21.816	21.782	2	1.000	28562	4240	1	2	4240	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.842	21.842	0	1.003	27074	3242	31	77	105		
321.8936	21.816	21.842	-2	1.002	34925	4202	37	92	114	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.358	20.727	98	1.026	853	199	31	77	6		
321.8936	22.341	20.727	97	1.026	1914	264	37	92	7	0.45(0.65-0.89)	
	Empc Correction				1107	258	37	92	7		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A F1 PeCDFs											RQ
339.8597	24.268	24.666	-24	1.000	930	276	5	12	55		
341.8567	24.285	24.666	-23	1.000	557	133	3	7	44	1.67(1.32-1.78)	
339.8597	24.328	24.666	-20	1.000	574	173	5	12	35		
341.8567	24.397	24.666	-16	1.000	801	142	3	7	47	0.72(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.365	28.176	-49	1.000	493	76	7	17	11		
341.8567	27.323	28.176	-51	1.000	293	68	13	32	5	1.68(1.32-1.78)	
339.8597	30.944	28.176	166	1.000	42003	5021	7	17	717		
341.8567	30.952	28.176	166	1.000	26303	3283	13	32	253	1.60(1.32-1.78)	
339.8597	31.197	28.176	181	1.000	1166	325	7	17	46		
341.8567	31.155	28.176	178	1.000	921	220	13	32	17	1.27(1.32-1.78)	
339.8597	31.281	28.176	186	1.000	587	172	7	17	25		
341.8567	31.298	28.176	187	1.000	571	77	13	32	6	1.03(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	30.776	28.536	134	1.000	32522	3921	50	125	78		
357.8516	30.759	28.536	133	1.000	20794	2627	8	20	328	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						19	47			
375.8178	35.073						16	40			
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.385	35.427	-3	1.000	720	183	13	32	14		
391.8127	35.376	35.427	-3	1.000	494	115	10	25	12	1.46(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.630	38.630	0	1.000	40696	10611	27	67	393		
409.7788	38.630	38.630	0	1.000	38256	9931	15	37	662	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.876	39.876	0	1.000	37049	10134	27	67	375		
409.7788	39.876	39.876	0	1.000	34046	9582	15	37	639	1.09(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						27	67			
409.7788	39.253						15	37			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.573	39.573	0	1.000	28472	8182	15	37	545		
425.7737	39.573	39.573	0	1.000	26689	7927	18	45	440	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.253						15	37			
425.7737	39.253						18	45			
1,3,6,8-TCDF											
303.9016	16.121	16.121	0		51259	8761	19	47	461		
305.8987	16.129	16.121	1		64913	11170	32	80	349	0.79(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.755	17.755	0		29748	4895	31	77	158		
321.8936	17.772	17.755	1		35752	5364	37	92	145	0.83(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7-TCDF											
303.9016	20.465	20.465	0		91905	11730	19	47	617		
305.8987	20.474	20.465	1		116066	13607	32	80	425	0.79(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.584	21.584	0		24036	3484	31	77	112		
321.8936	21.601	21.584	1		31909	4496	37	92	122	0.75(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.005	22.005	0		38078	4978	19	47	262		
305.8987	22.005	22.005	0		50741	6292	32	80	197	0.75(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.100	22.100	0		30261	3819	31	77	123		
321.8936	22.117	22.100	1		39499	4583	37	92	124	0.77(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.649	23.649	0		42091	6762	19	47	356		
305.8987	23.640	23.649	-1		52696	8507	32	80	266	0.80(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.700	23.700	0		26243	4229	31	77	136		
1,3,4,6,8-PeCDF											
339.8597	24.062	24.062	0		49143	8715	5	12	1743		
341.8567	24.070	24.062	1		32788	6207	3	7	2069	1.50(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.119	26.119	0		36563	4902	50	125	98		
357.8516	26.136	26.119	1		21606	3187	8	20	398	1.69(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	30.776	30.776	0		32522	3921	50	125	78		a
357.8516	30.759	30.776	-1		20794	2627	8	20	328	1.56(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	30.944	30.944	0		42003	5021	7	17	717		a
341.8567	30.952	30.944	1		26303	3283	13	32	253	1.60(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.212	33.212	0		53745	7067	19	47	372		
375.8178	33.212	33.212	0		41053	5227	16	40	327	1.31(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.273	34.273	0		35102	5925	13	32	456		
391.8127	34.273	34.273	0		28121	4682	10	25	468	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.581	36.581	0		32760	7052	13	32	542		
391.8127	36.572	36.581	-1		28127	6383	10	25	638	1.16(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.934	36.934	0		46978	11482	19	47	604		
375.8178	36.926	36.934	-1		36305	9134	16	40	571	1.29(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.933	38.933	0		30305	8179	15	37	545		
425.7737	38.933	38.933	0		29065	7829	18	45	435	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	82325	12389

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	82325	12389

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.708	1142	200	1195	324	1.05	0.96	RQ
19.708	920	249	1195	324	0.9513		Empc Correction
20.982	799	152	2231	334	1.36	0.36	RQ
20.982	799	152	1037	197	0.8258		Empc Correction
22.324	951	173	1268	204	1.00	0.75	
24.053	662	199	1302	181	0.8834	0.51	RQ
24.053	662	199	859	258	0.6842		Empc Correction
Signal Totals:							
	3332	773	4359	983			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9550	1767				0.59	RQ
	7691	1756					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.296 = (9550 * 40.000) / (82325 * 1.080)
Empc Amount: 3.459 = (7691 * 40.000) / (82325 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

Non-2,3,7,8-sub-TCDD, RT: 20.727

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	40.000	52515	7660

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		40.000	52515	7660

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.358	853	199	1914	264	1.96	0.45	RQ
22.358	853	199	1107	258	1.39		Empc Correction
Signal Totals:							
	853	199	1107	258			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2767	463				0.45	RQ
	1960	457					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.960 = (2767 * 40.000) / (52515 * 1.075)

Empc Amount: 1.388 = (1960 * 40.000) / (52515 * 1.075)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

F1 PeCDFs, RT: 24.666

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.268	930	276	557	133		1.67	
24.328	574	173	801	142		0.72	R
Signal Totals:							
	1504	449	1358	275			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2862	724				1.11	RQ
	2431	693					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (2862 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (2431 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.365	493	76	293	68		1.68	
30.944	42003	5021	26303	3283		1.60	
31.197	1166	325	921	220		1.27	R
31.281	587	172	571	77		1.03	R
Signal Totals:							
	44249	5594	28088	3648			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	72337	9242				1.58	RQ
	71975	9264					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (72337 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (71975 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.776	32522	3921	20794	2627		1.56	
Signal Totals:							
	32522	3921	20794	2627			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	53316	6548				1.56	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (53316 * 0.0) / (0 * 0.000)

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

Non-2,3,7,8-sub-HxCDD, RT: 35.427

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.385	720	183	494	115		1.46	R
Signal Totals:							
	720	183	494	115			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1214	298				1.46	RQ
	1106	257					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1214 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (1106 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

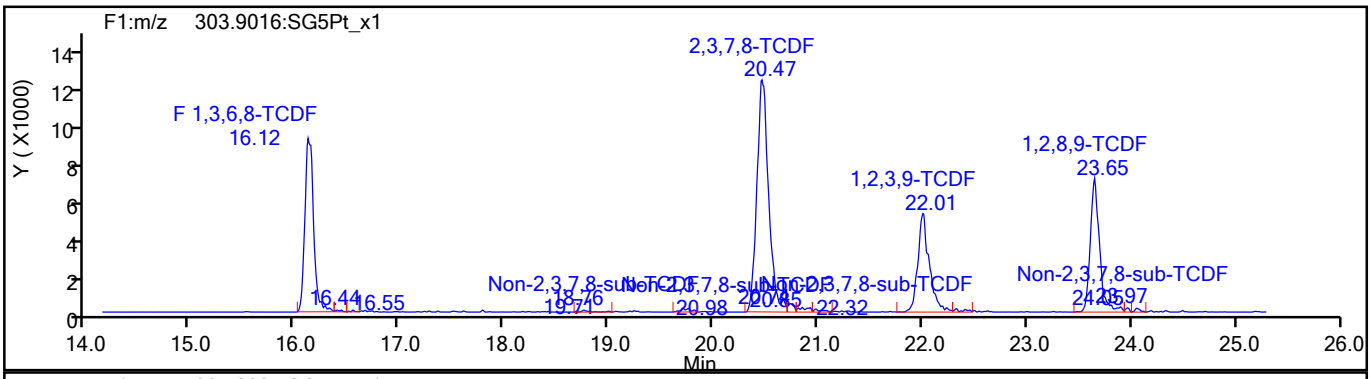

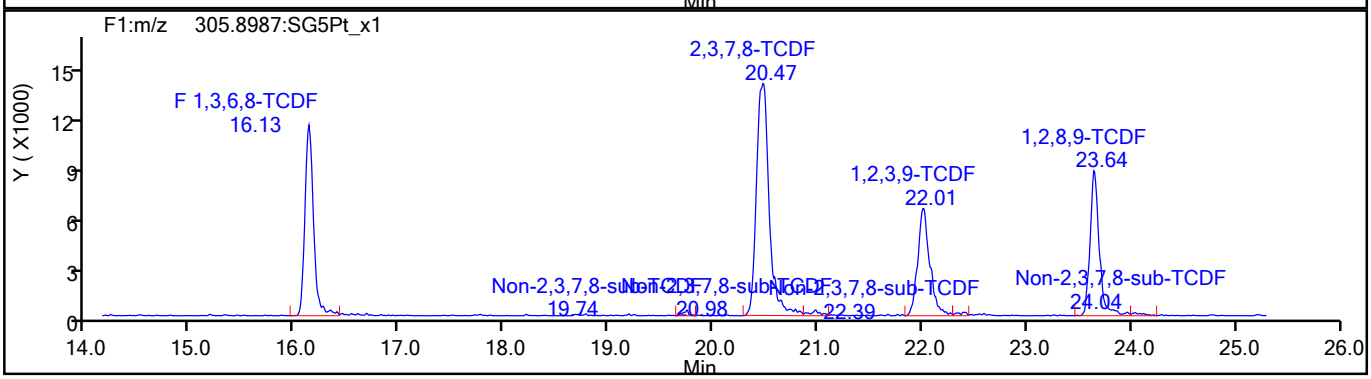

TCDF Standards

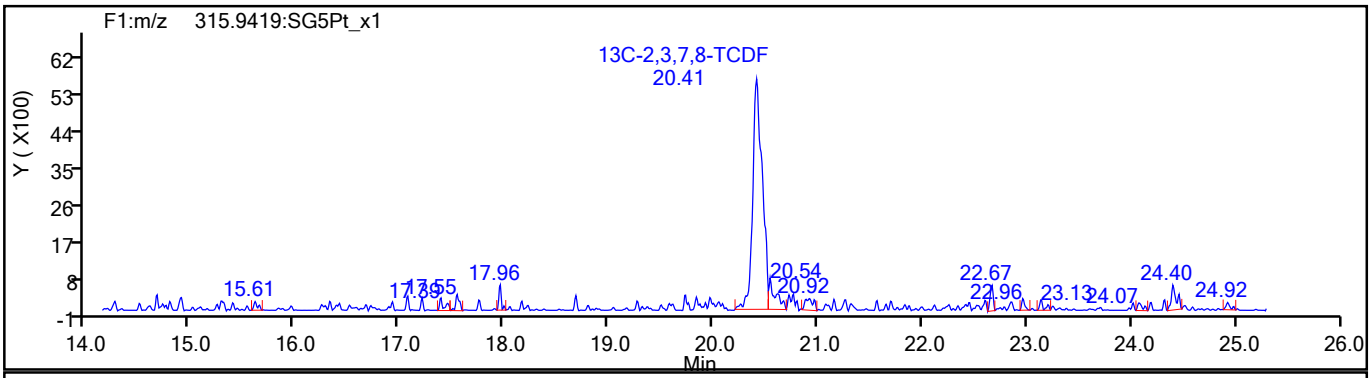

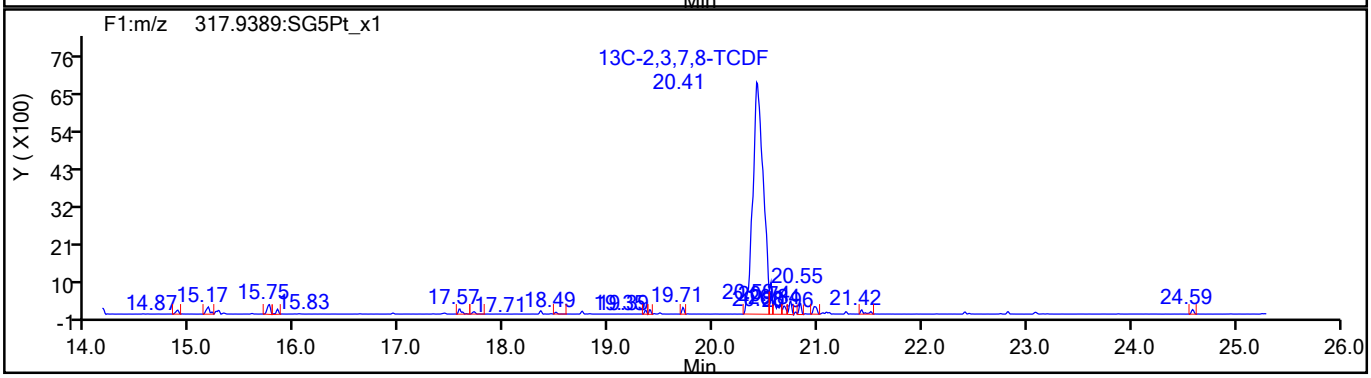

789516

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

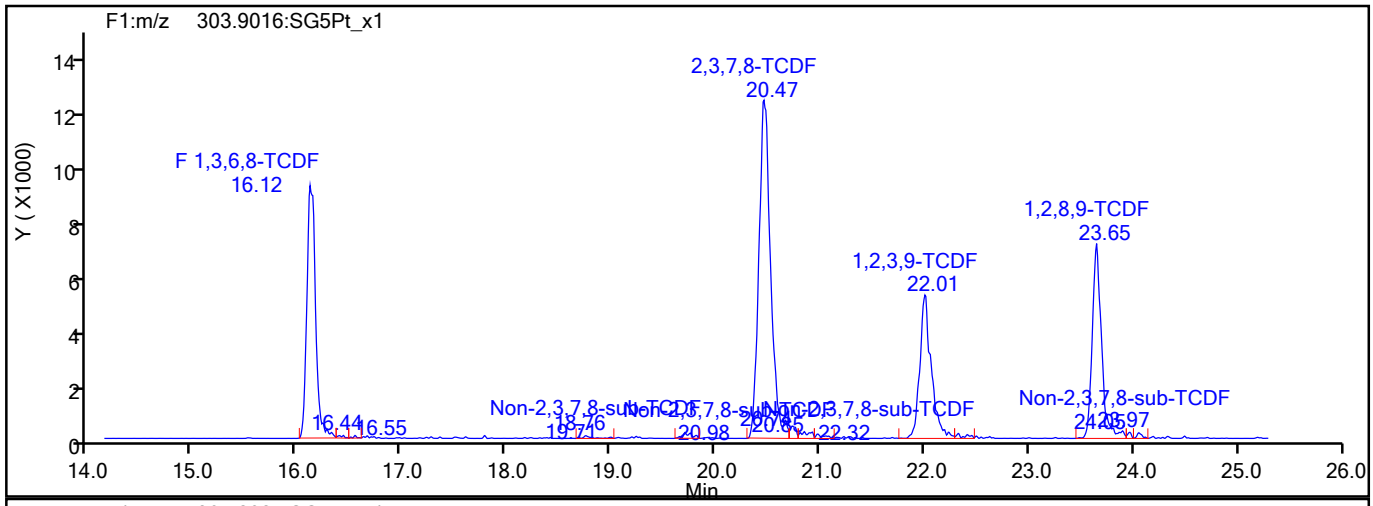

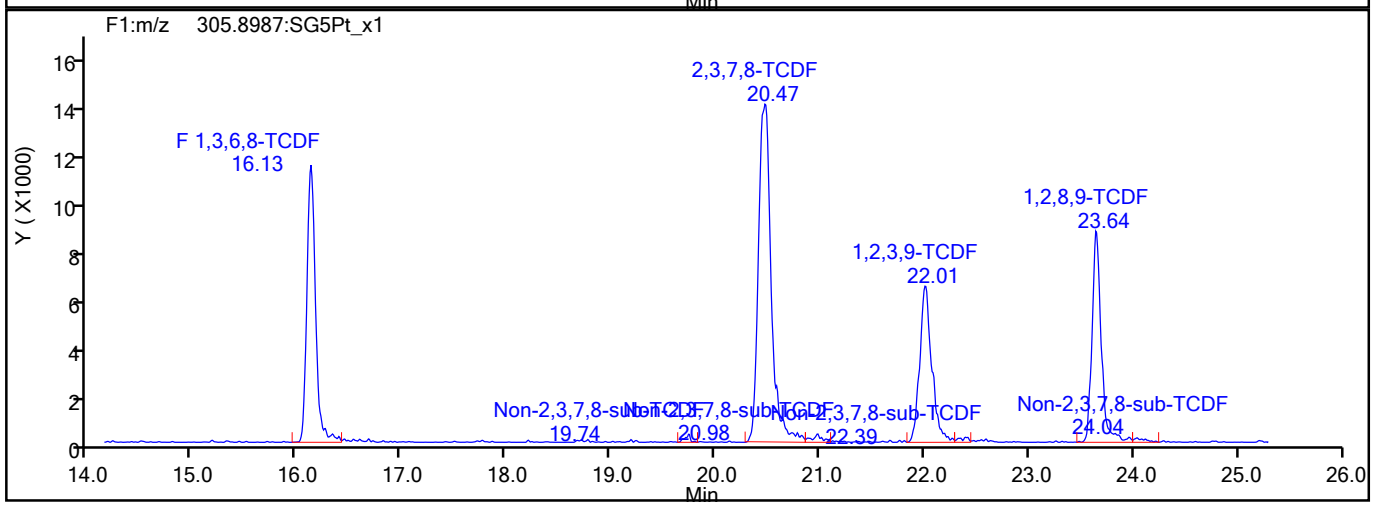

TCDF Interference Mass

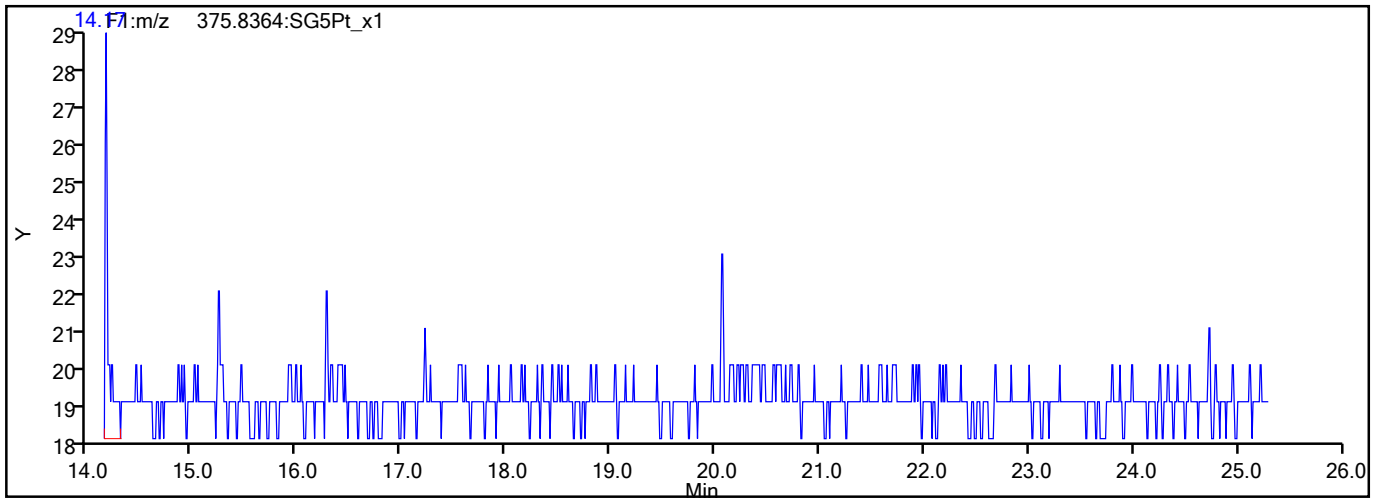

789517

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

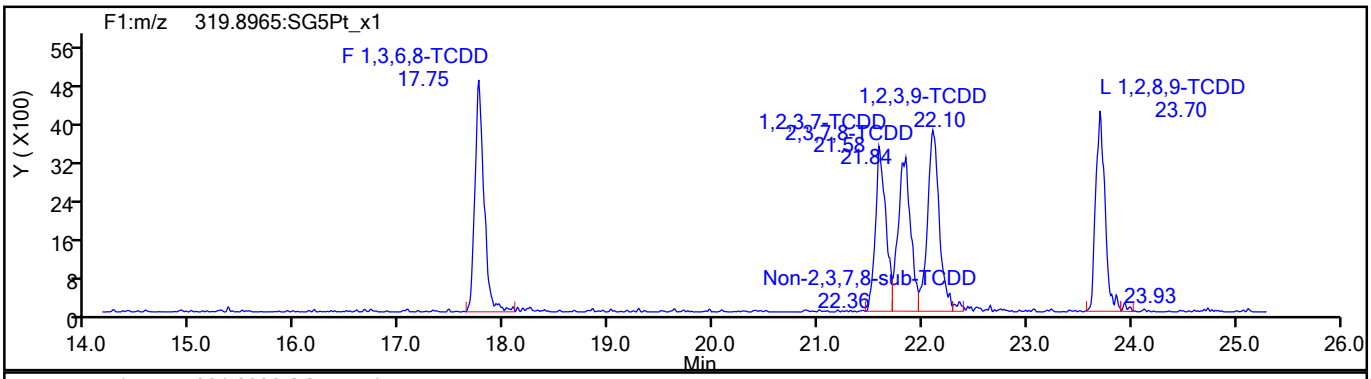

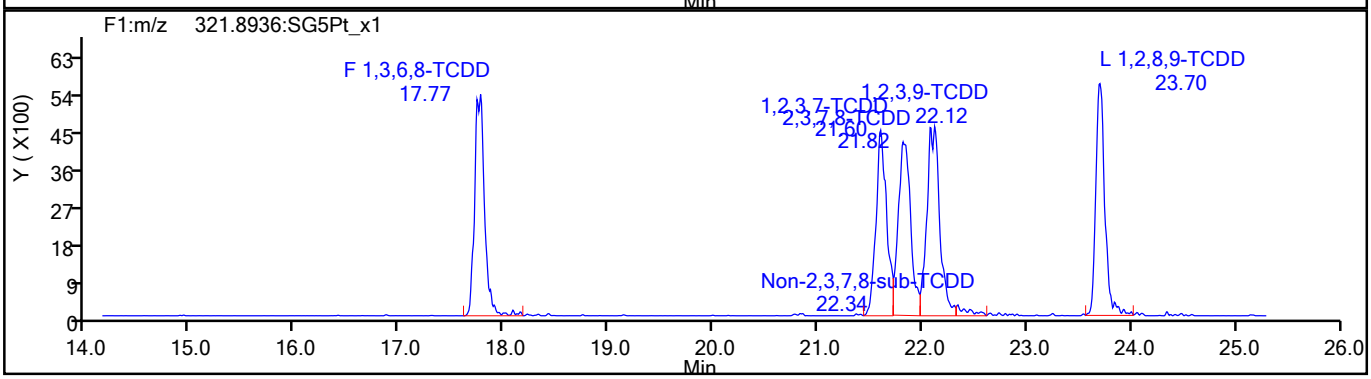

TCDD Standards

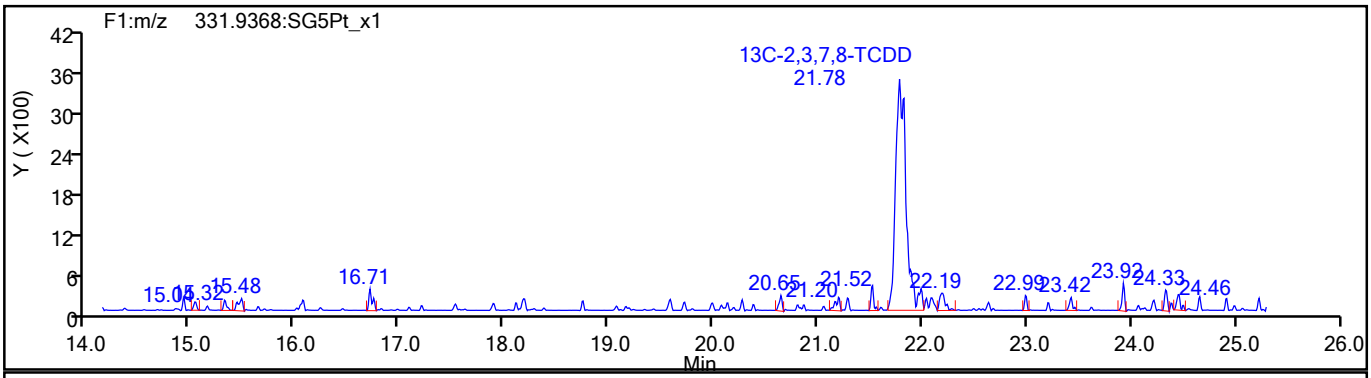

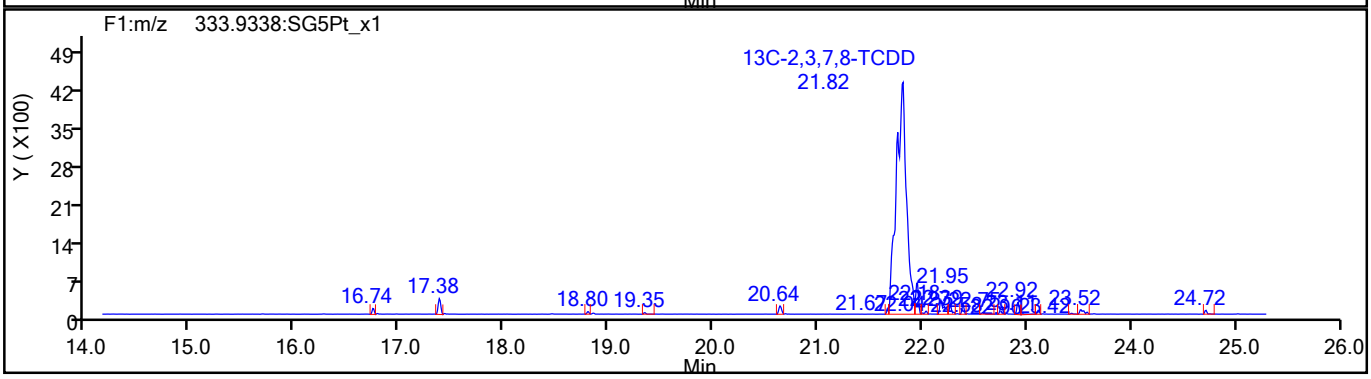

789518

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

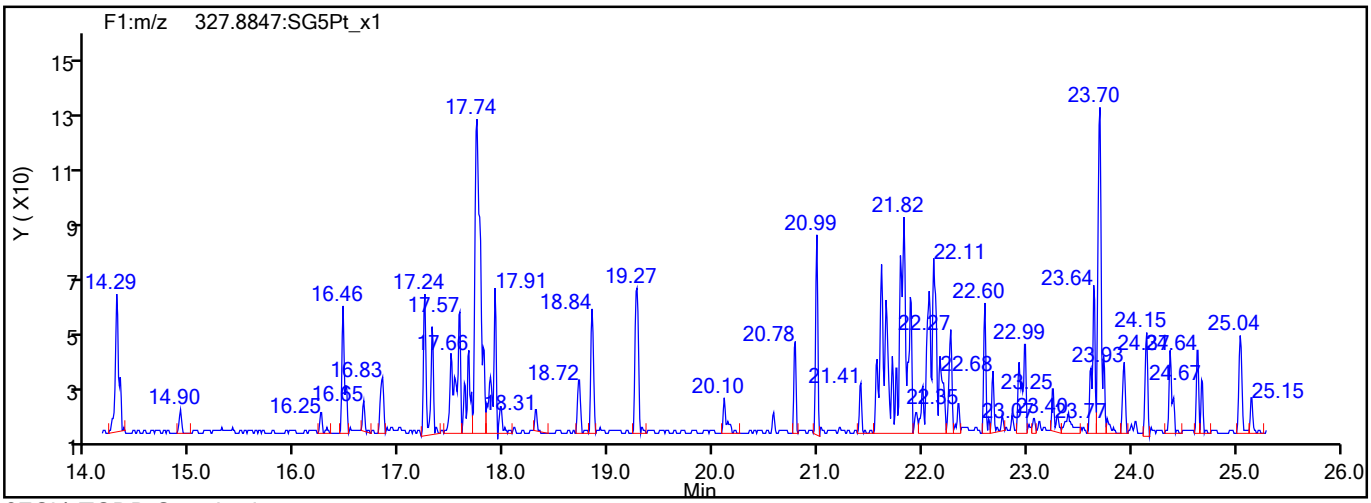

37Cl4-TCDD Standards

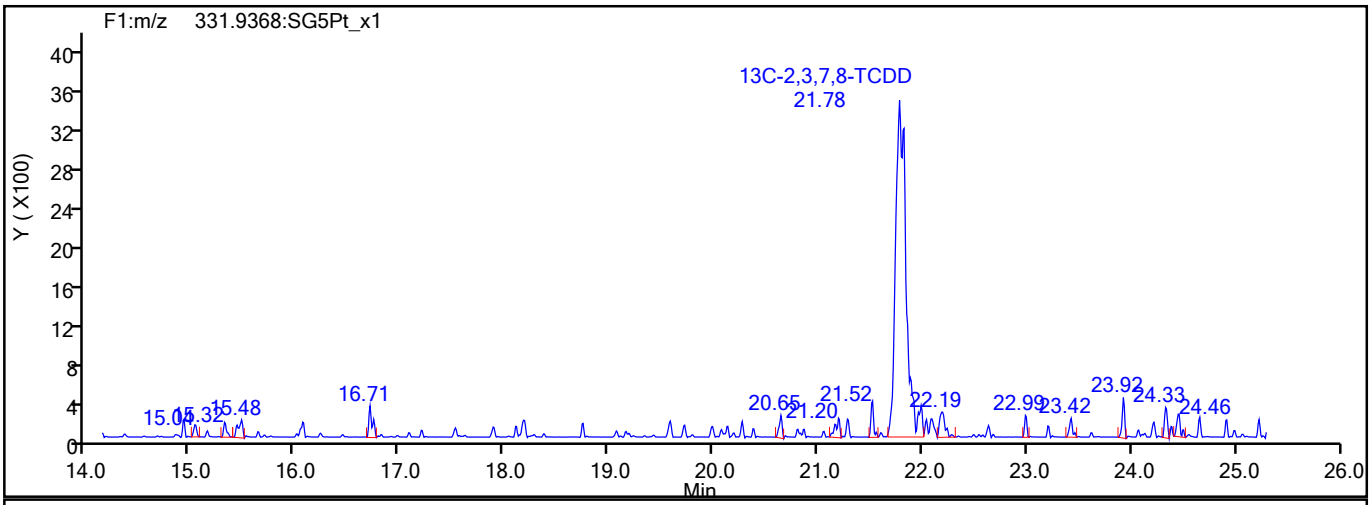

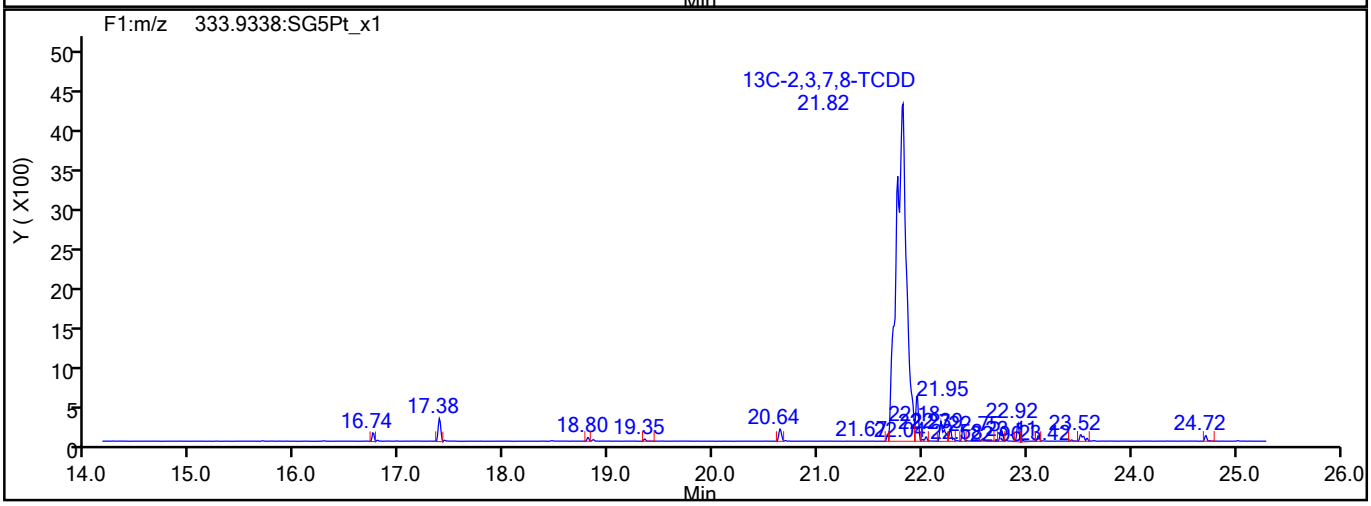

789519

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

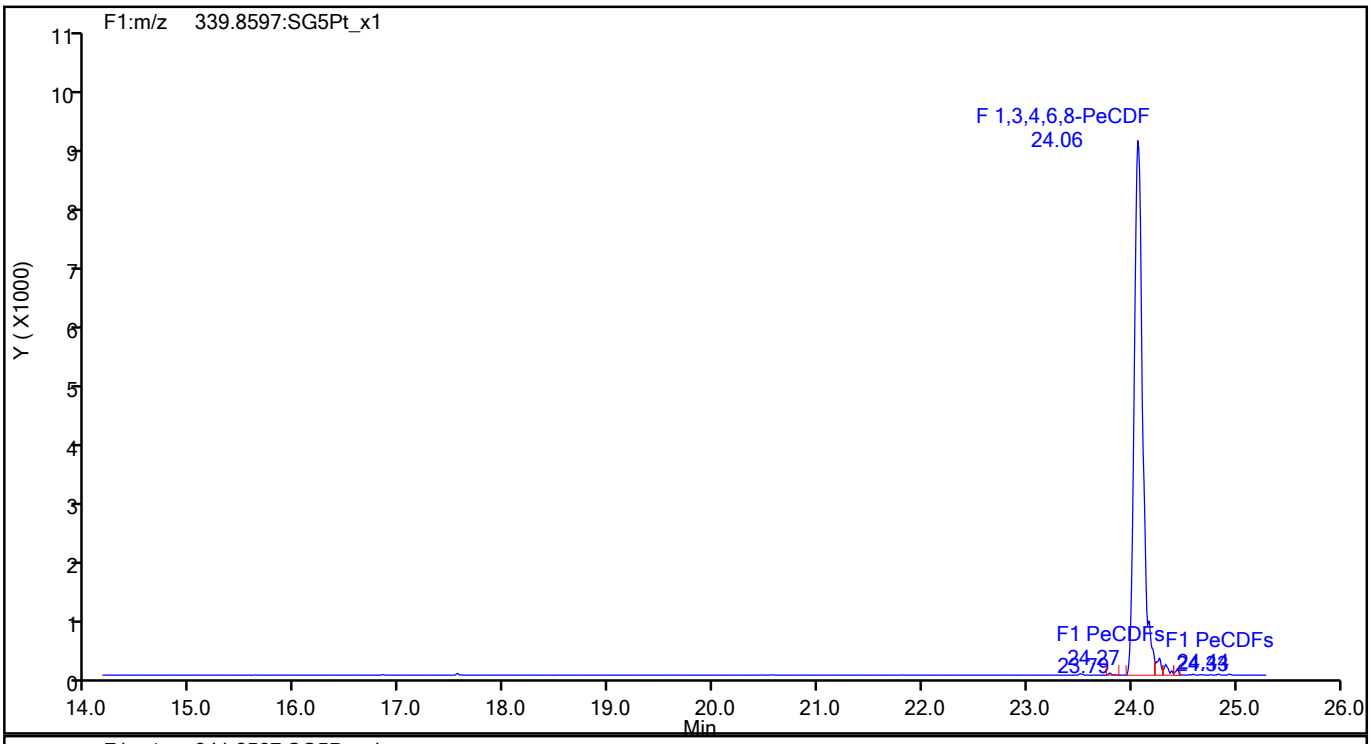

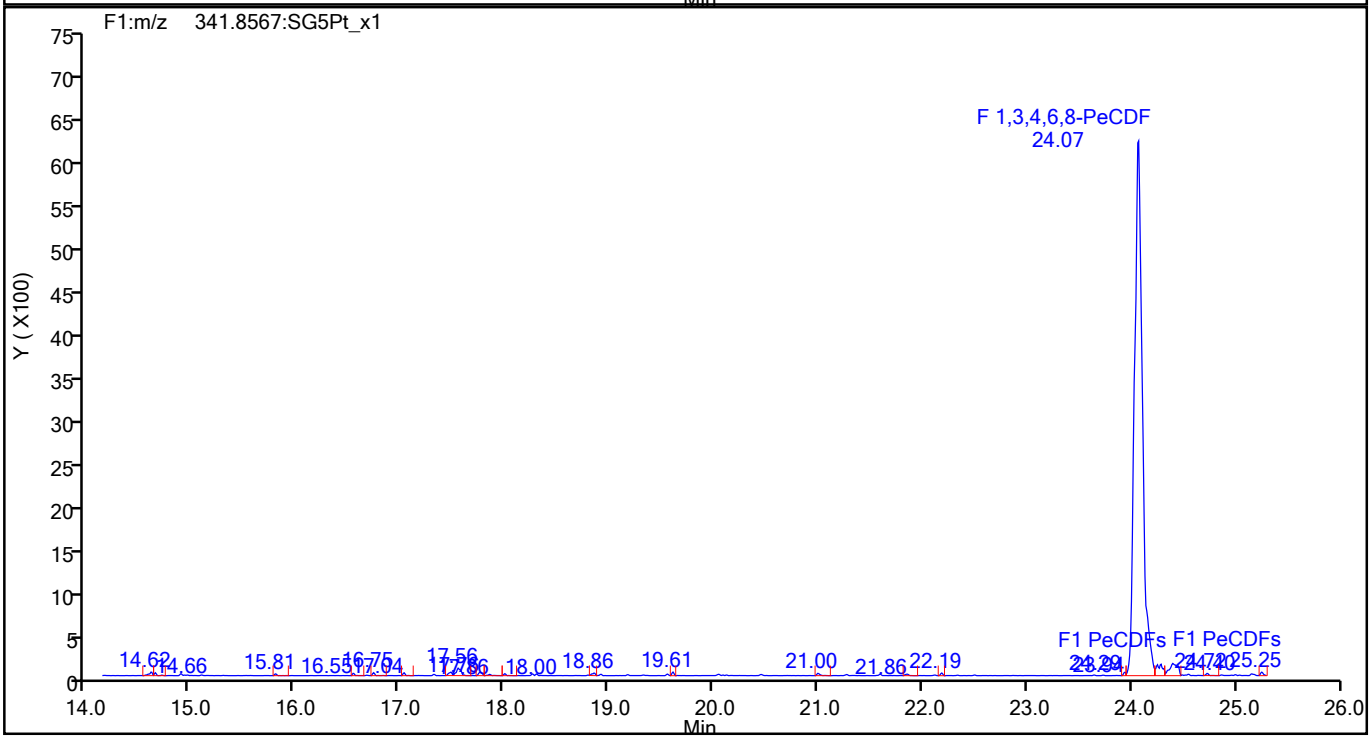

789520

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

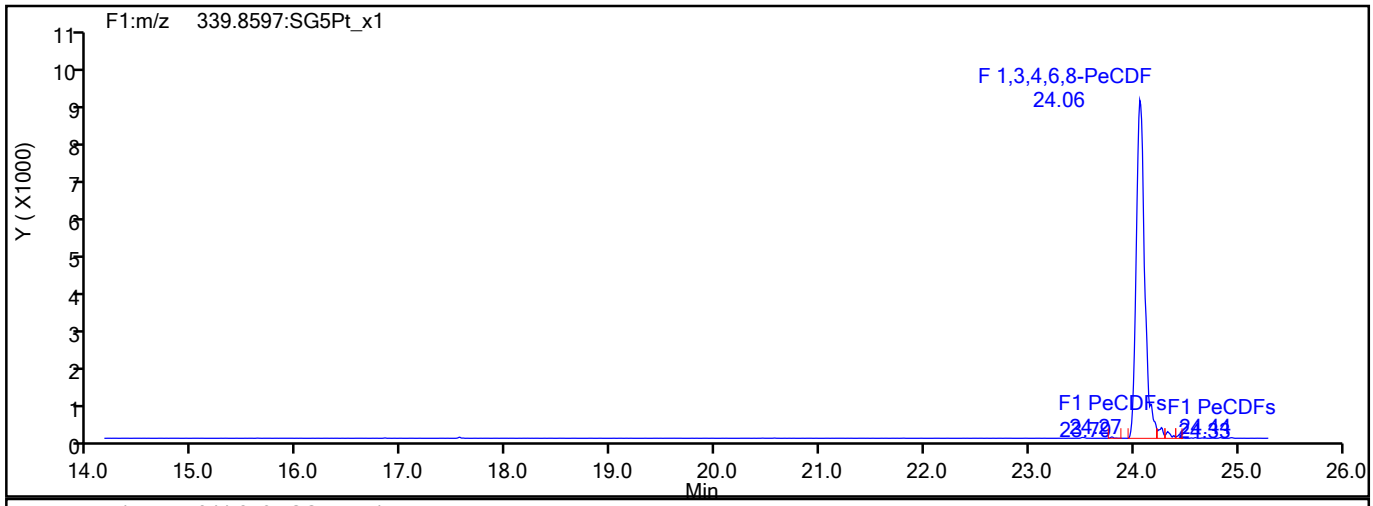

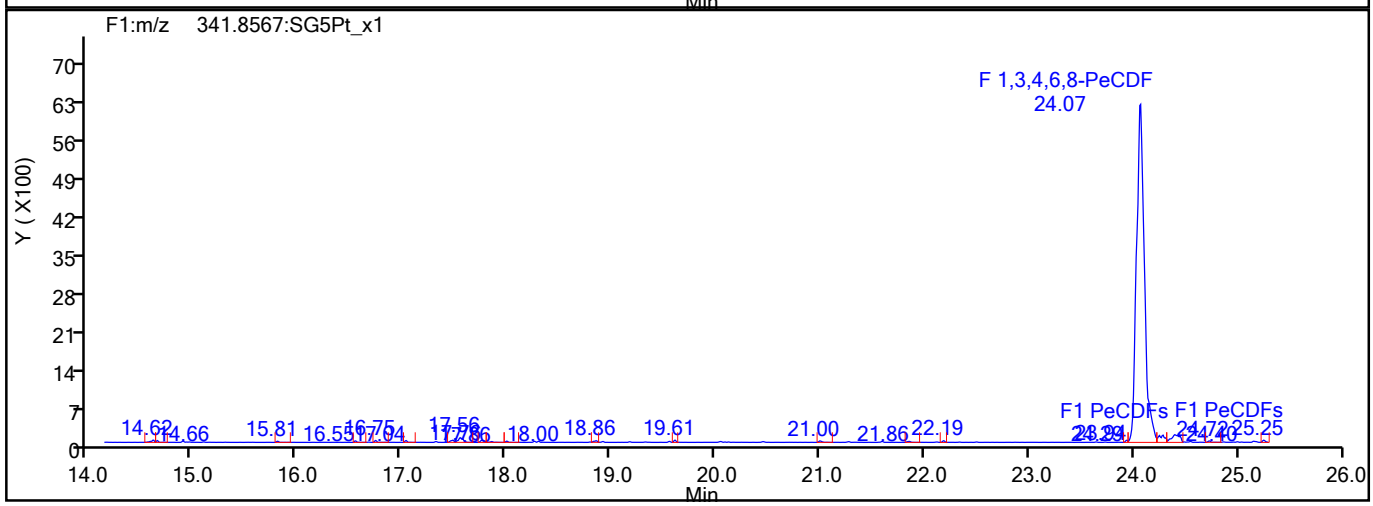

F1 PeCDFs Interference Mass

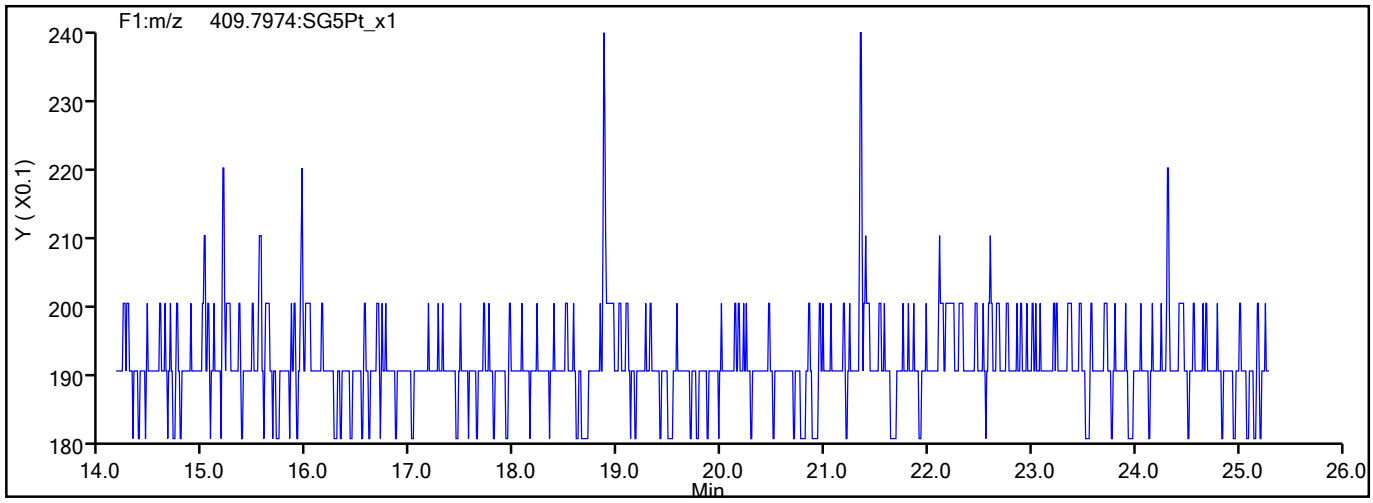

789521

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

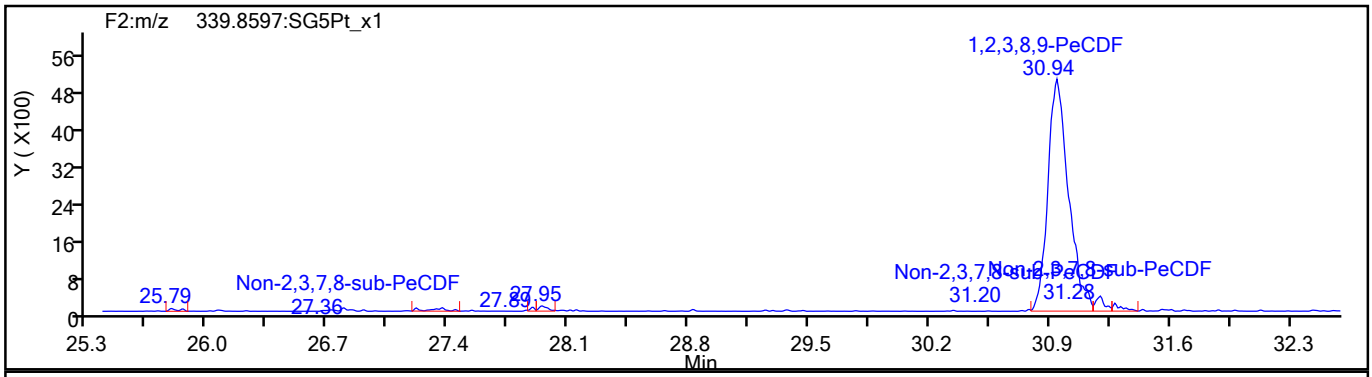

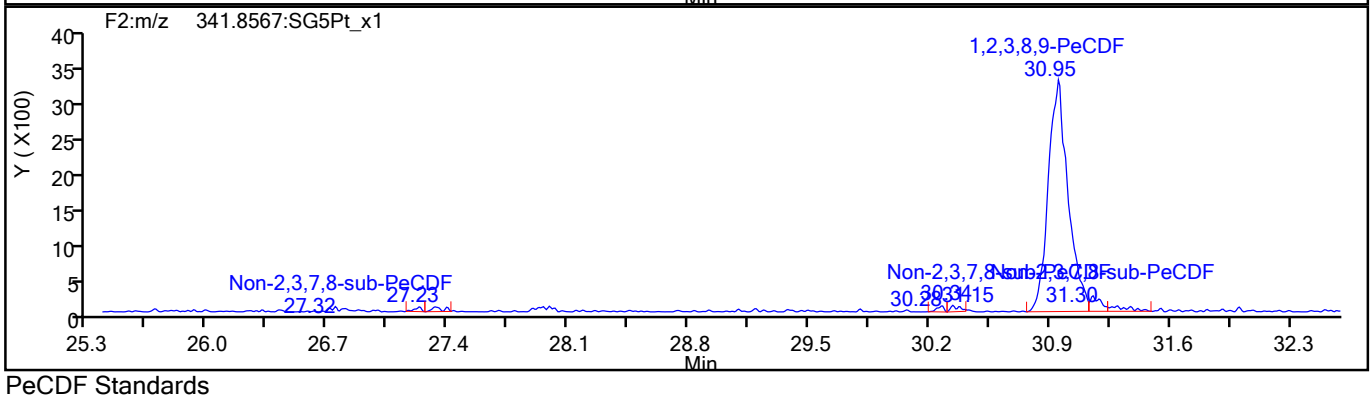

PeCDF Standards

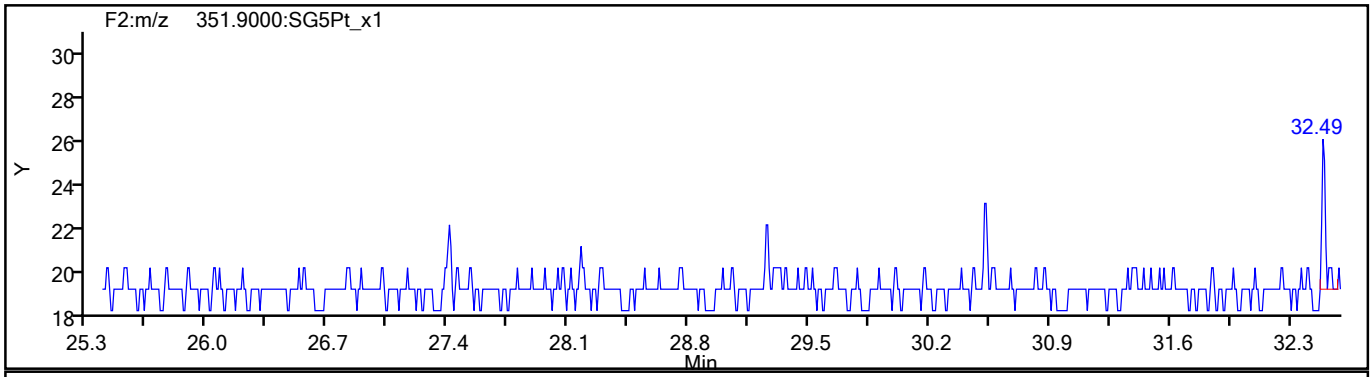

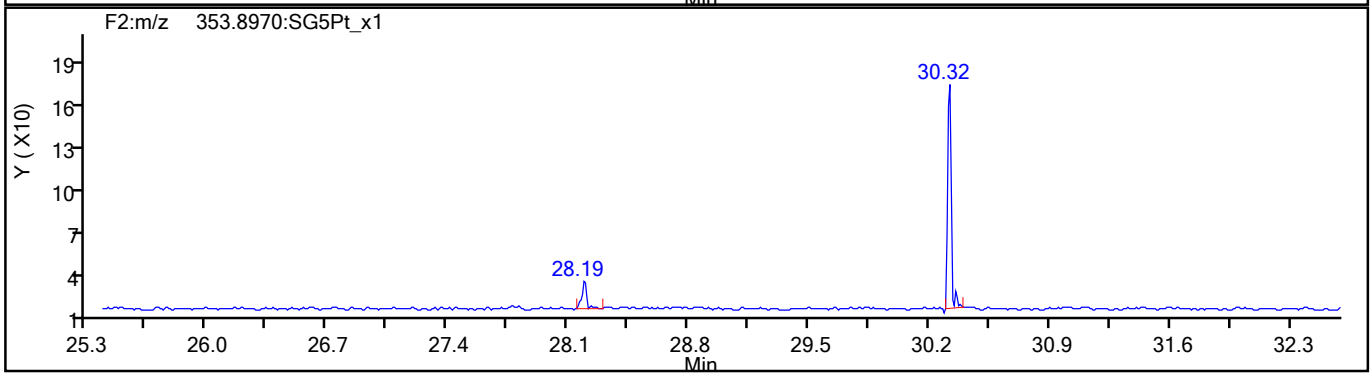

789522

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

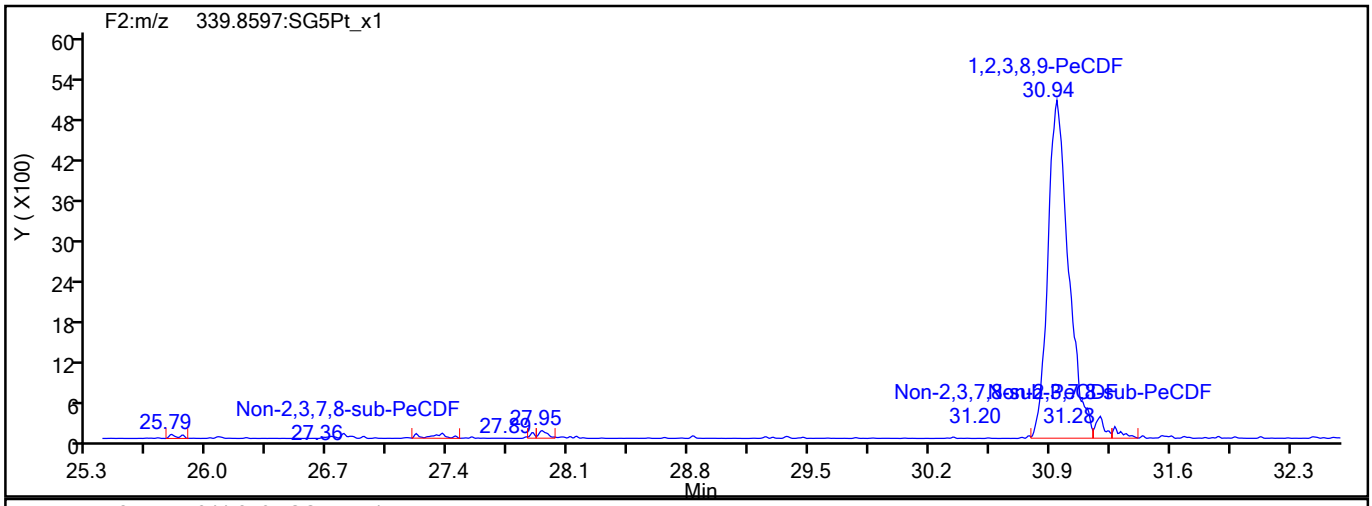

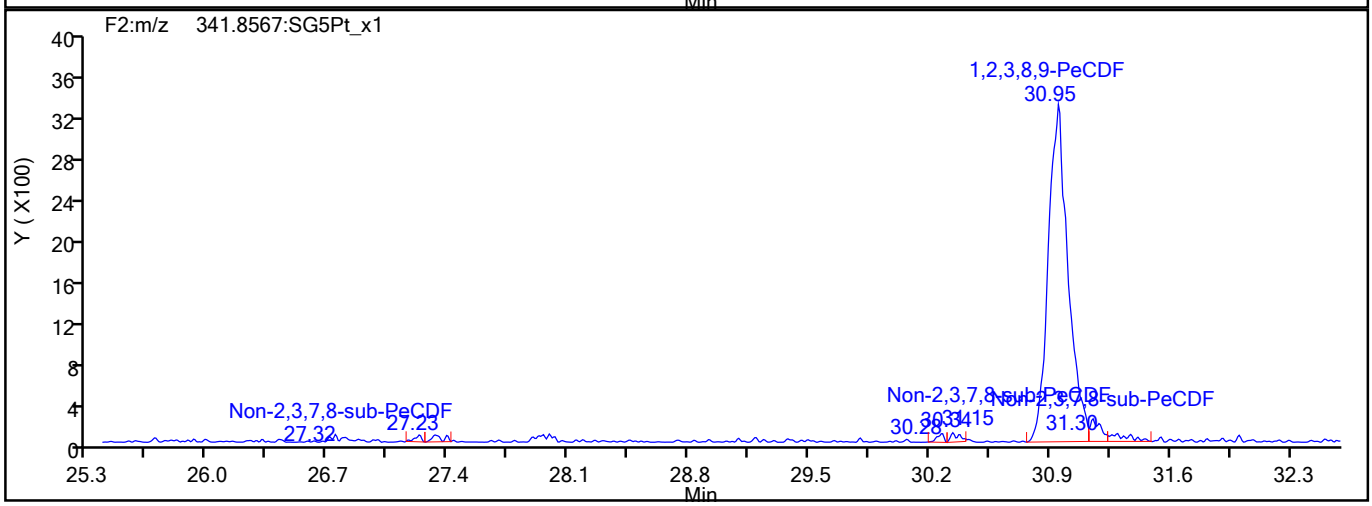

PeCDF Interference Mass

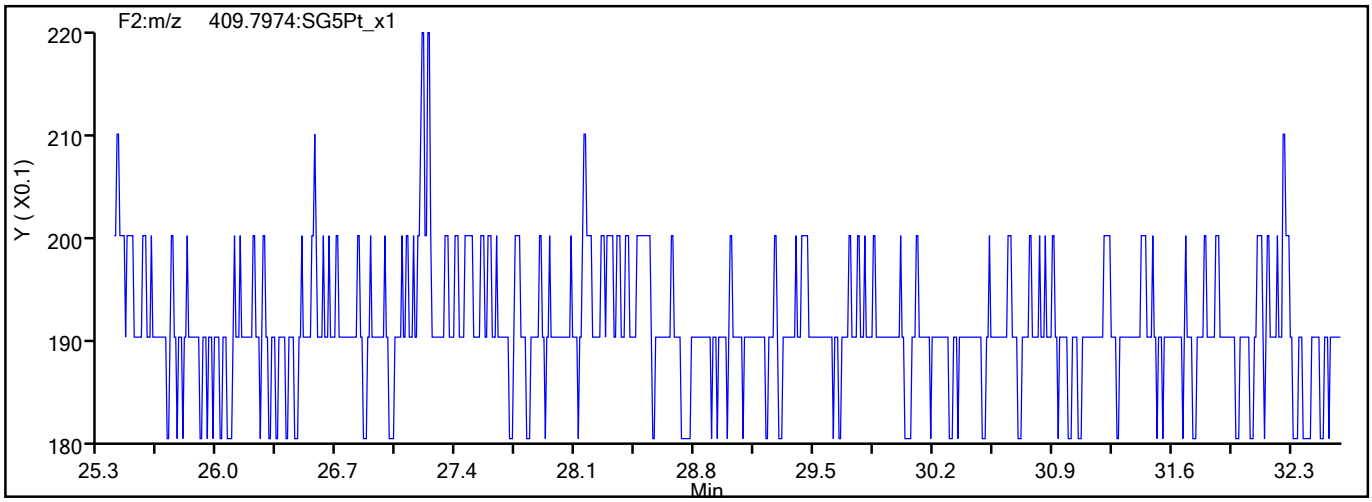

789523

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

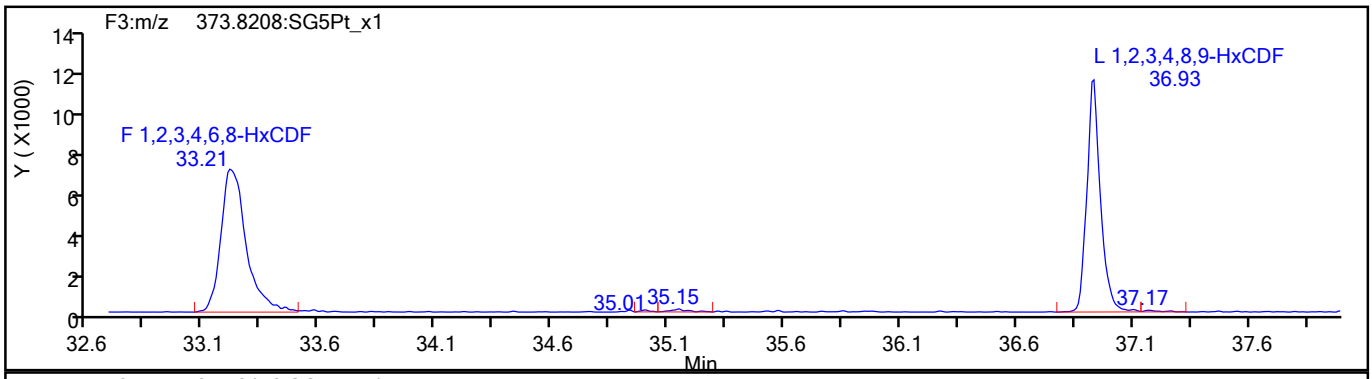

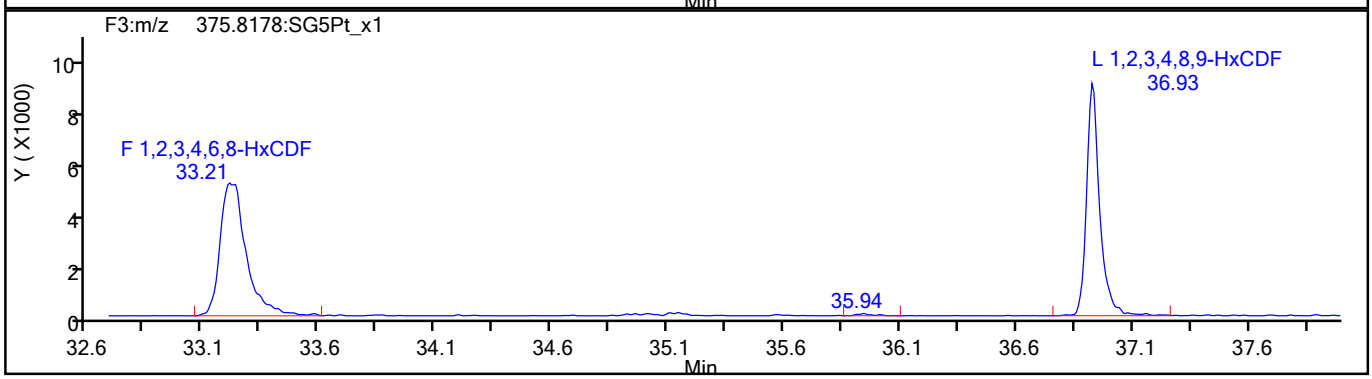

HxCDF Standards

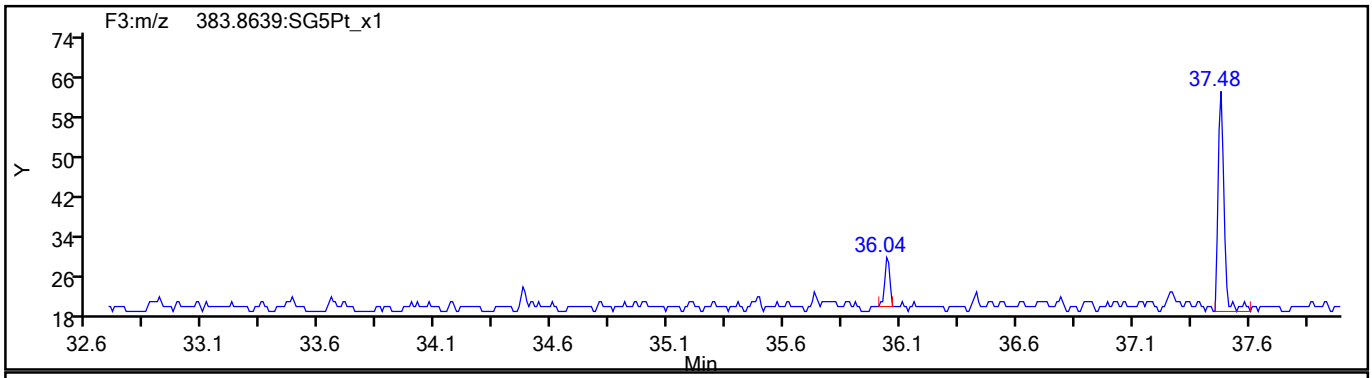

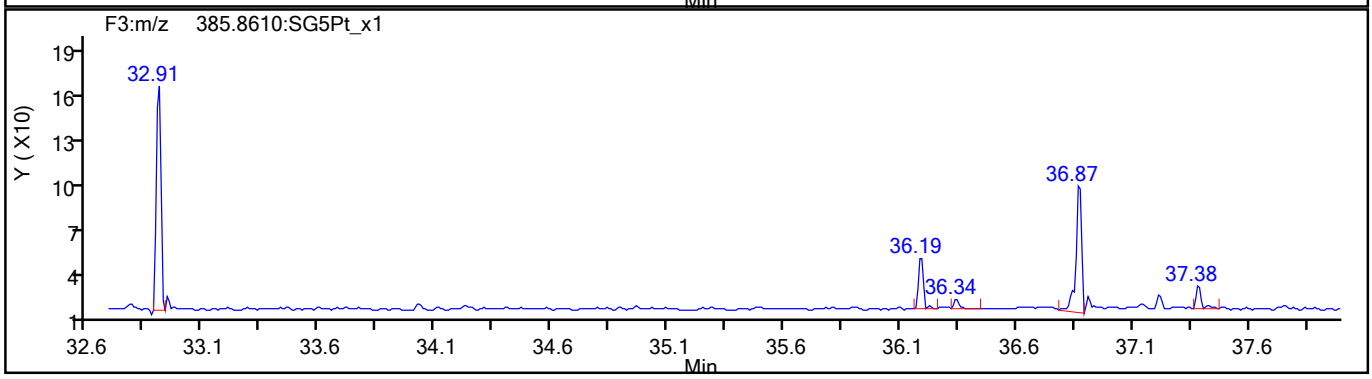

789524

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

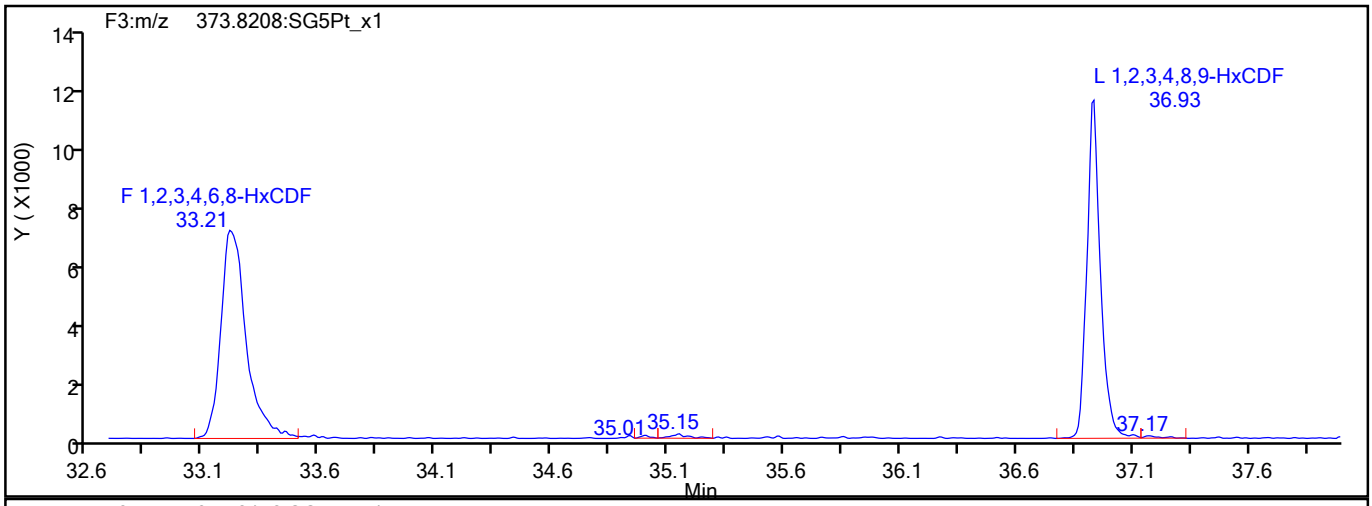

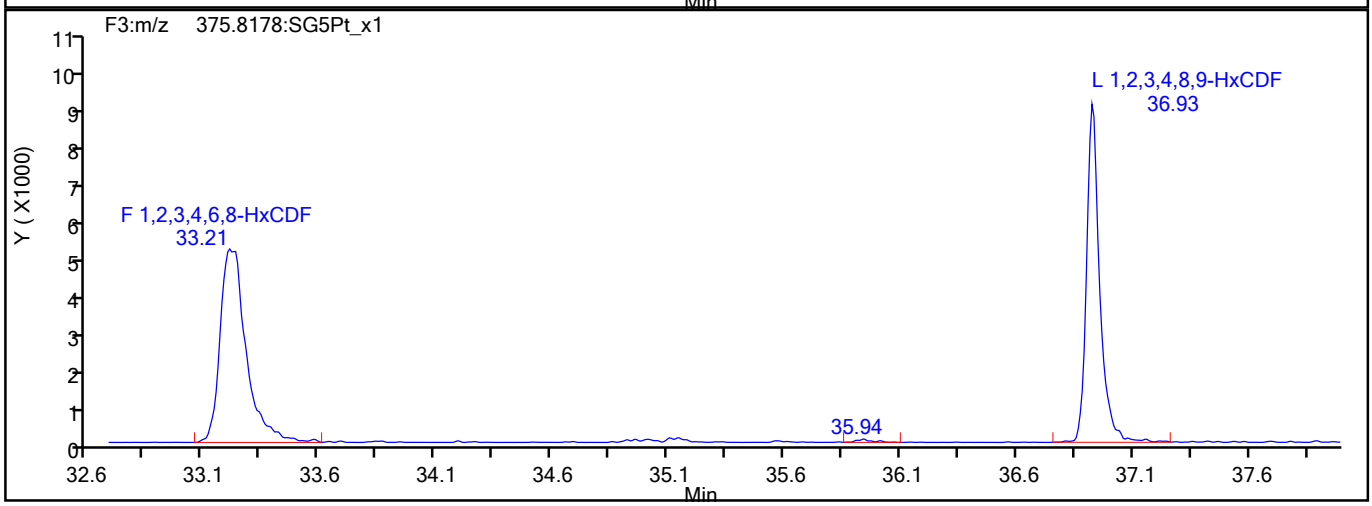

HxCDF Interference Mass

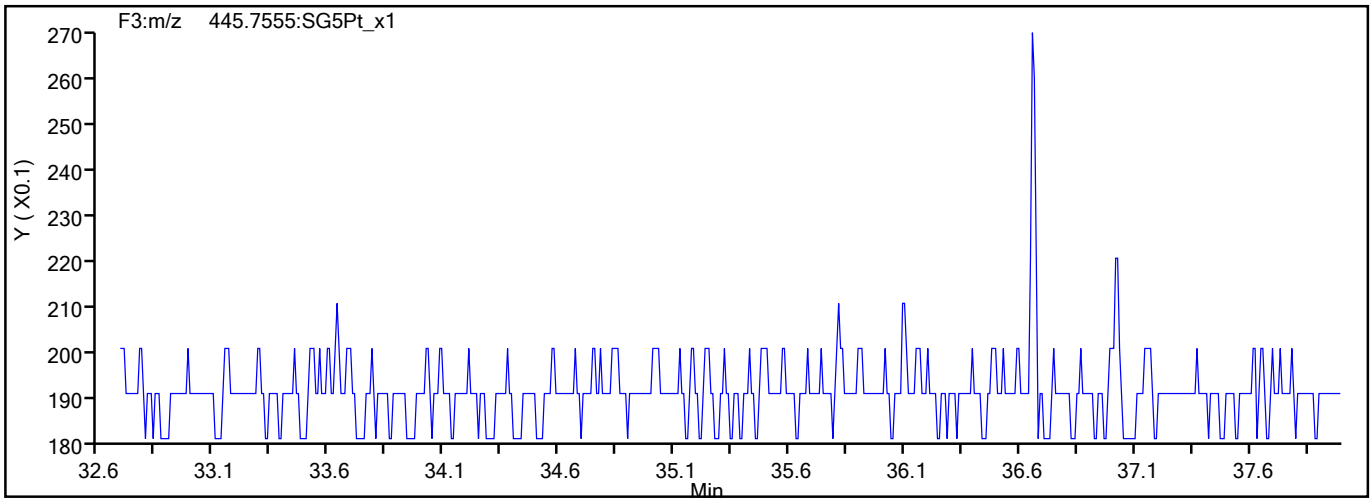

789525

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

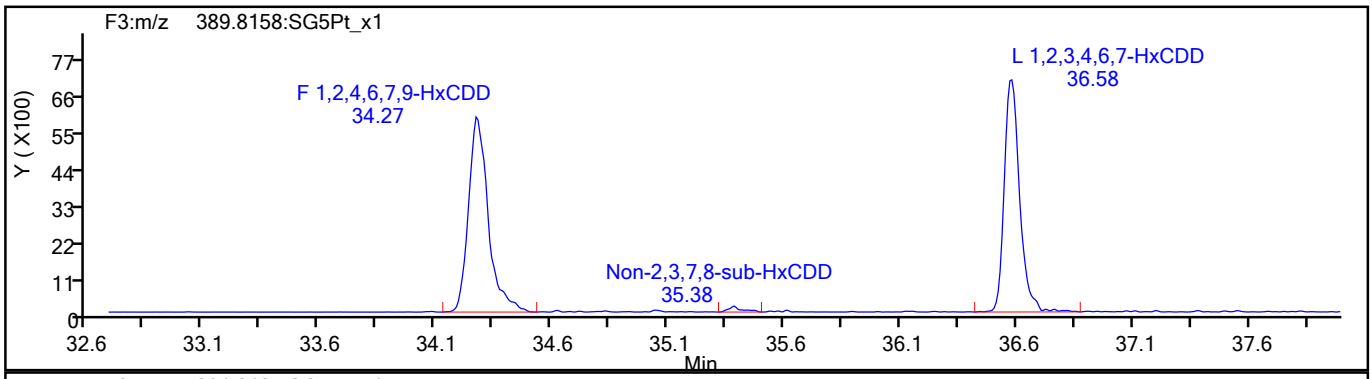

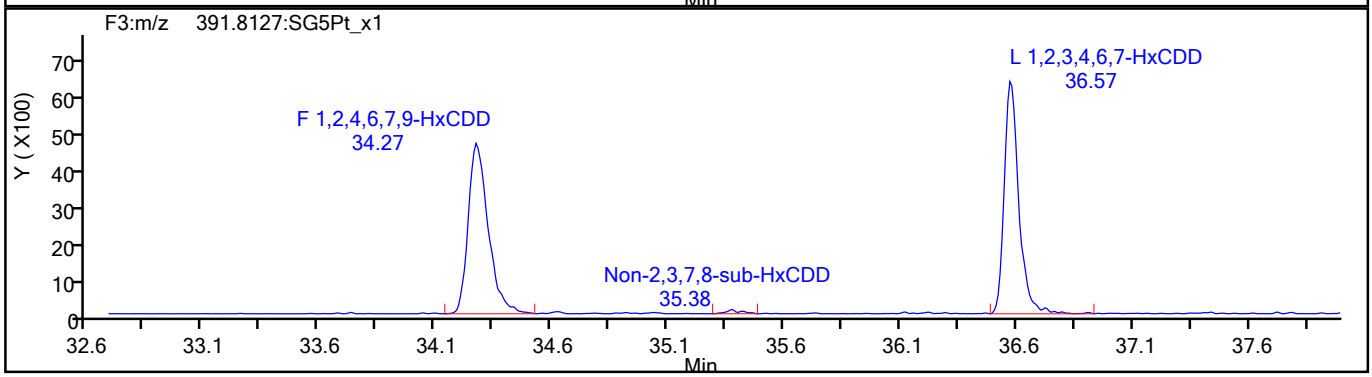

HxCDD Standards

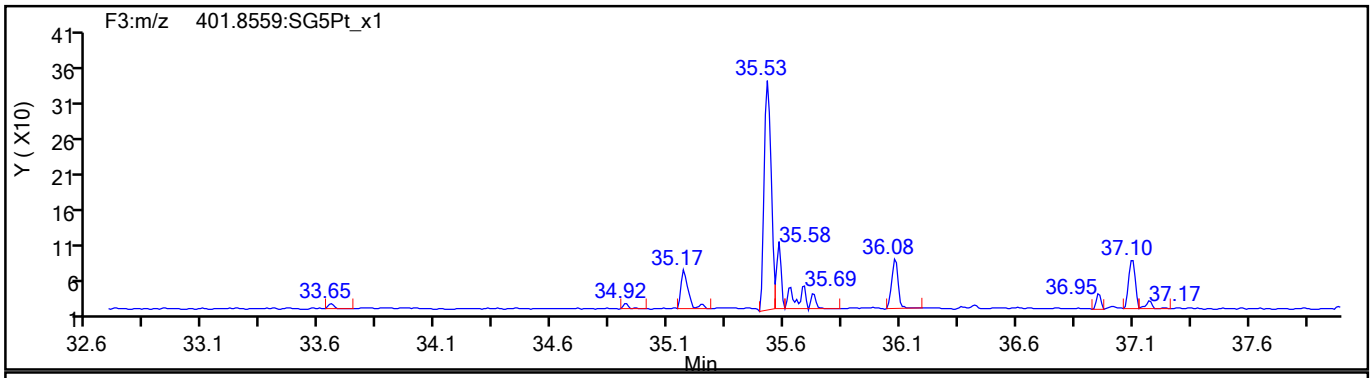

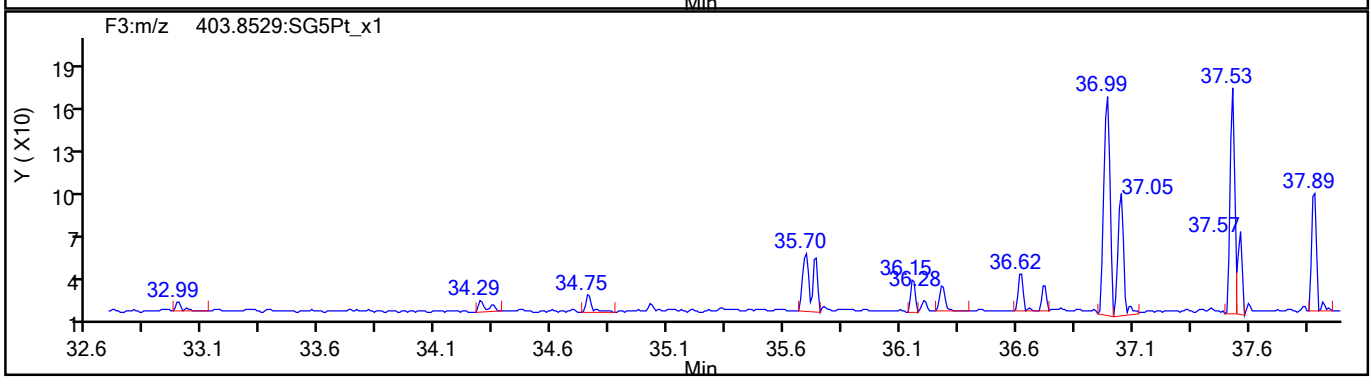

789526

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

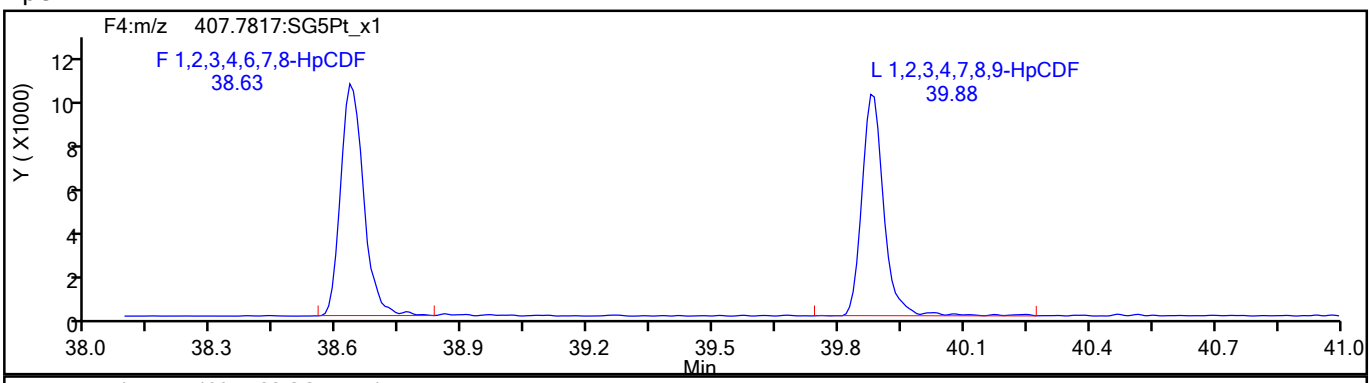

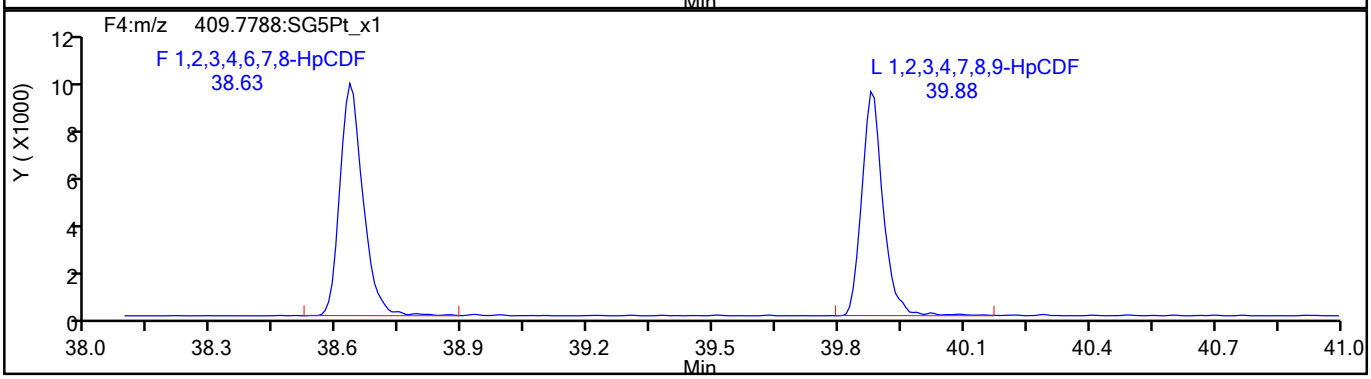

HpCDF Standards

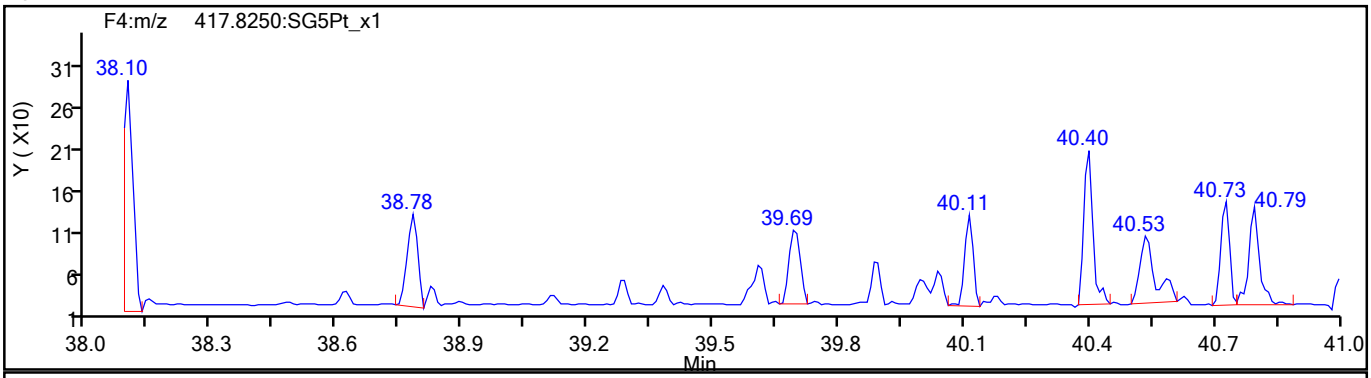

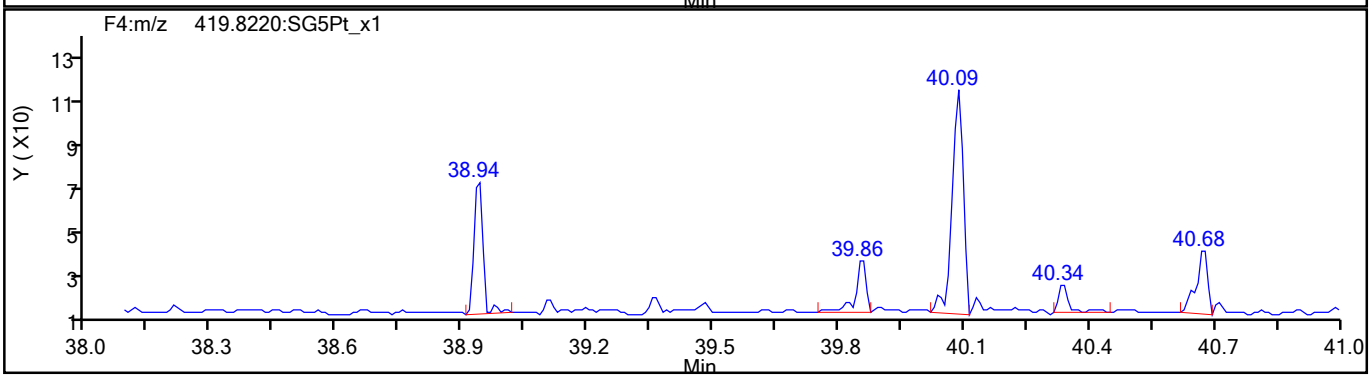

789527

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

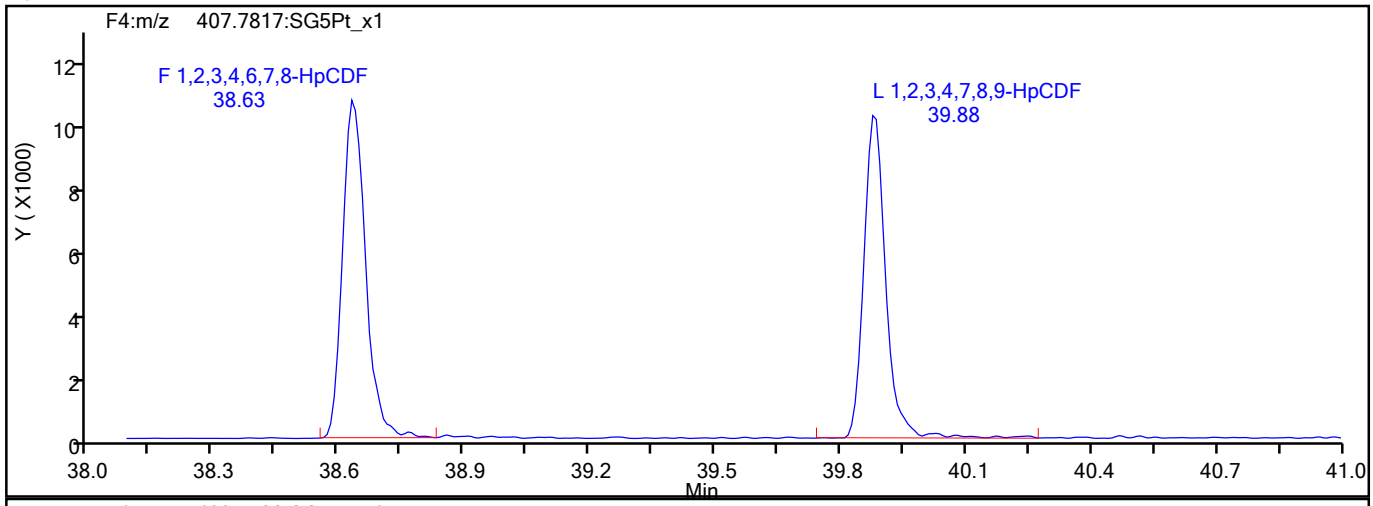

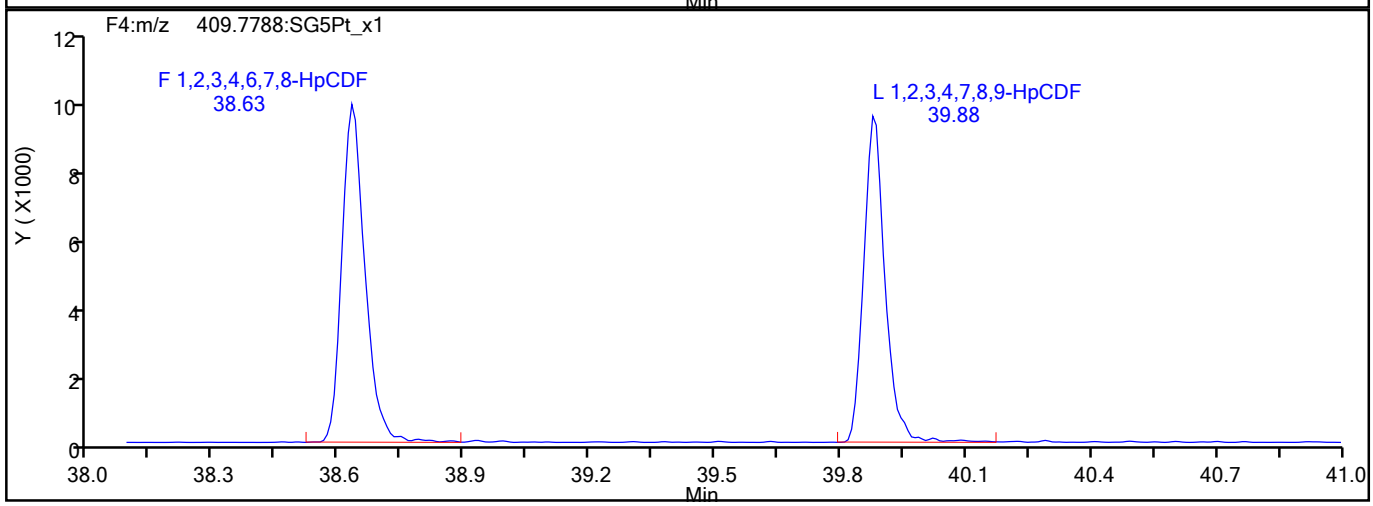

HpCDF Interference Mass

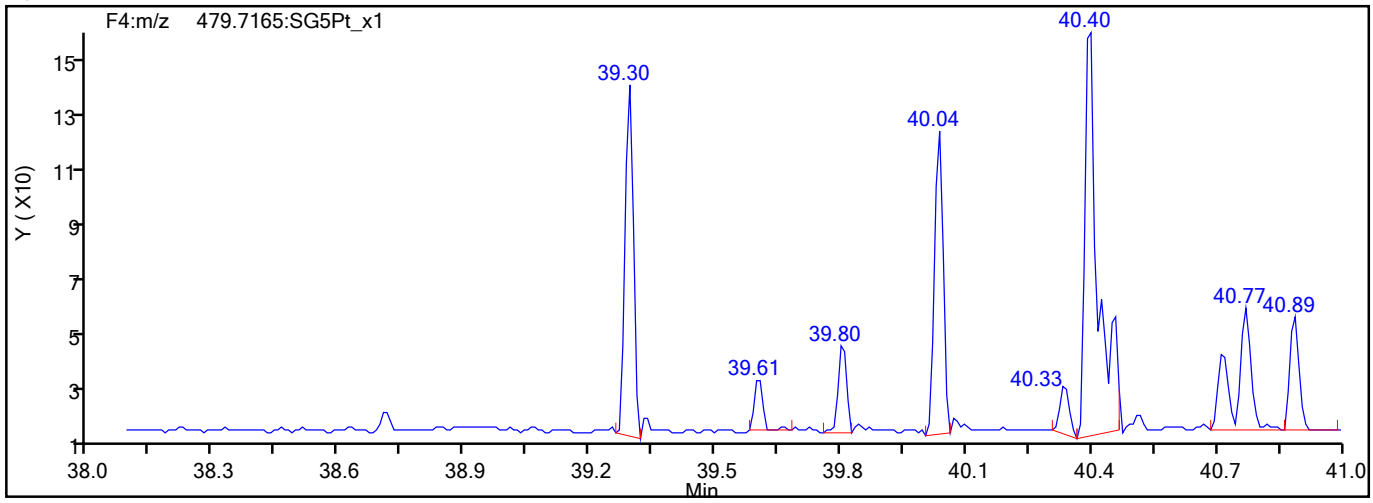

789528

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

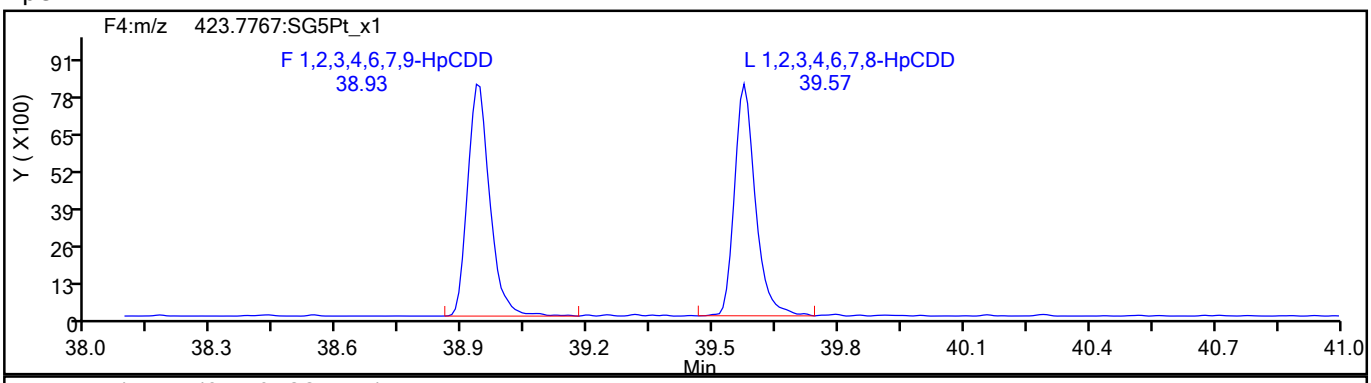

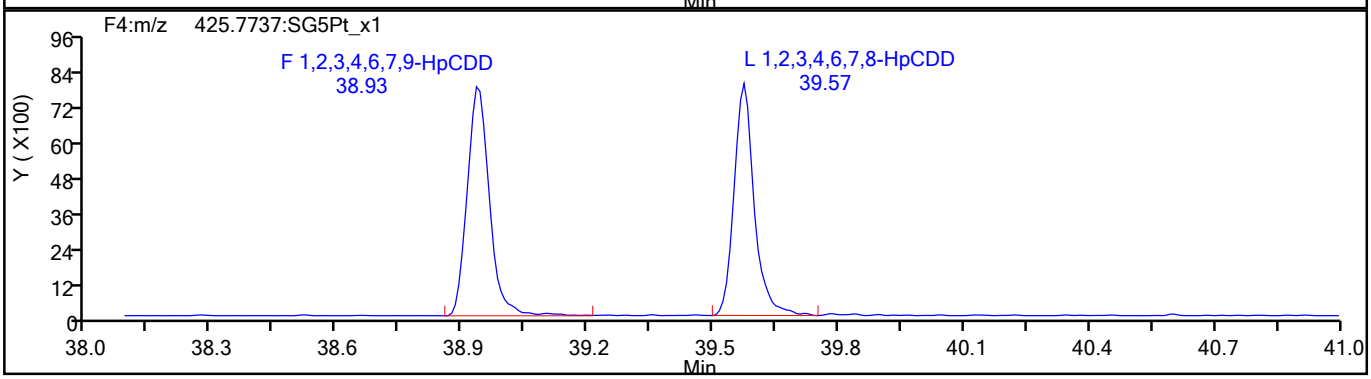

HpCDD Standards

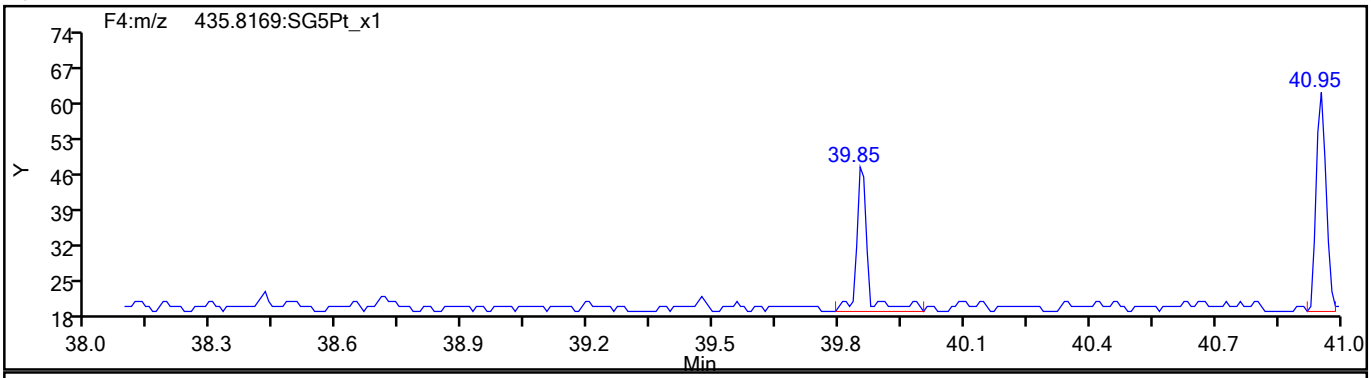

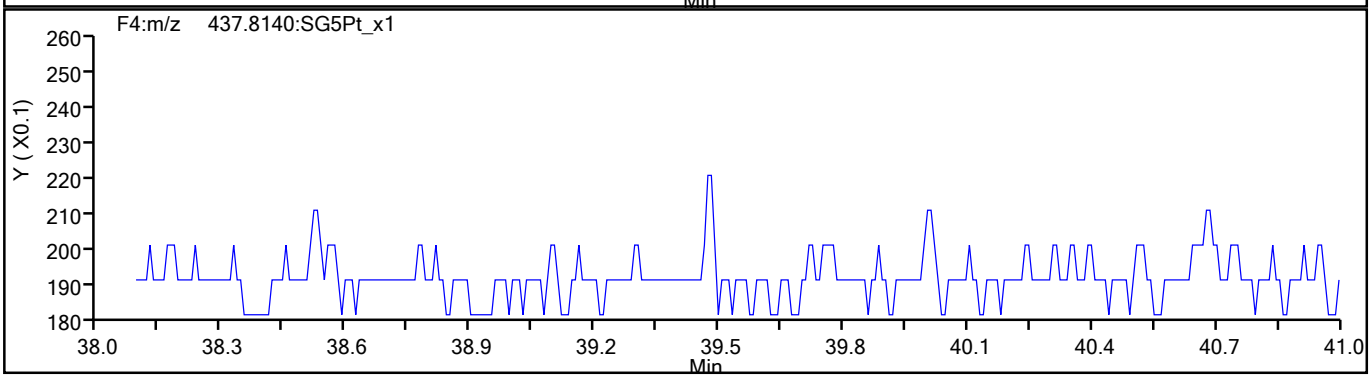

789529

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

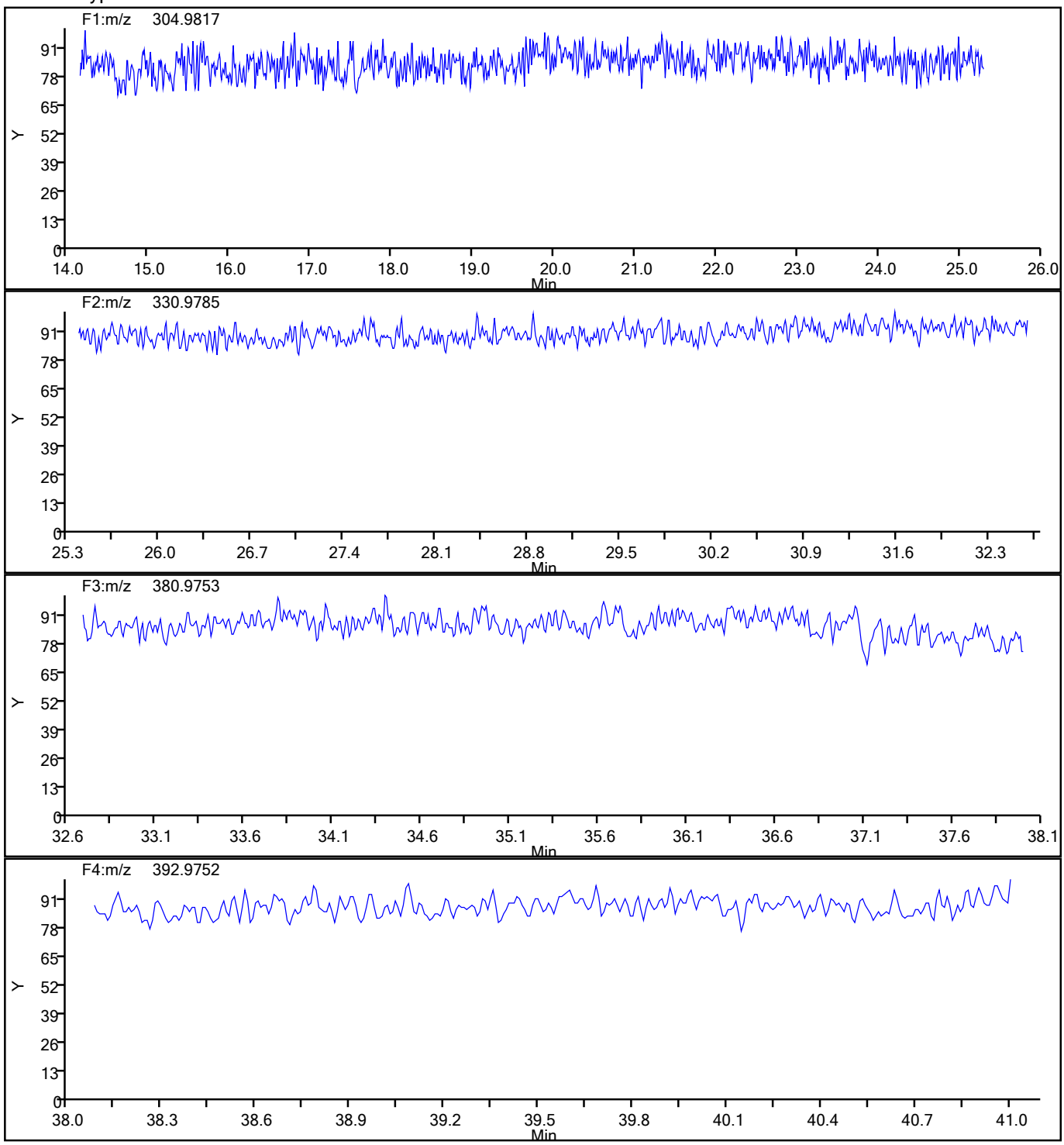

789530

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

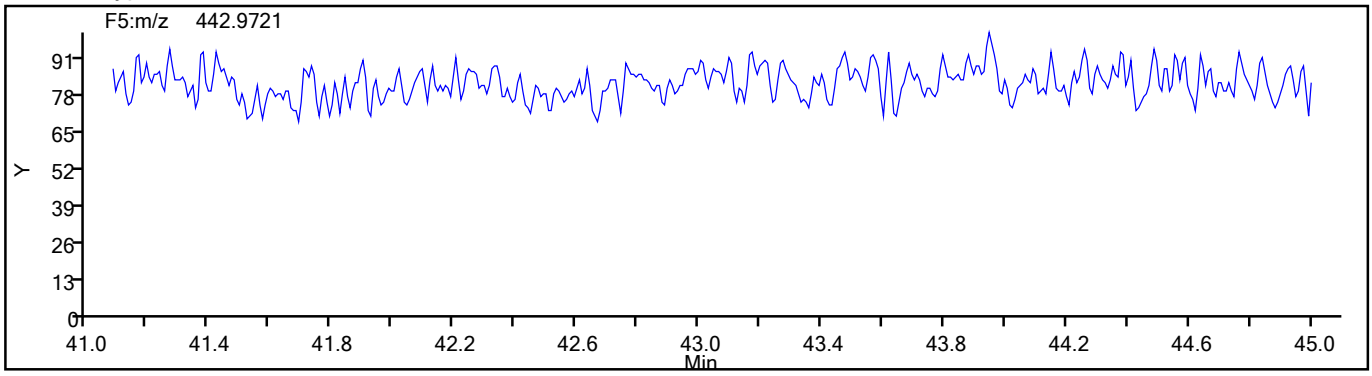

789531

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 20-Aug-2021 02:21:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:41 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:17:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.365	467833	0.81	1.3459					0.00	
2,3,7,8-TCDF	20.408	1028230	0.68	1.0802	81.4	81.4	0.2004	0.2004		
A Non-2,3,7,8-sub-TCDF	19.851	19218	0.77	1.0802	1.833	1.521	0.2004	0.6601		RQ
S Total TCDF					83.2	82.9	0.2004	0.2004		RQ
D 13C-2,3,7,8-TCDD	21.716	306095	0.83	0.9317					0.00	
2,3,7,8-TCDD	21.733	360703	0.82	1.0753	43.8	43.8	0.1149	0.1149		
A Non-2,3,7,8-sub-TCDD	20.684						0.1149	0.1149		
S Total TCDD					43.8	43.8	0.1149	0.1149		
A F1 PeCDFs	24.634	713	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.173	388340	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.478	284602	1.57	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.009	7010	1.24	0.0000						RQ
S Total HxCDF										RQ
A Non-2,3,7,8-sub-HxCDD	35.375	3880	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.618	417242	1.02	1.4421						
1,2,3,4,7,8,9-HpCDF	39.872	395176	1.06	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.245						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.561	315483	1.06	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.241						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.128	632851	0.68							
1,3,6,8-TCDD	17.726	345944	0.79							
2,3,4,7-TCDF	20.408	1028230	0.68							
1,2,3,7-TCDD	21.518	306508	0.76							
1,2,3,9-TCDF	21.939	443680	0.70							
1,2,3,9-TCDD	22.008	363657	0.82							
1,2,8,9-TCDF	23.574	570780	0.73							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.643	174001								
1,3,4,6,8-PeCDF	24.004	470784	1.65							
1,2,3,8,9-PeCDD	26.038	304807	1.59							
1,2,4,7,9-PeCDD	30.776						0.0	0.0		
1,2,3,8,9-PeCDF	30.944						0.0	0.0		
1,2,3,4,6,8-HxCDF	33.120	491975	1.24							
1,2,4,6,7,9-HxCDD	34.205	337333	1.27							
1,2,3,4,6,7-HxCDD	36.545	327967	1.27							
1,2,3,4,8,9-HxCDF	36.898	474737	1.23							
1,2,3,4,6,7,9-HpCDD	38.921	308708	1.05							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 20-Aug-2021 02:21:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:41 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: arghestanis Date: 20-Aug-2021 09:17:20

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.365	20.365	0	1.000	208816	29479	77	192	383		
317.9389	20.356	20.365	-1	1.000	259017	35573	20	50	1779	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.408	20.408	0	1.002	415746	51351	54	135	951		
305.8987	20.399	20.408	-1	1.002	612484	78065	87	217	897	0.68(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.731	19.851	-67	0.920	1292	284	54	135	5		
305.8987	18.714	19.851	-68	0.919	2953	608	87	217	7	0.44(0.65-0.89)	
	Empc Correction				1677	368	87	217	4		
303.9016	19.651	19.851	-12	0.965	3565	599	54	135	11		
305.8987	19.651	19.851	-12	0.965	4345	691	87	217	8	0.82(0.65-0.89)	
303.9016	23.995	19.851	248	1.178	3628	632	54	135	12		
305.8987	23.995	19.851	248	1.178	7371	1071	87	217	12	0.49(0.65-0.89)	
	Empc Correction				4711	820	87	217	9		
13C-2,3,7,8-TCDD											
331.9368	21.716	21.716	0	1.000	138947	18418	16	40	1151		
333.9338	21.681	21.716	-2	1.000	167148	21073	58	145	363	0.83(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.733	21.733	0	1.001	162087	21343	27	67	790		
321.8936	21.741	21.733	1	1.001	198616	25745	22	55	1170	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	20.684						27	67			
321.8936	20.684						22	55			
A F1 PeCDFs											RQ
339.8597	24.399	24.634	-14	1.000	637	92	7	17	13		
341.8567	24.408	24.634	-14	1.000	280	114	9	22	13	2.28(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.701	28.173	-148	1.000	1007	221	33	82	7		
341.8567	25.726	28.173	-147	1.000	618	105	25	62	4	1.63(1.32-1.78)	
339.8597	26.652	28.173	-91	1.000	1282	272	33	82	8		
341.8567	26.719	28.173	-87	1.000	1199	139	25	62	6	1.07(1.32-1.78)	
339.8597	27.233	28.173	-56	1.000	2704	359	33	82	11		
341.8567	27.266	28.173	-54	1.000	1654	276	25	62	11	1.63(1.32-1.78)	
339.8597	27.847	28.173	-20	1.000	2865	363	33	82	11		
341.8567	27.830	28.173	-21	1.000	1857	264	25	62	11	1.54(1.32-1.78)	
339.8597	30.801	28.173	157	1.000	228677	27894	33	82	845		
341.8567	30.801	28.173	157	1.000	146849	18011	25	62	720	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	30.624	28.478	129	1.000	173911	21451	25	62	858		
357.8516	30.624	28.478	129	1.000	110691	13444	22	55	611	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	35.097	35.009	5	1.000	3881	661	70	175	9		
375.8178	35.097	35.009	5	1.000	3878	670	63	157	11	1.00(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.316	35.375	-4	1.000	2148	405	37	92	11		
391.8127	35.333	35.375	-3	1.000	2394	461	29	72	16	0.90(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.618	38.618	0	1.000	210762	52957	76	190	697		
409.7788	38.610	38.618	-1	1.000	206480	51508	66	165	780	1.02(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872	39.872	0	1.000	203770	54845	76	190	722		
409.7788	39.864	39.872	-1	1.000	191406	52568	66	165	796	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.245						76	190			
409.7788	39.245						66	165			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.561	39.561	0	1.000	162373	45421	47	117	966		
425.7737	39.561	39.561	0	1.000	153110	43013	51	127	843	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.241						47	117			
425.7737	39.241						51	127			
1,3,6,8-TCDF											
303.9016	16.128	16.128	0		256933	49037	54	135	908		
305.8987	16.128	16.128	0		375918	69992	87	217	805	0.68(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.726	17.726	0		153088	25266	27	67	936		
321.8936	17.734	17.726	1		192856	31475	22	55	1431	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.408	20.408	0		415746	51351	54	135	951		
305.8987	20.399	20.408	-1		612484	78065	87	217	897	0.68(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7-TCDD											
319.8965	21.518	21.518	0		132540	17783	27	67	659		
321.8936	21.518	21.518	0		173968	25305	22	55	1150	0.76(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.939	21.939	0		182383	22694	54	135	420		
305.8987	21.931	21.939	-1		261297	32313	87	217	371	0.70(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.008	22.008	0		163777	22768	27	67	843		
321.8936	22.017	22.008	1		199880	26605	22	55	1209	0.82(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.574	23.574	0		240977	39036	54	135	723		
305.8987	23.574	23.574	0		329803	55021	87	217	632	0.73(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.643	23.643	0		174001	29575	27	67	1095		
1,3,4,6,8-PeCDF											
339.8597	24.004	24.004	0		293455	51890	7	17	7413		
341.8567	24.012	24.004	1		177329	31853	9	22	3539	1.65(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.038	26.038	0		187015	26181	25	62	1047		
357.8516	26.038	26.038	0		117792	16681	22	55	758	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.776						25	62			
357.8516	30.776						22	55			
1,2,3,8,9-PeCDF											
339.8597	30.944						33	82			
341.8567	30.944						25	62			
1,2,3,4,6,8-HxCDF											
373.8208	33.120	33.120	0		271876	38426	70	175	549		
375.8178	33.111	33.120	-1		220099	29793	63	157	473	1.24(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.205	34.205	0		188918	32295	37	92	873		
391.8127	34.197	34.205	-1		148415	25256	29	72	871	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.545	36.545	0		183615	42121	37	92	1138		
391.8127	36.536	36.545	-1		144352	33027	29	72	1139	1.27(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.898	36.898	0		262044	59186	70	175	846		
375.8178	36.898	36.898	0		212693	49326	63	157	783	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.921	38.921	0		157870	43353	47	117	922		
425.7737	38.921	38.921	0		150838	40670	51	127	797	1.05(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	467833	65052

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	467833	65052

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.731	1292	284	2953	608	0.3360	0.44	RQ
18.731	1292	284	1677	368	0.2350		Empc Correction
19.651	3565	599	4345	691	0.6261	0.82	
23.995	3628	632	7371	1071	0.8706	0.49	RQ
23.995	3628	632	4711	820	0.6601		Empc Correction
Signal Totals:							
	8485	1515	10733	1879			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23154	3885				0.58	RQ
	19218	3394					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.833 = (23154 * 40.000) / (467833 * 1.080)

Empc Amount: 1.521 = (19218 * 40.000) / (467833 * 1.080)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.399	637	92	280	114		2.28	R
Signal Totals:							
	637	92	280	114			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	917	206				2.28	RQ
	713	290					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (917 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (713 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.701	1007	221	618	105		1.63	
26.652	1282	272	1199	139		1.07	R
27.233	2704	359	1654	276		1.63	
27.847	2865	363	1857	264		1.54	
30.801	228677	27894	146849	18011		1.56	
Signal Totals:							
	236535	29109	152177	18795			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	388712	47904				1.55	RQ
	388340	47940					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (388712 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (388340 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.624	173911	21451	110691	13444		1.57	
Signal Totals:							
	173911	21451	110691	13444			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	284602	34895				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (284602 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF

IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
35.097	3881	661	3878	670		1.00	R
Signal Totals:							
	3881	661	3878	670			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7759	1331				1.00	RQ
	7010	1194					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0 = (7759 * 0.0) / (0 * 0.000)

Empc Amount: 0.0 = (7010 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	20-Aug-2021 02:21:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	518043	Lims Sample ID:	16

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.316	2148	405	2394	461		0.90	R
Signal Totals:							
	2148	405	2394	461			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4542	866				0.90	RQ
	3880	731					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4542 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (3880 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

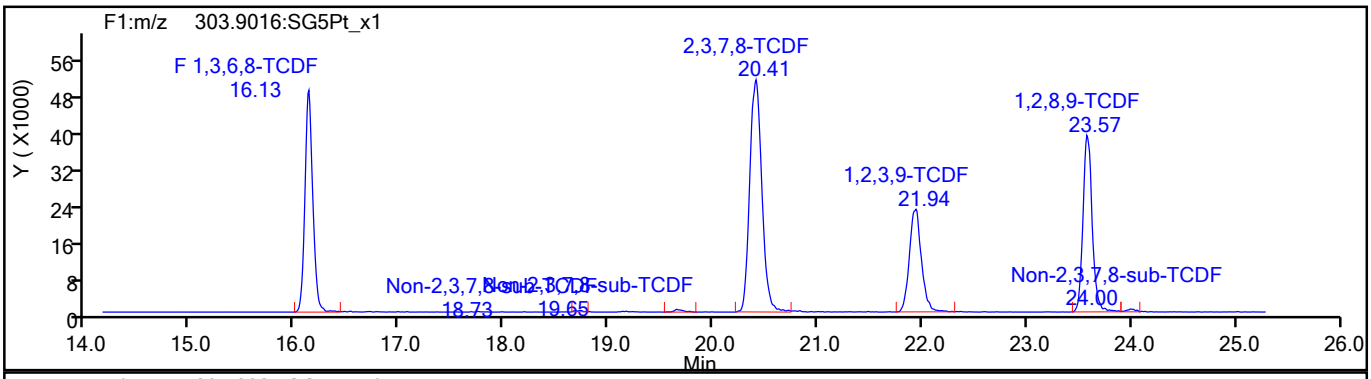

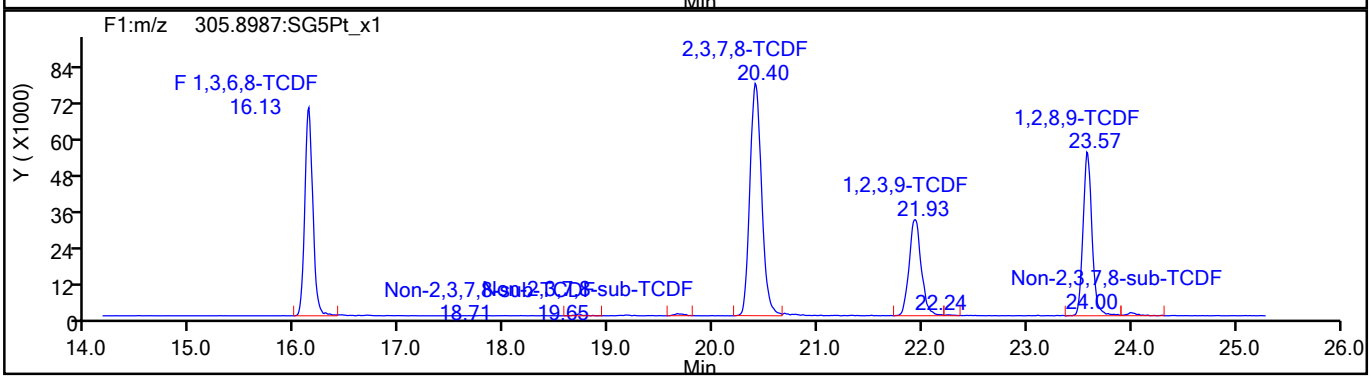

TCDF Standards

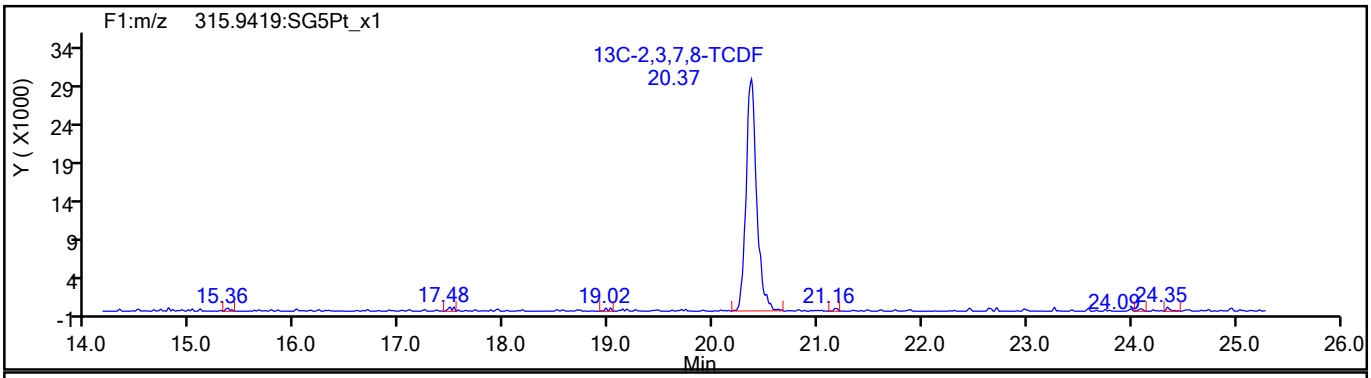

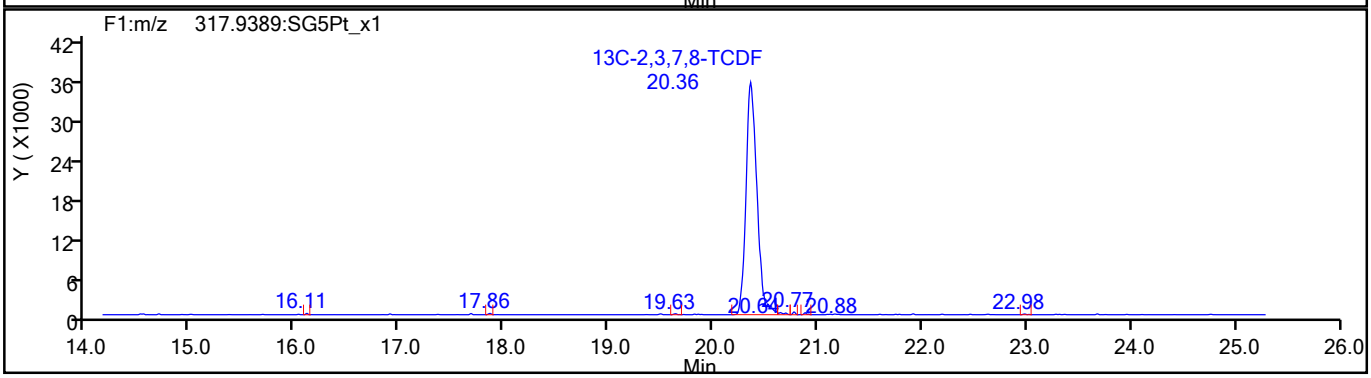

789544

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

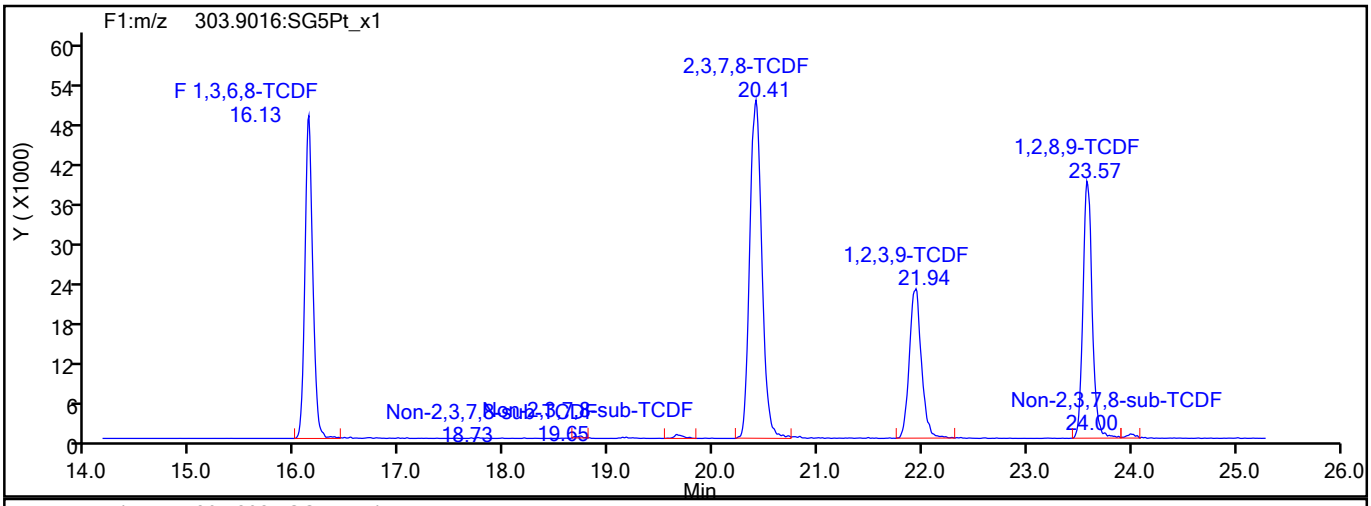

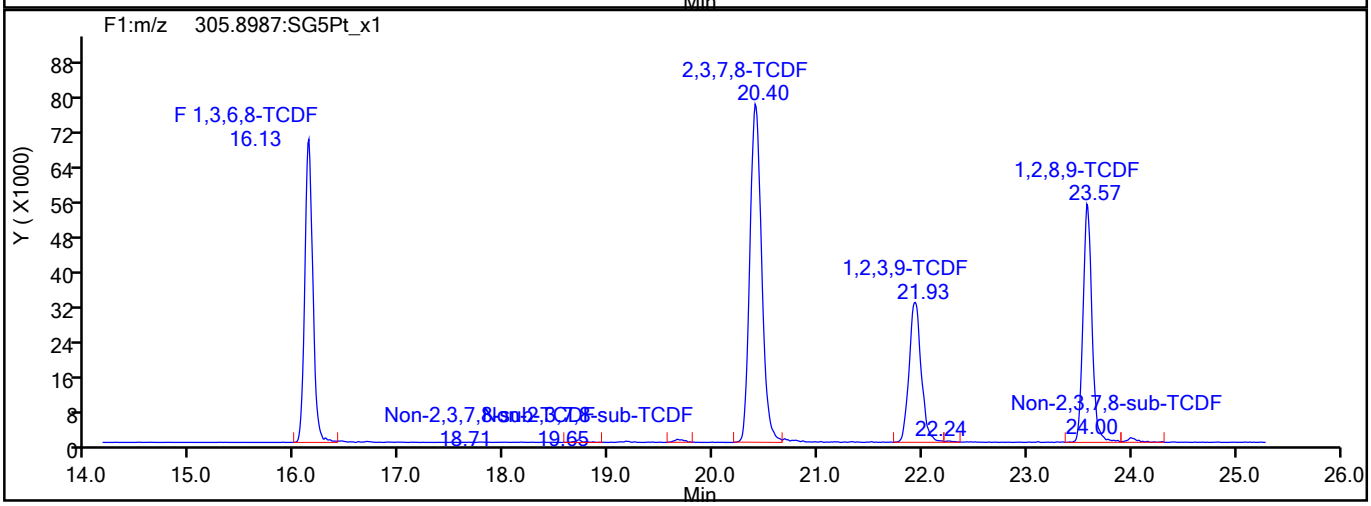

TCDF Interference Mass

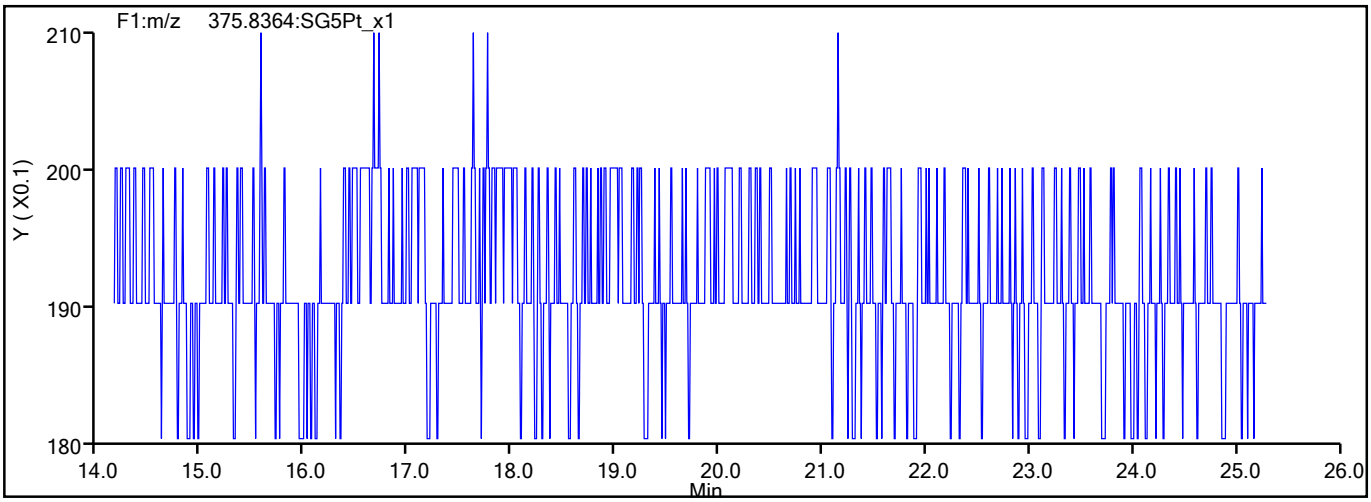

789545

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

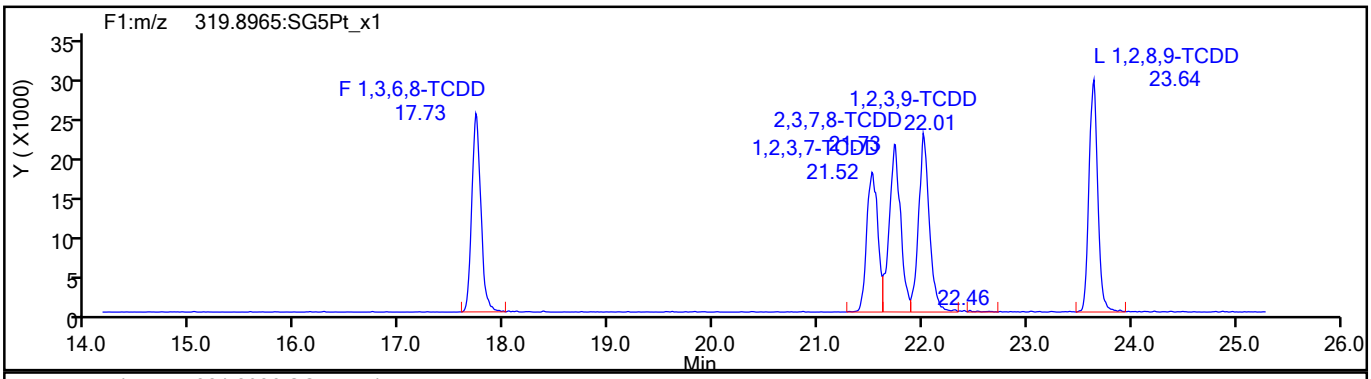

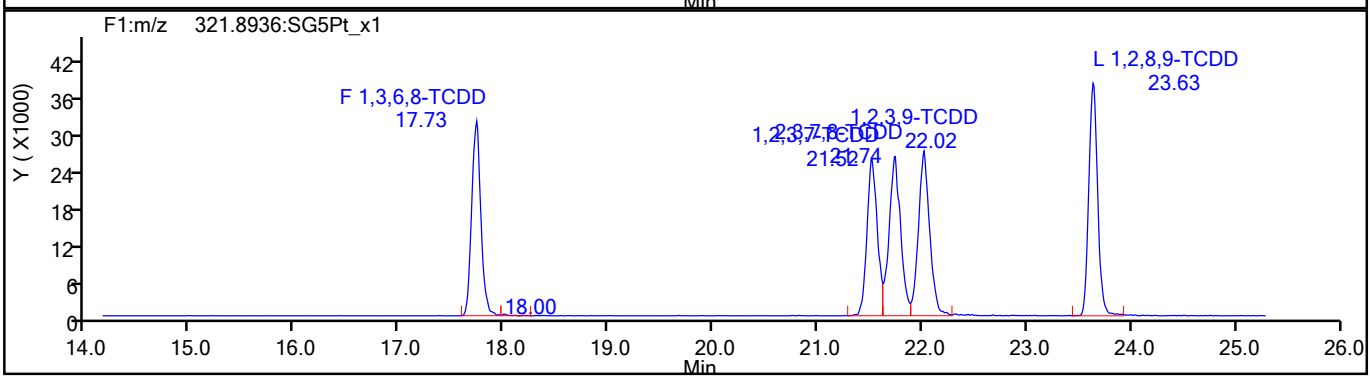

TCDD Standards

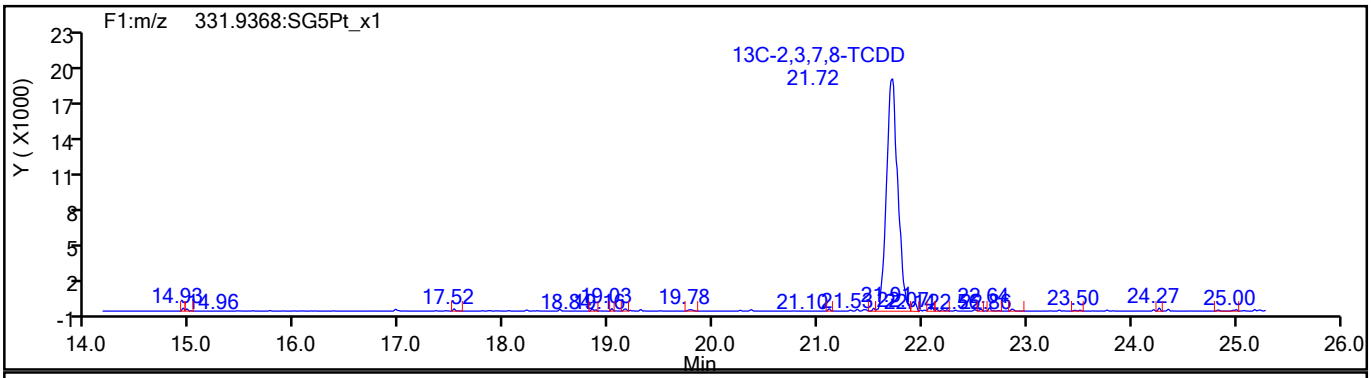

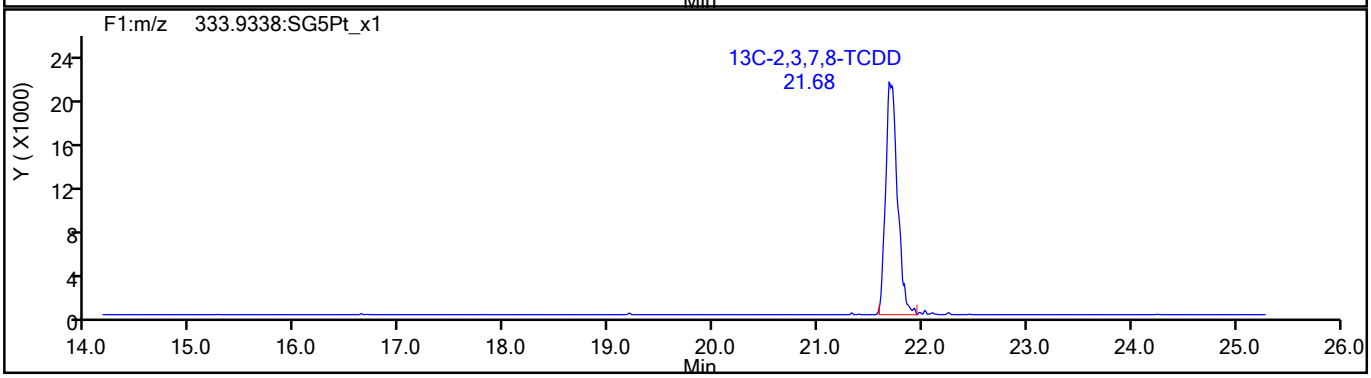

789546

Report Date: 21-Aug-2021 17:06:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

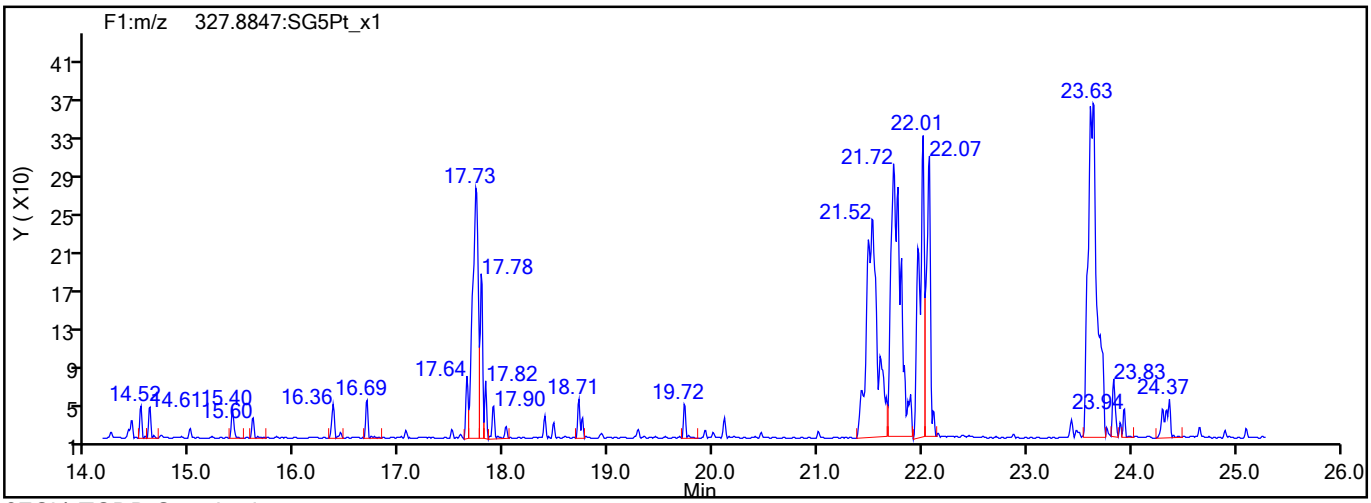

37Cl4-TCDD Standards

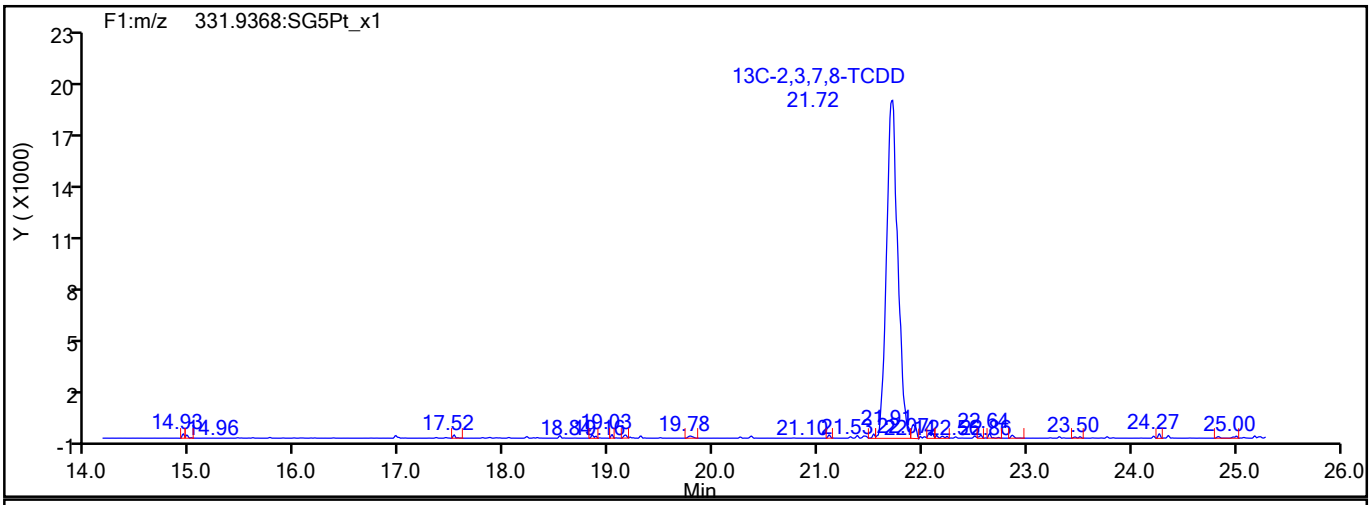

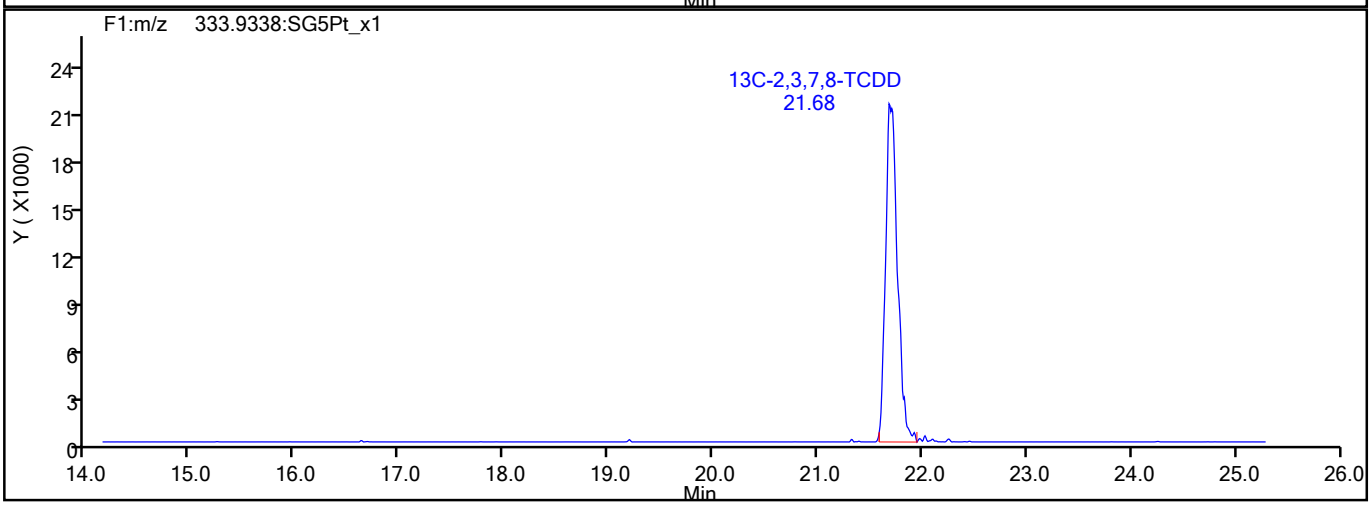

789547

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

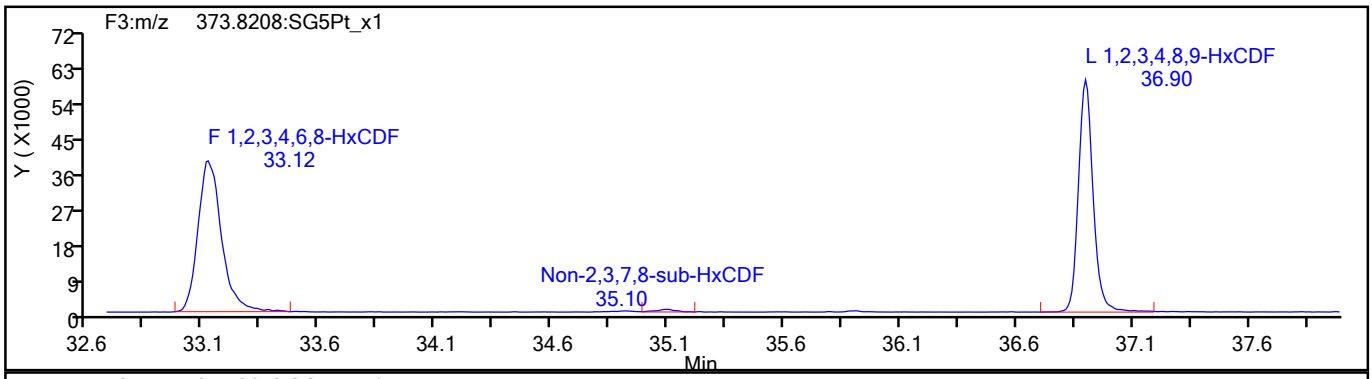

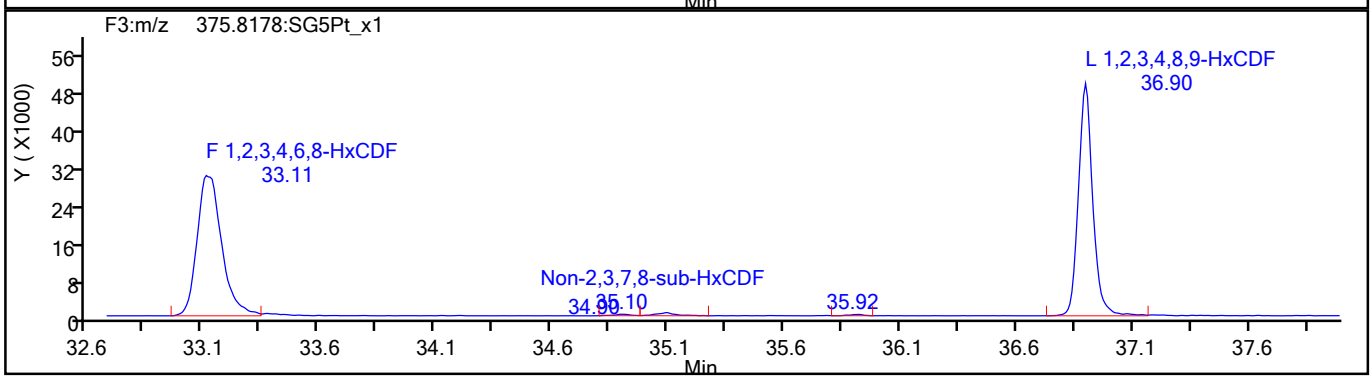

HxCDF Standards

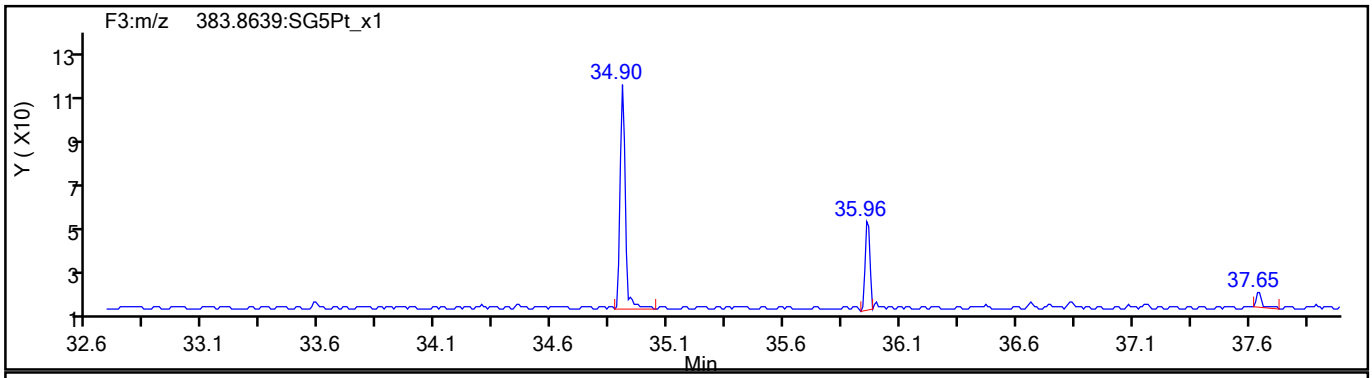

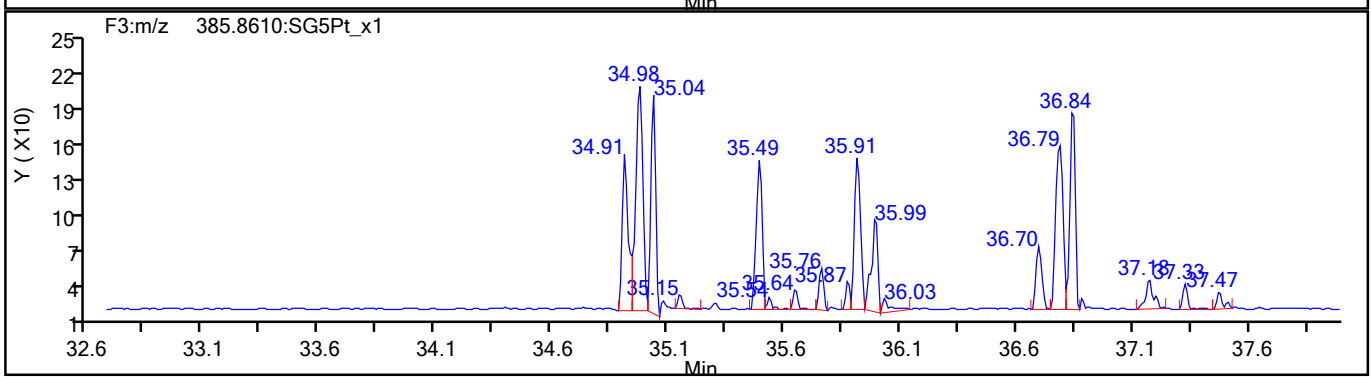

789548

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

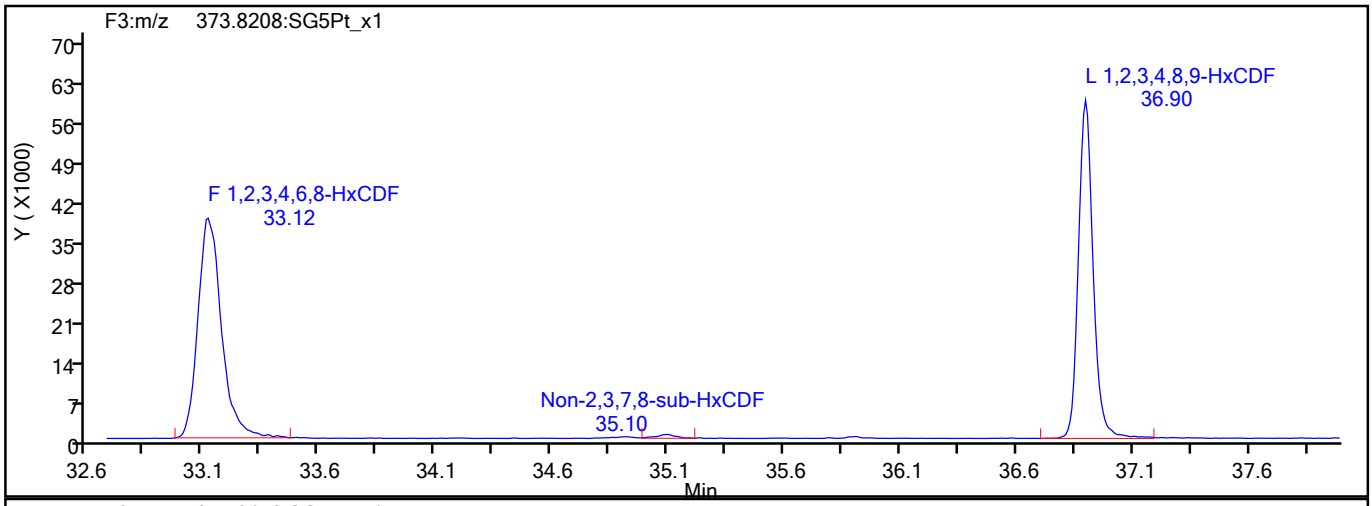

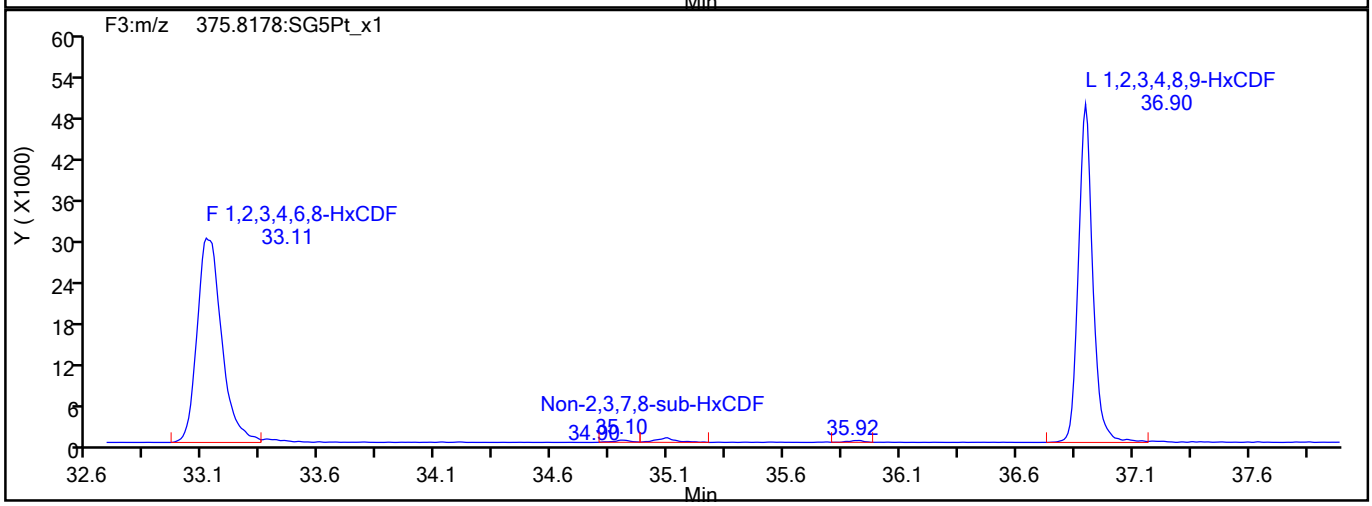

HxCDF Interference Mass

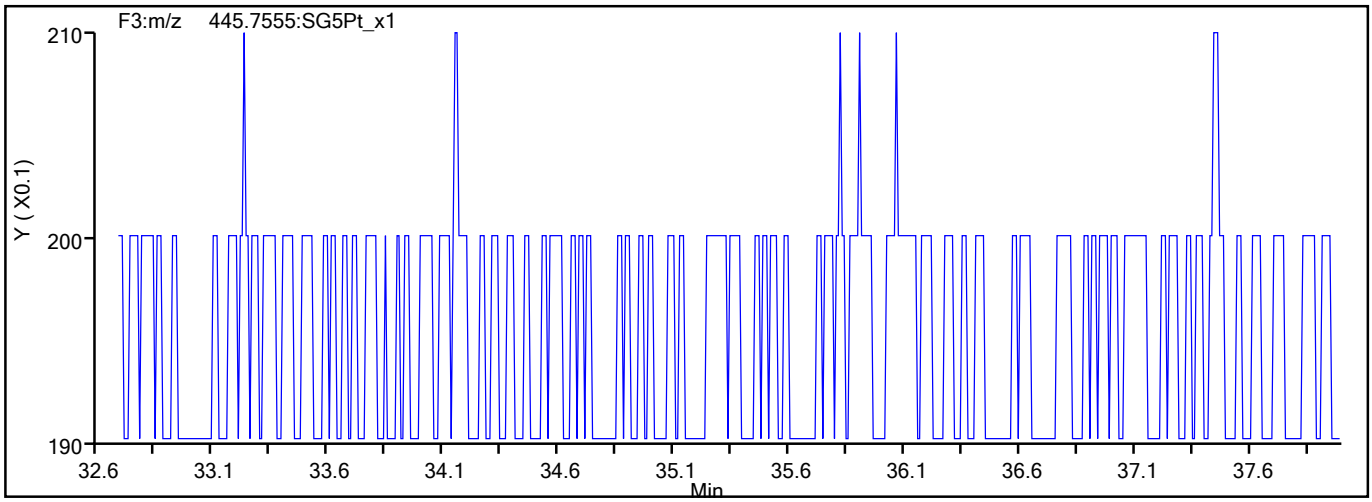

789549

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

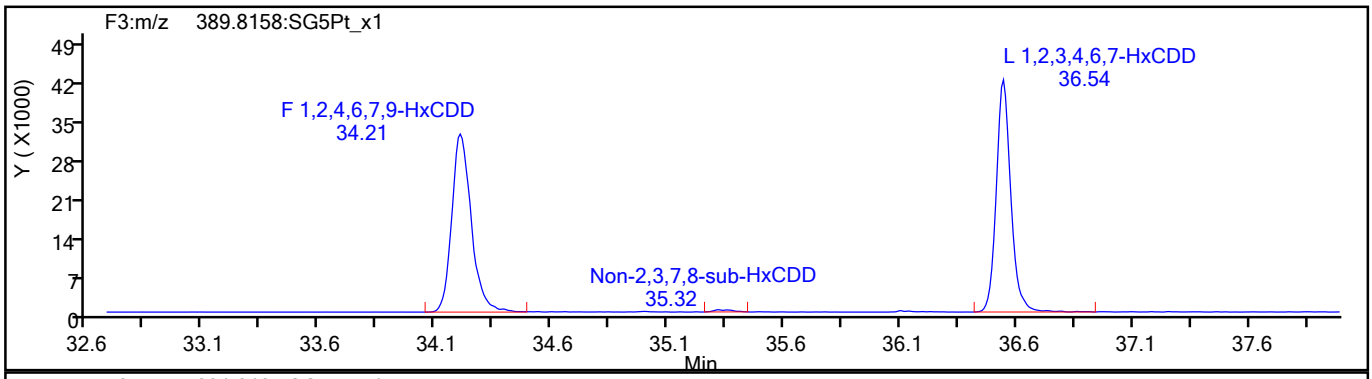

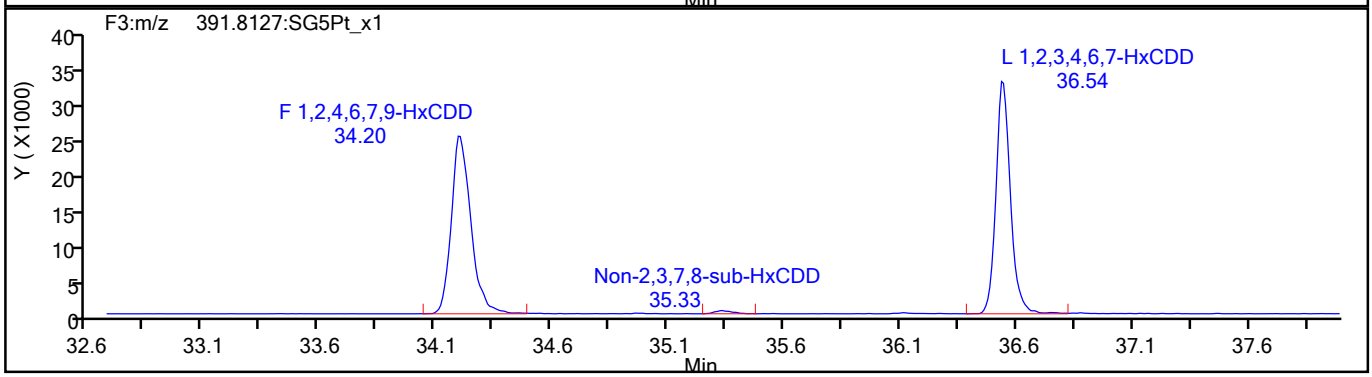

HxCDD Standards

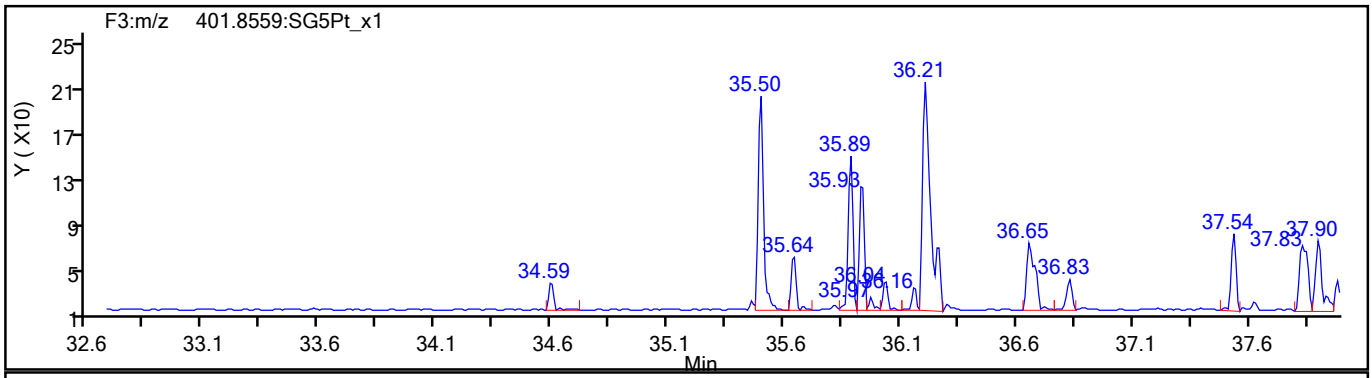

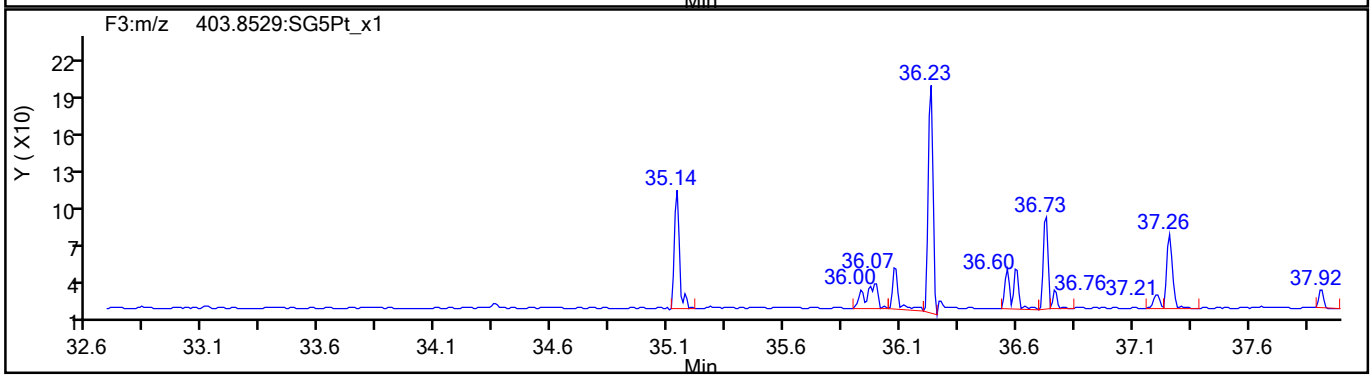

789550

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

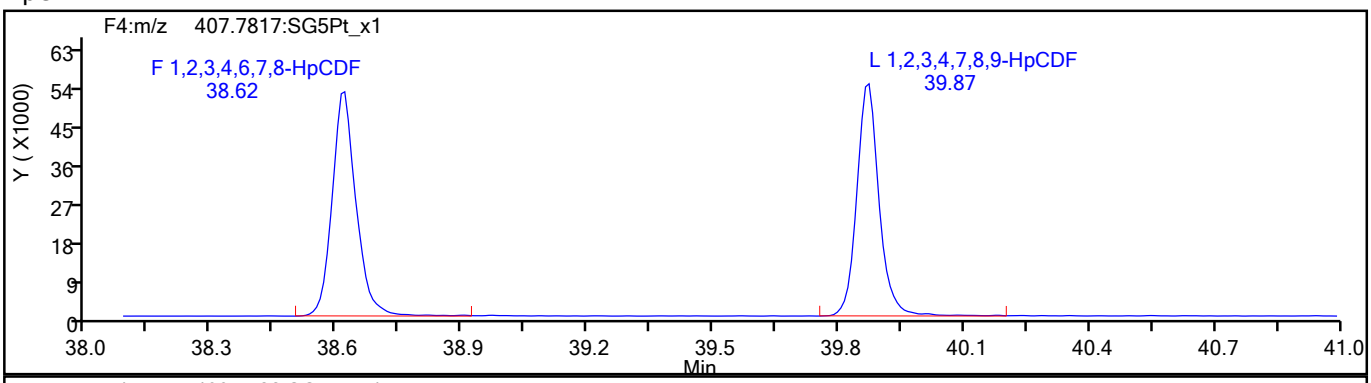

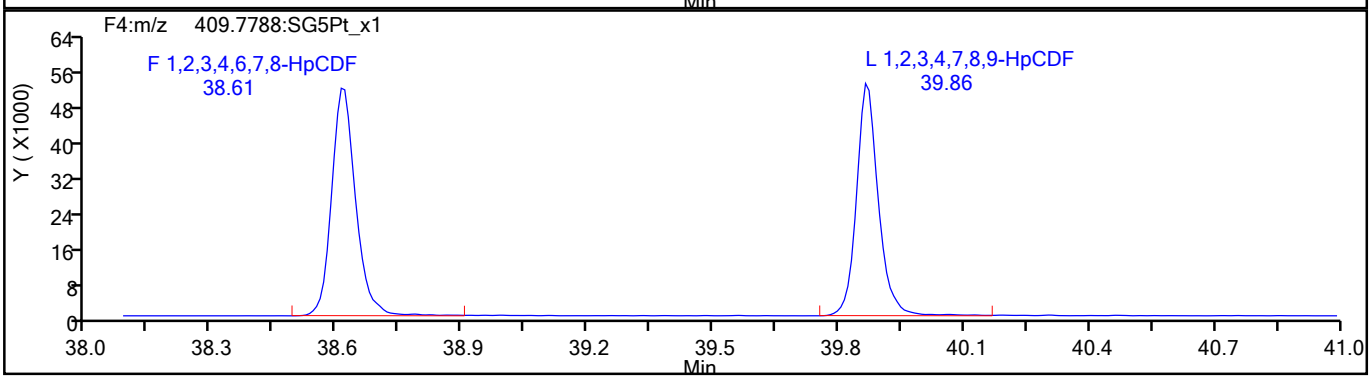

HpCDF Standards

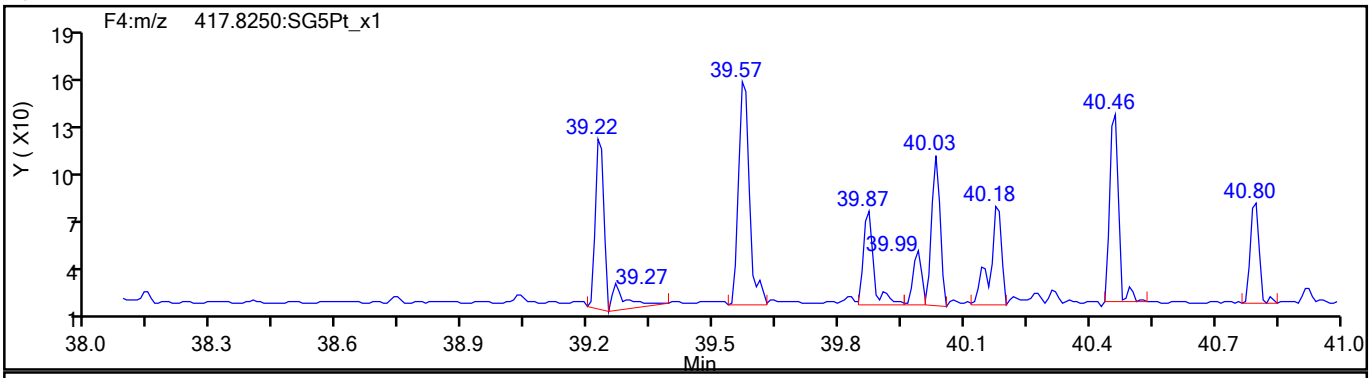

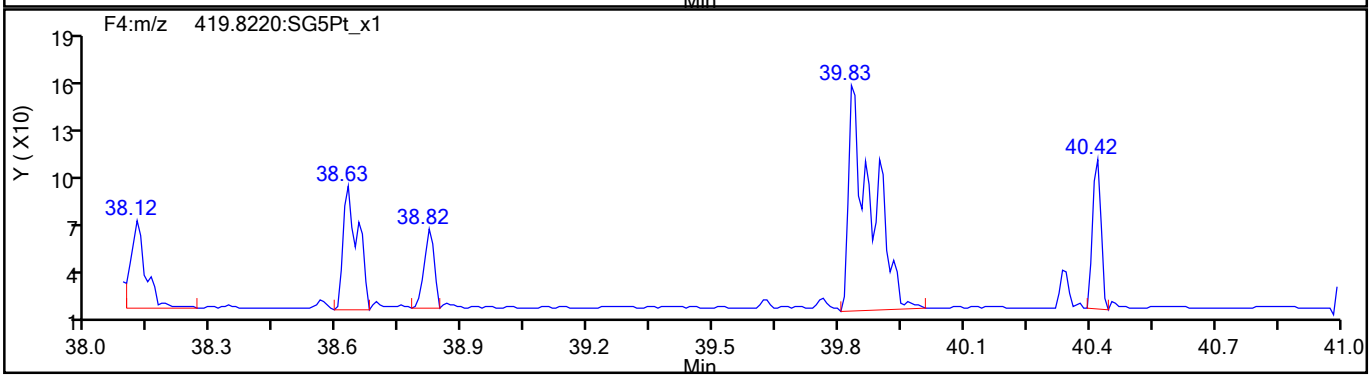

789551

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

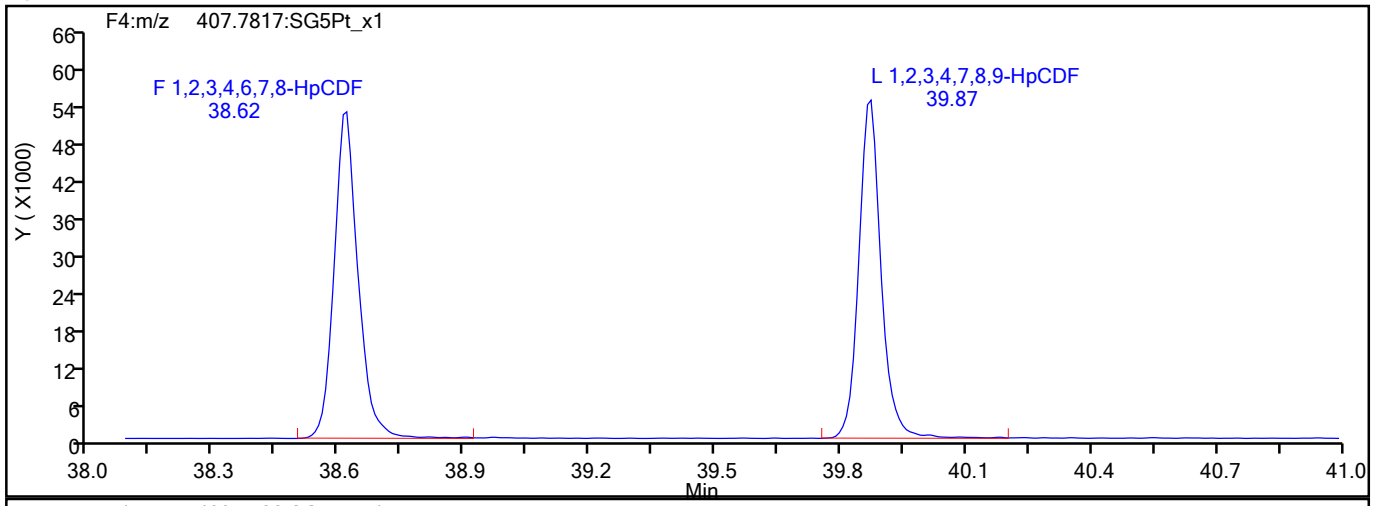

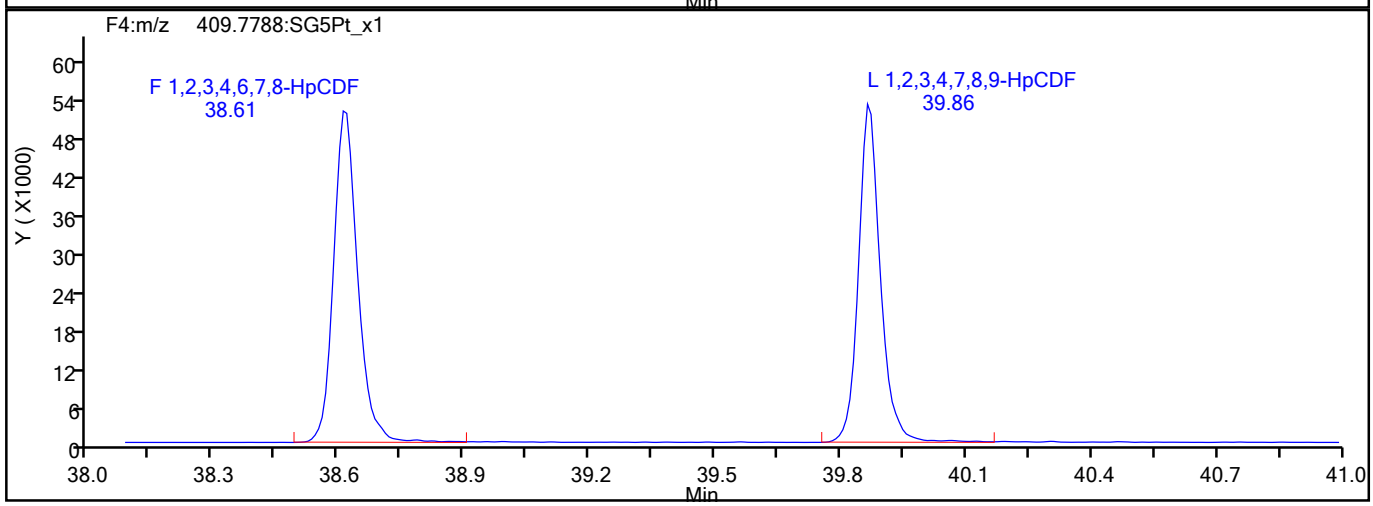

HpCDF Interference Mass

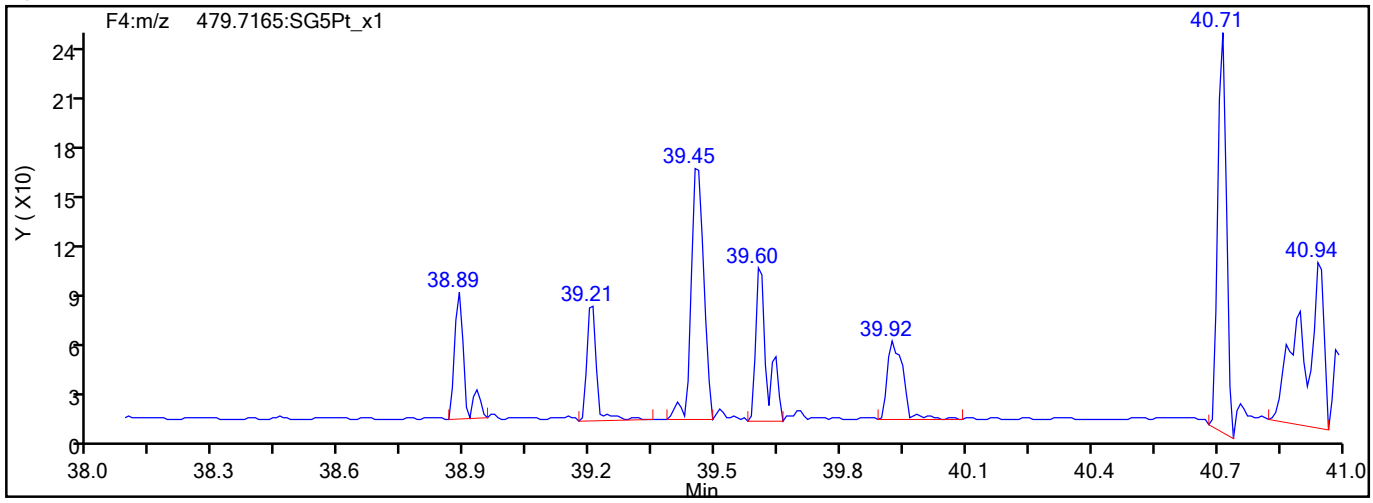

789552

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

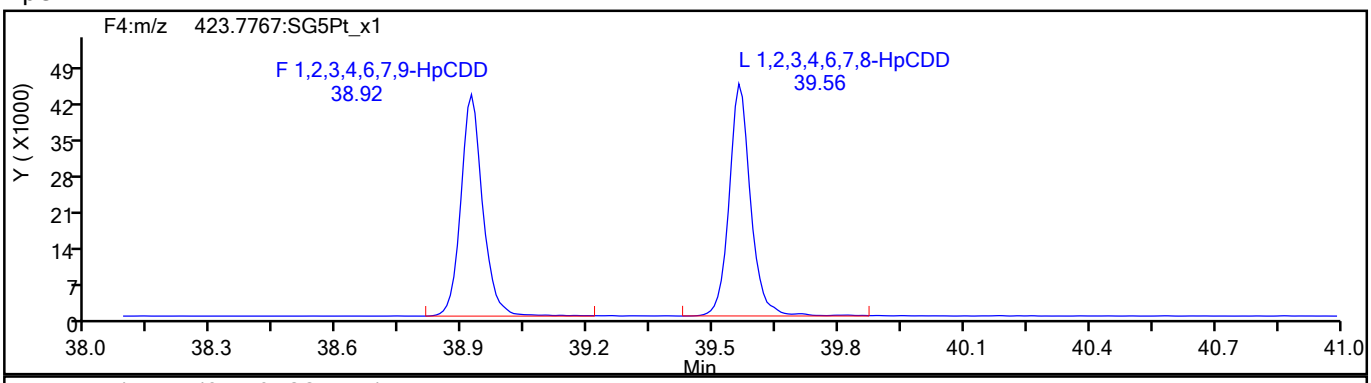

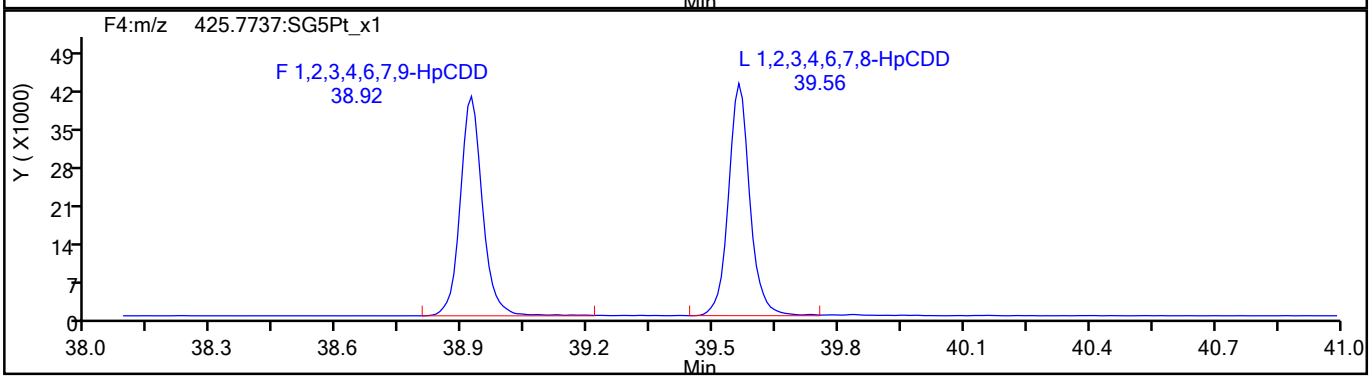

HpCDD Standards

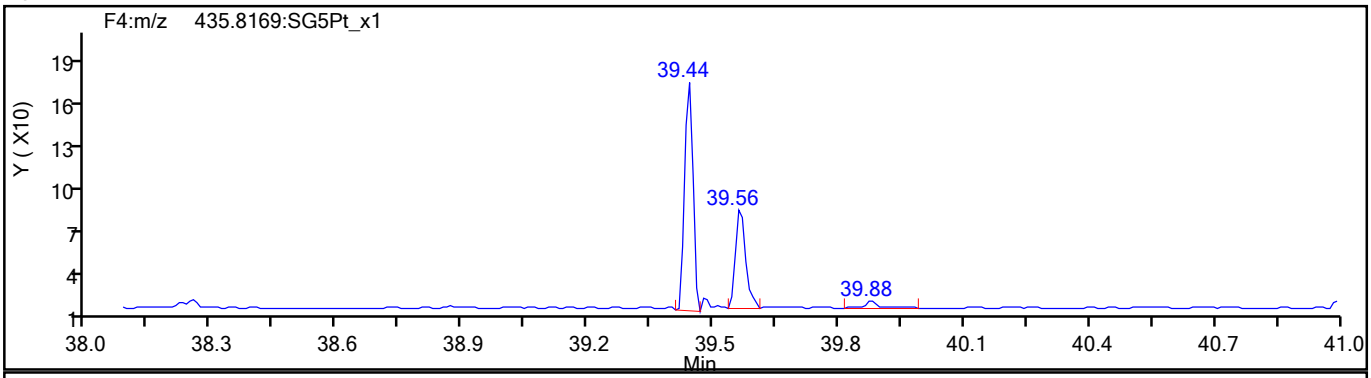

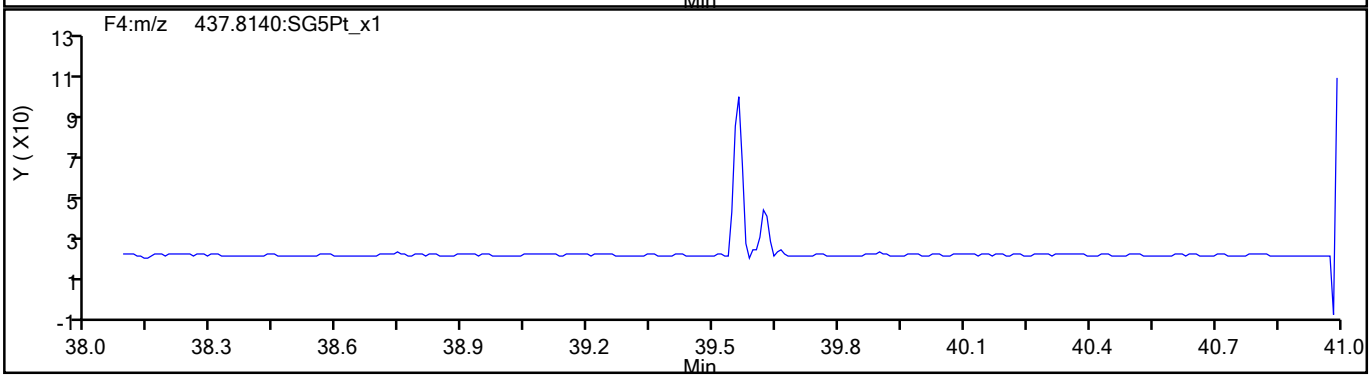

789553

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

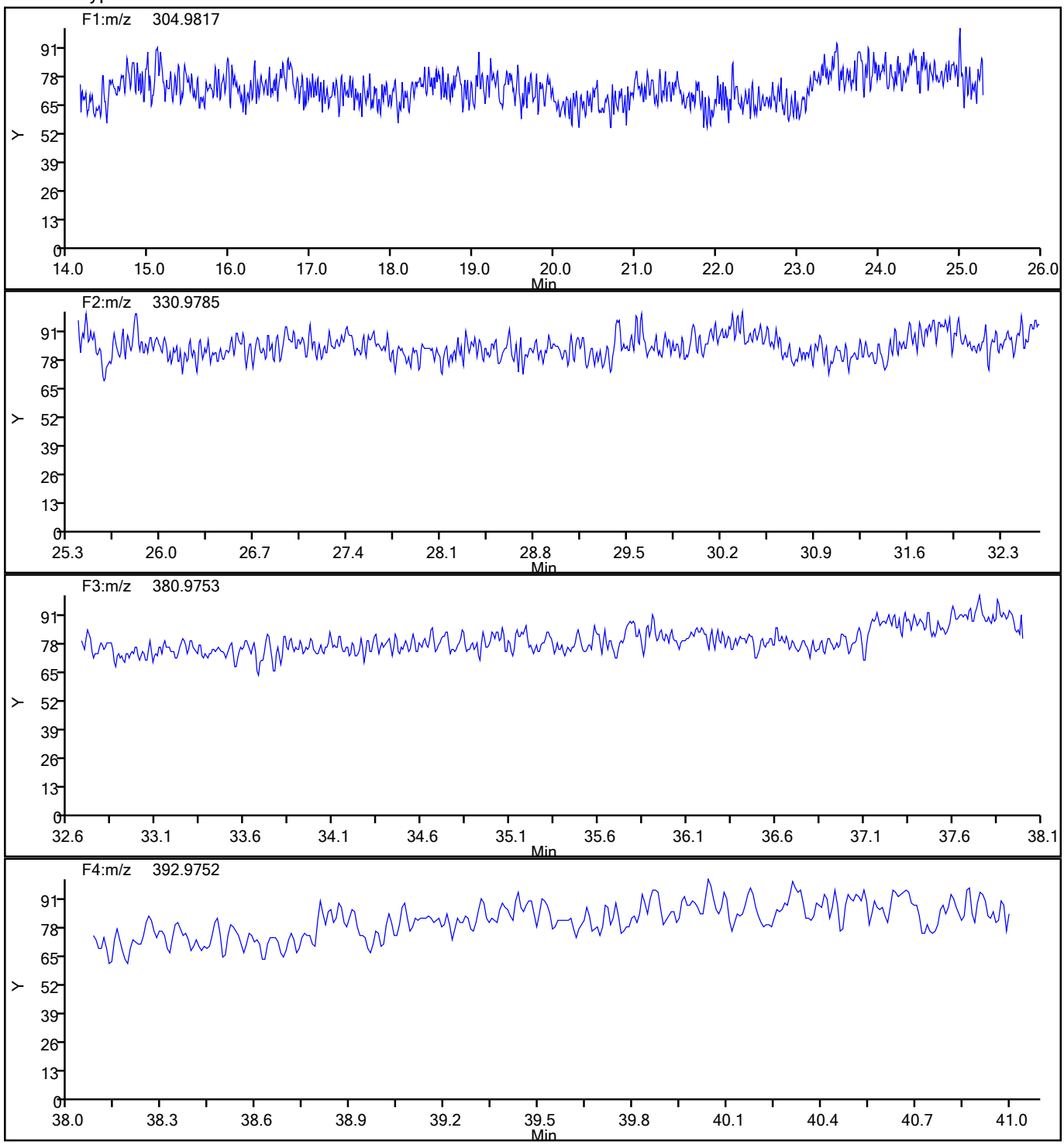

789554

Report Date: 21-Aug-2021 17:06:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_18.d		
Injection Date:	20-Aug-2021 02:21:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	518043	Sample Line#:	16
Column Type:	DB-5	Column Dia:	0.32 mm

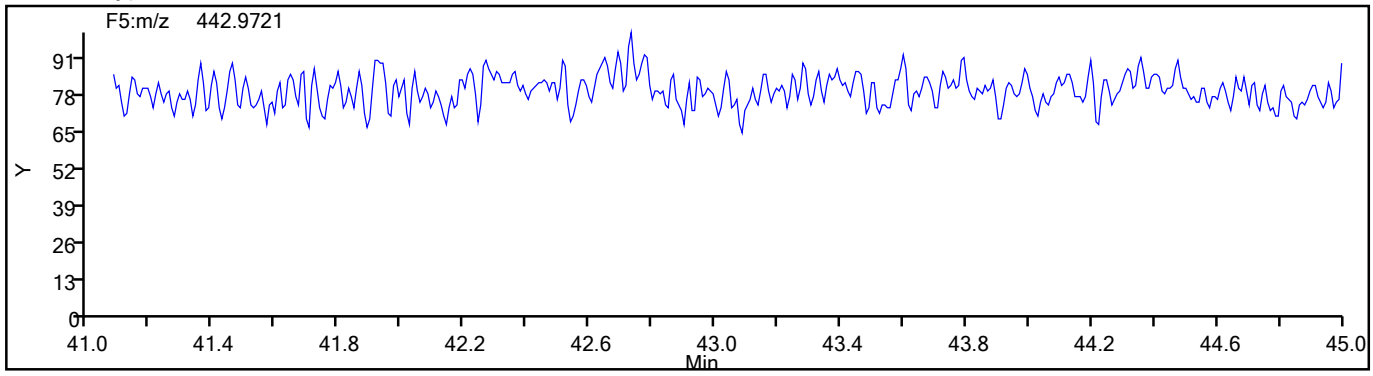

789555

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Lab File ID: 19au21dfs1_5.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10(g) Date Analyzed: 08/19/2021 16:27

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517891 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.073
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.067
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.052
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.055
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.0	0.042
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.046
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.041
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.021
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.020
72918-21-9	1,2,3,7,8,9-HxCDF	ND		5.0	0.020
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.022
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.338	J	5.0	0.032
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.177	J	5.0	0.038
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.041
3268-87-9	OCDD	1.21	J	10	0.029
39001-02-0	OCDF	ND		10	0.12
41903-57-5	Total TCDD	ND		1.0	0.14
30402-14-3	Total TCDF	4.06		1.0	0.047
36088-22-9	Total PeCDD	ND		5.0	0.21
30402-15-4	Total PeCDF	ND		5.0	0.055
34465-46-8	Total HxCDD	ND		5.0	0.19
55684-94-1	Total HxCDF	ND		5.0	0.040
37871-00-4	Total HpCDD	0.546	J	5.0	0.032
38998-75-3	Total HpCDF	0.177	J	5.0	0.039

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Lab File ID: 19au21dfs1_5.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10(g) Date Analyzed: 08/19/2021 16:27

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517891 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	36		25-164
89059-46-1	13C-2,3,7,8-TCDF	36		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	35		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	36		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	40		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	40		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	39		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	47		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	43		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	39		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	38		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	41		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	41		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	42		26-138
114423-97-1	13C-OCDD	36		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	46		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 19-Aug-2021 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513879/1-a RI
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 08:56:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: dadunj Date: 23-Aug-2021 08:56:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.367	999541	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.413	482916	0.81	1.3459	35.9	35.9	0.2062	0.2062	35.90	
2,3,7,8-TCDF	20.422	7680	0.67	1.0802	1.472	1.472	0.0237	0.0237		M
A Non-2,3,7,8-sub-TCDF	19.851	2918	0.78	1.0802	0.5594	0.5594	0.0237	0.5594		a
S Total TCDF					2.032	2.032	0.0237	0.0237		
D 13C-2,3,7,8-TCDD	21.745	331874	0.84	0.9317	35.6	35.6	0.1263	0.1263	35.64	
2,3,7,8-TCDD	21.797						0.0367	0.0367		RQU
$ 37Cl4-2,3,7,8-TCDD	21.780	184847		1.0083	18.3	18.3	0.0144	0.0144	45.85	
A Non-2,3,7,8-sub-TCDD	20.684						0.0367	0.0717		RQU
S Total TCDD							0.0717	0.0717		
D 13C-1,2,3,7,8-PeCDF	27.242	411361	1.64	1.1405	36.1	36.1	0.1592	0.1592	36.09	
1,2,3,7,8-PeCDF	27.263						0.0262	0.0262		
D 13C-2,3,4,7,8-PeCDF	28.759	451402	1.71	1.1253	40.1	40.1	0.1614	0.1614	40.13	
2,3,4,7,8-PeCDF	28.910						0.0273	0.0273		RQU
A F1 PeCDFs	24.634						0.007863	0.007863		RQU
A Non-2,3,7,8-sub-PeCDF	28.173						0.0267	0.0267		RQU
S Total PeCDF							0.0273	0.0273		
D 13C-1,2,3,7,8-PeCDD	29.559	251252	1.75	0.7165	35.1	35.1	0.0527	0.0527	35.08	
1,2,3,7,8-PeCDD	29.616						0.0337	0.0337		
A Non-2,3,7,8-sub-PeCDD	28.478						0.0337	0.1027		RQU
S Total PeCDD							0.1027	0.1027		
D 13C-1,2,3,4,7,8-HxCDF	34.909	442177	0.56	0.9648	46.8	46.8	0.1353	0.1353	46.82	
1,2,3,4,7,8-HxCDF	34.918						0.0106	0.0106		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.070	452714	0.55	1.0708	43.2	43.2	0.1220	0.1220	43.19	
1,2,3,6,7,8-HxCDF	35.087						0.009816	0.009816		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.887	384775	0.54	1.0413	37.7	37.7	0.1254	0.1254	37.75	
2,3,4,6,7,8-HxCDF	35.916						0.0110	0.0110		
D 13C-1,2,3,7,8,9-HxCDF	36.788	369514	0.55	0.9731	38.8	38.8	0.1342	0.1342	38.79	
1,2,3,7,8,9-HxCDF	36.791						0.0102	0.0102		
A Non-2,3,7,8-sub-HxCDF	35.009						0.0104	0.0199		RQU
S Total HxCDF							0.0199	0.0199		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.586	978844	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.097	300443	1.30	0.7587	40.5	40.5	0.1264	0.1264	40.46	
1,2,3,4,7,8-HxCDD	36.126						0.0212	0.0212		
D 13C-1,2,3,6,7,8-HxCDD	36.215	325228	1.26	0.8593	38.7	38.7	0.1116	0.1116	38.67	
1,2,3,6,7,8-HxCDD	36.244						0.0231	0.0231		
1,2,3,7,8,9-HxCDD	36.552						0.0205	0.0205		RQU
A Non-2,3,7,8-sub-HxCDD	35.375						0.0215	0.0943		RQU
S Total HxCDD							0.0943	0.0943		
D 13C-1,2,3,4,6,7,8-HpCDF	38.610	296829	0.48	0.7359	41.2	41.2	0.1807	0.1807	41.20	
1,2,3,4,6,7,8-HpCDF	38.619	379	0.90	1.4421	0.0885	0.0885	0.0188	0.0188		M
D 13C-1,2,3,4,7,8,9-HpCDF	39.857	279786	0.49	0.6854	41.7	41.7	0.1940	0.1940	41.70	
1,2,3,4,7,8,9-HpCDF	39.872						0.0205	0.0205		
A Non-2,3,7,8-sub-HpCDF	39.245						0.0196	0.0196		
S Total HpCDF					0.0885	0.0885	0.0197	0.0197		
D 13C-1,2,3,4,6,7,8-HpCDD	39.554	269457	1.07	0.6745	40.8	40.8	0.0880	0.0880	40.81	
1,2,3,4,6,7,8-HpCDD	39.570	478	1.01	1.0503	0.1689	0.1689	0.0159	0.0159		M
A Non-2,3,7,8-sub-HpCDD	39.241	295	1.12	1.0503	0.1042	0.1042	0.0159	0.1042		
S Total HpCDD					0.2731	0.2731	0.0159	0.0159		
D 13C-OCDD	42.051	387569	0.87	0.5446	72.7	72.7	0.2546	0.2546	36.35	
OCDF	42.157						0.0584	0.0584		
OCDD	42.068	1247	0.84	1.0620	0.6059	0.6059	0.0145	0.0145		M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 19-Aug-2021 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513879/1-a RI
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 08:56:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: dadunj Date: 23-Aug-2021 08:56:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.367	21.395	-2		448088	60917	46	115	1324		
333.9338	21.359	21.395	-2		551453	76764	19	47	4040	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.413	20.365	3	0.955	216659	29555	127	317	233		
317.9389	20.388	20.365	1	0.954	266257	36744	26	65	1413	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.422	20.408	1	1.000	3077	466	1	2	466		M
305.8987	20.422	20.408	1	1.000	4603	728	6	15	121	0.67(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	19.734	19.851	-7	0.967	1278	284	1	2	284		a
305.8987	19.709	19.851	-9	0.965	1640	273	6	15	46	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.745	21.716	2	1.018	151821	19232	46	115	418		
333.9338	21.737	21.716	1	1.017	180053	23875	19	47	1257	0.84(0.65-0.89)	
2,3,7,8-TCDD											RQU
319.8965	21.733						6	15			
321.8936	21.733						1	2			
37Cl4-2,3,7,8-TCDD											
327.8847	21.780	21.799	-1	1.019	184847	22658	8	20	2832		
A Non-2,3,7,8-sub-TCDD											U
319.8965	17.808	20.684	-172	0.819	189	61	6	15	10		
	Empc Correction				111	40	6	15	7		
321.8936	17.774	20.684	-174	0.817	145	52	1	2	52	1.30(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.242	27.251	-1	1.275	255453	37782	54	135	700		
353.8970	27.242	27.251	-1	1.275	155908	23687	46	115	515	1.64(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.276						1	2			
341.8567	27.276						6	15			
13C-2,3,4,7,8-PeCDF											
351.9000	28.759	28.757	0	1.346	284972	39477	54	135	731		
353.8970	28.742	28.757	-1	1.345	166430	22399	46	115	487	1.71(1.32-1.78)	
2,3,4,7,8-PeCDF											RQU
339.8597	28.791						1	2			
341.8567	28.791						6	15			
A F1 PeCDFs											U
339.8597	24.270	24.634	-22	0.891	14	10	1	2	10		
341.8567	24.347	24.634	-17	0.894	375	126	1	2	126	0.04(1.32-1.78)	
	Empc Correction				9	6	1	2	6		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	28.173	28.173	0	1.034	22	12	1	2			
341.8567	28.173	28.173	0	1.034	163	52	6	15		0.13(1.32-1.78)	
	Empc Correction				14	7	6	15	0		
13C-1,2,3,7,8-PeCDD											
367.8949	29.559	29.574	-1	1.383	159751	21868	10	25	2187		
369.8919	29.575	29.574	0	1.384	91501	12206	11	27	1110	1.75(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616						4	10			
357.8516	29.616						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.063	28.478	-145	0.882	120	38	4	10	10		
	Empc Correction				54	24	4	10	6		
357.8516	26.054	28.478	-145	0.881	35	16	1	2	16	3.43(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.909	34.906	0	0.954	159560	29606	34	85	871		
385.8610	34.909	34.906	0	0.954	282617	52423	76	190	690	0.56(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	34.922						2	5			
375.8178	34.922						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.070	35.066	0	0.959	161024	31293	34	85	920		
385.8610	35.061	35.066	0	0.958	291690	52360	76	190	689	0.55(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.082						2	5			
375.8178	35.082						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.887	35.890	0	0.981	134908	26852	34	85	790		
385.8610	35.887	35.890	0	0.981	249867	47678	76	190	627	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.907						2	5			
375.8178	35.907						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.788	36.782	0	1.006	131797	27710	34	85	815		
385.8610	36.780	36.782	0	1.005	237717	51610	76	190	679	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791						2	5			
375.8178	36.791						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.419	35.009	-95	0.957	41	29	2	5	15		
375.8178	33.427	35.009	-95	0.958	46	15	2	5	8	0.89(1.05-1.43)	
	Empc Correction				33	23	2	5	12		
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.586	36.581	0		542767	116573	46	115	2534		
403.8529	36.586	36.581	0		436077	94013	35	87	2686	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.097	36.092	0	0.987	169567	35941	46	115	781		
403.8529	36.097	36.092	0	0.987	130876	30793	35	87	880	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.109						4	10			
391.8127	36.109						2	5			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.215	36.210	0	0.990	181621	37484	46	115	815		
403.8529	36.215	36.210	0	0.990	143607	27866	35	87	796	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.227						4	10			
391.8127	36.227						2	5			
1,2,3,7,8,9-HxCDD											RQU
389.8158	36.597						4	10			
391.8127	36.597						2	5			
A Non-2,3,7,8-sub-HxCDD											U
389.8158	34.977	35.375	-24	0.966	247	48	4	10	12		
	Empc Correction				172	48	4	10	12		
391.8127	34.994	35.375	-23	0.966	139	39	2	5	20	1.78(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.610	38.596	1	1.055	96572	24055	41	102	587		
419.8220	38.610	38.596	1	1.055	200257	49761	71	177	701	0.48(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7817	38.619	38.618	0	1.000	180	61	6	15	10		
409.7788	38.619	38.618	0	1.000	199	84	2	5	42	0.90(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.857	39.850	0	1.089	91751	25313	41	102	617		
419.8220	39.857	39.850	0	1.089	188035	49089	71	177	691	0.49(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872						6	15			
409.7788	39.872						2	5			
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.245						6	15			
409.7788	39.245						2	5			

Report Date: 23-Aug-2021 08:56:17 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.554	39.547	0	1.081	139342	37216	23	57	1618		
437.8140	39.554	39.547	0	1.081	130115	34855	27	67	1291	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											M
423.7767	39.570	39.561	1	1.000	240	101	4	10	25		
425.7737	39.562	39.561	0	1.000	238	76	1	2	76	1.01(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.947	39.241	-18	0.985	156	65	4	10	16		
425.7737	38.914	39.241	-20	0.984	139	52	1	2	52	1.12(0.88-1.20)	
13C-OCDD											
469.7780	42.051	42.036	1	1.149	180767	43311	74	185	585		
471.7750	42.051	42.036	1	1.149	206802	47640	43	107	1108	0.87(0.76-1.02)	
OCDF											
441.7428	42.137						3	7			
443.7399	42.137						11	27			
OCDD											M
457.7377	42.068	42.053	1	1.000	569	118	1	2	118		M
459.7348	42.051	42.053	0	1.000	678	161	2	5	81	0.84(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	482916	66299

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	482916	66299

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.734	1278	284	1640	273	0.5594	0.78	a
Signal Totals:							
	1278	284	1640	273			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2918	557				0.78	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5594 = (2918 * 100.000) / (482916 * 1.080)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	331874	43107

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	331874	43107

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.808	189	61	145	52	0.0936	1.30	RQ
17.808	111	40	145	52	0.0717		Empc Correction
21.960	78	44	37	20	0.0322	2.11	RQ
21.960	28	15	37	20	0.0182		Empc Correction
23.385	139	62	10	5	0.0418	13.90	RQ
23.385	7	3	10	5	0.004764		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	411361	61469
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	451402	61876

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	431381	61672

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.270	14	10	375	126	0.0875	0.04	RQ
24.270	14	10	9	6	0.005171		Empc Correction
24.553	8	4	62	43	0.0157	0.13	RQ
24.553	8	4	5	2	0.002923		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	411361	61469
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	451402	61876

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	431381	61672

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
29.567	22	12	163	52	0.0416	0.13	RQ
29.567	22	12	14	7	0.008094		Empc Correction

Compound is Marked ND

789567

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	251252	34074

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	251252	34074

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.063	120	38	35	16	0.0590	3.43	RQ
26.063	54	24	35	16	0.0338		Empc Correction
26.374	55	36	12	6	0.0255	4.58	RQ
26.374	18	9	12	6	0.0114		Empc Correction
30.224	437	87	106	40	0.2065	4.12	RQ
30.224	164	61	106	40	0.1027		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	442177	82029
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	452714	83653
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	384775	74530
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	369514	79320

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	412295	79883

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.419	41	29	46	15	0.0175	0.89	RQ
33.419	41	29	33	23	0.0149		Empc Correction
35.407	52	27	47	31	0.0199	1.11	

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	300443	66734
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	325228	65350
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	312835	66042

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.977	247	48	139	39	0.1170	1.78	RQ
34.977	172	48	139	39	0.0943		Empc Correction
35.297	59	22	62	34	0.0367	0.95	RQ
35.297	59	22	47	17	0.0321		Empc Correction
35.904	124	47	45	32	0.0512	2.76	RQ
35.904	55	39	45	32	0.0303		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	269457	72071

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	269457	72071

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.947	156	65	139	52	0.1042	1.12	
Signal Totals:							
	156	65	139	52			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	295	117				1.12	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.1042 = (295 * 100.000) / (269457 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.42
Area: 2721
Amount: 1.404027
Amount Units: pg/ul

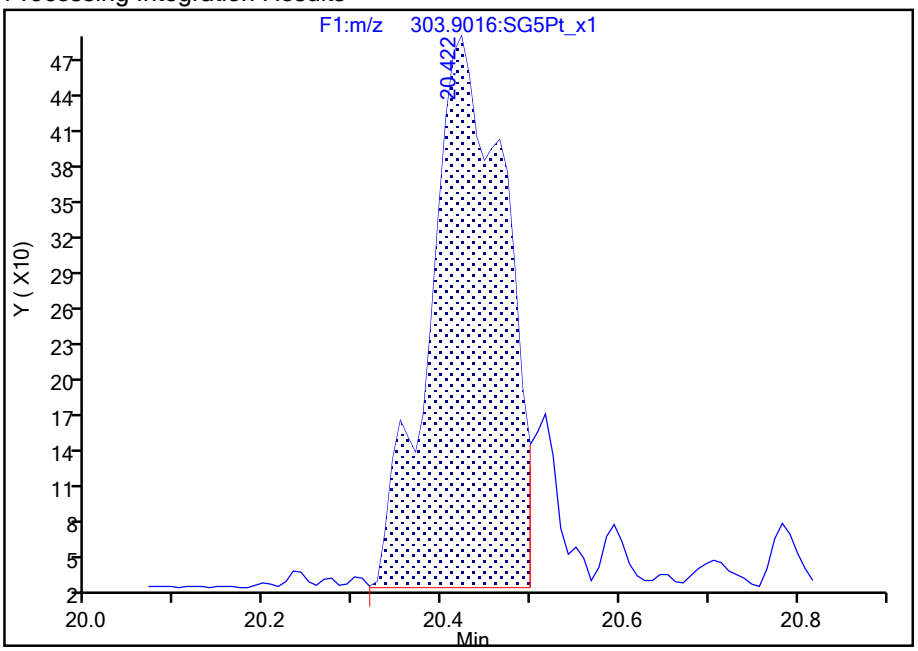

Manual Integration Results

RT: 20.42
Area: 3077
Amount: 1.472273
Amount Units: pg/ul

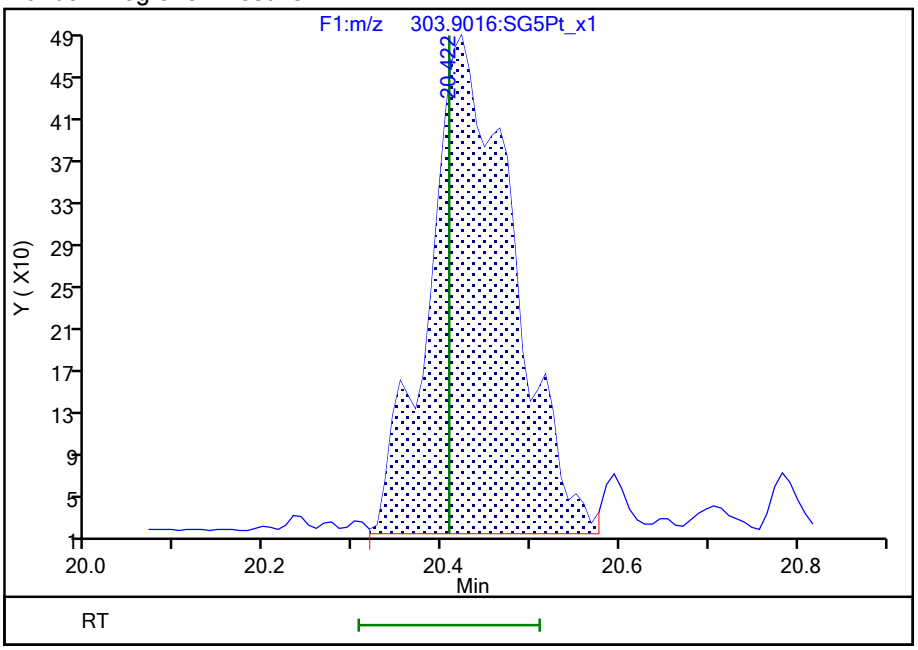

Reviewer: dadunj, 23-Aug-2021 08:53:56

Audit Action: Manually Integrated Audit Reason: Baseline

789572

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.62
Area: 339
Amount: 0.121248
Amount Units: pg/ul

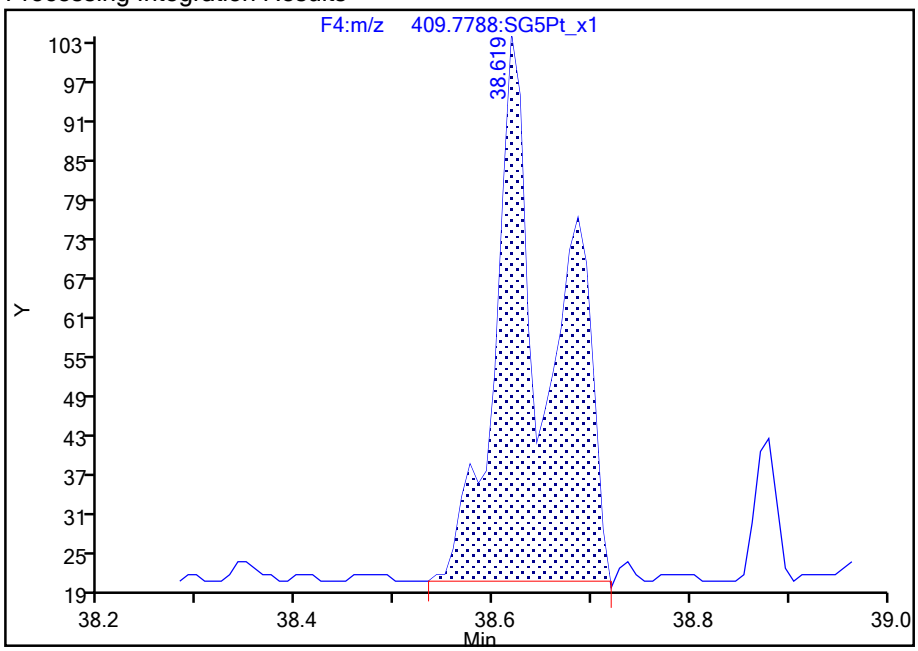

Manual Integration Results

RT: 38.62
Area: 199
Amount: 0.088541
Amount Units: pg/ul

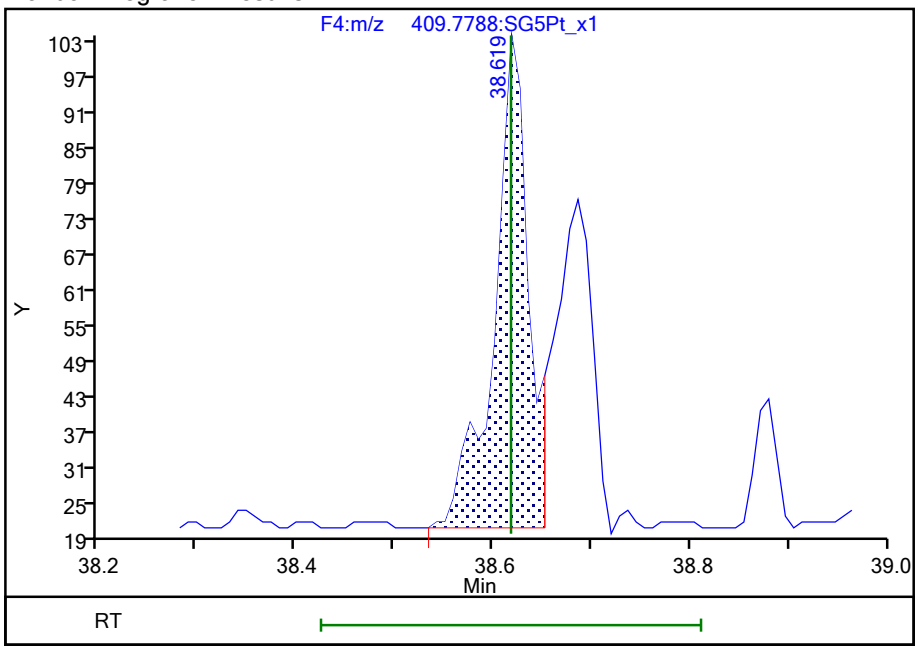

Reviewer: dadunj, 23-Aug-2021 08:55:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 39.56
Area: 255
Amount: 0.174905
Amount Units: pg/ul

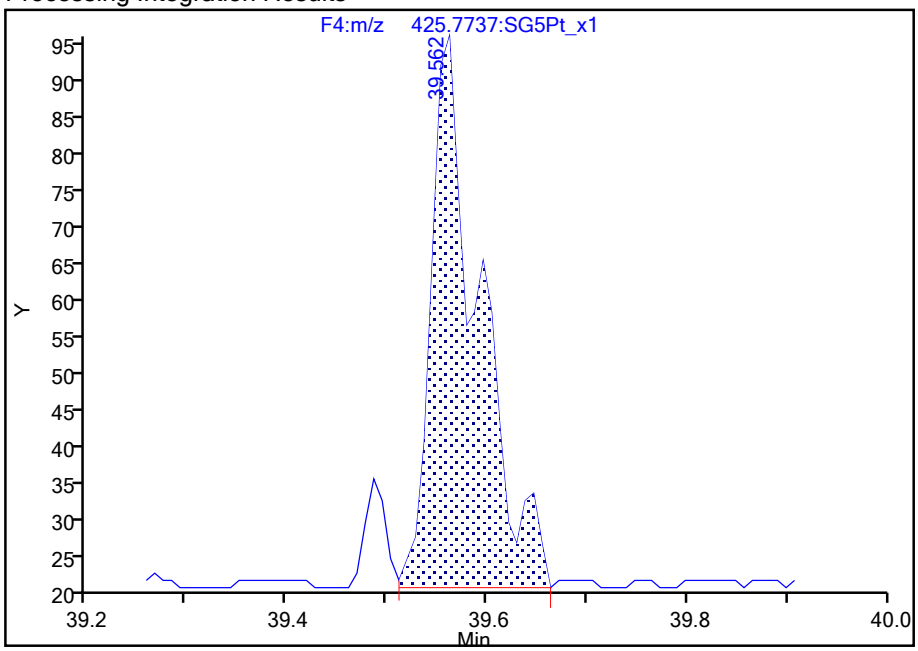

Manual Integration Results

RT: 39.56
Area: 238
Amount: 0.168898
Amount Units: pg/ul

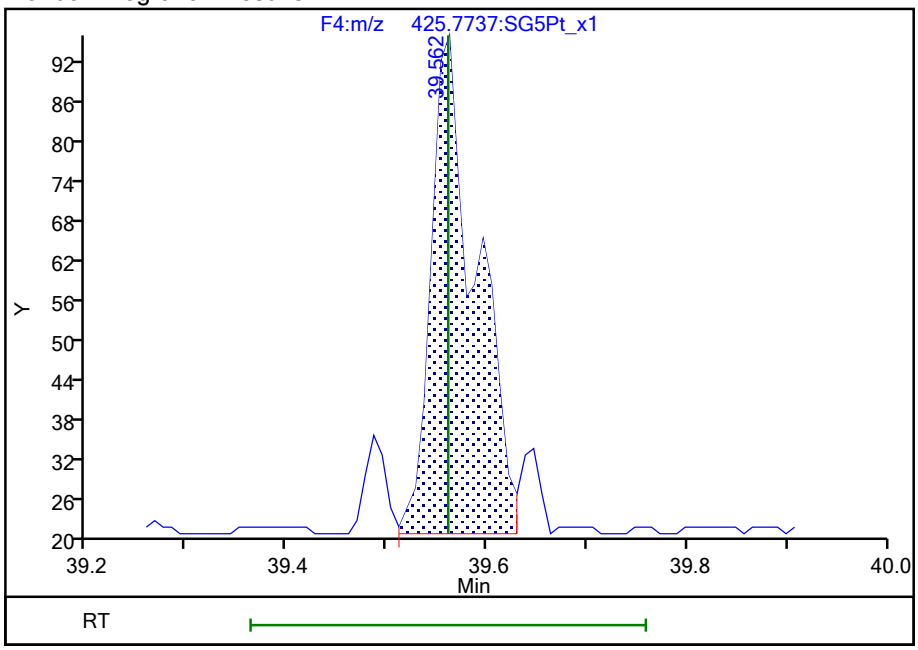

Reviewer: dadunj, 23-Aug-2021 08:55:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 42.07
Area: 520
Amount: 0.582127
Amount Units: pg/ul

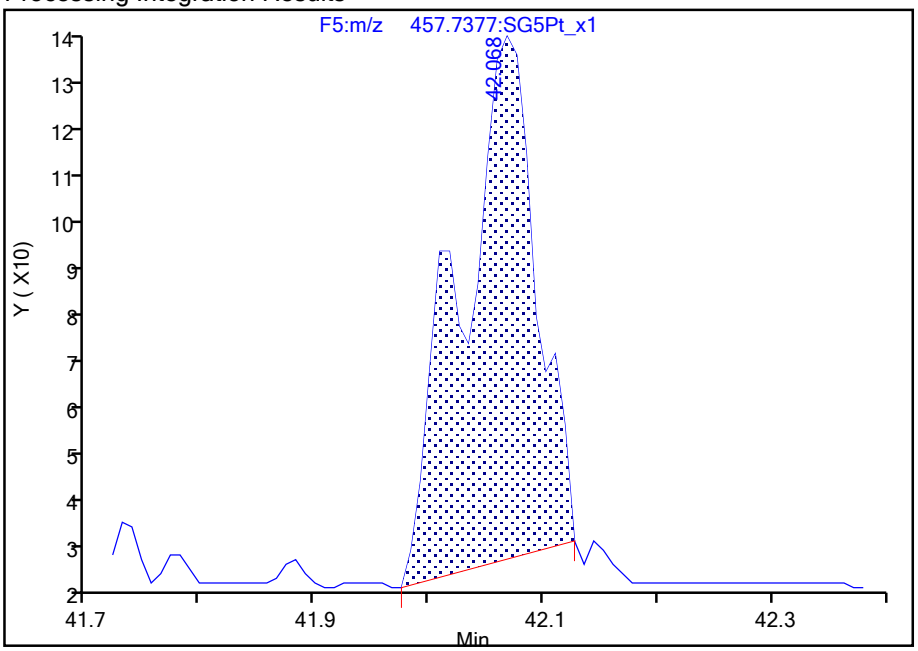

Manual Integration Results

RT: 42.07
Area: 569
Amount: 0.605937
Amount Units: pg/ul

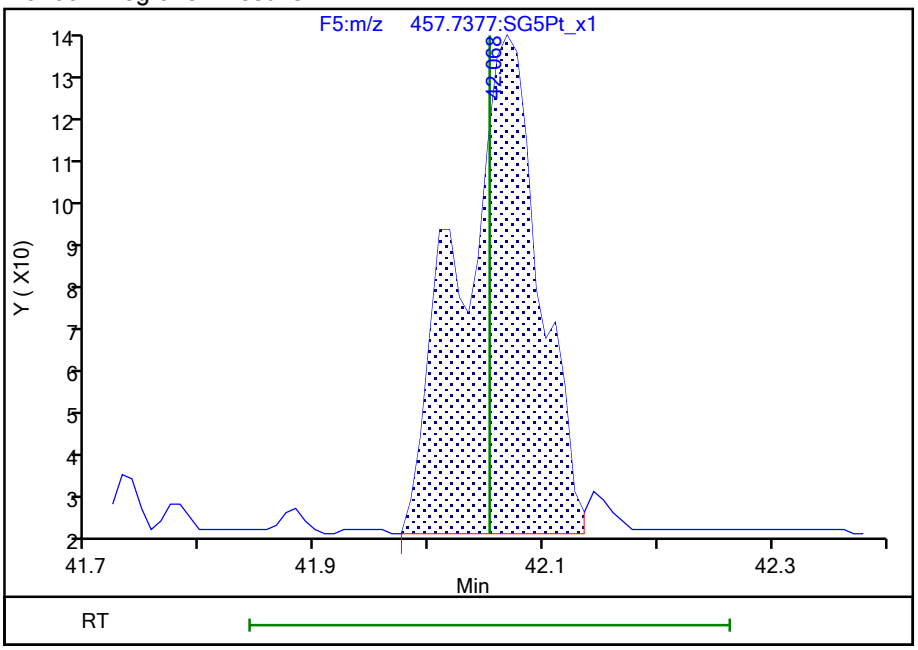

Reviewer: dadunj, 23-Aug-2021 08:55:45

Audit Action: Manually Integrated Audit Reason: Baseline

789575

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

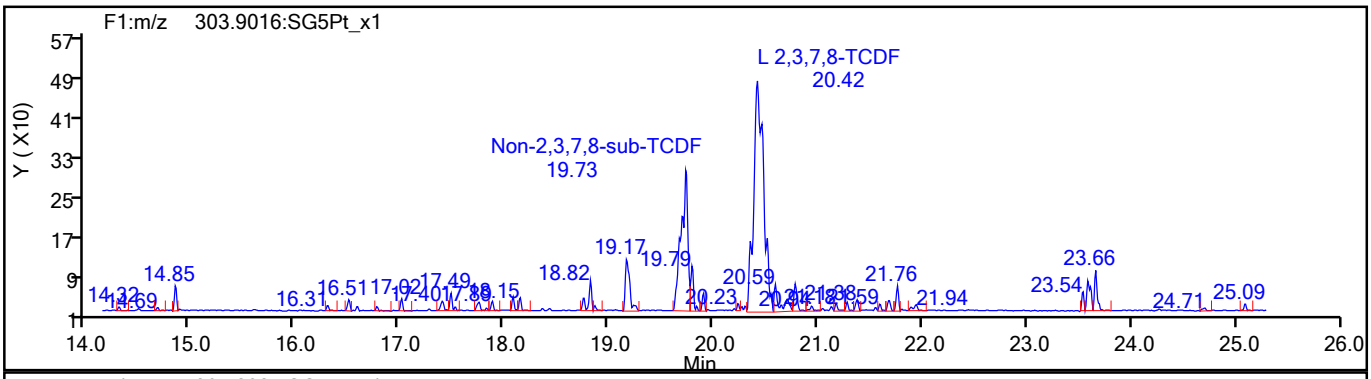

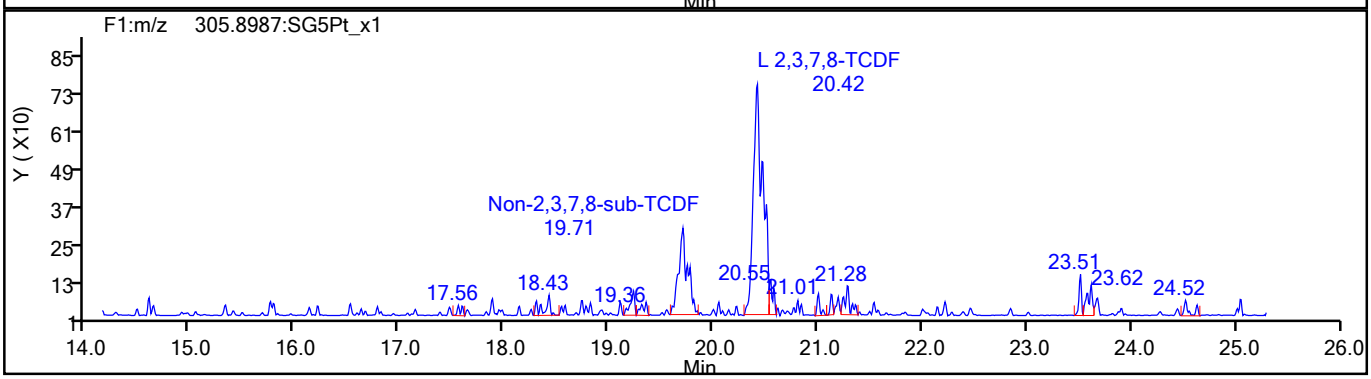

TCDF Standards

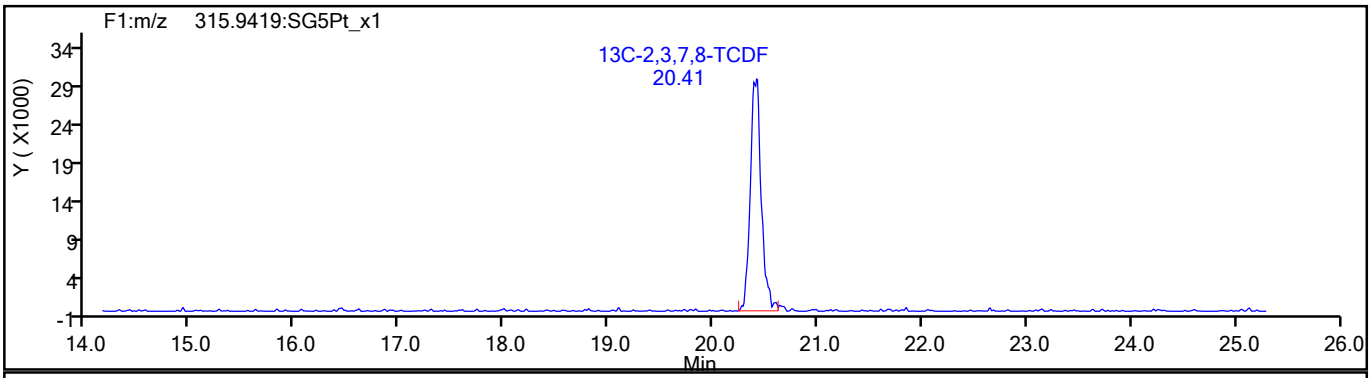

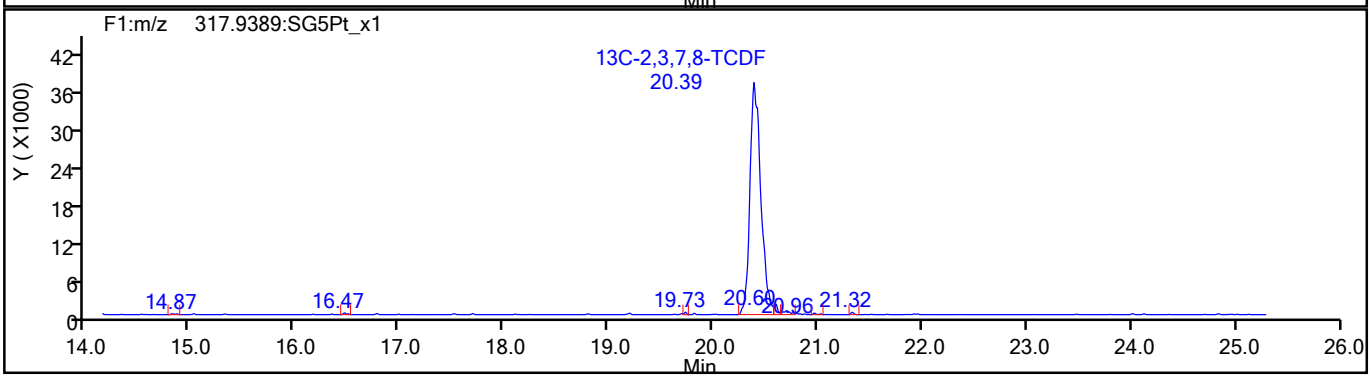

789576

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

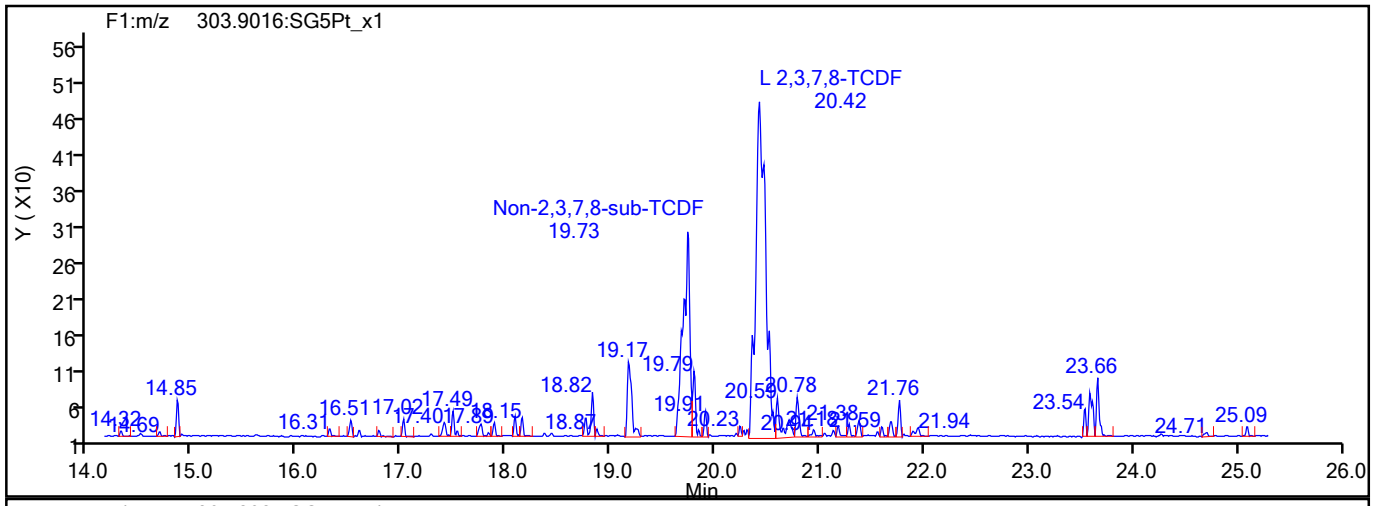

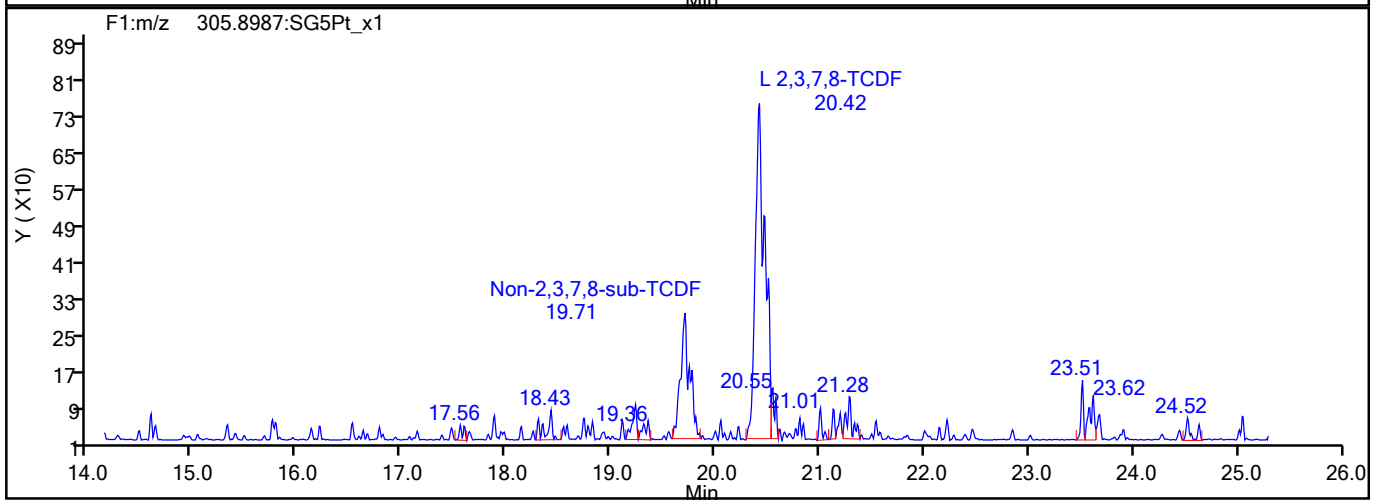

TCDF Interference Mass

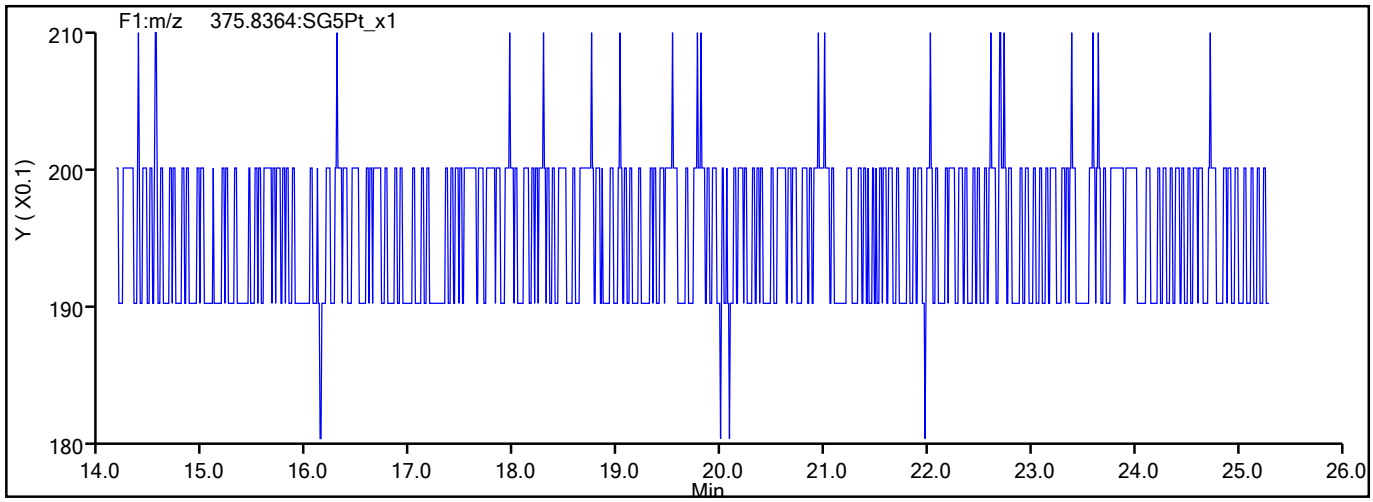

789577

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

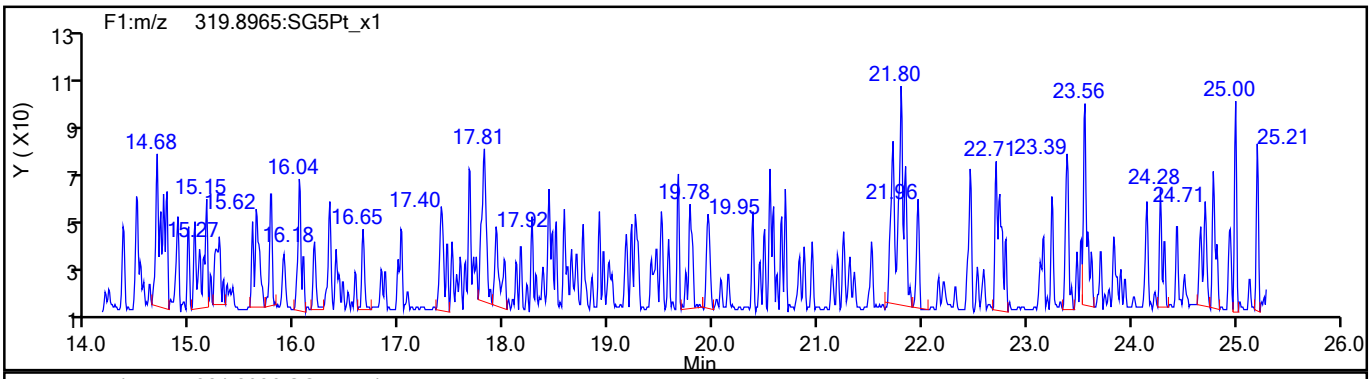

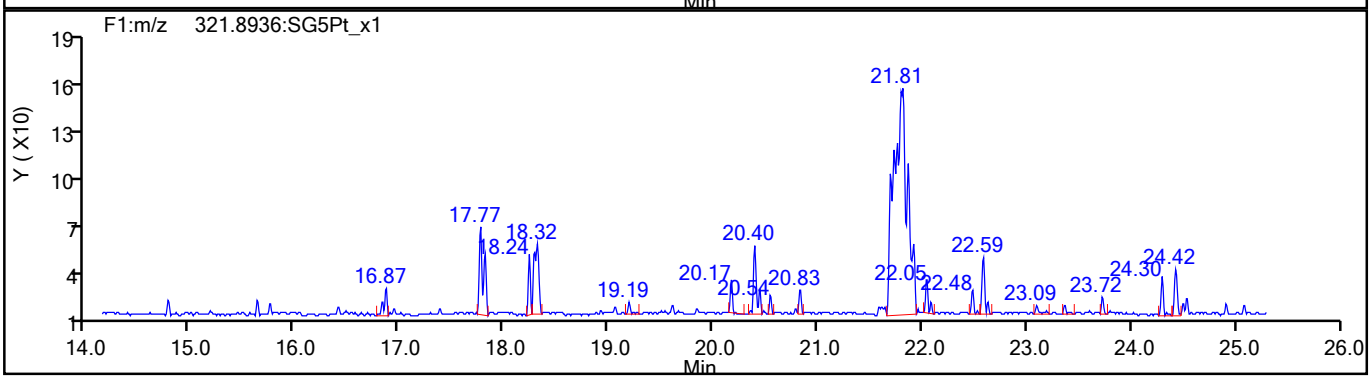

TCDD Standards

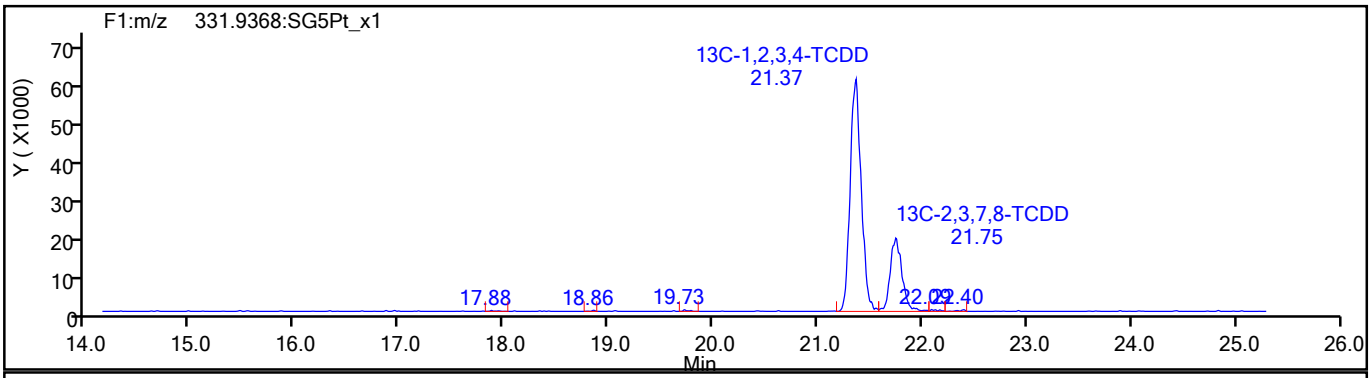

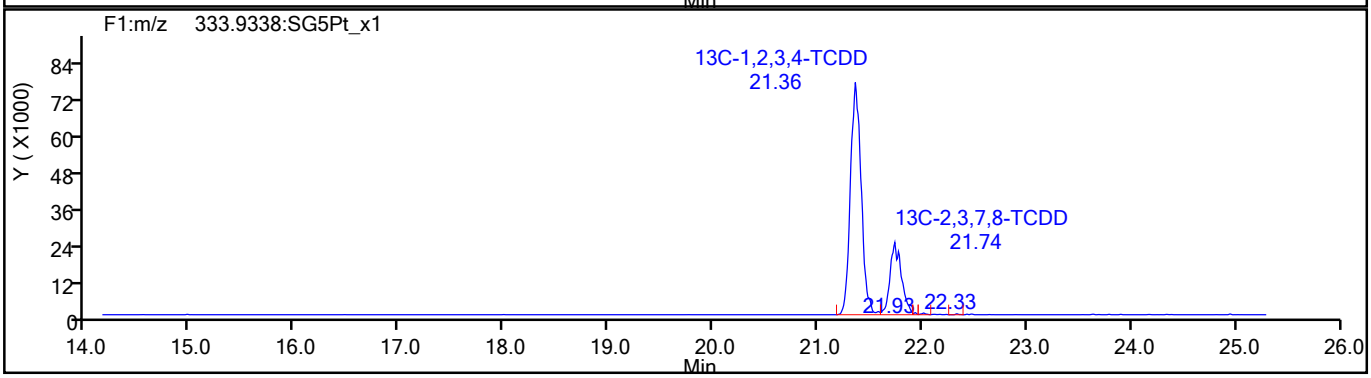

789578

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

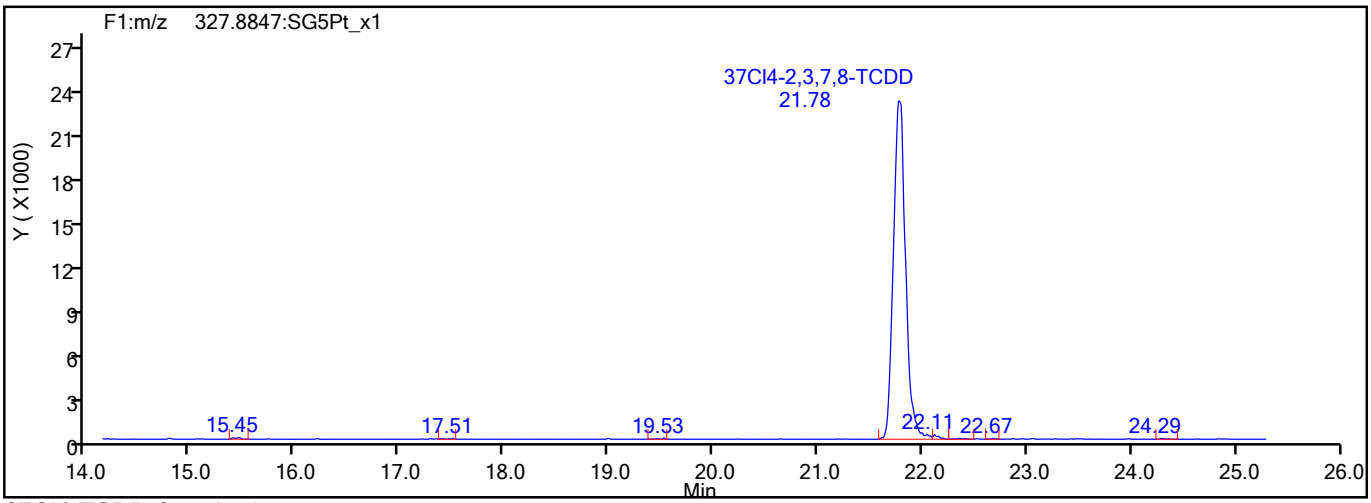

37Cl4-TCDD Standards

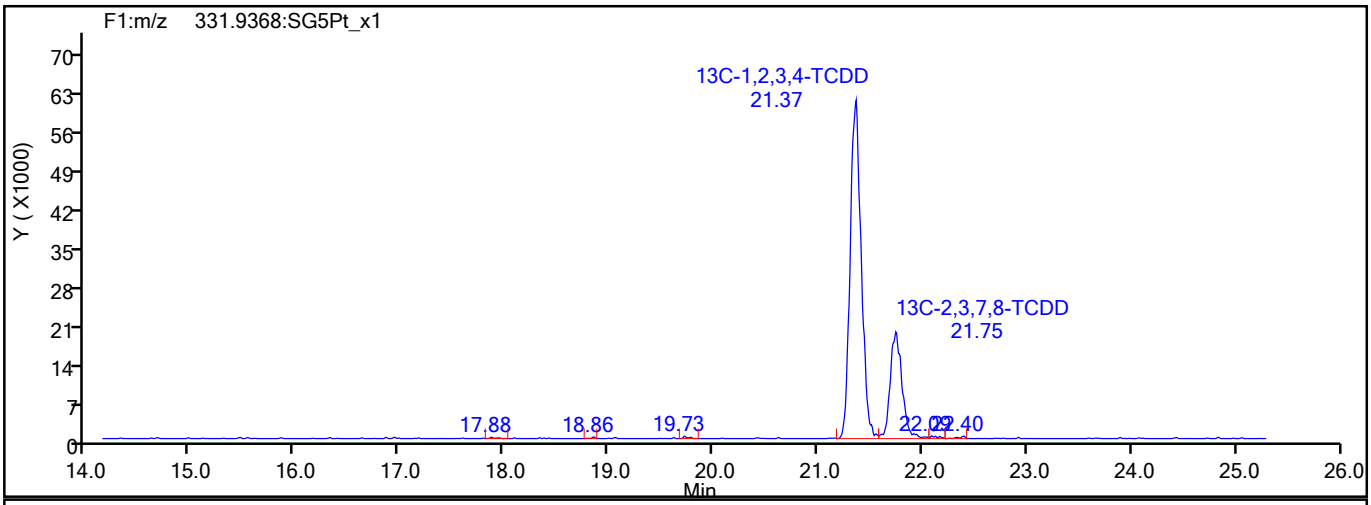

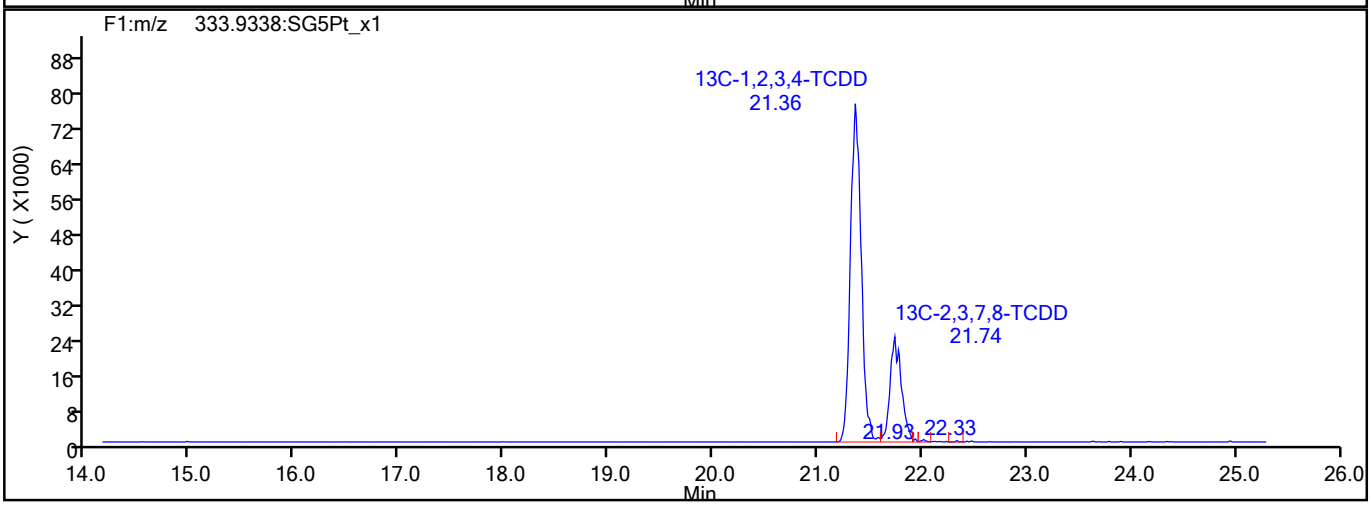

789579

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

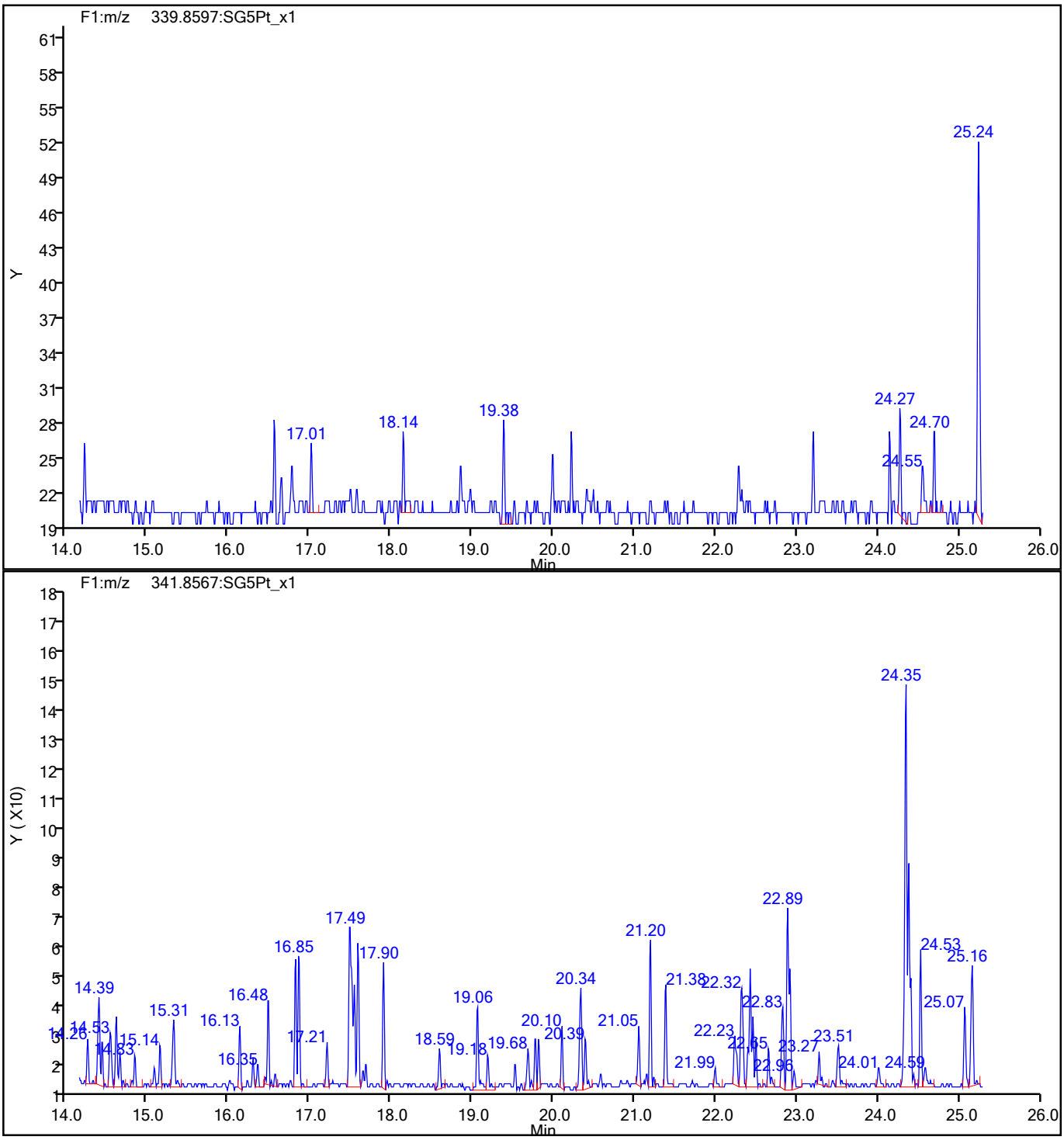

789580

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

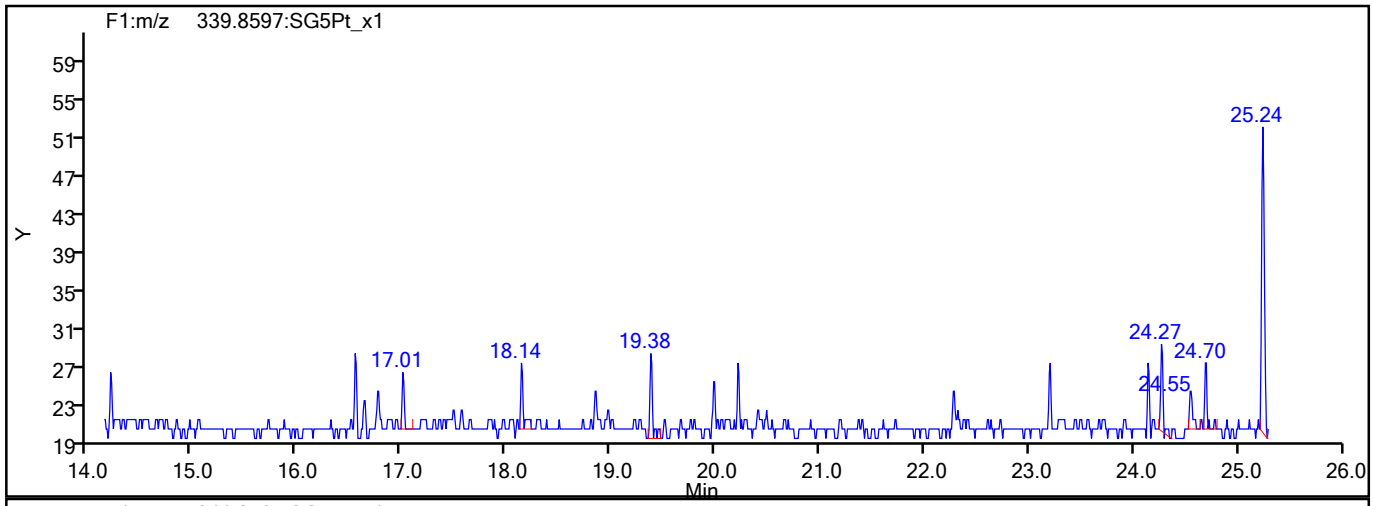

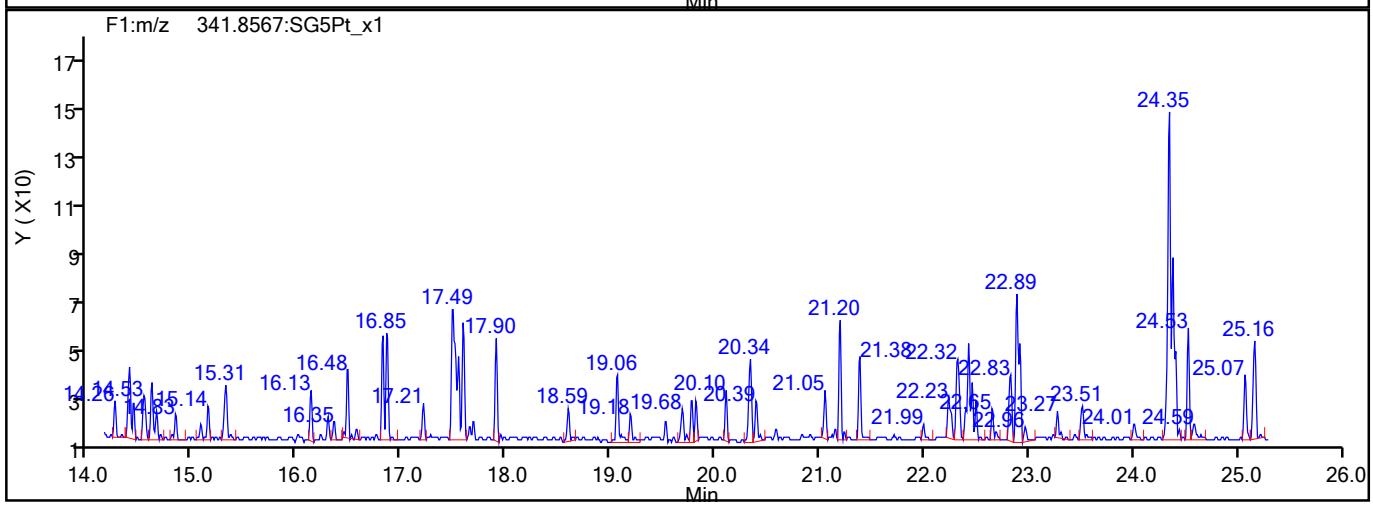

F1 PeCDFs Interference Mass

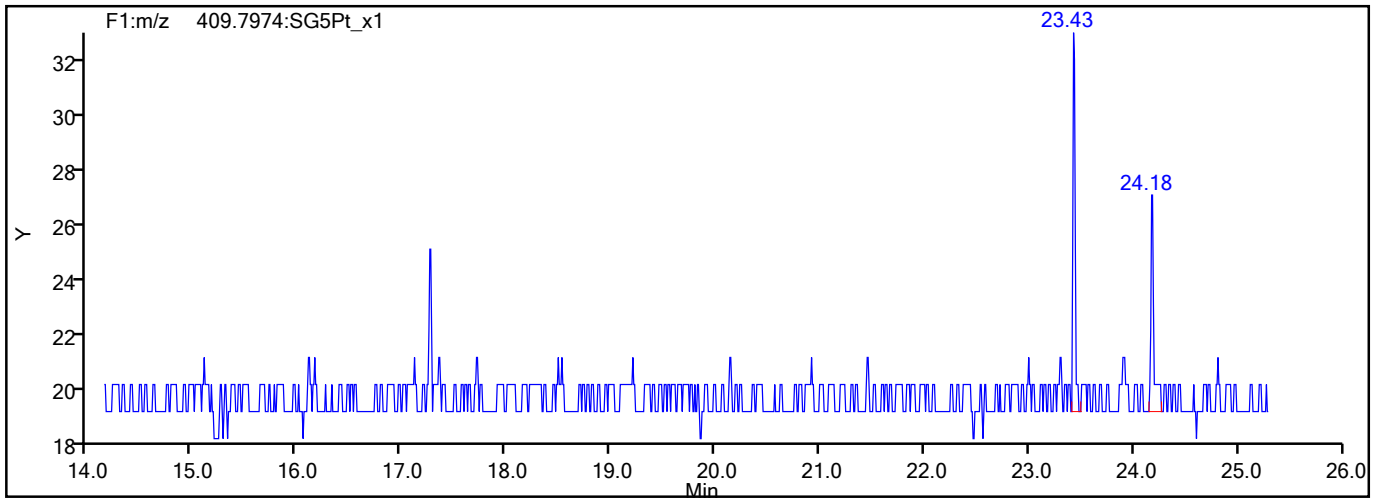

789581

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

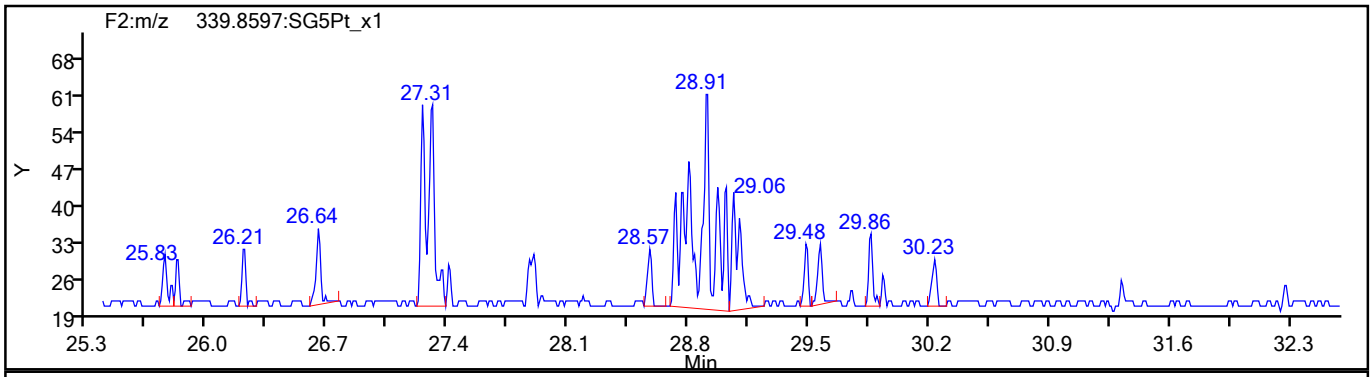

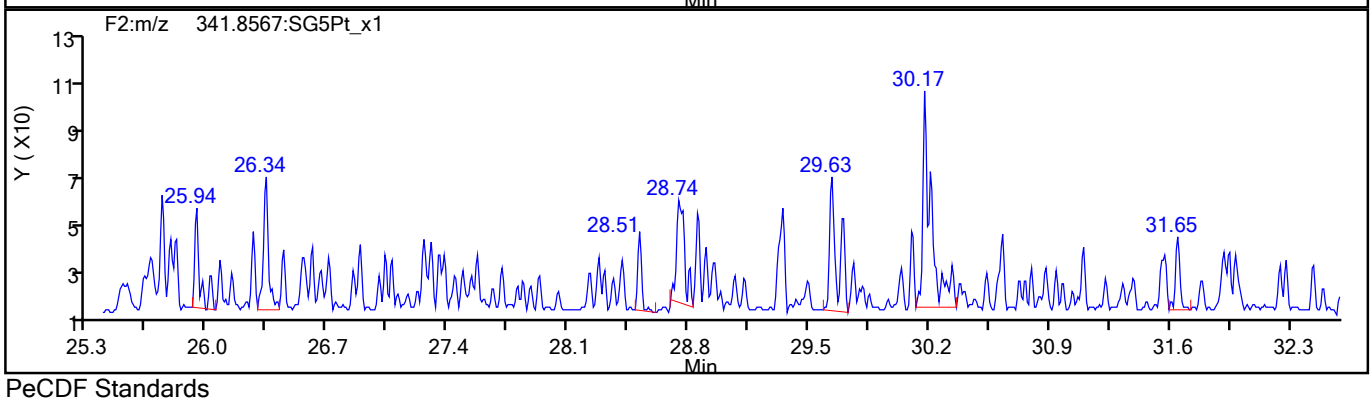

PeCDF Standards

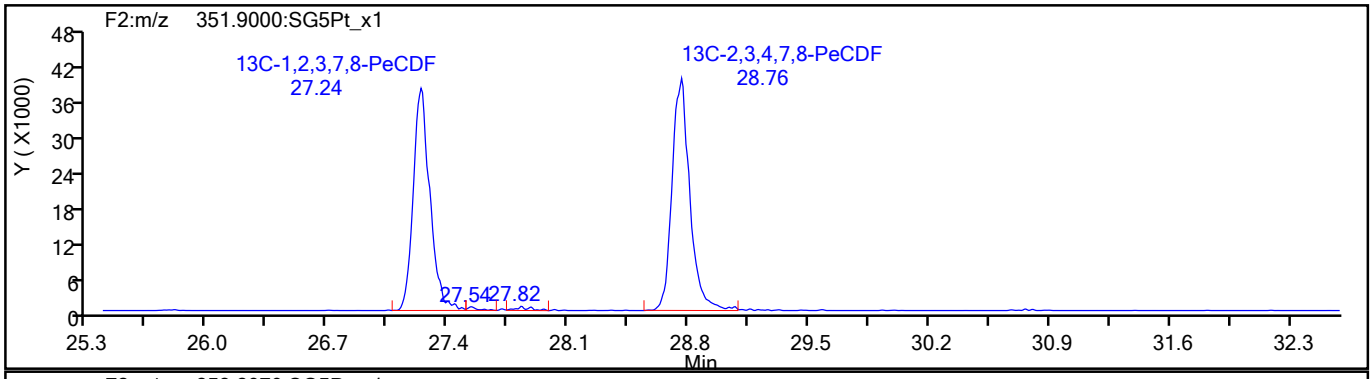

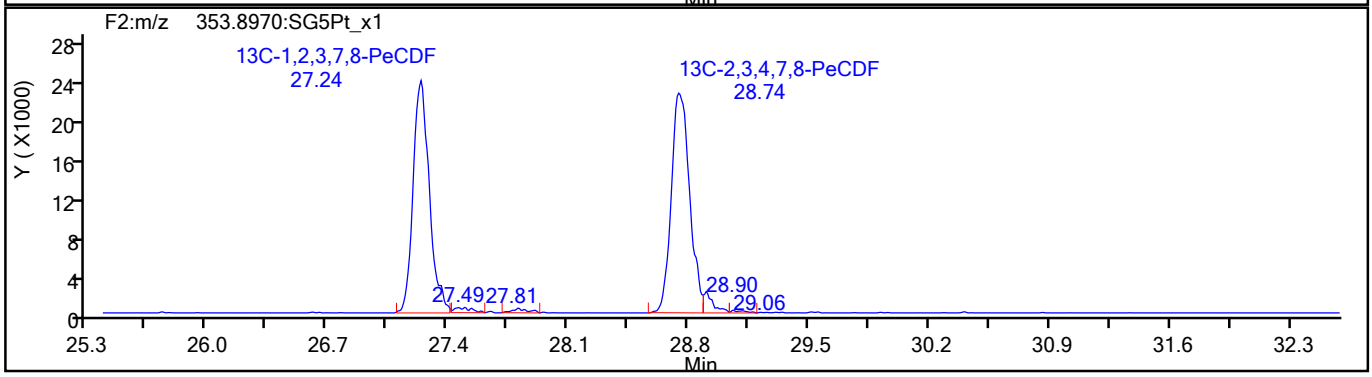

789582

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

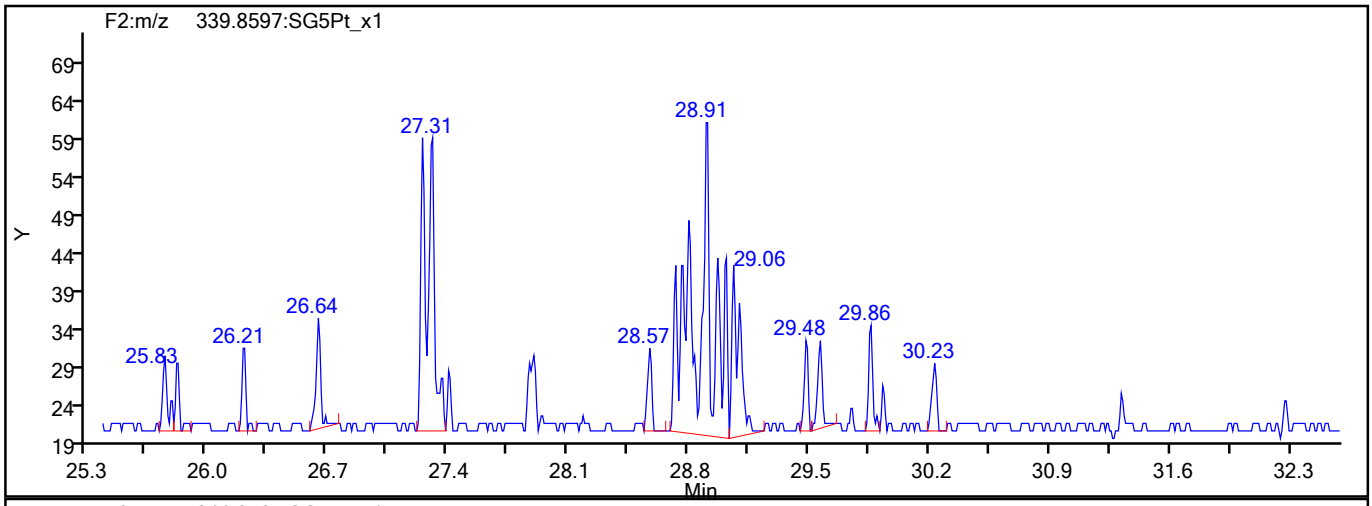

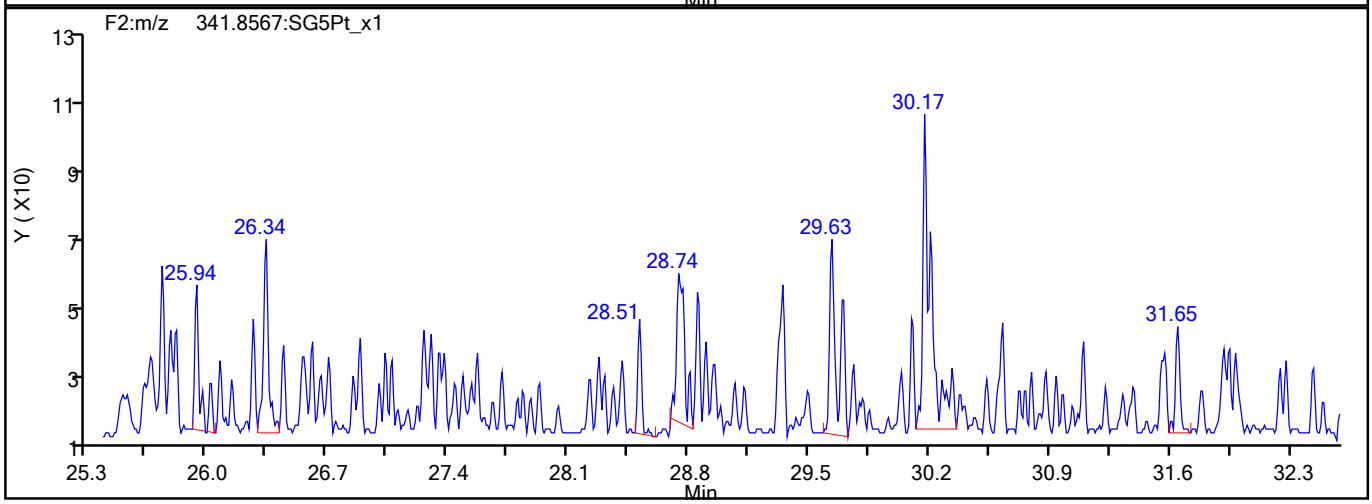

PeCDF Interference Mass

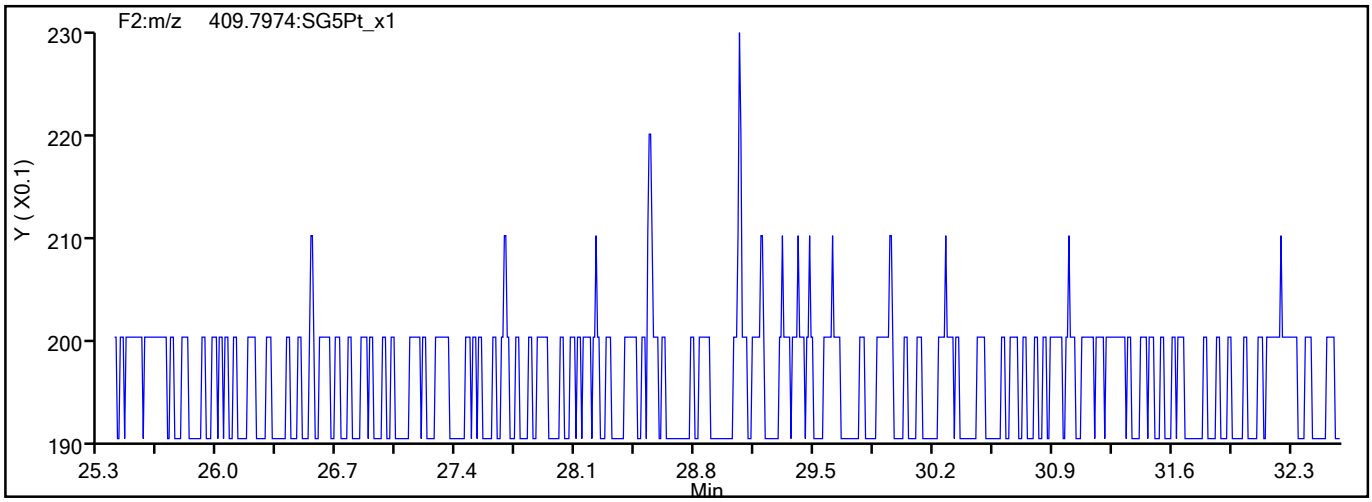

789583

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

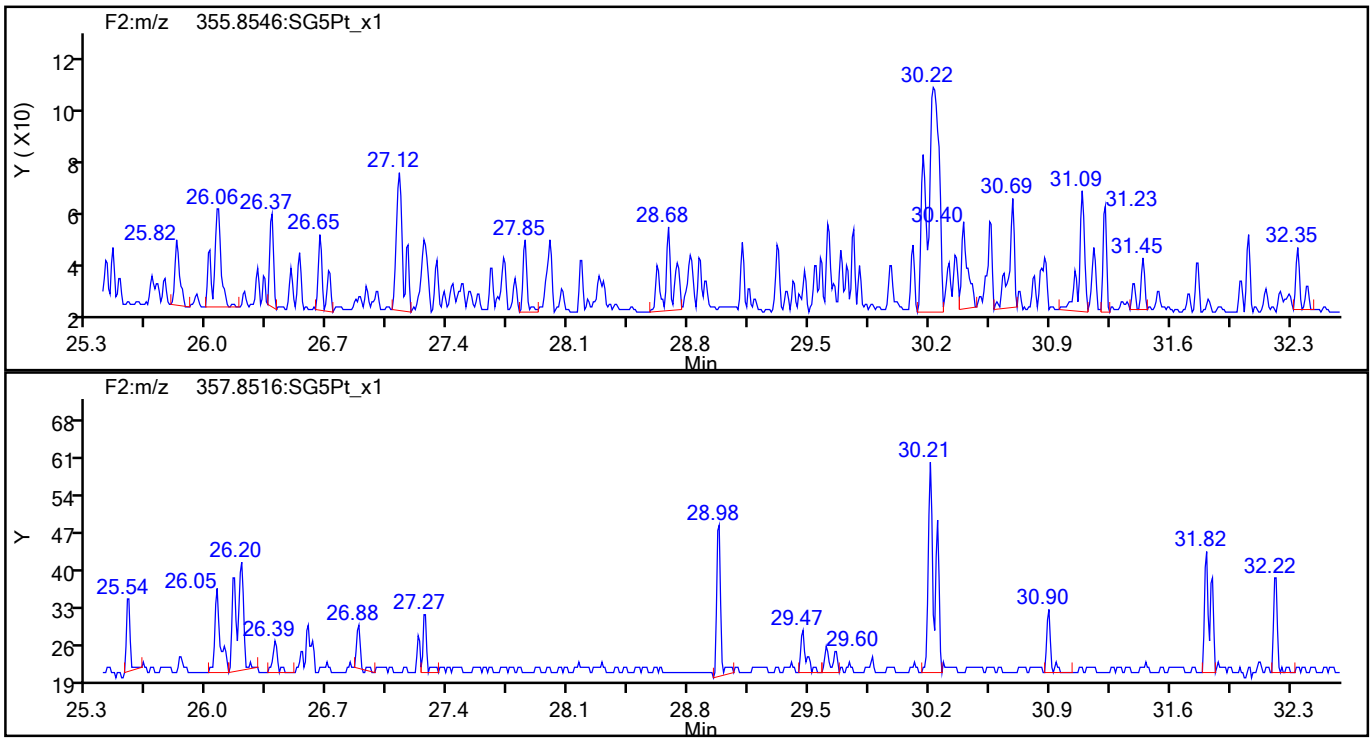

PeCDD Standards

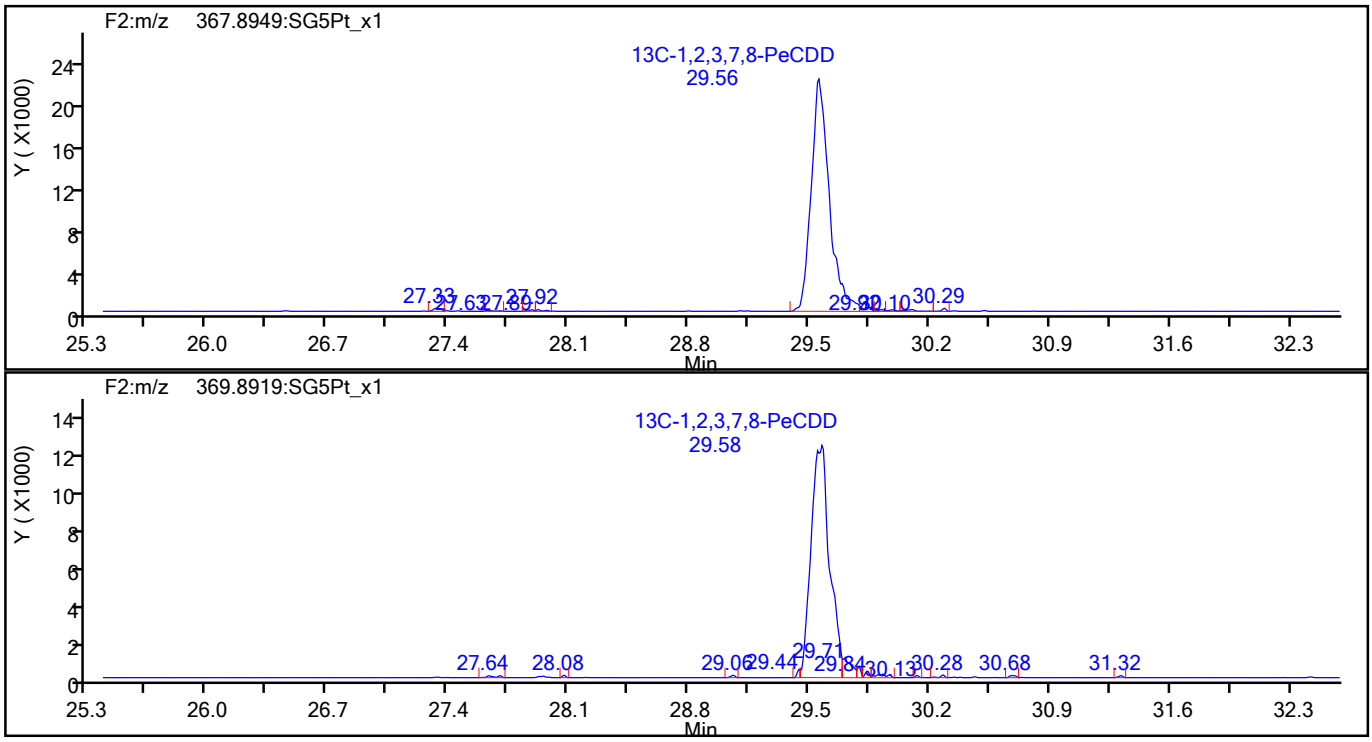

789584

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

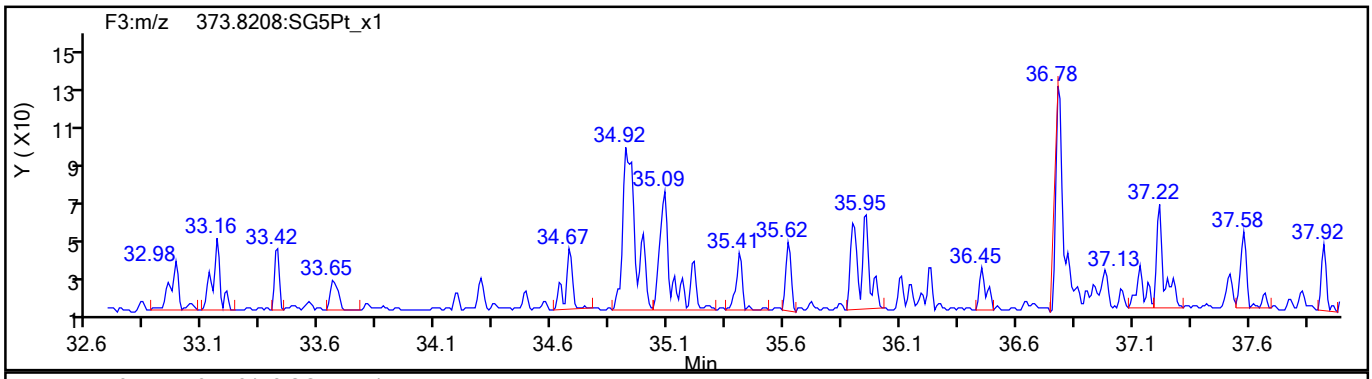

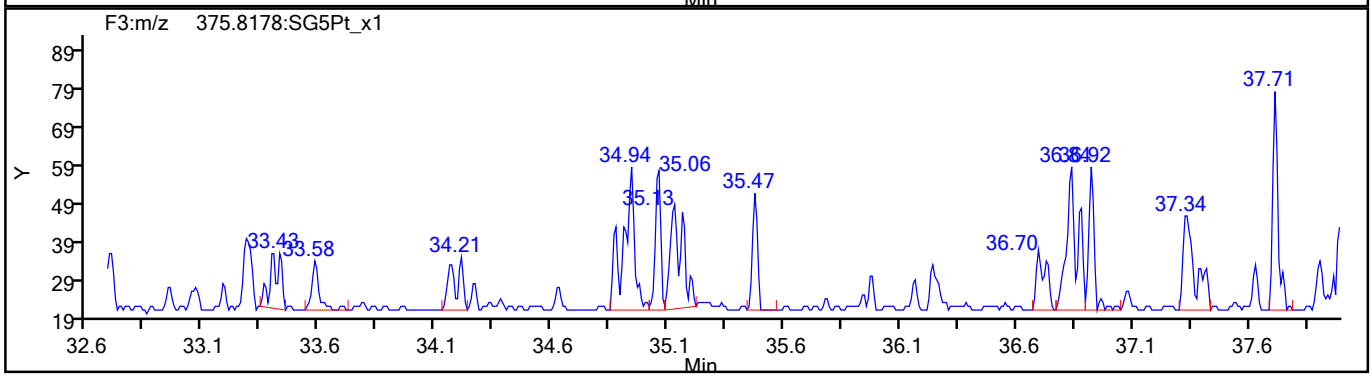

HxCDF Standards

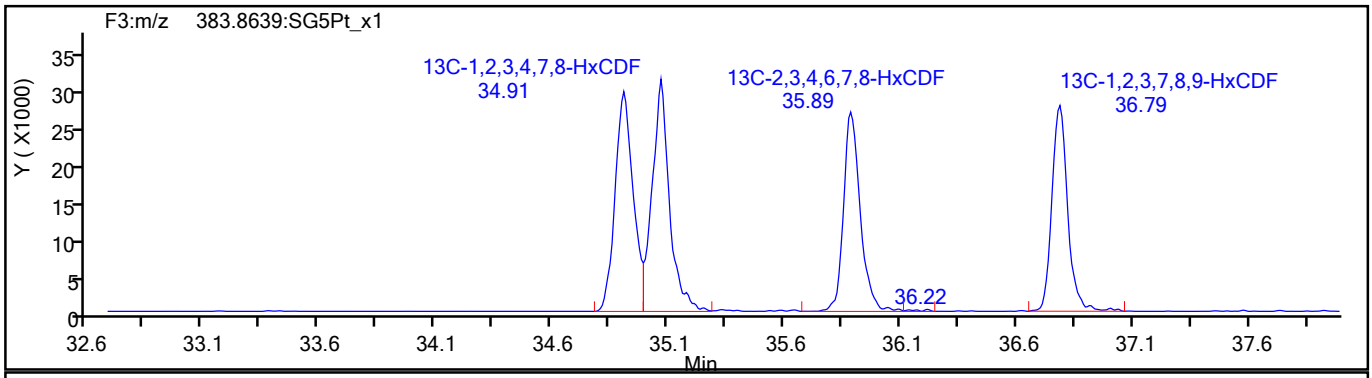

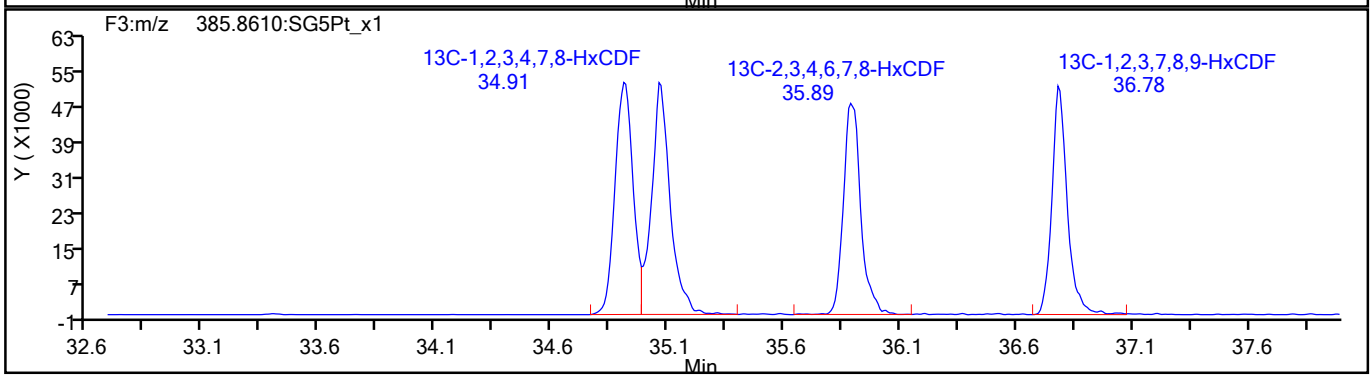

789585

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
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HxCDF

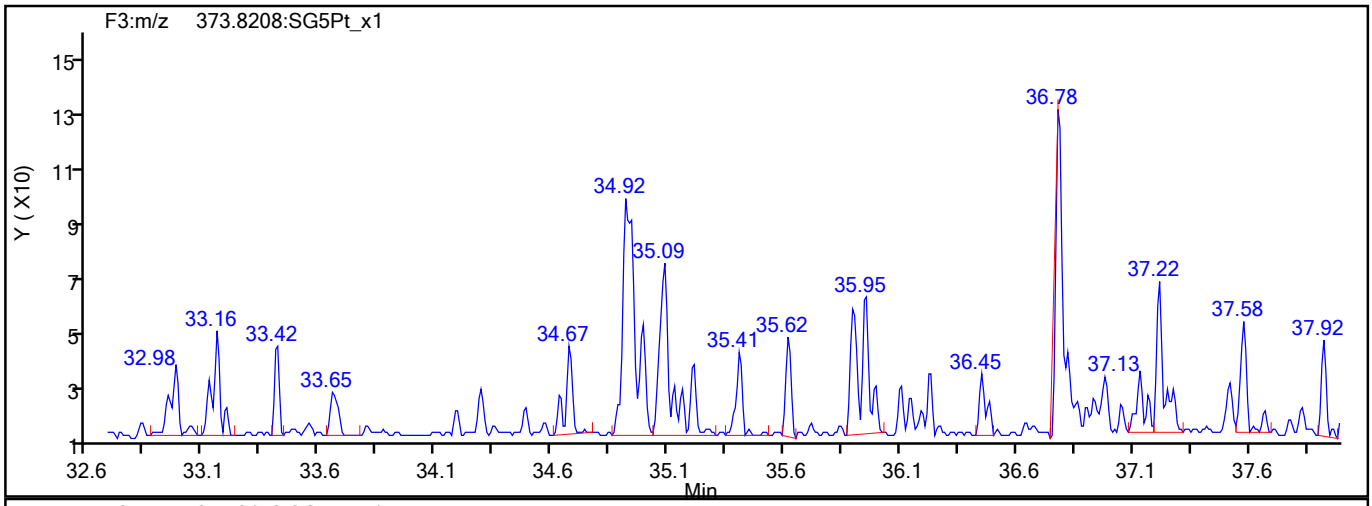

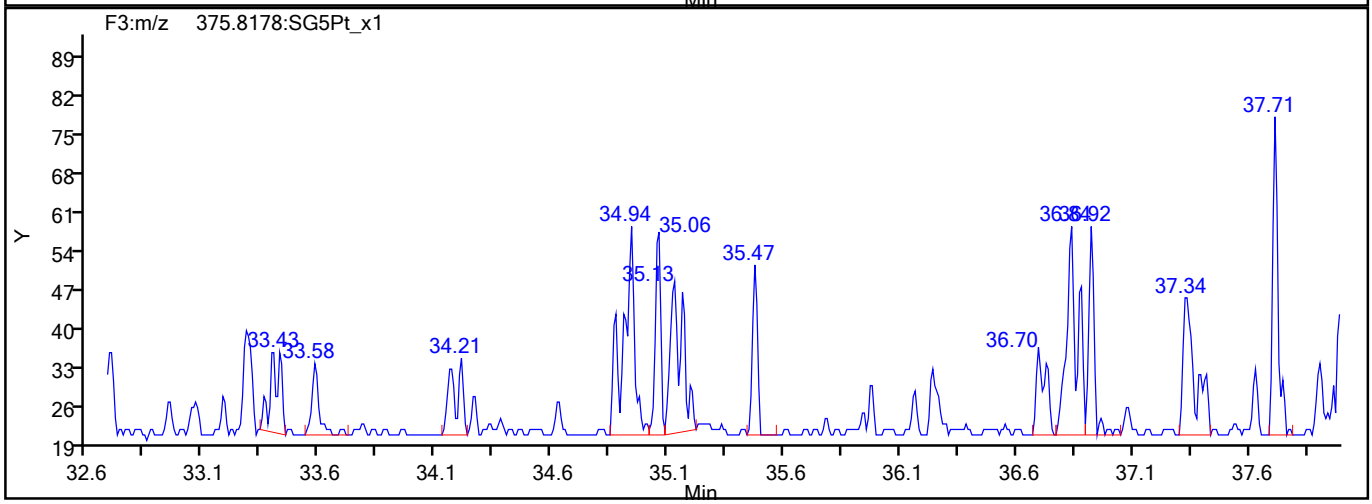

HxCDF Interference Mass

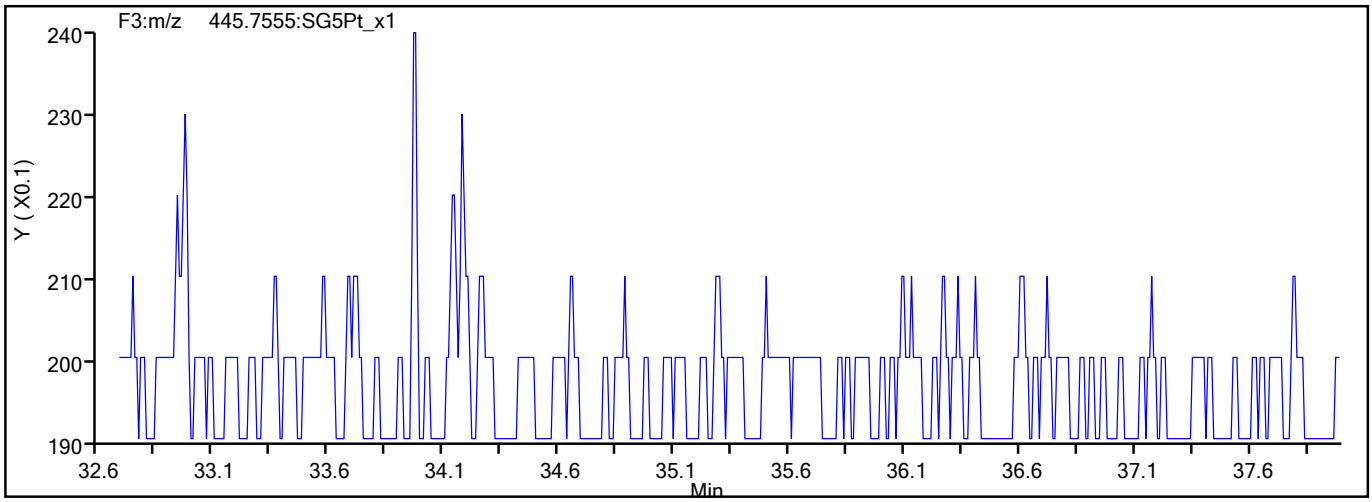

789586

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDD

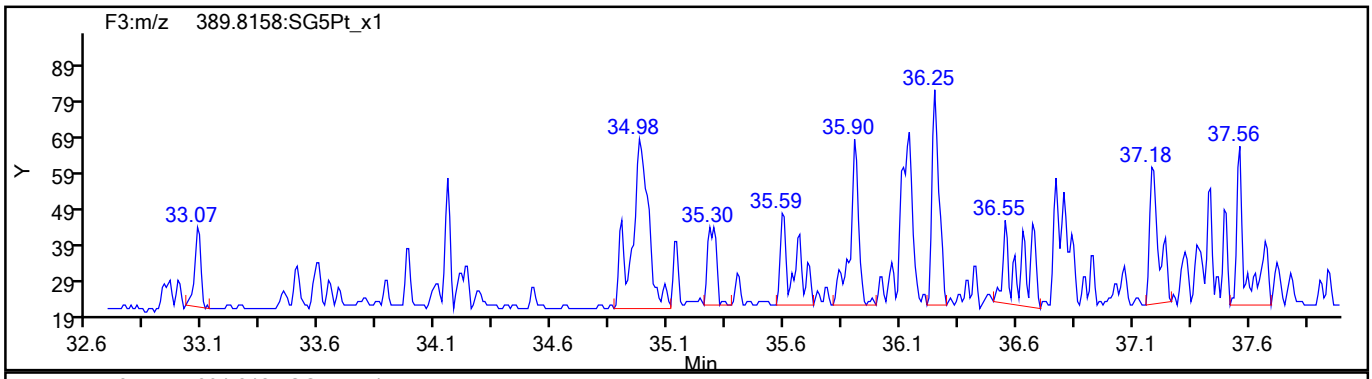

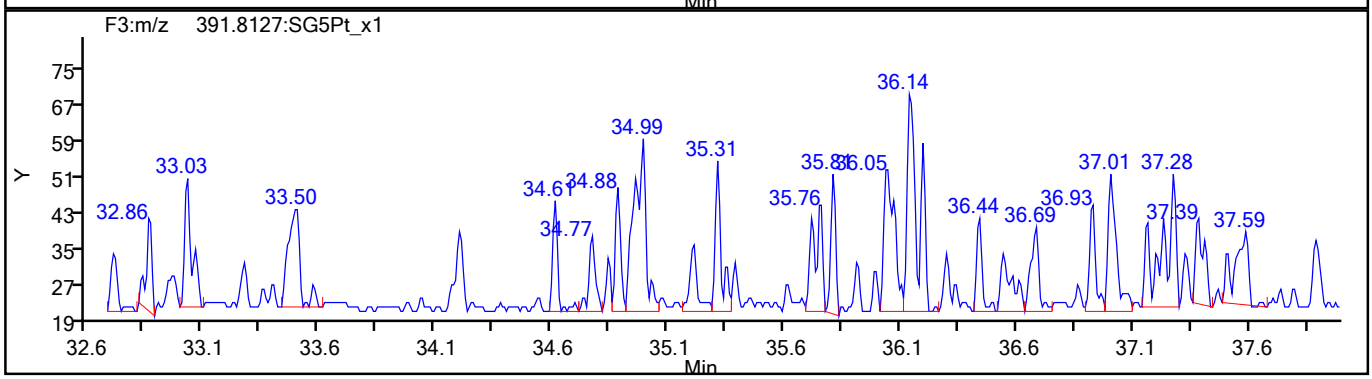

HxCDD Standards

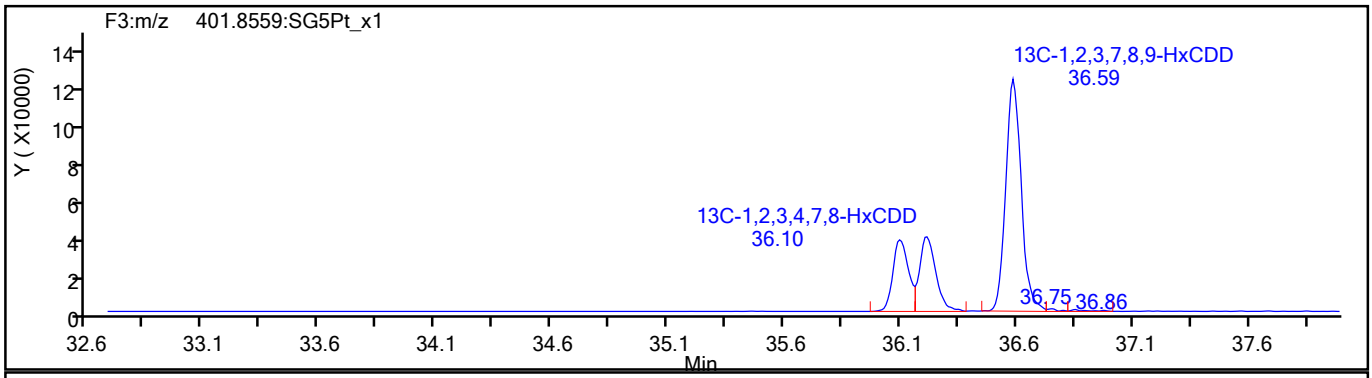

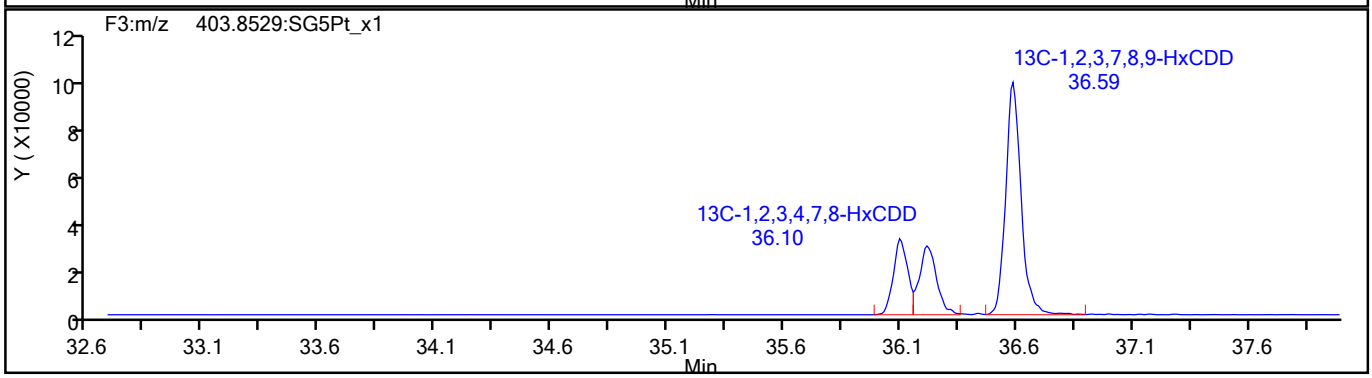

789587

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

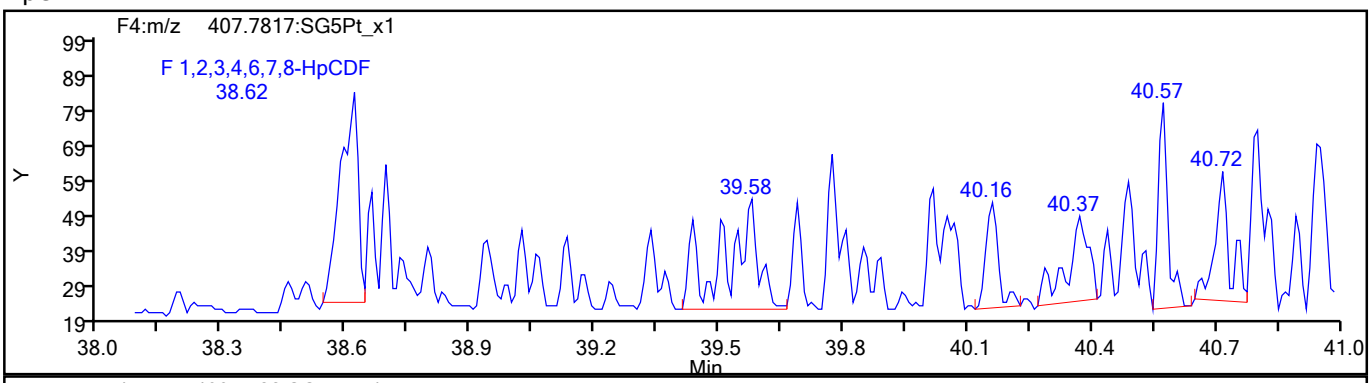

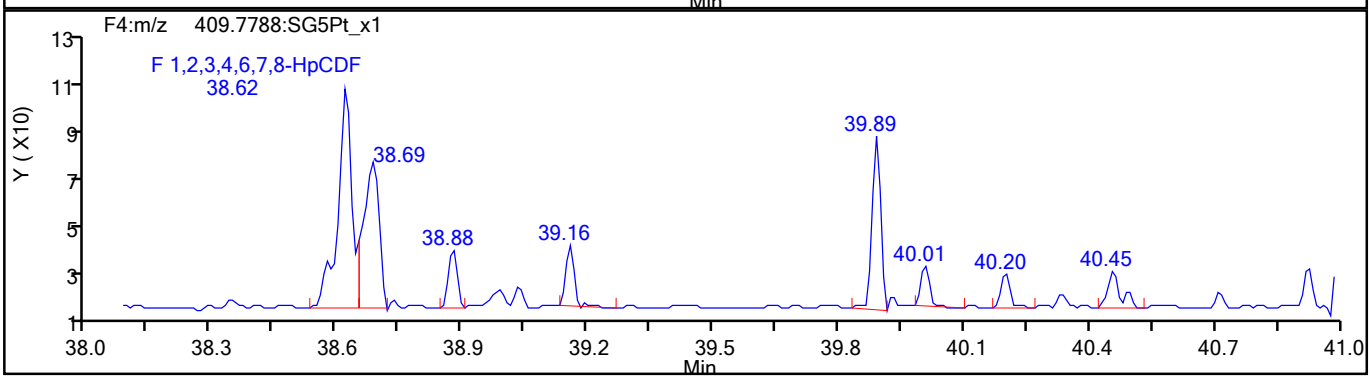

HpCDF Standards

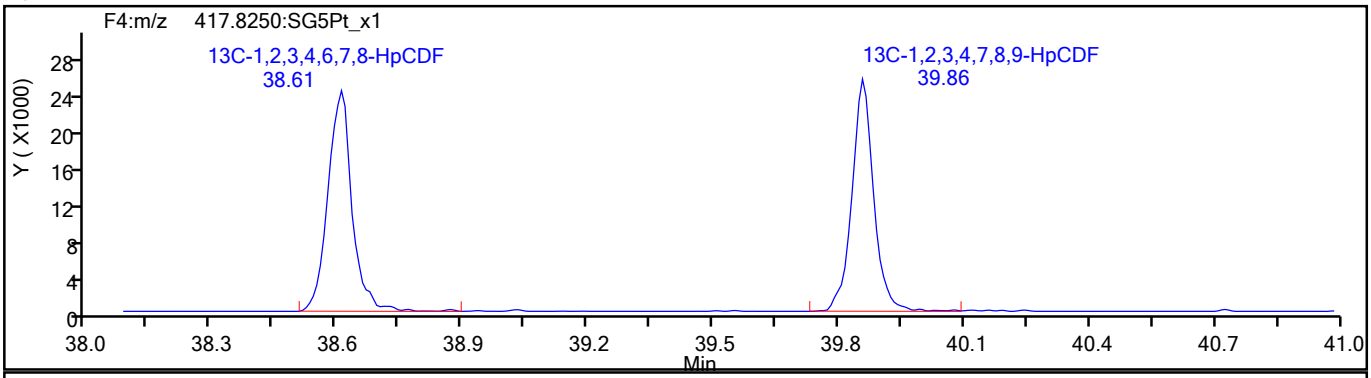

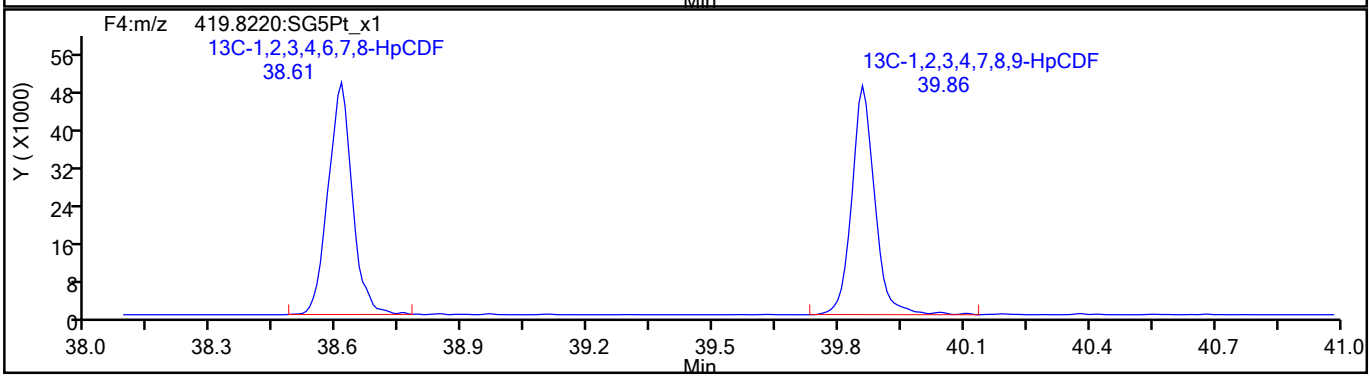

789588

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

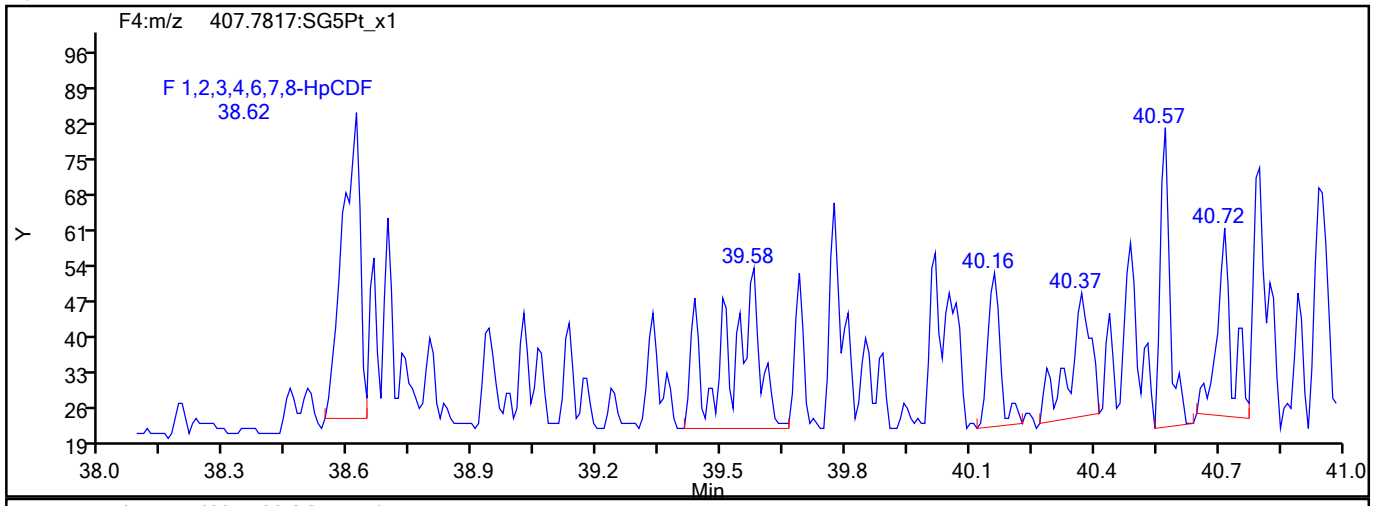

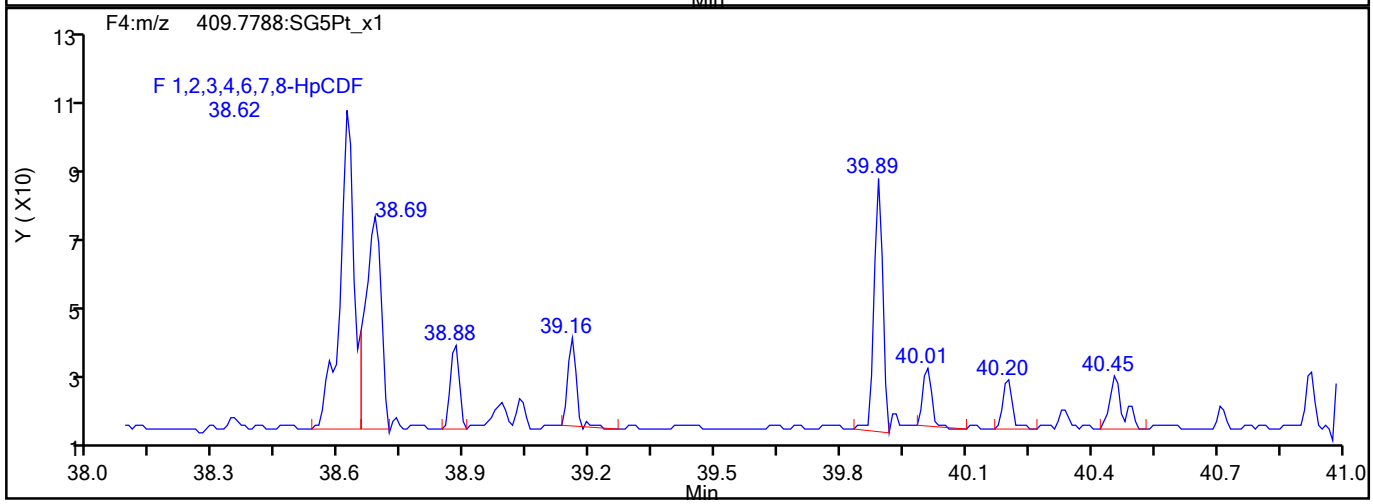

HpCDF Interference Mass

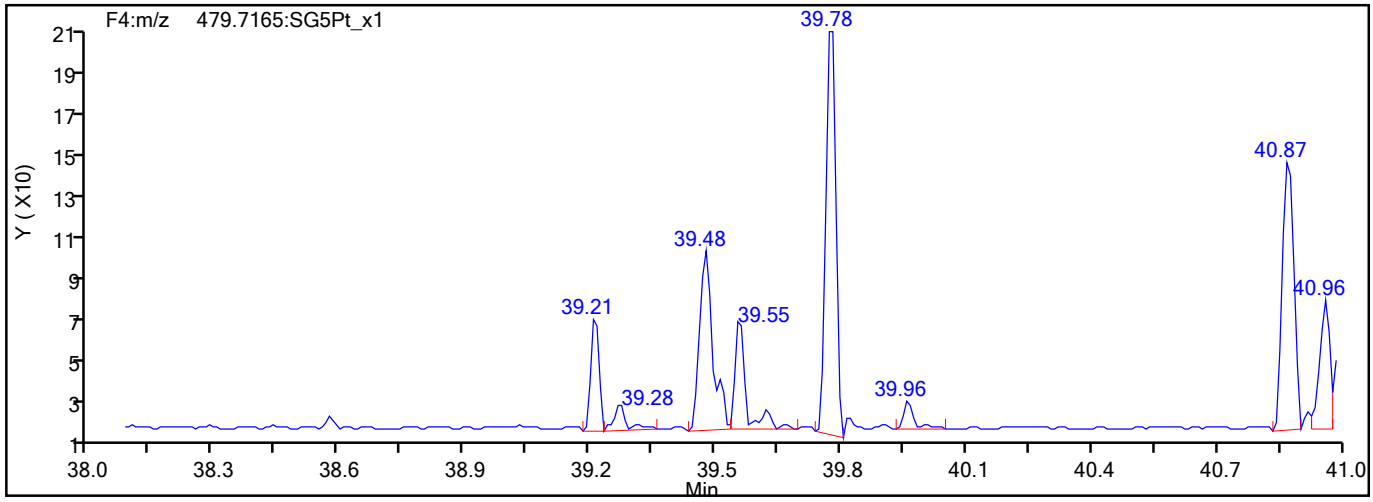

789589

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDD

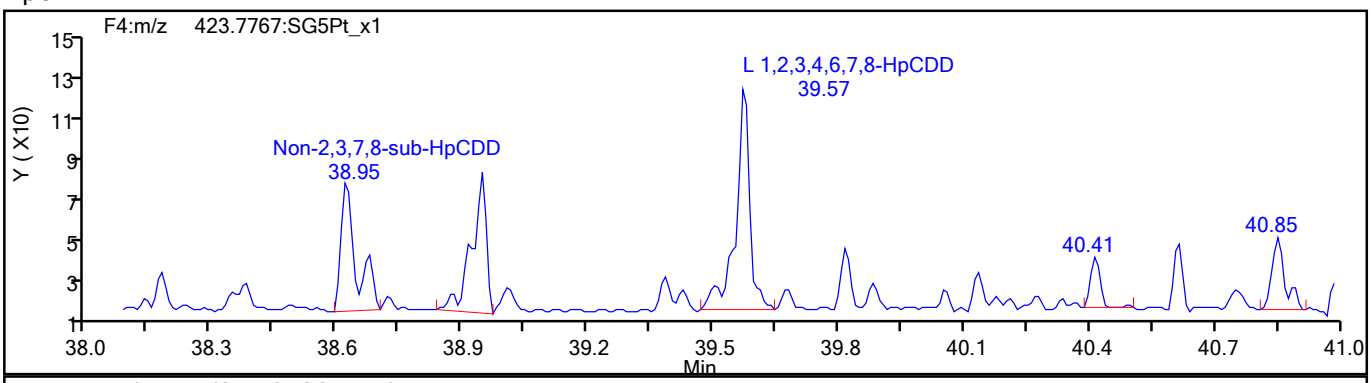

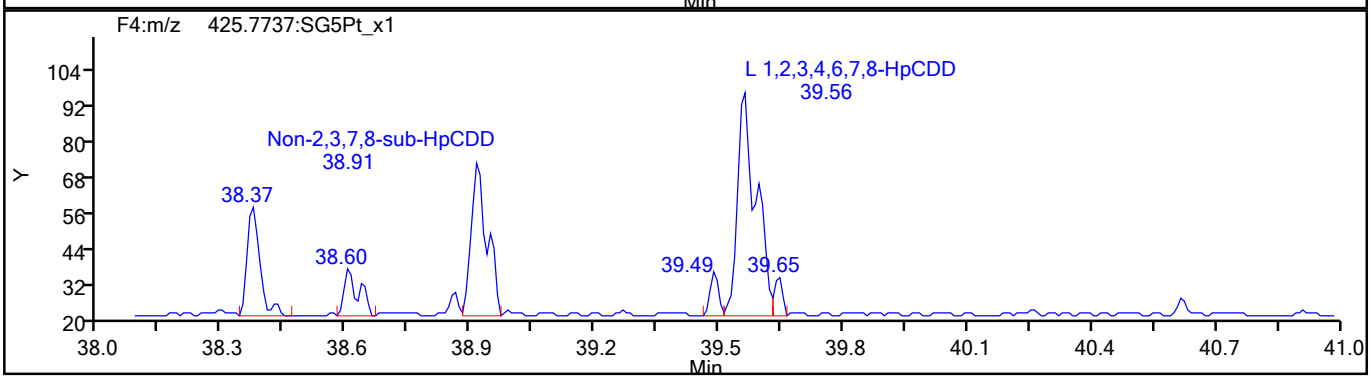

HpCDD Standards

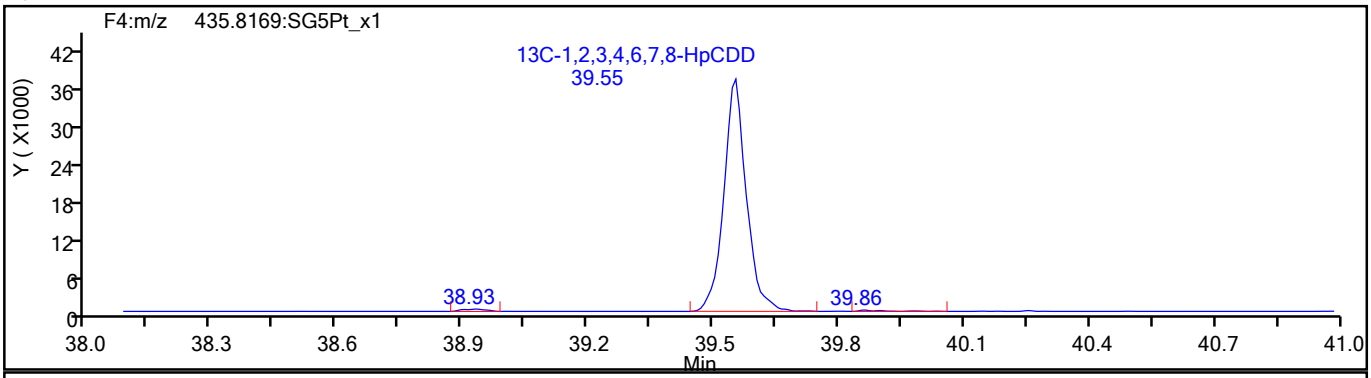

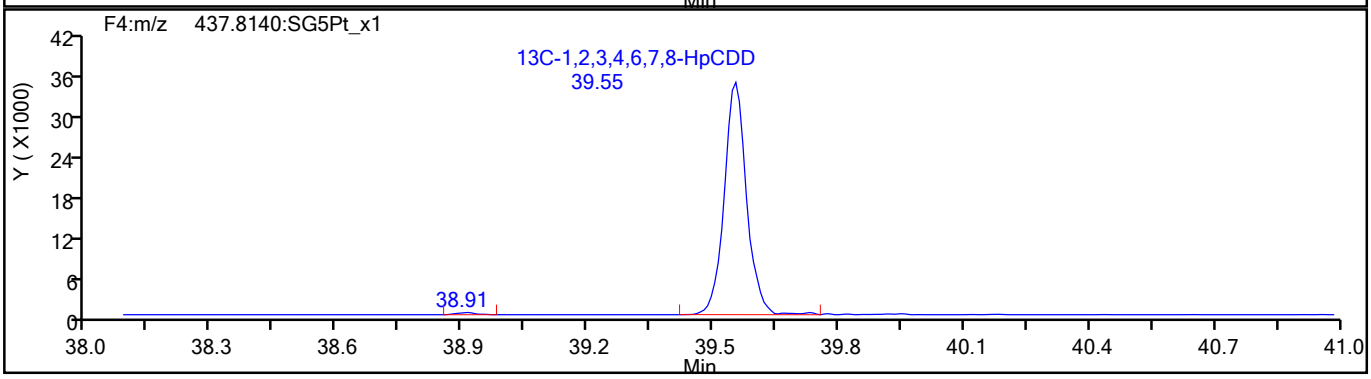

789590

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

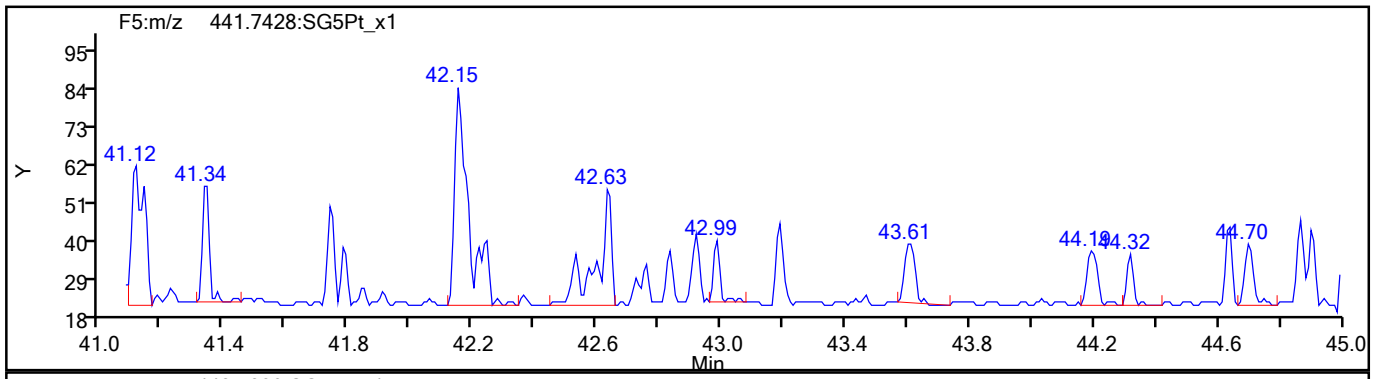

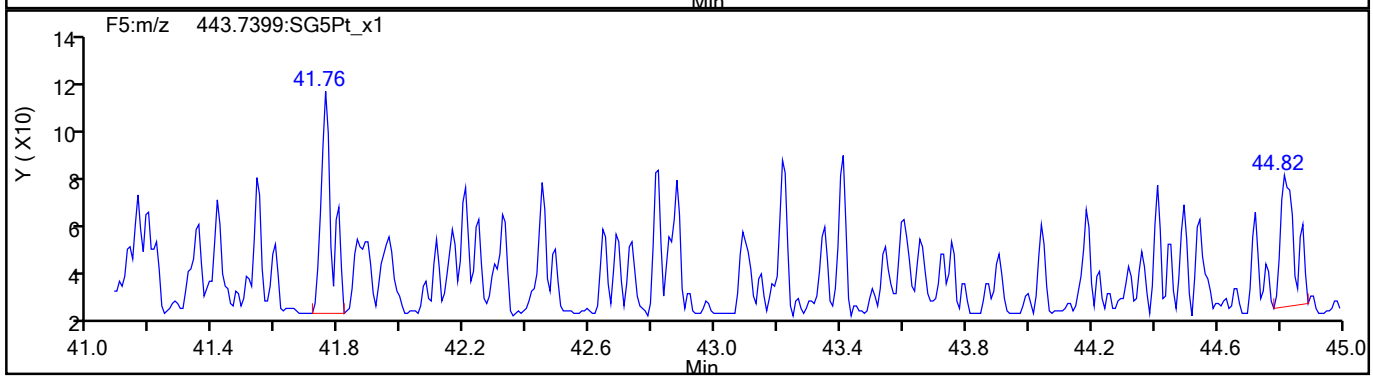

OCDF Standards

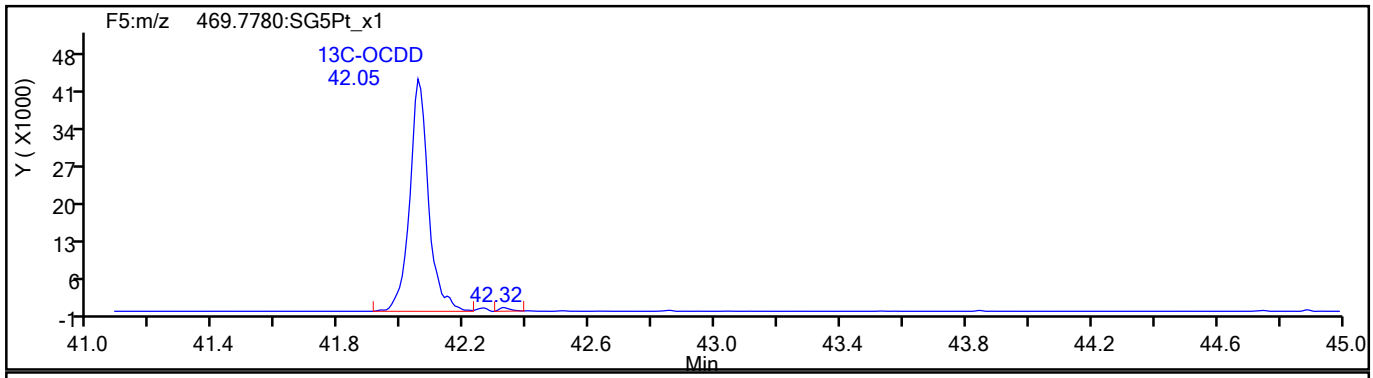

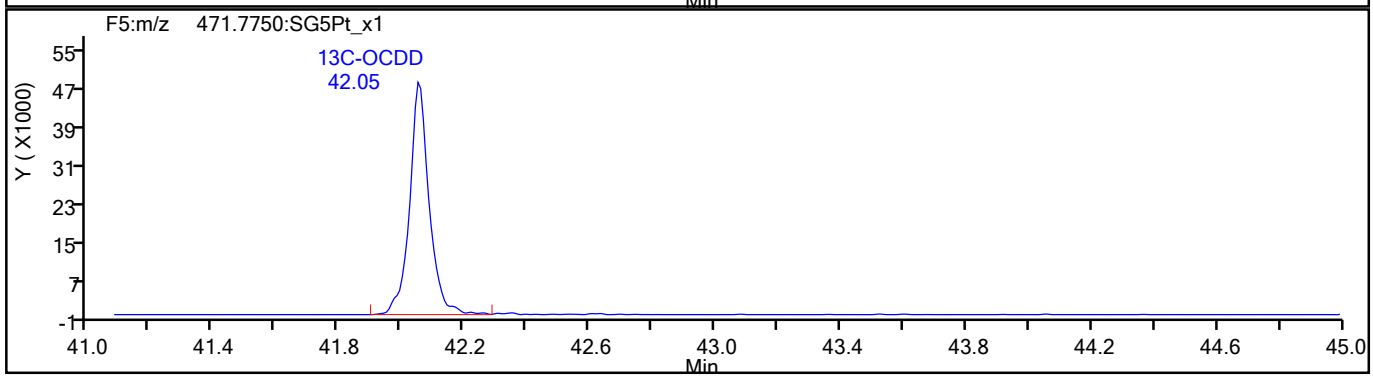

789591

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

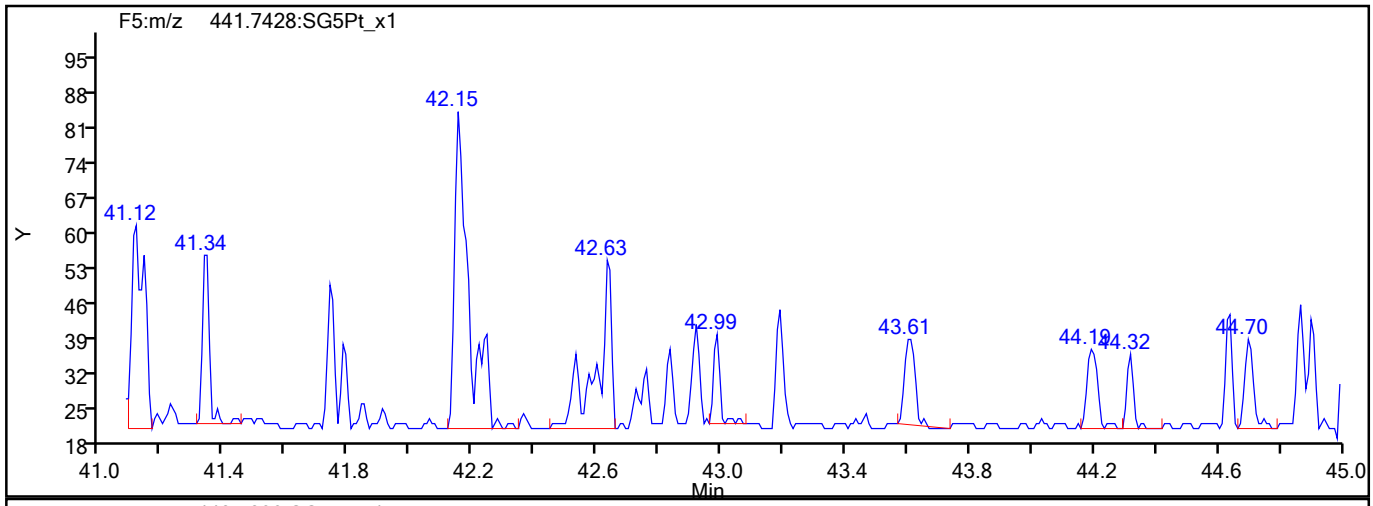

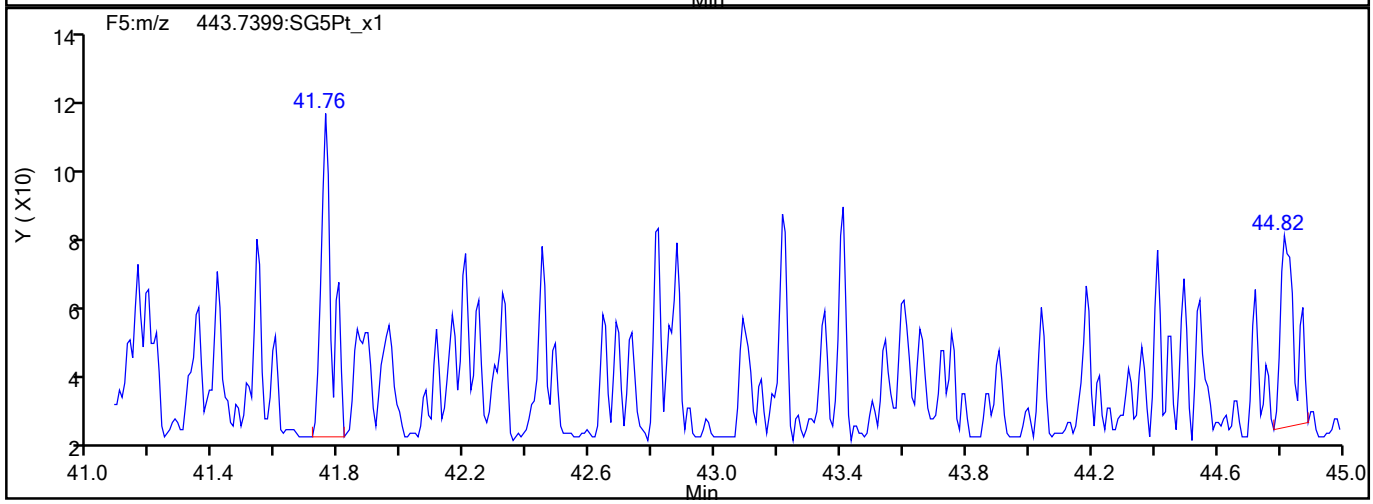

OCDF Interference Mass

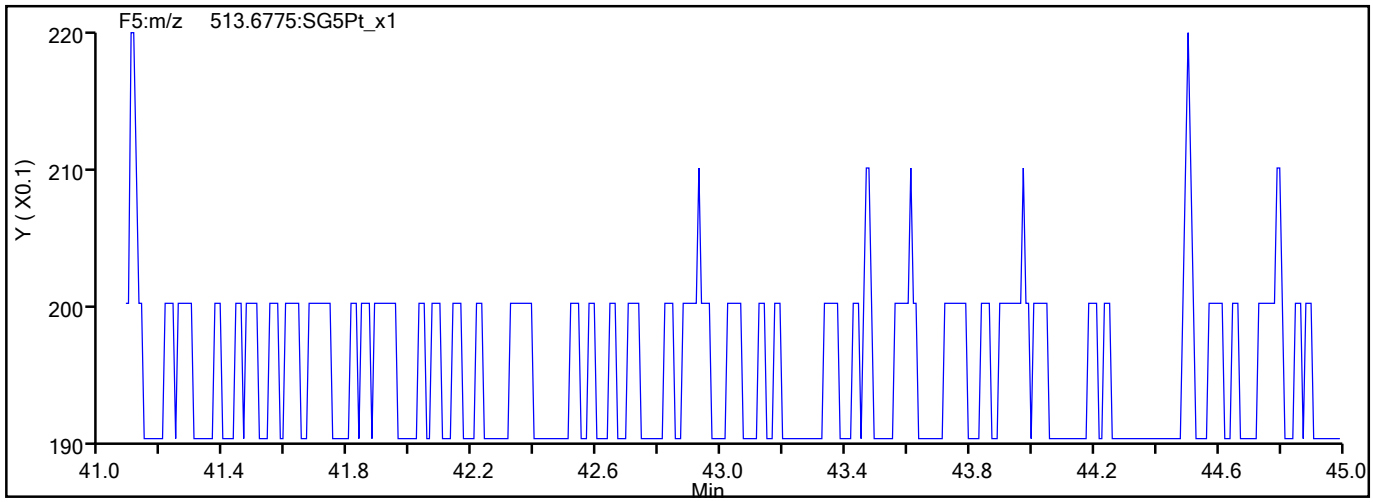

789592

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

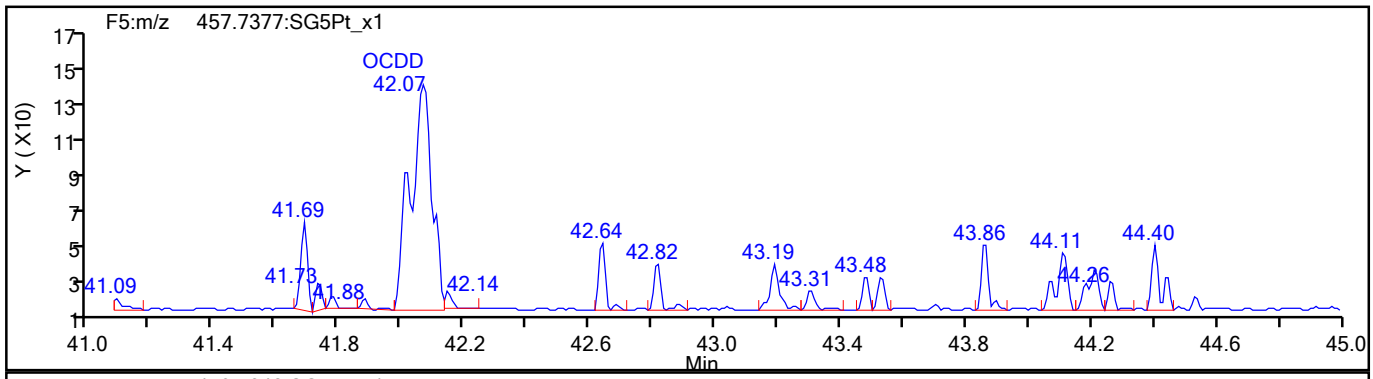

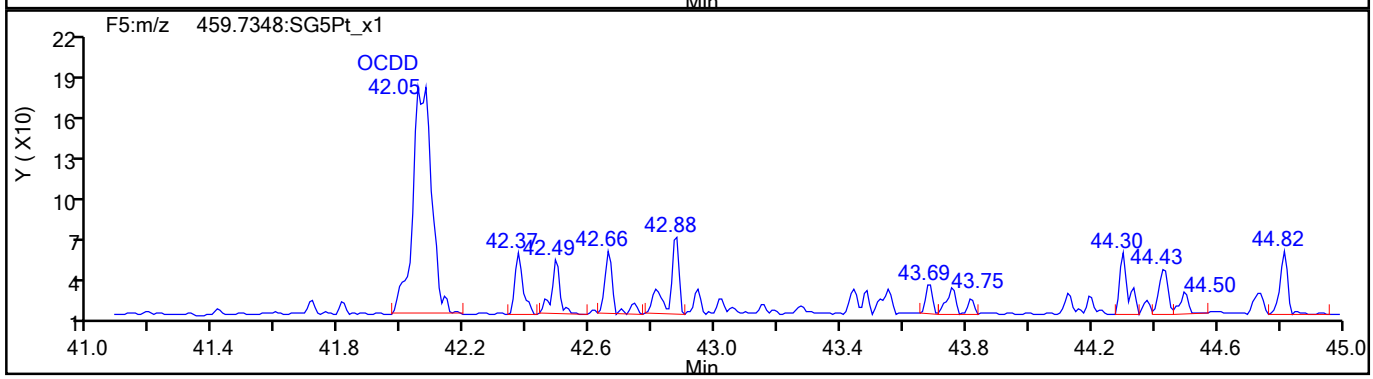

OCDD Standards

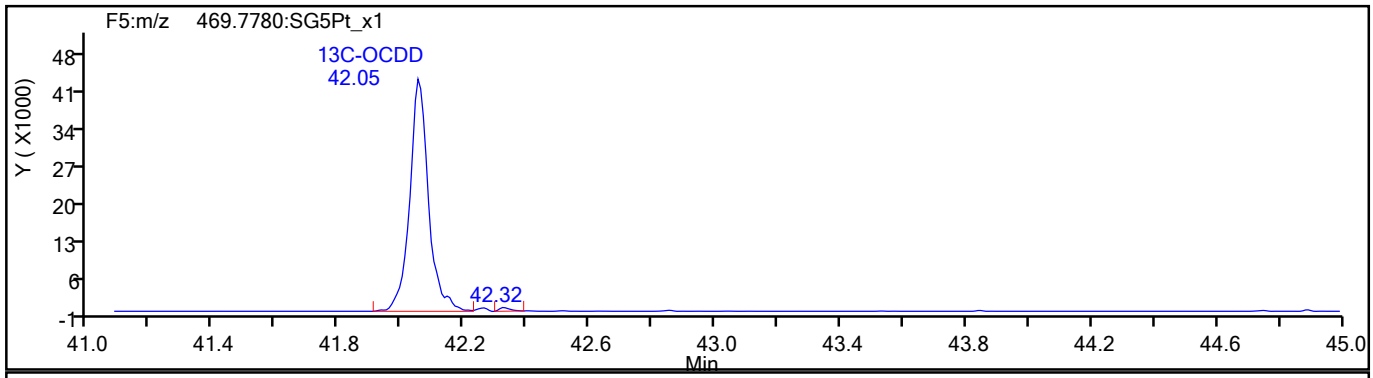

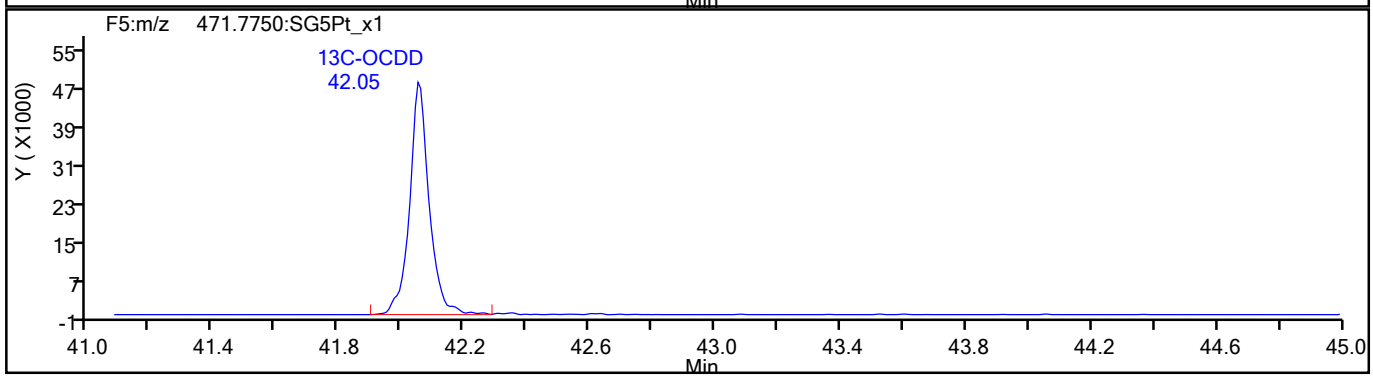

789593

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

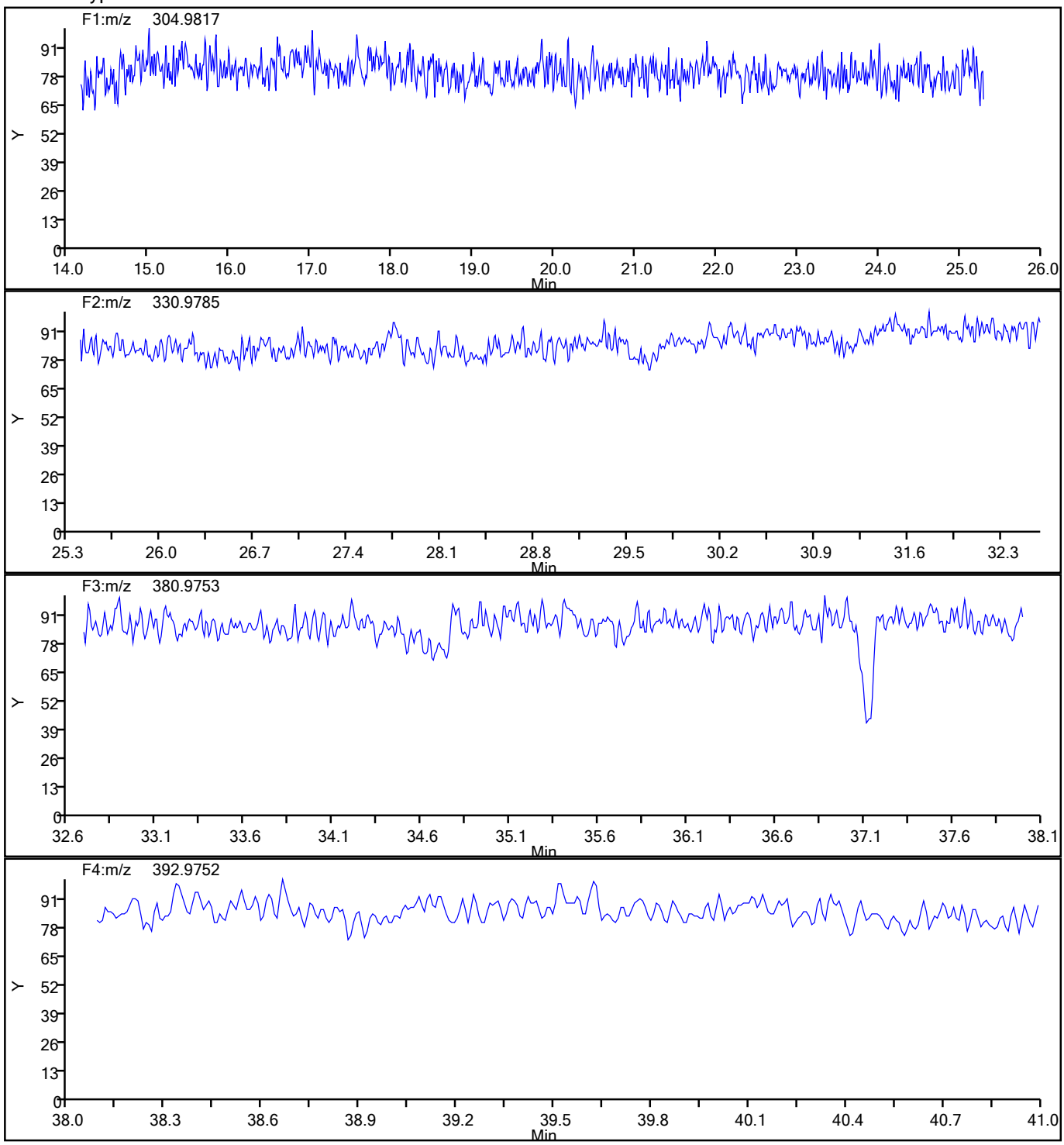

789594

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

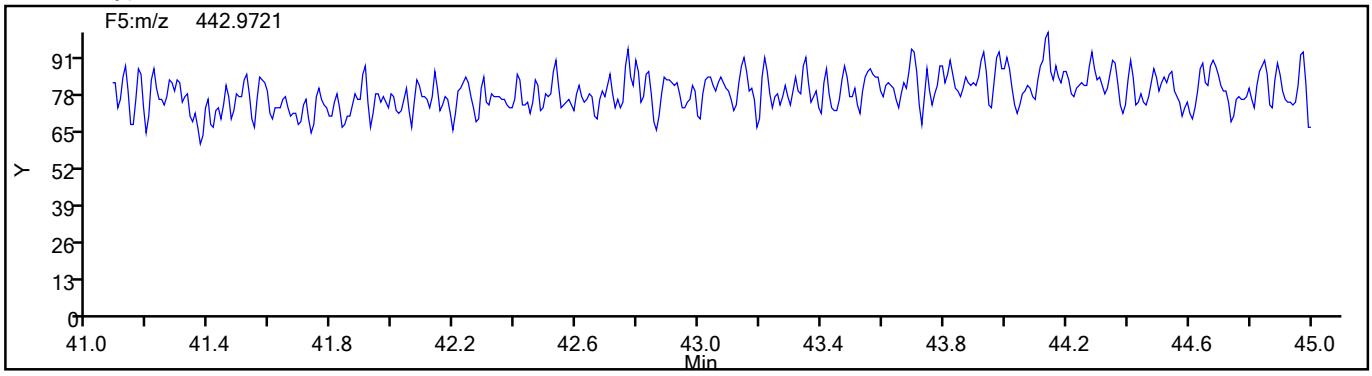

789595

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-513879/1-A RA
Matrix: Sediment
Lab File ID: 24AU2111D2_004.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/24/2021 10:23
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	2.39		1.0	0.22

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	37		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	50		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Aug-2021 10:23:51 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-513879/1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:45:21

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.296	33759459	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.599	16734440	0.77	1.3327	37.2	37.2	0.2026	0.2026	37.20	
2,3,7,8-TCDF	17.627	199129	0.67	0.9978	1.193	1.193	0.1094	0.1094		
D 13C-2,3,7,8-TCDD	16.063	10422147	0.73	0.8749	35.3	35.3	0.3776	0.3776	35.29	
$ 37Cl4-2,3,7,8-TCDD	16.077	5861410		0.8648	20.1	20.1	0.0638	0.0638	50.19	
2,3,7,8-TCDD	16.077	55715	0.68	1.0570	0.5058	0.5058	0.1084	0.1084		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

789597

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Aug-2021 10:23:51 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-513879/1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:45:21

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.296	16.283	1		14575481	3405725	5651	14127	603		
333.9339	16.296	16.283	1		19183978	4267762	4489	11222	951	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.599	17.613	-1	1.080	7306406	1361111	3621	9052	376		
317.9389	17.613	17.613	0	1.081	9428034	1838509	4668	11670	394	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.627	17.641	-1	1.002	79942	15130	769	1922	20		
305.8987	17.640	17.641	0	1.002	119187	24047	628	1570	38	0.67(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.063	16.050	1	0.986	4380782	989974	5651	14127	175		
333.9339	16.063	16.050	1	0.986	6041365	1466938	4489	11222	327	0.73(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.077	16.063	1	0.987	5861410	1265710	1693	4232	748		
2,3,7,8-TCDD											
319.8965	16.077	16.077	0	1.001	22554	5305	627	1567	8		
321.8936	16.077	16.077	0	1.001	33161	10494	499	1247	21	0.68(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

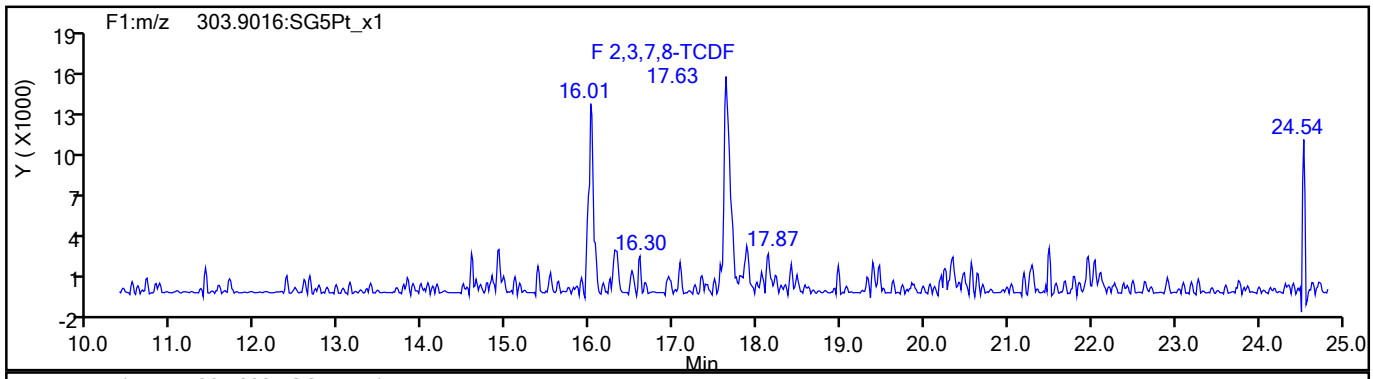

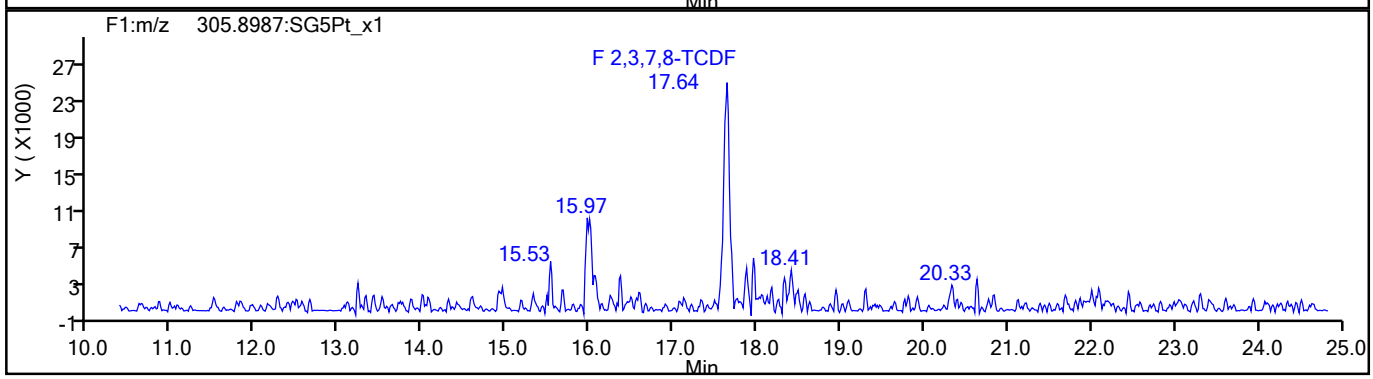

TCDF Standards

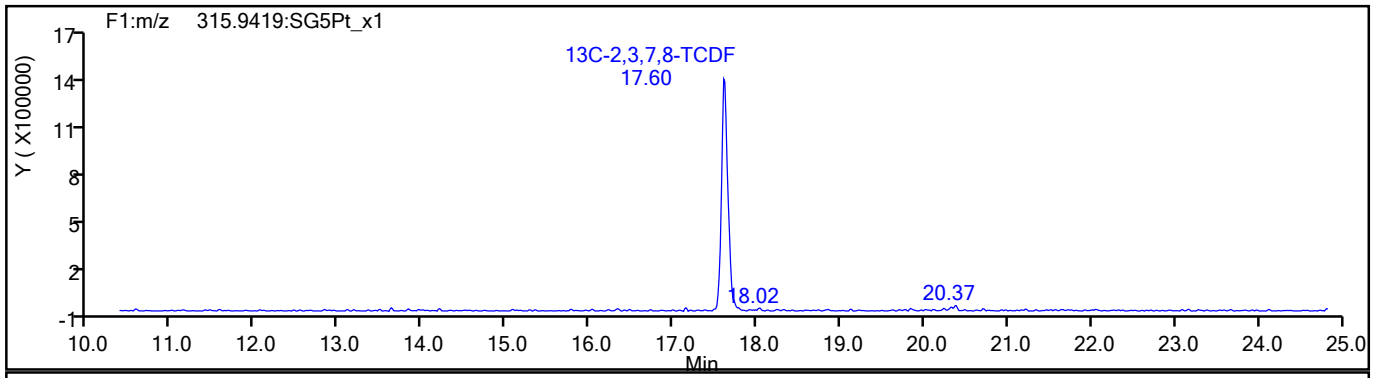

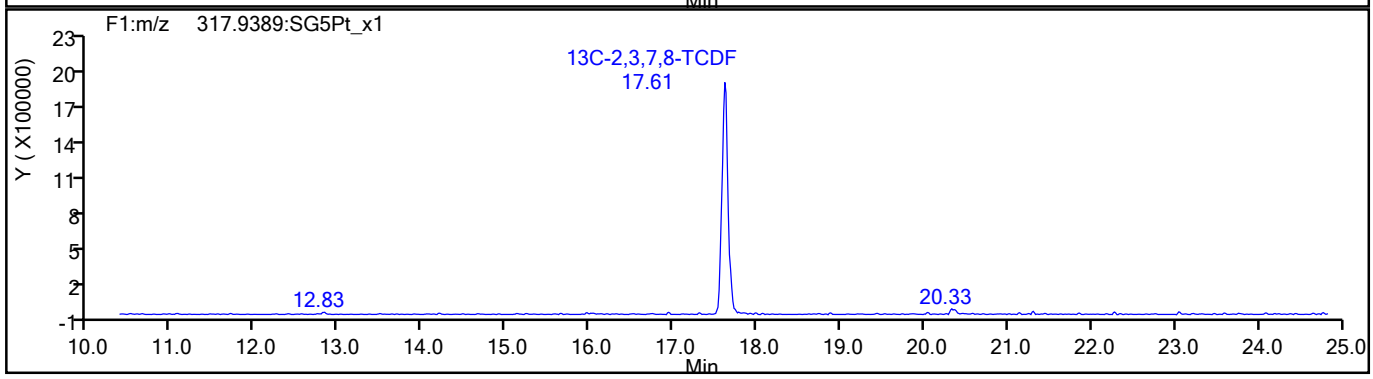

789599

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

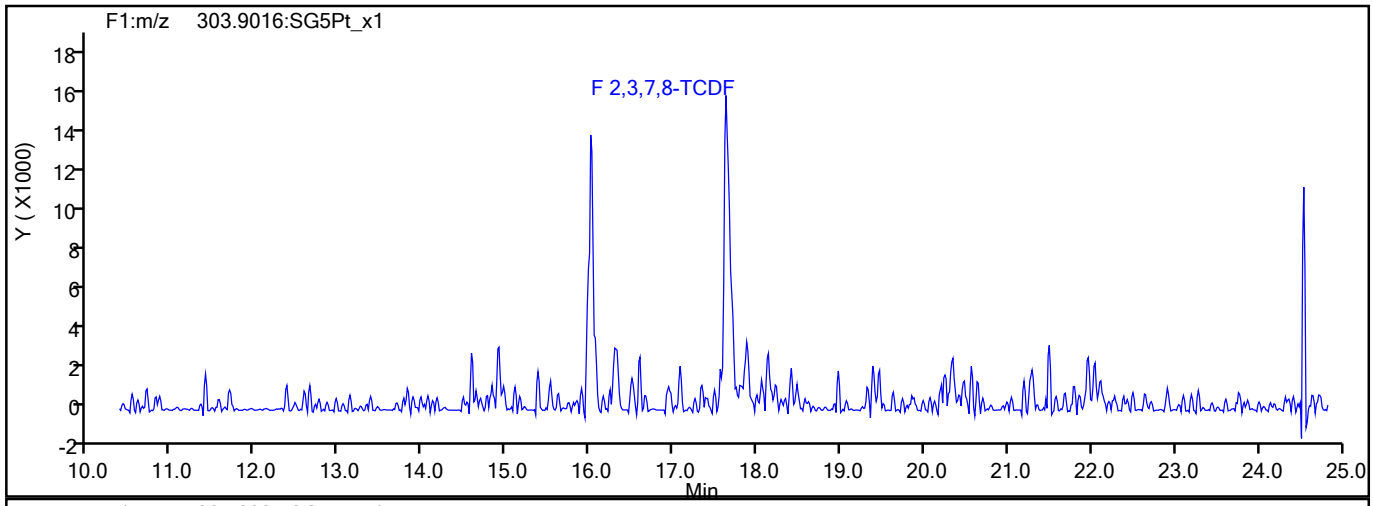

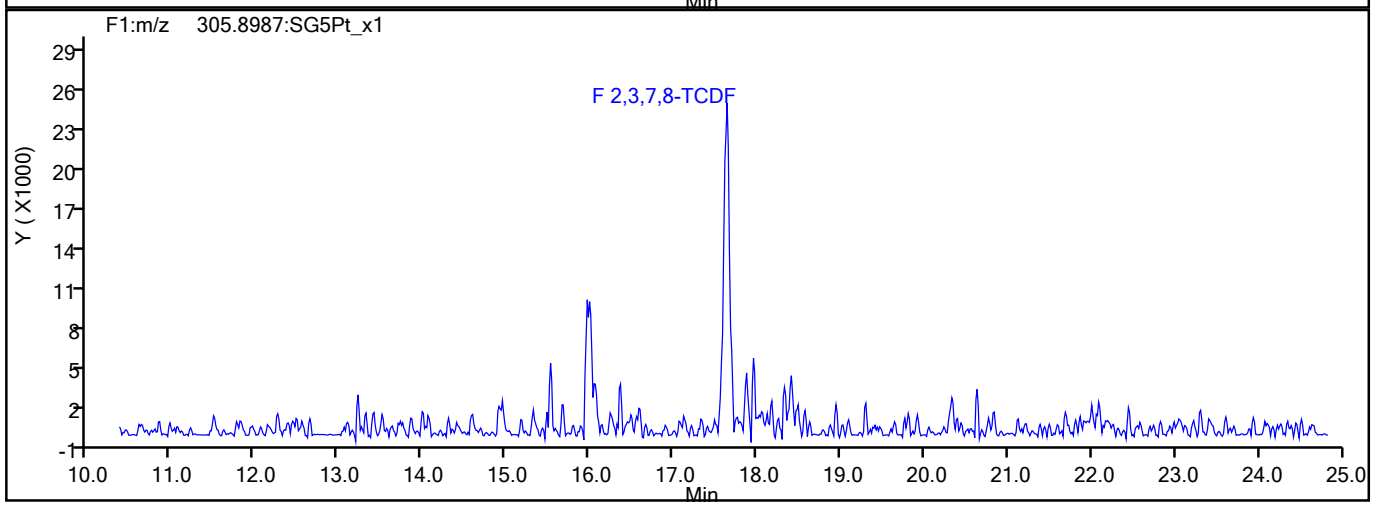

TCDF Interference Mass

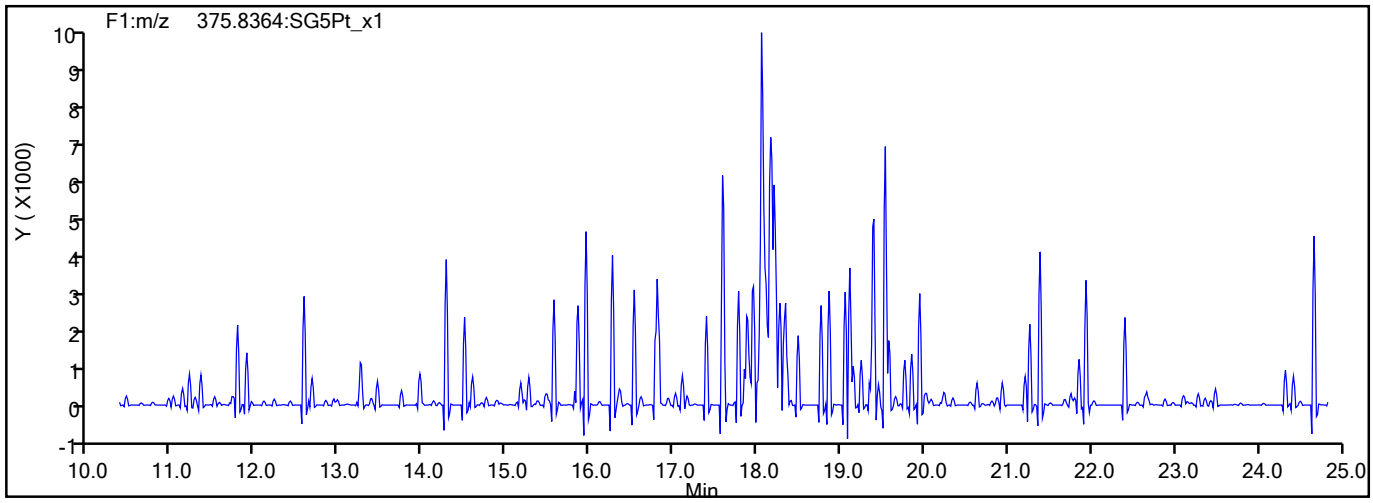

789600

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

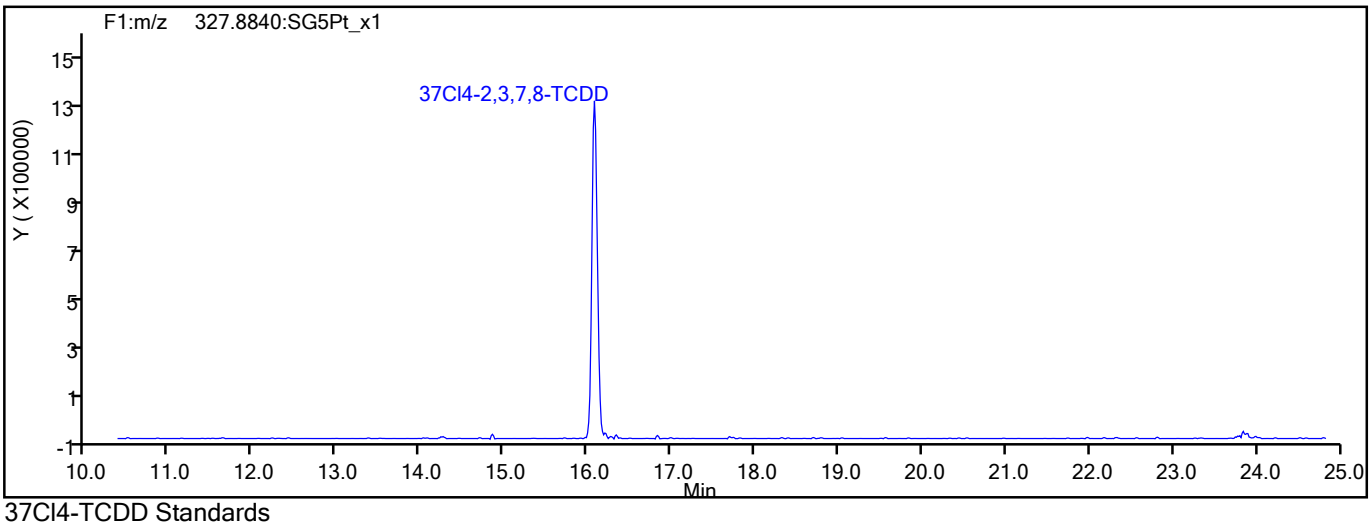

37Cl4-TCDD Standards

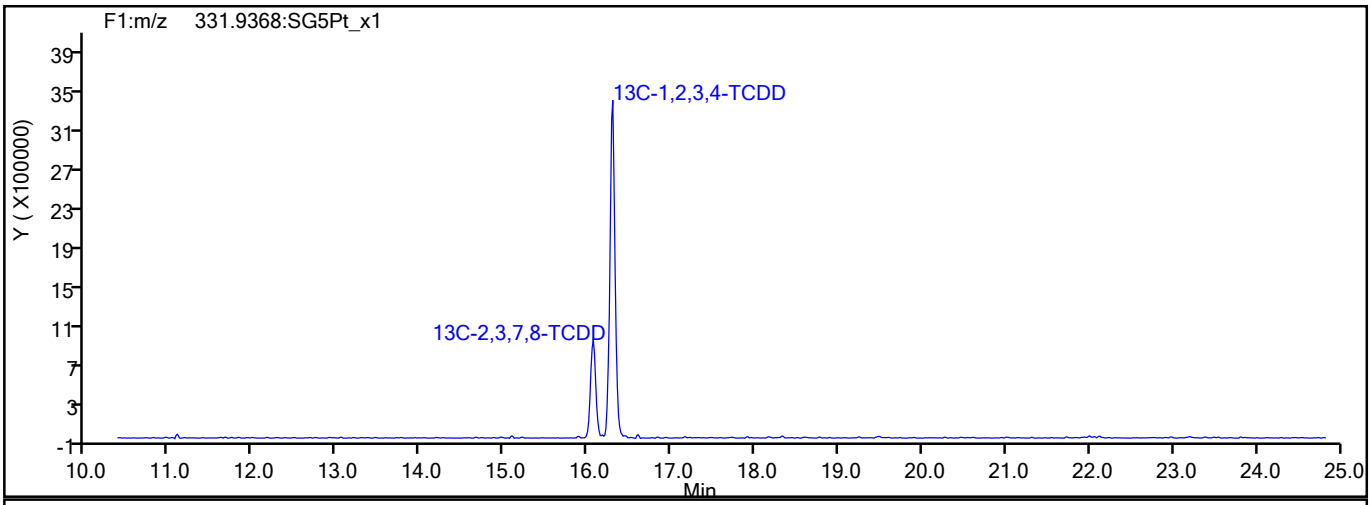

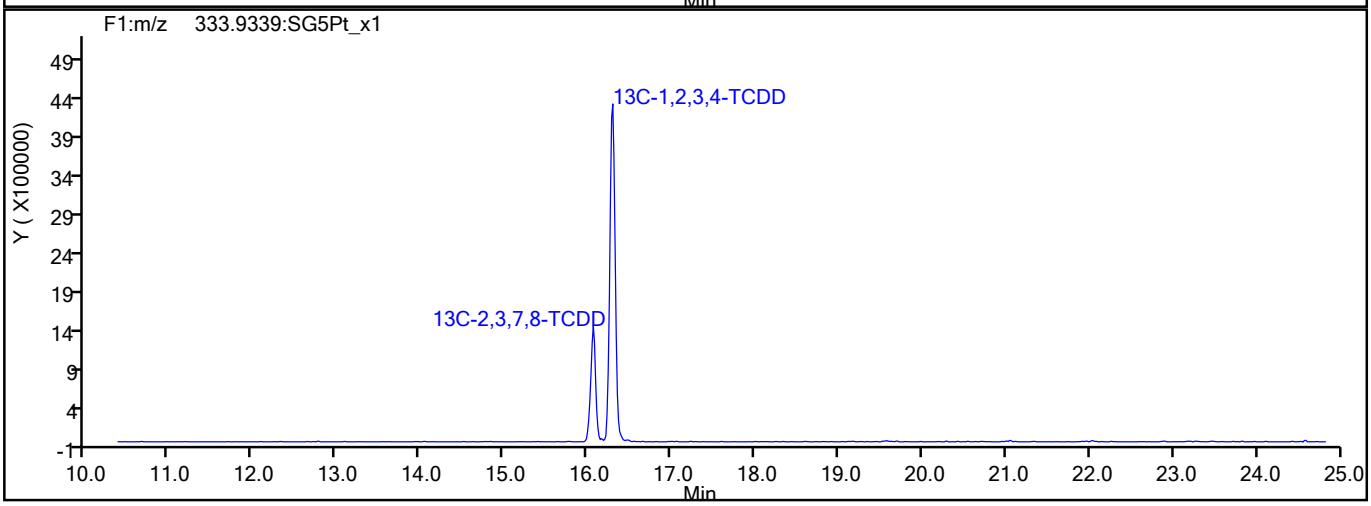

789601

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

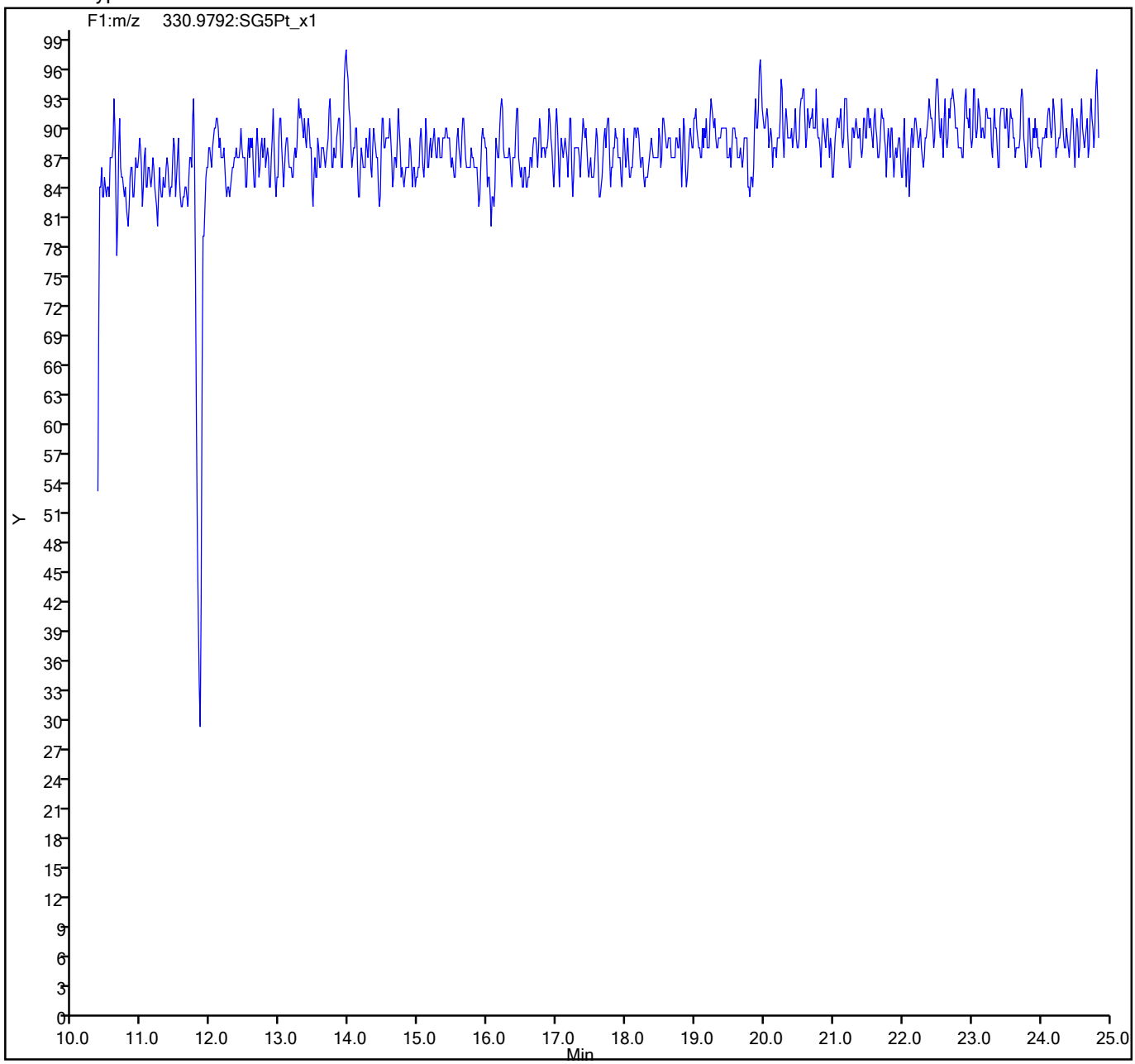

789602

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-513879/2-A
Matrix: Sediment
Lab File ID: 17au21dfs1_51.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/19/2021 04:43
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	22.3		1.0	0.27
51207-31-9	2,3,7,8-TCDF	23.1		1.0	0.098
40321-76-4	1,2,3,7,8-PeCDD	113		5.0	0.26
57117-41-6	1,2,3,7,8-PeCDF	117		5.0	0.36
57117-31-4	2,3,4,7,8-PeCDF	109		5.0	0.38
39227-28-6	1,2,3,4,7,8-HxCDD	101		5.0	0.22
57653-85-7	1,2,3,6,7,8-HxCDD	112		5.0	0.27
19408-74-3	1,2,3,7,8,9-HxCDD	109		5.0	0.23
70648-26-9	1,2,3,4,7,8-HxCDF	114		5.0	0.35
57117-44-9	1,2,3,6,7,8-HxCDF	120		5.0	0.36
72918-21-9	1,2,3,7,8,9-HxCDF	118		5.0	0.36
60851-34-5	2,3,4,6,7,8-HxCDF	121		5.0	0.36
35822-46-9	1,2,3,4,6,7,8-HpCDD	111		5.0	0.32
67562-39-4	1,2,3,4,6,7,8-HpCDF	118		5.0	0.50
55673-89-7	1,2,3,4,7,8,9-HpCDF	108		5.0	0.50
3268-87-9	OCDD	232		10	0.36
39001-02-0	OCDF	243		10	0.38
41903-57-5	Total TCDD	22.3		1.0	0.27
30402-14-3	Total TCDF	23.1		1.0	0.098
36088-22-9	Total PeCDD	113		5.0	0.26
30402-15-4	Total PeCDF	226		5.0	0.37
34465-46-8	Total HxCDD	322		5.0	0.24
55684-94-1	Total HxCDF	474		5.0	0.36
37871-00-4	Total HpCDD	112		5.0	0.32
38998-75-3	Total HpCDF	227		5.0	0.50

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513879/2-A

Matrix: Sediment Lab File ID: 17au21dfs1_51.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10(g) Date Analyzed: 08/19/2021 04:43

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517462 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	34		20-175
89059-46-1	13C-2,3,7,8-TCDF	36		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	34		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	31		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	36		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	37		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	35		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	42		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	37		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	32		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	33		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	36		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	35		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	40		20-186
114423-97-1	13C-OCDD	39		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	47		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Aug-2021 04:43:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513879/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:46:32 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:28:21

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.378	1152953	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.398	552191	0.79	1.3459	35.6	35.6	0.2111	0.2111	35.59	
2,3,7,8-TCDF	20.449	68815	0.80	1.0802	11.5	11.5	0.0489	0.0489	115	
A Non-2,3,7,8-sub-TCDF	19.878						0.0489	0.3566		RQU
S Total TCDF					11.5	11.5	0.0489	0.0489		
D 13C-2,3,7,8-TCDD	21.765	368595	0.88	0.9317	34.3	34.3	0.2791	0.2791	34.31	
2,3,7,8-TCDD	21.782	44148	0.88	1.0753	11.1	11.1	0.1343	0.1343	111	
$ 37Cl4-2,3,7,8-TCDD	21.799	220145		1.0083	18.9	18.9	0.0142	0.0142	47.34	
A Non-2,3,7,8-sub-TCDD	20.707						0.1343	0.1343		
S Total TCDD					11.1	11.1	0.1343	0.1343		
D 13C-1,2,3,7,8-PeCDF	27.239	404112	1.57	1.1405	30.7	30.7	0.0980	0.0980	30.73	
1,2,3,7,8-PeCDF	27.272	248460	1.62	1.0543	58.3	58.3	0.1811	0.1811	117	
D 13C-2,3,4,7,8-PeCDF	28.763	466834	1.64	1.1253	36.0	36.0	0.0994	0.0994	35.98	
2,3,4,7,8-PeCDF	28.779	256500	1.56	1.0079	54.5	54.5	0.1893	0.1893	109	
A F1 PeCDFs	24.648						0.0108	0.0108		RQU
A Non-2,3,7,8-sub-PeCDF	28.125						0.1851	0.6069		U
S Total PeCDF					112.8	112.8	0.1852	0.1852		
D 13C-1,2,3,7,8-PeCDD	29.571	282216	1.56	0.7165	34.2	34.2	0.1243	0.1243	34.16	
1,2,3,7,8-PeCDD	29.588	167577	1.56	1.0465	56.7	56.7	0.1285	0.1285	113	
A Non-2,3,7,8-sub-PeCDD	28.489						0.1285	0.1629		RQU
S Total PeCDD					56.7	56.7	0.1285	0.1285		
D 13C-1,2,3,4,7,8-HxCDF	34.920	440250	0.54	0.9648	41.5	41.5	0.1289	0.1289	41.52	
1,2,3,4,7,8-HxCDF	34.937	287979	1.27	1.1474	57.0	57.0	0.1753	0.1753	114	
D 13C-1,2,3,6,7,8-HxCDF	35.064	437444	0.52	1.0708	37.2	37.2	0.1162	0.1162	37.17	
1,2,3,6,7,8-HxCDF	35.106	320805	1.31	1.2178	60.2	60.2	0.1818	0.1818	120	
D 13C-2,3,4,6,7,8-HxCDF	35.897	380639	0.55	1.0413	33.3	33.3	0.1194	0.1194	33.26	
2,3,4,6,7,8-HxCDF	35.914	279720	1.28	1.2145	60.5	60.5	0.1780	0.1780	121	
D 13C-1,2,3,7,8,9-HxCDF	36.790	347505	0.54	0.9731	32.5	32.5	0.1278	0.1278	32.49	
1,2,3,7,8,9-HxCDF	36.807	255102	1.35	1.2401	59.2	59.2	0.1804	0.1804	118	
A Non-2,3,7,8-sub-HxCDF	35.028						0.1786	0.1786		
S Total HxCDF					236.9	236.9	0.1789	0.1789		
* 13C-1,2,3,7,8,9-HxCDD	36.596	1099079	1.26	1.8E+04	100.0	100.0				

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-1,2,3,4,7,8-HxCDD	36.108	308239	1.13	0.7587	37.0	37.0	0.1300	0.1300	36.97	
1,2,3,4,7,8-HxCDD	36.125	165063	1.25	1.0608	50.5	50.5	0.1116	0.1116	101	
D 13C-1,2,3,6,7,8-HxCDD	36.226	327063	1.26	0.8593	34.6	34.6	0.1148	0.1148	34.63	
1,2,3,6,7,8-HxCDD	36.243	182721	1.24	0.9933	56.2	56.2	0.1330	0.1330	112	
1,2,3,7,8,9-HxCDD	36.605	191715	1.22	1.1094	54.4	54.4	0.1126	0.1126	109	
A Non-2,3,7,8-sub-HxCDD	35.394						0.1184	0.1184		
S Total HxCDD					161.1	161.1	0.1191	0.1191		
D 13C-1,2,3,4,6,7,8-HpCDF	38.620	285196	0.46	0.7359	35.3	35.3	0.1457	0.1457	35.26	
1,2,3,4,6,7,8-HpCDF	38.628	243533	1.05	1.4421	59.2	59.2	0.2492	0.2492	118	
D 13C-1,2,3,4,7,8,9-HpCDF	39.874	302406	0.45	0.6854	40.1	40.1	0.1564	0.1564	40.14	
1,2,3,4,7,8,9-HpCDF	39.882	214074	1.05	1.3092	54.1	54.1	0.2481	0.2481	108	
A Non-2,3,7,8-sub-HpCDF	39.258						0.2480	0.2480		
S Total HpCDF					113.3	113.3	0.2487	0.2487		
D 13C-1,2,3,4,6,7,8-HpCDD	39.562	268592	1.02	0.6745	36.2	36.2	0.0922	0.0922	36.23	
1,2,3,4,6,7,8-HpCDD	39.579	156038	1.04	1.0503	55.3	55.3	0.1617	0.1617	111	
A Non-2,3,7,8-sub-HpCDD	39.258	1484	1.04	1.0503	0.5969	0.5261	0.1617	0.5261	0.00	RQ
S Total HpCDD					55.9	55.8	0.1617	0.1617		RQ
D 13C-OCDD	42.068	462455	0.94	0.5446	77.3	77.3	0.1394	0.1394	38.63	
OCDF	42.161	370595	0.96	1.3168	121.7	121.7	0.1900	0.1900	122	
OCDD	42.068	284636	0.91	1.0620	115.9	115.9	0.1799	0.1799	116	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 09:46:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Aug-2021 04:43:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513879/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:46:32 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:28:21

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.378	21.427	-3		512123	71188	71	177	1003		a
333.9338	21.378	21.427	-3		640830	82634	89	222	928	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.398	20.401	0	0.954	243971	33108	139	347	238		
317.9389	20.415	20.401	1	0.955	308220	42563	36	90	1182	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.449	20.436	1	1.003	30521	4146	6	15	691		
305.8987	20.432	20.436	0	1.002	38294	5319	10	25	532	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											U
303.9016	18.739	19.878	-68	0.919	162	68	6	15	11		
	Empc Correction				119	50	6	15	8		
305.8987	18.765	19.878	-67	0.920	155	65	10	25	7	1.05(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.765	21.743	1	1.018	172091	21636	71	177	305		
333.9338	21.739	21.743	0	1.017	196504	24757	89	222	278	0.88(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.782	21.777	0	1.001	20673	2465	24	60	103		
321.8936	21.773	21.777	0	1.000	23475	3194	3	7	1065	0.88(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.799	21.849	-3	1.020	220145	28798	9	22	3200		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.707						24	60			
321.8936	20.707						3	7			
13C-1,2,3,7,8-PeCDF											
351.9000	27.239	27.288	-3	1.274	246750	37936	50	125	759		
353.8970	27.247	27.288	-2	1.275	157362	24926	19	47	1312	1.57(1.32-1.78)	

789607

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.272	27.313	-2	1.001	153449	22468	27	67	832		
341.8567	27.281	27.313	-2	1.002	95011	14063	21	52	670	1.62(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.763	28.795	-2	1.345	290330	39582	50	125	792		
353.8970	28.754	28.795	-2	1.345	176504	23330	19	47	1228	1.64(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.779	28.820	-2	1.001	156208	20762	27	67	769		
341.8567	28.779	28.820	-2	1.001	100292	13170	21	52	627	1.56(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.618	24.648	-2	0.904	12	5	1	2	5		
341.8567	24.610	24.648	-2	0.903	37	18	2	5	9	0.32(1.32-1.78)	
	Empc Correction				7	3	2	5	2		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	27.879	28.125	-15	1.023	1729	241	27	67	9		
341.8567	27.811	28.125	-19	1.021	996	151	21	52	7	1.74(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.571	29.612	-2	1.383	171861	22744	21	52	1083		
369.8919	29.554	29.612	-3	1.382	110355	14435	34	85	425	1.56(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.588	29.637	-3	1.001	102094	13051	15	37	870		
357.8516	29.596	29.637	-2	1.001	65483	8320	5	12	1664	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.489	28.489	0	0.963	712	141	15	37			
	Empc Correction				292	51	15	37	0		
357.8516	28.489	28.489	0	0.963	189	33	5	12		3.77(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.920	34.942	-1	0.954	154382	28905	45	112	642		
385.8610	34.912	34.942	-2	0.954	285868	51650	71	177	727	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.937	34.959	-1	1.000	161292	30332	39	97	778		
375.8178	34.937	34.959	-1	1.000	126687	23452	26	65	902	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.064	35.111	-3	0.958	149152	25148	45	112	559		
385.8610	35.089	35.111	-1	0.959	288292	48027	71	177	676	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.106	35.119	-1	1.001	181702	30359	39	97	778		
375.8178	35.097	35.119	-1	1.001	139103	24502	26	65	942	1.31(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.897	35.919	-1	0.981	134384	27782	45	112	617		
385.8610	35.897	35.919	-1	0.981	246255	47138	71	177	664	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.914	35.936	-1	1.000	157261	31460	39	97	807		
375.8178	35.914	35.936	-1	1.000	122459	23907	26	65	920	1.28(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.790	36.811	-1	1.005	121621	25275	45	112	562		
385.8610	36.790	36.811	-1	1.005	225884	47153	71	177	664	0.54(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	36.807	36.828	-1	1.000	146578	31137	39	97	798		
375.8178	36.807	36.828	-1	1.000	108524	22657	26	65	871	1.35(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						39	97			
375.8178	35.028						26	65			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.596	36.609	-1		613234	129054	45	112	2868		
403.8529	36.596	36.609	-1		485845	104110	47	117	2215	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.108	36.129	-1	0.987	163698	37090	45	112	824		
403.8529	36.108	36.129	-1	0.987	144541	30477	47	117	648	1.13(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.125	36.146	-1	1.000	91763	20395	15	37	1360		
391.8127	36.125	36.146	-1	1.000	73300	15889	17	42	935	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.226	36.247	-1	0.990	182318	33355	45	112	741		
403.8529	36.226	36.247	-1	0.990	144745	27185	47	117	578	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.243	36.264	-1	1.000	101151	20151	15	37	1343		
391.8127	36.234	36.264	-2	1.000	81570	15244	17	42	897	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.605	36.626	-1	1.014	105175	22152	15	37	1477		
391.8127	36.613	36.626	-1	1.014	86540	19124	17	42	1125	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.394						15	37			
391.8127	35.394						17	42			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.620	38.626	0	1.055	90235	21930	39	97	562		
419.8220	38.620	38.626	0	1.055	194961	46799	61	152	767	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.628	38.630	0	1.000	124835	30815	56	140	550		
409.7788	38.628	38.630	0	1.000	118698	28856	43	107	671	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.874	39.880	0	1.090	94287	23632	39	97	606		
419.8220	39.874	39.880	0	1.090	208119	52415	61	152	859	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.882	39.885	0	1.000	109760	27352	56	140	488		
409.7788	39.874	39.885	-1	1.000	104314	26341	43	107	613	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						56	140			
409.7788	39.258						43	107			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.562	39.569	0	1.081	135567	36294	24	60	1512		
437.8140	39.562	39.569	0	1.081	133025	32596	34	85	959	1.02(0.88-1.20)	

Report Date: 20-Aug-2021 09:46:32 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.579	39.582	0	1.000	79370	19810	28	70	708		
425.7737	39.571	39.582	-1	1.000	76668	19293	19	47	1015	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.931	39.258	-20	0.984	757	201	28	70	7		
425.7737	38.940	39.258	-19	0.984	927	213	19	47	11	0.82(0.88-1.20)	
	Empc Correction				727	193	19	47	10		
13C-OCDD											
469.7780	42.068	42.072	0	1.150	224125	50031	47	117	1064		
471.7750	42.059	42.072	-1	1.149	238330	51486	24	60	2145	0.94(0.76-1.02)	
OCDF											
441.7428	42.161	42.165	0	1.002	181285	39296	22	55	1786		
443.7399	42.161	42.165	0	1.002	189310	43296	29	72	1493	0.96(0.76-1.02)	
OCDD											
457.7377	42.068	42.081	-1	1.000	135245	30903	20	50	1545		
459.7348	42.068	42.081	-1	1.000	149391	32862	19	47	1730	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	552191	75671

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	552191	75671

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.739	162	68	155	65	0.0531	1.05	RQ
18.739	119	50	155	65	0.0459		Empc Correction
19.427	92	39	339	85	0.0723	0.27	RQ
19.427	92	39	119	50	0.0354		Empc Correction
19.728	942	162	1185	362	0.3566	0.79	
20.570	1237	306	356	162	0.2671	3.47	RQ
20.570	274	124	356	162	0.1056		Empc Correction
20.759	320	67	178	119	0.0835	1.80	RQ
20.759	137	91	178	119	0.0528		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	404112	62862
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	466834	62912

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	435473	62887

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.618	12	5	37	18	0.0109	0.32	RQ
24.618	12	5	7	3	0.004232		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	404112	62862
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	466834	62912

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	435473	62887

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.879	1729	241	996	151	0.6069	1.74	

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	282216	37179

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	282216	37179

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.245	712	141	189	33	0.3051	3.77	RQ
30.245	292	51	189	33	0.1629		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	268592	68890

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	268592	68890

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.931	757	201	927	213	0.5969	0.82	RQ
38.931	757	201	727	193	0.5261		Empc Correction
Signal Totals:							
	757	201	727	193			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1684	414				0.82	RQ
	1484	394					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5969 = (1684 * 100.000) / (268592 * 1.050)

Empc Amount: 0.5261 = (1484 * 100.000) / (268592 * 1.050)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

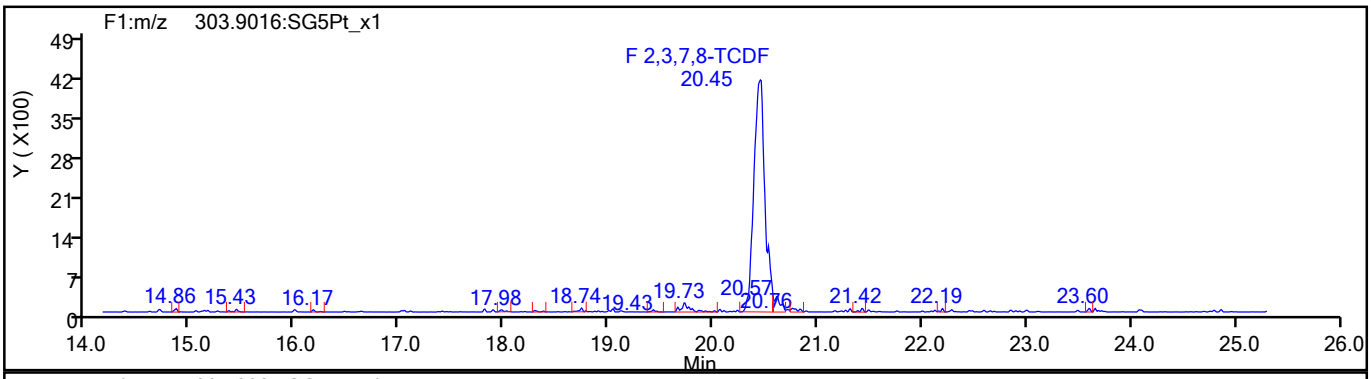

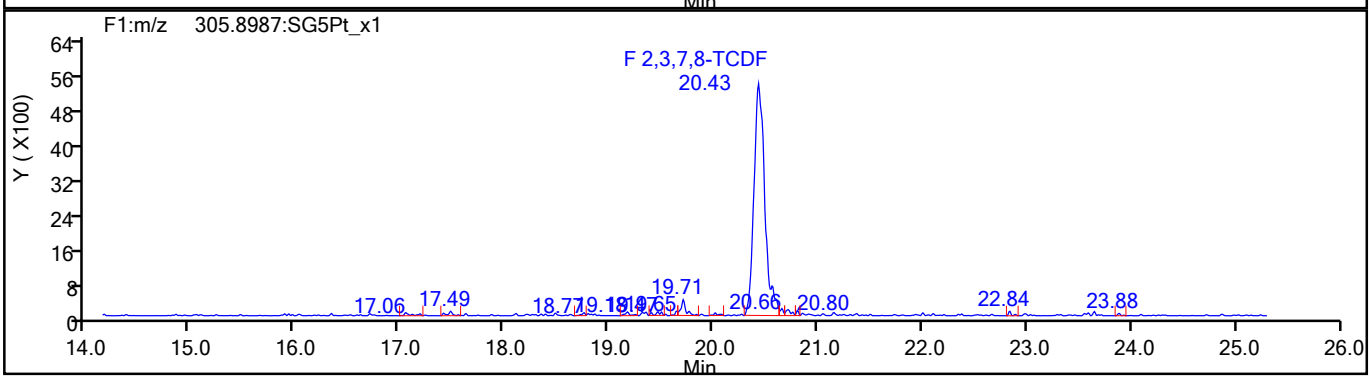

TCDF Standards

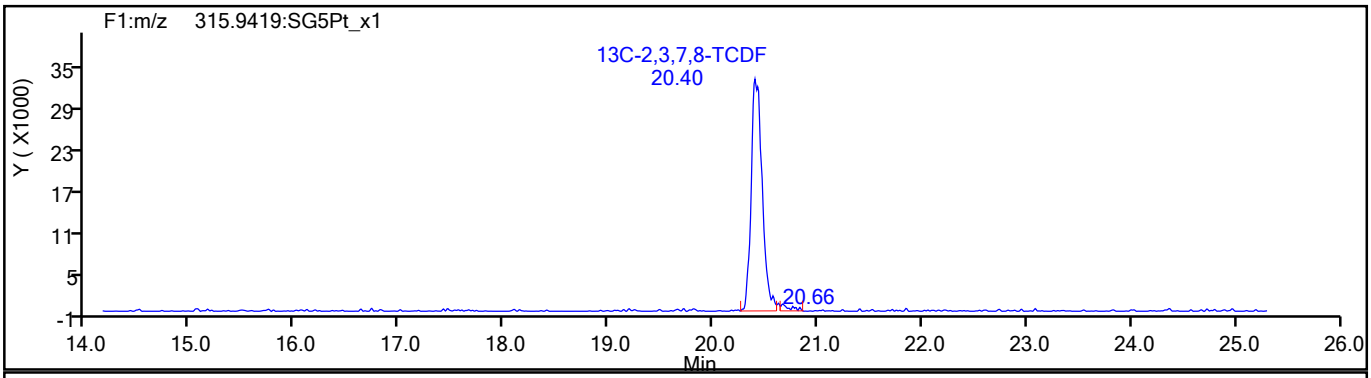

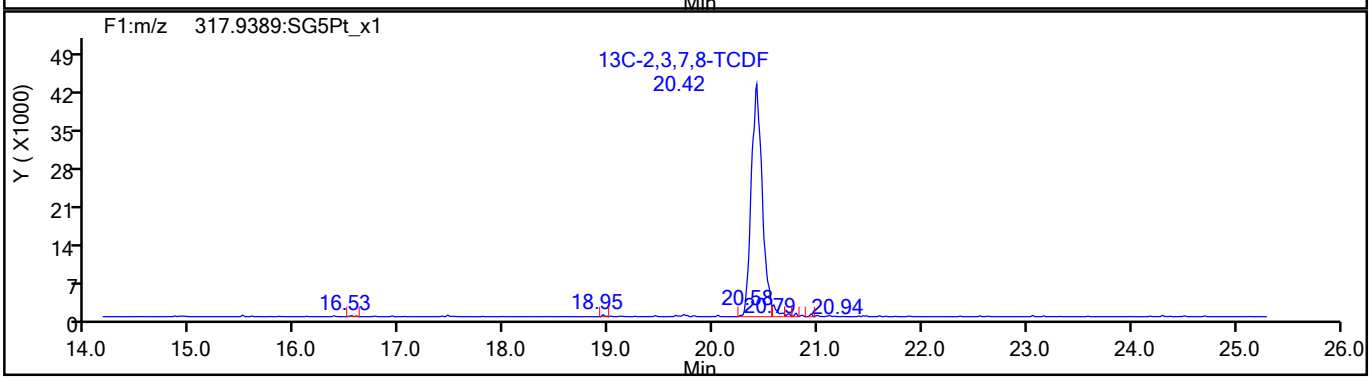

789616

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

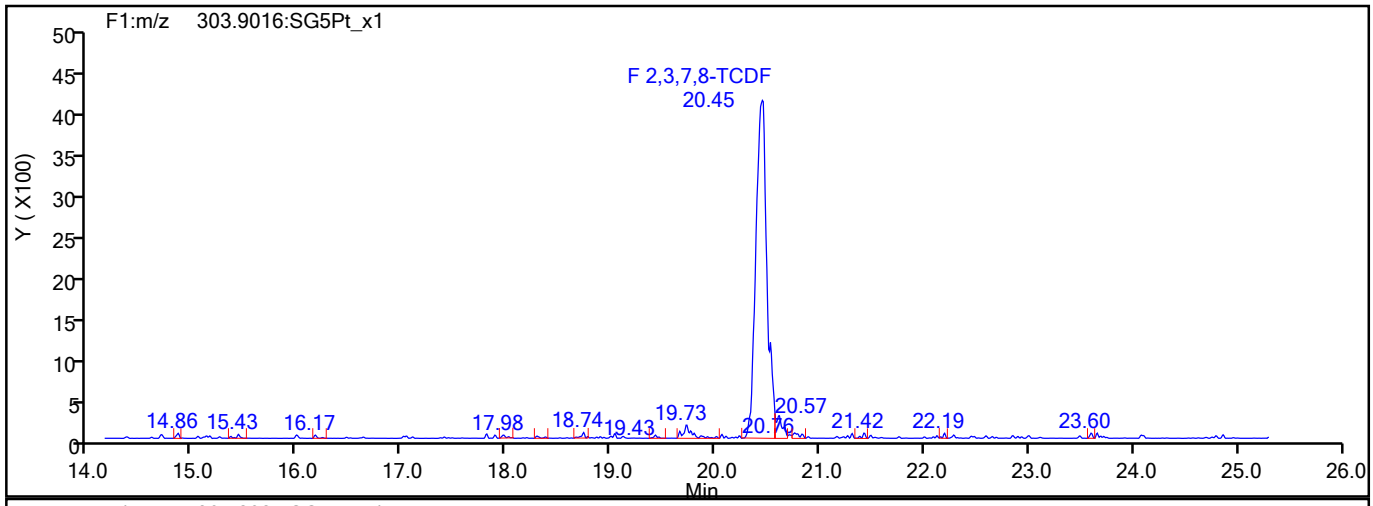

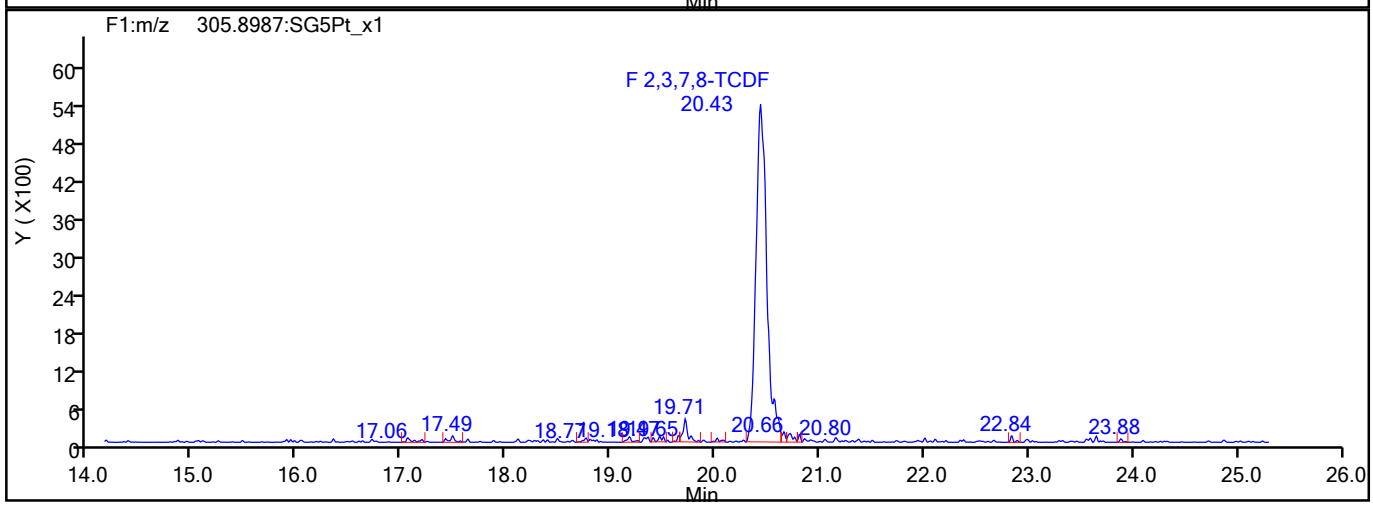

TCDF Interference Mass

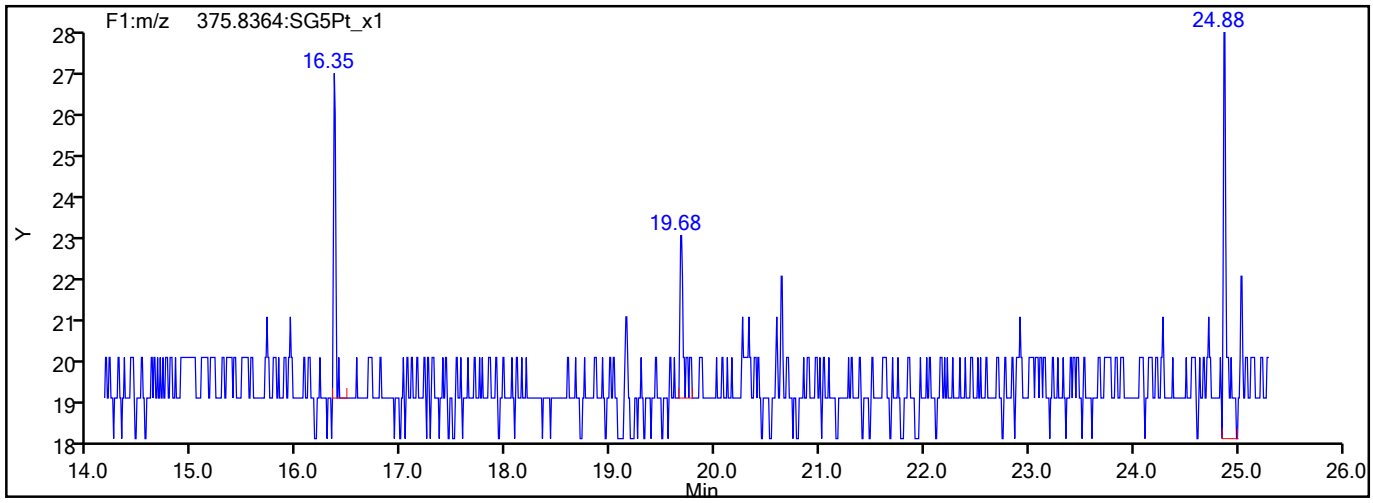

789617

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

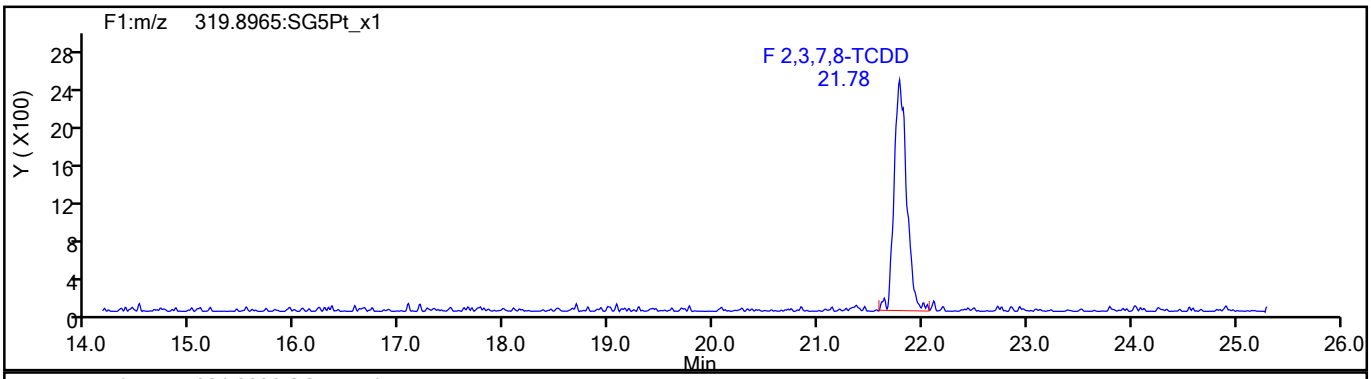

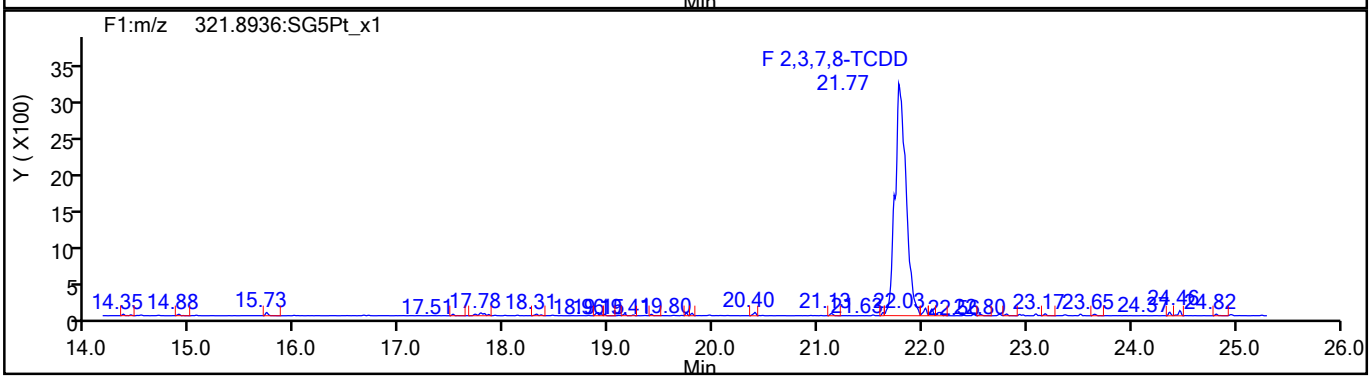

TCDD Standards

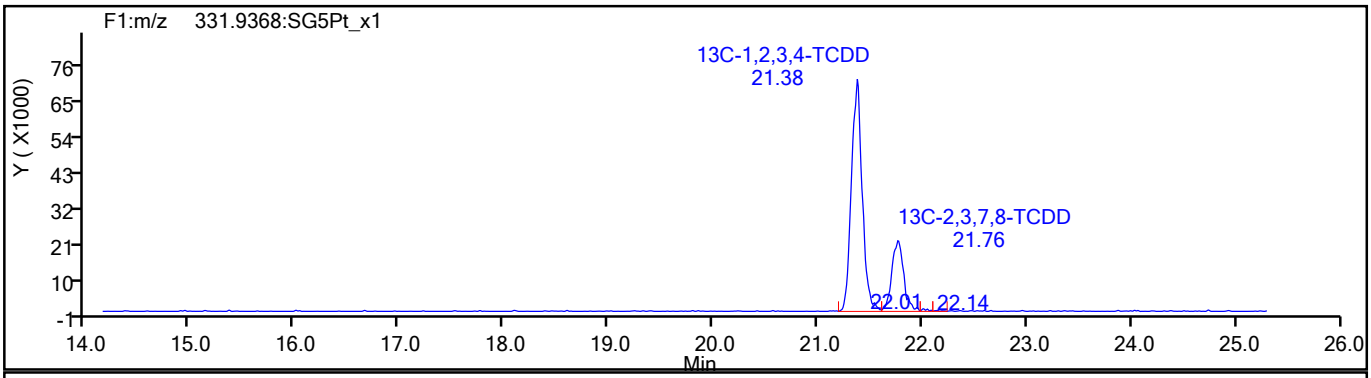

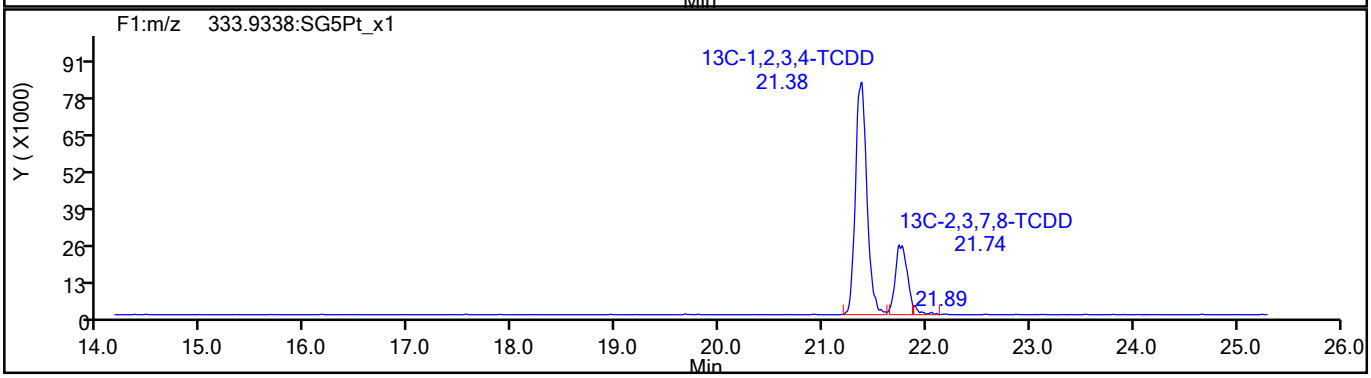

789618

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

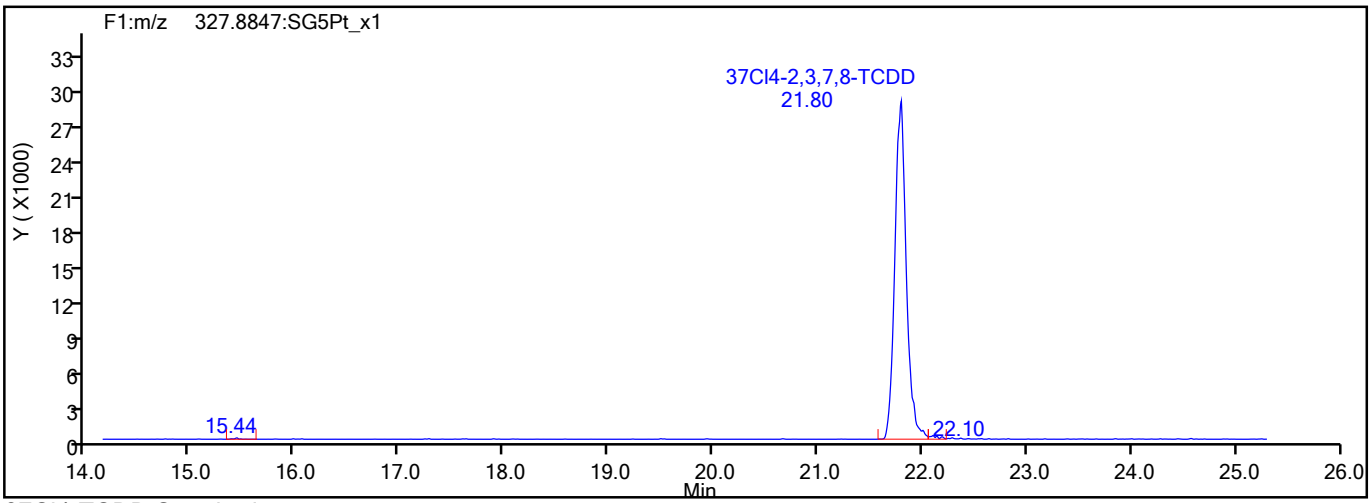

37Cl4-TCDD Standards

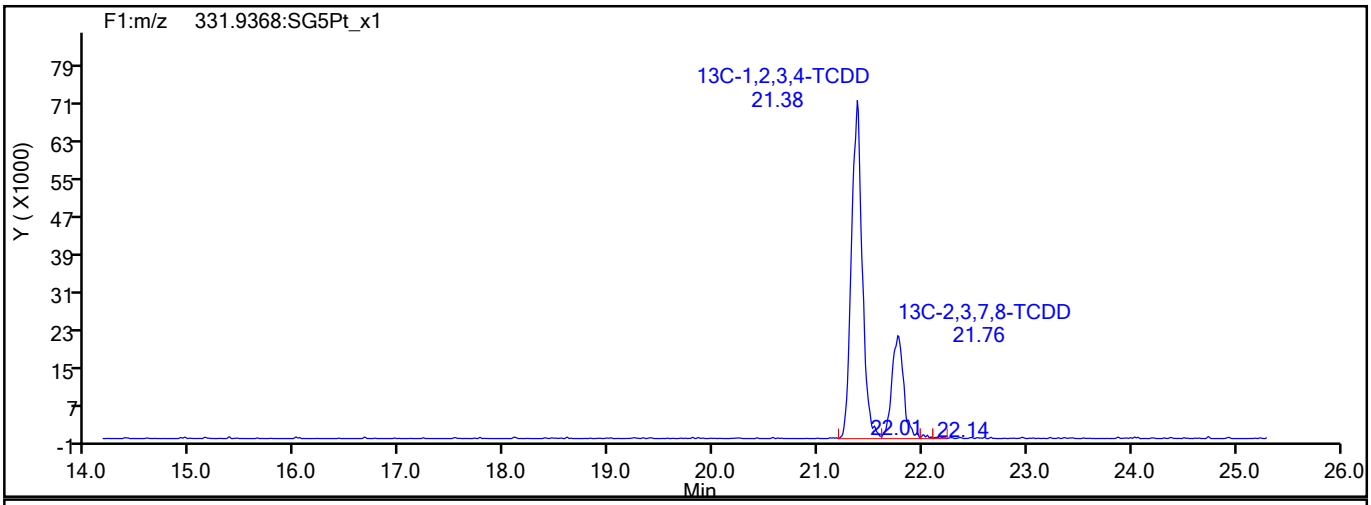

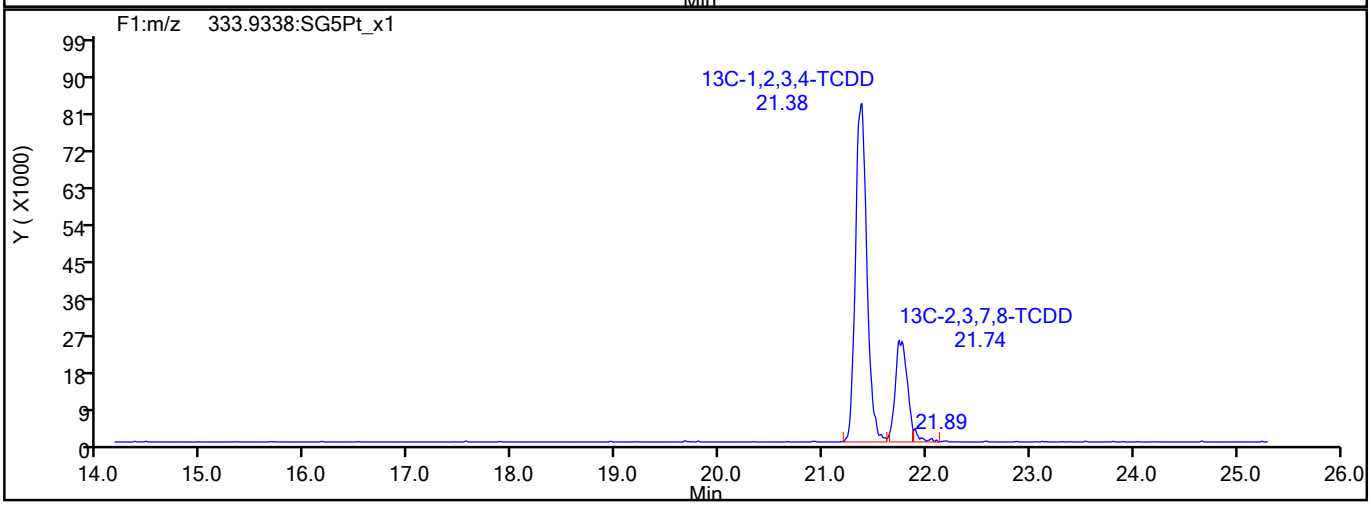

789619

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

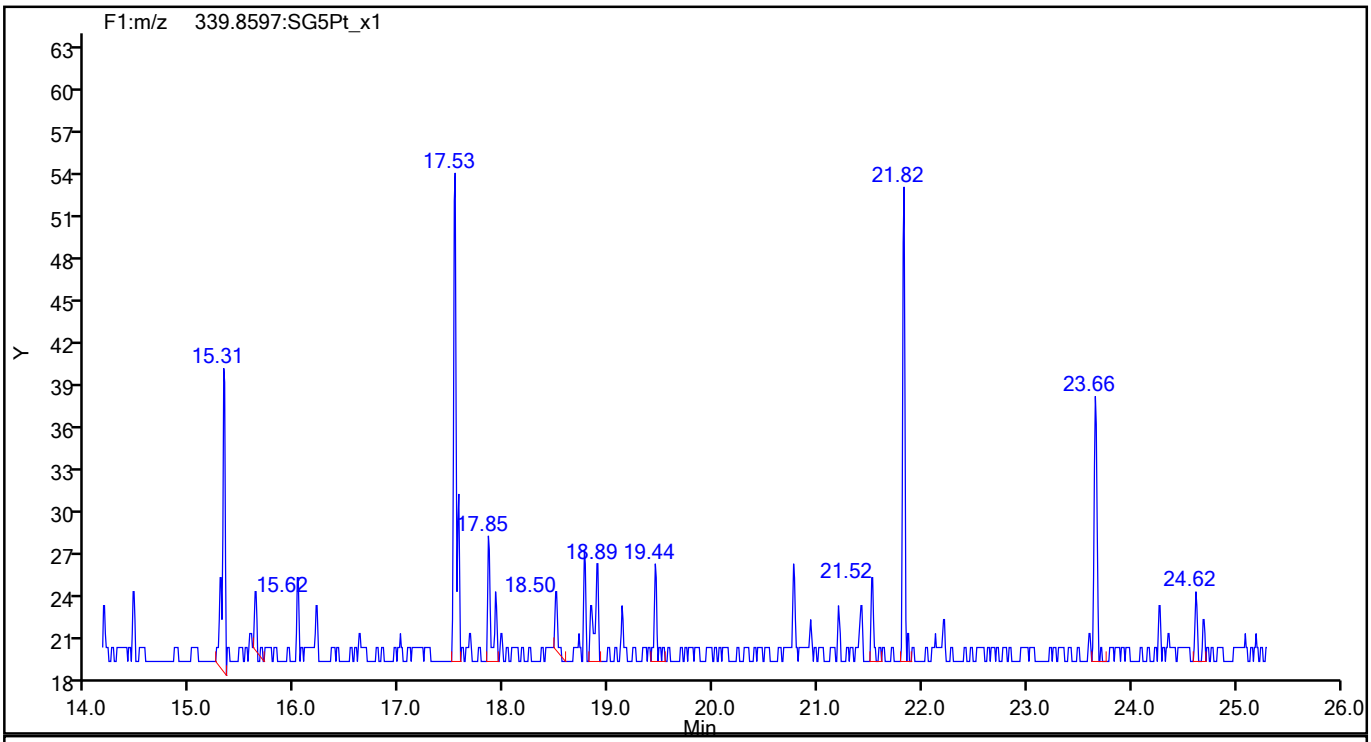

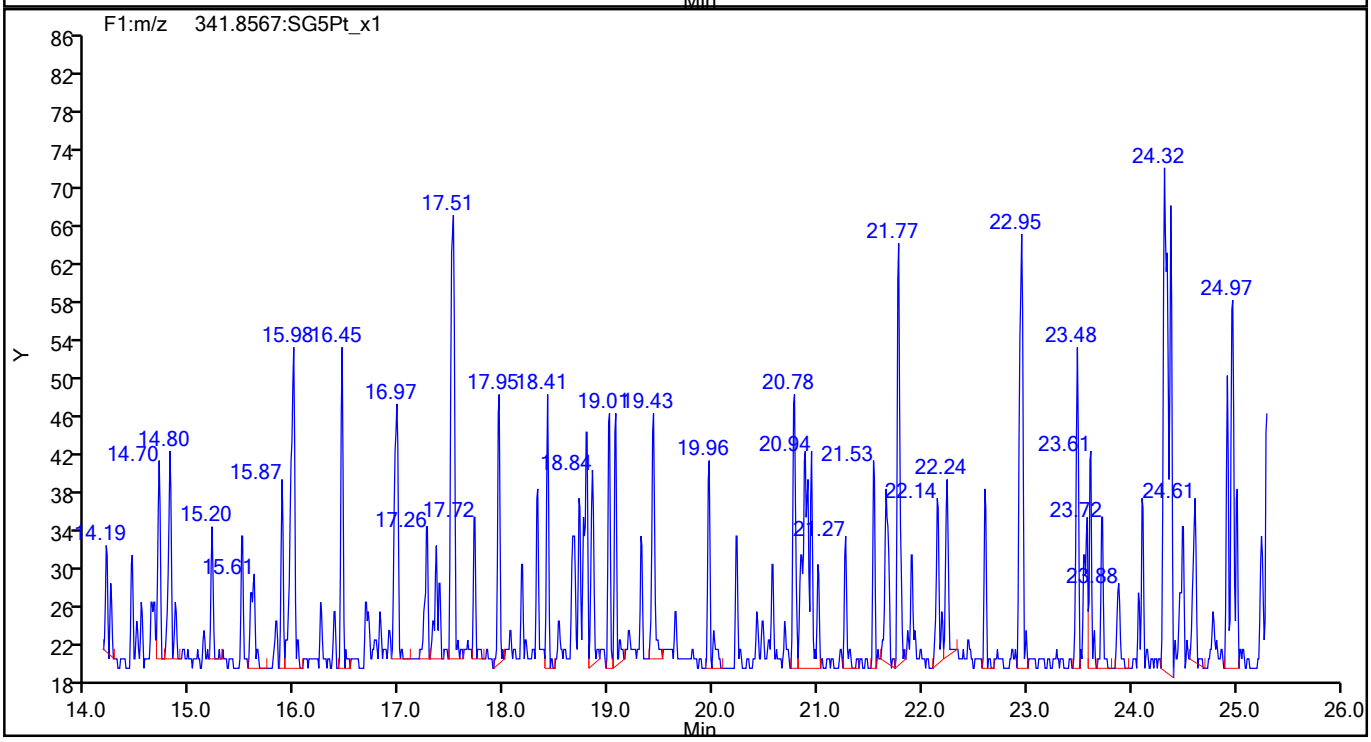

789620

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

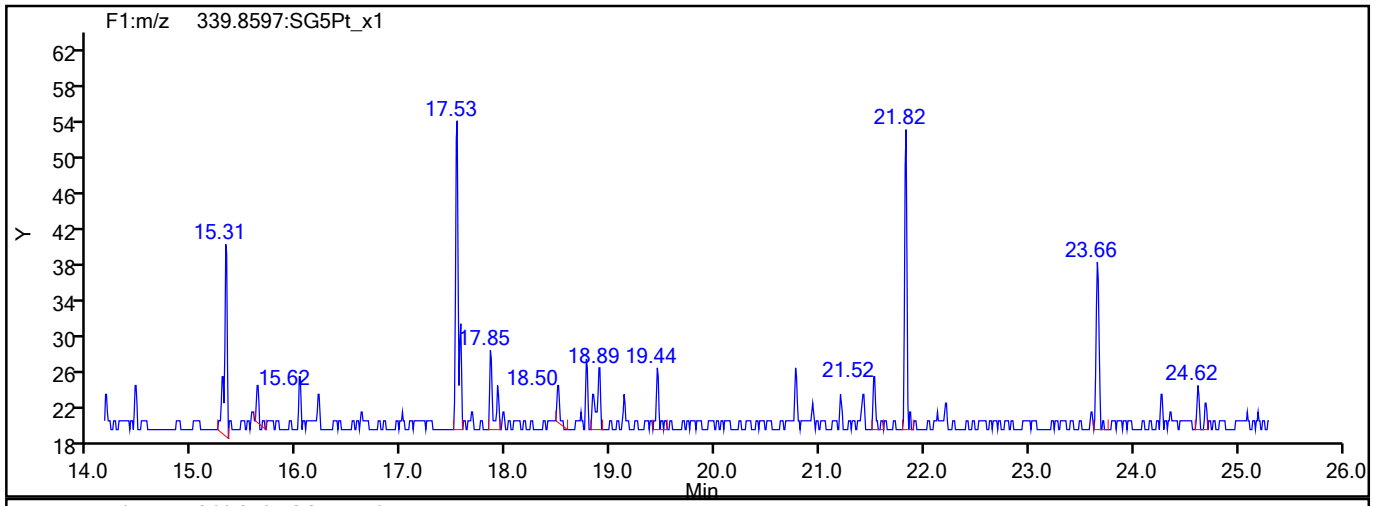

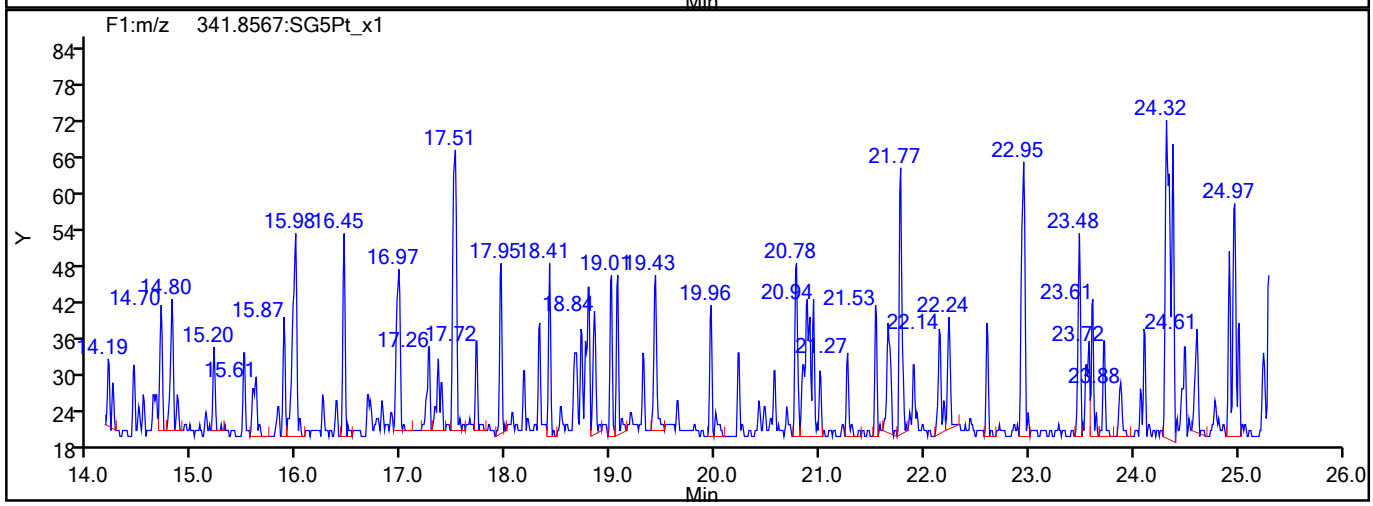

F1 PeCDFs Interference Mass

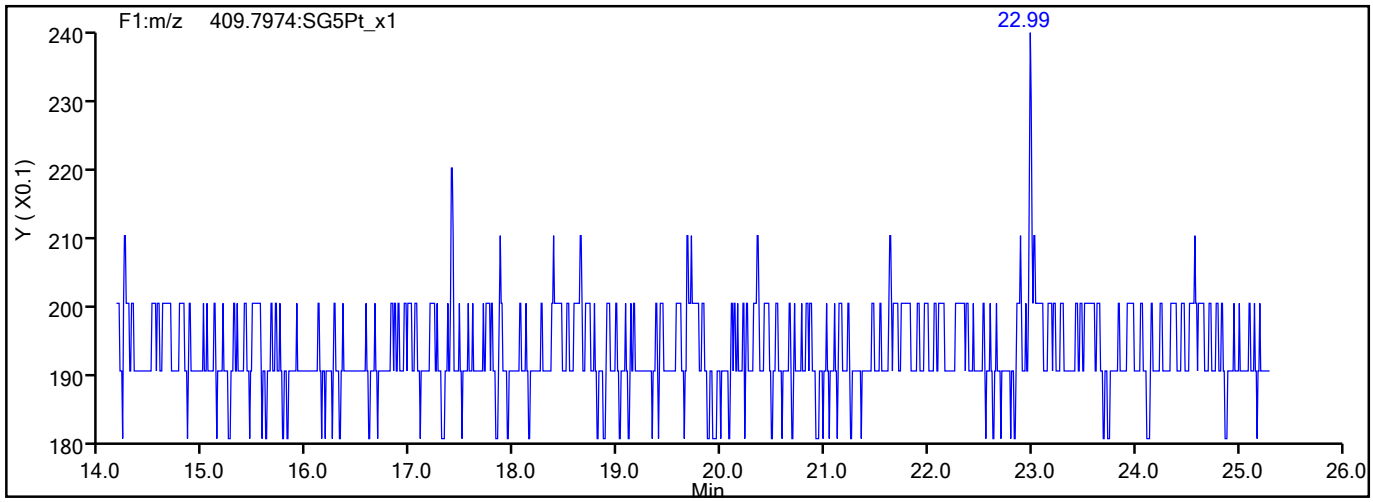

789621

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

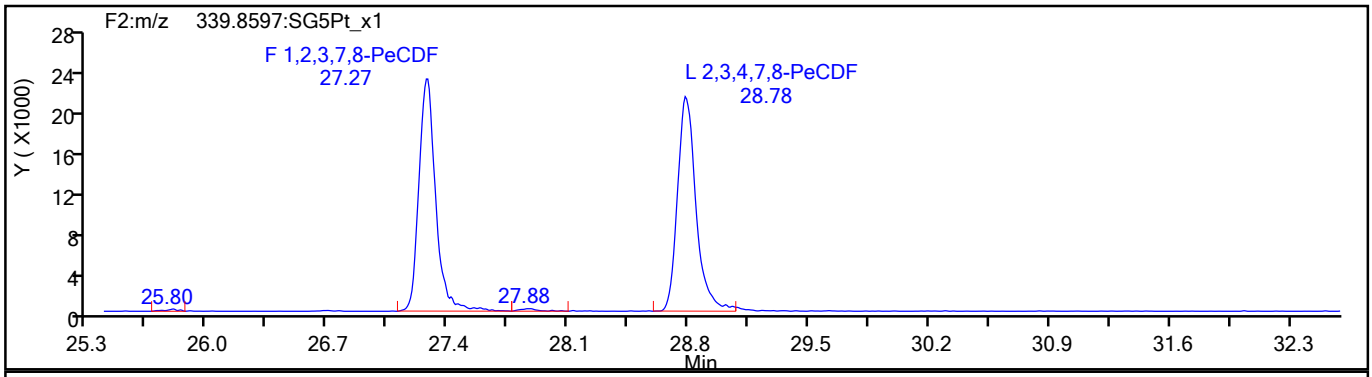

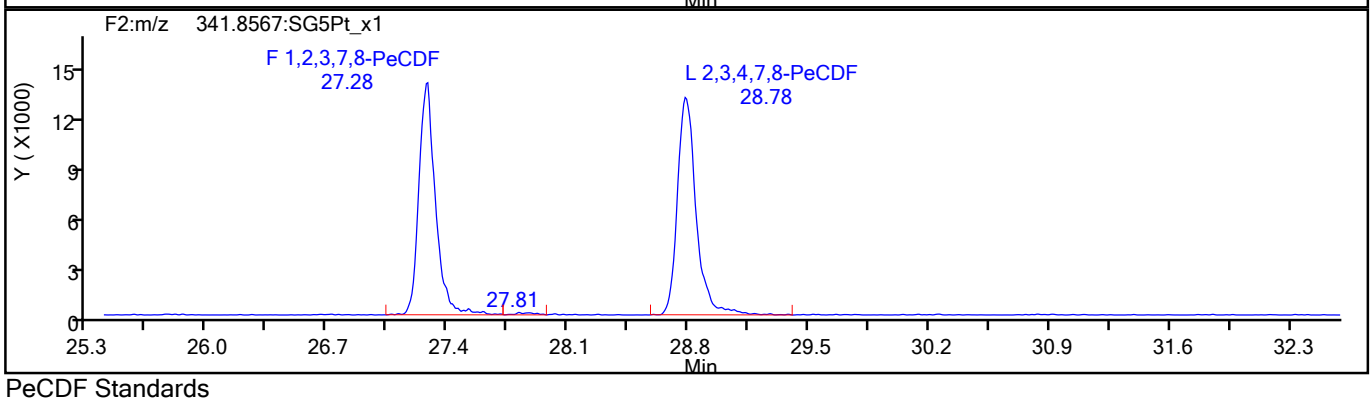

PeCDF Standards

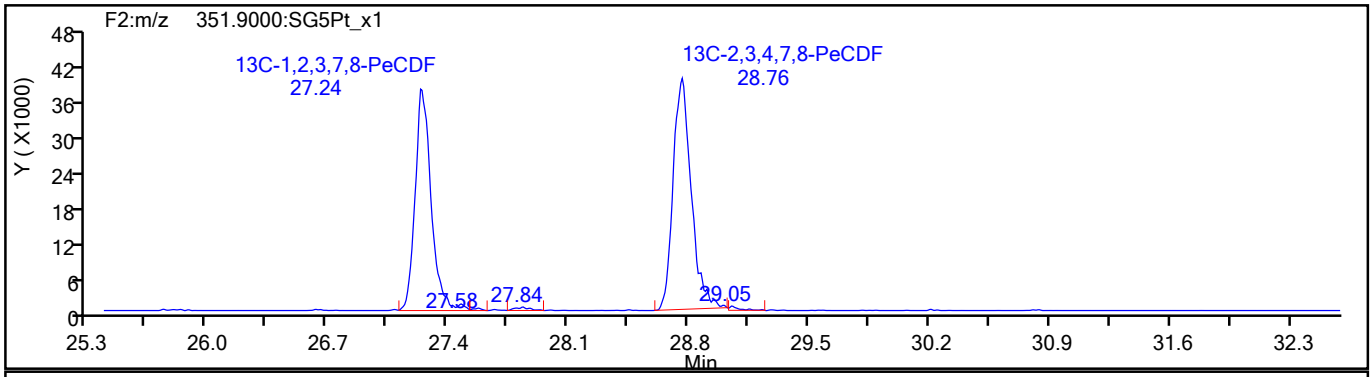

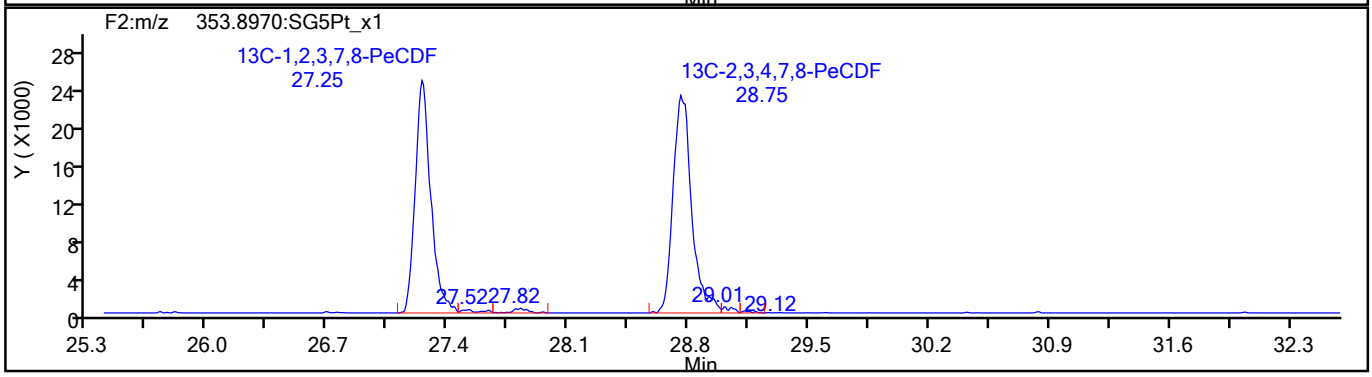

789622

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

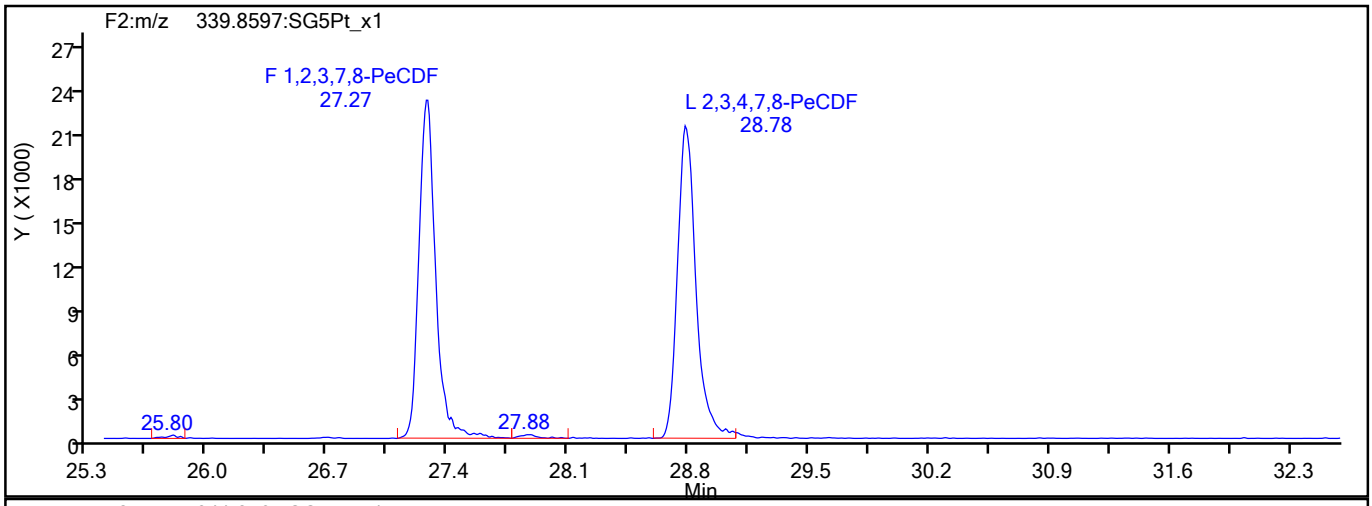

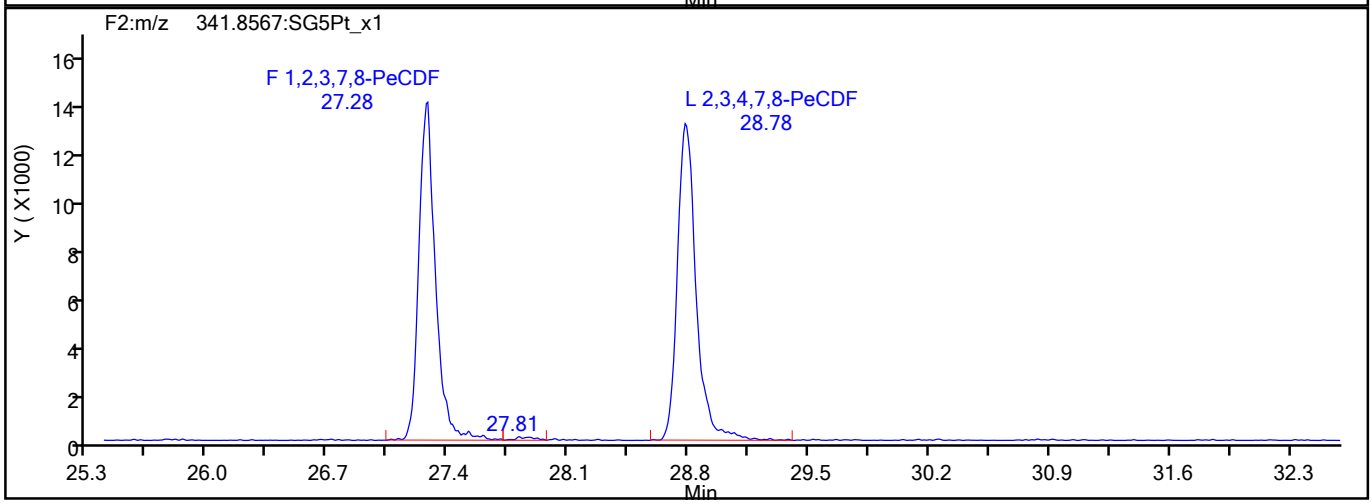

PeCDF Interference Mass

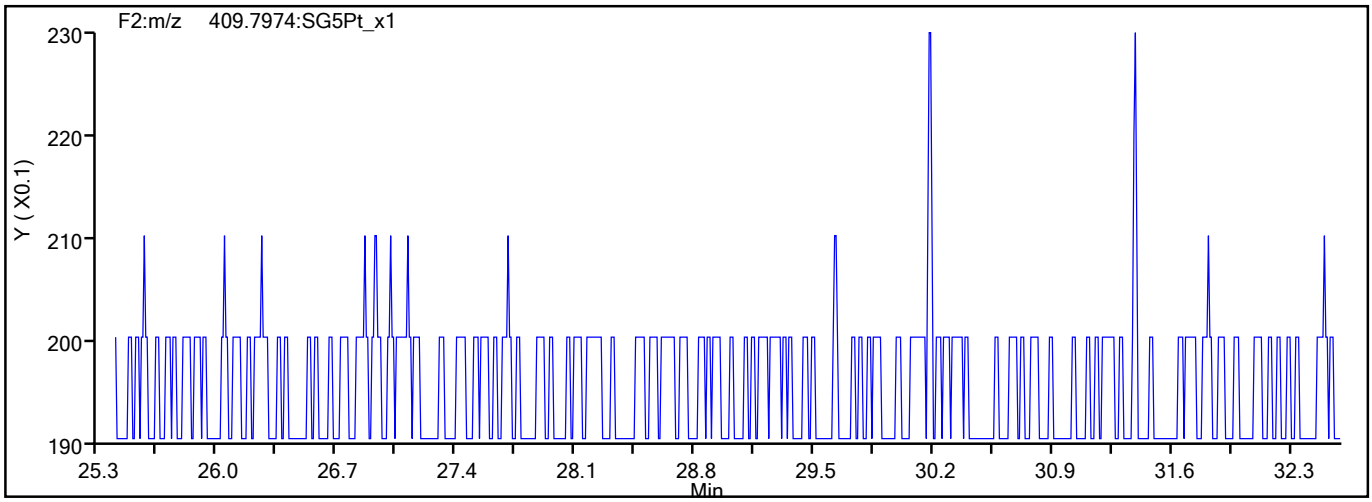

789623

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

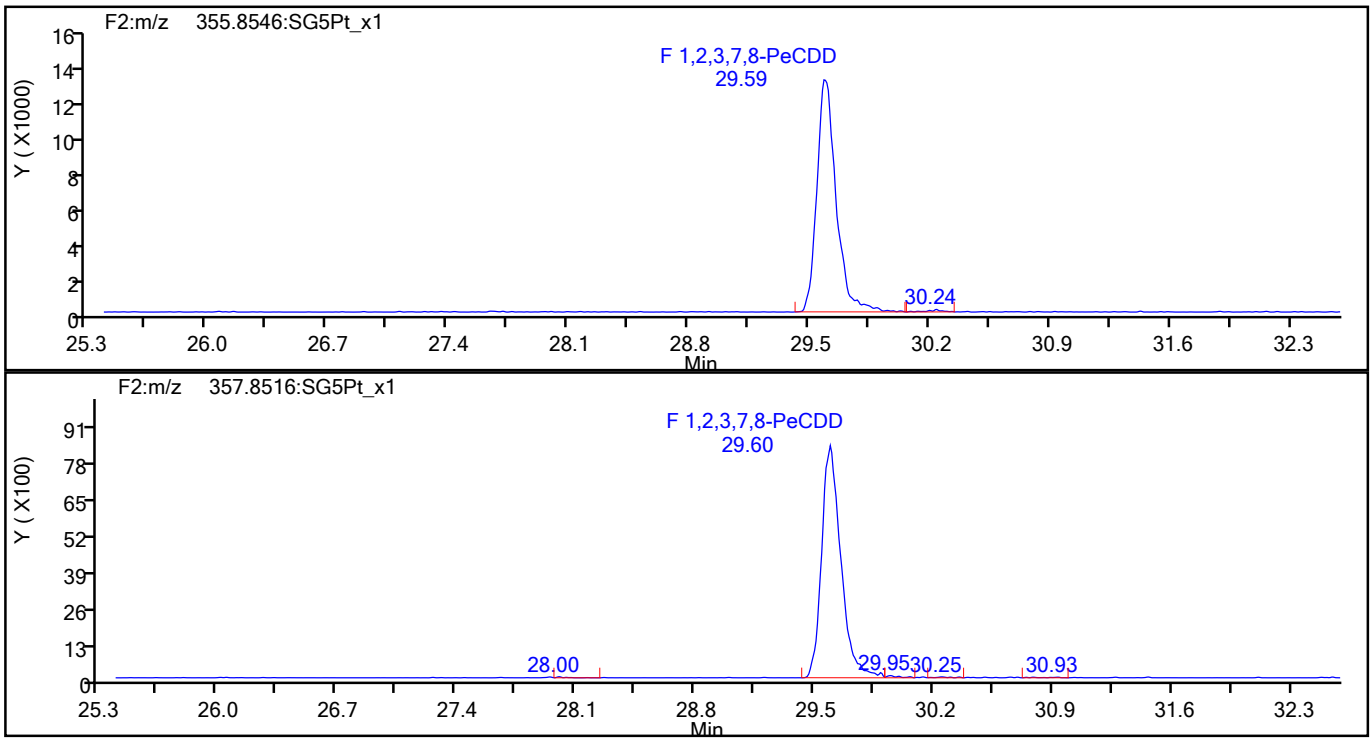

PeCDD Standards

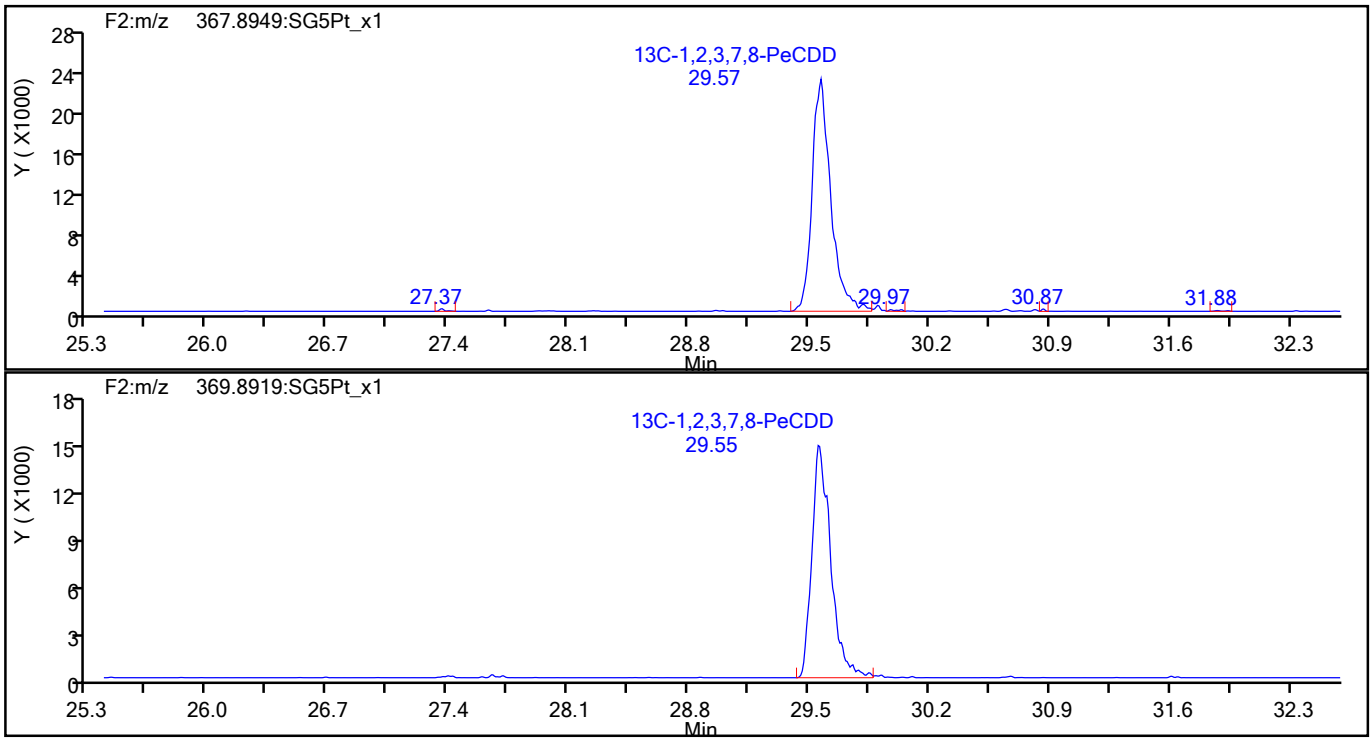

789624

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

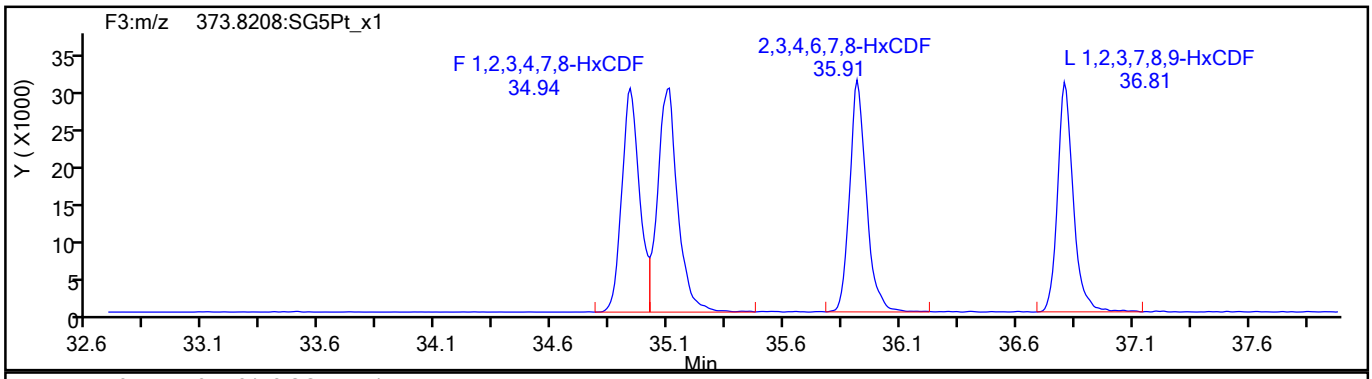

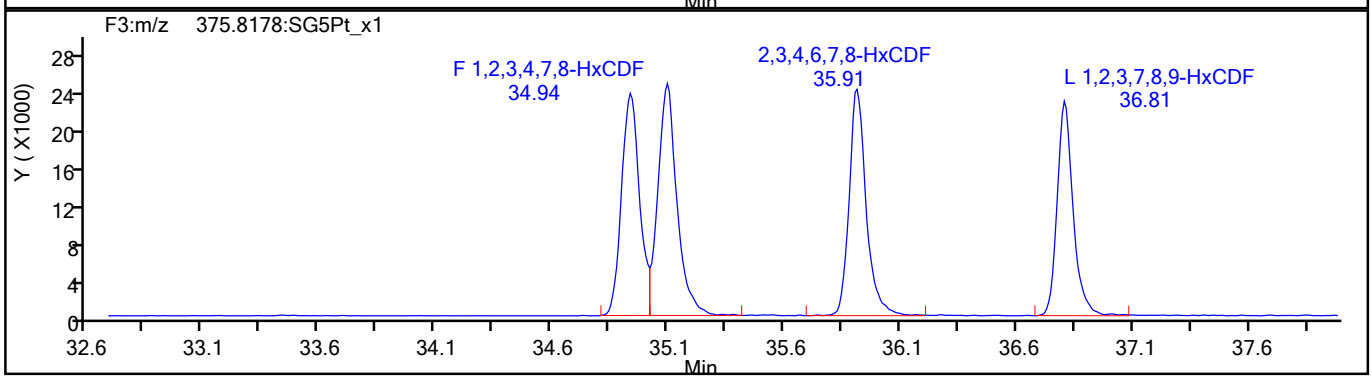

HxCDF Standards

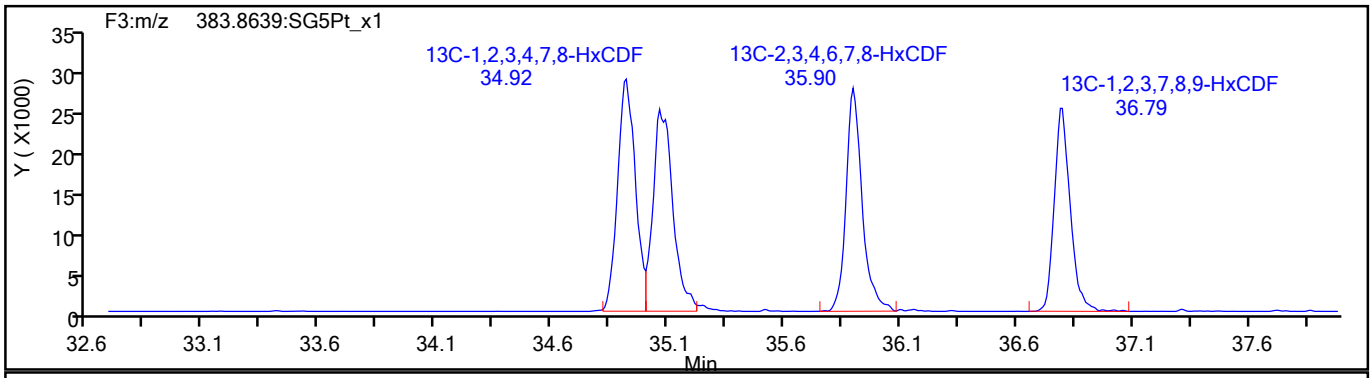

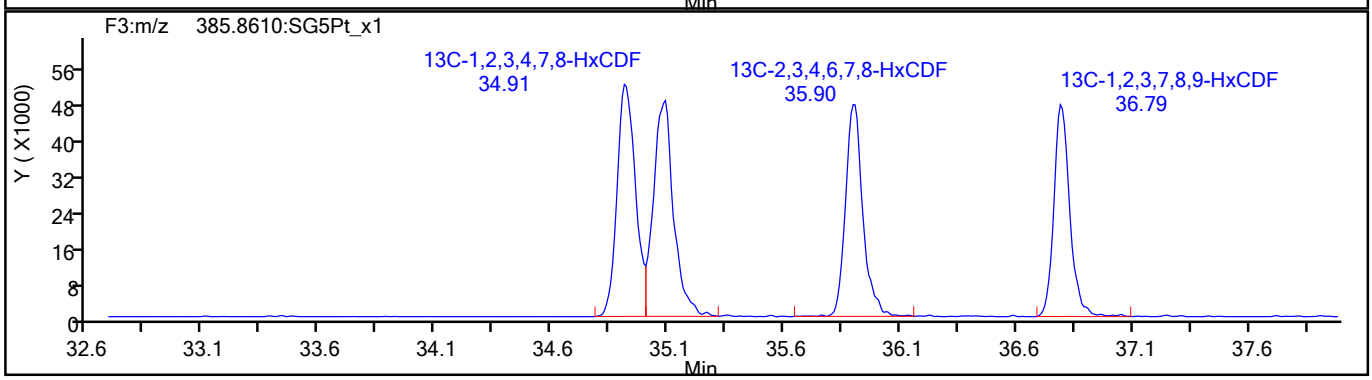

789625

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

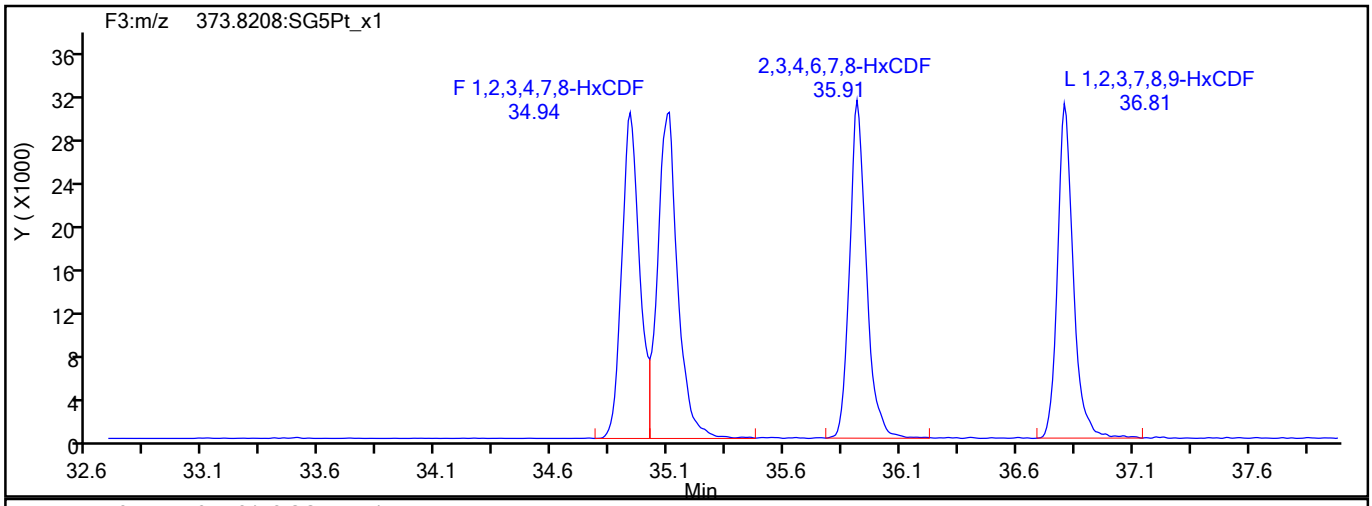

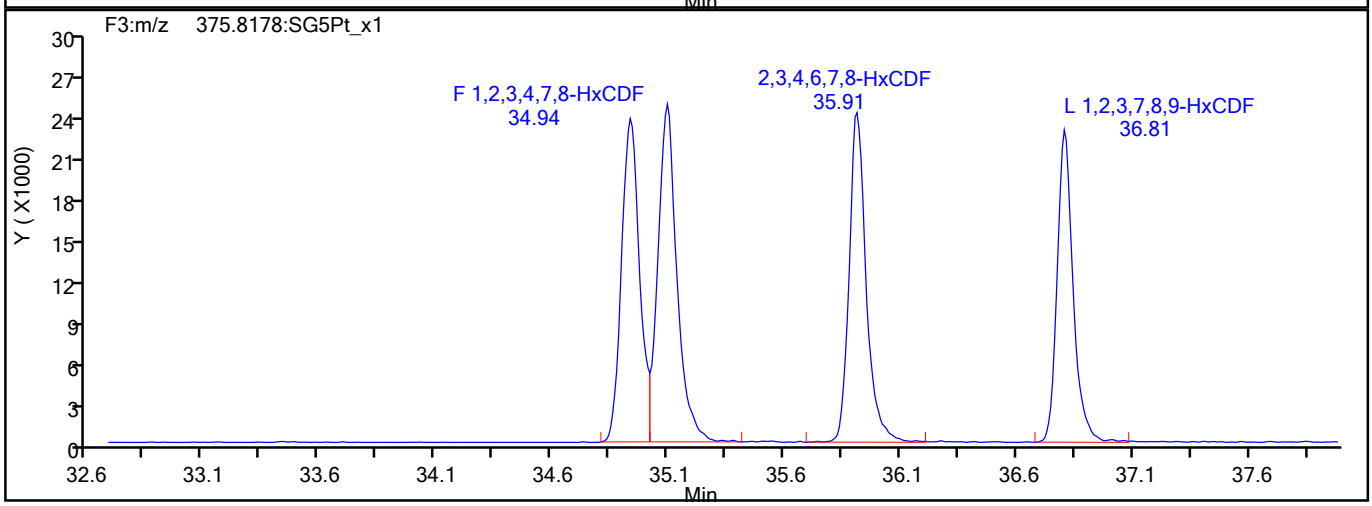

HxCDF Interference Mass

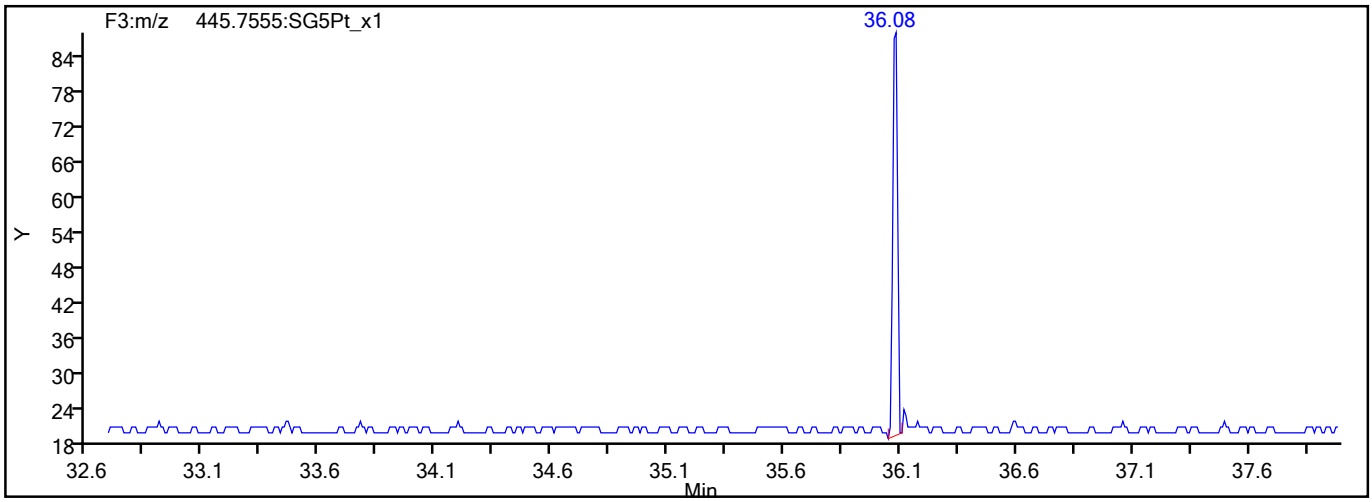

789626

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

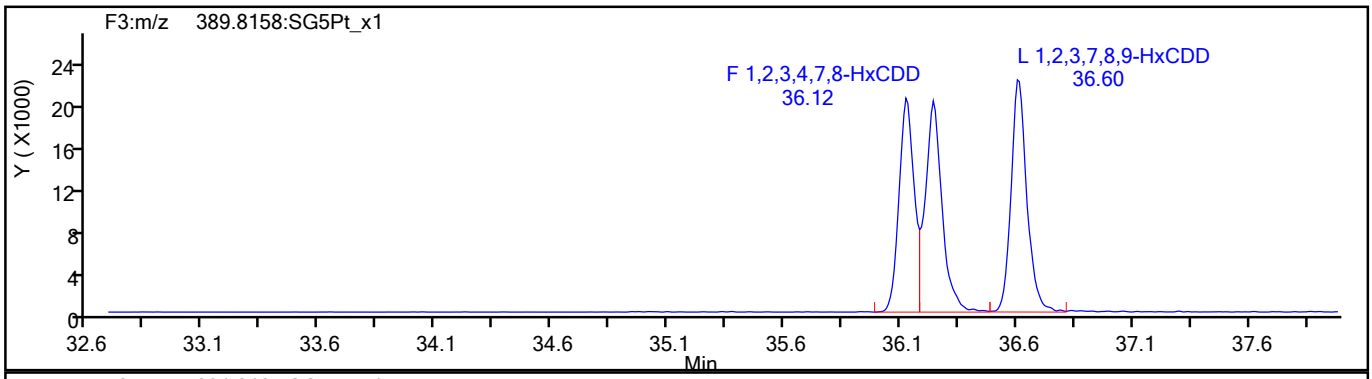

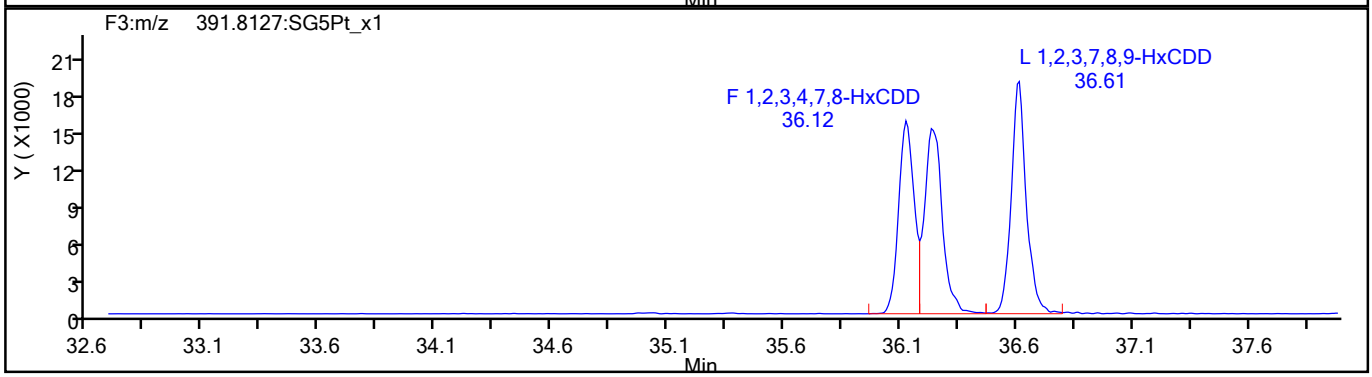

HxCDD Standards

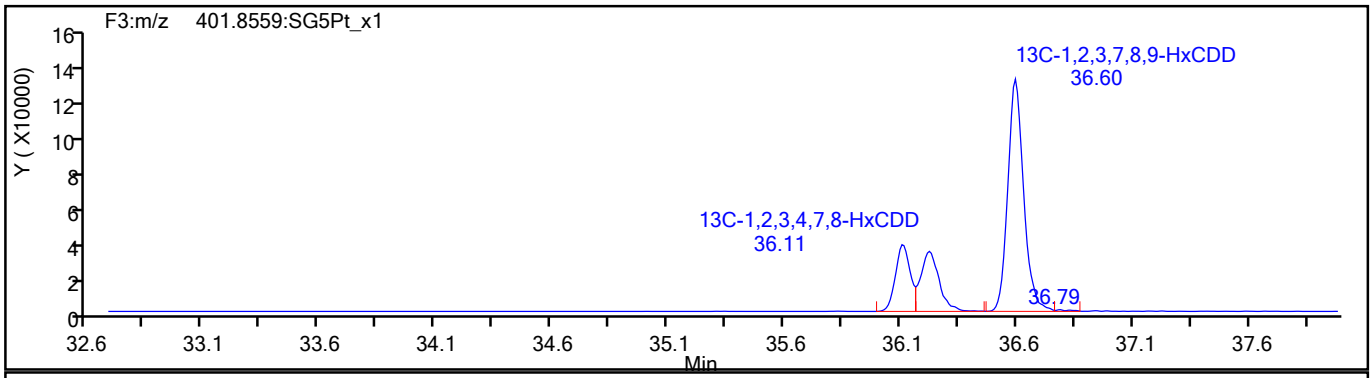

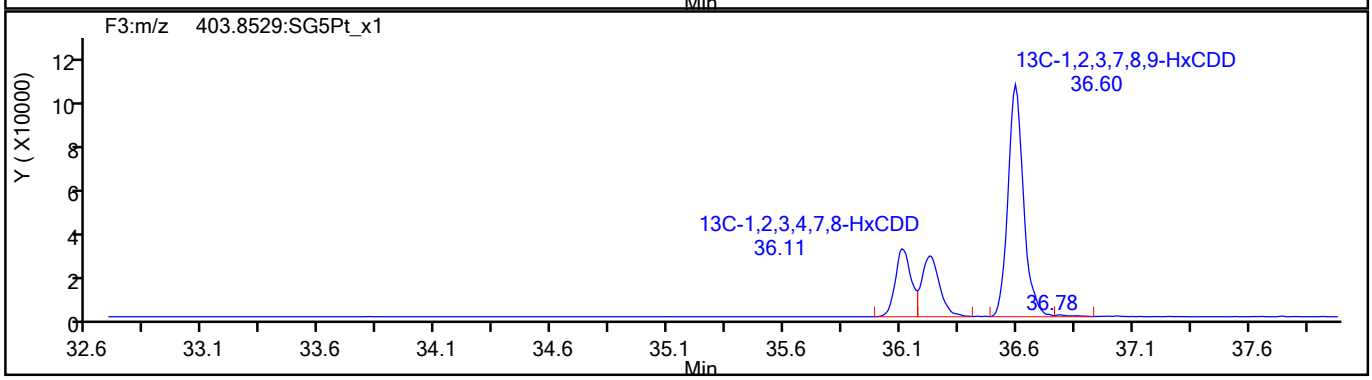

789627

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

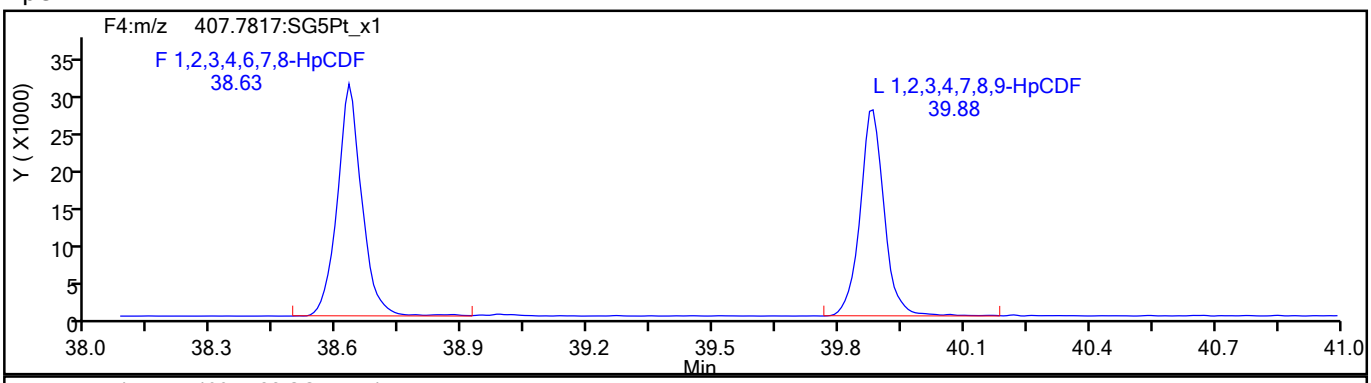

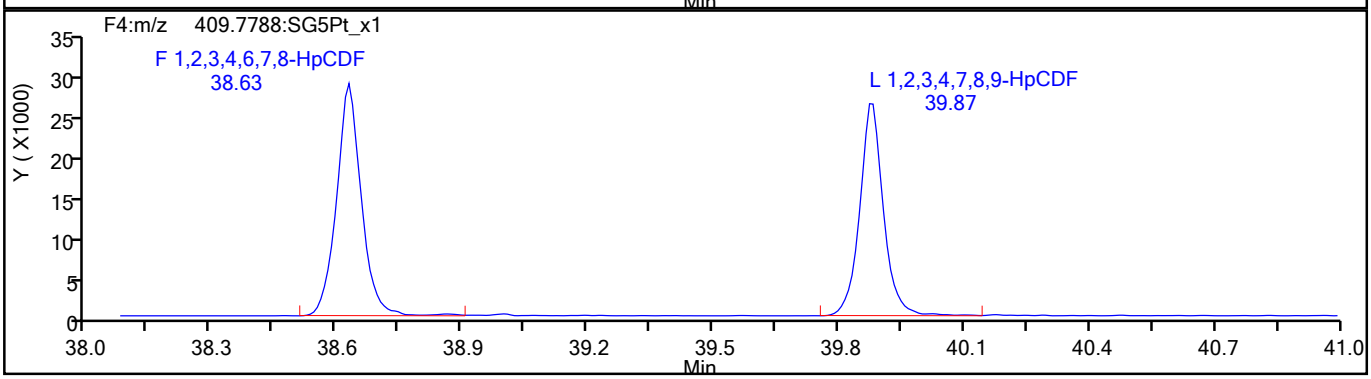

HpCDF Standards

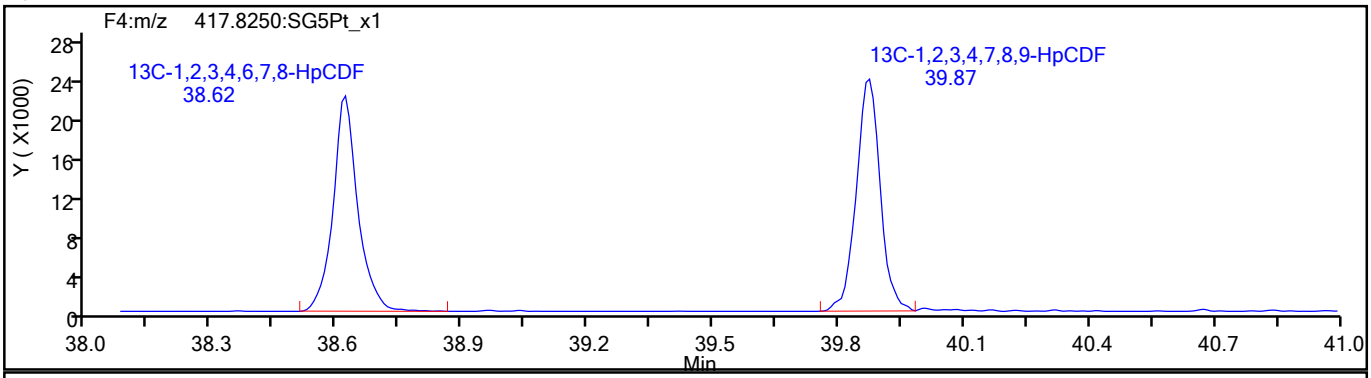

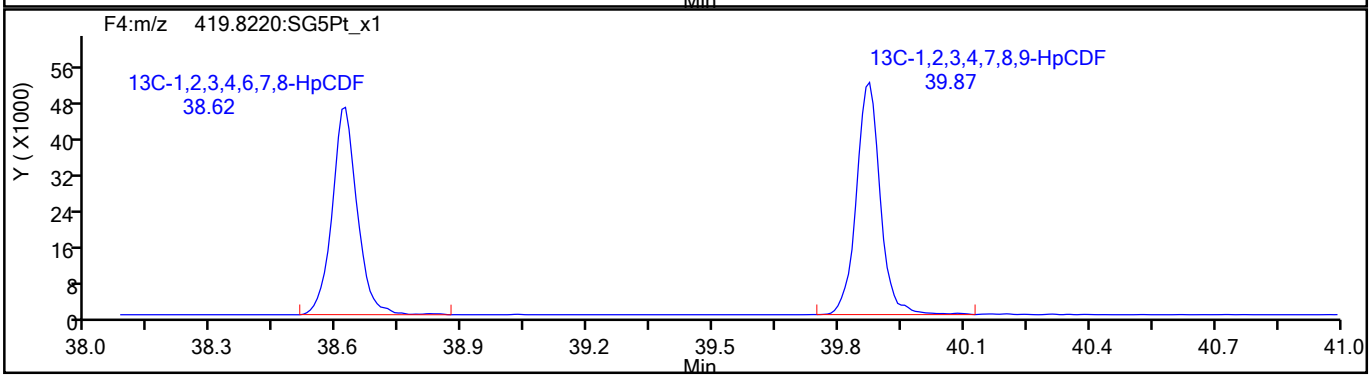

789628

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

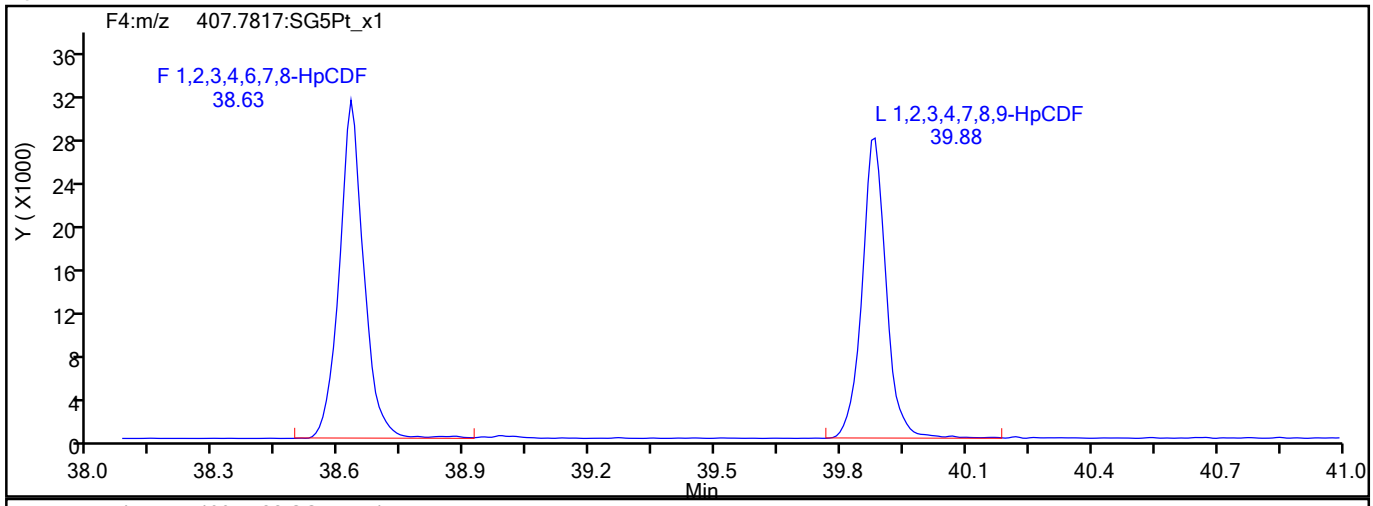

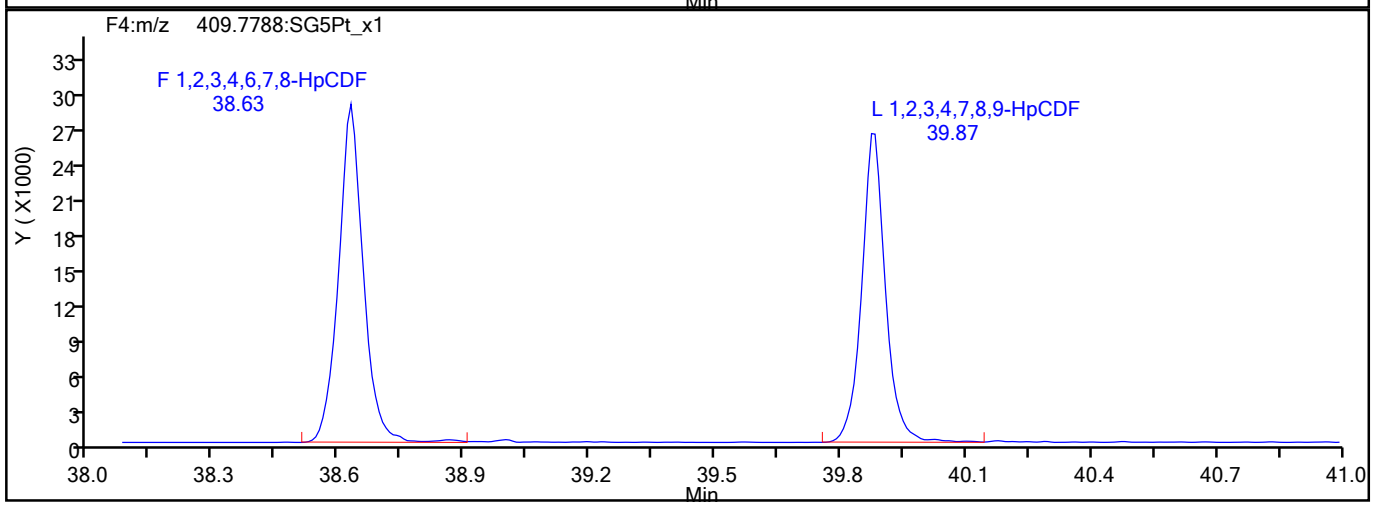

HpCDF Interference Mass

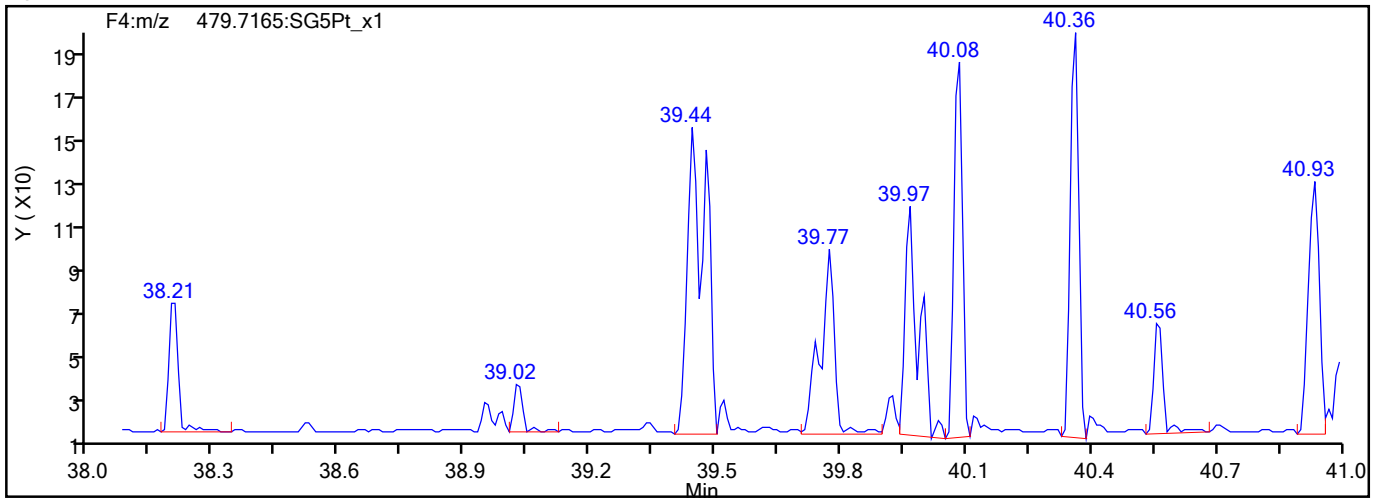

789629

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

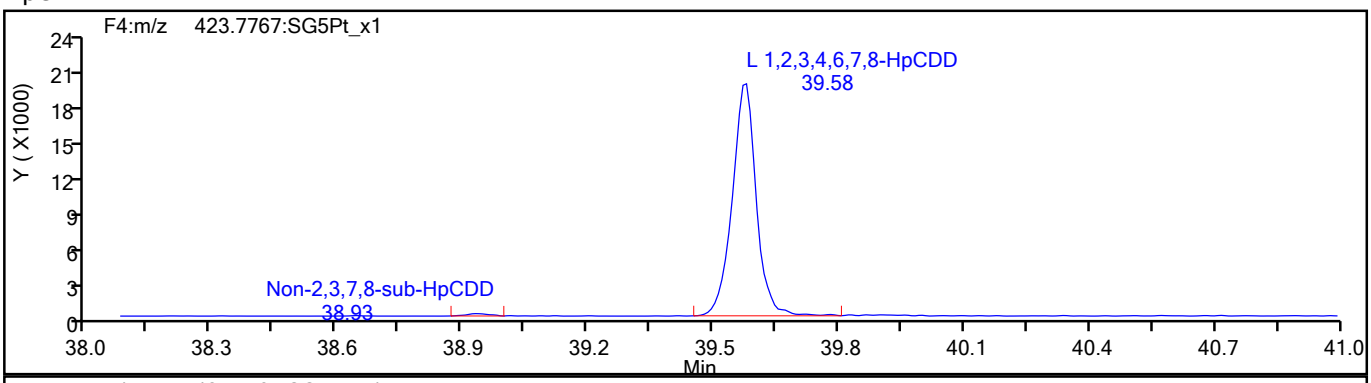

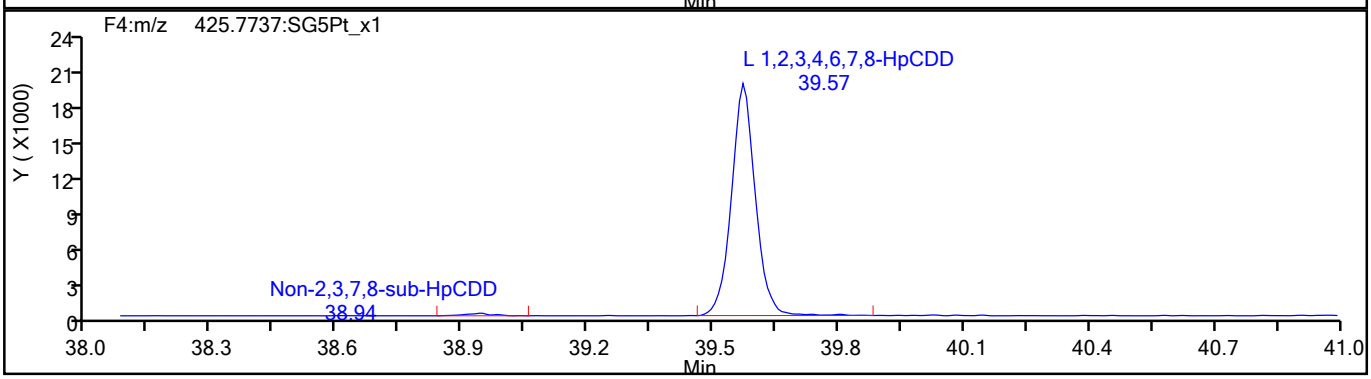

HpCDD Standards

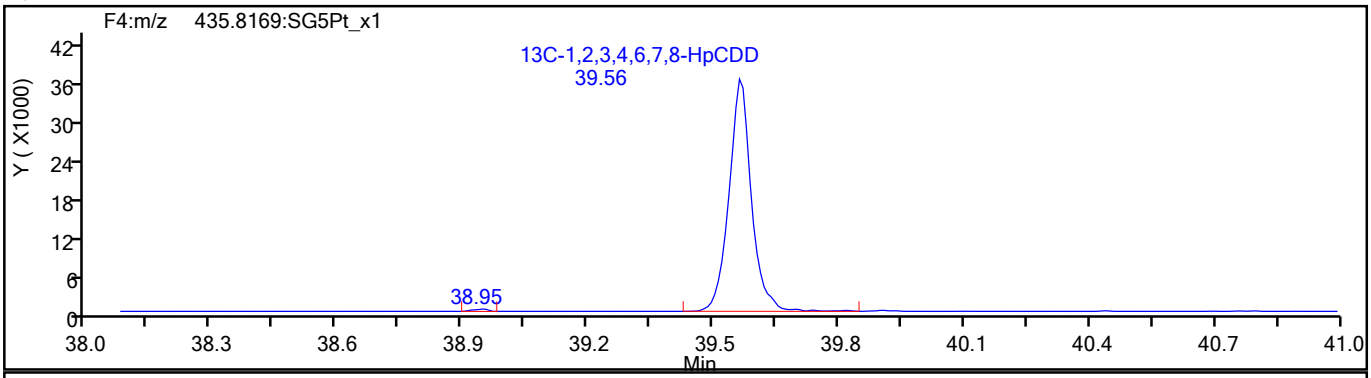

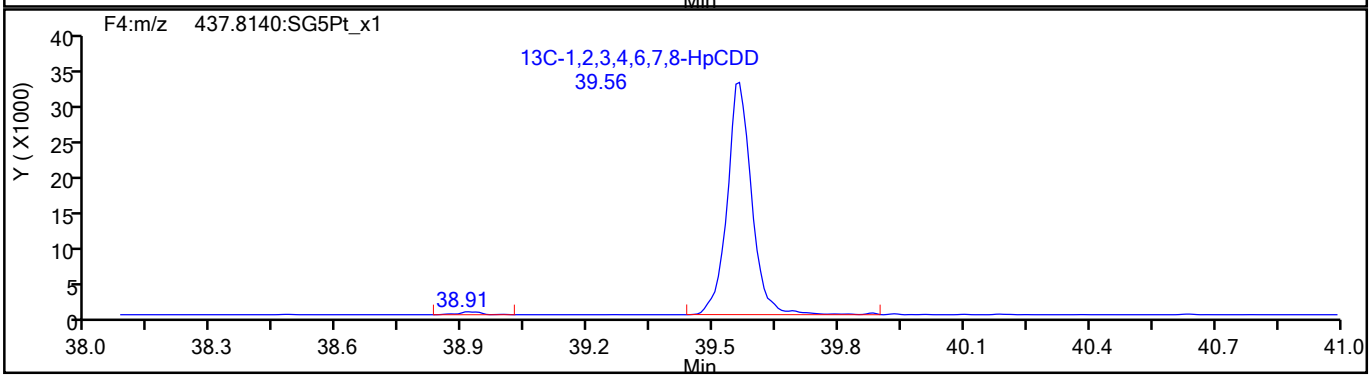

789630

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

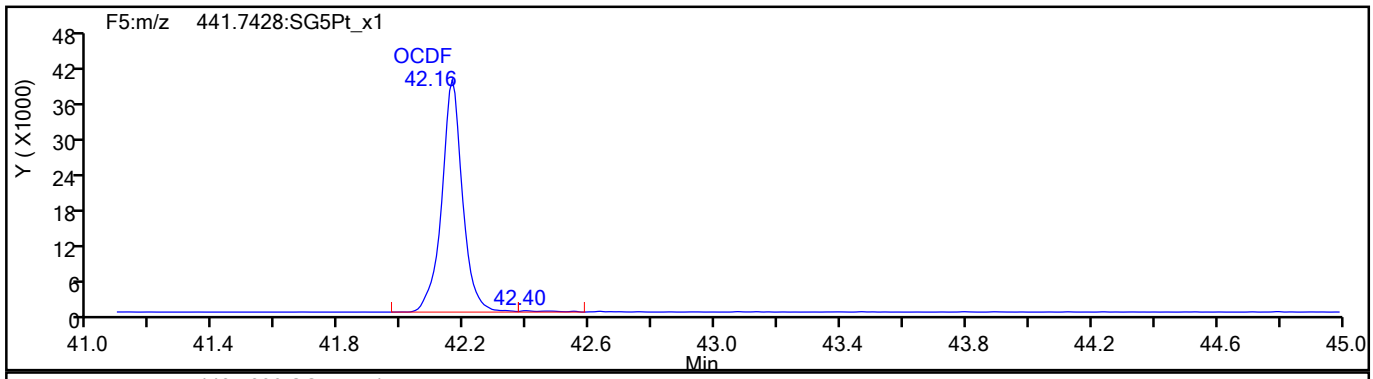

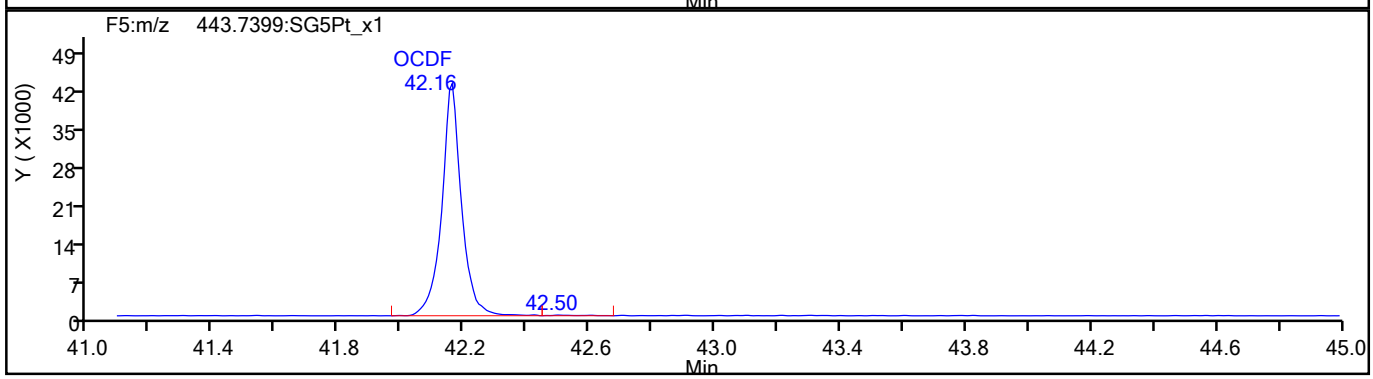

OCDF Standards

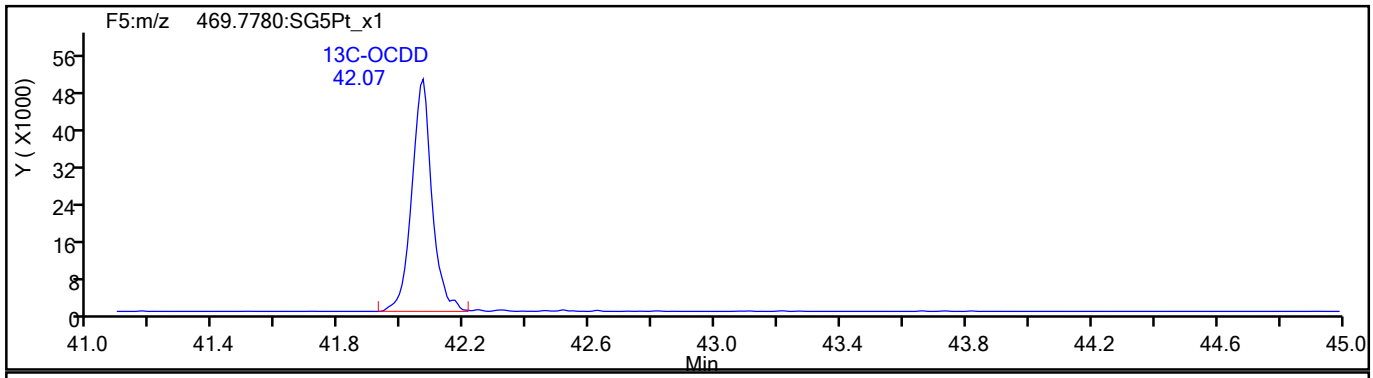

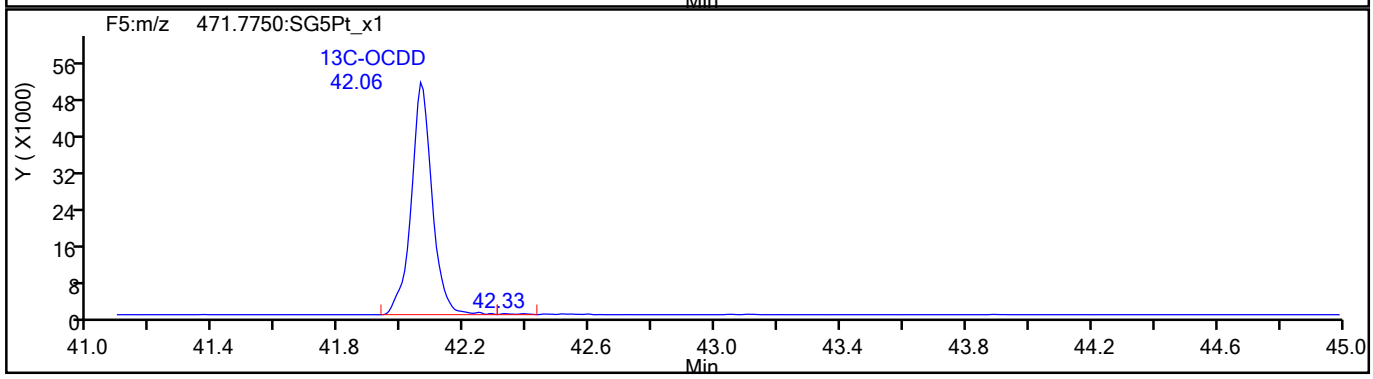

789631

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

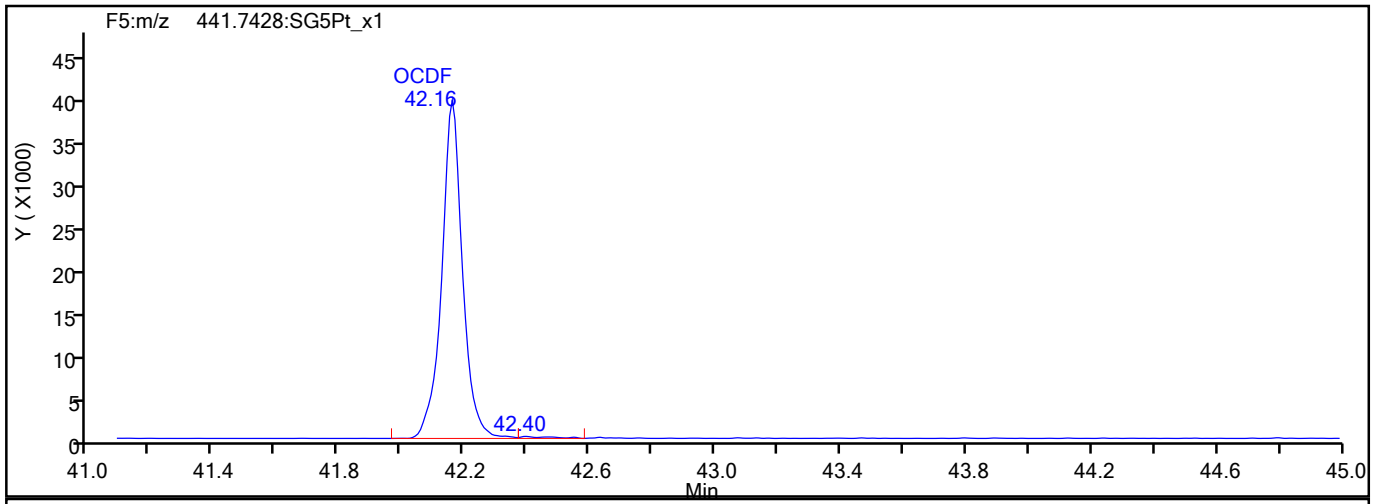

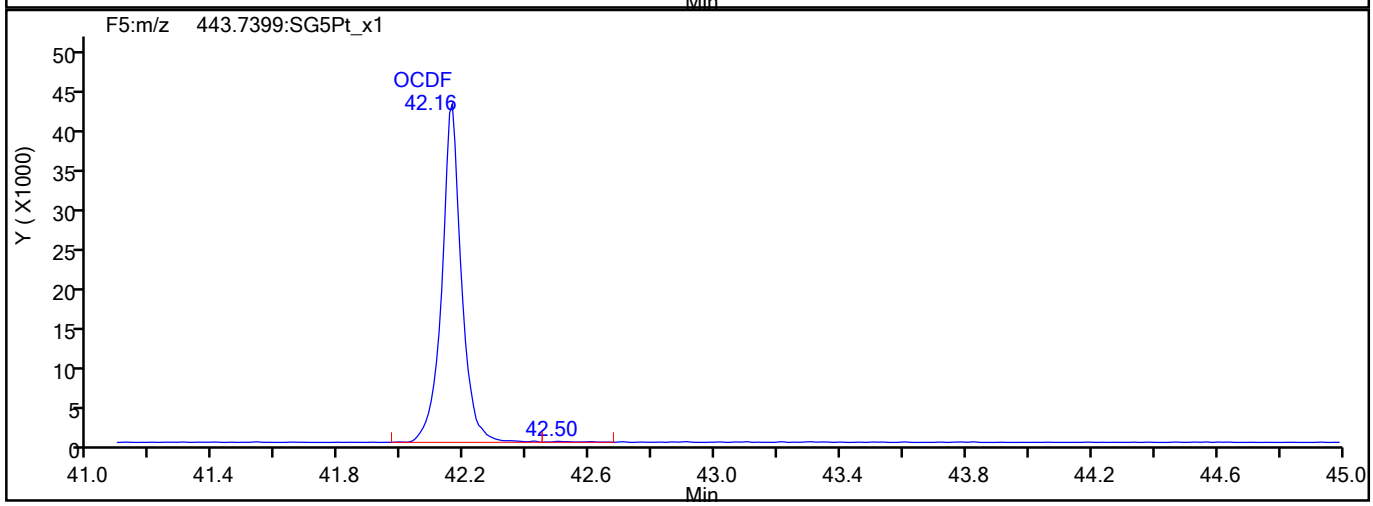

OCDF Interference Mass

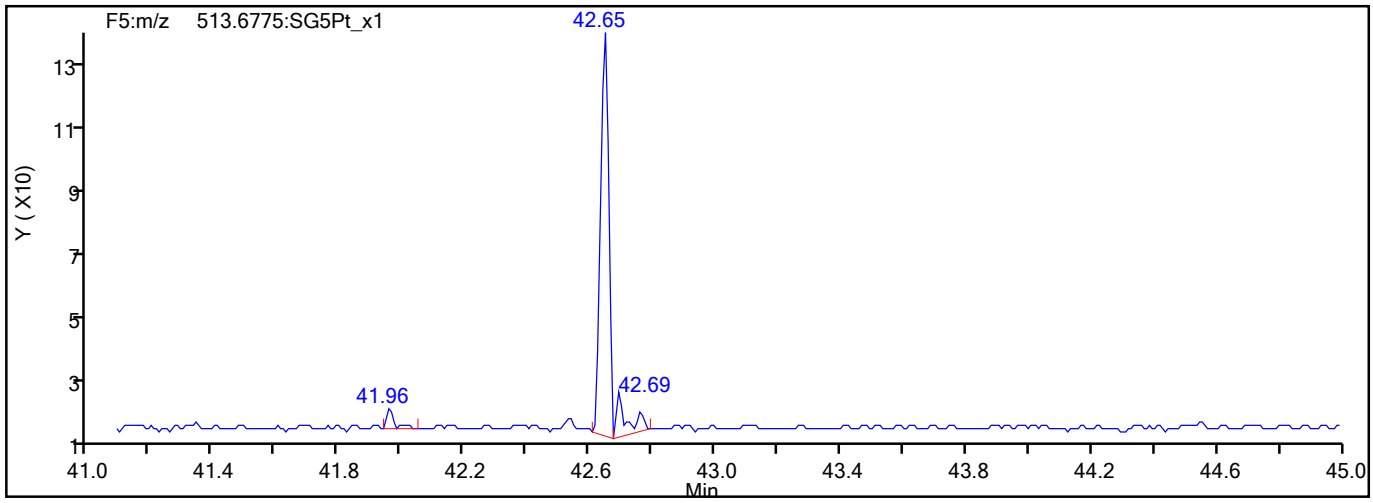

789632

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

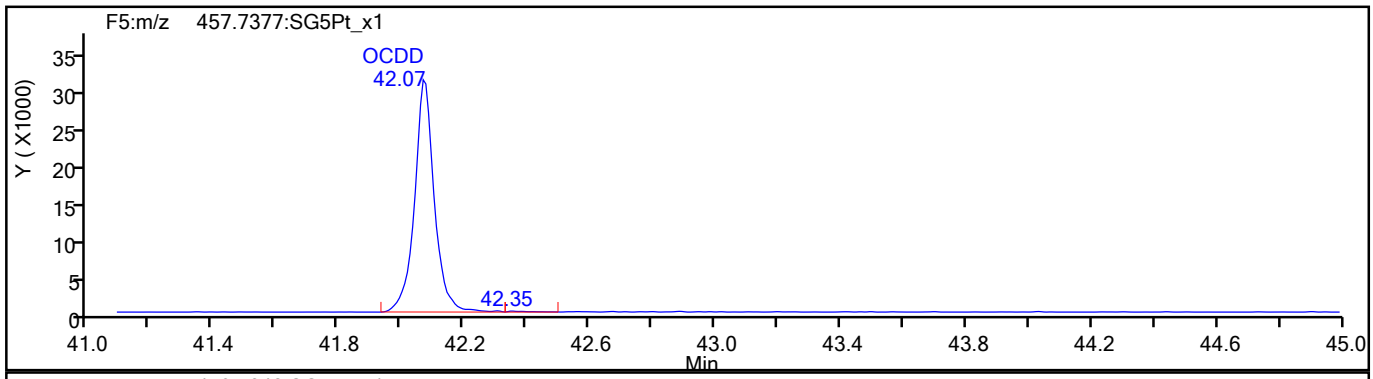

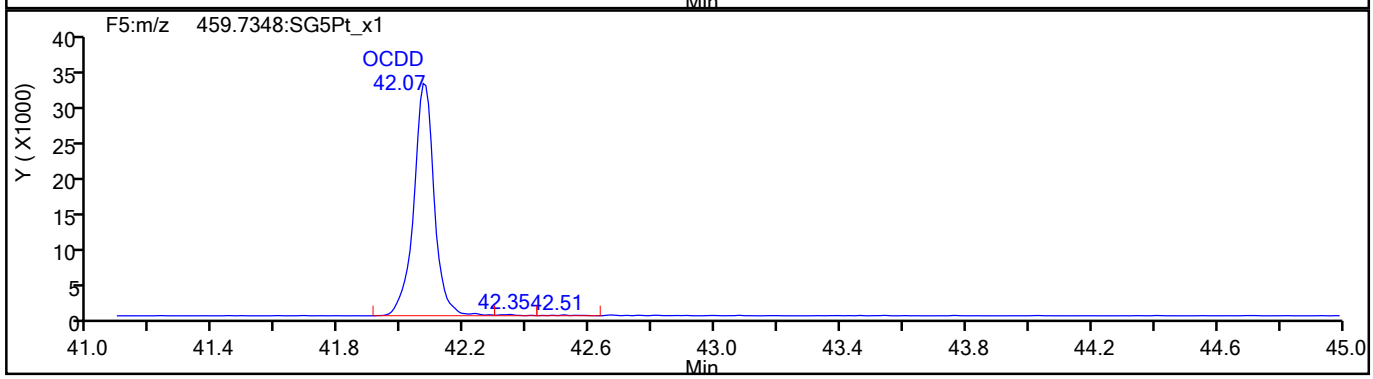

OCDD Standards

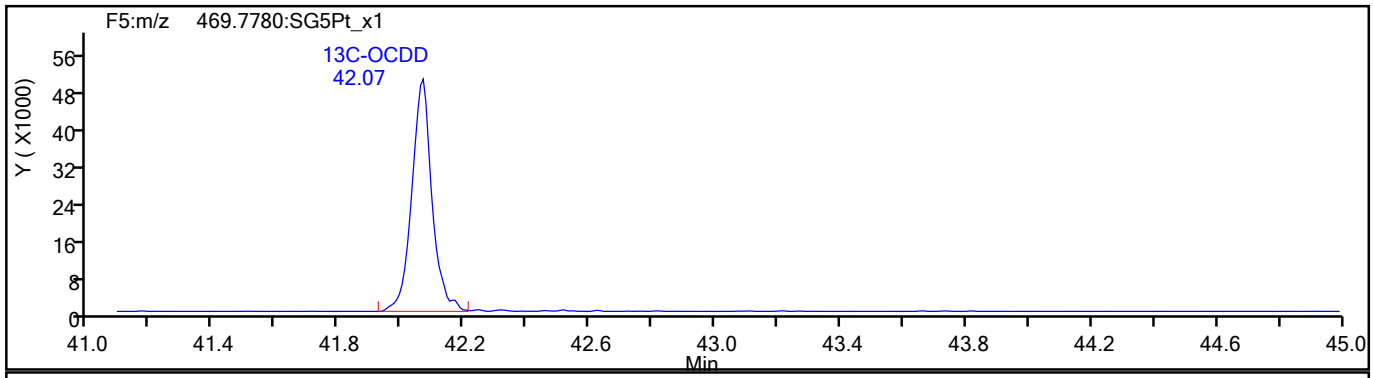

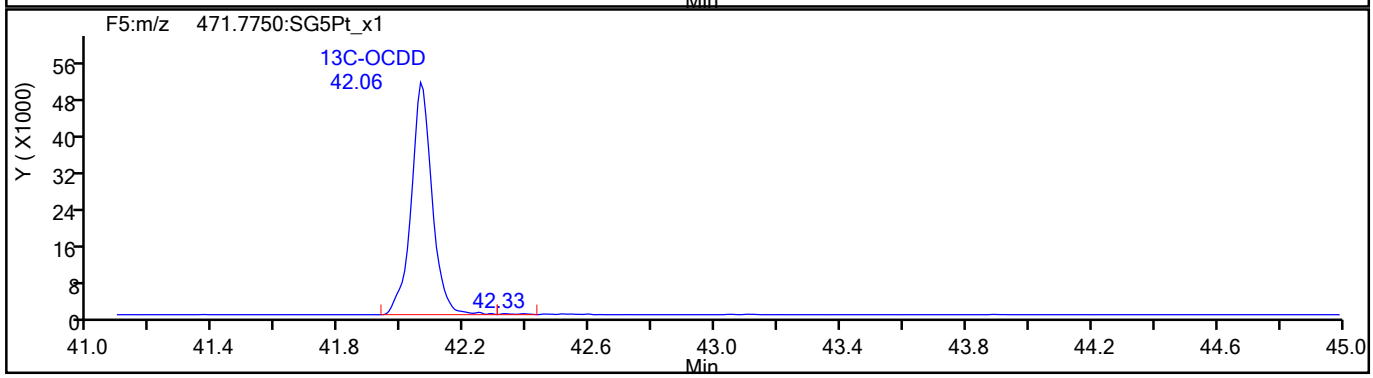

789633

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

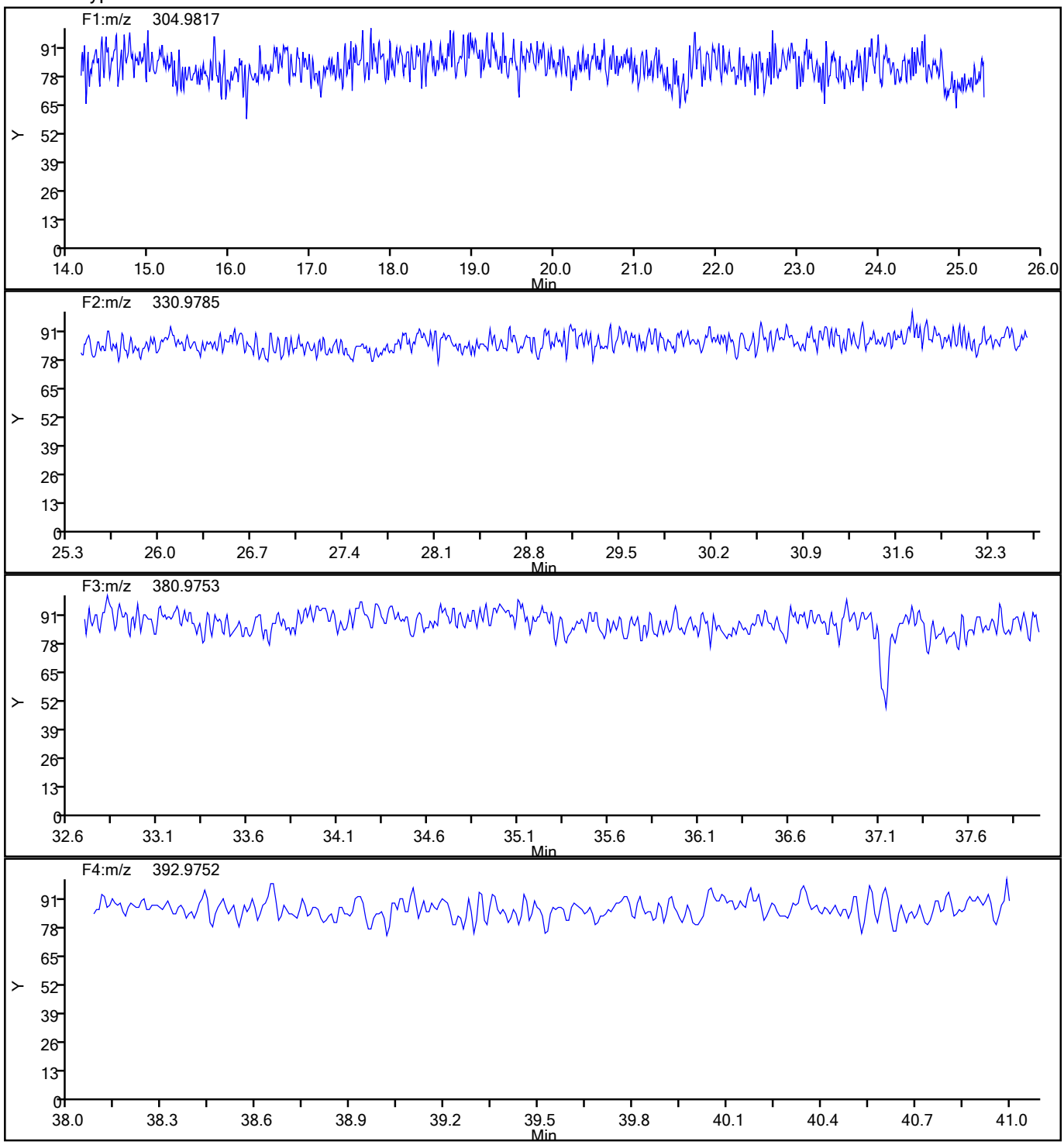

789634

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

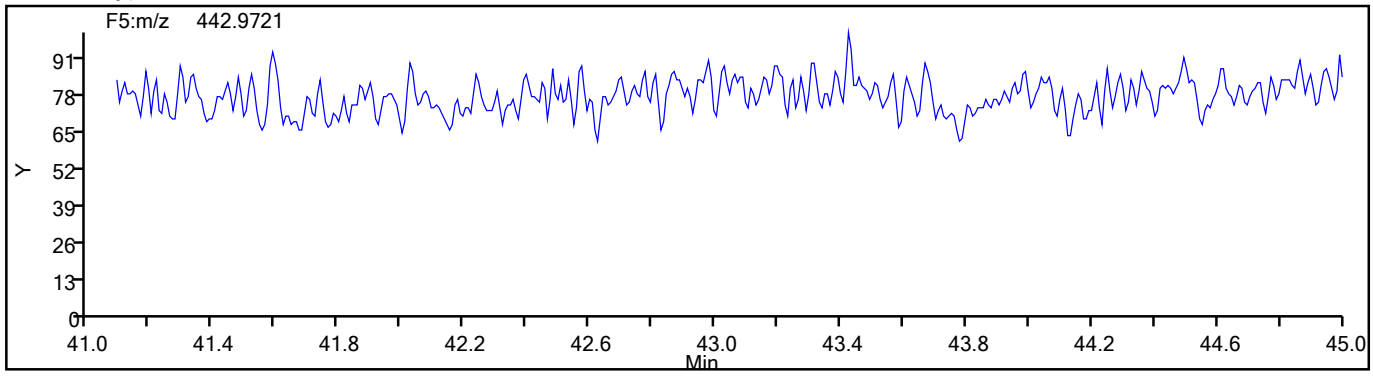

789635

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (2-4) MS
Lab Sample ID: 320-76901-2 MS
Matrix: Sediment
Lab File ID: 17au21dfs1_53.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.08(g)
Date Analyzed: 08/19/2021 06:18
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	73.3		1.4	0.35
40321-76-4	1,2,3,7,8-PeCDD	151		6.8	0.56
57117-41-6	1,2,3,7,8-PeCDF	161		6.8	0.70
57117-31-4	2,3,4,7,8-PeCDF	143		6.8	0.71
39227-28-6	1,2,3,4,7,8-HxCDD	132		6.8	0.67
57653-85-7	1,2,3,6,7,8-HxCDD	140		6.8	0.82
19408-74-3	1,2,3,7,8,9-HxCDD	152		6.8	0.68
70648-26-9	1,2,3,4,7,8-HxCDF	158		6.8	0.52
57117-44-9	1,2,3,6,7,8-HxCDF	154		6.8	0.57
72918-21-9	1,2,3,7,8,9-HxCDF	155		6.8	0.52
60851-34-5	2,3,4,6,7,8-HxCDF	160		6.8	0.51
35822-46-9	1,2,3,4,6,7,8-HpCDD	197		6.8	0.55
67562-39-4	1,2,3,4,6,7,8-HpCDF	156		6.8	0.68
55673-89-7	1,2,3,4,7,8,9-HpCDF	144		6.8	0.70
3268-87-9	OCDD	1650		14	1.3
39001-02-0	OCDF	279		14	0.40
41903-57-5	Total TCDD	73.3		1.4	0.35
30402-14-3	Total TCDF	363		1.4	0.78
36088-22-9	Total PeCDD	153		6.8	0.56
30402-15-4	Total PeCDF	308		6.8	0.71
34465-46-8	Total HxCDD	441		6.8	0.72
55684-94-1	Total HxCDF	626		6.8	0.53
37871-00-4	Total HpCDD	270		6.8	0.55
38998-75-3	Total HpCDF	303		6.8	0.69

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (2-4) MS
Lab Sample ID: 320-76901-2 MS
Matrix: Sediment
Lab File ID: 17au21dfs1_53.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.08(g)
Date Analyzed: 08/19/2021 06:18
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	41		25-164
89059-46-1	13C-2,3,7,8-TCDF	38		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	39		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	39		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	43		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	44		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	39		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	50		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	46		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	40		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	41		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	47		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	46		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	50		26-138
114423-97-1	13C-OCDD	42		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	50		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d
Lims ID: 320-76901-A-2-B MS
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MS
Inject. Date: 19-Aug-2021 06:18:00 ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-2-b ms
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:55:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:30:02

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.364	1273344	0.78	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.393	657638	0.87	1.3459	38.4	38.4	0.1400	0.1400	38.37	
2,3,7,8-TCDF	20.419	597024	0.81	1.0802	84.0	84.0	0.2866	0.2866	840	
A Non-2,3,7,8-sub-TCDF	19.878	347294	0.83	1.0802	48.9	48.9	0.2866	30.5	0.00	
S Total TCDF					132.9	132.9	0.2866	0.2866		
D 13C-2,3,7,8-TCDD	21.733	487963	0.83	0.9317	41.1	41.1	0.1480	0.1480	41.13	
2,3,7,8-TCDD	21.776	140903	0.74	1.0753	26.9	26.9	0.1300	0.1300	269	
$ 37Cl4-2,3,7,8-TCDD	21.759	254778		1.0083	19.8	19.8	0.0318	0.0318	49.61	
A Non-2,3,7,8-sub-TCDD	20.707						0.1300	0.6775		RQU
S Total TCDD					26.9	26.9	0.1300	0.1300		
D 13C-1,2,3,7,8-PeCDF	27.230	561807	1.65	1.1405	38.7	38.7	0.1258	0.1258	38.69	
1,2,3,7,8-PeCDF	27.255	349012	1.61	1.0543	58.9	58.9	0.2580	0.2580	118	
D 13C-2,3,4,7,8-PeCDF	28.746	609085	1.62	1.1253	42.5	42.5	0.1275	0.1275	42.51	
2,3,4,7,8-PeCDF	28.754	320708	1.61	1.0079	52.2	52.2	0.2591	0.2591	104	
A F1 PeCDFs	24.648						0.007698	0.0368		RQU
A Non-2,3,7,8-sub-PeCDF	28.125	10251	1.55	1.0311	1.908	1.698	0.2584	1.066	0.00	RQ
S Total PeCDF					113.1	112.9	0.2586	0.2586		RQ
D 13C-1,2,3,7,8-PeCDD	29.554	354202	1.64	0.7165	38.8	38.8	0.0448	0.0448	38.82	
1,2,3,7,8-PeCDD	29.571	204714	1.57	1.0465	55.2	55.2	0.2061	0.2061	110	
A Non-2,3,7,8-sub-PeCDD	28.489	3692	1.55	1.0465	1.291	0.996	0.2061	0.4360	0.00	RQ
S Total PeCDD					56.5	56.2	0.2061	0.2061		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.908	518913	0.58	0.9648	49.5	49.5	0.1443	0.1443	49.52	
1,2,3,4,7,8-HxCDF	34.925	344823	1.26	1.1474	57.9	57.9	0.1913	0.1913	116	
D 13C-1,2,3,6,7,8-HxCDF	35.051	534673	0.53	1.0708	46.0	46.0	0.1300	0.1300	45.97	
1,2,3,6,7,8-HxCDF	35.085	366671	1.34	1.2178	56.3	56.3	0.2085	0.2085	113	
D 13C-2,3,4,6,7,8-HxCDF	35.885	469172	0.54	1.0413	41.5	41.5	0.1337	0.1337	41.48	
2,3,4,6,7,8-HxCDF	35.902	333949	1.29	1.2145	58.6	58.6	0.1868	0.1868	117	
D 13C-1,2,3,7,8,9-HxCDF	36.778	420011	0.52	0.9731	39.7	39.7	0.1431	0.1431	39.74	
1,2,3,7,8,9-HxCDF	36.795	295518	1.27	1.2401	56.7	56.7	0.1910	0.1910	113	
A Non-2,3,7,8-sub-HxCDF	35.028						0.1938	0.1938		
S Total HxCDF					229.6	229.6	0.1944	0.1944		

789638

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.584	1086089	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.096	363397	1.37	0.7587	44.1	44.1	0.1388	0.1388	44.10	
1,2,3,4,7,8-HxCDD	36.113	186137	1.26	1.0608	48.3	48.3	0.2455	0.2455	96.57	
D 13C-1,2,3,6,7,8-HxCDD	36.205	362253	1.21	0.8593	38.8	38.8	0.1225	0.1225	38.82	
1,2,3,6,7,8-HxCDD	36.230	184875	1.25	0.9933	51.4	51.4	0.3005	0.3005	103	
1,2,3,7,8,9-HxCDD	36.593	223621	1.28	1.1094	55.6	55.6	0.2507	0.2507	111	
A Non-2,3,7,8-sub-HxCDD	35.394	23906	1.24	1.0545	6.480	6.248	0.2638	4.372	0.00	RQ
S Total HxCDD					161.7	161.5	0.2656	0.2656		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.601	367464	0.46	0.7359	46.0	46.0	0.1685	0.1685	45.97	
1,2,3,4,6,7,8-HpCDF	38.610	303862	1.06	1.4421	57.3	57.3	0.2490	0.2490	115	
D 13C-1,2,3,4,7,8,9-HpCDF	39.856	370288	0.45	0.6854	49.7	49.7	0.1809	0.1809	49.74	
1,2,3,4,7,8,9-HpCDF	39.864	255496	1.05	1.3092	52.7	52.7	0.2550	0.2550	105	
A Non-2,3,7,8-sub-HpCDF	39.258	4284	1.19	1.3756	0.8443	0.8443	0.2515	0.8443	0.00	
S Total HpCDF					110.9	110.9	0.2520	0.2520		
D 13C-1,2,3,4,6,7,8-HpCDD	39.544	346496	1.07	0.6745	47.3	47.3	0.0916	0.0916	47.30	
1,2,3,4,6,7,8-HpCDD	39.561	263250	1.03	1.0503	72.3	72.3	0.2030	0.2030	145	
A Non-2,3,7,8-sub-HpCDD	39.258	97153	1.05	1.0503	26.7	26.7	0.2030	26.7	0.00	
S Total HpCDD					99.0	99.0	0.2030	0.2030		
D 13C-OCDD	42.042	501034	0.91	0.5446	84.7	84.7	0.1214	0.1214	42.35	
OCDF	42.143	337334	0.95	1.3168	102.3	102.3	0.1465	0.1465	102	
OCDD	42.059	1613594	0.90	1.0620	606.5	606.5	0.4768	0.4768	607	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d
Lims ID: 320-76901-A-2-B MS
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MS
Inject. Date: 19-Aug-2021 06:18:00 ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-2-b ms
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:55:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:30:02

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.364	21.427	-4		559859	76681	63	157	1217		a
333.9338	21.347	21.427	-5		713485	101057	35	87	2887	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.393	20.401	0	0.955	305823	44084	87	217	507		
317.9389	20.411	20.401	1	0.955	351815	48620	47	117	1034	0.87(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.419	20.436	-1	1.001	267107	34363	47	117	731		
305.8987	20.428	20.436	0	1.002	329917	42995	68	170	632	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.895	19.878	-119	0.877	5341	878	47	117	19		
305.8987	17.886	19.878	-119	0.877	7013	1467	68	170	22	0.76(0.65-0.89)	
303.9016	18.813	19.878	-64	0.923	6927	1027	47	117	22		
305.8987	18.813	19.878	-64	0.923	9389	1329	68	170	20	0.74(0.65-0.89)	
303.9016	19.217	19.878	-40	0.942	9513	1553	47	117	33		
305.8987	19.174	19.878	-42	0.940	13372	1903	68	170	28	0.71(0.65-0.89)	
303.9016	19.706	19.878	-10	0.966	99834	14573	47	117	310		
305.8987	19.698	19.878	-11	0.966	116922	16542	68	170	243	0.85(0.65-0.89)	
303.9016	20.093	19.878	13	0.985	3268	598	47	117	13		
305.8987	20.119	19.878	14	0.987	4496	809	68	170	12	0.73(0.65-0.89)	
303.9016	21.209	19.878	80	1.040	16094	2005	47	117	43		
305.8987	21.192	19.878	79	1.039	19961	2667	68	170	39	0.81(0.65-0.89)	
303.9016	23.589	19.878	222	1.157	16179	2525	47	117	54		
305.8987	23.597	19.878	223	1.157	18985	2944	68	170	43	0.85(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.733	21.743	-1	1.017	221319	29181	63	157	463		
333.9338	21.733	21.743	-1	1.017	266644	35177	35	87	1005	0.83(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											
319.8965	21.776	21.777	0	1.002	59916	7524	21	52	358		
321.8936	21.767	21.777	-1	1.002	80987	10740	15	37	716	0.74(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.759	21.849	-5	1.018	254778	31487	23	57	1369		
A Non-2,3,7,8-sub-TCDD											U
319.8965	19.646	20.707	-64	0.904	832	169	21	52	8		
321.8936	19.689	20.707	-61	0.906	971	198	15	37	13	0.86(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.230	27.288	-3	1.275	349457	54360	54	135	1007		
353.8970	27.213	27.288	-4	1.274	212350	32052	48	120	668	1.65(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.255	27.313	-3	1.001	215111	33497	55	137	609		
341.8567	27.255	27.313	-3	1.001	133901	20180	39	97	517	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.746	28.795	-3	1.346	376379	53922	54	135	999		
353.8970	28.746	28.795	-3	1.346	232706	36053	48	120	751	1.62(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.754	28.820	-4	1.000	197733	26963	55	137	490		
341.8567	28.762	28.820	-3	1.001	122975	17312	39	97	444	1.61(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.036	24.648	-37	0.883	135	34	1	2	34		
341.8567	24.027	24.648	-37	0.882	187	46	2	5	23	0.72(1.32-1.78)	
	Empc Correction				87	21	2	5	11		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.789	28.125	-140	0.947	4095	700	55	137	13		
341.8567	25.764	28.125	-141	0.946	2338	398	39	97	10	1.75(1.32-1.78)	
339.8597	27.828	28.125	-18	1.022	2321	449	55	137	8		
341.8567	27.828	28.125	-18	1.022	2764	329	39	97	8	0.84(1.32-1.78)	
	Empc Correction				1497	289	39	97	7		
13C-1,2,3,7,8-PeCDD											
367.8949	29.554	29.612	-3	1.383	220030	30153	16	40	1885		
369.8919	29.546	29.612	-4	1.383	134172	17131	7	17	2447	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.571	29.637	-4	1.001	124918	16384	21	52	780		
357.8516	29.563	29.637	-4	1.000	79796	10080	20	50	504	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.034	28.489	-147	0.881	861	158	21	52	8		
357.8516	26.093	28.489	-143	0.883	1220	243	20	50	12	0.71(1.32-1.78)	
	Empc Correction				555	101	20	50	5		
355.8546	26.884	28.489	-96	0.910	831	139	21	52	7		
	Empc Correction				401	103	21	52	5		
357.8516	26.825	28.489	-100	0.908	259	67	20	50	3	3.21(1.32-1.78)	
355.8546	27.929	28.489	-34	0.945	1019	170	21	52	8		
357.8516	27.912	28.489	-35	0.944	597	110	20	50	6	1.71(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.908	34.942	-2	0.954	189653	33627	54	135	623		
385.8610	34.900	34.942	-3	0.954	329260	64349	74	185	870	0.58(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.925	34.959	-2	1.000	192491	34685	50	125	694		
375.8178	34.916	34.959	-3	1.000	152332	28734	36	90	798	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.051	35.111	-4	0.958	185793	30365	54	135	562		
385.8610	35.059	35.111	-3	0.958	348880	54312	74	185	734	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.085	35.119	-2	1.001	209903	36919	50	125	738		
375.8178	35.076	35.119	-3	1.001	156768	27345	36	90	760	1.34(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.885	35.919	-2	0.981	163945	33038	54	135	612		
385.8610	35.885	35.919	-2	0.981	305227	61734	74	185	834	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.902	35.936	-2	1.000	188084	38003	50	125	760		
375.8178	35.902	35.936	-2	1.000	145865	30058	36	90	835	1.29(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.778	36.811	-2	1.005	144126	32054	54	135	594		
385.8610	36.778	36.811	-2	1.005	275885	58736	74	185	794	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.795	36.828	-2	1.000	165600	36534	50	125	731		
375.8178	36.795	36.828	-2	1.000	129918	26550	36	90	738	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						50	125			
375.8178	35.028						36	90			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.584	36.609	-1		607343	130506	48	120	2719		
403.8529	36.584	36.609	-1		478746	99310	49	122	2027	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.096	36.129	-2	0.987	210292	46199	48	120	962		
403.8529	36.096	36.129	-2	0.987	153105	36360	49	122	742	1.37(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.113	36.146	-2	1.000	103693	24385	46	115	530		
391.8127	36.113	36.146	-2	1.000	82444	19647	40	100	491	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.205	36.247	-3	0.990	198634	41443	48	120	863		
403.8529	36.214	36.247	-2	0.990	163619	30578	49	122	624	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.230	36.264	-2	1.001	102690	20786	46	115	452		
391.8127	36.222	36.264	-3	1.000	82185	16426	40	100	411	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.593	36.626	-2	1.014	125348	27119	46	115	590		
391.8127	36.593	36.626	-2	1.014	98273	21584	40	100	540	1.28(1.05-1.43)	

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Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	34.209	35.394	-71	0.945	9440	1670	46	115	36		
391.8127	34.201	35.394	-71	0.945	7287	1198	40	100	30	1.30(1.05-1.43)	
389.8158	35.337	35.394	-3	0.976	4860	903	46	115	20		
	Empc Correction				3974	864	46	115	19		
391.8127	35.337	35.394	-3	0.976	3205	697	40	100	17	1.52(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.601	38.626	-1	1.055	116341	28548	48	120	595		
419.8220	38.601	38.626	-1	1.055	251123	63369	66	165	960	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.610	38.630	-1	1.000	156499	37014	70	175	529		
409.7788	38.610	38.630	-1	1.000	147363	36502	62	155	589	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.856	39.880	-1	1.089	114615	30964	48	120	645		
419.8220	39.856	39.880	-1	1.089	255673	67883	66	165	1029	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.864	39.885	-1	1.000	130687	35326	70	175	505		
409.7788	39.864	39.885	-1	1.000	124809	34163	62	155	551	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.972	39.258	-17	1.010	2330	562	70	175	8		
409.7788	38.972	39.258	-17	1.010	1954	524	62	155	8	1.19(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.544	39.569	-1	1.081	179447	47839	39	97	1227		
437.8140	39.552	39.569	-1	1.081	167049	43599	18	45	2422	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.561	39.582	-1	1.000	133712	35925	43	107	835		
425.7737	39.561	39.582	-1	1.000	129538	34399	35	87	983	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.913	39.258	-21	0.984	49729	12184	43	107	283		
425.7737	38.921	39.258	-20	0.984	47424	11827	35	87	338	1.05(0.88-1.20)	
13C-OCDD											
469.7780	42.042	42.072	-2	1.149	238923	59099	38	95	1555		
471.7750	42.042	42.072	-2	1.149	262111	62170	23	57	2703	0.91(0.76-1.02)	
OCDF											
441.7428	42.143	42.165	-1	1.002	164007	35909	21	52	1710		
443.7399	42.143	42.165	-1	1.002	173327	38634	26	65	1486	0.95(0.76-1.02)	
OCDD											
457.7377	42.059	42.081	-1	1.000	764463	176188	55	137	3203		
459.7348	42.050	42.081	-2	1.000	849131	192526	68	170	2831	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

U - Marked Undetected

a - User Assigned ID

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	657638	92704

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	657638	92704

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.895	5341	878	7013	1467	1.74	0.76	
18.813	6927	1027	9389	1329	2.30	0.74	
19.217	9513	1553	13372	1903	3.22	0.71	
19.706	99834	14573	116922	16542	30.5	0.85	
20.093	3268	598	4496	809	1.09	0.73	
21.209	16094	2005	19961	2667	5.08	0.81	
23.589	16179	2525	18985	2944	4.95	0.85	
Signal Totals:							
	157156	23159	190138	27661			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	347294	50820				0.83	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 48.889 = (347294 * 100.000) / (657638 * 1.080)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	487963	64358

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	487963	64358

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.646	832	169	971	198	0.3436	0.86	
20.789	353	126	120	50	0.0901	2.94	RQ
20.789	92	38	120	50	0.0404		Empc Correction
21.621	1595	402	1526	303	0.5948	1.05	RQ
21.621	1175	233	1526	303	0.5147		Empc Correction
22.446	3415	496	2009	541	1.03	1.70	RQ
22.446	1546	416	2009	541	0.6775		Empc Correction

Compound is Marked ND

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	561807	86412
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	609085	89975

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	585446	88193

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.036	135	34	187	46	0.0533	0.72	RQ
24.036	135	34	87	21	0.0368		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	561807	86412
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	609085	89975

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	585446	88193

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.789	4095	700	2338	398	1.07	1.75	
27.828	2321	449	2764	329	0.8424	0.84	RQ
27.828	2321	449	1497	289	0.6325		Empc Correction
Signal Totals:							
	6416	1149	3835	687			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11518	1876				1.26	RQ
	10251	1836					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.908 = (11518 * 100.000) / (585446 * 1.031)

Empc Amount: 1.698 = (10251 * 100.000) / (585446 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	354202	47284

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	354202	47284

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.034	861	158	1220	243	0.5614	0.71	RQ
26.034	861	158	555	101	0.3820		Empc Correction
26.884	831	139	259	67	0.2941	3.21	RQ
26.884	401	103	259	67	0.1781		Empc Correction
27.929	1019	170	597	110	0.4360	1.71	
Signal Totals:							
	2281	431	1411	278			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4787	887				1.31	RQ
	3692	709					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.291 = (4787 * 100.000) / (354202 * 1.046)

Empc Amount: 0.996 = (3692 * 100.000) / (354202 * 1.046)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	363397	82559
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	362253	72021
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	362825	77290

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.209	9440	1670	7287	1198	4.37	1.30	
35.337	4860	903	3205	697	2.11	1.52	RQ
35.337	3974	864	3205	697	1.88		Empc Correction
Signal Totals:							
	13414	2534	10492	1895			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	24792	4468				1.36	RQ
	23906	4429					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 6.480 = (24792 * 100.000) / (362825 * 1.055)

Empc Amount: 6.248 = (23906 * 100.000) / (362825 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

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AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	367464	91917
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	370288	98847

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	368876	95382

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.972	2330	562	1954	524	0.8443	1.19	
Signal Totals:							
	2330	562	1954	524			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4284	1086				1.19	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.8443 = (4284 * 100.000) / (368876 * 1.376)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	346496	91438

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	346496	91438

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.913	49729	12184	47424	11827	26.7	1.05	
Signal Totals:							
	49729	12184	47424	11827			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	97153	24011				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 26.696 = (97153 * 100.000) / (346496 * 1.050)

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Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

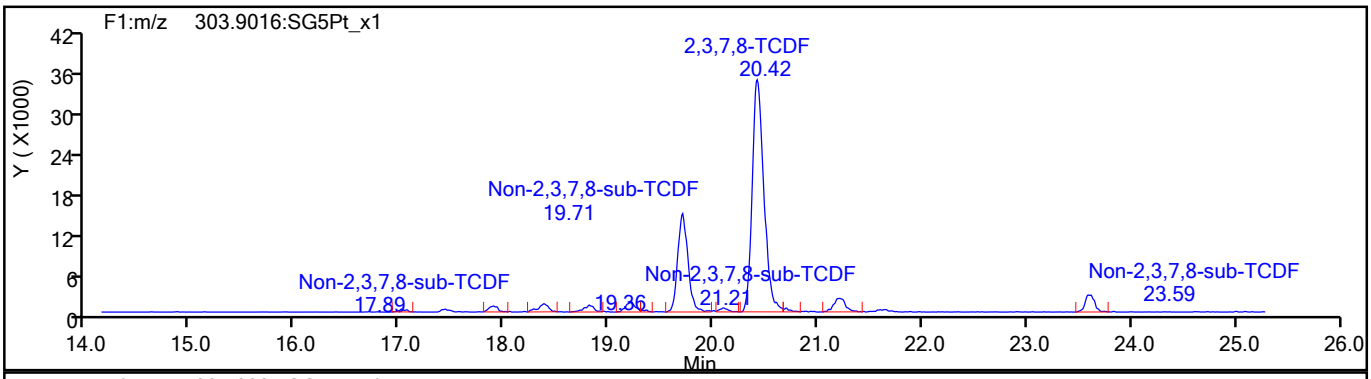

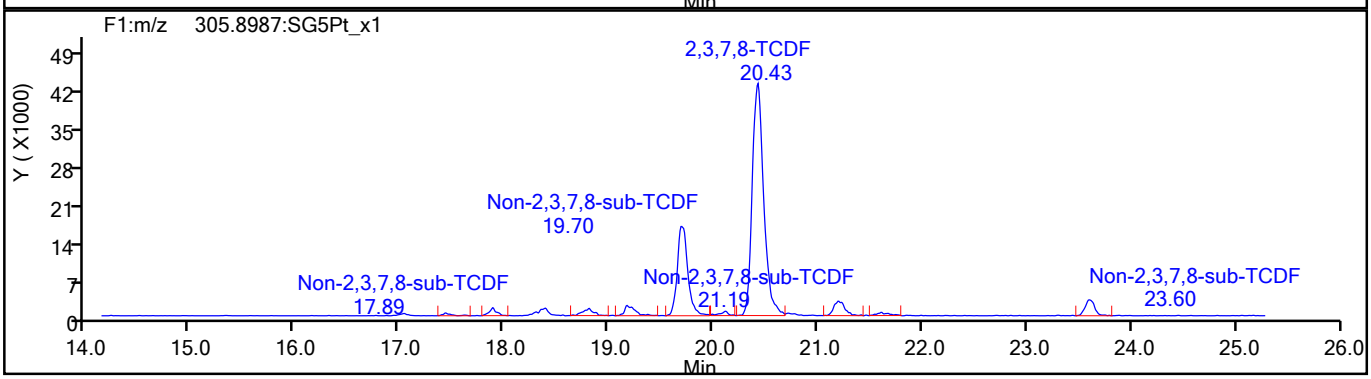

TCDF Standards

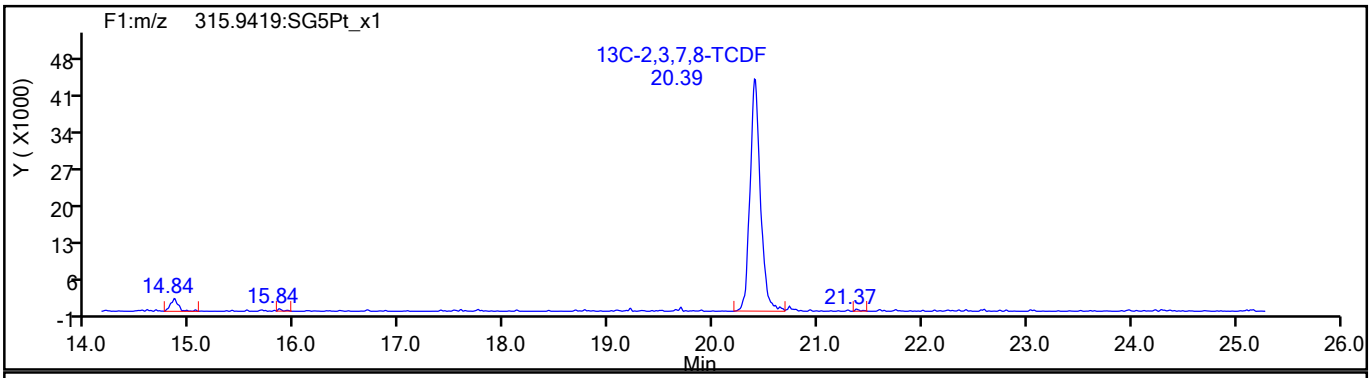

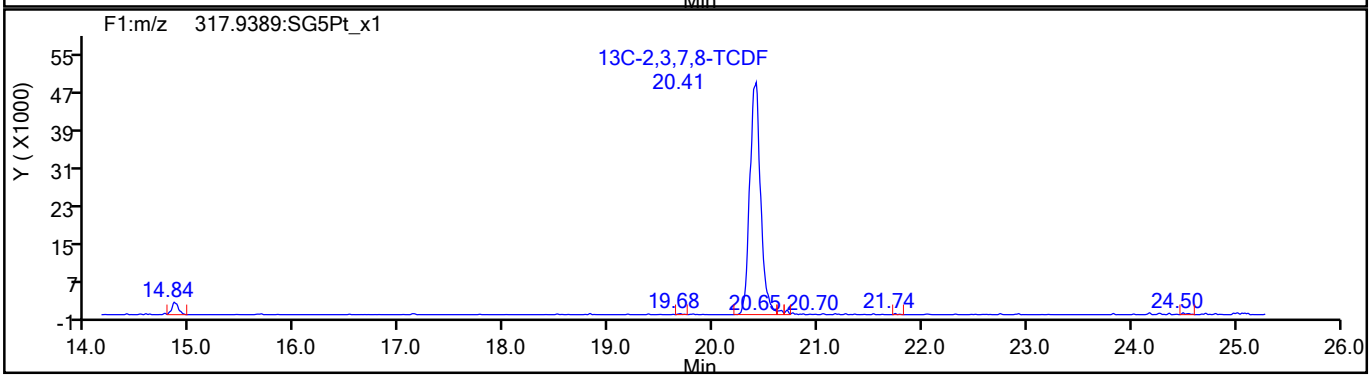

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Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

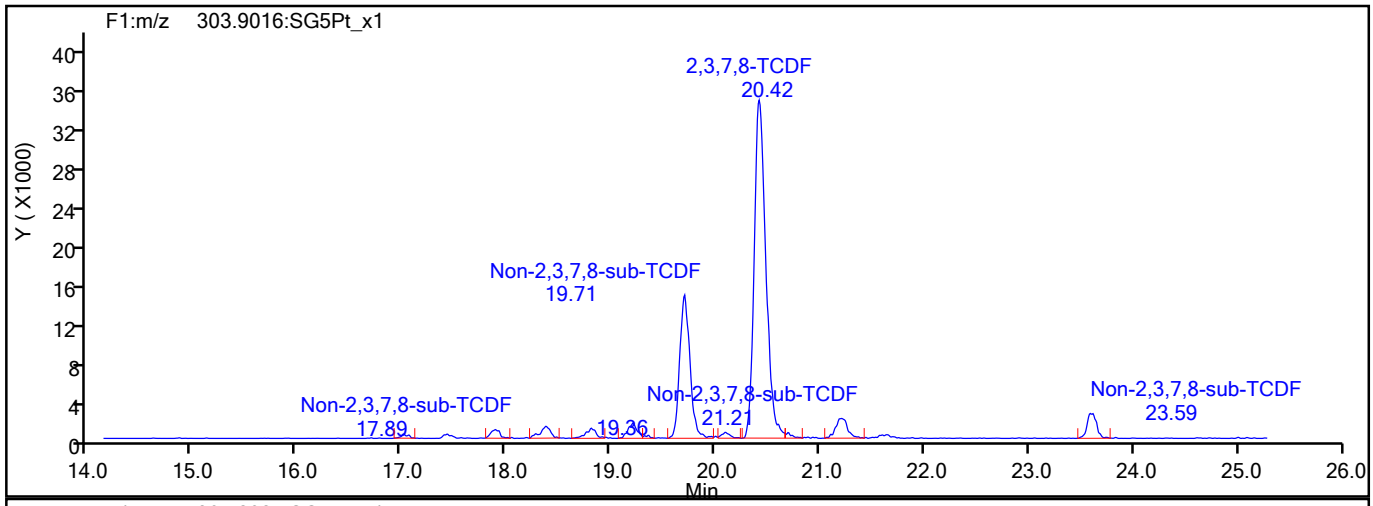

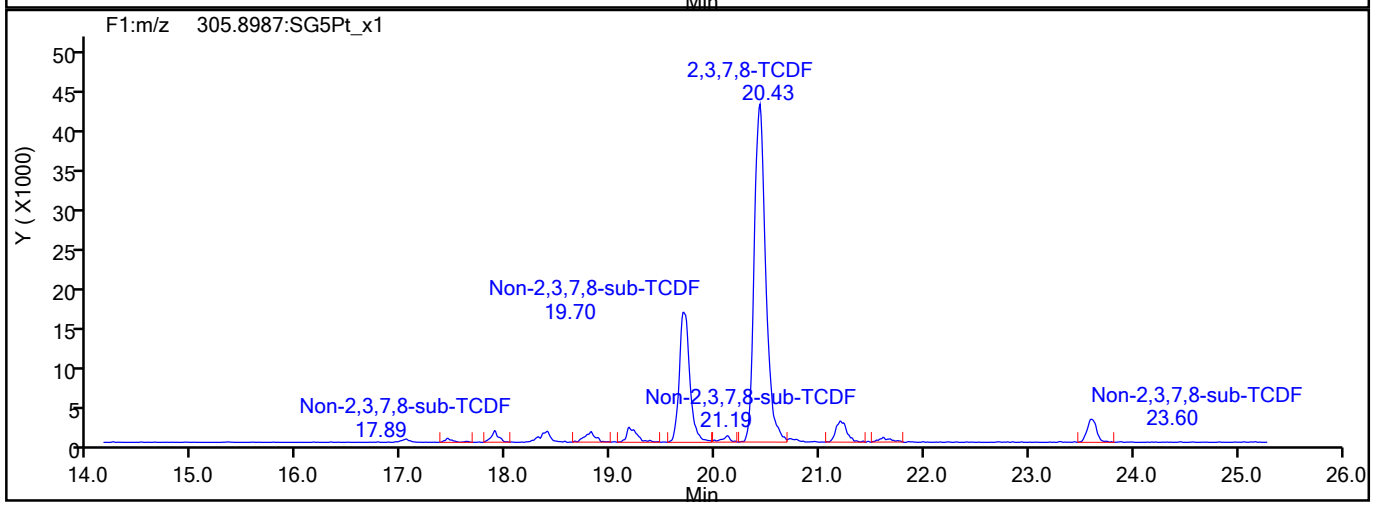

TCDF Interference Mass

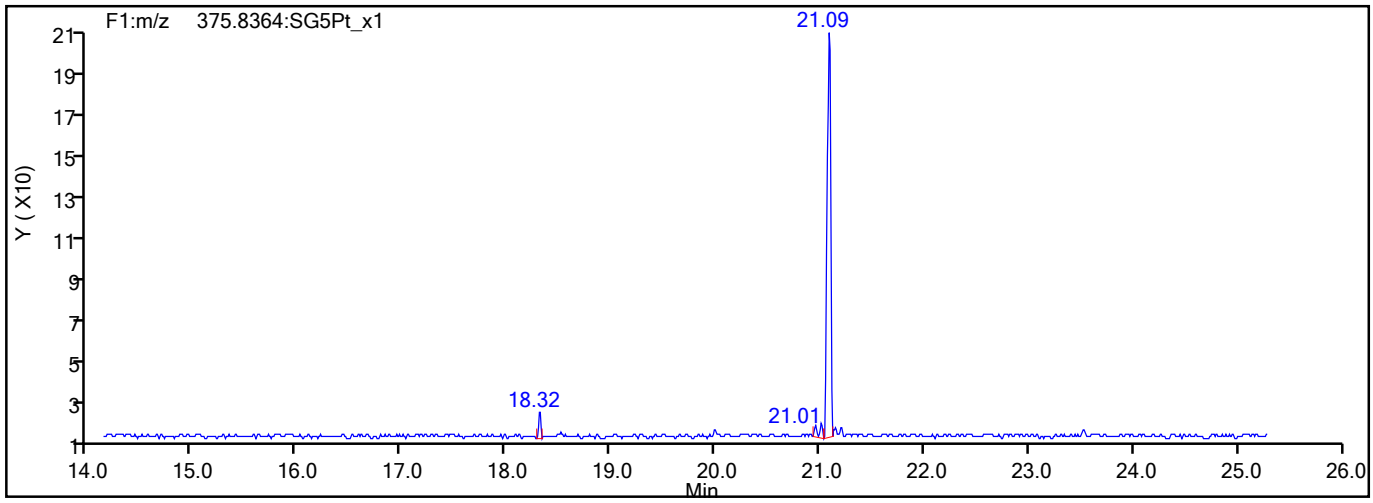

789654

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

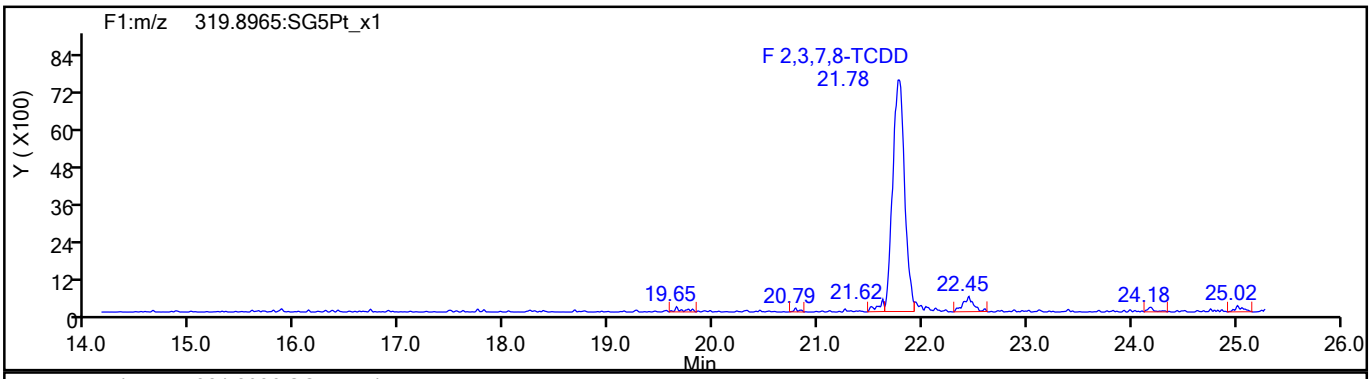

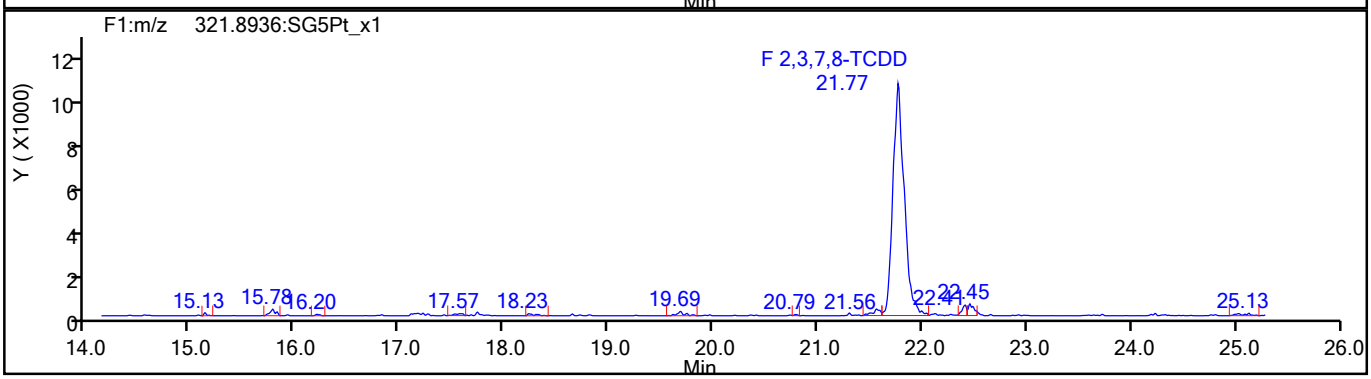

TCDD Standards

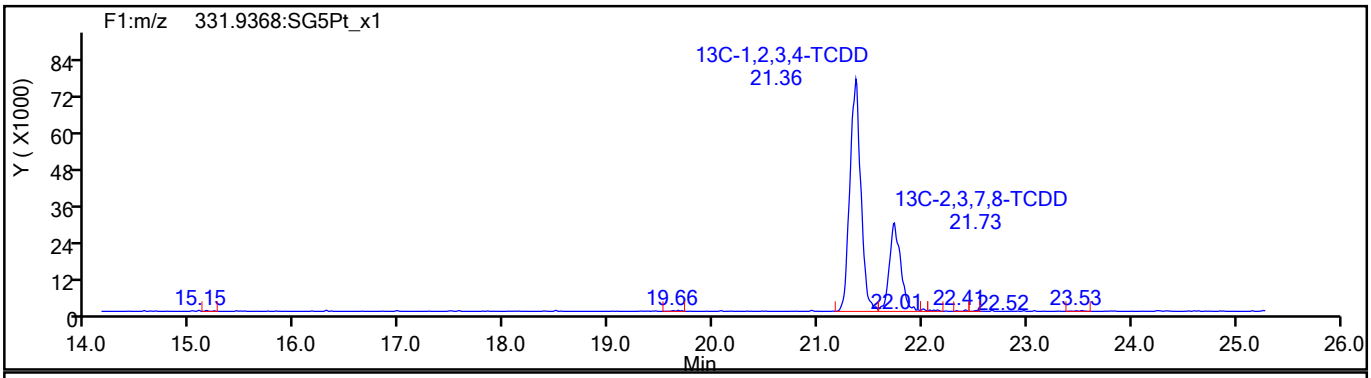

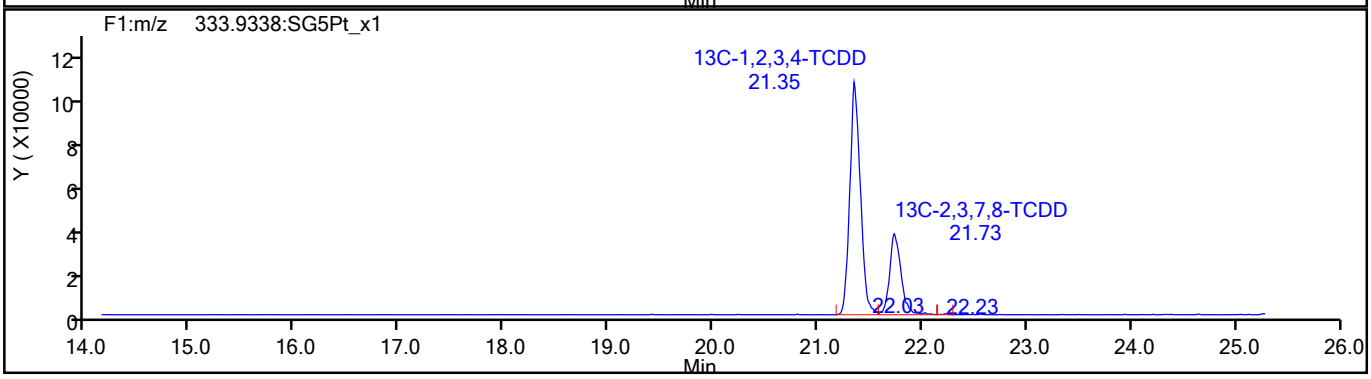

789655

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

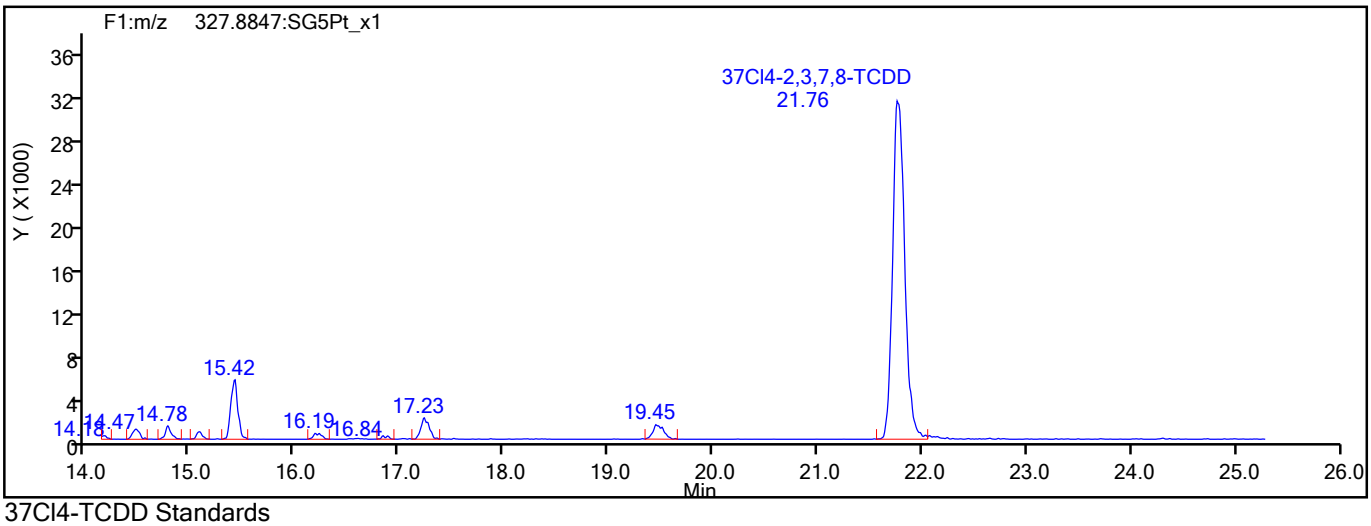

37Cl4-TCDD Standards

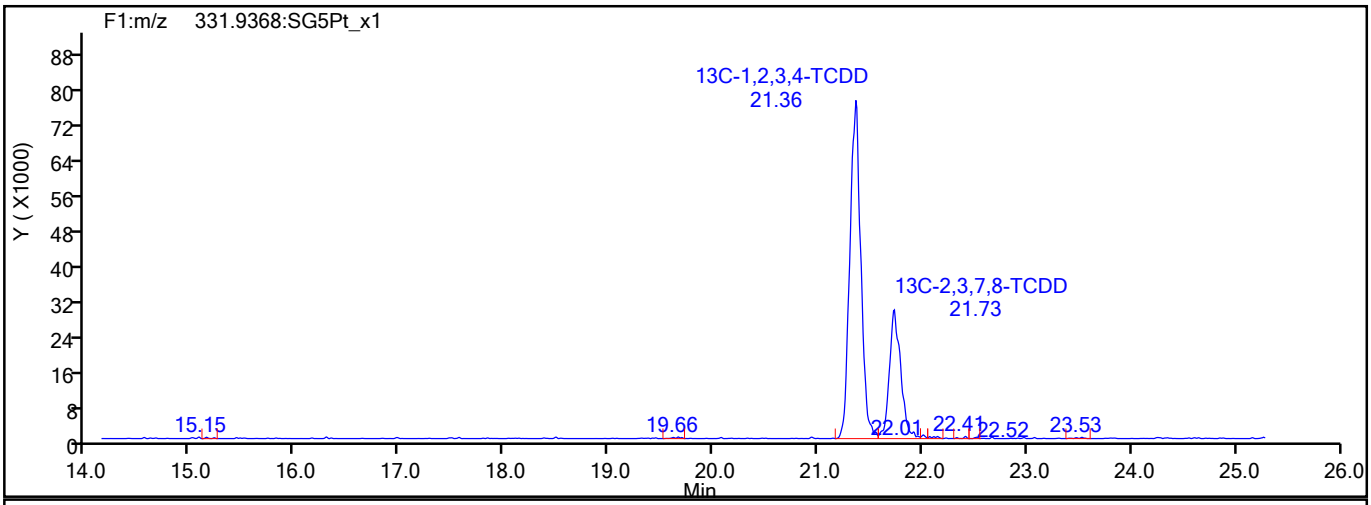

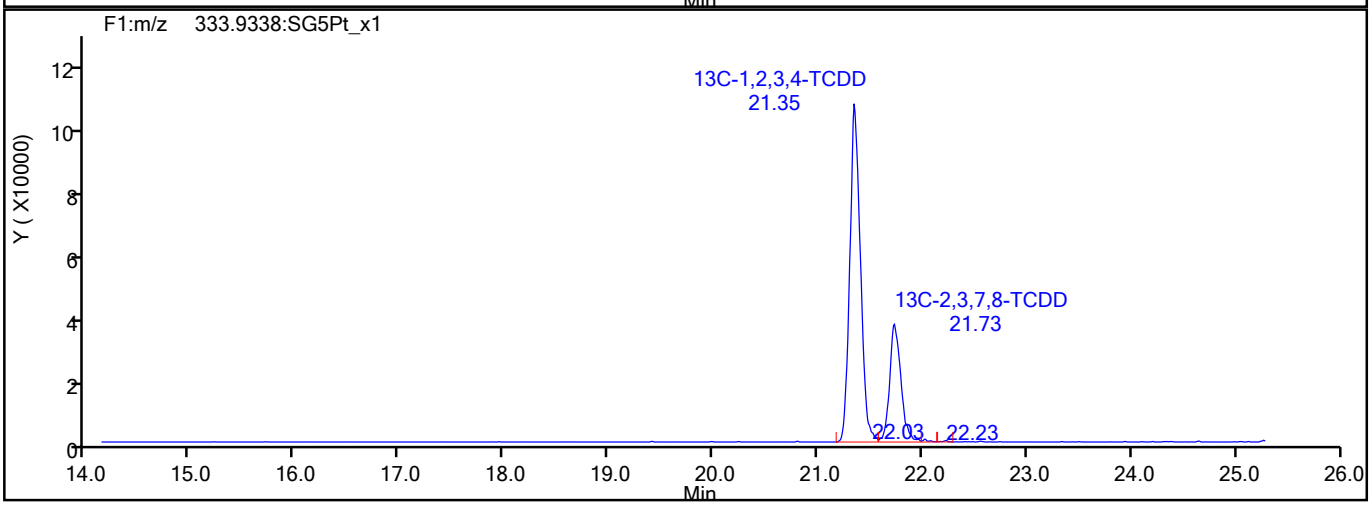

789656

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

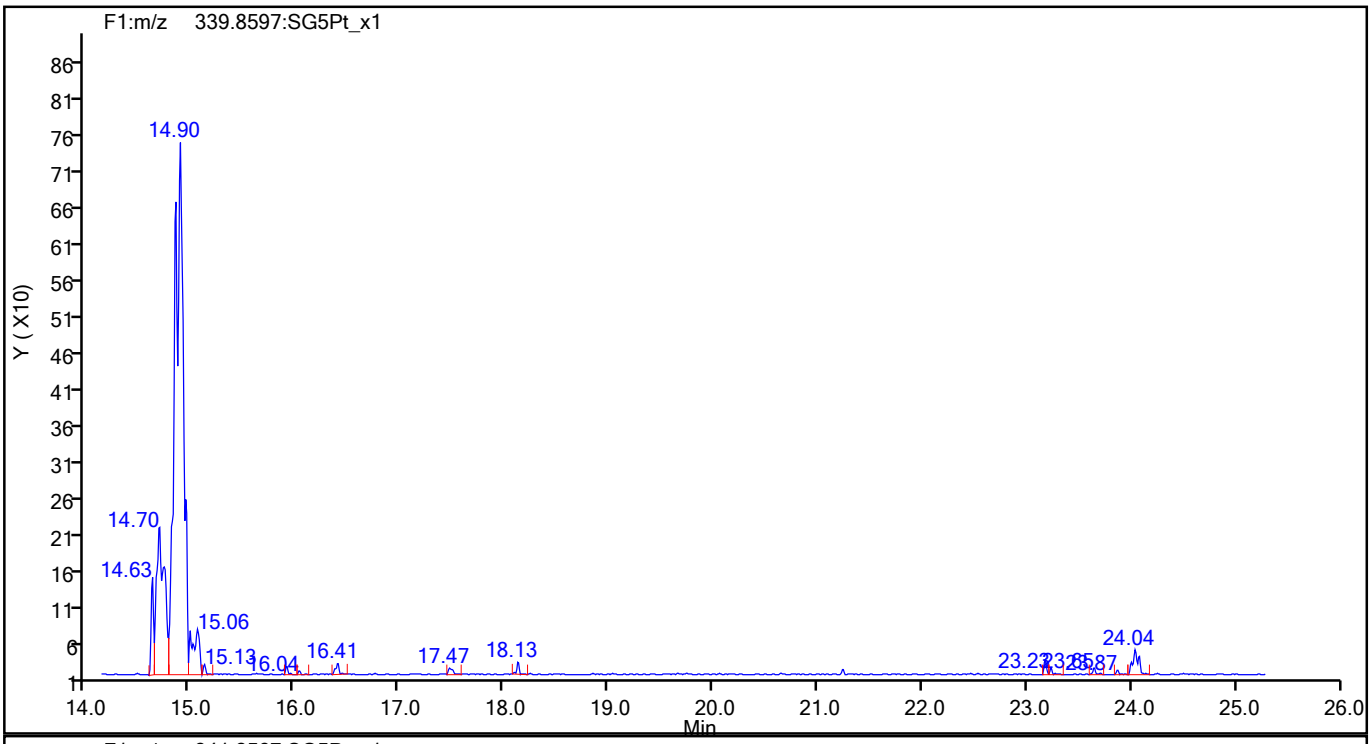

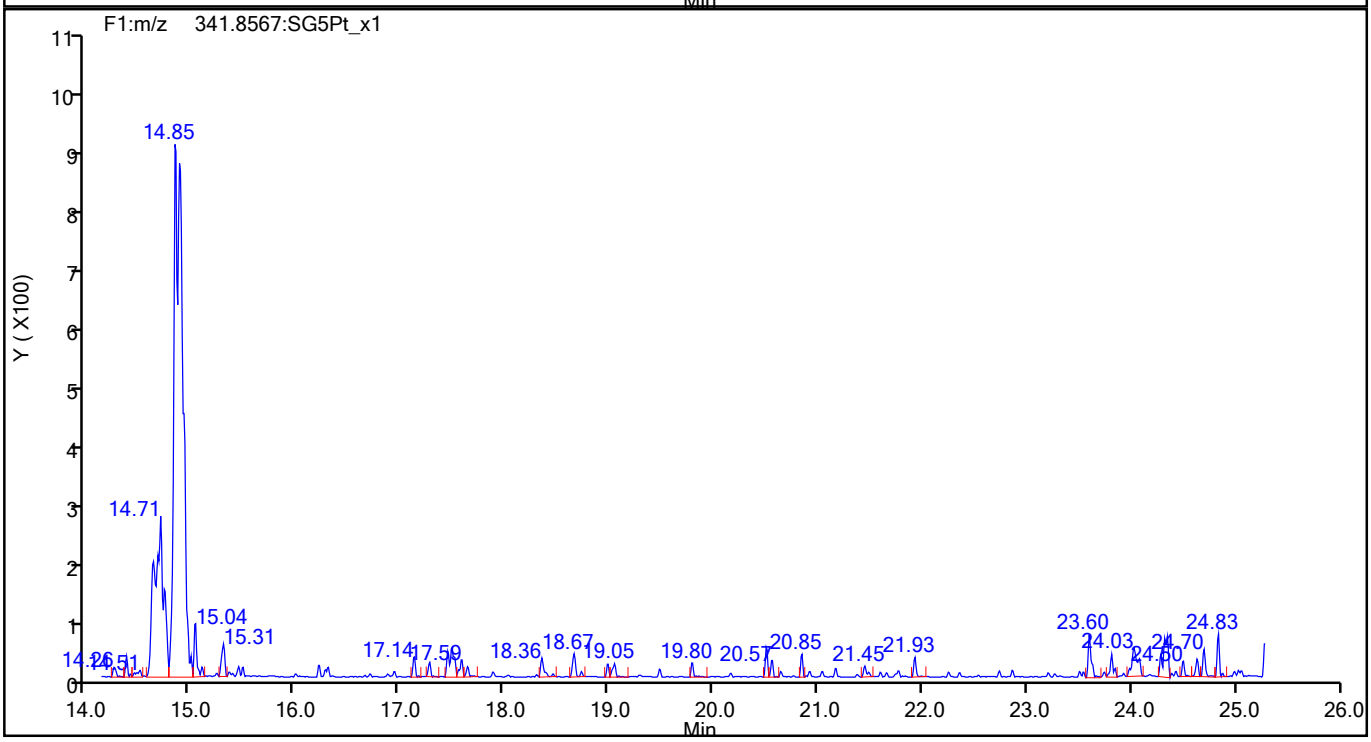

789657

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

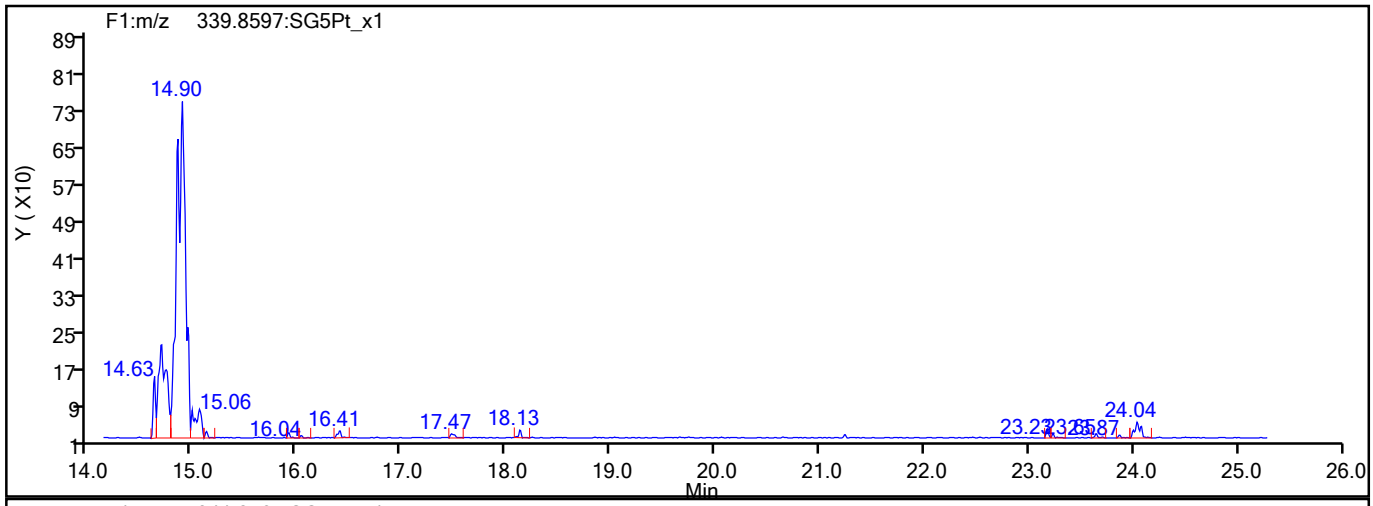

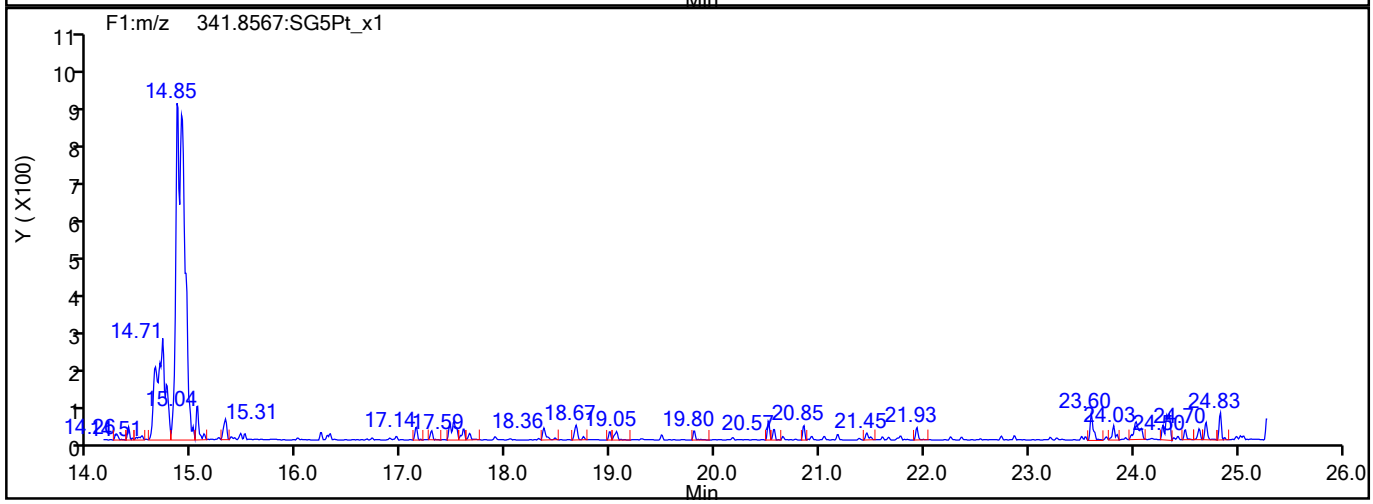

F1 PeCDFs Interference Mass

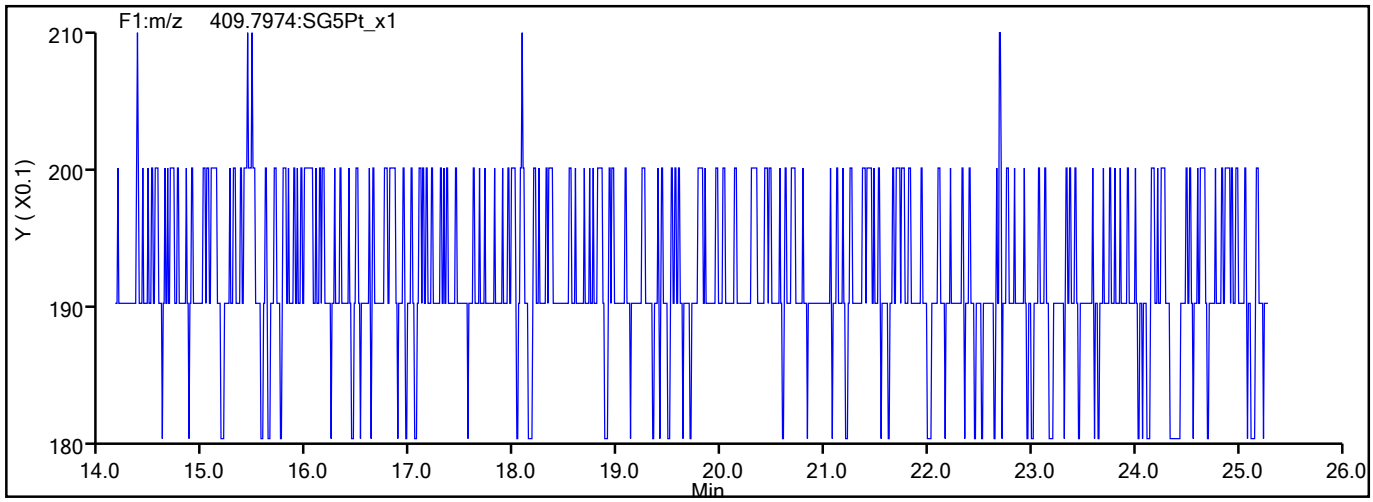

789658

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

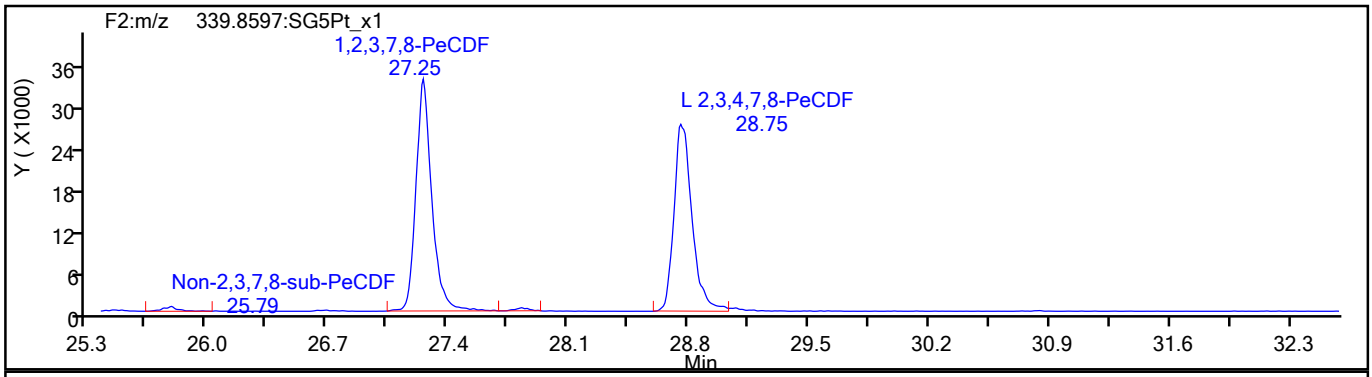

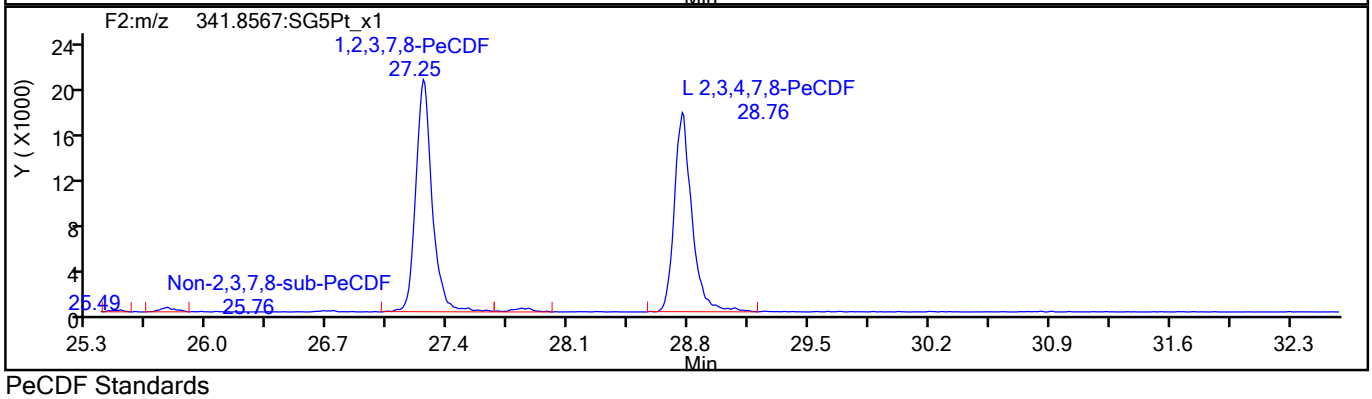

PeCDF Standards

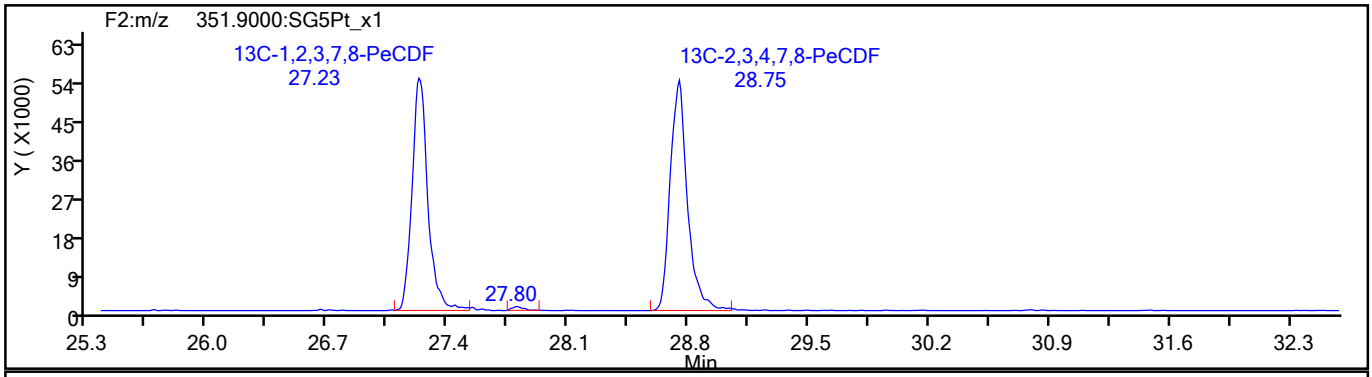

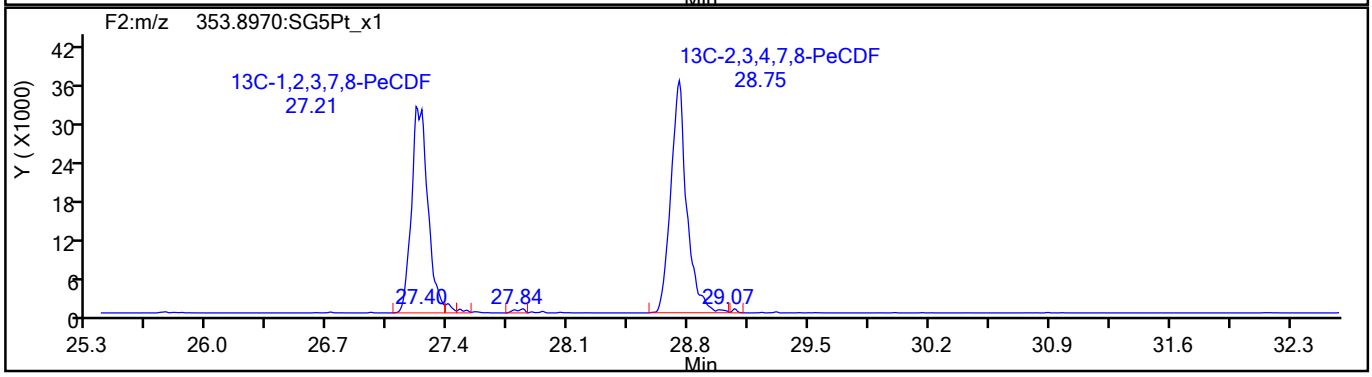

789659

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

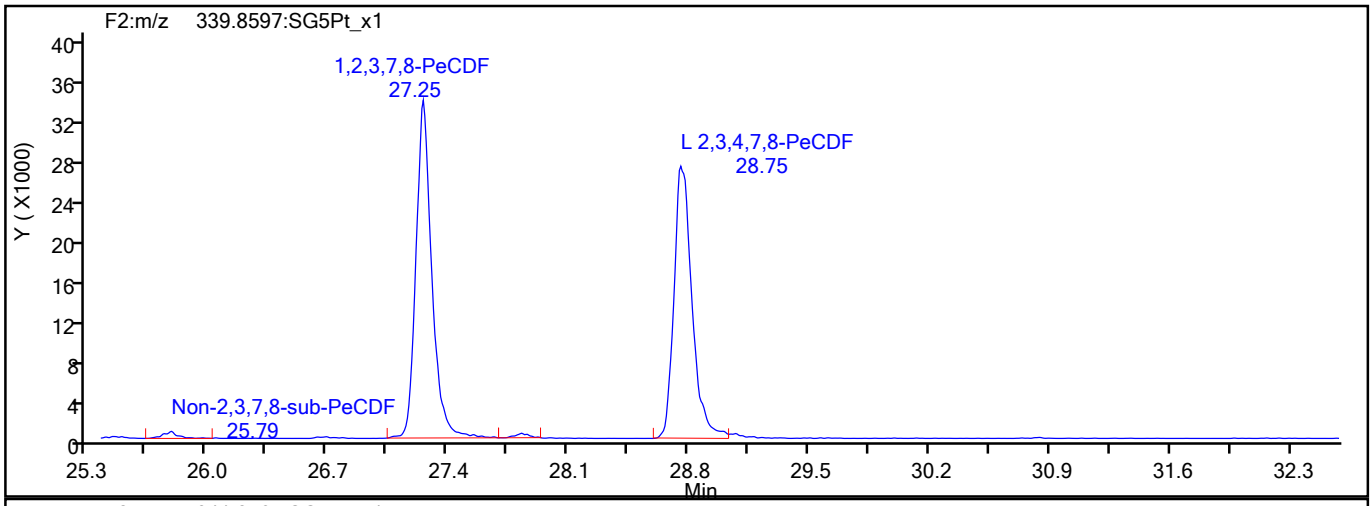

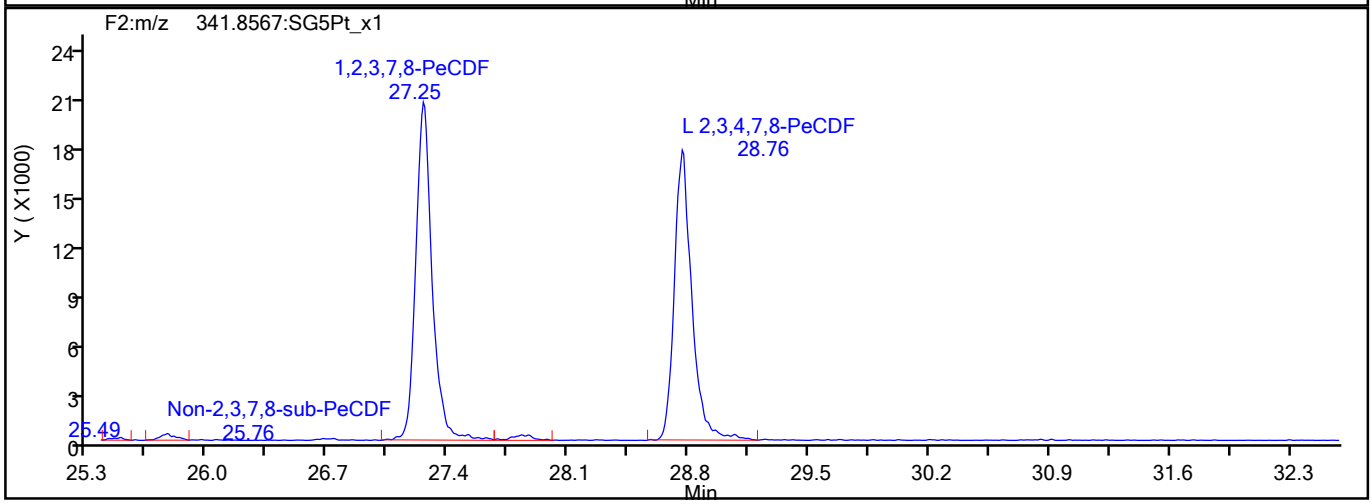

PeCDF Interference Mass

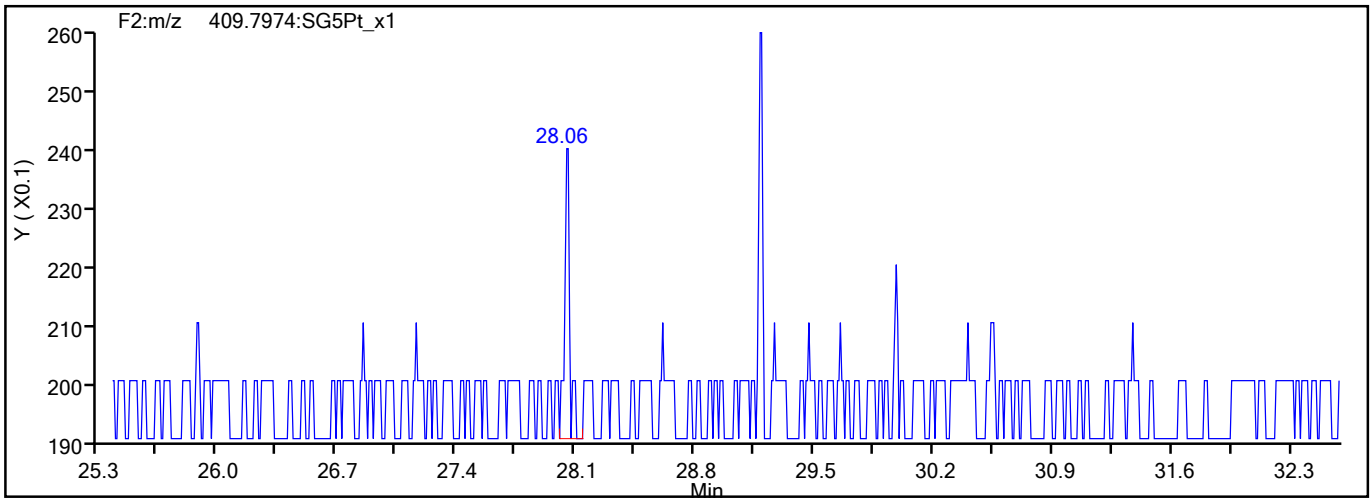

789660

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

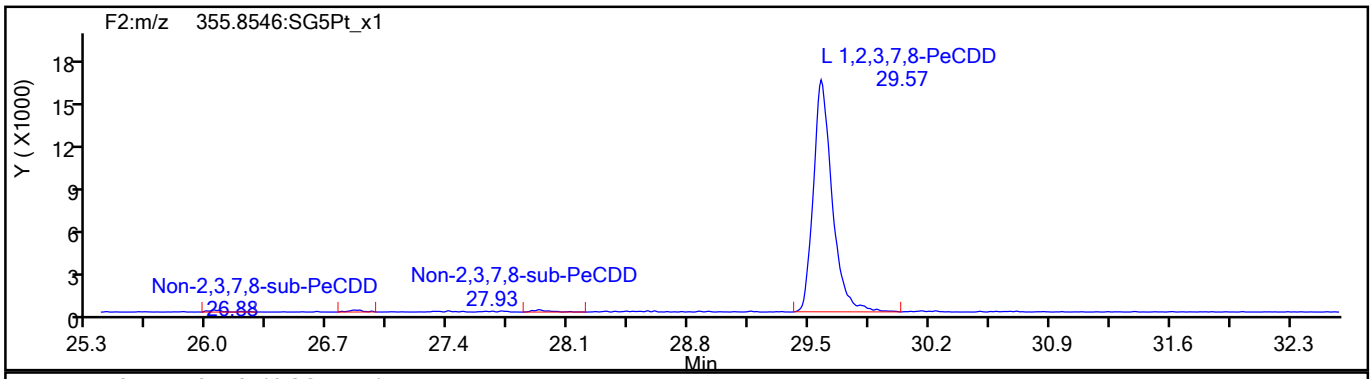

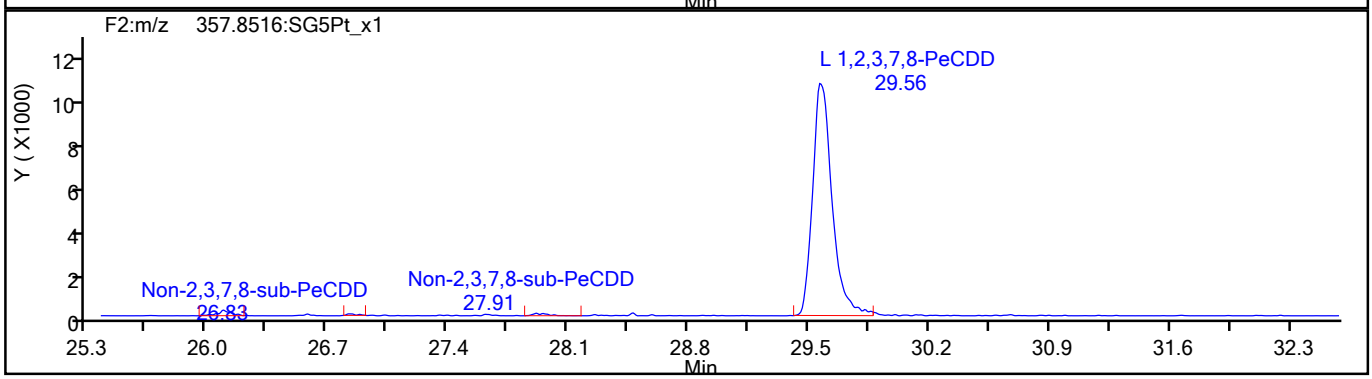

PeCDD Standards

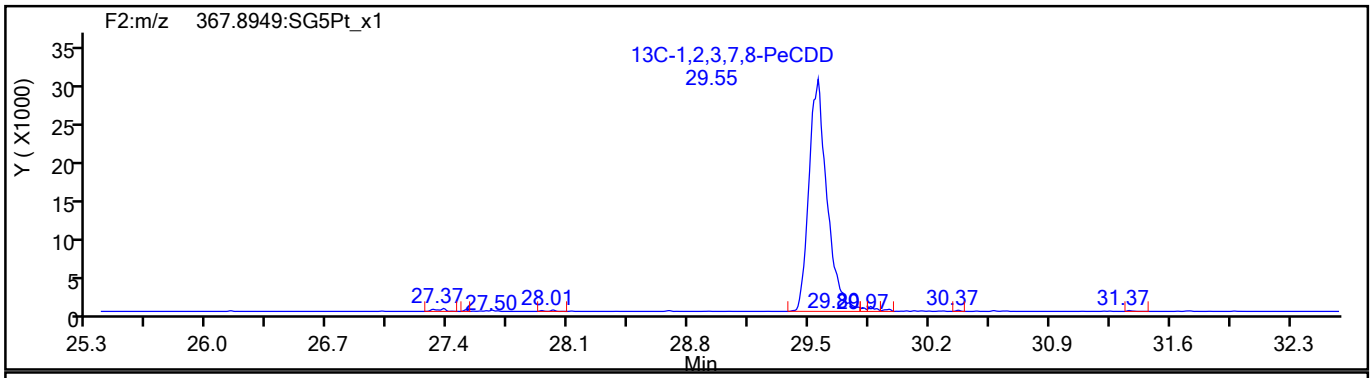

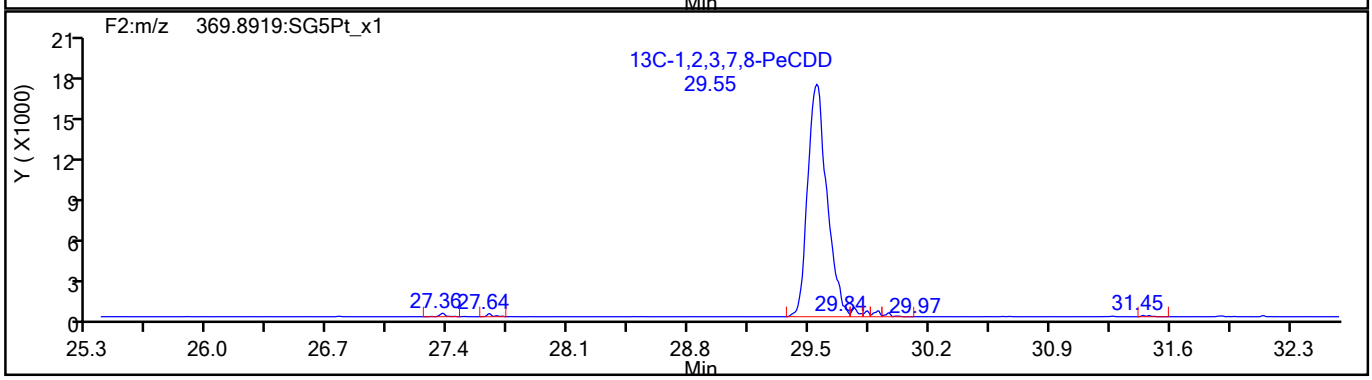

789661

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

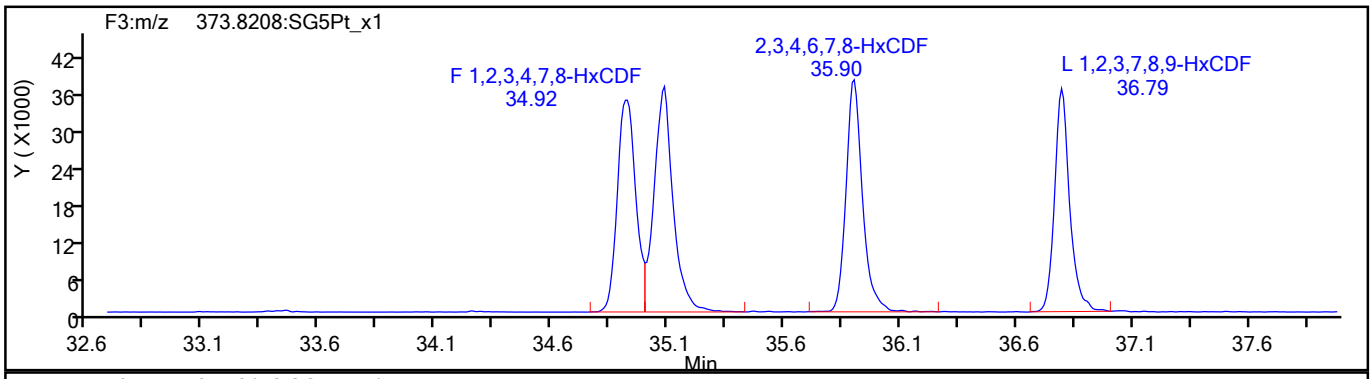

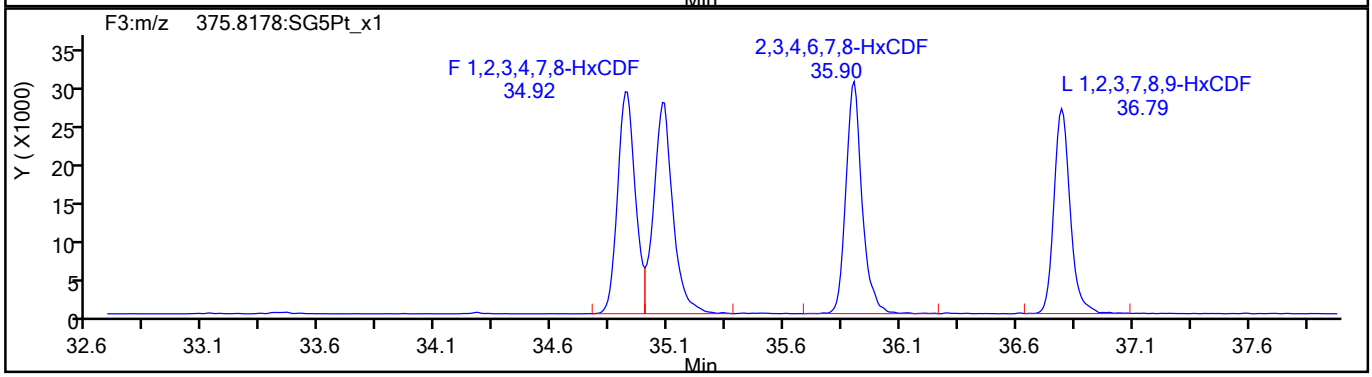

HxCDF Standards

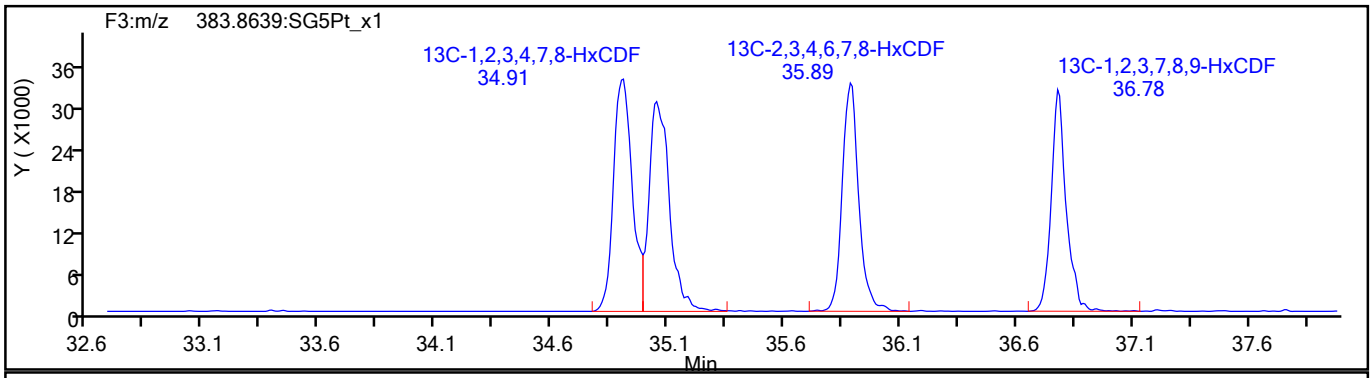

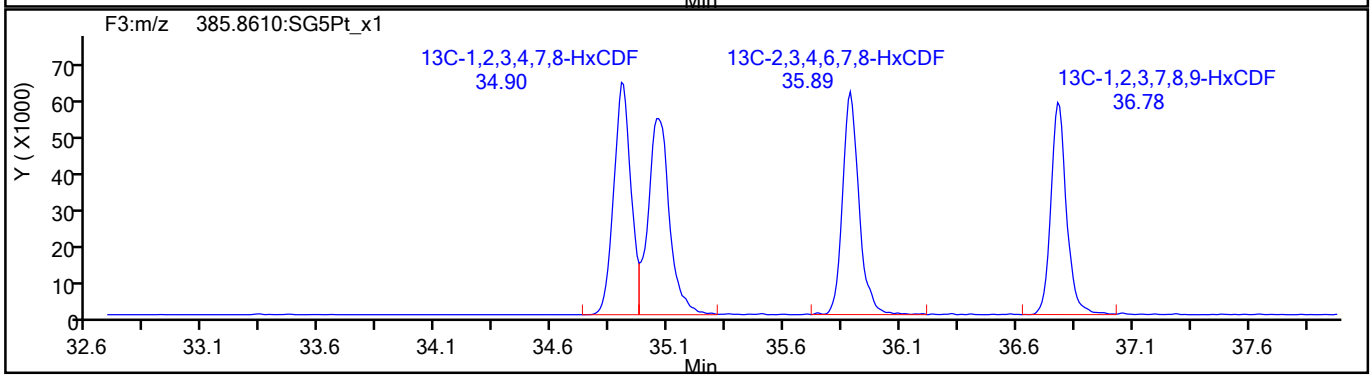

789662

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

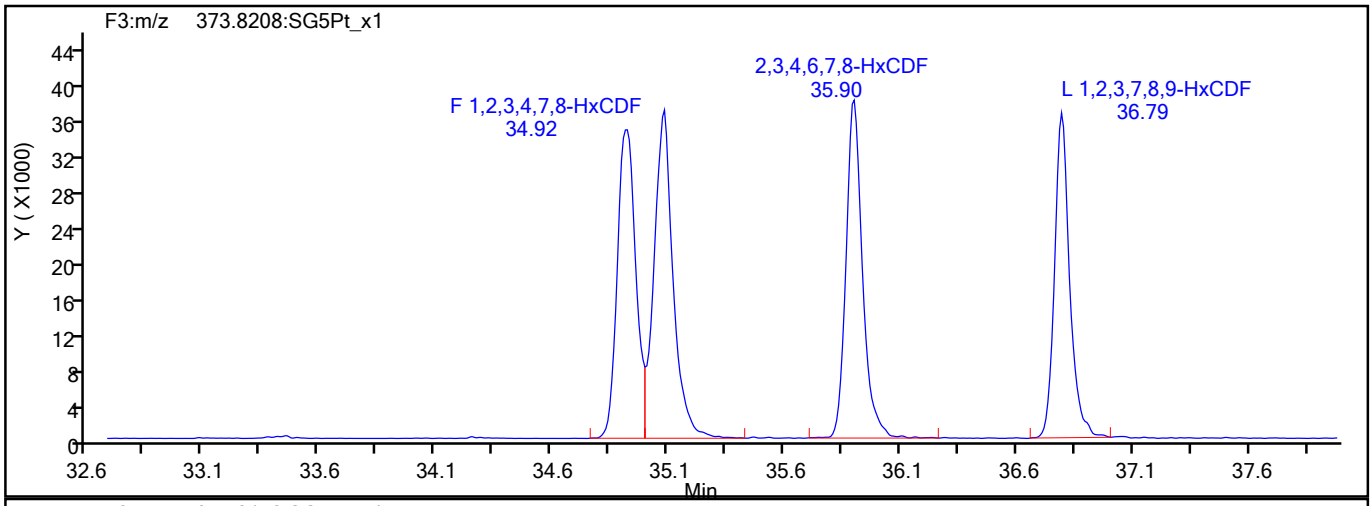

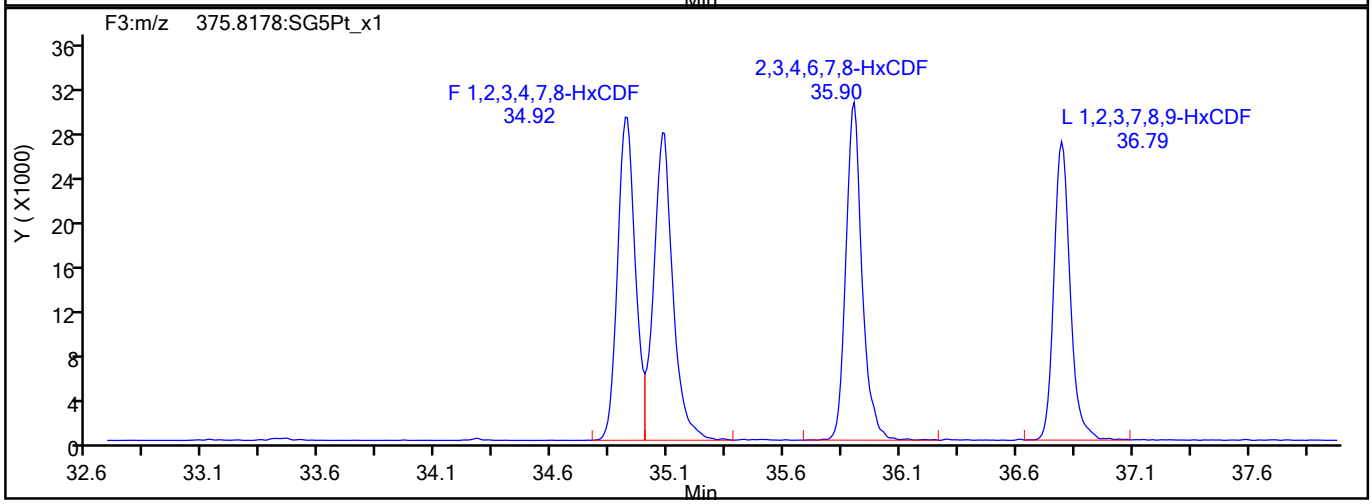

HxCDF Interference Mass

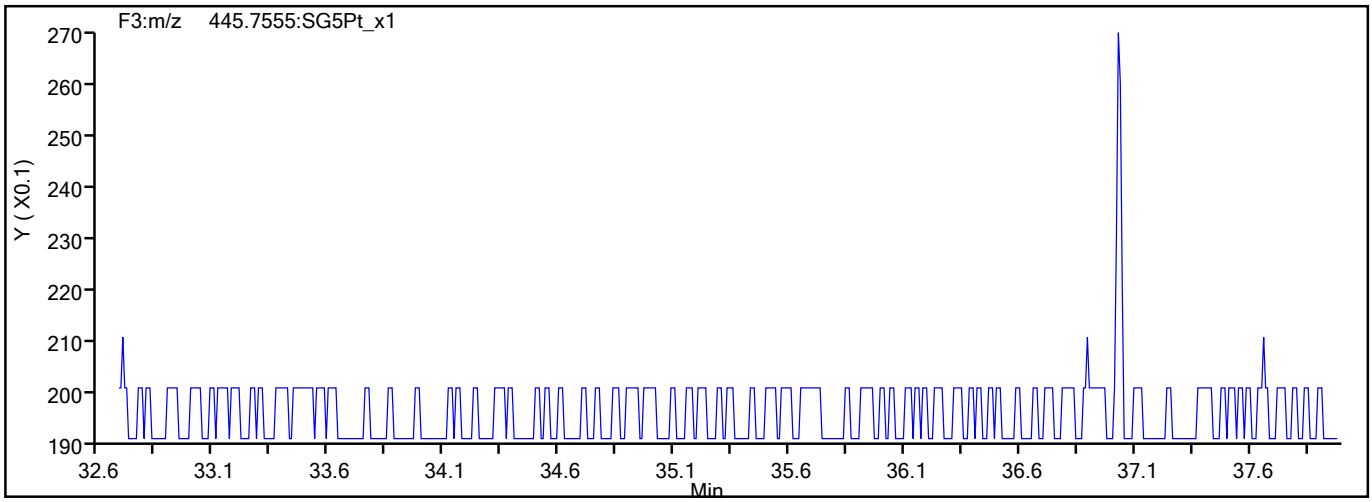

789663

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

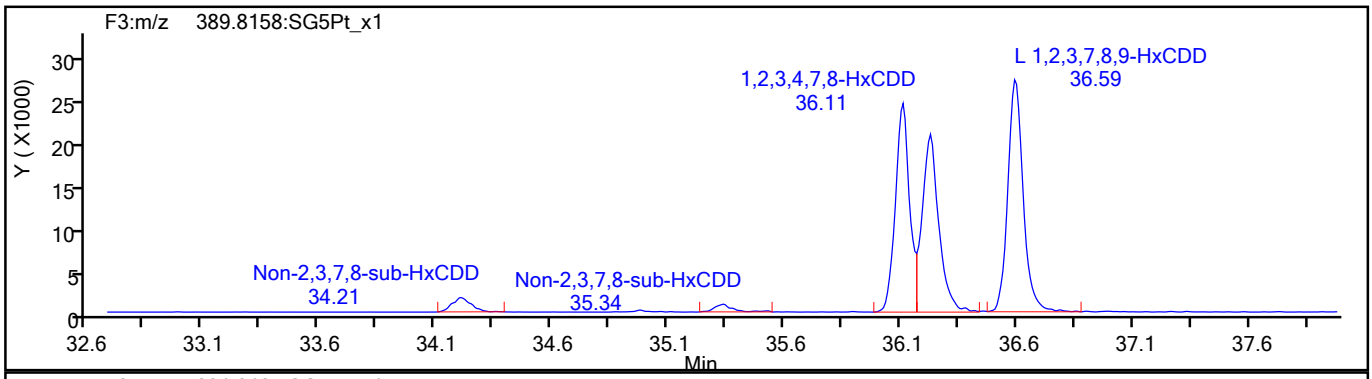

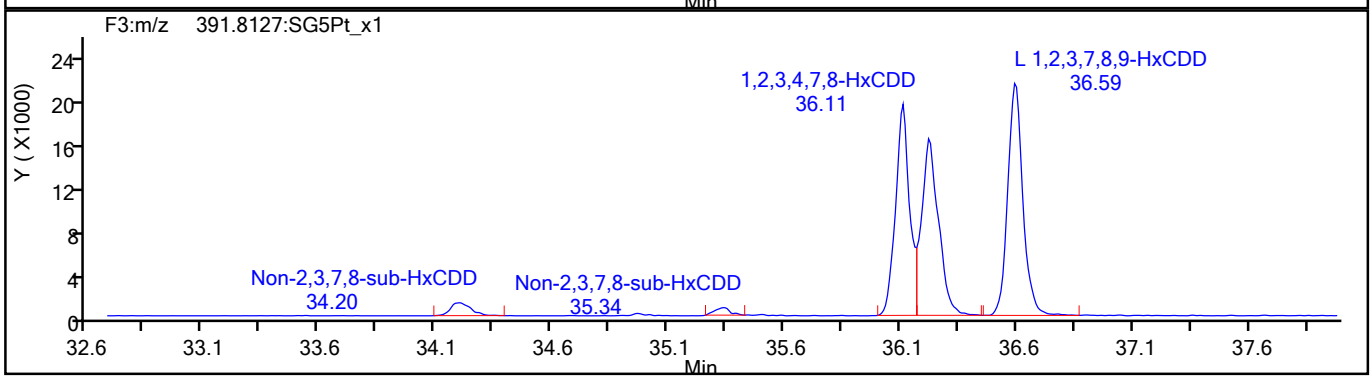

HxCDD Standards

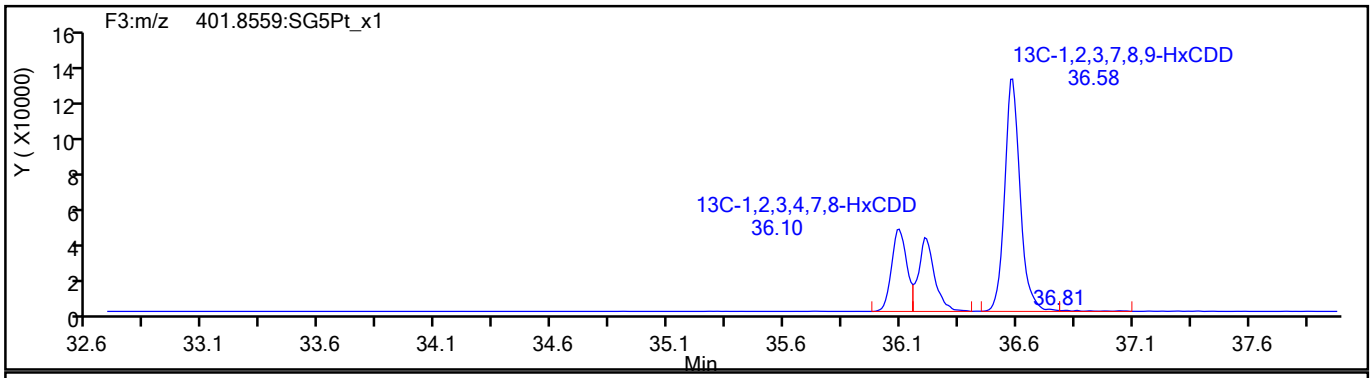

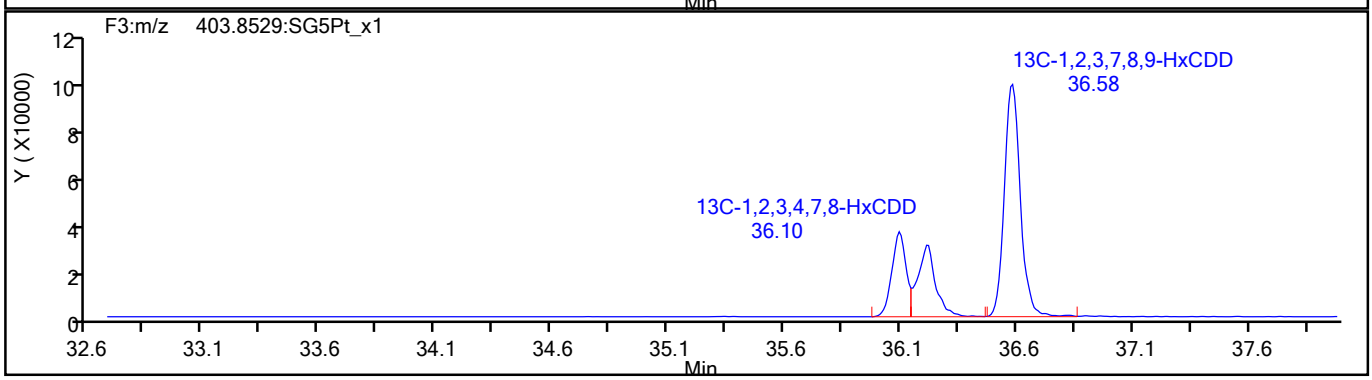

789664

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

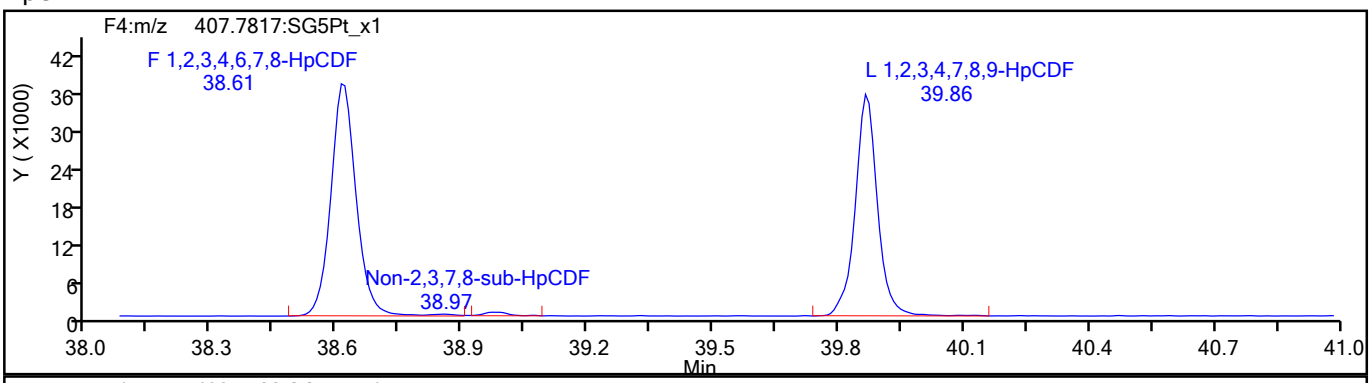

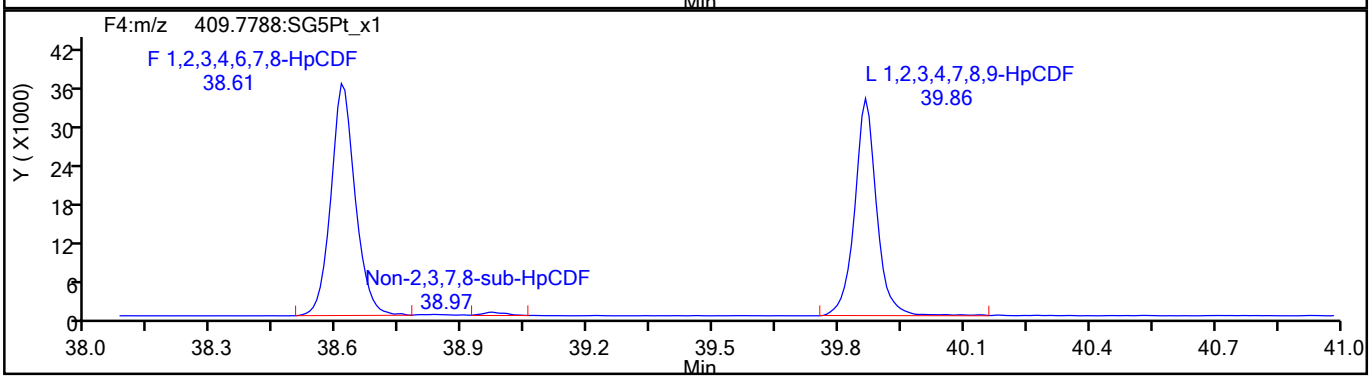

HpCDF Standards

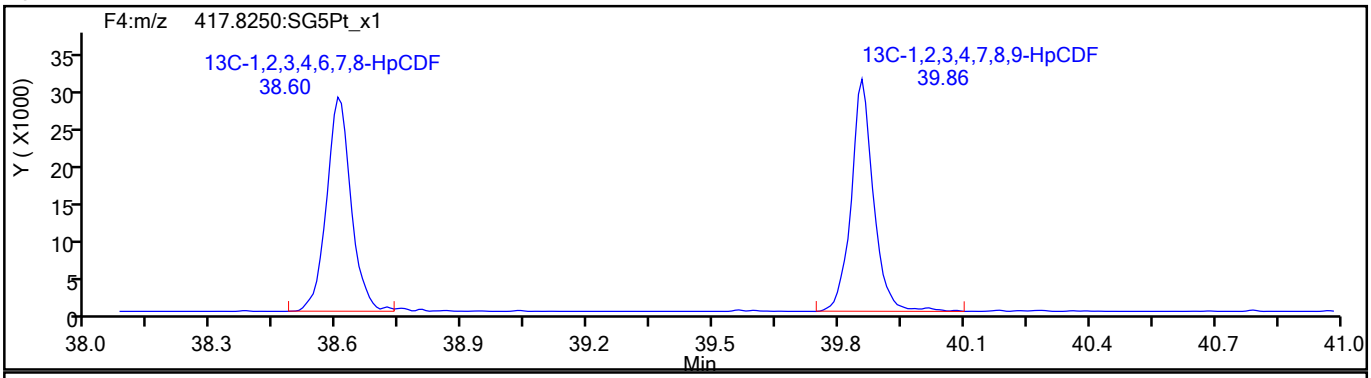

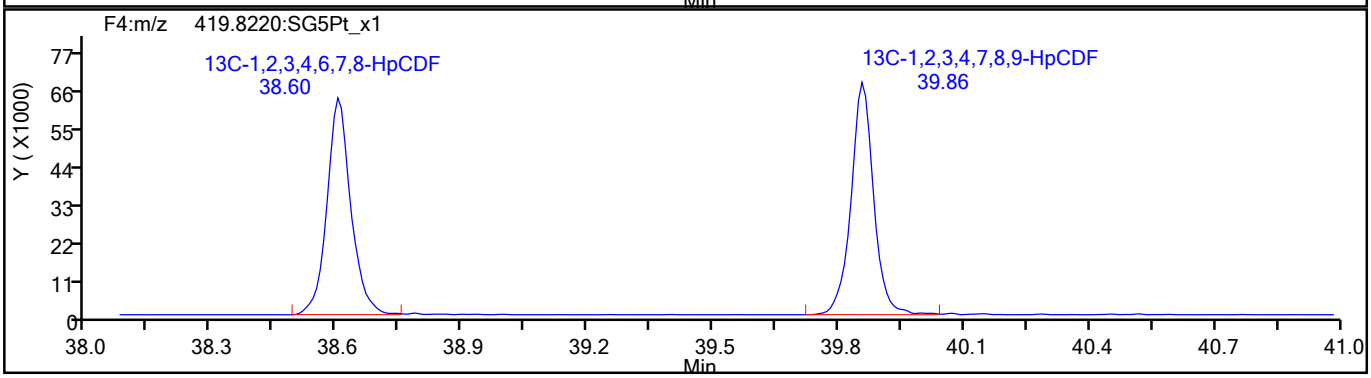

789665

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

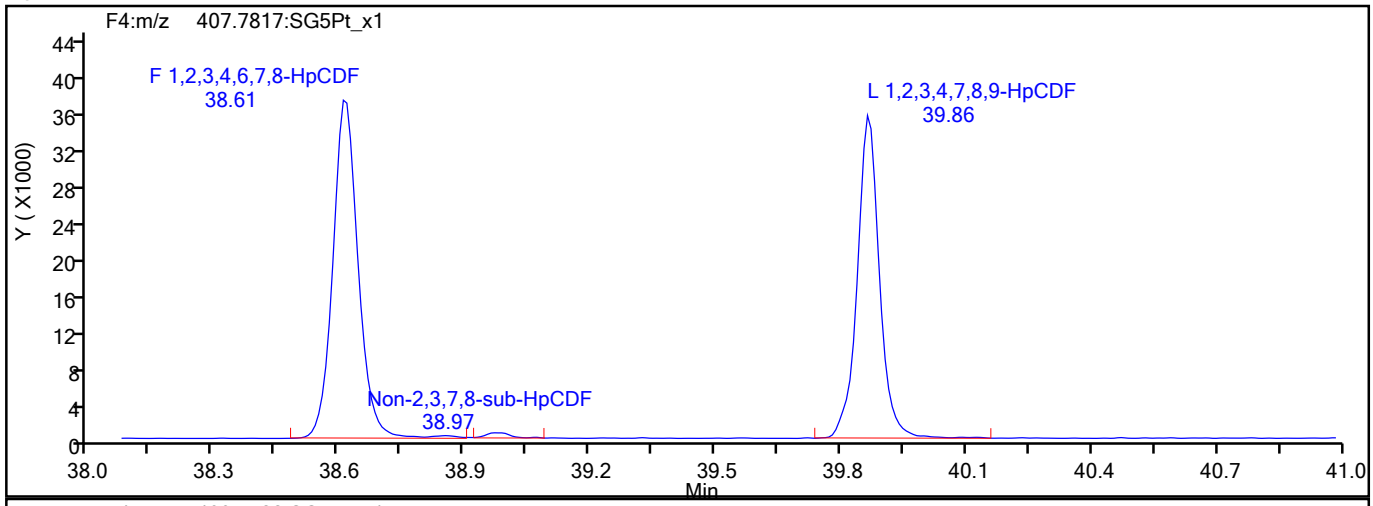

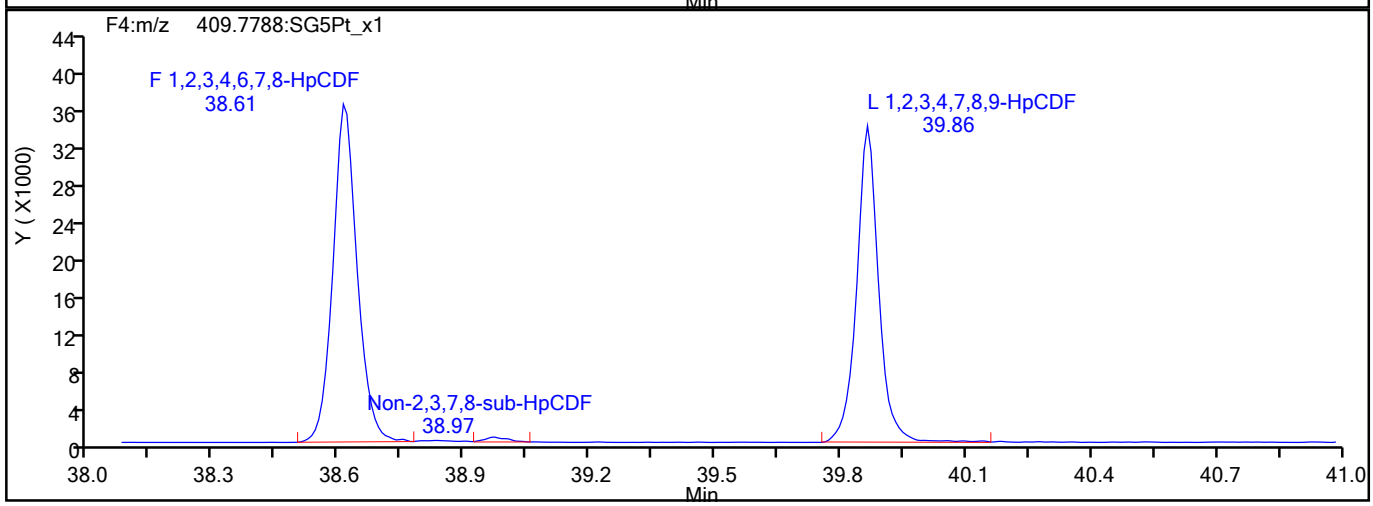

HpCDF Interference Mass

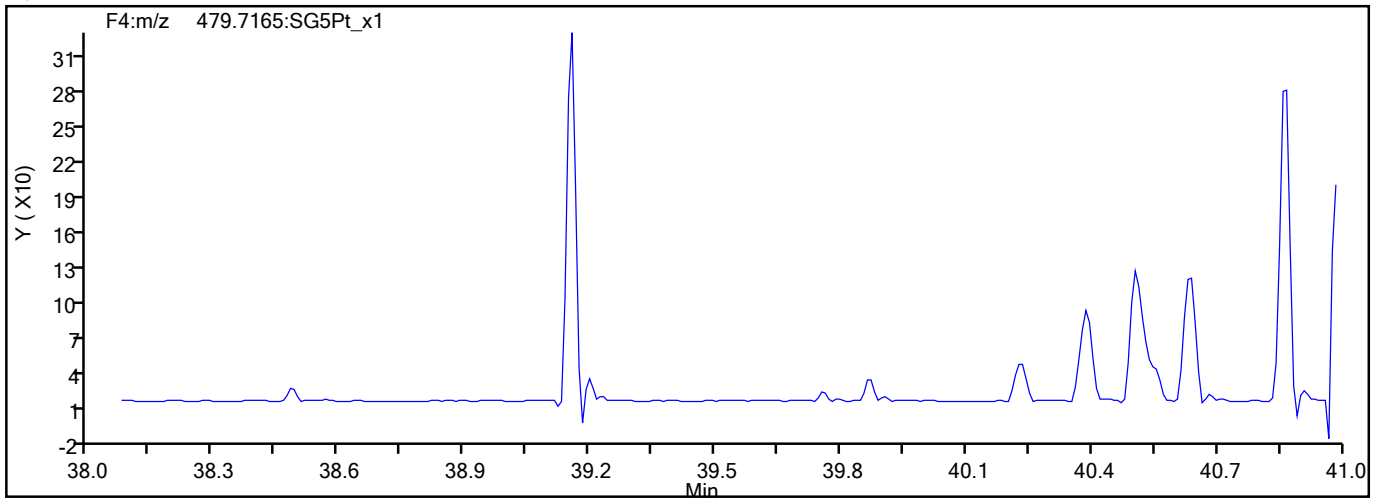

789666

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

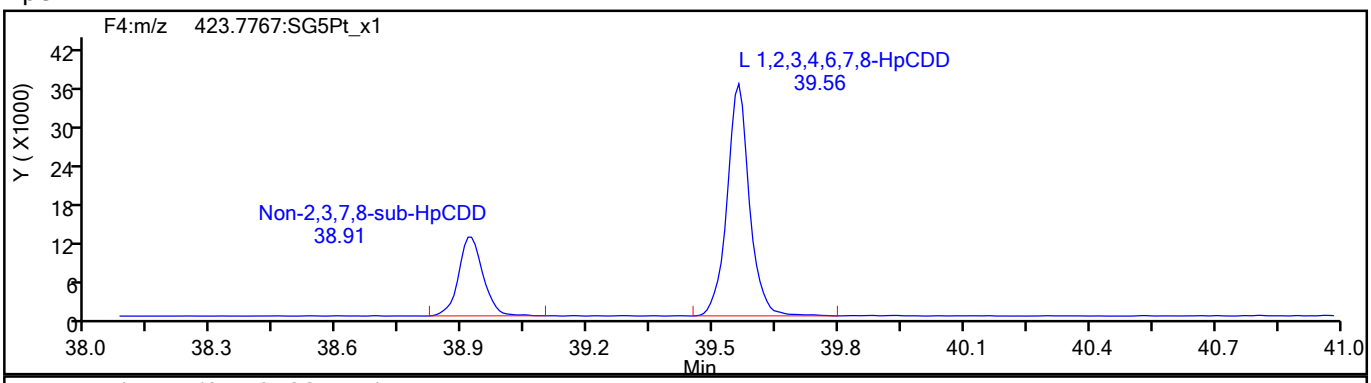

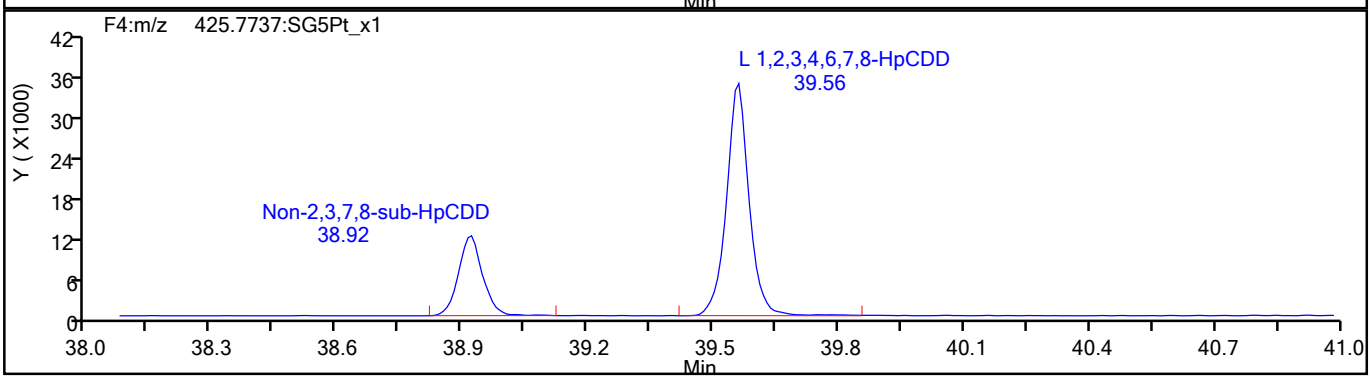

HpCDD Standards

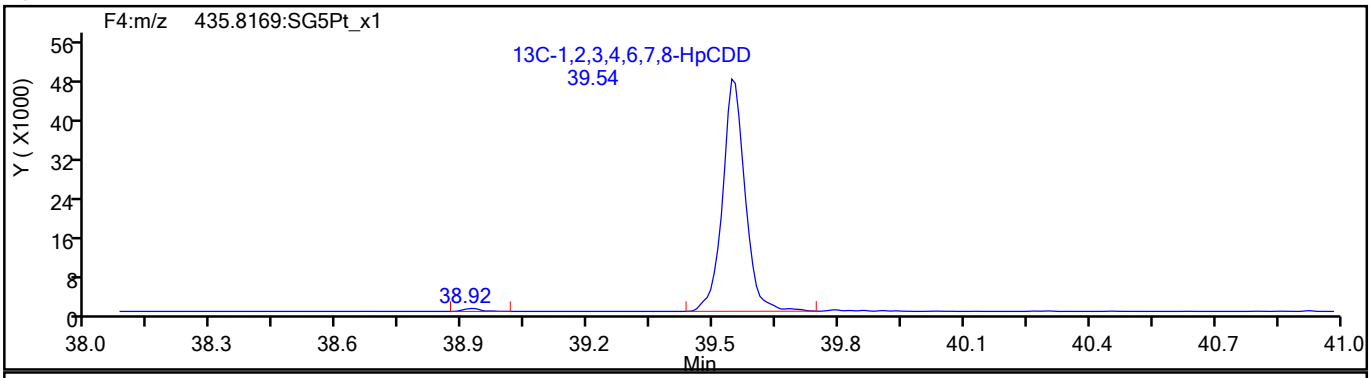

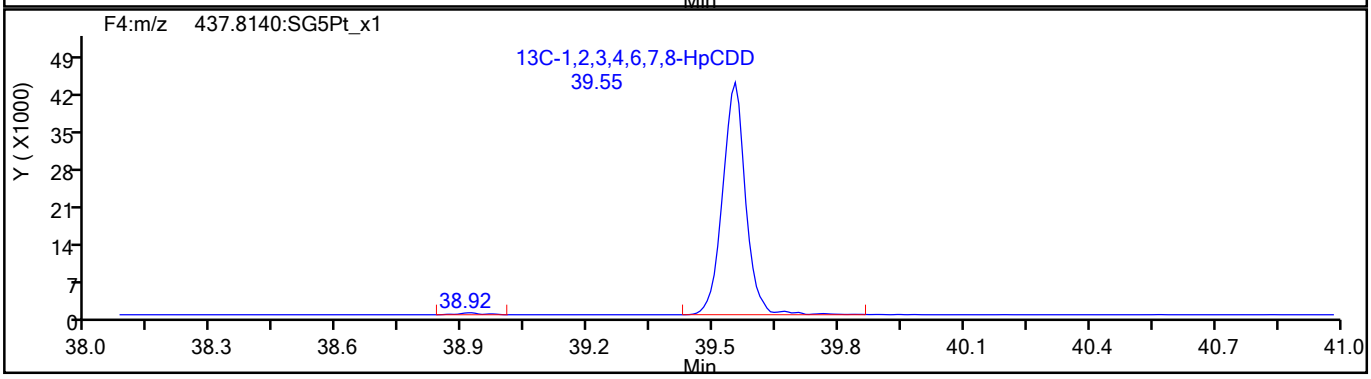

789667

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

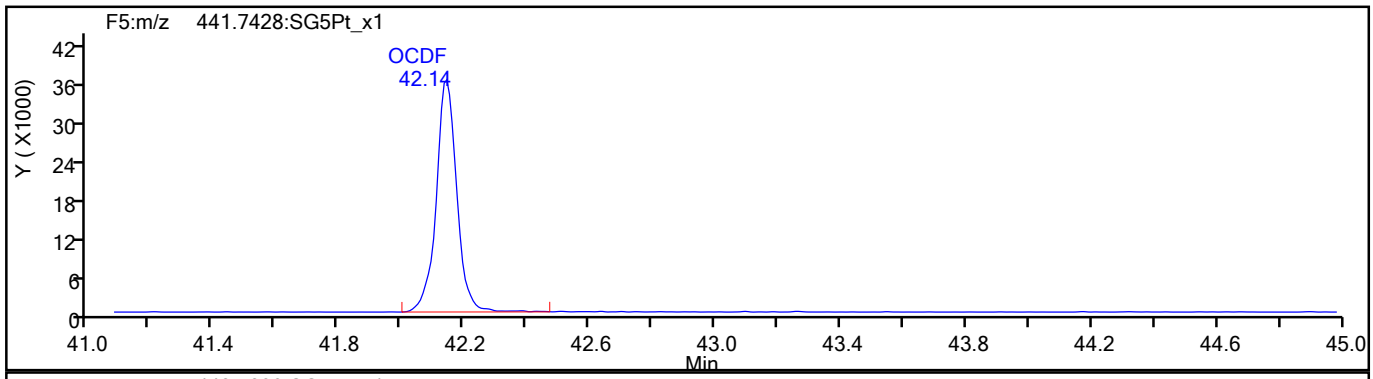

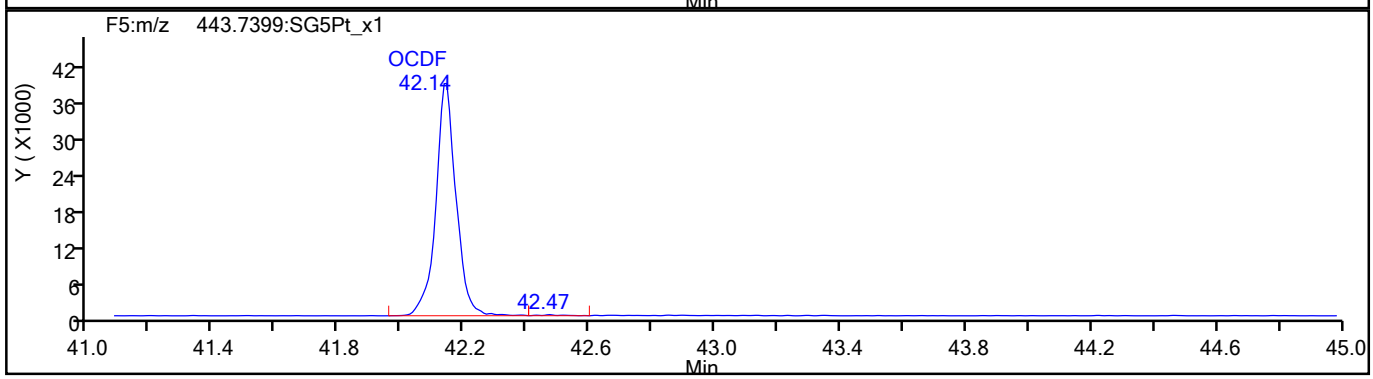

OCDF Standards

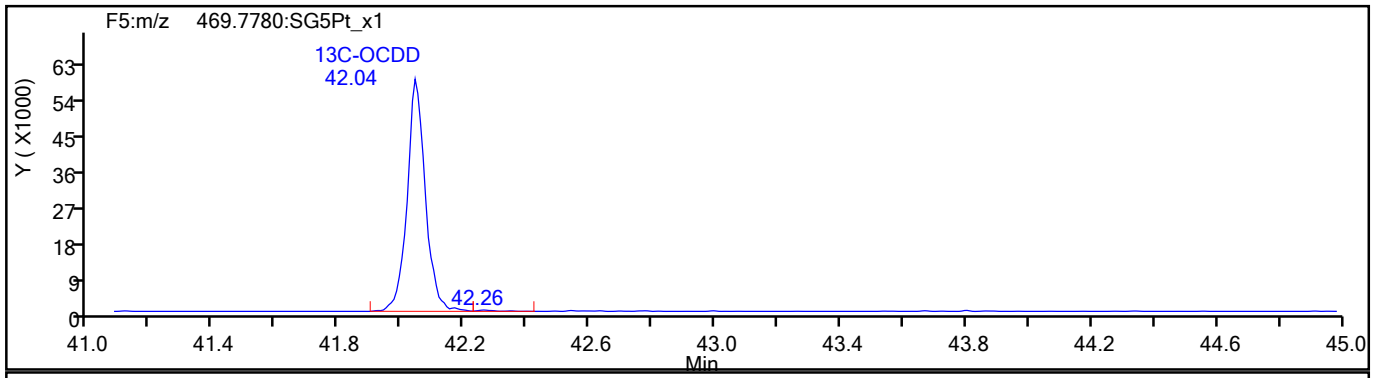

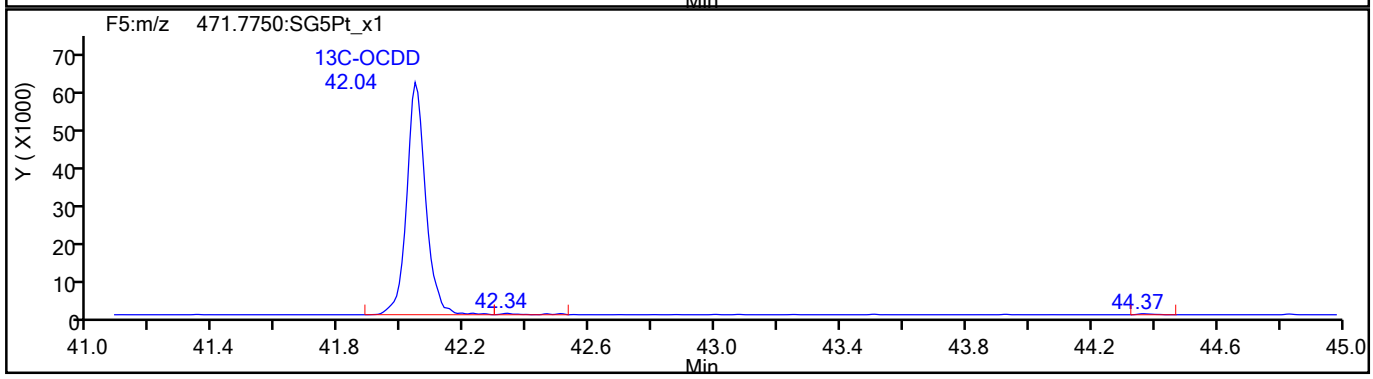

789668

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

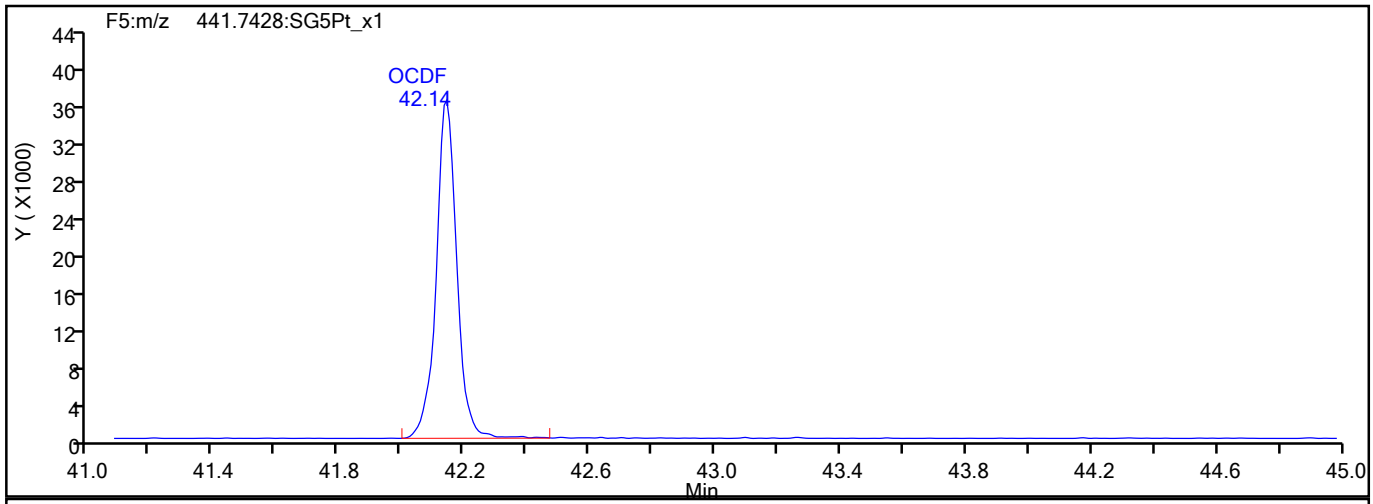

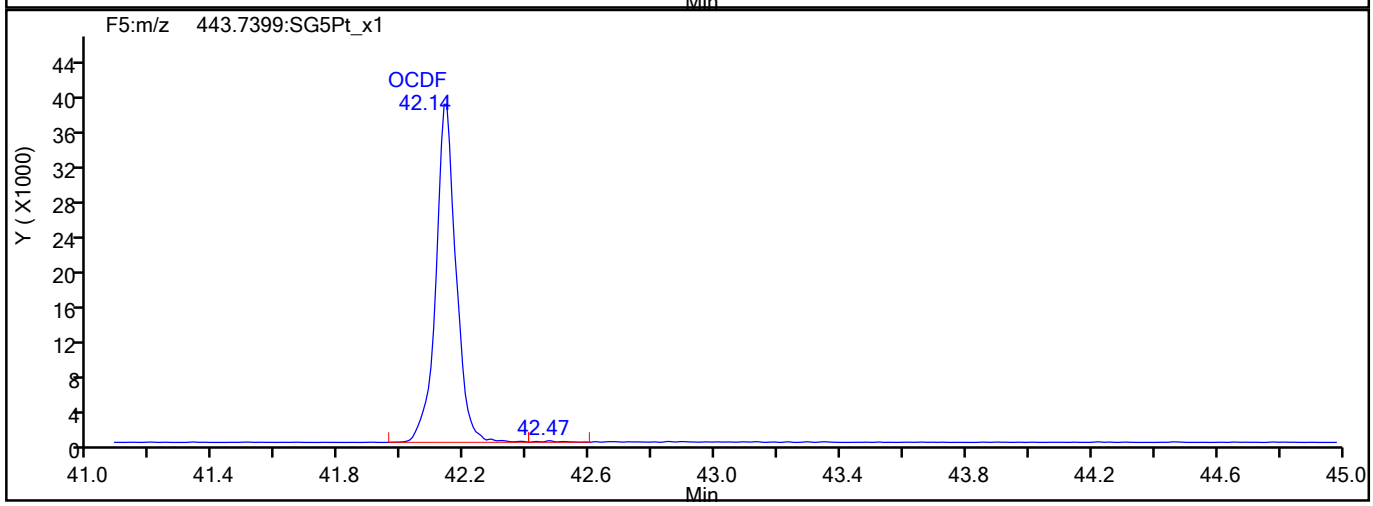

OCDF Interference Mass

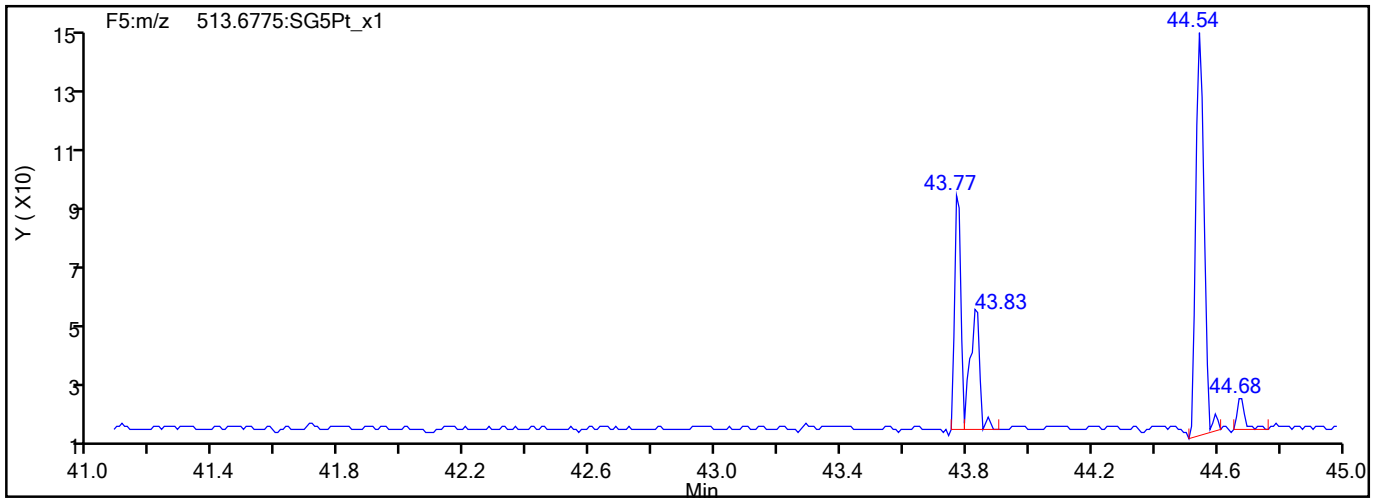

789669

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

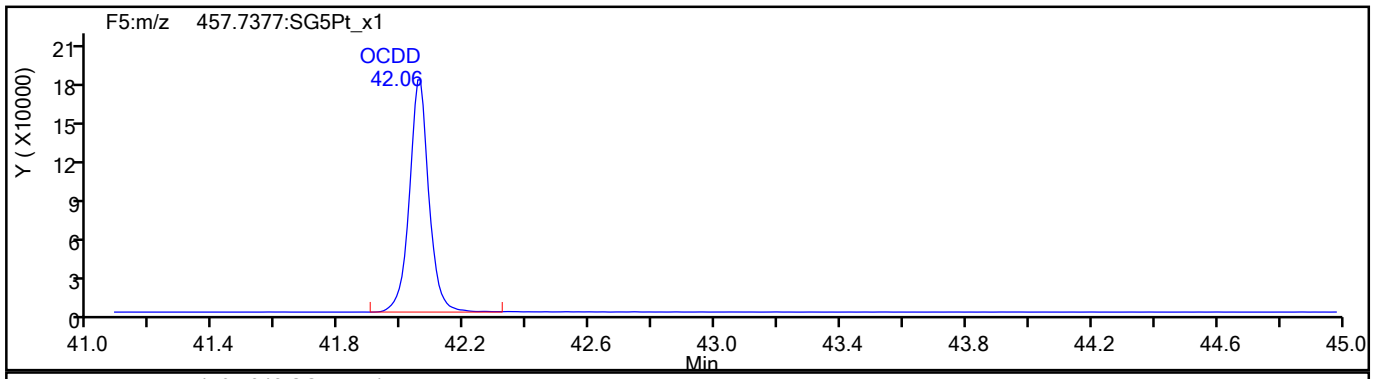

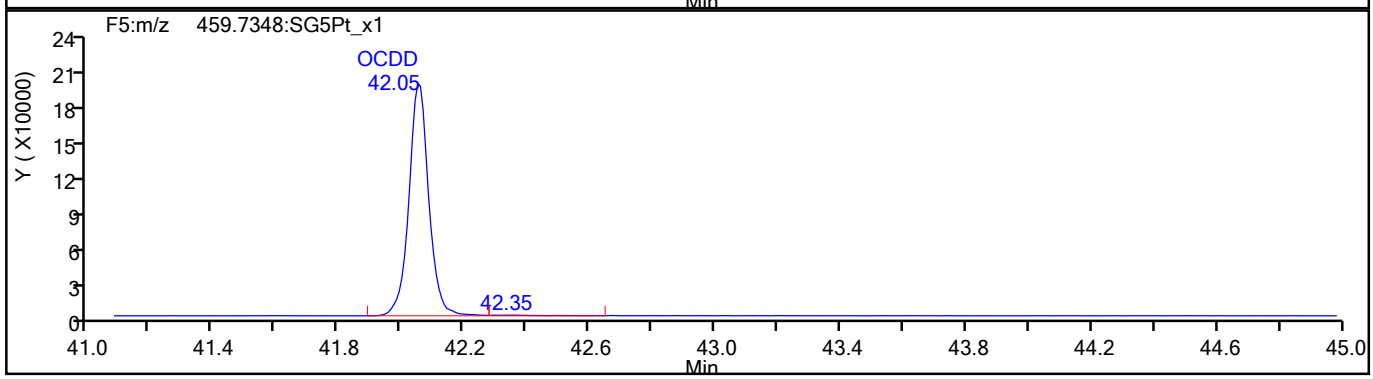

OCDD Standards

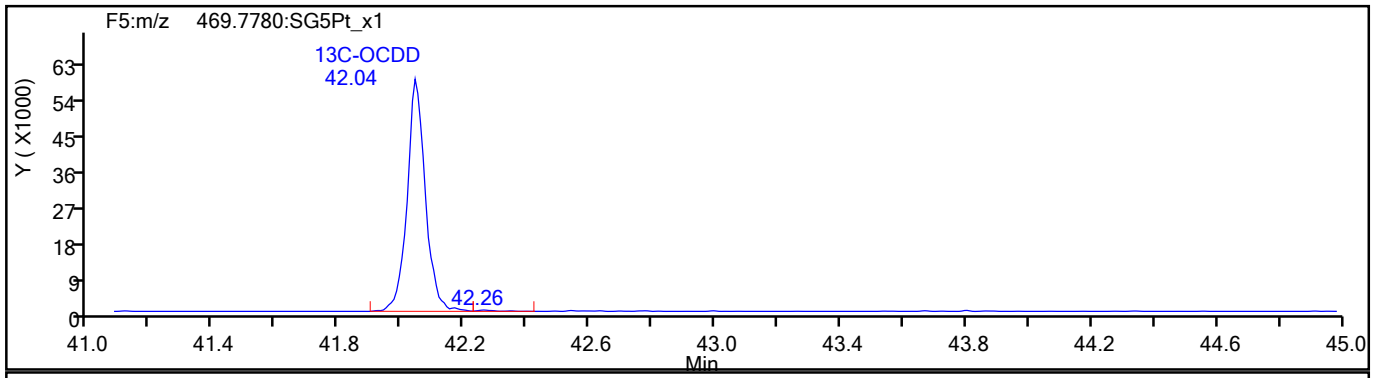

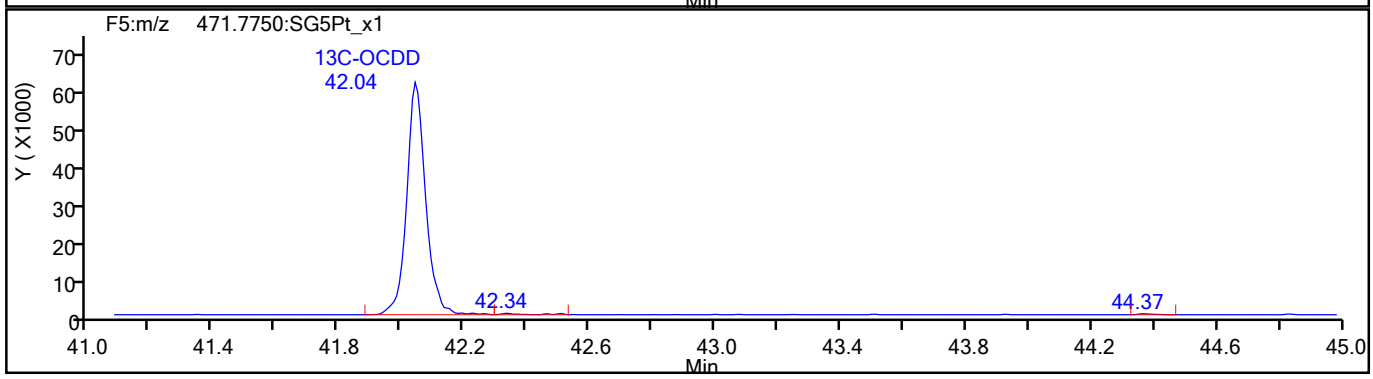

789670

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

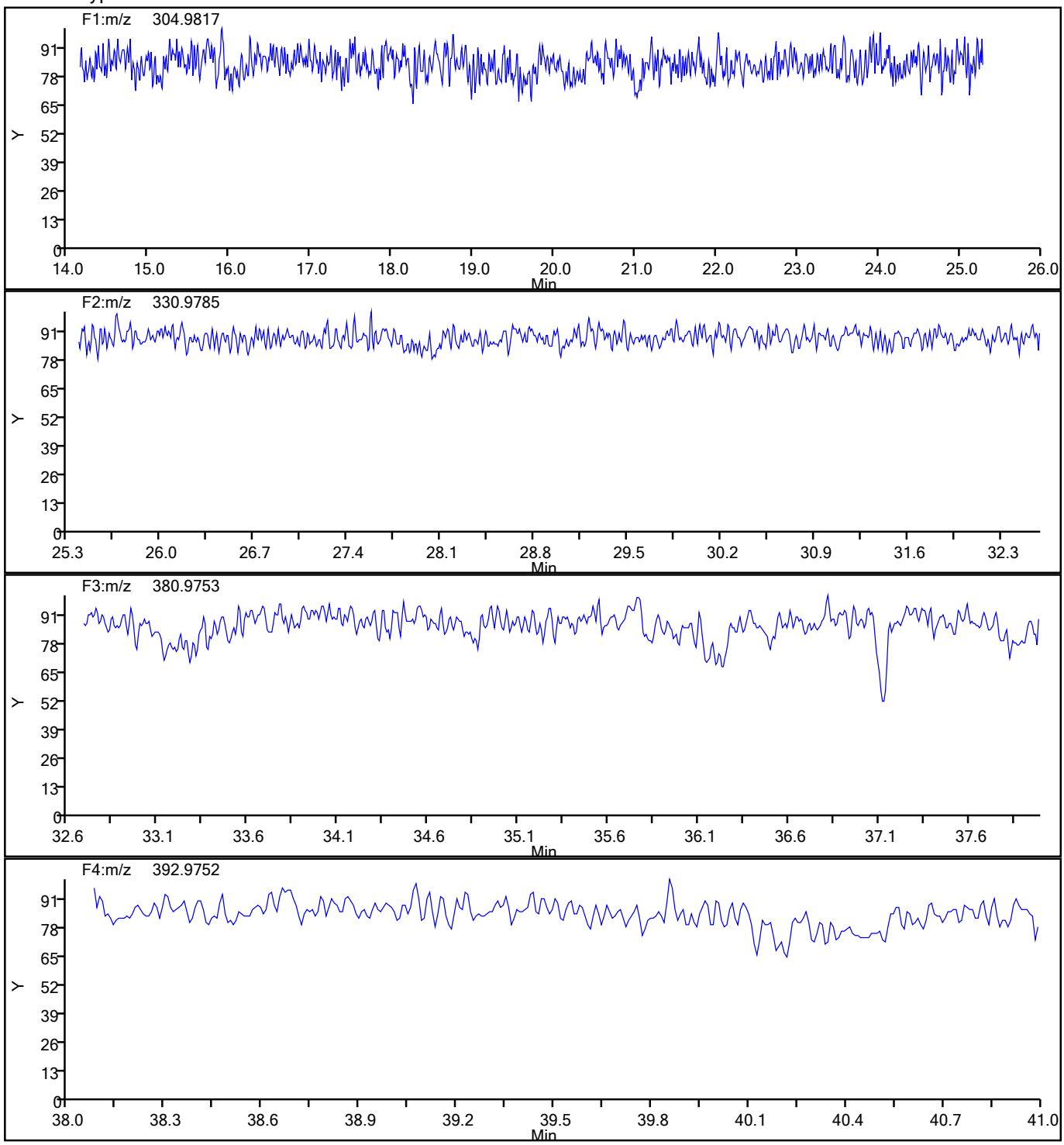

789671

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

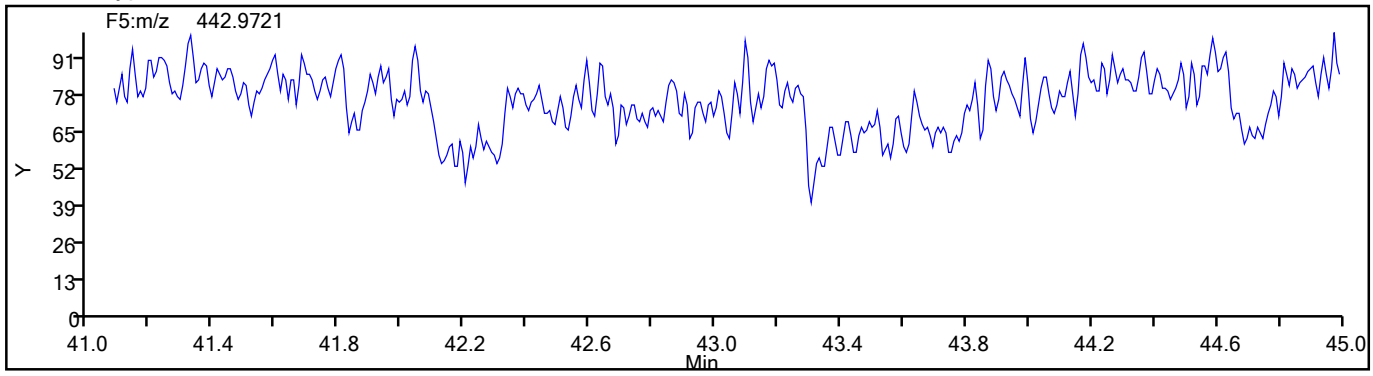

789672

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (2-4) MS RA
Lab Sample ID: 320-76901-2 MS RA
Matrix: Sediment
Lab File ID: 27AU2111D2_007.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.08(g)
Date Analyzed: 08/27/2021 12:52
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	200		1.4	0.60

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	43		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	58		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_007.d
Lims ID: 320-76901-A-2-B MS
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MS
Inject. Date: 27-Aug-2021 12:52:12 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-2-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:50:03

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.287	56841542	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.604	32347604	0.85	1.3327	42.7	42.7	0.2401	0.2401	42.70	
2,3,7,8-TCDF	17.631	23612841	0.79	0.9978	73.2	73.2	0.2204	0.2204	732	
D 13C-2,3,7,8-TCDD	16.054	20171625	0.73	0.8749	40.6	40.6	1.087	1.087	40.56	
2,3,7,8-TCDD	16.081	6500016	0.77	1.0570	30.5	30.5	0.2300	0.2300	305	
$ 37Cl4-2,3,7,8-TCDD	16.081	11386455		0.8648	23.2	23.2	0.0725	0.0725	57.91	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

789674

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_007.d
Lims ID: 320-76901-A-2-B MS
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MS
Inject. Date: 27-Aug-2021 12:52:12 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-2-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:50:03

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.287	16.284	0		24563745	5300789	21290	53225	249		
333.9339	16.287	16.284	0		32277797	7092114	25841	64602	274	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.604	17.614	-1	1.081	14840225	2856793	7831	19577	365		
317.9389	17.604	17.614	-1	1.081	17507379	3208793	8031	20077	400	0.85(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.631	17.628	0	1.002	10436897	1973325	2542	6355	776		
305.8987	17.631	17.628	0	1.002	13175944	2443560	2794	6985	875	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.054	16.064	-1	0.986	8530947	1886793	21290	53225	89		
333.9339	16.068	16.064	0	0.987	11640678	2664386	25841	64602	103	0.73(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.081	16.078	0	1.002	2828033	612021	2335	5837	262		
321.8936	16.081	16.078	0	1.002	3671983	827384	2090	5225	396	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.081	16.078	0	0.987	11386455	2548421	3107	7767	820		

QC Flag Legend

Processing Flags

Report Date: 27-Aug-2021 15:52:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_007.d		
Injection Date:	27-Aug-2021 12:52:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

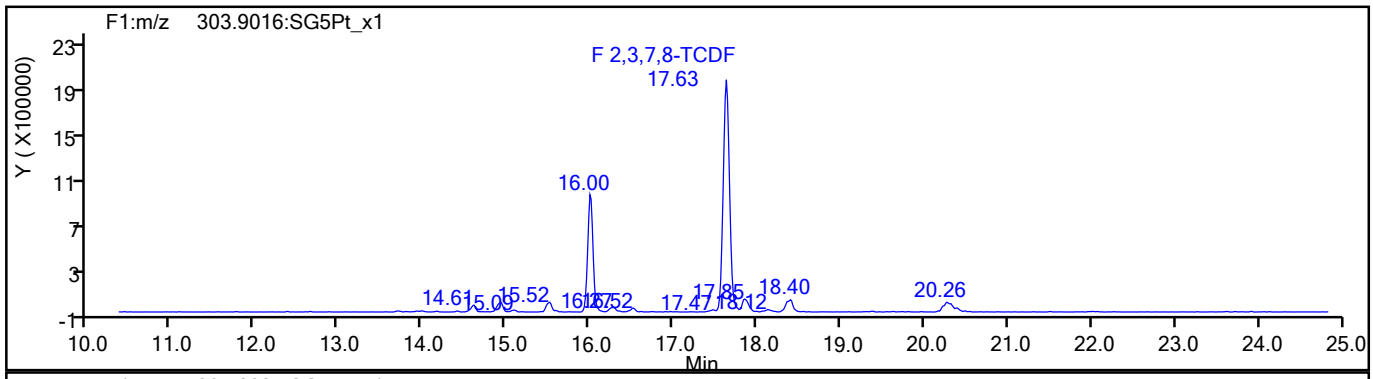

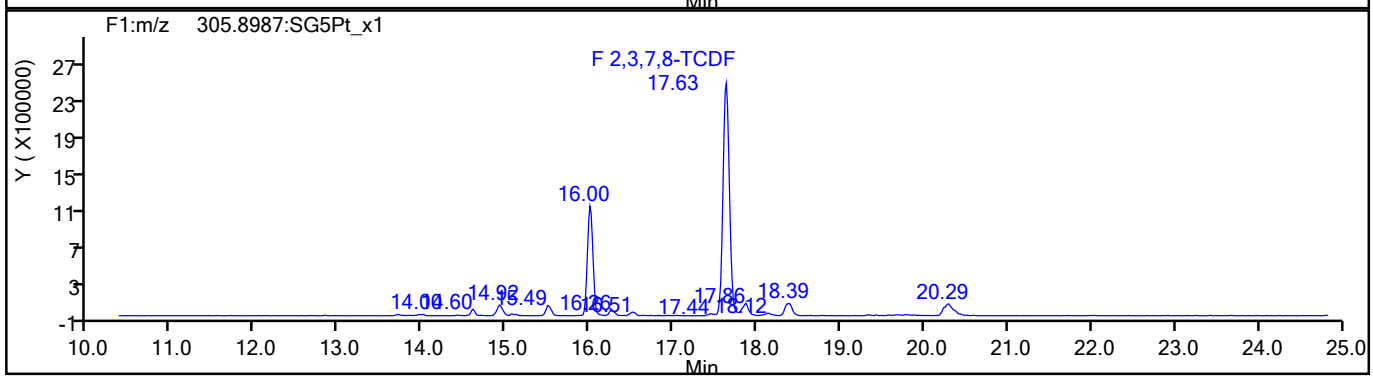

TCDF Standards

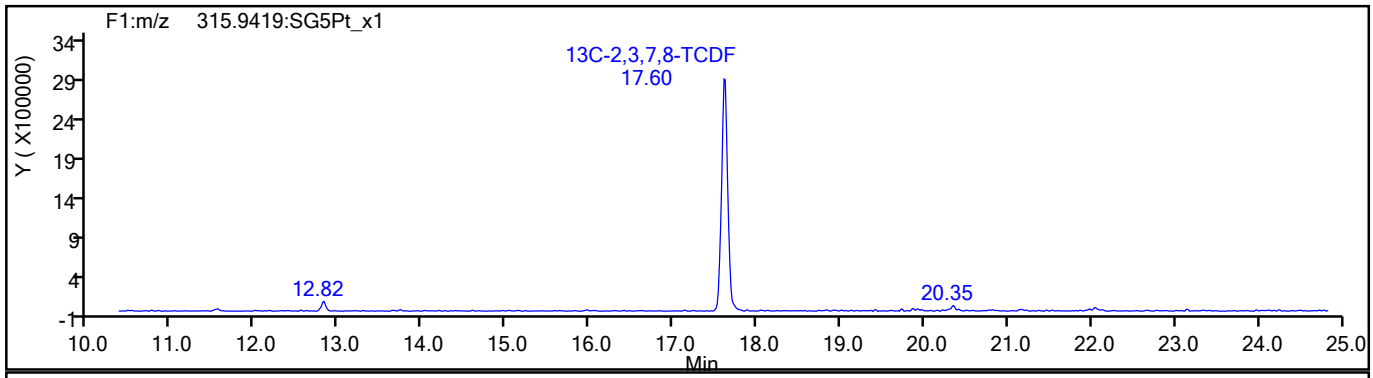

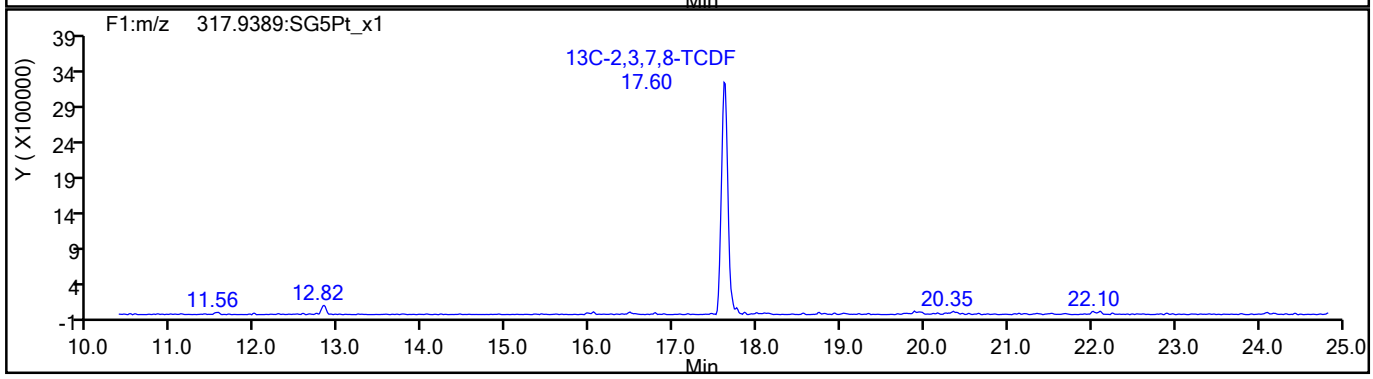

789676

Report Date: 27-Aug-2021 15:52:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_007.d		
Injection Date:	27-Aug-2021 12:52:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

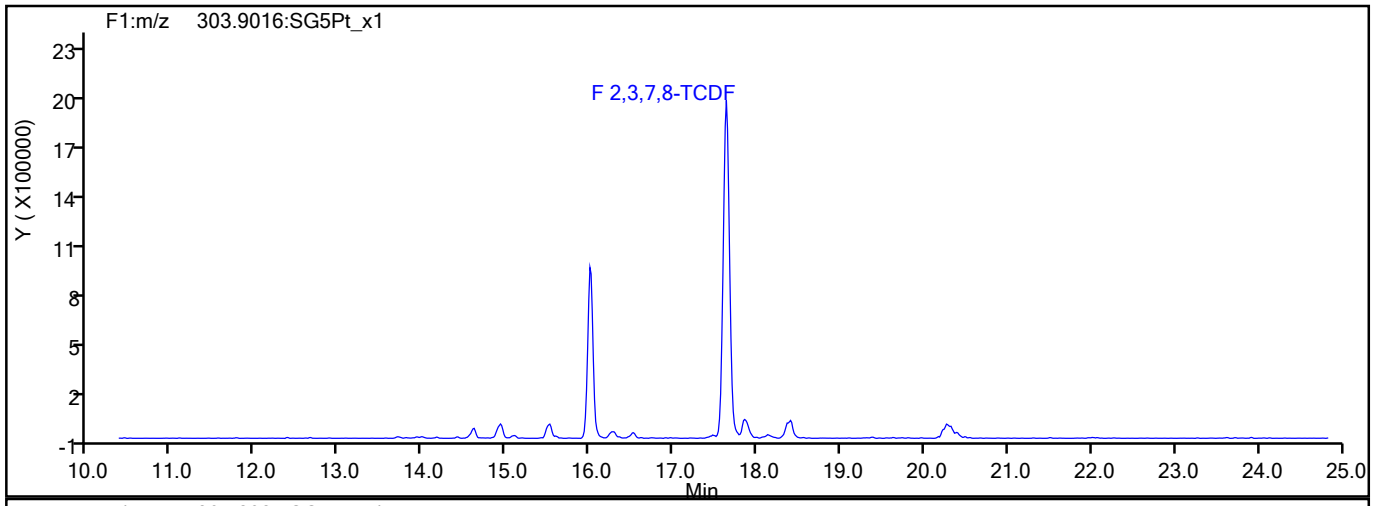

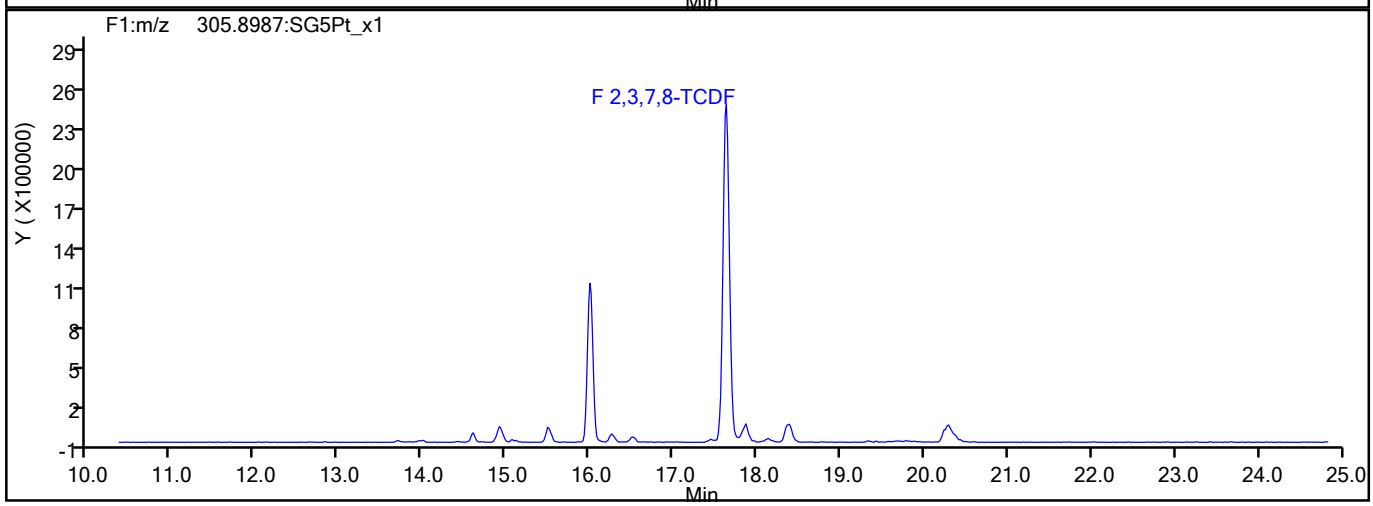

TCDF Interference Mass

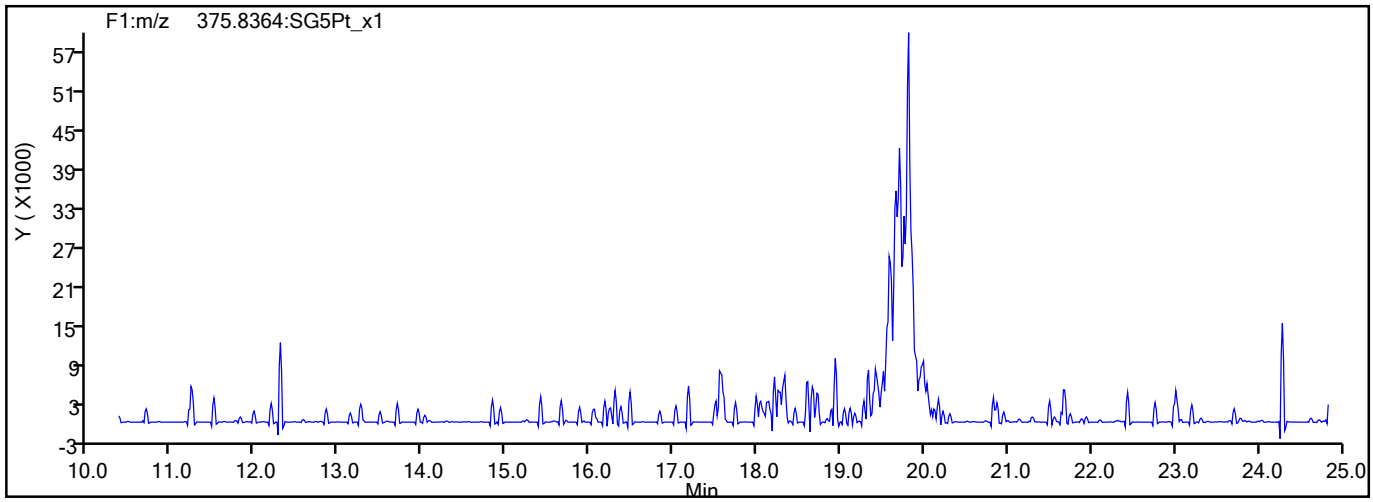

789677

Report Date: 27-Aug-2021 15:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_007.d		
Injection Date:	27-Aug-2021 12:52:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

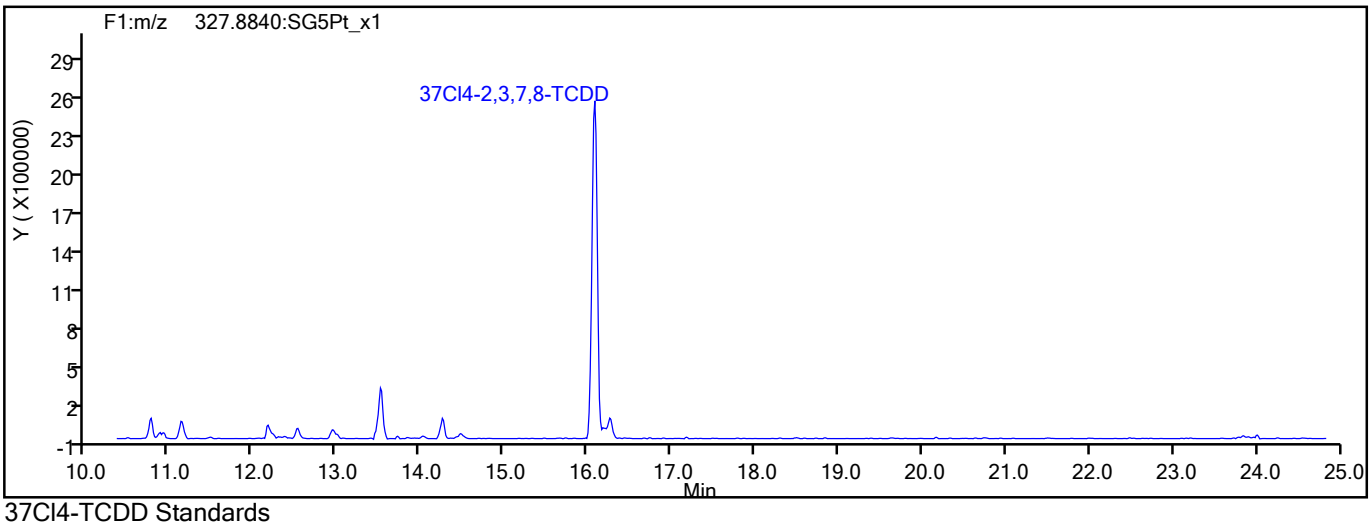

37Cl4-TCDD Standards

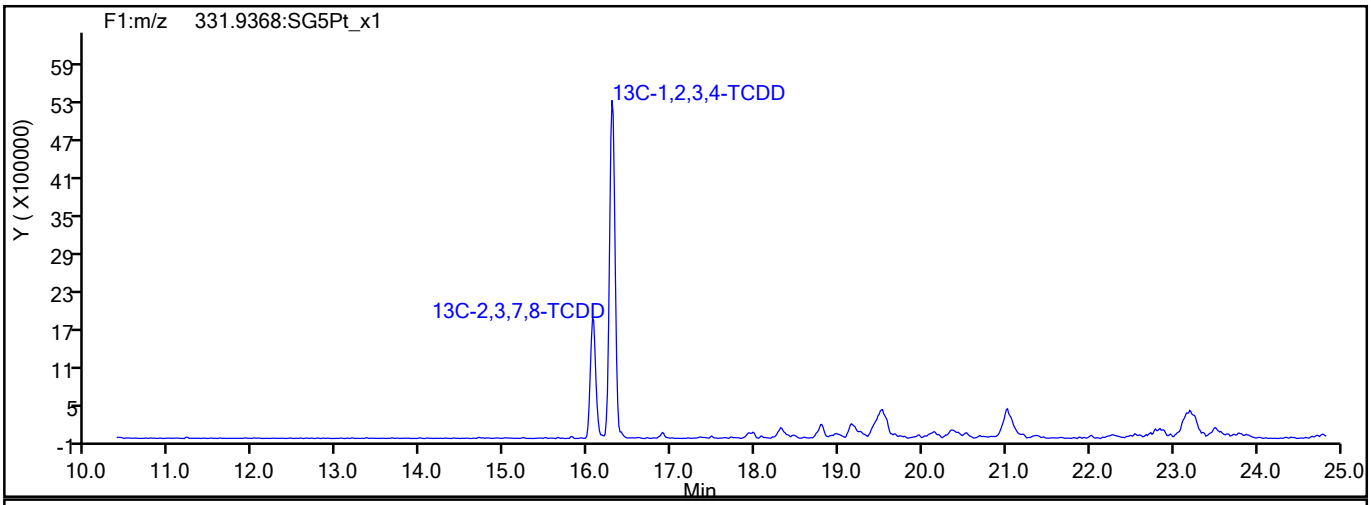

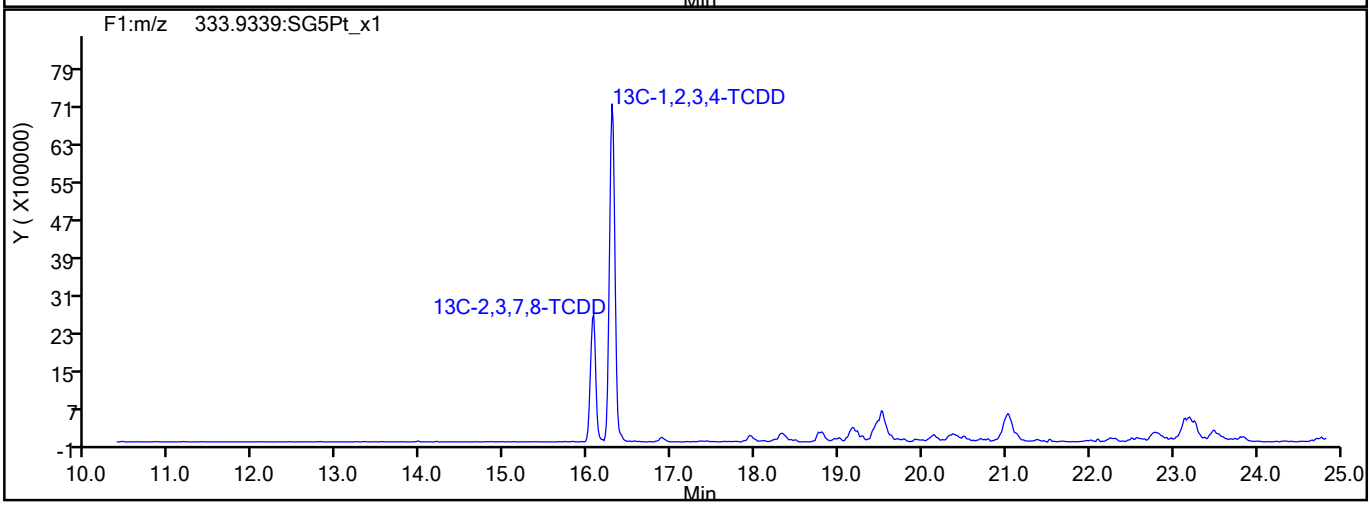

789678

Report Date: 27-Aug-2021 15:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_007.d		
Injection Date:	27-Aug-2021 12:52:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

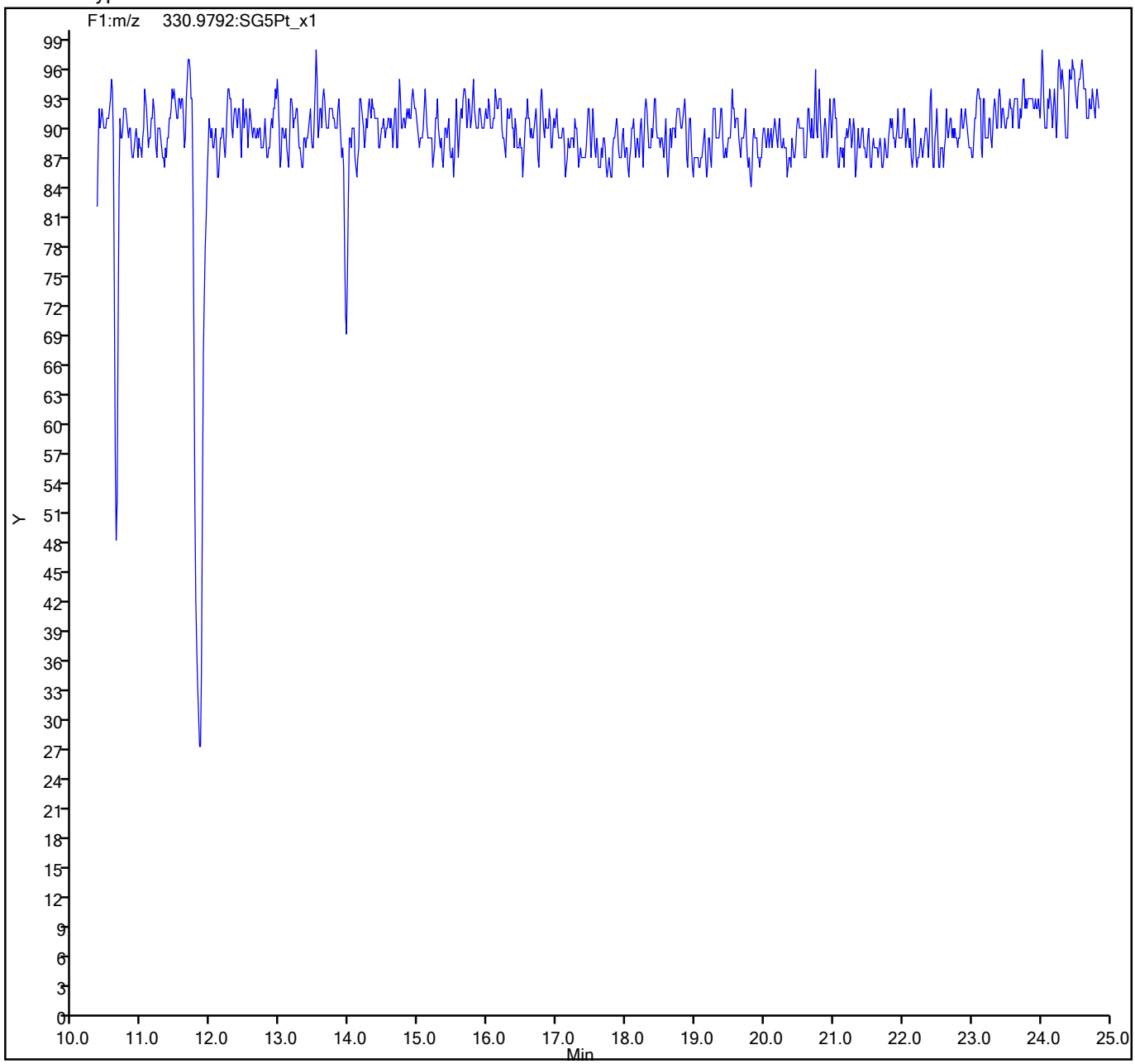

789679

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (2-4) MSD
Lab Sample ID: 320-76901-2 MSD
Matrix: Sediment
Lab File ID: 17au21dfs1_54.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.20(g)
Date Analyzed: 08/19/2021 07:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	65.4		1.3	0.28
40321-76-4	1,2,3,7,8-PeCDD	151		6.7	0.68
57117-41-6	1,2,3,7,8-PeCDF	161		6.7	0.67
57117-31-4	2,3,4,7,8-PeCDF	147		6.7	0.71
39227-28-6	1,2,3,4,7,8-HxCDD	137		6.7	0.82
57653-85-7	1,2,3,6,7,8-HxCDD	142		6.7	0.94
19408-74-3	1,2,3,7,8,9-HxCDD	119		6.7	0.81
70648-26-9	1,2,3,4,7,8-HxCDF	153		6.7	0.58
57117-44-9	1,2,3,6,7,8-HxCDF	161		6.7	0.67
72918-21-9	1,2,3,7,8,9-HxCDF	155		6.7	0.78
60851-34-5	2,3,4,6,7,8-HxCDF	164		6.7	0.63
35822-46-9	1,2,3,4,6,7,8-HpCDD	193		6.7	0.47
67562-39-4	1,2,3,4,6,7,8-HpCDF	152		6.7	0.71
55673-89-7	1,2,3,4,7,8,9-HpCDF	144		6.7	0.65
3268-87-9	OCDD	1450		13	1.2
39001-02-0	OCDF	326		13	0.38
41903-57-5	Total TCDD	68.2		1.3	0.28
30402-14-3	Total TCDF	308		1.3	0.93
36088-22-9	Total PeCDD	153		6.7	0.68
30402-15-4	Total PeCDF	313		6.7	0.69
34465-46-8	Total HxCDD	412		6.7	0.86
55684-94-1	Total HxCDF	634		6.7	0.67
37871-00-4	Total HpCDD	260		6.7	0.47
38998-75-3	Total HpCDF	296		6.7	0.68

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (2-4) MSD
Lab Sample ID: 320-76901-2 MSD
Matrix: Sediment
Lab File ID: 17au21dfs1_54.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.20(g)
Date Analyzed: 08/19/2021 07:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	46		25-164
89059-46-1	13C-2,3,7,8-TCDF	43		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	43		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	45		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	48		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	57		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	67		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	56		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	41		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	50		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	55		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	55		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	61		26-138
114423-97-1	13C-OCDD	62		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	57		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d
Lims ID: 320-76901-A-2-C MSD
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MSD
Inject. Date: 19-Aug-2021 07:06:00 ALS Bottle#: 0 Worklist Smp#: 50
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-2-c msd
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:56:43 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:30:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.329	1248189	0.83	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.367	729731	0.84	1.3459	43.4	43.4	0.1654	0.1654	43.44	
2,3,7,8-TCDF	20.401	575157	0.82	1.0802	73.0	73.0	0.3457	0.3457	730	
A Non-2,3,7,8-sub-TCDF	19.878	324005	0.77	1.0802	41.5	41.1	0.3457	27.9	0.00	RQ
S Total TCDF					114.4	114.1	0.3457	0.3457		RQ
D 13C-2,3,7,8-TCDD	21.715	530739	0.82	0.9317	45.6	45.6	0.1641	0.1641	45.64	
2,3,7,8-TCDD	21.775	138356	0.78	1.0753	24.2	24.2	0.1056	0.1056	242	
$ 37Cl4-2,3,7,8-TCDD	21.758	287102		1.0083	22.8	22.8	0.0451	0.0451	57.03	
A Non-2,3,7,8-sub-TCDD	20.707	6078	0.89	1.0753	1.065	1.065	0.1056	1.065	0.00	a
S Total TCDD					25.3	25.3	0.1056	0.1056		
D 13C-1,2,3,7,8-PeCDF	27.247	643396	1.60	1.1405	45.2	45.2	0.1500	0.1500	45.20	
1,2,3,7,8-PeCDF	27.273	405542	1.61	1.0543	59.8	59.8	0.2474	0.2474	120	
D 13C-2,3,4,7,8-PeCDF	28.755	677367	1.59	1.1253	48.2	48.2	0.1520	0.1520	48.22	
2,3,4,7,8-PeCDF	28.780	371066	1.60	1.0079	54.4	54.4	0.2642	0.2642	109	
A F1 PeCDFs	24.648						0.0123	0.1074		U
A Non-2,3,7,8-sub-PeCDF	28.125	12772	1.55	1.0311	2.034	1.876	0.2556	0.9466	0.00	RQ
S Total PeCDF					116.2	116.0	0.2558	0.2558		RQ
D 13C-1,2,3,7,8-PeCDD	29.564	386850	1.60	0.7165	43.3	43.3	0.1482	0.1482	43.26	
1,2,3,7,8-PeCDD	29.597	226890	1.53	1.0465	56.0	56.0	0.2523	0.2523	112	
A Non-2,3,7,8-sub-PeCDD	28.489	3259	1.55	1.0465	1.096	0.8050	0.2523	0.3431	0.00	RQ
S Total PeCDD					57.1	56.8	0.2523	0.2523		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.915	586830	0.53	0.9648	67.5	67.5	0.1928	0.1928	67.50	
1,2,3,4,7,8-HxCDF	34.924	381545	1.27	1.1474	56.7	56.7	0.2134	0.2134	113	
D 13C-1,2,3,6,7,8-HxCDF	35.075	535800	0.54	1.0708	55.5	55.5	0.1737	0.1737	55.53	
1,2,3,6,7,8-HxCDF	35.084	390501	1.31	1.2178	59.8	59.8	0.2472	0.2472	120	
D 13C-2,3,4,6,7,8-HxCDF	35.892	468106	0.52	1.0413	49.9	49.9	0.1786	0.1786	49.89	
2,3,4,6,7,8-HxCDF	35.900	346772	1.33	1.2145	61.0	61.0	0.2348	0.2348	122	
D 13C-1,2,3,7,8,9-HxCDF	36.776	357245	0.53	0.9731	40.7	40.7	0.1912	0.1912	40.74	
1,2,3,7,8,9-HxCDF	36.801	255449	1.34	1.2401	57.7	57.7	0.2911	0.2911	115	
A Non-2,3,7,8-sub-HxCDF	35.028						0.2426	0.2426		
S Total HxCDF					235.2	235.2	0.2466	0.2466		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.574	901101	1.27	1.8E+04	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	36.094	390499	1.14	0.7587	57.1	57.1	0.1168	0.1168	57.12	
1,2,3,4,7,8-HxCDD	36.111	209743	1.20	1.0608	50.6	50.6	0.3027	0.3027	101	
D 13C-1,2,3,6,7,8-HxCDD	36.212	430290	1.25	0.8593	55.6	55.6	0.1031	0.1031	55.57	
1,2,3,6,7,8-HxCDD	36.229	225667	1.26	0.9933	52.8	52.8	0.3497	0.3497	106	
1,2,3,7,8,9-HxCDD	36.591	201566	1.27	1.1094	44.3	44.3	0.3008	0.3008	88.54	
A Non-2,3,7,8-sub-HxCDD	35.394	22737	1.24	1.0545	5.593	5.254	0.3165	3.541	0.00	RQ
S Total HxCDD					153.3	153.0	0.3178	0.3178		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.599	362194	0.46	0.7359	54.6	54.6	0.1919	0.1919	54.62	
1,2,3,4,6,7,8-HpCDF	38.607	294882	1.02	1.4421	56.5	56.5	0.2630	0.2630	113	
D 13C-1,2,3,4,7,8,9-HpCDF	39.845	376400	0.43	0.6854	60.9	60.9	0.2061	0.2061	60.95	
1,2,3,4,7,8,9-HpCDF	39.862	262323	1.05	1.3092	53.2	53.2	0.2393	0.2393	106	
A Non-2,3,7,8-sub-HpCDF	39.258						0.2495	0.2495		
S Total HpCDF					109.7	109.7	0.2512	0.2512		
D 13C-1,2,3,4,6,7,8-HpCDD	39.542	336170	1.06	0.6745	55.3	55.3	0.1242	0.1242	55.31	
1,2,3,4,6,7,8-HpCDD	39.550	252425	1.07	1.0503	71.5	71.5	0.1759	0.1759	143	
A Non-2,3,7,8-sub-HpCDD	39.258	88130	1.04	1.0503	25.0	25.0	0.1759	25.0	0.00	
S Total HpCDD					96.5	96.5	0.1759	0.1759		
D 13C-OCDD	42.039	610449	0.91	0.5446	124.4	124.4	0.1207	0.1207	62.19	
OCDF	42.140	486329	0.94	1.3168	121.0	121.0	0.1408	0.1408	121	
OCDD	42.056	1748962	0.89	1.0620	539.6	539.6	0.4398	0.4398	540	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d
Lims ID: 320-76901-A-2-C MSD
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MSD
Inject. Date: 19-Aug-2021 07:06:00 ALS Bottle#: 0 Worklist Smp#: 50
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-2-c msd
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:56:43 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:30:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.329	21.427	-6		564969	72927	66	165	1105		a
333.9338	21.337	21.427	-5		683220	91920	35	87	2626	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.367	20.401	-2	0.955	332911	45753	101	252	453		
317.9389	20.367	20.401	-2	0.955	396820	54659	46	115	1188	0.84(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.401	20.436	-2	1.002	258753	33760	68	170	496		
305.8987	20.418	20.436	-1	1.003	316404	40055	82	205	488	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	17.851	19.878	-121	0.876	4802	1013	68	170	15		
305.8987	17.851	19.878	-121	0.876	5527	992	82	205	12	0.87(0.65-0.89)	
303.9016	19.191	19.878	-41	0.942	8894	1332	68	170	20		
305.8987	19.165	19.878	-43	0.941	12405	1657	82	205	20	0.72(0.65-0.89)	
303.9016	19.689	19.878	-11	0.967	100135	14610	68	170	215		
305.8987	19.671	19.878	-12	0.966	120067	17602	82	205	215	0.83(0.65-0.89)	
303.9016	20.101	19.878	13	0.987	4020	601	68	170	9		
305.8987	20.075	19.878	12	0.986	5037	801	82	205	10	0.80(0.65-0.89)	
303.9016	21.183	19.878	78	1.040	17010	2287	68	170	34		
	Empc Correction				14122	2053	68	170	30		
305.8987	21.191	19.878	79	1.040	18341	2667	82	205	33	0.93(0.65-0.89)	
303.9016	23.580	19.878	222	1.158	13008	2161	68	170	32		
305.8987	23.580	19.878	222	1.158	17647	2927	82	205	36	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.715	21.743	-2	1.018	239494	30600	66	165	464		
333.9338	21.732	21.743	-1	1.019	291245	37212	35	87	1063	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											
319.8965	21.775	21.777	0	1.003	60835	7898	20	50	395		
321.8936	21.758	21.777	-1	1.002	77521	10545	11	27	959	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.758	21.849	-5	1.020	287102	36718	30	75	1224		
A Non-2,3,7,8-sub-TCDD											a
319.8965	22.420	20.707	103	1.032	2870	515	20	50	26		a
321.8936	22.429	20.707	103	1.033	3208	593	11	27	54	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.247	27.288	-2	1.277	395686	60175	58	145	1038		
353.8970	27.256	27.288	-2	1.278	247710	35689	55	137	649	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.273	27.313	-2	1.001	250374	36533	63	157	580		
341.8567	27.264	27.313	-3	1.001	155168	22637	37	92	612	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.755	28.795	-2	1.348	415584	58542	58	145	1009		
353.8970	28.772	28.795	-1	1.349	261783	35351	55	137	643	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.780	28.820	-2	1.001	228456	31189	63	157	495		
341.8567	28.780	28.820	-2	1.001	142610	19298	37	92	522	1.60(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.061	24.648	-35	0.883	420	133	1	2	133		
341.8567	24.001	24.648	-39	0.881	311	81	4	10	20	1.35(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.782	28.125	-140	0.946	3846	669	63	157	11		
341.8567	25.782	28.125	-140	0.946	2973	464	37	92	13	1.29(1.32-1.78)	
	Empc Correction				2481	431	37	92	12		
339.8597	27.846	28.125	-17	1.022	3918	623	63	157	10		
341.8567	27.880	28.125	-15	1.023	3113	373	37	92	10	1.26(1.32-1.78)	
	Empc Correction				2527	401	37	92	11		
13C-1,2,3,7,8-PeCDD											
367.8949	29.564	29.612	-3	1.386	237975	32092	31	77	1035		
369.8919	29.580	29.612	-2	1.387	148875	17909	39	97	459	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.597	29.637	-2	1.001	137153	17946	31	77	579		
357.8516	29.606	29.637	-2	1.001	89737	11079	22	55	504	1.53(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.052	28.489	-146	0.881	341	123	31	77	4		
357.8516	26.077	28.489	-144	0.882	1072	179	22	55	8	0.32(1.32-1.78)	
	Empc Correction				220	79	22	55	4		
355.8546	26.877	28.489	-97	0.909	796	191	31	77	6		
357.8516	26.877	28.489	-97	0.909	608	138	22	55	6	1.31(1.32-1.78)	
	Empc Correction				513	123	22	55	6		
355.8546	27.989	28.489	-30	0.947	1075	186	31	77	6		
	Empc Correction				844	269	31	77	9		
357.8516	27.989	28.489	-30	0.947	545	174	22	55	8	1.97(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.915	34.942	-2	0.955	203983	39880	61	152	654		
385.8610	34.907	34.942	-2	0.954	382847	73272	92	230	796	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.924	34.959	-2	1.000	213742	42412	64	160	663		
375.8178	34.924	34.959	-2	1.000	167803	33033	47	117	703	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.075	35.111	-2	0.959	188549	32997	61	152	541		
385.8610	35.067	35.111	-3	0.959	347251	59005	92	230	641	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.084	35.119	-2	1.000	221568	38639	64	160	604		
375.8178	35.084	35.119	-2	1.000	168933	29151	47	117	620	1.31(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.892	35.919	-2	0.981	160833	34312	61	152	562		
385.8610	35.883	35.919	-2	0.981	307273	62815	92	230	683	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.900	35.936	-2	1.000	198054	40921	64	160	639		
375.8178	35.900	35.936	-2	1.000	148718	31392	47	117	668	1.33(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.776	36.811	-2	1.006	123988	27807	61	152	456		
385.8610	36.784	36.811	-2	1.006	233257	48936	92	230	532	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.801	36.828	-2	1.001	146499	31299	64	160	489		
375.8178	36.793	36.828	-2	1.000	108950	23360	47	117	497	1.34(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						64	160			
375.8178	35.028						47	117			
13C-1,2,3,7,8,9-HxCDD											a
401.8559	36.574	36.609	-2		503379	116384	48	120	2425		a
403.8529	36.574	36.609	-2		397722	88961	25	62	3558	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.094	36.129	-2	0.987	207820	50883	48	120	1060		
403.8529	36.094	36.129	-2	0.987	182679	43162	25	62	1726	1.14(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.111	36.146	-2	1.000	114487	24766	55	137	450		
391.8127	36.111	36.146	-2	1.000	95256	20560	66	165	312	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.212	36.247	-2	0.990	238902	46755	48	120	974		
403.8529	36.212	36.247	-2	0.990	191388	40181	25	62	1607	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.229	36.264	-2	1.000	126027	25564	55	137	465		
391.8127	36.229	36.264	-2	1.000	99640	21249	66	165	322	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.591	36.626	-2	1.014	112709	22960	55	137	417		
391.8127	36.582	36.626	-3	1.014	88857	18321	66	165	278	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	34.208	35.394	-71	0.945	8270	1375	55	137	25		
391.8127	34.233	35.394	-70	0.945	7054	1150	66	165	17	1.17(1.05-1.43)	
389.8158	35.328	35.394	-4	0.976	4104	957	55	137	17		
391.8127	35.336	35.394	-3	0.976	4778	862	66	165	13	0.86(1.05-1.43)	
	Empc Correction				3309	771	66	165	12		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.599	38.626	-2	1.055	113757	25033	39	97	642		
419.8220	38.599	38.626	-2	1.055	248437	59327	77	192	770	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.607	38.630	-1	1.000	149066	35087	71	177	494		
409.7788	38.607	38.630	-1	1.000	145816	33825	57	142	593	1.02(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.845	39.880	-2	1.089	113001	30686	39	97	787		
419.8220	39.853	39.880	-2	1.090	263399	71461	77	192	928	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.862	39.885	-1	1.000	134057	35489	71	177	500		
409.7788	39.862	39.885	-1	1.000	128266	34295	57	142	602	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						71	177			
409.7788	39.258						57	142			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.542	39.569	-2	1.081	173345	46882	26	65	1803		
437.8140	39.542	39.569	-2	1.081	162825	43499	43	107	1012	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.550	39.582	-2	1.000	130452	33383	31	77	1077		
425.7737	39.550	39.582	-2	1.000	121973	30663	36	90	852	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.919	39.258	-20	0.984	44952	11791	31	77	380		
425.7737	38.919	39.258	-20	0.984	43178	11254	36	90	313	1.04(0.88-1.20)	
13C-OCDD											
469.7780	42.039	42.072	-2	1.149	290062	69327	27	67	2568		
471.7750	42.047	42.072	-1	1.150	320387	76258	27	67	2824	0.91(0.76-1.02)	
OCDF											
441.7428	42.140	42.165	-1	1.002	235923	54742	23	57	2380		
443.7399	42.140	42.165	-1	1.002	250406	58376	31	77	1883	0.94(0.76-1.02)	
OCDD											
457.7377	42.056	42.081	-1	1.000	823958	195903	65	162	3014		
459.7348	42.056	42.081	-1	1.000	925004	218785	71	177	3081	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

U - Marked Undetected

a - User Assigned ID

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	729731	100412

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	729731	100412

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.851	4802	1013	5527	992	1.31	0.87	
19.191	8894	1332	12405	1657	2.70	0.72	
19.689	100135	14610	120067	17602	27.9	0.83	
20.101	4020	601	5037	801	1.15	0.80	
21.183	17010	2287	18341	2667	4.48	0.93	RQ
21.183	14122	2053	18341	2667	4.12		Empc Correction
23.580	13008	2161	17647	2927	3.89	0.74	
Signal Totals:							
	144981	21770	179024	26646			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	326893	48650				0.83	RQ
	324005	48416					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 41.471 = (326893 * 100.000) / (729731 * 1.080)
Empc Amount: 41.104 = (324005 * 100.000) / (729731 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	530739	67812

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	530739	67812

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.420	2870	515	3208	593	1.06	0.89	a
Signal Totals:							
	2870	515	3208	593			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6078	1108				0.89	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.065 = (6078 * 100.000) / (530739 * 1.075)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	643396	95864
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	677367	93893

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	660381	94878

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.061	420	133	311	81	0.1074	1.35	

Compound is Marked ND

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	643396	95864
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	677367	93893

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	660381	94878

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.782	3846	669	2973	464	1.00	1.29	RQ
25.782	3846	669	2481	431	0.9292		Empc Correction
27.846	3918	623	3113	373	1.03	1.26	RQ
27.846	3918	623	2527	401	0.9466		Empc Correction
Signal Totals:							
	7764	1292	5008	832			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13850	2129				1.28	RQ
	12772	2124					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.034 = (13850 * 100.000) / (660381 * 1.031)

Empc Amount: 1.876 = (12772 * 100.000) / (660381 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	386850	50001

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	386850	50001

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.052	341	123	1072	179	0.3490	0.32	RQ
26.052	341	123	220	79	0.1386		Empc Correction
26.877	796	191	608	138	0.3468	1.31	RQ
26.877	796	191	513	123	0.3233		Empc Correction
27.989	1075	186	545	174	0.4002	1.97	RQ
27.989	844	269	545	174	0.3431		Empc Correction
Signal Totals:							
	1981	583	1278	376			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4437	991				0.99	RQ
	3259	959					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.096 = (4437 * 100.000) / (386850 * 1.046)

Empc Amount: 0.8050 = (3259 * 100.000) / (386850 * 1.046)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	390499	94045
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	430290	86936
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	410394	90490

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.208	8270	1375	7054	1150	3.54	1.17	
35.328	4104	957	4778	862	2.05	0.86	RQ
35.328	4104	957	3309	771	1.71		Empc Correction
Signal Totals:							
	12374	2332	10363	1921			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	24206	4344				1.05	RQ
	22737	4253					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 5.593 = (24206 * 100.000) / (410394 * 1.055)

Empc Amount: 5.254 = (22737 * 100.000) / (410394 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	336170	90381

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	336170	90381

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.919	44952	11791	43178	11254	25.0	1.04	
Signal Totals:							
	44952	11791	43178	11254			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	88130	23045				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 24.960 = (88130 * 100.000) / (336170 * 1.050)

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

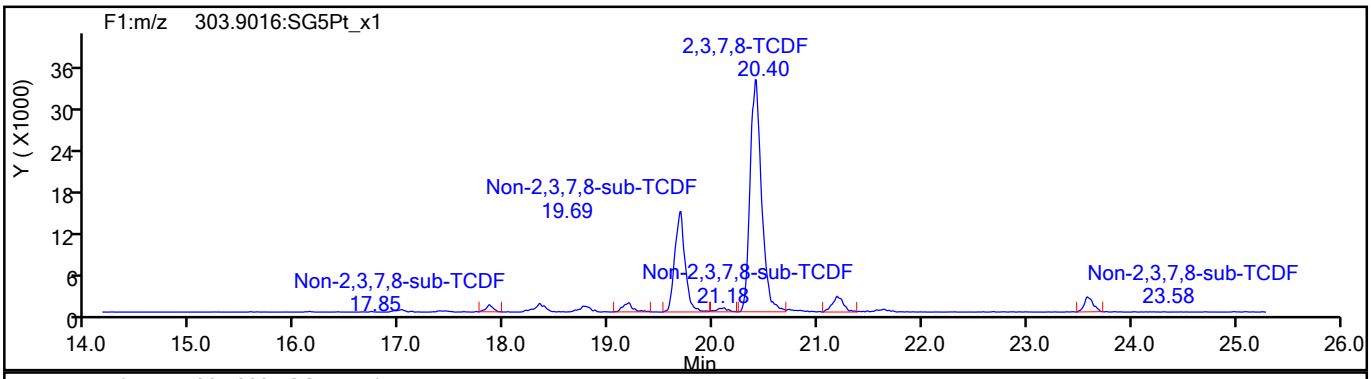

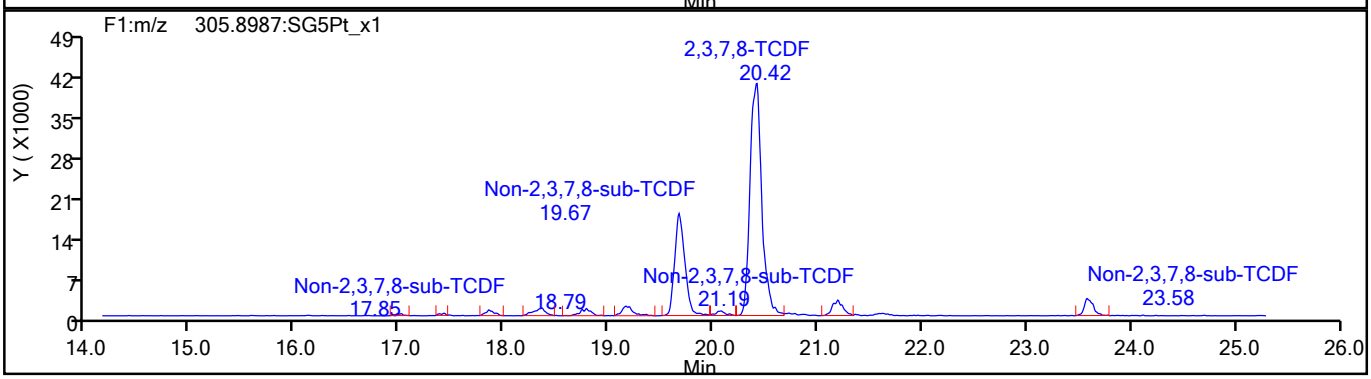

TCDF Standards

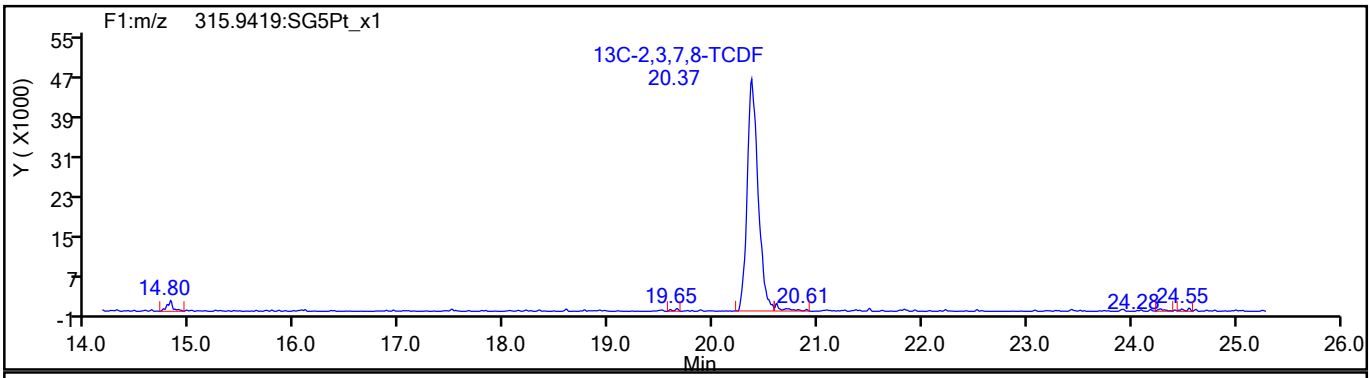

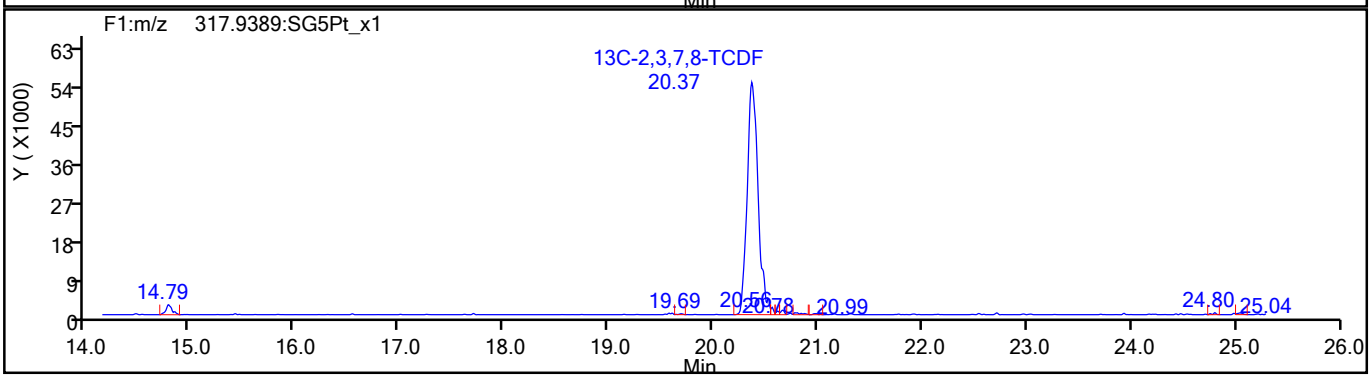

789696

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

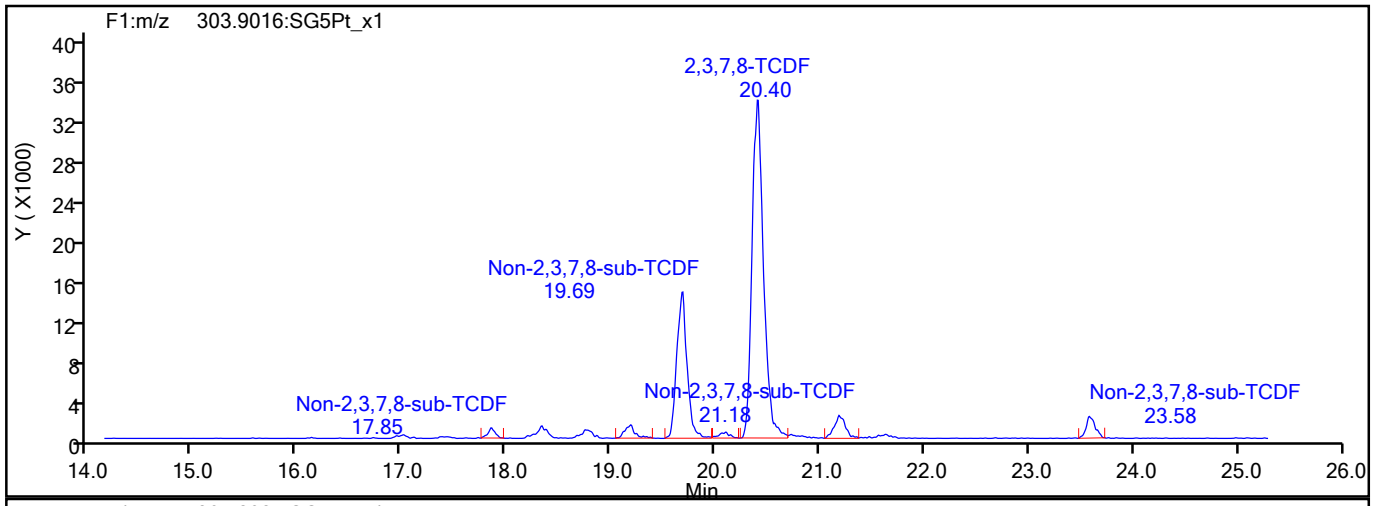

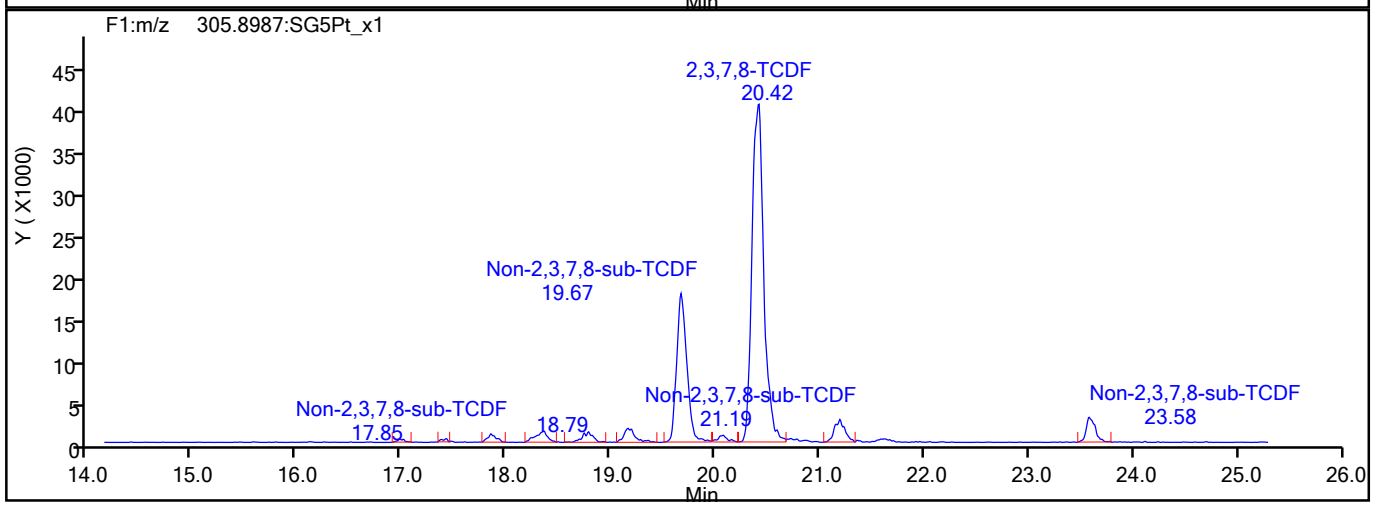

TCDF Interference Mass

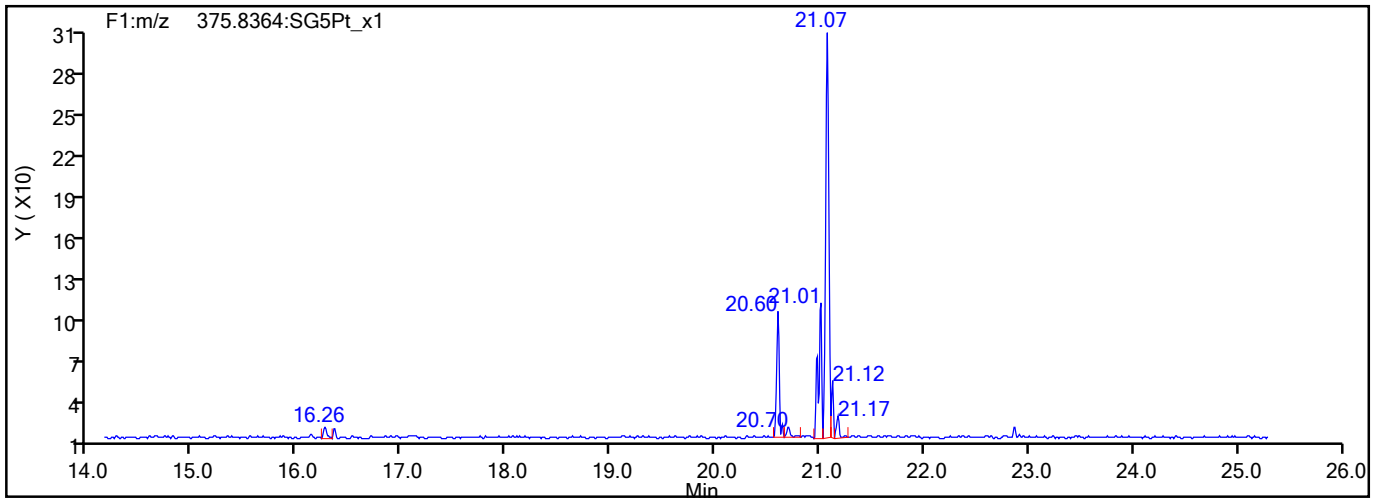

789697

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

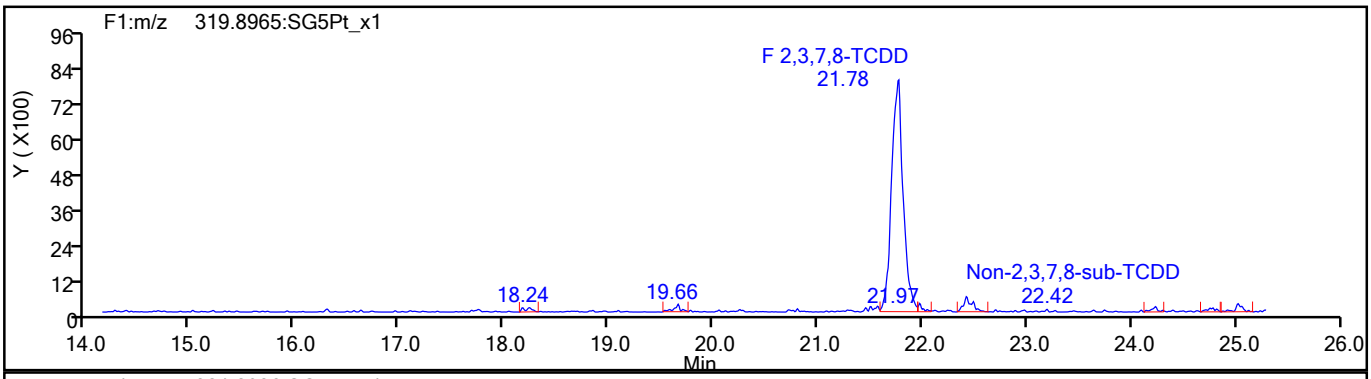

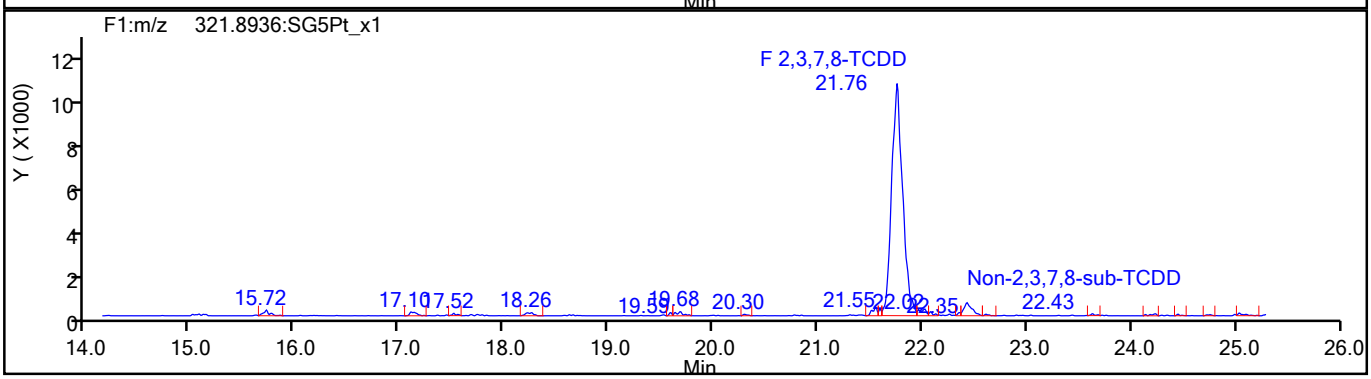

TCDD Standards

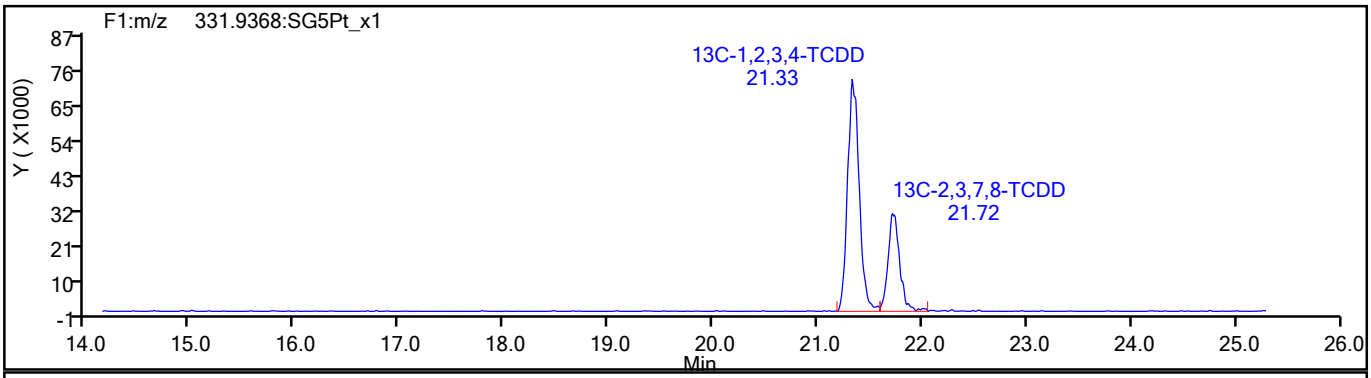

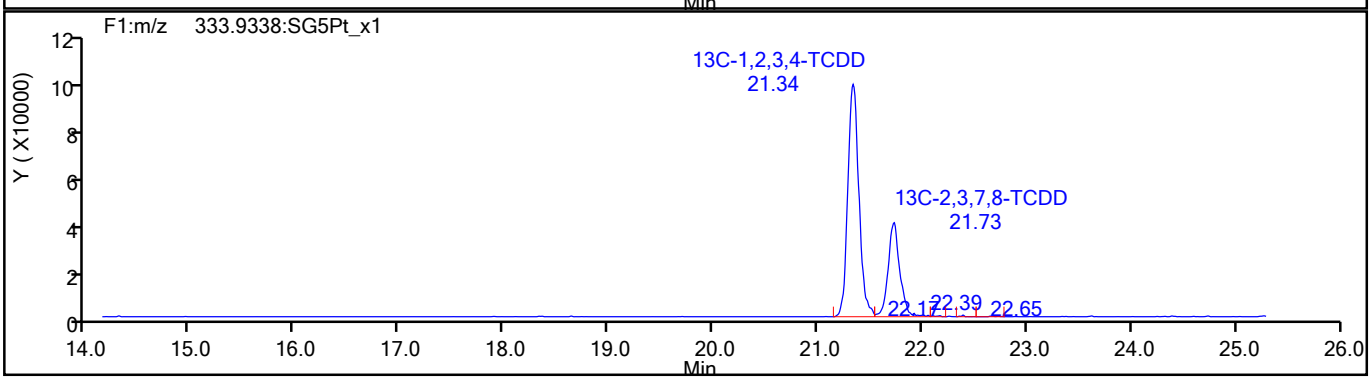

789698

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

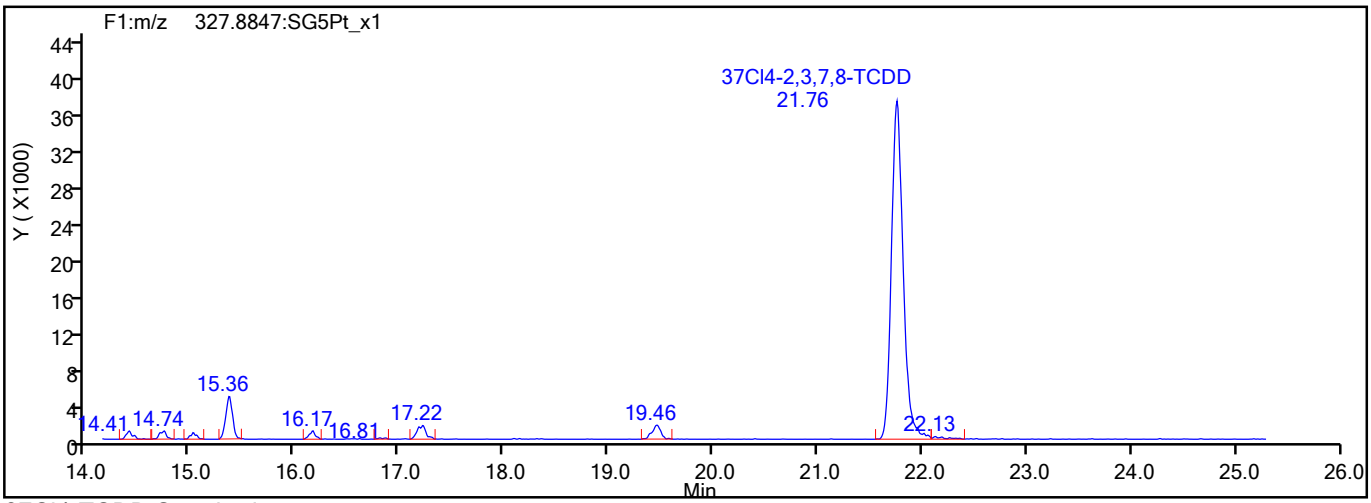

37Cl4-TCDD Standards

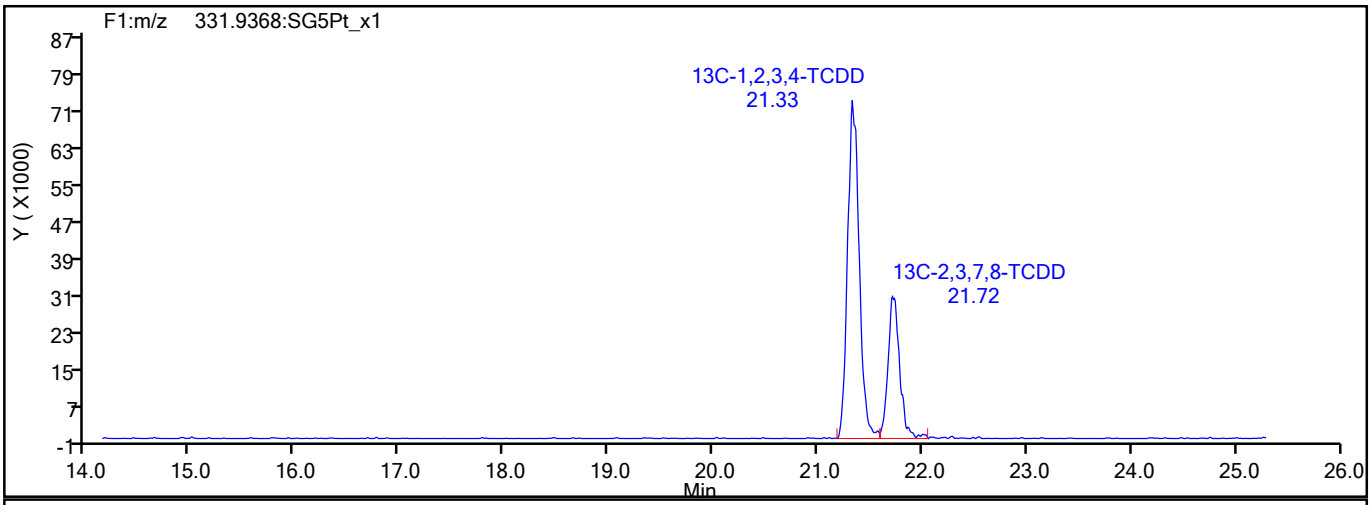

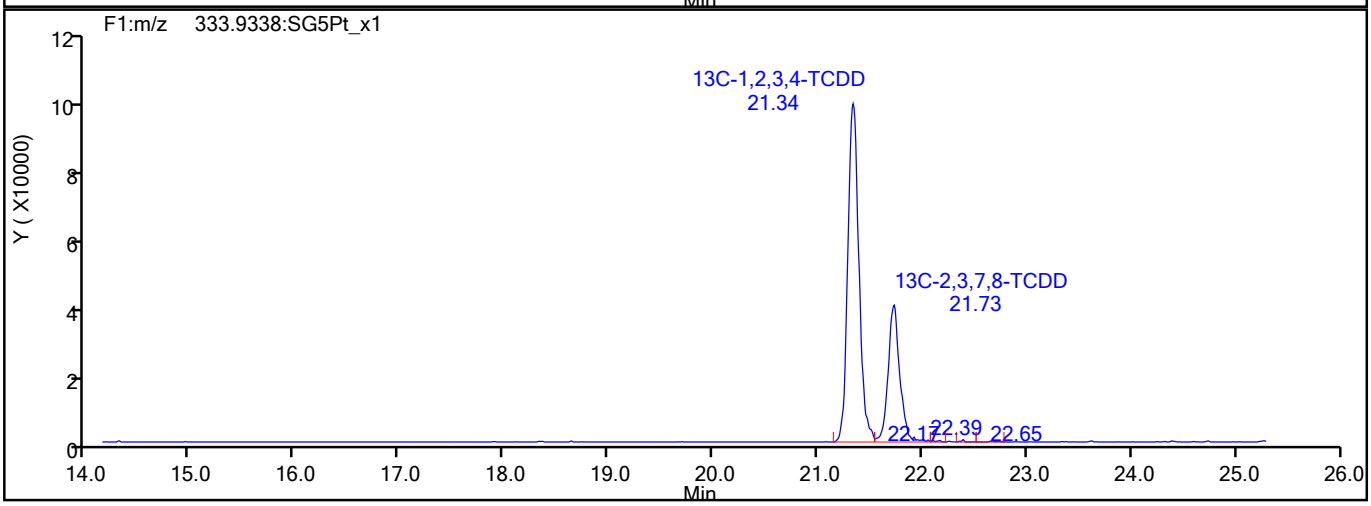

789699

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

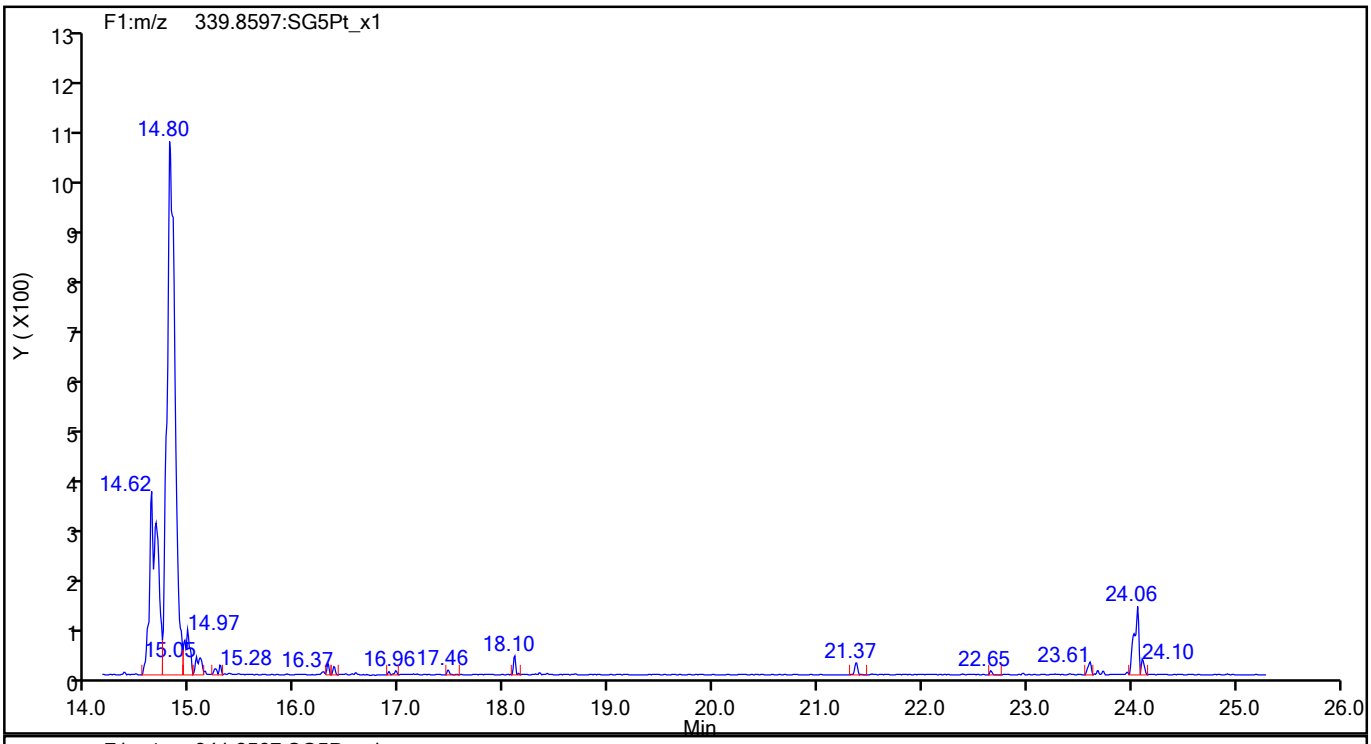

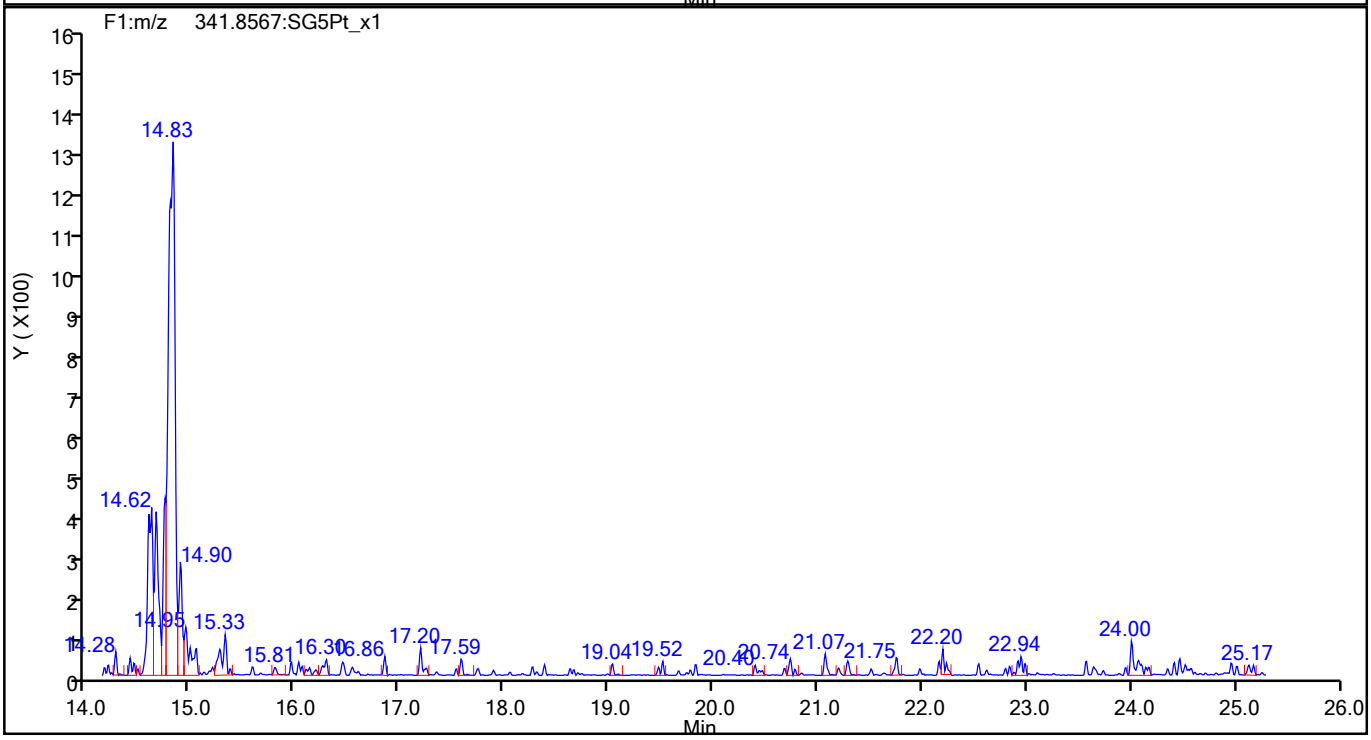

789700

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

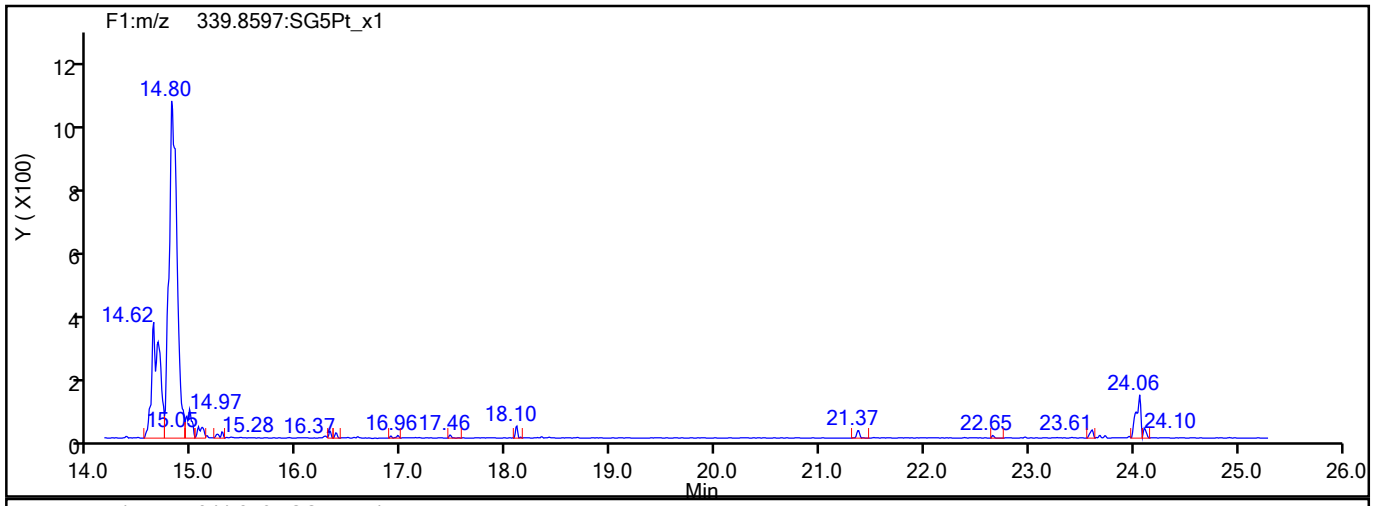

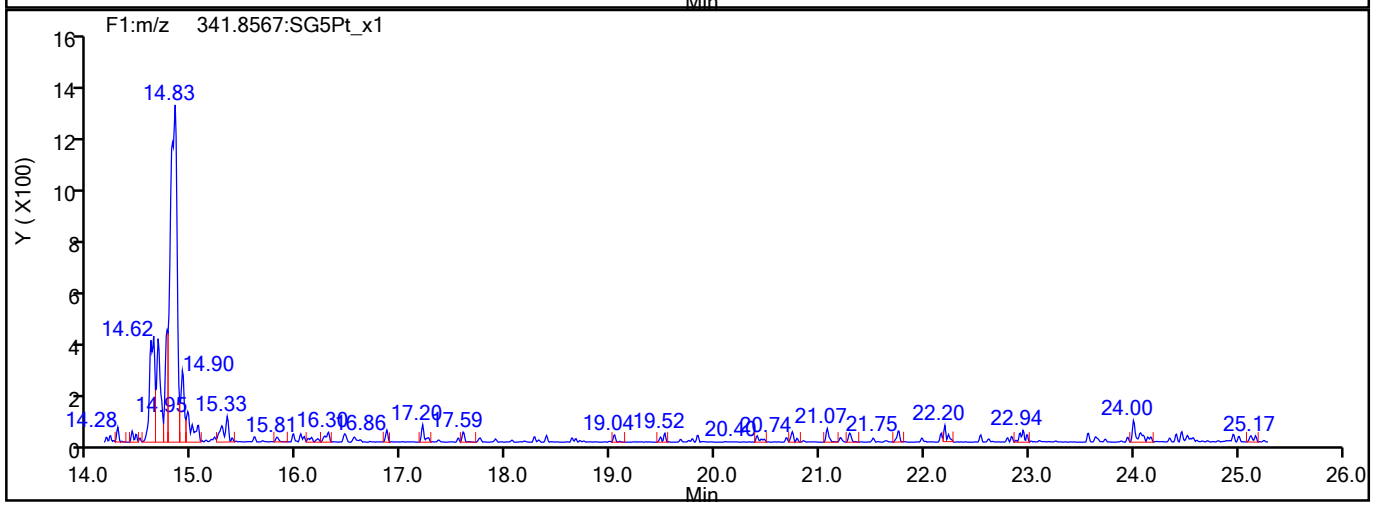

F1 PeCDFs Interference Mass

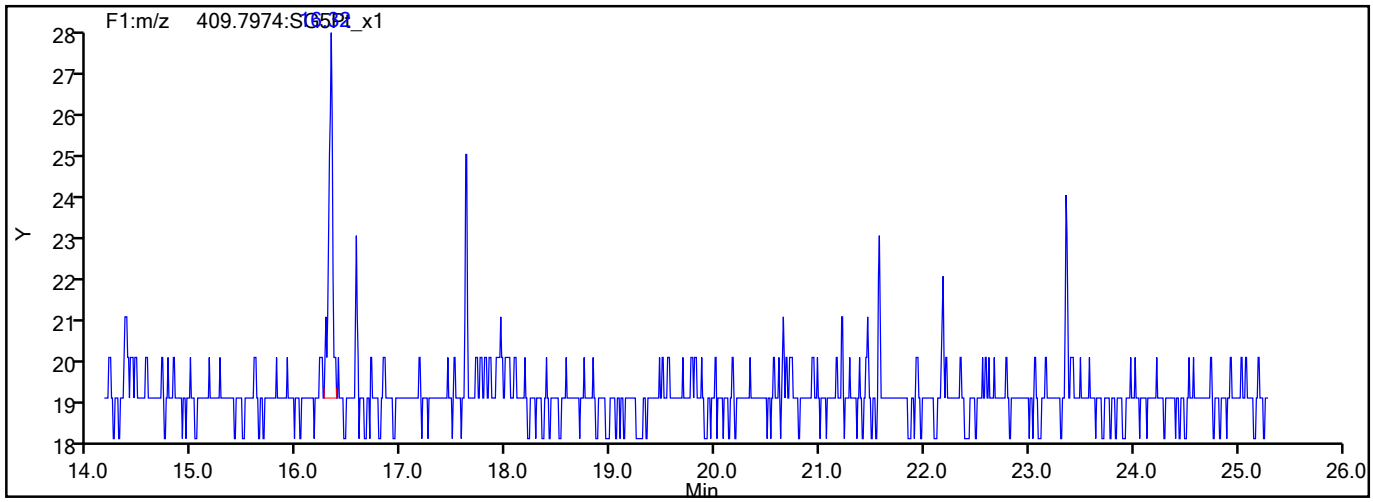

789701

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

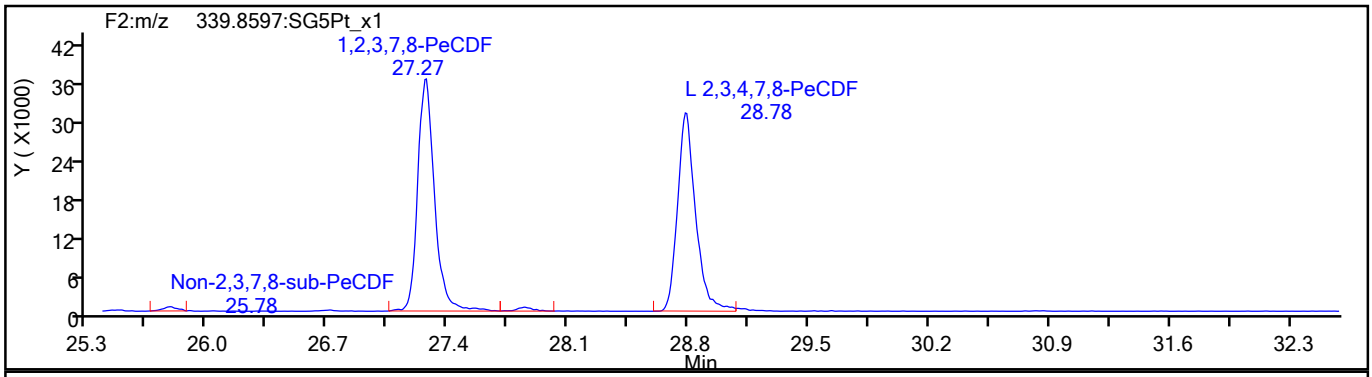

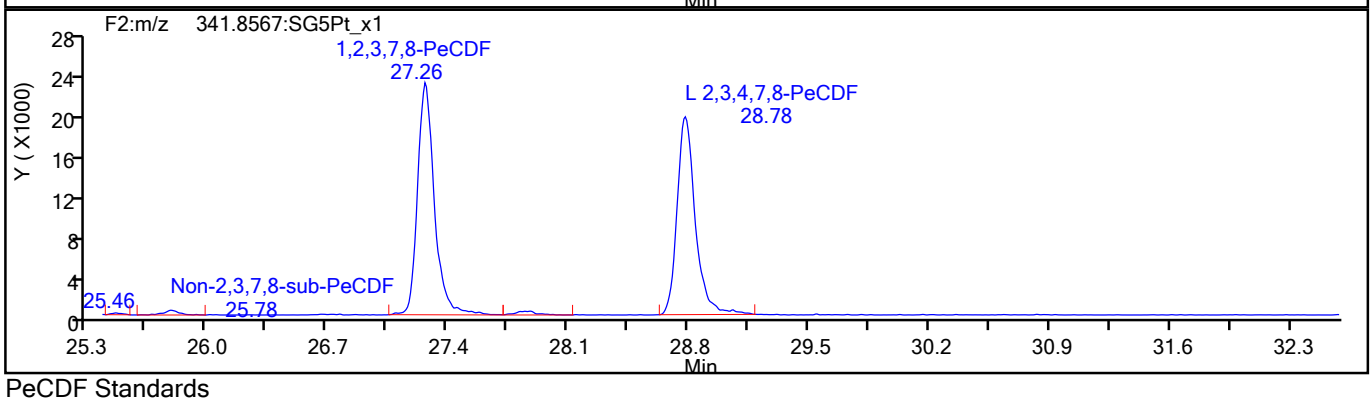

PeCDF Standards

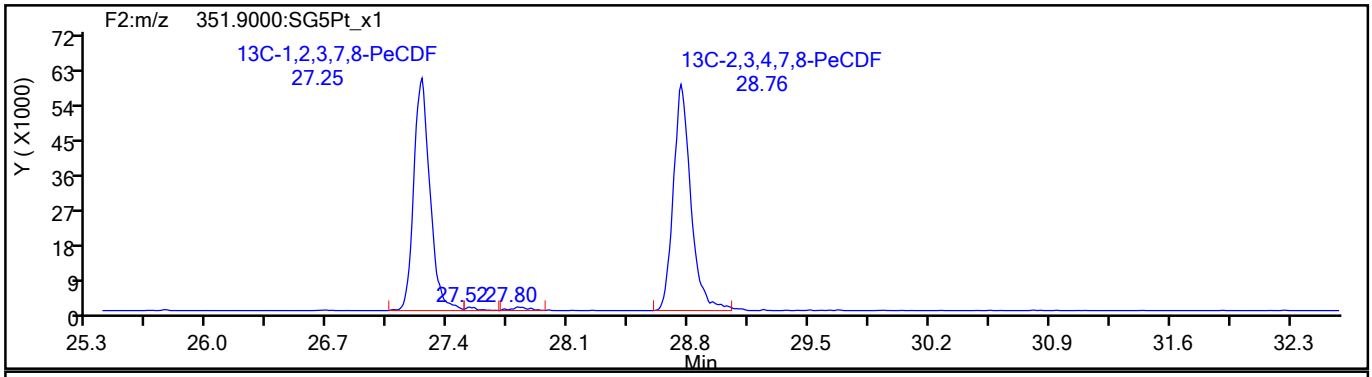

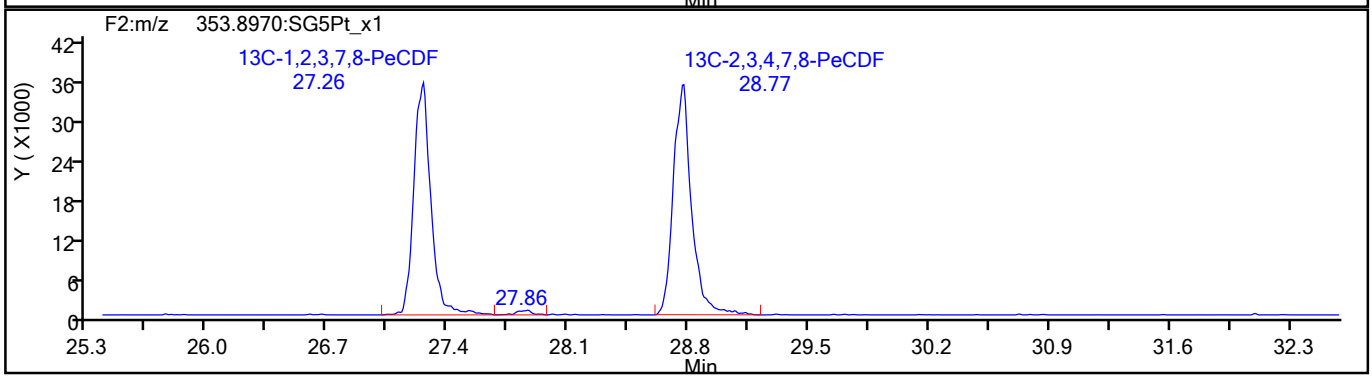

789702

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

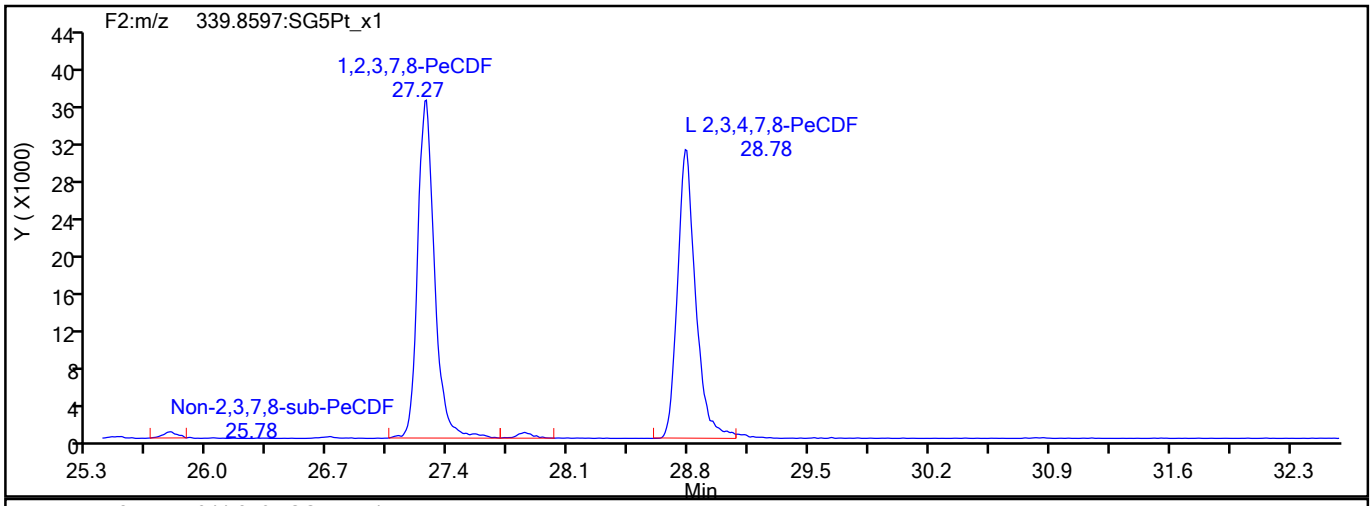

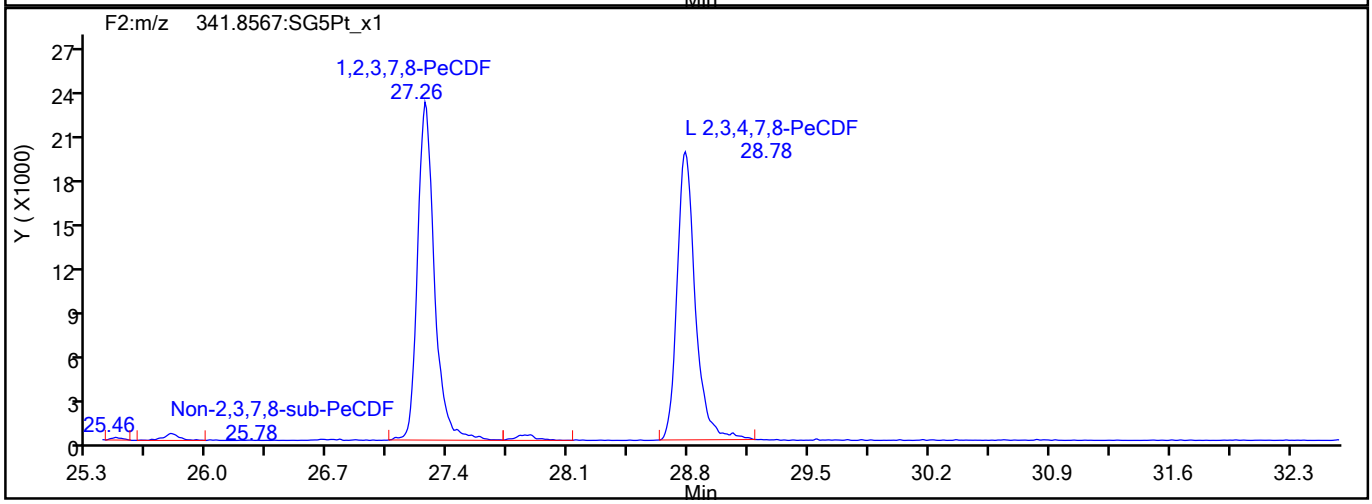

PeCDF Interference Mass

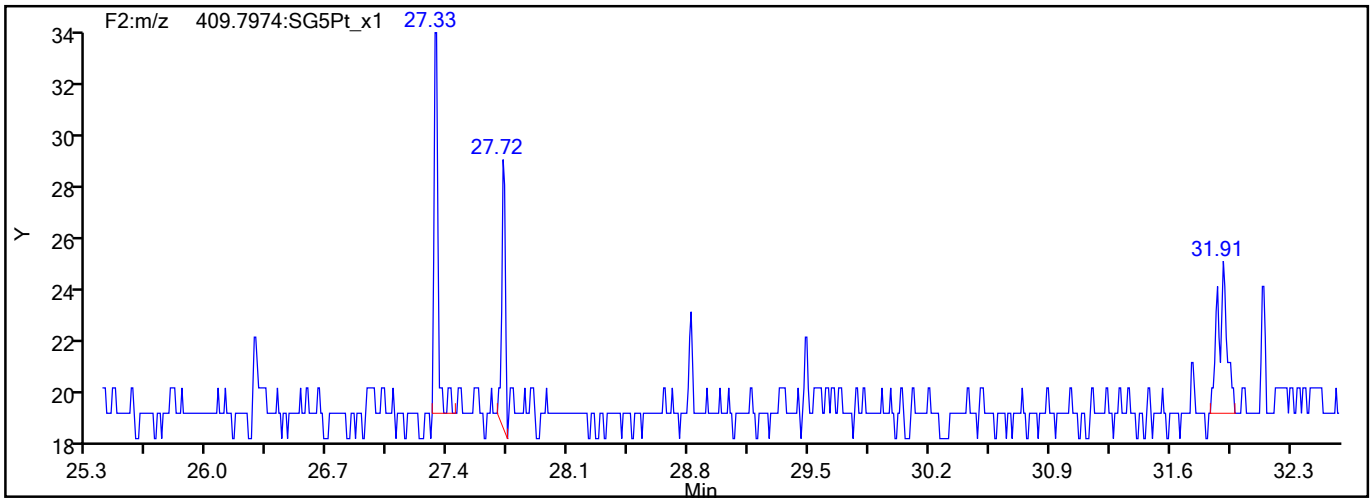

789703

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

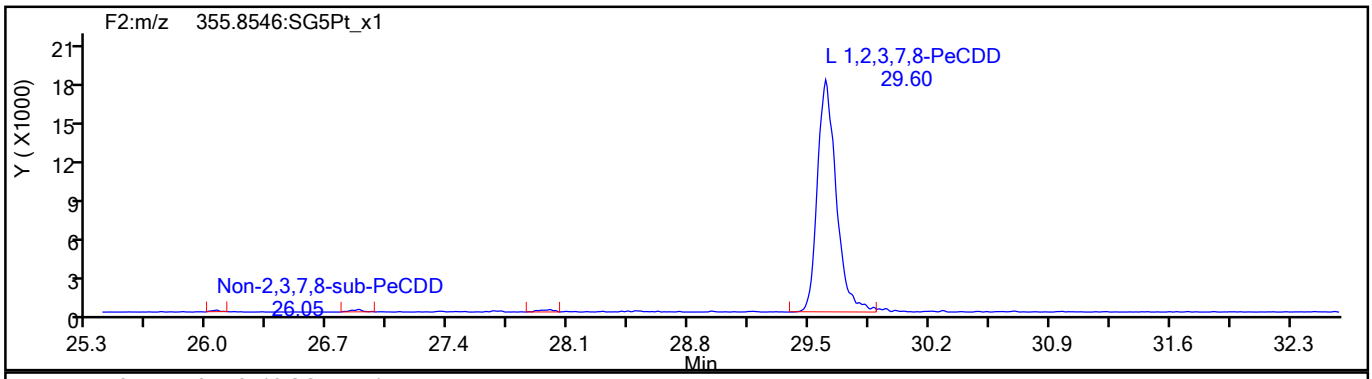

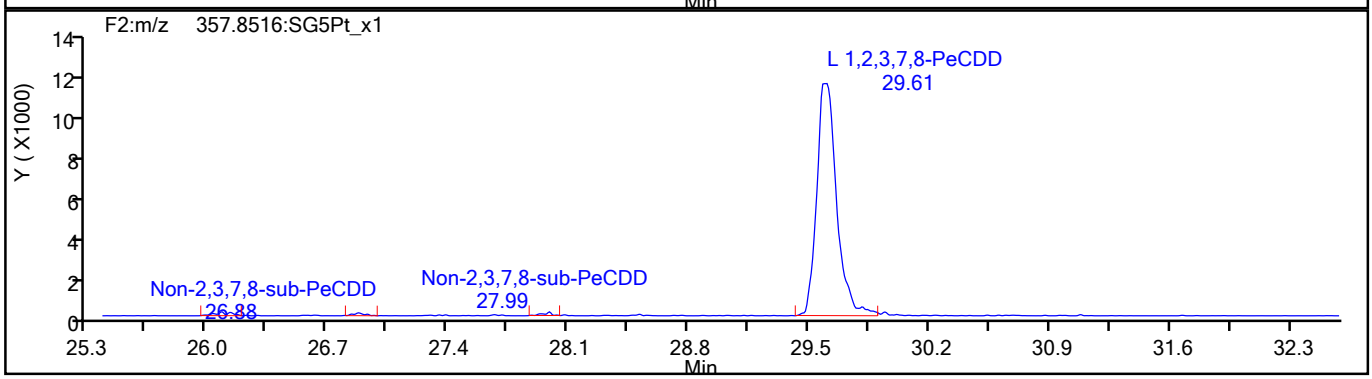

PeCDD Standards

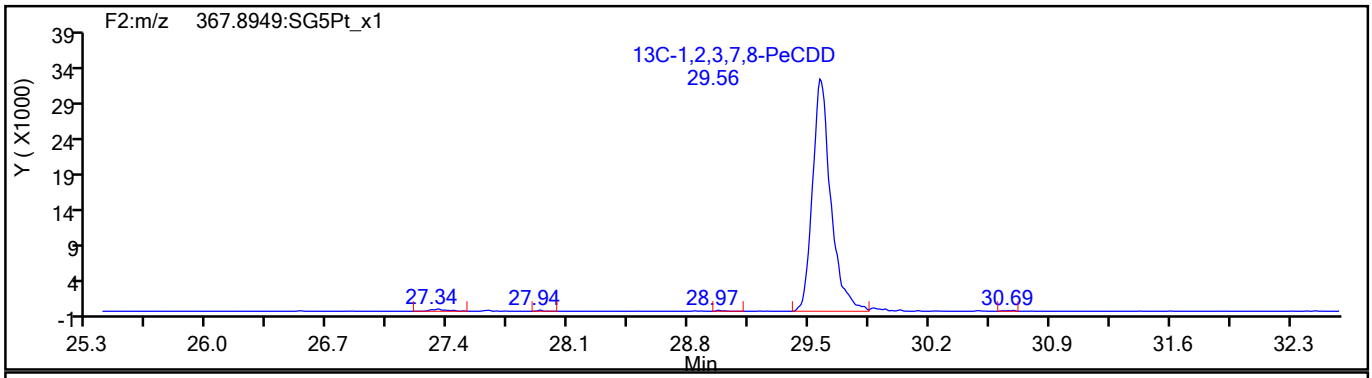

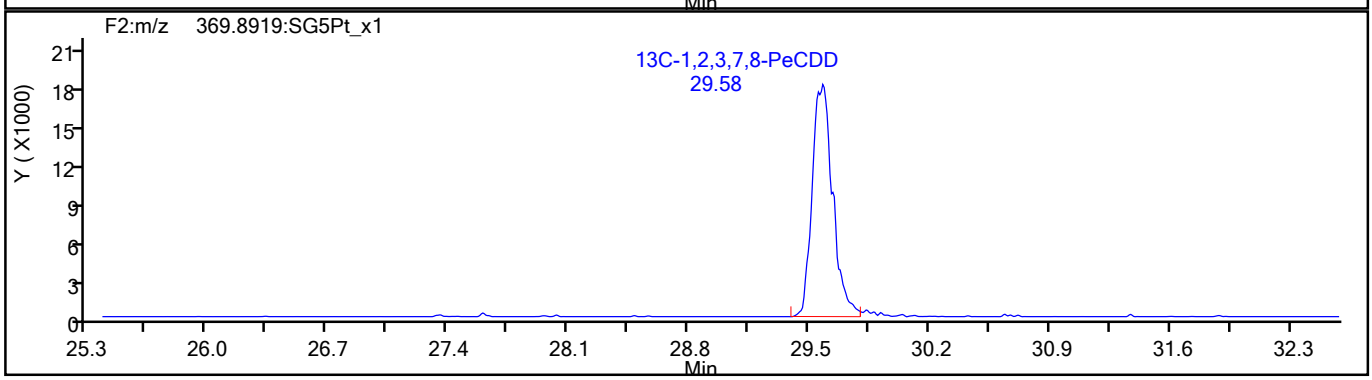

789704

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

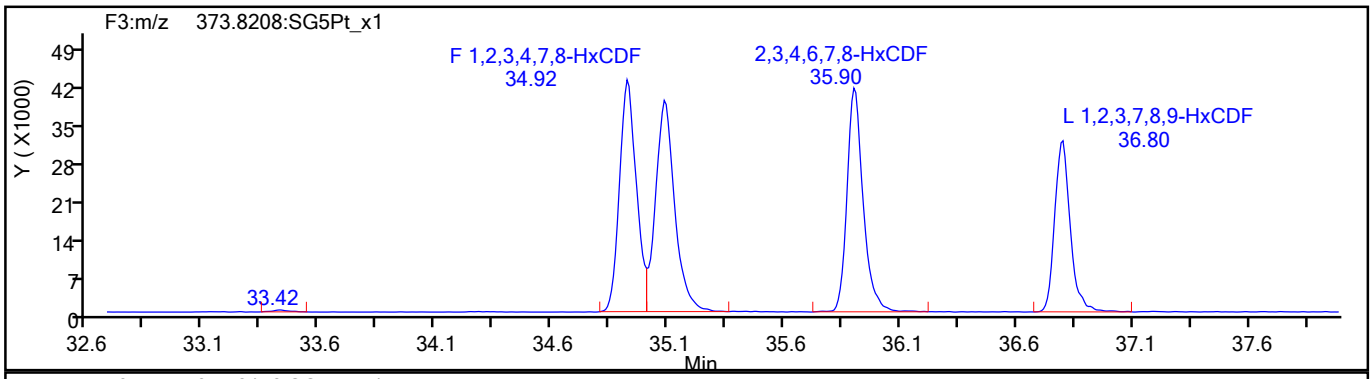

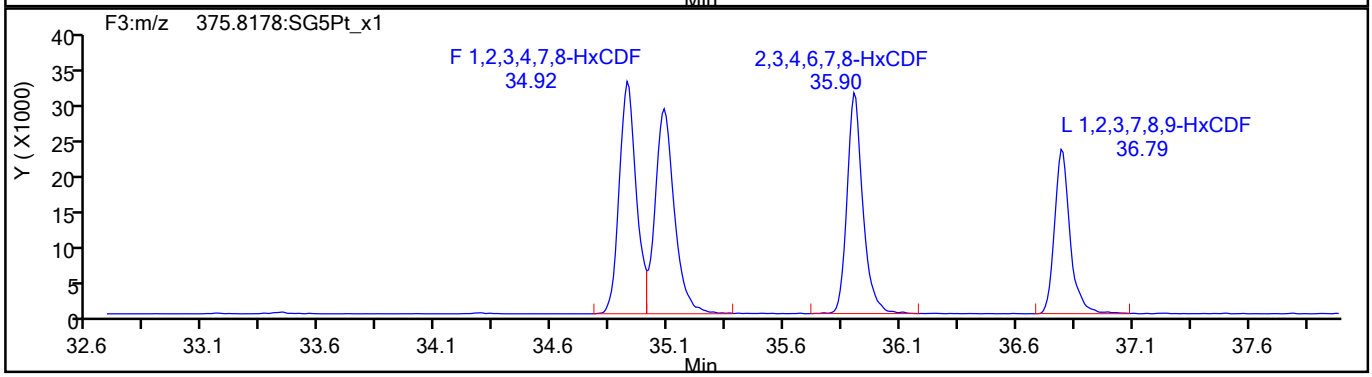

HxCDF Standards

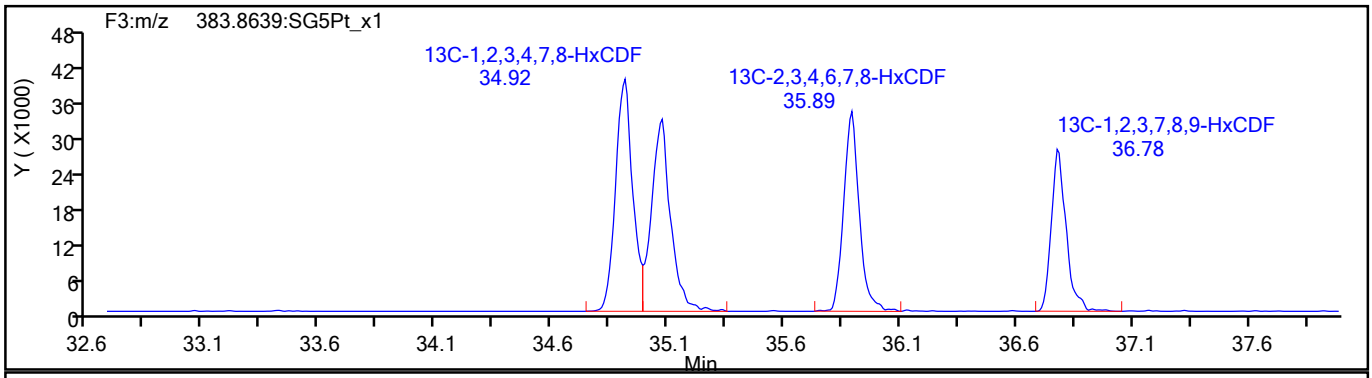

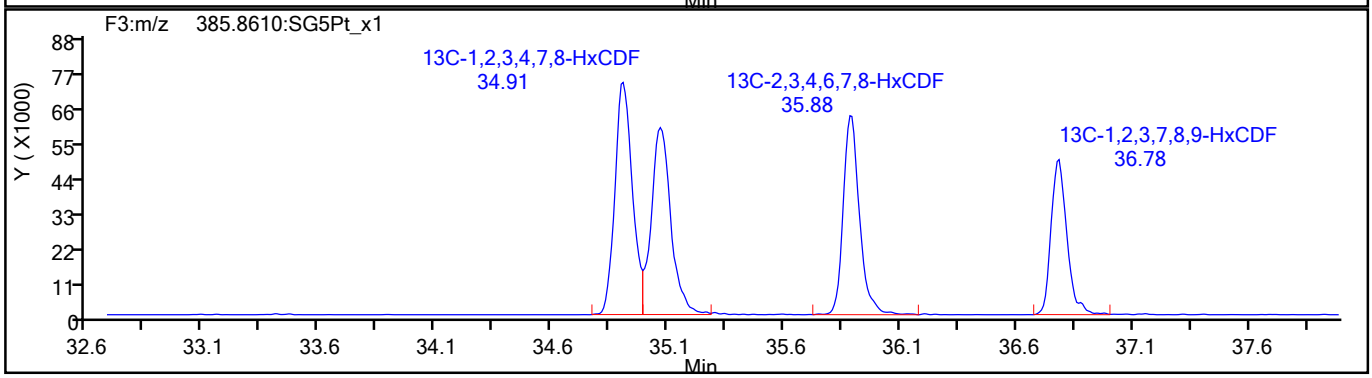

789705

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

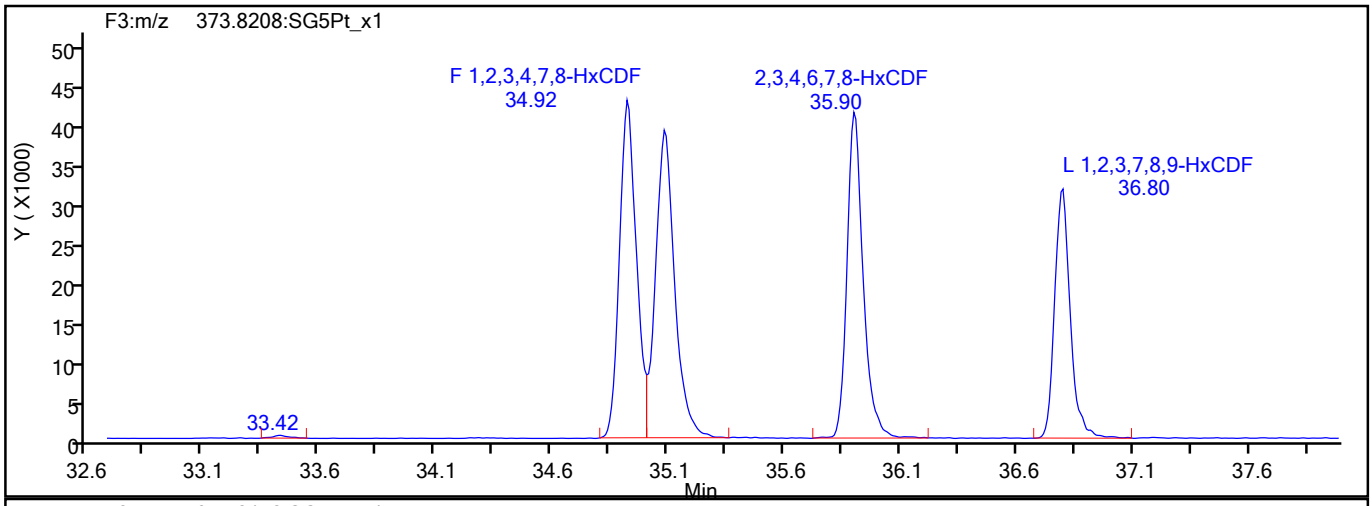

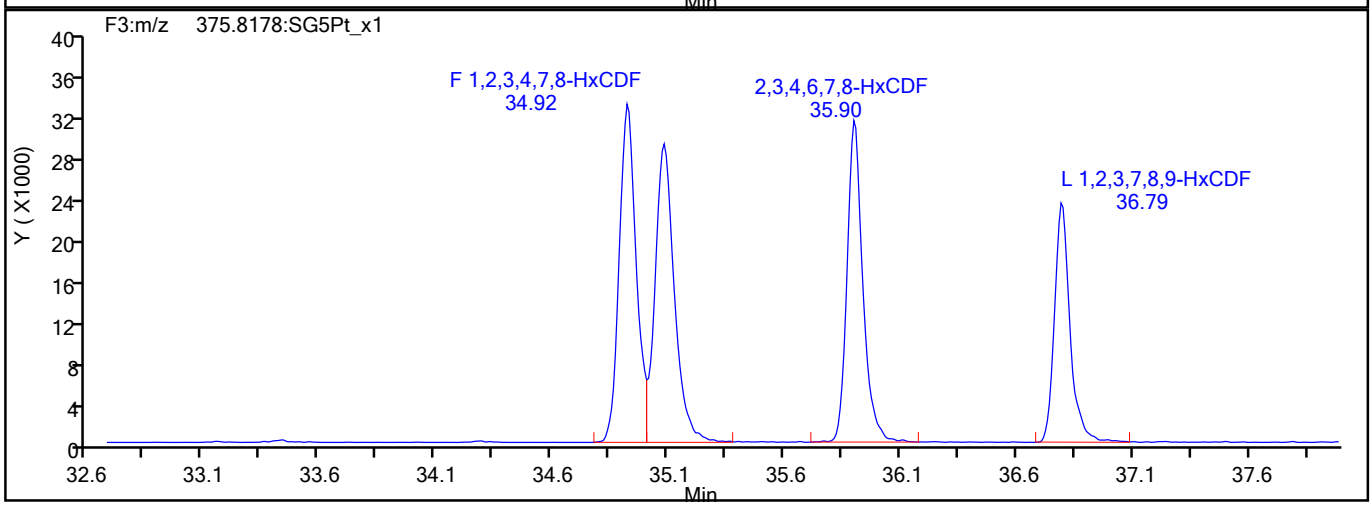

HxCDF Interference Mass

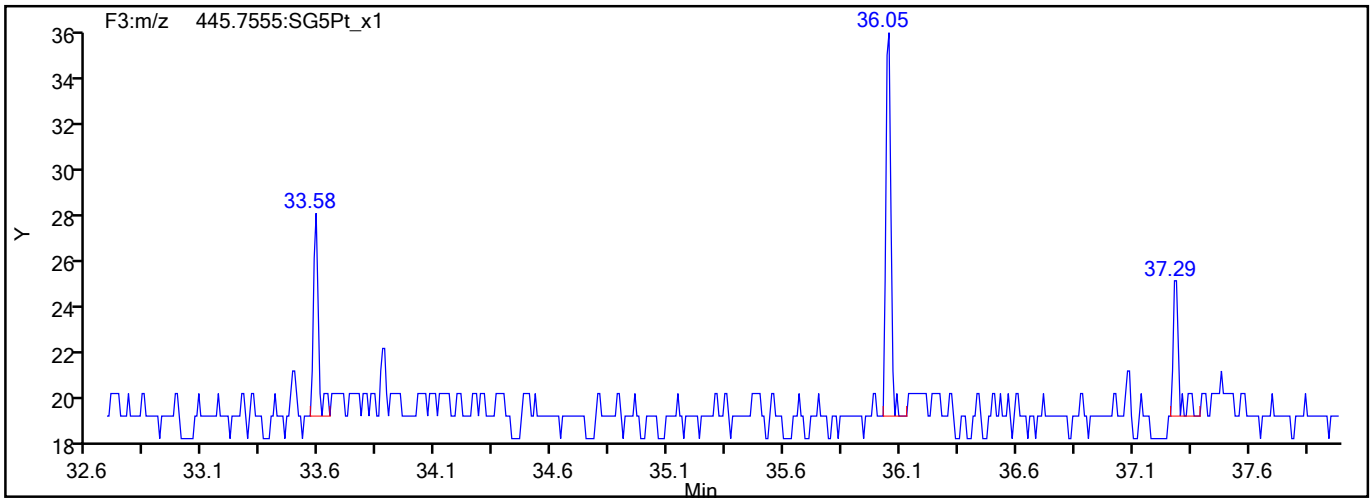

789706

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

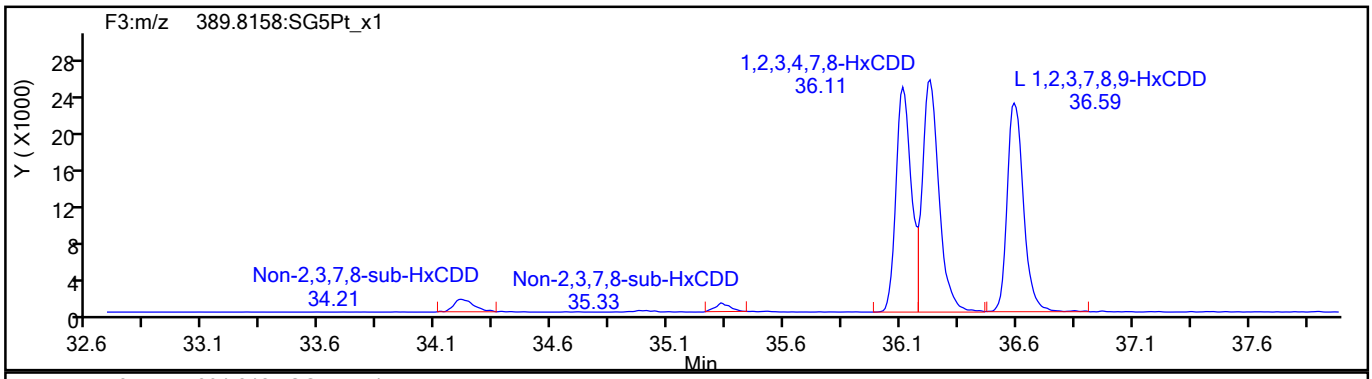

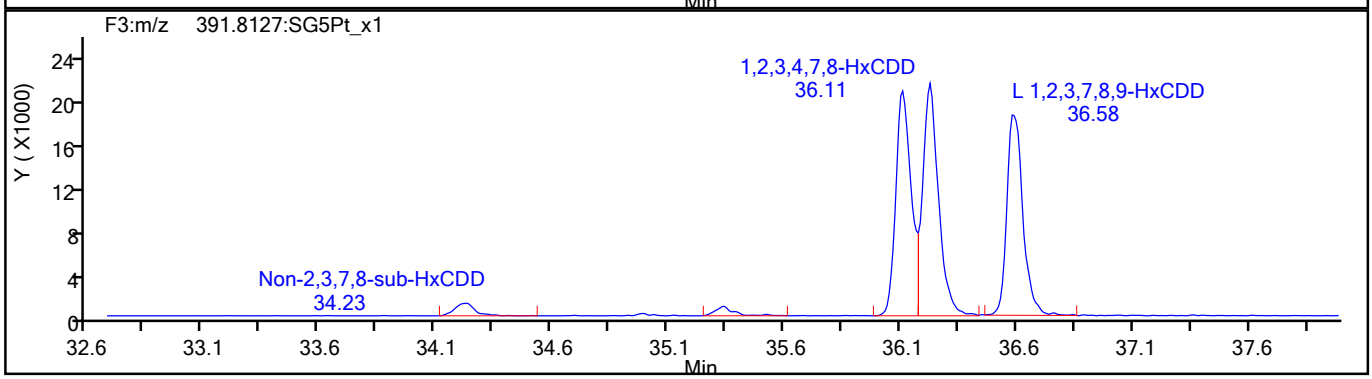

HxCDD Standards

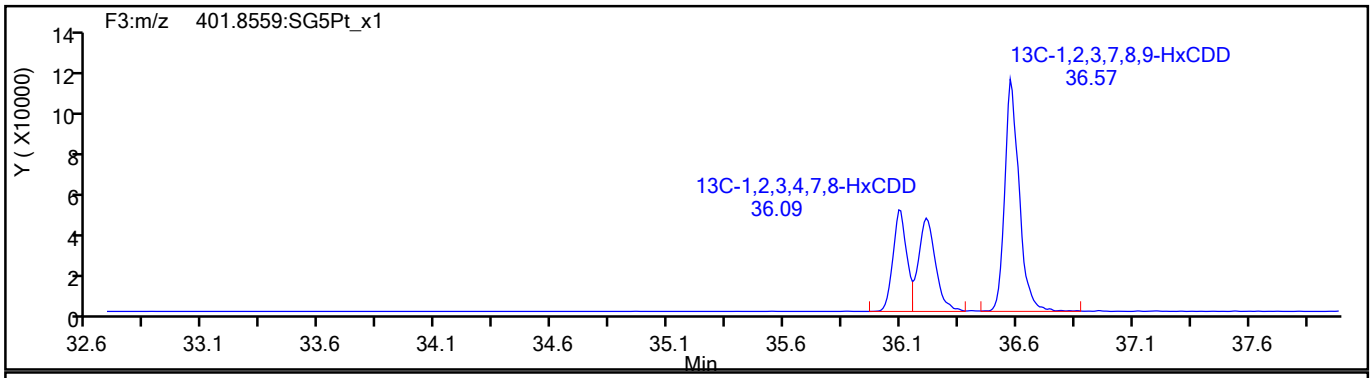

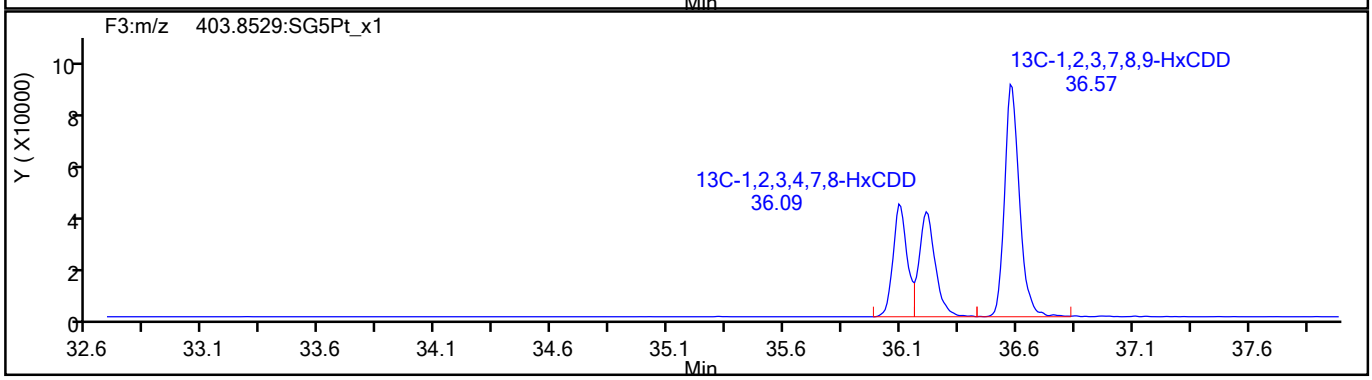

789707

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

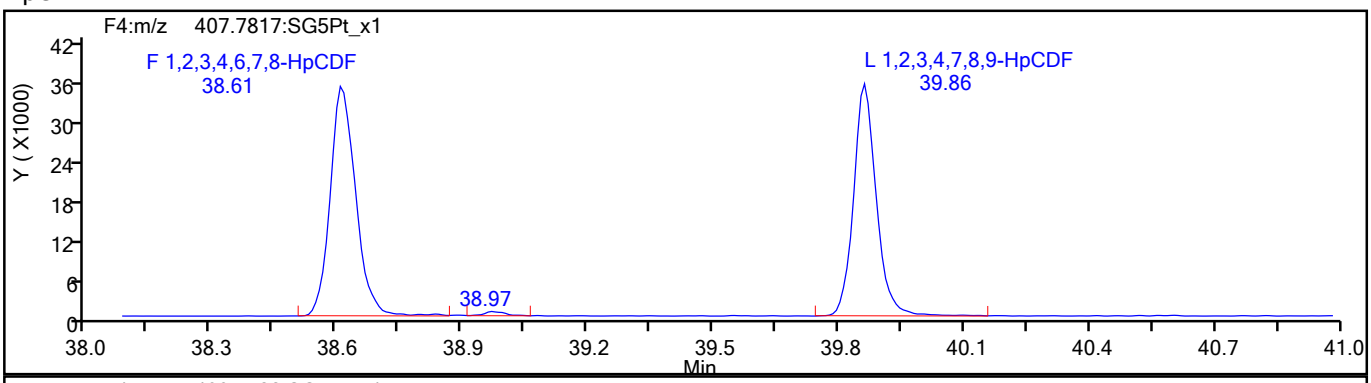

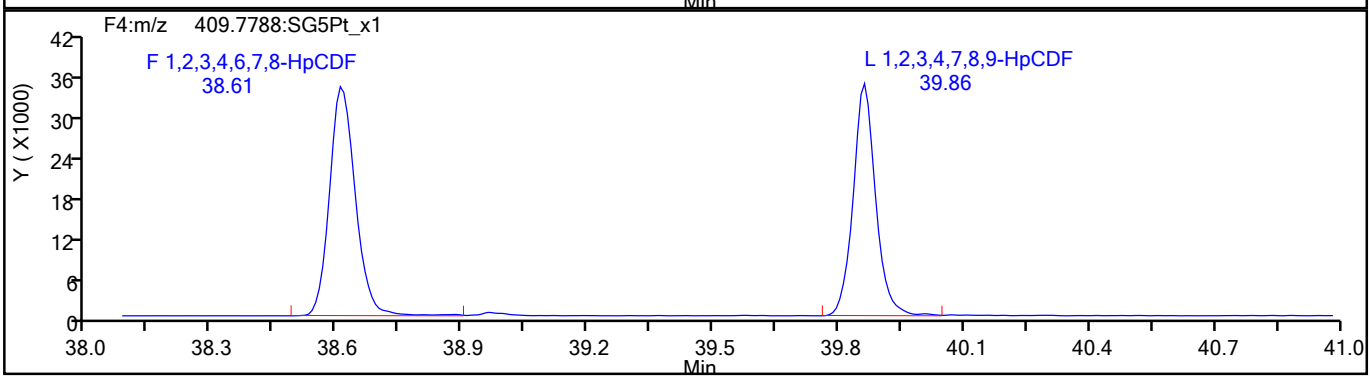

HpCDF Standards

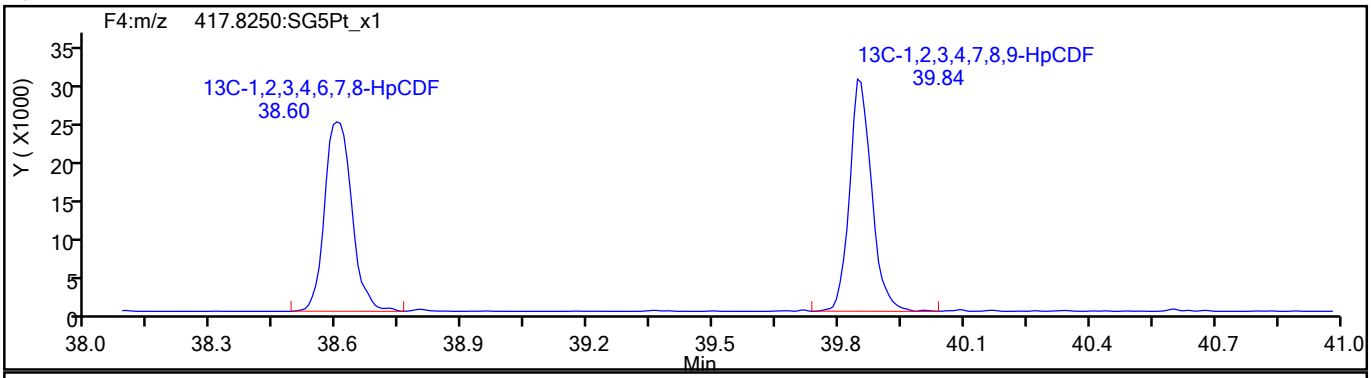

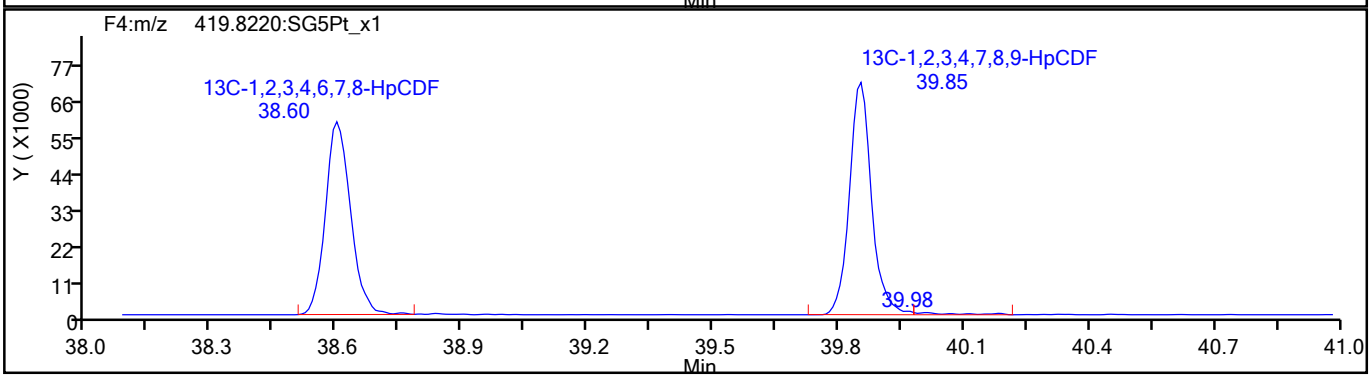

789708

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

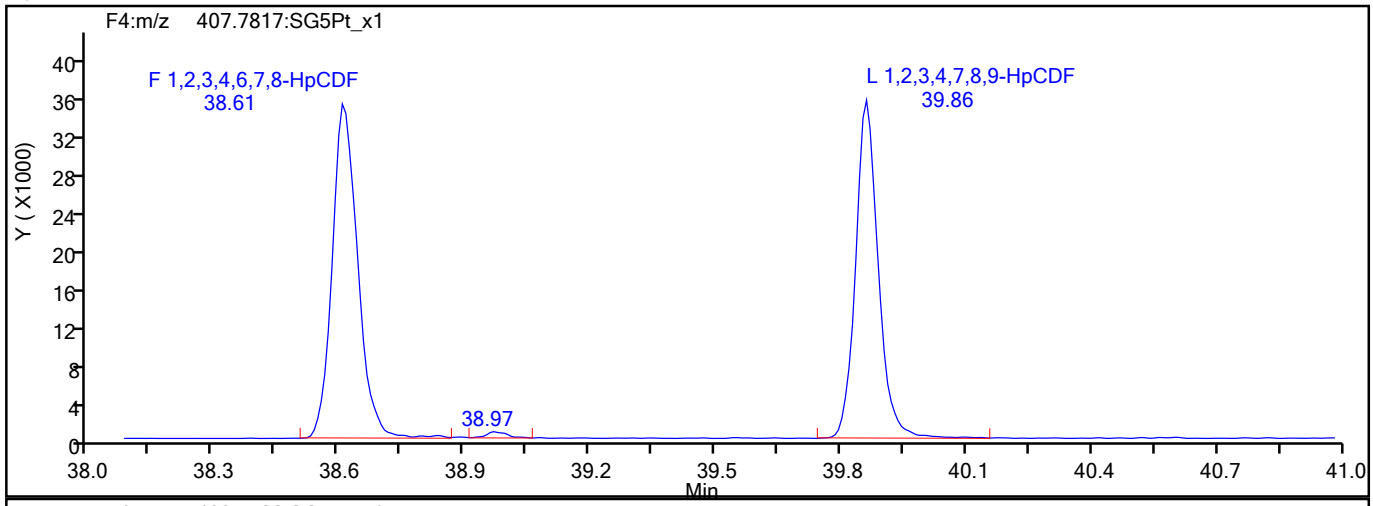

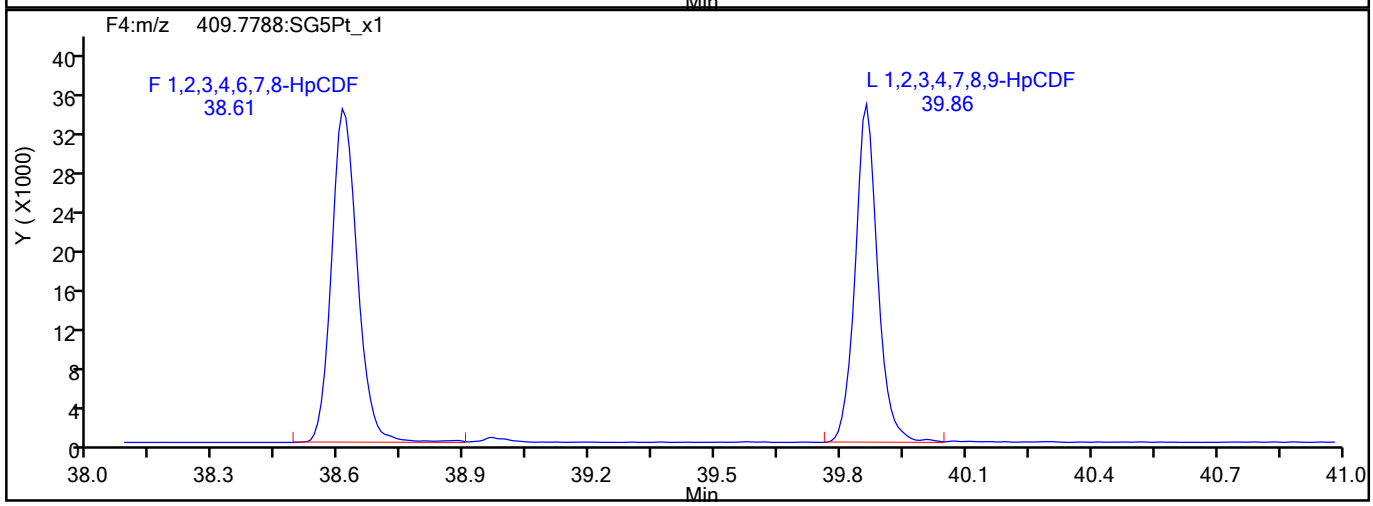

HpCDF Interference Mass

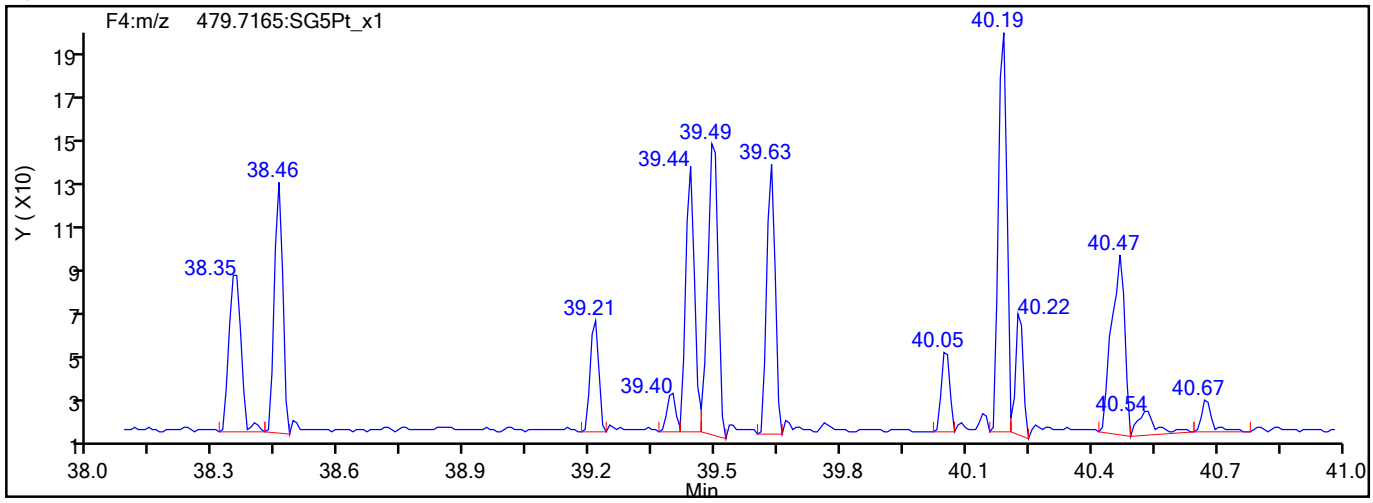

789709

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

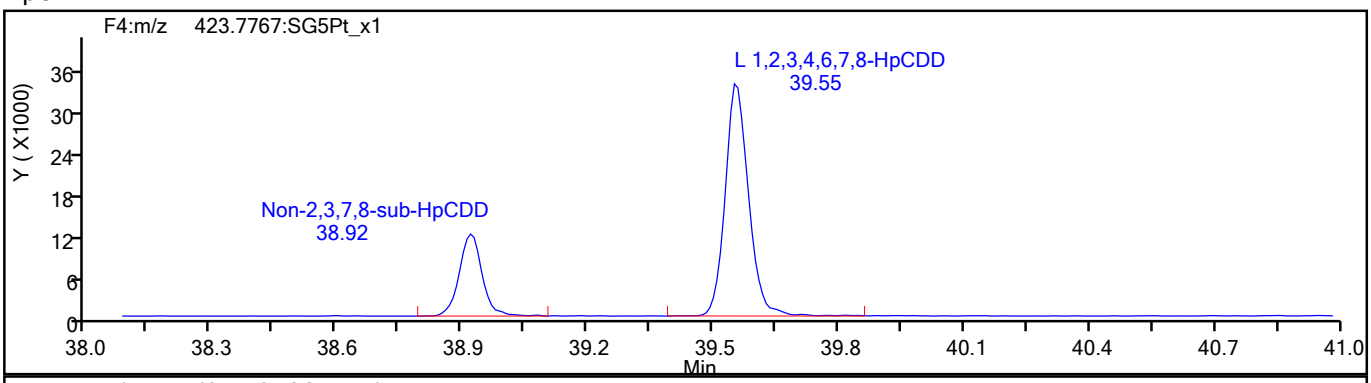

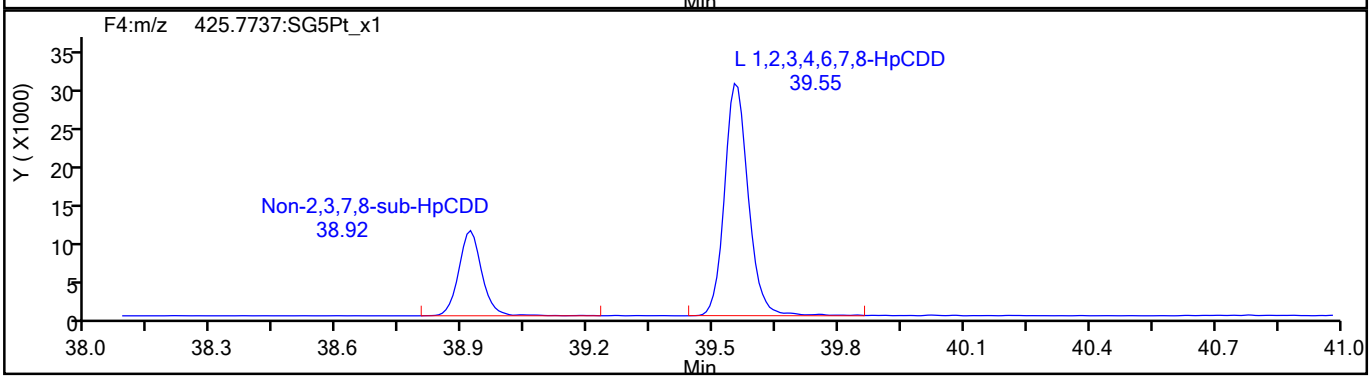

HpCDD Standards

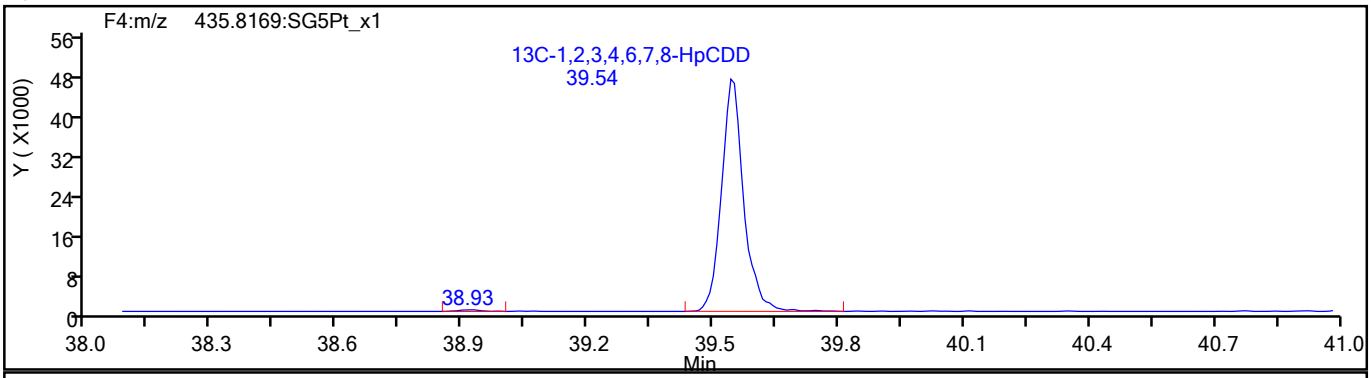

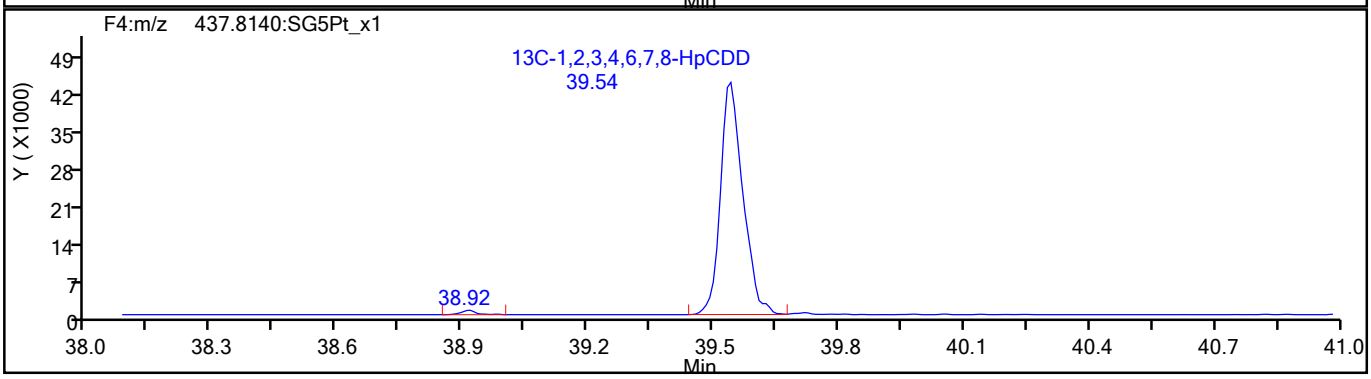

789710

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

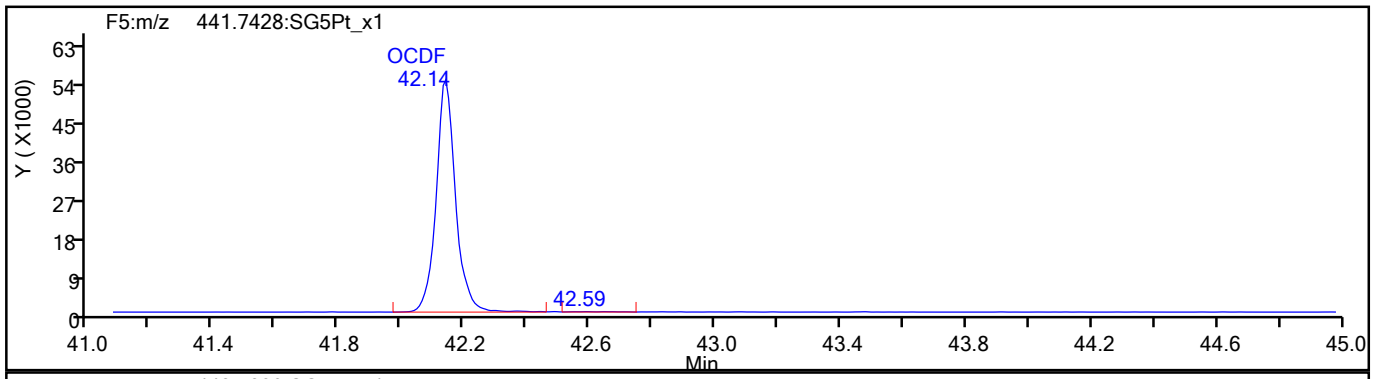

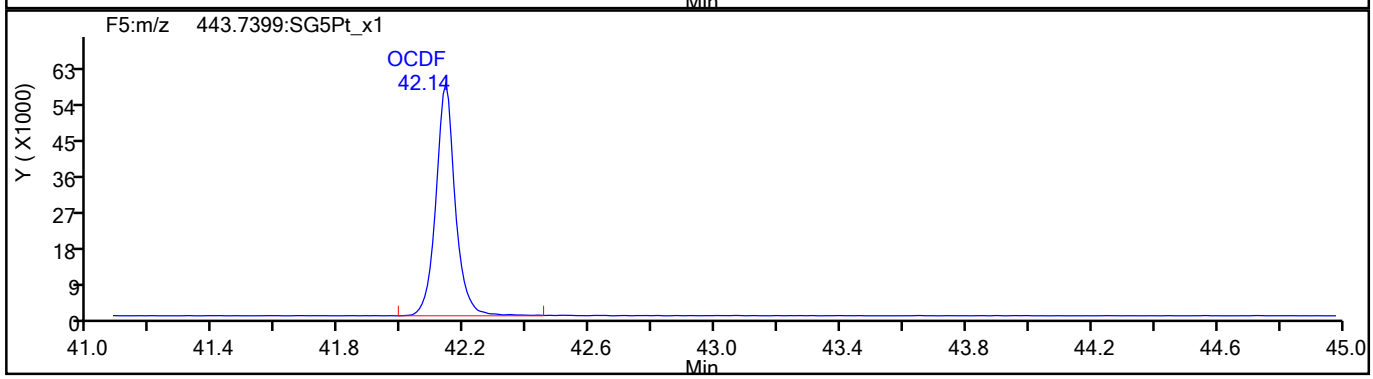

OCDF Standards

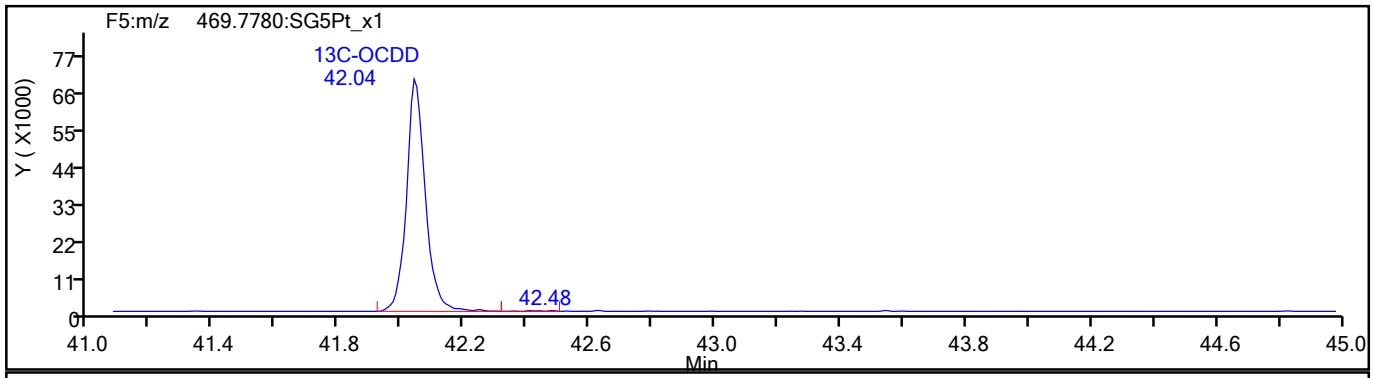

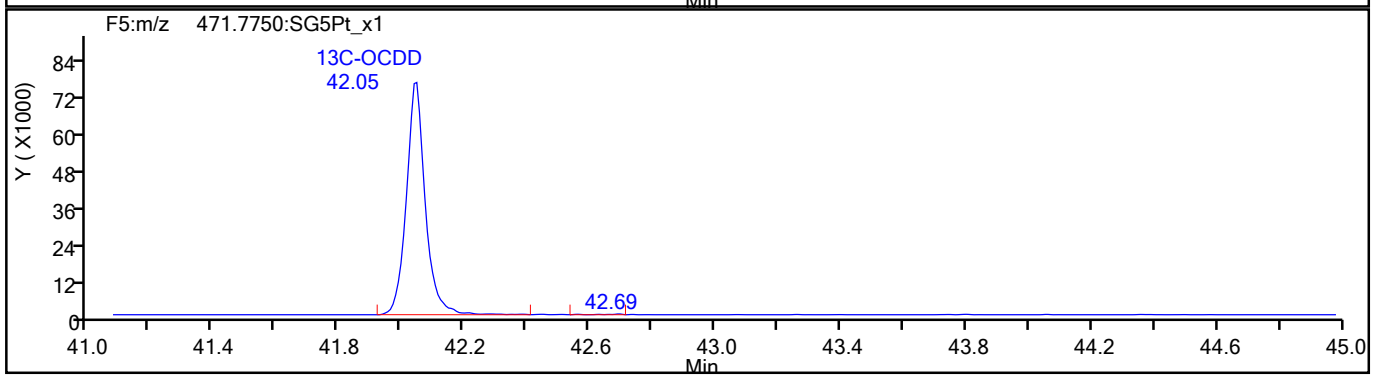

789711

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

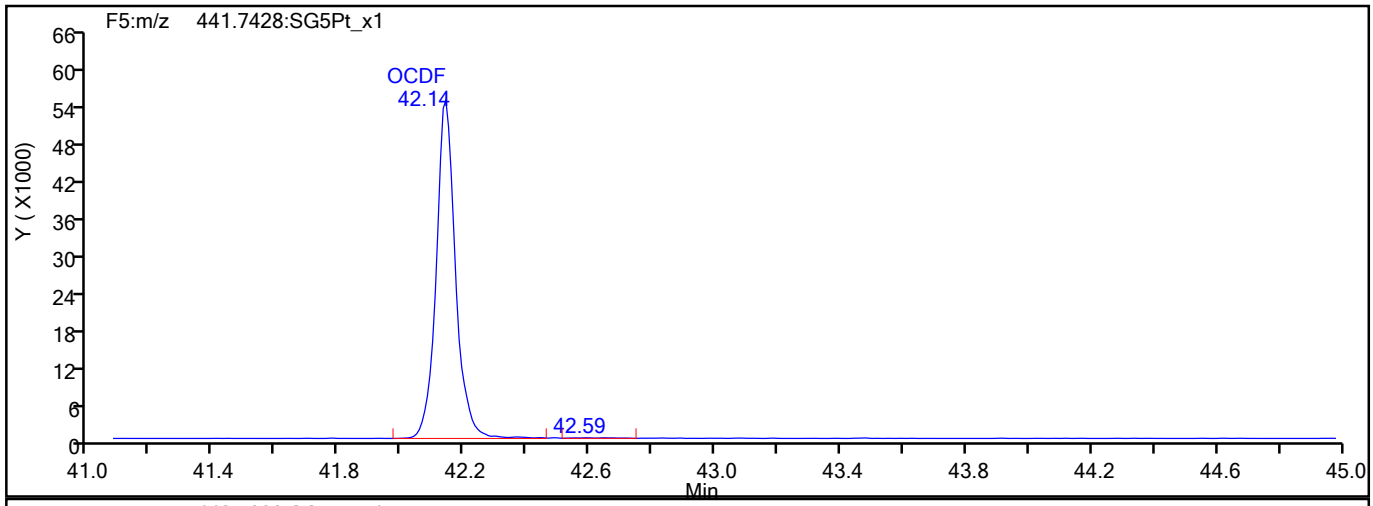

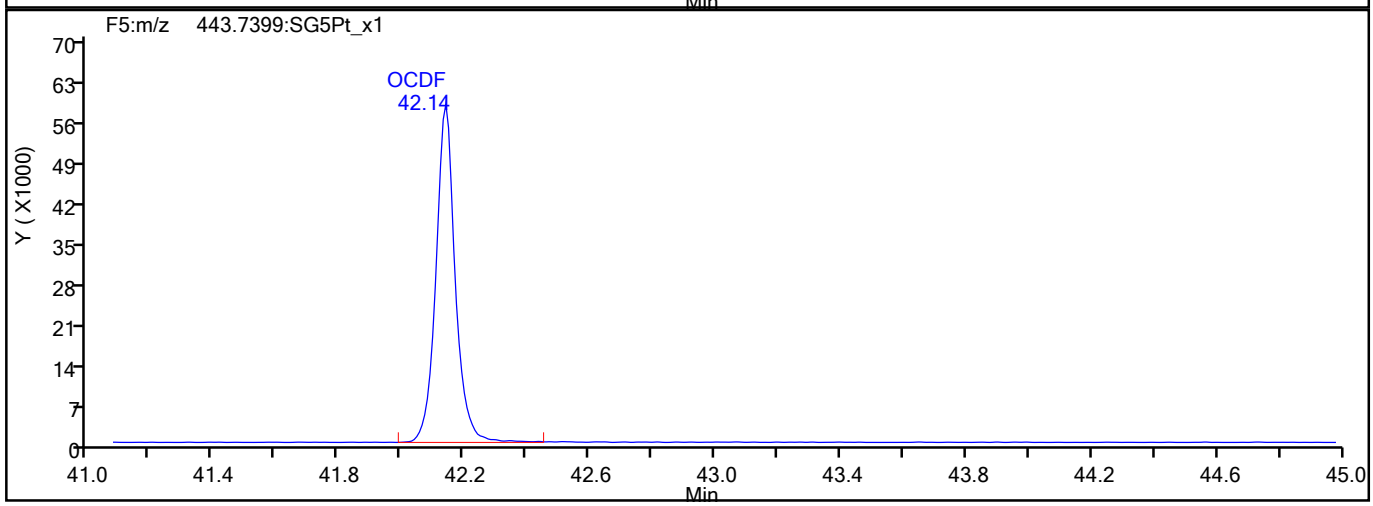

OCDF Interference Mass

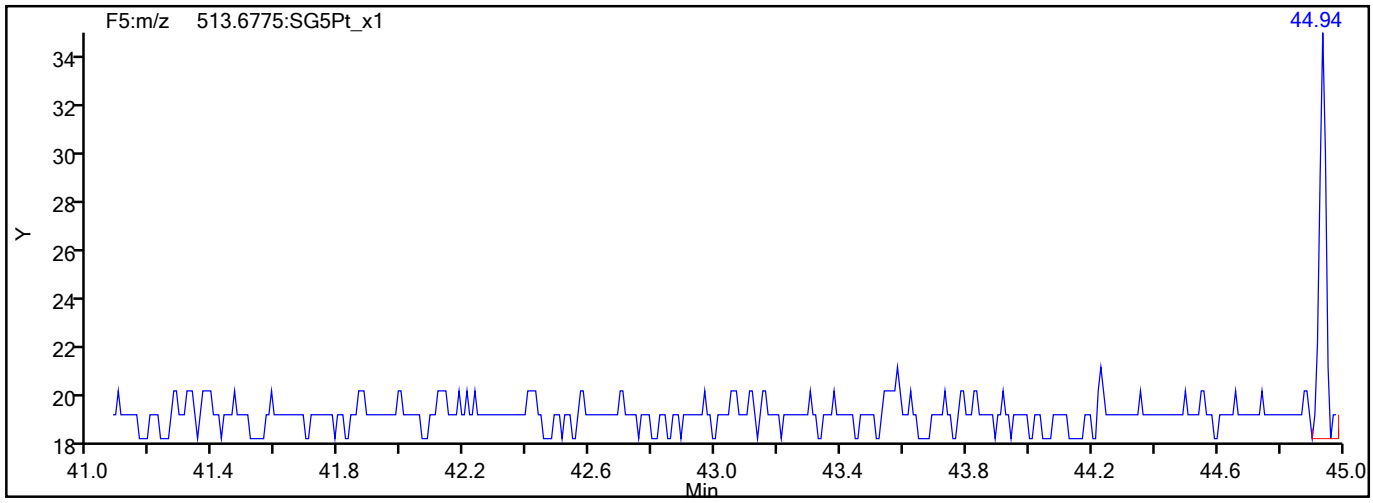

789712

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

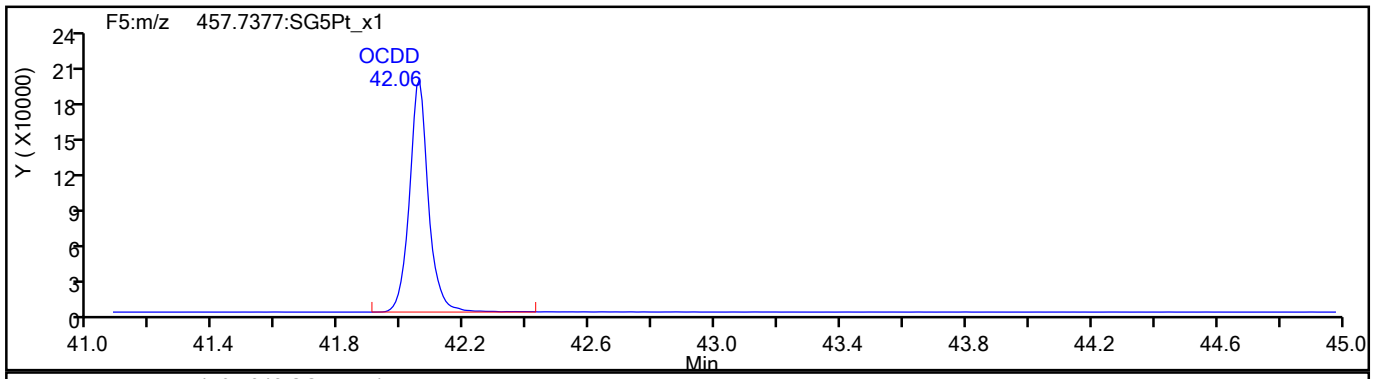

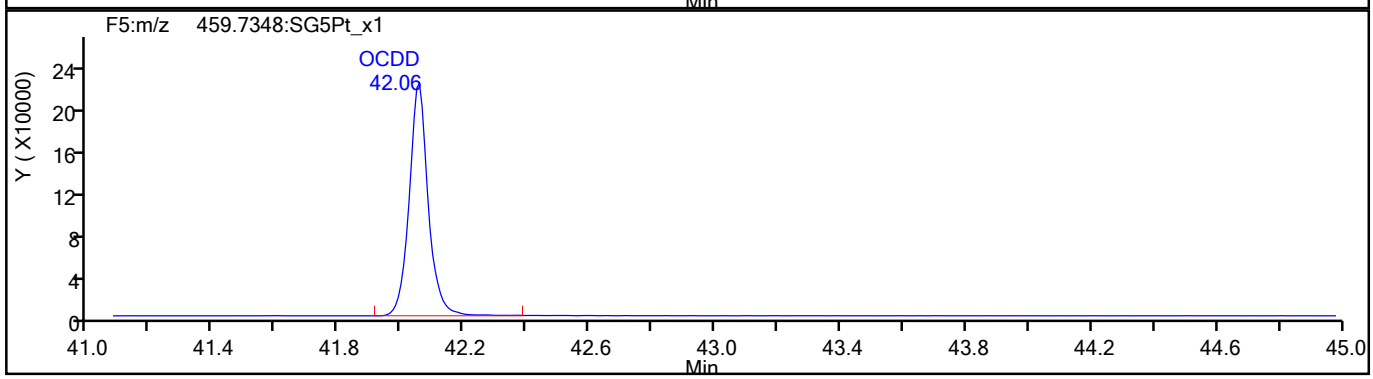

OCDD Standards

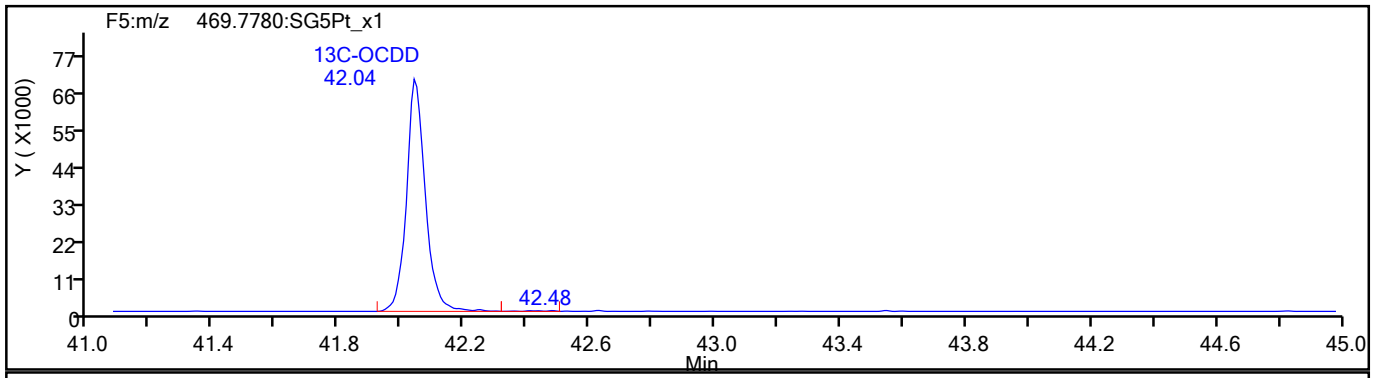

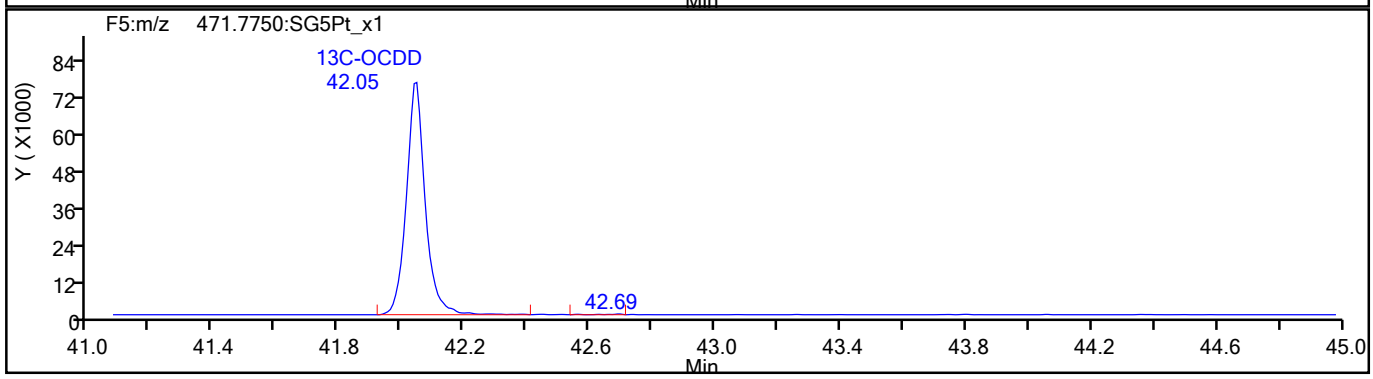

789713

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

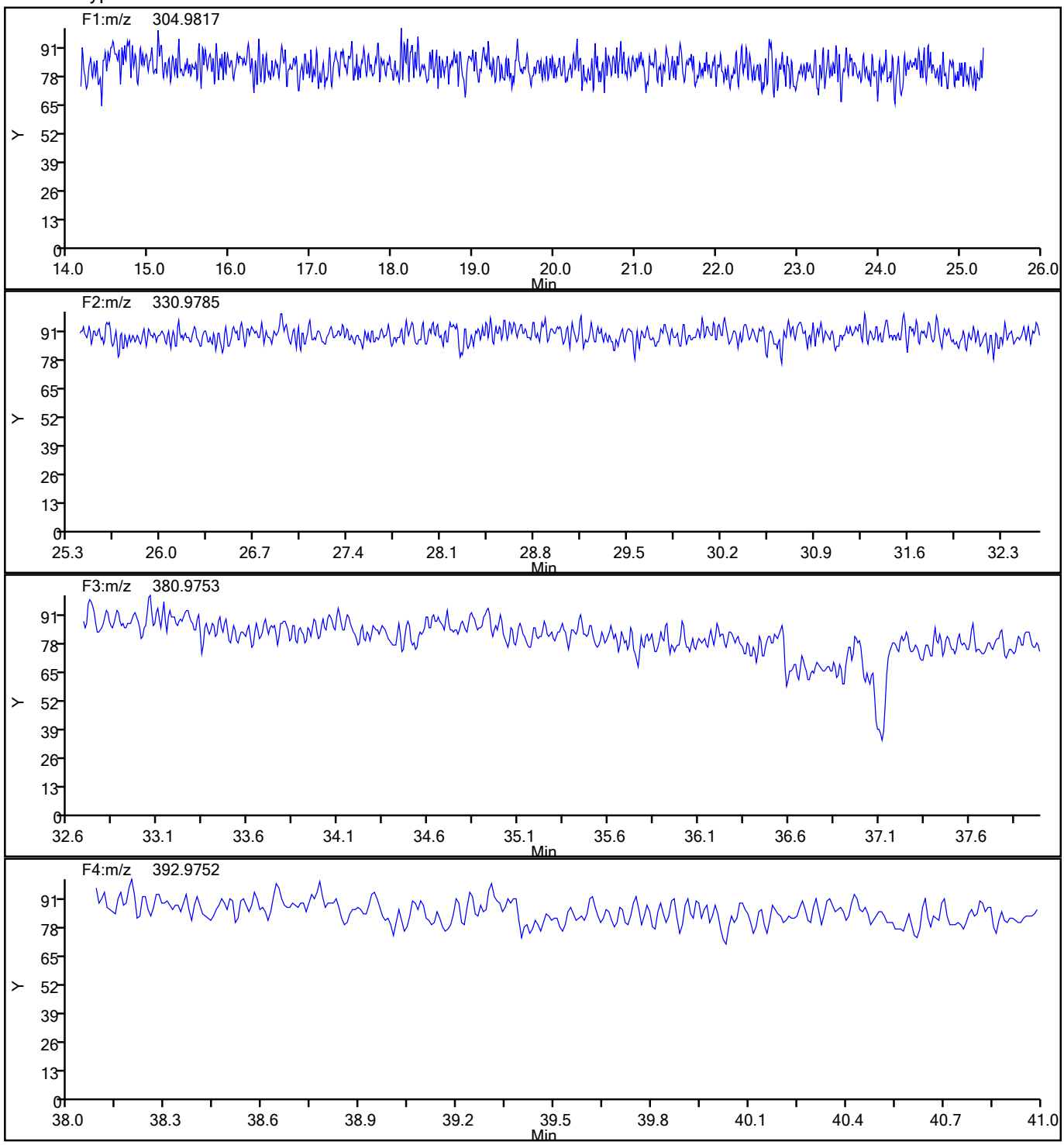

789714

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

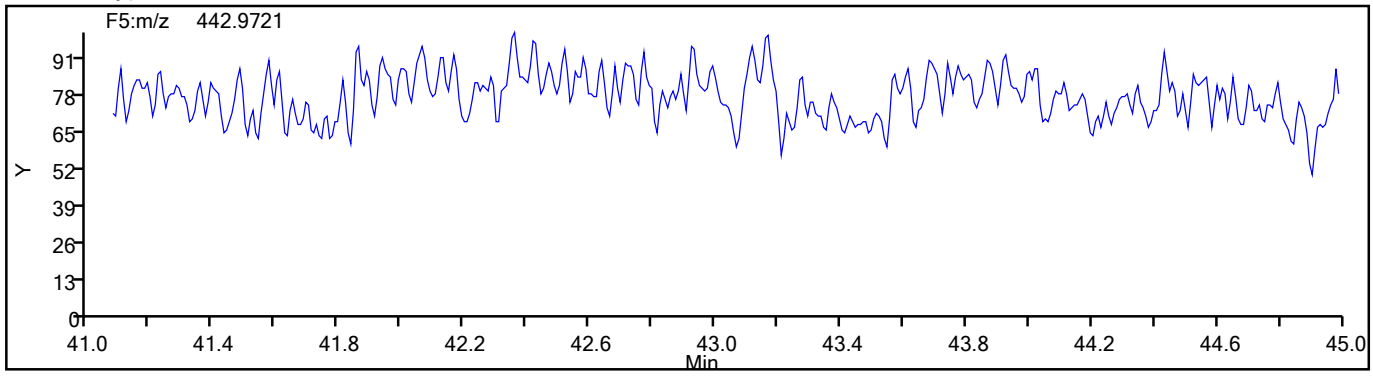

789715

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-1
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (2-4) MSD RA
Lab Sample ID: 320-76901-2 MSD RA
Matrix: Sediment
Lab File ID: 27AU2111D2_008.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:05
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.20(g)
Date Analyzed: 08/27/2021 13:30
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	172		1.3	0.58

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	50		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	65		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_008.d
Lims ID: 320-76901-A-2-C MSD
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MSD
Inject. Date: 27-Aug-2021 13:30:30 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-2-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:50:14

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.299	57429416	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.601	38185418	0.78	1.3327	49.9	49.9	0.2772	0.2772	49.89	
2,3,7,8-TCDF	17.629	24296820	0.80	0.9978	63.8	63.8	0.2142	0.2142	638	
D 13C-2,3,7,8-TCDD	16.065	22815502	0.79	0.8749	45.4	45.4	1.344	1.344	45.41	
2,3,7,8-TCDD	16.079	6655982	0.81	1.0570	27.6	27.6	0.2274	0.2274	276	
$ 37Cl4-2,3,7,8-TCDD	16.079	12978451		0.8648	26.1	26.1	0.0833	0.0833	65.33	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

789717

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_008.d
Lims ID: 320-76901-A-2-C MSD
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MSD
Inject. Date: 27-Aug-2021 13:30:30 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-2-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:50:14

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.299	16.284	1		25198303	5260855	25703	64257	205		
333.9339	16.285	16.284	0		32231113	6910984	31545	78862	219	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.601	17.614	-1	1.080	16792584	3098268	7403	18507	419		
317.9389	17.615	17.614	0	1.081	21392834	4038299	10586	26465	381	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.628	0	1.002	10773418	2053603	2434	6085	844		
305.8987	17.629	17.628	0	1.002	13523402	2556005	3668	9170	697	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.064	0	0.986	10051386	2319807	25703	64257	90		
333.9339	16.065	16.064	0	0.986	12764116	2828992	31545	78862	90	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.079	16.078	0	1.001	2979646	658555	2387	5967	276		
321.8936	16.079	16.078	0	1.001	3676336	792542	2563	6407	309	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.079	16.078	0	0.987	12978451	2996421	3506	8765	855		

QC Flag Legend

Processing Flags

Report Date: 27-Aug-2021 15:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_008.d		
Injection Date:	27-Aug-2021 13:30:30	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

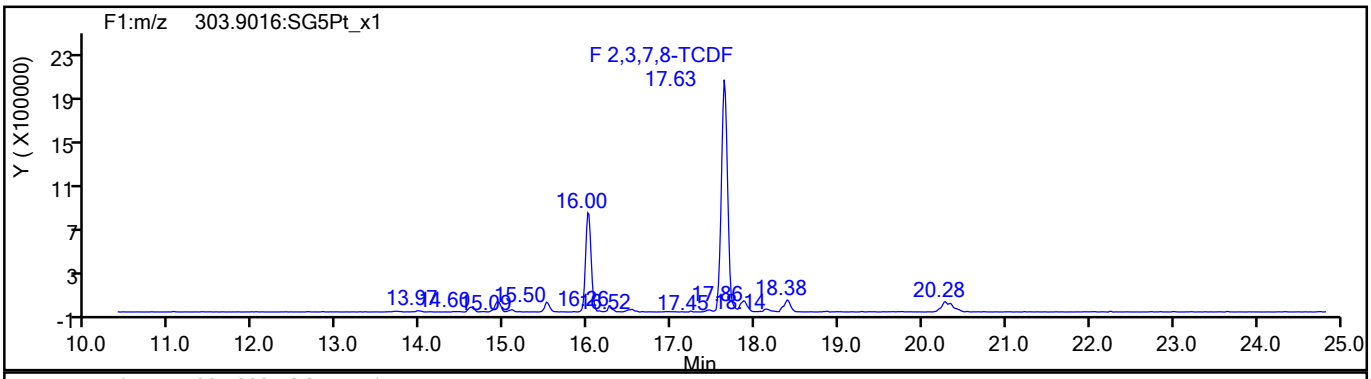

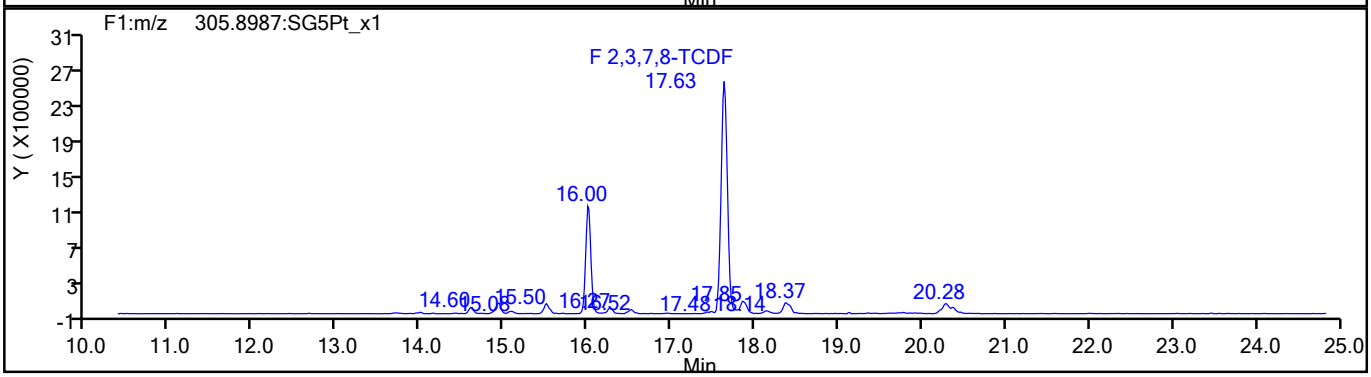

TCDF Standards

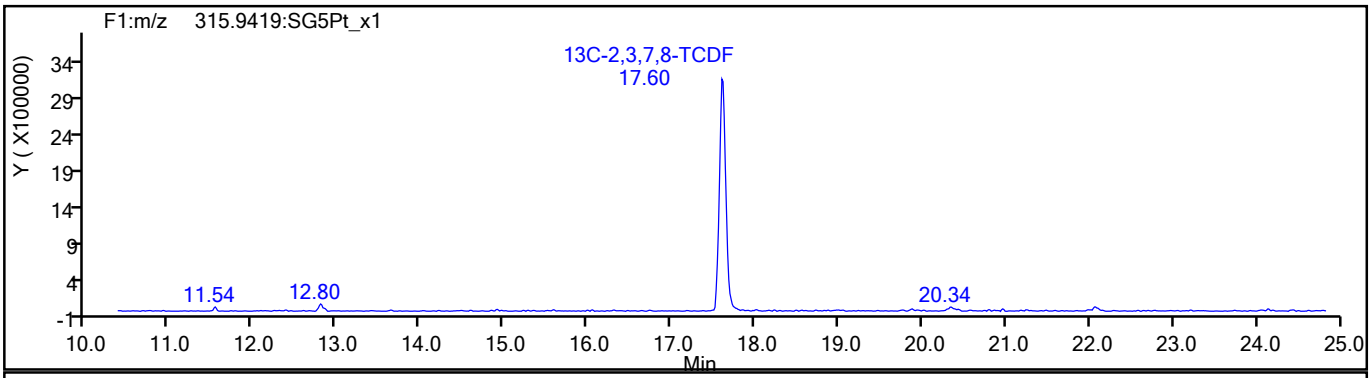

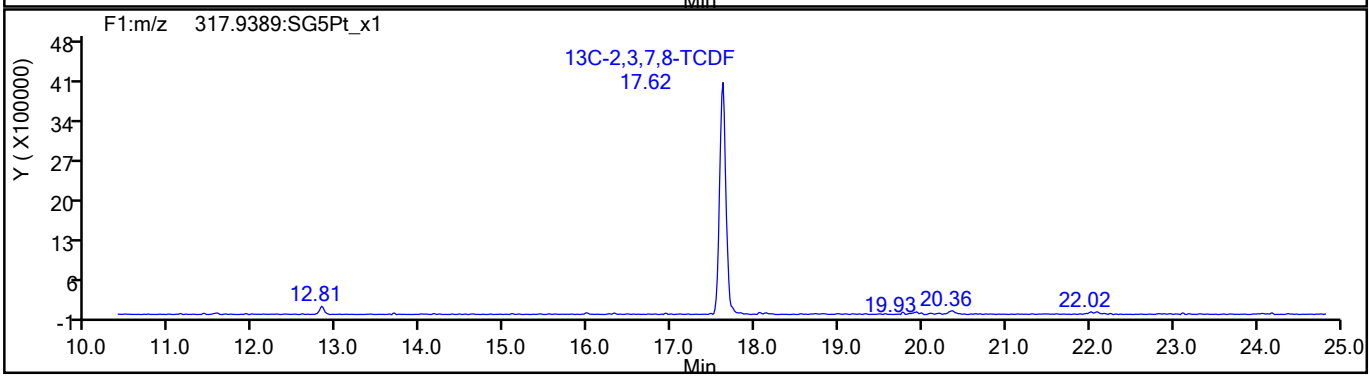

789719

Report Date: 27-Aug-2021 15:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_008.d		
Injection Date:	27-Aug-2021 13:30:30	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

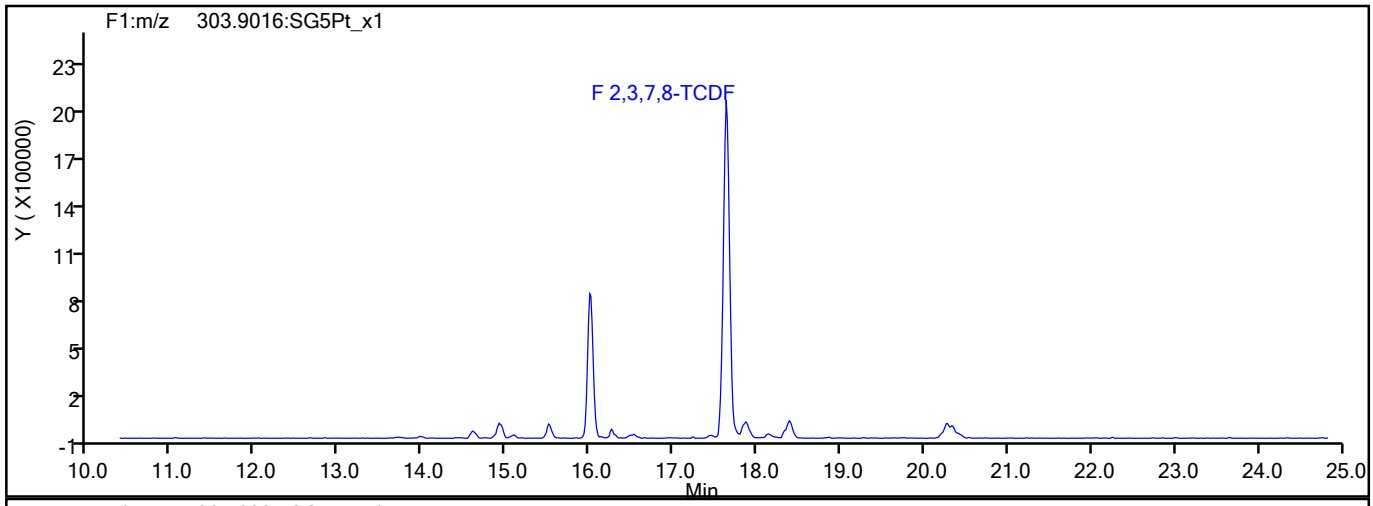

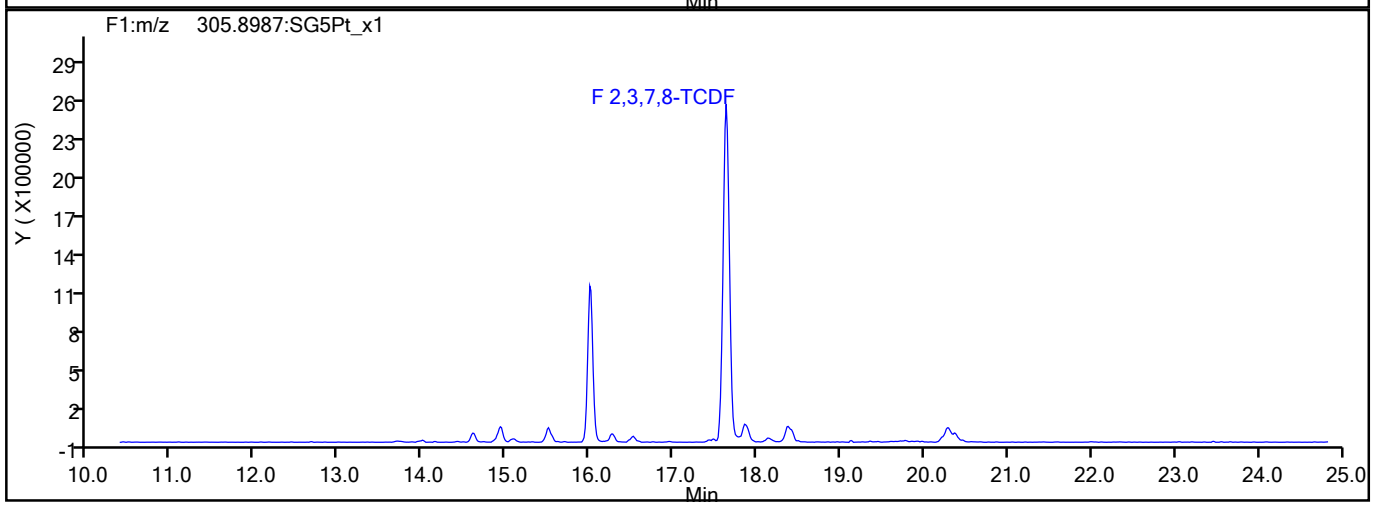

TCDF Interference Mass

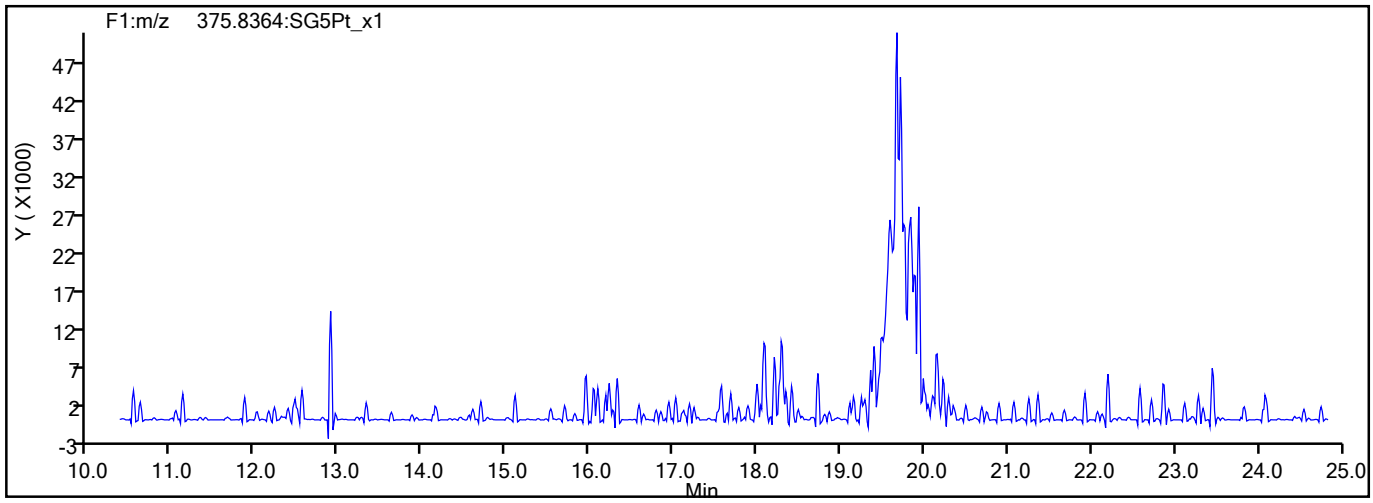

789720

Report Date: 27-Aug-2021 15:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_008.d		
Injection Date:	27-Aug-2021 13:30:30	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

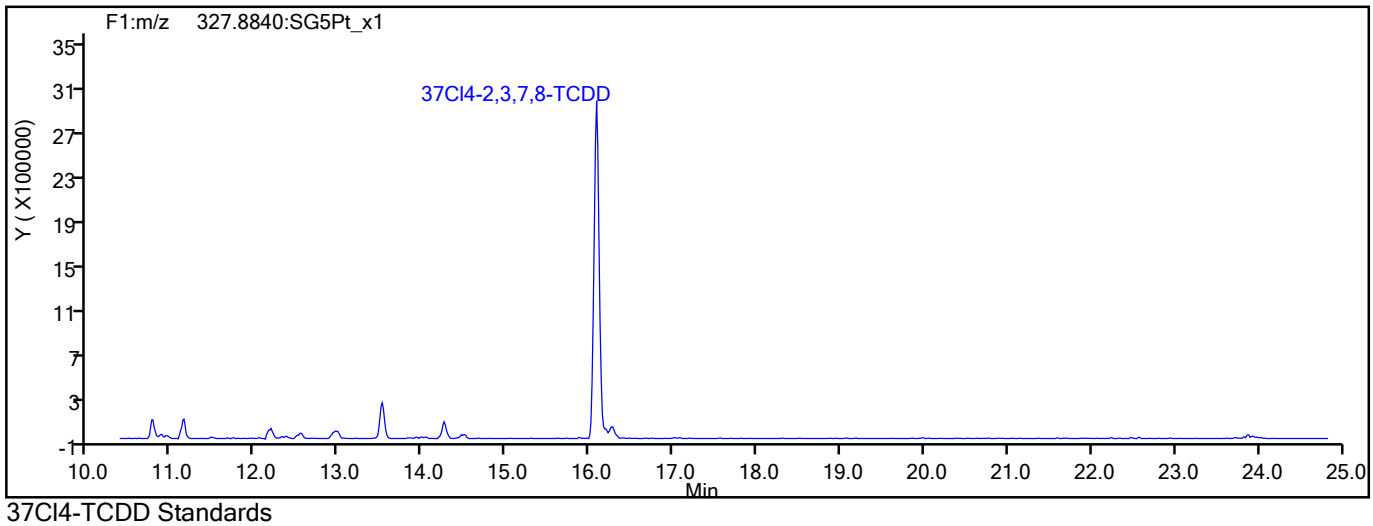

37Cl4-TCDD Standards

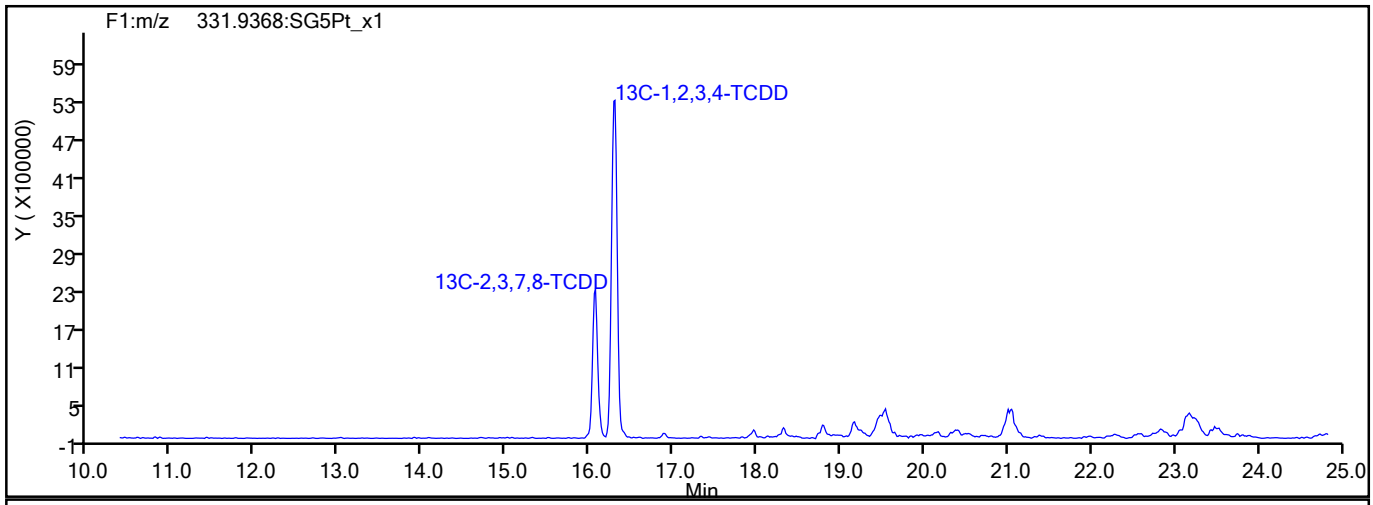

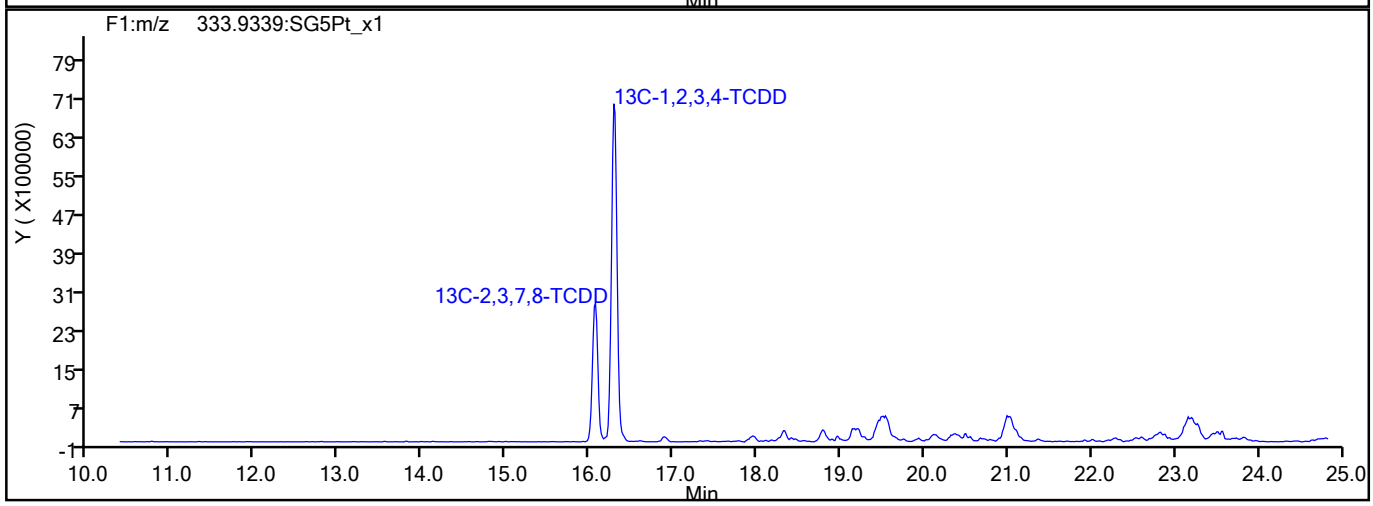

789721

Report Date: 27-Aug-2021 15:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_008.d		
Injection Date:	27-Aug-2021 13:30:30	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

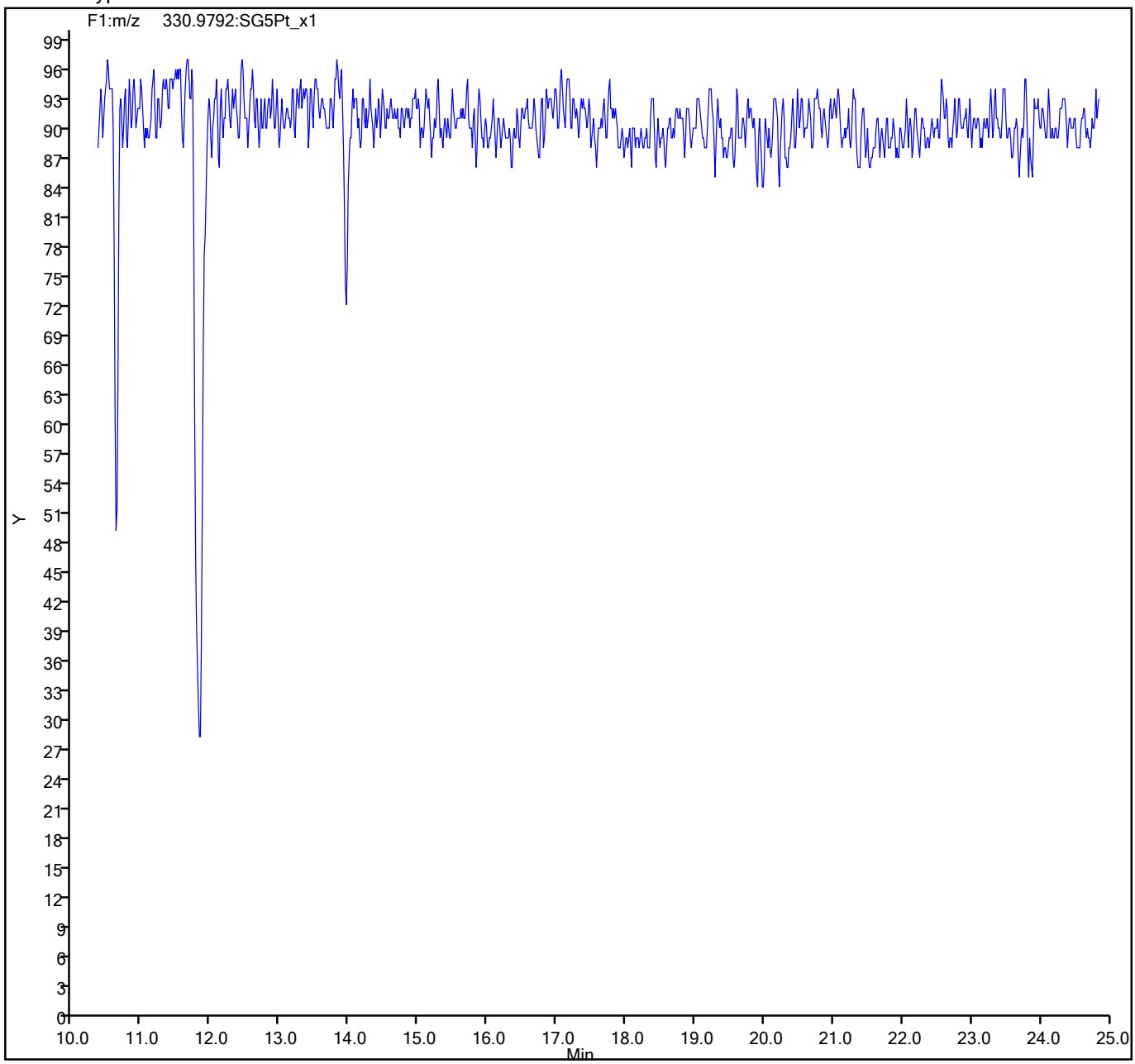

789722

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Instrument ID: DFS 1 Start Date: 06/08/2021 12:40

Analysis Batch Number: 496688 End Date: 06/08/2021 19:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-496688/1		06/08/2021 12:40	1	08jn21adfs1_2.d	DB-5 0.32(mm)
IC 320-496688/3		06/08/2021 14:18	1	08jn21adfs1_4.d	DB-5 0.32(mm)
IC 320-496688/4		06/08/2021 15:06	1	08jn21adfs1_5.d	DB-5 0.32(mm)
IC 320-496688/5		06/08/2021 15:54	1	08jn21adfs1_6.d	DB-5 0.32(mm)
IC 320-496688/6		06/08/2021 16:42	1	08jn21adfs1_7.d	DB-5 0.32(mm)
IC 320-496688/7		06/08/2021 17:30	1	08jn21adfs1_8.d	DB-5 0.32(mm)
ICV 320-496688/9		06/08/2021 19:25	1	08jn21adfs1_11.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Instrument ID: 10D5 Start Date: 07/26/2021 09:21

Analysis Batch Number: 510264 End Date: 07/26/2021 15:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-510264/1		07/26/2021 09:21	1	26JL2110D5_1.d	DB-5 0.32(mm)
IC 320-510264/3		07/26/2021 10:51	1	26JL2110D5_3.d	DB-5 0.32(mm)
IC 320-510264/4		07/26/2021 11:36	1	26JL2110D5_4.d	DB-5 0.32(mm)
IC 320-510264/5		07/26/2021 12:21	1	26JL2110D5_5.d	DB-5 0.32(mm)
IC 320-510264/6		07/26/2021 13:06	1	26JL2110D5_6.d	DB-5 0.32(mm)
IC 320-510264/7		07/26/2021 13:51	1	26JL2110D5_7.d	DB-5 0.32(mm)
ICV 320-510264/9		07/26/2021 15:31	1	26JL2110D5_9.d	DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/19/2021 01:32

Analysis Batch Number: 517462 End Date: 08/19/2021 11:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-517462/43		08/19/2021 01:32	1	17au21dfs1_47.d	DB-5 0.32(mm)
WDM 320-517462/44		08/19/2021 02:19	1	17au21dfs1_48.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 03:55	1		DB-5 0.32(mm)
LCS 320-513879/2-A		08/19/2021 04:43	1	17au21dfs1_51.d	DB-5 0.32(mm)
320-76901-2	11215702-072821-BN-SJ SB095 (2-4)	08/19/2021 05:30	1	17au21dfs1_52.d	DB-5 0.32(mm)
320-76901-2 MS	11215702-072821-BN-SJ SB095 (2-4) MS	08/19/2021 06:18	1	17au21dfs1_53.d	DB-5 0.32(mm)
320-76901-2 MSD	11215702-072821-BN-SJ SB095 (2-4) MSD	08/19/2021 07:06	1	17au21dfs1_54.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 07:54	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 08:42	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 09:30	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 10:18	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 11:06	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/19/2021 13:59

Analysis Batch Number: 517891 End Date: 08/19/2021 23:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-517891/1		08/19/2021 13:59	1	19au21dfs1_2.d	DB-5 0.32(mm)
CCV 320-517891/2		08/19/2021 14:46	1	19au21dfs1_3.d	DB-5 0.32(mm)
MB 320-513879/1-A		08/19/2021 16:27	1	19au21dfs1_5.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 17:15	1		DB-5 0.32(mm)
320-76901-3	11215702-072821-BN-SJ SB095 (4-6)	08/19/2021 18:03	1	19au21dfs1_7.d	DB-5 0.32(mm)
320-76901-4	11215702-072821-BN-SJ SB095 (6-8)	08/19/2021 18:51	1	19au21dfs1_8.d	DB-5 0.32(mm)
320-76901-5	11215702-072821-BN-SJ SB095 (8-10)	08/19/2021 19:39	1	19au21dfs1_9.d	DB-5 0.32(mm)
320-76901-6	11215702-072821-BN-SJ SB095 (10-12)	08/19/2021 20:27	1	19au21dfs1_10.d	DB-5 0.32(mm)
320-76901-7	11215702-072821-BN-SJ SB095 (12-14)	08/19/2021 21:15	1	19au21dfs1_11.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 22:02	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 22:50	1		DB-5 0.32(mm)
320-76901-13	11215702-072821-BN-DU P-10	08/19/2021 23:38	1	19au21dfs1_14.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Instrument ID: DFS 1 Start Date: 08/20/2021 01:34

Analysis Batch Number: 518043 End Date: 08/20/2021 09:32

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-518043/15		08/20/2021 01:34	1	19au21dfs1_17.d	DB-5 0.32(mm)
WDM 320-518043/16		08/20/2021 02:21	1	19au21dfs1_18.d	DB-5 0.32(mm)
ZZZZZ		08/20/2021 03:09	1		DB-5 0.32(mm)
ZZZZZ		08/20/2021 03:57	5		DB-5 0.32(mm)
ZZZZZ		08/20/2021 04:45	10		DB-5 0.32(mm)
ZZZZZ		08/20/2021 05:33	10		DB-5 0.32(mm)
ZZZZZ		08/20/2021 06:21	10		DB-5 0.32(mm)
ZZZZZ		08/20/2021 07:09	10		DB-5 0.32(mm)
ZZZZZ		08/20/2021 07:57	10		DB-5 0.32(mm)
320-76901-1	11215702-072821-BN-SJ SB095 (0-2)	08/20/2021 08:44	10	19au21dfs1_26.d	DB-5 0.32(mm)
ZZZZZ		08/20/2021 09:32	10		DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/24/2021 08:28

Analysis Batch Number: 519438 End Date: 08/24/2021 15:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-519438/1		08/24/2021 08:28	1	24AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-519438/2		08/24/2021 09:07	1	24AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/24/2021 09:45	1		DB-225 0.32(mm)
MB 320-513879/1-A RA		08/24/2021 10:23	1	24AU2111D2_004.d	DB-225 0.32(mm)
ZZZZZ		08/24/2021 11:02	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 11:40	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 12:18	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 12:57	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 13:35	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 14:13	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 14:51	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 15:30	1		DB-225 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/27/2021 08:59

Analysis Batch Number: 520438 End Date: 08/27/2021 14:47

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-520438/1		08/27/2021 08:59	1	27AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-520438/2		08/27/2021 09:37	1	27AU2111D2_002.d	DB-225 0.32(mm)
320-76901-13 RA	11215702-072821-BN-DUP-10 RA	08/27/2021 10:57	1	27AU2111D2_004.d	DB-225 0.32(mm)
320-76901-6 RA	11215702-072821-BN-SJSB095 (10-12) RA	08/27/2021 11:35	1	27AU2111D2_005.d	DB-225 0.32(mm)
320-76901-2 RA	11215702-072821-BN-SJSB095 (2-4) RA	08/27/2021 12:13	1	27AU2111D2_006.d	DB-225 0.32(mm)
320-76901-2 MS RA	11215702-072821-BN-SJSB095 (2-4) MS RA	08/27/2021 12:52	1	27AU2111D2_007.d	DB-225 0.32(mm)
320-76901-2 MSD RA	11215702-072821-BN-SJSB095 (2-4) MSD RA	08/27/2021 13:30	1	27AU2111D2_008.d	DB-225 0.32(mm)
ZZZZZ		08/27/2021 14:08	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 14:47	1		DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/27/2021 15:38

Analysis Batch Number: 520456 End Date: 08/28/2021 02:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-520456/1		08/27/2021 15:38	1	27AU21A11D2_001.d	DB-225 0.32(mm)
CCV 320-520456/2		08/27/2021 16:16	1	27AU21A11D2_002.d	DB-225 0.32(mm)
320-76901-3 RA	11215702-072821-BN-SJSB095 (4-6) RA	08/27/2021 17:33	1	27AU21A11D2_004.d	DB-225 0.32(mm)
320-76901-4 RA	11215702-072821-BN-SJSB095 (6-8) RA	08/27/2021 18:11	1	27AU21A11D2_005.d	DB-225 0.32(mm)
320-76901-7 RA	11215702-072821-BN-SJSB095 (12-14) RA	08/27/2021 18:50	1	27AU21A11D2_006.d	DB-225 0.32(mm)
320-76901-8 RA	11215702-072821-BN-SJSB095 (14-16) RA	08/27/2021 19:28	1	27AU21A11D2_007.d	DB-225 0.32(mm)
ZZZZZ		08/27/2021 20:06	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 20:45	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 21:23	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 22:01	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 22:40	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 23:18	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 23:56	1		DB-225 0.32(mm)
ZZZZZ		08/28/2021 00:35	1		DB-225 0.32(mm)
ZZZZZ		08/28/2021 01:13	1		DB-225 0.32(mm)
320-76901-5 RA	11215702-072821-BN-SJSB095 (8-10) RA	08/28/2021 01:52	1	27AU21A11D2_017.d	DB-225 0.32(mm)
320-76901-1 RA	11215702-072821-BN-SJSB095 (0-2) RA	08/28/2021 02:30	1	27AU21A11D2_018.d	DB-225 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/30/2021 21:15

Analysis Batch Number: 521465 End Date: 08/31/2021 05:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-521465/1		08/30/2021 21:15	1	30AU2110D5_14.d	DB-5 0.32(mm)
CCV 320-521465/2		08/30/2021 22:10	1	30AU2110D5_15.d	DB-5 0.32(mm)
ZZZZZ		08/30/2021 22:55	1		DB-5 0.32(mm)
ZZZZZ		08/30/2021 23:40	1		DB-5 0.32(mm)
320-76901-8	11215702-072821-BN-SJ SB095 (14-16)	08/31/2021 00:25	1	30AU2110D5_18.d	DB-5 0.32(mm)
ZZZZZ		08/31/2021 01:10	1		DB-5 0.32(mm)
ZZZZZ		08/31/2021 01:55	1		DB-5 0.32(mm)
ZZZZZ		08/31/2021 02:40	1		DB-5 0.32(mm)
ZZZZZ		08/31/2021 03:25	1		DB-5 0.32(mm)
ZZZZZ		08/31/2021 04:10	1		DB-5 0.32(mm)
ZZZZZ		08/31/2021 04:55	1		DB-5 0.32(mm)
ZZZZZ		08/31/2021 05:40	1		DB-5 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76901-1

SDG No.:

Batch Number: 513879 Batch Start Date: 08/06/21 12:57 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/14/21 06:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-513879/1		HRMS-Sox, 1613B		10 g	20.0 uL	C,1	66	1	1 mL
LCS 320-513879/2		HRMS-Sox, 1613B		10 g	20.0 uL	2	39	3	1 mL
320-76901-A-1	11215702-072821-BN-SJSB095 (0-2)	HRMS-Sox, 1613B	T	10.80 g	20.0 uL	3	68	1	1 mL
320-76901-A-2	11215702-072821-BN-SJSB095 (2-4)	HRMS-Sox, 1613B	T	10.06 g	20.0 uL	4	62	3	1 mL
320-76901-A-2 MS	11215702-072821-BN-SJSB095 (2-4)	HRMS-Sox, 1613B	T	10.08 g	20.0 uL	5	114	1	1 mL
320-76901-A-2 MSD	11215702-072821-BN-SJSB095 (2-4)	HRMS-Sox, 1613B	T	10.20 g	20.0 uL	6	6	3	1 mL
320-76901-A-3	11215702-072821-BN-SJSB095 (4-6)	HRMS-Sox, 1613B	T	10.7 g	20.0 uL	F,1	8	1	1 mL
320-76901-A-4	11215702-072821-BN-SJSB095 (6-8)	HRMS-Sox, 1613B	T	10.28 g	20.0 uL	2	119	3	1 mL
320-76901-A-5	11215702-072821-BN-SJSB095 (8-10)	HRMS-Sox, 1613B	T	10.14 g	20.0 uL	3	32	1	1 mL
320-76901-A-6	11215702-072821-BN-SJSB095 (10-12)	HRMS-Sox, 1613B	T	10.15 g	20.0 uL	4	22	3	1 mL
320-76901-A-7	11215702-072821-BN-SJSB095 (12-14)	HRMS-Sox, 1613B	T	10.33 g	20.0 uL	5	38	1	1 mL
320-76901-A-8	11215702-072821-BN-SJSB095 (14-16)	HRMS-Sox, 1613B	T	10.31 g	20.0 uL	6	24	3	1 mL
320-76901-A-13	11215702-072821-BN-DUP-10	HRMS-Sox, 1613B	T	10.24 g	20.0 uL	2	23	3	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-513879/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-513879/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76901-A-1	11215702-072821-BN-SJSB095 (0-2)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76901-A-2	11215702-072821-BN-SJSB095 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76901-A-2 MS	11215702-072821-BN-SJSB095 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76901-1

SDG No.:

Batch Number: 513879 Batch Start Date: 08/06/21 12:57 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/14/21 06:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
320-76901-A-2 MSD	11215702-072821-BN-SJSB095 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76901-A-3	11215702-072821-BN-SJSB095 (4-6)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76901-A-4	11215702-072821-BN-SJSB095 (6-8)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76901-A-5	11215702-072821-BN-SJSB095 (8-10)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76901-A-6	11215702-072821-BN-SJSB095 (10-12)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76901-A-7	11215702-072821-BN-SJSB095 (12-14)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76901-A-8	11215702-072821-BN-SJSB095 (14-16)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-76901-A-13	11215702-072821-BN-DUP-10	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76901-1

SDG No.:

Batch Number: 513879 Batch Start Date: 08/06/21 12:57 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/14/21 06:30

Batch Notes	
20% DCM:Hexane ID	DH28_00193 mL
65% DCM:Hexane ID	DH6535_00546
Acid Silica Gel ID	SA5644_00732
Acid Alumina ID	Acid_Alumina_00019
Balance ID	QA-0
Sulfuric Acid Lot Number	H2SO400152
Hexane ID	Hexane_00285
IFB Clean Up	GLB 8-14-21
Na2SO4 ID	SodiumSulfate_00166
Analyst ID - IDA Reagent Drop	HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	EMG 8/7/21
Analyst ID - IS Reagent Drop	GLB 8-14-21 DB15270 HRDXNIS00137 B 1/4 20uL
Analyst ID - IS Reagent Drop Witness	HK 8-14-21
Analyst ID - SU Reagent Drop	SR 8/13/21 HD05018 HRDXNSU00255 B 4/5 1.0mL
Analyst ID - SU Reagent Drop Witness	TGL 8-13-21
Analyst ID - TA Reagent Drop	DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	EMG 8/7/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/7/21 10:00
Soxhlet/Soxtherm Start	8/7/21 7:00
Storage Box ID	DXN -267
Toluene ID	Toluene_00110

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

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Sacramento
Dilution Report Form – HRMS Tests

Use this form for documenting dilutions. All dilutions are based on removing sample from the original extract, unless otherwise noted. The final volume for the dilutions listed is the sum of the solvent and the sample.

Attach the completed form to the original bench sheet, for archive with the lot data.

Table 1: How Dilutions Are Made

Dilution required	Amount of Solvent (µL) DXN Methods: 8290, 1613B, TO-9, EPA 23, EPA 0023A; Solvent (tetradecane C_{14}) PCB Methods: 1668A, 1668C; Solvent (dodecane C_{12})	Amount of sample (µl) to be added to solvent
2X	5.0	5.0
5X	8.0	2.0
10X	18.0	2.0
20X	38.0	2.0
25X	48.0	2.0
30X	58.0	2.0
40X	78.0	2.0
50X	98.0	2.0
100X	198.0	2.0

Sample Dilutions Made

Job Number	Sample ID	Dilution Made	Reagent (Solvent)/ IS ID*	Pipette/ Syringe ID	Analyst	Date
320-76888	A-5-A	5X	C14 (2390386)	NA (10µL)	KSS	8/19/21
	A-1-A	10X				
	A-1-B MS	10X				
	A-1-C-MSD	10X				
	A-4-A	10X				
	A-2-A	10X				
	A-3-A	10X				
320-76901	A-1-A	10X				

8/19/21 KS

Log solvents into TALS, use TALS Reagent ID here; if adding IS, also input TALS Reagent ID for IS.

GENERAL CHEMISTRY

789737

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-76901-1

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-072821-BN-SJSB095 (0-2)	320-76901-1
11215702-072821-BN-SJSB095 (2-4)	320-76901-2
11215702-072821-BN-SJSB095 (4-6)	320-76901-3
11215702-072821-BN-SJSB095 (6-8)	320-76901-4
11215702-072821-BN-SJSB095 (8-10)	320-76901-5
11215702-072821-BN-SJSB095 (10-12)	320-76901-6
11215702-072821-BN-SJSB095 (12-14)	320-76901-7
11215702-072821-BN-SJSB095 (14-16)	320-76901-8
11215702-072821-BN-DUP-10	320-76901-13

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76901-1

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76901-1

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/30/2021 12:30 End Date: 07/30/2021 12:30

Lab Sample Id	D/F	Type	Time	Analytes																							
				% Sol	Moist																						
320-76901-1	1	T	12:30	X	X																						
320-76901-2	1	T	12:30	X	X																						
320-76901-2 DU	1	T	12:30	X	X																						
320-76901-3	1	T	12:30	X	X																						
320-76901-4	1	T	12:30	X	X																						
320-76901-5	1	T	12:30	X	X																						
320-76901-6	1	T	12:30	X	X																						
320-76901-7	1	T	12:30	X	X																						
320-76901-8	1	T	12:30	X	X																						
ZZZZZZ			12:30																								
320-76901-13	1	T	12:30	X	X																						
ZZZZZZ			12:30																								
ZZZZZZ			12:30																								
ZZZZZZ			12:30																								

Prep Types:
T = Total/NA

FORM XIII-IN

789741

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76901-1

SDG No.:

Batch Number: 511711 Batch Start Date: 07/30/21 12:30 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/02/21 09:08

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76901-A-1	11215702-072821-BN-SJSB095 (0-2)	D 2216	T	1	1.02 g	10.56 g	6.44 g	43.1865828092243 %	56.8134171907757 %
320-76901-A-2	11215702-072821-BN-SJSB095 (2-4)	D 2216	T	2	1.01 g	8.45 g	6.42 g	27.2849462365591 %	72.7150537634409 %
320-76901-A-2 DU	11215702-072821-BN-SJSB095 (2-4)	D 2216	T	3	1.00 g	9.15 g	6.60 g	31.2883435582822 %	68.7116564417178 %
320-76901-A-3	11215702-072821-BN-SJSB095 (4-6)	D 2216	T	4	1.03 g	10.42 g	8.15 g	24.1746538871139 %	75.8253461128861 %
320-76901-A-4	11215702-072821-BN-SJSB095 (6-8)	D 2216	T	5	1.01 g	8.97 g	7.46 g	18.9698492462312 %	81.0301507537688 %
320-76901-A-5	11215702-072821-BN-SJSB095 (8-10)	D 2216	T	6	1.04 g	12.37 g	9.72 g	23.3892321270962 %	76.6107678729038 %
320-76901-A-6	11215702-072821-BN-SJSB095 (10-12)	D 2216	T	7	1.01 g	10.20 g	8.04 g	23.5038084874864 %	76.4961915125136 %
320-76901-A-7	11215702-072821-BN-SJSB095 (12-14)	D 2216	T	8	1.00 g	9.26 g	7.34 g	23.2445520581114 %	76.7554479418886 %
320-76901-A-8	11215702-072821-BN-SJSB095 (14-16)	D 2216	T	9	2.00 g	12.69 g	10.09 g	24.3217960710945 %	75.6782039289055 %
320-76901-A-13	11215702-072821-BN-DUP-10	D 2216	T	11	1.03 g	10.29 g	8.60 g	18.2505399568034 %	81.7494600431966 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	08/02/2021 08:37
Date and Time Samples out of Desiccator	08/02/2021 09:08
Date samples were placed in the oven	07/30/2021
Oven Temp In	114 Degrees C
Time samples were place in the oven	12:30
Date samples were removed from oven	08/02/2021
Oven Temp Out	113 Degrees C
Time Samples were removed from oven	08:37
Oven ID	Soil Prep #2
Thermometer ID	151969607

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76901-1

SDG No.:

Batch Number: 511711 Batch Start Date: 07/30/21 12:30 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/02/21 09:08

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-76901-1

Batch: 511711
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76901-A-1

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	43.1865828092243	%
Percent Solids	None	1	56.8134171907757	%

Lab Sample ID: 320-76901-A-2

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	27.2849462365591	%
Percent Solids	None	1	72.7150537634409	%

Lab Sample ID: 320-76901-A-2 DU

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	31.2883435582822	%
Percent Solids	None	1	68.7116564417178	%

Lab Sample ID: 320-76901-A-3

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	24.1746538871139	%
Percent Solids	None	1	75.8253461128861	%

Lab Sample ID: 320-76901-A-4

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	18.9698492462312	%
Percent Solids	None	1	81.0301507537688	%

Lab Sample ID: 320-76901-A-5

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	23.3892321270962	%
Percent Solids	None	1	76.6107678729038	%

Lab Sample ID: 320-76901-A-6

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	23.5038084874864	%
Percent Solids	None	1	76.4961915125136	%

Lab Sample ID: 320-76901-A-7

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	23.2445520581114	%
Percent Solids	None	1	76.7554479418886	%

Lab Sample ID: 320-76901-A-8

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	24.3217960710945	%
Percent Solids	None	1	75.6782039289055	%

General Chemistry Raw Data Report

Job ID: 320-76901-1

Batch: 511711 (Continued)
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76901-A-13

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	18.2505399568034	%
Percent Solids	None	1	81.7494600431966	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P
1.00	1.00	200.00	200.00	8/1/2021	DM	WT-3	P
1.00	1.00	200.00	200.00	08/02/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

789748

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

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Chain of Custody Record

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 1 of 2
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702 - 2021-001			

Analysis Requested

320-76901 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072821-BN-SJSB095 (0-2)	7-28-21	1100	G	S	N	N	X	X	X	1	
(2-4)		1105			N	Y	X	X	X	1	MS/MSD
(4-6)		1110			N	N	X	X	X		
(6-8)		1115			N	N	X	X	X		
(8-10)		1120			N	N	X	X	X		
(10-12)		1125			N	N	X	X	X		
(12-14)		1130			N	N	X	X	X		
(14-16)		1135			N	N	X	X	X		
(16-18)		1140			N	N	X	X	X		PRIORITY
(18-20)		1145			N	N	X	X	X		HOLD
(20-22)		1150			N	N	X	X	X		HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: Fedex		
Relinquished by: Breanna North	Date/Time: 7-28-21 1500	Company: GHD	Received by: [signature]	Date/Time: 7/29/21 945	Company: GHD
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: 15192663		Cooler Temperature(s) °C and Other Remarks: 1.5		

Ver: 01/16/2019

789749

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

eurofins

Chain of Custody Record

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 2 of 2
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=soil, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	16138	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072821-BN-SJSB095(22-24)	7-28-21	1155	G	S	N	N	X	X	X		HOLD
11215702-072821-BN-DUP-10	7-28-21	—	G	S	N	N	X	X	X		

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: Fedex		
Relinquished by: Breanna North	Date/Time: 7-28-21 1500	Company: GHD	Received by: [signature]	Date/Time: 7/29/21 945	Company: ETAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: X Yes Δ No	Custody Seal No.: 1519263		Cooler Temperature(s) °C and Other Remarks: 1.5		

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-76901-1

Login Number: 76901
List Number: 1
Creator: Cahill, Nicholas P

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1519263
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Job Number: 320-76901-2

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
8/30/2021 5:38 PM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
08/30/2021

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Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 7/29/2021 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.5º C.

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument DFS 1 exceeded this criteria: 11215702-072821-BN-SJSB095 (16-18) (320-76901-9), (CCV 320-517891/2) and (MB 320-513879/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: Due to the high concentration of some analytes, some matrix spike/matrix spike duplicate (MS/MSD) recoveries for preparation batch 320-513879 could not be evaluated for accuracy and precision. The laboratory control sample met acceptance criteria.

Method 1613B: The method blank for preparation batch 320-513879 contained 2,3,7,8-TCDF above the reporting limit (RL). As discussed, the associated samples were not re-extracted and re-analyzed.

Method 1613B: The ending resolution check did not print due to instrument error. A manual resolution check was performed more than 12 hours from the previous check without tuning the instrument indicating the Instrument maintained the greater than 10,000 resolution. All samples were analyzed within the 12 hour analytical clock requirement. There is no adverse impact on the data reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Job ID: 320-76901-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072821-BN-SJSB095 (16-18) Lab Sample ID: 320-76901-9

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	15	B	6.7	0.17	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.28	J B	6.7	0.058	pg/g	1	☼	1613B	Total/NA
OCDD	260	B	13	0.31	pg/g	1	☼	1613B	Total/NA
Total TCDD	1.2	J q	1.3	0.13	pg/g	1	☼	1613B	Total/NA
Total TCDF	6.1	B	1.3	0.068	pg/g	1	☼	1613B	Total/NA
Total PeCDD	5.9	J q	6.7	0.15	pg/g	1	☼	1613B	Total/NA
Total HxCDD	17		6.7	0.27	pg/g	1	☼	1613B	Total/NA
Total HpCDD	66	B	6.7	0.17	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.28	J B	6.7	0.060	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	3.6		1.3	0.15	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-2

Client Sample ID: 11215702-072821-BN-SJSB095 (16-18)

Lab Sample ID: 320-76901-9

Date Collected: 07/28/21 11:40
Matrix: Sediment
Date Received: 07/29/21 09:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**30.7**		0.1	0.1	%			07/30/21 12:30	1
Percent Solids	**69.3**		0.1	0.1	%			07/30/21 12:30	1

Client Sample ID: 11215702-072821-BN-SJSB095 (16-18)

Lab Sample ID: 320-76901-9

Date Collected: 07/28/21 11:40
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 69.3

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.3	0.13	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
1,2,3,7,8-PeCDD	ND		6.7	0.15	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
1,2,3,7,8-PeCDF	ND		6.7	0.052	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
2,3,4,7,8-PeCDF	ND		6.7	0.056	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
1,2,3,4,7,8-HxCDD	ND		6.7	0.28	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
1,2,3,6,7,8-HxCDD	ND		6.7	0.29	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
1,2,3,7,8,9-HxCDD	ND		6.7	0.26	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
1,2,3,4,7,8-HxCDF	ND		6.7	0.019	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
1,2,3,6,7,8-HxCDF	ND		6.7	0.018	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
1,2,3,7,8,9-HxCDF	ND		6.7	0.018	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
2,3,4,6,7,8-HxCDF	ND		6.7	0.017	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
1,2,3,4,6,7,8-HpCDD	**15**	**B**	6.7	0.17	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
1,2,3,4,6,7,8-HpCDF	**0.28**	**J B**	6.7	0.058	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
1,2,3,4,7,8,9-HpCDF	ND		6.7	0.061	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
OCDD	**260**	**B**	13	0.31	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
OCDF	ND		13	0.12	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
Total TCDD	**1.2**	**J q**	1.3	0.13	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
Total TCDF	**6.1**	**B**	1.3	0.068	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
Total PeCDD	**5.9**	**J q**	6.7	0.15	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
Total PeCDF	ND		6.7	0.056	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
Total HxCDD	**17**		6.7	0.27	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
Total HxCDF	ND		6.7	0.052	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
Total HpCDD	**66**	**B**	6.7	0.17	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1
Total HpCDF	**0.28**	**J B**	6.7	0.060	pg/g	☼	08/06/21 12:58	08/19/21 22:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*41*		*25 - 164*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-2,3,7,8-TCDF	*41*		*24 - 169*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-1,2,3,7,8-PeCDD	*40*		*25 - 181*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-1,2,3,7,8-PeCDF	*39*		*24 - 185*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-2,3,4,7,8-PeCDF	*43*		*21 - 178*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-1,2,3,4,7,8-HxCDD	*47*		*32 - 141*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-1,2,3,6,7,8-HxCDD	*46*		*28 - 130*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-1,2,3,4,7,8-HxCDF	*50*		*26 - 152*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-1,2,3,6,7,8-HxCDF	*49*		*26 - 123*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-1,2,3,7,8,9-HxCDF	*43*		*29 - 147*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-2,3,4,6,7,8-HxCDF	*45*		*28 - 136*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*47*		*23 - 140*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*48*		*28 - 143*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*49*		*26 - 138*	*08/06/21 12:58*	*08/19/21 22:50*	*1*
13C-OCDD	*36*		*17 - 157*	*08/06/21 12:58*	*08/19/21 22:50*	*1*

Client Sample ID: 11215702-072821-BN-SJSB095 (16-18) Lab Sample ID: 320-76901-9

Date Collected: 07/28/21 11:40 **Matrix: Sediment**
Date Received: 07/29/21 09:45 **Percent Solids: 69.3**

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*51*		*35 - 197*	*08/06/21 12:58*	*08/19/21 22:50*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**3.6**		1.3	0.15	pg/g	☼	08/06/21 12:58	08/27/21 20:06	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*44*		*24 - 169*	*08/06/21 12:58*	*08/27/21 20:06*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*56*		*35 - 197*	*08/06/21 12:58*	*08/27/21 20:06*	*1*

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-2

Client Sample ID: 11215702-072821-BN-SJSB095 (16-18) — Lab Sample ID: 320-76901-9

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	ND		1.3	0.13	pg/g	1	0.065	1613B
1,2,3,7,8-PeCDD	ND		6.7	0.15	pg/g	1	0.075	1613B
1,2,3,7,8-PeCDF	ND		6.7	0.052	pg/g	0.03	0.00078	1613B
2,3,4,7,8-PeCDF	ND		6.7	0.056	pg/g	0.3	0.0084	1613B
1,2,3,4,7,8-HxCDD	ND		6.7	0.28	pg/g	0.1	0.014	1613B
1,2,3,6,7,8-HxCDD	ND		6.7	0.29	pg/g	0.1	0.015	1613B
1,2,3,7,8,9-HxCDD	ND		6.7	0.26	pg/g	0.1	0.013	1613B
1,2,3,4,7,8-HxCDF	ND		6.7	0.019	pg/g	0.1	0.00095	1613B
1,2,3,6,7,8-HxCDF	ND		6.7	0.018	pg/g	0.1	0.00090	1613B
1,2,3,7,8,9-HxCDF	ND		6.7	0.018	pg/g	0.1	0.00090	1613B
2,3,4,6,7,8-HxCDF	ND		6.7	0.017	pg/g	0.1	0.00085	1613B
1,2,3,4,6,7,8-HpCDD	**15**	**B**	6.7	0.17	pg/g	0.01	**0.15**	1613B
1,2,3,4,6,7,8-HpCDF	**0.28**	**J B**	6.7	0.058	pg/g	0.01	**0.0028**	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.7	0.061	pg/g	0.01	0.00031	1613B
OCDD	**260**	**B**	13	0.31	pg/g	0.0003	**0.078**	1613B
OCDF	ND		13	0.12	pg/g	0.0003	0.000018	1613B
2,3,7,8-TCDF - RA	**3.6**		1.3	0.15	pg/g	0.1	**0.36**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		0.79	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-76901-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-76901-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (35-197)							
320-76901-9	11215702-072821-BN-SJSB095	51							
320-76901-9 - RA	11215702-072821-BN-SJSB095 (16-18)	56							
320-76901-A-2-B MS	Matrix Spike	50							
320-76901-A-2-B MS - RA	Matrix Spike	58							
320-76901-A-2-C MSD	Matrix Spike Duplicate	57							
320-76901-A-2-C MSD - RA	Matrix Spike Duplicate	65							
MB 320-513879/1-A	Method Blank	46							
MB 320-513879/1-A - RA	Method Blank	50							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (31-191)							
LCS 320-513879/2-A	Lab Control Sample	47							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-76901-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-76901-9	11215702-072821-BN-SJSB095	41	41	40	39	43	47	46	50
320-76901-9 - RA	11215702-072821-BN-SJSB095 (16-18)		44						
320-76901-A-2-B MS	Matrix Spike	41	38	39	39	43	44	39	50
320-76901-A-2-B MS - RA	Matrix Spike		43						
320-76901-A-2-C MSD	Matrix Spike Duplicate	46	43	43	45	48	57	56	67
320-76901-A-2-C MSD - RA	Matrix Spike Duplicate		50						
MB 320-513879/1-A	Method Blank	36	36	35	36	40	40	39	47
MB 320-513879/1-A - RA	Method Blank		37						

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-76901-9	11215702-072821-BN-SJSB095	49	43	45	47	48	49	36
320-76901-9 - RA	11215702-072821-BN-SJSB095 (16-18)							
320-76901-A-2-B MS	Matrix Spike	46	40	41	47	46	50	42
320-76901-A-2-B MS - RA	Matrix Spike							
320-76901-A-2-C MSD	Matrix Spike Duplicate	56	41	50	55	55	61	62
320-76901-A-2-C MSD - RA	Matrix Spike Duplicate							
MB 320-513879/1-A	Method Blank	43	39	38	41	41	42	36
MB 320-513879/1-A - RA	Method Blank							

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-513879/2-A	Lab Control Sample	34	36	34	31	36	37	35	42

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-513879/2-A	Lab Control Sample	37	32	33	36	35	40	39

Isotope Dilution Summary

Client: GHD Services Inc.
Job ID: 320-76901-2
Project/Site: SJRWP Supplemental Design Investigation

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Analysis Batch: 517891

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 513879

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.073	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8-PeCDD	ND		5.0	0.067	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8-PeCDF	ND		5.0	0.052	pg/g		08/06/21 12:58	08/19/21 16:27	1
2,3,4,7,8-PeCDF	ND		5.0	0.055	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.042	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.046	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.041	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.021	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.020	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.020	pg/g		08/06/21 12:58	08/19/21 16:27	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.022	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,6,7,8-HpCDD	0.338	J	5.0	0.032	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,6,7,8-HpCDF	0.177	J	5.0	0.038	pg/g		08/06/21 12:58	08/19/21 16:27	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.041	pg/g		08/06/21 12:58	08/19/21 16:27	1
OCDD	1.21	J	10	0.029	pg/g		08/06/21 12:58	08/19/21 16:27	1
OCDF	ND		10	0.12	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total TCDD	ND		1.0	0.14	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total TCDF	4.06		1.0	0.047	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total PeCDD	ND		5.0	0.21	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total PeCDF	ND		5.0	0.055	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HxCDD	ND		5.0	0.19	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HxCDF	ND		5.0	0.040	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HpCDD	0.546	J	5.0	0.032	pg/g		08/06/21 12:58	08/19/21 16:27	1
Total HpCDF	0.177	J	5.0	0.039	pg/g		08/06/21 12:58	08/19/21 16:27	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*36*		*25 - 164*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,7,8-TCDF	*36*		*24 - 169*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8-PeCDD	*35*		*25 - 181*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8-PeCDF	*36*		*24 - 185*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,4,7,8-PeCDF	*40*		*21 - 178*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,7,8-HxCDD	*40*		*32 - 141*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,6,7,8-HxCDD	*39*		*28 - 130*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,7,8-HxCDF	*47*		*26 - 152*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,6,7,8-HxCDF	*43*		*26 - 123*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,7,8,9-HxCDF	*39*		*29 - 147*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-2,3,4,6,7,8-HxCDF	*38*		*28 - 136*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*41*		*23 - 140*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*41*		*28 - 143*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*42*		*26 - 138*	*08/06/21 12:58*	*08/19/21 16:27*	*1*
13C-OCDD	*36*		*17 - 157*	*08/06/21 12:58*	*08/19/21 16:27*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*46*		*35 - 197*	*08/06/21 12:58*	*08/19/21 16:27*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-513879/2-A
Client Sample ID: Lab Control Sample
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 517462
Prep Batch: 513879

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	22.3		pg/g		111	67 - 158
2,3,7,8-TCDF	20.0	23.1	B	pg/g		115	75 - 158
1,2,3,7,8-PeCDD	100	113		pg/g		113	70 - 142
1,2,3,7,8-PeCDF	100	117		pg/g		117	80 - 134
2,3,4,7,8-PeCDF	100	109		pg/g		109	68 - 160
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	70 - 164
1,2,3,6,7,8-HxCDD	100	112		pg/g		112	76 - 134
1,2,3,7,8,9-HxCDD	100	109		pg/g		109	64 - 162
1,2,3,4,7,8-HxCDF	100	114		pg/g		114	72 - 134
1,2,3,6,7,8-HxCDF	100	120		pg/g		120	84 - 130
1,2,3,7,8,9-HxCDF	100	118		pg/g		118	78 - 130
2,3,4,6,7,8-HxCDF	100	121		pg/g		121	70 - 156
1,2,3,4,6,7,8-HpCDD	100	111	B	pg/g		111	70 - 140
1,2,3,4,6,7,8-HpCDF	100	118	B	pg/g		118	82 - 122
1,2,3,4,7,8,9-HpCDF	100	108		pg/g		108	78 - 138
OCDD	200	232	B	pg/g		116	78 - 144
OCDF	200	243		pg/g		122	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*34*		*20 - 175*
13C-2,3,7,8-TCDF	*36*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*34*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*31*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*36*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*37*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*35*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*42*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*37*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*32*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*33*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*36*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*35*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*40*		*20 - 186*
13C-OCDD	*39*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*47*		*31 - 191*

Lab Sample ID: 320-76901-A-2-B MS
Client Sample ID: Matrix Spike
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 517462
Prep Batch: 513879

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	42		27.3	73.3		pg/g	☼	113	67 - 158
1,2,3,7,8-PeCDD	ND		136	151		pg/g	☼	110	70 - 142
1,2,3,7,8-PeCDF	ND		136	161		pg/g	☼	118	80 - 134
2,3,4,7,8-PeCDF	ND		136	143		pg/g	☼	104	68 - 160
1,2,3,4,7,8-HxCDD	ND		136	132		pg/g	☼	97	70 - 164

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76901-A-2-B MS **Client Sample ID: Matrix Spike**

Matrix: Sediment **Prep Type: Total/NA**

Analysis Batch: 517462 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	ND		136	140		pg/g	☼	103	76 - 134
1,2,3,7,8,9-HxCDD	ND		136	152		pg/g	☼	111	64 - 162
1,2,3,4,7,8-HxCDF	7.0		136	158		pg/g	☼	111	72 - 134
1,2,3,6,7,8-HxCDF	1.6	J q	136	154		pg/g	☼	111	84 - 130
1,2,3,7,8,9-HxCDF	ND		136	155		pg/g	☼	113	78 - 130
2,3,4,6,7,8-HxCDF	ND		136	160		pg/g	☼	117	70 - 156
1,2,3,4,6,7,8-HpCDD	60	B	136	197		pg/g	☼	100	70 - 140
1,2,3,4,6,7,8-HpCDF	4.4	J q B	136	156		pg/g	☼	111	82 - 122
1,2,3,4,7,8,9-HpCDF	2.0	J	136	144		pg/g	☼	104	78 - 138
OCDD	1700	B	273	1650	4	pg/g	☼	-24	78 - 144
OCDF	18	q	273	279		pg/g	☼	96	63 - 170

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*41*		*25 - 164*
13C-2,3,7,8-TCDF	*38*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*39*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*39*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*43*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*44*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*39*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*50*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*46*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*40*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*41*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*47*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*46*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*50*		*26 - 138*
13C-OCDD	*42*		*17 - 157*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*50*		*35 - 197*

Lab Sample ID: 320-76901-A-2-C MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Sediment **Prep Type: Total/NA**

Analysis Batch: 517462 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	42		27.0	65.4		pg/g	☼	85	67 - 158	11	50
1,2,3,7,8-PeCDD	ND		135	151		pg/g	☼	112	70 - 142	0	50
1,2,3,7,8-PeCDF	ND		135	161		pg/g	☼	120	80 - 134	0	50
2,3,4,7,8-PeCDF	ND		135	147		pg/g	☼	109	68 - 160	3	50
1,2,3,4,7,8-HxCDD	ND		135	137		pg/g	☼	101	70 - 164	4	50
1,2,3,6,7,8-HxCDD	ND		135	142		pg/g	☼	106	76 - 134	2	50
1,2,3,7,8,9-HxCDD	ND		135	119		pg/g	☼	89	64 - 162	24	50
1,2,3,4,7,8-HxCDF	7.0		135	153		pg/g	☼	108	72 - 134	3	50
1,2,3,6,7,8-HxCDF	1.6	J q	135	161		pg/g	☼	119	84 - 130	5	50
1,2,3,7,8,9-HxCDF	ND		135	155		pg/g	☼	115	78 - 130	0	50
2,3,4,6,7,8-HxCDF	ND		135	164		pg/g	☼	122	70 - 156	3	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-76901-A-2-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 517462 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	60	B	135	193		pg/g	☼	98	70 - 140	2	50
1,2,3,4,6,7,8-HpCDF	4.4	J q B	135	152		pg/g	☼	110	82 - 122	3	50
1,2,3,4,7,8,9-HpCDF	2.0	J	135	144		pg/g	☼	105	78 - 138	0	50
OCDD	1700	B	270	1450	4	pg/g	☼	-99	78 - 144	13	50
OCDF	18	q	270	326		pg/g	☼	114	63 - 170	16	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*46*		*25 - 164*
13C-2,3,7,8-TCDF	*43*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*43*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*45*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*48*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*57*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*56*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*67*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*56*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*41*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*50*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*55*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*55*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*61*		*26 - 138*
13C-OCDD	*62*		*17 - 157*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*57*		*35 - 197*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: MB 320-513879/1-A **Client Sample ID: Method Blank**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519438 **Prep Batch: 513879**

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF - RA	2.39		1.0	0.22	pg/g		08/06/21 12:58	08/24/21 10:23	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF - RA	*37*		*24 - 169*	*08/06/21 12:58*	*08/24/21 10:23*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD - RA	*50*		*35 - 197*	*08/06/21 12:58*	*08/24/21 10:23*	*1*

Lab Sample ID: 320-76901-A-2-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 520438 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDF - RA	140	B	27.3	200	4	pg/g	☼	210	75 - 158

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA (Continued)

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C-2,3,7,8-TCDF - RA	43		24 - 169

Surrogate	MS %Recovery	MS Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	58		35 - 197

Lab Sample ID: 320-76901-A-2-C MSD **Client Sample ID: Matrix Spike Duplicate**

Matrix: Sediment **Prep Type: Total/NA**

Analysis Batch: 520438 **Prep Batch: 513879**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	140	B	27.0	172	4	pg/g	☼	110	75 - 158	15	50

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDF - RA	50		24 - 169

Surrogate	MSD %Recovery	MSD Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	65		35 - 197

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-76901-2
Project/Site: SJRWP Supplemental Design Investigation

Specialty Organics

Prep Batch: 513879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-9 - RA	11215702-072821-BN-SJSB095 (16-18)	Total/NA	Sediment	HRMS-Sox	
320-76901-9	11215702-072821-BN-SJSB095 (16-18)	Total/NA	Sediment	HRMS-Sox	
MB 320-513879/1-A - RA	Method Blank	Total/NA	Sediment	HRMS-Sox	
MB 320-513879/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-513879/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-76901-A-2-B MS - RA	Matrix Spike	Total/NA	Sediment	HRMS-Sox	
320-76901-A-2-B MS	Matrix Spike	Total/NA	Sediment	HRMS-Sox	
320-76901-A-2-C MSD - RA	Matrix Spike Duplicate	Total/NA	Sediment	HRMS-Sox	
320-76901-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	HRMS-Sox	

Analysis Batch: 517462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-513879/2-A	Lab Control Sample	Total/NA	Sediment	1613B	513879
320-76901-A-2-B MS	Matrix Spike	Total/NA	Sediment	1613B	513879
320-76901-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	1613B	513879

Analysis Batch: 517891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-9	11215702-072821-BN-SJSB095 (16-18)	Total/NA	Sediment	1613B	513879
MB 320-513879/1-A	Method Blank	Total/NA	Sediment	1613B	513879

Analysis Batch: 519438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-513879/1-A - RA	Method Blank	Total/NA	Sediment	1613B	513879

Analysis Batch: 520438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-A-2-B MS - RA	Matrix Spike	Total/NA	Sediment	1613B	513879
320-76901-A-2-C MSD - RA	Matrix Spike Duplicate	Total/NA	Sediment	1613B	513879

Analysis Batch: 520456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-9 - RA	11215702-072821-BN-SJSB095 (16-18)	Total/NA	Sediment	1613B	513879

General Chemistry

Analysis Batch: 511711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-76901-9	11215702-072821-BN-SJSB095 (16-18)	Total/NA	Sediment	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Job ID: 320-76901-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-072821-BN-SJSB095 (16-18)
Lab Sample ID: 320-76901-9

Date Collected: 07/28/21 11:40
Matrix: Sediment
Date Received: 07/29/21 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	511711	07/30/21 12:30	TCS	TAL SAC

Client Sample ID: 11215702-072821-BN-SJSB095 (16-18)
Lab Sample ID: 320-76901-9

Date Collected: 07/28/21 11:40
Matrix: Sediment
Date Received: 07/29/21 09:45
Percent Solids: 69.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/27/21 20:06	DB	TAL SAC
Total/NA	Prep	HRMS-Sox			513879	08/06/21 12:58	FC	TAL SAC
Total/NA	Analysis	1613B		1	517891	08/19/21 22:50	KSS	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-76901-2
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDD
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDF
1613B	HRMS-Sox	Sediment	OCDD
1613B	HRMS-Sox	Sediment	OCDF
1613B	HRMS-Sox	Sediment	Total HpCDD
1613B	HRMS-Sox	Sediment	Total HpCDF
1613B	HRMS-Sox	Sediment	Total HxCDD
1613B	HRMS-Sox	Sediment	Total HxCDF
1613B	HRMS-Sox	Sediment	Total PeCDD
1613B	HRMS-Sox	Sediment	Total PeCDF
1613B	HRMS-Sox	Sediment	Total TCDD
1613B	HRMS-Sox	Sediment	Total TCDF
D 2216		Sediment	Percent Moisture
D 2216		Sediment	Percent Solids
TEQ		Sediment	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-2

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-76901-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-76901-9	11215702-072821-BN-SJSB095 (16-18)	Sediment	07/28/21 11:40	07/29/21 09:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 520456

Lab Sample ID: 320-76901-9 RA Client Sample ID: 11215702-072821-BN-SJSB095 (16-18) RA

Date Analyzed: 08/27/21 20:06 Lab File ID: 27AU21A11D2_008.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.65	Baseline	bennettd	08/30/21 09:41

1613B

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-2

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517462

Lab Sample ID: CCV 320-517462/43 Client Sample ID:

Date Analyzed: 08/19/21 01:32 Lab File ID: 17au21dfs1_47.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	20.49	Baseline	stephensk	08/19/21 09:20
2,3,7,8-TCDD	21.84	Baseline	stephensk	08/19/21 09:21
13C-1,2,3,7,8-PeCDD	29.61	Baseline	stephensk	08/19/21 09:21

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-2

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517891

Lab Sample ID: WDM 320-517891/1 Client Sample ID:

Date Analyzed: 08/19/21 13:59 Lab File ID: 19au21dfs1_2.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,4,7,9-PeCDD	30.78	Peak assignment corrected	stephensk	08/19/21 15:00
1,2,3,8,9-PeCDF	30.94	Peak assignment corrected	stephensk	08/19/21 15:00

Lab Sample ID: CCV 320-517891/2 Client Sample ID:

Date Analyzed: 08/19/21 14:46 Lab File ID: 19au21dfs1_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,4-TCDD	21.35	Peak assignment corrected	stephensk	08/19/21 15:37
2,3,7,8-TCDD	21.75	Baseline	stephensk	08/19/21 15:38

Lab Sample ID: MB 320-513879/1-A Client Sample ID:

Date Analyzed: 08/19/21 16:27 Lab File ID: 19au21dfs1_5.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 08:54
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 08:54
1,2,3,7,8,9-HxCDD		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,4,7,8-PeCDF		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,7,8-TCDD		Invalid Compound ID	dadunj	08/23/21 08:54
2,3,7,8-TCDF	20.42	Baseline	dadunj	08/23/21 08:53
1,2,3,4,6,7,8-HpCDF	38.62	Split Peak	dadunj	08/23/21 08:55
1,2,3,4,6,7,8-HpCDD	39.57	Split Peak	dadunj	08/23/21 08:55
OCDD	42.07	Baseline	dadunj	08/23/21 08:55

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-76901-2

SDG No.:

Instrument ID: DFS 1 Analysis Batch Number: 517891

Lab Sample ID: 320-76901-9 Client Sample ID: 11215702-072821-BN-SJSB095 (16-18)

Date Analyzed: 08/19/21 22:50 Lab File ID: 19au21dfs1_13.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:24
1,2,3,4,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 09:23
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/23/21 09:24
1,2,3,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 09:23
1,2,3,7,8-PeCDF		Invalid Compound ID	dadunj	08/23/21 09:23
2,3,4,6,7,8-HxCDF		Invalid Compound ID	dadunj	08/23/21 09:23
2,3,7,8-TCDD		Invalid Compound ID	dadunj	08/23/21 09:22
OCDF		Invalid Compound ID	dadunj	08/23/21 09:24
2,3,7,8-TCDF	20.40	Incomplete Integration	stephensk	08/21/21 17:01
1,2,3,4,6,7,8-HpCDF	38.63	Baseline	dadunj	08/23/21 09:24

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25	CIL, Lot ER03111502			(Purchased Reagent)		13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25	CIL, Lot ER03111502			(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00464	250 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL

789786

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30	CIL, Lot ER09031903			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

789797

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

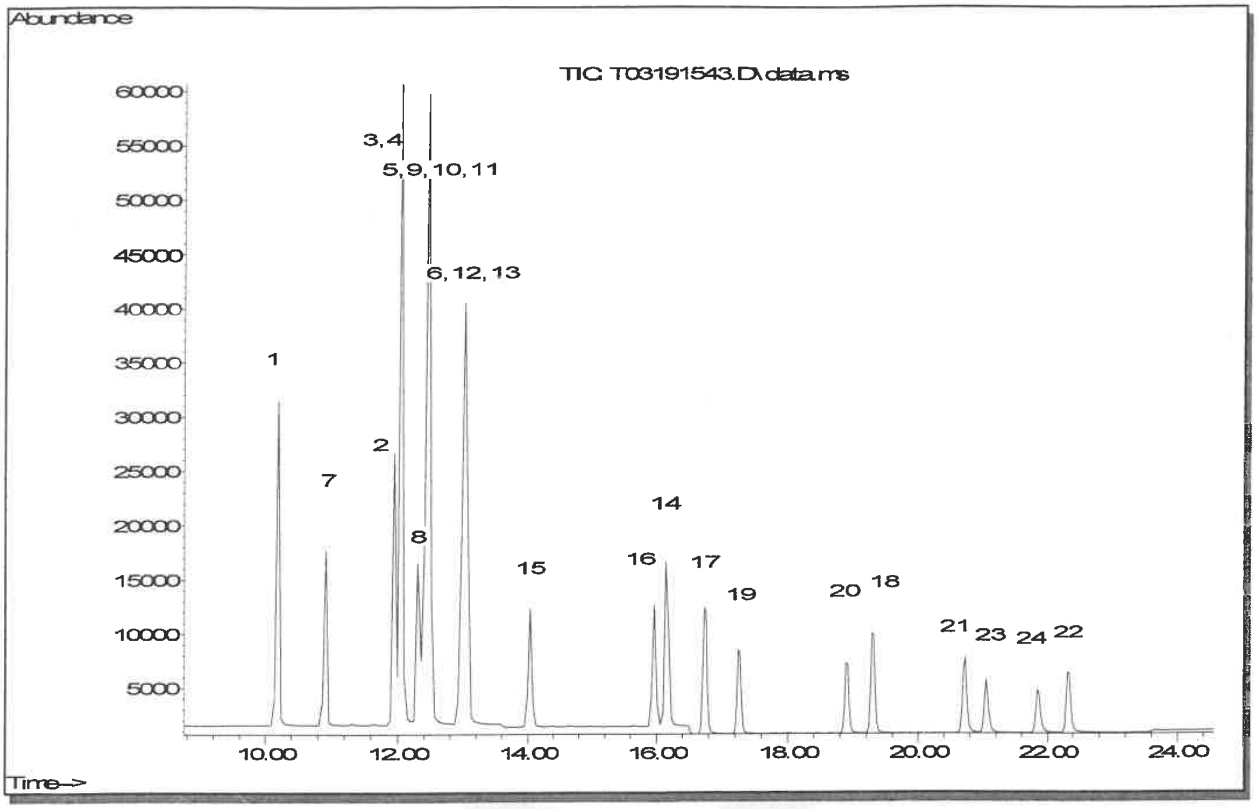

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

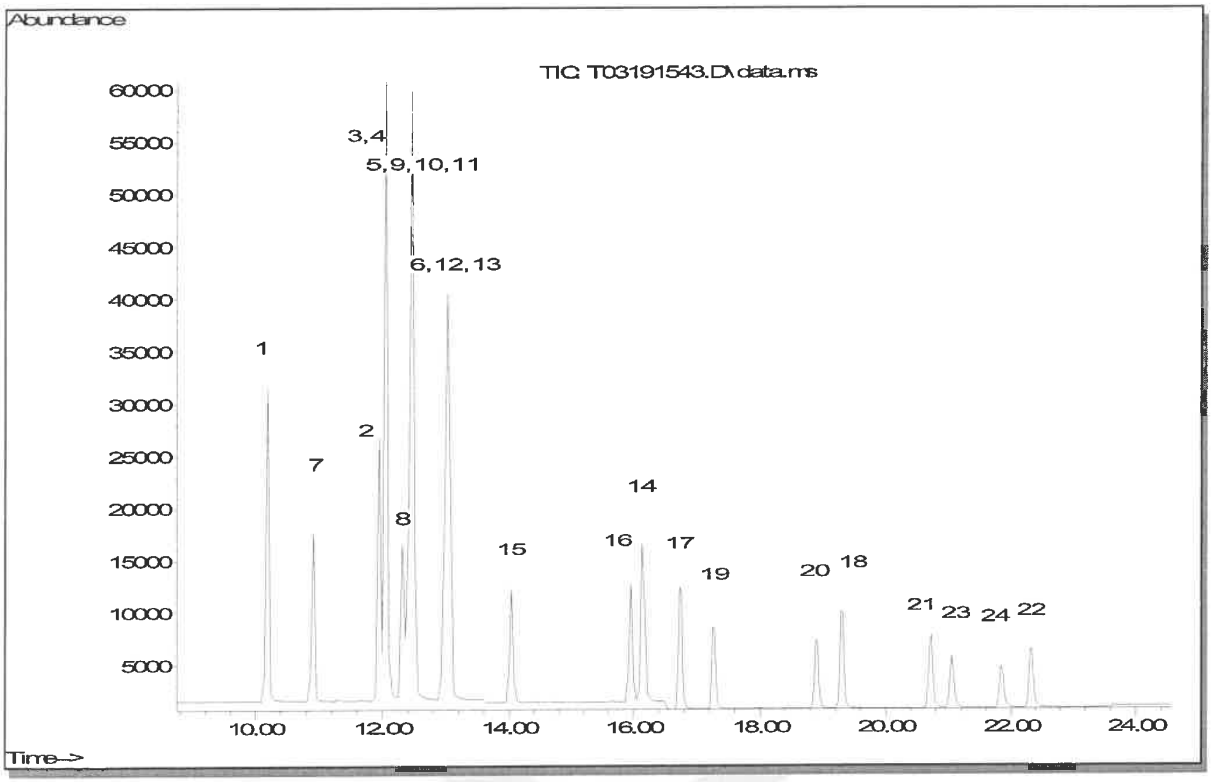

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r: 3/30/20

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

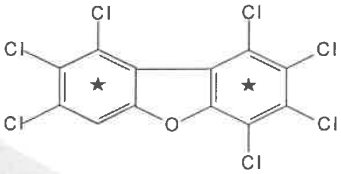

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

789811

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

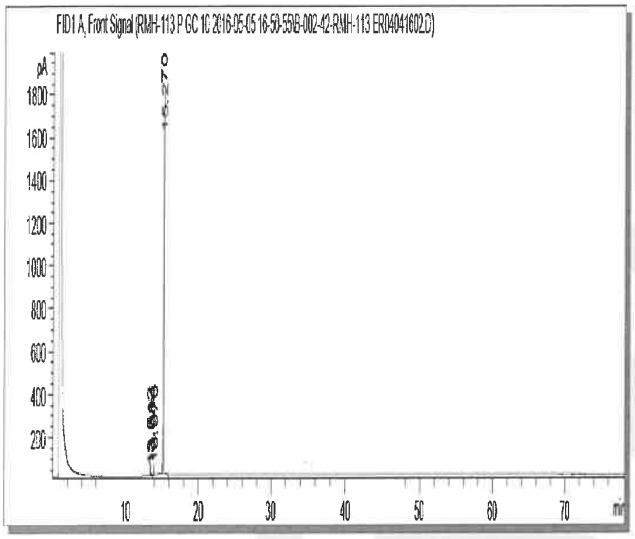

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

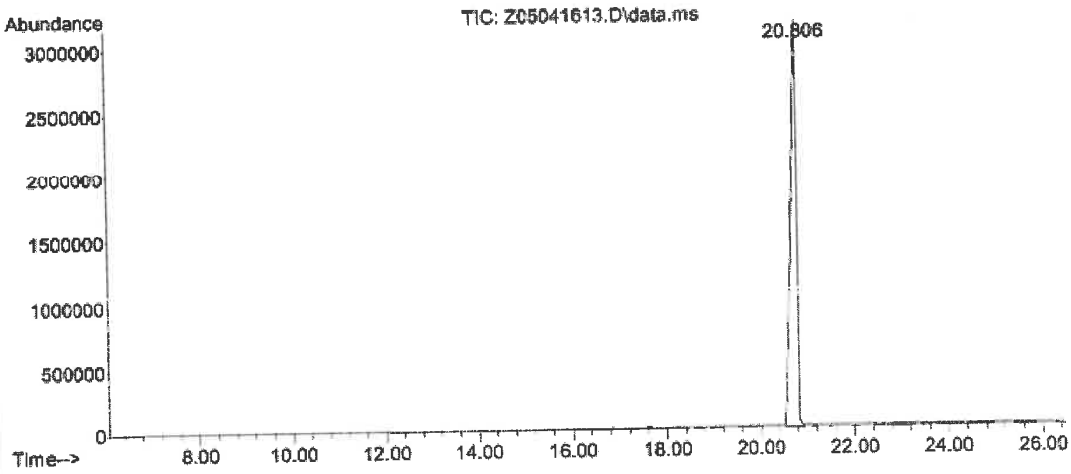

Mass Spectrum

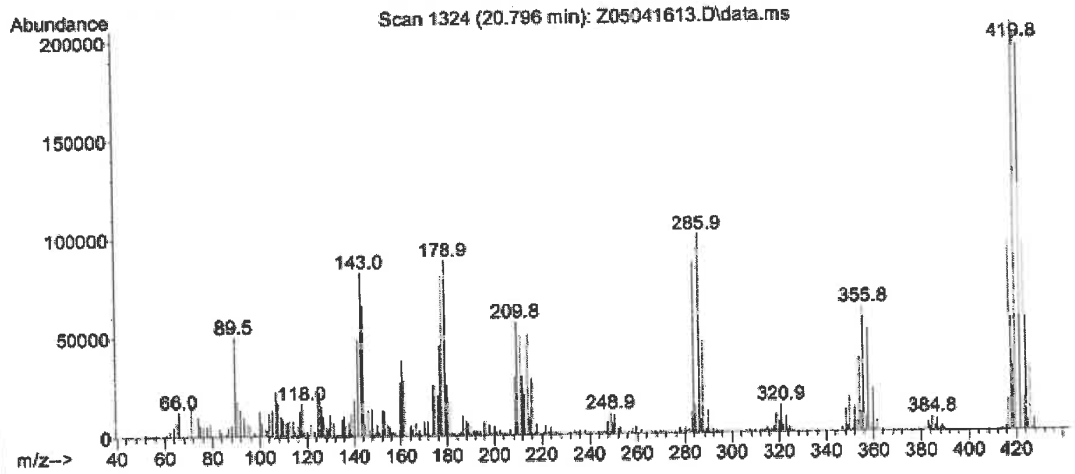

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 [illegible]

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

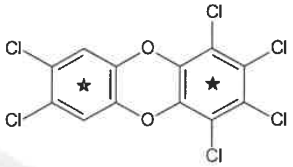

Catalog Number: ED-946
Solution Lot: ER04211601
Expiration Date: June 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

789818

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

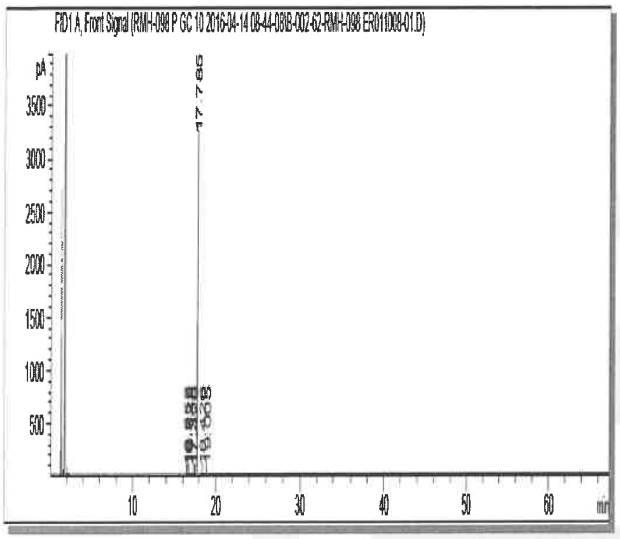

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument:	GC#10
Sample Name:	ER011008-01
Acquired:	April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

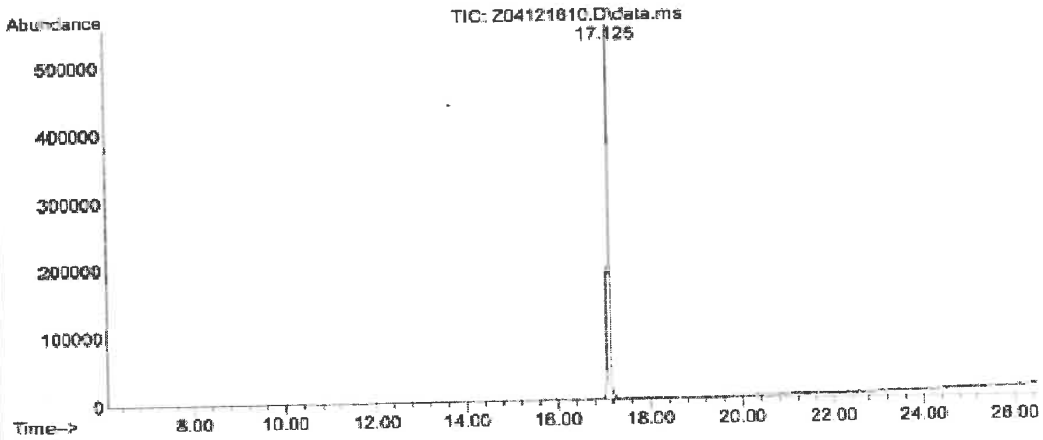

Mass Spectrum

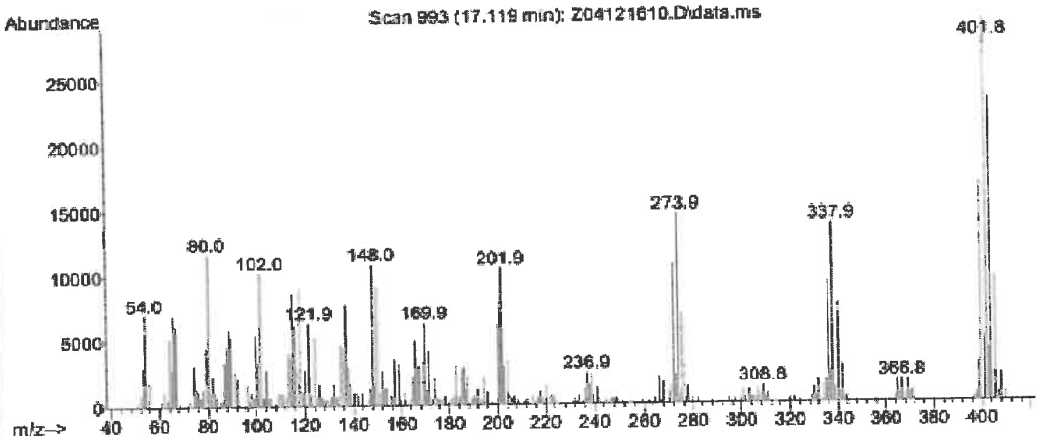

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

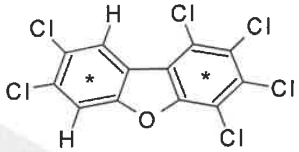

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

789823

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}Cl_6H_2O$
Compound Lot:	ER11281601	**CAS Number:**	114423-98-2
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

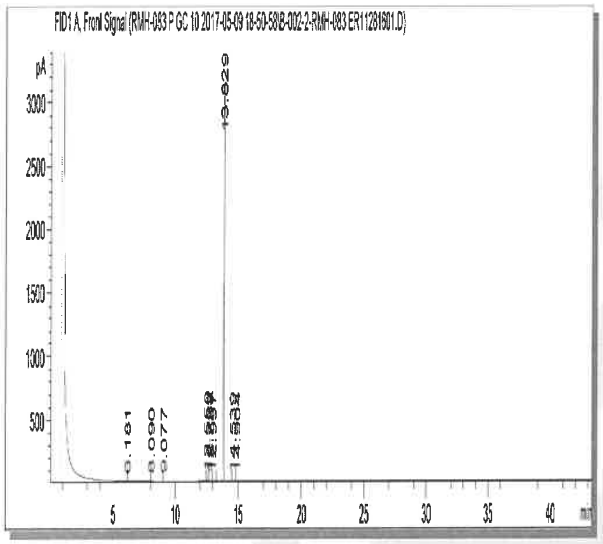

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

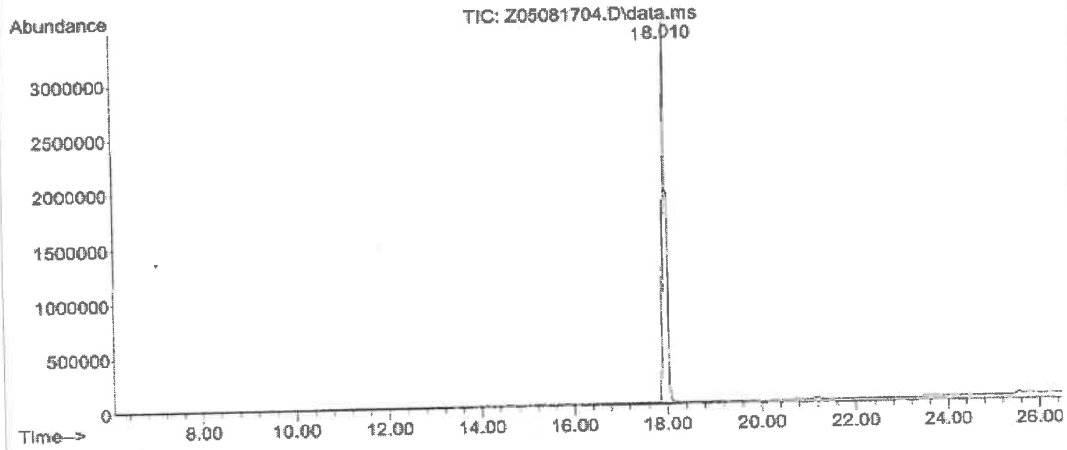

Mass Spectrum

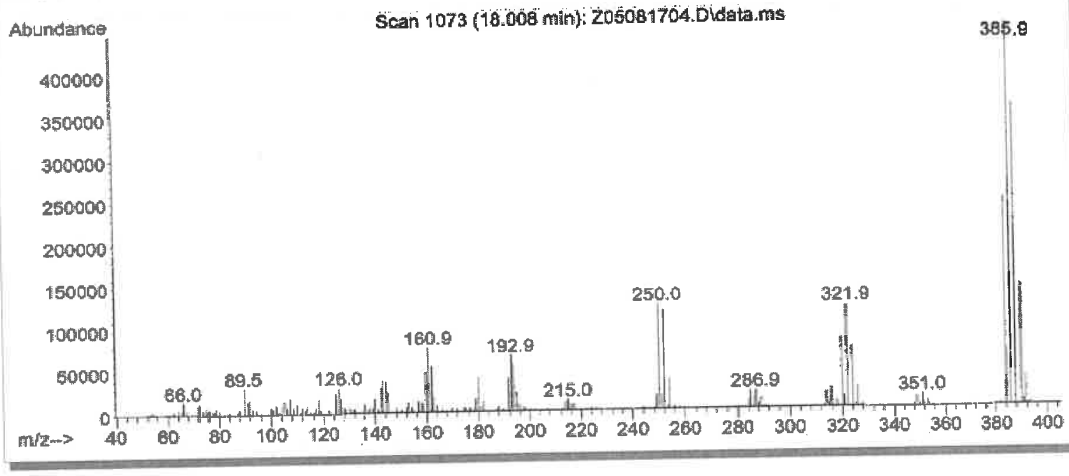

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

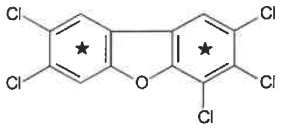

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

789828

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

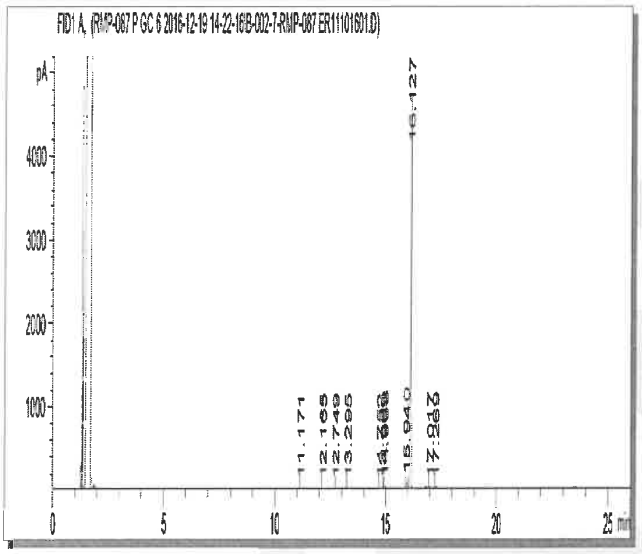

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

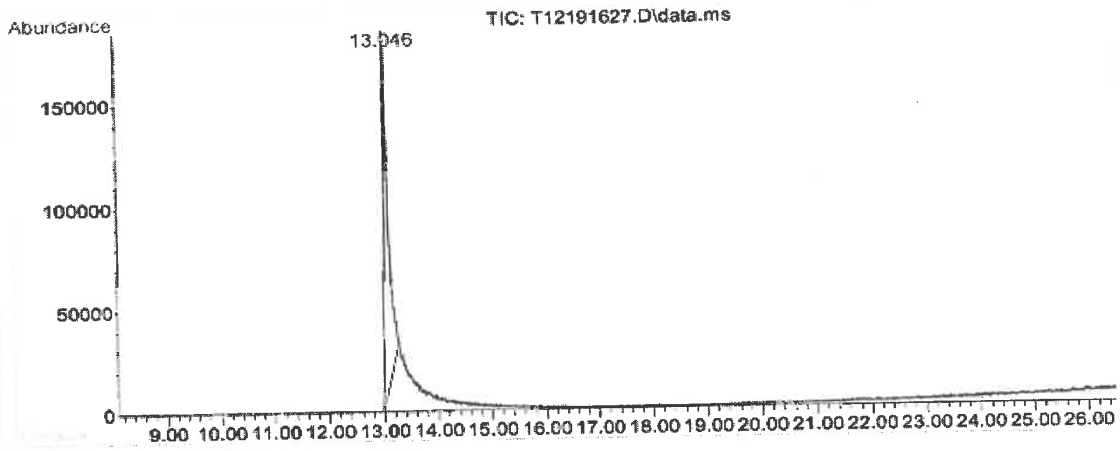

Mass Spectrum

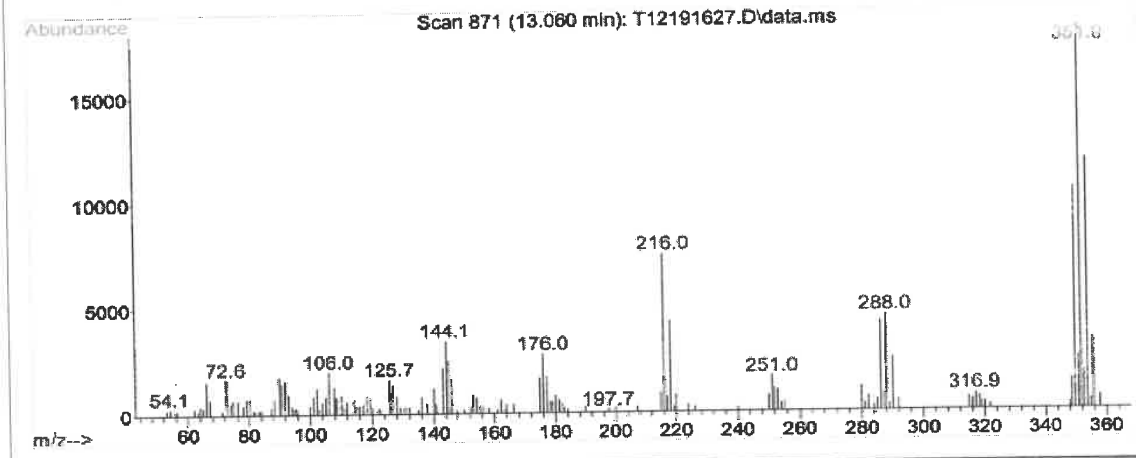

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

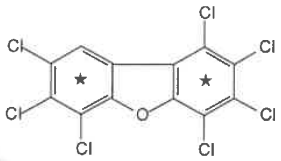

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

789833

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER020507-02

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-84-8
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

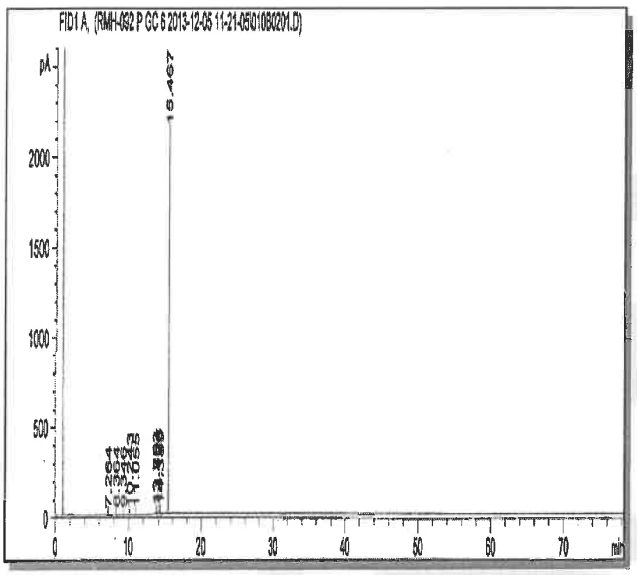

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument:	GC#6
Sample Name:	ER020507-02
Acquired:	December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

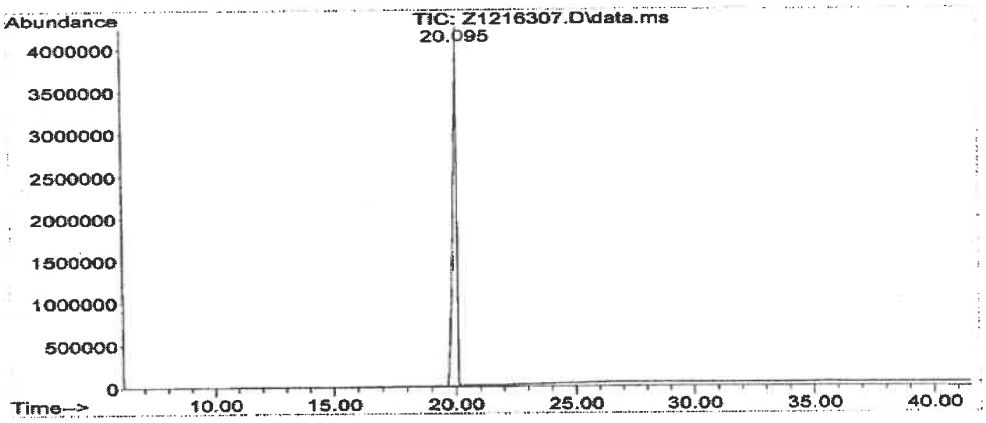

Mass Spectrum

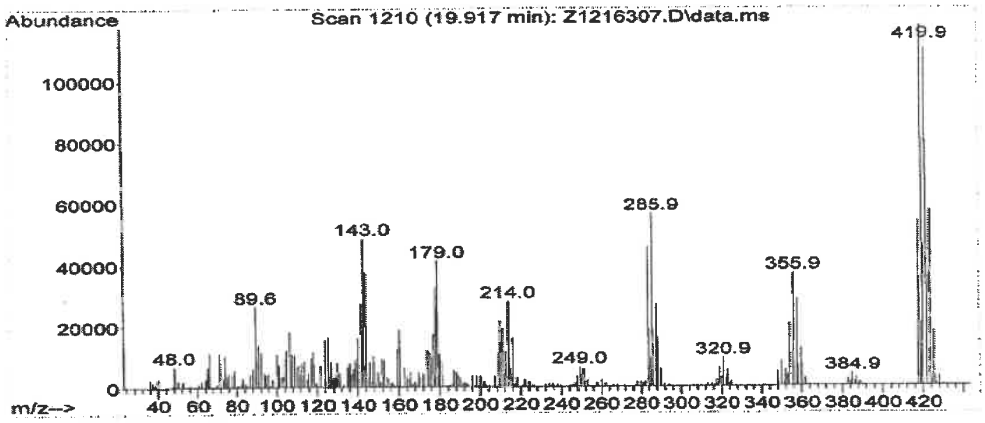

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

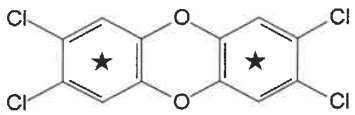

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

789840

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

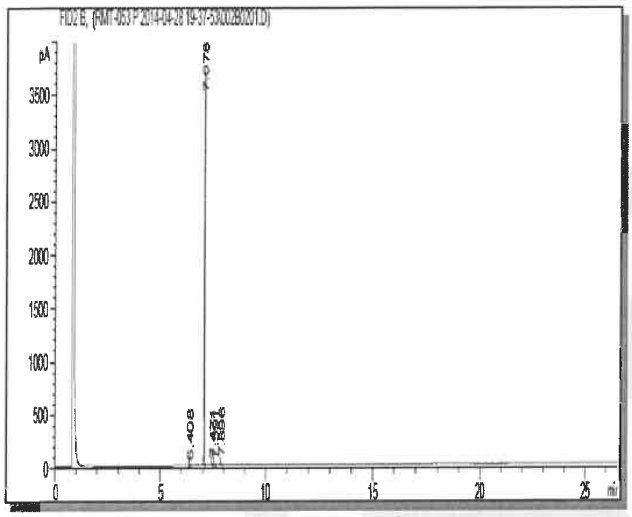

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

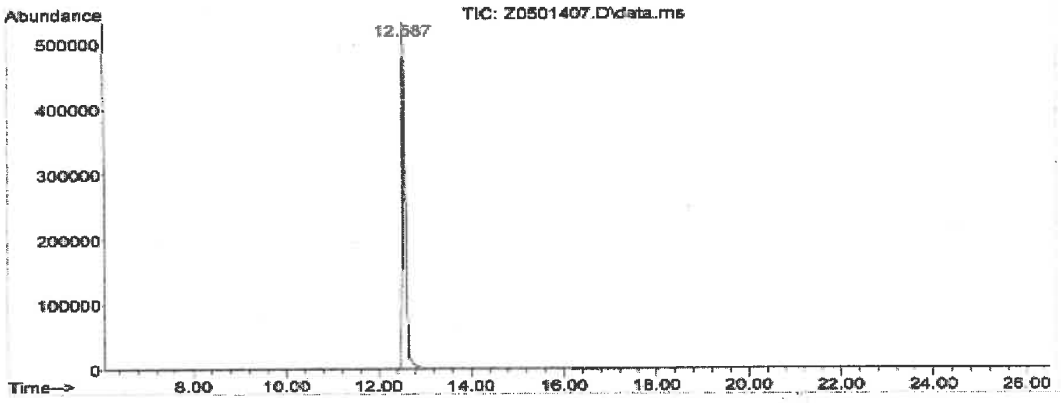

Mass Spectrum

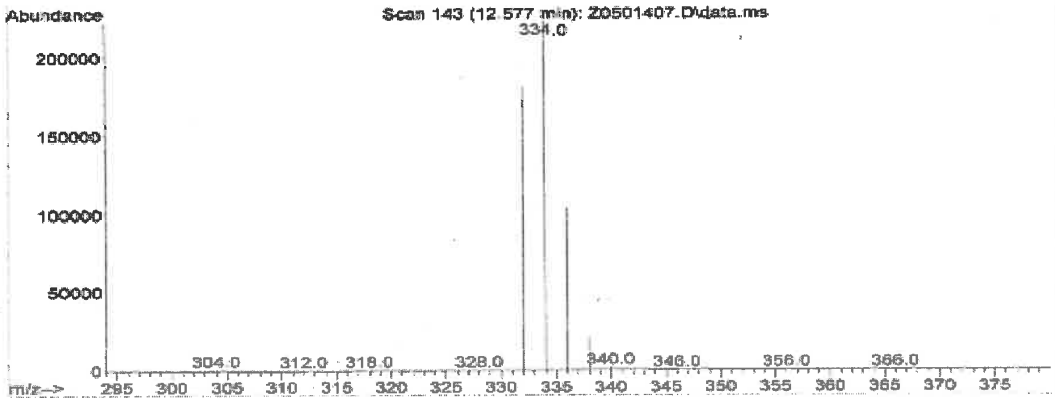

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

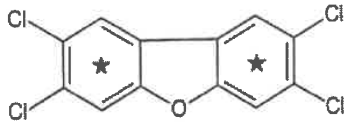

Catalog Number: EF-904
Solution Lot: ER09131601
Expiration Date: September 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

789845

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/FID

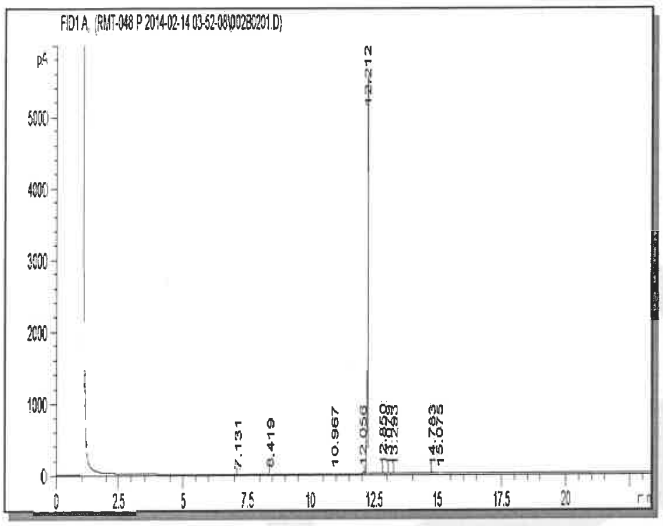

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

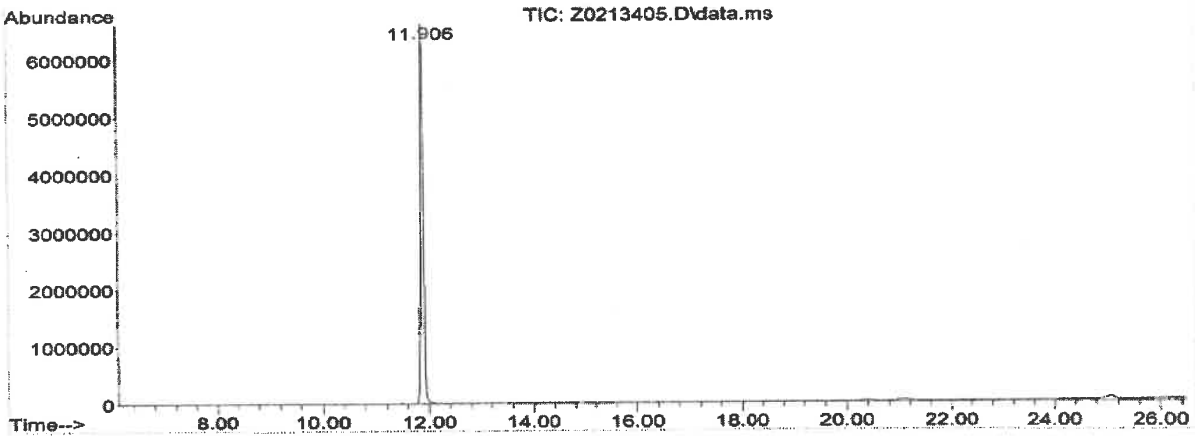

Mass Spectrum

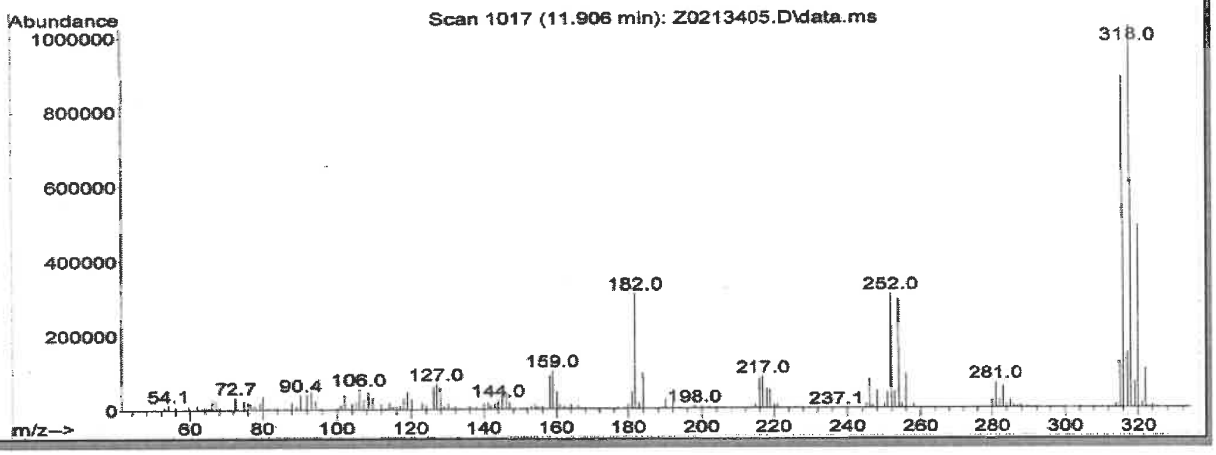

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

Reagent

HRDXNIDA_00443

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

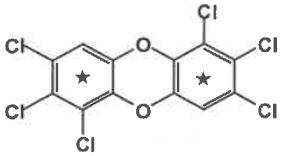

Catalog Number: ED-966
Solution Lot: ER03151801
Expiration Date: March 2028
Solvent: n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

789850

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

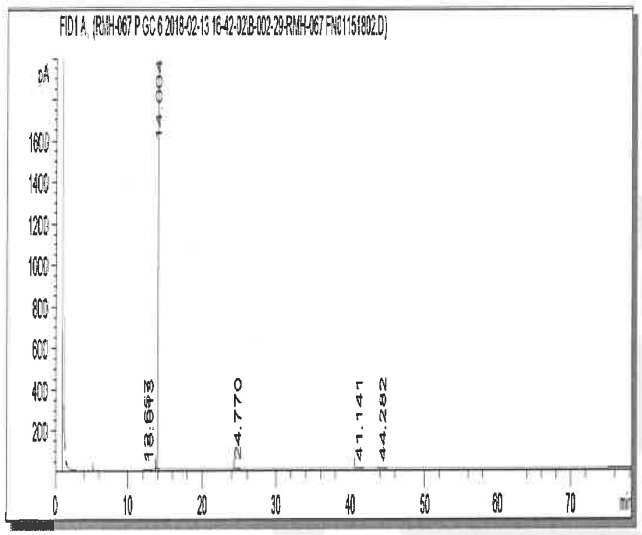

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: FN01151802
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Mar 05 10:17:33 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

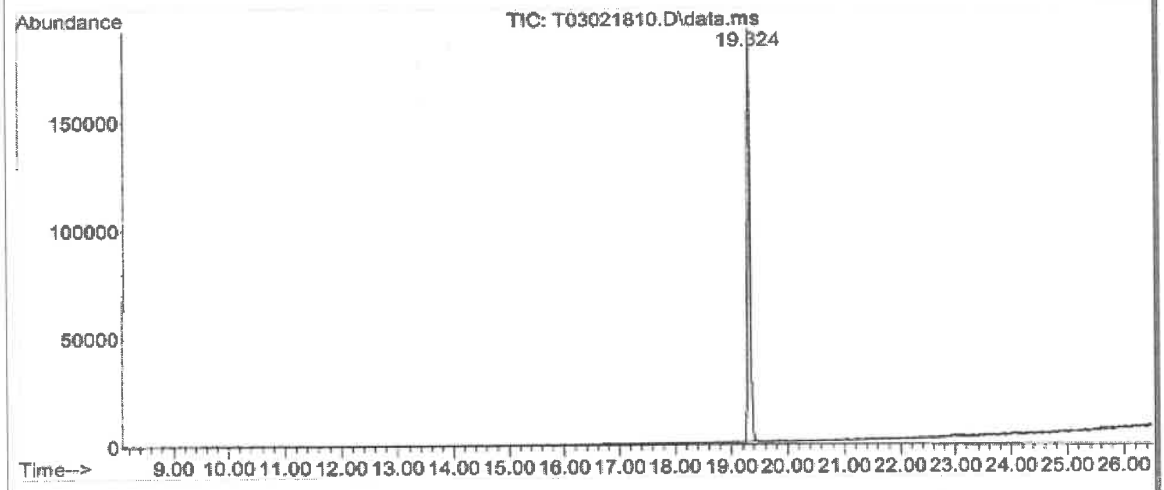

Mass Spectrum

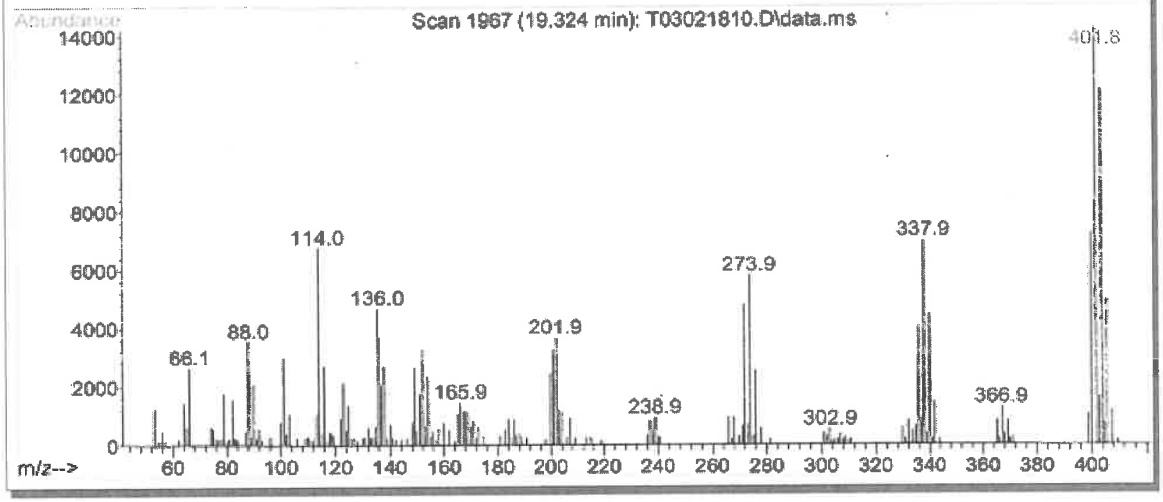

Reagent

HRDXNIDA_00457

r: 1/18/21 SHV

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

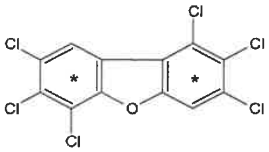

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

789855

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

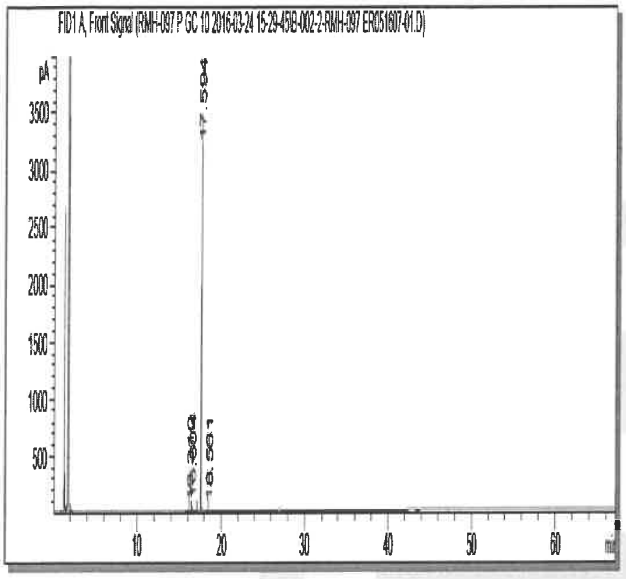

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

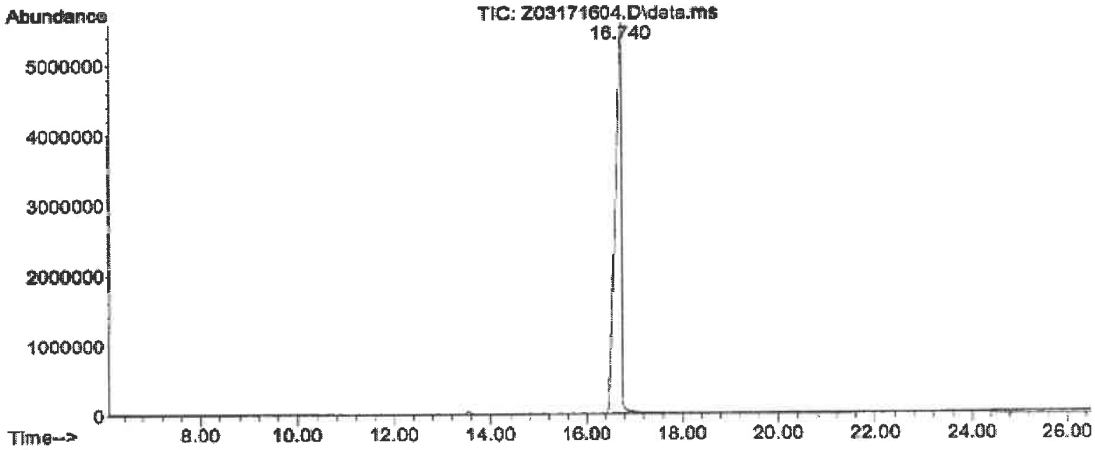

Mass Spectrum

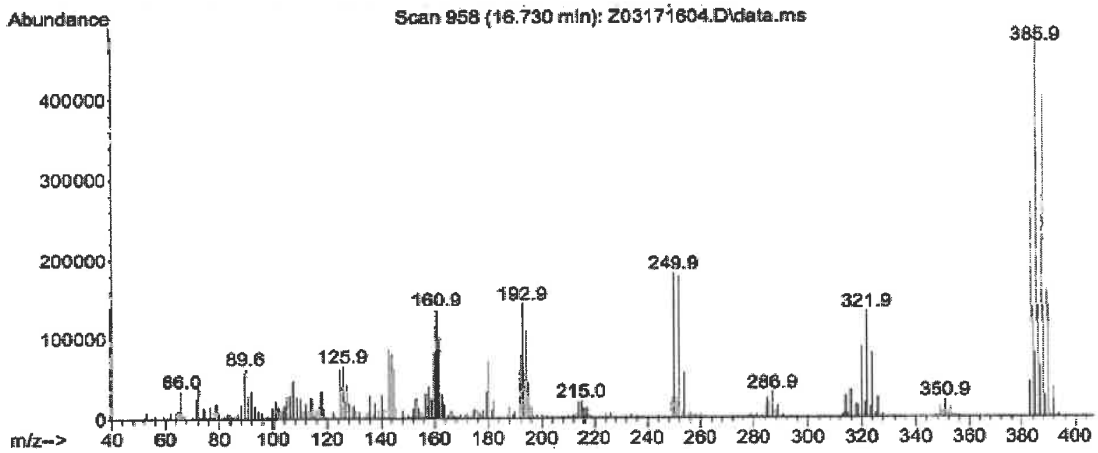

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

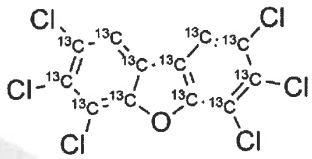

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

789862

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER09051801

Chemical Formula: $^{13}C_{12}H_2Cl_6O$
CAS Number: 116843-05-1
Molecular Weight: 386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

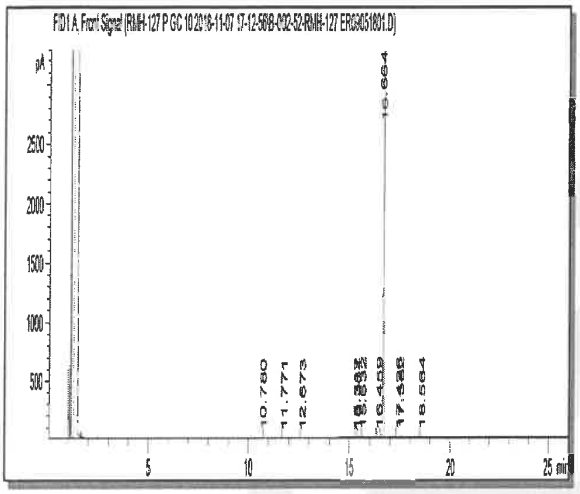

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

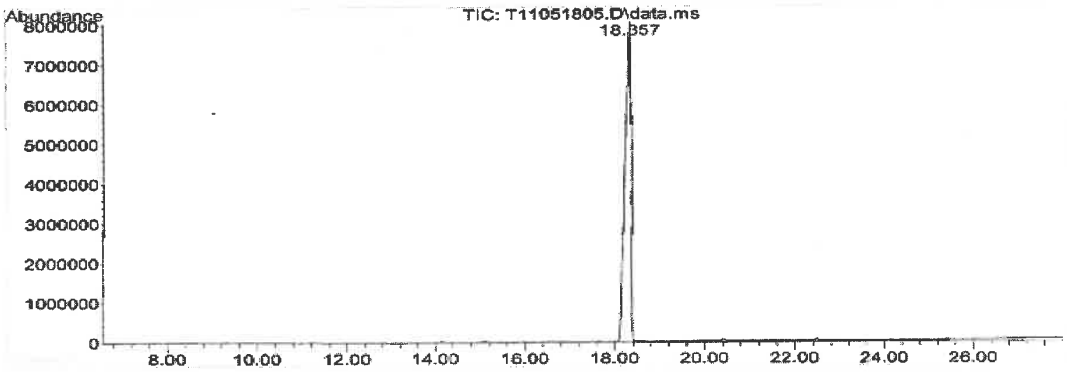

Mass Spectrum

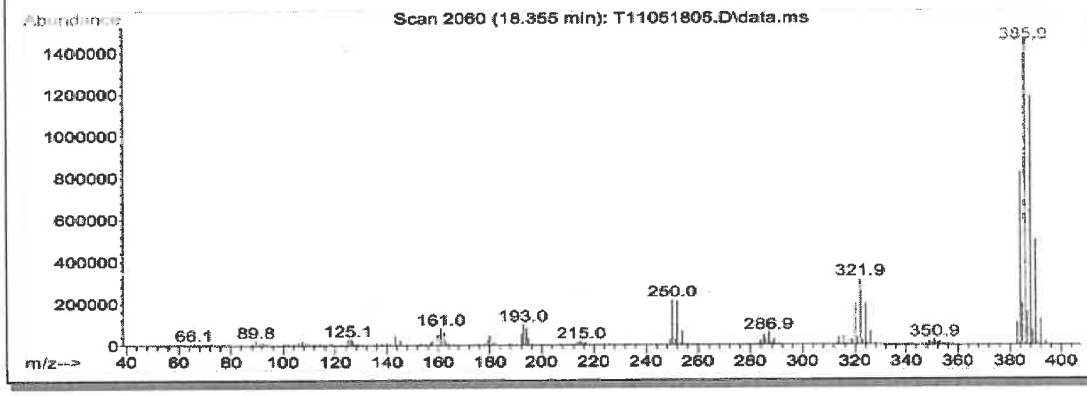

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

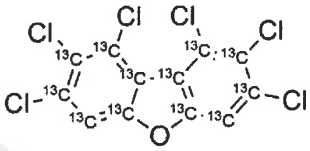

Catalog Number: EF-986
Solution Lot: ER01062016
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

789869

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

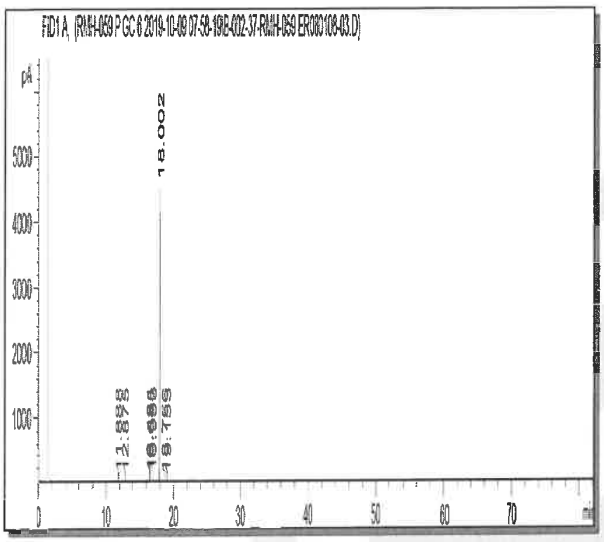

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

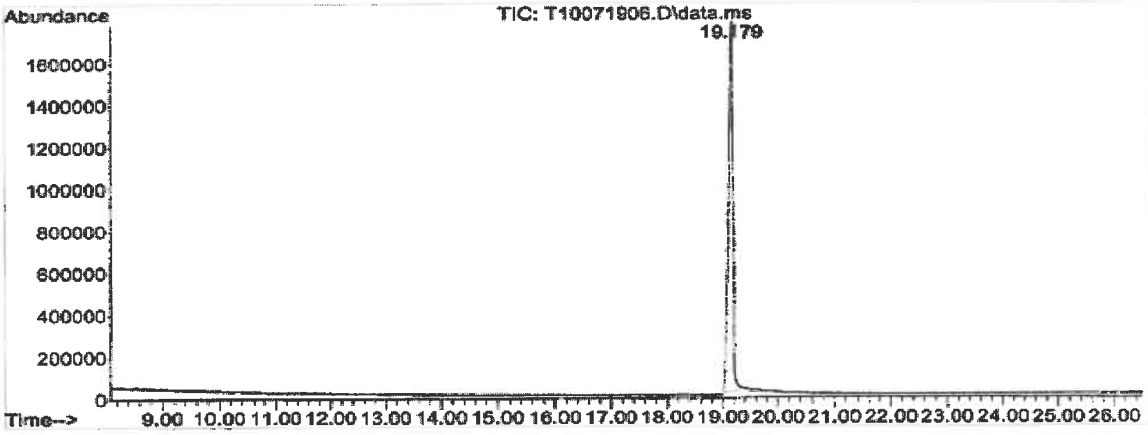

Mass Spectrum

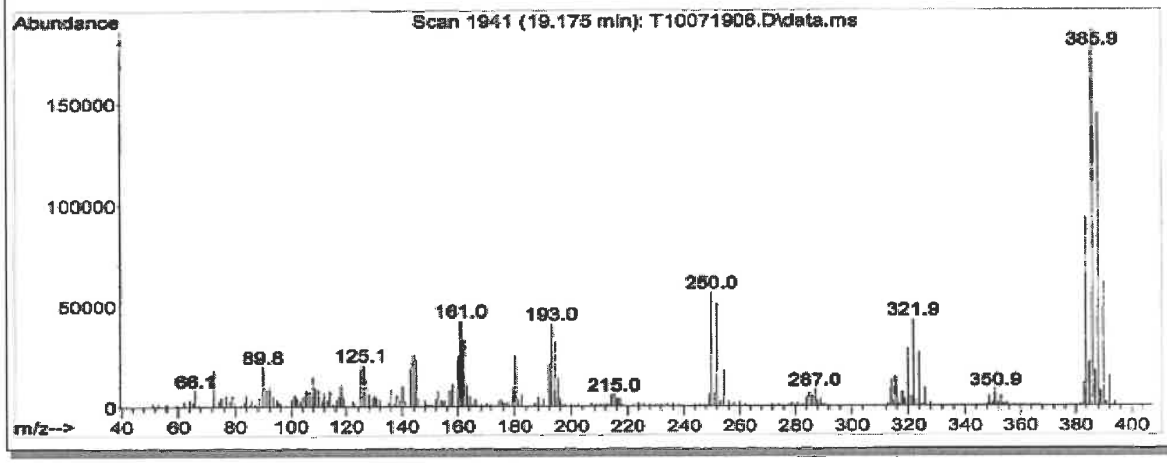

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

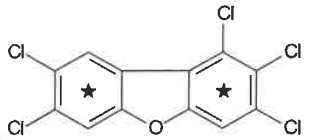

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

789876

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O$
Compound Lot:	ER090110-01	**CAS Number:**	109719-77-9
		Molecular Weight:	352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

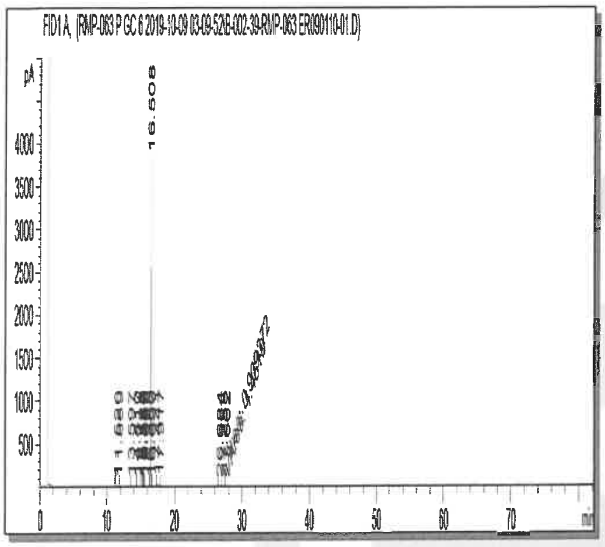

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Sample Name: ER090110-01
Acquired: October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

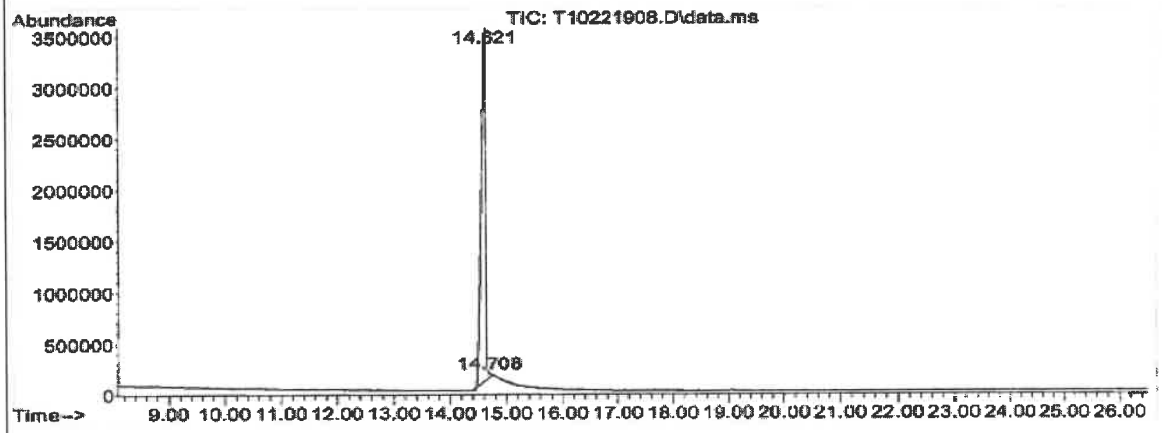

Mass Spectrum

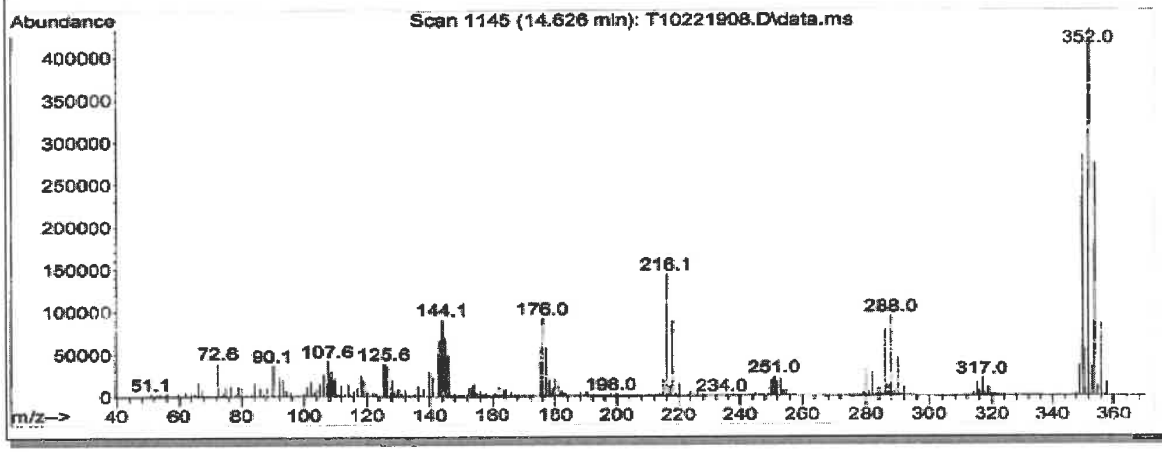

789879

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

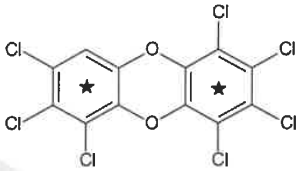

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

789883

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 0.999

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER100110-01

Chemical Formula: $^{13}C_{12}HCl_7O_2$
CAS Number: 109719-83-7
Molecular Weight: 437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

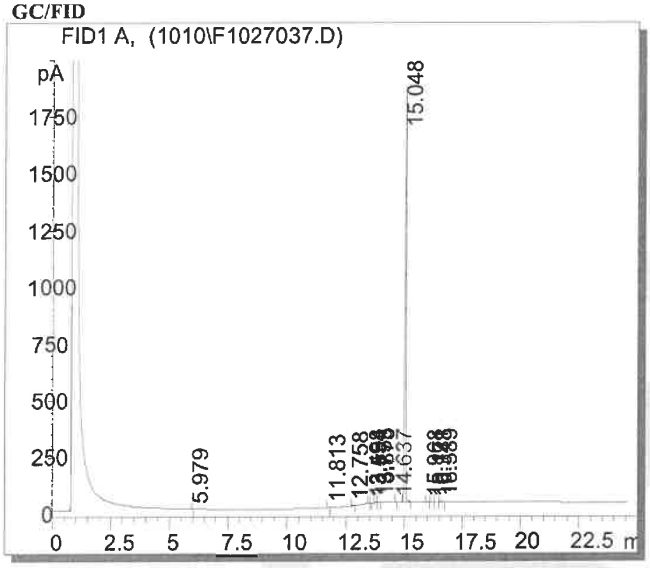

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

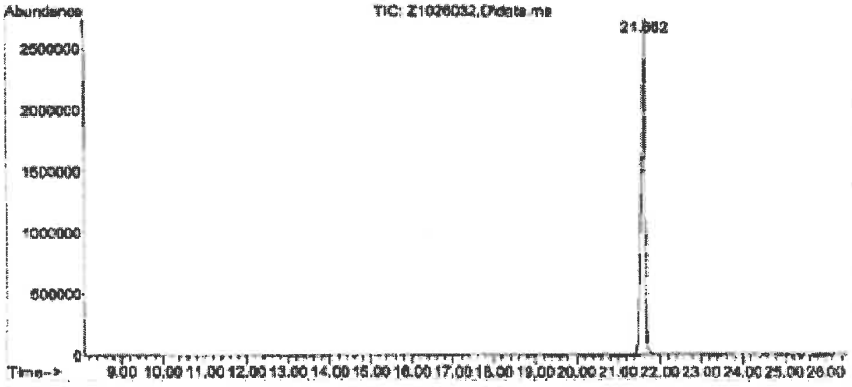

Mass Spectrum

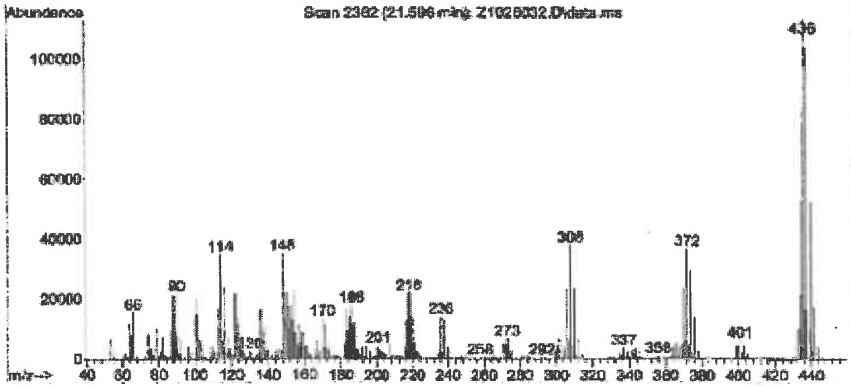

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

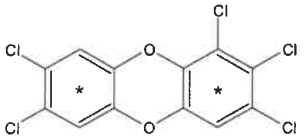

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

789888

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER06241403

Chemical Formula: $^{13}C_{12}H_3Cl_5O_2$
CAS Number: 109719-79-1
Molecular Weight: 368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

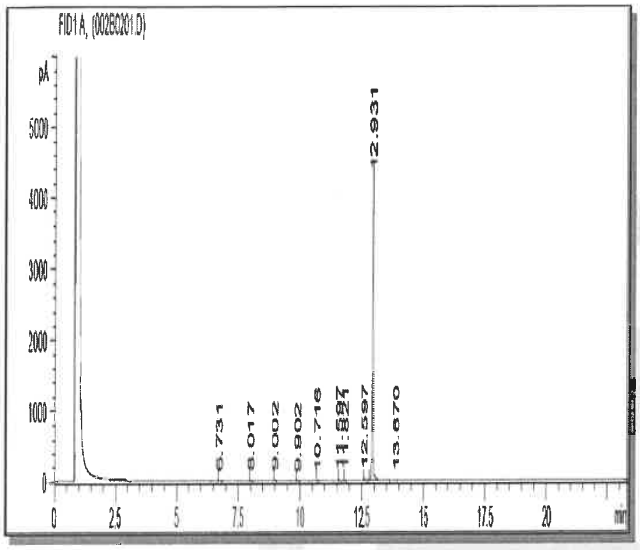

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

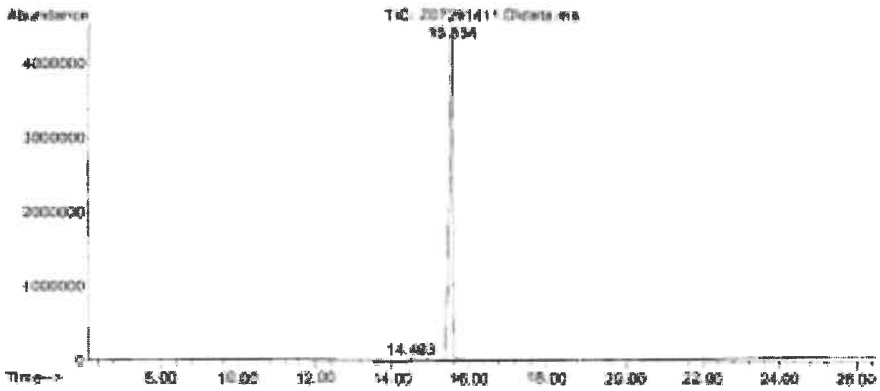

Mass Spectrum

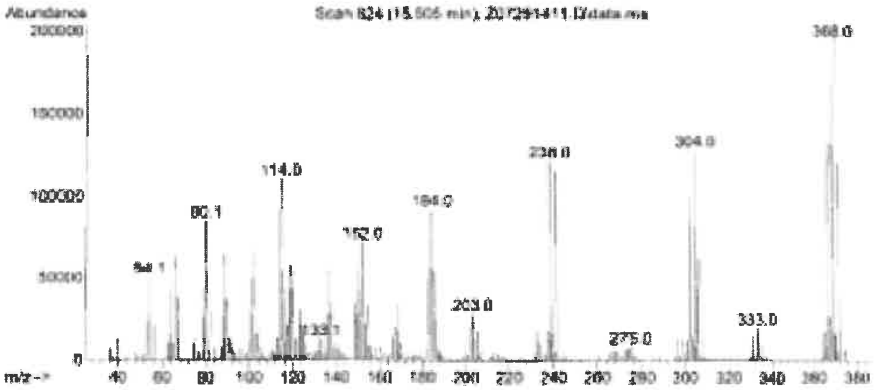

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

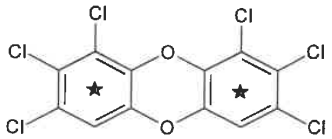

Catalog Number: ED-996
Solution Lot: ER08221601
Expiration Date: September 2026
Solvent: n-Nonane:Toluene (80:20)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

789895

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

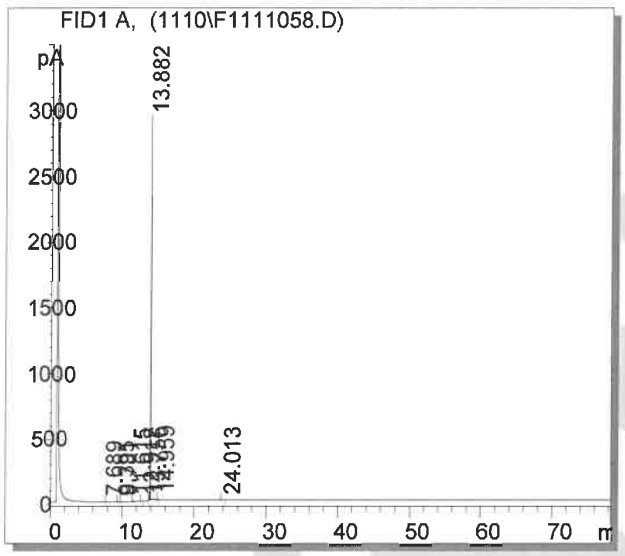

Column:	DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1110\F1111058.D
Instrument:	GC#6
Sample Name:	ER110510-01
Acquired:	November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

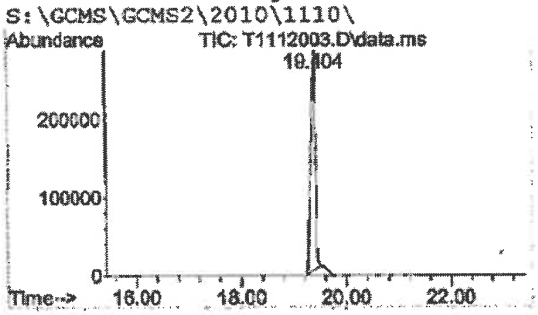

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

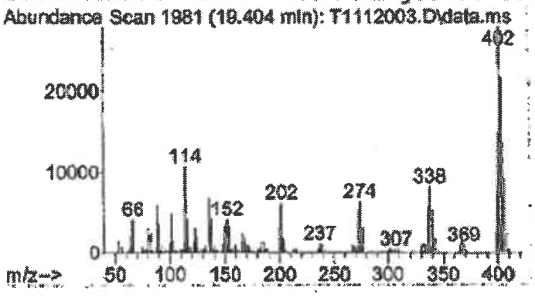

SIM Ion Chromatogram 1

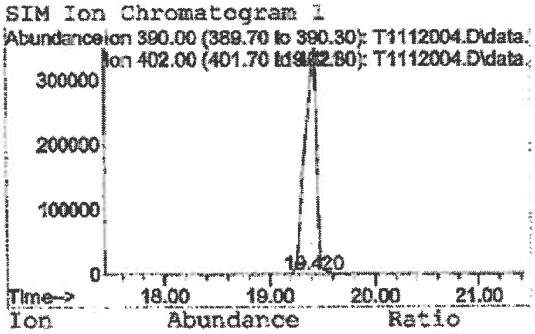

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

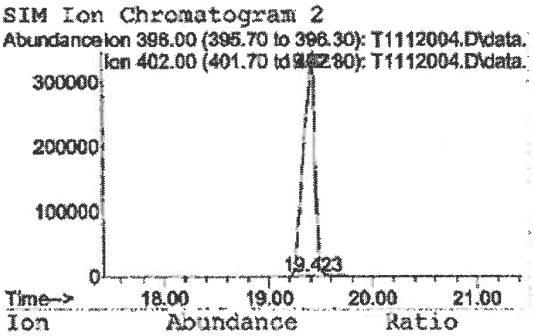

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

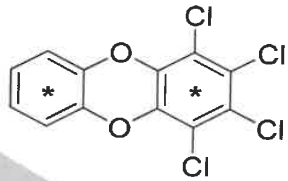

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 13194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

789902

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

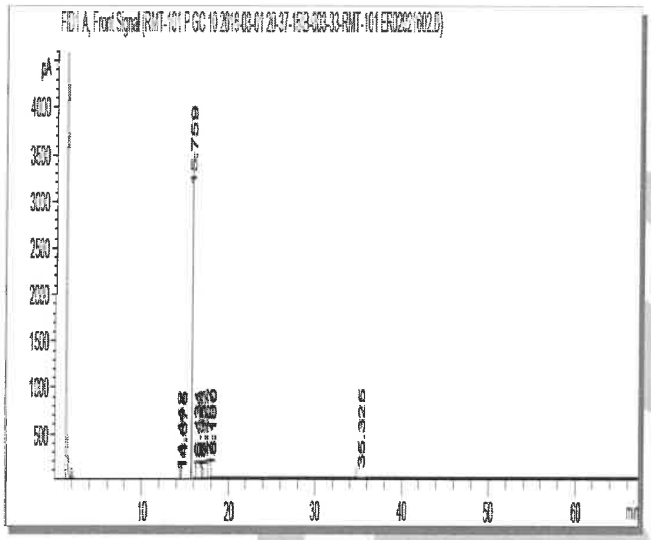

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

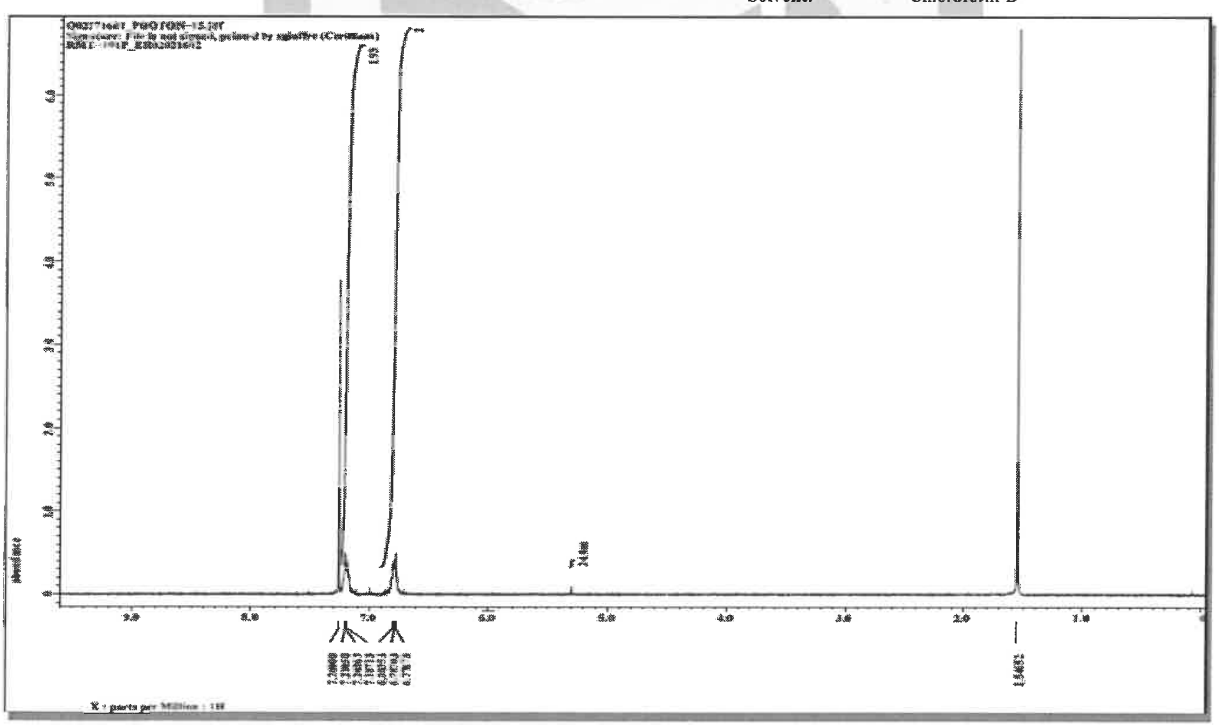

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER02021602
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Fri Feb 19 12:55:12 2016
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

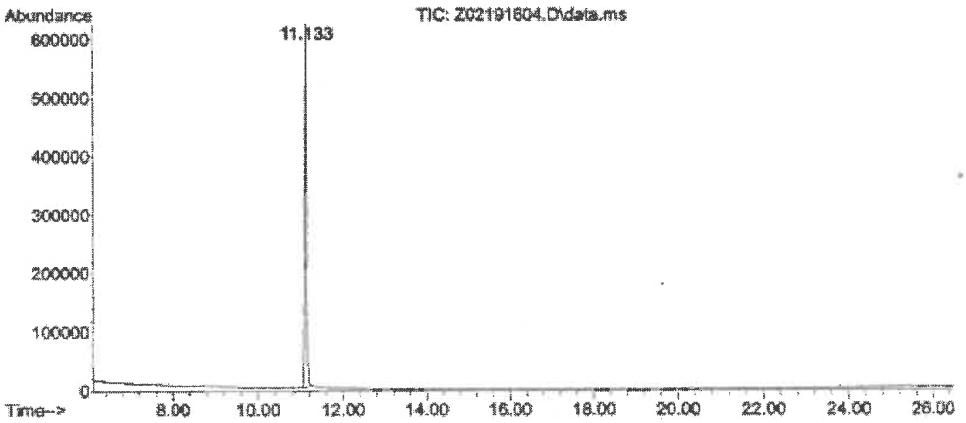

Mass Spectrum

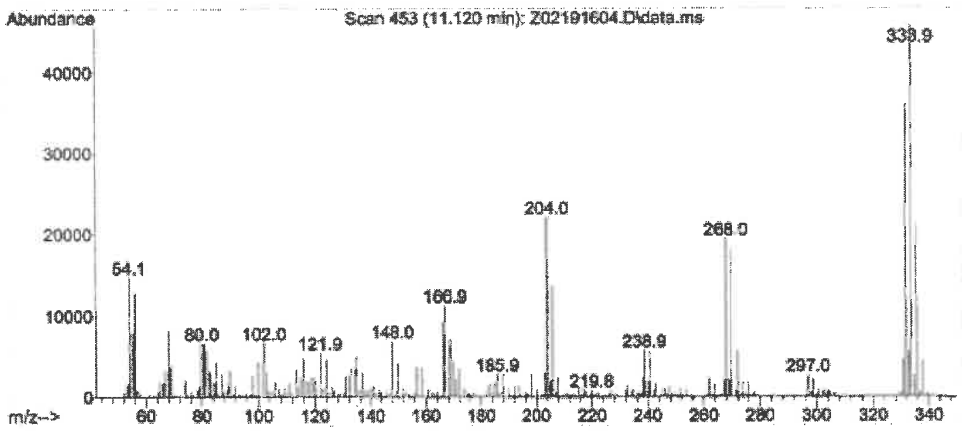

Reagent

HRDXNTA_00108

(2)

P: 4ba/19 SKJ

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

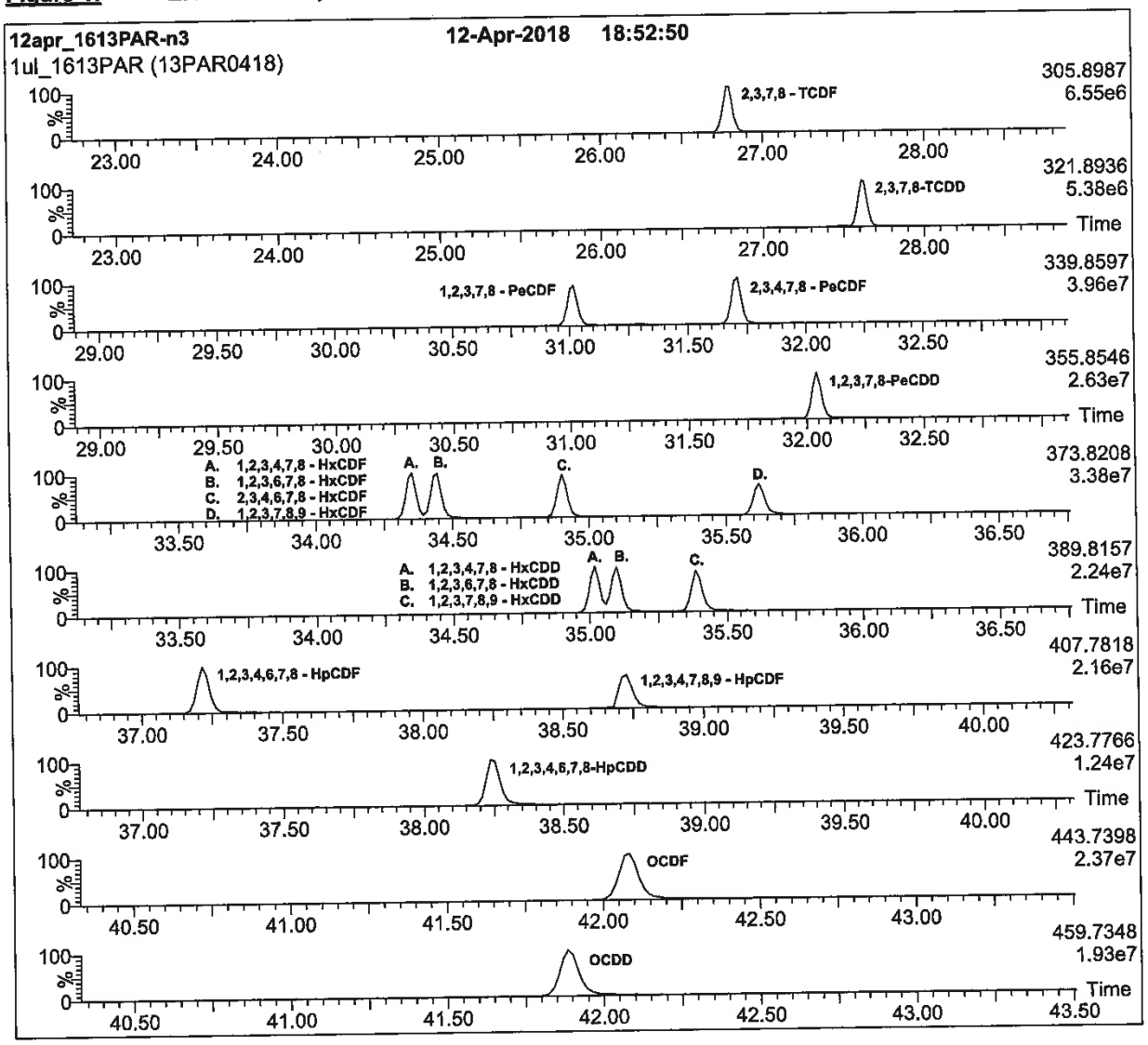

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

(3)

P: 4/3dic SKV

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Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number: EDF-7999-10X
Solution Lot: ER02241602
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

789912

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method: GC/ECD
Column: DB-5ms, 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program: 140°C to 200°C at 40°C/min, 200°C to 300°C at 4°C/min hold 3 min
Injector Temp: Cool on-column
Detector Temp: 280°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397.1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386.6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0.8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0.7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

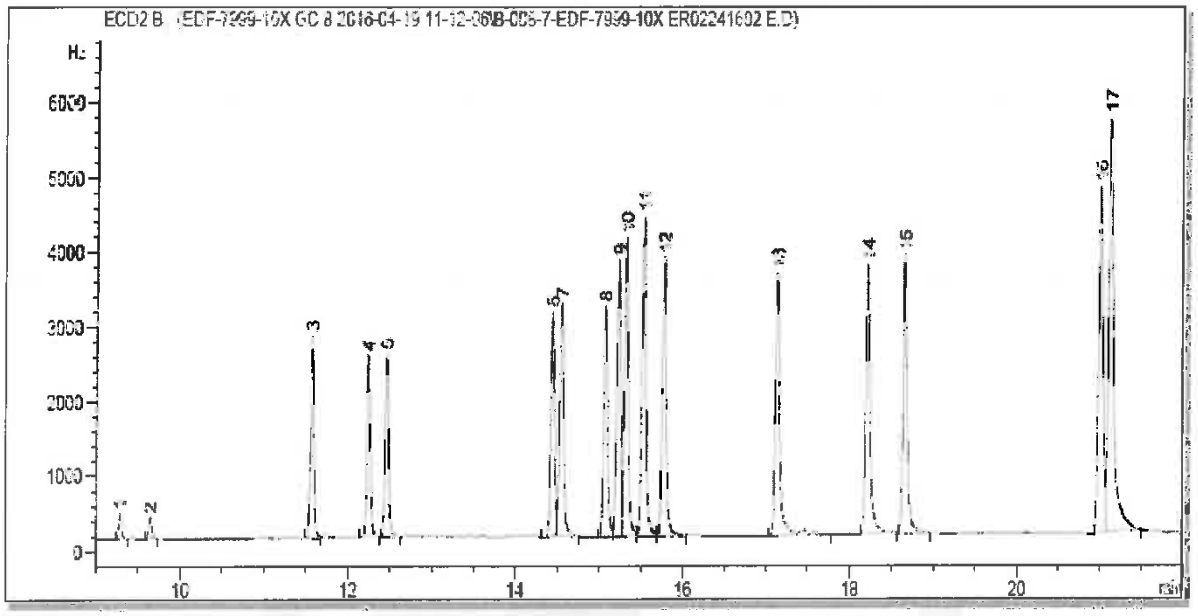

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

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Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Method 1613 PAR Stock Solution

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

789917

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

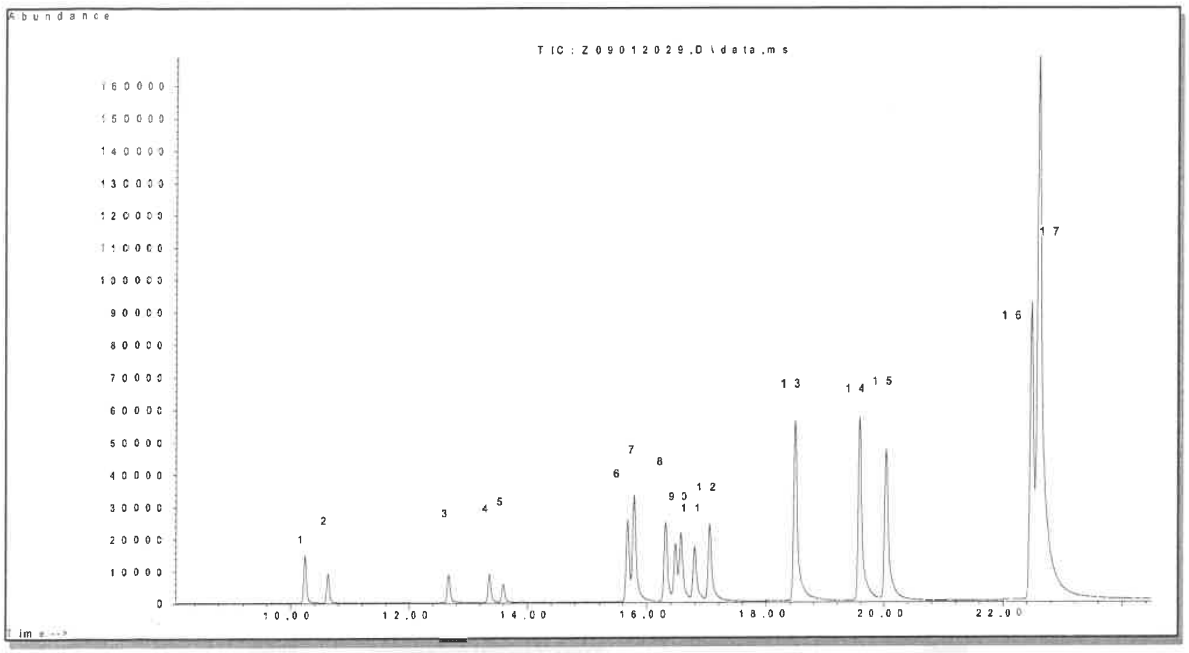

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	37TCDD #	TCDF #
11215702-072821-BN -SJSB095 (16-18) RA	320-76901-9 RA	56	44
	MB 320-513879/1-A RA	50	37
	320-76901-A-2-B MS RA	58	43
	320-76901-A-2-C MSD RA	65	50

	QC LIMITS
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
TCDF = 13C-2,3,7,8-TCDF	24-169

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-513879/2-A	36	34	47	31	36	34	42	37

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-513879/2-A	33	37	35	32	35	36	40	39

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-072821-BN -SJSB095 (16-18)	320-76901-9	41	41	51	39	43	40	50	49
	MB 320-513879/1-A	36	36	46	36	40	35	47	43
	320-76901-A-2-B MS	38	41	50	39	43	39	50	46
	320-76901-A-2-C MSD	43	46	57	45	48	43	67	56

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-072821-BN -SJSB095 (16-18)	320-76901-9	45	47	46	43	48	47	49	36
	MB 320-513879/1-A	38	40	39	39	41	41	42	36
	320-76901-A-2-B MS	41	44	39	40	46	47	50	42
	320-76901-A-2-C MSD	50	57	56	41	55	55	61	62

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_51.d

Lab ID: LCS 320-513879/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	22.3	111	67-158	
2,3,7,8-TCDF	20.0	23.1	115	75-158	
1,2,3,7,8-PeCDD	100	113	113	70-142	
1,2,3,7,8-PeCDF	100	117	117	80-134	
2,3,4,7,8-PeCDF	100	109	109	68-160	
1,2,3,4,7,8-HxCDD	100	101	101	70-164	
1,2,3,6,7,8-HxCDD	100	112	112	76-134	
1,2,3,7,8,9-HxCDD	100	109	109	64-162	
1,2,3,4,7,8-HxCDF	100	114	114	72-134	
1,2,3,6,7,8-HxCDF	100	120	120	84-130	
1,2,3,7,8,9-HxCDF	100	118	118	78-130	
2,3,4,6,7,8-HxCDF	100	121	121	70-156	
1,2,3,4,6,7,8-HpCDD	100	111	111	70-140	
1,2,3,4,6,7,8-HpCDF	100	118	118	82-122	
1,2,3,4,7,8,9-HpCDF	100	108	108	78-138	
OCDD	200	232	116	78-144	
OCDF	200	243	122	63-170	
13C-2,3,7,8-TCDD	200	68.6	34	20-175	
13C-2,3,7,8-TCDF	200	71.2	36	22-152	
13C-1,2,3,7,8-PeCDD	200	68.3	34	21-227	
13C-1,2,3,7,8-PeCDF	200	61.5	31	21-192	
13C-2,3,4,7,8-PeCDF	200	72.0	36	13-328	
13C-1,2,3,4,7,8-HxCDD	200	73.9	37	21-193	
13C-1,2,3,6,7,8-HxCDD	200	69.3	35	25-163	
13C-1,2,3,4,7,8-HxCDF	200	83.0	42	19-202	
13C-1,2,3,6,7,8-HxCDF	200	74.3	37	21-159	
13C-1,2,3,7,8,9-HxCDF	200	65.0	32	17-205	
13C-2,3,4,6,7,8-HxCDF	200	66.5	33	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	72.5	36	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	70.5	35	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	80.3	40	20-186	
13C-OCDD	400	155	39	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_53.d

Lab ID: 320-76901-A-2-B MS Client ID:

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	27.3	42	73.3	113	67-158	
1,2,3,7,8-PeCDD	136	ND	151	110	70-142	
1,2,3,7,8-PeCDF	136	ND	161	118	80-134	
2,3,4,7,8-PeCDF	136	ND	143	104	68-160	
1,2,3,4,7,8-HxCDD	136	ND	132	97	70-164	
1,2,3,6,7,8-HxCDD	136	ND	140	103	76-134	
1,2,3,7,8,9-HxCDD	136	ND	152	111	64-162	
1,2,3,4,7,8-HxCDF	136	7.0	158	111	72-134	
1,2,3,6,7,8-HxCDF	136	1.6 J	154	111	84-130	
1,2,3,7,8,9-HxCDF	136	ND	155	113	78-130	
2,3,4,6,7,8-HxCDF	136	ND	160	117	70-156	
1,2,3,4,6,7,8-HpCDD	136	60	197	100	70-140	
1,2,3,4,6,7,8-HpCDF	136	4.4 J	156	111	82-122	
1,2,3,4,7,8,9-HpCDF	136	2.0 J	144	104	78-138	
OCDD	273	1700	1650	-24	78-144	4
OCDF	273	18	279	96	63-170	
13C-2,3,7,8-TCDD	273	130	112	41	25-164	
13C-2,3,7,8-TCDF	273	130	105	38	24-169	
13C-1,2,3,7,8-PeCDD	273	130	106	39	25-181	
13C-1,2,3,7,8-PeCDF	273	120	106	39	24-185	
13C-2,3,4,7,8-PeCDF	273	120	116	43	21-178	
13C-1,2,3,4,7,8-HxCDD	273	140	120	44	32-141	
13C-1,2,3,6,7,8-HxCDD	273	130	106	39	28-130	
13C-1,2,3,4,7,8-HxCDF	273	150	135	50	26-152	
13C-1,2,3,6,7,8-HxCDF	273	130	125	46	26-123	
13C-1,2,3,7,8,9-HxCDF	273	110	108	40	29-147	
13C-2,3,4,6,7,8-HxCDF	273	120	113	41	28-136	
13C-1,2,3,4,6,7,8-HpCDD	273	150	129	47	23-140	
13C-1,2,3,4,6,7,8-HpCDF	273	140	125	46	28-143	
13C-1,2,3,4,7,8,9-HpCDF	273	160	136	50	26-138	
13C-OCDD	546	300	231	42	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 27AU2111D2_007.d

Lab ID: 320-76901-A-2-B MS RA Client ID:

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	27.3	140	200	210	75-158	4
13C-2,3,7,8-TCDF	273	130	117	43	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 17au21dfs1_54.d

Lab ID: 320-76901-A-2-C MSD Client ID:

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	27.0	65.4	85	11	50	67-158	
1,2,3,7,8-PeCDD	135	151	112	0	50	70-142	
1,2,3,7,8-PeCDF	135	161	120	0	50	80-134	
2,3,4,7,8-PeCDF	135	147	109	3	50	68-160	
1,2,3,4,7,8-HxCDD	135	137	101	4	50	70-164	
1,2,3,6,7,8-HxCDD	135	142	106	2	50	76-134	
1,2,3,7,8,9-HxCDD	135	119	89	24	50	64-162	
1,2,3,4,7,8-HxCDF	135	153	108	3	50	72-134	
1,2,3,6,7,8-HxCDF	135	161	119	5	50	84-130	
1,2,3,7,8,9-HxCDF	135	155	115	0	50	78-130	
2,3,4,6,7,8-HxCDF	135	164	122	3	50	70-156	
1,2,3,4,6,7,8-HpCDD	135	193	98	2	50	70-140	
1,2,3,4,6,7,8-HpCDF	135	152	110	3	50	82-122	
1,2,3,4,7,8,9-HpCDF	135	144	105	0	50	78-138	
OCDD	270	1450	-99	13	50	78-144	4
OCDF	270	326	114	16	50	63-170	
13C-2,3,7,8-TCDD	270	123	46			25-164	
13C-2,3,7,8-TCDF	270	117	43			24-169	
13C-1,2,3,7,8-PeCDD	270	117	43			25-181	
13C-1,2,3,7,8-PeCDF	270	122	45			24-185	
13C-2,3,4,7,8-PeCDF	270	130	48			21-178	
13C-1,2,3,4,7,8-HxCDD	270	154	57			32-141	
13C-1,2,3,6,7,8-HxCDD	270	150	56			28-130	
13C-1,2,3,4,7,8-HxCDF	270	182	67			26-152	
13C-1,2,3,6,7,8-HxCDF	270	150	56			26-123	
13C-1,2,3,7,8,9-HxCDF	270	110	41			29-147	
13C-2,3,4,6,7,8-HxCDF	270	135	50			28-136	
13C-1,2,3,4,6,7,8-HpCDD	270	149	55			23-140	
13C-1,2,3,4,6,7,8-HpCDF	270	147	55			28-143	
13C-1,2,3,4,7,8,9-HpCDF	270	164	61			26-138	
13C-OCDD	539	335	62			17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 27AU2111D2_008.d

Lab ID: 320-76901-A-2-C MSD RA Client ID:

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDF	27.0	172	110	15	50	75-158	4
13C-2,3,7,8-TCDF	270	135	50			24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab File ID: 24AU2111D2_004.d Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Date Extracted: 08/06/2021 12:58

Instrument ID: 11D2 Date Analyzed: 08/24/2021 10:23

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	320-76901-A-2-B MS RA	27AU2111D2_007.d	08/27/2021 12:52
	320-76901-A-2-C MSD RA	27AU2111D2_008.d	08/27/2021 13:30
11215702-072821-BN-SJSB095 (16-18) RA	320-76901-9 RA	27AU21A11D2_008.d	08/27/2021 20:06

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab File ID: 19au21dfs1_5.d Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Date Extracted: 08/06/2021 12:58

Instrument ID: DFS 1 Date Analyzed: 08/19/2021 16:27

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-513879/2-A	17au21dfs1_51.d	08/19/2021 04:43
	320-76901-A-2-B MS	17au21dfs1_53.d	08/19/2021 06:18
	320-76901-A-2-C MSD	17au21dfs1_54.d	08/19/2021 07:06
11215702-072821-BN-SJSB095 (16-18)	320-76901-9	19au21dfs1_13.d	08/19/2021 22:50

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-2
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (16-18)
Lab Sample ID: 320-76901-9
Matrix: Sediment
Lab File ID: 19au21dfs1_13.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.71(g)
Date Analyzed: 08/19/2021 22:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.3	0.13
40321-76-4	1,2,3,7,8-PeCDD	ND		6.7	0.15
57117-41-6	1,2,3,7,8-PeCDF	ND		6.7	0.052
57117-31-4	2,3,4,7,8-PeCDF	ND		6.7	0.056
39227-28-6	1,2,3,4,7,8-HxCDD	ND		6.7	0.28
57653-85-7	1,2,3,6,7,8-HxCDD	ND		6.7	0.29
19408-74-3	1,2,3,7,8,9-HxCDD	ND		6.7	0.26
70648-26-9	1,2,3,4,7,8-HxCDF	ND		6.7	0.019
57117-44-9	1,2,3,6,7,8-HxCDF	ND		6.7	0.018
72918-21-9	1,2,3,7,8,9-HxCDF	ND		6.7	0.018
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.7	0.017
35822-46-9	1,2,3,4,6,7,8-HpCDD	15	B	6.7	0.17
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.28	J B	6.7	0.058
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.7	0.061
3268-87-9	OCDD	260	B	13	0.31
39001-02-0	OCDF	ND		13	0.12
41903-57-5	Total TCDD	1.2	J q	1.3	0.13
30402-14-3	Total TCDF	6.1	B	1.3	0.068
36088-22-9	Total PeCDD	5.9	J q	6.7	0.15
30402-15-4	Total PeCDF	ND		6.7	0.056
34465-46-8	Total HxCDD	17		6.7	0.27
55684-94-1	Total HxCDF	ND		6.7	0.052
37871-00-4	Total HpCDD	66	B	6.7	0.17
38998-75-3	Total HpCDF	0.28	J B	6.7	0.060

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-2
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (16-18)
Lab Sample ID: 320-76901-9
Matrix: Sediment
Lab File ID: 19au21dfs1_13.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.71(g)
Date Analyzed: 08/19/2021 22:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	41		25-164
89059-46-1	13C-2,3,7,8-TCDF	41		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	40		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	39		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	43		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	47		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	46		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	50		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	49		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	43		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	45		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	47		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	48		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	49		26-138
114423-97-1	13C-OCDD	36		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	51		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d
Lims ID: 320-76901-A-9-A
Client ID: 11215702-072821-BN-SJSB095 (16-18)
Sample Type: Client
Inject. Date: 19-Aug-2021 22:50:00 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-9-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:25:05 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 17:01:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.351	1082506	0.82	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.388	592549	0.82	1.3459	40.7	40.7	0.1084	0.1084	40.67	
2,3,7,8-TCDF	20.396	10336	0.79	1.0802	1.615	1.615	0.0254	0.0254		M
A Non-2,3,7,8-sub-TCDF	19.851	4108	0.71	1.0802	0.6418	0.6418	0.0254	0.6418		Ma
S Total TCDF					2.257	2.257	0.0254	0.0254		
D 13C-2,3,7,8-TCDD	21.747	409794	0.82	0.9317	40.6	40.6	0.1178	0.1178	40.63	
2,3,7,8-TCDD	21.773						0.0473	0.0473		RQU
$ 37Cl4-2,3,7,8-TCDD	21.773	222223		1.0083	20.4	20.4	0.0130	0.0130	50.90	
A Non-2,3,7,8-sub-TCDD	20.684	2040	0.77	1.0753	0.5110	0.4629	0.0473	0.4629		RQM
S Total TCDD					0.5110	0.4629	0.0473	0.0473		RQ
D 13C-1,2,3,7,8-PeCDF	27.225	481784	1.56	1.1405	39.0	39.0	0.1366	0.1366	39.02	
1,2,3,7,8-PeCDF	27.275						0.0193	0.0193		U
D 13C-2,3,4,7,8-PeCDF	28.723	525654	1.58	1.1253	43.2	43.2	0.1384	0.1384	43.15	
2,3,4,7,8-PeCDF	28.787						0.0207	0.0207		
A F1 PeCDFs	24.634						0.009306	0.009306		RQU
A Non-2,3,7,8-sub-PeCDF	28.173						0.0199	0.0199		RQU
S Total PeCDF							0.0207	0.0207		
D 13C-1,2,3,7,8-PeCDD	29.548	307325	1.54	0.7165	39.6	39.6	0.0844	0.0844	39.63	
1,2,3,7,8-PeCDD	29.616						0.0562	0.0562		
A Non-2,3,7,8-sub-PeCDD	28.478	7095	1.55	1.0465	2.344	2.206	0.0562	1.306		RQMa
S Total PeCDD					2.344	2.206	0.0562	0.0562		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.901	468266	0.55	0.9648	50.2	50.2	0.1556	0.1556	50.23	
1,2,3,4,7,8-HxCDF	34.960						0.006949	0.006949		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.069	511776	0.52	1.0708	49.5	49.5	0.1402	0.1402	49.46	
1,2,3,6,7,8-HxCDF	34.960						0.006521	0.006521		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.886	452690	0.55	1.0413	45.0	45.0	0.1442	0.1442	44.99	
2,3,4,6,7,8-HxCDF	35.928						0.006179	0.006179		RQU
D 13C-1,2,3,7,8,9-HxCDF	36.778	404312	0.55	0.9731	43.0	43.0	0.1543	0.1543	43.00	
1,2,3,7,8,9-HxCDF	36.808						0.006534	0.006534		
A Non-2,3,7,8-sub-HxCDF	35.009						0.006534	0.0192		RQU
S Total HxCDF							0.0192	0.0192		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.585	966259	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.096	344464	1.26	0.7587	47.0	47.0	0.1471	0.1471	46.99	
1,2,3,4,7,8-HxCDD	36.121						0.1024	0.1024		U
D 13C-1,2,3,6,7,8-HxCDD	36.214	383235	1.28	0.8593	46.2	46.2	0.1299	0.1299	46.16	
1,2,3,6,7,8-HxCDD	36.121						0.1067	0.1067		U
1,2,3,7,8,9-HxCDD	36.597						0.0967	0.0967		
A Non-2,3,7,8-sub-HxCDD	35.375	24451	1.22	1.0545	6.373	6.373	0.1017	6.373		a
S Total HxCDD					6.373	6.373	0.1019	0.1019		
D 13C-1,2,3,4,6,7,8-HpCDF	38.600	342020	0.45	0.7359	48.1	48.1	0.1994	0.1994	48.10	
1,2,3,4,6,7,8-HpCDF	38.626	514	0.98	1.4421	0.1042	0.1042	0.0217	0.0217		M
D 13C-1,2,3,4,7,8,9-HpCDF	39.855	323483	0.48	0.6854	48.8	48.8	0.2141	0.2141	48.85	
1,2,3,4,7,8,9-HpCDF	39.872						0.0228	0.0228		
A Non-2,3,7,8-sub-HpCDF	39.245						0.0222	0.0222		
S Total HpCDF					0.1042	0.1042	0.0222	0.0222		
D 13C-1,2,3,4,6,7,8-HpCDD	39.552	303149	1.04	0.6745	46.5	46.5	0.0785	0.0785	46.51	
1,2,3,4,6,7,8-HpCDD	39.569	17841	1.02	1.0503	5.603	5.603	0.0630	0.0630		
A Non-2,3,7,8-sub-HpCDD	39.241	59510	0.99	1.0503	18.7	18.7	0.0630	18.7		
S Total HpCDD					24.3	24.3	0.0630	0.0630		
D 13C-OCDD	42.049	379746	0.90	0.5446	72.2	72.2	0.1413	0.1413	36.08	
OCDF	42.158						0.0444	0.0444		U
OCDD	42.057	194470	0.89	1.0620	96.4	96.4	0.1163	0.1163		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d
Lims ID: 320-76901-A-9-A
Client ID: 11215702-072821-BN-SJSB095 (16-18)
Sample Type: Client
Inject. Date: 19-Aug-2021 22:50:00 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-9-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 09:25:05 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: stephensk Date: 21-Aug-2021 17:01:37

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.351	21.395	-3		488516	67024	44	110	1523		
333.9338	21.368	21.395	-2		593990	85145	23	57	3702	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.388	20.365	1	0.955	266316	35928	64	160	561		
317.9389	20.396	20.365	2	0.955	326233	44377	25	62	1775	0.82(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.396	20.408	-1	1.000	4574	565	3	7	188		M
305.8987	20.448	20.408	2	1.003	5762	836	6	15	139	0.79(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											Ma
303.9016	19.699	19.851	-9	0.966	1701	356	3	7	119		a
305.8987	19.742	19.851	-7	0.968	2407	391	6	15	65	0.71(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.747	21.716	2	1.019	184239	22953	44	110	522		
333.9338	21.756	21.716	2	1.019	225555	30165	23	57	1312	0.82(0.65-0.89)	
2,3,7,8-TCDD											RQU
319.8965	21.733						9	22			
321.8936	21.733						2	5			
37Cl4-2,3,7,8-TCDD											
327.8847	21.773	21.799	-2	1.020	222223	28182	8	20	3523		
A Non-2,3,7,8-sub-TCDD											RQM
319.8965	19.673	20.684	-61	0.905	1099	183	9	22	20		M
	Empc Correction				887	186	9	22	21		
321.8936	19.673	20.684	-61	0.905	1153	242	2	5	121	0.95(0.65-0.89)	M
13C-1,2,3,7,8-PeCDF											
351.9000	27.225	27.251	-2	1.275	293698	44330	61	152	727		
353.8970	27.233	27.251	-1	1.276	188086	29510	34	85	868	1.56(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											U
339.8597	27.276						1	2			
341.8567	27.276						5	12			
13C-2,3,4,7,8-PeCDF											
351.9000	28.723	28.757	-2	1.345	322096	43198	61	152	708		
353.8970	28.723	28.757	-2	1.345	203558	28871	34	85	849	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.791						1	2			
341.8567	28.791						5	12			
A F1 PeCDFs											U
339.8597	24.371	24.634	-16	0.895	22	13	1	2	13		
341.8567	24.414	24.634	-13	0.897	34	25	2	5	13	0.65(1.32-1.78)	
	Empc Correction				14	8	2	5	4		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	25.751	28.173	-145	0.946	47	21	1	2	21		
341.8567	25.743	28.173	-146	0.946	158	46	5	12	9	0.30(1.32-1.78)	
	Empc Correction				30	13	5	12	3		
13C-1,2,3,7,8-PeCDD											
367.8949	29.548	29.574	-2	1.384	186328	26242	21	52	1250		
369.8919	29.548	29.574	-2	1.384	120997	16235	16	40	1015	1.54(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616						8	20			
357.8516	29.616						2	5			
A Non-2,3,7,8-sub-PeCDD											RQMa
355.8546	26.055	28.478	-145	0.882	1070	190	8	20	24		a
	Empc Correction				626	167	8	20	21		
357.8516	26.038	28.478	-146	0.881	404	108	2	5	54	2.65(1.32-1.78)	
355.8546	26.863	28.478	-97	0.909	2520	473	8	20	59		
357.8516	26.888	28.478	-95	0.910	1679	292	2	5	146	1.50(1.32-1.78)	
355.8546	28.504	28.478	2	0.965	1195	212	8	20	27		a
357.8516	28.496	28.478	1	0.964	671	93	2	5	47	1.78(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.901	34.906	0	0.954	166293	31031	33	82	940		
385.8610	34.909	34.906	0	0.954	301973	56768	92	230	617	0.55(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	34.922						2	5			
375.8178	34.922						1	2			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.069	35.066	0	0.959	175324	31994	33	82	970		
385.8610	35.061	35.066	0	0.958	336452	56153	92	230	610	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.082						2	5			
375.8178	35.082						1	2			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.886	35.890	0	0.981	160772	31497	33	82	954		
385.8610	35.886	35.890	0	0.981	291918	61783	92	230	672	0.55(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											RQU
373.8208	35.907						2	5			
375.8178	35.907						1	2			
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.778	36.782	0	1.005	143512	30415	33	82	922		
385.8610	36.787	36.782	0	1.006	260800	55978	92	230	608	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791						2	5			
375.8178	36.791						1	2			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.444	35.009	-94	0.958	59	38	2	5	19		
375.8178	33.444	35.009	-94	0.958	62	30	1	2	30	0.95(1.05-1.43)	
	Empc Correction				47	30	1	2	30		
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.585	36.581	0		538239	114201	58	145	1969		
403.8529	36.585	36.581	0		428020	93650	35	87	2676	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.096	36.092	0	0.987	191760	41498	58	145	715		
403.8529	36.105	36.092	1	0.987	152704	34013	35	87	972	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											U
389.8158	36.109						15	37			
391.8127	36.109						18	45			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.214	36.210	0	0.990	214910	44010	58	145	759		
403.8529	36.214	36.210	0	0.990	168325	33375	35	87	954	1.28(1.05-1.43)	
1,2,3,6,7,8-HxCDD											U
389.8158	36.227						15	37			
391.8127	36.227						18	45			
1,2,3,7,8,9-HxCDD											
389.8158	36.597						15	37			
391.8127	36.597						18	45			
A Non-2,3,7,8-sub-HxCDD											a
389.8158	34.219	35.375	-69	0.945	13445	2216	15	37	148		a
391.8127	34.202	35.375	-70	0.944	11006	1889	18	45	105	1.22(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.600	38.596	0	1.055	106053	25574	48	120	533		
419.8220	38.609	38.596	1	1.055	235967	54390	74	185	735	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7817	38.626	38.618	0	1.001	254	54	9	22	6		M
409.7788	38.634	38.618	1	1.001	260	75	1	2	75	0.98(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.855	39.850	0	1.089	104988	27337	48	120	570		
419.8220	39.855	39.850	0	1.089	218495	56443	74	185	763	0.48(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872						9	22			
409.7788	39.872						1	2			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.245						9	22			
409.7788	39.245						1	2			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.552	39.547	0	1.081	154901	39187	20	50	1959		
437.8140	39.552	39.547	0	1.081	148248	39361	24	60	1640	1.04(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.569	39.561	0	1.000	9020	2394	12	30	200		
425.7737	39.560	39.561	0	1.000	8821	2388	9	22	265	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.929	39.241	-19	0.984	29603	7630	12	30	636		
425.7737	38.921	39.241	-19	0.984	29907	7691	9	22	855	0.99(0.88-1.20)	
13C-OCDD											
469.7780	42.049	42.036	1	1.149	180275	44508	21	52	2119		
471.7750	42.049	42.036	1	1.149	199471	47780	43	107	1111	0.90(0.76-1.02)	
OCDF											U
441.7428	42.137						5	12			
443.7399	42.137						6	15			
OCDD											
457.7377	42.057	42.053	0	1.000	91635	21125	11	27	1920		
459.7348	42.057	42.053	0	1.000	102835	24219	12	30	2018	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d
Lims ID: 320-76901-A-9-A
Client ID: 11215702-072821-BN-SJSB095 (16-18)
Inject. Date: 19-Aug-2021 22:50:00 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 12

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	592549	80305

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	592549	80305

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.699	1701	356	2407	391	0.6418	0.71	a
Signal Totals:							
	1701	356	2407	391			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4108	747				0.71	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6418 = (4108 * 100.000) / (592549 * 1.080)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Lims ID:	320-76901-A-9-A		
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Inject. Date:	19-Aug-2021 22:50:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	12

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	409794	53118

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	409794	53118

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.673	1099	183	1153	242	0.5110	0.95	RQM
19.673	887	186	1153	242	0.4629		Empc Correction
Signal Totals:							
	887	186	1153	242			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2252	425				0.95	RQM
	2040	428					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5110 = (2252 * 100.000) / (409794 * 1.075)
Empc Amount: 0.4629 = (2040 * 100.000) / (409794 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Lims ID:	320-76901-A-9-A		
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Inject. Date:	19-Aug-2021 22:50:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	12

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	481784	73840
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	525654	72069

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	503719	72954

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.371	22	13	34	25	0.0108	0.65	RQ
24.371	22	13	14	8	0.006932		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Lims ID:	320-76901-A-9-A		
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Inject. Date:	19-Aug-2021 22:50:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	12

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	481784	73840
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	525654	72069

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	503719	72954

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.751	47	21	158	46	0.0395	0.30	RQ
25.751	47	21	30	13	0.0148		Empc Correction
26.703	28	11	48	18	0.0146	0.58	RQ
26.703	28	11	18	7	0.008857		Empc Correction
30.197	40	22	241	65	0.0541	0.17	RQ
30.197	40	22	25	14	0.0125		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 09:25:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Lims ID:	320-76901-A-9-A		
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Inject. Date:	19-Aug-2021 22:50:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	12

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	307325	42477

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	307325	42477

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.055	1070	190	404	108	0.4583	2.65	RQa
26.055	626	167	404	108	0.3203		Empc Correction
26.863	2520	473	1679	292	1.31	1.50	
28.504	1195	212	671	93	0.5802	1.78	a
Signal Totals:							
	4341	852	2754	493			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7539	1368				1.74	RQa
	7095	1345					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.344 = (7539 * 100.000) / (307325 * 1.046)
Empc Amount: 2.206 = (7095 * 100.000) / (307325 * 1.046)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 23-Aug-2021 09:25:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Lims ID:	320-76901-A-9-A		
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Inject. Date:	19-Aug-2021 22:50:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	12

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	468266	87799
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	511776	88147
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	452690	93280
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	404312	86393

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	459261	88904

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.444	59	38	62	30	0.0219	0.95	RQ
33.444	59	38	47	30	0.0192		Empc Correction
34.615	39	18	18	7	0.0103	2.17	RQ
34.615	22	8	18	7	0.007228		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Lims ID:	320-76901-A-9-A		
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Inject. Date:	19-Aug-2021 22:50:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	12

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	344464	75511
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	383235	77385
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	363849	76448

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.219	13445	2216	11006	1889	6.37	1.22	a
Signal Totals:							
	13445	2216	11006	1889			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	24451	4105				1.22	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 6.373 = (24451 * 100.000) / (363849 * 1.055)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 23-Aug-2021 09:25:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Lims ID:	320-76901-A-9-A		
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Inject. Date:	19-Aug-2021 22:50:00	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	12

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	303149	78548

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	303149	78548

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.929	29603	7630	29907	7691	18.7	0.99	
Signal Totals:							
	29603	7630	29907	7691			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	59510	15321				0.99	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 18.690 = (59510 * 100.000) / (303149 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d				
Injection Date:	19-Aug-2021 22:50:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-9-A	Lab Sample ID:	320-76901-9		
Client ID:	11215702-072821-BN-SJSB095 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.40
Area: 3749
Amount: 1.320799
Amount Units: pg/ul

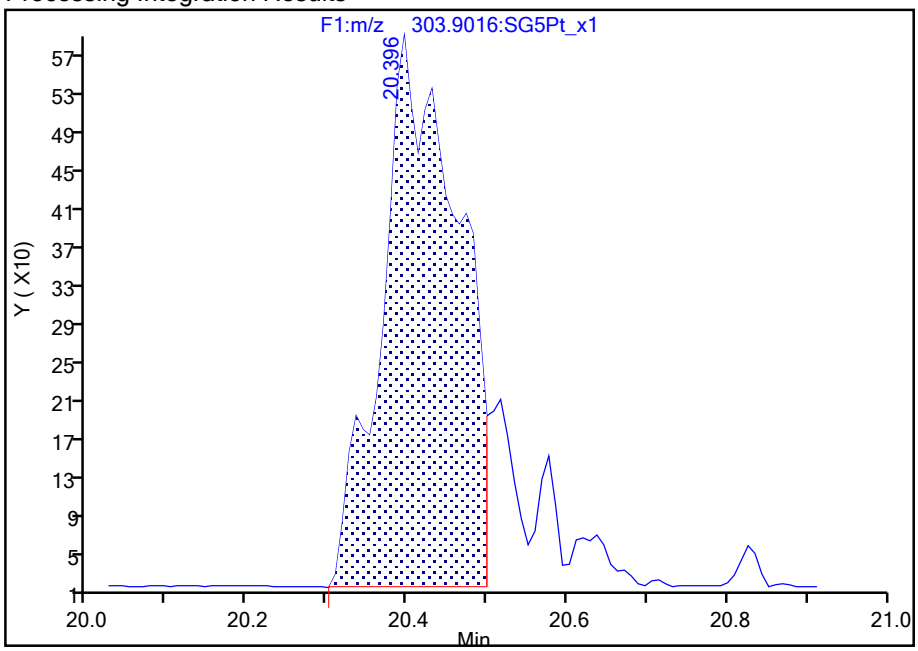

Manual Integration Results

RT: 20.40
Area: 4574
Amount: 1.614830
Amount Units: pg/ul

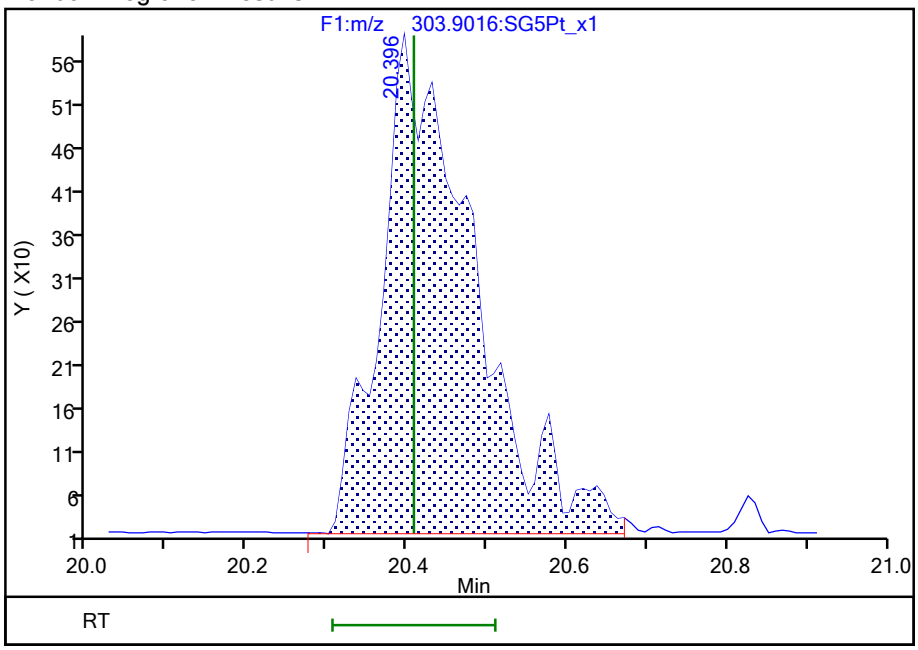

Reviewer: stephensk, 21-Aug-2021 17:01:21

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d				
Injection Date:	19-Aug-2021 22:50:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-9-A	Lab Sample ID:	320-76901-9		
Client ID:	11215702-072821-BN-SJSB095 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 20.45
Area: 4705
Amount: 1.320799
Amount Units: pg/ul

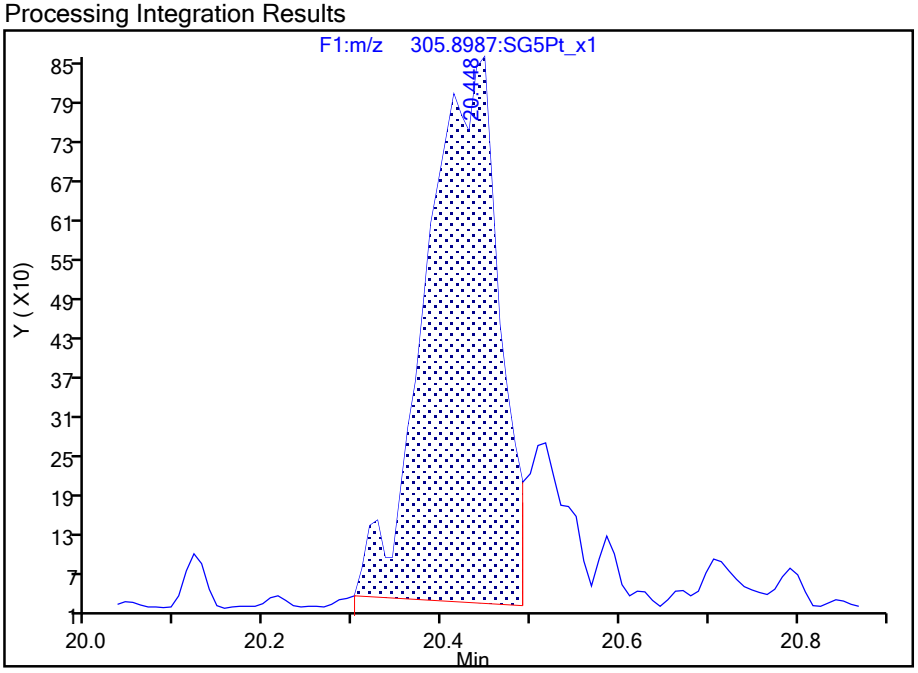

Manual Integration Results

RT: 20.45
Area: 5762
Amount: 1.614830
Amount Units: pg/ul

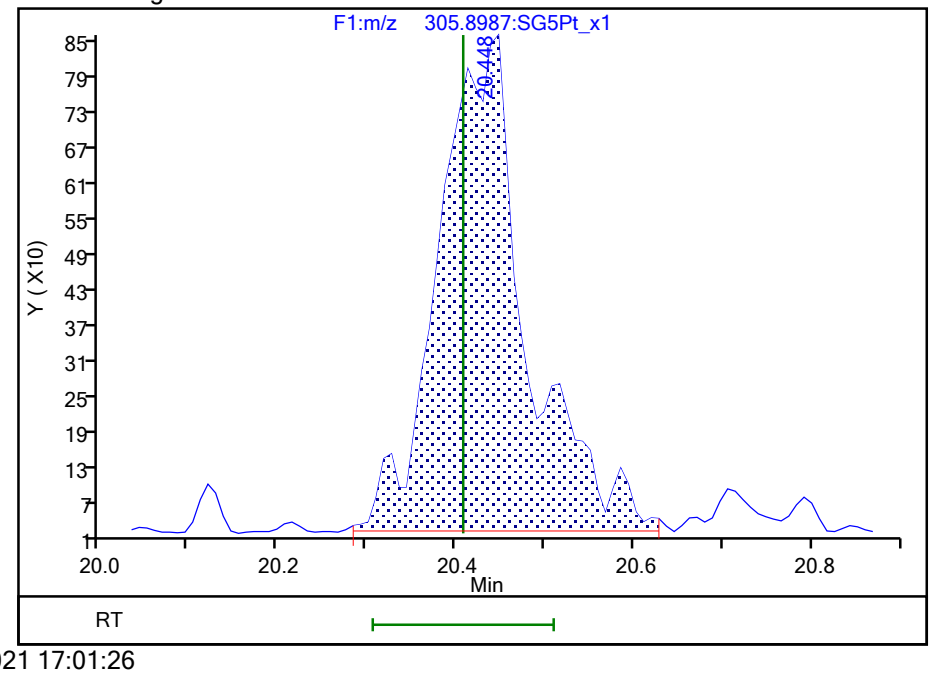

Reviewer: stephensk, 21-Aug-2021 17:01:26

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

789951

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d				
Injection Date:	19-Aug-2021 22:50:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-9-A	Lab Sample ID:	320-76901-9		
Client ID:	11215702-072821-BN-SJSB095 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (17.70- 23.67)

Signal: 1

Processing Integration Results

RT = 19.673 Area = 1057

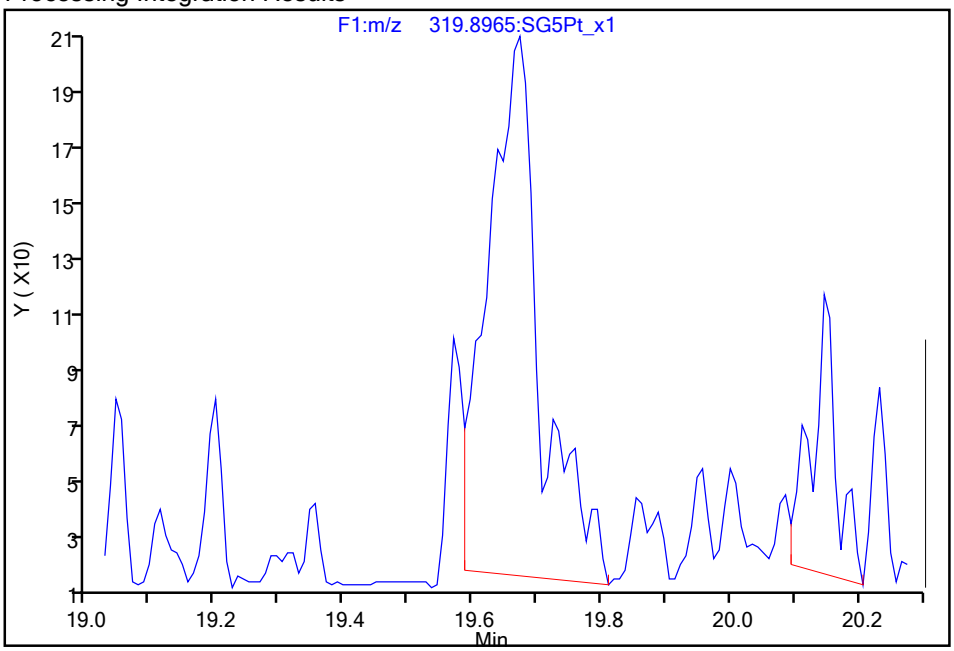

Manual Integration Results

RT = 19.673 Area = 1099 M

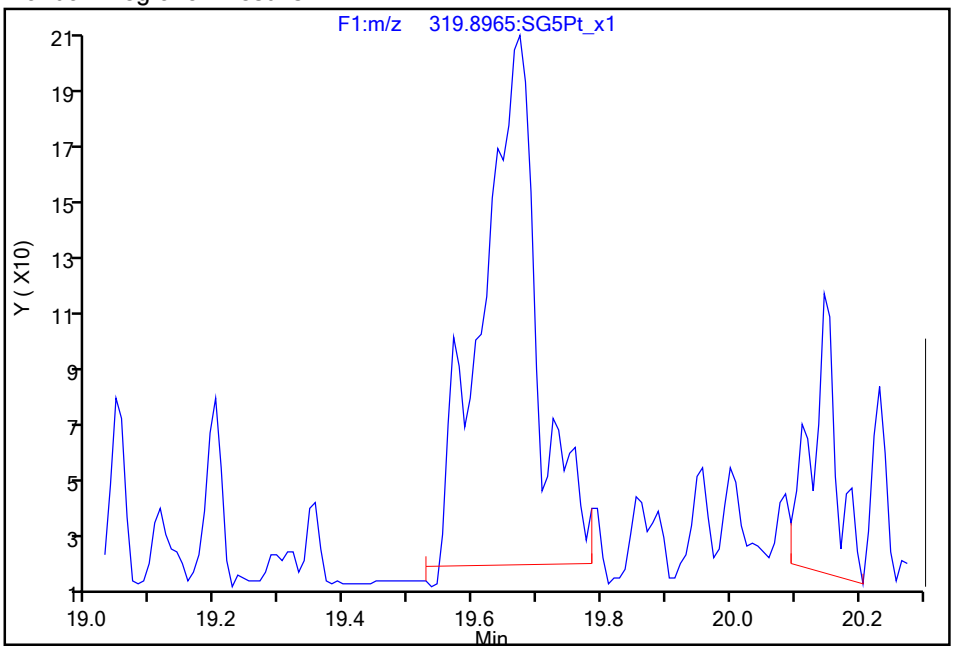

Reviewer: dadunj, 23-Aug-2021 09:23:07

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d				
Injection Date:	19-Aug-2021 22:50:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-9-A	Lab Sample ID:	320-76901-9		
Client ID:	11215702-072821-BN-SJSB095 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (17.70- 23.67)

Signal: 2

Processing Integration Results

RT = 19.673 Area = 749

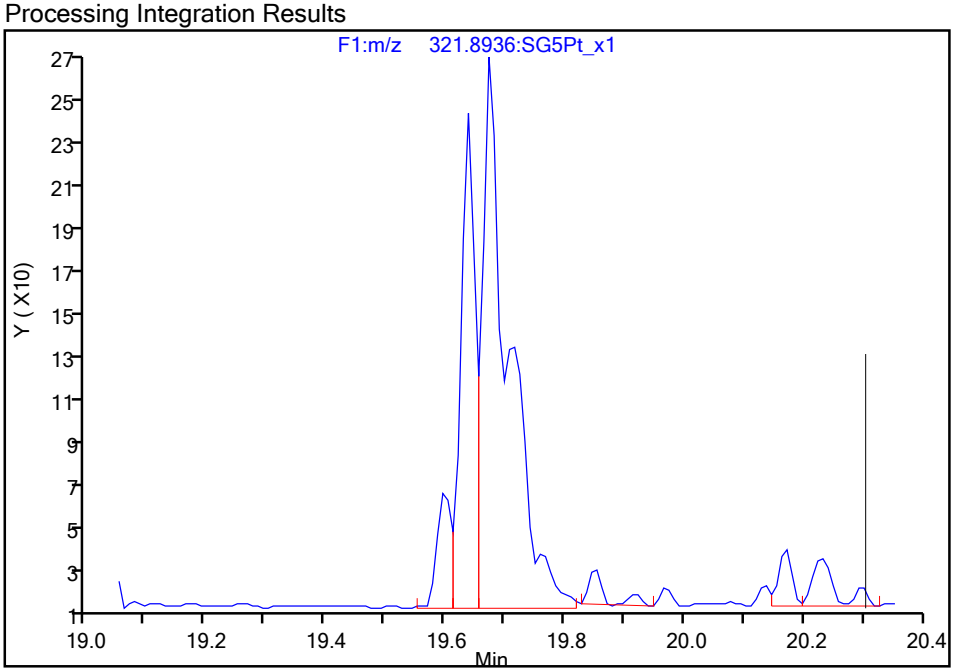

Manual Integration Results

RT = 19.673 Area = 1153 M

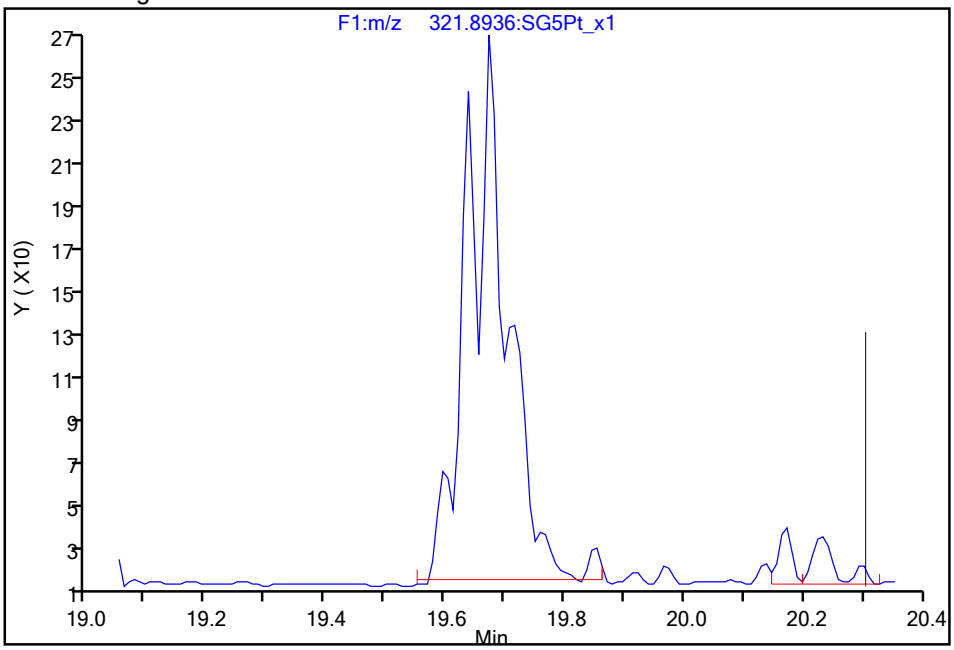

Reviewer: dadunj, 23-Aug-2021 09:23:02

Audit Action: Manually Integrated Audit Reason: Baseline

789953

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d				
Injection Date:	19-Aug-2021 22:50:00	Instrument ID:	DFS 1		
Lims ID:	320-76901-A-9-A	Lab Sample ID:	320-76901-9		
Client ID:	11215702-072821-BN-SJSB095 (16-18)				
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 38.63
Area: 228
Amount: 0.098942
Amount Units: pg/ul

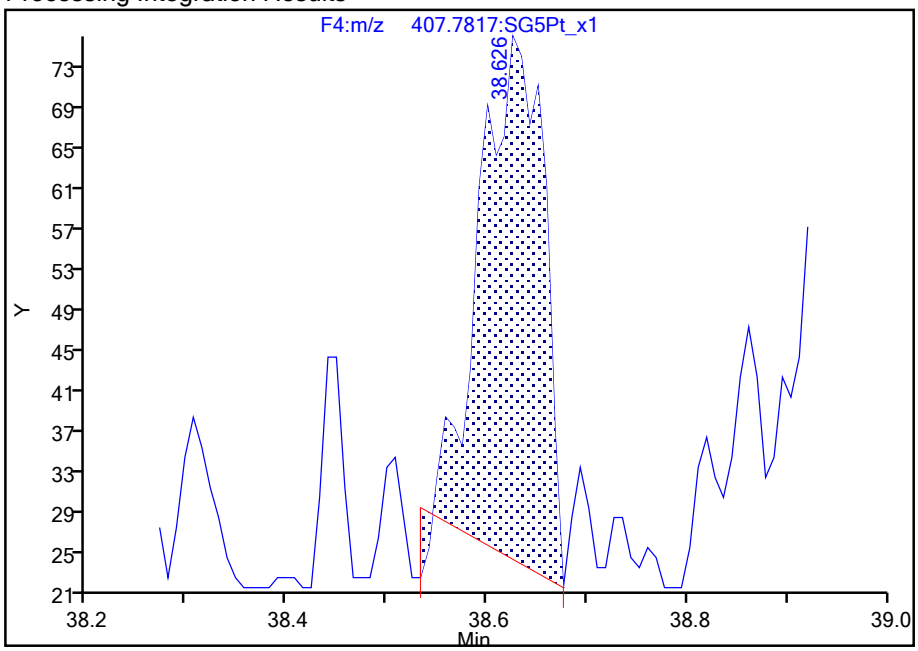

Manual Integration Results

RT: 38.63
Area: 254
Amount: 0.104214
Amount Units: pg/ul

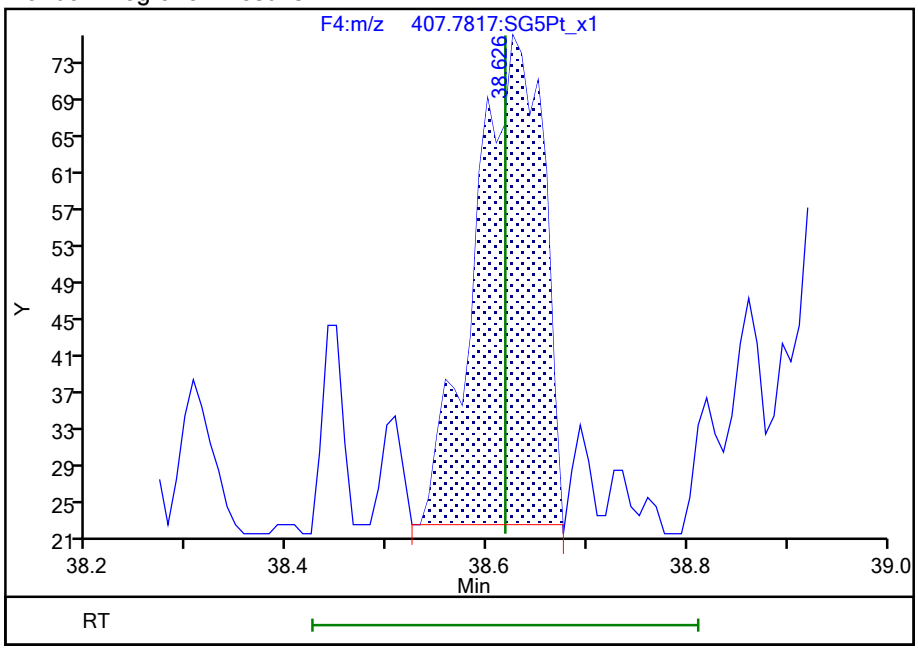

Reviewer: dadunj, 23-Aug-2021 09:24:22

Audit Action: Manually Integrated Audit Reason: Baseline

789954

Report Date: 23-Aug-2021 09:25:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

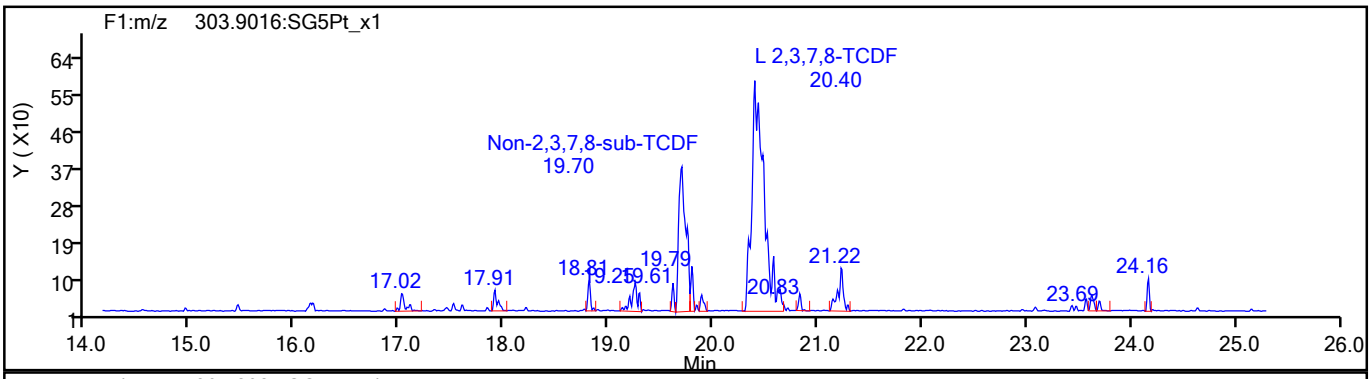

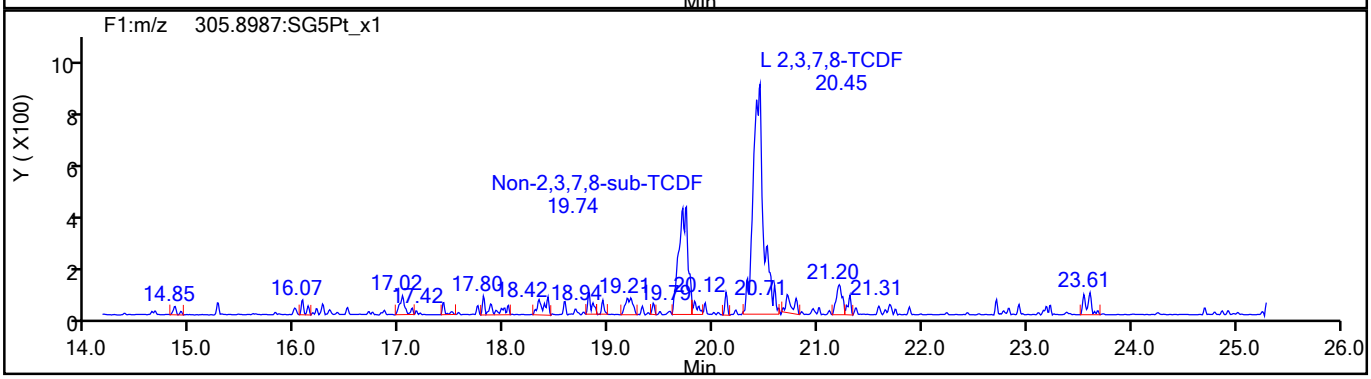

TCDF Standards

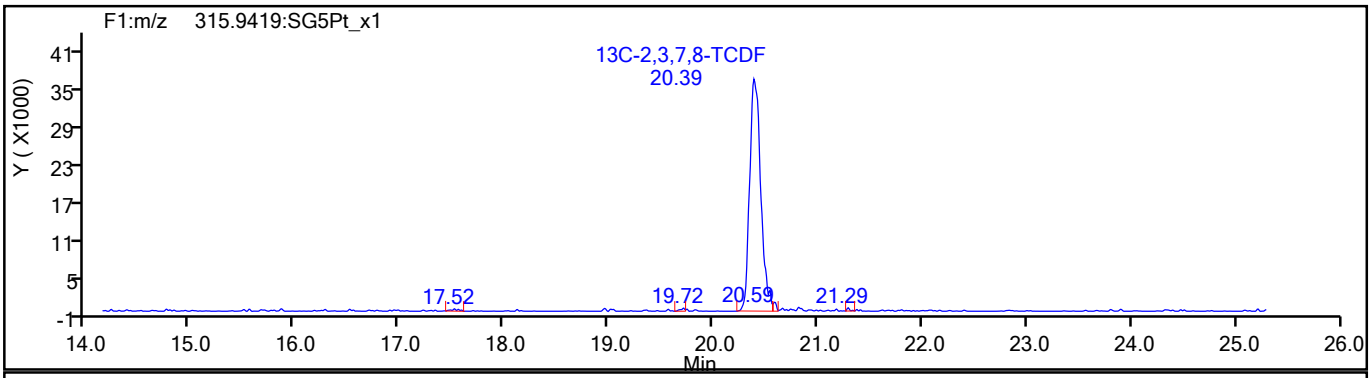

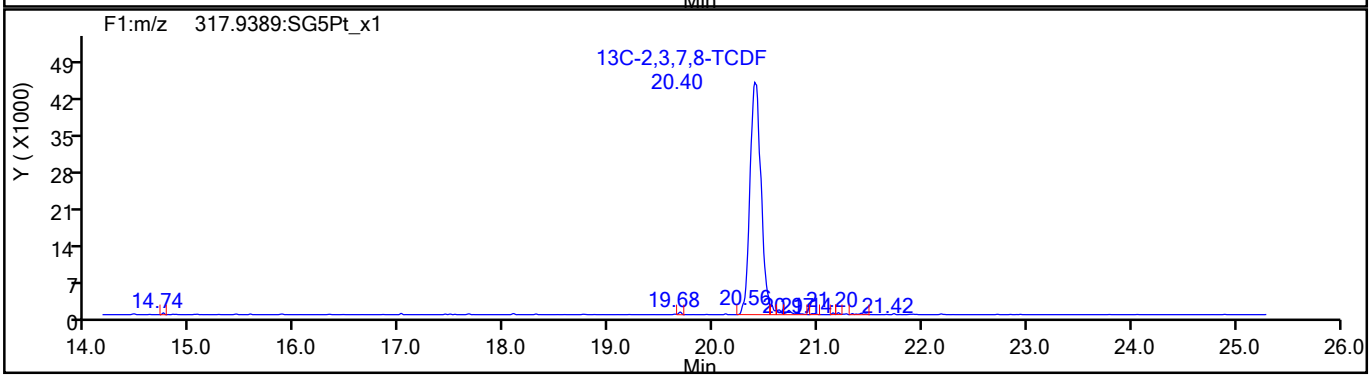

789955

Report Date: 23-Aug-2021 09:25:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

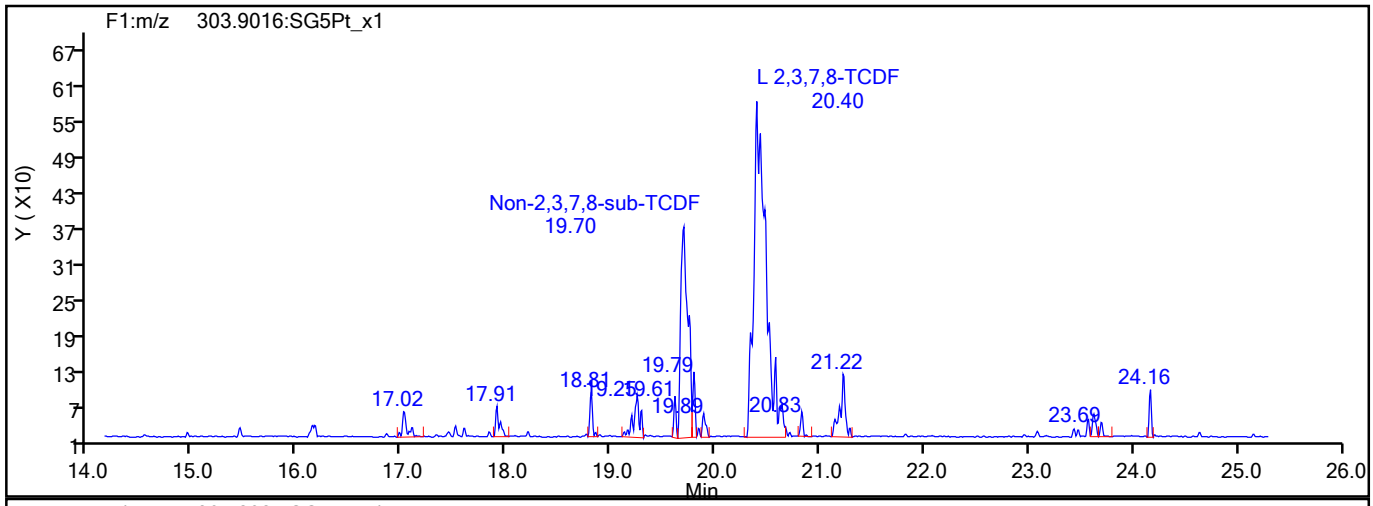

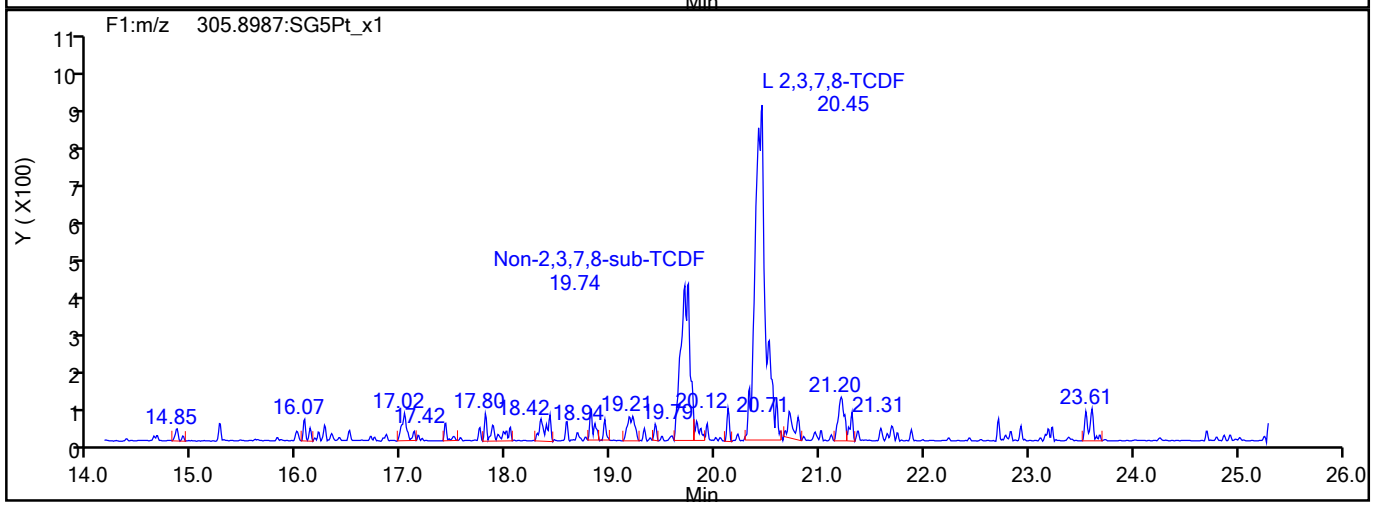

TCDF Interference Mass

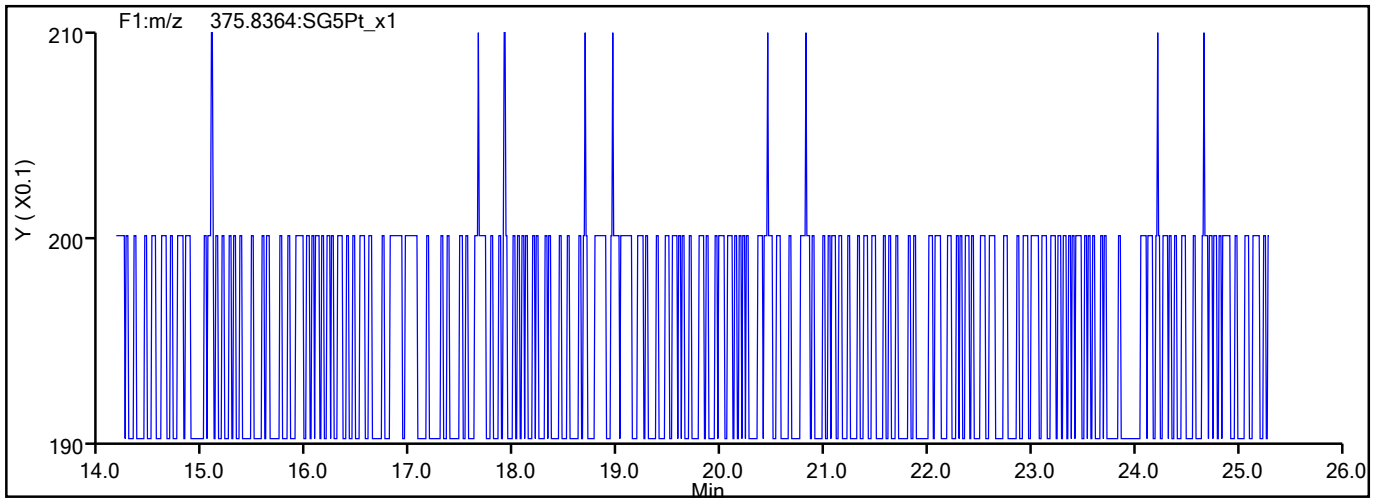

789956

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

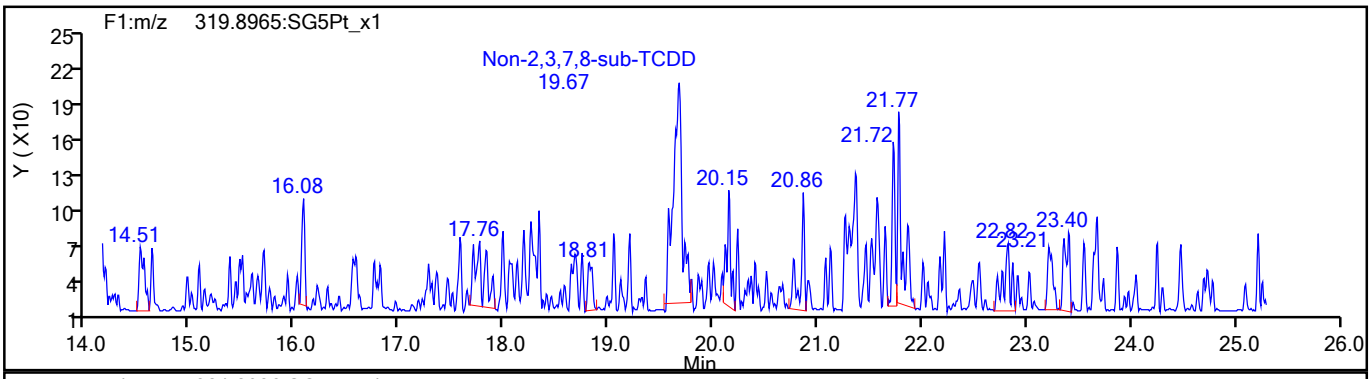

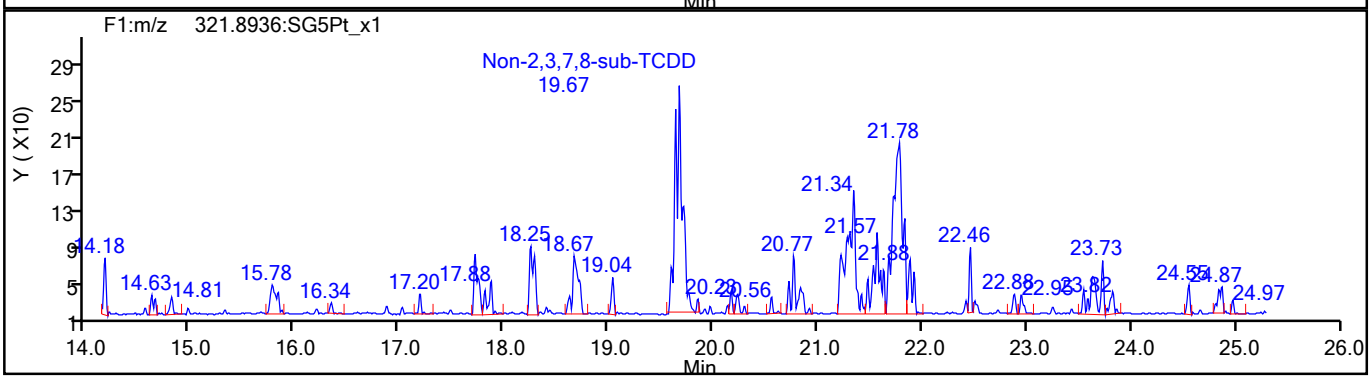

TCDD Standards

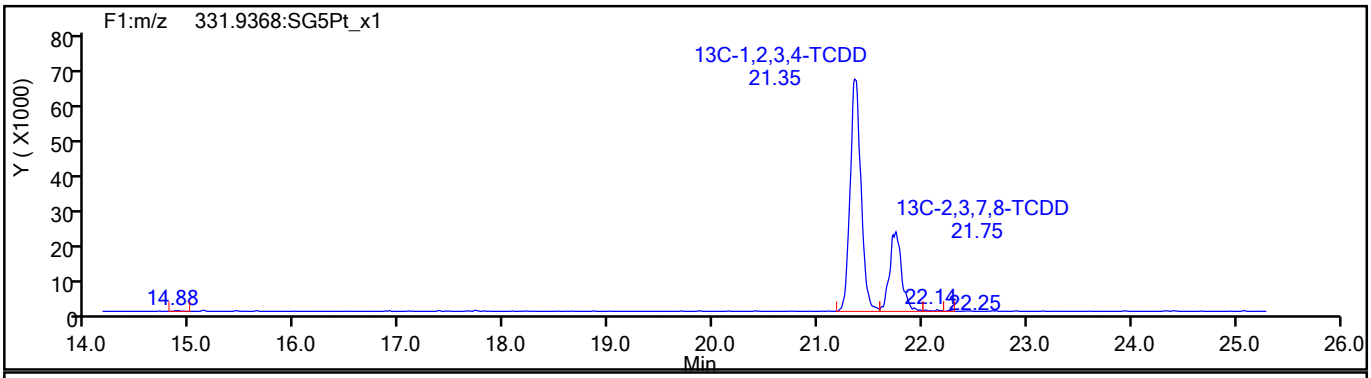

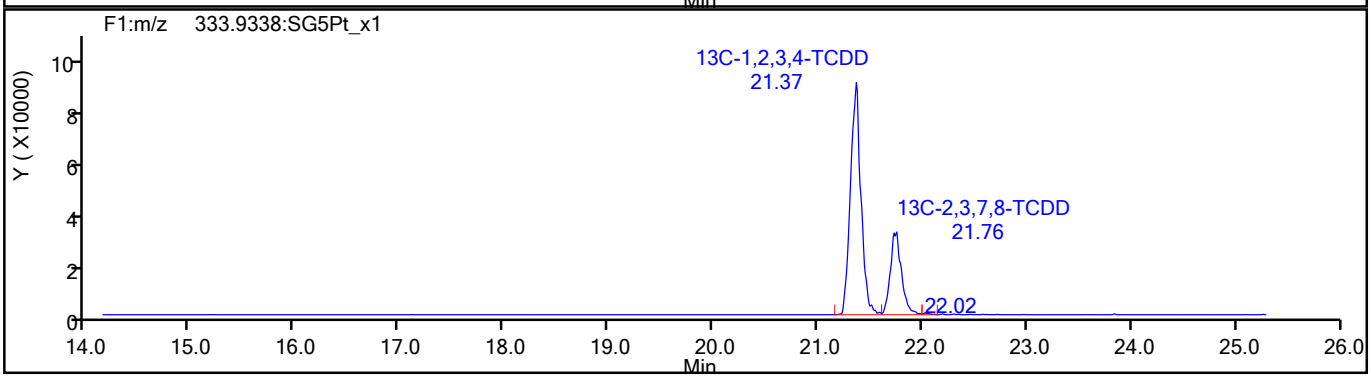

789957

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

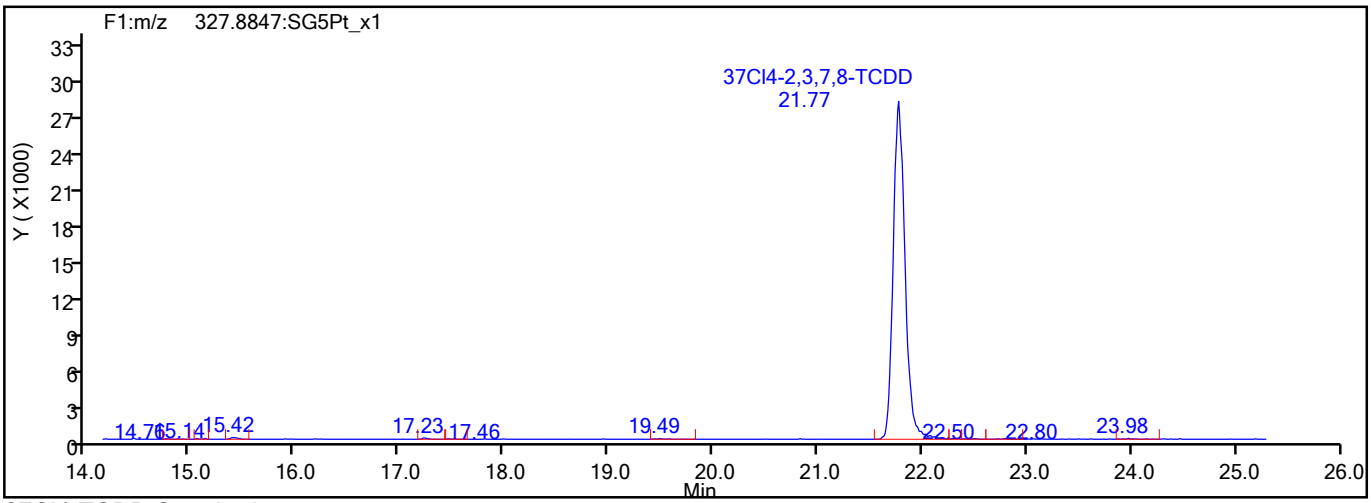

37Cl4-TCDD Standards

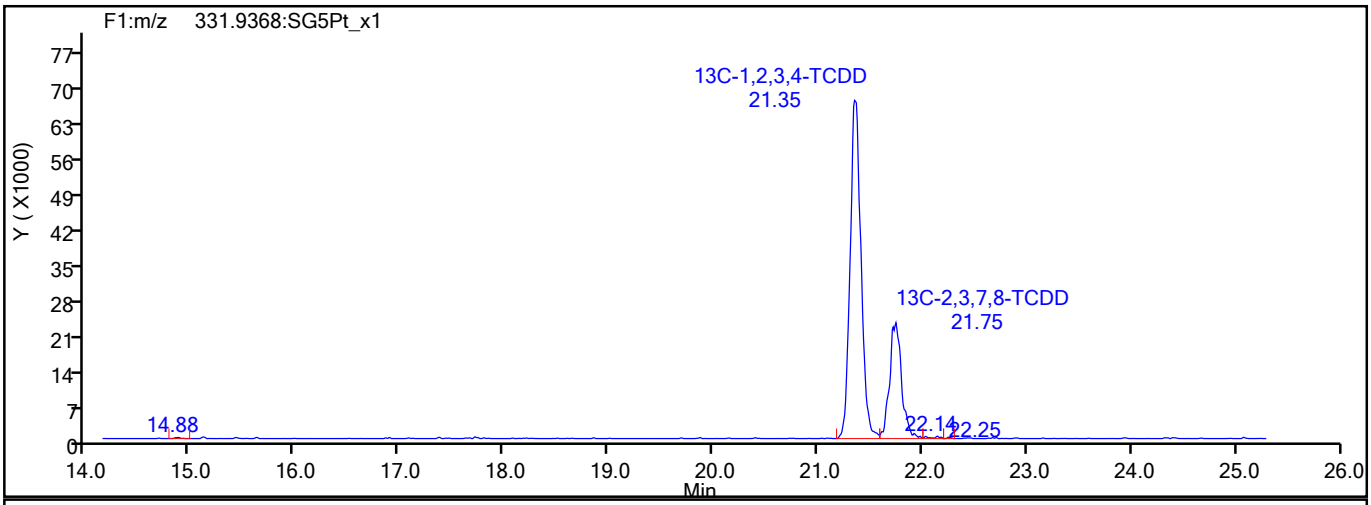

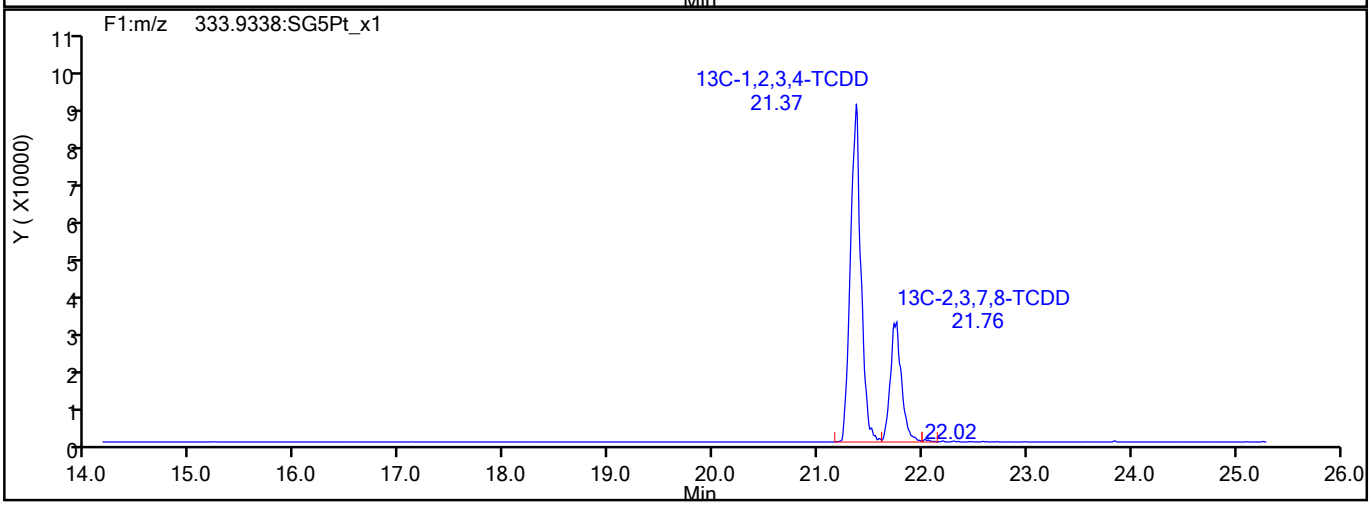

789958

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

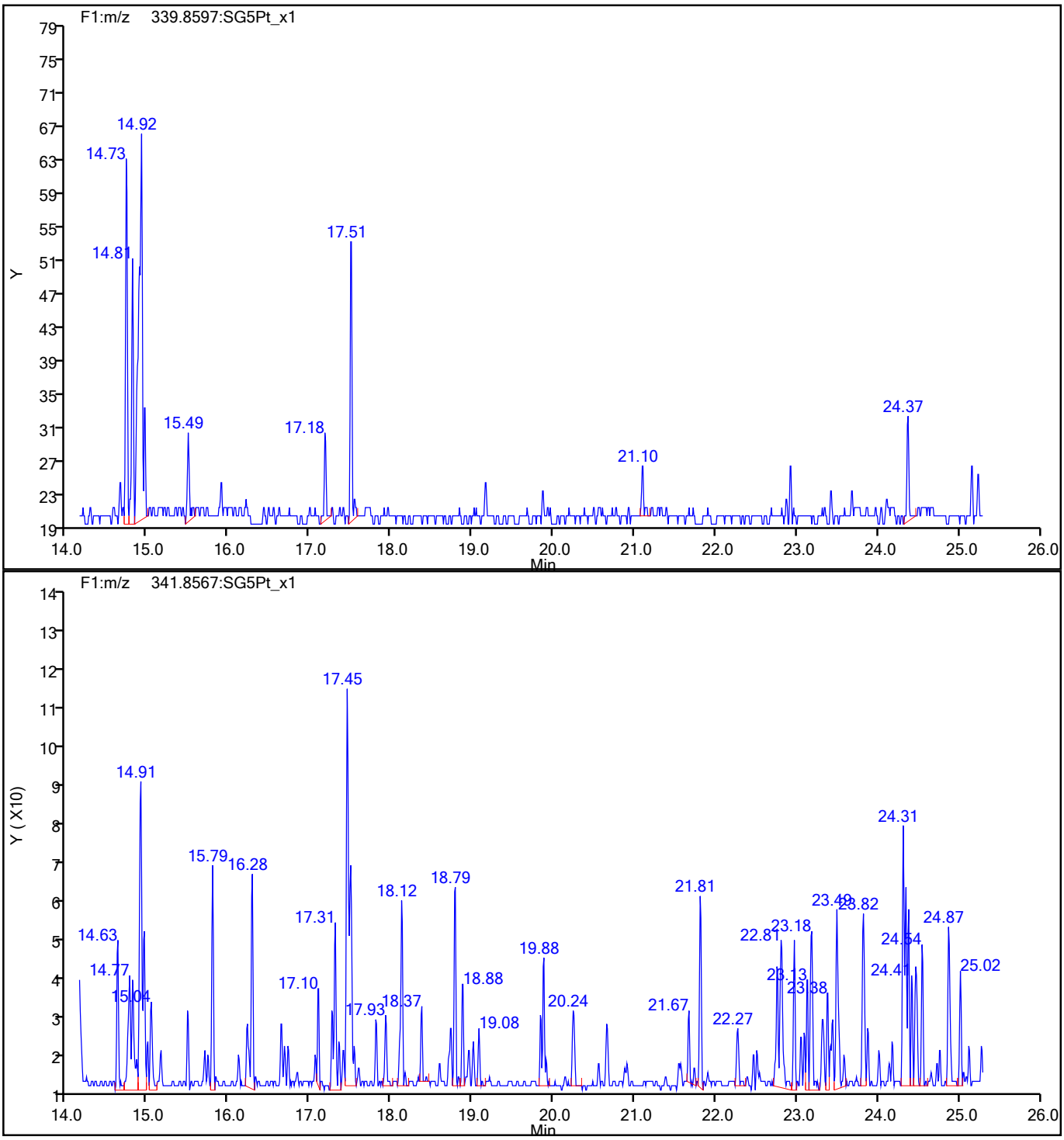

789959

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

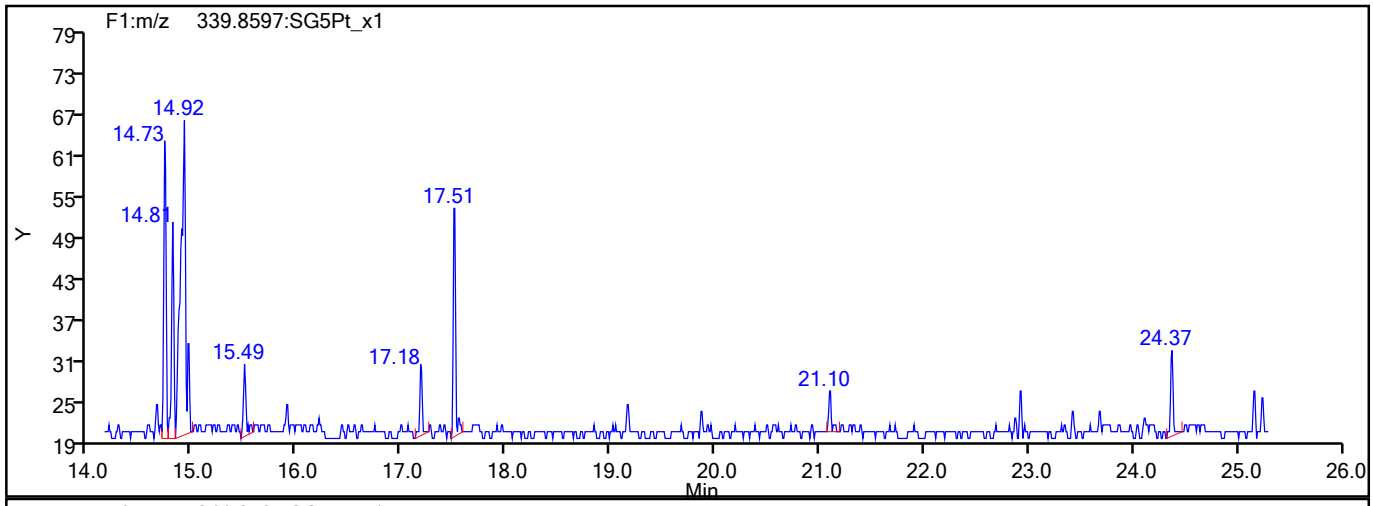

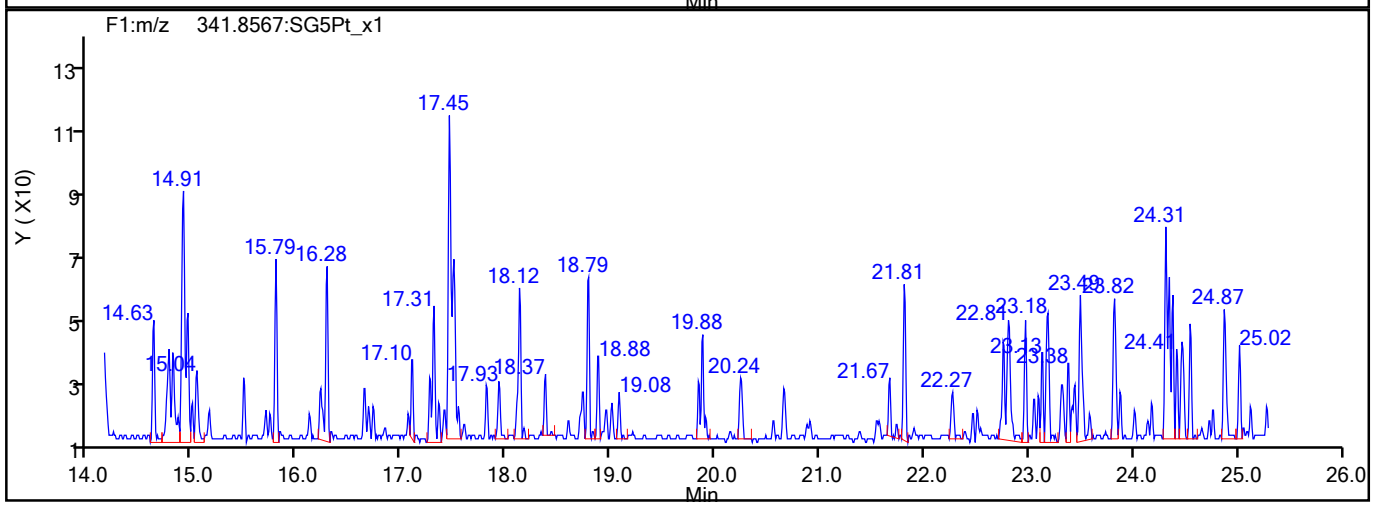

F1 PeCDFs Interference Mass

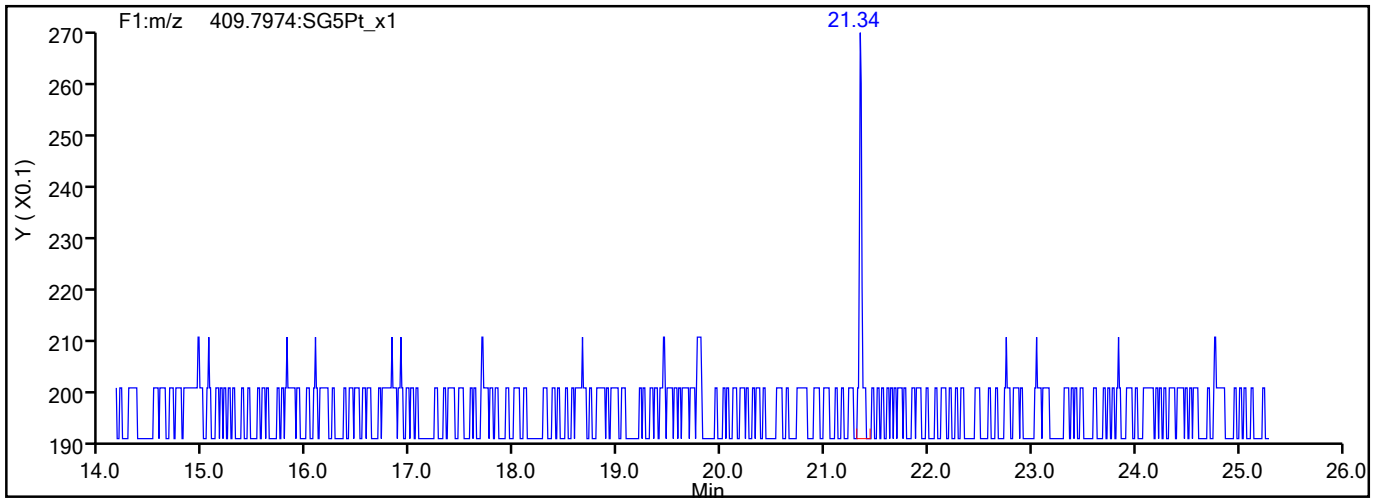

789960

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

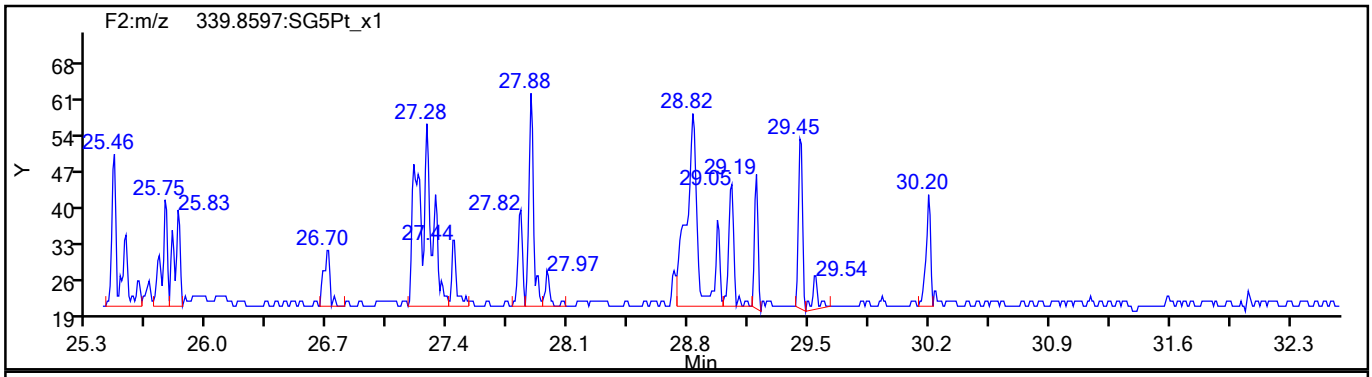

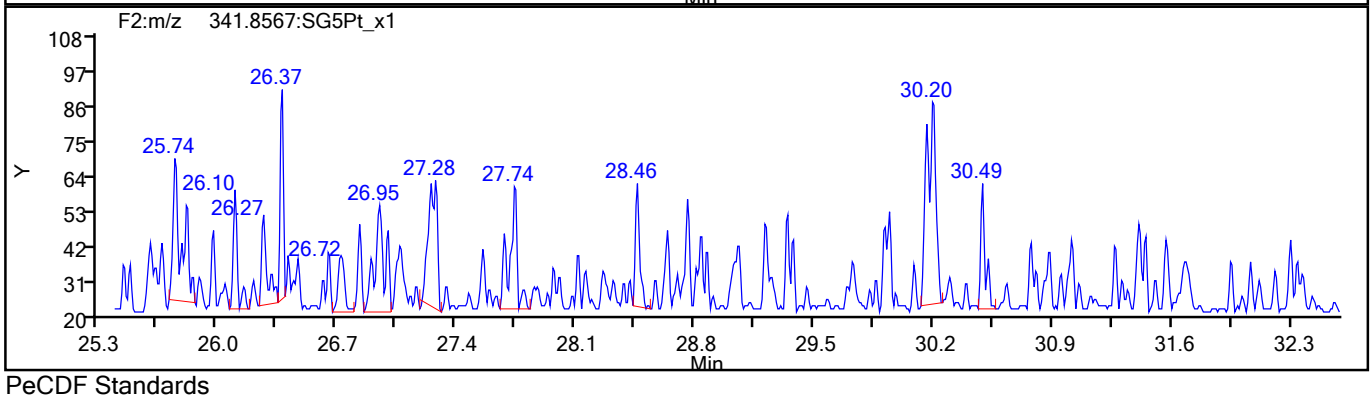

PeCDF Standards

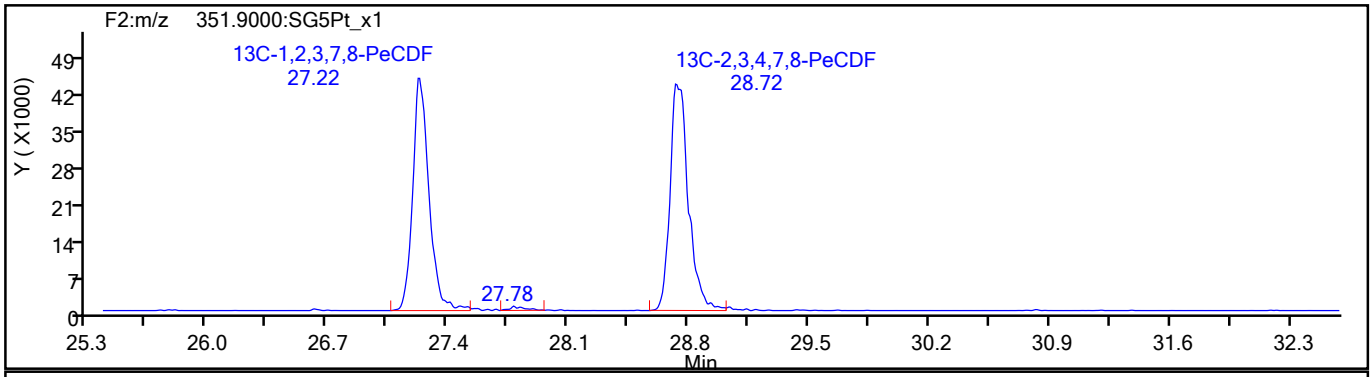

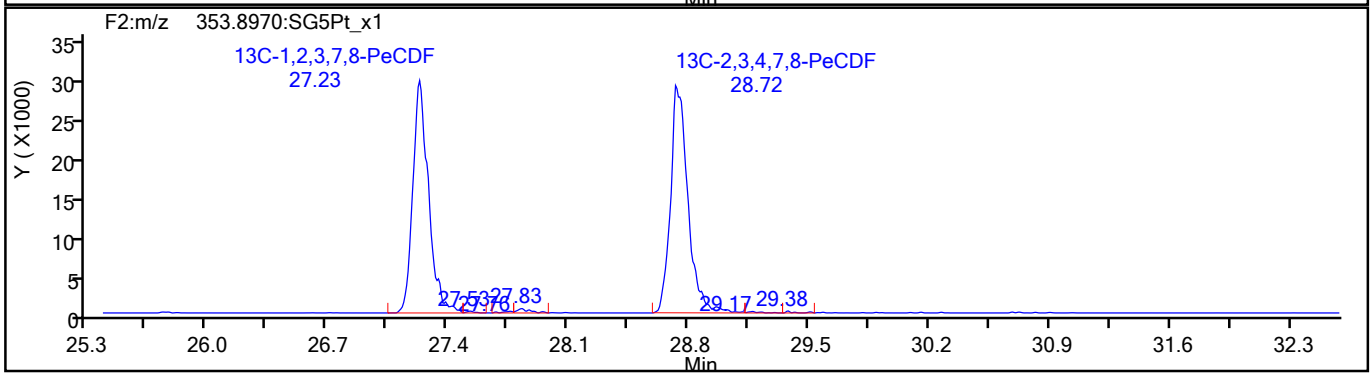

789961

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

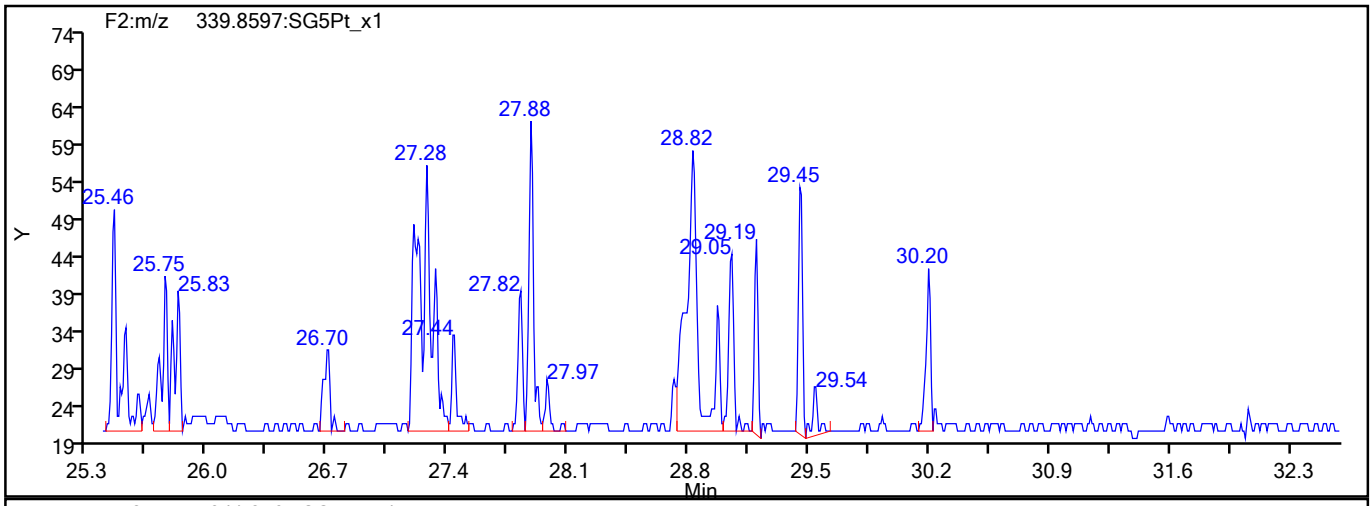

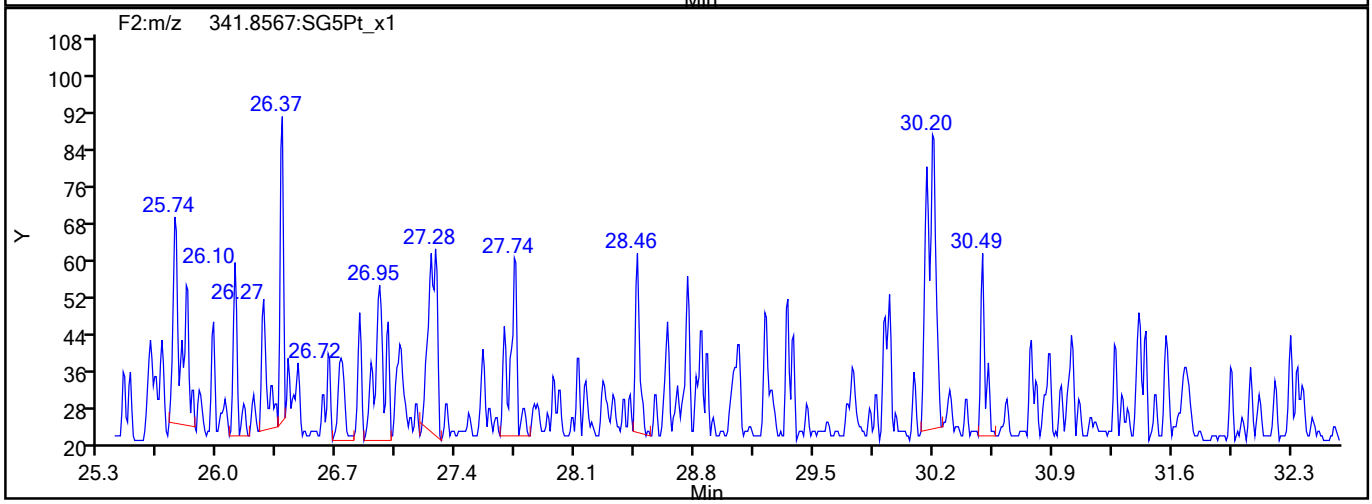

PeCDF Interference Mass

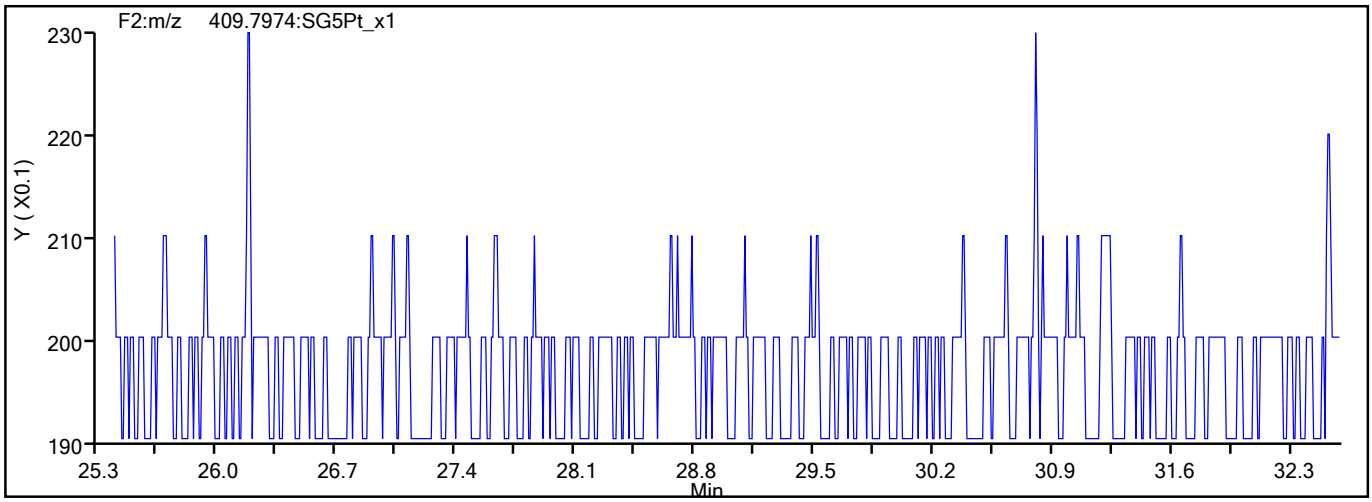

789962

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

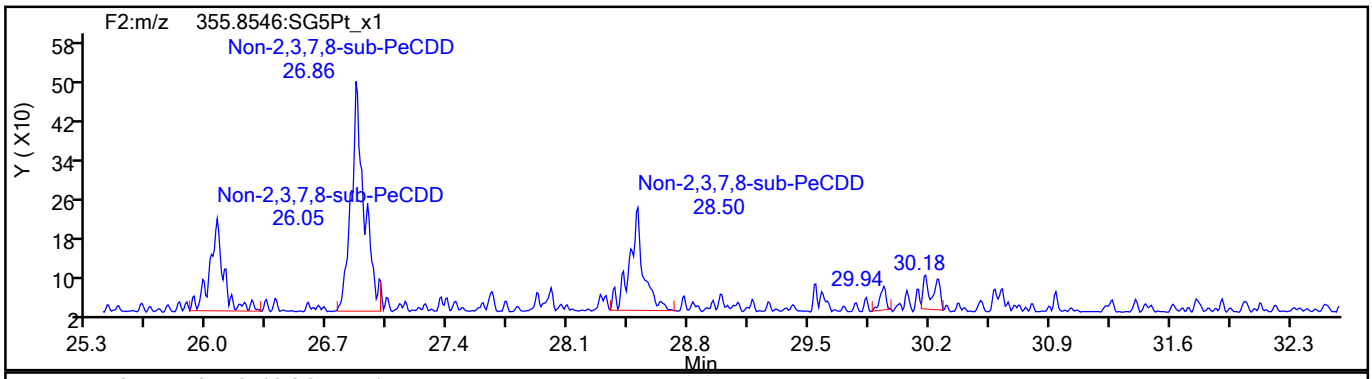

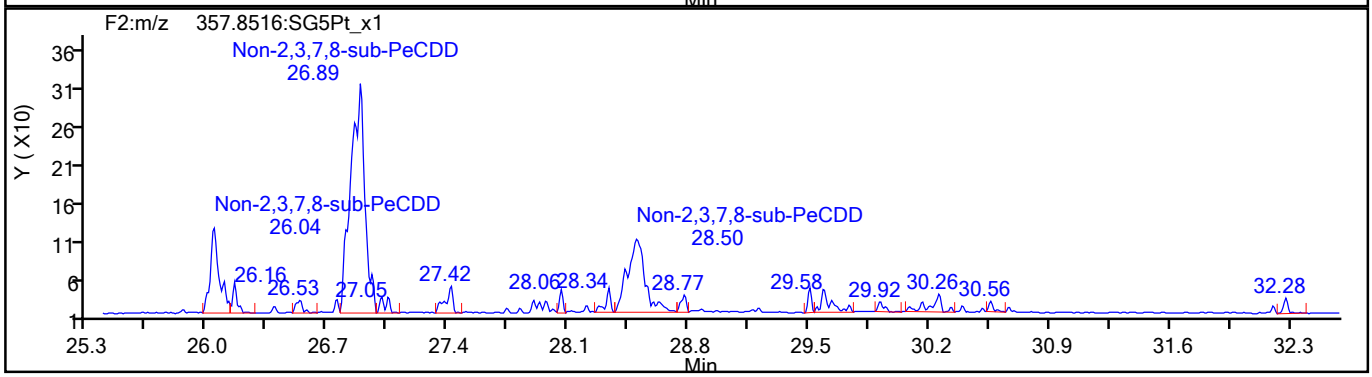

PeCDD Standards

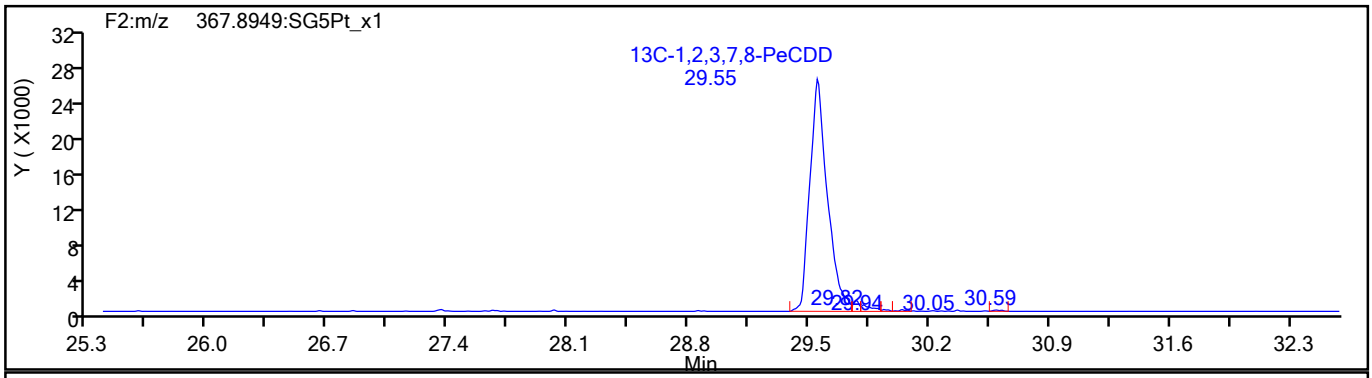

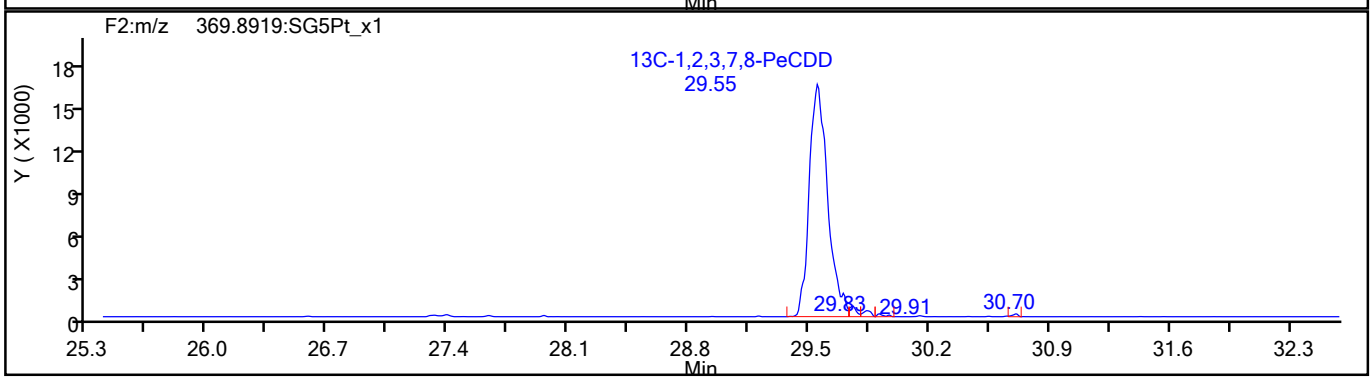

789963

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

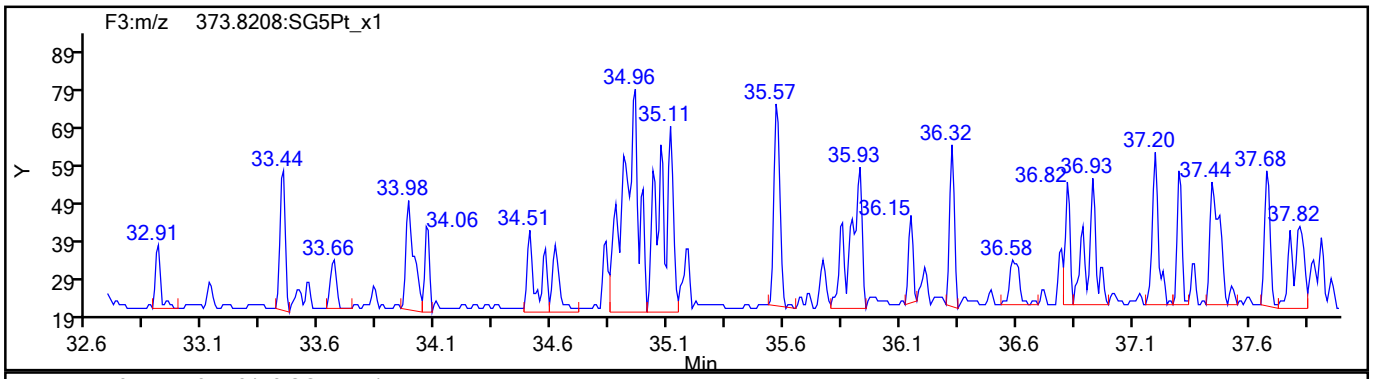

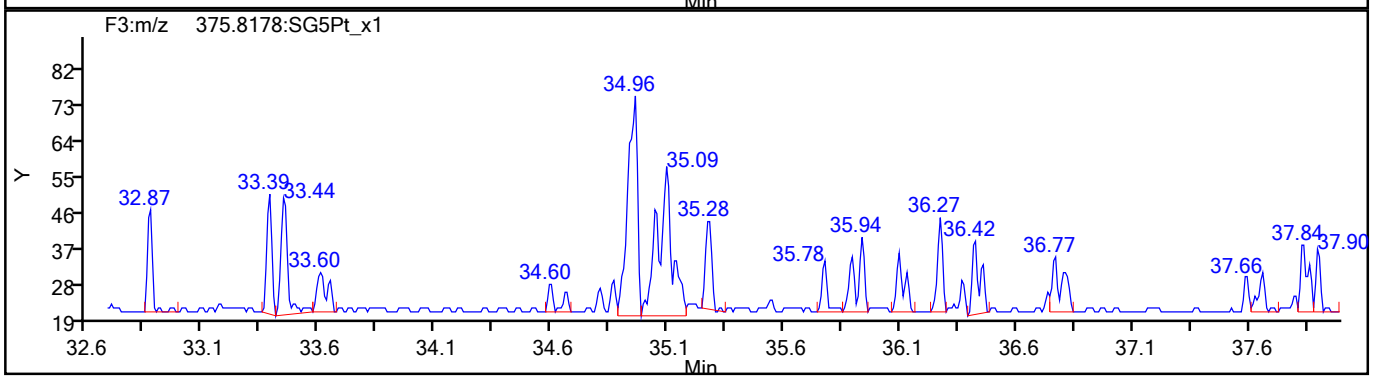

HxCDF Standards

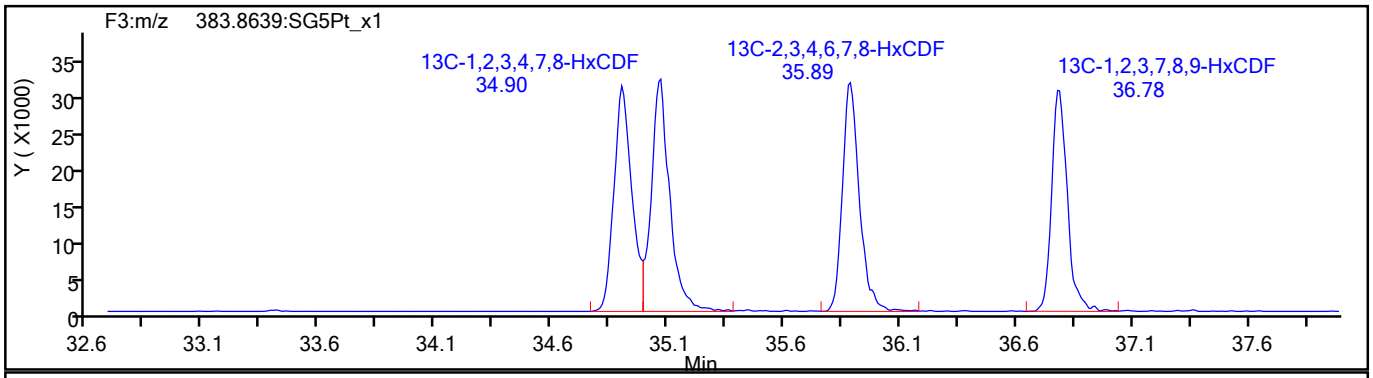

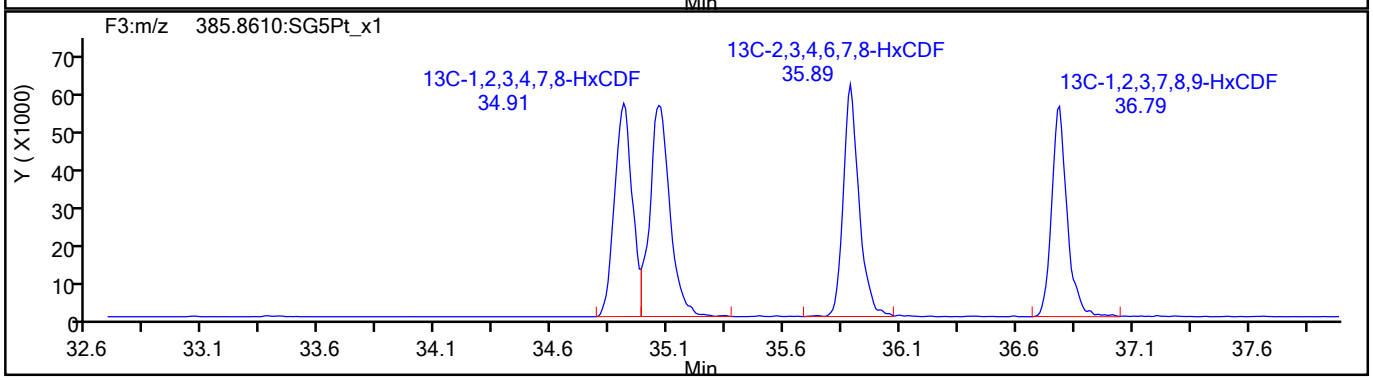

789964

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

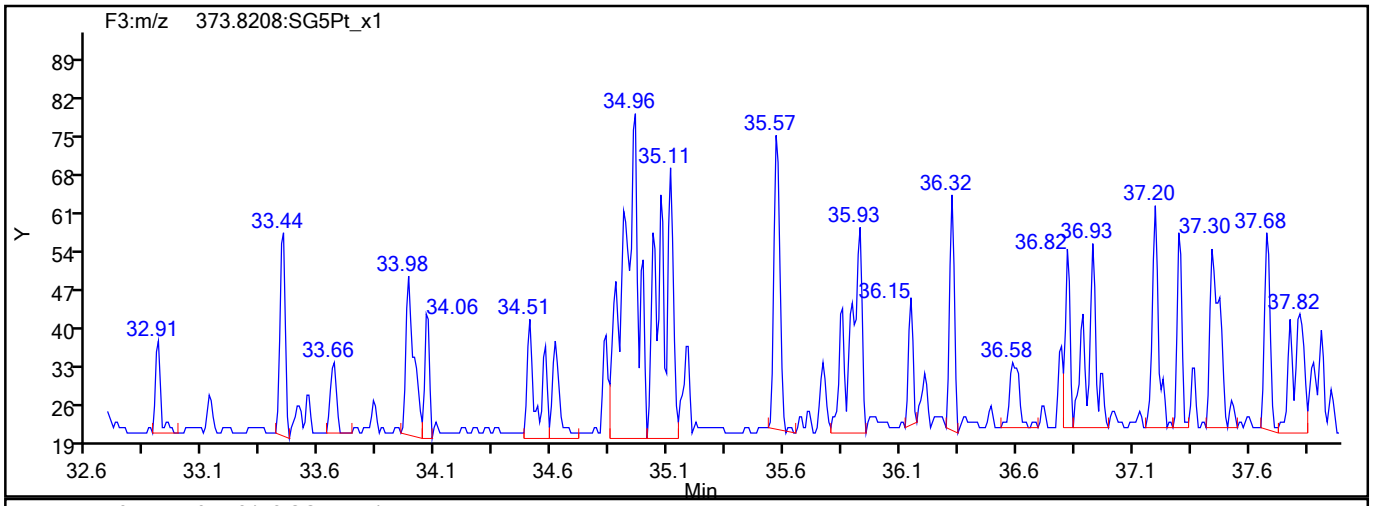

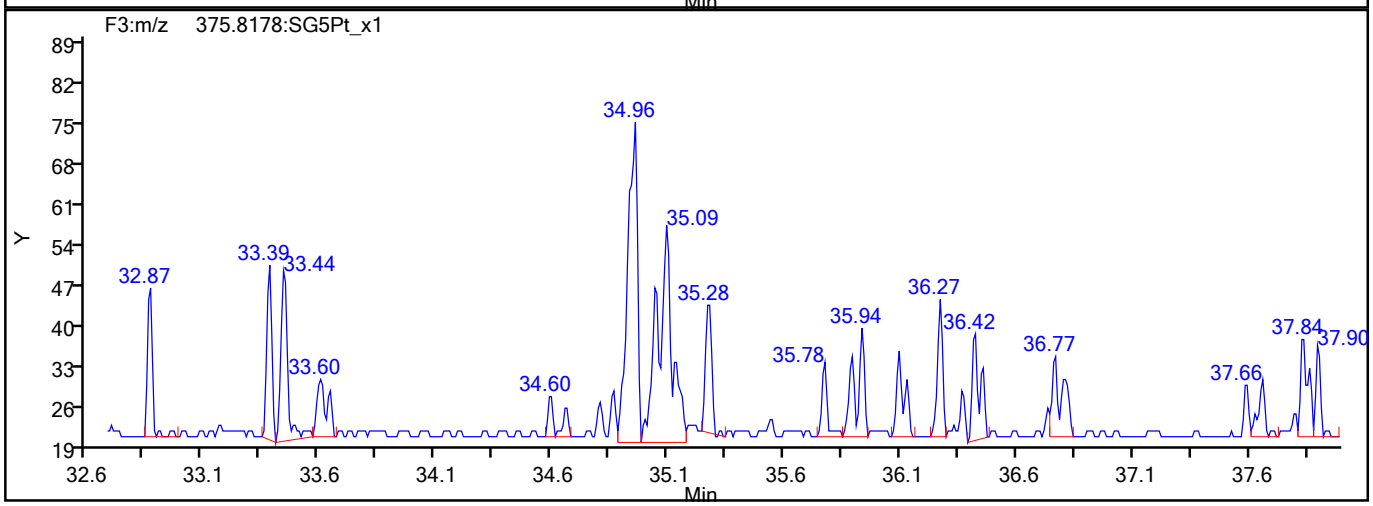

HxCDF Interference Mass

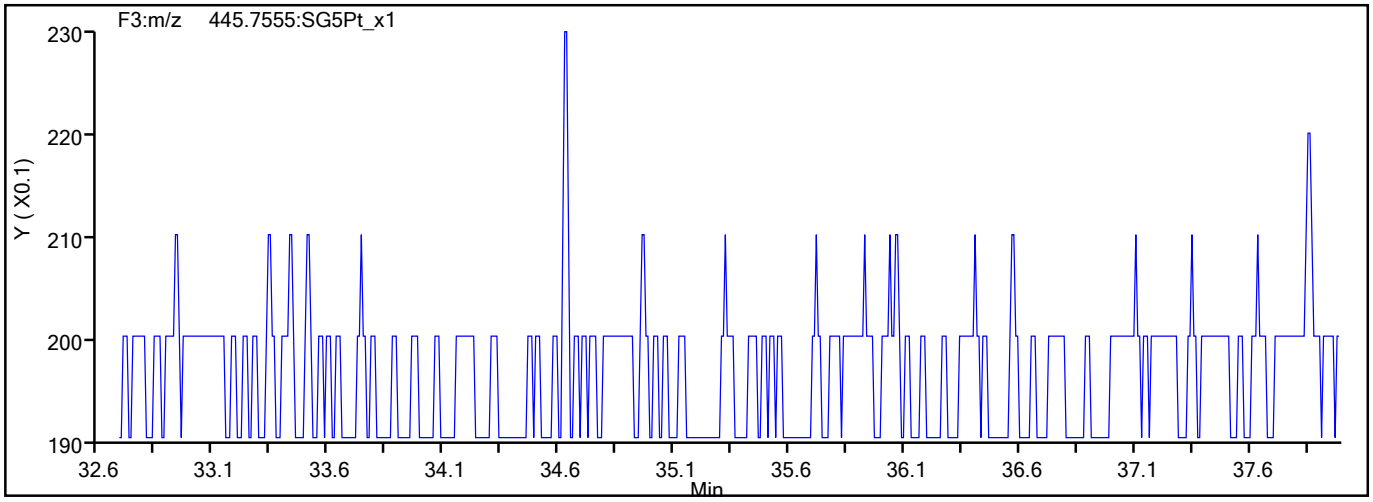

789965

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

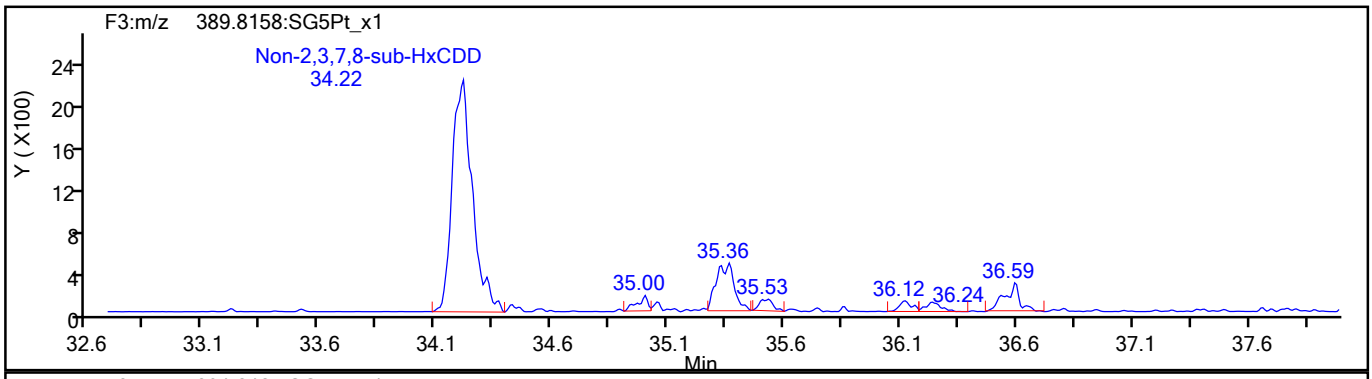

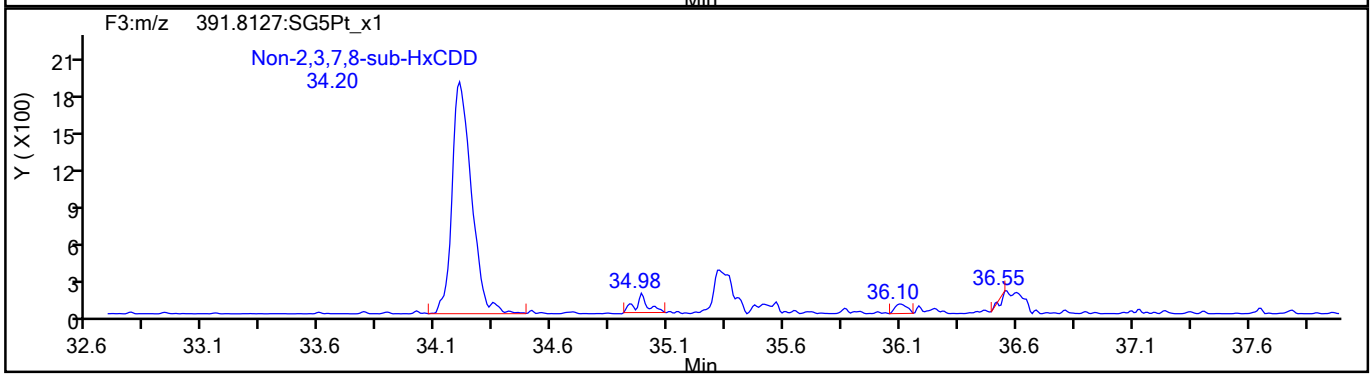

HxCDD Standards

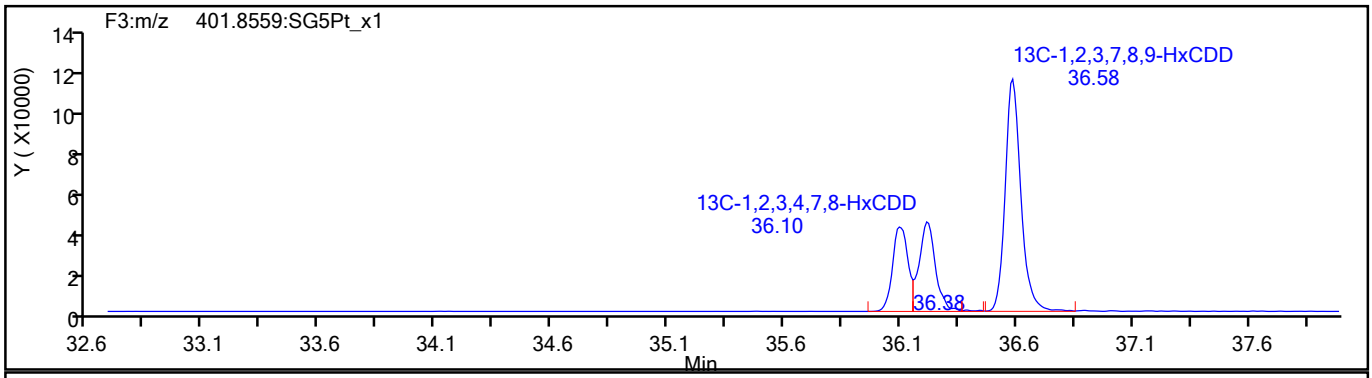

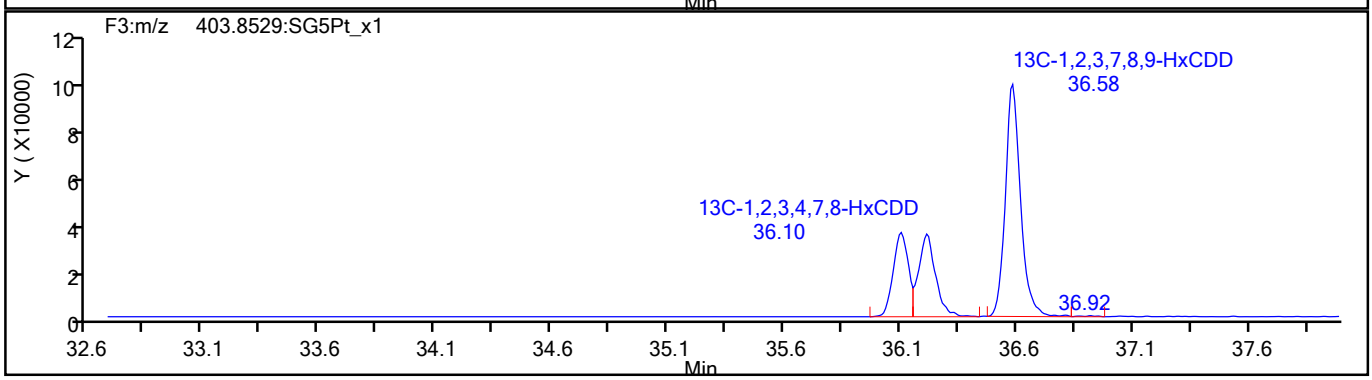

789966

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

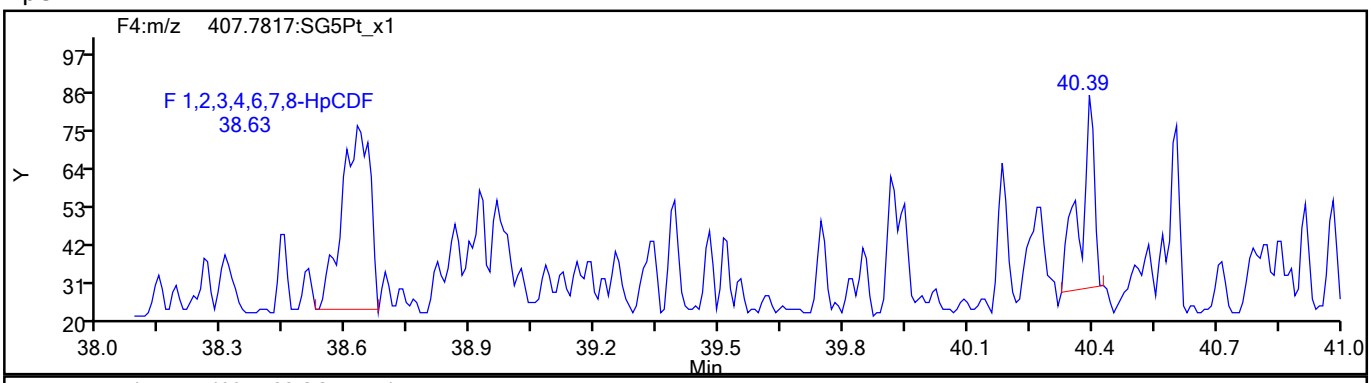

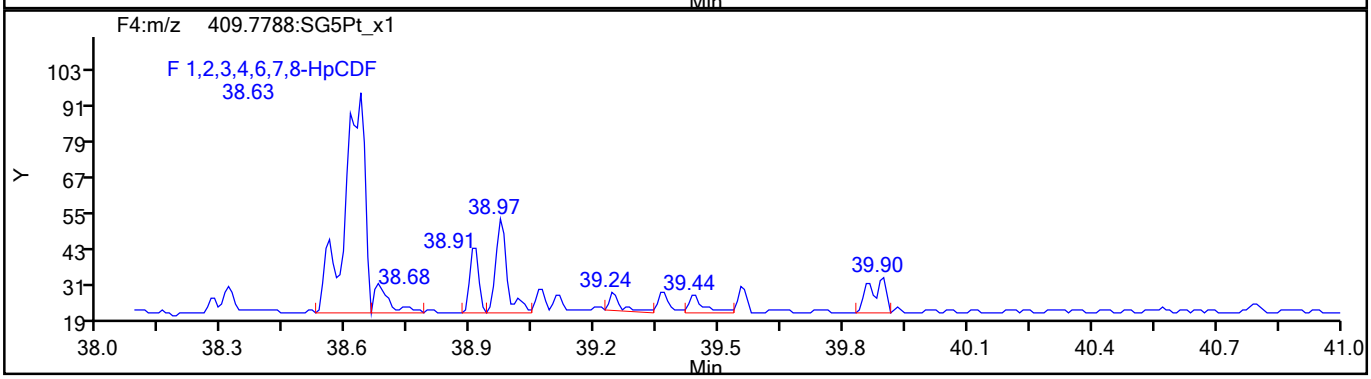

HpCDF Standards

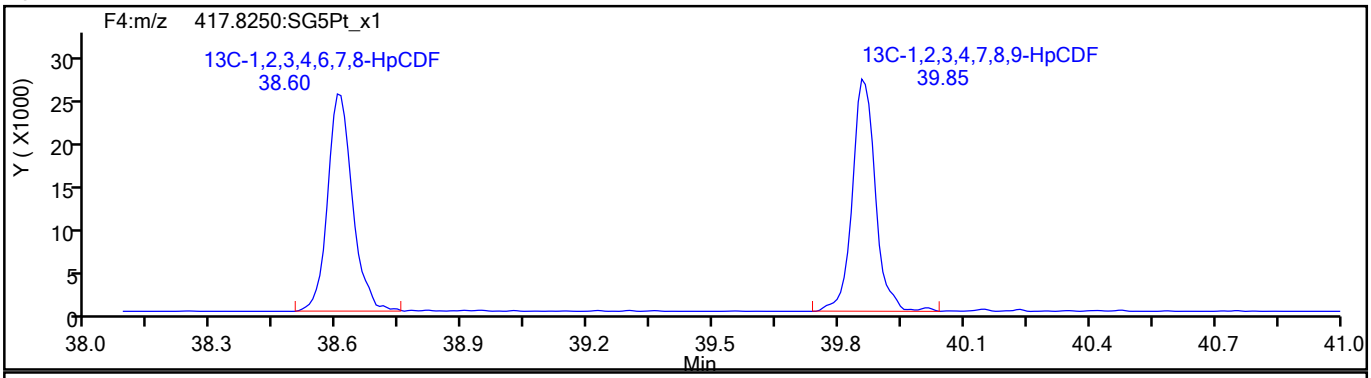

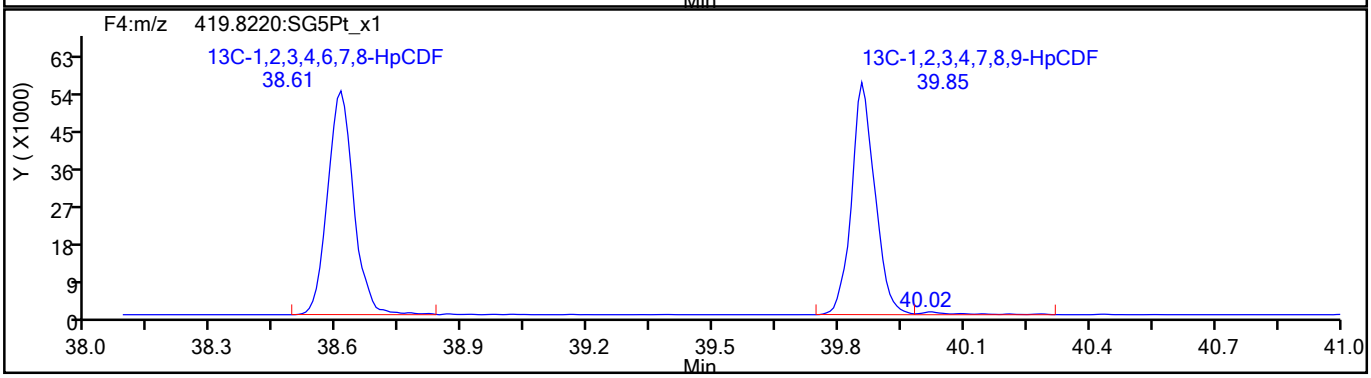

789967

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

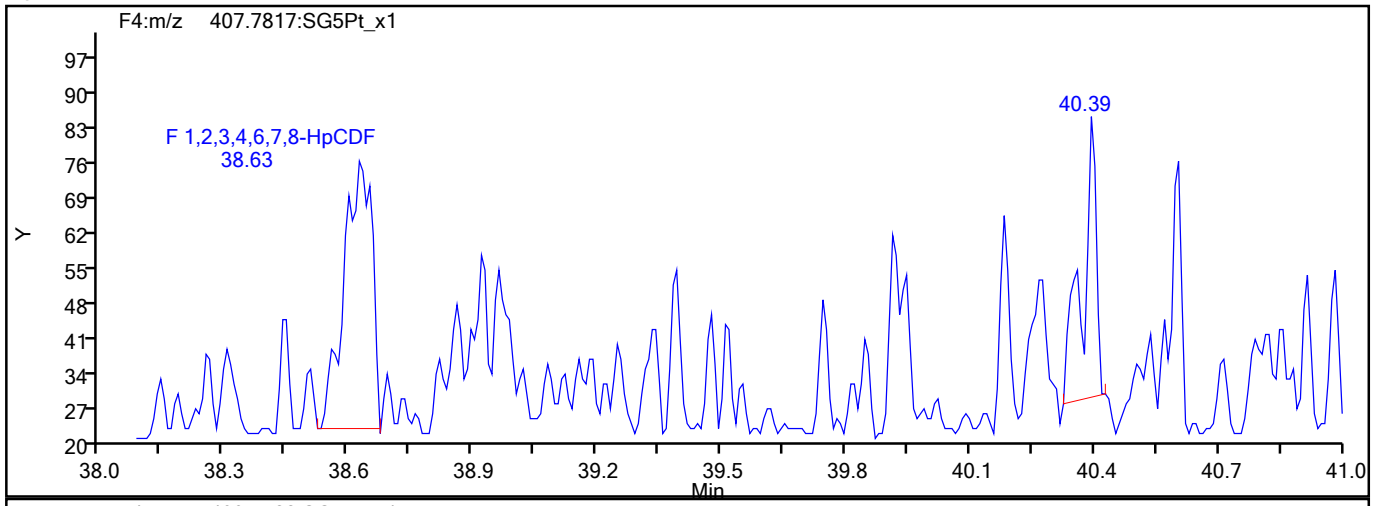

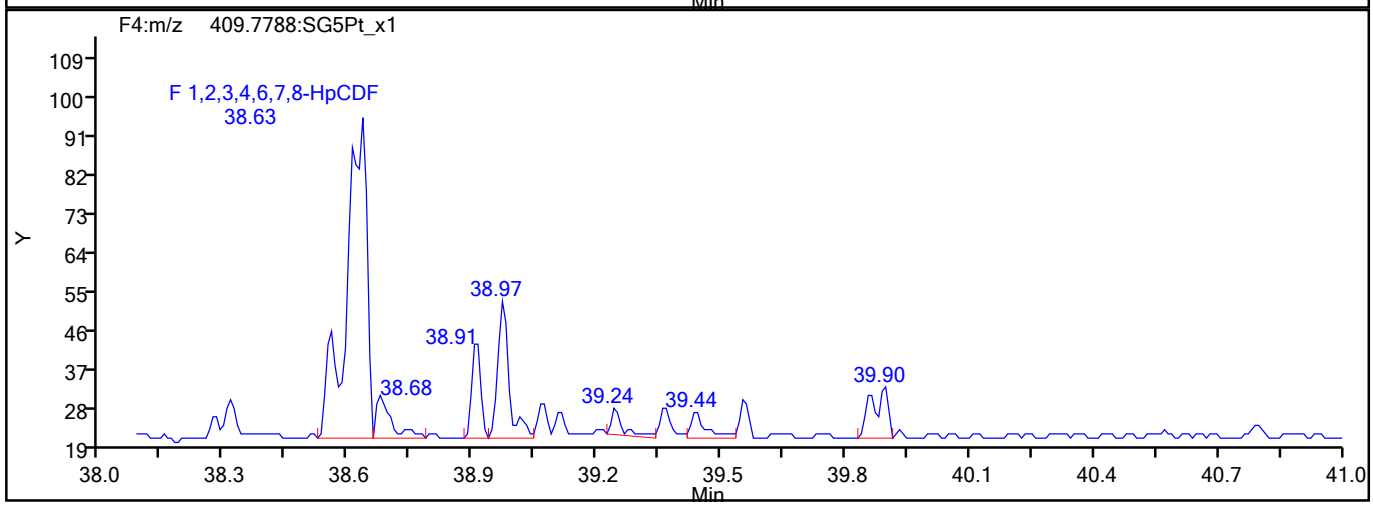

HpCDF Interference Mass

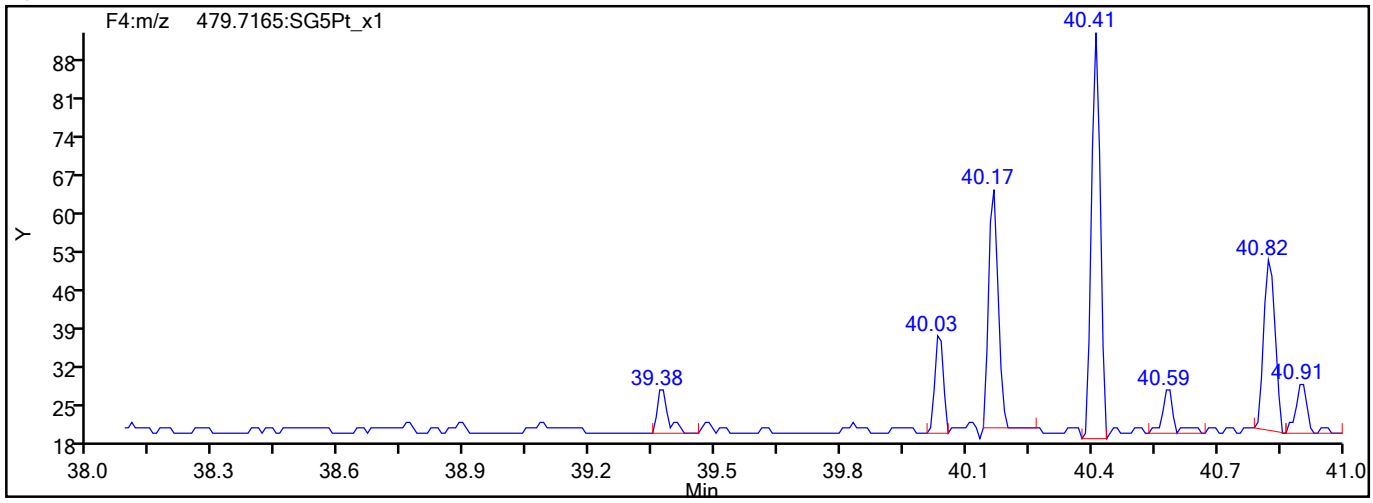

789968

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

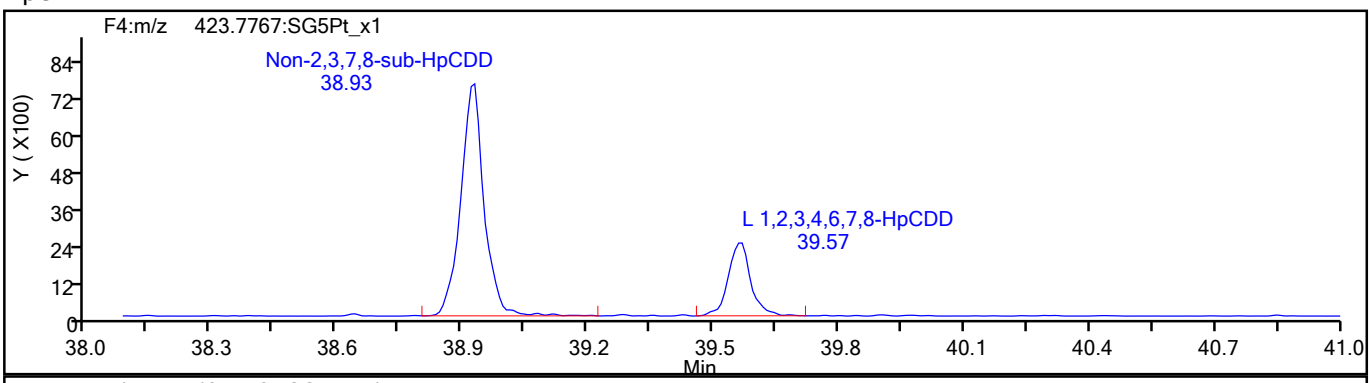

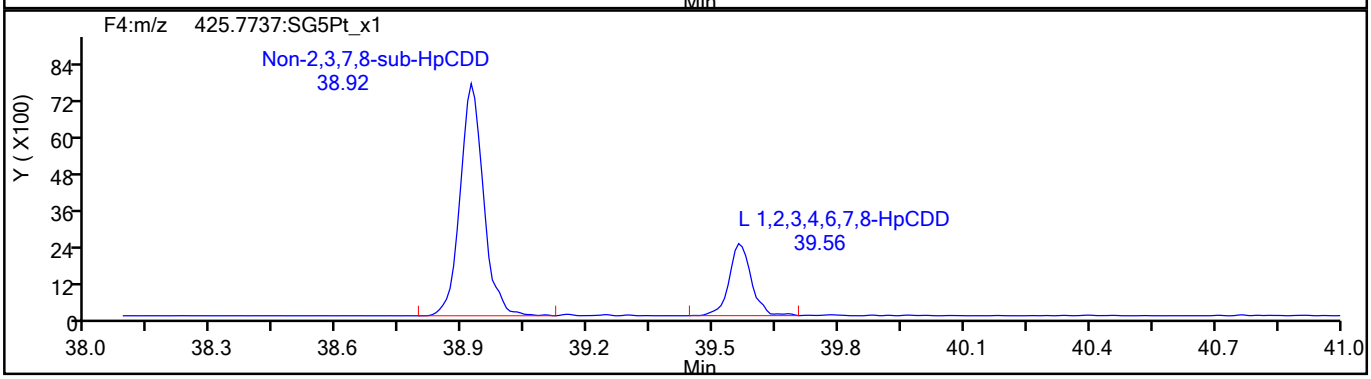

HpCDD Standards

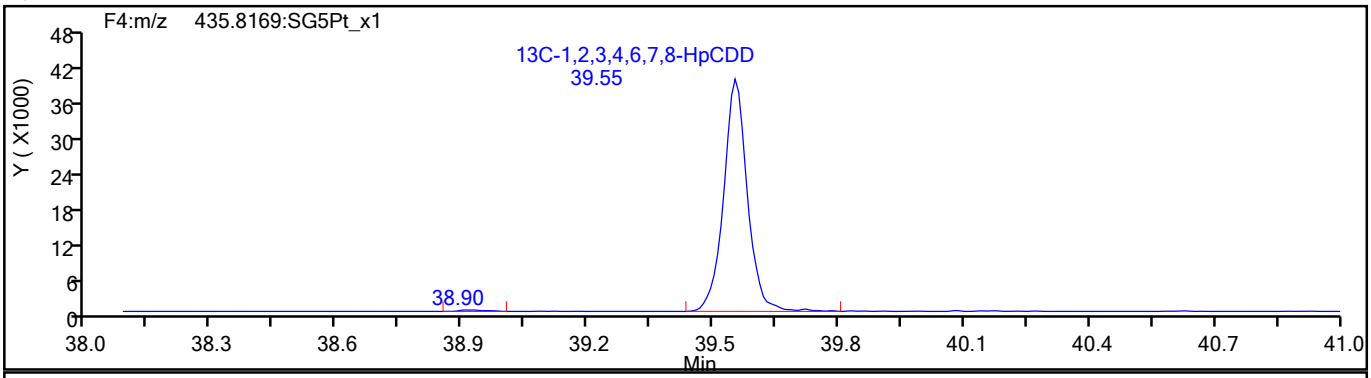

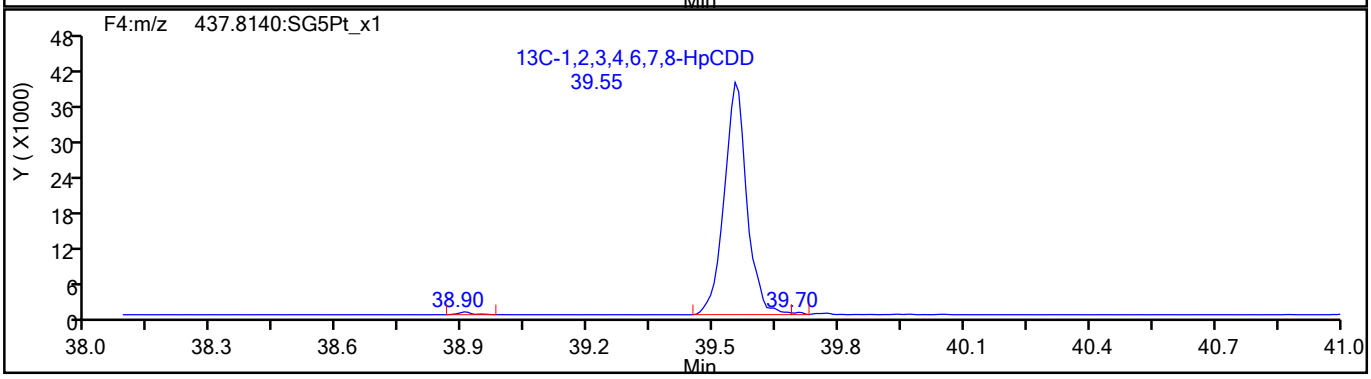

789969

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

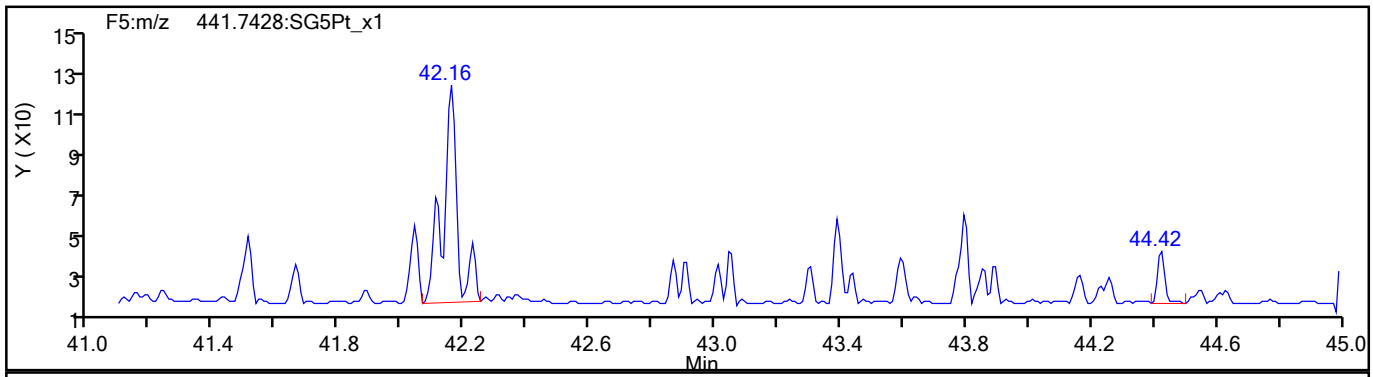

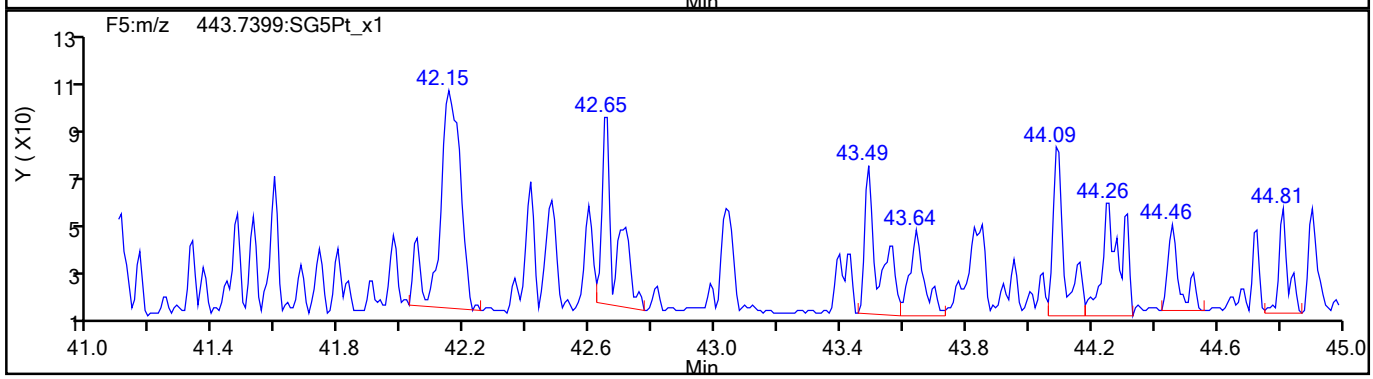

OCDF Standards

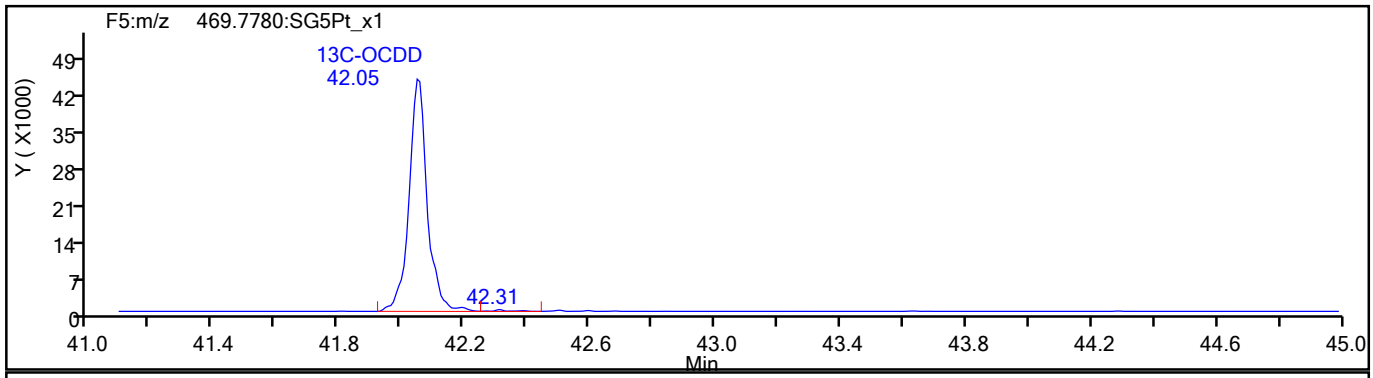

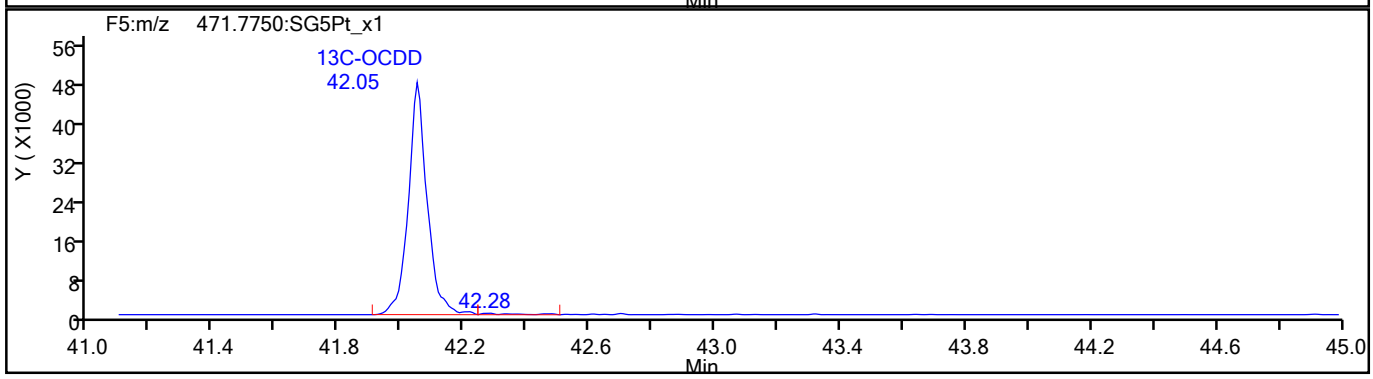

789970

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

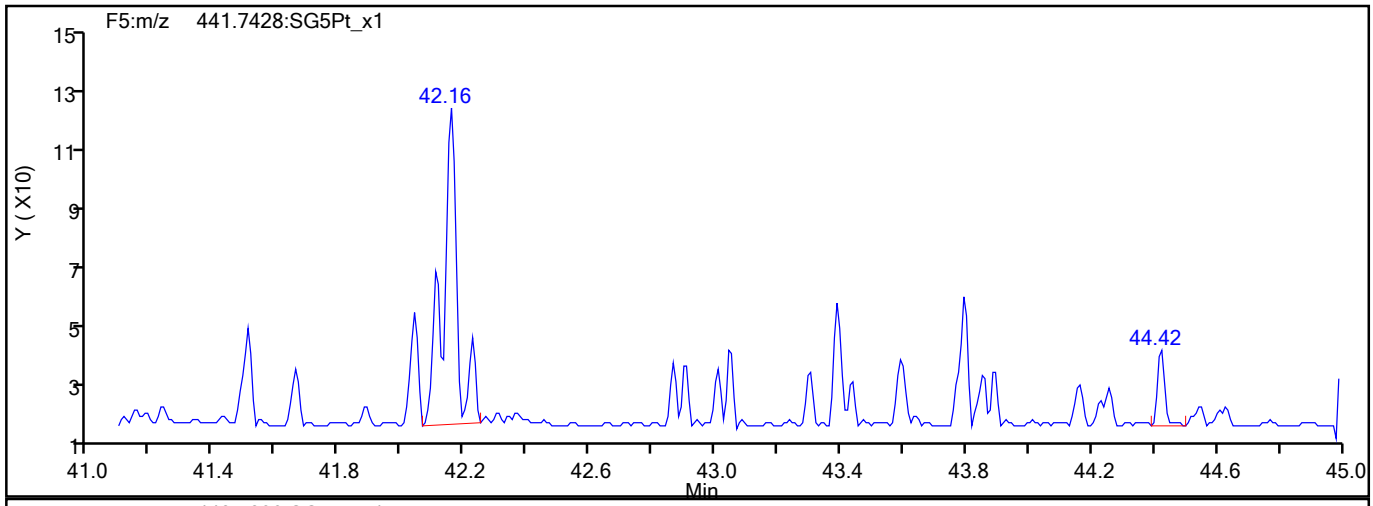

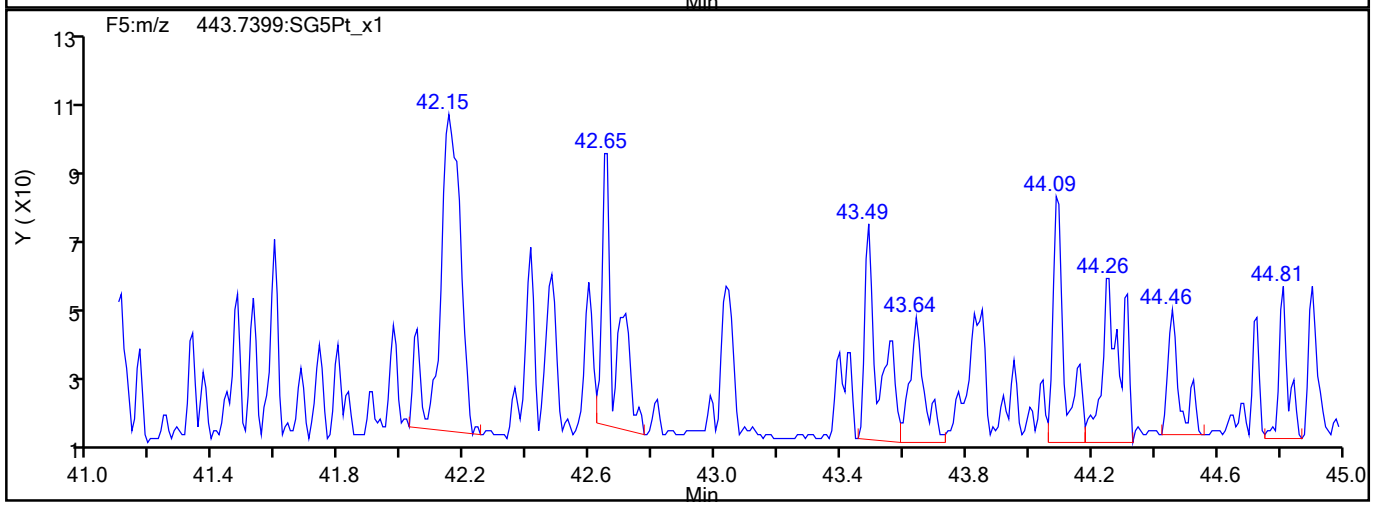

OCDF Interference Mass

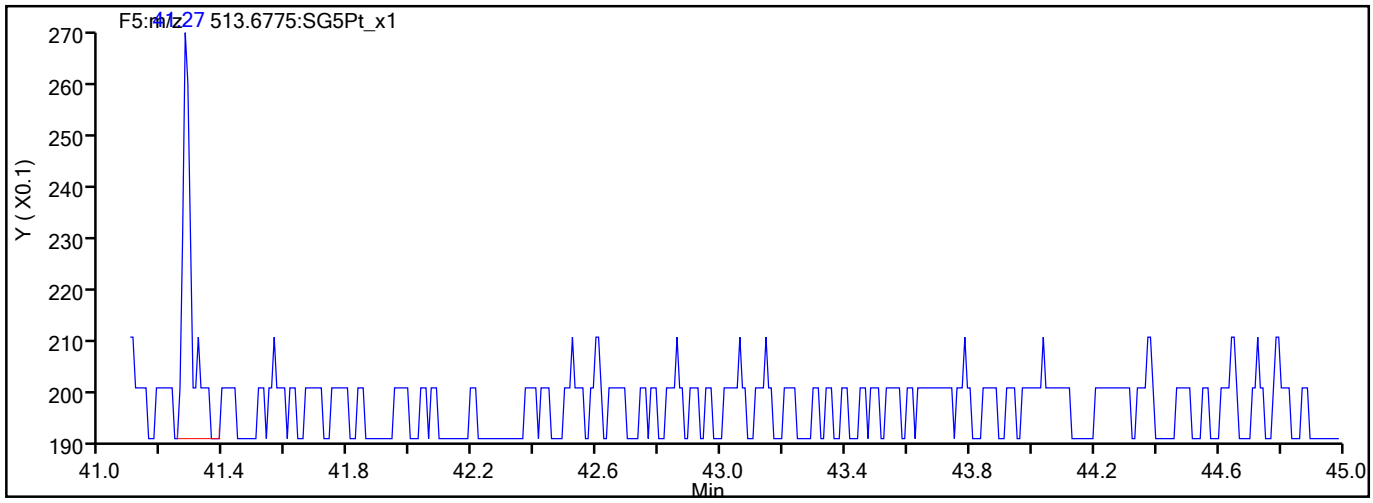

789971

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

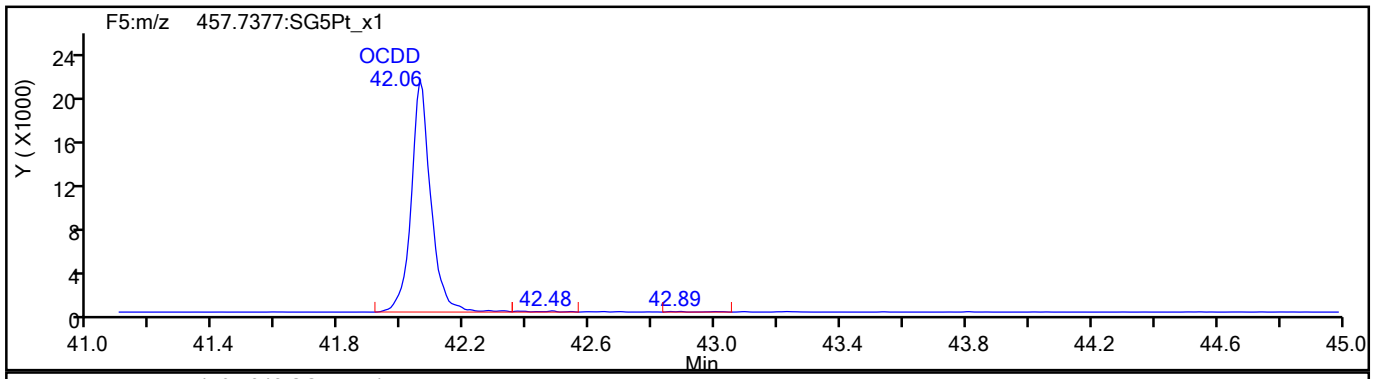

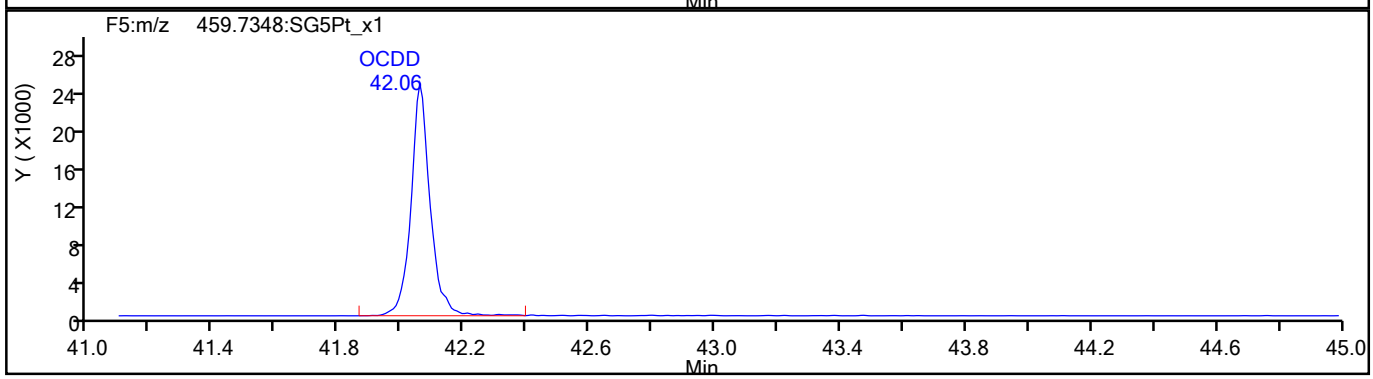

OCDD Standards

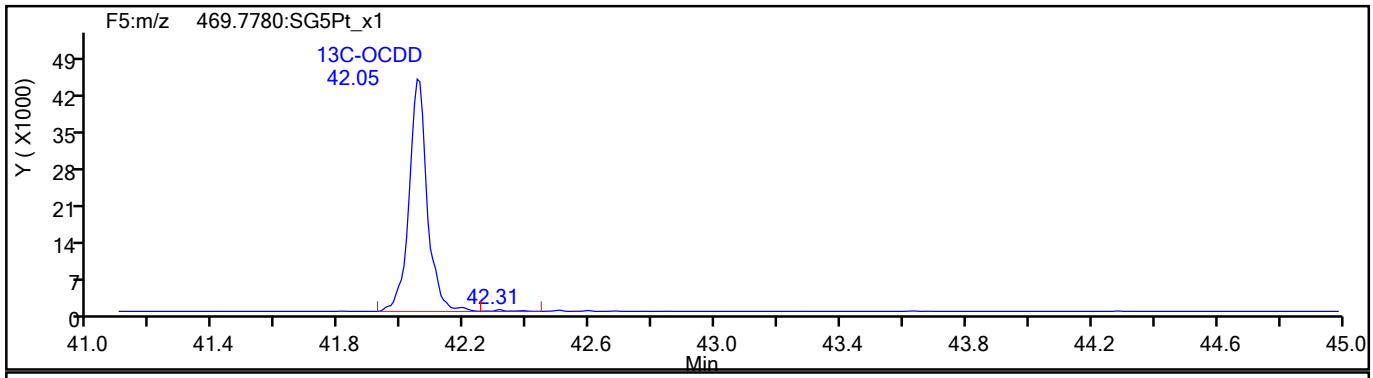

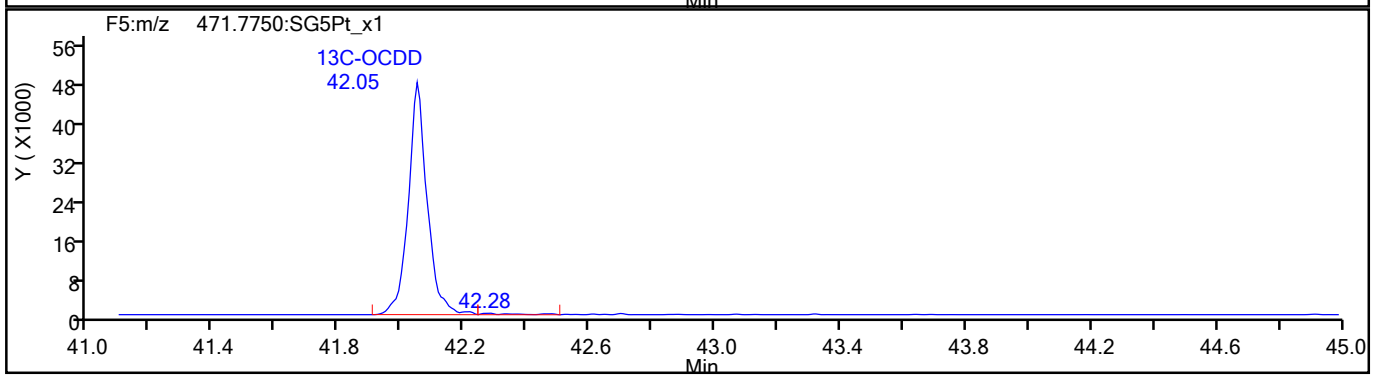

789972

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

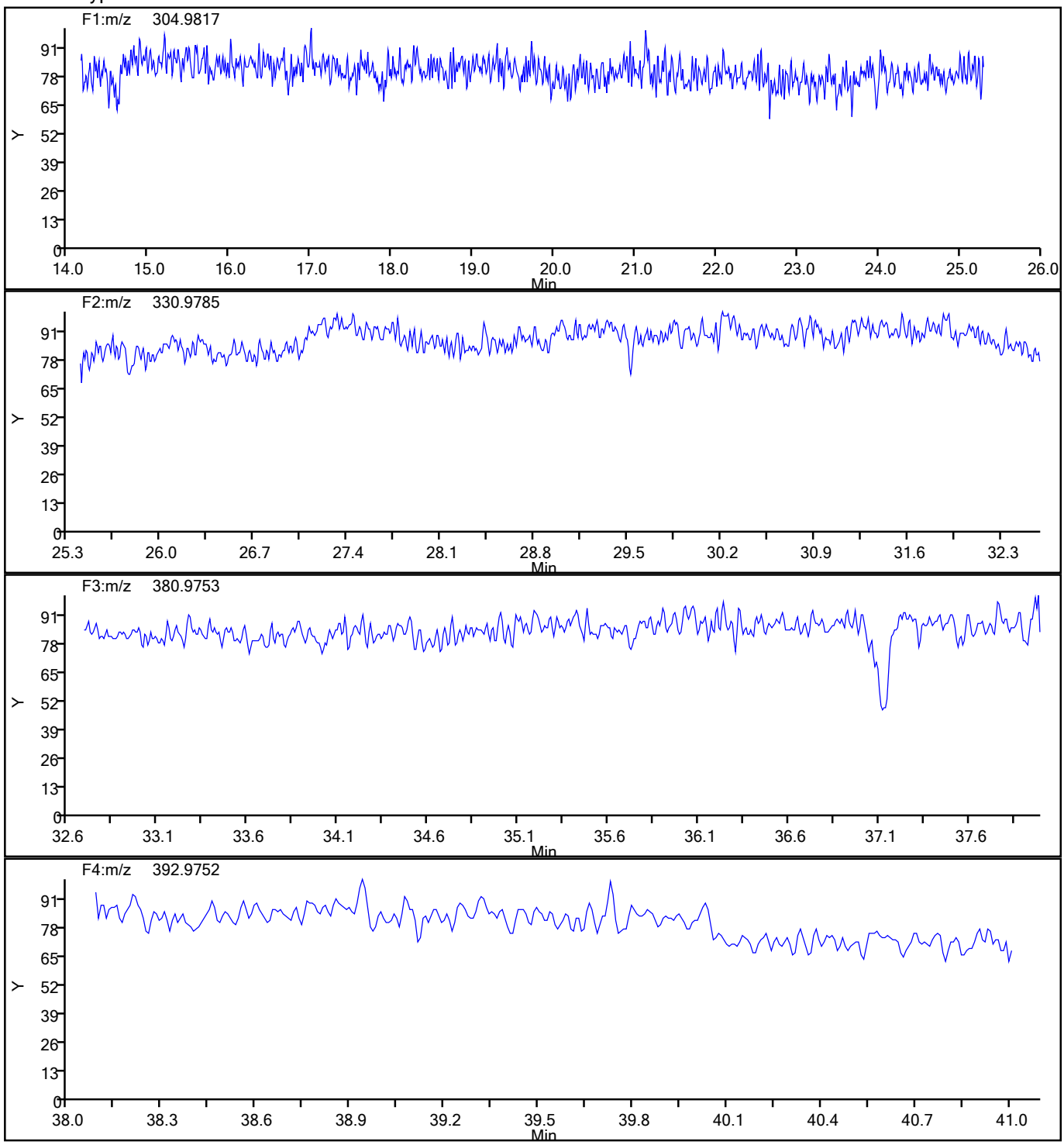

789973

Report Date: 23-Aug-2021 09:25:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_13.d		
Injection Date:	19-Aug-2021 22:50:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	517891	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

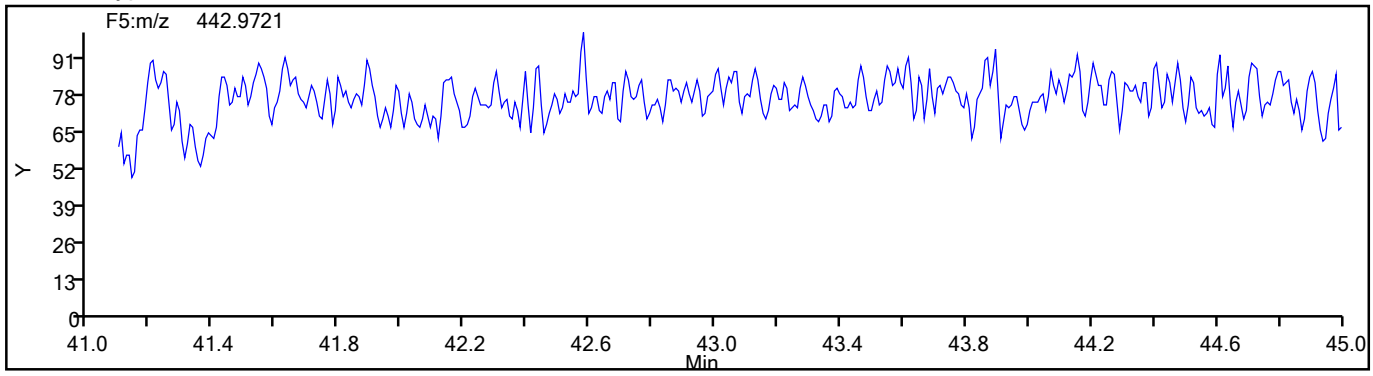

789974

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-2
SDG No.:
Client Sample ID: 11215702-072821-BN-SJSB095 (16-18) RA
Lab Sample ID: 320-76901-9 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_008.d
Analysis Method: 1613B
Date Collected: 07/28/2021 11:40
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.71(g)
Date Analyzed: 08/27/2021 20:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	3.6		1.3	0.15

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	44		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	56		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_008.d
Lims ID: 320-76901-A-9-A
Client ID: 11215702-072821-BN-SJSB095 (16-18)
Sample Type: Client
Inject. Date: 27-Aug-2021 20:06:45 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-9-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:42:00

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.301	55464494	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.617	32657562	0.78	1.3327	44.2	44.2	0.1579	0.1579	44.18	
2,3,7,8-TCDF	17.645	435313	0.89	0.9978	1.336	1.336	0.0553	0.0553		M
D 13C-2,3,7,8-TCDD	16.068	19701616	0.73	0.8749	40.6	40.6	0.3123	0.3123	40.60	
2,3,7,8-TCDD	16.095	94940	0.77	1.0570	0.7363	0.4559	0.1211	0.1211		RQ
$ 37Cl4-2,3,7,8-TCDD	16.095	10700402		0.8648	22.3	22.3	0.0829	0.0829	55.77	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_008.d
Lims ID: 320-76901-A-9-A
Client ID: 11215702-072821-BN-SJSB095 (16-18)
Sample Type: Client
Inject. Date: 27-Aug-2021 20:06:45 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-9-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:42:00

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.301	16.300	0		24538828	5388643	5352	13380	1007		
333.9339	16.301	16.300	0		30925666	7016361	8204	20510	855	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.617	17.616	0	1.081	14355430	2626915	5610	14025	468		
317.9389	17.617	17.616	0	1.081	18302132	3560781	4831	12077	737	0.78(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.645	17.644	0	1.002	204562	38462	625	1562	62		
305.8987	17.645	17.644	0	1.002	230751	48234	741	1852	65	0.89(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.068	16.066	0	0.986	8311854	1804181	5352	13380	337		
333.9339	16.081	16.066	1	0.987	11389762	2444654	8204	20510	298	0.73(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.095	16.080	1	1.002	41302	10969	1183	2957	9		
321.8936	16.095	16.080	1	1.002	112033	16416	992	2480	17	0.37(0.65-0.89)	
	Empc Correction				53638	14245	992	2480	14		
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.987	10700402	2464055	3557	8892	693		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_008.d				
Injection Date:	27-Aug-2021 20:06:45	Instrument ID:	11D2		
Lims ID:	320-76901-A-9-A	Lab Sample ID:	320-76901-9		
Client ID:	11215702-072821-BN-SJSB095 (16-18)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.64
Area: 215500
Amount: 1.289090
Amount Units: pg/ul

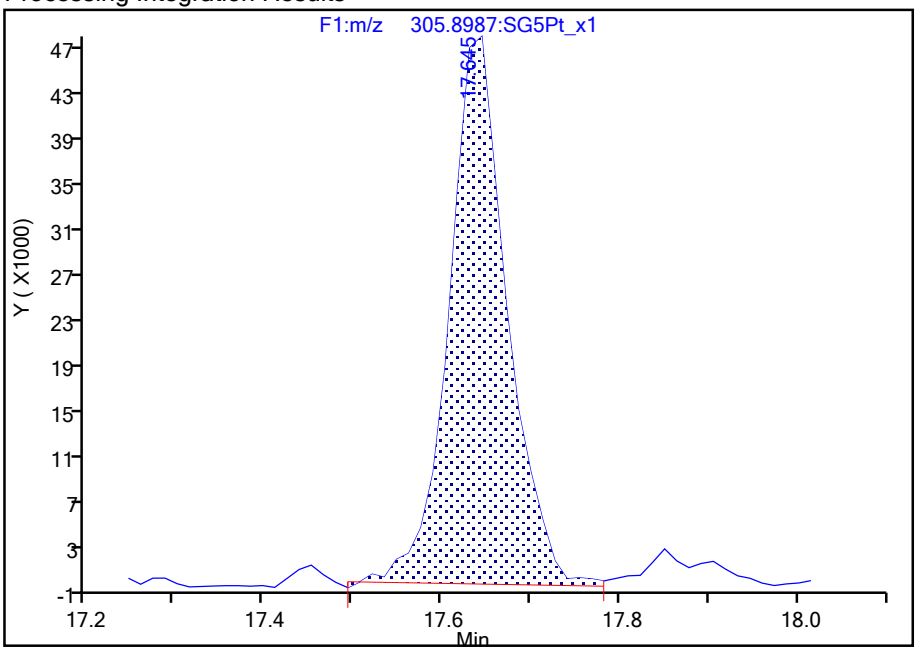

Manual Integration Results

RT: 17.64
Area: 230751
Amount: 1.335892
Amount Units: pg/ul

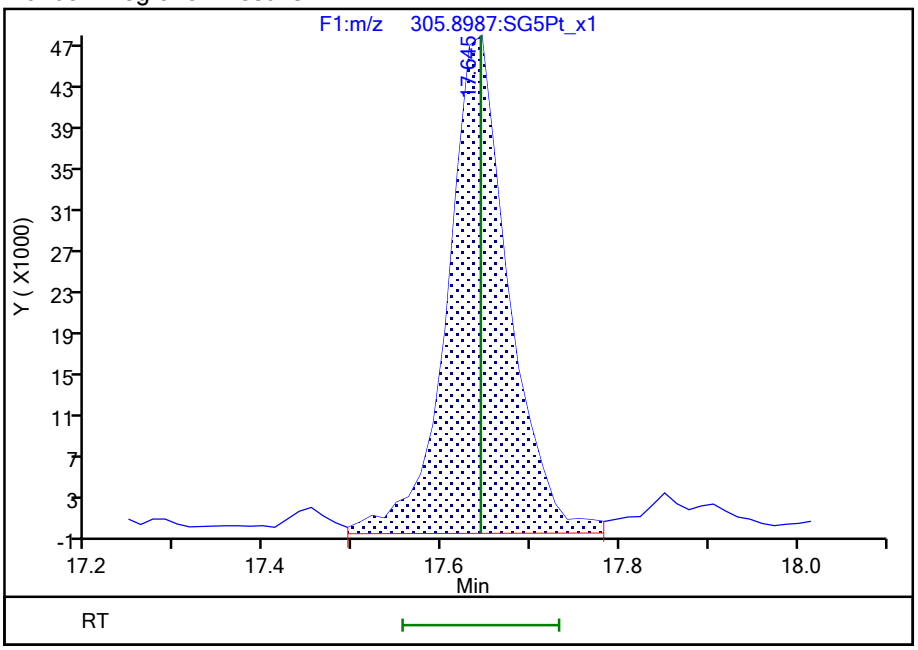

Reviewer: bennettd, 30-Aug-2021 09:41:52

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 30-Aug-2021 09:51:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_008.d		
Injection Date:	27-Aug-2021 20:06:45	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	520456	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

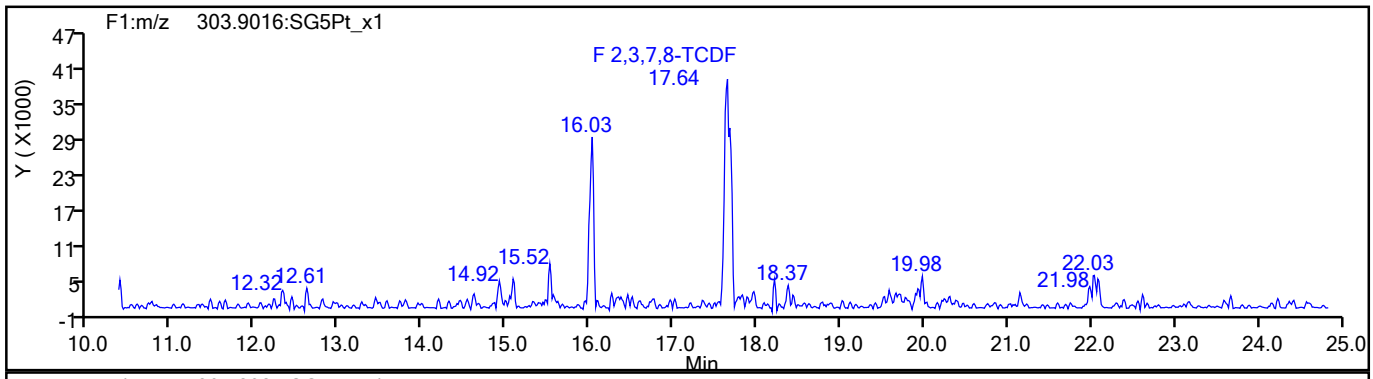

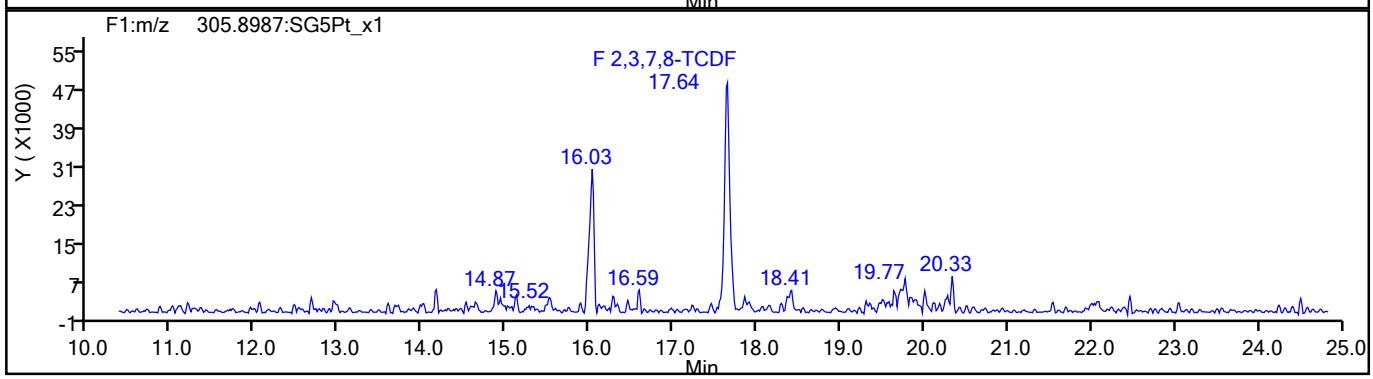

TCDF Standards

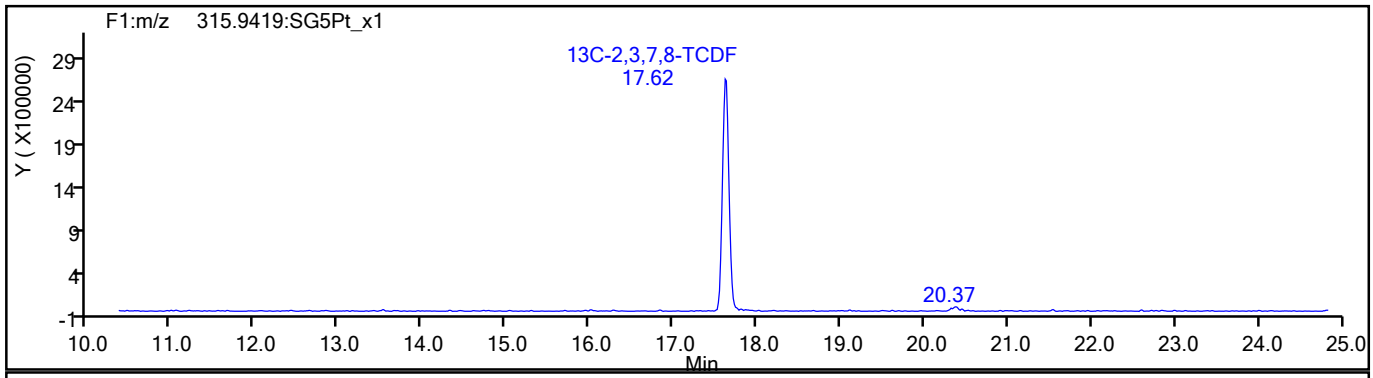

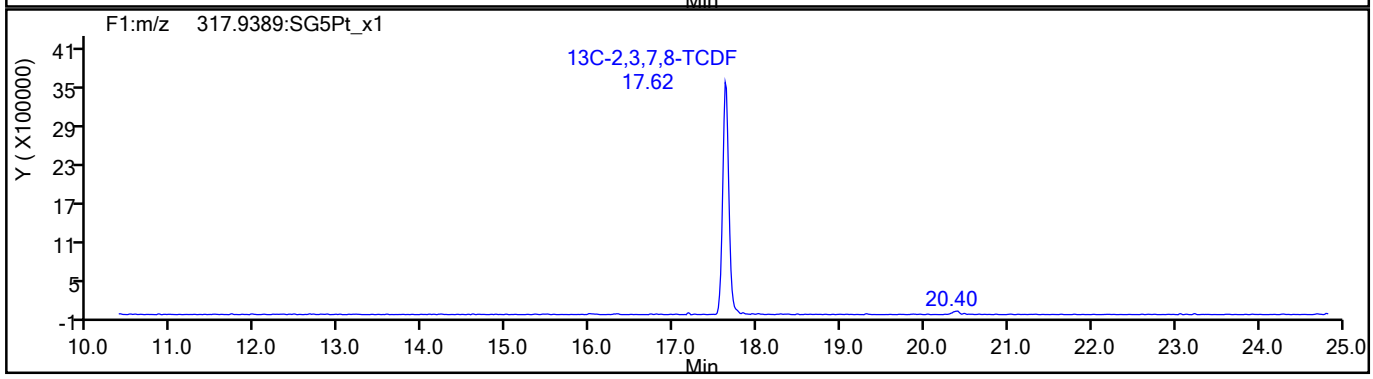

789979

Report Date: 30-Aug-2021 09:51:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_008.d		
Injection Date:	27-Aug-2021 20:06:45	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	520456	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

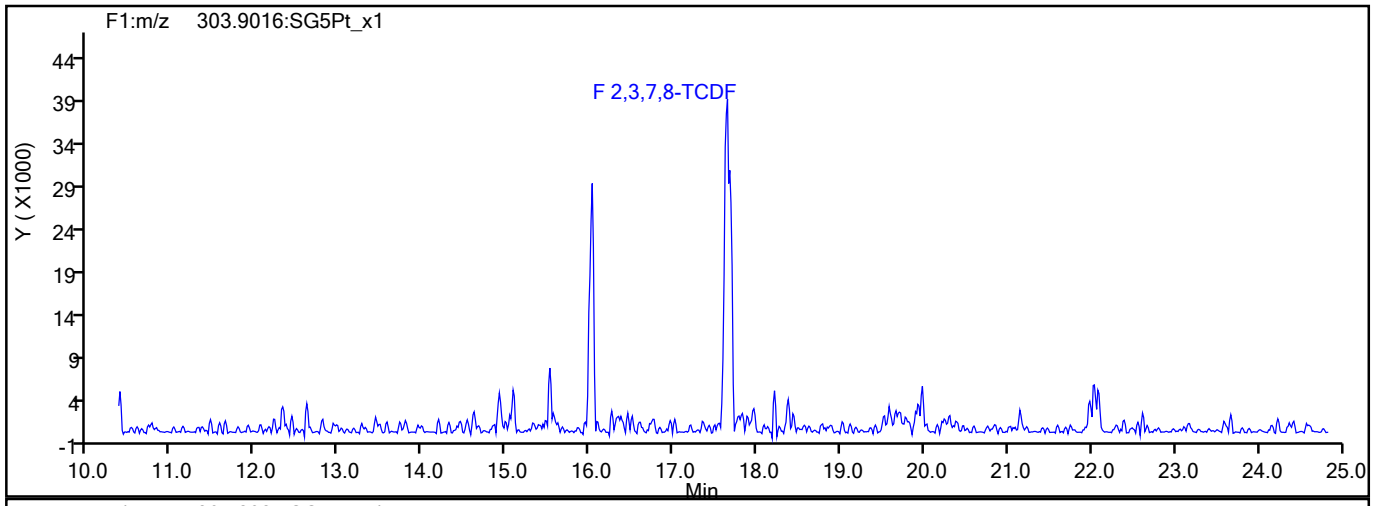

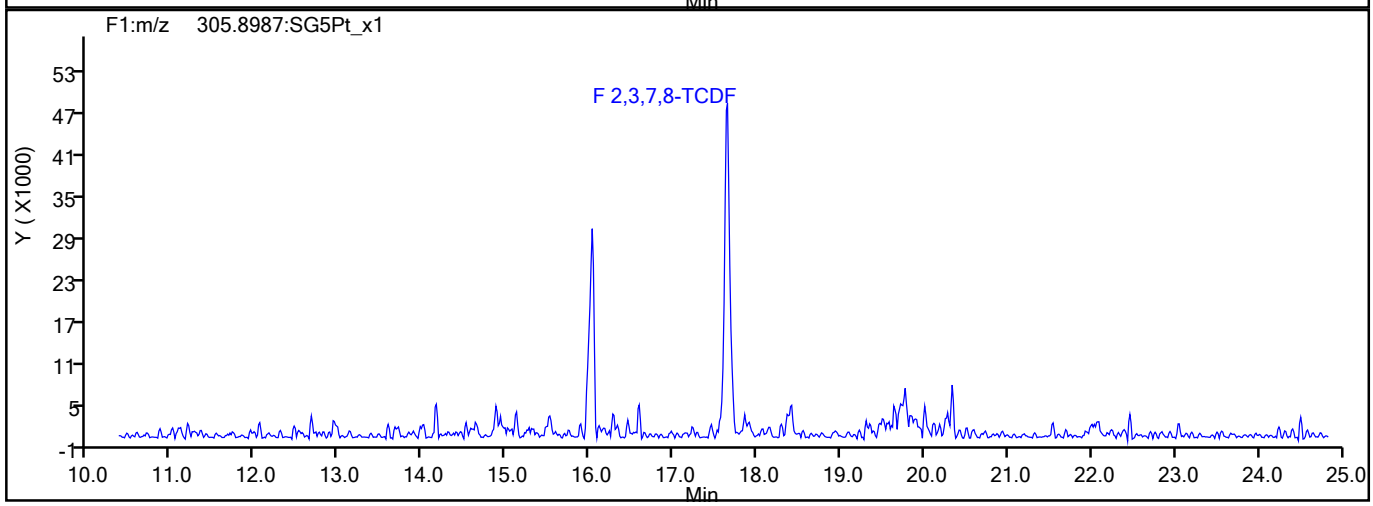

TCDF Interference Mass

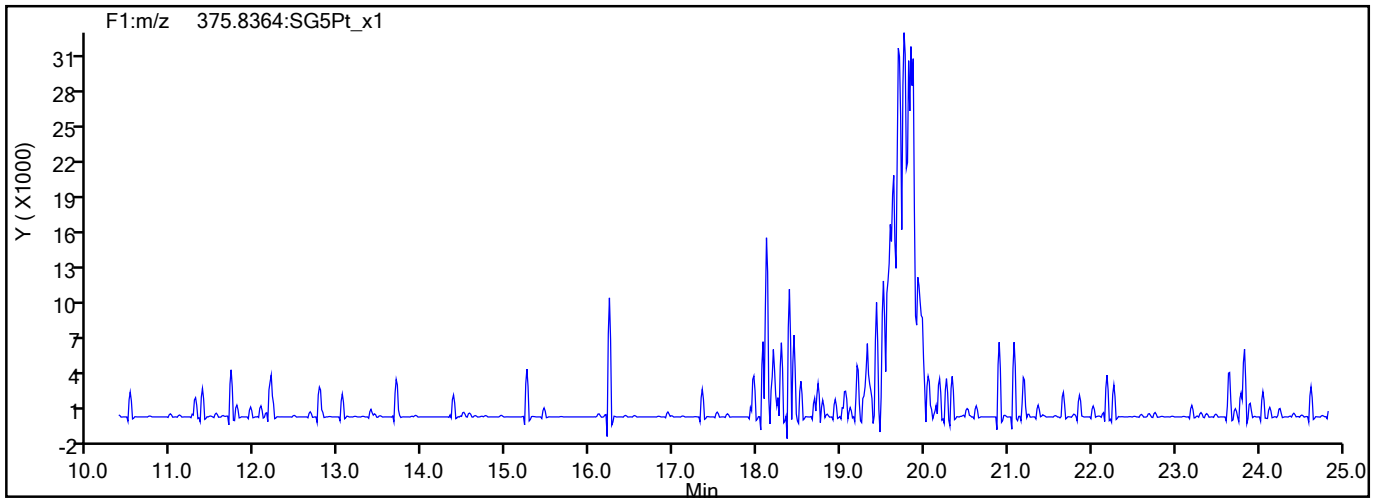

789980

Report Date: 30-Aug-2021 09:51:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_008.d		
Injection Date:	27-Aug-2021 20:06:45	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	520456	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

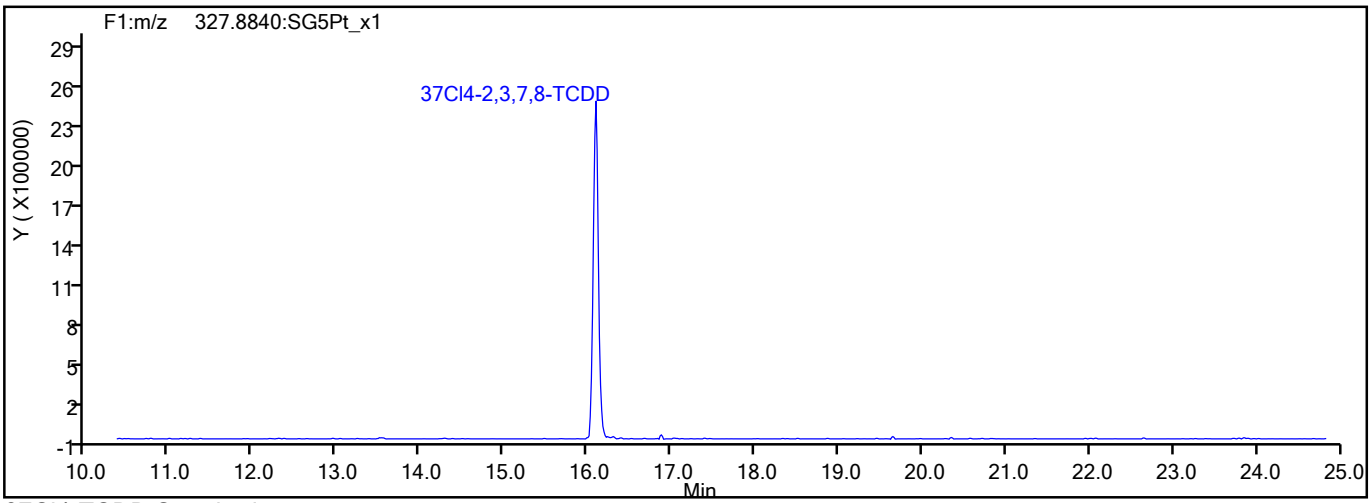

37Cl4-TCDD Standards

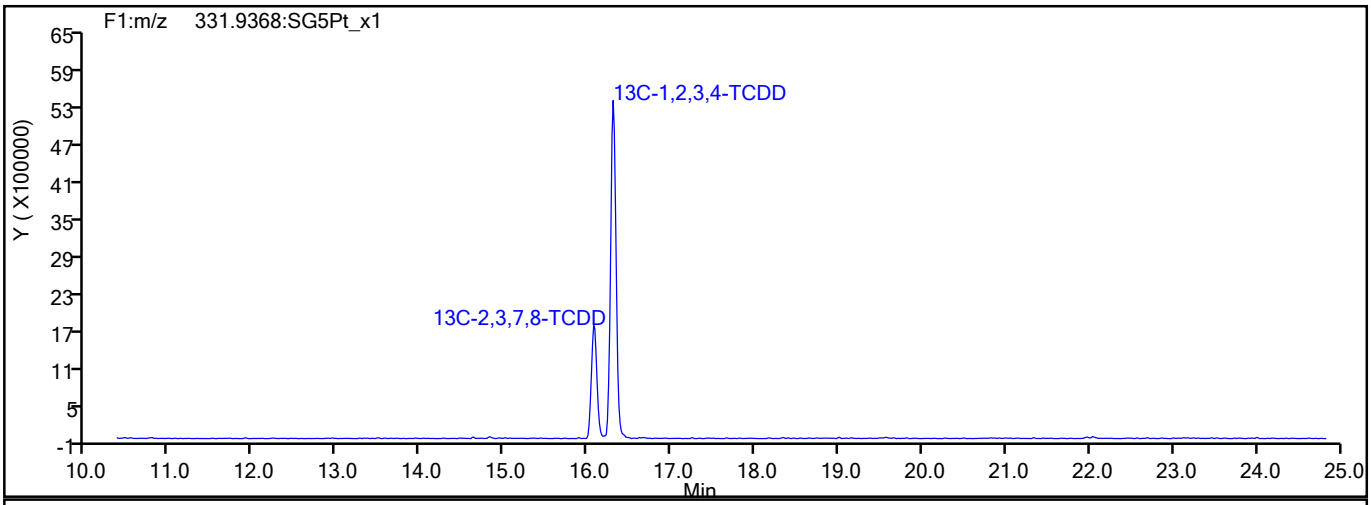

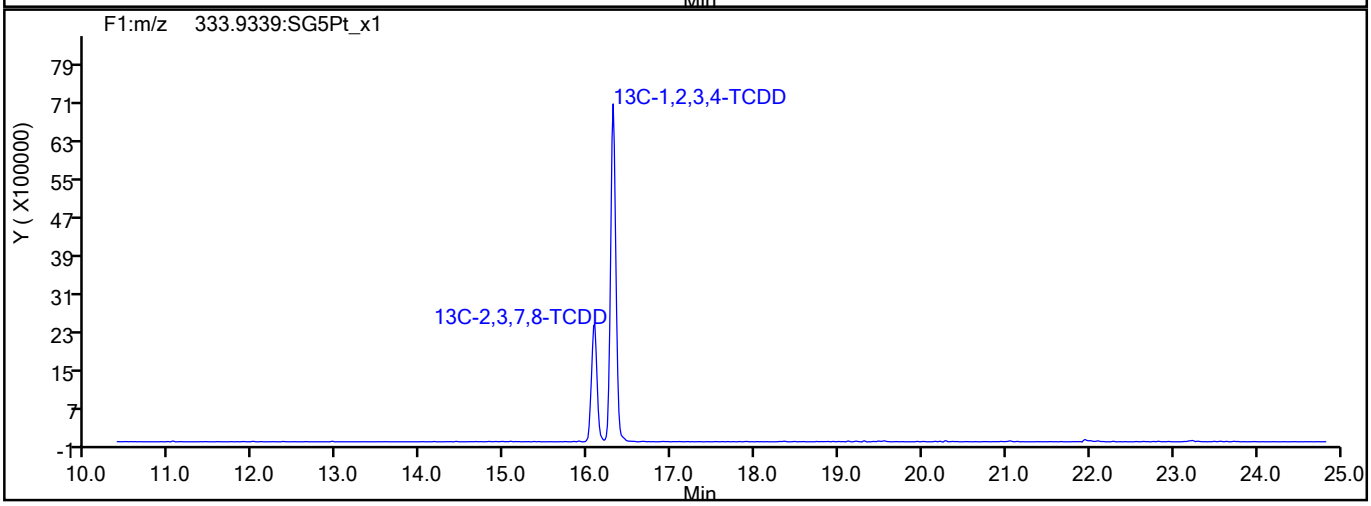

789981

Report Date: 30-Aug-2021 09:51:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_008.d		
Injection Date:	27-Aug-2021 20:06:45	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (16-18)		
Worklist#:	520456	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

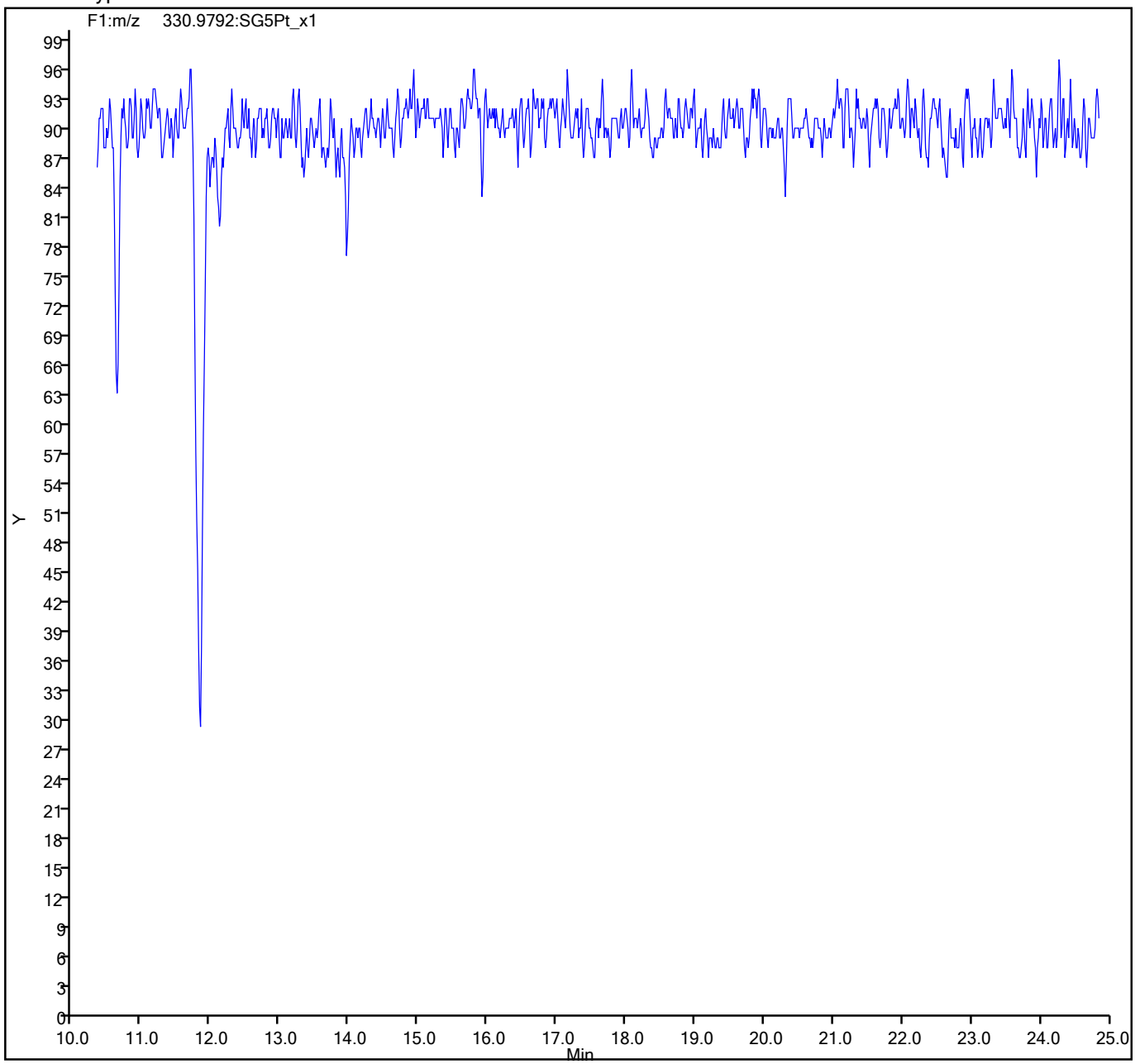

789982

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

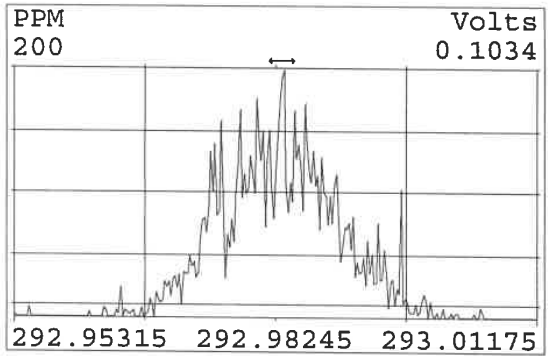

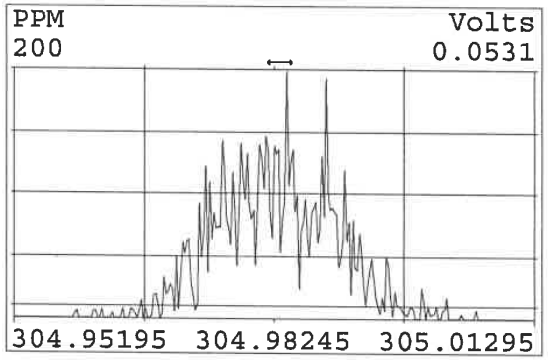

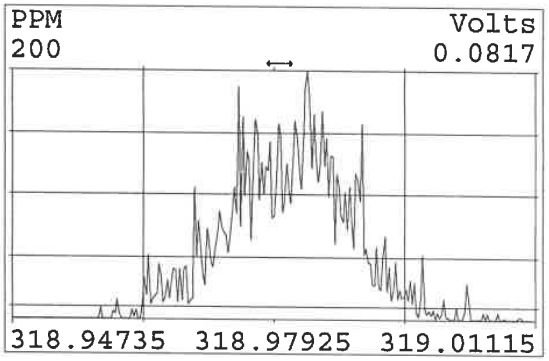

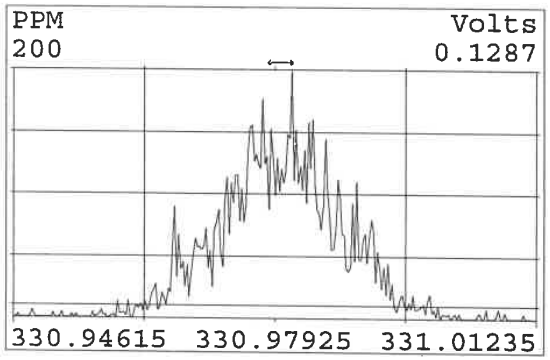

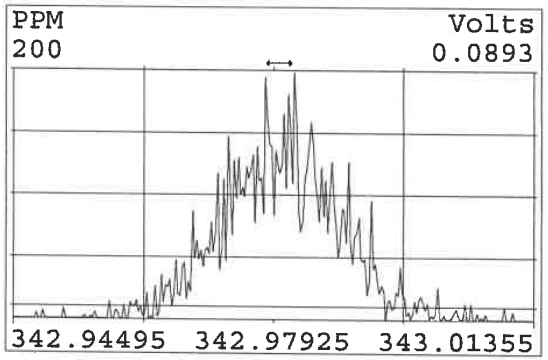

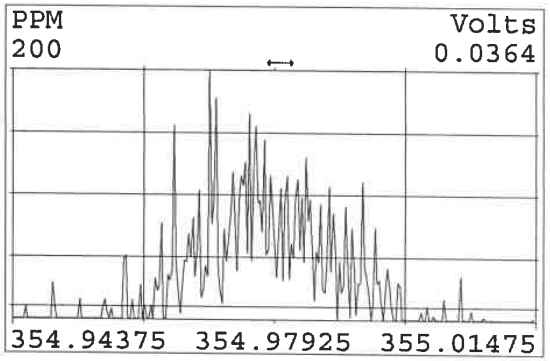

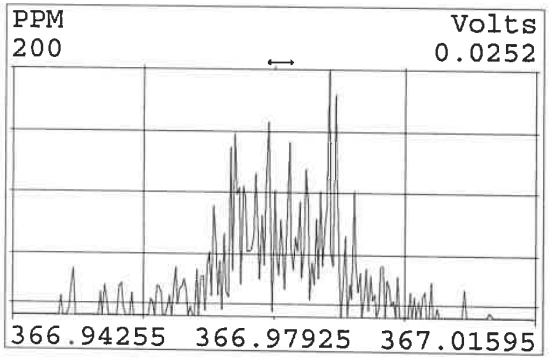

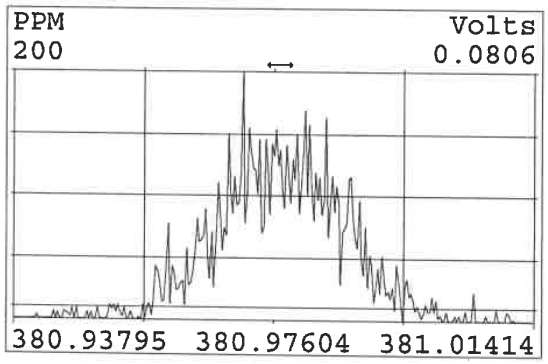

789986

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

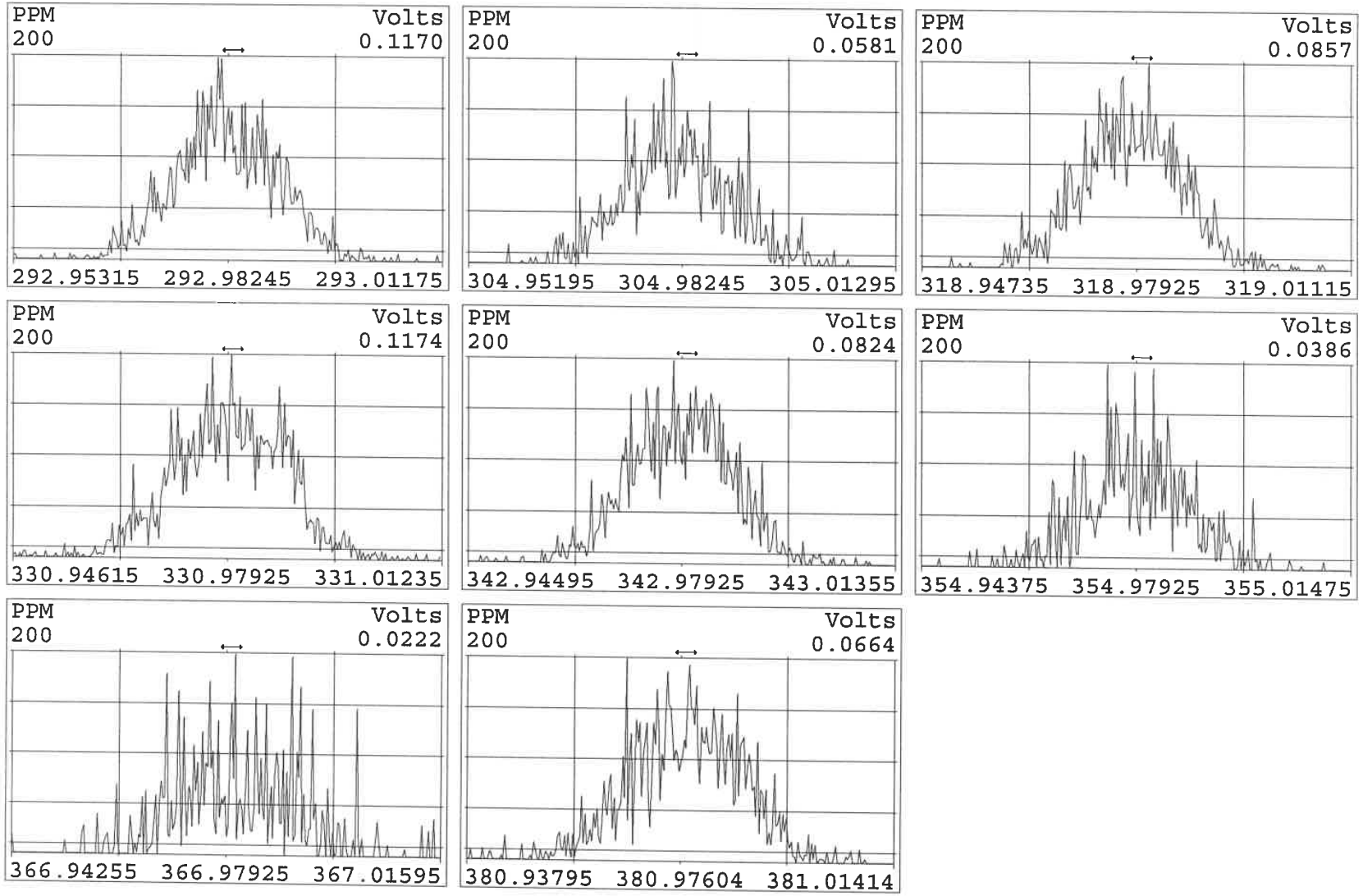

789987

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

789988

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

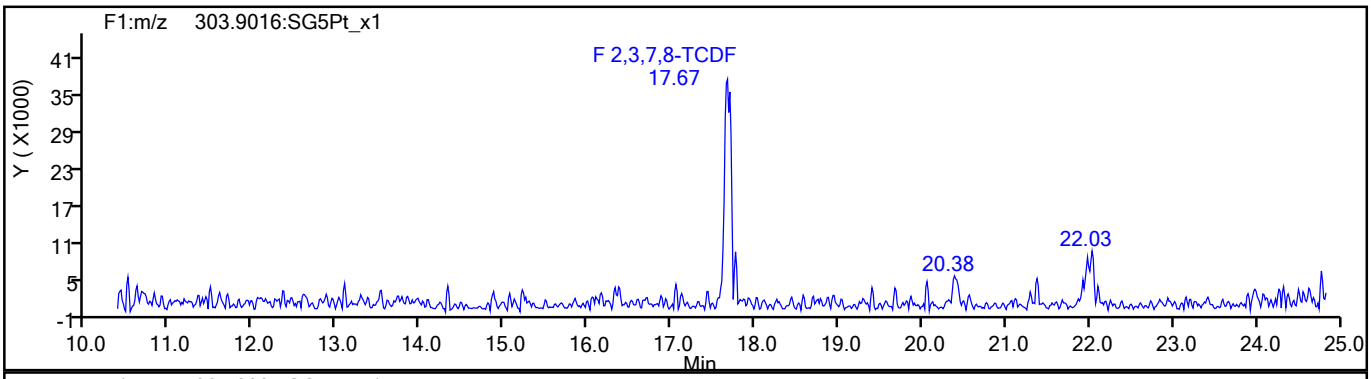

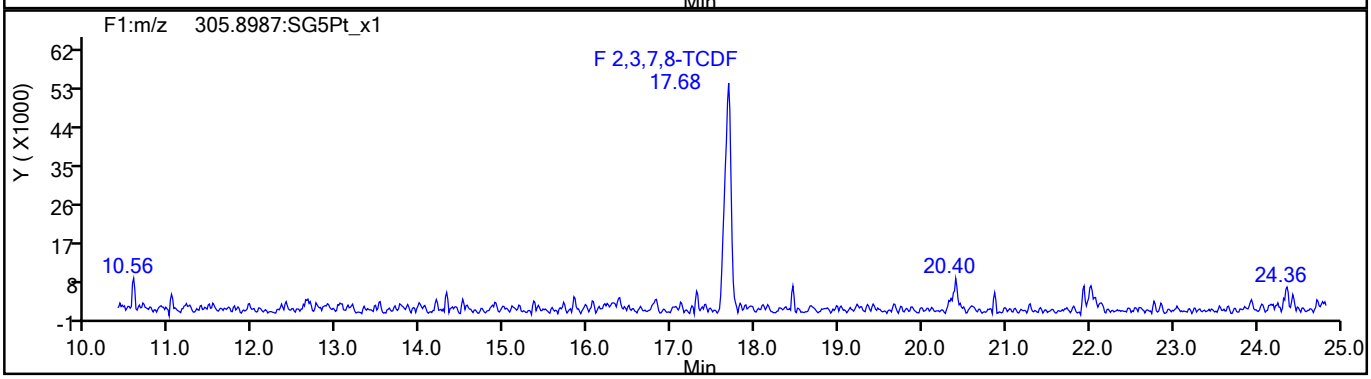

TCDF Standards

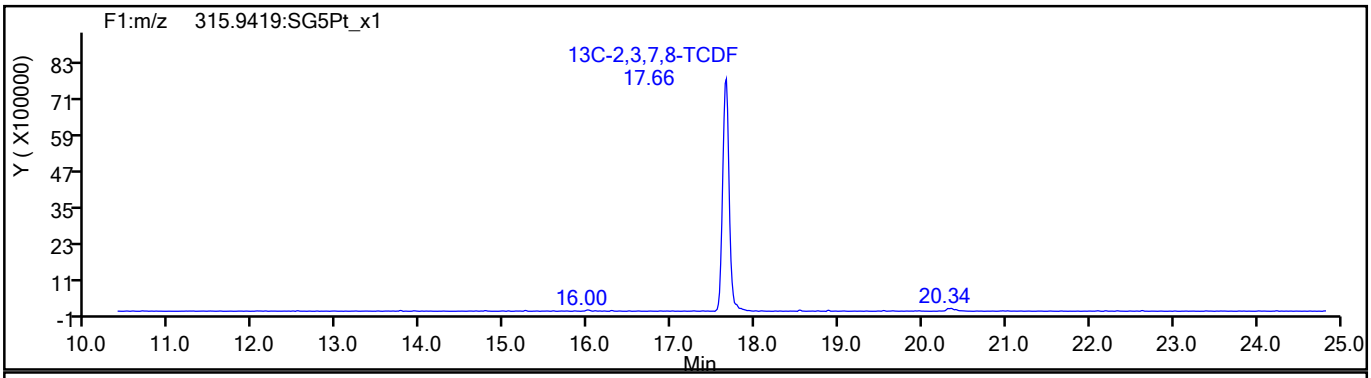

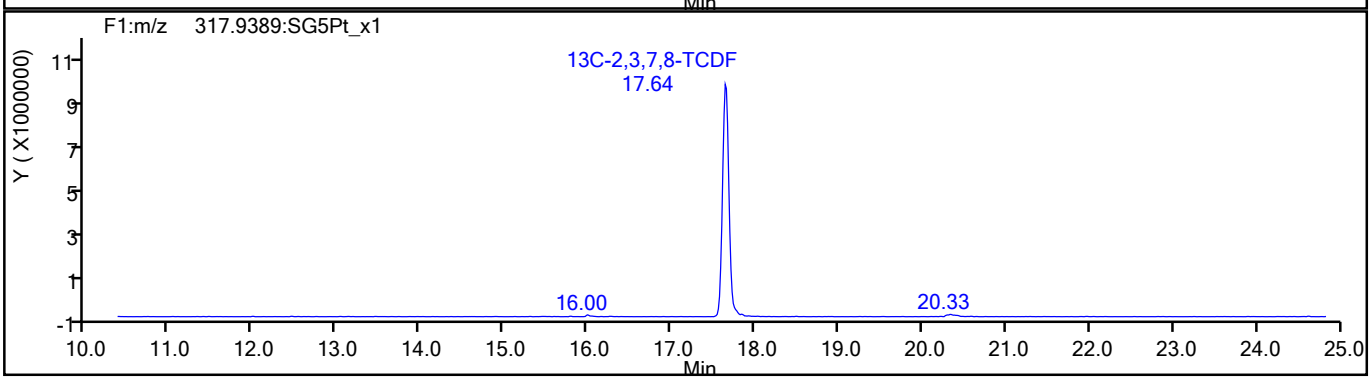

789990

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

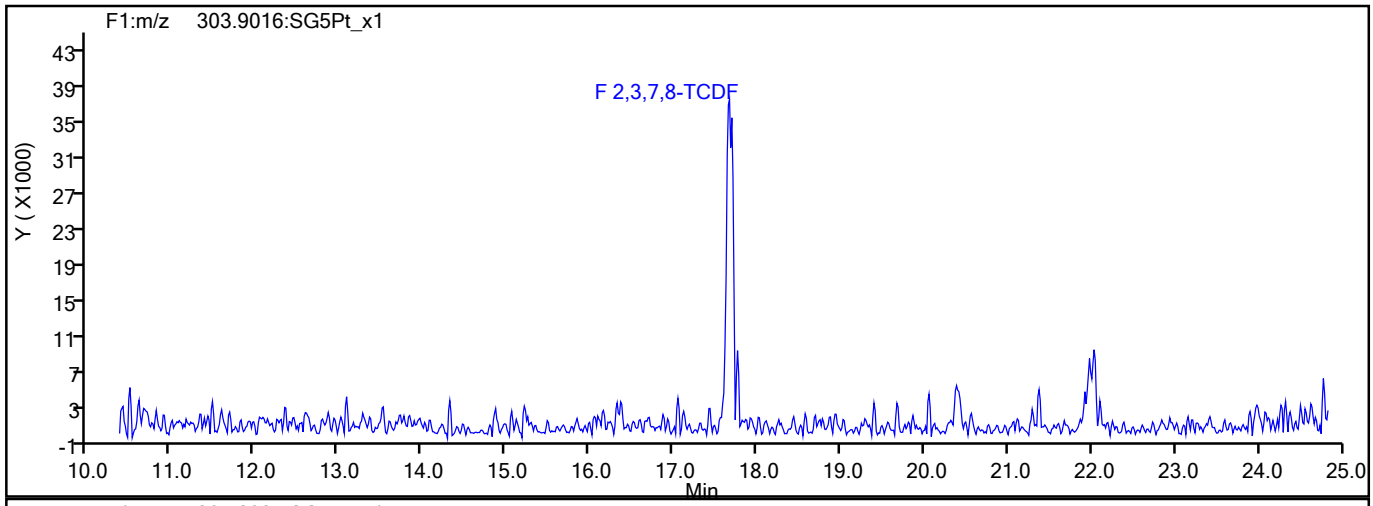

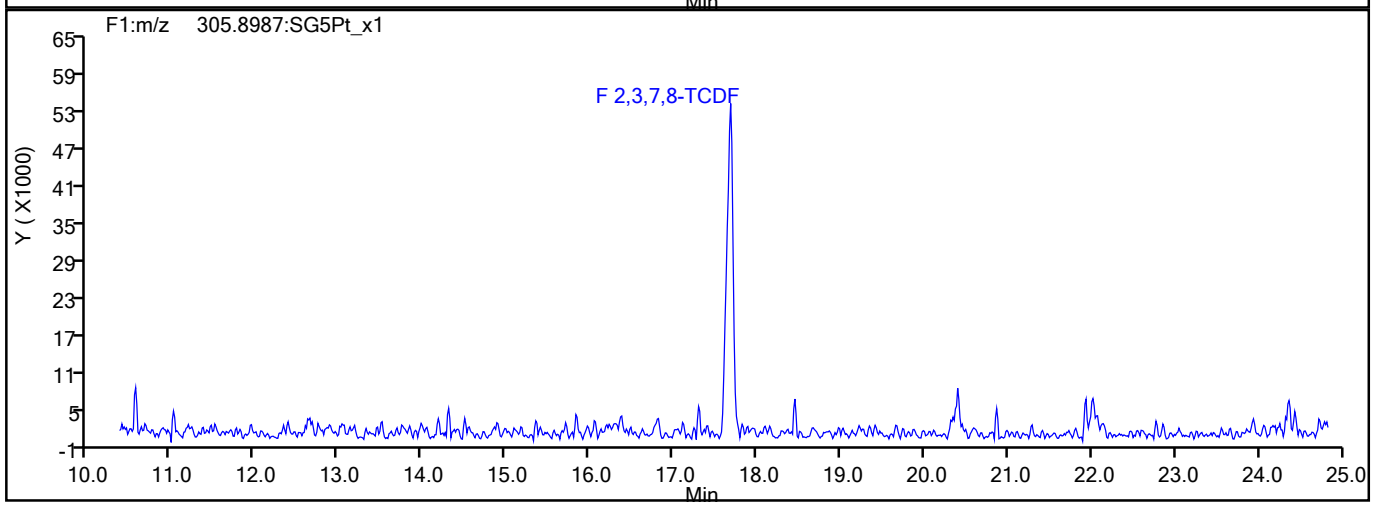

TCDF Interference Mass

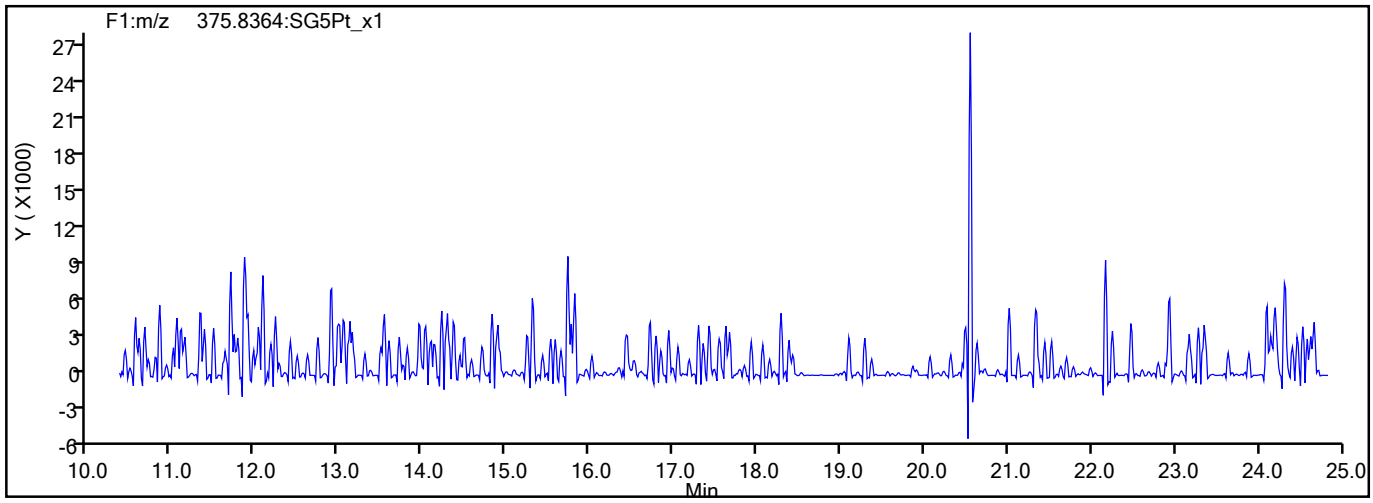

789991

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

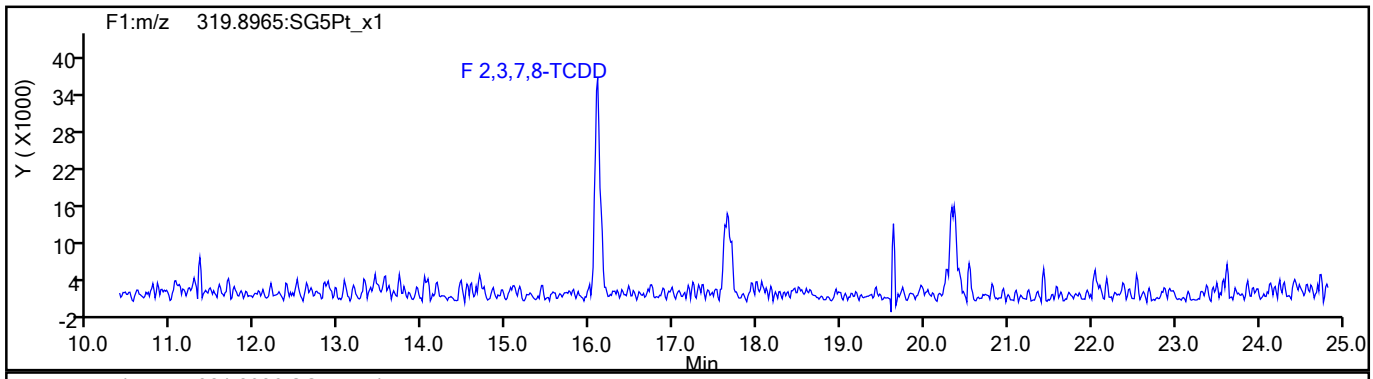

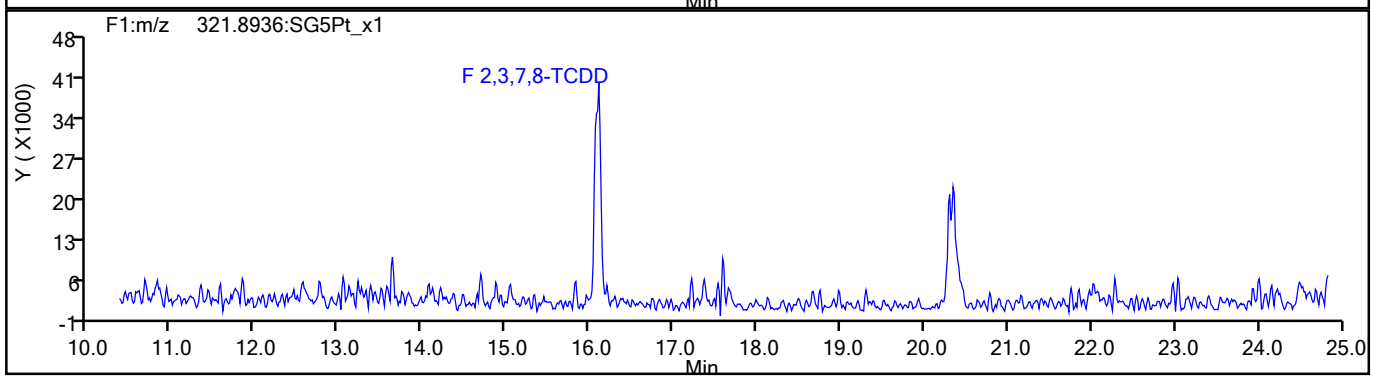

TCDD Standards

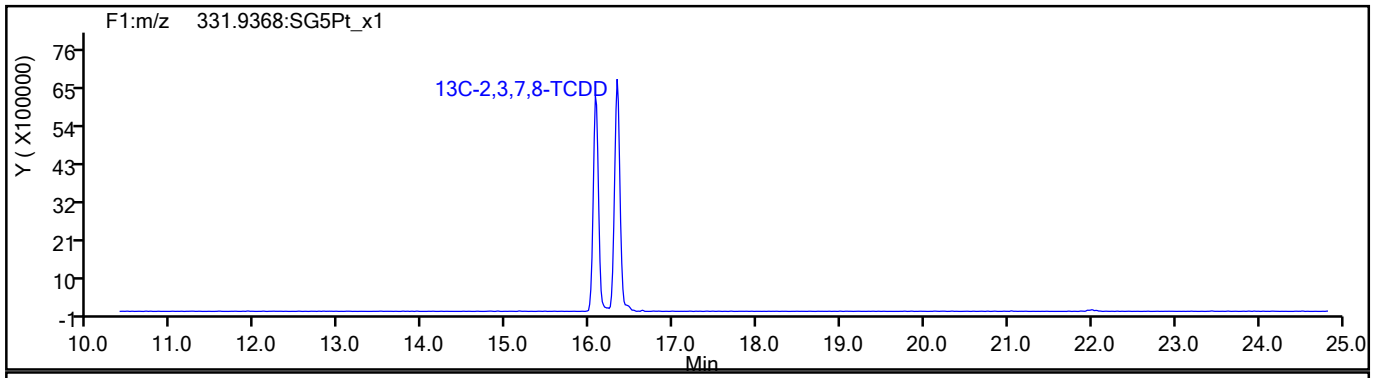

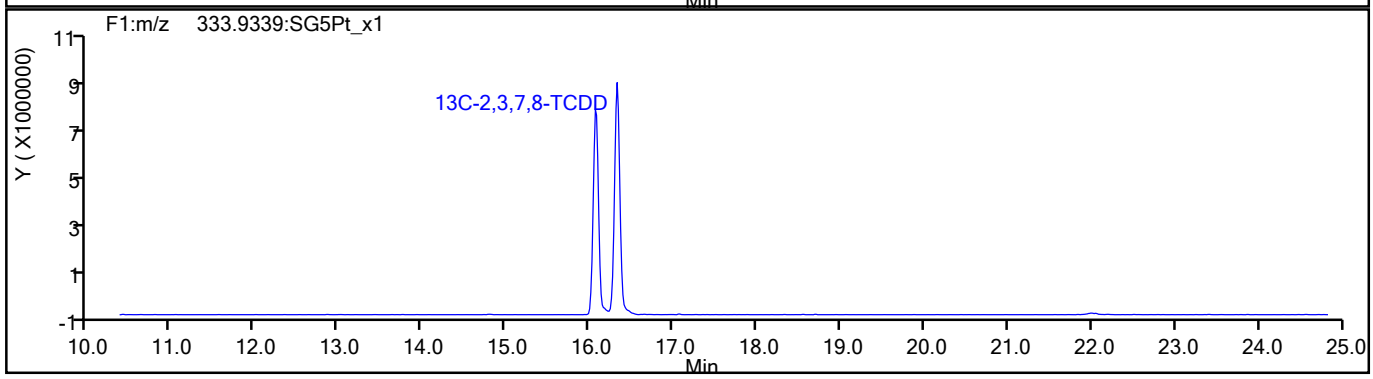

789992

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

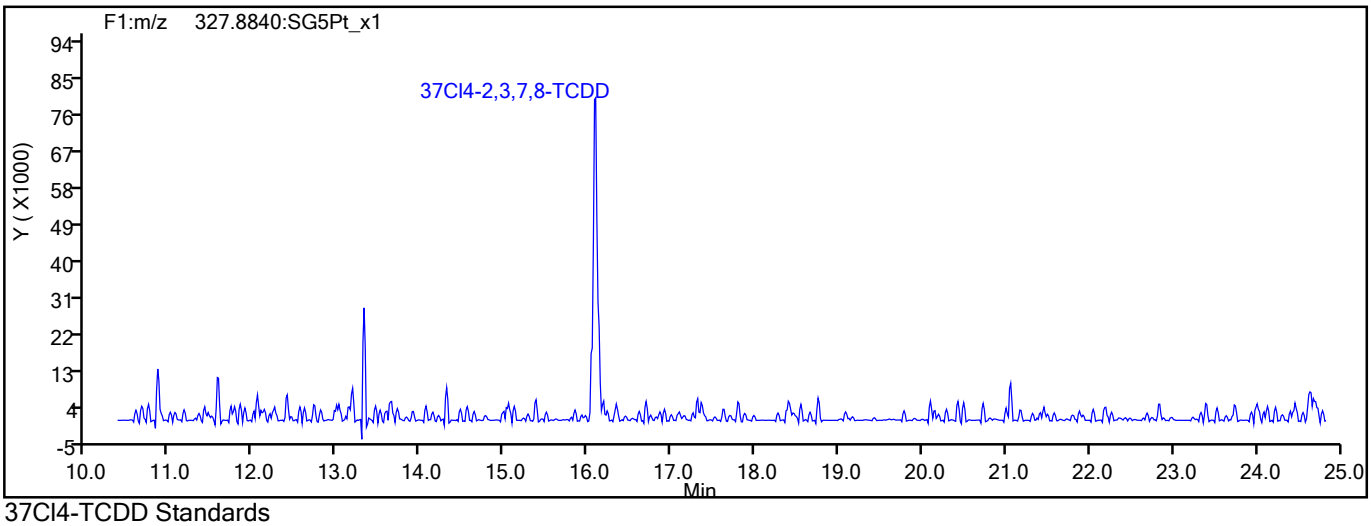

37Cl4-TCDD Standards

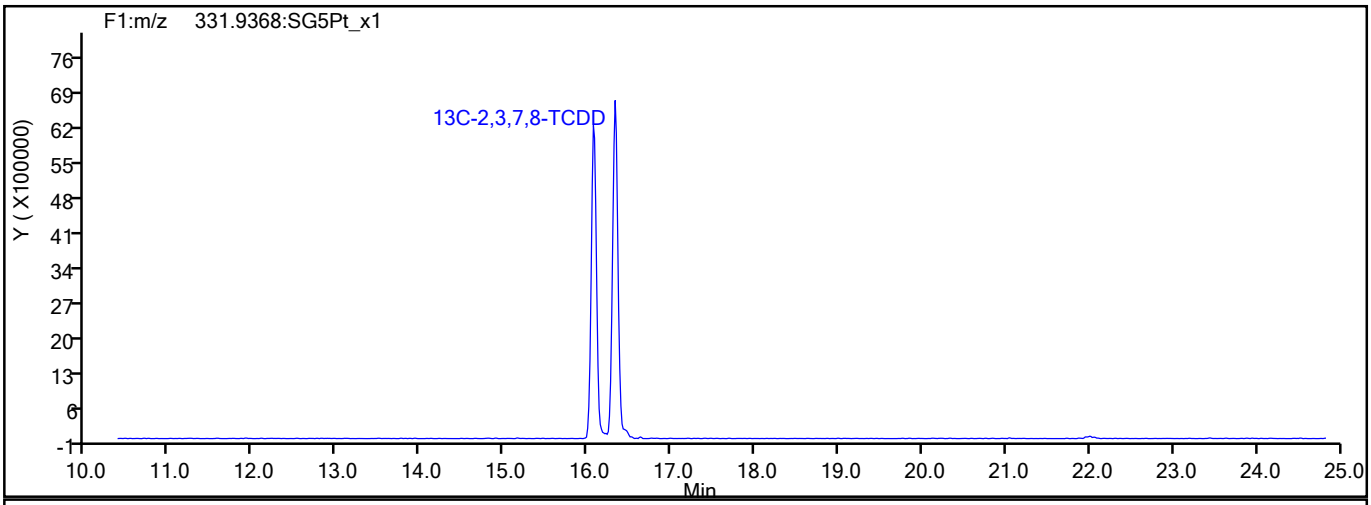

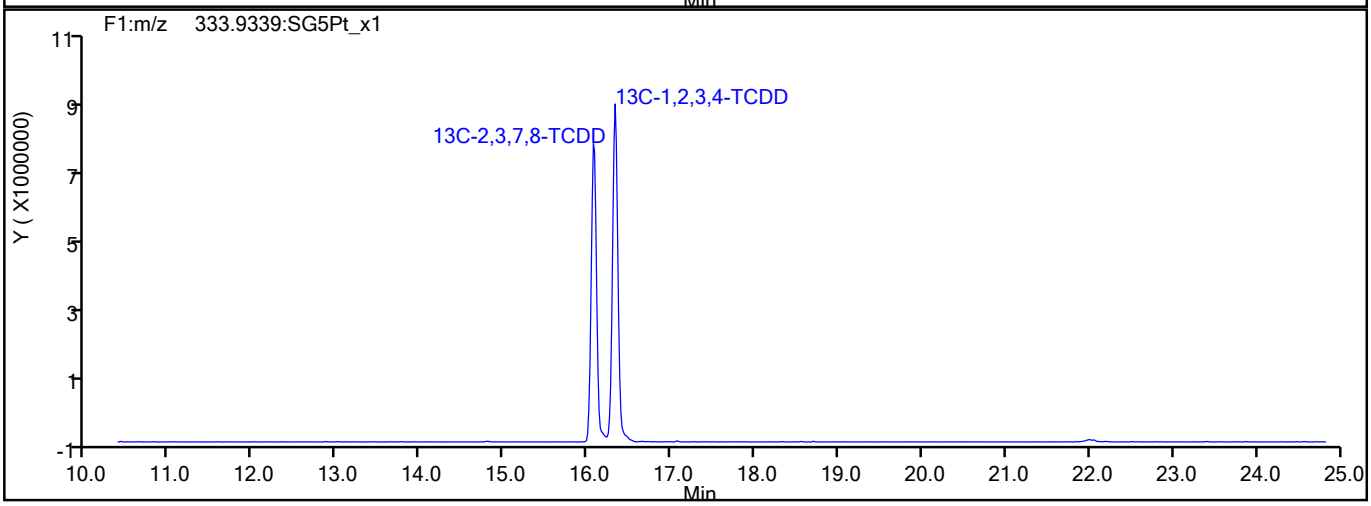

789993

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

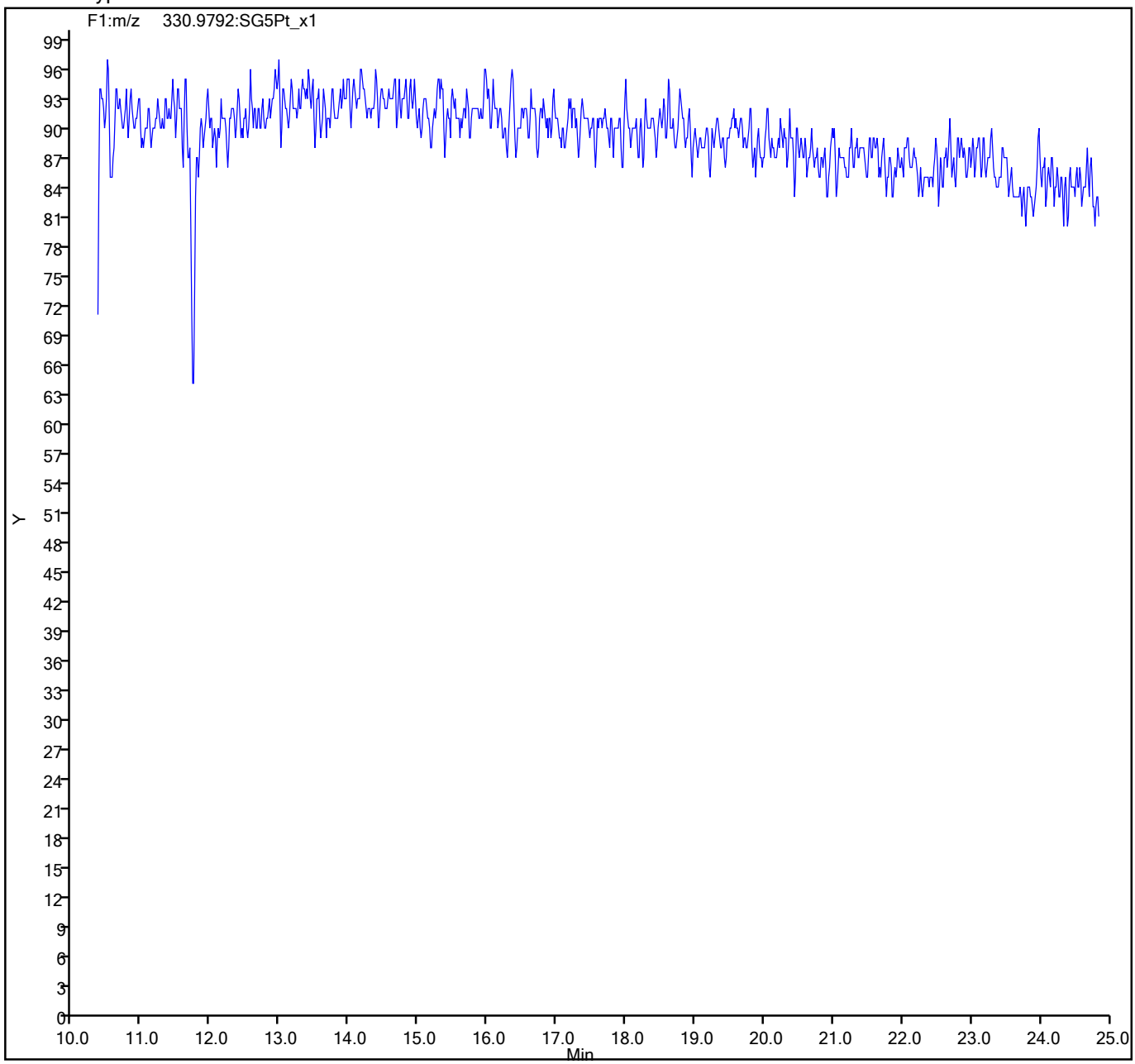

789994

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags
Review Flags
M - Manually Integrated

Reagents:
HRDXNL3_00029 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

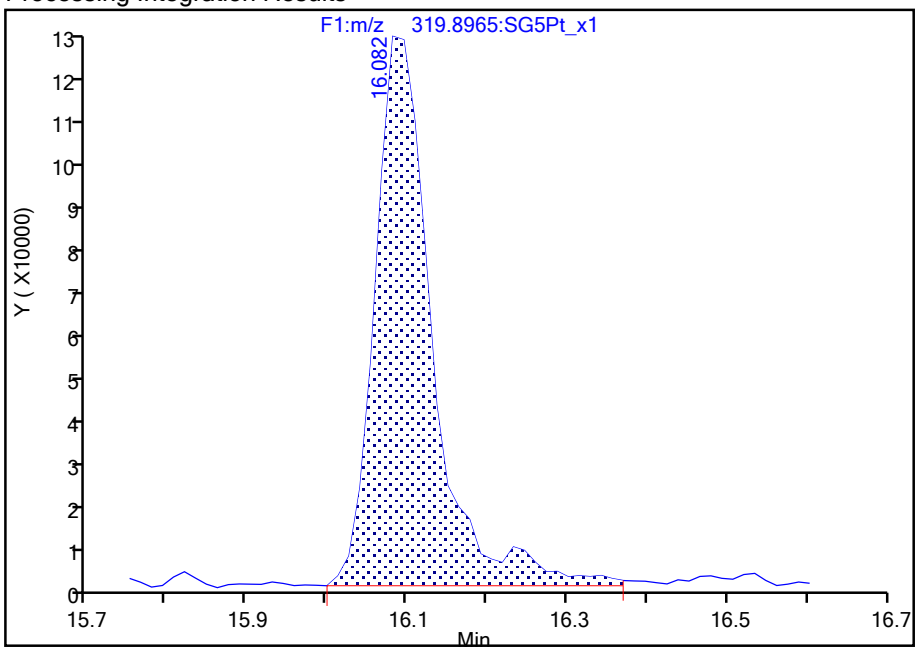

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

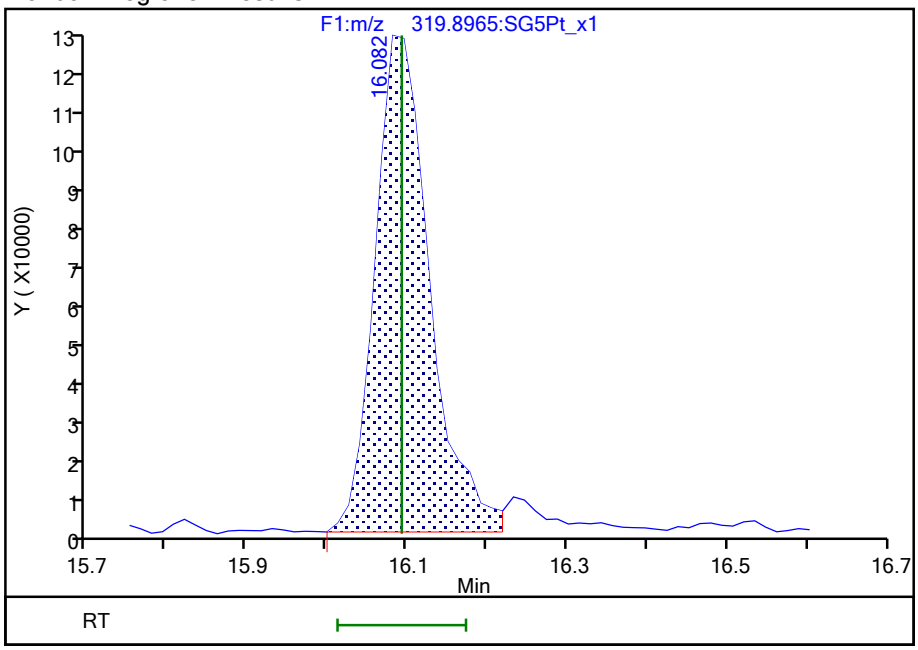

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

789997

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

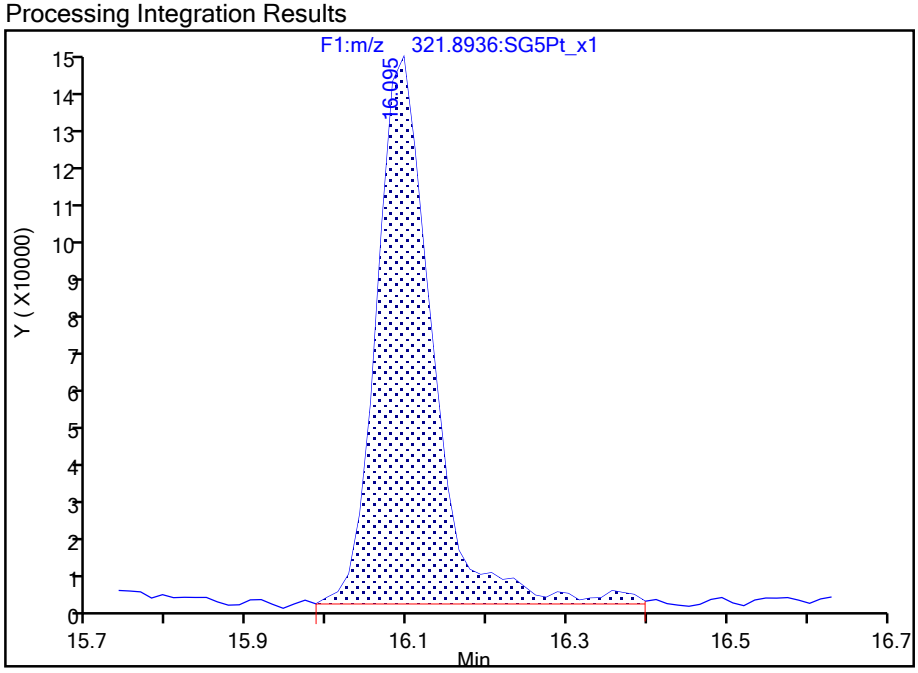

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

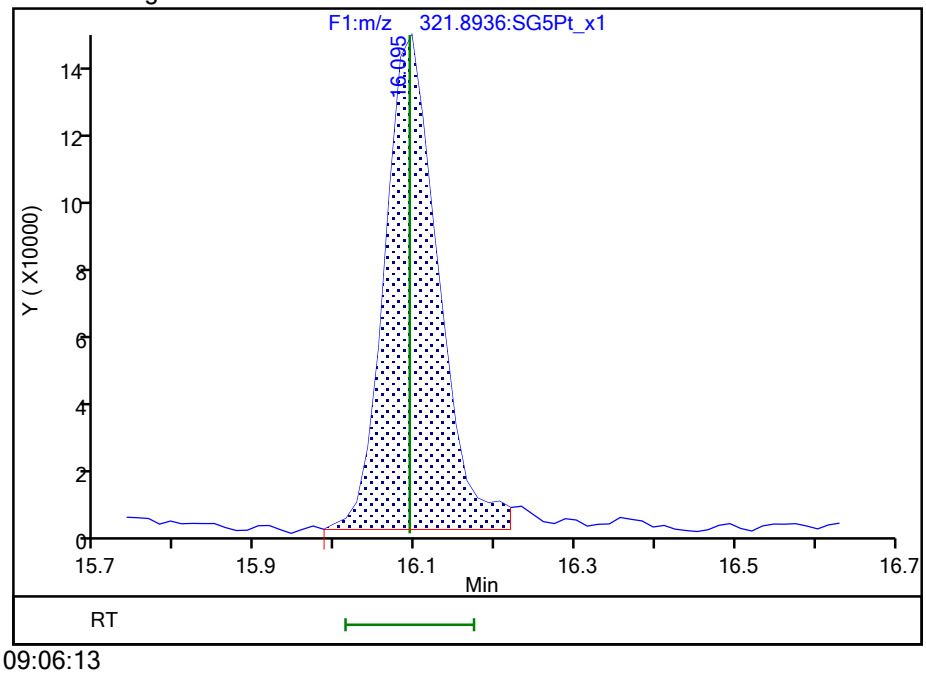

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

789998

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

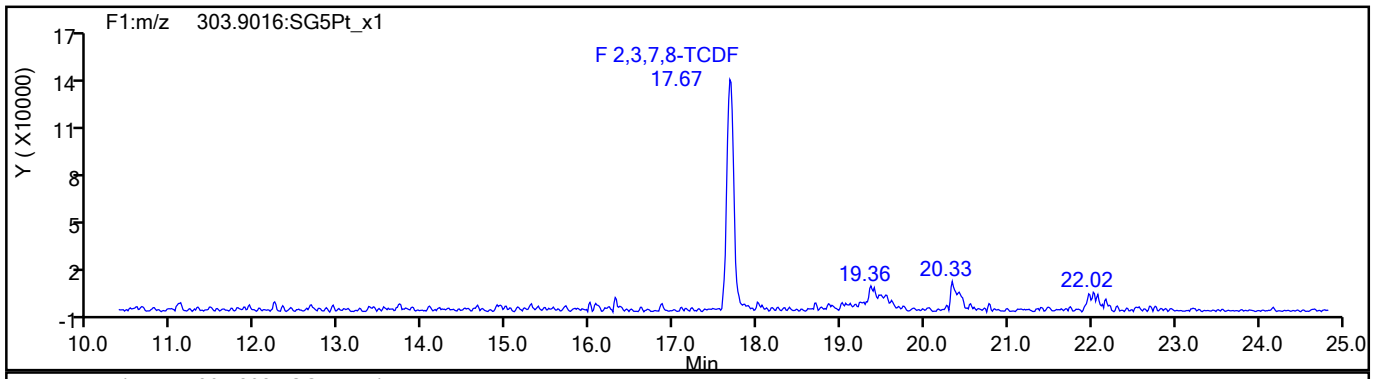

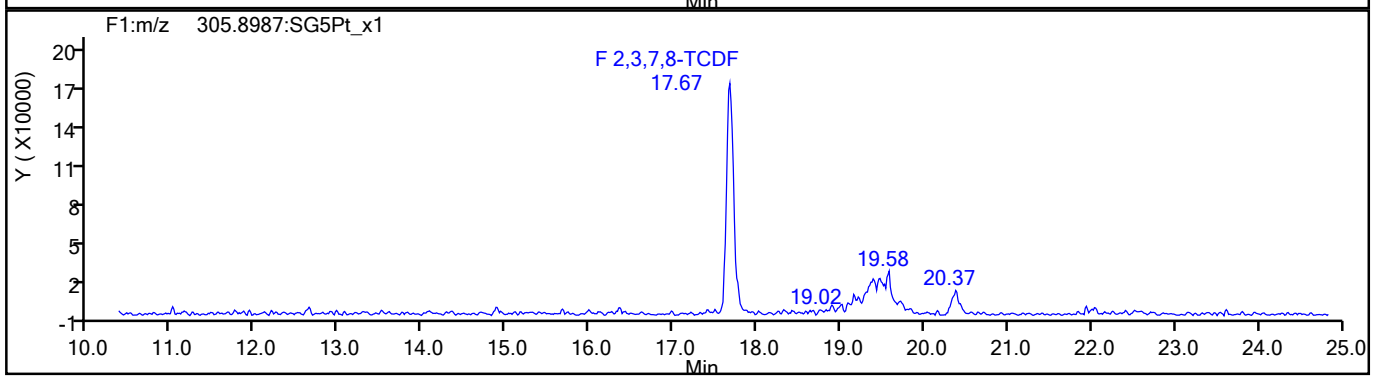

TCDF Standards

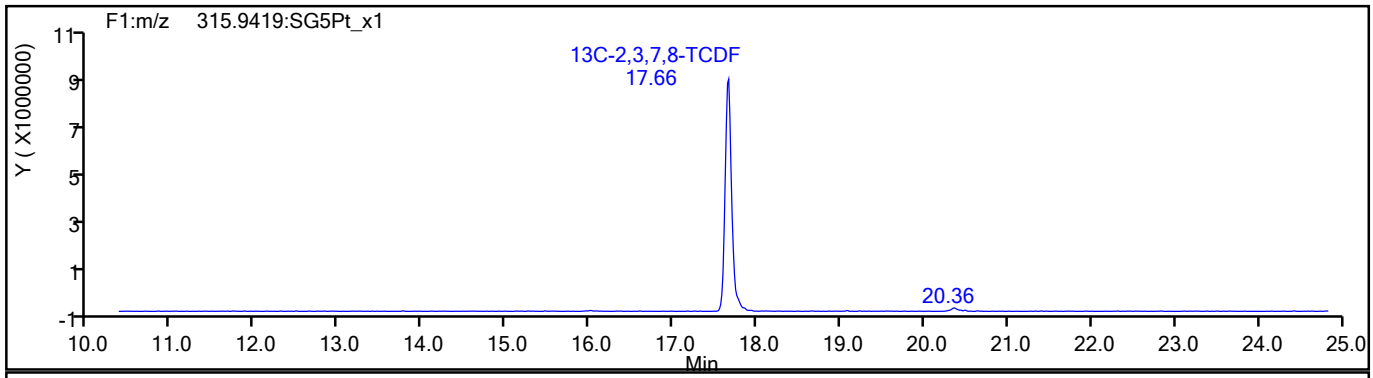

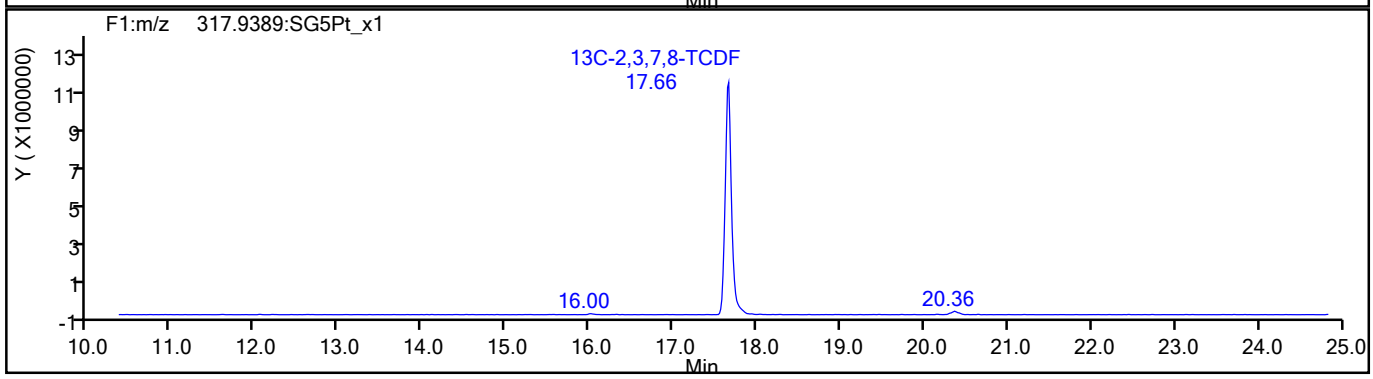

789999

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

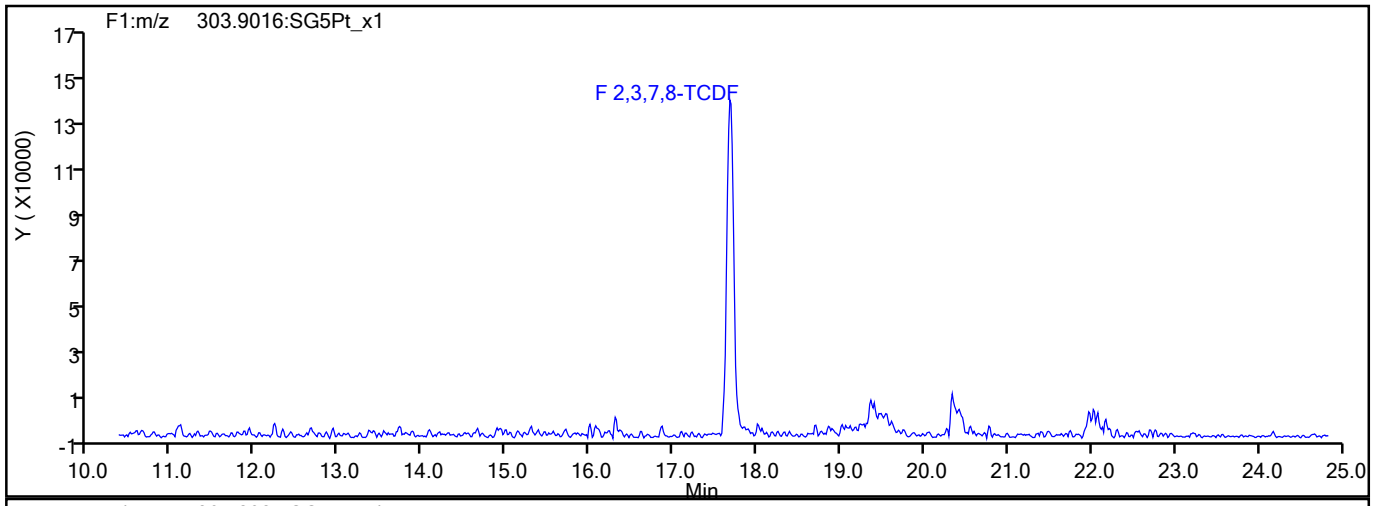

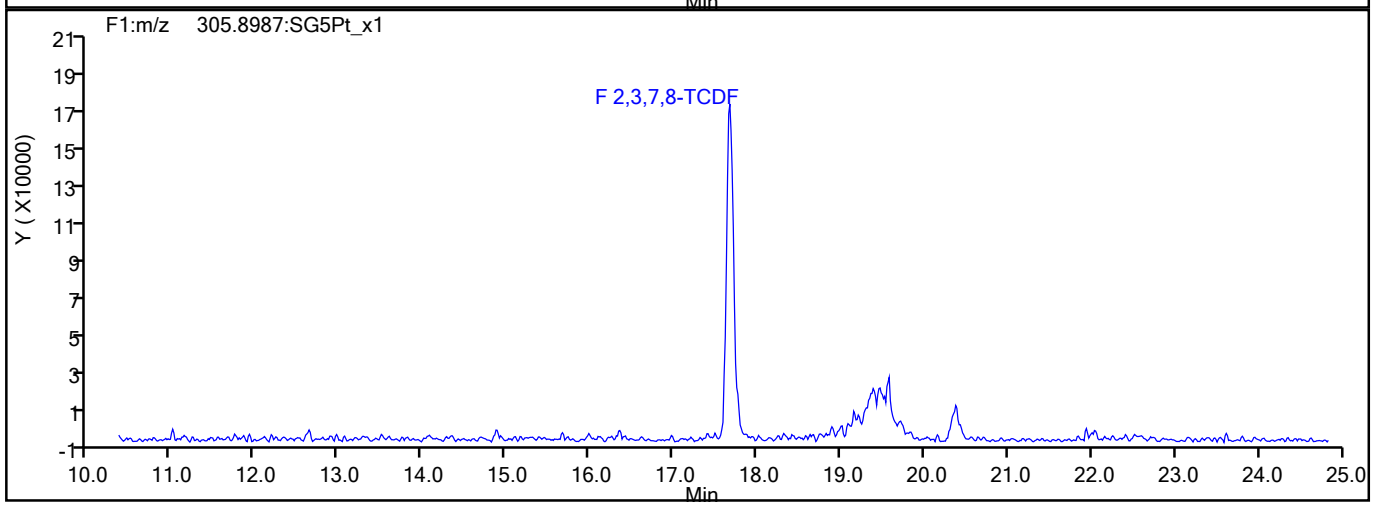

TCDF Interference Mass

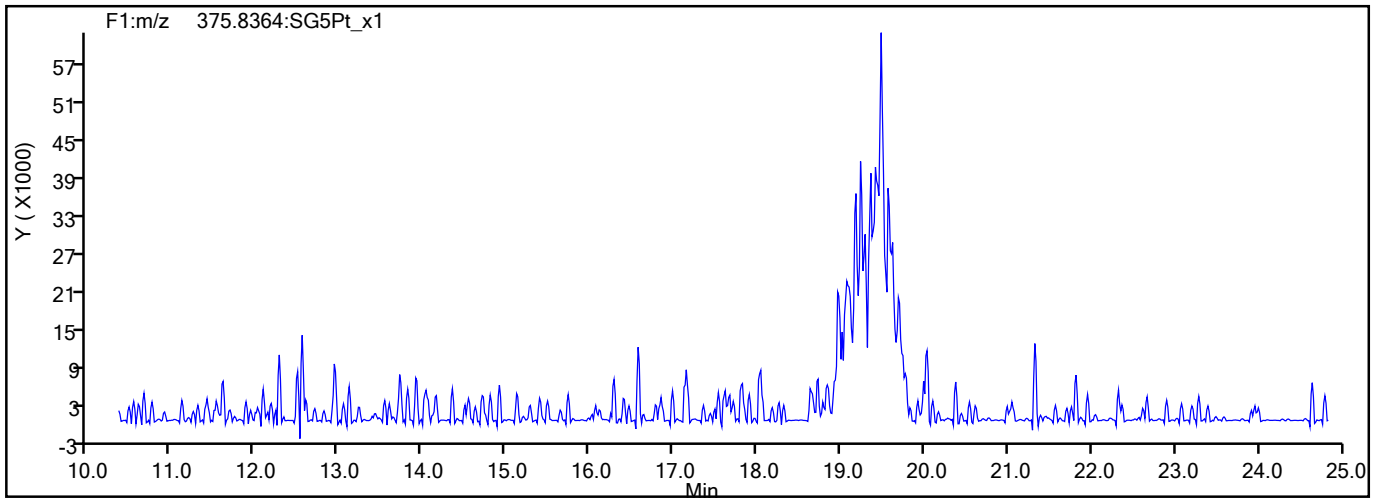

790000

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

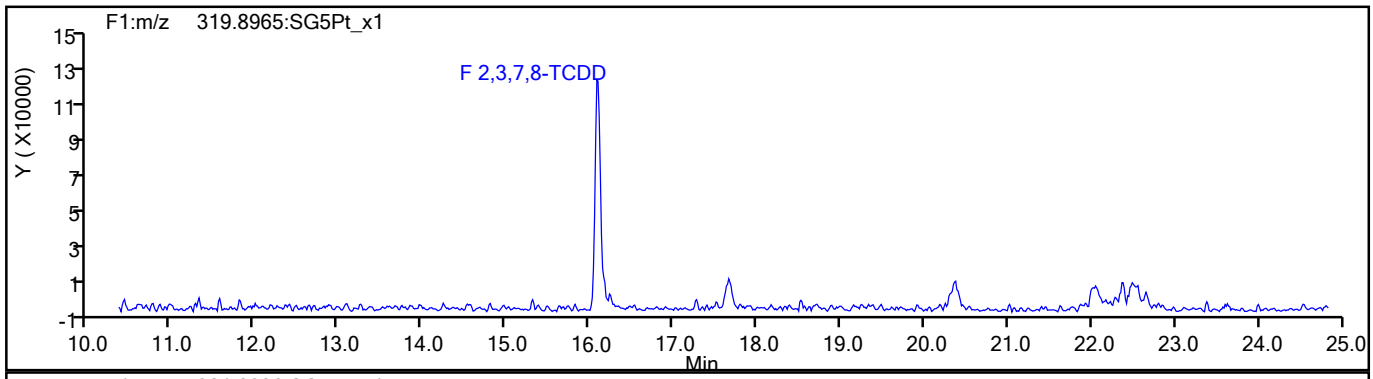

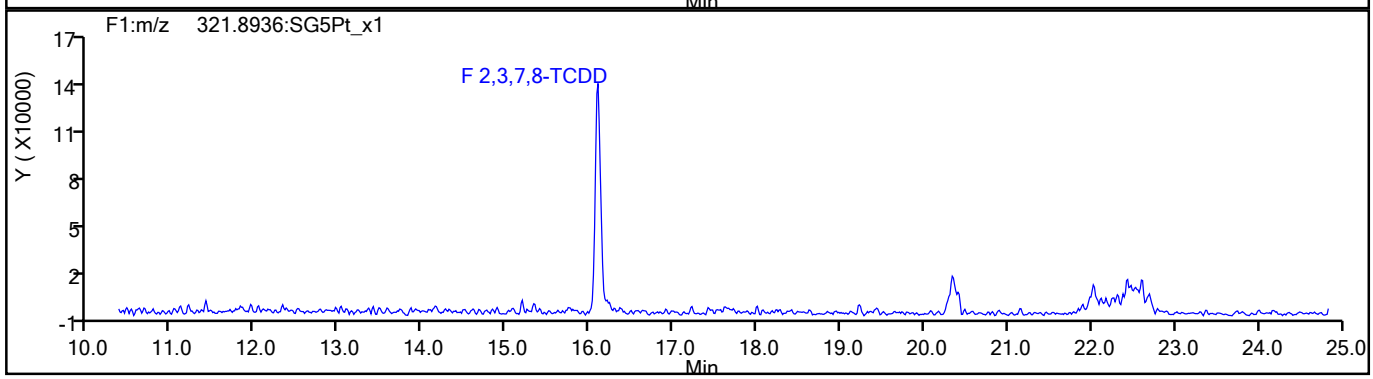

TCDD Standards

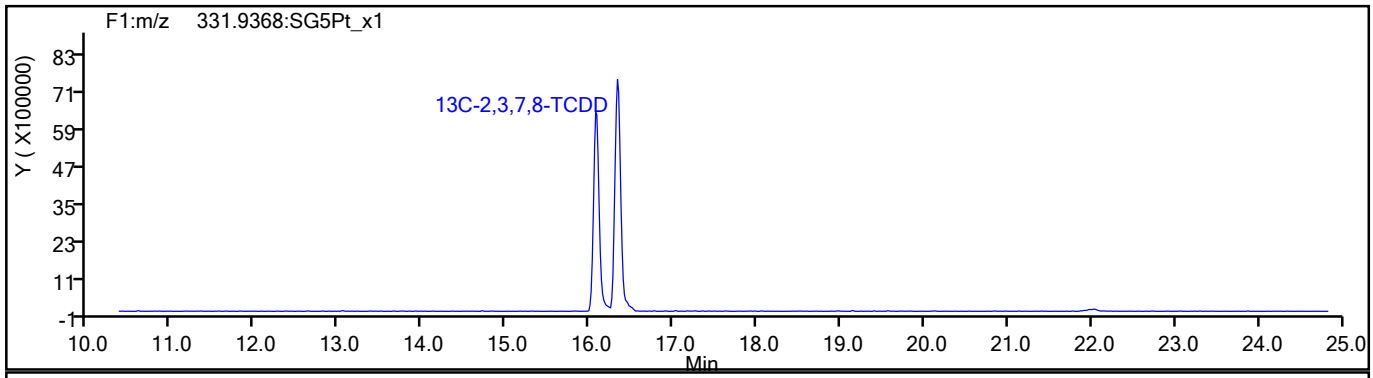

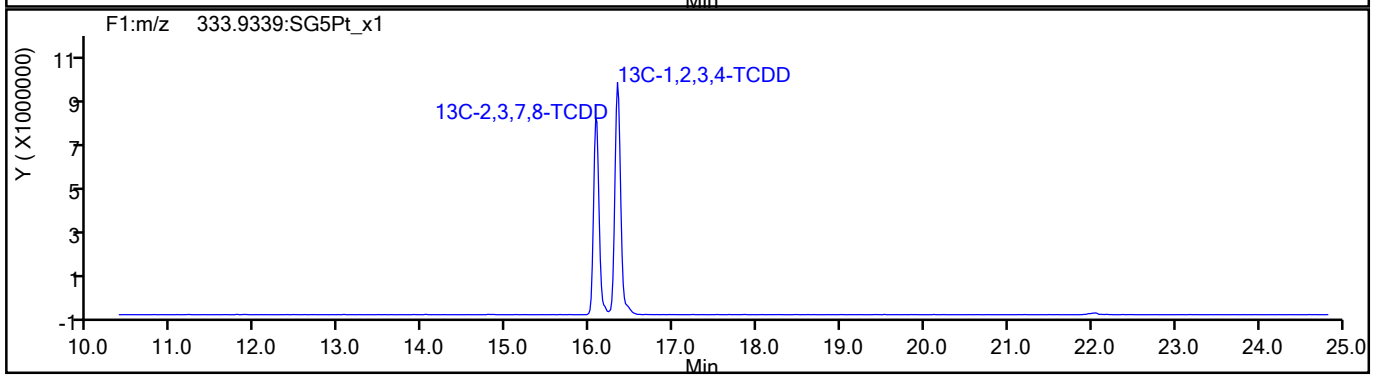

790001

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

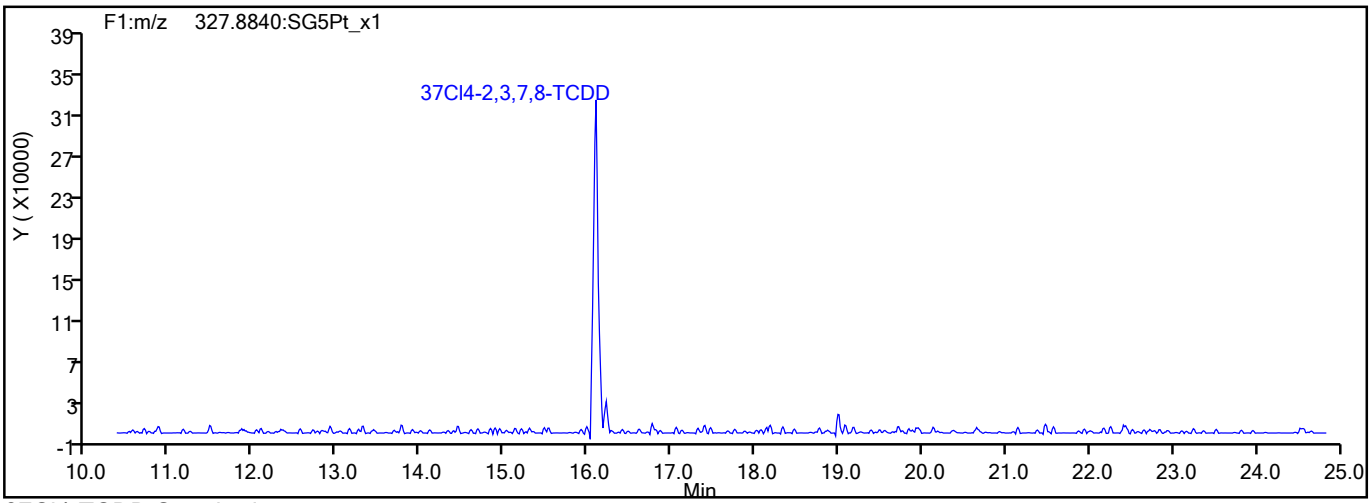

37Cl4-TCDD Standards

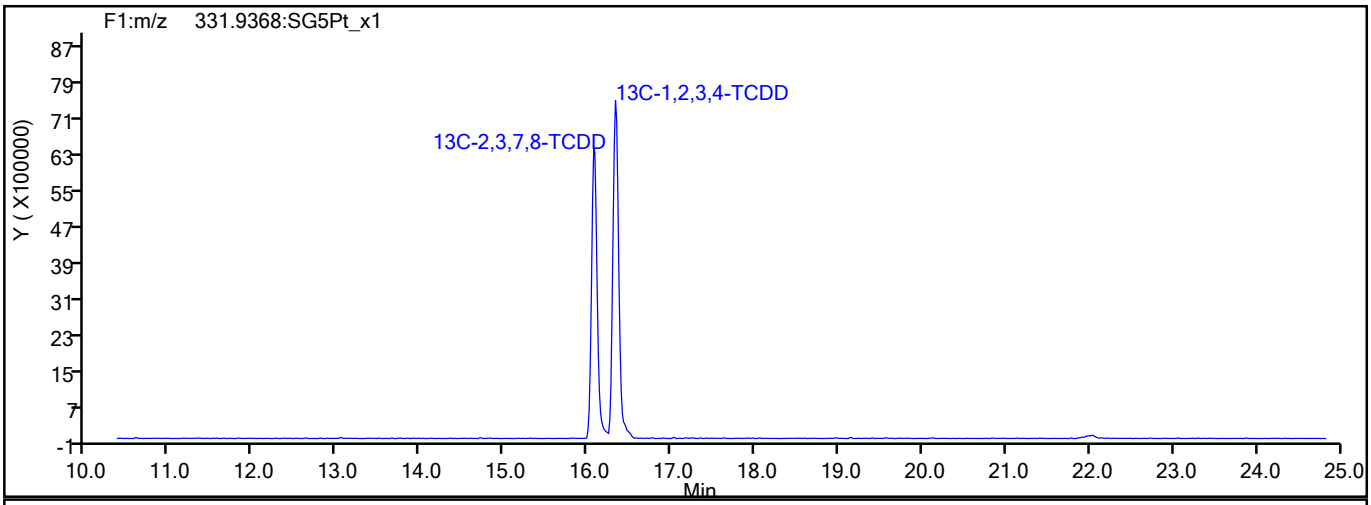

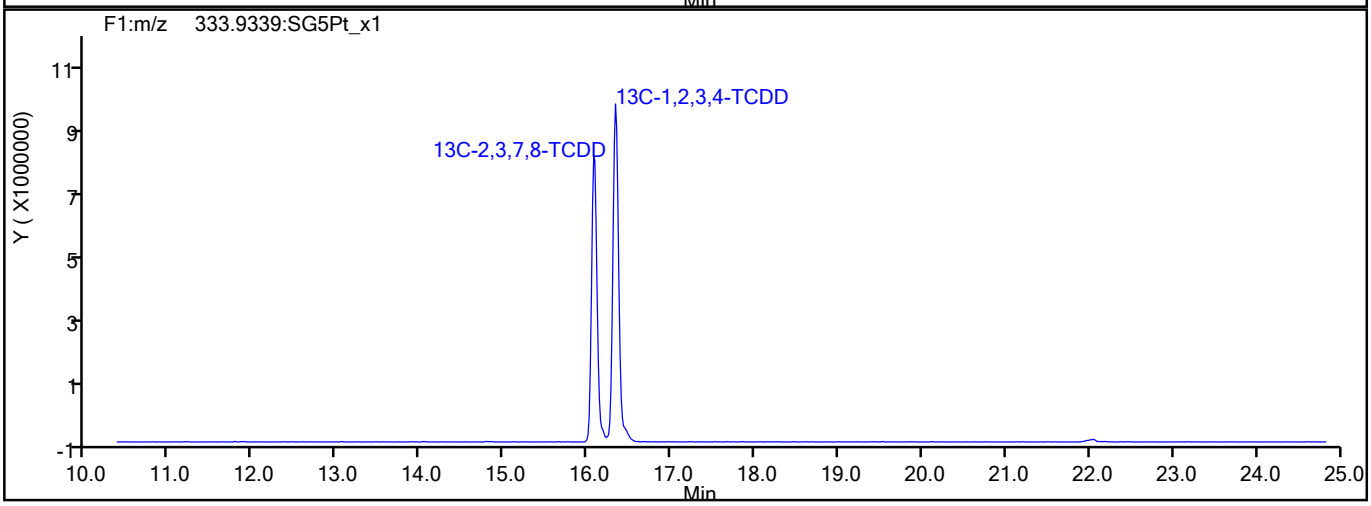

790002

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

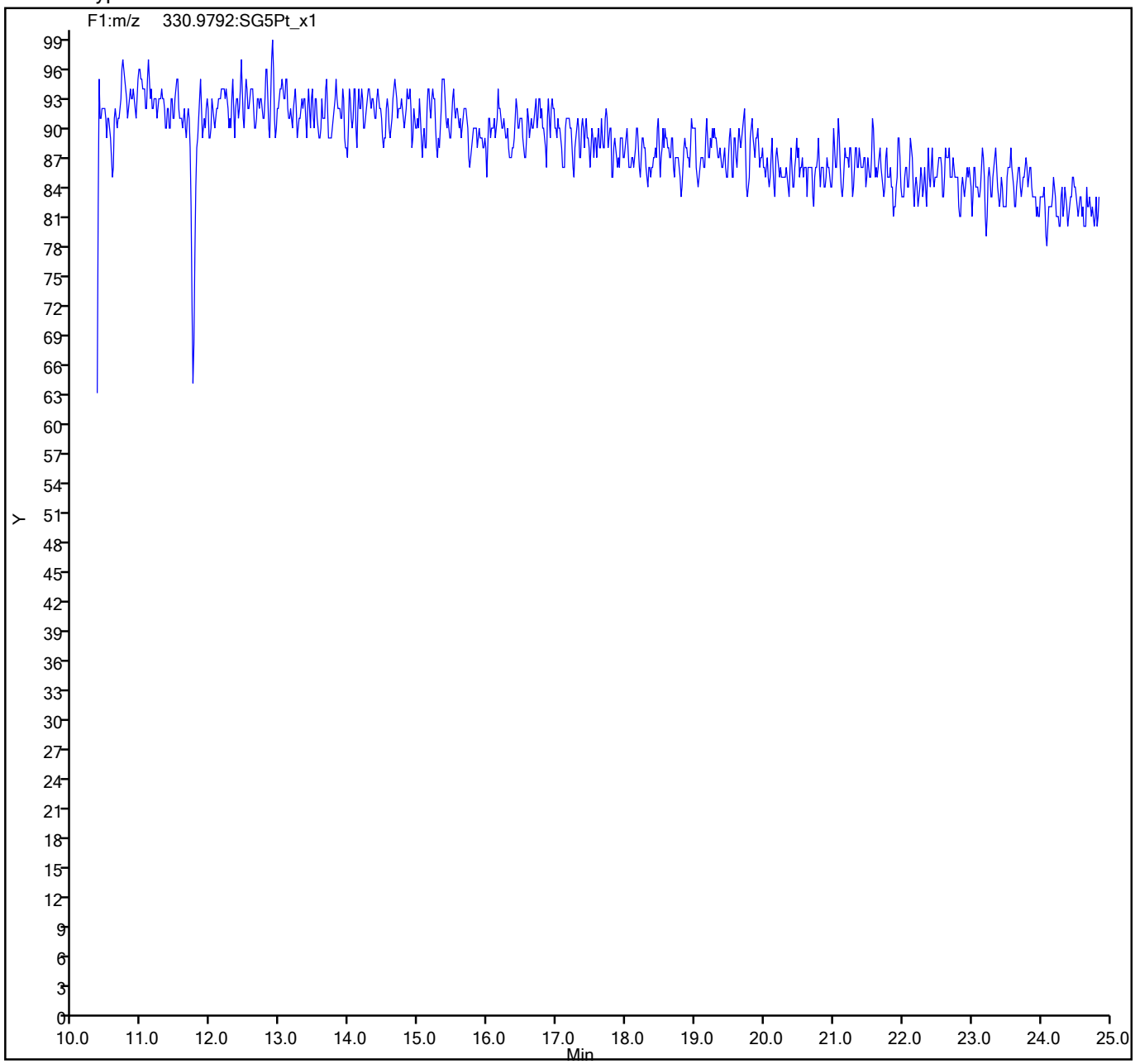

790003

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

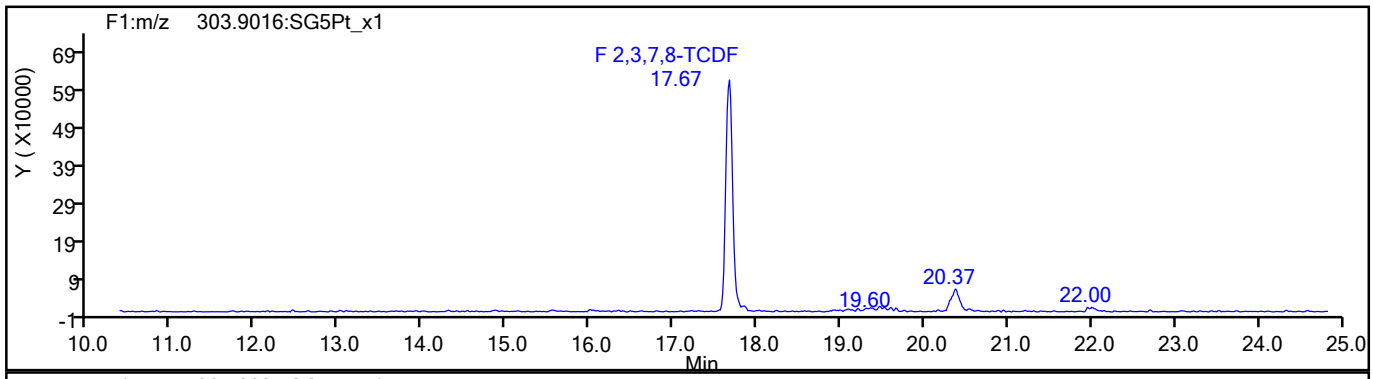

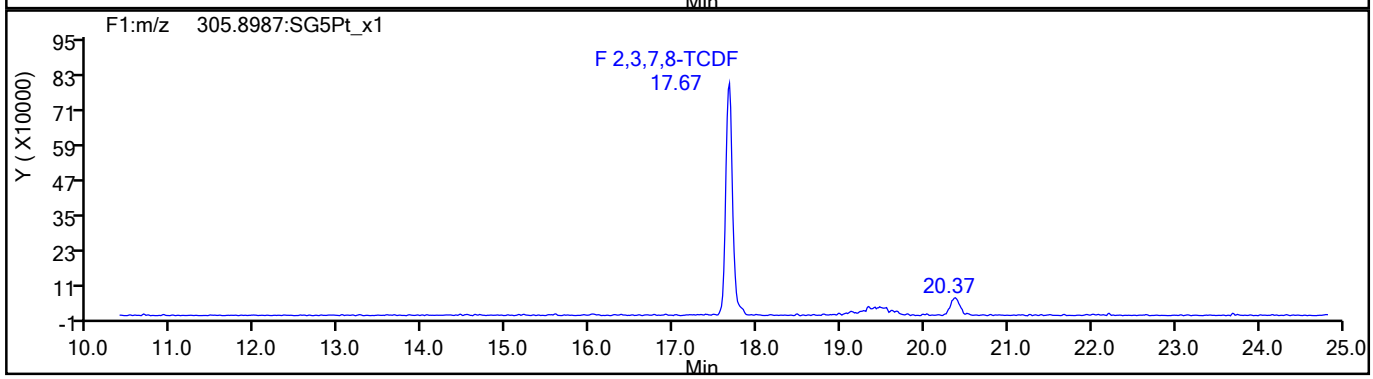

TCDF Standards

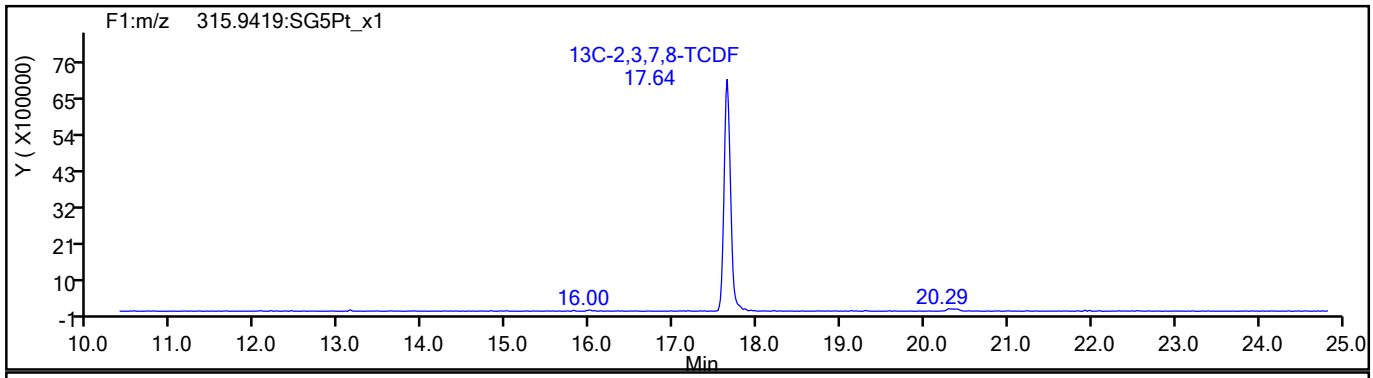

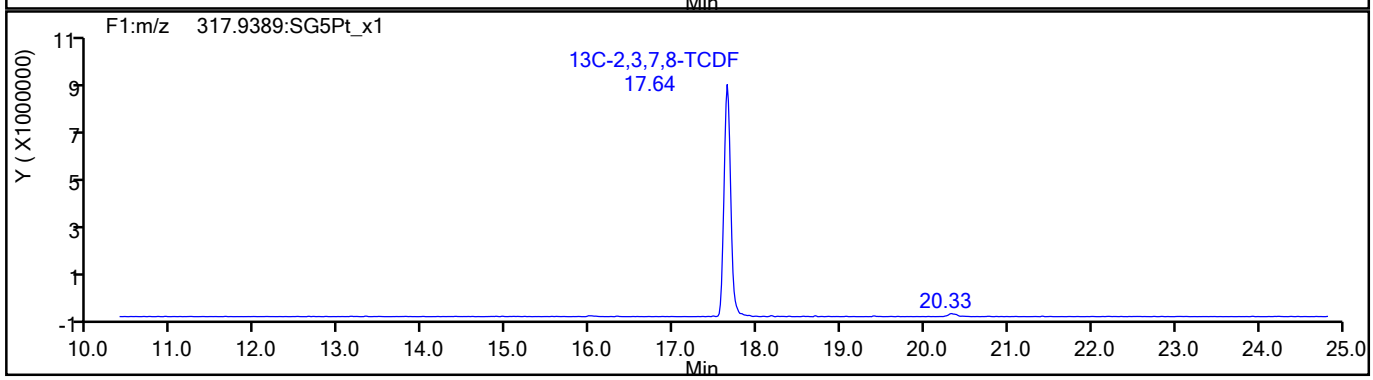

790006

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

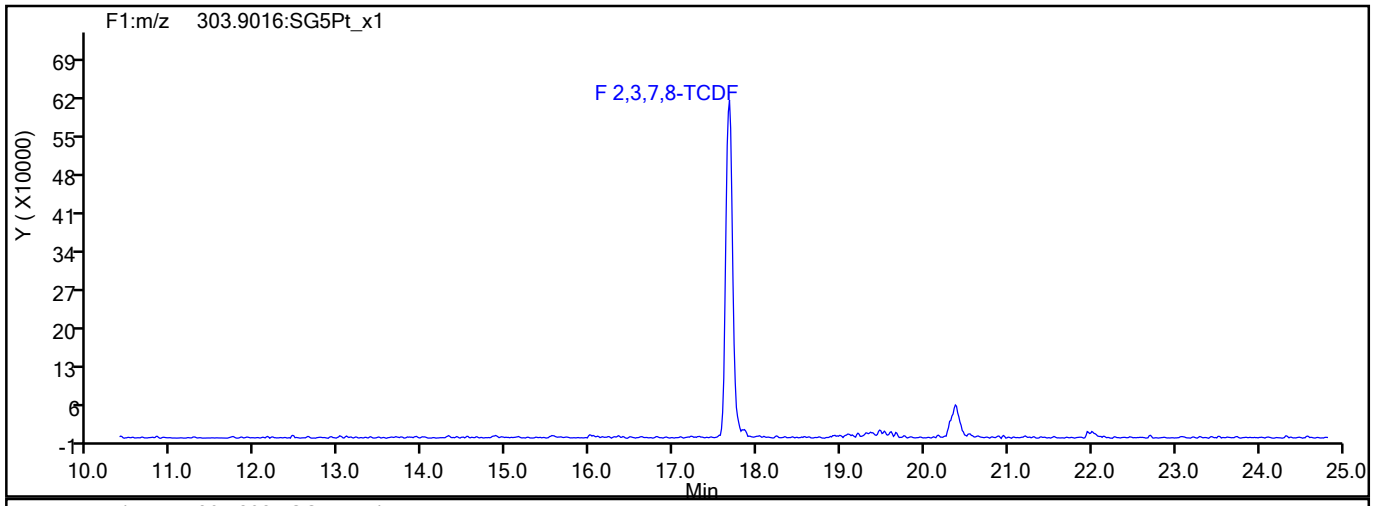

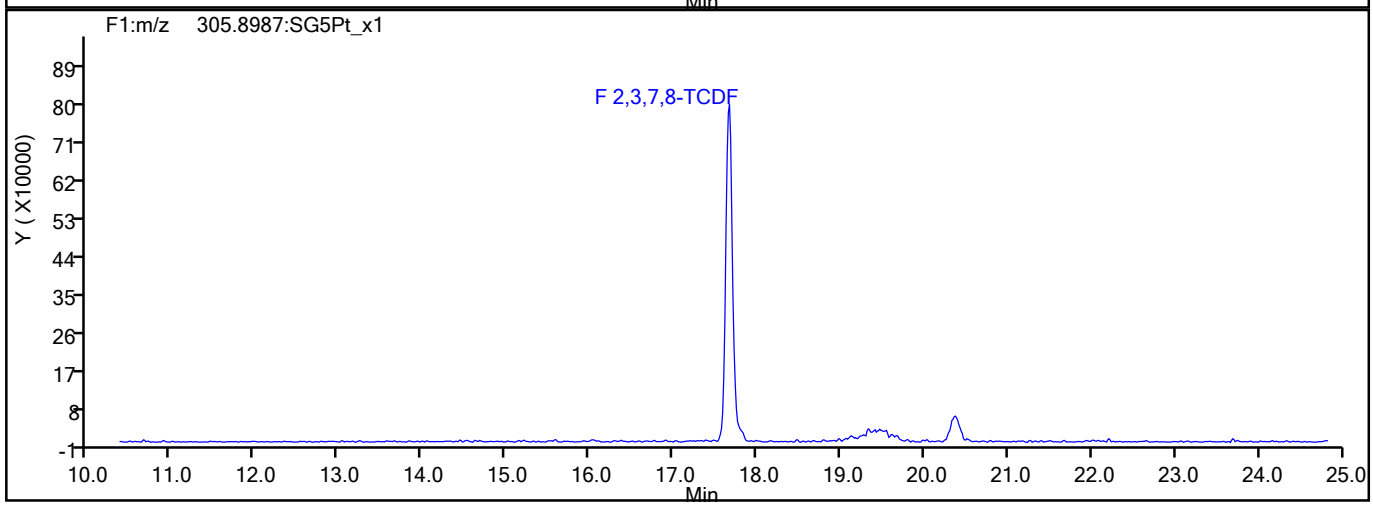

TCDF Interference Mass

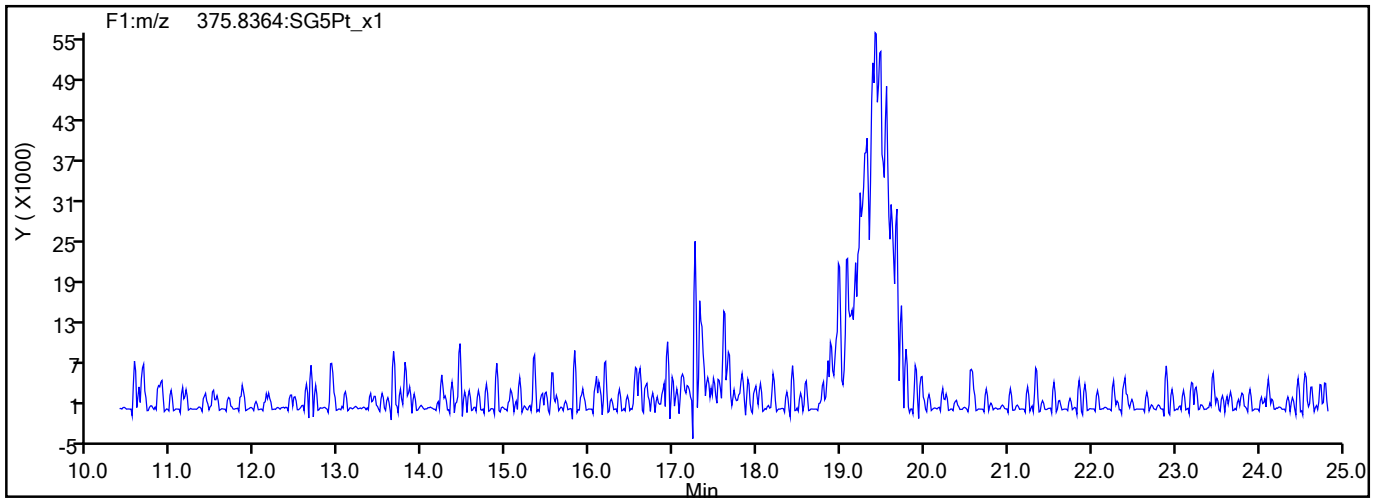

790007

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

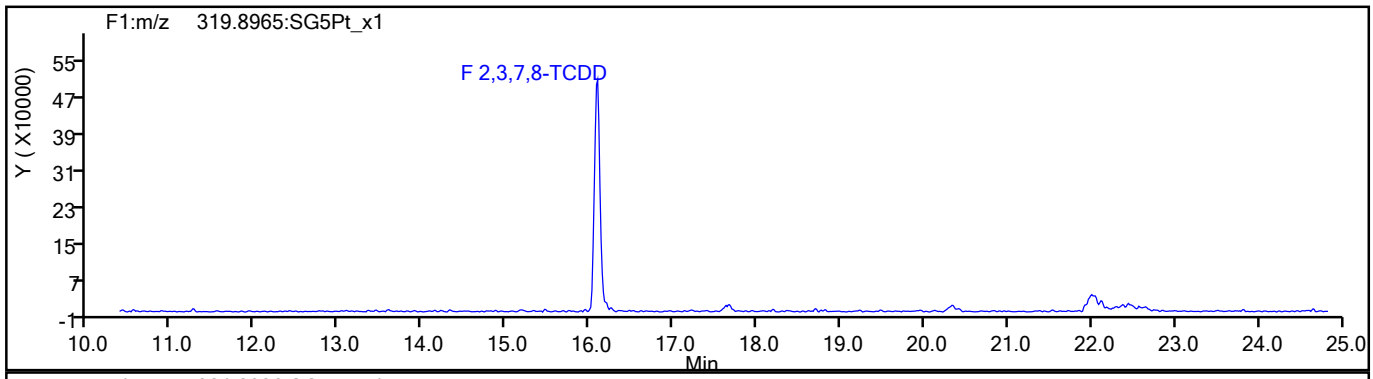

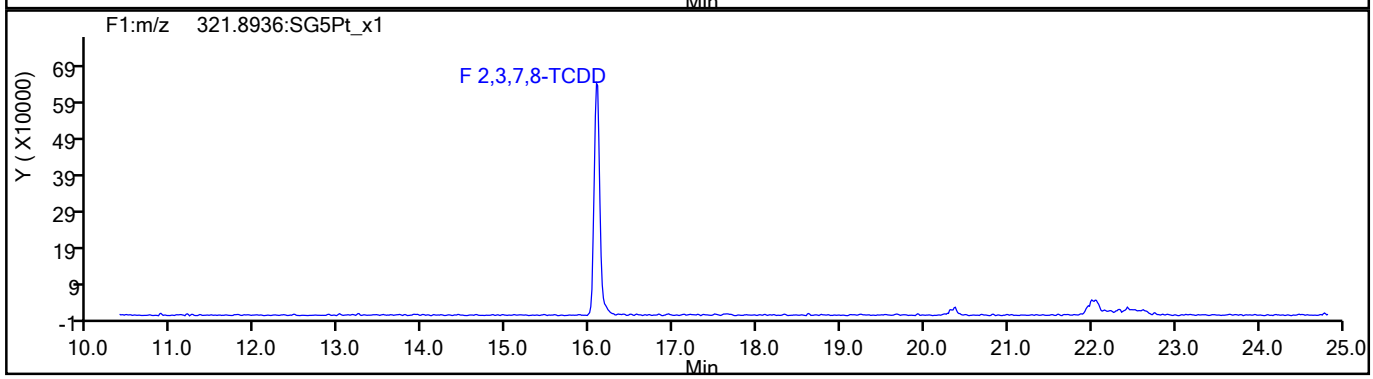

TCDD Standards

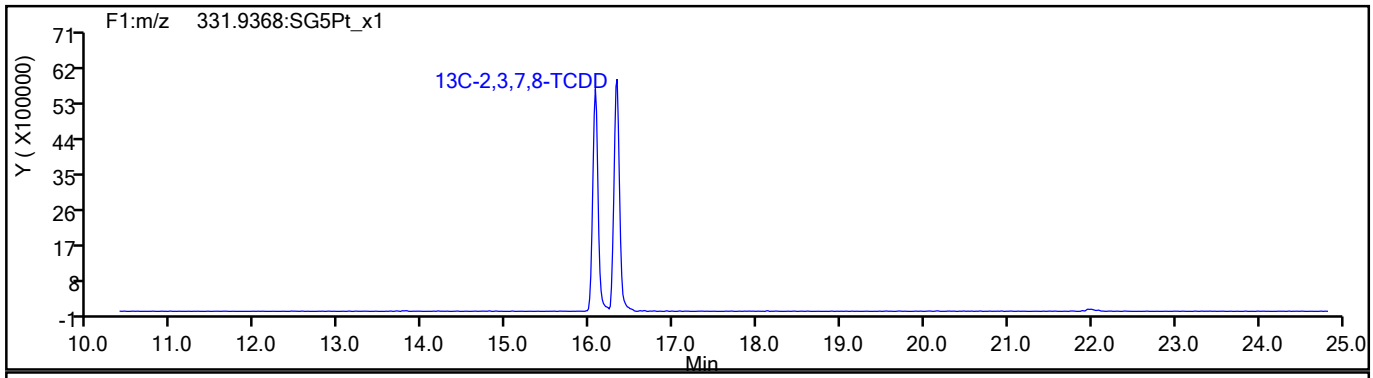

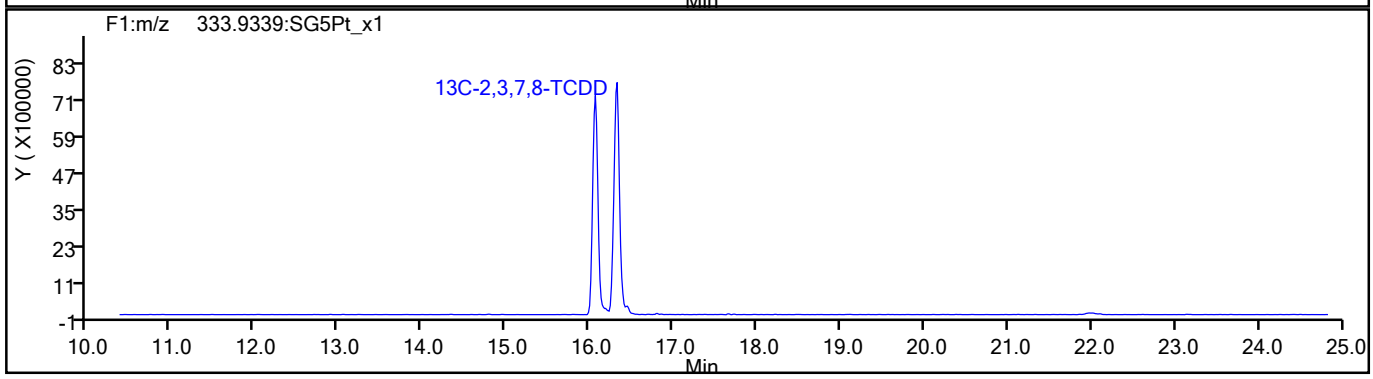

790008

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

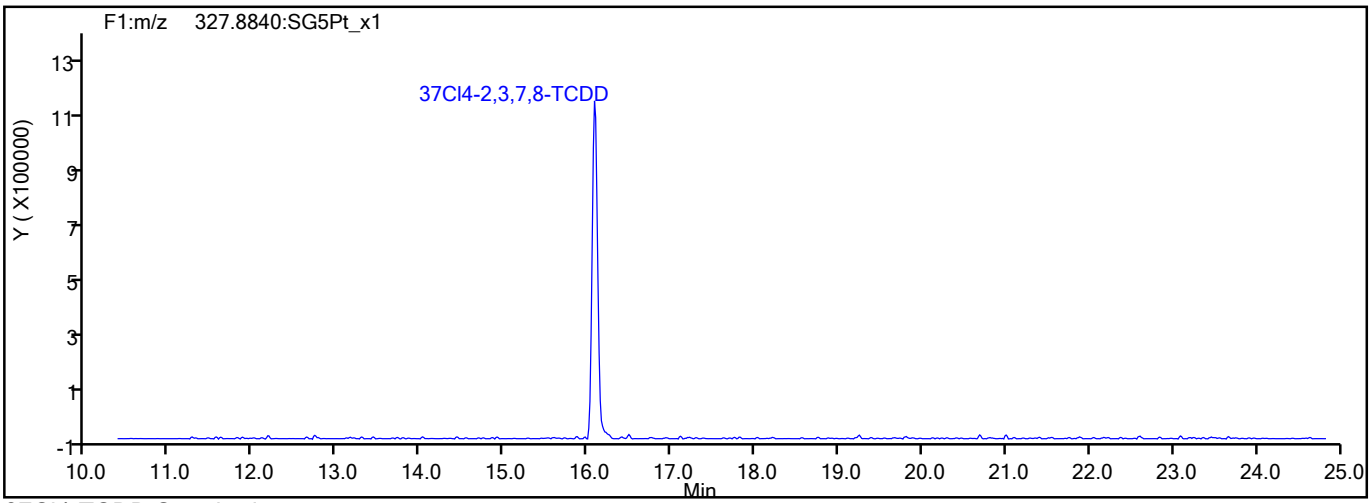

37Cl4-TCDD Standards

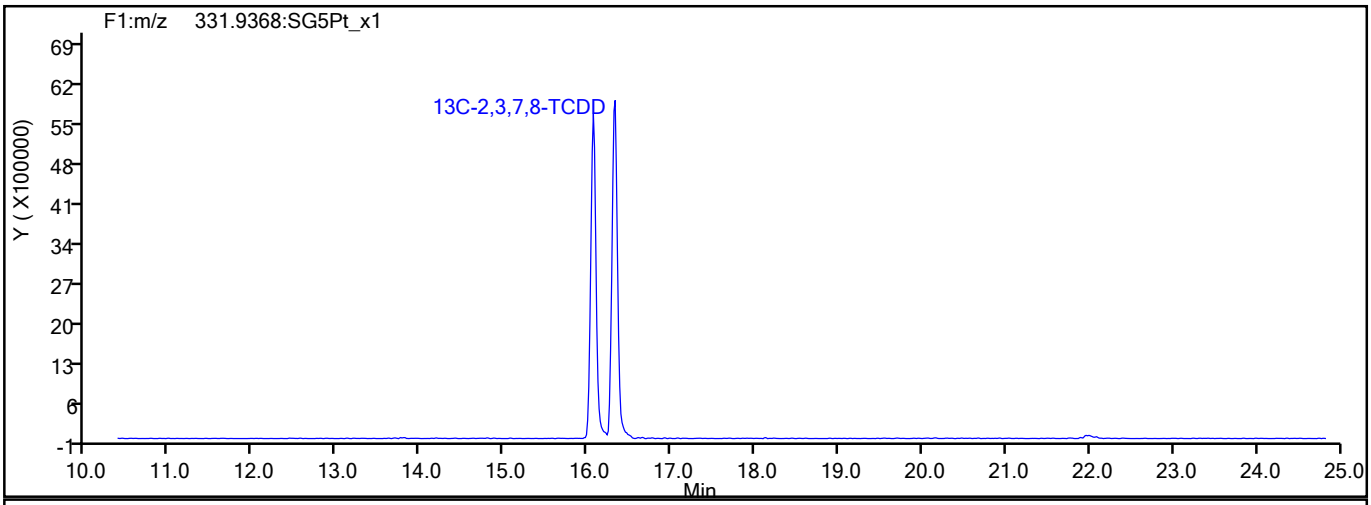

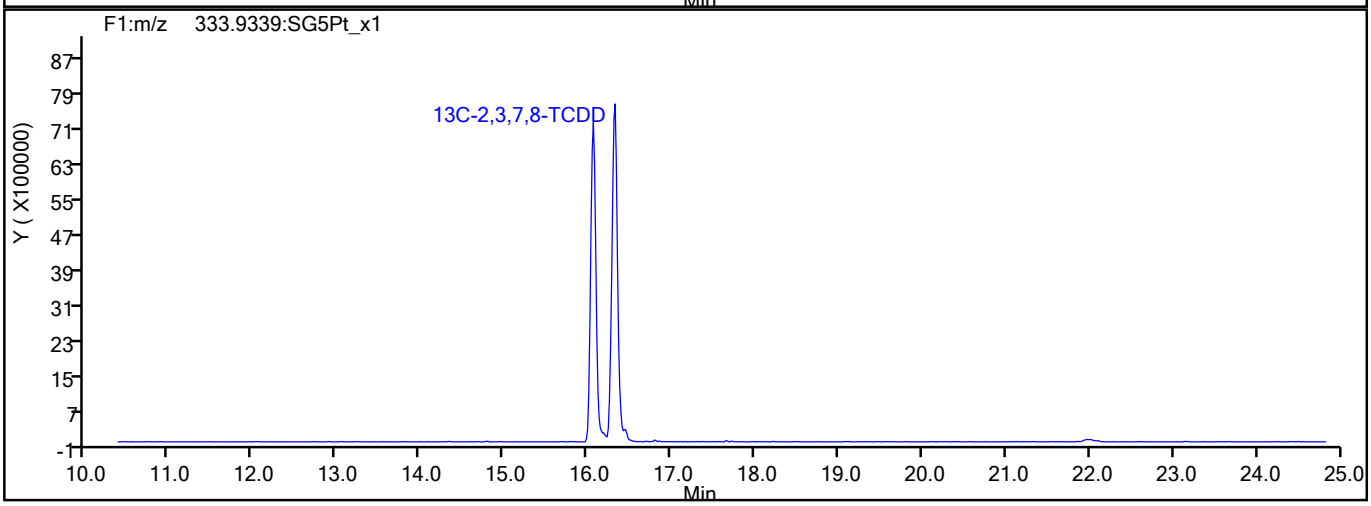

790009

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

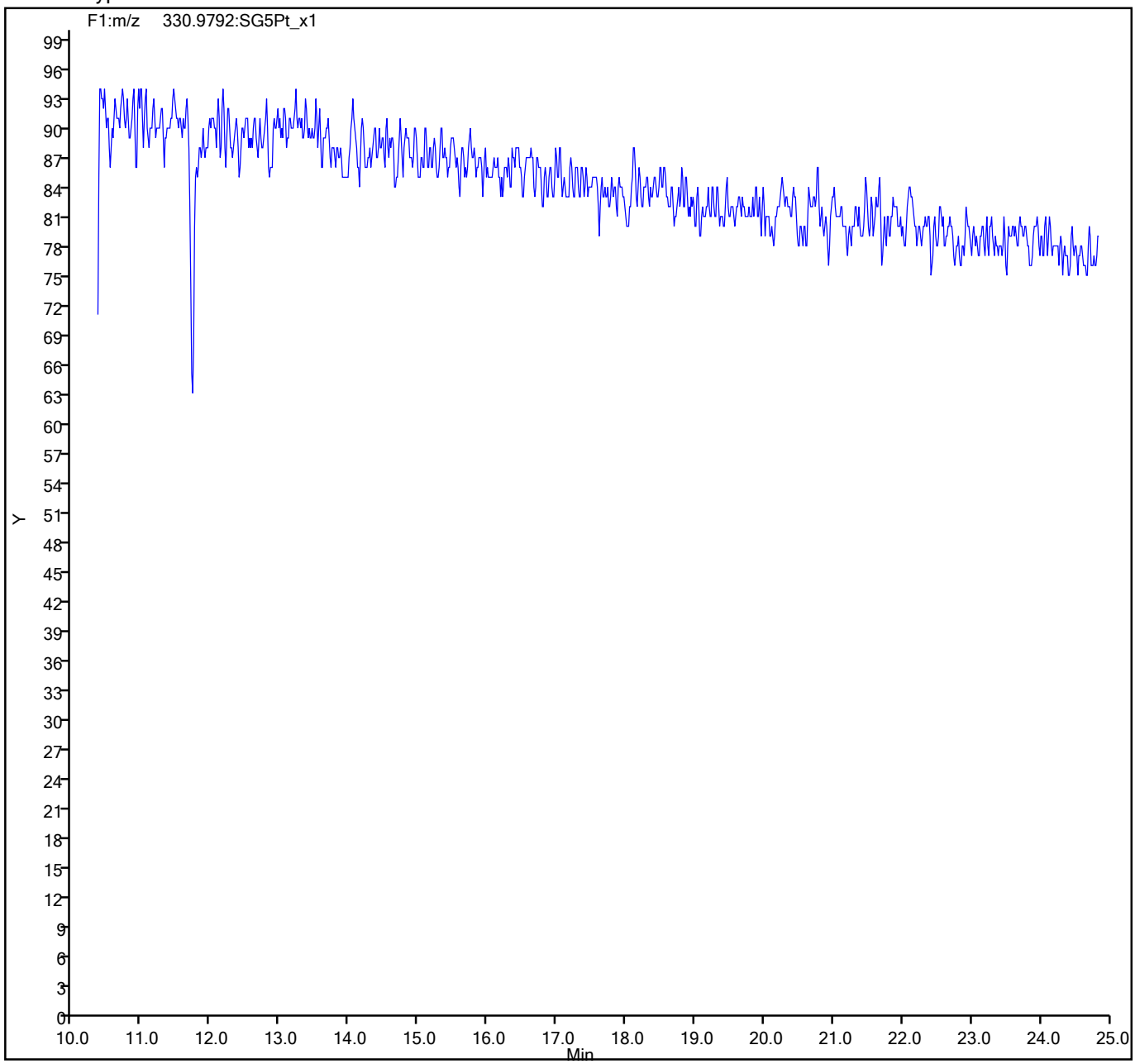

790010

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

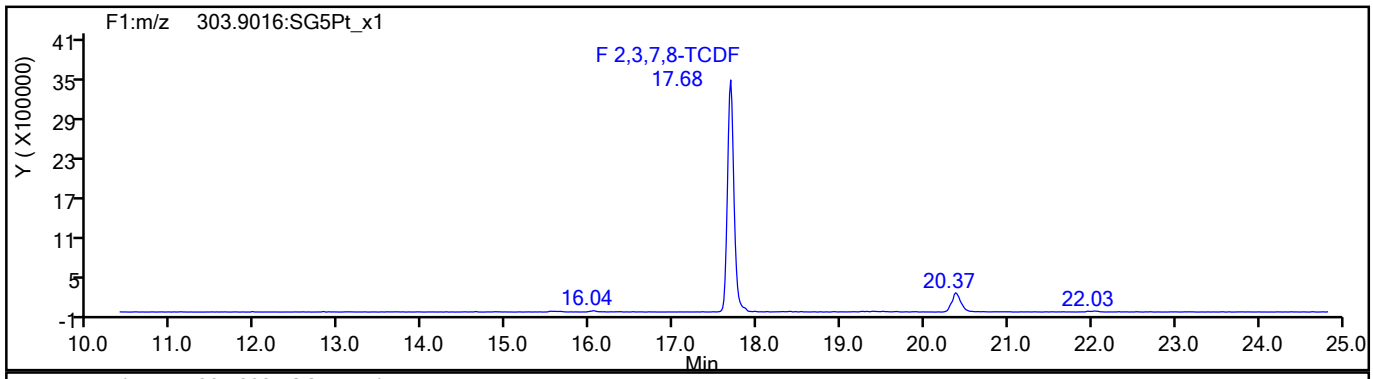

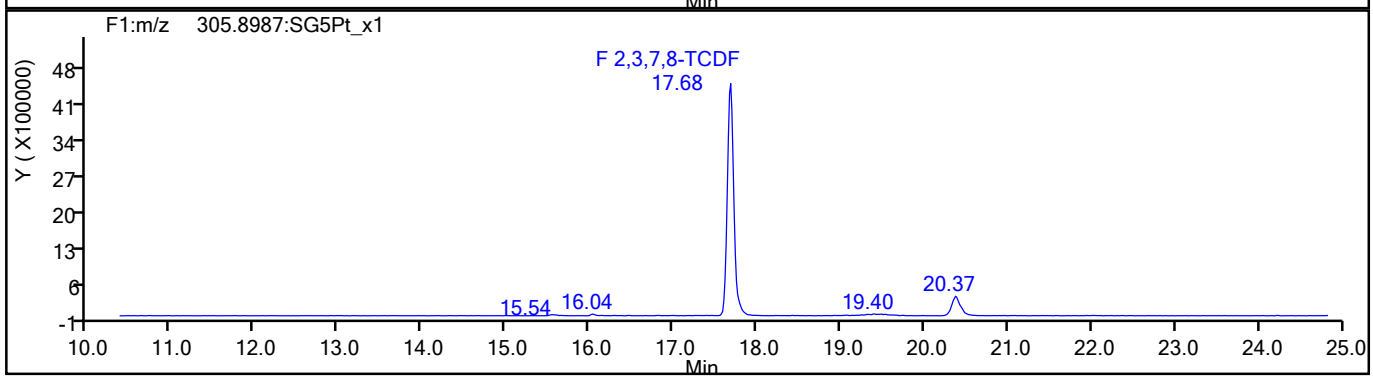

TCDF Standards

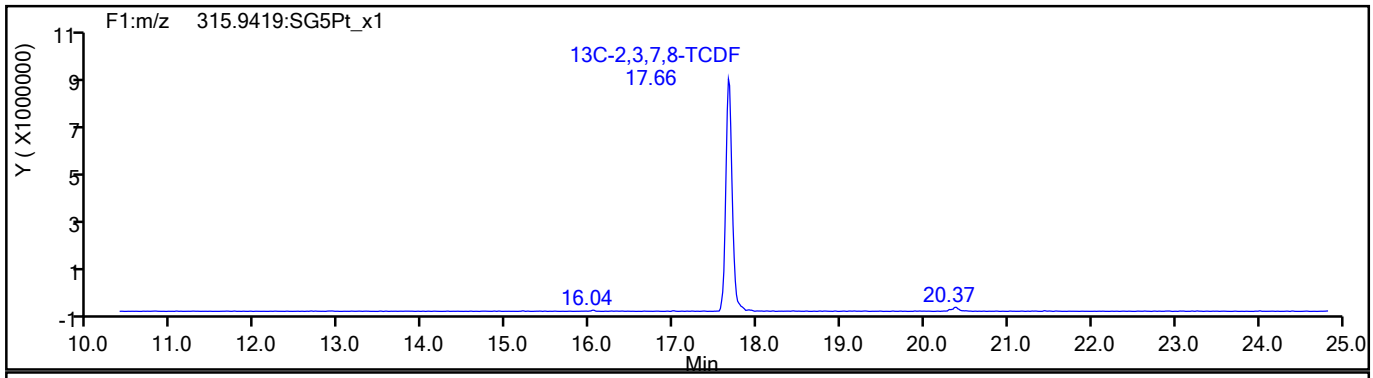

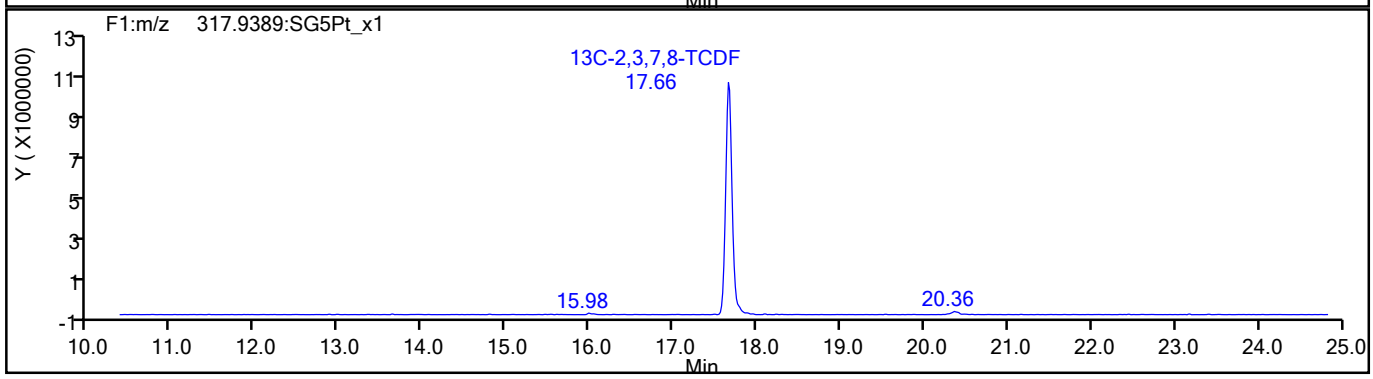

790013

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

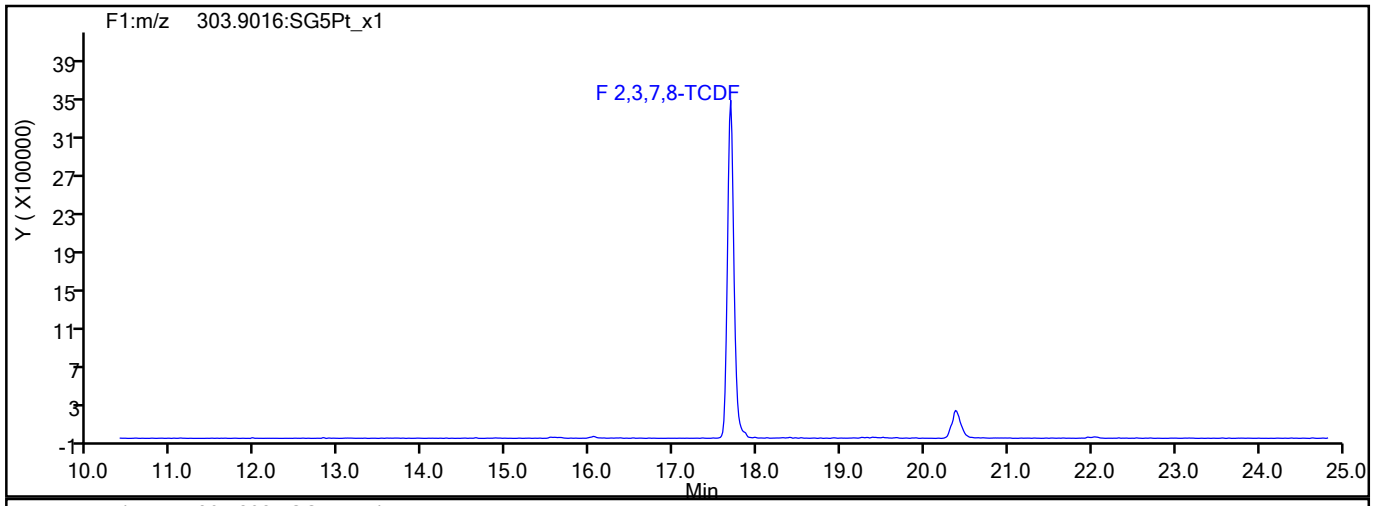

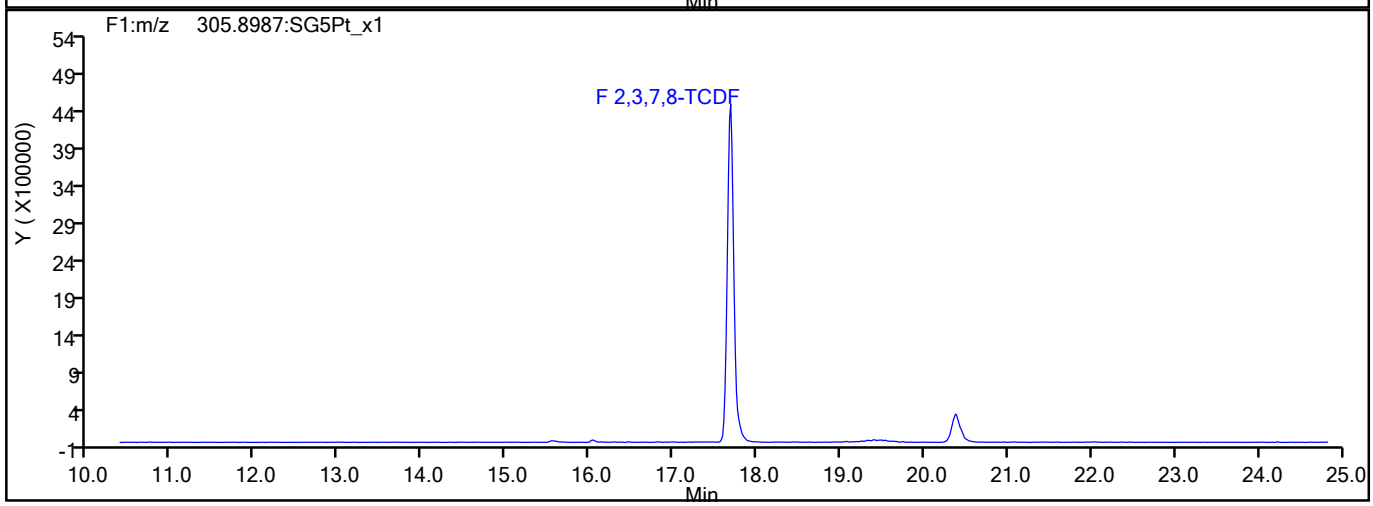

TCDF Interference Mass

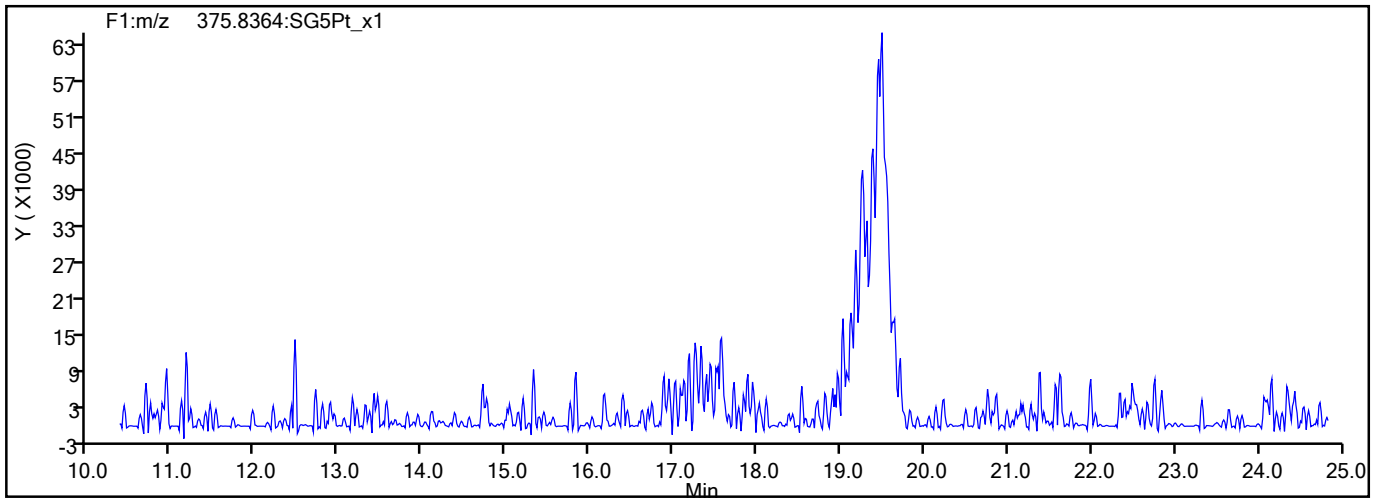

790014

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

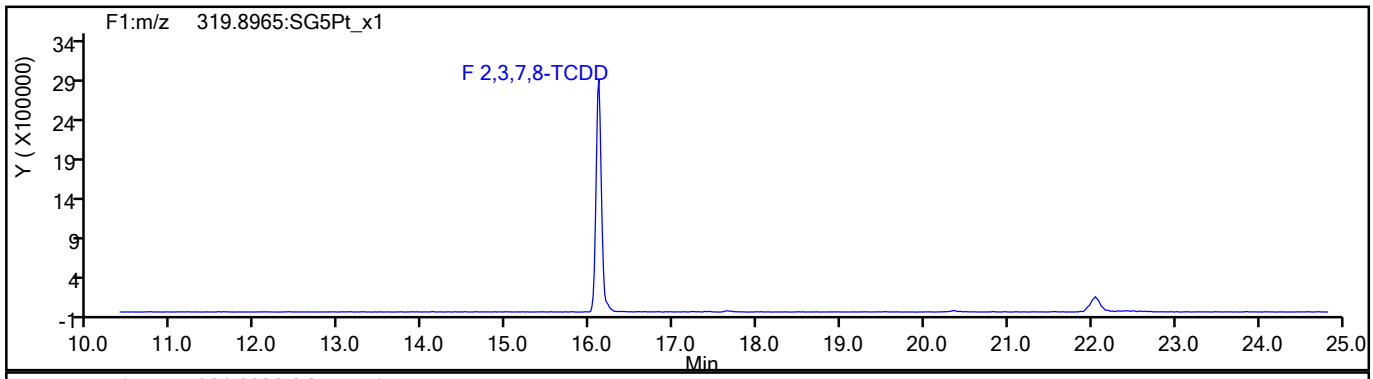

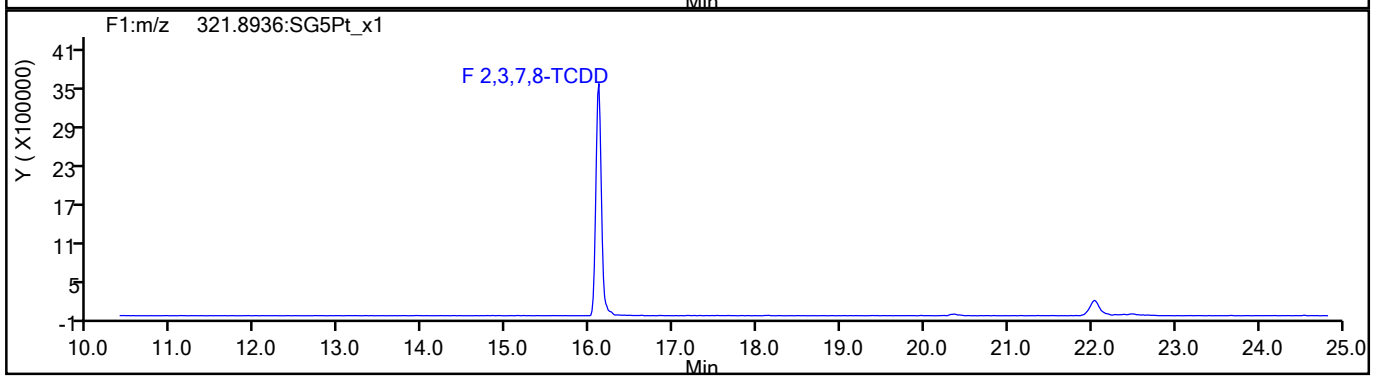

TCDD Standards

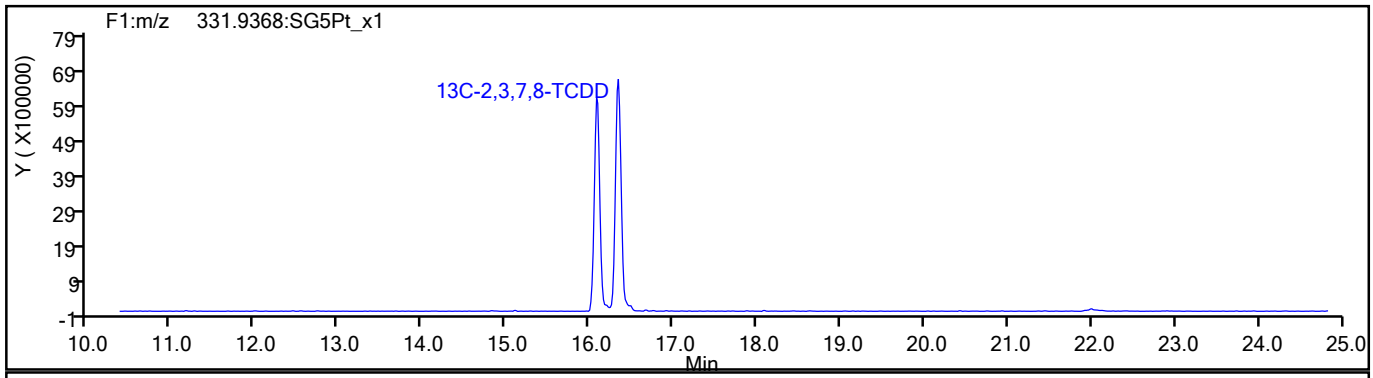

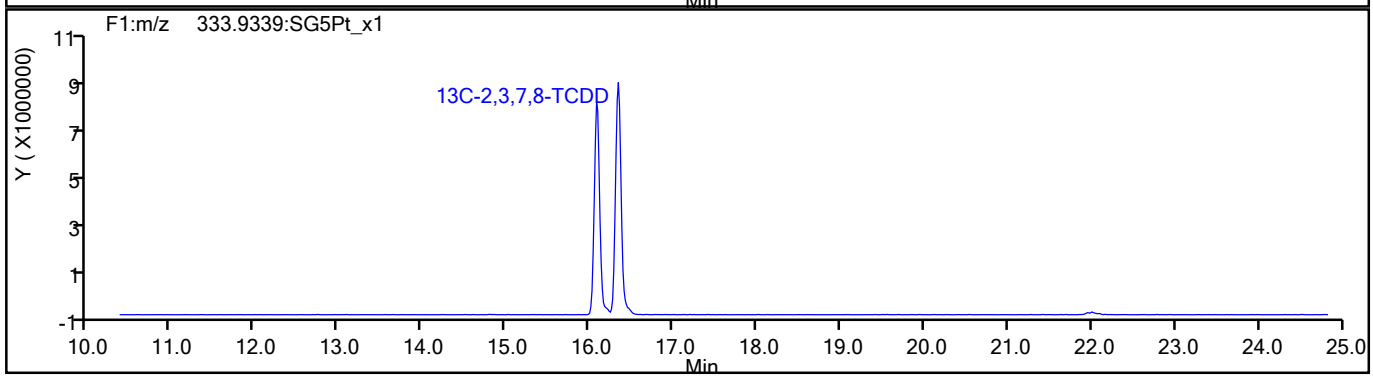

790015

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

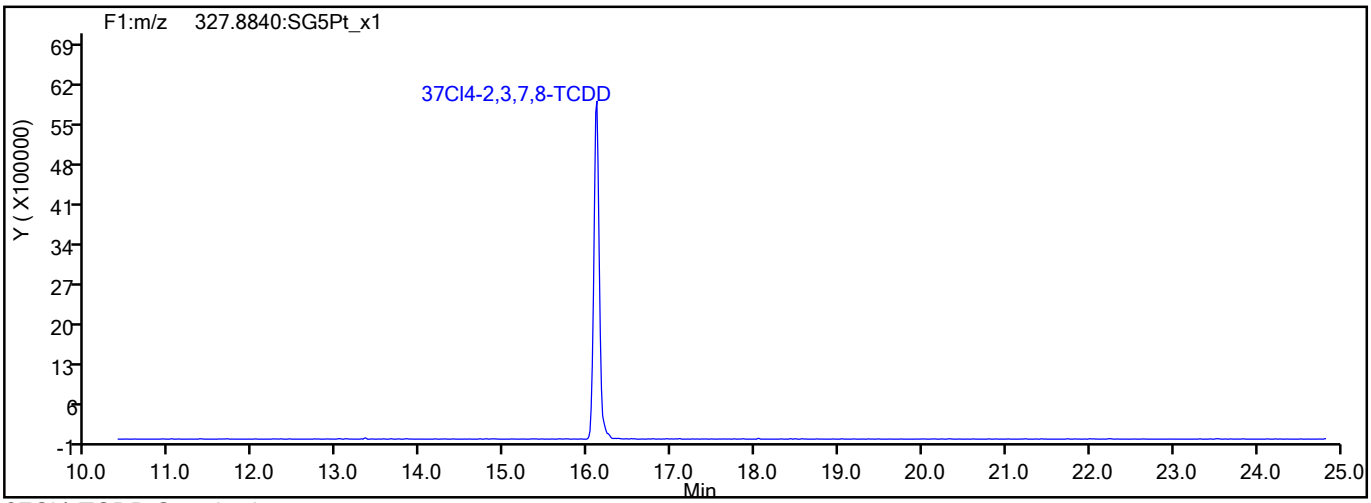

37Cl4-TCDD Standards

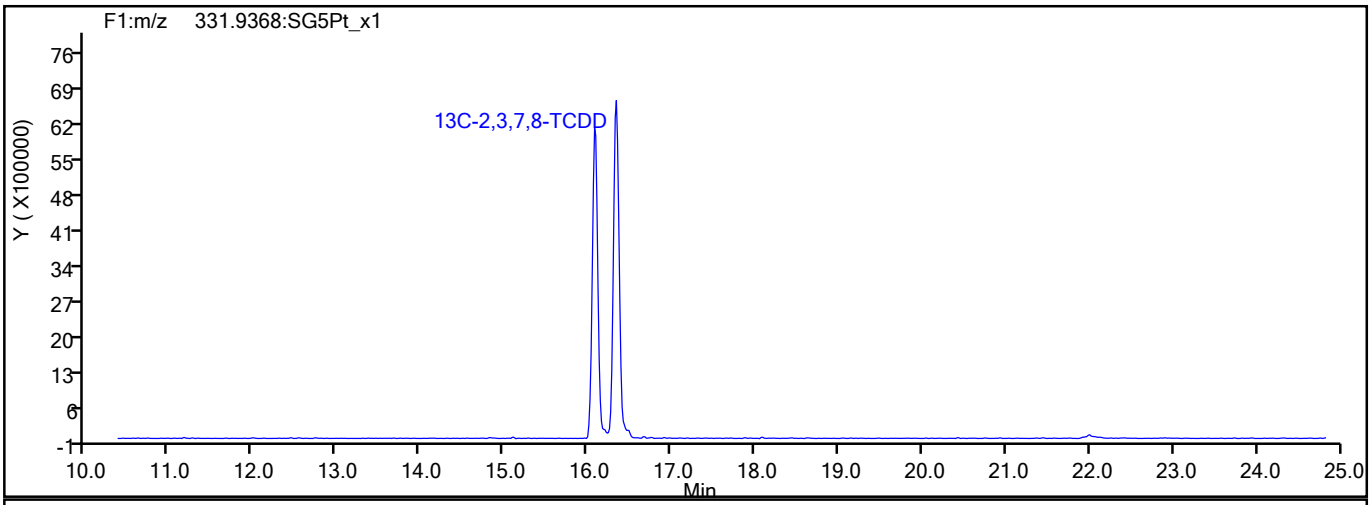

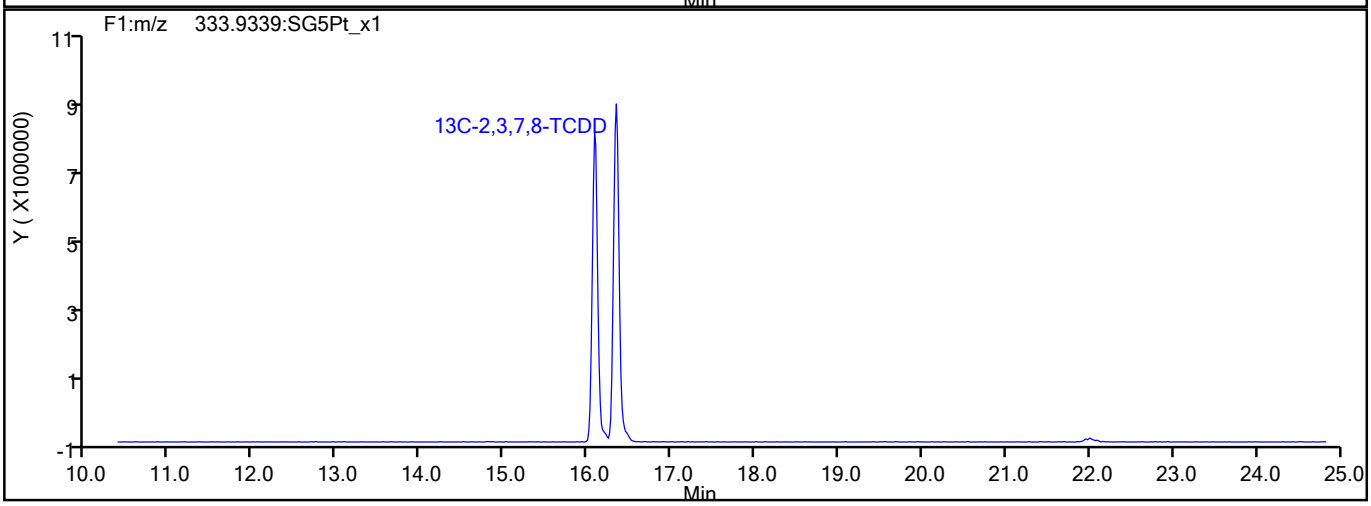

790016

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

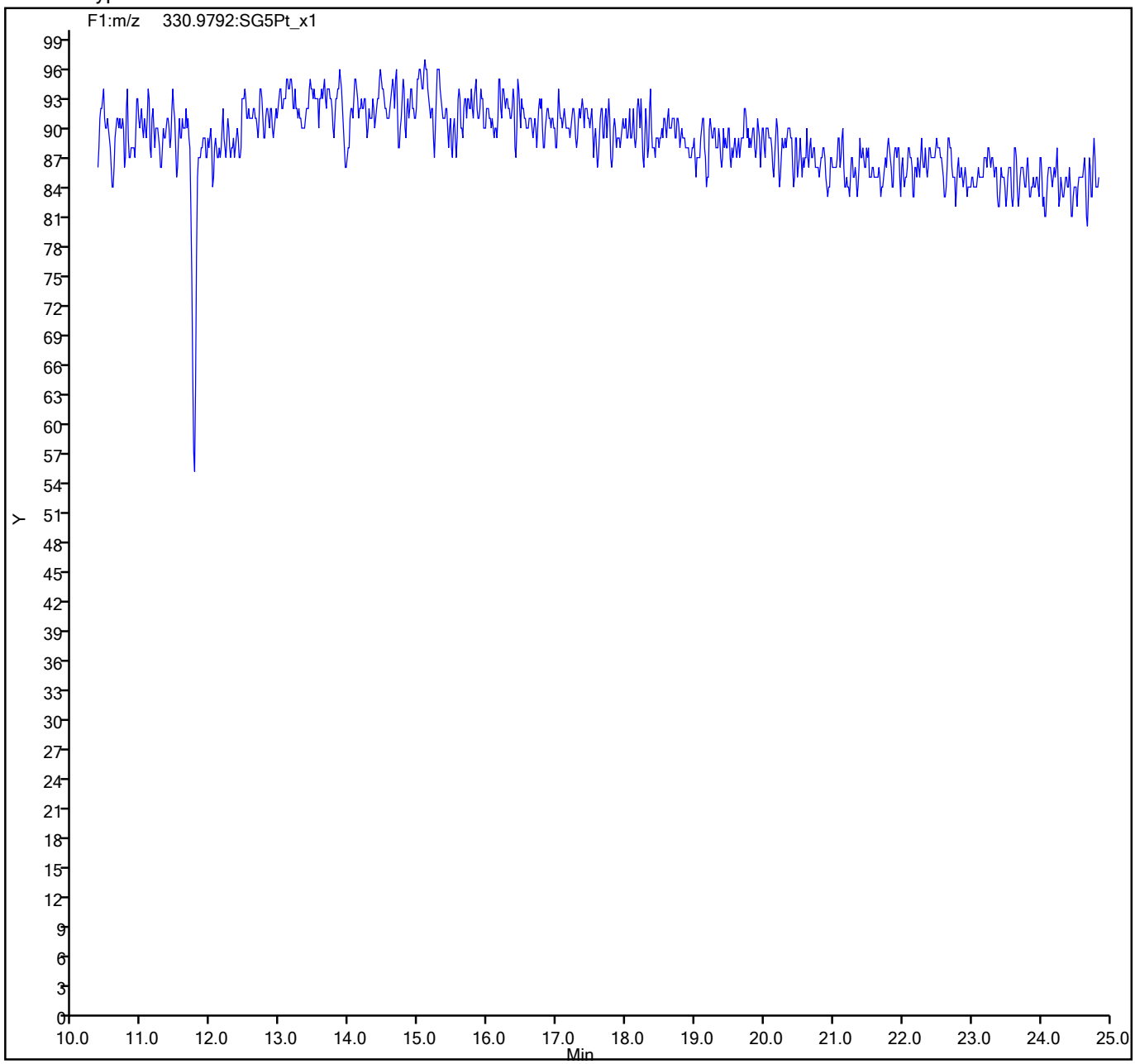

790017

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

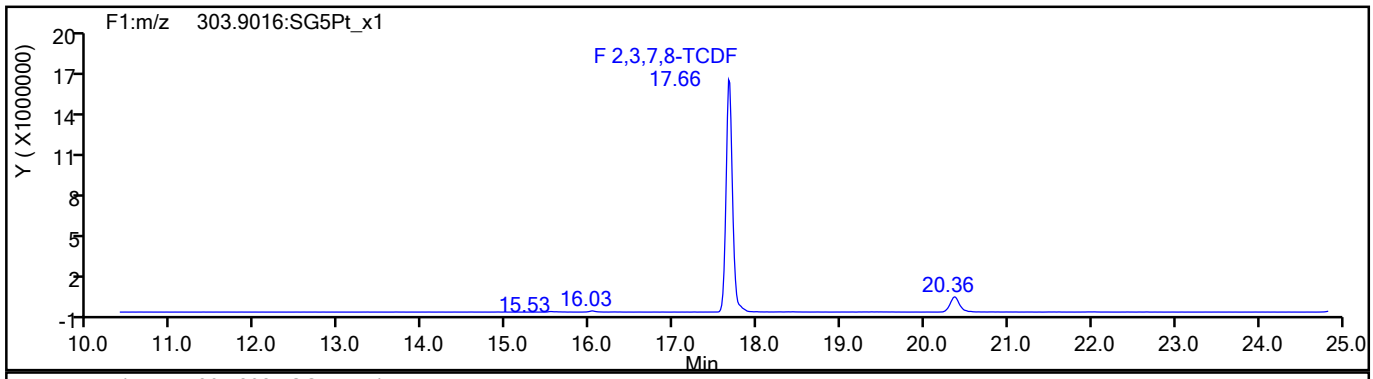

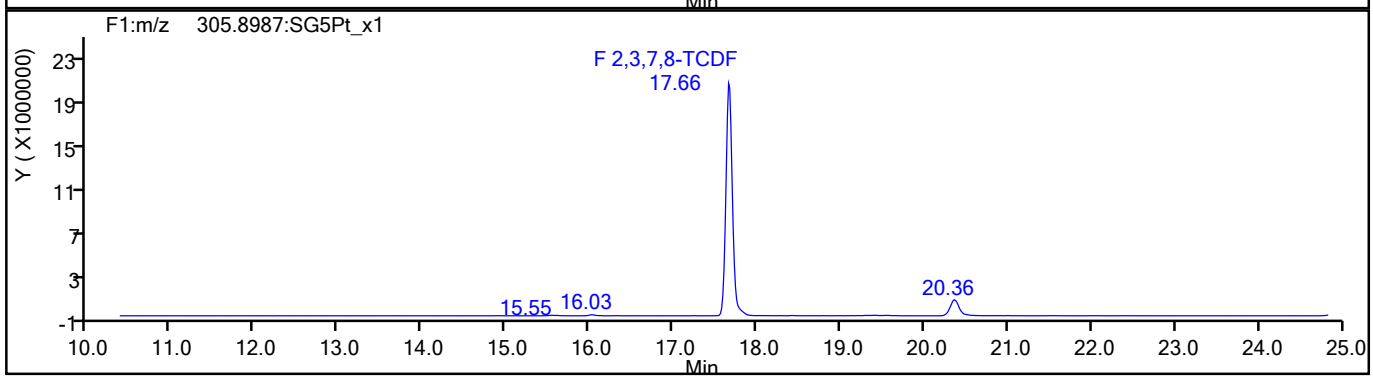

TCDF Standards

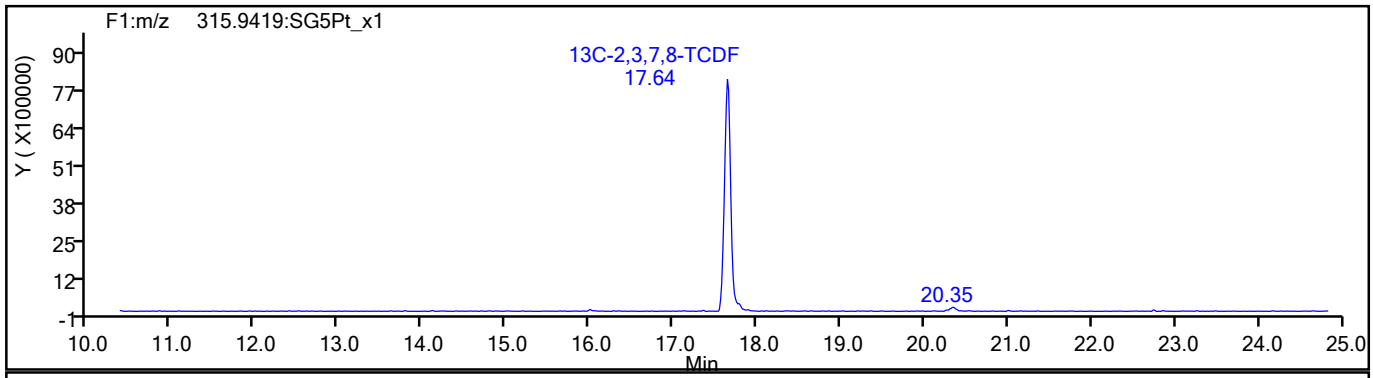

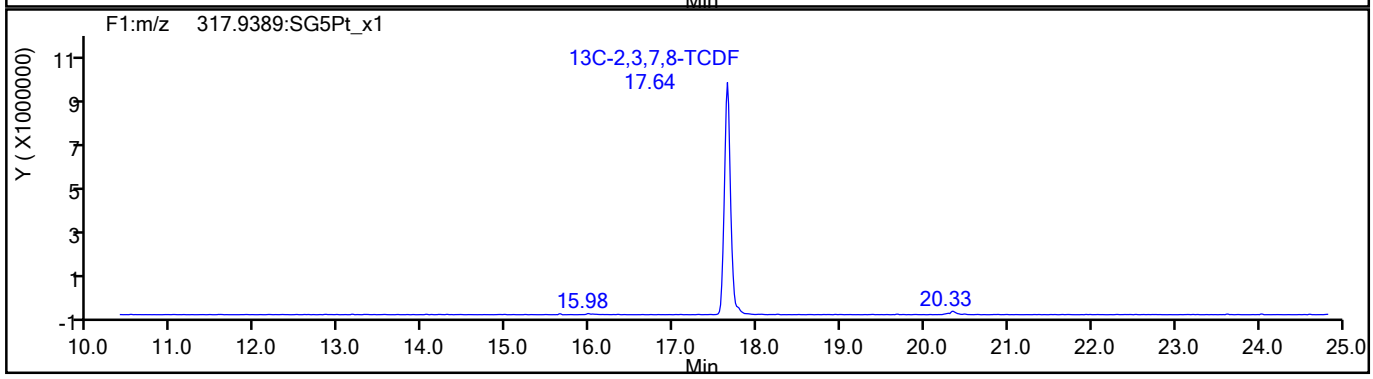

790020

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

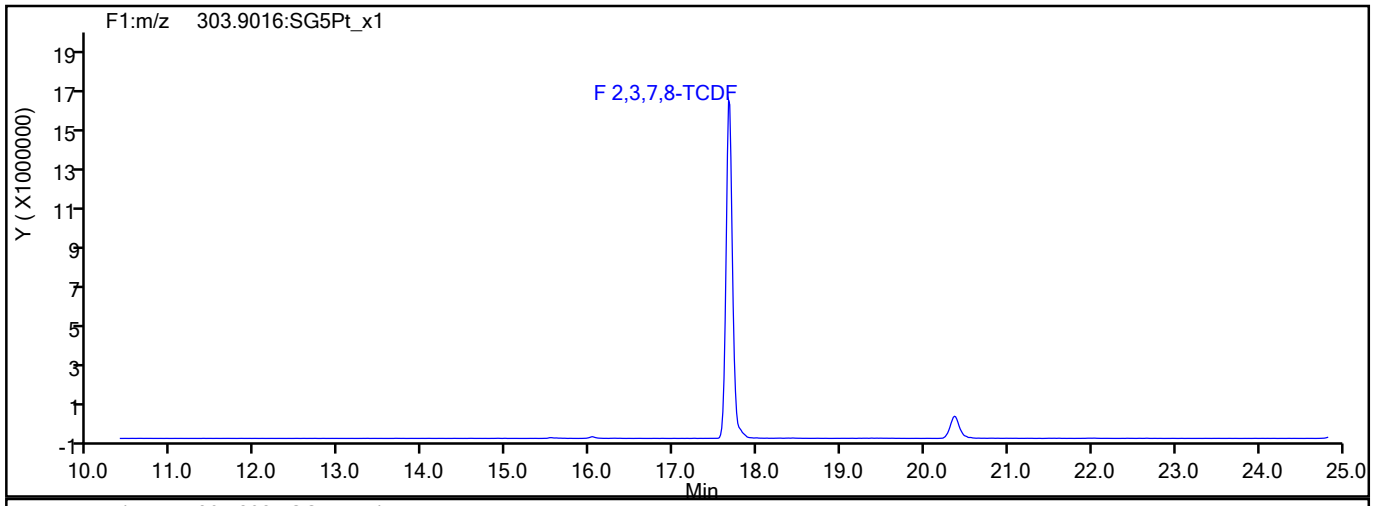

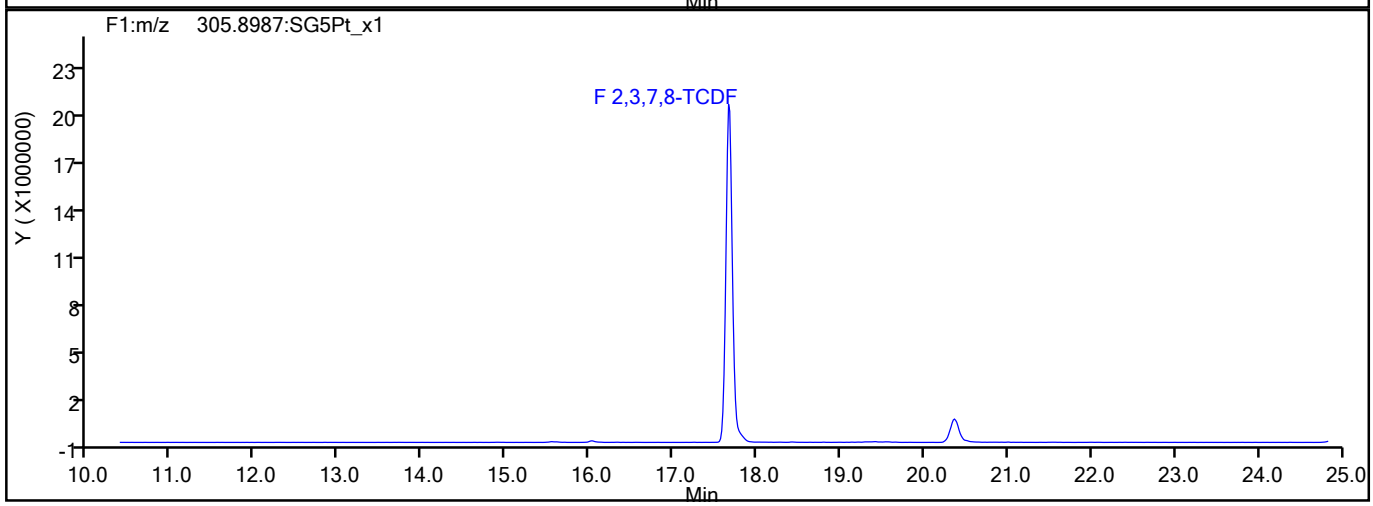

TCDF Interference Mass

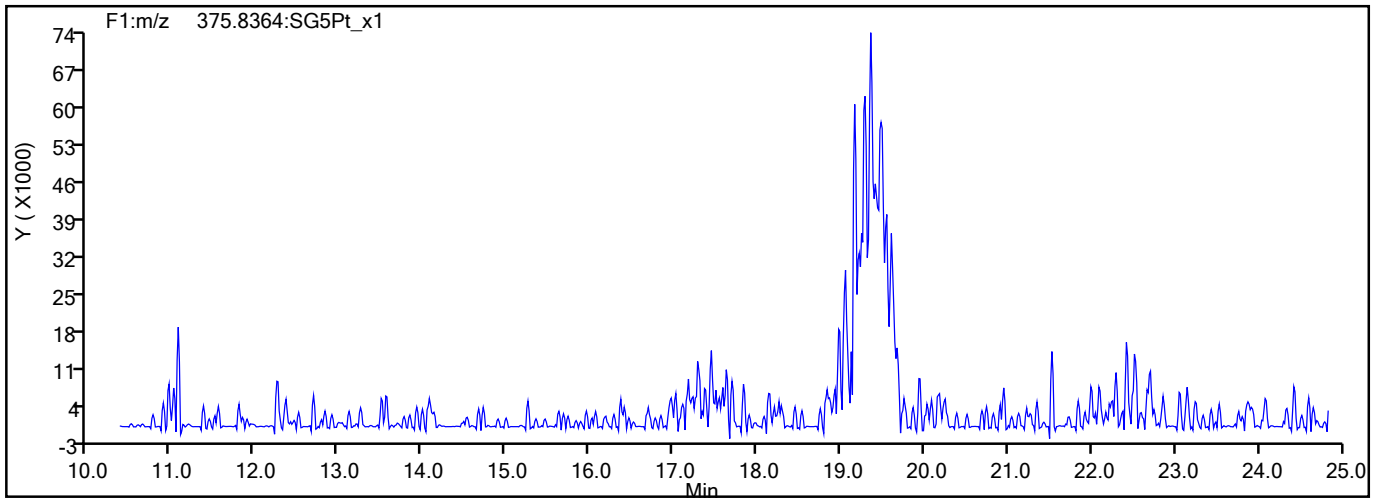

790021

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

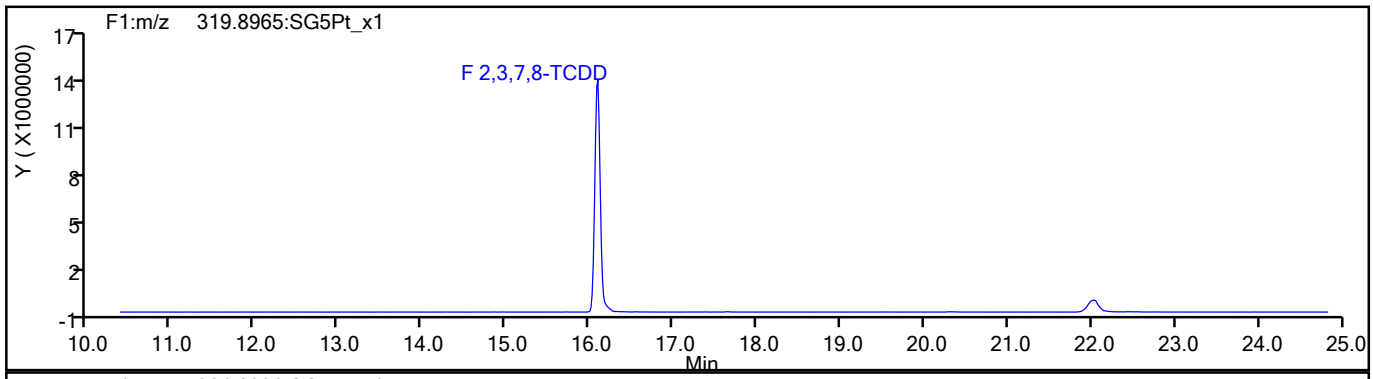

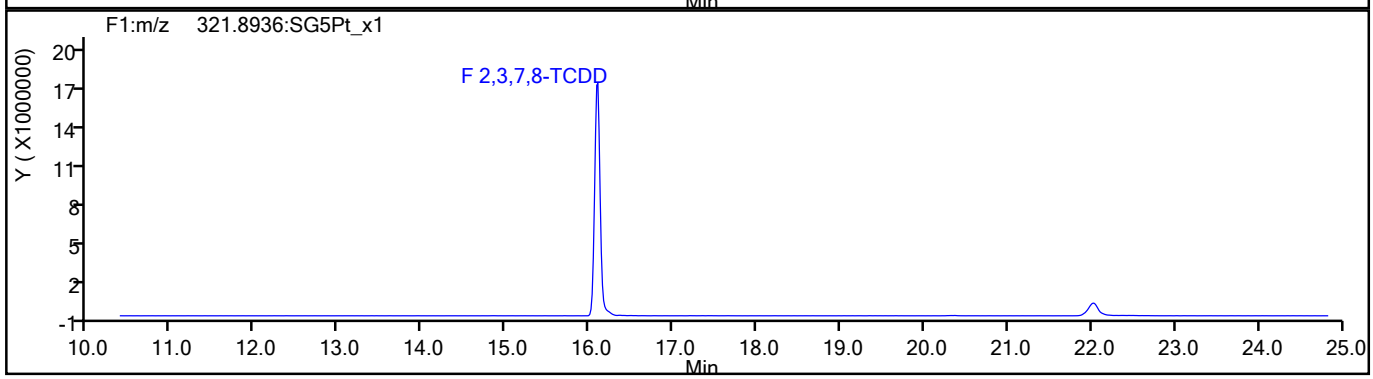

TCDD Standards

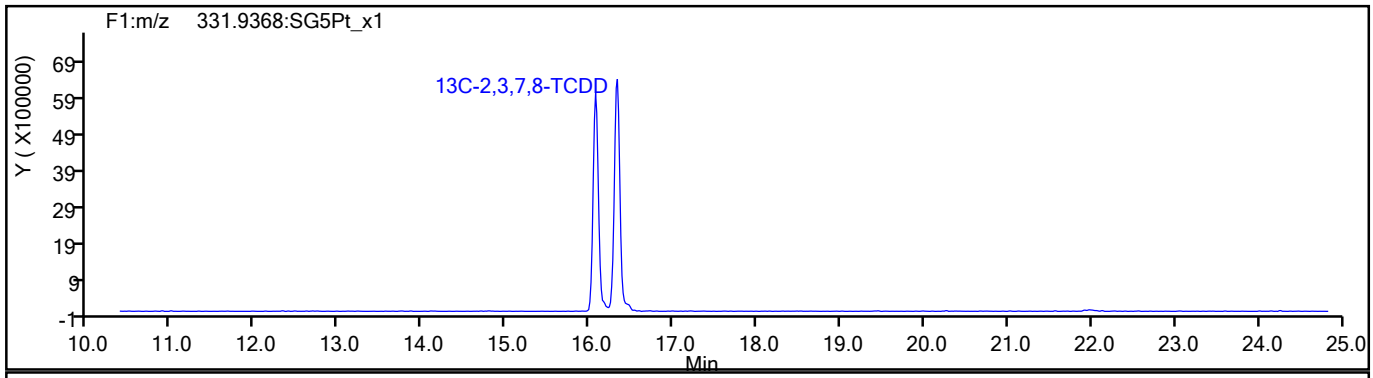

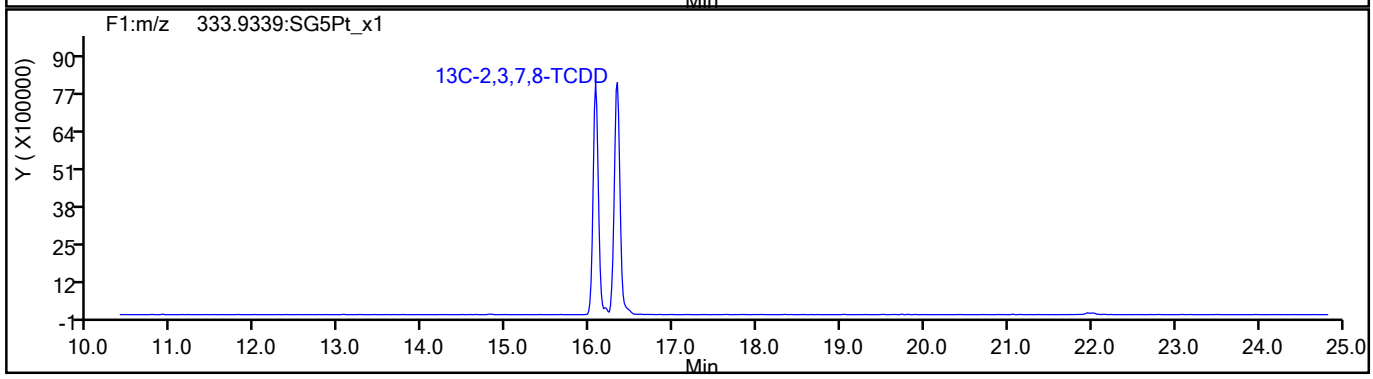

790022

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

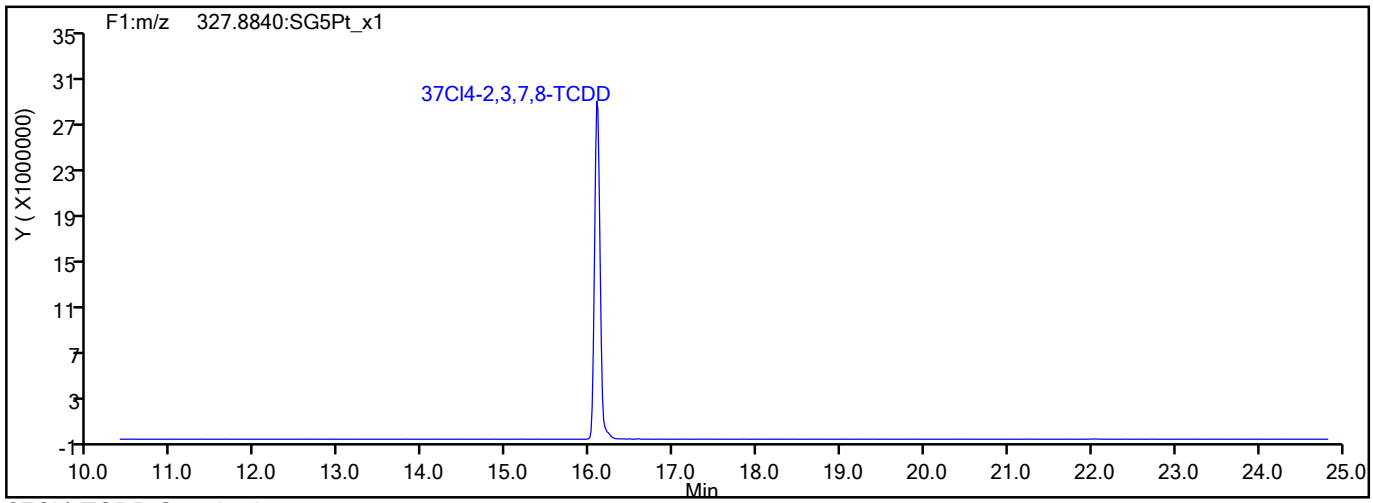

37Cl4-TCDD Standards

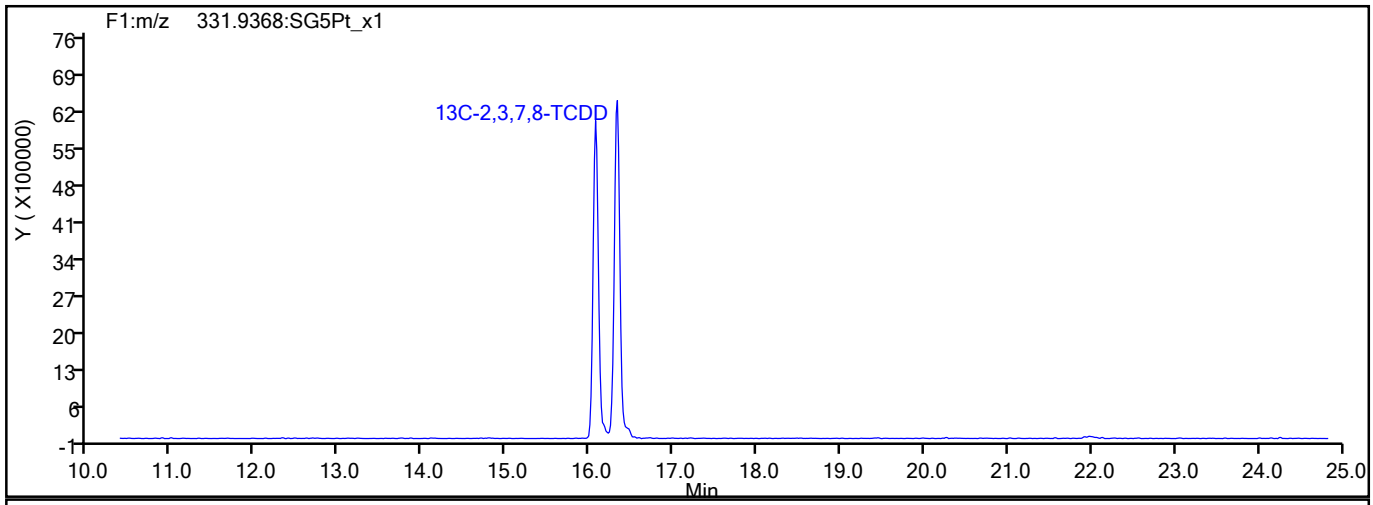

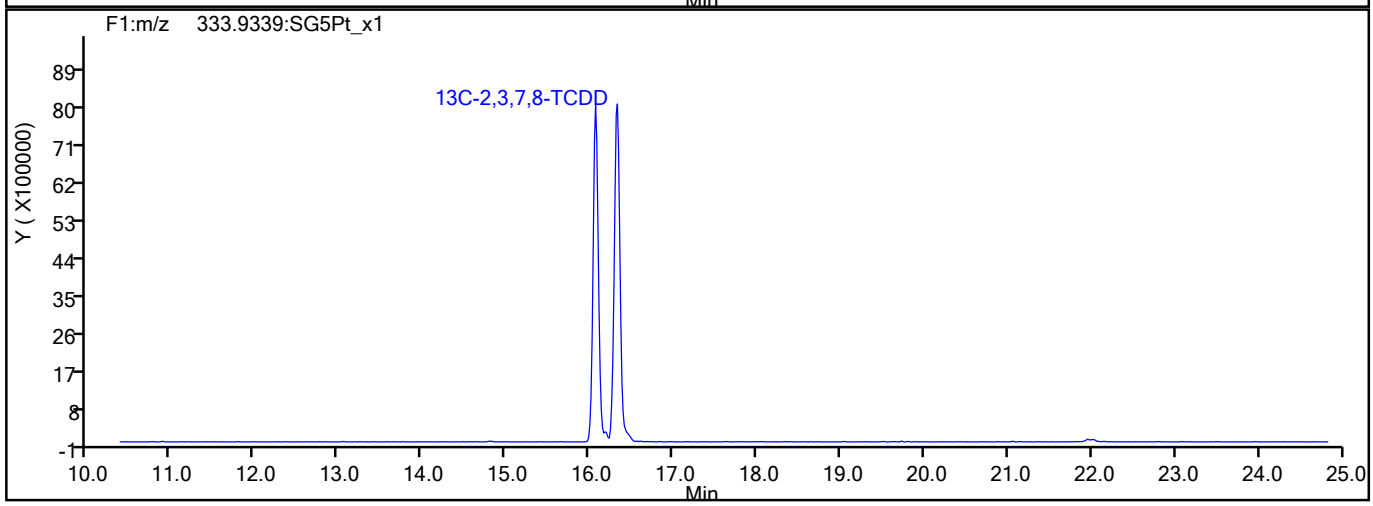

790023

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

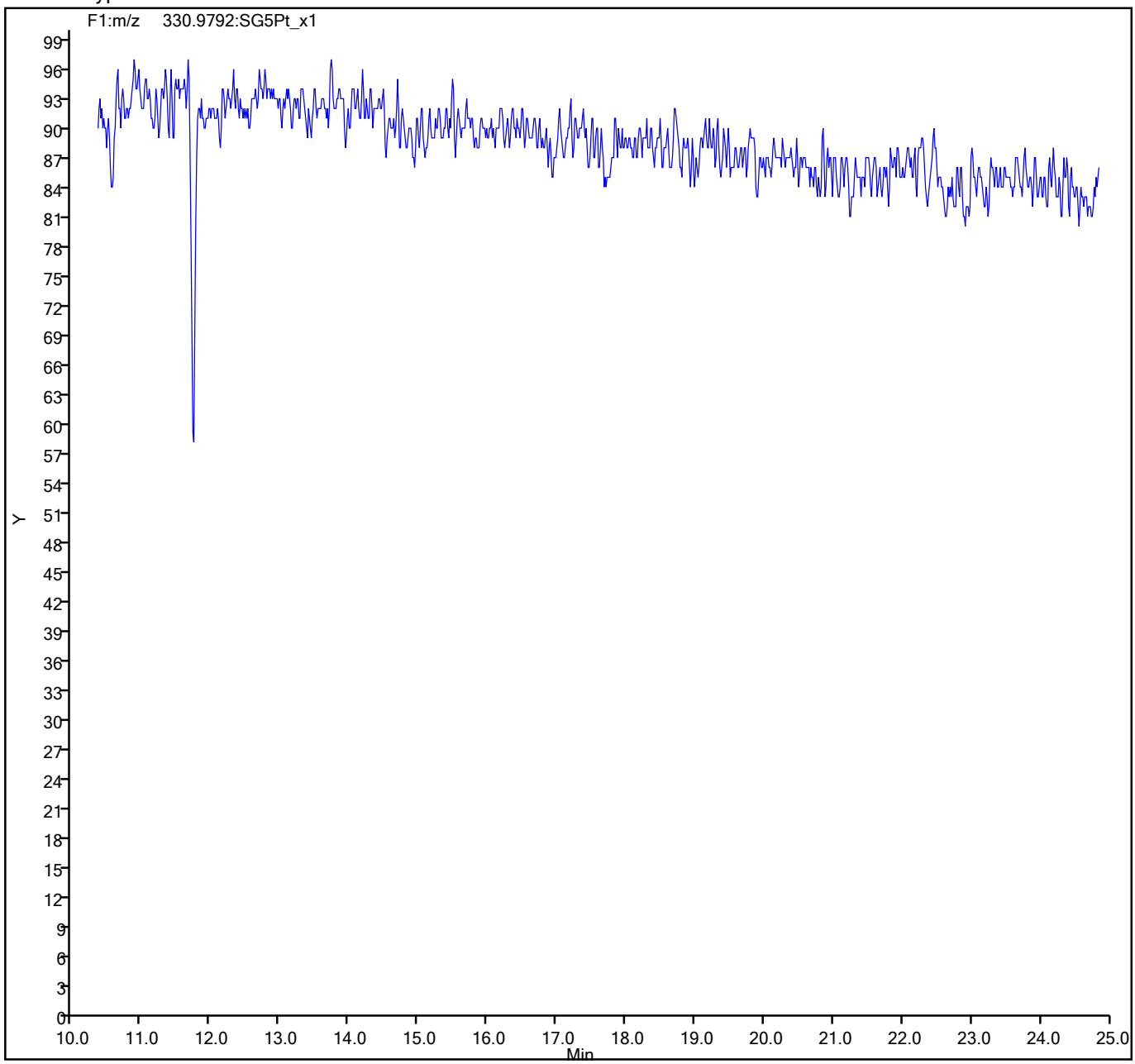

790024

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

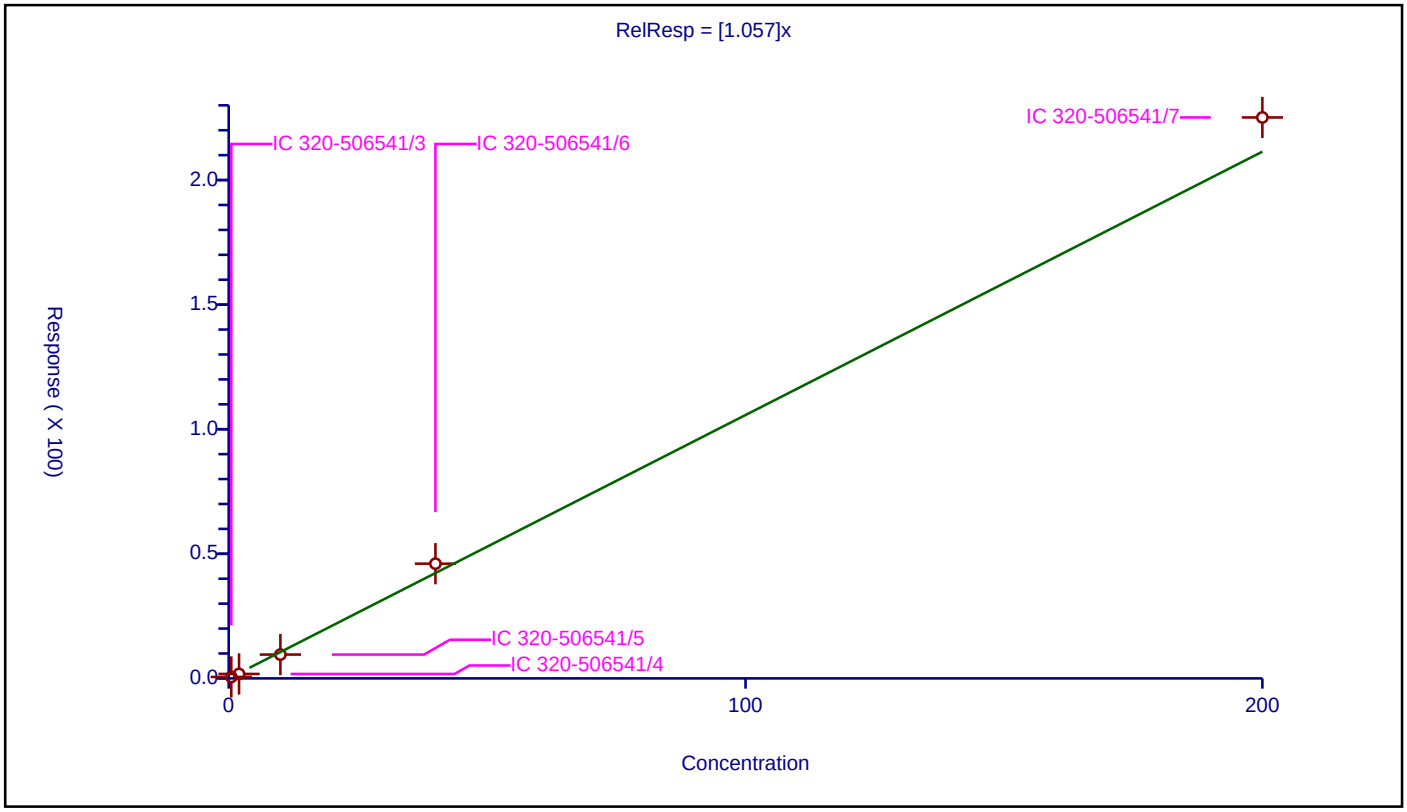

790025

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

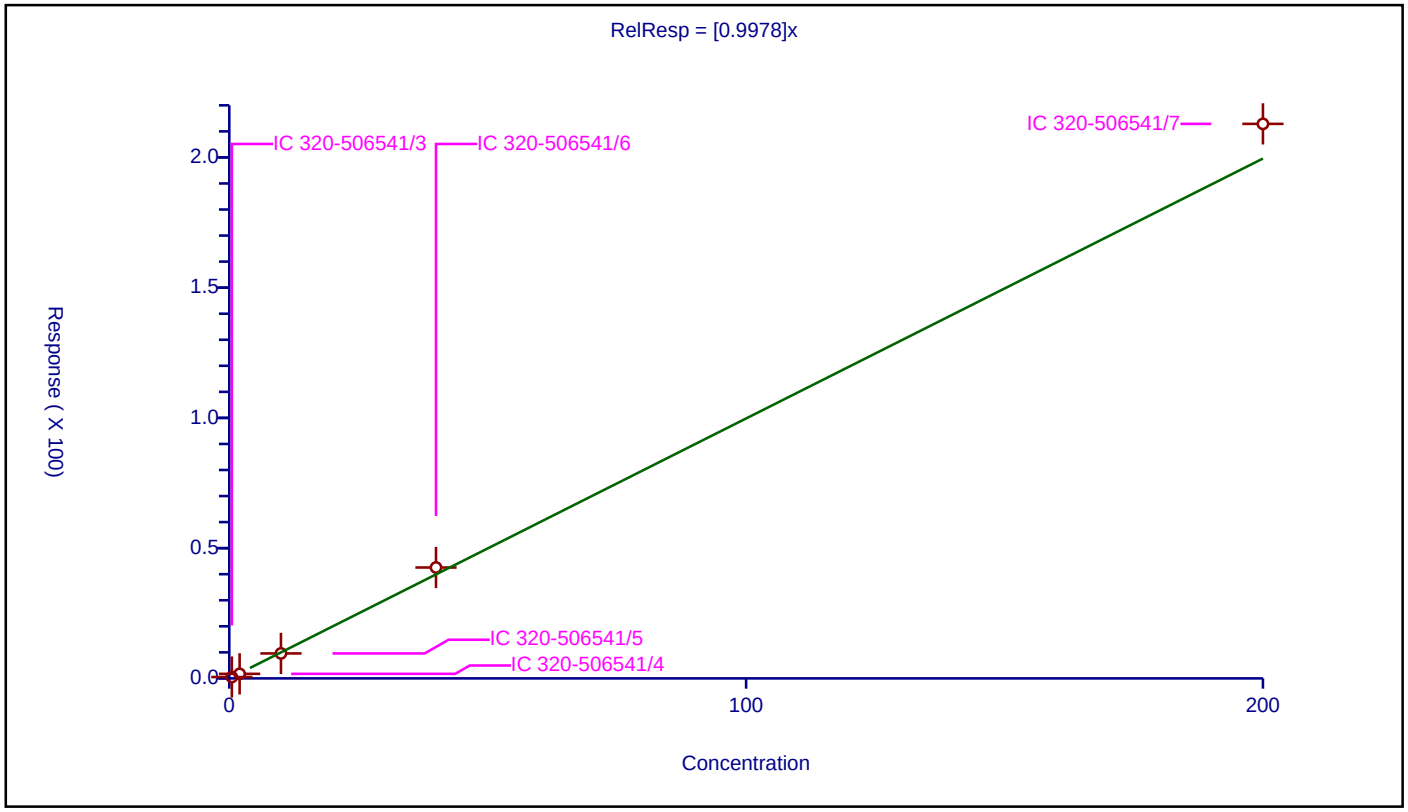

790026

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

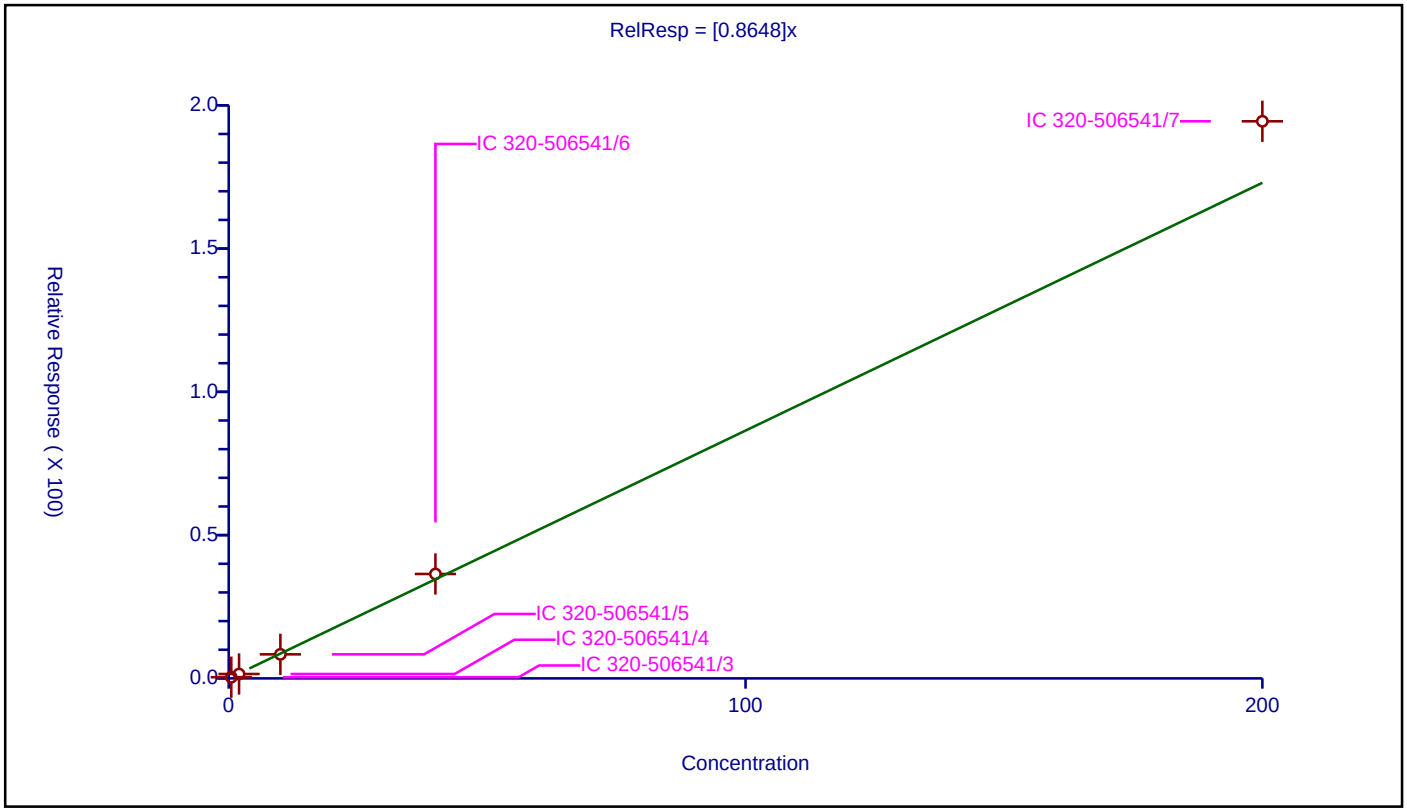

790027

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.2335	0.9635	1.0464	1.1217	1.0358	AveID		1.0802				9.5		20.0			
2,3,7,8-TCDD	1.1335	0.9559	1.0998	1.1237	1.0638	AveID		1.0753				6.7		20.0			
1,2,3,7,8-PeCDF	1.1920	0.9412	1.0373	1.0897	1.0112	AveID		1.0543				8.9		20.0			
2,3,4,7,8-PeCDF	1.1233	0.8984	0.9921	1.0636	0.9619	AveID		1.0079				8.7		20.0			
1,2,3,7,8-PeCDD	1.0719	0.9520	1.0685	1.1015	1.0385	AveID		1.0465				5.5		20.0			
1,2,3,4,7,8-HxCDF	1.2226	1.0072	1.1873	1.2073	1.1126	AveID		1.1474				7.8		20.0			
1,2,3,6,7,8-HxCDF	1.3374	1.0951	1.2359	1.2506	1.1700	AveID		1.2178				7.5		20.0			
2,3,4,6,7,8-HxCDF	1.3135	1.1007	1.2368	1.2623	1.1590	AveID		1.2145				7.0		20.0			
1,2,3,4,7,8-HxCDD	1.1235	0.9702	1.0749	1.1249	1.0104	AveID		1.0608				6.5		20.0			
1,2,3,6,7,8-HxCDD	1.0557	0.8863	1.0416	1.0264	0.9567	AveID		0.9933				7.1		20.0			
1,2,3,7,8,9-HxCDD	1.3093	0.9566	1.1202	1.1079	1.0532	AveID		1.1094				11.6		20.0			
1,2,3,7,8,9-HxCDF	1.3581	1.1239	1.2532	1.2757	1.1897	AveID		1.2401				7.1		20.0			
1,2,3,4,6,7,8-HpCDF	1.5412	1.2896	1.4855	1.5240	1.3700	AveID		1.4421				7.5		20.0			
1,2,3,4,6,7,8-HpCDD	1.1377	0.9531	1.0459	1.0970	1.0178	AveID		1.0503				6.8		20.0			
1,2,3,4,7,8,9-HpCDF	1.4057	1.1770	1.3459	1.3937	1.2235	AveID		1.3092				7.9		20.0			
OCDD	1.1328	0.9954	1.0870	1.1027	0.9920	AveID		1.0620				6.1		20.0			
OCDF	1.3392	1.1863	1.3349	1.3964	1.3271	AveID		1.3168				5.9		20.0			
13C-2,3,7,8-TCDF	1.3569	1.2925	1.2977	1.3484	1.4339	Ave		1.3459				4.2		35.0			
13C-2,3,7,8-TCDD	0.9164	0.8941	0.9478	0.9250	0.9750	Ave		0.9317				3.3		35.0			
13C-1,2,3,7,8-PeCDF	1.0773	1.0923	1.1314	1.1553	1.2461	Ave		1.1405				5.8		35.0			
13C-2,3,4,7,8-PeCDF	1.1109	1.0890	1.0480	1.1277	1.2510	Ave		1.1253				6.8		35.0			
13C-1,2,3,7,8-PeCDD	0.6866	0.6668	0.7308	0.7224	0.7758	Ave		0.7165				5.9		35.0			
13C-1,2,3,4,7,8-HxCDF	0.8656	0.8706	1.1172	0.9651	1.0057	Ave		0.9648				10.8		35.0			
13C-1,2,3,6,7,8-HxCDF	0.9280	0.9536	1.2227	1.0830	1.1668	Ave		1.0708				12.0		35.0			
13C-2,3,4,6,7,8-HxCDF	0.8692	0.9805	1.1292	1.1087	1.1190	Ave		1.0413				10.9		35.0			
13C-1,2,3,4,7,8-HxCDD	0.6435	0.7681	0.8180	0.7773	0.7866	Ave		0.7587				8.8		35.0			
13C-1,2,3,6,7,8-HxCDD	0.7368	0.8783	0.8857	0.9060	0.8896	Ave		0.8593				8.1		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9679	0.9781	1.0054	0.9456	0.9684	Ave		0.9731				2.2		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.7002	0.7170	0.7171	0.7555	0.7898	Ave		0.7359				4.9		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6351	0.6548	0.6640	0.7261	0.6926	Ave		0.6745				5.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6394	0.6623	0.6557	0.7259	0.7437	Ave		0.6854				6.8		35.0			
13C-OCDD	0.5202	0.5165	0.5084	0.5910	0.5871	Ave		0.5446				7.5		35.0			
37Cl4-2,3,7,8-TCDD	0.9654	0.9590	1.0722	1.0074	1.0375	Ave		1.0083				4.8					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-496688/3	08jn21adfs1_4.d
Level 2	IC 320-496688/4	08jn21adfs1_5.d
Level 3	IC 320-496688/5	08jn21adfs1_6.d
Level 4	IC 320-496688/6	08jn21adfs1_7.d
Level 5	IC 320-496688/7	08jn21adfs1_8.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	19533	50956	258022	1274052	6137031	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	12122	34971	198062	875630	4286034	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	74934	210335	1114982	5302236	26032333	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	72817	200175	987812	5051373	24861382	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	42943	129872	741897	3351337	16645947	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	46374	155611	1093397	4293581	21902419	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	54388	185321	1245549	4991420	26721257	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	50026	191527	1151149	5157631	25388405	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	31680	132244	724729	3222329	15558498	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	34082	138142	760446	3426727	16661405	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	39595	139741	786511	3436144	17279185	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	57602	195077	1038574	4445357	22553786	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	47287	164108	878086	4243438	21181967	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	31661	110761	572466	2935203	13800004	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	39382	138335	727362	3728415	17812004	2.50	10.0	50.0	200	1000
OCDD		AveID	51642	182470	910980	4803166	22803823	5.00	20.0	100	400	2000
OCDF		AveID	61051	217473	1118740	6082696	30505464	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	3167014	2644389	2465726	2839435	2962515	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	2138853	1829253	1800864	1948011	2014532	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	2514489	2234847	2149791	2432949	2574521	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	2592947	2228025	1991303	2374722	2584740	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	1602476	1364144	1388641	1521254	1602880	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	1517222	1545033	1841825	1778238	1968615	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	1626653	1692336	2015594	1995567	2283961	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	1523436	1740015	1861559	2042874	2190509	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	1127895	1363103	1348471	1432215	1539784	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	1291365	1558668	1460100	1669337	1741498	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	1696557	1735785	1657413	1742331	1895740	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	1227279	1272526	1182209	1392194	1546113	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	1113145	1162117	1094713	1337869	1355803	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	1120663	1175351	1080883	1337573	1455766	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	1823492	1833139	1676139	2177938	2298668	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2 Analy Batch No.: 496688

SDG No.:

Instrument ID: DFS 1 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2021 14:18 Calibration End Date: 06/08/2021 17:30 Calibration ID: 55577

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	11266	39241	203726	848616	4287059	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	08JN21ADFS1_1	Resolution Check	RC 060821A	46			GRB	1.000	
2	08JN21ADFS1_2	WDM HRDXNCP_00042	WDM 060821A	1	Dioxin		GRB	1.000	
3	08JN21ADFS1_3	SB Solvent Blank C-14	SB 060821	3			GRB	1.000	
4	08JN21ADFS1_4	CS-2 HRDXNL2_00032	IC 060821	4	Dioxin		GRB	1.000	
5	08JN21ADFS1_5	CS-3 HRDXNL3_00029	IC 060821A	5	Dioxin		GRB	1.000	
6	08JN21ADFS1_6	CS-4 HRDXNL4_00099	IC 060821B	2	Dioxin		GRB	1.000	
7	08JN21ADFS1_7	CS-5 HRDXNL5_00032	IC 060821C	6	Dioxin		GRB	1.000	
8	08JN21ADFS1_8	CS-6 HRDXNL6_00028	IC 060821D	7	Dioxin		GRB	1.000	
9	08JN21ADFS1_9	Resolution Check	RC 060821B	46			GRB	1.000	
10	08JN21ADFS1_10	SB Solvent Blank C-14	SB 060821A	3			GRB	1.000	
11	08JN21ADFS1_11	ICV HRDXNIC_00047	ICV 060821	8	Dioxin		GRB	1.000	
12	08JN21ADFS1_12	Resolution Check	RC 060821C	46			GRB	1.000	
13	08JN21ADFS1_13	CCV CS-4 HRDXNL4_00099	CCV 060821A	2	Dioxin		GRB	1.000	
14	08JN21ADFS1_14	WDM HRDXNCP_00042	WDM 060821B	1	Dioxin		GRB	1.000	
15	08JN21ADFS1_15	mb 320-482224/1-a RI	mb 320-482224/1-a	10	8290/Solid	100	GRB	20.000	g
16	08JN21ADFS1_16	320-72057-a-23-a mdlv RI (7)	320-72057-a-23-a mdlv	11	8290/Solid		GRB	20.000	g
17	08JN21ADFS1_17	320-72057-a-24-a mdlv RI (8)	320-72057-a-24-a mdlv	12	8290/Solid		GRB	20.000	g
18	08JN21ADFS1_18	320-72057-a-25-a mdlv RI (9)	320-72057-a-25-a mdlv	13	8290/Solid		GRB	20.000	g
19	08JN21ADFS1_19	320-72057-a-26-a loqv RI (10)	320-72057-a-26-a loqv	14	8290/Solid		GRB	20.000	g
20	08JN21ADFS1_20	320-74542-b-3-a	320-74542-b-3-a	15	8290A/Solid	D245	GRB	10.000	g
21	08JN21ADFS1_21	320-74542-b-2-a	320-74542-b-2-a	16	8290A/Solid		GRB	10.000	g
22	08JN21ADFS1_22	320-74542-b-1-a	320-74542-b-1-a	17	8290A/Solid		GRB	10.000	g
23	08JN21ADFS1_23	lcs 320-496101/2-a	lcs 320-496101/2-a	18	8290A/Solid		GRB	10.000	g
24	08JN21ADFS1_24	lcsd 320-496101/3-a	lcsd 320-496101/3-a	19	8290A/Solid		GRB	10.000	g
25	08JN21ADFS1_25	mb 320-496101/1-a	mb 320-496101/1-a	20	8290A/Solid		GRB	10.000	
26	08JN21ADFS1_26	Resolution Check	RC 060821D	46			GRB	1.000	
27	08JN21ADFS1_27	CCV CS-4 HRDXNL4_00099	CCV 060821B	2	Dioxin		GRB	1.000	
28	08JN21ADFS1_28	Resolution Check	RC 060821E	46			GRB	1.000	
29	08JN21ADFS1_29	WDM HRDXNCP_00042	WDM 060821C	1	Dioxin		GRB	1.000	
30	08JN21ADFS1_30	SB Solvent Blank C-14	SB 060821B	3			GRB	1.000	
31	08JN21ADFS1_31	320-74542-b-4-a	320-74542-b-4-a	21	8290A/Solid	D245	GRB	10.000	g
32	08JN21ADFS1_32	320-74542-b-5-a	320-74542-b-5-a	22	8290A/Solid		GRB	10.000	g
33	08JN21ADFS1_33	320-74542-b-6-a	320-74542-b-6-a	23	8290A/Solid		GRB	10.000	g
34	08JN21ADFS1_34	320-74542-b-7-a	320-74542-b-7-a	24	8290A/Solid		GRB	10.000	g
35	08JN21ADFS1_35	320-74542-b-8-a	320-74542-b-8-a	25	8290A/Solid		GRB	10.000	g
36	08JN21ADFS1_36	320-74542-b-9-a	320-74542-b-9-a	26	8290A/Solid		GRB	10.000	g
37	08JN21ADFS1_37	SB Solvent Blank C-14	SB 060821C	3			GRB	1.000	
38	08JN21ADFS1_38	Resolution Check	RC 060821F	46			GRB	1.000	
39	08JN21ADFS1_39	CCV CS-4 HRDXNL4_00099	CCV 060821C	2	Dioxin		GRB	1.000	
40	08JN21ADFS1_40	Resolution Check	RC 060821G	46			GRB	1.000	

LOG FILE ✓'d
06/09/21
GRB

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 12:20
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10809 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10359 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10673 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10724 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10609 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10694 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10161 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10386 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10328 [5%height]

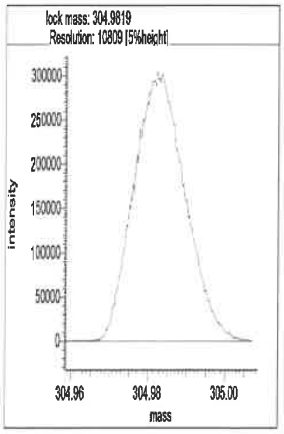

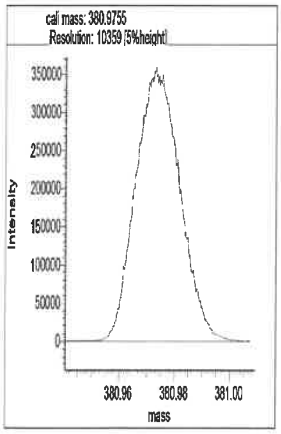

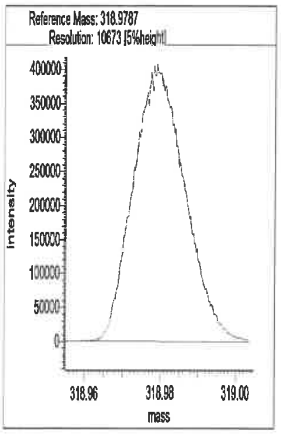

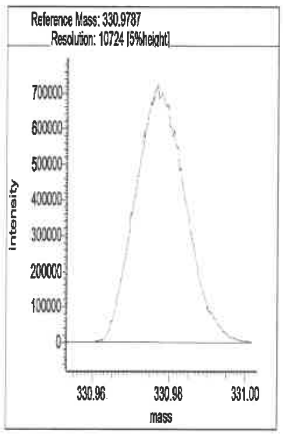

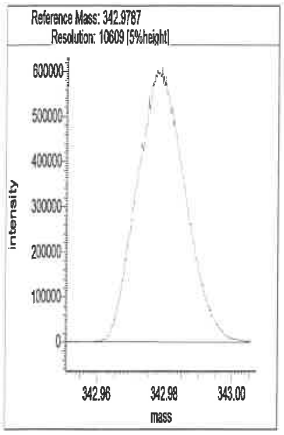

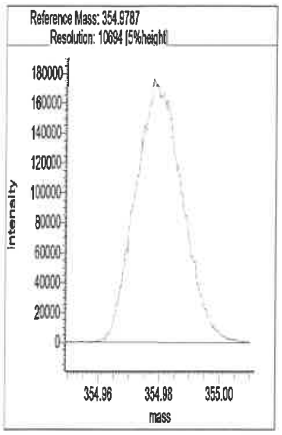

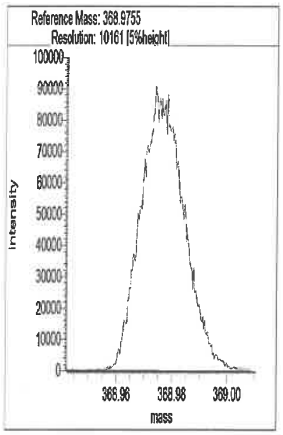

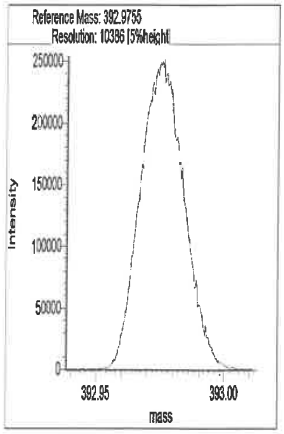

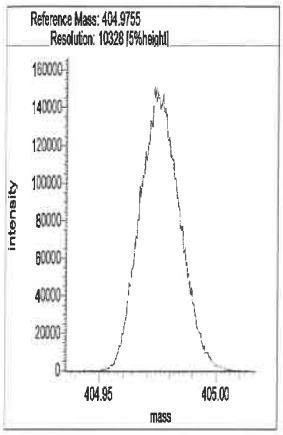

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10749 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10650 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10687 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10661 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10183 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10343 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10397 [5%height]

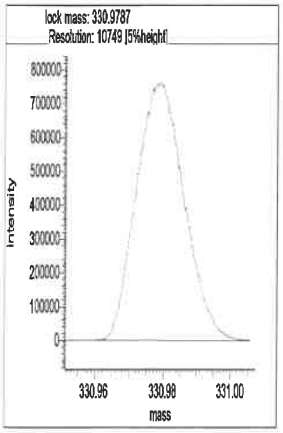

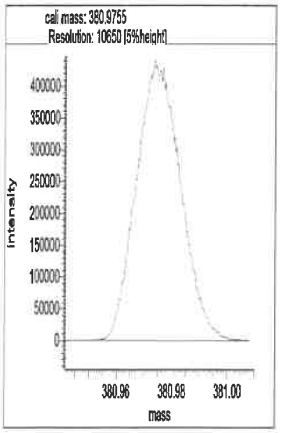

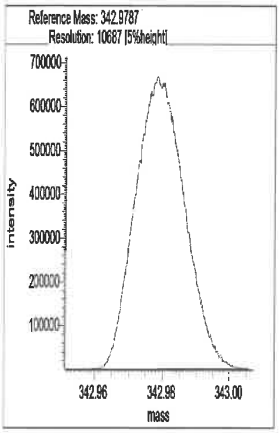

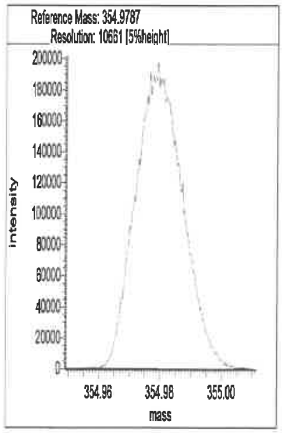

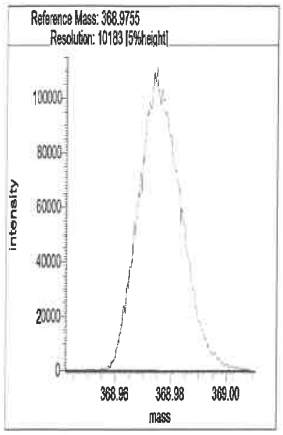

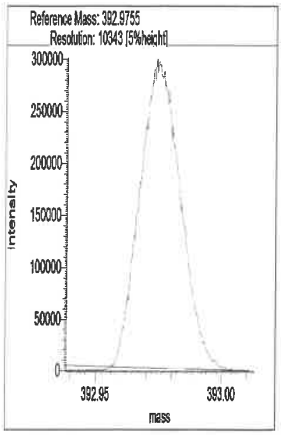

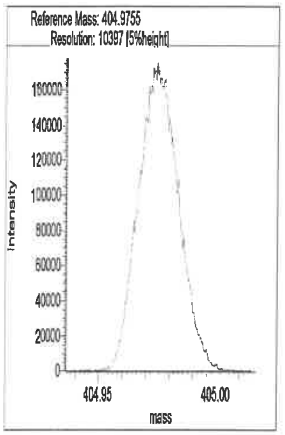

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10665 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10428 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10632 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10792 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10868 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10680 [5%height]

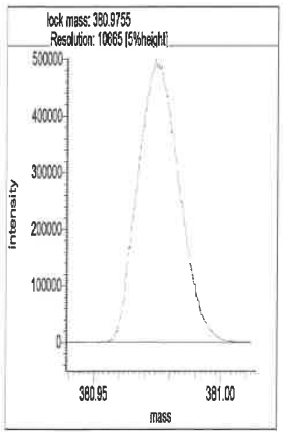

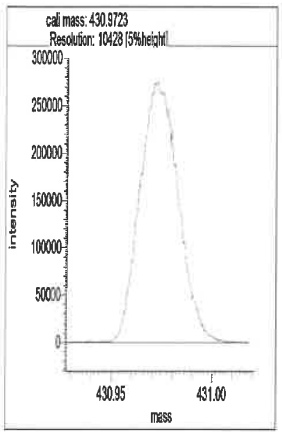

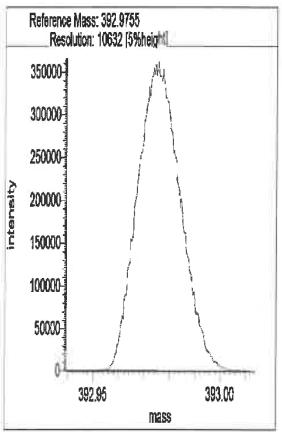

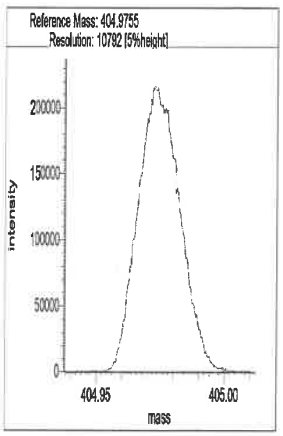

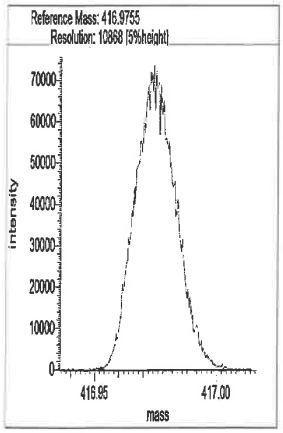

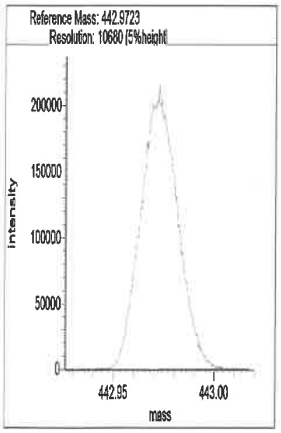

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10780 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10428 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10519 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10746 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10596 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10599 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10334 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10486 [5%height]

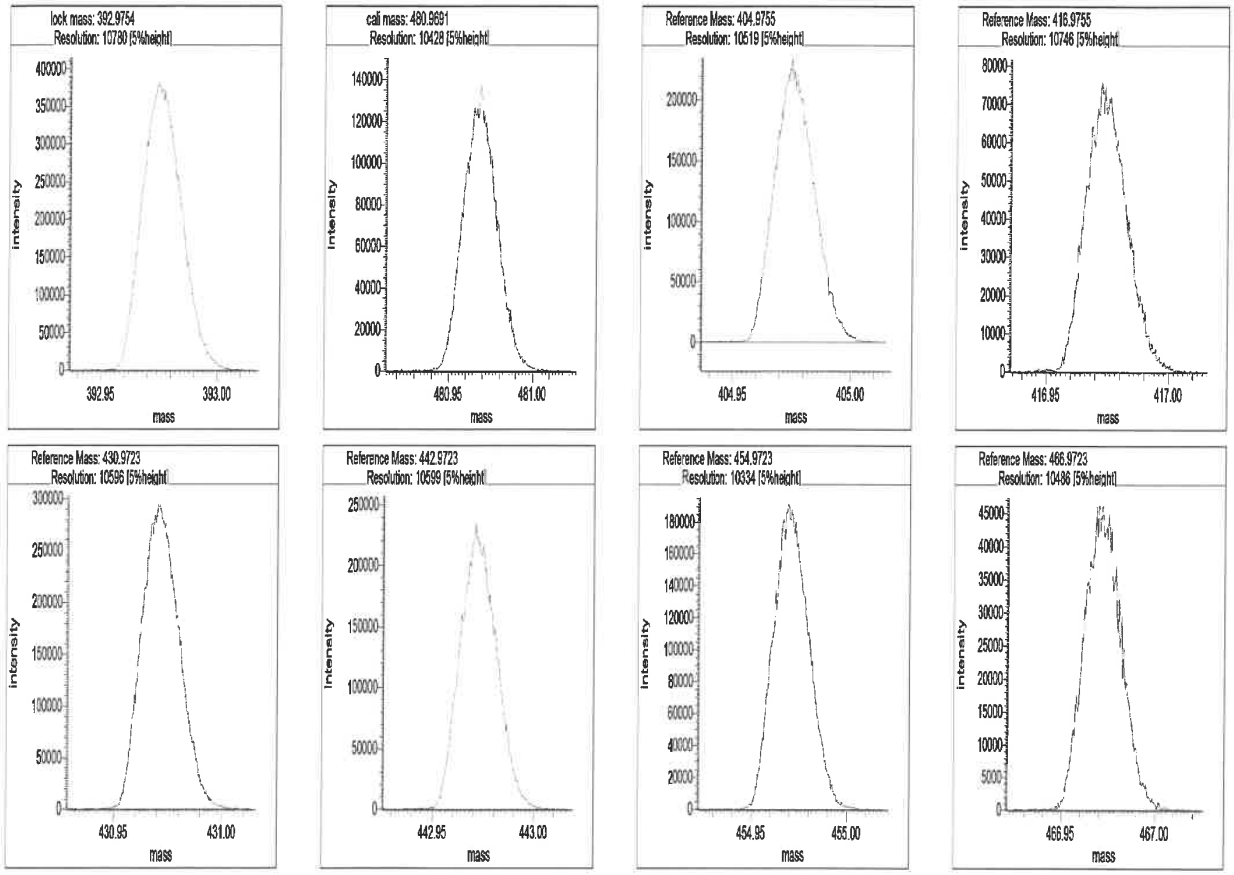

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10812 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10576 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10586 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10905 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10543 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10541 [5%height]

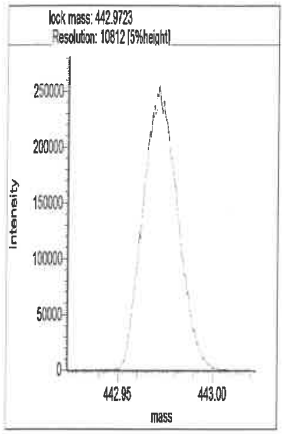
lock mass: 442.9723
Resolution: 10812 [5%height]
Intensity
mass

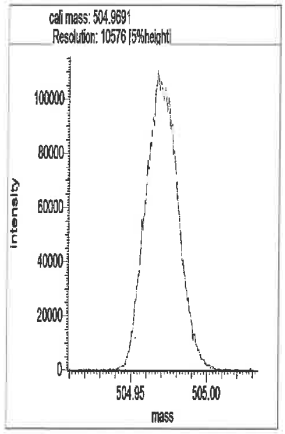
cali mass: 504.9691
Resolution: 10576 [5%height]
Intensity
mass

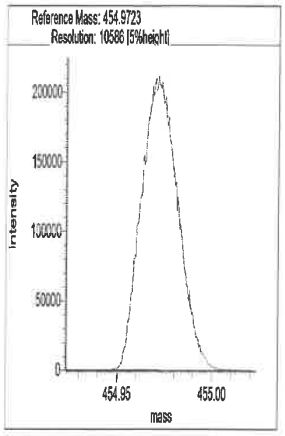
Reference Mass: 454.9723
Resolution: 10566 [5%height]
Intensity
mass

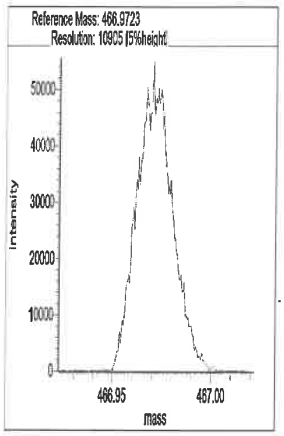
Reference Mass: 466.9723
Resolution: 10905 [5%height]
Intensity
mass

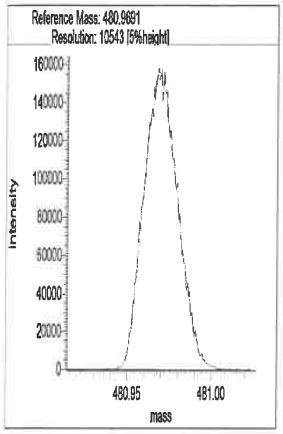
Reference Mass: 480.9691
Resolution: 10543 [5%height]
Intensity
mass

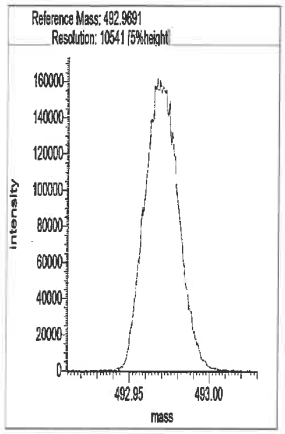
Reference Mass: 492.9691
Resolution: 10541 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 18:18
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11138 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10557 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10815 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11047 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10923 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10964 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10533 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10381 [5%height]

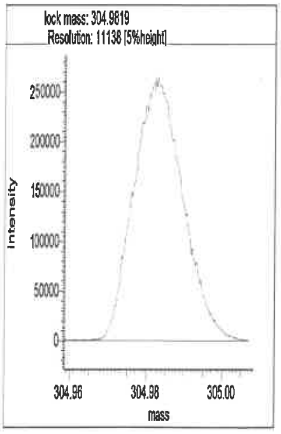

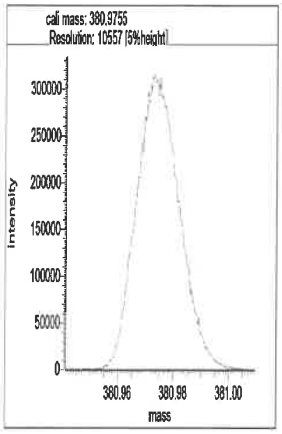

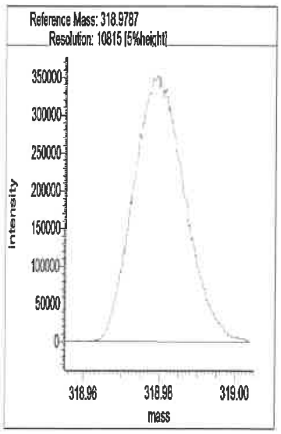

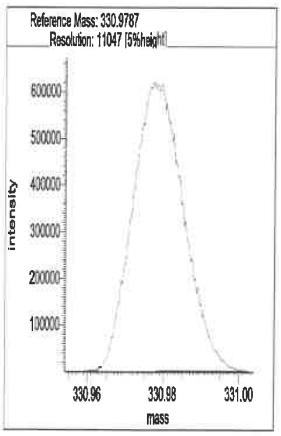

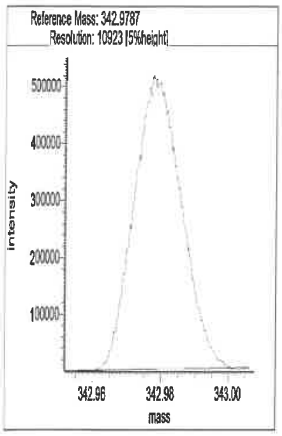

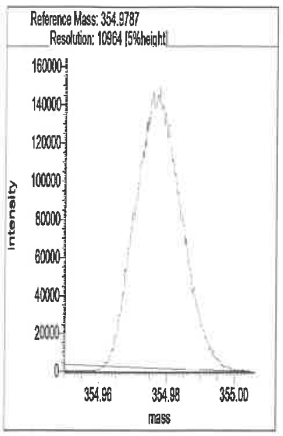

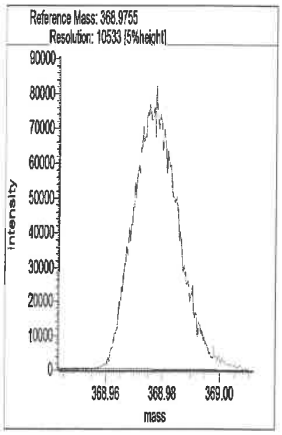

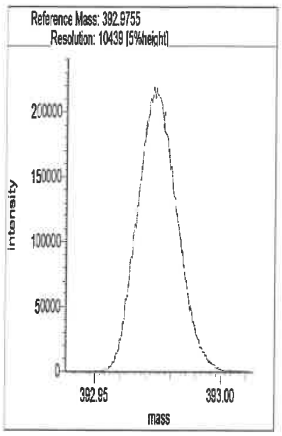

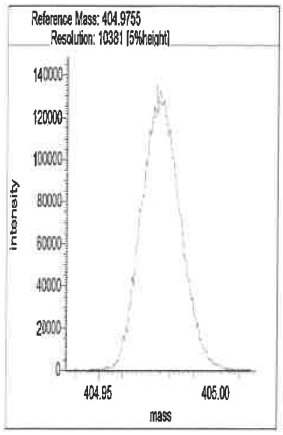

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10931 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10771 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11049 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10941 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10429 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10942 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10794 [5%height]

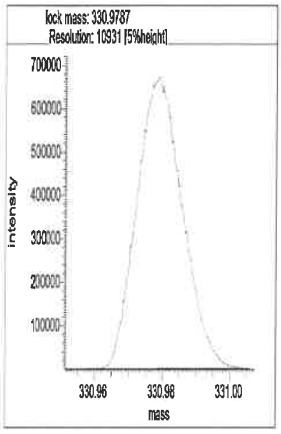

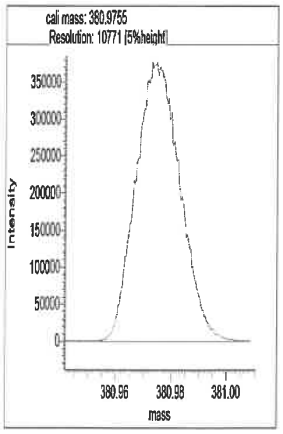

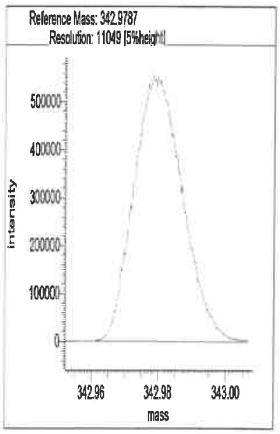

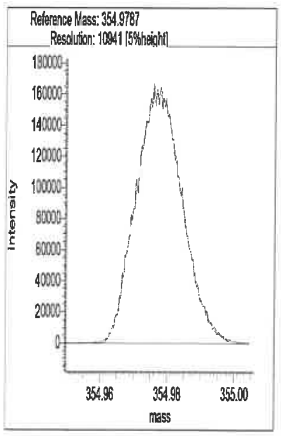

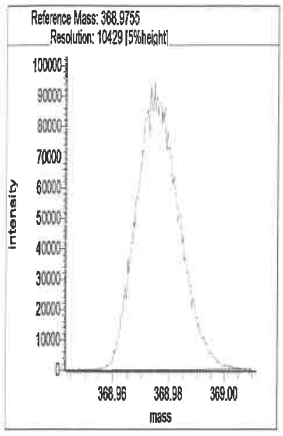

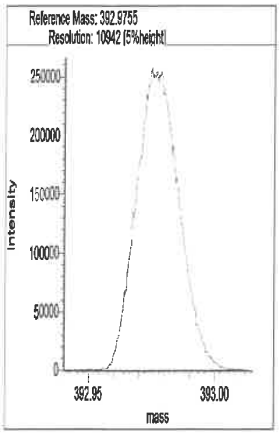

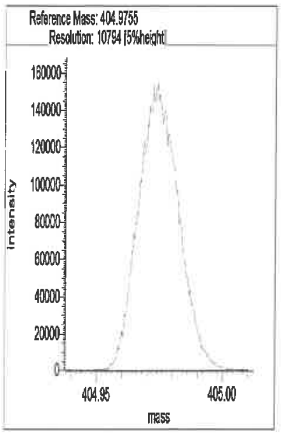

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10885 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10505 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10981 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10838 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11244 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10864 [5%height]

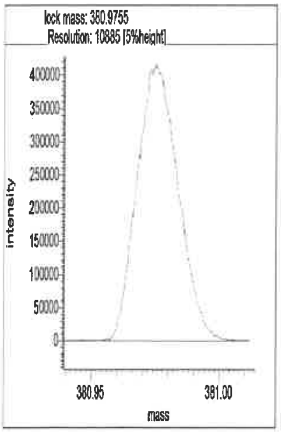

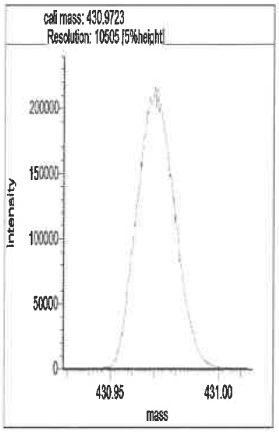

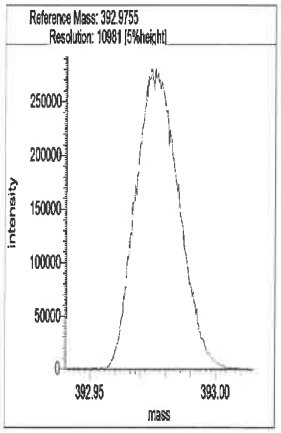

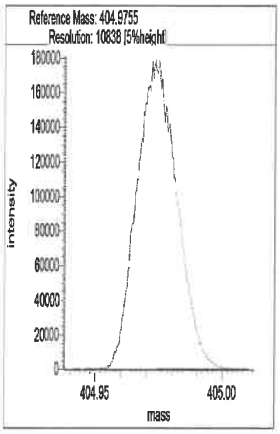

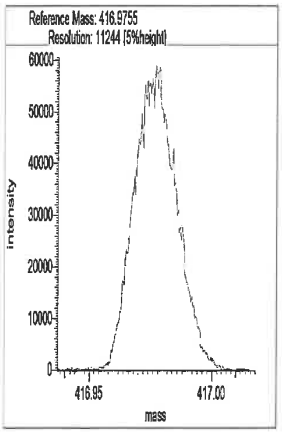

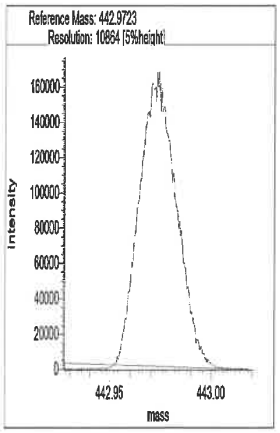

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10912 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10920 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10645 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11021 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10722 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10705 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10886 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11473 [5%height]

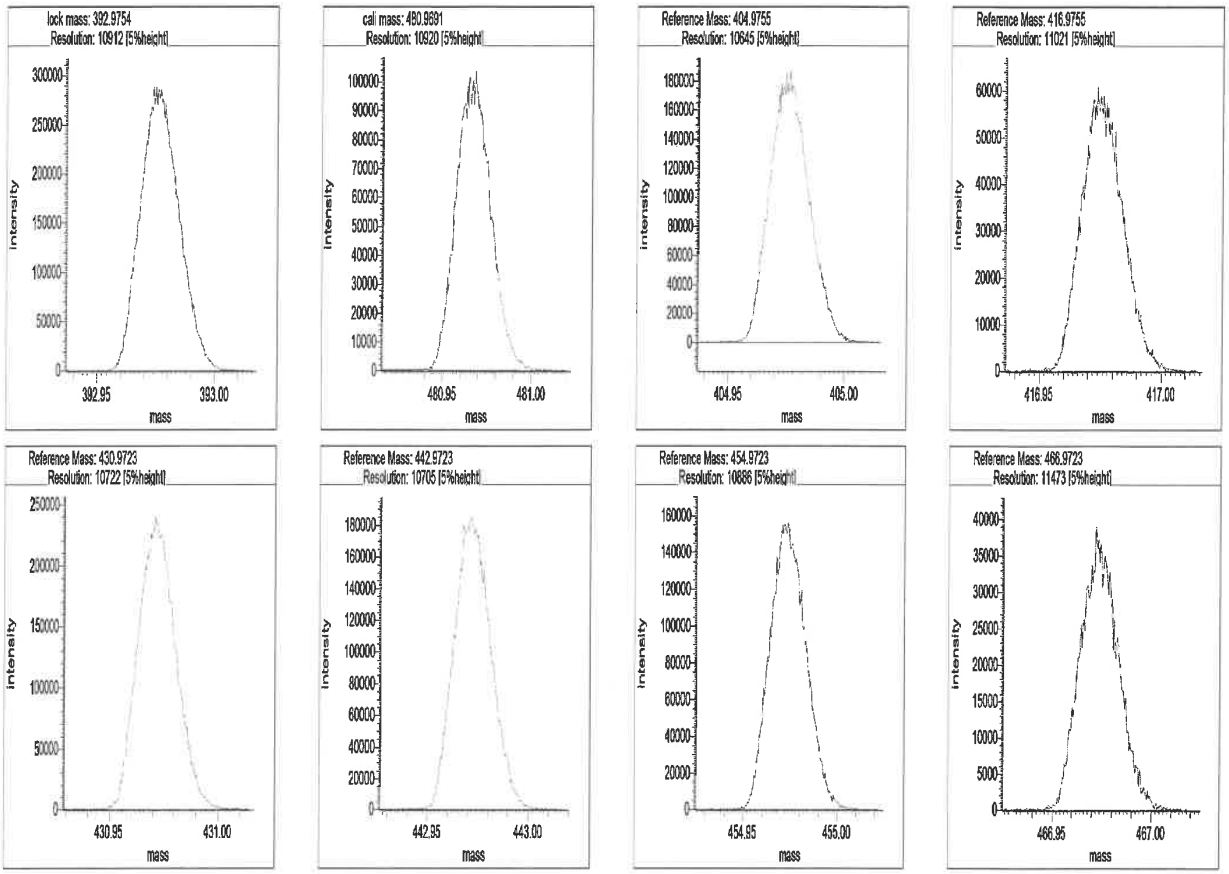

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11094 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10852 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11104 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11145 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10592 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10719 [5%height]

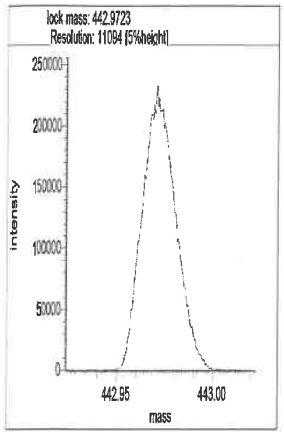
lock mass: 442.9723
Resolution: 11094 [5%height]
Intensity
mass

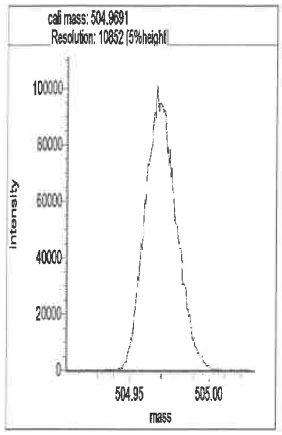
cali mass: 504.9691
Resolution: 10852 [5%height]
Intensity
mass

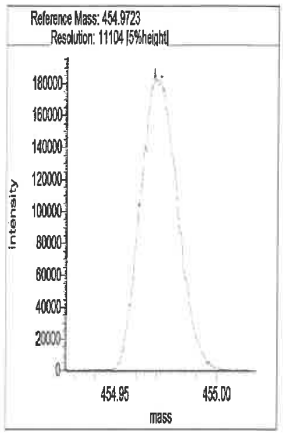
Reference Mass: 454.9723
Resolution: 11104 [5%height]
Intensity
mass

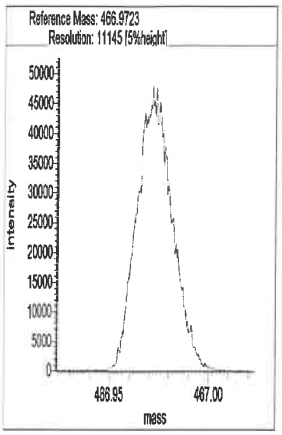
Reference Mass: 466.9723
Resolution: 11145 [5%height]
Intensity
mass

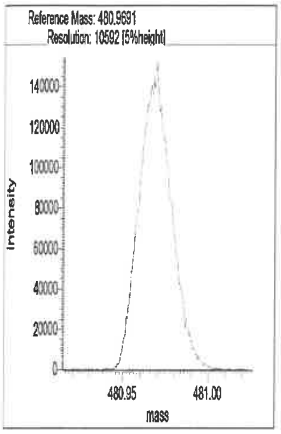
Reference Mass: 480.9691
Resolution: 10592 [5%height]
Intensity
mass

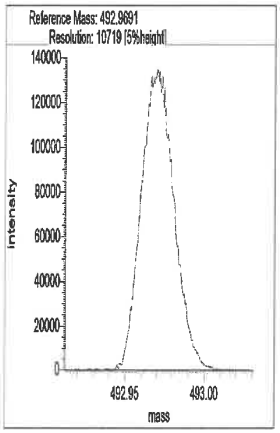
Reference Mass: 492.9691
Resolution: 10719 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	08 Jun 2021 20:13
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11228 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10780 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10868 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10774 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10877 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10591 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10487 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10710 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10243 [5%height]

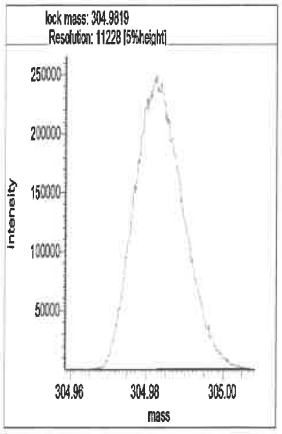

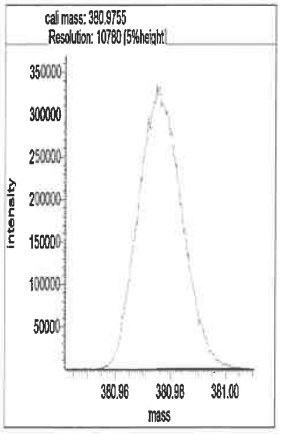

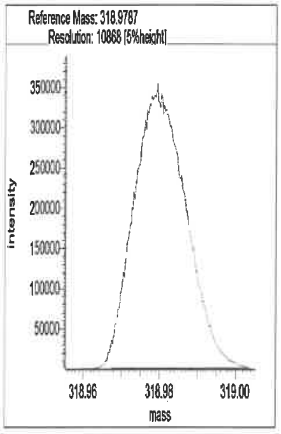

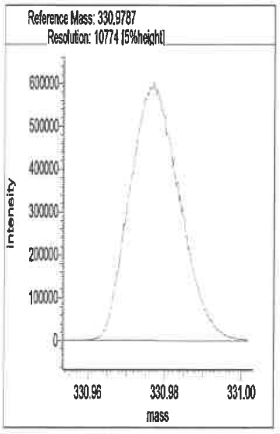

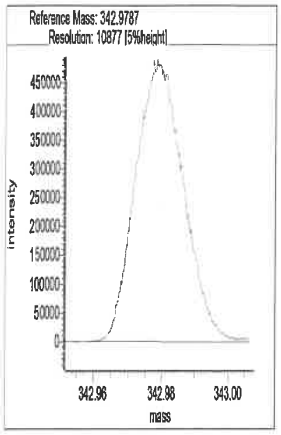

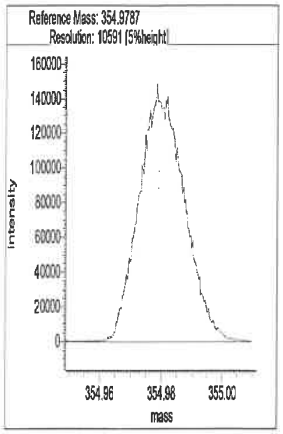

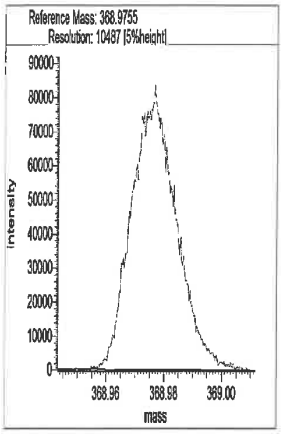

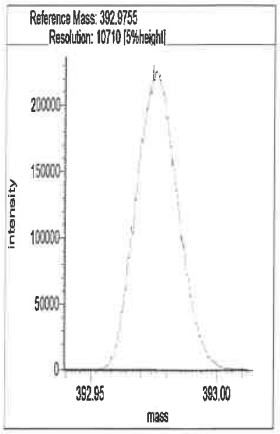

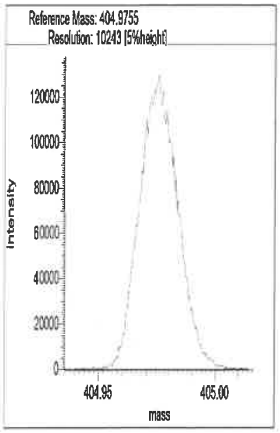

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10867 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10936 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10948 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10910 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10174 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10675 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10514 [5%height]

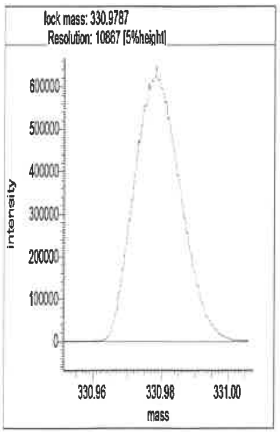

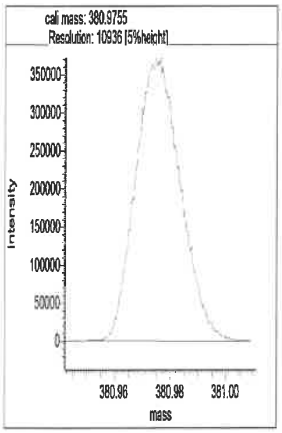

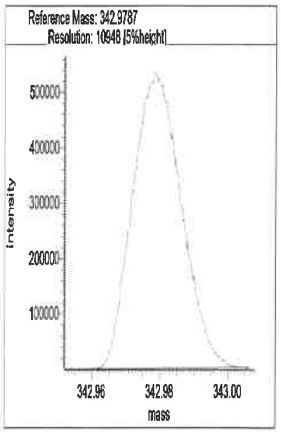

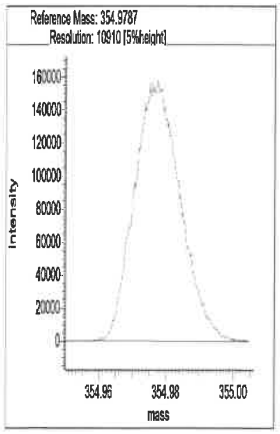

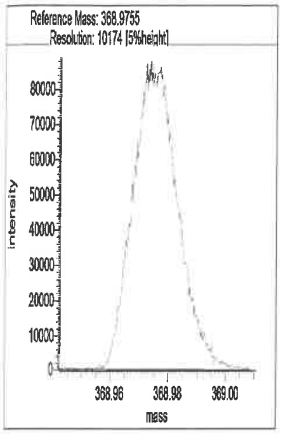

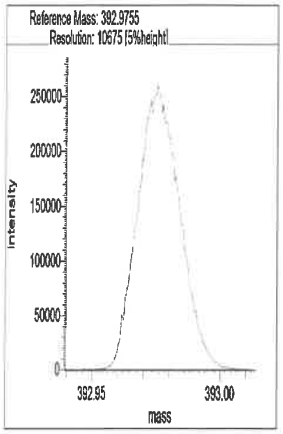

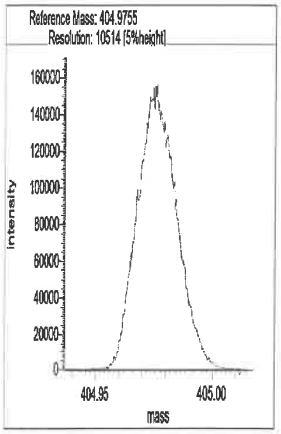

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10898 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10782 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11034 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11134 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10786 [5%height]

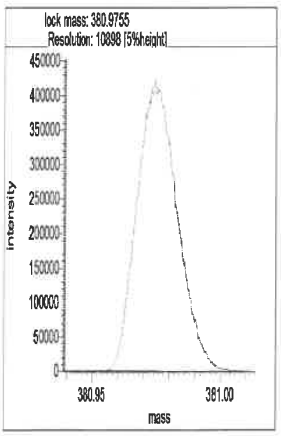

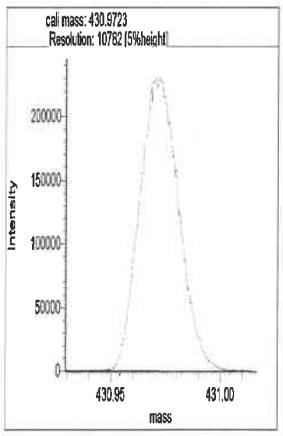

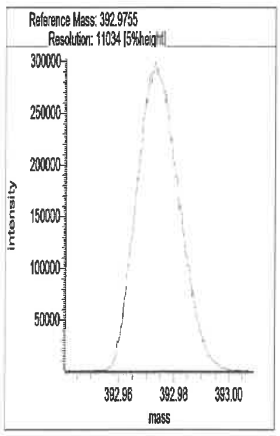

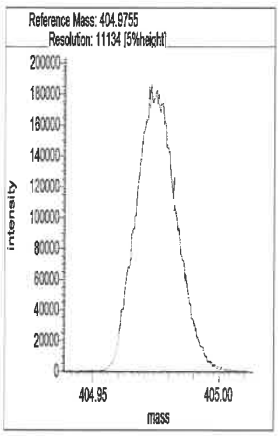

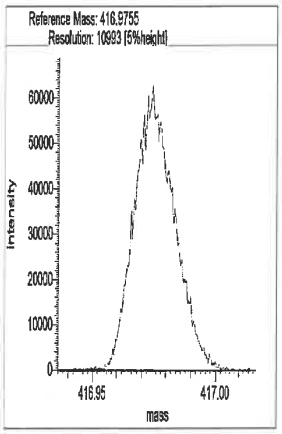

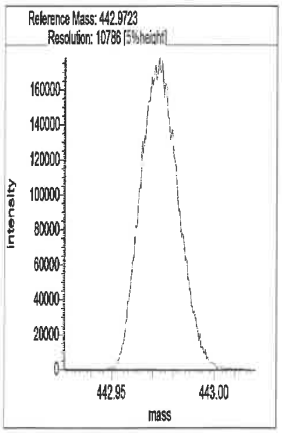

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11155 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10418 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10767 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10954 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10613 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11028 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10950 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10877 [5%height]

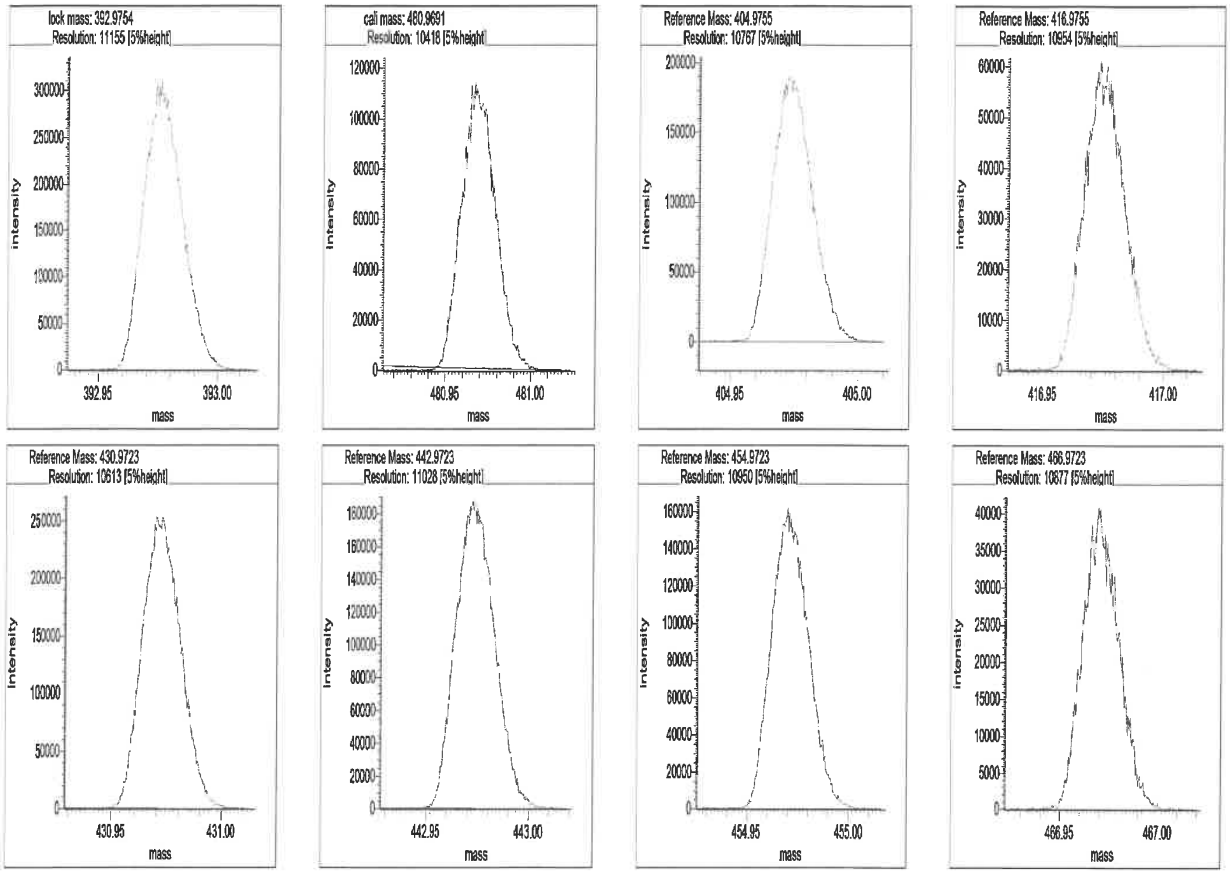

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10985 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10829 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11149 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11382 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11128 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11097 [5%height]

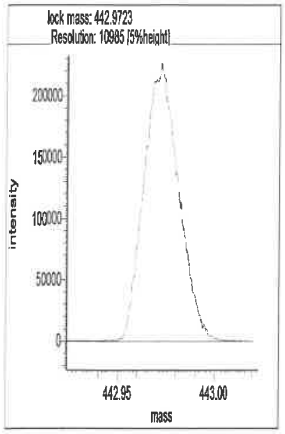
lock mass: 442.9723
Resolution: 10985 [5%height]
intensity
mass

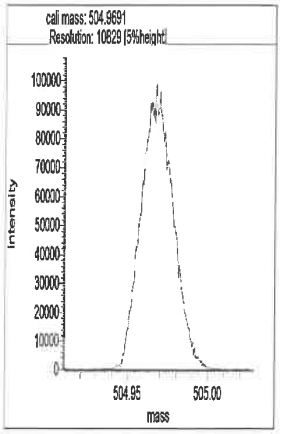
cali mass: 504.9691
Resolution: 10629 [5%height]
intensity
mass

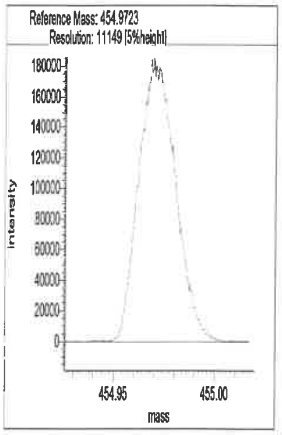
Reference Mass: 454.9723
Resolution: 11149 [5%height]
intensity
mass

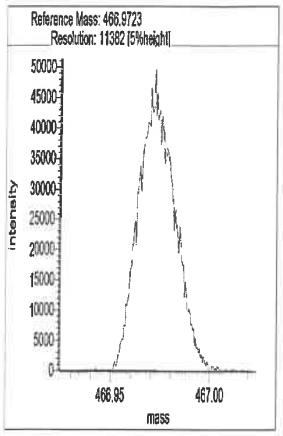
Reference Mass: 466.9723
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intensity
mass

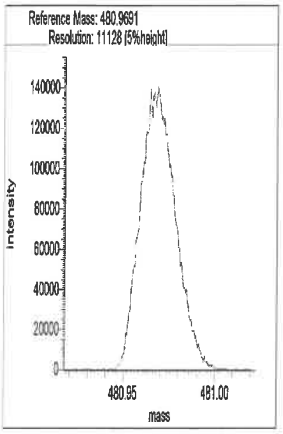
Reference Mass: 480.9691
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intensity
mass

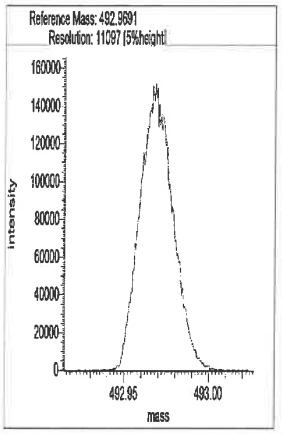
Reference Mass: 492.9691
Resolution: 11097 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.564	2334037	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.628	3167014	0.81	1.3459	100.8	100.8	0.1546	0.1546	101	
2,3,7,8-TCDF	19.662	19533	0.82	1.0802	0.5710	0.5710	0.007637	0.007637	114	
S Total TCDF					0.5710	0.5710	0.007637	0.007637		
D 13C-2,3,7,8-TCDD	20.933	2138853	0.81	0.9317	98.4	98.4	0.1772	0.1772	98.36	
$ 37Cl4-2,3,7,8-TCDD	20.941	11266		1.0083	0.4787	0.4787	0.005933	0.005933	95.74	
2,3,7,8-TCDD	20.967	12122	0.71	1.0753	0.5270	0.5270	0.0223	0.0223	105	
S Total TCDD					0.5270	0.5270	0.0223	0.0223		
D 13C-1,2,3,7,8-PeCDF	26.587	2514489	1.59	1.1405	94.5	94.5	0.3469	0.3469	94.46	
1,2,3,7,8-PeCDF	26.613	74934	1.71	1.0543	2.827	2.827	0.0199	0.0199	113	
D 13C-2,3,4,7,8-PeCDF	28.046	2592947	1.57	1.1253	98.7	98.7	0.3516	0.3516	98.72	
2,3,4,7,8-PeCDF	28.071	72817	1.61	1.0079	2.786	2.786	0.0219	0.0219	111	
S Total PeCDF					5.613	5.613	0.0209	0.0209		
D 13C-1,2,3,7,8-PeCDD	28.830	1602476	1.59	0.7165	95.8	95.8	0.1271	0.1271	95.83	
1,2,3,7,8-PeCDD	28.855	42943	1.72	1.0465	2.561	2.561	0.0215	0.0215	102	
S Total PeCDD					2.561	2.561	0.0215	0.0215		
D 13C-1,2,3,4,7,8-HxCDF	34.406	1517222	0.52	0.9648	89.7	89.7	0.3358	0.3358	89.72	
1,2,3,4,7,8-HxCDF	34.431	46374	1.30	1.1474	2.664	2.664	0.0219	0.0219	107	
D 13C-1,2,3,6,7,8-HxCDF	34.583	1626653	0.54	1.0708	86.7	86.7	0.3026	0.3026	86.67	
1,2,3,6,7,8-HxCDF	34.608	54388	1.19	1.2178	2.746	2.746	0.0201	0.0201	110	
D 13C-2,3,4,6,7,8-HxCDF	35.468	1523436	0.53	1.0413	83.5	83.5	0.3112	0.3112	83.47	
2,3,4,6,7,8-HxCDF	35.485	50026	1.25	1.2145	2.704	2.704	0.0183	0.0183	108	
D 13C-1,2,3,7,8,9-HxCDF	36.404	1696557	0.52	0.9731	99.5	99.5	0.3330	0.3330	99.47	
1,2,3,7,8,9-HxCDF	36.421	57602	1.21	1.2401	2.738	2.738	0.0145	0.0145	110	
S Total HxCDF					10.9	10.9	0.0187	0.0187		
* 13C-1,2,3,7,8,9-HxCDD	36.210	1752780	1.29	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.695	1127895	1.27	0.7587	84.8	84.8	0.2005	0.2005	84.82	
1,2,3,4,7,8-HxCDD	35.712	31680	1.20	1.0608	2.648	2.648	0.0198	0.0198	106	
D 13C-1,2,3,6,7,8-HxCDD	35.822	1291365	1.29	0.8593	85.7	85.7	0.1770	0.1770	85.74	
1,2,3,6,7,8-HxCDD	35.839	34082	1.16	0.9933	2.657	2.657	0.0196	0.0196	106	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.227	39595	1.15	1.1094	2.950	2.950	0.0182	0.0182	118	
S Total HxCDD					8.255	8.255	0.0192	0.0192		
D 13C-1,2,3,4,6,7,8-HpCDF	38.321	1227279	0.46	0.7359	95.1	95.1	0.3550	0.3550	95.14	
1,2,3,4,6,7,8-HpCDF	38.329	47287	1.05	1.4421	2.672	2.672	0.0138	0.0138	107	
D 13C-1,2,3,4,7,8,9-HpCDF	39.611	1120663	0.46	0.6854	93.3	93.3	0.3812	0.3812	93.29	
1,2,3,4,7,8,9-HpCDF	39.619	39382	1.04	1.3092	2.684	2.684	0.0149	0.0149	107	
S Total HpCDF					5.356	5.356	0.0144	0.0144		
D 13C-1,2,3,4,6,7,8-HpCDD	39.307	1113145	1.06	0.6745	94.2	94.2	0.2577	0.2577	94.15	
1,2,3,4,6,7,8-HpCDD	39.316	31661	0.99	1.0503	2.708	2.708	0.0190	0.0190	108	
S Total HpCDD					2.708	2.708	0.0190	0.0190		
D 13C-OCDD	41.797	1823492	0.90	0.5446	191.0	191.0	0.3325	0.3325	95.51	
OCDF	41.890	61051	0.95	1.3168	5.085	5.085	0.0322	0.0322	102	
OCDD	41.805	51642	0.88	1.0620	5.333	5.333	0.0182	0.0182	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Jun-2021 14:18:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-2 HRDXNL2_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:52:54 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 08-Jun-2021 15:08:39

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.564	20.547	1		1041449	163457	148	370	1104		
333.9338	20.564	20.547	1		1292588	204311	95	237	2151	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.628	19.616	1	0.954	1415927	226149	197	492	1148		
317.9389	19.628	19.616	1	0.954	1751087	282985	109	272	2596	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.662	19.646	1	1.002	8785	1472	3	7	491		
305.8987	19.662	19.646	1	1.002	10748	1598	14	35	114	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.933	20.910	1	1.018	956834	140160	148	370	947		
333.9338	20.924	20.910	1	1.018	1182019	172842	95	237	1819	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.941	20.935	0	1.018	11266	1696	9	22	188		
2,3,7,8-TCDD											
319.8965	20.967	20.939	2	1.002	5046	703	25	62	28		
321.8936	20.950	20.939	1	1.001	7076	1165	5	12	233	0.71(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.587	26.560	2	1.293	1544614	271650	354	885	767		
353.8970	26.587	26.560	2	1.293	969875	166951	228	570	732	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.613	26.584	2	1.001	47325	8180	13	32	629		
341.8567	26.596	26.584	1	1.000	27609	5058	24	60	211	1.71(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.046	28.014	2	1.364	1584958	253357	354	885	716		
353.8970	28.037	28.014	1	1.363	1007989	162868	228	570	714	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.071	28.039	2	1.001	44929	7445	13	32	573		
341.8567	28.063	28.039	1	1.001	27888	4385	24	60	183	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.830	28.801	2	1.402	983567	149258	81	202	1843		
369.8919	28.830	28.801	2	1.402	618909	95647	53	132	1805	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.855	28.828	2	1.001	27146	4327	17	42	255		
357.8516	28.863	28.828	2	1.001	15797	2500	5	12	500	1.72(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.406	34.384	1	0.950	521957	103110	186	465	554		
385.8610	34.406	34.384	1	0.950	995265	195967	351	877	558	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.431	34.405	2	1.001	26220	5205	19	47	274		
375.8178	34.431	34.405	2	1.001	20154	4061	11	27	369	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.583	34.562	1	0.955	567371	107545	186	465	578		
385.8610	34.583	34.562	1	0.955	1059282	198264	351	877	565	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.608	34.582	2	1.001	29510	5690	19	47	299		
375.8178	34.600	34.582	1	1.000	24878	4701	11	27	427	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.468	35.444	1	0.980	527302	117266	186	465	630		
385.8610	35.468	35.444	1	0.980	996134	220962	351	877	630	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.485	35.461	1	1.000	27767	6035	19	47	318		
375.8178	35.476	35.461	1	1.000	22259	4941	11	27	449	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.404	36.388	1	1.005	582391	143633	186	465	772		
385.8610	36.404	36.388	1	1.005	1114166	273141	351	877	778	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.421	36.402	1	1.000	31508	7777	19	47	409		
375.8178	36.421	36.402	1	1.000	26094	6045	11	27	550	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.210	36.192	1		987922	232825	142	355	1640		
403.8529	36.210	36.192	1		764858	181339	110	275	1649	1.29(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.695	35.680	1	0.986	630506	153231	142	355	1079		
403.8529	35.695	35.680	1	0.986	497389	118761	110	275	1080	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.712	35.695	1	1.000	17291	4375	12	30	365		
391.8127	35.712	35.695	1	1.000	14389	3541	11	27	322	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.822	35.805	1	0.989	727495	166749	142	355	1174		
403.8529	35.822	35.805	1	0.989	563870	125792	110	275	1144	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.839	35.820	1	1.000	18295	4156	12	30	346		
391.8127	35.830	35.820	1	1.000	15787	3353	11	27	305	1.16(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.227	36.208	1	1.015	21159	5138	12	30	428		
391.8127	36.218	36.208	1	1.015	18436	4550	11	27	414	1.15(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.321	38.305	1	1.058	389255	110351	150	375	736		
419.8220	38.321	38.305	1	1.058	838024	240182	283	707	849	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.329	38.317	1	1.000	24164	7010	18	45	389		
409.7788	38.329	38.317	1	1.000	23123	6463	10	25	646	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.611	39.600	1	1.094	351407	112029	150	375	747		
419.8220	39.611	39.600	1	1.094	769256	246420	283	707	871	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.619	39.608	1	1.000	20064	6267	18	45	348		
409.7788	39.628	39.608	1	1.000	19318	5891	10	25	589	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.307	39.293	1	1.086	574080	172930	147	367	1176		
437.8140	39.307	39.293	1	1.086	539065	163690	141	352	1161	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.316	39.301	1	1.000	15770	4799	17	42	282		
425.7737	39.316	39.301	1	1.000	15891	4656	10	25	466	0.99(0.88-1.20)	
13C-OCDD											
469.7780	41.797	41.785	1	1.154	864827	245324	148	370	1658		
471.7750	41.797	41.785	1	1.154	958665	273299	152	380	1798	0.90(0.76-1.02)	
OCDF											
441.7428	41.890	41.875	1	1.002	29681	8172	14	35	584		
443.7399	41.881	41.875	0	1.002	31370	8963	30	75	299	0.95(0.76-1.02)	
OCDD											
457.7377	41.805	41.794	1	1.000	24122	6775	8	20	847		
459.7348	41.805	41.794	1	1.000	27520	7850	12	30	654	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

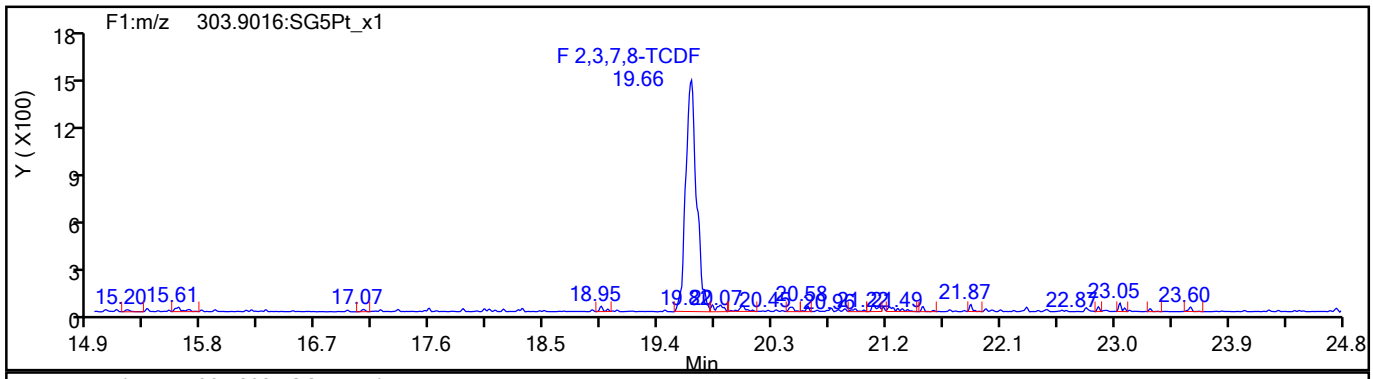

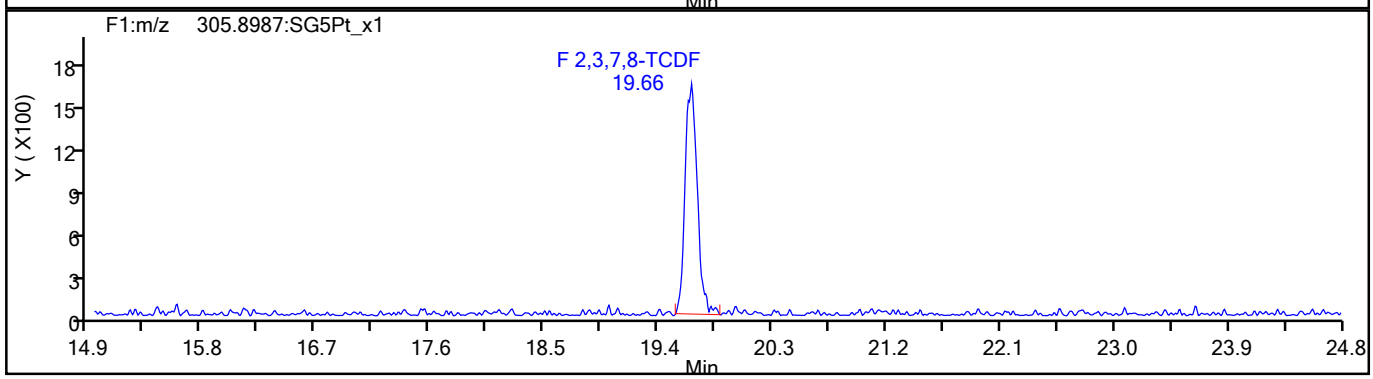

TCDF Standards

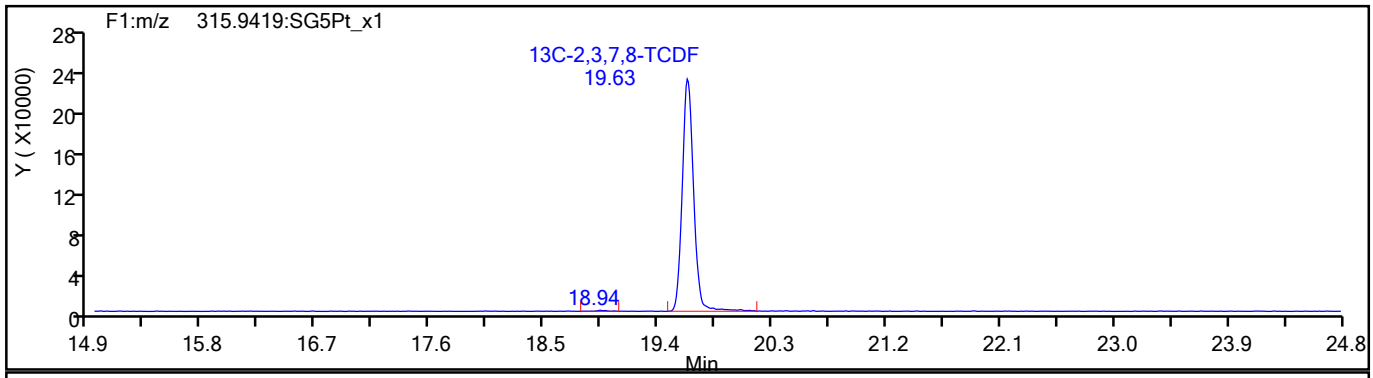

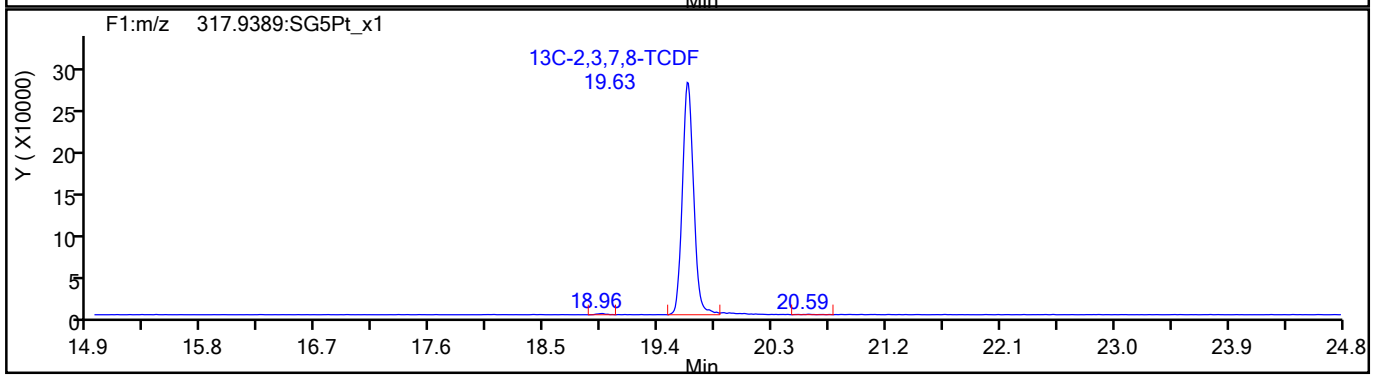

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Report Date: 09-Jun-2021 08:53:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

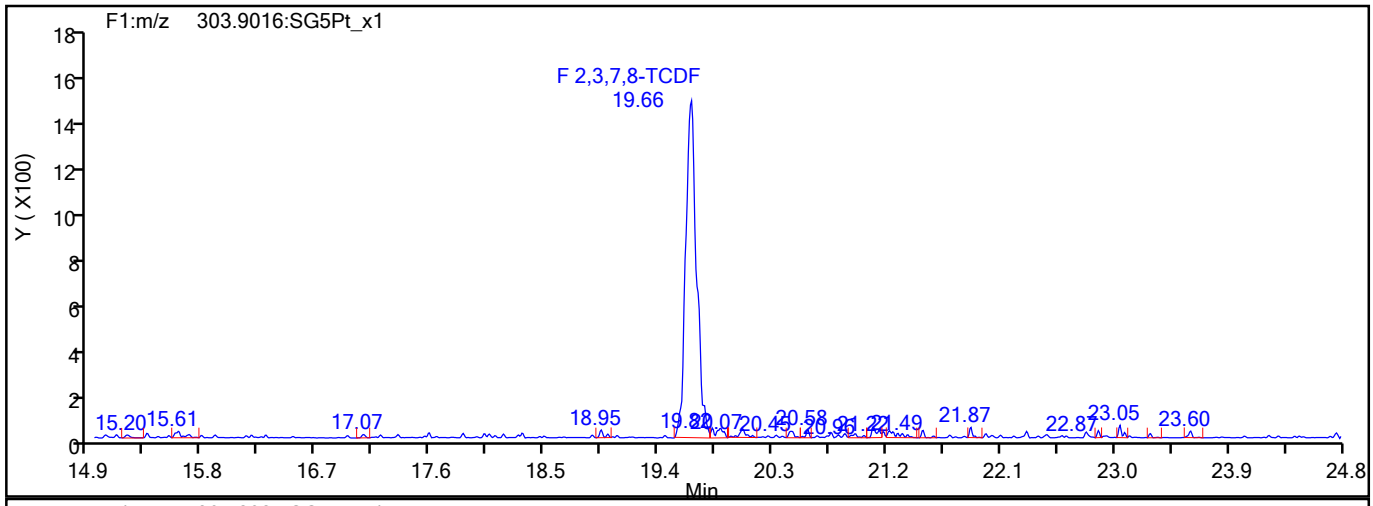

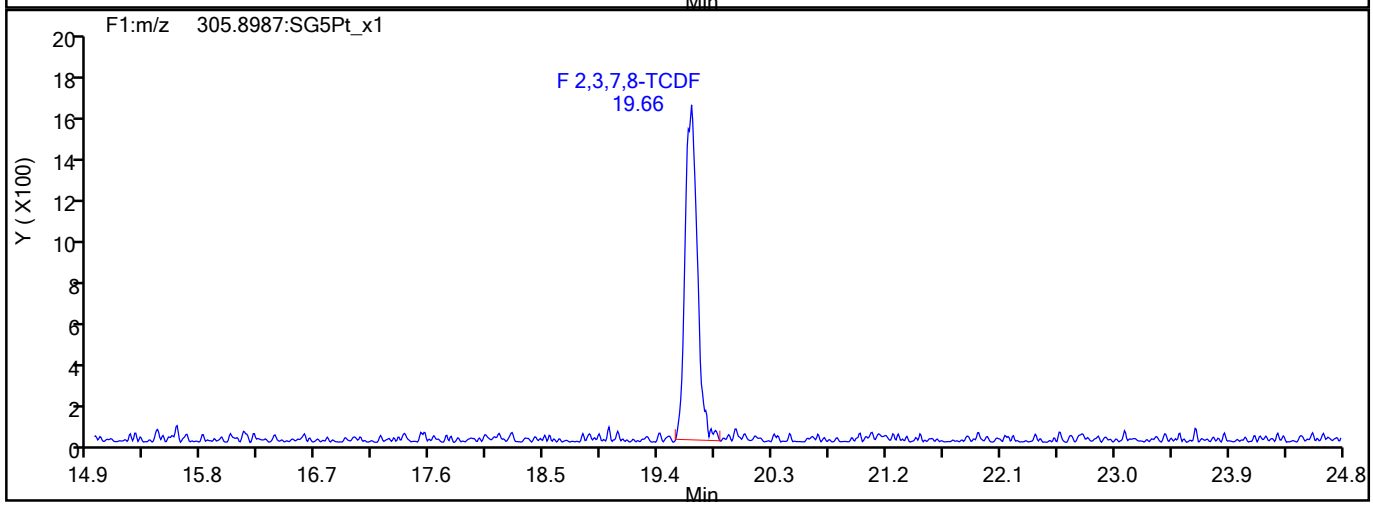

TCDF Interference Mass

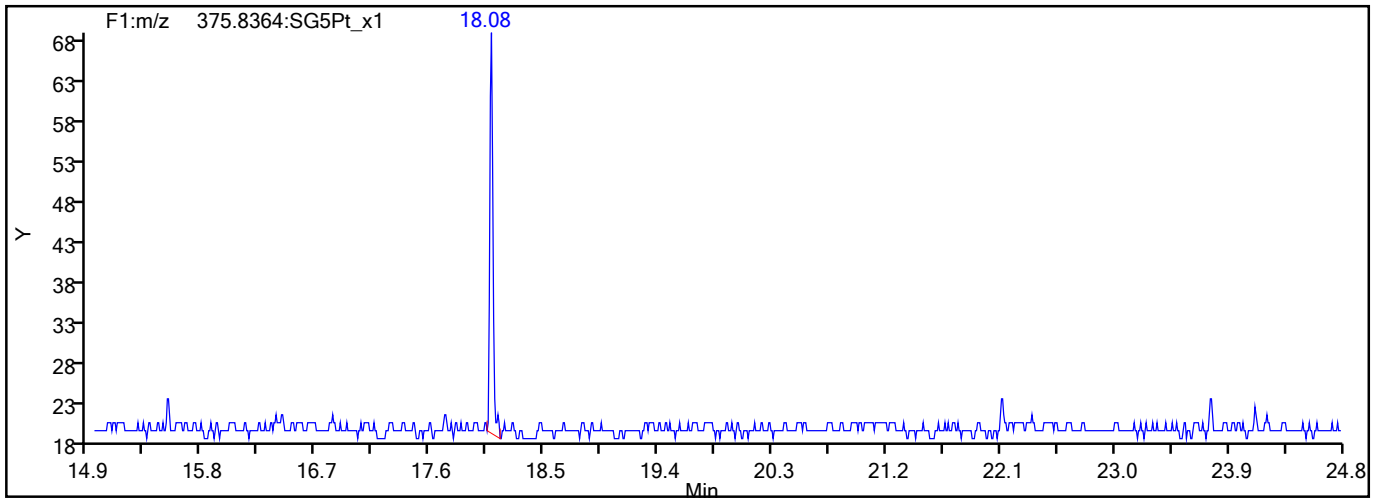

790055

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

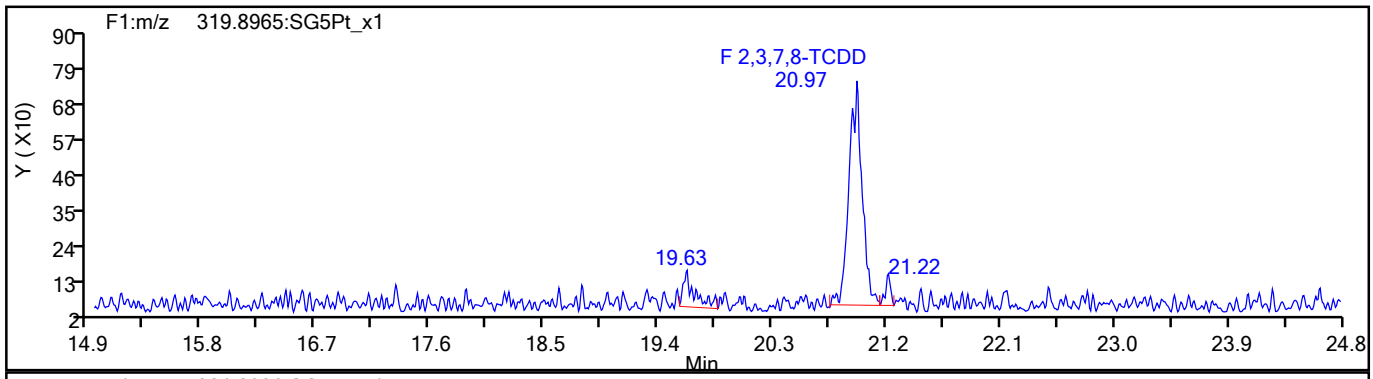

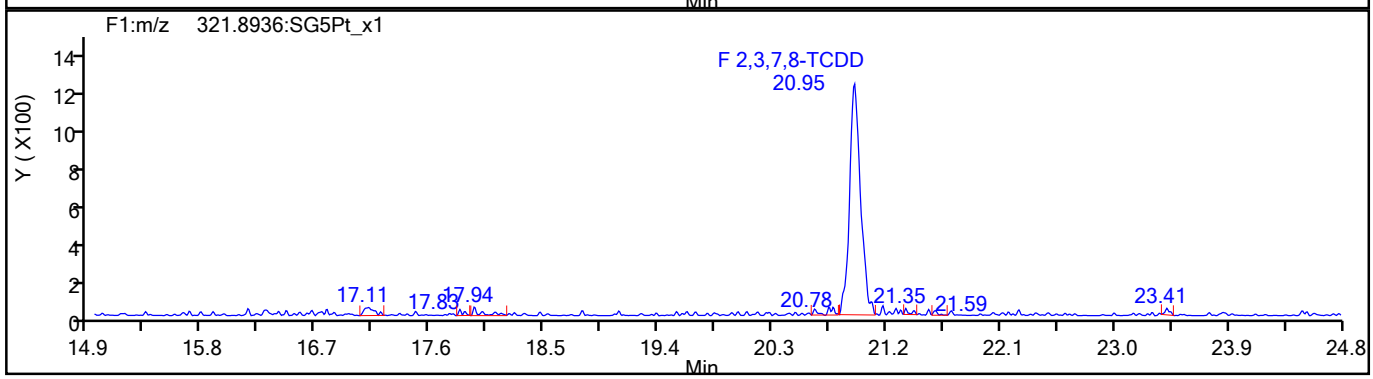

TCDD Standards

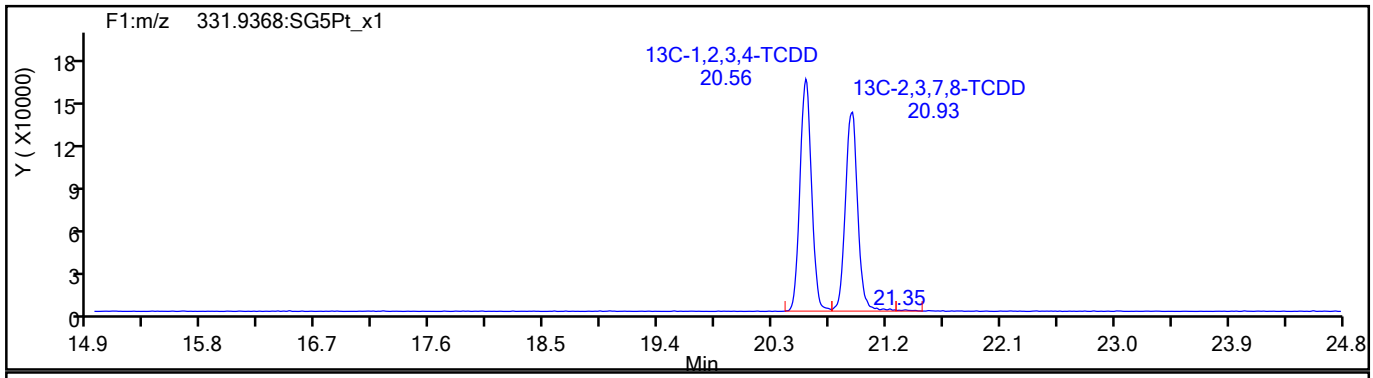

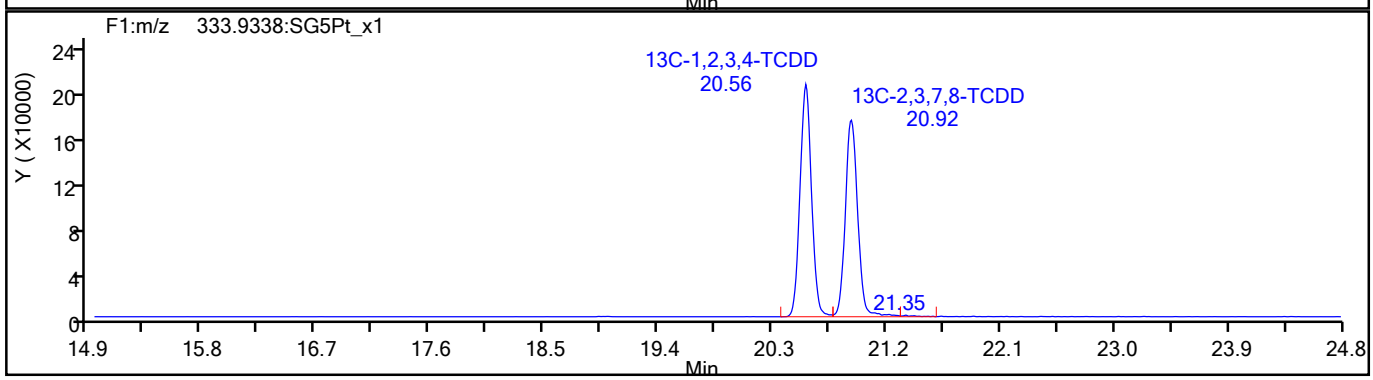

790056

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

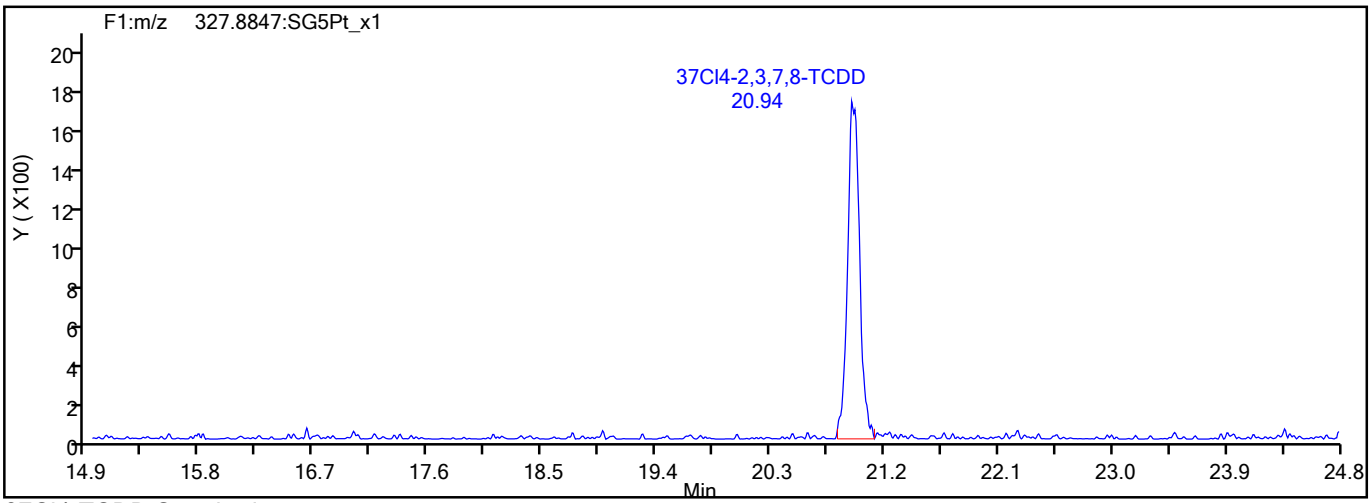

37Cl4-TCDD Standards

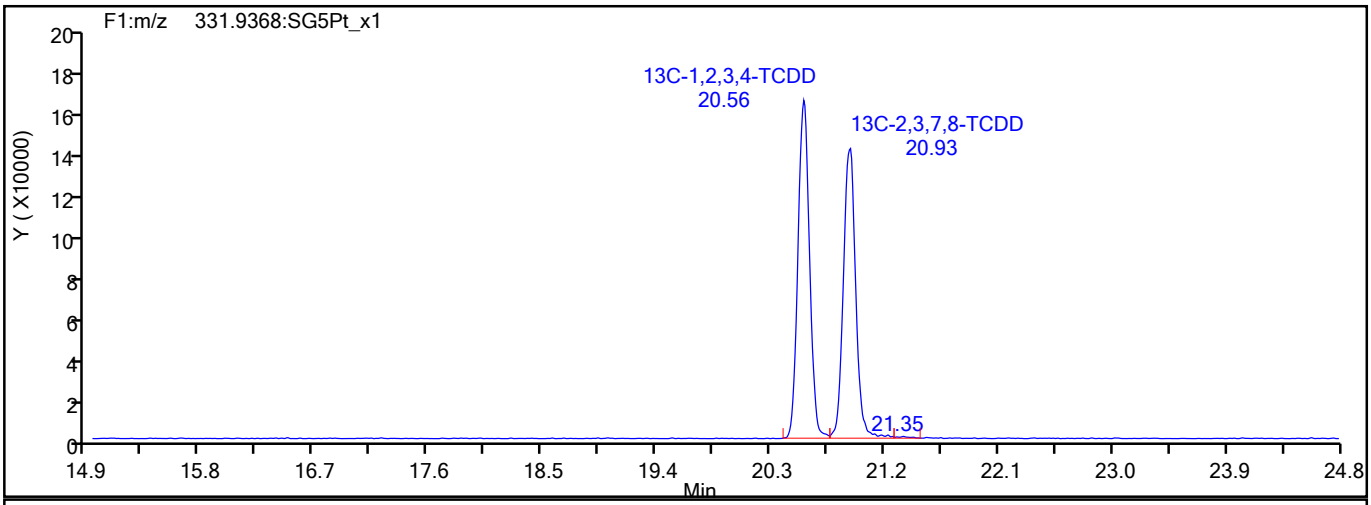

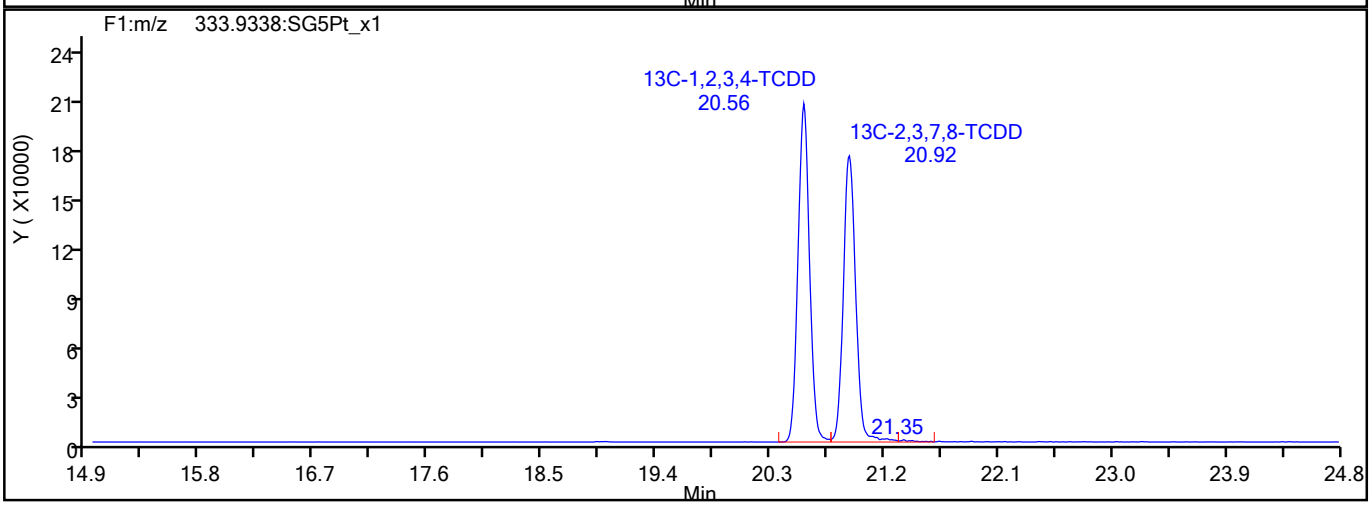

790057

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

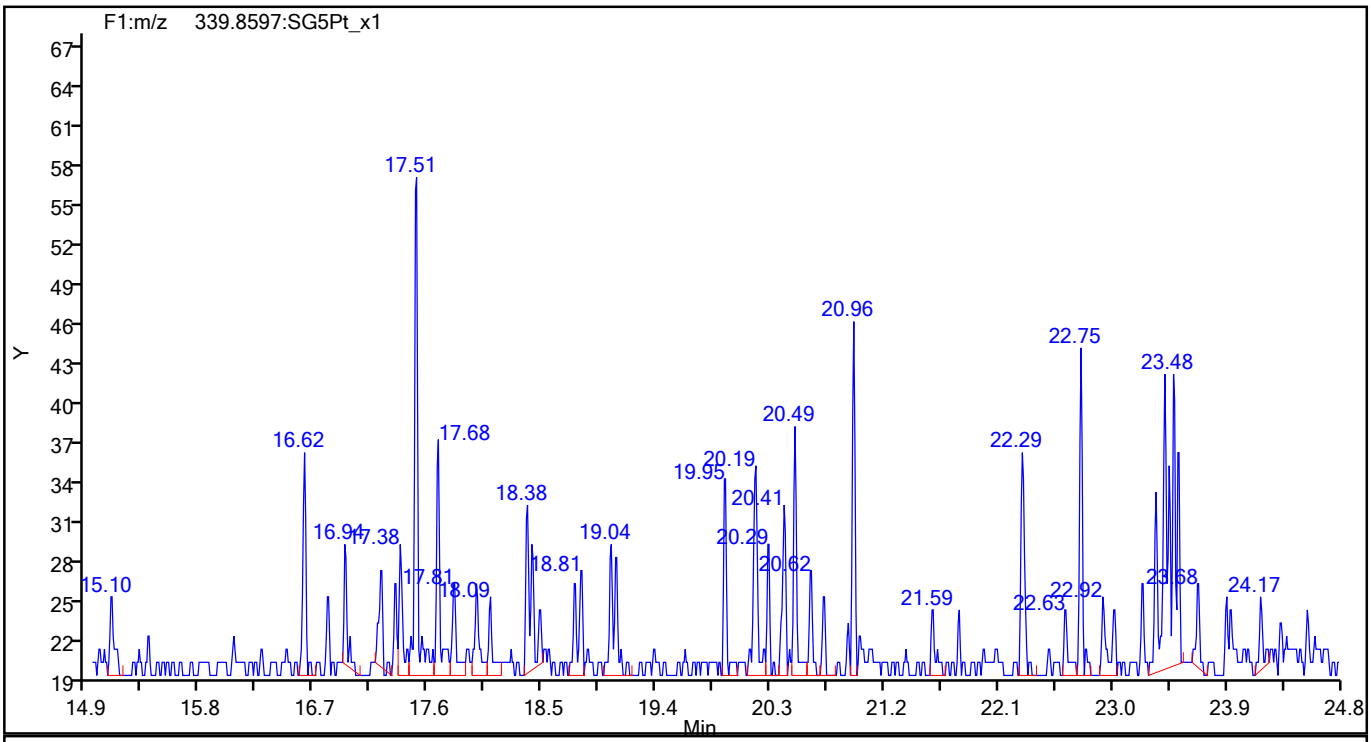

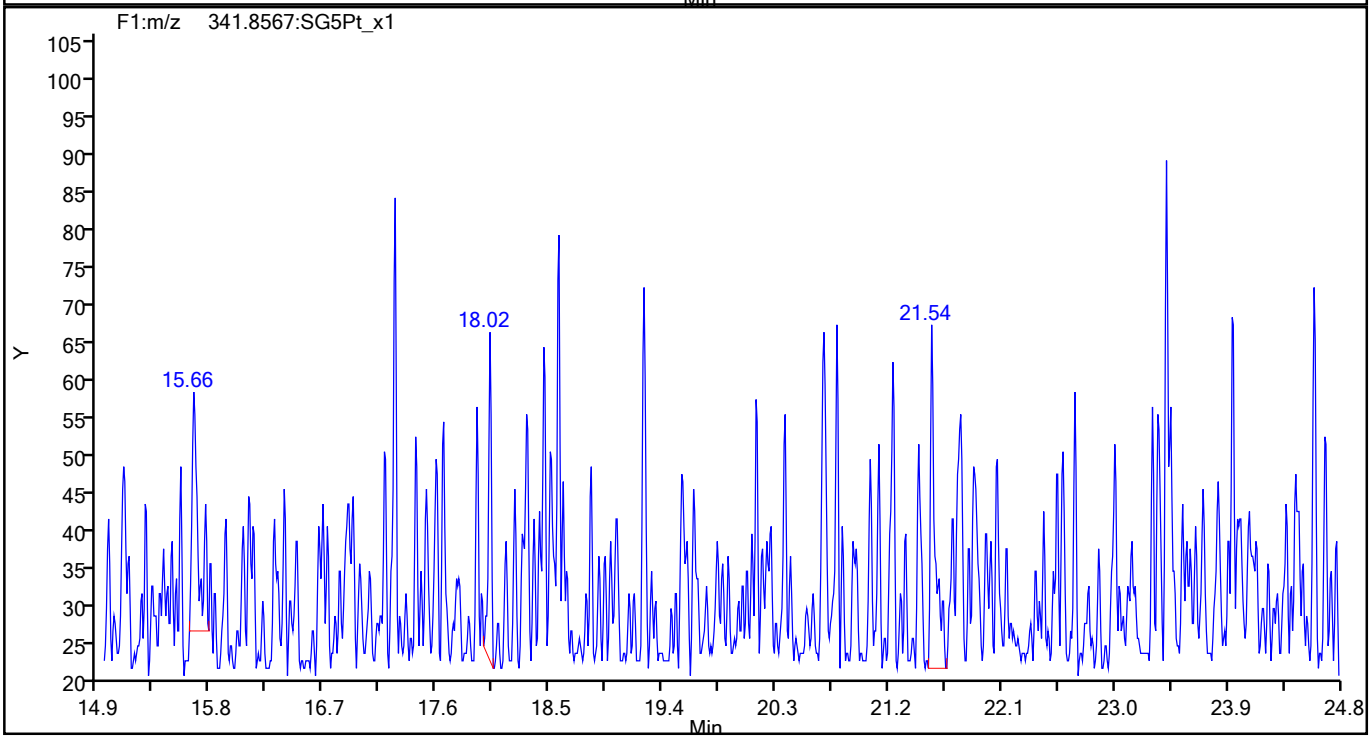

790058

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

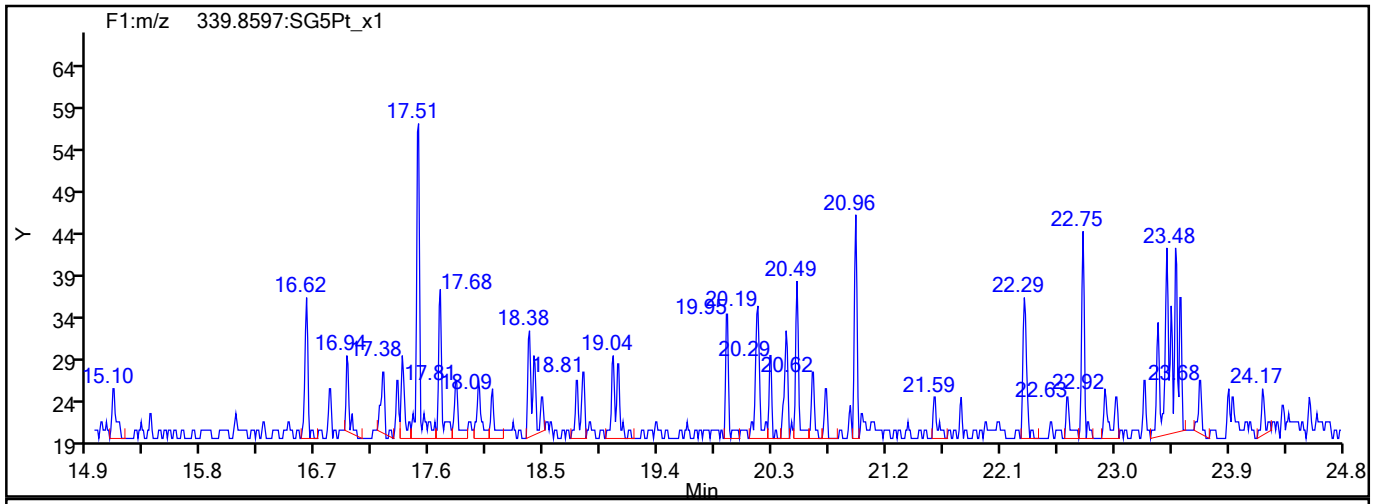

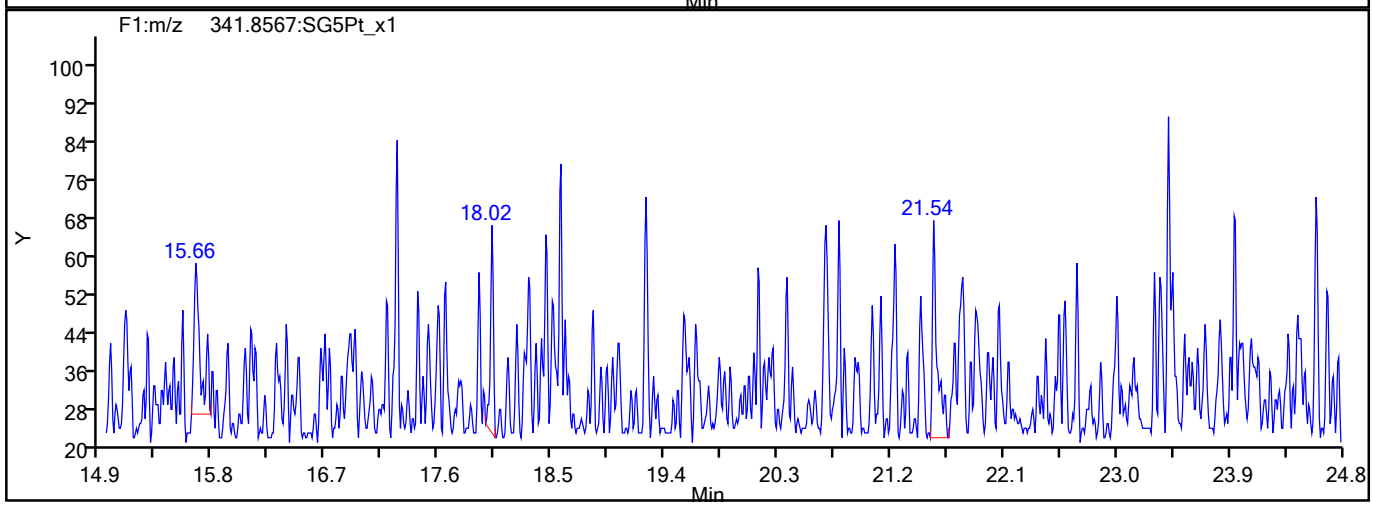

F1 PeCDFs Interference Mass

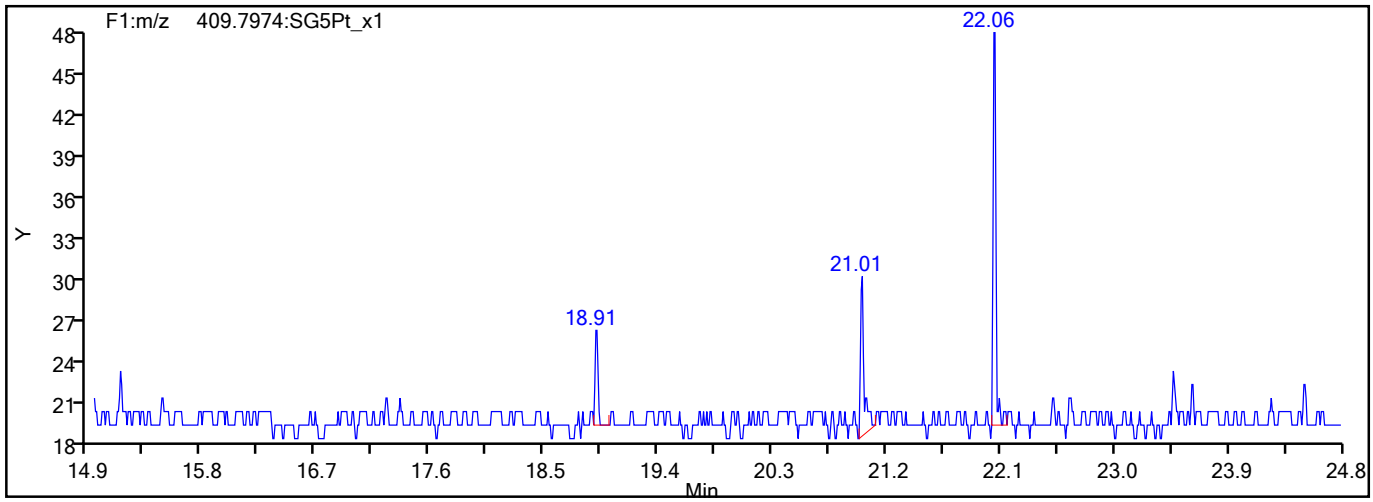

790059

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

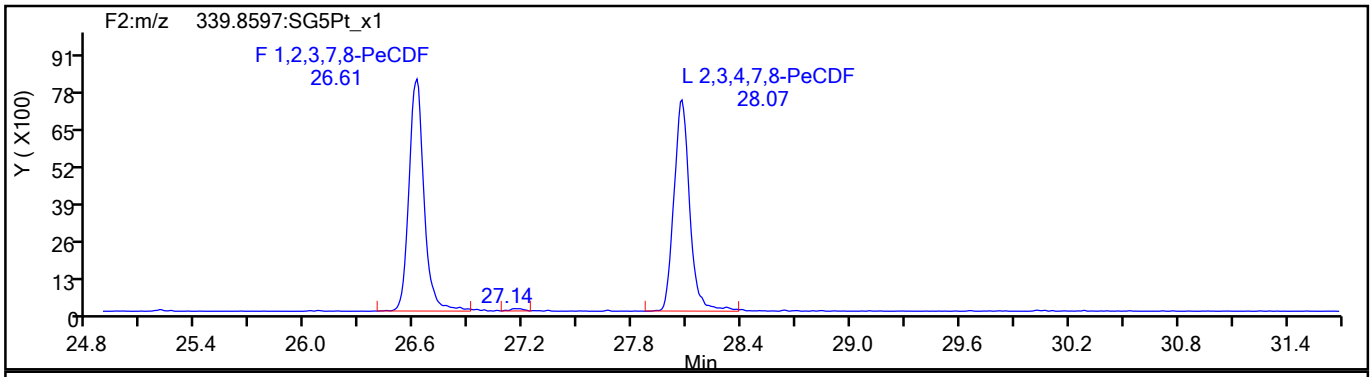

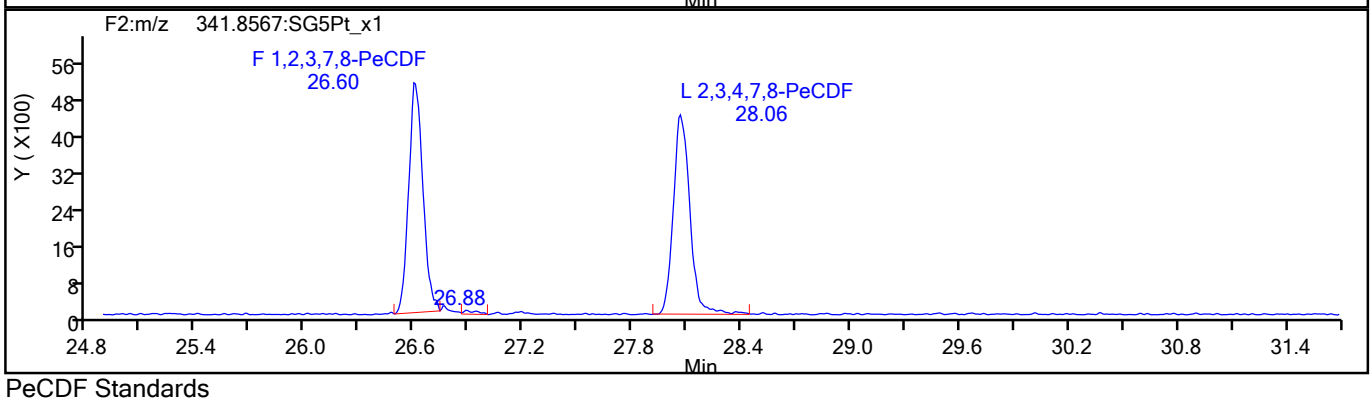

PeCDF Standards

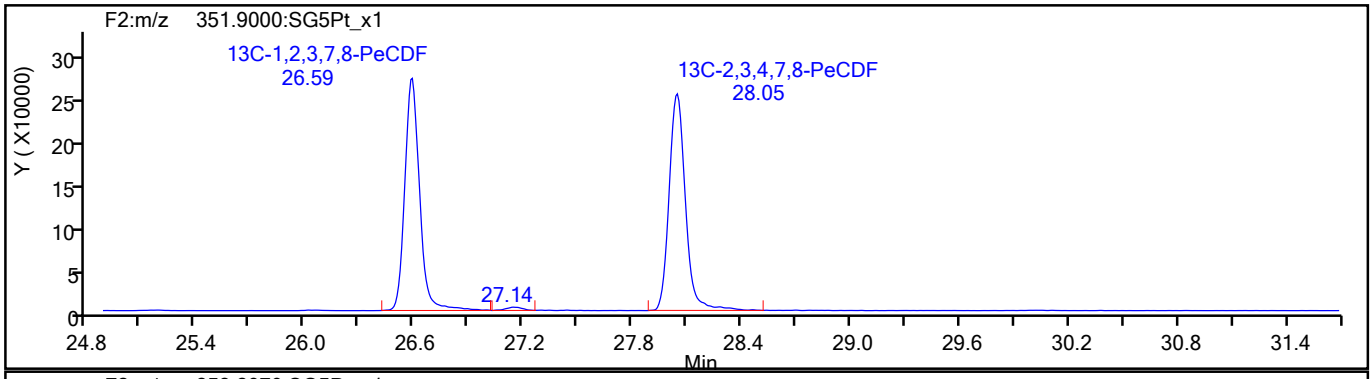

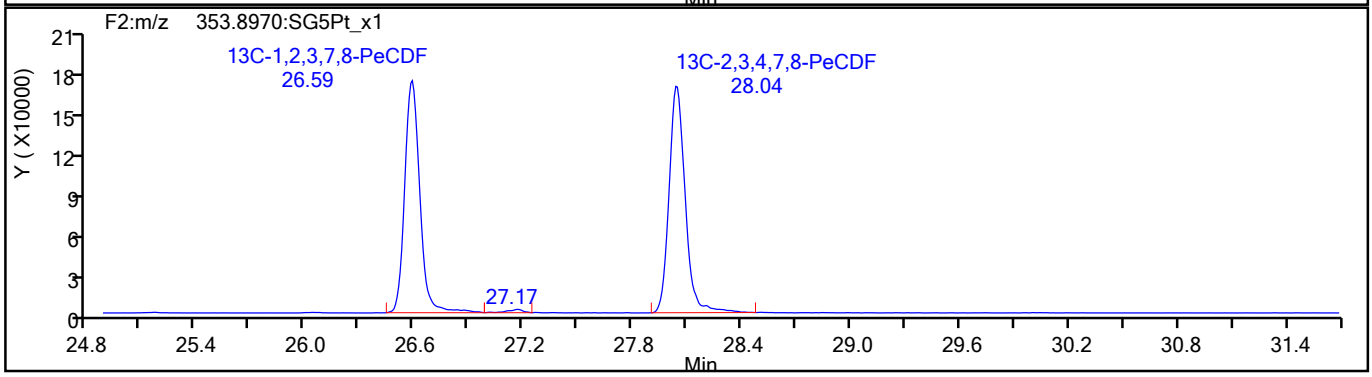

790060

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

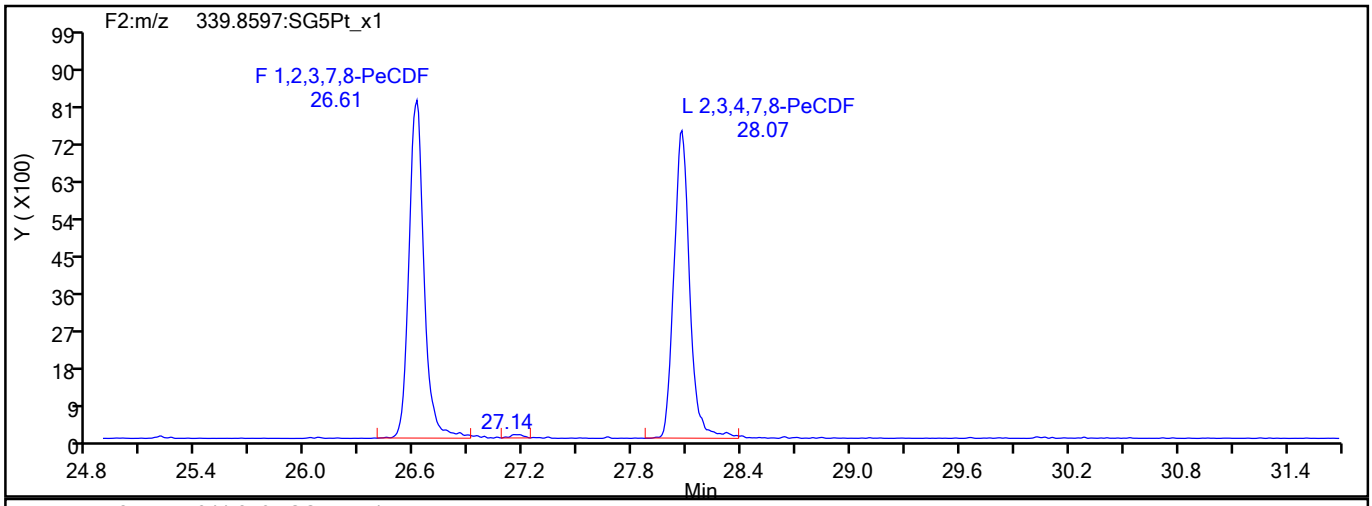

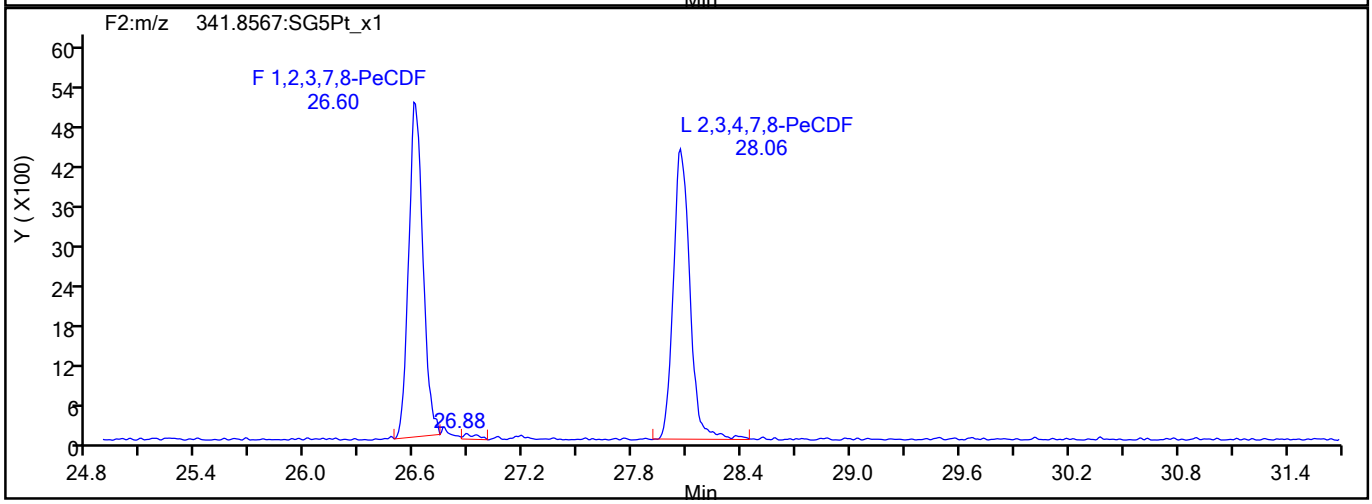

PeCDF Interference Mass

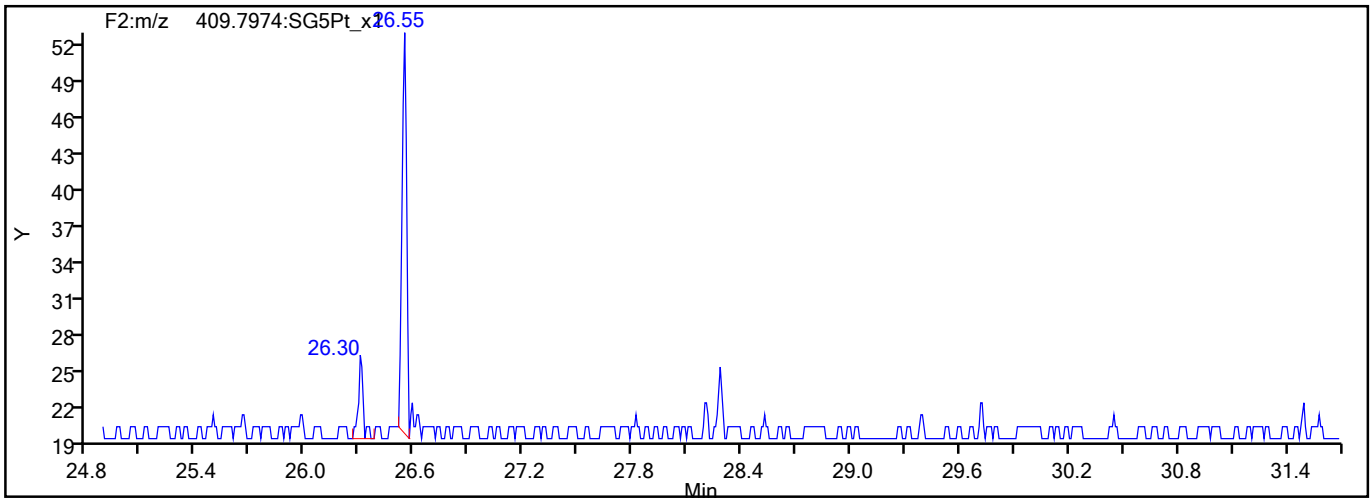

790061

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

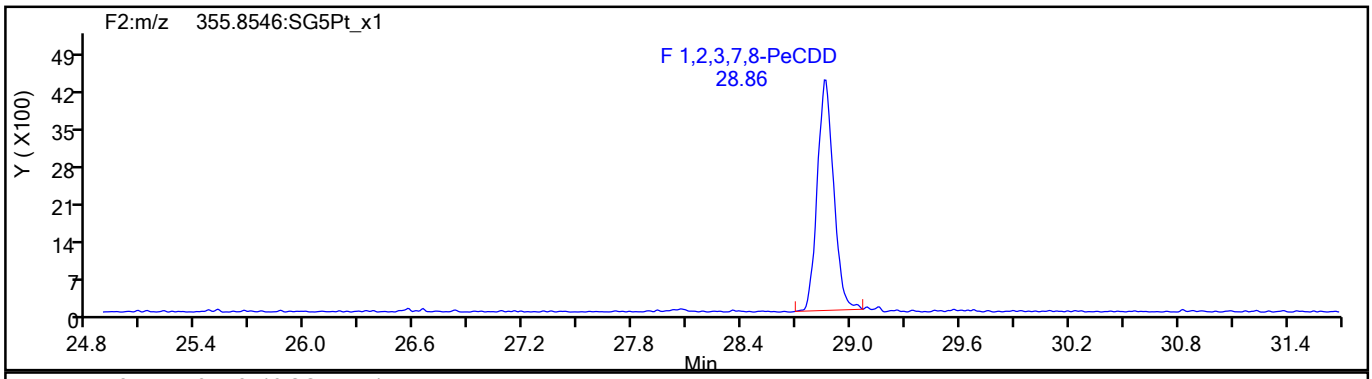

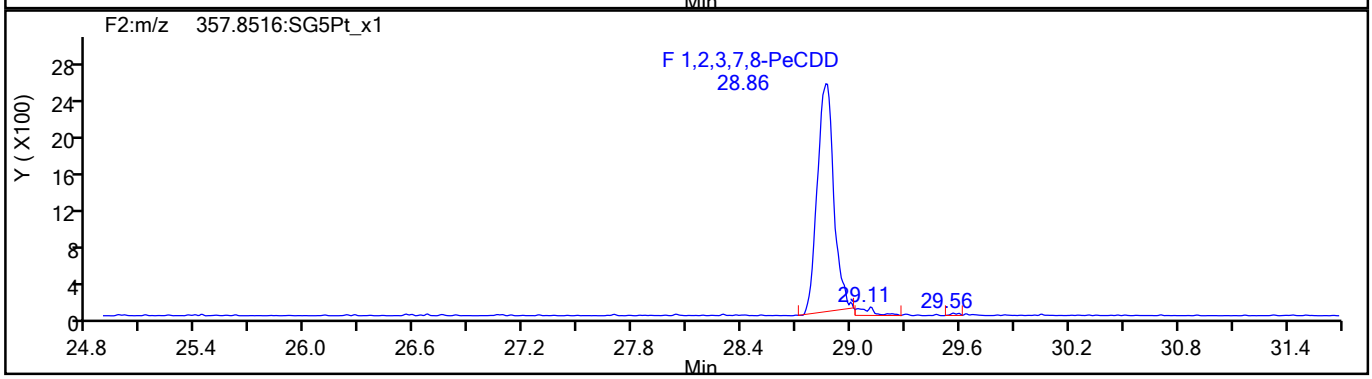

PeCDD Standards

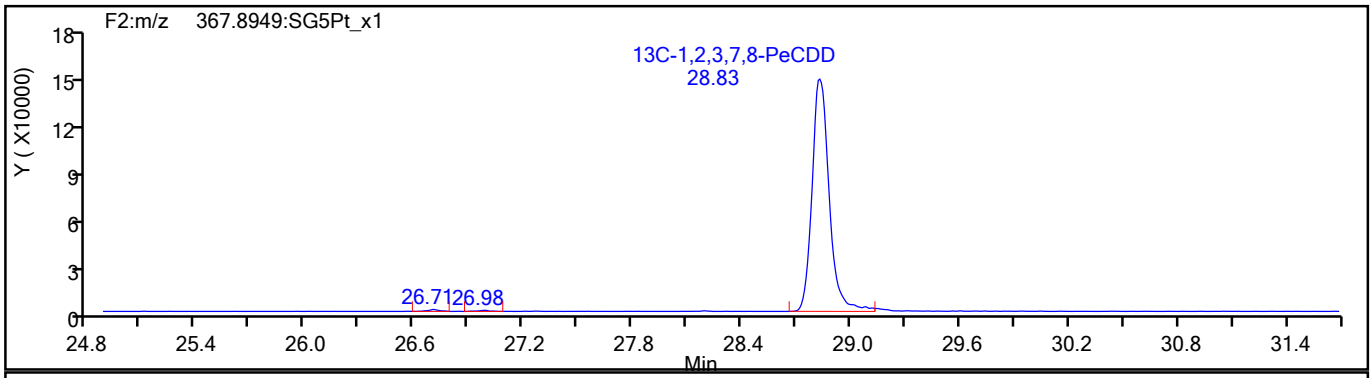

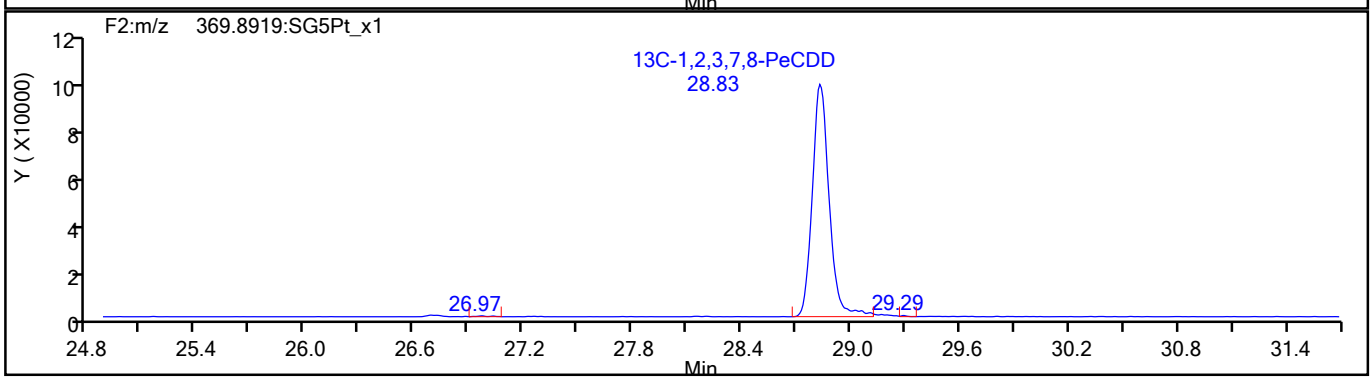

790062

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

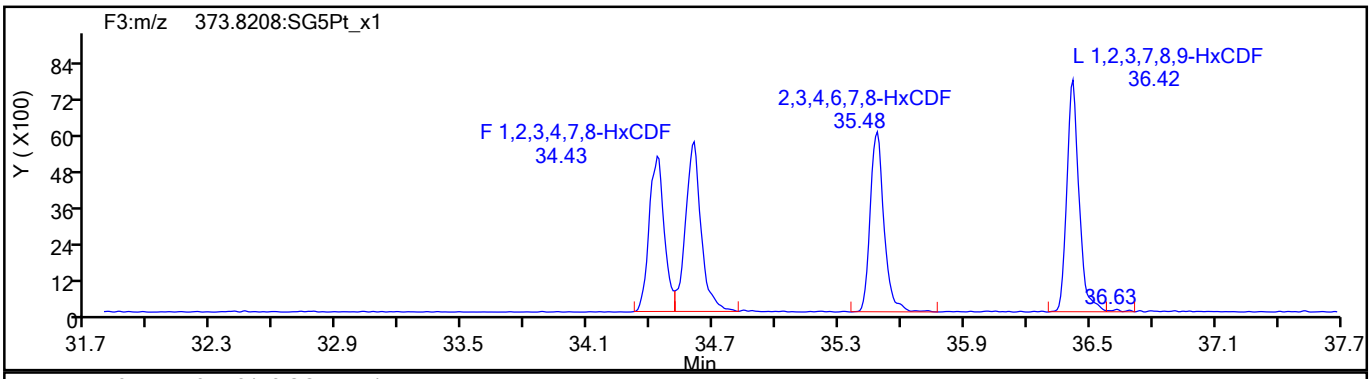

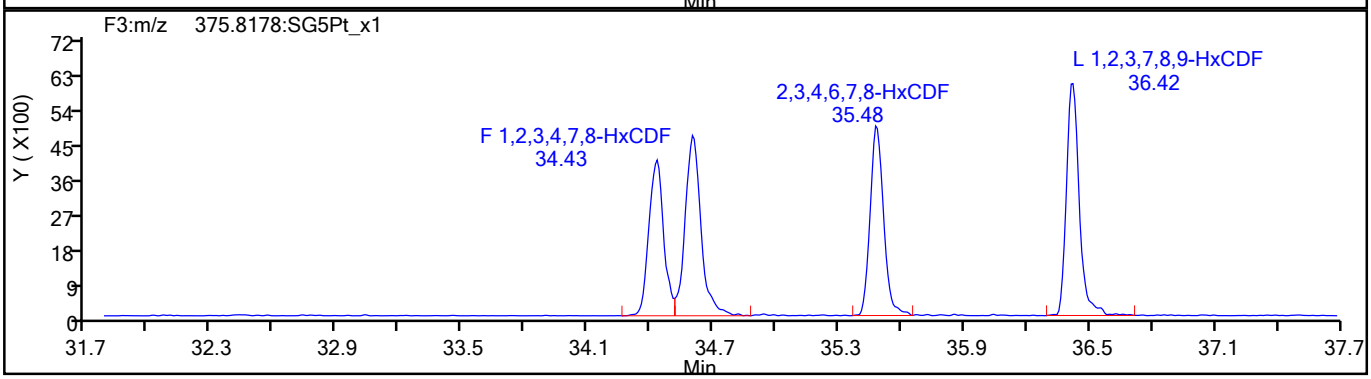

HxCDF Standards

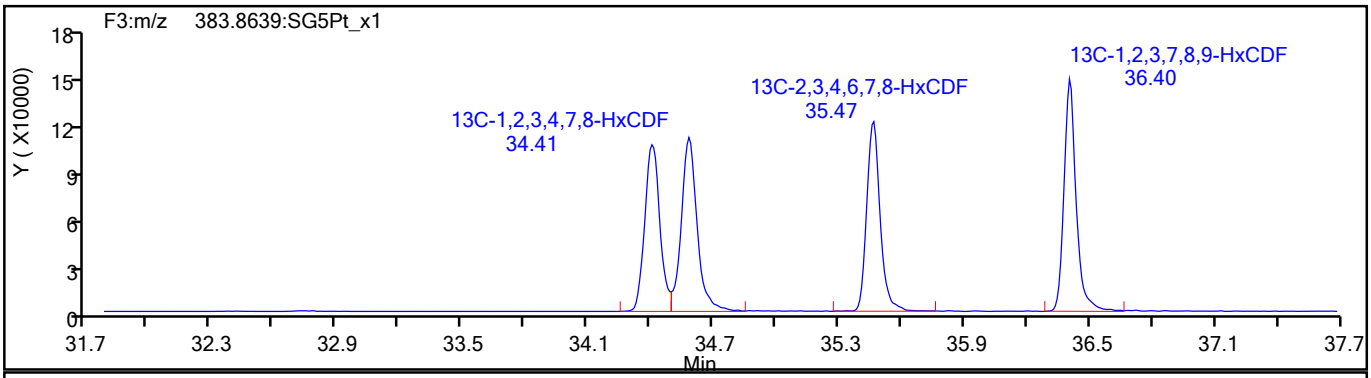

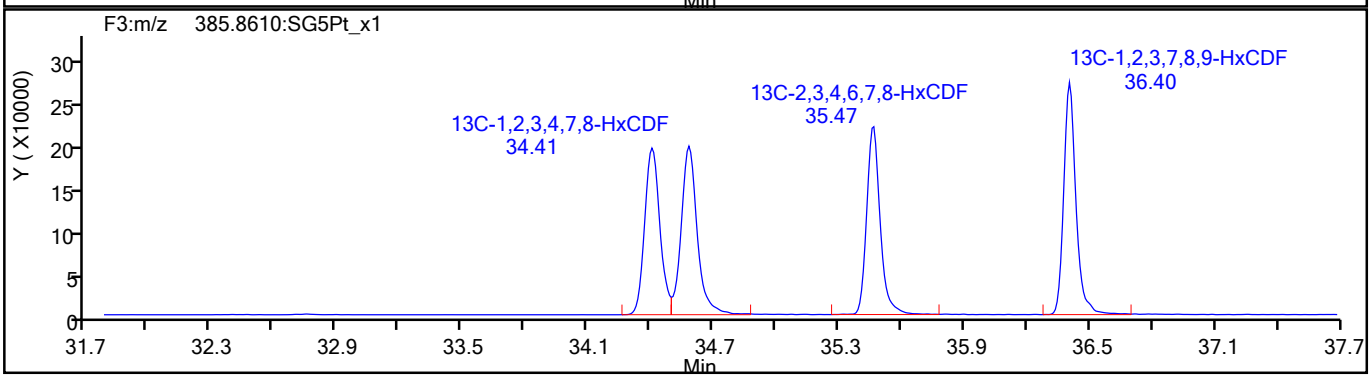

790063

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

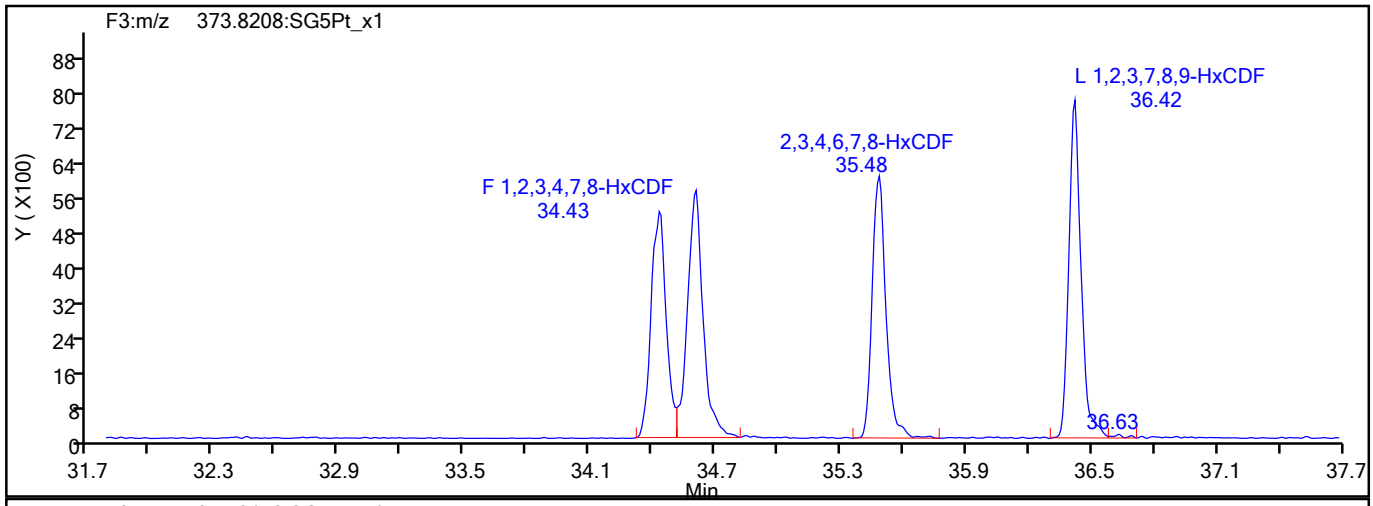

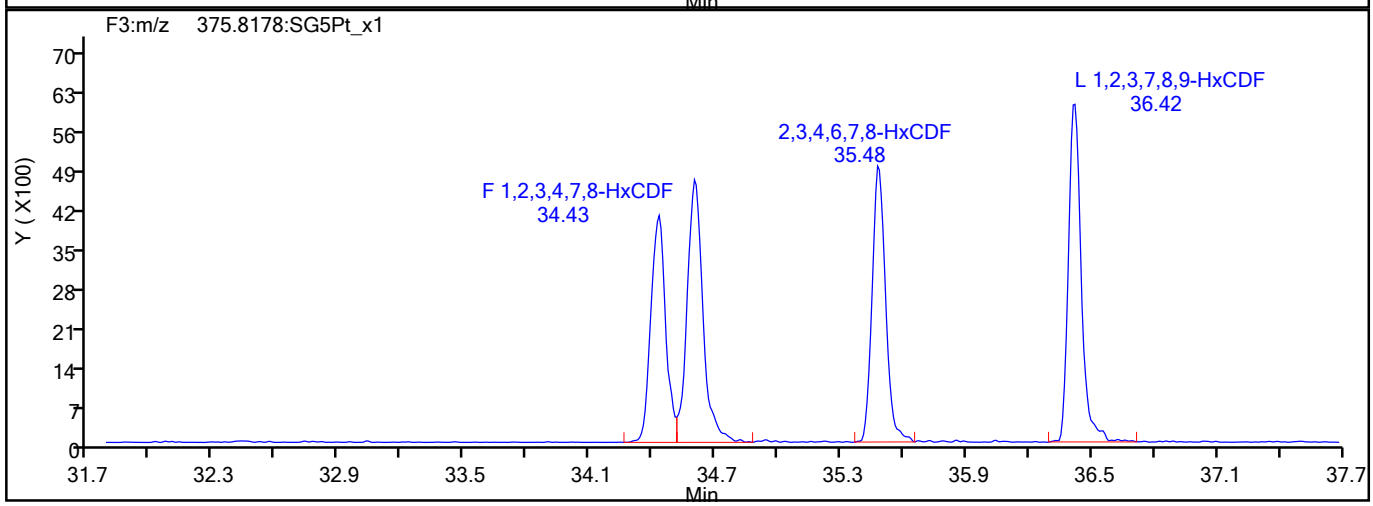

HxCDF Interference Mass

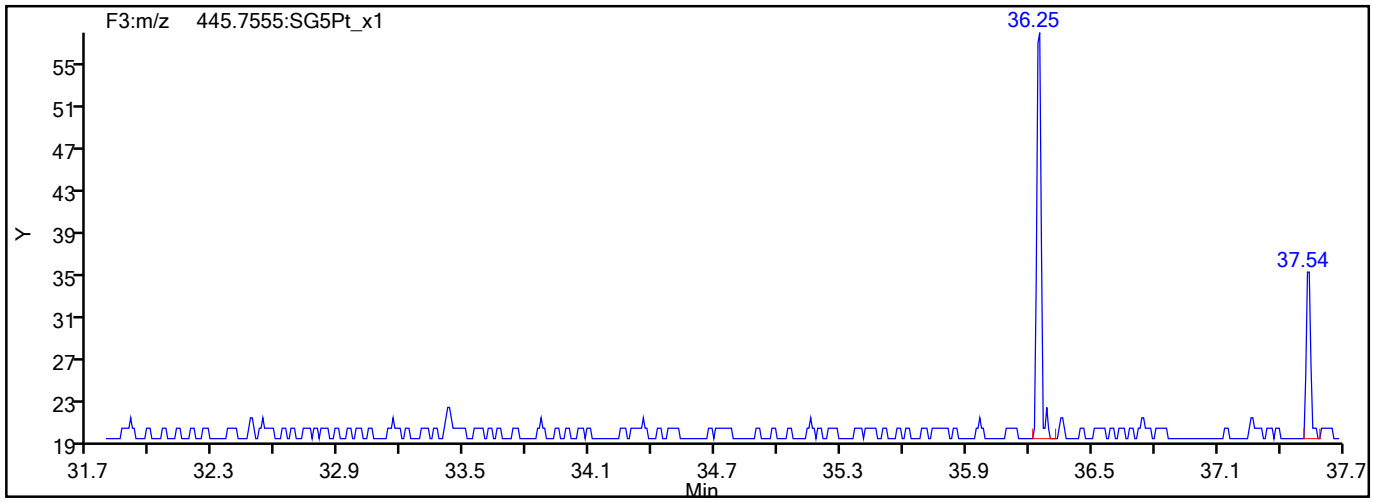

790064

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

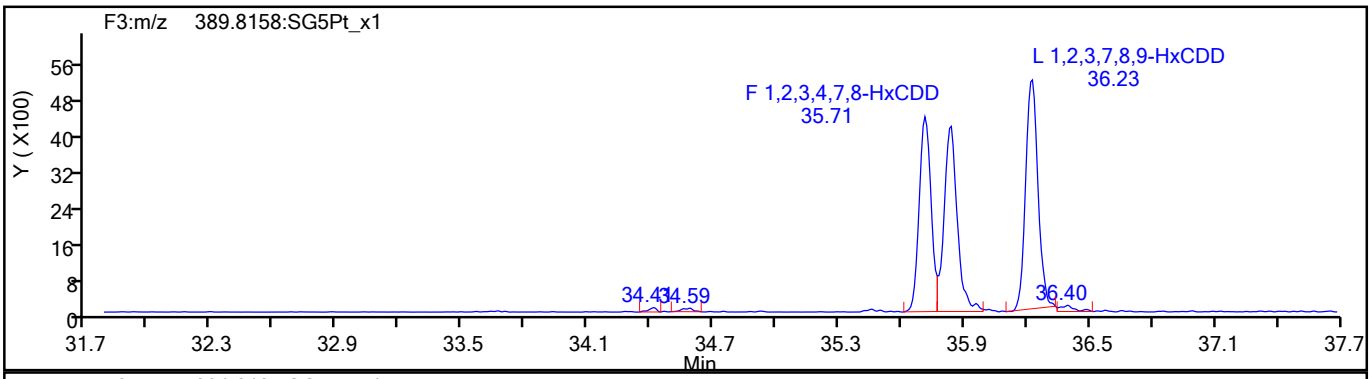

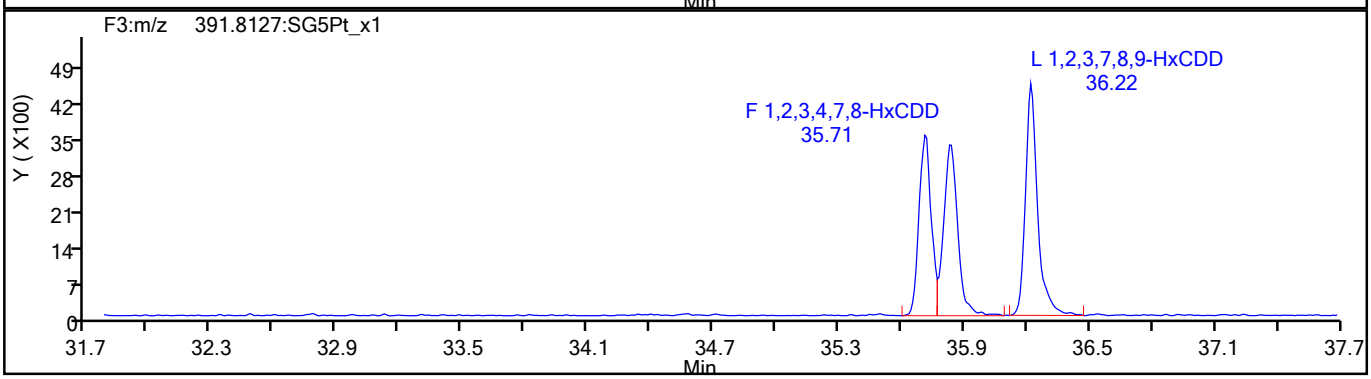

HxCDD Standards

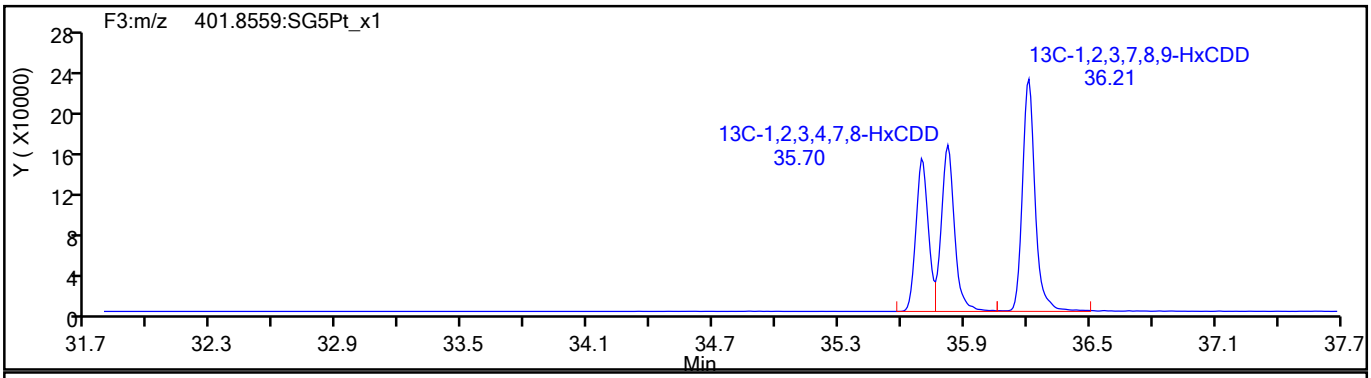

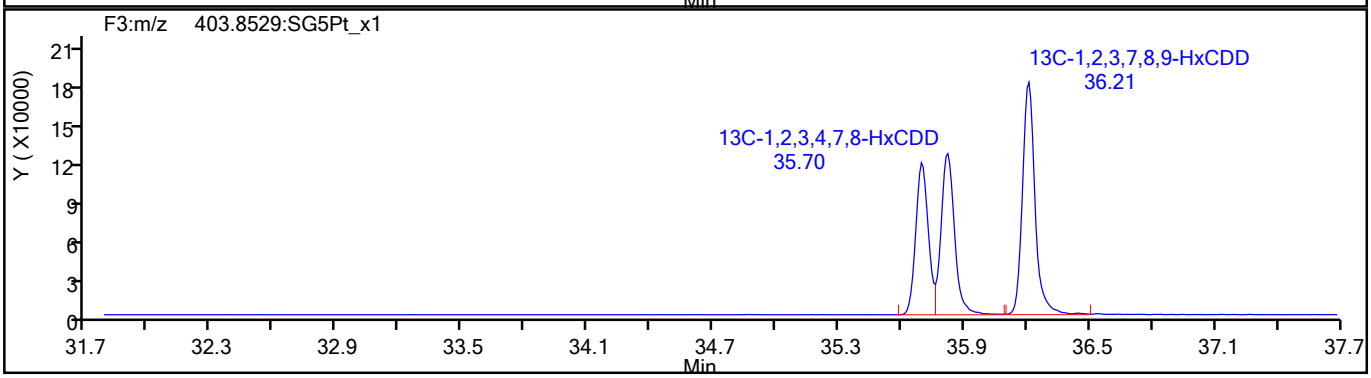

790065

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

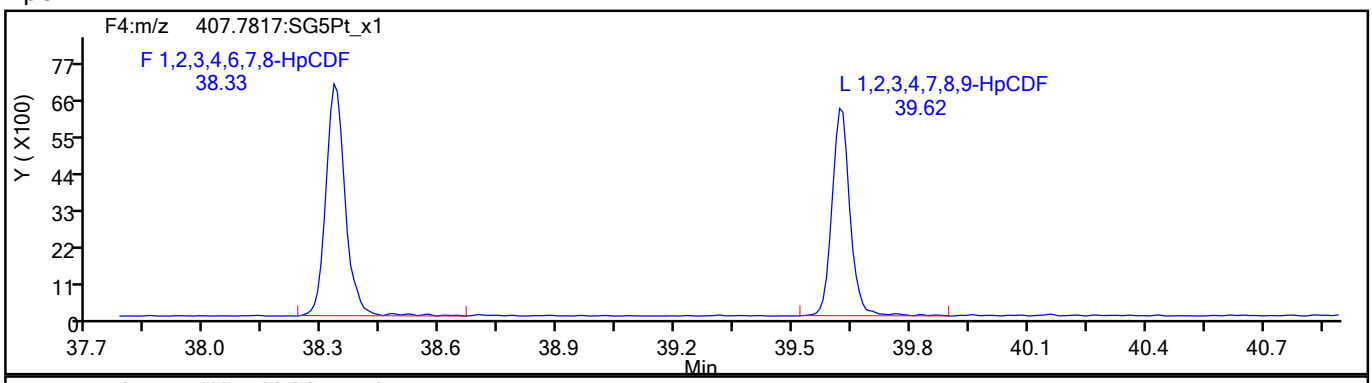

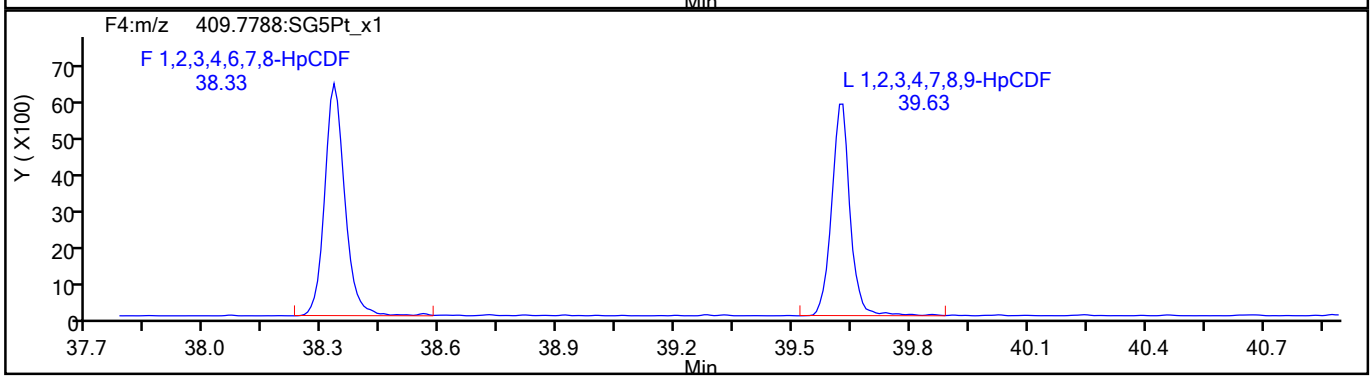

HpCDF Standards

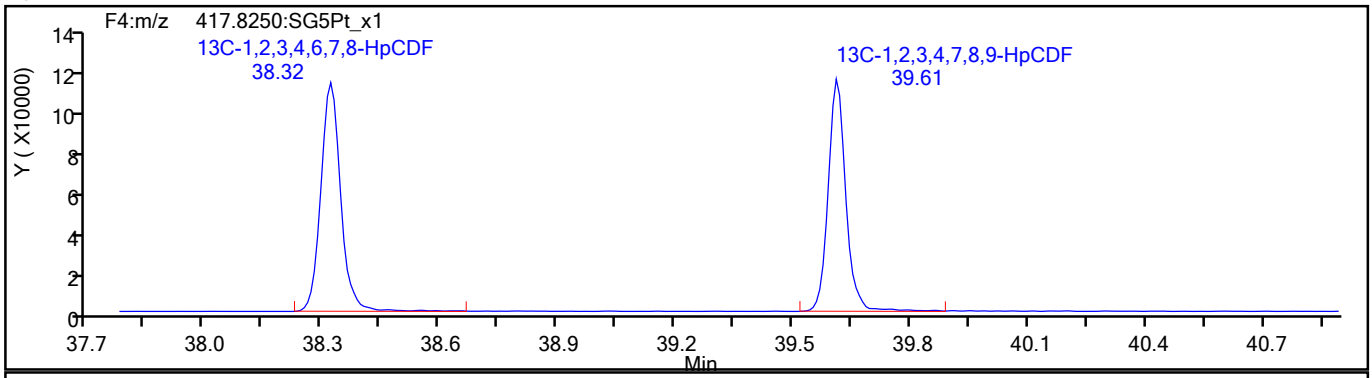

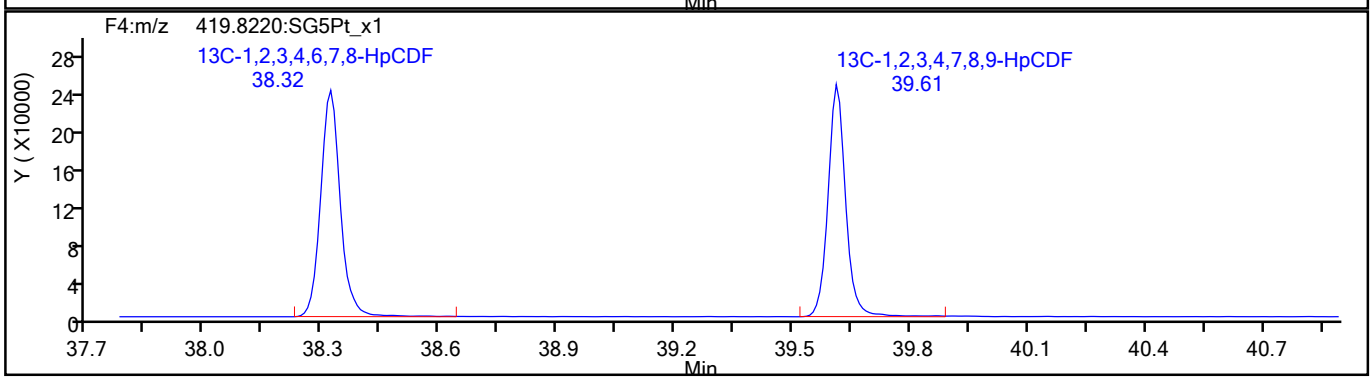

790066

Report Date: 09-Jun-2021 08:53:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

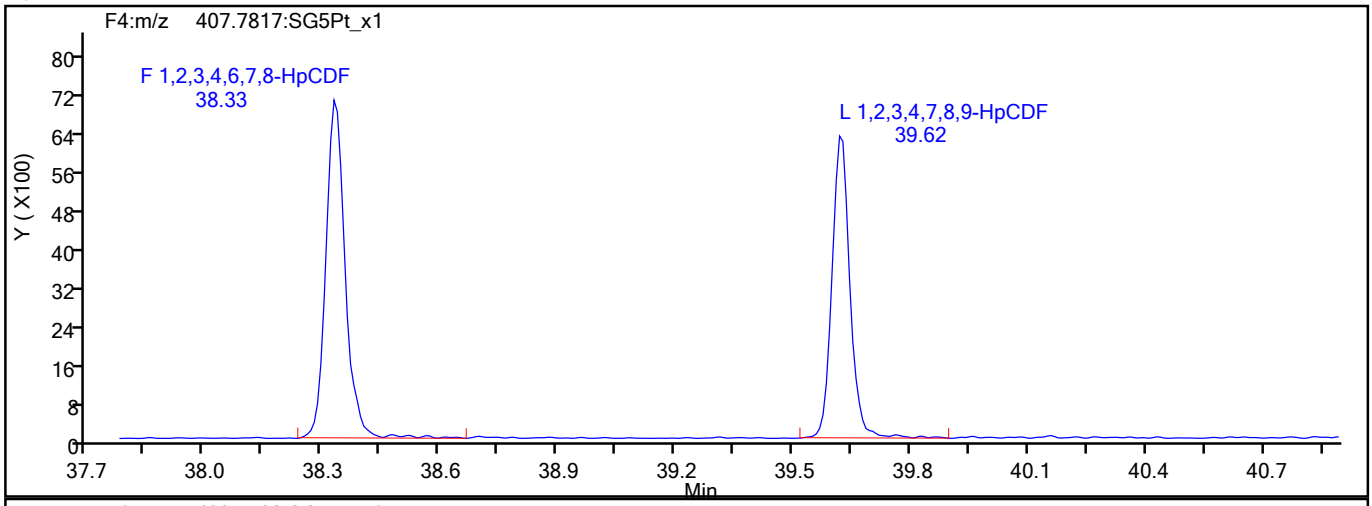

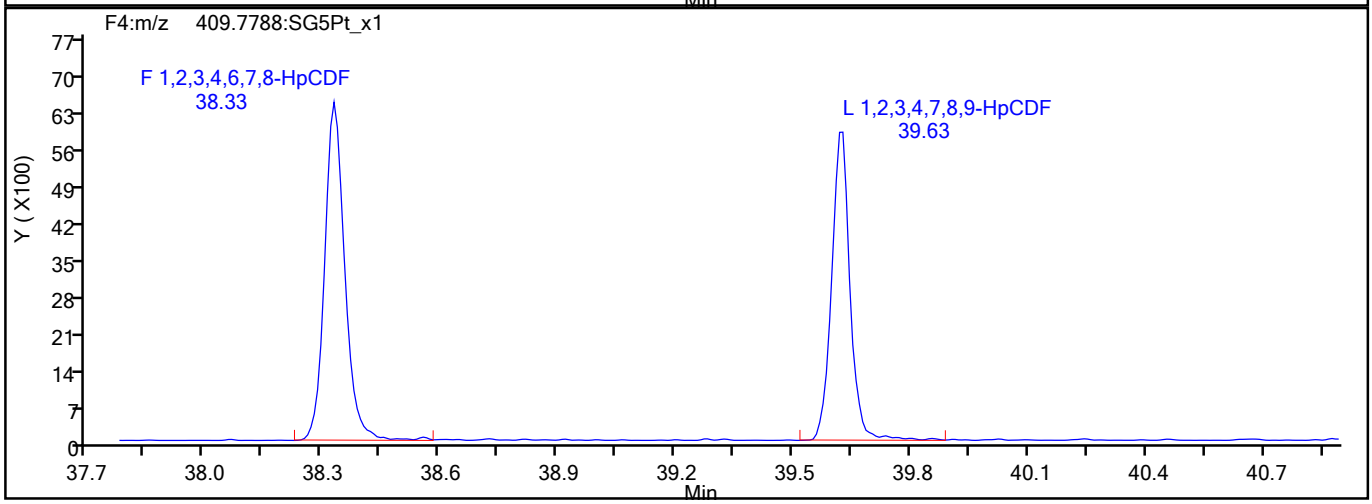

HpCDF Interference Mass

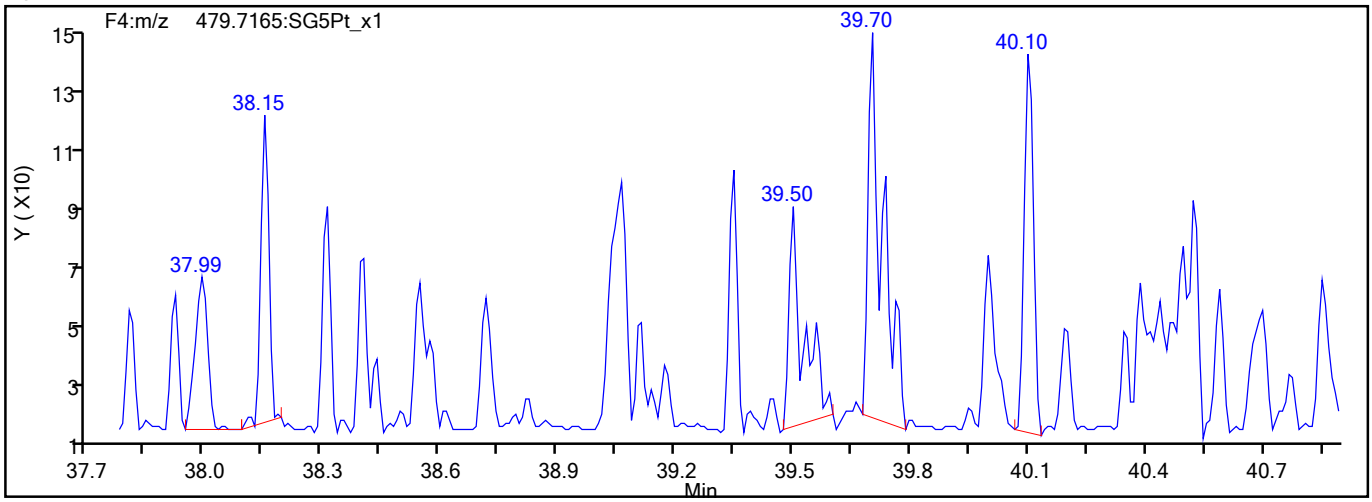

790067

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

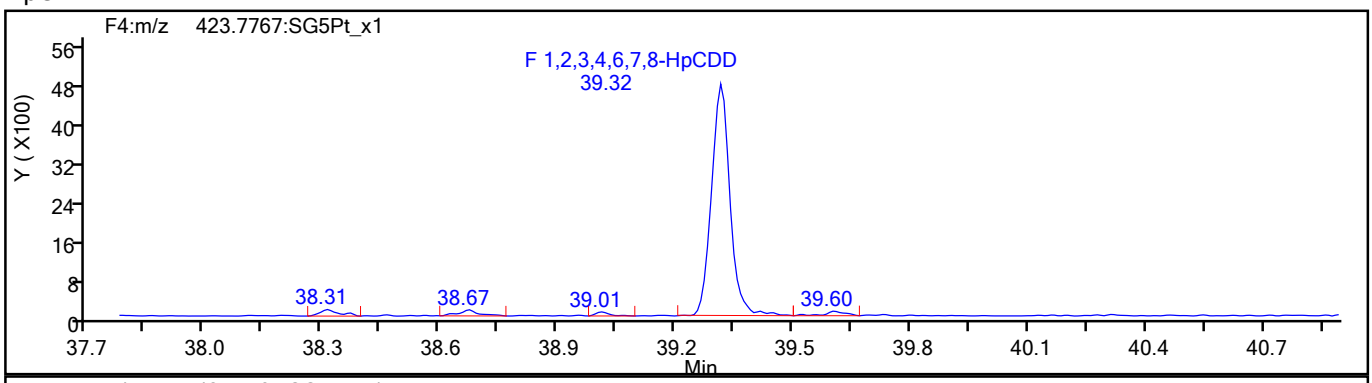

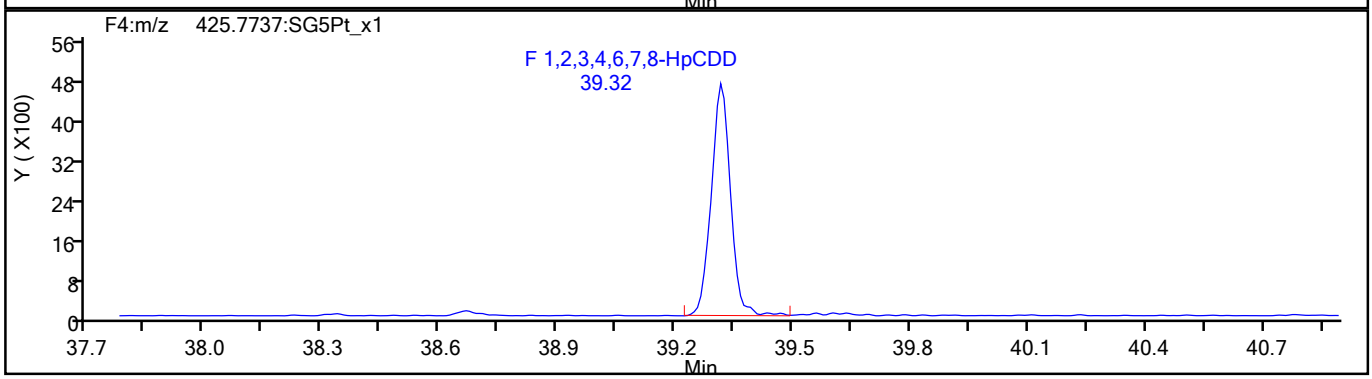

HpCDD Standards

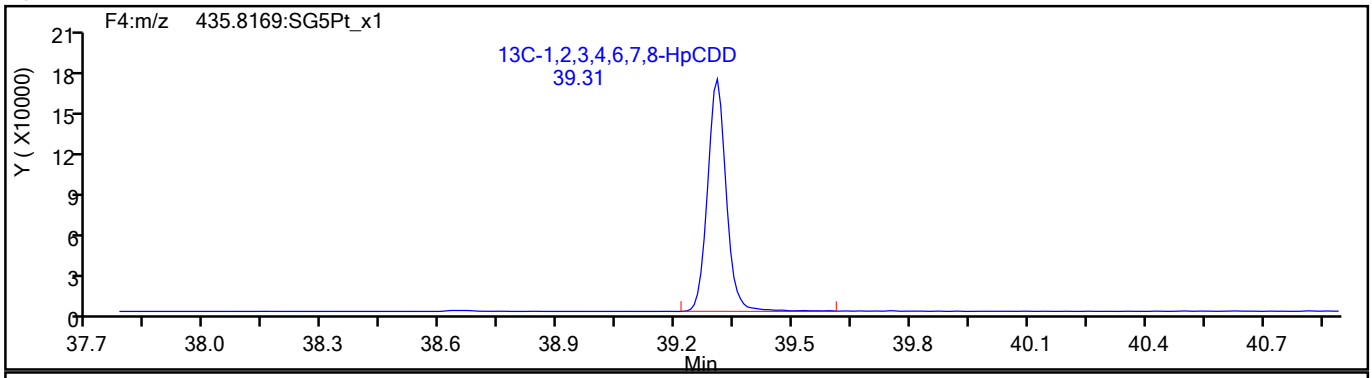

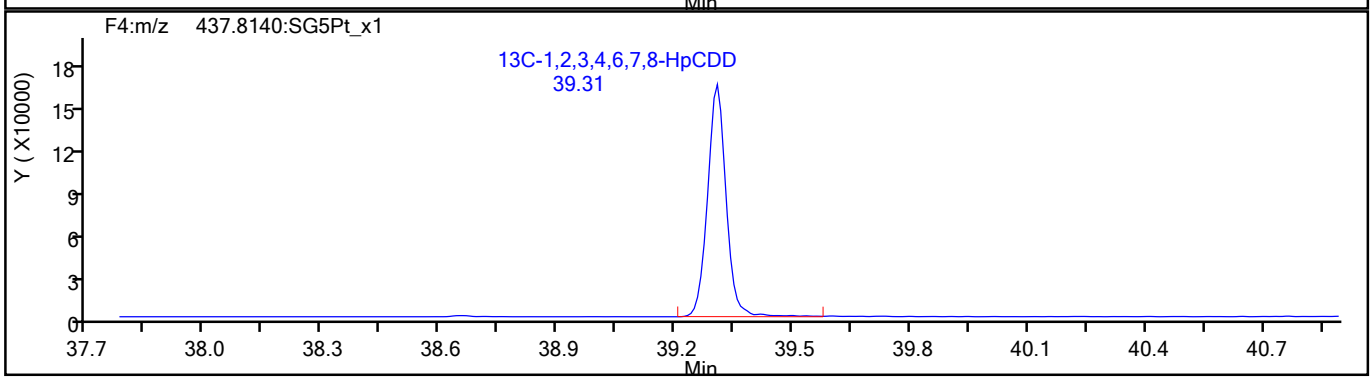

790068

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

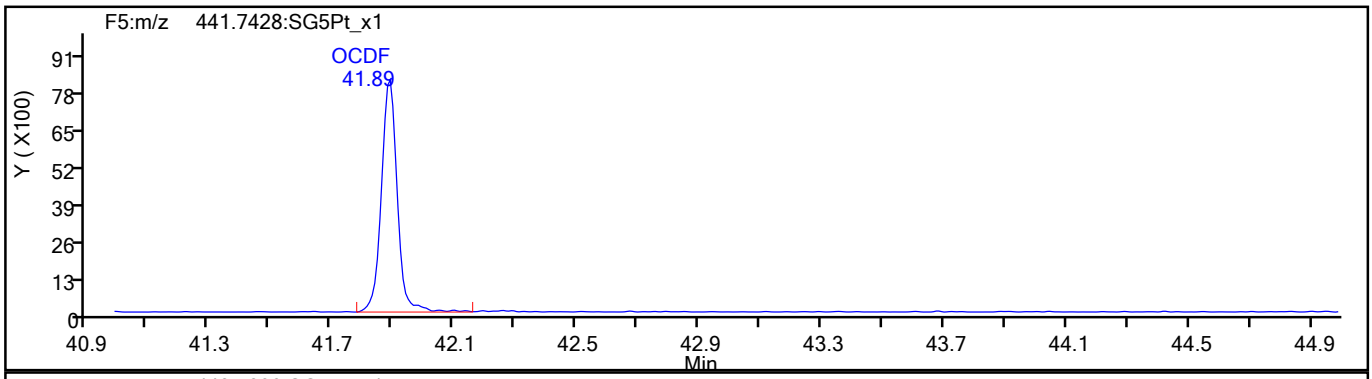

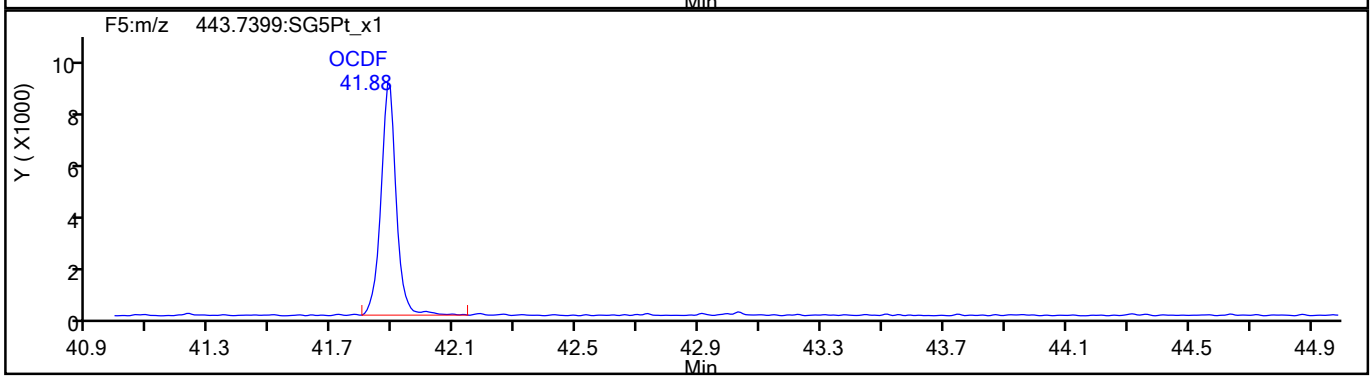

OCDF Standards

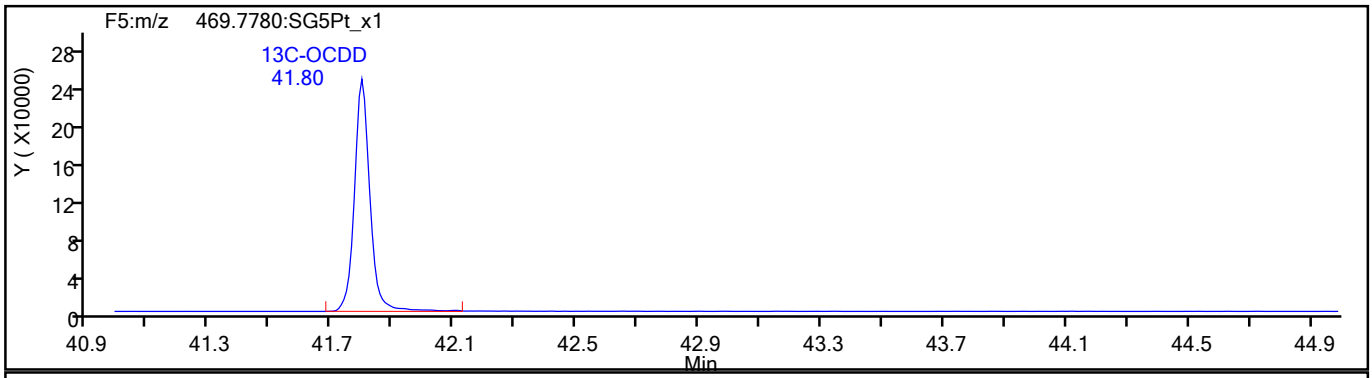

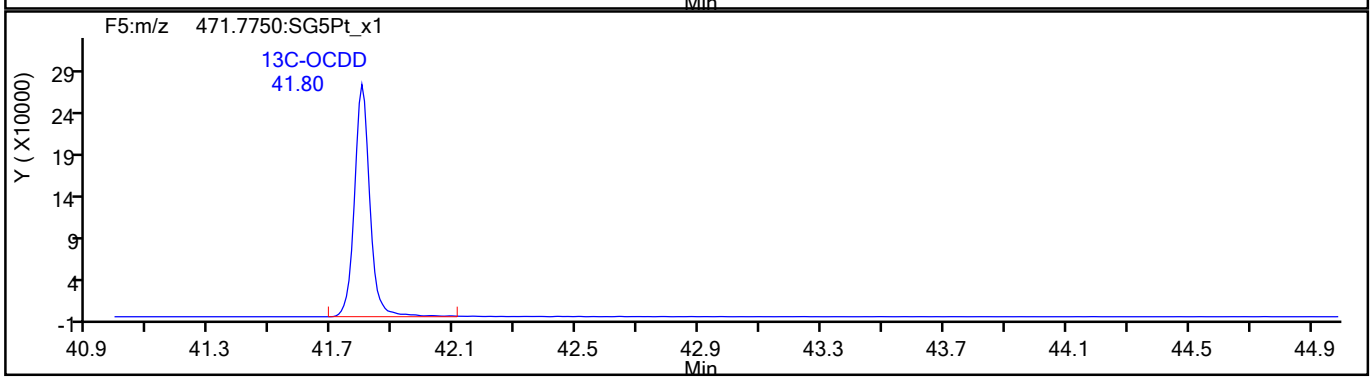

790069

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

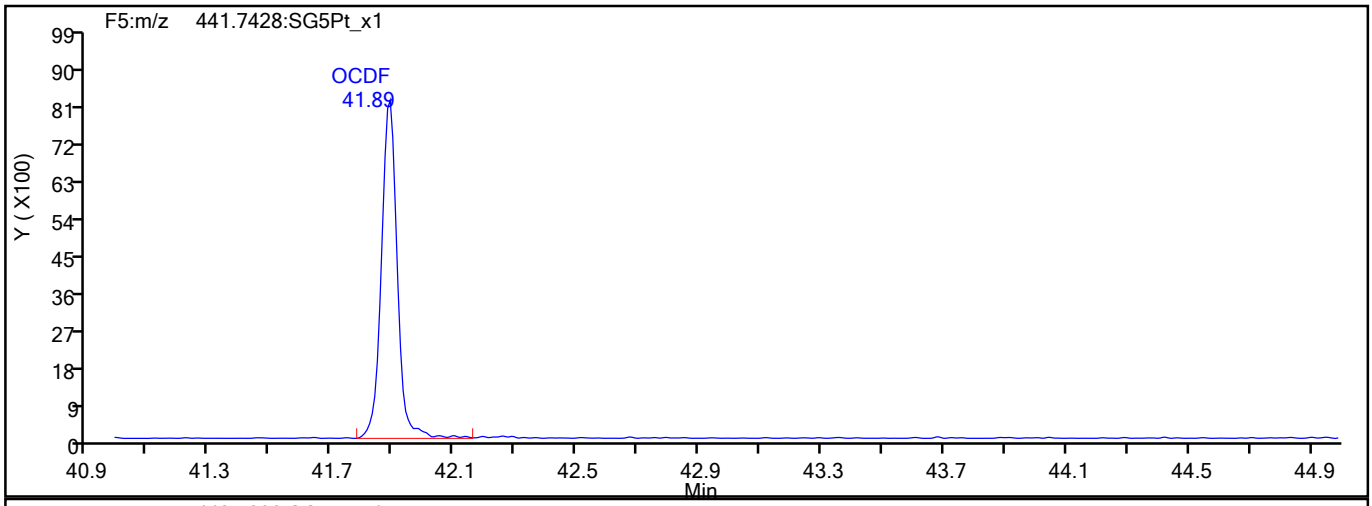

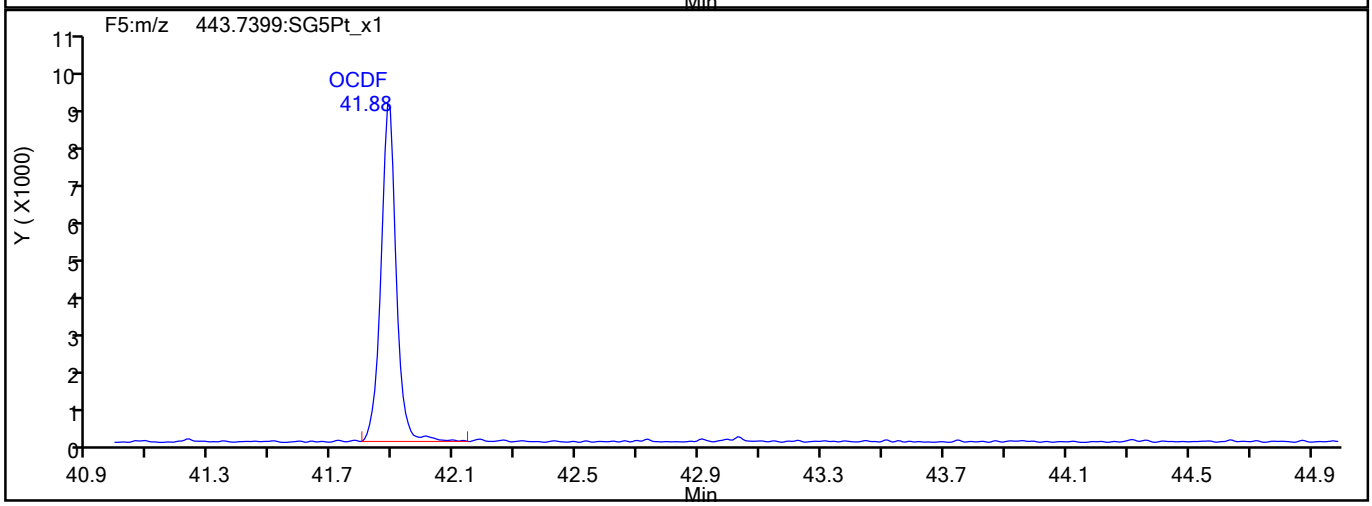

OCDF Interference Mass

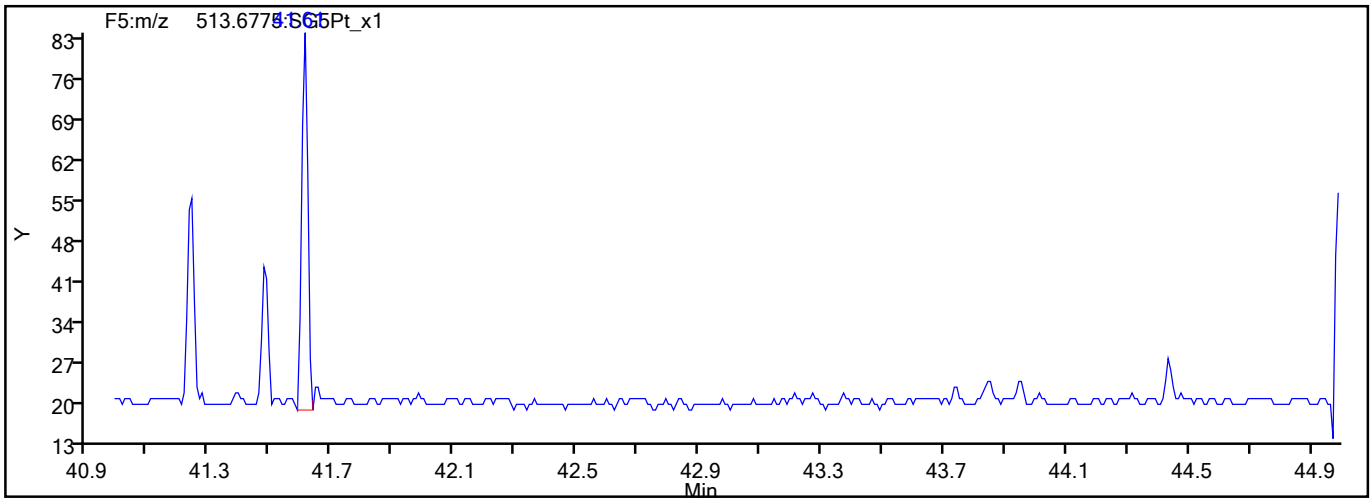

790070

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

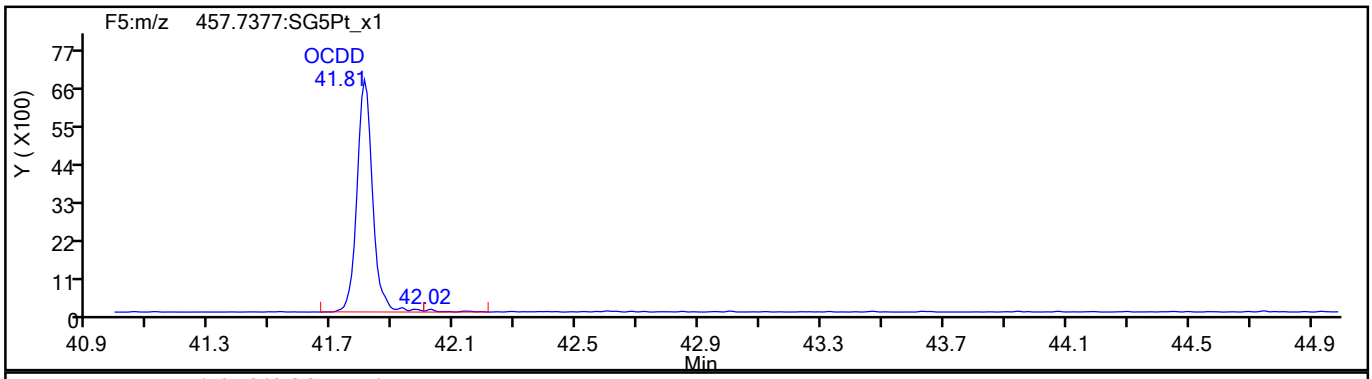

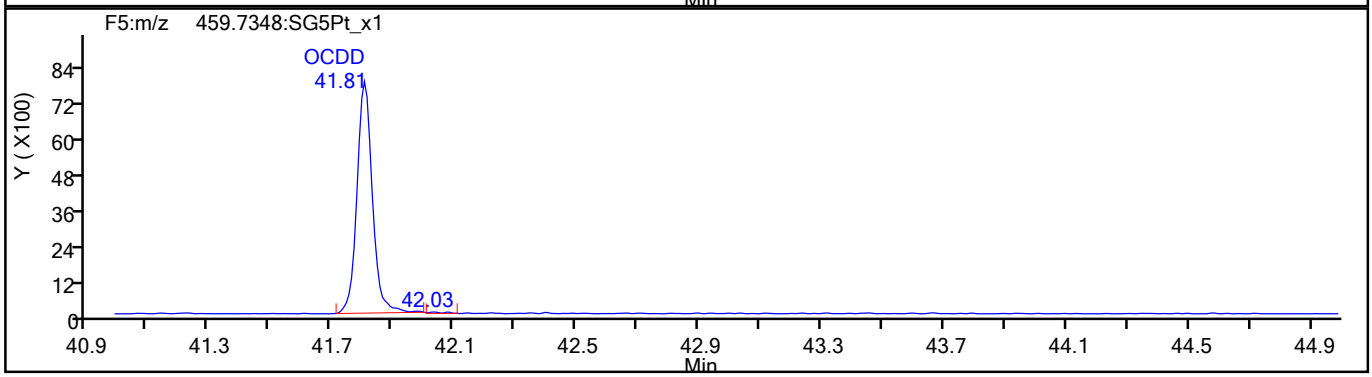

OCDD Standards

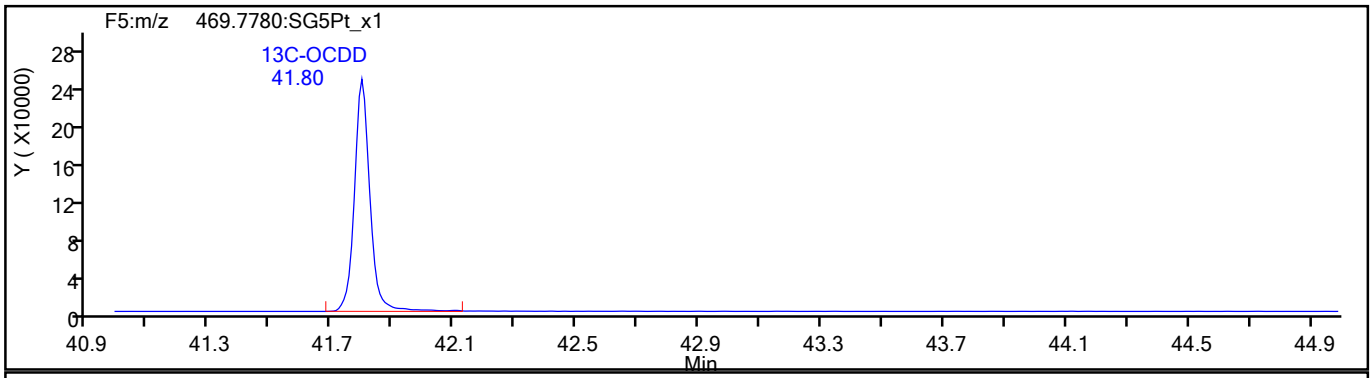

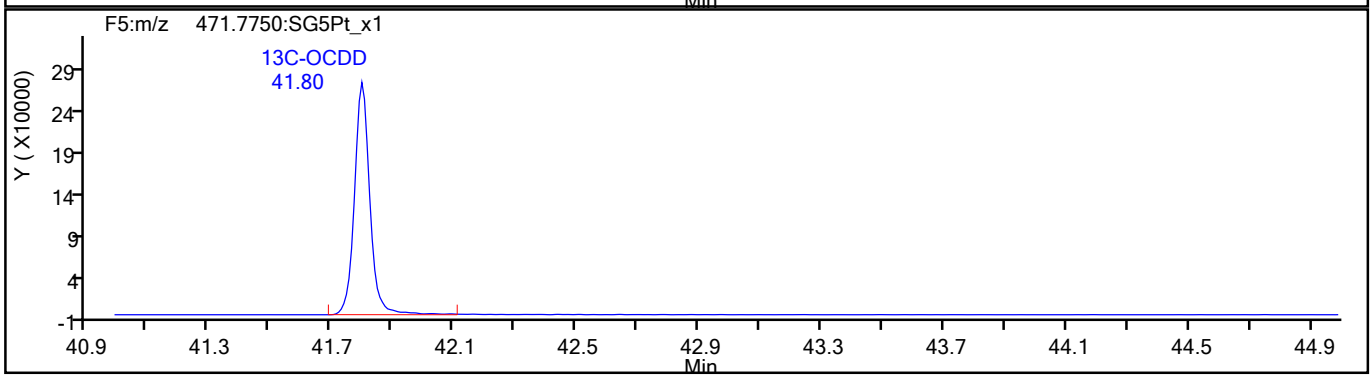

790071

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

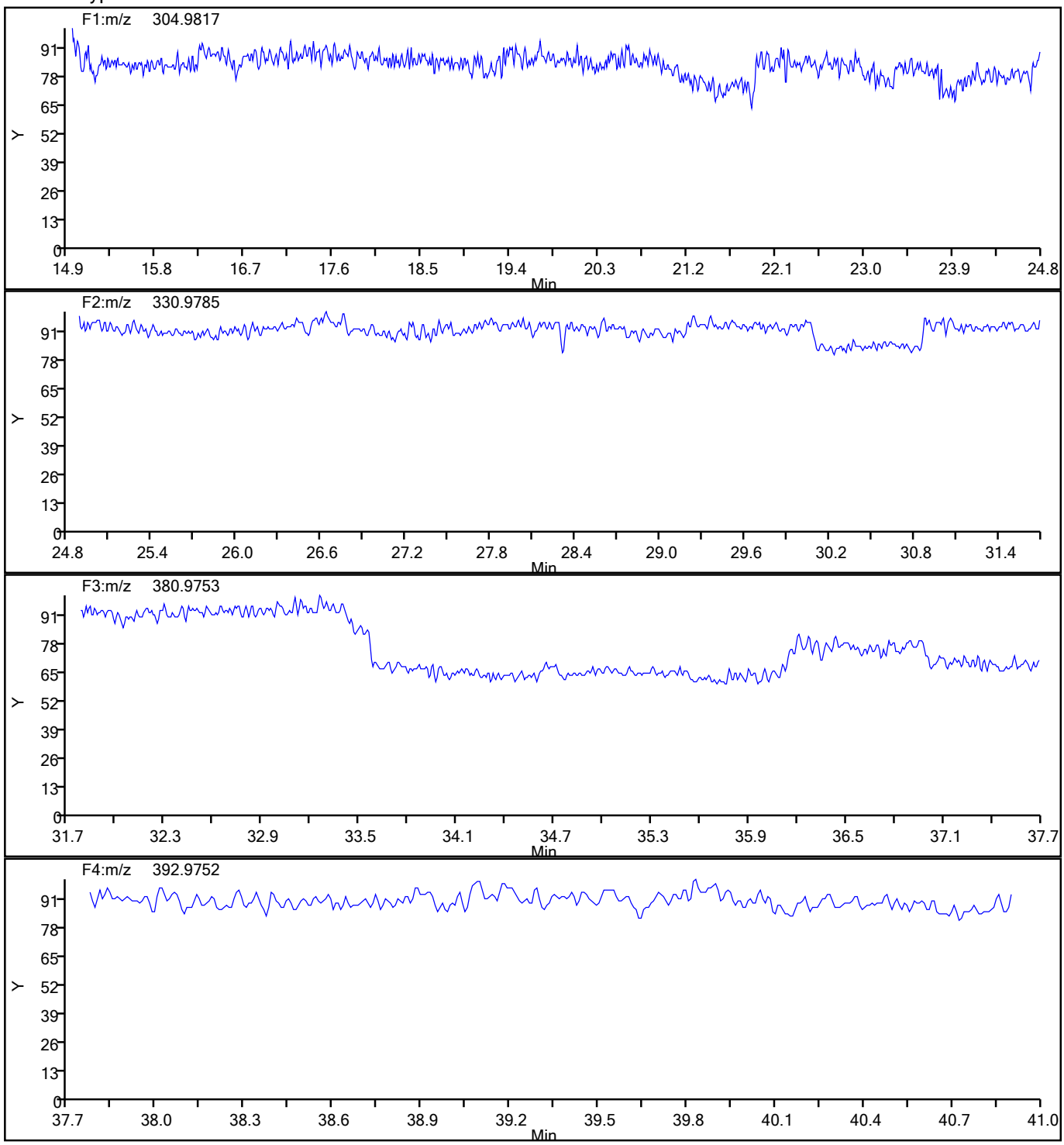

790072

Report Date: 09-Jun-2021 08:53:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_4.d		
Injection Date:	08-Jun-2021 14:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

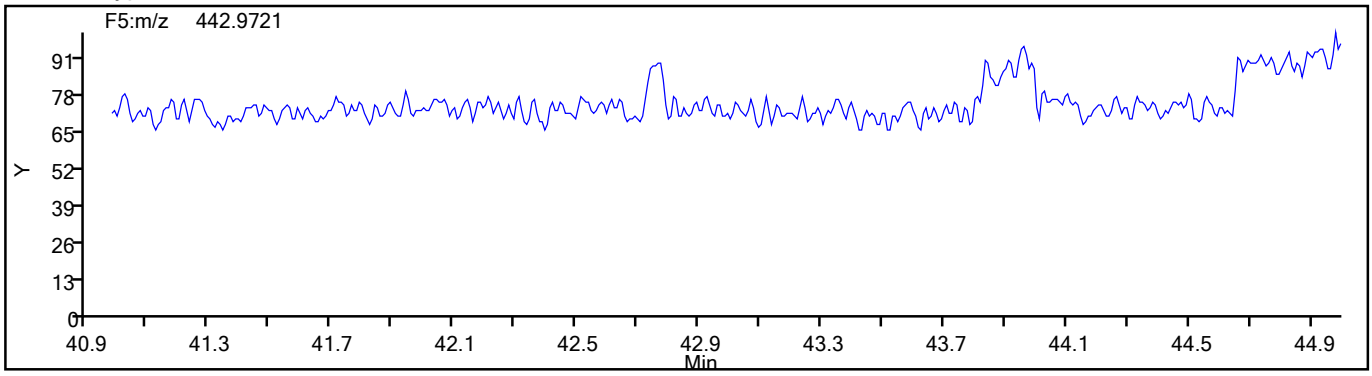

790073

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.534	2045939	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.606	2644389	0.79	1.3459	96.0	96.0	0.2067	0.2067	96.04	
2,3,7,8-TCDF	19.641	50956	0.80	1.0802	1.784	1.784	0.0111	0.0111	89.19	
S Total TCDF					1.784	1.784	0.0111	0.0111		
D 13C-2,3,7,8-TCDD	20.886	1829253	0.79	0.9317	96.0	96.0	0.1871	0.1871	95.97	
$ 37Cl4-2,3,7,8-TCDD	20.929	39241		1.0083	1.902	1.902	0.006151	0.006151	95.11	
2,3,7,8-TCDD	20.929	34971	0.82	1.0753	1.778	1.778	0.0298	0.0298	88.89	
S Total TCDD					1.778	1.778	0.0298	0.0298		
D 13C-1,2,3,7,8-PeCDF	26.541	2234847	1.61	1.1405	95.8	95.8	0.3208	0.3208	95.78	
1,2,3,7,8-PeCDF	26.566	210335	1.55	1.0543	8.927	8.927	0.0325	0.0325	89.27	
D 13C-2,3,4,7,8-PeCDF	27.991	2228025	1.61	1.1253	96.8	96.8	0.3252	0.3252	96.77	
2,3,4,7,8-PeCDF	28.016	200175	1.56	1.0079	8.914	8.914	0.0356	0.0356	89.14	
S Total PeCDF					17.8	17.8	0.0341	0.0341		
D 13C-1,2,3,7,8-PeCDD	28.784	1364144	1.60	0.7165	93.1	93.1	0.1177	0.1177	93.06	
1,2,3,7,8-PeCDD	28.809	129872	1.62	1.0465	9.097	9.097	0.0251	0.0251	90.97	
S Total PeCDD					9.097	9.097	0.0251	0.0251		
D 13C-1,2,3,4,7,8-HxCDF	34.367	1545033	0.52	0.9648	90.2	90.2	0.3810	0.3810	90.23	
1,2,3,4,7,8-HxCDF	34.384	155611	1.20	1.1474	8.778	8.778	0.0522	0.0522	87.78	
D 13C-1,2,3,6,7,8-HxCDF	34.544	1692336	0.52	1.0708	89.1	89.1	0.3433	0.3433	89.05	
1,2,3,6,7,8-HxCDF	34.569	185321	1.24	1.2178	8.992	8.992	0.0483	0.0483	89.92	
D 13C-2,3,4,6,7,8-HxCDF	35.429	1740015	0.54	1.0413	94.2	94.2	0.3530	0.3530	94.16	
2,3,4,6,7,8-HxCDF	35.446	191527	1.25	1.2145	9.063	9.063	0.0405	0.0405	90.63	
D 13C-1,2,3,7,8,9-HxCDF	36.374	1735785	0.52	0.9731	100.5	100.5	0.3778	0.3778	101	
1,2,3,7,8,9-HxCDF	36.390	195077	1.27	1.2401	9.062	9.062	0.0369	0.0369	90.62	
S Total HxCDF					35.9	35.9	0.0445	0.0445		
* 13C-1,2,3,7,8,9-HxCDD	36.180	1774694	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.665	1363103	1.28	0.7587	101.2	101.2	0.1971	0.1971	101	
1,2,3,4,7,8-HxCDD	35.682	132244	1.27	1.0608	9.146	9.146	0.0258	0.0258	91.46	
D 13C-1,2,3,6,7,8-HxCDD	35.792	1558668	1.27	0.8593	102.2	102.2	0.1740	0.1740	102	
1,2,3,6,7,8-HxCDD	35.809	138142	1.21	0.9933	8.922	8.922	0.0262	0.0262	89.22	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.196	139741	1.27	1.1094	8.622	8.622	0.0240	0.0240	86.22	
S Total HxCDD					26.7	26.7	0.0253	0.0253		
D 13C-1,2,3,4,6,7,8-HpCDF	38.291	1272526	0.47	0.7359	97.4	97.4	0.3733	0.3733	97.43	
1,2,3,4,6,7,8-HpCDF	38.308	164108	1.06	1.4421	8.943	8.943	0.0378	0.0378	89.43	
D 13C-1,2,3,4,7,8,9-HpCDF	39.589	1175351	0.46	0.6854	96.6	96.6	0.4008	0.4008	96.63	
1,2,3,4,7,8,9-HpCDF	39.598	138335	1.04	1.3092	8.990	8.990	0.0420	0.0420	89.90	
S Total HpCDF					17.9	17.9	0.0399	0.0399		
D 13C-1,2,3,4,6,7,8-HpCDD	39.286	1162117	1.05	0.6745	97.1	97.1	0.2422	0.2422	97.08	
1,2,3,4,6,7,8-HpCDD	39.294	110761	1.07	1.0503	9.075	9.075	0.0319	0.0319	90.75	
S Total HpCDD					9.075	9.075	0.0319	0.0319		
D 13C-OCDD	41.775	1833139	0.91	0.5446	189.7	189.7	0.2857	0.2857	94.83	
OCDF	41.868	217473	0.91	1.3168	18.0	18.0	0.0452	0.0452	90.09	
OCDD	41.784	182470	0.91	1.0620	18.7	18.7	0.0368	0.0368	93.73	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Jun-2021 15:06:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-3 HRDXNL3_00029
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:11 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:20:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.534	20.547	-1		908781	140893	128	320	1101		
333.9338	20.542	20.547	0		1137158	181590	97	242	1872	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.606	19.616	-1	0.955	1167638	192853	232	580	831		
317.9389	19.615	19.616	0	0.955	1476751	240851	127	317	1896	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.641	19.646	0	1.002	22722	3787	5	12	757		
305.8987	19.632	19.646	-1	1.001	28234	4422	16	40	276	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.886	20.910	-1	1.017	809102	120100	128	320	938		
333.9338	20.895	20.910	-1	1.018	1020151	151021	97	242	1557	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.929	20.935	0	1.019	39241	6110	8	20	764		
2,3,7,8-TCDD											
319.8965	20.929	20.939	-1	1.002	15743	2433	27	67	90		
321.8936	20.929	20.939	-1	1.002	19228	3031	8	20	379	0.82(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.541	26.560	-1	1.293	1380136	237735	280	700	849		
353.8970	26.549	26.560	-1	1.293	854711	147619	192	480	769	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.566	26.584	-1	1.001	127910	22847	25	62	914		
341.8567	26.566	26.584	-1	1.001	82425	14553	28	70	520	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	27.991	28.014	-1	1.363	1373543	227507	280	700	813		
353.8970	27.991	28.014	-1	1.363	854482	140253	192	480	730	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.016	28.039	-1	1.001	121955	19987	25	62	799		
341.8567	28.016	28.039	-1	1.001	78220	12878	28	70	460	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.784	28.801	-1	1.402	839338	134094	55	137	2438		
369.8919	28.775	28.801	-2	1.401	524806	82953	54	135	1536	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.809	28.828	-1	1.001	80255	12276	18	45	682		
357.8516	28.809	28.828	-1	1.001	49617	7332	5	12	1466	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.367	34.384	-1	0.950	530041	107506	195	487	551		
385.8610	34.367	34.384	-1	0.950	1014992	209541	410	1025	511	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.384	34.405	-1	1.000	84954	17499	46	115	380		
375.8178	34.384	34.405	-1	1.000	70657	14926	30	75	498	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.544	34.562	-1	0.955	582468	111482	195	487	572		
385.8610	34.544	34.562	-1	0.955	1109868	211659	410	1025	516	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.569	34.582	-1	1.001	102510	19443	46	115	423		
375.8178	34.561	34.582	-1	1.000	82811	15785	30	75	526	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.429	35.444	-1	0.979	608469	136128	195	487	698		
385.8610	35.429	35.444	-1	0.979	1131546	250431	410	1025	611	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.446	35.461	-1	1.000	106373	23069	46	115	502		
375.8178	35.446	35.461	-1	1.000	85154	19256	30	75	642	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.374	36.388	-1	1.005	597532	142559	195	487	731		
385.8610	36.374	36.388	-1	1.005	1138253	273050	410	1025	666	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.390	36.402	-1	1.000	109103	26446	46	115	575		
375.8178	36.390	36.402	-1	1.000	85974	20436	30	75	681	1.27(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.180	36.192	-1		992912	228100	138	345	1653		
403.8529	36.180	36.192	-1		781782	183211	108	270	1696	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.665	35.680	-1	0.986	765726	187664	138	345	1360		
403.8529	35.665	35.680	-1	0.986	597377	148078	108	270	1371	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.682	35.695	-1	1.000	73908	17289	18	45	961		
391.8127	35.682	35.695	-1	1.000	58336	14382	19	47	757	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.792	35.805	-1	0.989	870562	199612	138	345	1446		
403.8529	35.792	35.805	-1	0.989	688106	154356	108	270	1429	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.809	35.820	-1	1.000	75558	17193	18	45	955		
391.8127	35.809	35.820	-1	1.000	62584	14006	19	47	737	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.196	36.208	-1	1.015	78157	18353	18	45	1020		
391.8127	36.196	36.208	-1	1.015	61584	14405	19	47	758	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.291	38.305	-1	1.058	404086	116332	150	375	776		
419.8220	38.291	38.305	-1	1.058	868440	254106	302	755	841	0.47(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.308	38.317	-1	1.000	84325	24268	44	110	552		
409.7788	38.299	38.317	-1	1.000	79783	22737	37	92	615	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.589	39.600	-1	1.094	368476	114509	150	375	763		
419.8220	39.589	39.600	-1	1.094	806875	252758	302	755	837	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.598	39.608	-1	1.000	70636	21558	44	110	490		
409.7788	39.598	39.608	-1	1.000	67699	21216	37	92	573	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.286	39.293	0	1.086	594894	185269	137	342	1352		
437.8140	39.286	39.293	0	1.086	567223	172933	132	330	1310	1.05(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.294	39.301	0	1.000	57275	17734	30	75	591		
425.7737	39.294	39.301	0	1.000	53486	17016	18	45	945	1.07(0.88-1.20)	
13C-OCDD											
469.7780	41.775	41.785	-1	1.155	873143	243136	128	320	1900		
471.7750	41.775	41.785	-1	1.155	959996	268180	128	320	2095	0.91(0.76-1.02)	
OCDF											
441.7428	41.868	41.875	0	1.002	103359	30074	20	50	1504		
443.7399	41.859	41.875	-1	1.002	114114	32506	41	102	793	0.91(0.76-1.02)	
OCDD											
457.7377	41.784	41.794	-1	1.000	86745	24118	17	42	1419		
459.7348	41.784	41.794	-1	1.000	95725	27065	23	57	1177	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL3_00029 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

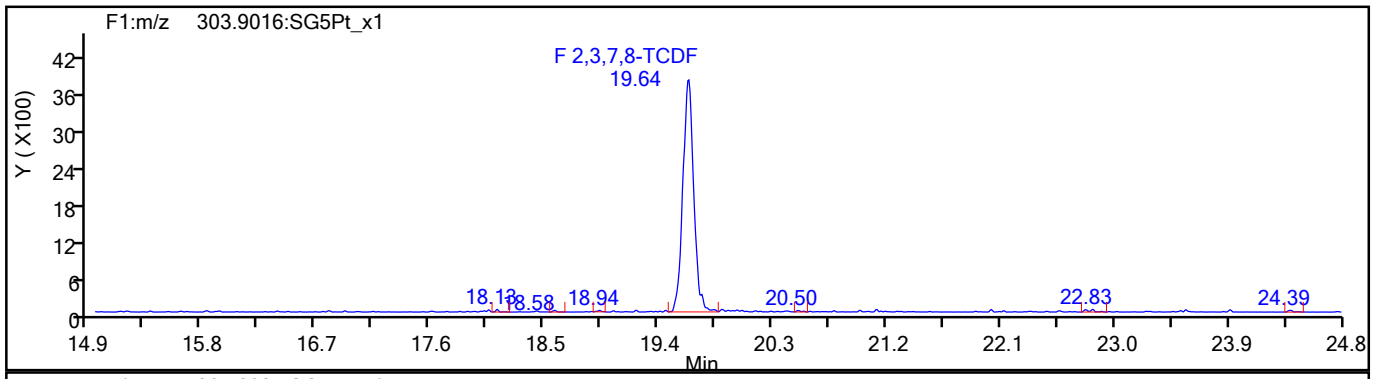

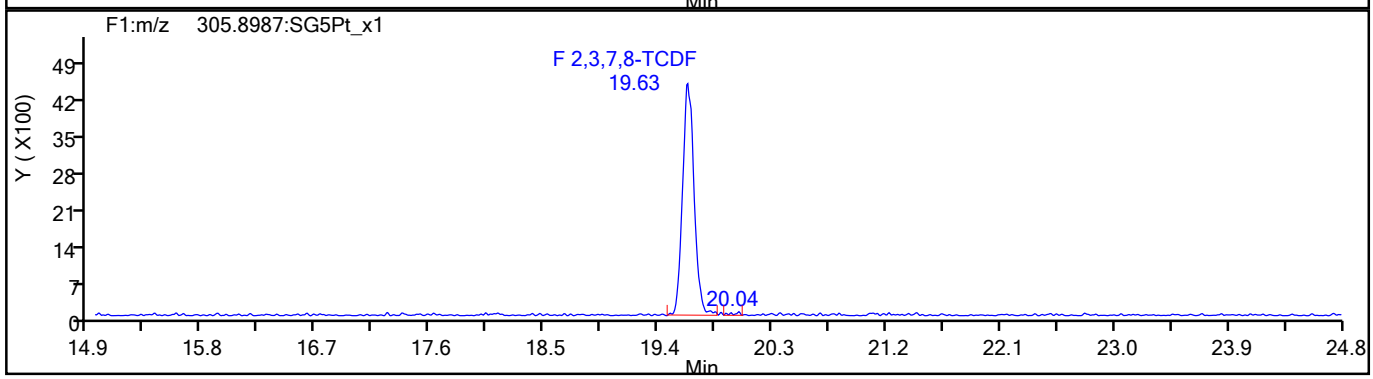

TCDF Standards

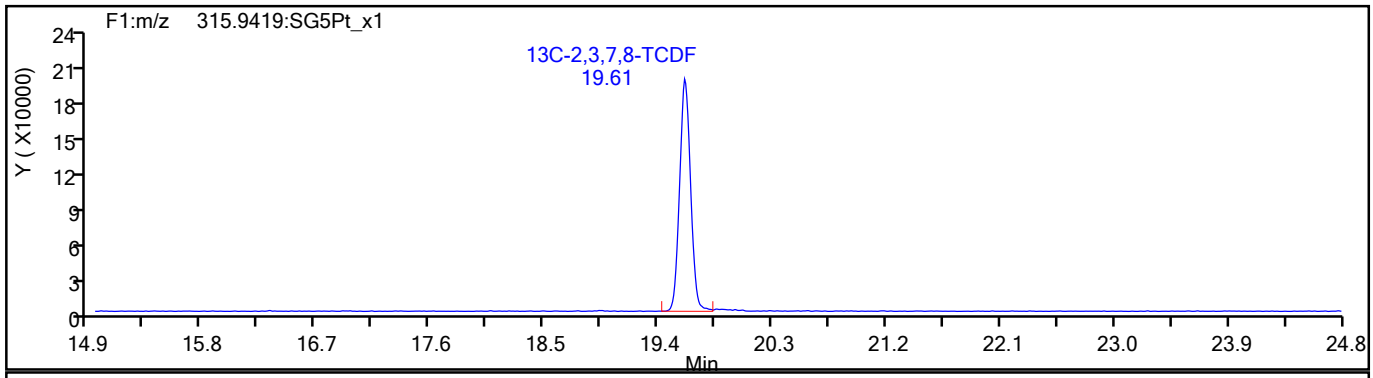

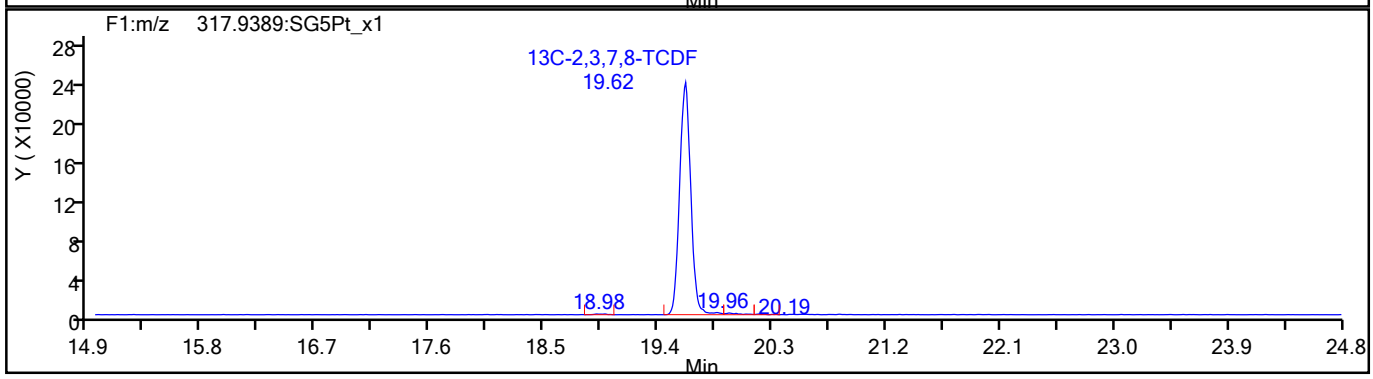

790079

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

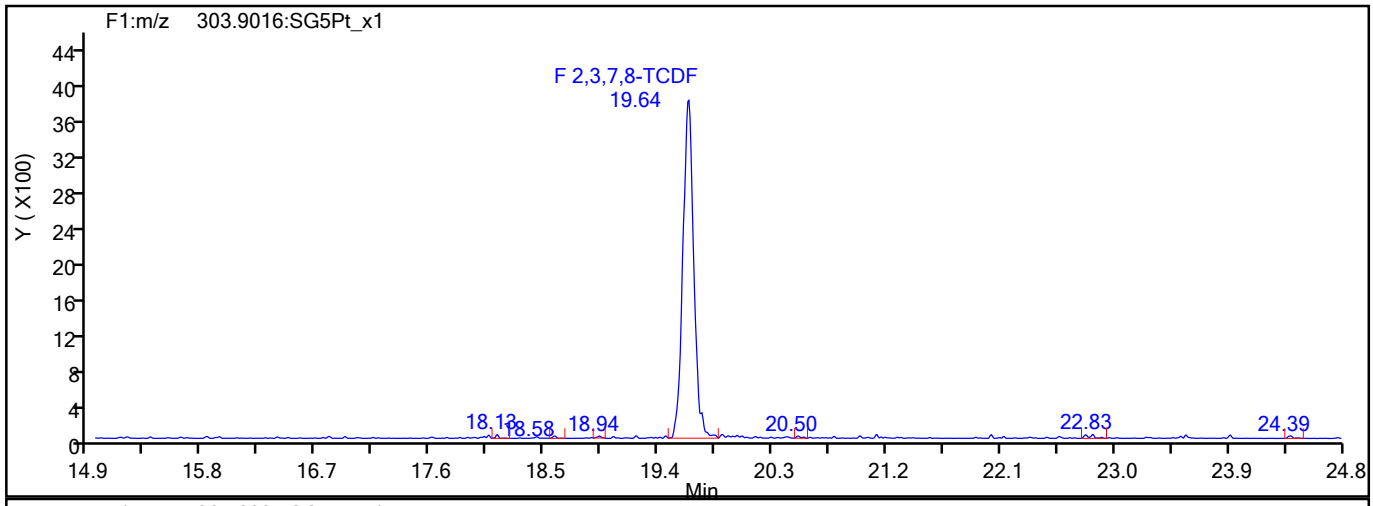

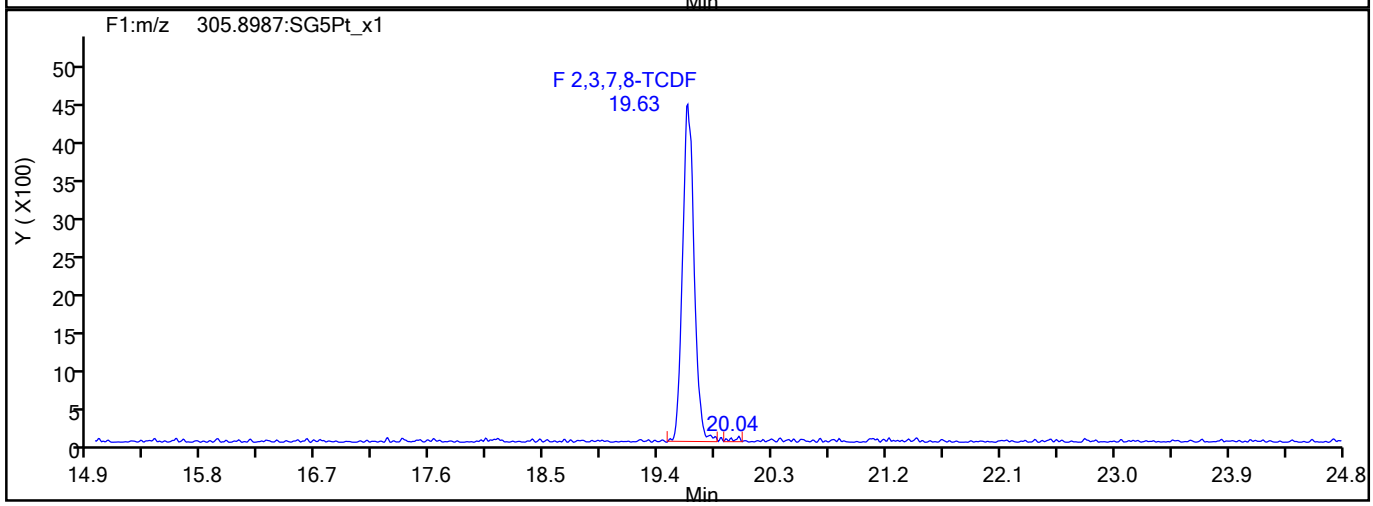

TCDF Interference Mass

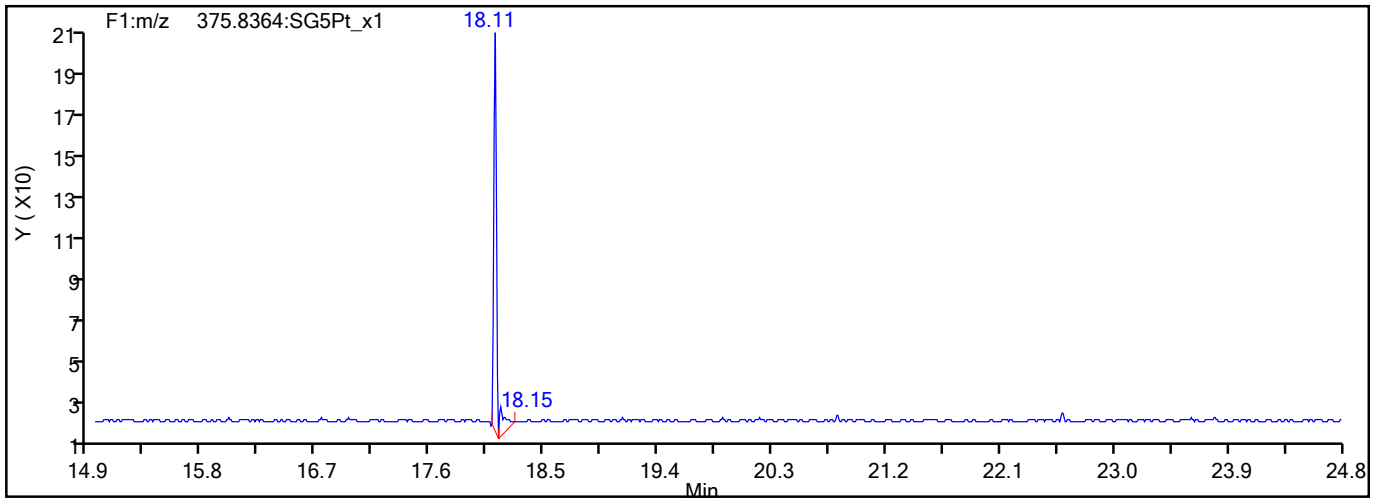

790080

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

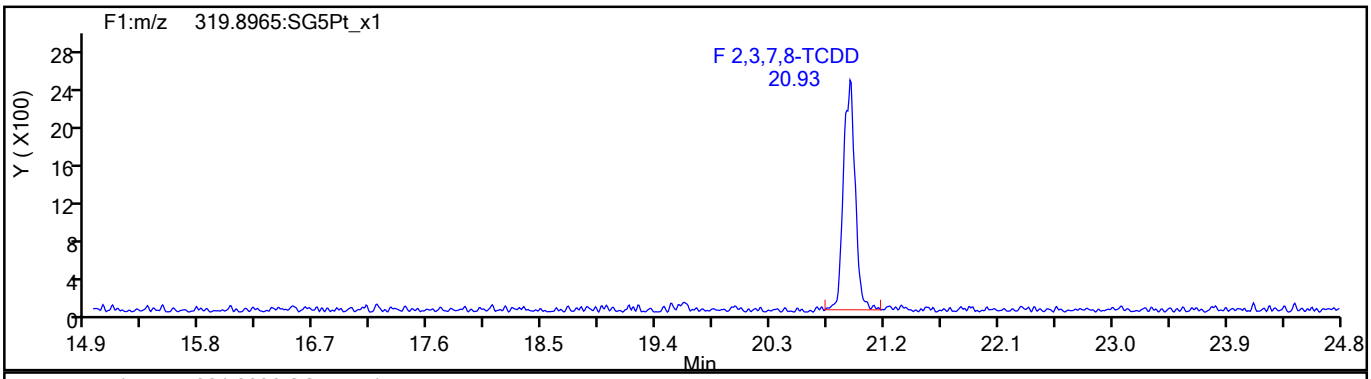

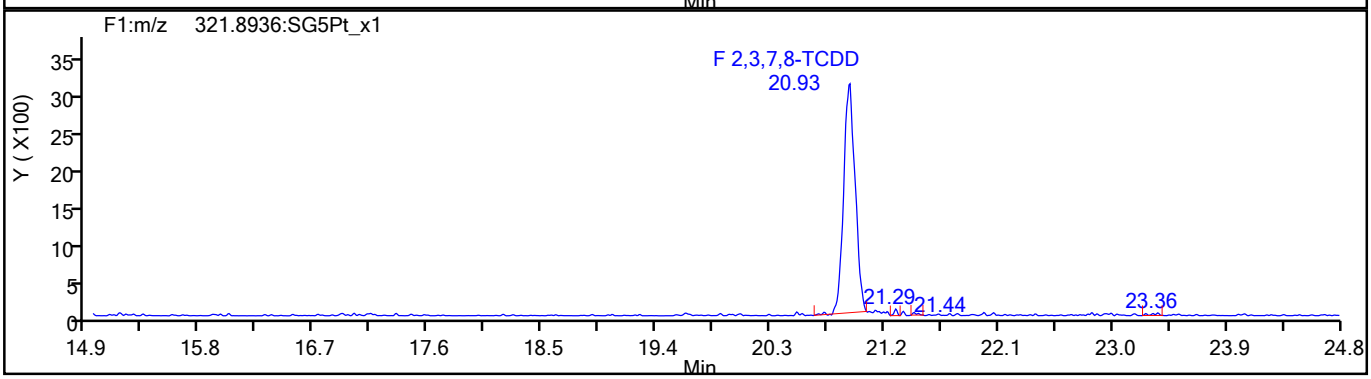

TCDD Standards

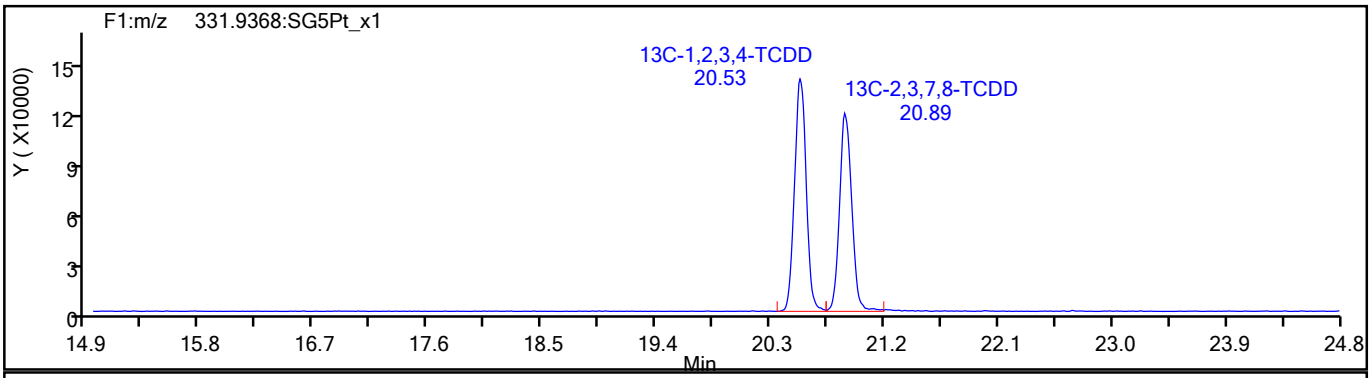

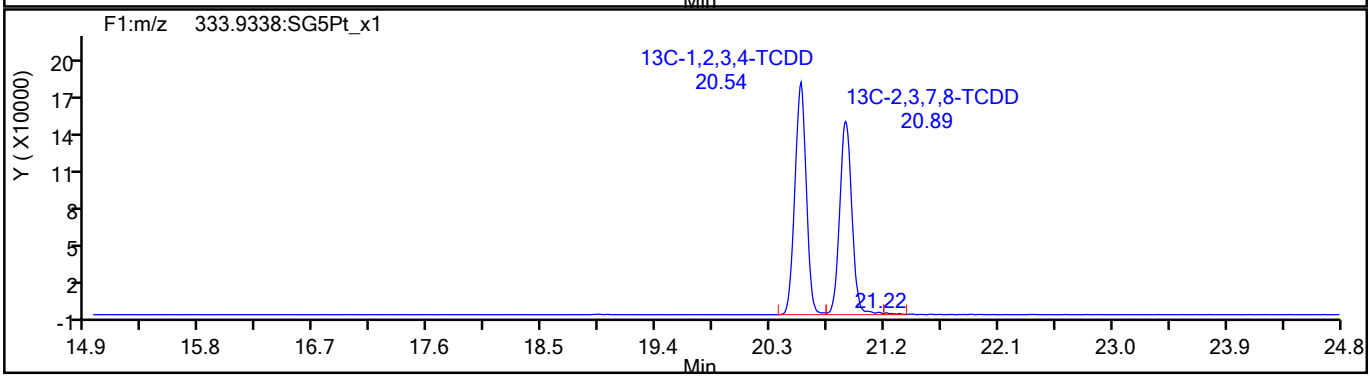

790081

Report Date: 09-Jun-2021 08:53:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

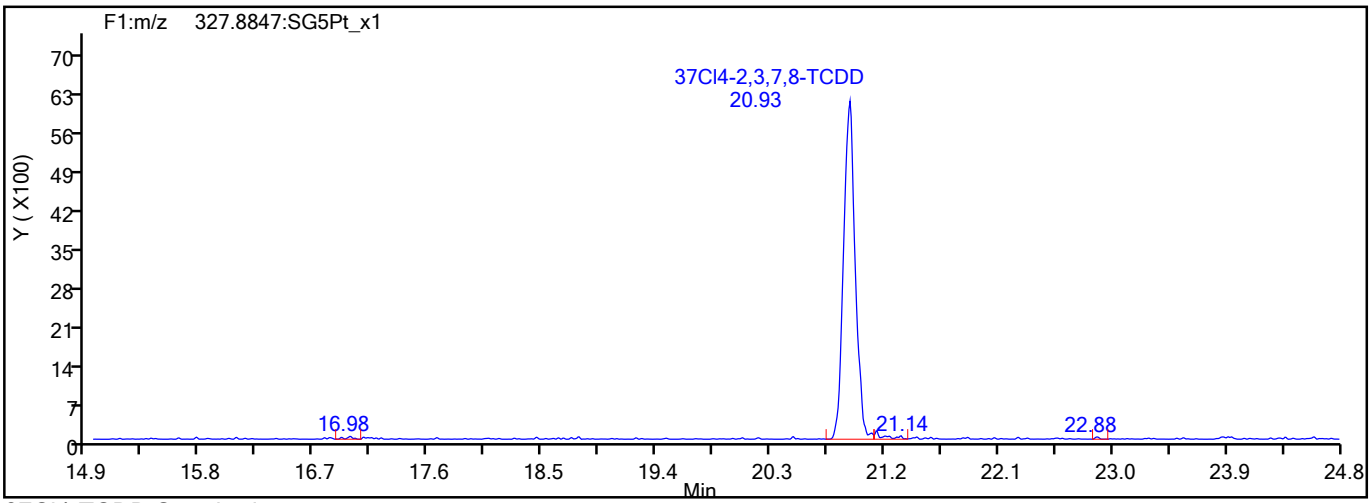

37Cl4-TCDD Standards

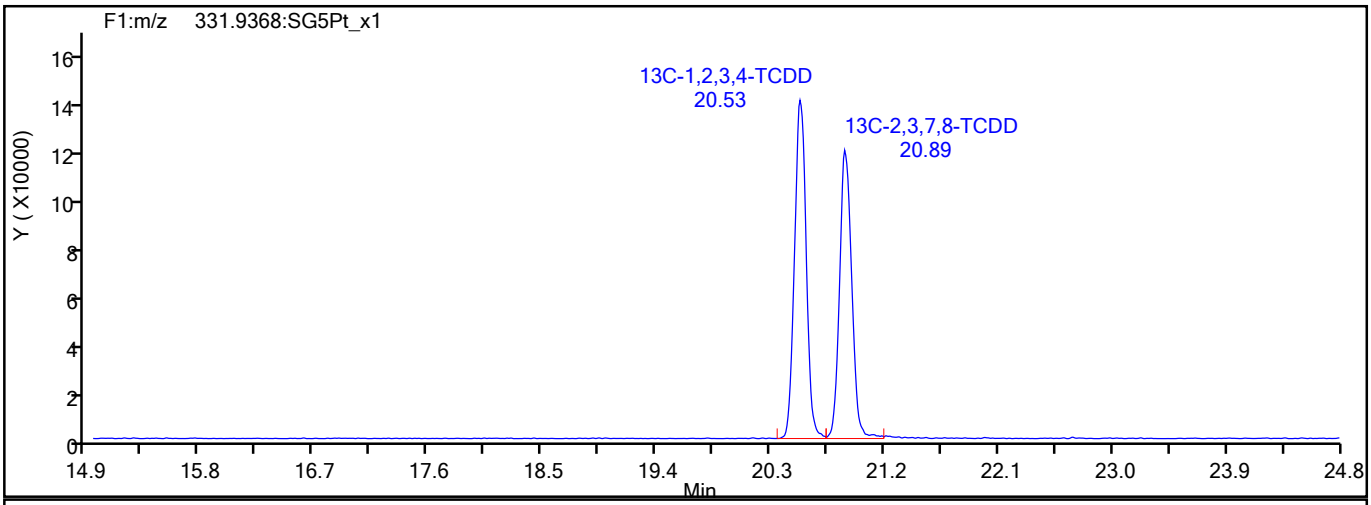

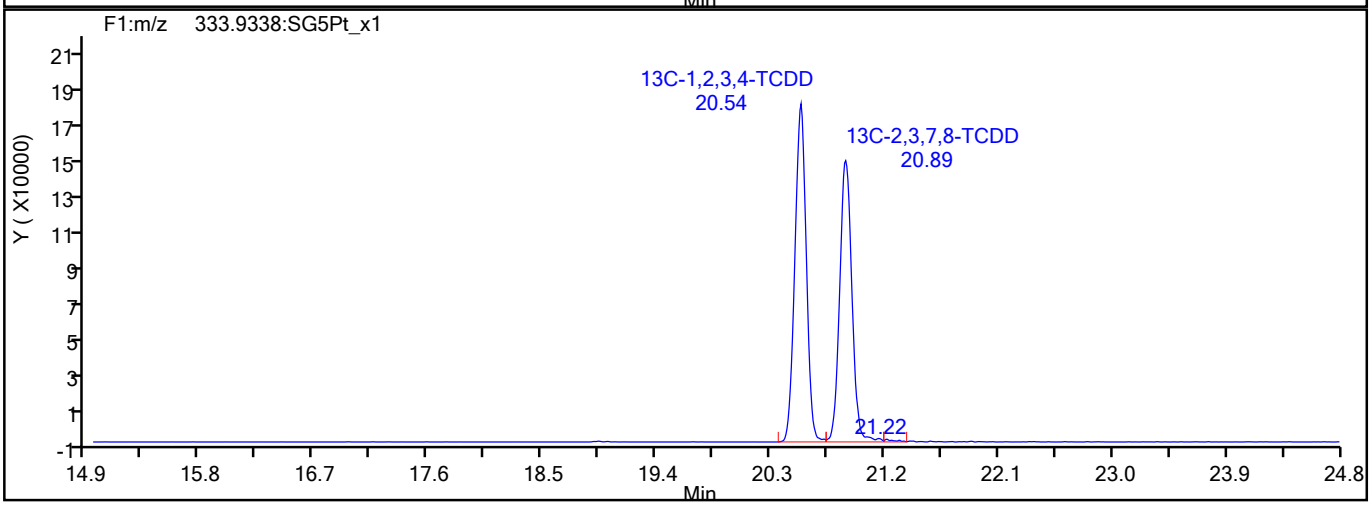

790082

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

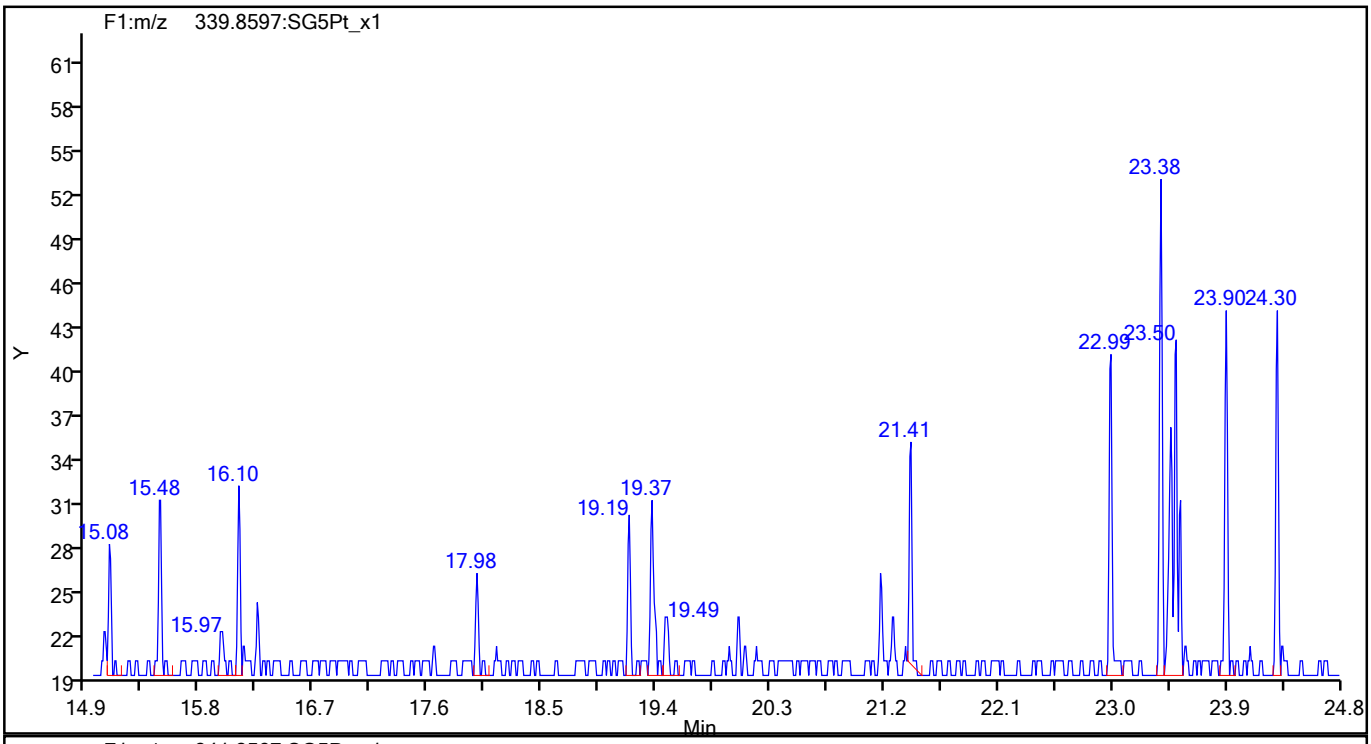

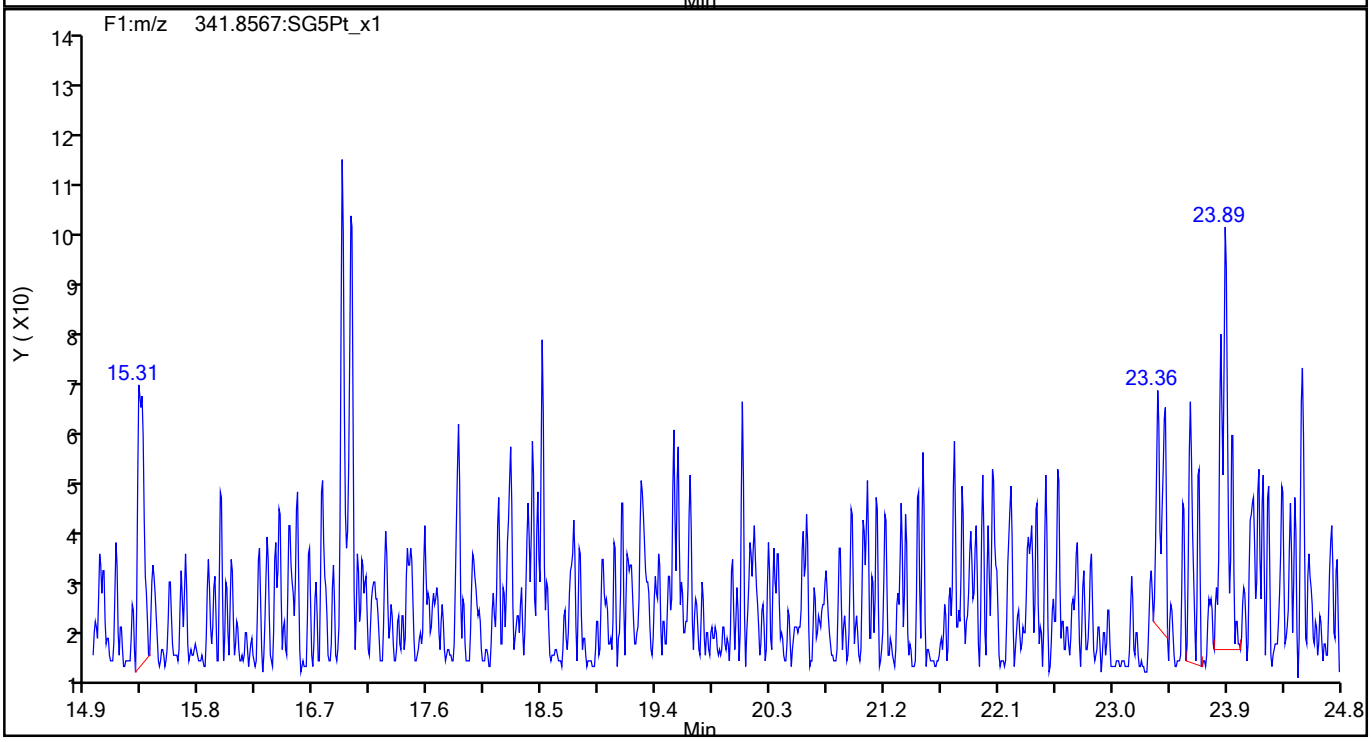

790083

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

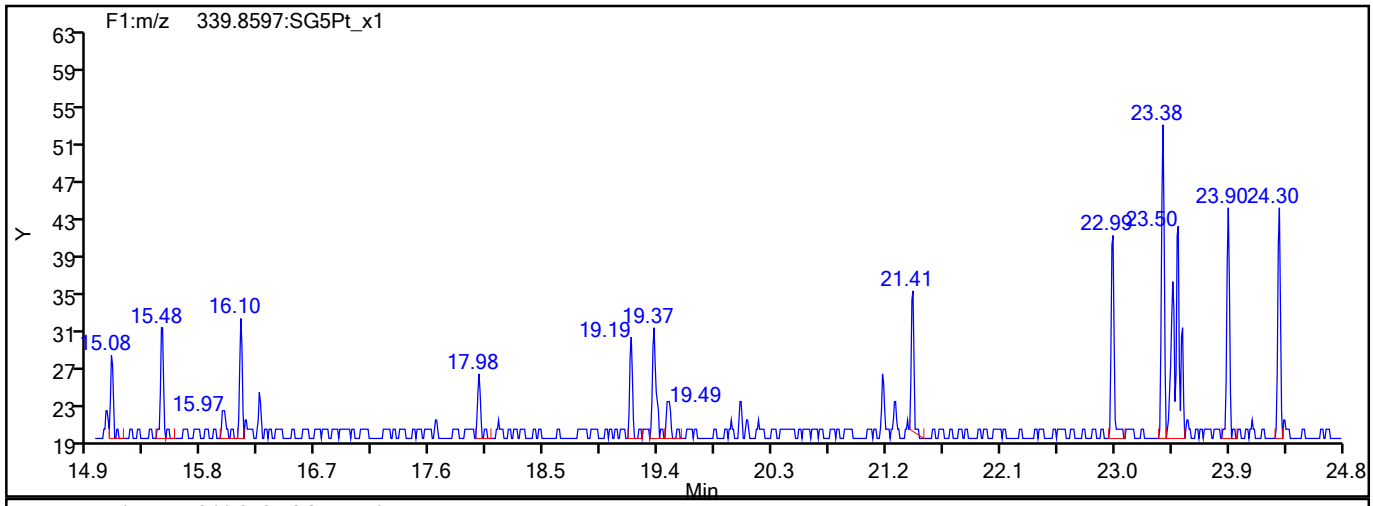

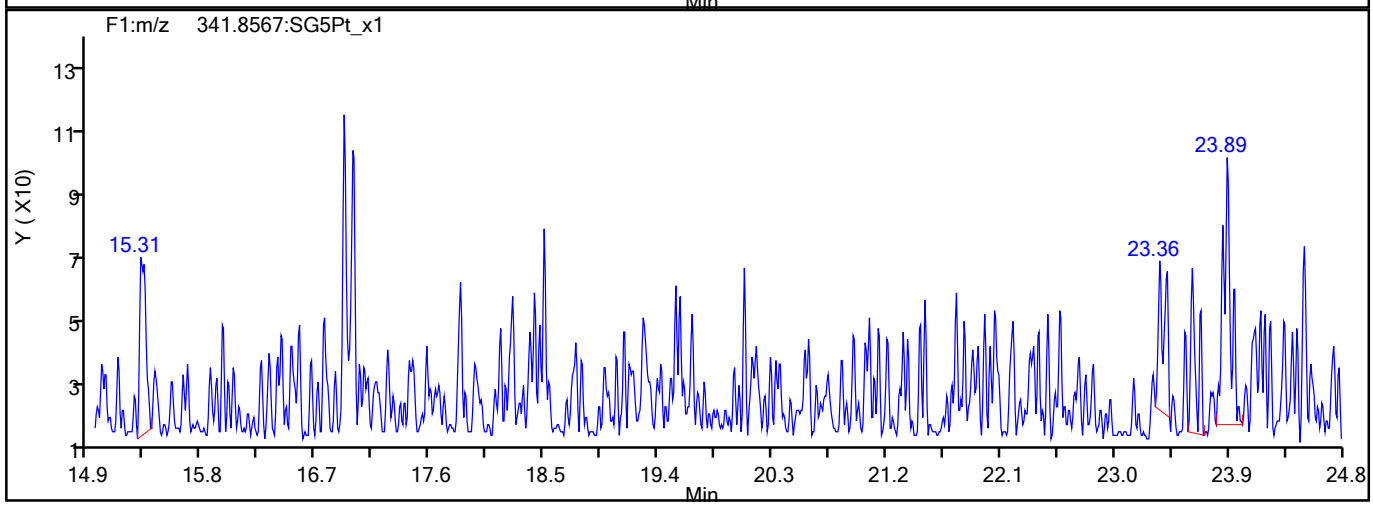

F1 PeCDFs Interference Mass

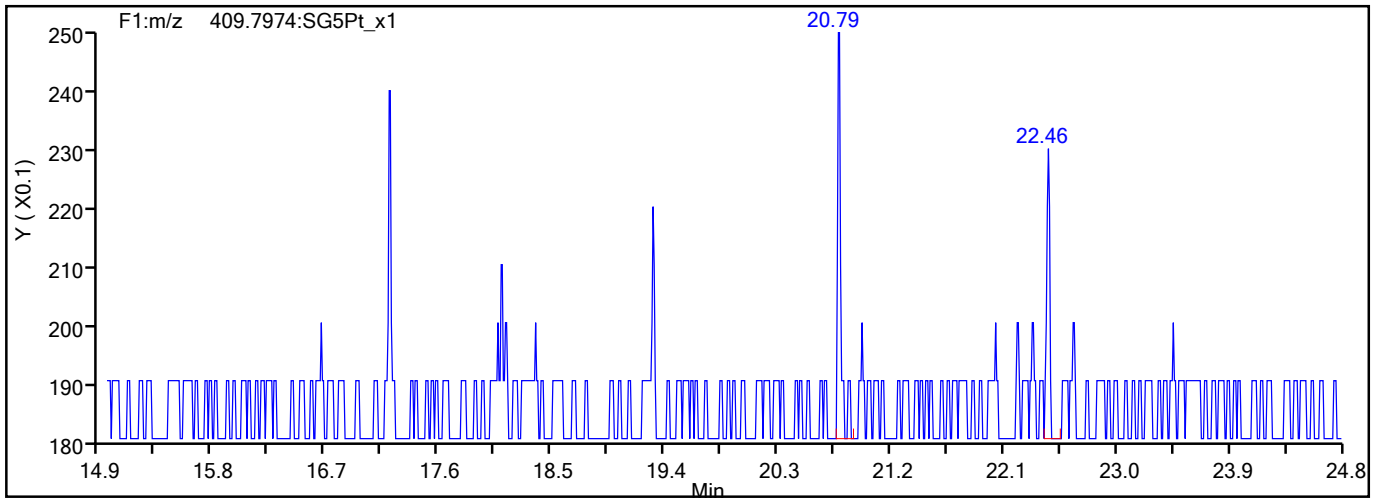

790084

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

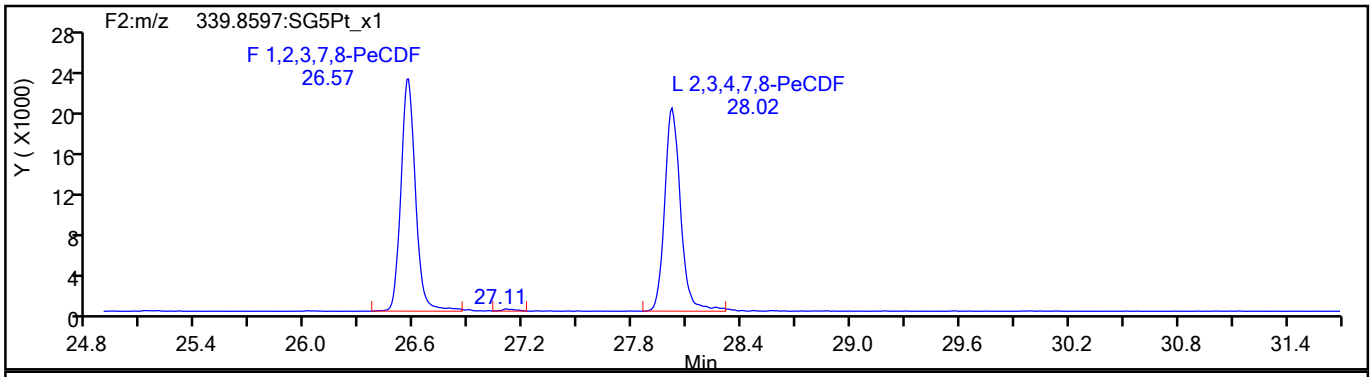

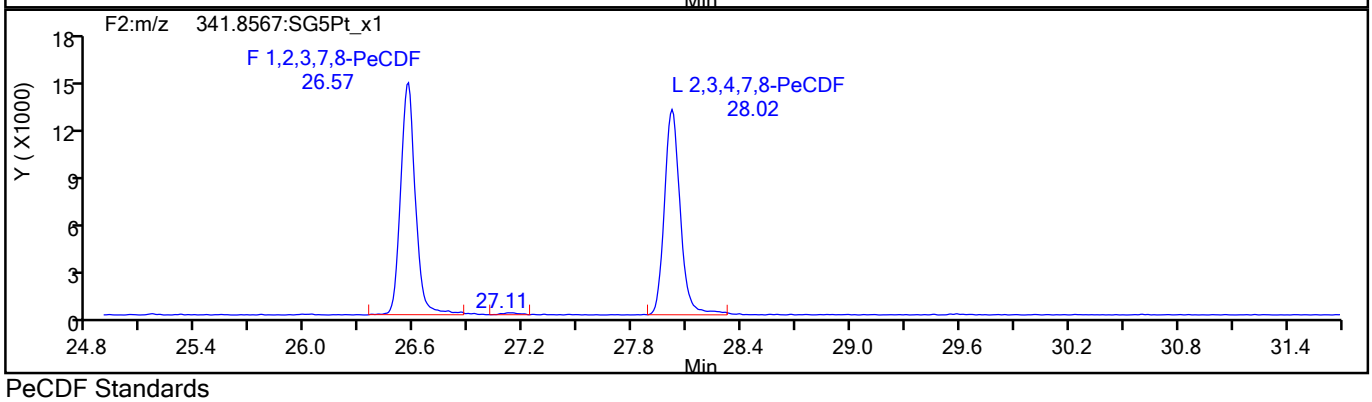

PeCDF Standards

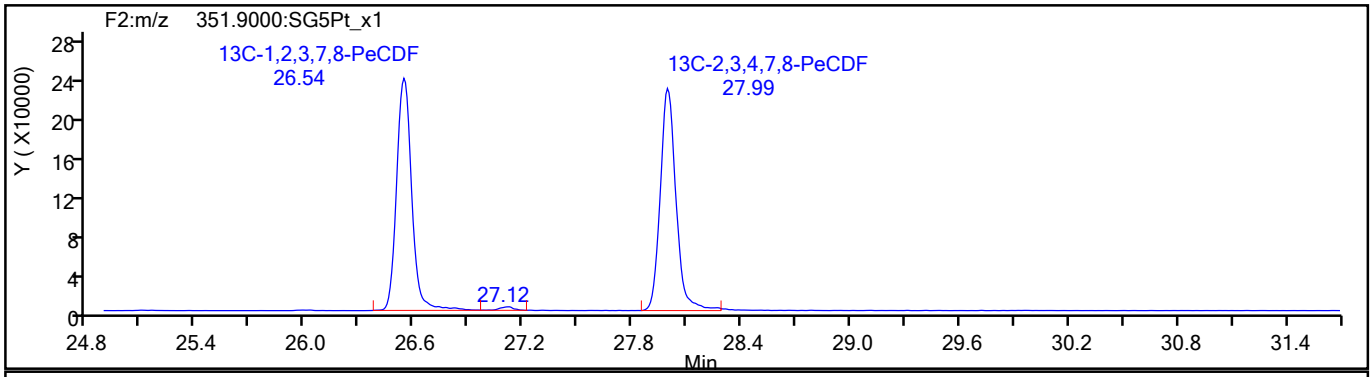

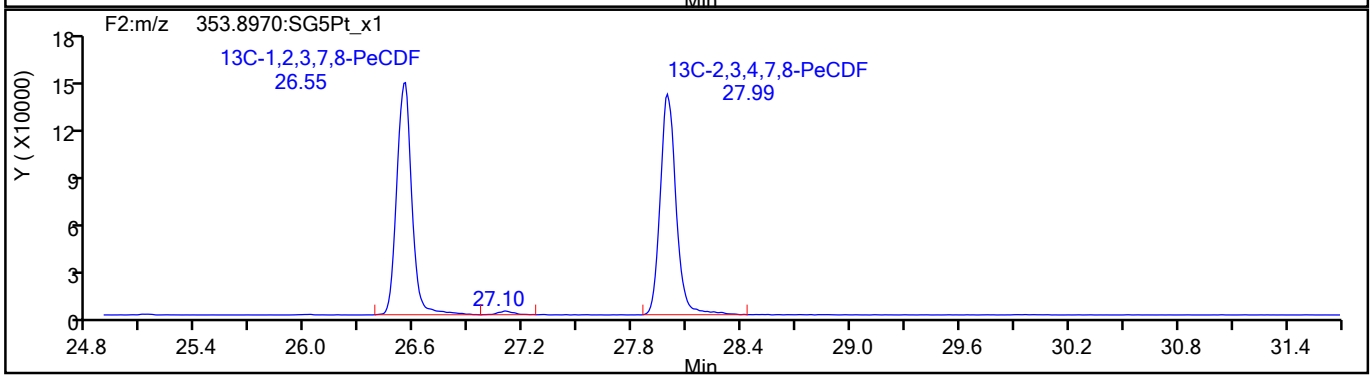

790085

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

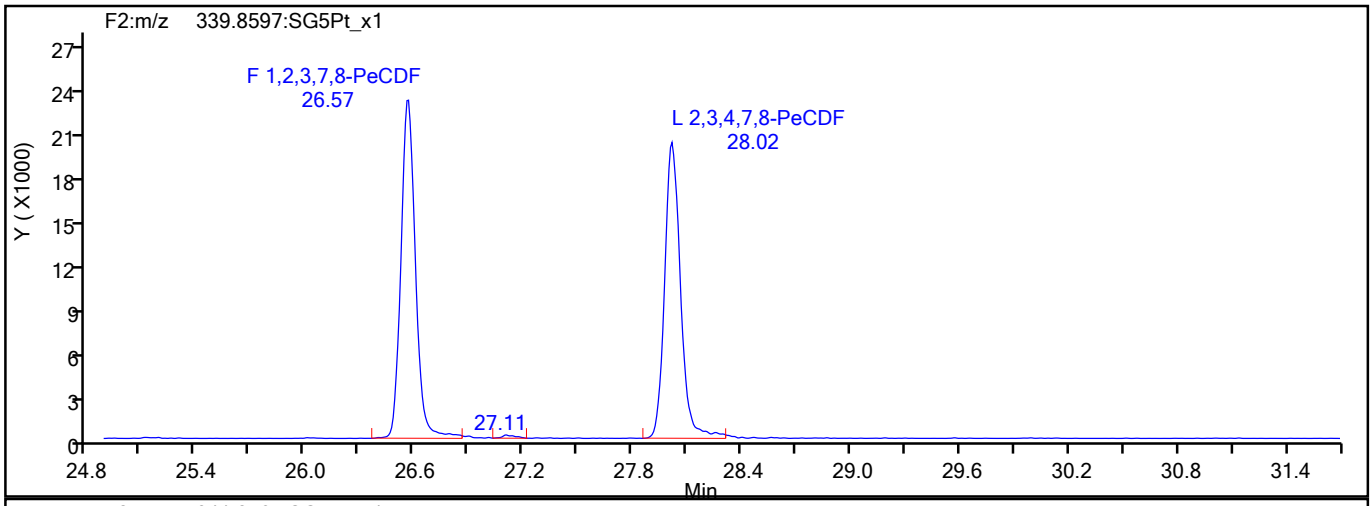

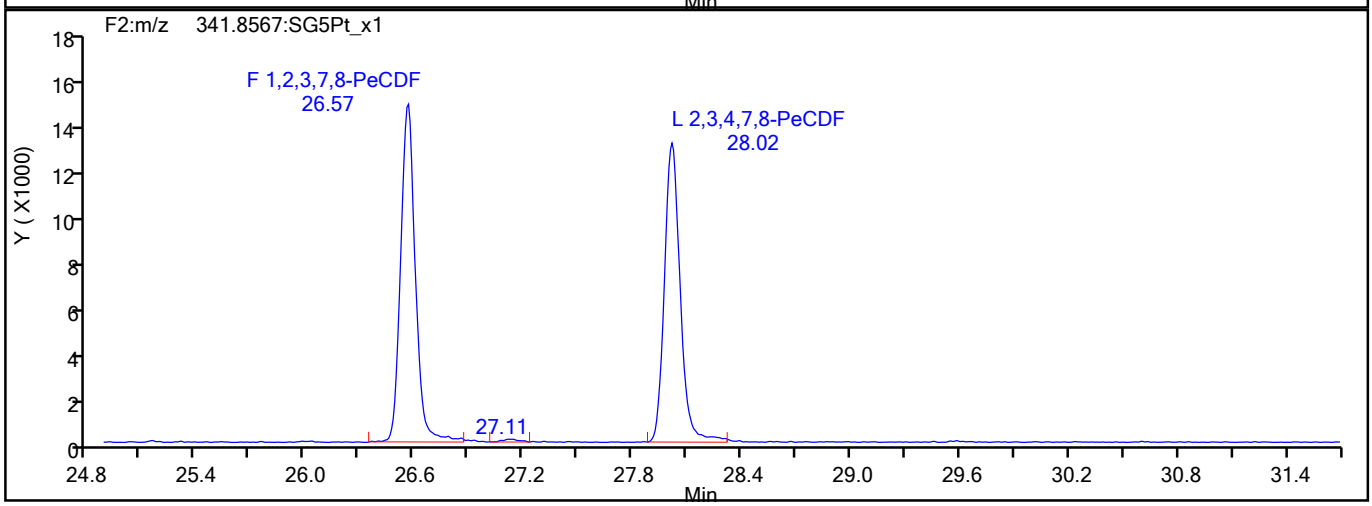

PeCDF Interference Mass

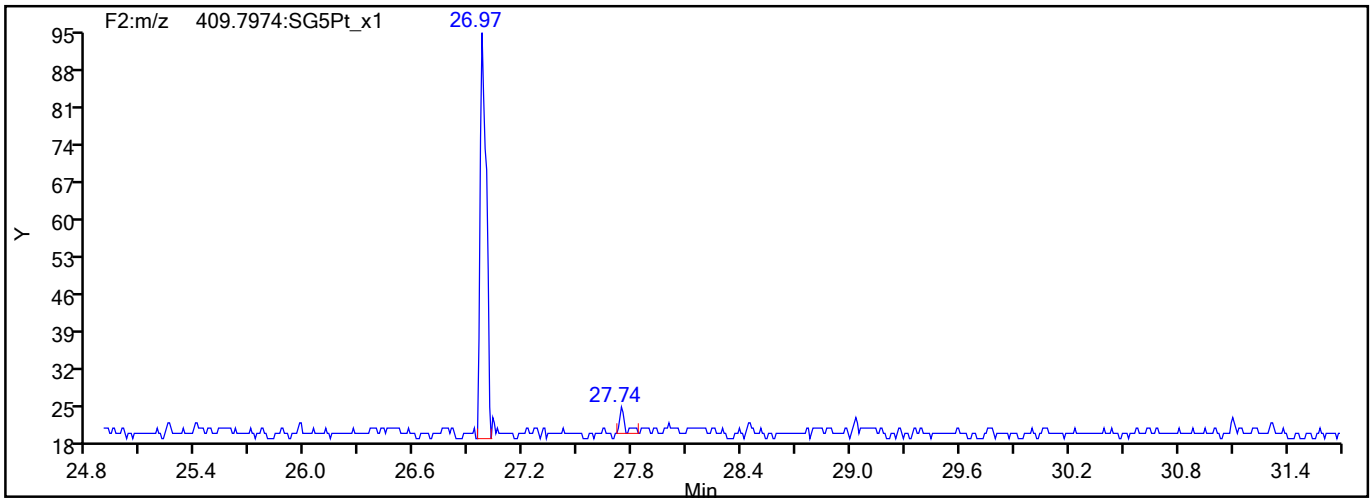

790086

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

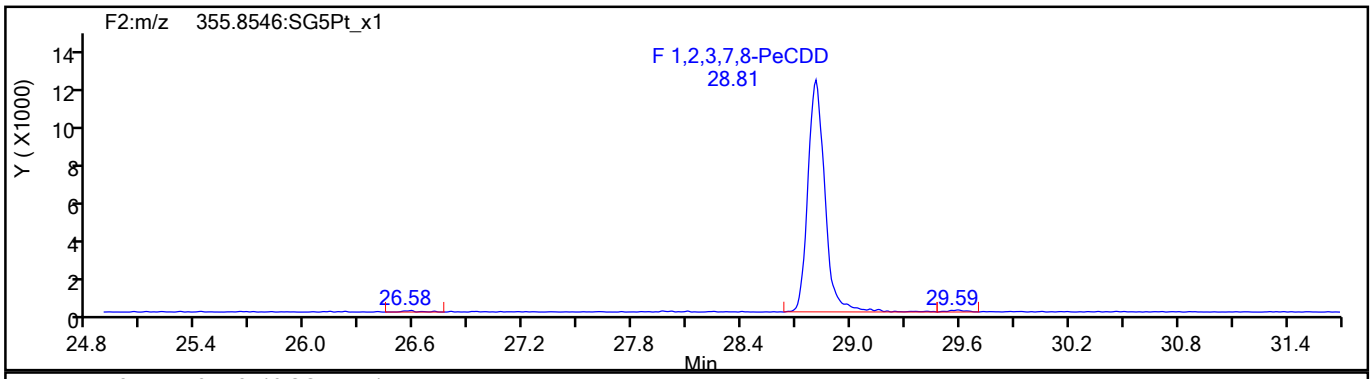

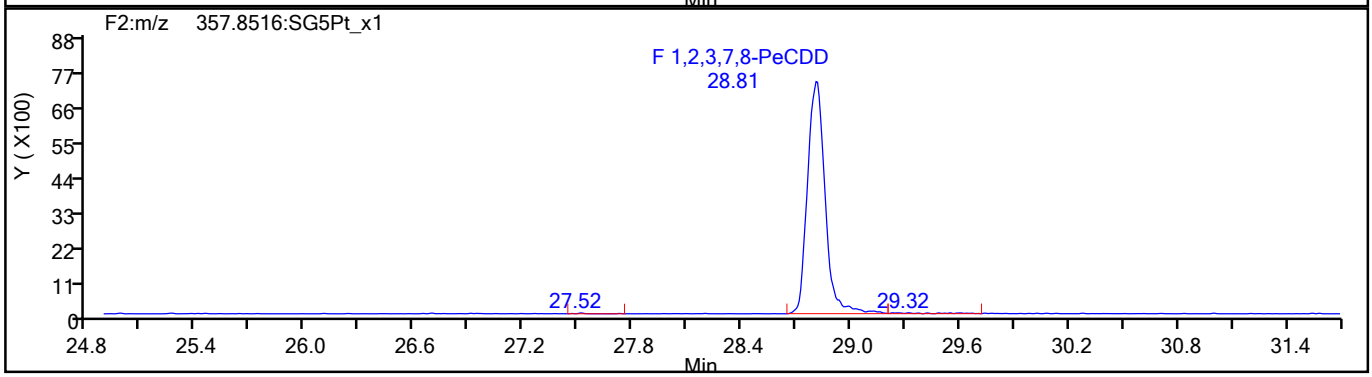

PeCDD Standards

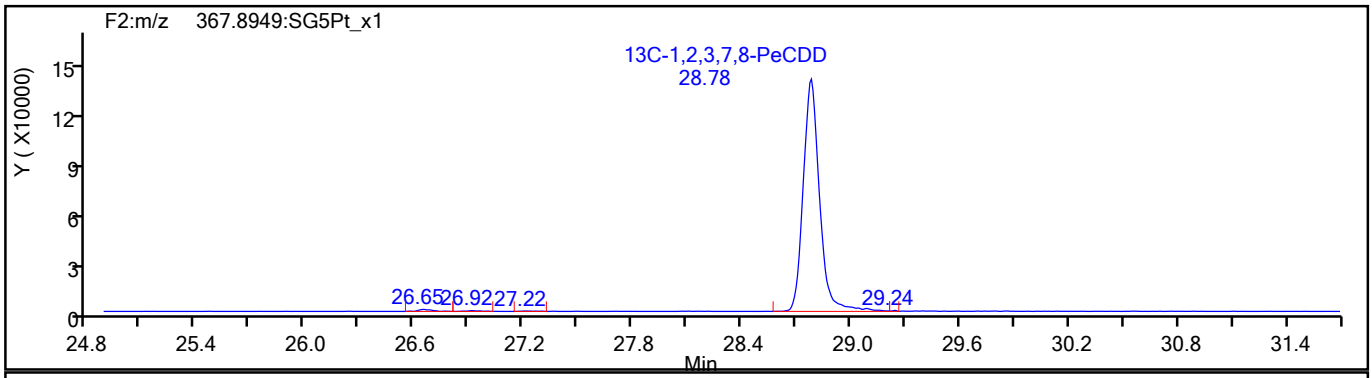

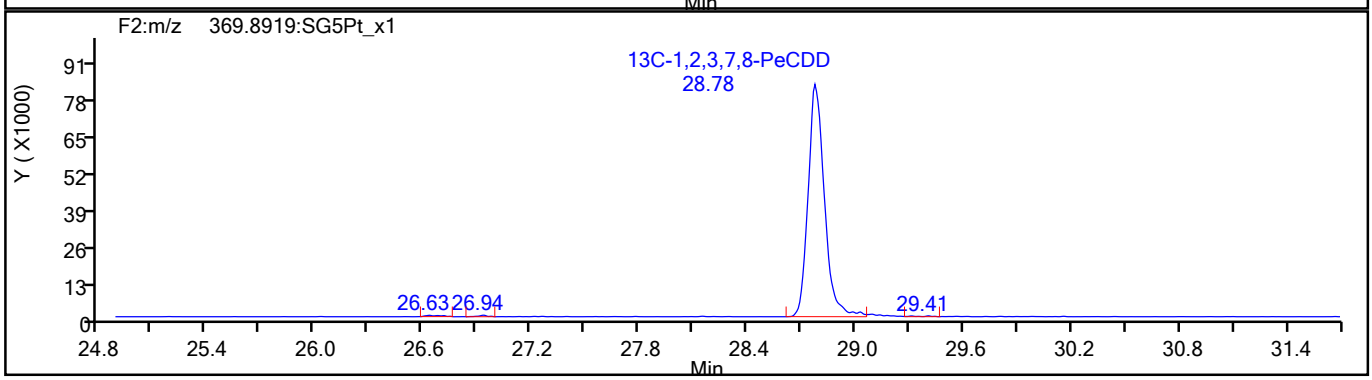

790087

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

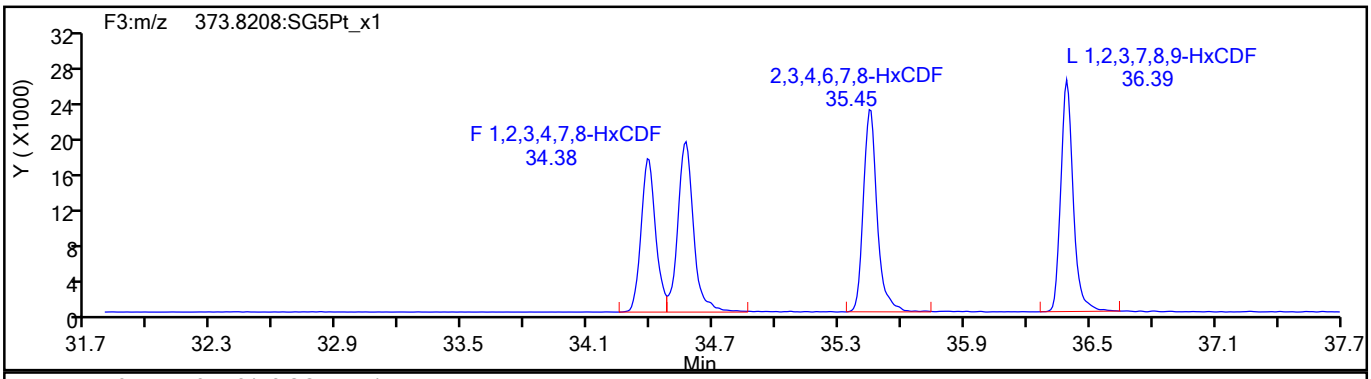

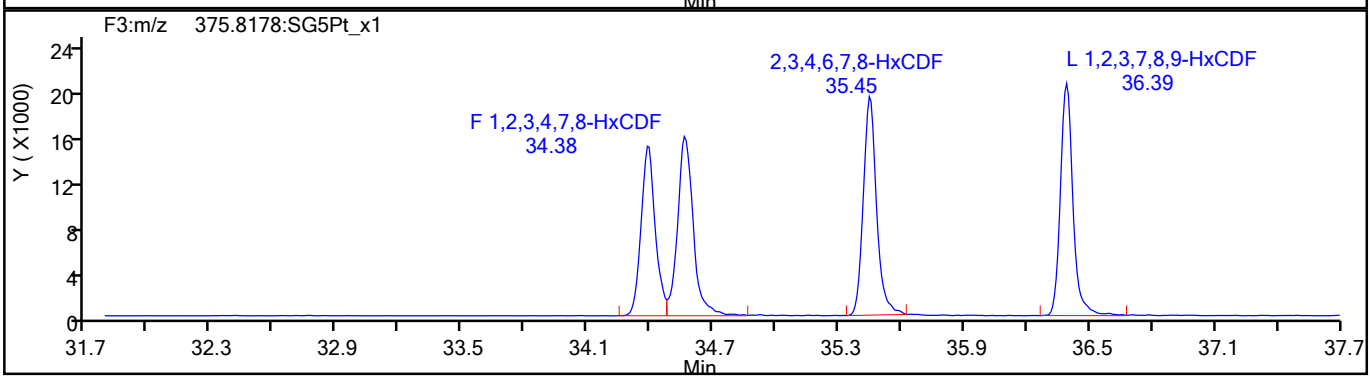

HxCDF Standards

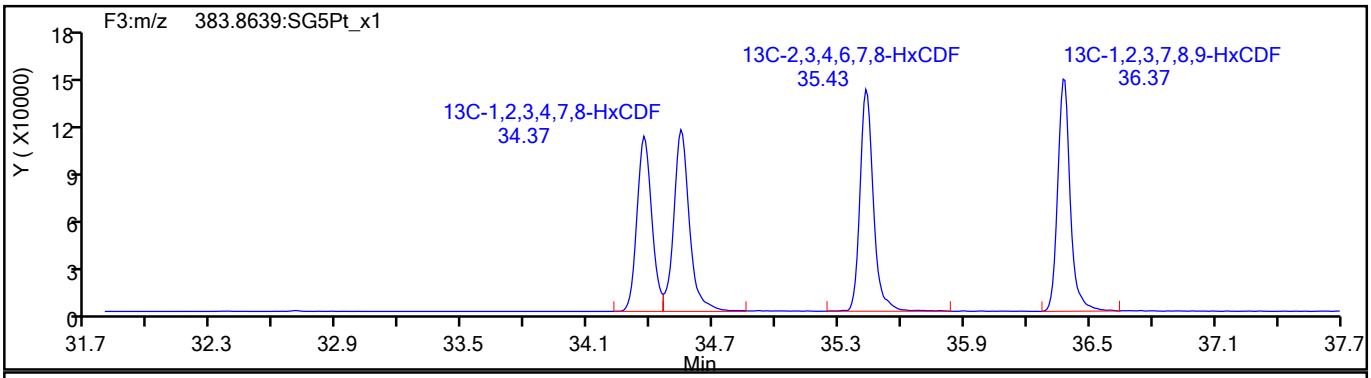

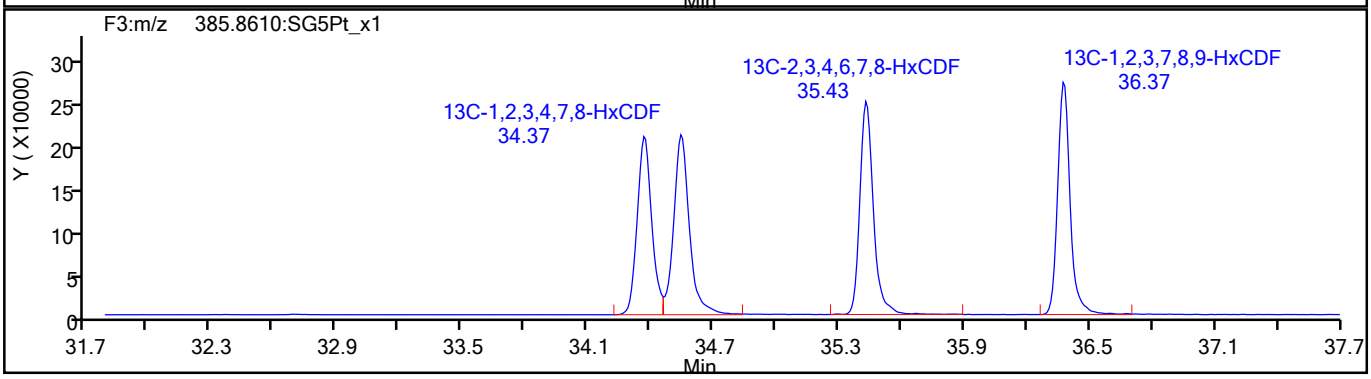

790088

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

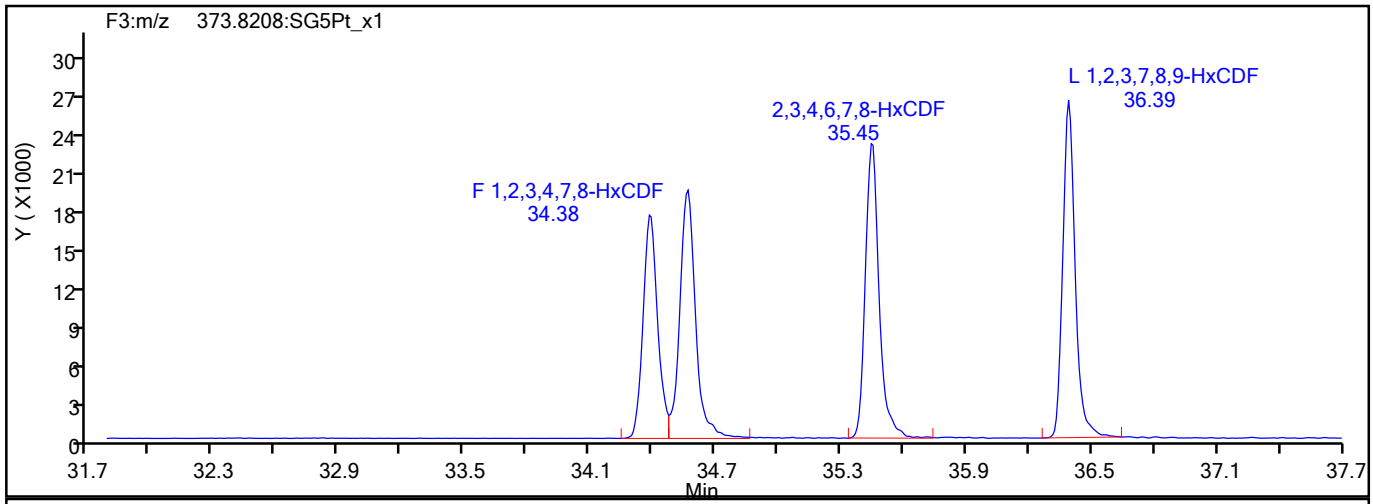

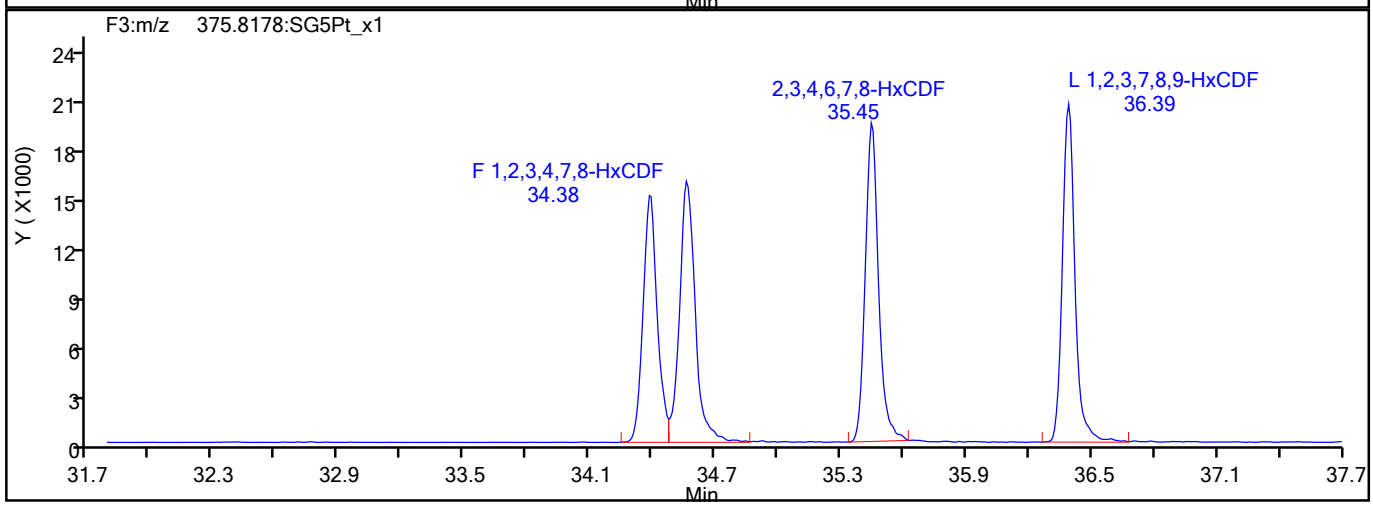

HxCDF Interference Mass

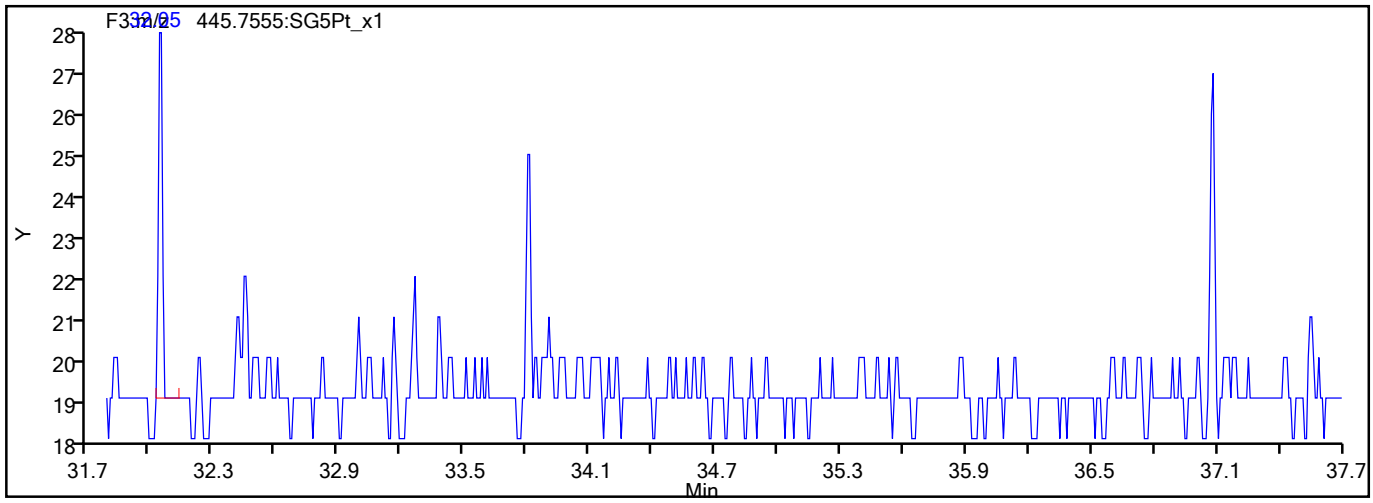

790089

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

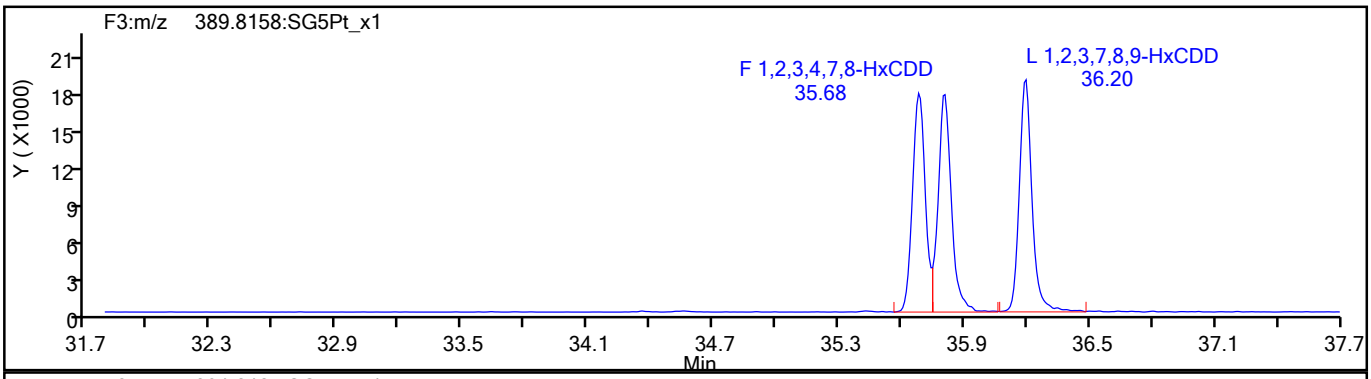

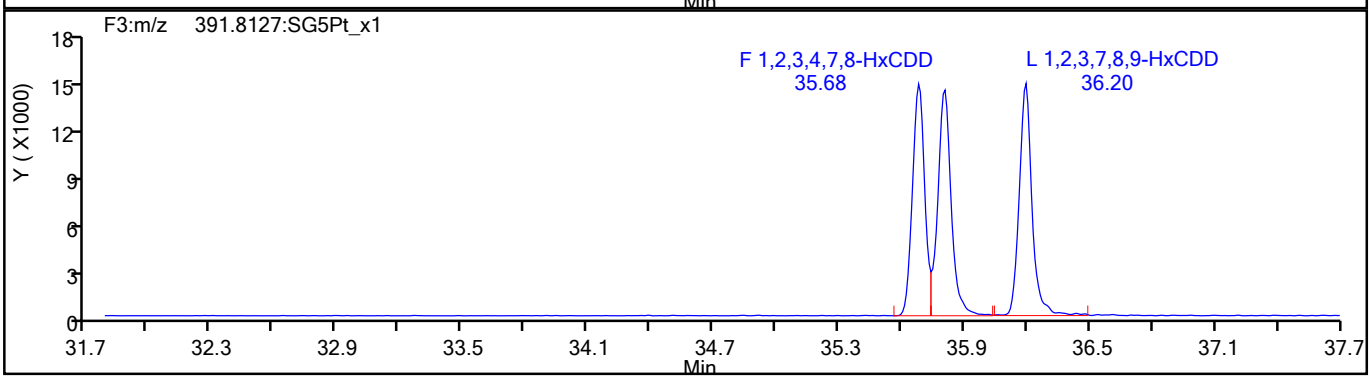

HxCDD Standards

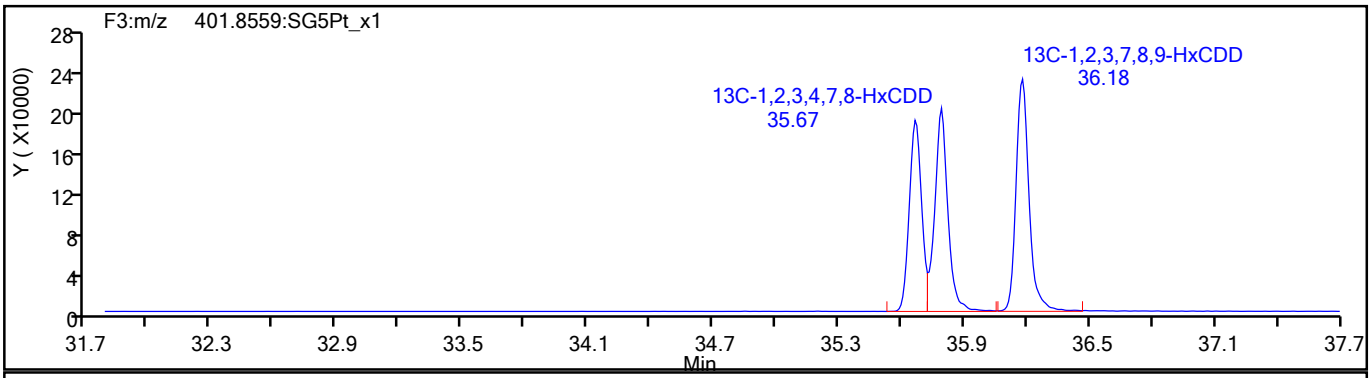

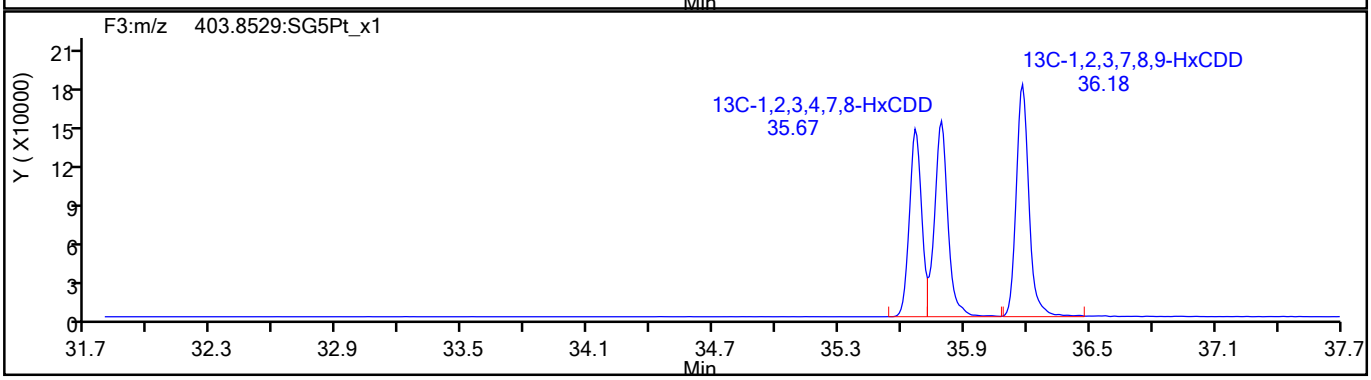

790090

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

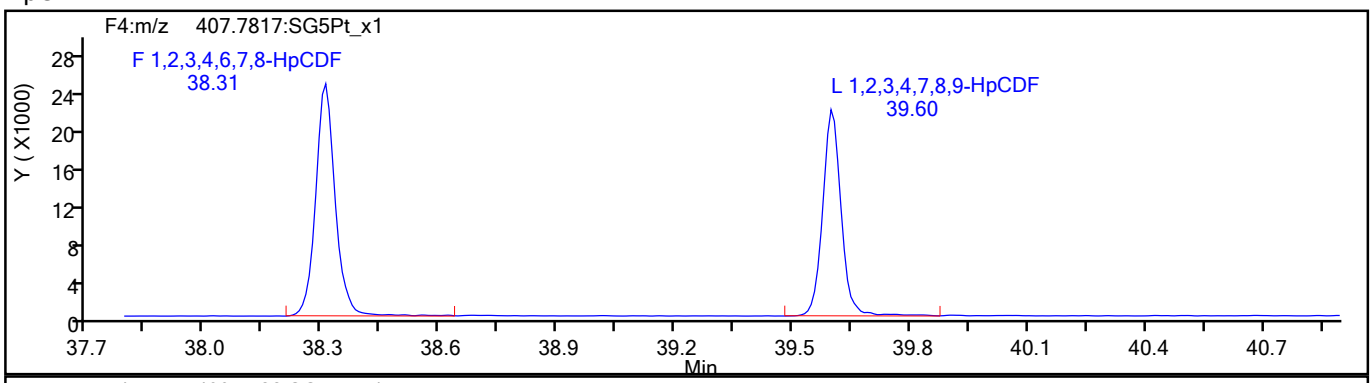

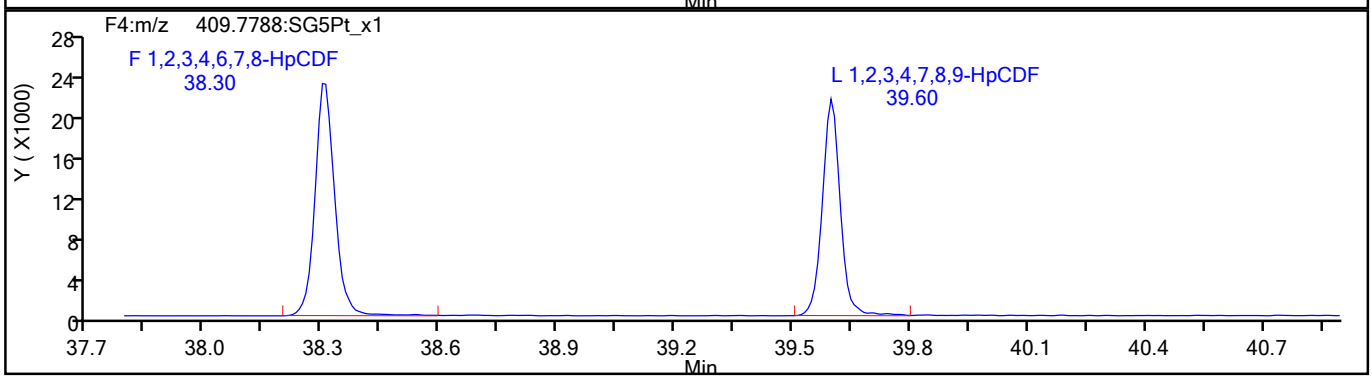

HpCDF Standards

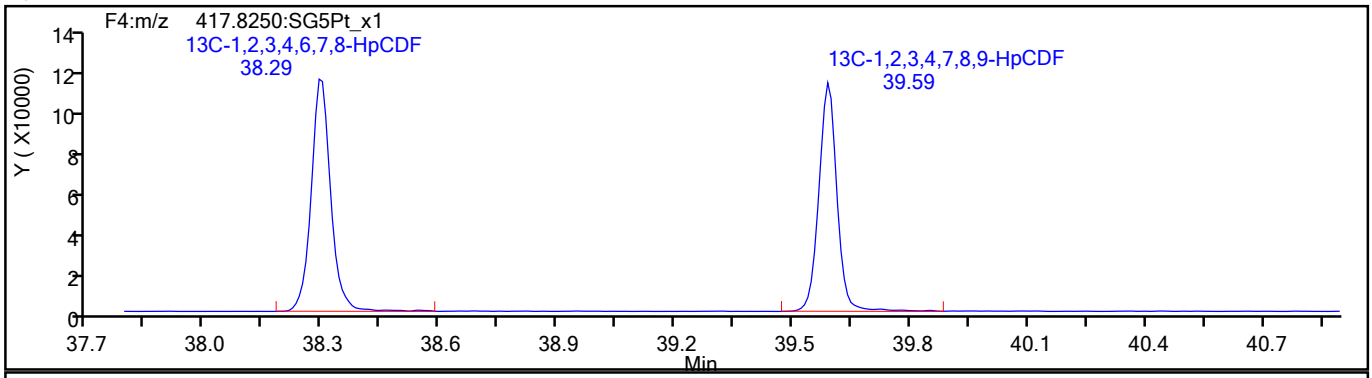

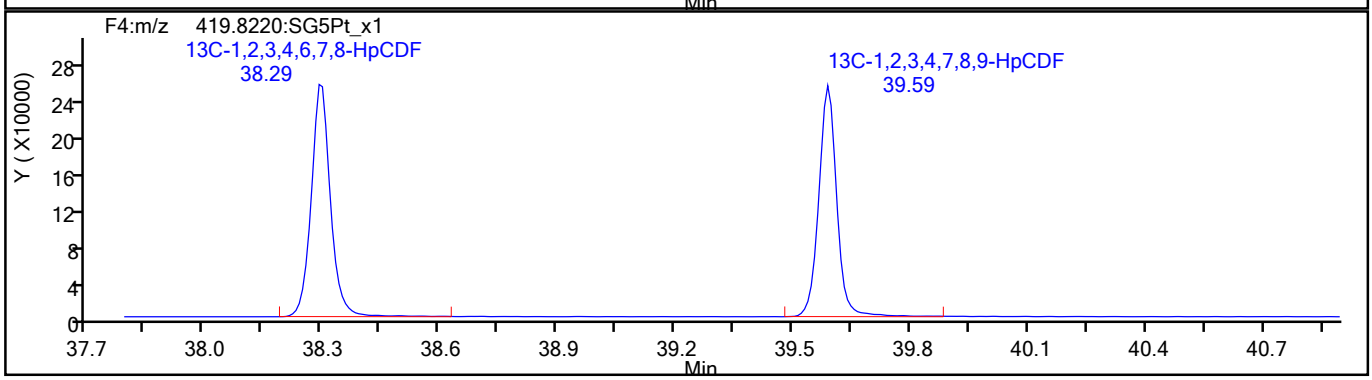

790091

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

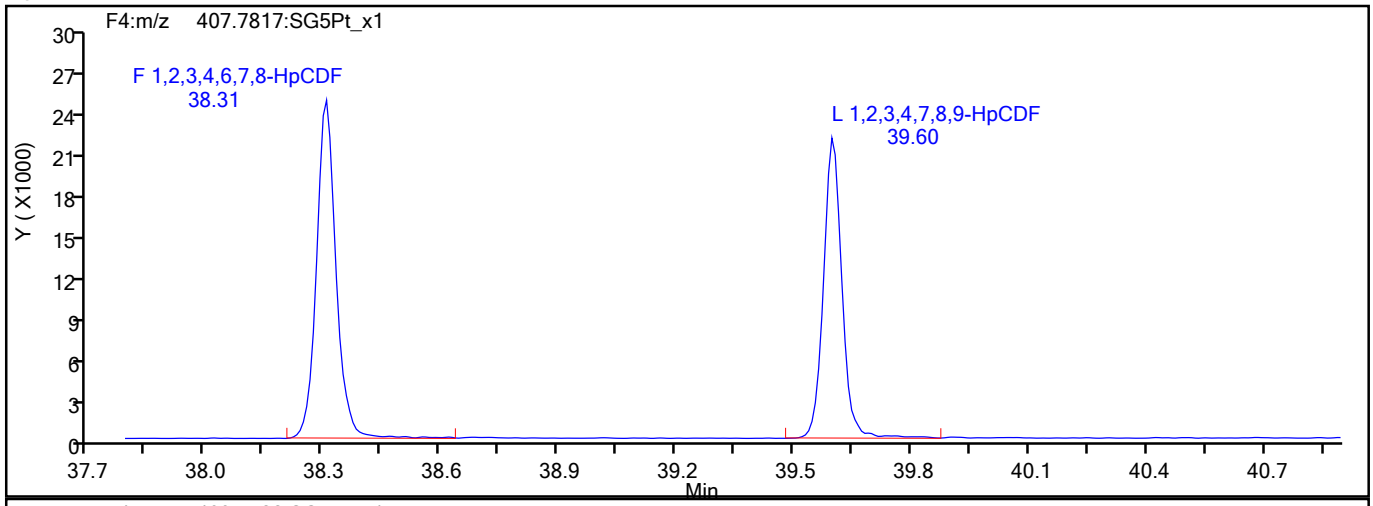

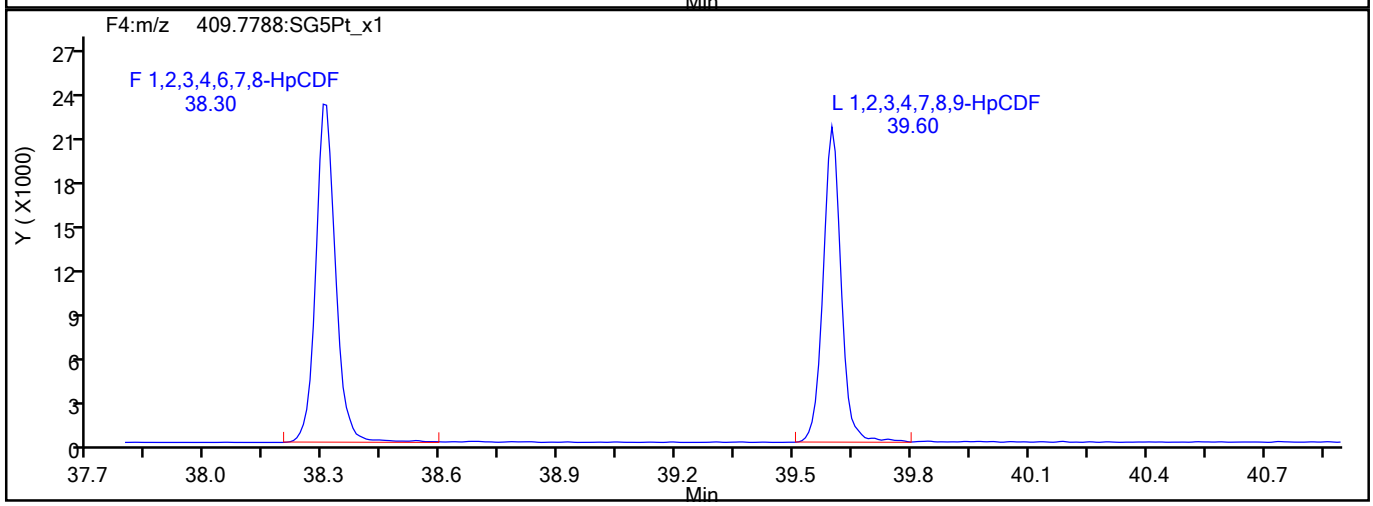

HpCDF Interference Mass

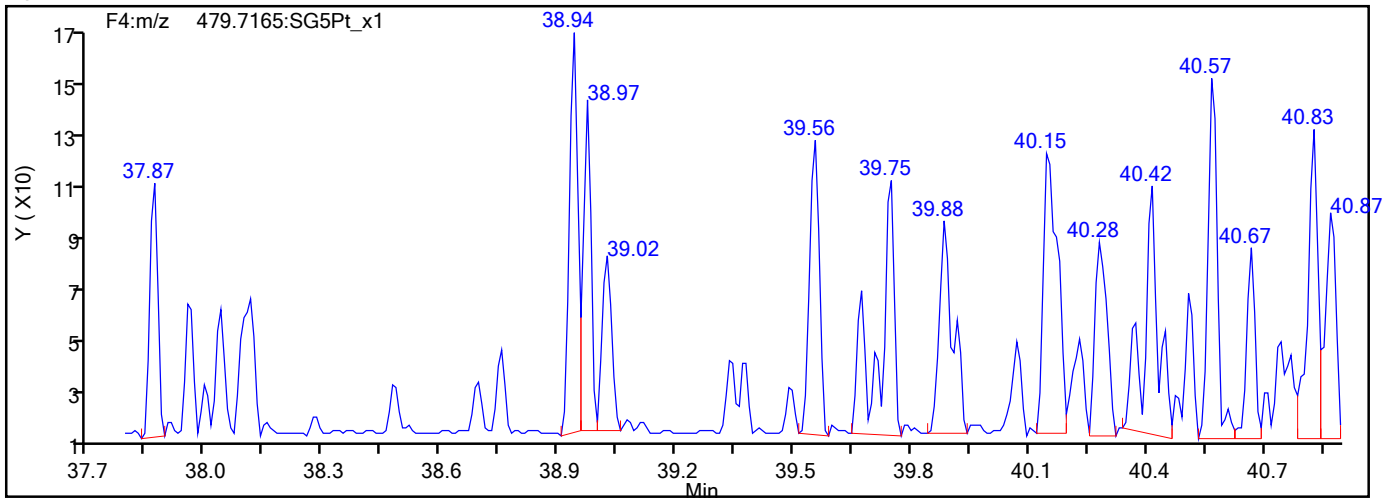

790092

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDD

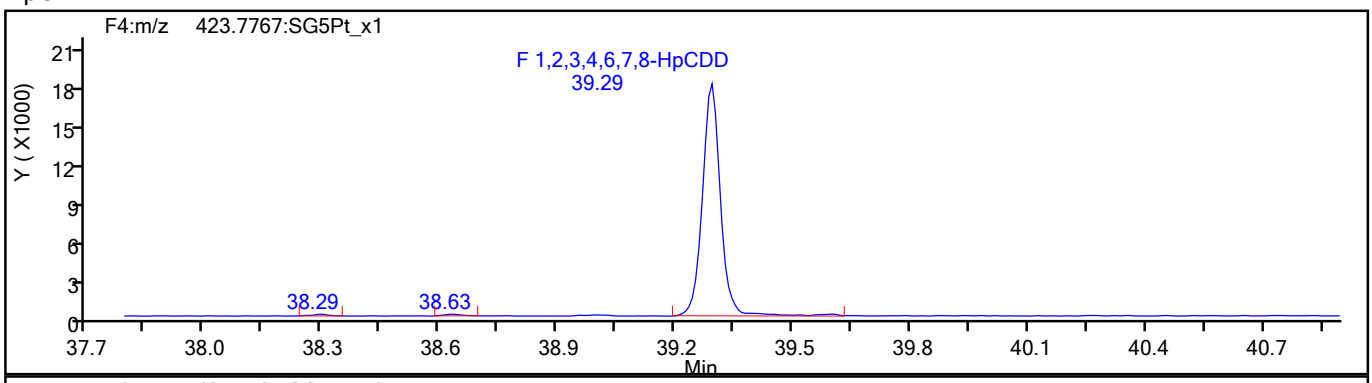

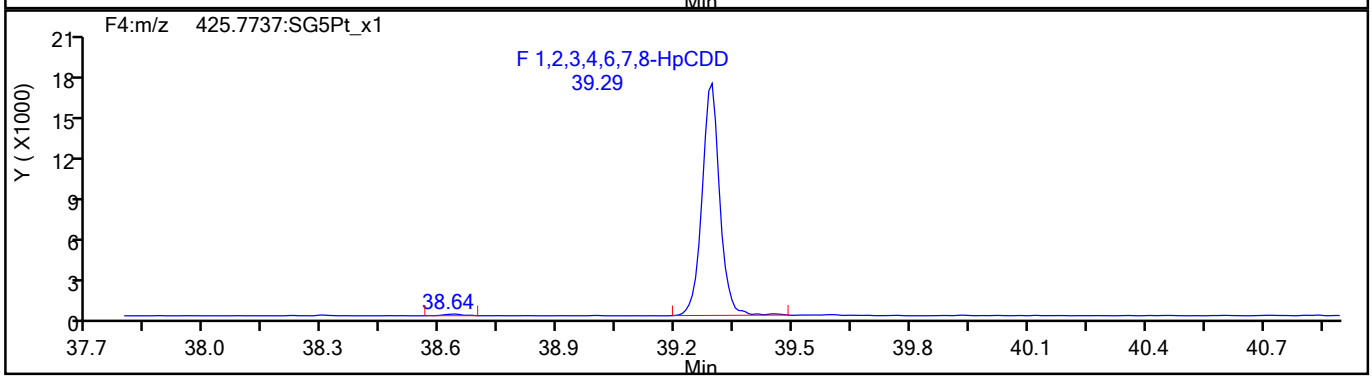

HpCDD Standards

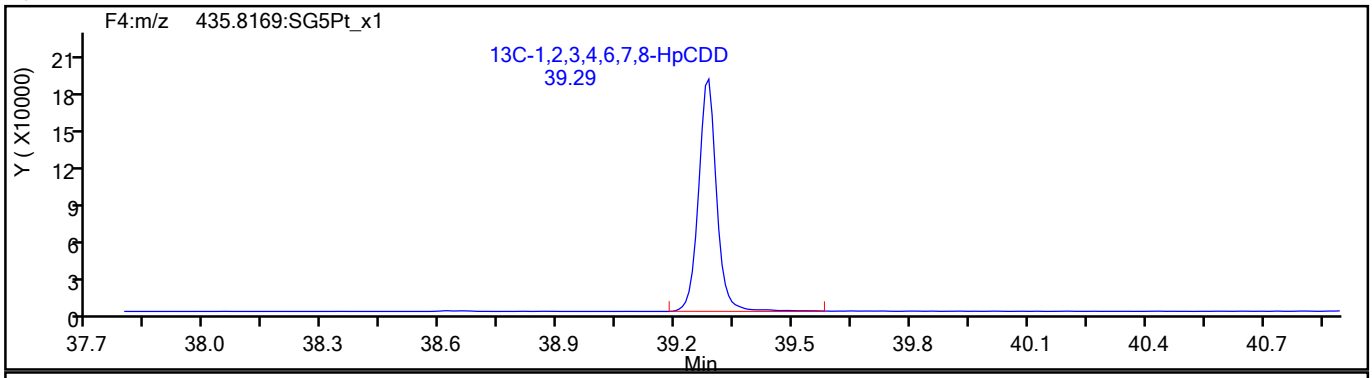

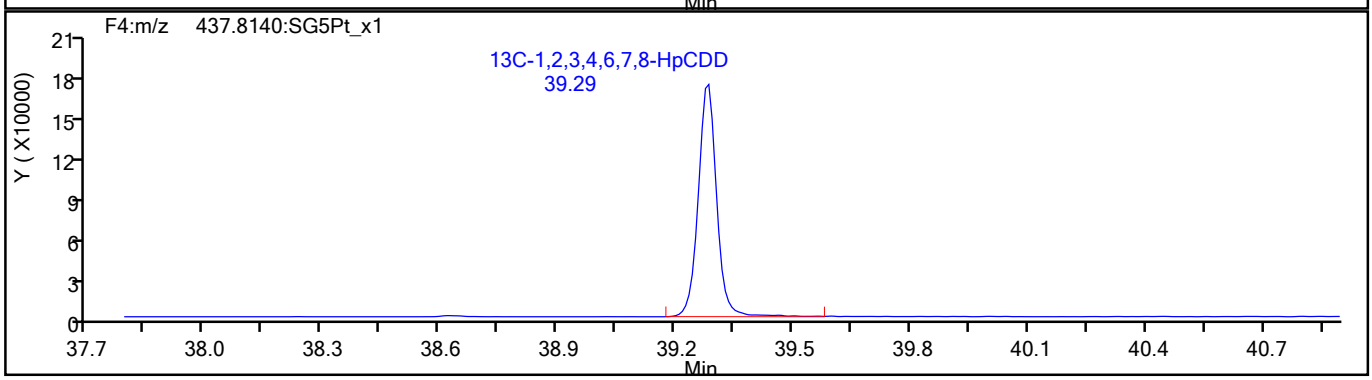

790093

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

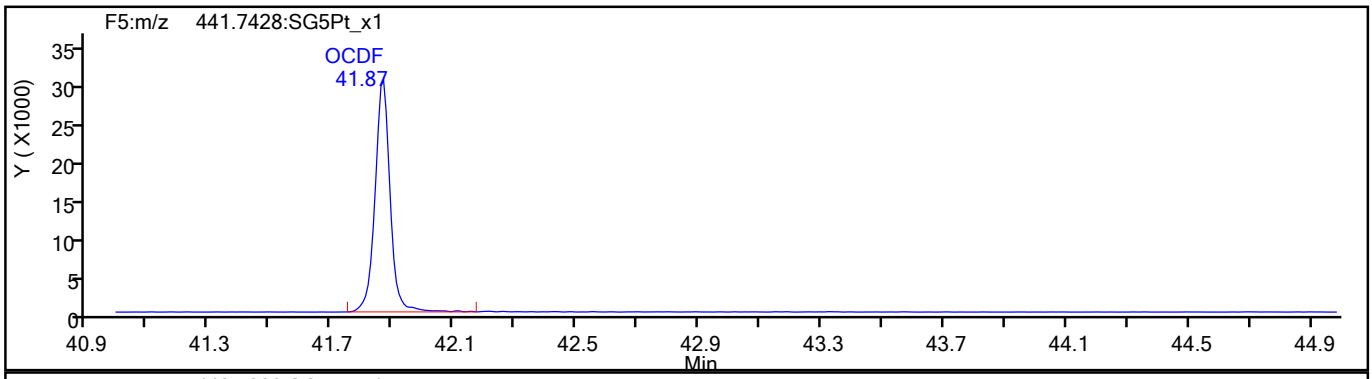

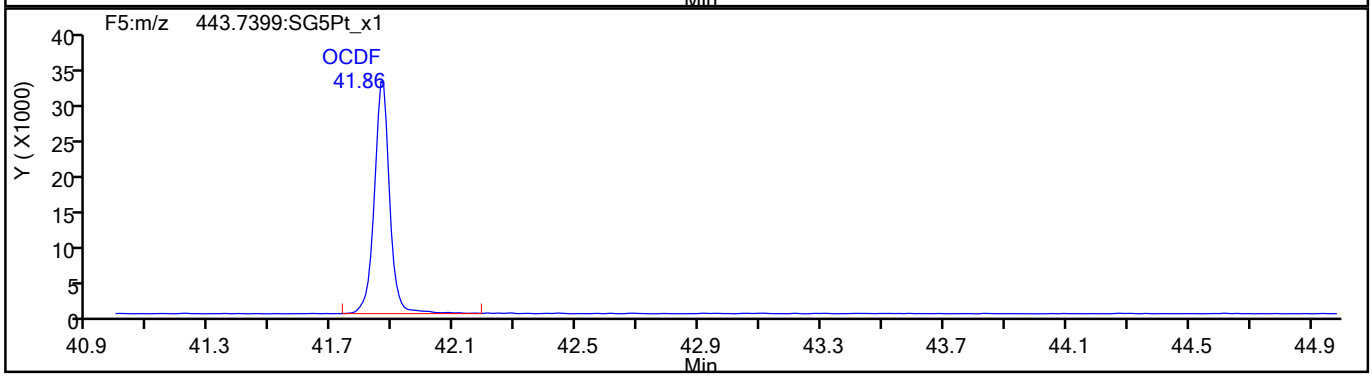

OCDF Standards

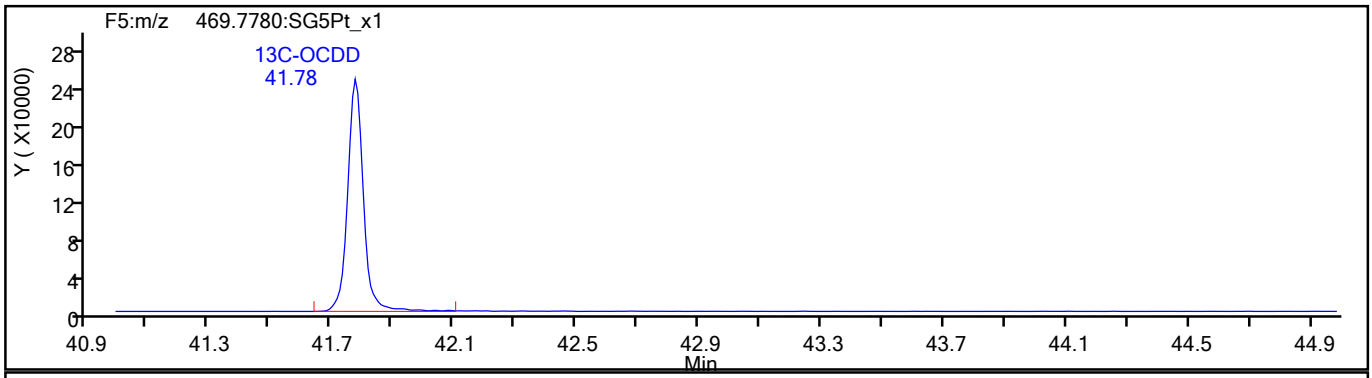

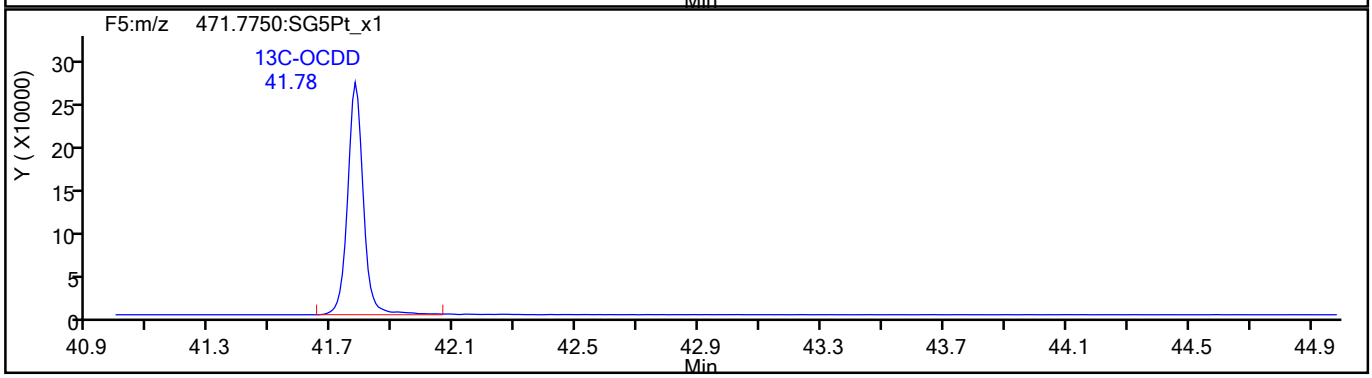

790094

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

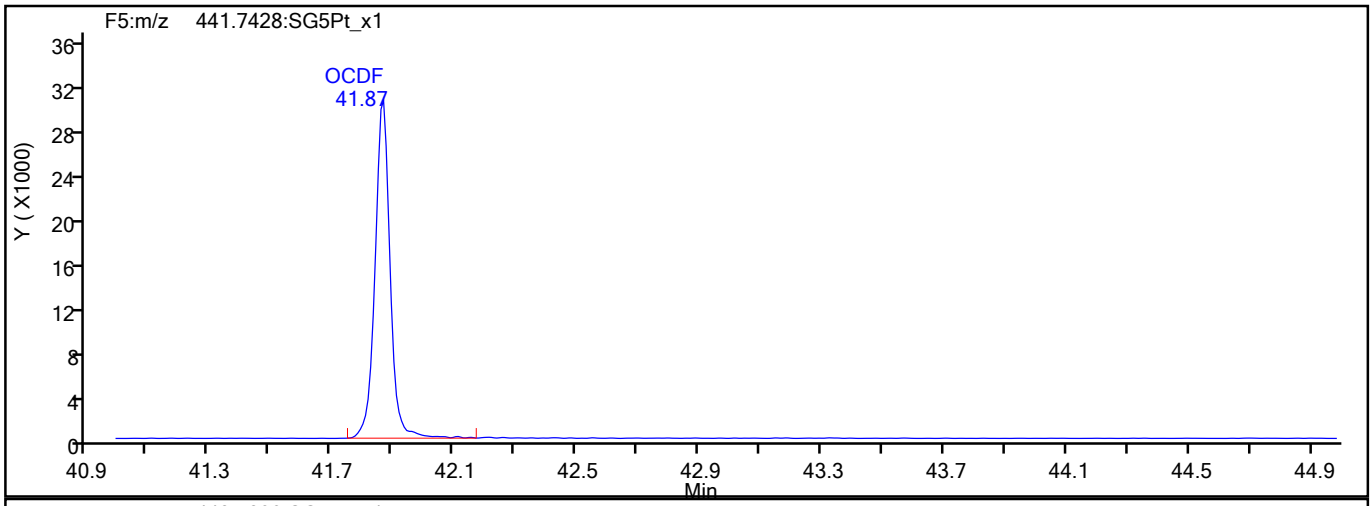

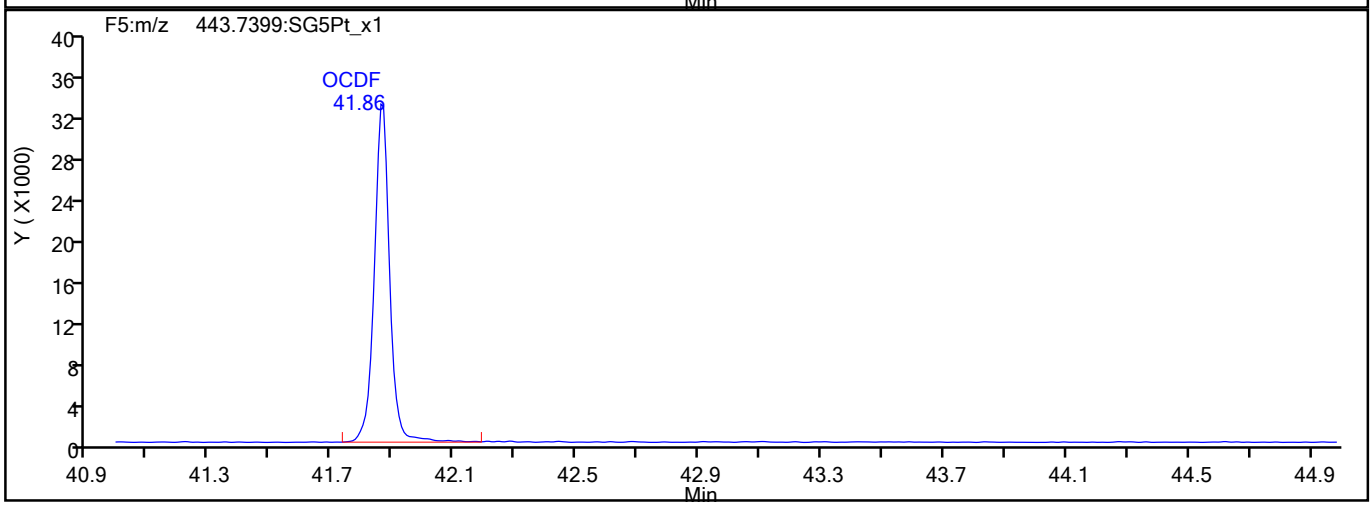

OCDF Interference Mass

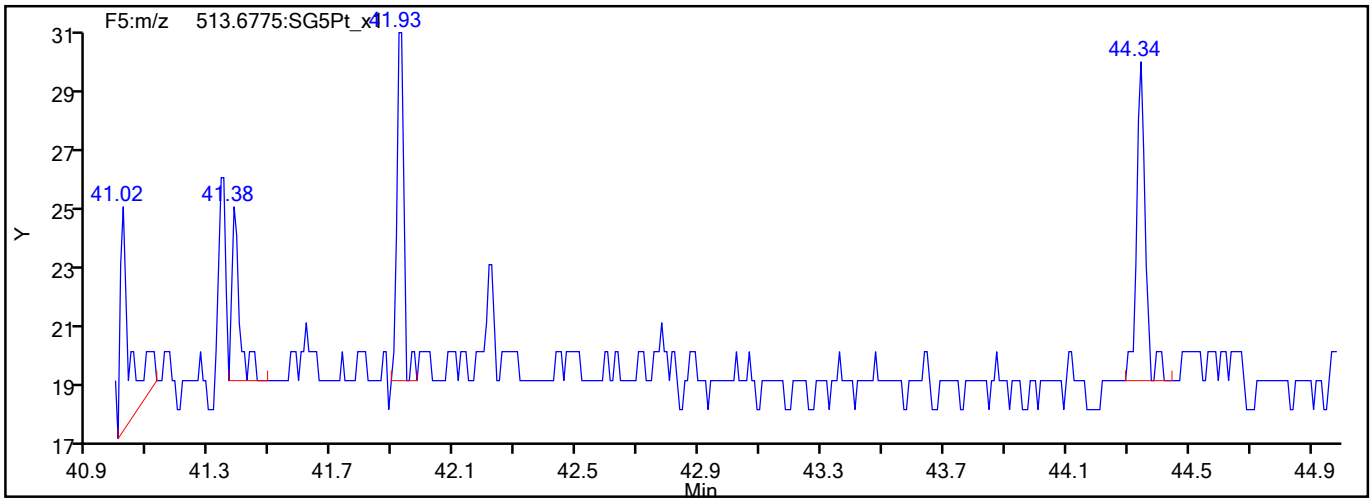

790095

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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OCDD

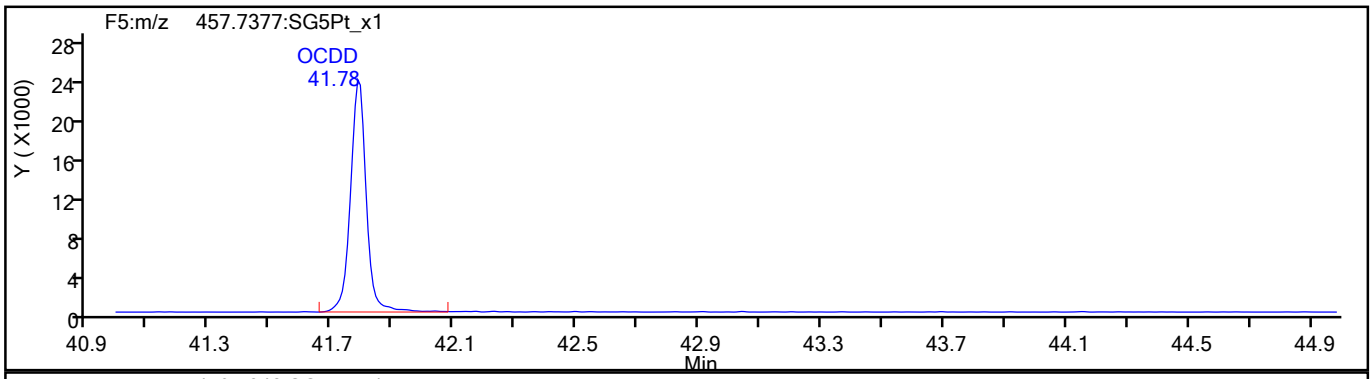

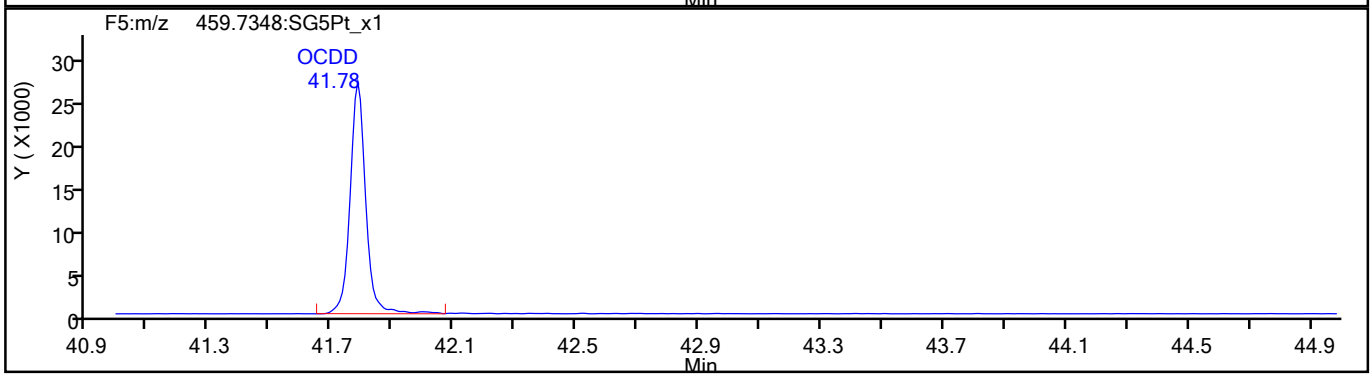

OCDD Standards

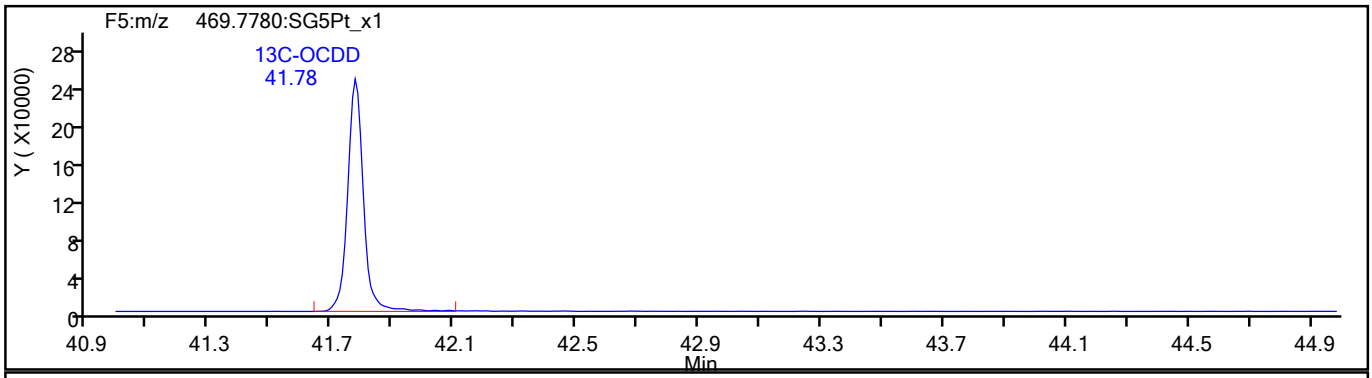

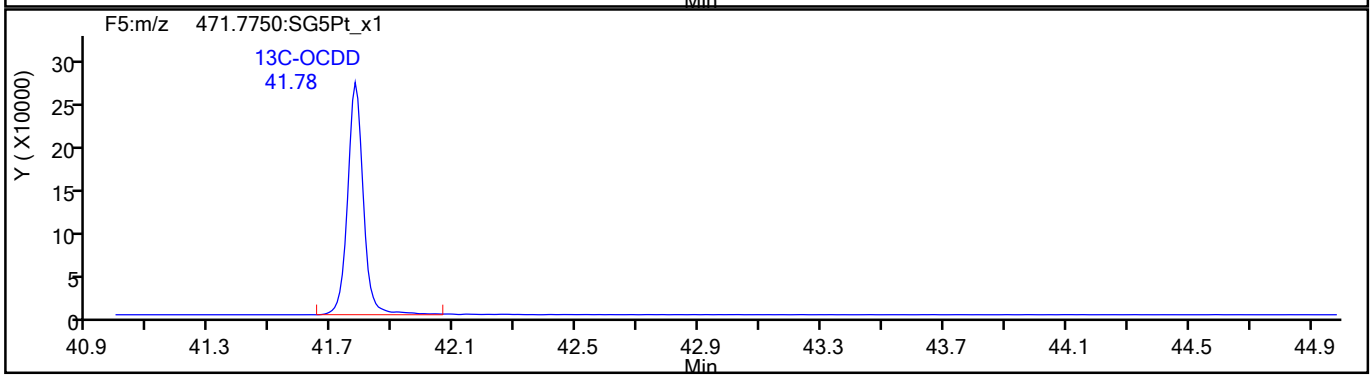

790096

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

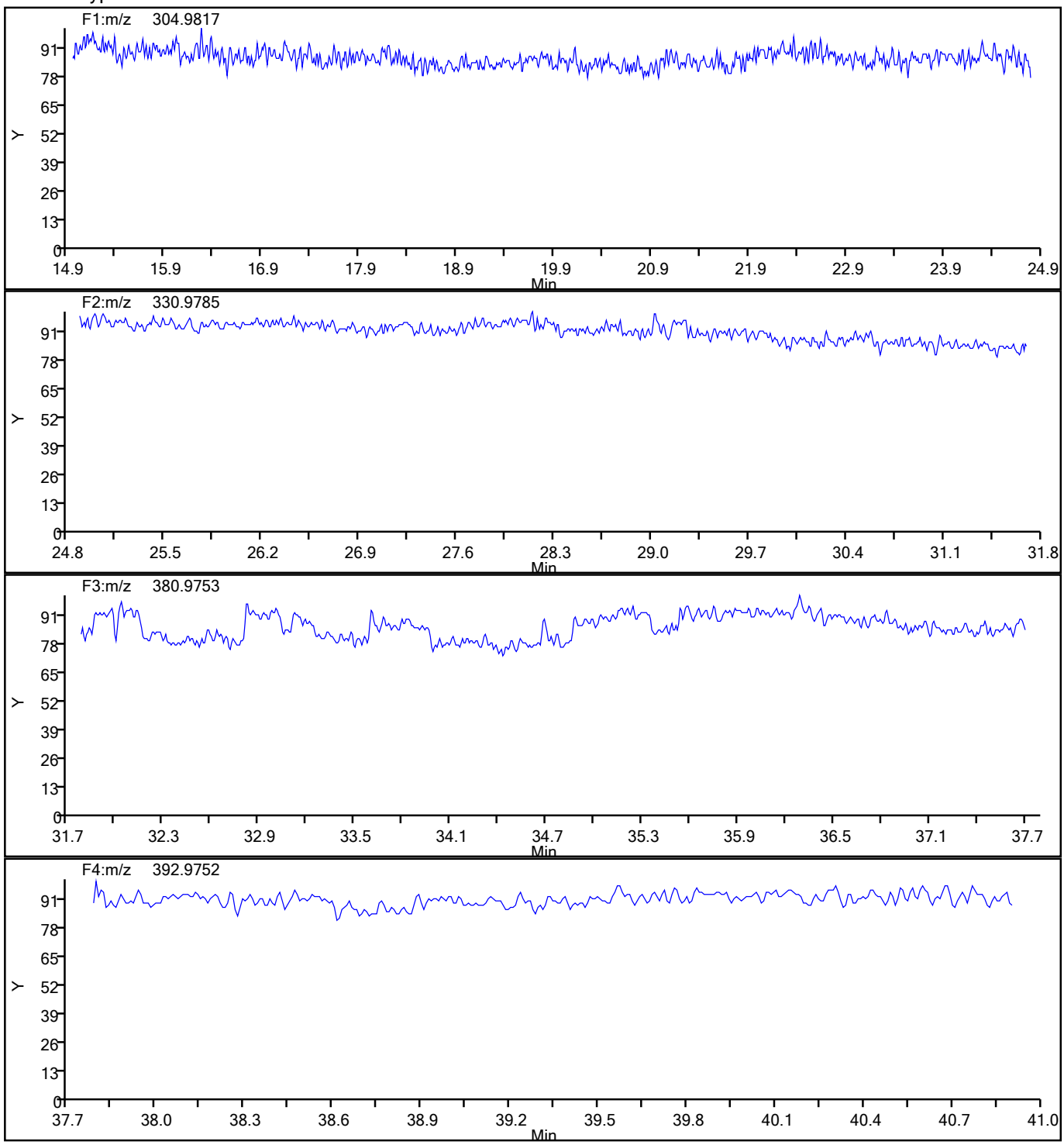

790097

Report Date: 09-Jun-2021 08:53:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_5.d		
Injection Date:	08-Jun-2021 15:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

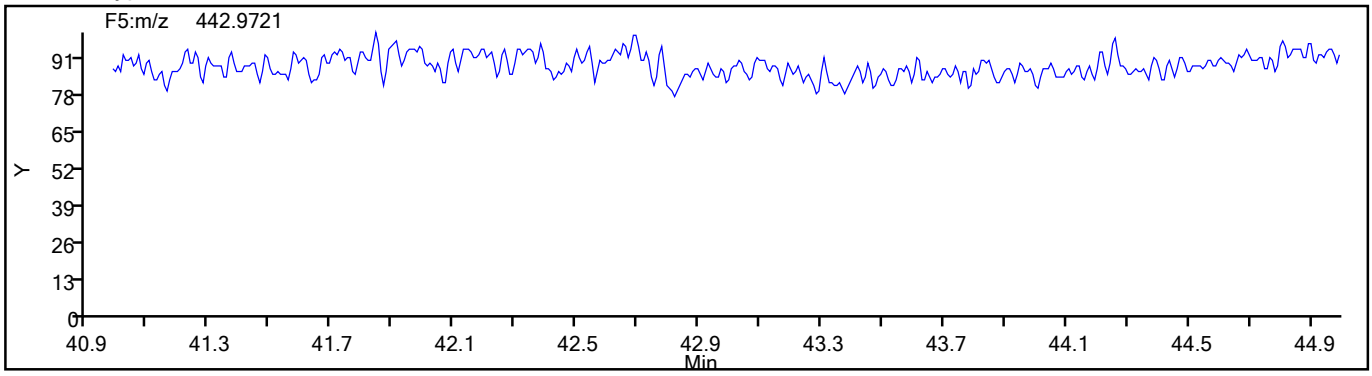

790098

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.546	1900111	0.78	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.619	2465726	0.79	1.3459	96.4	96.4	0.1978	0.1978	96.42	
2,3,7,8-TCDF	19.645	258022	0.78	1.0802	9.687	9.687	0.0168	0.0168	96.87	
S Total TCDF					9.687	9.687	0.0168	0.0168		
D 13C-2,3,7,8-TCDD	20.907	1800864	0.81	0.9317	101.7	101.7	0.1641	0.1641	102	
$ 37Cl4-2,3,7,8-TCDD	20.933	203726		1.0083	10.6	10.6	0.0134	0.0134	106	
2,3,7,8-TCDD	20.924	198062	0.75	1.0753	10.2	10.2	0.0351	0.0351	102	
S Total TCDD					10.2	10.2	0.0351	0.0351		
D 13C-1,2,3,7,8-PeCDF	26.556	2149791	1.60	1.1405	99.2	99.2	0.3269	0.3269	99.20	
1,2,3,7,8-PeCDF	26.573	1114982	1.57	1.0543	49.2	49.2	0.1379	0.1379	98.39	
D 13C-2,3,4,7,8-PeCDF	28.006	1991303	1.58	1.1253	93.1	93.1	0.3313	0.3313	93.13	
2,3,4,7,8-PeCDF	28.031	987812	1.58	1.0079	49.2	49.2	0.1665	0.1665	98.44	
S Total PeCDF					98.4	98.4	0.1522	0.1522		
D 13C-1,2,3,7,8-PeCDD	28.790	1388641	1.58	0.7165	102.0	102.0	0.1629	0.1629	102	
1,2,3,7,8-PeCDD	28.824	741897	1.57	1.0465	51.1	51.1	0.0499	0.0499	102	
S Total PeCDD					51.1	51.1	0.0499	0.0499		
D 13C-1,2,3,4,7,8-HxCDF	34.384	1841825	0.54	0.9648	115.8	115.8	0.3936	0.3936	116	
1,2,3,4,7,8-HxCDF	34.401	1093397	1.25	1.1474	51.7	51.7	0.1928	0.1928	103	
D 13C-1,2,3,6,7,8-HxCDF	34.561	2015594	0.53	1.0708	114.2	114.2	0.3547	0.3547	114	
1,2,3,6,7,8-HxCDF	34.578	1245549	1.24	1.2178	50.7	50.7	0.1720	0.1720	101	
D 13C-2,3,4,6,7,8-HxCDF	35.447	1861559	0.53	1.0413	108.4	108.4	0.3647	0.3647	108	
2,3,4,6,7,8-HxCDF	35.463	1151149	1.26	1.2145	50.9	50.9	0.1650	0.1650	102	
D 13C-1,2,3,7,8,9-HxCDF	36.399	1657413	0.54	0.9731	103.3	103.3	0.3903	0.3903	103	
1,2,3,7,8,9-HxCDF	36.408	1038574	1.24	1.2401	50.5	50.5	0.1718	0.1718	101	
S Total HxCDF					203.9	203.9	0.1754	0.1754		
* 13C-1,2,3,7,8,9-HxCDD	36.197	1648545	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.691	1348471	1.27	0.7587	107.8	107.8	0.2143	0.2143	108	
1,2,3,4,7,8-HxCDD	35.699	724729	1.28	1.0608	50.7	50.7	0.0918	0.0918	101	
D 13C-1,2,3,6,7,8-HxCDD	35.809	1460100	1.24	0.8593	103.1	103.1	0.1892	0.1892	103	
1,2,3,6,7,8-HxCDD	35.826	760446	1.23	0.9933	52.4	52.4	0.0967	0.0967	105	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.214	786511	1.27	1.1094	50.5	50.5	0.0872	0.0872	101	
S Total HxCDD					153.6	153.6	0.0919	0.0919		
D 13C-1,2,3,4,6,7,8-HpCDF	38.316	1182209	0.45	0.7359	97.4	97.4	0.3866	0.3866	97.44	
1,2,3,4,6,7,8-HpCDF	38.324	878086	1.05	1.4421	51.5	51.5	0.1699	0.1699	103	
D 13C-1,2,3,4,7,8,9-HpCDF	39.614	1080883	0.46	0.6854	95.7	95.7	0.4151	0.4151	95.66	
1,2,3,4,7,8,9-HpCDF	39.622	727362	1.05	1.3092	51.4	51.4	0.1875	0.1875	103	
S Total HpCDF					102.9	102.9	0.1787	0.1787		
D 13C-1,2,3,4,6,7,8-HpCDD	39.302	1094713	1.07	0.6745	98.4	98.4	0.2448	0.2448	98.45	
1,2,3,4,6,7,8-HpCDD	39.310	572466	1.05	1.0503	49.8	49.8	0.1044	0.1044	99.58	
S Total HpCDD					49.8	49.8	0.1044	0.1044		
D 13C-OCDD	41.794	1676139	0.90	0.5446	186.7	186.7	0.2845	0.2845	93.34	
OCDF	41.887	1118740	0.90	1.3168	101.4	101.4	0.1189	0.1189	101	
OCDD	41.803	910980	0.89	1.0620	102.4	102.4	0.1082	0.1082	102	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Jun-2021 15:54:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-4 HRDXNL4_00099
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:21:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.546	20.547	0		832498	129736	116	290	1118		
333.9338	20.546	20.547	0		1067613	165878	65	162	2552	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.619	19.616	0	0.955	1091704	180342	213	532	847		
317.9389	19.619	19.616	0	0.955	1374022	217372	102	255	2131	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.645	19.646	0	1.001	113254	18239	10	25	1824		
305.8987	19.645	19.646	0	1.001	144768	23858	19	47	1256	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.907	20.910	0	1.018	803279	117913	116	290	1016		
333.9338	20.907	20.910	0	1.018	997585	152094	65	162	2340	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.933	20.935	0	1.019	203726	29833	16	40	1865		
2,3,7,8-TCDD											
319.8965	20.924	20.939	-1	1.001	85173	13080	31	77	422		
321.8936	20.941	20.939	0	1.002	112889	16258	10	25	1626	0.75(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.556	26.560	0	1.292	1323851	238814	266	665	898		
353.8970	26.556	26.560	0	1.292	825940	146442	175	437	837	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.573	26.584	-1	1.001	680306	120693	132	330	914		
341.8567	26.573	26.584	-1	1.001	434676	76404	92	230	830	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.006	28.014	0	1.363	1219332	203015	266	665	763		
353.8970	28.006	28.014	0	1.363	771971	130766	175	437	747	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.031	28.039	0	1.001	604266	98138	132	330	743		
341.8567	28.031	28.039	0	1.001	383546	62644	92	230	681	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.790	28.801	-1	1.401	851334	132655	82	205	1618		
369.8919	28.790	28.801	-1	1.401	537307	81623	56	140	1458	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.824	28.828	0	1.001	452903	70092	31	77	2261		
357.8516	28.824	28.828	0	1.001	288994	44853	14	35	3204	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.384	34.384	0	0.950	645542	131022	198	495	662		
385.8610	34.384	34.384	0	0.950	1196283	248690	400	1000	622	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.401	34.405	0	1.000	607111	119877	181	452	662		
375.8178	34.401	34.405	0	1.000	486286	95304	155	387	615	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.561	34.562	0	0.955	696119	139607	198	495	705		
385.8610	34.561	34.562	0	0.955	1319475	261396	400	1000	653	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.578	34.582	0	1.000	690624	134257	181	452	742		
375.8178	34.578	34.582	0	1.000	554925	106932	155	387	690	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.447	35.444	0	0.979	648311	145832	198	495	737		
385.8610	35.447	35.444	0	0.979	1213248	273234	400	1000	683	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.463	35.461	0	1.000	640849	139500	181	452	771		
375.8178	35.463	35.461	0	1.000	510300	111840	155	387	722	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.399	36.388	1	1.006	579583	134604	198	495	680		
385.8610	36.399	36.388	1	1.006	1077830	259553	400	1000	649	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.408	36.402	0	1.000	575769	139453	181	452	770		
375.8178	36.408	36.402	0	1.000	462805	111702	155	387	721	1.24(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.197	36.192	0		918631	219913	146	365	1506		
403.8529	36.197	36.192	0		729914	173739	110	275	1579	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.691	35.680	1	0.986	754120	185149	146	365	1268		
403.8529	35.691	35.680	1	0.986	594351	145418	110	275	1322	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.699	35.695	0	1.000	407415	100236	71	177	1412		
391.8127	35.699	35.695	0	1.000	317314	80745	58	145	1392	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.809	35.805	0	0.989	809032	182963	146	365	1253		
403.8529	35.809	35.805	0	0.989	651068	152224	110	275	1384	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.826	35.820	0	1.000	419224	96522	71	177	1359		
391.8127	35.826	35.820	0	1.000	341222	77256	58	145	1332	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.214	36.208	0	1.015	440686	104923	71	177	1478		
391.8127	36.214	36.208	0	1.015	345825	82846	58	145	1428	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.316	38.305	1	1.059	366846	105531	154	385	685		
419.8220	38.316	38.305	1	1.059	815363	231224	294	735	786	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.324	38.317	0	1.000	449936	128816	169	422	762		
409.7788	38.324	38.317	0	1.000	428150	123728	161	402	768	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.614	39.600	1	1.094	340338	106309	154	385	690		
419.8220	39.606	39.600	0	1.094	740545	229697	294	735	781	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.622	39.608	1	1.000	372140	117961	169	422	698		
409.7788	39.622	39.608	1	1.000	355222	111585	161	402	693	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.302	39.293	1	1.086	567057	176920	136	340	1301		
437.8140	39.302	39.293	1	1.086	527656	171361	124	310	1382	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.310	39.301	1	1.000	293602	91347	77	192	1186		
425.7737	39.310	39.301	1	1.000	278864	87962	76	190	1157	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.794	41.785	1	1.155	795323	226496	132	330	1716		
471.7750	41.794	41.785	1	1.155	880816	252365	112	280	2253	0.90(0.76-1.02)	
OCDF											
441.7428	41.887	41.875	1	1.002	530577	155278	73	182	2127		
443.7399	41.887	41.875	1	1.002	588163	168537	77	192	2189	0.90(0.76-1.02)	
OCDD											
457.7377	41.803	41.794	1	1.000	427984	122796	54	135	2274		
459.7348	41.803	41.794	1	1.000	482996	140394	56	140	2507	0.89(0.76-1.02)	

Reagents:

HRDXNL4_00099 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

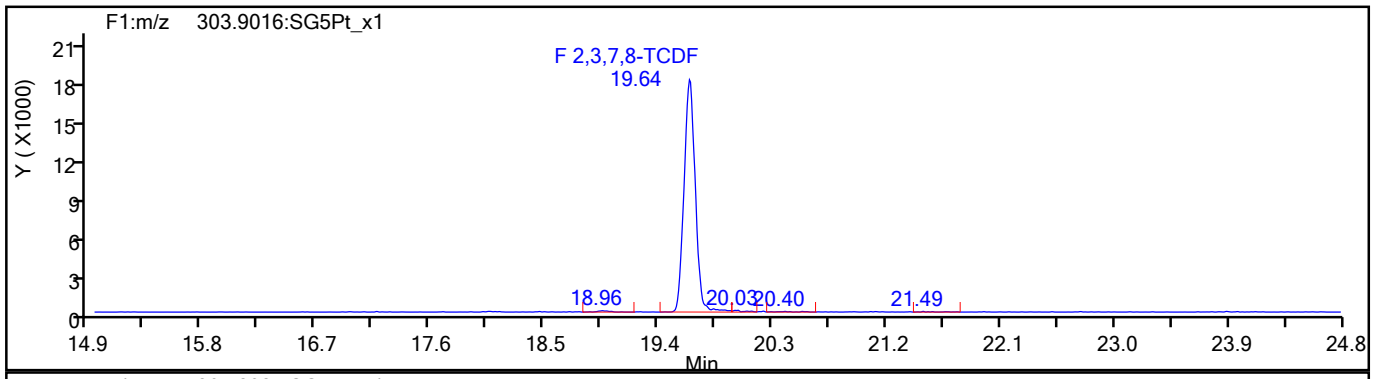

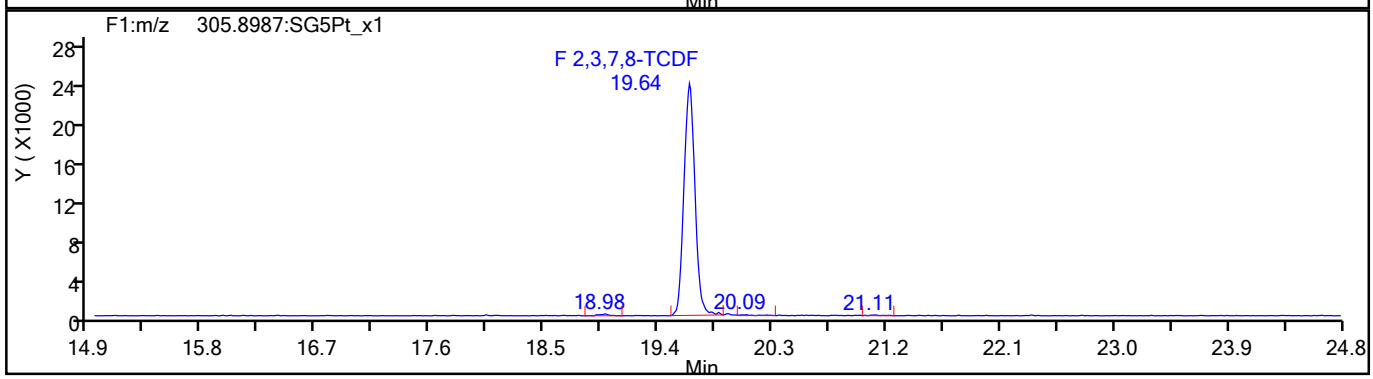

TCDF Standards

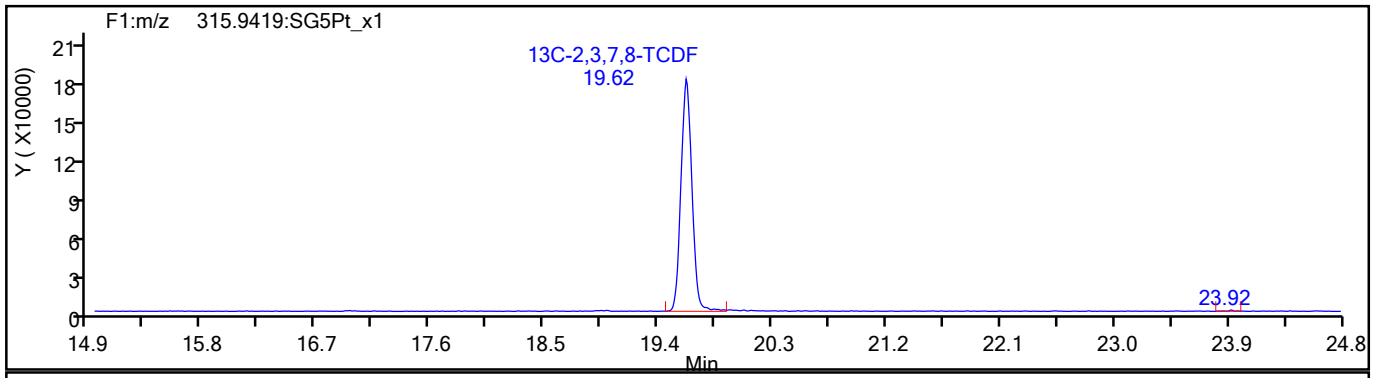

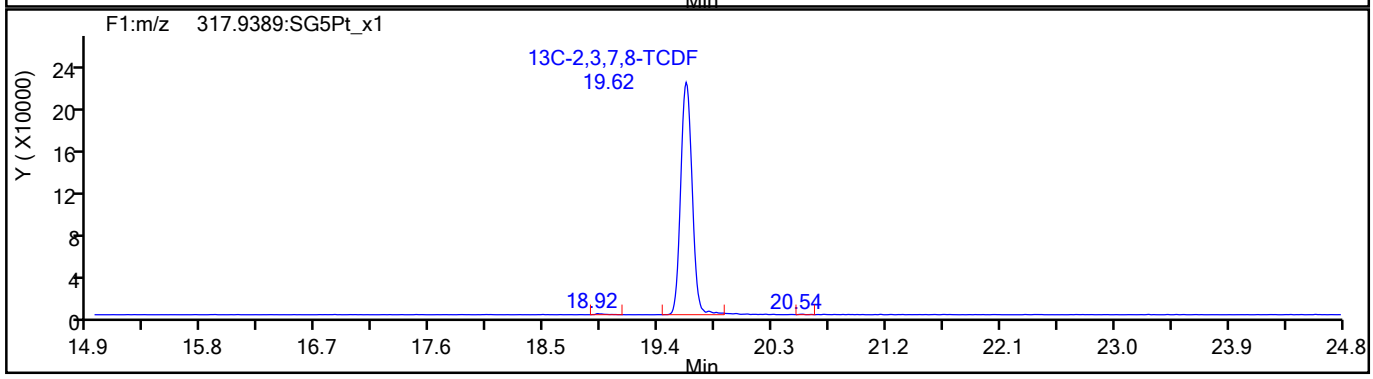

790104

Report Date: 09-Jun-2021 08:53:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

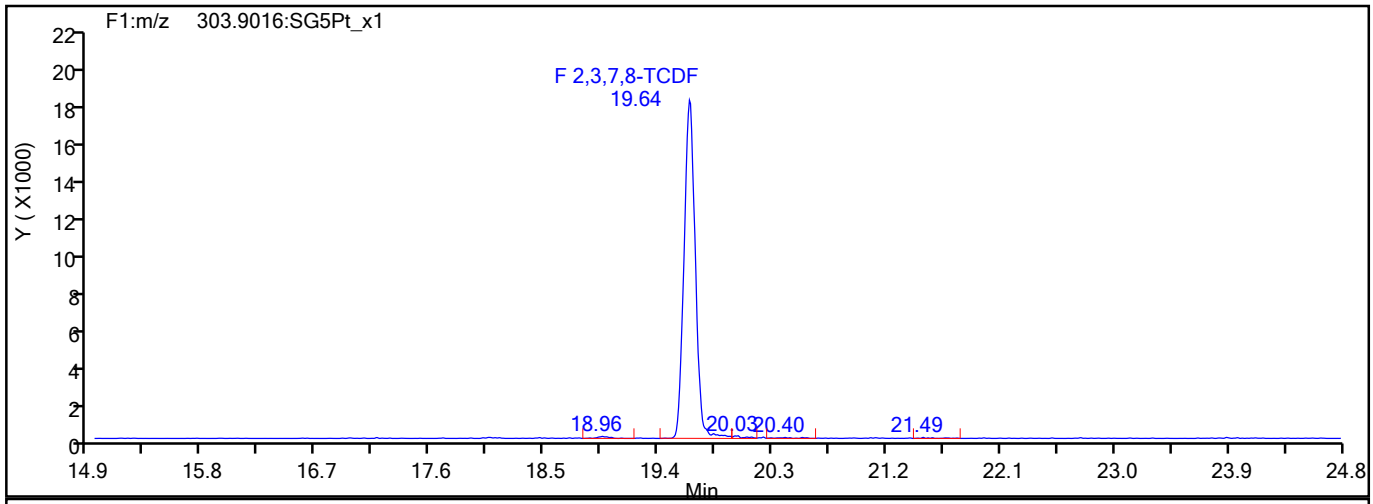

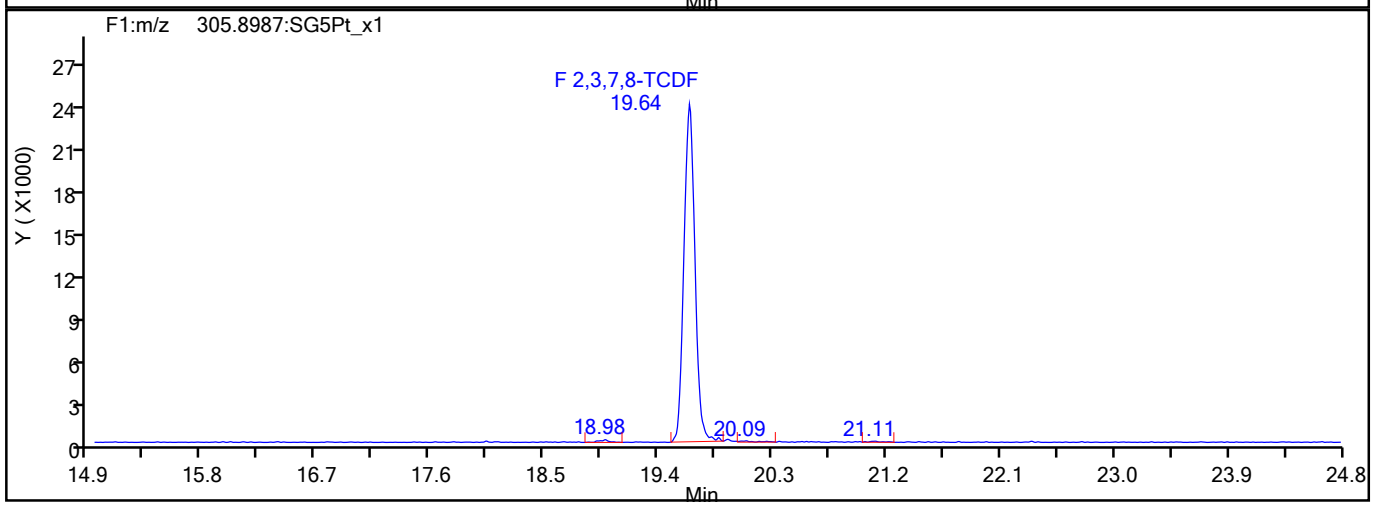

TCDF Interference Mass

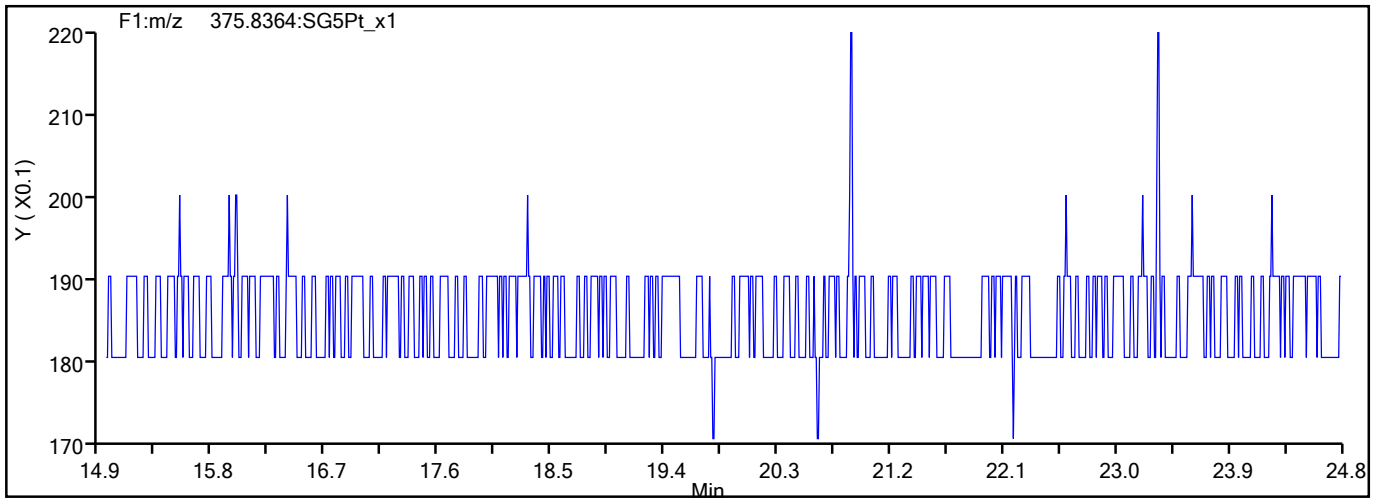

790105

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

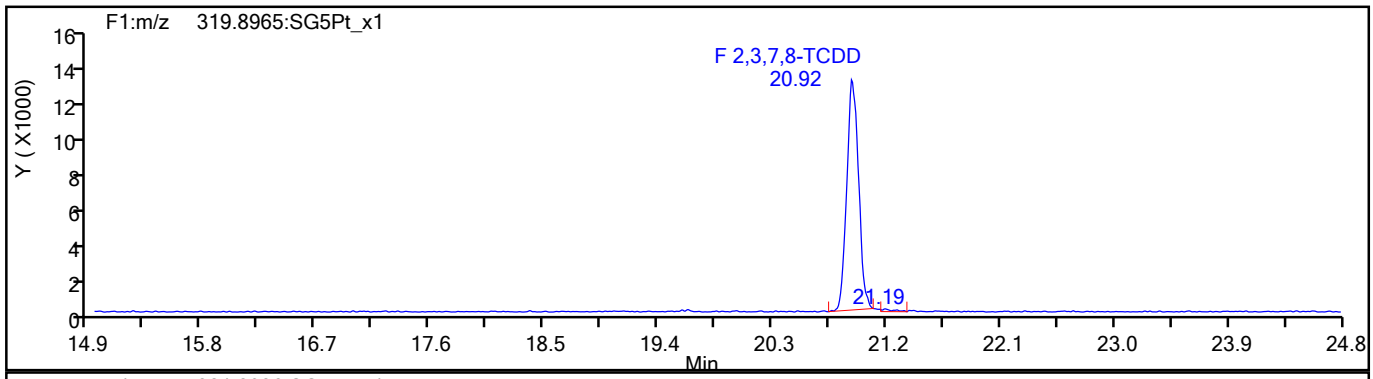

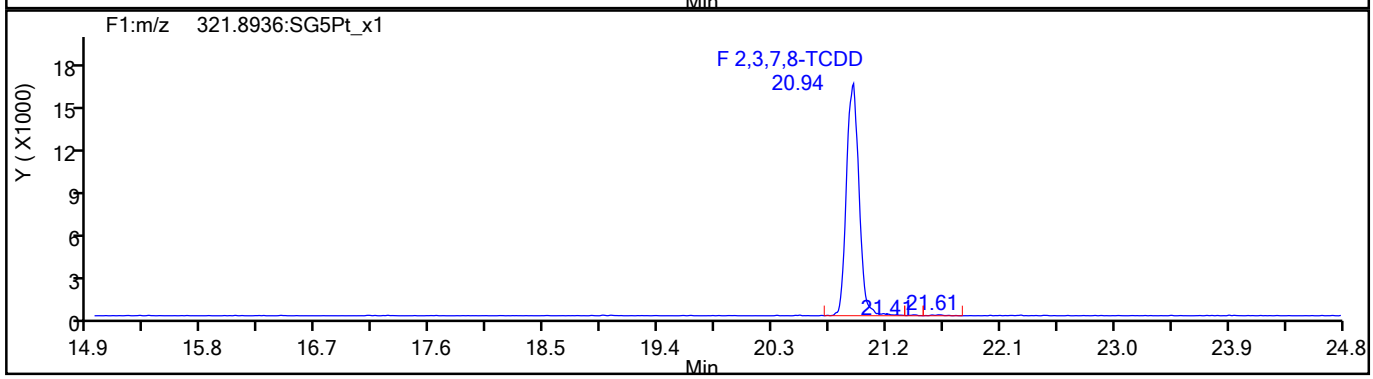

TCDD Standards

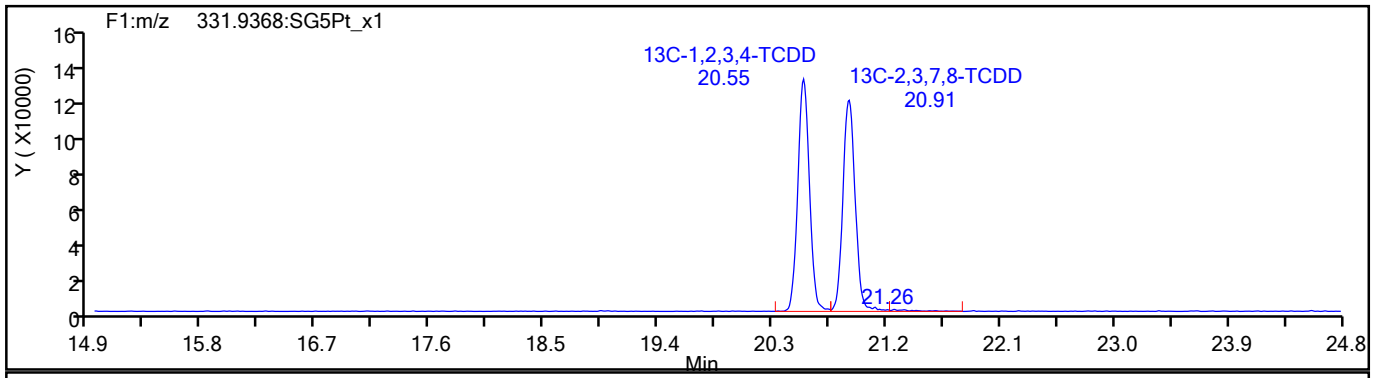

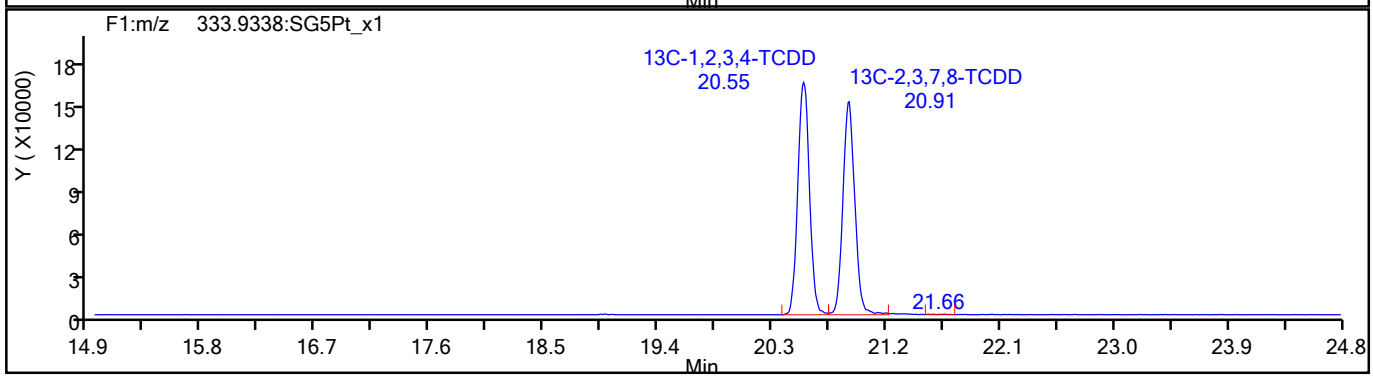

790106

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

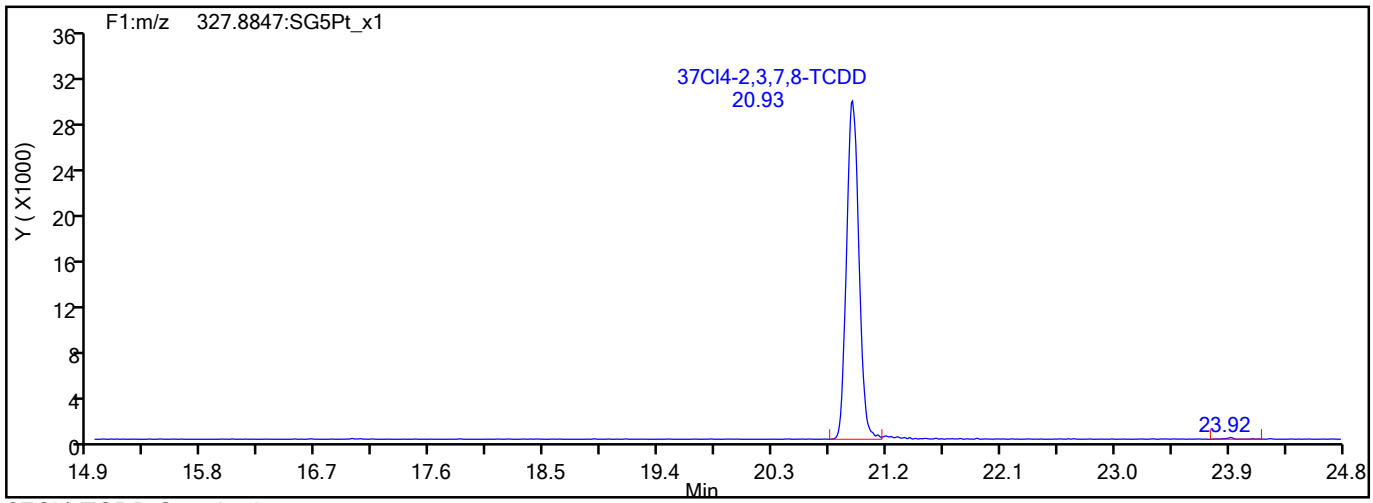

37Cl4-TCDD Standards

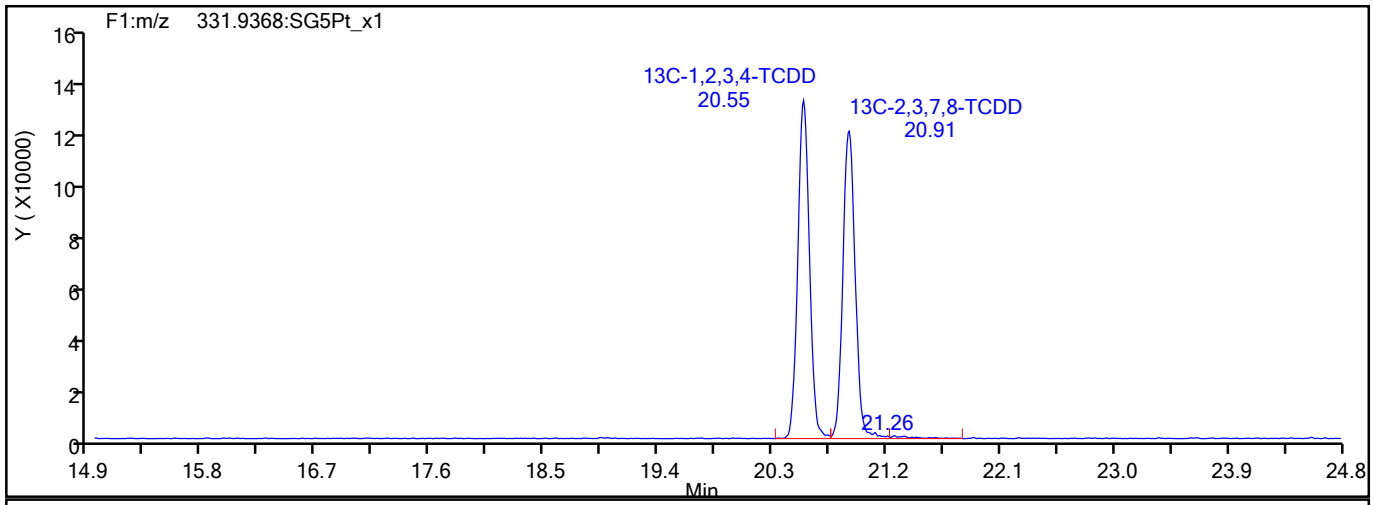

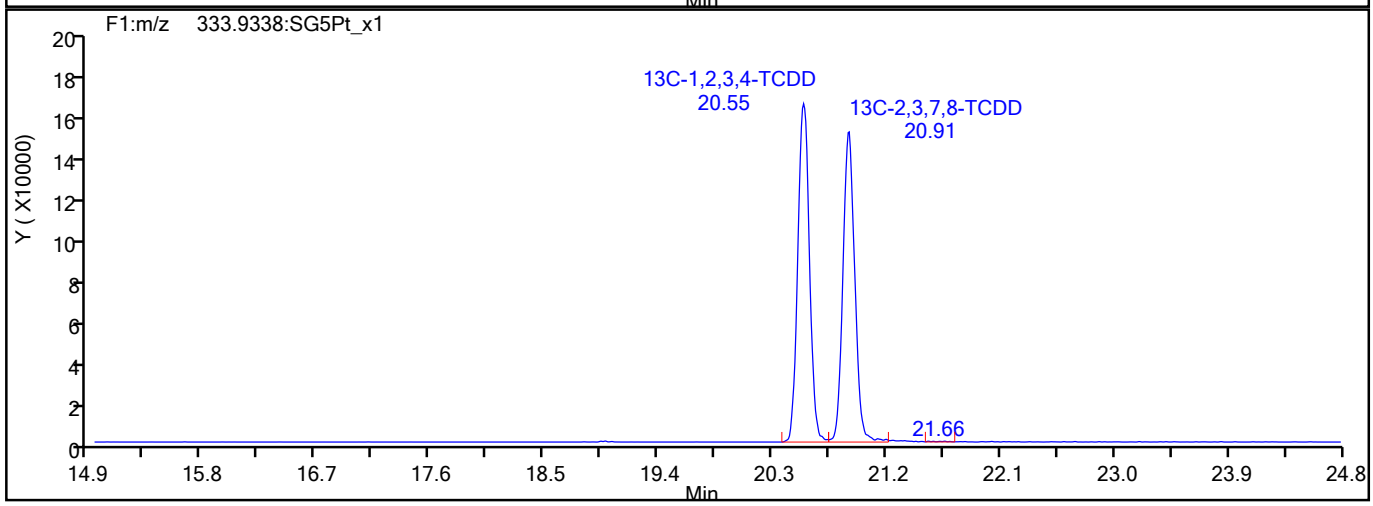

790107

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

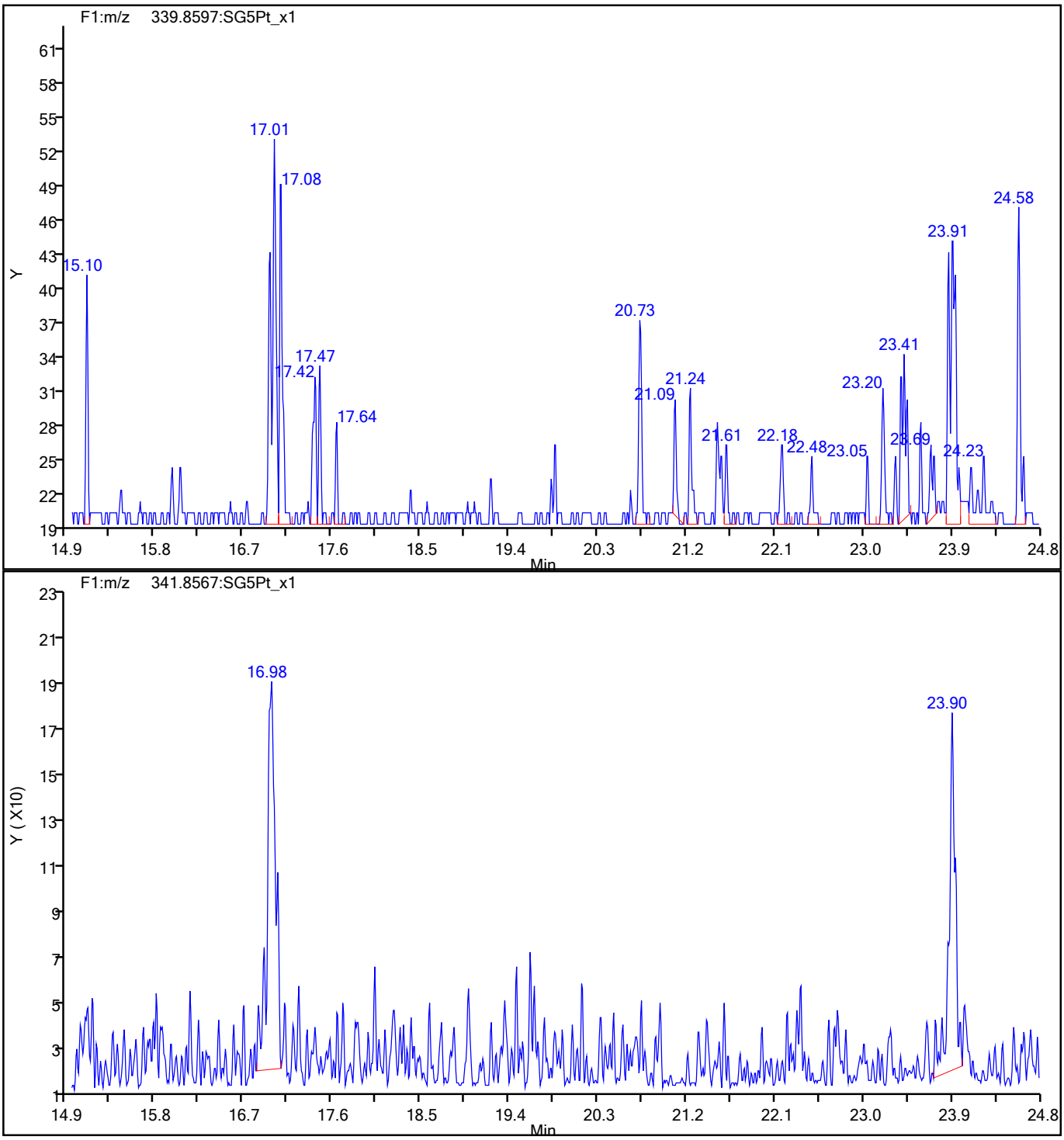

790108

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

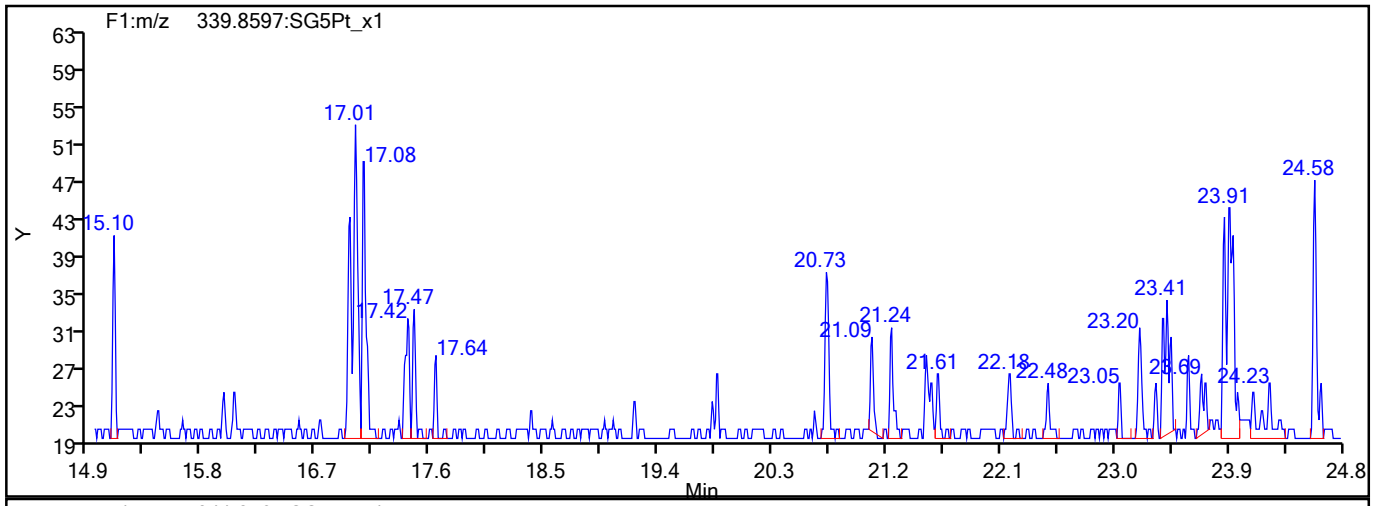

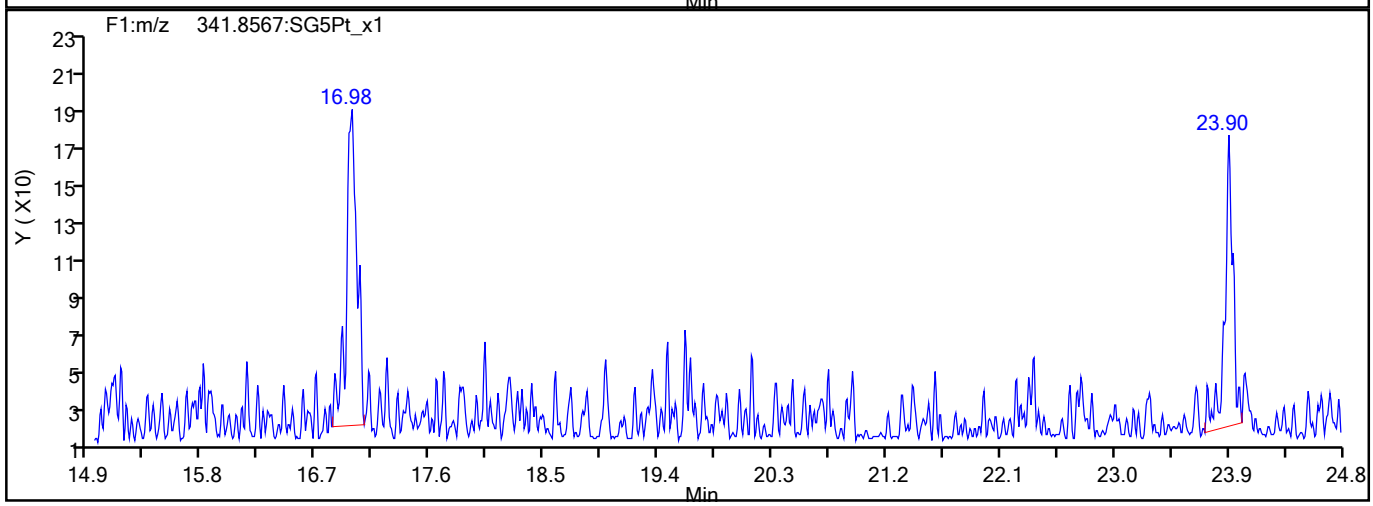

F1 PeCDFs Interference Mass

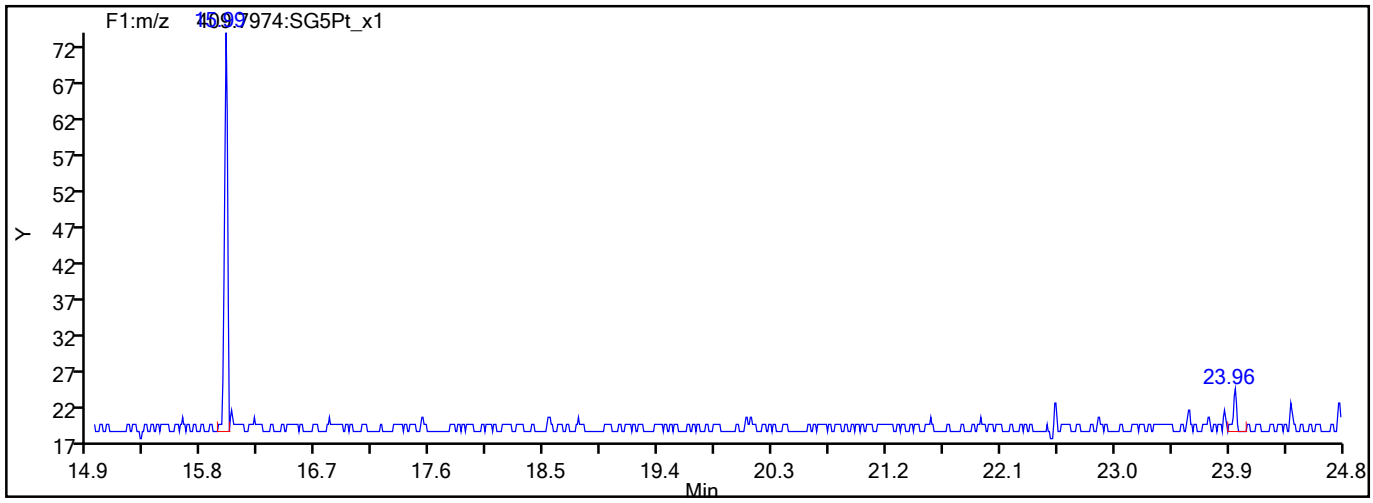

790109

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

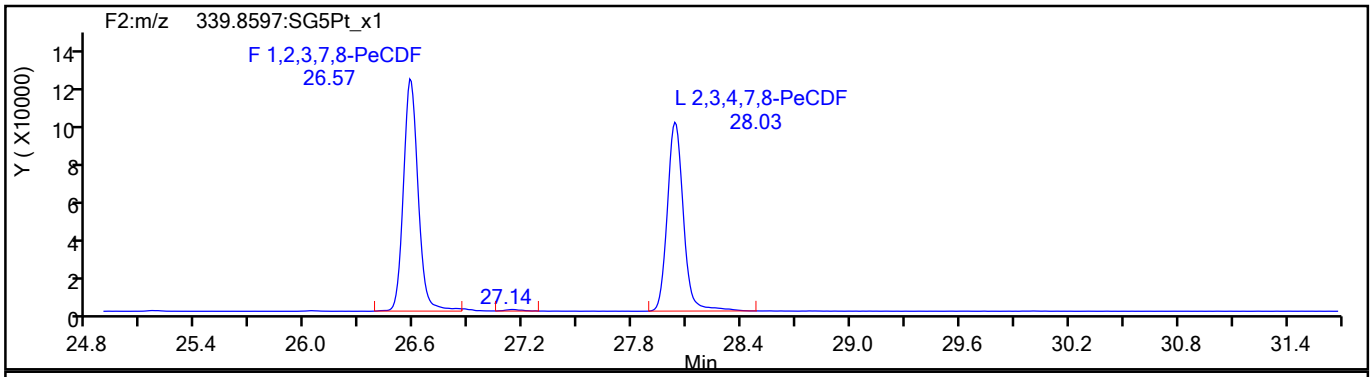

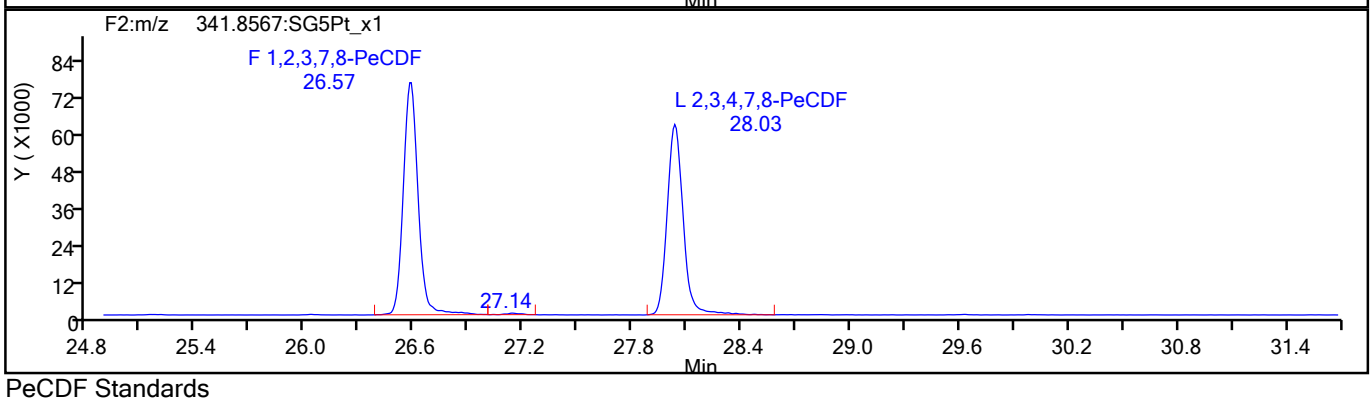

PeCDF Standards

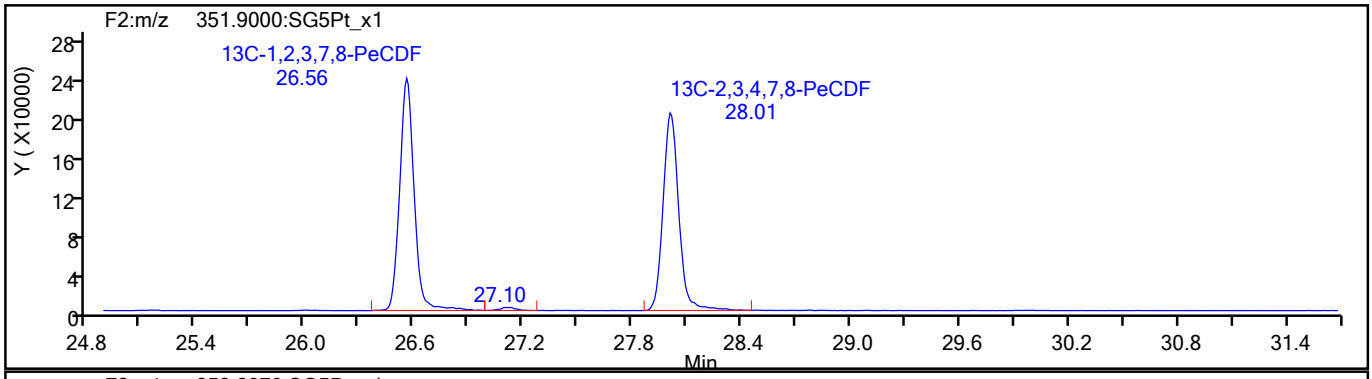

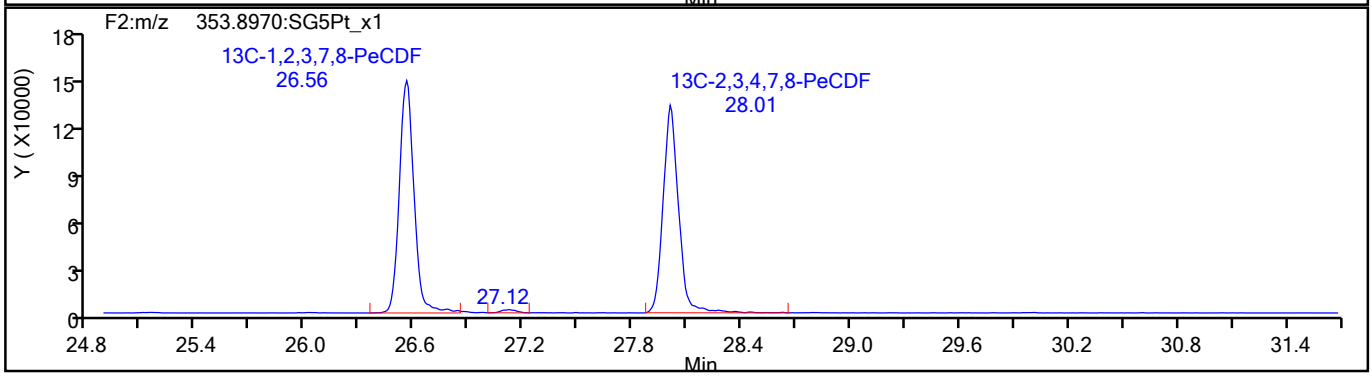

790110

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

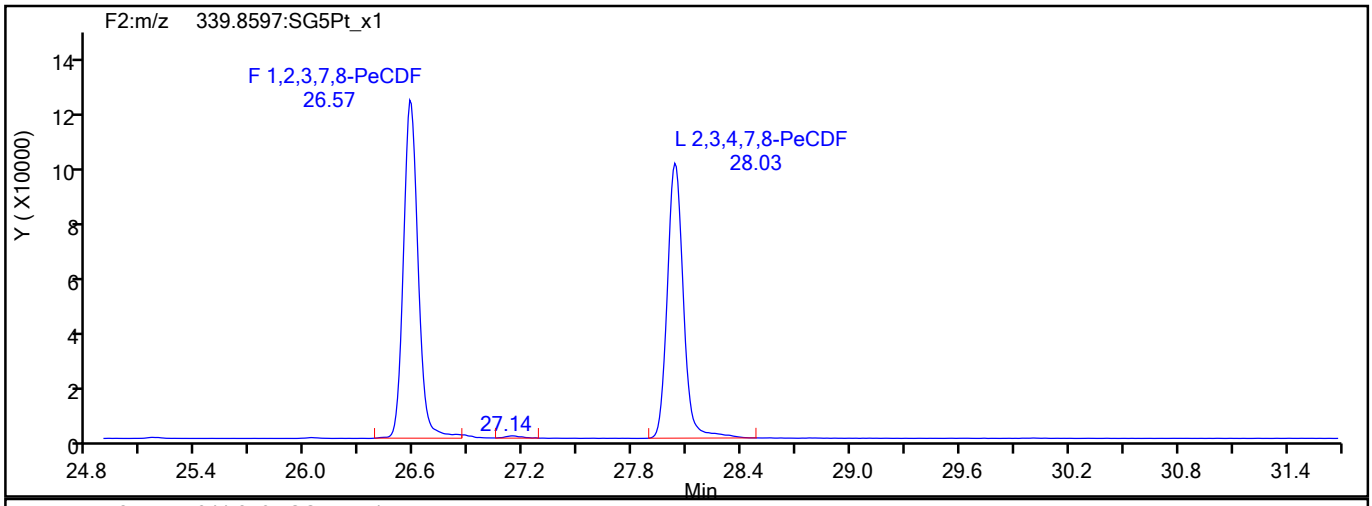

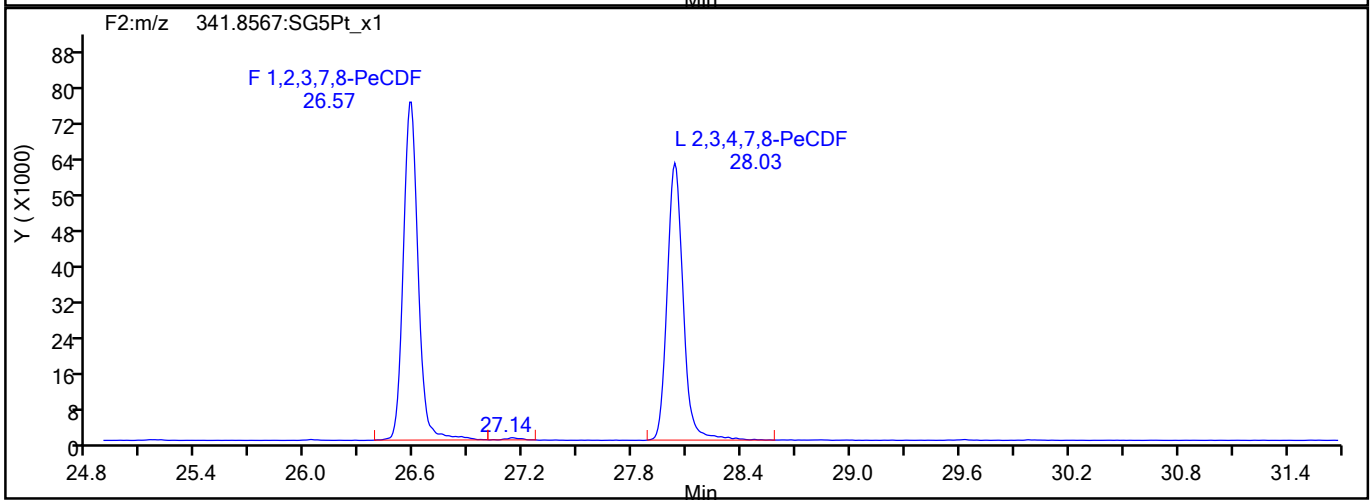

PeCDF Interference Mass

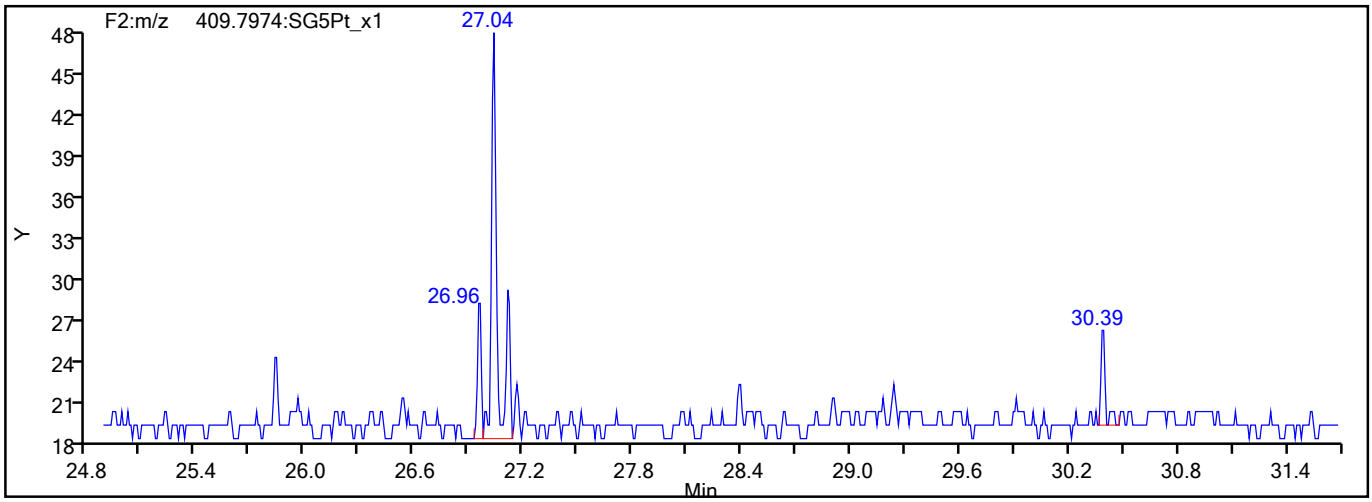

790111

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

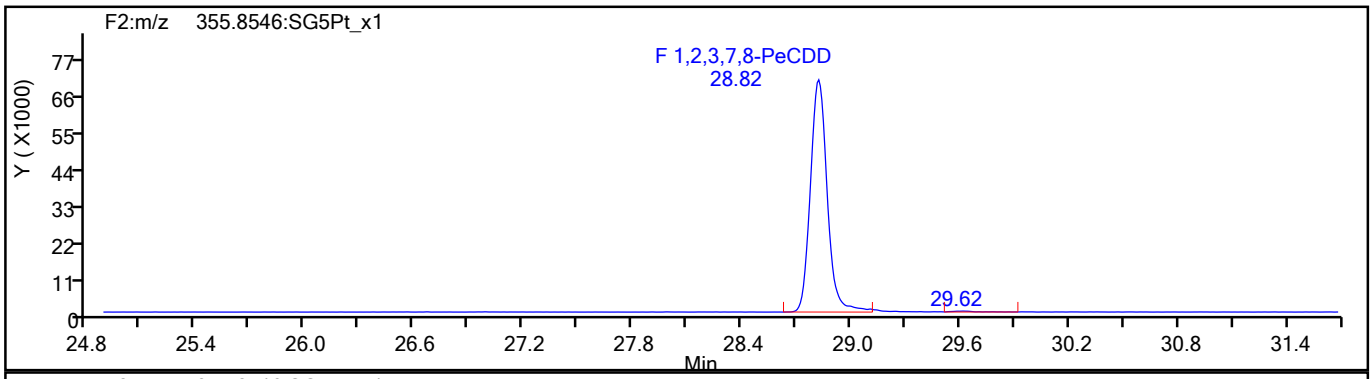

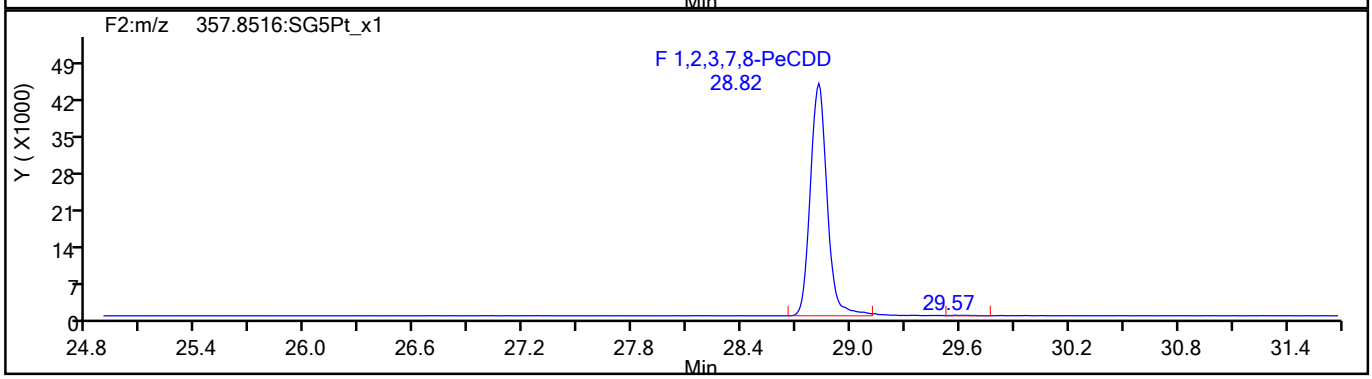

PeCDD Standards

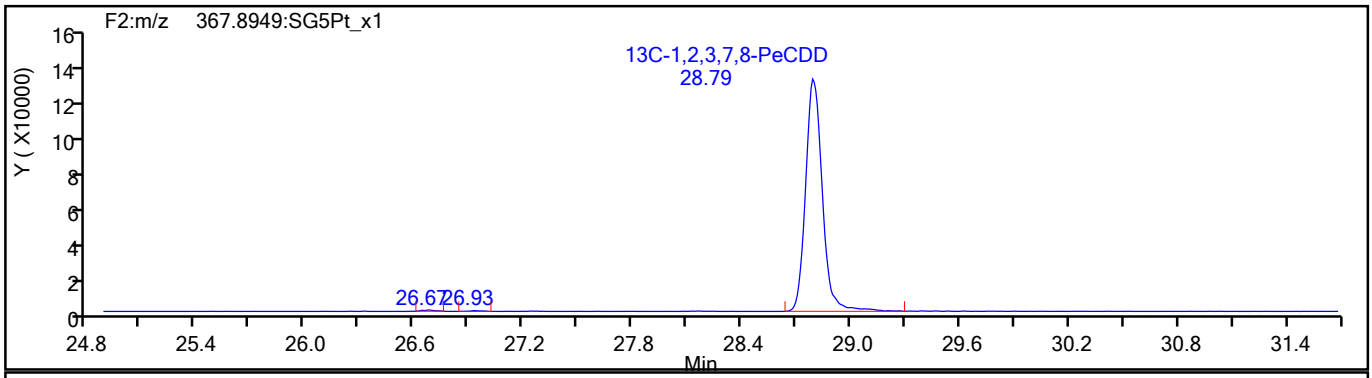

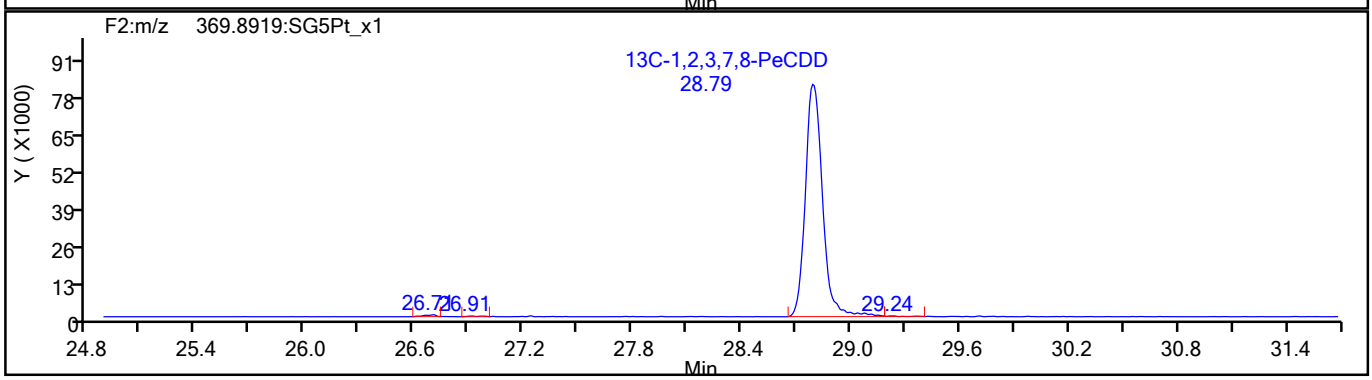

790112

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

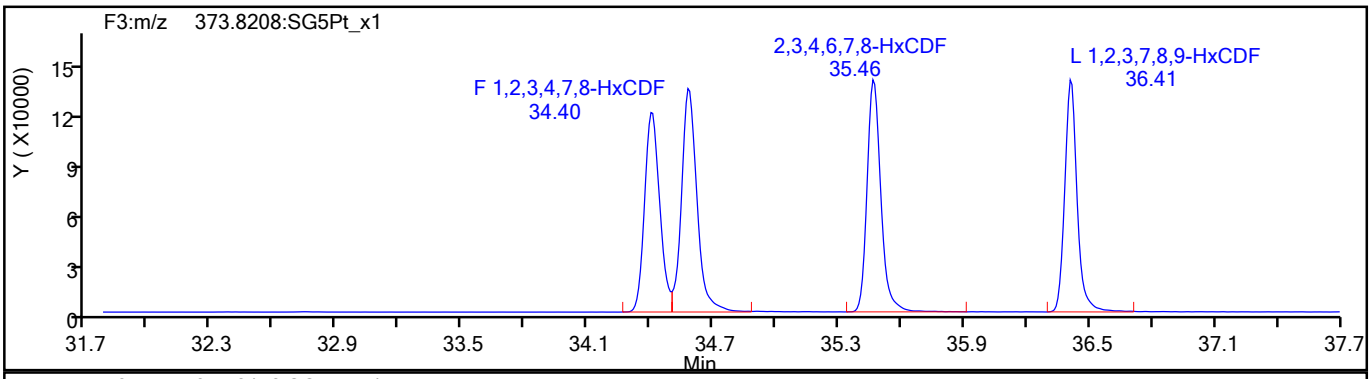

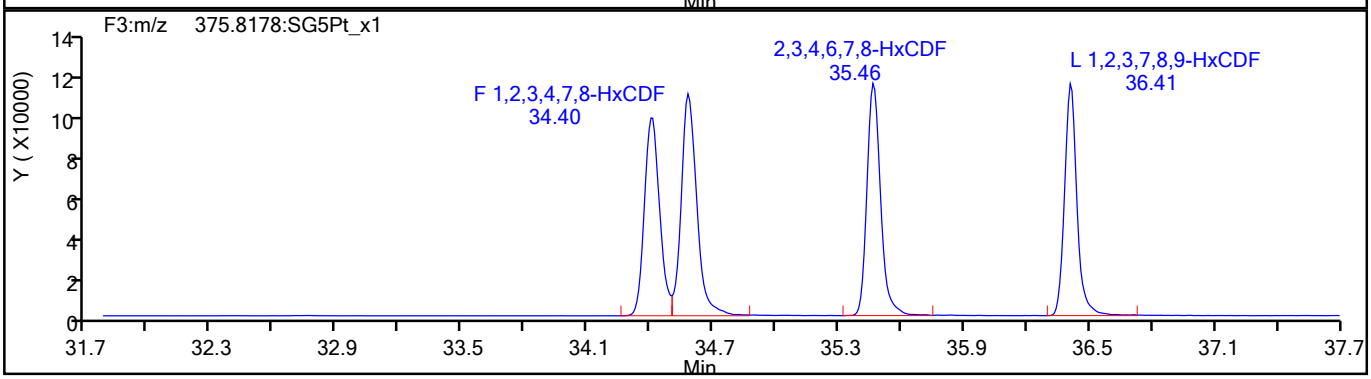

HxCDF Standards

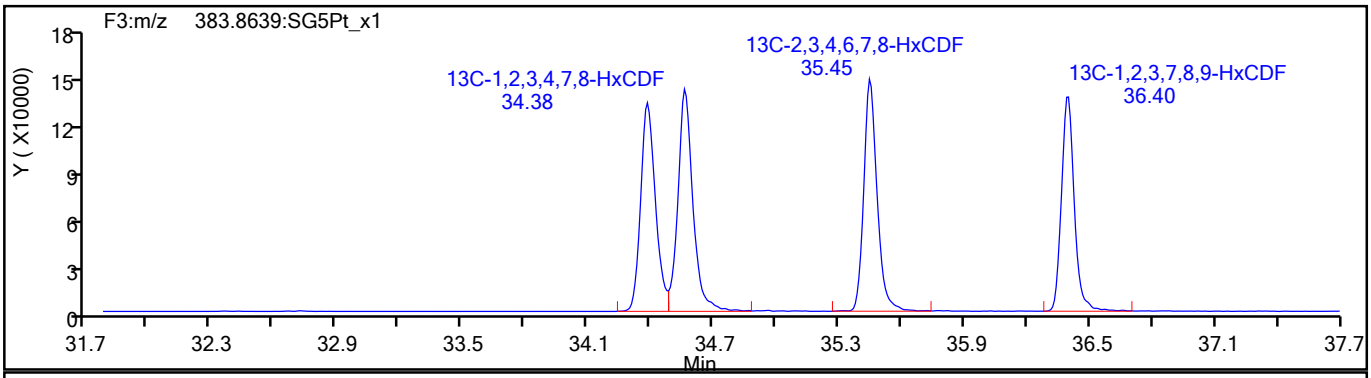

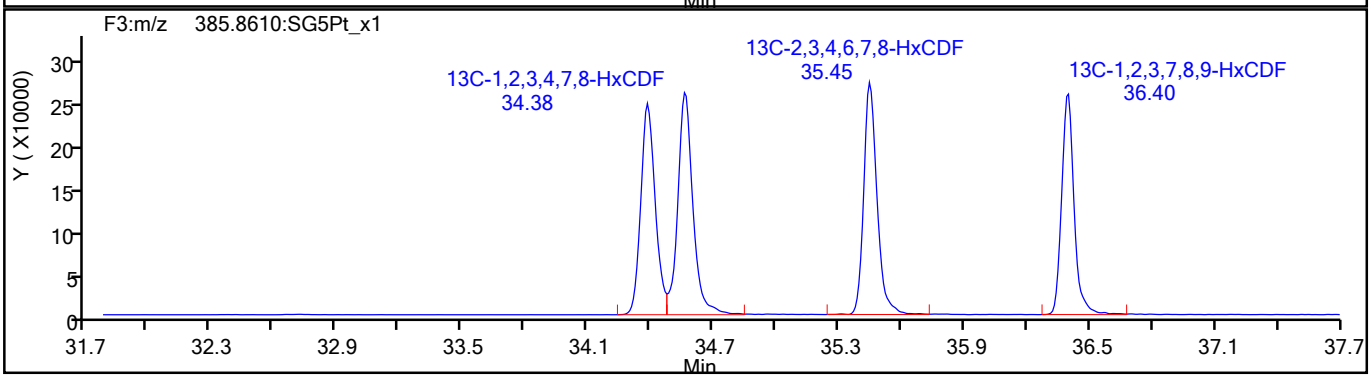

790113

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

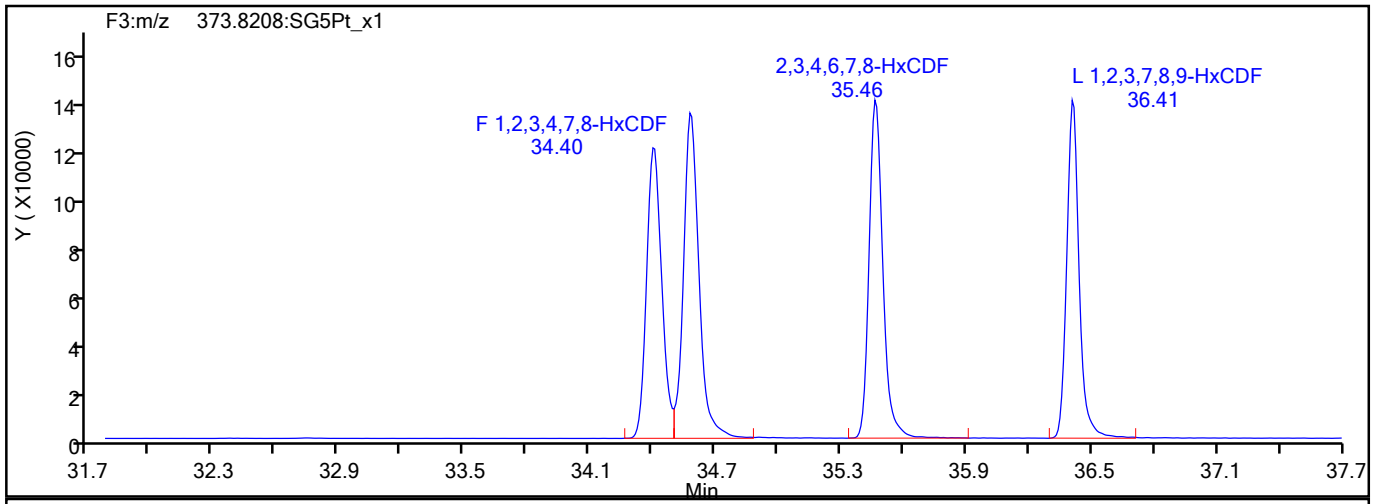

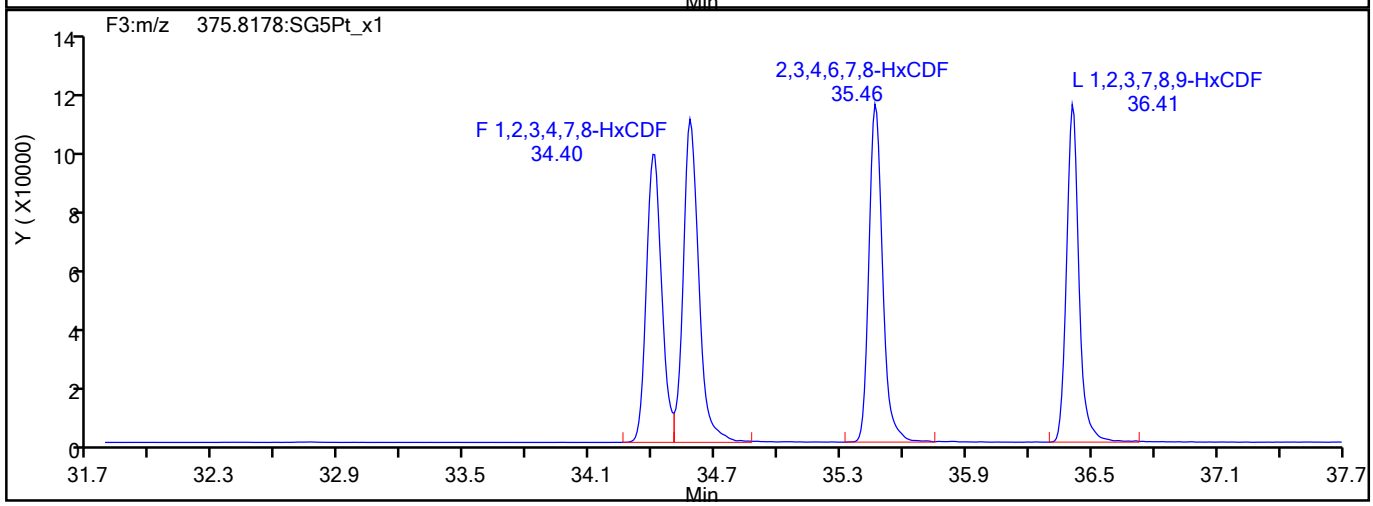

HxCDF Interference Mass

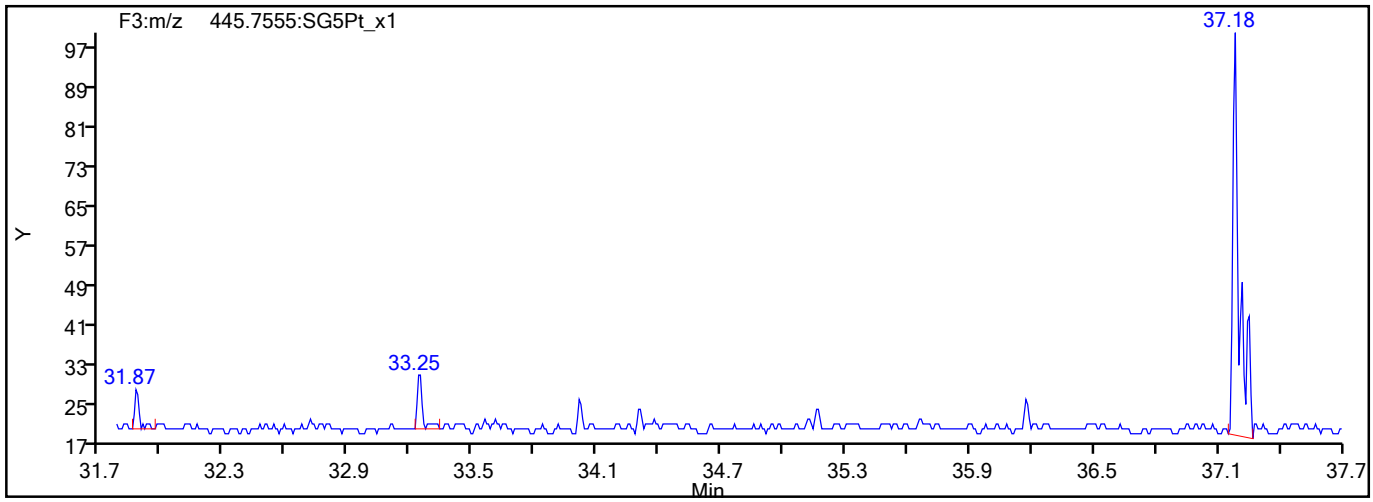

790114

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

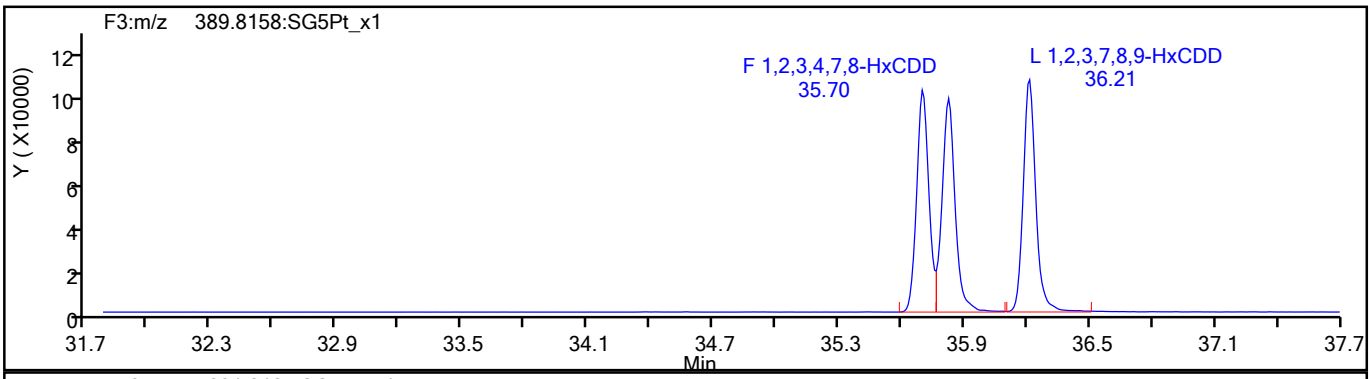

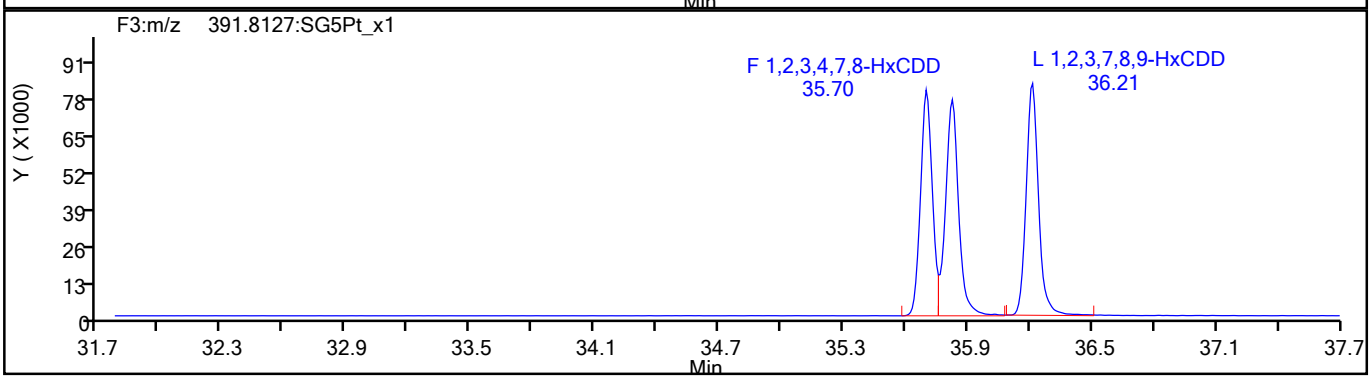

HxCDD Standards

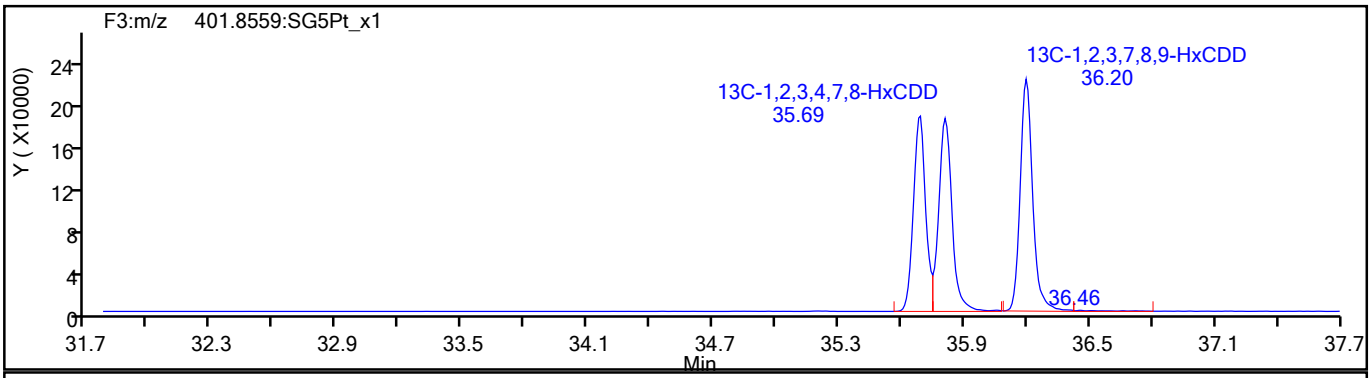

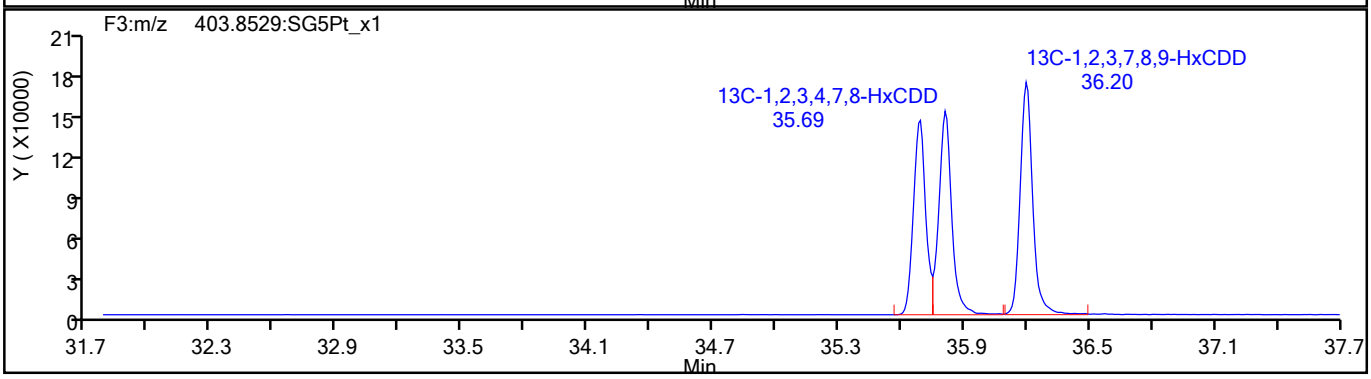

790115

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

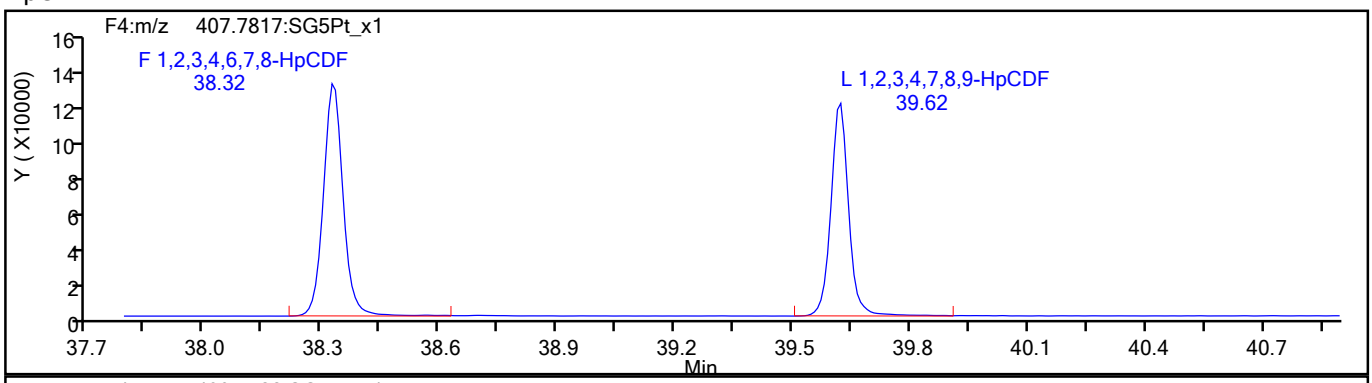

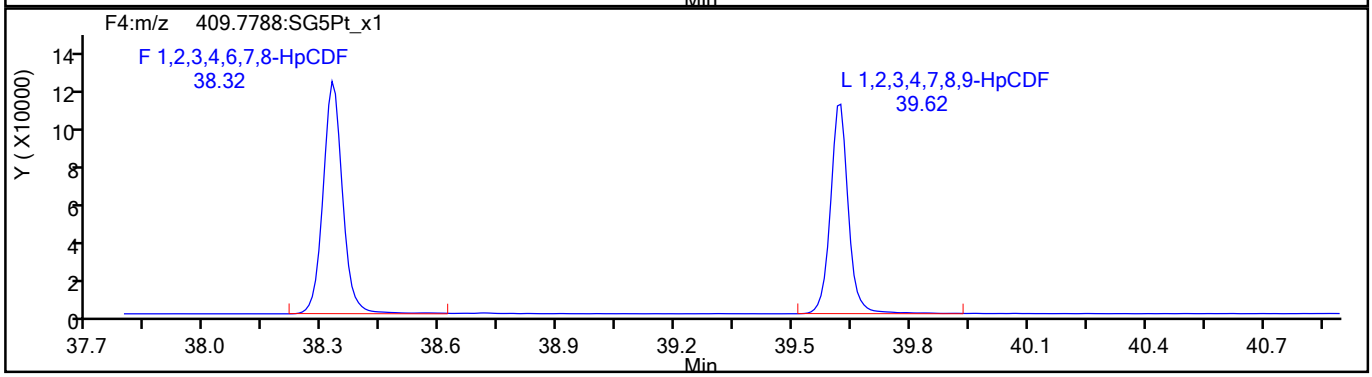

HpCDF Standards

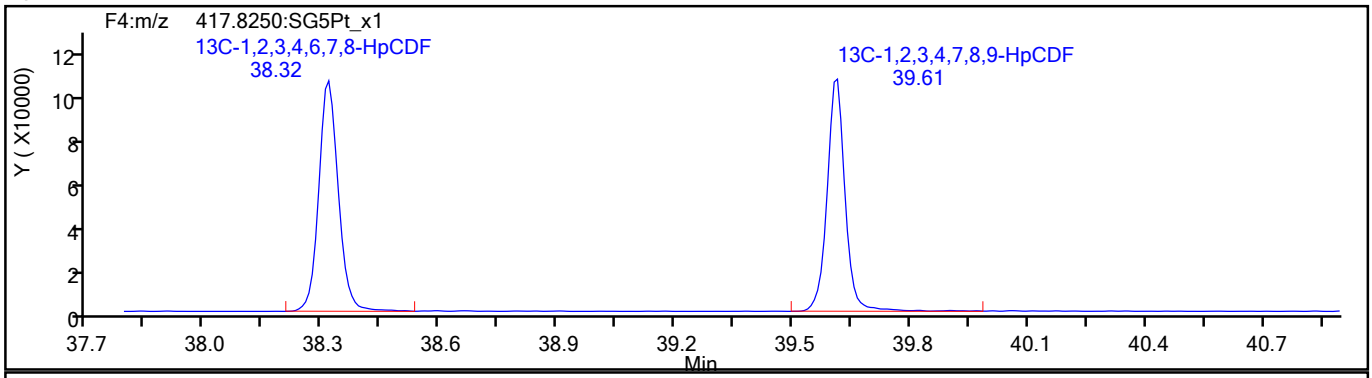

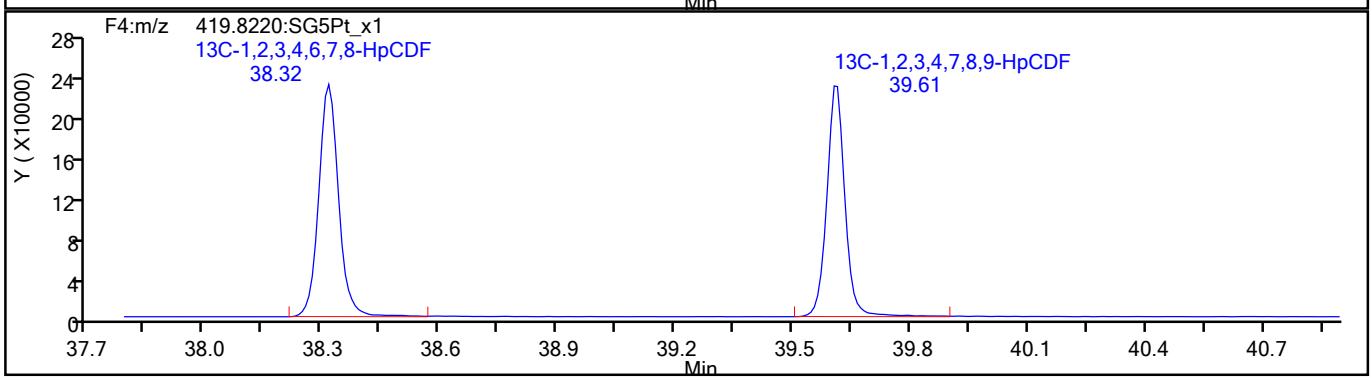

790116

Report Date: 09-Jun-2021 08:53:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

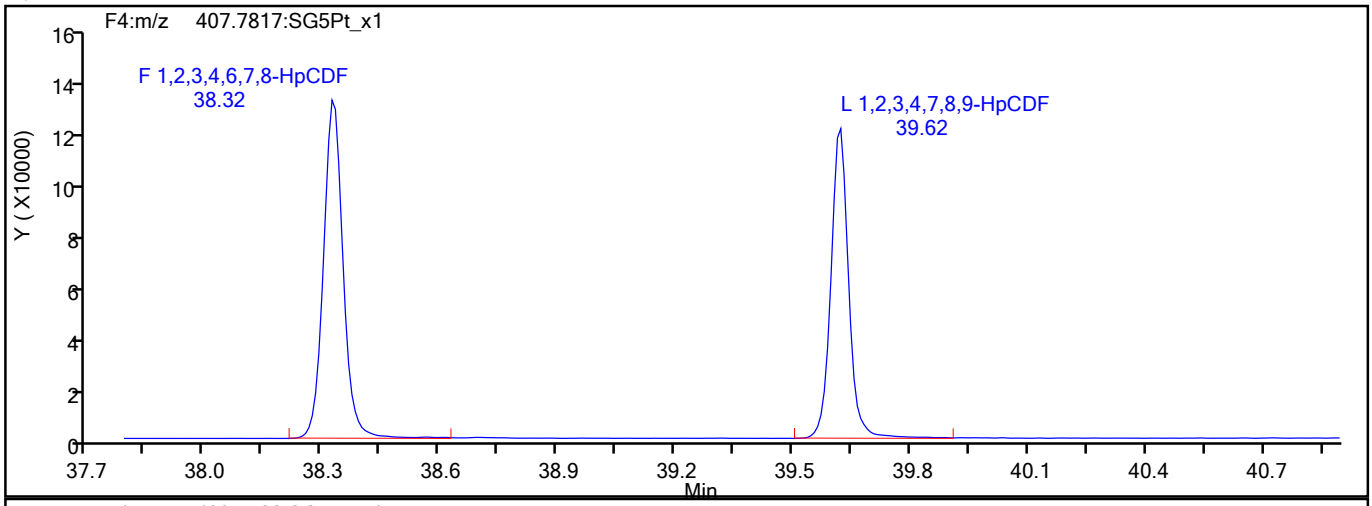

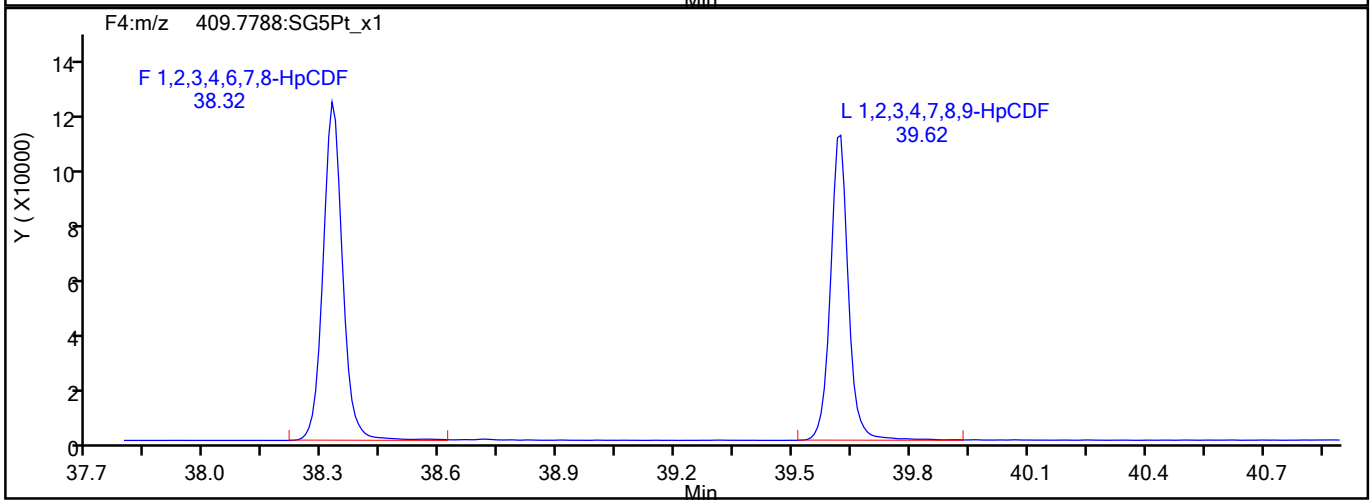

HpCDF Interference Mass

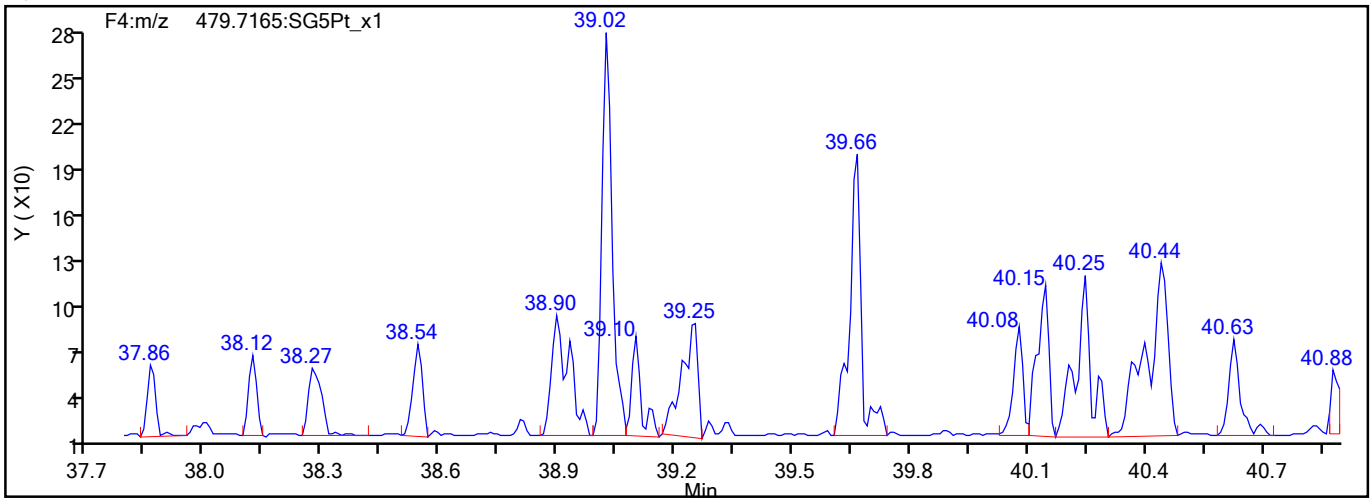

790117

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

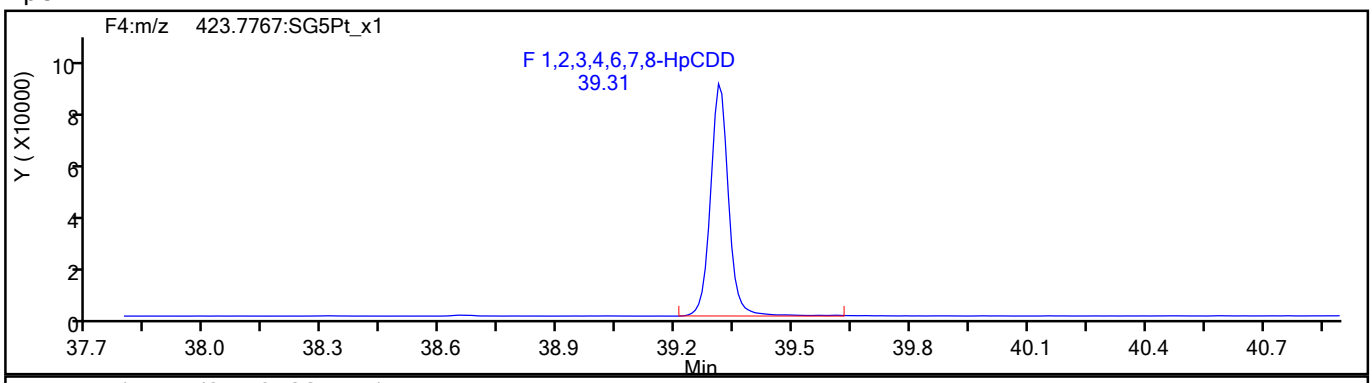

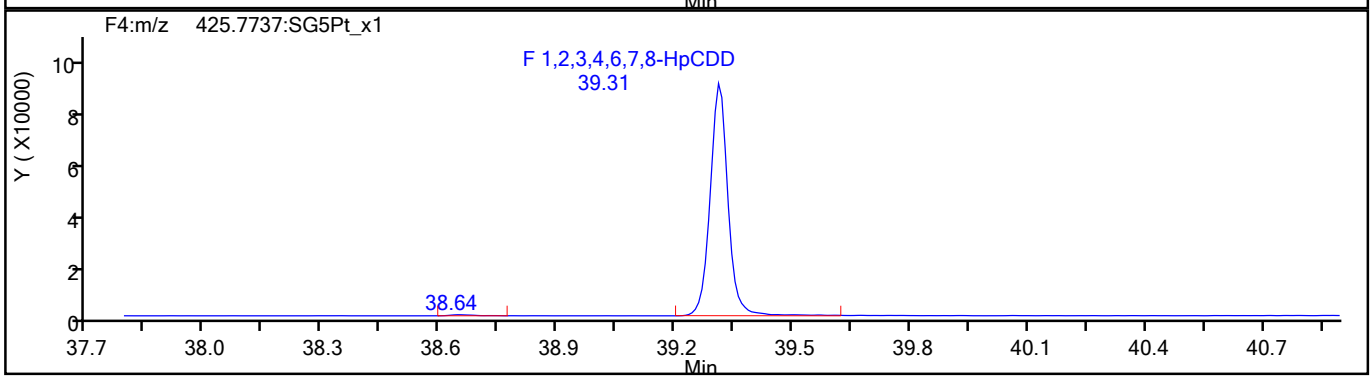

HpCDD Standards

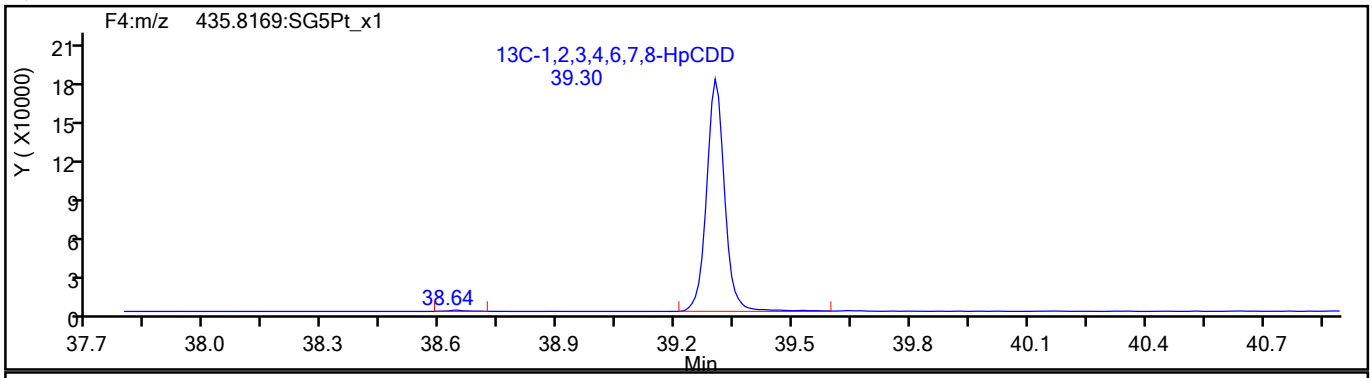

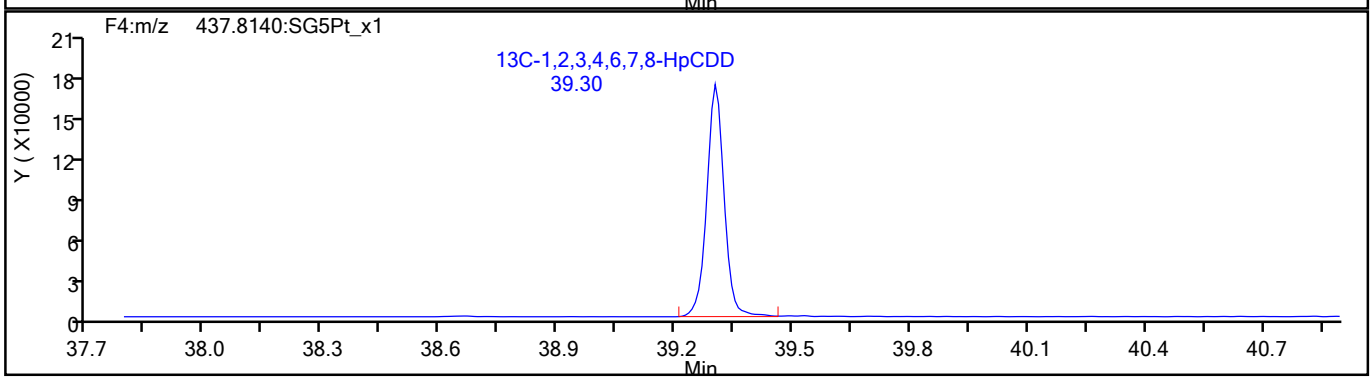

790118

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

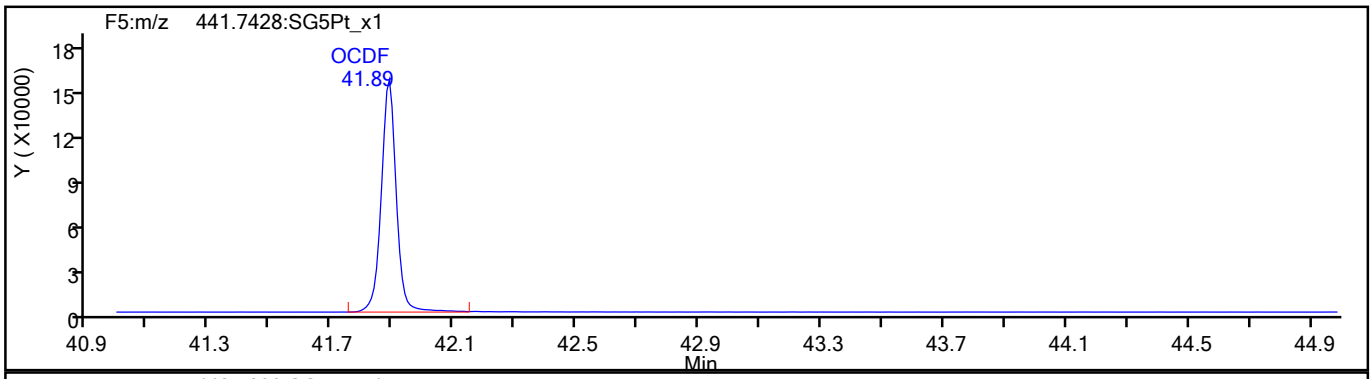

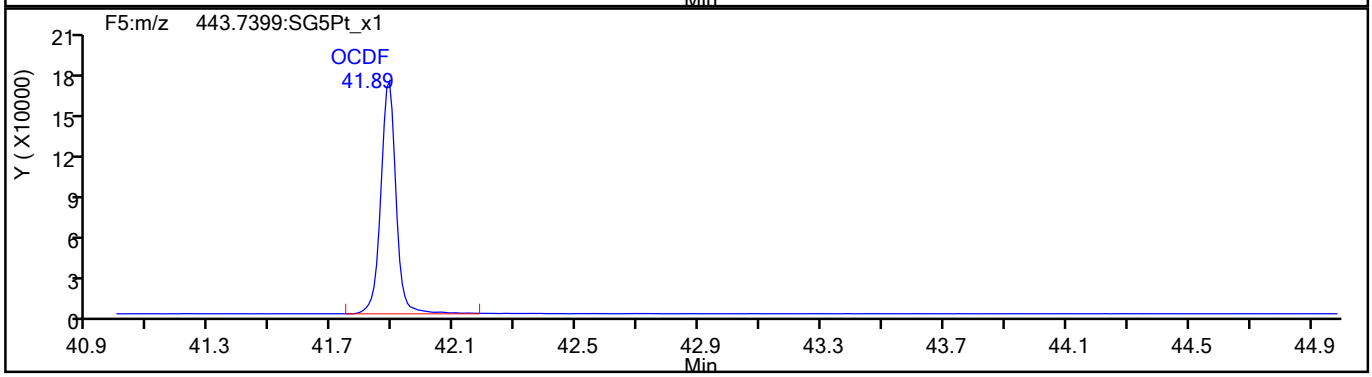

OCDF Standards

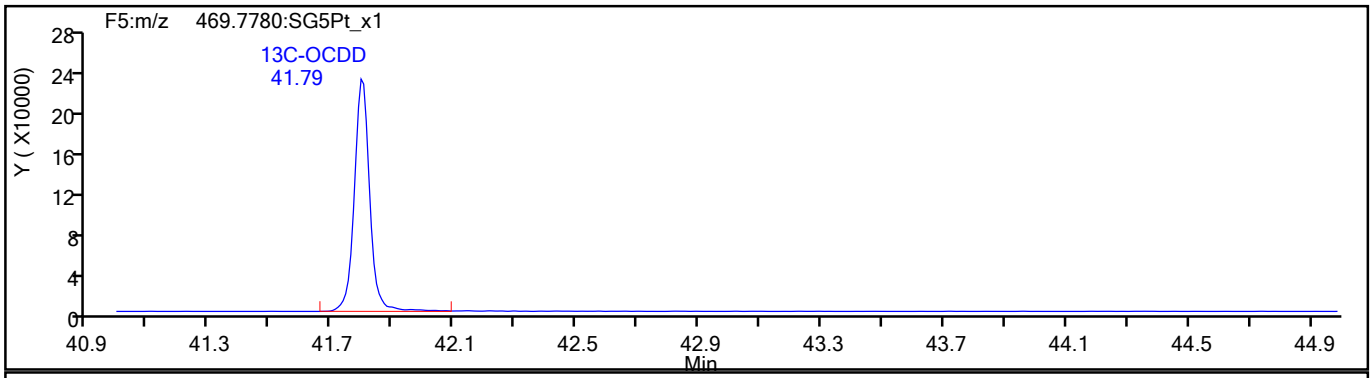

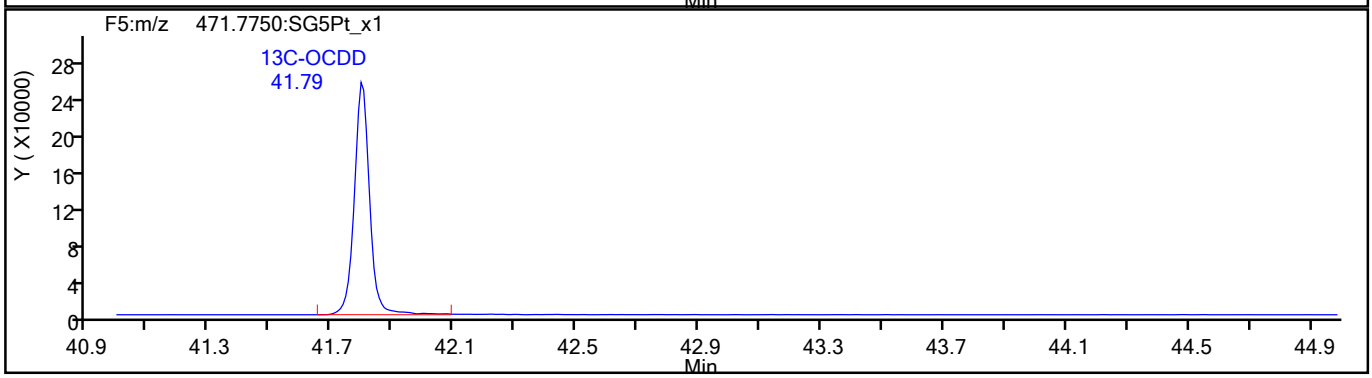

790119

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

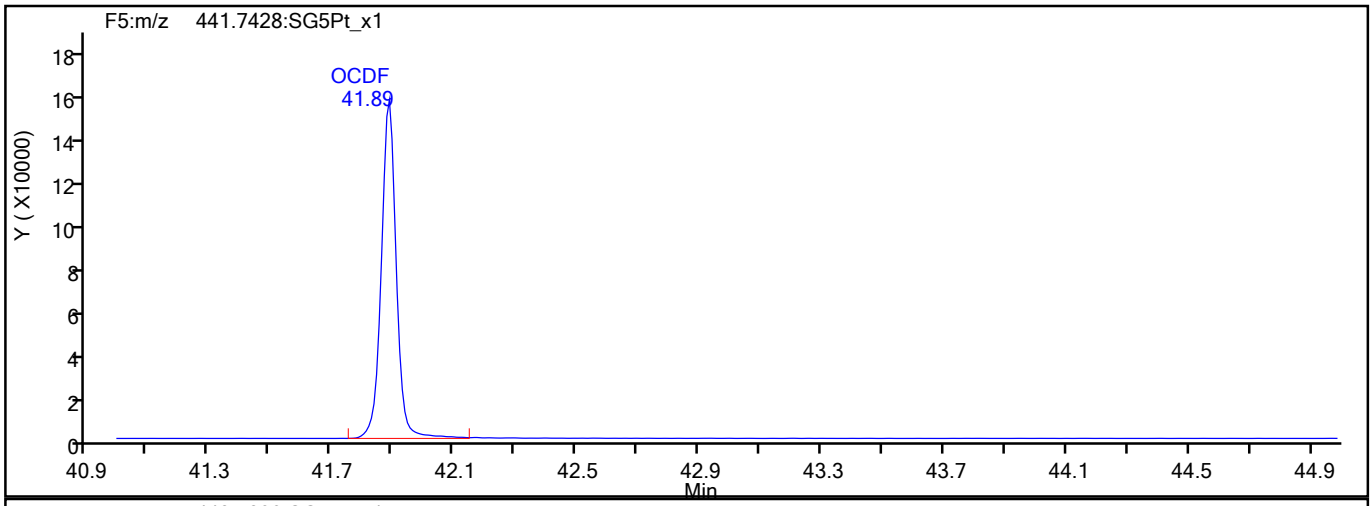

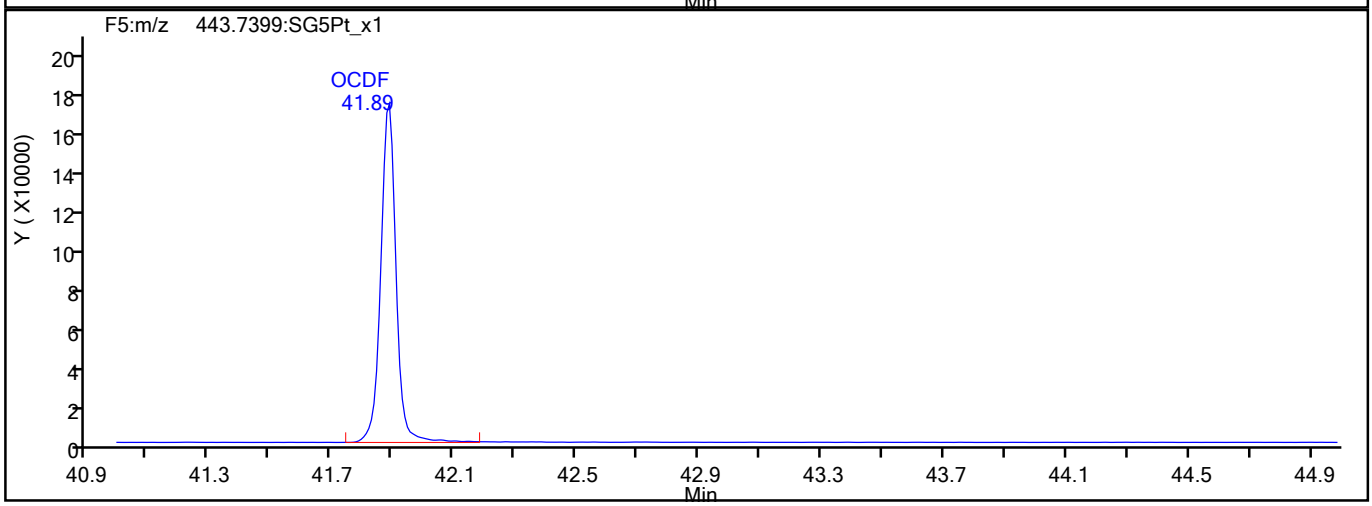

OCDF Interference Mass

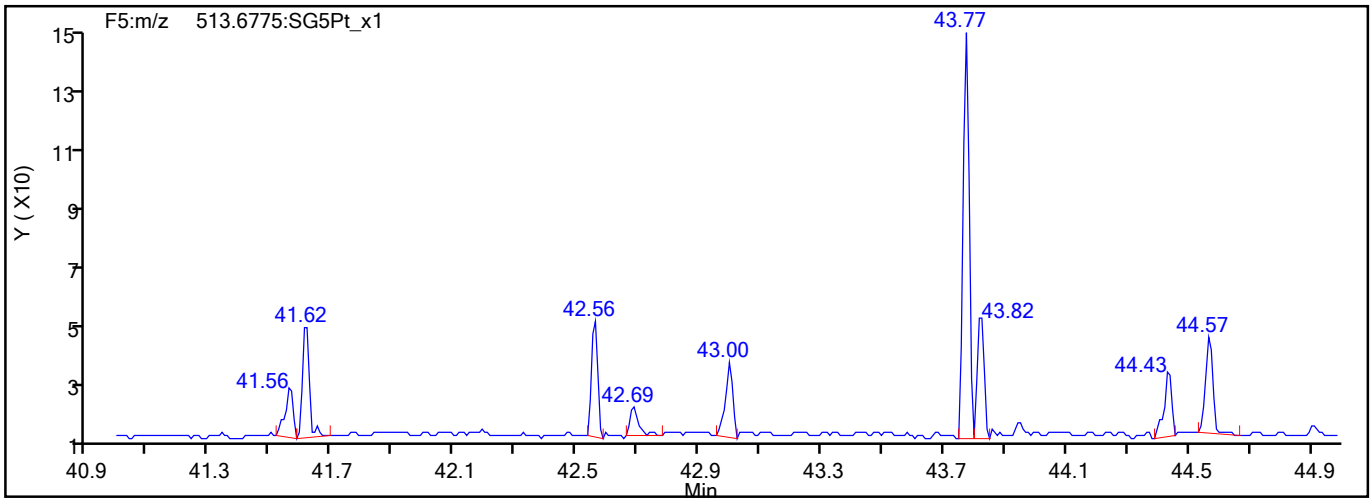

790120

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

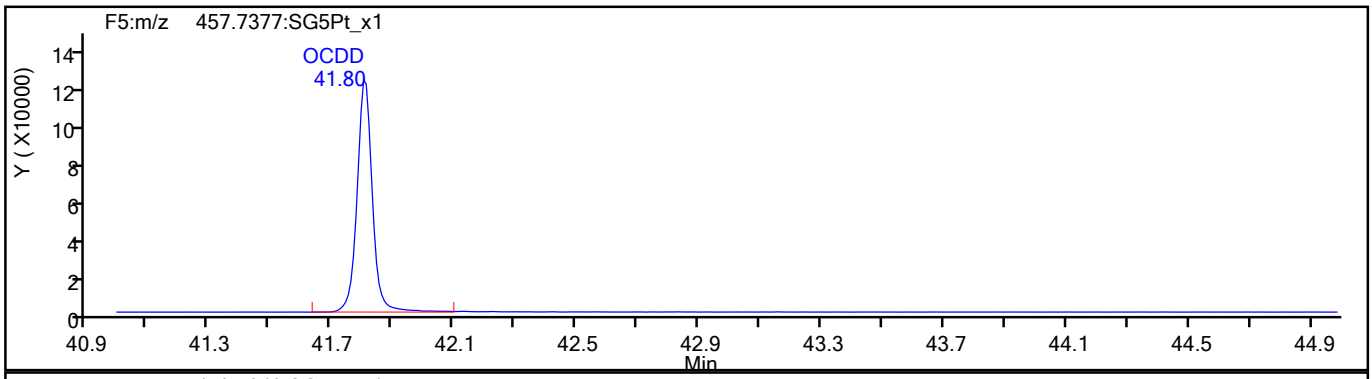

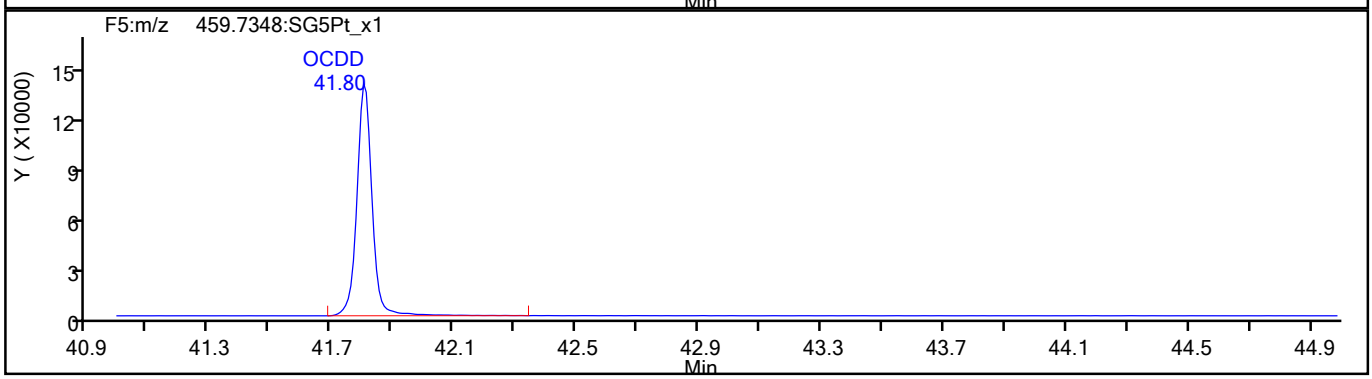

OCDD Standards

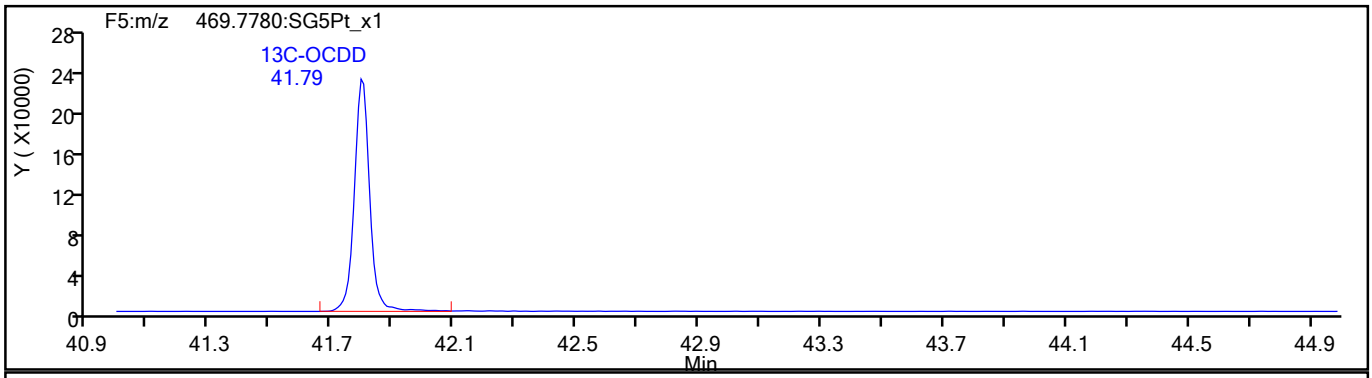

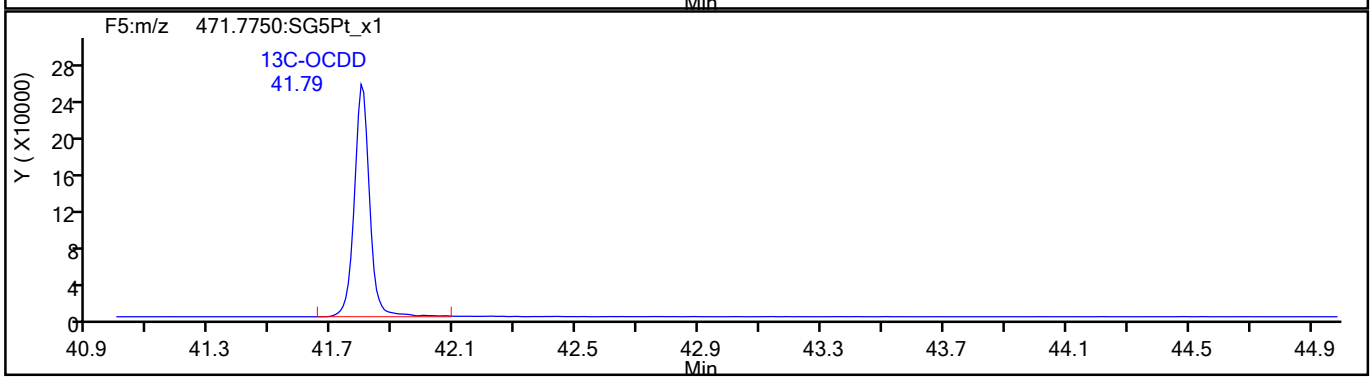

790121

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

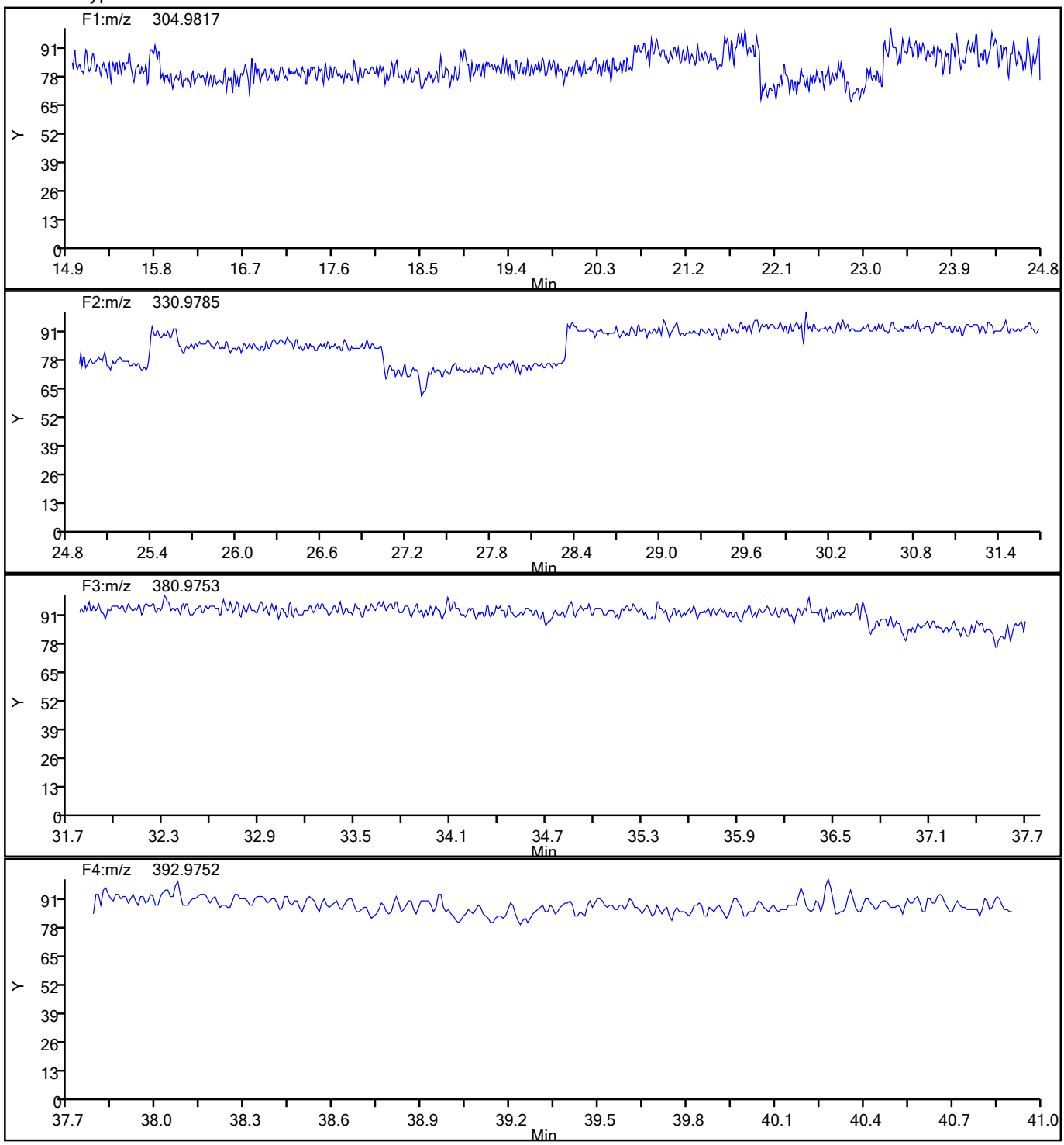

790122

Report Date: 09-Jun-2021 08:53:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_6.d		
Injection Date:	08-Jun-2021 15:54:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

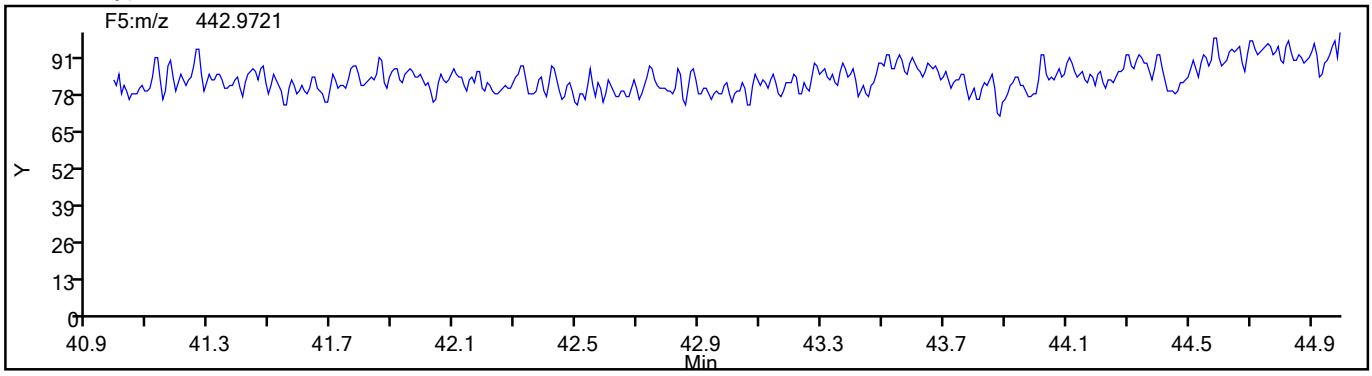

790123

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.548	2105852	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.612	2839435	0.79	1.3459	100.2	100.2	0.1786	0.1786	100	
2,3,7,8-TCDF	19.638	1274052	0.79	1.0802	41.5	41.5	0.0460	0.0460	104	
S Total TCDF					41.5	41.5	0.0460	0.0460		
D 13C-2,3,7,8-TCDD	20.909	1948011	0.81	0.9317	99.3	99.3	0.1662	0.1662	99.29	
$ 37Cl4-2,3,7,8-TCDD	20.935	848616		1.0083	40.0	40.0	0.0168	0.0168	99.92	
2,3,7,8-TCDD	20.935	875630	0.79	1.0753	41.8	41.8	0.0546	0.0546	105	
S Total TCDD					41.8	41.8	0.0546	0.0546		
D 13C-1,2,3,7,8-PeCDF	26.564	2432949	1.58	1.1405	101.3	101.3	0.3082	0.3082	101	
1,2,3,7,8-PeCDF	26.589	5302236	1.57	1.0543	206.7	206.7	0.5886	0.5886	103	
D 13C-2,3,4,7,8-PeCDF	28.023	2374722	1.60	1.1253	100.2	100.2	0.3123	0.3123	100	
2,3,4,7,8-PeCDF	28.048	5051373	1.58	1.0079	211.1	211.1	0.6756	0.6756	106	
S Total PeCDF					417.8	417.8	0.6321	0.6321		
D 13C-1,2,3,7,8-PeCDD	28.806	1521254	1.60	0.7165	100.8	100.8	0.1214	0.1214	101	
1,2,3,7,8-PeCDD	28.832	3351337	1.58	1.0465	210.5	210.5	0.1088	0.1088	105	
S Total PeCDD					210.5	210.5	0.1088	0.1088		
D 13C-1,2,3,4,7,8-HxCDF	34.391	1778238	0.53	0.9648	100.0	100.0	0.3266	0.3266	100	
1,2,3,4,7,8-HxCDF	34.407	4293581	1.24	1.1474	210.4	210.4	0.7958	0.7958	105	
D 13C-1,2,3,6,7,8-HxCDF	34.568	1995567	0.54	1.0708	101.1	101.1	0.2943	0.2943	101	
1,2,3,6,7,8-HxCDF	34.584	4991420	1.25	1.2178	205.4	205.4	0.6778	0.6778	103	
D 13C-2,3,4,6,7,8-HxCDF	35.444	2042874	0.53	1.0413	106.5	106.5	0.3026	0.3026	106	
2,3,4,6,7,8-HxCDF	35.461	5157631	1.25	1.2145	207.9	207.9	0.5811	0.5811	104	
D 13C-1,2,3,7,8,9-HxCDF	36.388	1742331	0.52	0.9731	97.2	97.2	0.3238	0.3238	97.17	
1,2,3,7,8,9-HxCDF	36.397	4445357	1.26	1.2401	205.7	205.7	0.6020	0.6020	103	
S Total HxCDF					829.5	829.5	0.6642	0.6642		
* 13C-1,2,3,7,8,9-HxCDD	36.194	1842630	1.26	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.680	1432215	1.28	0.7587	102.4	102.4	0.1598	0.1598	102	
1,2,3,4,7,8-HxCDD	35.697	3222329	1.26	1.0608	212.1	212.1	0.2911	0.2911	106	
D 13C-1,2,3,6,7,8-HxCDD	35.806	1669337	1.24	0.8593	105.4	105.4	0.1411	0.1411	105	
1,2,3,6,7,8-HxCDD	35.815	3426727	1.26	0.9933	206.7	206.7	0.2773	0.2773	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.203	3436144	1.26	1.1094	199.7	199.7	0.2625	0.2625	99.86	
S Total HxCDD					618.5	618.5	0.2770	0.2770		
D 13C-1,2,3,4,6,7,8-HpCDF	38.305	1392194	0.46	0.7359	102.7	102.7	0.3327	0.3327	103	
1,2,3,4,6,7,8-HpCDF	38.314	4243438	1.05	1.4421	211.4	211.4	0.6211	0.6211	106	
D 13C-1,2,3,4,7,8,9-HpCDF	39.595	1337573	0.45	0.6854	105.9	105.9	0.3573	0.3573	106	
1,2,3,4,7,8,9-HpCDF	39.603	3728415	1.05	1.3092	212.9	212.9	0.6974	0.6974	106	
S Total HpCDF					424.3	424.3	0.6592	0.6592		
D 13C-1,2,3,4,6,7,8-HpCDD	39.291	1337869	1.09	0.6745	107.6	107.6	0.2398	0.2398	108	
1,2,3,4,6,7,8-HpCDD	39.300	2935203	1.04	1.0503	208.9	208.9	0.3525	0.3525	104	
S Total HpCDD					208.9	208.9	0.3525	0.3525		
D 13C-OCDD	41.782	2177938	0.90	0.5446	217.0	217.0	0.3019	0.3019	109	
OCDF	41.866	6082696	0.91	1.3168	424.2	424.2	0.3916	0.3916	106	
OCDD	41.790	4803166	0.89	1.0620	415.3	415.3	0.3872	0.3872	104	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Jun-2021 16:42:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-5 HRDXNL5_00032
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:53:46 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:22:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.548	20.547	0		944131	150571	127	317	1186		
333.9338	20.548	20.547	0		1161721	185169	81	202	2286	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.612	19.616	0	0.954	1253649	203983	215	537	949		
317.9389	19.621	19.616	0	0.955	1585786	258903	108	270	2397	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.638	19.646	0	1.001	561539	89311	44	110	2030		
305.8987	19.638	19.646	0	1.001	712513	111913	48	120	2332	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.909	20.910	0	1.018	869542	131887	127	317	1038		
333.9338	20.909	20.910	0	1.018	1078469	161266	81	202	1991	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.935	20.935	0	1.019	848616	126683	23	57	5508		
2,3,7,8-TCDD											
319.8965	20.935	20.939	0	1.001	385954	58537	36	90	1626		
321.8936	20.935	20.939	0	1.001	489676	72800	33	82	2206	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.564	26.560	0	1.293	1489826	258263	302	755	855		
353.8970	26.564	26.560	0	1.293	943123	164307	170	425	967	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.589	26.584	0	1.001	3241988	556504	638	1595	872		
341.8567	26.589	26.584	0	1.001	2060248	355863	411	1027	866	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.023	28.014	1	1.364	1460304	235761	302	755	781		
353.8970	28.023	28.014	1	1.364	914418	149333	170	425	878	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.048	28.039	1	1.001	3094556	515182	638	1595	807		
341.8567	28.048	28.039	1	1.001	1956817	323488	411	1027	787	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.806	28.801	0	1.402	936578	147383	82	205	1797		
369.8919	28.806	28.801	0	1.402	584676	95987	35	87	2742	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.832	28.828	0	1.001	2051590	320770	72	180	4455		
357.8516	28.832	28.828	0	1.001	1299747	208335	39	97	5342	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.391	34.384	0	0.950	617675	123602	191	477	647		
385.8610	34.382	34.384	0	0.950	1160563	234726	378	945	621	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.407	34.405	0	1.000	2381065	482843	745	1862	648		
375.8178	34.407	34.405	0	1.000	1912516	389022	564	1410	690	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.568	34.562	0	0.955	696940	140400	191	477	735		
385.8610	34.568	34.562	0	0.955	1298627	255987	378	945	677	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.584	34.582	0	1.000	2775629	556827	745	1862	747		
375.8178	34.584	34.582	0	1.000	2215791	440544	564	1410	781	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.444	35.444	0	0.979	707399	160237	191	477	839		
385.8610	35.444	35.444	0	0.979	1335475	303406	378	945	803	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.461	35.461	0	1.000	2866027	647502	745	1862	869		
375.8178	35.461	35.461	0	1.000	2291604	520419	564	1410	923	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.388	36.388	0	1.005	598306	148820	191	477	779		
385.8610	36.388	36.388	0	1.005	1144025	289476	378	945	766	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.397	36.402	0	1.000	2476452	605954	745	1862	813		
375.8178	36.397	36.402	0	1.000	1968905	483719	564	1410	858	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.194	36.192	0		1026134	250783	116	290	2162		
403.8529	36.186	36.192	0		816496	200495	103	257	1947	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.680	35.680	0	0.986	804332	193336	116	290	1667		
403.8529	35.680	35.680	0	0.986	627883	151493	103	257	1471	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.697	35.695	0	1.000	1795969	436602	241	602	1812		
391.8127	35.697	35.695	0	1.000	1426360	347066	185	462	1876	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.806	35.805	0	0.989	925744	214247	116	290	1847		
403.8529	35.806	35.805	0	0.989	743593	172424	103	257	1674	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.815	35.820	0	1.000	1911971	434863	241	602	1804		
391.8127	35.815	35.820	0	1.000	1514756	347831	185	462	1880	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.203	36.208	0	1.015	1913013	474198	241	602	1968		
391.8127	36.203	36.208	0	1.015	1523131	377483	185	462	2040	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.305	38.305	0	1.058	436356	136587	154	385	887		
419.8220	38.305	38.305	0	1.058	955838	295474	288	720	1026	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.314	38.317	0	1.000	2176116	664265	789	1972	842		
409.7788	38.314	38.317	0	1.000	2067322	632606	759	1897	833	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.595	39.600	0	1.094	416057	129213	154	385	839		
419.8220	39.595	39.600	0	1.094	921516	294690	288	720	1023	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.603	39.608	0	1.000	1911190	607125	789	1972	769		
409.7788	39.603	39.608	0	1.000	1817225	579552	759	1897	764	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.291	39.293	0	1.086	696483	219725	150	375	1465		
437.8140	39.291	39.293	0	1.086	641386	202177	142	355	1424	1.09(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.300	39.301	0	1.000	1499524	478443	315	787	1519		
425.7737	39.300	39.301	0	1.000	1435679	451932	310	775	1458	1.04(0.88-1.20)	
13C-OCDD											
469.7780	41.782	41.785	0	1.154	1033665	317462	144	360	2205		
471.7750	41.782	41.785	0	1.154	1144273	352280	153	382	2302	0.90(0.76-1.02)	
OCDF											
441.7428	41.866	41.875	-1	1.002	2905097	900371	326	815	2762		
443.7399	41.866	41.875	-1	1.002	3177599	981356	365	912	2689	0.91(0.76-1.02)	
OCDD											
457.7377	41.790	41.794	0	1.000	2268006	705330	257	642	2744		
459.7348	41.790	41.794	0	1.000	2535160	785518	294	735	2672	0.89(0.76-1.02)	

Reagents:

HRDXNL5_00032 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

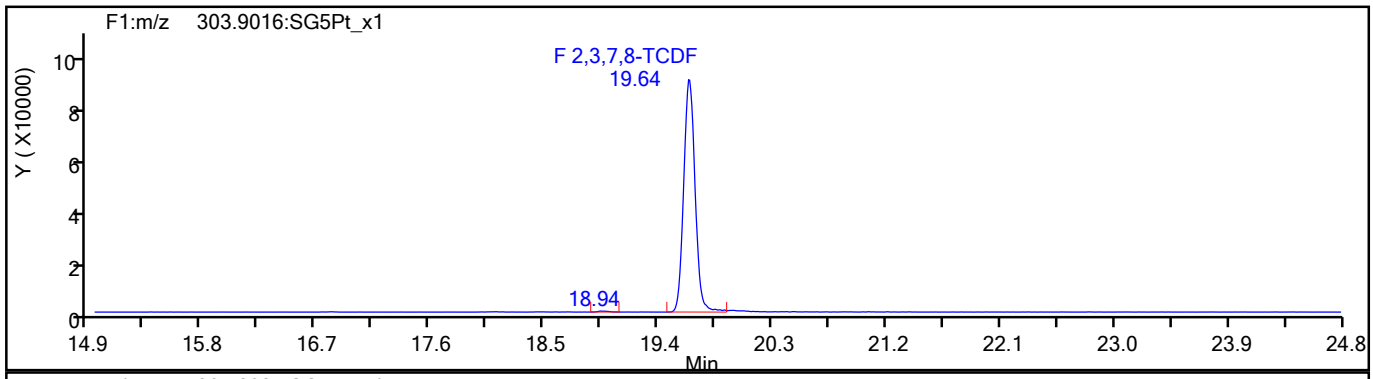

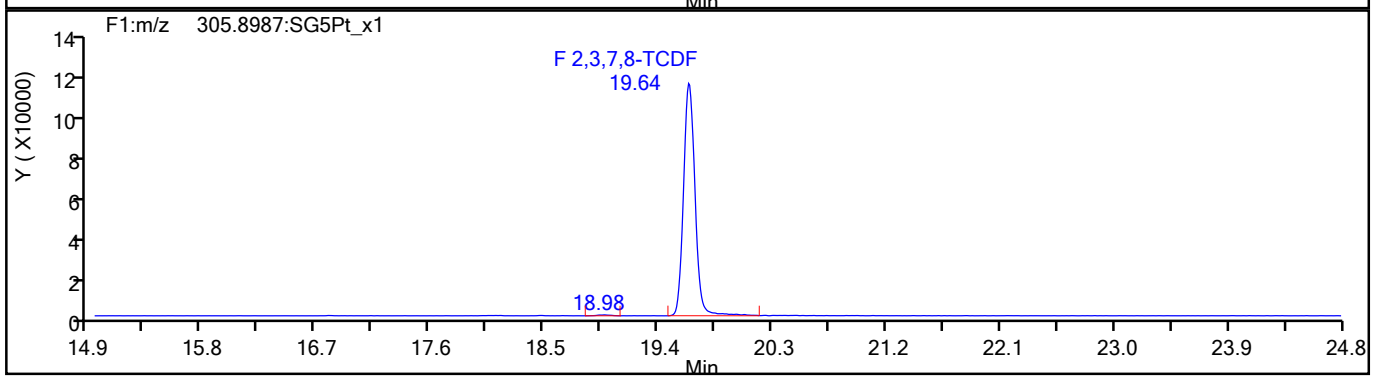

TCDF Standards

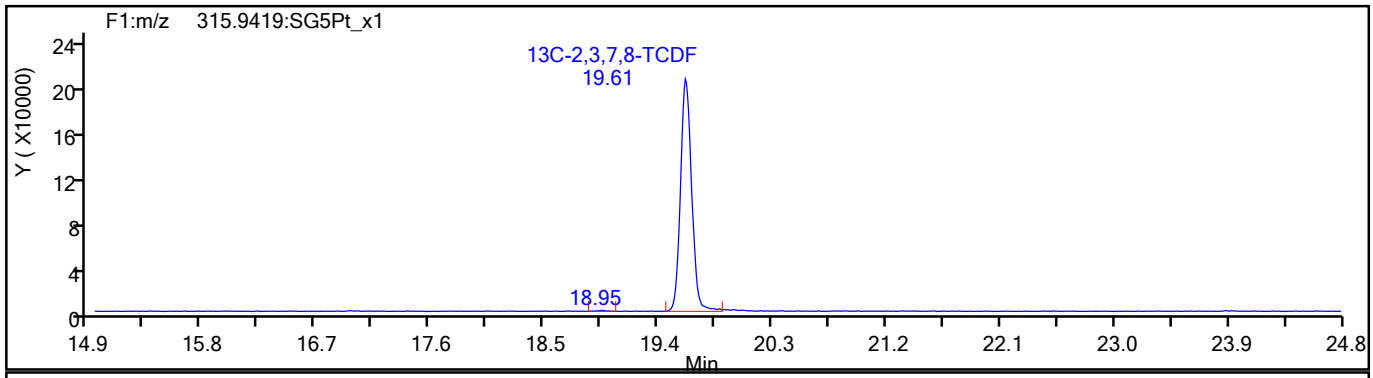

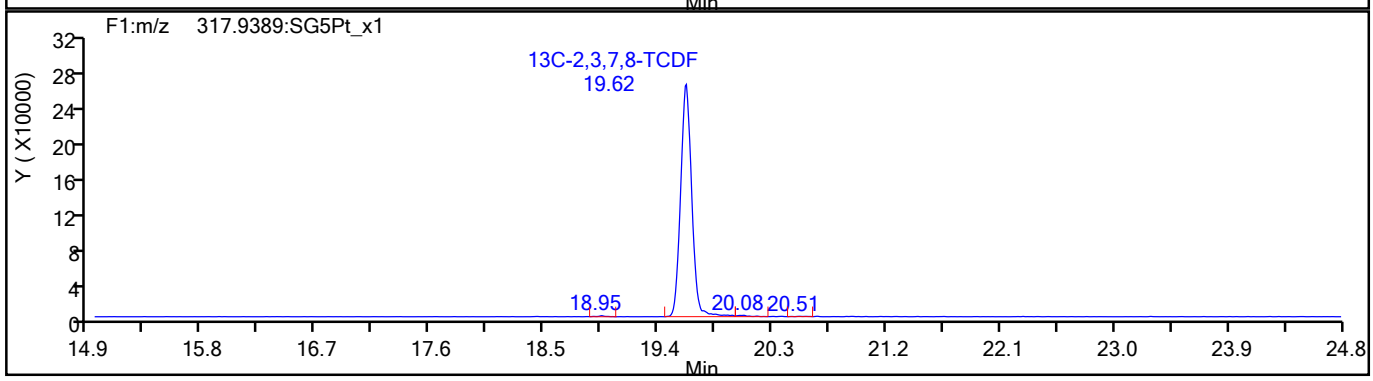

790129

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

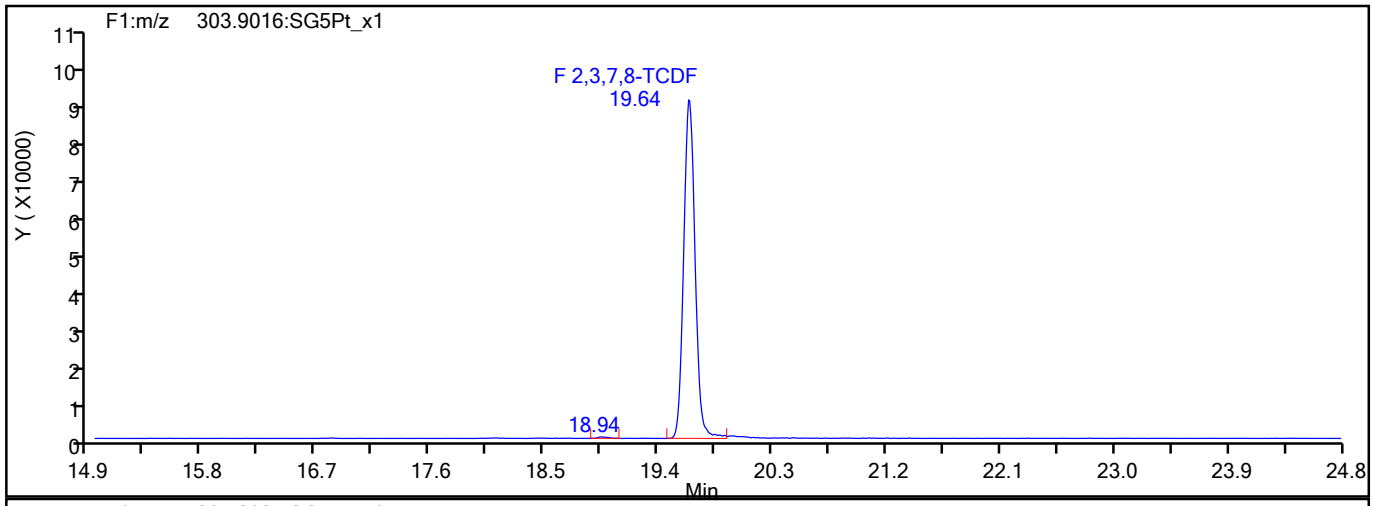

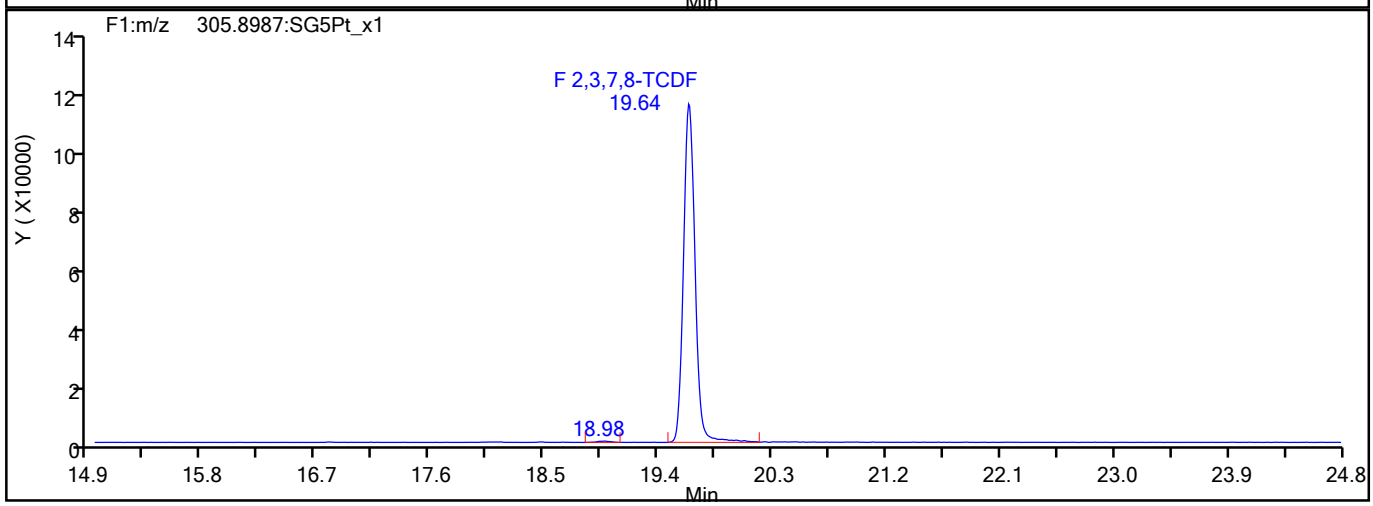

TCDF Interference Mass

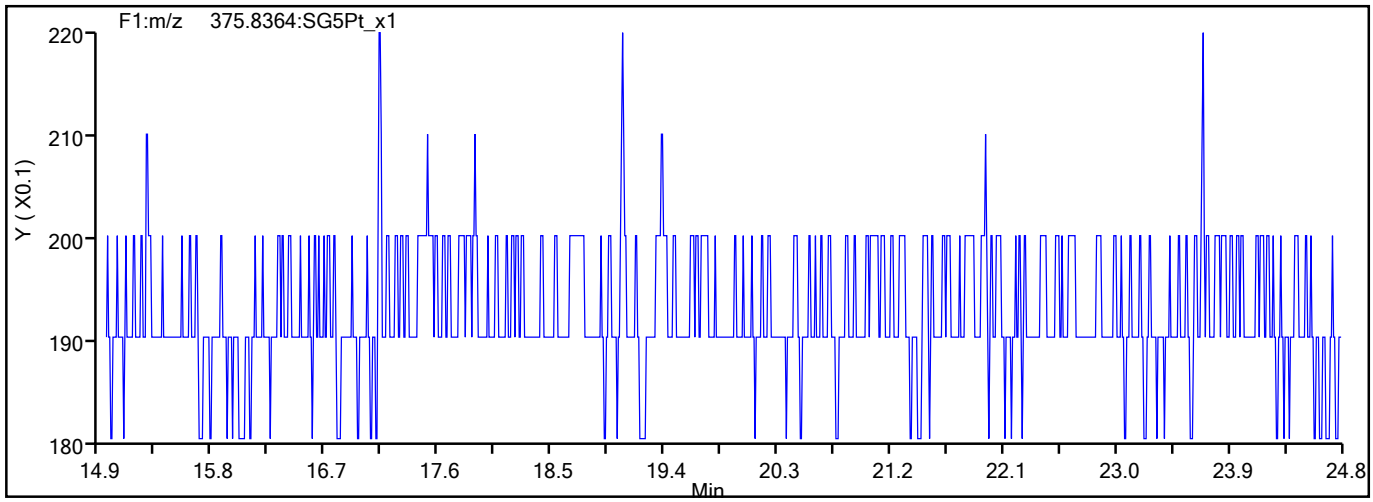

790130

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

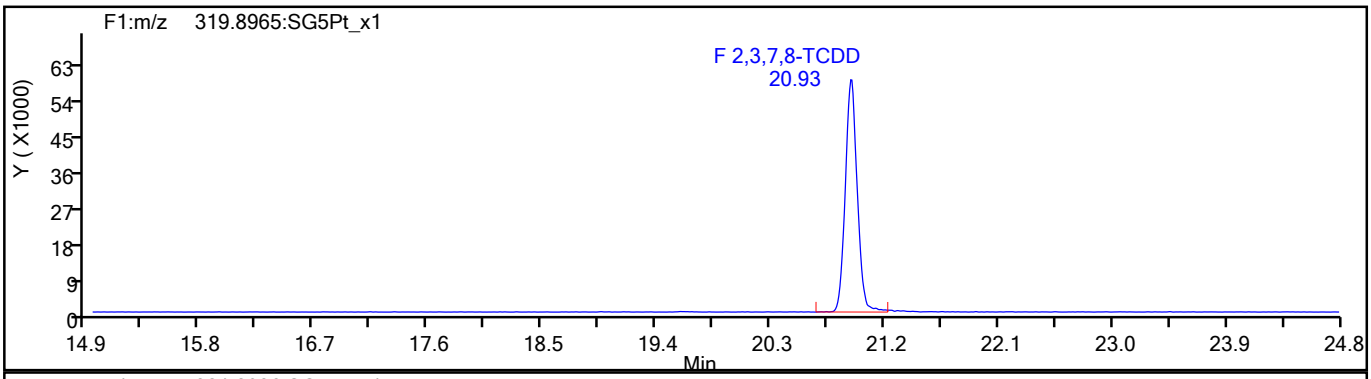

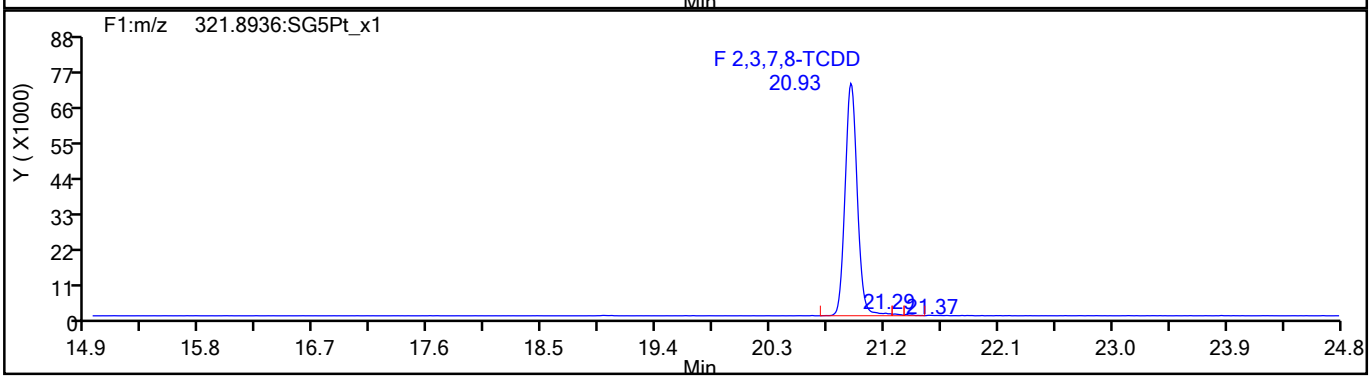

TCDD Standards

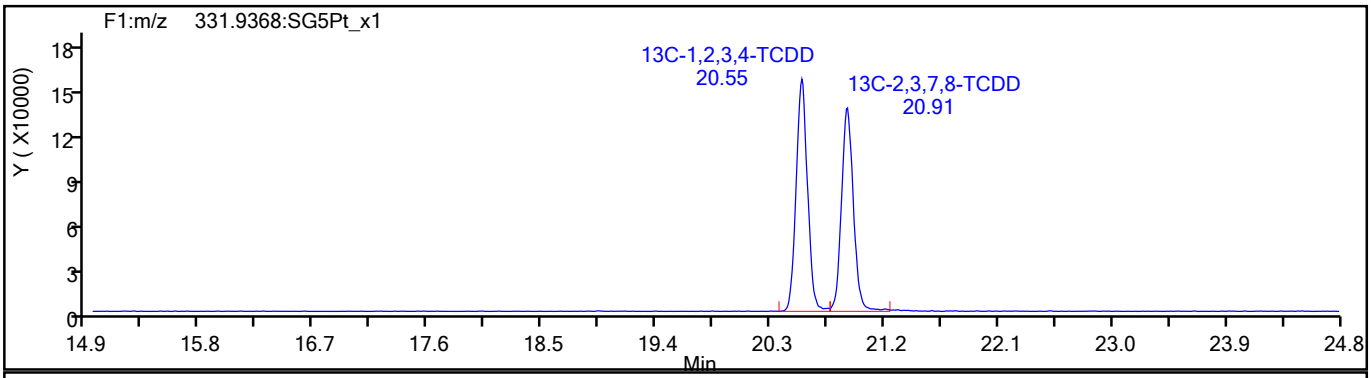

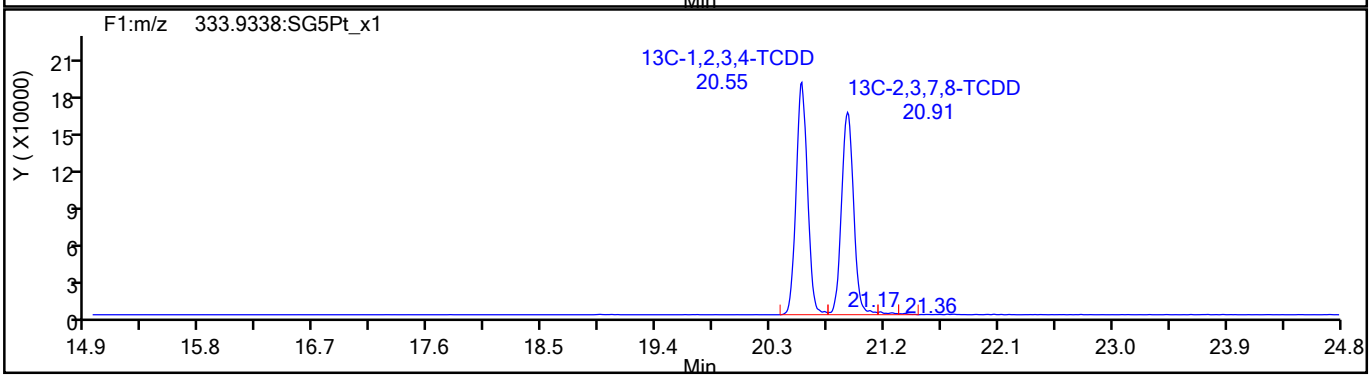

790131

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

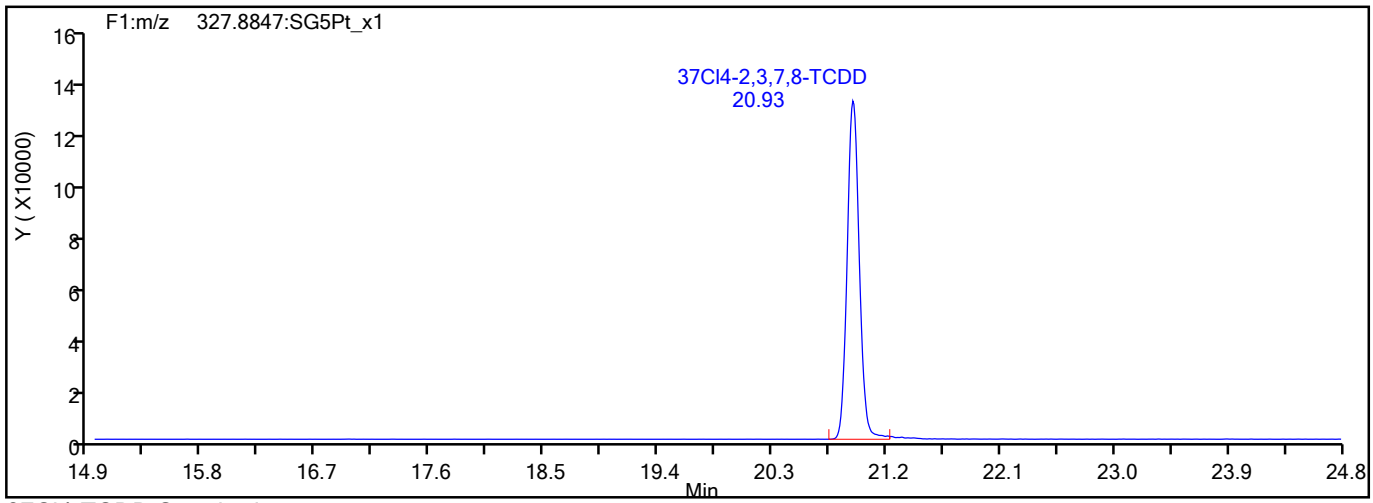

37Cl4-TCDD Standards

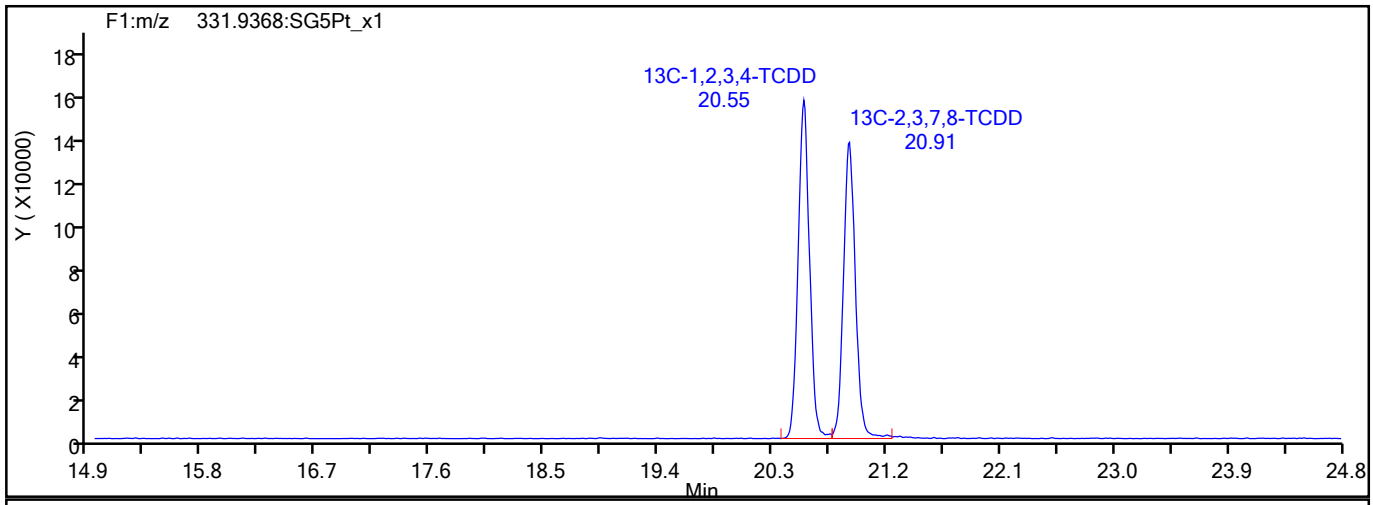

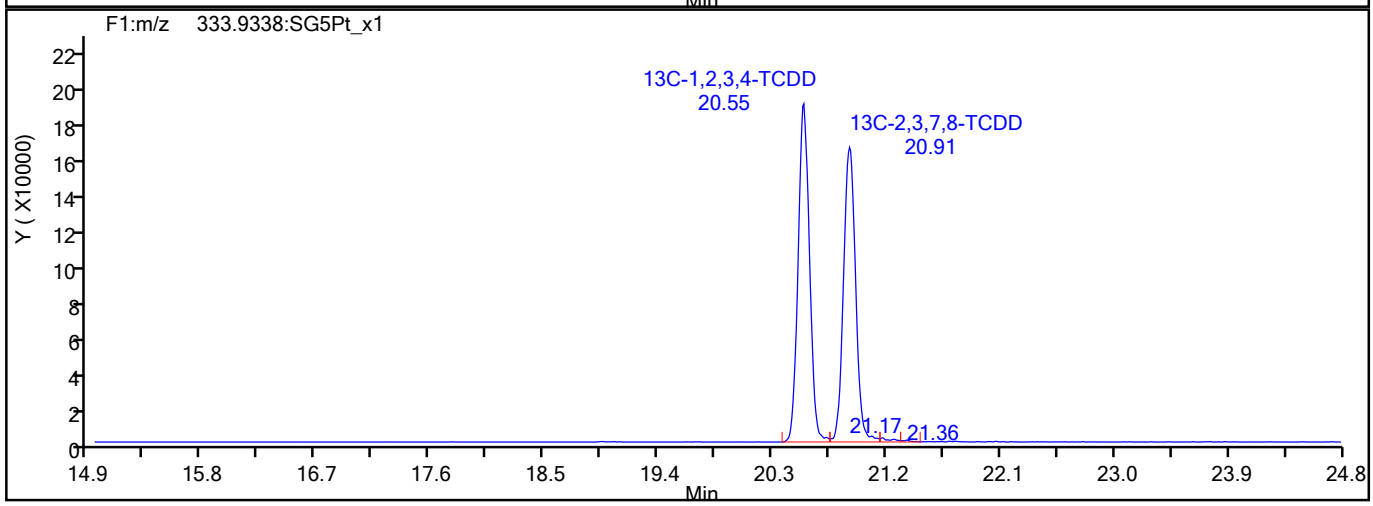

790132

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

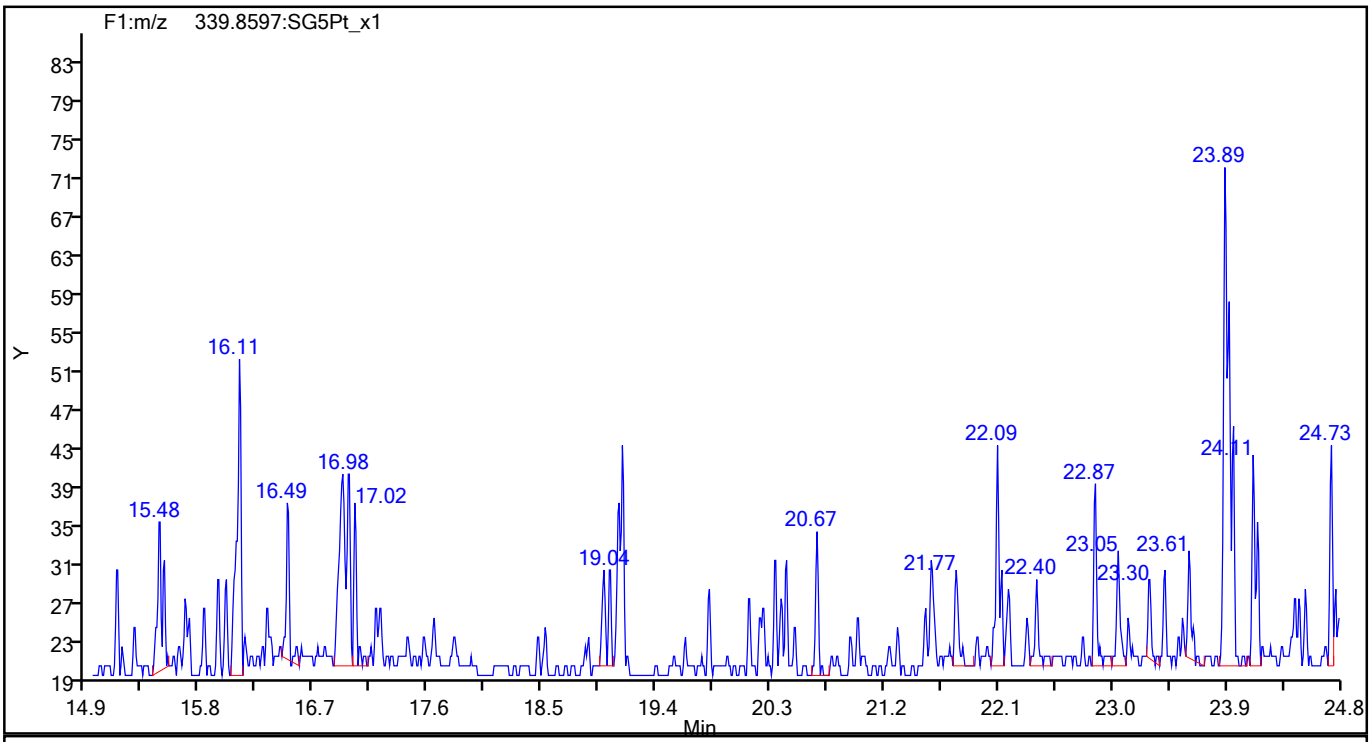

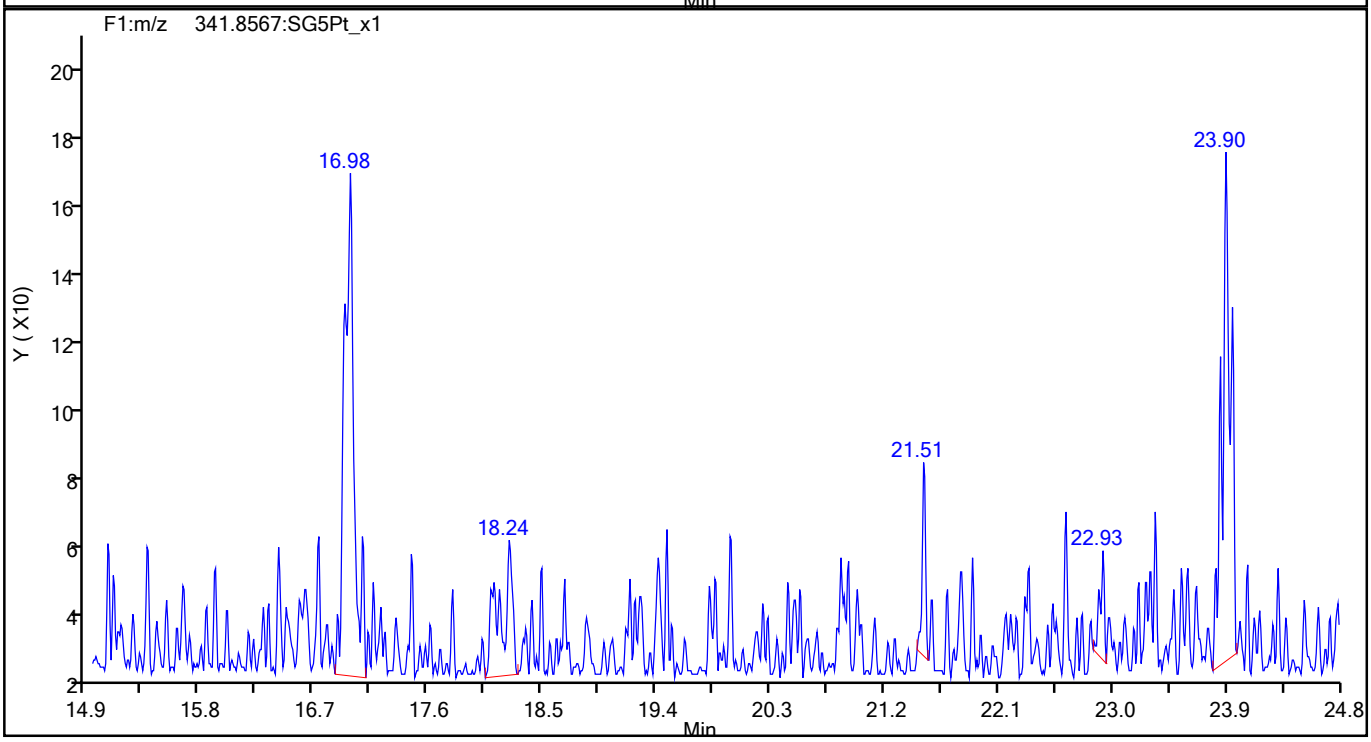

790133

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

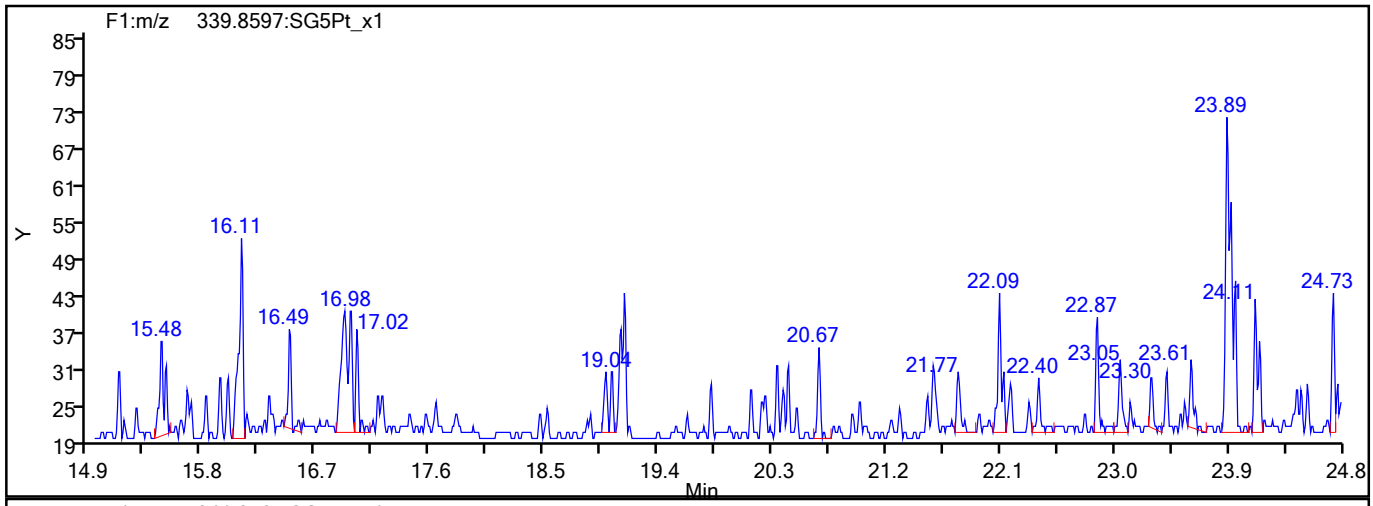

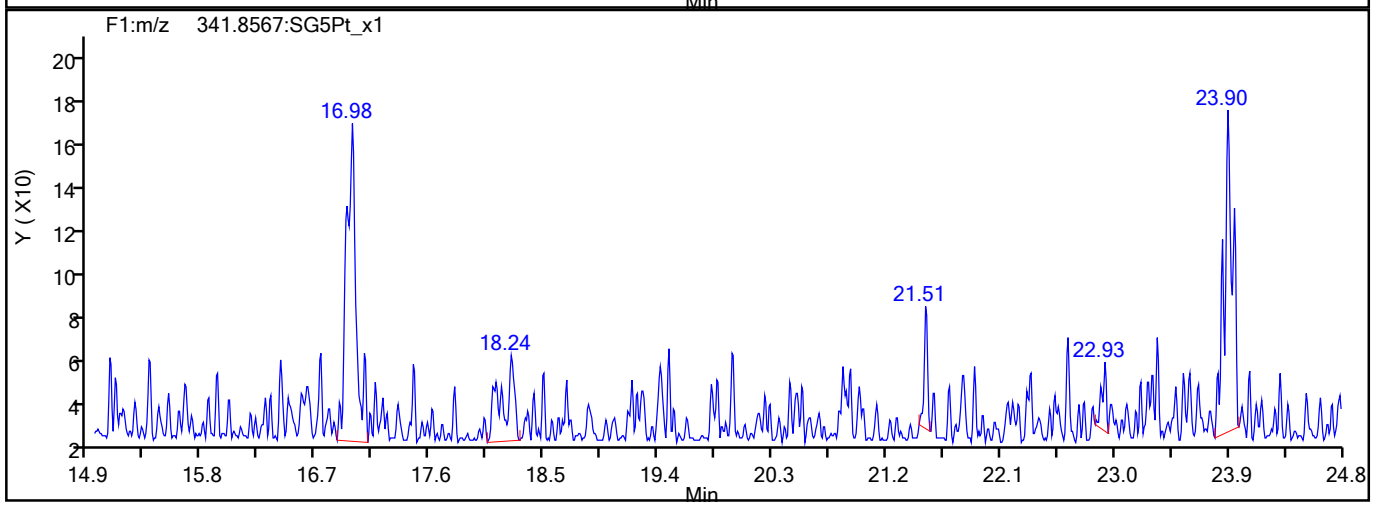

F1 PeCDFs Interference Mass

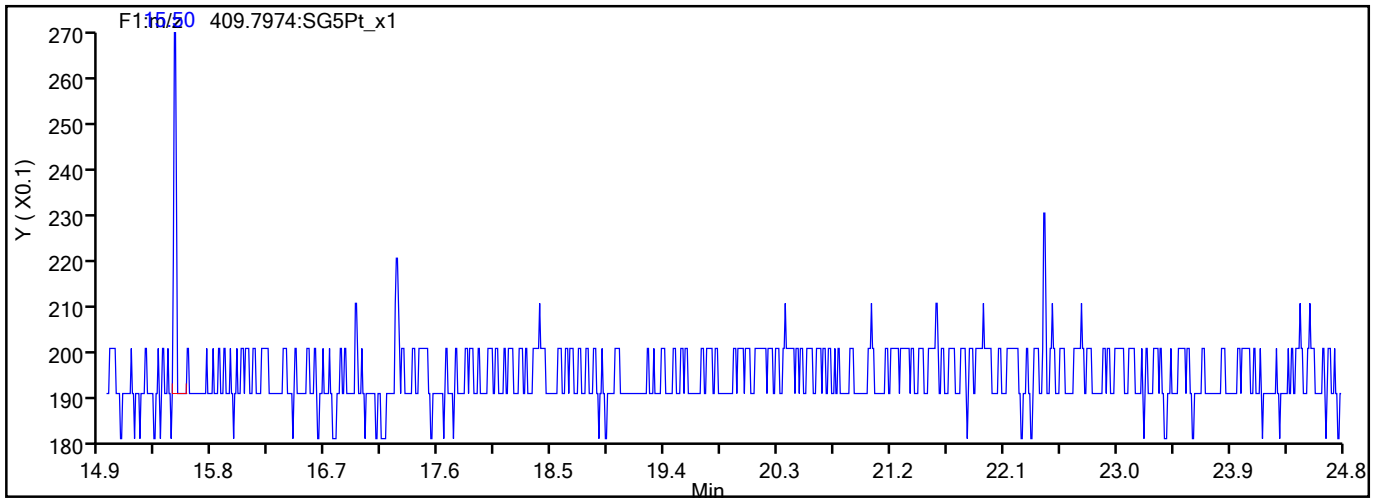

790134

Report Date: 09-Jun-2021 08:53:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

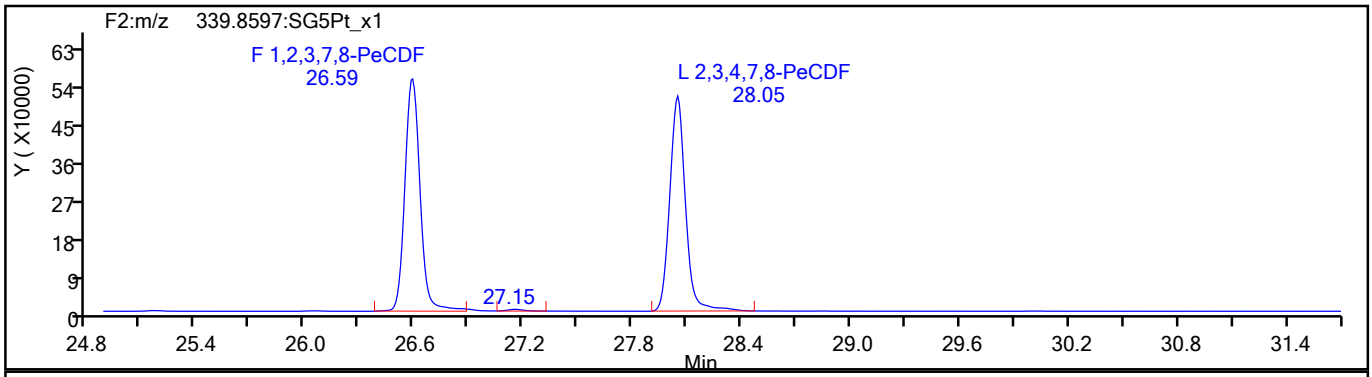

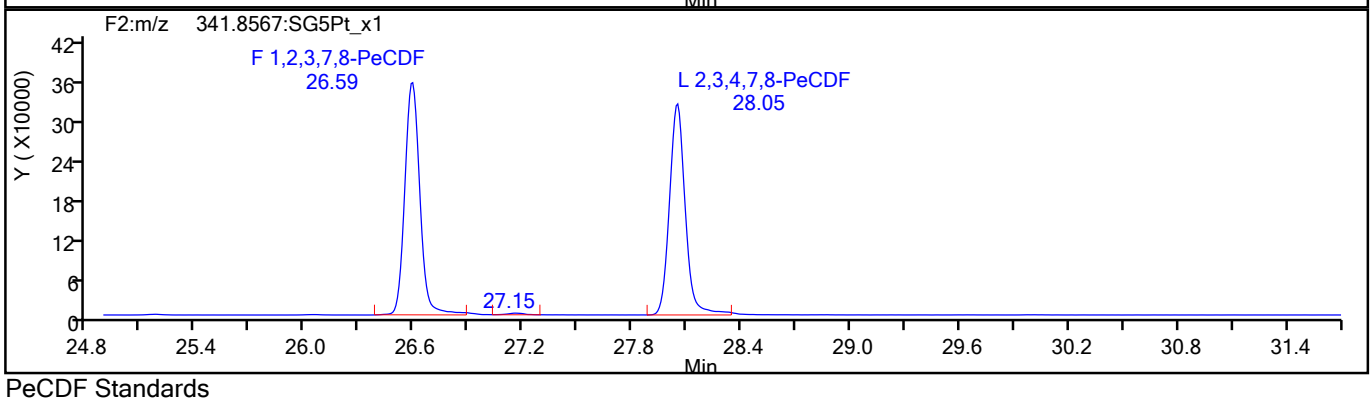

PeCDF Standards

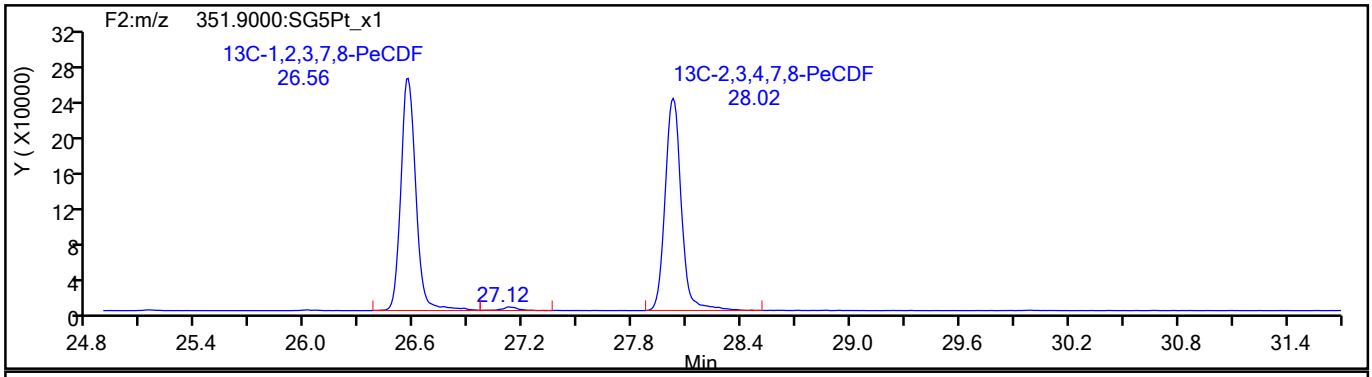

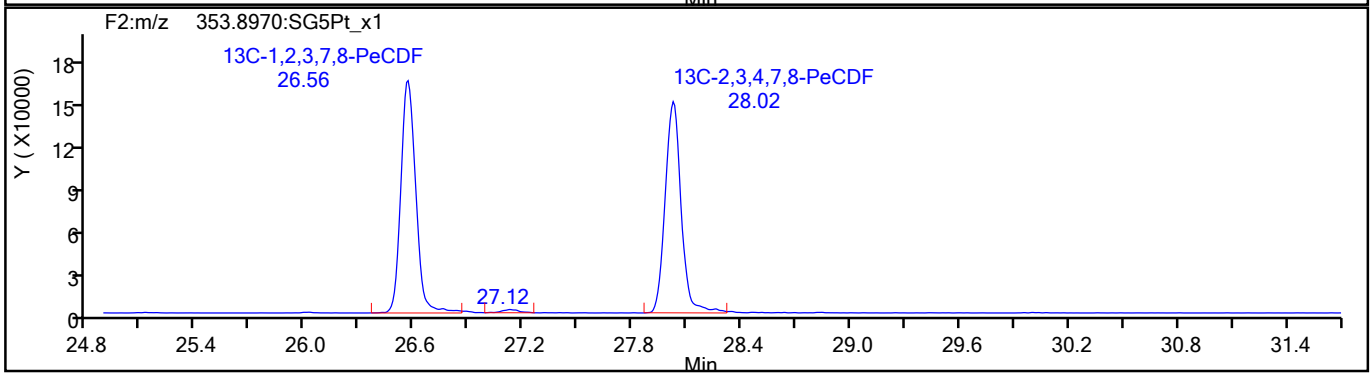

790135

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

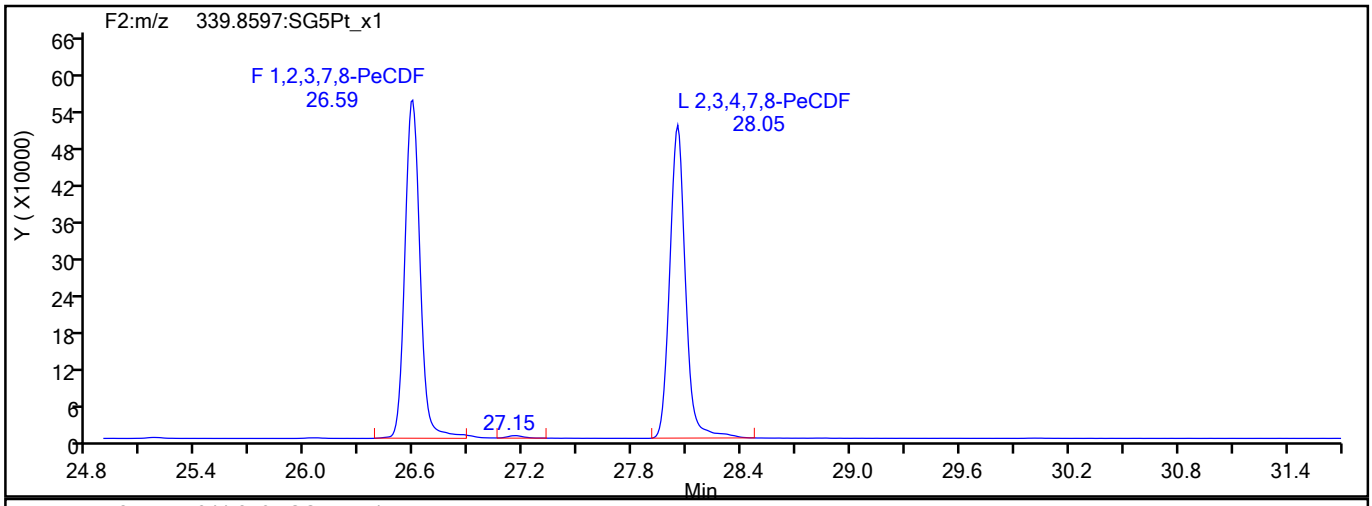

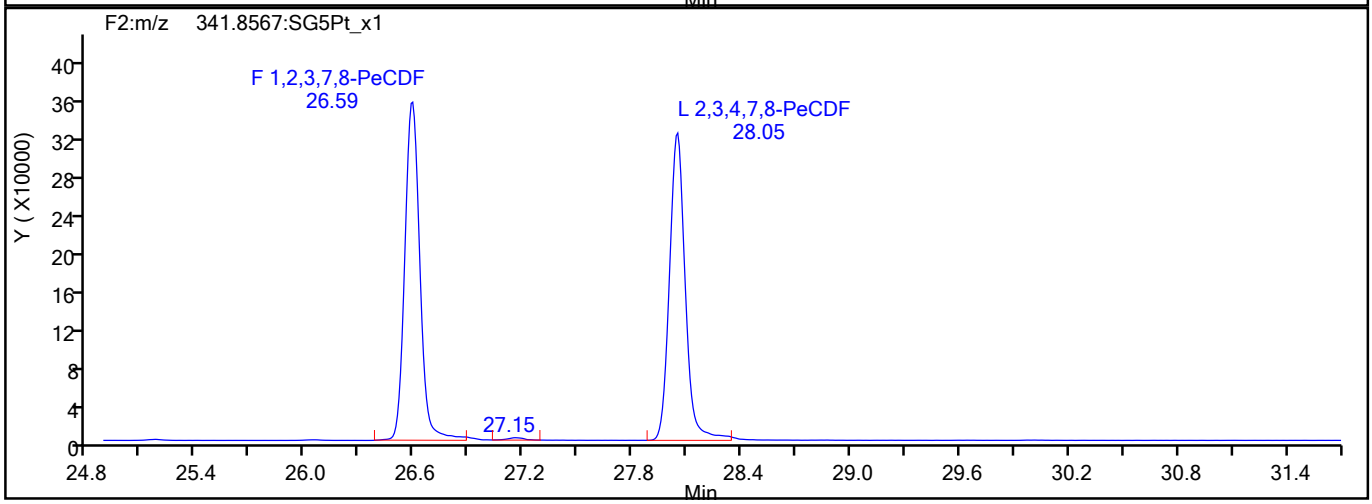

PeCDF Interference Mass

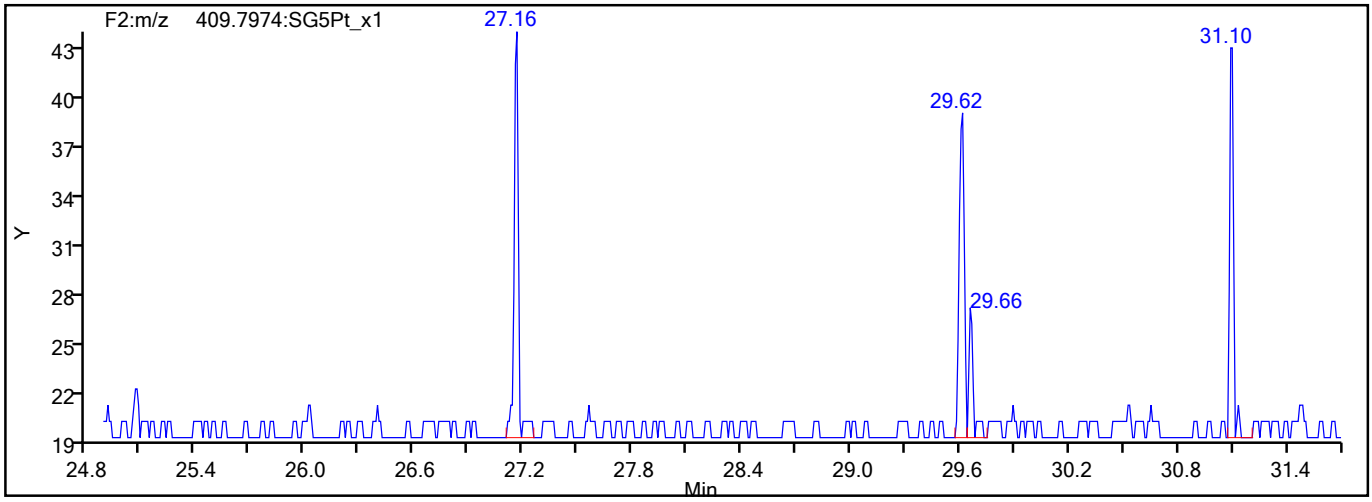

790136

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

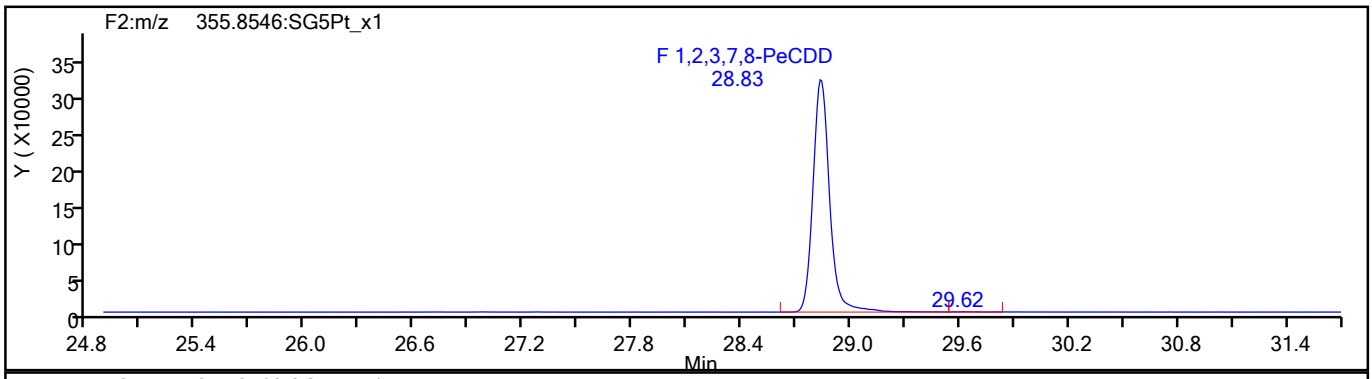

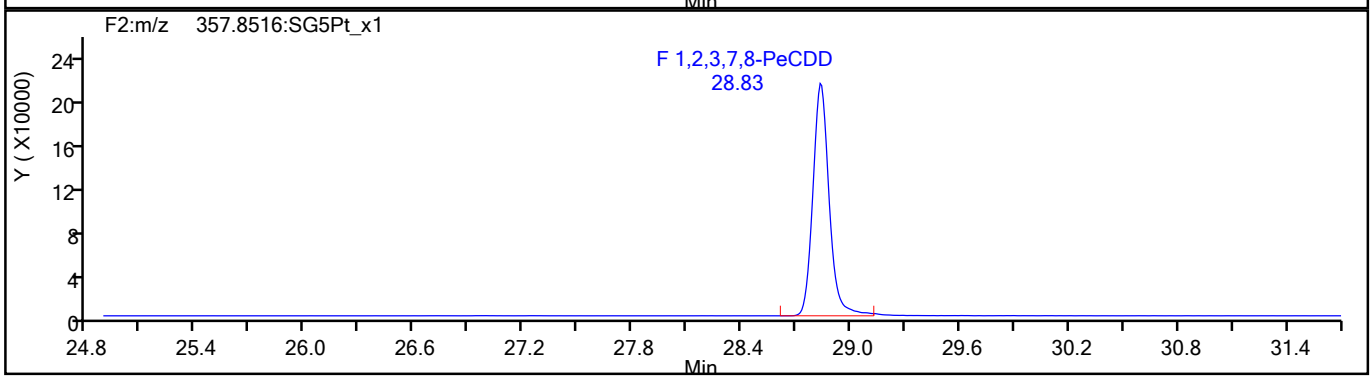

PeCDD Standards

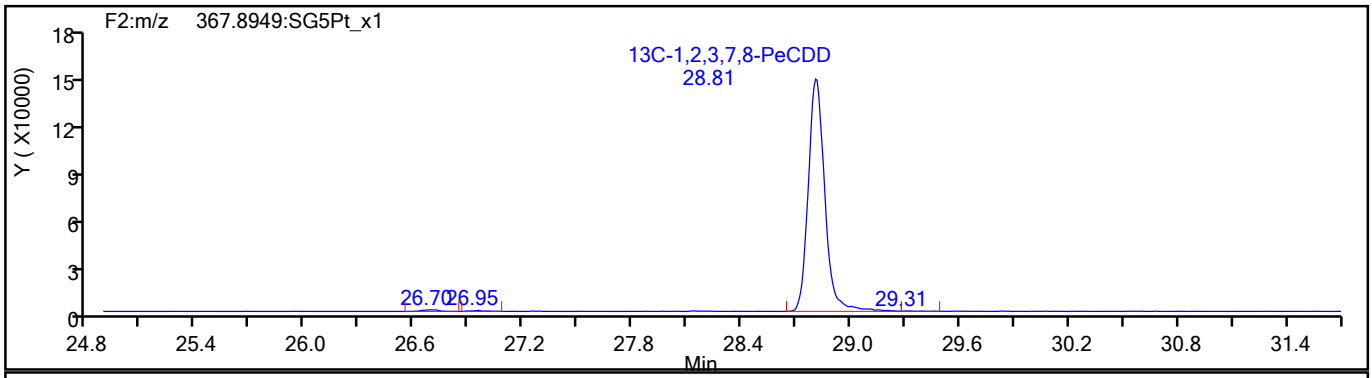

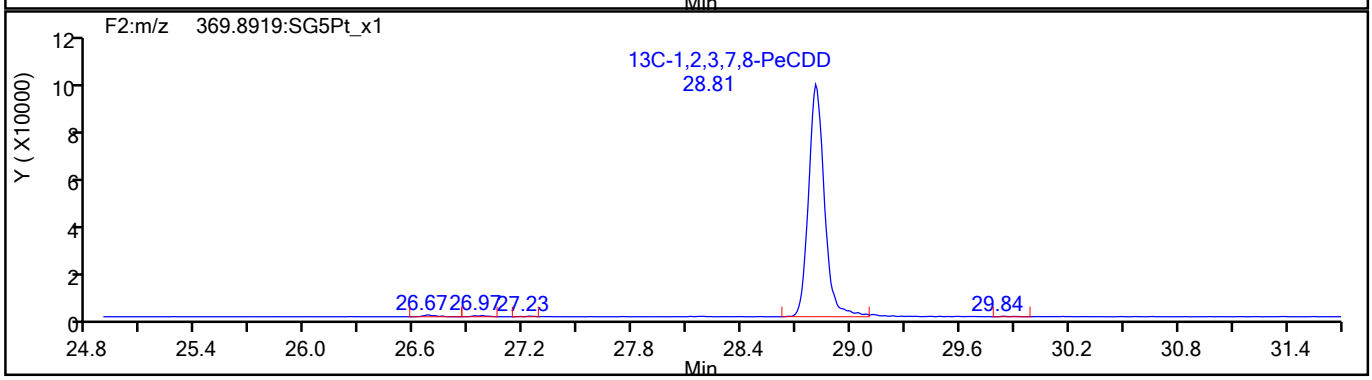

790137

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

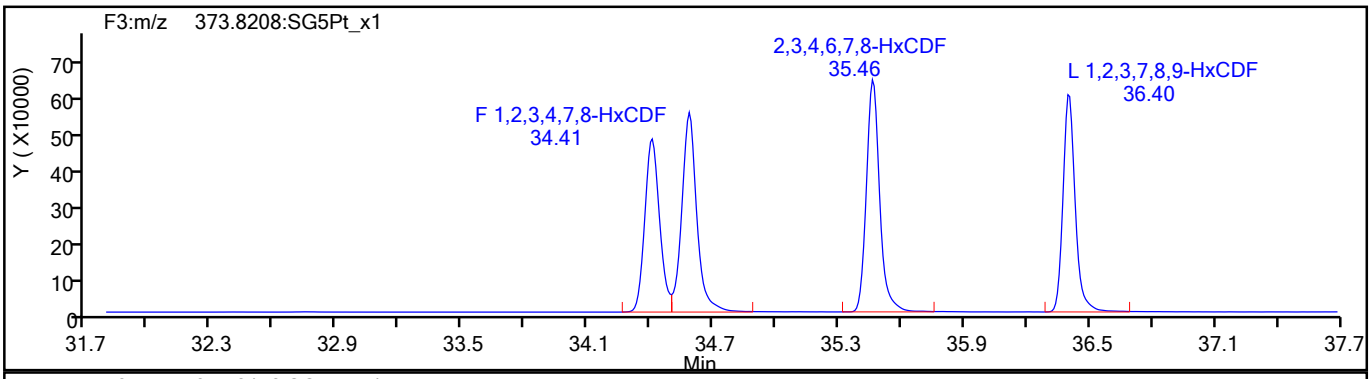

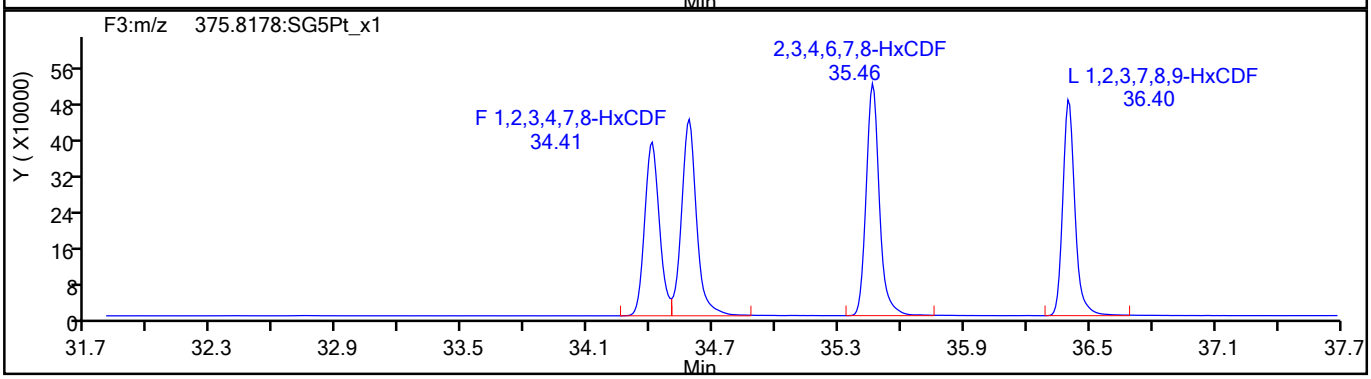

HxCDF Standards

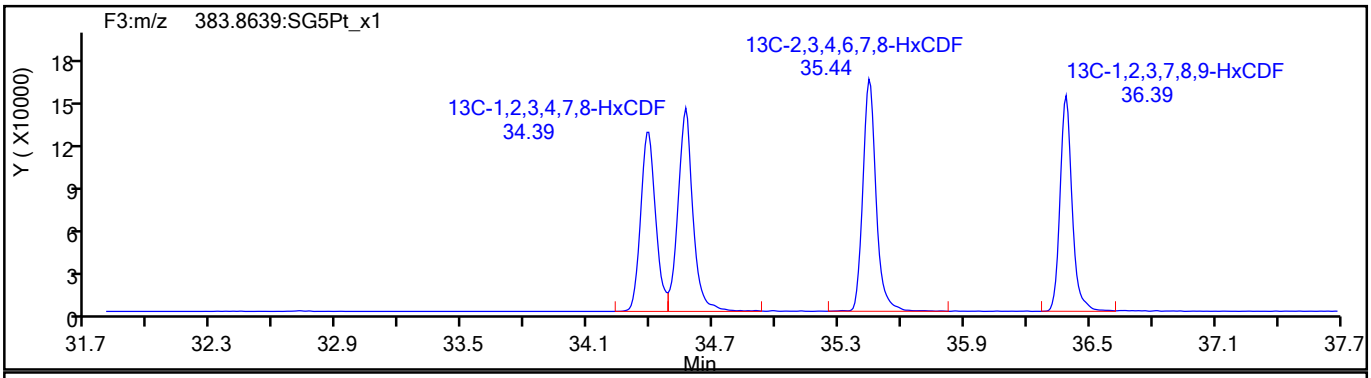

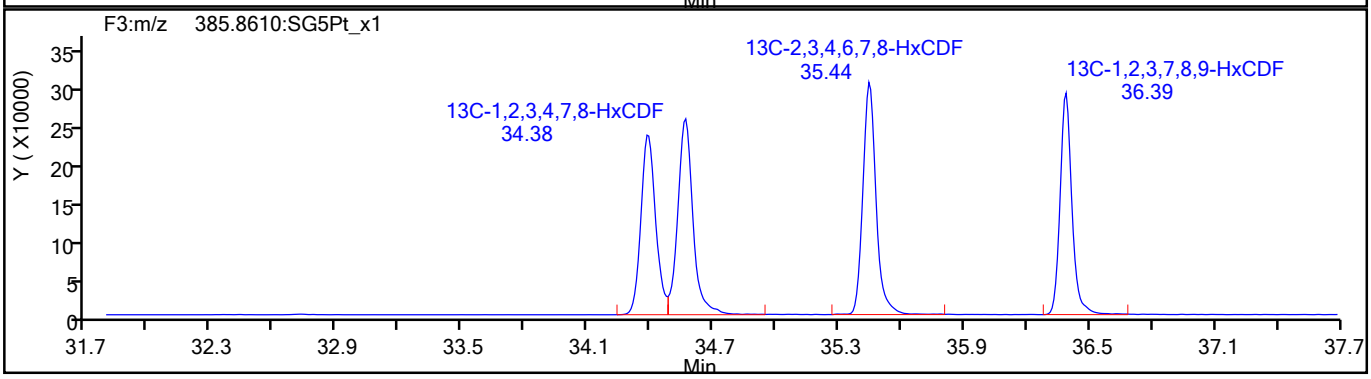

790138

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

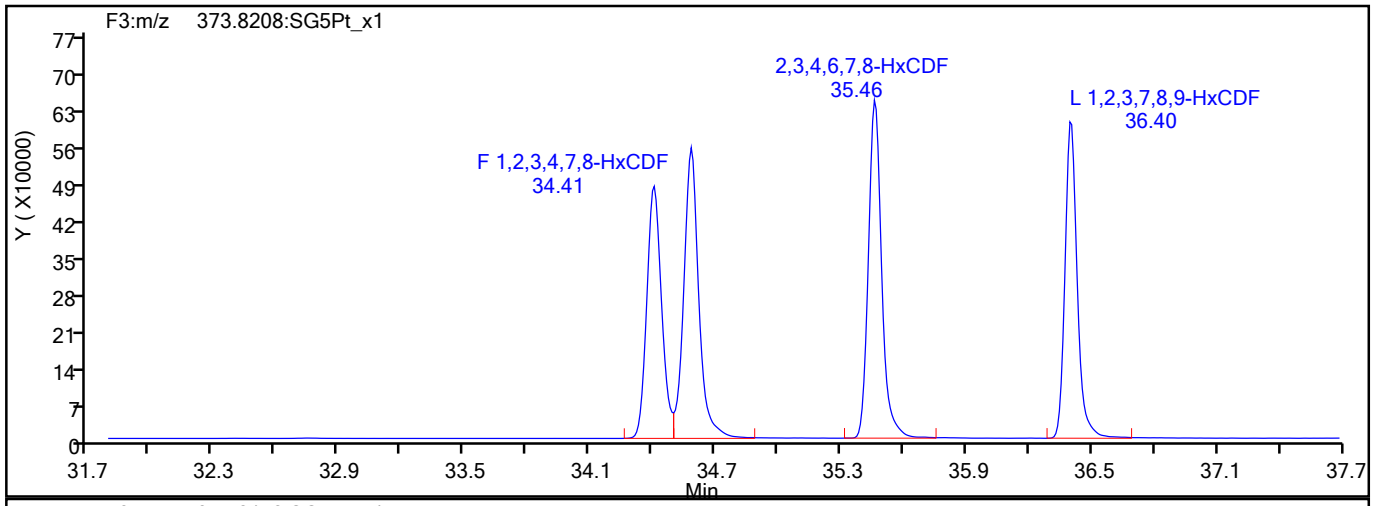

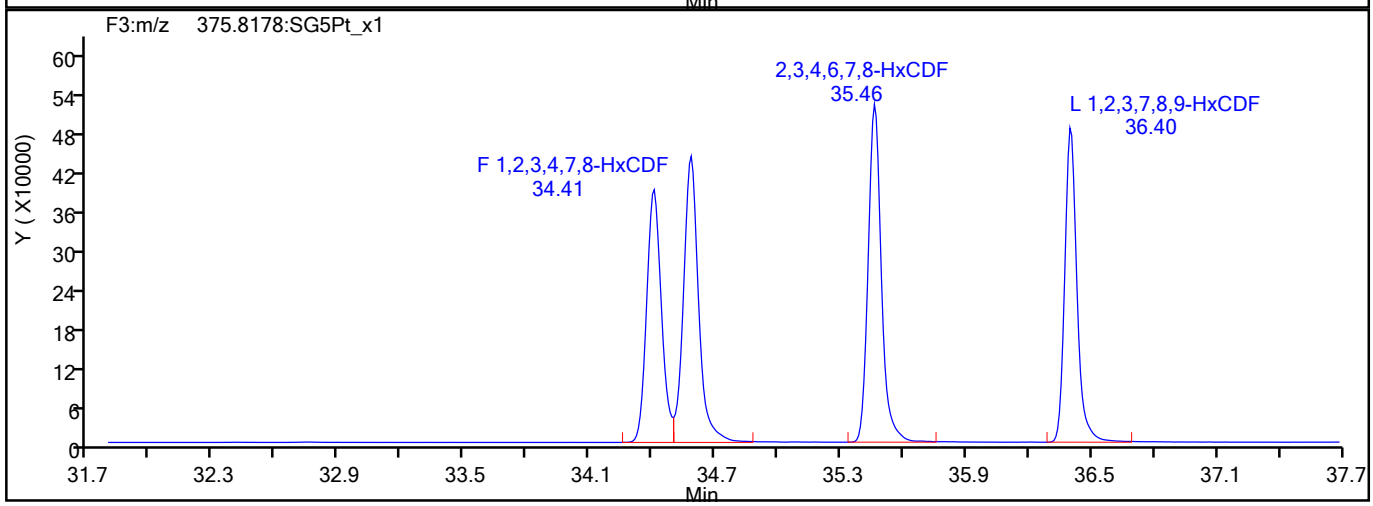

HxCDF Interference Mass

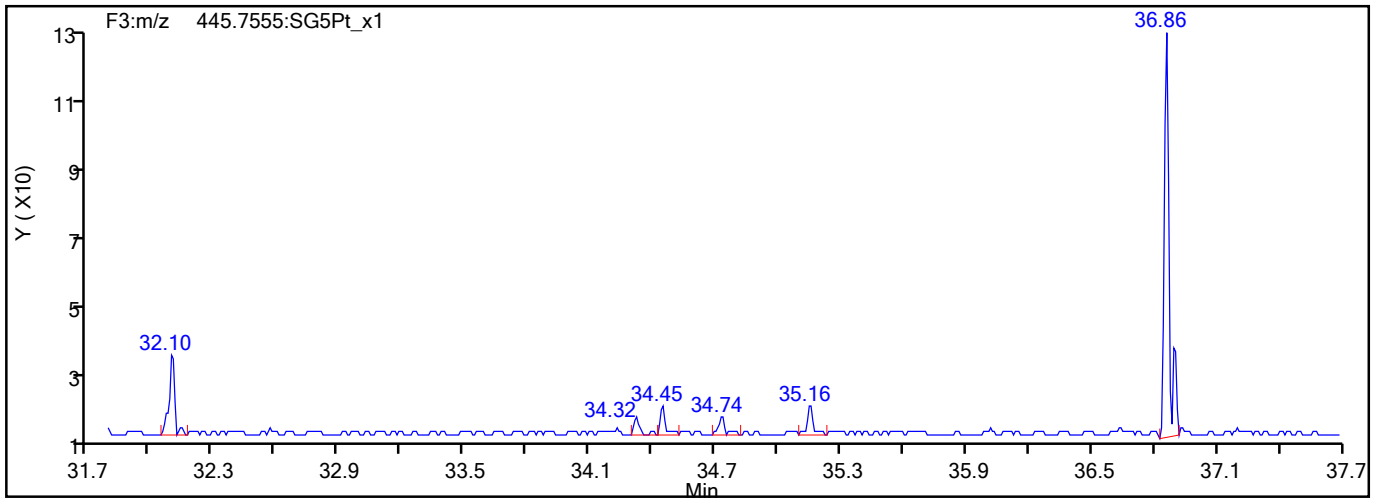

790139

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

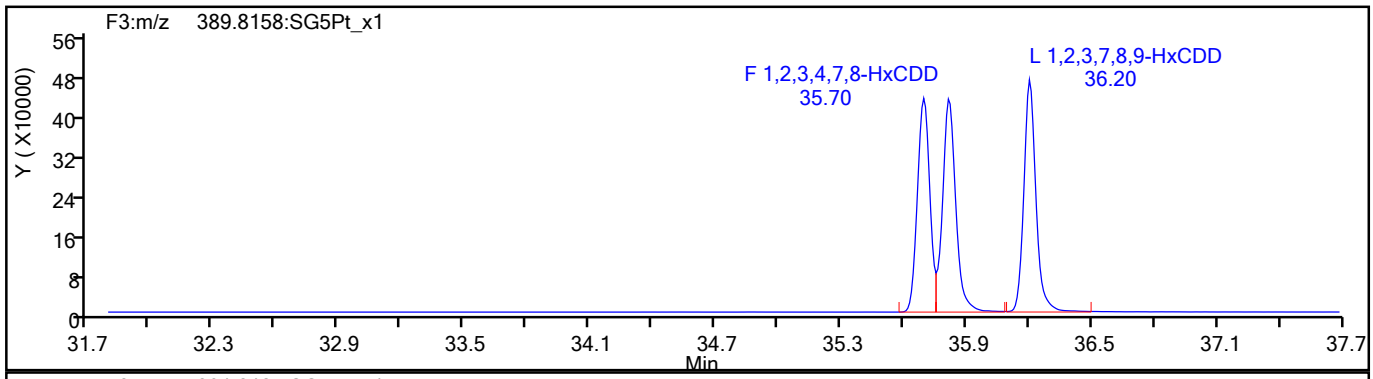

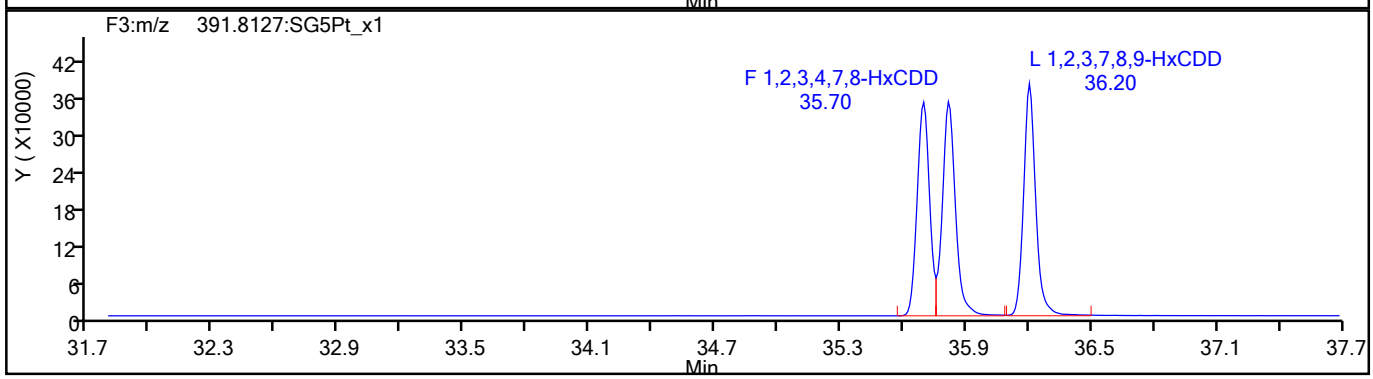

HxCDD Standards

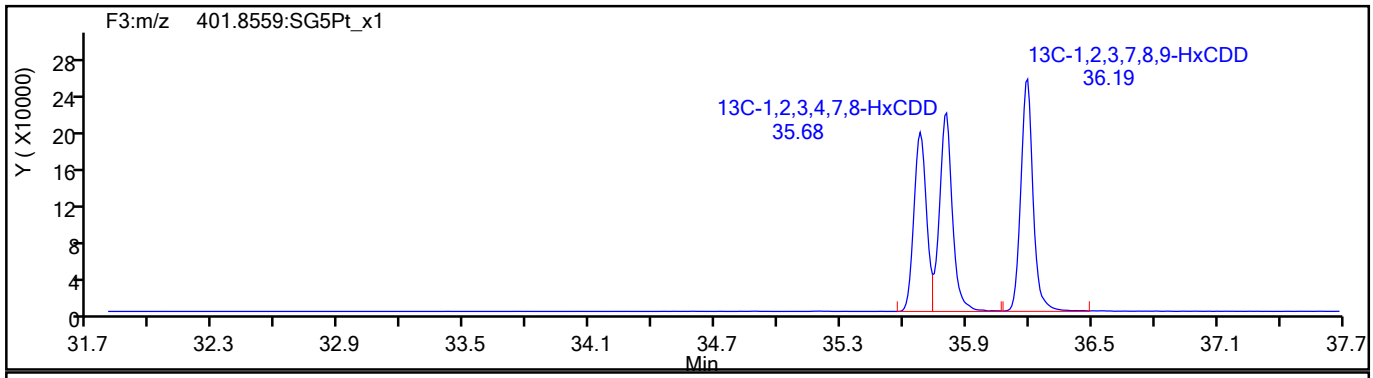

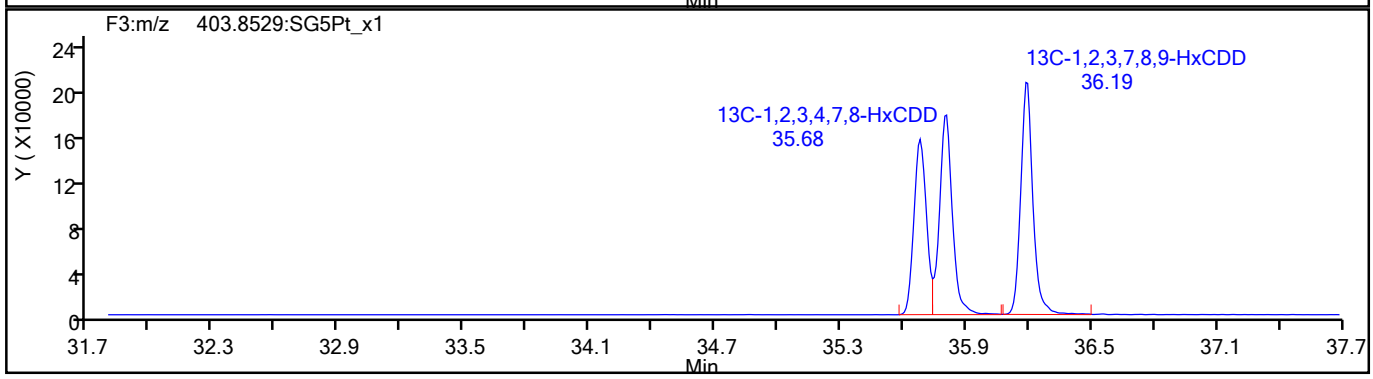

790140

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

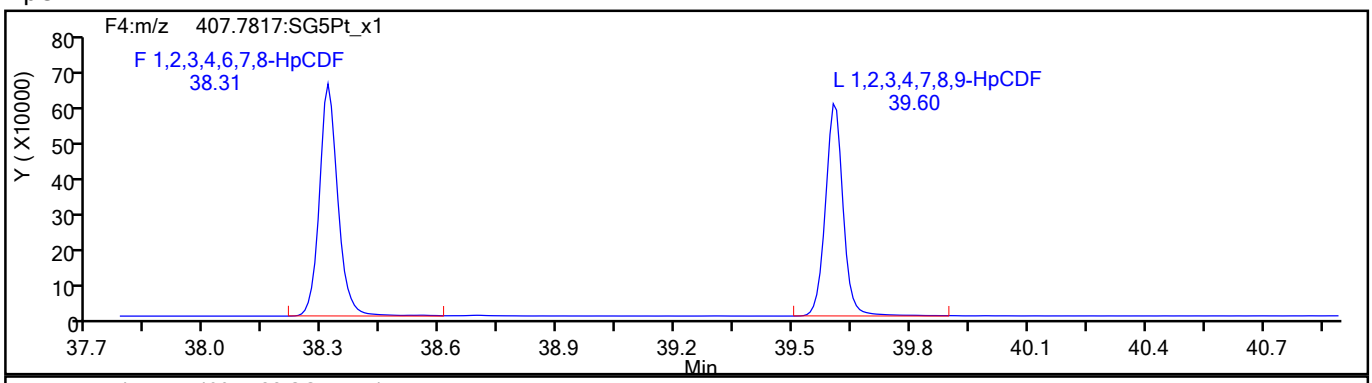

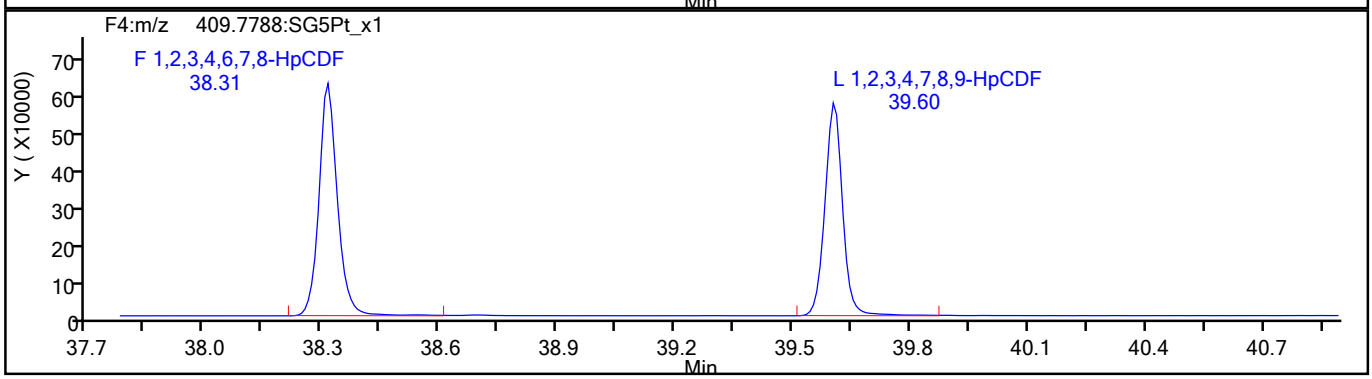

HpCDF Standards

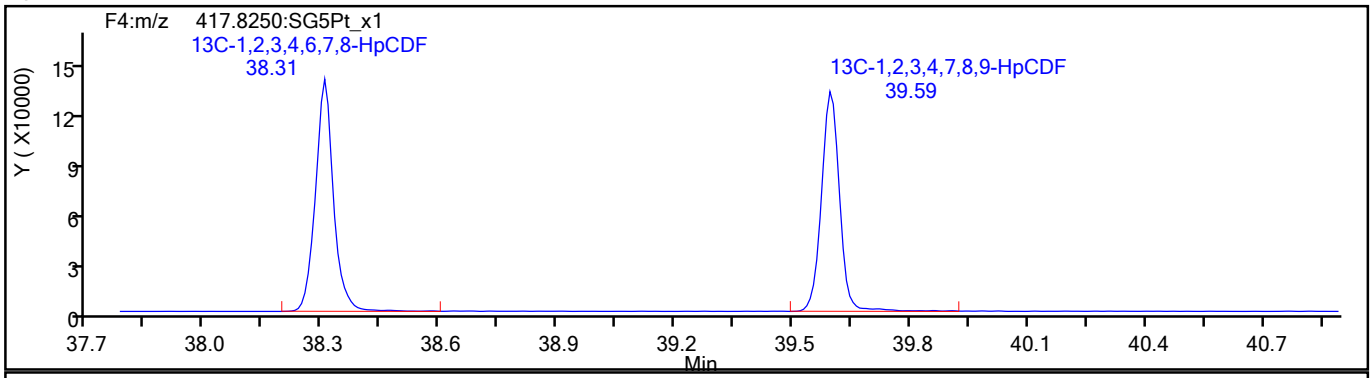

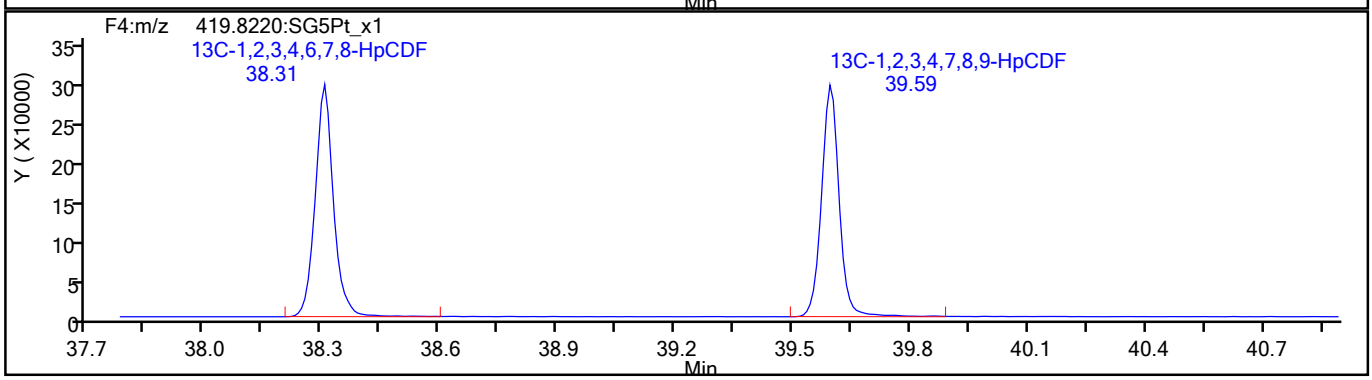

790141

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

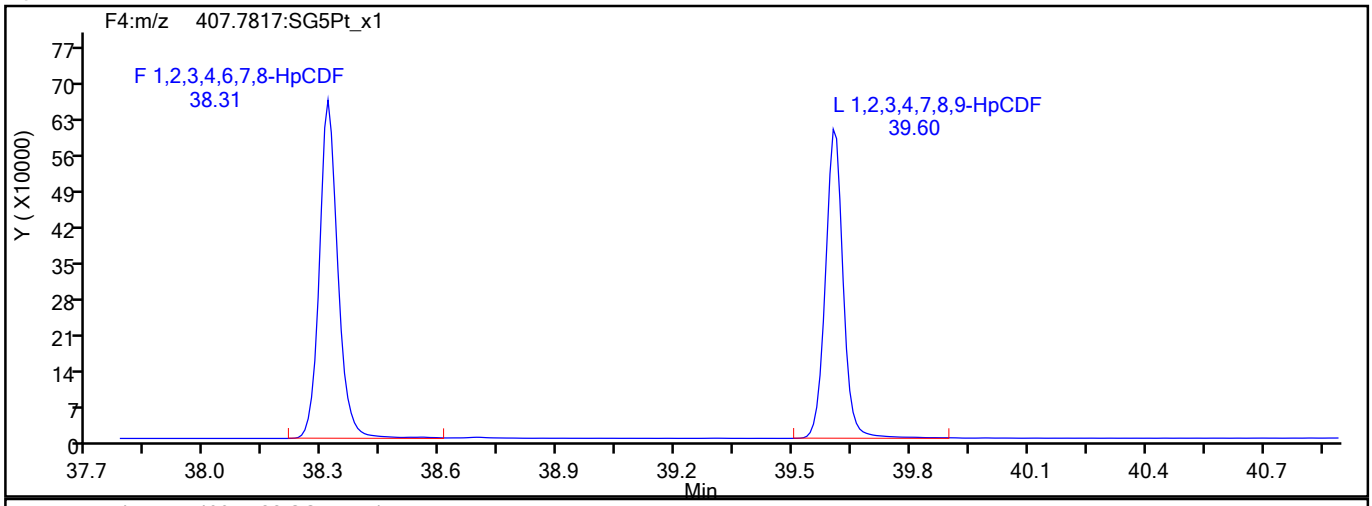

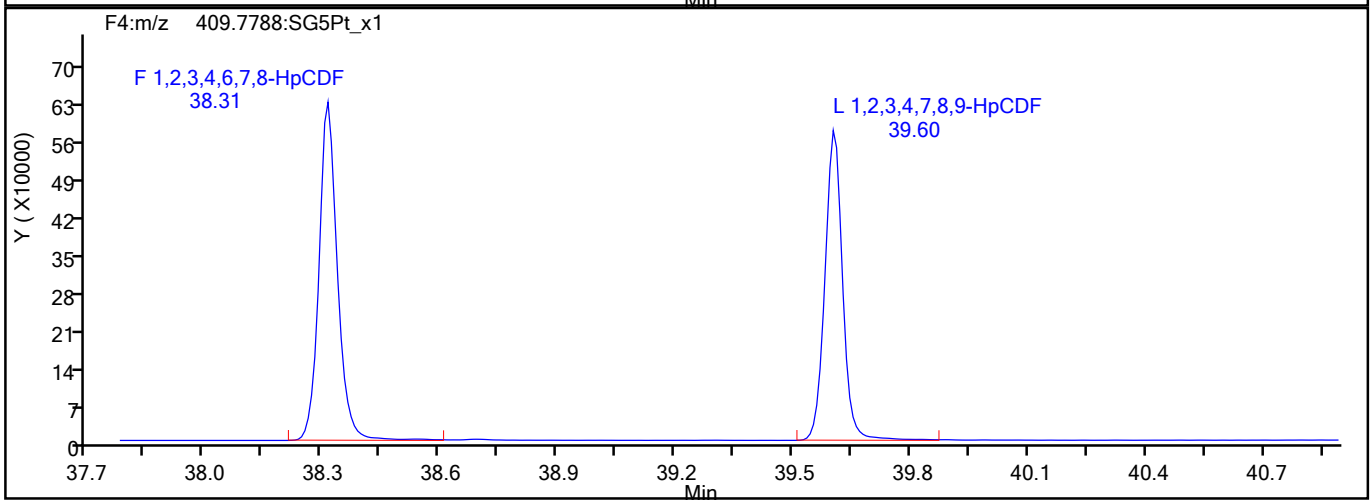

HpCDF Interference Mass

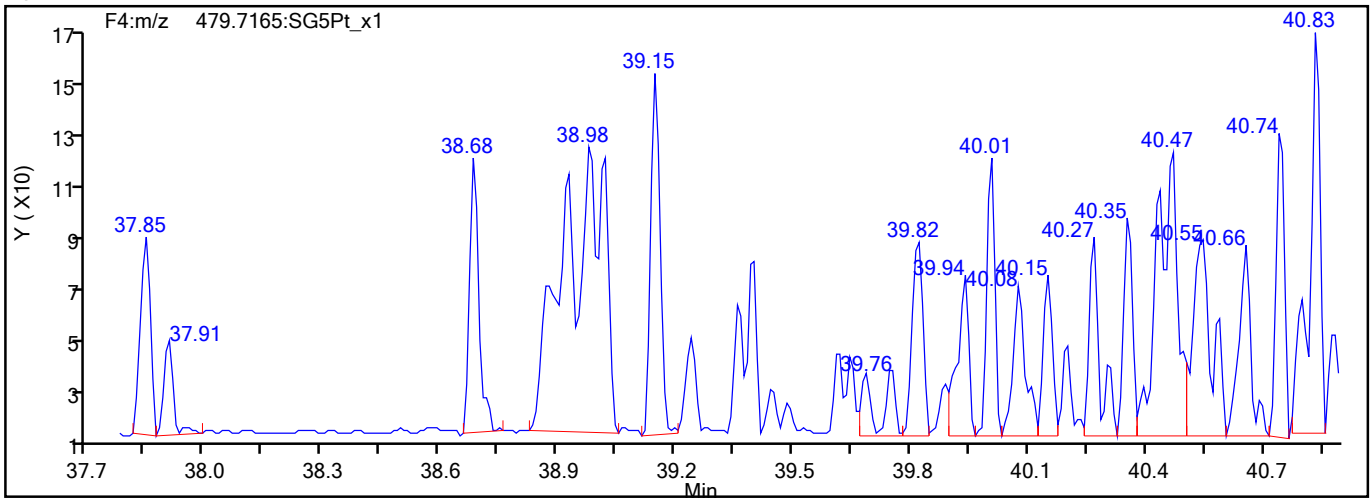

790142

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

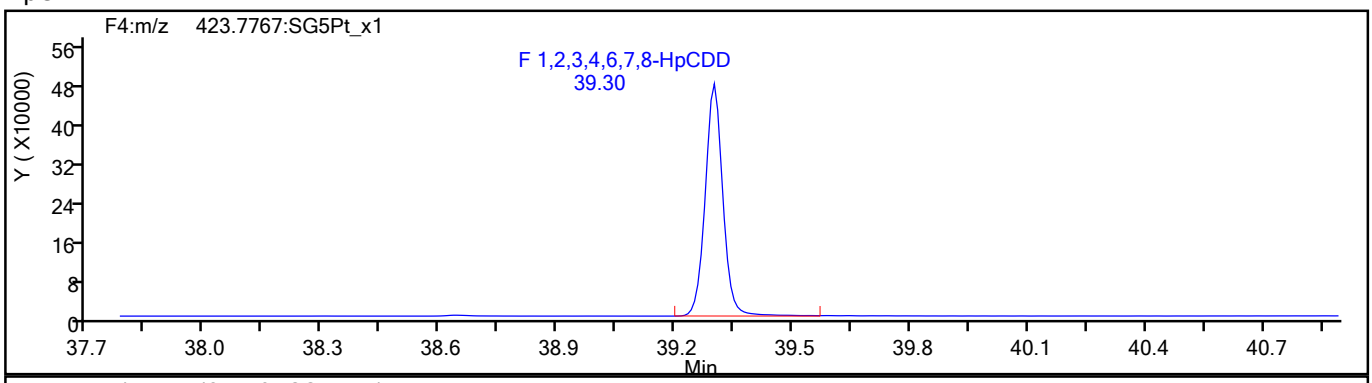

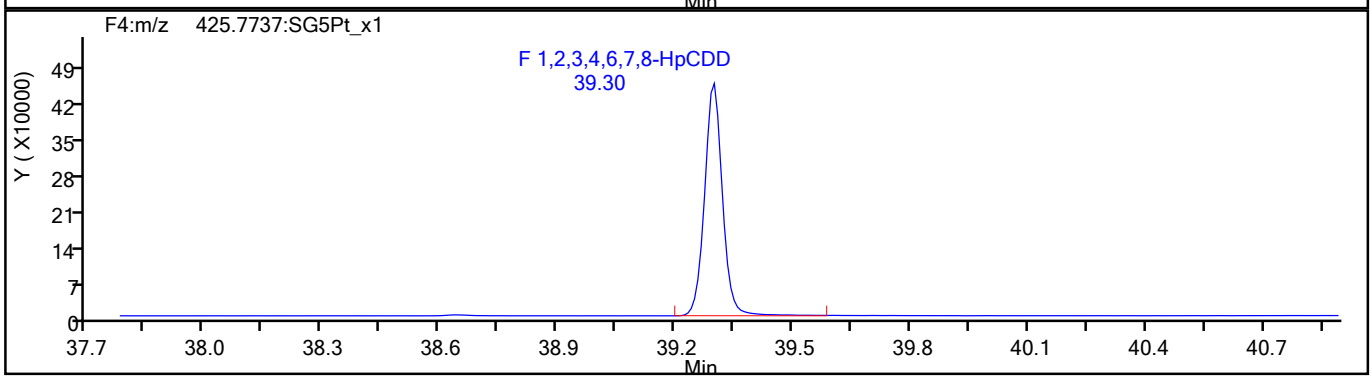

HpCDD Standards

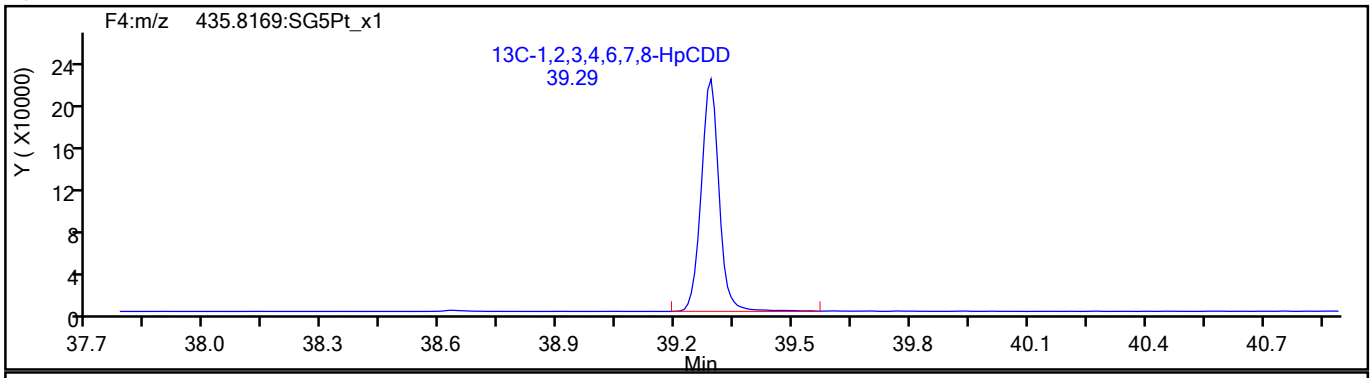

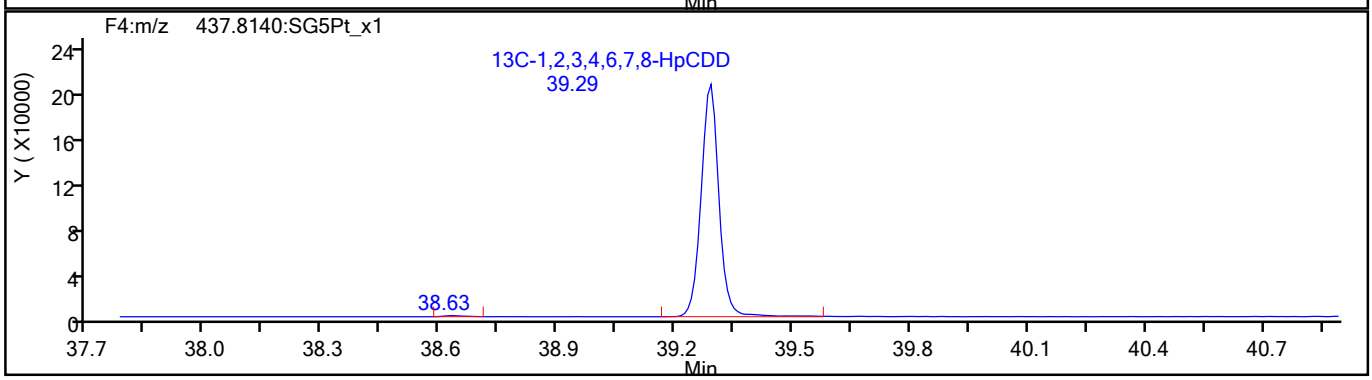

790143

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

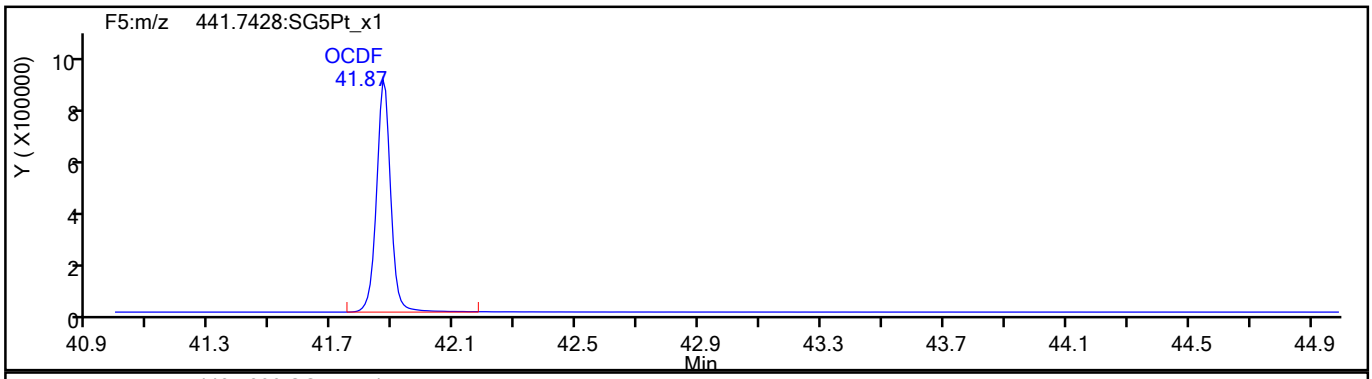

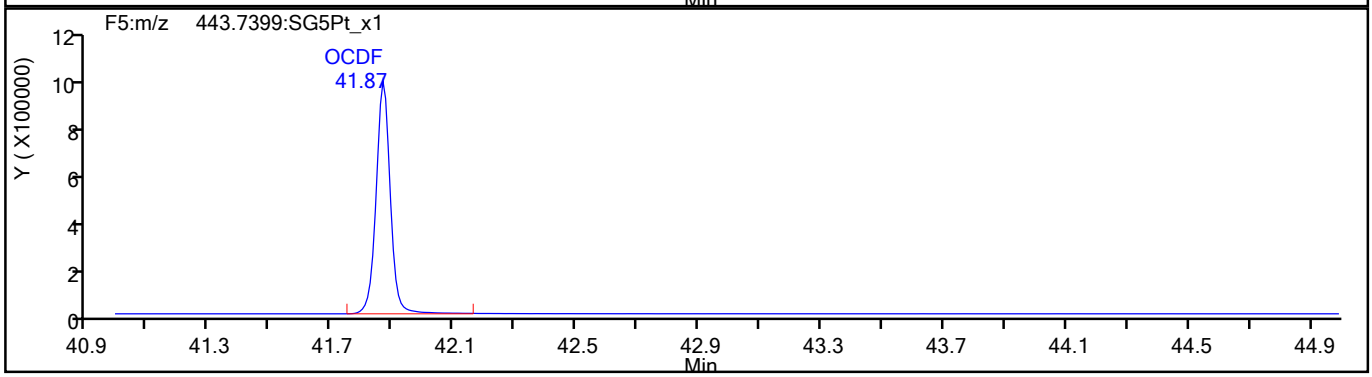

OCDF Standards

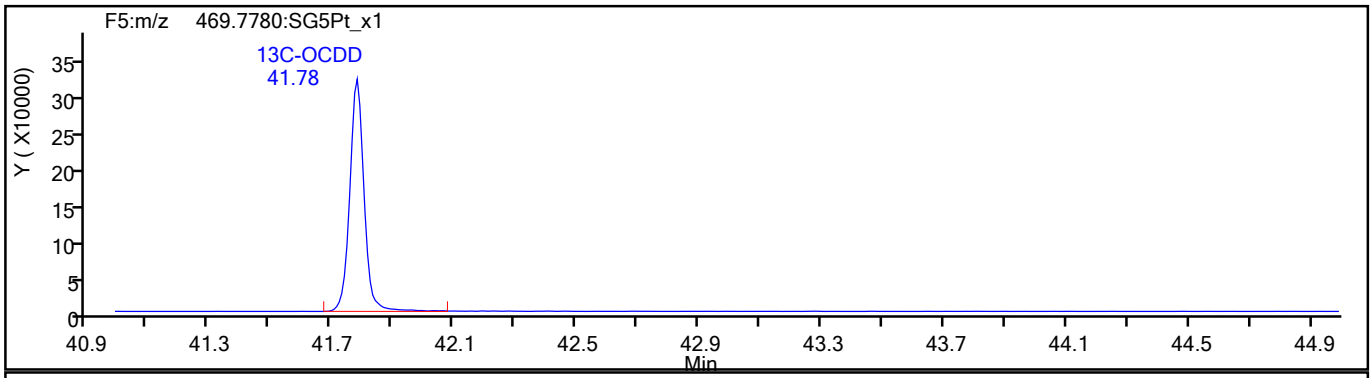

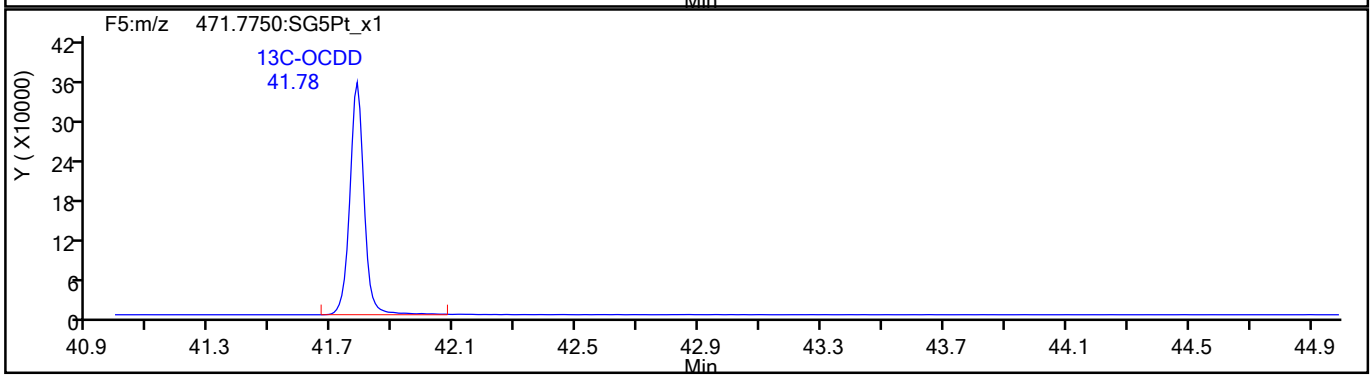

790144

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

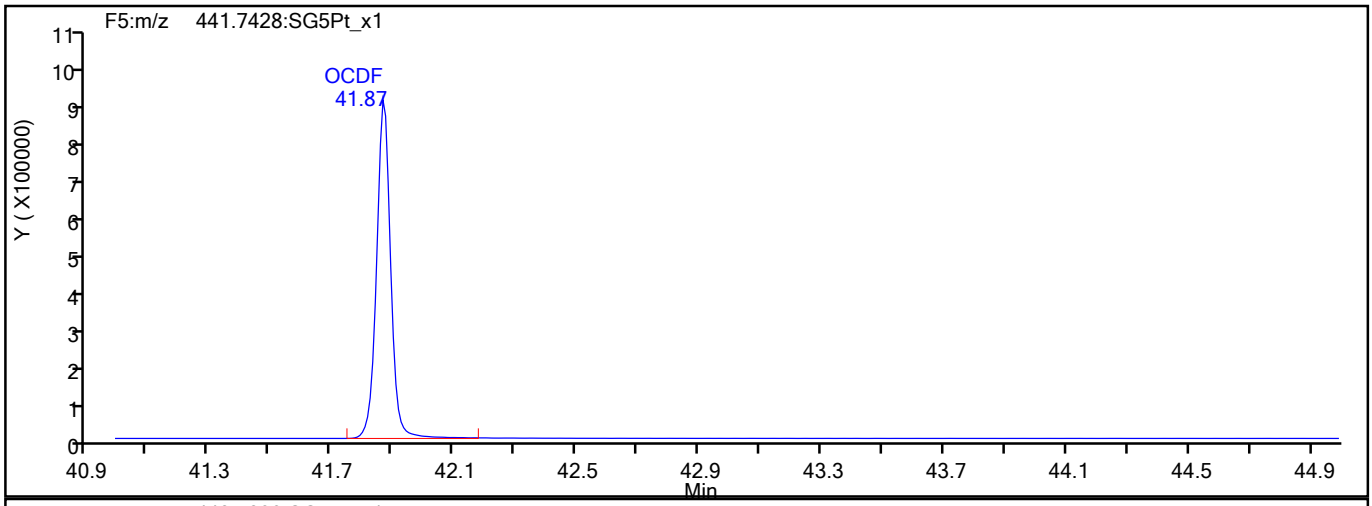

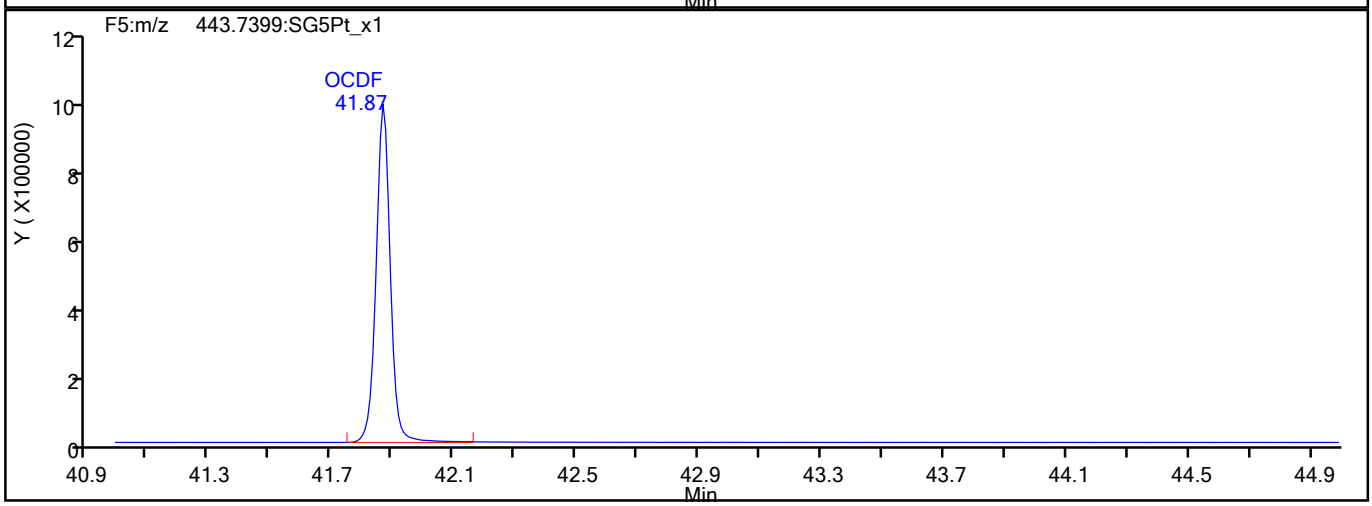

OCDF Interference Mass

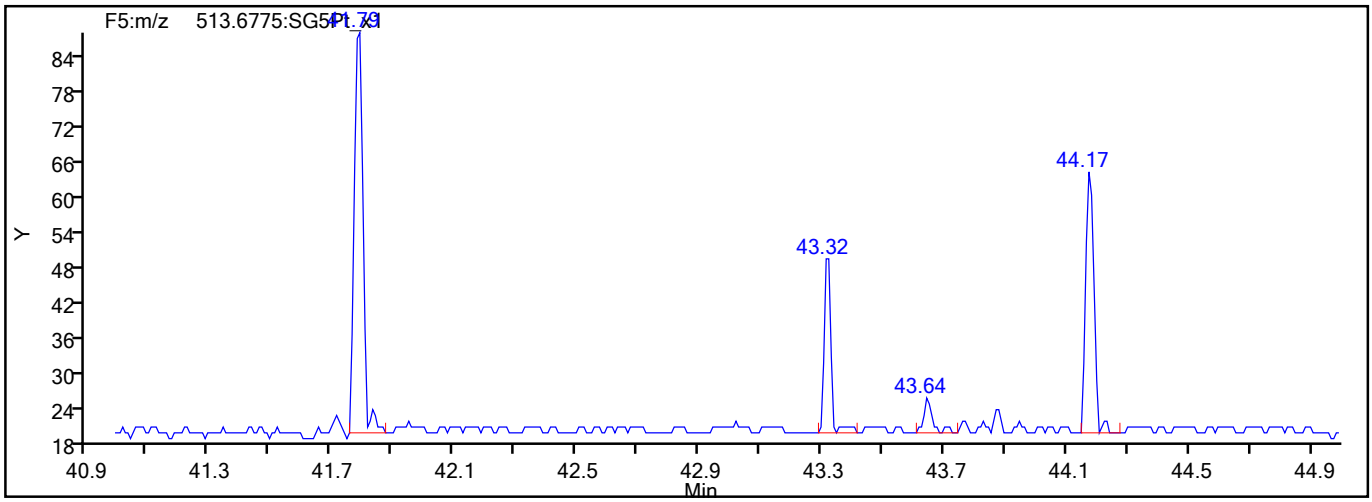

790145

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

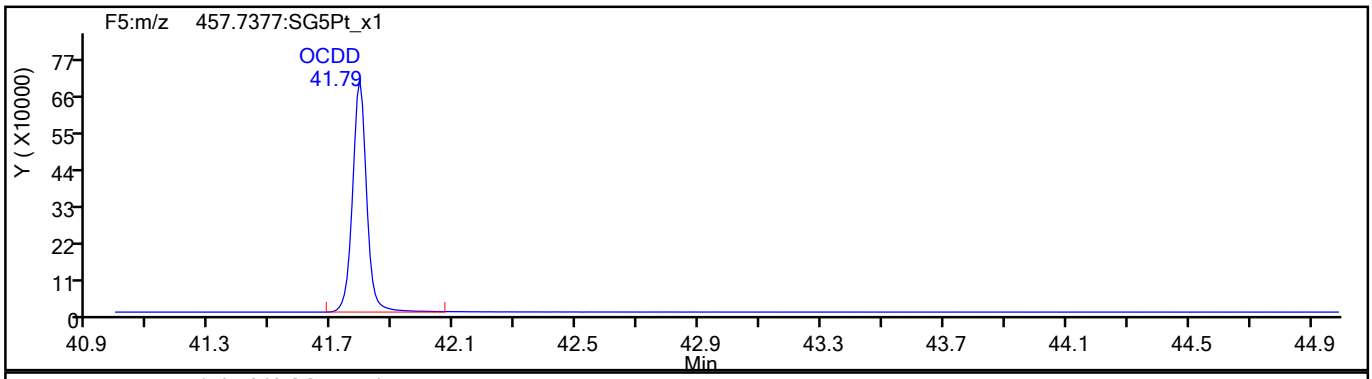

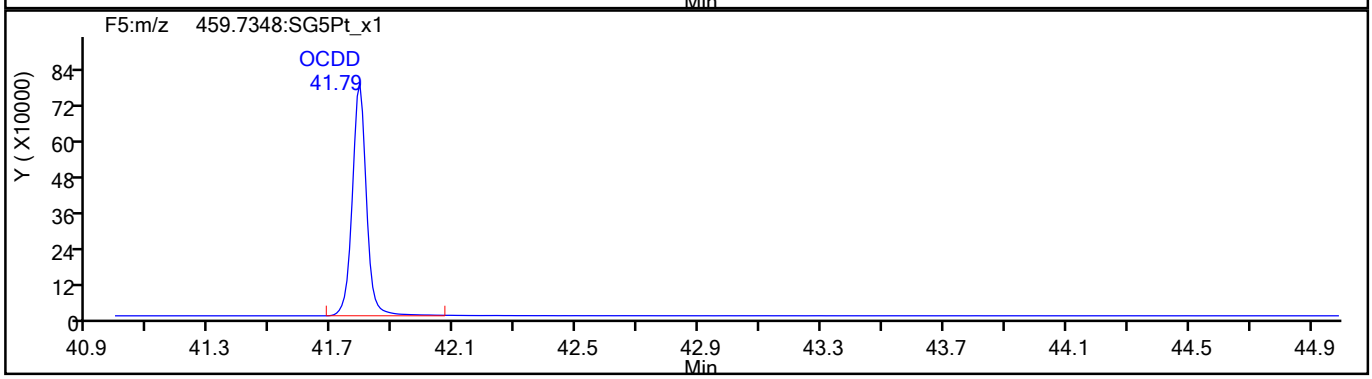

OCDD Standards

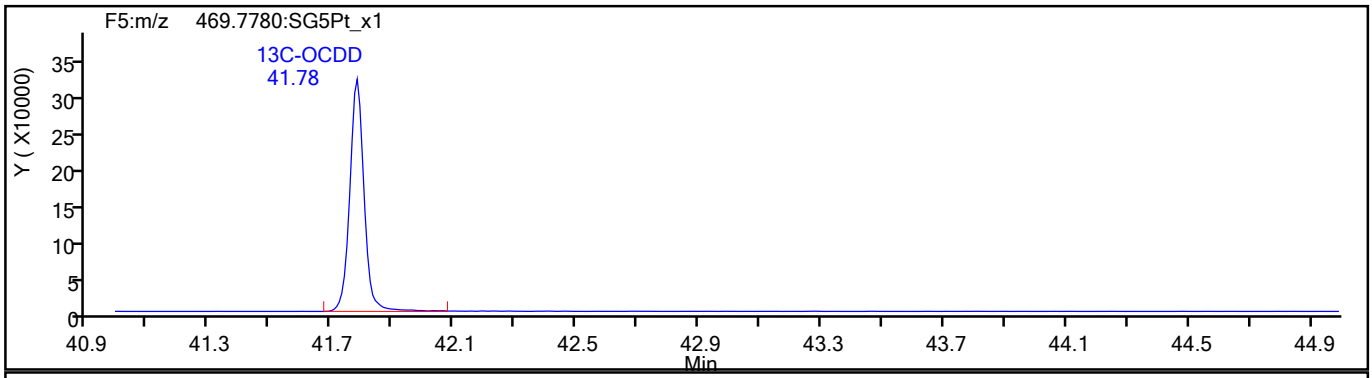

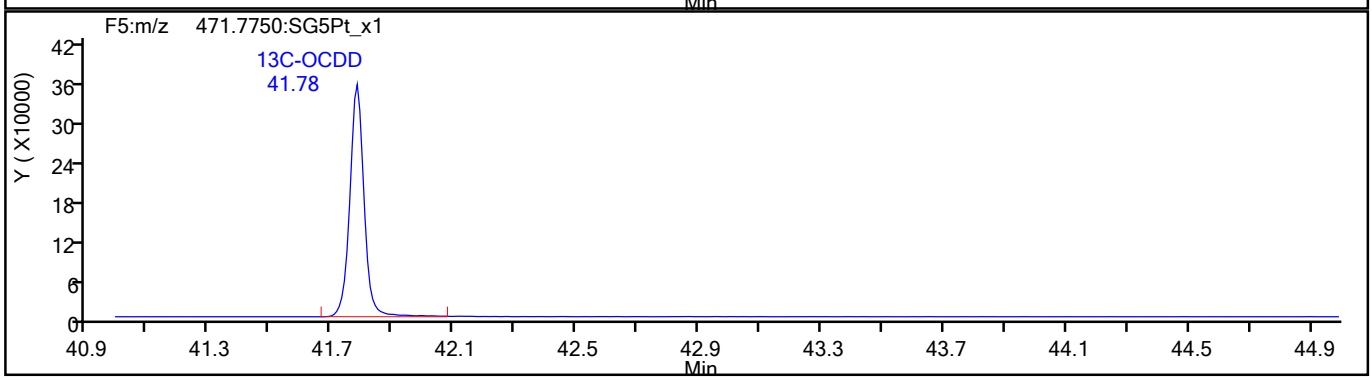

790146

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

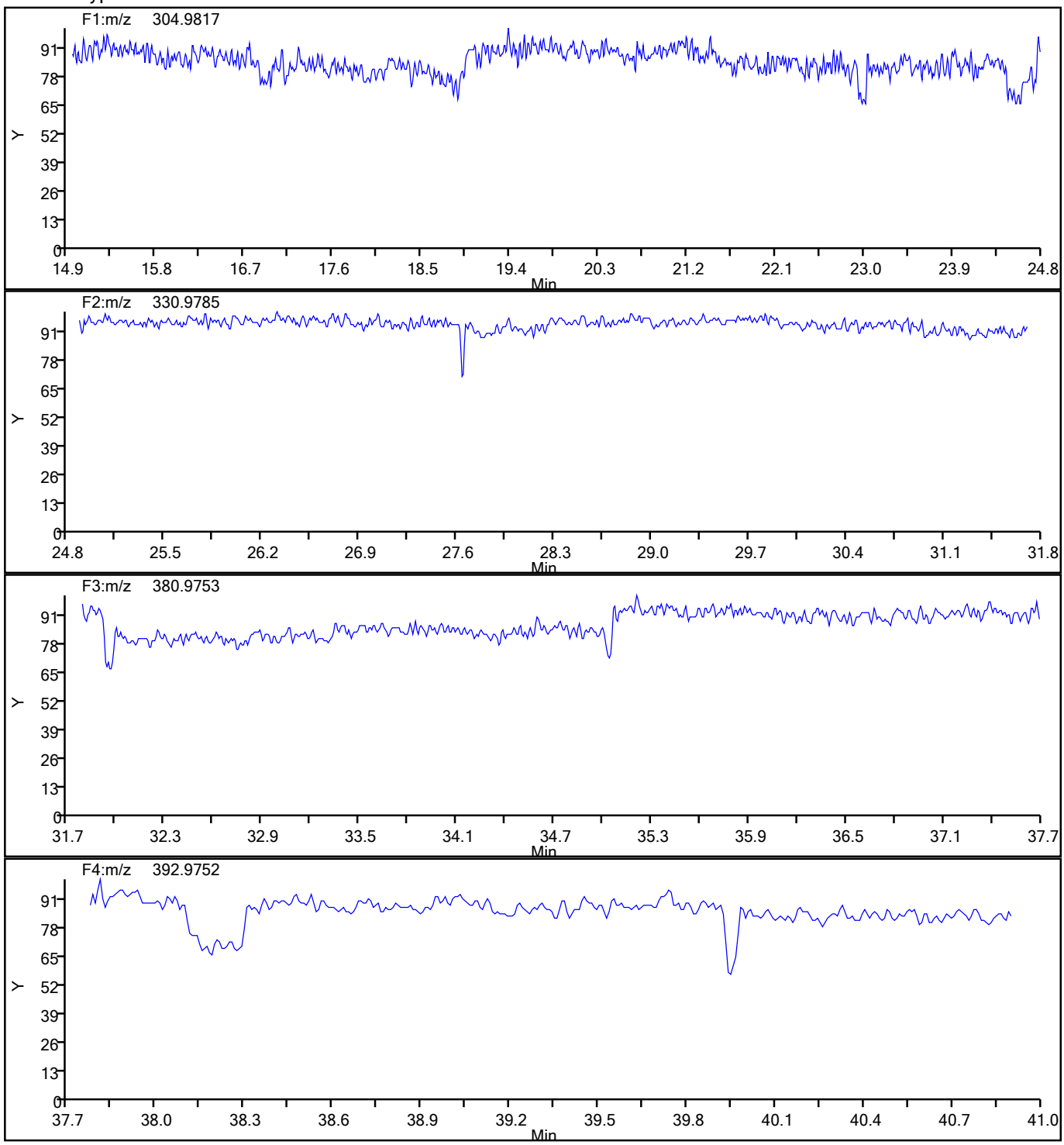

790147

Report Date: 09-Jun-2021 08:53:58 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_7.d		
Injection Date:	08-Jun-2021 16:42:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

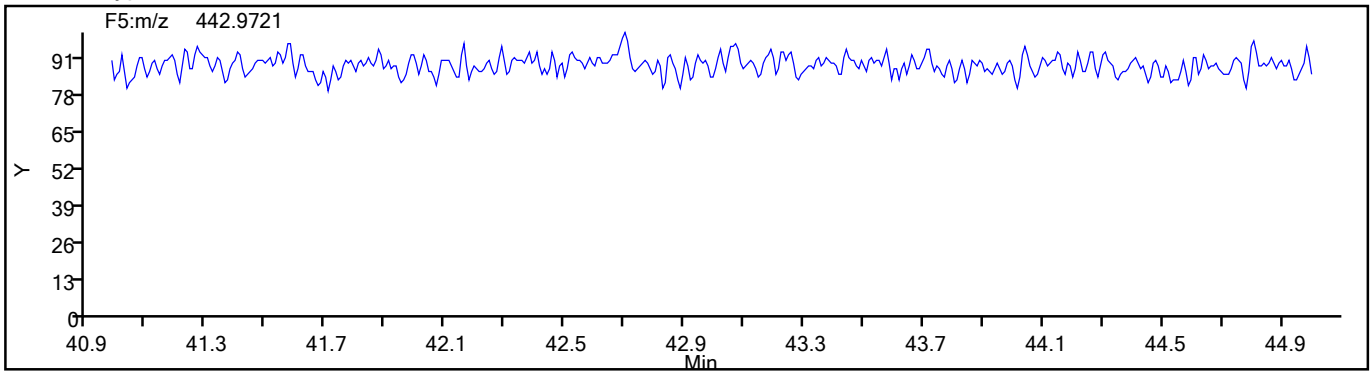

790148

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	20.544	2066088	0.80	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	19.616	2962515	0.80	1.3459	106.5	106.5	0.1844	0.1844	107	
2,3,7,8-TCDF	19.642	6137031	0.79	1.0802	191.8	191.8	0.1493	0.1493	95.89	
S Total TCDF					191.8	191.8	0.1493	0.1493		
D 13C-2,3,7,8-TCDD	20.913	2014532	0.80	0.9317	104.7	104.7	0.1455	0.1455	105	
$ 37Cl4-2,3,7,8-TCDD	20.939	4287059		1.0083	205.8	205.8	0.0958	0.0958	103	
2,3,7,8-TCDD	20.939	4286034	0.79	1.0753	197.8	197.8	0.1041	0.1041	98.92	
S Total TCDD					197.8	197.8	0.1041	0.1041		
D 13C-1,2,3,7,8-PeCDF	26.552	2574521	1.60	1.1405	109.3	109.3	0.2956	0.2956	109	
1,2,3,7,8-PeCDF	26.578	26032333	1.55	1.0543	959.1	959.1	2.101	2.101	95.91	
D 13C-2,3,4,7,8-PeCDF	28.002	2584740	1.63	1.1253	111.2	111.2	0.2996	0.2996	111	
2,3,4,7,8-PeCDF	28.028	24861382	1.54	1.0079	954.4	954.4	2.393	2.393	95.44	
S Total PeCDF					1913.5	1913.5	2.247	2.247		
D 13C-1,2,3,7,8-PeCDD	28.795	1602880	1.57	0.7165	108.3	108.3	0.1169	0.1169	108	
1,2,3,7,8-PeCDD	28.820	16645947	1.55	1.0465	992.4	992.4	0.3154	0.3154	99.24	
S Total PeCDD					992.4	992.4	0.3154	0.3154		
D 13C-1,2,3,4,7,8-HxCDF	34.370	1968615	0.53	0.9648	104.2	104.2	0.2764	0.2764	104	
1,2,3,4,7,8-HxCDF	34.404	21902419	1.26	1.1474	969.7	969.7	2.964	2.964	96.97	
D 13C-1,2,3,6,7,8-HxCDF	34.555	2283961	0.53	1.0708	109.0	109.0	0.2490	0.2490	109	
1,2,3,6,7,8-HxCDF	34.572	26721257	1.24	1.2178	960.7	960.7	2.280	2.280	96.07	
D 13C-2,3,4,6,7,8-HxCDF	35.432	2190509	0.53	1.0413	107.5	107.5	0.2561	0.2561	107	
2,3,4,6,7,8-HxCDF	35.449	25388405	1.26	1.2145	954.3	954.3	2.195	2.195	95.43	
D 13C-1,2,3,7,8,9-HxCDF	36.376	1895740	0.54	0.9731	99.5	99.5	0.2741	0.2741	99.52	
1,2,3,7,8,9-HxCDF	36.393	22553786	1.25	1.2401	959.4	959.4	2.206	2.206	95.94	
S Total HxCDF					3844.1	3844.1	2.411	2.411		
* 13C-1,2,3,7,8,9-HxCDD	36.182	1957513	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	35.668	1539784	1.30	0.7587	103.7	103.7	0.1260	0.1260	104	
1,2,3,4,7,8-HxCDD	35.685	15558498	1.24	1.0608	952.5	952.5	0.9710	0.9710	95.25	
D 13C-1,2,3,6,7,8-HxCDD	35.794	1741498	1.29	0.8593	103.5	103.5	0.1112	0.1112	104	
1,2,3,6,7,8-HxCDD	35.811	16661405	1.25	0.9933	963.1	963.1	0.9604	0.9604	96.31	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,7,8,9-HxCDD	36.198	17279185	1.24	1.1094	949.3	949.3	0.8929	0.8929	94.93	
S Total HxCDD					2865.0	2865.0	0.9414	0.9414		
D 13C-1,2,3,4,6,7,8-HpCDF	38.292	1546113	0.45	0.7359	107.3	107.3	0.2883	0.2883	107	
1,2,3,4,6,7,8-HpCDF	38.309	21181967	1.05	1.4421	950.0	950.0	2.277	2.277	95.00	
D 13C-1,2,3,4,7,8,9-HpCDF	39.591	1455766	0.46	0.6854	108.5	108.5	0.3095	0.3095	109	
1,2,3,4,7,8,9-HpCDF	39.600	17812004	1.04	1.3092	934.6	934.6	2.410	2.410	93.46	
S Total HpCDF					1884.6	1884.6	2.344	2.344		
D 13C-1,2,3,4,6,7,8-HpCDD	39.279	1355803	1.07	0.6745	102.7	102.7	0.1997	0.1997	103	
1,2,3,4,6,7,8-HpCDD	39.287	13800004	1.05	1.0503	969.1	969.1	1.263	1.263	96.91	
S Total HpCDD					969.1	969.1	1.263	1.263		
D 13C-OCDD	41.778	2298668	0.91	0.5446	215.6	215.6	0.2297	0.2297	108	
OCDF	41.862	30505464	0.91	1.3168	2015.6	2015.6	1.318	1.318	101	
OCDD	41.786	22803823	0.89	1.0620	1868.3	1868.3	1.408	1.408	93.41	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 08-Jun-2021 17:30:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CS-6 HRDXNL6_00028
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 09-Jun-2021 08:54:04 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: bilottag Date: 09-Jun-2021 07:23:25

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	20.544	20.547	0		920603	150087	115	287	1305		
333.9338	20.544	20.547	0		1145485	178229	63	157	2829	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	19.616	19.616	0	0.955	1315625	222528	203	507	1096		
317.9389	19.625	19.616	1	0.955	1646890	273662	123	307	2225	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	19.642	19.646	0	1.001	2713655	446561	138	345	3236		
305.8987	19.642	19.646	0	1.001	3423376	567597	182	455	3119	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	20.913	20.910	0	1.018	893612	134635	115	287	1171		
333.9338	20.913	20.910	0	1.018	1120920	170916	63	157	2713	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	20.939	20.935	0	1.019	4287059	670067	127	317	5276		
2,3,7,8-TCDD											
319.8965	20.939	20.939	0	1.001	1891754	292983	63	157	4651		
321.8936	20.939	20.939	0	1.001	2394280	370217	74	185	5003	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	26.552	26.560	0	1.292	1583459	282119	248	620	1138		
353.8970	26.552	26.560	0	1.292	991062	177690	195	487	911	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	26.578	26.584	0	1.001	15809872	2840843	2484	6210	1144		
341.8567	26.578	26.584	0	1.001	10222461	1821485	1590	3975	1146	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.002	28.014	-1	1.363	1602860	260320	248	620	1050		
353.8970	28.002	28.014	-1	1.363	981880	162024	195	487	831	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	28.028	28.039	-1	1.001	15085675	2478093	2484	6210	998		
341.8567	28.028	28.039	-1	1.001	9775707	1618127	1590	3975	1018	1.54(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	28.795	28.801	0	1.402	978472	153717	62	155	2479		
369.8919	28.795	28.801	0	1.402	624408	97747	48	120	2036	1.57(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	28.820	28.828	0	1.001	10130500	1566899	211	527	7426		
357.8516	28.820	28.828	0	1.001	6515447	1012500	121	302	8368	1.55(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.370	34.384	-1	0.950	681535	131177	206	515	637		
385.8610	34.370	34.384	-1	0.950	1287080	241920	293	732	826	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.404	34.405	0	1.001	12221224	2429393	2850	7125	852		
375.8178	34.404	34.405	0	1.001	9681195	1938109	2226	5565	871	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	34.555	34.562	0	0.955	787279	159086	206	515	772		
385.8610	34.555	34.562	0	0.955	1496682	297889	293	732	1017	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	34.572	34.582	-1	1.000	14789206	2955884	2850	7125	1037		
375.8178	34.572	34.582	-1	1.000	11932051	2355841	2226	5565	1058	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.432	35.444	-1	0.979	755749	165004	206	515	801		
385.8610	35.432	35.444	-1	0.979	1434760	311089	293	732	1062	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.449	35.461	-1	1.000	14140079	3143736	2850	7125	1103		
375.8178	35.449	35.461	-1	1.000	11248326	2509936	2226	5565	1128	1.26(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.376	36.388	-1	1.005	661276	161798	206	515	785		
385.8610	36.376	36.388	-1	1.005	1234464	302164	293	732	1031	0.54(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.393	36.402	-1	1.000	12520528	3053286	2850	7125	1071		
375.8178	36.393	36.402	-1	1.000	10033258	2435227	2226	5565	1094	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.182	36.192	-1		1094886	260943	101	252	2584		
403.8529	36.182	36.192	-1		862627	206665	78	195	2650	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	35.668	35.680	-1	0.986	871516	210376	101	252	2083		
403.8529	35.668	35.680	-1	0.986	668268	161161	78	195	2066	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	35.685	35.695	-1	1.000	8624435	2104573	873	2182	2411		
391.8127	35.685	35.695	-1	1.000	6934063	1696812	658	1645	2579	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	35.794	35.805	-1	0.989	980230	223296	101	252	2211		
403.8529	35.794	35.805	-1	0.989	761268	177860	78	195	2280	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8158	35.811	35.820	-1	1.000	9246987	2090881	873	2182	2395		
391.8127	35.811	35.820	-1	1.000	7414418	1678531	658	1645	2551	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.198	36.208	-1	1.015	9564246	2295203	873	2182	2629		
391.8127	36.198	36.208	-1	1.015	7714939	1845750	658	1645	2805	1.24(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.292	38.305	-1	1.058	482843	137759	141	352	977		
419.8220	38.292	38.305	-1	1.058	1063270	304088	256	640	1188	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.309	38.317	0	1.000	10831802	3065791	3002	7505	1021		
409.7788	38.309	38.317	0	1.000	10350165	2906390	2802	7005	1037	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.591	39.600	-1	1.094	458518	146875	141	352	1042		
419.8220	39.591	39.600	-1	1.094	997248	313009	256	640	1223	0.46(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.600	39.608	-1	1.000	9086557	2852631	3002	7505	950		
409.7788	39.600	39.608	-1	1.000	8725447	2728020	2802	7005	974	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.279	39.293	-1	1.086	700550	219811	138	345	1593		
437.8140	39.279	39.293	-1	1.086	655253	202475	114	285	1776	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.287	39.301	-1	1.000	7071387	2141109	1133	2832	1890		
425.7737	39.287	39.301	-1	1.000	6728617	2063900	1107	2767	1864	1.05(0.88-1.20)	
13C-OCDD											
469.7780	41.778	41.785	0	1.155	1096060	330168	115	287	2871		
471.7750	41.778	41.785	0	1.155	1202608	365220	119	297	3069	0.91(0.76-1.02)	
OCDF											
441.7428	41.862	41.875	-1	1.002	14551716	4304688	1153	2882	3733		
443.7399	41.862	41.875	-1	1.002	15953748	4798066	1261	3152	3805	0.91(0.76-1.02)	
OCDD											
457.7377	41.786	41.794	0	1.000	10735225	3226535	983	2457	3282		
459.7348	41.786	41.794	0	1.000	12068598	3663774	1097	2742	3340	0.89(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 1.00 Units: mL

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

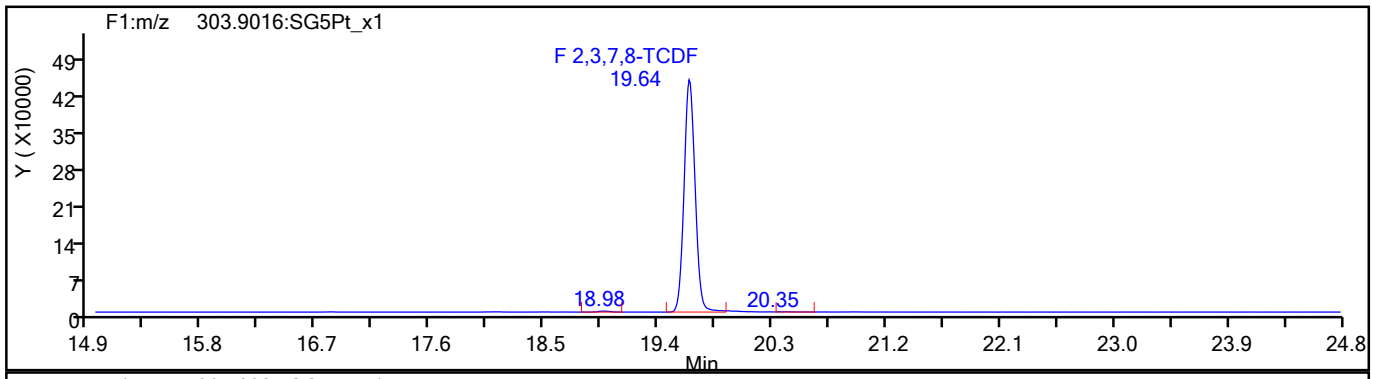

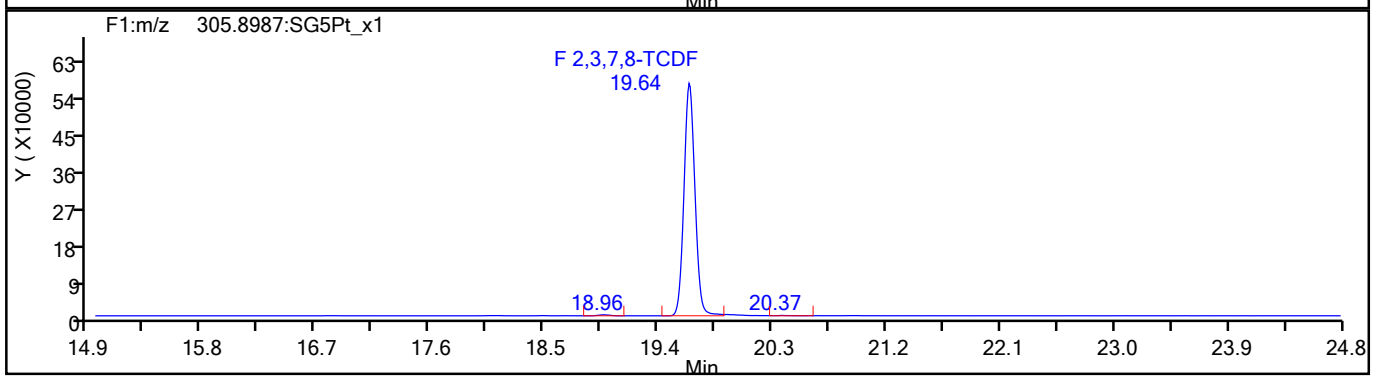

TCDF Standards

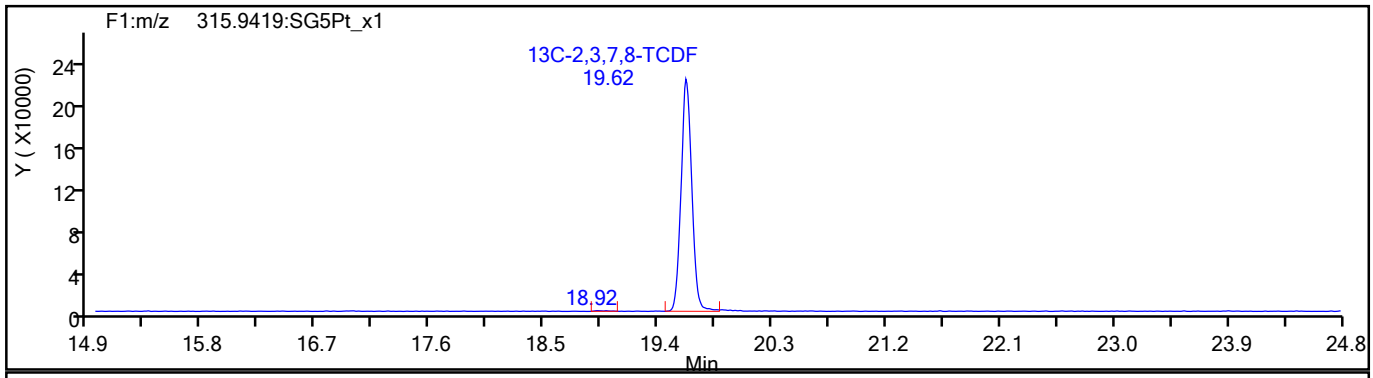

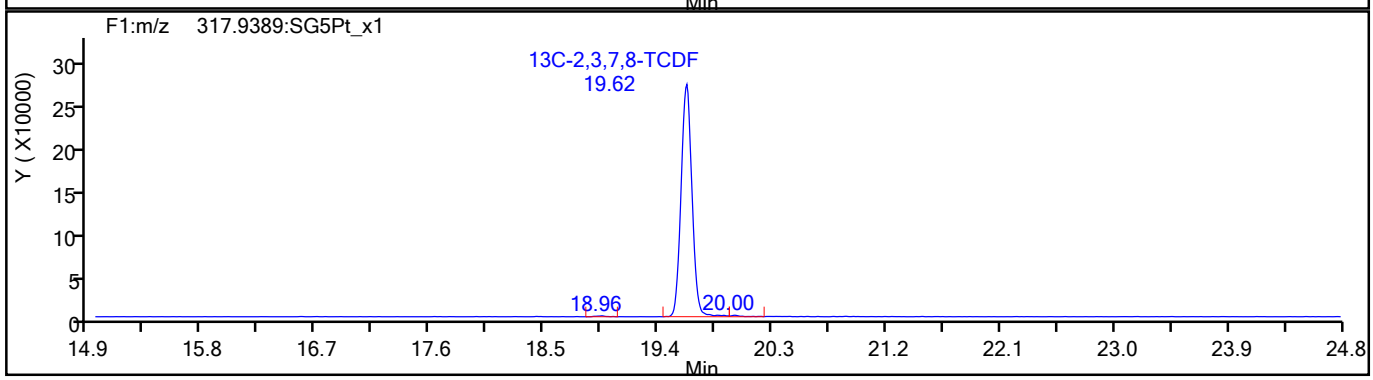

790154

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

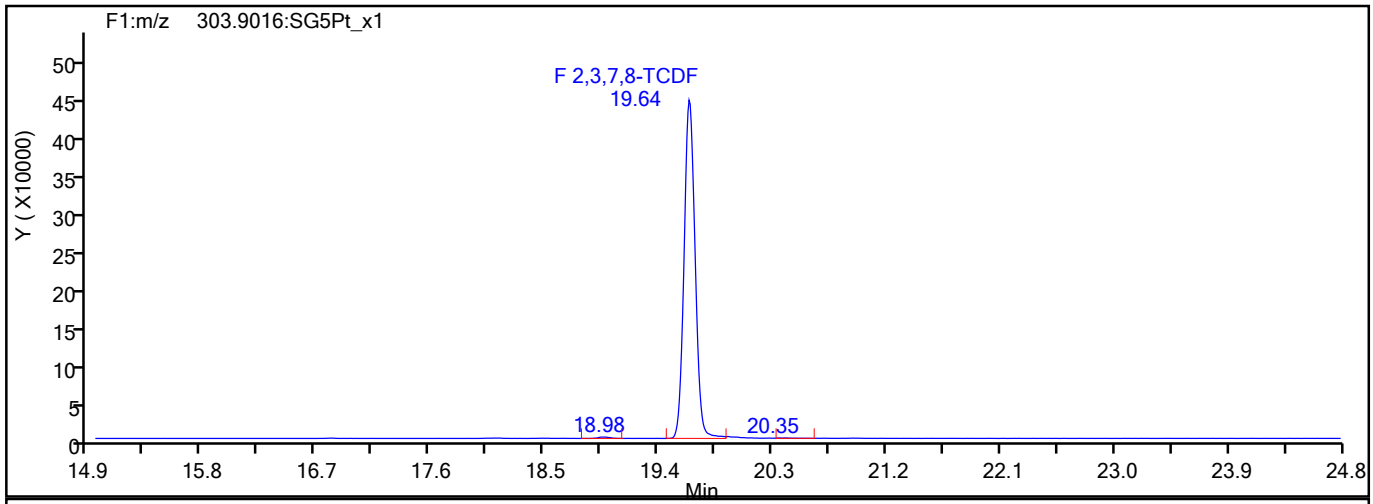

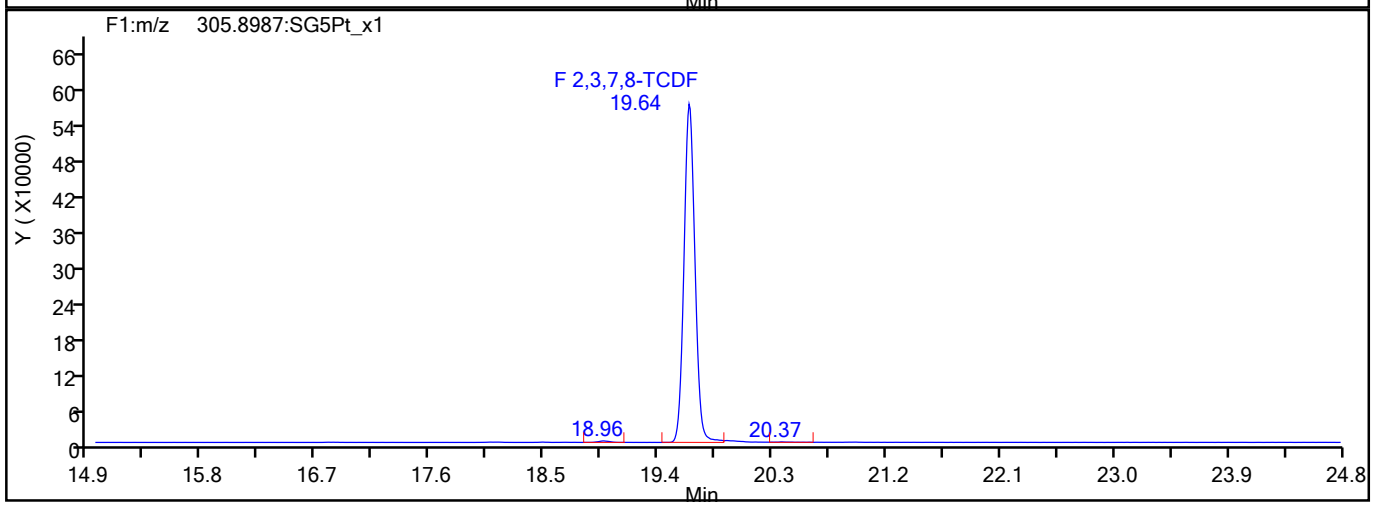

TCDF Interference Mass

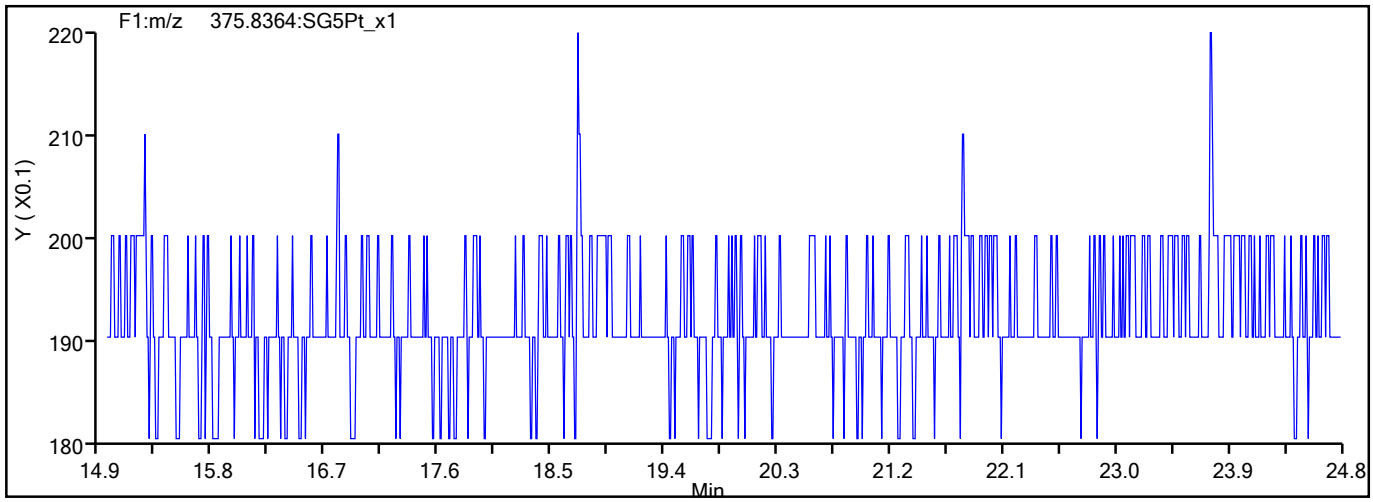

790155

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

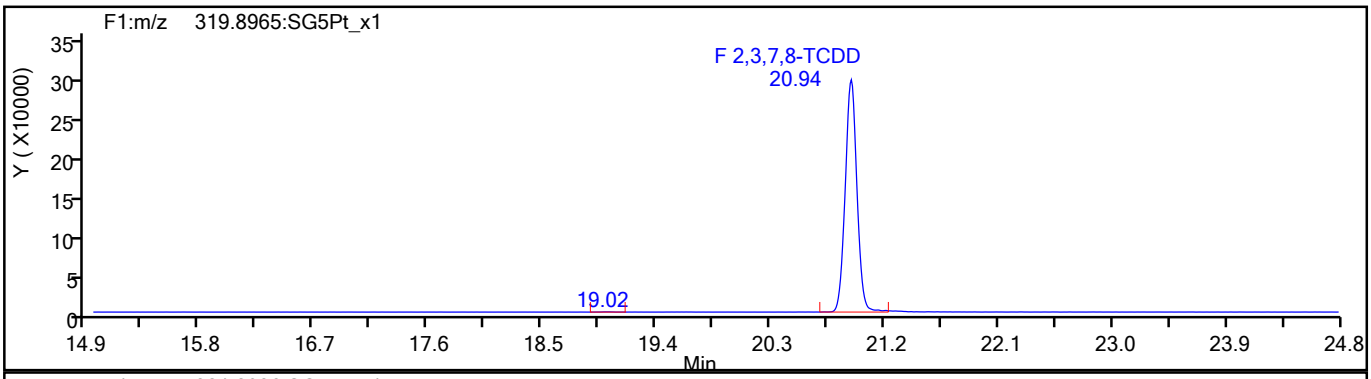

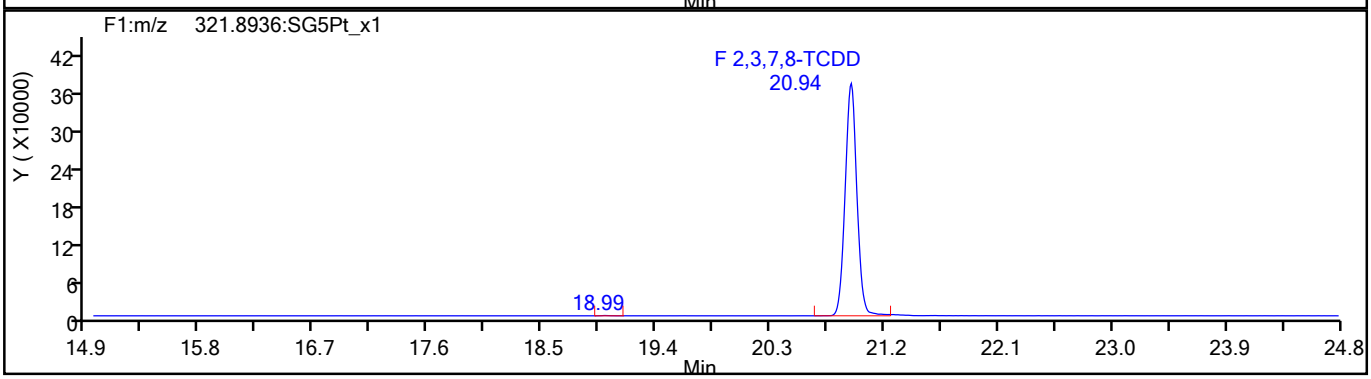

TCDD Standards

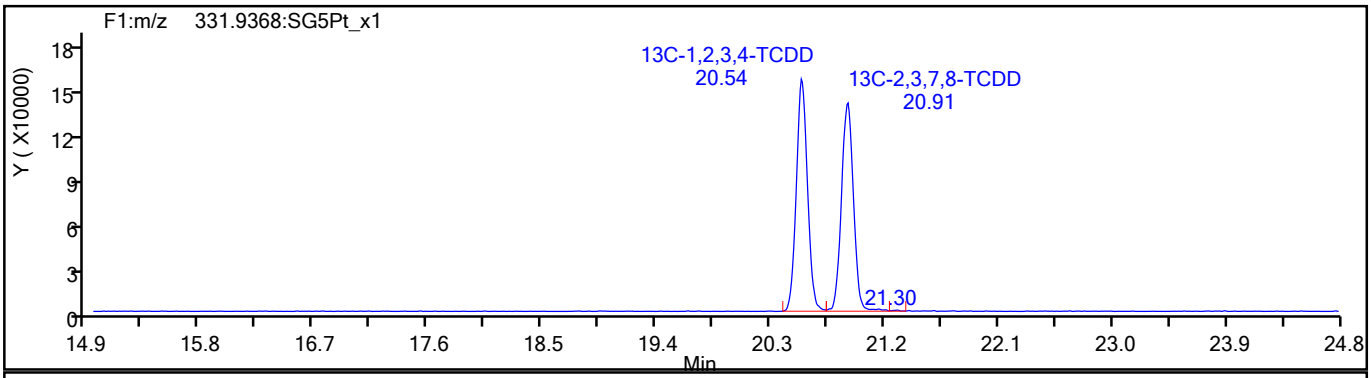

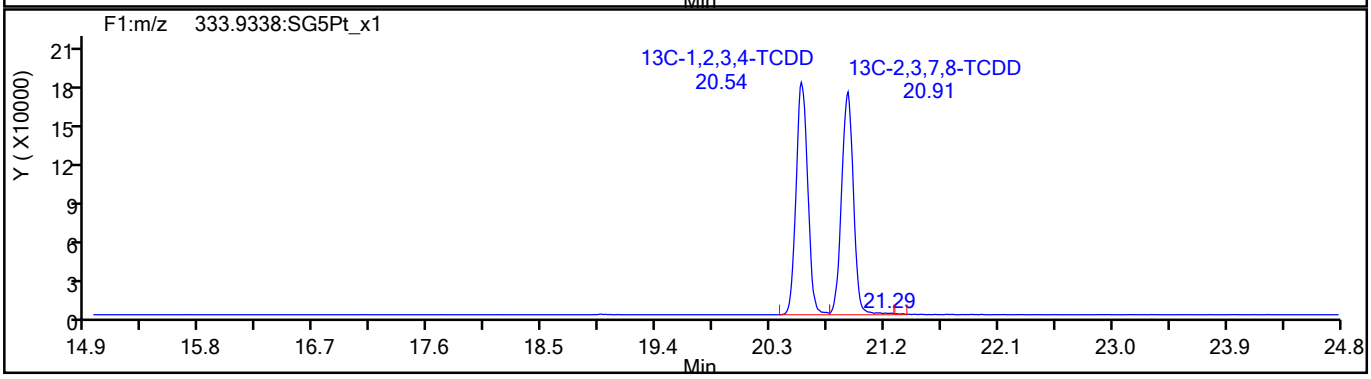

790156

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

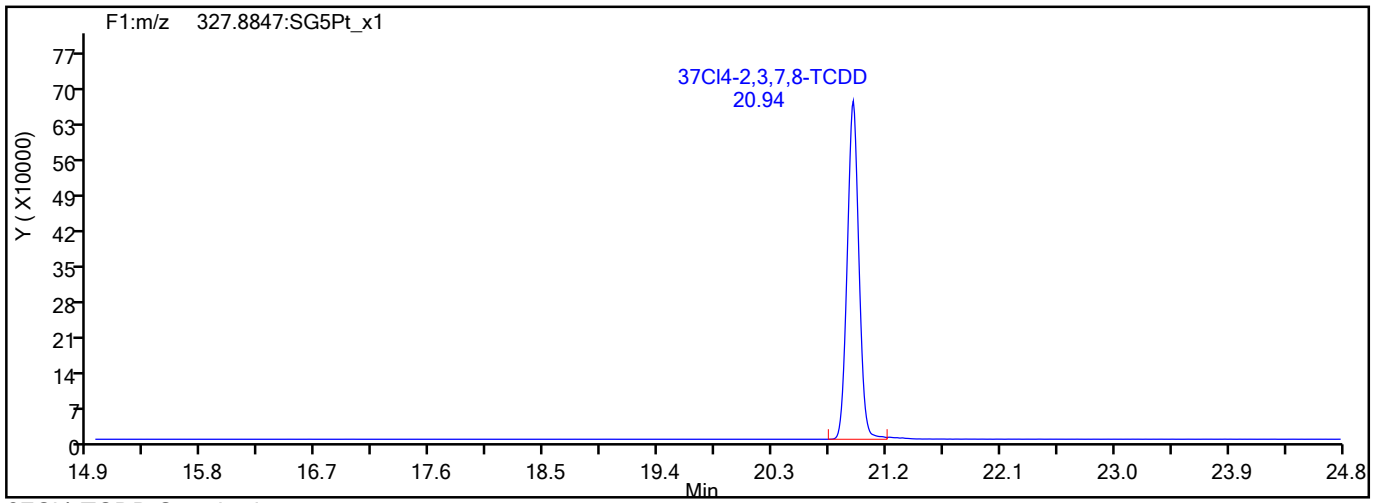

37Cl4-TCDD Standards

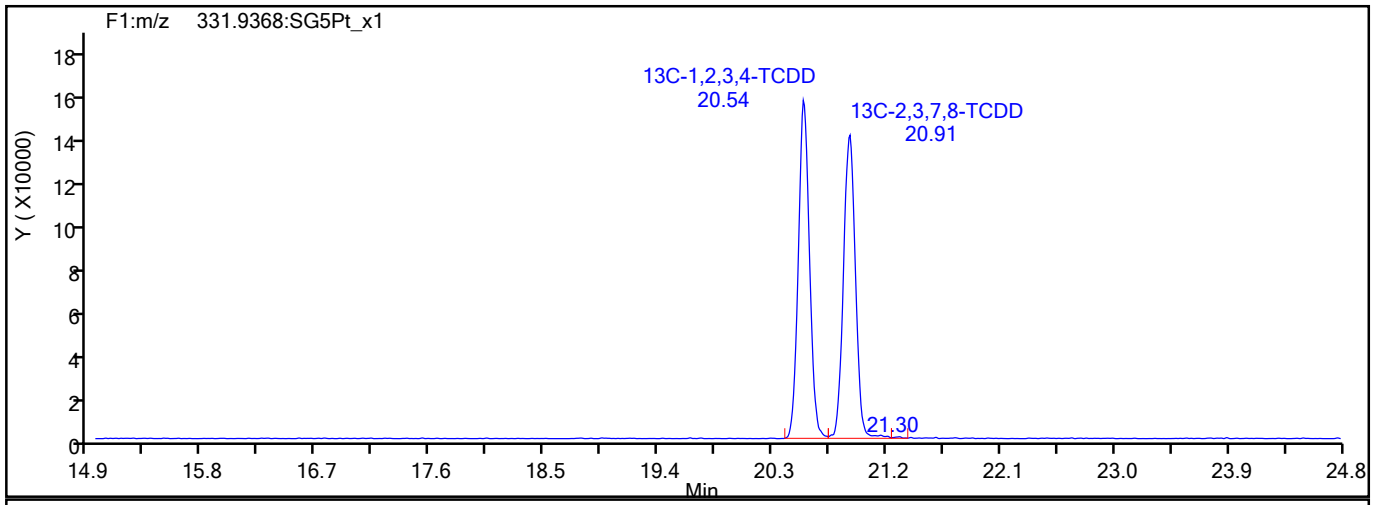

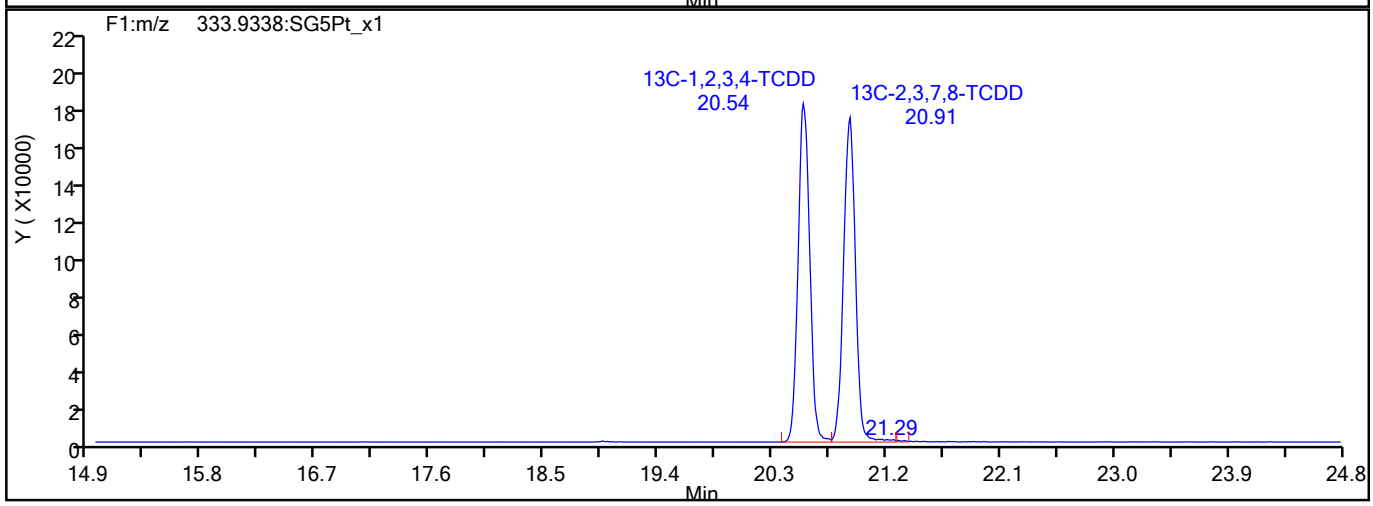

790157

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

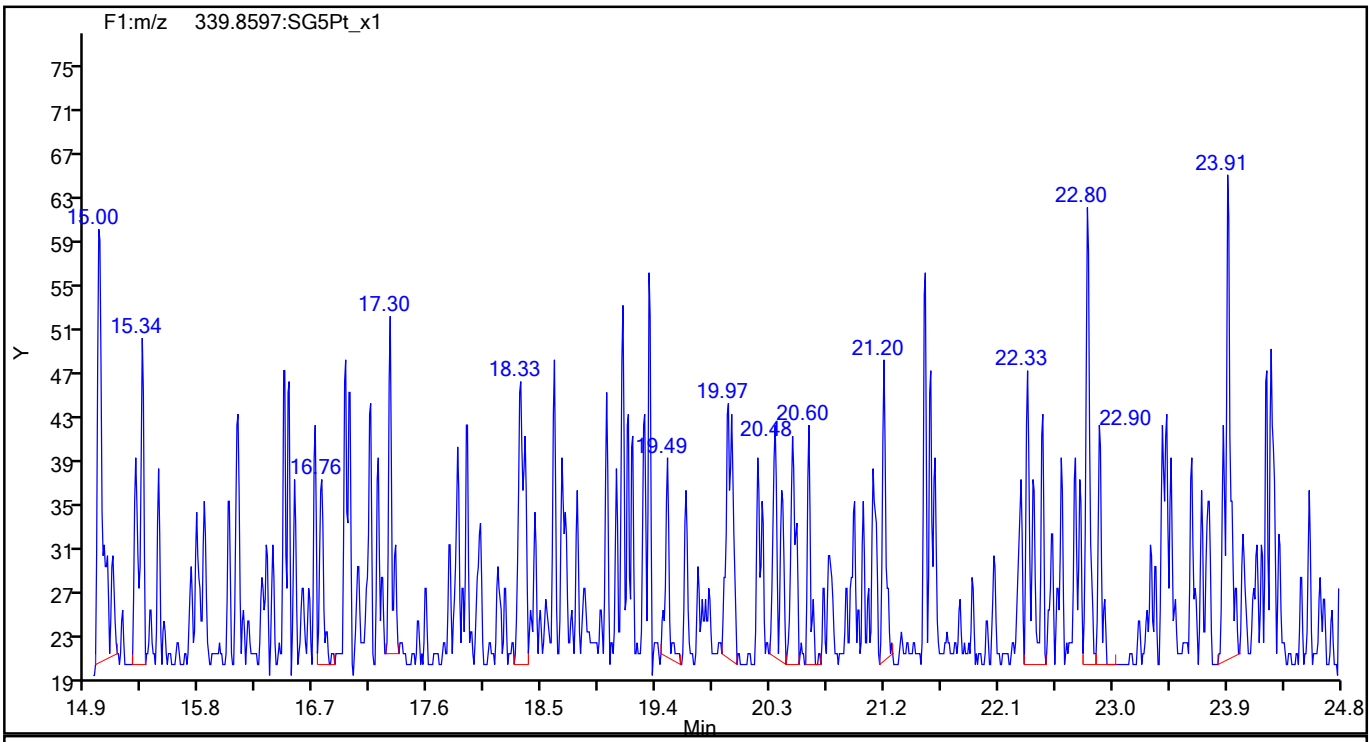

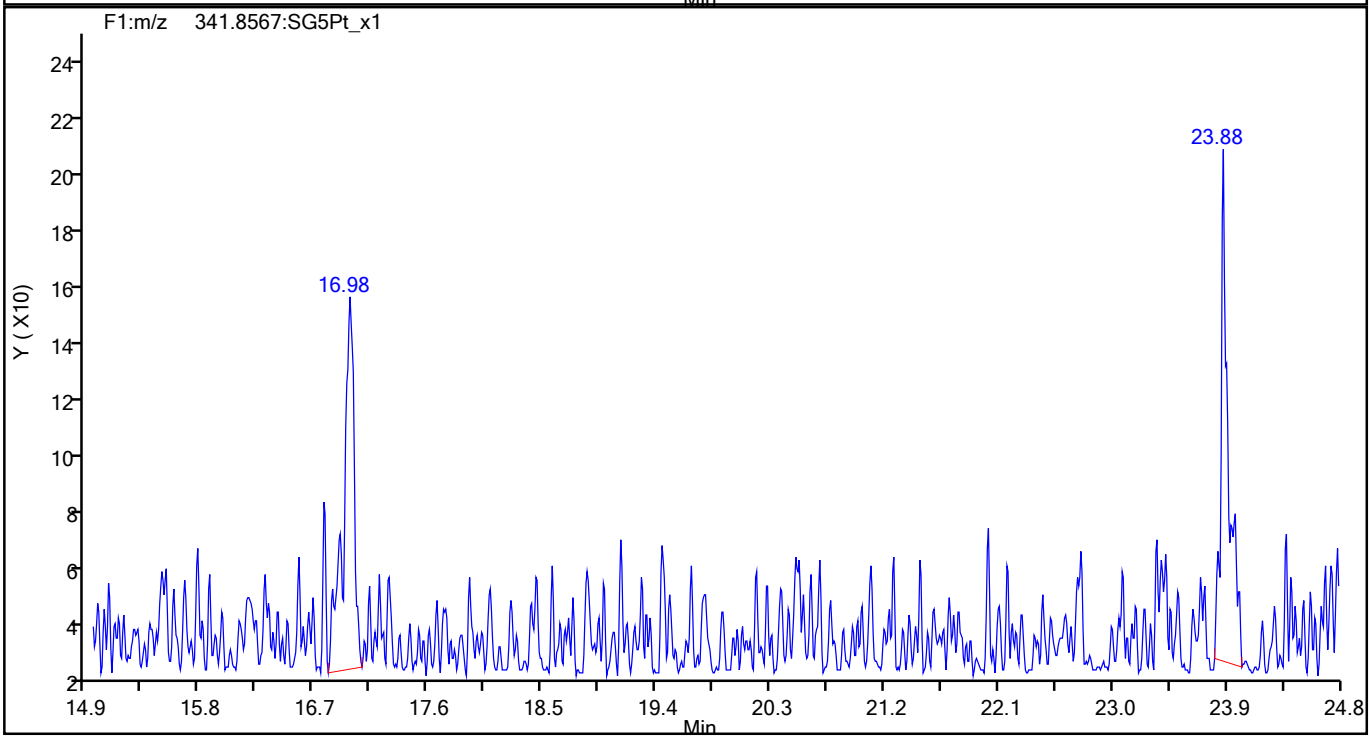

790158

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

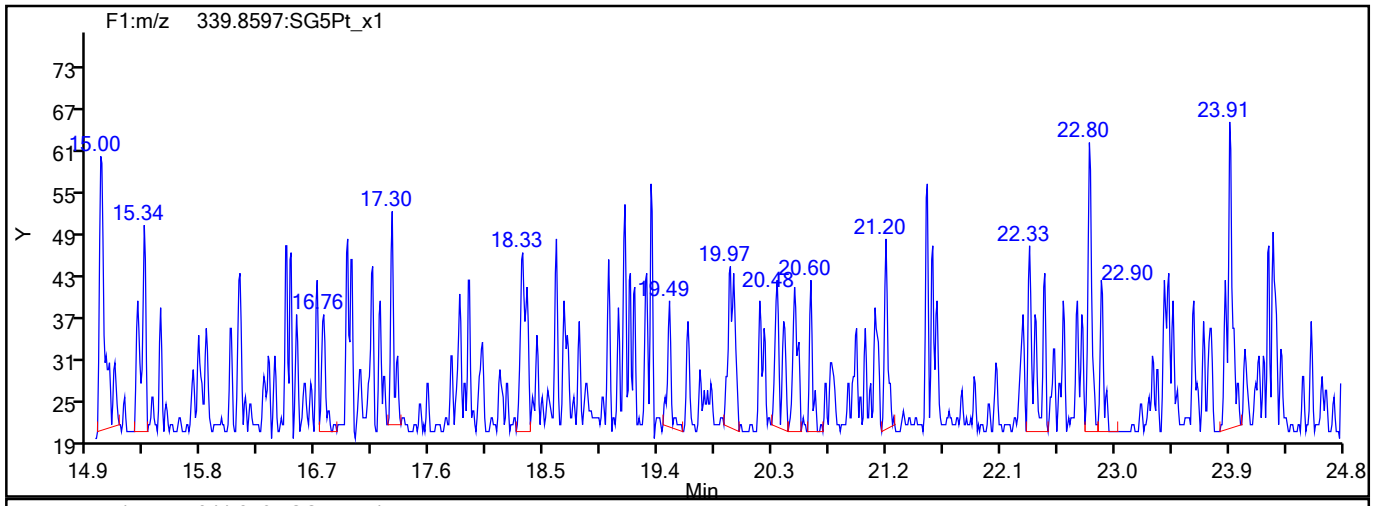

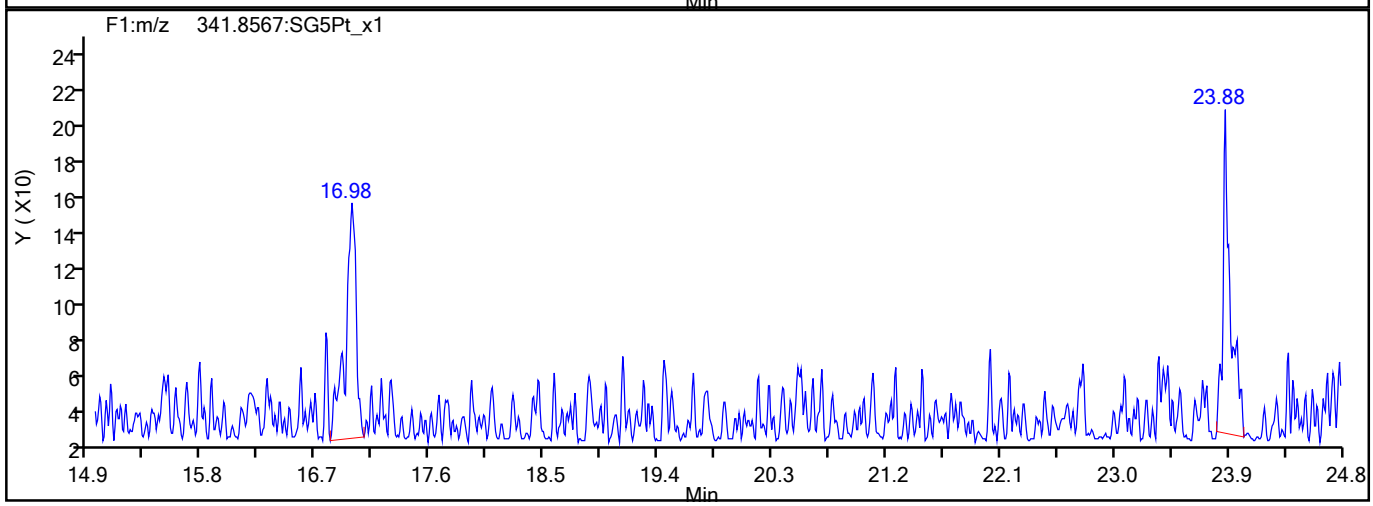

F1 PeCDFs Interference Mass

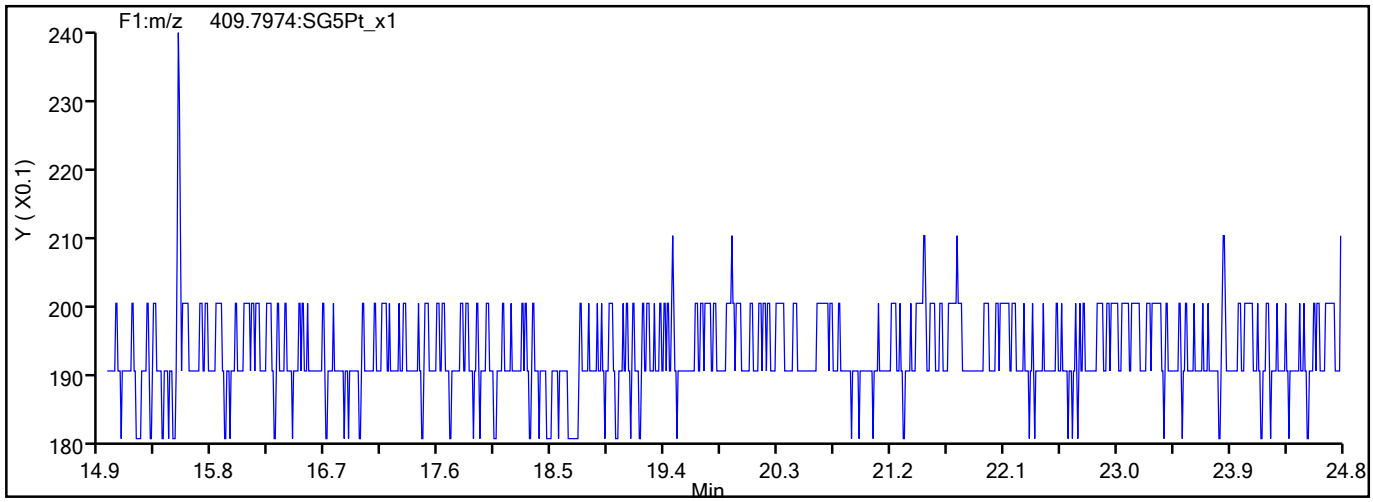

790159

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

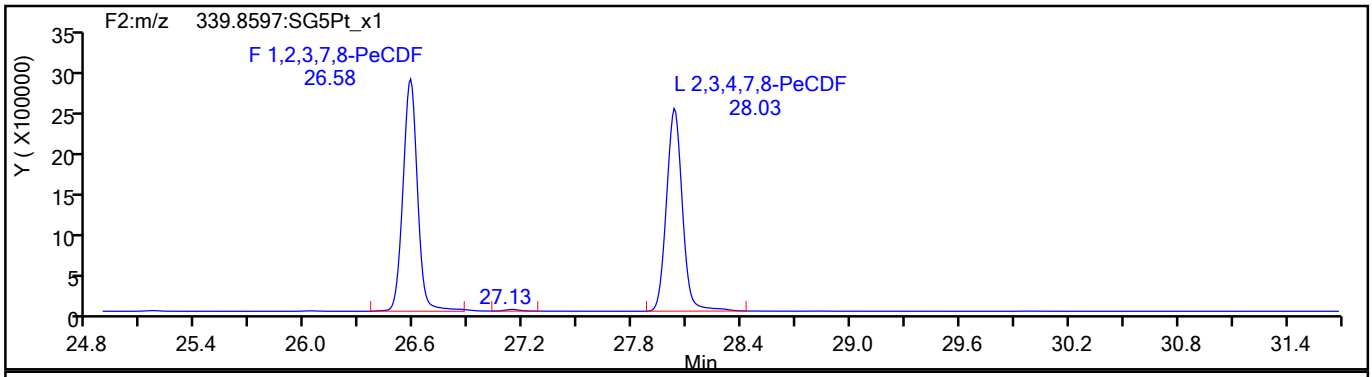

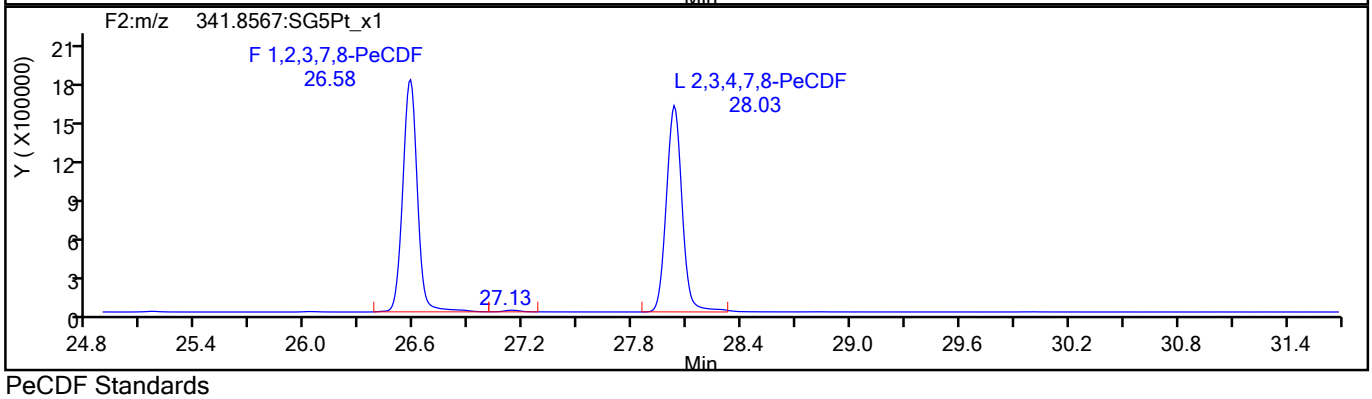

PeCDF Standards

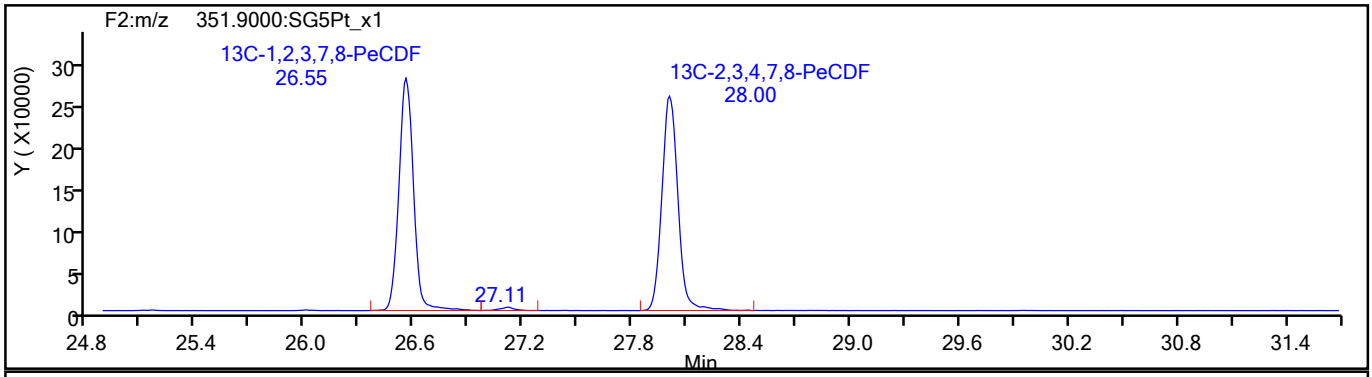

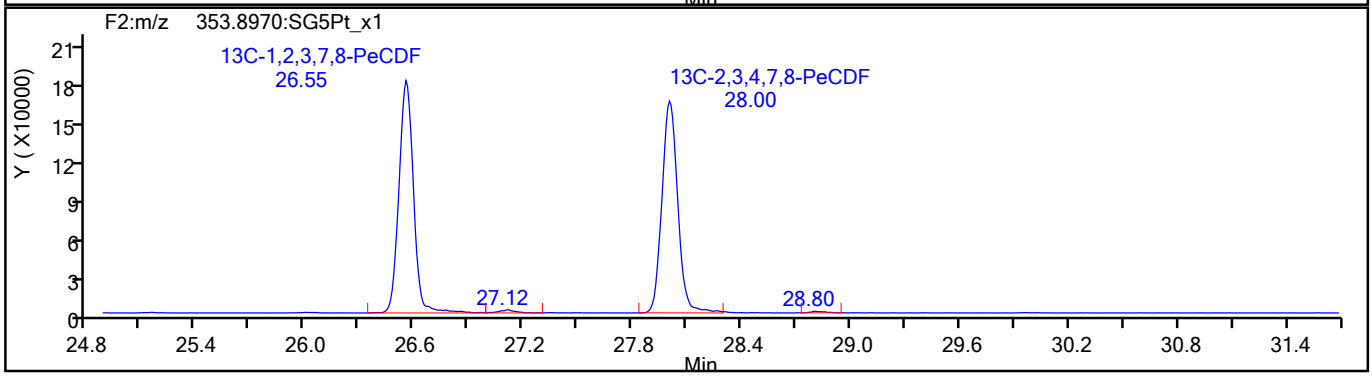

790160

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

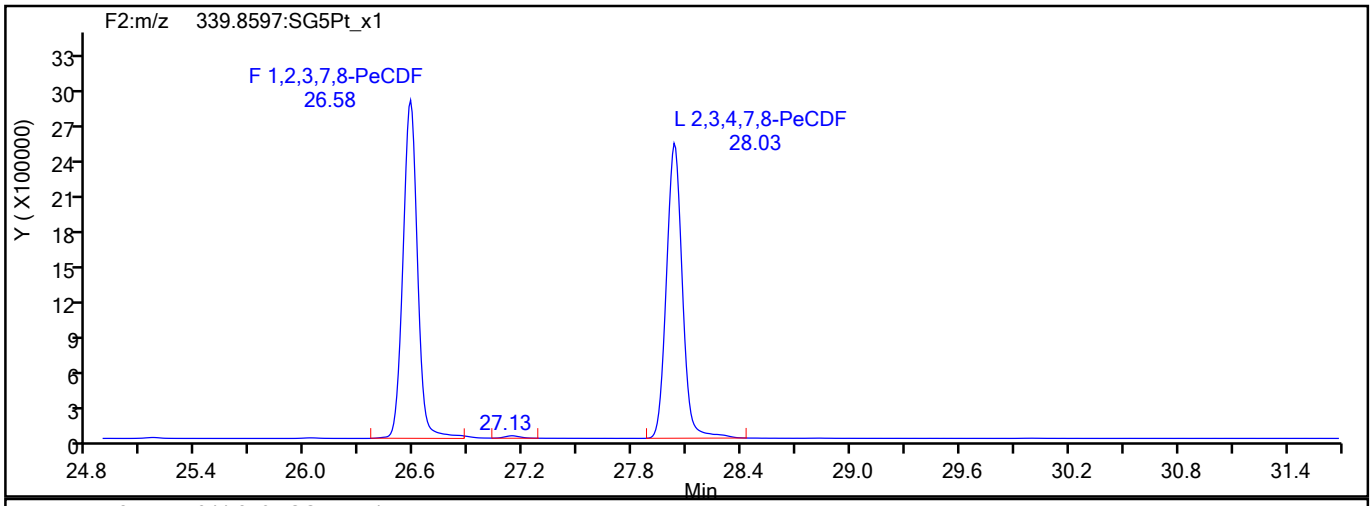

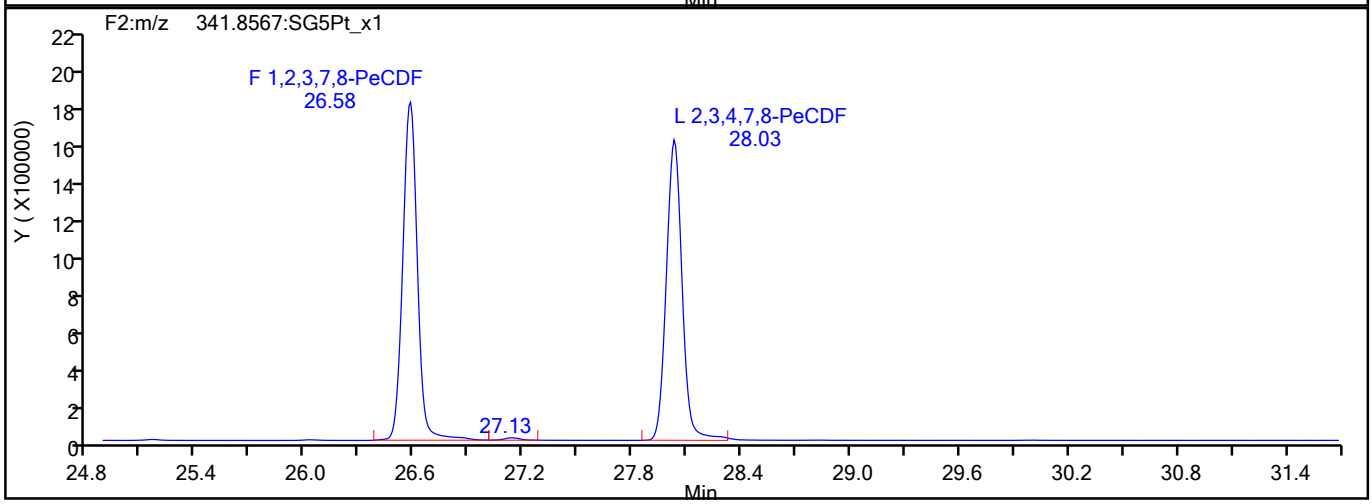

PeCDF Interference Mass

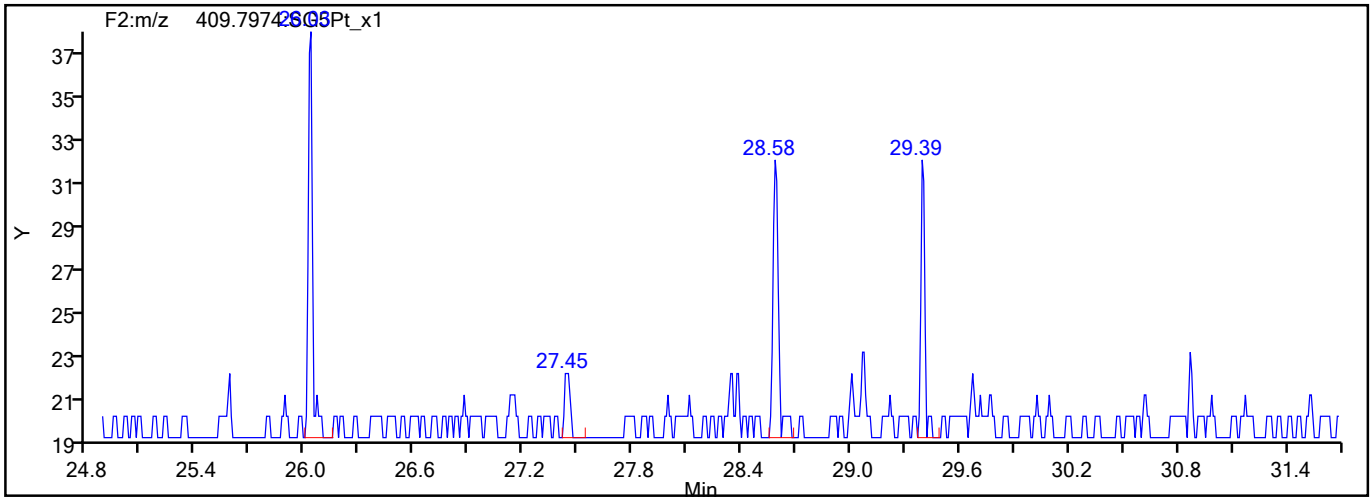

790161

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

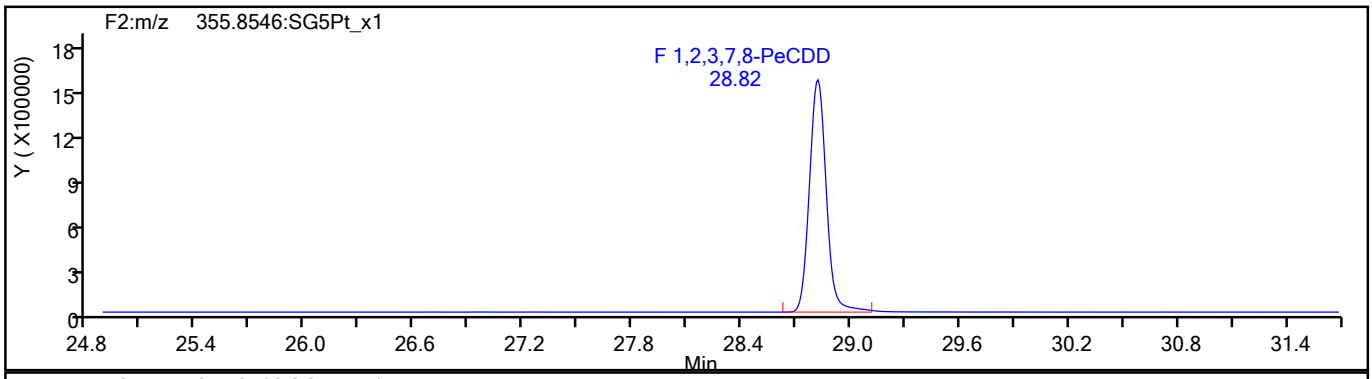

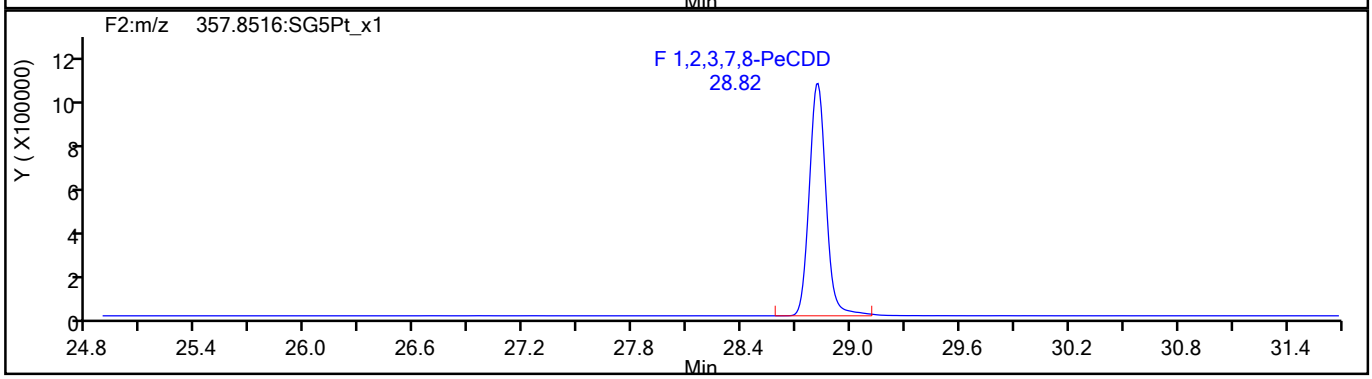

PeCDD Standards

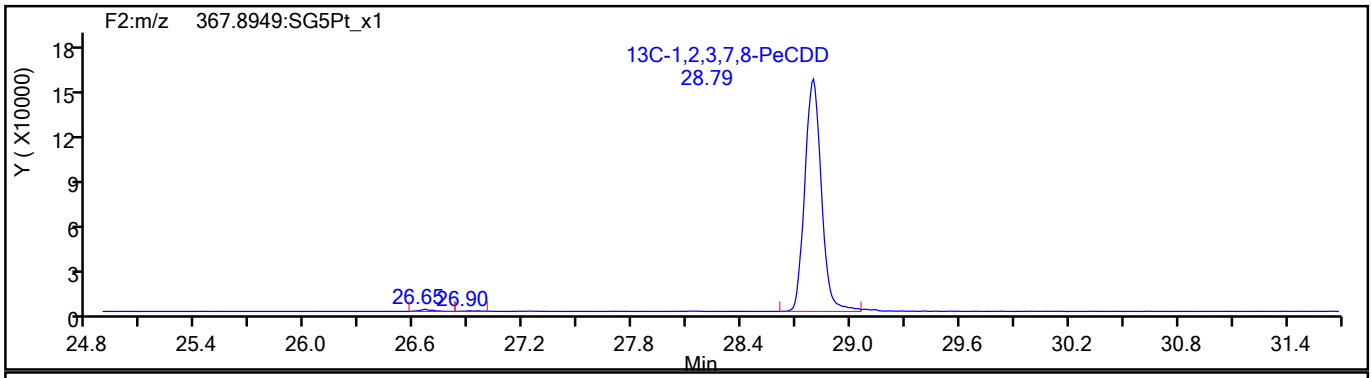

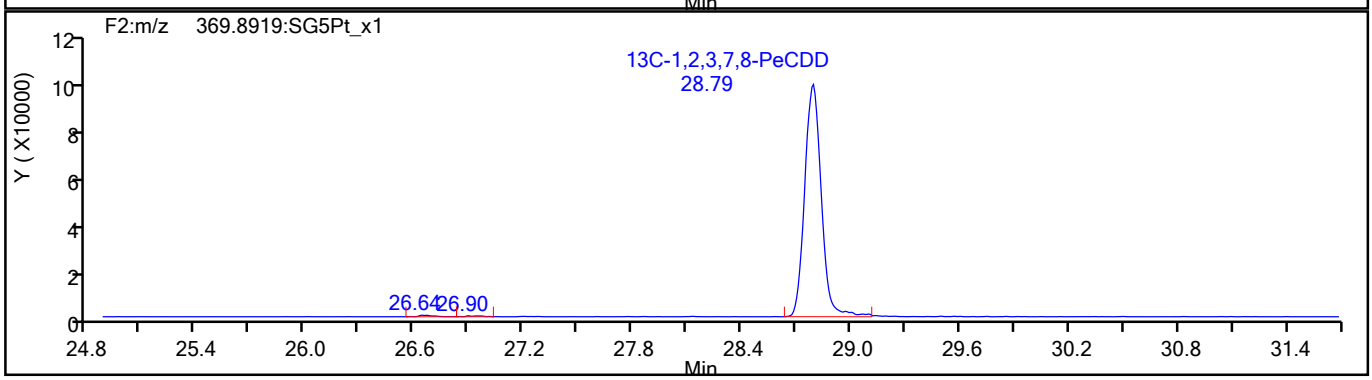

790162

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

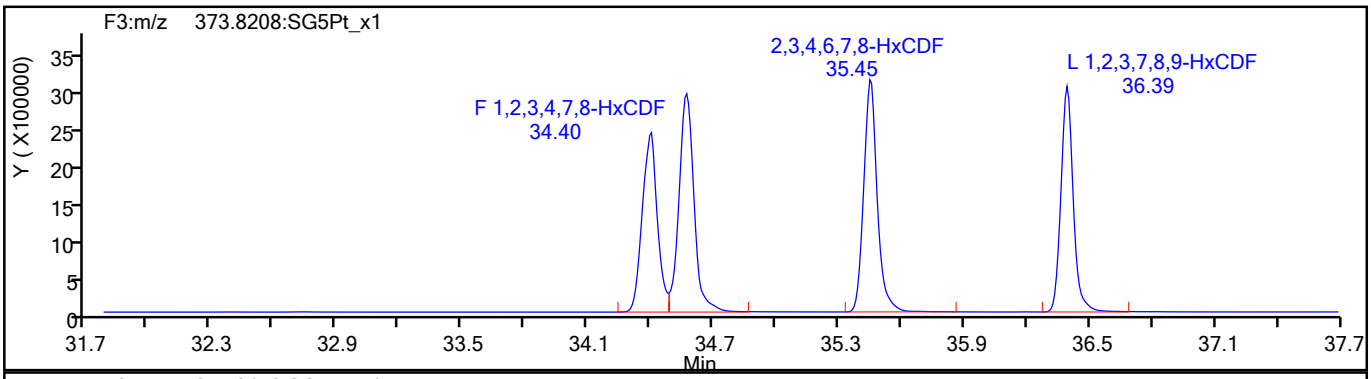

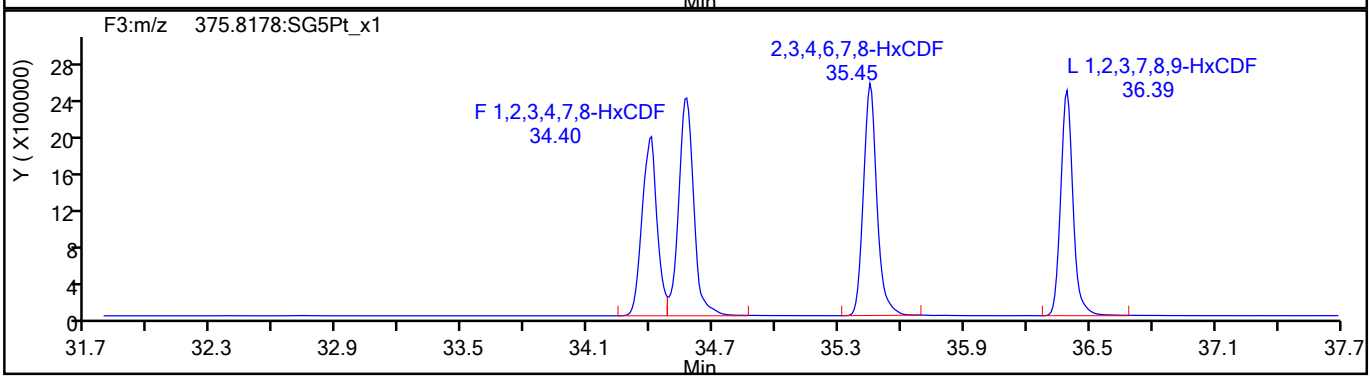

HxCDF Standards

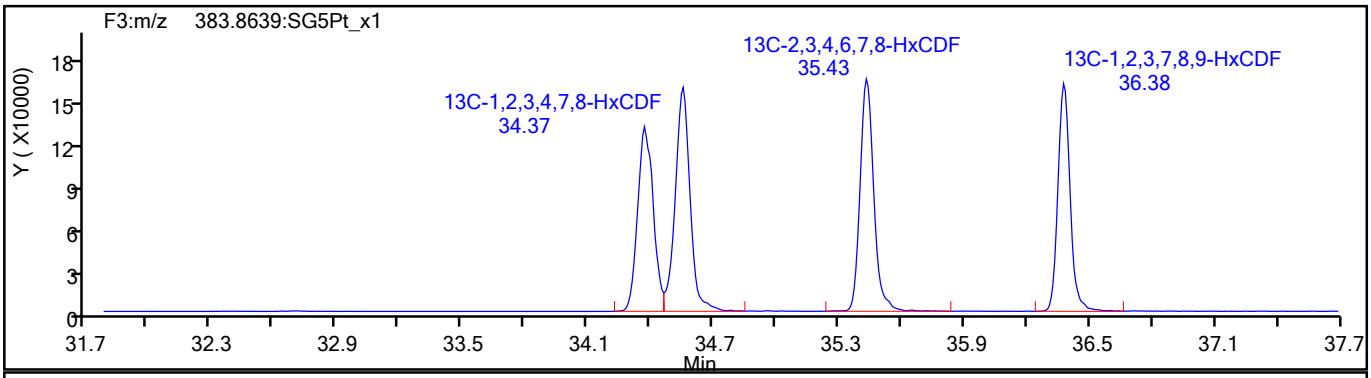

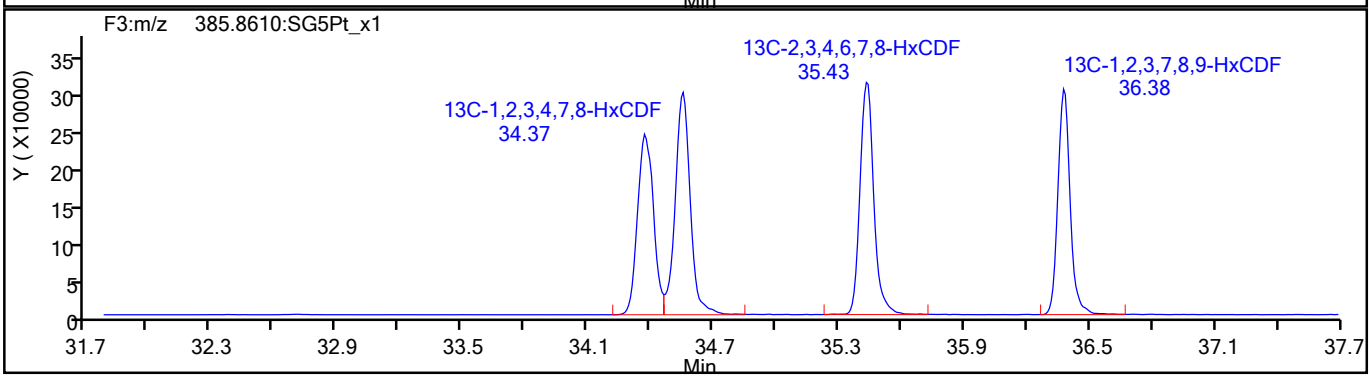

790163

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

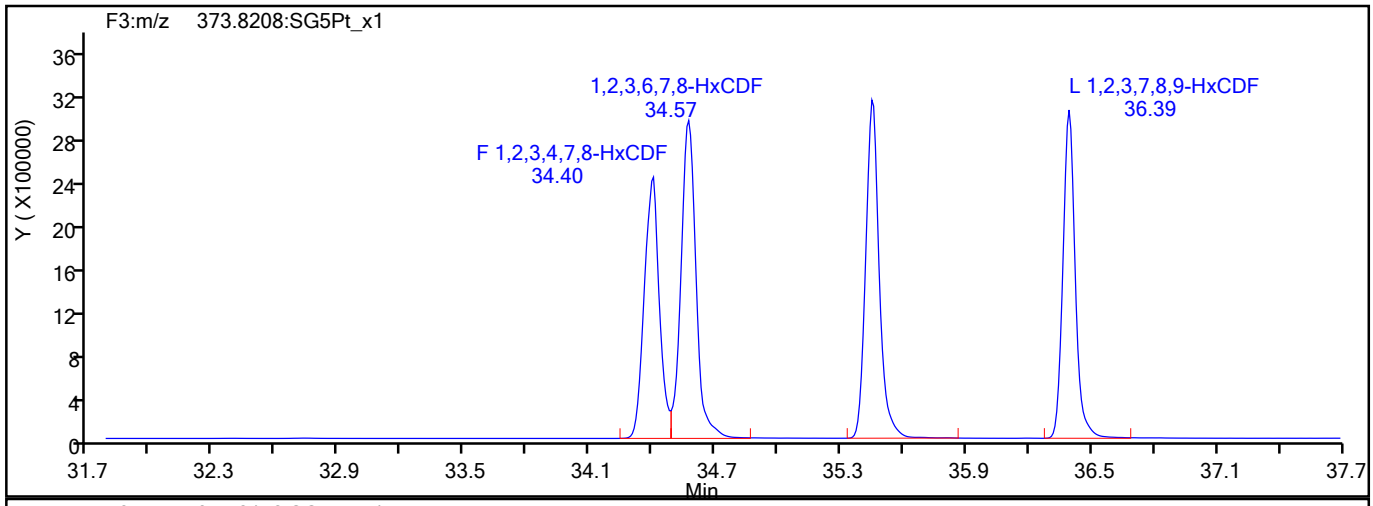

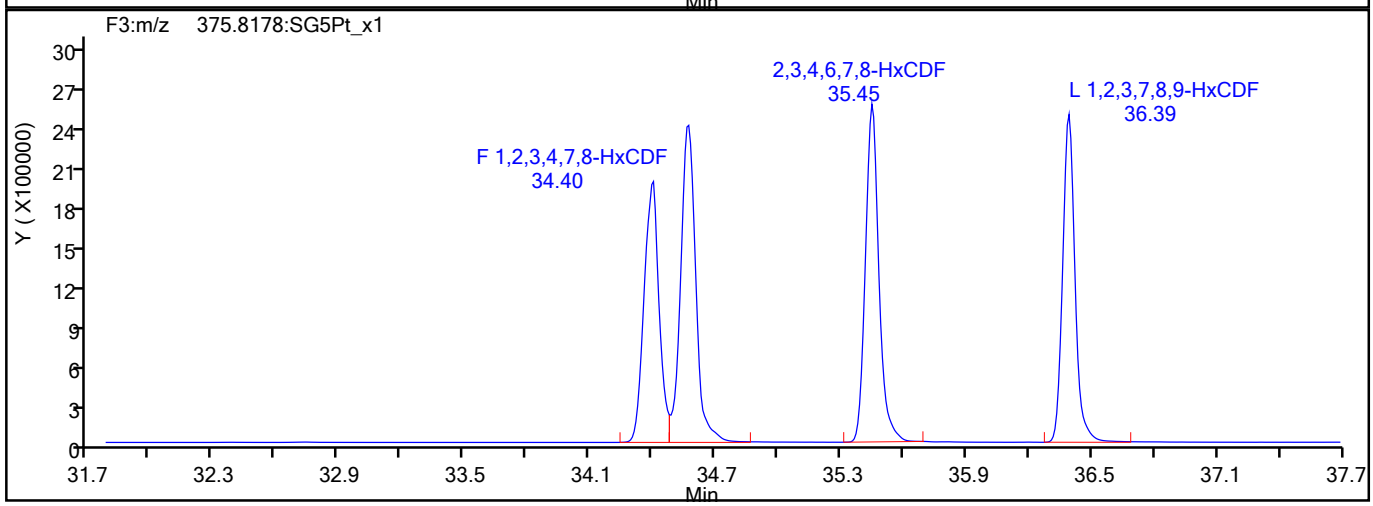

HxCDF Interference Mass

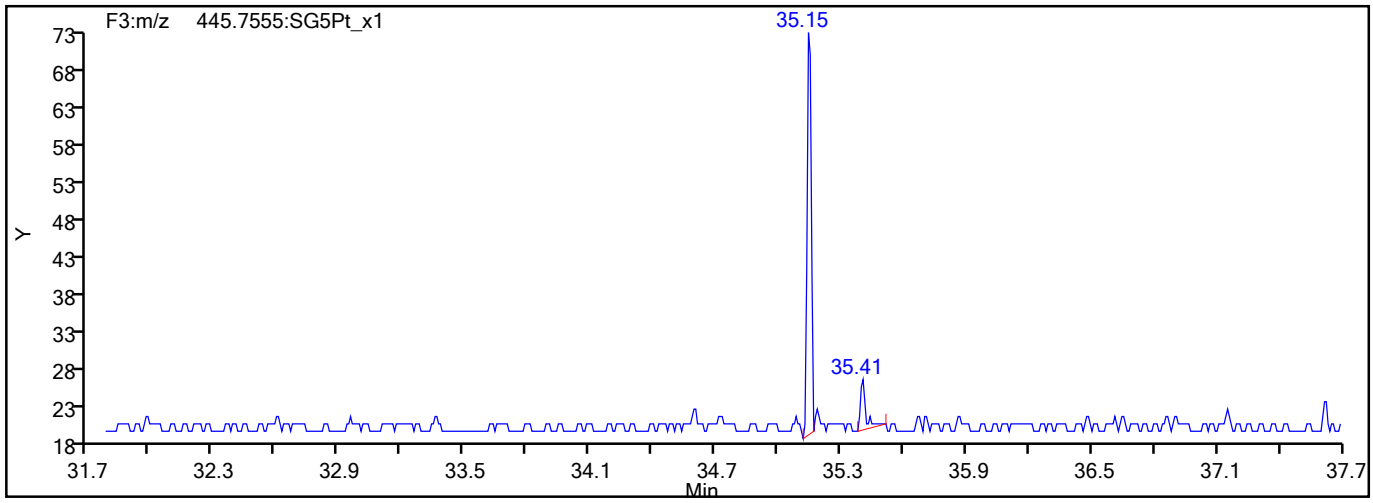

790164

Report Date: 09-Jun-2021 08:54:16 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

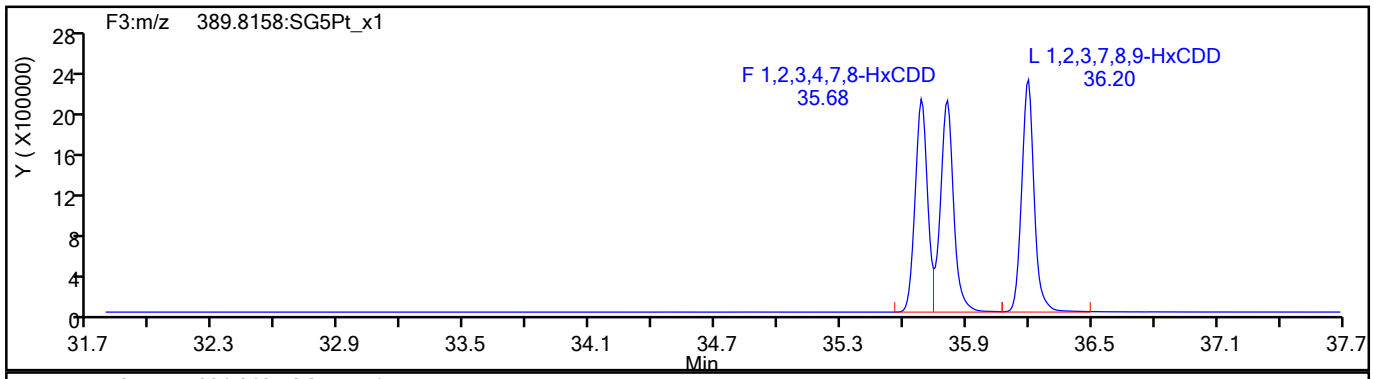

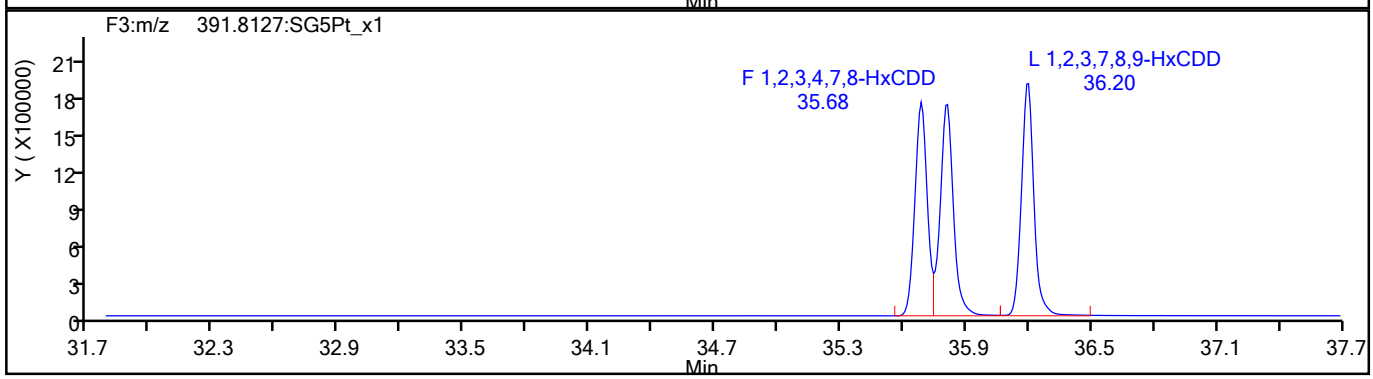

HxCDD Standards

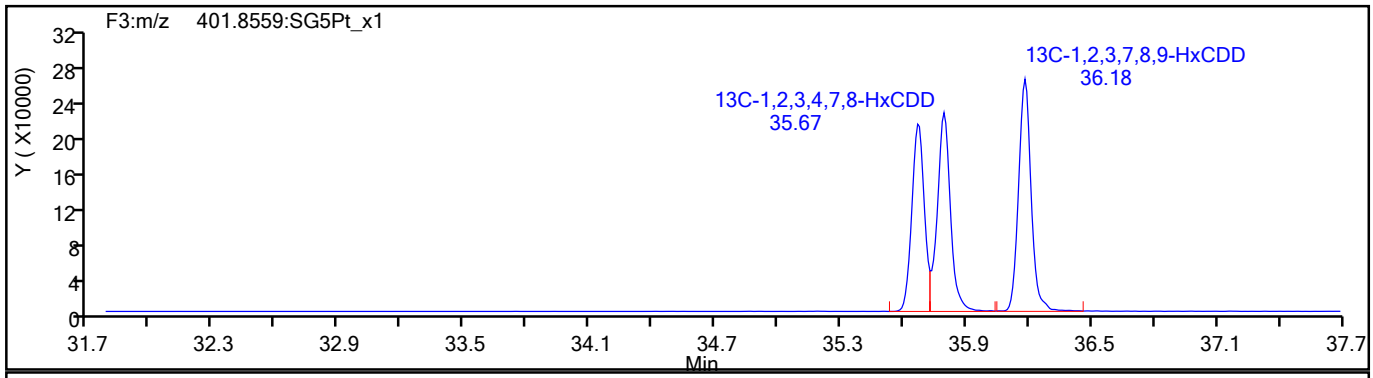

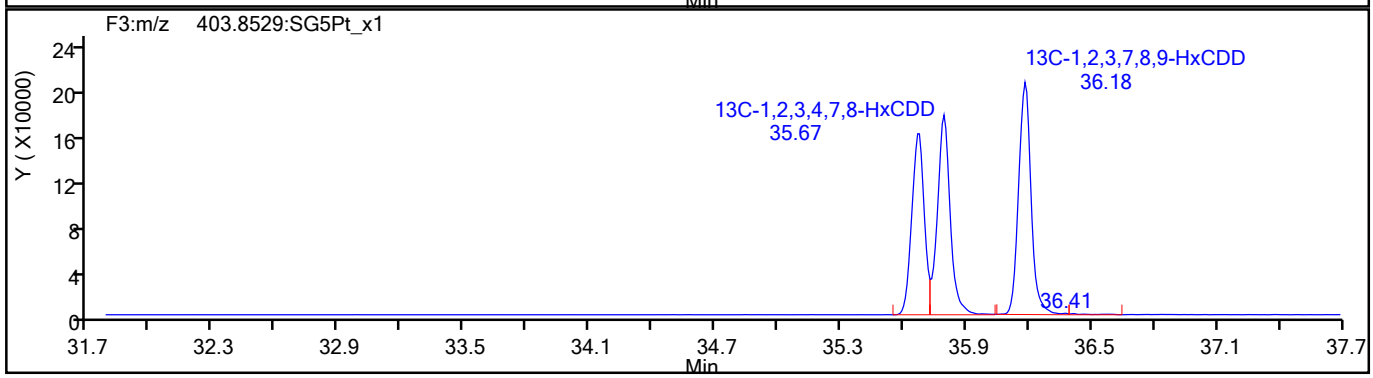

790165

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

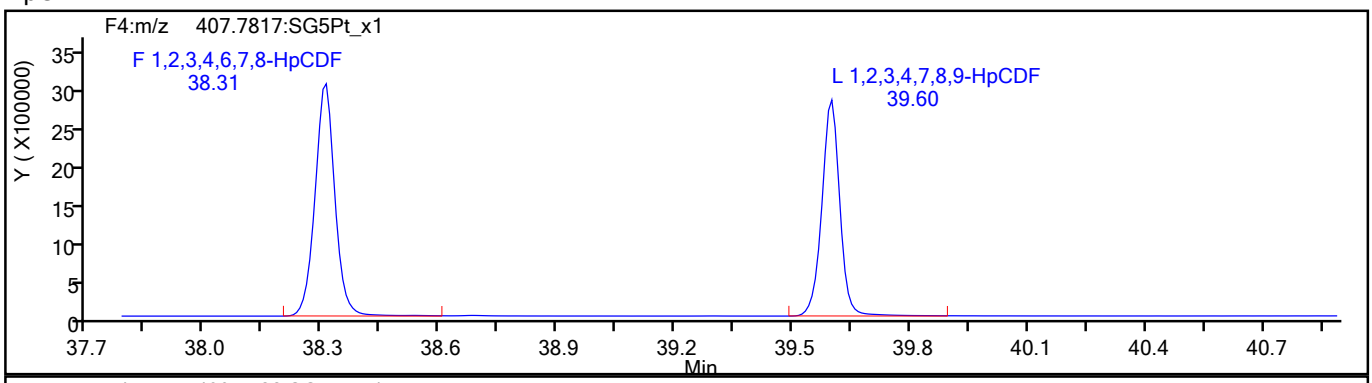

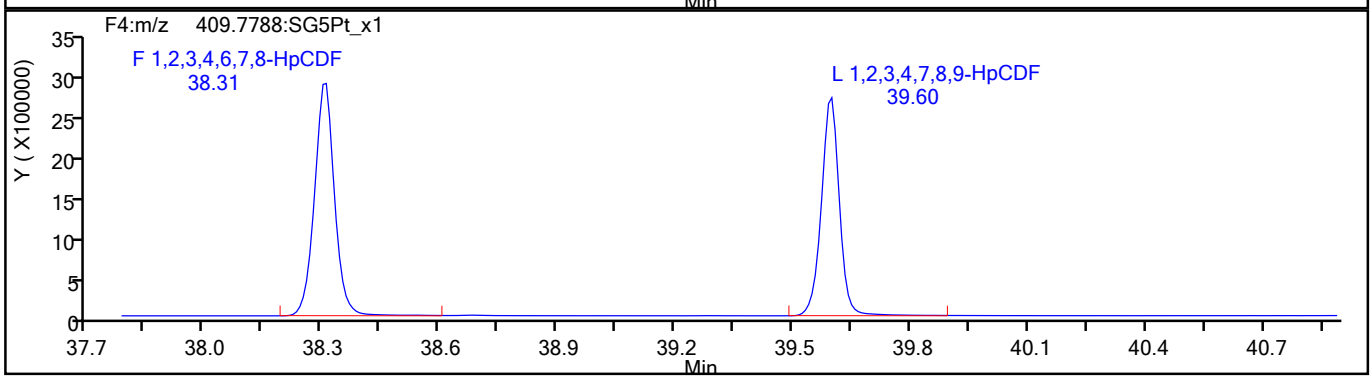

HpCDF Standards

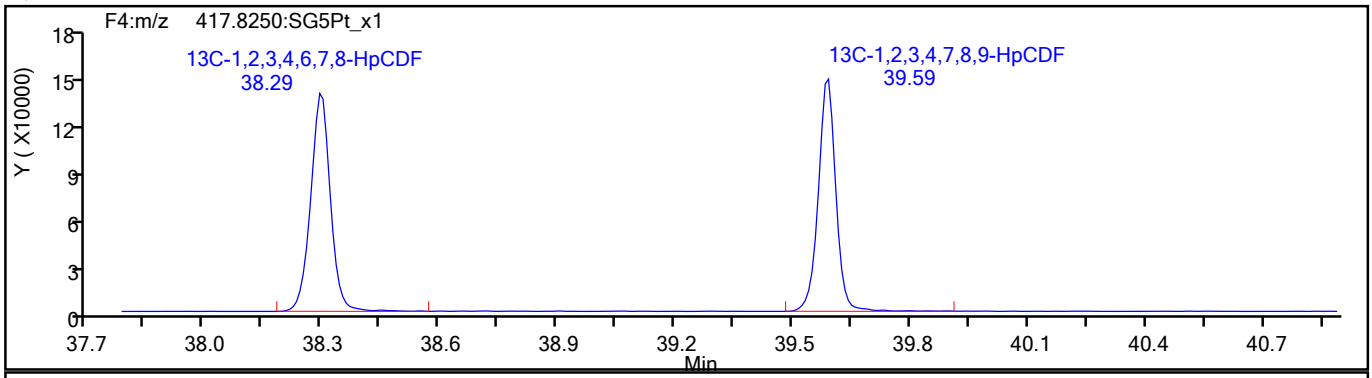

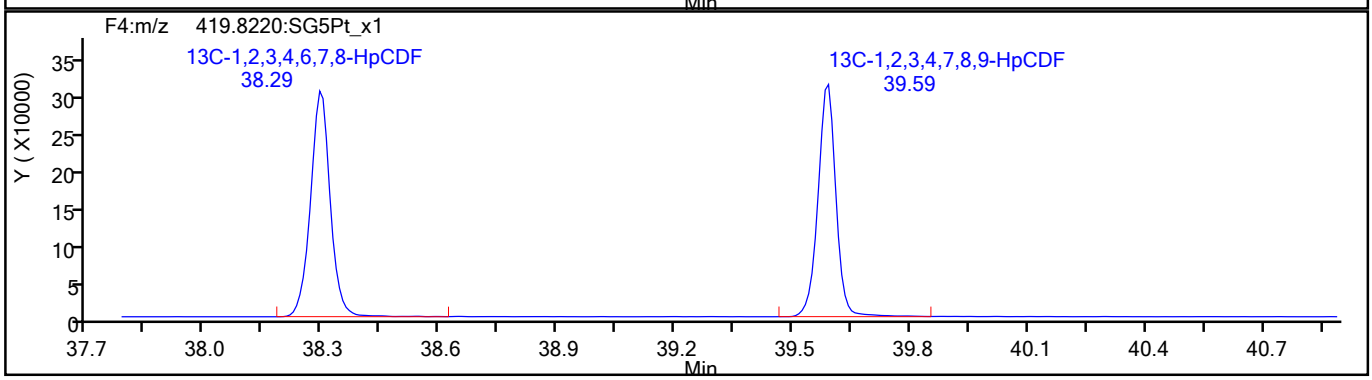

790166

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

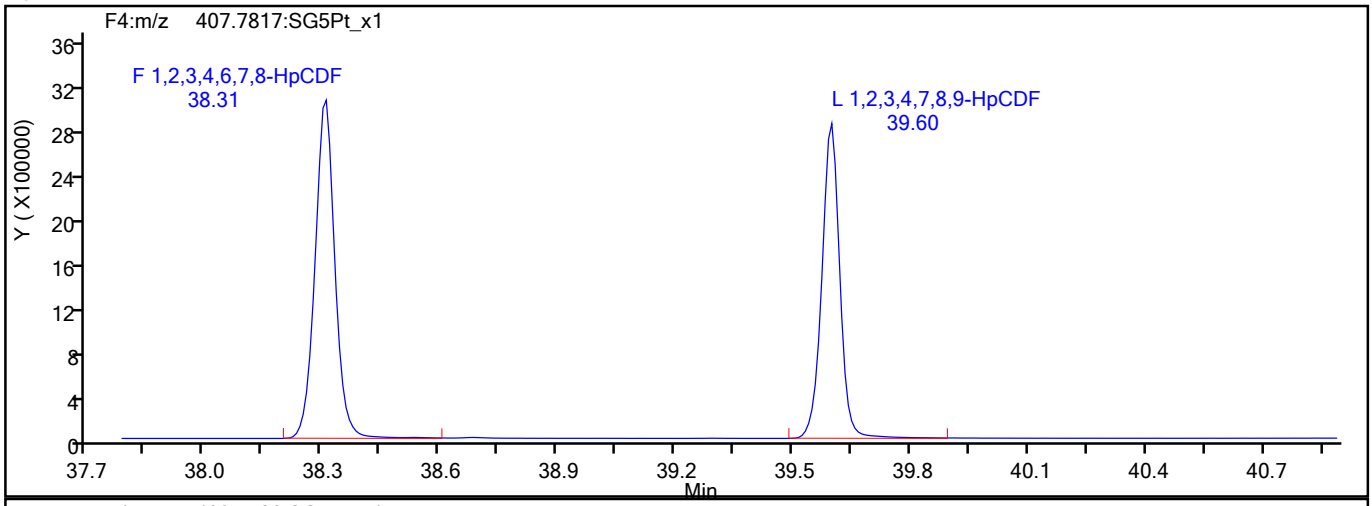

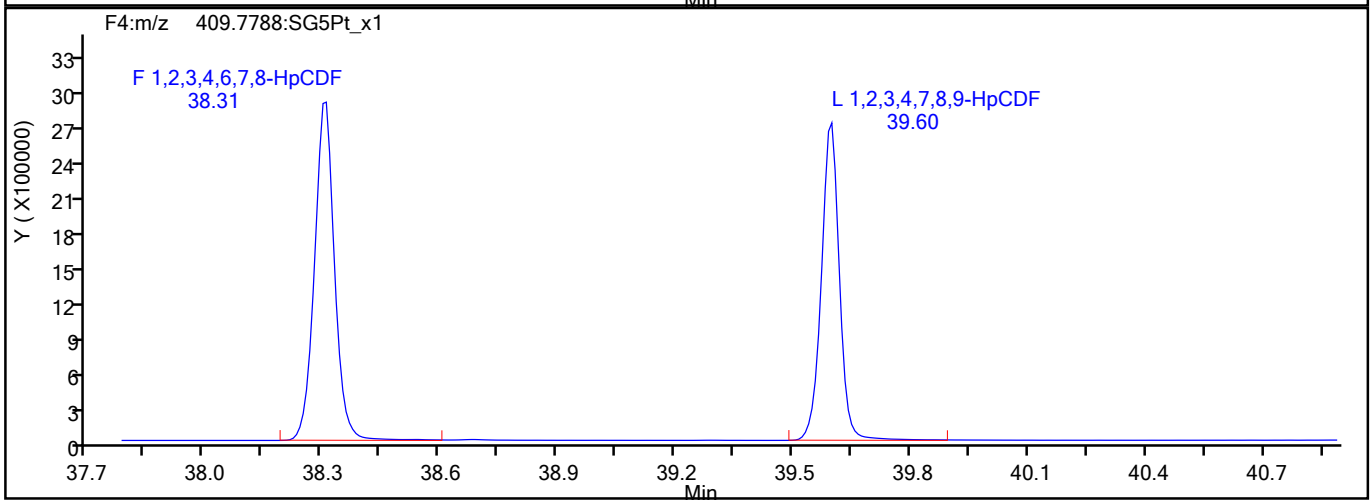

HpCDF Interference Mass

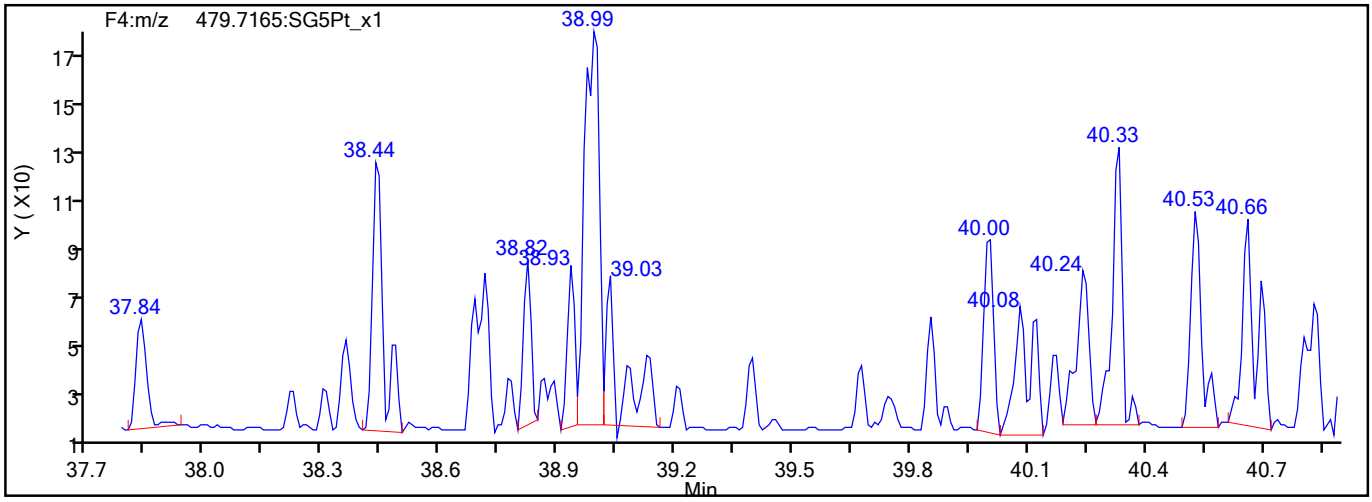

790167

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

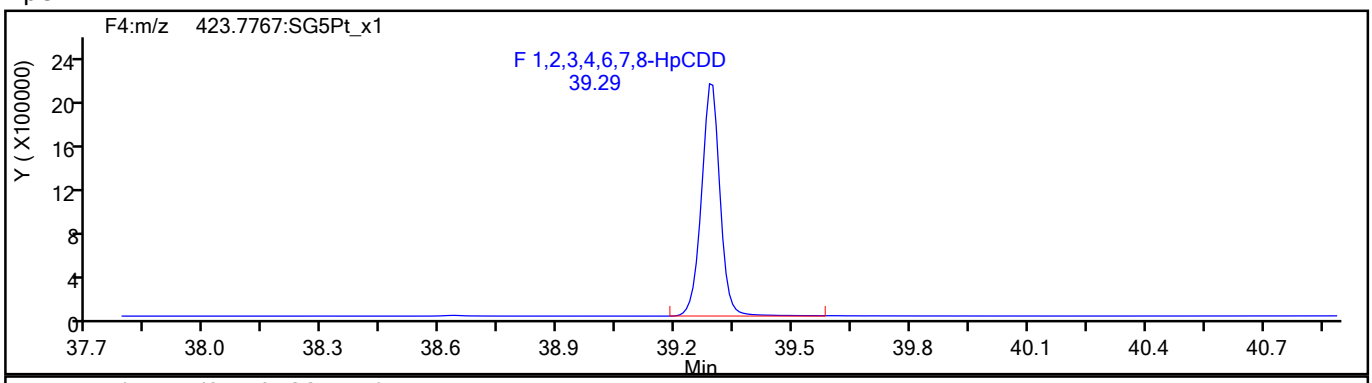

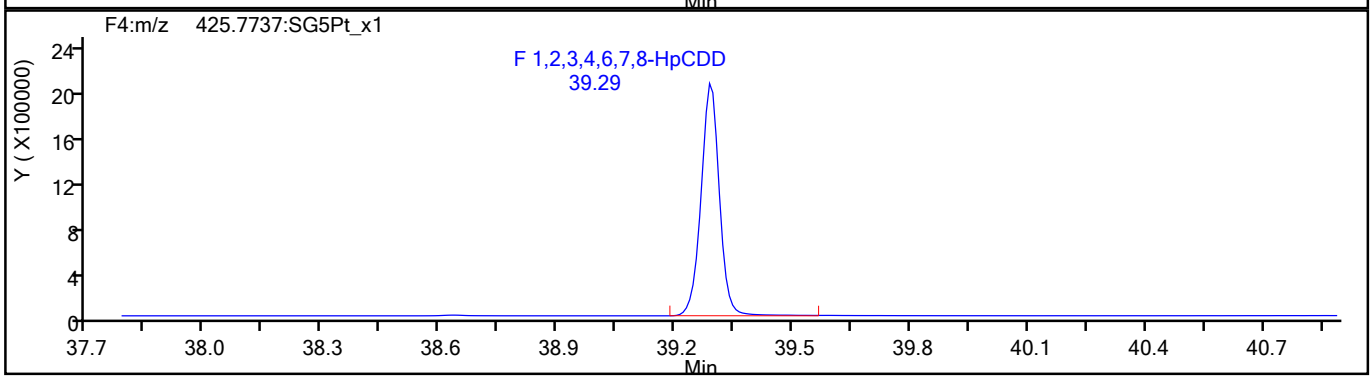

HpCDD Standards

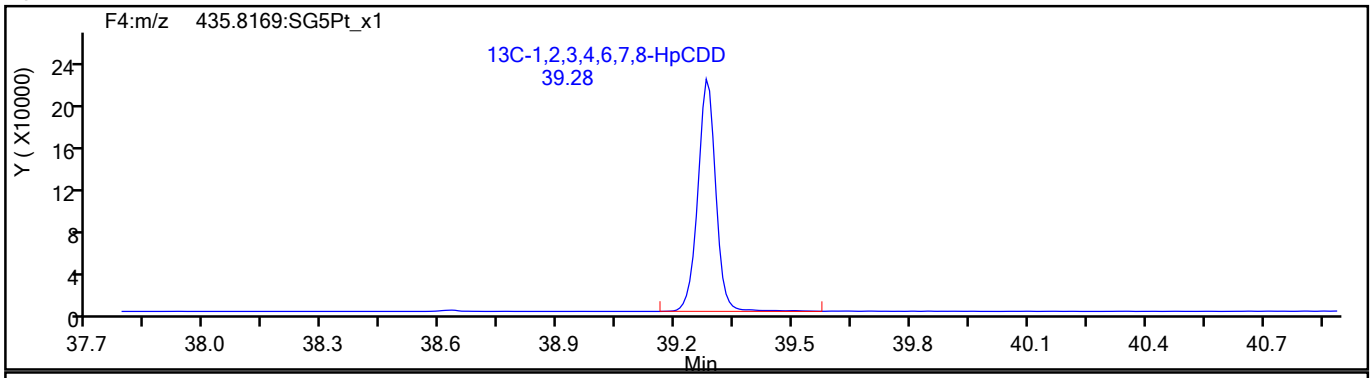

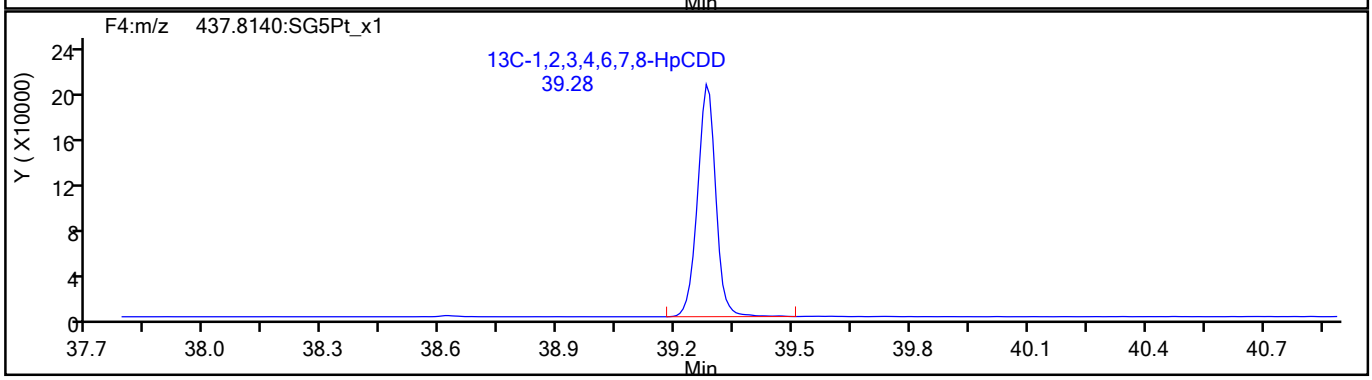

790168

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

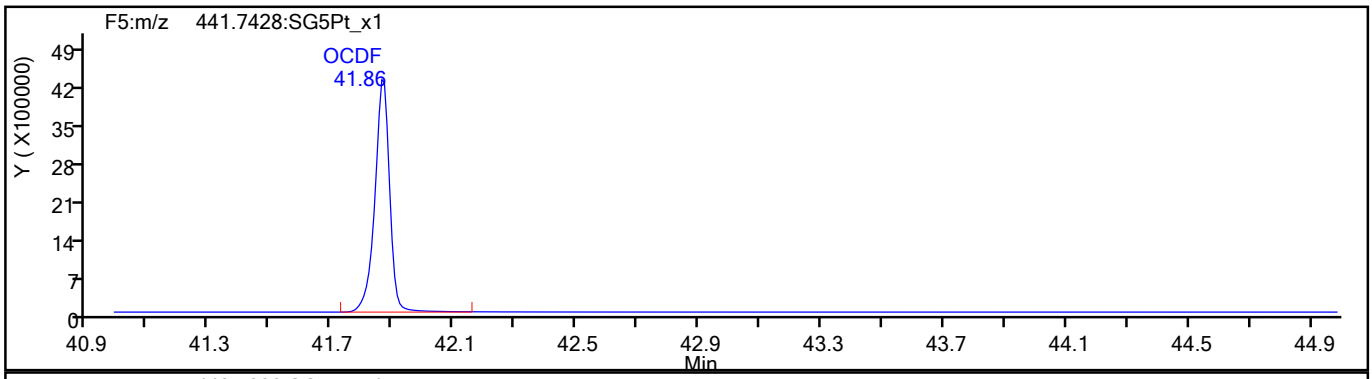

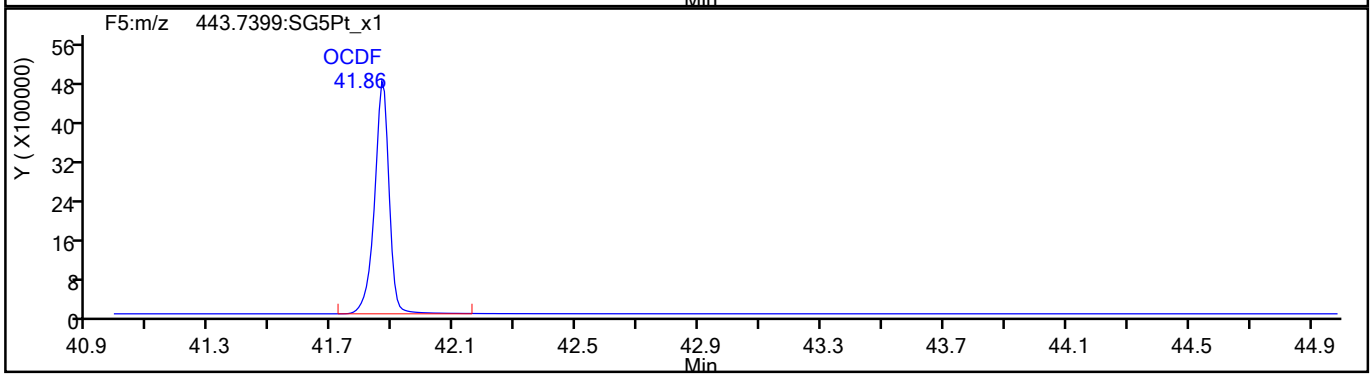

OCDF Standards

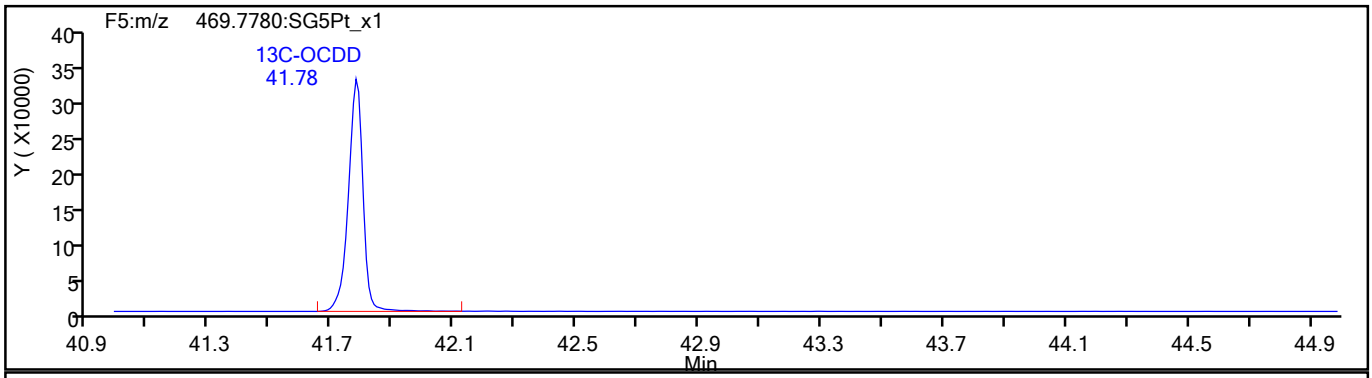

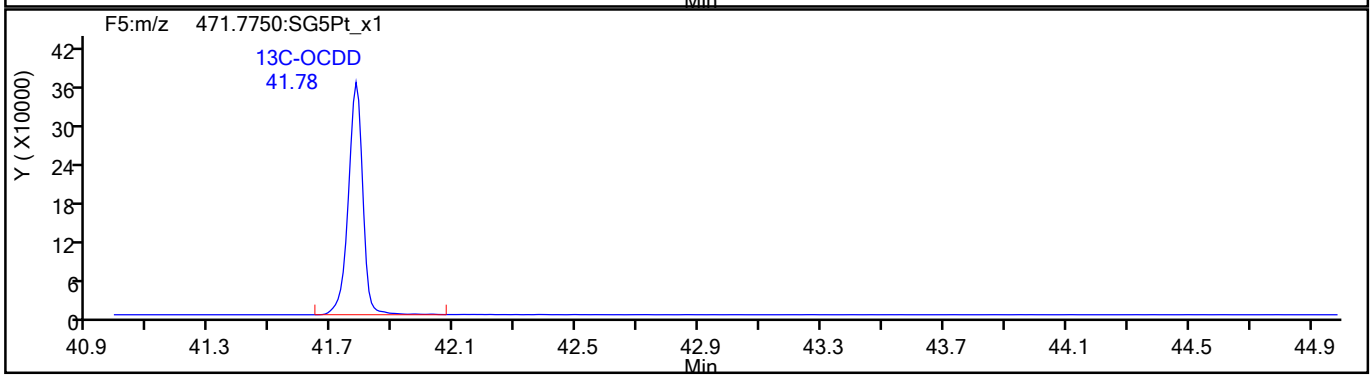

790169

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

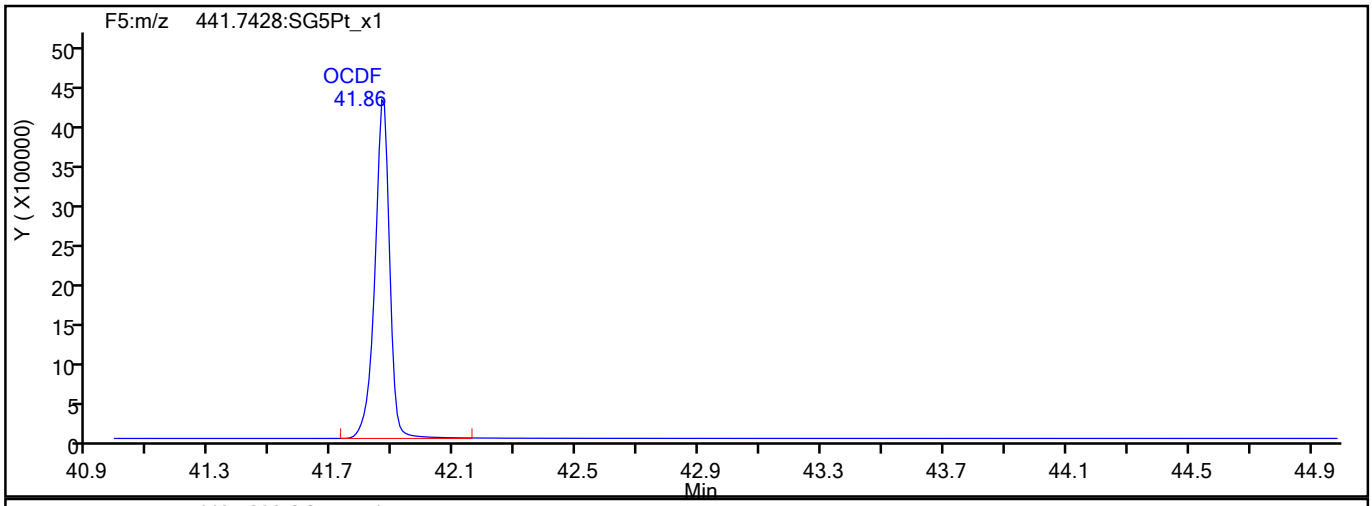

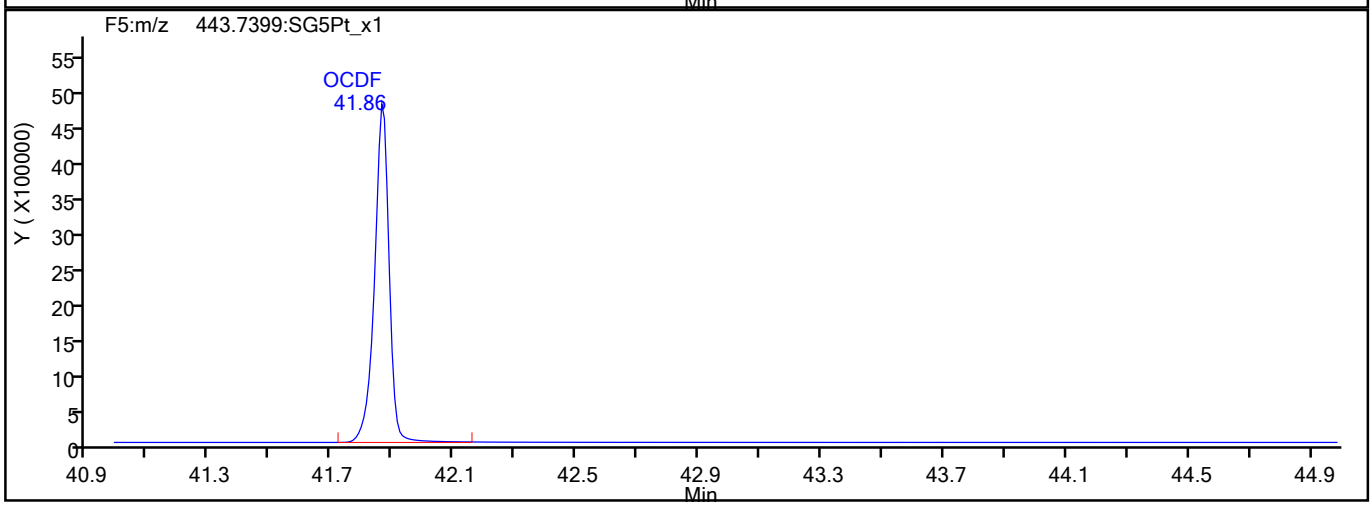

OCDF Interference Mass

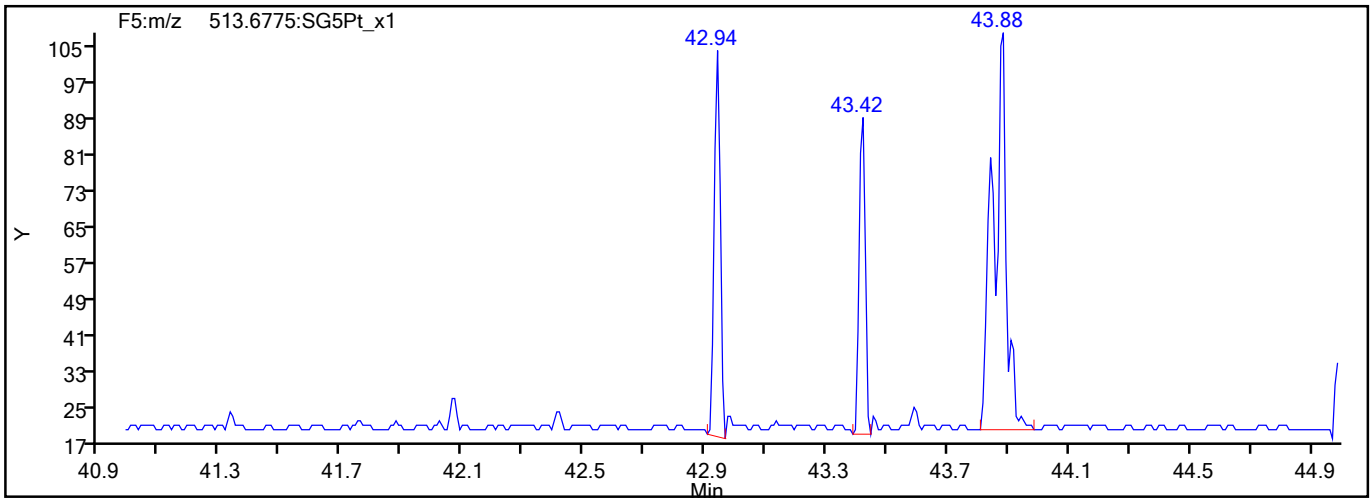

790170

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

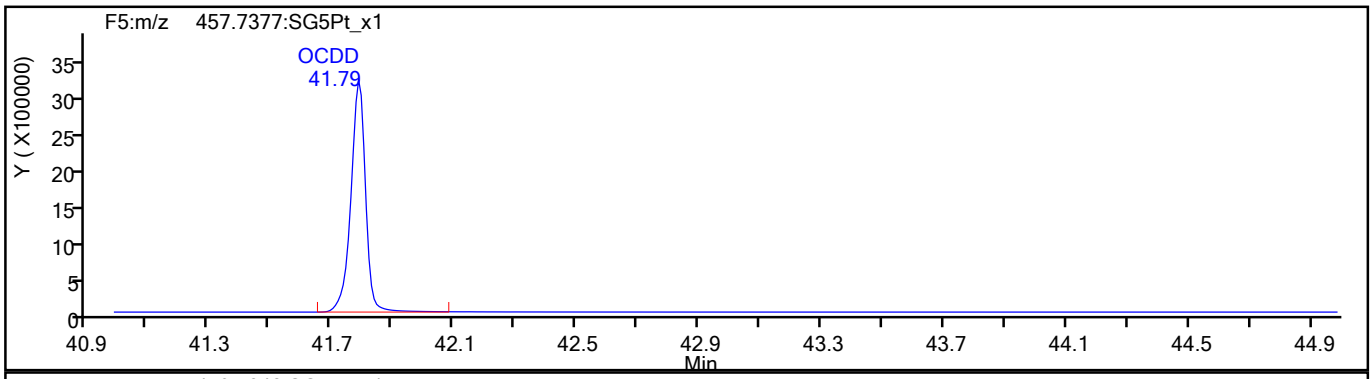

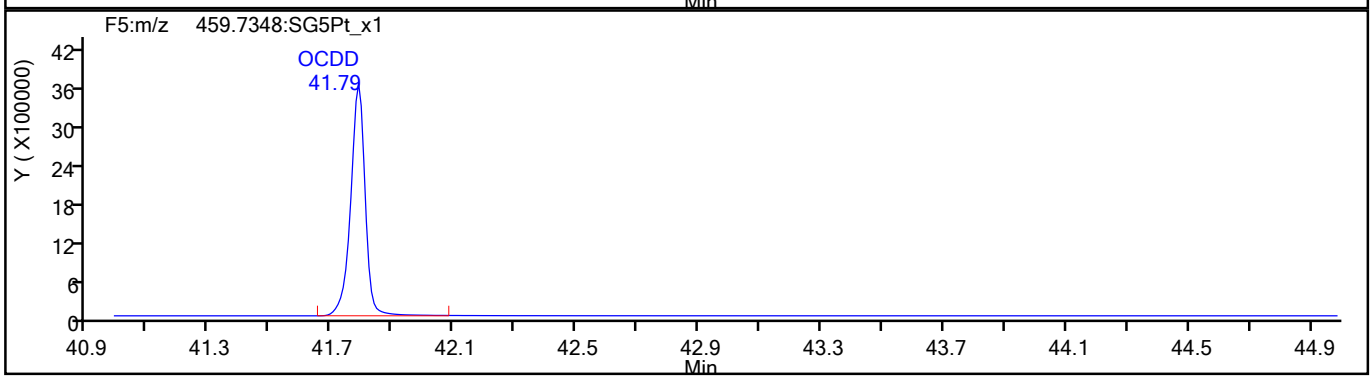

OCDD Standards

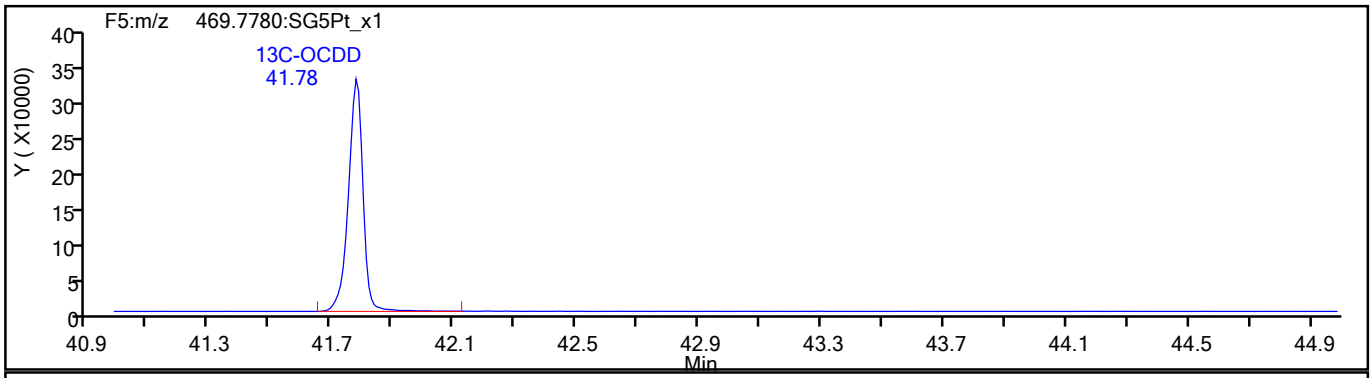

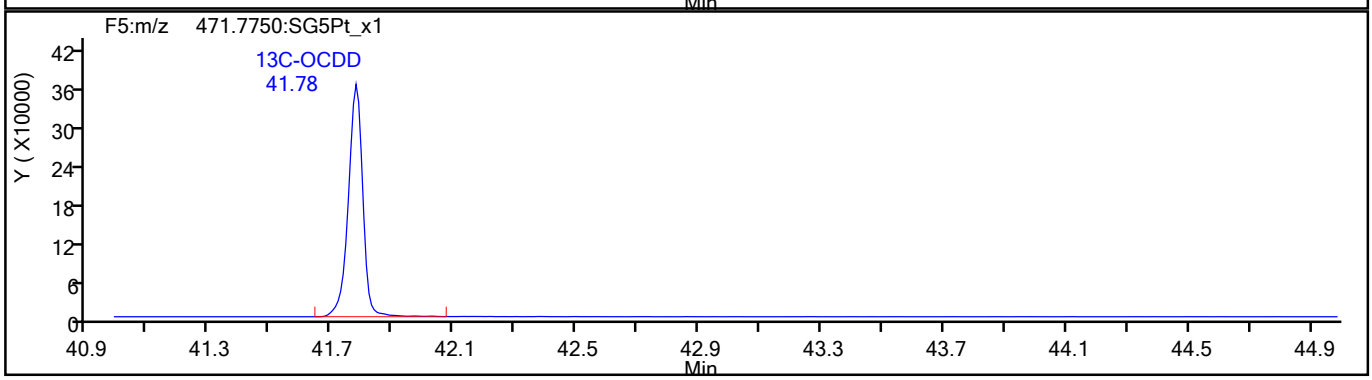

790171

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

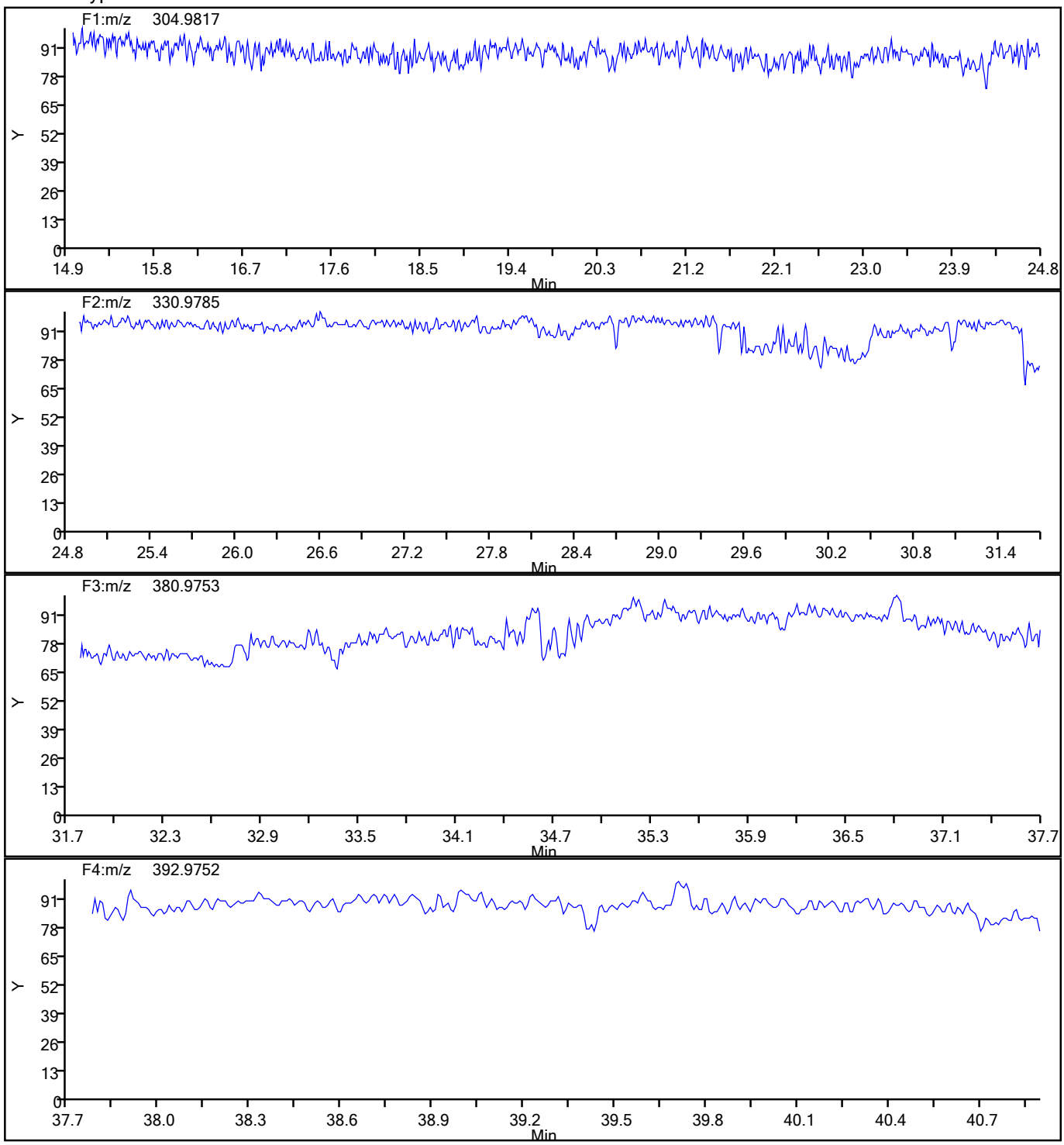

790172

Report Date: 09-Jun-2021 08:54:17 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d		
Injection Date:	08-Jun-2021 17:30:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	496688	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

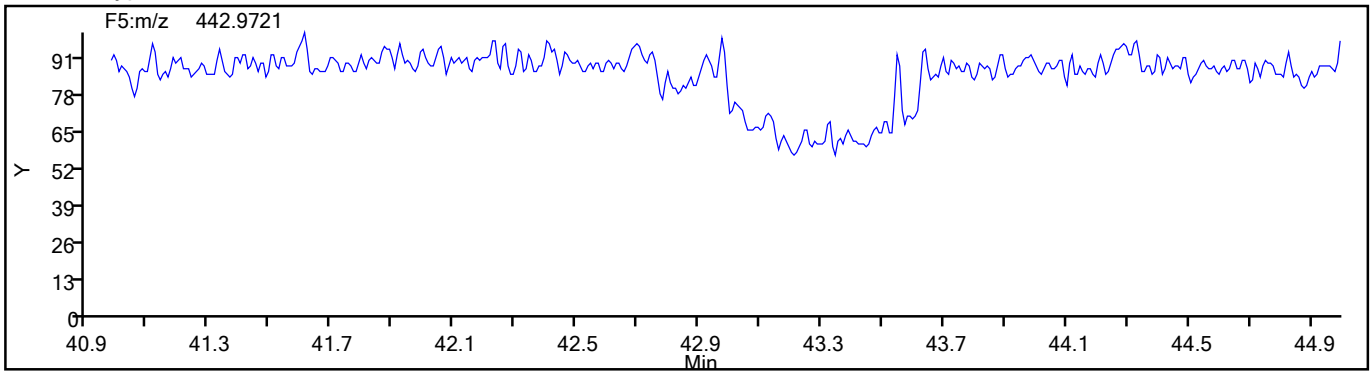

790173

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.05

Error Coefficients

Standard Error:	7060000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.844284	100.0	1113145.0	1.137713	Y
2	IC 320-496688/4	10.0	9.530968	100.0	1162117.0	0.953097	Y
3	IC 320-496688/5	50.0	52.293706	100.0	1094713.0	1.045874	Y
4	IC 320-496688/6	200.0	219.393902	100.0	1337869.0	1.09697	Y
5	IC 320-496688/7	1000.0	1017.847283	100.0	1355803.0	1.017847	Y

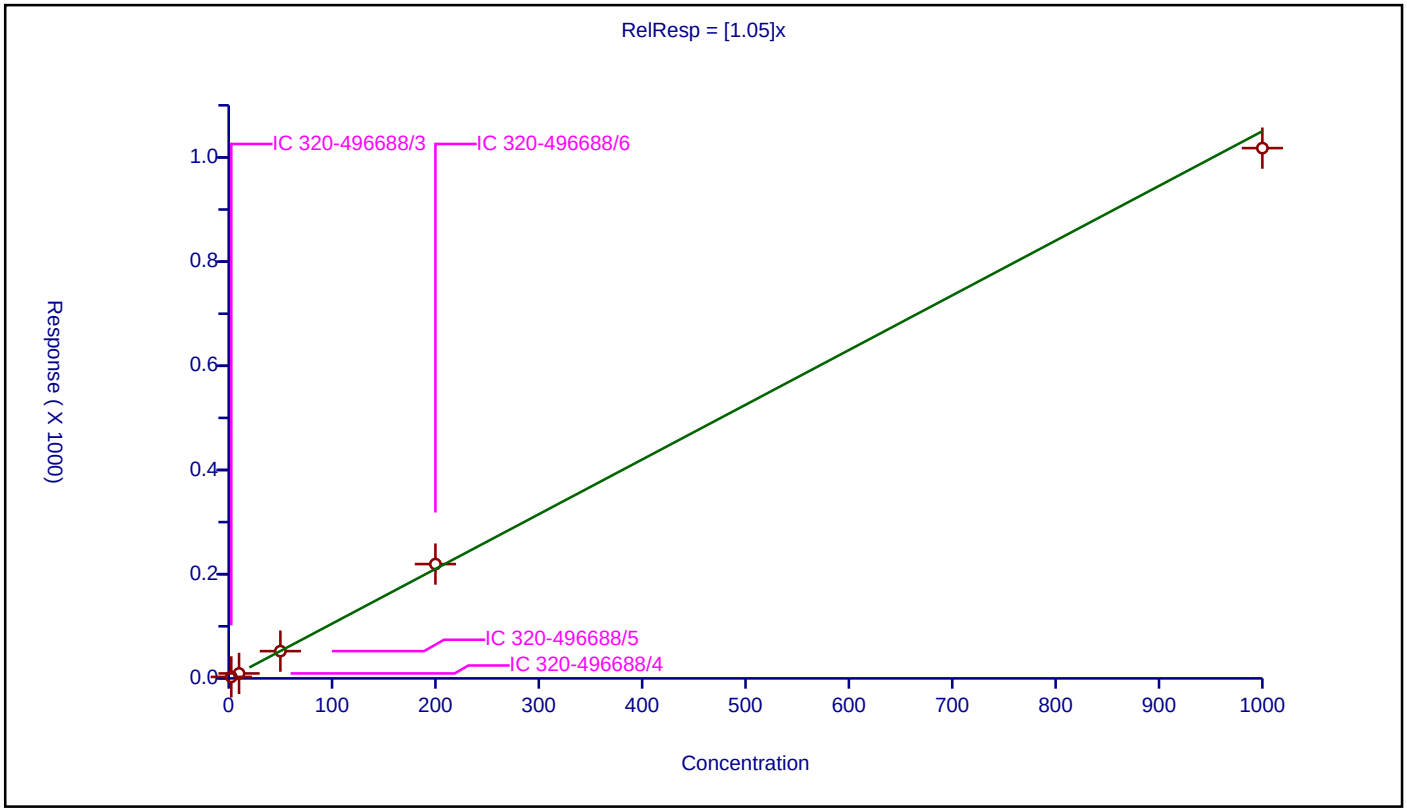

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.442

Error Coefficients

Standard Error:	10800000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.852995	100.0	1227279.0	1.541198	Y
2	IC 320-496688/4	10.0	12.896239	100.0	1272526.0	1.289624	Y
3	IC 320-496688/5	50.0	74.275022	100.0	1182209.0	1.4855	Y
4	IC 320-496688/6	200.0	304.802204	100.0	1392194.0	1.524011	Y
5	IC 320-496688/7	1000.0	1370.014158	100.0	1546113.0	1.370014	Y

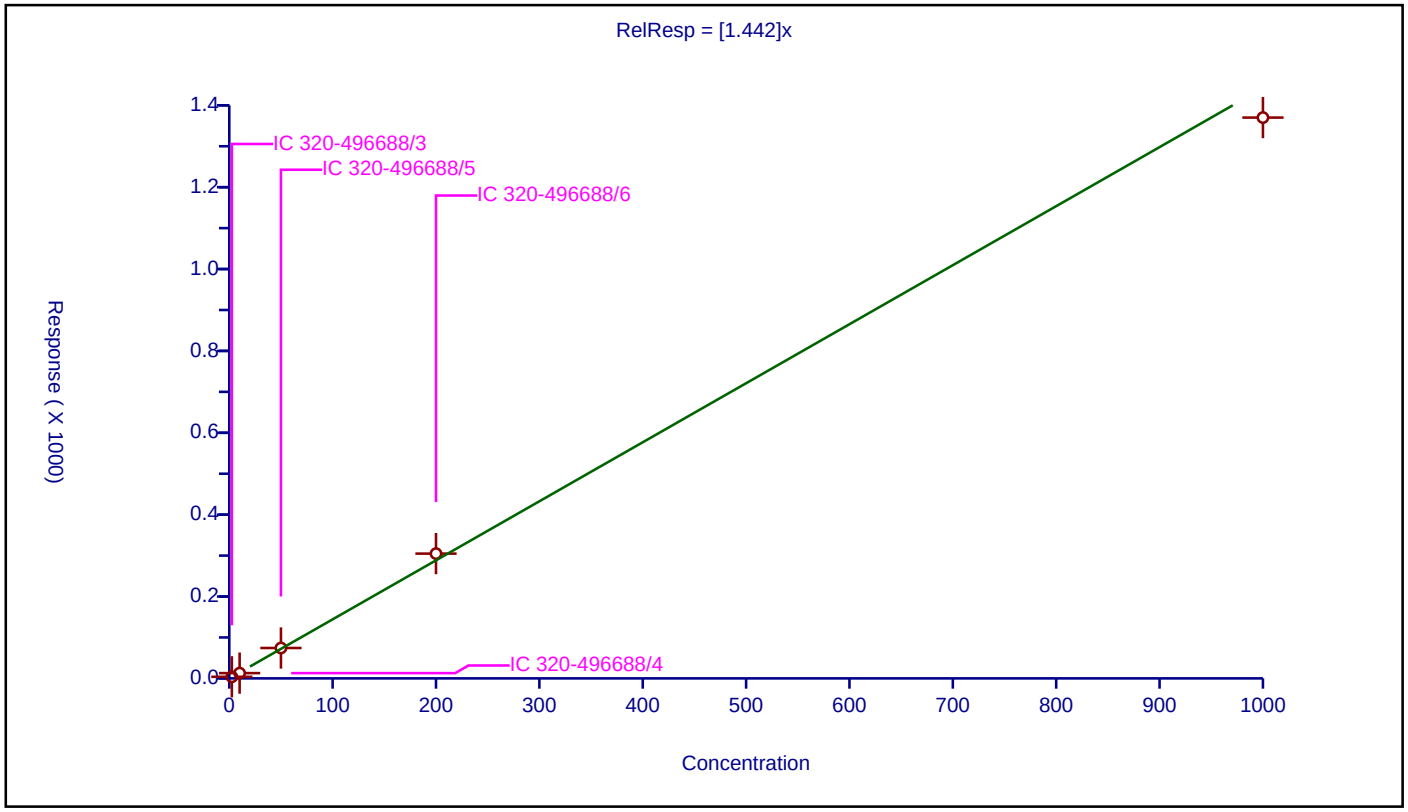

790175

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.309

Error Coefficients

Standard Error:	9110000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.51417	100.0	1120663.0	1.405668	Y
2	IC 320-496688/4	10.0	11.769676	100.0	1175351.0	1.176968	Y
3	IC 320-496688/5	50.0	67.293315	100.0	1080883.0	1.345866	Y
4	IC 320-496688/6	200.0	278.744786	100.0	1337573.0	1.393724	Y
5	IC 320-496688/7	1000.0	1223.548565	100.0	1455766.0	1.223549	Y

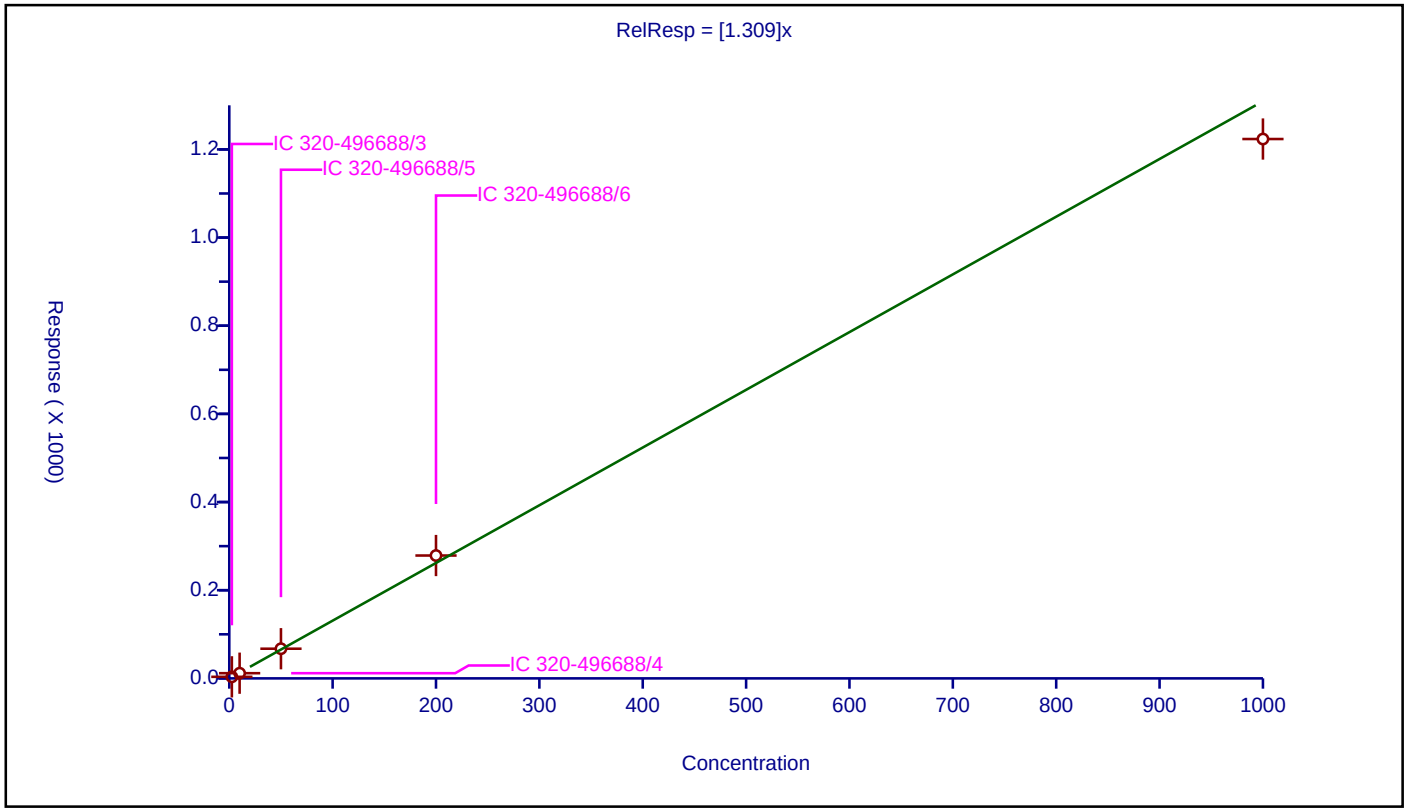

790176

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	7950000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808772	100.0	1127895.0	1.123509	Y
2	IC 320-496688/4	10.0	9.701688	100.0	1363103.0	0.970169	Y
3	IC 320-496688/5	50.0	53.7445	100.0	1348471.0	1.07489	Y
4	IC 320-496688/6	200.0	224.989195	100.0	1432215.0	1.124946	Y
5	IC 320-496688/7	1000.0	1010.433801	100.0	1539784.0	1.010434	Y

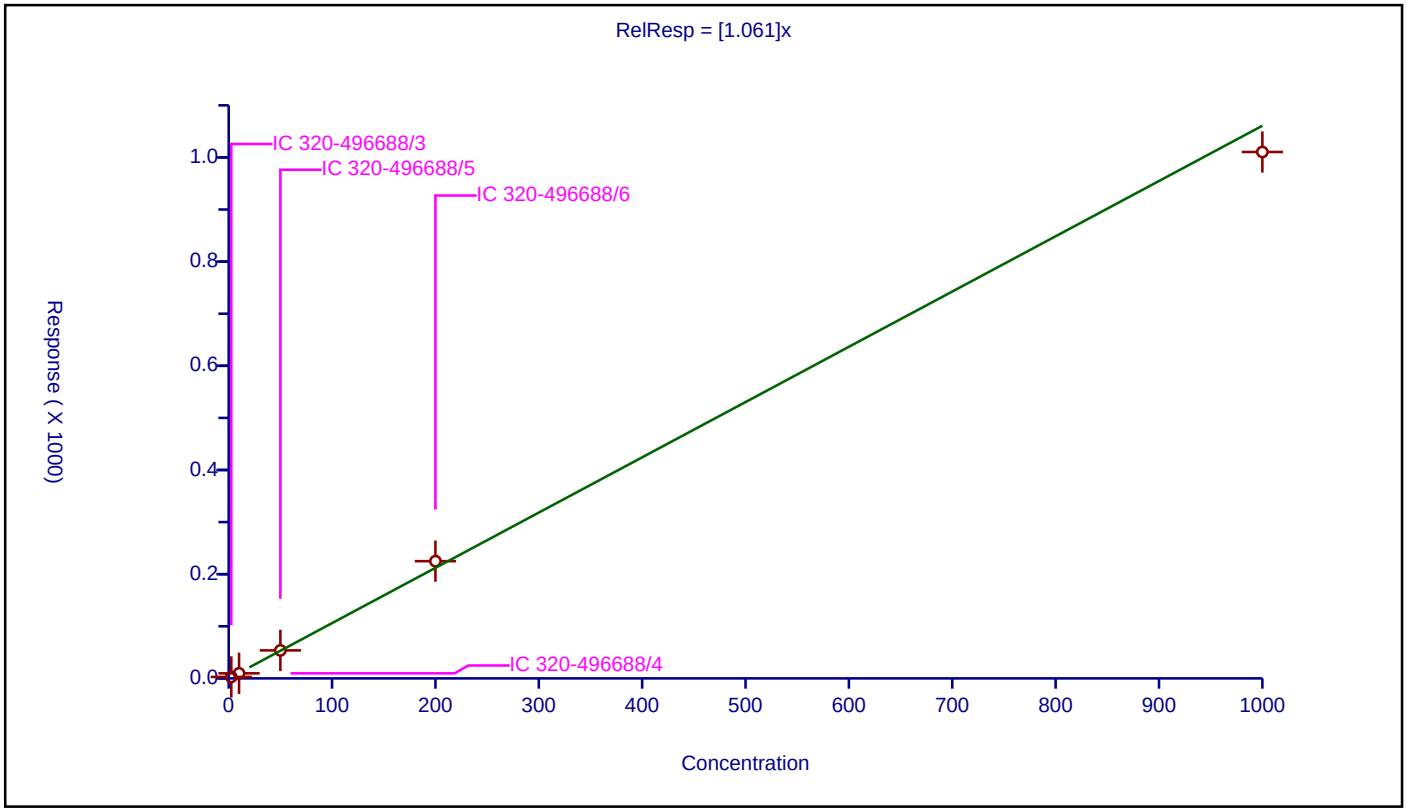

790177

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.147

Error Coefficients

Standard Error:	11200000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.056507	100.0	1517222.0	1.222603	Y
2	IC 320-496688/4	10.0	10.071694	100.0	1545033.0	1.007169	Y
3	IC 320-496688/5	50.0	59.364869	100.0	1841825.0	1.187297	Y
4	IC 320-496688/6	200.0	241.451426	100.0	1778238.0	1.207257	Y
5	IC 320-496688/7	1000.0	1112.580113	100.0	1968615.0	1.11258	Y

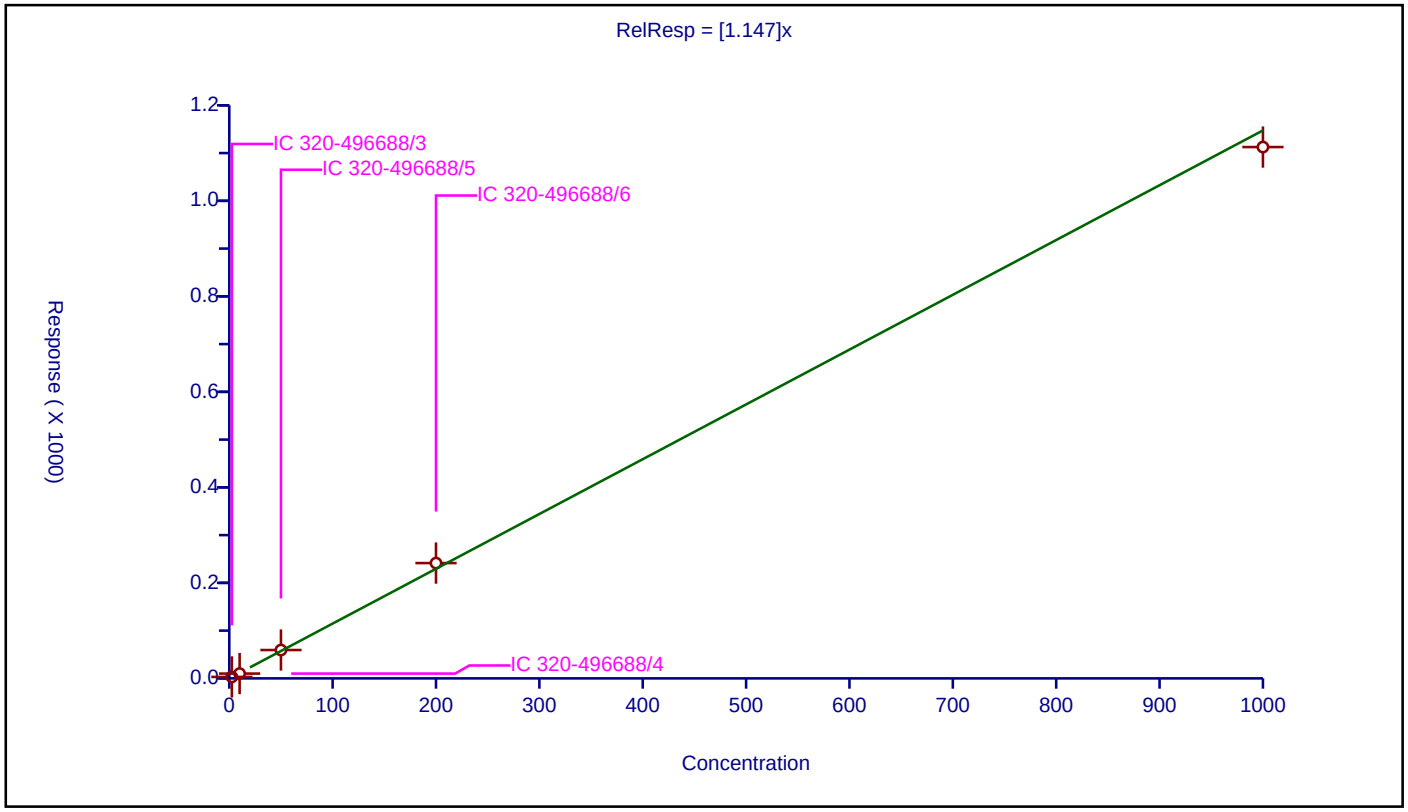

790178

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9933

Error Coefficients

Standard Error:	8510000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.639223	100.0	1291365.0	1.055689	Y
2	IC 320-496688/4	10.0	8.862824	100.0	1558668.0	0.886282	Y
3	IC 320-496688/5	50.0	52.081775	100.0	1460100.0	1.041636	Y
4	IC 320-496688/6	200.0	205.274729	100.0	1669337.0	1.026374	Y
5	IC 320-496688/7	1000.0	956.728345	100.0	1741498.0	0.956728	Y

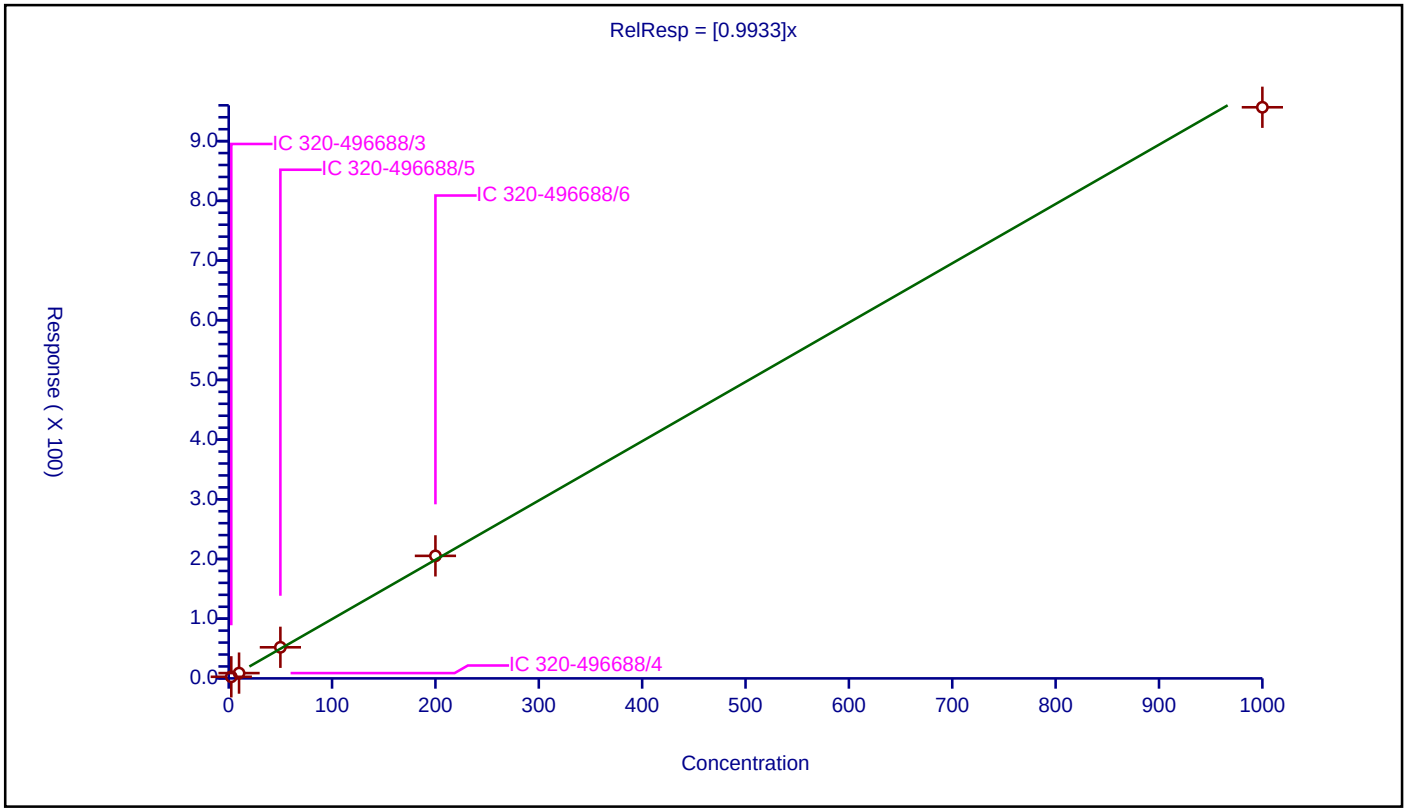

790179

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.218

Error Coefficients

Standard Error:	13600000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.343553	100.0	1626653.0	1.337421	Y
2	IC 320-496688/4	10.0	10.950603	100.0	1692336.0	1.09506	Y
3	IC 320-496688/5	50.0	61.795629	100.0	2015594.0	1.235913	Y
4	IC 320-496688/6	200.0	250.125403	100.0	1995567.0	1.250627	Y
5	IC 320-496688/7	1000.0	1169.95242	100.0	2283961.0	1.169952	Y

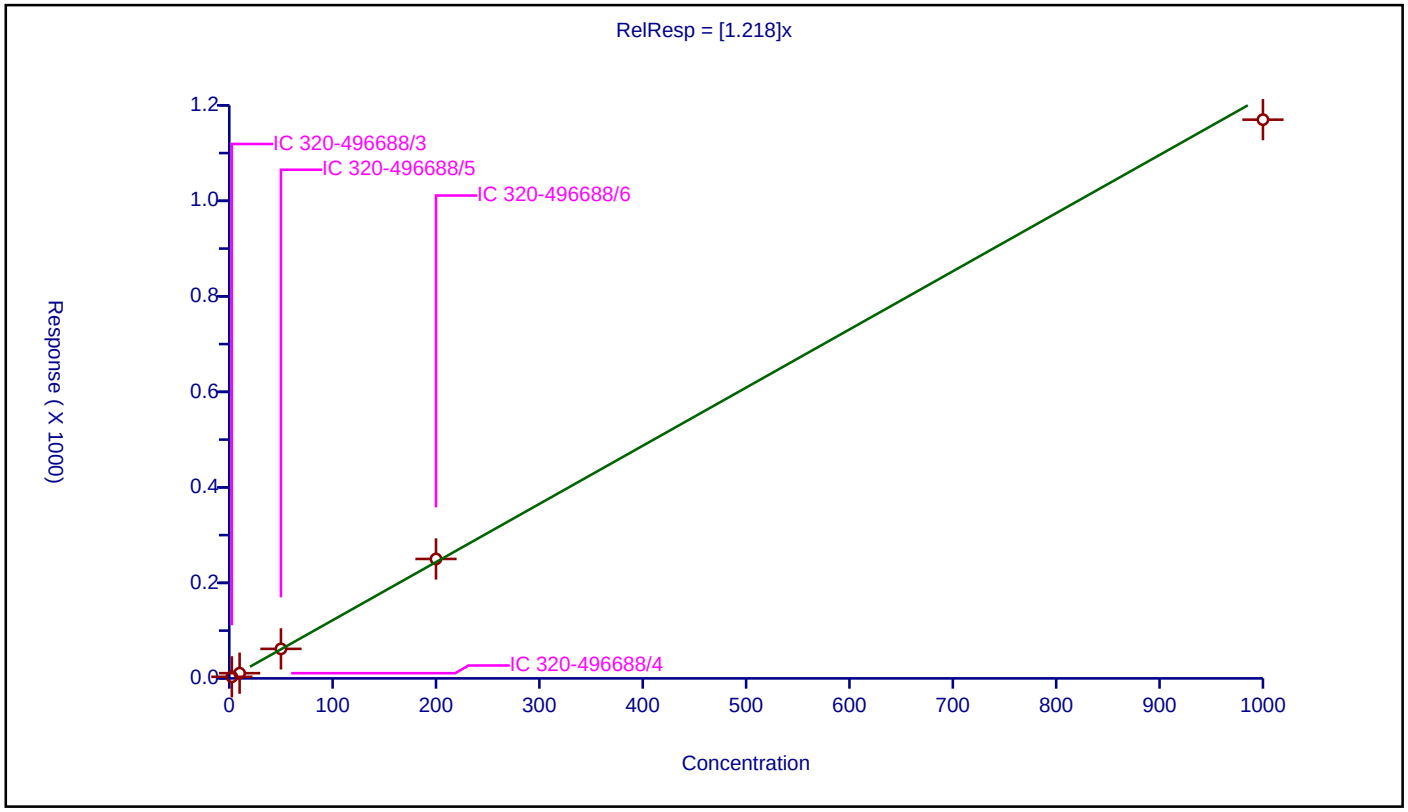

790180

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.184

Error Coefficients

Standard Error:	8820000
Relative Standard Error:	11.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.510522	100.0	1127895.0	1.404209	Y
2	IC 320-496688/4	10.0	10.251683	100.0	1363103.0	1.025168	Y
3	IC 320-496688/5	50.0	58.326134	100.0	1348471.0	1.166523	Y
4	IC 320-496688/6	200.0	239.918169	100.0	1432215.0	1.199591	Y
5	IC 320-496688/7	1000.0	1122.182397	100.0	1539784.0	1.122182	Y

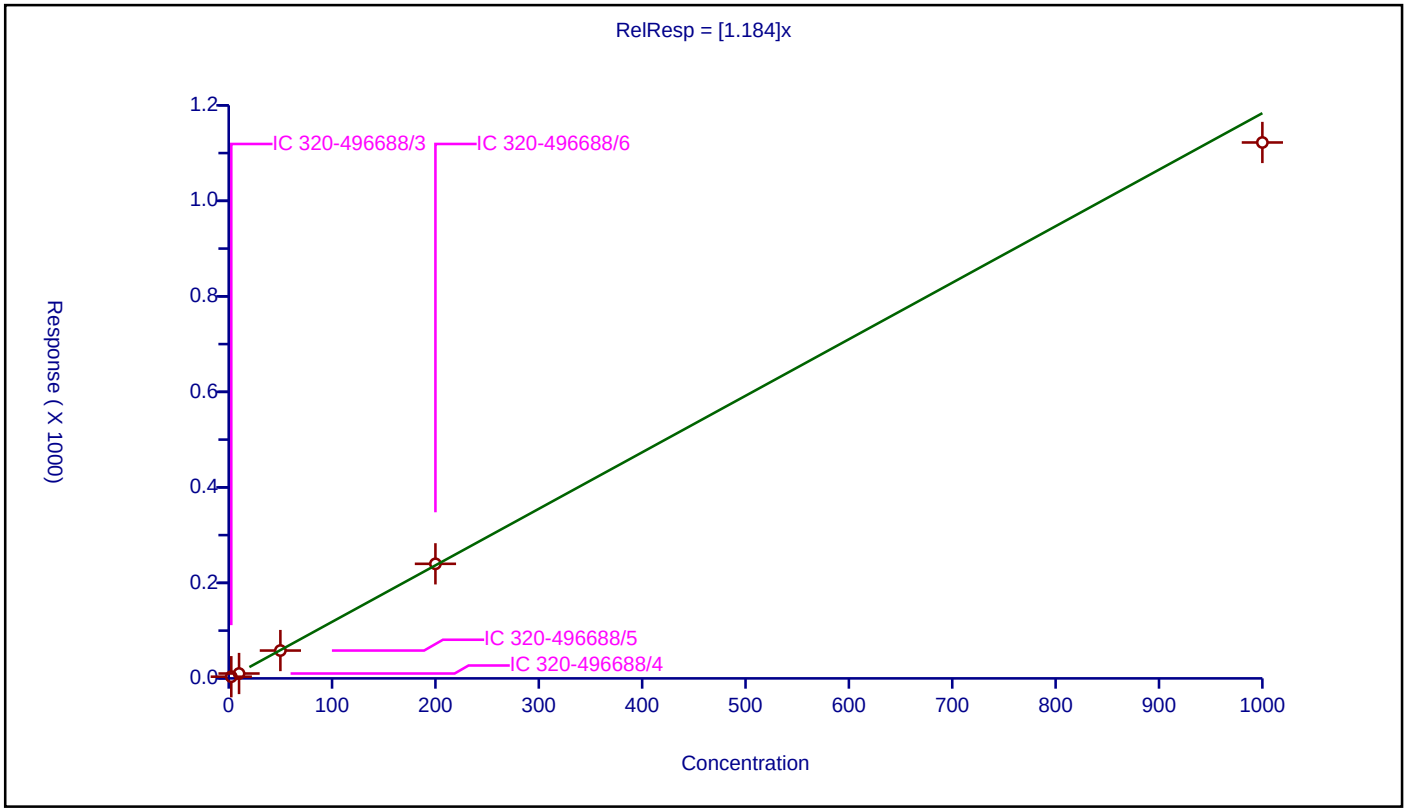

790181

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.24

Error Coefficients

Standard Error:	11500000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.395229	100.0	1696557.0	1.358092	Y
2	IC 320-496688/4	10.0	11.238546	100.0	1735785.0	1.123855	Y
3	IC 320-496688/5	50.0	62.662354	100.0	1657413.0	1.253247	Y
4	IC 320-496688/6	200.0	255.13849	100.0	1742331.0	1.275692	Y
5	IC 320-496688/7	1000.0	1189.708821	100.0	1895740.0	1.189709	Y

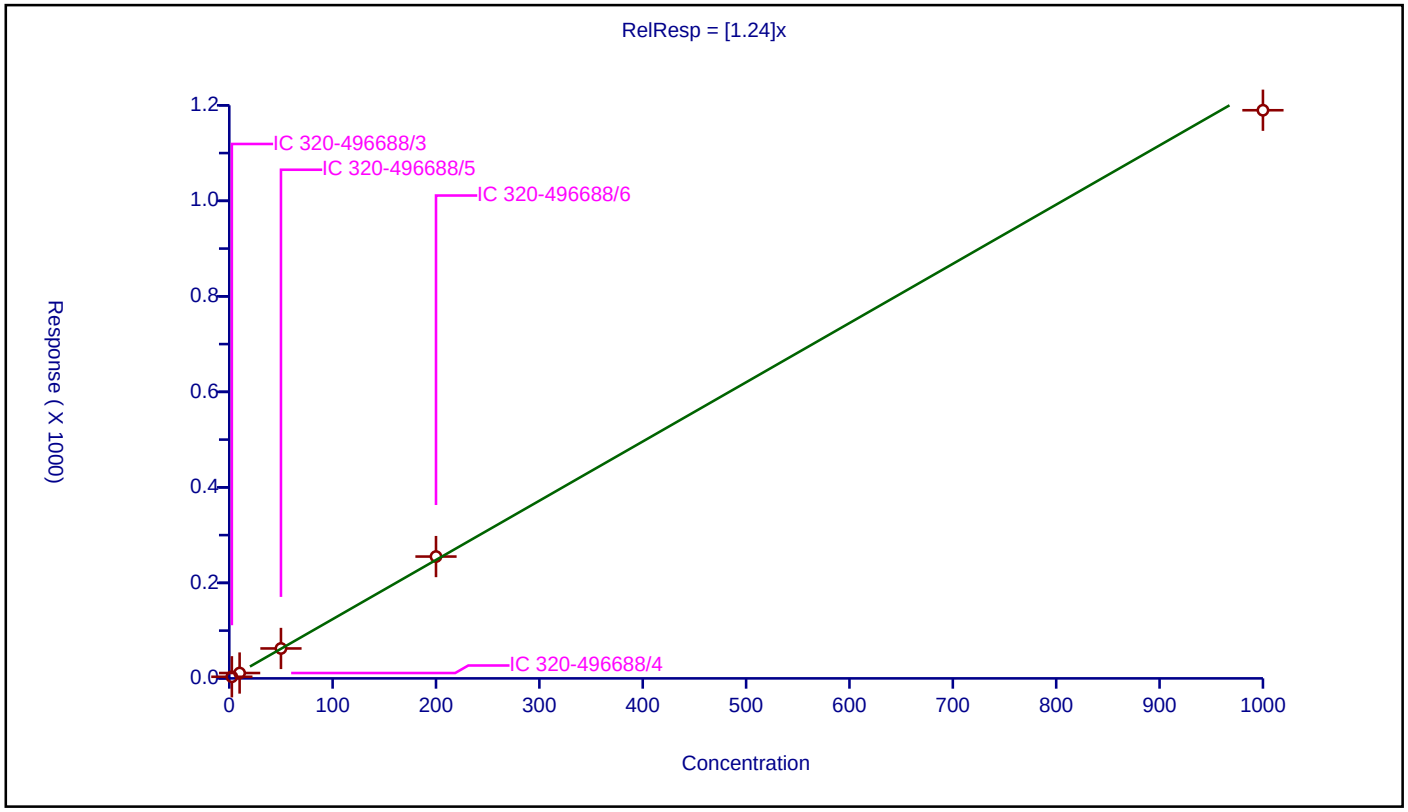

790182

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.046

Error Coefficients

Standard Error:	8500000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.679791	100.0	1602476.0	1.071916	Y
2	IC 320-496688/4	10.0	9.520403	100.0	1364144.0	0.95204	Y
3	IC 320-496688/5	50.0	53.426119	100.0	1388641.0	1.068522	Y
4	IC 320-496688/6	200.0	220.300949	100.0	1521254.0	1.101505	Y
5	IC 320-496688/7	1000.0	1038.502383	100.0	1602880.0	1.038502	Y

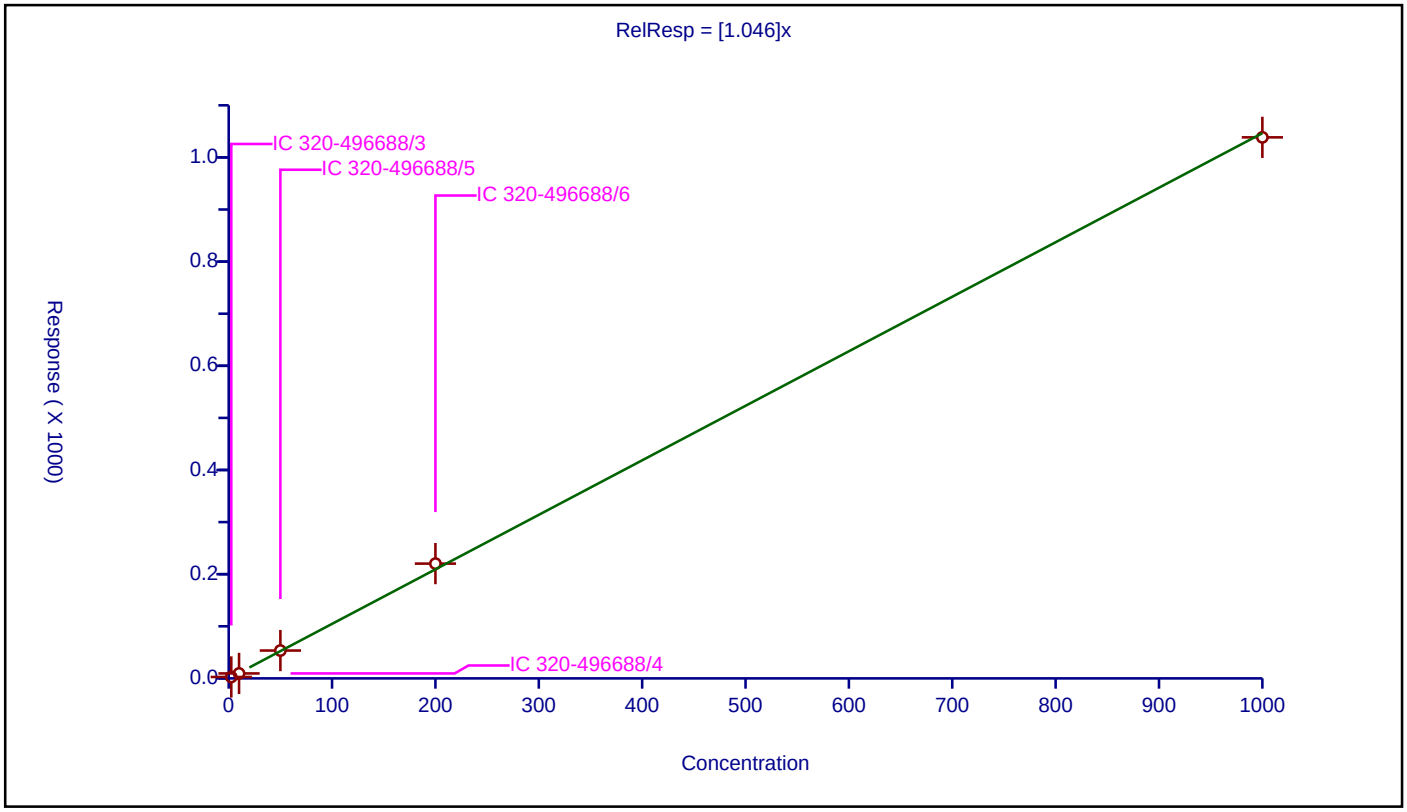

790183

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.054

Error Coefficients

Standard Error:	13300000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.980089	100.0	2514489.0	1.192035	Y
2	IC 320-496688/4	10.0	9.411606	100.0	2234847.0	0.941161	Y
3	IC 320-496688/5	50.0	51.86467	100.0	2149791.0	1.037293	Y
4	IC 320-496688/6	200.0	217.934531	100.0	2432949.0	1.089673	Y
5	IC 320-496688/7	1000.0	1011.152482	100.0	2574521.0	1.011152	Y

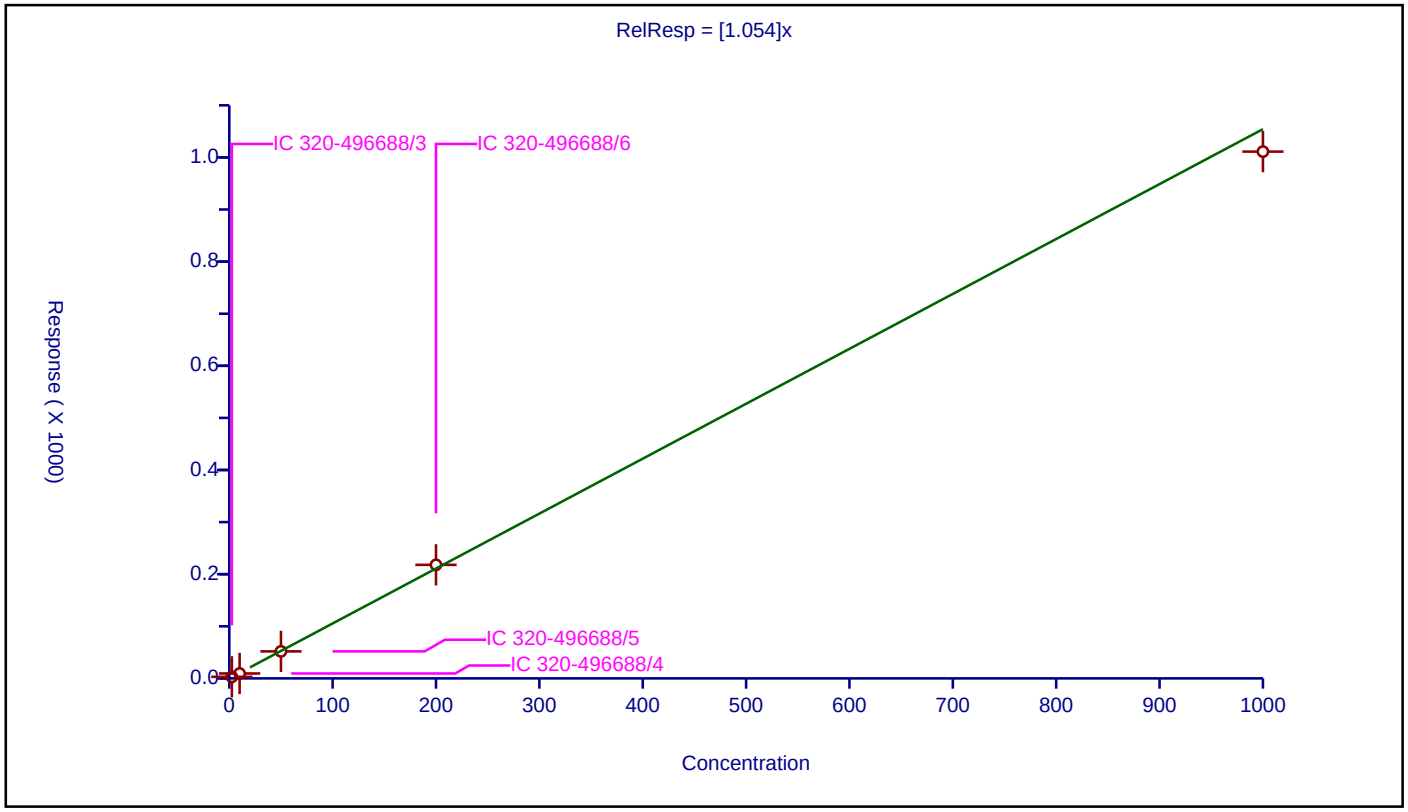

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.214

Error Coefficients

Standard Error:	13000000
Relative Standard Error:	7.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	3.283761	100.0	1523436.0	1.313504	Y
2	IC 320-496688/4	10.0	11.007204	100.0	1740015.0	1.10072	Y
3	IC 320-496688/5	50.0	61.8379	100.0	1861559.0	1.236758	Y
4	IC 320-496688/6	200.0	252.469364	100.0	2042874.0	1.262347	Y
5	IC 320-496688/7	1000.0	1159.01852	100.0	2190509.0	1.159019	Y

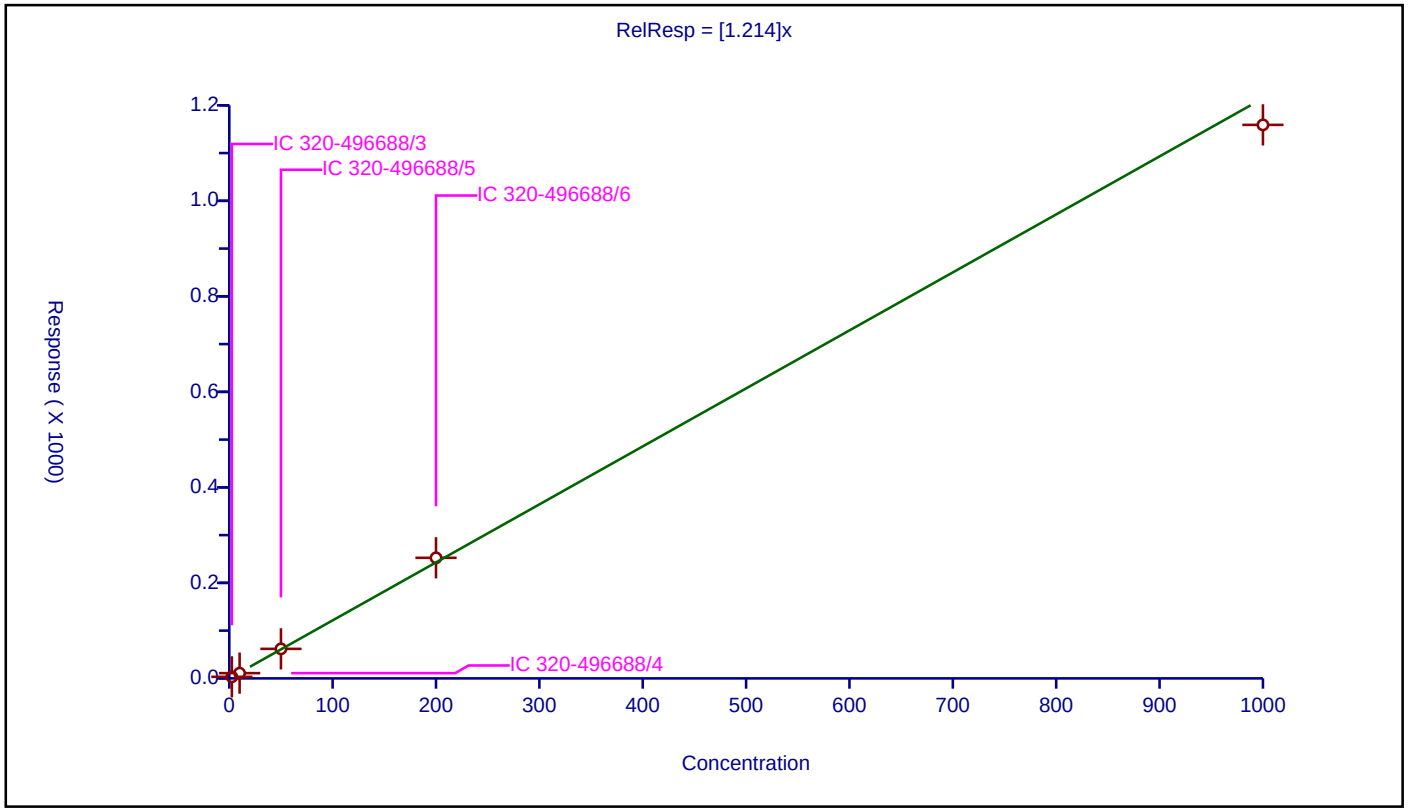

790185

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	12700000
Relative Standard Error:	8.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	2.5	2.808272	100.0	2592947.0	1.123309	Y
2	IC 320-496688/4	10.0	8.984414	100.0	2228025.0	0.898441	Y
3	IC 320-496688/5	50.0	49.606313	100.0	1991303.0	0.992126	Y
4	IC 320-496688/6	200.0	212.714288	100.0	2374722.0	1.063571	Y
5	IC 320-496688/7	1000.0	961.852333	100.0	2584740.0	0.961852	Y

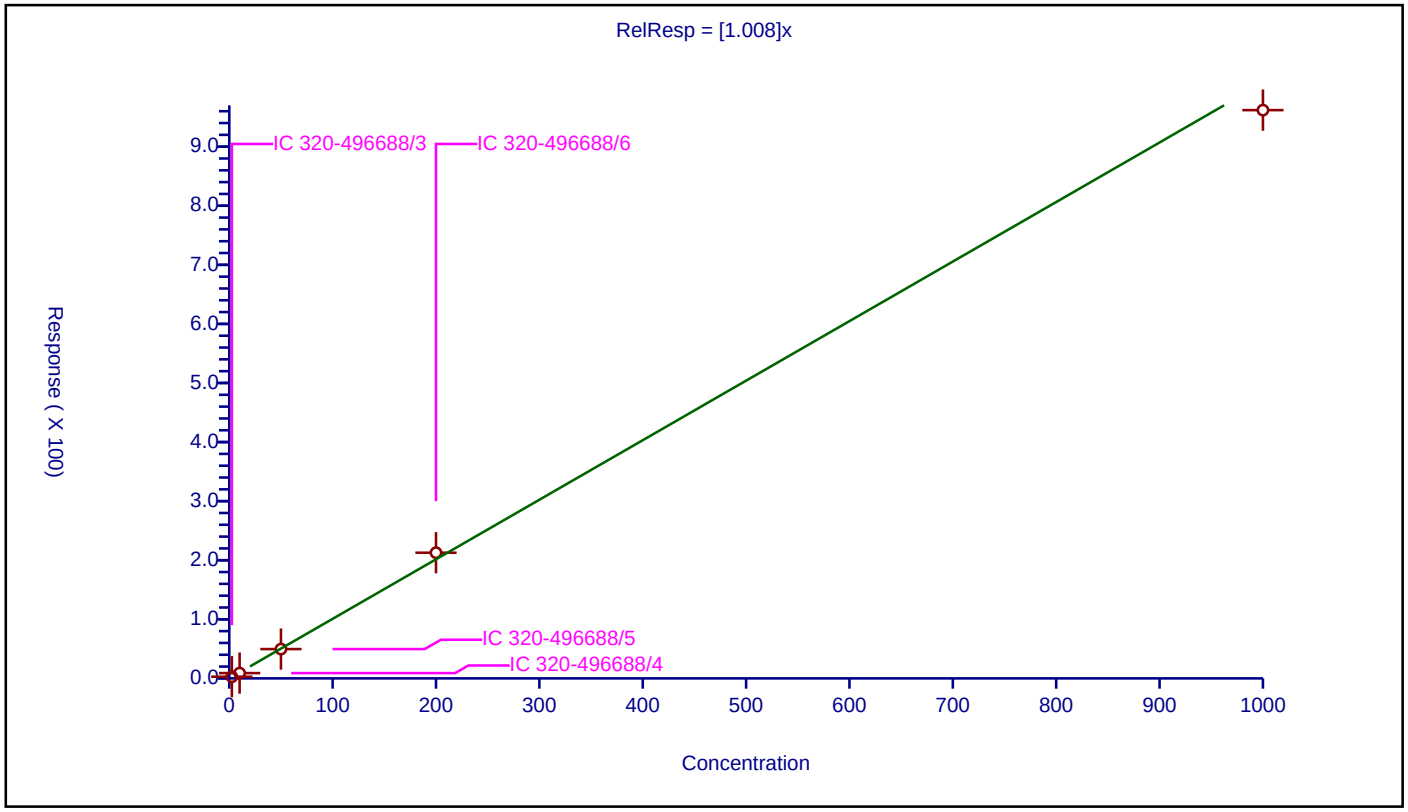

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.075

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.566752	100.0	2138853.0	1.133505	Y
2	IC 320-496688/4	2.0	1.911764	100.0	1829253.0	0.955882	Y
3	IC 320-496688/5	10.0	10.998165	100.0	1800864.0	1.099817	Y
4	IC 320-496688/6	40.0	44.949952	100.0	1948011.0	1.123749	Y
5	IC 320-496688/7	200.0	212.755816	100.0	2014532.0	1.063779	Y

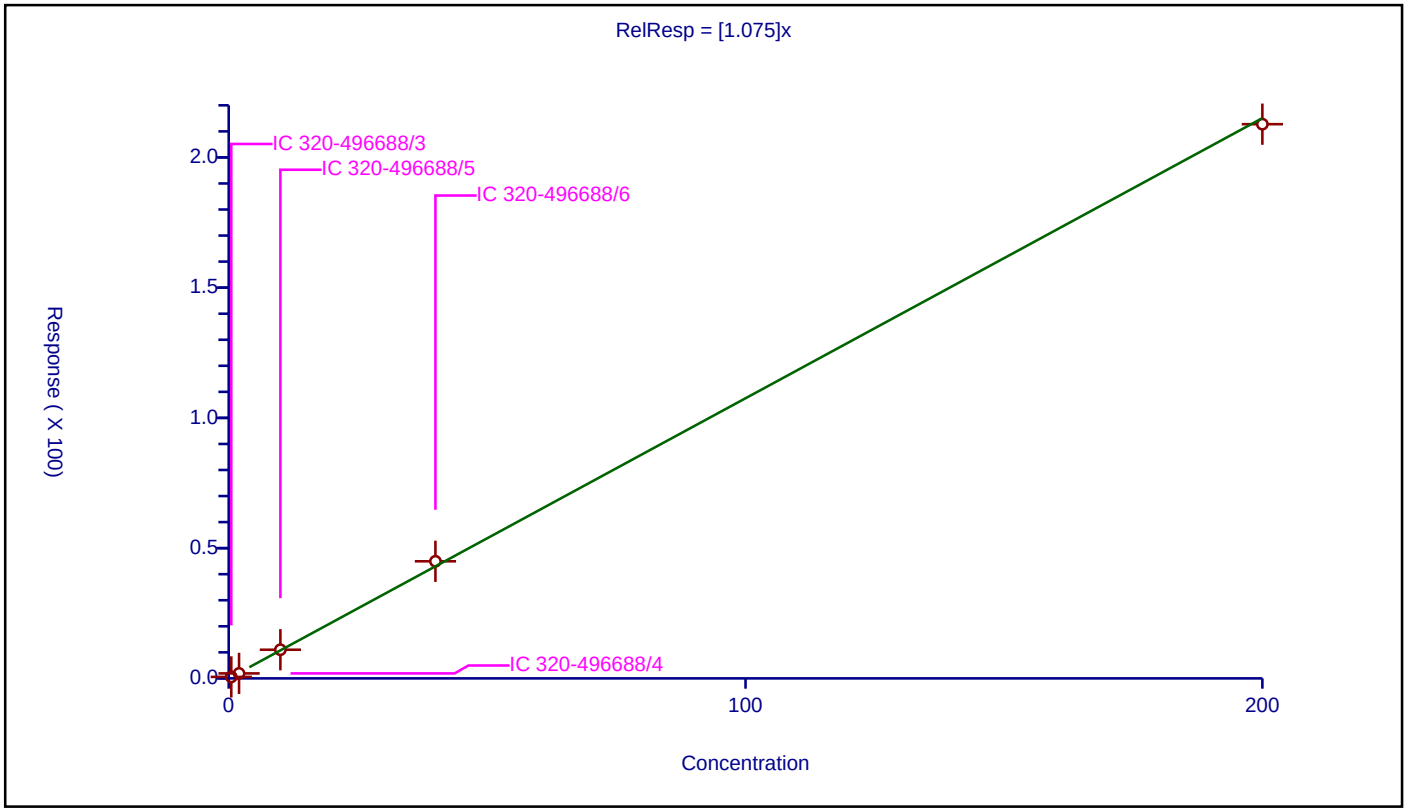

790187

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.08

Error Coefficients

Standard Error:	3140000
Relative Standard Error:	9.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.616764	100.0	3167014.0	1.233528	Y
2	IC 320-496688/4	2.0	1.926948	100.0	2644389.0	0.963474	Y
3	IC 320-496688/5	10.0	10.464342	100.0	2465726.0	1.046434	Y
4	IC 320-496688/6	40.0	44.869913	100.0	2839435.0	1.121748	Y
5	IC 320-496688/7	200.0	207.156116	100.0	2962515.0	1.035781	Y

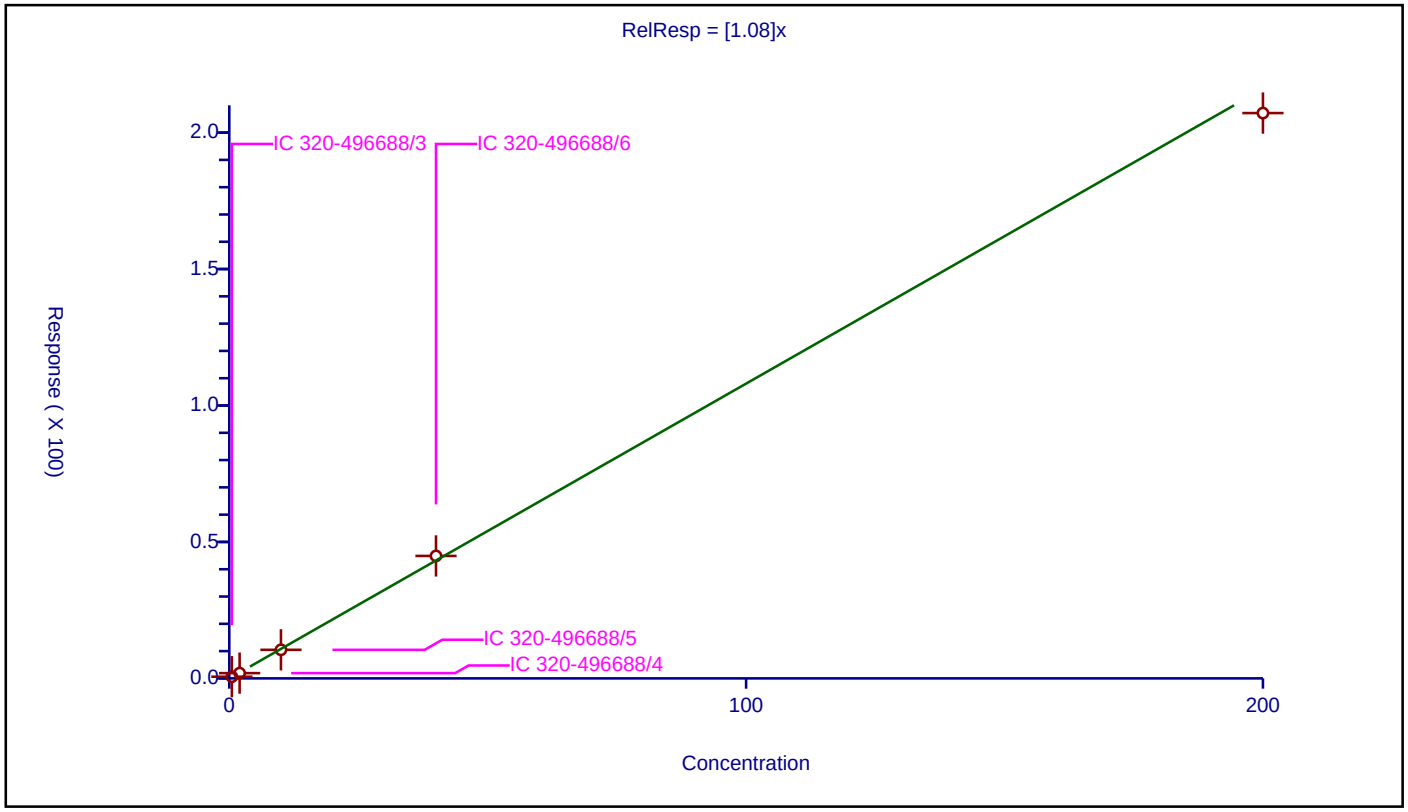

790188

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.008

Error Coefficients

Standard Error:	2190000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	0.5	0.482683	100.0	2334037.0	0.965366	Y
2	IC 320-496688/4	2.0	1.917995	100.0	2045939.0	0.958997	Y
3	IC 320-496688/5	10.0	10.721795	100.0	1900111.0	1.072179	Y
4	IC 320-496688/6	40.0	40.297989	100.0	2105852.0	1.00745	Y
5	IC 320-496688/7	200.0	207.496438	100.0	2066088.0	1.037482	Y

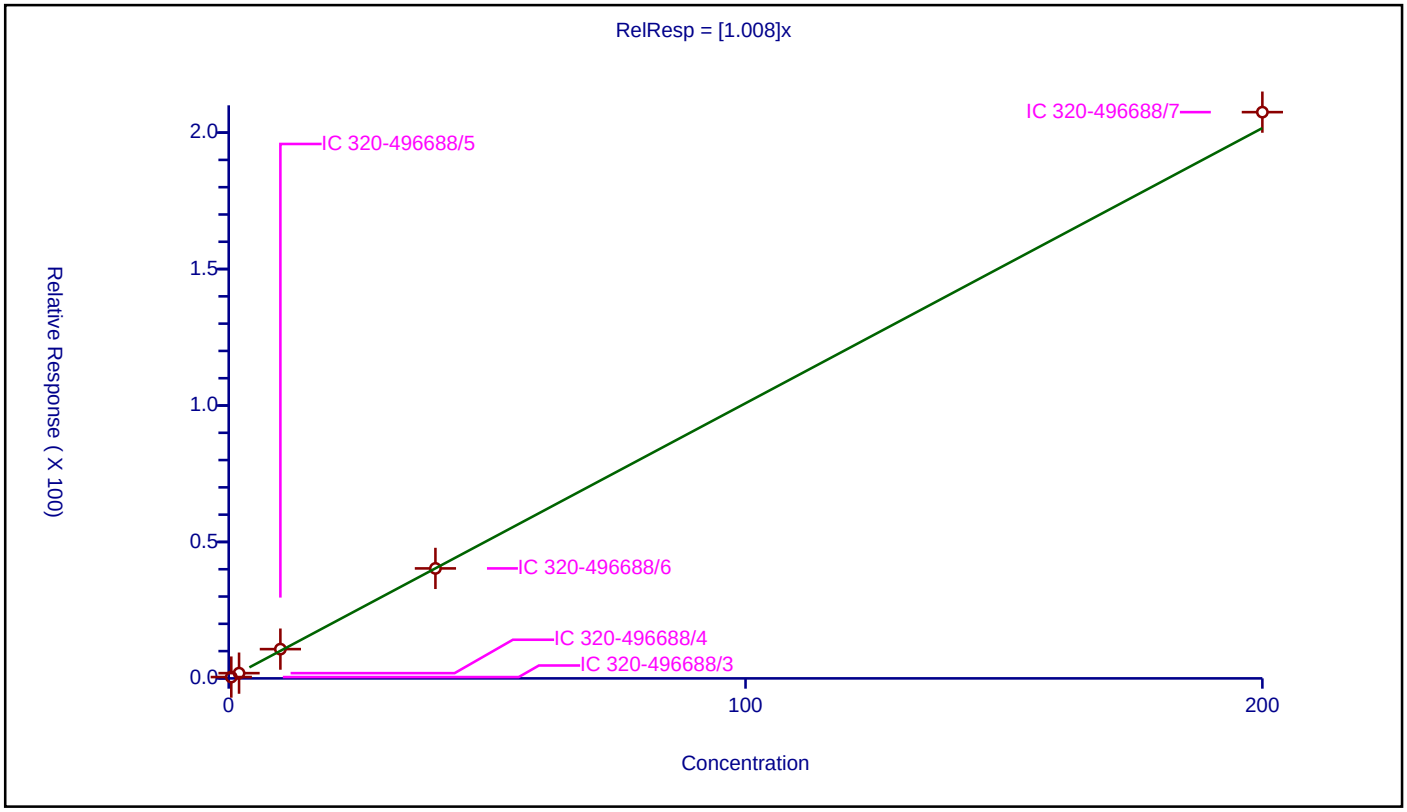

790189

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.062

Error Coefficients

Standard Error:	11700000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	5.664077	200.0	1823492.0	1.132815	Y
2	IC 320-496688/4	20.0	19.907928	200.0	1833139.0	0.995396	Y
3	IC 320-496688/5	100.0	108.699815	200.0	1676139.0	1.086998	Y
4	IC 320-496688/6	400.0	441.074631	200.0	2177938.0	1.102687	Y
5	IC 320-496688/7	2000.0	1984.090177	200.0	2298668.0	0.992045	Y

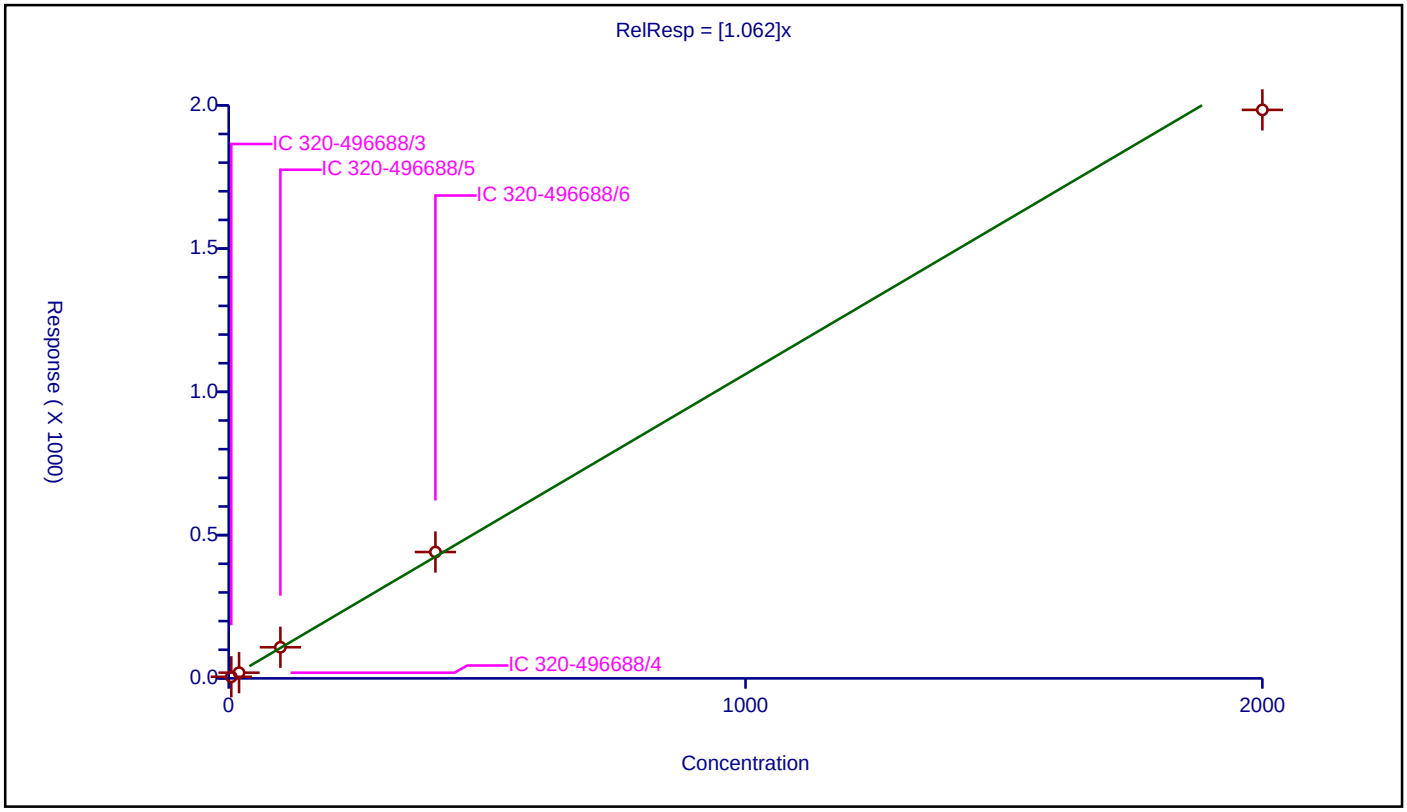

790190

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	15600000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-496688/3	5.0	6.696054	200.0	1823492.0	1.339211	Y
2	IC 320-496688/4	20.0	23.726842	200.0	1833139.0	1.186342	Y
3	IC 320-496688/5	100.0	133.490122	200.0	1676139.0	1.334901	Y
4	IC 320-496688/6	400.0	558.573844	200.0	2177938.0	1.396435	Y
5	IC 320-496688/7	2000.0	2654.186163	200.0	2298668.0	1.327093	Y

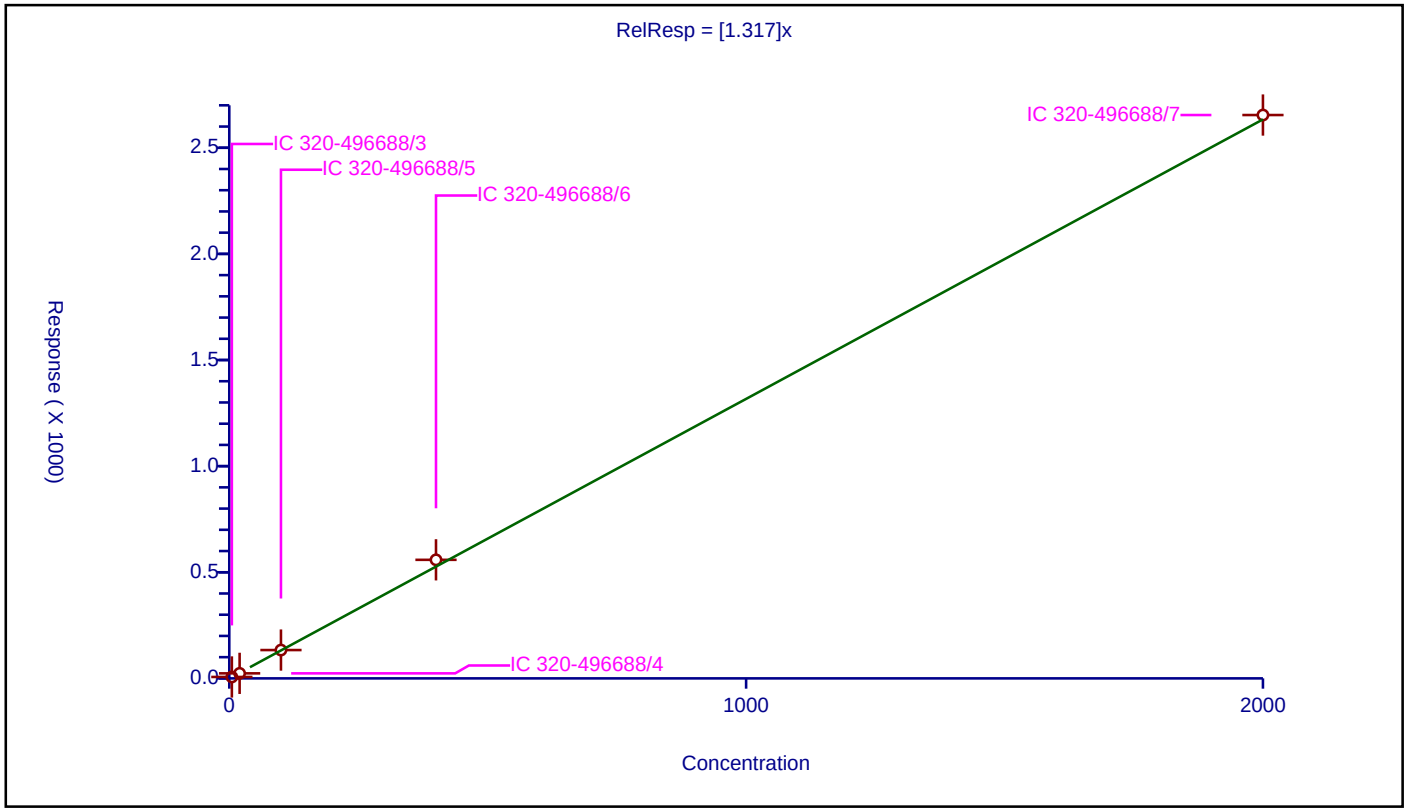

790191

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

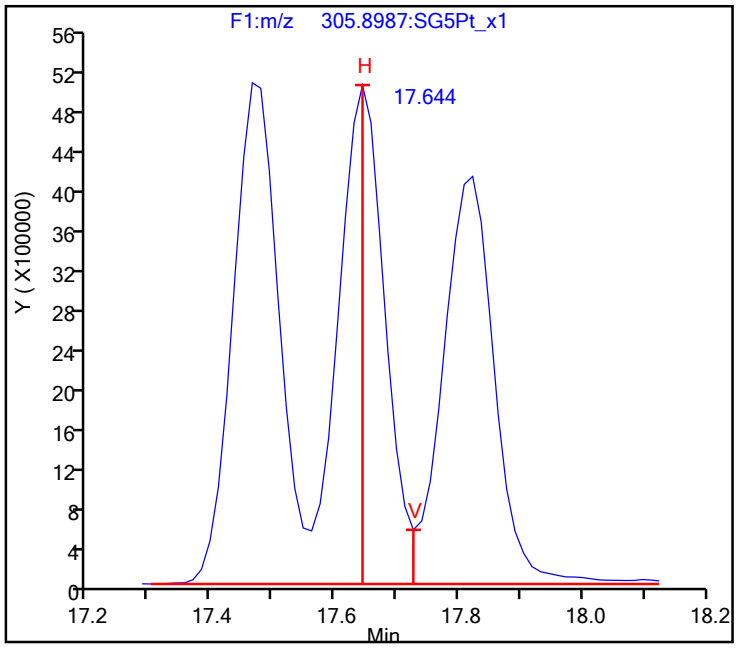

790193

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab Sample ID (1): WDM 320-517462/44 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/19/2021 02:19

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.78	21

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d				
Injection Date:	19-Aug-2021 02:19:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	44
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 5301
H (Peak Height) = 24781

%R = 21 <= 25
Passed

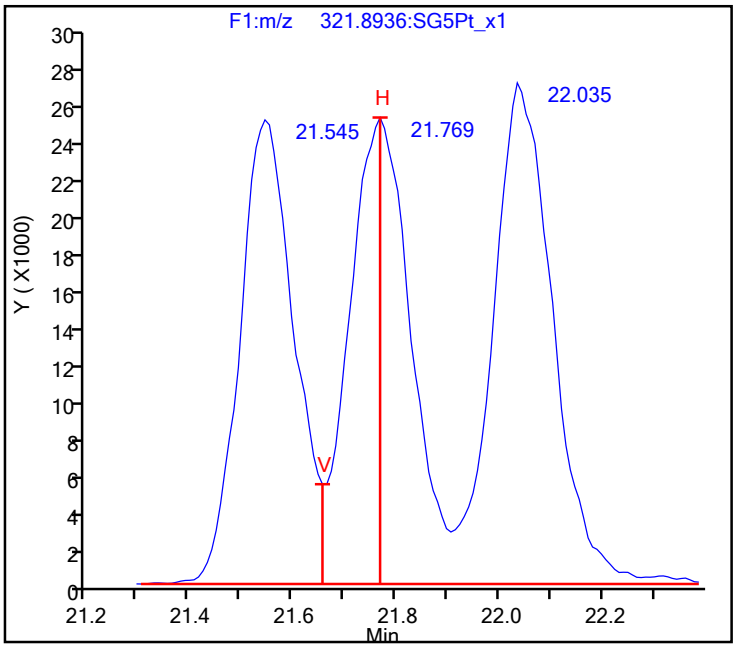

790195

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab Sample ID (1): WDM 320-517891/1 Instrument ID (1): DFS 1

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/19/2021 13:59

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	21.84	22

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d				
Injection Date:	19-Aug-2021 13:59:00	Instrument ID:	DFS 1		
Lims ID:	WDM				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 916
H (Peak Height) = 4212

%R = 22 <= 25
Passed

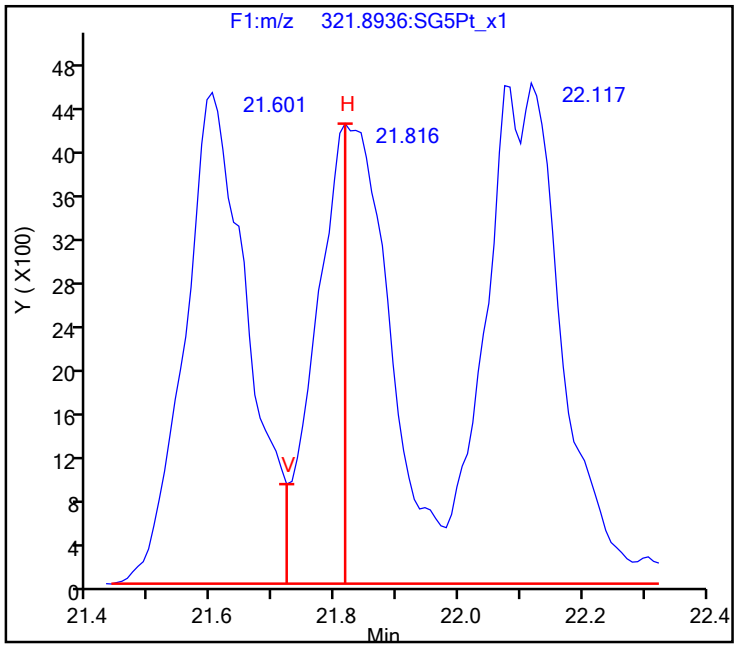

790197

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab Sample ID (1): CPS 320-519438/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/24/2021 08:28

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	13

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d				
Injection Date:	24-Aug-2021 08:28:58	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 298756
H (Peak Height) = 2238451

%R = 13 <= 25
Passed

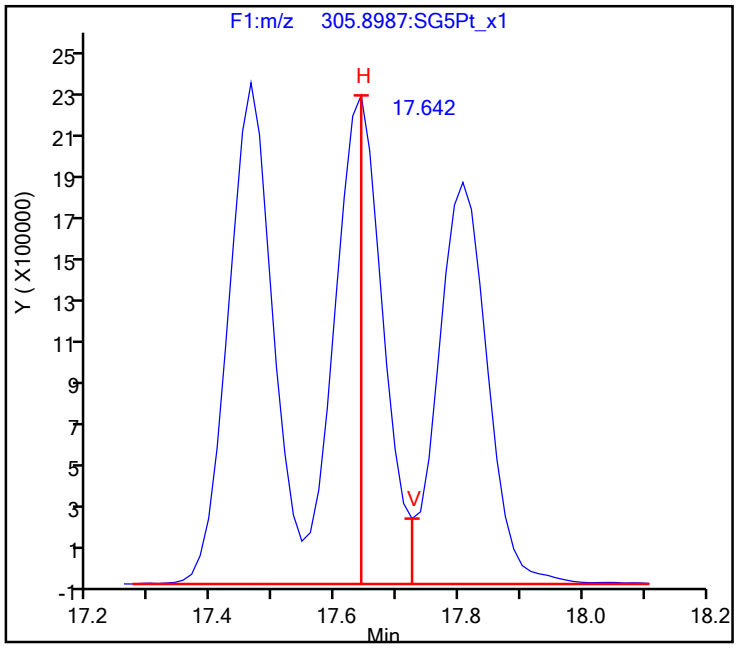

790199

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d				
Injection Date:	24-Aug-2021 08:28:58	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab Sample ID (1): CPS 320-520438/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/27/2021 08:59

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	11

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d				
Injection Date:	27-Aug-2021 08:59:39	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 444126
H (Peak Height) = 3930424

%R = 11 <= 25
Passed

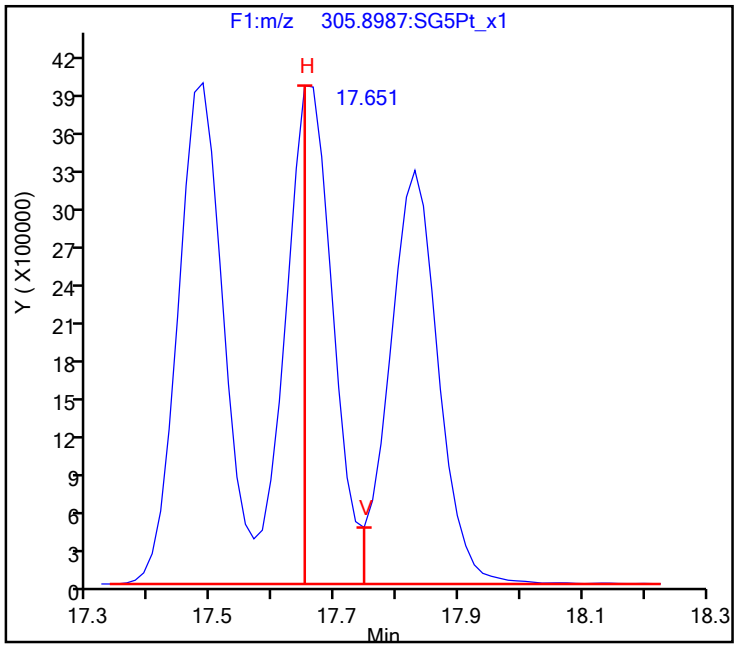

790202

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d				
Injection Date:	27-Aug-2021 08:59:39	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab Sample ID (1): CPS 320-520456/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/27/2021 15:38

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	12

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d				
Injection Date:	27-Aug-2021 15:38:16	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 527494
H (Peak Height) = 4488549

%R = 12 <= 25
Passed

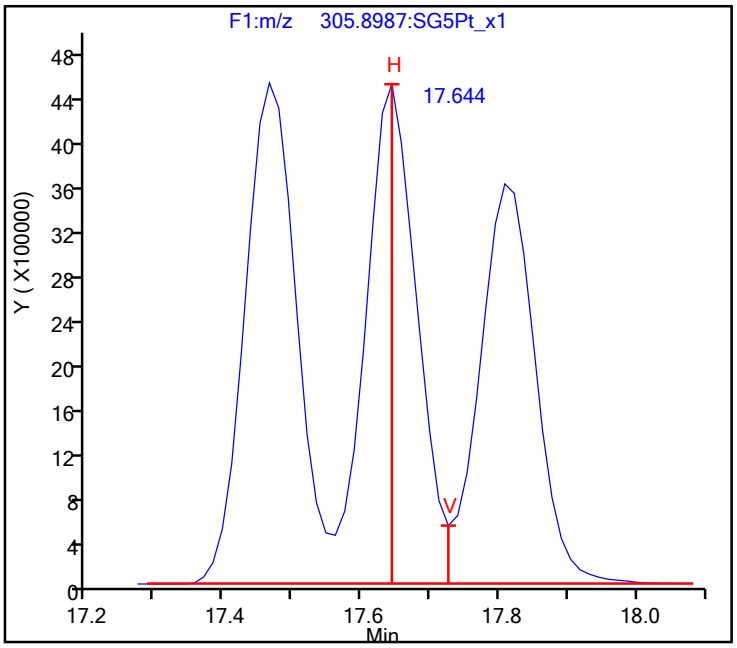

790205

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

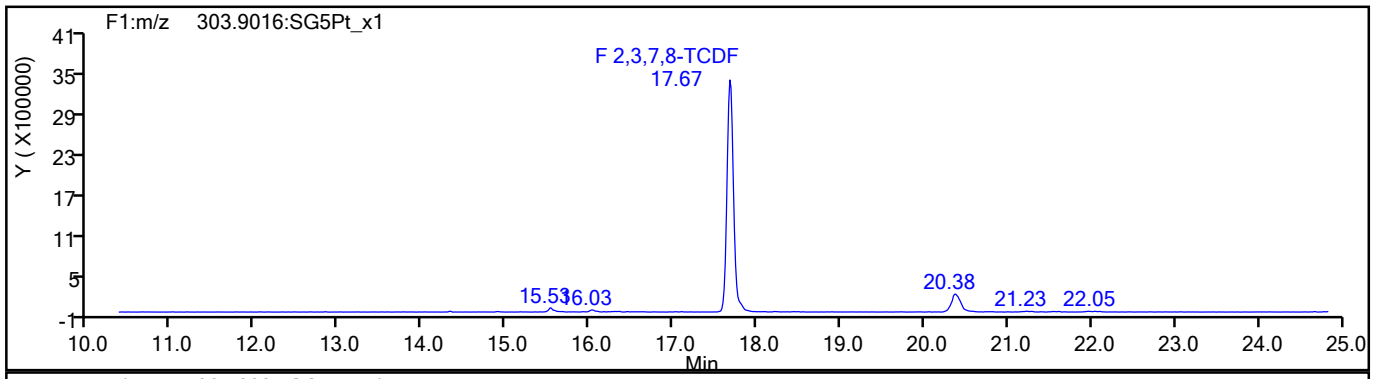

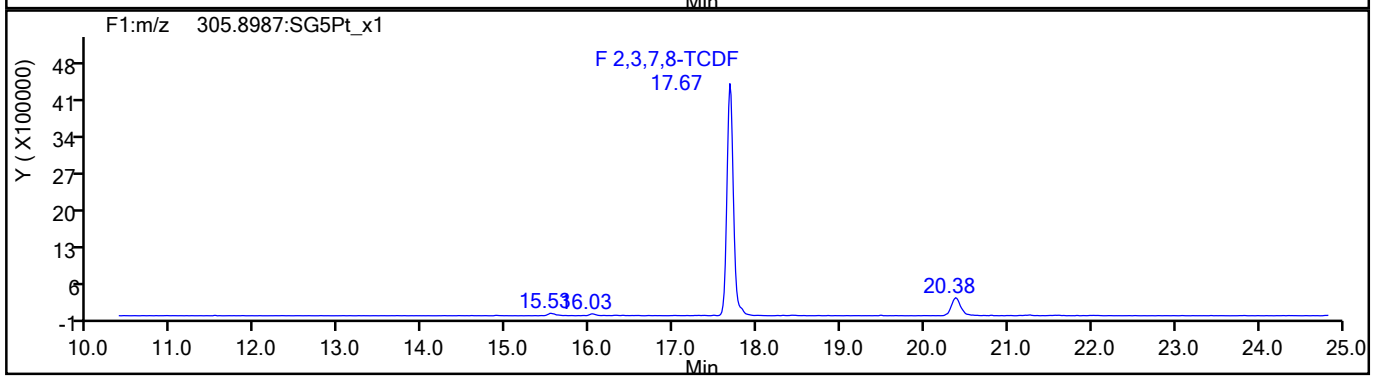

TCDF Standards

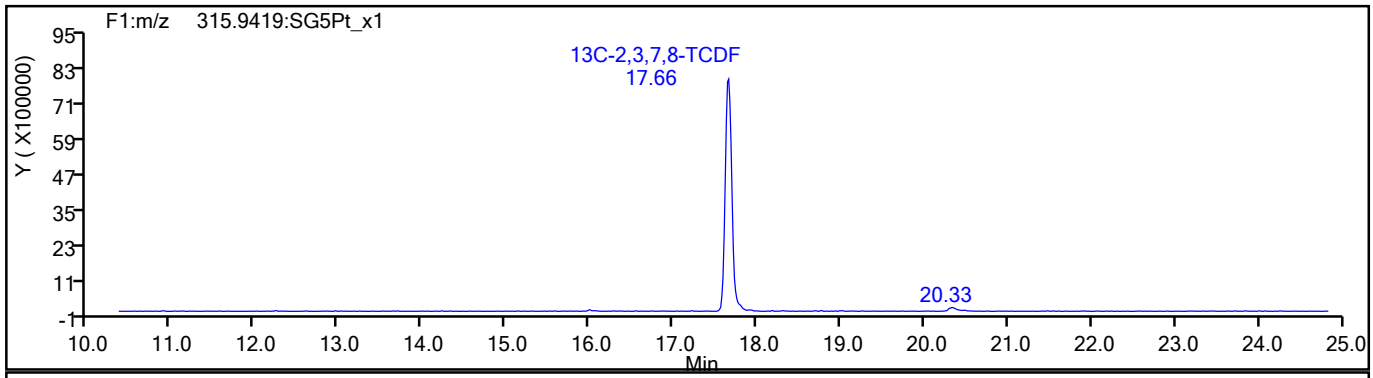

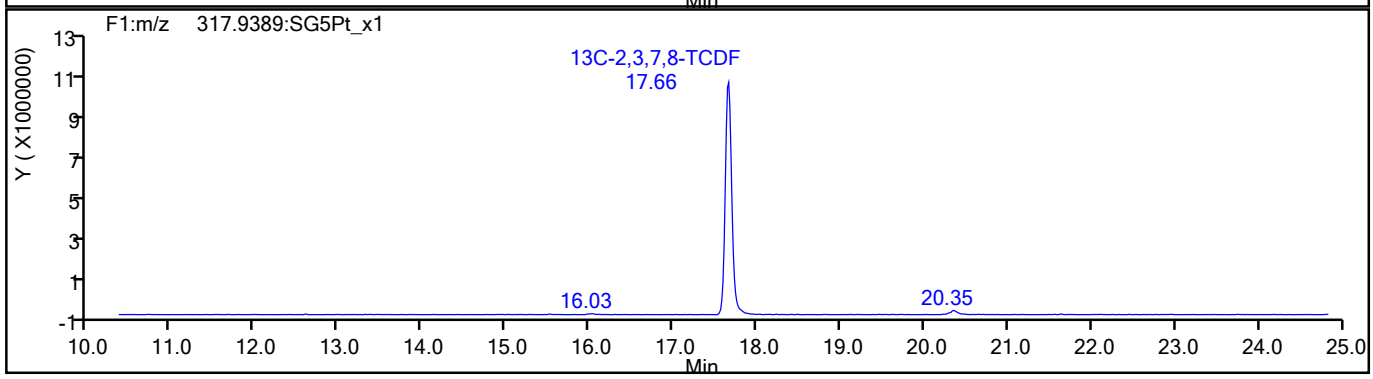

790209

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

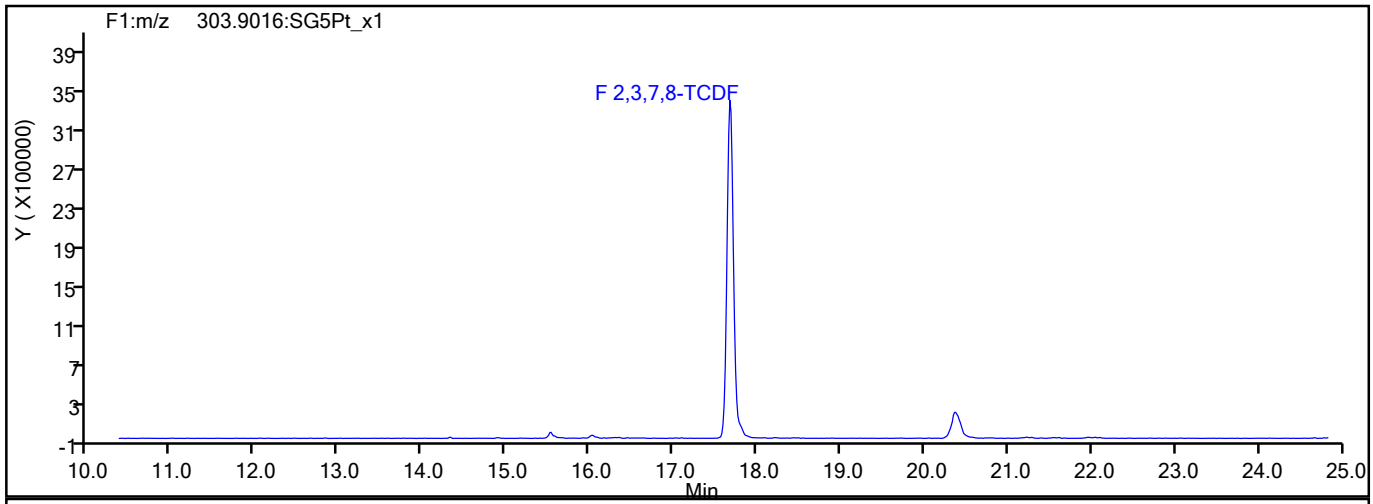

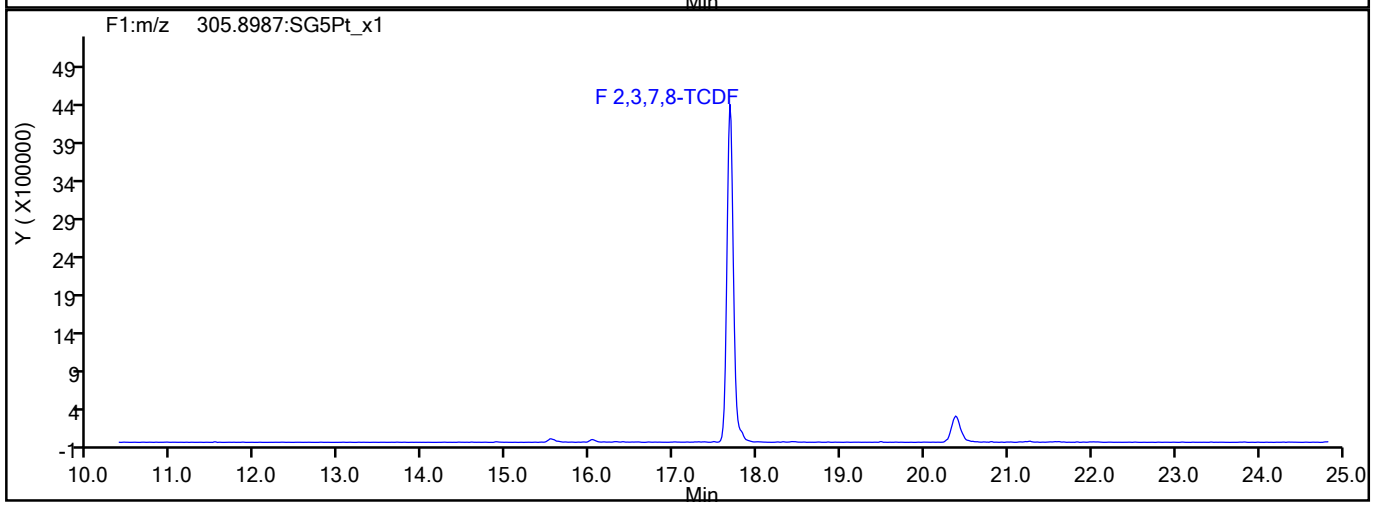

TCDF Interference Mass

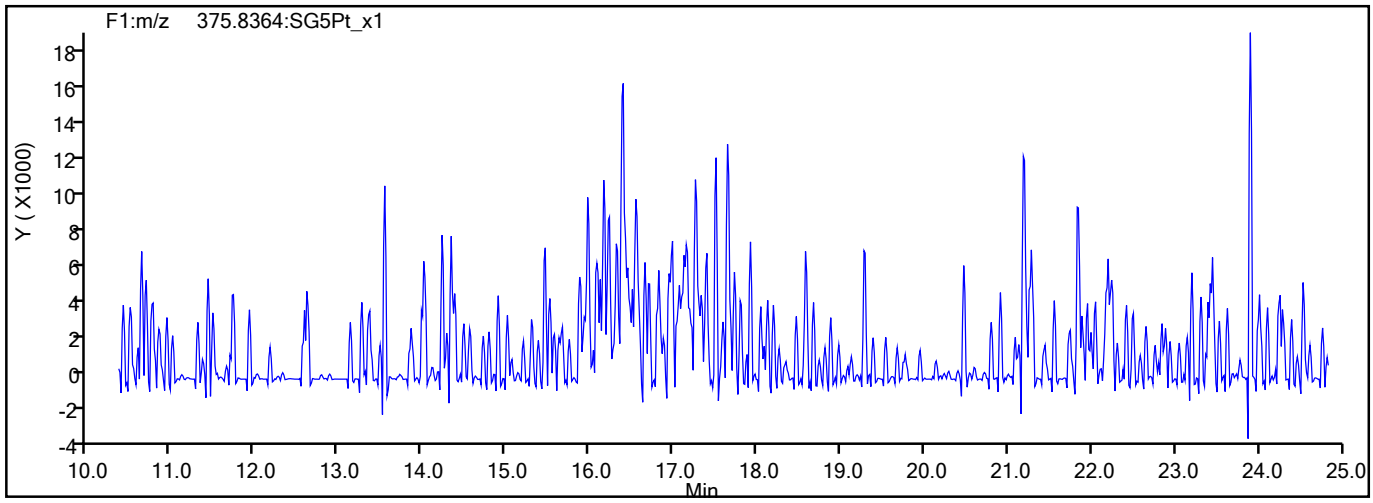

790210

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

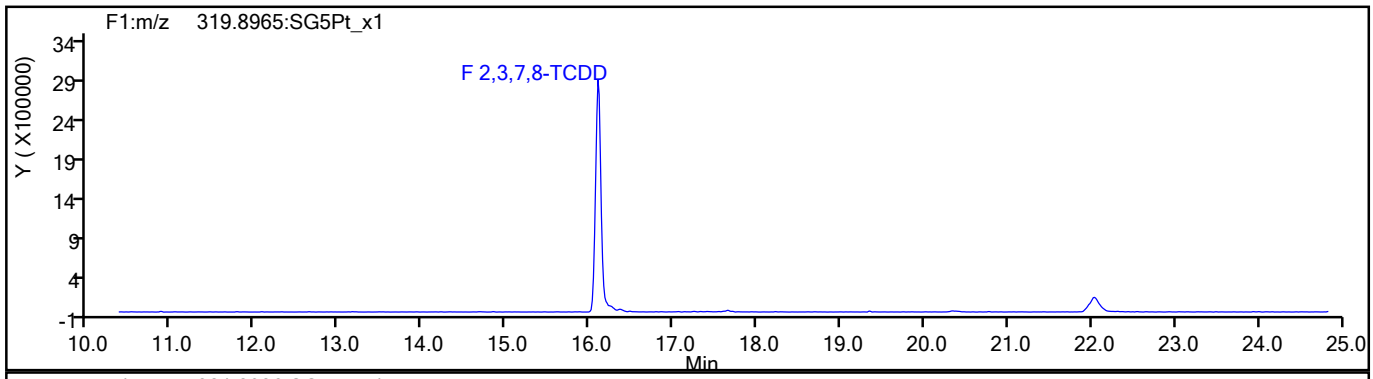

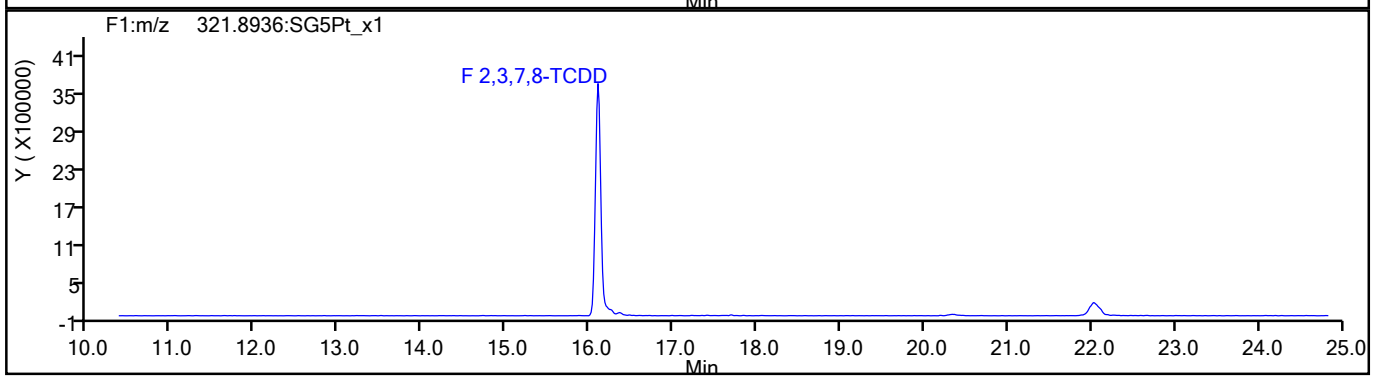

TCDD Standards

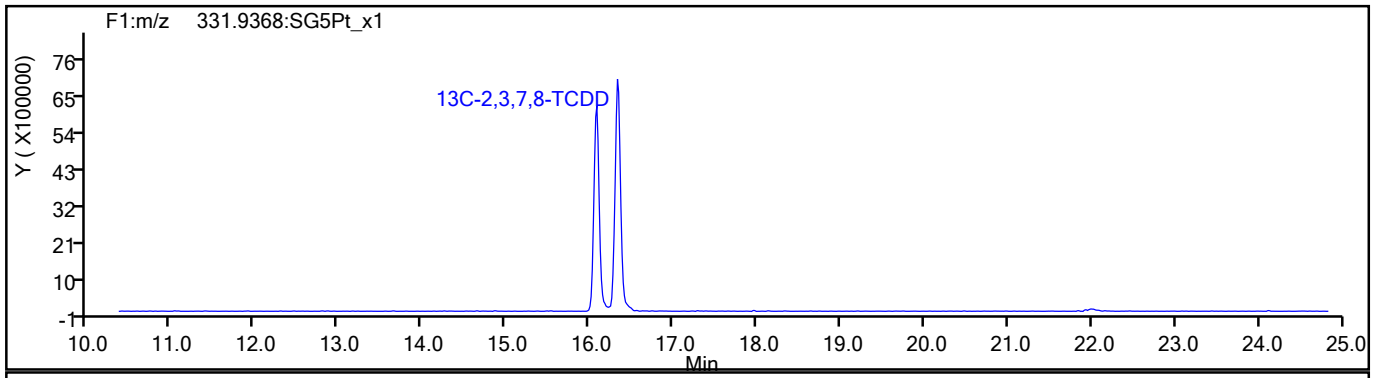

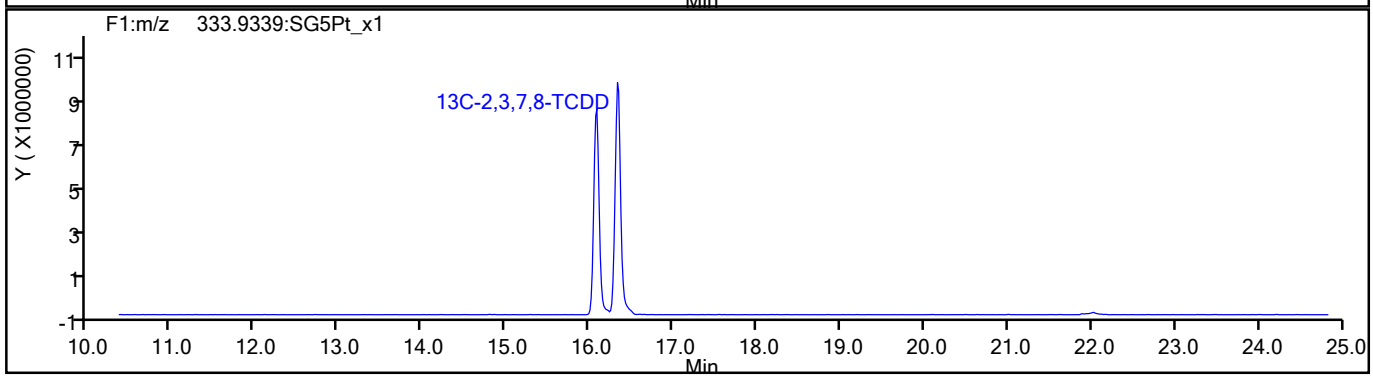

790211

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

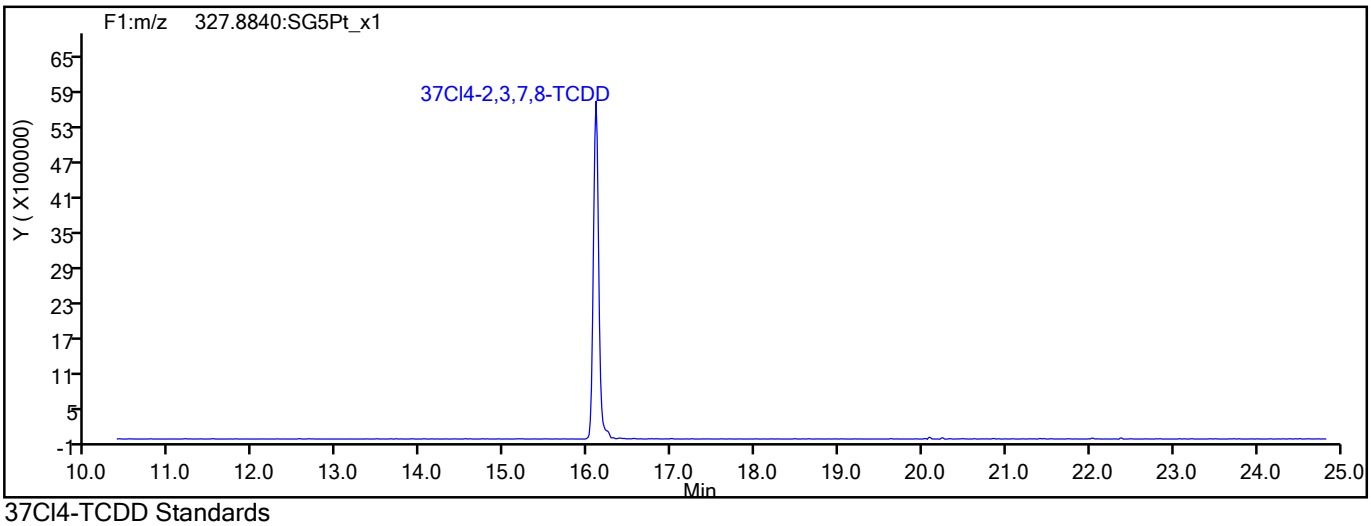

37Cl4-TCDD Standards

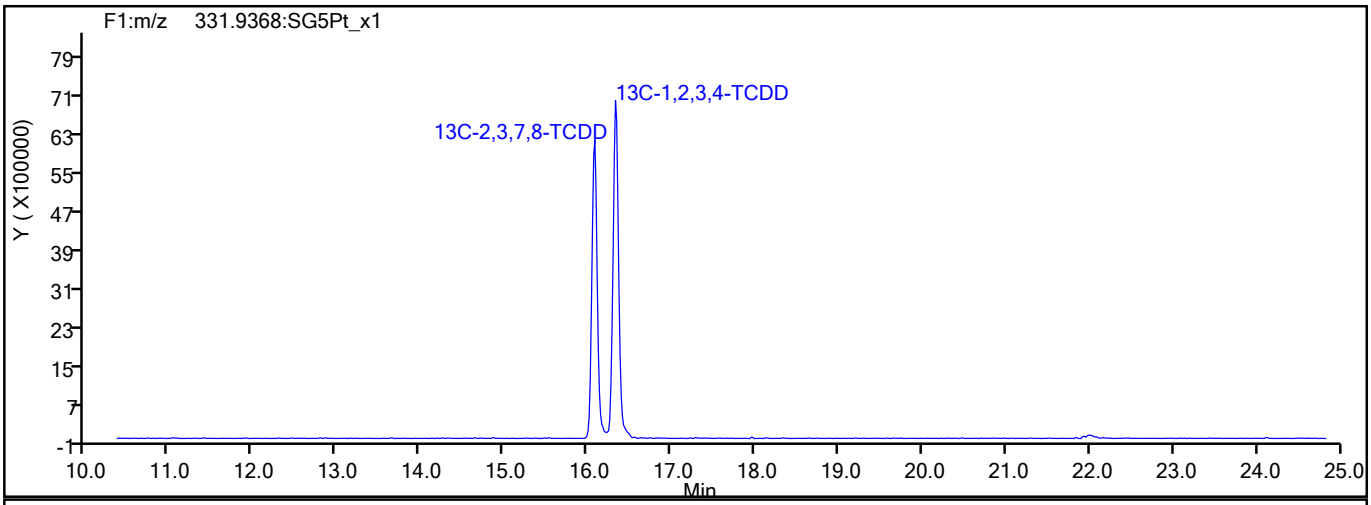

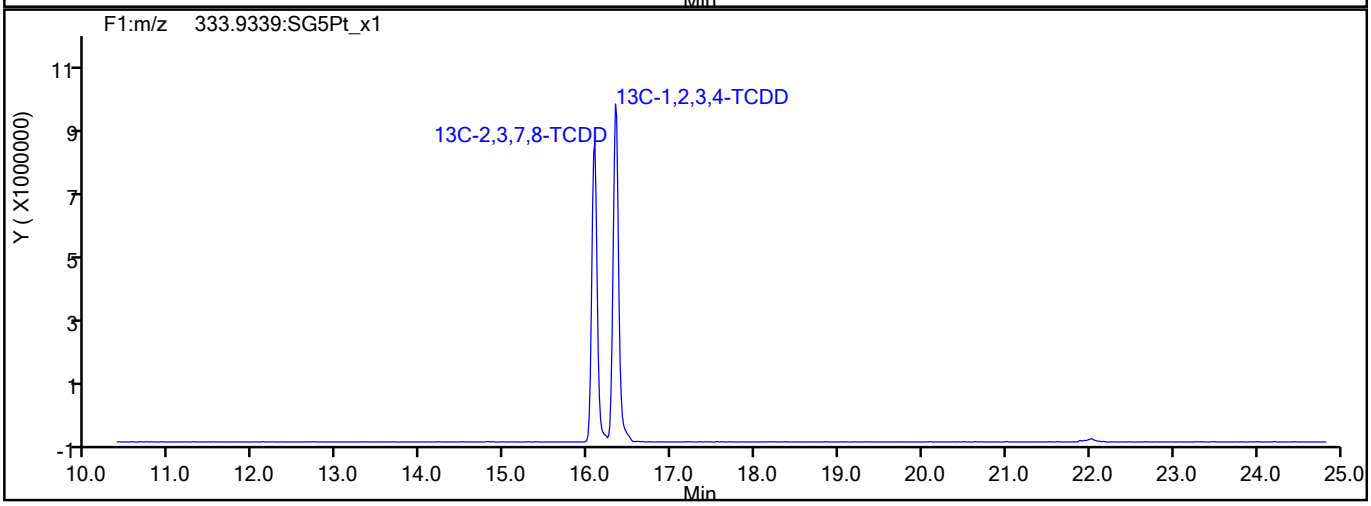

790212

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

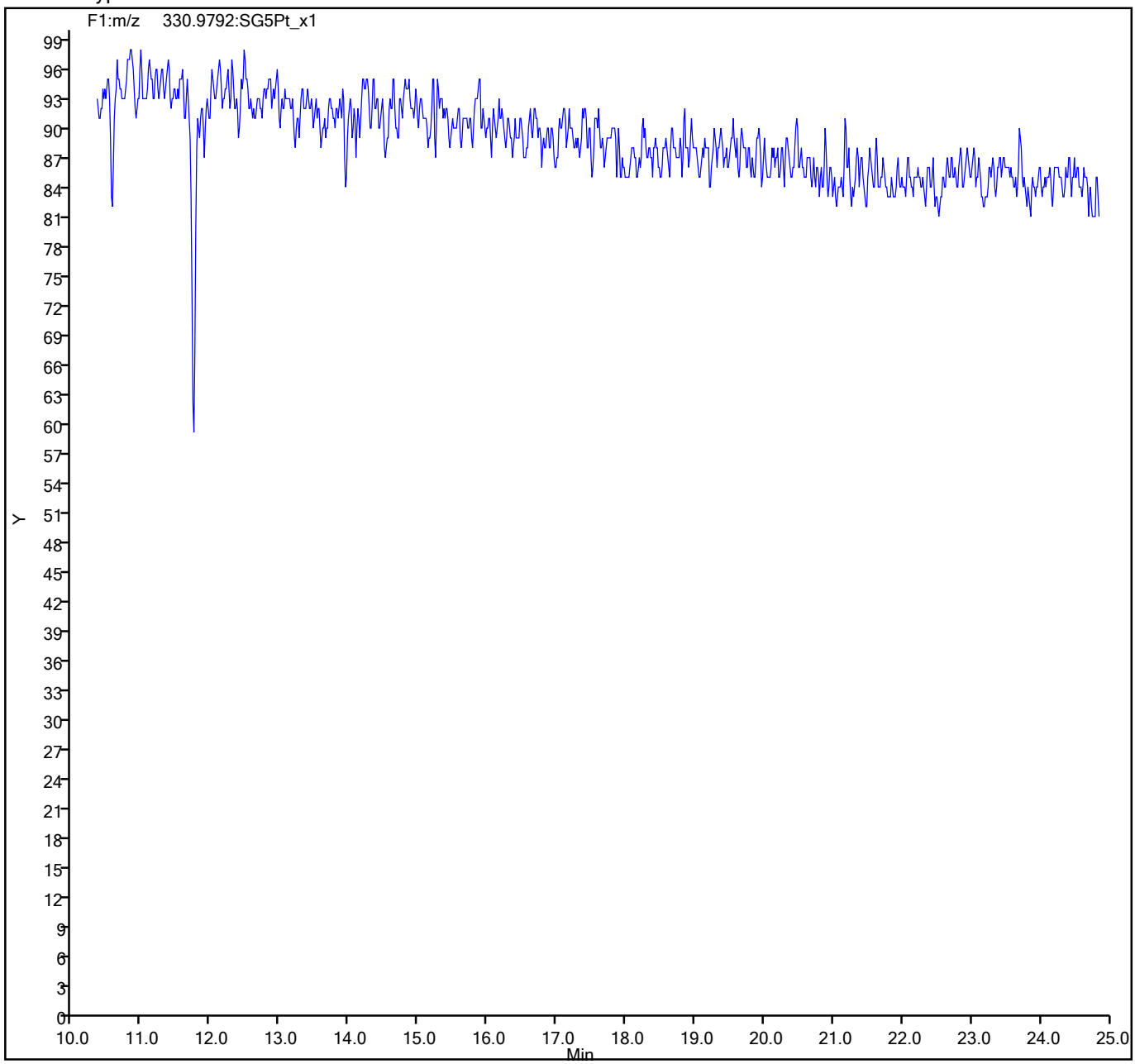

790213

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab Sample ID: CCV 320-519438/2 Calibration Date: 08/24/2021 09:07

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 24AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.028		9.73	10.0	97	78-129
2,3,7,8-TCDF	AveID	0.998	0.9203		9.22	10.0	92	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9731		111	100	111	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.568		118	100	118	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9663		11.2	10.0	112	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
24AU2111D2	1	CPS 082421	CPS HRDXNCP_00044				1.00000	
24AU2111D2	2	CCV 082421	CCV CS-4 HRDXNL4_00100				1.00000	
24AU2111D2	3	SB 082421	Solvent Blank C-14				1.00000	
24AU2111D2	4	320-513879	MB 320-513879/1-A	20	1613B/Solid	D267	10.00000	g
24AU2111D2	5	320-513585	320-76769-A-18-A	20	1613B/Solid	D265	10.00000	g
24AU2111D2	6	320-513585	320-76769-A-2-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	7	320-513585	320-76769-A-14-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	8	320-513585	320-76769-A-26-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	9	320-513585	320-76769-A-28-A X5	20	1613B/Solid		10.00000	g
24AU2111D2	10	320-513586	320-76769-A-27-A	20	1613B/Solid	D266	10.00000	g
24AU2111D2	11	320-513586	320-76769-A-27-B MS	20	1613B/Solid		10.00000	g
24AU2111D2	12	320-513586	320-76769-A-27-C MSD	20	1613B/Solid		10.00000	g
24AU2111D2	13						1.00000	
24AU2111D2	14						1.00000	
24AU2111D2	15						1.00000	
24AU2111D2	16						1.00000	
24AU2111D2	17						1.00000	
24AU2111D2	18		KSS 08-24-21				1.00000	
24AU2111D2	19						1.00000	

LOGFILE CHECKED
DB 8/24/21

Peak Locate Examination:24-AUG-2021:08:27 File:24AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

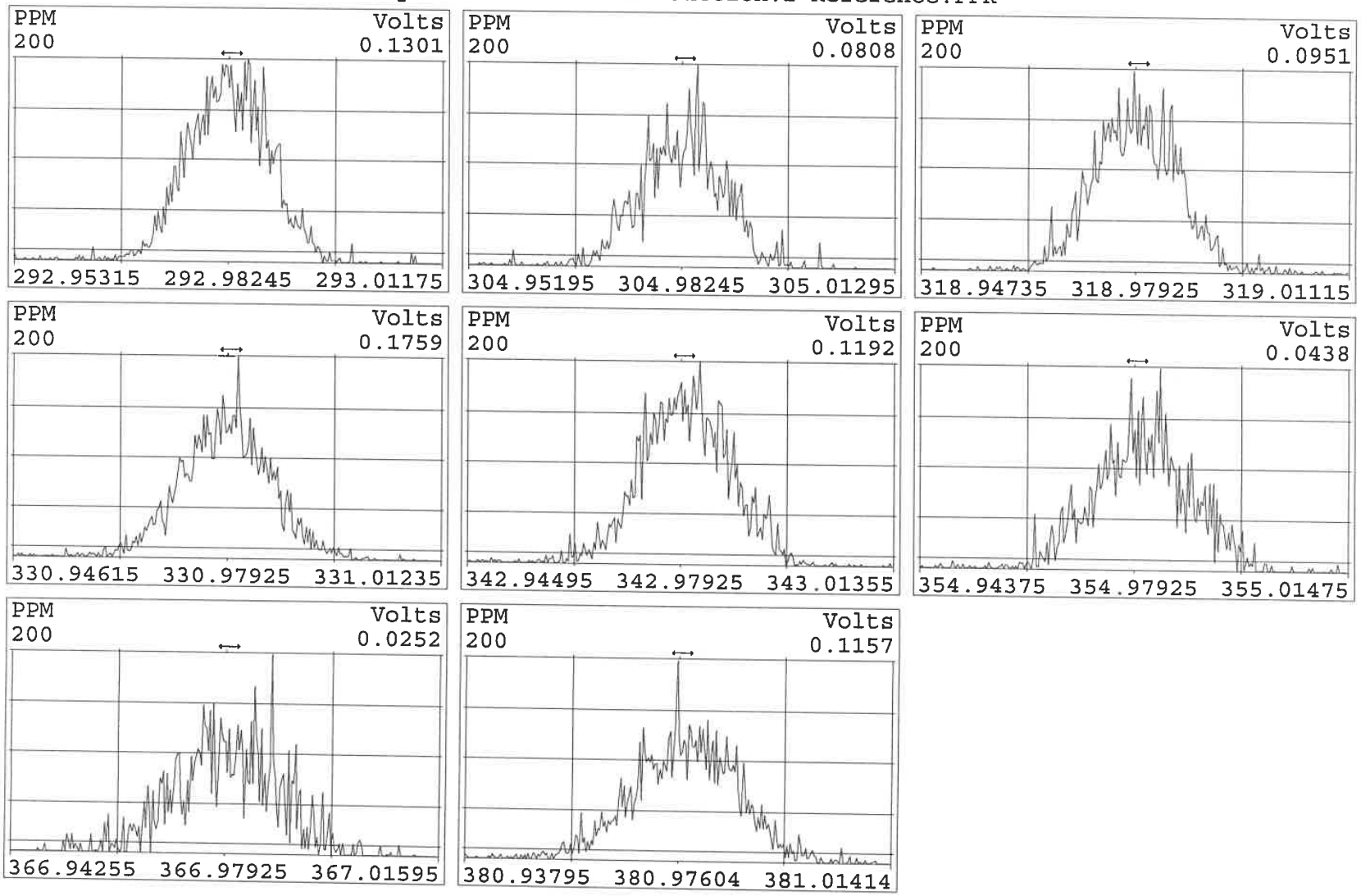

Peak Locate Examination:24-AUG-2021:16:14 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

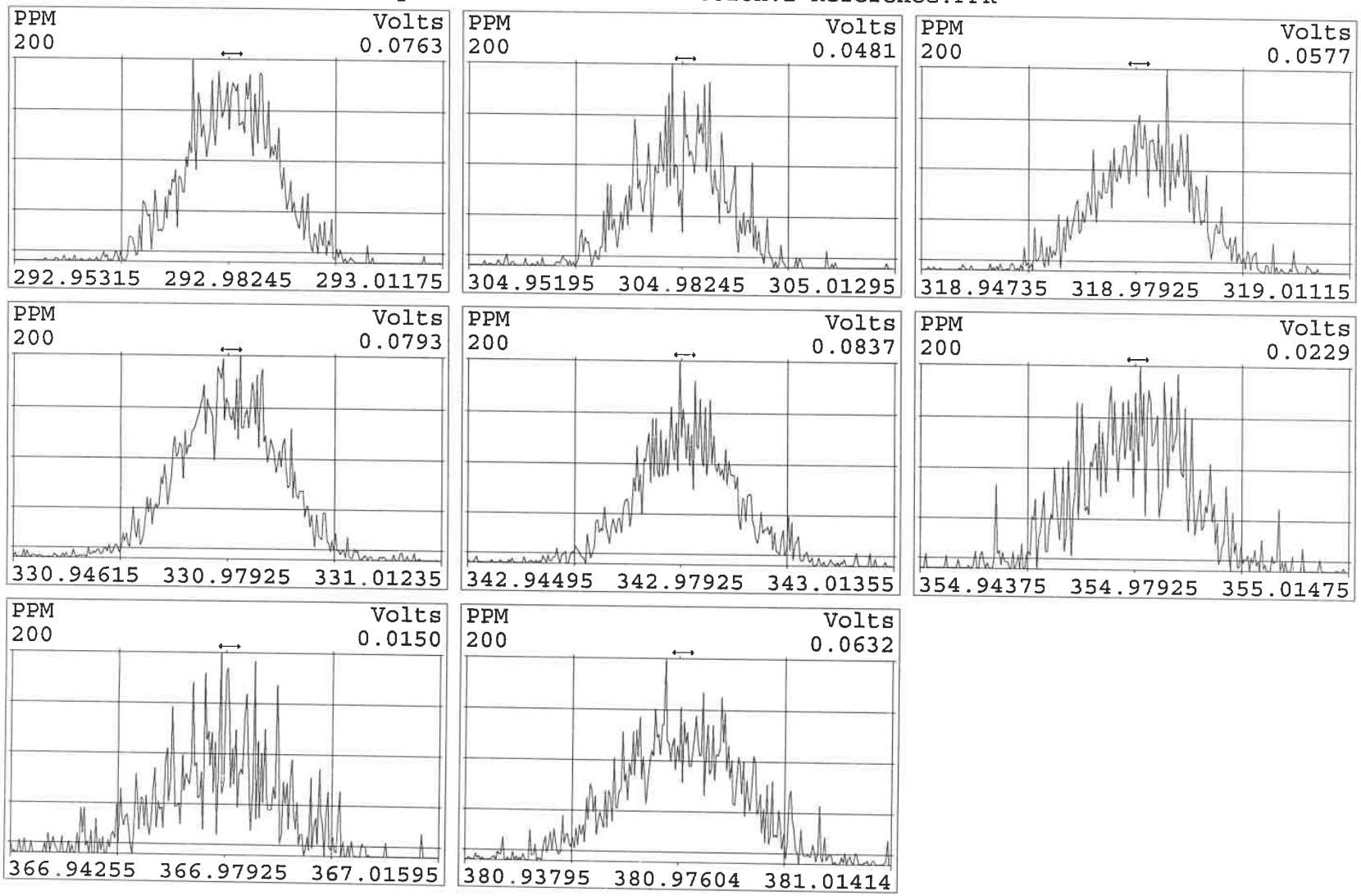

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 09:07:16 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:42

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.283	33559774	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	52629254	0.80	1.3327	117.7	117.7	0.2512	0.2512	118	
2,3,7,8-TCDF	17.641	4843376	0.77	0.9978	9.223	9.223	0.0442	0.0442	92.23	
D 13C-2,3,7,8-TCDD	16.050	32656269	0.76	0.8749	111.2	111.2	0.4262	0.4262	111	
$ 37Cl4-2,3,7,8-TCDD	16.063	3242735		0.8648	11.2	11.2	0.0810	0.0810	112	
2,3,7,8-TCDD	16.077	3357078	0.83	1.0570	9.726	9.726	0.0680	0.0680	97.26	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 24-Aug-2021 09:07:16 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:42

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.283	16.283	0		14514242	3109306	5198	12995	598		
333.9339	16.283	16.283	0		19045532	4067992	5508	13770	739	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.613	0	1.082	23419943	4217062	5707	14267	739		
317.9389	17.599	17.613	-1	1.081	29209311	5613115	3903	9757	1438	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.641	17.641	0	1.002	2101458	376732	657	1642	573		
305.8987	17.627	17.641	-1	1.001	2741918	507422	1079	2697	470	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.050	16.050	0	0.986	14062884	3232967	5198	12995	622		
333.9339	16.050	16.050	0	0.986	18593385	4326423	5508	13770	785	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.063	16.063	0	0.987	3242735	728649	2011	5027	362		
2,3,7,8-TCDD											
319.8965	16.077	16.077	0	1.002	1524098	338203	902	2255	375		
321.8936	16.077	16.077	0	1.002	1832980	395830	1270	3175	312	0.83(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

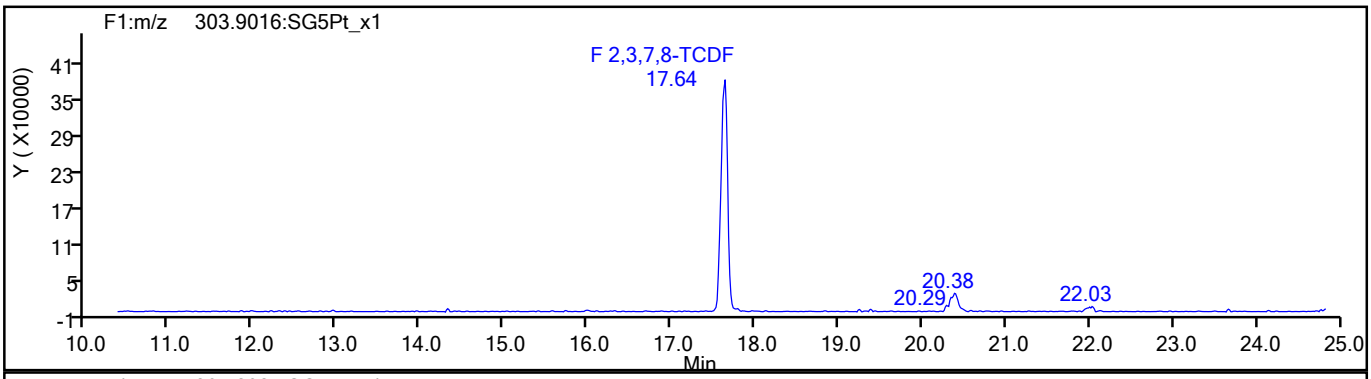

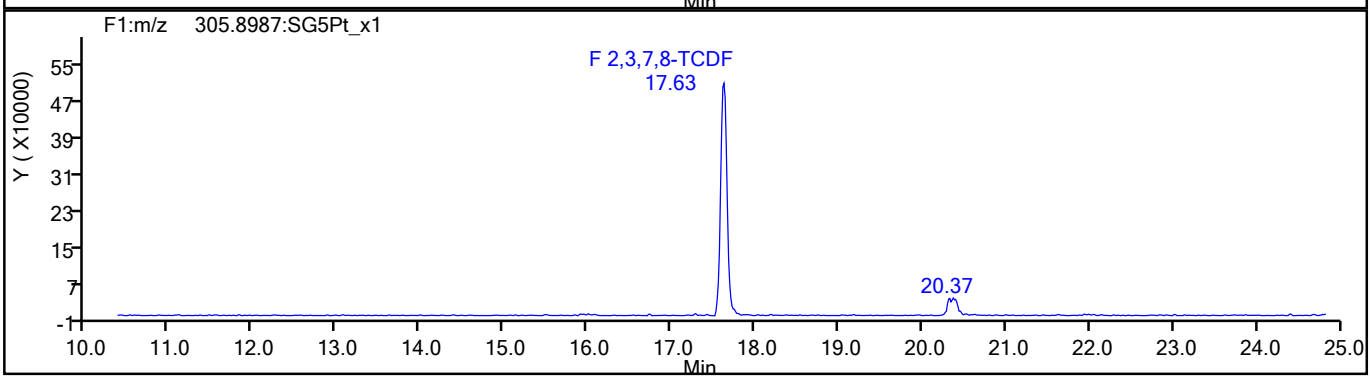

TCDF Standards

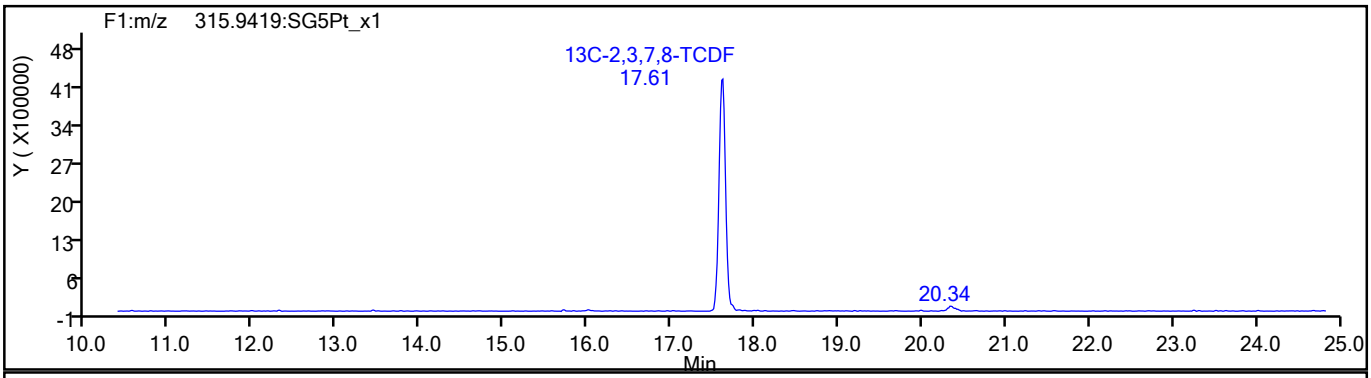

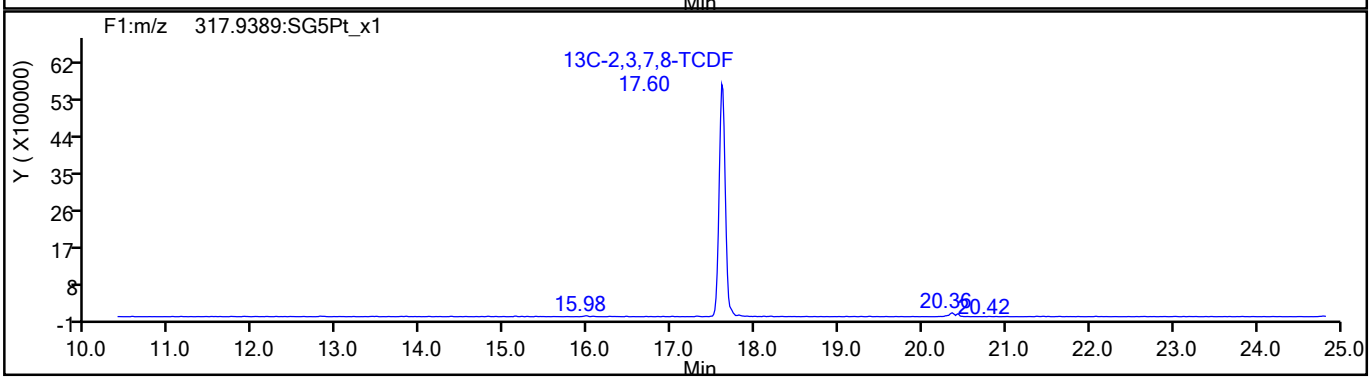

790220

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

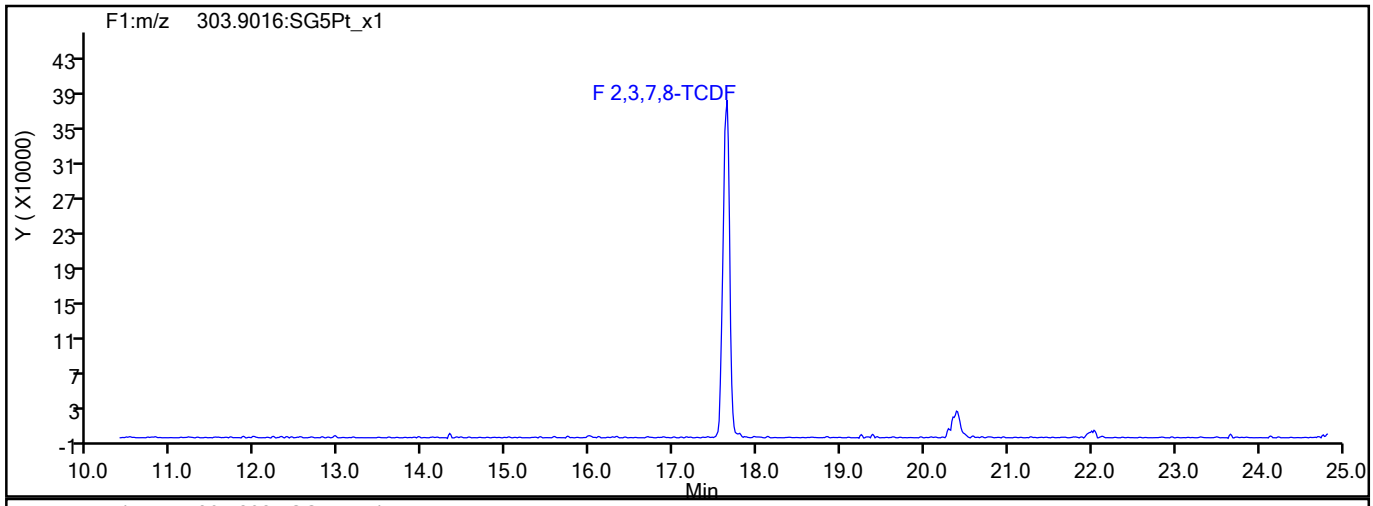

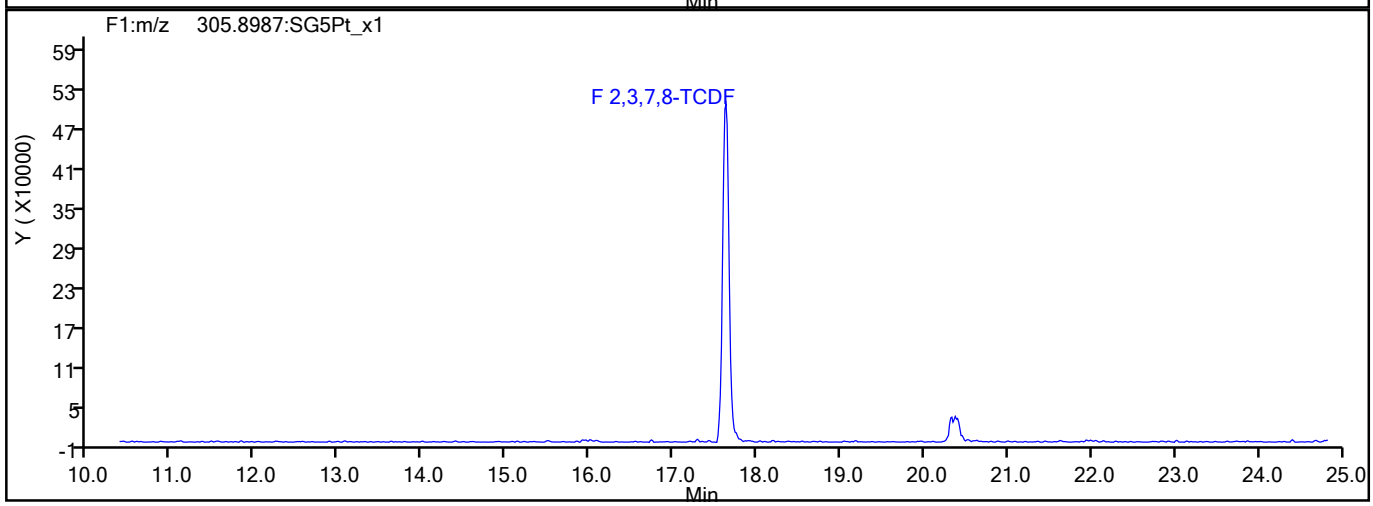

TCDF Interference Mass

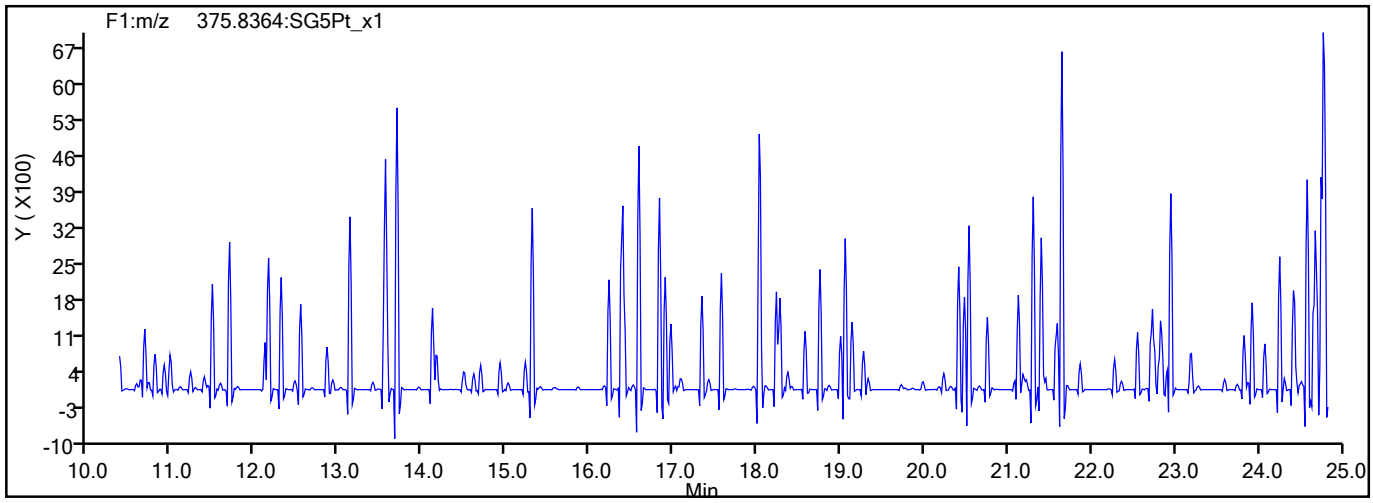

790221

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

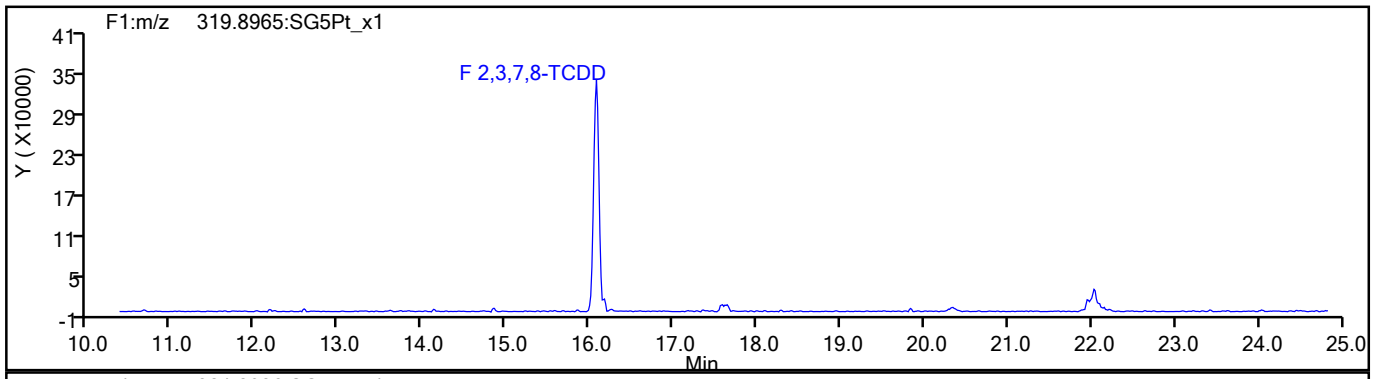

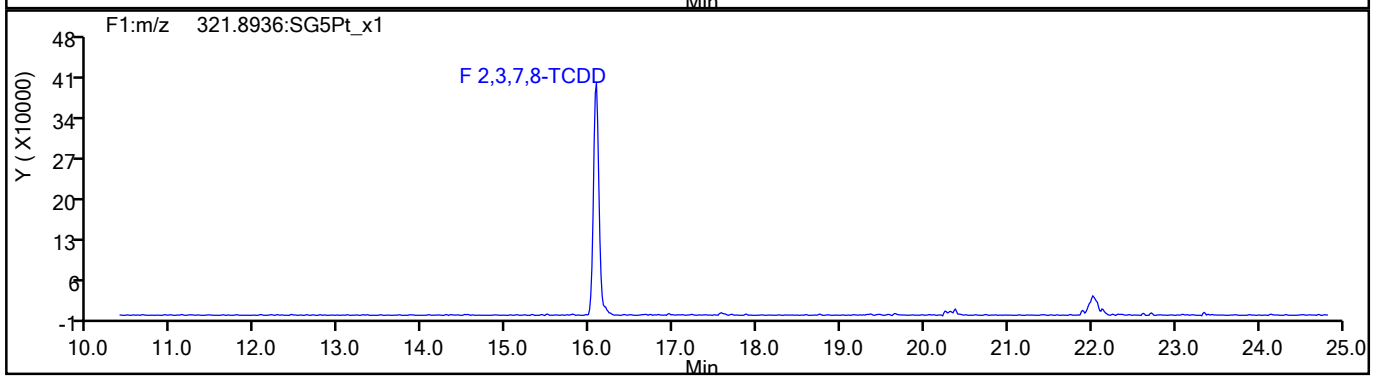

TCDD Standards

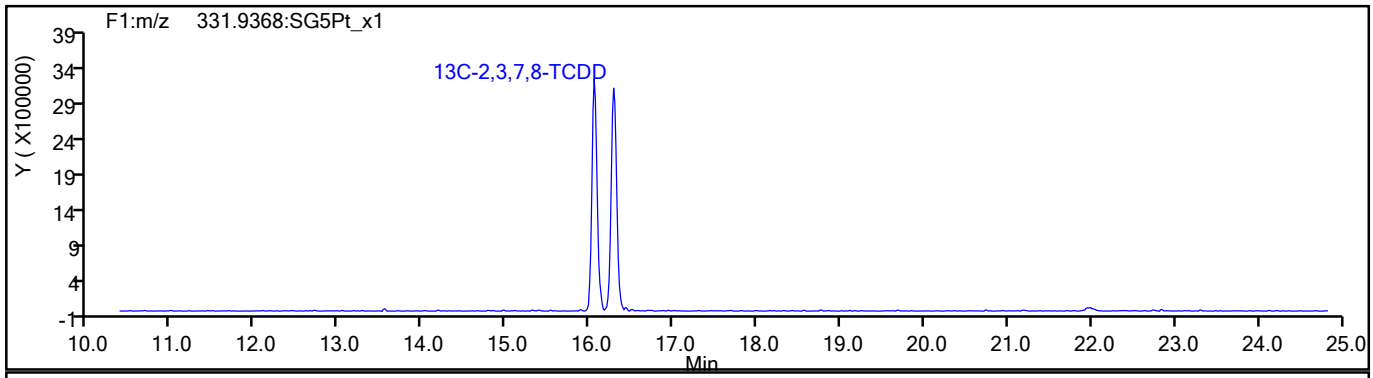

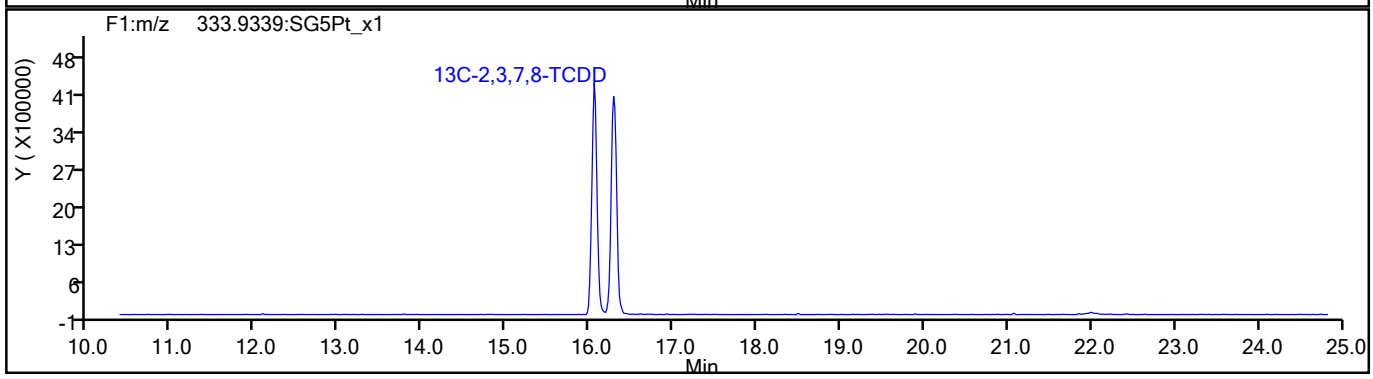

790222

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

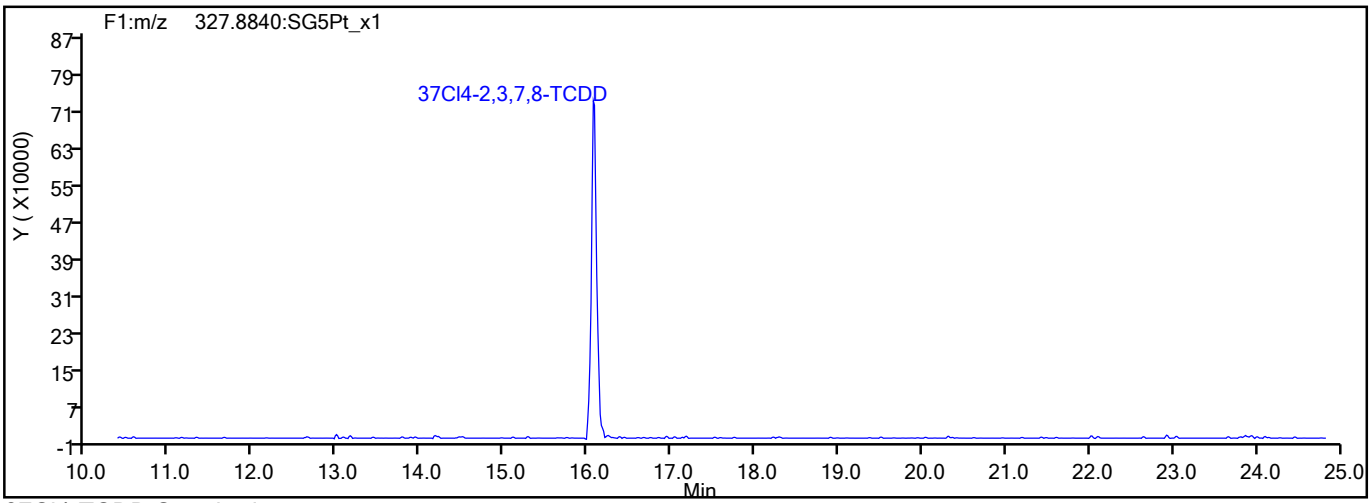

37Cl4-TCDD Standards

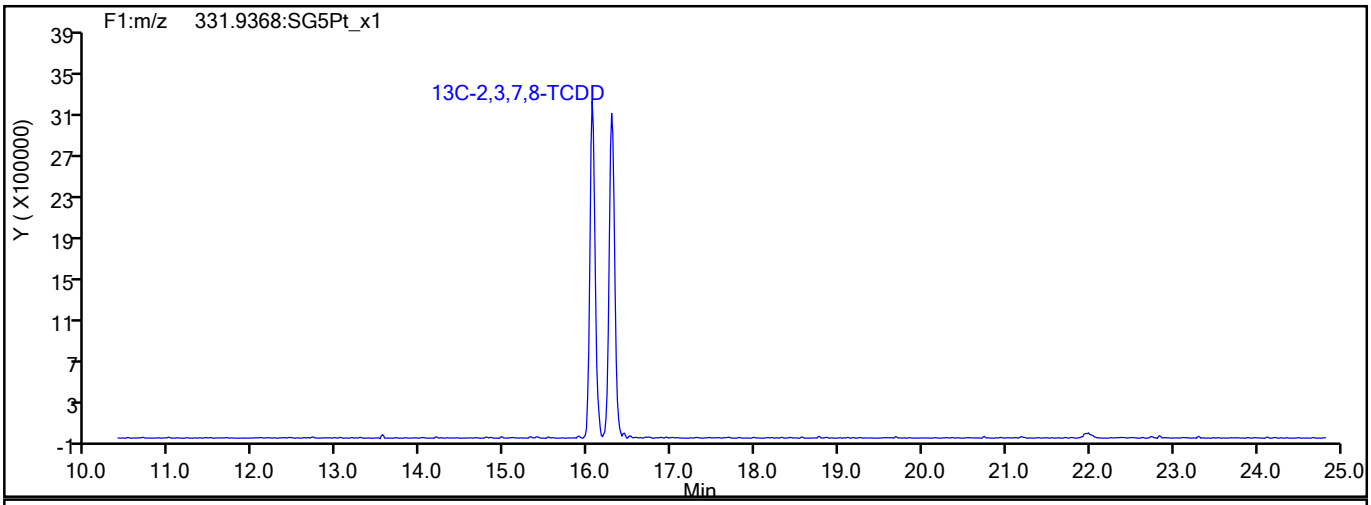

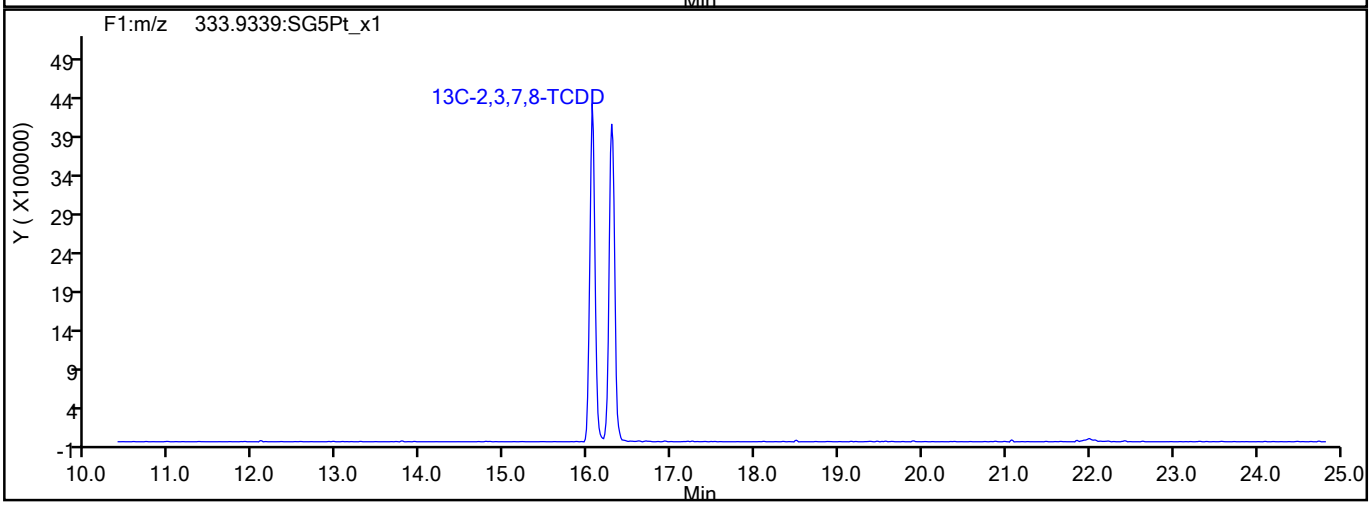

790223

Report Date: 24-Aug-2021 17:07:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_002.d		
Injection Date:	24-Aug-2021 09:07:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

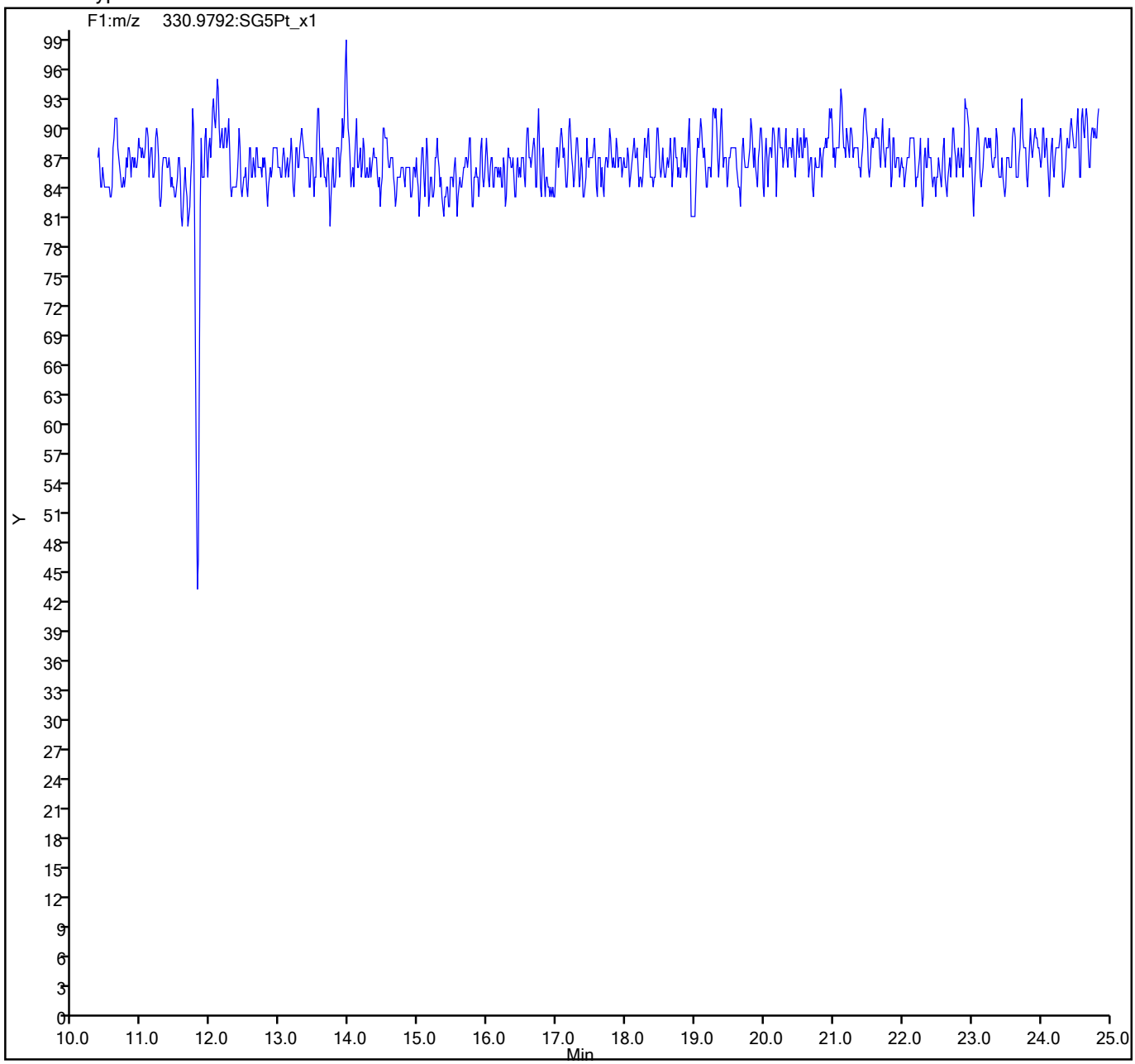

790224

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab Sample ID: CCV 320-520438/2 Calibration Date: 08/27/2021 09:37

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 27AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.031		9.75	10.0	97	78-129
2,3,7,8-TCDF	AveID	0.998	0.8964		8.98	10.0	90	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9556		109	100	109	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.511		113	100	113	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8788		10.2	10.0	102	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
27AU2111D2	1	CPS 082721	CPS HRDXNCP_00044				1.00000	
27AU2111D2	2	CCV 082721	CCV CS-4 HRDXNL4_00100				1.00000	
27AU2111D2	3	SB 082721	Solvent Blank C-14				1.00000	
27AU2111D2	4	320-513879	320-76901-A-13-A	20	1613B/Solid	D267	10.00000	g
27AU2111D2	5	320-513879	320-76901-A-6-A	20	1613B/Solid		10.00000	g
27AU2111D2	6	320-513879	320-76901-A-2-A	20	1613B/Solid		10.00000	g
27AU2111D2	7	320-513879	320-76901-A-2-B MS	20	1613B/Solid		10.00000	g
27AU2111D2	8	320-513879	320-76901-A-2-C MSD	20	1613B/Solid		10.00000	g
27AU2111D2	9	320-513879	320-76888-A-7-A	20	1613B/Solid		10.00000	g
27AU2111D2	10	320-513879	320-76888-A-8-A	20	1613B/Solid		10.00000	g
27AU2111D2	11						1.00000	
27AU2111D2	12						1.00000	
27AU2111D2	13						1.00000	
27AU2111D2	14						1.00000	
27AU2111D2	15		DB 08-28-21				1.00000	
27AU2111D2	16						1.00000	

LOGFILE CHECKED
DB 8/27/21

Peak Locate Examination:27-AUG-2021:08:58 File:27AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

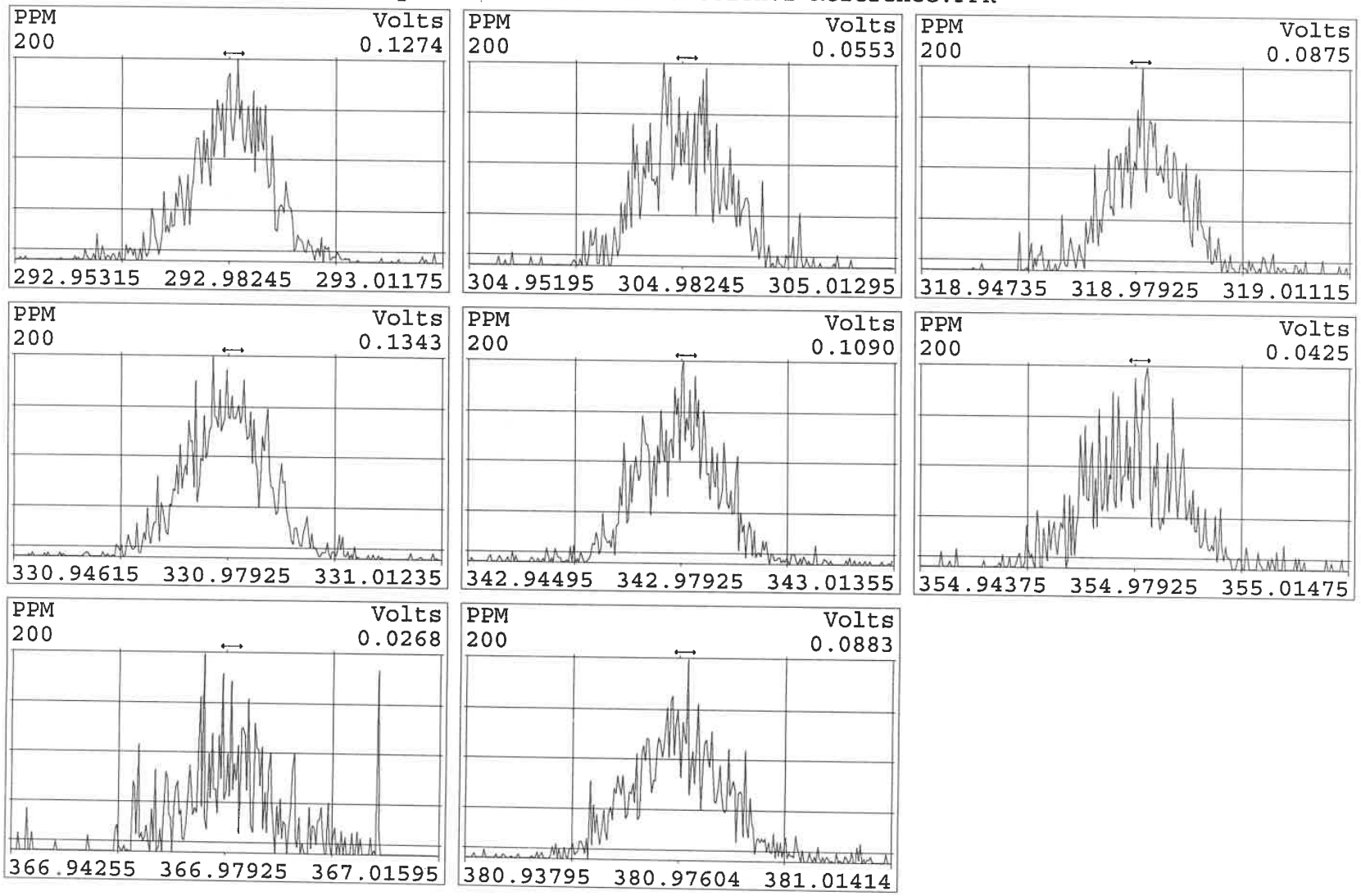

Peak Locate Examination:27-AUG-2021:15:32 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

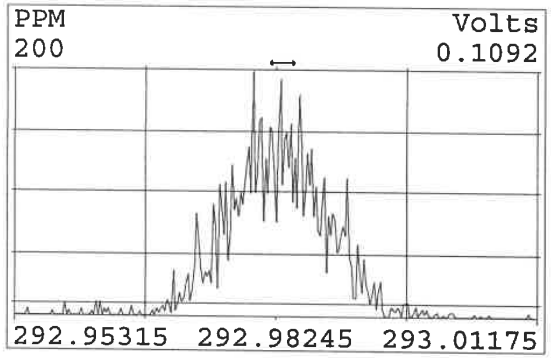

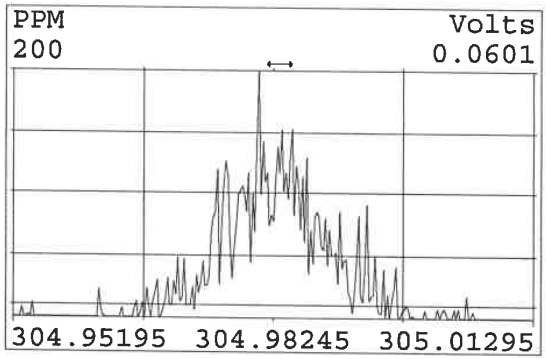

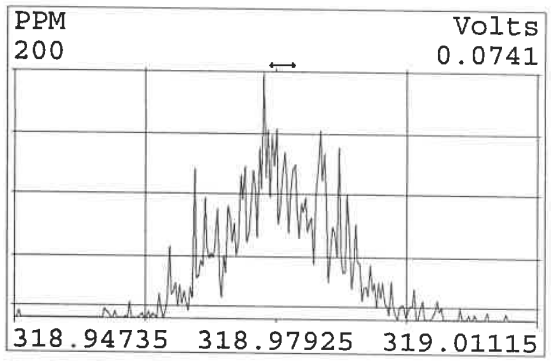

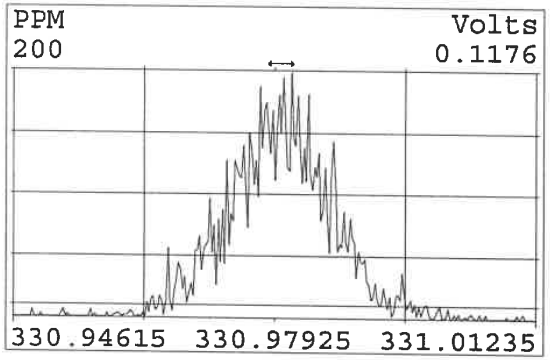

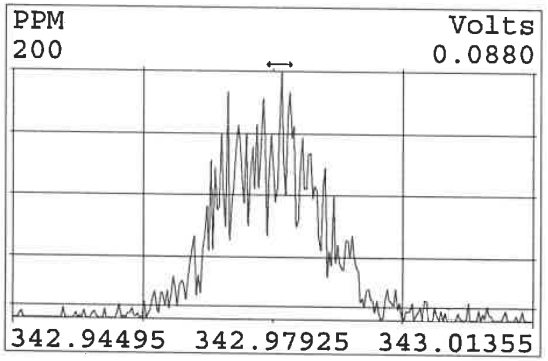

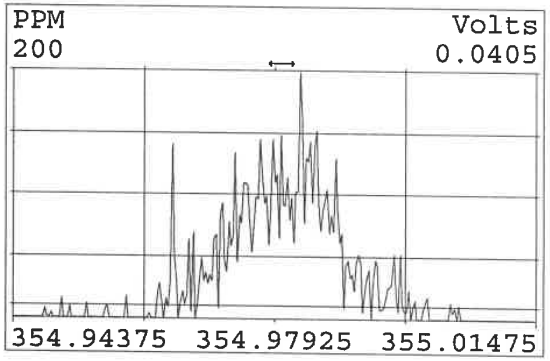

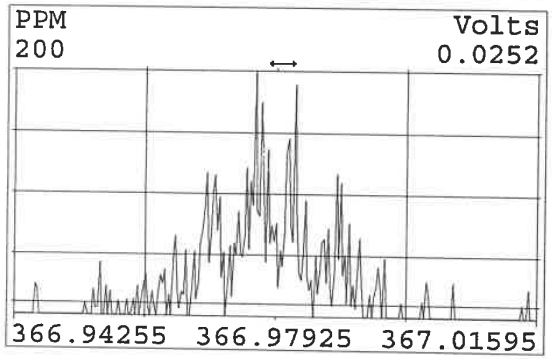

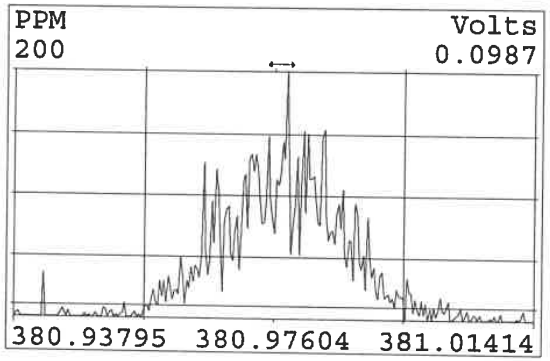

790228

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 09:37:57 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:48:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.284	57069656	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.614	86240244	0.76	1.3327	113.4	113.4	0.2571	0.2571	113	
2,3,7,8-TCDF	17.628	7730382	0.81	0.9978	8.983	8.983	0.0324	0.0324	89.83	
D 13C-2,3,7,8-TCDD	16.064	54534600	0.79	0.8749	109.2	109.2	0.2932	0.2932	109	
2,3,7,8-TCDD	16.078	5619957	0.82	1.0570	9.750	9.750	0.0472	0.0472	97.50	
$ 37Cl4-2,3,7,8-TCDD	16.078	5015089		0.8648	10.2	10.2	0.0341	0.0341	102	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

790229

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 09:37:57 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:48:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.284	16.284	0		25007159	5610326	8221	20552	682		
333.9339	16.297	16.284	1		32062497	6929297	4645	11612	1492	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.614	17.614	0	1.082	37188579	7168347	8551	21377	838		
317.9389	17.600	17.614	-1	1.081	49051665	9433887	8633	21582	1093	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.628	0	1.001	3452785	630428	1003	2507	629		
305.8987	17.628	17.628	0	1.001	4277597	811560	1141	2852	711	0.81(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.064	0	0.987	24091403	5572015	8221	20552	678		
333.9339	16.064	16.064	0	0.987	30443197	6988447	4645	11612	1505	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.078	16.078	0	1.001	2525483	543598	891	2227	610		
321.8936	16.078	16.078	0	1.001	3094474	688607	1617	4042	426	0.82(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.078	0	0.987	5015089	1139283	1480	3700	770		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

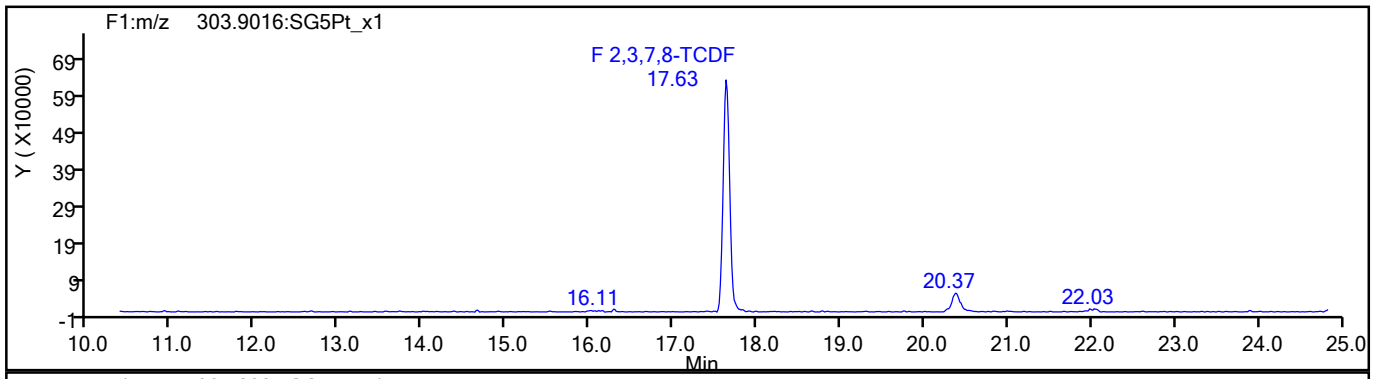

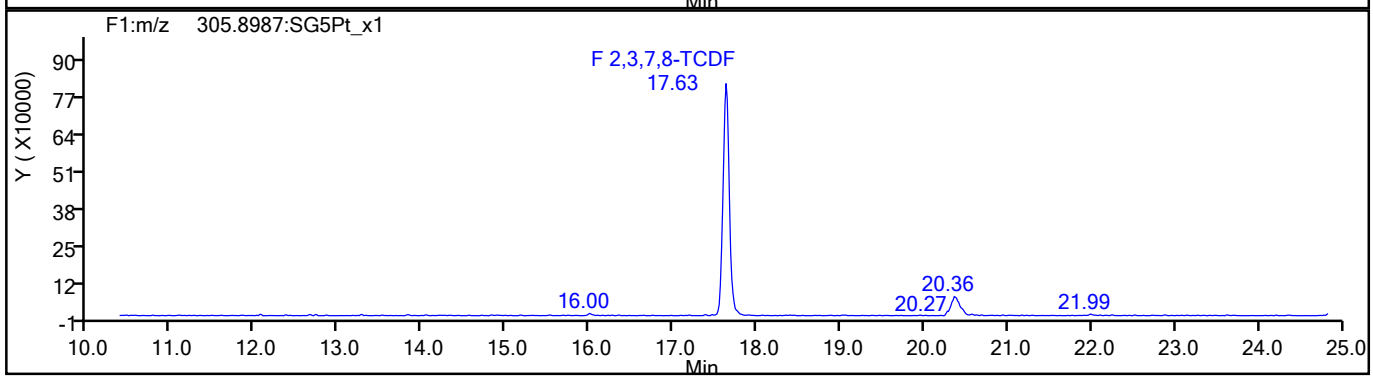

TCDF Standards

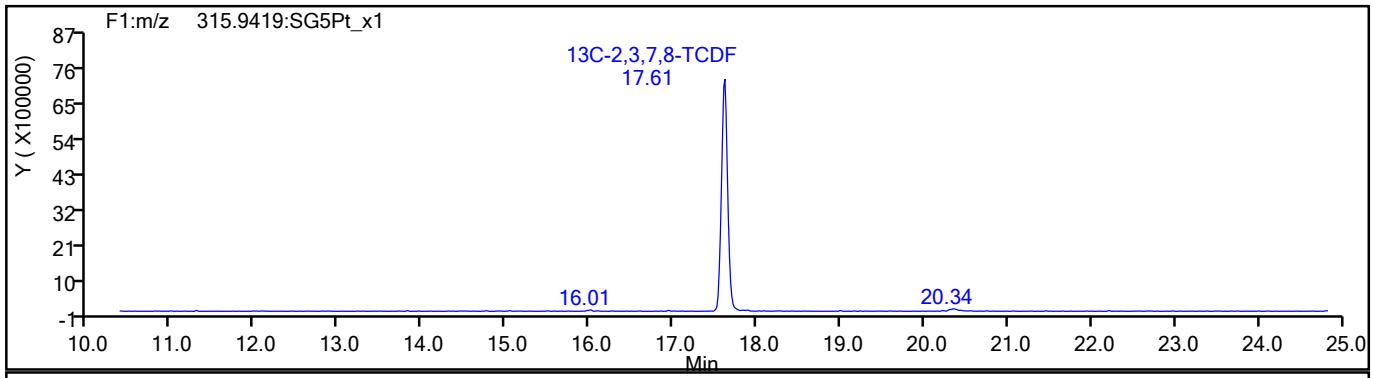

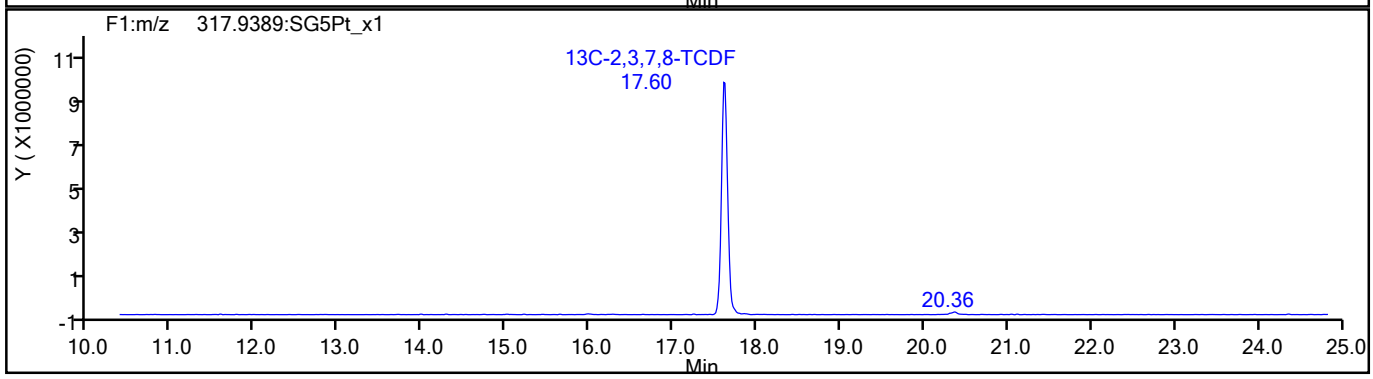

790231

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

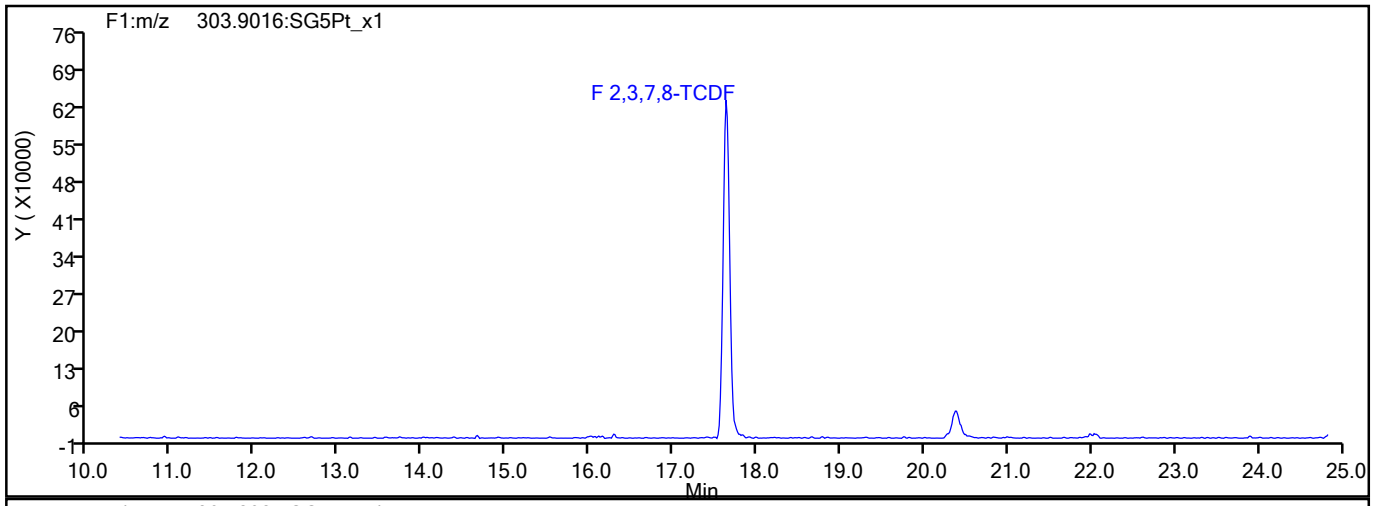

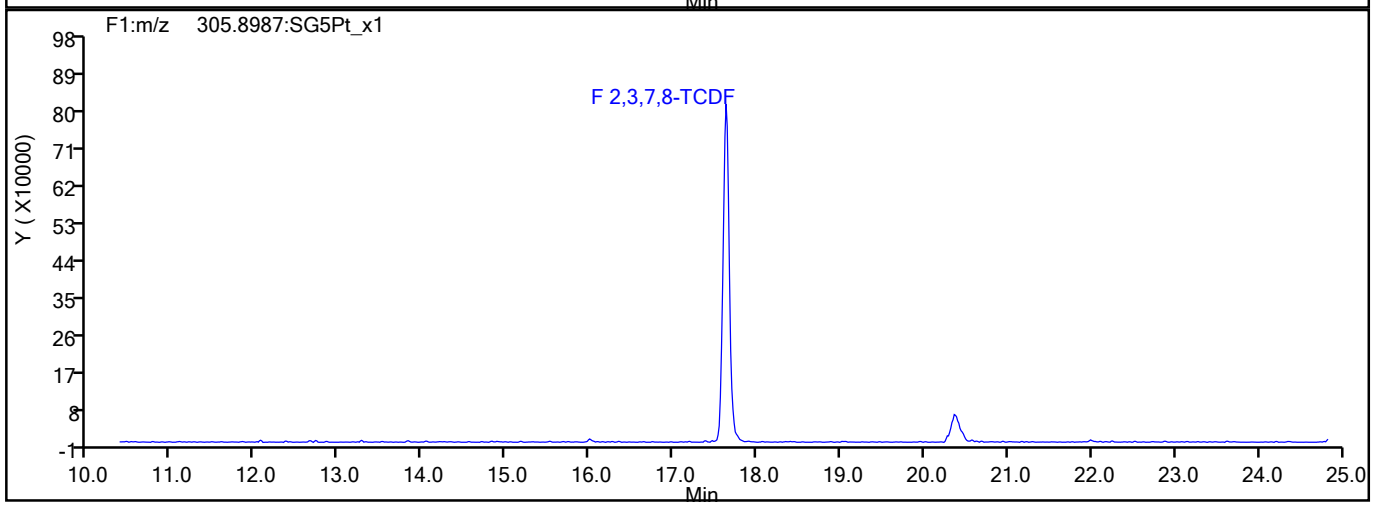

TCDF Interference Mass

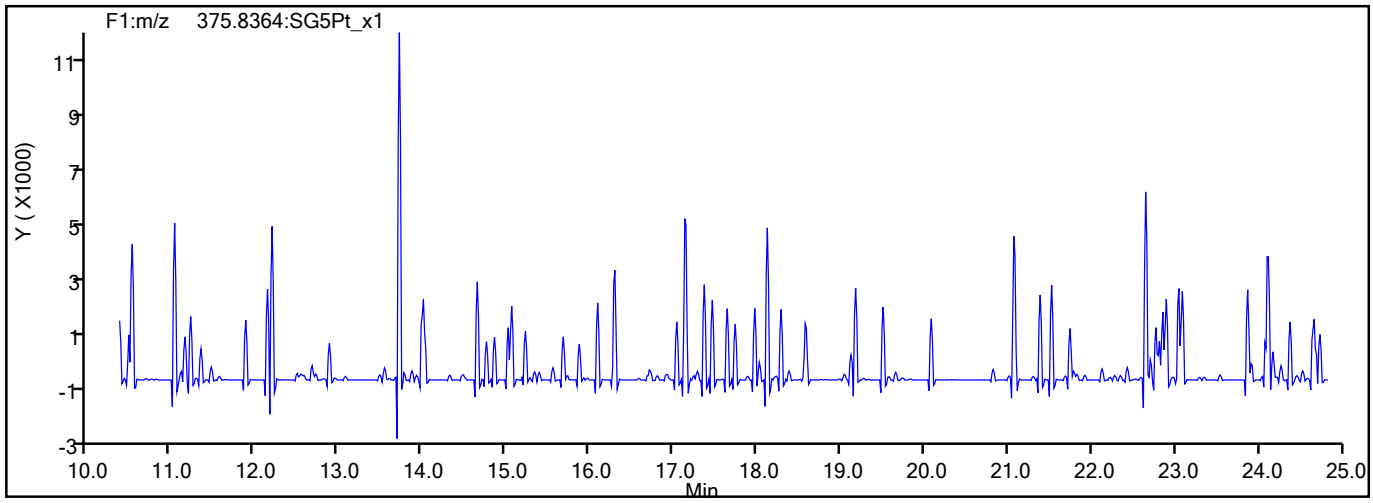

790232

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

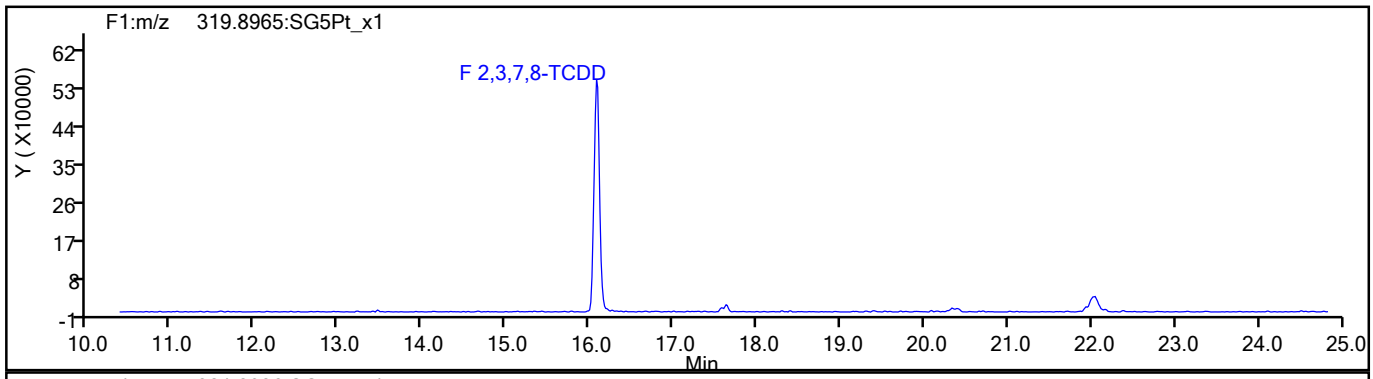

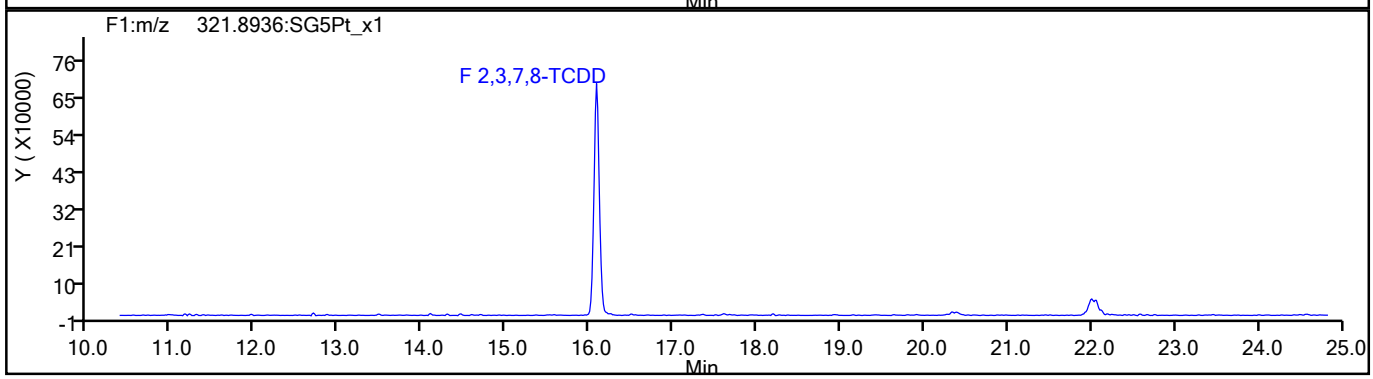

TCDD Standards

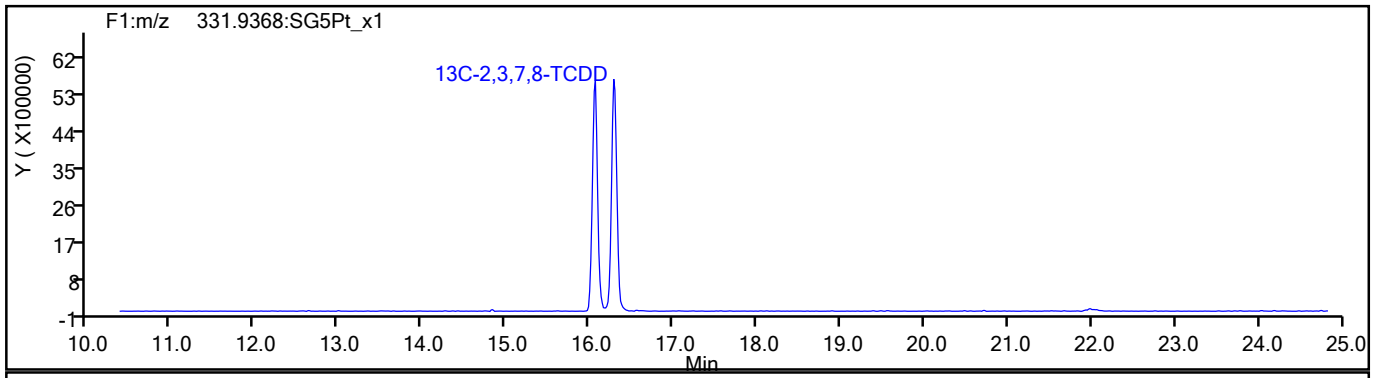

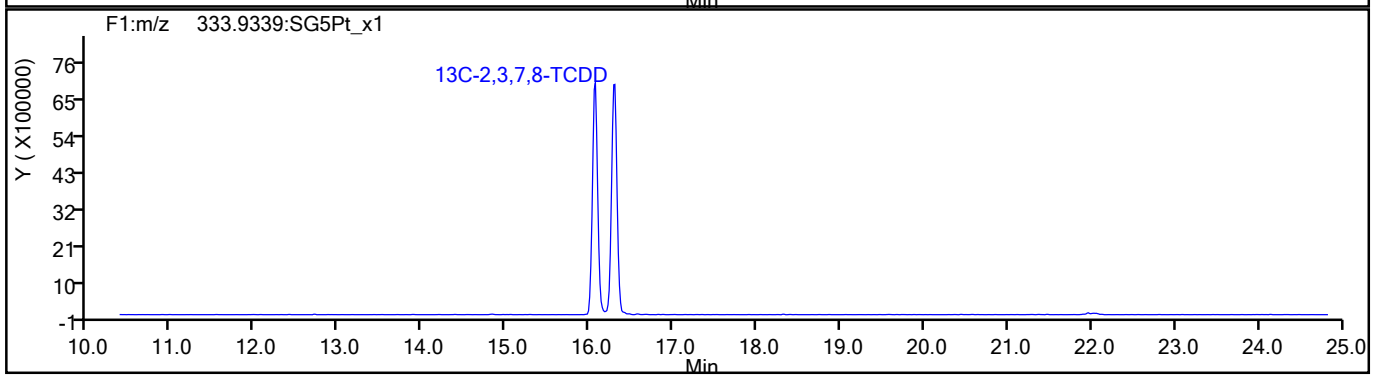

790233

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

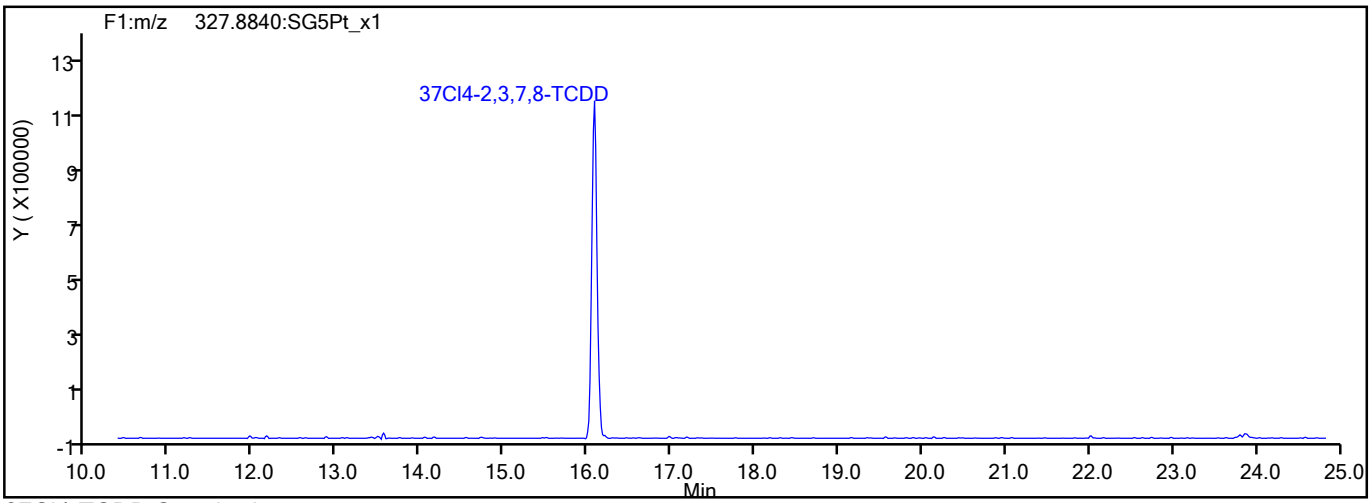

37Cl4-TCDD Standards

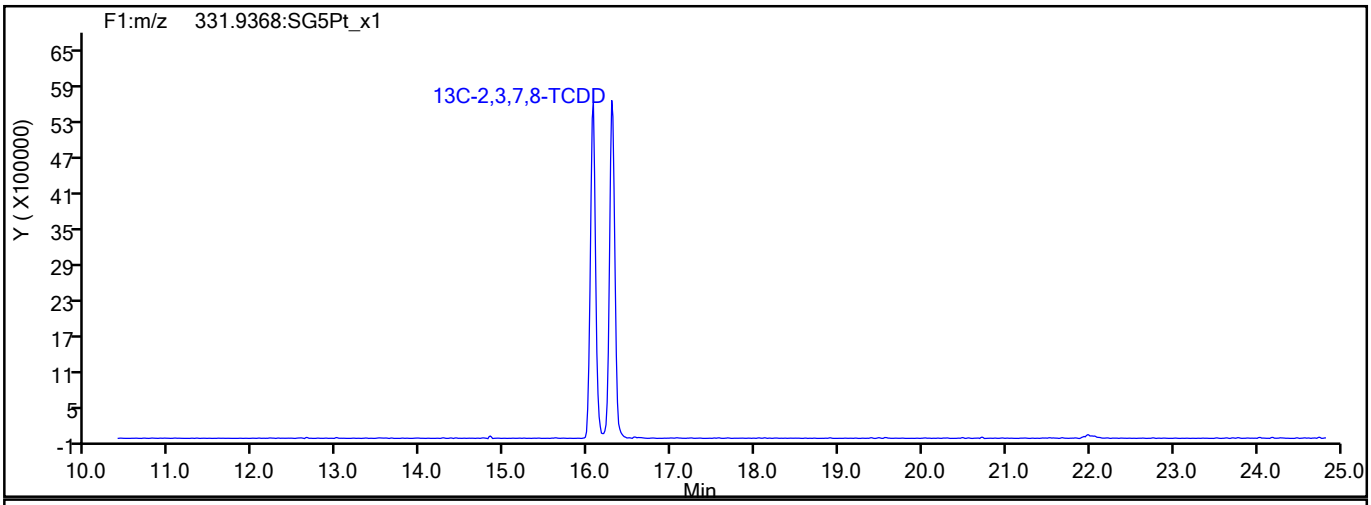

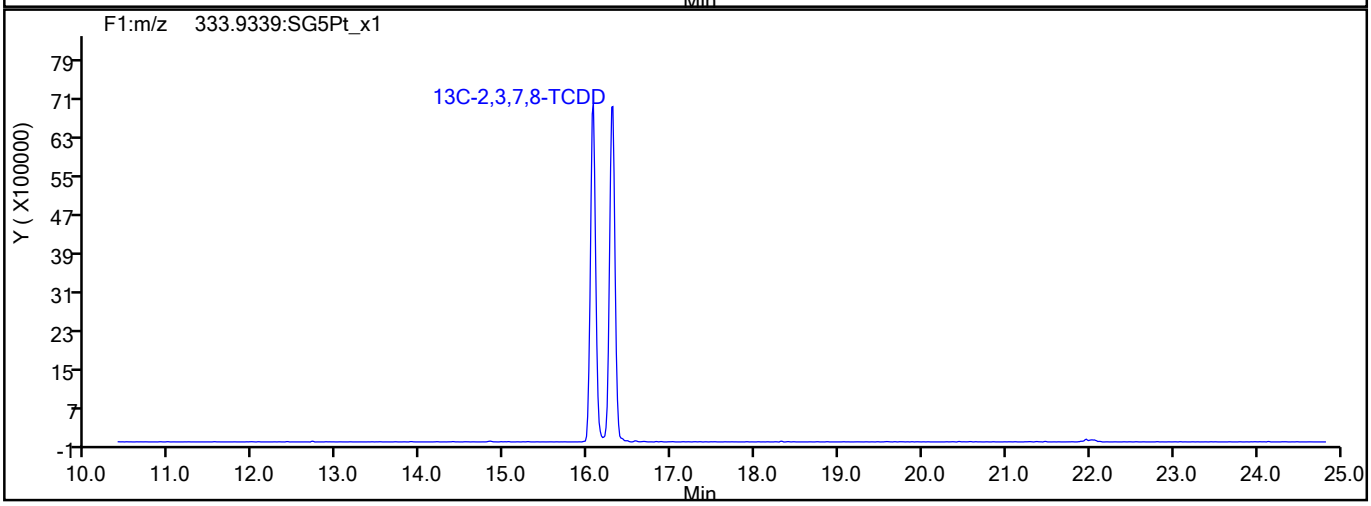

790234

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_002.d		
Injection Date:	27-Aug-2021 09:37:57	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

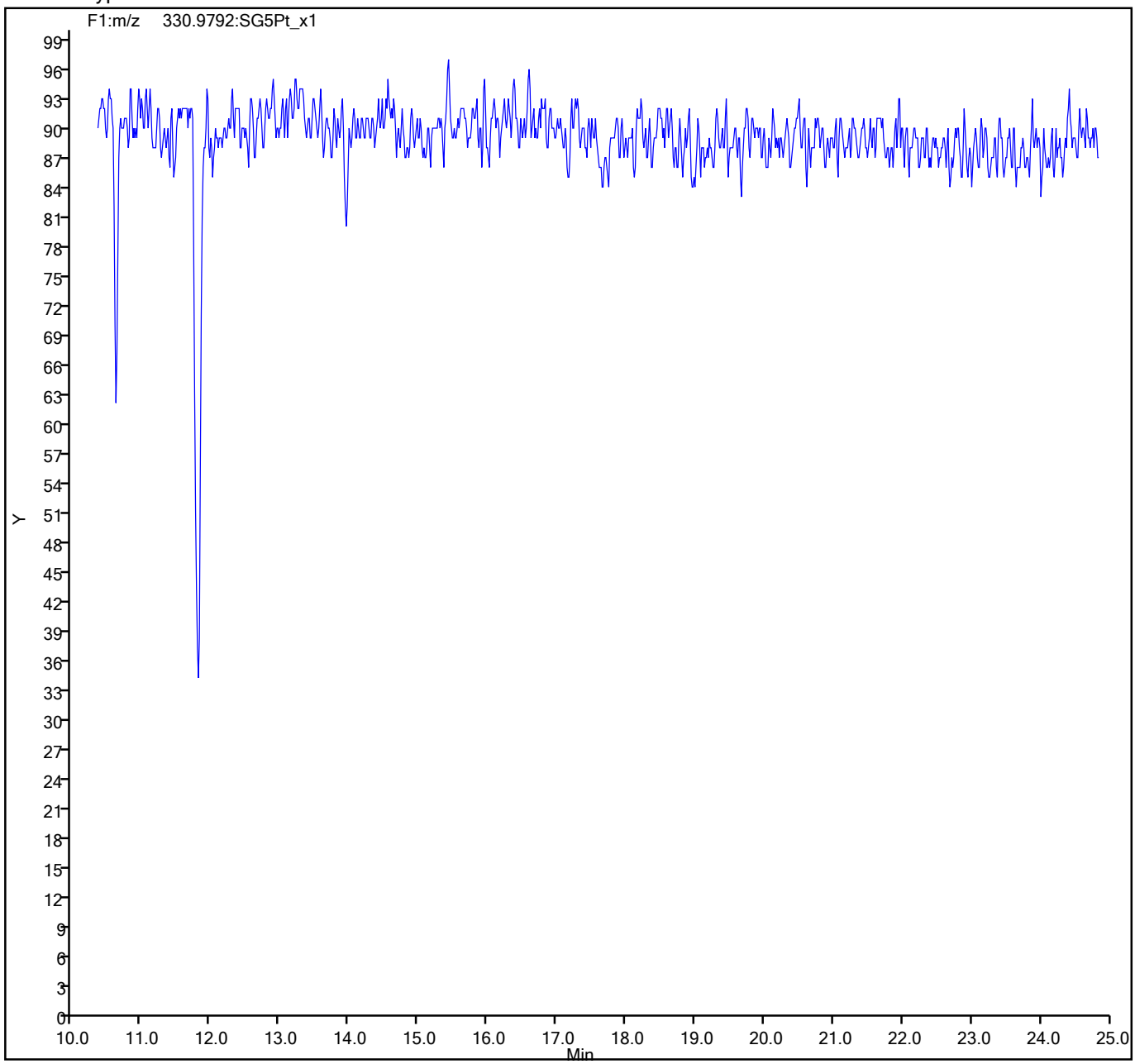

790235

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab Sample ID: CCV 320-520456/2 Calibration Date: 08/27/2021 16:16

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 27AU21A11D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.015		9.60	10.0	96	78-129
2,3,7,8-TCDF	AveID	0.998	0.9289		9.31	10.0	93	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9723		111	100	111	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.539		116	100	116	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9437		10.9	10.0	109	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
27AU21A11D2	1	CPS 082721	CPS HRDXNCP_00044				1.00000	
27AU21A11D2	2	CCV 082721	CCV CS-4 HRDXNL4_00100				1.00000	
27AU21A11D2	3	SB 082721	Solvent Blank C-14				1.00000	
27AU21A11D2	4	320-513879	320-76901-A-3-A	20	1613B/Solid	D267	10.00000	g
27AU21A11D2	5	320-513879	320-76901-A-4-A	20	1613B/Solid		10.00000	g
27AU21A11D2	6	320-513879	320-76901-A-7-A	20	1613B/Solid		10.00000	g
27AU21A11D2	7	320-513879	320-76901-A-8-A	20	1613B/Solid		10.00000	g
27AU21A11D2	8	320-513879	320-76901-A-9-A	20	1613B/Solid		10.00000	g
27AU21A11D2	9	320-515492	320-77214-A-9-A	20	1613B/Solid	D270	10.00000	g
27AU21A11D2	10	320-515492	320-77214-A-13-A	20	1613B/Solid		10.00000	g
27AU21A11D2	11	320-515492	320-77214-A-6-A	20	1613B/Solid		10.00000	g
27AU21A11D2	12	320-515492	320-77214-A-8-A	20	1613B/Solid		10.00000	g
27AU21A11D2	13	320-515492	320-77214-A-4-A	20	1613B/Solid		10.00000	g
27AU21A11D2	14	320-515492	320-77214-A-7-A	20	1613B/Solid		10.00000	g
27AU21A11D2	15	320-515492	320-77214-A-5-A	20	1613B/Solid		10.00000	g
27AU21A11D2	16	320-515492	320-77214-A-3-A	20	1613B/Solid		10.00000	g
27AU21A11D2	17	320-513879	320-76901-A-5-A	20	1613B/Solid	D267	10.00000	g
27AU21A11D2	18	320-513879	320-76901-A-1-A	20	1613B/Solid		10.00000	g
27AU21A11D2	19						1.00000	
27AU21A11D2	20						1.00000	
27AU21A11D2	21						1.00000	
27AU21A11D2	22						1.00000	
27AU21A11D2	23		DB 08-28-21				1.00000	
27AU21A11D2	24						1.00000	

Logfile ✓ id
8/30/21
KSS

Peak Locate Examination:27-AUG-2021:15:37 File:27AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

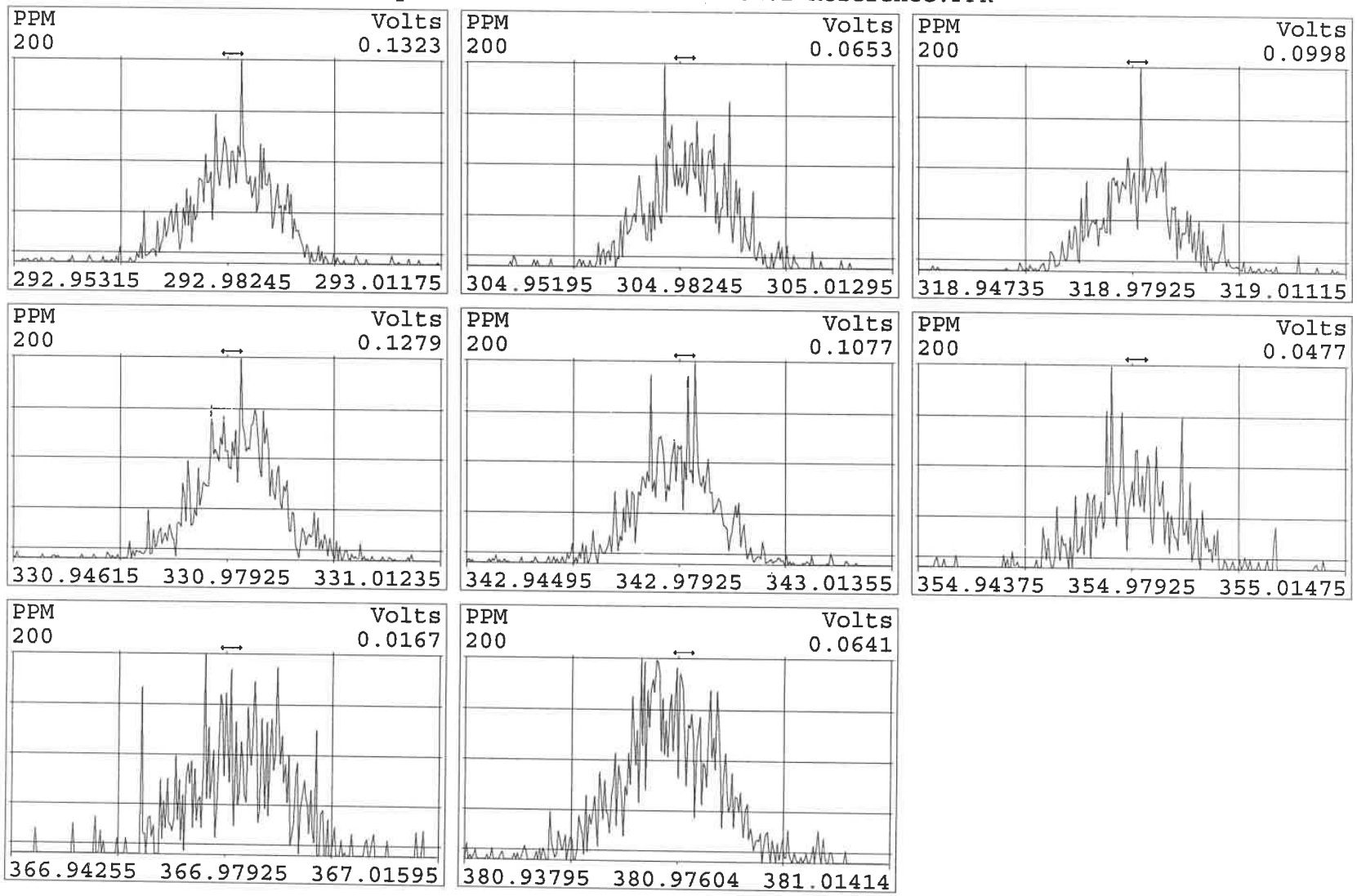

Peak Locate Examination:30-AUG-2021:09:20 File:30AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

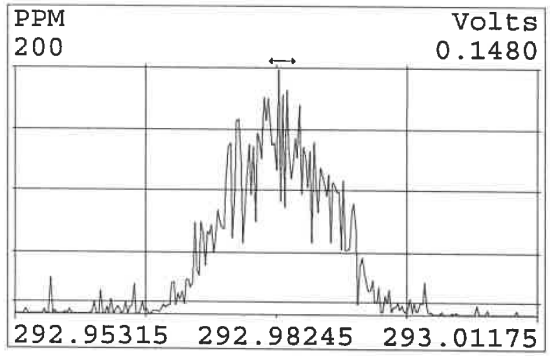

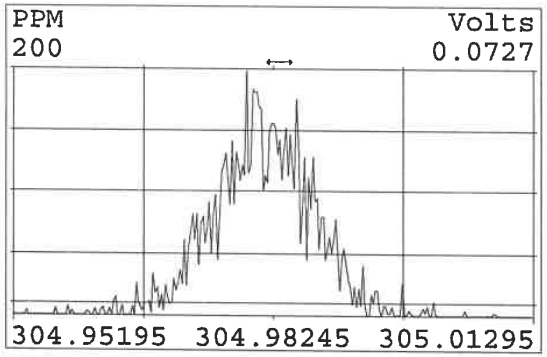

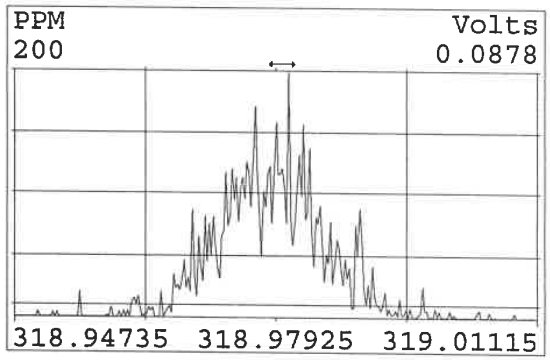

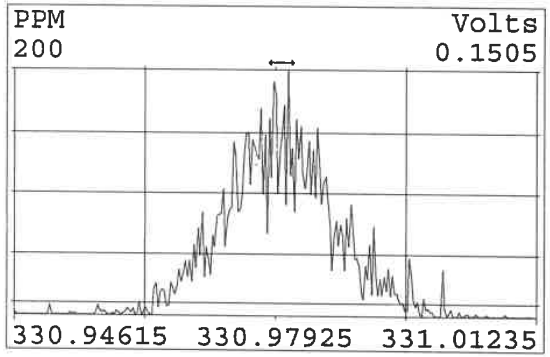

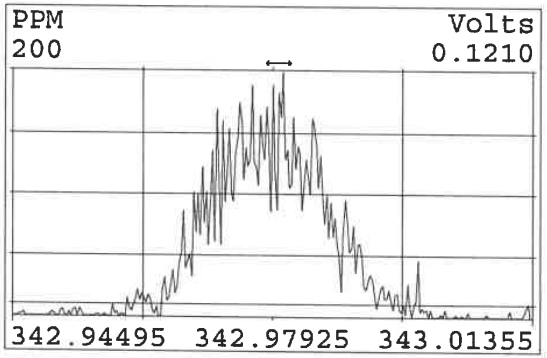

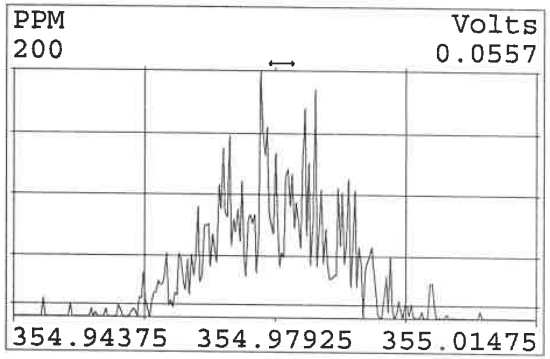

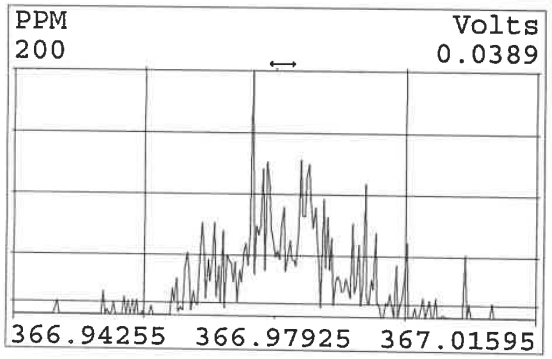

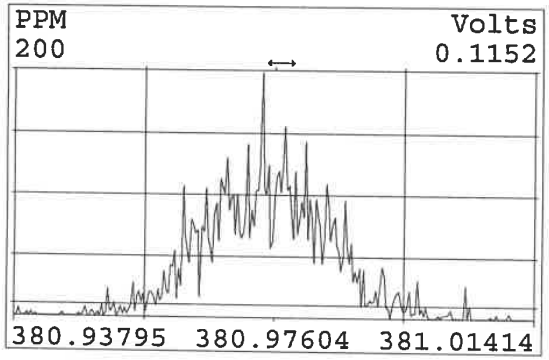

790239

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 16:16:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:56

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.300	59556751	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.616	91683910	0.79	1.3327	115.5	115.5	0.2031	0.2031	116	
2,3,7,8-TCDF	17.644	8516074	0.75	0.9978	9.309	9.309	0.0439	0.0439	93.09	
D 13C-2,3,7,8-TCDD	16.066	57904157	0.76	0.8749	111.1	111.1	0.2489	0.2489	111	
2,3,7,8-TCDD	16.080	5876060	0.77	1.0570	9.601	9.601	0.0419	0.0419	96.01	
$ 37Cl4-2,3,7,8-TCDD	16.080	5620446		0.8648	10.9	10.9	0.0372	0.0372	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 16:16:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:56

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.300	16.300	0		26013127	5710640	6230	15575	917		
333.9339	16.300	16.300	0		33543624	7492944	5271	13177	1422	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.616	17.616	0	1.081	40596412	7743193	6996	17490	1107		
317.9389	17.616	17.616	0	1.081	51087498	9604898	7298	18245	1316	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.644	0	1.002	3658590	684488	1314	3285	521		
305.8987	17.644	17.644	0	1.002	4857484	875548	1725	4312	508	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	0.986	24957849	5501958	6230	15575	883		
333.9339	16.066	16.066	0	0.986	32946308	7425811	5271	13177	1409	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.080	16.080	0	1.001	2562809	565022	1197	2992	472		
321.8936	16.080	16.080	0	1.001	3313251	720270	1091	2727	660	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.080	0	0.987	5620446	1244371	1700	4250	732		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

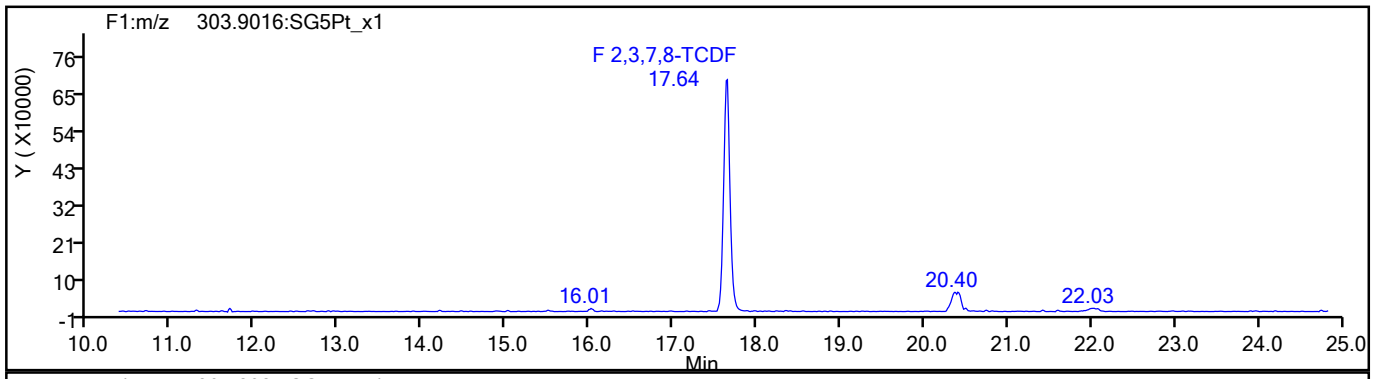

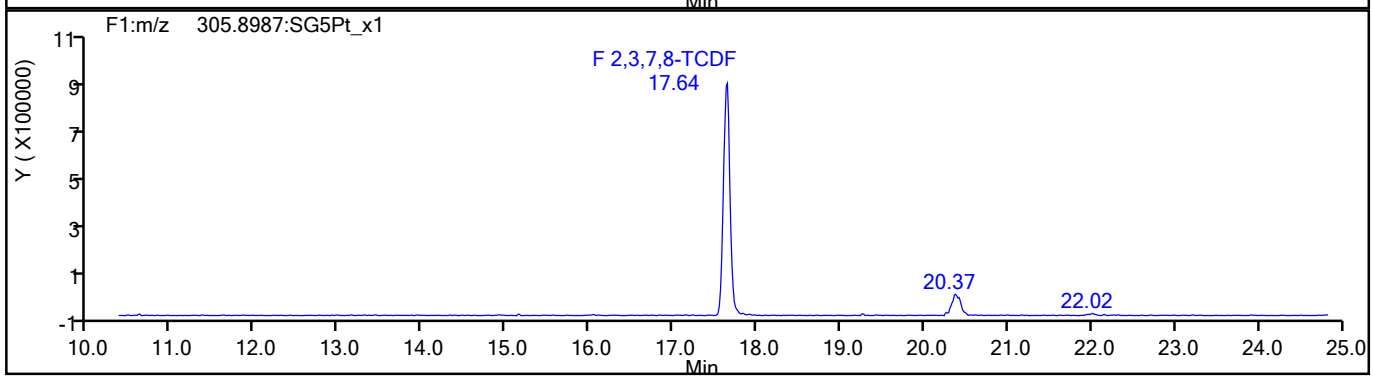

TCDF Standards

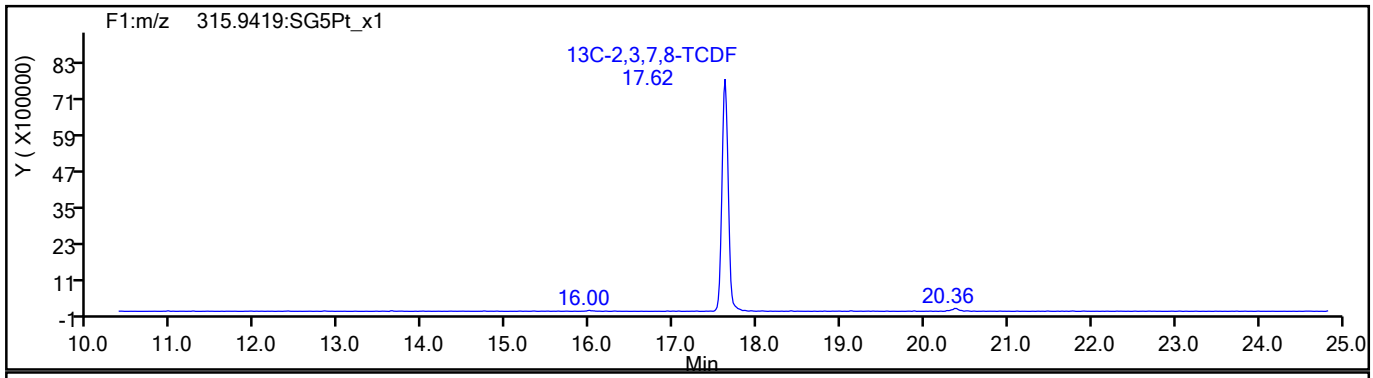

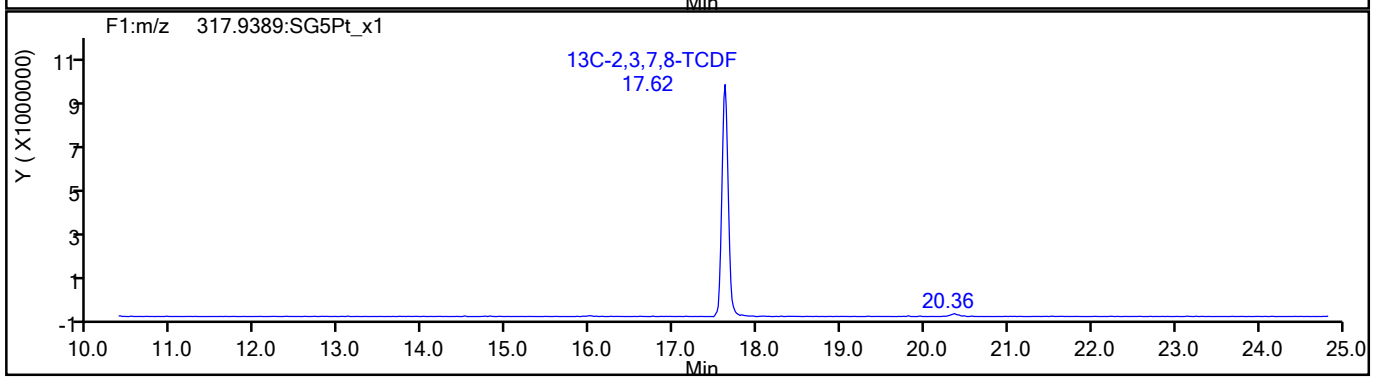

790242

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

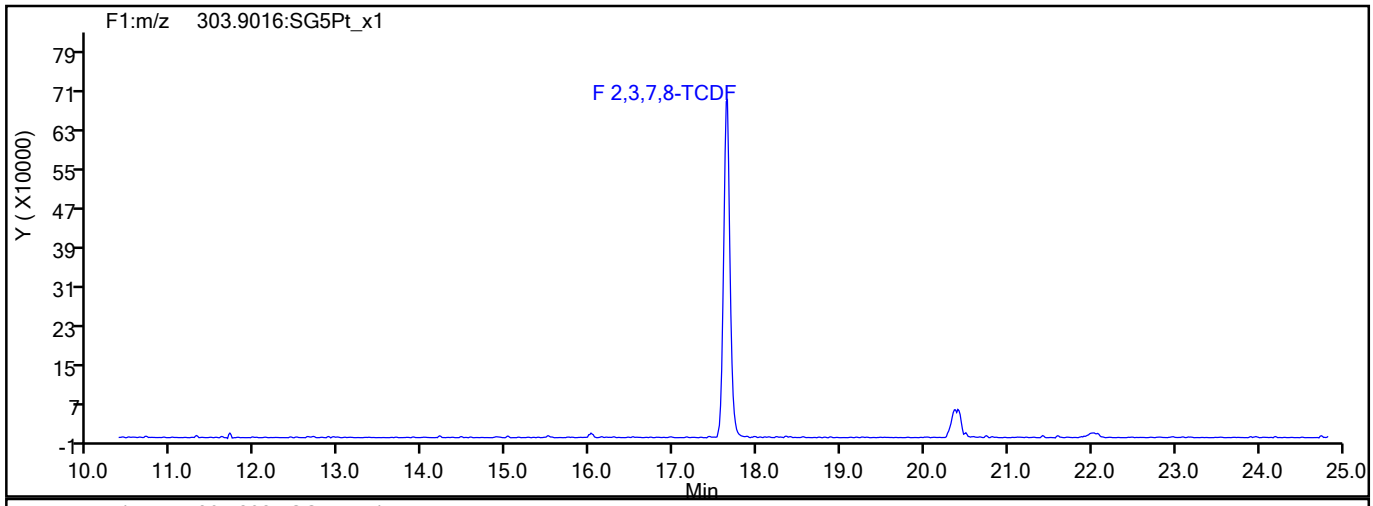

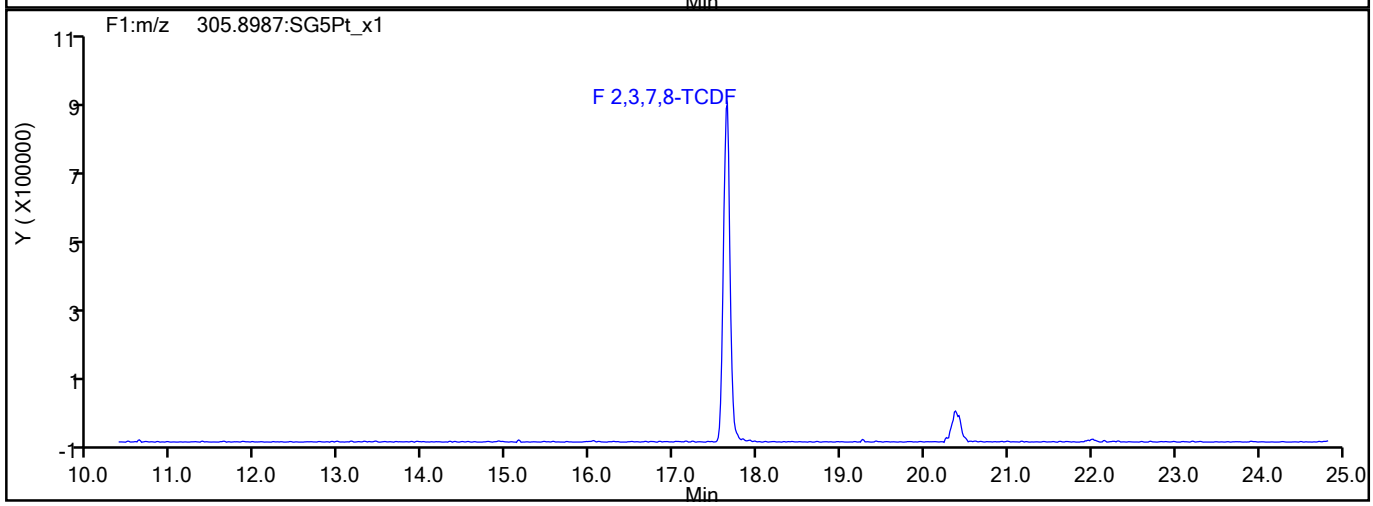

TCDF Interference Mass

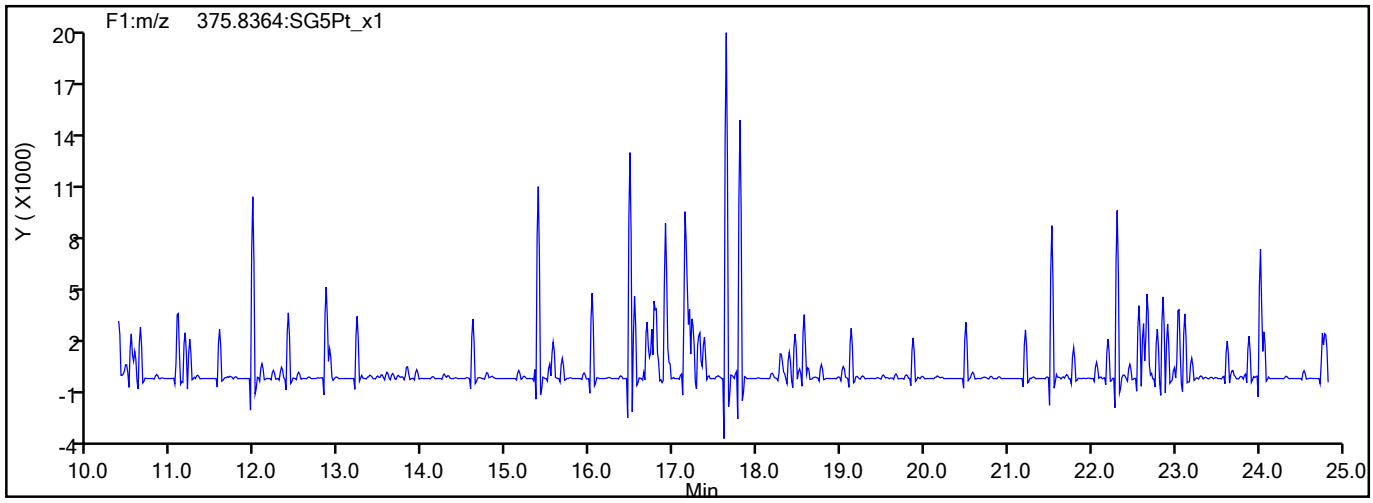

790243

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

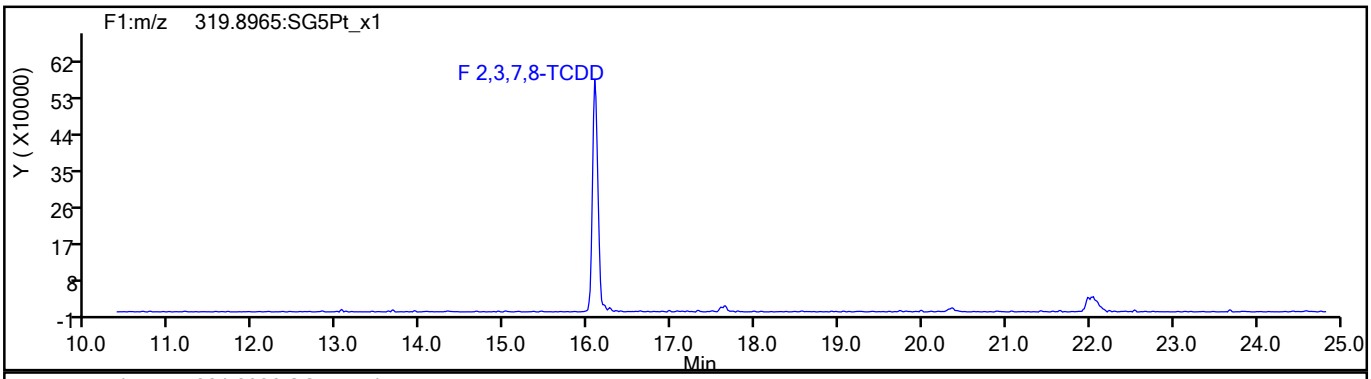

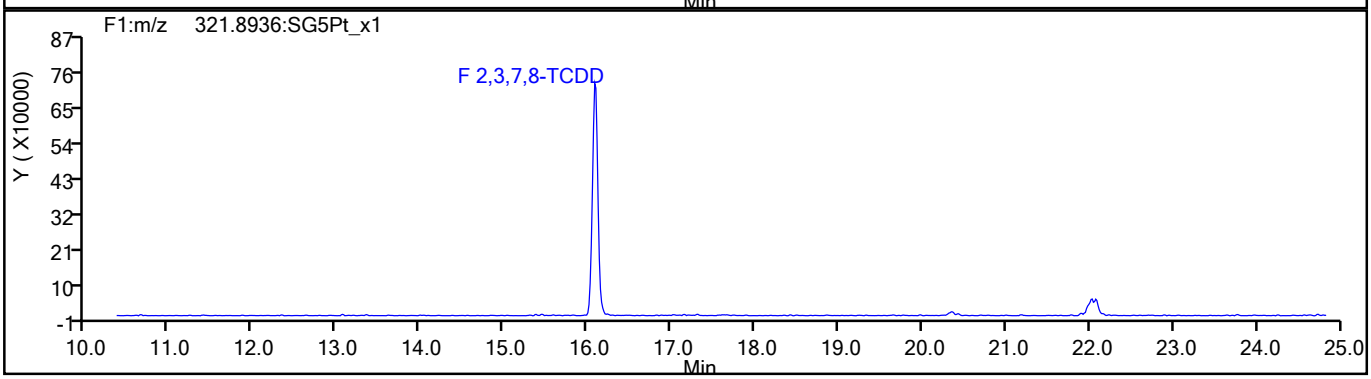

TCDD Standards

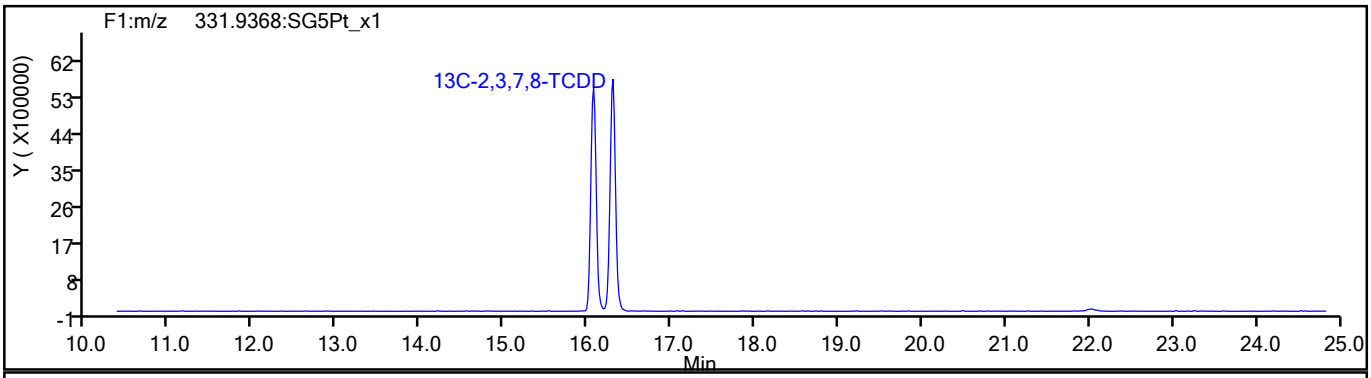

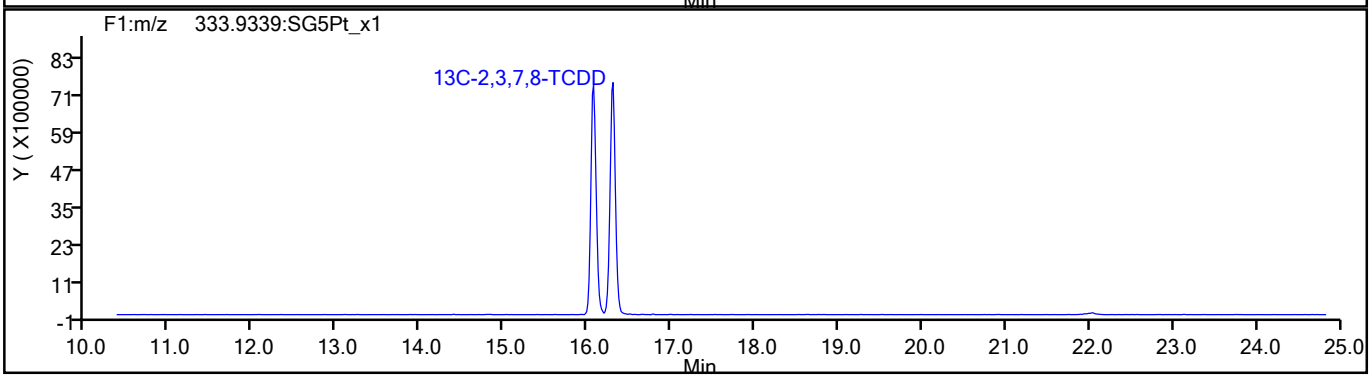

790244

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

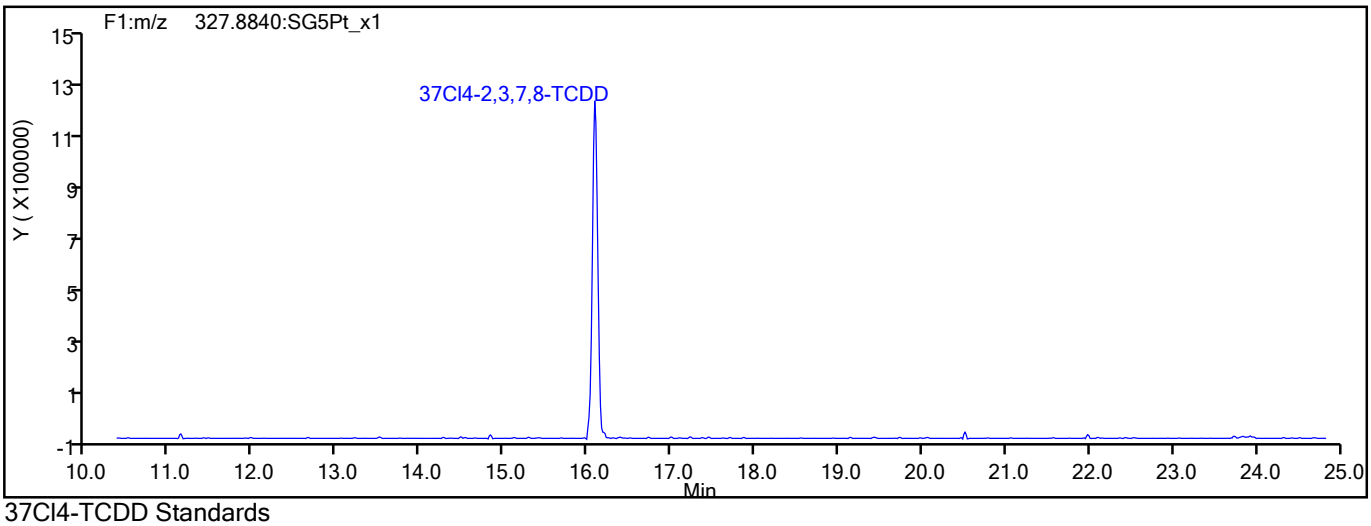

37Cl4-TCDD Standards

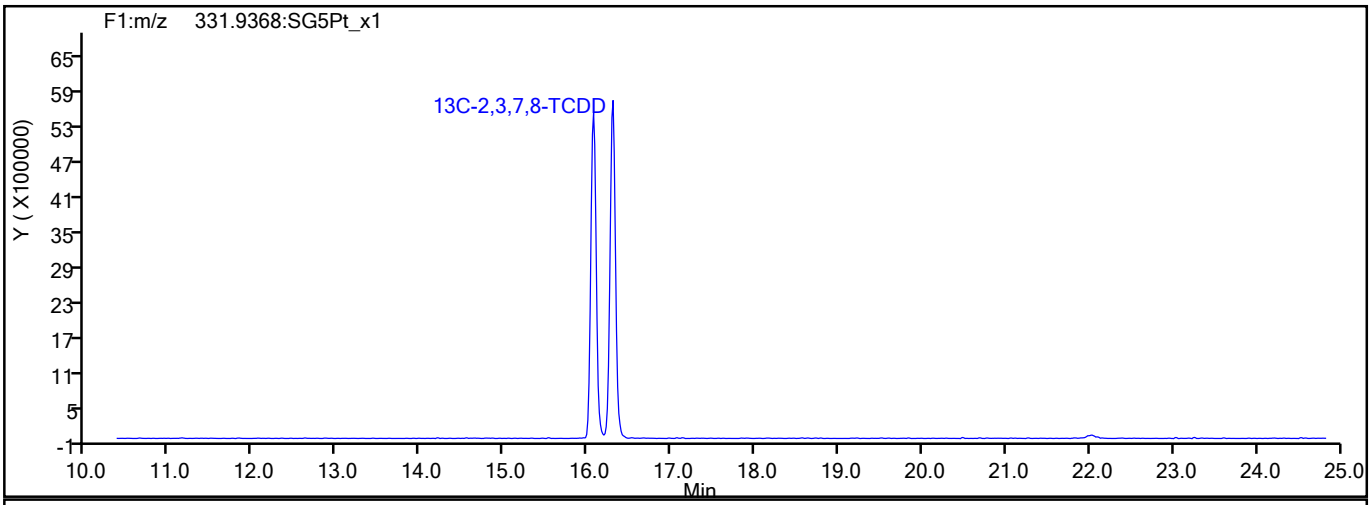

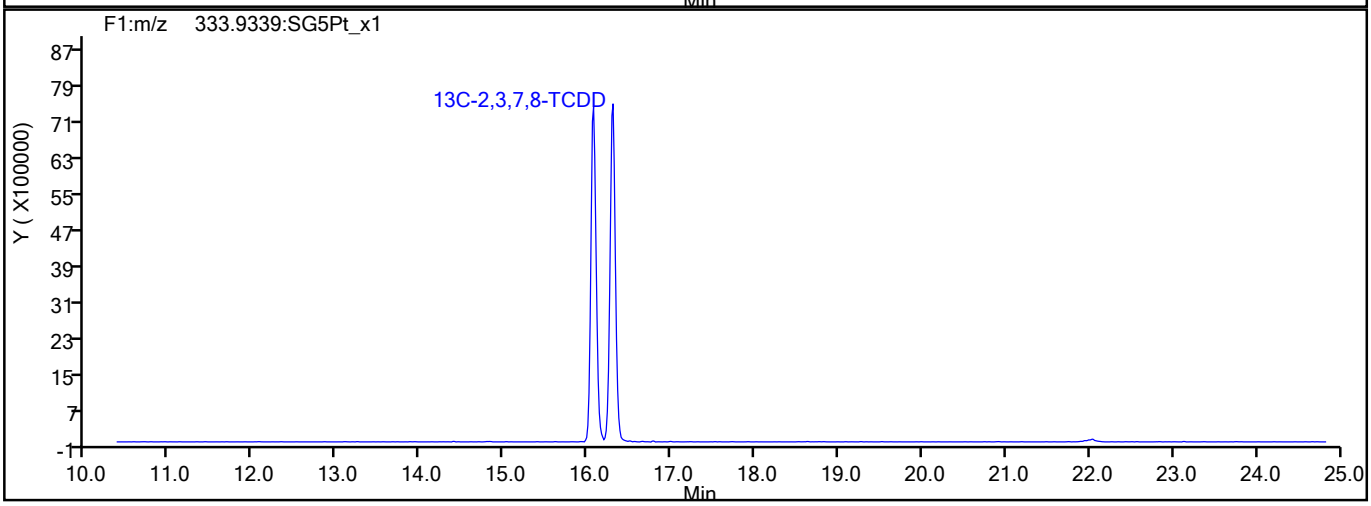

790245

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

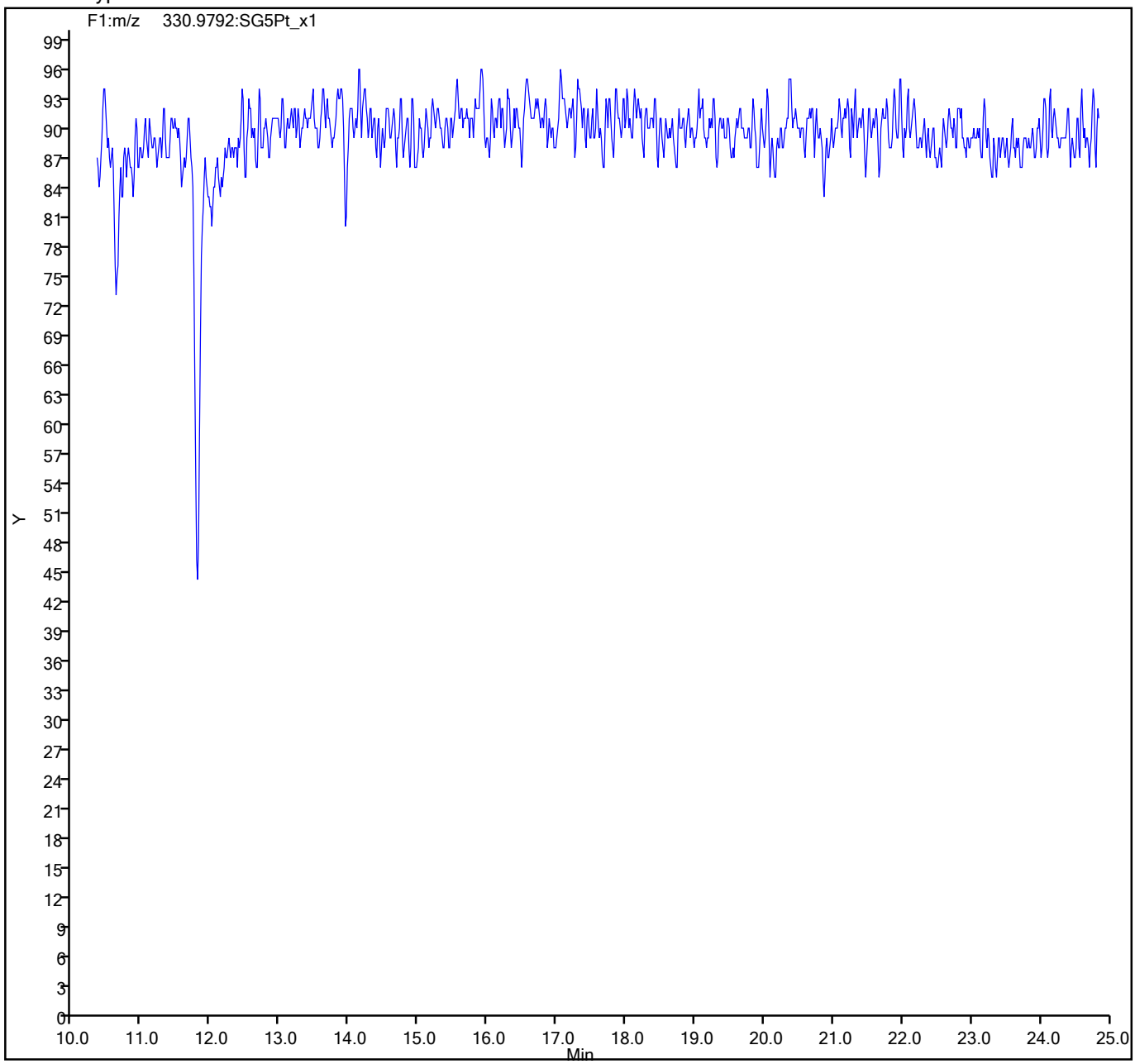

790246

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab Sample ID: CCV 320-517462/43 Calibration Date: 08/19/2021 01:32

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 17au21dfs1_47.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.245		11.5	10.0	115	84-120
2,3,7,8-TCDD	AveID	1.075	1.091		10.1	10.0	101	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.086		51.5	50.0	103	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9679		48.0	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.034		49.4	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.177		51.3	50.0	103	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.349		55.4	50.0	111	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.333		54.9	50.0	110	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9806		46.2	50.0	92	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9110		45.9	50.0	92	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.012		45.6	50.0	91	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.321		53.3	50.0	107	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.388		48.1	50.0	96	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.035		49.3	50.0	99	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.305		49.8	50.0	100	86-116
OCDD	AveID	1.062	1.020		96.0	100	96	79-126
OCDF	AveID	1.317	1.321		100	100	100	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.297		96.4	100	96	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9349		100	100	100	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	1.121		98.3	100	98	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.082		96.1	100	96	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6859		95.7	100	96	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.092		113	100	113	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.016		94.9	100	95	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	0.9659		92.8	100	93	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.8144		107	100	107	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9636		112	100	112	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9078		93.3	100	93	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7453		101	100	101	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7361		109	100	109	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.6807		99.3	100	99	77-129
13C-OCDD	Ave	0.5446	0.6101		224	200	112	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	0.9902		9.82	10.0	98	79-127

31	17AU21DFS1_31	Resolution Check	RC 081721B	46			KSS	1.000	
32	17AU21DFS1_32	CCV CS-4 HRDXNL4_00100	CCV 081721B	2	Dioxin		KSS	1.000	
33	17AU21DFS1_33	WDM HRDXNCP_00044	WDM 081721B	1	Dioxin		KSS	1.000	
34	17AU21DFS1_34	SB Solvent Blank C14	SB 081721D	3	Dioxin		KSS	1.000	
35	17AU21DFS1_35	320-76769-A-31-A RI	320-76769-A-31-A b.i. NU	12	1613B/Solid	D266	KSS	10.000	g
36	17AU21DFS1_36	320-76887-A-8-A	320-76887-A-8-A	24	1613B/Solid		KSS	10.000	g
37	17AU21DFS1_37	320-76887-A-9-A	320-76887-A-9-A	25	1613B/Solid		KSS	10.000	g
38	17AU21DFS1_38	320-76887-A-13-A	320-76887-A-13-A	26	1613B/Solid		KSS	10.000	g
39	17AU21DFS1_39	320-76888-A-13-A	320-76888-A-13-A bad inj.	27	1613B/Solid		KSS	10.000	g
40	17AU21DFS1_40	320-76769-A-27-A	320-76769-A-27-A	28	1613B/Solid		KSS	10.000	g
41	17AU21DFS1_41	320-76769-A-27-B MS	320-76769-A-27-B MS	29	1613B/Solid		KSS	10.000	g
42	17AU21DFS1_42	320-76769-A-27-C MSD	320-76769-A-27-C MSD	30	1613B/Solid		KSS	10.000	g
43	17AU21DFS1_43	320-76769-A-29-A	320-76769-A-29-A needs 20x	31 } reanalyze	1613B/Solid		KSS	10.000	g
44	17AU21DFS1_44	320-76887-A-1-A	320-76887-A-1-A	32 }	1613B/Solid		KSS	10.000	g
45	17AU21DFS1_45	SB Solvent Blank C14	SB 081721E	3	Dioxin		KSS	1.000	
46	17AU21DFS1_46	Resolution Check	RC 081721C	46			KSS	1.000	
47	17AU21DFS1_47	CCV CS-4 HRDXNL4_00100	CCV 081721C	2	Dioxin		KSS	1.000	
48	17AU21DFS1_48	WDM HRDXNCP_00044	WDM 081721C	1	Dioxin		KSS	1.000	
49	17AU21DFS1_49	SB Solvent Blank C14	SB 081721F	3	Dioxin		KSS	1.000	
50	17AU21DFS1_50	mb 320-513879/1-a	mb 320-513879/1-a	33	1613B/Solid	D267	KSS	10.000	g
51	17AU21DFS1_51	lcs 320-513879/2-a	lcs 320-513879/2-a	34	1613B/Solid		KSS	10.000	g
52	17AU21DFS1_52	320-76901-a-2-a	320-76901-a-2-a	35	1613B/Solid		KSS	10.000	g
53	17AU21DFS1_53	320-76901-a-2-b ms	320-76901-a-2-b ms	36	1613B/Solid		KSS	10.000	g
54	17AU21DFS1_54	320-76901-a-2-c msd	320-76901-a-2-c msd	37	1613B/Solid		KSS	10.000	g
55	17AU21DFS1_55	320-76769-a-4-b	320-76769-a-4-b	38	1613B/Solid		KSS	10.000	g
56	17AU21DFS1_56	320-76888-a-6-a	320-76888-a-6-a	39	1613B/Solid		KSS	10.000	g
57	17AU21DFS1_57	320-76888-a-7-a	320-76888-a-7-a	40	1613B/Solid		KSS	10.000	g
58	17AU21DFS1_58	320-76888-a-8-a	320-76888-a-8-a	41	1613B/Solid		KSS	10.000	g
59	17AU21DFS1_59	320-76888-a-9-a	320-76888-a-9-a	42	1613B/Solid		KSS	10.000	g
60	17AU21DFS1_60	SB Solvent Blank C14	SB 081721G	3	Dioxin		KSS	1.000	
61	17AU21DFS1_61	Resolution Check	RC 081721D	46			KSS	1.000	

LOGFILE CHECKED)
DB 8/18/21

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	18 Aug 2021 13:21
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11764 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 11325 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11273 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11367 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10982 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11814 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10754 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10893 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 11277 [5%height]

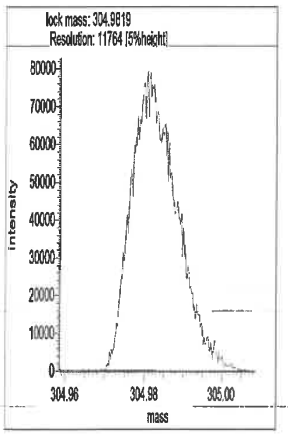

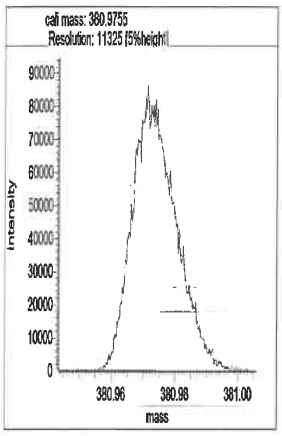

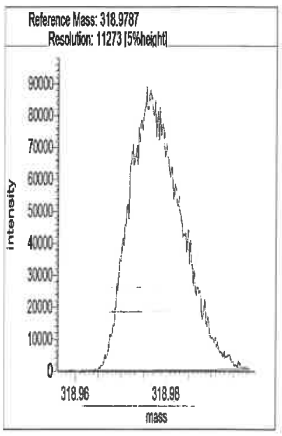

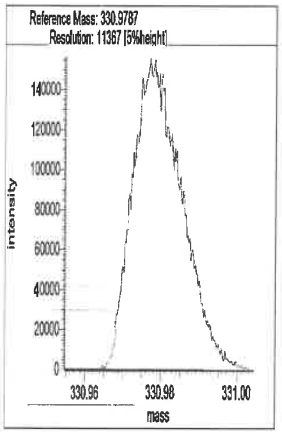

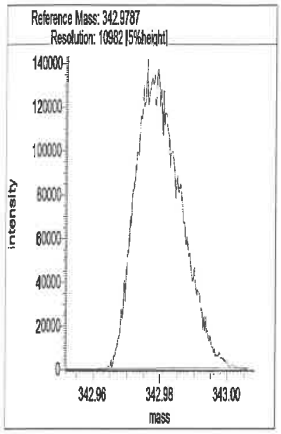

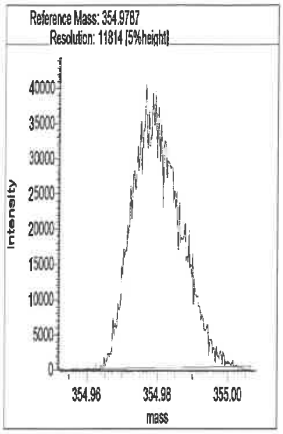

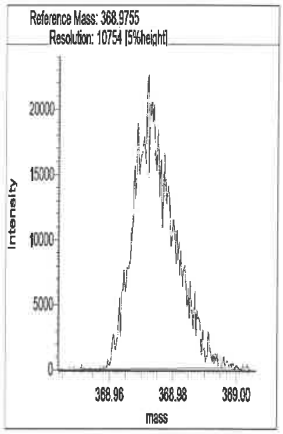

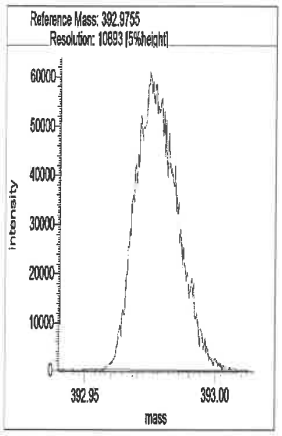

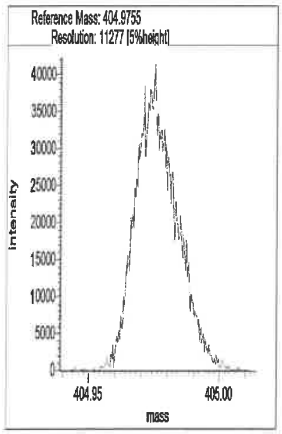

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11468 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11263 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11122 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11410 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 11908 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11302 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11465 [5%height]

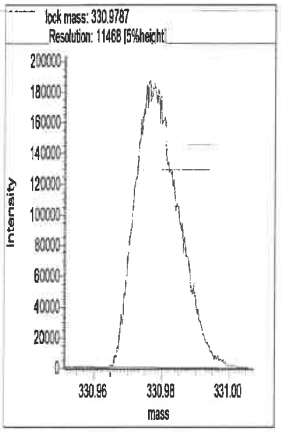

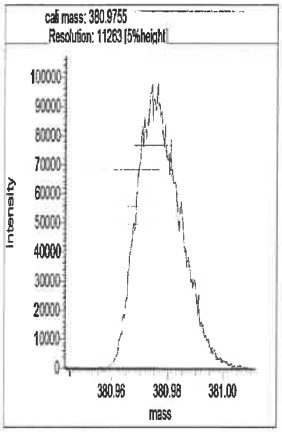

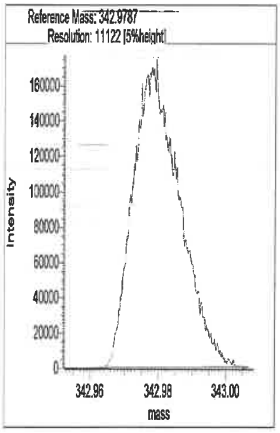

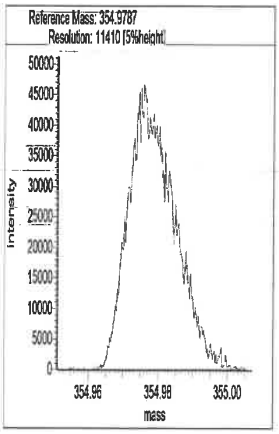

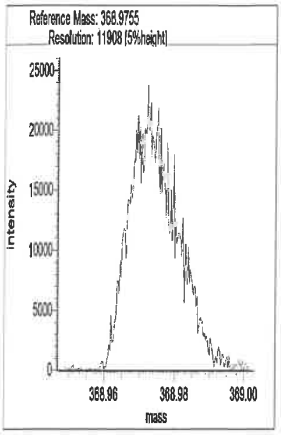

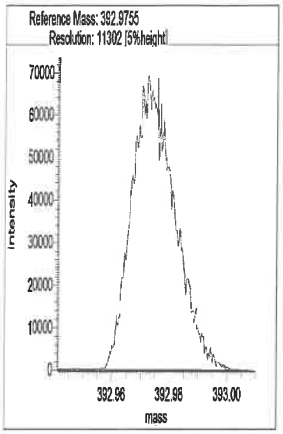

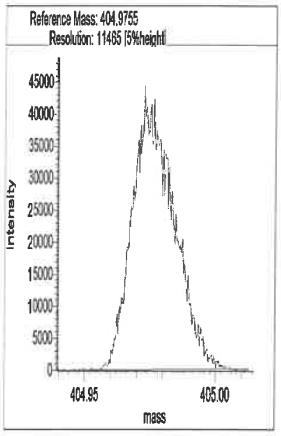

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11134 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 12114 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10814 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10709 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12108 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11058 [5%height]

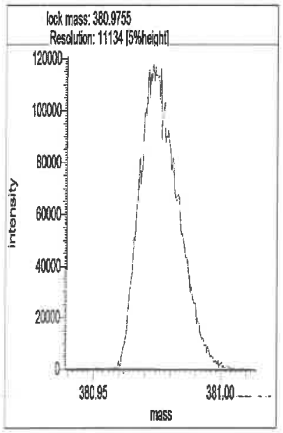

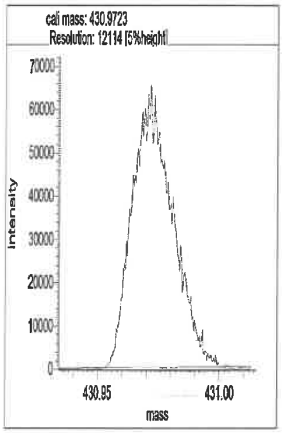

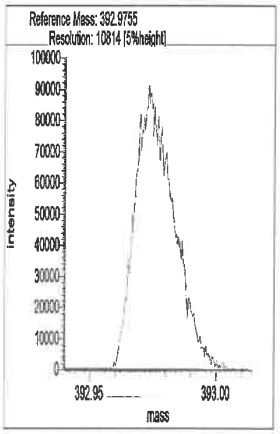

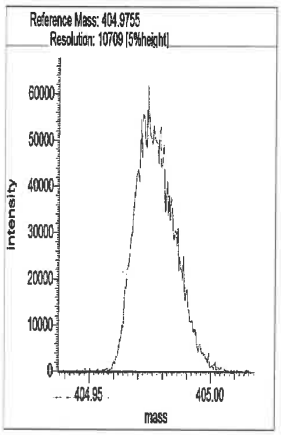

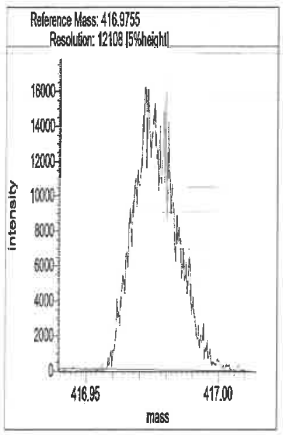

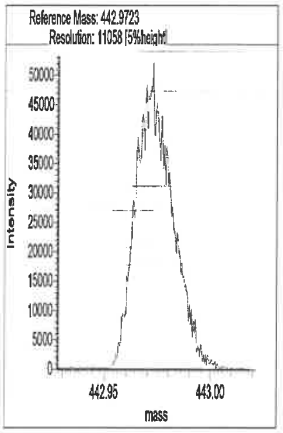

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11118 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10878 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11203 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11316 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11509 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11083 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11515 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11288 [5%height]

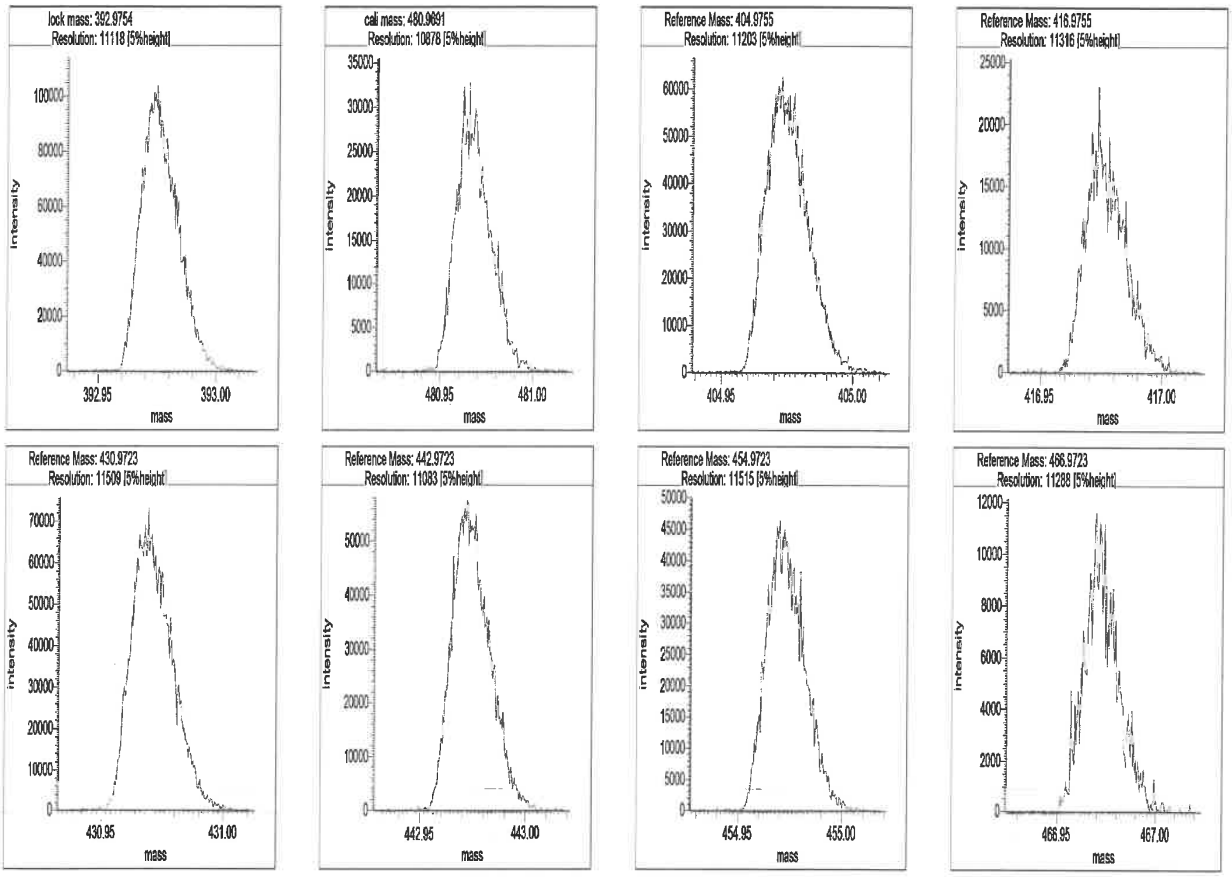

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11646 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 12656 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11387 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11162 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11214 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 11453 [5%height]

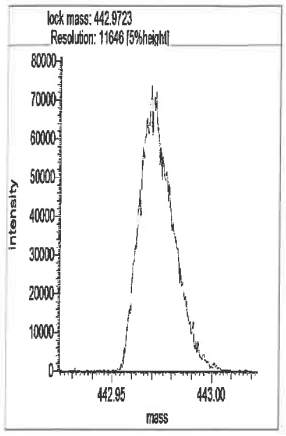
lock mass: 442.9723
Resolution: 11646 [5%height]
intensity
mass

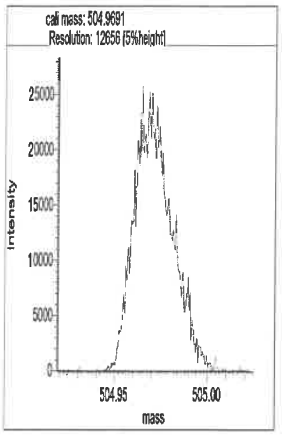
cali mass: 504.9691
Resolution: 12656 [5%height]
intensity
mass

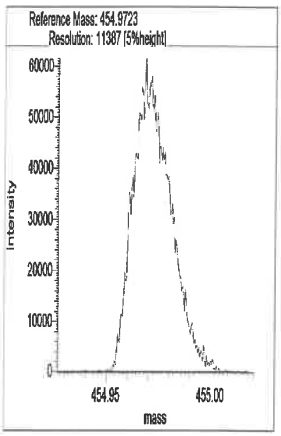
Reference Mass: 454.9723
Resolution: 11387 [5%height]
intensity
mass

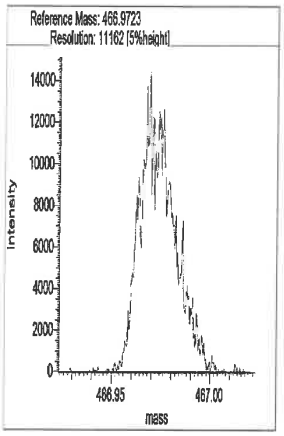
Reference Mass: 466.9723
Resolution: 11162 [5%height]
intensity
mass

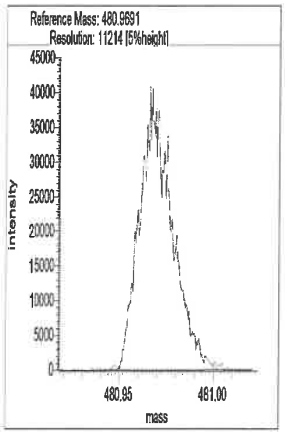
Reference Mass: 480.9691
Resolution: 11214 [5%height]
intensity
mass

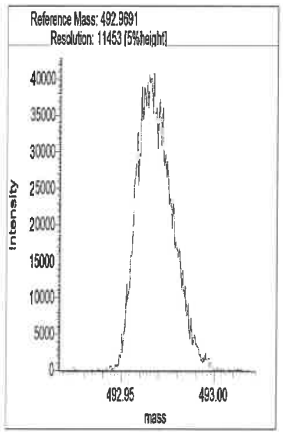
Reference Mass: 492.9691
Resolution: 11453 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 01:12
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10755 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10064 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11004 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10862 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10493 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11020 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10113 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10231 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9724 [5%height] ✓ ok 8/19/21

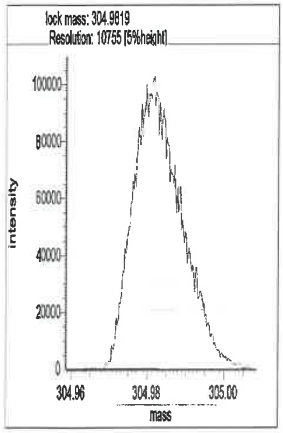

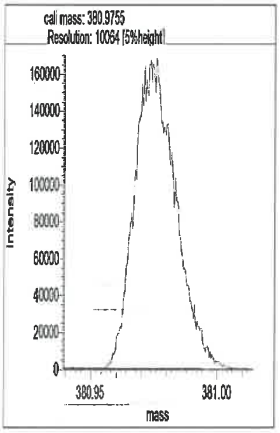

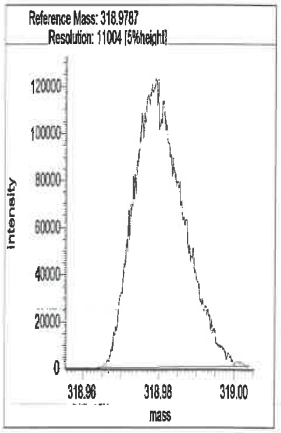

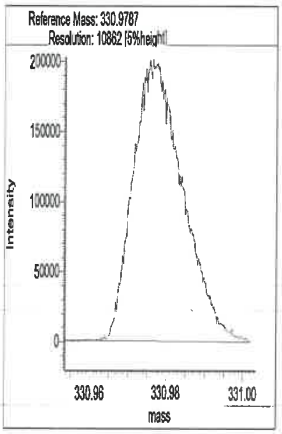

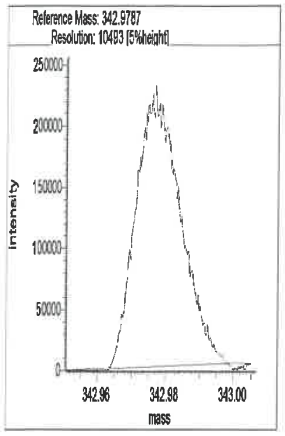

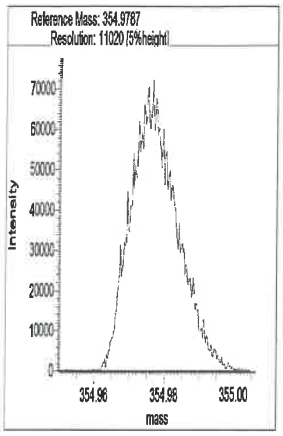

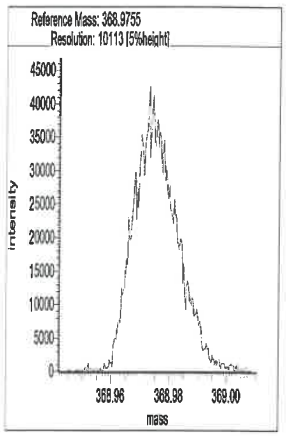

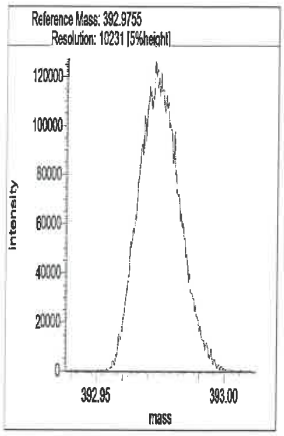

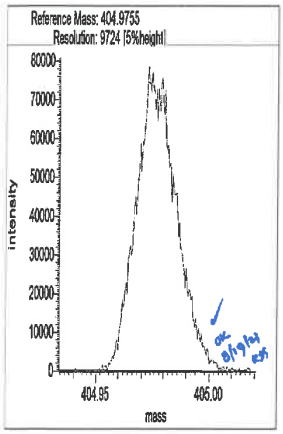

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10868 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10796 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10893 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11154 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10747 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10439 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10242 [5%height]

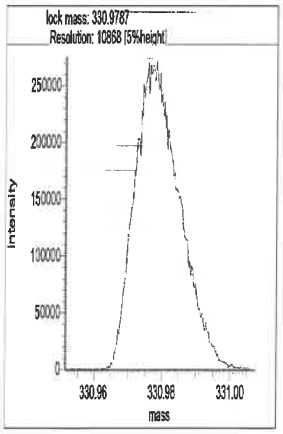

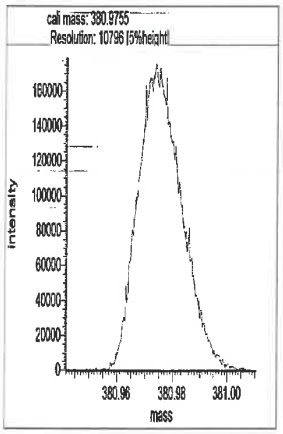

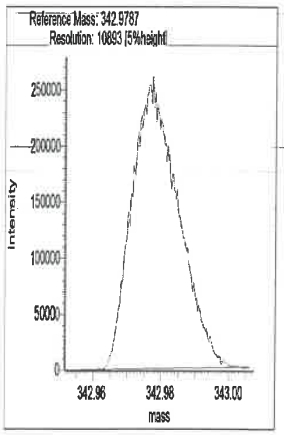

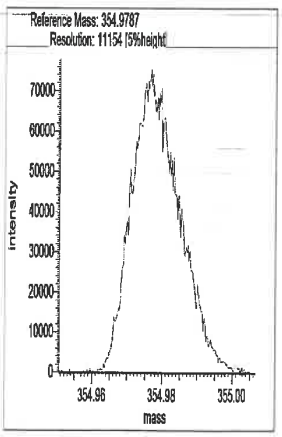

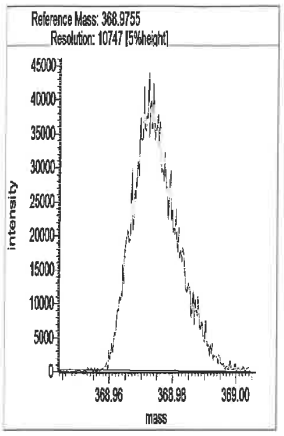

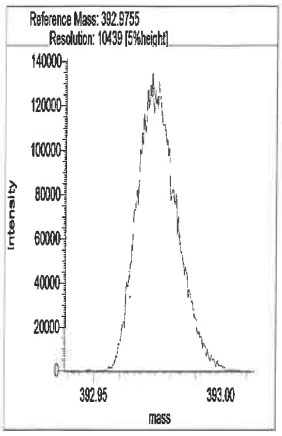

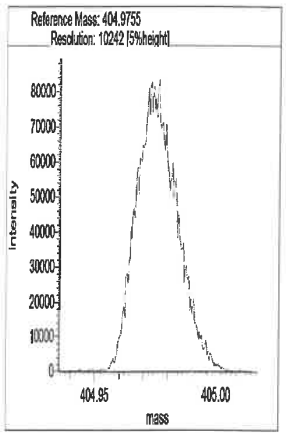

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11012 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10577 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11026 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10658 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11077 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10816 [5%height]

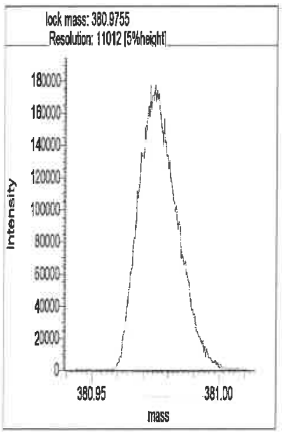

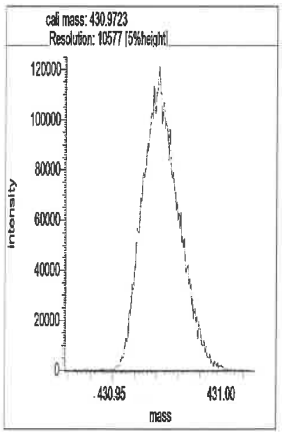

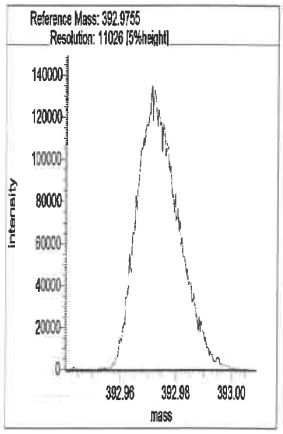

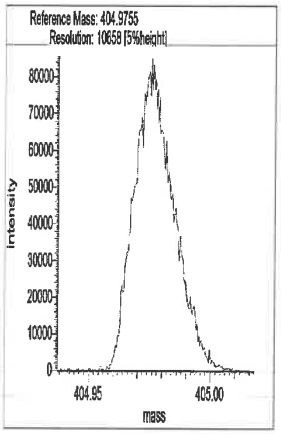

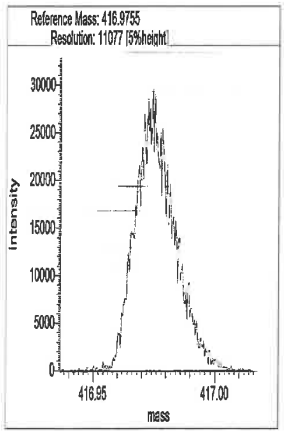

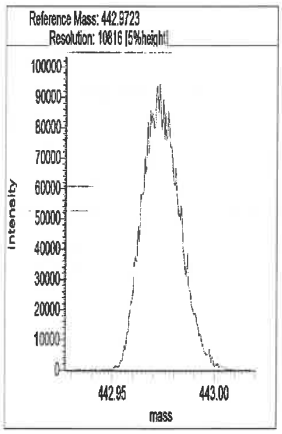

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11599 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10409 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11028 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11067 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10523 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10883 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10838 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11180 [5%height]

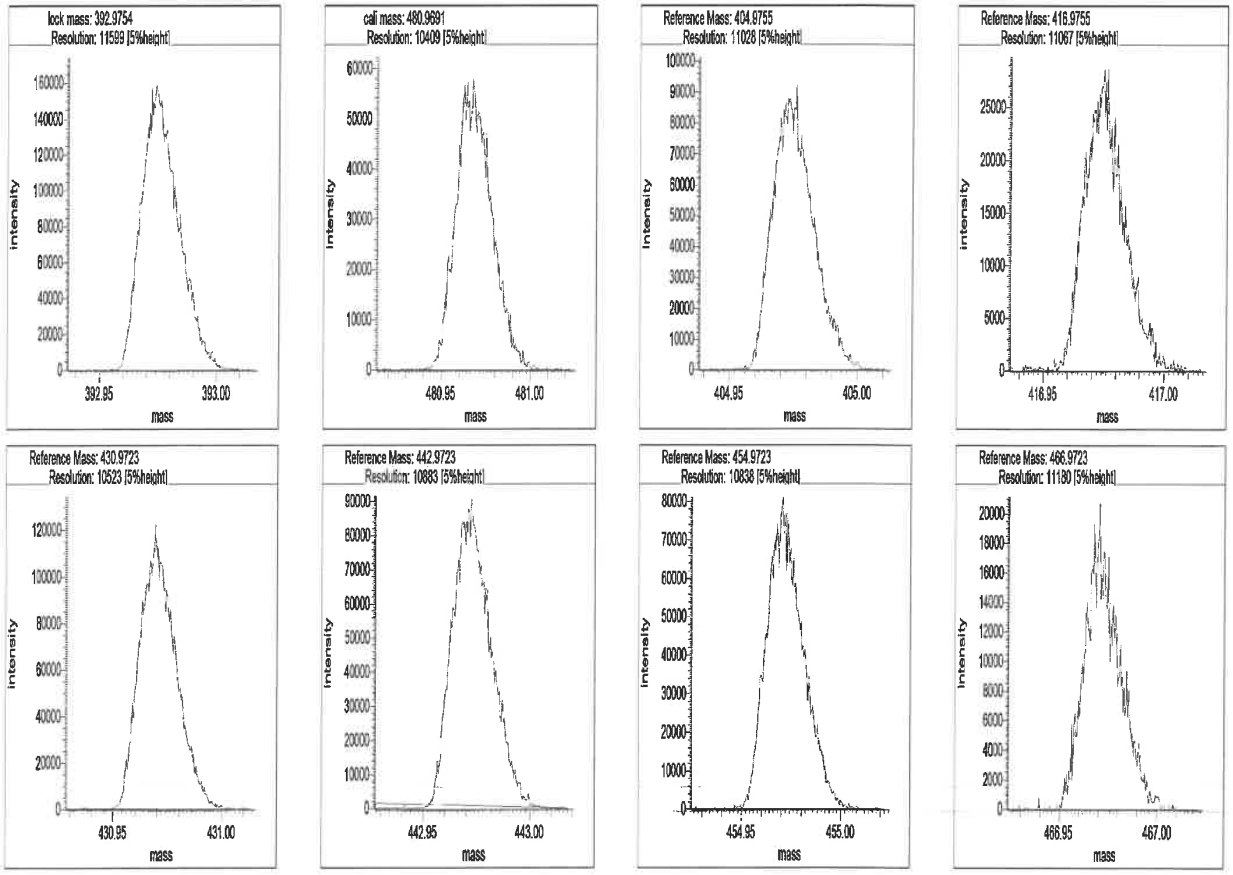

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11216 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10772 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11196 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11002 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11259 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10778 [5%height]

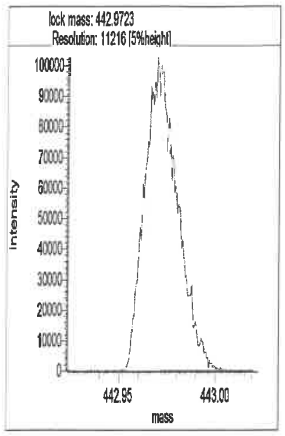
lock mass: 442.9723
Resolution: 11216 [5%height]
Intensity
mass

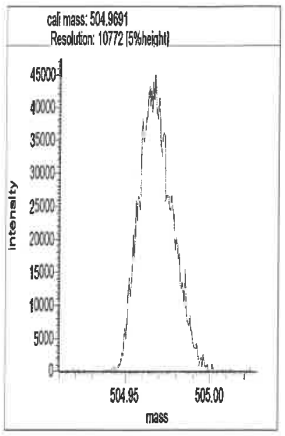
cali mass: 504.9691
Resolution: 10772 [5%height]
Intensity
mass

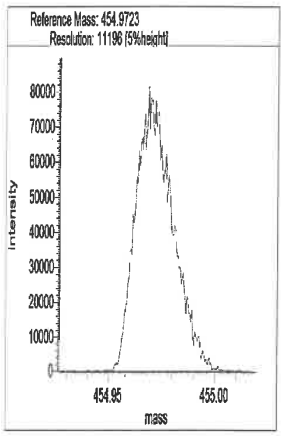
Reference Mass: 454.9723
Resolution: 11196 [5%height]
Intensity
mass

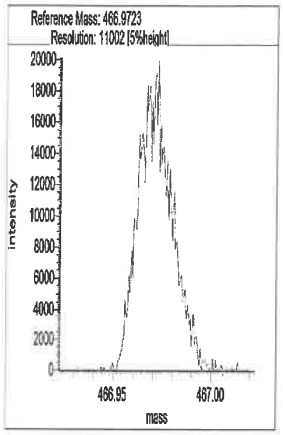
Reference Mass: 466.9723
Resolution: 11002 [5%height]
Intensity
mass

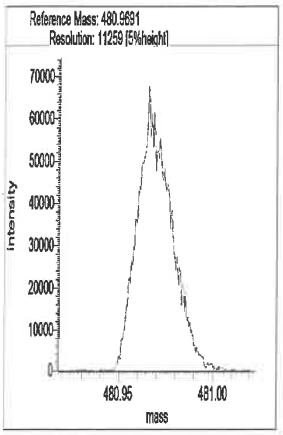
Reference Mass: 480.9691
Resolution: 11259 [5%height]
Intensity
mass

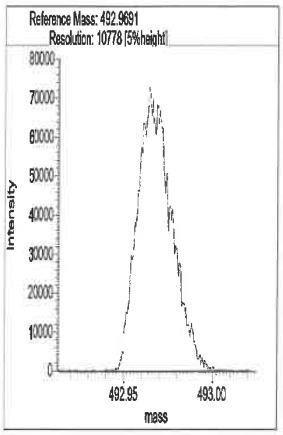
Reference Mass: 492.9691
Resolution: 10778 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 12:47
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11862 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10668 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11408 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11603 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11057 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11275 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11232 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10101 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 9688 [5%height] ✓ 8/19/21 KCF

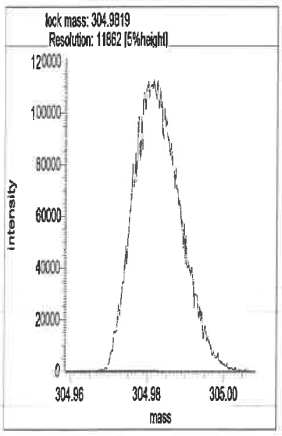

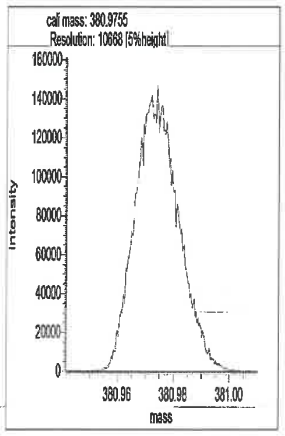

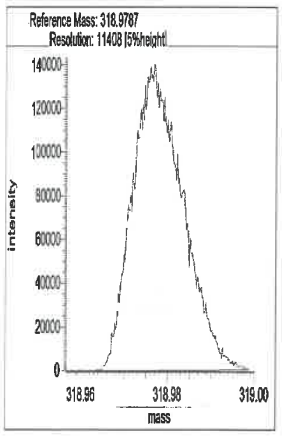

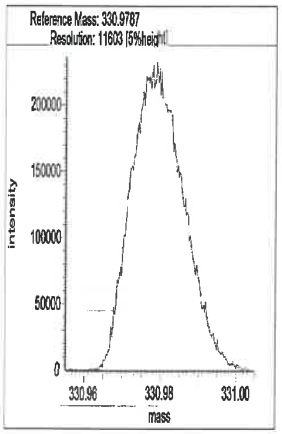

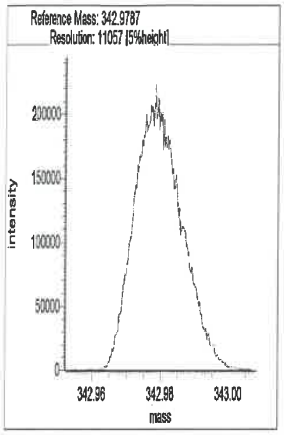

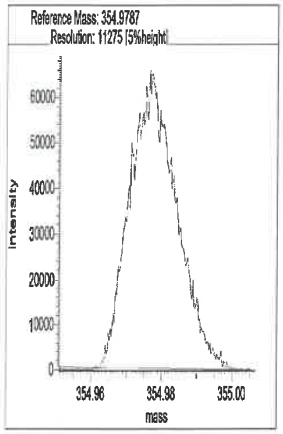

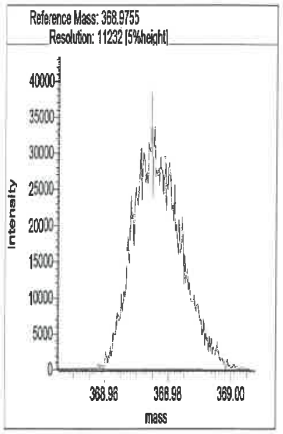

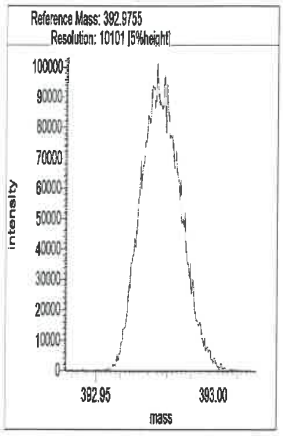

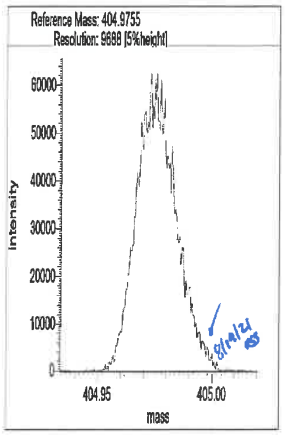

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11409 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 11096 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11275 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10877 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10816 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11177 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10770 [5%height]

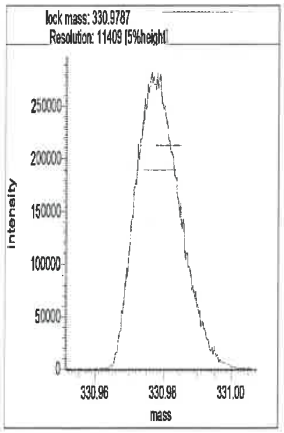

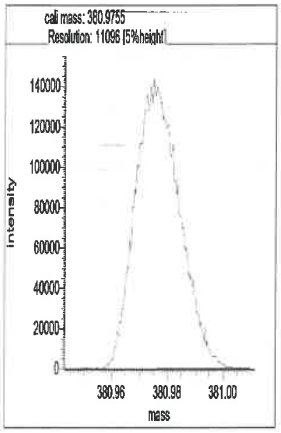

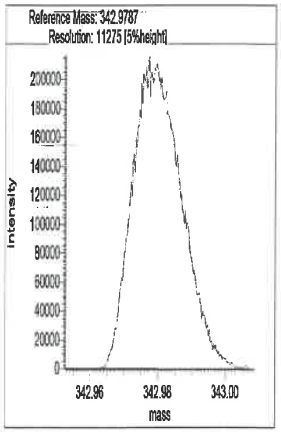

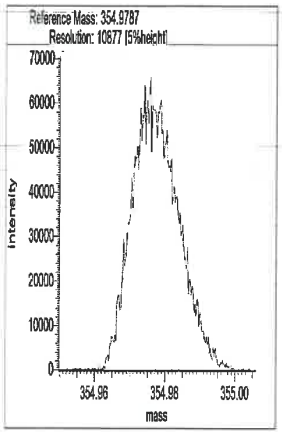

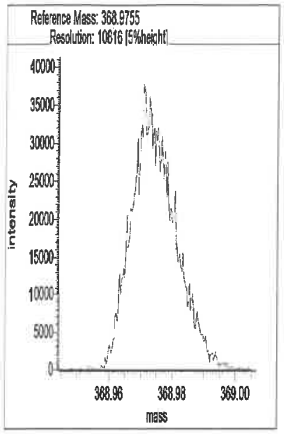

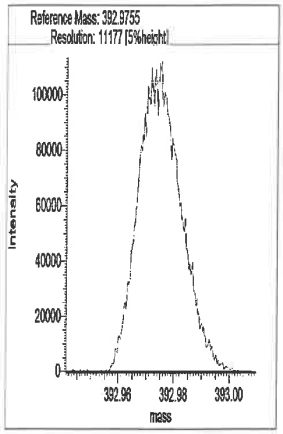

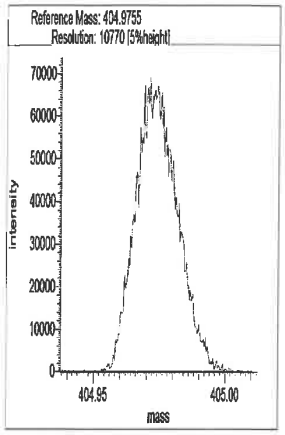

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11068 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 11154 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11414 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11295 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10788 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10614 [5%height]

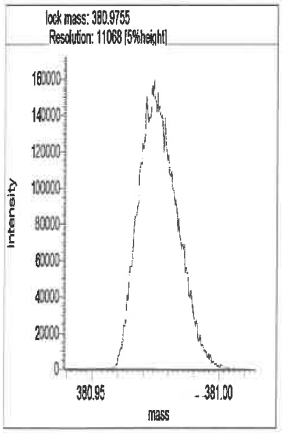

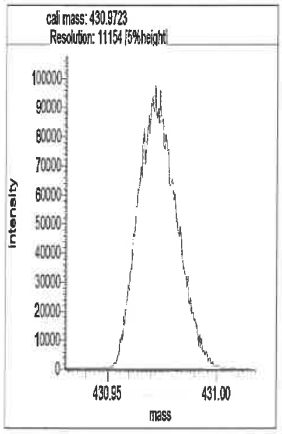

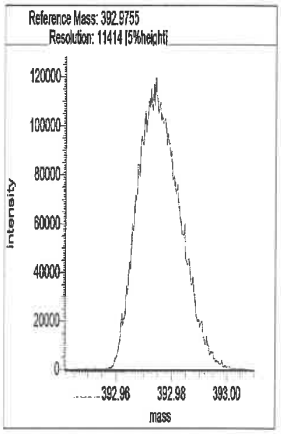

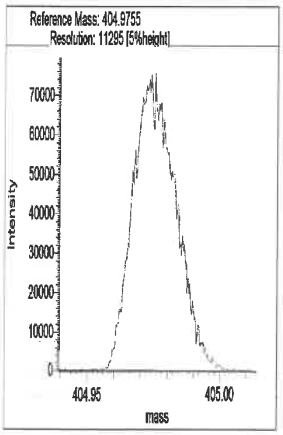

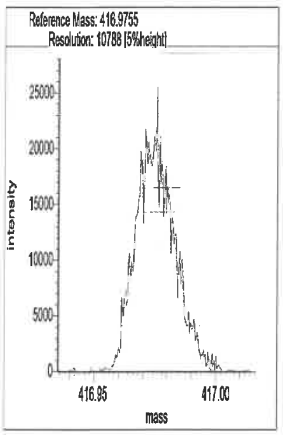

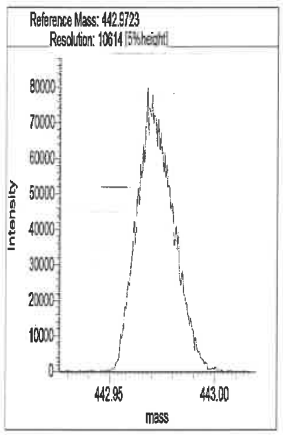

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11418 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 11823 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11599 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11335 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10811 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 11056 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10732 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10827 [5%height]

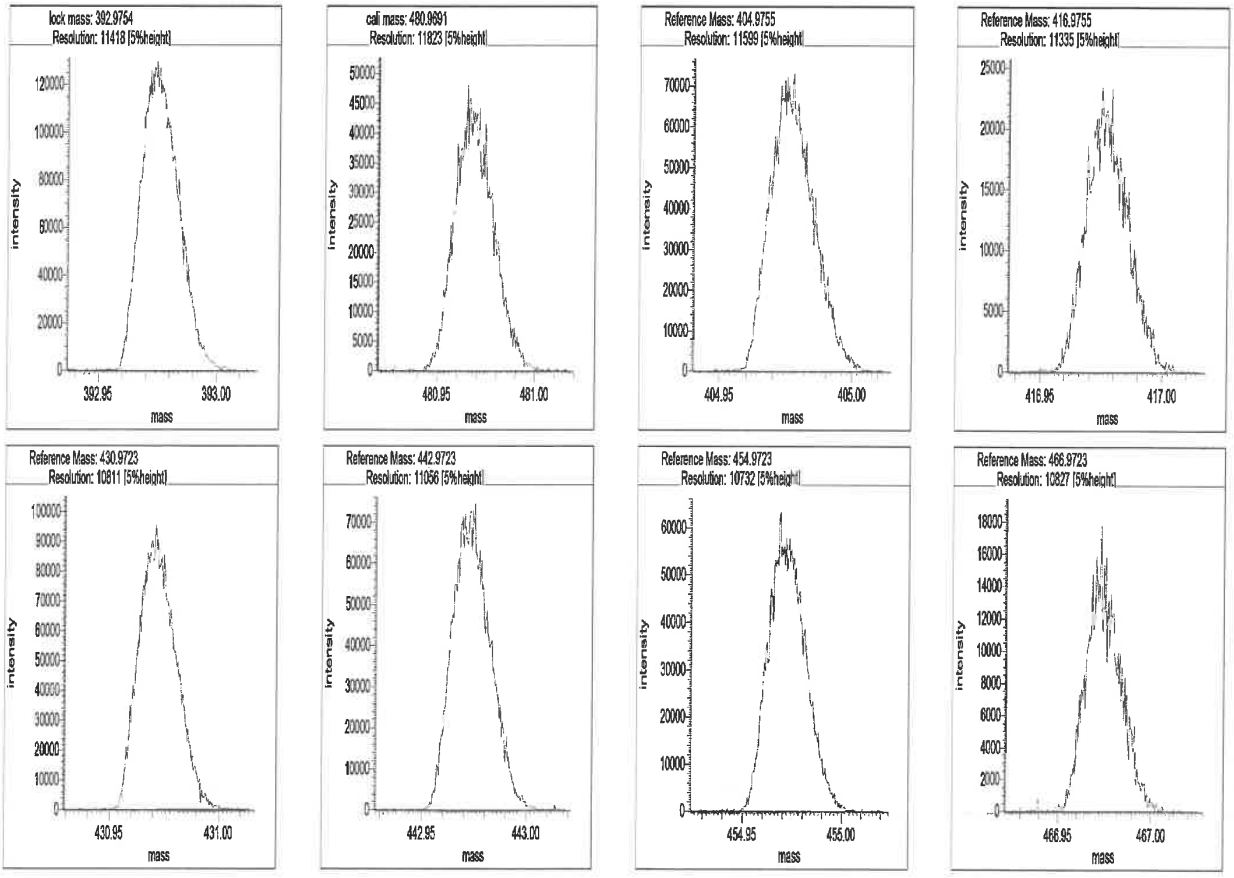

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11579 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11377 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11119 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 12204 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10698 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10928 [5%height]

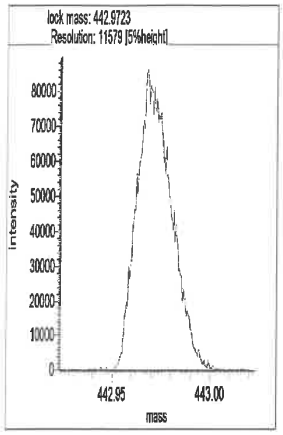
lock mass: 442.9723
Resolution: 11579 [5%height]
Intensity
mass

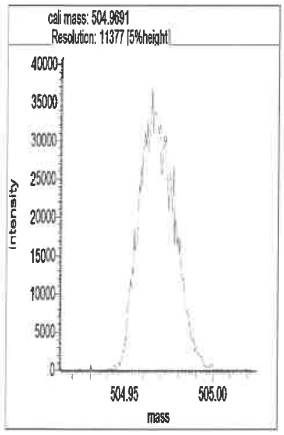
cali mass: 504.9691
Resolution: 11377 [5%height]
Intensity
mass

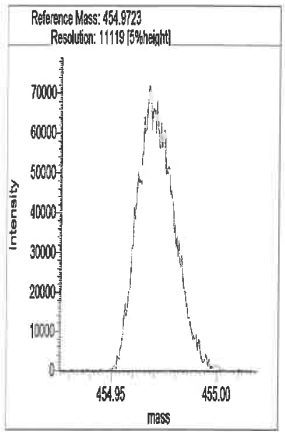
Reference Mass: 454.9723
Resolution: 11119 [5%height]
Intensity
mass

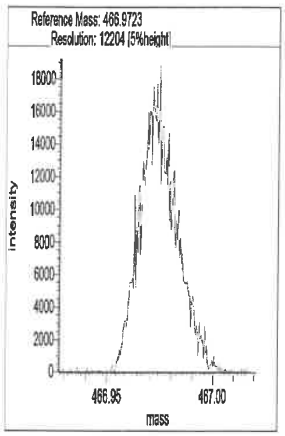
Reference Mass: 466.9723
Resolution: 12204 [5%height]
Intensity
mass

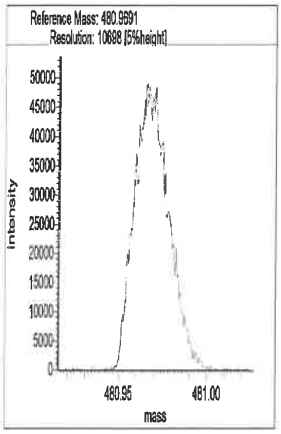
Reference Mass: 480.9691
Resolution: 10628 [5%height]
Intensity
mass

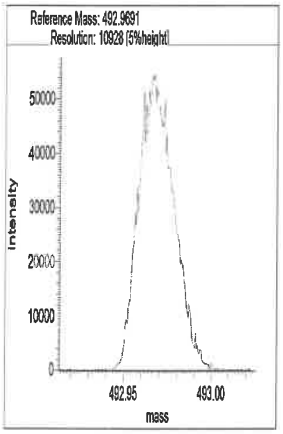
Reference Mass: 492.9691
Resolution: 10928 [5%height]
Intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 01:32:00 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:22:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.427	984489	0.83	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.464	1276686	0.81	1.3459	96.4	96.4	0.2841	0.2841	96.35	
2,3,7,8-TCDF	20.490	158938	0.88	1.0802	11.5	11.5	0.1590	0.1590	115	M
A Non-2,3,7,8-sub-TCDF	19.946						0.1590	0.1590		
S Total TCDF					11.5	11.5	0.1590	0.1590		
D 13C-2,3,7,8-TCDD	21.806	920353	0.75	0.9317	100.3	100.3	0.5973	0.5973	100	
2,3,7,8-TCDD	21.840	100432	0.75	1.0753	10.1	10.1	0.0654	0.0654	101	M
$ 37Cl4-2,3,7,8-TCDD	21.849	97480		1.0083	9.820	9.820	0.0128	0.0128	98.20	
A Non-2,3,7,8-sub-TCDD	20.781						0.0654	0.0654		
S Total TCDD					10.1	10.1	0.0654	0.0654		
D 13C-1,2,3,7,8-PeCDF	27.288	1103721	1.59	1.1405	98.3	98.3	0.2569	0.2569	98.30	
1,2,3,7,8-PeCDF	27.313	599354	1.65	1.0543	51.5	51.5	0.1124	0.1124	103	
D 13C-2,3,4,7,8-PeCDF	28.795	1065050	1.63	1.1253	96.1	96.1	0.2604	0.2604	96.13	
2,3,4,7,8-PeCDF	28.820	515414	1.63	1.0079	48.0	48.0	0.1284	0.1284	96.03	
A F1 PeCDFs	24.697	361	1.55	1.0311	0.0544	0.0323	0.004263	0.0291	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.194	6323	1.61	1.0311	0.5655	0.5655	0.1200	0.5655	0.00	
S Total PeCDF					100.1	100.1	0.1204	0.1204		RQ
D 13C-1,2,3,7,8-PeCDD	29.612	675256	1.54	0.7165	95.7	95.7	0.2875	0.2875	95.73	M
1,2,3,7,8-PeCDD	29.637	349091	1.55	1.0465	49.4	49.4	0.2994	0.2994	98.80	
A Non-2,3,7,8-sub-PeCDD	28.489						0.2994	0.2994		
S Total PeCDD					49.4	49.4	0.2994	0.2994		
D 13C-1,2,3,4,7,8-HxCDF	34.942	961464	0.54	0.9648	113.2	113.2	0.2217	0.2217	113	
1,2,3,4,7,8-HxCDF	34.959	565917	1.34	1.1474	51.3	51.3	0.1626	0.1626	103	
D 13C-1,2,3,6,7,8-HxCDF	35.111	894964	0.54	1.0708	94.9	94.9	0.1997	0.1997	94.92	
1,2,3,6,7,8-HxCDF	35.119	603750	1.33	1.2178	55.4	55.4	0.1845	0.1845	111	
D 13C-2,3,4,6,7,8-HxCDF	35.919	850492	0.53	1.0413	92.8	92.8	0.2054	0.2054	92.76	
2,3,4,6,7,8-HxCDF	35.936	566662	1.32	1.2145	54.9	54.9	0.1693	0.1693	110	
D 13C-1,2,3,7,8,9-HxCDF	36.811	799349	0.53	0.9731	93.3	93.3	0.2198	0.2198	93.29	
1,2,3,7,8,9-HxCDF	36.828	528030	1.35	1.2401	53.3	53.3	0.1512	0.1512	107	
A Non-2,3,7,8-sub-HxCDF	35.107						0.1659	0.1659		
S Total HxCDF					214.8	214.8	0.1669	0.1669		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.609	880537	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.129	717142	1.25	0.7587	107.3	107.3	0.1846	0.1846	107	
1,2,3,4,7,8-HxCDD	36.146	351624	1.23	1.0608	46.2	46.2	0.0806	0.0806	92.44	
D 13C-1,2,3,6,7,8-HxCDD	36.247	848519	1.22	0.8593	112.1	112.1	0.1630	0.1630	112	
1,2,3,6,7,8-HxCDD	36.264	386501	1.24	0.9933	45.9	45.9	0.0800	0.0800	91.71	
1,2,3,7,8,9-HxCDD	36.626	395938	1.20	1.1094	45.6	45.6	0.0743	0.0743	91.18	
A Non-2,3,7,8-sub-HxCDD	35.460						0.0781	0.0781		
S Total HxCDD					137.7	137.7	0.0783	0.0783		
D 13C-1,2,3,4,6,7,8-HpCDF	38.626	656274	0.44	0.7359	101.3	101.3	0.2851	0.2851	101	
1,2,3,4,6,7,8-HpCDF	38.634	455320	1.06	1.4421	48.1	48.1	0.1685	0.1685	96.22	
D 13C-1,2,3,4,7,8,9-HpCDF	39.880	599385	0.45	0.6854	99.3	99.3	0.3061	0.3061	99.32	
1,2,3,4,7,8,9-HpCDF	39.888	390971	1.08	1.3092	49.8	49.8	0.1885	0.1885	99.65	
A Non-2,3,7,8-sub-HpCDF	39.288						0.1780	0.1780		
S Total HpCDF					97.9	97.9	0.1785	0.1785		
D 13C-1,2,3,4,6,7,8-HpCDD	39.569	648199	1.06	0.6745	109.1	109.1	0.2831	0.2831	109	
1,2,3,4,6,7,8-HpCDD	39.577	335357	1.04	1.0503	49.3	49.3	0.1045	0.1045	98.52	
A Non-2,3,7,8-sub-HpCDD	39.288	3567	1.04	1.0503	0.5786	0.5239	0.1045	0.5239	0.00	RQ
S Total HpCDD					49.8	49.8	0.1045	0.1045		RQ
D 13C-OCDD	42.072	1074471	0.91	0.5446	224.1	224.1	0.2244	0.2244	112	
OCDF	42.165	709884	0.97	1.3168	100.3	100.3	0.1011	0.1011	100	
OCDD	42.081	547805	0.90	1.0620	96.0	96.0	0.1077	0.1077	96.02	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 01:32:00 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:25 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:22:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.427	21.427	0		445977	61730	165	412	374		
333.9338	21.444	21.427	1		538512	70339	129	322	545	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.464	20.464	0	0.955	572920	76535	109	272	702		
317.9389	20.464	20.464	0	0.955	703766	101095	93	232	1087	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.490	20.490	0	1.001	74325	10071	54	135	187		M
305.8987	20.490	20.490	0	1.001	84613	12394	68	170	182	0.88(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	19.946						54	135			
305.8987	19.946						68	170			
13C-2,3,7,8-TCDD											
331.9368	21.806	21.806	0	1.018	395703	49232	165	412	298		
333.9338	21.806	21.806	0	1.018	524650	67347	129	322	522	0.75(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.840	21.840	0	1.002	43022	5107	20	50	255		M
321.8936	21.840	21.840	0	1.002	57410	7402	13	32	569	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.849	21.849	0	1.020	97480	12477	7	17	1782		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.781						20	50			
321.8936	20.781						13	32			
13C-1,2,3,7,8-PeCDF											
351.9000	27.288	27.288	0	1.274	677865	102468	92	230	1114		
353.8970	27.279	27.288	-1	1.273	425856	63812	63	157	1013	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.313	27.313	0	1.001	373055	54148	41	102	1321		
341.8567	27.313	27.313	0	1.001	226299	33164	38	95	873	1.65(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.795	28.795	0	1.344	659478	94038	92	230	1022		
353.8970	28.795	28.795	0	1.344	405572	58215	63	157	924	1.63(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.820	28.820	0	1.001	319323	44133	41	102	1076		
341.8567	28.820	28.820	0	1.001	196091	26521	38	95	698	1.63(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.267	24.697	-26	0.889	22	14	1	2	14		
341.8567	24.250	24.697	-27	0.889	64	21	2	5	11	0.34(1.32-1.78)	
	Empc Correction				14	9	2	5	5		
339.8597	24.379	24.697	-19	0.893	198	49	1	2	49		
341.8567	24.379	24.697	-19	0.893	324	81	2	5	41	0.61(1.32-1.78)	
	Empc Correction				127	31	2	5	16		
A Non-2,3,7,8-sub-PeCDF											
339.8597	27.894	28.194	-18	1.022	3897	465	41	102	11		
341.8567	27.877	28.194	-19	1.022	2426	361	38	95	10	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											M
367.8949	29.612	29.612	0	1.382	408922	48749	62	155	786		
369.8919	29.628	29.612	1	1.383	266334	33288	47	117	708	1.54(1.32-1.78)	M
1,2,3,7,8-PeCDD											
355.8546	29.637	29.637	0	1.001	212257	27310	81	202	337		
357.8516	29.637	29.637	0	1.001	136834	17949	22	55	816	1.55(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.489						81	202			
357.8516	28.489						22	55			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.942	34.942	0	0.954	336469	68825	57	142	1207		
385.8610	34.942	34.942	0	0.954	624995	114454	111	277	1031	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.959	34.959	0	1.000	323795	64220	78	195	823		
375.8178	34.959	34.959	0	1.000	242122	47319	59	147	802	1.34(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.111	35.111	0	0.959	313436	52098	57	142	914		
385.8610	35.111	35.111	0	0.959	581528	100114	111	277	902	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.119	35.119	0	1.000	344594	62612	78	195	803		
375.8178	35.119	35.119	0	1.000	259156	47352	59	147	803	1.33(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.919	35.919	0	0.981	293056	57881	57	142	1015		
385.8610	35.919	35.919	0	0.981	557436	108473	111	277	977	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.936	35.936	0	1.000	321979	63834	78	195	818		
375.8178	35.936	35.936	0	1.000	244683	48323	59	147	819	1.32(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.811	36.811	0	1.006	276711	60371	57	142	1059		
385.8610	36.811	36.811	0	1.006	522638	121974	111	277	1099	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.828	36.828	0	1.000	302880	64959	78	195	833		
375.8178	36.828	36.828	0	1.000	225150	48893	59	147	829	1.35(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.107						78	195			
375.8178	35.107						59	147			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.609	36.609	0		486696	109333	53	132	2063		
403.8529	36.617	36.609	1		393841	87046	57	142	1527	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.129	36.129	0	0.987	398284	87752	53	132	1656		
403.8529	36.129	36.129	0	0.987	318858	70052	57	142	1229	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.146	36.146	0	1.000	194100	42368	32	80	1324		
391.8127	36.146	36.146	0	1.000	157524	35287	22	55	1604	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.247	36.247	0	0.990	466694	92606	53	132	1747		
403.8529	36.247	36.247	0	0.990	381825	77360	57	142	1357	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.264	36.264	0	1.000	214301	44193	32	80	1381		
391.8127	36.255	36.264	-1	1.000	172200	36180	22	55	1645	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.626	36.626	0	1.014	215900	47500	32	80	1484		
391.8127	36.626	36.626	0	1.014	180038	40127	22	55	1824	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.460						32	80			
391.8127	35.460						22	55			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.626	38.626	0	1.055	200757	51554	47	117	1097		
419.8220	38.626	38.626	0	1.055	455517	113911	118	295	965	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.634	38.634	0	1.000	234238	59520	82	205	726		
409.7788	38.634	38.634	0	1.000	221082	55709	79	197	705	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.880	39.880	0	1.089	186100	51202	47	117	1089		
419.8220	39.880	39.880	0	1.089	413285	111683	118	295	946	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.888	39.888	0	1.000	203424	55186	82	205	673		
409.7788	39.888	39.888	0	1.000	187547	51038	79	197	646	1.08(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.288						82	205			
409.7788	39.288						79	197			

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.569	39.569	0	1.081	333648	91786	80	200	1147		
437.8140	39.569	39.569	0	1.081	314551	90360	70	175	1291	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.577	39.577	0	1.000	170747	48038	40	100	1201		
425.7737	39.577	39.577	0	1.000	164610	46442	40	100	1161	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.946	39.288	-21	0.984	2190	476	40	100	12		
	Empc Correction				1818	545	40	100	14		
425.7737	38.946	39.288	-21	0.984	1749	525	40	100	13	1.25(0.88-1.20)	
13C-OCDD											
469.7780	42.072	42.072	0	1.149	513322	127575	59	147	2162		
471.7750	42.064	42.072	-1	1.149	561149	138295	37	92	3738	0.91(0.76-1.02)	
OCDF											
441.7428	42.165	42.165	0	1.002	349557	84896	33	82	2573		
443.7399	42.165	42.165	0	1.002	360327	89931	38	95	2367	0.97(0.76-1.02)	
OCDD											
457.7377	42.081	42.081	0	1.000	259339	62403	31	77	2013		
459.7348	42.072	42.081	-1	1.000	288466	70332	30	75	2344	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.697

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1103721	166280
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1065050	152253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1084385	159266

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.267	22	14	64	21	0.007692	0.34	RQ
24.267	22	14	14	9	0.003220		Empc Correction
24.379	198	49	324	81	0.0467	0.61	RQ
24.379	198	49	127	31	0.0291		Empc Correction
Signal Totals:							
	220	63	141	40			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	608	165				0.57	RQ
	361	103					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0544 = (608 * 100.000) / (1084385 * 1.031)
Empc Amount: 0.0323 = (361 * 100.000) / (1084385 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.194

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	1103721	166280
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	1065050	152253

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	1084385	159266

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.894	3897	465	2426	361	0.5655	1.61	n
Signal Totals:							
	3897	465	2426	361			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6323	826				1.61	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5655 = (6323 * 100.000) / (1084385 * 1.031)

QC Flag Legend

Processing Flags
n - Failed Sig-To-Noise Test

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 01:32:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 43
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.288

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	648199	182146

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	648199	182146

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.946	2190	476	1749	525	0.5786	1.25	RQ
38.946	1818	545	1749	525	0.5239		Empc Correction
Signal Totals:							
	1818	545	1749	525			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3939	1001				1.25	RQ
	3567	1070					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5786 = (3939 * 100.000) / (648199 * 1.050)
Empc Amount: 0.5239 = (3567 * 100.000) / (648199 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.49
Area: 70726
Amount: 11.264064
Amount Units: pg/ul

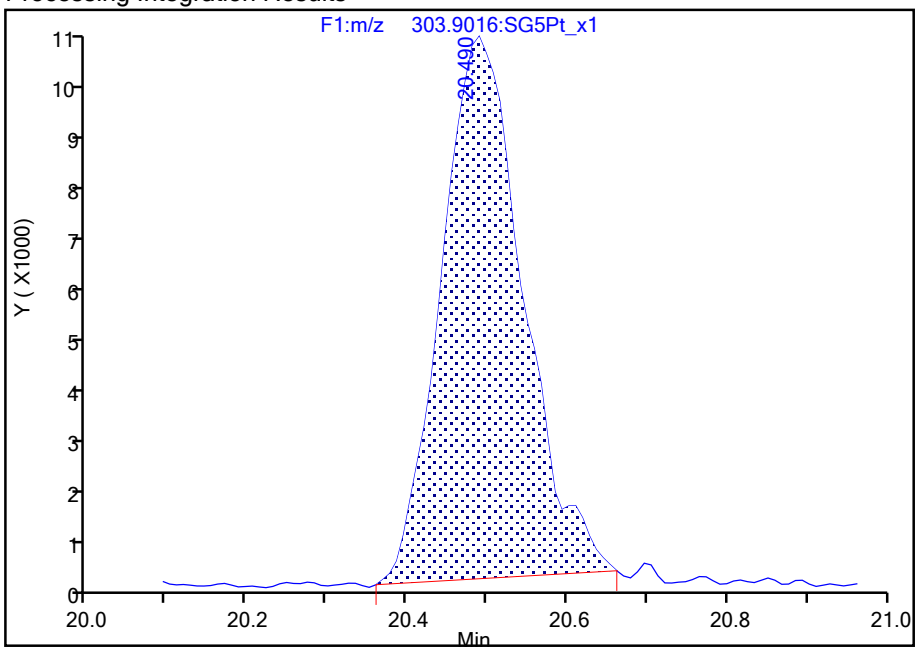

Manual Integration Results

RT: 20.49
Area: 74325
Amount: 11.525037
Amount Units: pg/ul

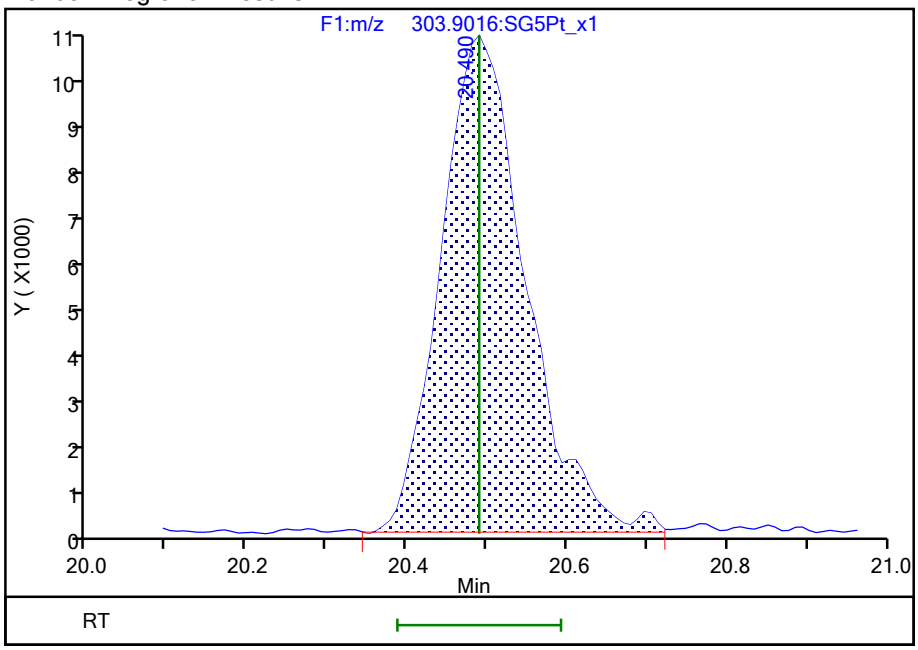

Reviewer: stephensk, 19-Aug-2021 09:20:42

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.84
Area: 41863
Amount: 10.030634
Amount Units: pg/ul

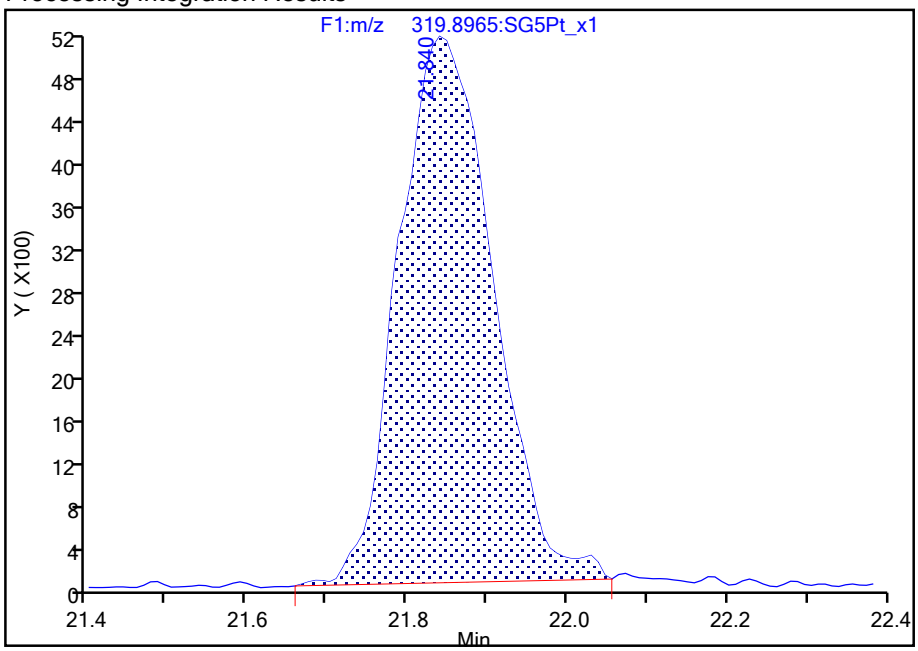

Manual Integration Results

RT: 21.84
Area: 43022
Amount: 10.147741
Amount Units: pg/ul

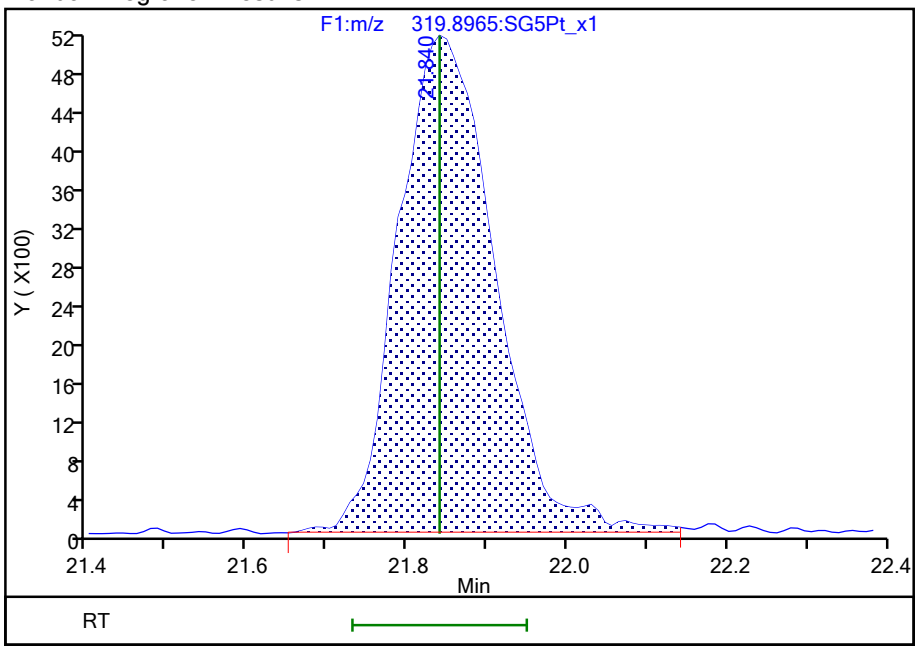

Reviewer: stephensk, 19-Aug-2021 09:21:00

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d				
Injection Date:	19-Aug-2021 01:32:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	43
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2(26.07 :33.00)		

13C-1,2,3,7,8-PeCDD, CAS: 109719-79-1

Signal: 2

Processing Integration Results

RT: 29.63
Area: 252502
Amount: 93.771696
Amount Units: pg/ul

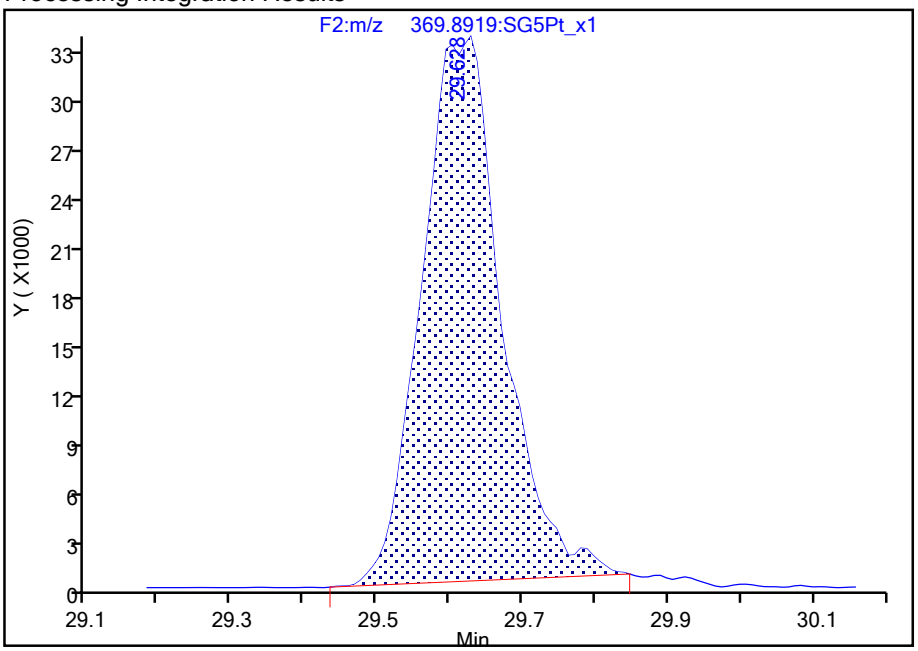

Manual Integration Results

RT: 29.63
Area: 266334
Amount: 95.732693
Amount Units: pg/ul

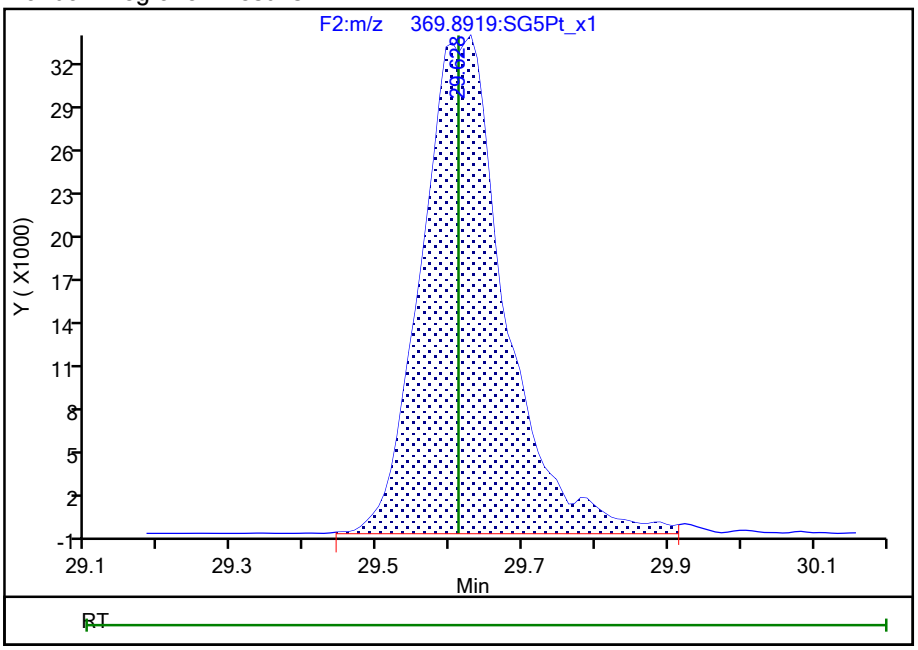

Reviewer: stephensk, 19-Aug-2021 09:21:19

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

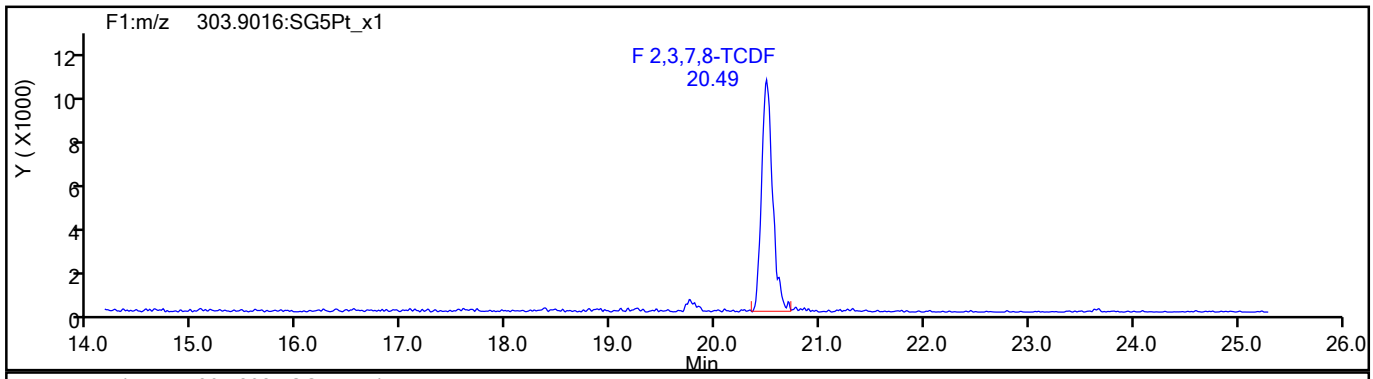

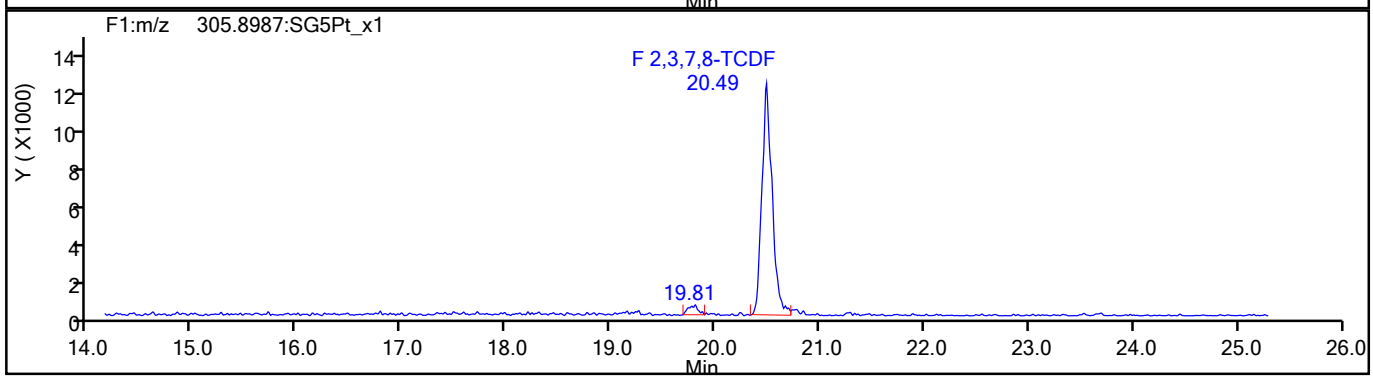

TCDF Standards

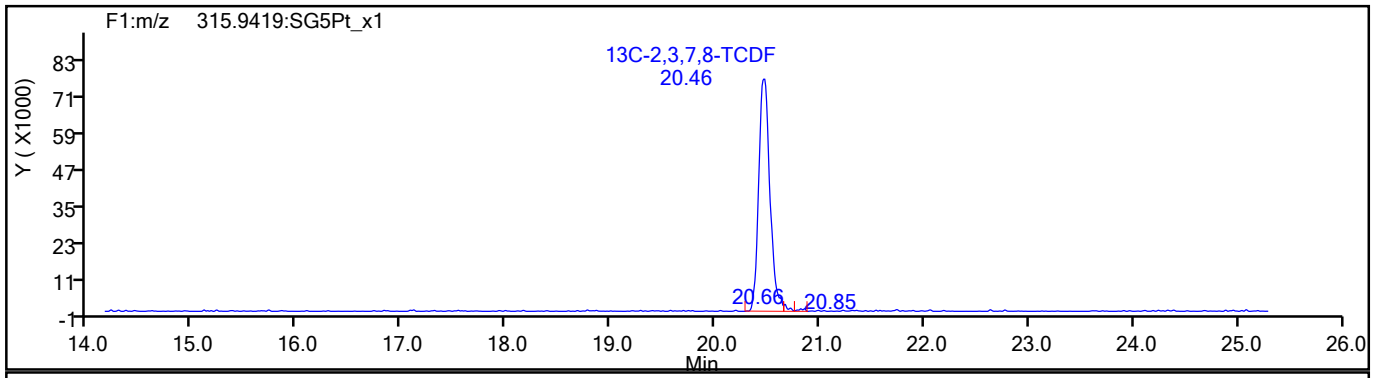

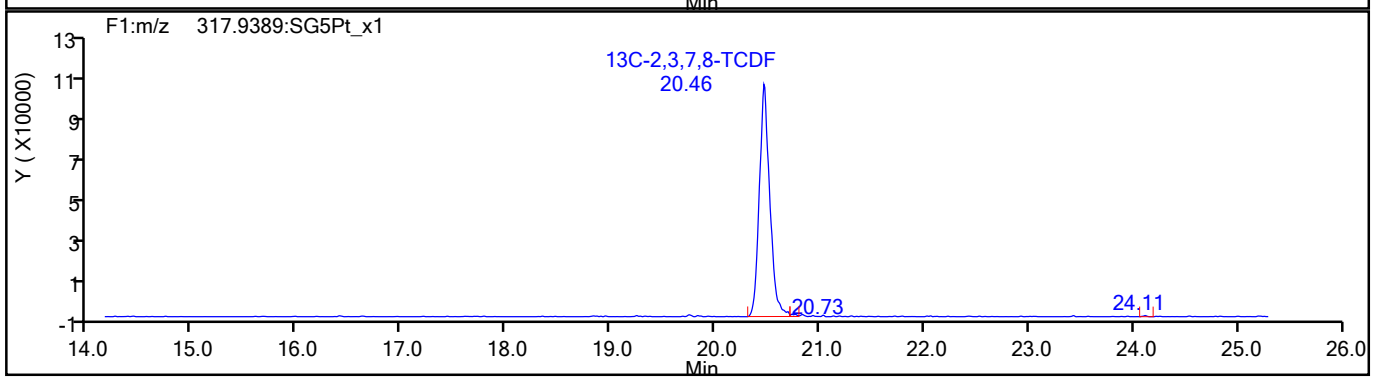

790276

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

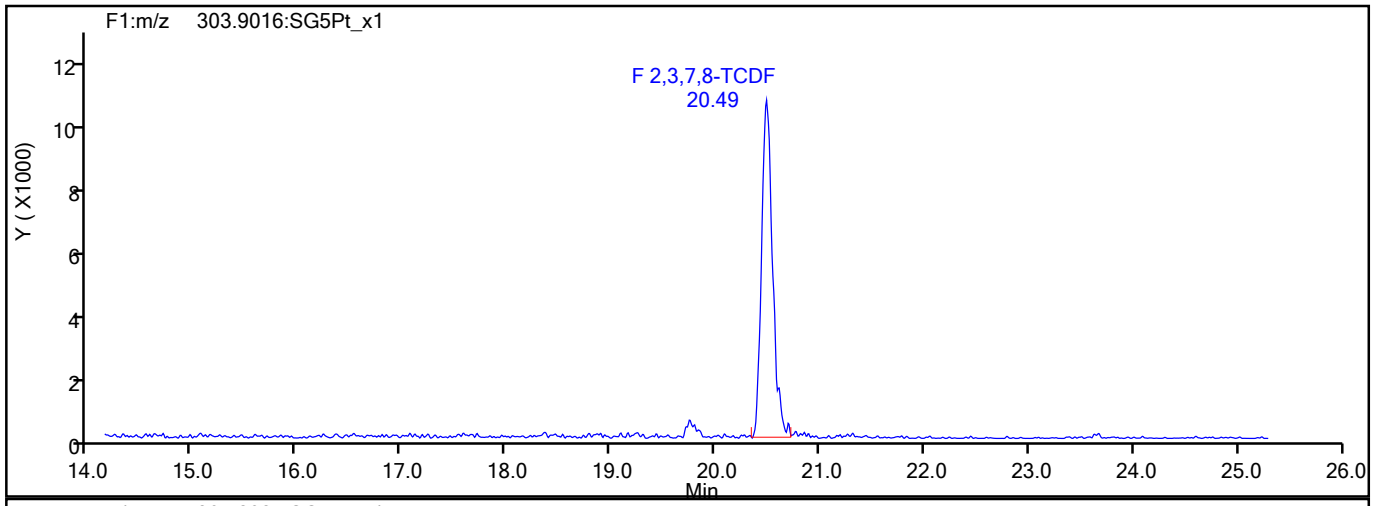

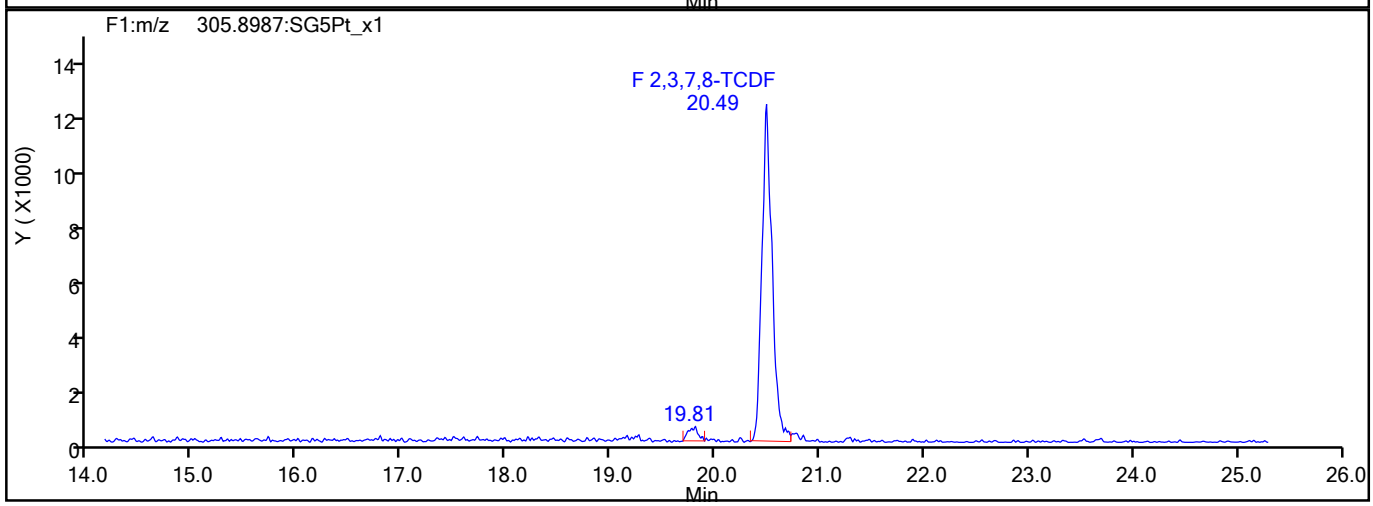

TCDF Interference Mass

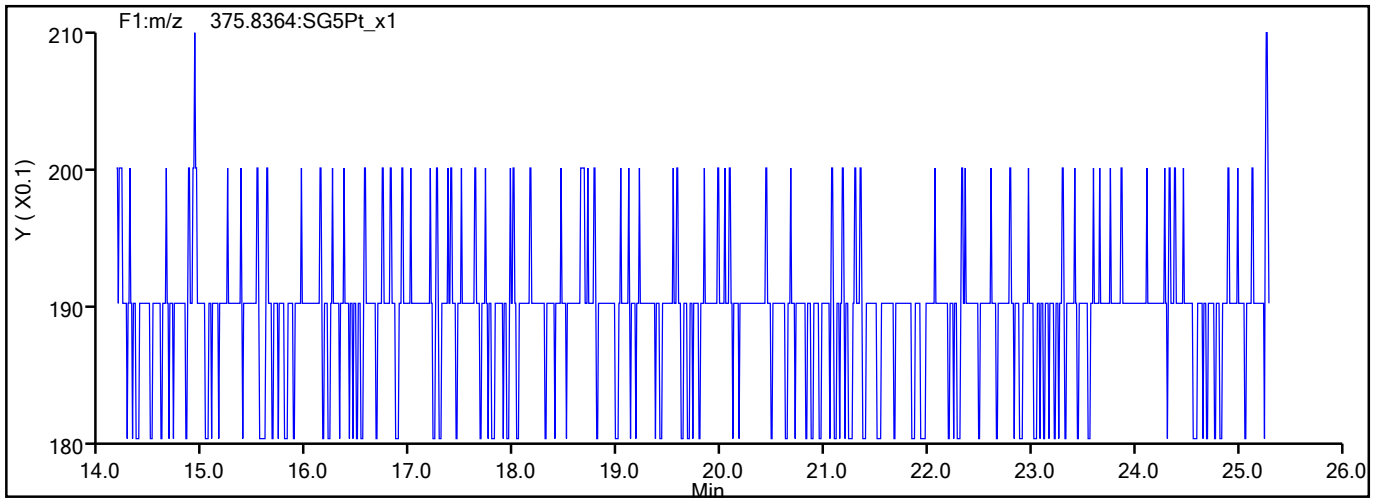

790277

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

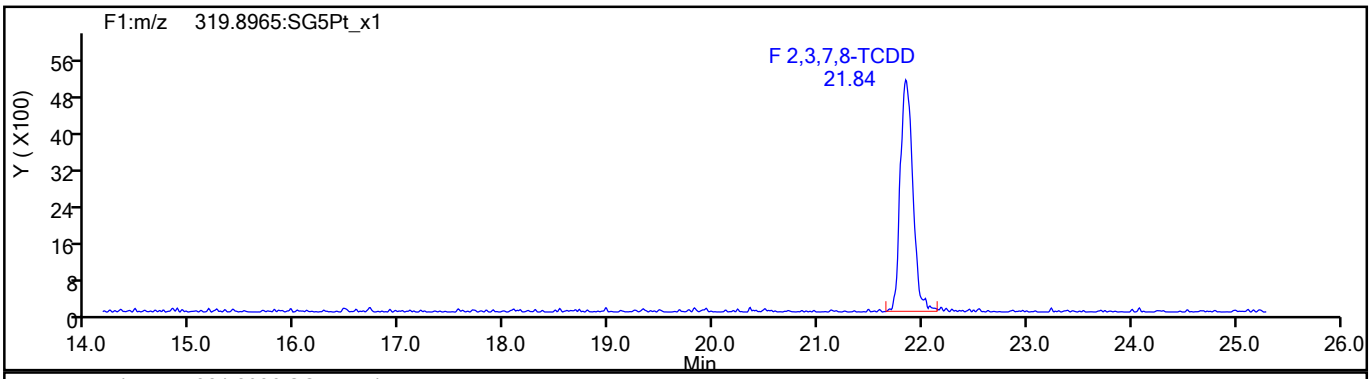

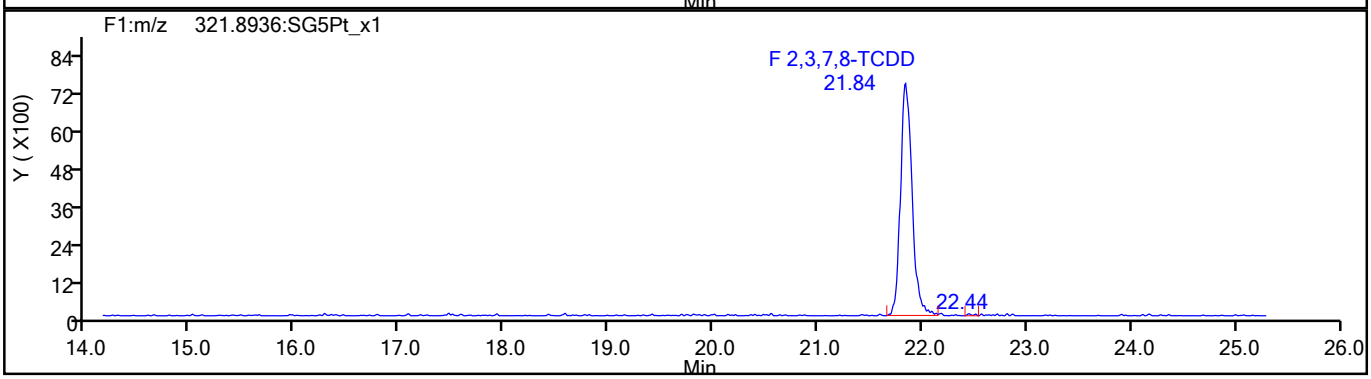

TCDD Standards

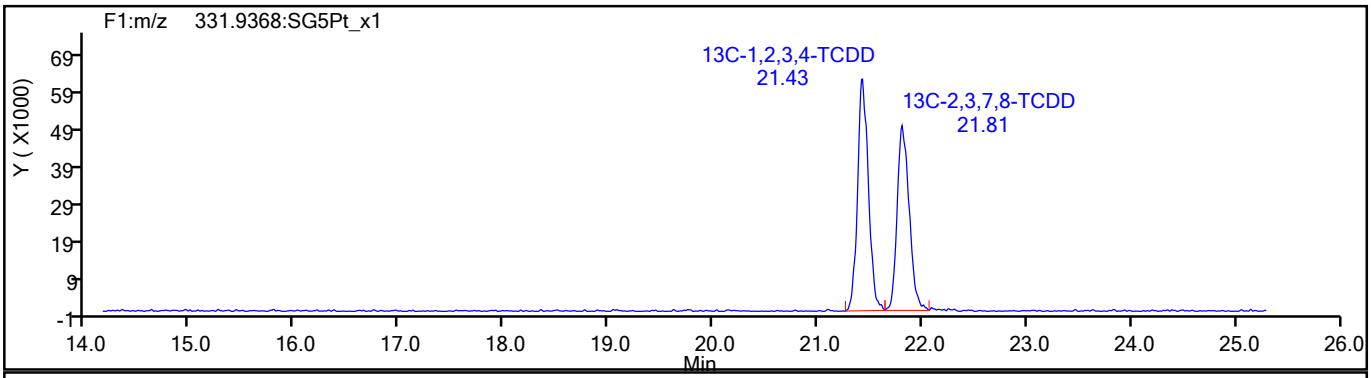

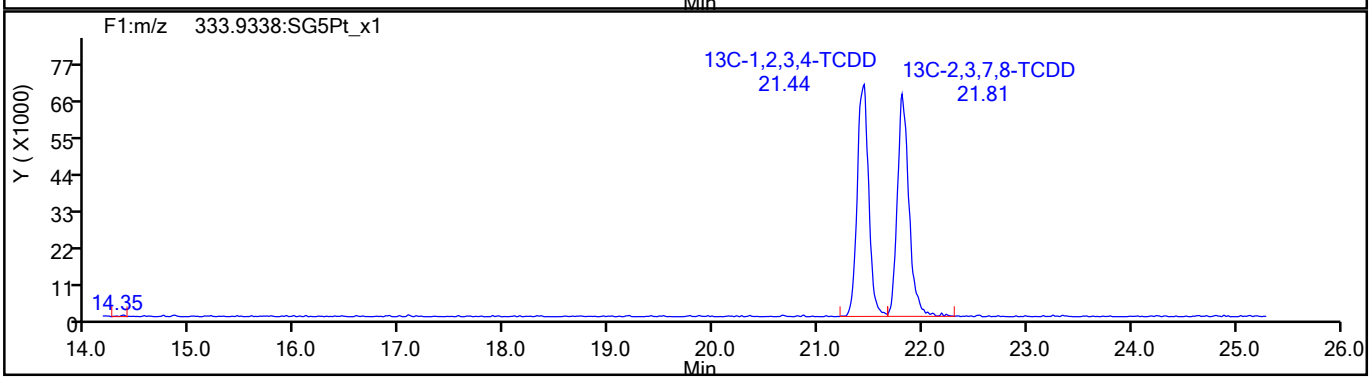

790278

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

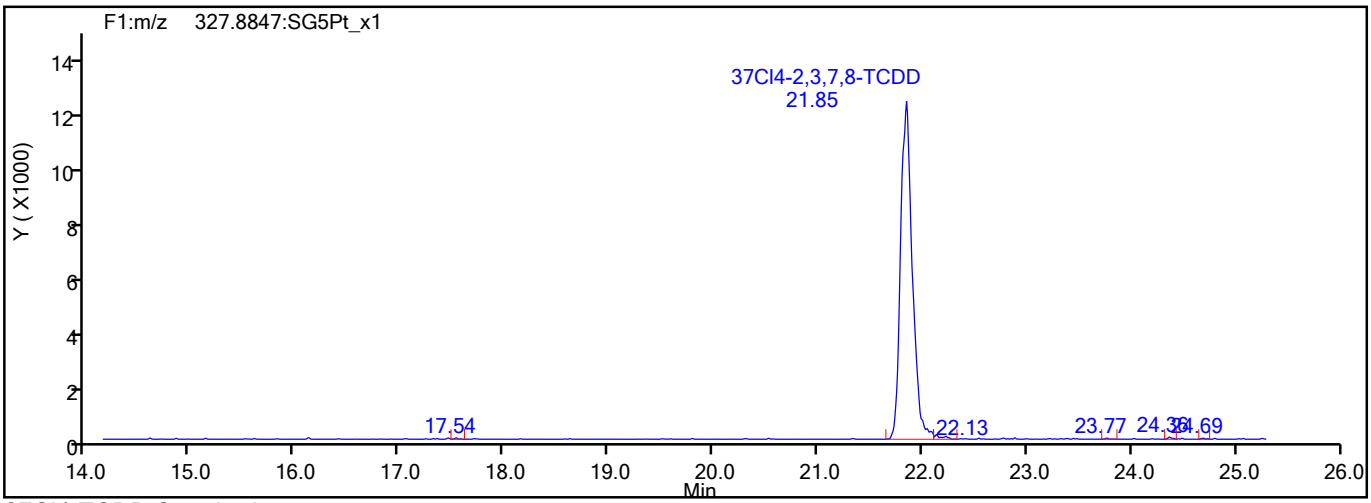

37Cl4-TCDD Standards

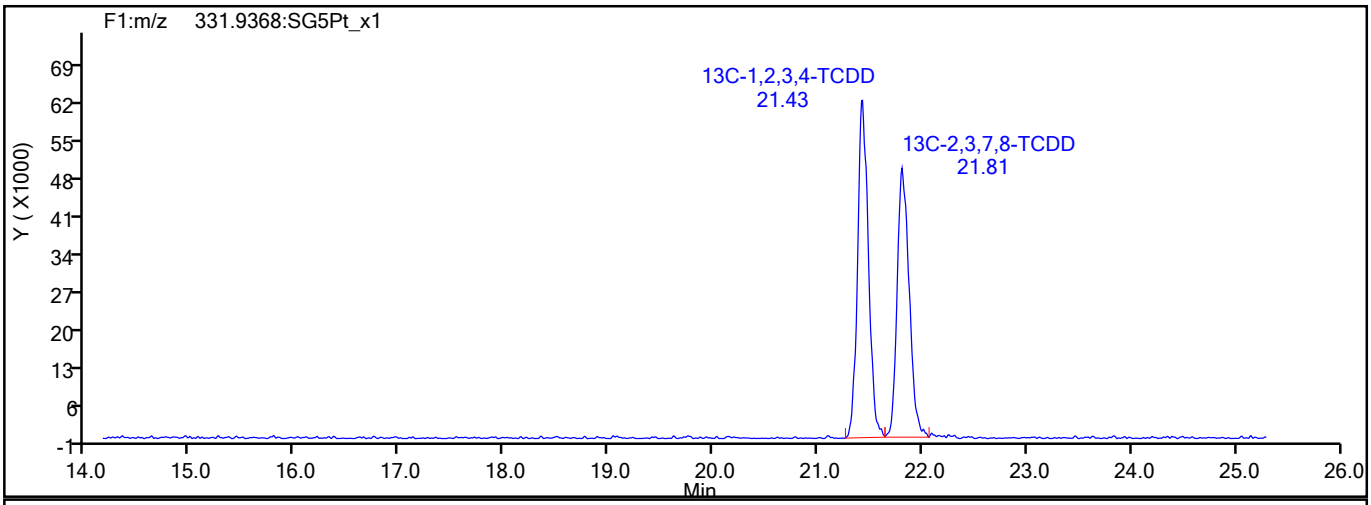

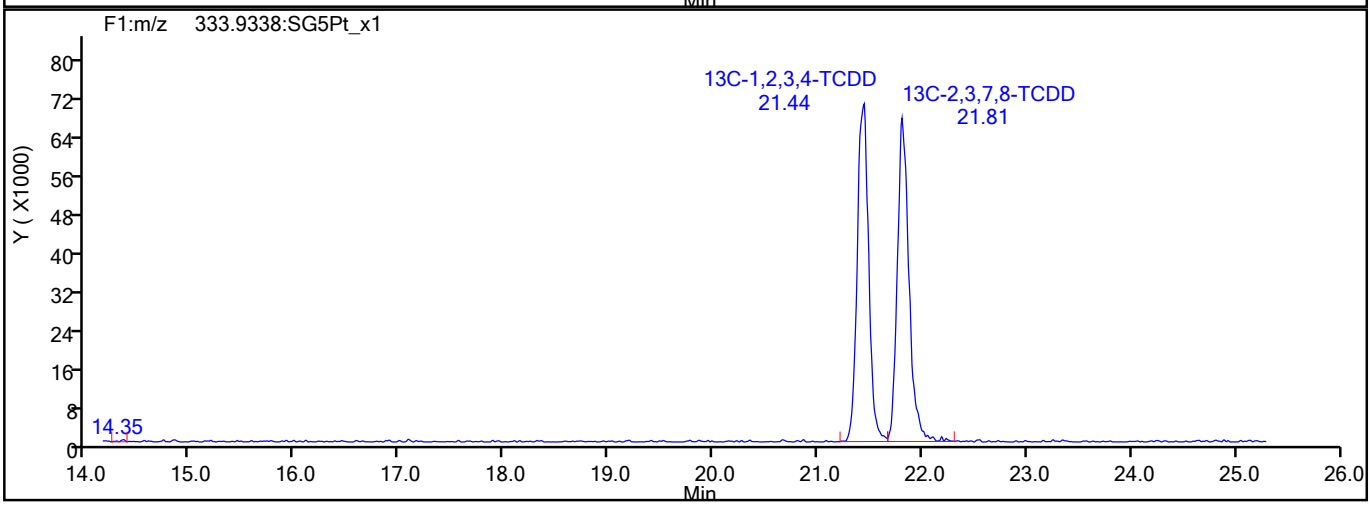

790279

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

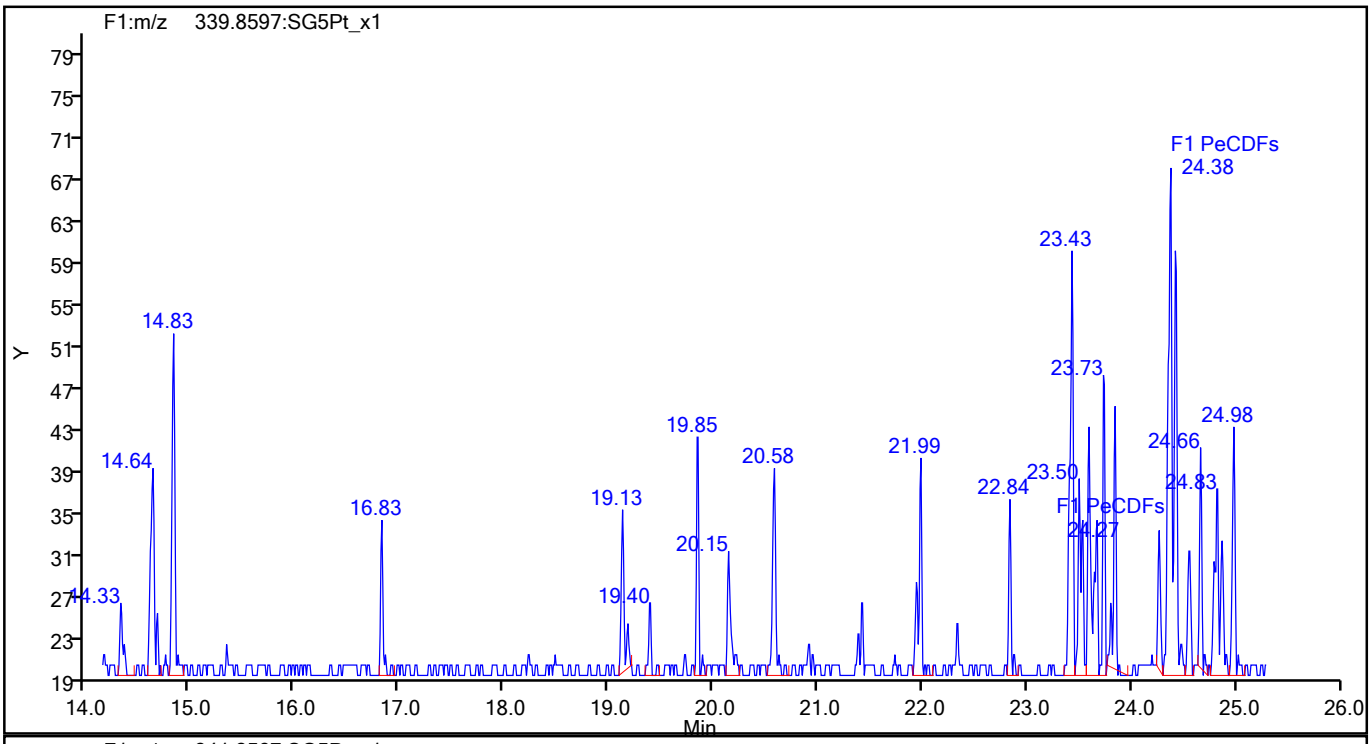

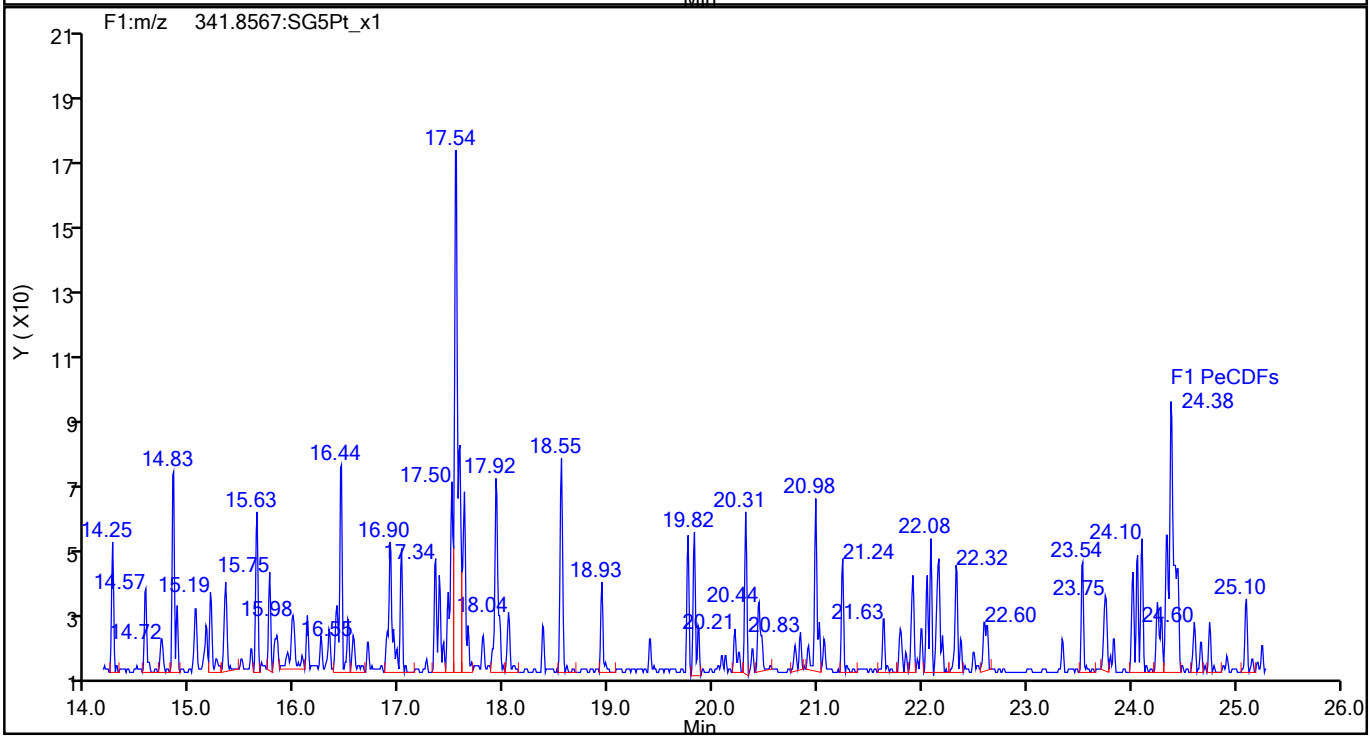

790280

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

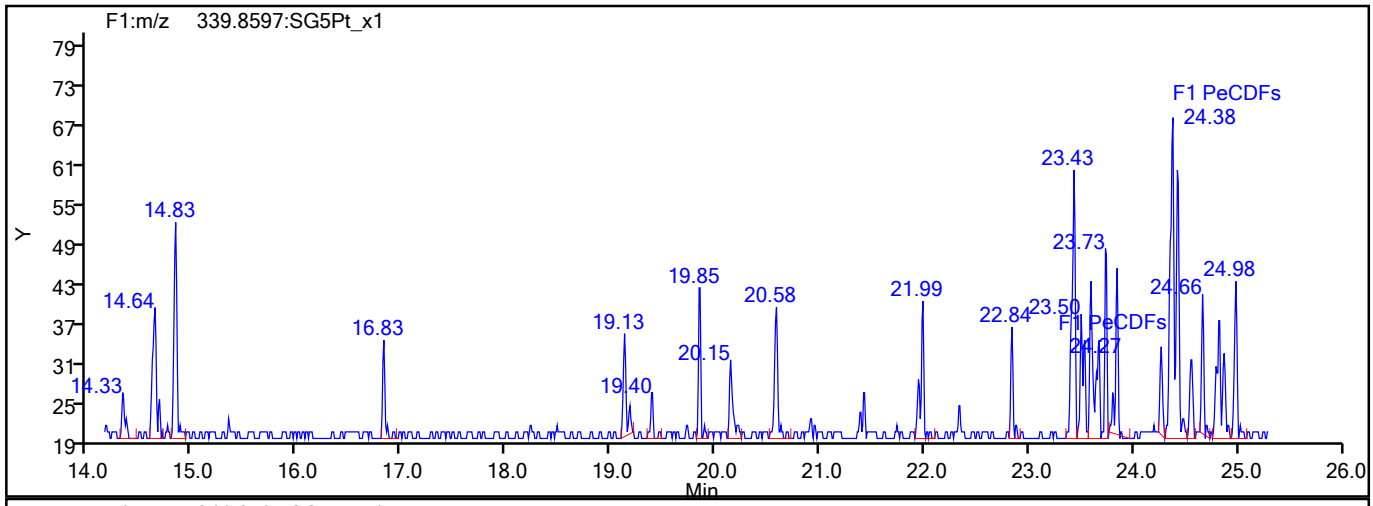

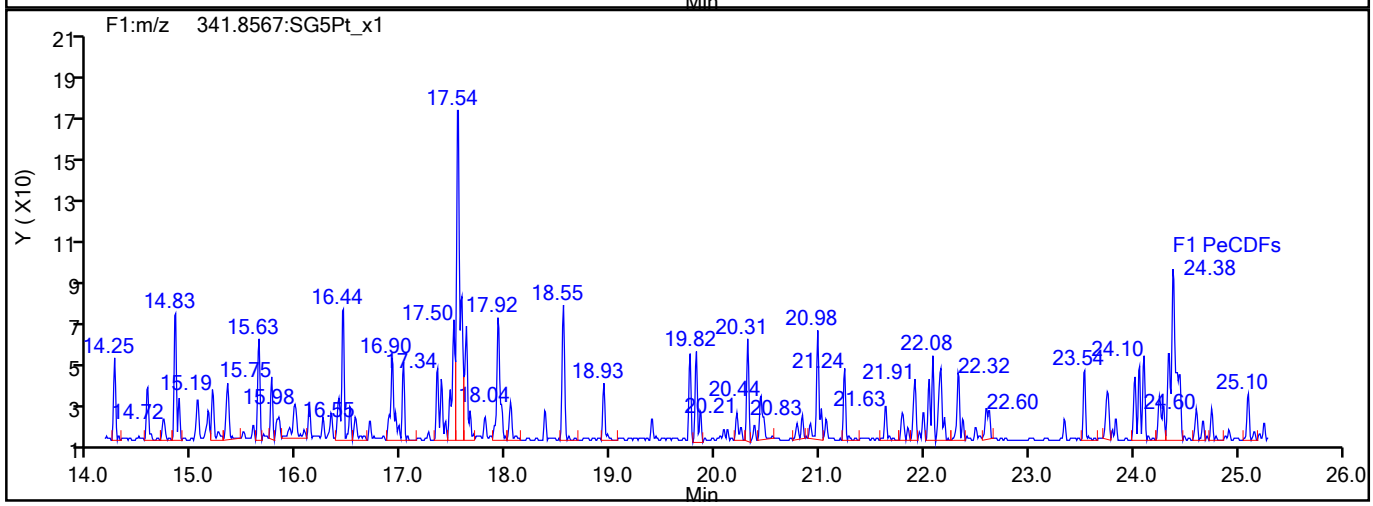

F1 PeCDFs Interference Mass

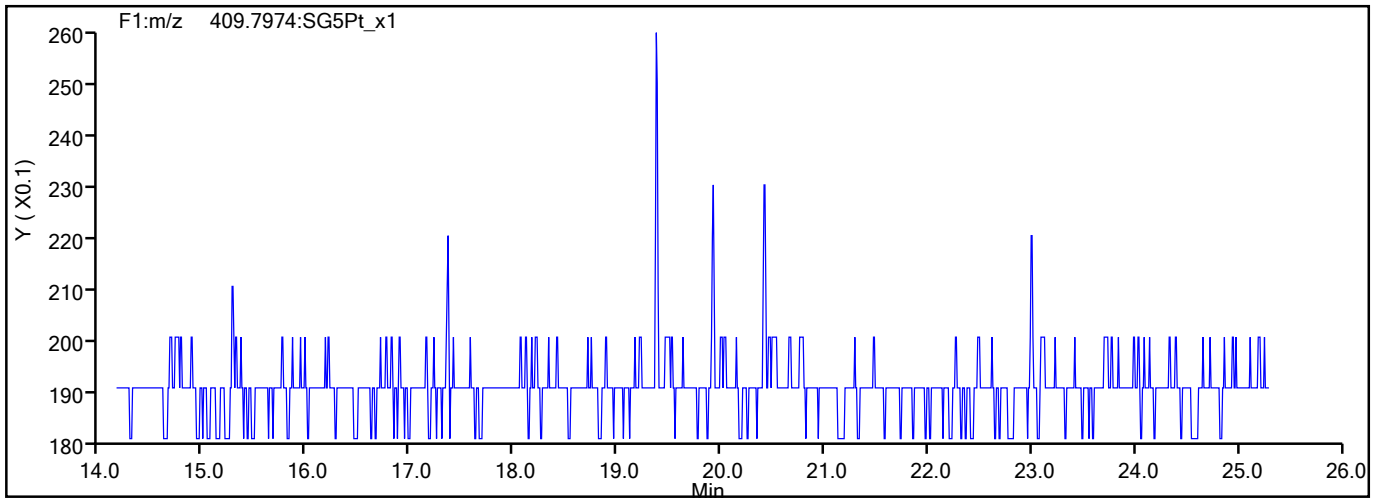

790281

Report Date: 19-Aug-2021 15:49:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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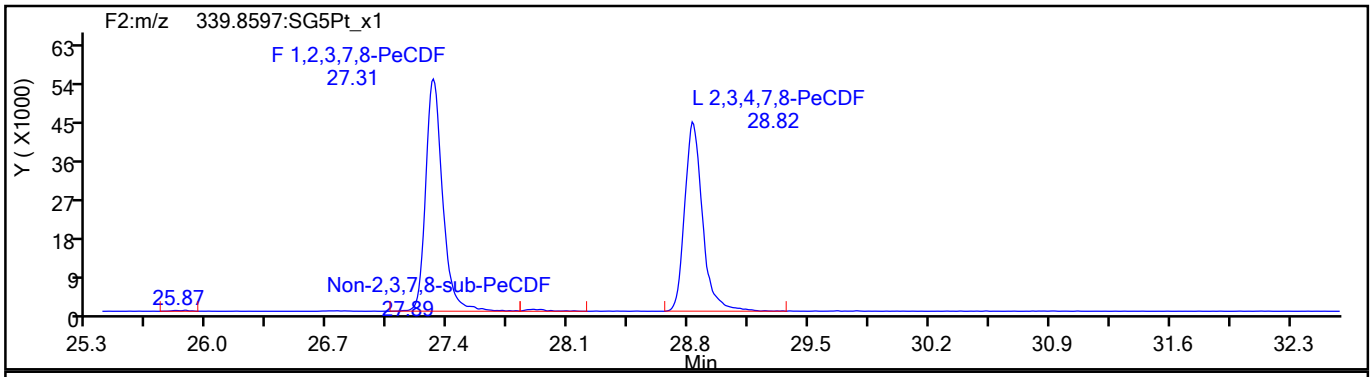

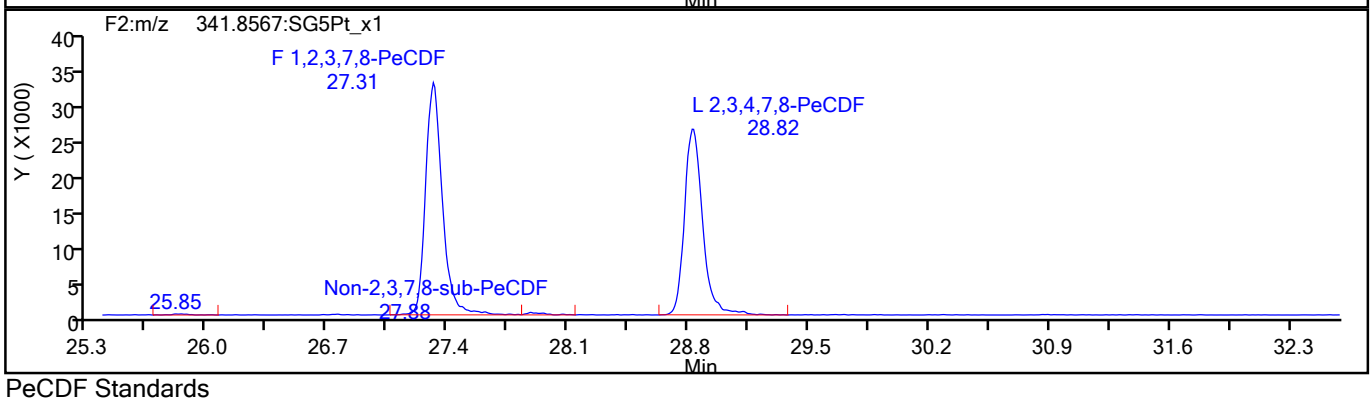

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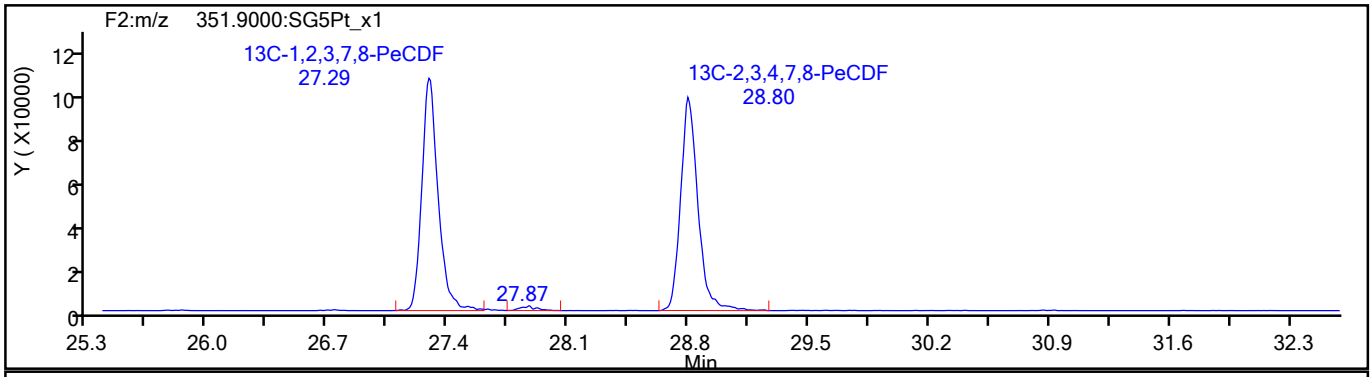

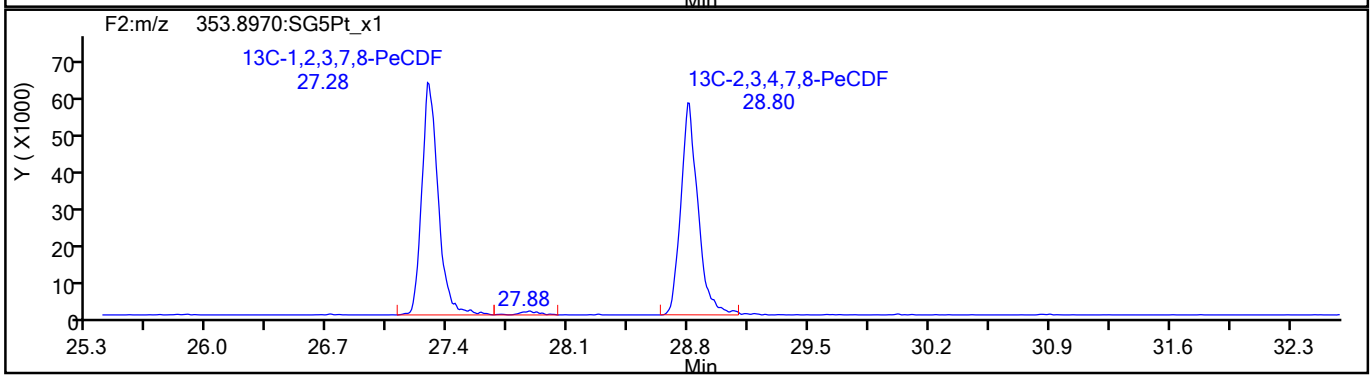

790282

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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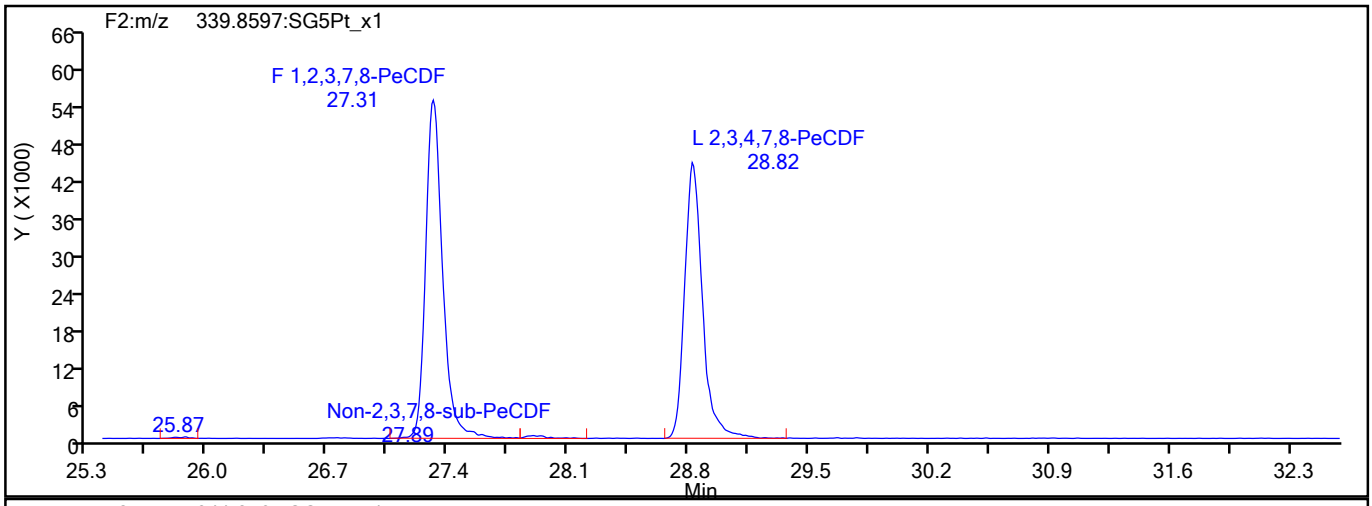

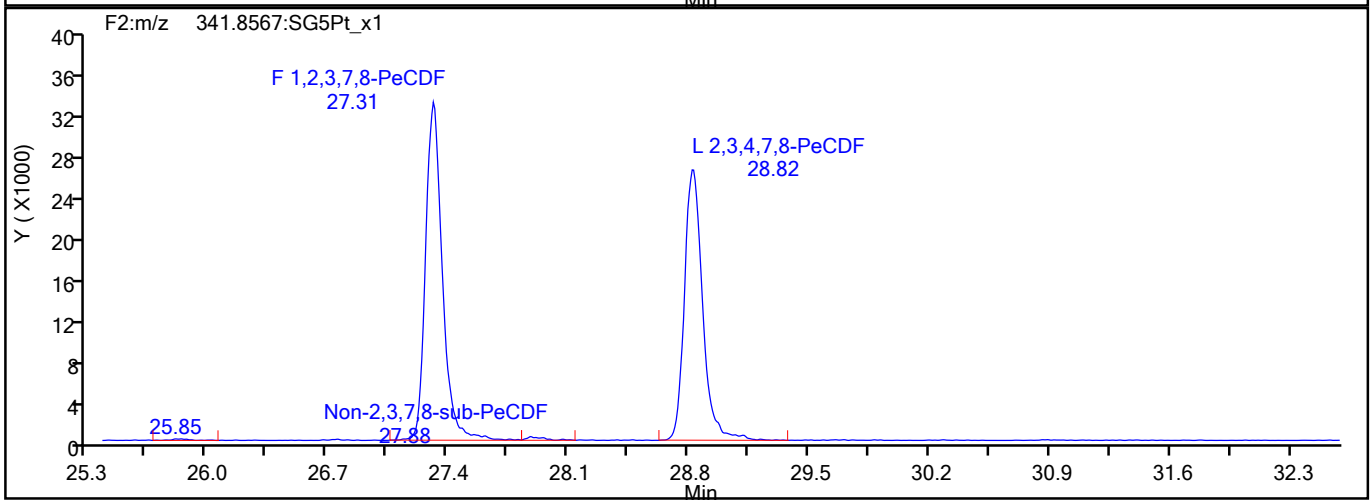

PeCDF Interference Mass

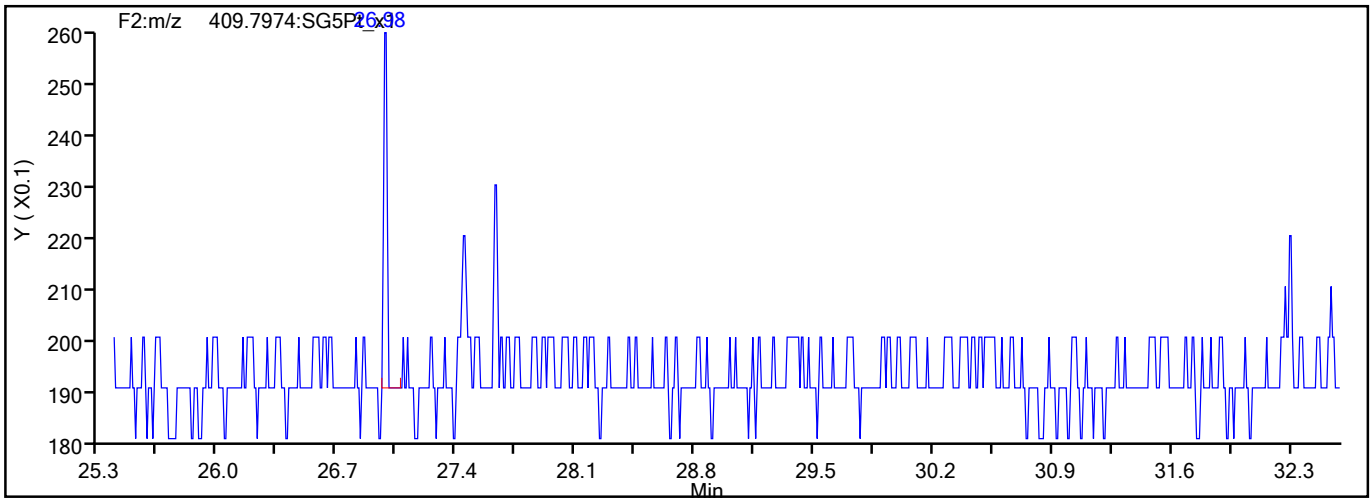

790283

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

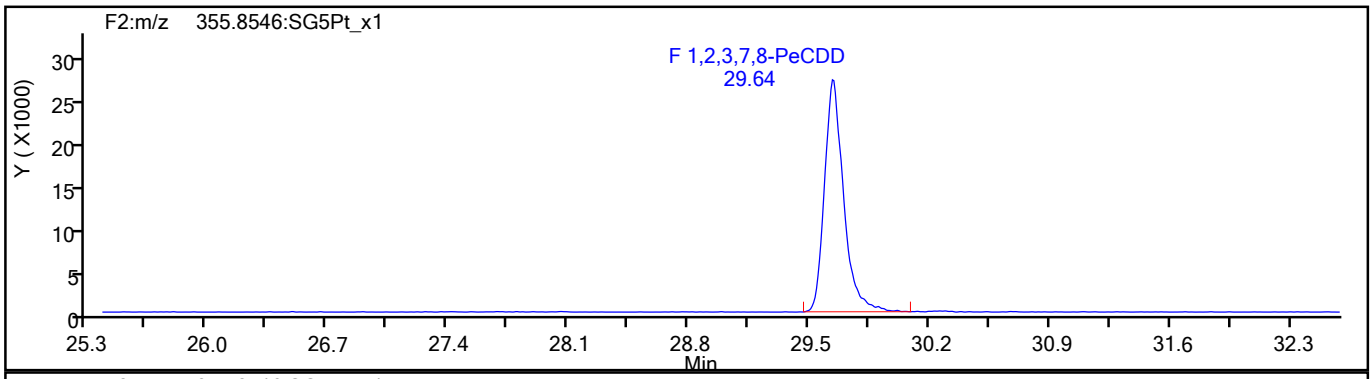

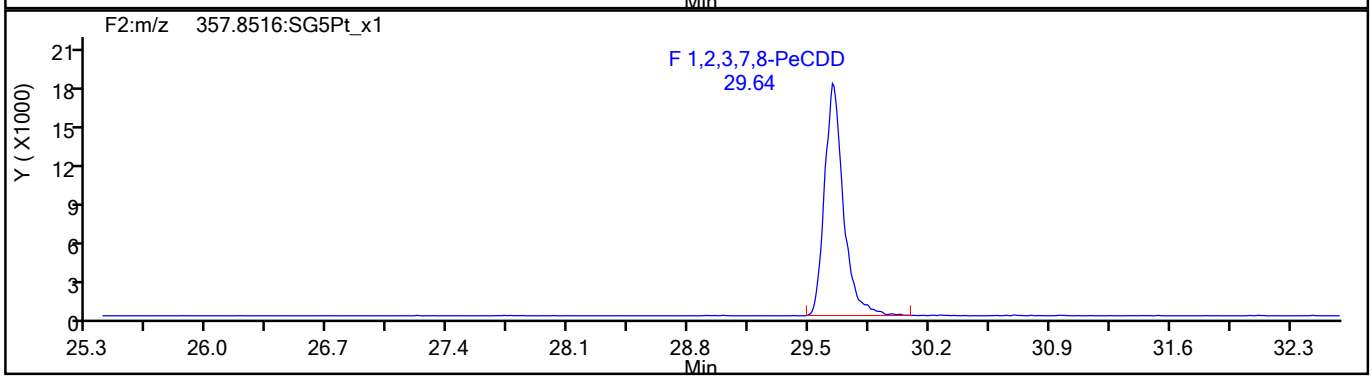

PeCDD Standards

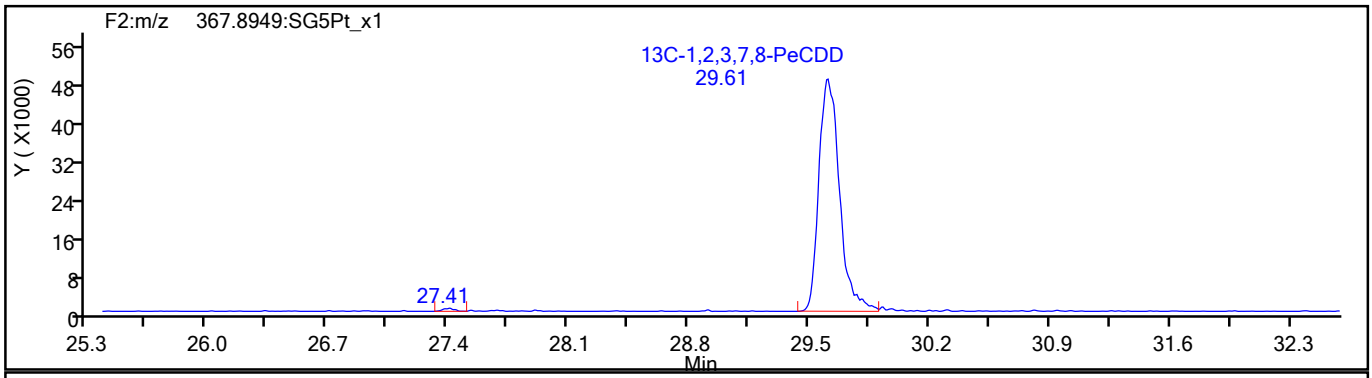

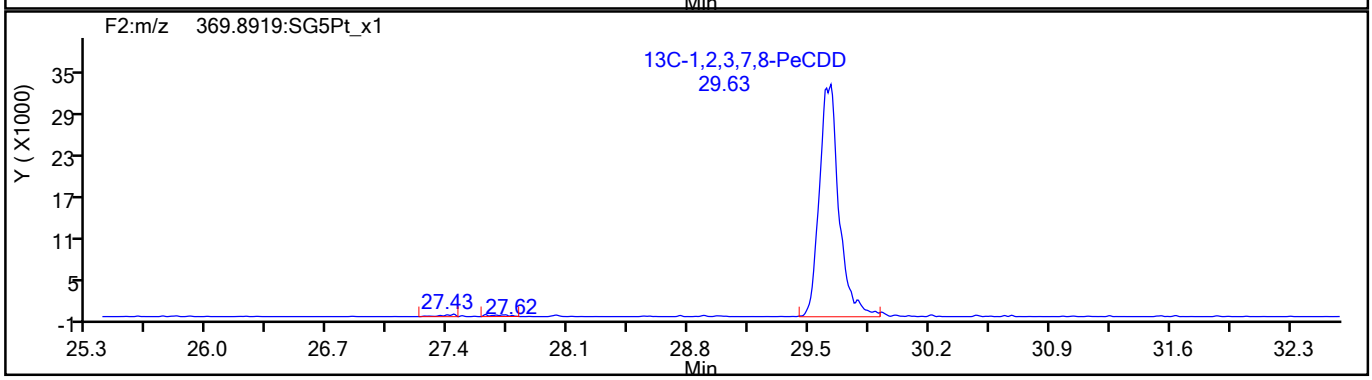

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Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

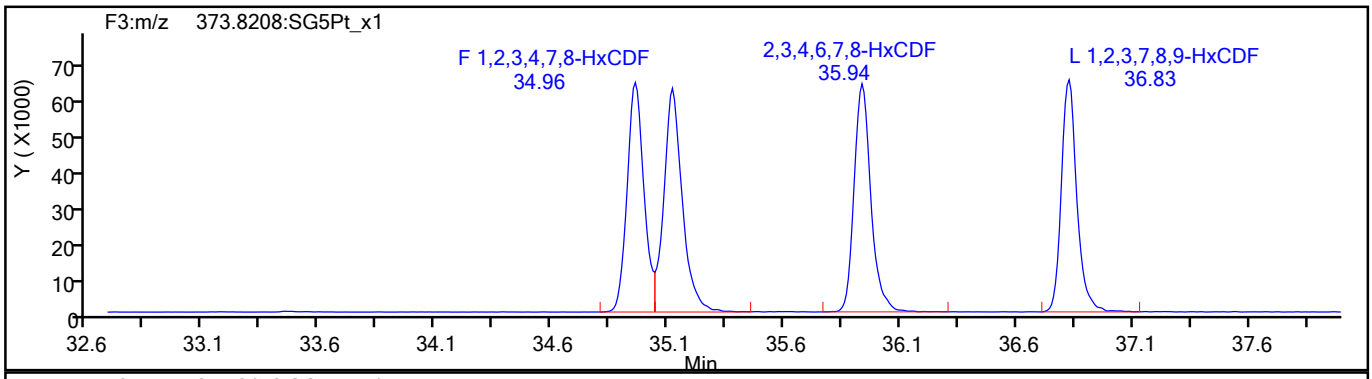

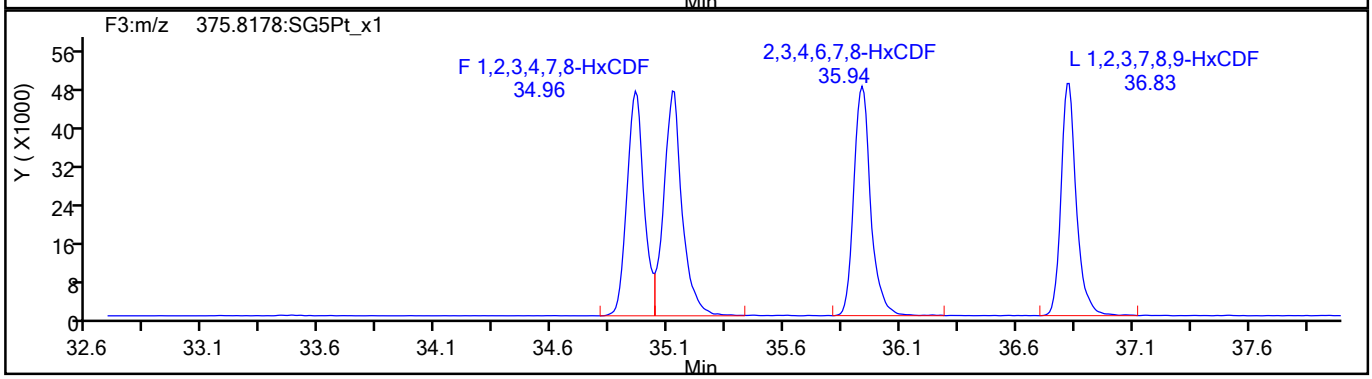

HxCDF Standards

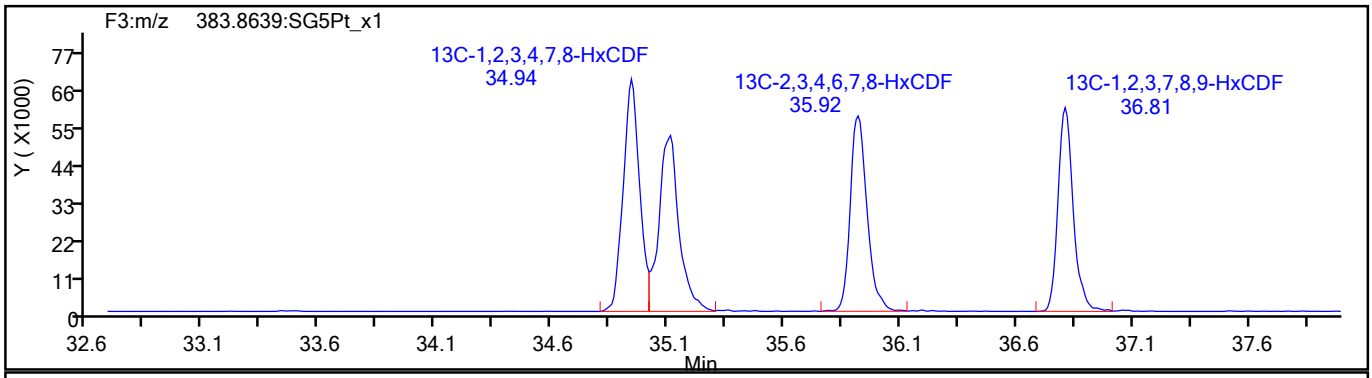

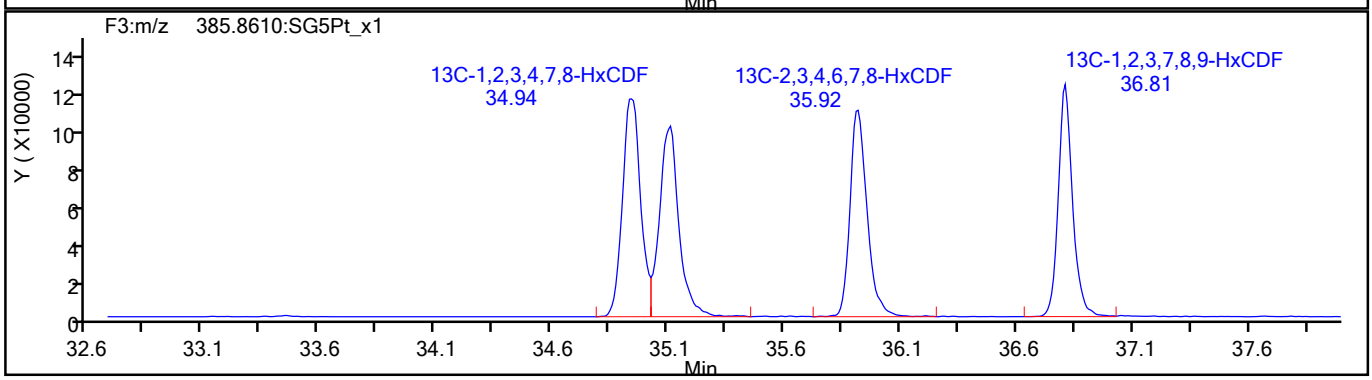

790285

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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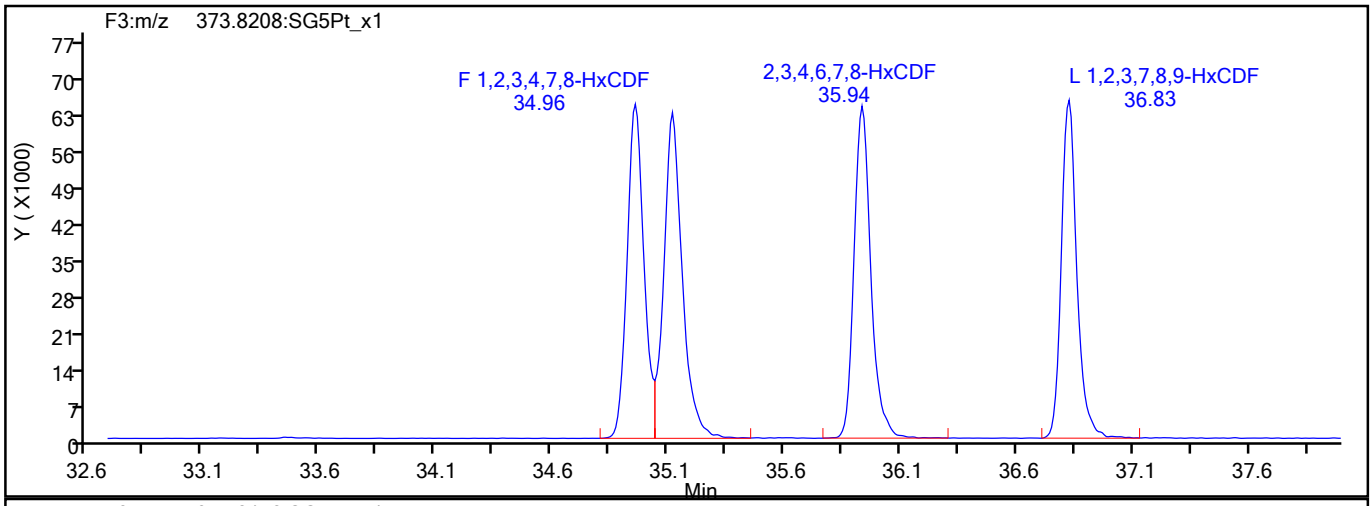

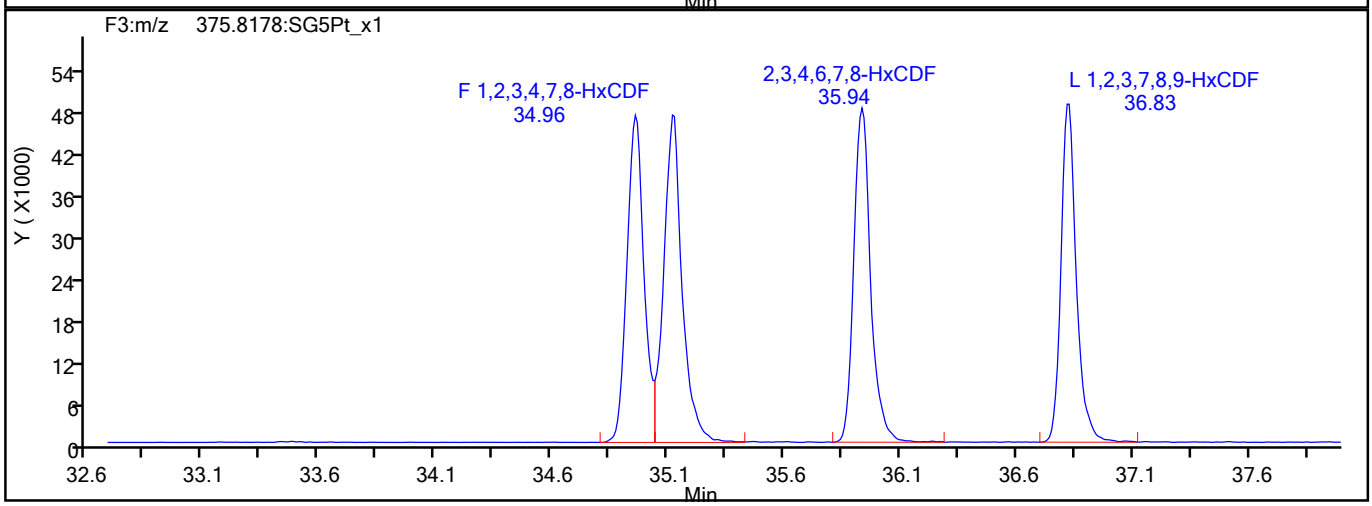

HxCDF Interference Mass

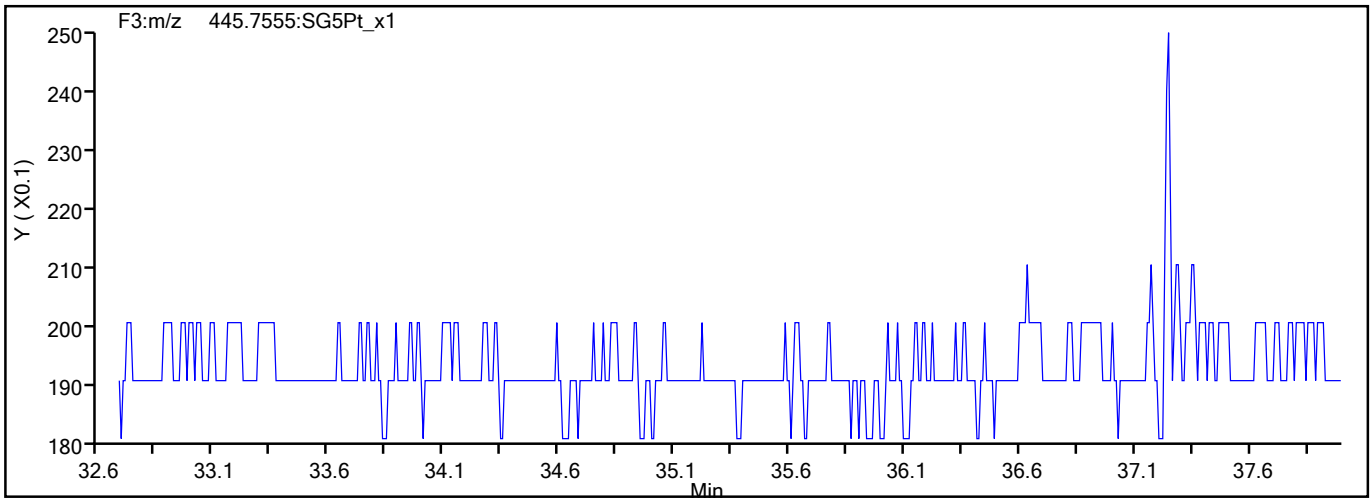

790286

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

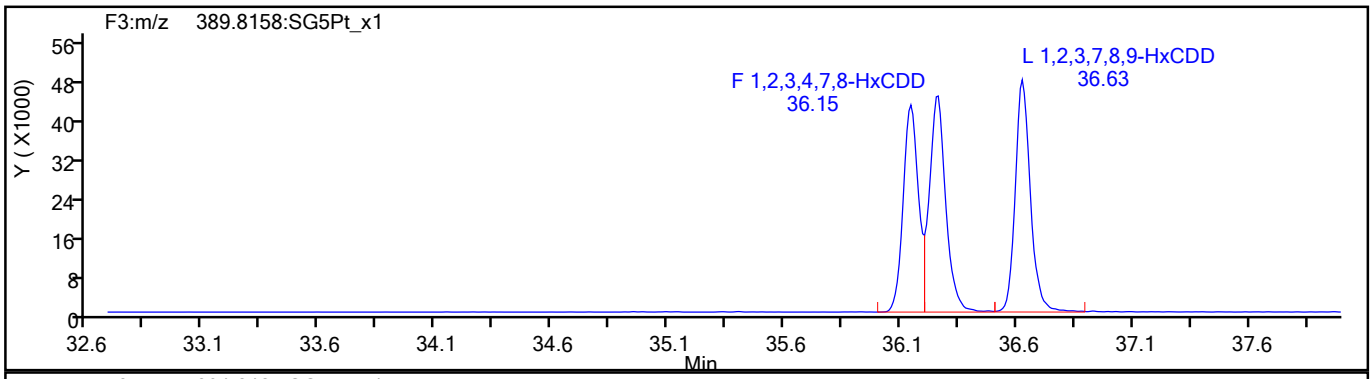

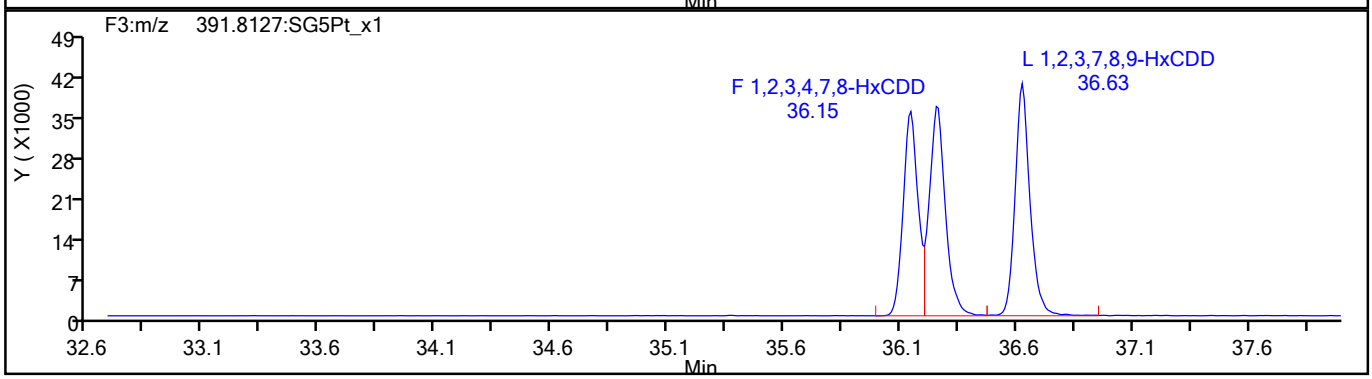

HxCDD Standards

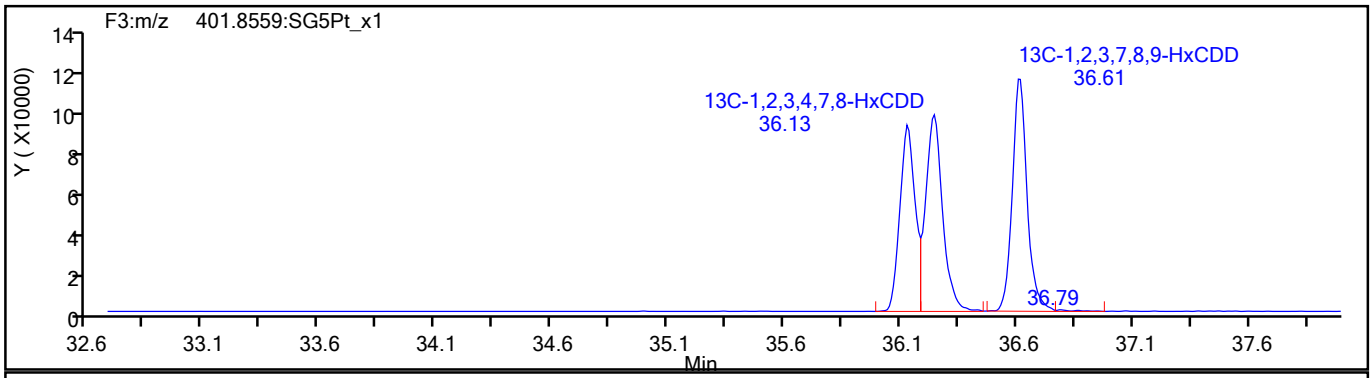

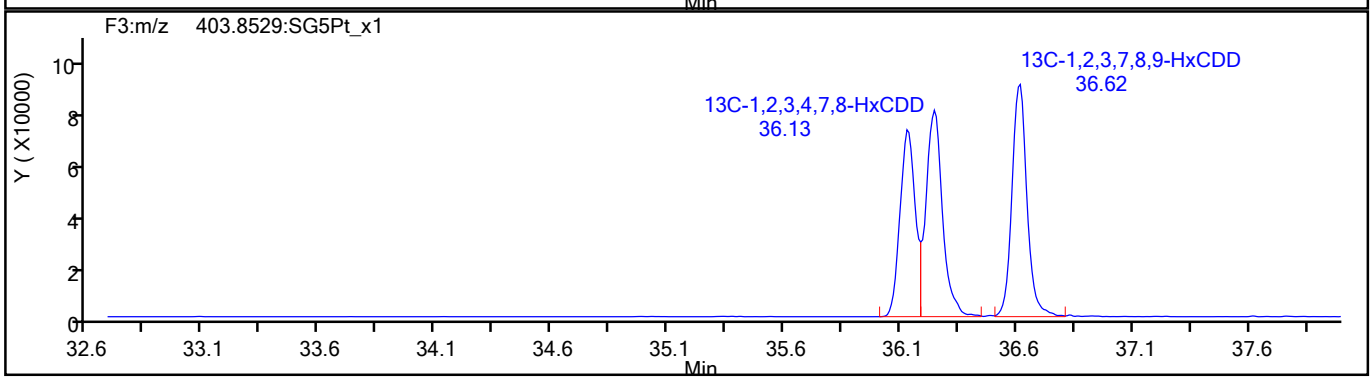

790287

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Eurofins TestAmerica, Sacramento

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HpCDF

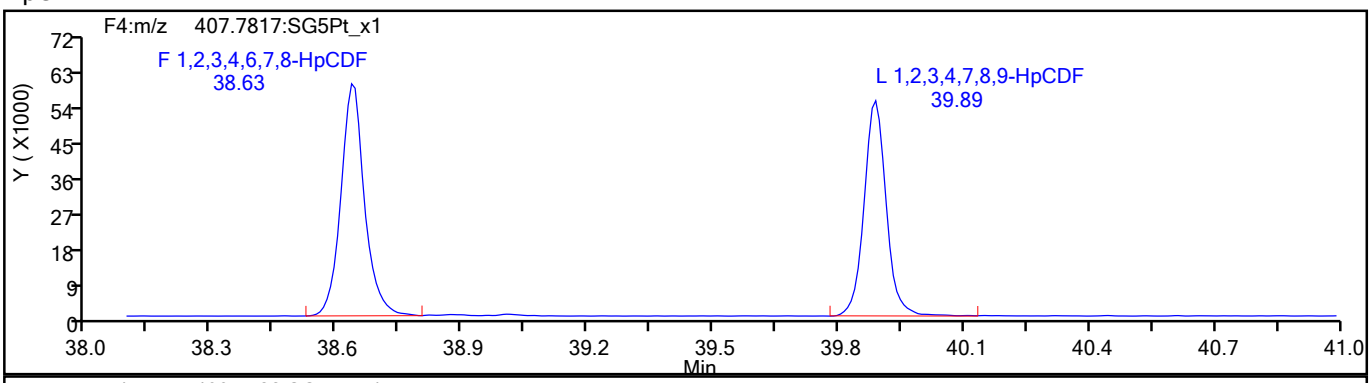

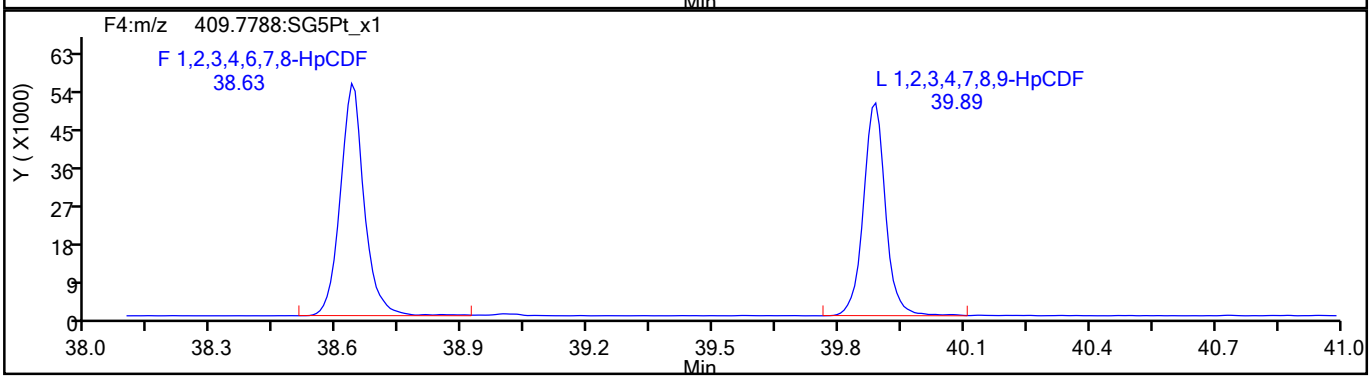

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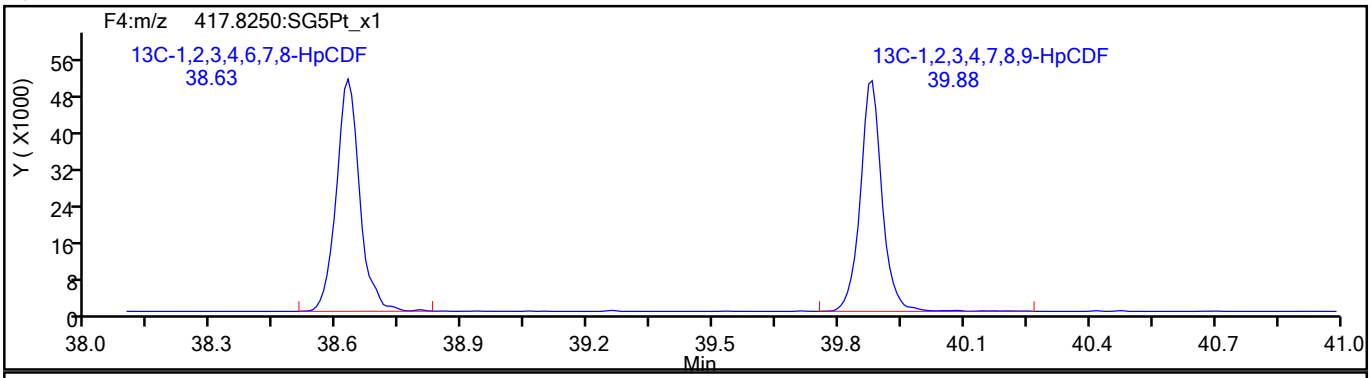

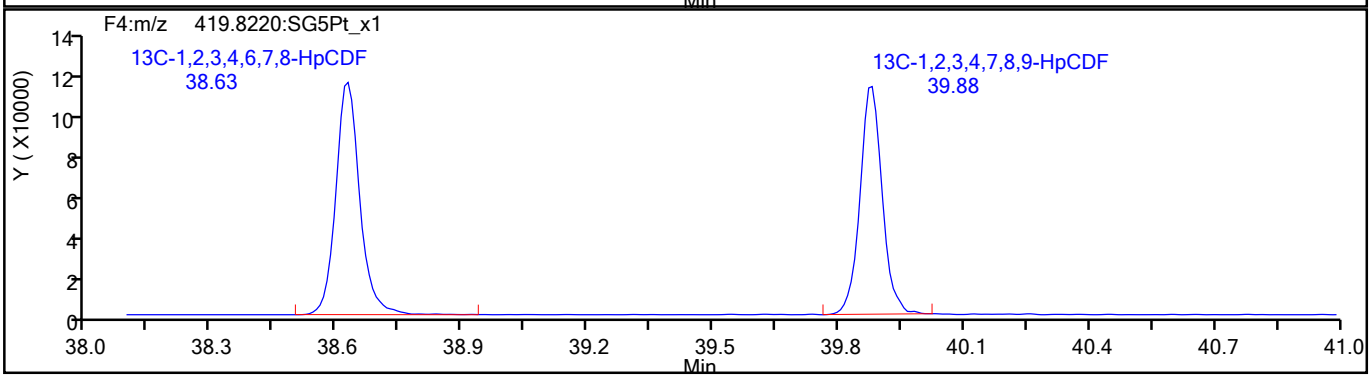

790288

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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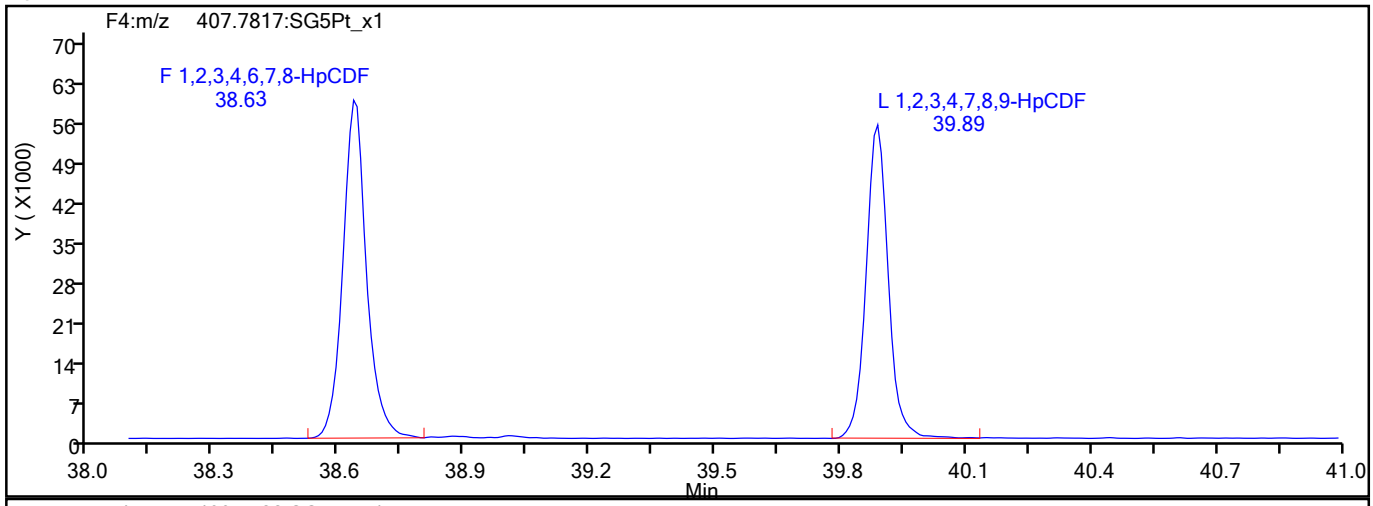

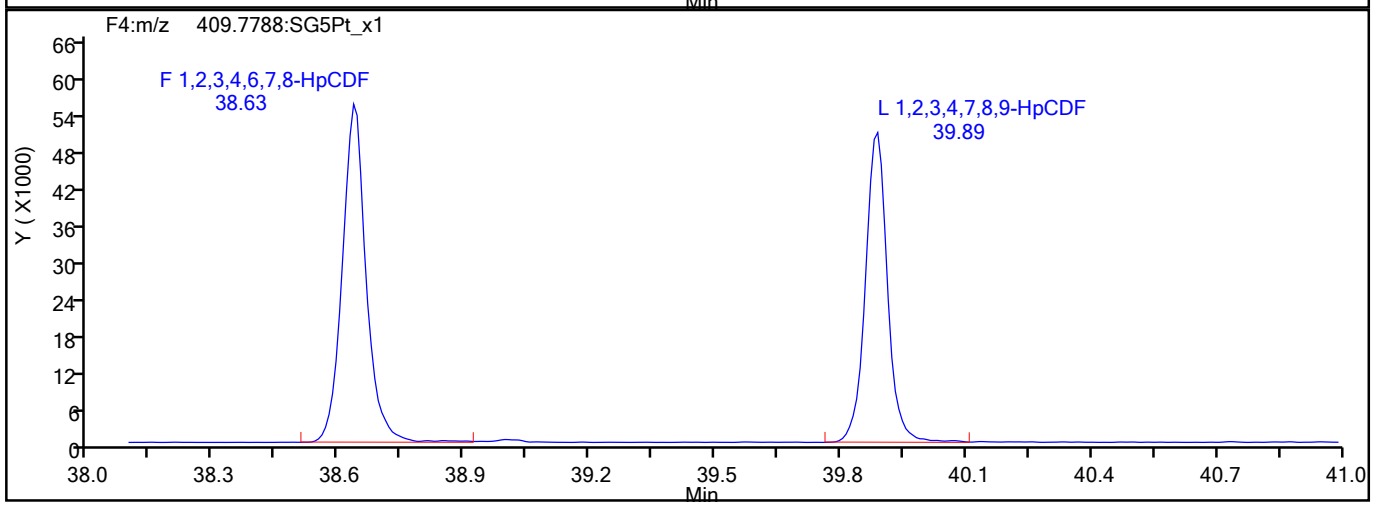

HpCDF Interference Mass

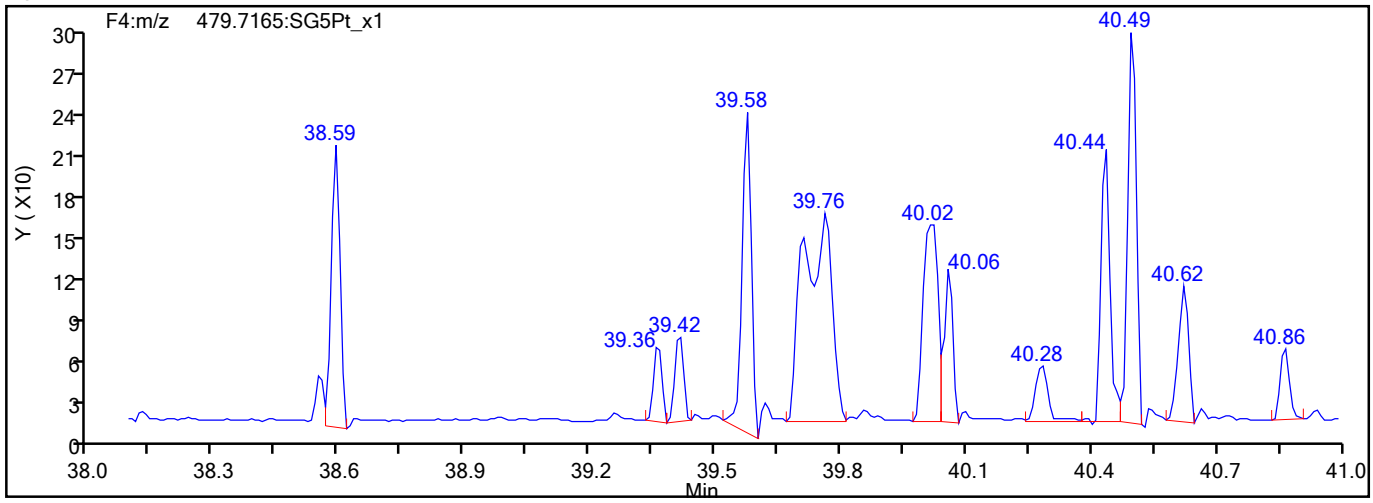

790289

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Eurofins TestAmerica, Sacramento

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HpCDD

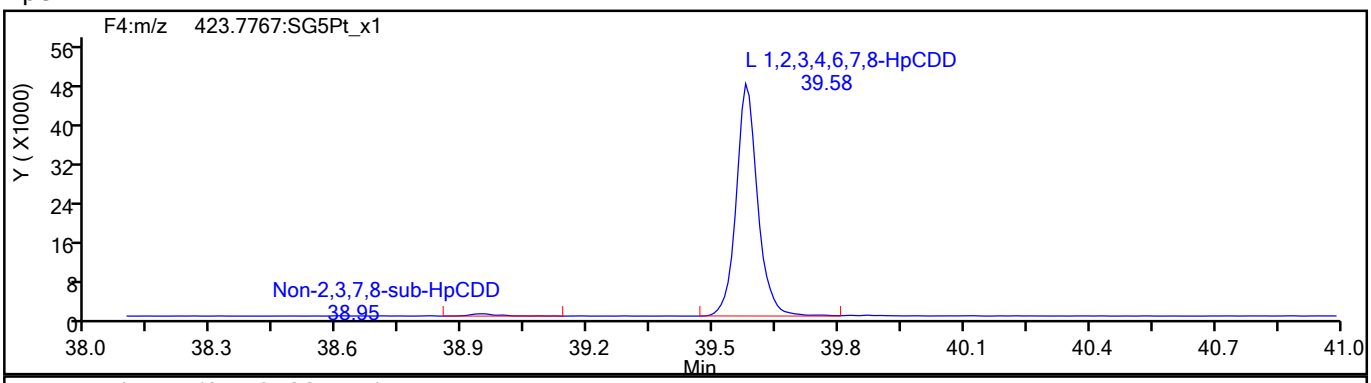

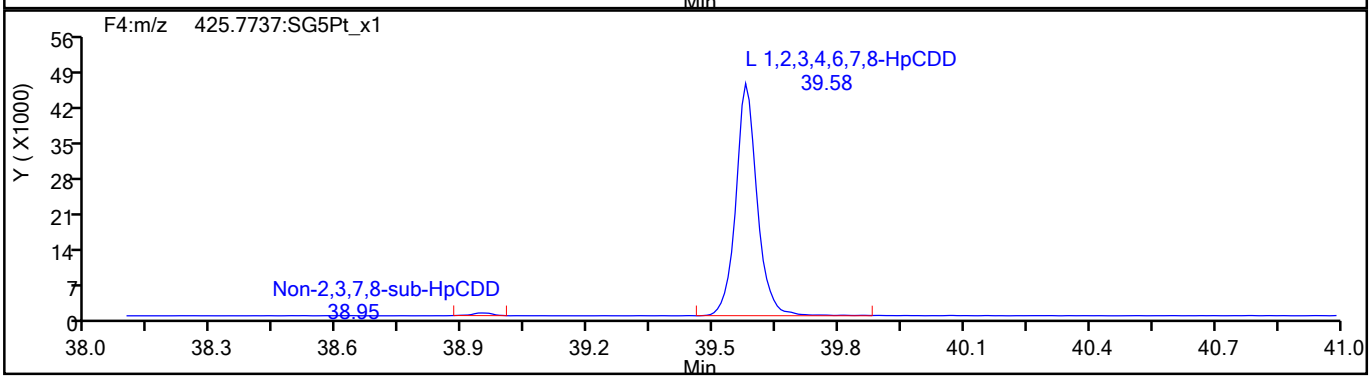

HpCDD Standards

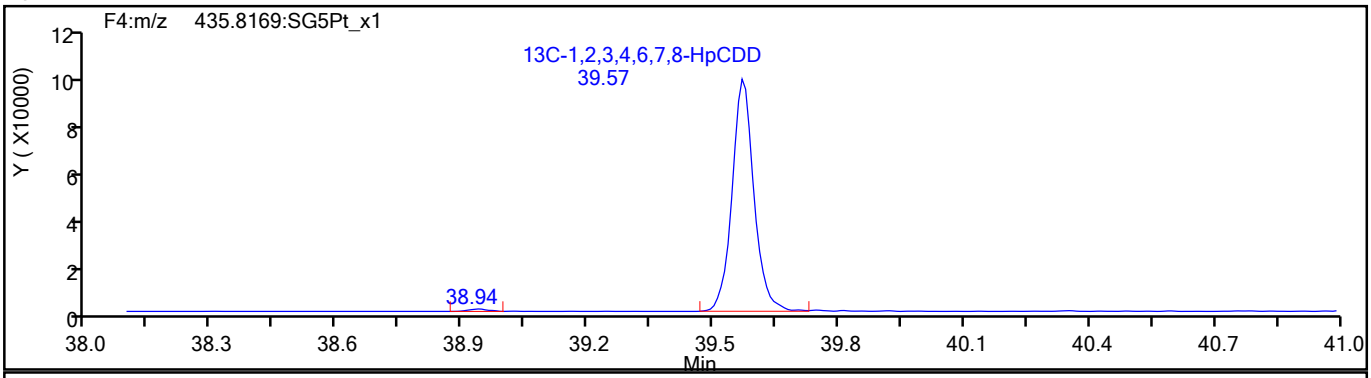

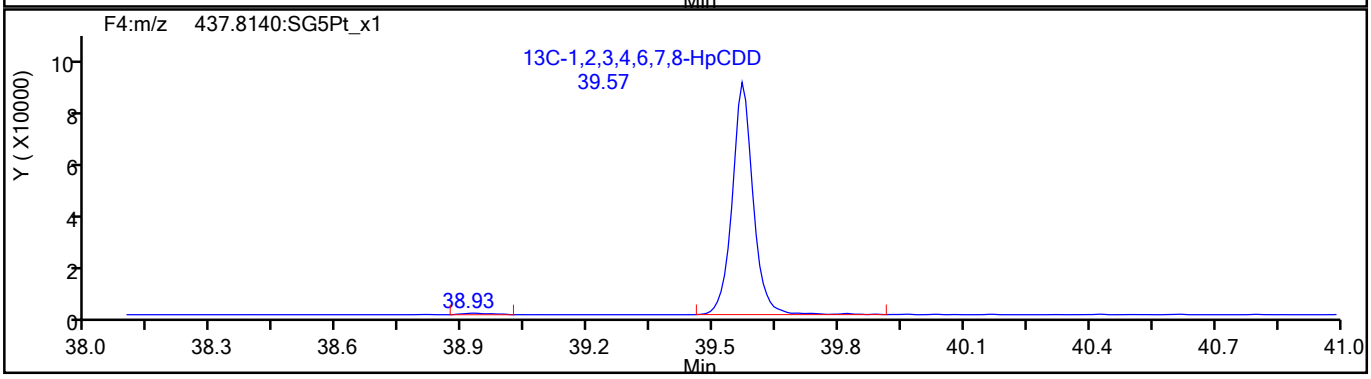

790290

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Eurofins TestAmerica, Sacramento

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OCDF

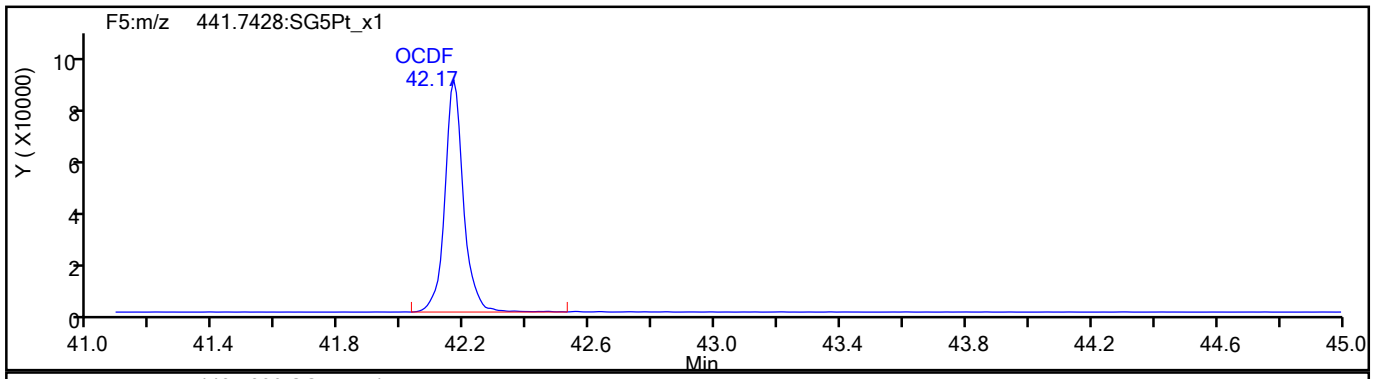

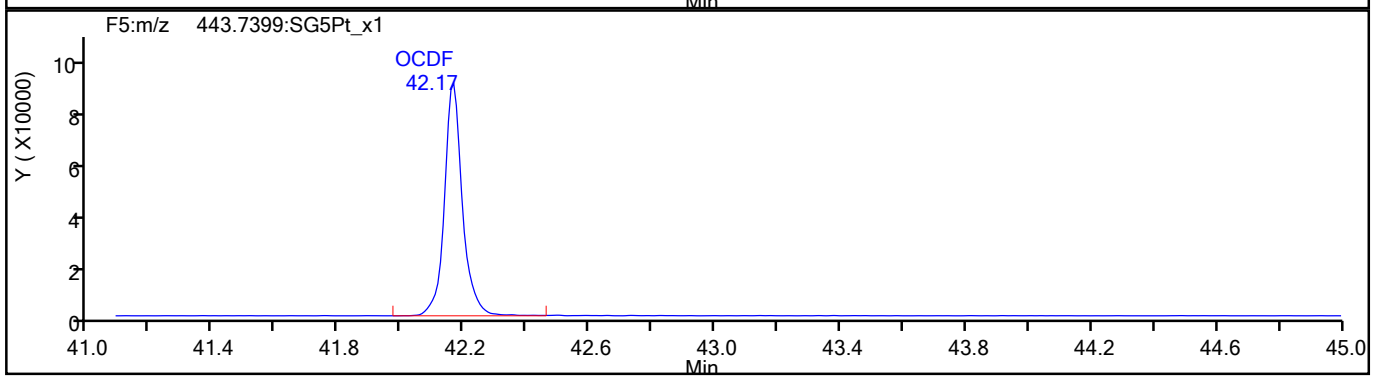

OCDF Standards

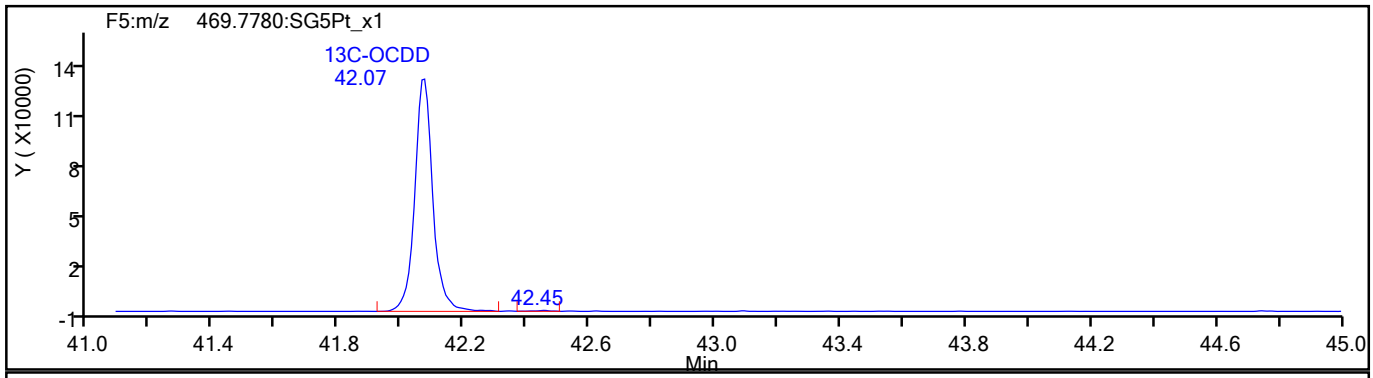

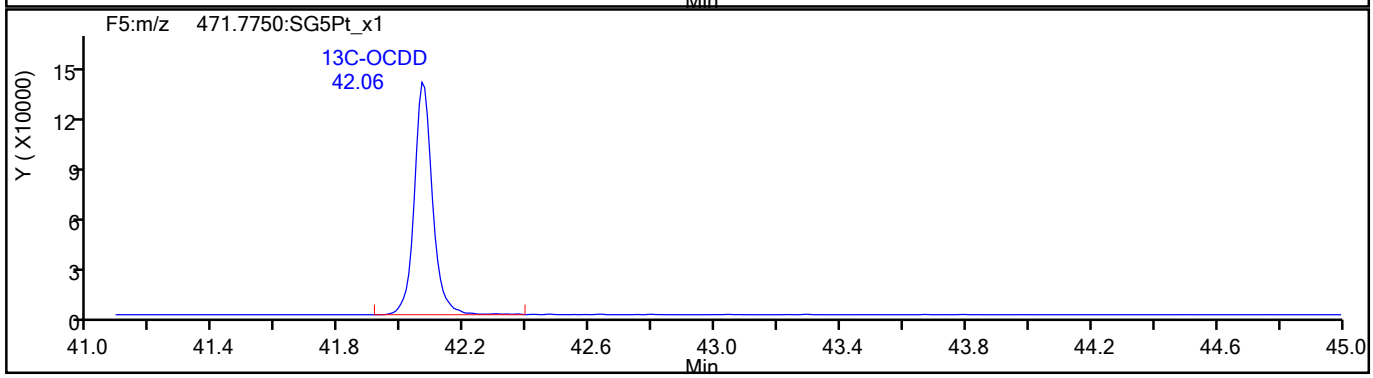

790291

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

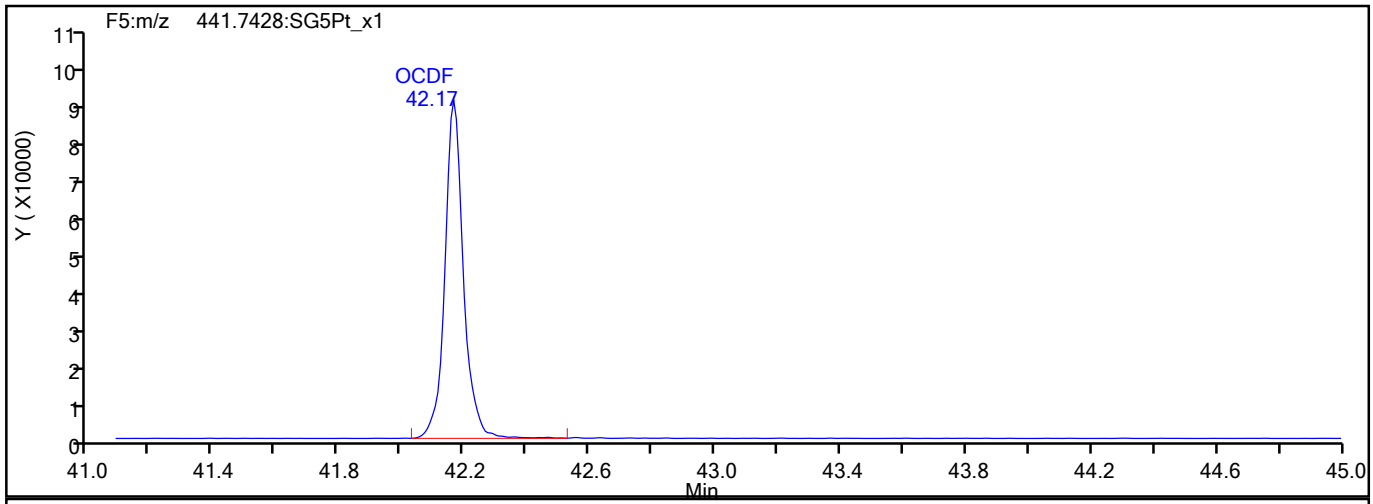

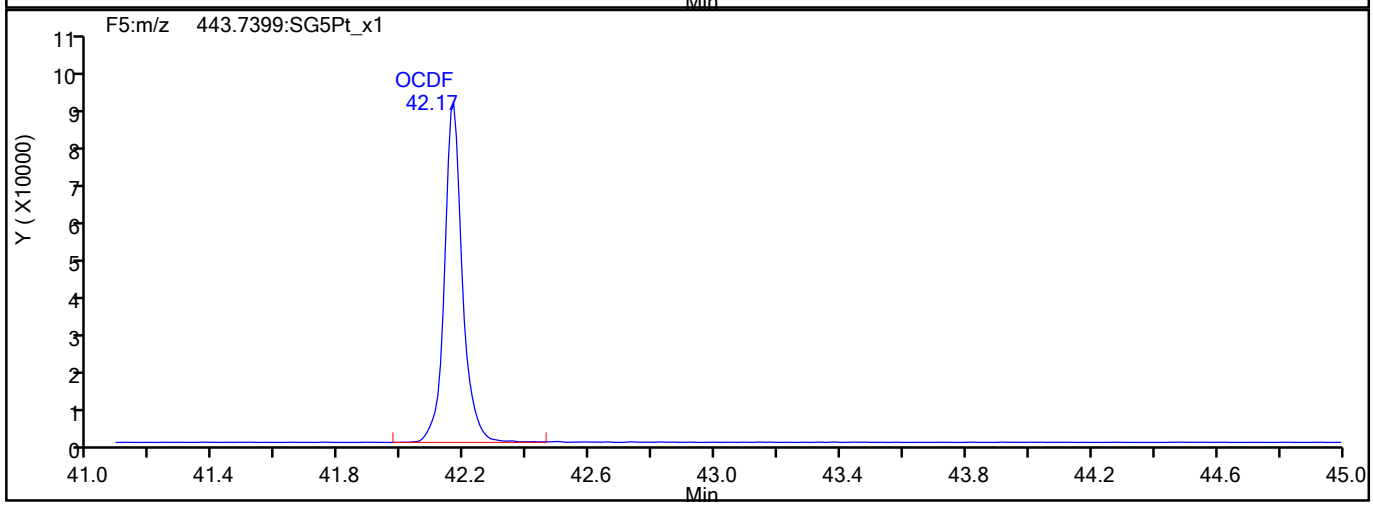

OCDF Interference Mass

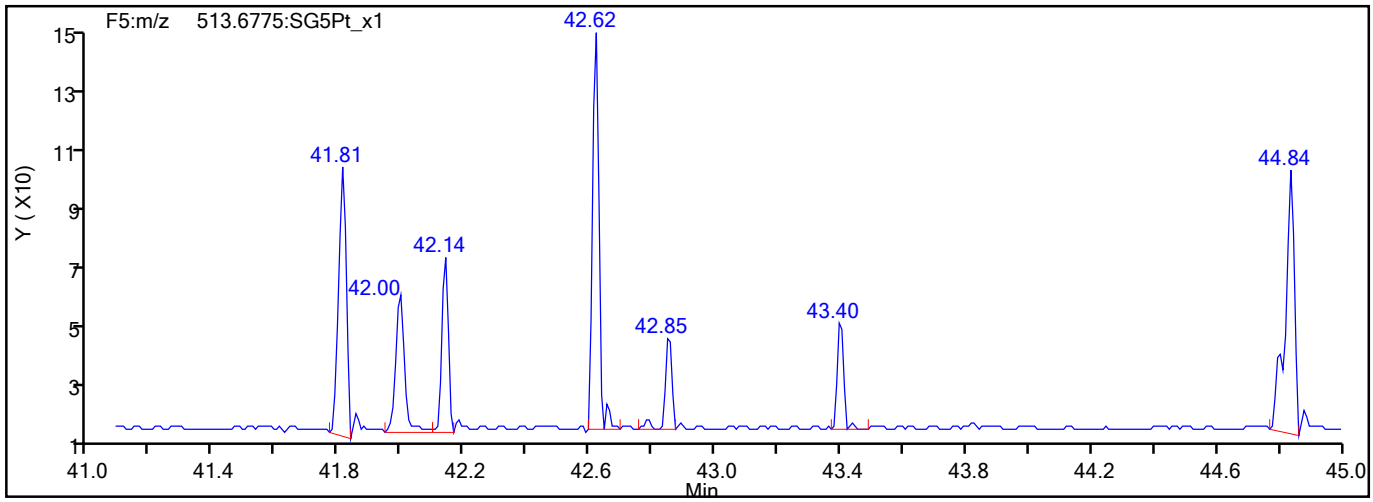

790292

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

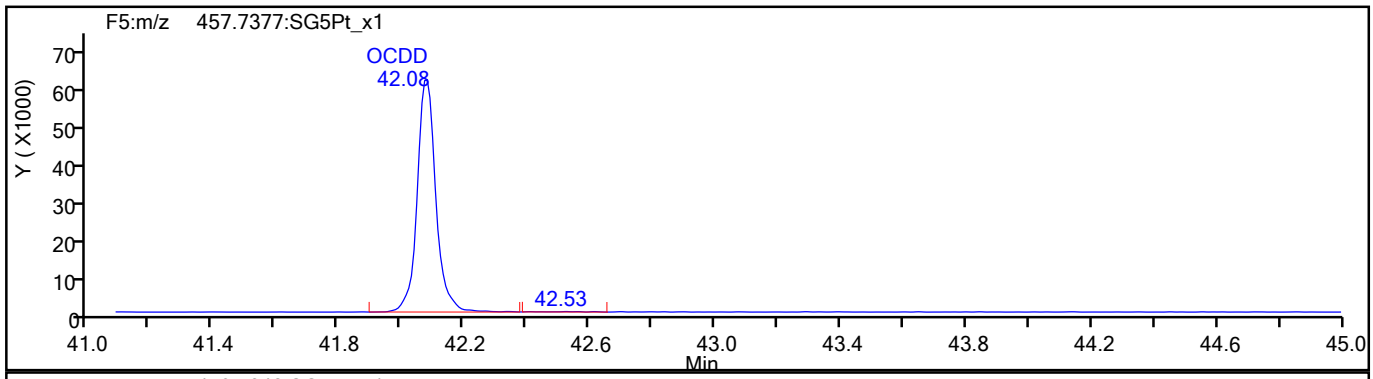

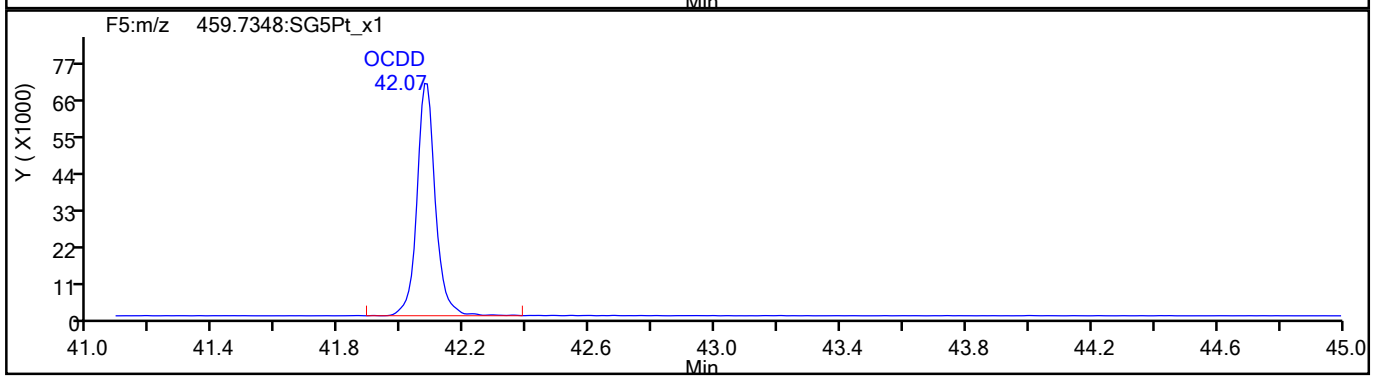

OCDD Standards

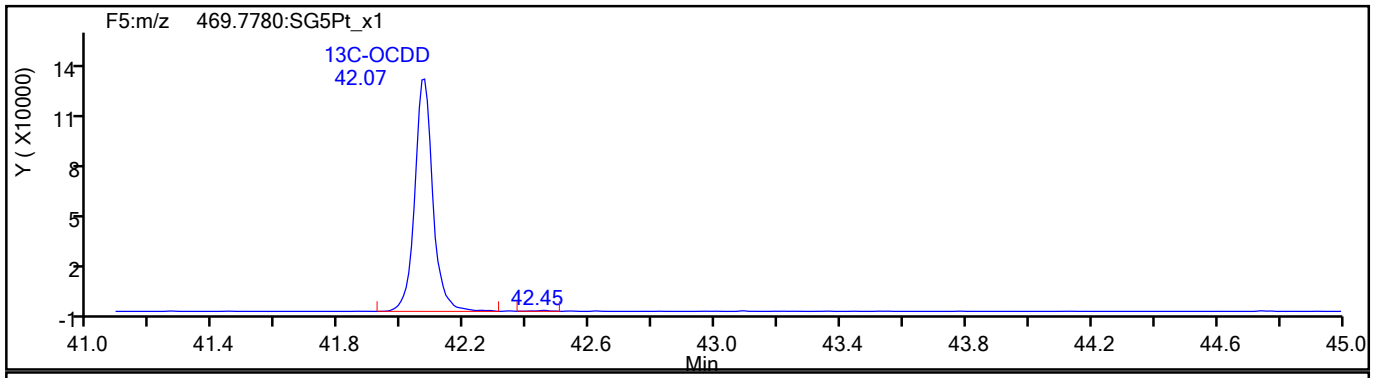

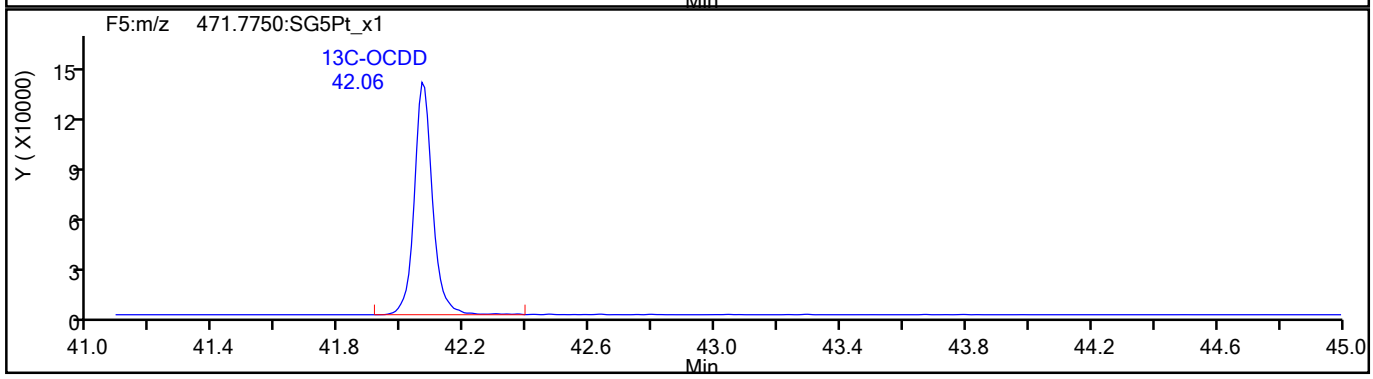

790293

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

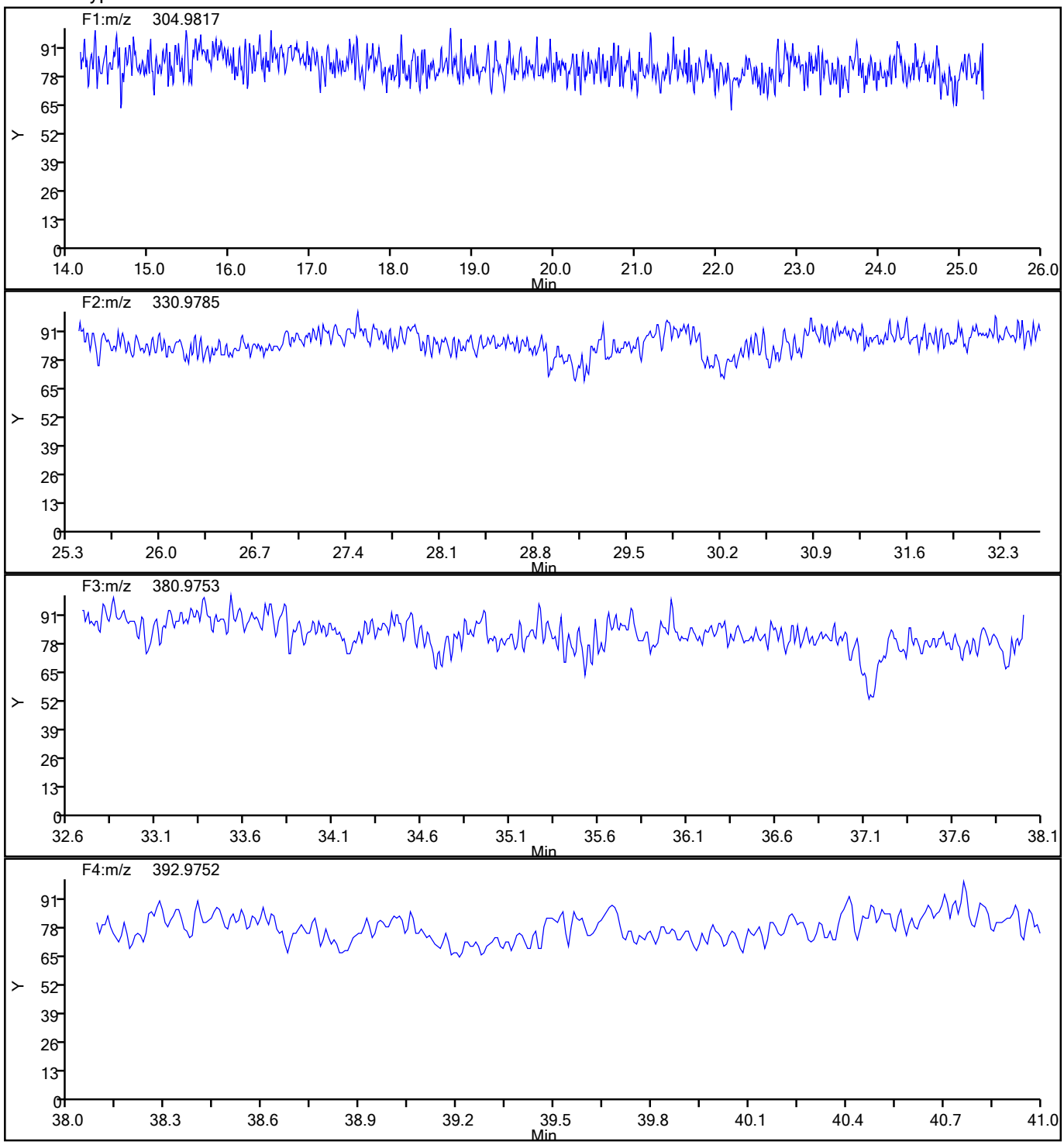

790294

Report Date: 19-Aug-2021 15:49:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_47.d		
Injection Date:	19-Aug-2021 01:32:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	43
Column Type:	DB-5	Column Dia:	0.32 mm

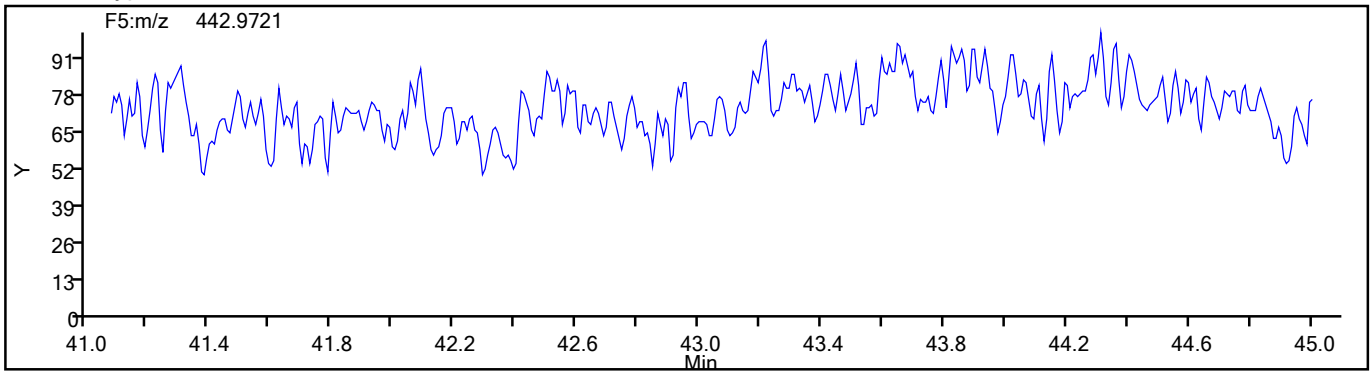

790295

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Lab Sample ID: CCV 320-517891/2 Calibration Date: 08/19/2021 14:46

Instrument ID: DFS 1 Calib Start Date: 06/08/2021 14:18

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 06/08/2021 17:30

Lab File ID: 19au21dfs1_3.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.080	1.050		9.72	10.0	97	84-120
2,3,7,8-TCDD	AveID	1.075	1.033		9.60	10.0	96	78-129
1,2,3,7,8-PeCDF	AveID	1.054	1.077		51.1	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.008	0.9629		47.8	50.0	96	82-122
1,2,3,7,8-PeCDD	AveID	1.046	1.051		50.2	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.147	1.164		50.7	50.0	101	90-112
1,2,3,6,7,8-HxCDF	AveID	1.218	1.285		52.8	50.0	106	88-114
2,3,4,6,7,8-HxCDF	AveID	1.214	1.306		53.7	50.0	107	88-114
1,2,3,4,7,8-HxCDD	AveID	1.061	0.9728		45.9	50.0	92	78-128
1,2,3,6,7,8-HxCDD	AveID	0.9933	0.9017		45.4	50.0	91	78-128
1,2,3,7,8,9-HxCDD	AveID	1.109	1.036		46.7	50.0	93	82-122
1,2,3,7,8,9-HxCDF	AveID	1.240	1.311		52.8	50.0	106	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.442	1.348		46.7	50.0	93	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.050	1.013		48.2	50.0	96	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.309	1.260		48.1	50.0	96	86-116
OCDD	AveID	1.062	1.013		95.4	100	95	79-126
OCDF	AveID	1.317	1.434		109	100	109	63-159
13C-2,3,7,8-TCDF	Ave	1.346	1.419		105	100	105	71-140
13C-2,3,7,8-TCDD	Ave	0.9317	0.9767		105	100	105	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.140	0.996		87.4	100	87	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.125	1.099		97.7	100	98	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7165	0.6618		92.4	100	92	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	0.9648	1.074		111	100	111	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.071	1.086		101	100	101	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.041	1.008		96.8	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7587	0.7840		103	100	103	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8593	0.9106		106	100	106	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9731	0.9343		96.0	100	96	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7359	0.7901		107	100	107	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6745	0.7627		113	100	113	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.6854	0.7751		113	100	113	77-129
13C-OCDD	Ave	0.5446	0.6405		235	200	118	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.008	1.001		9.93	10.0	99	79-127

	File Name	SampleName	Sample ID	Position	Method/Matrix	Box	User	Sample Vol	Units
1	19AU21DFS1_1	Resolution Check	RC 081921	46			KSS	1.000	
2	19AU21DFS1_2	WDM HRDXNCP_00044	WDM 081921	1	Dioxin		KSS	1.000	
3	19AU21DFS1_3	CCV CS-4 HRDXNL4_00100	CCV 081921	2	Dioxin		KSS	1.000	
4	19AU21DFS1_4	SB Solvent Blank C14	SB 081921	3	Dioxin		KSS	1.000	
5	19AU21DFS1_5	mb 320-513879/1-a RI	mb 320-513879/1-a	4	1613B/Solid	D267	KSS	10.000	g
6	19AU21DFS1_6	320-76888-a-13-a RI	320-76888-a-13-a	5	1613B/Solid	D266	KSS	10.000	g
7	19AU21DFS1_7	320-76901-a-3-a	320-76901-a-3-a	6	1613B/Solid	D267	KSS	10.000	g
8	19AU21DFS1_8	320-76901-a-4-a	320-76901-a-4-a	7	1613B/Solid		KSS	10.000	g
9	19AU21DFS1_9	320-76901-a-5-a	320-76901-a-5-a	8	1613B/Solid		KSS	10.000	g
10	19AU21DFS1_10	320-76901-a-6-a	320-76901-a-6-a	9	1613B/Solid		KSS	10.000	g
11	19AU21DFS1_11	320-76901-a-7-a	320-76901-a-7-a	10	1613B/Solid		KSS	10.000	g
12	19AU21DFS1_12	320-76901-a-8-a	320-76901-a-8-a	11	1613B/Solid		KSS	10.000	g
13	19AU21DFS1_13	320-76901-a-9-a	320-76901-a-9-a	12	1613B/Solid		KSS	10.000	g
14	19AU21DFS1_14	320-76901-a-13-a	320-76901-a-13-a	13	1613B/Solid		KSS	10.000	g
15	19AU21DFS1_15	SB Solvent Blank C14	SB 081921A	3	Dioxin		KSS	1.000	
16	19AU21DFS1_16	Resolution Check	RC 081921A	46			KSS	1.000	
17	19AU21DFS1_17	CCV CS-4 HRDXNL4_00100	CCV 081921A	2	Dioxin		KSS	1.000	
18	19AU21DFS1_18	WDM HRDXNCP_00044	WDM 081921A	1	Dioxin		KSS	1.000	
19	19AU21DFS1_19	SB Solvent Blank C14	SB 081921B	3	Dioxin		KSS	1.000	
20	19AU21DFS1_20	320-76888-a-5-a 5X	320-76888-a-5-a	14	1613B/Solid	D267	KSS	10.000	g
21	19AU21DFS1_21	320-76888-a-1-a 10X	320-76888-a-1-a	15	1613B/Solid		KSS	10.000	g
22	19AU21DFS1_22	320-76888-a-1-b ms 10X	320-76888-a-1-b ms	16	1613B/Solid		KSS	10.000	g
23	19AU21DFS1_23	320-76888-a-1-c msd 10X	320-76888-a-1-c msd	17	1613B/Solid		KSS	10.000	g
24	19AU21DFS1_24	320-76888-a-4-a 10X	320-76888-a-4-a	18	1613B/Solid		KSS	10.000	g
25	19AU21DFS1_25	320-76888-a-2-a 10X	320-76888-a-2-a	19	1613B/Solid		KSS	10.000	g
26	19AU21DFS1_26	320-76901-a-1-a 10X	320-76901-a-1-a	20	1613B/Solid		KSS	10.000	g
27	19AU21DFS1_27	320-76888-a-3-a 10X	320-76888-a-3-a	21	1613B/Solid		KSS	10.000	g
28	19AU21DFS1_28	SB Solvent Blank C14	SB 081921C	3	Dioxin		KSS	1.000	
29	19AU21DFS1_29	SB Solvent Blank C14	SB 081921D	3	Dioxin		KSS	1.000	
30	19AU21DFS1_30	Resolution Check	RC 081921B	46			KSS	1.000	

Logfile ✓'d
8/21/21
KSS

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	19 Aug 2021 13:39
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 11552 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10549 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 11385 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 11272 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 11335 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 11001 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 11059 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 10420 [5%height]
Ref. mass 404.9755 [m/z] Resolution: 10449 [5%height]

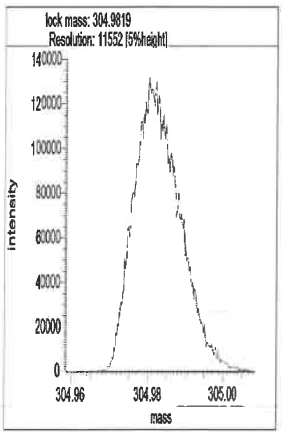

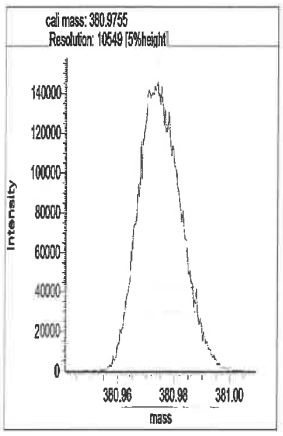

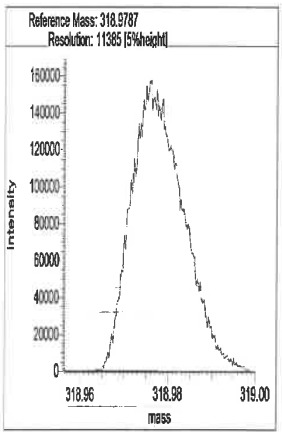

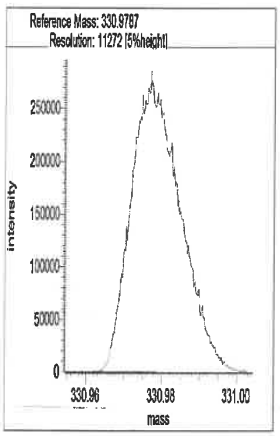

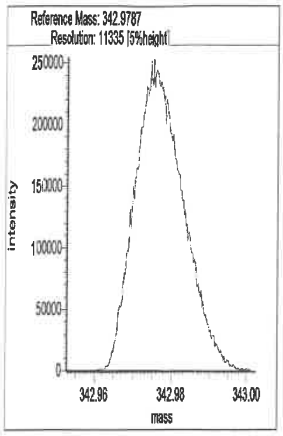

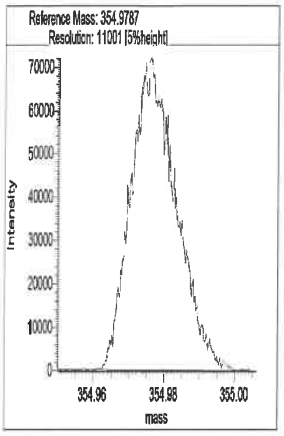

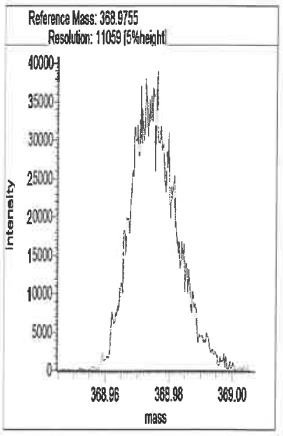

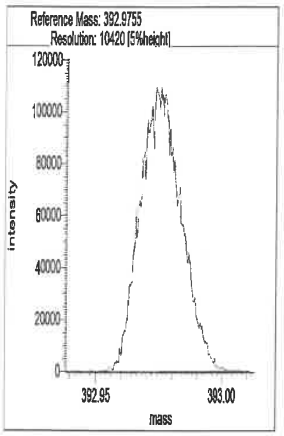

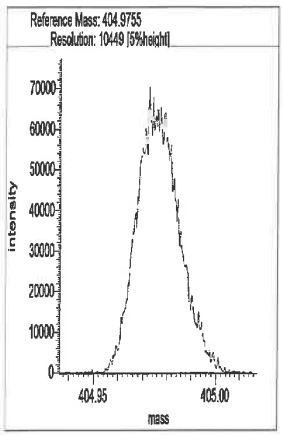

Segment 2

Lock mass 330.9787 [m/z] Resolution: 11485 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10793 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11226 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11398 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10683 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10785 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10698 [5%height]

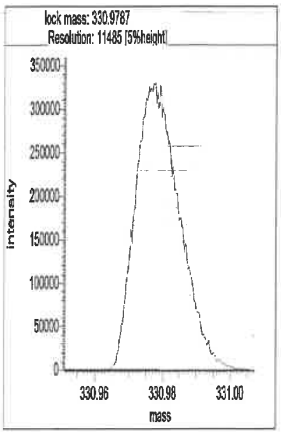

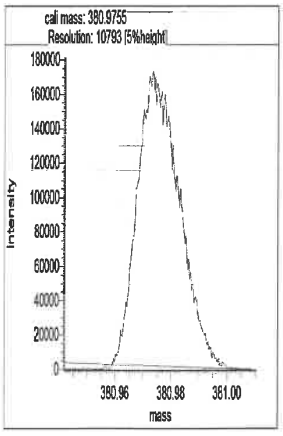

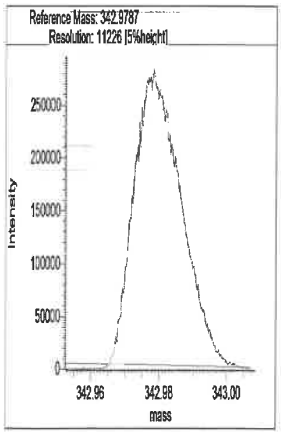

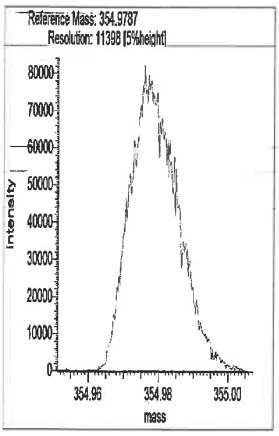

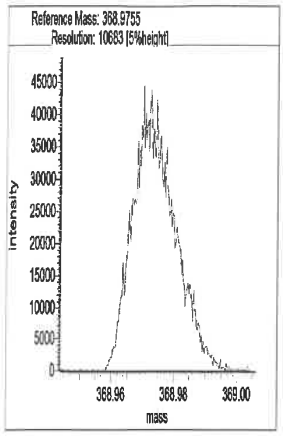

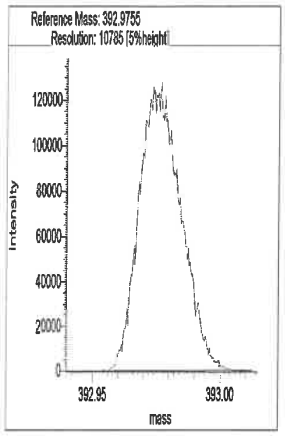

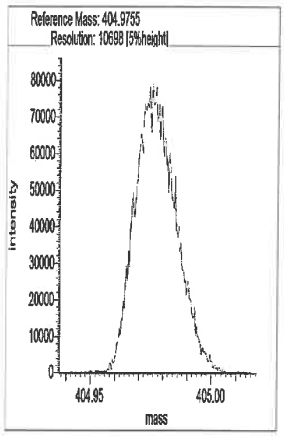

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11415 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10771 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 11020 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11042 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12007 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10745 [5%height]

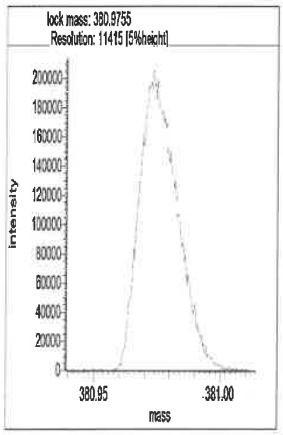

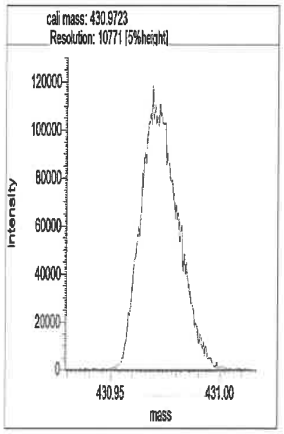

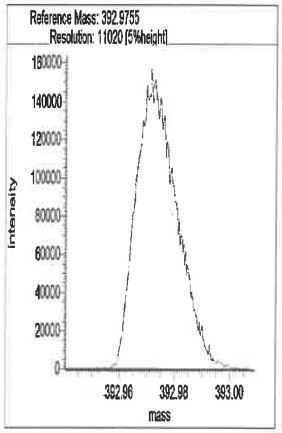

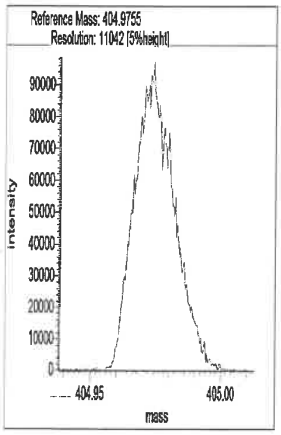

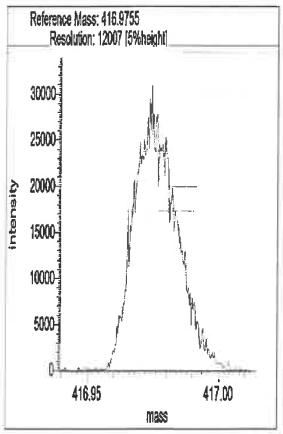

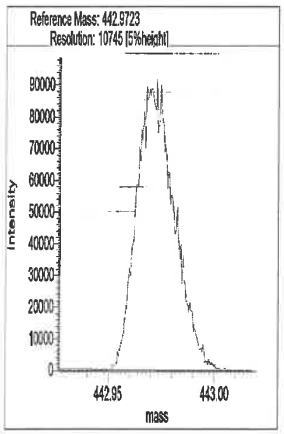

Segment 4

Lock mass 392.9754 [m/z] Resolution: 11386 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10623 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 11300 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10989 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 11023 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10728 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10731 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10778 [5%height]

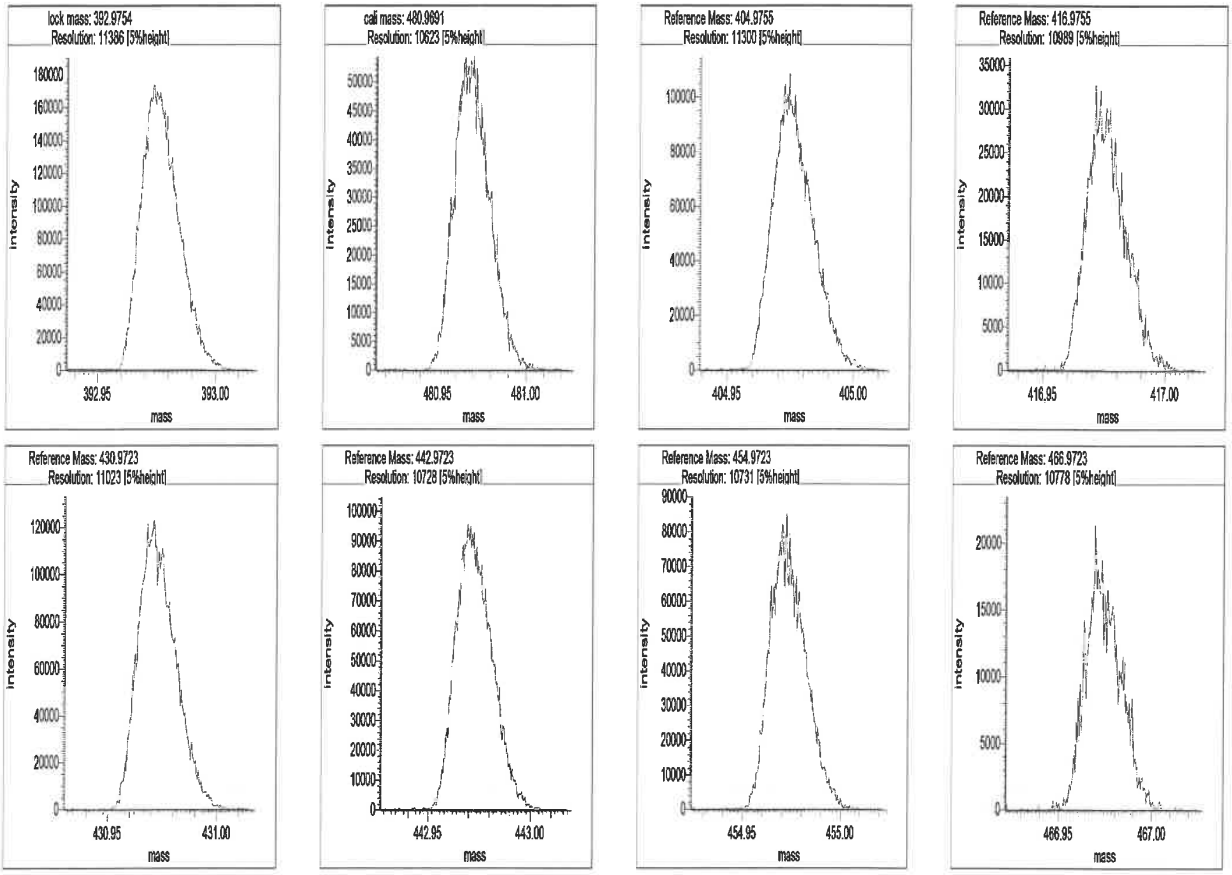

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11445 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 11134 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11159 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10809 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11068 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10706 [5%height]

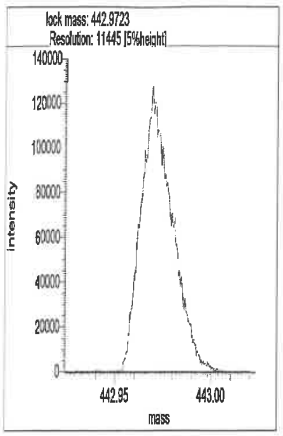
lock mass: 442.9723
Resolution: 11445 [5%height]
Intensity
mass

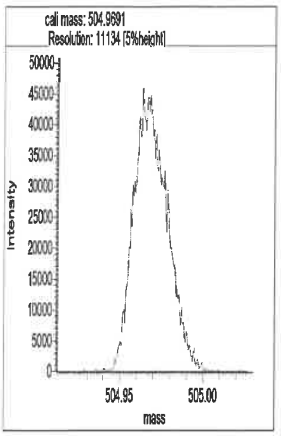
cali mass: 504.9691
Resolution: 11134 [5%height]
Intensity
mass

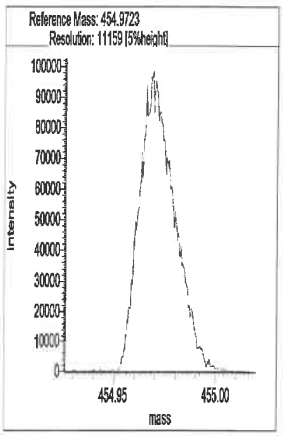
Reference Mass: 454.9723
Resolution: 11159 [5%height]
Intensity
mass

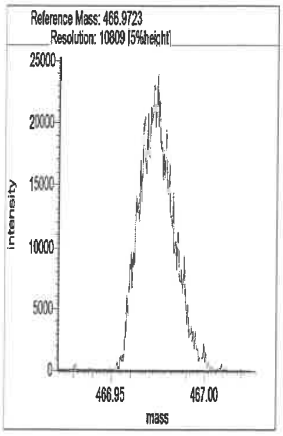
Reference Mass: 466.9723
Resolution: 10809 [5%height]
Intensity
mass

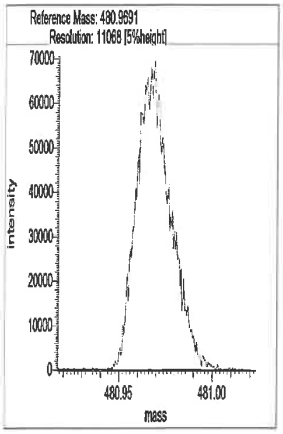
Reference Mass: 480.9691
Resolution: 11068 [5%height]
Intensity
mass

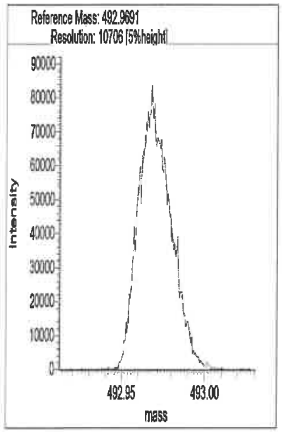
Reference Mass: 492.9691
Resolution: 10706 [5%height]
Intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 01:14
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10904 [5%height]
Cali. mass 380.9755 [m/z] Resolution: 10388 [5%height]
Ref. mass 318.9787 [m/z] Resolution: 10733 [5%height]
Ref. mass 330.9787 [m/z] Resolution: 10622 [5%height]
Ref. mass 342.9787 [m/z] Resolution: 10608 [5%height]
Ref. mass 354.9787 [m/z] Resolution: 10712 [5%height]
Ref. mass 368.9755 [m/z] Resolution: 10070 [5%height]
Ref. mass 392.9755 [m/z] Resolution: 9982 [5%height] ✓ OK 8/21/21 KH
Ref. mass 404.9755 [m/z] Resolution: 10023 [5%height]

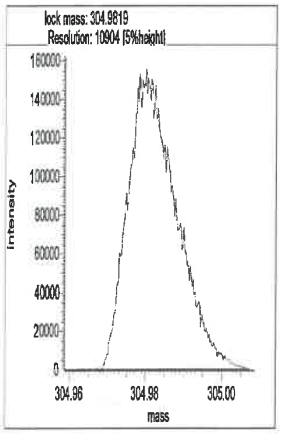

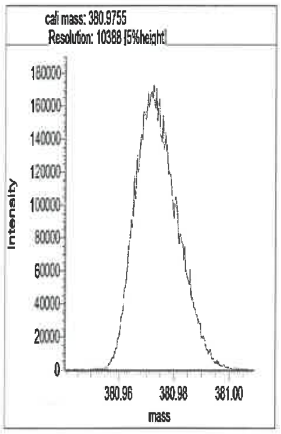

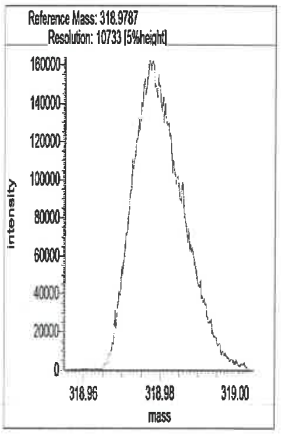

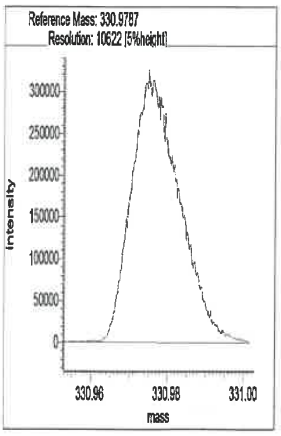

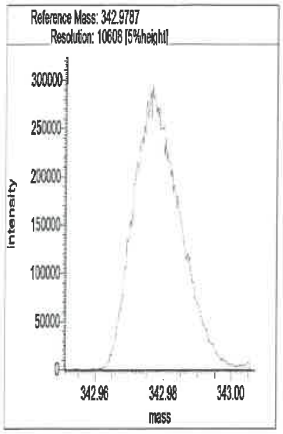

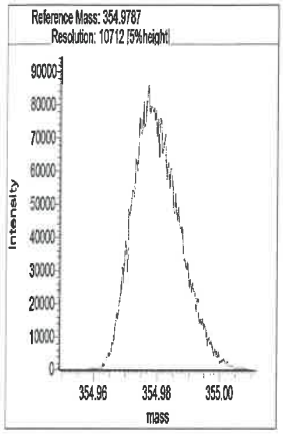

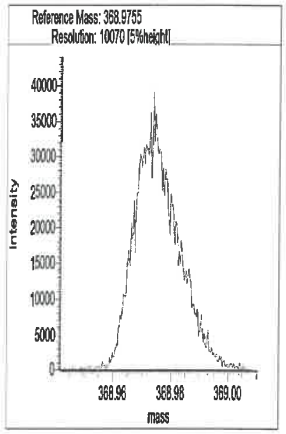

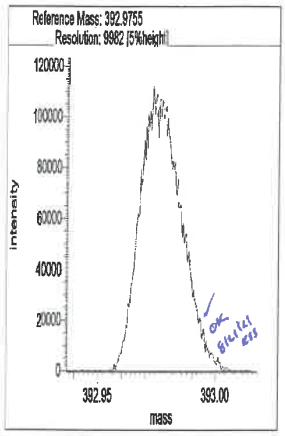

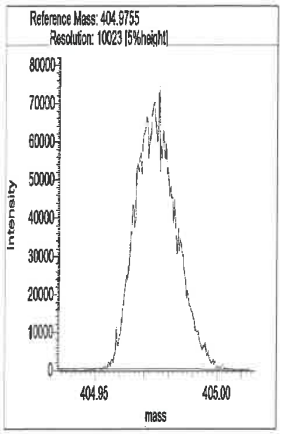

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10787 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10782 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 11025 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 11013 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10635 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10603 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10396 [5%height]

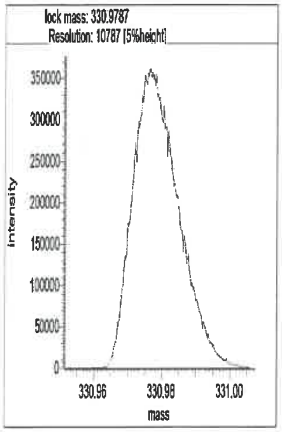

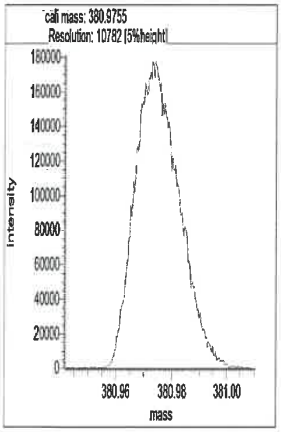

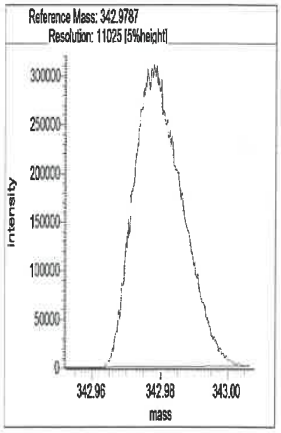

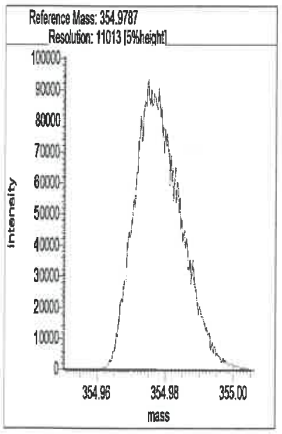

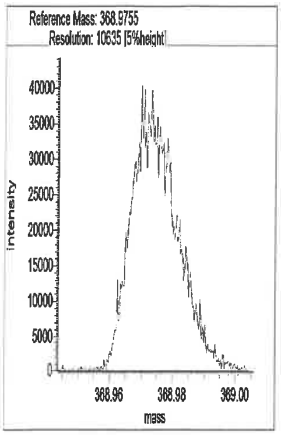

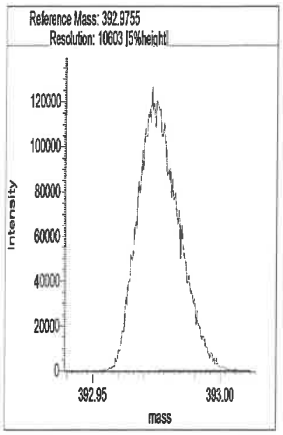

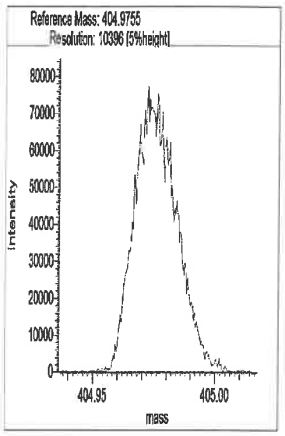

Segment 3

Lock mass 380.9755 [m/z] Resolution: 11029 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10564 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10871 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10418 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 11260 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10446 [5%height]

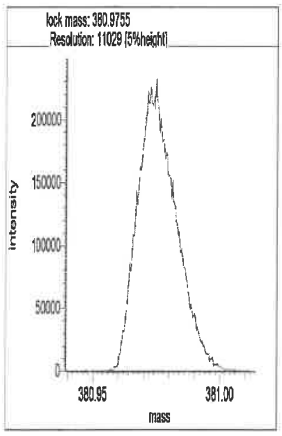

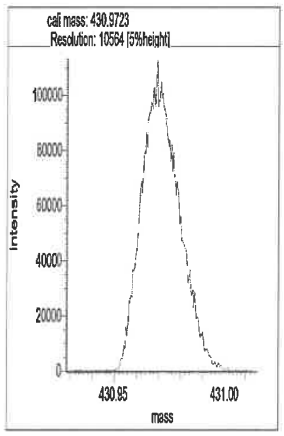

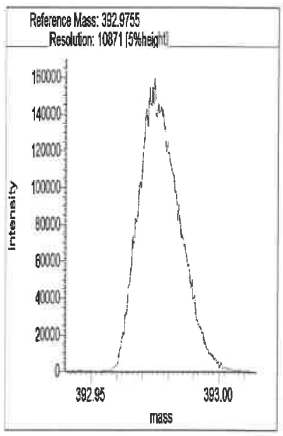

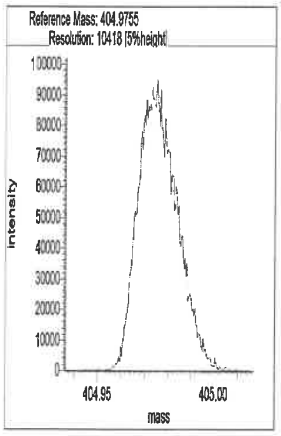

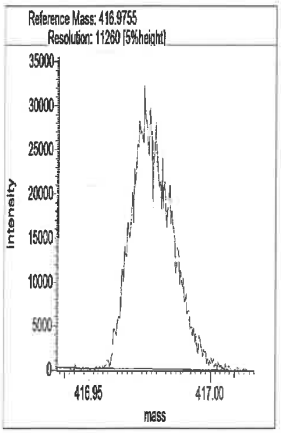

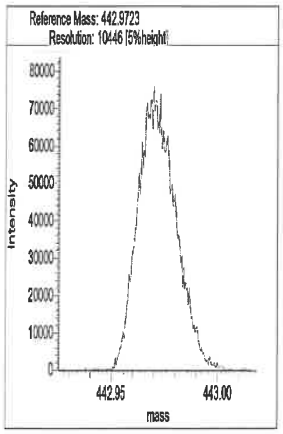

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10922 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 10352 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10773 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 12243 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10993 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10490 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10710 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11096 [5%height]

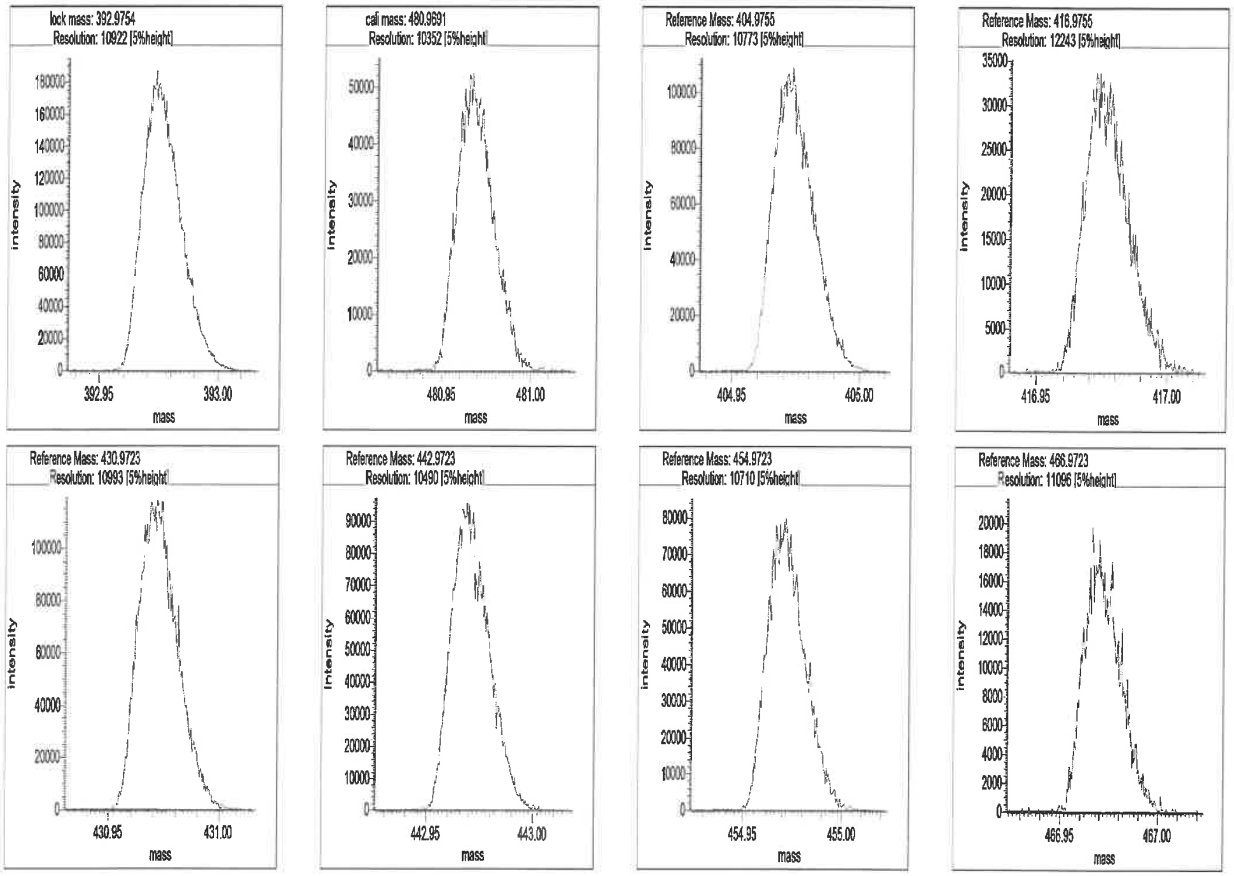

Segment 5

Lock mass 442.9723 [m/z] Resolution: 11165 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10856 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 11100 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10488 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 11155 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10611 [5%height]

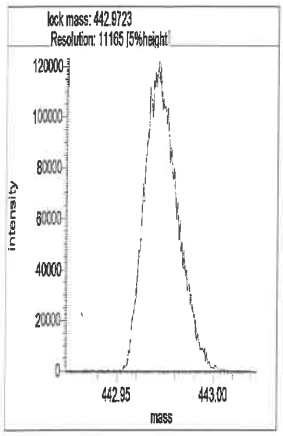
lock mass: 442.9723
Resolution: 11165 [5%height]
intensity
mass

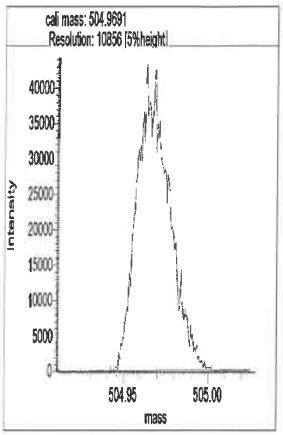
cali mass: 504.9691
Resolution: 10856 [5%height]
intensity
mass

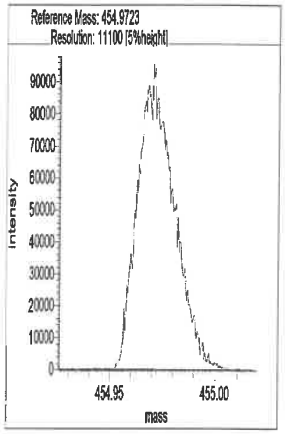
Reference Mass: 454.9723
Resolution: 11100 [5%height]
intensity
mass

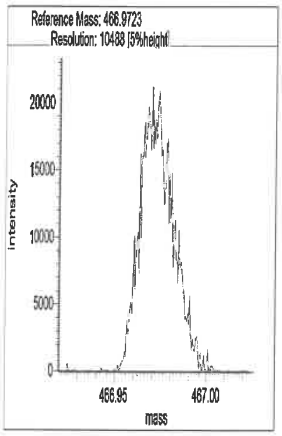
Reference Mass: 466.9723
Resolution: 10488 [5%height]
intensity
mass

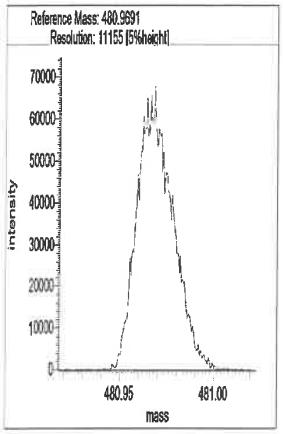
Reference Mass: 480.9691
Resolution: 11155 [5%height]
intensity
mass

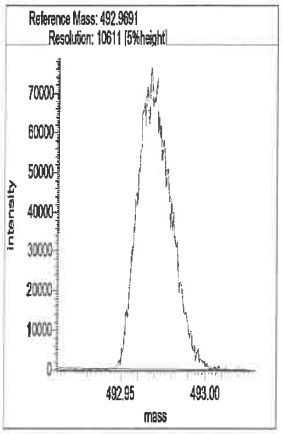
Reference Mass: 492.9691
Resolution: 10611 [5%height]
intensity
mass

Resolution Check Report (DFS SN: 3487)

eurofins | Environment Testing TestAmerica

Date:	20 Aug 2021 11:56
MID Experiment:	5w_db5_pfk_singleGC01_RS
Target Resolution:	10000
Resolution Warning :	9500
Resolution Error :	8000
Reference:	pfk
Status:	RESOLUTION PASSED

Segment 1

Lock mass 304.9819 [m/z] Resolution: 10511 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10099 [5%height]

Ref. mass 318.9787 [m/z] Resolution: 10342 [5%height]

Ref. mass 330.9787 [m/z] Resolution: 10503 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10344 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 27776 [5%height] ? software glitch. [illegible]

Ref. mass 368.9755 [m/z] Resolution: 10394 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 9749 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 9682 [5%height]

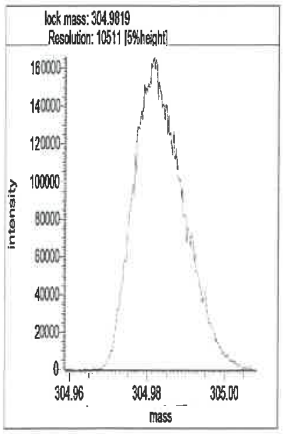

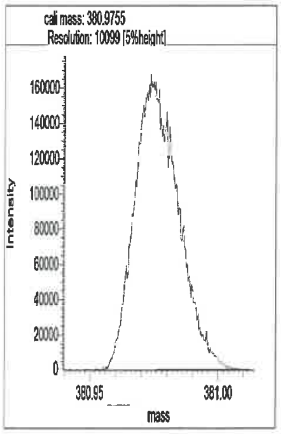

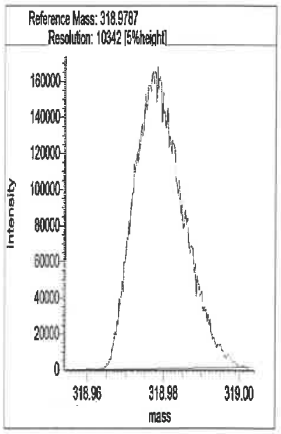

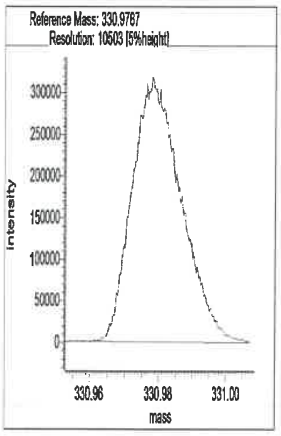

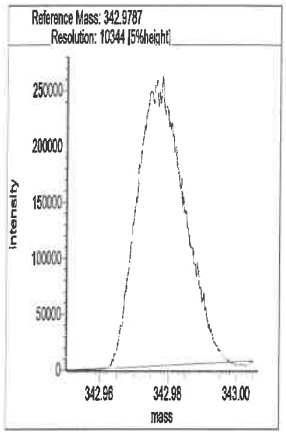

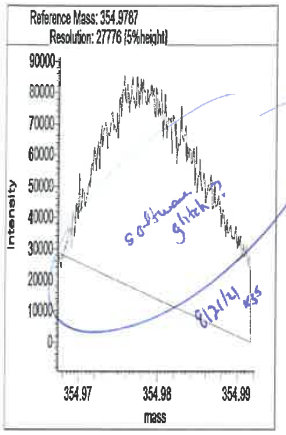

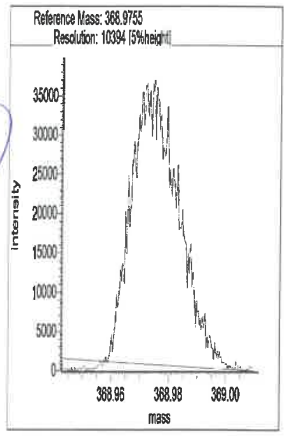

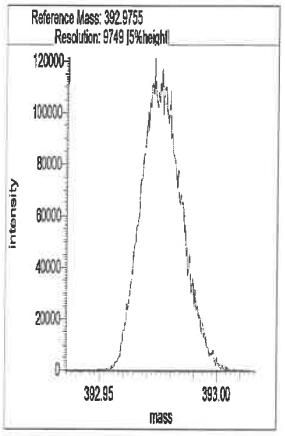

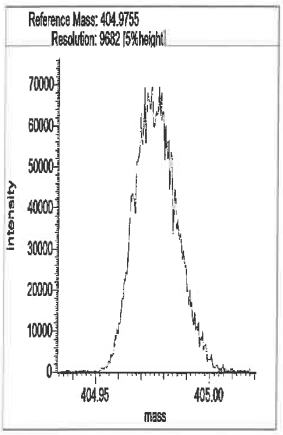

Segment 2

Lock mass 330.9787 [m/z] Resolution: 10733 [5%height]

Cali. mass 380.9755 [m/z] Resolution: 10393 [5%height]

Ref. mass 342.9787 [m/z] Resolution: 10683 [5%height]

Ref. mass 354.9787 [m/z] Resolution: 10545 [5%height]

Ref. mass 368.9755 [m/z] Resolution: 10150 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10185 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10040 [5%height]

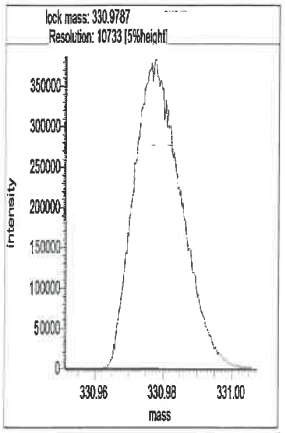

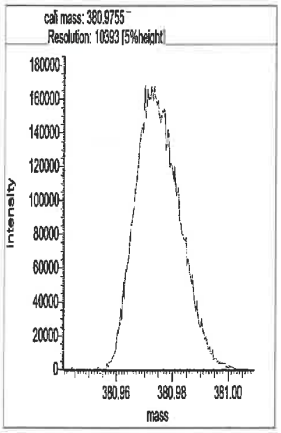

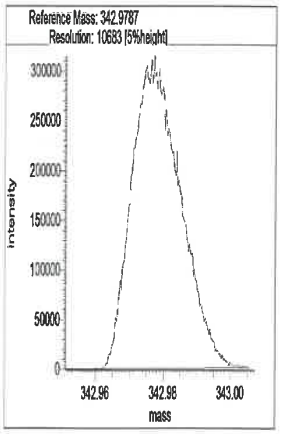

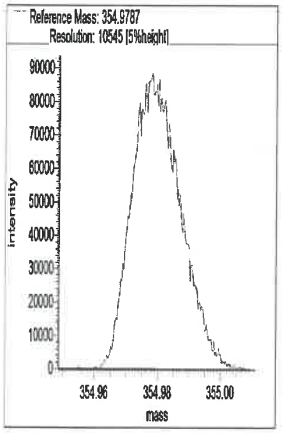

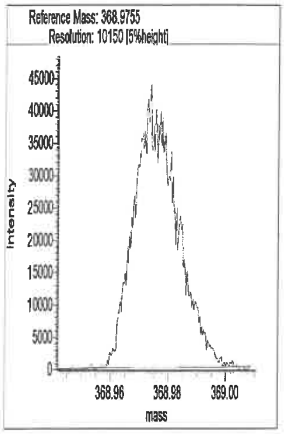

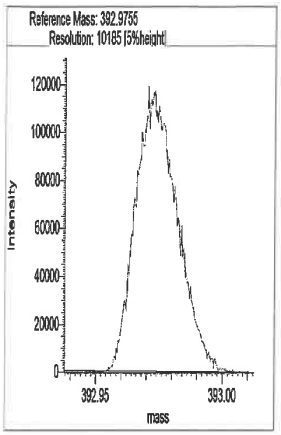

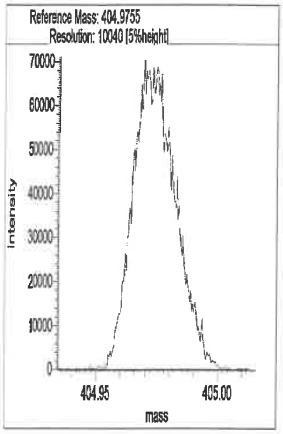

Segment 3

Lock mass 380.9755 [m/z] Resolution: 10536 [5%height]

Cali. mass 430.9723 [m/z] Resolution: 10253 [5%height]

Ref. mass 392.9755 [m/z] Resolution: 10403 [5%height]

Ref. mass 404.9755 [m/z] Resolution: 10410 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10419 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10244 [5%height]

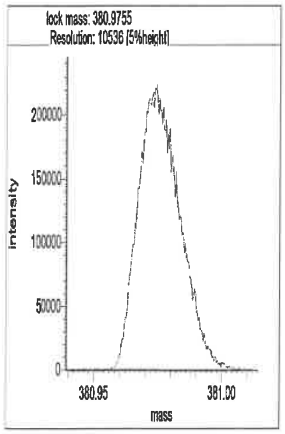

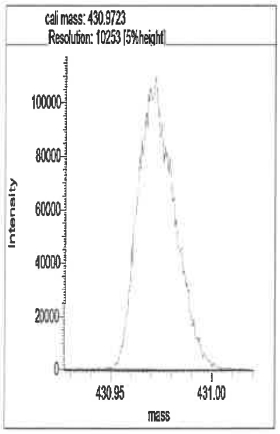

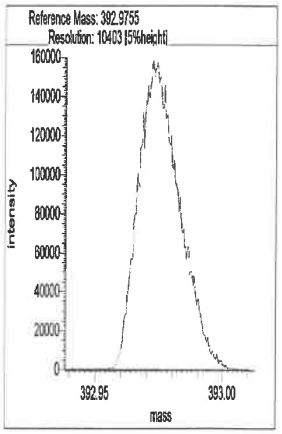

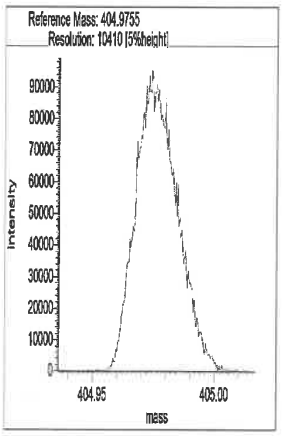

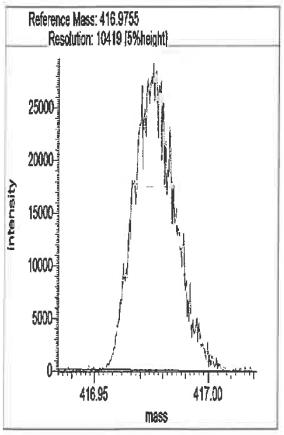

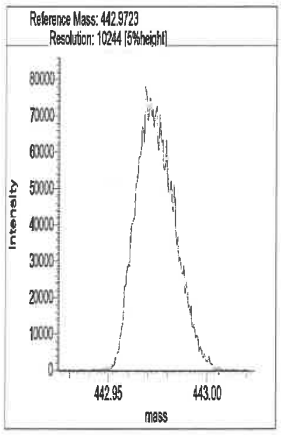

Segment 4

Lock mass 392.9754 [m/z] Resolution: 10914 [5%height]

Cali. mass 480.9691 [m/z] Resolution: 9523 [5%height] ✓ OK 8/21/21 KD

Ref. mass 404.9755 [m/z] Resolution: 10727 [5%height]

Ref. mass 416.9755 [m/z] Resolution: 10613 [5%height]

Ref. mass 430.9723 [m/z] Resolution: 10522 [5%height]

Ref. mass 442.9723 [m/z] Resolution: 10235 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10314 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 10509 [5%height]

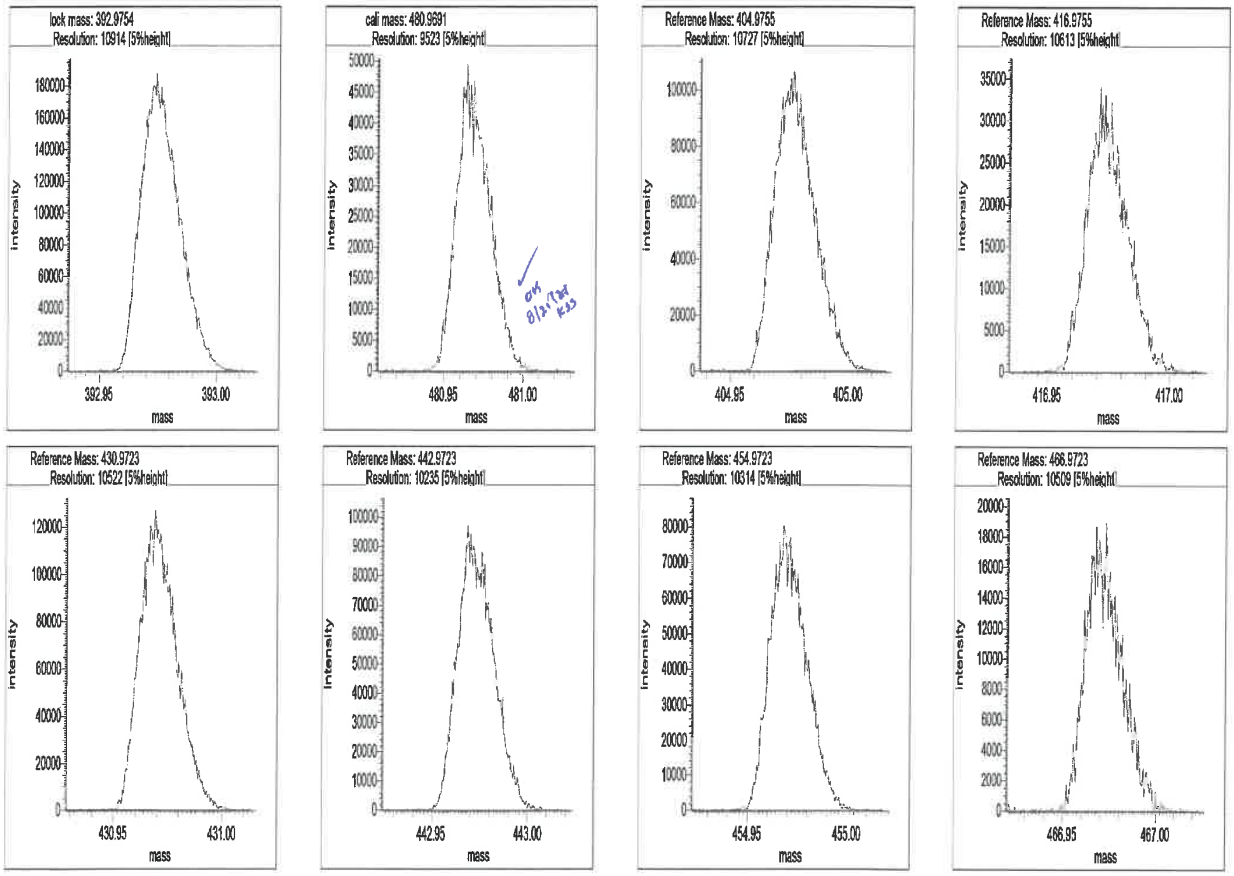

Segment 5

Lock mass 442.9723 [m/z] Resolution: 10927 [5%height]

Cali. mass 504.9691 [m/z] Resolution: 10443 [5%height]

Ref. mass 454.9723 [m/z] Resolution: 10654 [5%height]

Ref. mass 466.9723 [m/z] Resolution: 11221 [5%height]

Ref. mass 480.9691 [m/z] Resolution: 10354 [5%height]

Ref. mass 492.9691 [m/z] Resolution: 10748 [5%height]

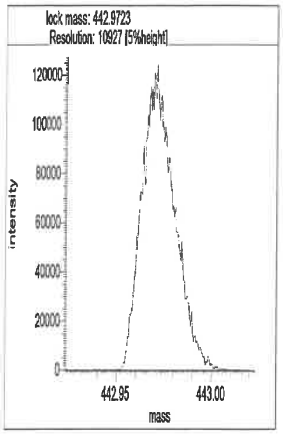
lock mass: 442.9723
Resolution: 10927 [5%height]
intensity
mass

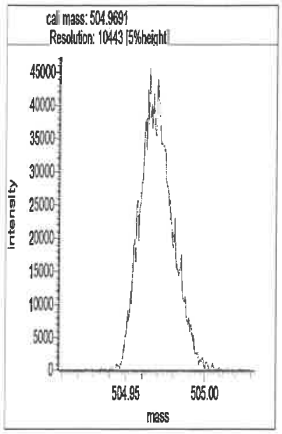
cali mass: 504.9691
Resolution: 10443 [5%height]
intensity
mass

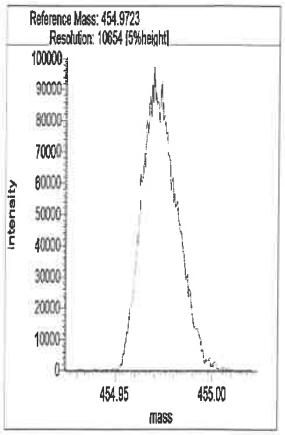
Reference Mass: 454.9723
Resolution: 10654 [5%height]
intensity
mass

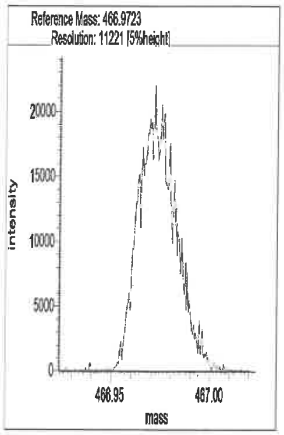
Reference Mass: 466.9723
Resolution: 11221 [5%height]
intensity
mass

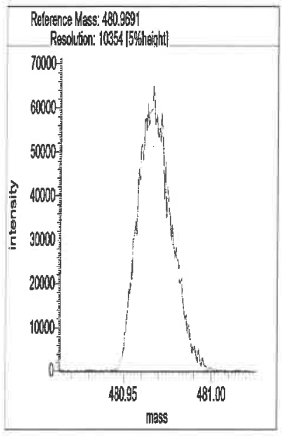
Reference Mass: 480.9691
Resolution: 10354 [5%height]
intensity
mass

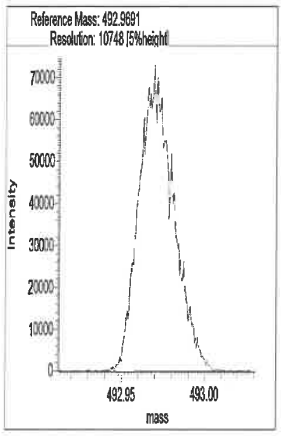
Reference Mass: 492.9691
Resolution: 10748 [5%height]
intensity
mass

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 14:46:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:38:43

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.350	880144	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.395	1248688	0.81	1.3459	105.4	105.4	0.3439	0.3439	105	
2,3,7,8-TCDF	20.421	131092	0.83	1.0802	9.719	9.719	0.0187	0.0187	97.19	
A Non-2,3,7,8-sub-TCDF	19.885	2548	0.77	1.0802	0.2183	0.1889	0.0187	0.0708	0.00	RQ
S Total TCDF					9.937	9.908	0.0187	0.0187		RQ
D 13C-2,3,7,8-TCDD	21.746	859664	0.80	0.9317	104.8	104.8	0.2310	0.2310	105	
2,3,7,8-TCDD	21.754	88765	0.76	1.0753	9.602	9.602	0.0289	0.0289	96.02	M
$ 37Cl4-2,3,7,8-TCDD	21.772	88098		1.0083	9.927	9.927	0.0148	0.0148	99.27	
A Non-2,3,7,8-sub-TCDD	20.727						0.0289	0.0289		
S Total TCDD					9.602	9.602	0.0289	0.0289		
D 13C-1,2,3,7,8-PeCDF	27.246	876942	1.58	1.1405	87.4	87.4	0.2980	0.2980	87.36	
1,2,3,7,8-PeCDF	27.263	472088	1.57	1.0543	51.1	51.1	0.1254	0.1254	102	
D 13C-2,3,4,7,8-PeCDF	28.762	967288	1.58	1.1253	97.7	97.7	0.3020	0.3020	97.66	
2,3,4,7,8-PeCDF	28.787	465705	1.60	1.0079	47.8	47.8	0.1325	0.1325	95.54	
A F1 PeCDFs	24.666	72	1.55	1.0311	0.0354	0.007573	0.007281	0.007281	0.00	RQ
A Non-2,3,7,8-sub-PeCDF	28.176	3649	1.55	1.0311	0.4206	0.3838	0.1289	0.3838	0.00	RQ
S Total PeCDF					99.3	99.2	0.1289	0.1289		RQ
D 13C-1,2,3,7,8-PeCDD	29.570	582520	1.58	0.7165	92.4	92.4	0.1287	0.1287	92.38	
1,2,3,7,8-PeCDD	29.595	305999	1.58	1.0465	50.2	50.2	0.2556	0.2556	100	
A Non-2,3,7,8-sub-PeCDD	28.536						0.2556	0.2556		
S Total PeCDD					50.2	50.2	0.2556	0.2556		
D 13C-1,2,3,4,7,8-HxCDF	34.922	857555	0.54	0.9648	111.3	111.3	0.3425	0.3425	111	
1,2,3,4,7,8-HxCDF	34.938	499173	1.30	1.1474	50.7	50.7	0.1885	0.1885	101	
D 13C-1,2,3,6,7,8-HxCDF	35.073	867107	0.50	1.0708	101.4	101.4	0.3086	0.3086	101	
1,2,3,6,7,8-HxCDF	35.099	557239	1.26	1.2178	52.8	52.8	0.1873	0.1873	106	
D 13C-2,3,4,6,7,8-HxCDF	35.899	805042	0.53	1.0413	96.8	96.8	0.3173	0.3173	96.79	
2,3,4,6,7,8-HxCDF	35.916	525498	1.33	1.2145	53.7	53.7	0.1797	0.1797	107	
D 13C-1,2,3,7,8,9-HxCDF	36.800	746273	0.55	0.9731	96.0	96.0	0.3396	0.3396	96.01	
1,2,3,7,8,9-HxCDF	36.808	489075	1.31	1.2401	52.8	52.8	0.1691	0.1691	106	
A Non-2,3,7,8-sub-HxCDF	35.073						0.1808	0.1808		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					210.1	210.1	0.1812	0.1812		
* 13C-1,2,3,7,8,9-HxCDD	36.598	798781	1.28	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.109	626230	1.27	0.7587	103.3	103.3	0.1789	0.1789	103	
1,2,3,4,7,8-HxCDD	36.126	304605	1.24	1.0608	45.9	45.9	0.0786	0.0786	91.71	
D 13C-1,2,3,6,7,8-HxCDD	36.227	727407	1.24	0.8593	106.0	106.0	0.1580	0.1580	106	
1,2,3,6,7,8-HxCDD	36.244	327966	1.26	0.9933	45.4	45.4	0.0820	0.0820	90.78	
1,2,3,7,8,9-HxCDD	36.606	350583	1.24	1.1094	46.7	46.7	0.0743	0.0743	93.38	
A Non-2,3,7,8-sub-HxCDD	35.427						0.0781	0.0781		
S Total HxCDD					137.9	137.9	0.0783	0.0783		
D 13C-1,2,3,4,6,7,8-HpCDF	38.614	631083	0.46	0.7359	107.4	107.4	0.3595	0.3595	107	
1,2,3,4,6,7,8-HpCDF	38.622	425207	1.05	1.4421	46.7	46.7	0.1807	0.1807	93.45	
D 13C-1,2,3,4,7,8,9-HpCDF	39.869	619112	0.44	0.6854	113.1	113.1	0.3861	0.3861	113	
1,2,3,4,7,8,9-HpCDF	39.877	390127	1.03	1.3092	48.1	48.1	0.1991	0.1991	96.27	
A Non-2,3,7,8-sub-HpCDF	39.253						0.1894	0.1894		
S Total HpCDF					94.9	94.9	0.1899	0.1899		
D 13C-1,2,3,4,6,7,8-HpCDD	39.557	609233	1.02	0.6745	113.1	113.1	0.2887	0.2887	113	
1,2,3,4,6,7,8-HpCDD	39.574	308551	1.04	1.0503	48.2	48.2	0.1086	0.1086	96.44	
A Non-2,3,7,8-sub-HpCDD	39.253	2712	1.04	1.0503	0.4815	0.4238	0.1086	0.4238	0.00	RQ
S Total HpCDD					48.7	48.6	0.1086	0.1086		RQ
D 13C-OCDD	42.064	1023273	0.90	0.5446	235.2	235.2	0.2892	0.2892	118	
OCDF	42.157	733525	0.95	1.3168	108.9	108.9	0.1126	0.1126	109	
OCDD	42.073	518459	0.87	1.0620	95.4	95.4	0.1218	0.1218	95.42	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Aug-2021 14:46:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Operator ID: Xcalibur_System Instrument ID: DFS 1
Sublist: chrom-Dioxin_DFS1*sub1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:38:43

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.350	21.350	0		392365	50129	68	170	737		a
333.9338	21.359	21.350	1		487779	63734	30	75	2124	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.395	20.395	0	0.955	557813	78278	117	292	669		
317.9389	20.387	20.395	-1	0.955	690875	94571	94	235	1006	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.421	20.421	0	1.001	59271	8014	5	12	1603		
305.8987	20.421	20.421	0	1.001	71821	9716	9	22	1080	0.83(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	18.717	19.885	-70	0.918	165	55	5	12	11		
305.8987	18.760	19.885	-67	0.920	328	106	9	22	12	0.50(0.65-0.89)	
	Empc Correction				214	71	9	22	8		
303.9016	19.724	19.885	-10	0.967	539	104	5	12	21		
	Empc Correction				415	97	5	12	19		
305.8987	19.689	19.885	-12	0.965	540	127	9	22	14	1.00(0.65-0.89)	
303.9016	20.696	19.885	49	1.015	334	82	5	12	16		
305.8987	20.696	19.885	49	1.015	398	183	9	22	20	0.84(0.65-0.89)	
303.9016	20.808	19.885	55	1.020	210	86	5	12	17		
305.8987	20.757	19.885	52	1.018	431	109	9	22	12	0.49(0.65-0.89)	
	Empc Correction				272	111	9	22	12		
13C-2,3,7,8-TCDD											
331.9368	21.746	21.746	0	1.019	380761	50135	68	170	737		
333.9338	21.737	21.746	-1	1.018	478903	62607	30	75	2087	0.80(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	21.754	21.754	0	1.000	38393	4783	10	25	478		M
321.8936	21.772	21.754	1	1.001	50372	6262	4	10	1566	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											
327.8847	21.772	21.772	0	1.020	88098	11715	7	17	1674		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.727						10	25			
321.8936	20.727						4	10			
13C-1,2,3,7,8-PeCDF											
351.9000	27.246	27.246	0	1.276	537093	80730	85	212	950		
353.8970	27.246	27.246	0	1.276	339849	53122	70	175	759	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.263	27.263	0	1.001	288515	42689	34	85	1256		
341.8567	27.263	27.263	0	1.001	183573	26170	37	92	707	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.762	28.762	0	1.347	592788	80849	85	212	951		
353.8970	28.753	28.762	-1	1.347	374500	51726	70	175	739	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.787	28.787	0	1.001	286668	39229	34	85	1154		
341.8567	28.787	28.787	0	1.001	179037	24246	37	92	655	1.60(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	24.352	24.666	-19	0.894	30	12	1	2	12		
341.8567	24.343	24.666	-19	0.893	194	92	3	7	31	0.15(1.32-1.78)	
	Empc Correction				19	7	3	7	2		
339.8597	25.005	24.666	20	0.918	14	8	1	2	8		
341.8567	25.023	24.666	21	0.918	99	47	3	7	16	0.14(1.32-1.78)	
	Empc Correction				9	5	3	7	2		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.869	28.176	-18	1.023	2568	448	34	85	13		
	Empc Correction				2218	396	34	85	12		
341.8567	27.877	28.176	-18	1.023	1431	256	37	92	7	1.79(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.570	29.570	0	1.385	356741	48302	23	57	2100		
369.8919	29.562	29.570	-1	1.385	225779	30199	19	47	1589	1.58(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.595	29.595	0	1.001	187317	23303	59	147	395		
357.8516	29.604	29.595	1	1.001	118682	15295	25	62	612	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	28.536						59	147			
357.8516	28.536						25	62			
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.922	34.922	0	0.954	301743	58450	70	175	835		
385.8610	34.922	34.922	0	0.954	555812	106606	161	402	662	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.938	34.938	0	1.000	282106	53539	84	210	637		
375.8178	34.930	34.938	-1	1.000	217067	41553	59	147	704	1.30(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.073	35.073	0	0.958	289842	54372	70	175	777		
385.8610	35.082	35.073	1	0.959	577265	102104	161	402	634	0.50(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDF											
373.8208	35.099	35.099	0	1.001	311153	56921	84	210	678		
375.8178	35.099	35.099	0	1.001	246086	45717	59	147	775	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.899	35.899	0	0.981	279239	55912	70	175	799		
385.8610	35.899	35.899	0	0.981	525803	107690	161	402	669	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.916	35.916	0	1.000	300256	62548	84	210	745		
375.8178	35.916	35.916	0	1.000	225242	47171	59	147	800	1.33(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.800	36.800	0	1.006	263890	60577	70	175	865		
385.8610	36.791	36.800	-1	1.005	482383	109655	161	402	681	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.808	36.808	0	1.000	276925	62991	84	210	750		
375.8178	36.808	36.808	0	1.000	212150	48219	59	147	817	1.31(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						84	210			
375.8178	35.073						59	147			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.598	36.598	0		447919	95381	56	140	1703		
403.8529	36.598	36.598	0		350862	79228	39	97	2031	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.109	36.109	0	0.987	350834	84152	56	140	1503		
403.8529	36.109	36.109	0	0.987	275396	65709	39	97	1685	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.126	36.126	0	1.000	168355	39063	26	65	1502		
391.8127	36.126	36.126	0	1.000	136250	30911	24	60	1288	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.227	36.227	0	0.990	402538	84276	56	140	1505		
403.8529	36.227	36.227	0	0.990	324869	69268	39	97	1776	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.244	36.244	0	1.000	182565	37967	26	65	1460		
391.8127	36.236	36.244	-1	1.000	145401	30482	24	60	1270	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.606	36.606	0	1.014	194341	42531	26	65	1636		
391.8127	36.606	36.606	0	1.014	156242	33894	24	60	1412	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.427						26	65			
391.8127	35.427						24	60			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.614	38.614	0	1.055	199982	53427	62	155	862		
419.8220	38.614	38.614	0	1.055	431101	110427	123	307	898	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.622	38.622	0	1.000	218080	55878	91	227	614		
409.7788	38.622	38.622	0	1.000	207127	52397	80	200	655	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.869	39.869	0	1.089	188242	48045	62	155	775		
419.8220	39.869	39.869	0	1.089	430870	115800	123	307	941	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.877	39.877	0	1.000	198124	52467	91	227	577		
409.7788	39.877	39.877	0	1.000	192003	50350	80	200	629	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						91	227			
409.7788	39.253						80	200			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.557	39.557	0	1.081	307328	83776	71	177	1180		
437.8140	39.557	39.557	0	1.081	301905	84577	65	162	1301	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.574	39.574	0	1.000	157219	41341	38	95	1088		
425.7737	39.574	39.574	0	1.000	151332	41049	39	97	1053	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.950	39.253	-18	0.985	1383	343	38	95	9		
425.7737	38.925	39.253	-20	0.984	1698	522	39	97	13	0.81(0.88-1.20)	
	Empc Correction				1329	329	39	97	8		
13C-OCDD											
469.7780	42.064	42.064	0	1.149	483730	114644	56	140	2047		
471.7750	42.064	42.064	0	1.149	539543	128072	54	135	2372	0.90(0.76-1.02)	
OCDF											
441.7428	42.157	42.157	0	1.002	357311	85331	29	72	2942		
443.7399	42.157	42.157	0	1.002	376214	89559	43	107	2083	0.95(0.76-1.02)	
OCDD											
457.7377	42.073	42.073	0	1.000	241071	58376	32	80	1824		
459.7348	42.073	42.073	0	1.000	277388	67400	31	77	2174	0.87(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 14:46:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	1248688	172849

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	1248688	172849

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.717	165	55	328	106	0.0366	0.50	RQ
18.717	165	55	214	71	0.0281		Empc Correction
19.724	539	104	540	127	0.0800	1.00	RQ
19.724	415	97	540	127	0.0708		Empc Correction
20.696	334	82	398	183	0.0543	0.84	
20.808	210	86	431	109	0.0475	0.49	RQ
20.808	210	86	272	111	0.0357		Empc Correction
Signal Totals:							
	1124	320	1424	492			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2945	852				0.74	RQ
	2548	812					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2183 = (2945 * 100.000) / (1248688 * 1.080)
Empc Amount: 0.1889 = (2548 * 100.000) / (1248688 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 14:46:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

F1 PeCDFs, RT: 24.666

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	876942	133852
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	967288	132575

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	922115	133213

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.352	30	12	194	92	0.0236	0.15	RQ
24.352	30	12	19	7	0.005154		Empc Correction
25.005	14	8	99	47	0.0119	0.14	RnQ
25.005	14	8	9	5	0.002419		Empc Correction
Signal Totals:							
	44	20	28	12			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	337	159				0.15	RQ
	72	32					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0354 = (337 * 100.000) / (922115 * 1.031)
Empc Amount: 0.007573 = (72 * 100.000) / (922115 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 14:46:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	876942	133852
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	967288	132575

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	922115	133213

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.869	2568	448	1431	256	0.4206	1.79	RnQ
27.869	2218	396	1431	256	0.3838		Empc Correction
Signal Totals:							
	2218	396	1431	256			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3999	704				1.79	RQ
	3649	652					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4206 = (3999 * 100.000) / (922115 * 1.031)
Empc Amount: 0.3838 = (3649 * 100.000) / (922115 * 1.031)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d
Lims ID: CCV
Client ID:
Inject. Date: 19-Aug-2021 14:46:00 Dil. Factor: 1.0000
Sample Type: CCV, Cal Verification
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 2
Sublist: chrom-Dioxin_DFS1*sub1

Non-2,3,7,8-sub-HpCDD, RT: 39.253

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	609233	168353

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	609233	168353

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.950	1383	343	1698	522	0.4815	0.81	RnQ
38.950	1383	343	1329	329	0.4238		Empc Correction
Signal Totals:							
	1383	343	1329	329			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3081	865				0.81	RQ
	2712	672					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4815 = (3081 * 100.000) / (609233 * 1.050)
Empc Amount: 0.4238 = (2712 * 100.000) / (609233 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d				
Injection Date:	19-Aug-2021 14:46:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Not Detected
Expected RT: 21.35

Processing Integration Results

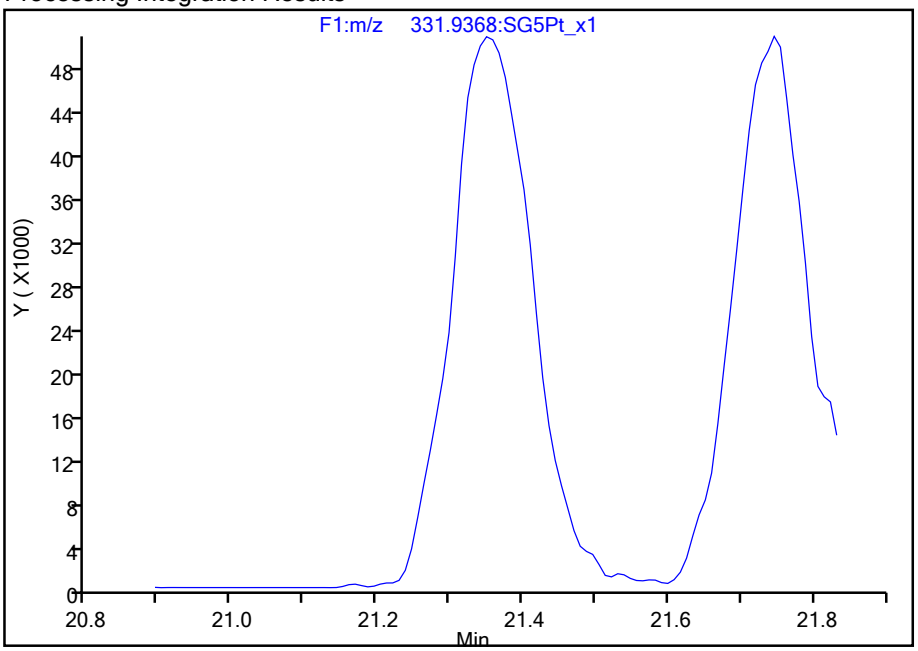

Manual Integration Results

RT: 21.35
Area: 392365
Amount: 100.0000
Amount Units: pg/ul

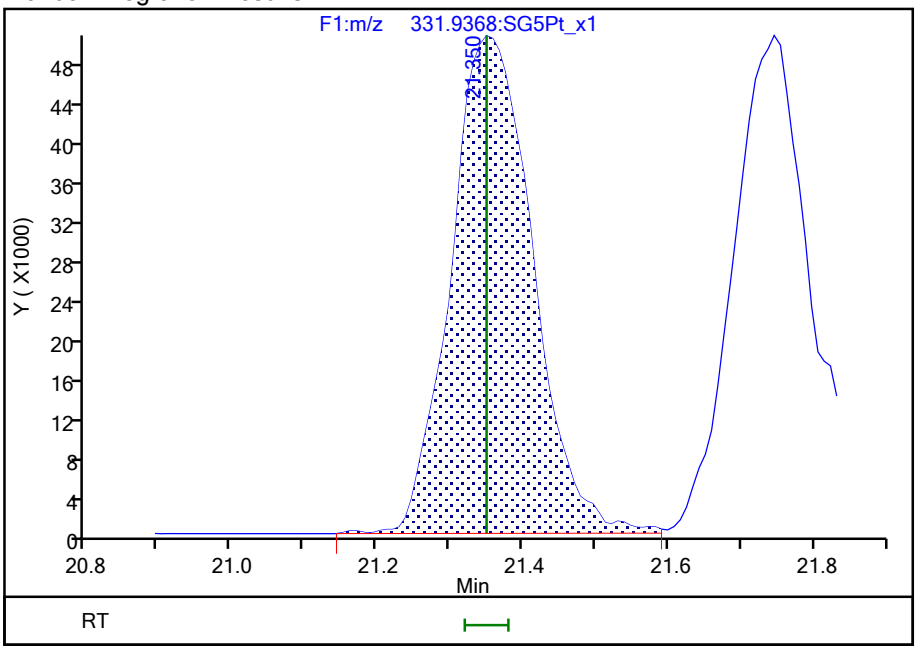

Reviewer: stephensk, 19-Aug-2021 15:37:52
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

790323

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d				
Injection Date:	19-Aug-2021 14:46:00	Instrument ID:	DFS 1		
Lims ID:	CCV				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 21.75
Area: 36392
Amount: 9.385610
Amount Units: pg/ul

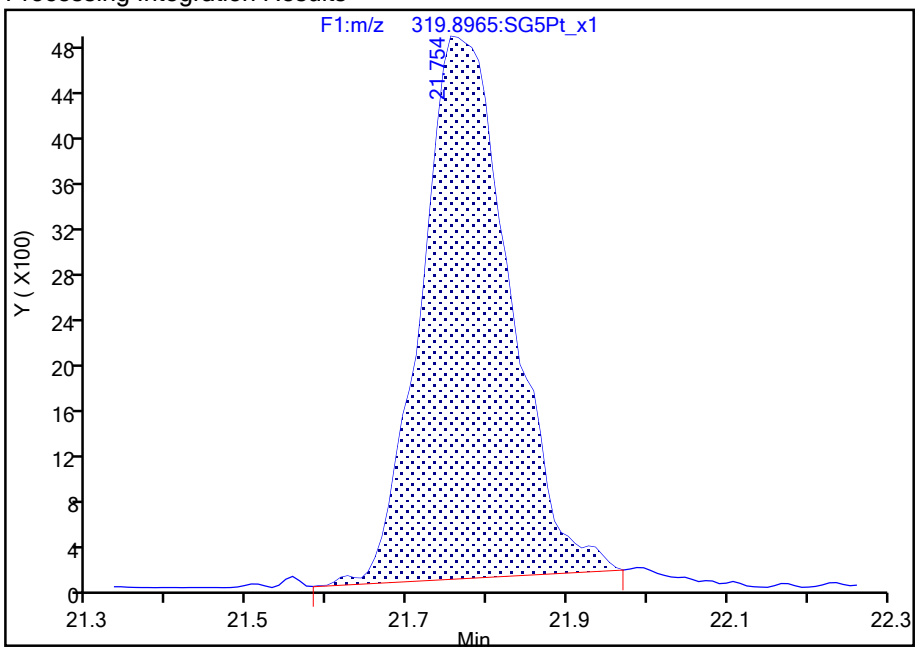

Manual Integration Results

RT: 21.75
Area: 38393
Amount: 9.602066
Amount Units: pg/ul

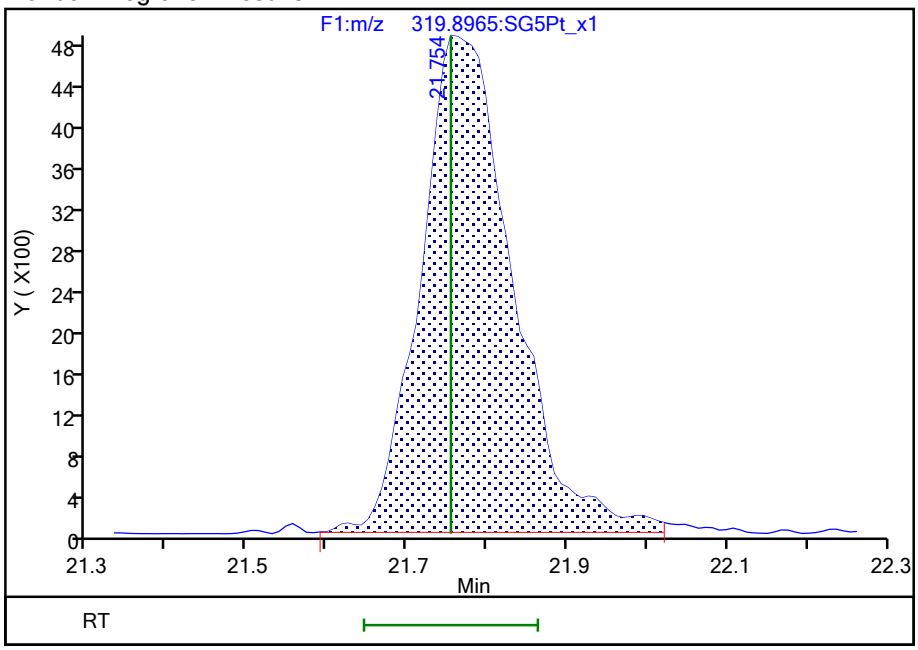

Reviewer: stephensk, 19-Aug-2021 15:38:12

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

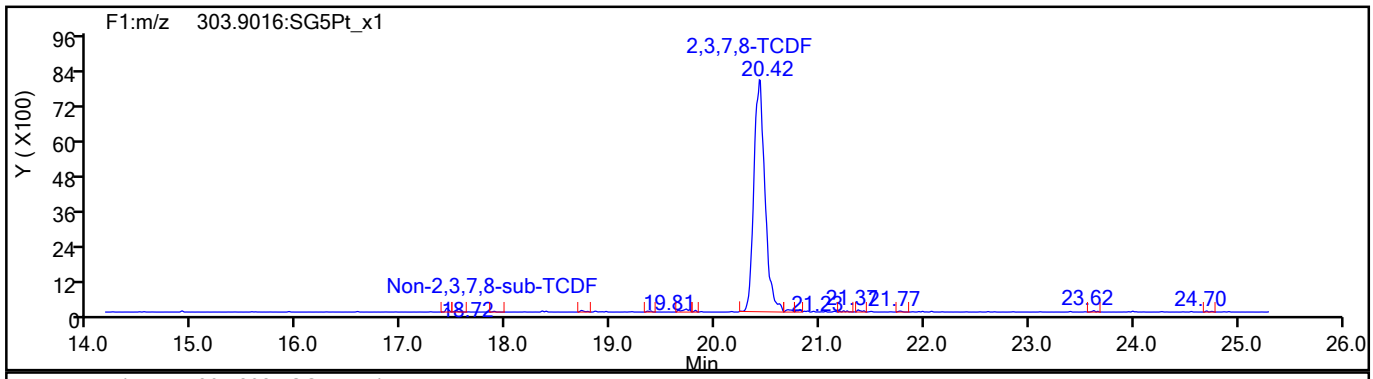

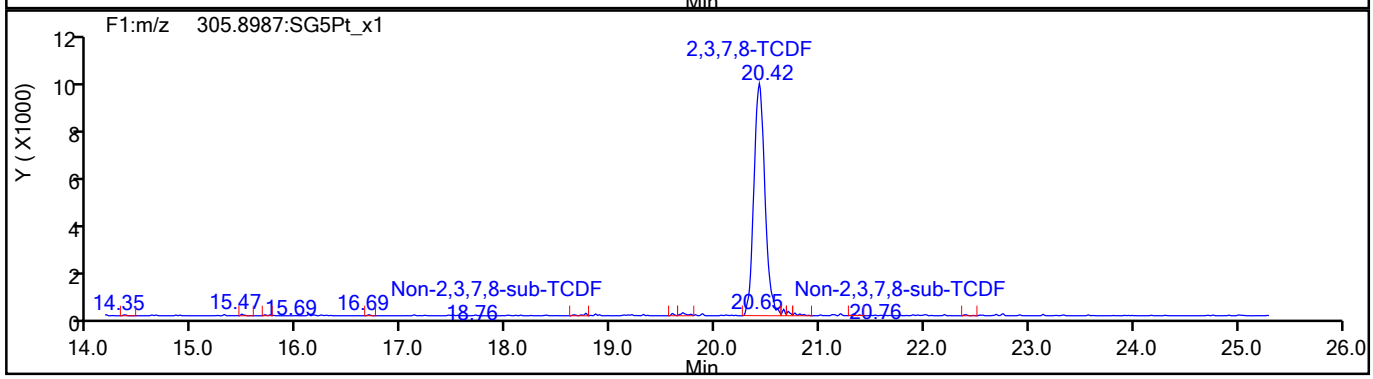

TCDF Standards

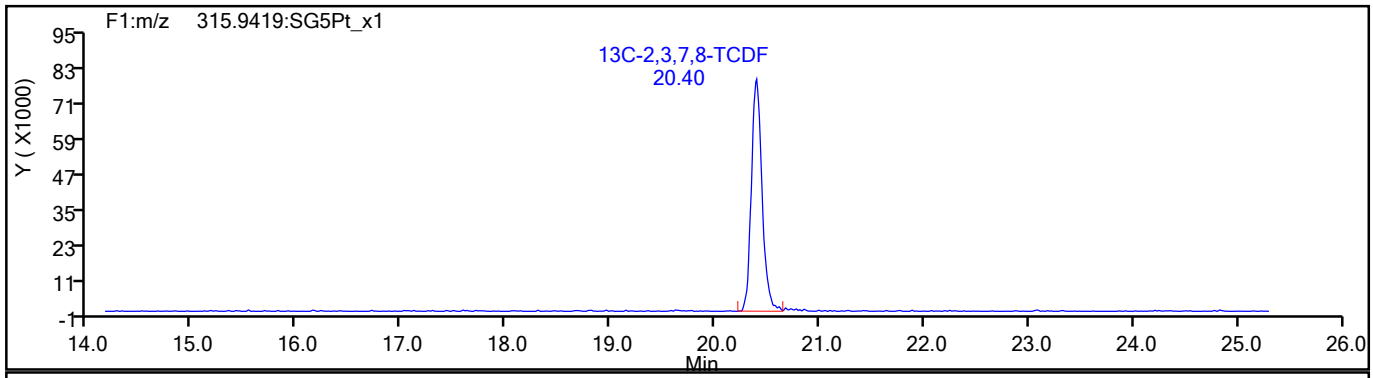

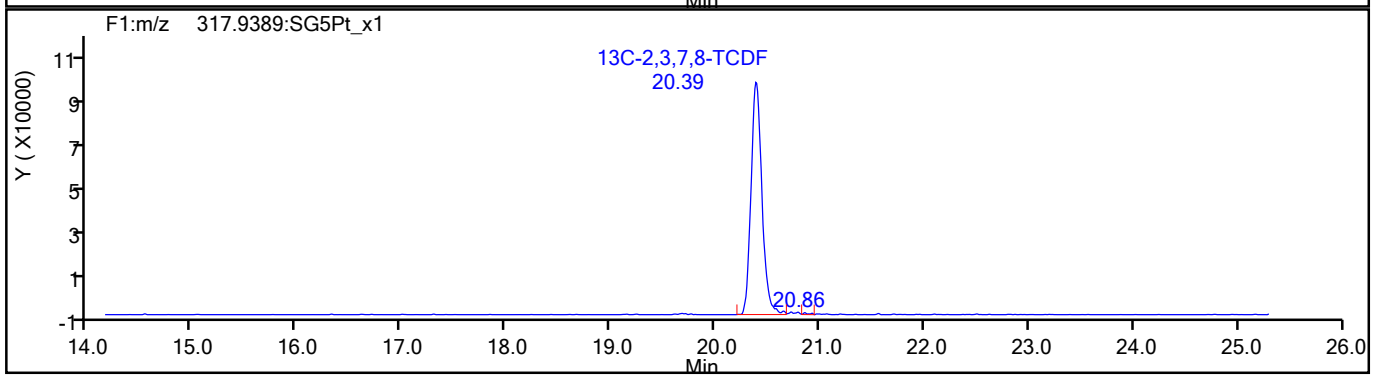

790325

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

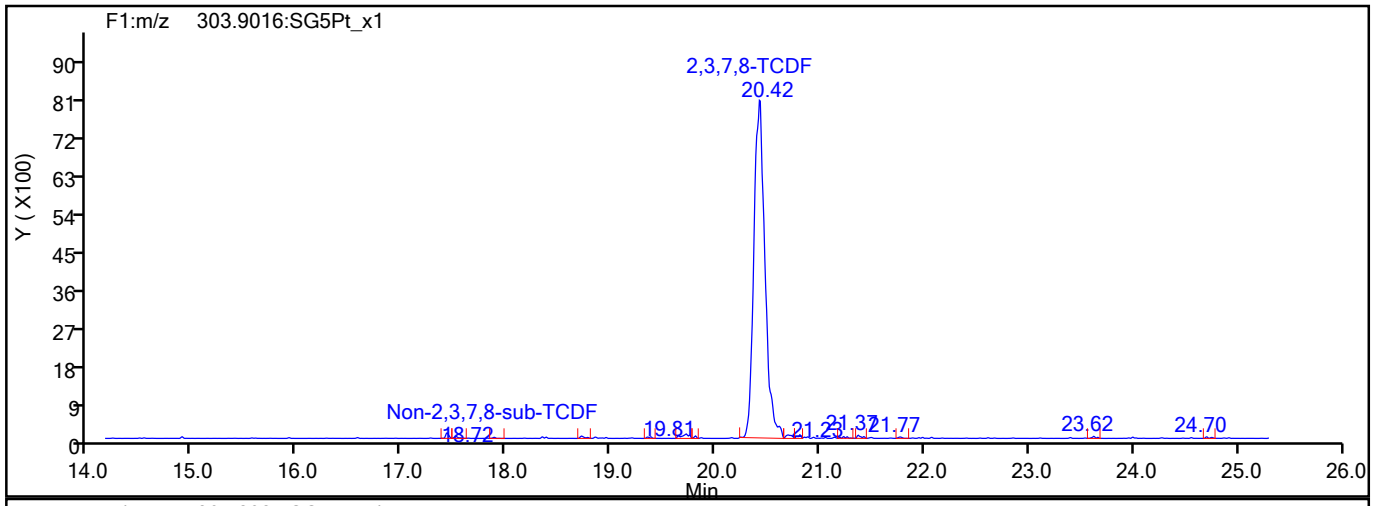

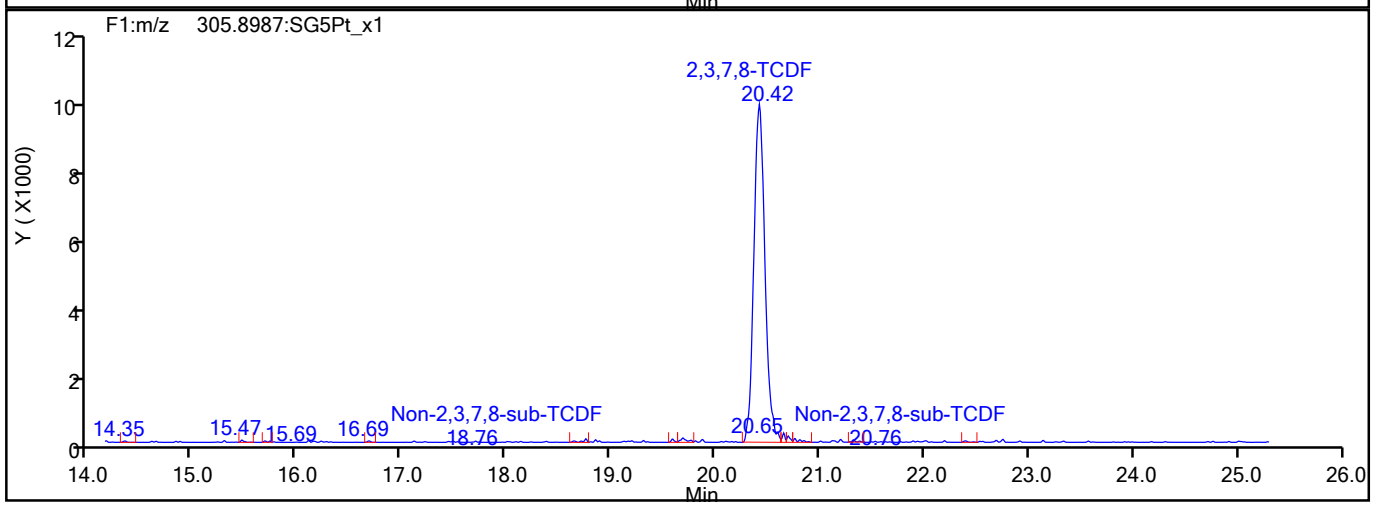

TCDF Interference Mass

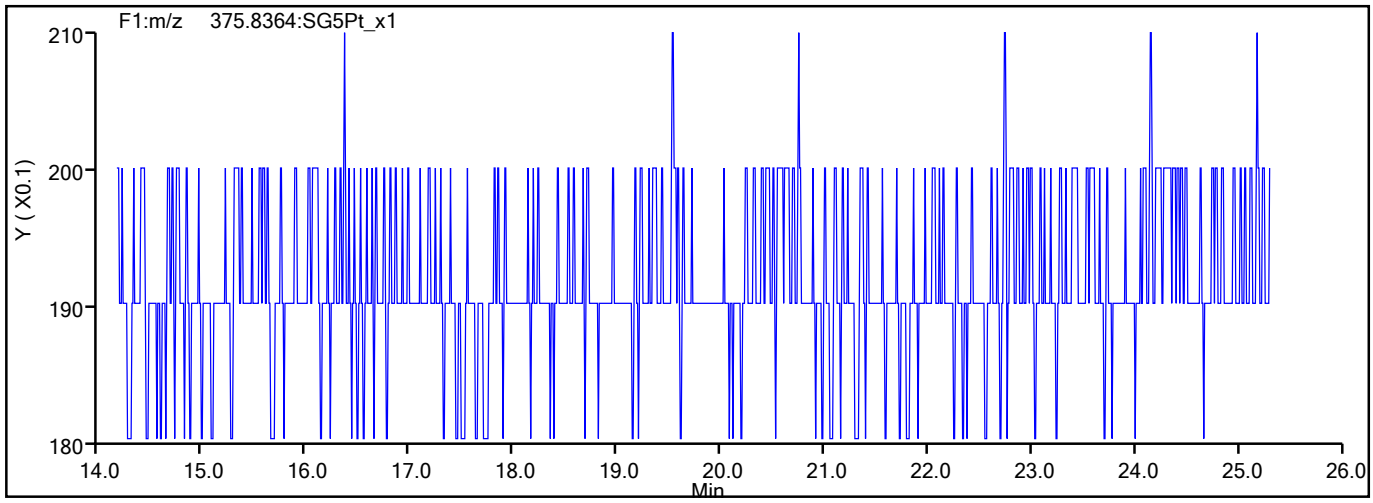

790326

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

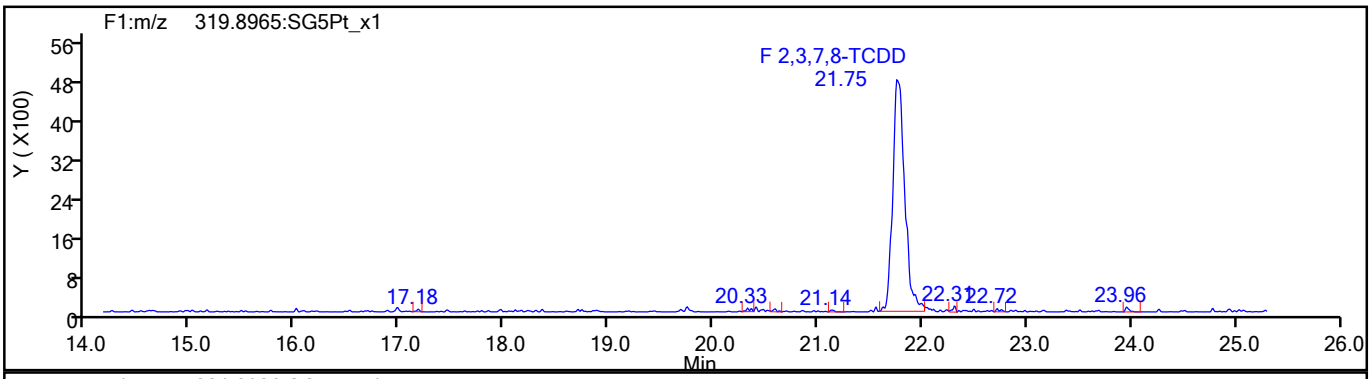

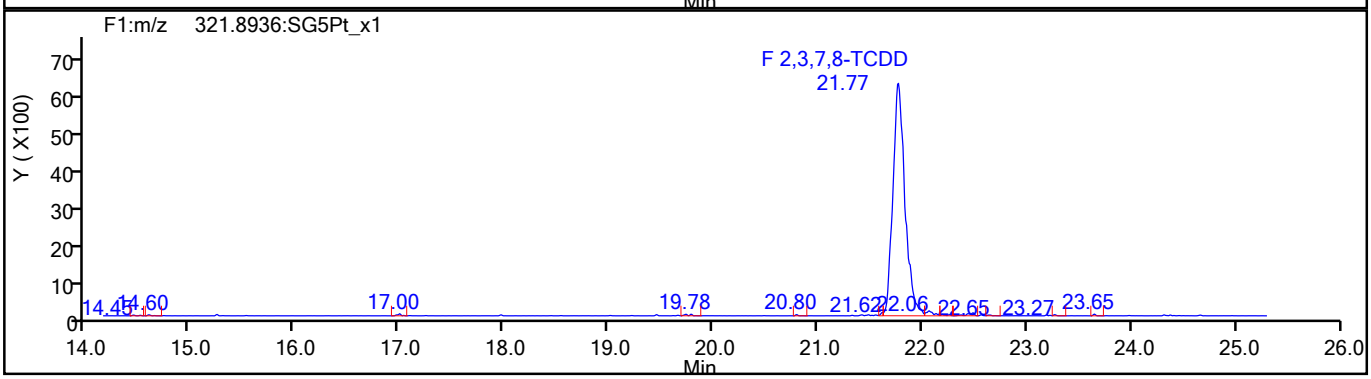

TCDD Standards

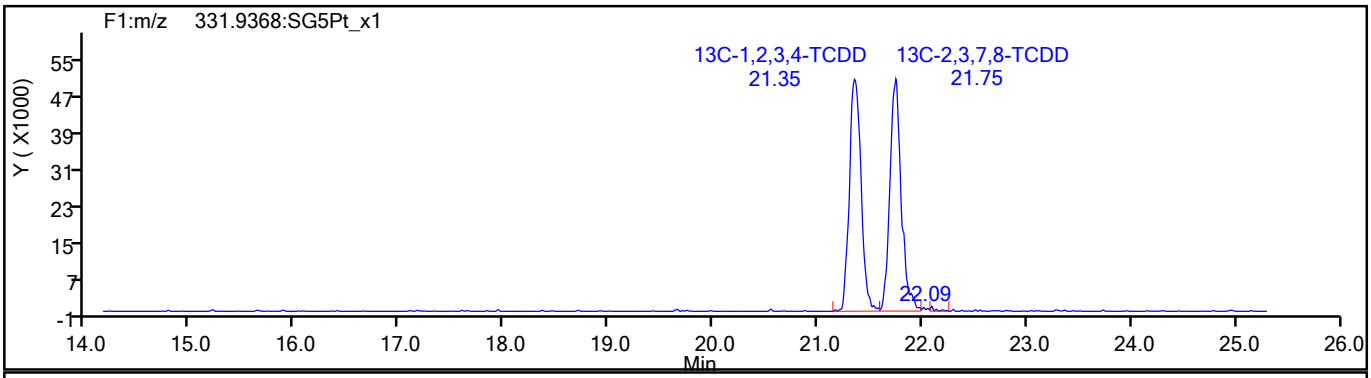

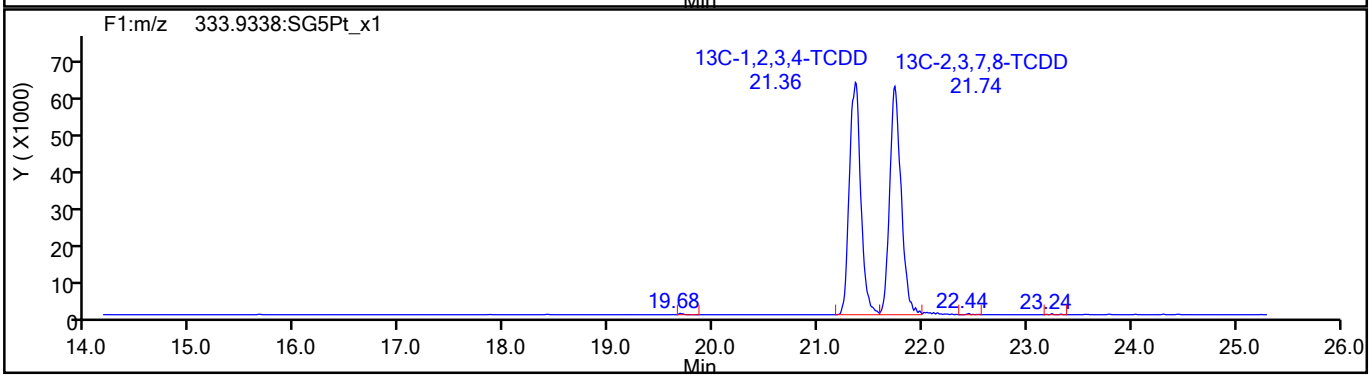

790327

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

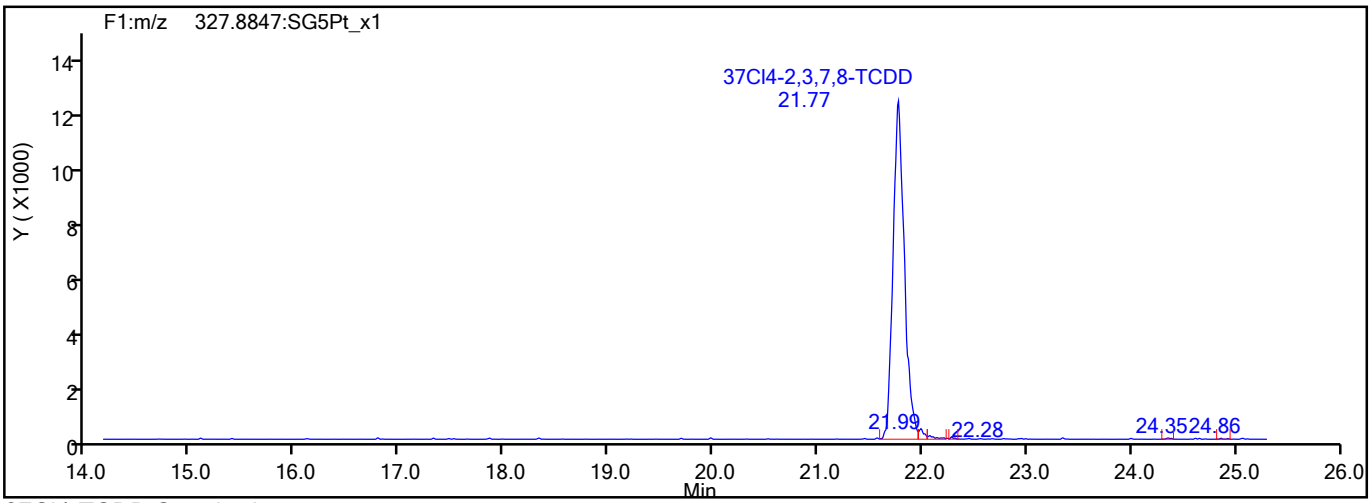

37Cl4-TCDD Standards

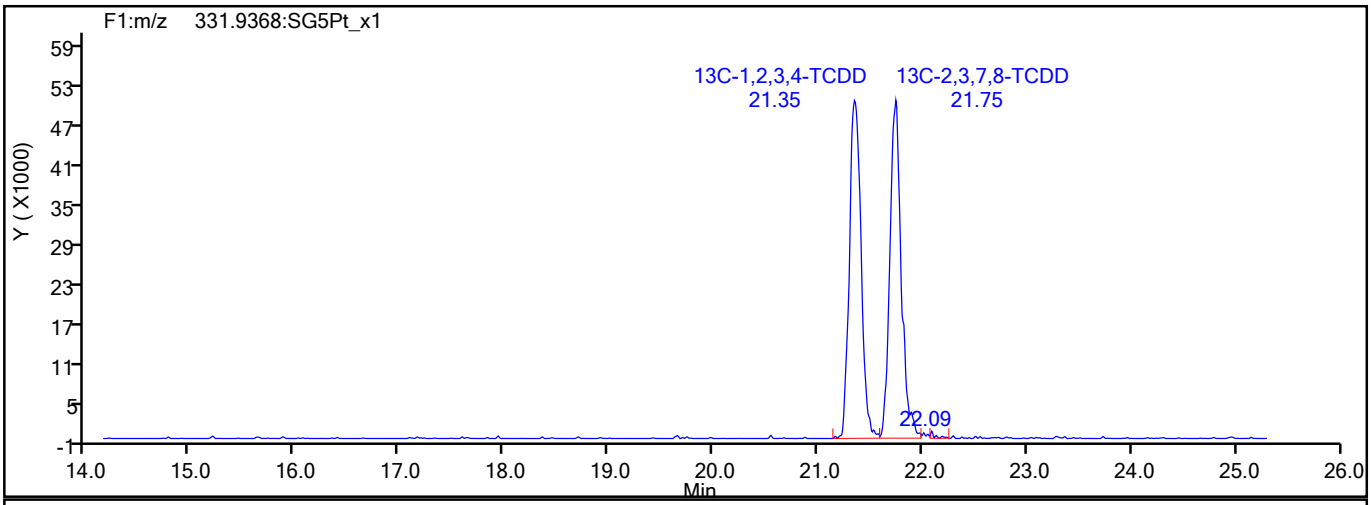

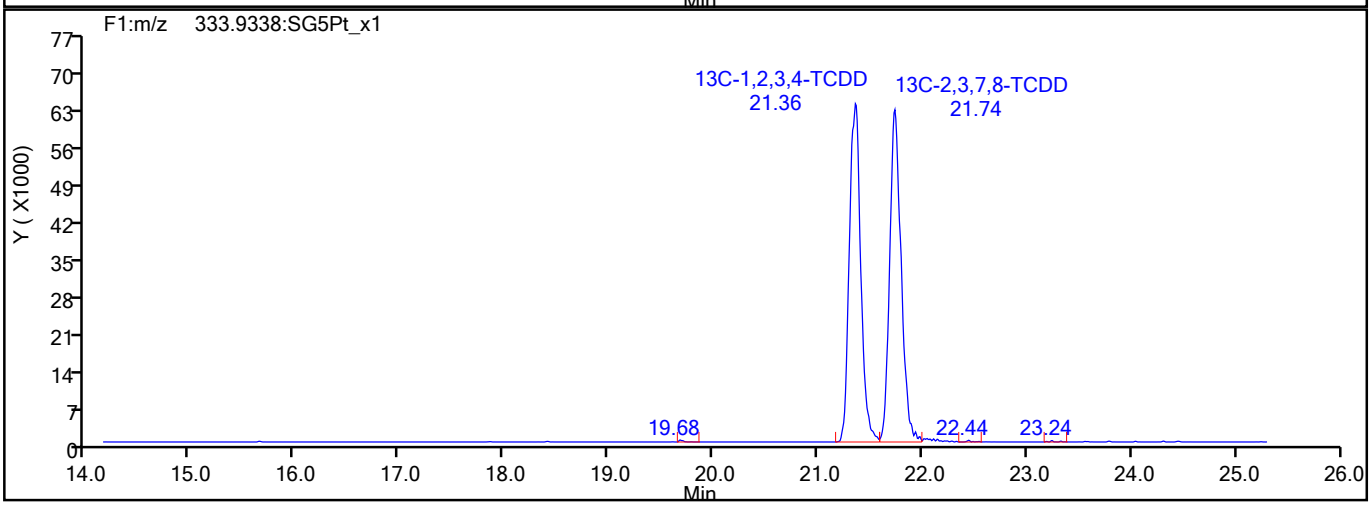

790328

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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F1 PeCDFs

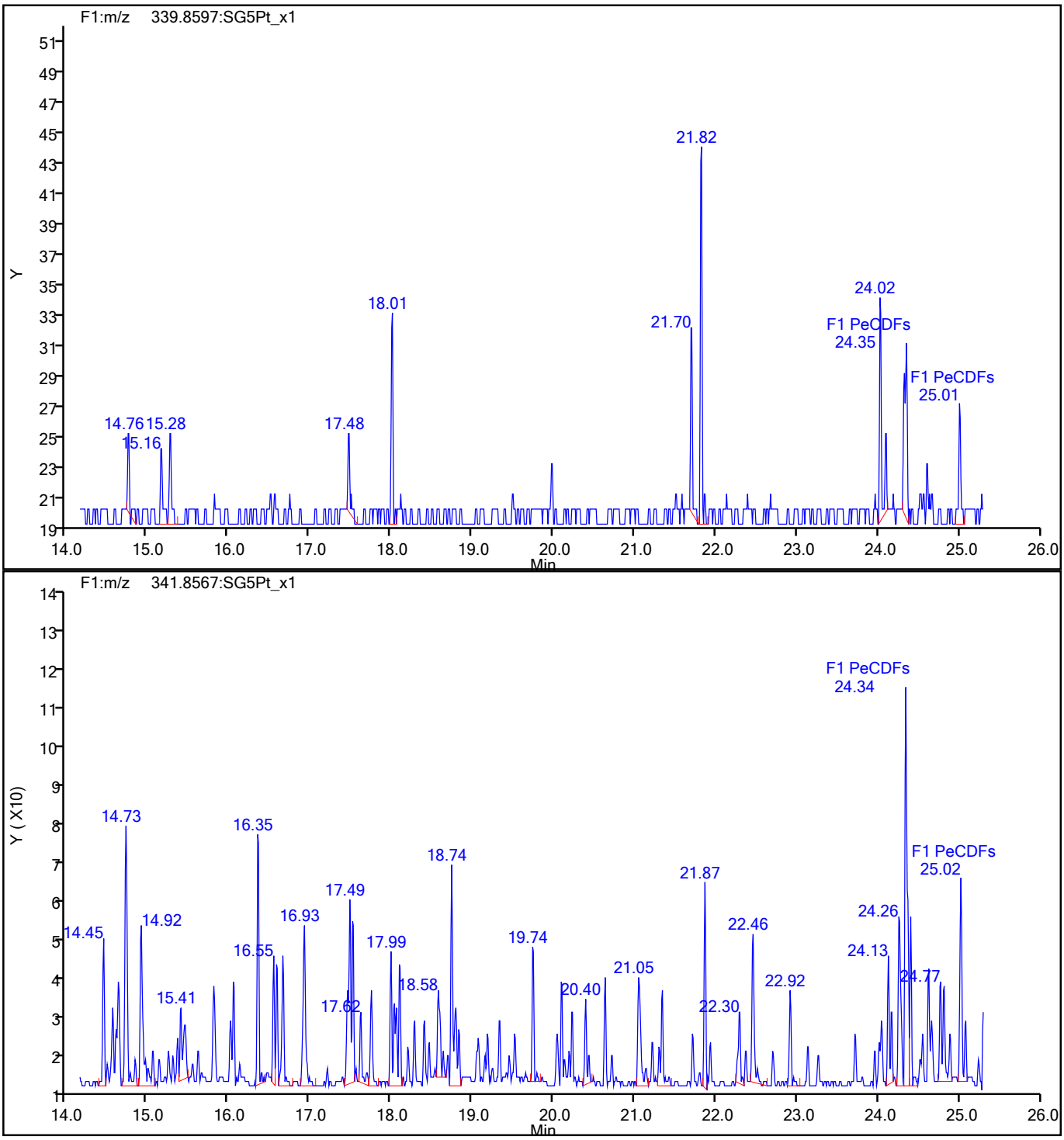

790329

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

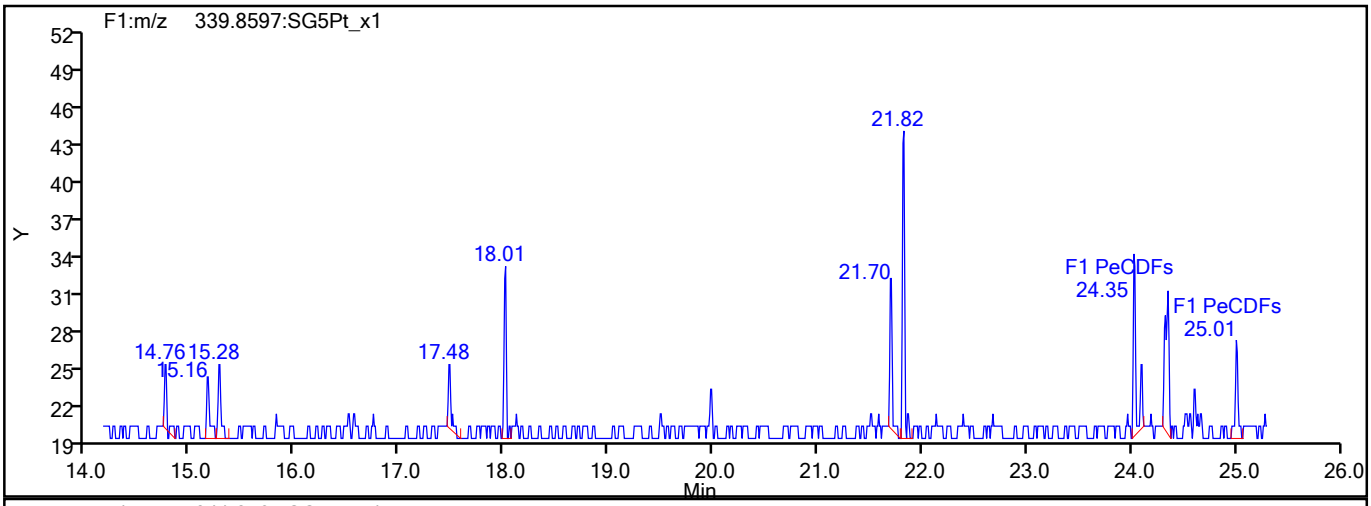

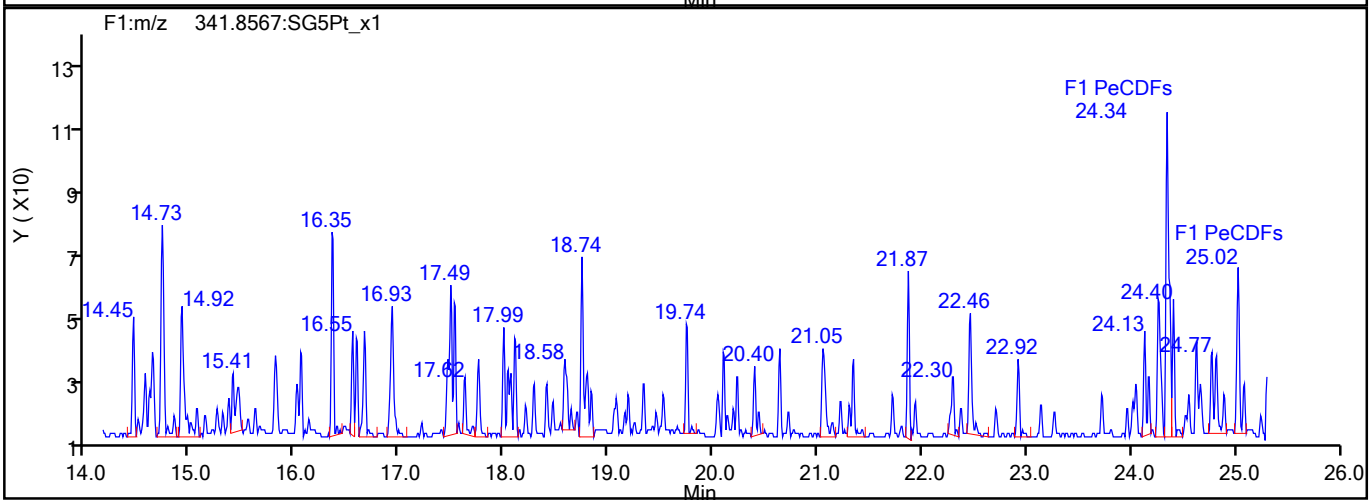

F1 PeCDFs Interference Mass

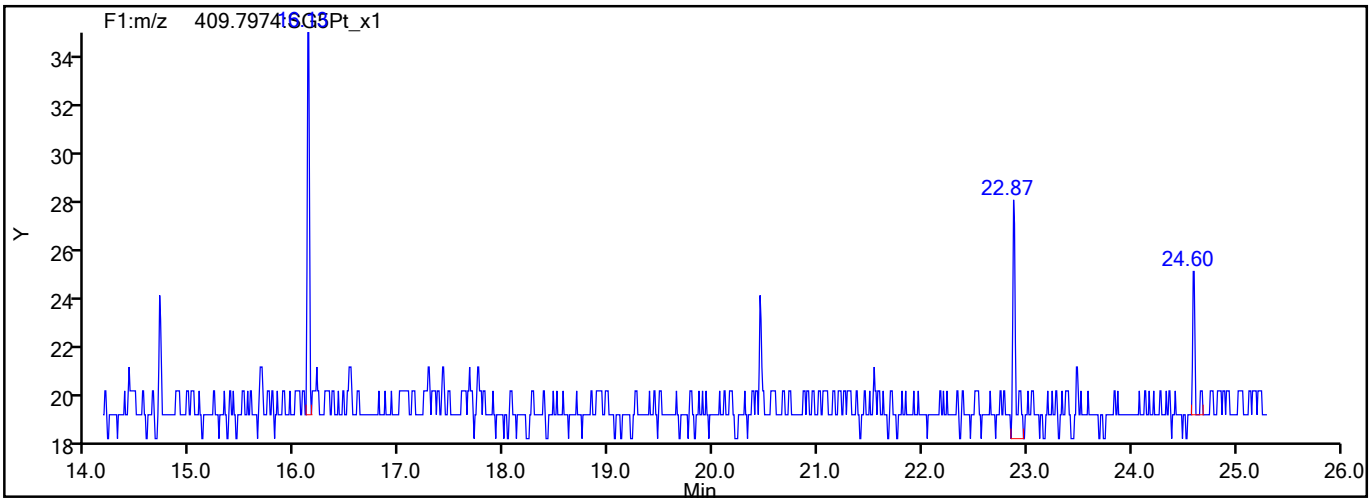

790330

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

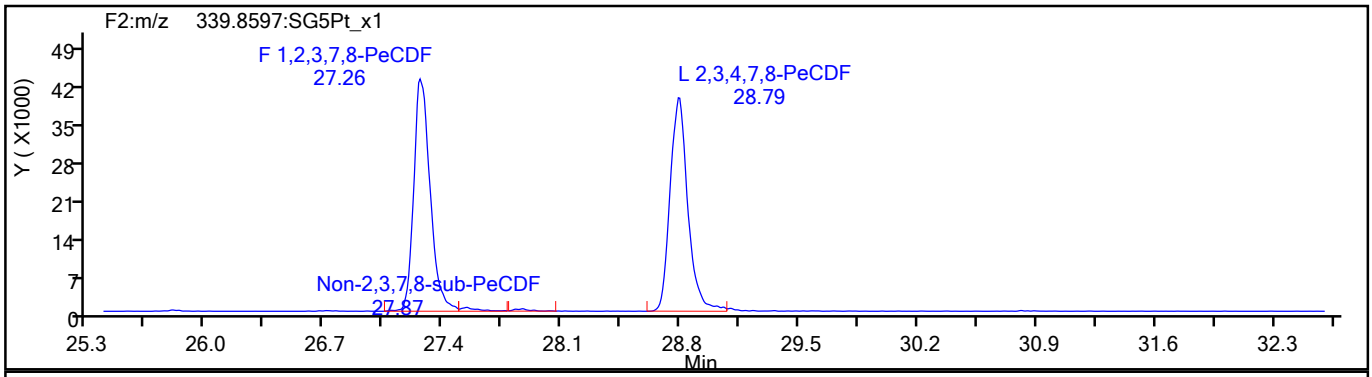

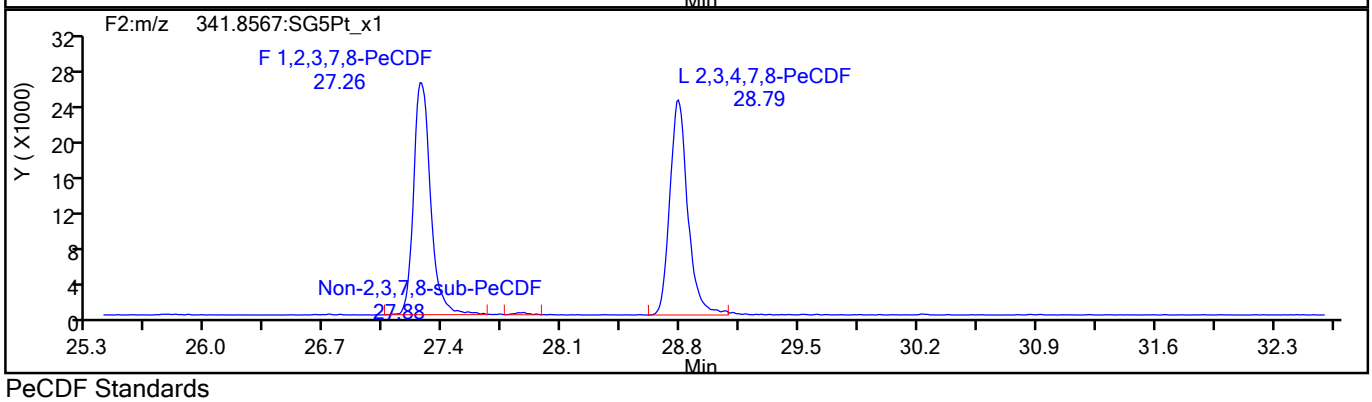

PeCDF Standards

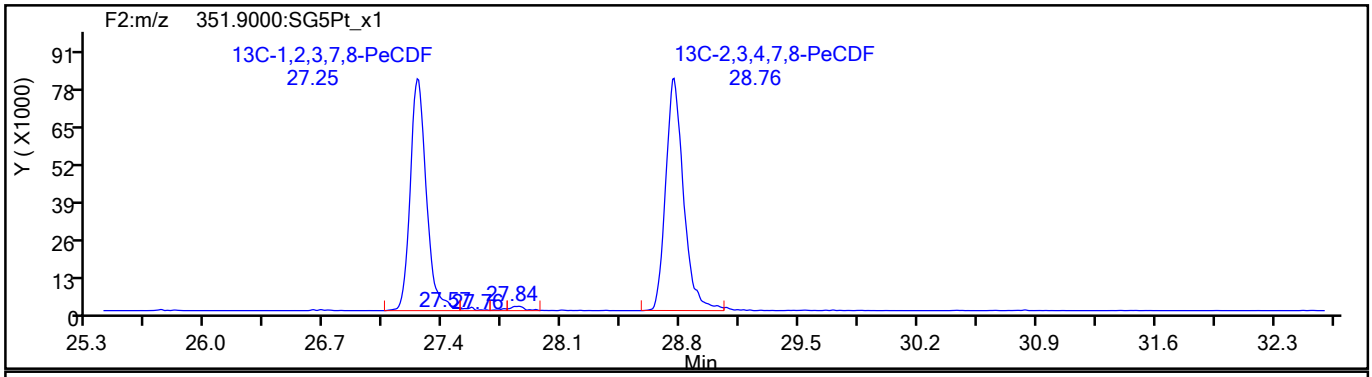

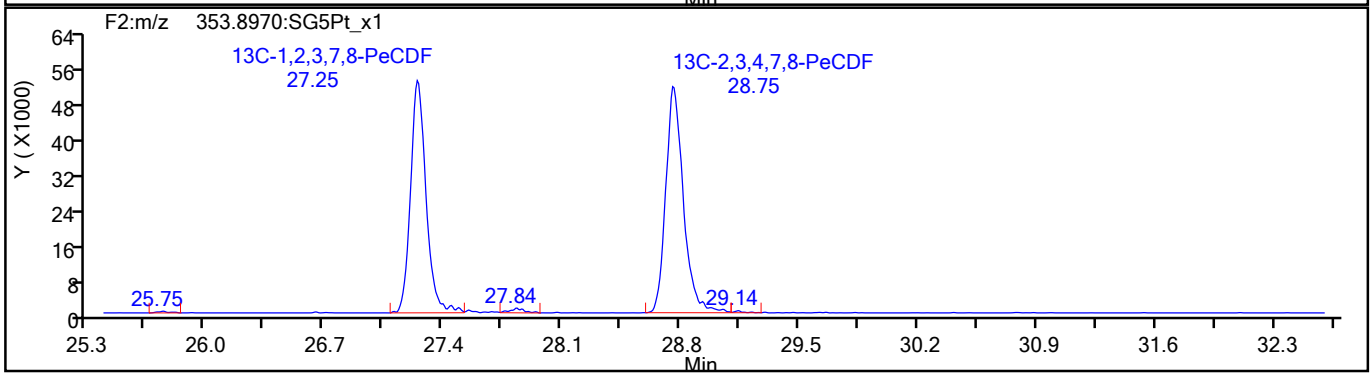

790331

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

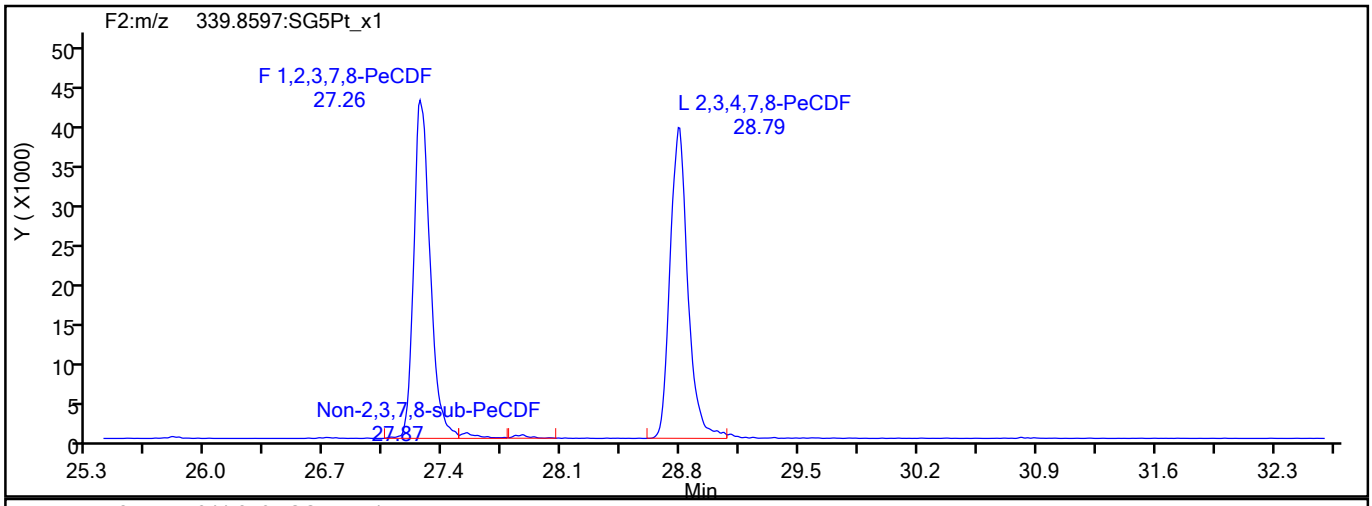

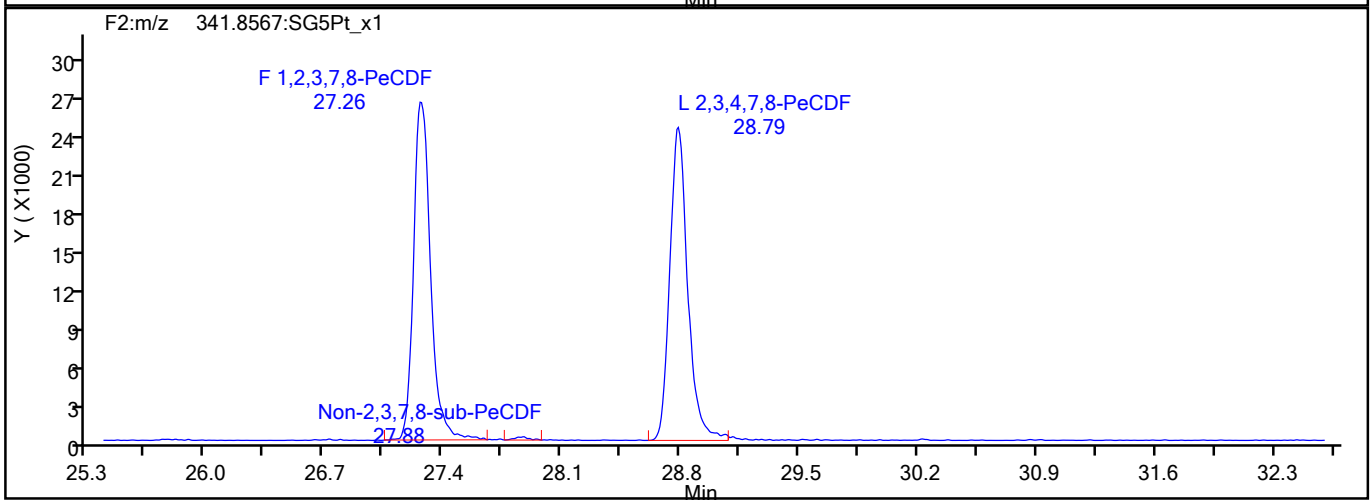

PeCDF Interference Mass

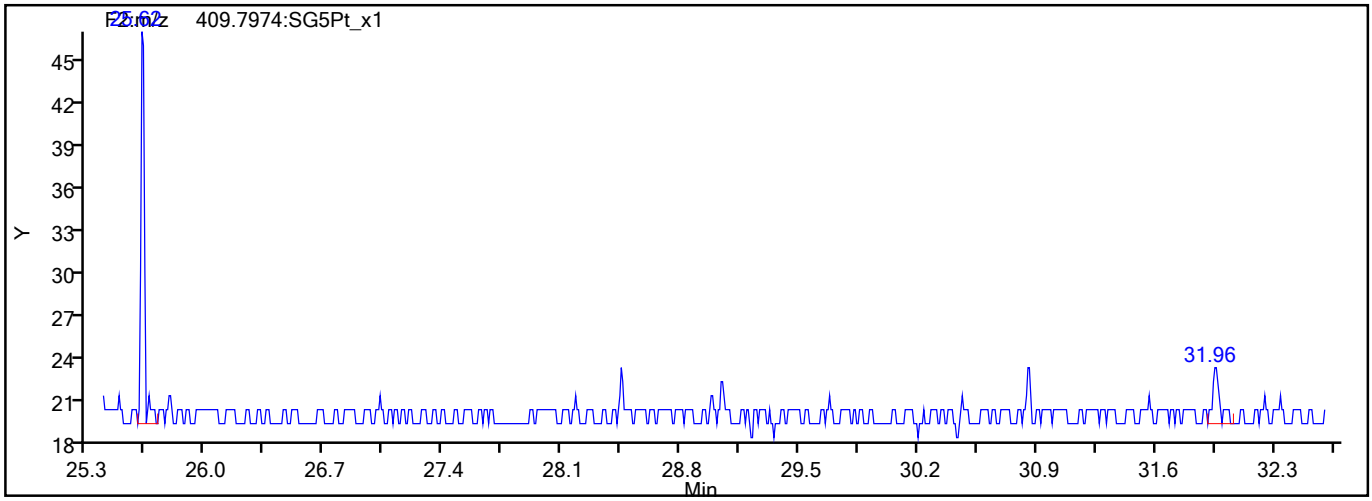

790332

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

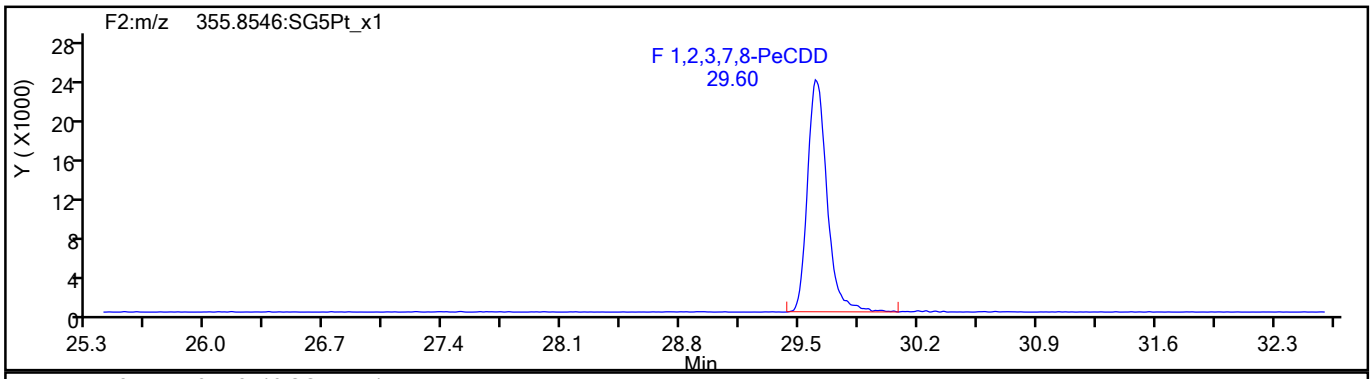

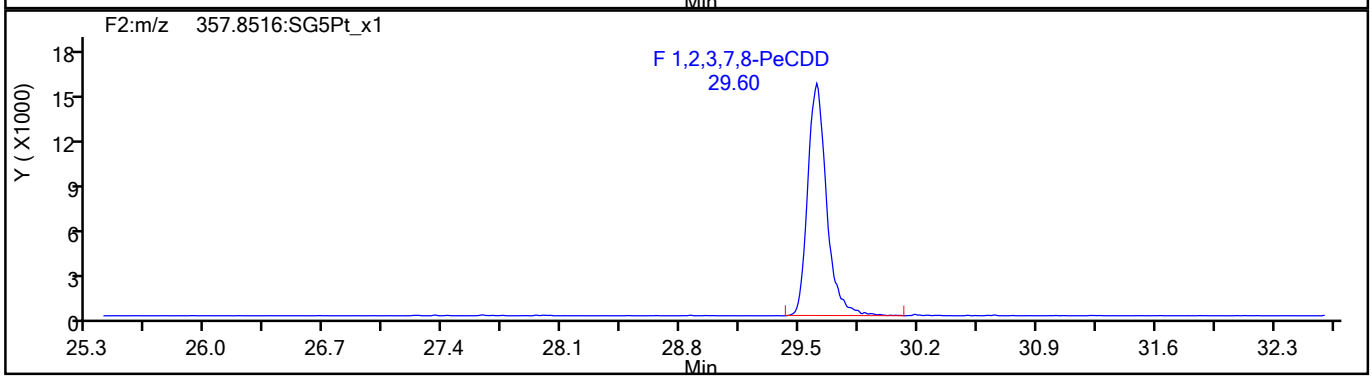

PeCDD Standards

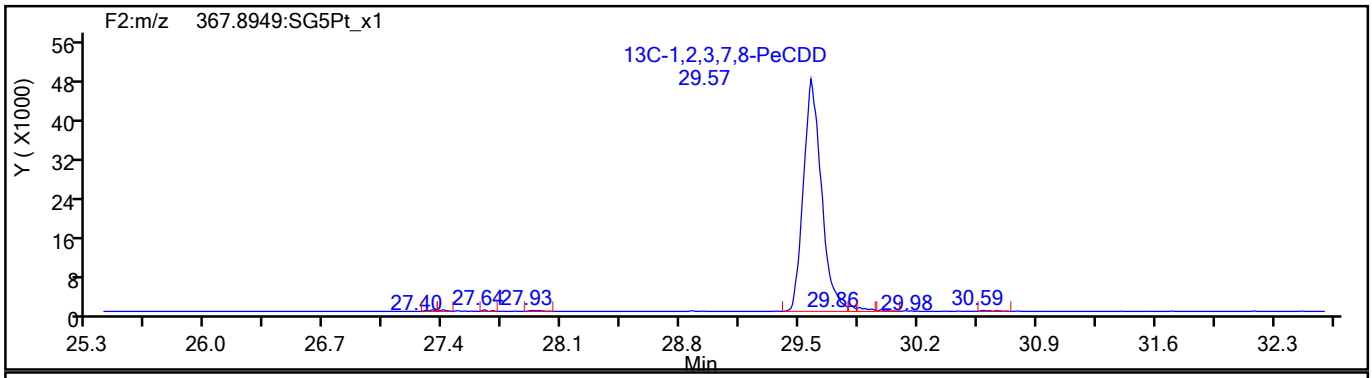

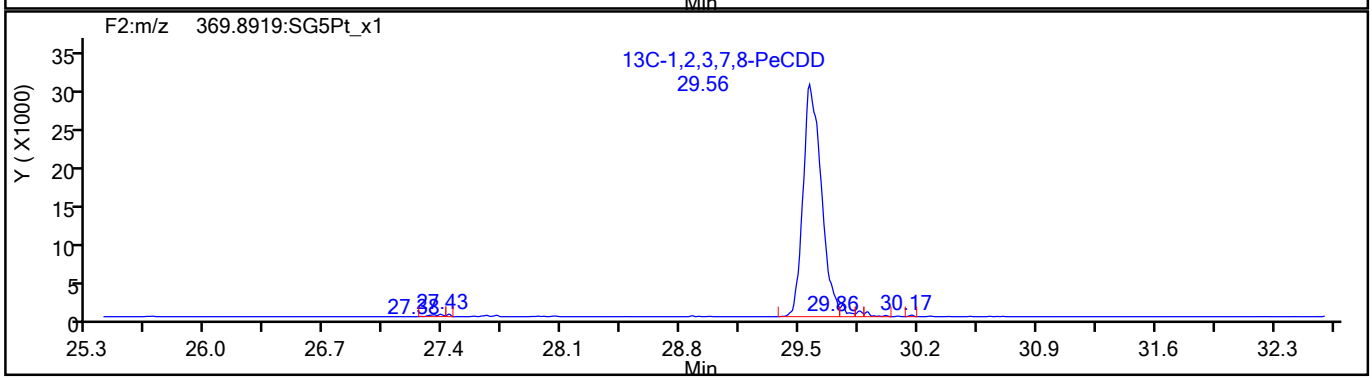

790333

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

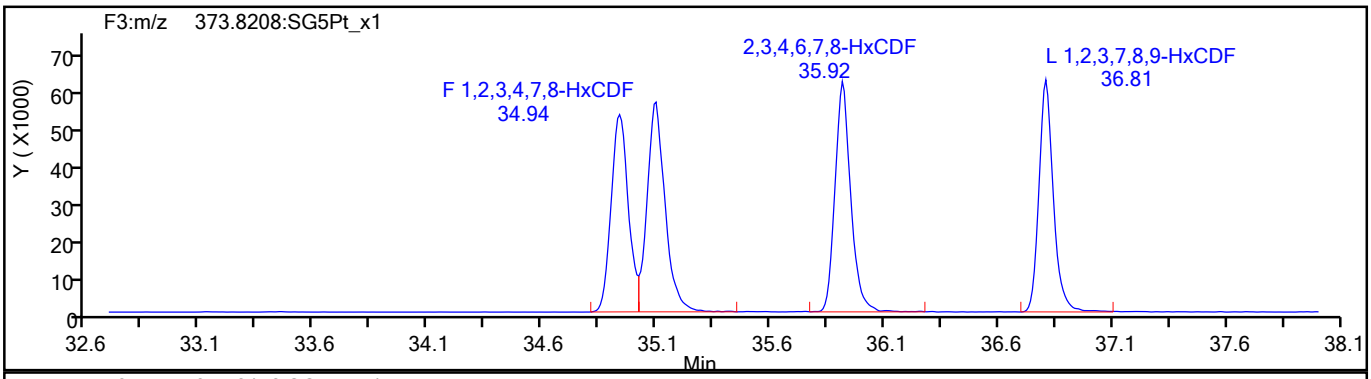

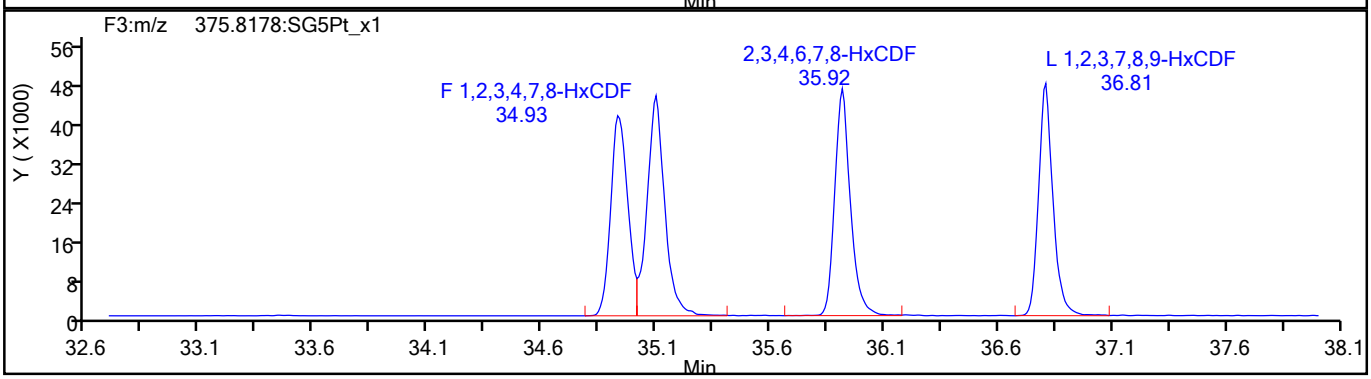

HxCDF Standards

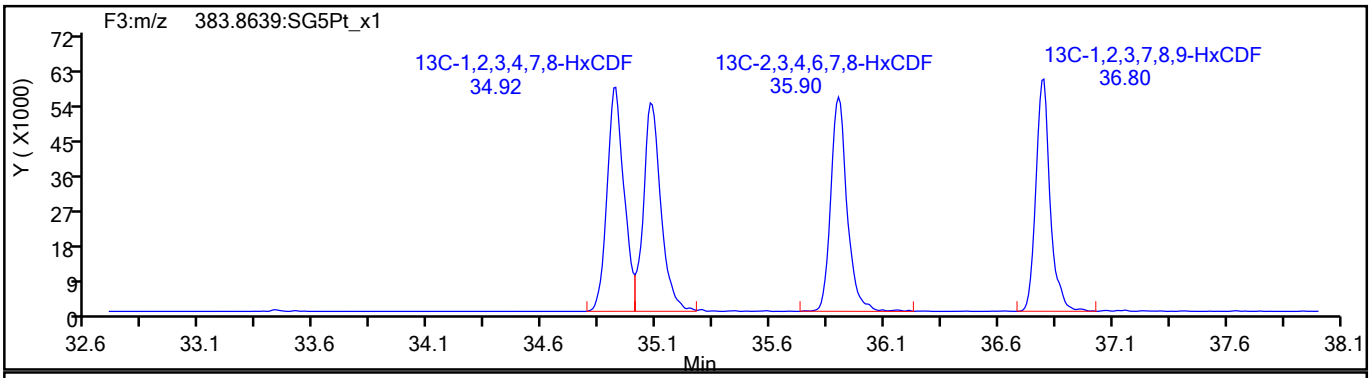

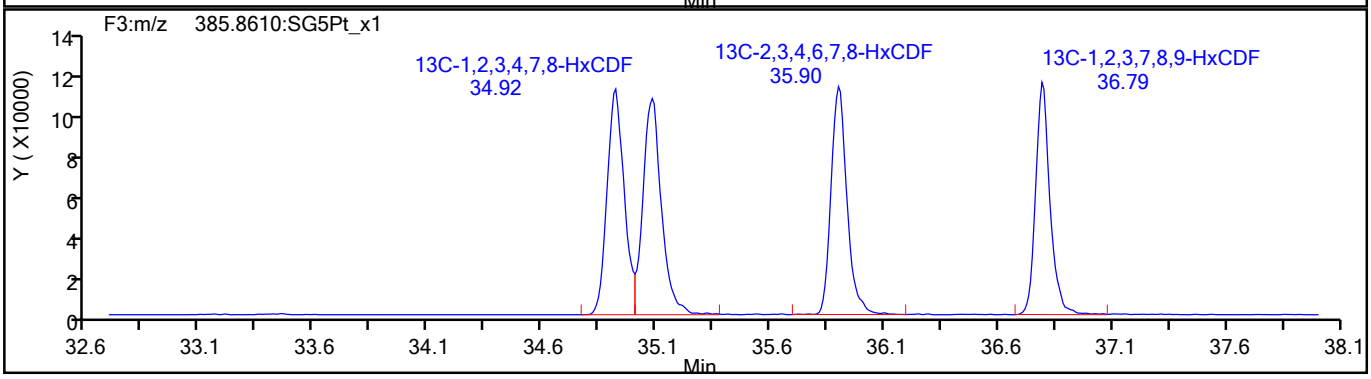

790334

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

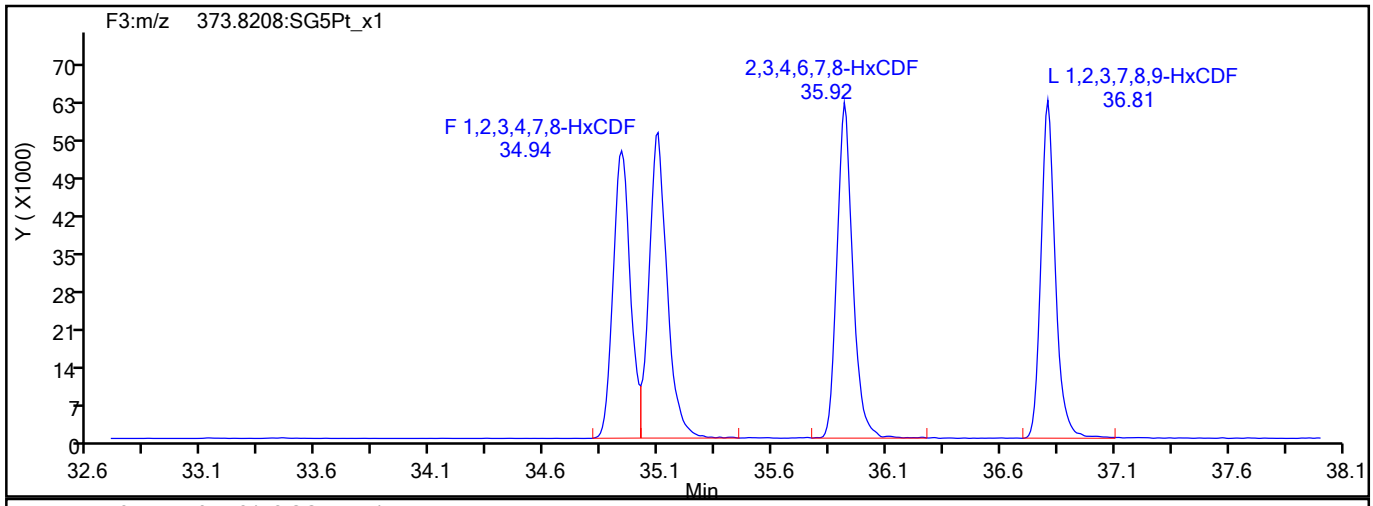

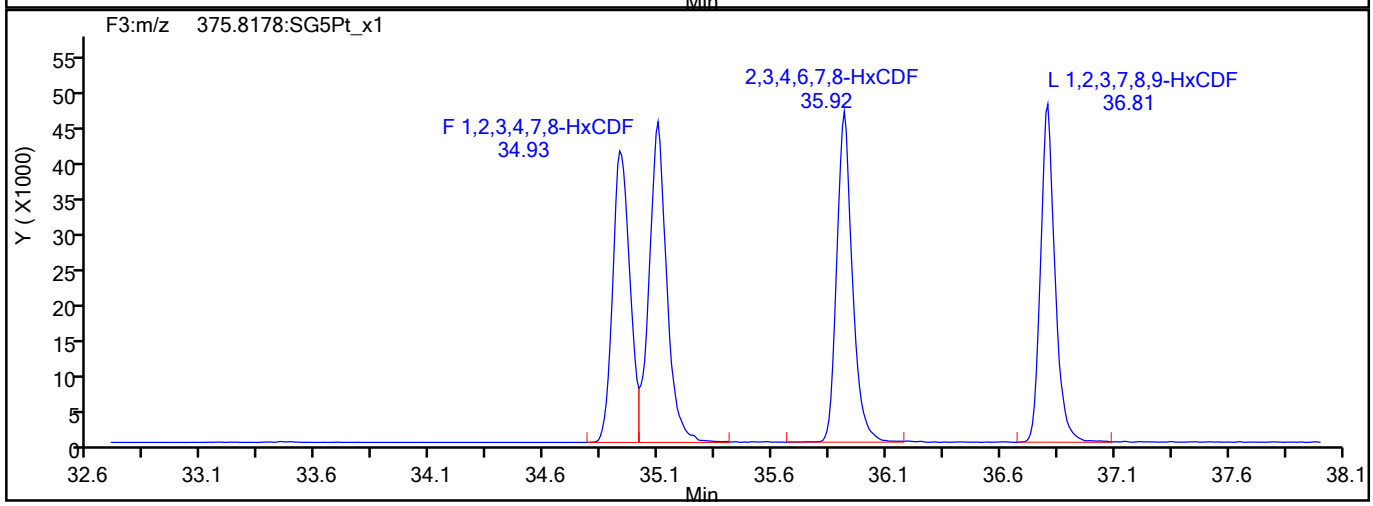

HxCDF Interference Mass

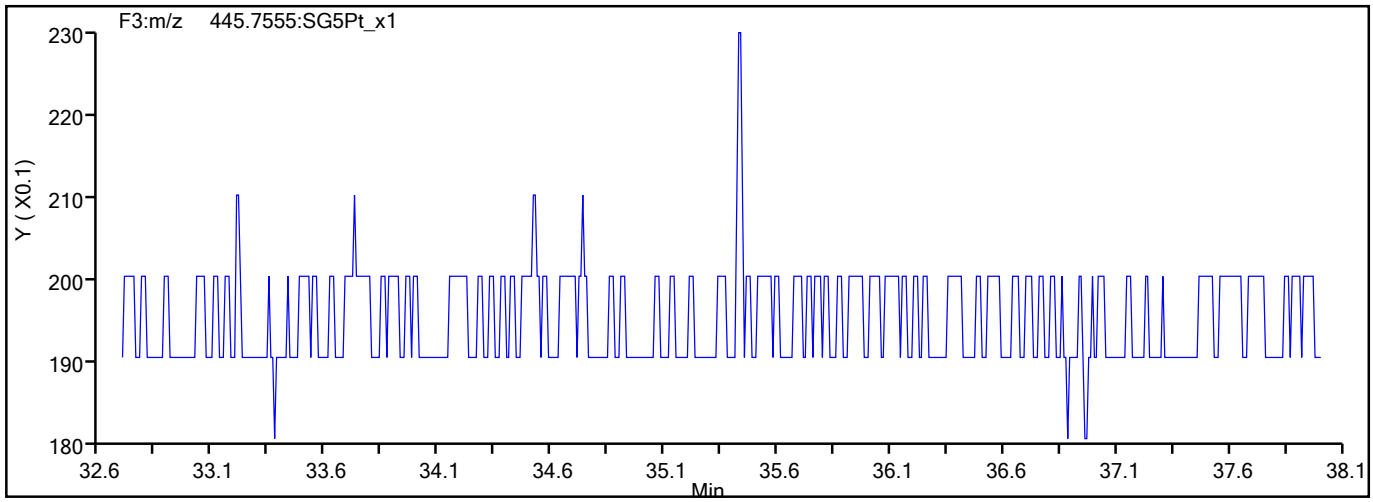

790335

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

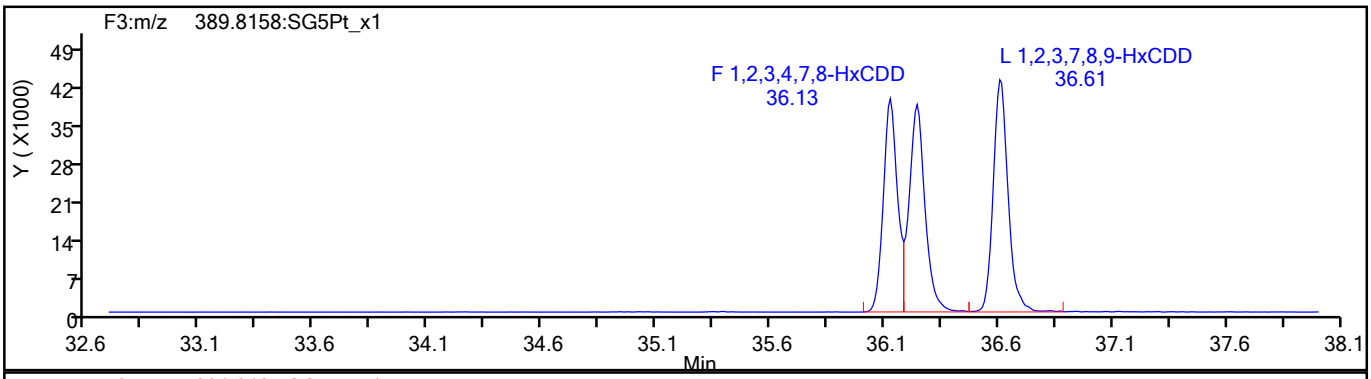

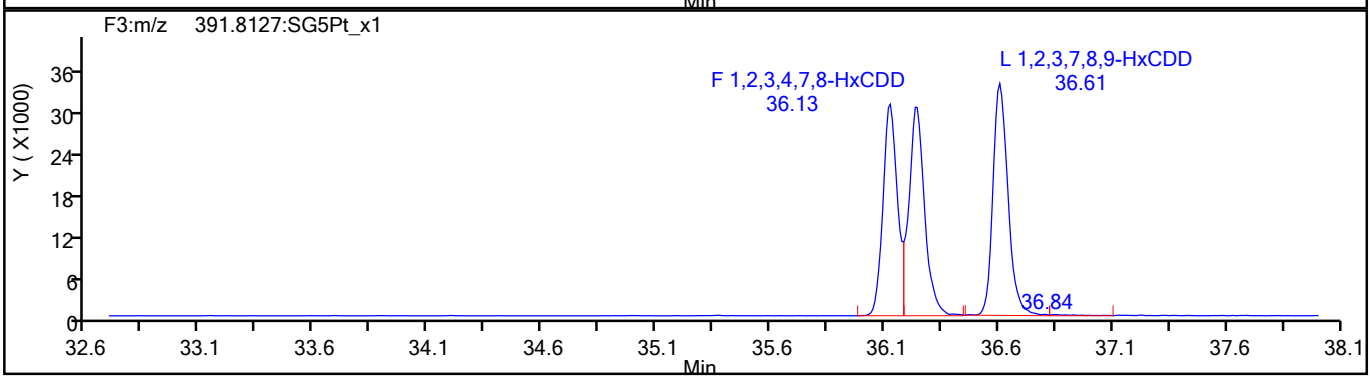

HxCDD Standards

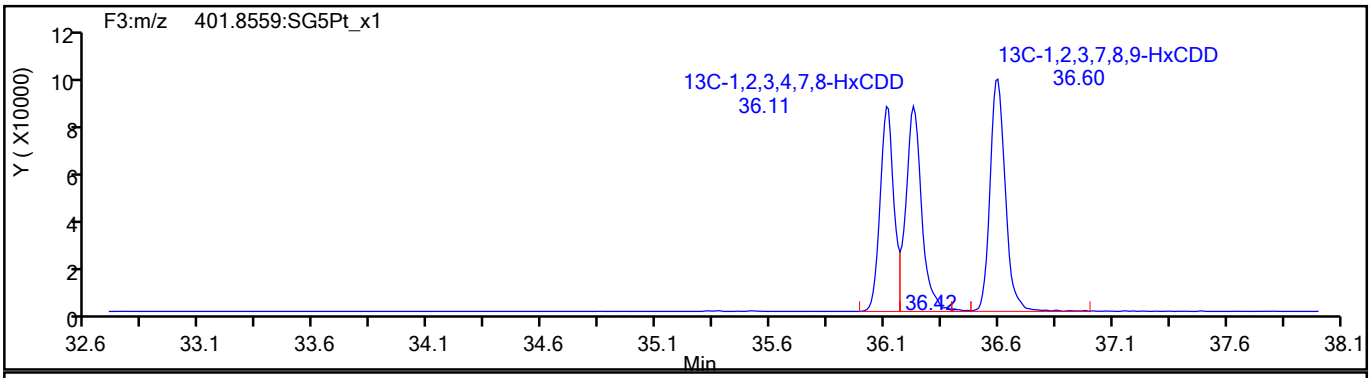

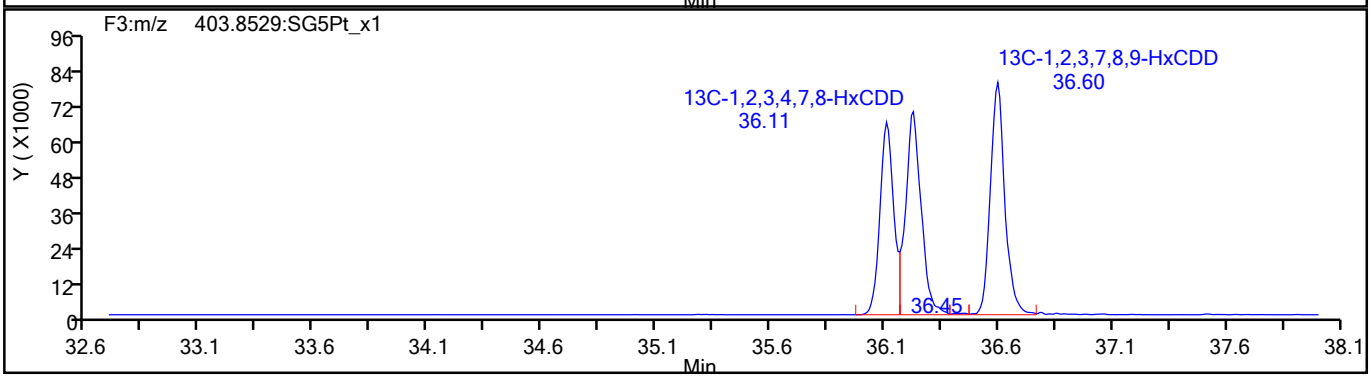

790336

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

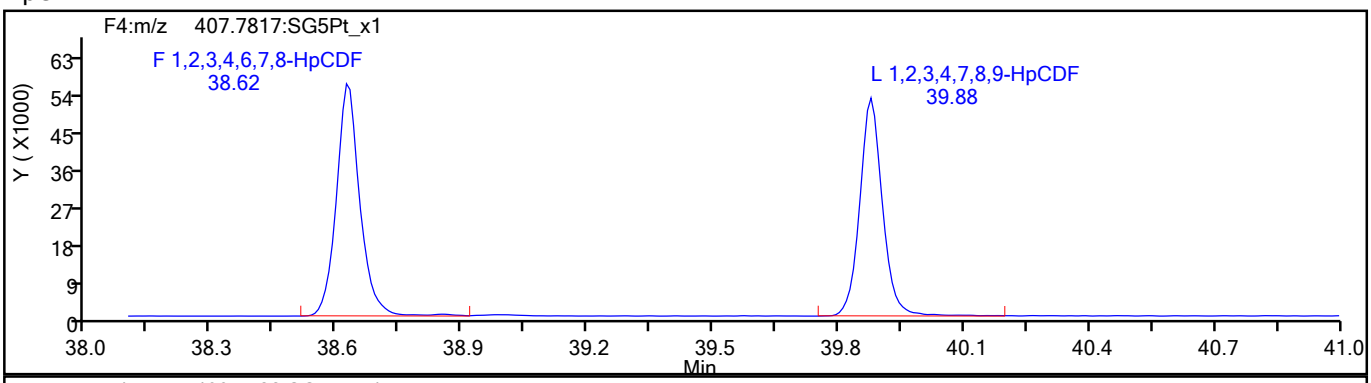

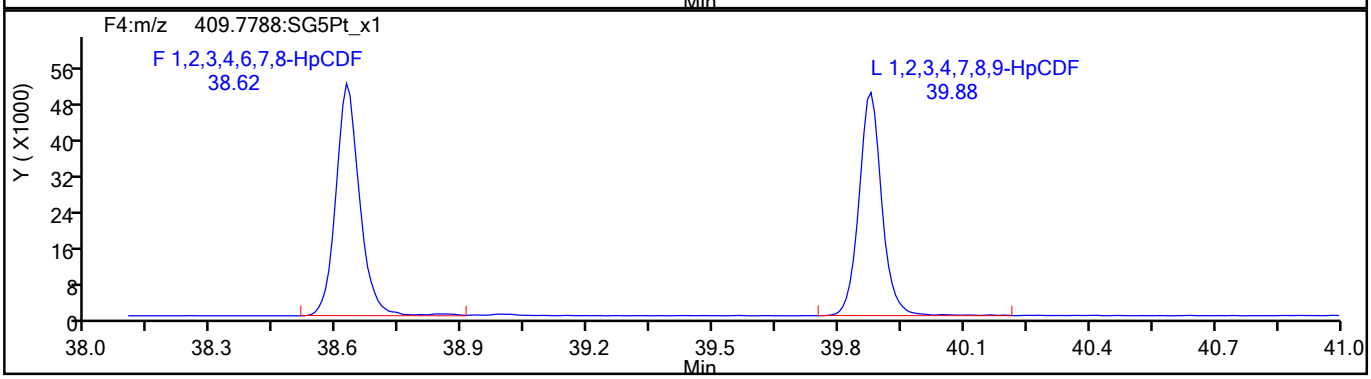

HpCDF Standards

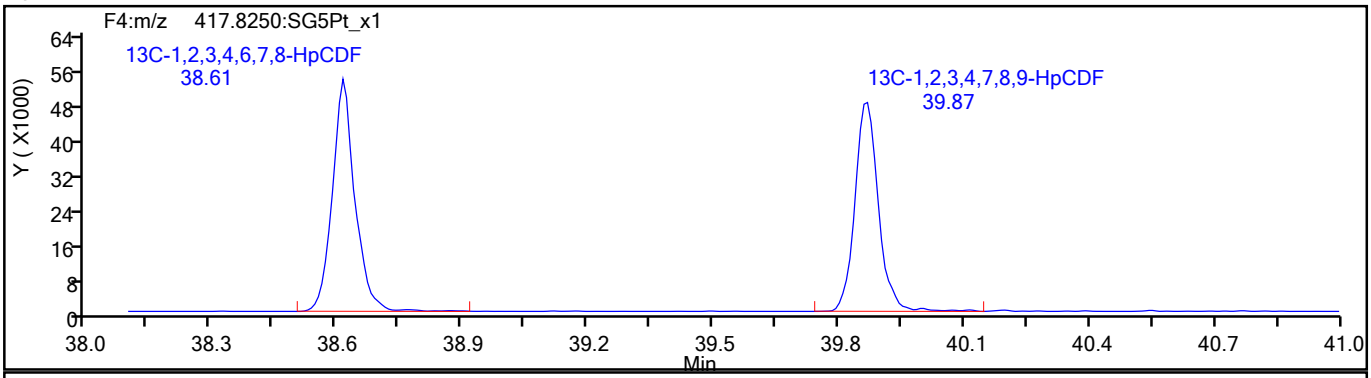

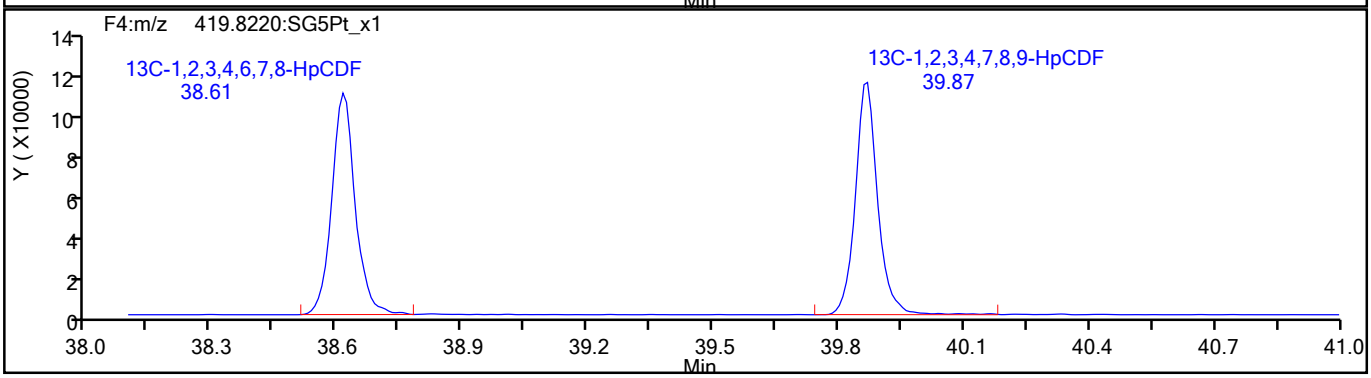

790337

Report Date: 21-Aug-2021 17:06:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

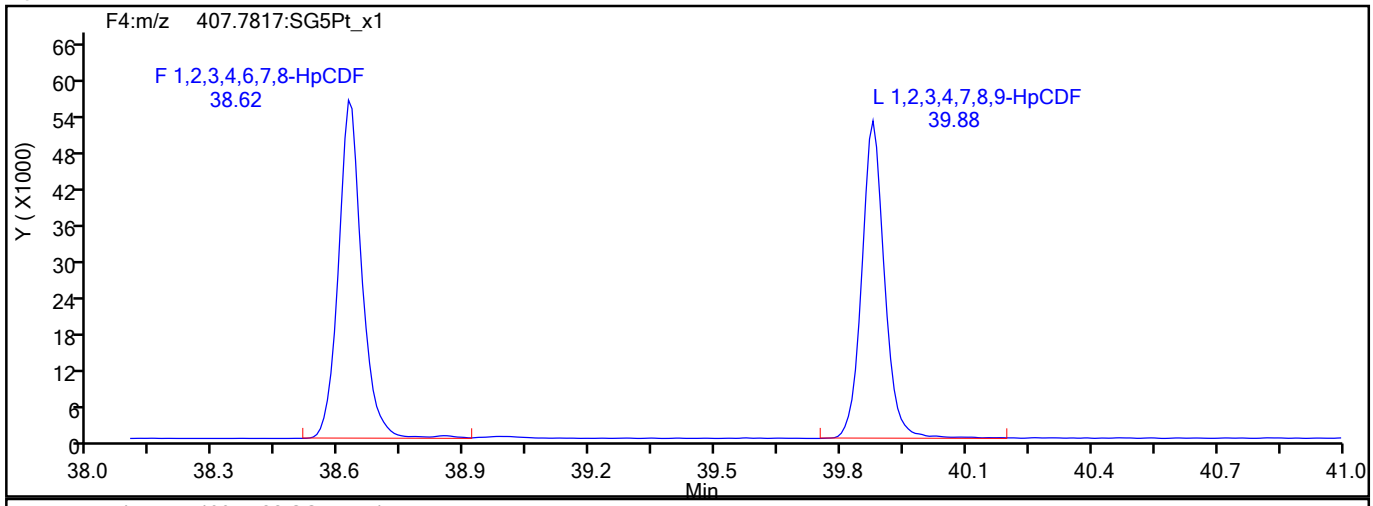

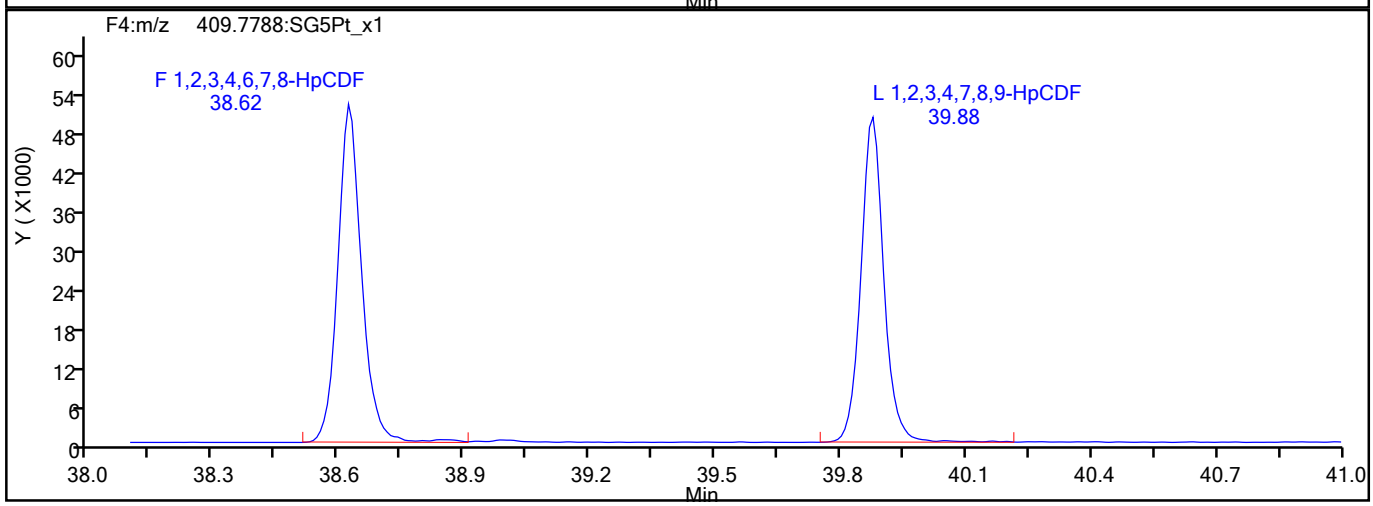

HpCDF Interference Mass

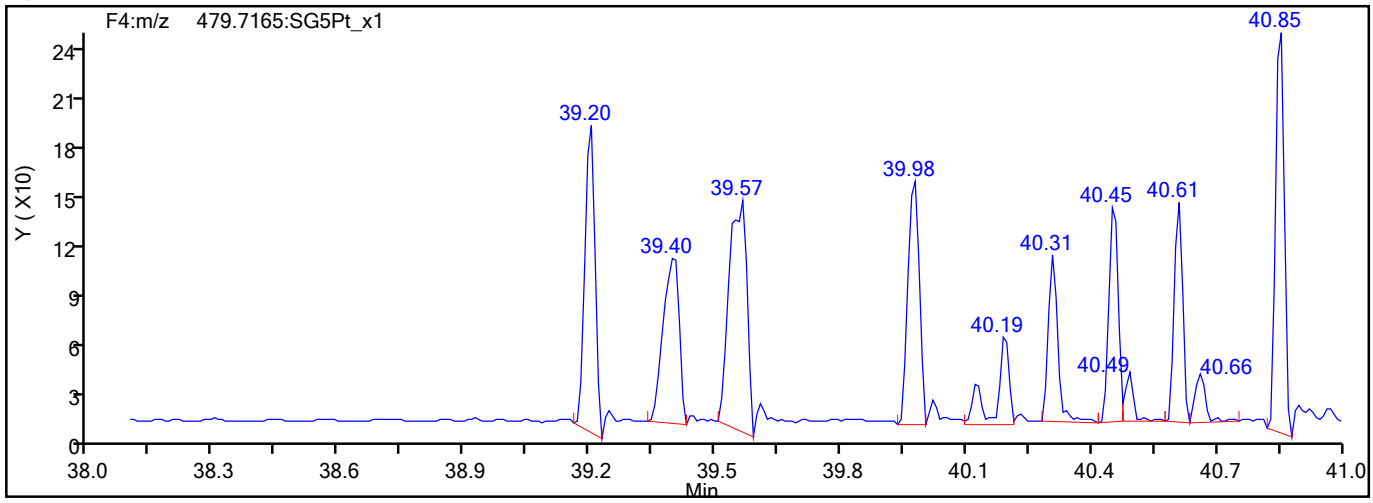

790338

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

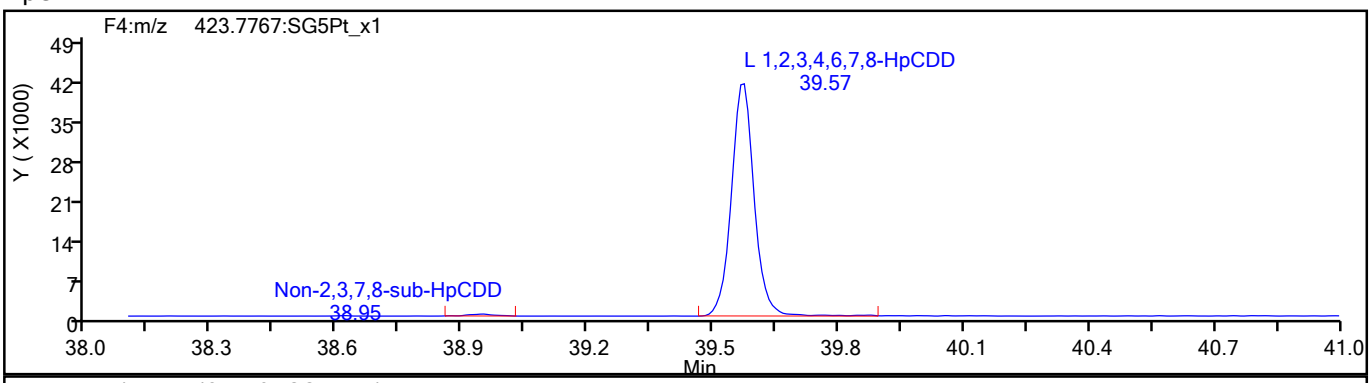

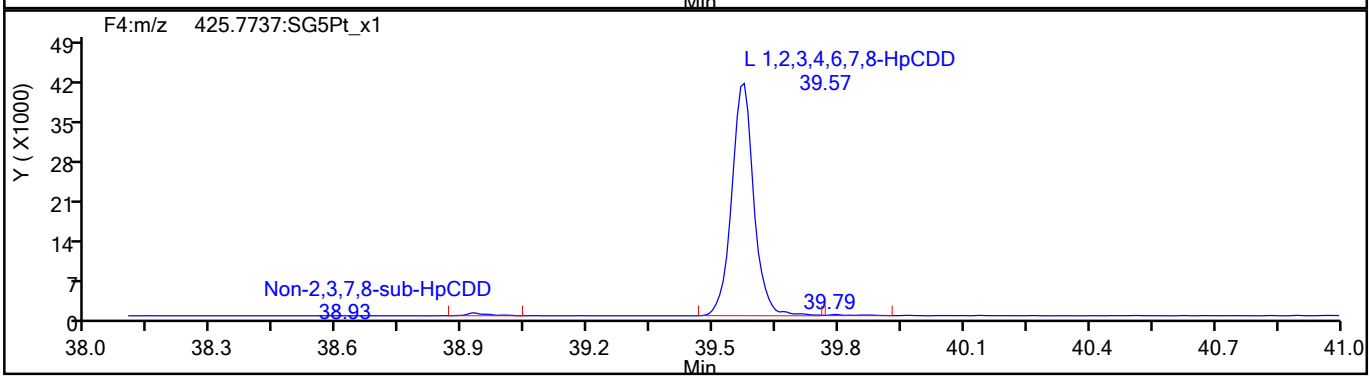

HpCDD Standards

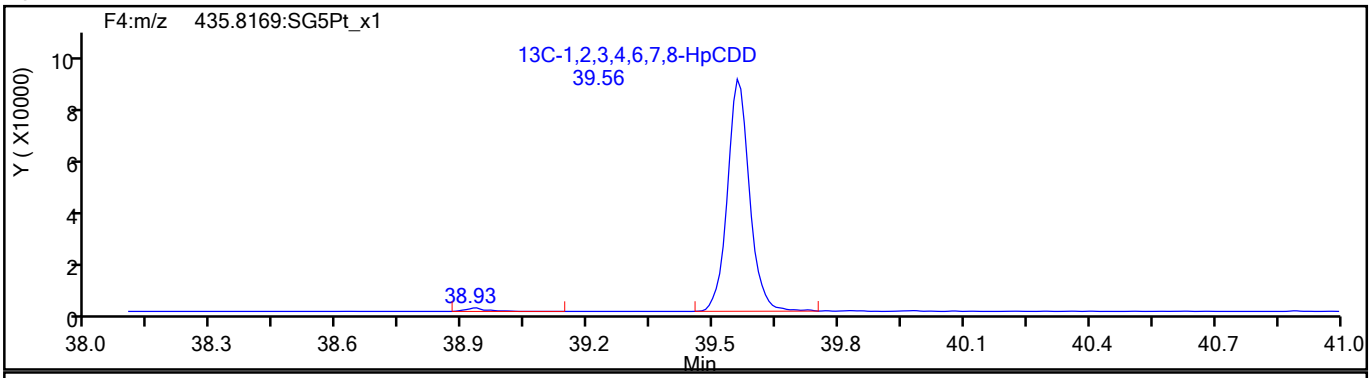

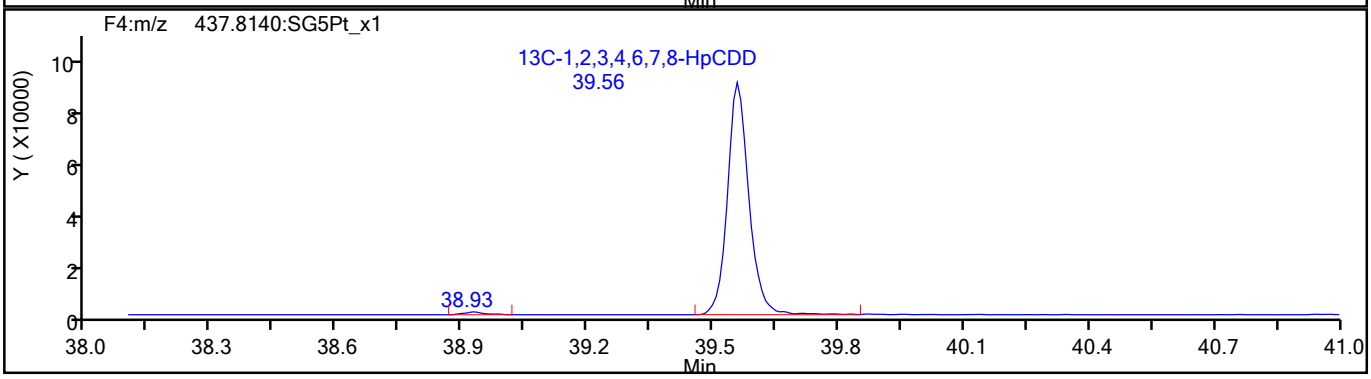

790339

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

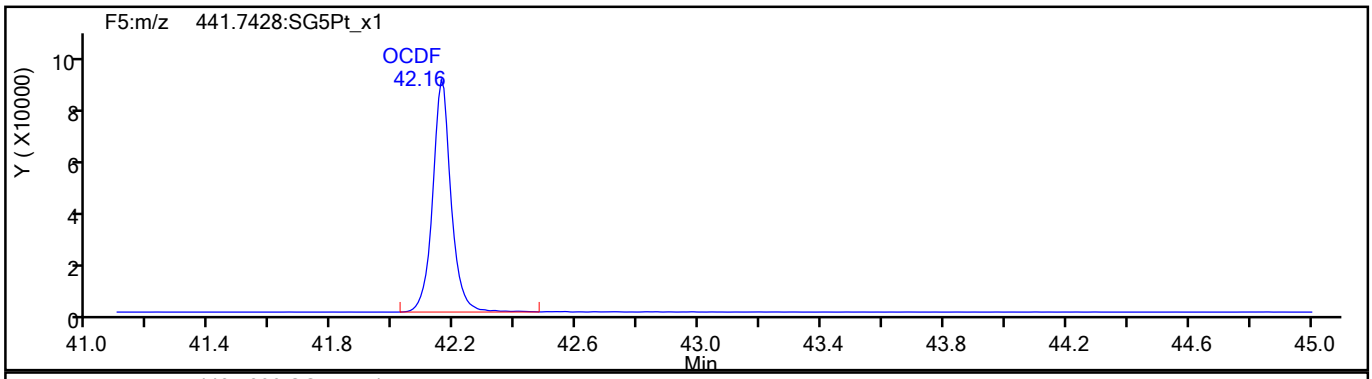

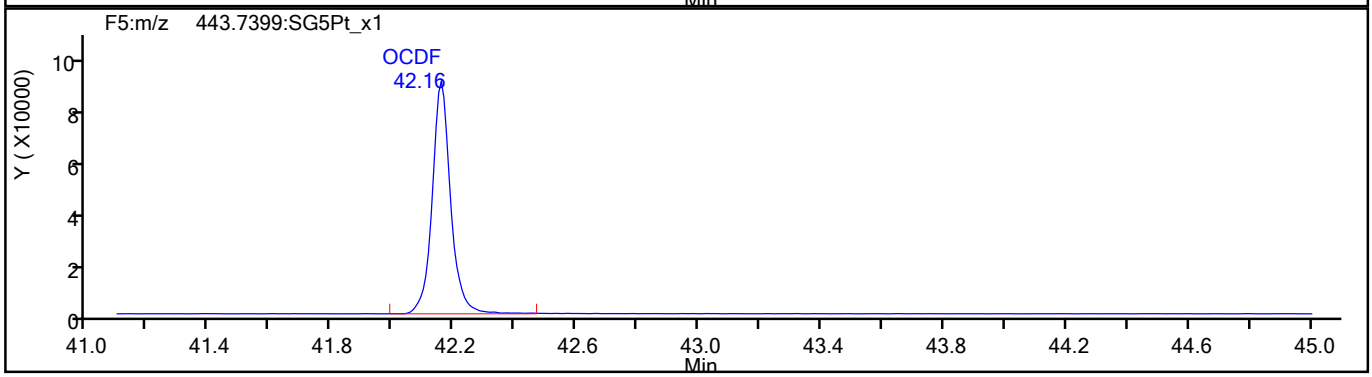

OCDF Standards

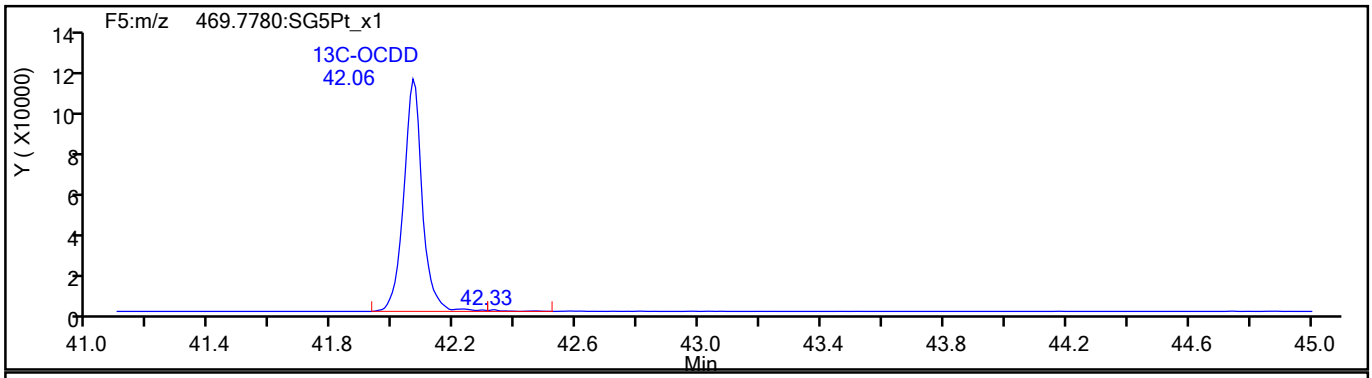

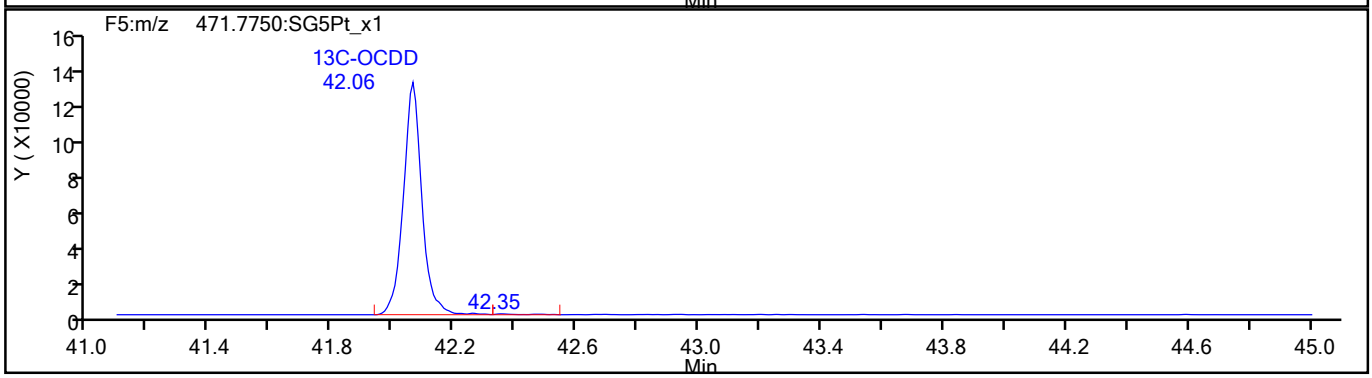

790340

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

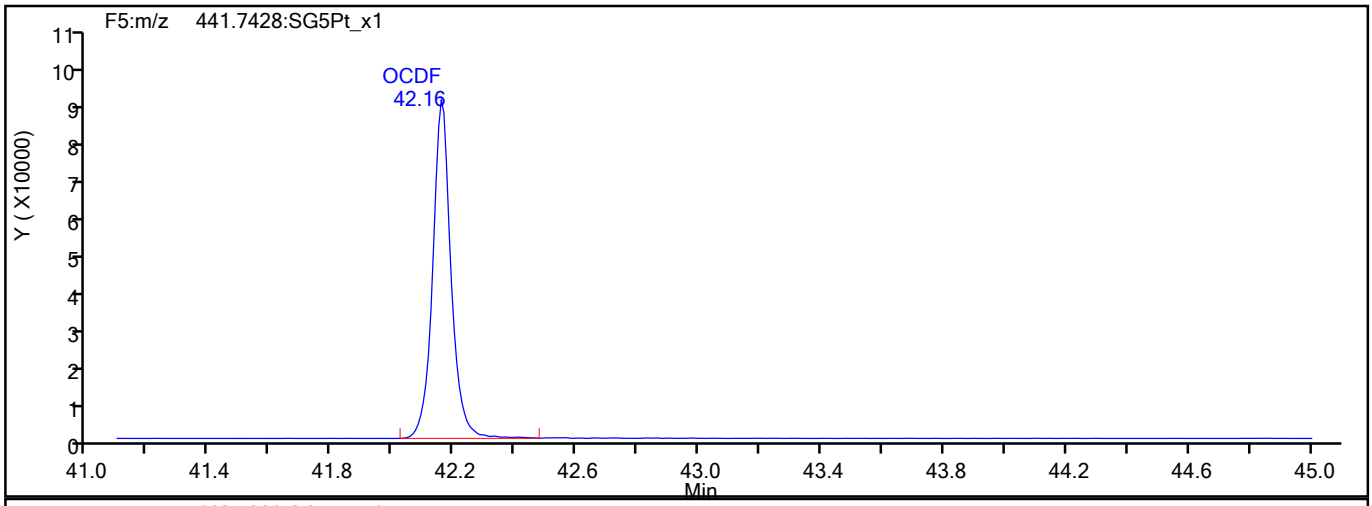

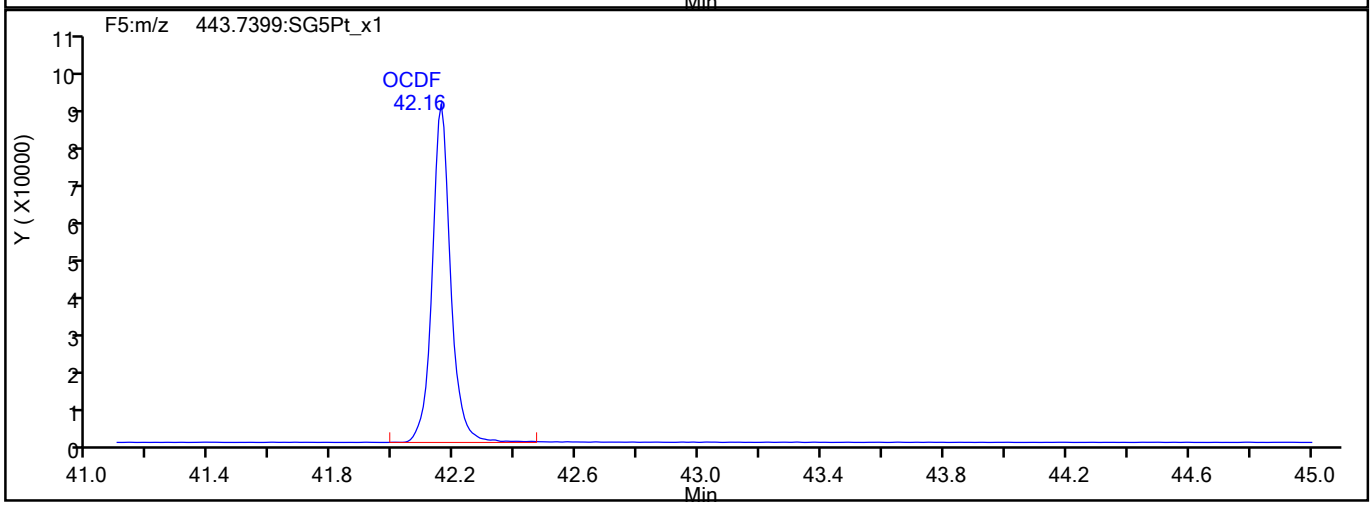

OCDF Interference Mass

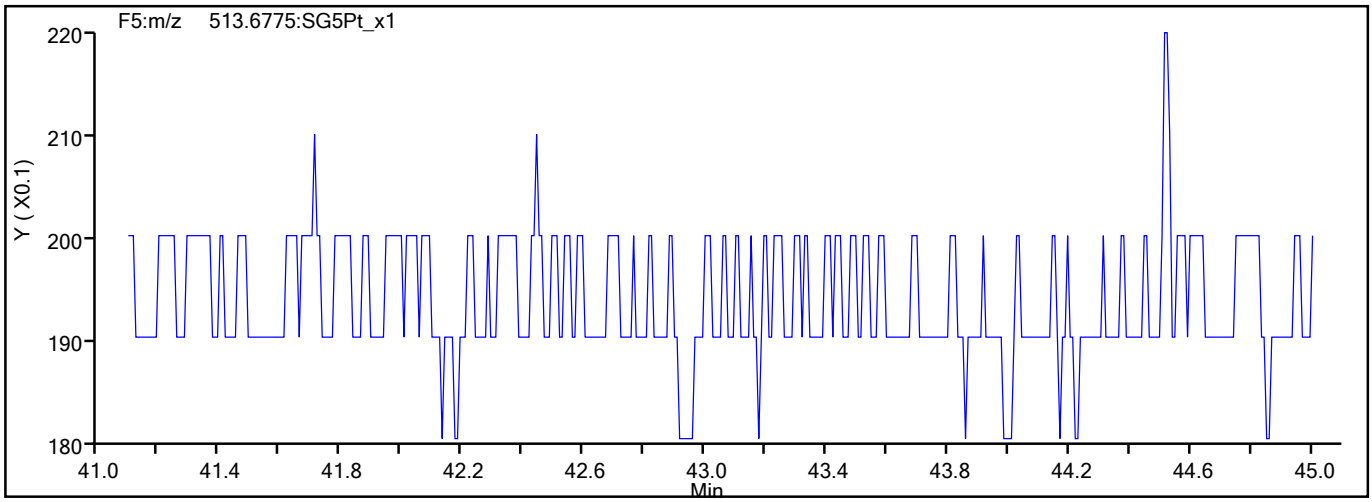

790341

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

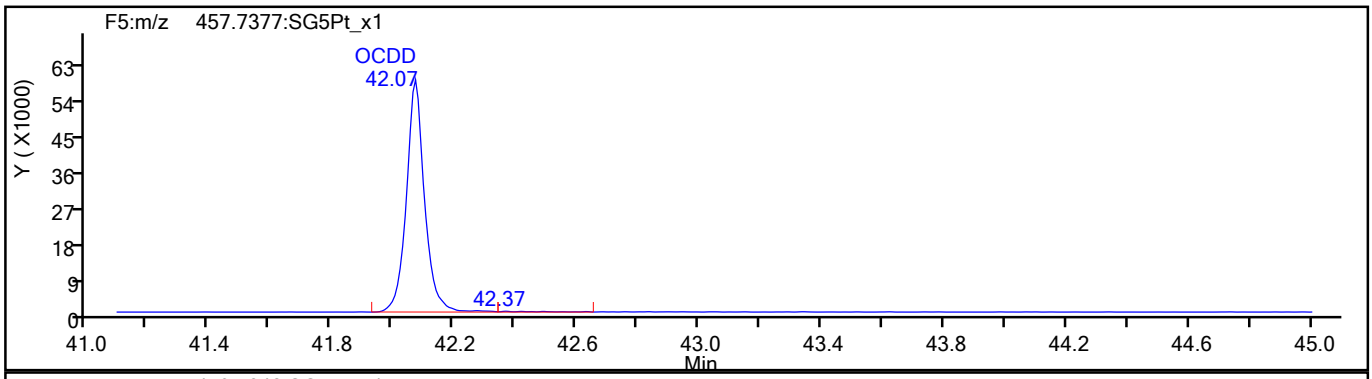

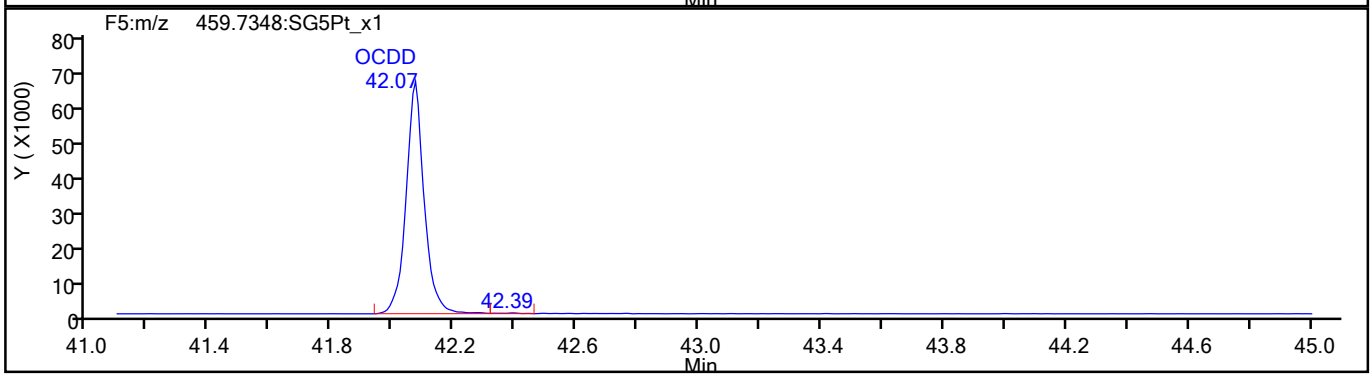

OCDD Standards

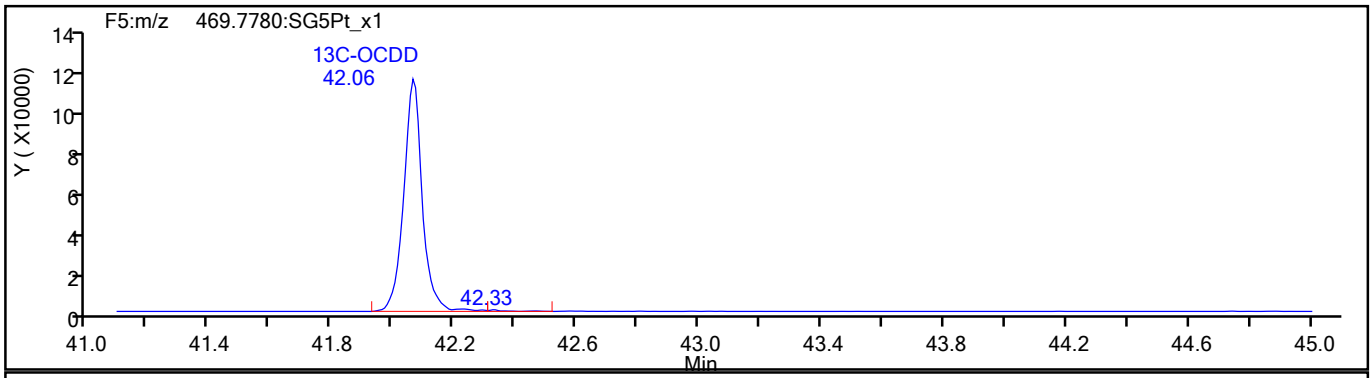

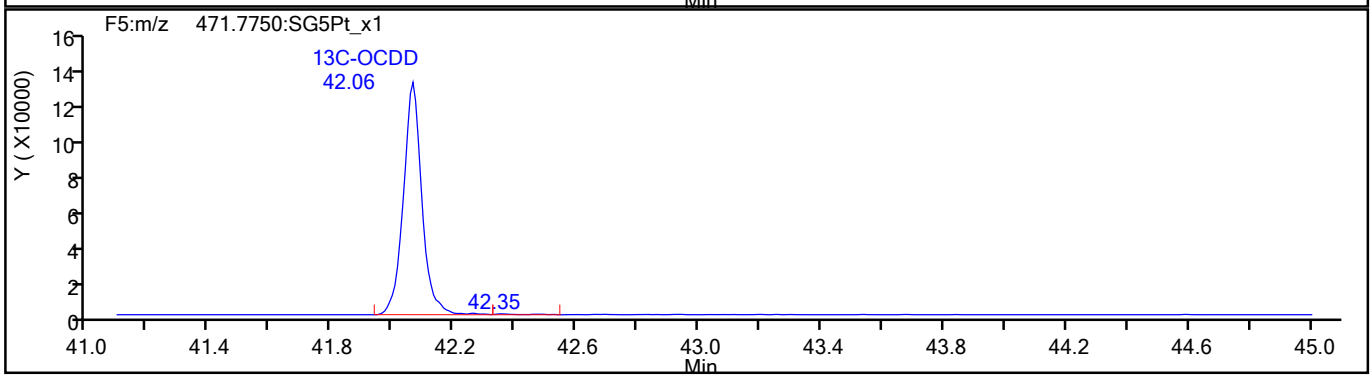

790342

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

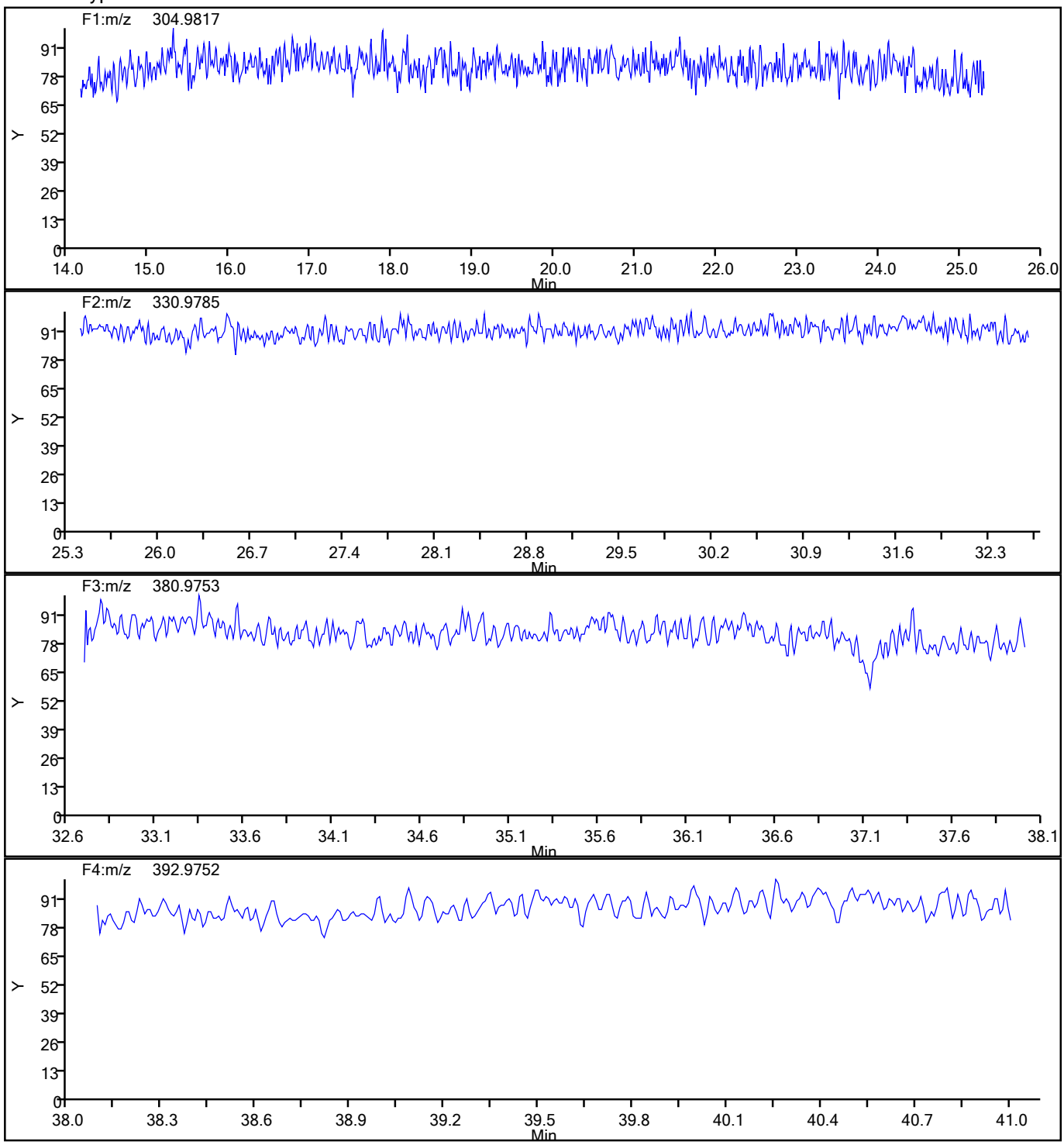

790343

Report Date: 21-Aug-2021 17:06:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_3.d		
Injection Date:	19-Aug-2021 14:46:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

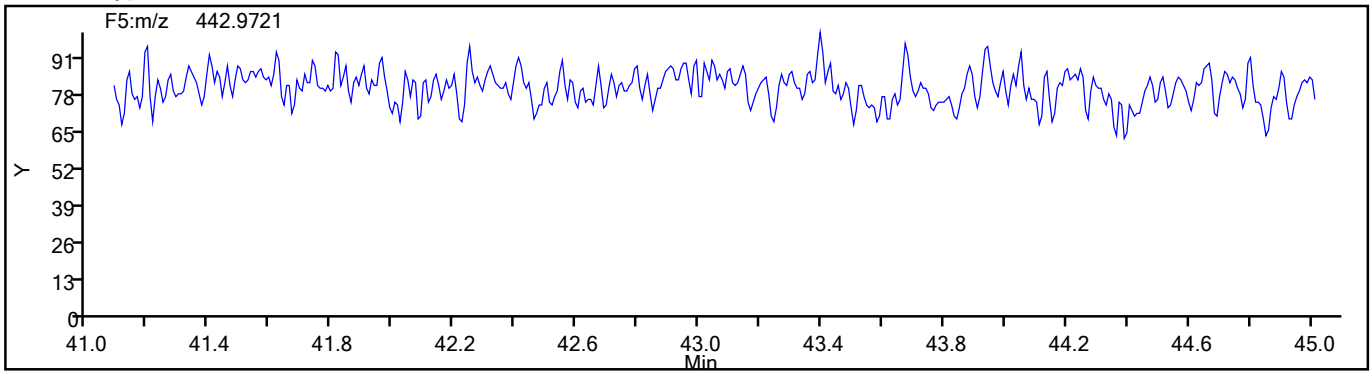

790344

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

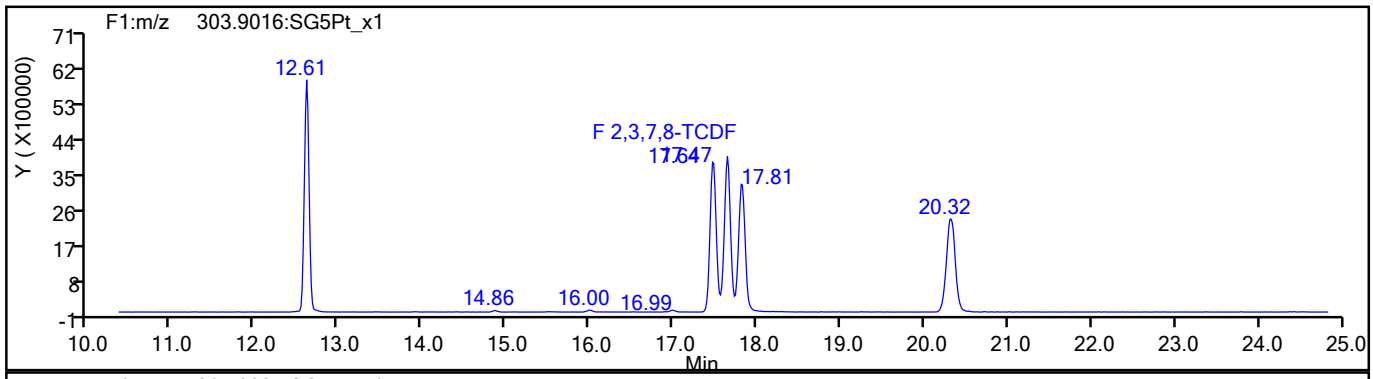

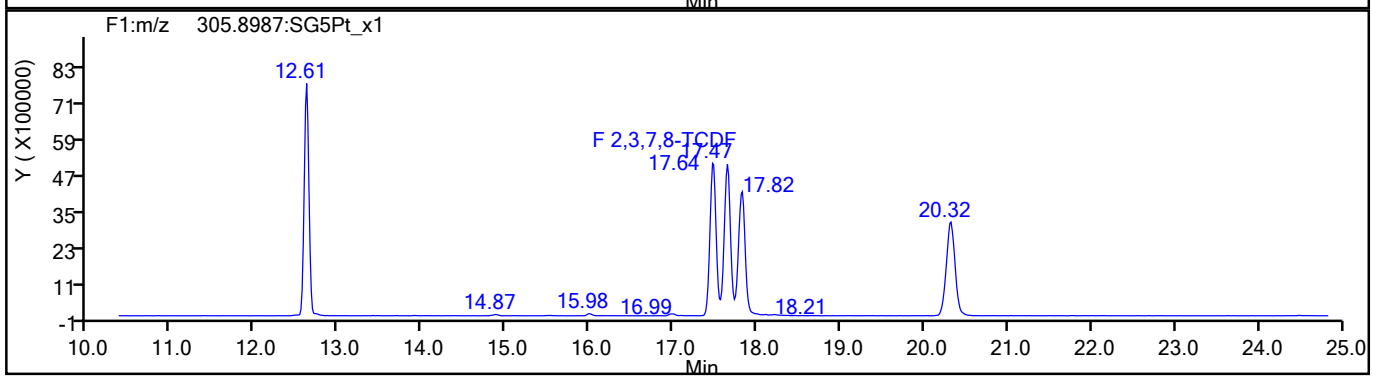

TCDF Standards

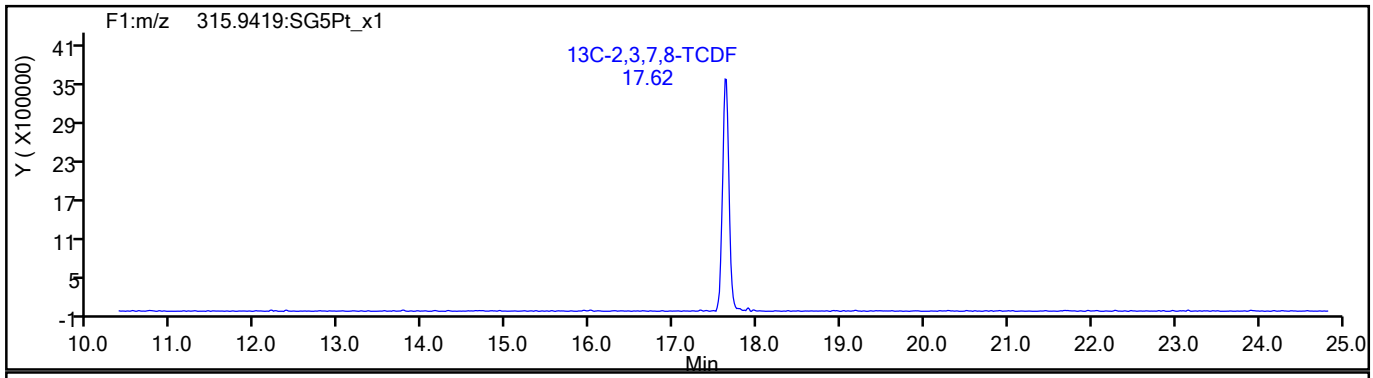

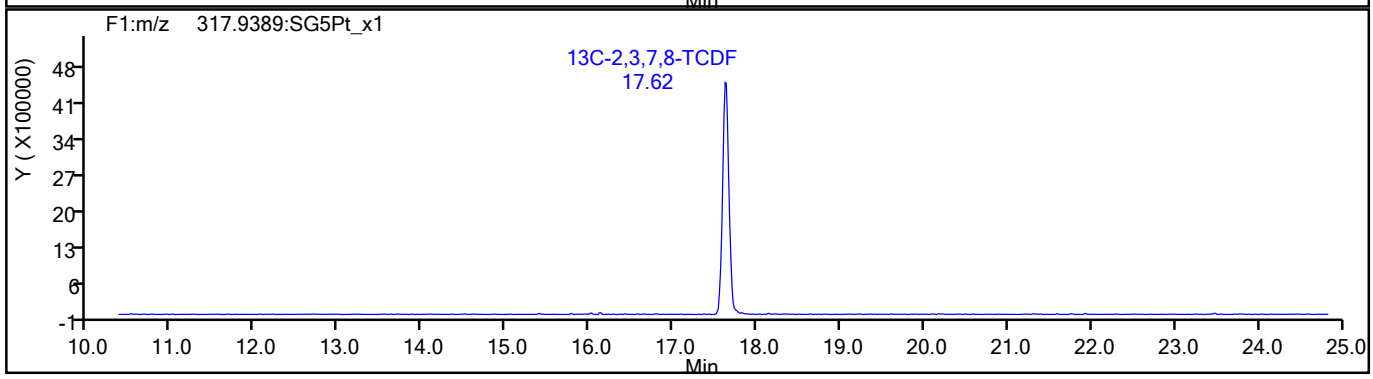

790347

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

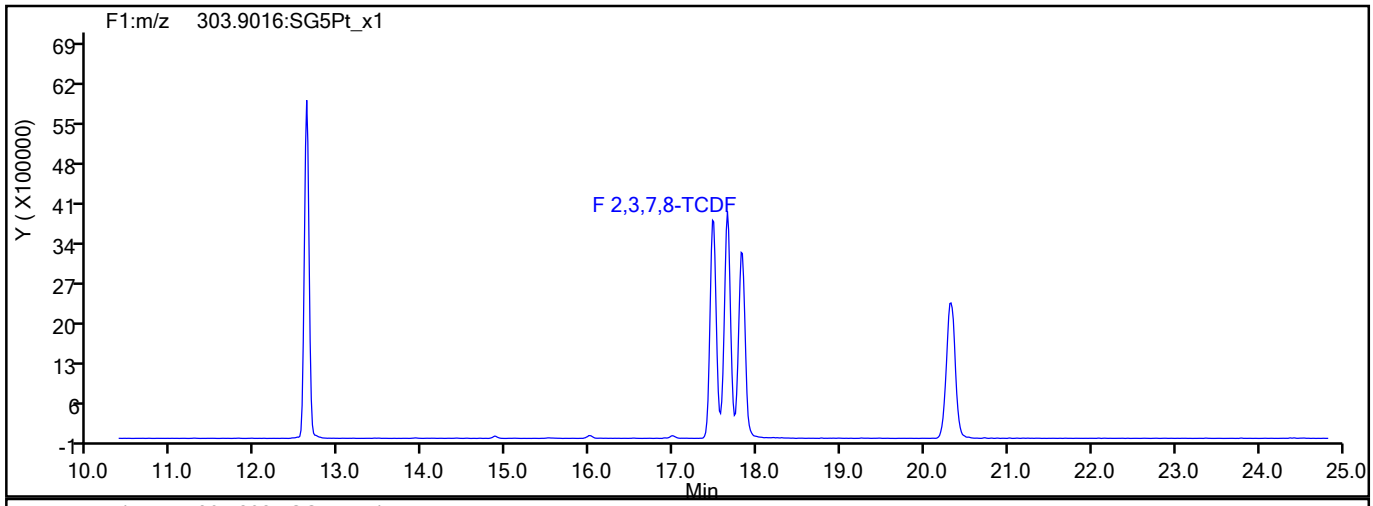

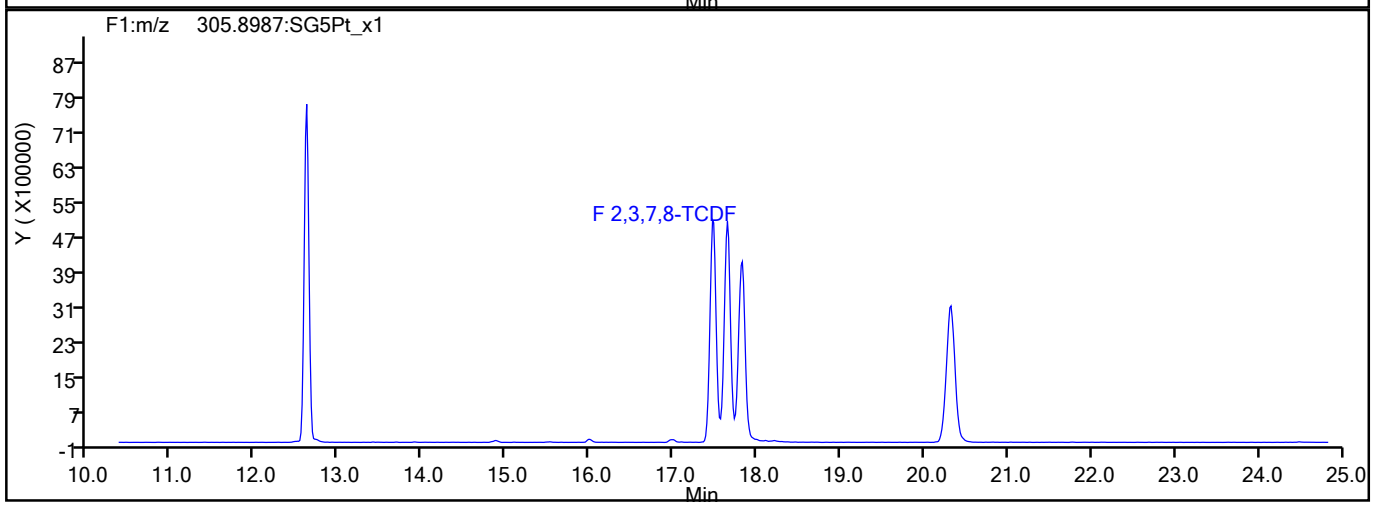

TCDF Interference Mass

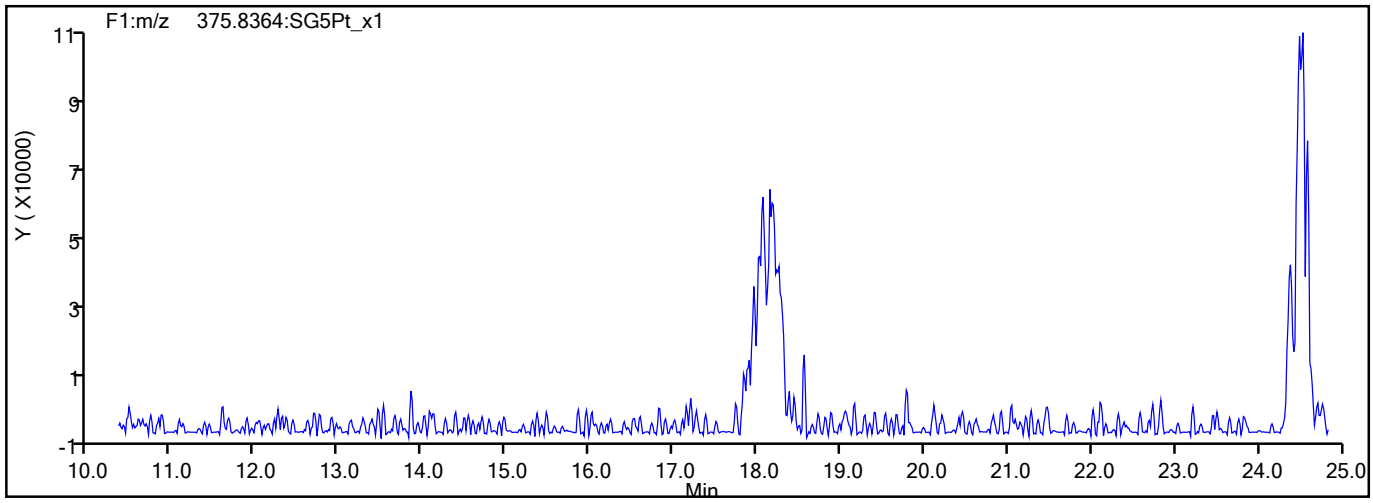

790348

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

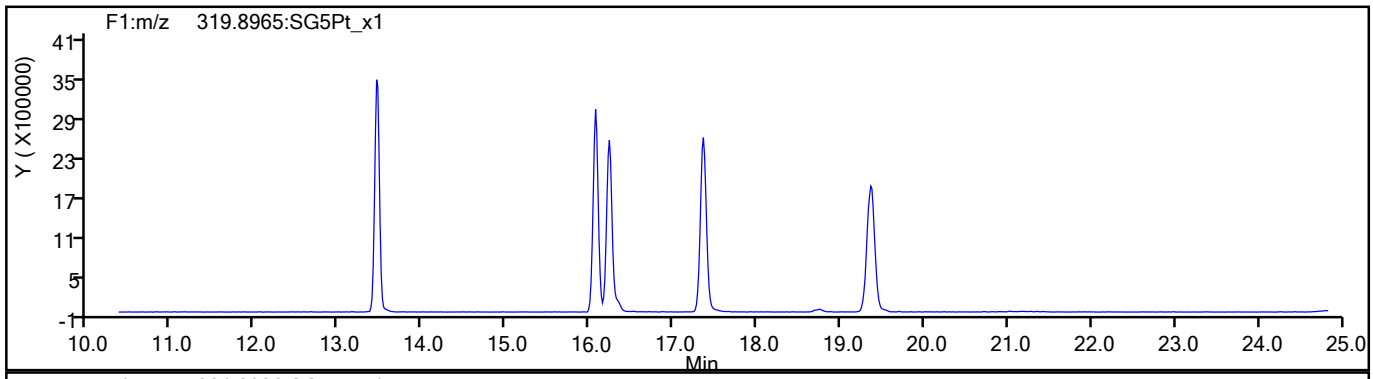

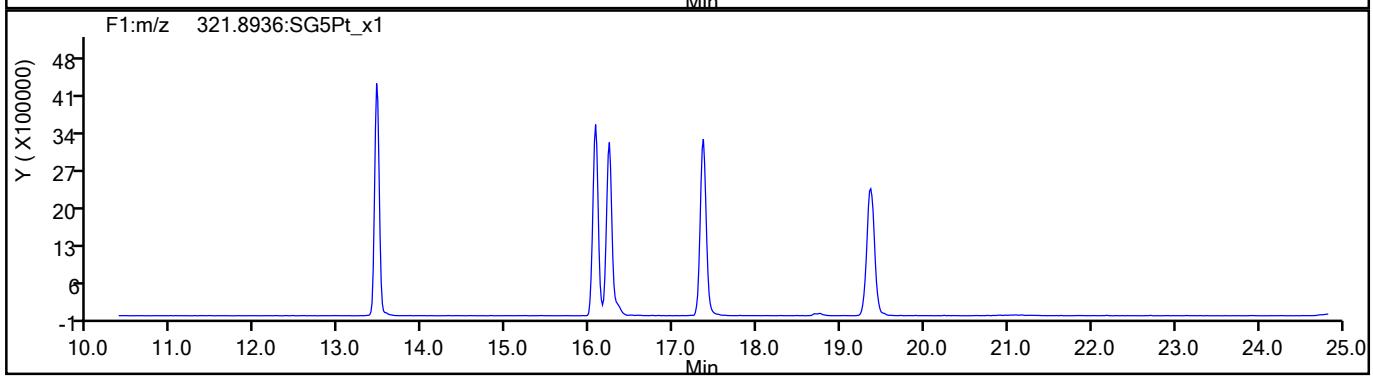

TCDD Standards

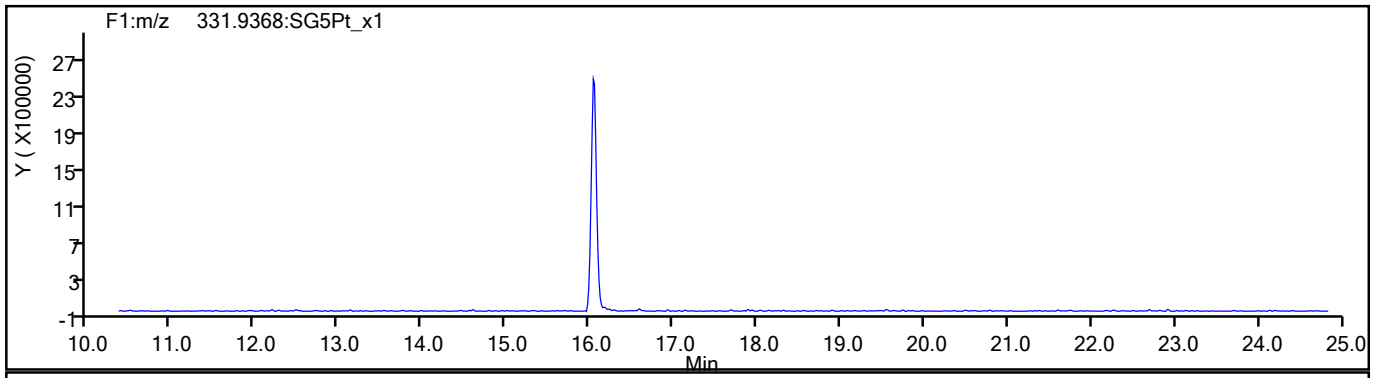

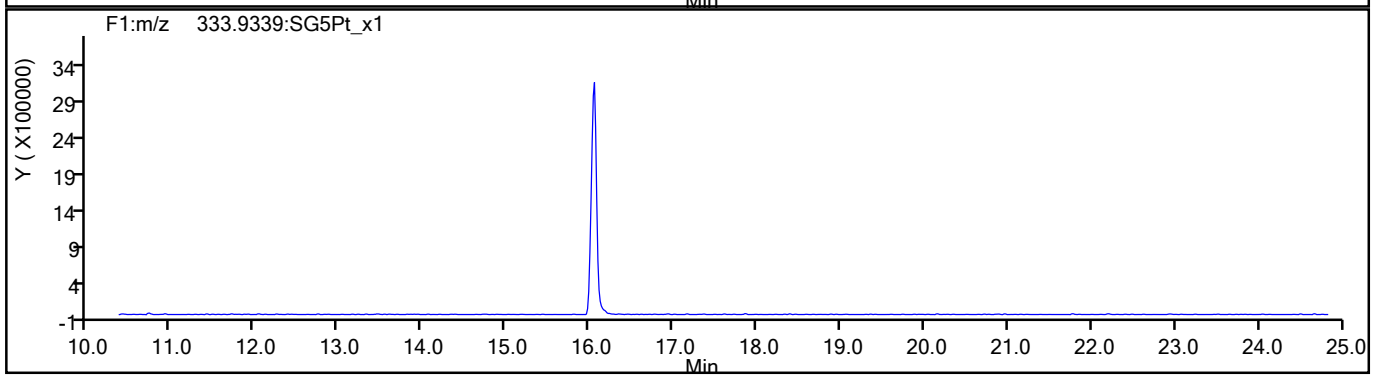

790349

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

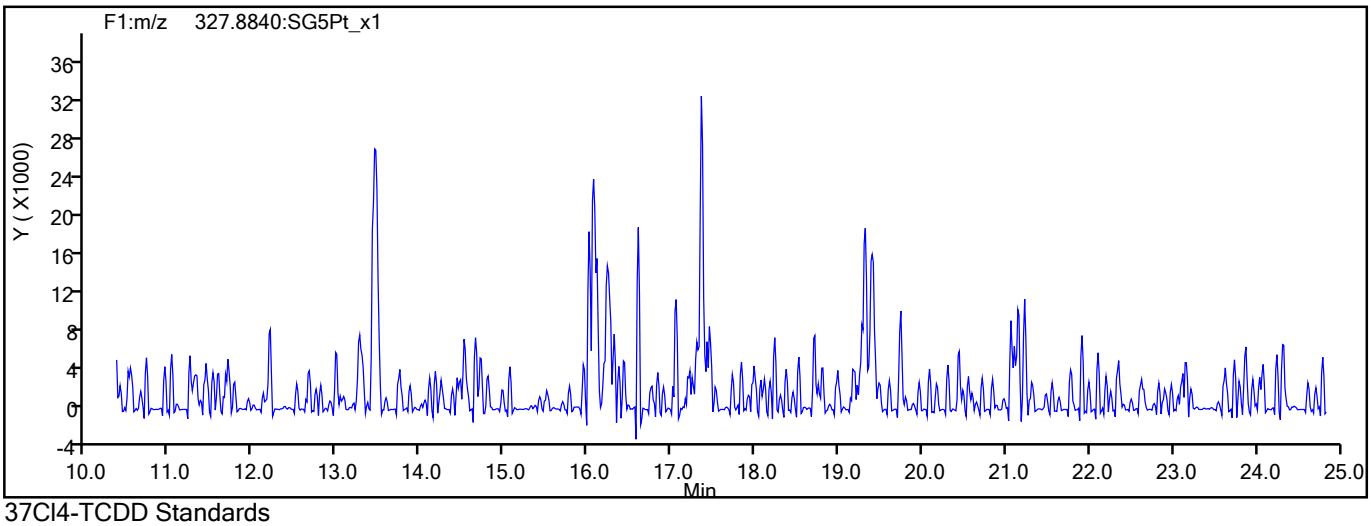

37Cl4-TCDD Standards

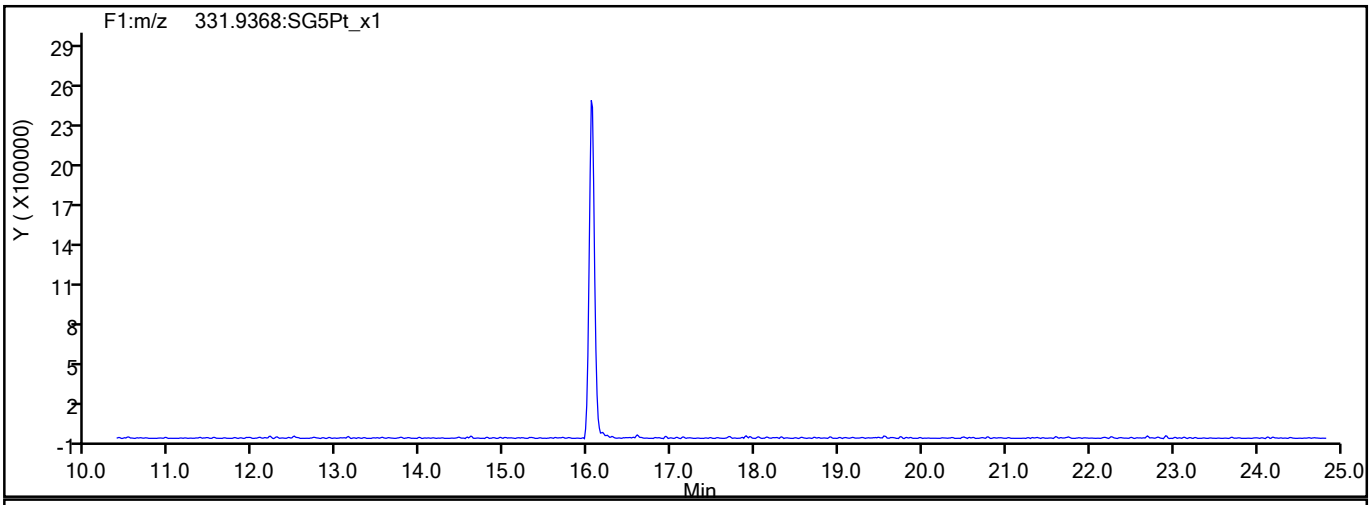

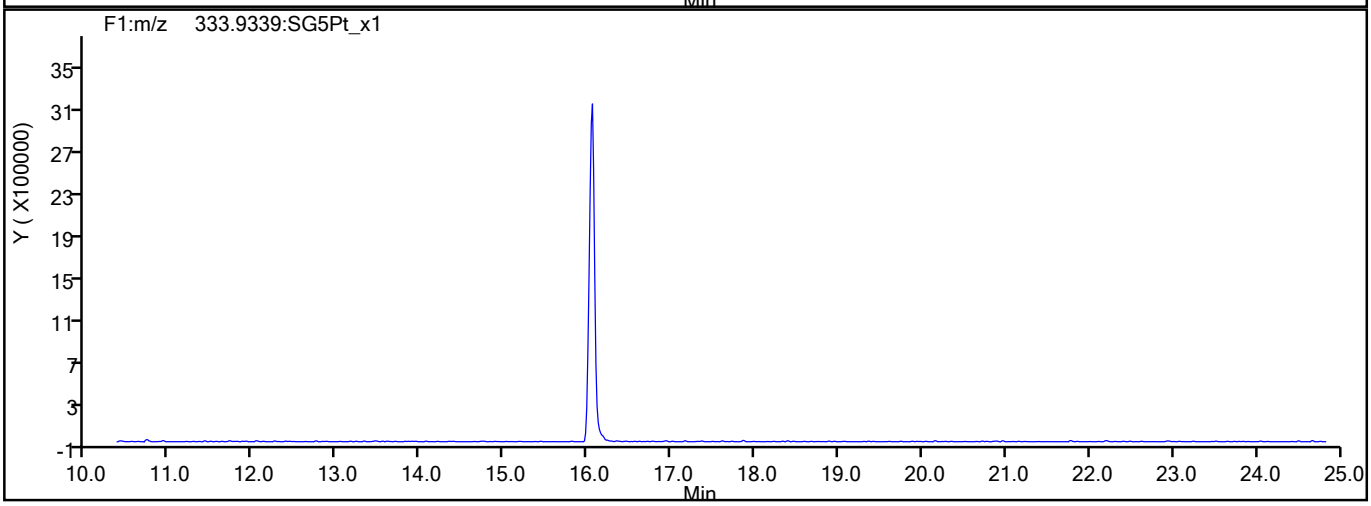

790350

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

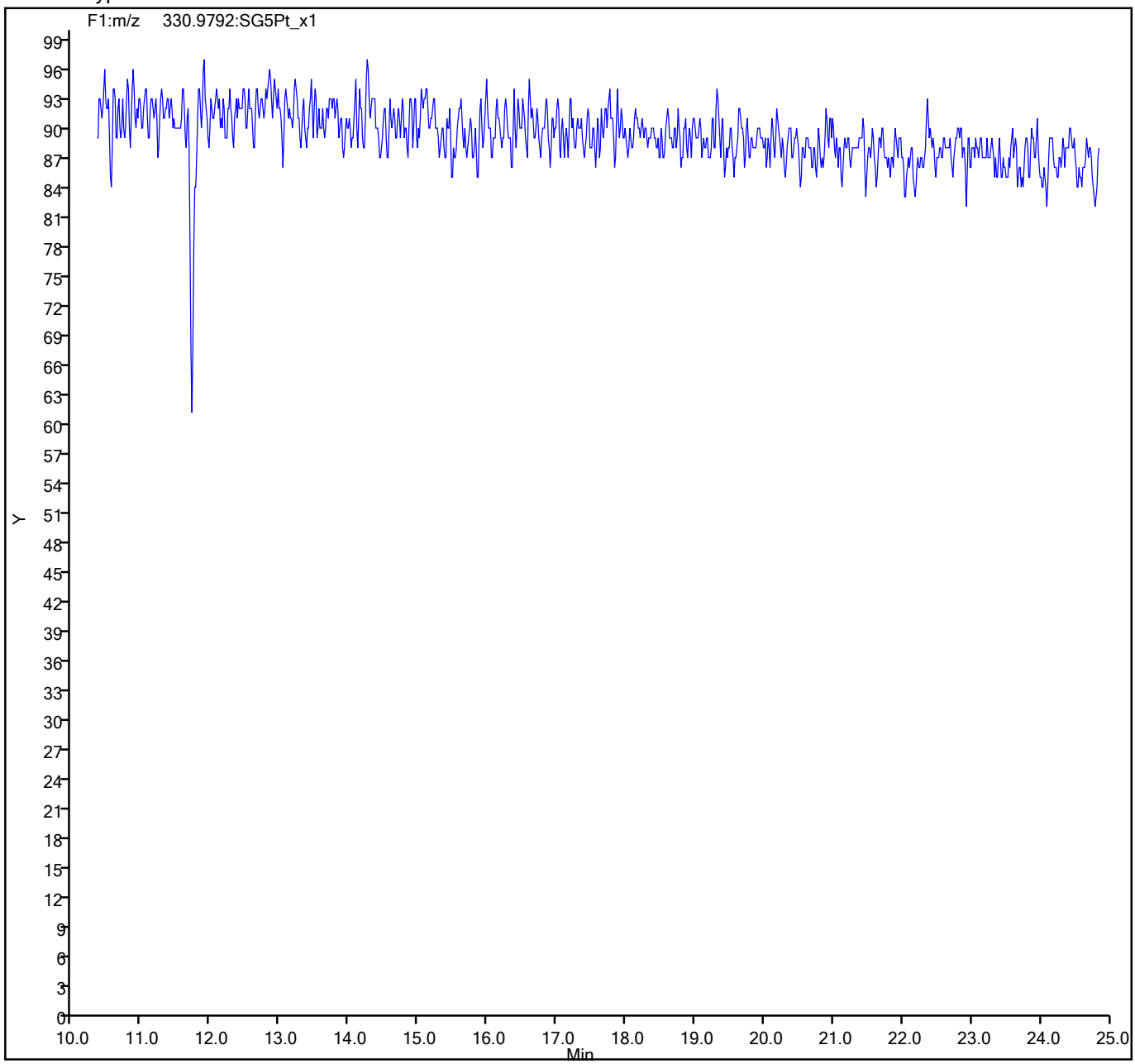

790351

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 08:28:58 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:02

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.615	20166287	0.80	1.3327					0.00	
2,3,7,8-TCDF	17.642	21336126	0.77	0.9978	42.4	42.4	0.0930	0.0930		
D 13C-2,3,7,8-TCDD	16.065	11857898	0.79	0.8749					0.00	
2,3,7,8-TCDD	16.092	14178098	0.79	1.0570	45.2	45.2	0.1126	0.1126		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 24-Aug-2021 08:28:58 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:44:02

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.000	8953190	1656694	4027	10067	411		
317.9389	17.615	17.615	0	1.000	11213097	2115870	3038	7595	696	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.642	17.642	0	1.002	9272598	1746650	1553	3882	1125		
305.8987	17.642	17.642	0	1.002	12063528	2238983	1948	4870	1149	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.065	0	1.000	5225809	1131264	4006	10015	282		
333.9339	16.065	16.065	0	1.000	6632089	1437296	1641	4102	876	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.092	16.092	0	1.002	6258759	1439127	1606	4015	896		
321.8936	16.078	16.092	-1	1.001	7919339	1769891	1451	3627	1220	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

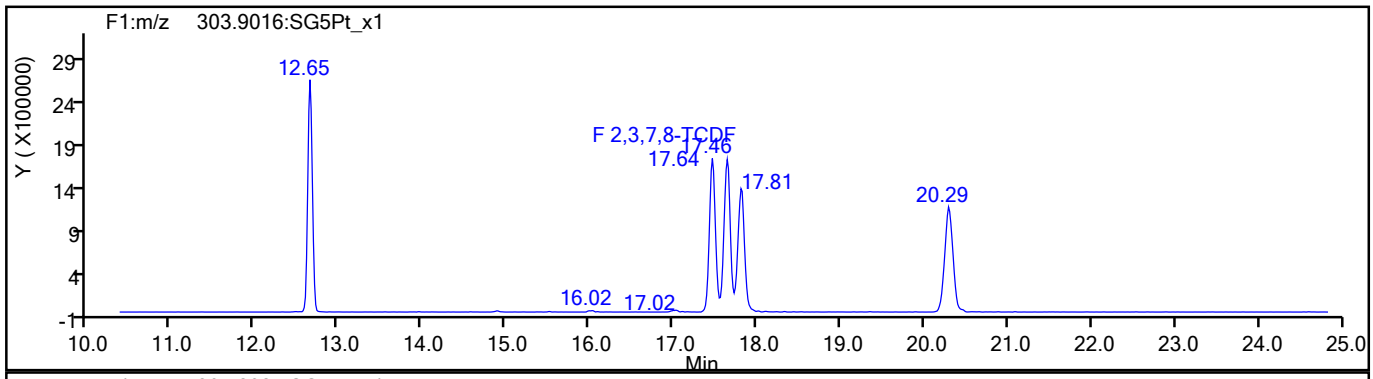

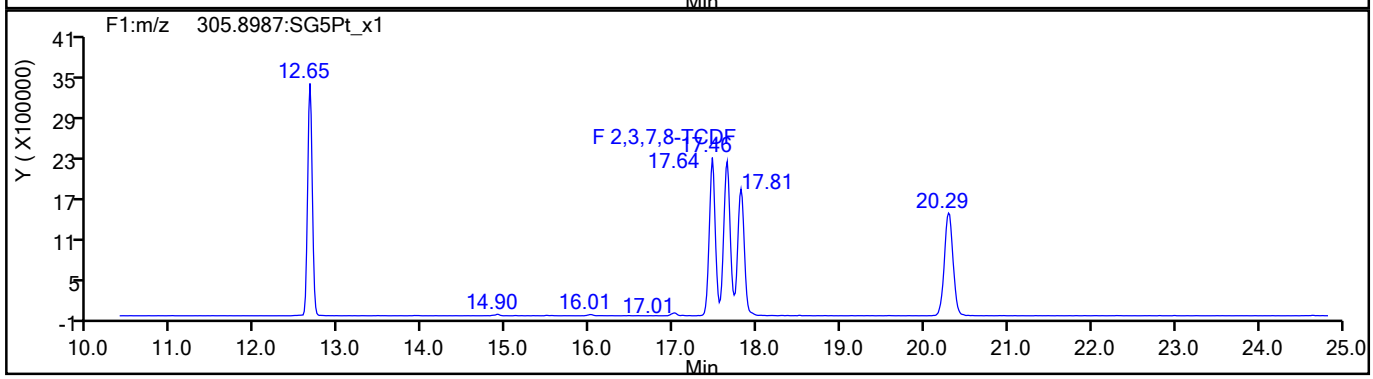

TCDF Standards

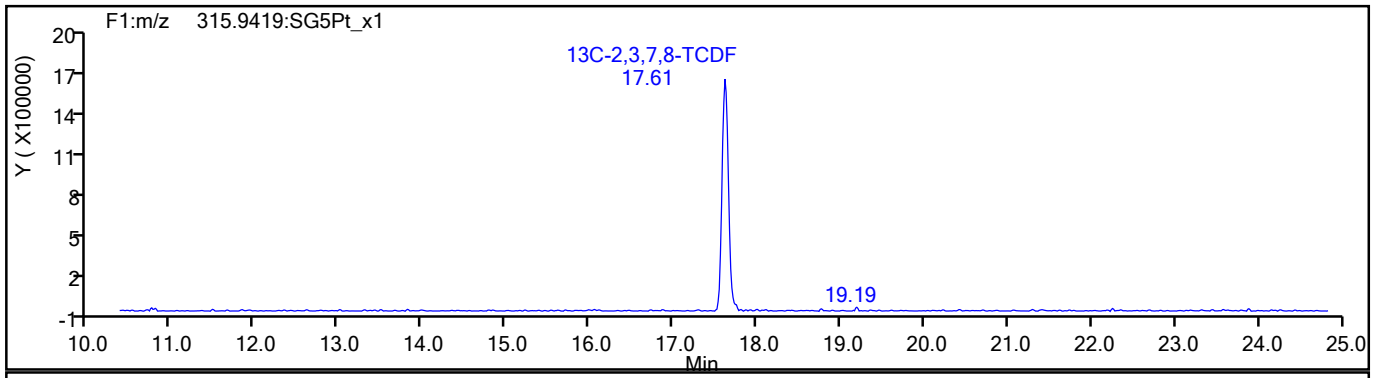

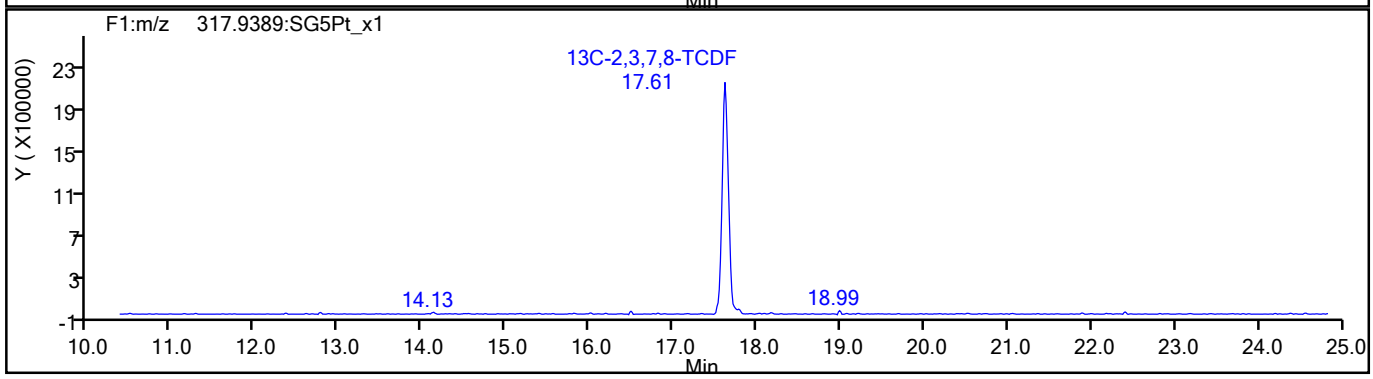

790354

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

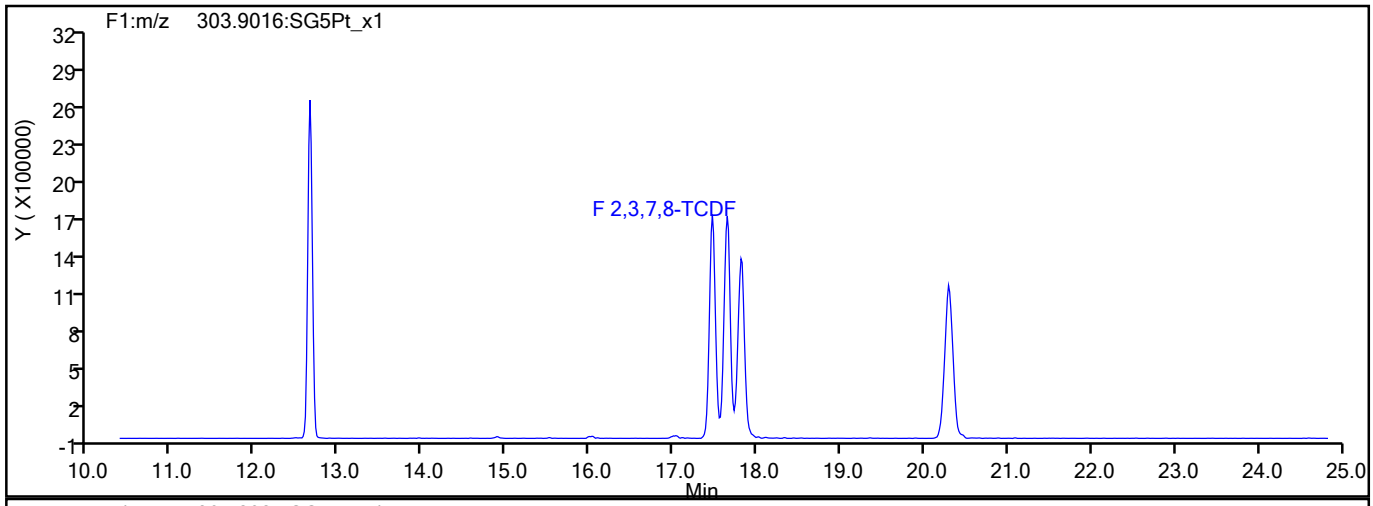

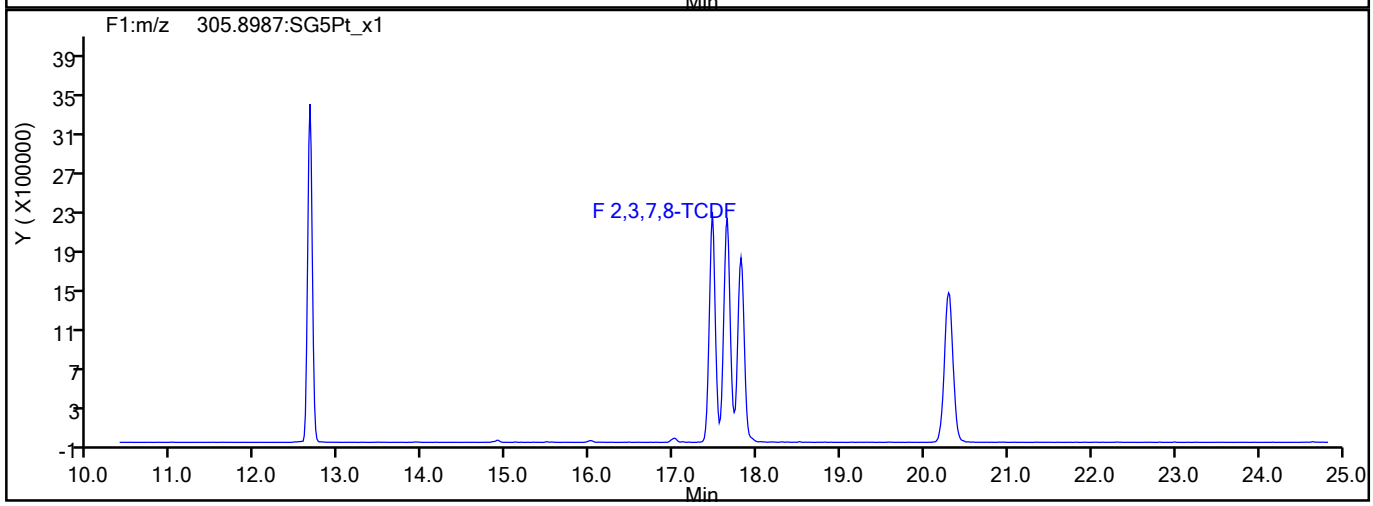

TCDF Interference Mass

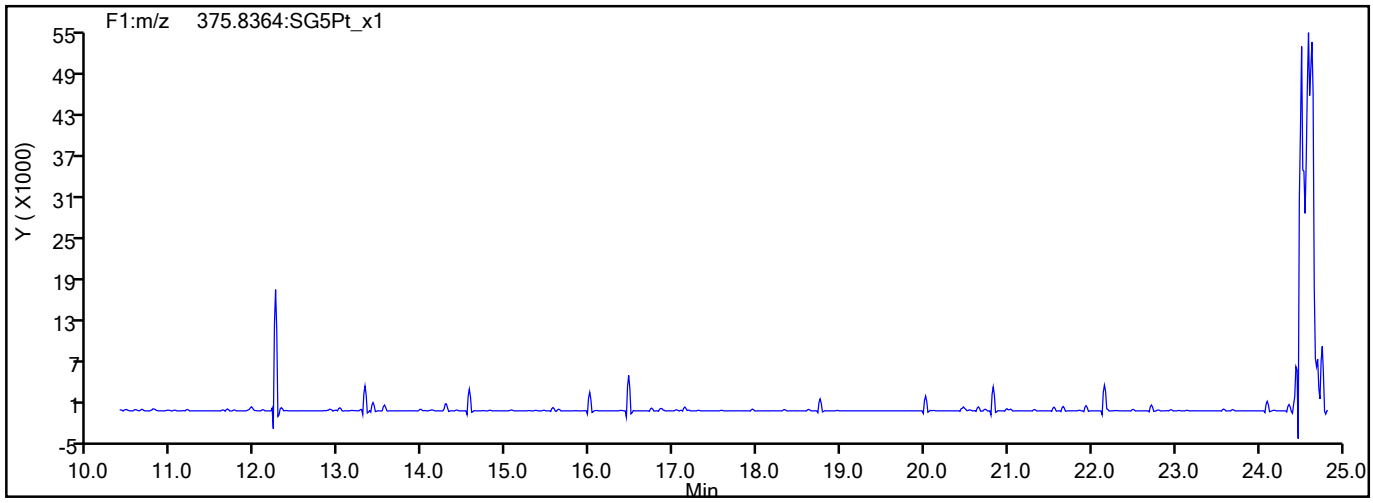

790355

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

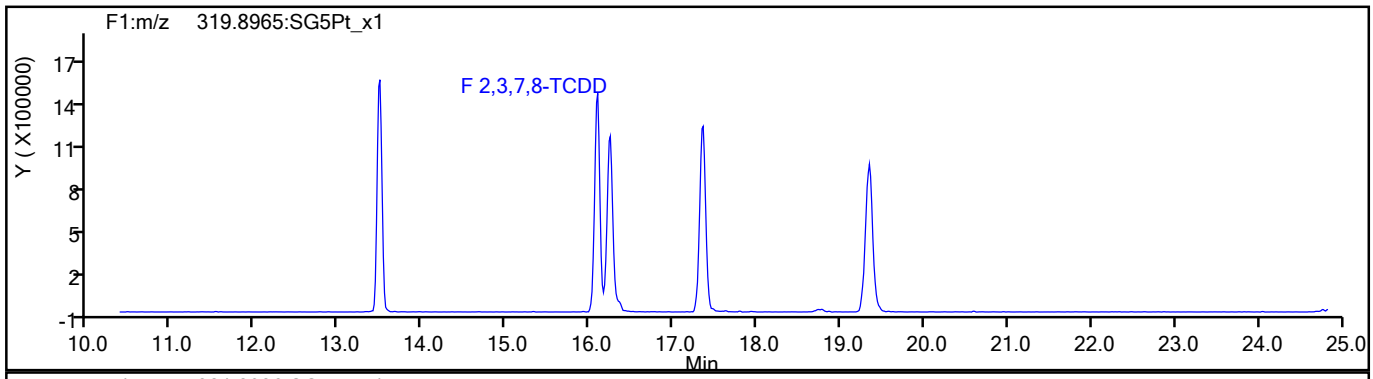

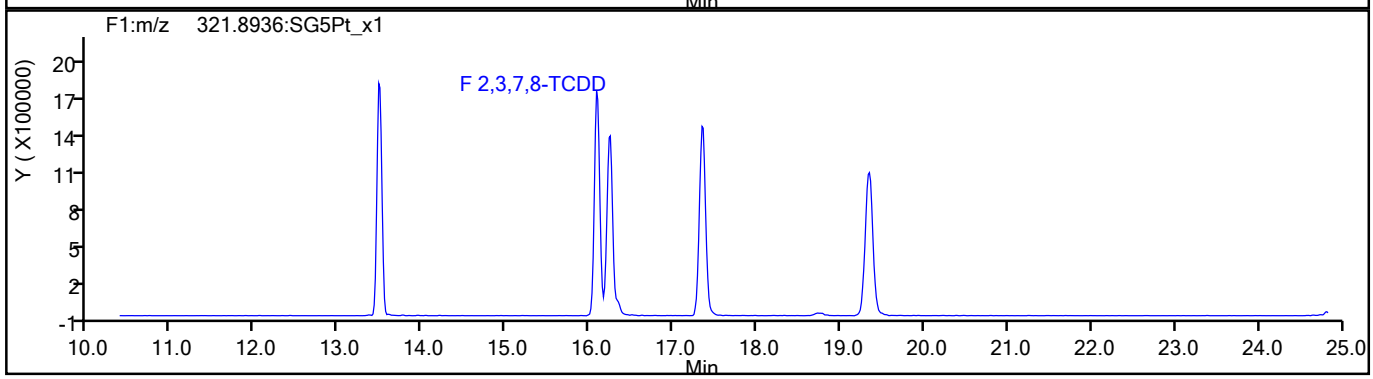

TCDD Standards

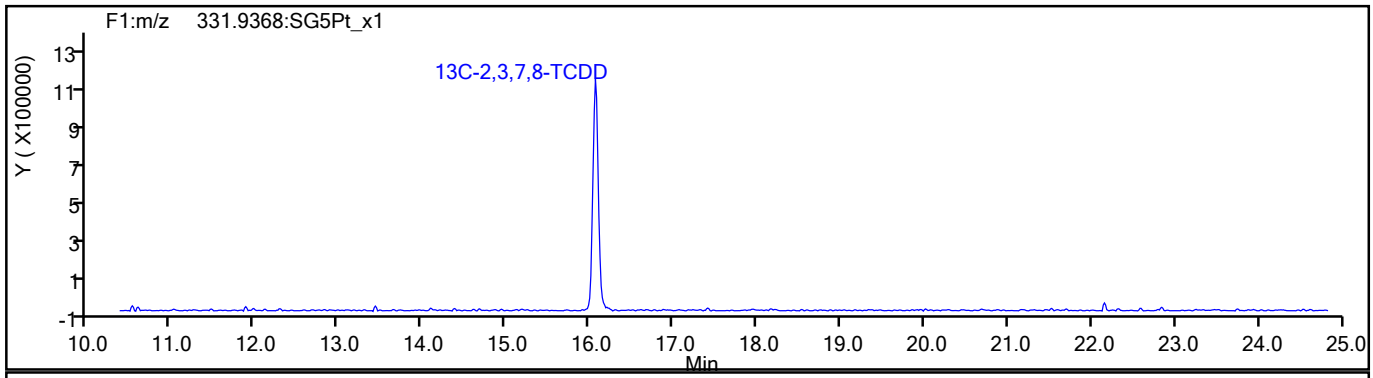

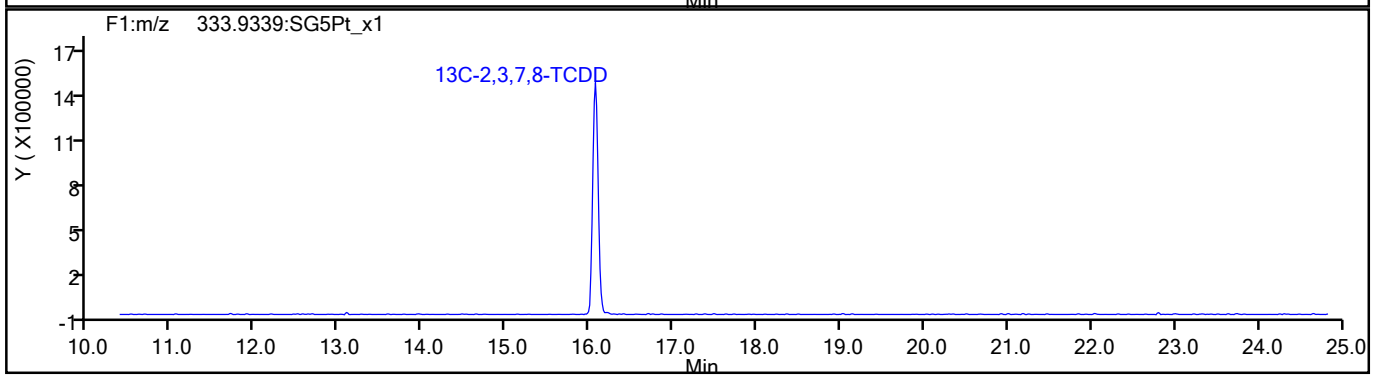

790356

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

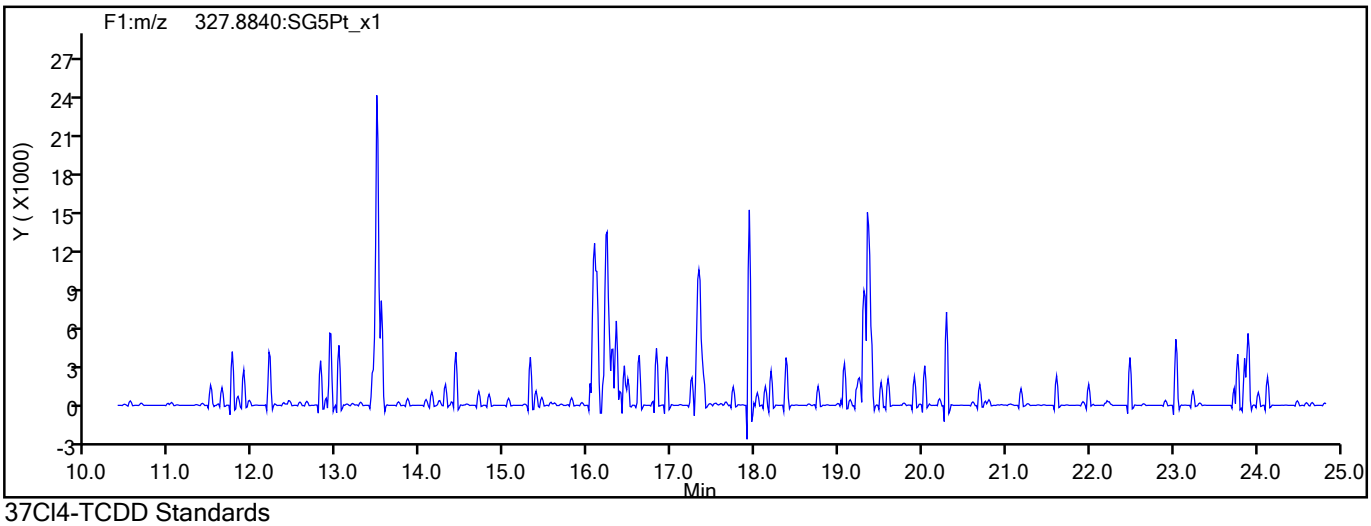

37Cl4-TCDD Standards

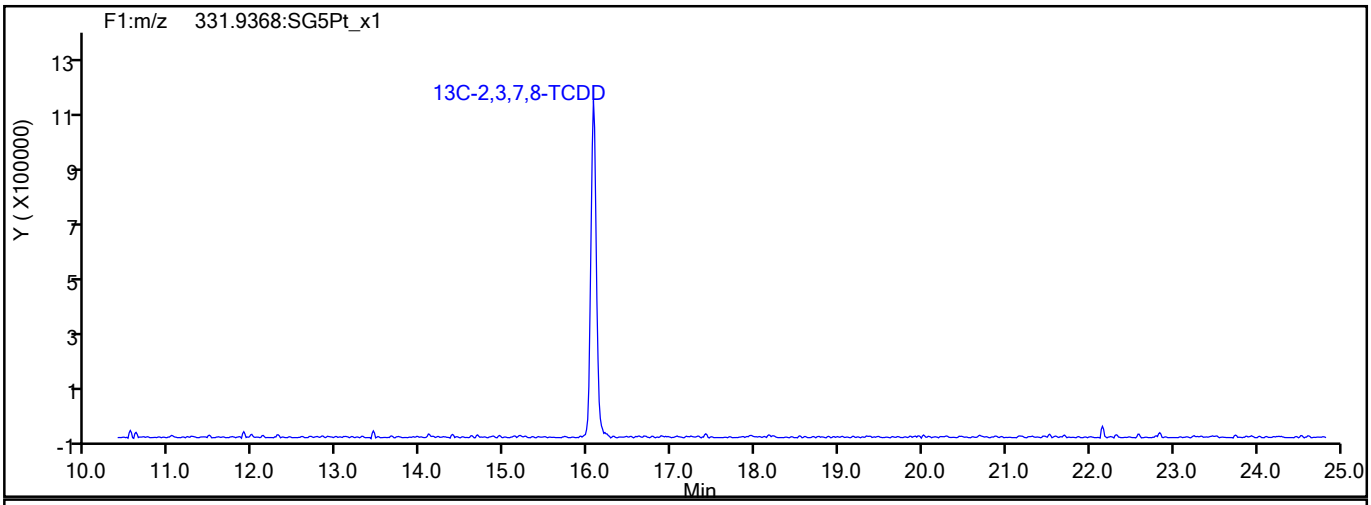

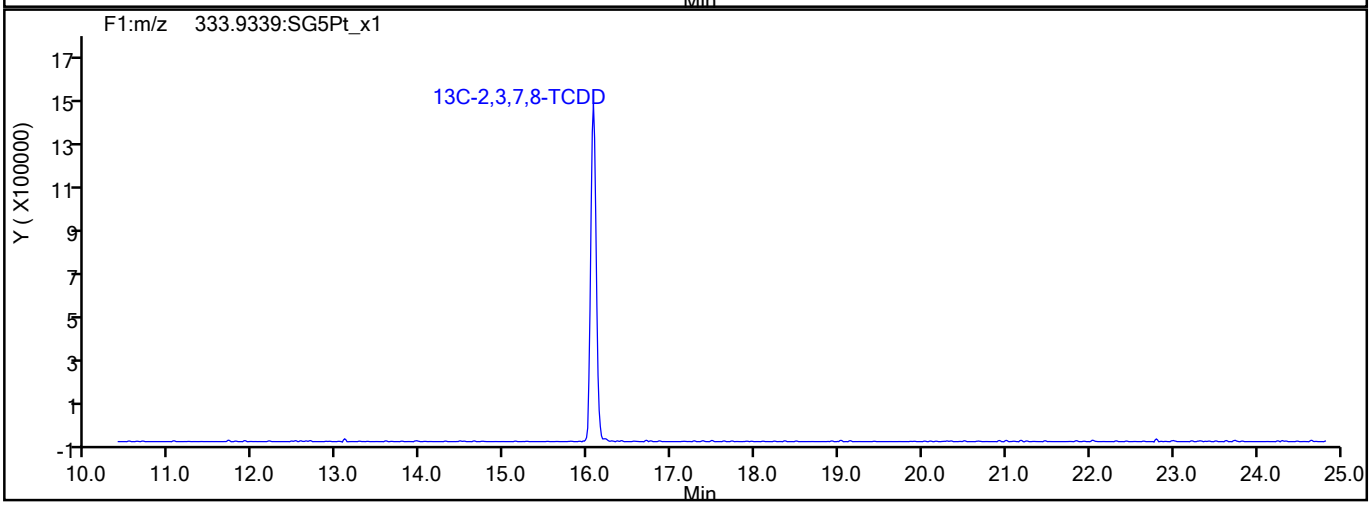

790357

Report Date: 24-Aug-2021 17:07:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_001.d		
Injection Date:	24-Aug-2021 08:28:58	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

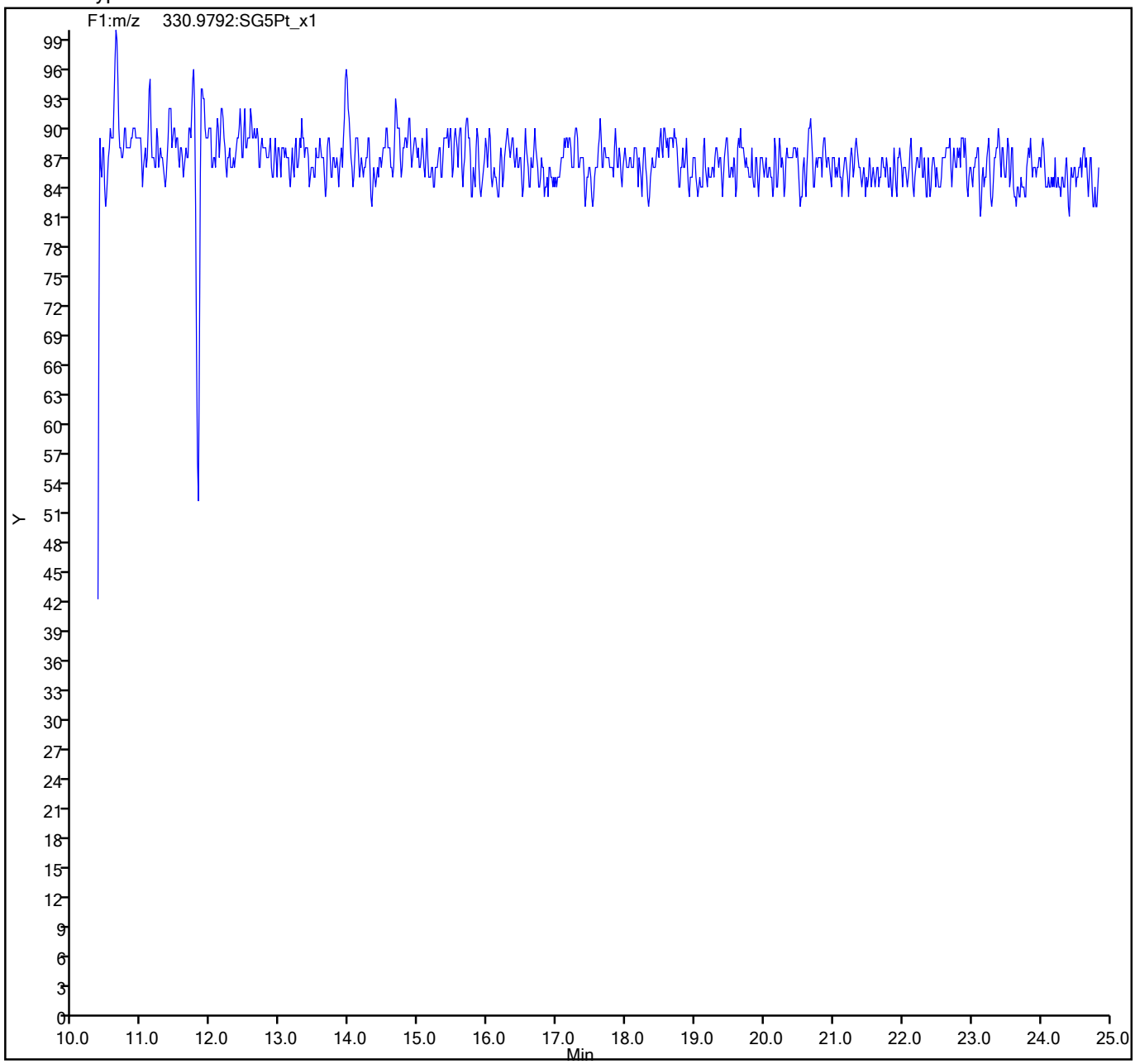

790358

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 08:59:39 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:48:00

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.637	35431848	0.77	1.3327					0.00	
2,3,7,8-TCDF	17.664	37045761	0.78	0.9978	41.9	41.9	0.0744	0.0744		
D 13C-2,3,7,8-TCDD	16.087	21057076	0.77	0.8749					0.00	
2,3,7,8-TCDD	16.101	24884372	0.77	1.0570	44.7	44.7	0.0846	0.0846		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 08:59:39 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:48:00

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.637	17.637	0	1.000	15459314	2940845	6227	15567	472		
317.9389	17.637	17.637	0	1.000	19972534	3794757	4880	12200	778	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.664	17.664	0	1.002	16254265	3079391	2319	5797	1328		
305.8987	17.651	17.664	-1	1.001	20791496	3931055	2679	6697	1467	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.087	16.087	0	1.000	9175721	2009725	4286	10715	469		
333.9339	16.087	16.087	0	1.000	11881355	2546873	2779	6947	916	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.101	16.101	0	1.001	10861375	2477041	1751	4377	1415		
321.8936	16.101	16.101	0	1.001	14022997	3266493	2324	5810	1406	0.77(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d		
Injection Date:	27-Aug-2021 08:59:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

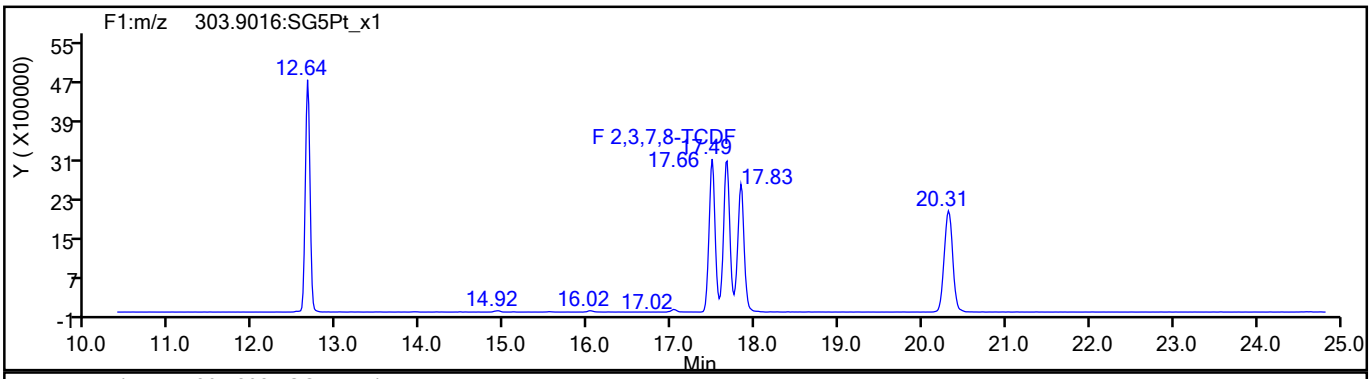

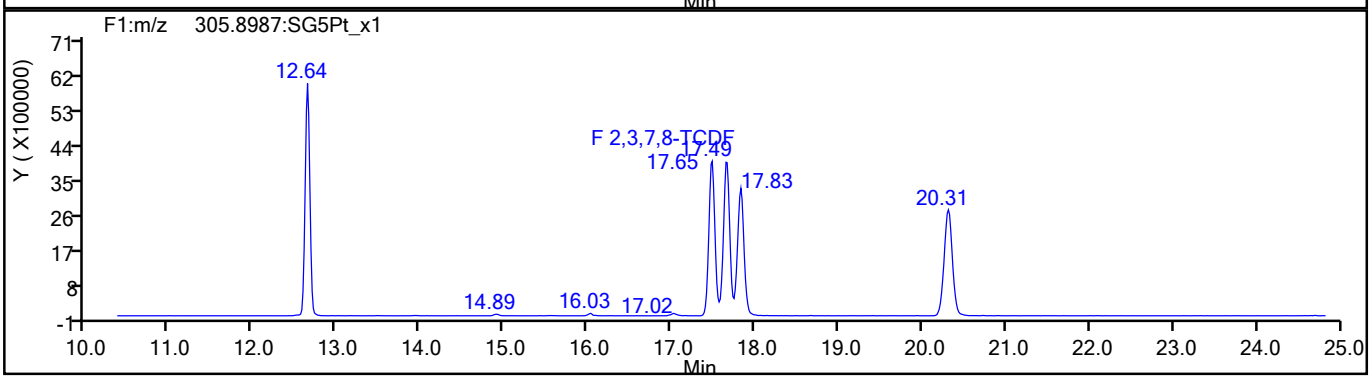

TCDF Standards

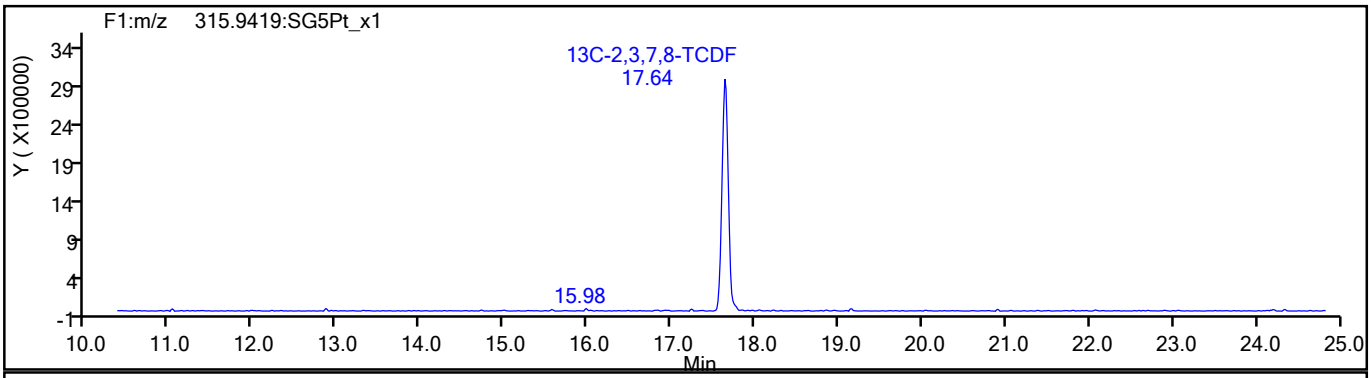

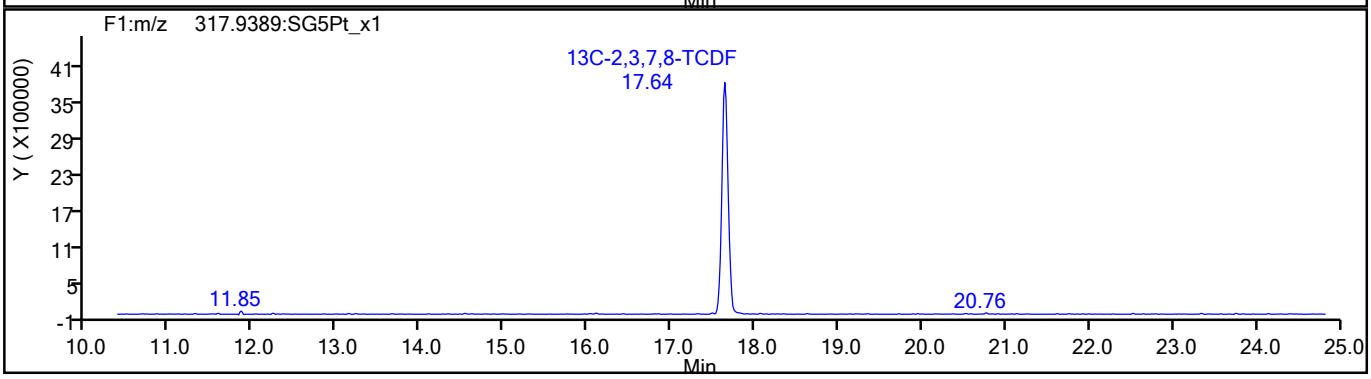

790361

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d		
Injection Date:	27-Aug-2021 08:59:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

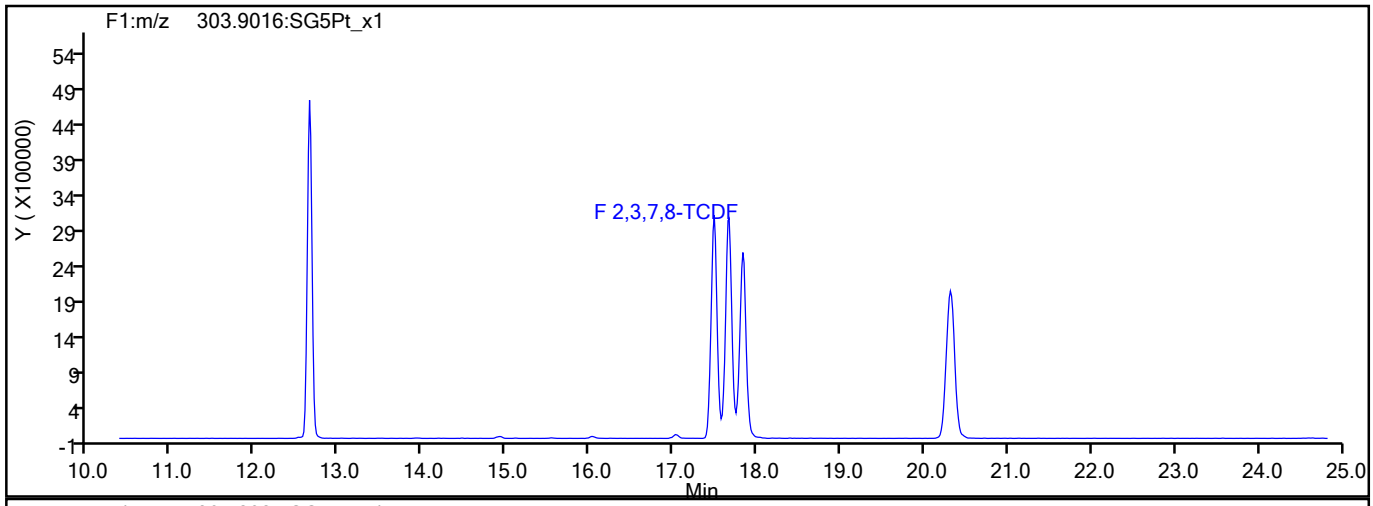

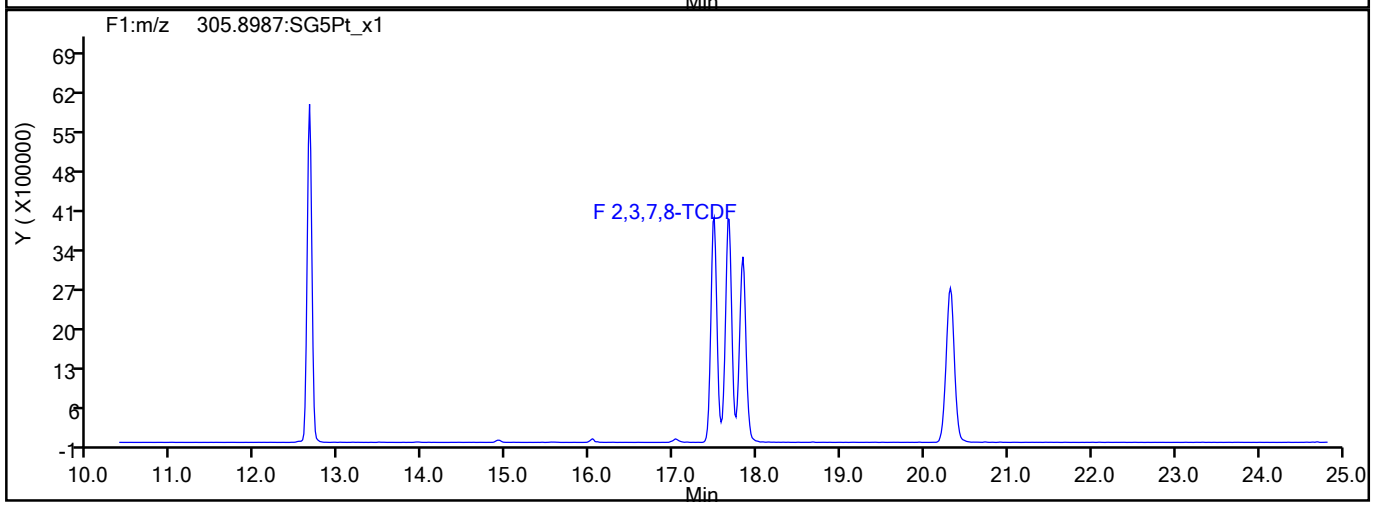

TCDF Interference Mass

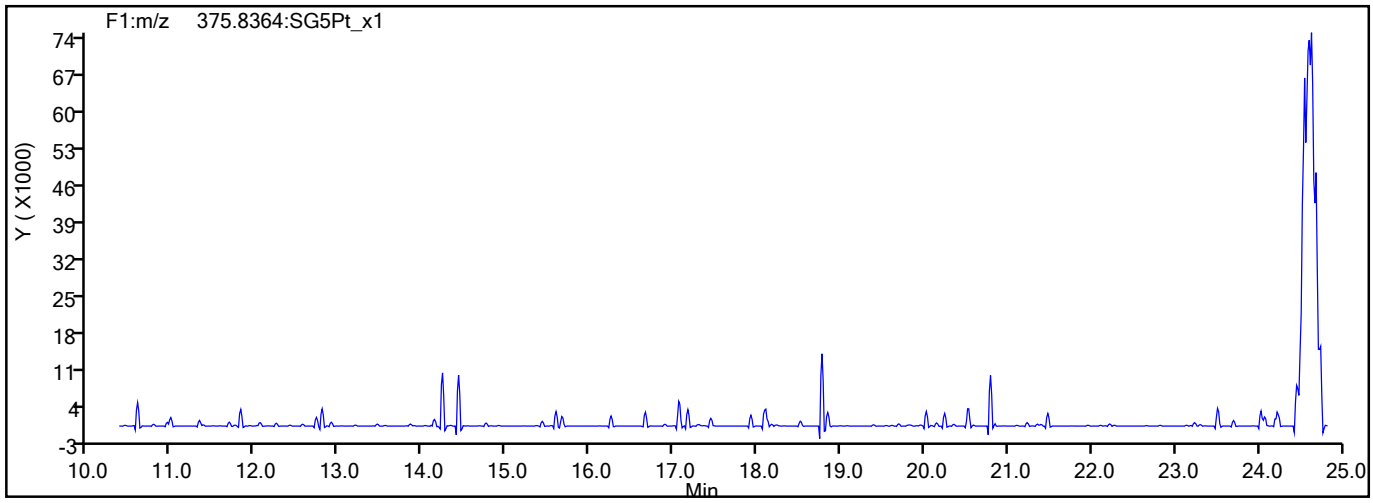

790362

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d		
Injection Date:	27-Aug-2021 08:59:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

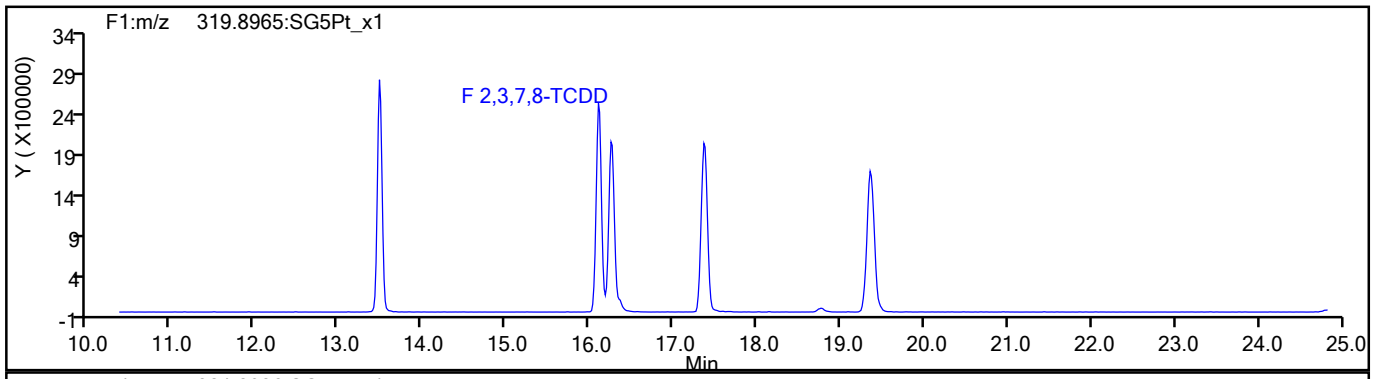

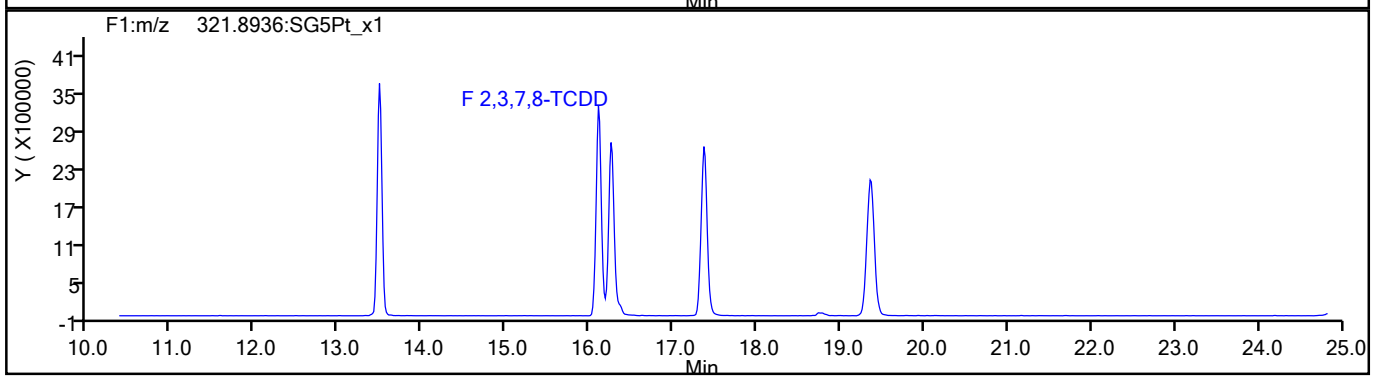

TCDD Standards

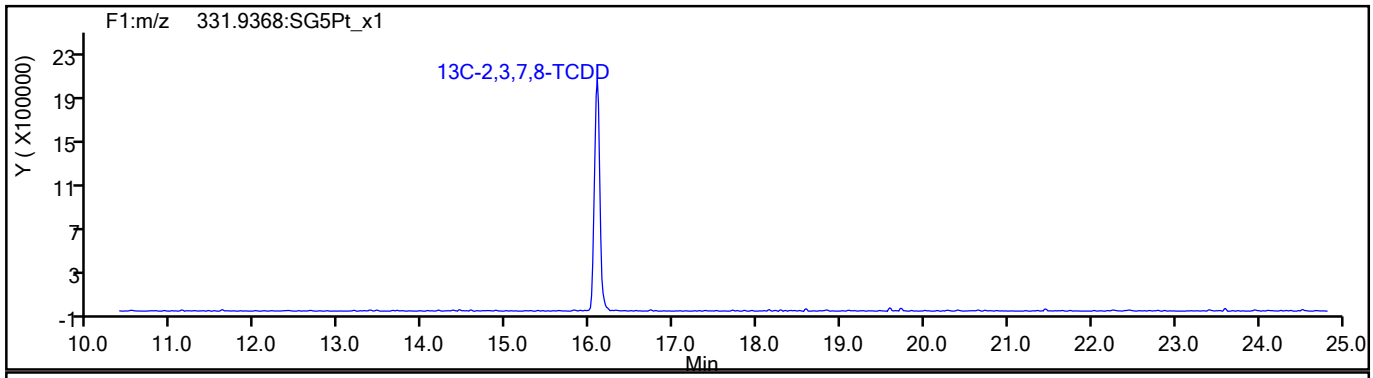

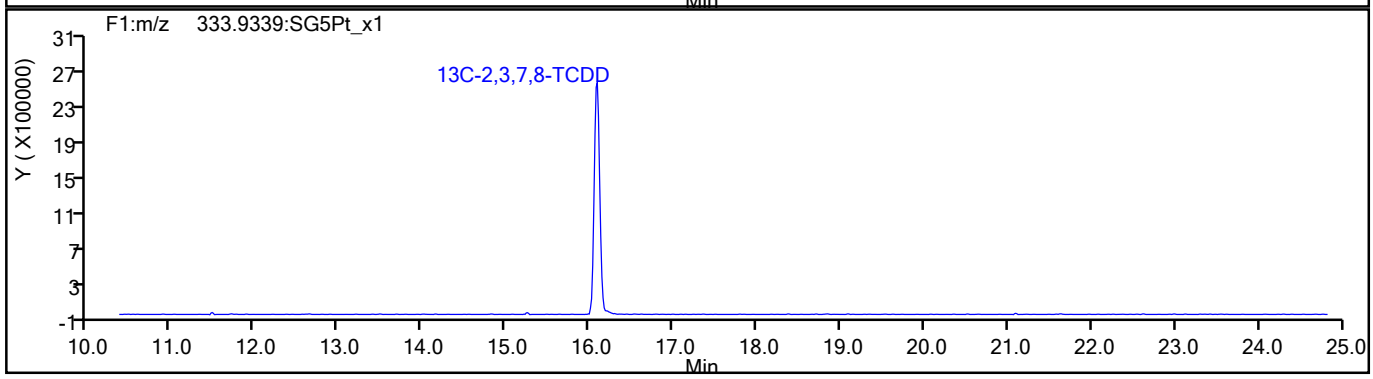

790363

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d		
Injection Date:	27-Aug-2021 08:59:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

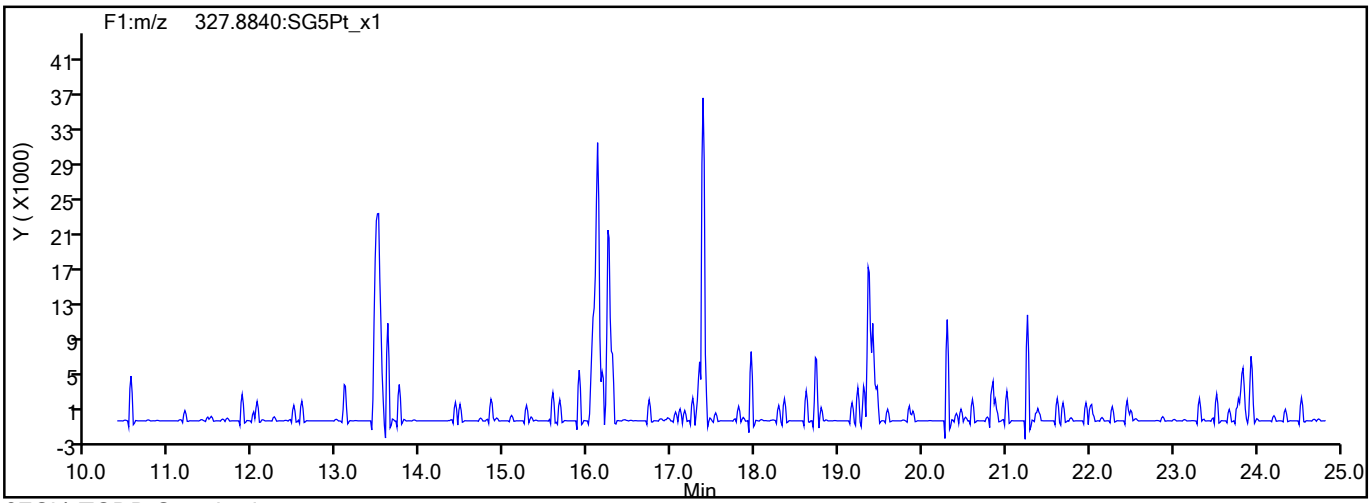

37Cl4-TCDD Standards

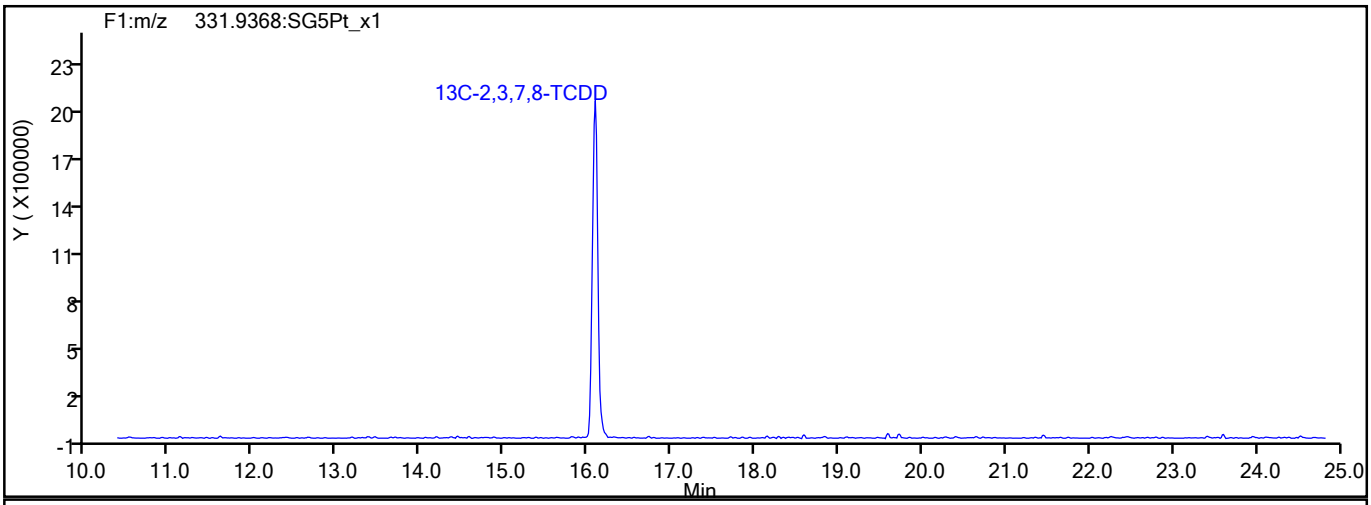

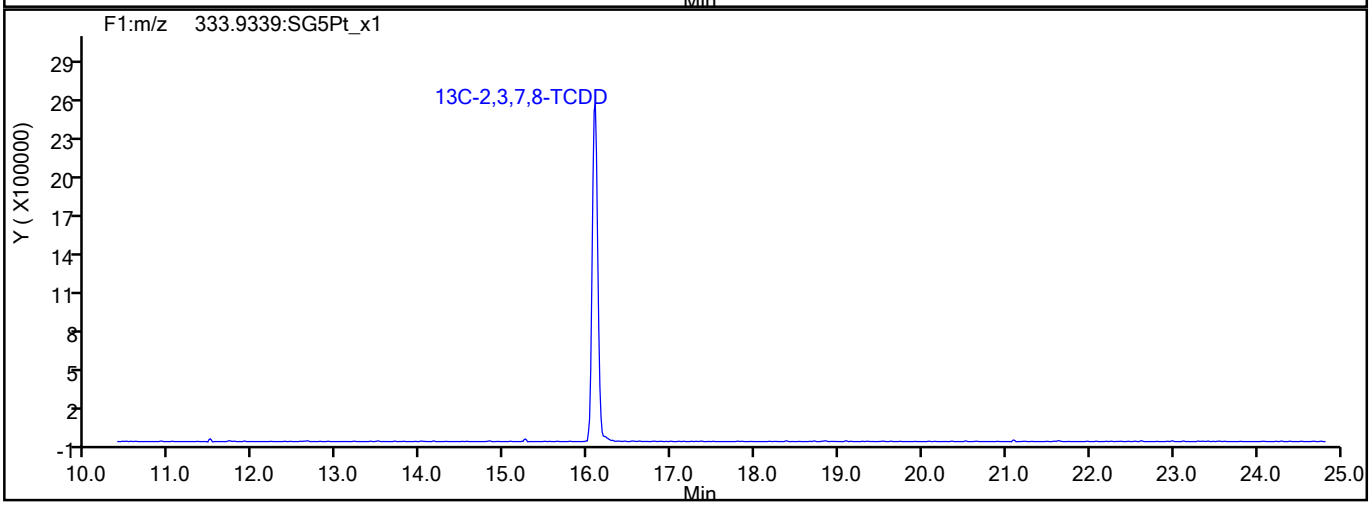

790364

Report Date: 27-Aug-2021 15:52:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_001.d		
Injection Date:	27-Aug-2021 08:59:39	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520438	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

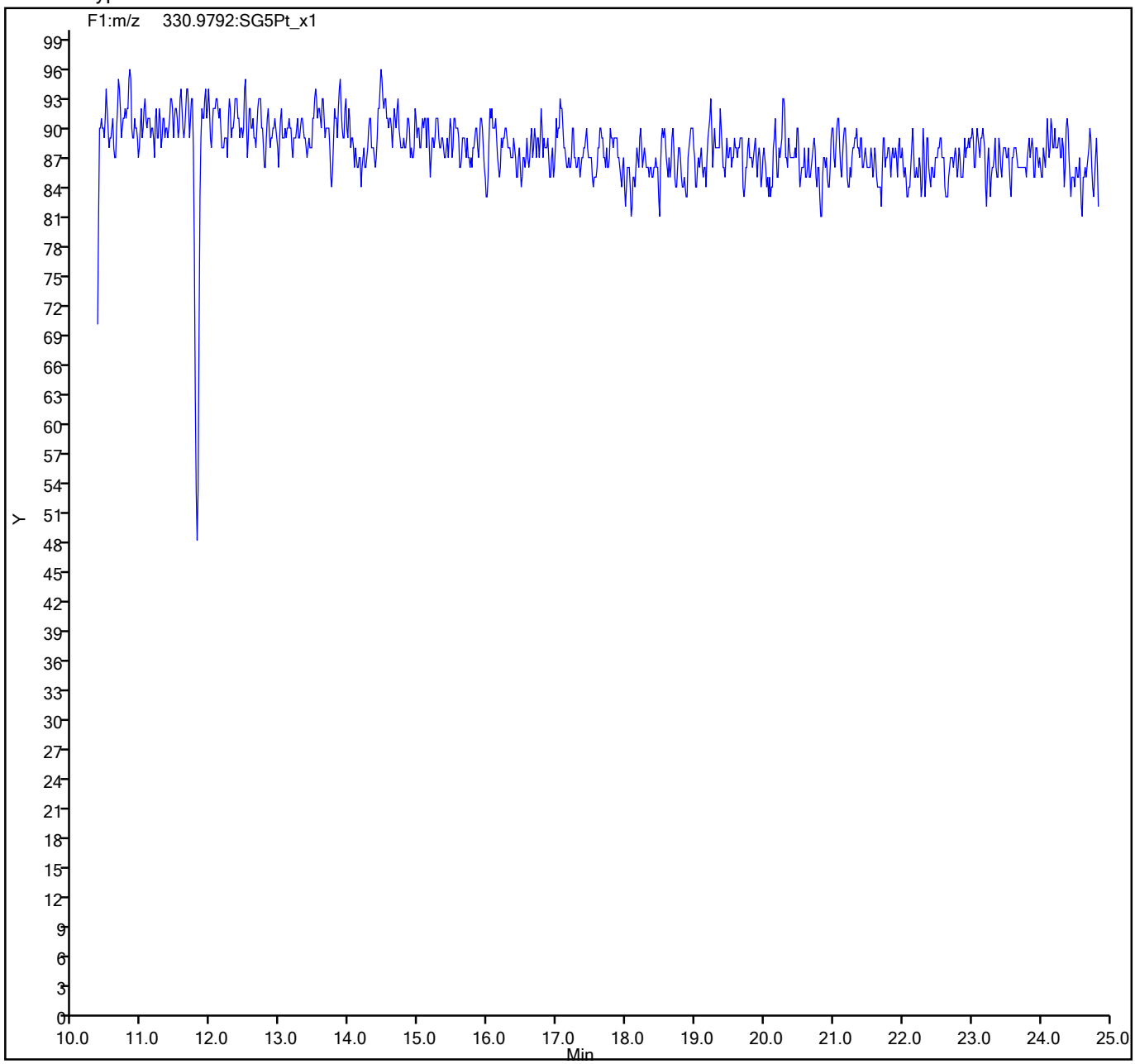

790365

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 15:38:16 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:34

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.630	38788235	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	40896159	0.78	0.9978	42.3	42.3	0.0758	0.0758		
D 13C-2,3,7,8-TCDD	16.066	22001037	0.78	0.8749					0.00	
2,3,7,8-TCDD	16.094	27039314	0.77	1.0570	46.5	46.5	0.0922	0.0922		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 15:38:16 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:34

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.630	17.630	0	1.000	17459073	3357288	5103	12757	658		
317.9389	17.630	17.630	0	1.000	21329162	3970010	4724	11810	840	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.644	0	1.001	17951435	3500124	2560	6400	1367		
305.8987	17.644	17.644	0	1.001	22944724	4488937	2979	7447	1507	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	1.000	9618318	2124266	3723	9307	571		
333.9339	16.066	16.066	0	1.000	12382719	2869762	3053	7632	940	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.094	16.094	0	1.002	11755596	2658333	2029	5072	1310		
321.8936	16.094	16.094	0	1.002	15283718	3448816	2838	7095	1215	0.77(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d		
Injection Date:	27-Aug-2021 15:38:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

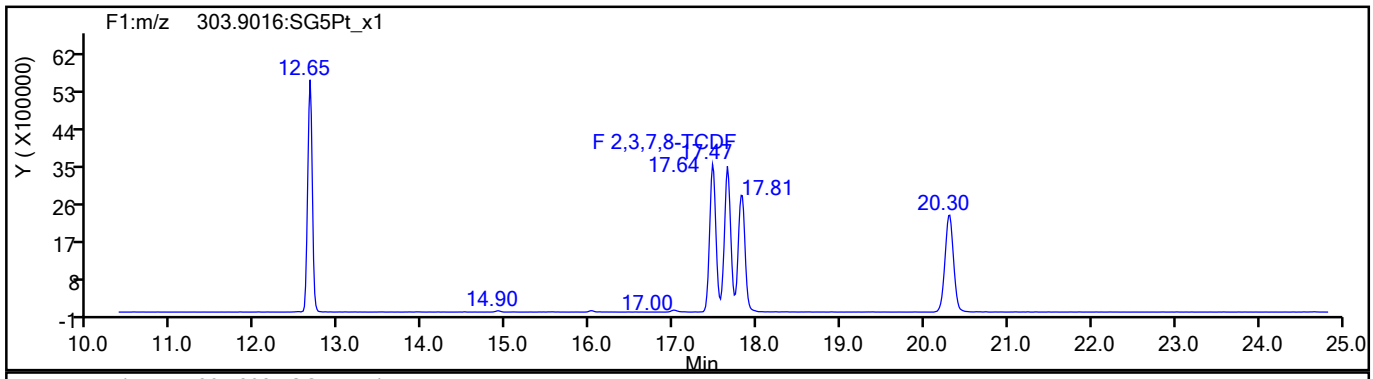

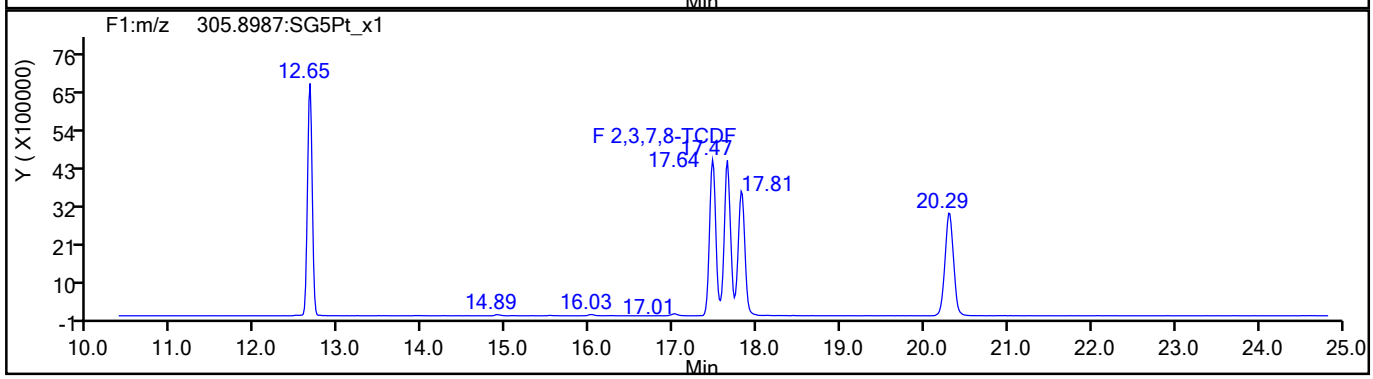

TCDF Standards

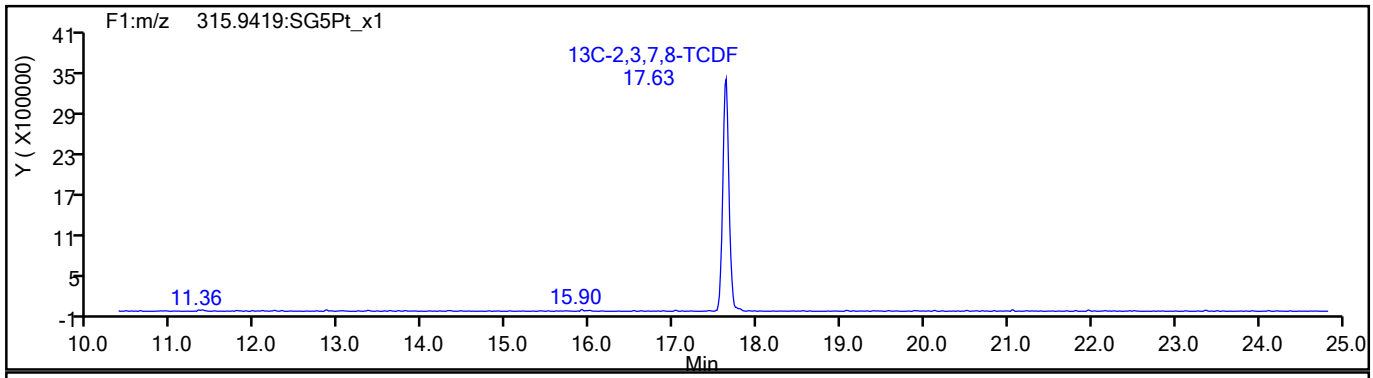

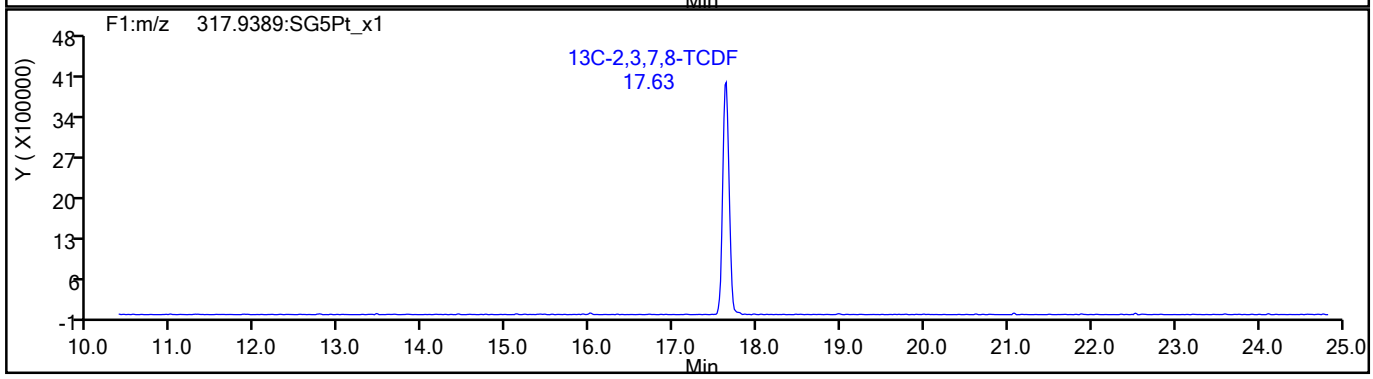

790368

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d		
Injection Date:	27-Aug-2021 15:38:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

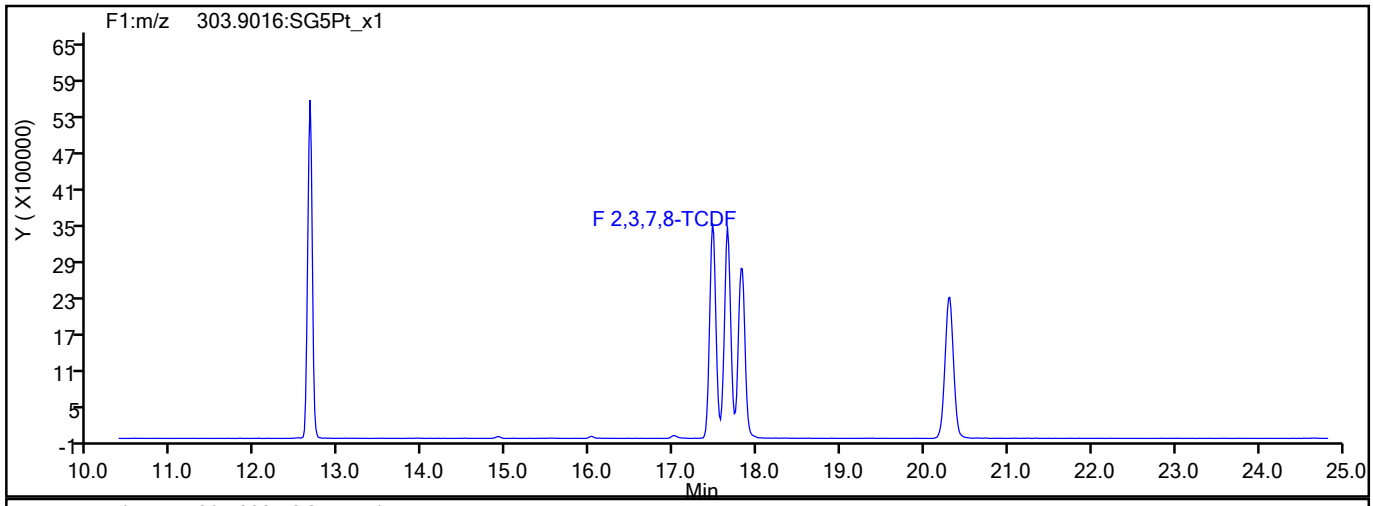

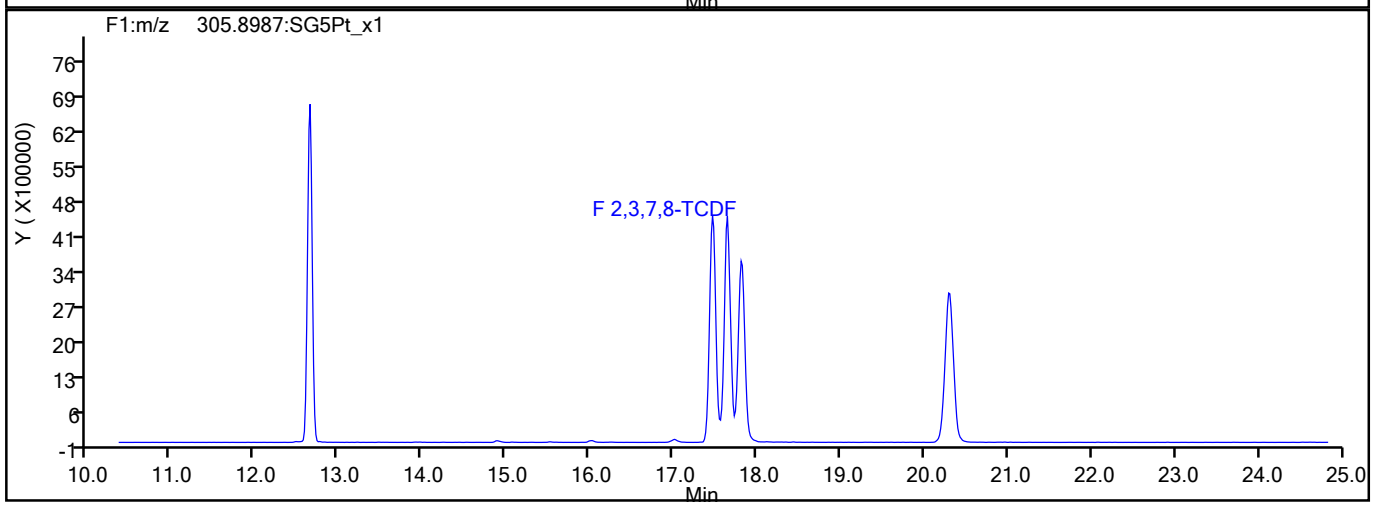

TCDF Interference Mass

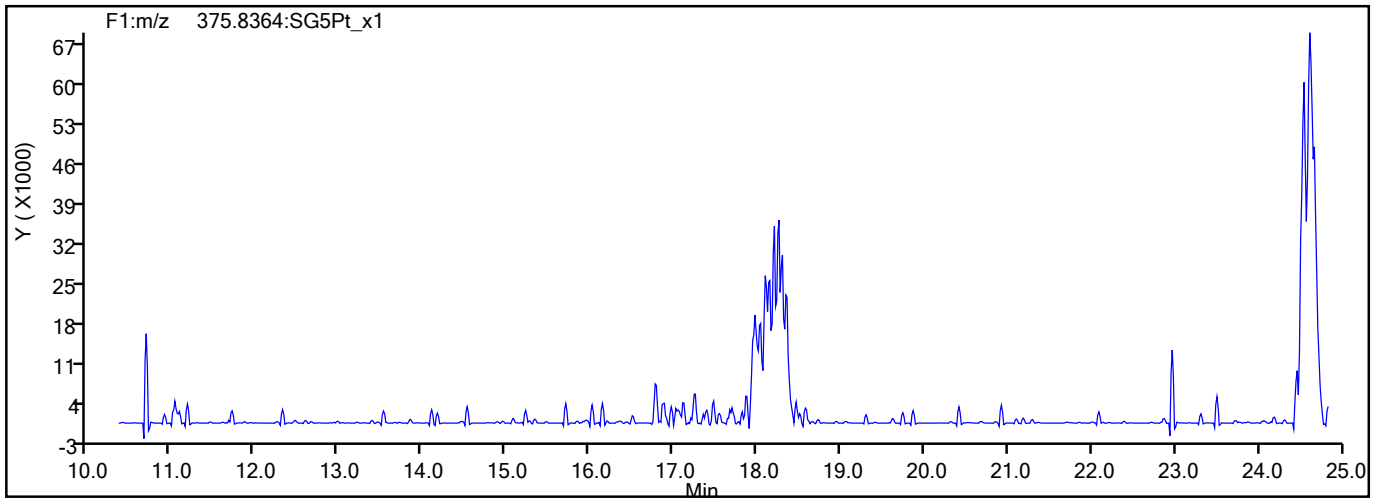

790369

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d		
Injection Date:	27-Aug-2021 15:38:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

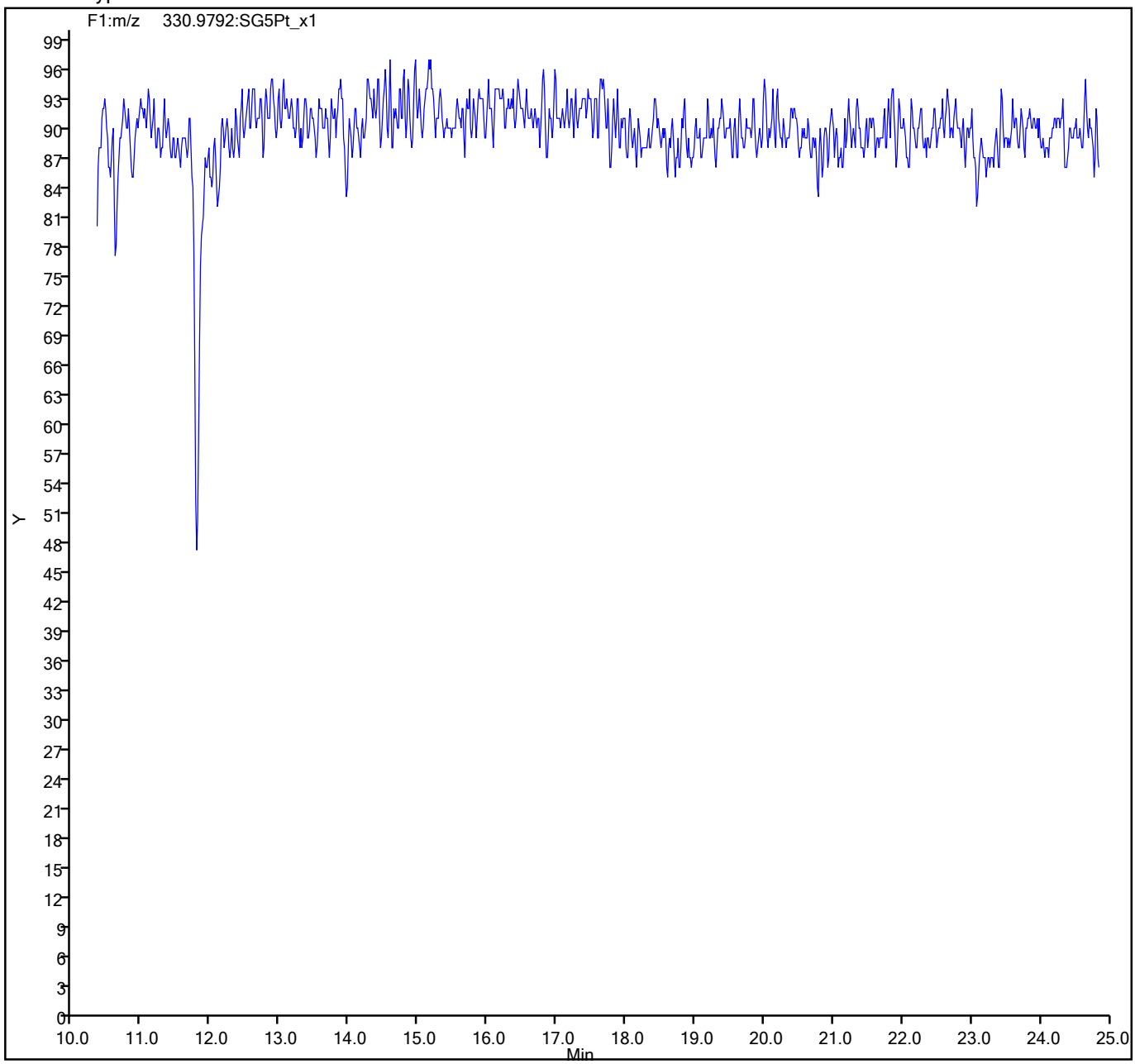

790370

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 02:19:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:24:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.401	485361	0.82	1.3459					0.00	
2,3,7,8-TCDF	20.436	1188413	0.84	1.0802	90.7	90.7	0.2813	0.2813		
A Non-2,3,7,8-sub-TCDF	19.878	19901	0.77	1.0802	1.727	1.518	0.2813	0.7822		RQ
S Total TCDF					92.4	92.2	0.2813	0.2813		RQ
D 13C-2,3,7,8-TCDD	21.743	329600	0.81	0.9317					0.00	
2,3,7,8-TCDD	21.777	370047	0.80	1.0753	41.8	41.8	0.1249	0.1249		
A Non-2,3,7,8-sub-TCDD	20.707	3685	0.77	1.0753	0.5012	0.4159	0.1249	0.4159		RQ
S Total TCDD					42.3	42.2	0.1249	0.1249		RQ
A F1 PeCDFs	24.648	904	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.125						0.0	0.0		
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.489	1055	1.45	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.028	10297	1.24	0.0000						RQ
S Total HxCDF										RQ
A Non-2,3,7,8-sub-HxCDD	35.394	4006	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.630	364225	1.07	1.4421						
1,2,3,4,7,8,9-HpCDF	39.885	322997	1.06	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.258						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.582	244067	1.05	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.258						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.156	689898	0.82							
1,3,6,8-TCDD	17.754	384589	0.80							
2,3,4,7-TCDF	20.436	1190538	0.84							
1,2,3,7-TCDD	21.545	321799	0.78							
1,2,3,9-TCDF	21.958	518792	0.84							
1,2,3,9-TCDD	22.035	386037	0.78							
1,2,8,9-TCDF	23.600	554349	0.82							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.660	159041								
1,3,4,6,8-PeCDF	24.022	462305	1.58							
1,2,3,8,9-PeCDD	26.056	316607	1.54							
1,2,4,7,9-PeCDD	30.652	304812	1.54							
1,2,3,8,9-PeCDF	30.838	407641	1.63							
1,2,3,4,6,8-HxCDF	33.138	482293	1.31							
1,2,4,6,7,9-HxCDD	34.224	313209	1.25							
1,2,3,4,6,7-HxCDD	36.564	309337	1.23							
1,2,3,4,8,9-HxCDF	36.918	413489	1.31							
1,2,3,4,6,7,9-HpCDD	38.934	270894	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 02:19:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 19-Aug-2021 15:49:28 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1612

First Level Reviewer: stephensk Date: 19-Aug-2021 09:24:20

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.401	20.401	0	1.000	219196	29055	85	212	342		
317.9389	20.393	20.401	-1	1.000	266165	33471	26	65	1287	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.436	20.436	0	1.002	544208	70535	85	212	830		
305.8987	20.436	20.436	0	1.002	644205	86812	105	262	827	0.84(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.713	19.878	-10	0.966	6415	874	85	212	10		
	Empc Correction				4460	790	85	212	9		
305.8987	19.678	19.878	-12	0.965	5793	1027	105	262	10	1.11(0.65-0.89)	
303.9016	24.013	19.878	248	1.177	4973	730	85	212	9		
	Empc Correction				4197	736	85	212	9		
305.8987	24.004	19.878	247	1.177	5451	956	105	262	9	0.91(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.743	21.743	0	1.000	147378	19307	97	242	199		
333.9338	21.734	21.743	-1	1.000	182222	24457	55	137	445	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.777	21.777	0	1.002	164836	19708	37	92	533		
321.8936	21.769	21.777	-1	1.001	205211	24772	22	55	1126	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.396	20.707	101	1.030	2359	261	37	92	7		
	Empc Correction				1603	201	37	92	5		
321.8936	22.457	20.707	105	1.033	2082	262	22	55	12	1.13(0.65-0.89)	
A F1 PeCDFs											RQ
339.8597	24.434	24.648	-13	1.000	323	113	8	20	14		
341.8567	24.486	24.648	-10	1.000	477	79	7	17	11	0.68(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	24.873	24.648	14	1.000	227	52	8	20	7		
341.8567	24.890	24.648	15	1.000	236	71	7	17	10	0.96(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	28.125						28	70			
341.8567	28.125						115	287			
A Non-2,3,7,8-sub-PeCDD											
355.8546	26.898	28.489	-95	1.000	625	122	24	60	5		
357.8516	26.856	28.489	-98	1.000	430	72	13	32	6	1.45(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											RQ
373.8208	34.973	35.028	-3	1.000	2250	338	67	167	5		
375.8178	34.956	35.028	-4	1.000	1567	325	45	112	7	1.44(1.05-1.43)	
373.8208	35.116	35.028	5	1.000	3879	551	67	167	8		
375.8178	35.125	35.028	6	1.000	2908	527	45	112	12	1.33(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.344	35.394	-3	1.000	2218	414	33	82	13		
391.8127	35.335	35.394	-4	1.000	2261	396	31	77	13	0.98(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.630	38.630	0	1.000	188441	47249	63	157	750		
409.7788	38.630	38.630	0	1.000	175784	44386	54	135	822	1.07(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.885	39.885	0	1.000	166495	43364	63	157	688		
409.7788	39.877	39.885	-1	1.000	156502	41246	54	135	764	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						63	157			
409.7788	39.258						54	135			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.582	39.582	0	1.000	125253	34507	41	102	842		
425.7737	39.573	39.582	-1	1.000	118814	33009	40	100	825	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.258						41	102			
425.7737	39.258						40	100			
1,3,6,8-TCDF											
303.9016	16.156	16.156	0		310778	57406	85	212	675		
305.8987	16.148	16.156	-1		379120	70718	105	262	674	0.82(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.754	17.754	0		170993	27785	37	92	751		
321.8936	17.754	17.754	0		213596	36009	22	55	1637	0.80(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	20.436	20.436	0		545121	70571	85	212	830		
305.8987	20.436	20.436	0		645417	86859	105	262	827	0.84(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.545	21.545	0		141111	18226	37	92	493		
321.8936	21.545	21.545	0		180688	24656	22	55	1121	0.78(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	21.958	21.958	0		236345	29756	85	212	350		
305.8987	21.949	21.958	-1		282447	37233	105	262	355	0.84(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,9-TCDD											
319.8965	22.035	22.035	0		168553	20335	37	92	550		
321.8936	22.035	22.035	0		217484	26622	22	55	1210	0.78(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.600	23.600	0		249931	41792	85	212	492		
305.8987	23.609	23.600	1		304418	49051	105	262	467	0.82(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.660	23.660	0		159041	26777	37	92	724		
1,3,4,6,8-PeCDF											
339.8597	24.022	24.022	0		282879	51764	8	20	6471		
341.8567	24.022	24.022	0		179426	33084	7	17	4726	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.056	26.056	0		191787	27480	24	60	1145		
357.8516	26.056	26.056	0		124820	18312	13	32	1409	1.54(1.32-1.78)	
1,2,4,7,9-PeCDD											
355.8546	30.652	30.652	0		184760	22522	24	60	938		
357.8516	30.661	30.652	1		120052	14042	13	32	1080	1.54(1.32-1.78)	
1,2,3,8,9-PeCDF											
339.8597	30.838	30.838	0		252442	29783	28	70	1064		
341.8567	30.846	30.838	1		155199	17958	115	287	156	1.63(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.138	33.138	0		273839	36209	67	167	540		
375.8178	33.138	33.138	0		208454	28574	45	112	635	1.31(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.224	34.224	0		173942	30009	33	82	909		
391.8127	34.224	34.224	0		139267	24561	31	77	792	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.564	36.564	0		170654	37355	33	82	1132		
391.8127	36.556	36.564	-1		138683	30201	31	77	974	1.23(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.918	36.918	0		234506	51404	67	167	767		
375.8178	36.918	36.918	0		178983	40201	45	112	893	1.31(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.934	38.934	0		137960	35037	41	102	855		
425.7737	38.934	38.934	0		132934	34741	40	100	869	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 02:19:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 44

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	485361	62526

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	485361	62526

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.713	6415	874	5793	1027	0.9314	1.11	RQ
19.713	4460	790	5793	1027	0.7822		Empc Correction
24.013	4973	730	5451	956	0.7953	0.91	RQ
24.013	4197	736	5451	956	0.7361		Empc Correction
Signal Totals:							
	8657	1526	11244	1983			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	22632	3587				1.01	RQ
	19901	3509					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.727 = (22632 * 40.000) / (485361 * 1.080)
Empc Amount: 1.518 = (19901 * 40.000) / (485361 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	40.000	329600	43764

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		40.000	329600	43764

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.396	2359	261	2082	262	0.5012	1.13	RQ
22.396	1603	201	2082	262	0.4159		Empc Correction
Signal Totals:							
	1603	201	2082	262			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4441	523				1.13	RQ
	3685	463					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5012 = (4441 * 40.000) / (329600 * 1.075)
Empc Amount: 0.4159 = (3685 * 40.000) / (329600 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.434	323	113	477	79		0.68	R
24.873	227	52	236	71		0.96	R
Signal Totals:							
	550	165	713	150			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1263	315				0.77	RQ
	904	270					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1263 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (904 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 02:19:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 44

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.898	625	122	430	72		1.45	
Signal Totals:							
	625	122	430	72			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1055	194				1.45	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1055 * 0.0) / (0 * 0.000)

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 02:19:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 44

Non-2,3,7,8-sub-HxCDF, RT: 35.028

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147				
1,2,3,6,7,8-HxCDF	1.218				
2,3,4,6,7,8-HxCDF	1.214				
1,2,3,7,8,9-HxCDF	1.240				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
34.973	2250	338	1567	325		1.44	R
35.116	3879	551	2908	527		1.33	
Signal Totals:							
	6129	889	4475	852			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10604	1741				1.37	RQ
	10297	1806					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (10604 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (10297 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:28 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 02:19:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	44

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.344	2218	414	2261	396		0.98	R
Signal Totals:							
	2218	414	2261	396			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4479	810				0.98	RQ
	4006	747					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (4479 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (4006 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

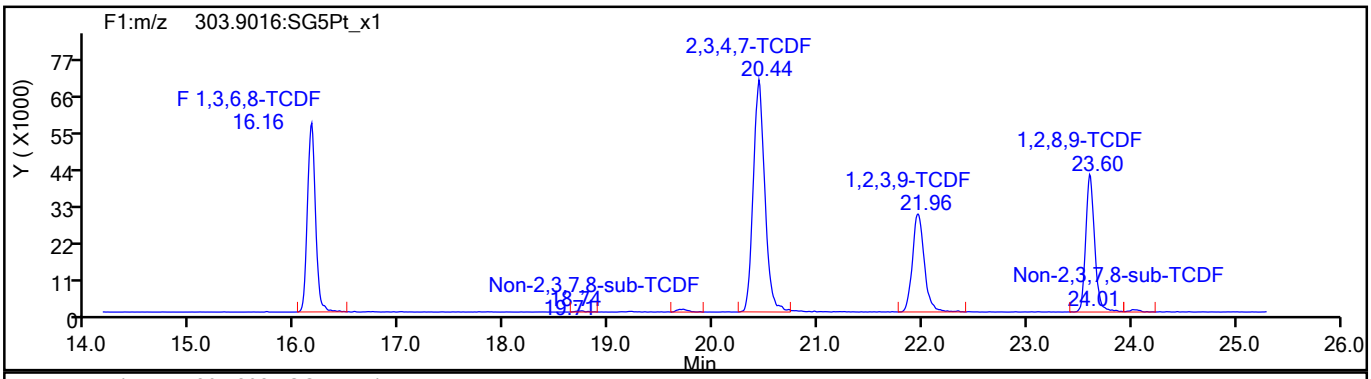

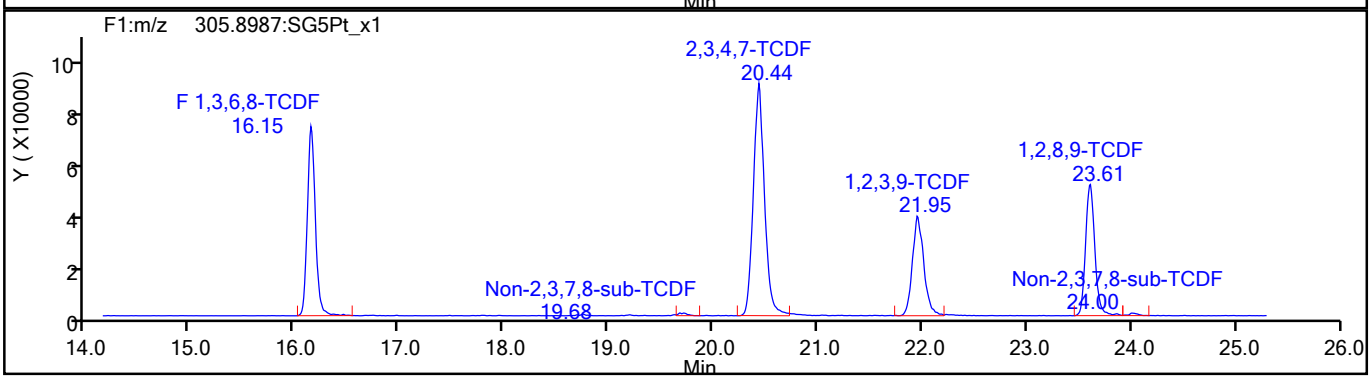

TCDF Standards

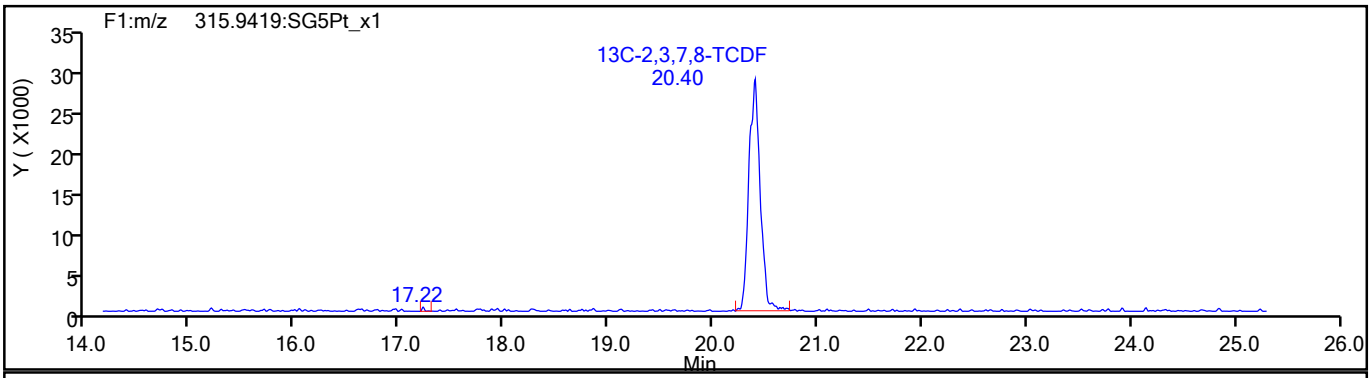

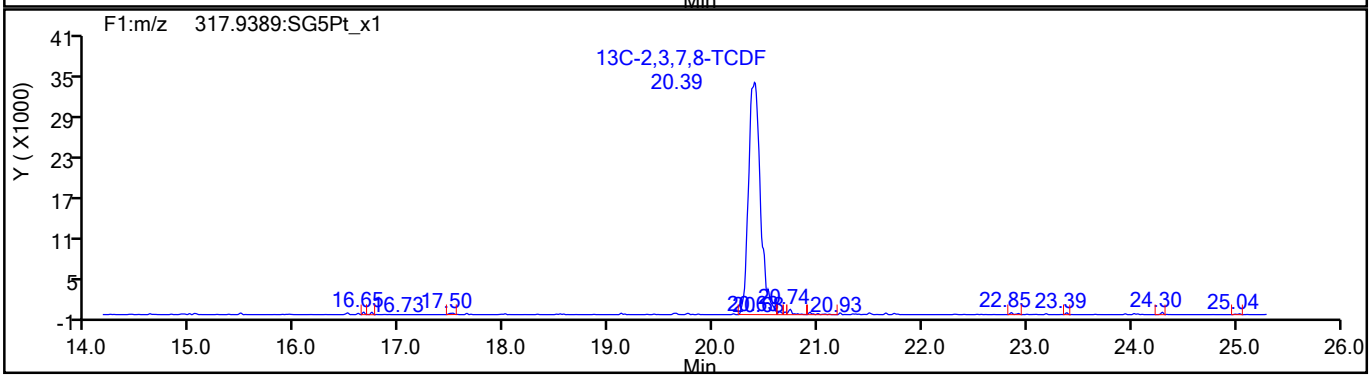

790382

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

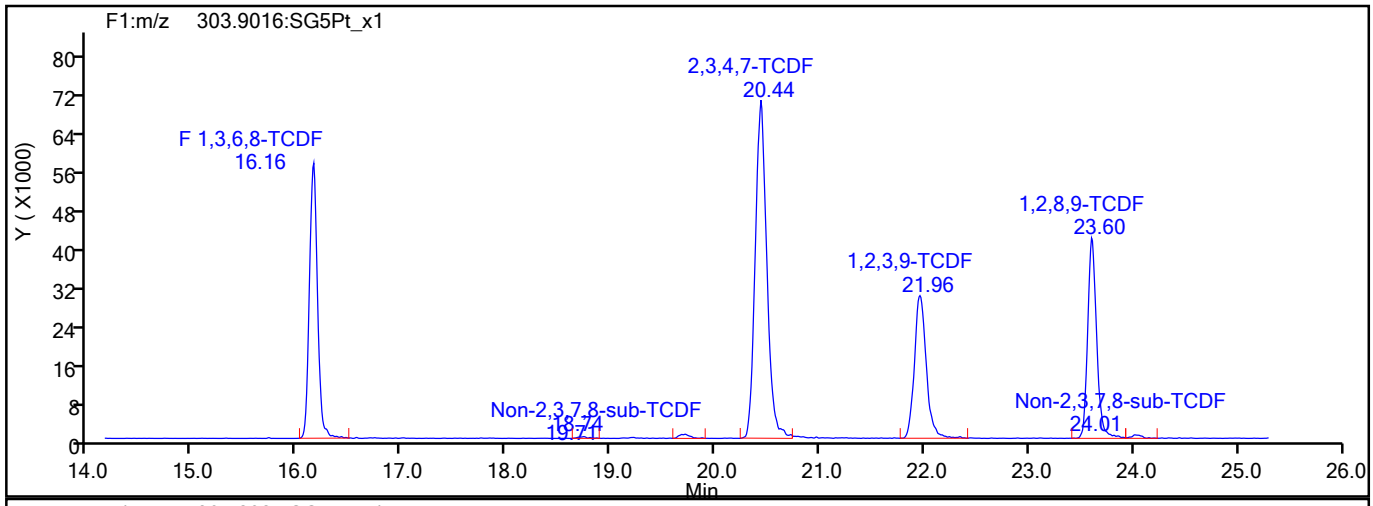

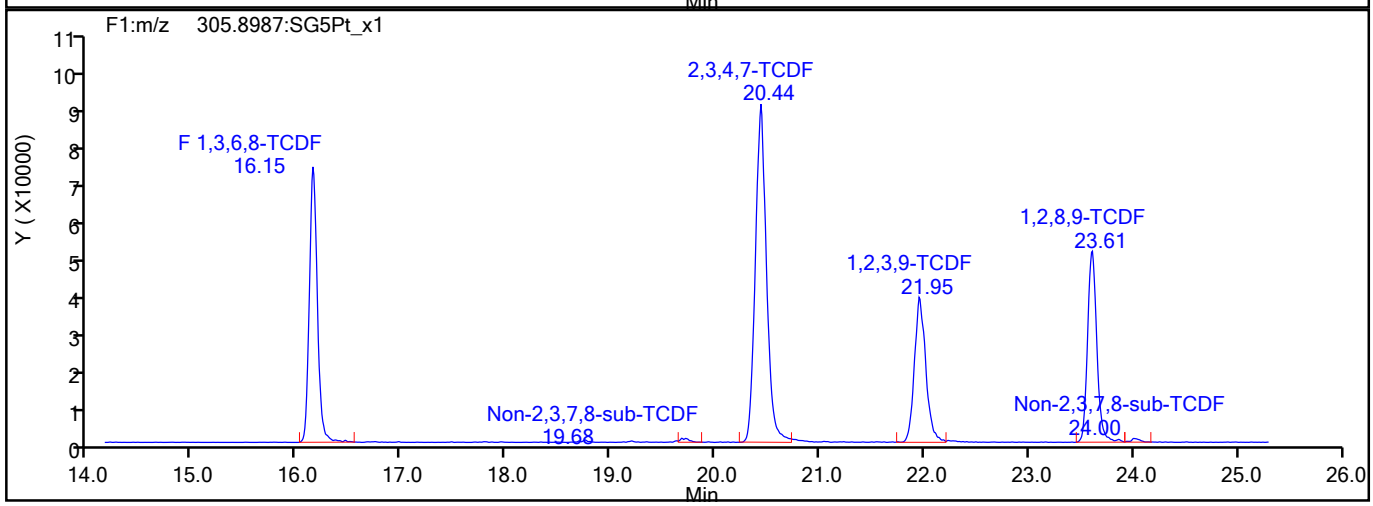

TCDF Interference Mass

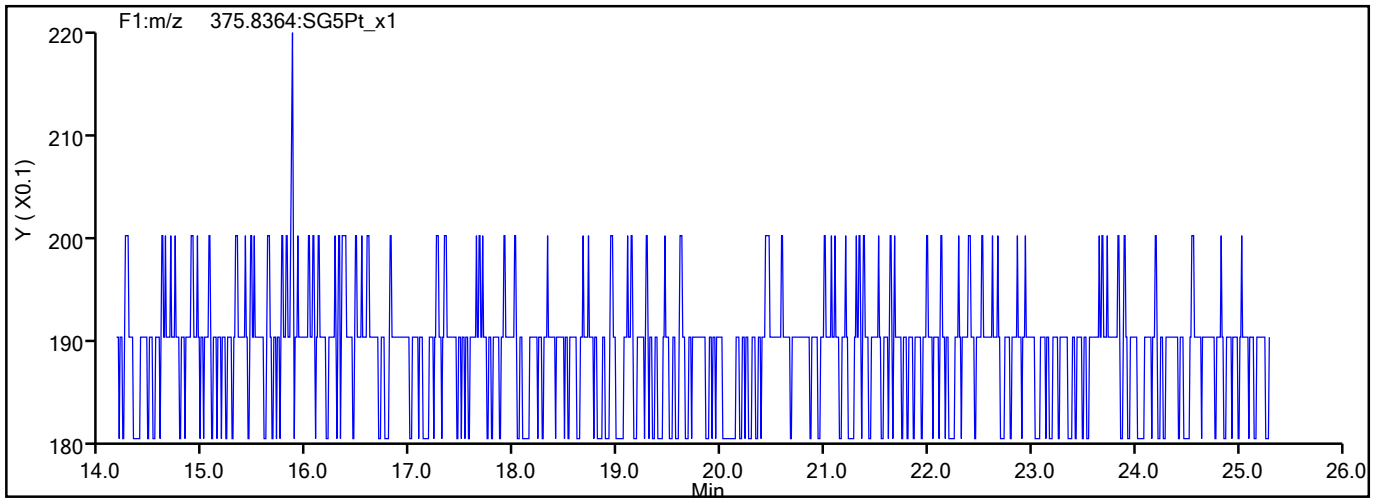

790383

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

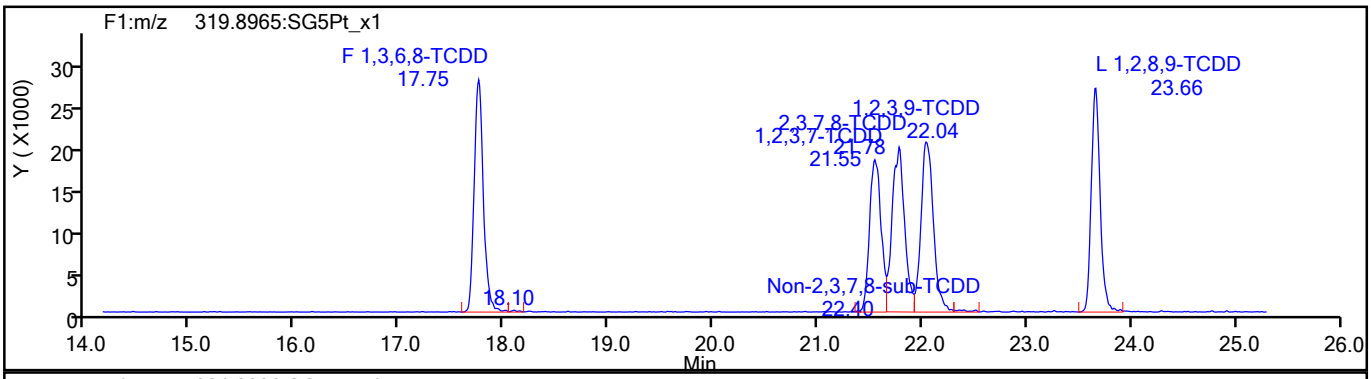

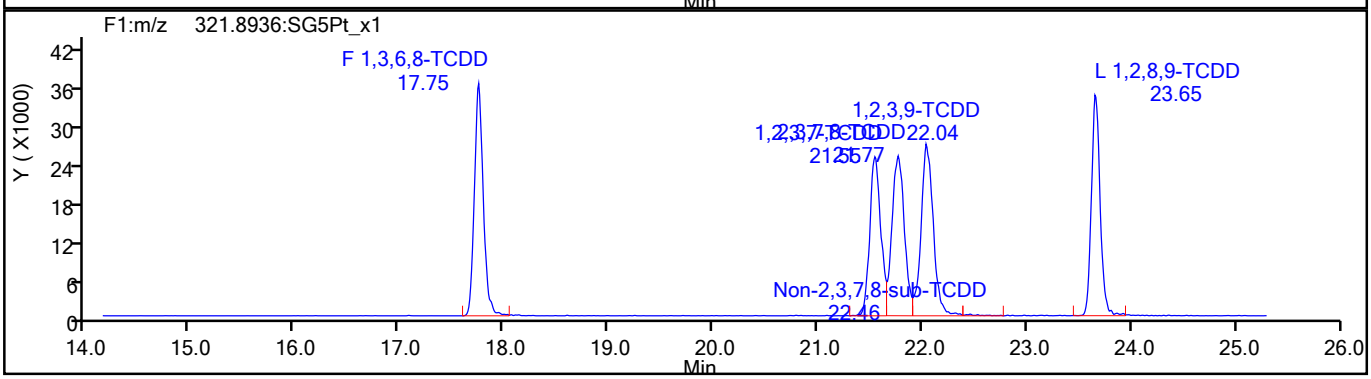

TCDD Standards

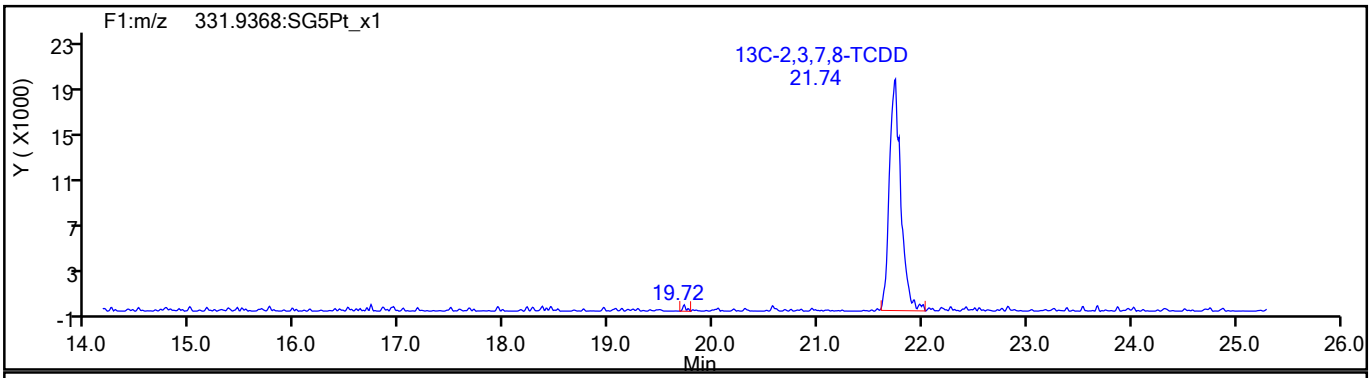

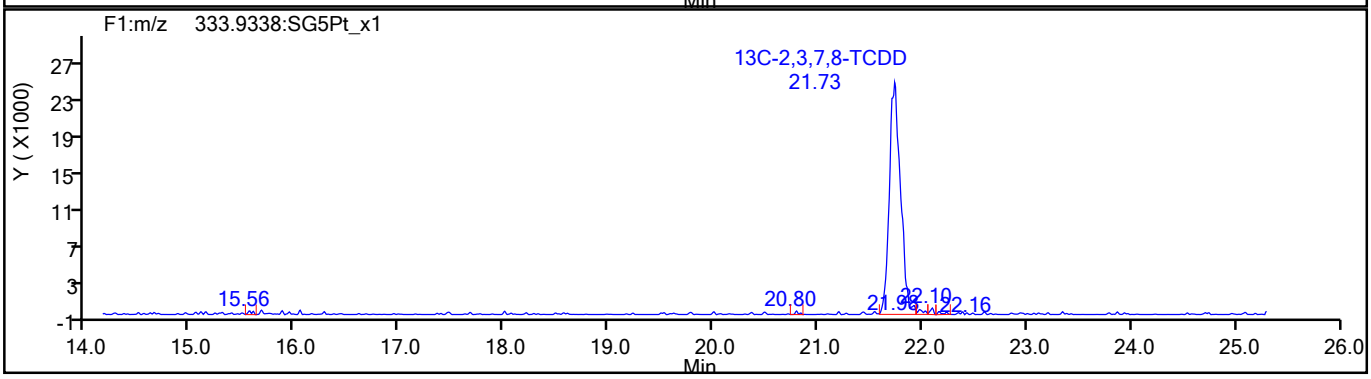

790384

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

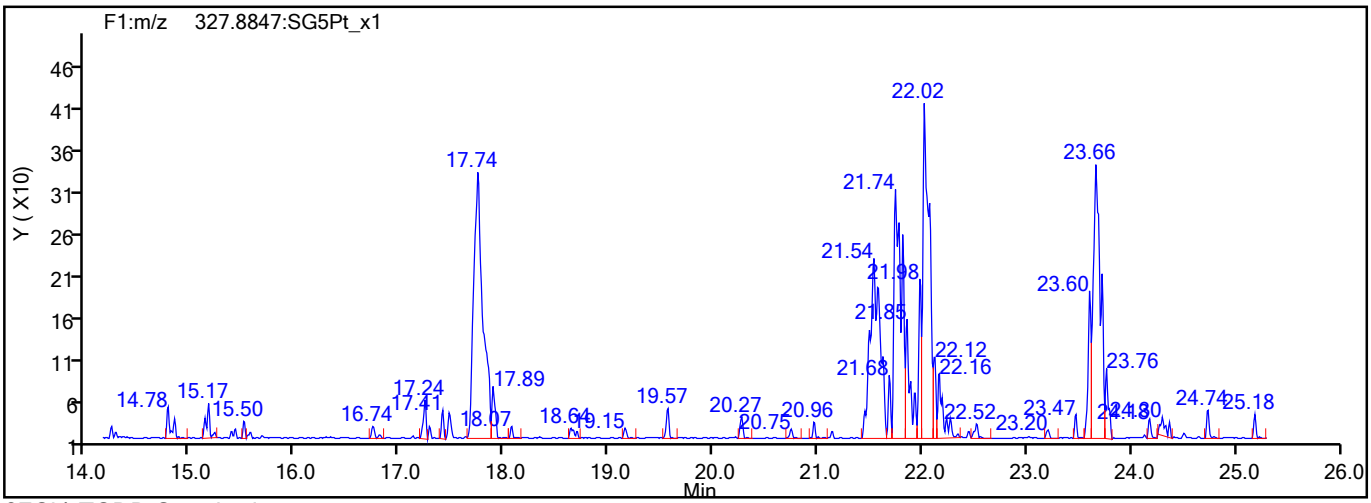

37Cl4-TCDD Standards

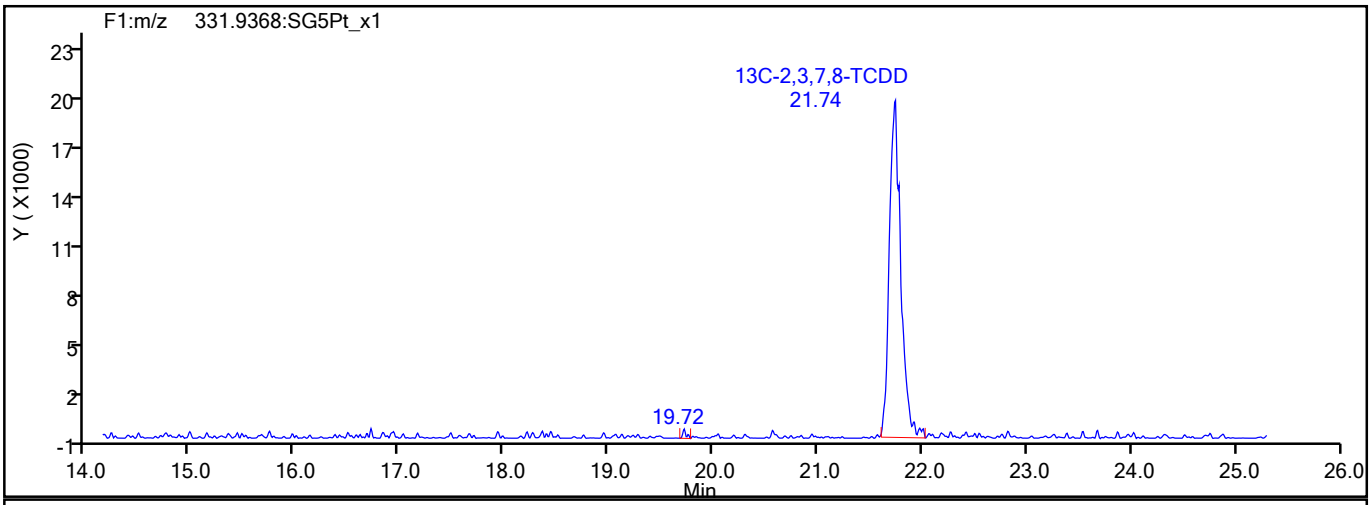

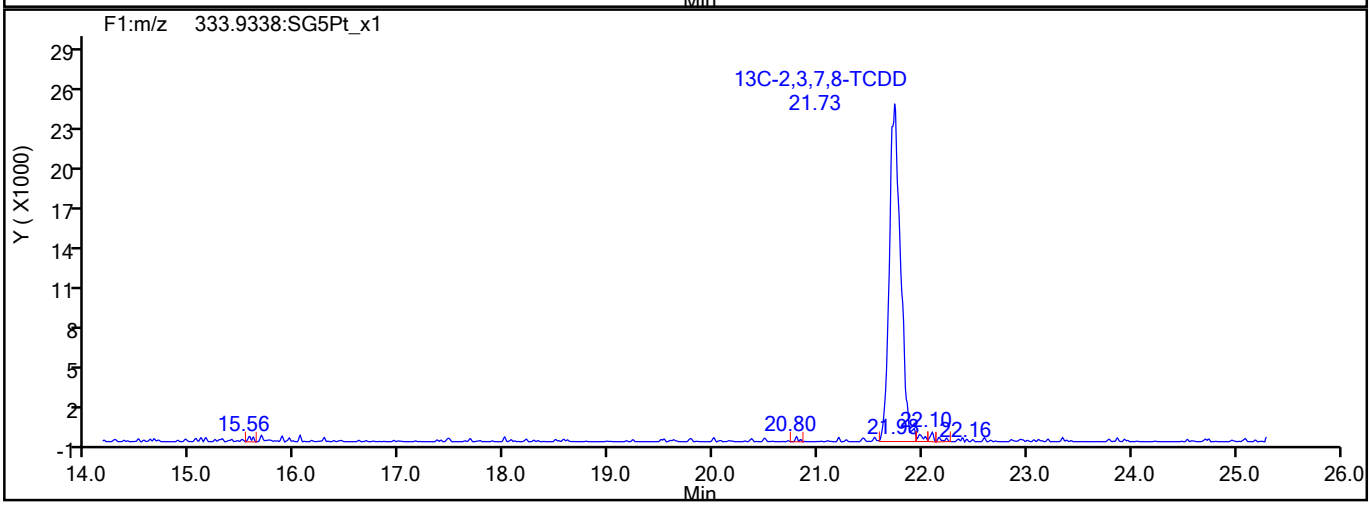

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Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

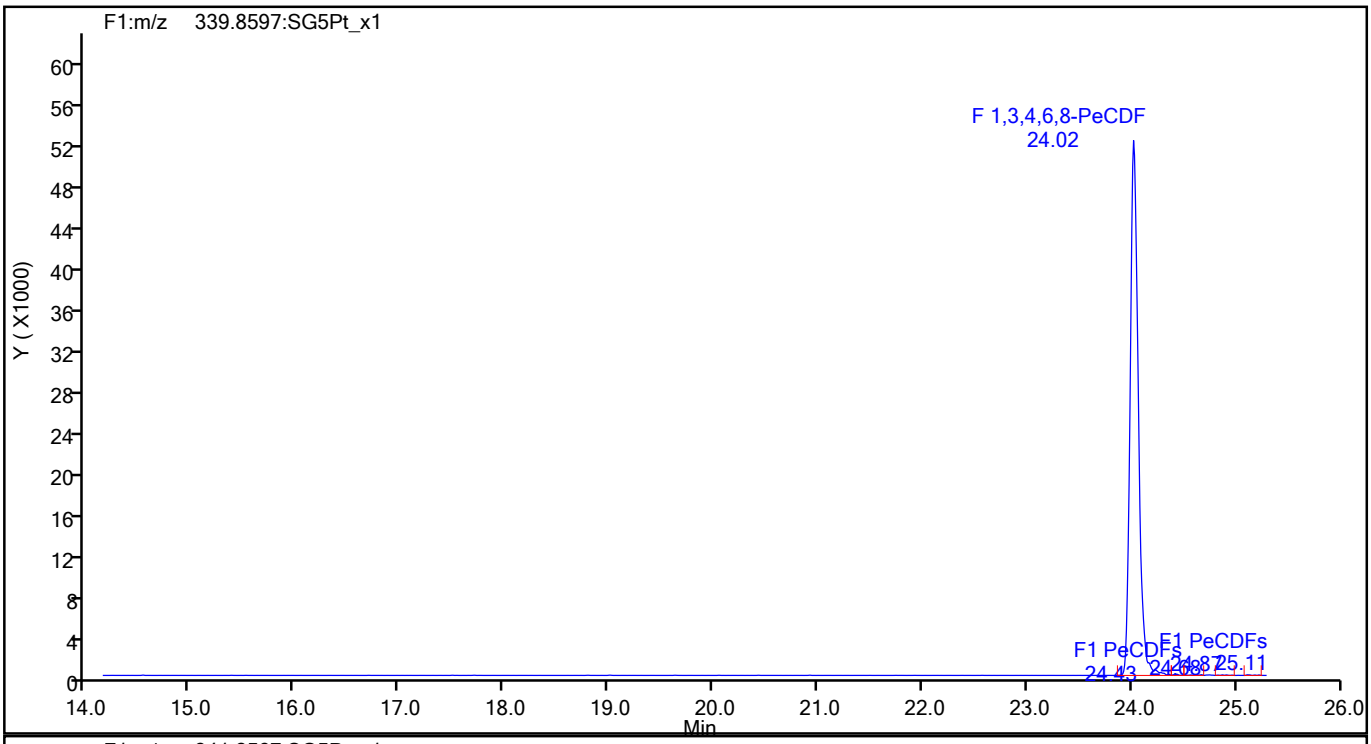

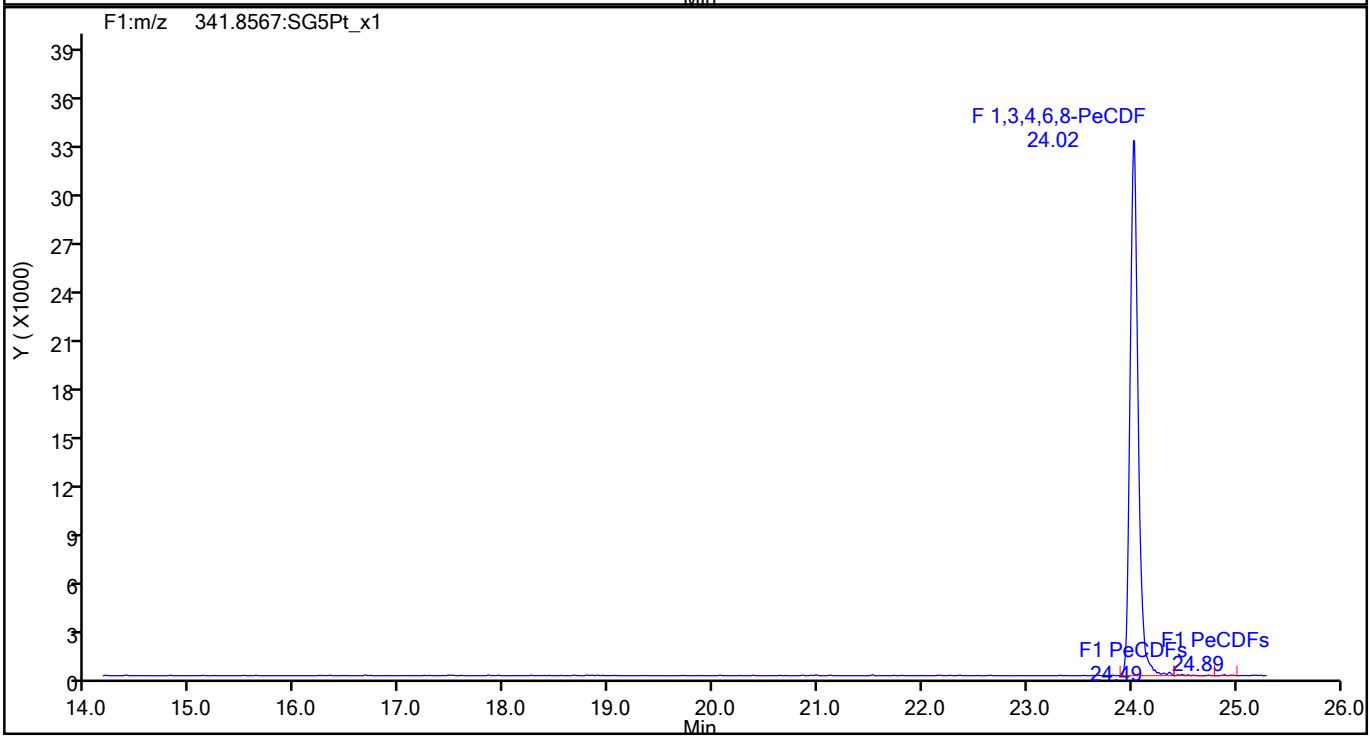

790386

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

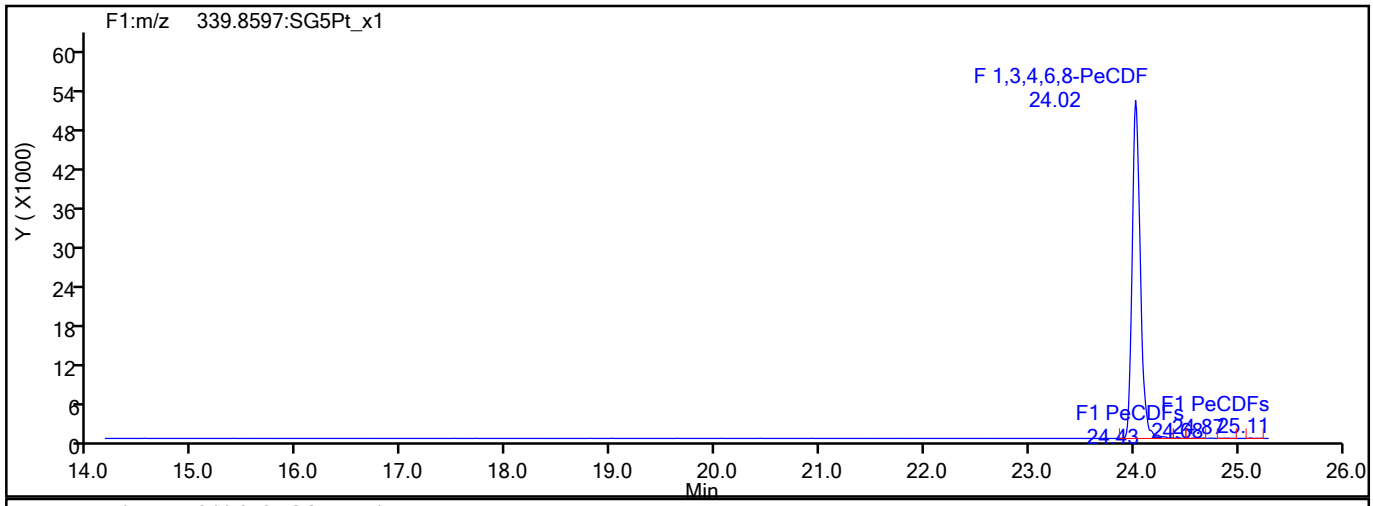

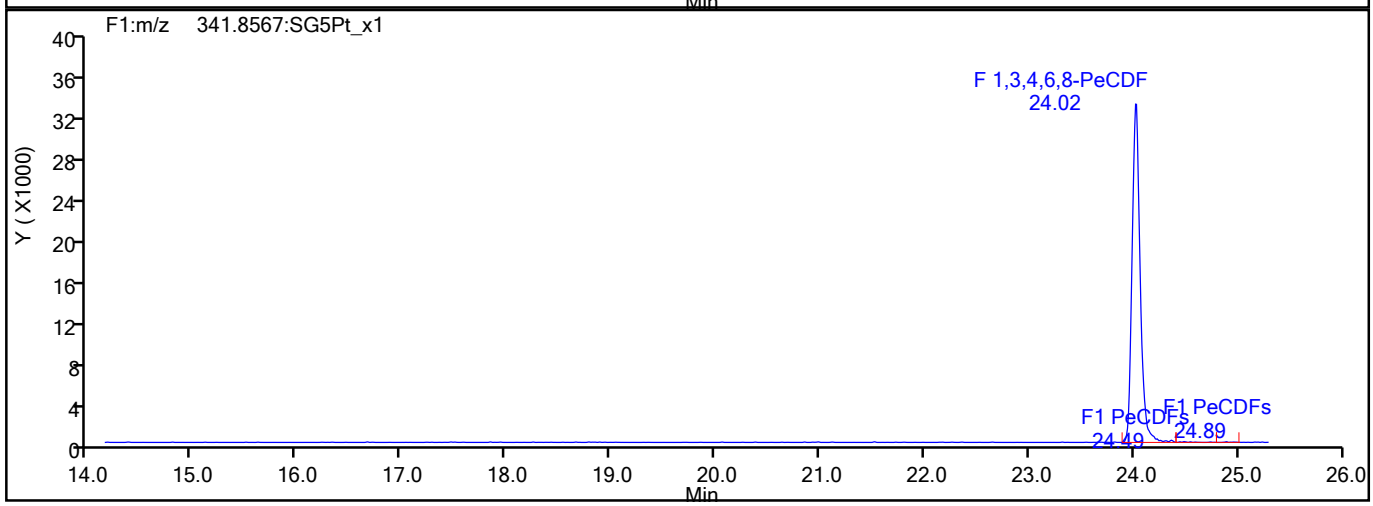

F1 PeCDFs Interference Mass

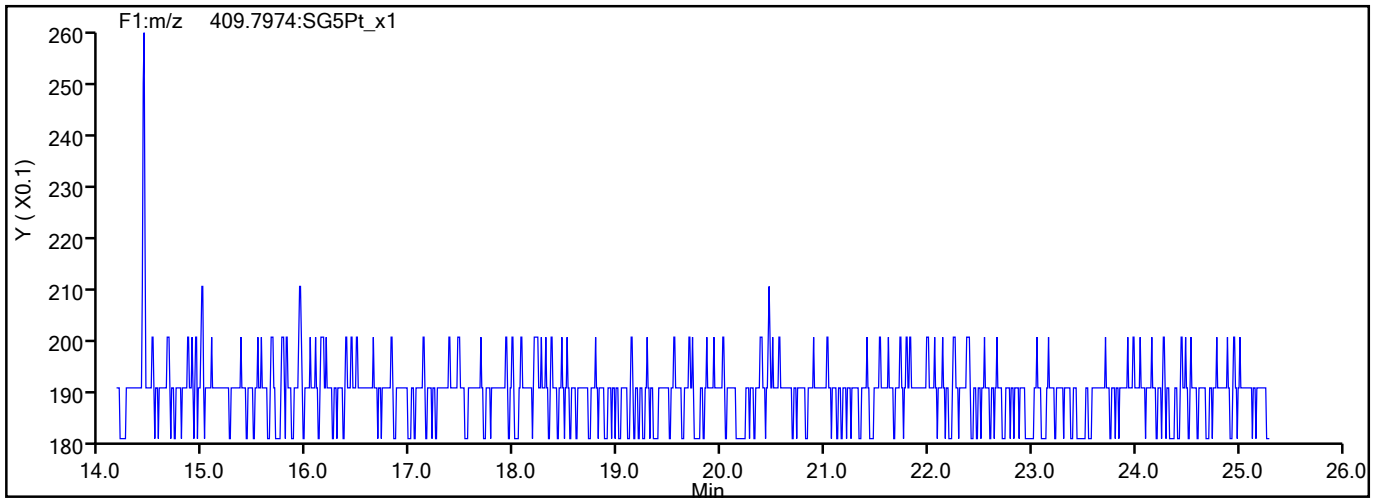

790387

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

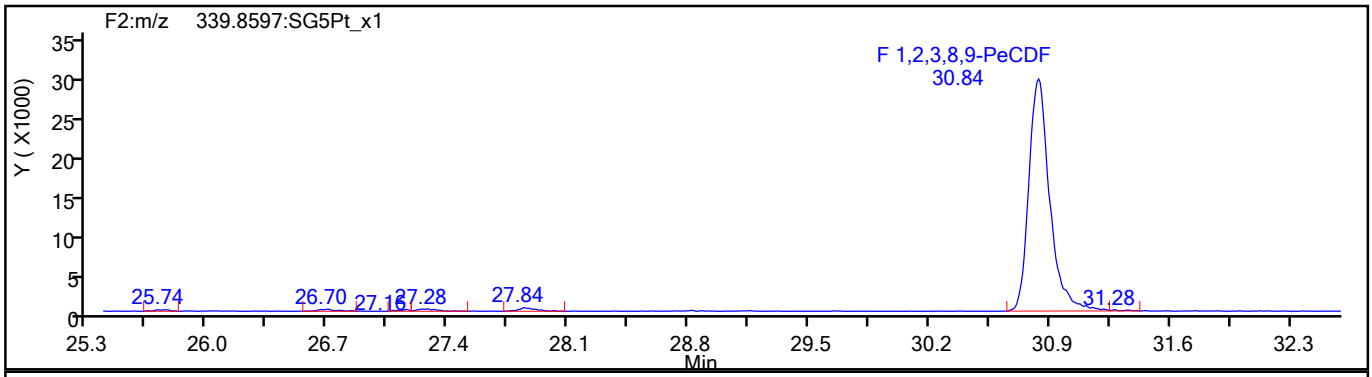

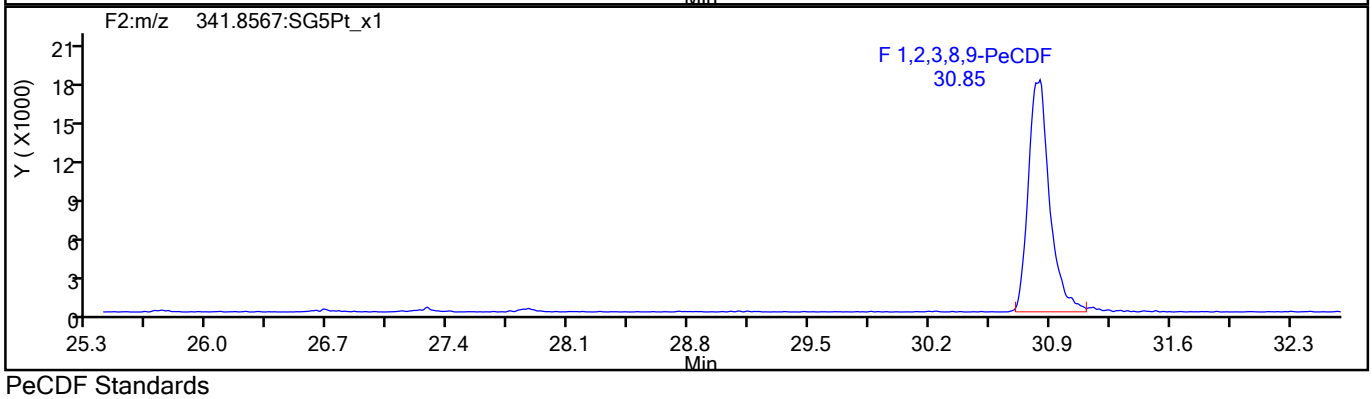

PeCDF Standards

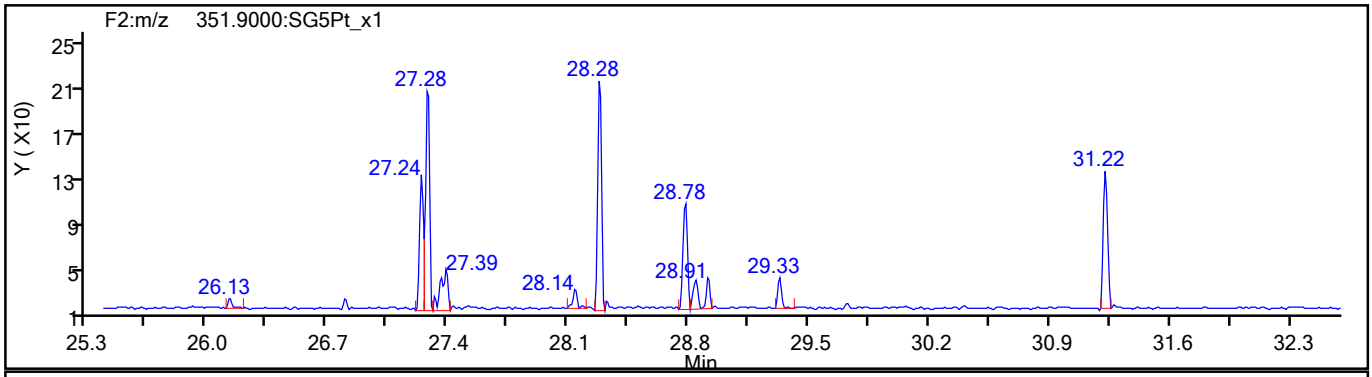

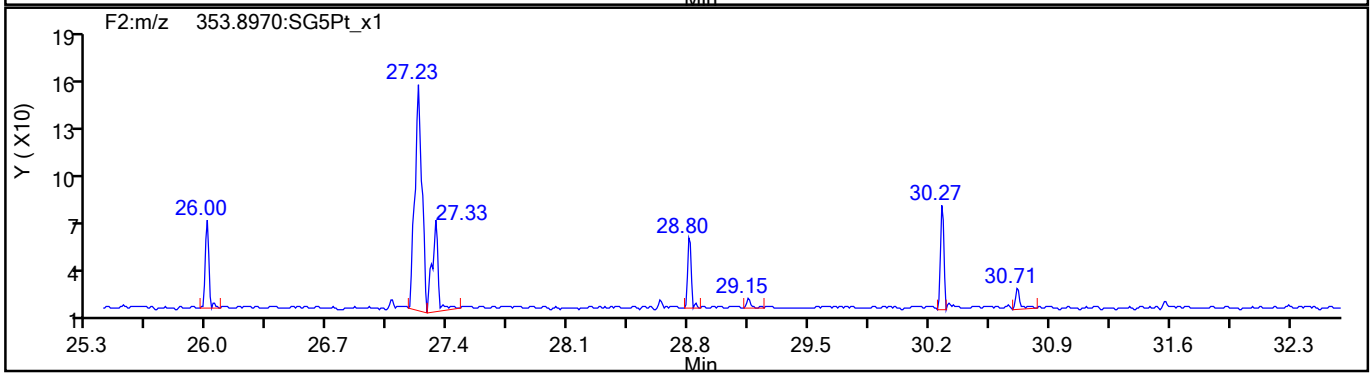

790388

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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PeCDF

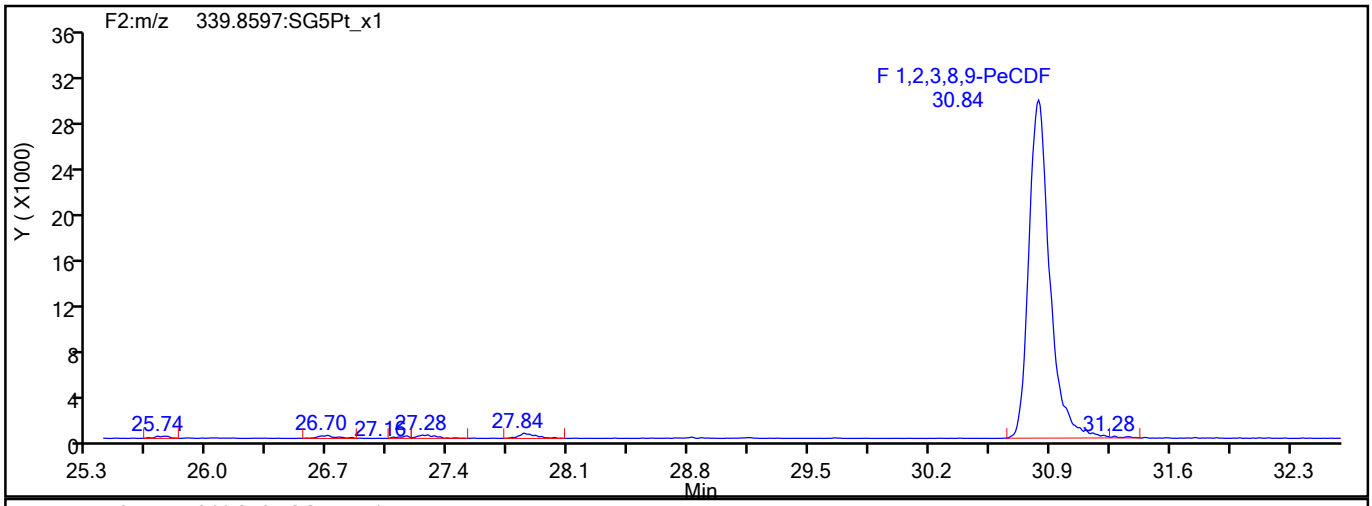

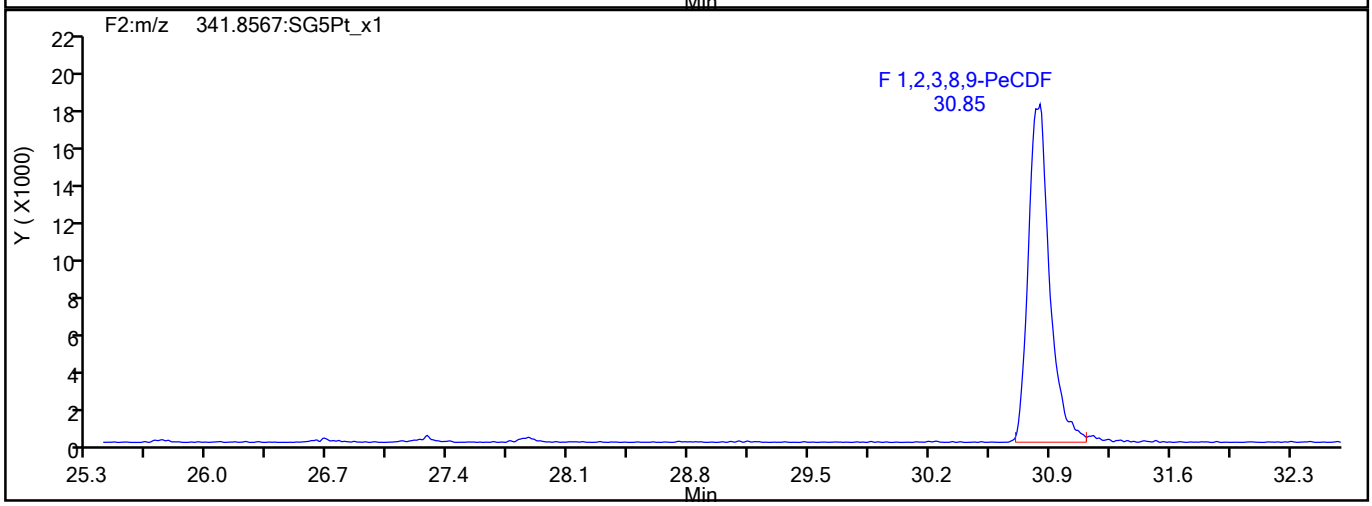

PeCDF Interference Mass

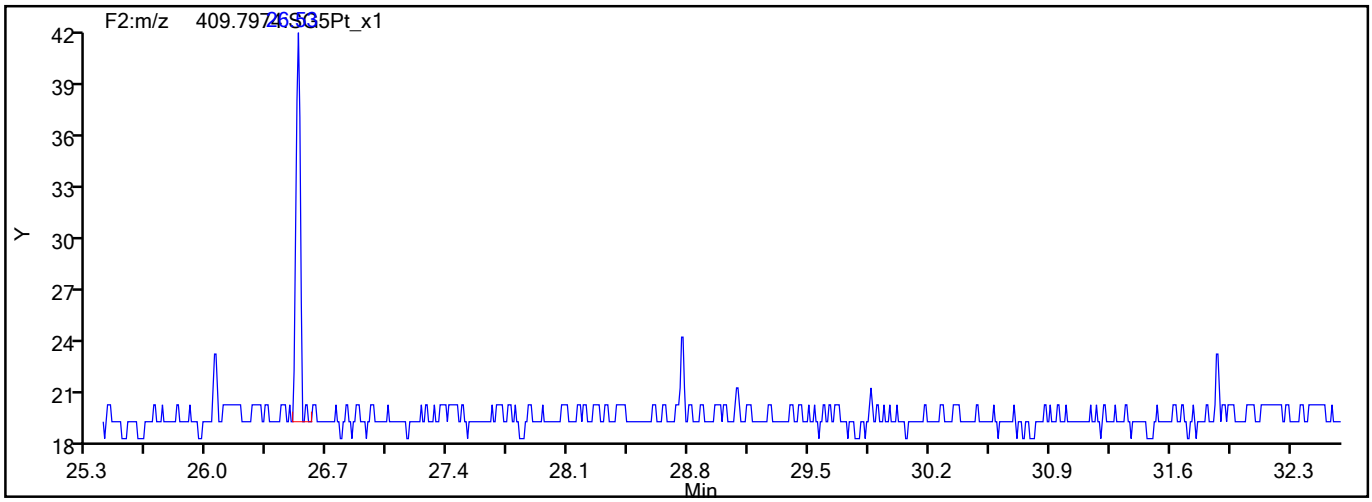

790389

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

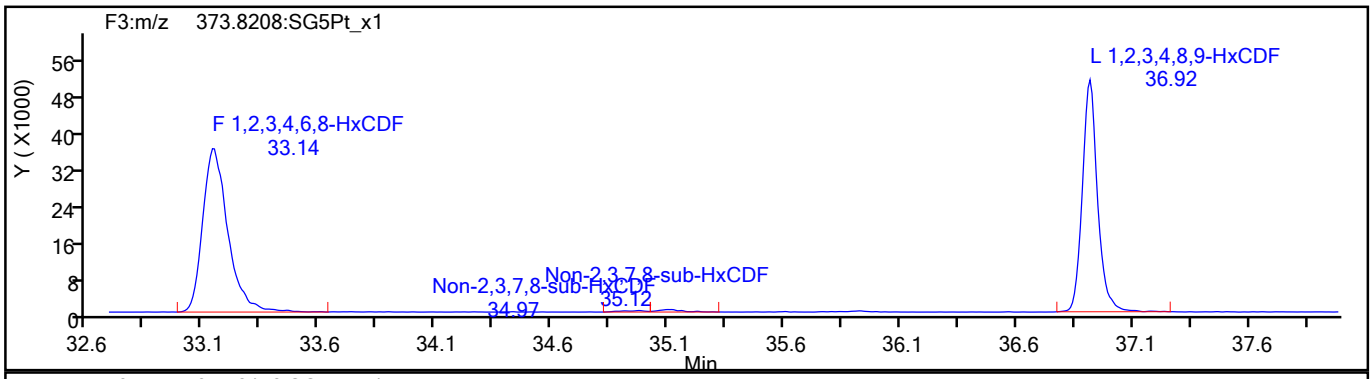

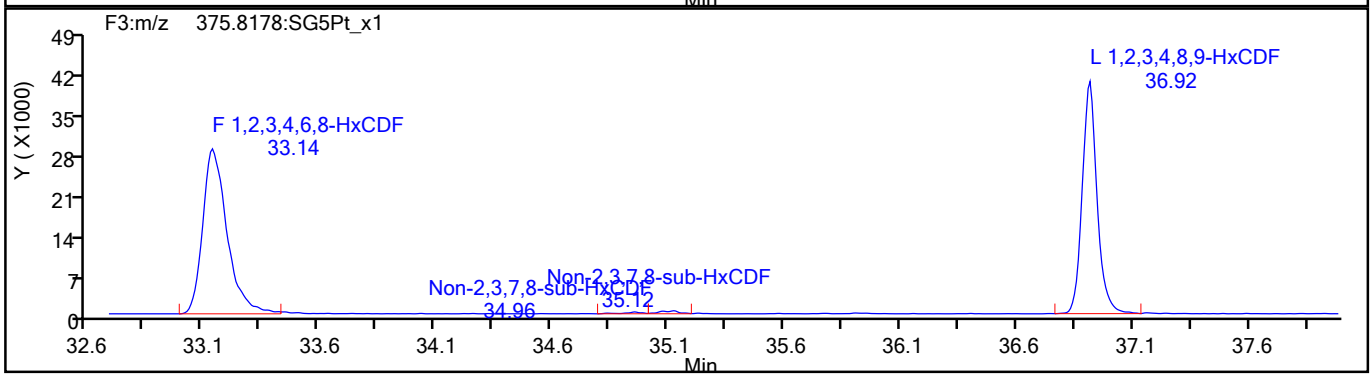

HxCDF Standards

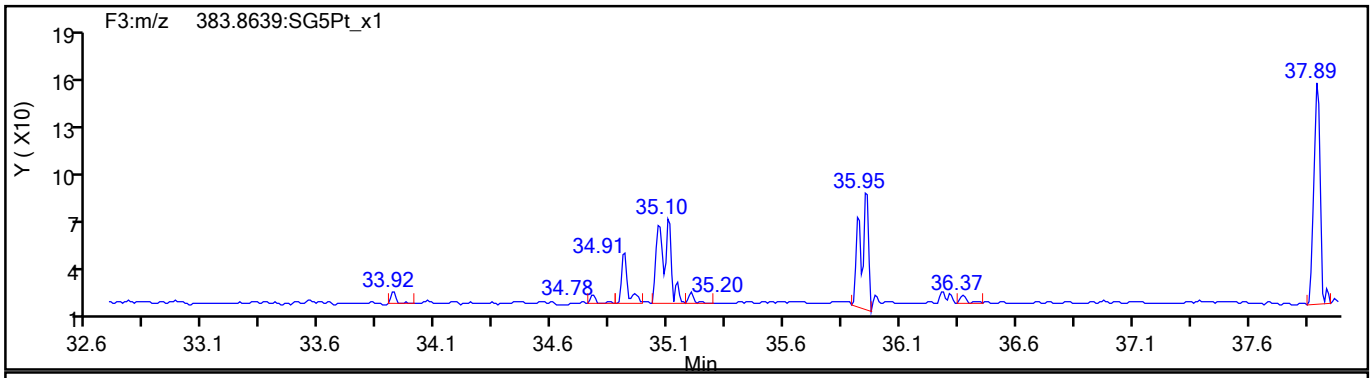

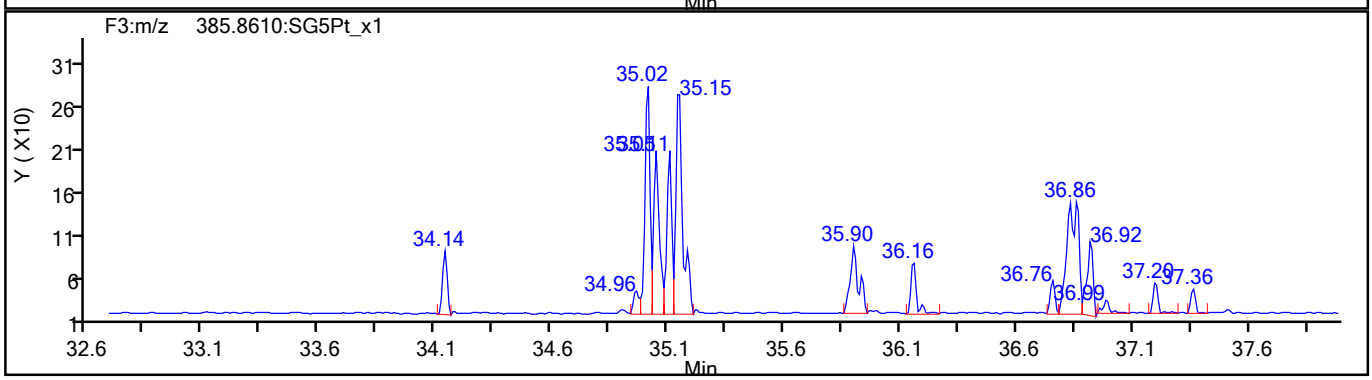

790390

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

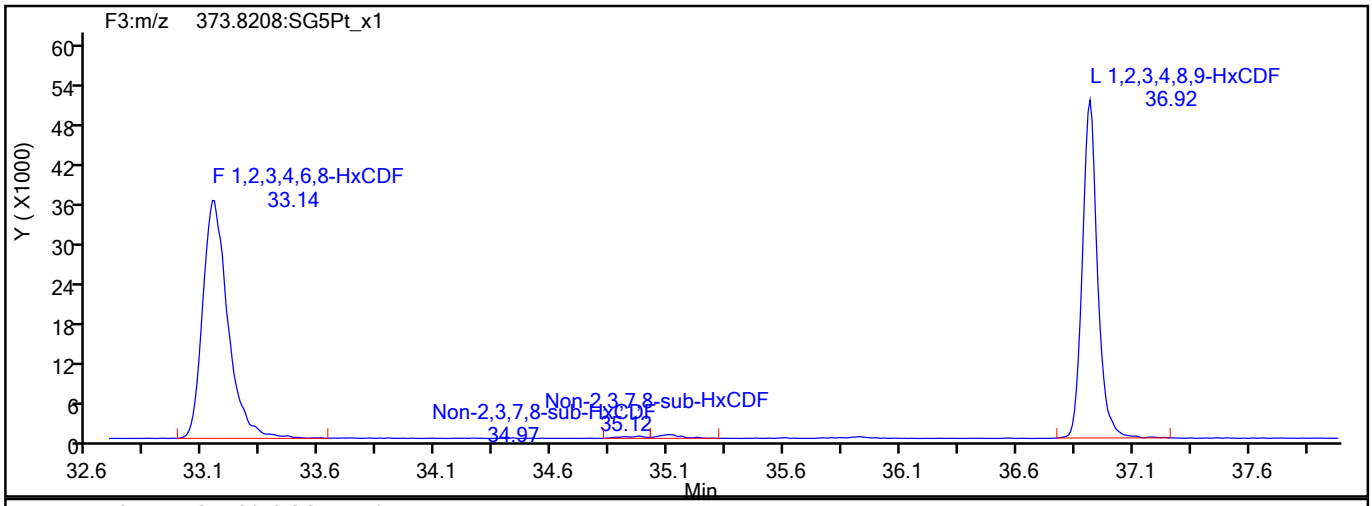

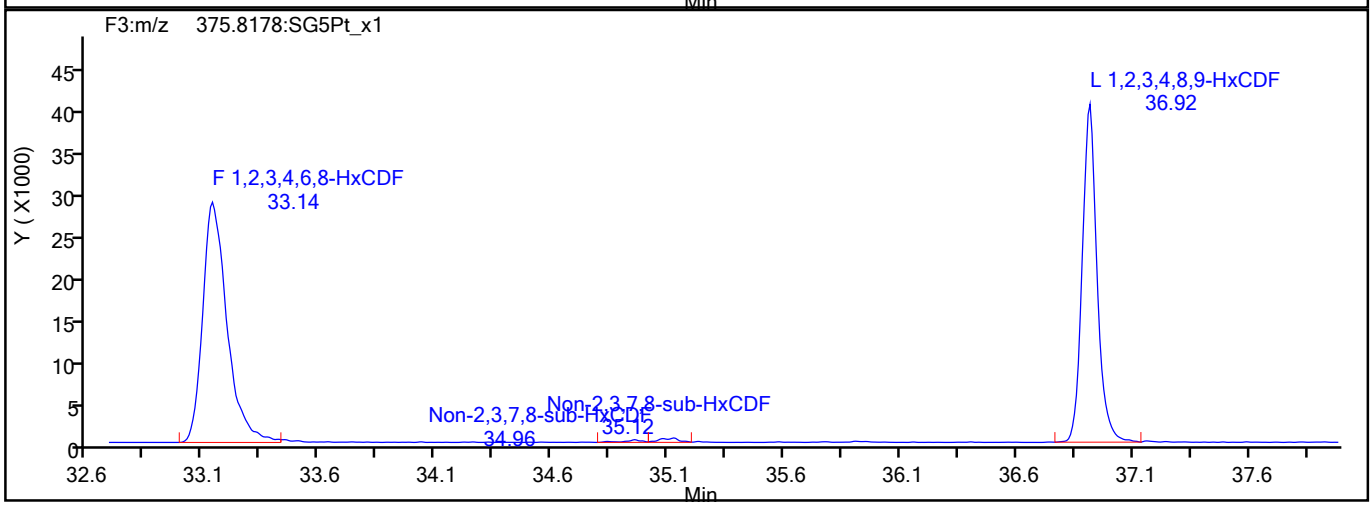

HxCDF Interference Mass

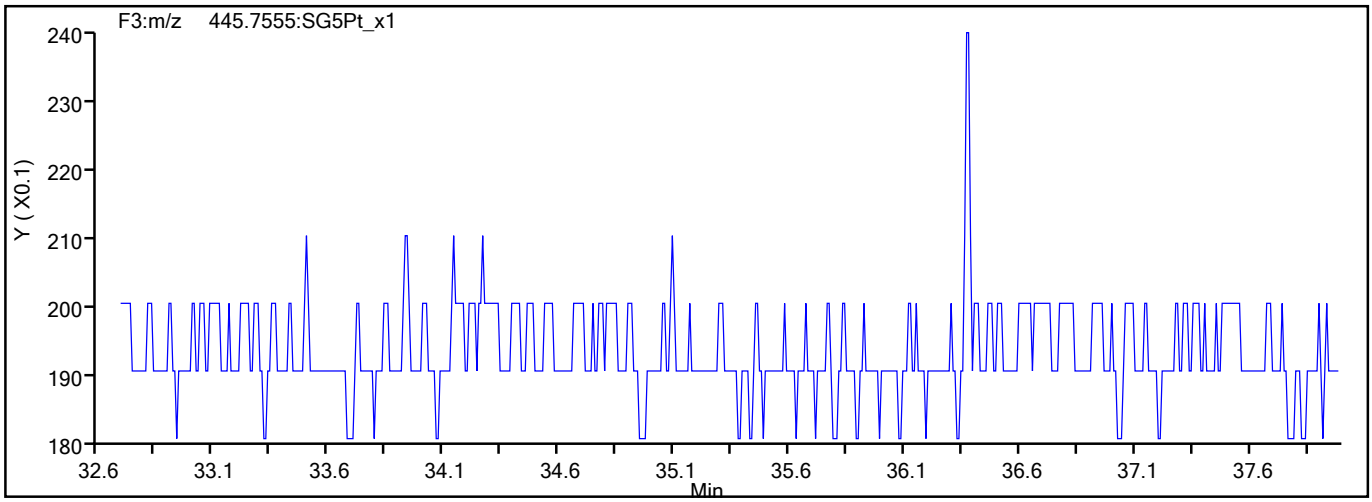

790391

Report Date: 19-Aug-2021 15:49:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

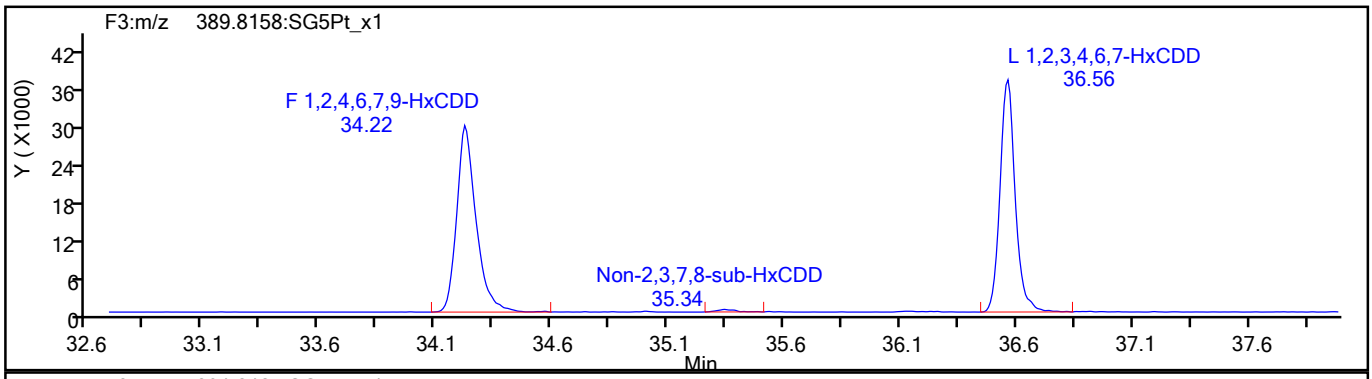

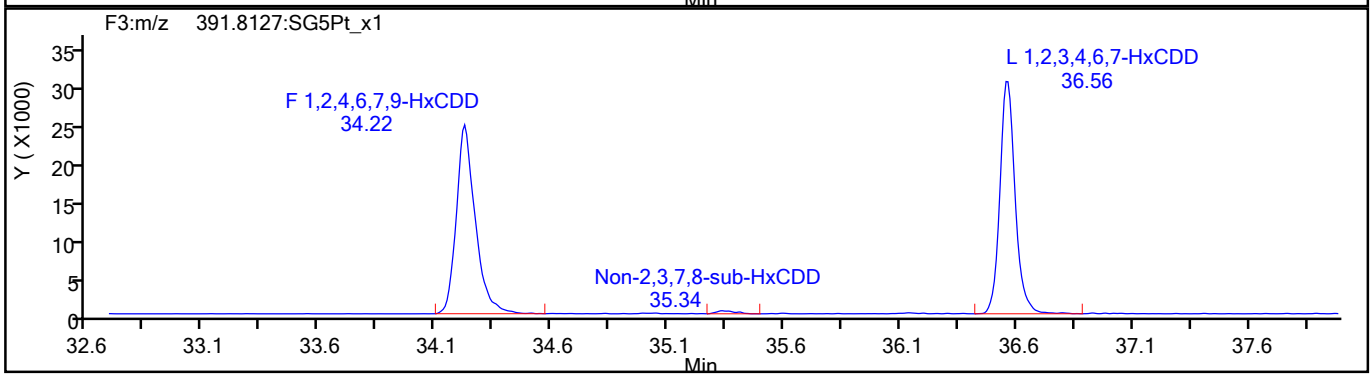

HxCDD Standards

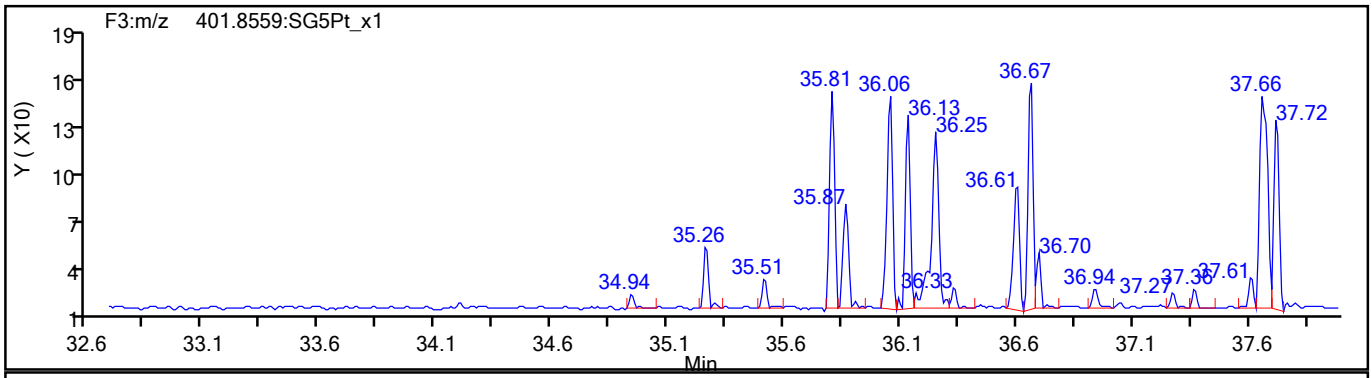

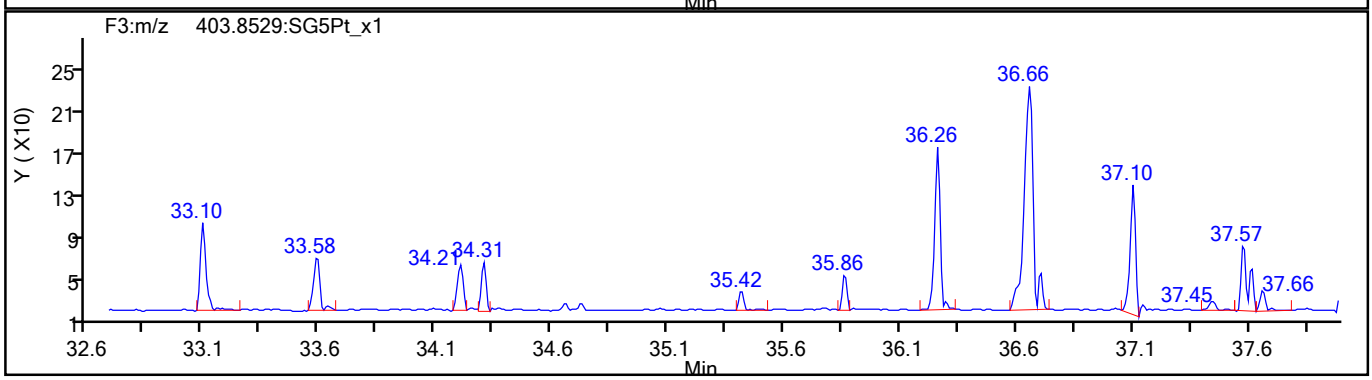

790392

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

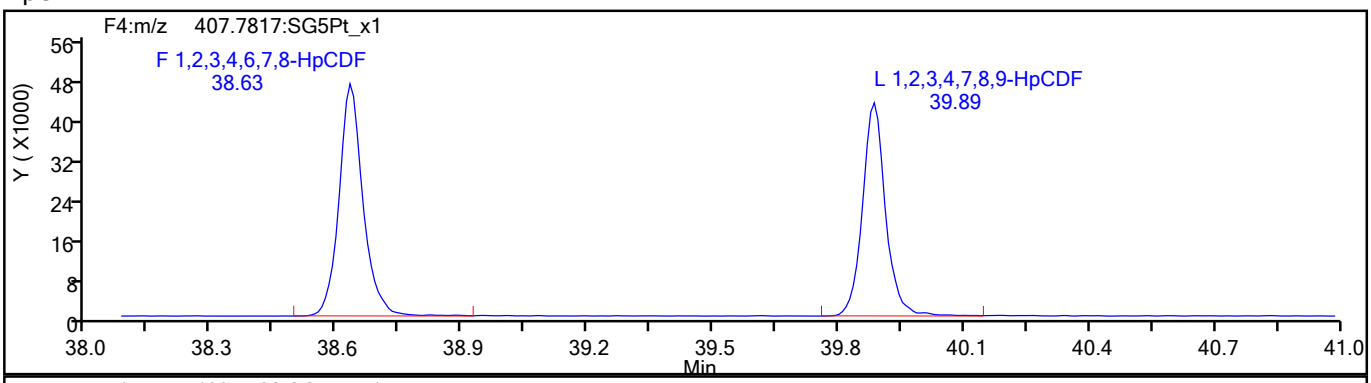

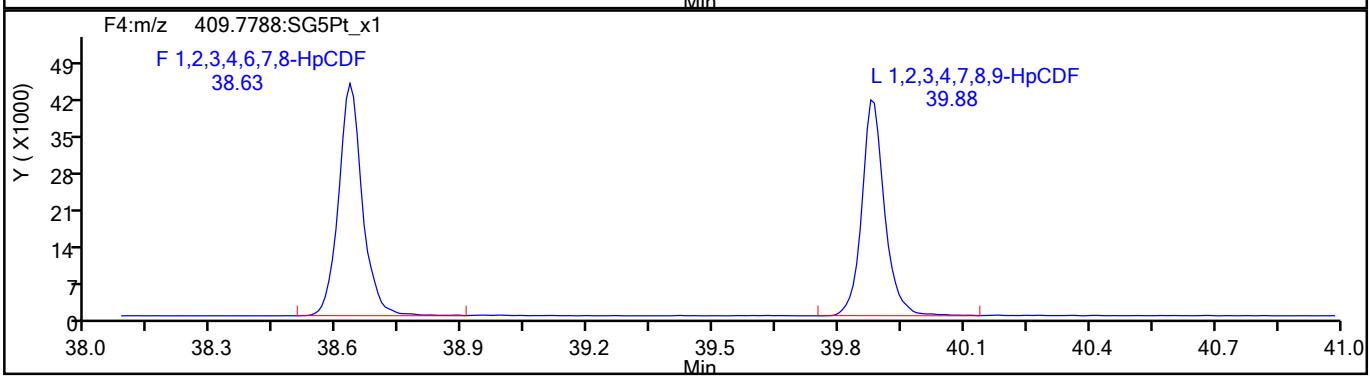

HpCDF Standards

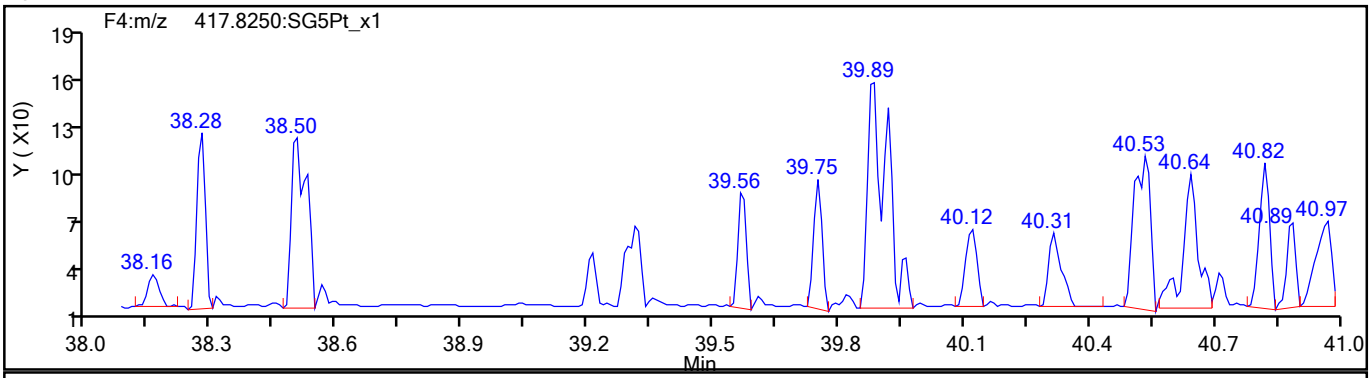

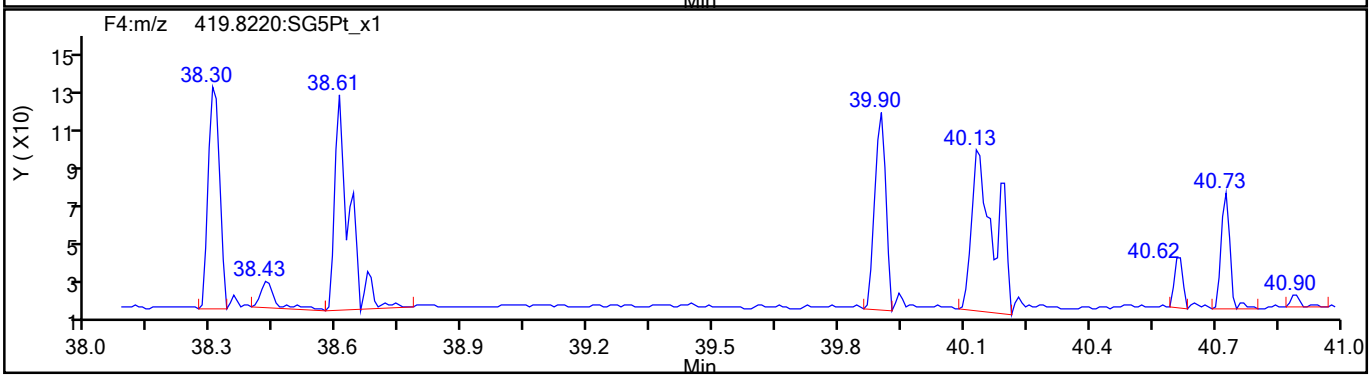

790393

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

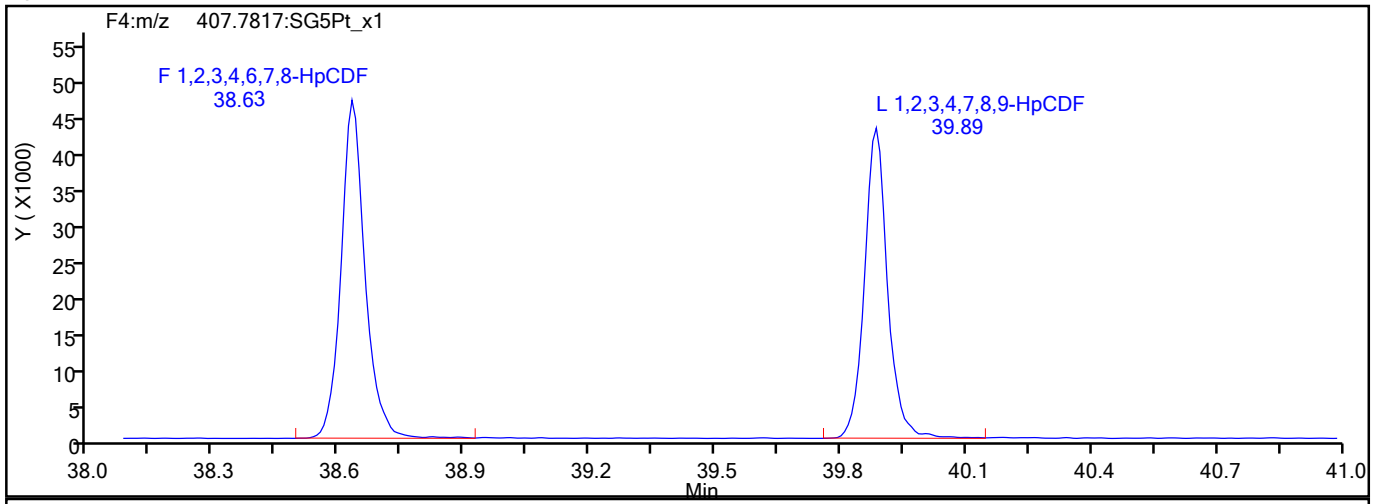

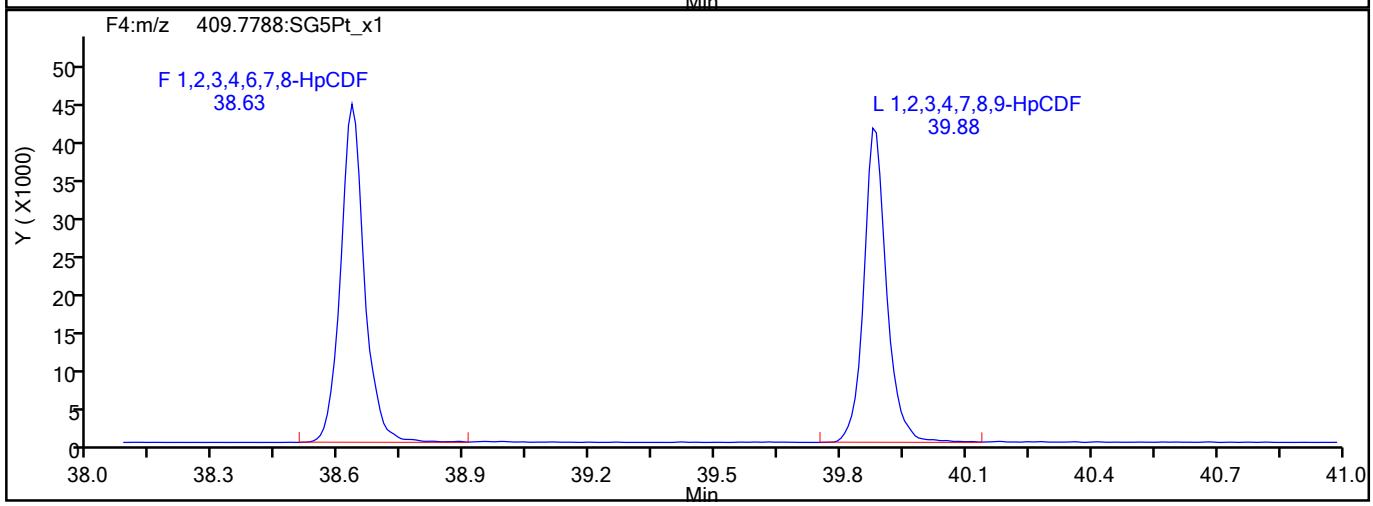

HpCDF Interference Mass

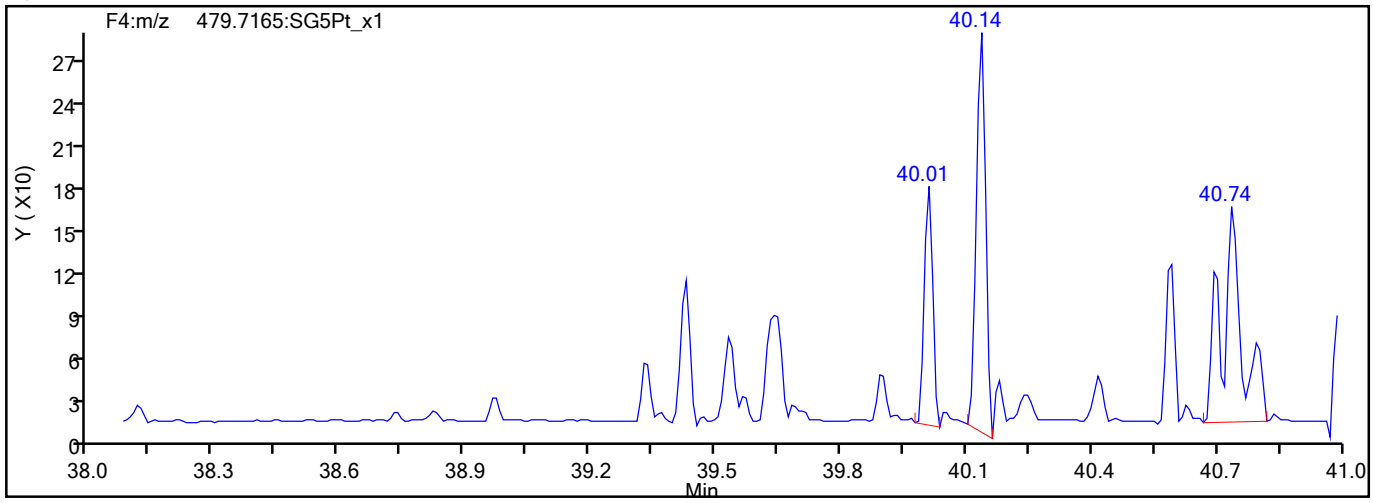

790394

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

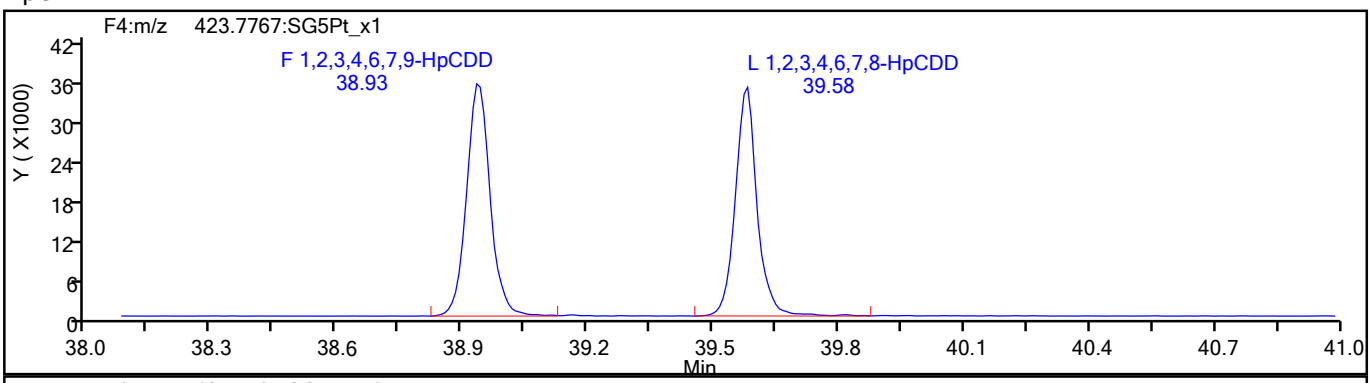

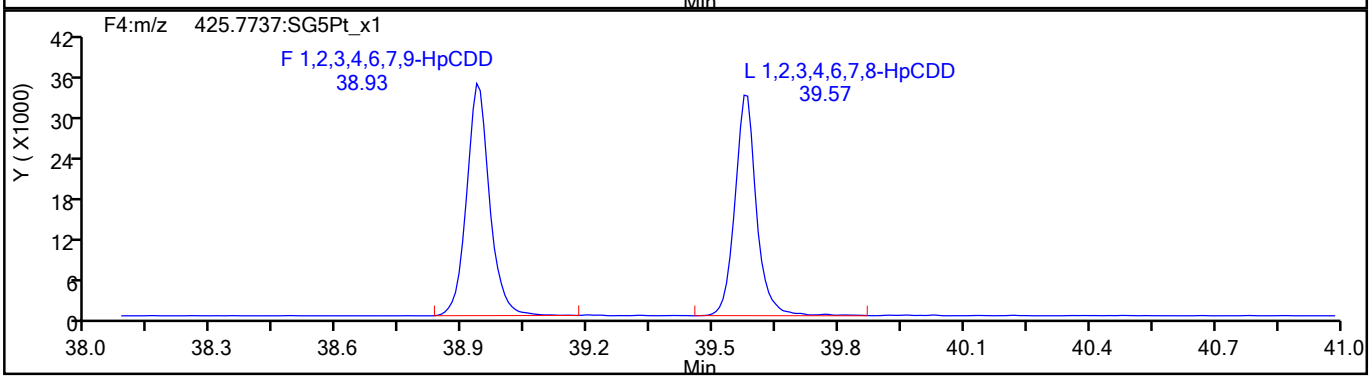

HpCDD Standards

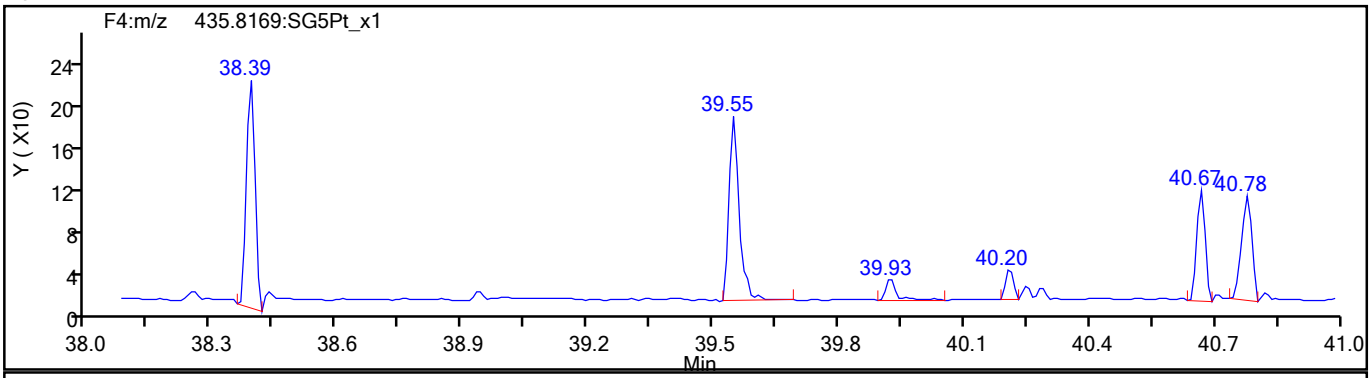

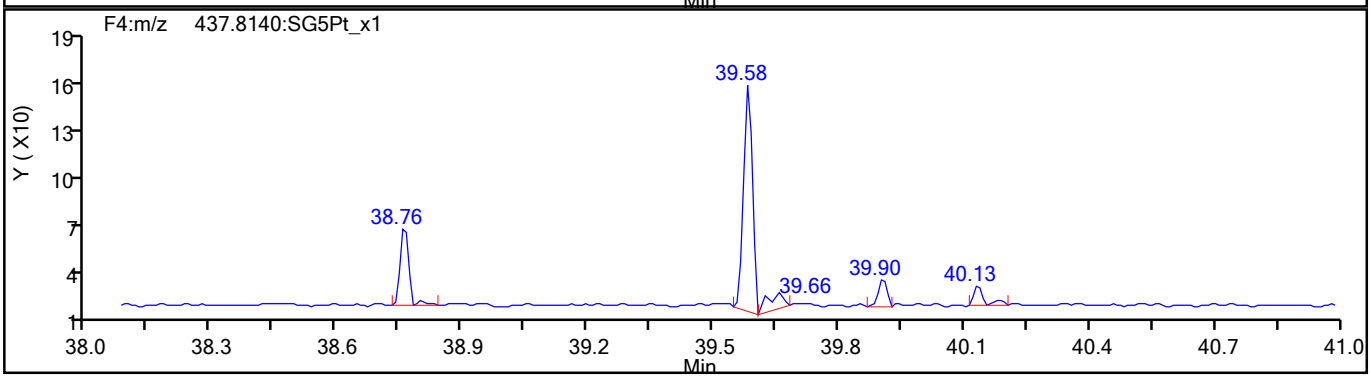

790395

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

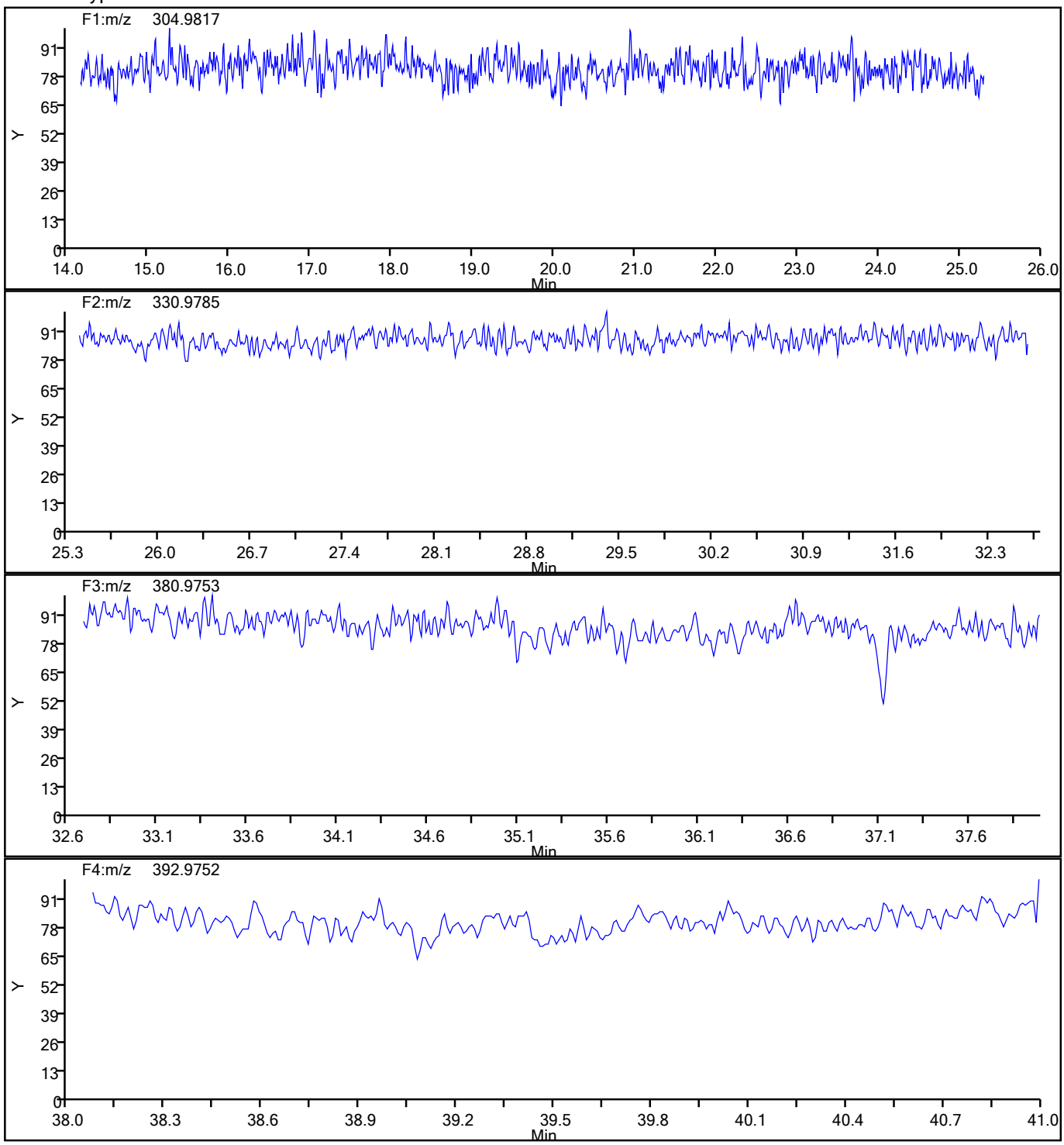

790396

Report Date: 19-Aug-2021 15:49:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_48.d		
Injection Date:	19-Aug-2021 02:19:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	44
Column Type:	DB-5	Column Dia:	0.32 mm

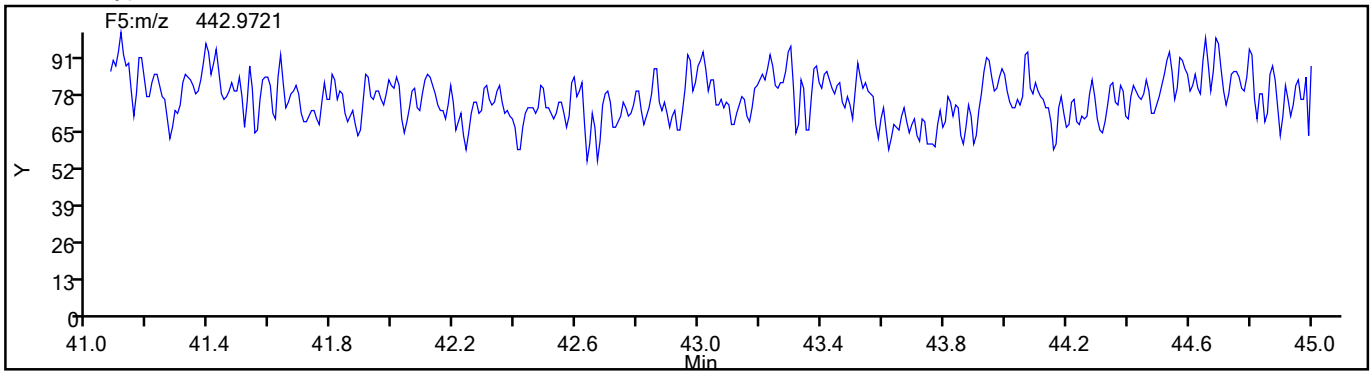

790397

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 13:59:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:08 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:37:44

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	20.414	82325	0.77	1.3459					0.00	
2,3,7,8-TCDF	20.465	207971	0.79	1.0802	93.5	93.5	0.3796	0.3796		
A Non-2,3,7,8-sub-TCDF	19.885	7691	0.77	1.0802	4.296	3.459	0.3796	0.998		RQ
S Total TCDF					97.8	97.0	0.3796	0.3796		RQ
D 13C-2,3,7,8-TCDD	21.782	52515	0.84	0.9317					0.00	
2,3,7,8-TCDD	21.842	61999	0.78	1.0753	43.9	43.9	0.8255	0.8255		
A Non-2,3,7,8-sub-TCDD	20.727	1960	0.77	1.0753	1.960	1.388	0.8255	1.388		RQ
S Total TCDD					45.9	45.3	0.8255	0.8255		RQ
A F1 PeCDFs	24.666	2431	1.55	0.0000						RQ
A Non-2,3,7,8-sub-PeCDF	28.176	71975	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	28.536	53316	1.56	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	35.073						0.0	0.0		
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	35.427	1106	1.24	0.0000						RQ
S Total HxCDD										RQ
1,2,3,4,6,7,8-HpCDF	38.630	78952	1.06	1.4421						
1,2,3,4,7,8,9-HpCDF	39.876	71095	1.09	1.3092						
A Non-2,3,7,8-sub-HpCDF	39.253						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	39.573	55161	1.07	1.0503						
A Non-2,3,7,8-sub-HpCDD	39.253						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	16.121	116172	0.79							
1,3,6,8-TCDD	17.755	65500	0.83							
2,3,4,7-TCDF	20.465	207971	0.79							
1,2,3,7-TCDD	21.584	55945	0.75							
1,2,3,9-TCDF	22.005	88819	0.75							
1,2,3,9-TCDD	22.100	69760	0.77							
1,2,8,9-TCDF	23.649	94787	0.80							

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	23.700	26243								
1,3,4,6,8-PeCDF	24.062	81931	1.50							
1,2,3,8,9-PeCDD	26.119	58169	1.69							
1,2,4,7,9-PeCDD	30.776	53316	1.56							a
1,2,3,8,9-PeCDF	30.944	68306	1.60							a
1,2,3,4,6,8-HxCDF	33.212	94798	1.31							
1,2,4,6,7,9-HxCDD	34.273	63223	1.25							
1,2,3,4,6,7-HxCDD	36.581	60887	1.16							
1,2,3,4,8,9-HxCDF	36.934	83283	1.29							
1,2,3,4,6,7,9-HpCDD	38.933	59370	1.04							

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.
Review Flags
a - User Assigned ID

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 19-Aug-2021 13:59:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM HRDXNCP_00044
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 21-Aug-2021 17:06:08 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1669

First Level Reviewer: stephensk Date: 19-Aug-2021 15:37:44

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	20.414	20.414	0	1.000	35682	5599	44	110	127		
317.9389	20.414	20.414	0	1.000	46643	6790	11	27	617	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.465	20.465	0	1.003	91905	11730	19	47	617		
305.8987	20.474	20.465	1	1.003	116066	13607	32	80	425	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	19.708	19.885	-11	0.965	1142	200	19	47	11		
	Empc Correction				920	249	19	47	13		
305.8987	19.742	19.885	-9	0.967	1195	324	32	80	10	0.96(0.65-0.89)	
303.9016	20.982	19.885	66	1.028	799	152	19	47	8		
305.8987	20.982	19.885	66	1.028	2231	334	32	80	10	0.36(0.65-0.89)	
	Empc Correction				1037	197	32	80	6		
303.9016	22.324	19.885	146	1.094	951	173	19	47	9		
305.8987	22.393	19.885	150	1.097	1268	204	32	80	6	0.75(0.65-0.89)	
303.9016	24.053	19.885	250	1.178	662	199	19	47	10		
305.8987	24.036	19.885	249	1.177	1302	181	32	80	6	0.51(0.65-0.89)	
	Empc Correction				859	258	32	80	8		
13C-2,3,7,8-TCDD											
331.9368	21.782	21.782	0	1.000	23953	3420	22	55	155		
333.9338	21.816	21.782	2	1.000	28562	4240	1	2	4240	0.84(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.842	21.842	0	1.003	27074	3242	31	77	105		
321.8936	21.816	21.842	-2	1.002	34925	4202	37	92	114	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	22.358	20.727	98	1.026	853	199	31	77	6		
321.8936	22.341	20.727	97	1.026	1914	264	37	92	7	0.45(0.65-0.89)	
	Empc Correction				1107	258	37	92	7		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A F1 PeCDFs											RQ
339.8597	24.268	24.666	-24	1.000	930	276	5	12	55		
341.8567	24.285	24.666	-23	1.000	557	133	3	7	44	1.67(1.32-1.78)	
339.8597	24.328	24.666	-20	1.000	574	173	5	12	35		
341.8567	24.397	24.666	-16	1.000	801	142	3	7	47	0.72(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	27.365	28.176	-49	1.000	493	76	7	17	11		
341.8567	27.323	28.176	-51	1.000	293	68	13	32	5	1.68(1.32-1.78)	
339.8597	30.944	28.176	166	1.000	42003	5021	7	17	717		
341.8567	30.952	28.176	166	1.000	26303	3283	13	32	253	1.60(1.32-1.78)	
339.8597	31.197	28.176	181	1.000	1166	325	7	17	46		
341.8567	31.155	28.176	178	1.000	921	220	13	32	17	1.27(1.32-1.78)	
339.8597	31.281	28.176	186	1.000	587	172	7	17	25		
341.8567	31.298	28.176	187	1.000	571	77	13	32	6	1.03(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	30.776	28.536	134	1.000	32522	3921	50	125	78		
357.8516	30.759	28.536	133	1.000	20794	2627	8	20	328	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.073						19	47			
375.8178	35.073						16	40			
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	35.385	35.427	-3	1.000	720	183	13	32	14		
391.8127	35.376	35.427	-3	1.000	494	115	10	25	12	1.46(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.630	38.630	0	1.000	40696	10611	27	67	393		
409.7788	38.630	38.630	0	1.000	38256	9931	15	37	662	1.06(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.876	39.876	0	1.000	37049	10134	27	67	375		
409.7788	39.876	39.876	0	1.000	34046	9582	15	37	639	1.09(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.253						27	67			
409.7788	39.253						15	37			
1,2,3,4,6,7,8-HpCDD											
423.7767	39.573	39.573	0	1.000	28472	8182	15	37	545		
425.7737	39.573	39.573	0	1.000	26689	7927	18	45	440	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	39.253						15	37			
425.7737	39.253						18	45			
1,3,6,8-TCDF											
303.9016	16.121	16.121	0		51259	8761	19	47	461		
305.8987	16.129	16.121	1		64913	11170	32	80	349	0.79(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	17.755	17.755	0		29748	4895	31	77	158		
321.8936	17.772	17.755	1		35752	5364	37	92	145	0.83(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7-TCDF											
303.9016	20.465	20.465	0		91905	11730	19	47	617		
305.8987	20.474	20.465	1		116066	13607	32	80	425	0.79(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	21.584	21.584	0		24036	3484	31	77	112		
321.8936	21.601	21.584	1		31909	4496	37	92	122	0.75(0.65-0.89)	
1,2,3,9-TCDF											
303.9016	22.005	22.005	0		38078	4978	19	47	262		
305.8987	22.005	22.005	0		50741	6292	32	80	197	0.75(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	22.100	22.100	0		30261	3819	31	77	123		
321.8936	22.117	22.100	1		39499	4583	37	92	124	0.77(0.65-0.89)	
1,2,8,9-TCDF											
303.9016	23.649	23.649	0		42091	6762	19	47	356		
305.8987	23.640	23.649	-1		52696	8507	32	80	266	0.80(0.65-0.89)	
1,2,8,9-TCDD											
319.8965	23.700	23.700	0		26243	4229	31	77	136		
1,3,4,6,8-PeCDF											
339.8597	24.062	24.062	0		49143	8715	5	12	1743		
341.8567	24.070	24.062	1		32788	6207	3	7	2069	1.50(1.32-1.78)	
1,2,3,8,9-PeCDD											
355.8546	26.119	26.119	0		36563	4902	50	125	98		
357.8516	26.136	26.119	1		21606	3187	8	20	398	1.69(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	30.776	30.776	0		32522	3921	50	125	78		a
357.8516	30.759	30.776	-1		20794	2627	8	20	328	1.56(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	30.944	30.944	0		42003	5021	7	17	717		a
341.8567	30.952	30.944	1		26303	3283	13	32	253	1.60(1.32-1.78)	
1,2,3,4,6,8-HxCDF											
373.8208	33.212	33.212	0		53745	7067	19	47	372		
375.8178	33.212	33.212	0		41053	5227	16	40	327	1.31(1.05-1.43)	
1,2,4,6,7,9-HxCDD											
389.8158	34.273	34.273	0		35102	5925	13	32	456		
391.8127	34.273	34.273	0		28121	4682	10	25	468	1.25(1.05-1.43)	
1,2,3,4,6,7-HxCDD											
389.8158	36.581	36.581	0		32760	7052	13	32	542		
391.8127	36.572	36.581	-1		28127	6383	10	25	638	1.16(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	36.934	36.934	0		46978	11482	19	47	604		
375.8178	36.926	36.934	-1		36305	9134	16	40	571	1.29(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7767	38.933	38.933	0		30305	8179	15	37	545		
425.7737	38.933	38.933	0		29065	7829	18	45	435	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 19.885

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	40.000	82325	12389

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		40.000	82325	12389

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.708	1142	200	1195	324	1.05	0.96	RQ
19.708	920	249	1195	324	0.9513		Empc Correction
20.982	799	152	2231	334	1.36	0.36	RQ
20.982	799	152	1037	197	0.8258		Empc Correction
22.324	951	173	1268	204	1.00	0.75	
24.053	662	199	1302	181	0.8834	0.51	RQ
24.053	662	199	859	258	0.6842		Empc Correction
Signal Totals:							
	3332	773	4359	983			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9550	1767				0.59	RQ
	7691	1756					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.296 = (9550 * 40.000) / (82325 * 1.080)
Empc Amount: 3.459 = (7691 * 40.000) / (82325 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

Non-2,3,7,8-sub-TCDD, RT: 20.727

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	40.000	52515	7660

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		40.000	52515	7660

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.358	853	199	1914	264	1.96	0.45	RQ
22.358	853	199	1107	258	1.39		Empc Correction
Signal Totals:							
	853	199	1107	258			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2767	463				0.45	RQ
	1960	457					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.960 = (2767 * 40.000) / (52515 * 1.075)
Empc Amount: 1.388 = (1960 * 40.000) / (52515 * 1.075)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Lims ID:	WDM		
Client ID:			
Inject. Date:	19-Aug-2021 13:59:00	Dil. Factor:	1.0000
Sample Type:	WDM, Window Defining Mix		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	1

F1 PeCDFs, RT: 24.666

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.268	930	276	557	133		1.67	
24.328	574	173	801	142		0.72	R
Signal Totals:							
	1504	449	1358	275			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2862	724				1.11	RQ
	2431	693					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (2862 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (2431 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 28.176

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054				
2,3,4,7,8-PeCDF	1.008				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.365	493	76	293	68		1.68	
30.944	42003	5021	26303	3283		1.60	
31.197	1166	325	921	220		1.27	R
31.281	587	172	571	77		1.03	R
Signal Totals:							
	44249	5594	28088	3648			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	72337	9242				1.58	RQ
	71975	9264					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (72337 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (71975 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.776	32522	3921	20794	2627		1.56	
Signal Totals:							
	32522	3921	20794	2627			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	53316	6548				1.56	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (53316 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d
Lims ID: WDM
Client ID:
Inject. Date: 19-Aug-2021 13:59:00 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 35.427

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061				
1,2,3,6,7,8-HxCDD	0.993				
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
35.385	720	183	494	115		1.46	R
Signal Totals:							
	720	183	494	115			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1214	298				1.46	RQ
	1106	257					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (1214 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (1106 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

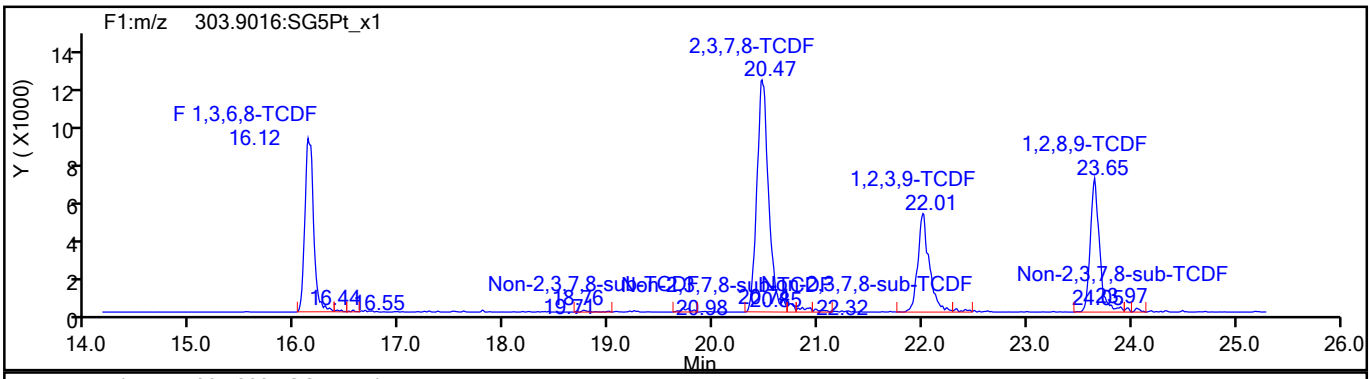

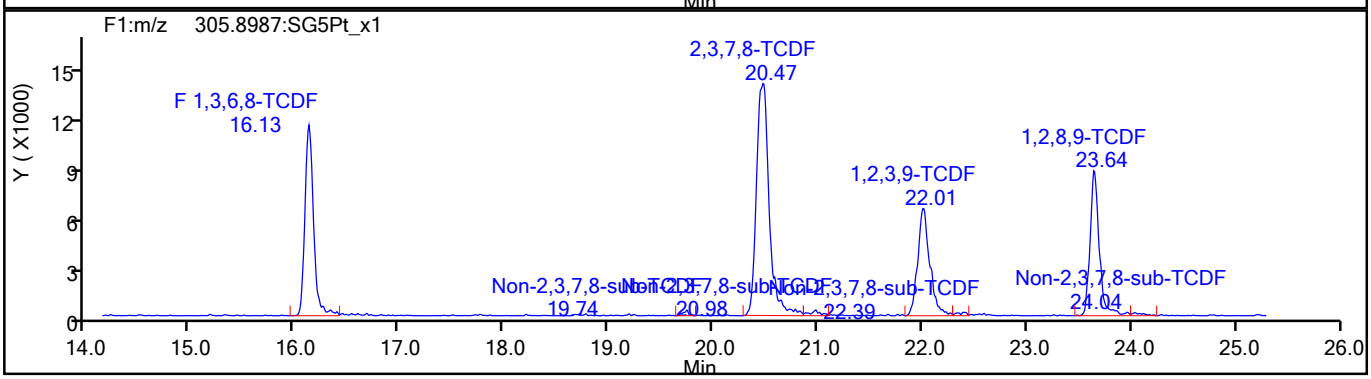

TCDF Standards

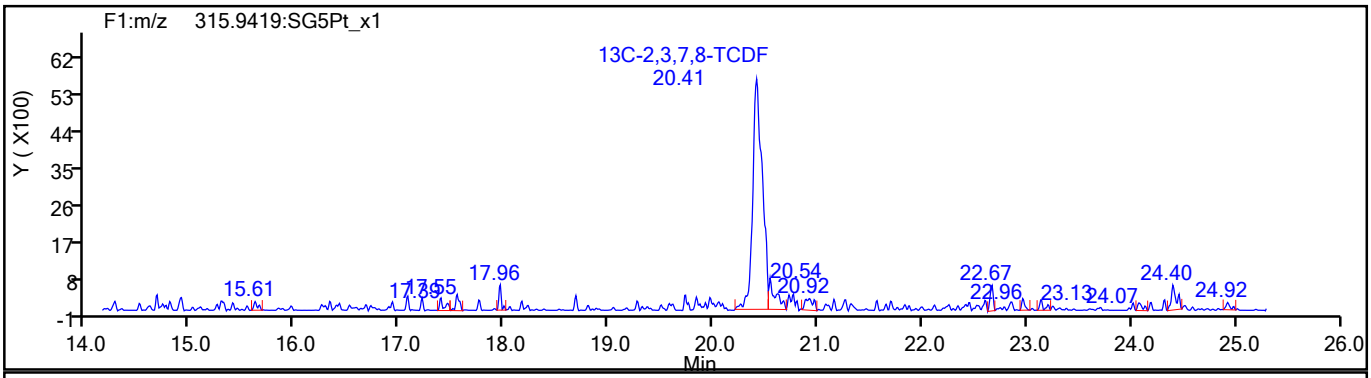

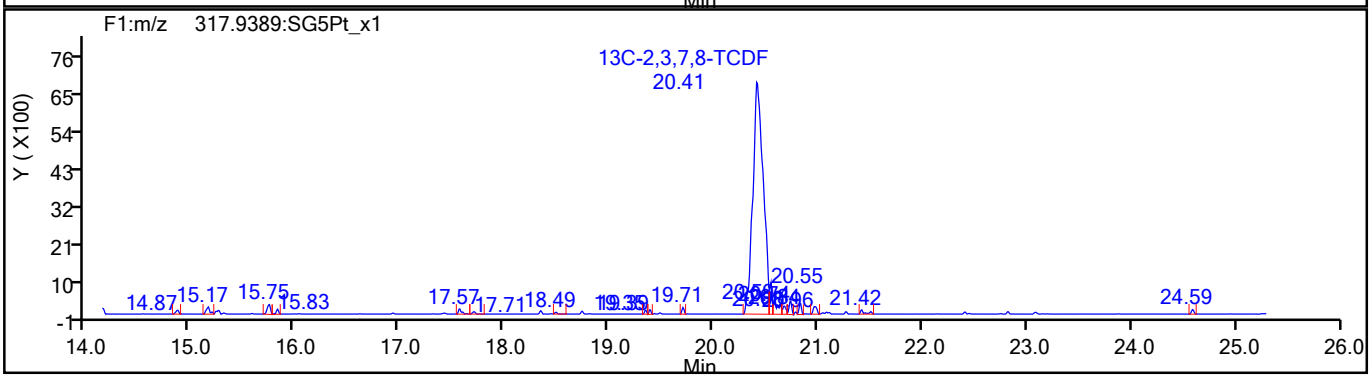

790410

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

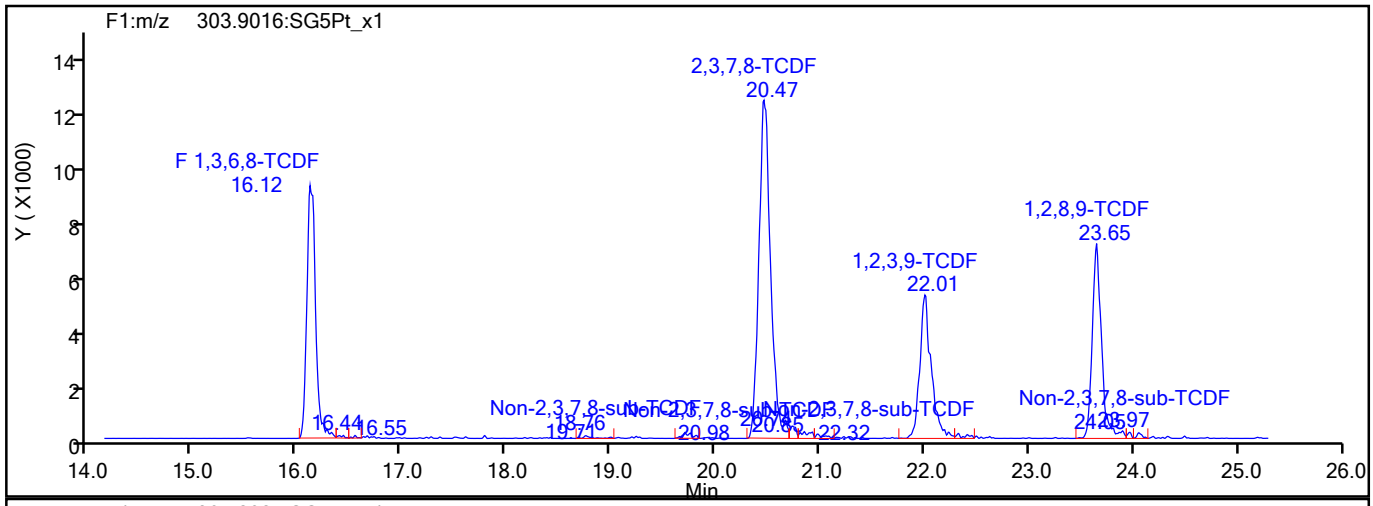

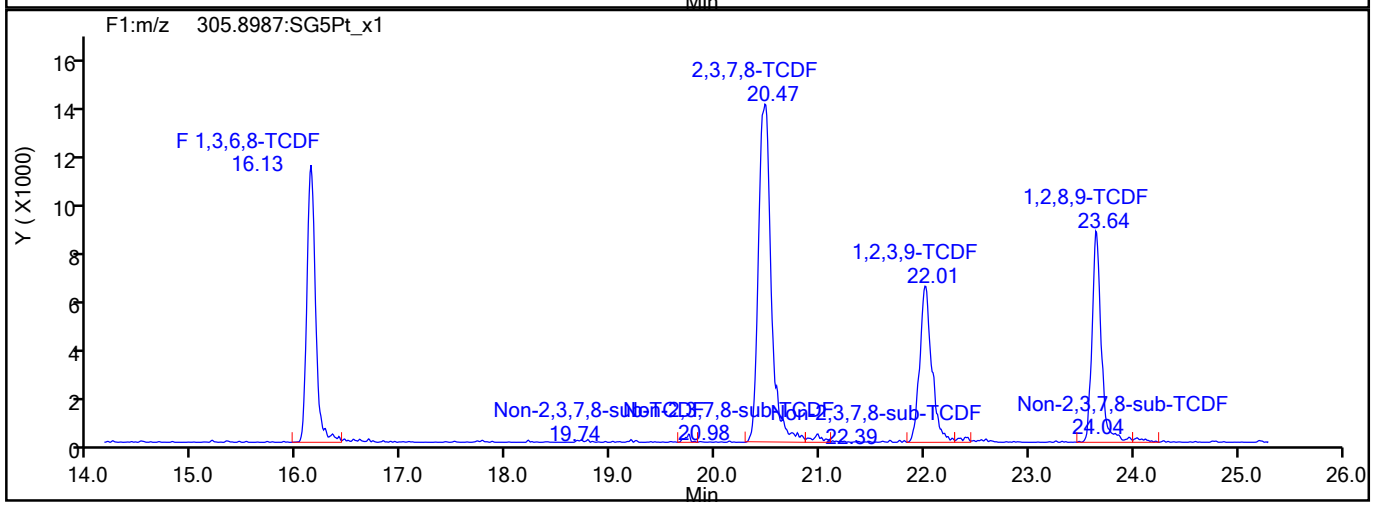

TCDF Interference Mass

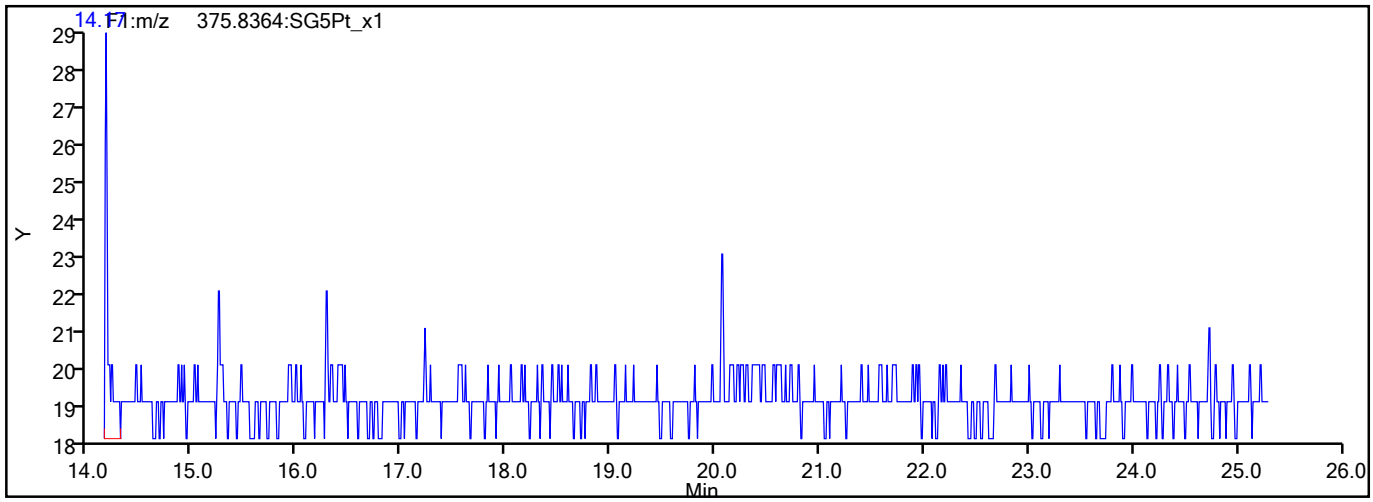

790411

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

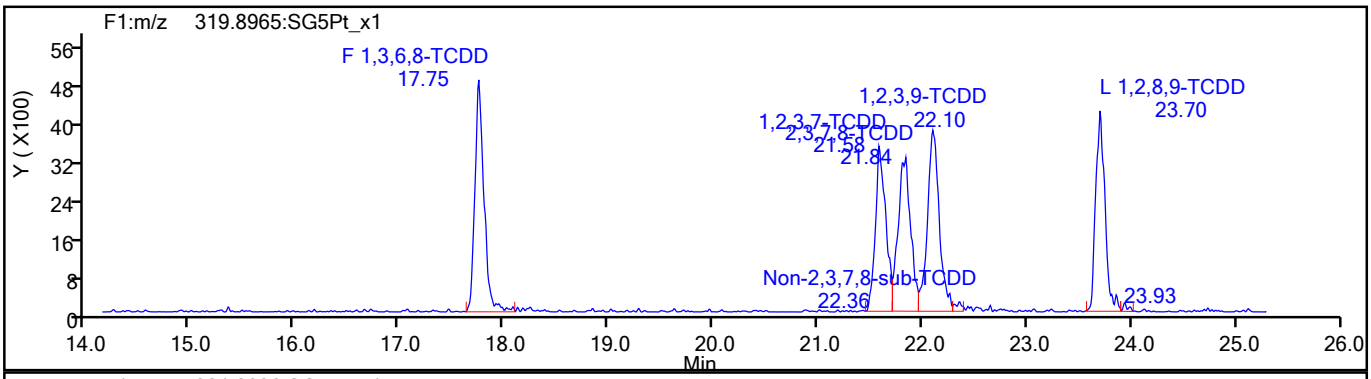

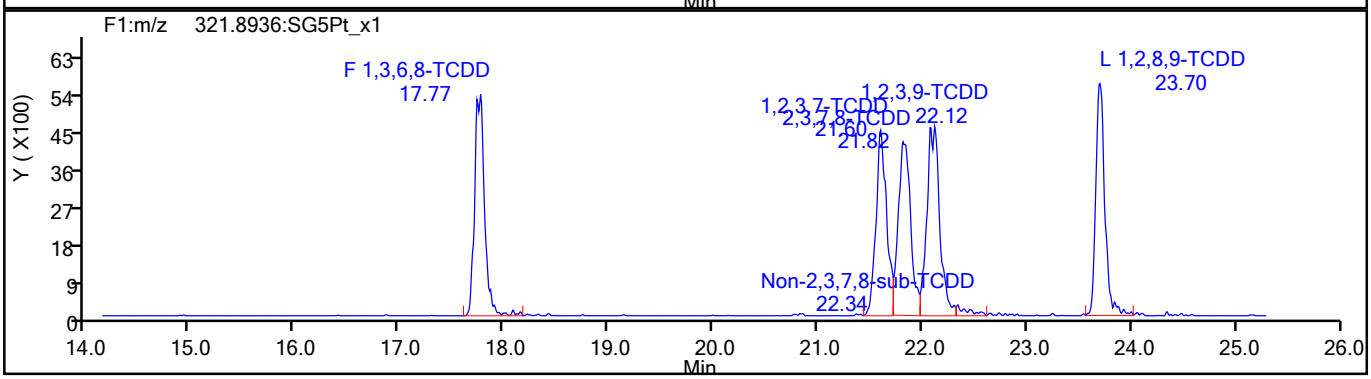

TCDD Standards

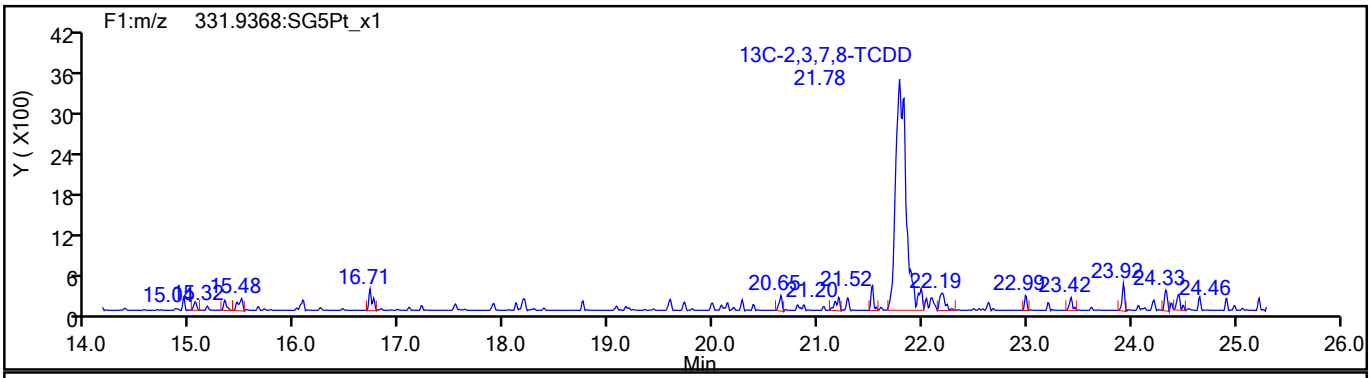

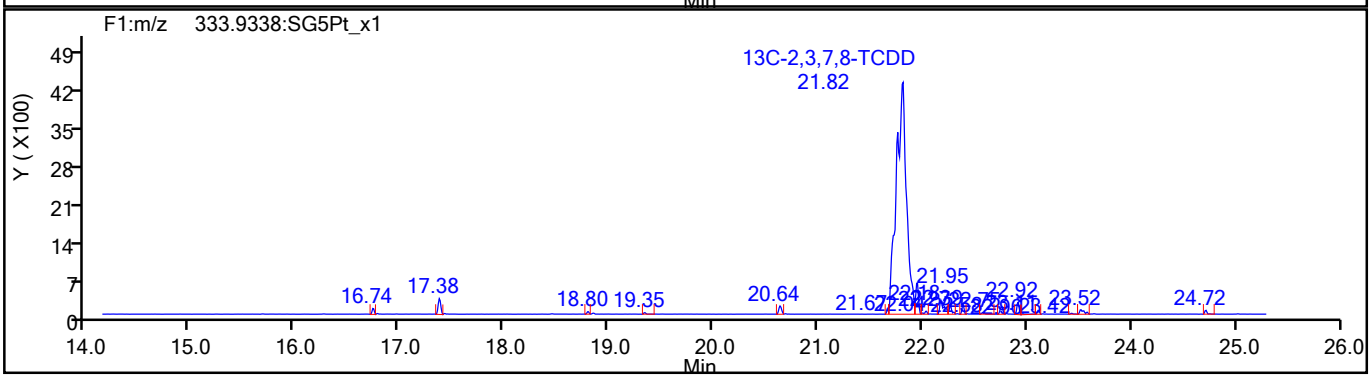

790412

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

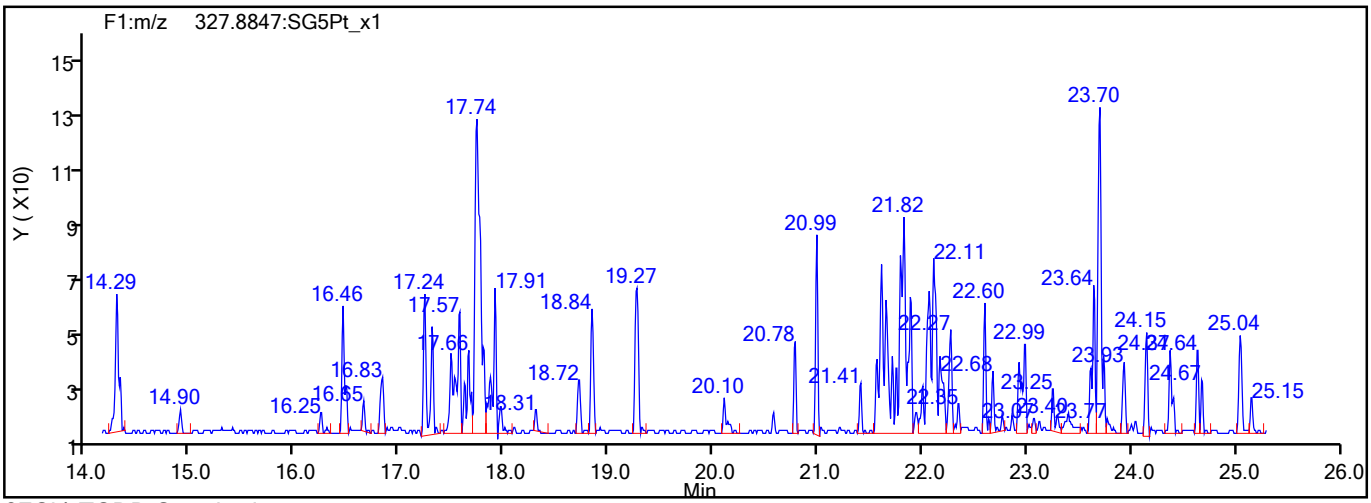

37Cl4-TCDD Standards

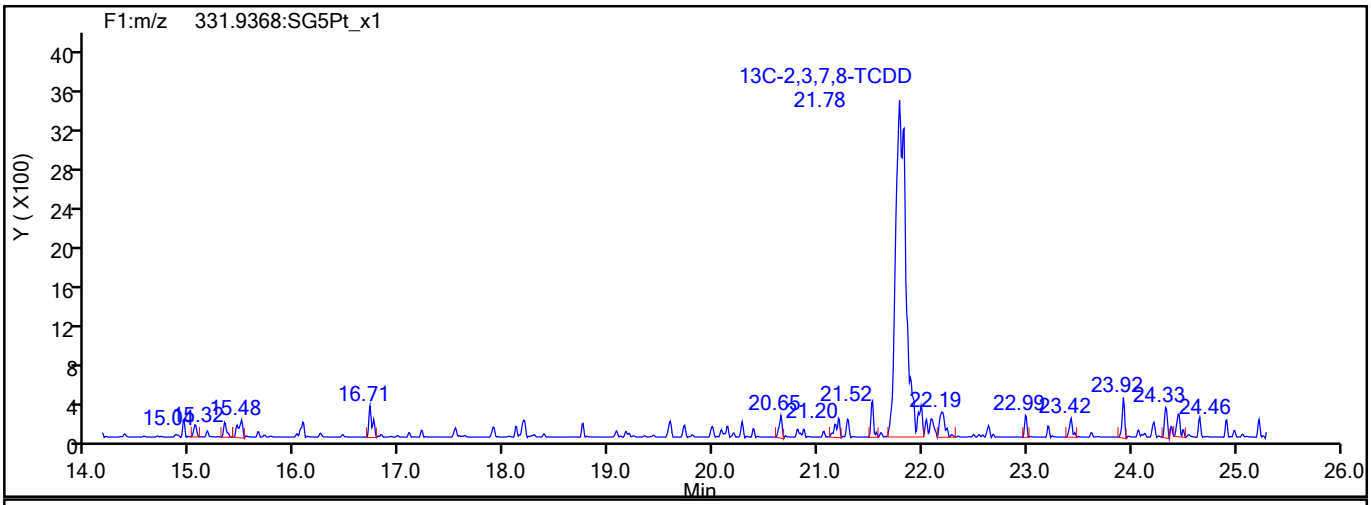

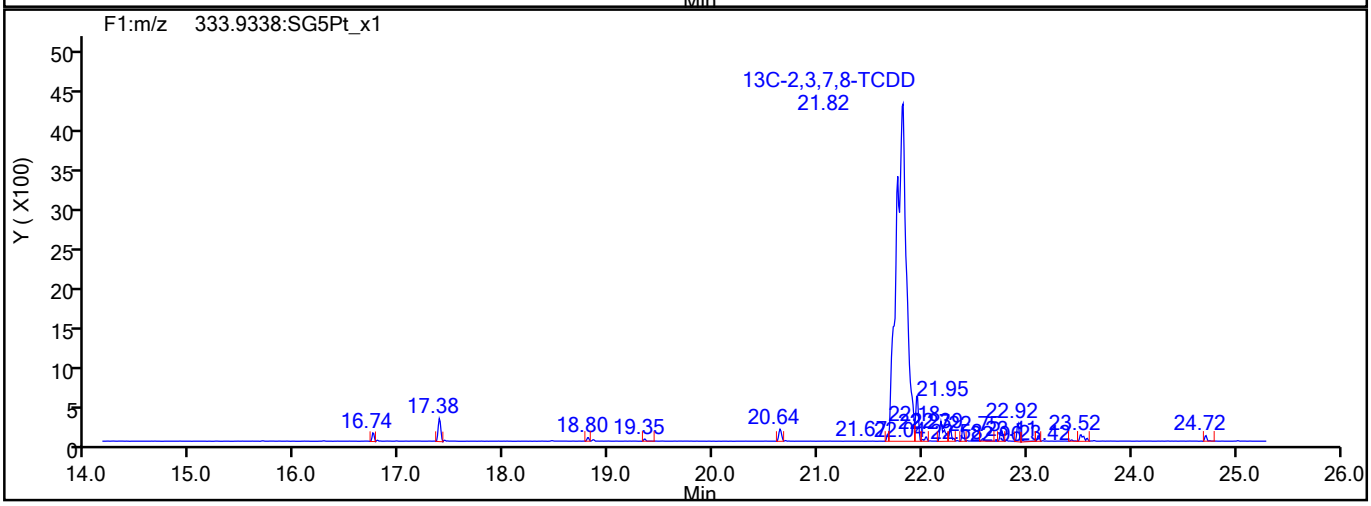

790413

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

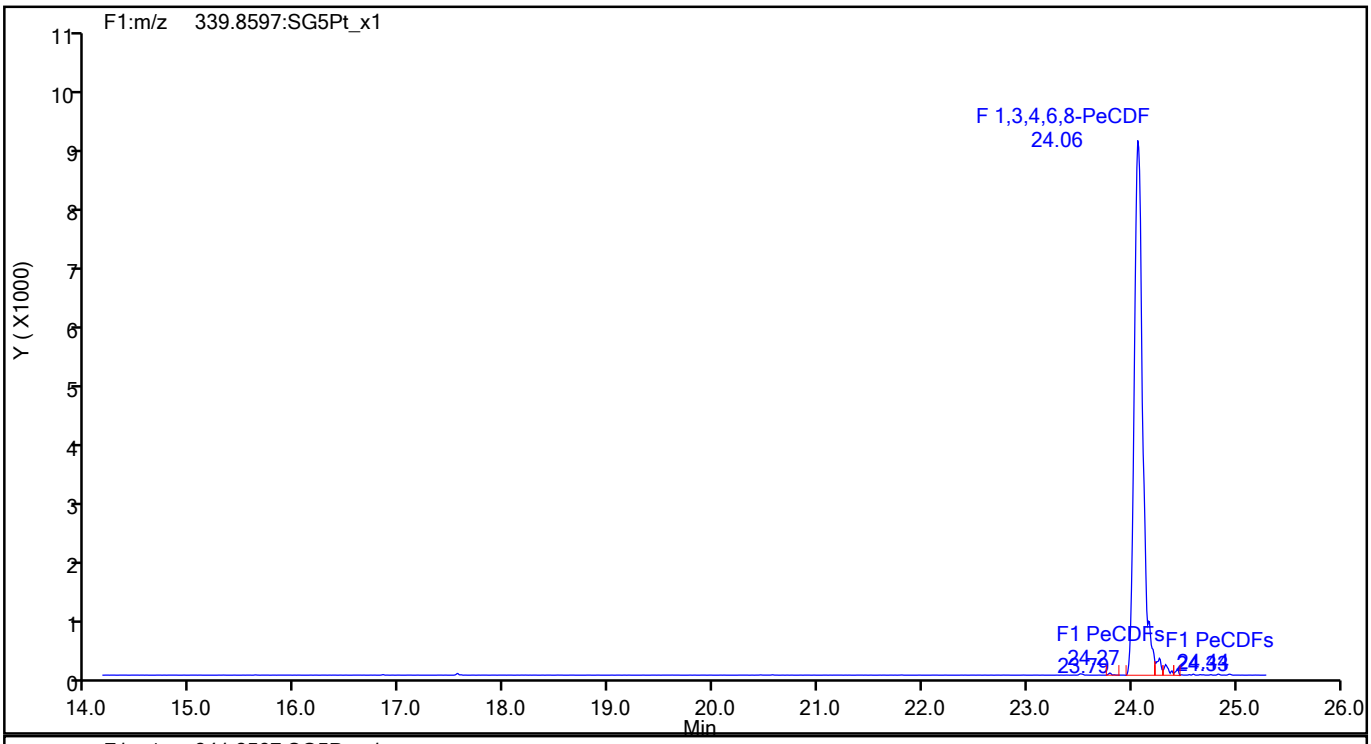

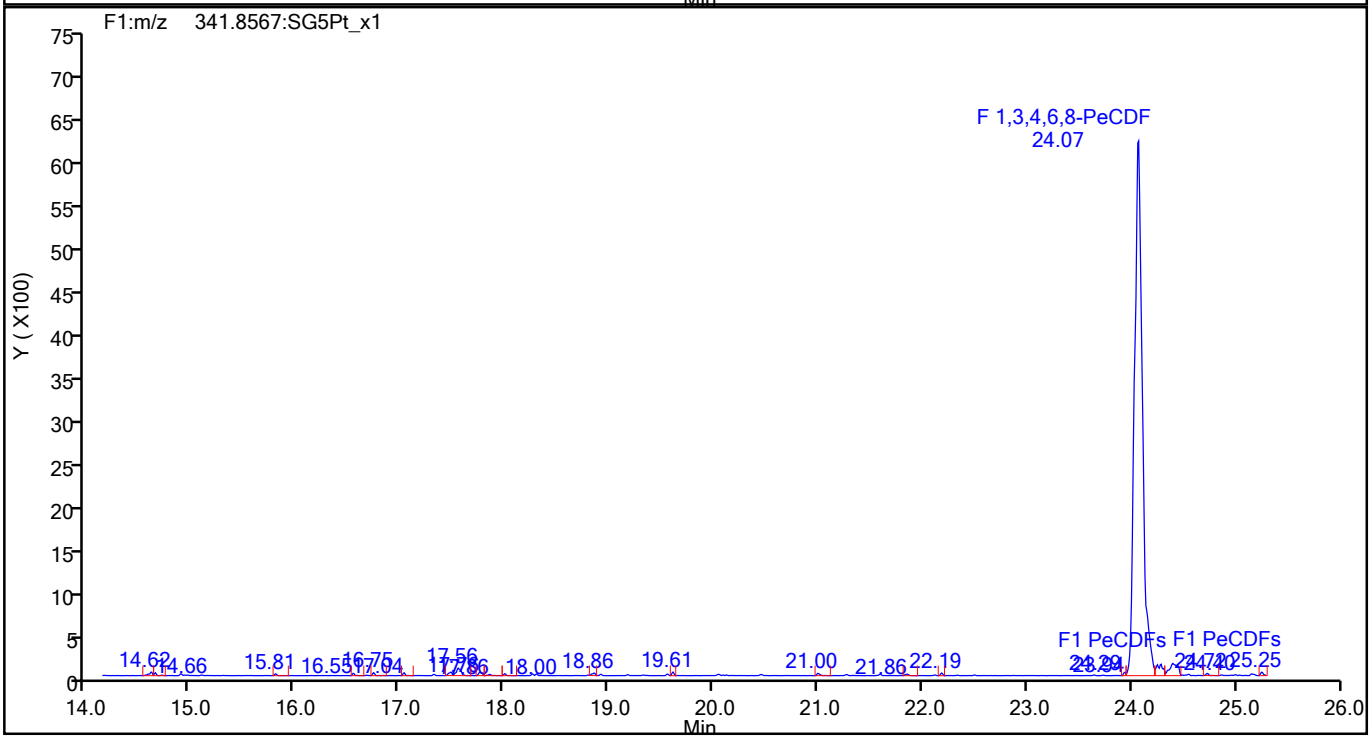

790414

Report Date: 21-Aug-2021 17:06:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

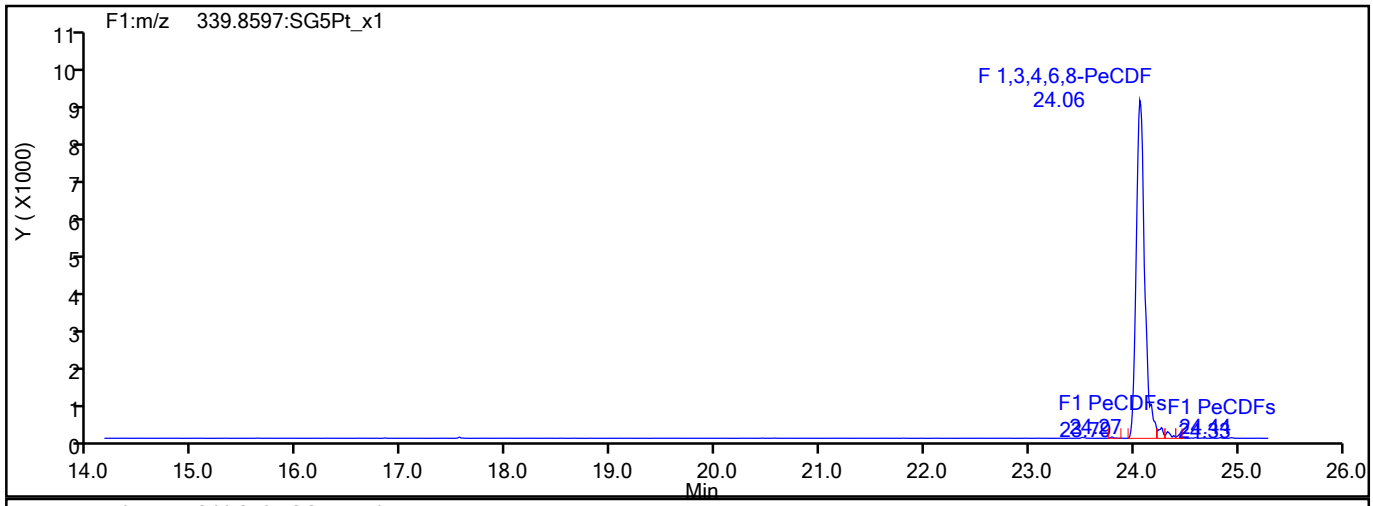

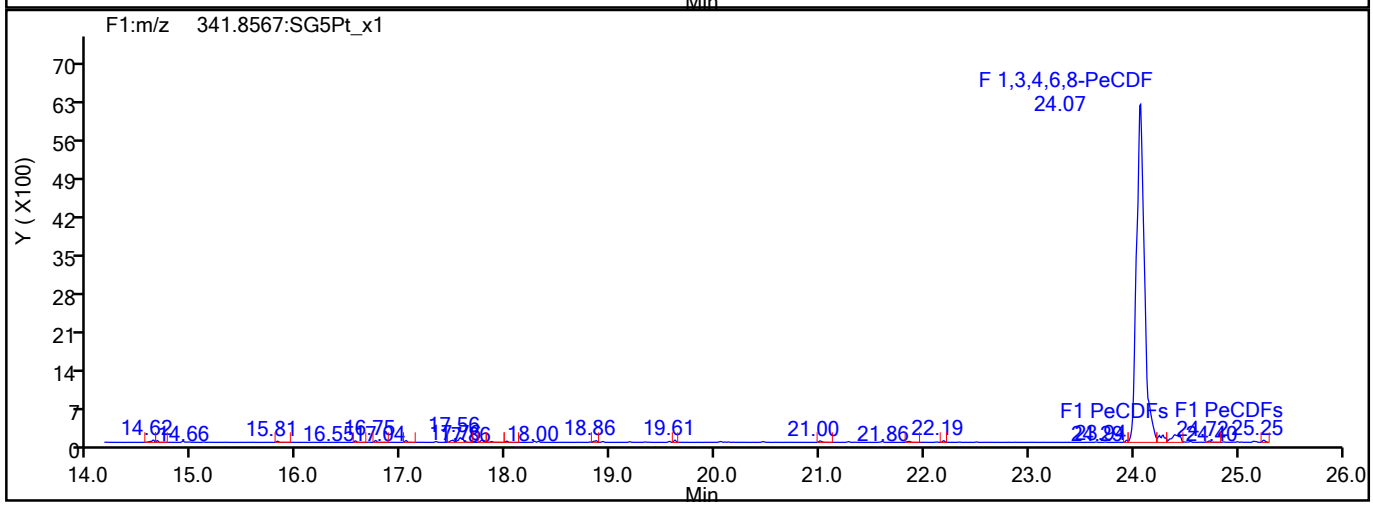

F1 PeCDFs Interference Mass

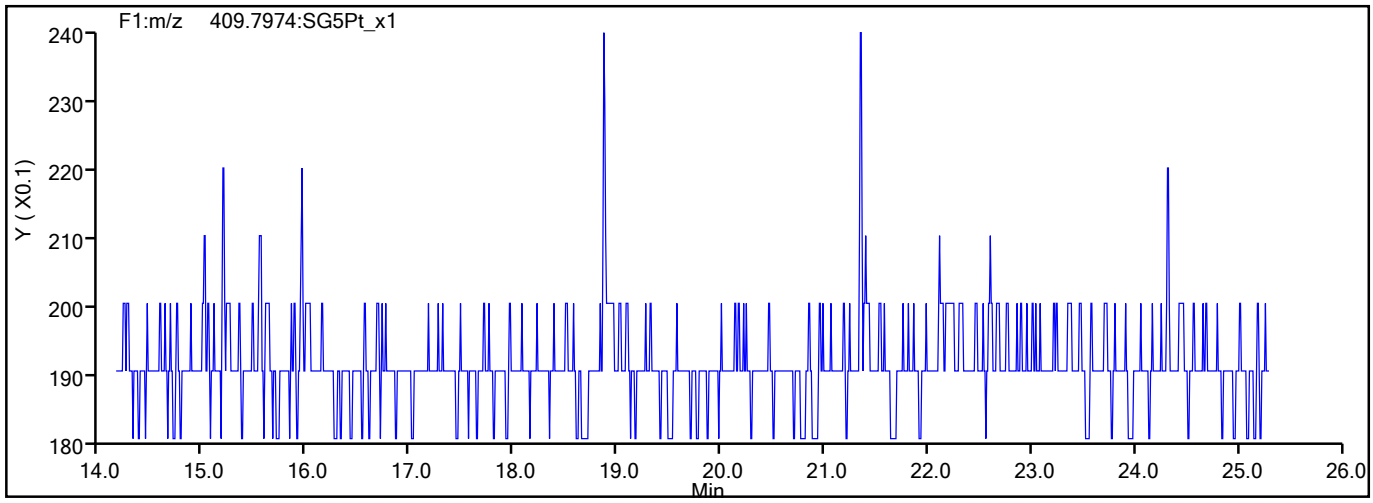

790415

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

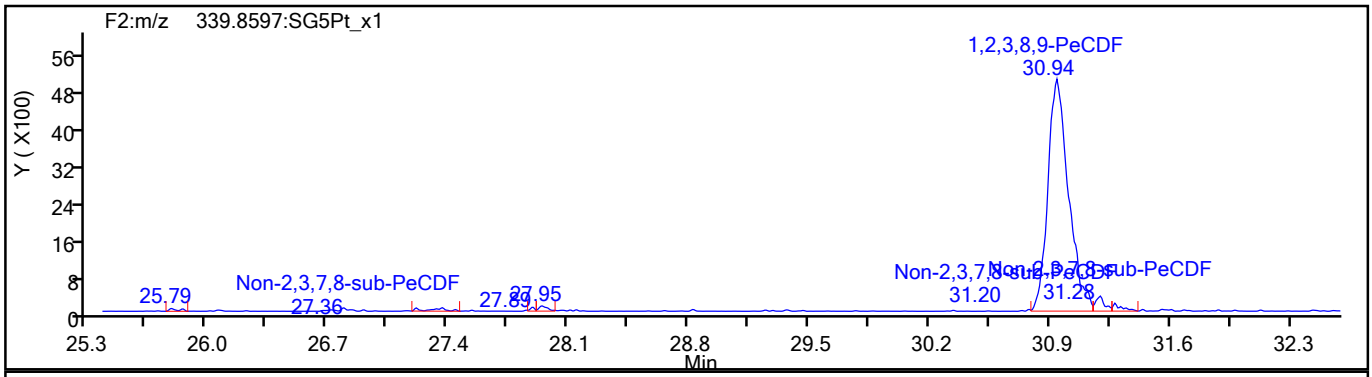

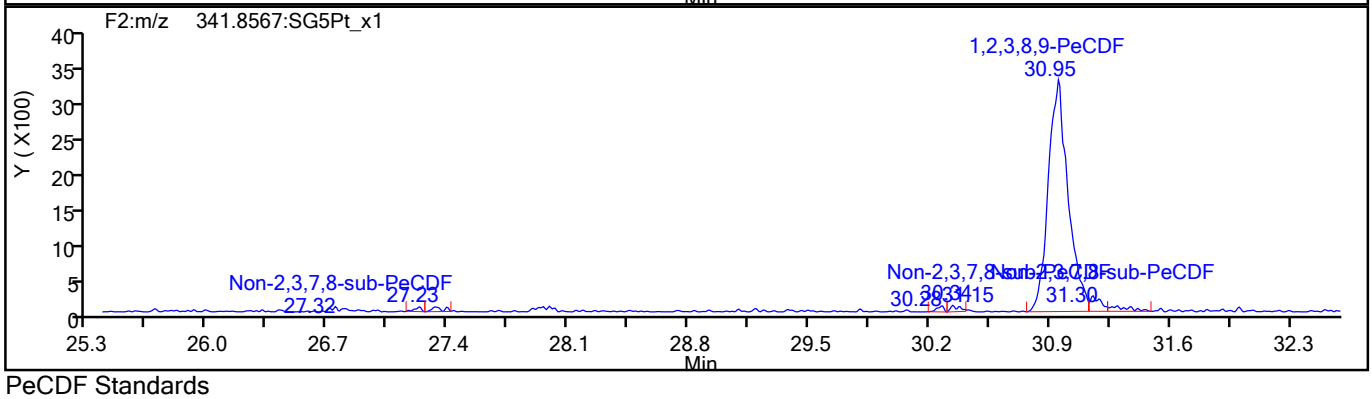

PeCDF Standards

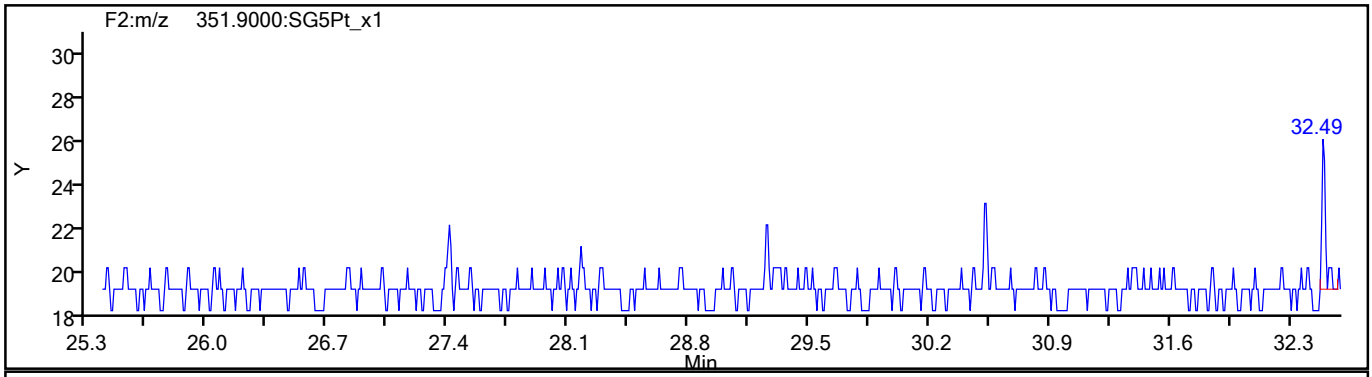

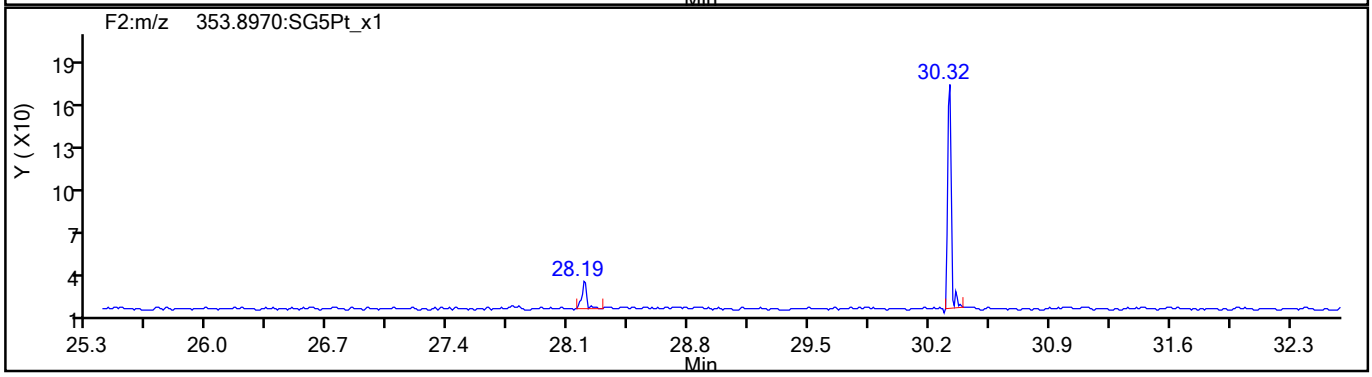

790416

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

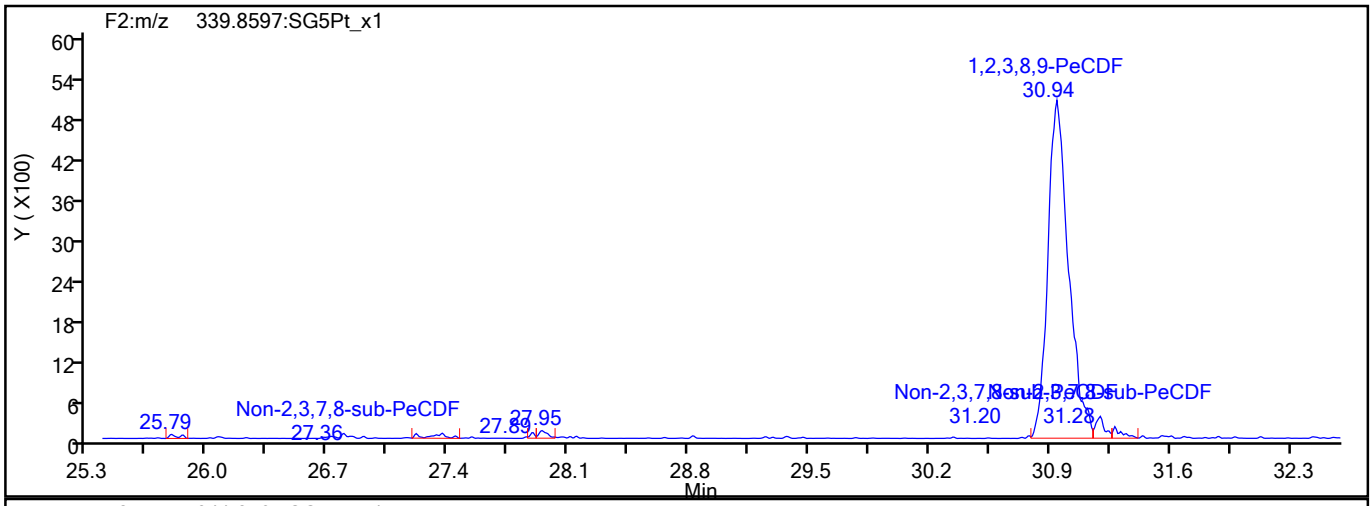

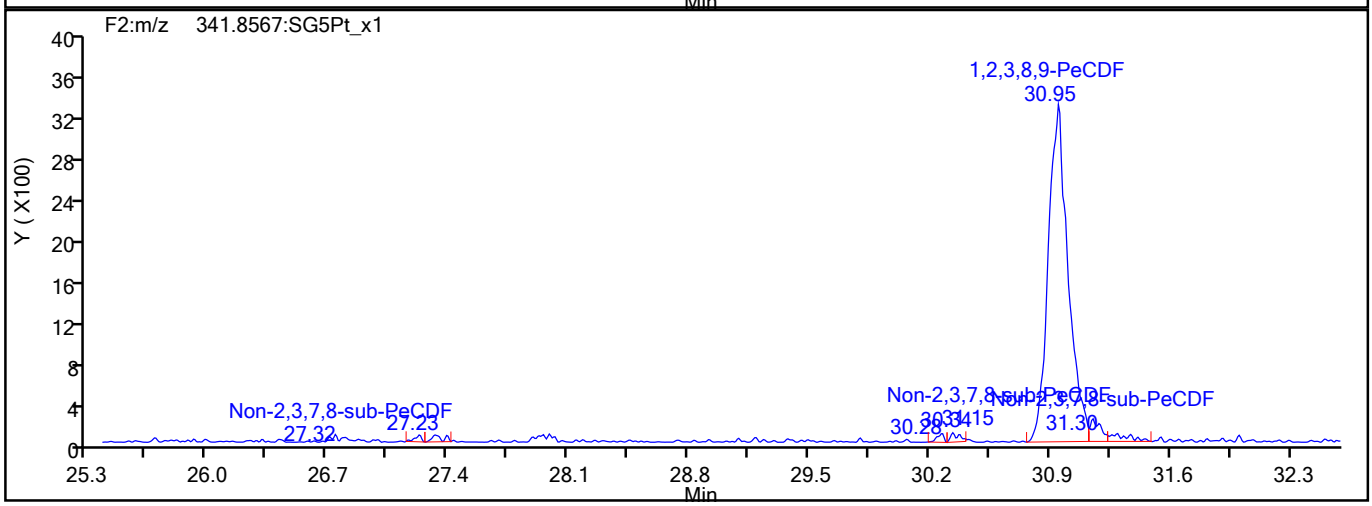

PeCDF Interference Mass

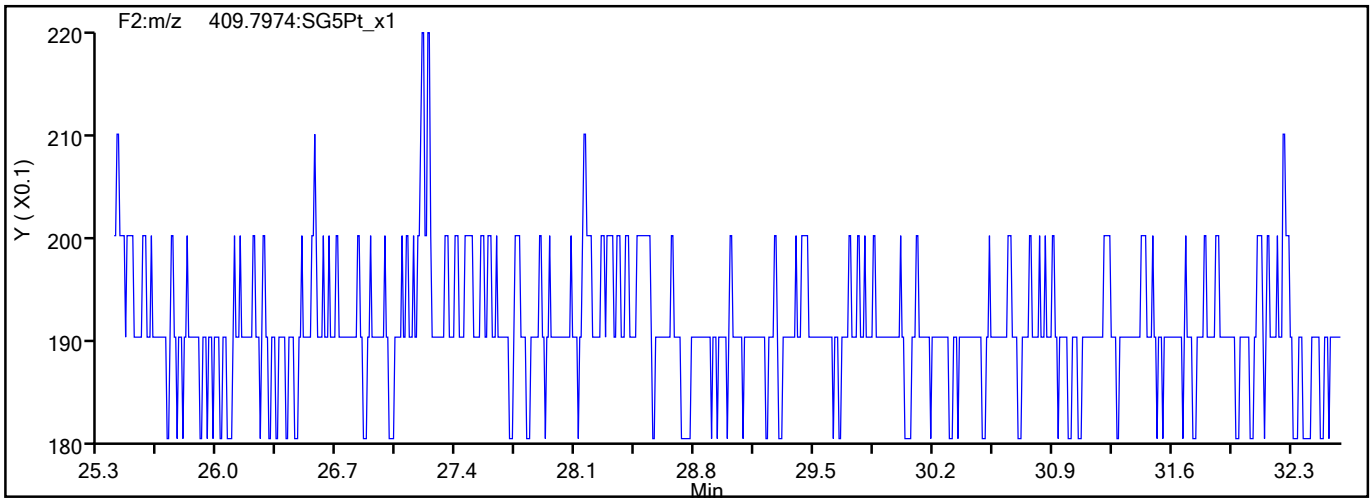

790417

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

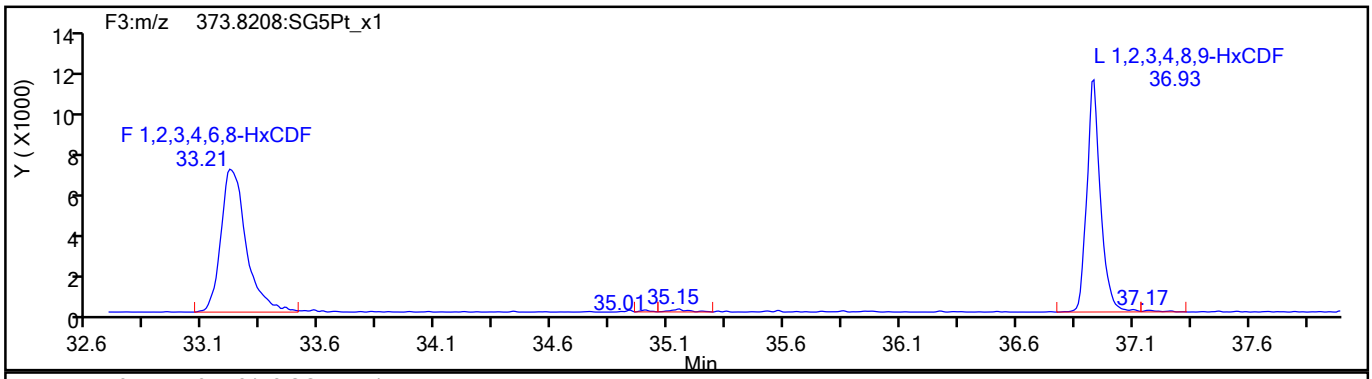

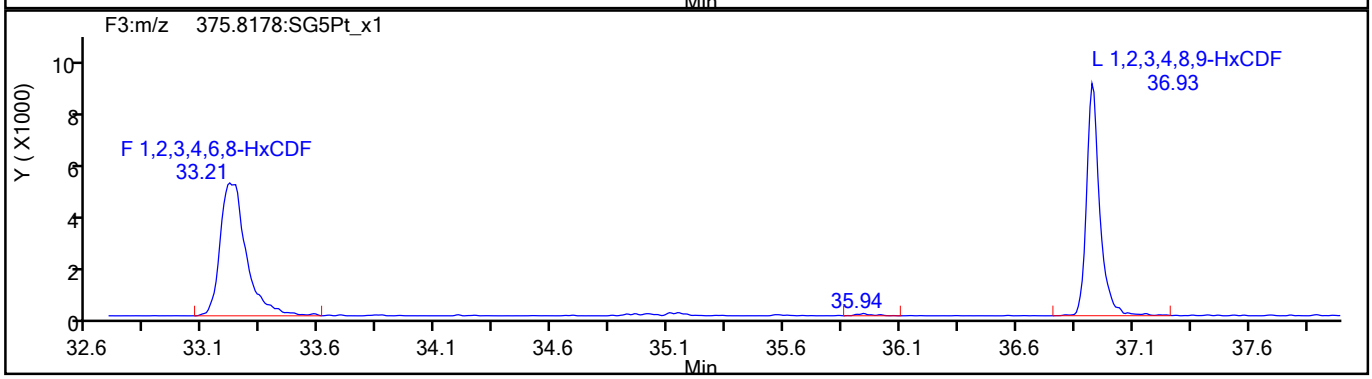

HxCDF Standards

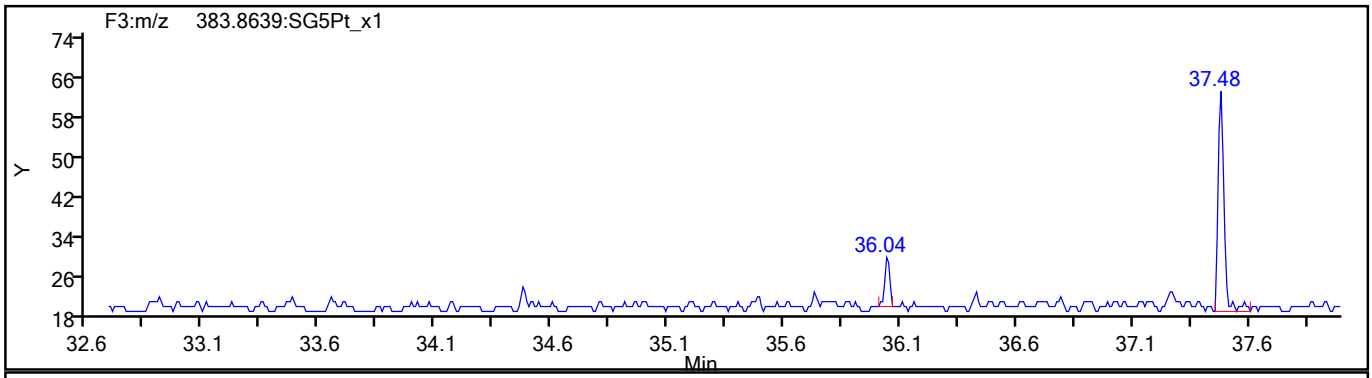

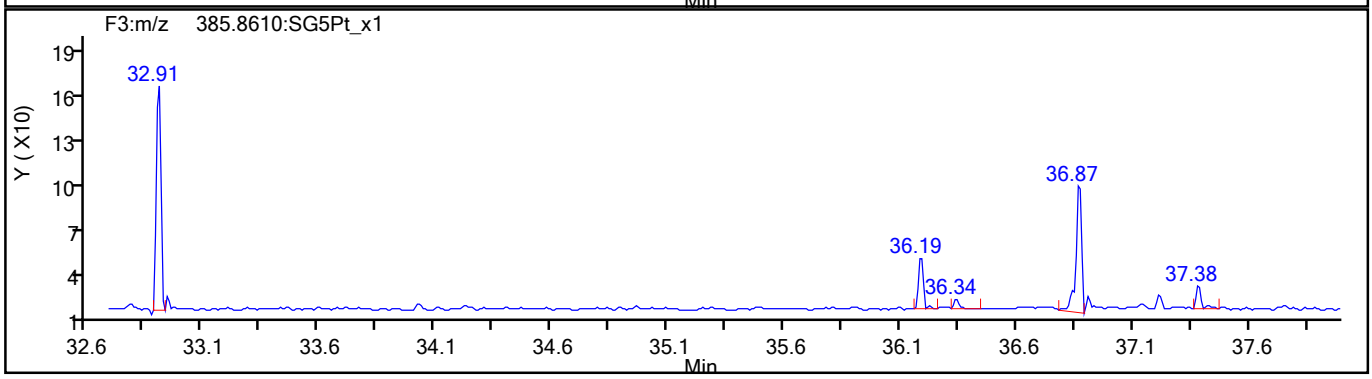

790418

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

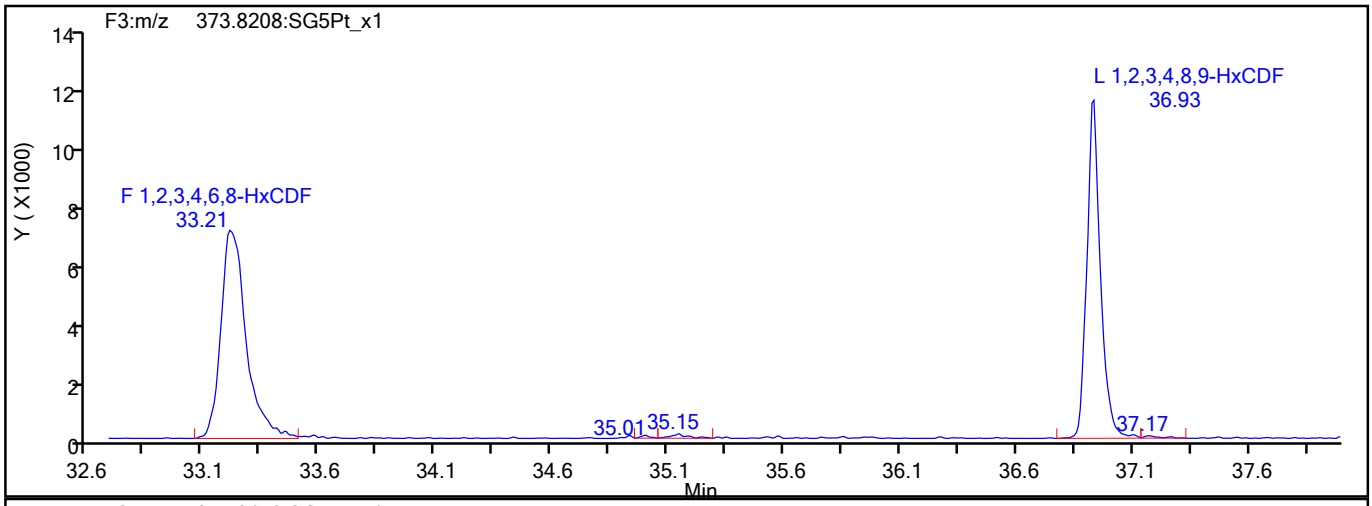

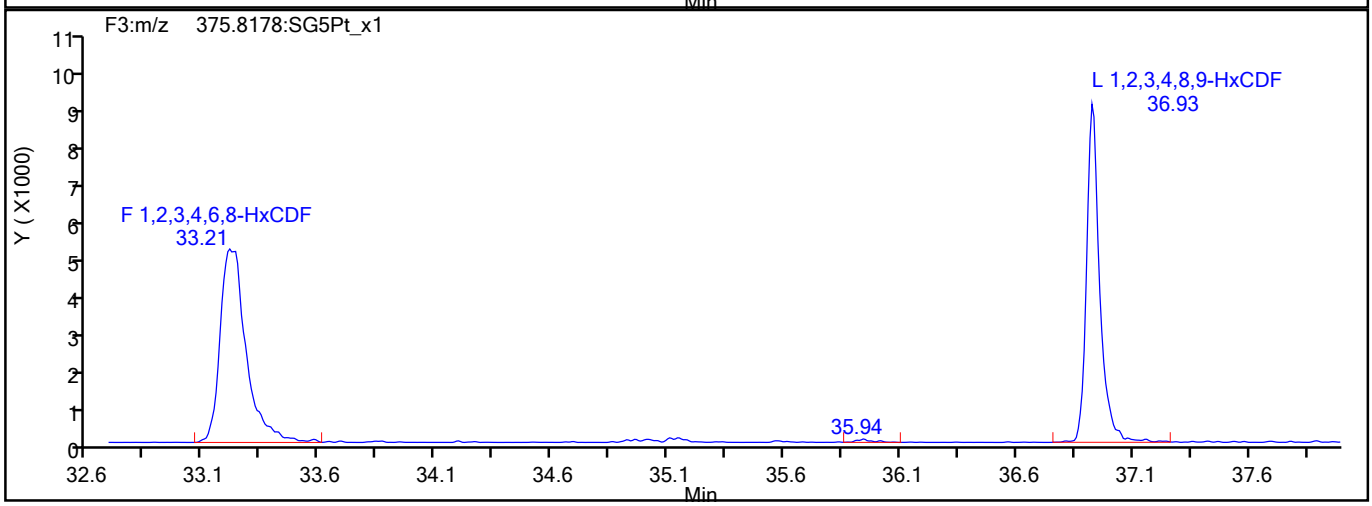

HxCDF Interference Mass

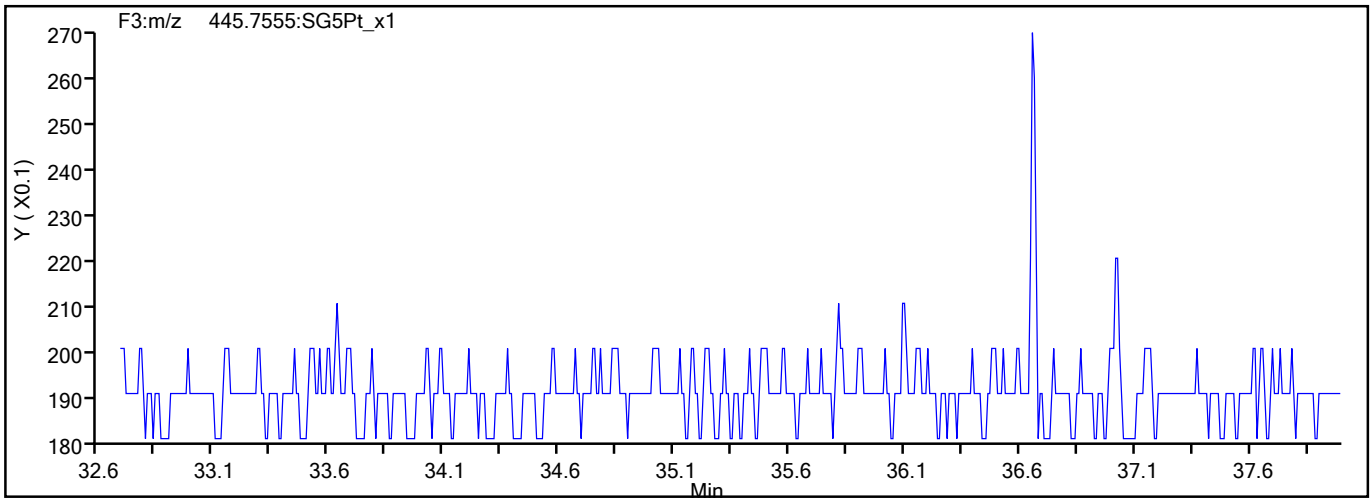

790419

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

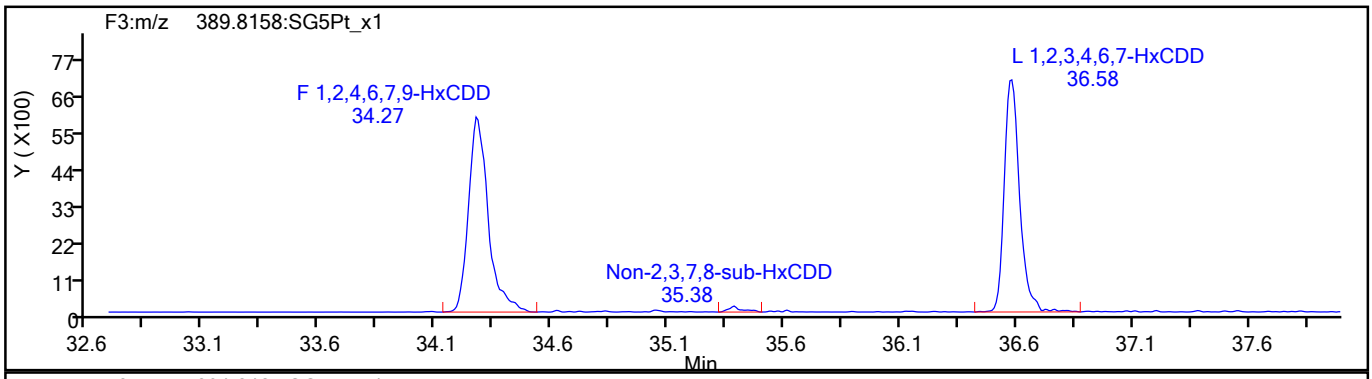

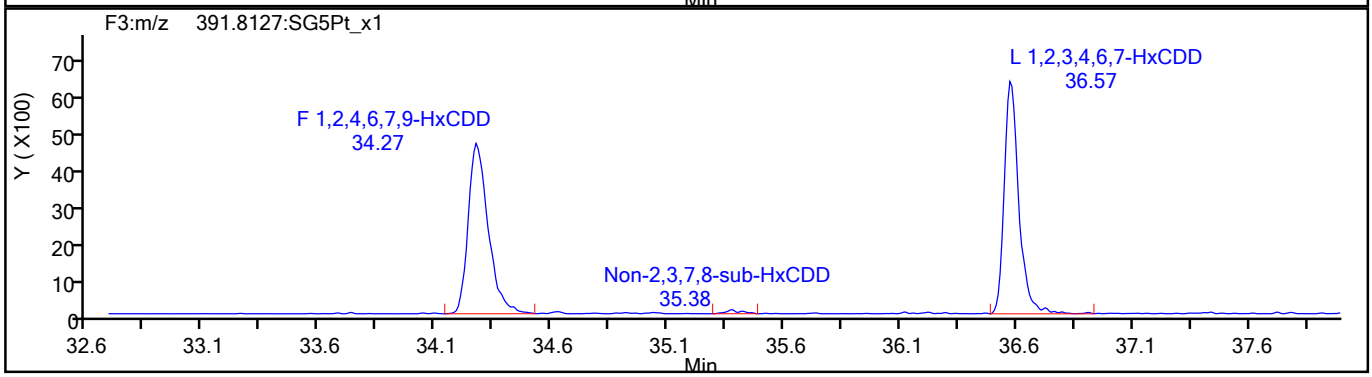

HxCDD Standards

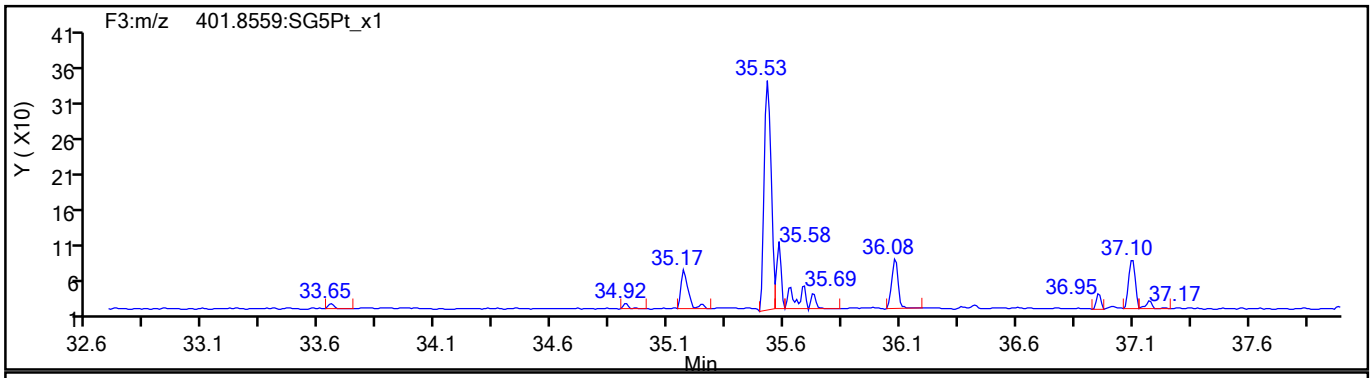

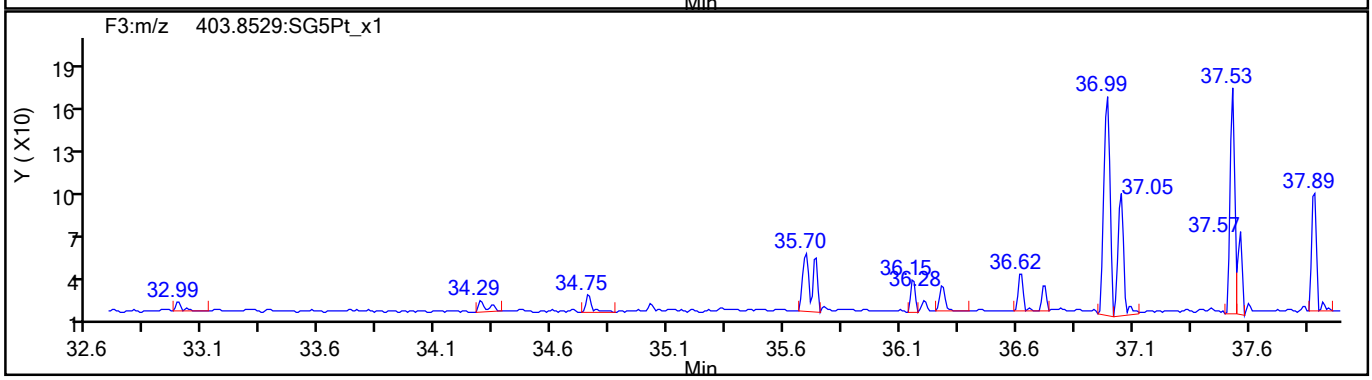

790420

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

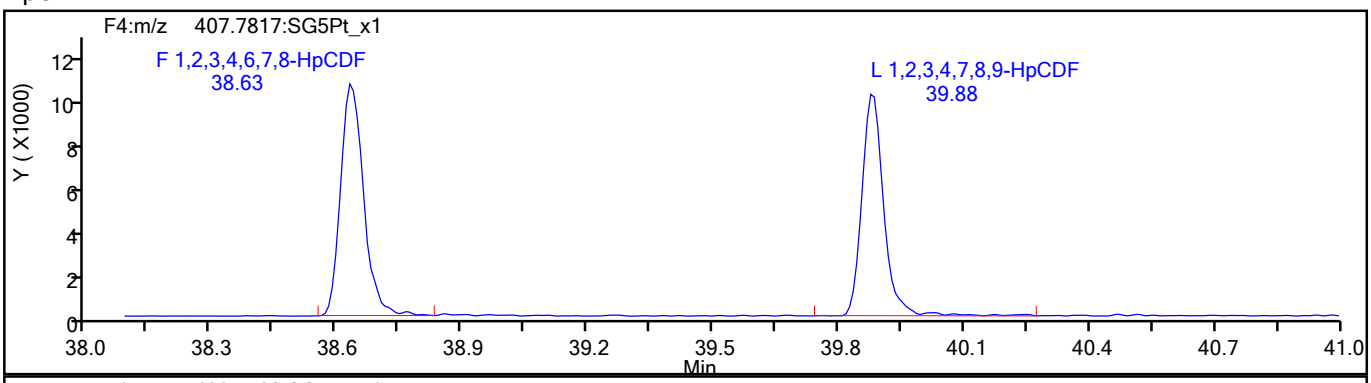

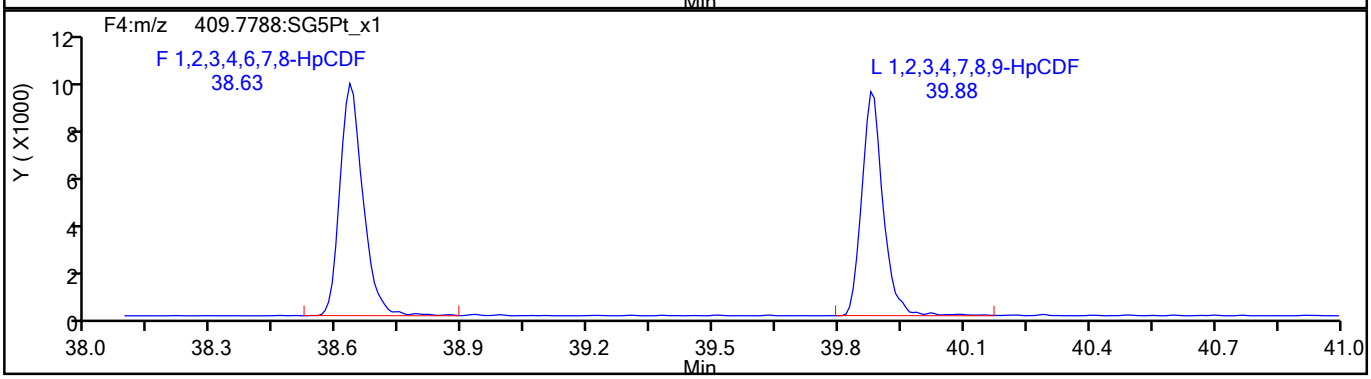

HpCDF Standards

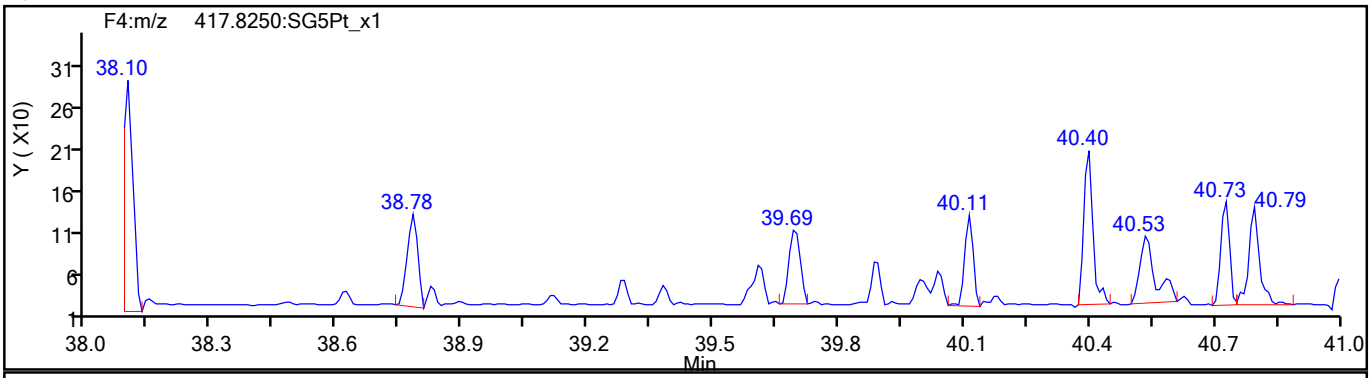

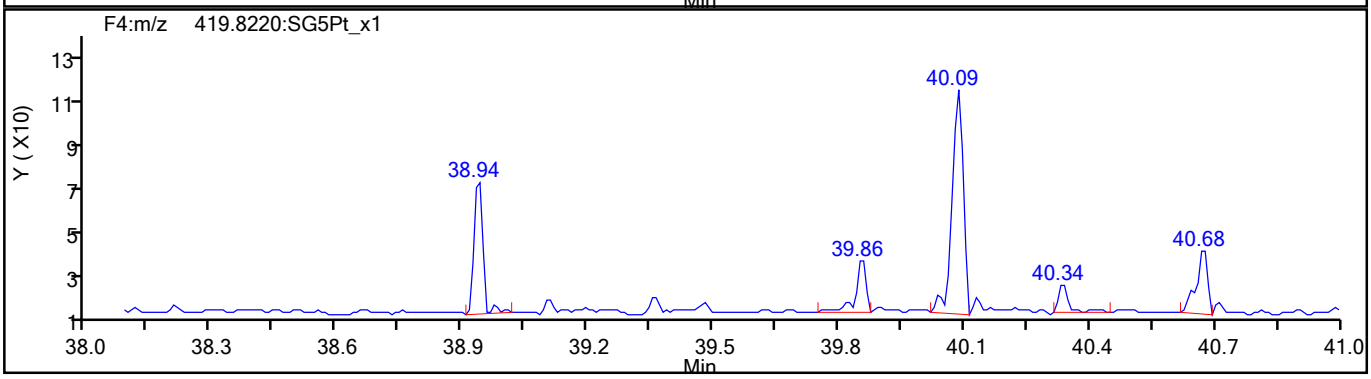

790421

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

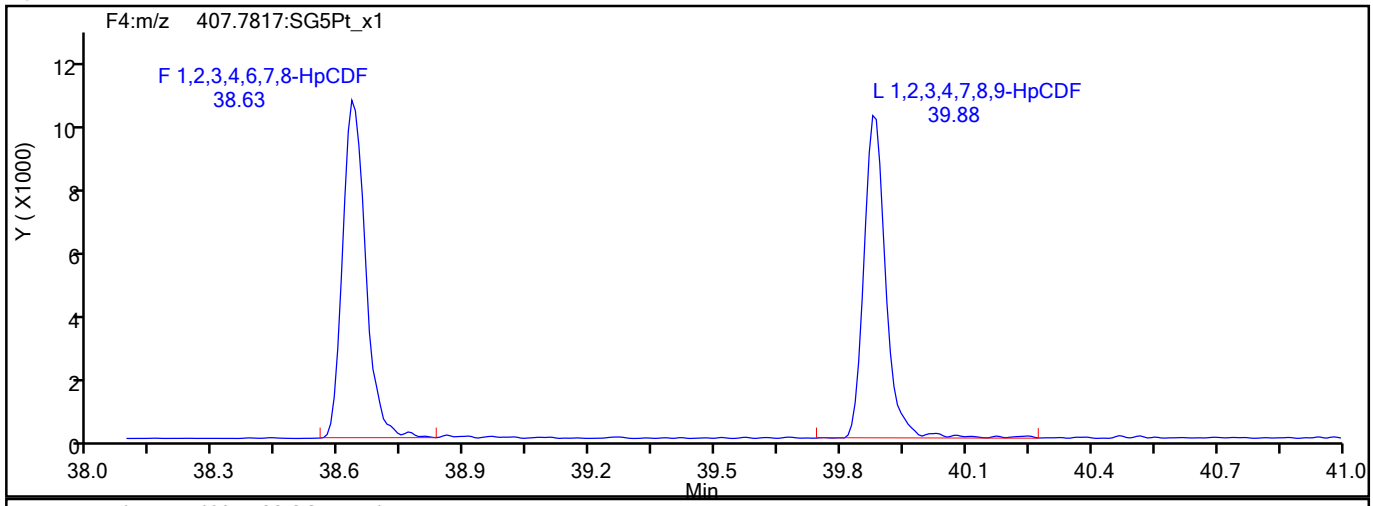

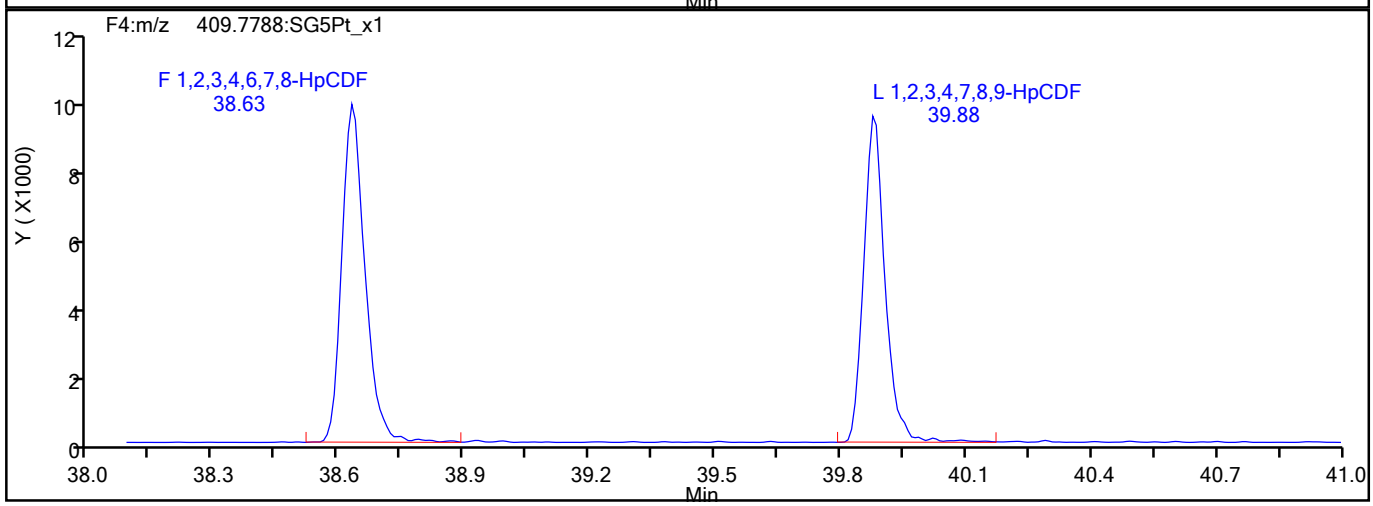

HpCDF Interference Mass

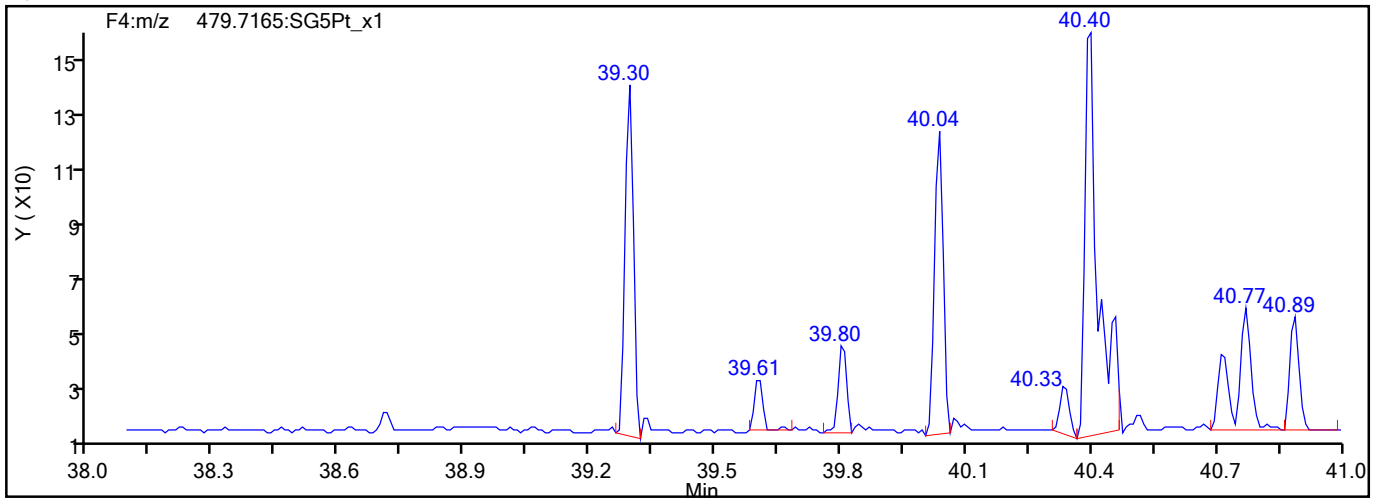

790422

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

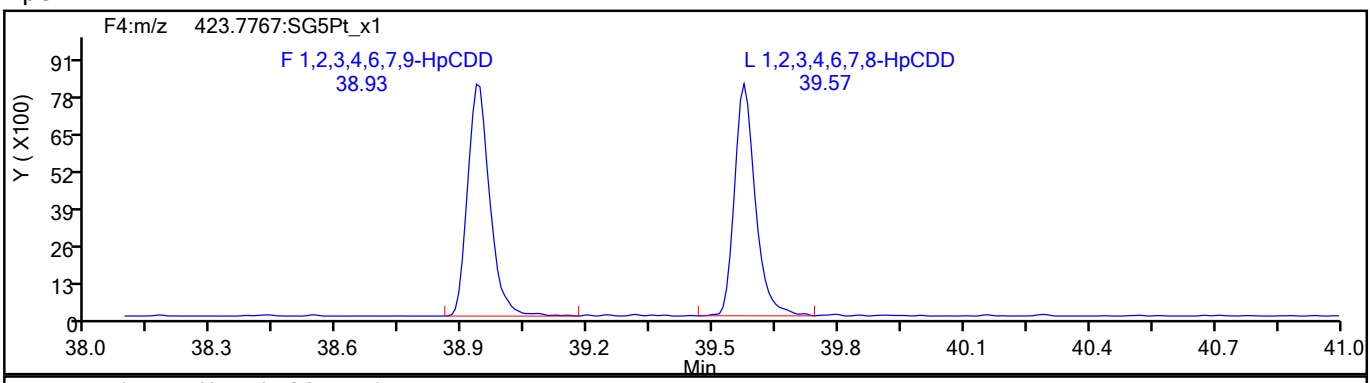

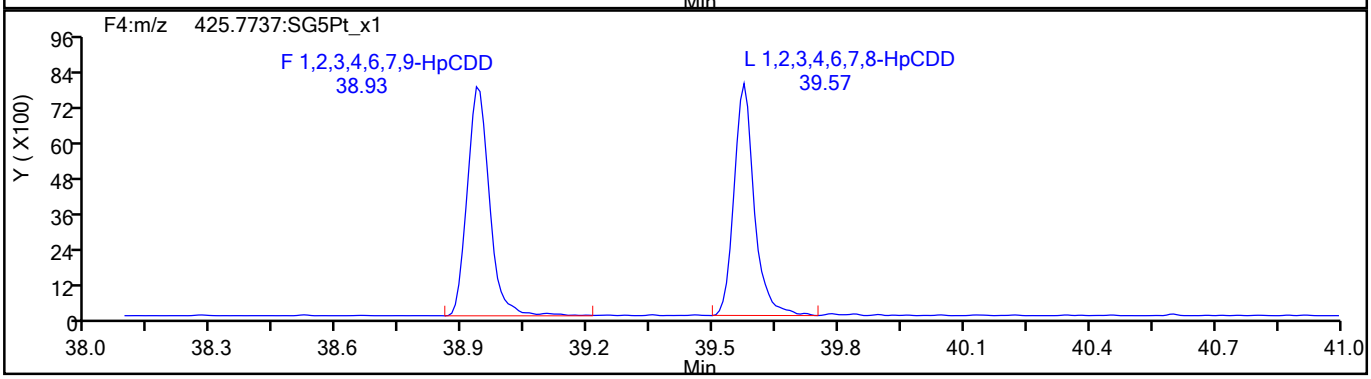

HpCDD Standards

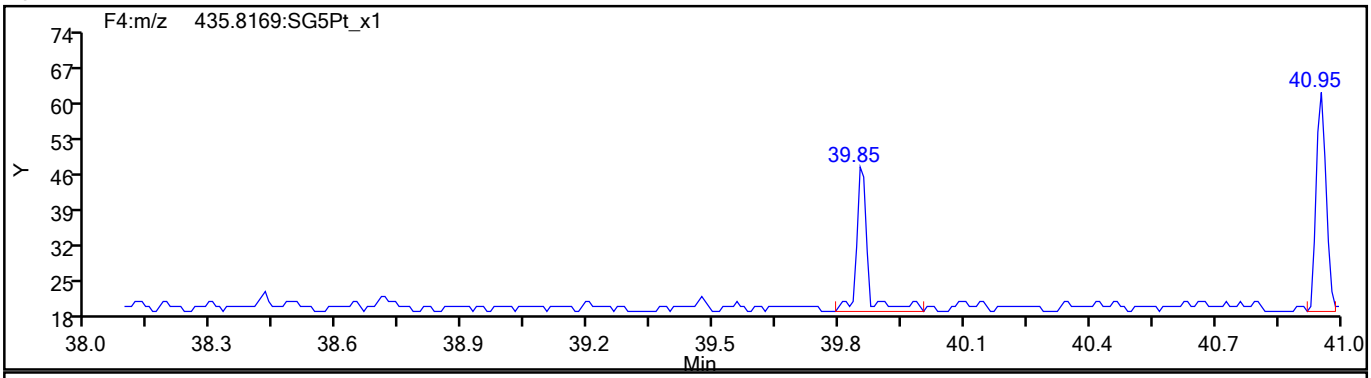

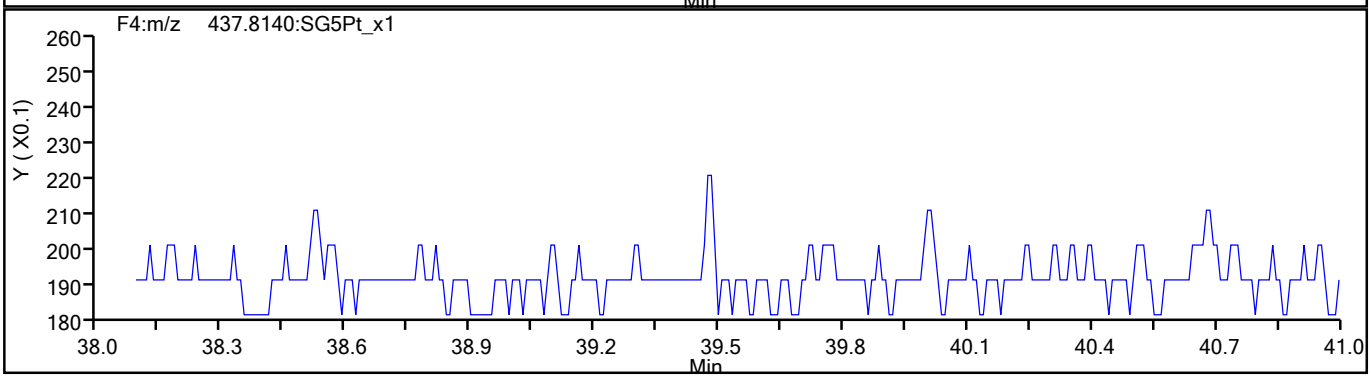

790423

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

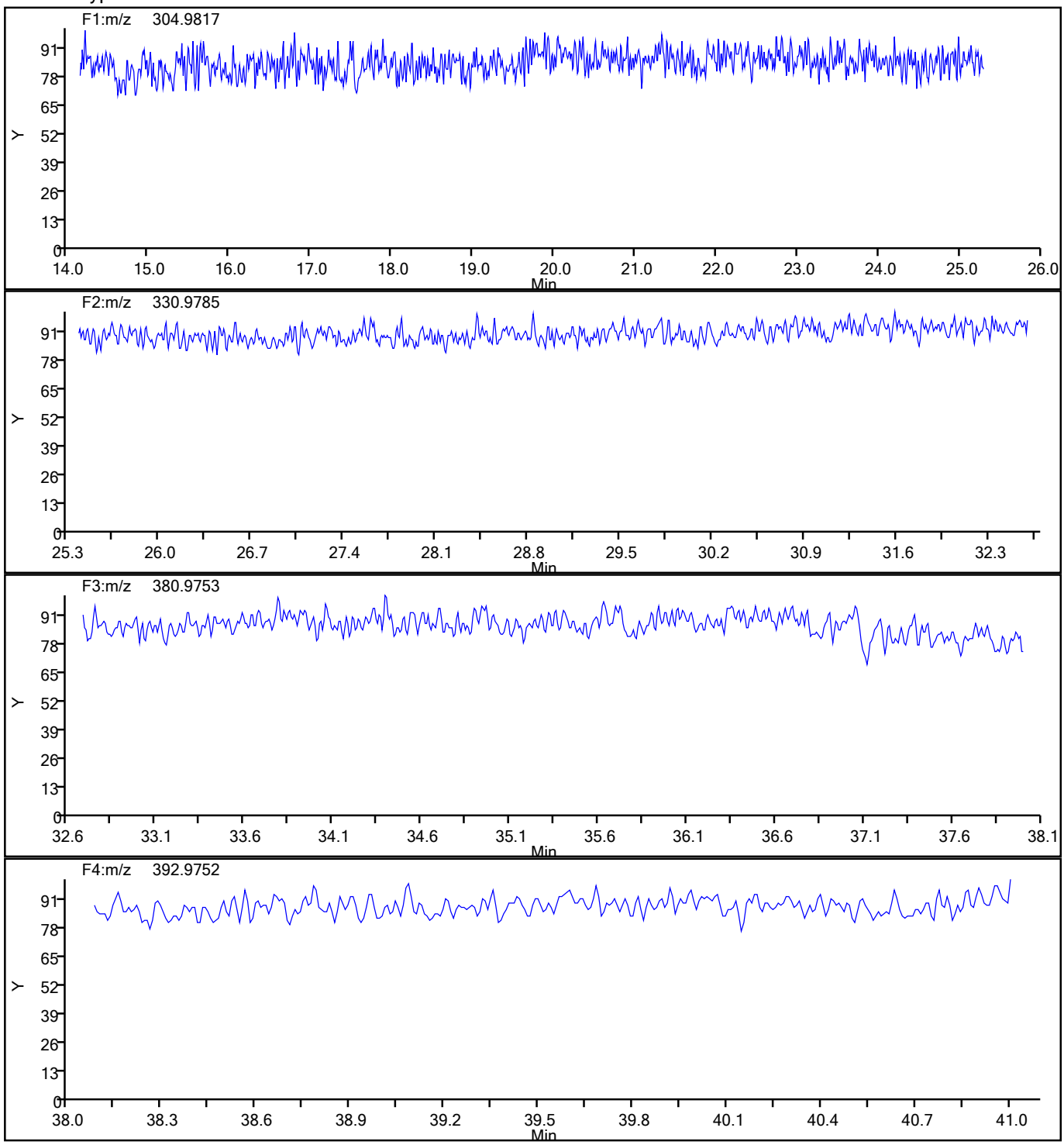

790424

Report Date: 21-Aug-2021 17:06:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_2.d		
Injection Date:	19-Aug-2021 13:59:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

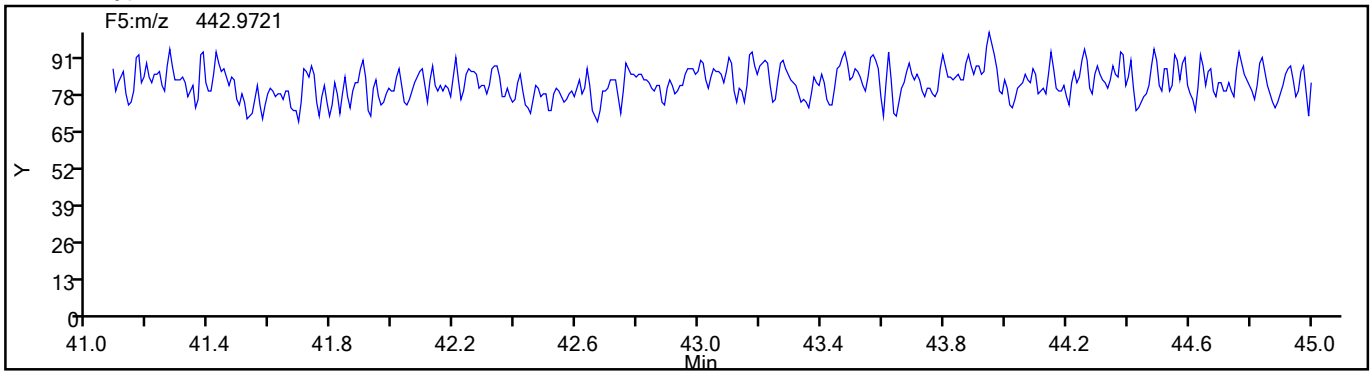

790425

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-2
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-513879/1-A
Matrix: Sediment
Lab File ID: 19au21dfs1_5.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/19/2021 16:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517891
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.073
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.067
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.052
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.055
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.0	0.042
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.046
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.041
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.021
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.020
72918-21-9	1,2,3,7,8,9-HxCDF	ND		5.0	0.020
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.022
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.338	J	5.0	0.032
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.177	J	5.0	0.038
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.041
3268-87-9	OCDD	1.21	J	10	0.029
39001-02-0	OCDF	ND		10	0.12
41903-57-5	Total TCDD	ND		1.0	0.14
30402-14-3	Total TCDF	4.06		1.0	0.047
36088-22-9	Total PeCDD	ND		5.0	0.21
30402-15-4	Total PeCDF	ND		5.0	0.055
34465-46-8	Total HxCDD	ND		5.0	0.19
55684-94-1	Total HxCDF	ND		5.0	0.040
37871-00-4	Total HpCDD	0.546	J	5.0	0.032
38998-75-3	Total HpCDF	0.177	J	5.0	0.039

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-513879/1-A

Matrix: Sediment Lab File ID: 19au21dfs1_5.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10(g) Date Analyzed: 08/19/2021 16:27

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517891 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	36		25-164
89059-46-1	13C-2,3,7,8-TCDF	36		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	35		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	36		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	40		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	40		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	39		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	47		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	43		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	39		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	38		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	41		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	41		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	42		26-138
114423-97-1	13C-OCDD	36		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	46		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 19-Aug-2021 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513879/1-a RI
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 08:56:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: dadunj Date: 23-Aug-2021 08:56:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.367	999541	0.81	2.1E+04	100.0	100.0				
D 13C-2,3,7,8-TCDF	20.413	482916	0.81	1.3459	35.9	35.9	0.2062	0.2062	35.90	
2,3,7,8-TCDF	20.422	7680	0.67	1.0802	1.472	1.472	0.0237	0.0237		M
A Non-2,3,7,8-sub-TCDF	19.851	2918	0.78	1.0802	0.5594	0.5594	0.0237	0.5594		a
S Total TCDF					2.032	2.032	0.0237	0.0237		
D 13C-2,3,7,8-TCDD	21.745	331874	0.84	0.9317	35.6	35.6	0.1263	0.1263	35.64	
2,3,7,8-TCDD	21.797						0.0367	0.0367		RQU
$ 37Cl4-2,3,7,8-TCDD	21.780	184847		1.0083	18.3	18.3	0.0144	0.0144	45.85	
A Non-2,3,7,8-sub-TCDD	20.684						0.0367	0.0717		RQU
S Total TCDD							0.0717	0.0717		
D 13C-1,2,3,7,8-PeCDF	27.242	411361	1.64	1.1405	36.1	36.1	0.1592	0.1592	36.09	
1,2,3,7,8-PeCDF	27.263						0.0262	0.0262		
D 13C-2,3,4,7,8-PeCDF	28.759	451402	1.71	1.1253	40.1	40.1	0.1614	0.1614	40.13	
2,3,4,7,8-PeCDF	28.910						0.0273	0.0273		RQU
A F1 PeCDFs	24.634						0.007863	0.007863		RQU
A Non-2,3,7,8-sub-PeCDF	28.173						0.0267	0.0267		RQU
S Total PeCDF							0.0273	0.0273		
D 13C-1,2,3,7,8-PeCDD	29.559	251252	1.75	0.7165	35.1	35.1	0.0527	0.0527	35.08	
1,2,3,7,8-PeCDD	29.616						0.0337	0.0337		
A Non-2,3,7,8-sub-PeCDD	28.478						0.0337	0.1027		RQU
S Total PeCDD							0.1027	0.1027		
D 13C-1,2,3,4,7,8-HxCDF	34.909	442177	0.56	0.9648	46.8	46.8	0.1353	0.1353	46.82	
1,2,3,4,7,8-HxCDF	34.918						0.0106	0.0106		RQU
D 13C-1,2,3,6,7,8-HxCDF	35.070	452714	0.55	1.0708	43.2	43.2	0.1220	0.1220	43.19	
1,2,3,6,7,8-HxCDF	35.087						0.009816	0.009816		RQU
D 13C-2,3,4,6,7,8-HxCDF	35.887	384775	0.54	1.0413	37.7	37.7	0.1254	0.1254	37.75	
2,3,4,6,7,8-HxCDF	35.916						0.0110	0.0110		
D 13C-1,2,3,7,8,9-HxCDF	36.788	369514	0.55	0.9731	38.8	38.8	0.1342	0.1342	38.79	
1,2,3,7,8,9-HxCDF	36.791						0.0102	0.0102		
A Non-2,3,7,8-sub-HxCDF	35.009						0.0104	0.0199		RQU
S Total HxCDF							0.0199	0.0199		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.586	978844	1.24	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.097	300443	1.30	0.7587	40.5	40.5	0.1264	0.1264	40.46	
1,2,3,4,7,8-HxCDD	36.126						0.0212	0.0212		
D 13C-1,2,3,6,7,8-HxCDD	36.215	325228	1.26	0.8593	38.7	38.7	0.1116	0.1116	38.67	
1,2,3,6,7,8-HxCDD	36.244						0.0231	0.0231		
1,2,3,7,8,9-HxCDD	36.552						0.0205	0.0205		RQU
A Non-2,3,7,8-sub-HxCDD	35.375						0.0215	0.0943		RQU
S Total HxCDD							0.0943	0.0943		
D 13C-1,2,3,4,6,7,8-HpCDF	38.610	296829	0.48	0.7359	41.2	41.2	0.1807	0.1807	41.20	
1,2,3,4,6,7,8-HpCDF	38.619	379	0.90	1.4421	0.0885	0.0885	0.0188	0.0188		M
D 13C-1,2,3,4,7,8,9-HpCDF	39.857	279786	0.49	0.6854	41.7	41.7	0.1940	0.1940	41.70	
1,2,3,4,7,8,9-HpCDF	39.872						0.0205	0.0205		
A Non-2,3,7,8-sub-HpCDF	39.245						0.0196	0.0196		
S Total HpCDF					0.0885	0.0885	0.0197	0.0197		
D 13C-1,2,3,4,6,7,8-HpCDD	39.554	269457	1.07	0.6745	40.8	40.8	0.0880	0.0880	40.81	
1,2,3,4,6,7,8-HpCDD	39.570	478	1.01	1.0503	0.1689	0.1689	0.0159	0.0159		M
A Non-2,3,7,8-sub-HpCDD	39.241	295	1.12	1.0503	0.1042	0.1042	0.0159	0.1042		
S Total HpCDD					0.2731	0.2731	0.0159	0.0159		
D 13C-OCDD	42.051	387569	0.87	0.5446	72.7	72.7	0.2546	0.2546	36.35	
OCDF	42.157						0.0584	0.0584		
OCDD	42.068	1247	0.84	1.0620	0.6059	0.6059	0.0145	0.0145		M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 19-Aug-2021 16:27:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: mb 320-513879/1-a RI
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 23-Aug-2021 08:56:17 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1678

First Level Reviewer: dadunj Date: 23-Aug-2021 08:56:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	21.367	21.395	-2		448088	60917	46	115	1324		
333.9338	21.359	21.395	-2		551453	76764	19	47	4040	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.413	20.365	3	0.955	216659	29555	127	317	233		
317.9389	20.388	20.365	1	0.954	266257	36744	26	65	1413	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	20.422	20.408	1	1.000	3077	466	1	2	466		M
305.8987	20.422	20.408	1	1.000	4603	728	6	15	121	0.67(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	19.734	19.851	-7	0.967	1278	284	1	2	284		a
305.8987	19.709	19.851	-9	0.965	1640	273	6	15	46	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.745	21.716	2	1.018	151821	19232	46	115	418		
333.9338	21.737	21.716	1	1.017	180053	23875	19	47	1257	0.84(0.65-0.89)	
2,3,7,8-TCDD											RQU
319.8965	21.733						6	15			
321.8936	21.733						1	2			
37Cl4-2,3,7,8-TCDD											
327.8847	21.780	21.799	-1	1.019	184847	22658	8	20	2832		
A Non-2,3,7,8-sub-TCDD											U
319.8965	17.808	20.684	-172	0.819	189	61	6	15	10		
	Empc Correction				111	40	6	15	7		
321.8936	17.774	20.684	-174	0.817	145	52	1	2	52	1.30(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.242	27.251	-1	1.275	255453	37782	54	135	700		
353.8970	27.242	27.251	-1	1.275	155908	23687	46	115	515	1.64(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.276						1	2			
341.8567	27.276						6	15			
13C-2,3,4,7,8-PeCDF											
351.9000	28.759	28.757	0	1.346	284972	39477	54	135	731		
353.8970	28.742	28.757	-1	1.345	166430	22399	46	115	487	1.71(1.32-1.78)	
2,3,4,7,8-PeCDF											RQU
339.8597	28.791						1	2			
341.8567	28.791						6	15			
A F1 PeCDFs											U
339.8597	24.270	24.634	-22	0.891	14	10	1	2	10		
341.8567	24.347	24.634	-17	0.894	375	126	1	2	126	0.04(1.32-1.78)	
	Empc Correction				9	6	1	2	6		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	28.173	28.173	0	1.034	22	12	1	2			
341.8567	28.173	28.173	0	1.034	163	52	6	15		0.13(1.32-1.78)	
	Empc Correction				14	7	6	15	0		
13C-1,2,3,7,8-PeCDD											
367.8949	29.559	29.574	-1	1.383	159751	21868	10	25	2187		
369.8919	29.575	29.574	0	1.384	91501	12206	11	27	1110	1.75(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.616						4	10			
357.8516	29.616						1	2			
A Non-2,3,7,8-sub-PeCDD											U
355.8546	26.063	28.478	-145	0.882	120	38	4	10	10		
	Empc Correction				54	24	4	10	6		
357.8516	26.054	28.478	-145	0.881	35	16	1	2	16	3.43(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.909	34.906	0	0.954	159560	29606	34	85	871		
385.8610	34.909	34.906	0	0.954	282617	52423	76	190	690	0.56(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQU
373.8208	34.922						2	5			
375.8178	34.922						2	5			
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.070	35.066	0	0.959	161024	31293	34	85	920		
385.8610	35.061	35.066	0	0.958	291690	52360	76	190	689	0.55(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQU
373.8208	35.082						2	5			
375.8178	35.082						2	5			
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.887	35.890	0	0.981	134908	26852	34	85	790		
385.8610	35.887	35.890	0	0.981	249867	47678	76	190	627	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.907						2	5			
375.8178	35.907						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.788	36.782	0	1.006	131797	27710	34	85	815		
385.8610	36.780	36.782	0	1.005	237717	51610	76	190	679	0.55(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.791						2	5			
375.8178	36.791						2	5			
A Non-2,3,7,8-sub-HxCDF											U
373.8208	33.419	35.009	-95	0.957	41	29	2	5	15		
375.8178	33.427	35.009	-95	0.958	46	15	2	5	8	0.89(1.05-1.43)	
	Empc Correction				33	23	2	5	12		
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.586	36.581	0		542767	116573	46	115	2534		
403.8529	36.586	36.581	0		436077	94013	35	87	2686	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.097	36.092	0	0.987	169567	35941	46	115	781		
403.8529	36.097	36.092	0	0.987	130876	30793	35	87	880	1.30(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.109						4	10			
391.8127	36.109						2	5			
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.215	36.210	0	0.990	181621	37484	46	115	815		
403.8529	36.215	36.210	0	0.990	143607	27866	35	87	796	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.227						4	10			
391.8127	36.227						2	5			
1,2,3,7,8,9-HxCDD											RQU
389.8158	36.597						4	10			
391.8127	36.597						2	5			
A Non-2,3,7,8-sub-HxCDD											U
389.8158	34.977	35.375	-24	0.966	247	48	4	10	12		
	Empc Correction				172	48	4	10	12		
391.8127	34.994	35.375	-23	0.966	139	39	2	5	20	1.78(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.610	38.596	1	1.055	96572	24055	41	102	587		
419.8220	38.610	38.596	1	1.055	200257	49761	71	177	701	0.48(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7817	38.619	38.618	0	1.000	180	61	6	15	10		
409.7788	38.619	38.618	0	1.000	199	84	2	5	42	0.90(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.857	39.850	0	1.089	91751	25313	41	102	617		
419.8220	39.857	39.850	0	1.089	188035	49089	71	177	691	0.49(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.872						6	15			
409.7788	39.872						2	5			
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.245						6	15			
409.7788	39.245						2	5			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.554	39.547	0	1.081	139342	37216	23	57	1618		
437.8140	39.554	39.547	0	1.081	130115	34855	27	67	1291	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											M
423.7767	39.570	39.561	1	1.000	240	101	4	10	25		
425.7737	39.562	39.561	0	1.000	238	76	1	2	76	1.01(0.88-1.20)	M
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.947	39.241	-18	0.985	156	65	4	10	16		
425.7737	38.914	39.241	-20	0.984	139	52	1	2	52	1.12(0.88-1.20)	
13C-OCDD											
469.7780	42.051	42.036	1	1.149	180767	43311	74	185	585		
471.7750	42.051	42.036	1	1.149	206802	47640	43	107	1108	0.87(0.76-1.02)	
OCDF											
441.7428	42.137						3	7			
443.7399	42.137						11	27			
OCDD											M
457.7377	42.068	42.053	1	1.000	569	118	1	2	118		M
459.7348	42.051	42.053	0	1.000	678	161	2	5	81	0.84(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Inject. Date: 19-Aug-2021 16:27:00 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDF, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	482916	66299

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	482916	66299

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
19.734	1278	284	1640	273	0.5594	0.78	a
Signal Totals:							
	1278	284	1640	273			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2918	557				0.78	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5594 = (2918 * 100.000) / (482916 * 1.080)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Inject. Date: 19-Aug-2021 16:27:00 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDD, RT: 20.684

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	331874	43107

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	331874	43107

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.808	189	61	145	52	0.0936	1.30	RQ
17.808	111	40	145	52	0.0717		Empc Correction
21.960	78	44	37	20	0.0322	2.11	RQ
21.960	28	15	37	20	0.0182		Empc Correction
23.385	139	62	10	5	0.0418	13.90	RQ
23.385	7	3	10	5	0.004764		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

F1 PeCDFs, RT: 24.634

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	411361	61469
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	451402	61876

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	431381	61672

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.270	14	10	375	126	0.0875	0.04	RQ
24.270	14	10	9	6	0.005171		Empc Correction
24.553	8	4	62	43	0.0157	0.13	RQ
24.553	8	4	5	2	0.002923		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDF, RT: 28.173

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	411361	61469
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	451402	61876

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	431381	61672

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
29.567	22	12	163	52	0.0416	0.13	RQ
29.567	22	12	14	7	0.008094		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d
Lims ID: MB 320-513879/1-A
Client ID:
Inject. Date: 19-Aug-2021 16:27:00 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517891 Lims Sample ID: 4

Non-2,3,7,8-sub-PeCDD, RT: 28.478

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	251252	34074

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	251252	34074

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.063	120	38	35	16	0.0590	3.43	RQ
26.063	54	24	35	16	0.0338		Empc Correction
26.374	55	36	12	6	0.0255	4.58	RQ
26.374	18	9	12	6	0.0114		Empc Correction
30.224	437	87	106	40	0.2065	4.12	RQ
30.224	164	61	106	40	0.1027		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDF, RT: 35.009

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.147	D 13C-1,2,3,4,7,8-HxCDF	100.000	442177	82029
1,2,3,6,7,8-HxCDF	1.218	D 13C-1,2,3,6,7,8-HxCDF	100.000	452714	83653
2,3,4,6,7,8-HxCDF	1.214	D 13C-2,3,4,6,7,8-HxCDF	100.000	384775	74530
1,2,3,7,8,9-HxCDF	1.240	D 13C-1,2,3,7,8,9-HxCDF	100.000	369514	79320

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.205		100.000	412295	79883

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
33.419	41	29	46	15	0.0175	0.89	RQ
33.419	41	29	33	23	0.0149		Empc Correction
35.407	52	27	47	31	0.0199	1.11	

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDD, RT: 35.375

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	300443	66734
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	325228	65350
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	312835	66042

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.977	247	48	139	39	0.1170	1.78	RQ
34.977	172	48	139	39	0.0943		Empc Correction
35.297	59	22	62	34	0.0367	0.95	RQ
35.297	59	22	47	17	0.0321		Empc Correction
35.904	124	47	45	32	0.0512	2.76	RQ
35.904	55	39	45	32	0.0303		Empc Correction

Compound is Marked ND

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Lims ID:	MB 320-513879/1-A		
Client ID:			
Inject. Date:	19-Aug-2021 16:27:00	Dil. Factor:	1.0000
Sample Type:	MB, Method Blank		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517891	Lims Sample ID:	4

Non-2,3,7,8-sub-HpCDD, RT: 39.241

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	269457	72071

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	269457	72071

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.947	156	65	139	52	0.1042	1.12	
Signal Totals:							
	156	65	139	52			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	295	117				1.12	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.1042 = (295 * 100.000) / (269457 * 1.050)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1(14.80 :26.00)		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 20.42
Area: 2721
Amount: 1.404027
Amount Units: pg/ul

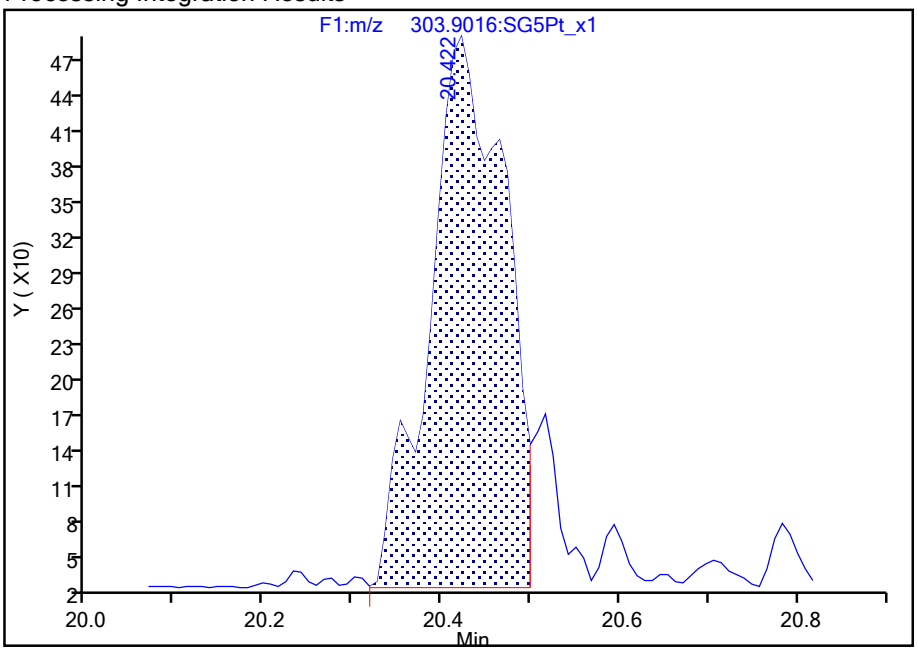

Manual Integration Results

RT: 20.42
Area: 3077
Amount: 1.472273
Amount Units: pg/ul

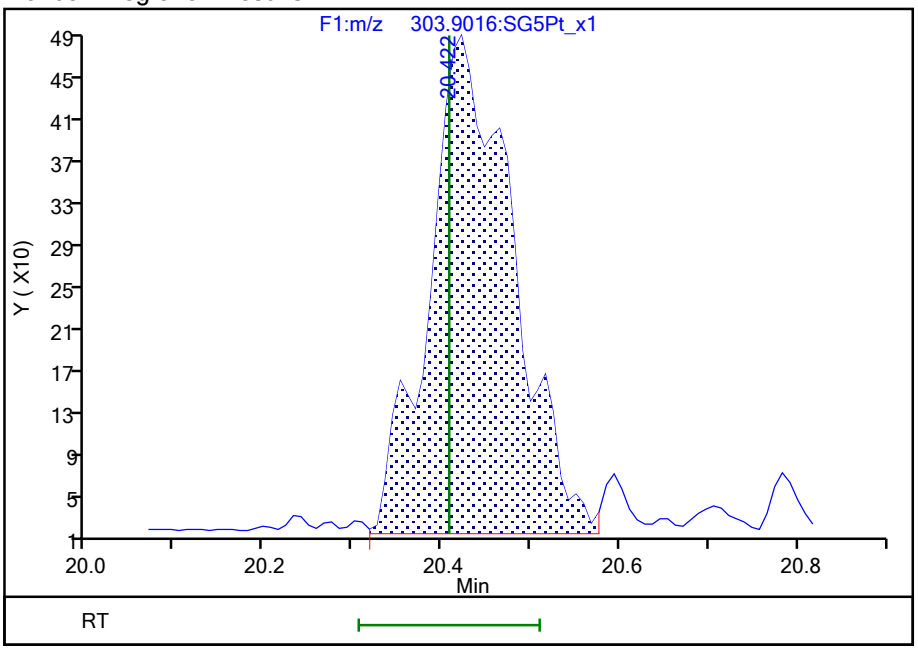

Reviewer: dadunj, 23-Aug-2021 08:53:56

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 38.62
Area: 339
Amount: 0.121248
Amount Units: pg/ul

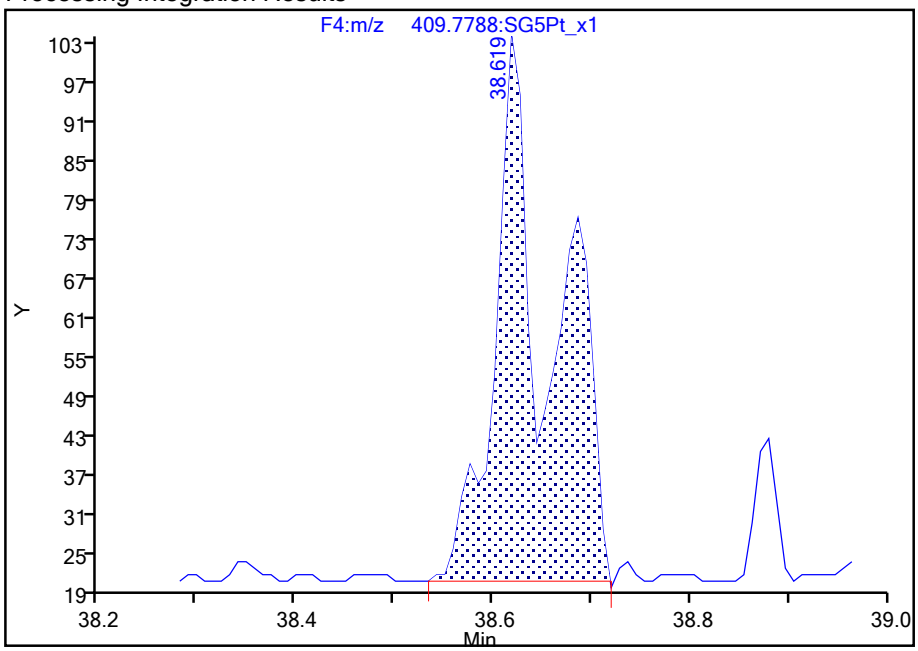

Manual Integration Results

RT: 38.62
Area: 199
Amount: 0.088541
Amount Units: pg/ul

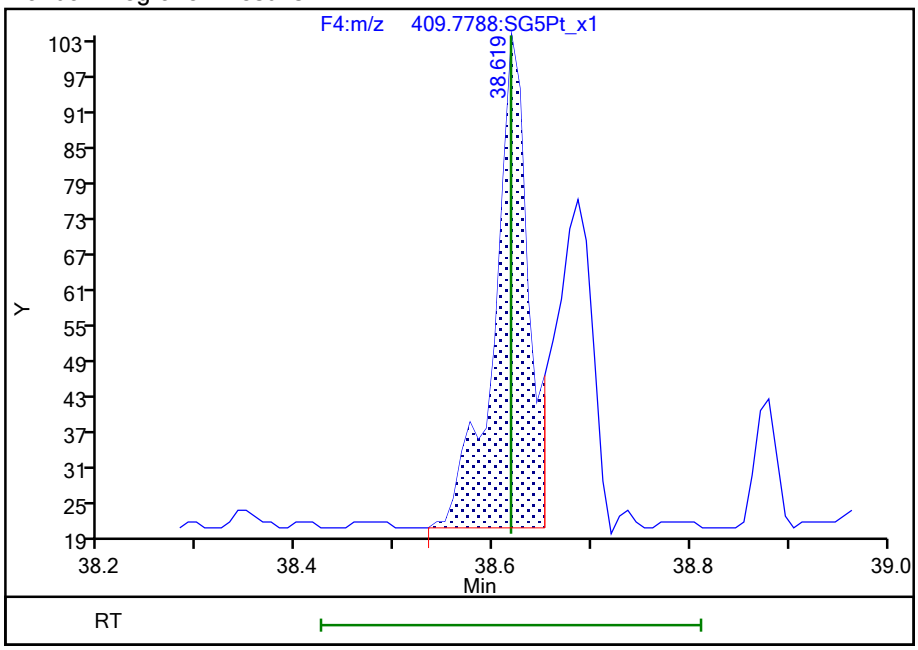

Reviewer: dadunj, 23-Aug-2021 08:55:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4(38.58 :41.00)		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 39.56
Area: 255
Amount: 0.174905
Amount Units: pg/ul

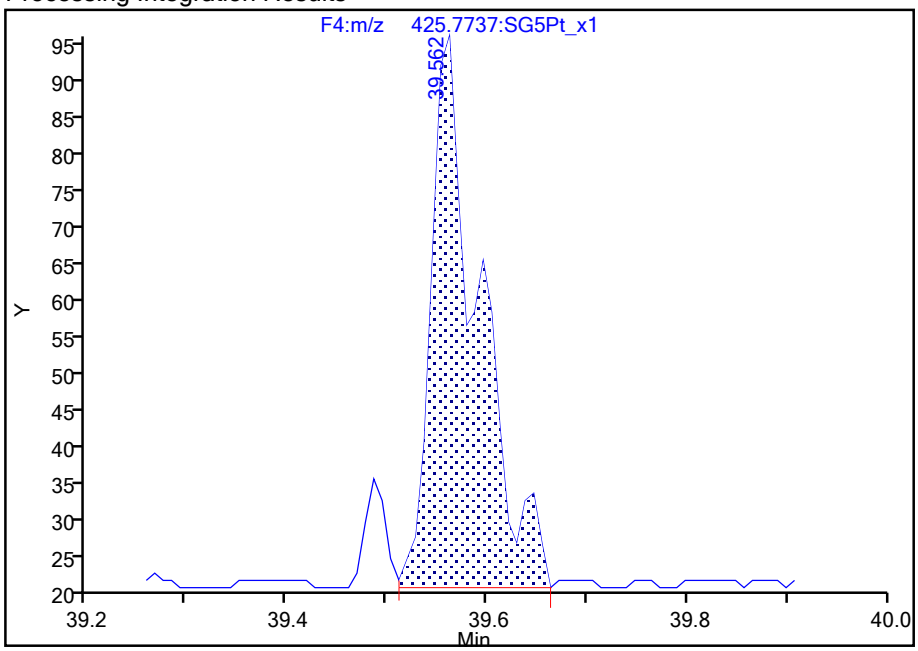

Manual Integration Results

RT: 39.56
Area: 238
Amount: 0.168898
Amount Units: pg/ul

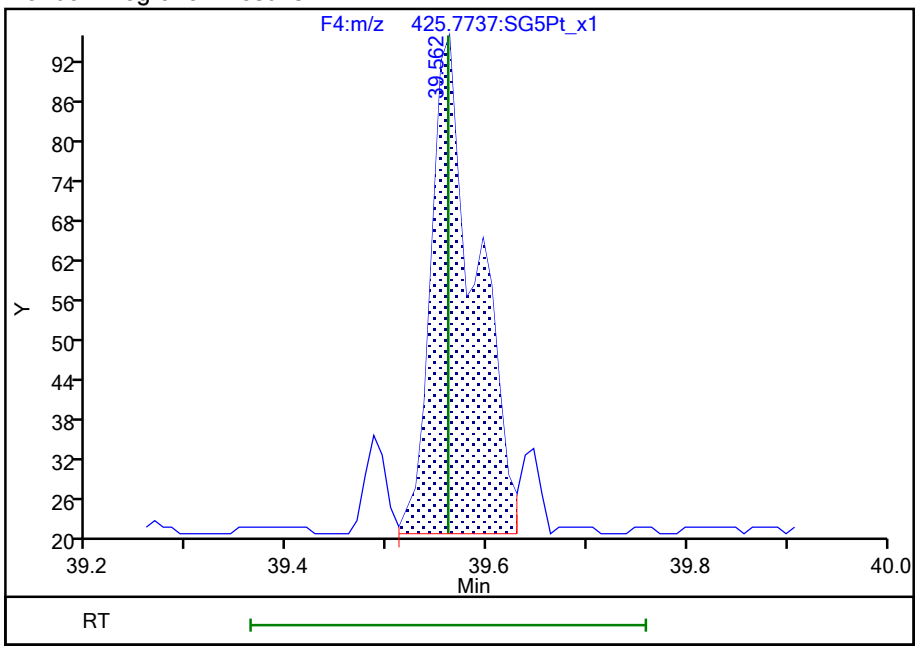

Reviewer: dadunj, 23-Aug-2021 08:55:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d				
Injection Date:	19-Aug-2021 16:27:00	Instrument ID:	DFS 1		
Lims ID:	MB 320-513879/1-A				
Client ID:					
Operator ID:	Xcalibur_System	ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5(41.08 :46.00)		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 42.07
Area: 520
Amount: 0.582127
Amount Units: pg/ul

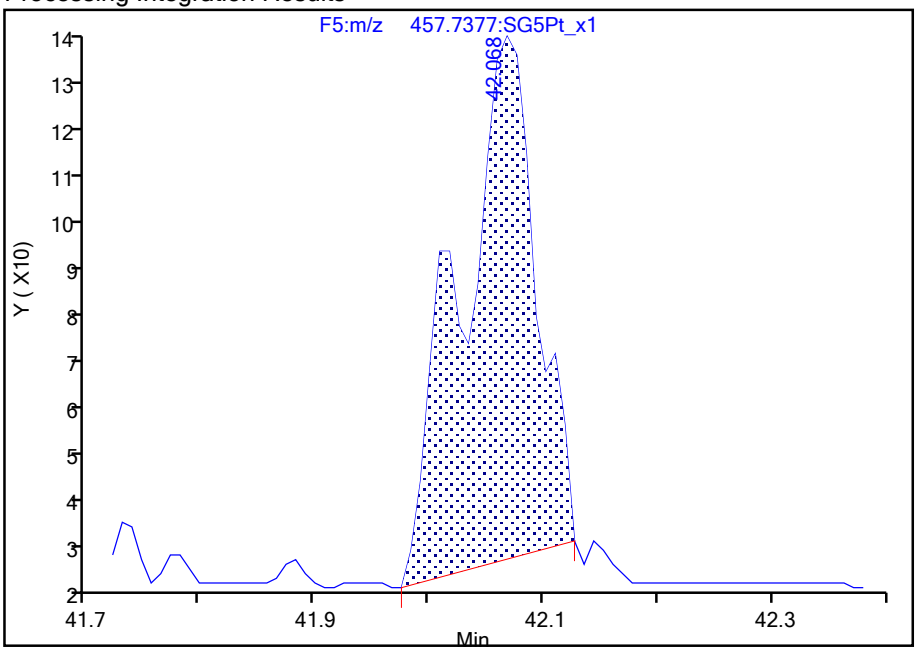

Manual Integration Results

RT: 42.07
Area: 569
Amount: 0.605937
Amount Units: pg/ul

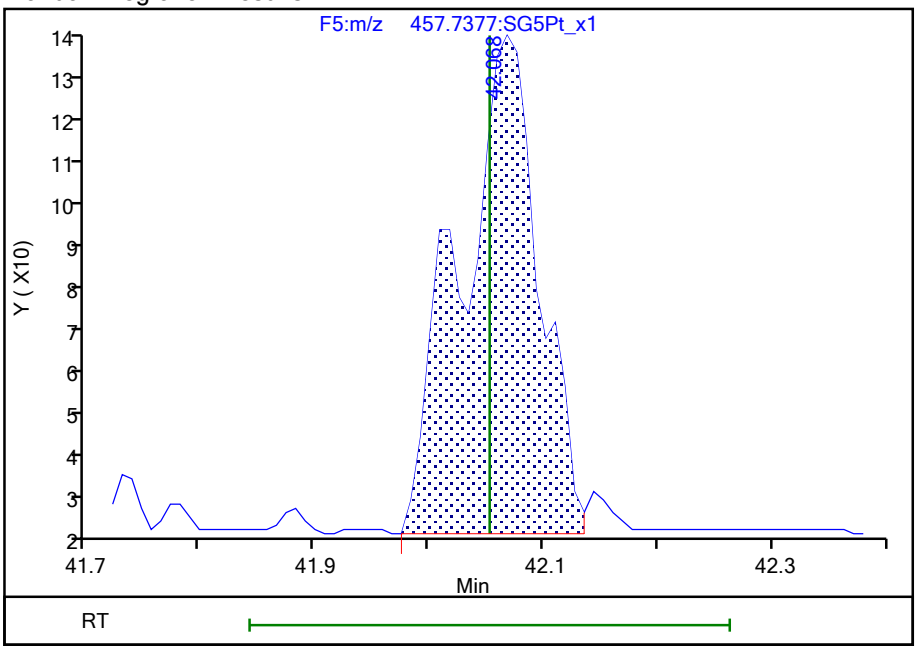

Reviewer: dadunj, 23-Aug-2021 08:55:45

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

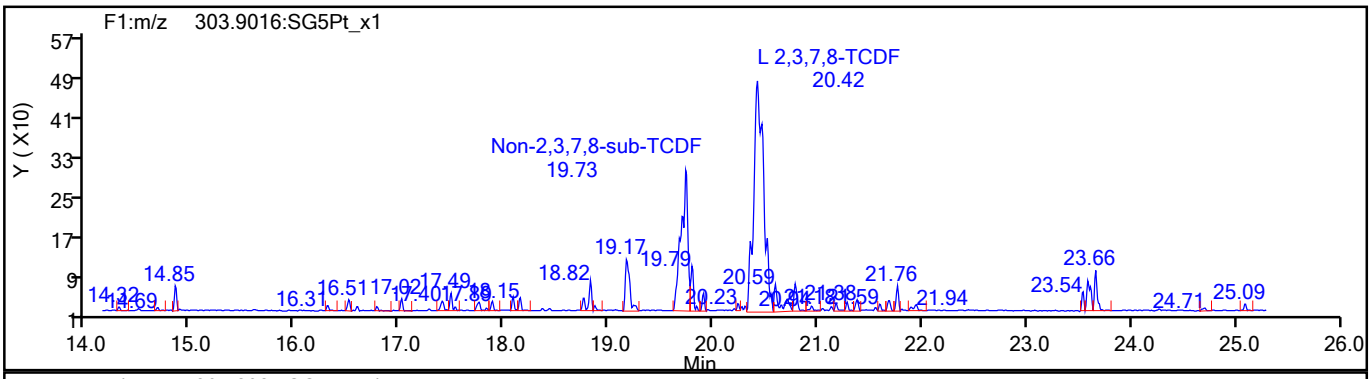

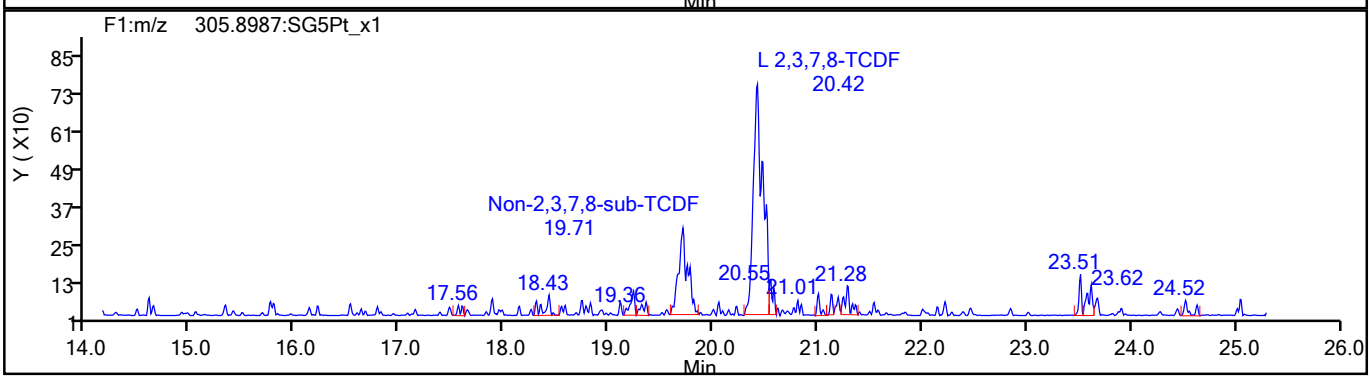

TCDF Standards

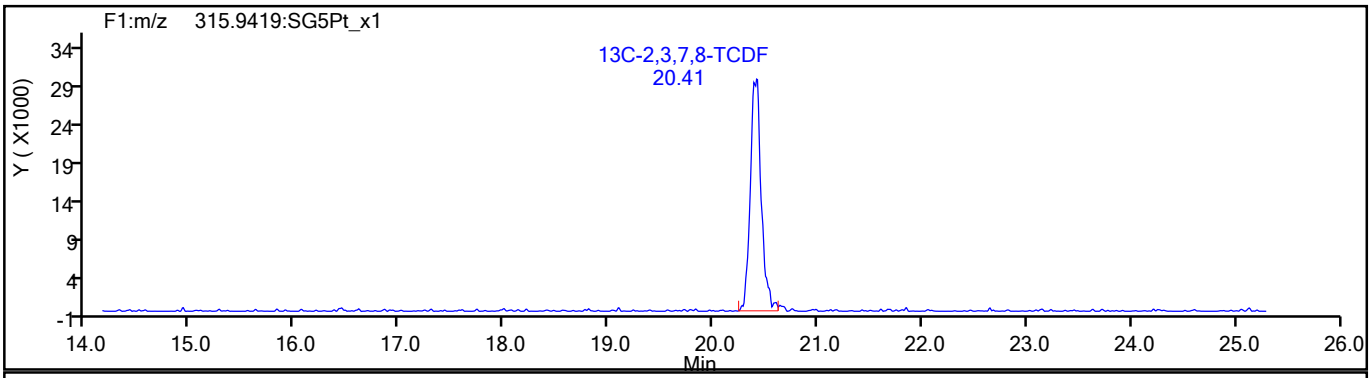

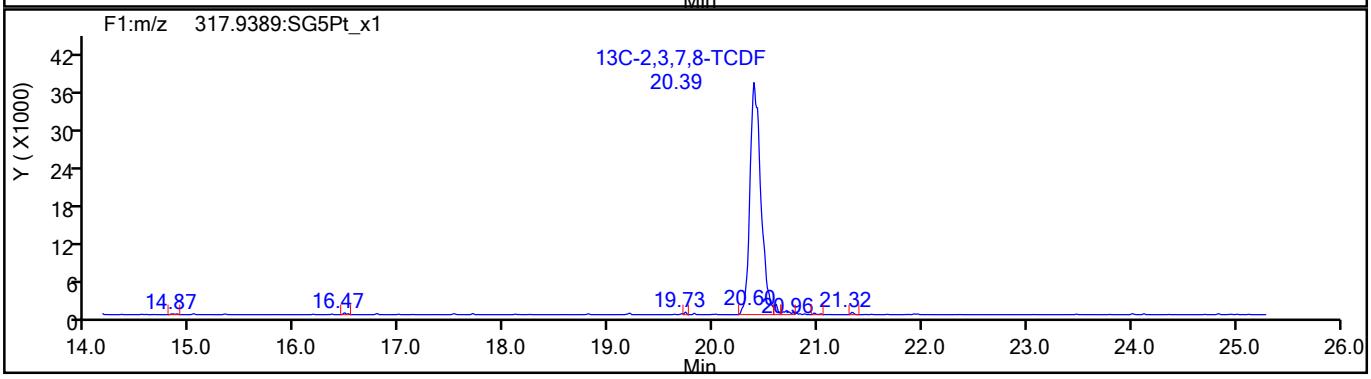

790446

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

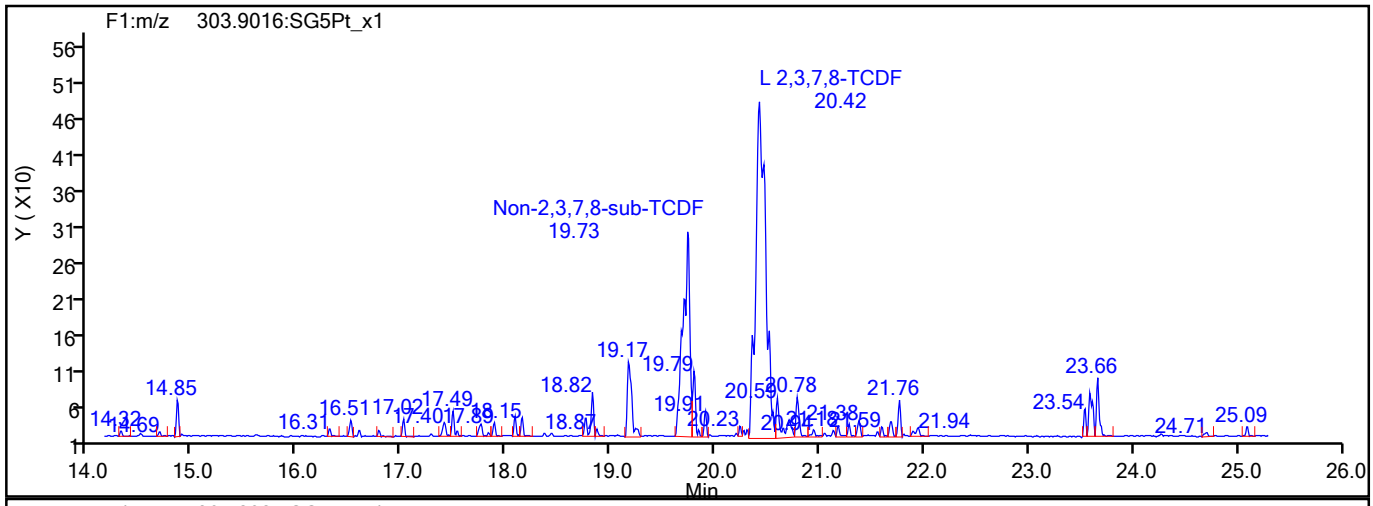

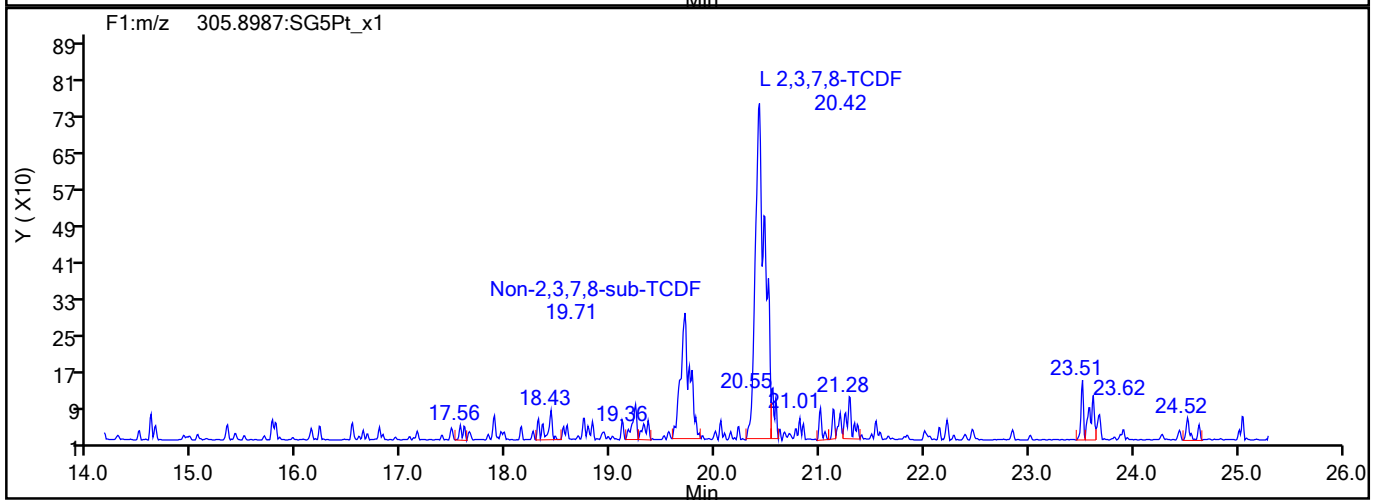

TCDF Interference Mass

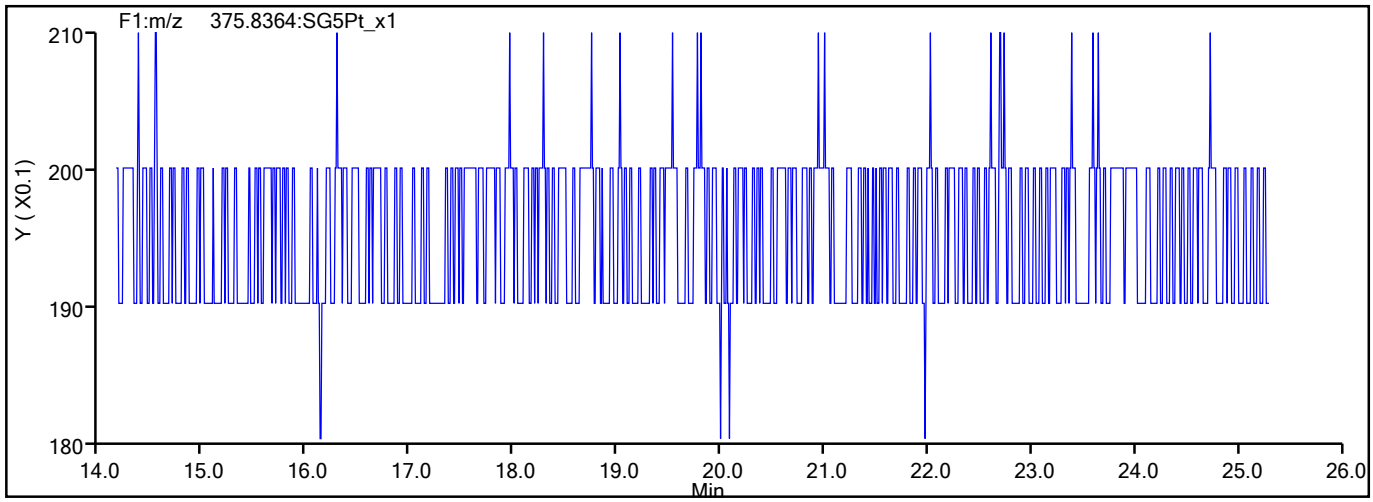

790447

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

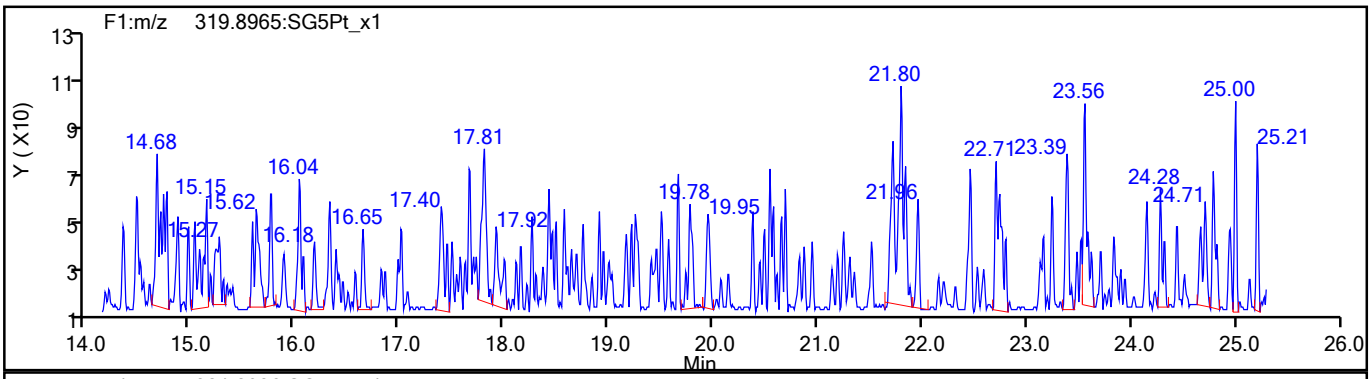

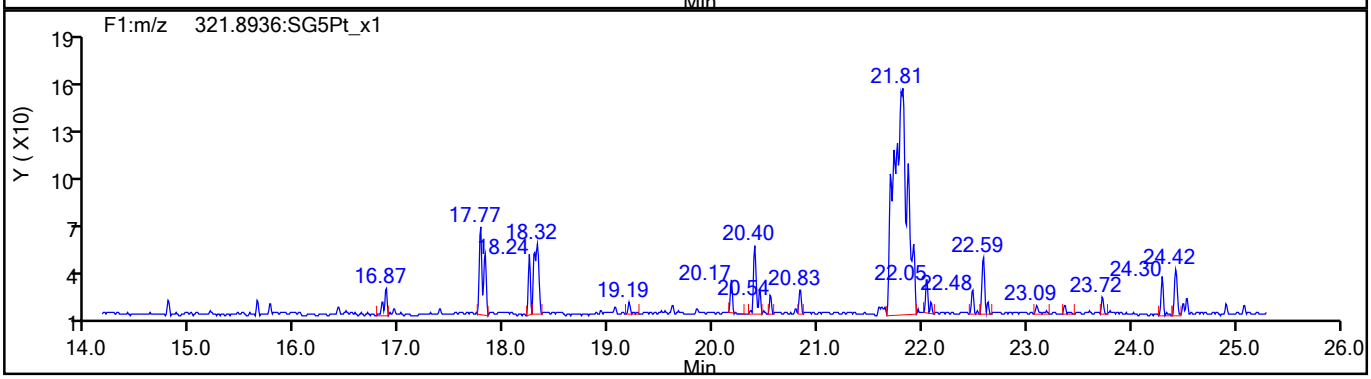

TCDD Standards

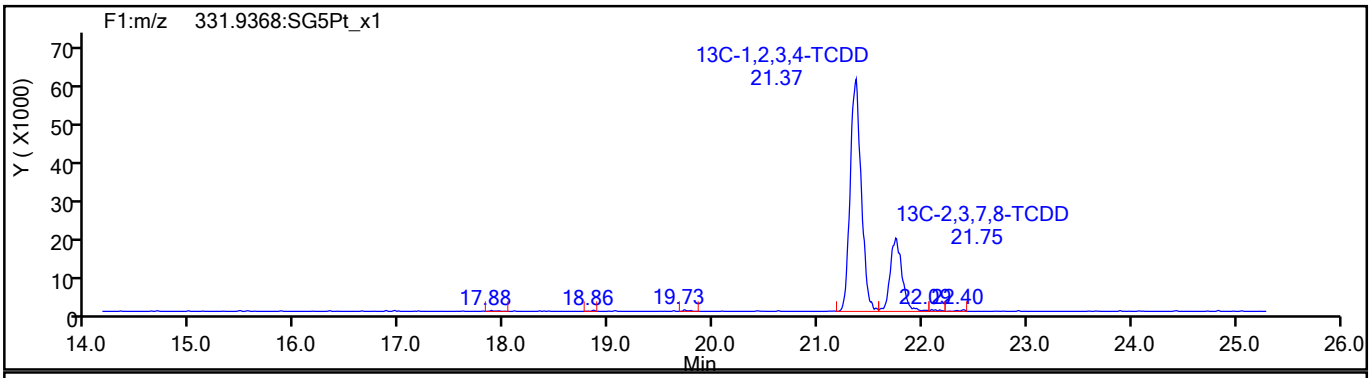

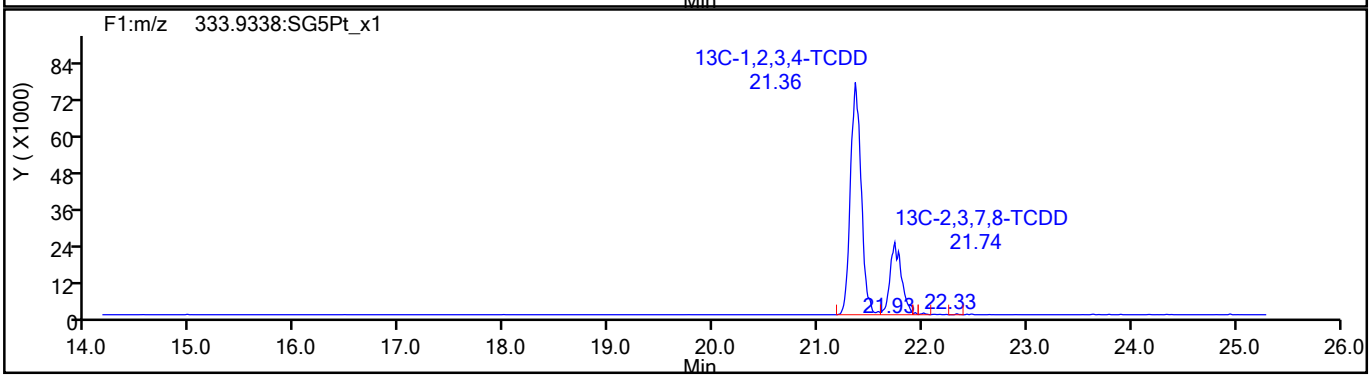

790448

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

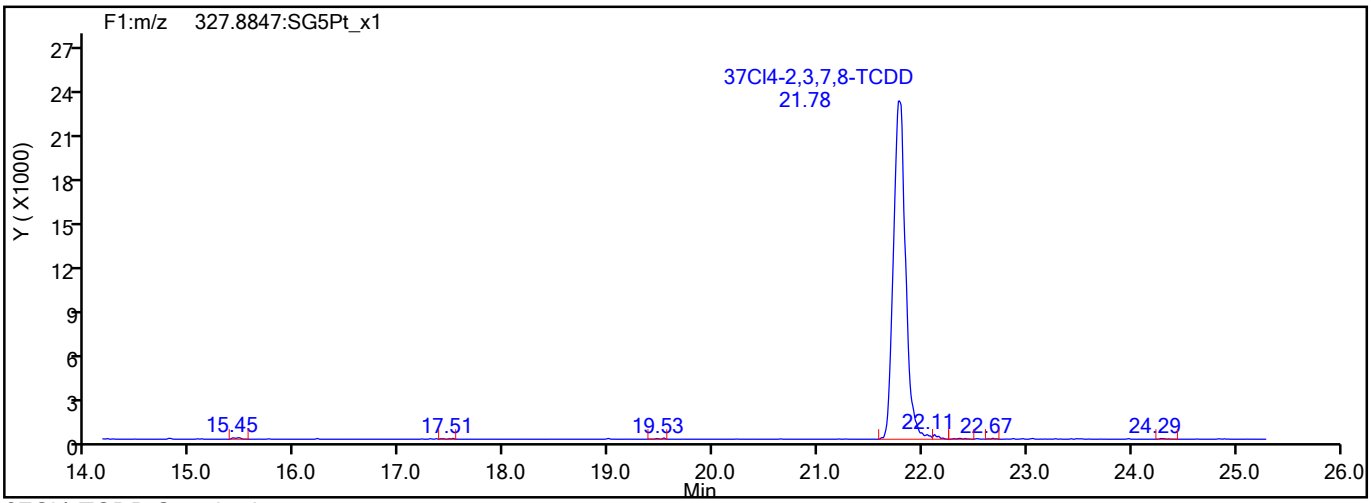

37Cl4-TCDD Standards

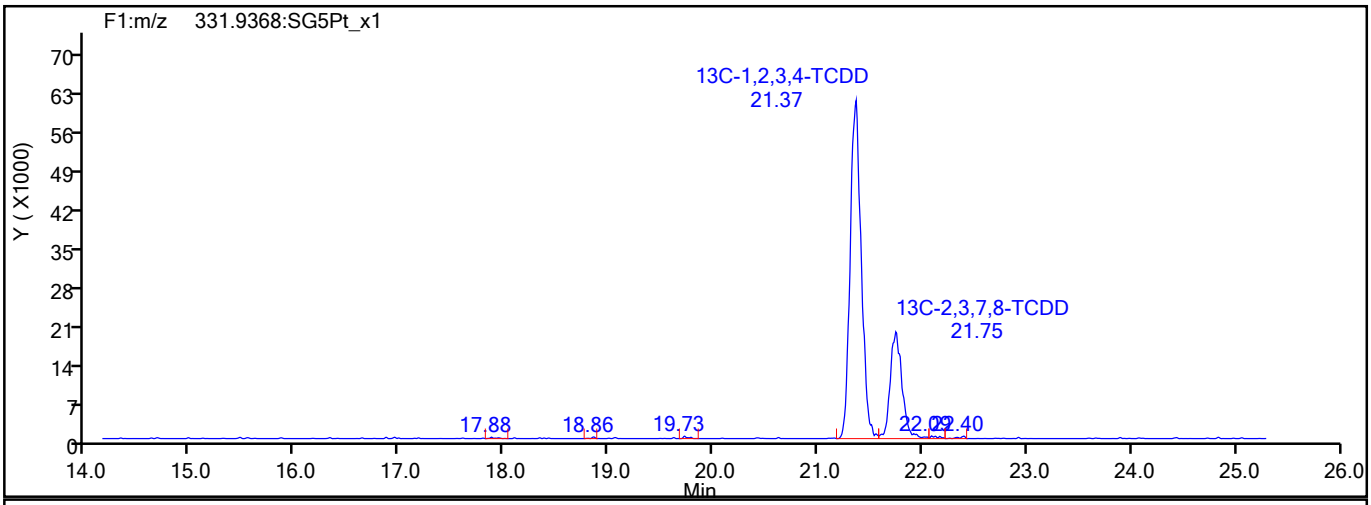

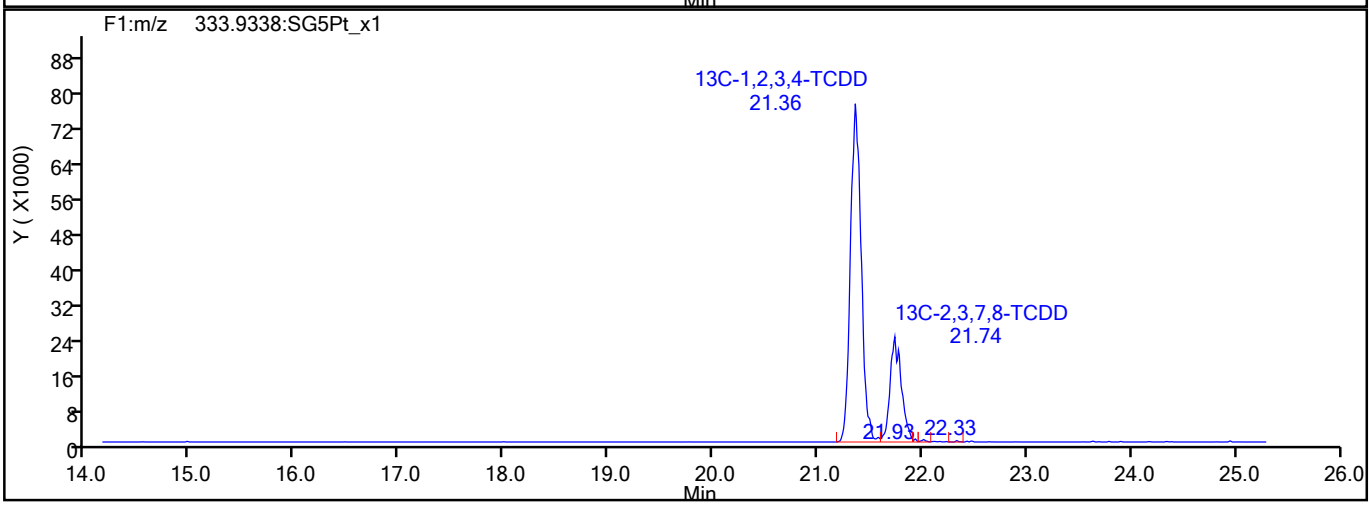

790449

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

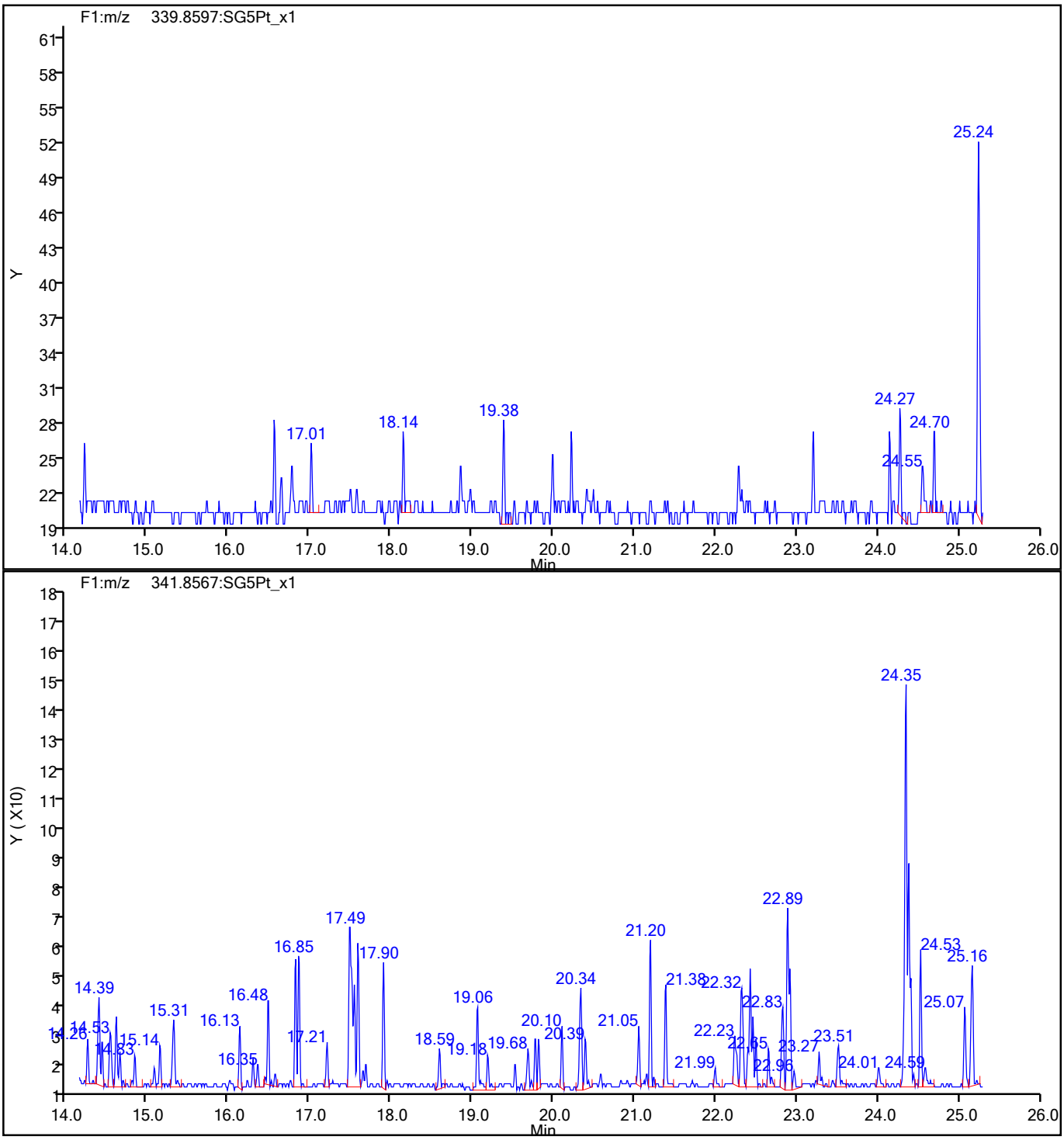

790450

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

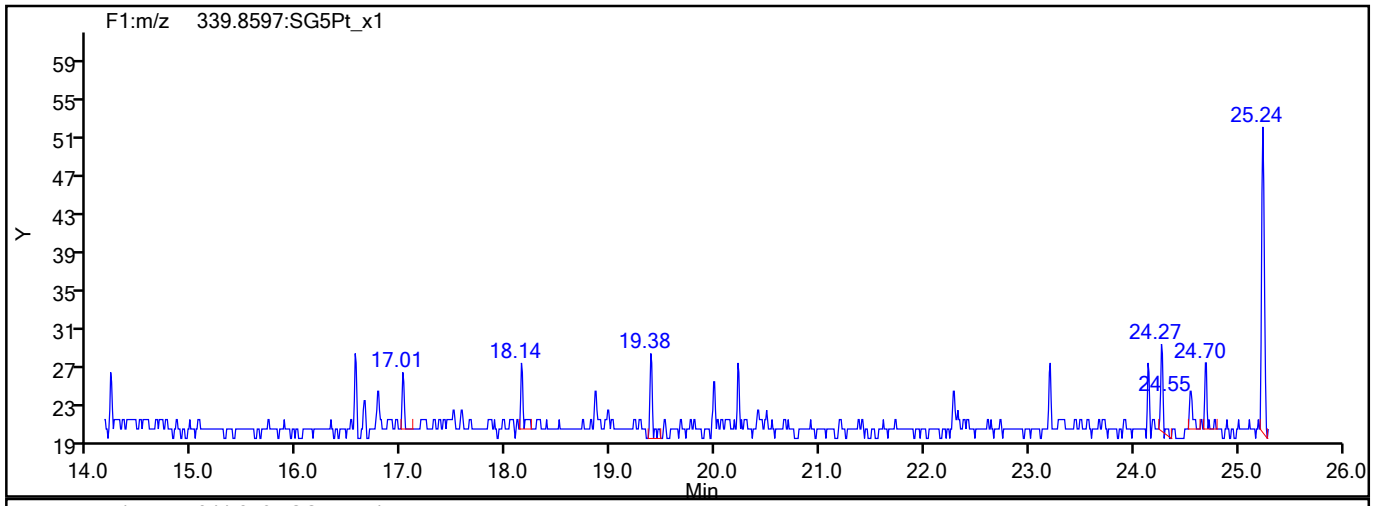

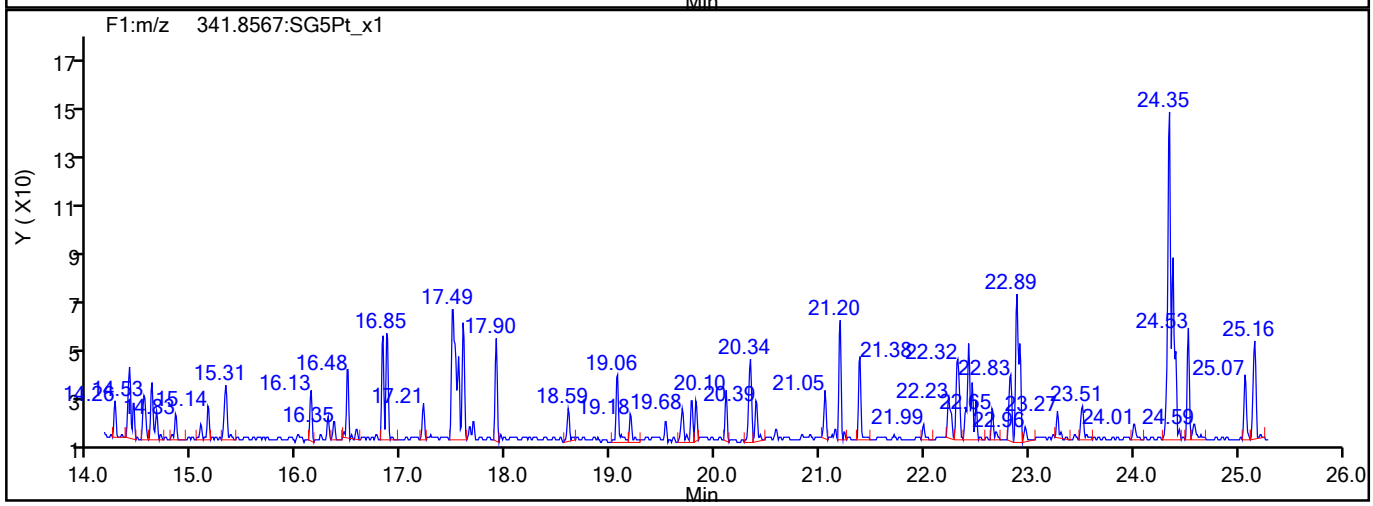

F1 PeCDFs Interference Mass

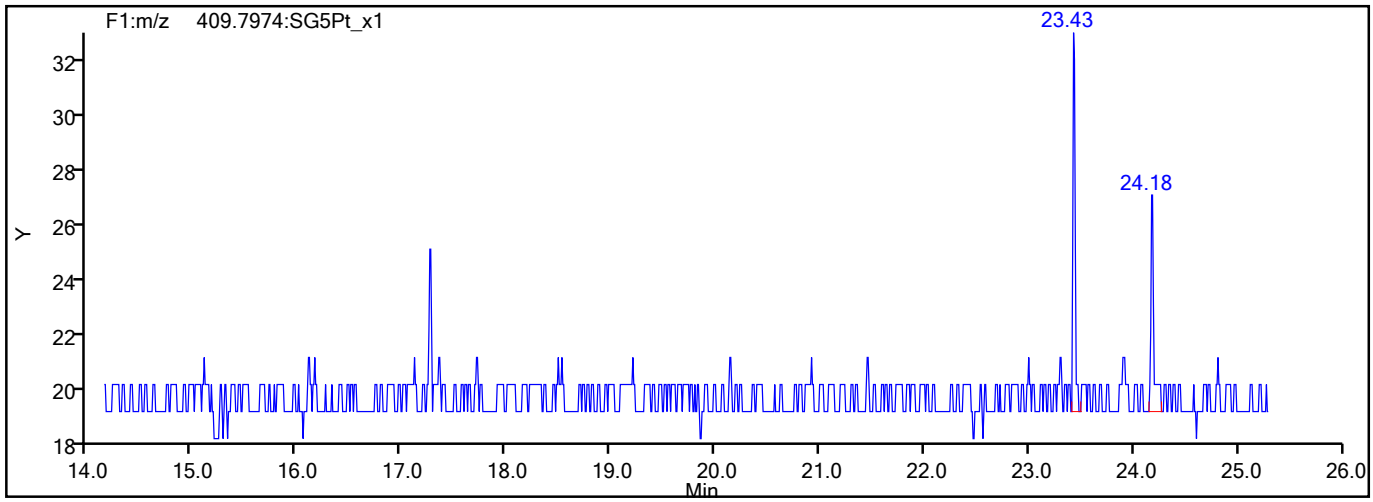

790451

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

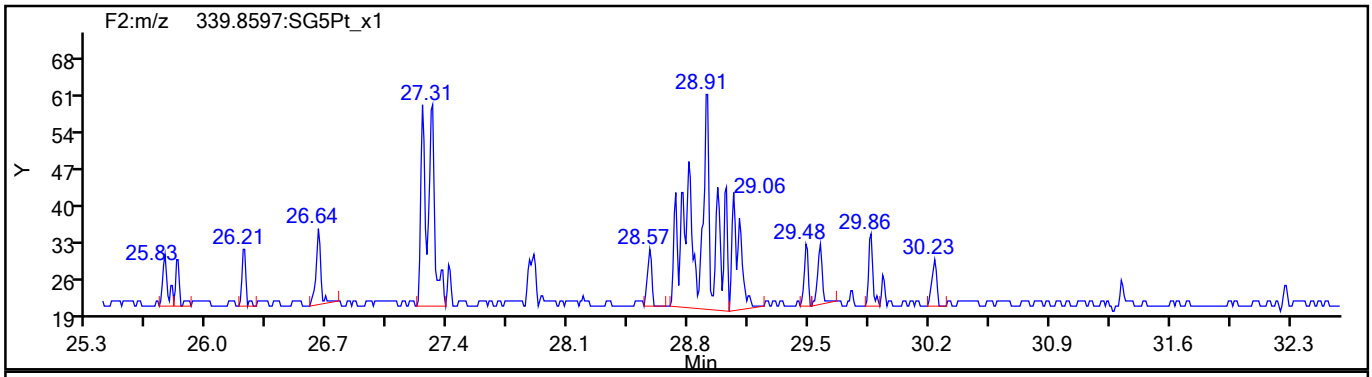

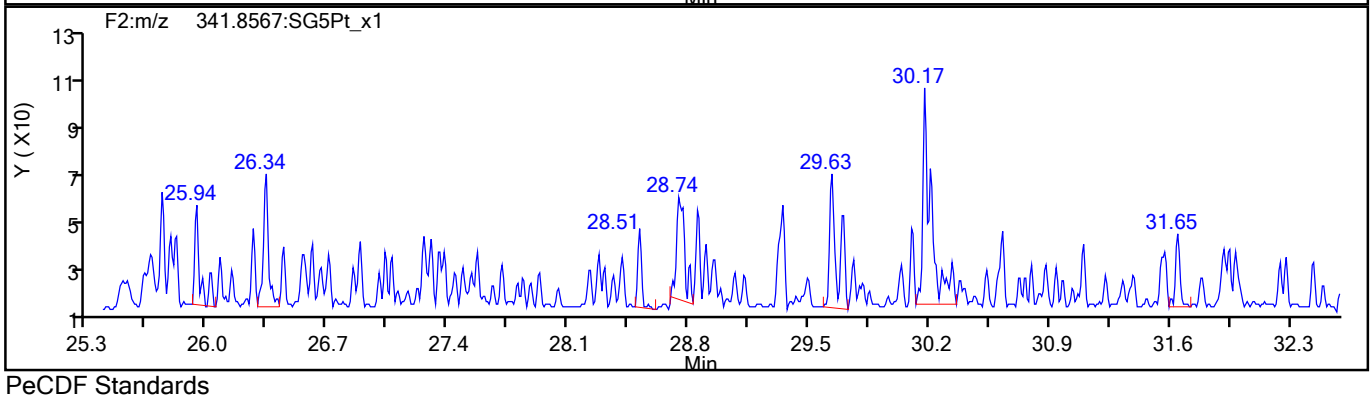

PeCDF Standards

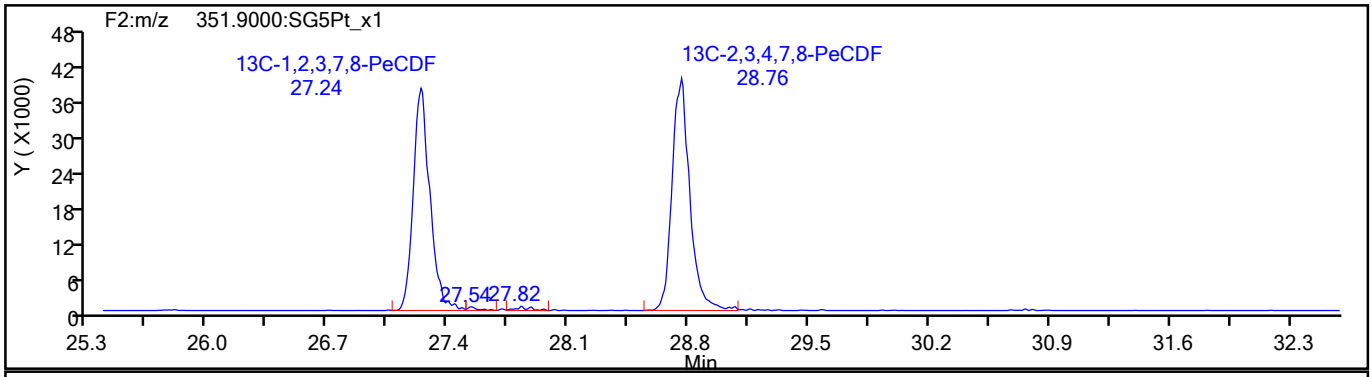

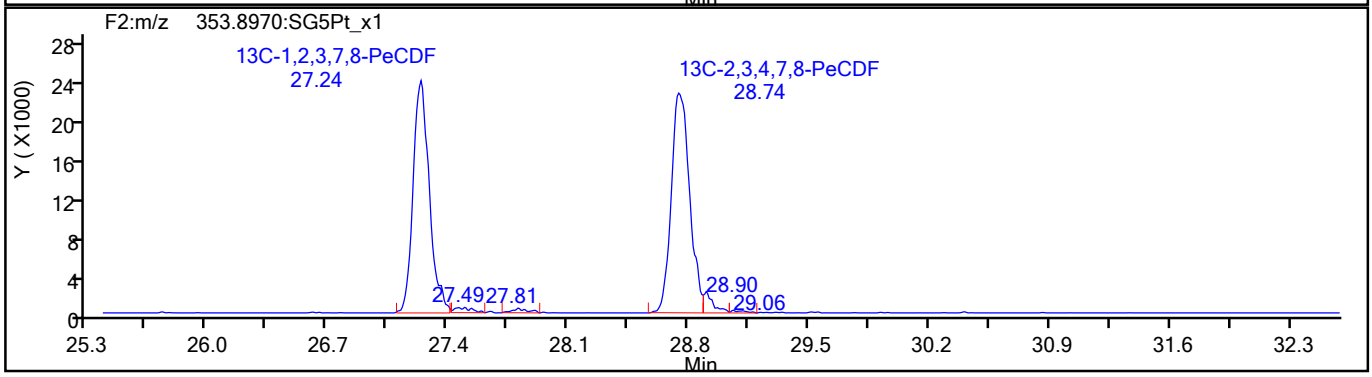

790452

Report Date: 23-Aug-2021 08:56:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

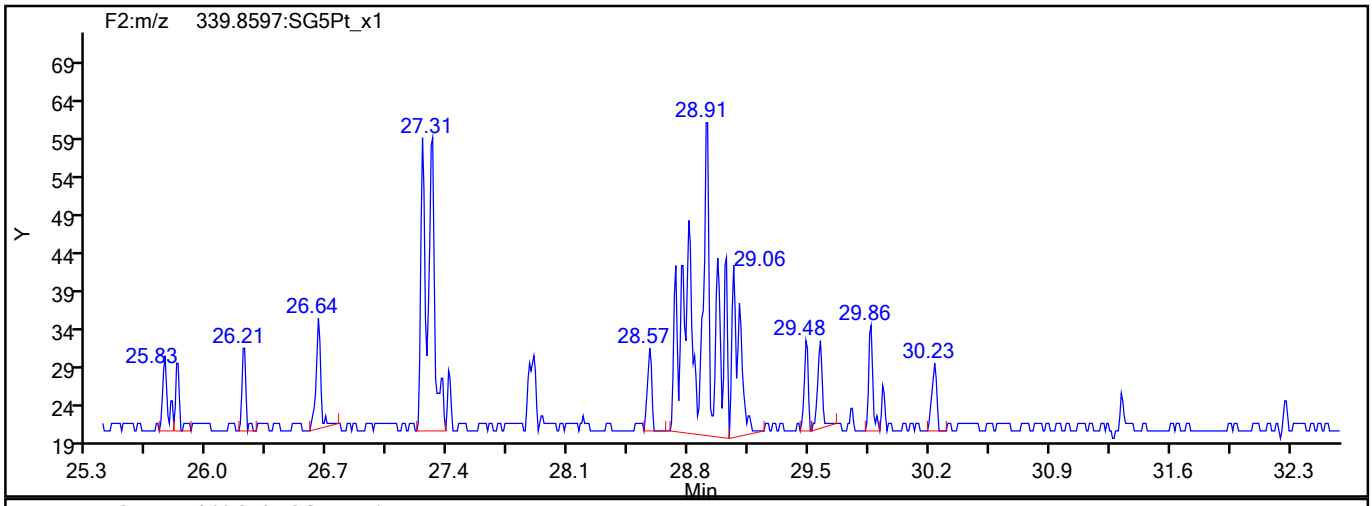

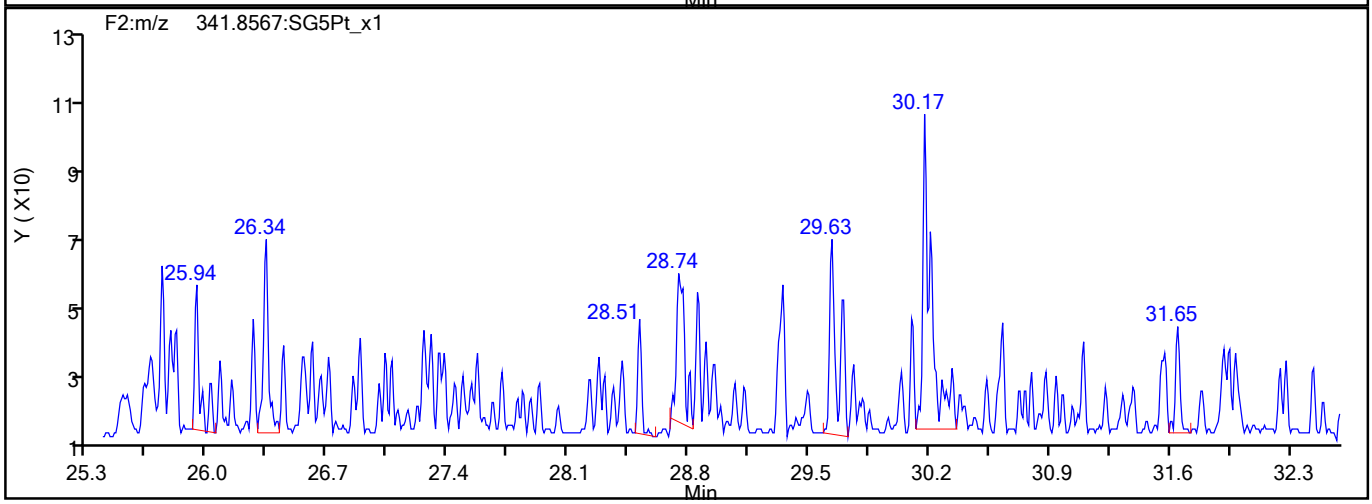

PeCDF Interference Mass

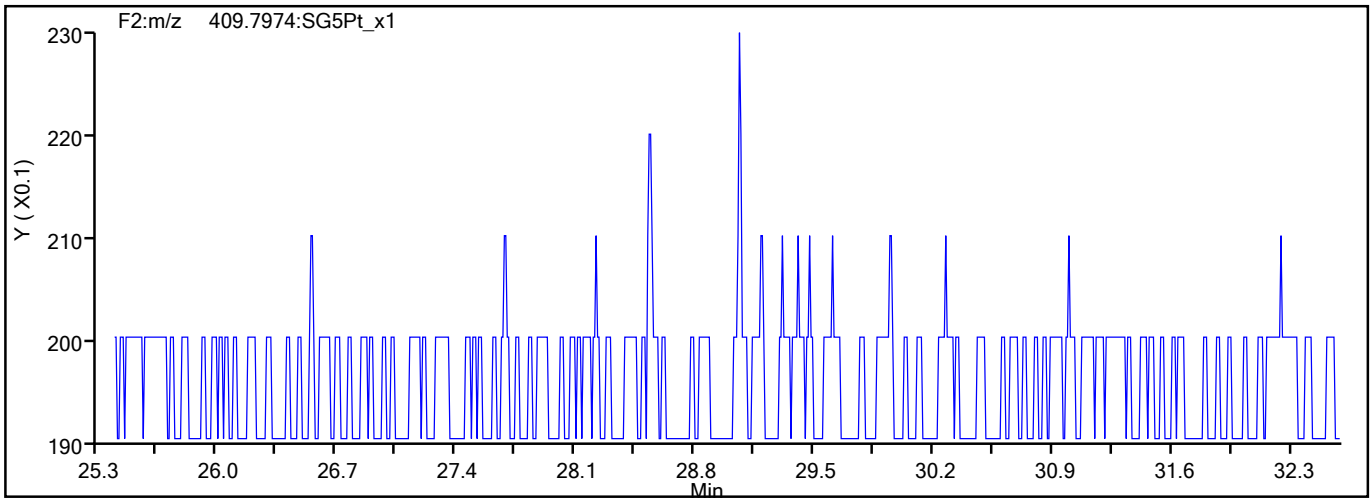

790453

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

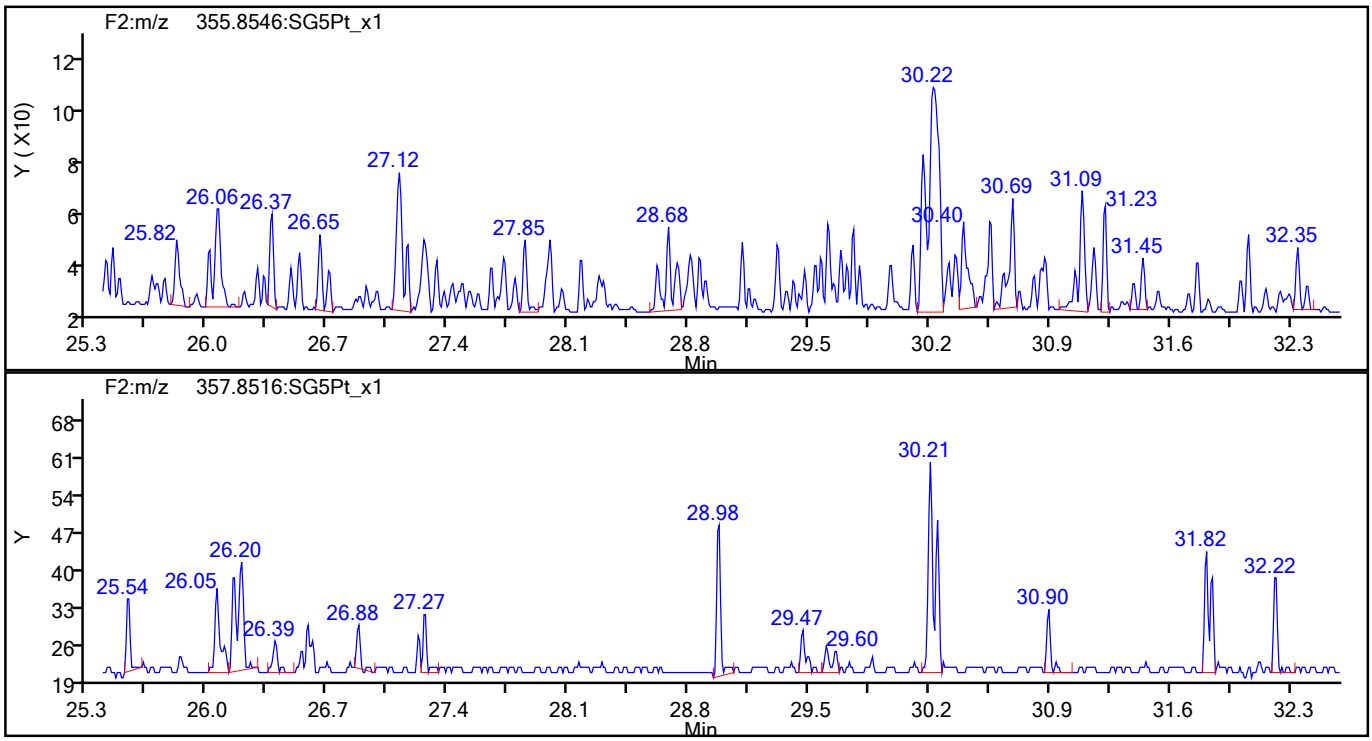

PeCDD Standards

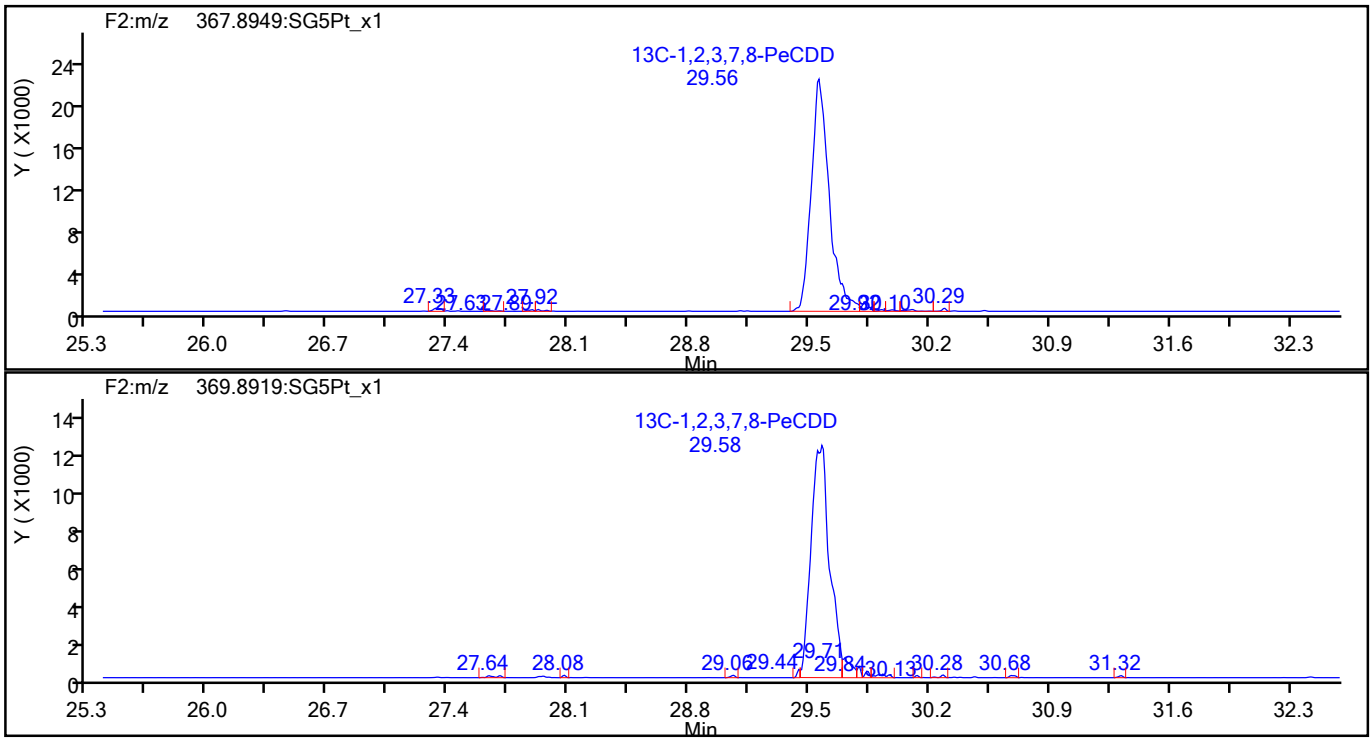

790454

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDF

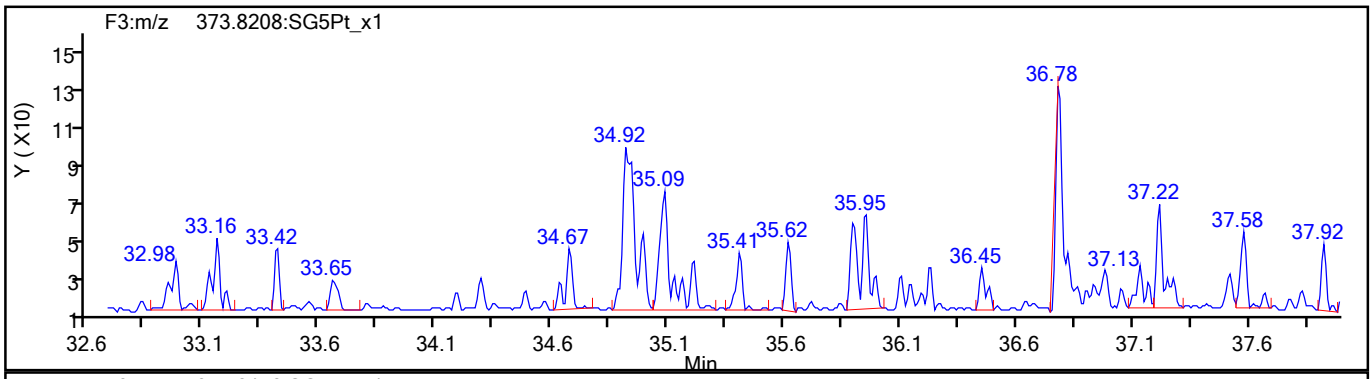

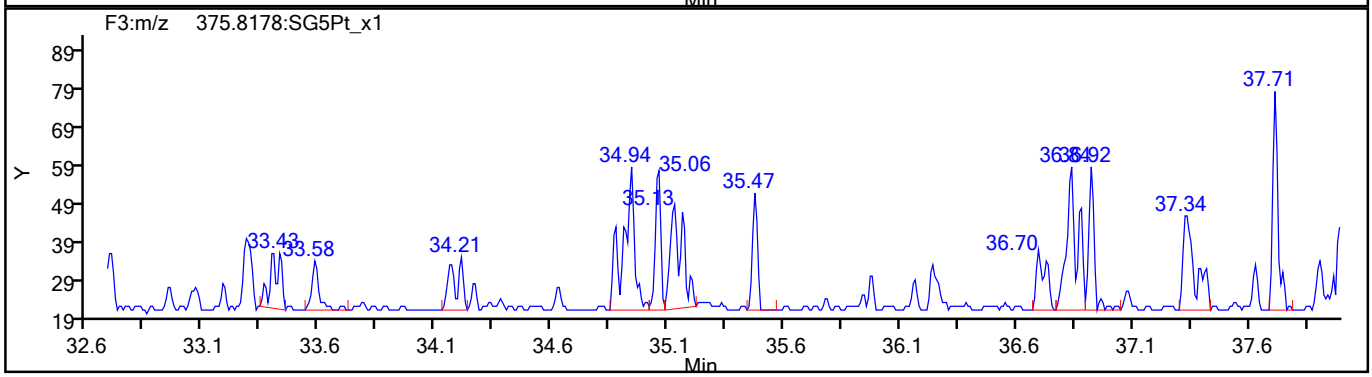

HxCDF Standards

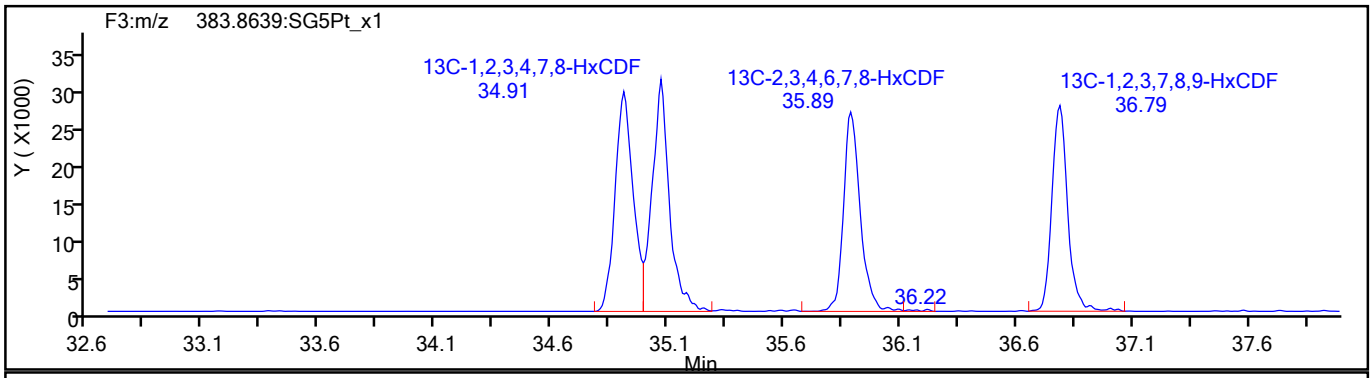

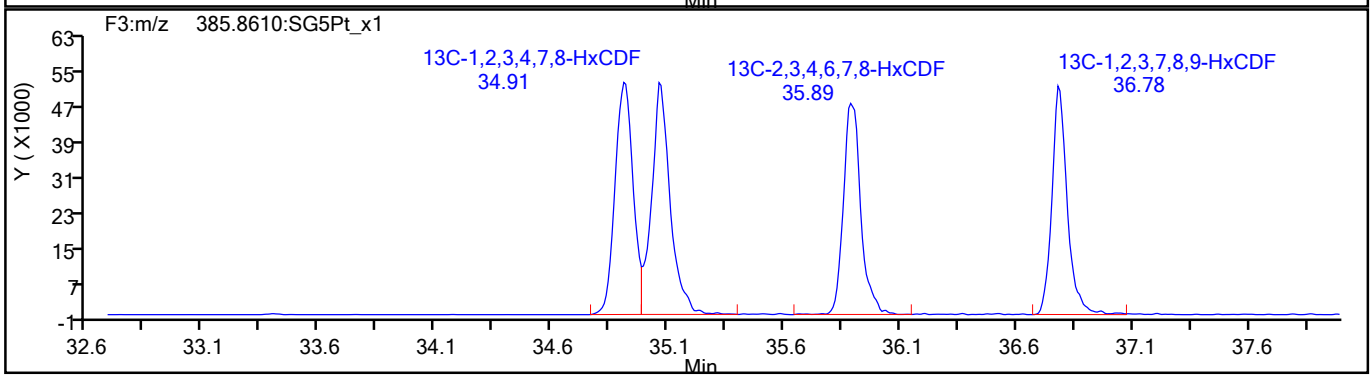

790455

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

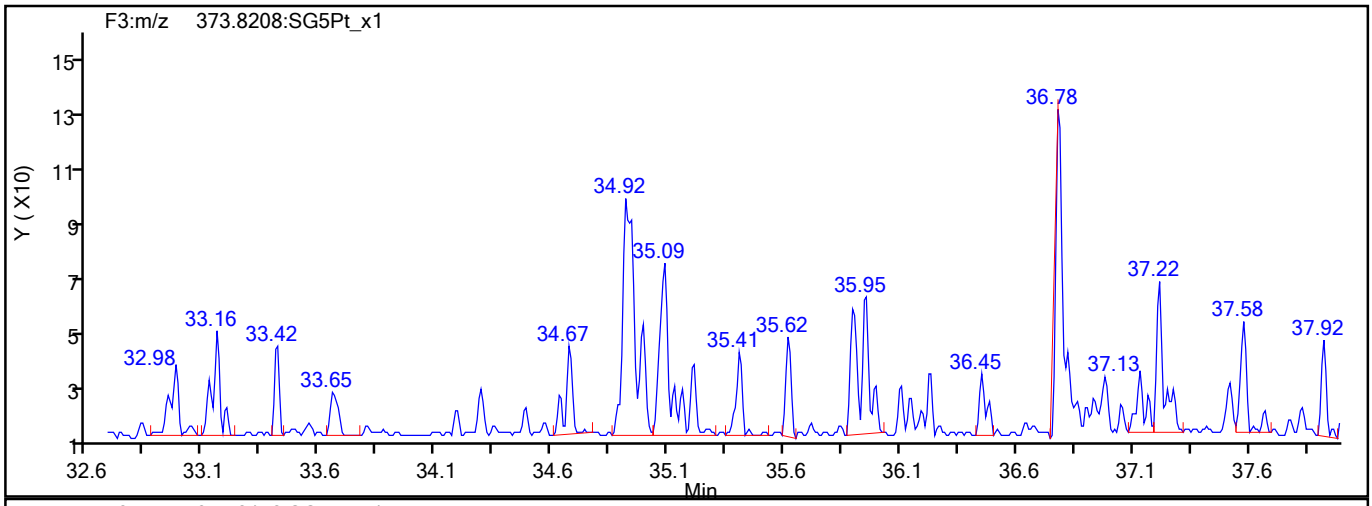

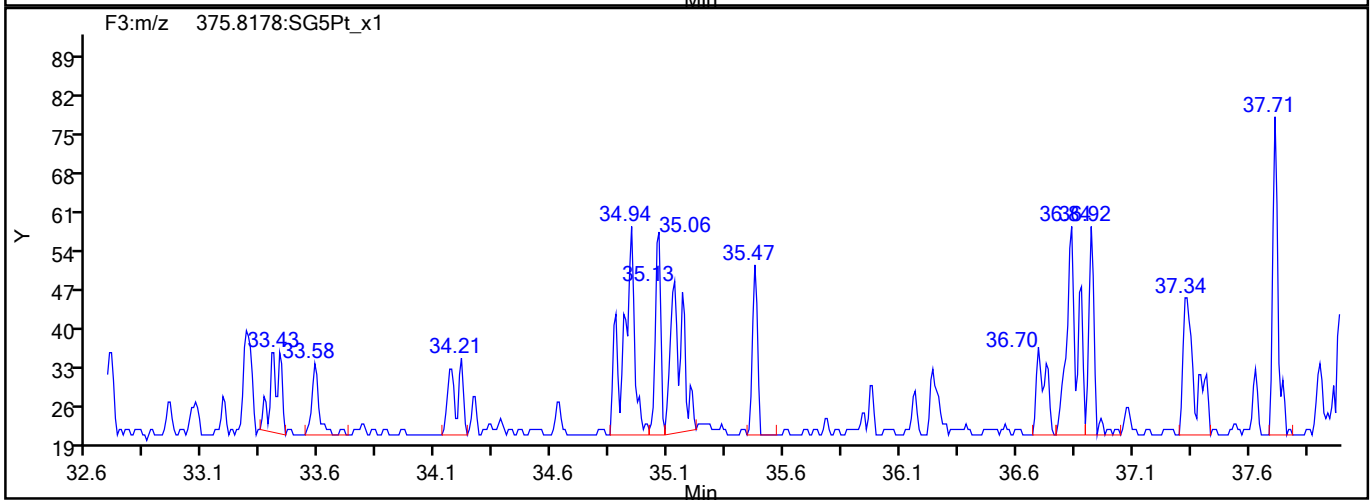

HxCDF Interference Mass

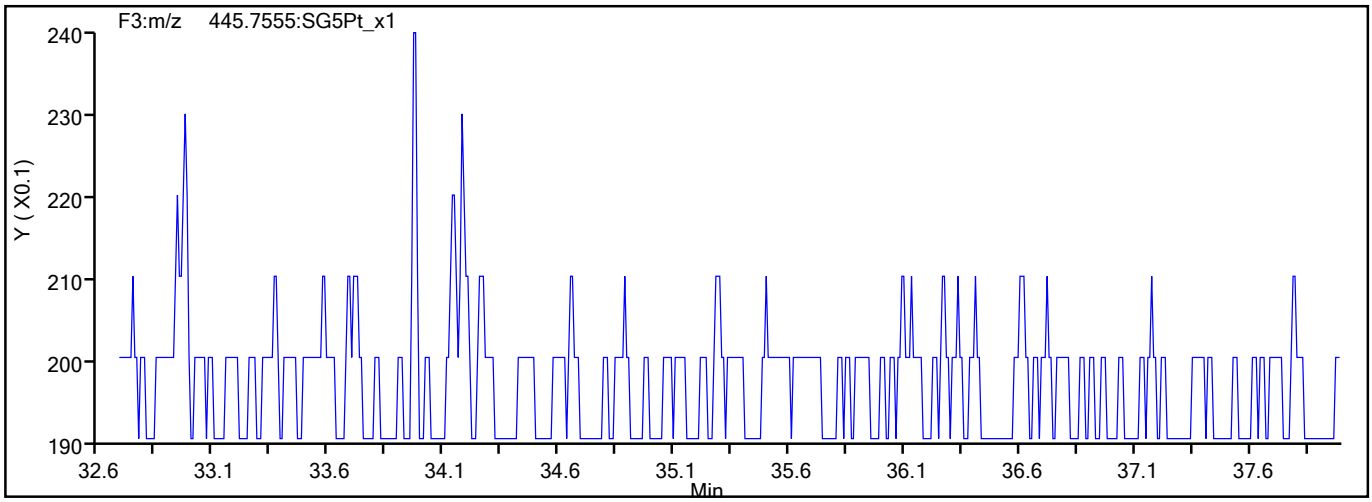

790456

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

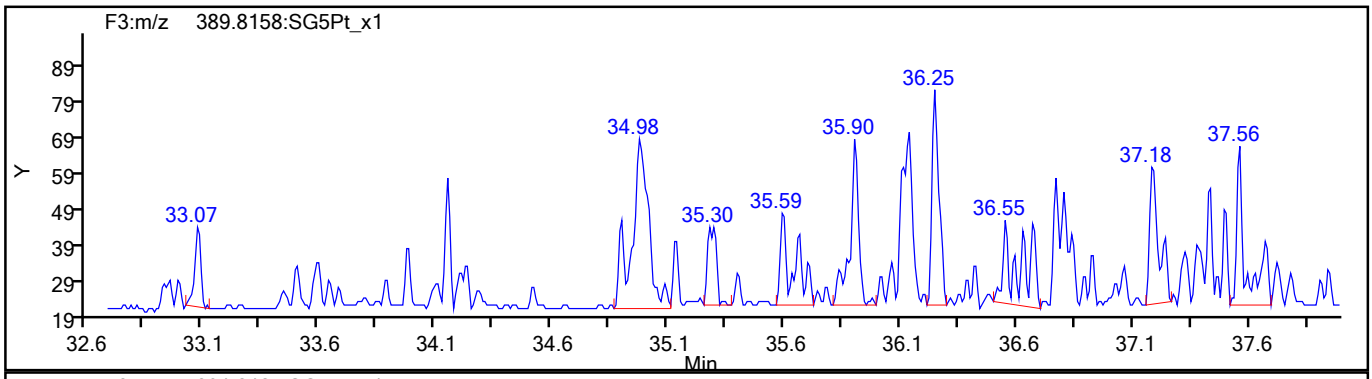

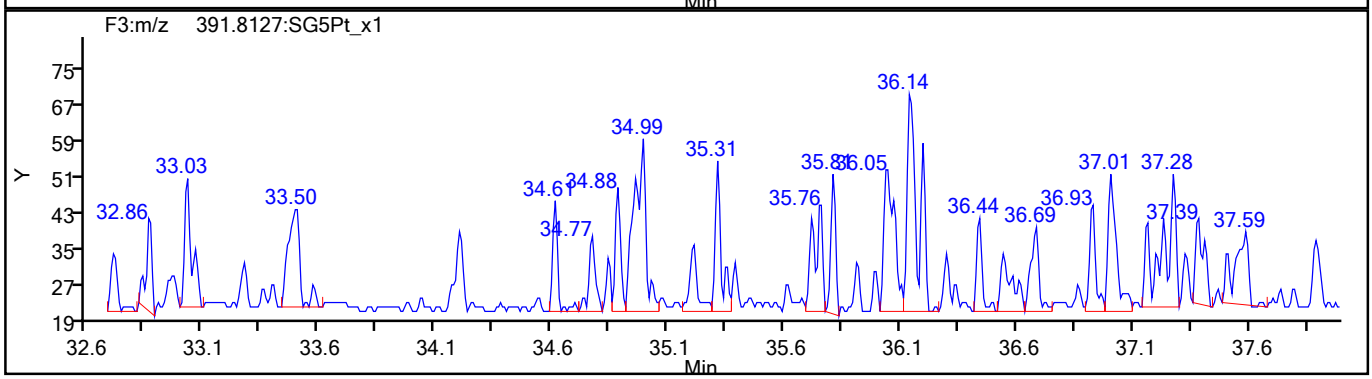

HxCDD Standards

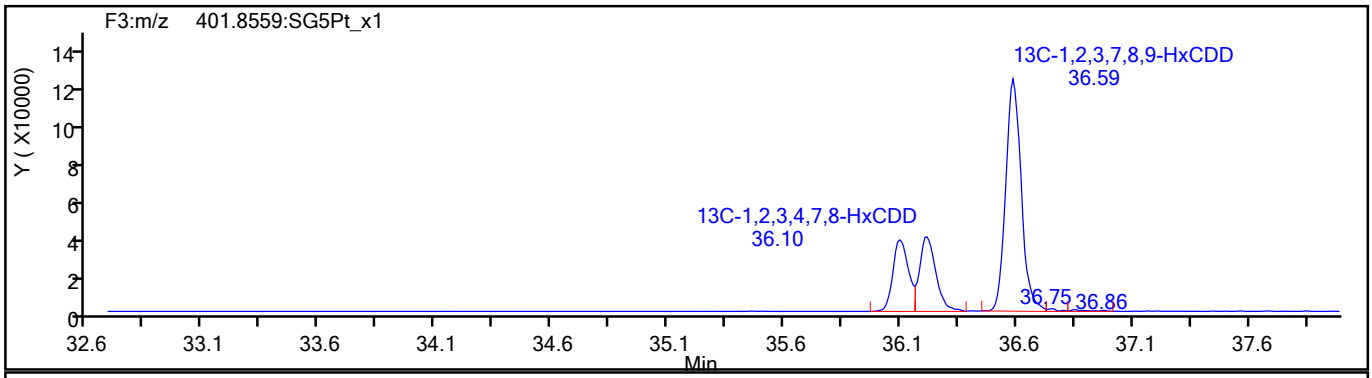

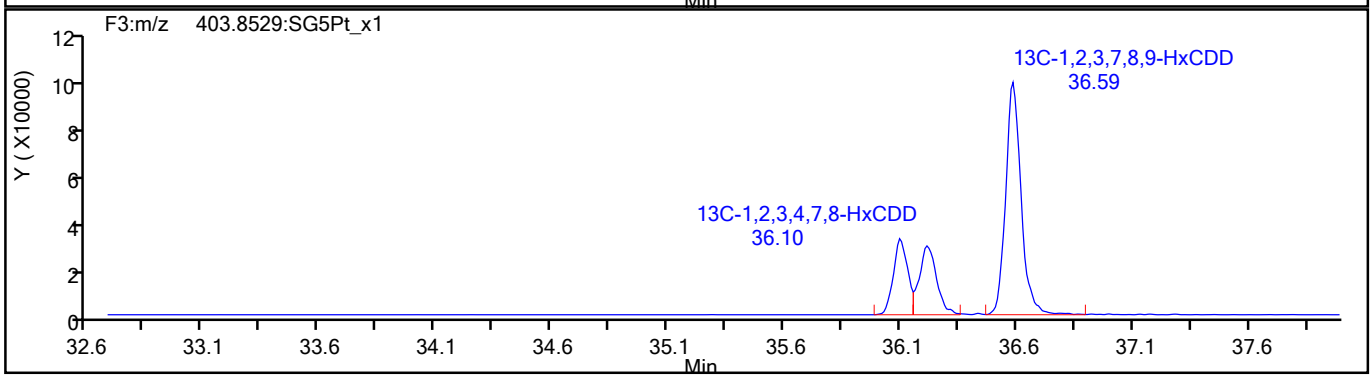

790457

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

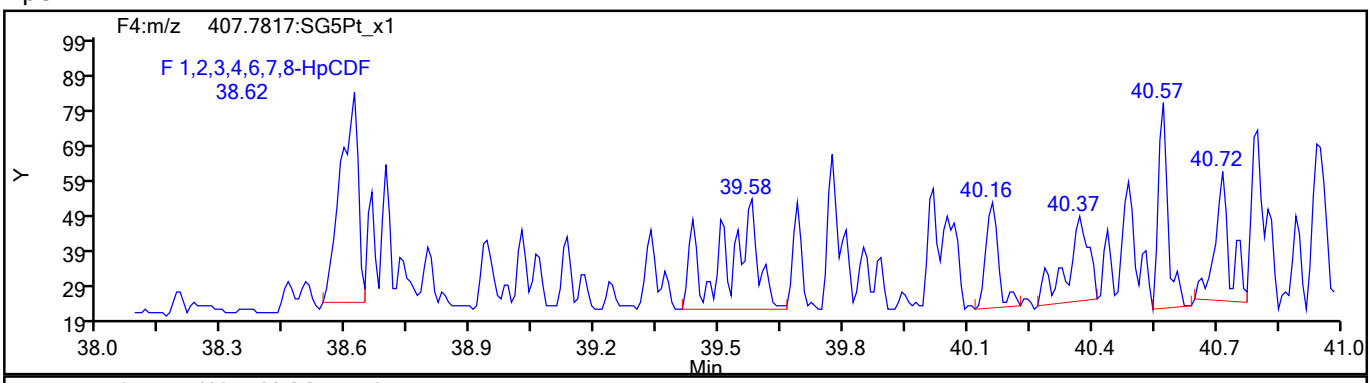

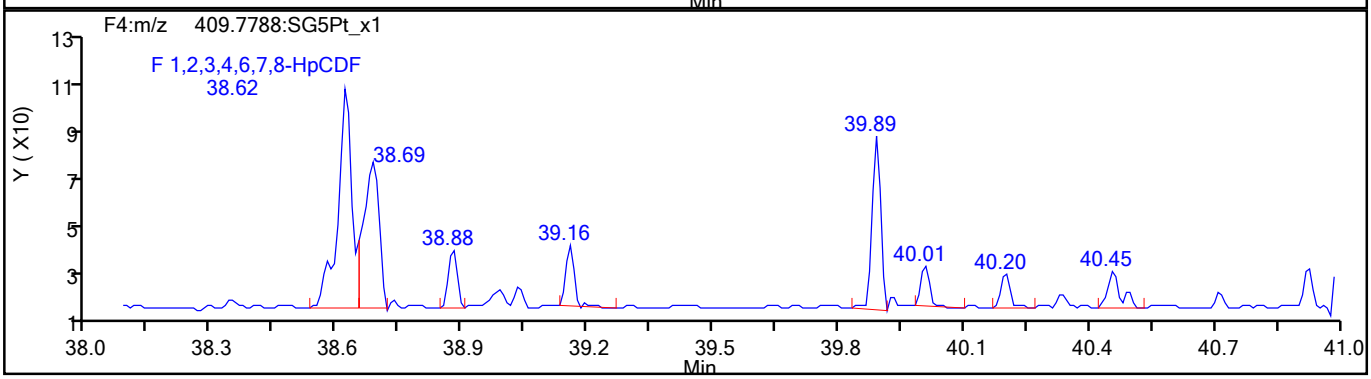

HpCDF Standards

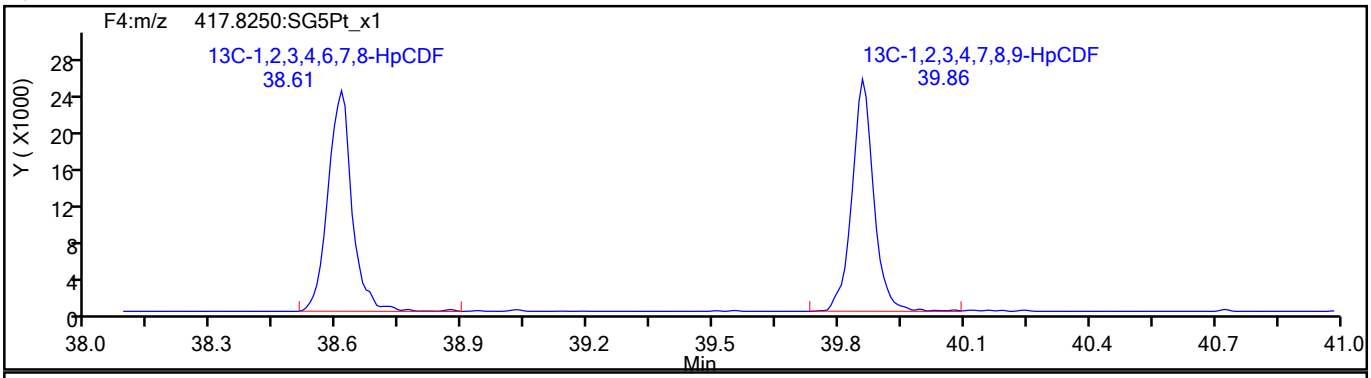

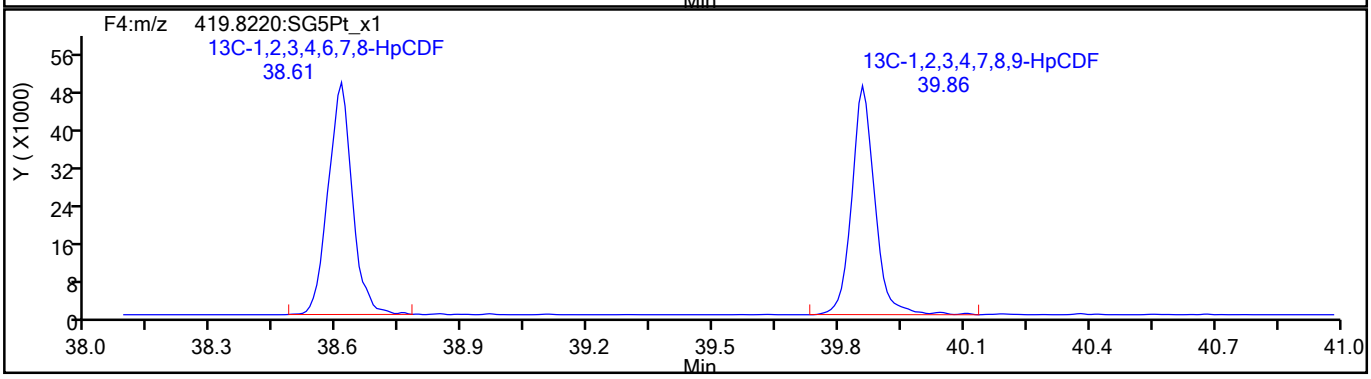

790458

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

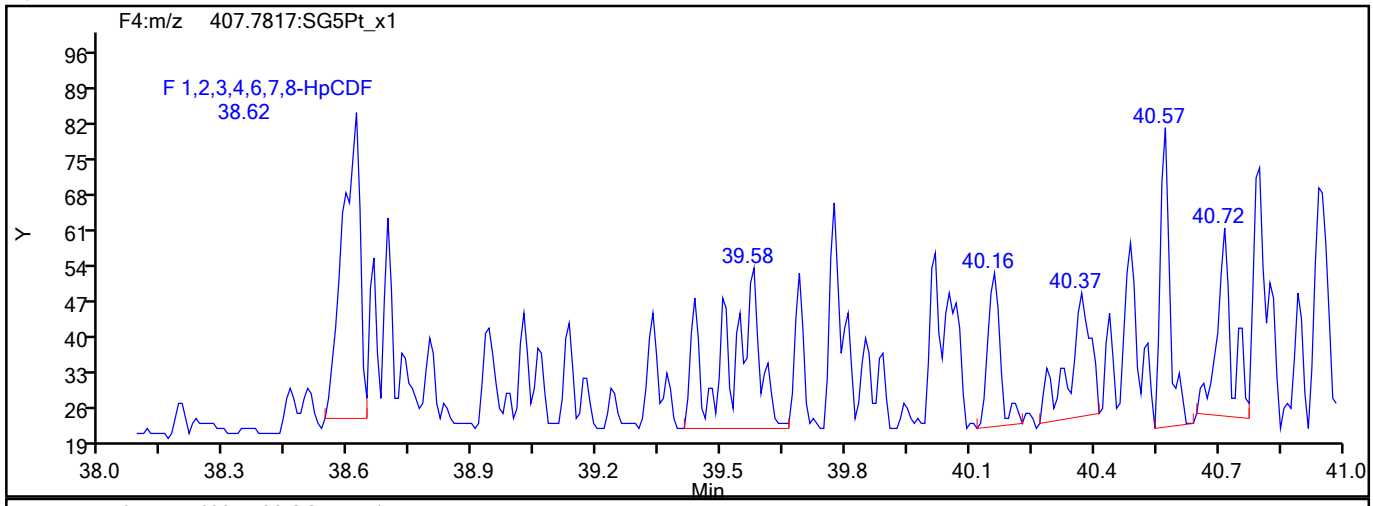

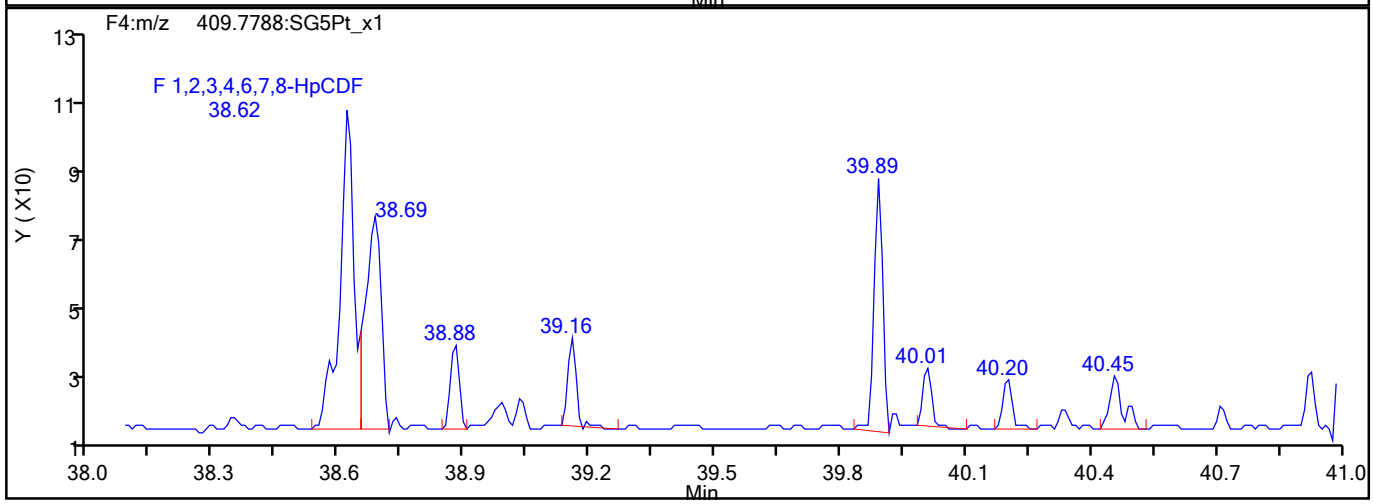

HpCDF Interference Mass

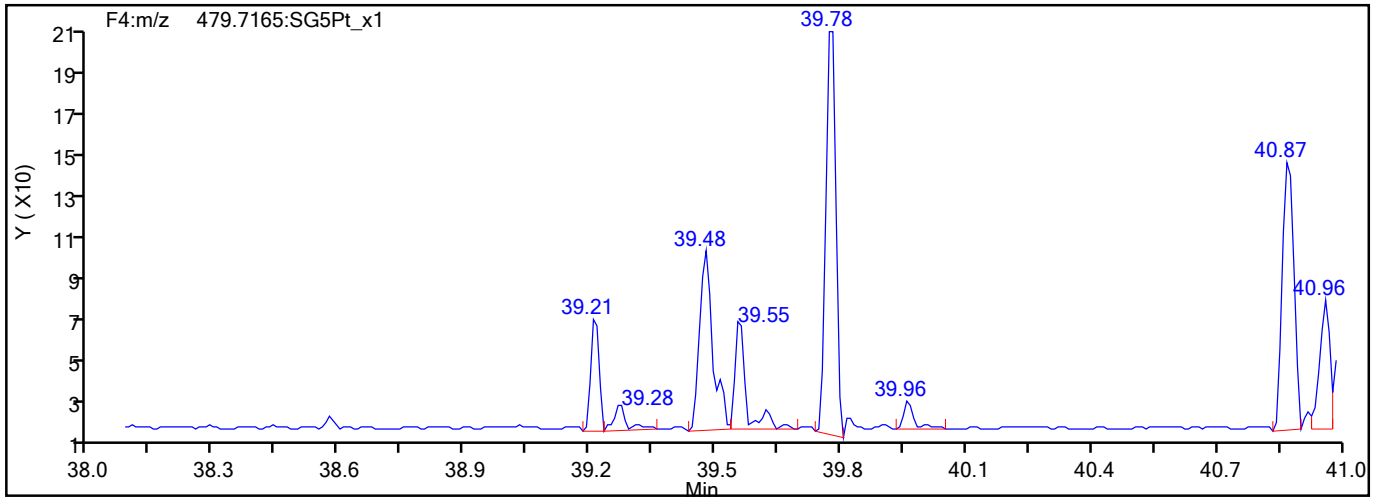

790459

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

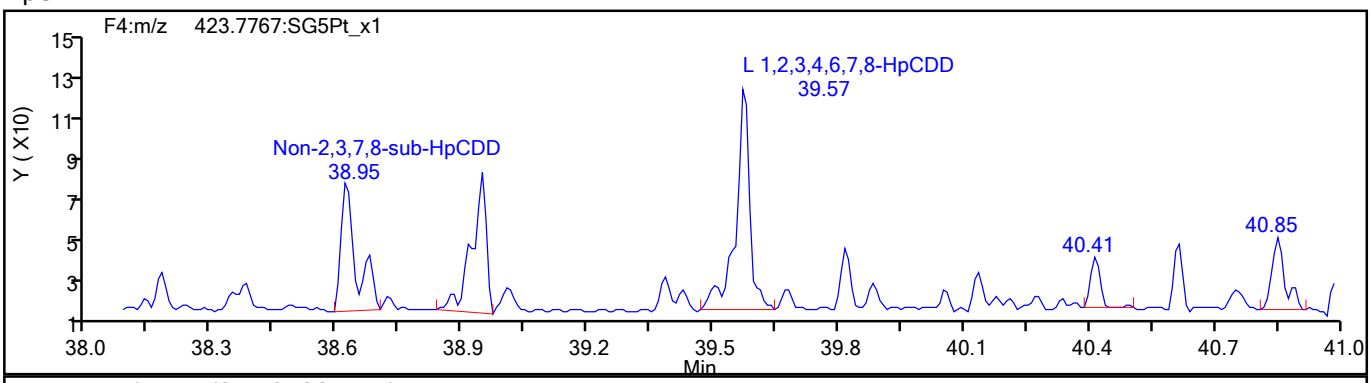

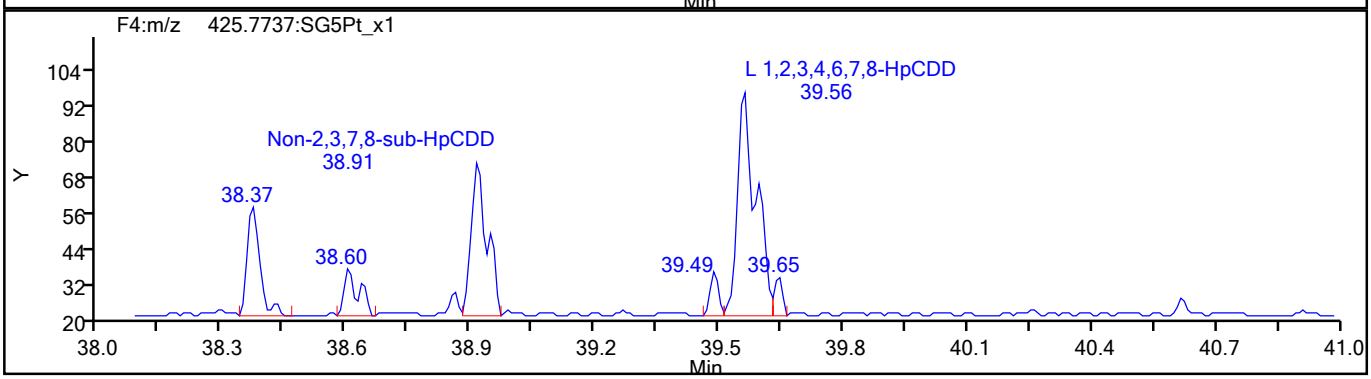

HpCDD Standards

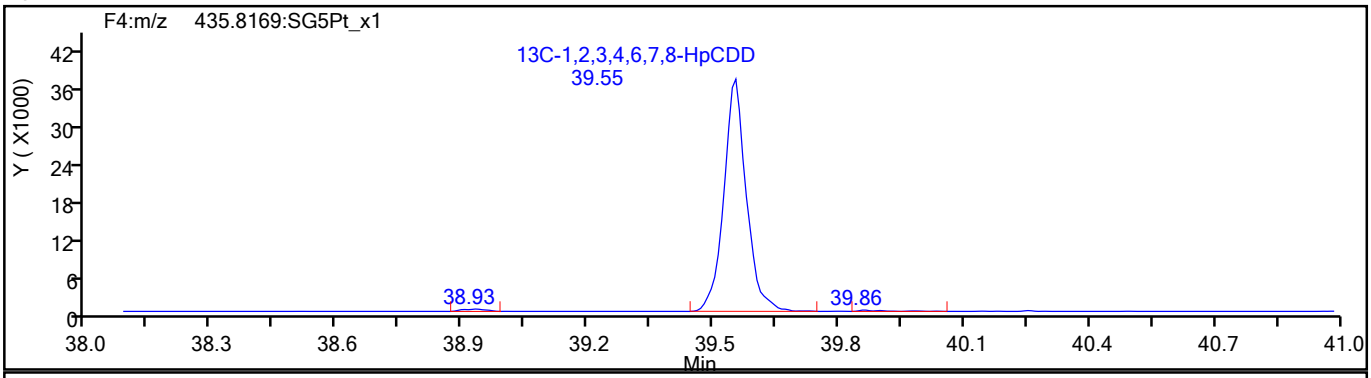

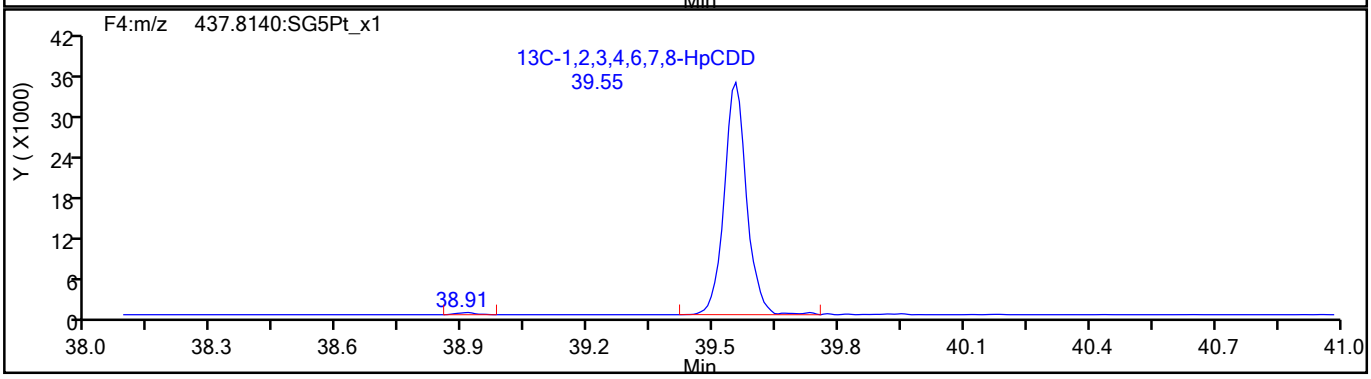

790460

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

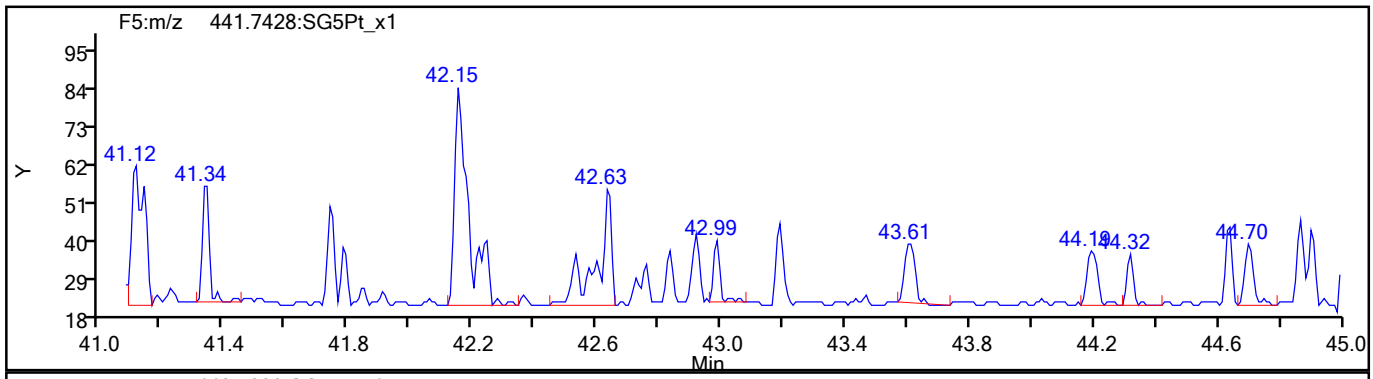

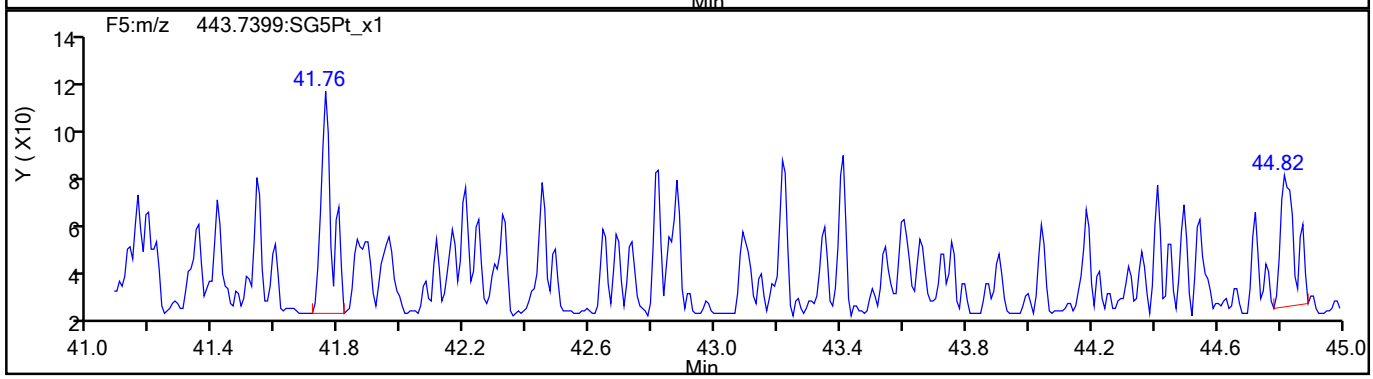

OCDF Standards

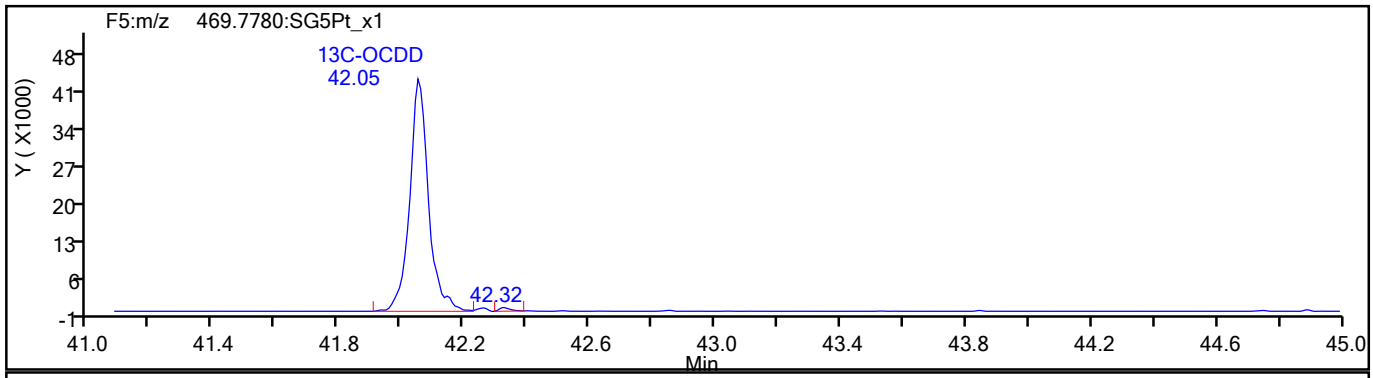

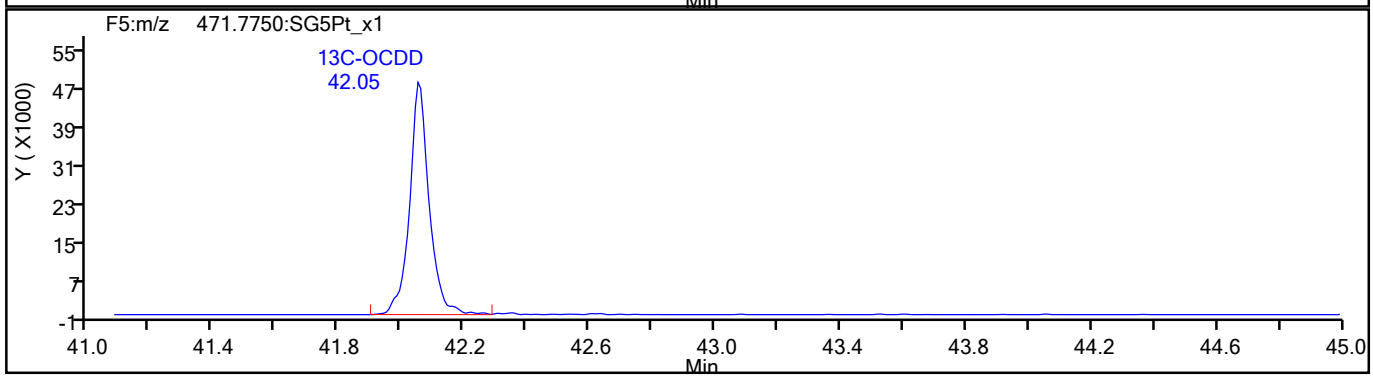

790461

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

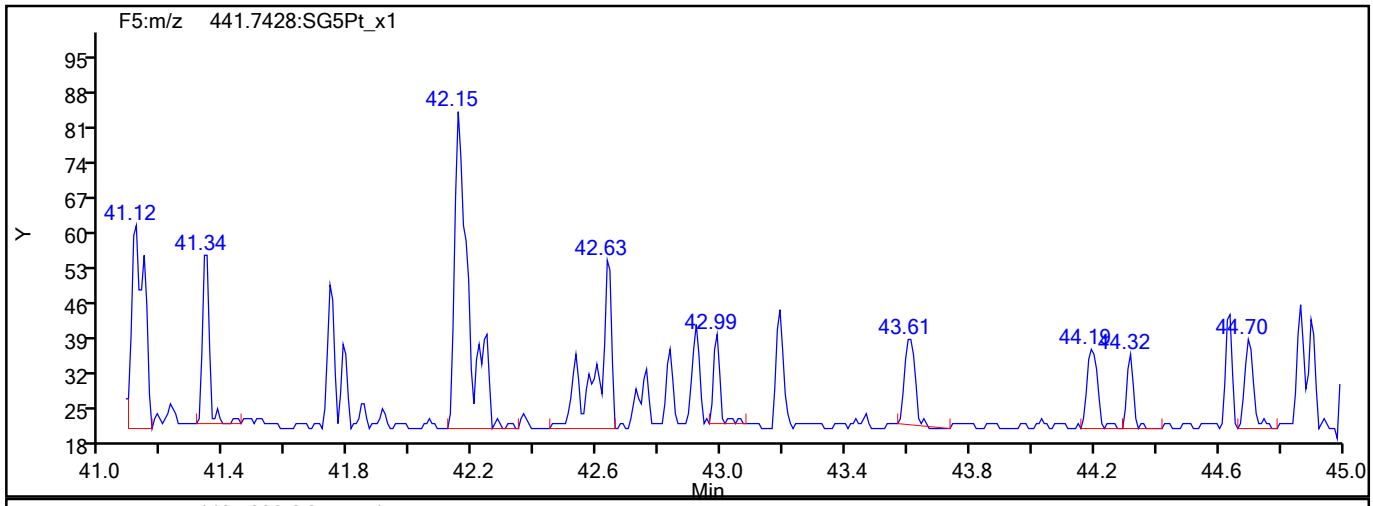

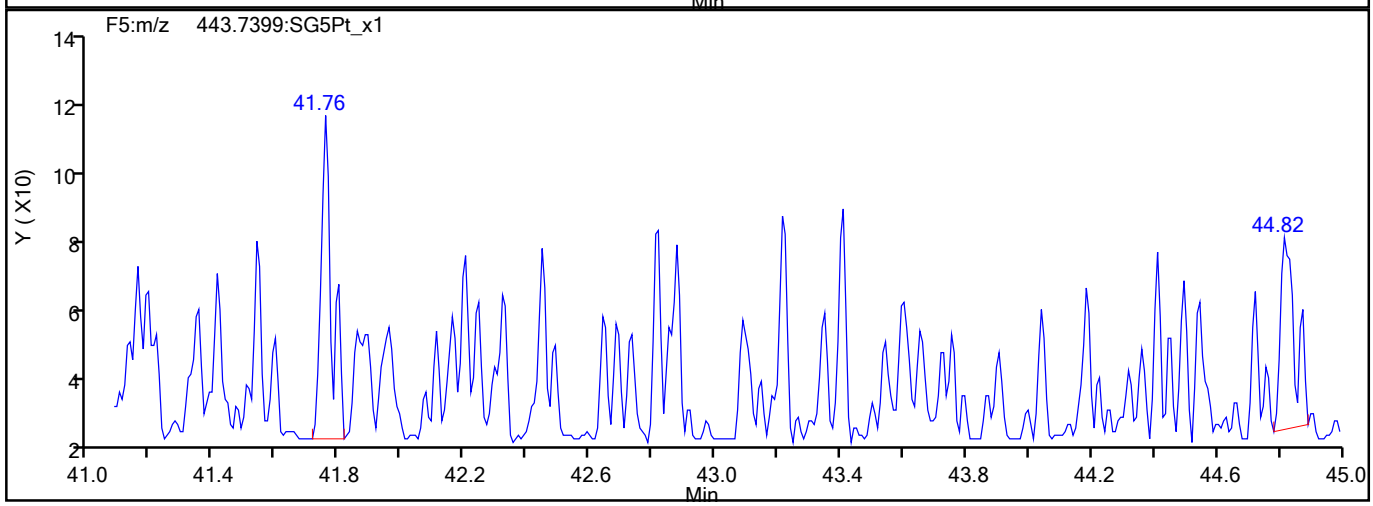

OCDF Interference Mass

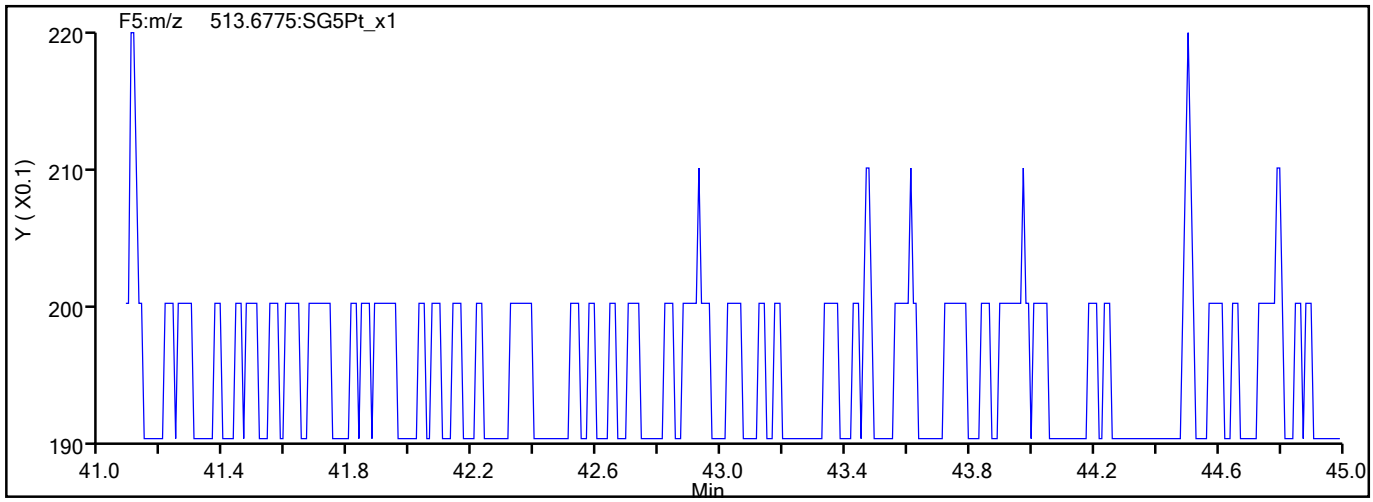

790462

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

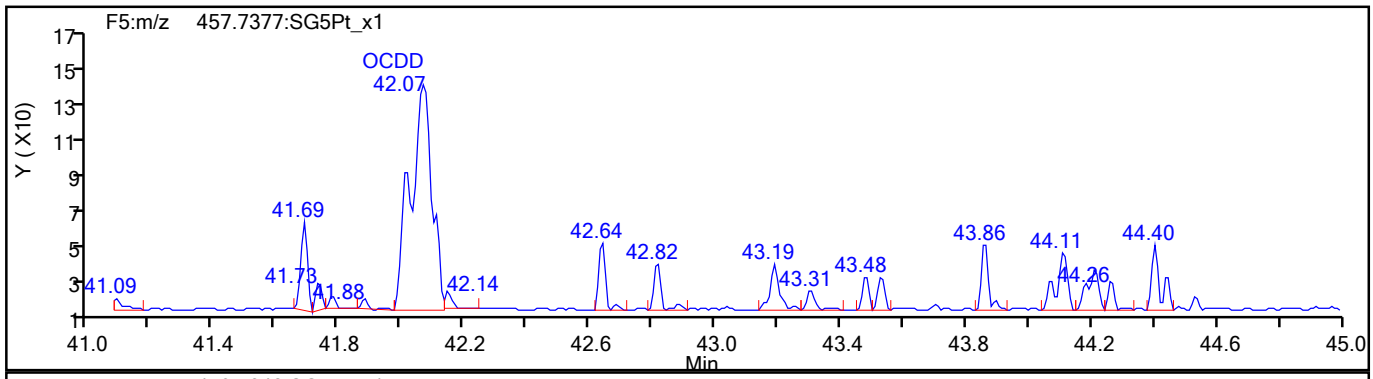

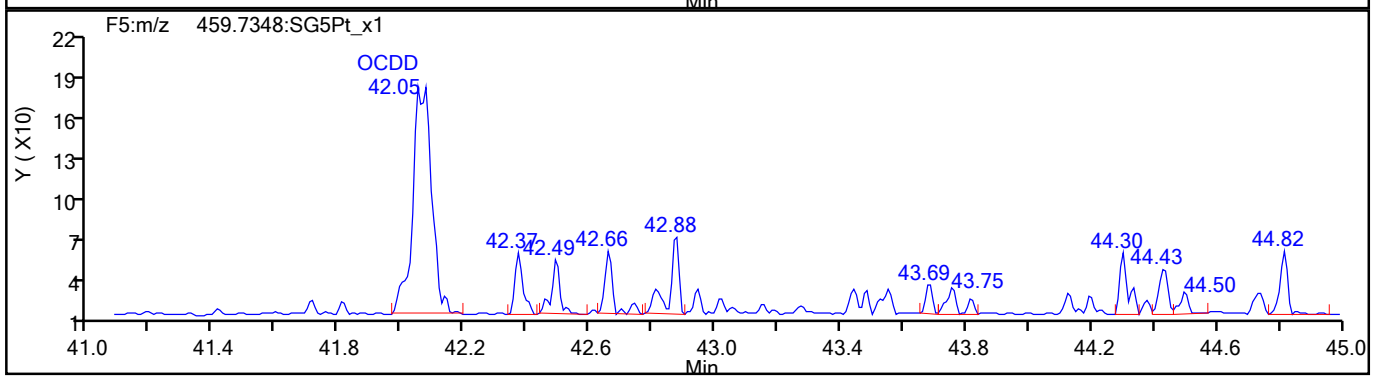

OCDD Standards

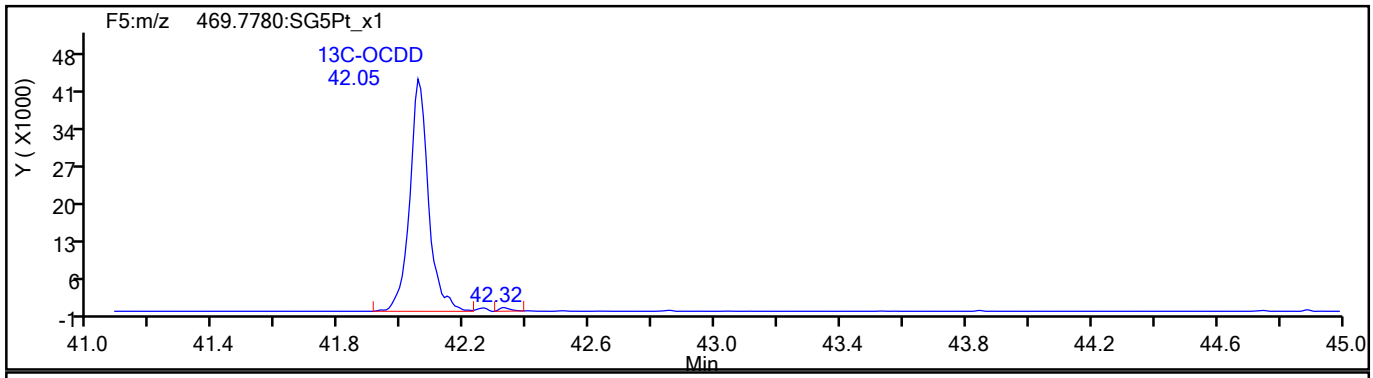

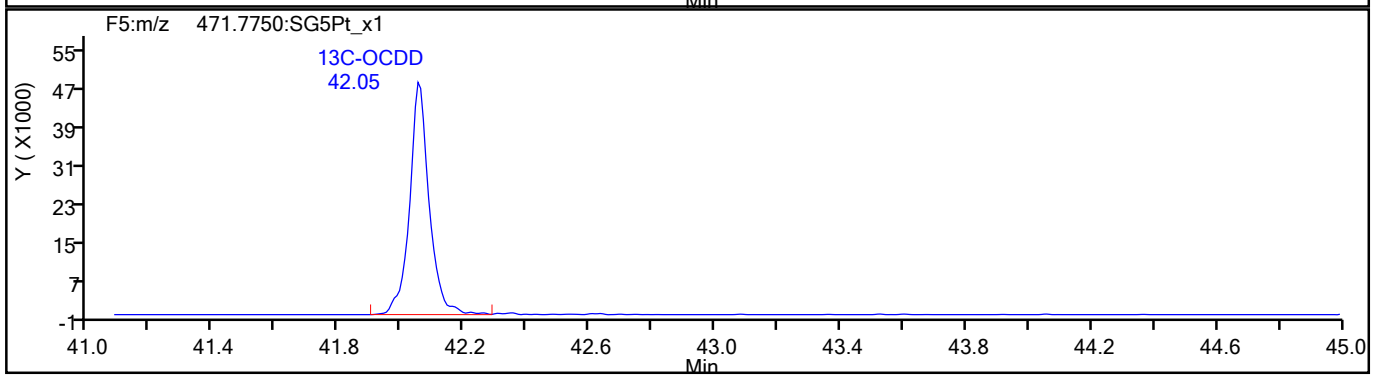

790463

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

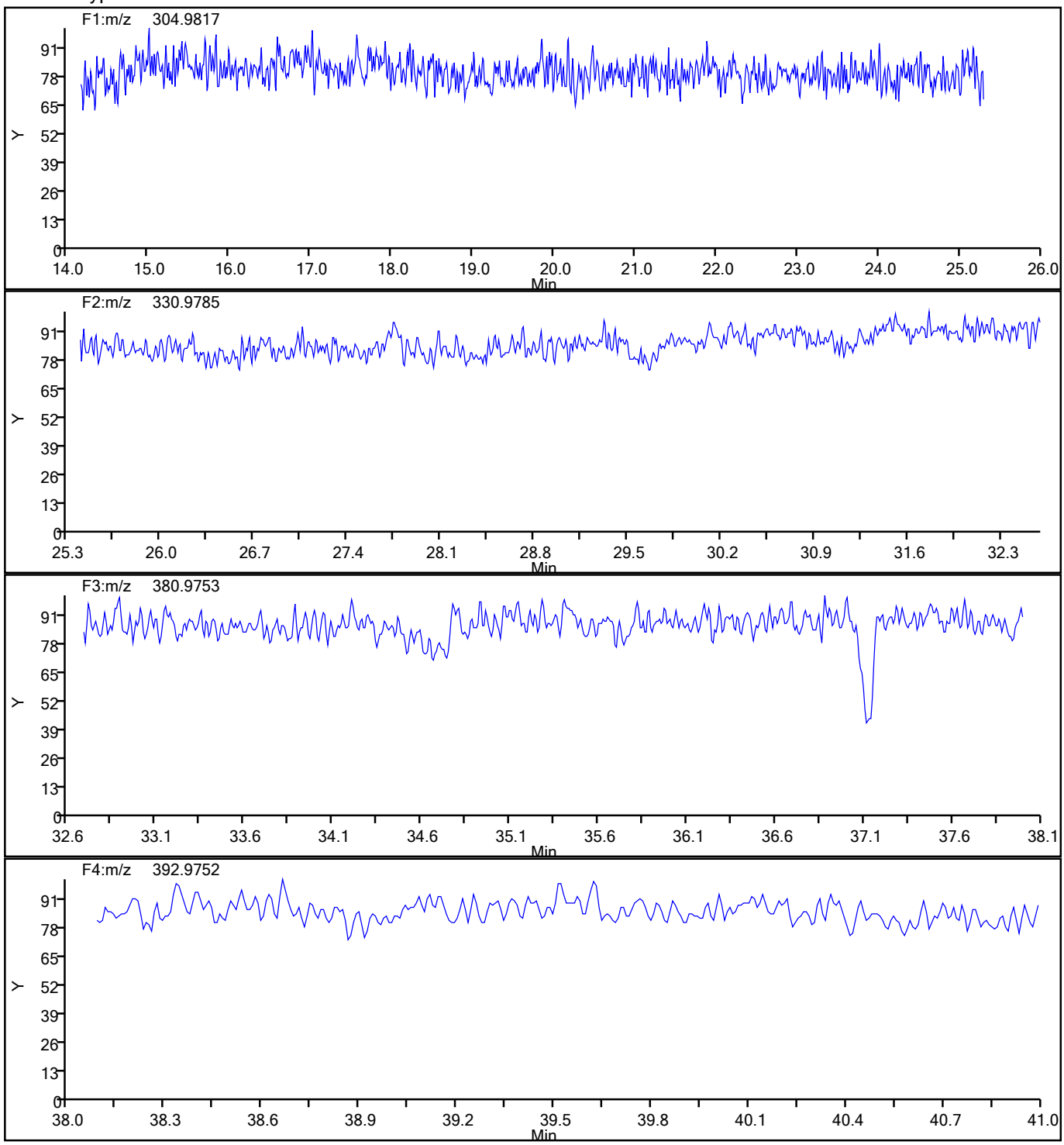

790464

Report Date: 23-Aug-2021 08:56:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210819-125325.b\19au21dfs1_5.d		
Injection Date:	19-Aug-2021 16:27:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517891	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

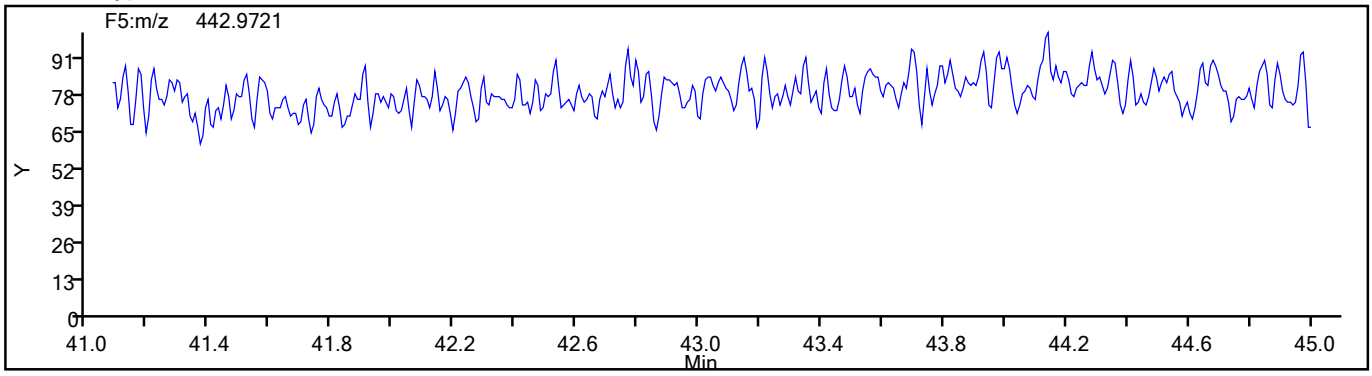

790465

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-2
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-513879/1-A RA
Matrix: Sediment
Lab File ID: 24AU2111D2_004.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/24/2021 10:23
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	2.39		1.0	0.22

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	37		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	50		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Aug-2021 10:23:51 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-513879/1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:45:21

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.296	33759459	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.599	16734440	0.77	1.3327	37.2	37.2	0.2026	0.2026	37.20	
2,3,7,8-TCDF	17.627	199129	0.67	0.9978	1.193	1.193	0.1094	0.1094		
D 13C-2,3,7,8-TCDD	16.063	10422147	0.73	0.8749	35.3	35.3	0.3776	0.3776	35.29	
$ 37Cl4-2,3,7,8-TCDD	16.077	5861410		0.8648	20.1	20.1	0.0638	0.0638	50.19	
2,3,7,8-TCDD	16.077	55715	0.68	1.0570	0.5058	0.5058	0.1084	0.1084		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

790467

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d
Lims ID: MB 320-513879/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Aug-2021 10:23:51 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-513879/1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 24-Aug-2021 17:07:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1683

First Level Reviewer: bennettd Date: 24-Aug-2021 16:45:21

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.296	16.283	1		14575481	3405725	5651	14127	603		
333.9339	16.296	16.283	1		19183978	4267762	4489	11222	951	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.599	17.613	-1	1.080	7306406	1361111	3621	9052	376		
317.9389	17.613	17.613	0	1.081	9428034	1838509	4668	11670	394	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.627	17.641	-1	1.002	79942	15130	769	1922	20		
305.8987	17.640	17.641	0	1.002	119187	24047	628	1570	38	0.67(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.063	16.050	1	0.986	4380782	989974	5651	14127	175		
333.9339	16.063	16.050	1	0.986	6041365	1466938	4489	11222	327	0.73(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.077	16.063	1	0.987	5861410	1265710	1693	4232	748		
2,3,7,8-TCDD											
319.8965	16.077	16.077	0	1.001	22554	5305	627	1567	8		
321.8936	16.077	16.077	0	1.001	33161	10494	499	1247	21	0.68(0.65-0.89)	

QC Flag Legend

Processing Flags

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

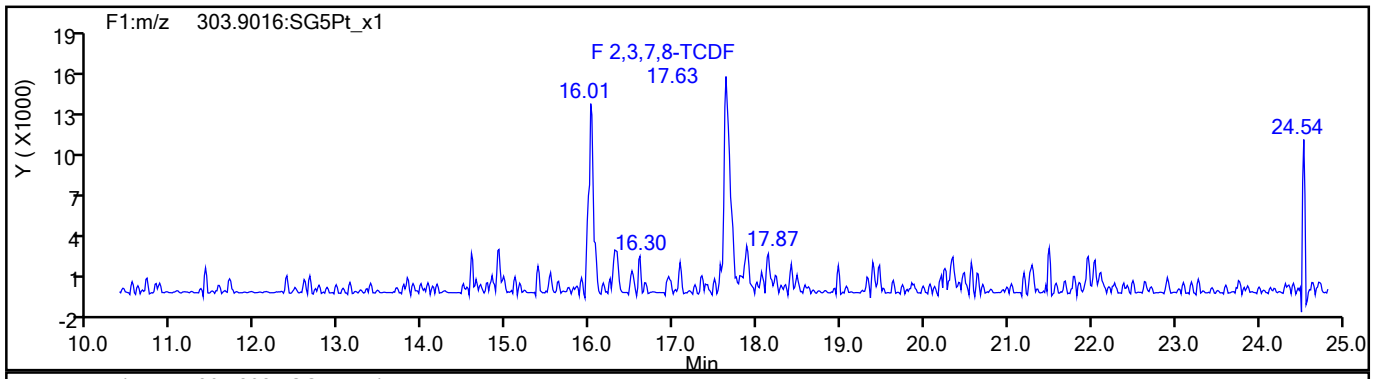

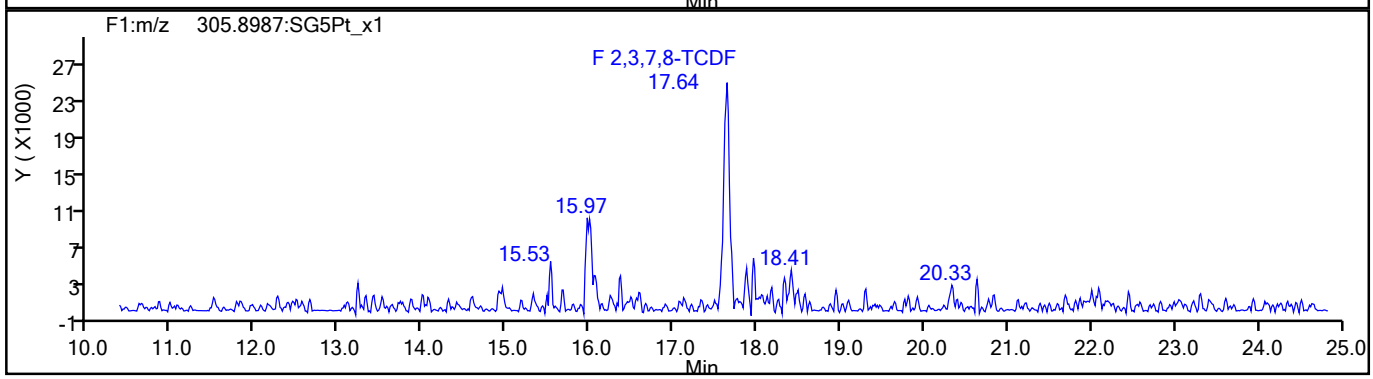

TCDF Standards

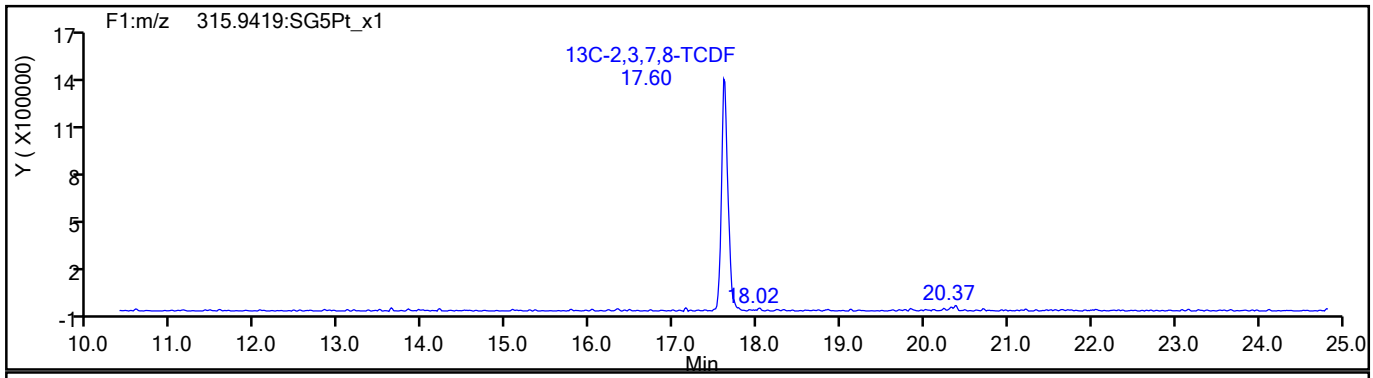

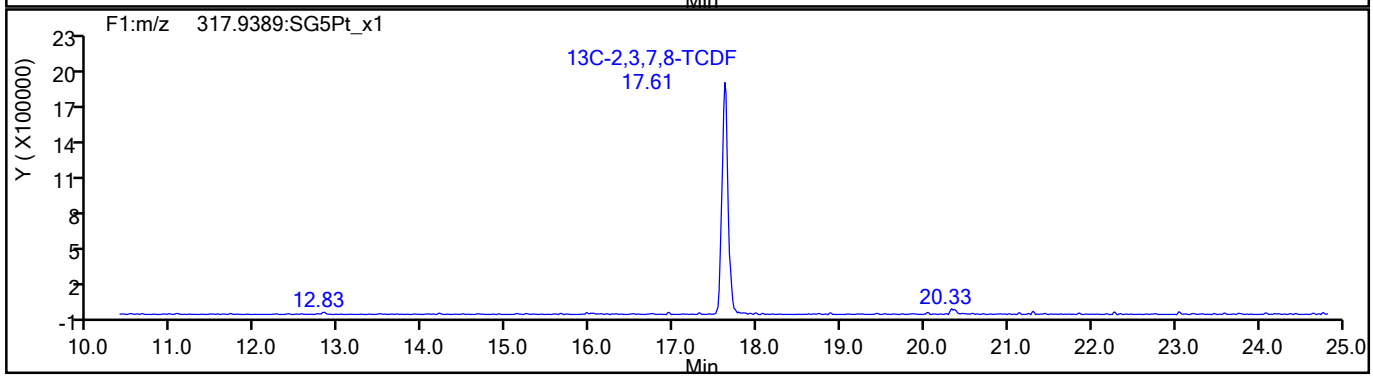

790469

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

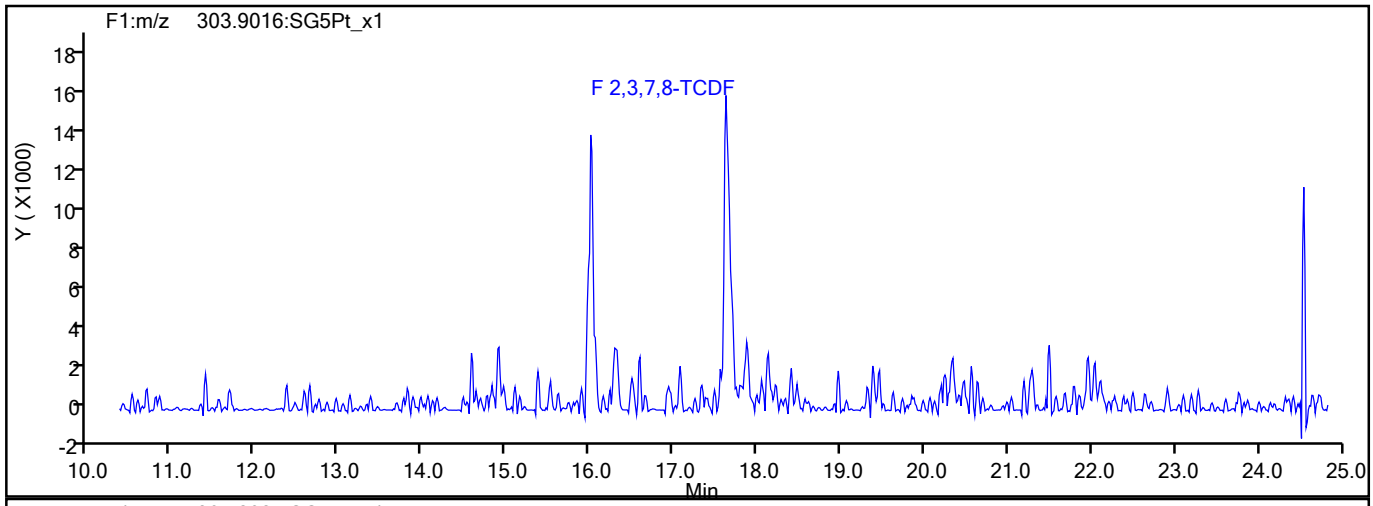

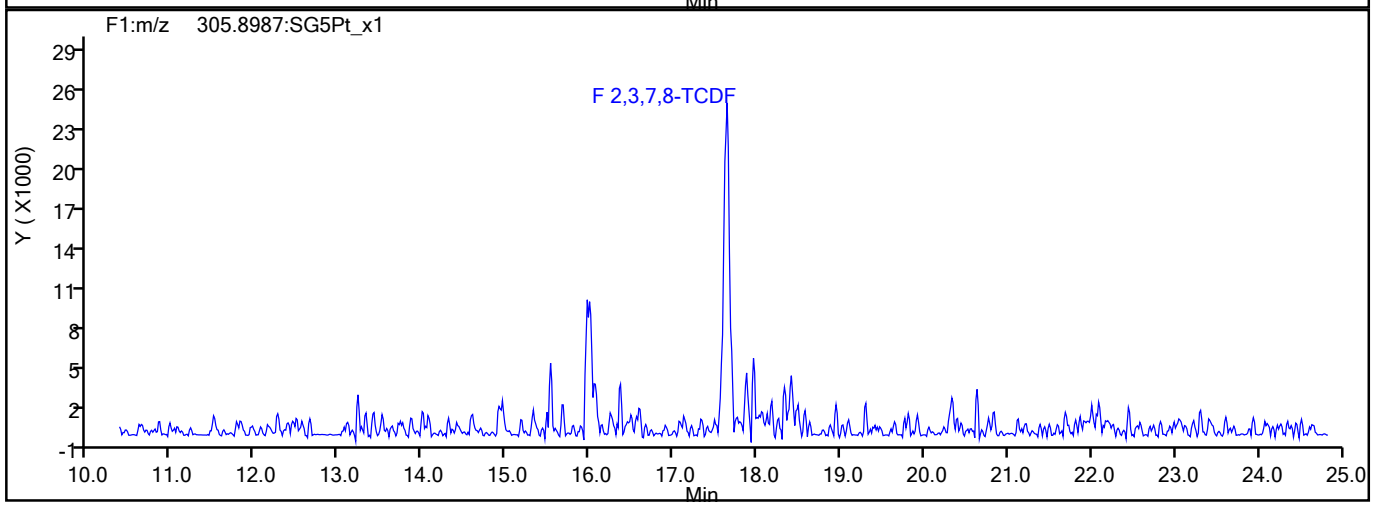

TCDF Interference Mass

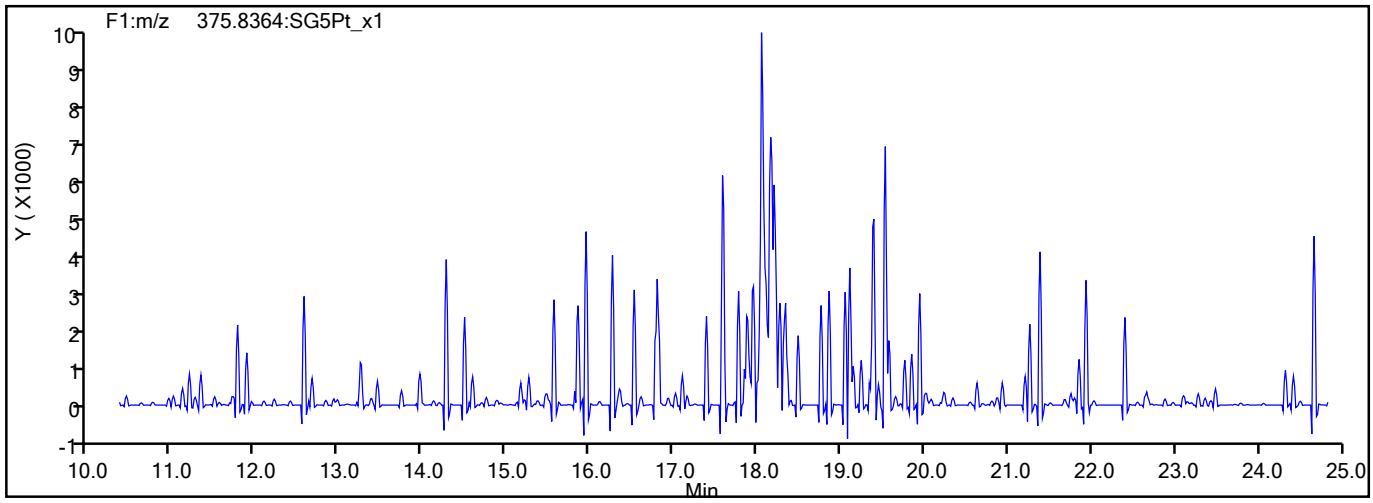

790470

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

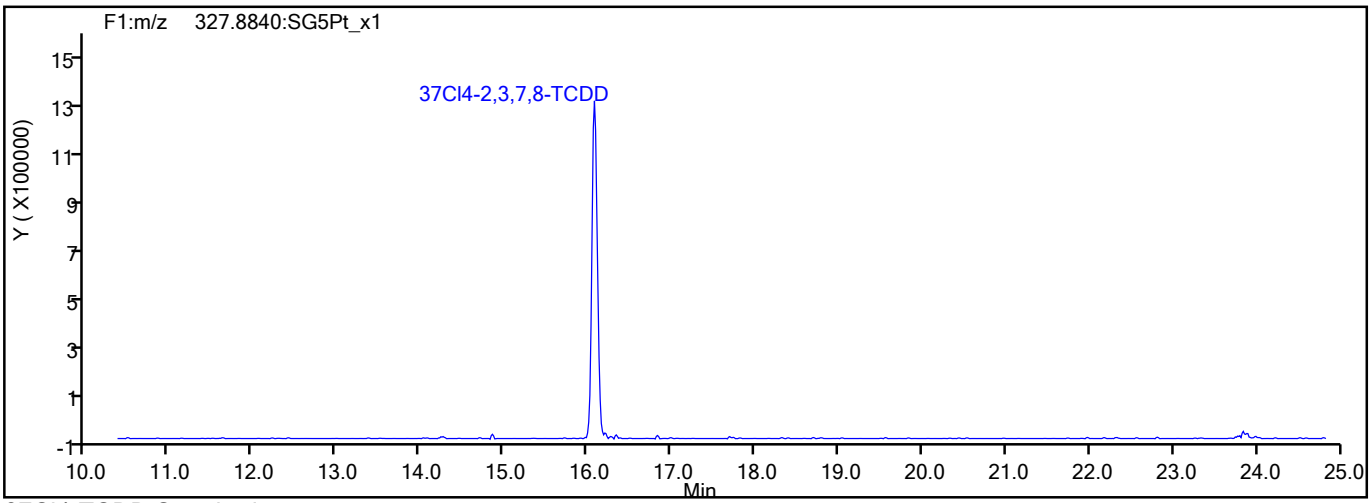

37Cl4-TCDD Standards

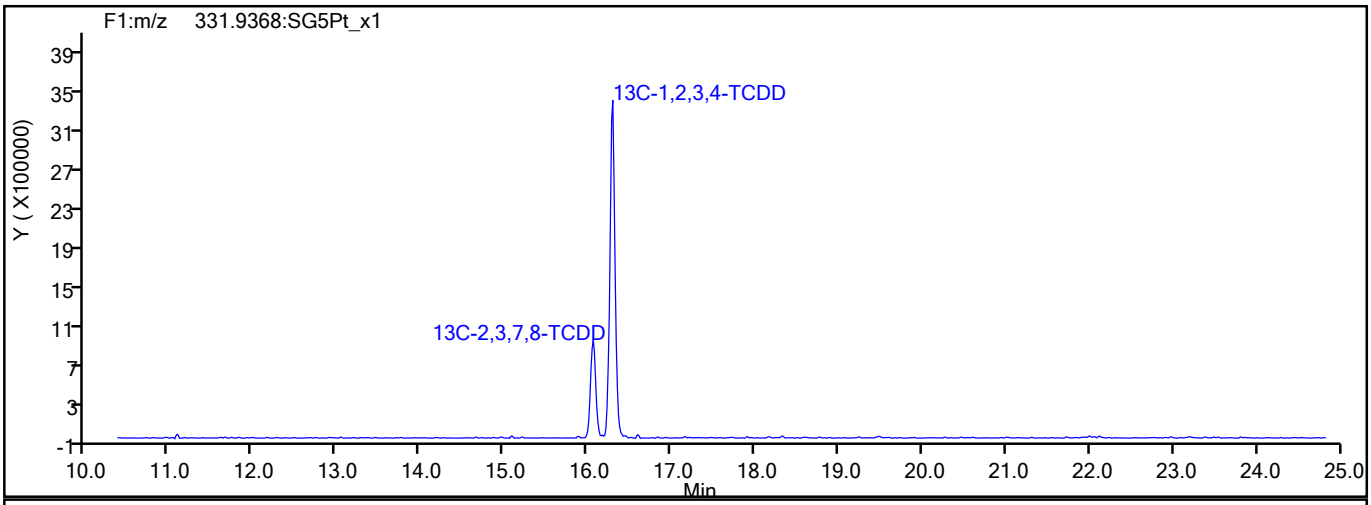

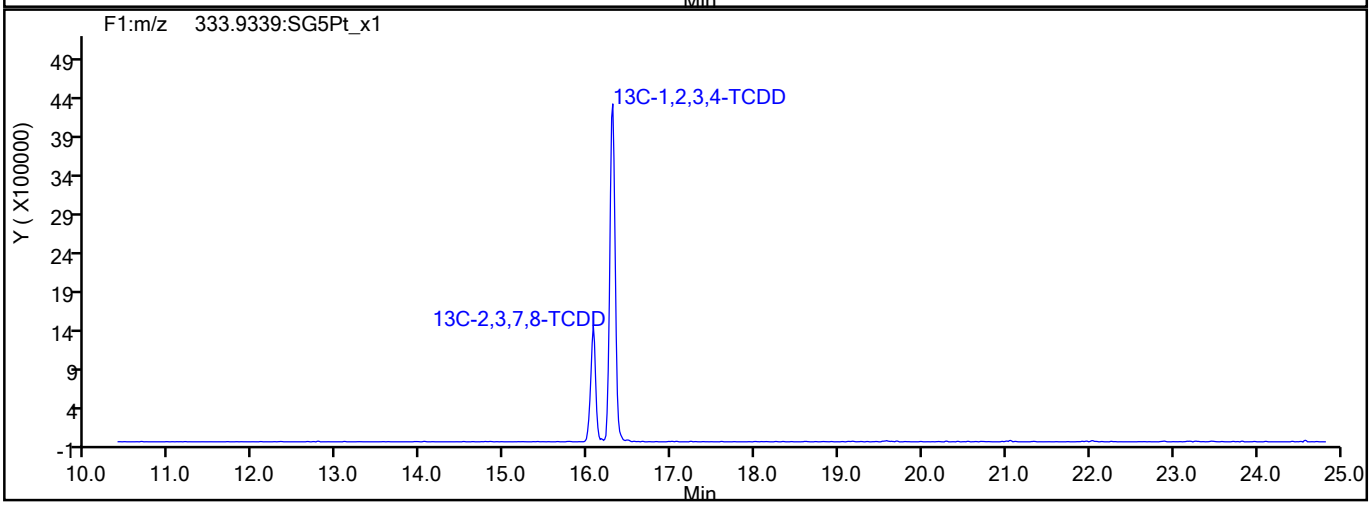

790471

Report Date: 24-Aug-2021 17:07:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210824-125660.b\24AU2111D2_004.d		
Injection Date:	24-Aug-2021 10:23:51	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519438	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

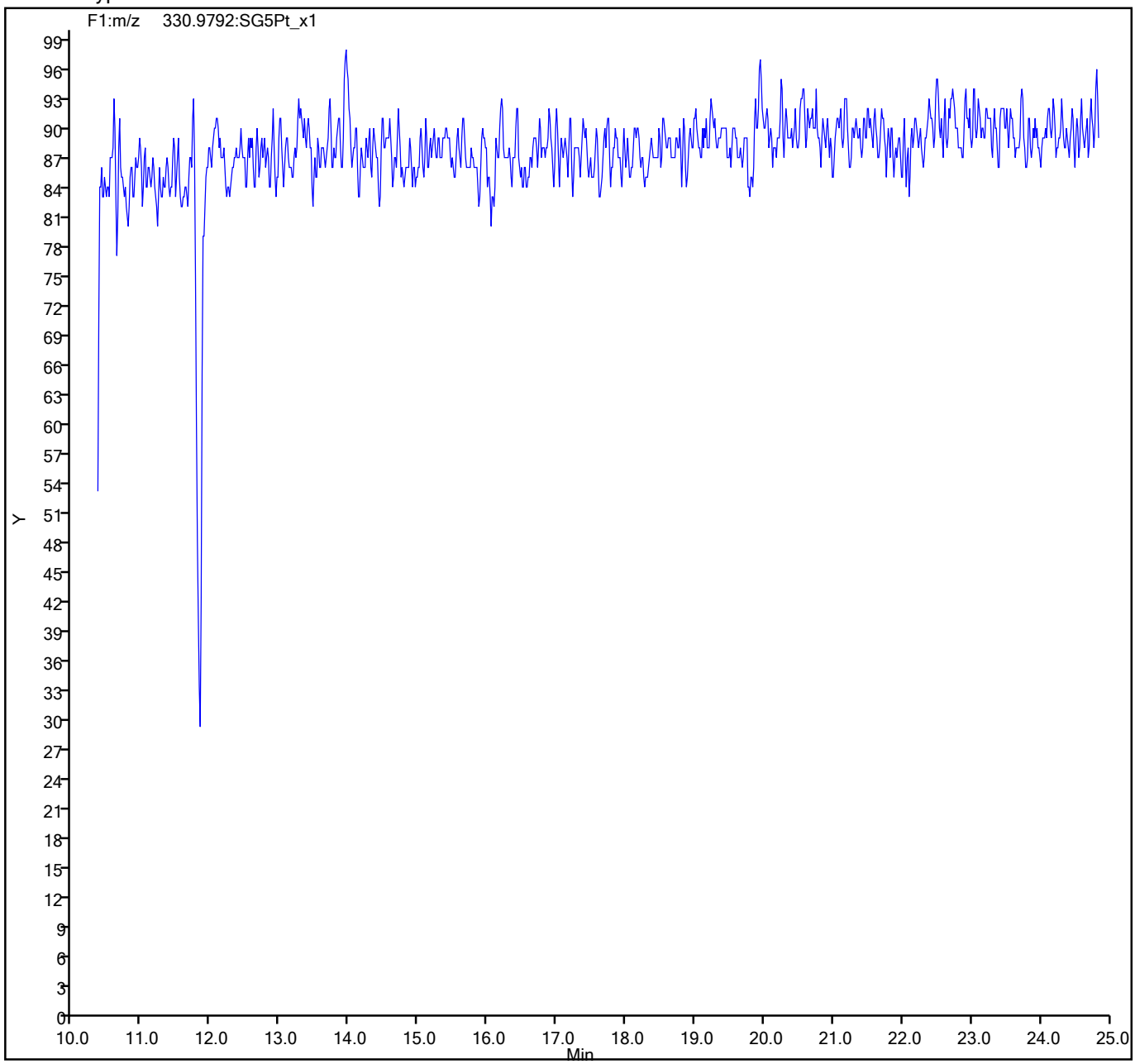

790472

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-2
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-513879/2-A
Matrix: Sediment
Lab File ID: 17au21dfs1_51.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10(g)
Date Analyzed: 08/19/2021 04:43
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	22.3		1.0	0.27
51207-31-9	2,3,7,8-TCDF	23.1		1.0	0.098
40321-76-4	1,2,3,7,8-PeCDD	113		5.0	0.26
57117-41-6	1,2,3,7,8-PeCDF	117		5.0	0.36
57117-31-4	2,3,4,7,8-PeCDF	109		5.0	0.38
39227-28-6	1,2,3,4,7,8-HxCDD	101		5.0	0.22
57653-85-7	1,2,3,6,7,8-HxCDD	112		5.0	0.27
19408-74-3	1,2,3,7,8,9-HxCDD	109		5.0	0.23
70648-26-9	1,2,3,4,7,8-HxCDF	114		5.0	0.35
57117-44-9	1,2,3,6,7,8-HxCDF	120		5.0	0.36
72918-21-9	1,2,3,7,8,9-HxCDF	118		5.0	0.36
60851-34-5	2,3,4,6,7,8-HxCDF	121		5.0	0.36
35822-46-9	1,2,3,4,6,7,8-HpCDD	111		5.0	0.32
67562-39-4	1,2,3,4,6,7,8-HpCDF	118		5.0	0.50
55673-89-7	1,2,3,4,7,8,9-HpCDF	108		5.0	0.50
3268-87-9	OCDD	232		10	0.36
39001-02-0	OCDF	243		10	0.38
41903-57-5	Total TCDD	22.3		1.0	0.27
30402-14-3	Total TCDF	23.1		1.0	0.098
36088-22-9	Total PeCDD	113		5.0	0.26
30402-15-4	Total PeCDF	226		5.0	0.37
34465-46-8	Total HxCDD	322		5.0	0.24
55684-94-1	Total HxCDF	474		5.0	0.36
37871-00-4	Total HpCDD	112		5.0	0.32
38998-75-3	Total HpCDF	227		5.0	0.50

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-513879/2-A

Matrix: Sediment Lab File ID: 17au21dfs1_51.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10(g) Date Analyzed: 08/19/2021 04:43

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 517462 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	34		20-175
89059-46-1	13C-2,3,7,8-TCDF	36		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	34		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	31		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	36		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	37		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	35		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	42		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	37		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	32		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	33		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	36		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	35		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	40		20-186
114423-97-1	13C-OCDD	39		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	47		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Aug-2021 04:43:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513879/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:46:32 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:28:21

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.378	1152953	0.80	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.398	552191	0.79	1.3459	35.6	35.6	0.2111	0.2111	35.59	
2,3,7,8-TCDF	20.449	68815	0.80	1.0802	11.5	11.5	0.0489	0.0489	115	
A Non-2,3,7,8-sub-TCDF	19.878						0.0489	0.3566		RQU
S Total TCDF					11.5	11.5	0.0489	0.0489		
D 13C-2,3,7,8-TCDD	21.765	368595	0.88	0.9317	34.3	34.3	0.2791	0.2791	34.31	
2,3,7,8-TCDD	21.782	44148	0.88	1.0753	11.1	11.1	0.1343	0.1343	111	
$ 37Cl4-2,3,7,8-TCDD	21.799	220145		1.0083	18.9	18.9	0.0142	0.0142	47.34	
A Non-2,3,7,8-sub-TCDD	20.707						0.1343	0.1343		
S Total TCDD					11.1	11.1	0.1343	0.1343		
D 13C-1,2,3,7,8-PeCDF	27.239	404112	1.57	1.1405	30.7	30.7	0.0980	0.0980	30.73	
1,2,3,7,8-PeCDF	27.272	248460	1.62	1.0543	58.3	58.3	0.1811	0.1811	117	
D 13C-2,3,4,7,8-PeCDF	28.763	466834	1.64	1.1253	36.0	36.0	0.0994	0.0994	35.98	
2,3,4,7,8-PeCDF	28.779	256500	1.56	1.0079	54.5	54.5	0.1893	0.1893	109	
A F1 PeCDFs	24.648						0.0108	0.0108		RQU
A Non-2,3,7,8-sub-PeCDF	28.125						0.1851	0.6069		U
S Total PeCDF					112.8	112.8	0.1852	0.1852		
D 13C-1,2,3,7,8-PeCDD	29.571	282216	1.56	0.7165	34.2	34.2	0.1243	0.1243	34.16	
1,2,3,7,8-PeCDD	29.588	167577	1.56	1.0465	56.7	56.7	0.1285	0.1285	113	
A Non-2,3,7,8-sub-PeCDD	28.489						0.1285	0.1629		RQU
S Total PeCDD					56.7	56.7	0.1285	0.1285		
D 13C-1,2,3,4,7,8-HxCDF	34.920	440250	0.54	0.9648	41.5	41.5	0.1289	0.1289	41.52	
1,2,3,4,7,8-HxCDF	34.937	287979	1.27	1.1474	57.0	57.0	0.1753	0.1753	114	
D 13C-1,2,3,6,7,8-HxCDF	35.064	437444	0.52	1.0708	37.2	37.2	0.1162	0.1162	37.17	
1,2,3,6,7,8-HxCDF	35.106	320805	1.31	1.2178	60.2	60.2	0.1818	0.1818	120	
D 13C-2,3,4,6,7,8-HxCDF	35.897	380639	0.55	1.0413	33.3	33.3	0.1194	0.1194	33.26	
2,3,4,6,7,8-HxCDF	35.914	279720	1.28	1.2145	60.5	60.5	0.1780	0.1780	121	
D 13C-1,2,3,7,8,9-HxCDF	36.790	347505	0.54	0.9731	32.5	32.5	0.1278	0.1278	32.49	
1,2,3,7,8,9-HxCDF	36.807	255102	1.35	1.2401	59.2	59.2	0.1804	0.1804	118	
A Non-2,3,7,8-sub-HxCDF	35.028						0.1786	0.1786		
S Total HxCDF					236.9	236.9	0.1789	0.1789		
* 13C-1,2,3,7,8,9-HxCDD	36.596	1099079	1.26	1.8E+04	100.0	100.0				

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-1,2,3,4,7,8-HxCDD	36.108	308239	1.13	0.7587	37.0	37.0	0.1300	0.1300	36.97	
1,2,3,4,7,8-HxCDD	36.125	165063	1.25	1.0608	50.5	50.5	0.1116	0.1116	101	
D 13C-1,2,3,6,7,8-HxCDD	36.226	327063	1.26	0.8593	34.6	34.6	0.1148	0.1148	34.63	
1,2,3,6,7,8-HxCDD	36.243	182721	1.24	0.9933	56.2	56.2	0.1330	0.1330	112	
1,2,3,7,8,9-HxCDD	36.605	191715	1.22	1.1094	54.4	54.4	0.1126	0.1126	109	
A Non-2,3,7,8-sub-HxCDD	35.394						0.1184	0.1184		
S Total HxCDD					161.1	161.1	0.1191	0.1191		
D 13C-1,2,3,4,6,7,8-HpCDF	38.620	285196	0.46	0.7359	35.3	35.3	0.1457	0.1457	35.26	
1,2,3,4,6,7,8-HpCDF	38.628	243533	1.05	1.4421	59.2	59.2	0.2492	0.2492	118	
D 13C-1,2,3,4,7,8,9-HpCDF	39.874	302406	0.45	0.6854	40.1	40.1	0.1564	0.1564	40.14	
1,2,3,4,7,8,9-HpCDF	39.882	214074	1.05	1.3092	54.1	54.1	0.2481	0.2481	108	
A Non-2,3,7,8-sub-HpCDF	39.258						0.2480	0.2480		
S Total HpCDF					113.3	113.3	0.2487	0.2487		
D 13C-1,2,3,4,6,7,8-HpCDD	39.562	268592	1.02	0.6745	36.2	36.2	0.0922	0.0922	36.23	
1,2,3,4,6,7,8-HpCDD	39.579	156038	1.04	1.0503	55.3	55.3	0.1617	0.1617	111	
A Non-2,3,7,8-sub-HpCDD	39.258	1484	1.04	1.0503	0.5969	0.5261	0.1617	0.5261	0.00	RQ
S Total HpCDD					55.9	55.8	0.1617	0.1617		RQ
D 13C-OCDD	42.068	462455	0.94	0.5446	77.3	77.3	0.1394	0.1394	38.63	
OCDF	42.161	370595	0.96	1.3168	121.7	121.7	0.1900	0.1900	122	
OCDD	42.068	284636	0.91	1.0620	115.9	115.9	0.1799	0.1799	116	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Aug-2021 04:43:00 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: lcs 320-513879/2-a
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:46:32 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:28:21

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.378	21.427	-3		512123	71188	71	177	1003		a
333.9338	21.378	21.427	-3		640830	82634	89	222	928	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.398	20.401	0	0.954	243971	33108	139	347	238		
317.9389	20.415	20.401	1	0.955	308220	42563	36	90	1182	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.449	20.436	1	1.003	30521	4146	6	15	691		
305.8987	20.432	20.436	0	1.002	38294	5319	10	25	532	0.80(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											U
303.9016	18.739	19.878	-68	0.919	162	68	6	15	11		
	Empc Correction				119	50	6	15	8		
305.8987	18.765	19.878	-67	0.920	155	65	10	25	7	1.05(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.765	21.743	1	1.018	172091	21636	71	177	305		
333.9338	21.739	21.743	0	1.017	196504	24757	89	222	278	0.88(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	21.782	21.777	0	1.001	20673	2465	24	60	103		
321.8936	21.773	21.777	0	1.000	23475	3194	3	7	1065	0.88(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.799	21.849	-3	1.020	220145	28798	9	22	3200		
A Non-2,3,7,8-sub-TCDD											
319.8965	20.707						24	60			
321.8936	20.707						3	7			
13C-1,2,3,7,8-PeCDF											
351.9000	27.239	27.288	-3	1.274	246750	37936	50	125	759		
353.8970	27.247	27.288	-2	1.275	157362	24926	19	47	1312	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	27.272	27.313	-2	1.001	153449	22468	27	67	832		
341.8567	27.281	27.313	-2	1.002	95011	14063	21	52	670	1.62(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.763	28.795	-2	1.345	290330	39582	50	125	792		
353.8970	28.754	28.795	-2	1.345	176504	23330	19	47	1228	1.64(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.779	28.820	-2	1.001	156208	20762	27	67	769		
341.8567	28.779	28.820	-2	1.001	100292	13170	21	52	627	1.56(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.618	24.648	-2	0.904	12	5	1	2	5		
341.8567	24.610	24.648	-2	0.903	37	18	2	5	9	0.32(1.32-1.78)	
	Empc Correction				7	3	2	5	2		
A Non-2,3,7,8-sub-PeCDF											U
339.8597	27.879	28.125	-15	1.023	1729	241	27	67	9		
341.8567	27.811	28.125	-19	1.021	996	151	21	52	7	1.74(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	29.571	29.612	-2	1.383	171861	22744	21	52	1083		
369.8919	29.554	29.612	-3	1.382	110355	14435	34	85	425	1.56(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.588	29.637	-3	1.001	102094	13051	15	37	870		
357.8516	29.596	29.637	-2	1.001	65483	8320	5	12	1664	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											U
355.8546	28.489	28.489	0	0.963	712	141	15	37			
	Empc Correction				292	51	15	37	0		
357.8516	28.489	28.489	0	0.963	189	33	5	12		3.77(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.920	34.942	-1	0.954	154382	28905	45	112	642		
385.8610	34.912	34.942	-2	0.954	285868	51650	71	177	727	0.54(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.937	34.959	-1	1.000	161292	30332	39	97	778		
375.8178	34.937	34.959	-1	1.000	126687	23452	26	65	902	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.064	35.111	-3	0.958	149152	25148	45	112	559		
385.8610	35.089	35.111	-1	0.959	288292	48027	71	177	676	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.106	35.119	-1	1.001	181702	30359	39	97	778		
375.8178	35.097	35.119	-1	1.001	139103	24502	26	65	942	1.31(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.897	35.919	-1	0.981	134384	27782	45	112	617		
385.8610	35.897	35.919	-1	0.981	246255	47138	71	177	664	0.55(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.914	35.936	-1	1.000	157261	31460	39	97	807		
375.8178	35.914	35.936	-1	1.000	122459	23907	26	65	920	1.28(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.790	36.811	-1	1.005	121621	25275	45	112	562		
385.8610	36.790	36.811	-1	1.005	225884	47153	71	177	664	0.54(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	36.807	36.828	-1	1.000	146578	31137	39	97	798		
375.8178	36.807	36.828	-1	1.000	108524	22657	26	65	871	1.35(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						39	97			
375.8178	35.028						26	65			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.596	36.609	-1		613234	129054	45	112	2868		
403.8529	36.596	36.609	-1		485845	104110	47	117	2215	1.26(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.108	36.129	-1	0.987	163698	37090	45	112	824		
403.8529	36.108	36.129	-1	0.987	144541	30477	47	117	648	1.13(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.125	36.146	-1	1.000	91763	20395	15	37	1360		
391.8127	36.125	36.146	-1	1.000	73300	15889	17	42	935	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.226	36.247	-1	0.990	182318	33355	45	112	741		
403.8529	36.226	36.247	-1	0.990	144745	27185	47	117	578	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.243	36.264	-1	1.000	101151	20151	15	37	1343		
391.8127	36.234	36.264	-2	1.000	81570	15244	17	42	897	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.605	36.626	-1	1.014	105175	22152	15	37	1477		
391.8127	36.613	36.626	-1	1.014	86540	19124	17	42	1125	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8158	35.394						15	37			
391.8127	35.394						17	42			
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.620	38.626	0	1.055	90235	21930	39	97	562		
419.8220	38.620	38.626	0	1.055	194961	46799	61	152	767	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.628	38.630	0	1.000	124835	30815	56	140	550		
409.7788	38.628	38.630	0	1.000	118698	28856	43	107	671	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.874	39.880	0	1.090	94287	23632	39	97	606		
419.8220	39.874	39.880	0	1.090	208119	52415	61	152	859	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.882	39.885	0	1.000	109760	27352	56	140	488		
409.7788	39.874	39.885	-1	1.000	104314	26341	43	107	613	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						56	140			
409.7788	39.258						43	107			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.562	39.569	0	1.081	135567	36294	24	60	1512		
437.8140	39.562	39.569	0	1.081	133025	32596	34	85	959	1.02(0.88-1.20)	

Report Date: 20-Aug-2021 09:46:32 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7767	39.579	39.582	0	1.000	79370	19810	28	70	708		
425.7737	39.571	39.582	-1	1.000	76668	19293	19	47	1015	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											RQ
423.7767	38.931	39.258	-20	0.984	757	201	28	70	7		
425.7737	38.940	39.258	-19	0.984	927	213	19	47	11	0.82(0.88-1.20)	
	Empc Correction				727	193	19	47	10		
13C-OCDD											
469.7780	42.068	42.072	0	1.150	224125	50031	47	117	1064		
471.7750	42.059	42.072	-1	1.149	238330	51486	24	60	2145	0.94(0.76-1.02)	
OCDF											
441.7428	42.161	42.165	0	1.002	181285	39296	22	55	1786		
443.7399	42.161	42.165	0	1.002	189310	43296	29	72	1493	0.96(0.76-1.02)	
OCDD											
457.7377	42.068	42.081	-1	1.000	135245	30903	20	50	1545		
459.7348	42.068	42.081	-1	1.000	149391	32862	19	47	1730	0.91(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	552191	75671

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	552191	75671

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
18.739	162	68	155	65	0.0531	1.05	RQ
18.739	119	50	155	65	0.0459		Empc Correction
19.427	92	39	339	85	0.0723	0.27	RQ
19.427	92	39	119	50	0.0354		Empc Correction
19.728	942	162	1185	362	0.3566	0.79	
20.570	1237	306	356	162	0.2671	3.47	RQ
20.570	274	124	356	162	0.1056		Empc Correction
20.759	320	67	178	119	0.0835	1.80	RQ
20.759	137	91	178	119	0.0528		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	404112	62862
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	466834	62912

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	435473	62887

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.618	12	5	37	18	0.0109	0.32	RQ
24.618	12	5	7	3	0.004232		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	404112	62862
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	466834	62912

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	435473	62887

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
27.879	1729	241	996	151	0.6069	1.74	

Compound is Marked ND

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Lims ID:	LCS 320-513879/2-A		
Client ID:			
Inject. Date:	19-Aug-2021 04:43:00	Dil. Factor:	1.0000
Sample Type:	LCS, Lab Control Sample		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	47

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	282216	37179

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	282216	37179

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
30.245	712	141	189	33	0.3051	3.77	RQ
30.245	292	51	189	33	0.1629		Empc Correction

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d
Lims ID: LCS 320-513879/2-A
Client ID:
Inject. Date: 19-Aug-2021 04:43:00 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 47

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	268592	68890

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	268592	68890

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.931	757	201	927	213	0.5969	0.82	RQ
38.931	757	201	727	193	0.5261		Empc Correction
Signal Totals:							
	757	201	727	193			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1684	414				0.82	RQ
	1484	394					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5969 = (1684 * 100.000) / (268592 * 1.050)
Empc Amount: 0.5261 = (1484 * 100.000) / (268592 * 1.050)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

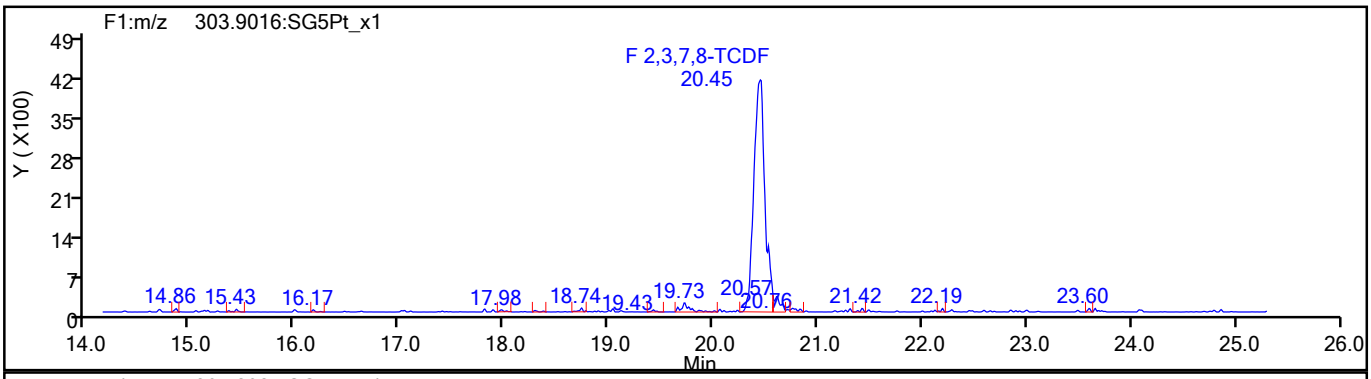

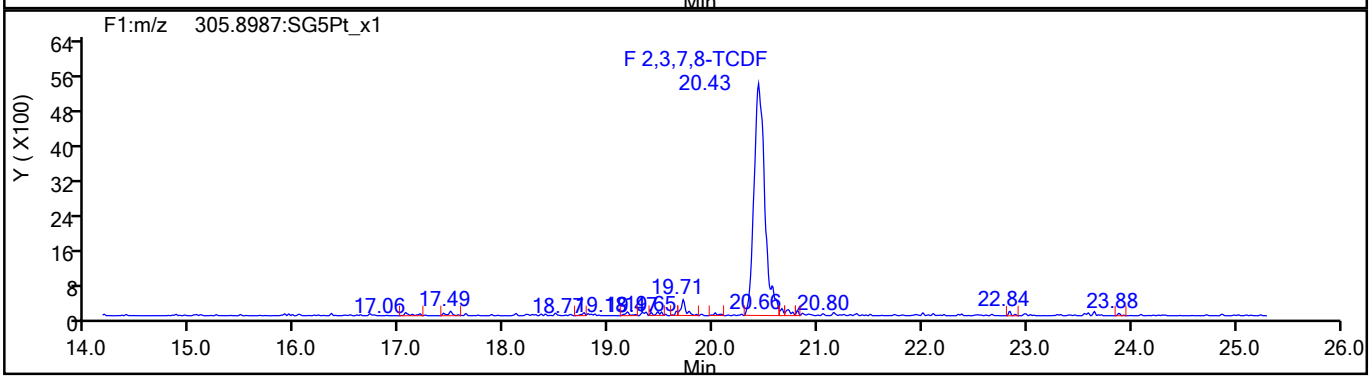

TCDF Standards

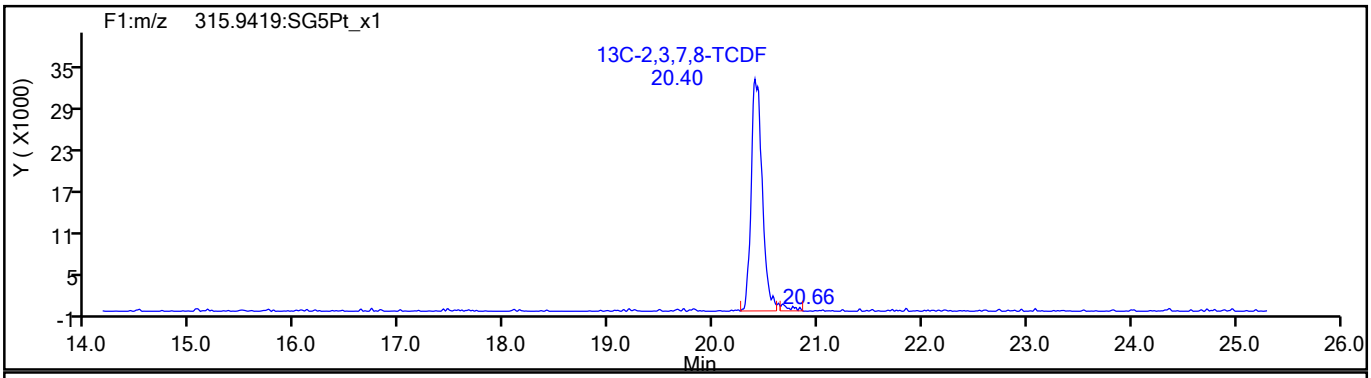

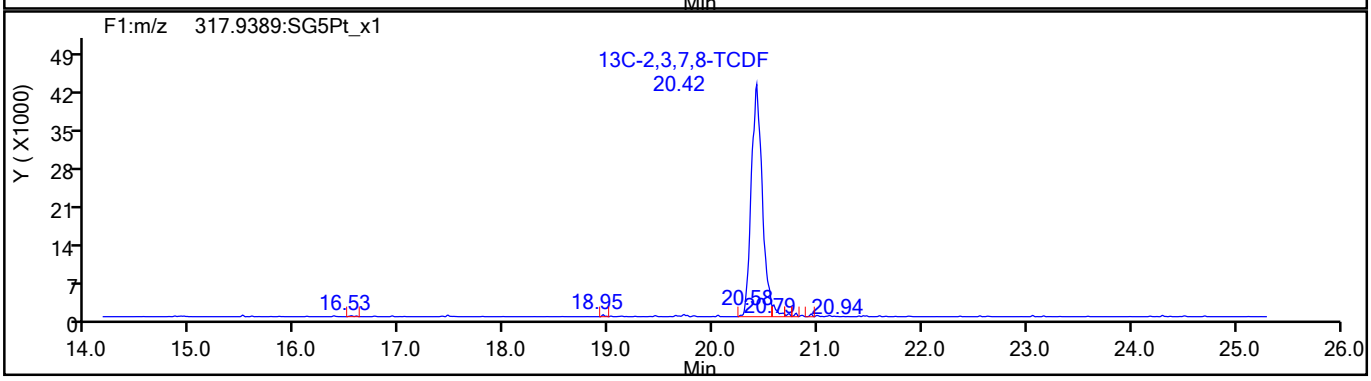

790486

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

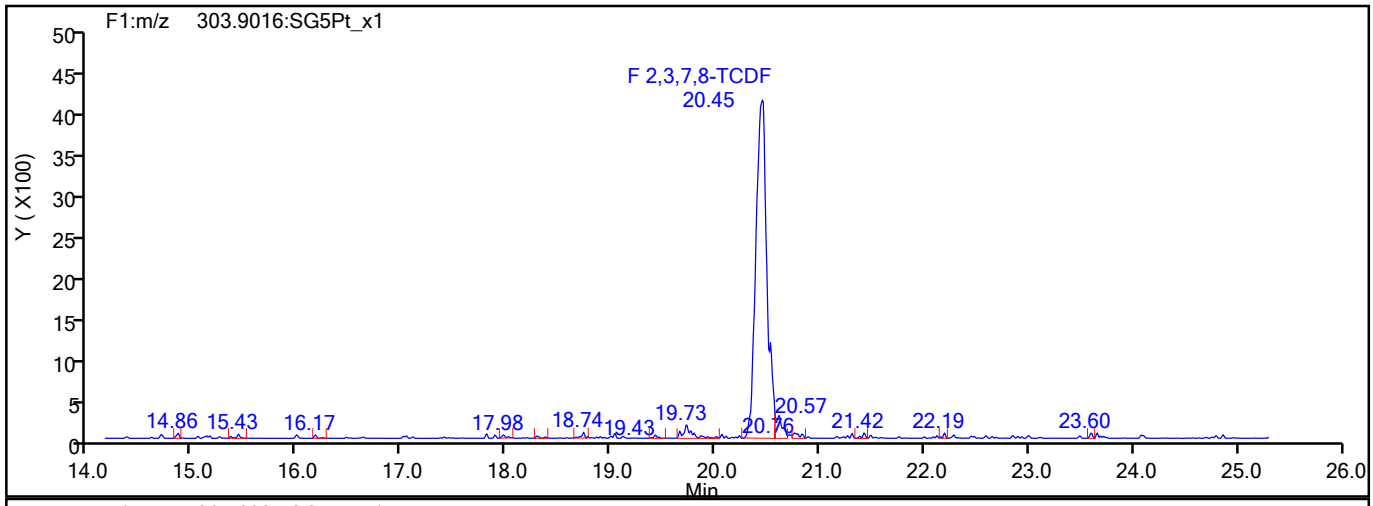

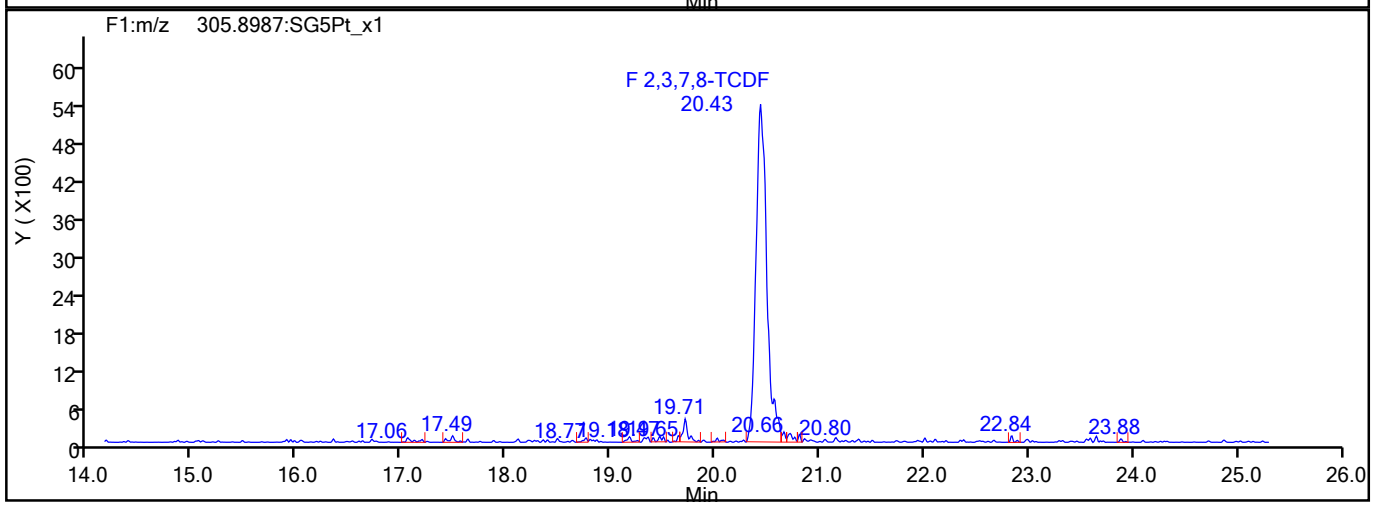

TCDF Interference Mass

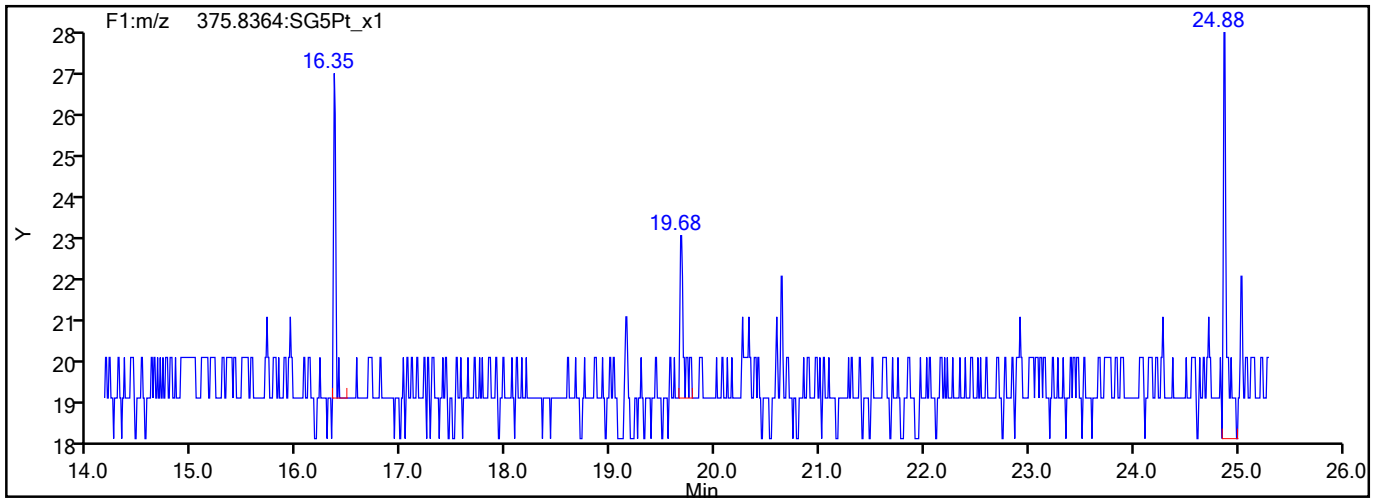

790487

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

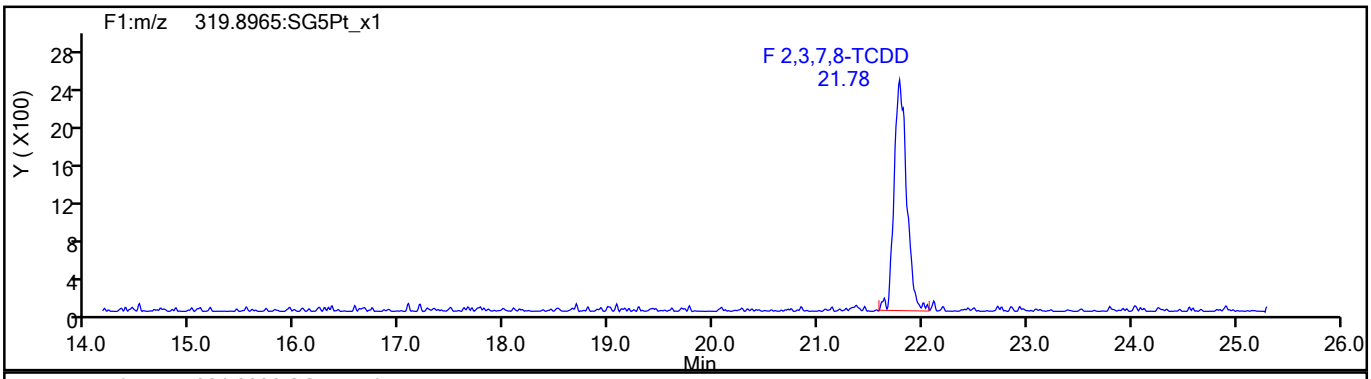

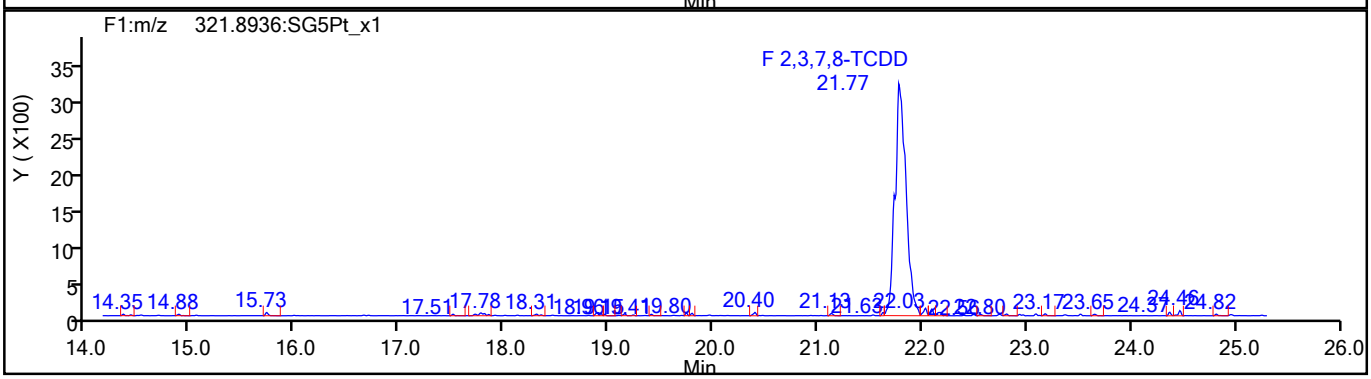

TCDD Standards

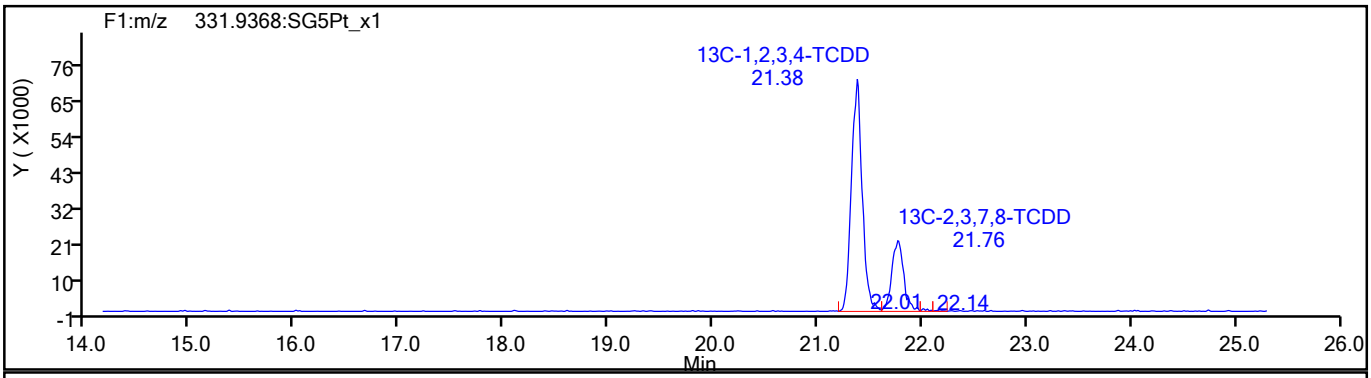

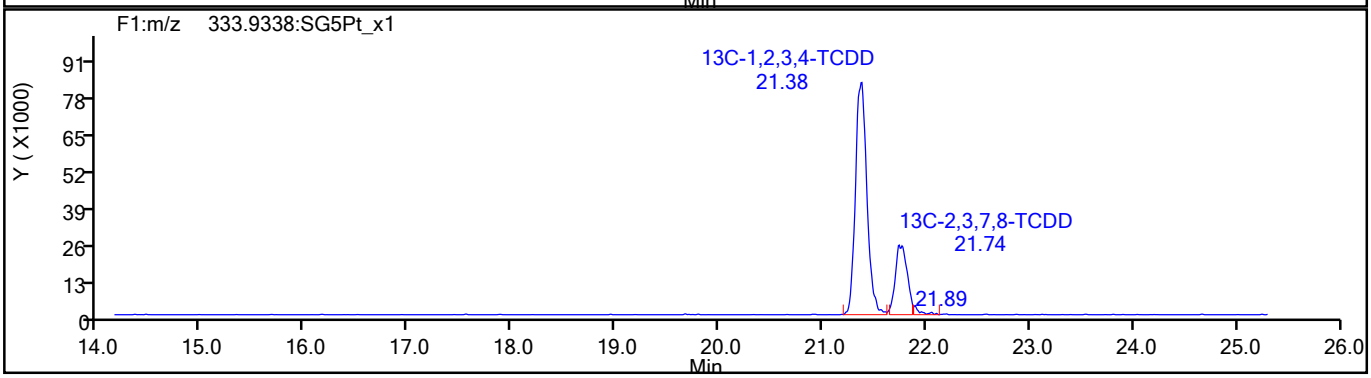

790488

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

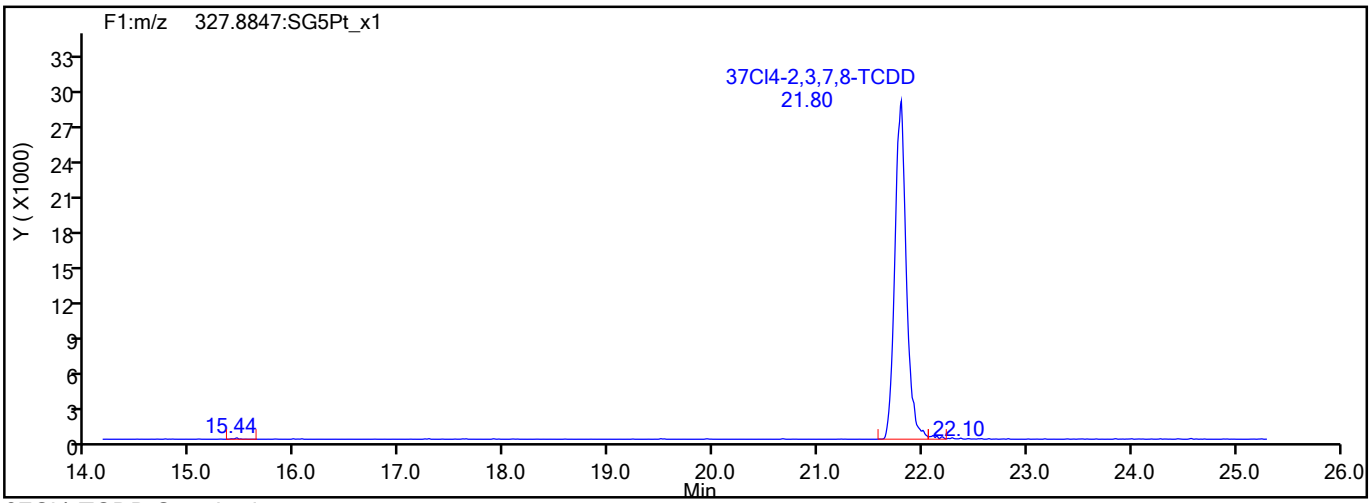

37Cl4-TCDD Standards

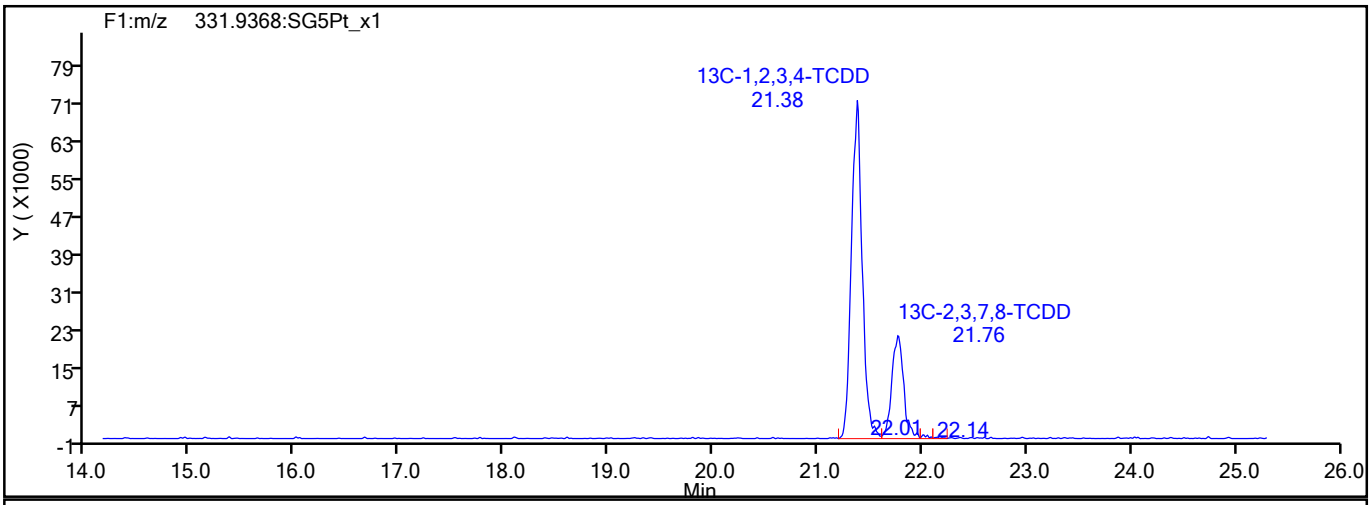

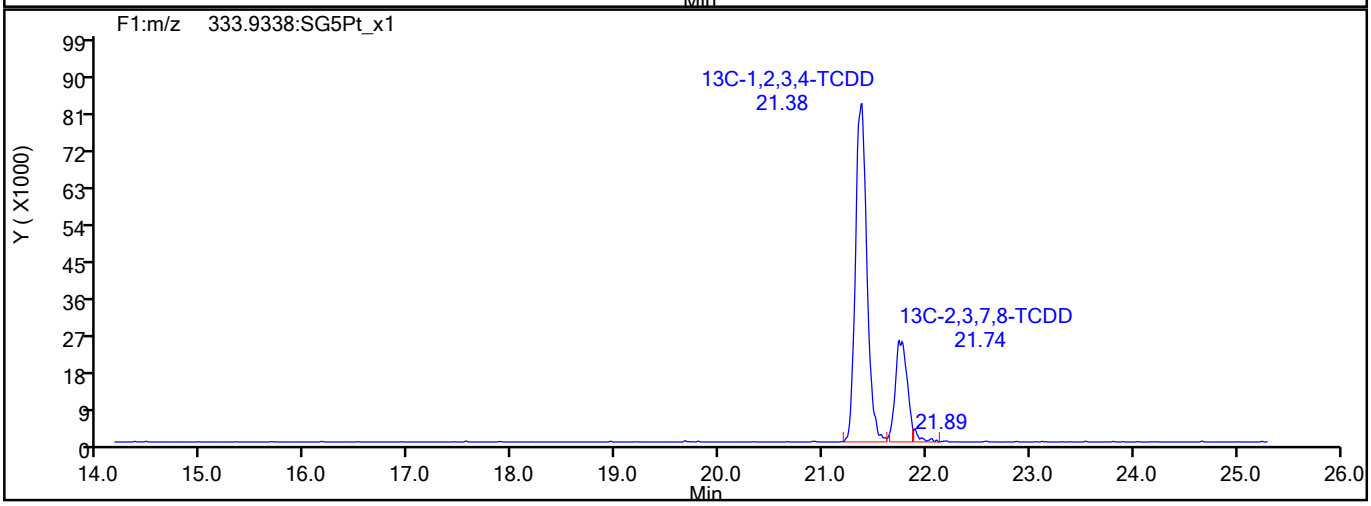

790489

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

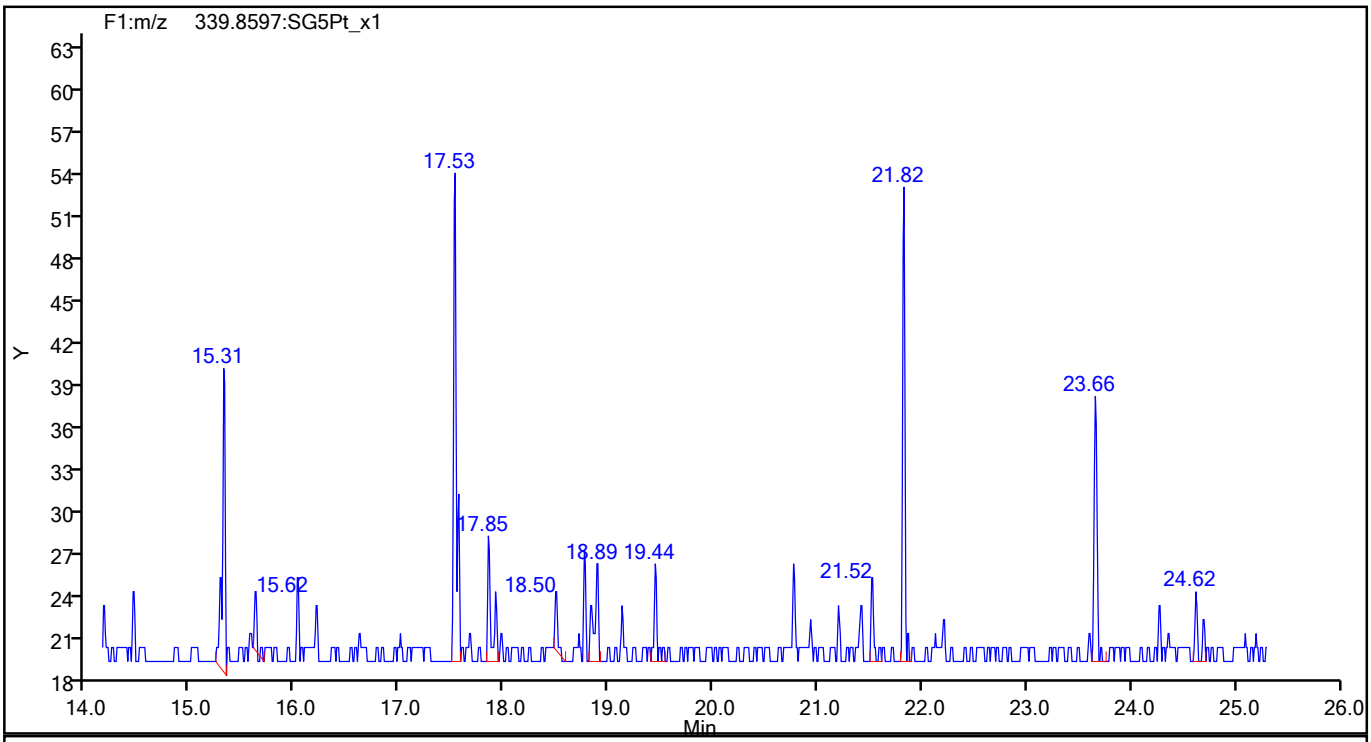

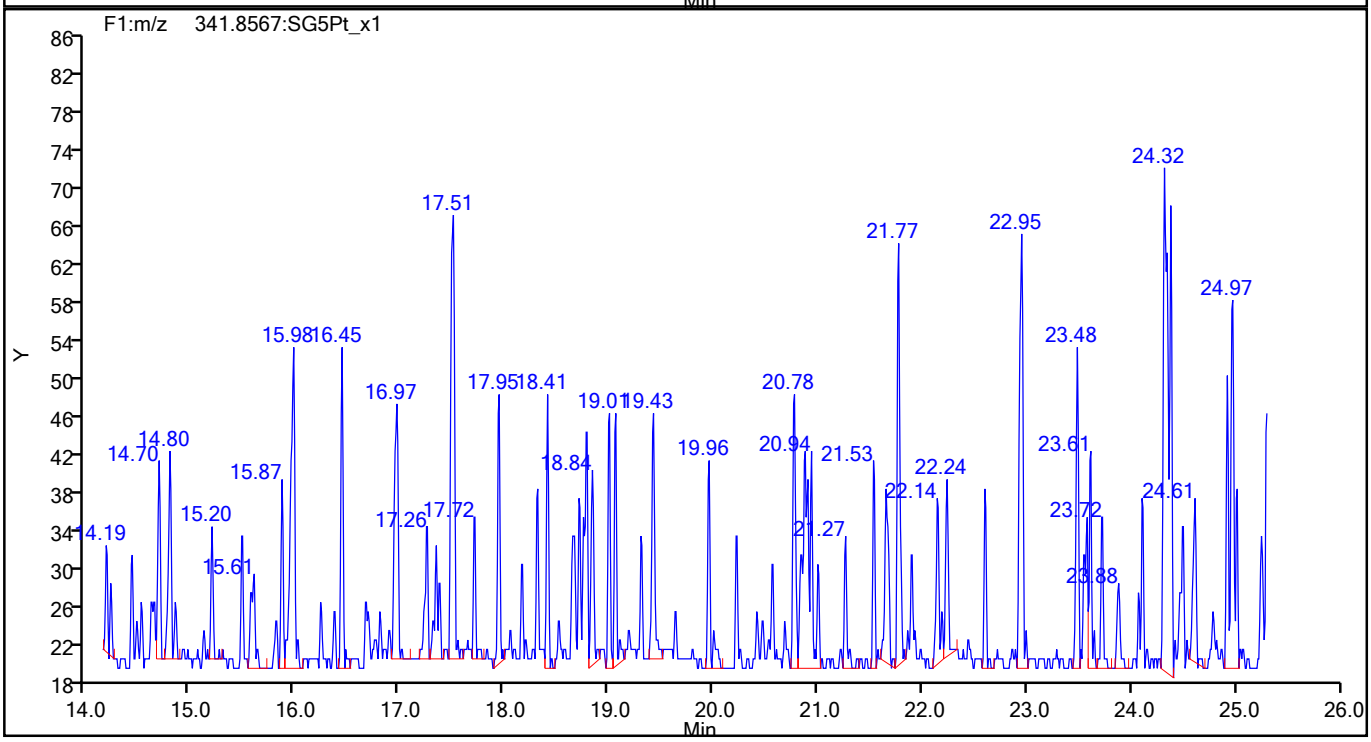

790490

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

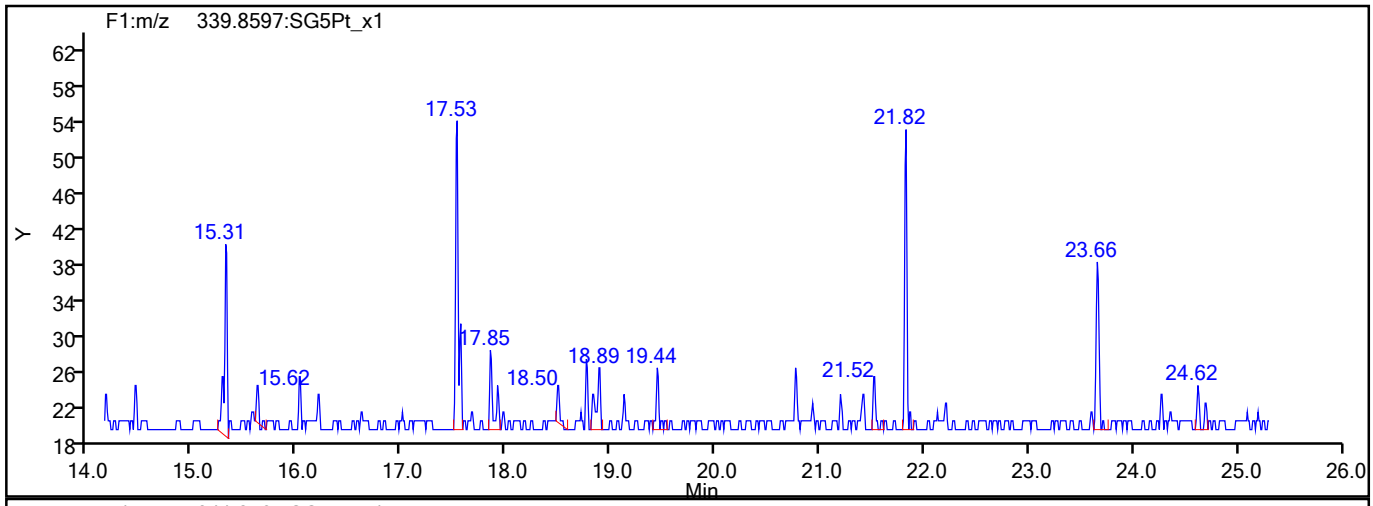

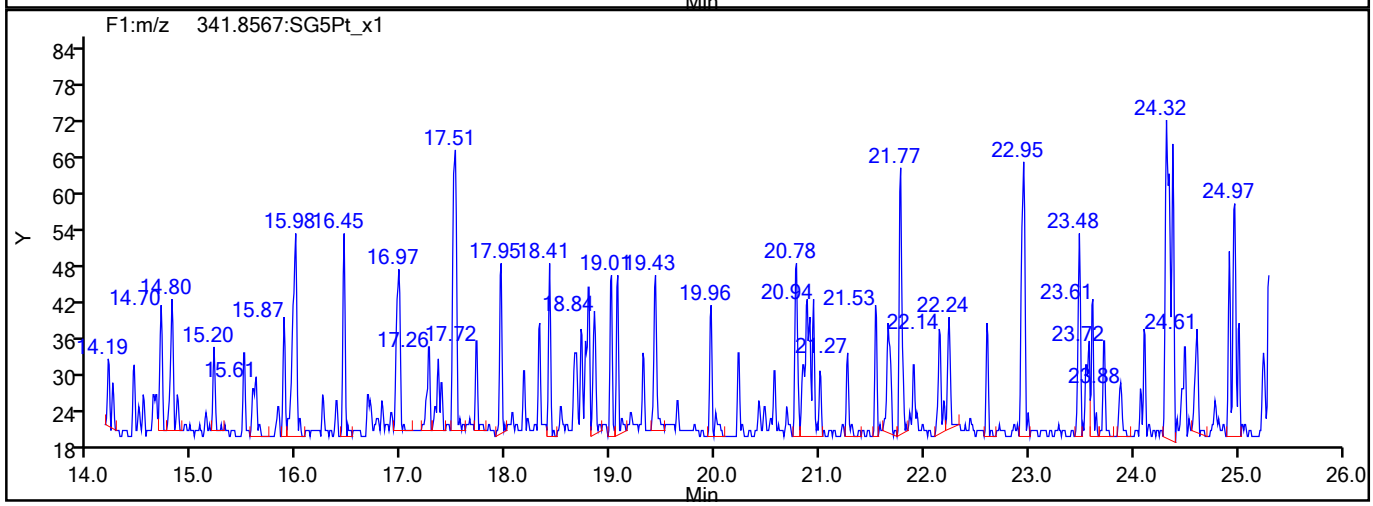

F1 PeCDFs Interference Mass

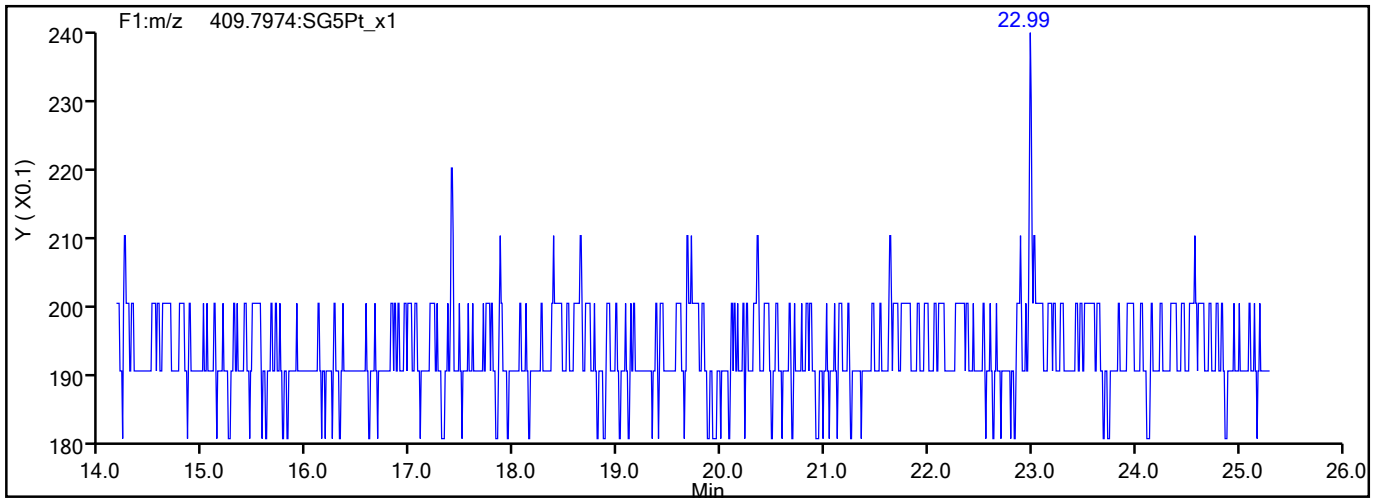

790491

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

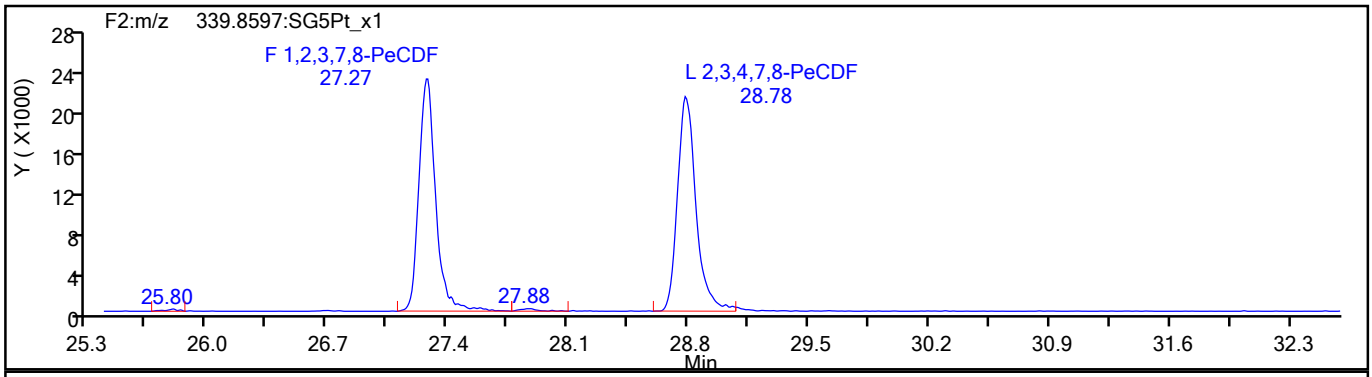

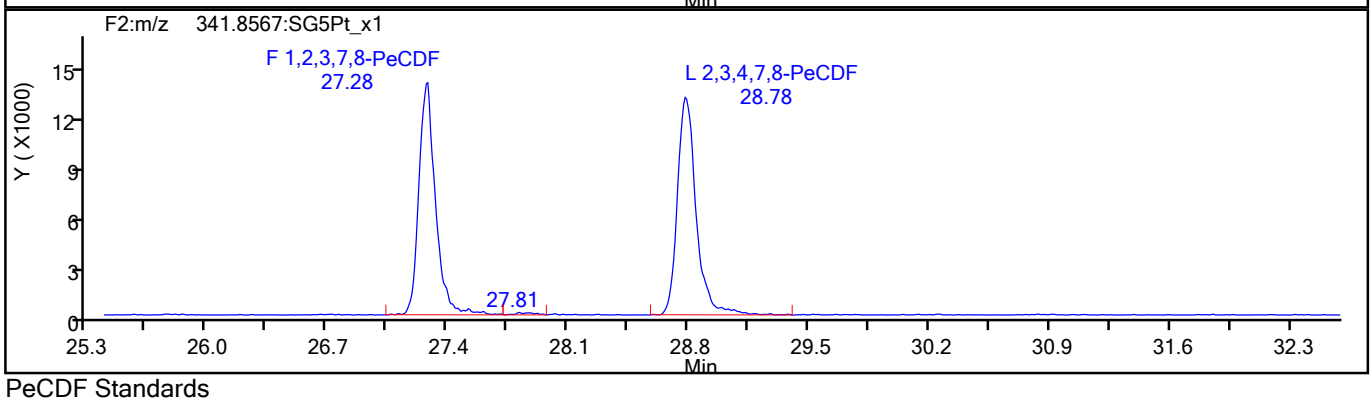

PeCDF Standards

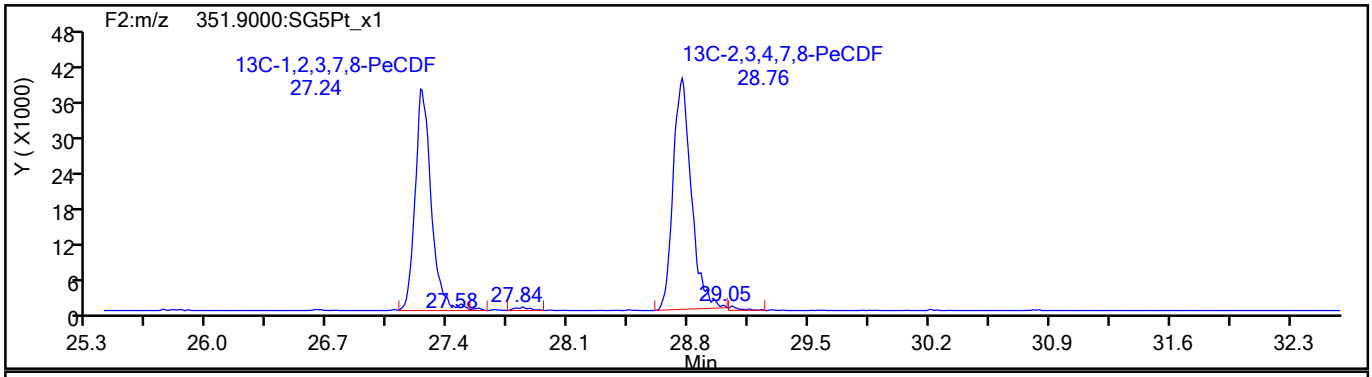

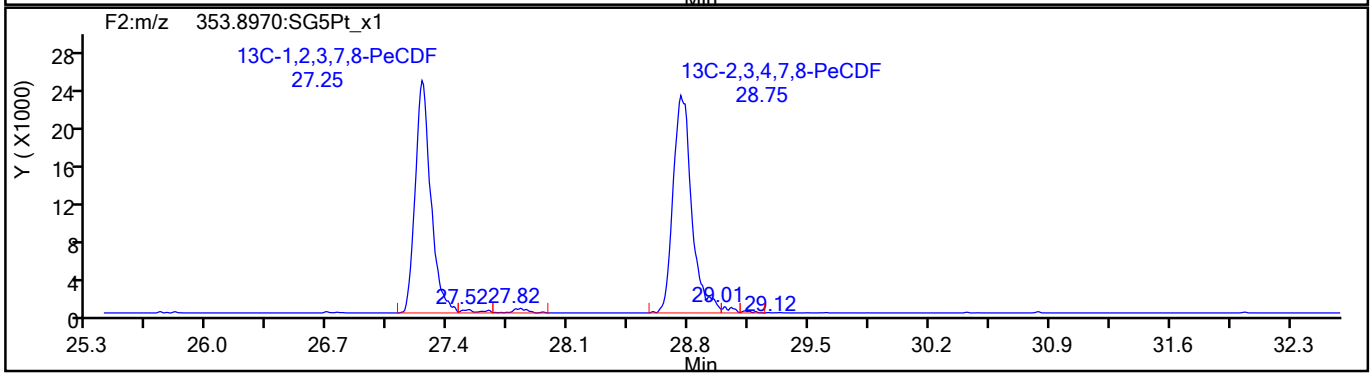

790492

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

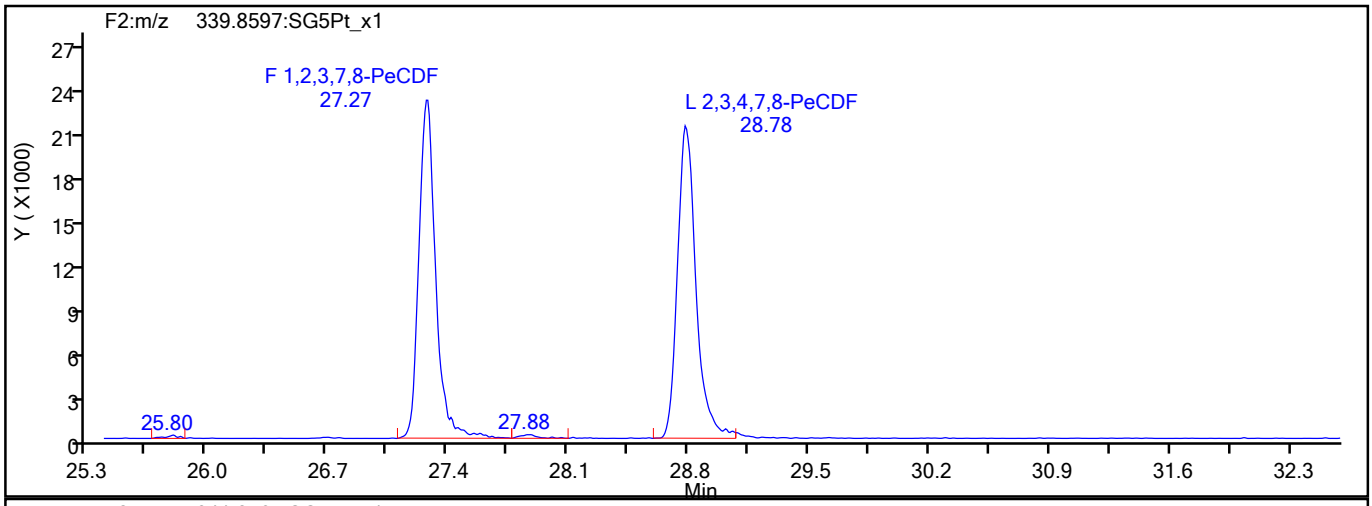

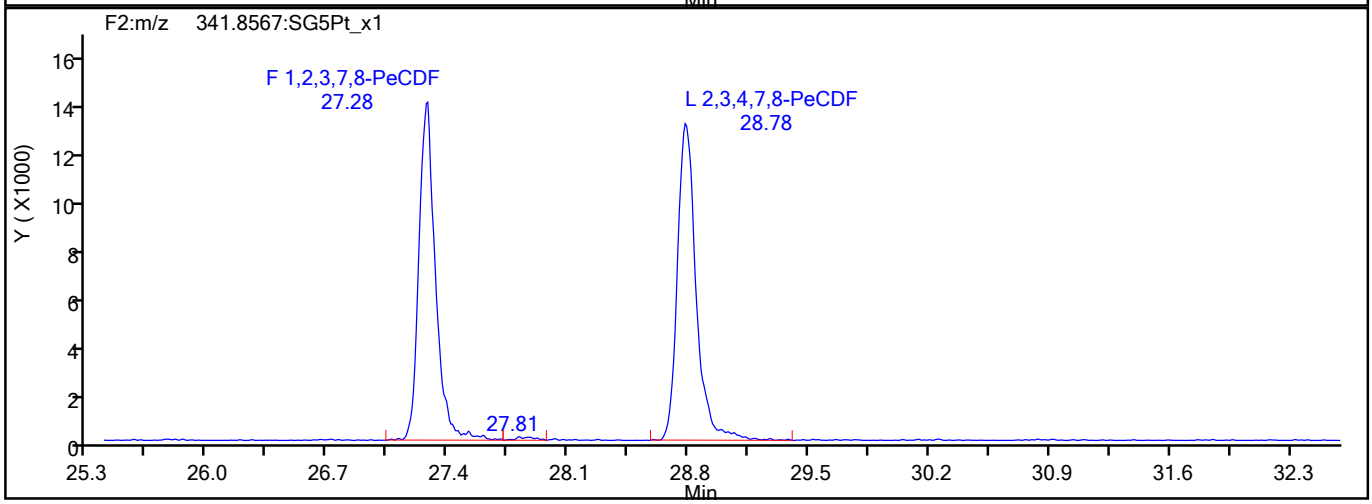

PeCDF Interference Mass

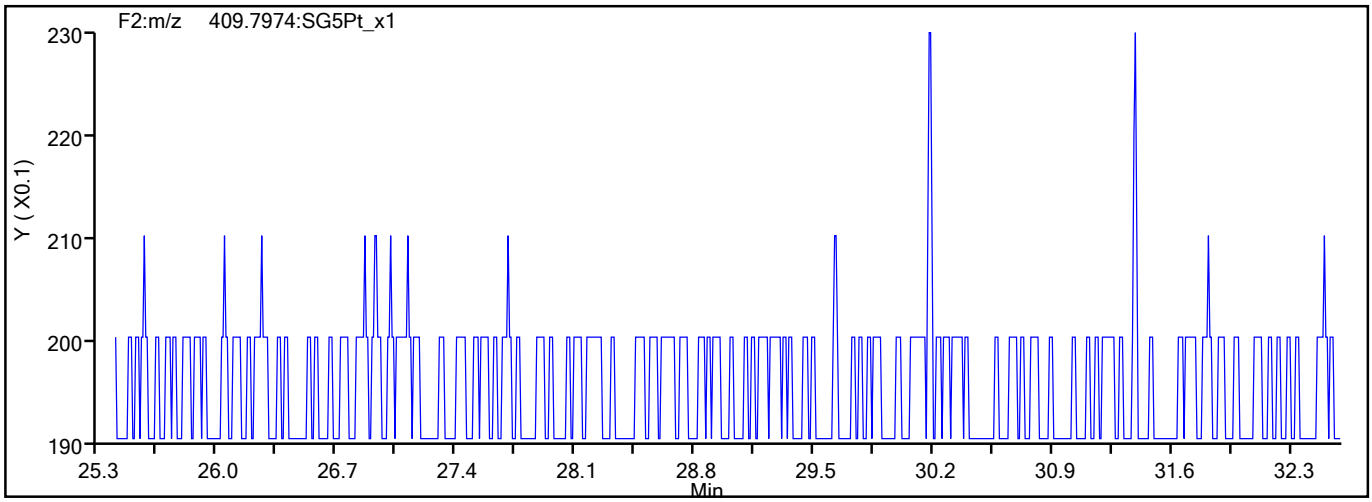

790493

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

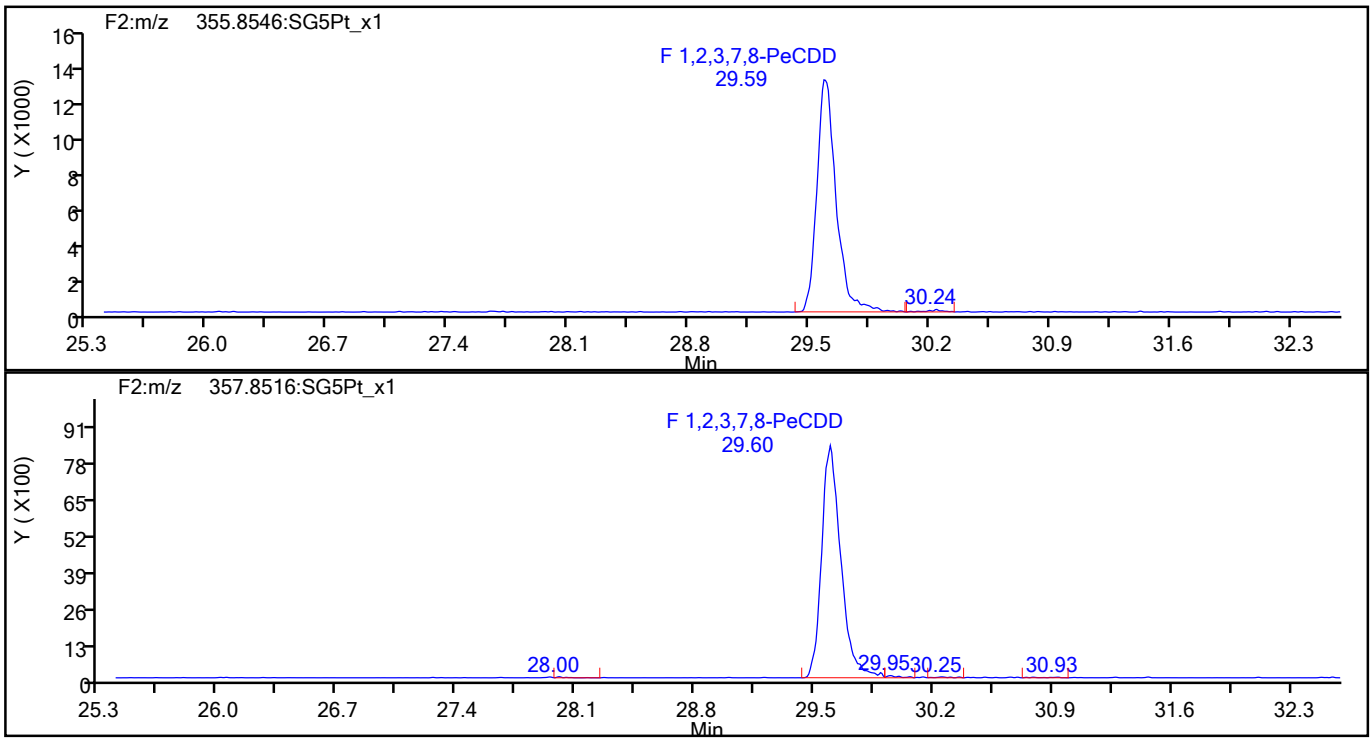

PeCDD Standards

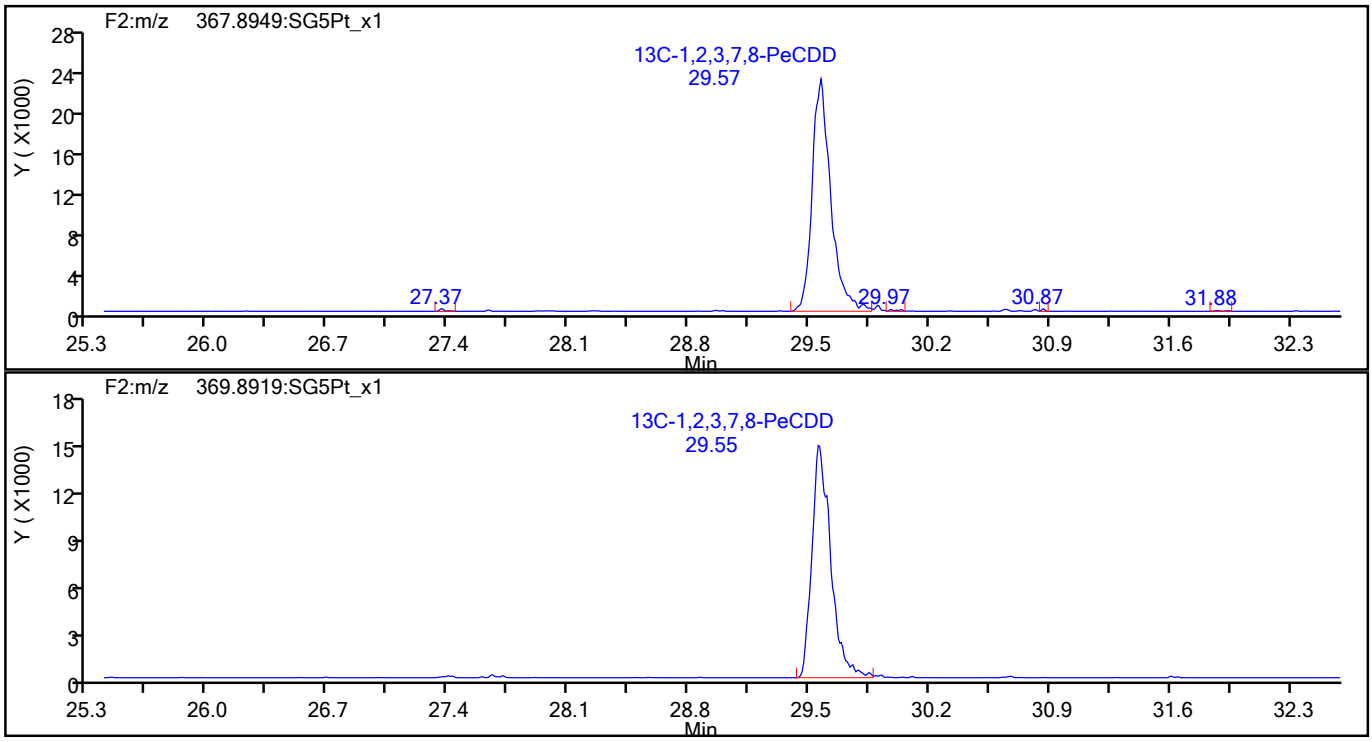

790494

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

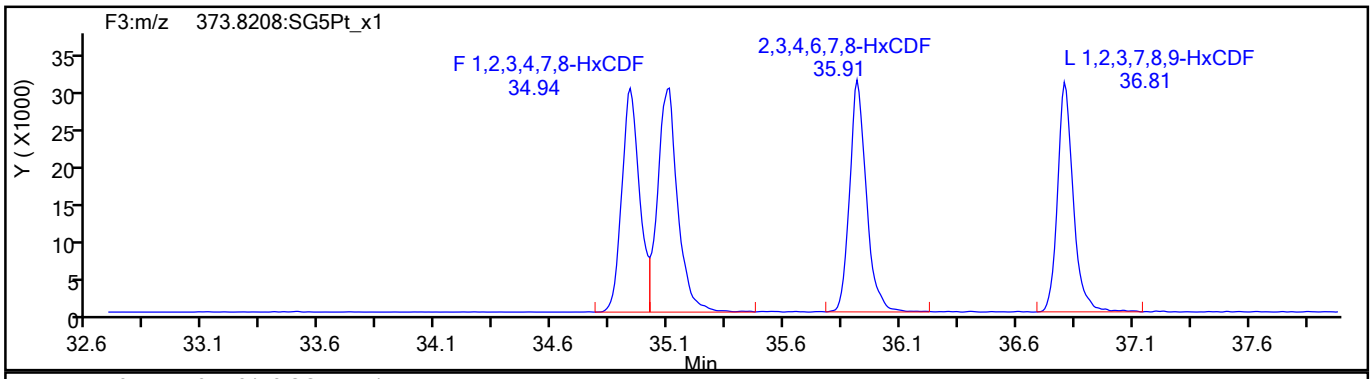

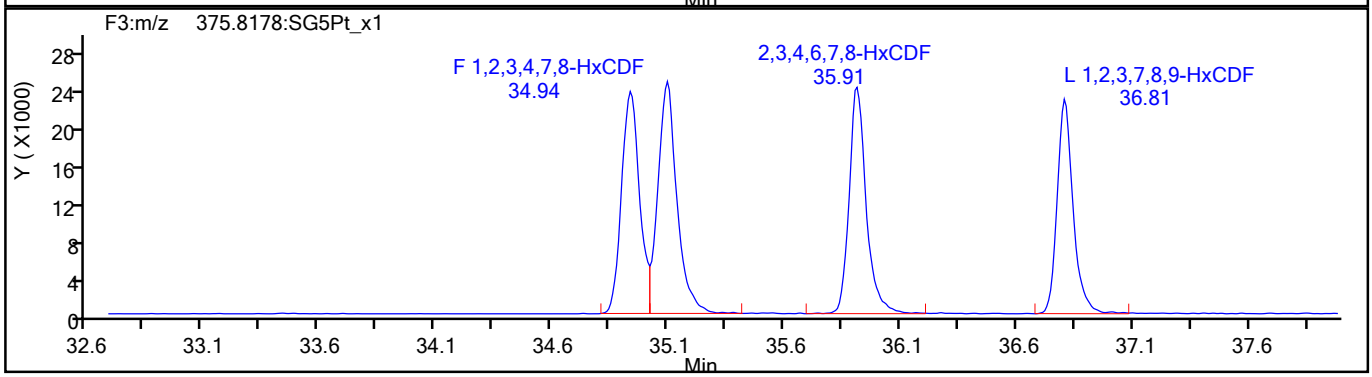

HxCDF Standards

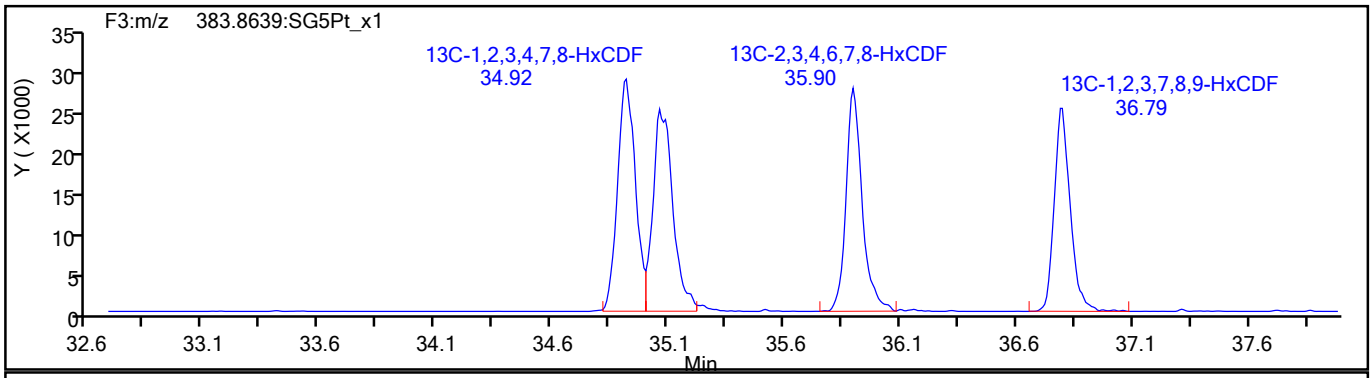

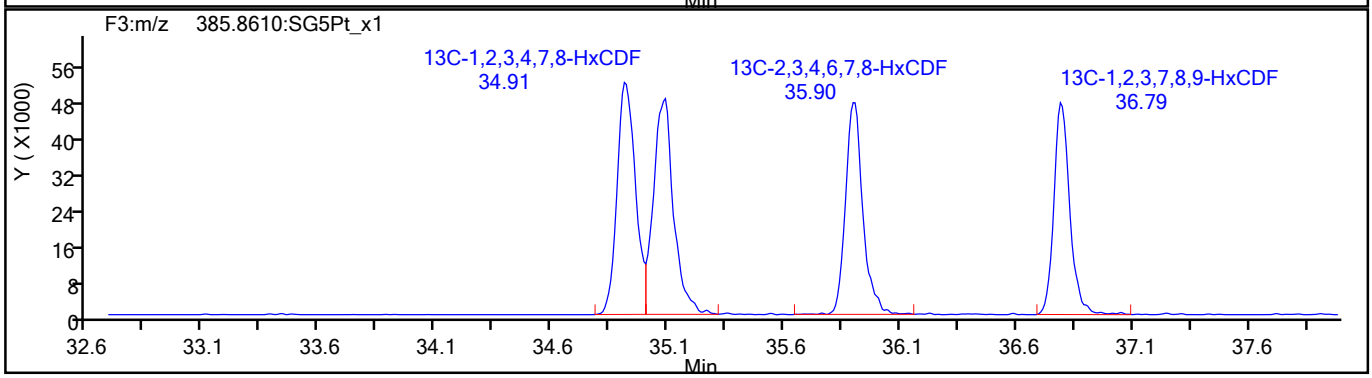

790495

Report Date: 20-Aug-2021 09:46:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

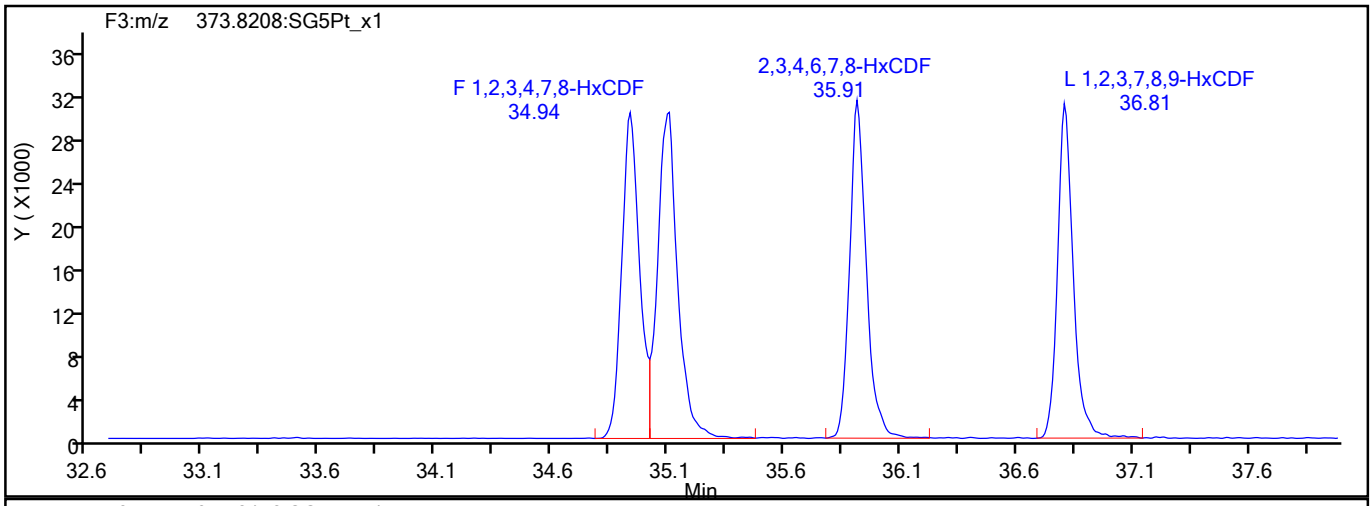

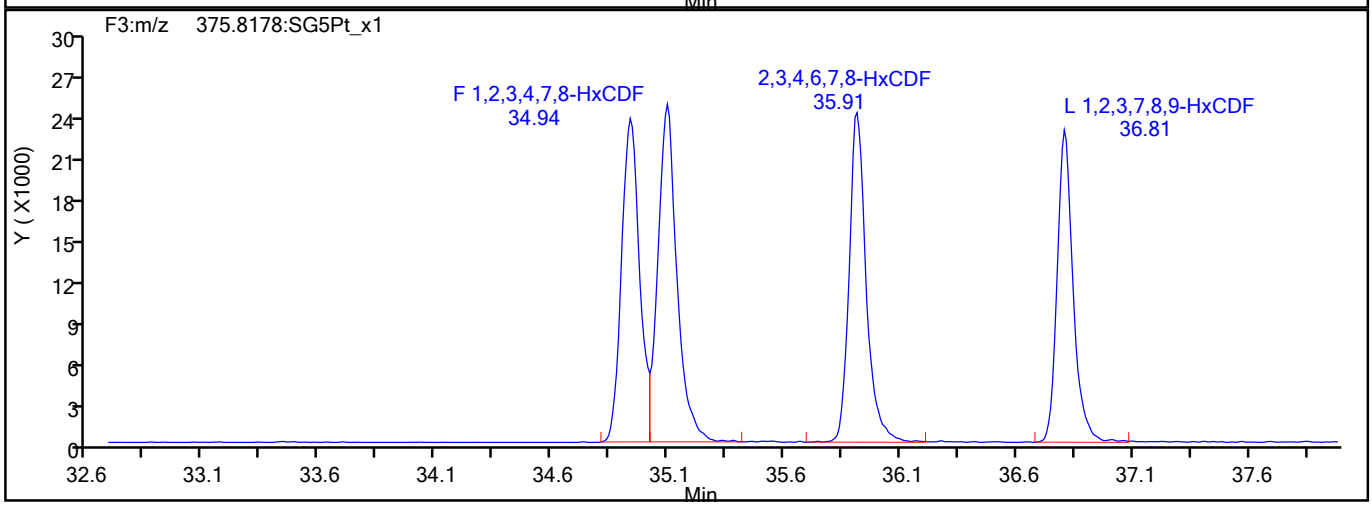

HxCDF Interference Mass

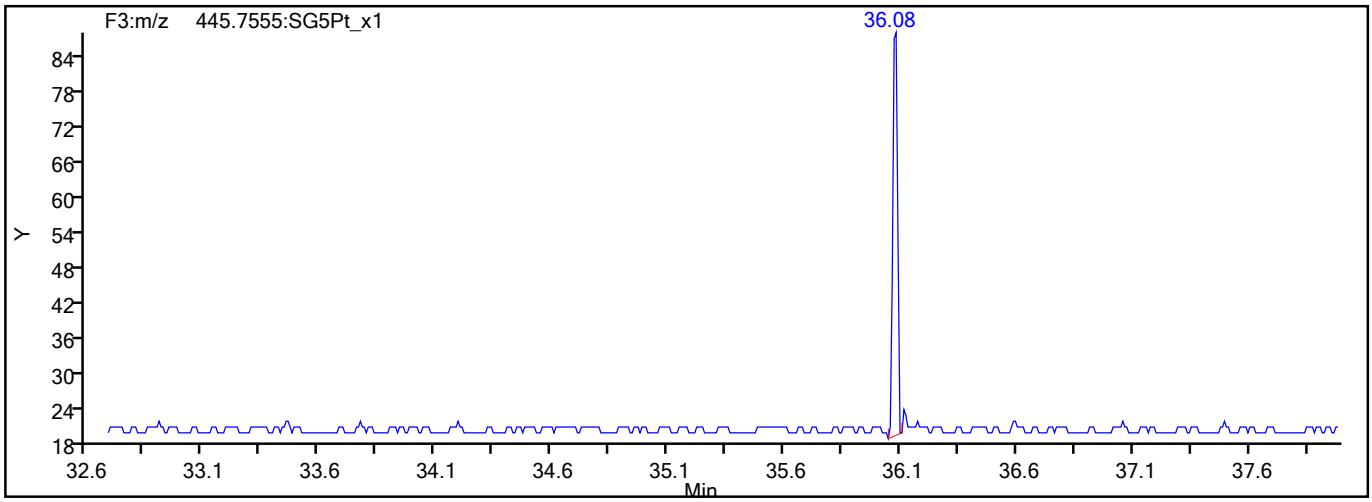

790496

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HxCDD

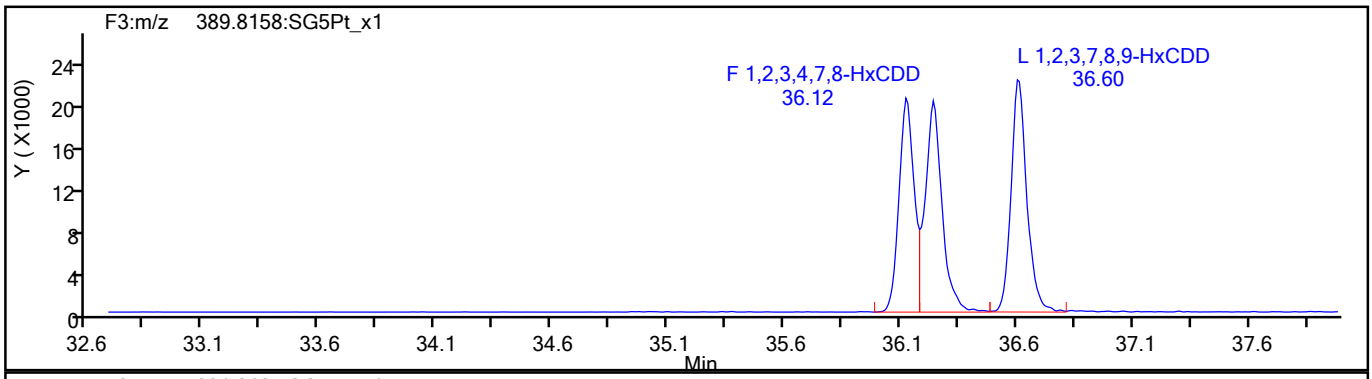

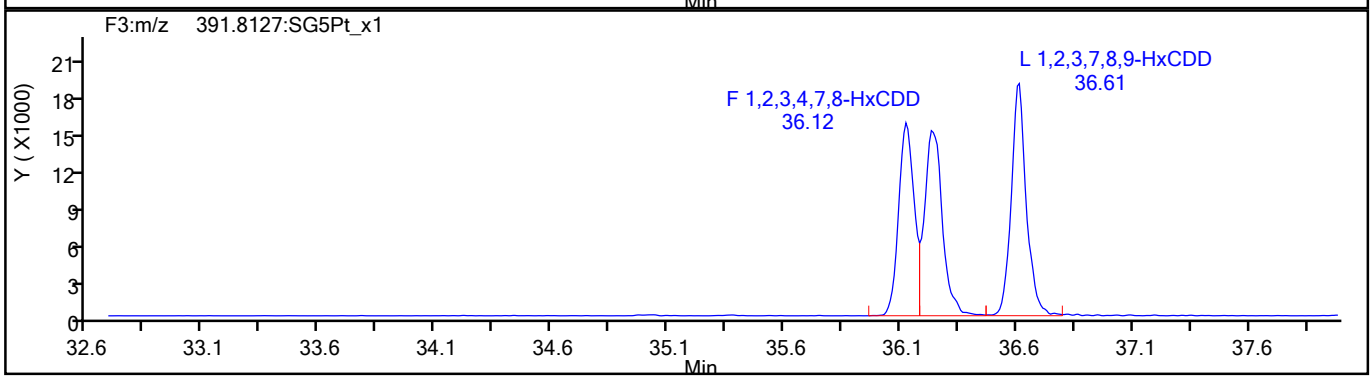

HxCDD Standards

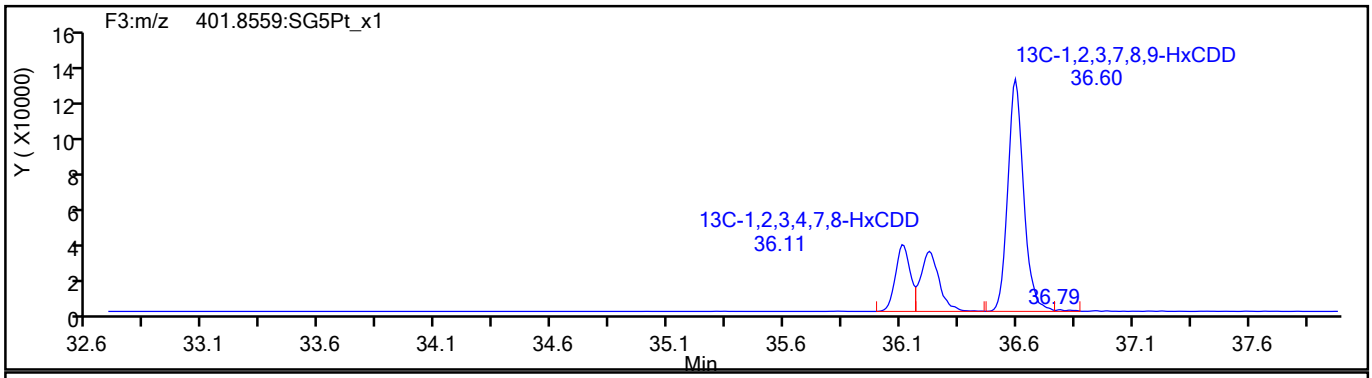

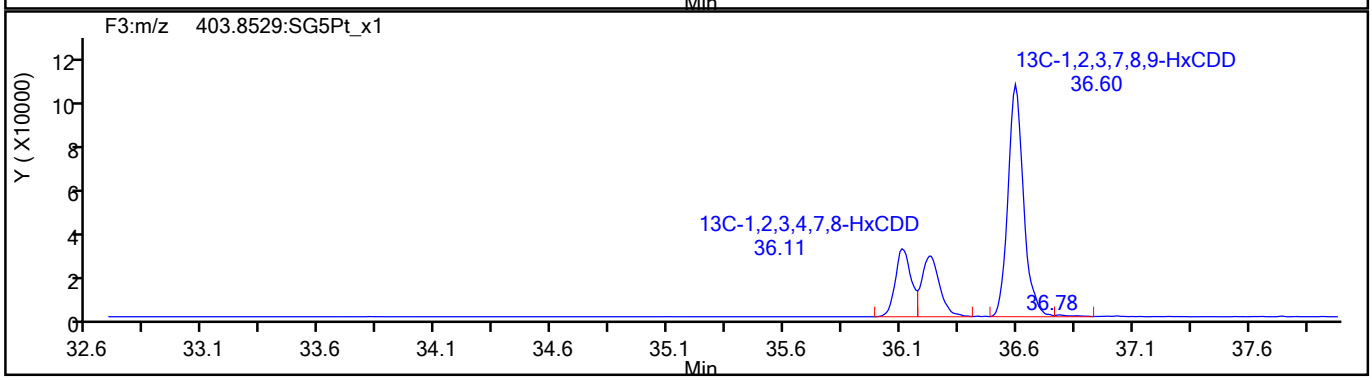

790497

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDF

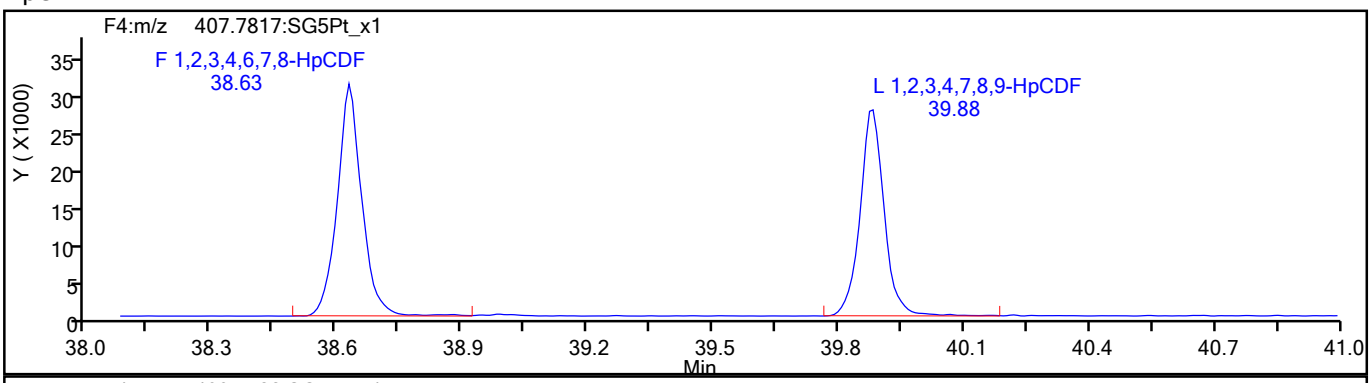

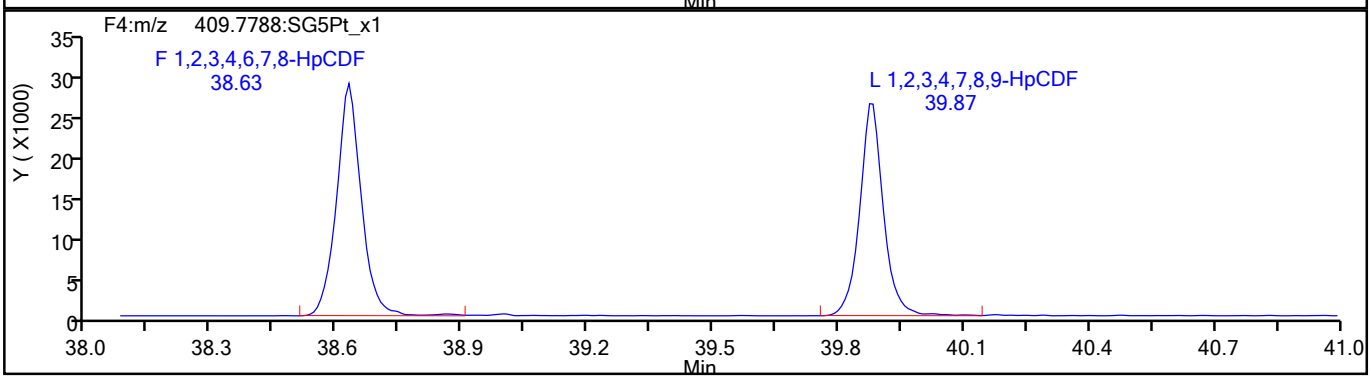

HpCDF Standards

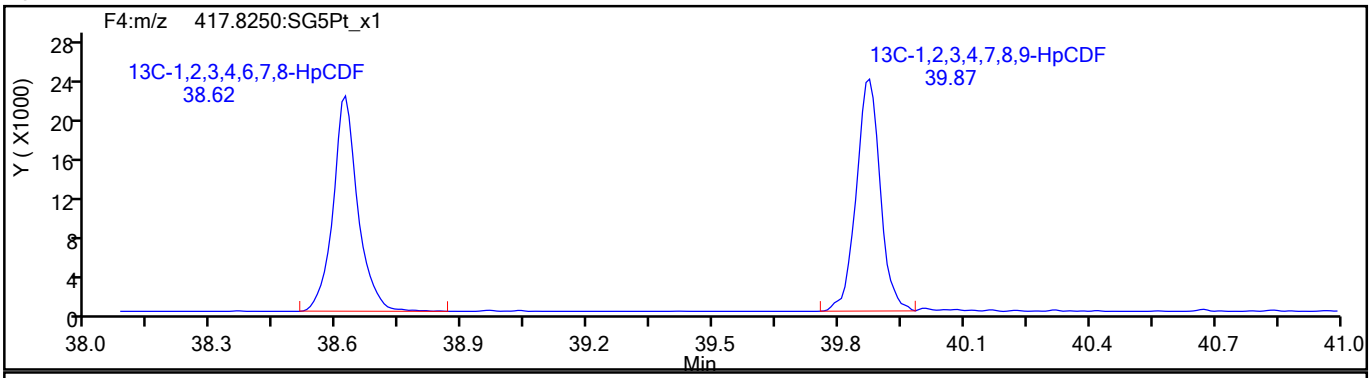

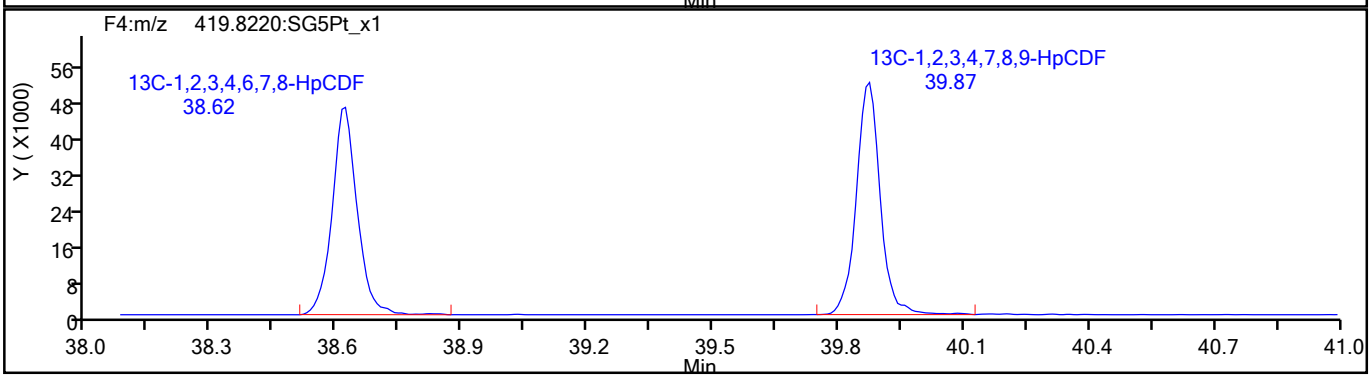

790498

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HpCDF

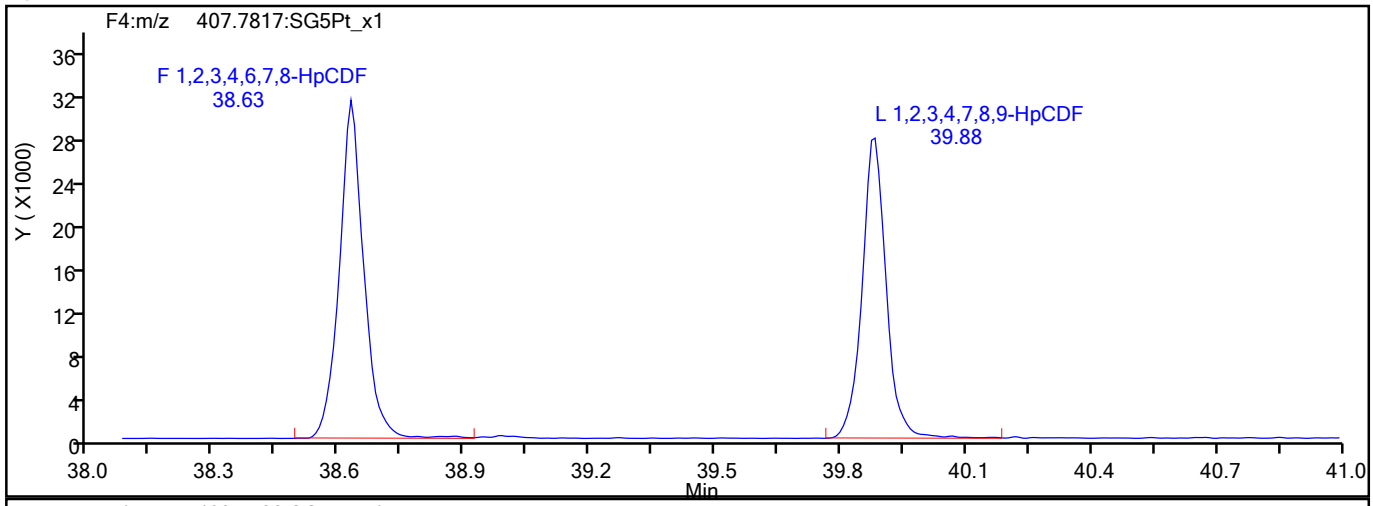

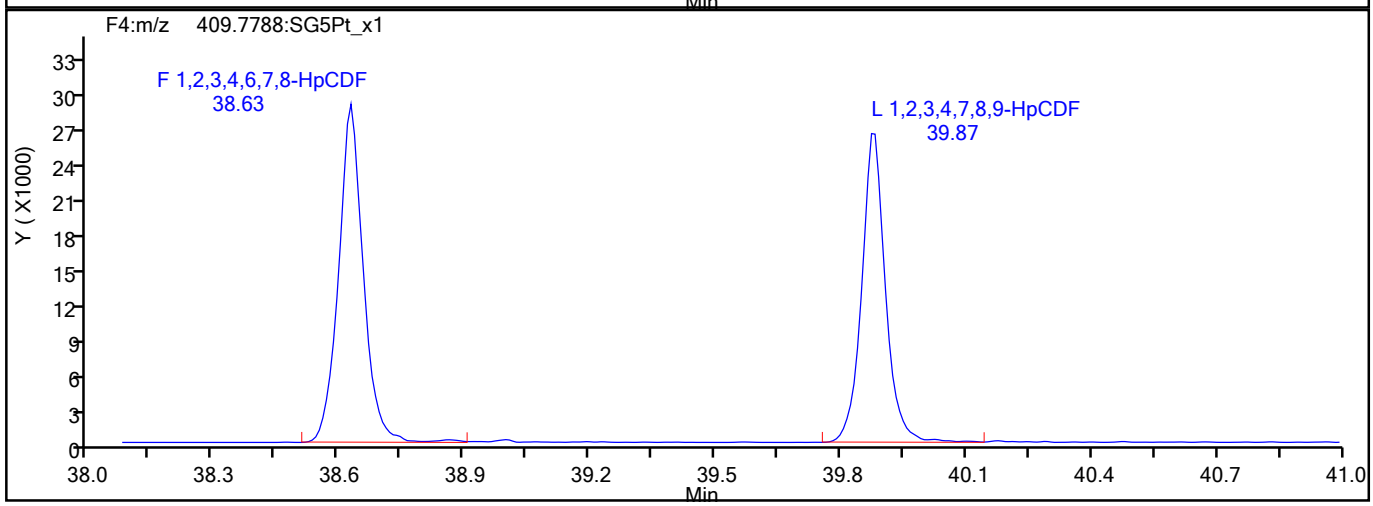

HpCDF Interference Mass

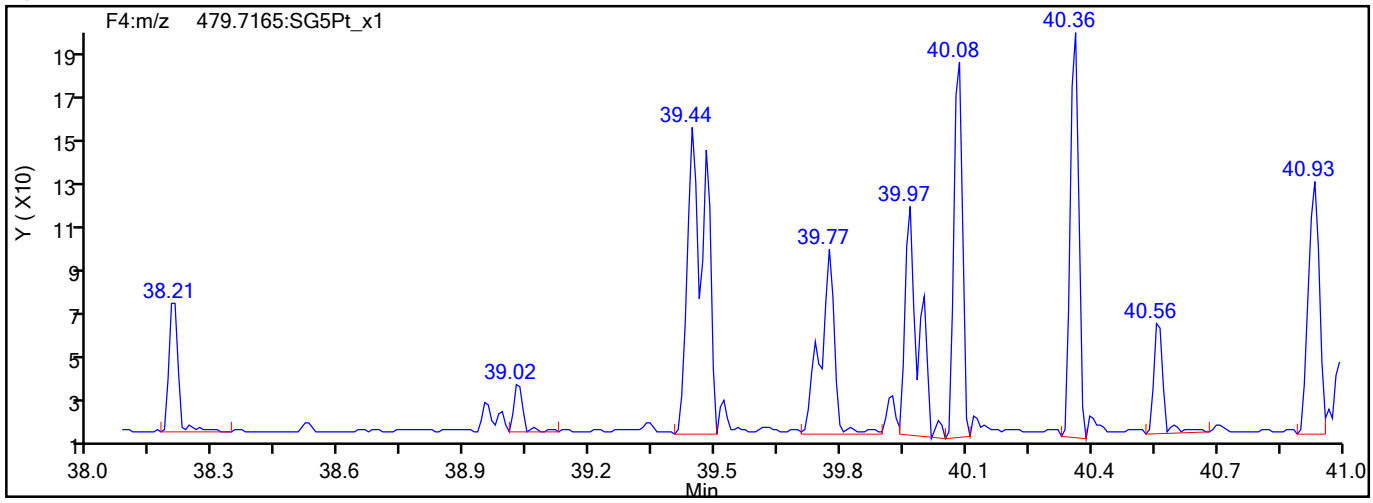

790499

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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HpCDD

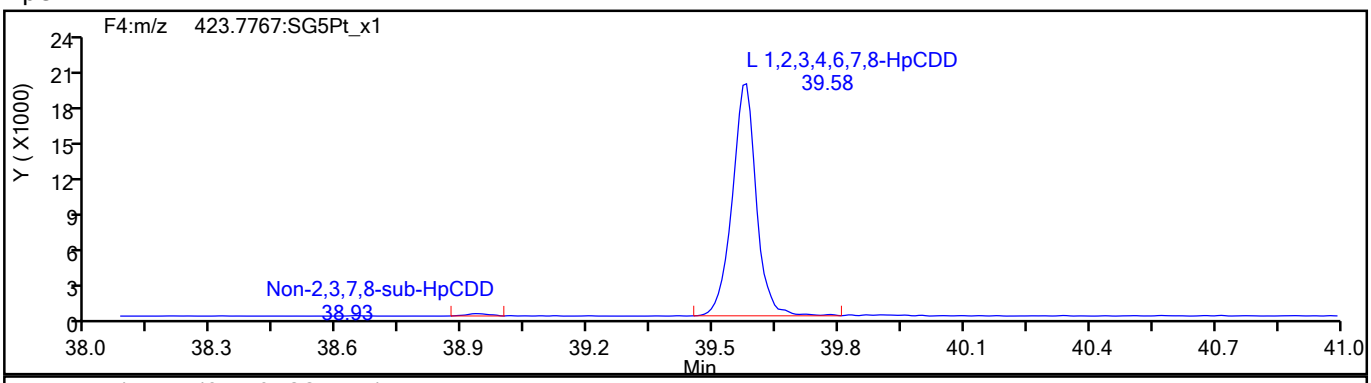

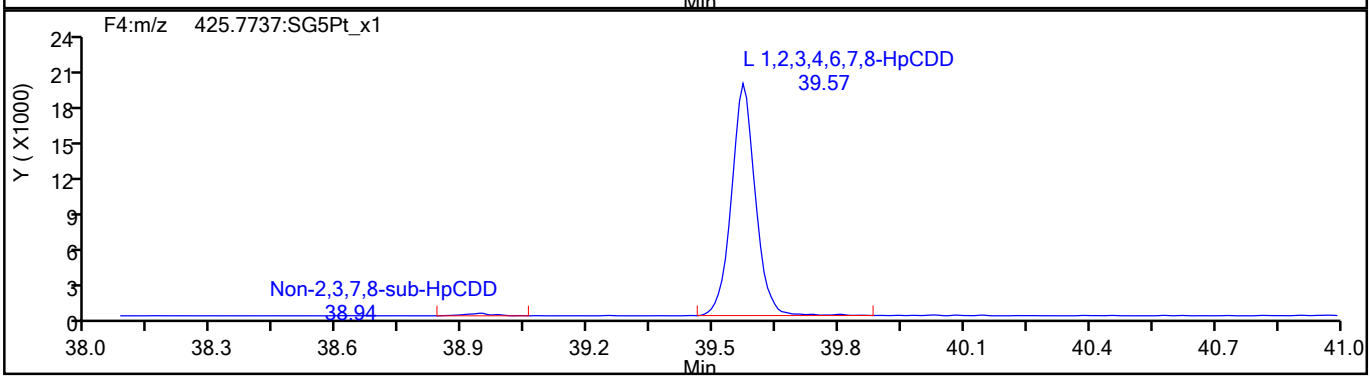

HpCDD Standards

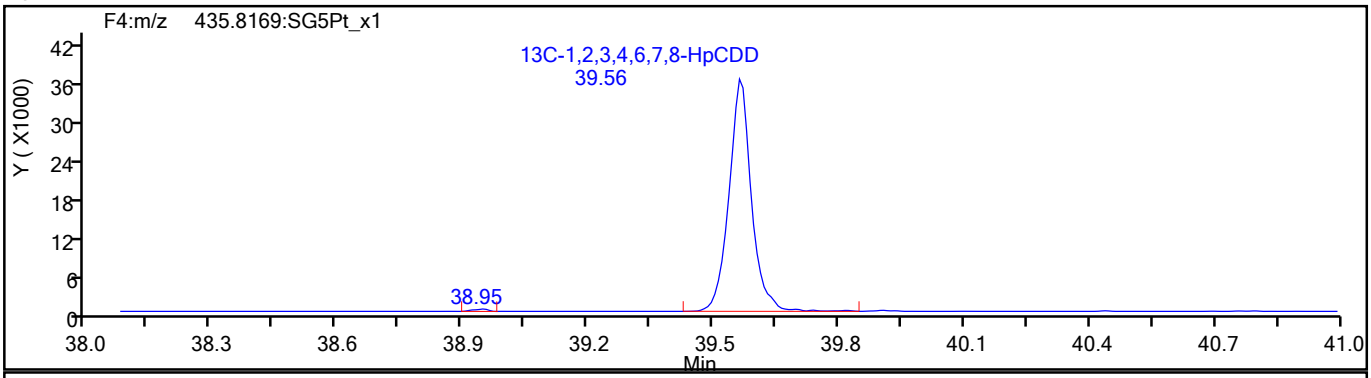

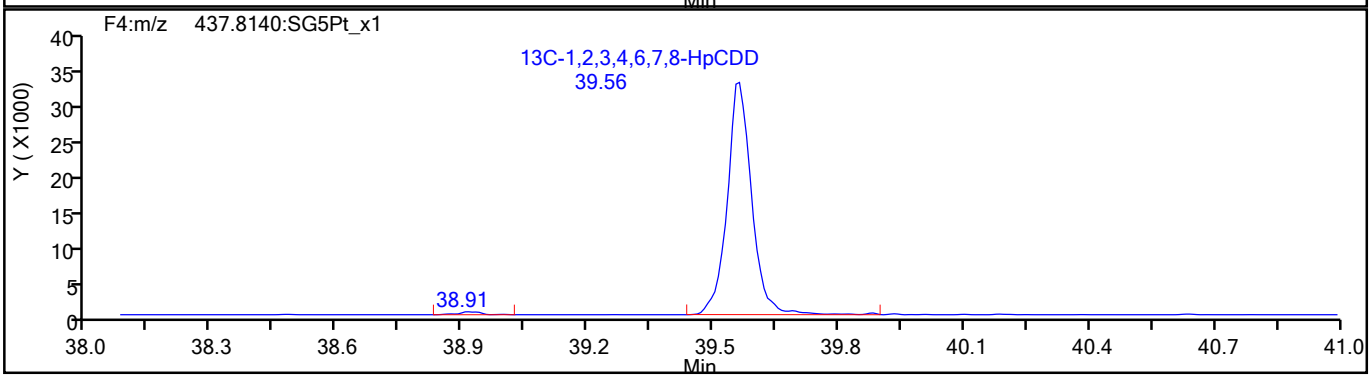

790500

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

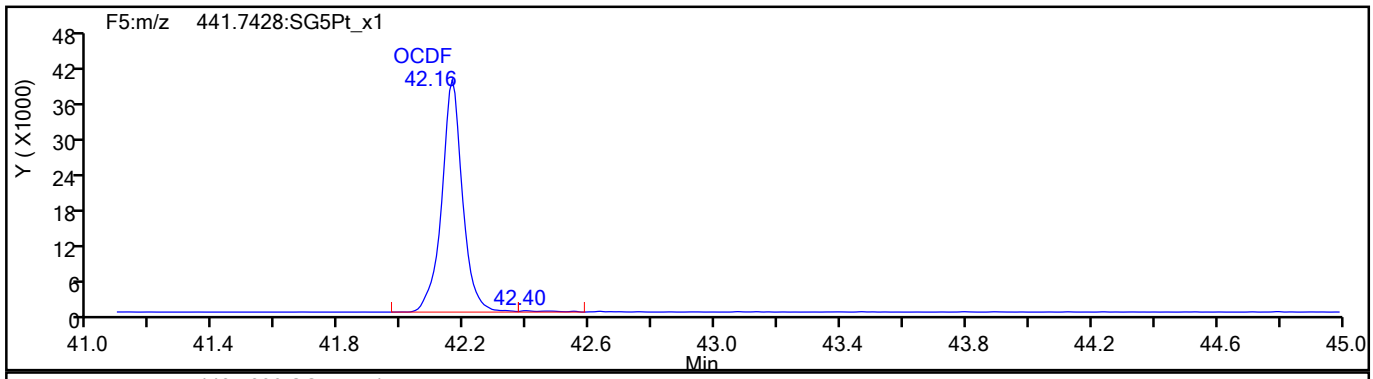

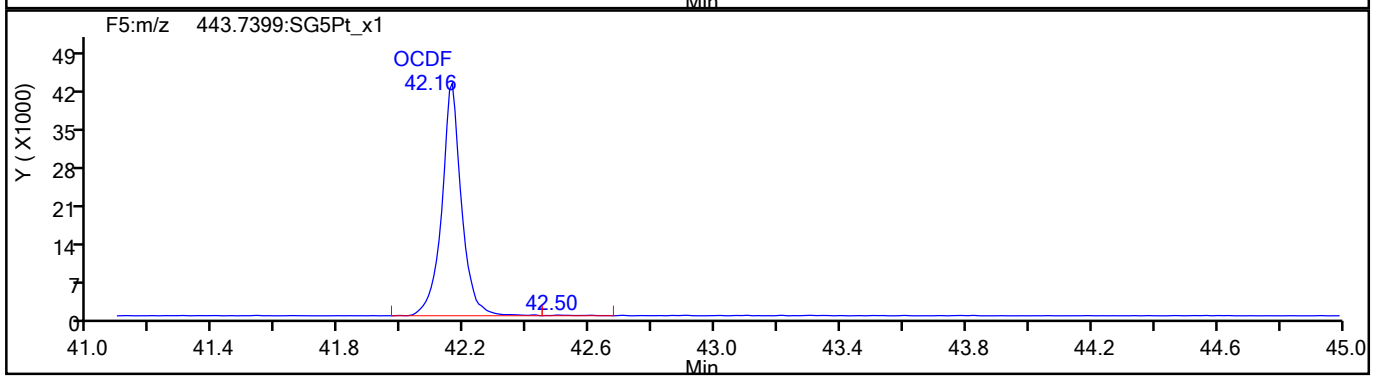

OCDF Standards

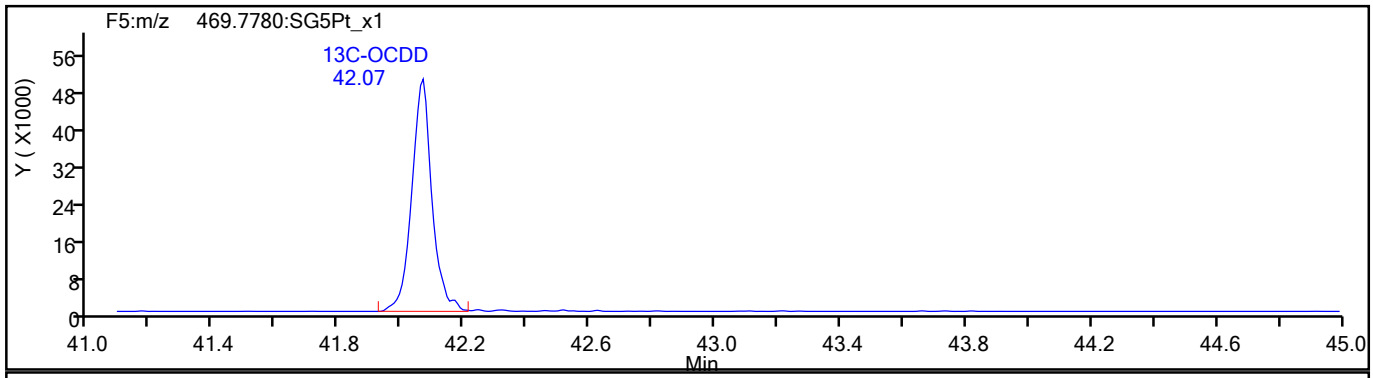

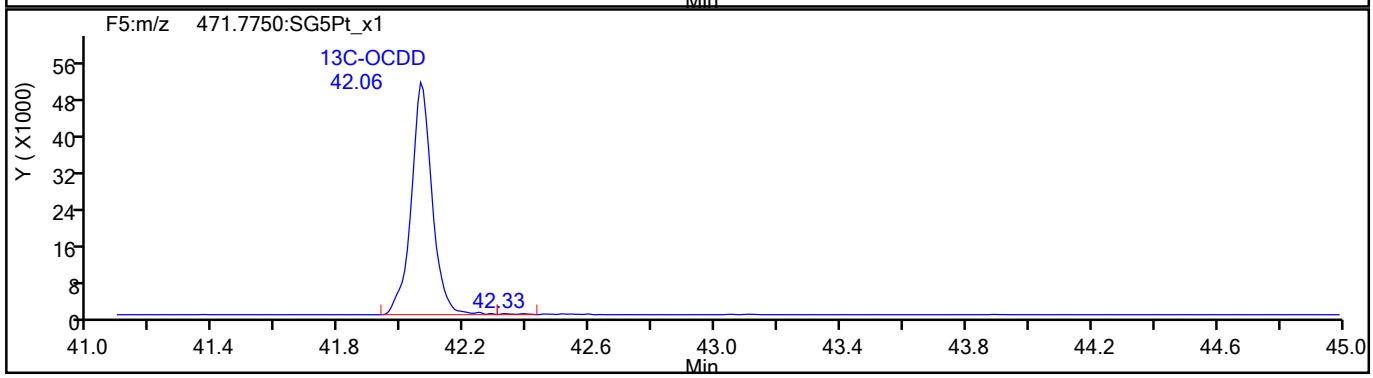

790501

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDF

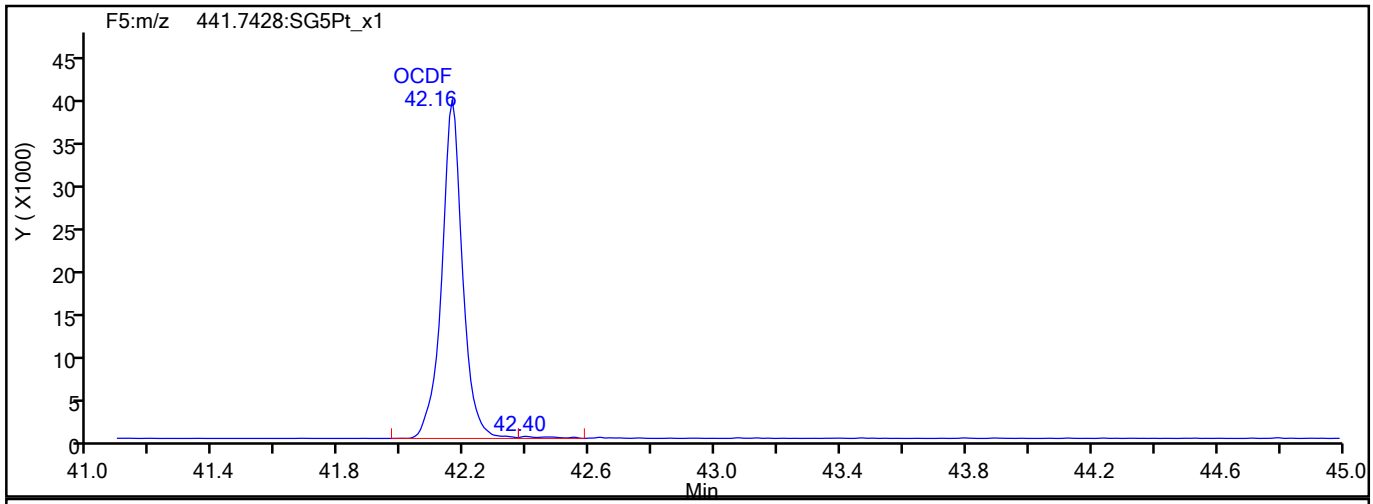

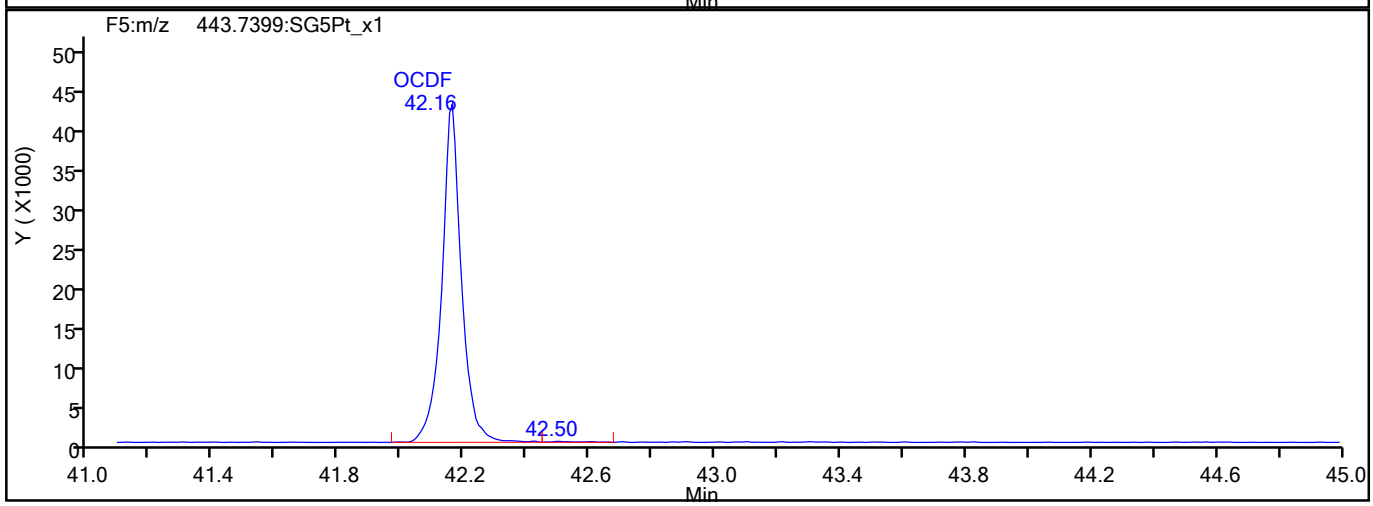

OCDF Interference Mass

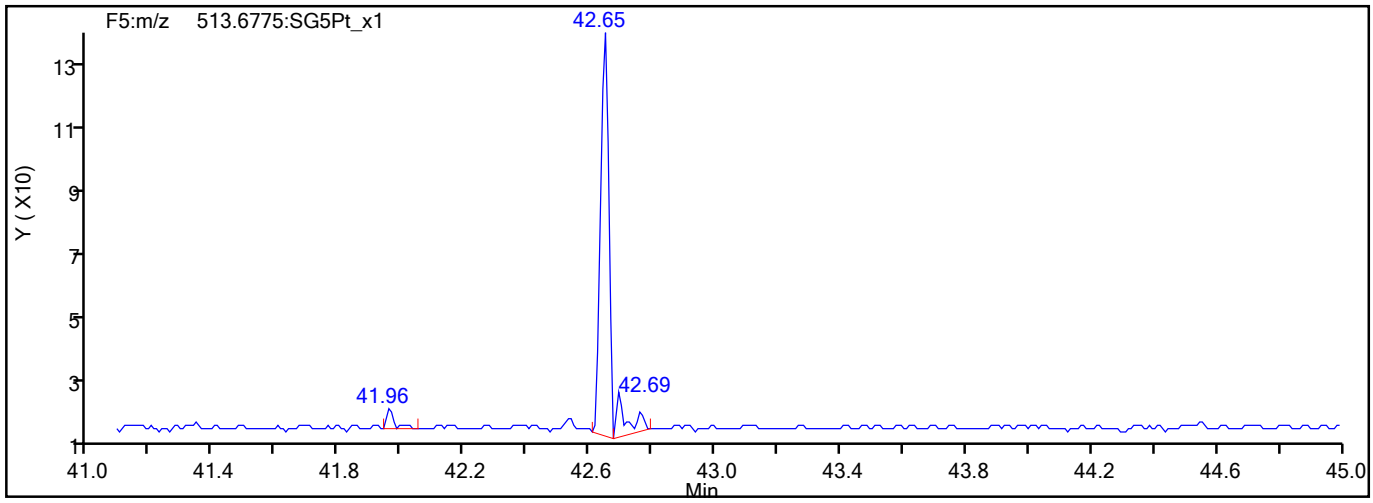

790502

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
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OCDD

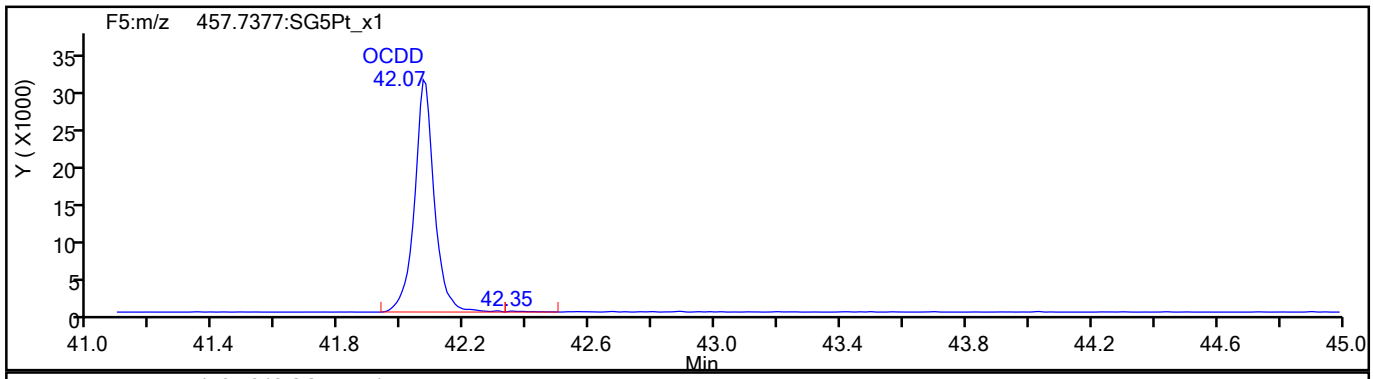

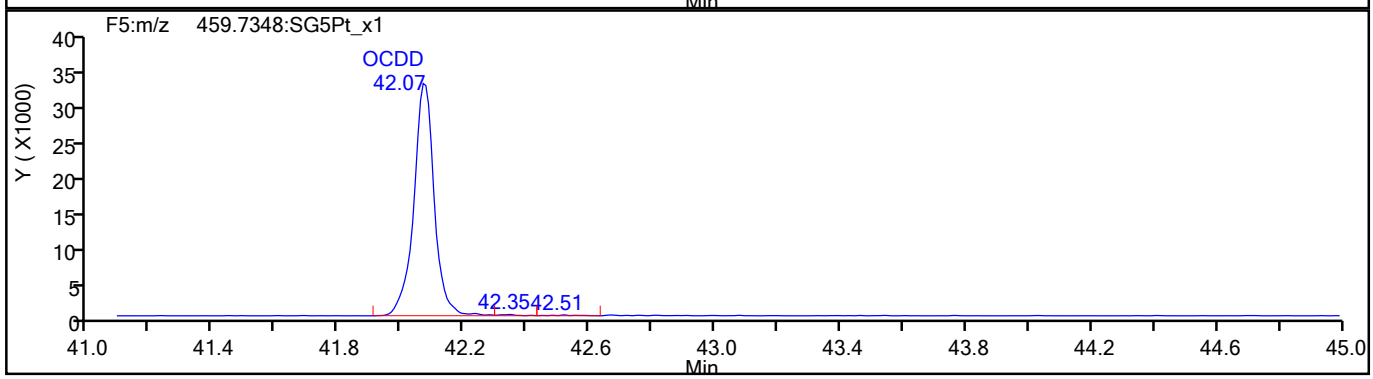

OCDD Standards

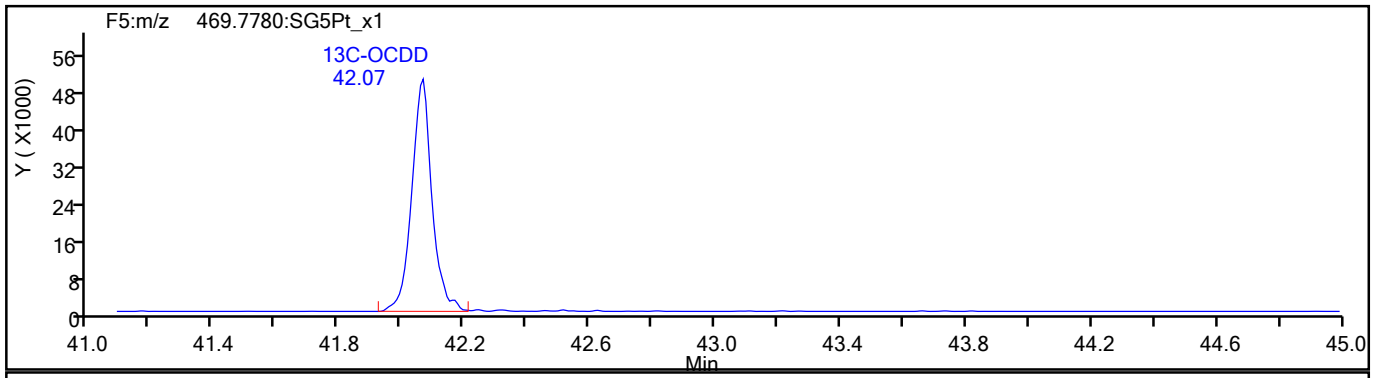

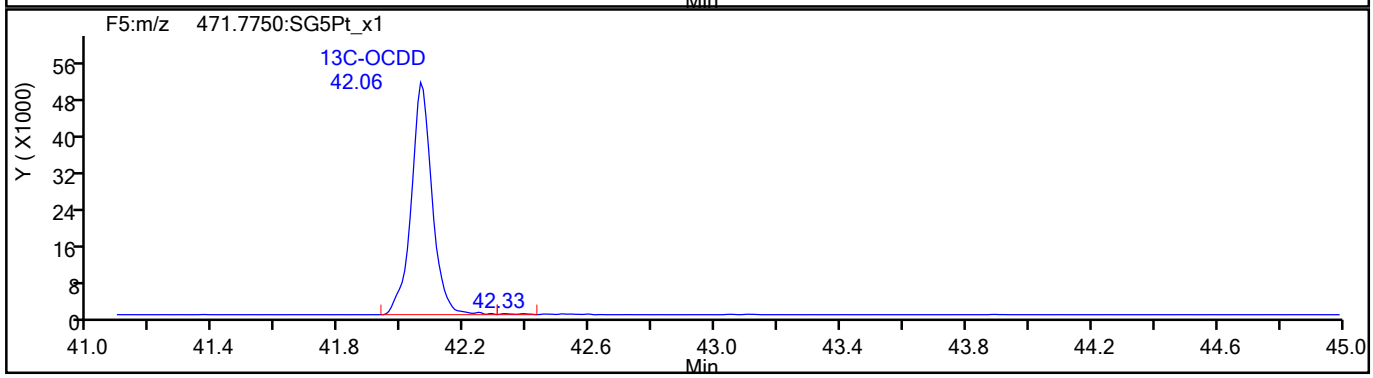

790503

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

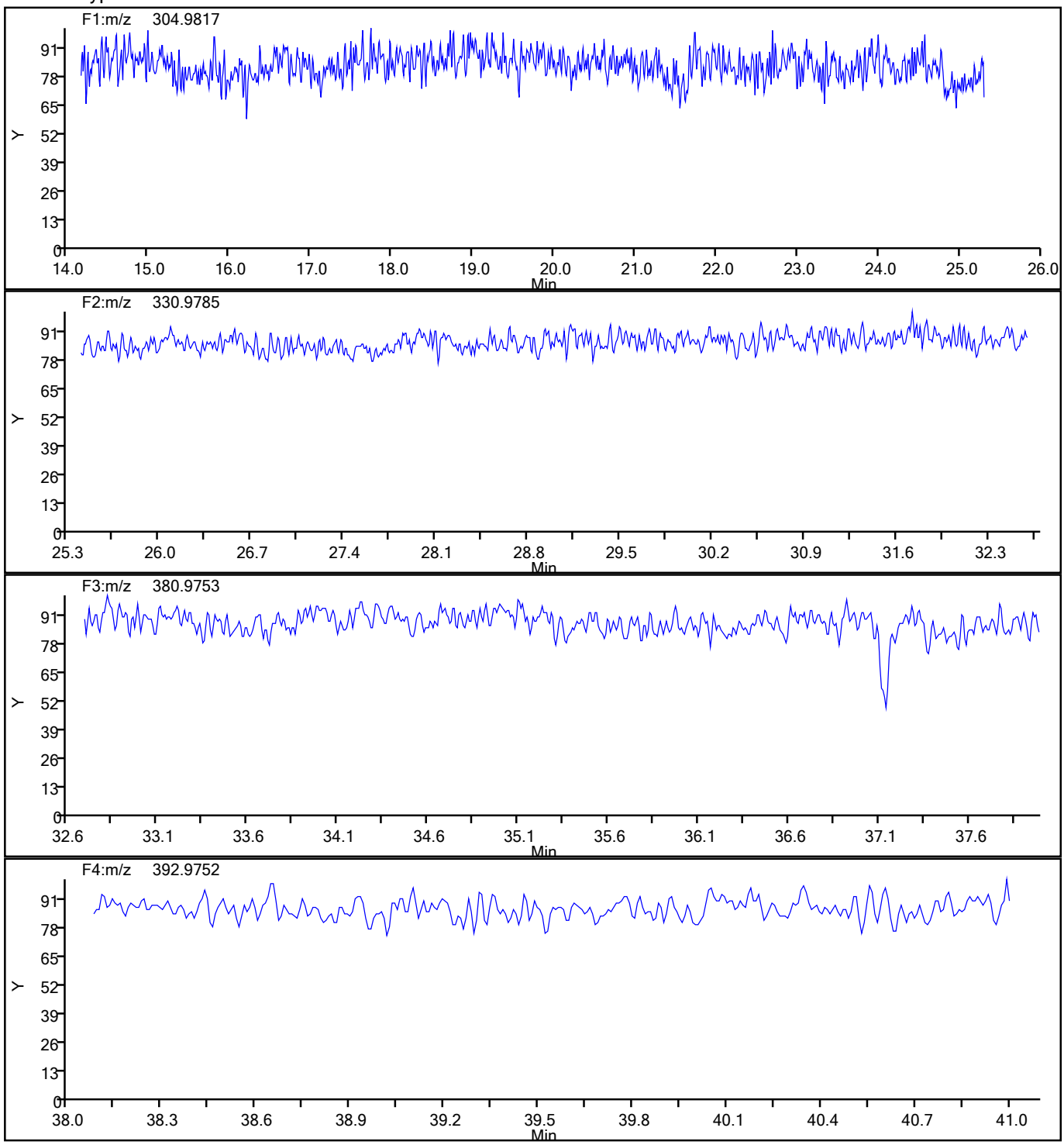

790504

Report Date: 20-Aug-2021 09:46:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_51.d		
Injection Date:	19-Aug-2021 04:43:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	517462	Sample Line#:	47
Column Type:	DB-5	Column Dia:	0.32 mm

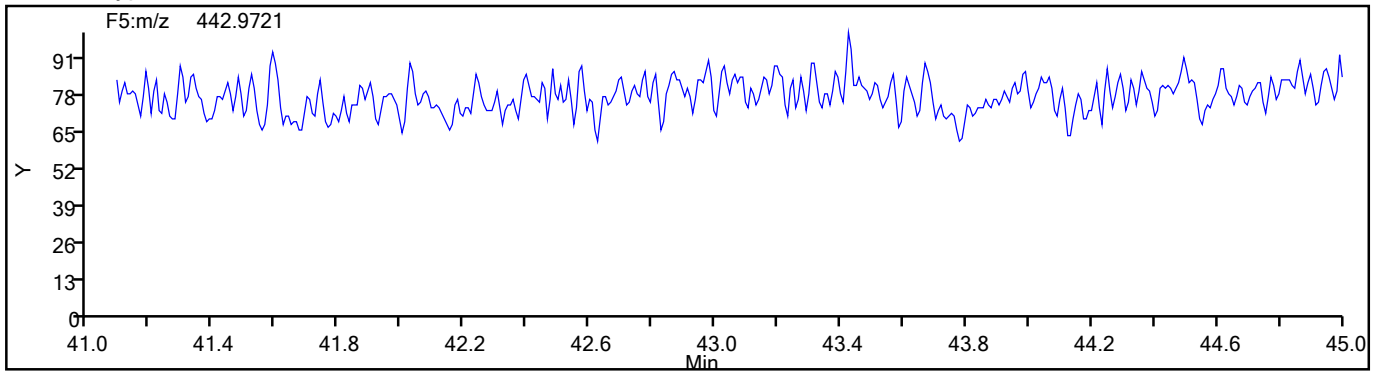

790505

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76901-A-2-B MS
Matrix: Sediment
Lab File ID: 17au21dfs1_53.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.08(g)
Date Analyzed: 08/19/2021 06:18
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	73.3		1.4	0.35
40321-76-4	1,2,3,7,8-PeCDD	151		6.8	0.56
57117-41-6	1,2,3,7,8-PeCDF	161		6.8	0.70
57117-31-4	2,3,4,7,8-PeCDF	143		6.8	0.71
39227-28-6	1,2,3,4,7,8-HxCDD	132		6.8	0.67
57653-85-7	1,2,3,6,7,8-HxCDD	140		6.8	0.82
19408-74-3	1,2,3,7,8,9-HxCDD	152		6.8	0.68
70648-26-9	1,2,3,4,7,8-HxCDF	158		6.8	0.52
57117-44-9	1,2,3,6,7,8-HxCDF	154		6.8	0.57
72918-21-9	1,2,3,7,8,9-HxCDF	155		6.8	0.52
60851-34-5	2,3,4,6,7,8-HxCDF	160		6.8	0.51
35822-46-9	1,2,3,4,6,7,8-HpCDD	197		6.8	0.55
67562-39-4	1,2,3,4,6,7,8-HpCDF	156		6.8	0.68
55673-89-7	1,2,3,4,7,8,9-HpCDF	144		6.8	0.70
3268-87-9	OCDD	1650		14	1.3
39001-02-0	OCDF	279		14	0.40
41903-57-5	Total TCDD	73.3		1.4	0.35
30402-14-3	Total TCDF	363		1.4	0.78
36088-22-9	Total PeCDD	153		6.8	0.56
30402-15-4	Total PeCDF	308		6.8	0.71
34465-46-8	Total HxCDD	441		6.8	0.72
55684-94-1	Total HxCDF	626		6.8	0.53
37871-00-4	Total HpCDD	270		6.8	0.55
38998-75-3	Total HpCDF	303		6.8	0.69

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Client Sample ID: Lab Sample ID: 320-76901-A-2-B MS

Matrix: Sediment Lab File ID: 17au21dfs1_53.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10.08(g) Date Analyzed: 08/19/2021 06:18

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 27.3 GPC Cleanup:(Y/N) N

Analysis Batch No.: 517462 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	41		25-164
89059-46-1	13C-2,3,7,8-TCDF	38		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	39		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	39		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	43		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	44		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	39		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	50		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	46		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	40		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	41		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	47		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	46		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	50		26-138
114423-97-1	13C-OCDD	42		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	50		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d
Lims ID: 320-76901-A-2-B MS
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MS
Inject. Date: 19-Aug-2021 06:18:00 ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-2-b ms
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:55:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:30:02

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.364	1273344	0.78	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.393	657638	0.87	1.3459	38.4	38.4	0.1400	0.1400	38.37	
2,3,7,8-TCDF	20.419	597024	0.81	1.0802	84.0	84.0	0.2866	0.2866	840	
A Non-2,3,7,8-sub-TCDF	19.878	347294	0.83	1.0802	48.9	48.9	0.2866	30.5	0.00	
S Total TCDF					132.9	132.9	0.2866	0.2866		
D 13C-2,3,7,8-TCDD	21.733	487963	0.83	0.9317	41.1	41.1	0.1480	0.1480	41.13	
2,3,7,8-TCDD	21.776	140903	0.74	1.0753	26.9	26.9	0.1300	0.1300	269	
$ 37Cl4-2,3,7,8-TCDD	21.759	254778		1.0083	19.8	19.8	0.0318	0.0318	49.61	
A Non-2,3,7,8-sub-TCDD	20.707						0.1300	0.6775		RQU
S Total TCDD					26.9	26.9	0.1300	0.1300		
D 13C-1,2,3,7,8-PeCDF	27.230	561807	1.65	1.1405	38.7	38.7	0.1258	0.1258	38.69	
1,2,3,7,8-PeCDF	27.255	349012	1.61	1.0543	58.9	58.9	0.2580	0.2580	118	
D 13C-2,3,4,7,8-PeCDF	28.746	609085	1.62	1.1253	42.5	42.5	0.1275	0.1275	42.51	
2,3,4,7,8-PeCDF	28.754	320708	1.61	1.0079	52.2	52.2	0.2591	0.2591	104	
A F1 PeCDFs	24.648						0.007698	0.0368		RQU
A Non-2,3,7,8-sub-PeCDF	28.125	10251	1.55	1.0311	1.908	1.698	0.2584	1.066	0.00	RQ
S Total PeCDF					113.1	112.9	0.2586	0.2586		RQ
D 13C-1,2,3,7,8-PeCDD	29.554	354202	1.64	0.7165	38.8	38.8	0.0448	0.0448	38.82	
1,2,3,7,8-PeCDD	29.571	204714	1.57	1.0465	55.2	55.2	0.2061	0.2061	110	
A Non-2,3,7,8-sub-PeCDD	28.489	3692	1.55	1.0465	1.291	0.996	0.2061	0.4360	0.00	RQ
S Total PeCDD					56.5	56.2	0.2061	0.2061		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.908	518913	0.58	0.9648	49.5	49.5	0.1443	0.1443	49.52	
1,2,3,4,7,8-HxCDF	34.925	344823	1.26	1.1474	57.9	57.9	0.1913	0.1913	116	
D 13C-1,2,3,6,7,8-HxCDF	35.051	534673	0.53	1.0708	46.0	46.0	0.1300	0.1300	45.97	
1,2,3,6,7,8-HxCDF	35.085	366671	1.34	1.2178	56.3	56.3	0.2085	0.2085	113	
D 13C-2,3,4,6,7,8-HxCDF	35.885	469172	0.54	1.0413	41.5	41.5	0.1337	0.1337	41.48	
2,3,4,6,7,8-HxCDF	35.902	333949	1.29	1.2145	58.6	58.6	0.1868	0.1868	117	
D 13C-1,2,3,7,8,9-HxCDF	36.778	420011	0.52	0.9731	39.7	39.7	0.1431	0.1431	39.74	
1,2,3,7,8,9-HxCDF	36.795	295518	1.27	1.2401	56.7	56.7	0.1910	0.1910	113	
A Non-2,3,7,8-sub-HxCDF	35.028						0.1938	0.1938		
S Total HxCDF					229.6	229.6	0.1944	0.1944		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.584	1086089	1.27	1.8E+04	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	36.096	363397	1.37	0.7587	44.1	44.1	0.1388	0.1388	44.10	
1,2,3,4,7,8-HxCDD	36.113	186137	1.26	1.0608	48.3	48.3	0.2455	0.2455	96.57	
D 13C-1,2,3,6,7,8-HxCDD	36.205	362253	1.21	0.8593	38.8	38.8	0.1225	0.1225	38.82	
1,2,3,6,7,8-HxCDD	36.230	184875	1.25	0.9933	51.4	51.4	0.3005	0.3005	103	
1,2,3,7,8,9-HxCDD	36.593	223621	1.28	1.1094	55.6	55.6	0.2507	0.2507	111	
A Non-2,3,7,8-sub-HxCDD	35.394	23906	1.24	1.0545	6.480	6.248	0.2638	4.372	0.00	RQ
S Total HxCDD					161.7	161.5	0.2656	0.2656		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.601	367464	0.46	0.7359	46.0	46.0	0.1685	0.1685	45.97	
1,2,3,4,6,7,8-HpCDF	38.610	303862	1.06	1.4421	57.3	57.3	0.2490	0.2490	115	
D 13C-1,2,3,4,7,8,9-HpCDF	39.856	370288	0.45	0.6854	49.7	49.7	0.1809	0.1809	49.74	
1,2,3,4,7,8,9-HpCDF	39.864	255496	1.05	1.3092	52.7	52.7	0.2550	0.2550	105	
A Non-2,3,7,8-sub-HpCDF	39.258	4284	1.19	1.3756	0.8443	0.8443	0.2515	0.8443	0.00	
S Total HpCDF					110.9	110.9	0.2520	0.2520		
D 13C-1,2,3,4,6,7,8-HpCDD	39.544	346496	1.07	0.6745	47.3	47.3	0.0916	0.0916	47.30	
1,2,3,4,6,7,8-HpCDD	39.561	263250	1.03	1.0503	72.3	72.3	0.2030	0.2030	145	
A Non-2,3,7,8-sub-HpCDD	39.258	97153	1.05	1.0503	26.7	26.7	0.2030	26.7	0.00	
S Total HpCDD					99.0	99.0	0.2030	0.2030		
D 13C-OCDD	42.042	501034	0.91	0.5446	84.7	84.7	0.1214	0.1214	42.35	
OCDF	42.143	337334	0.95	1.3168	102.3	102.3	0.1465	0.1465	102	
OCDD	42.059	1613594	0.90	1.0620	606.5	606.5	0.4768	0.4768	607	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d
Lims ID: 320-76901-A-2-B MS
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MS
Inject. Date: 19-Aug-2021 06:18:00 ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-2-b ms
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:55:10 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:30:02

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.364	21.427	-4		559859	76681	63	157	1217		a
333.9338	21.347	21.427	-5		713485	101057	35	87	2887	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.393	20.401	0	0.955	305823	44084	87	217	507		
317.9389	20.411	20.401	1	0.955	351815	48620	47	117	1034	0.87(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.419	20.436	-1	1.001	267107	34363	47	117	731		
305.8987	20.428	20.436	0	1.002	329917	42995	68	170	632	0.81(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.895	19.878	-119	0.877	5341	878	47	117	19		
305.8987	17.886	19.878	-119	0.877	7013	1467	68	170	22	0.76(0.65-0.89)	
303.9016	18.813	19.878	-64	0.923	6927	1027	47	117	22		
305.8987	18.813	19.878	-64	0.923	9389	1329	68	170	20	0.74(0.65-0.89)	
303.9016	19.217	19.878	-40	0.942	9513	1553	47	117	33		
305.8987	19.174	19.878	-42	0.940	13372	1903	68	170	28	0.71(0.65-0.89)	
303.9016	19.706	19.878	-10	0.966	99834	14573	47	117	310		
305.8987	19.698	19.878	-11	0.966	116922	16542	68	170	243	0.85(0.65-0.89)	
303.9016	20.093	19.878	13	0.985	3268	598	47	117	13		
305.8987	20.119	19.878	14	0.987	4496	809	68	170	12	0.73(0.65-0.89)	
303.9016	21.209	19.878	80	1.040	16094	2005	47	117	43		
305.8987	21.192	19.878	79	1.039	19961	2667	68	170	39	0.81(0.65-0.89)	
303.9016	23.589	19.878	222	1.157	16179	2525	47	117	54		
305.8987	23.597	19.878	223	1.157	18985	2944	68	170	43	0.85(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.733	21.743	-1	1.017	221319	29181	63	157	463		
333.9338	21.733	21.743	-1	1.017	266644	35177	35	87	1005	0.83(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											
319.8965	21.776	21.777	0	1.002	59916	7524	21	52	358		
321.8936	21.767	21.777	-1	1.002	80987	10740	15	37	716	0.74(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.759	21.849	-5	1.018	254778	31487	23	57	1369		
A Non-2,3,7,8-sub-TCDD											U
319.8965	19.646	20.707	-64	0.904	832	169	21	52	8		
321.8936	19.689	20.707	-61	0.906	971	198	15	37	13	0.86(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.230	27.288	-3	1.275	349457	54360	54	135	1007		
353.8970	27.213	27.288	-4	1.274	212350	32052	48	120	668	1.65(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.255	27.313	-3	1.001	215111	33497	55	137	609		
341.8567	27.255	27.313	-3	1.001	133901	20180	39	97	517	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.746	28.795	-3	1.346	376379	53922	54	135	999		
353.8970	28.746	28.795	-3	1.346	232706	36053	48	120	751	1.62(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.754	28.820	-4	1.000	197733	26963	55	137	490		
341.8567	28.762	28.820	-3	1.001	122975	17312	39	97	444	1.61(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.036	24.648	-37	0.883	135	34	1	2	34		
341.8567	24.027	24.648	-37	0.882	187	46	2	5	23	0.72(1.32-1.78)	
	Empc Correction				87	21	2	5	11		
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.789	28.125	-140	0.947	4095	700	55	137	13		
341.8567	25.764	28.125	-141	0.946	2338	398	39	97	10	1.75(1.32-1.78)	
339.8597	27.828	28.125	-18	1.022	2321	449	55	137	8		
341.8567	27.828	28.125	-18	1.022	2764	329	39	97	8	0.84(1.32-1.78)	
	Empc Correction				1497	289	39	97	7		
13C-1,2,3,7,8-PeCDD											
367.8949	29.554	29.612	-3	1.383	220030	30153	16	40	1885		
369.8919	29.546	29.612	-4	1.383	134172	17131	7	17	2447	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.571	29.637	-4	1.001	124918	16384	21	52	780		
357.8516	29.563	29.637	-4	1.000	79796	10080	20	50	504	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.034	28.489	-147	0.881	861	158	21	52	8		
357.8516	26.093	28.489	-143	0.883	1220	243	20	50	12	0.71(1.32-1.78)	
	Empc Correction				555	101	20	50	5		
355.8546	26.884	28.489	-96	0.910	831	139	21	52	7		
	Empc Correction				401	103	21	52	5		
357.8516	26.825	28.489	-100	0.908	259	67	20	50	3	3.21(1.32-1.78)	
355.8546	27.929	28.489	-34	0.945	1019	170	21	52	8		
357.8516	27.912	28.489	-35	0.944	597	110	20	50	6	1.71(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.908	34.942	-2	0.954	189653	33627	54	135	623		
385.8610	34.900	34.942	-3	0.954	329260	64349	74	185	870	0.58(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.925	34.959	-2	1.000	192491	34685	50	125	694		
375.8178	34.916	34.959	-3	1.000	152332	28734	36	90	798	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.051	35.111	-4	0.958	185793	30365	54	135	562		
385.8610	35.059	35.111	-3	0.958	348880	54312	74	185	734	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.085	35.119	-2	1.001	209903	36919	50	125	738		
375.8178	35.076	35.119	-3	1.001	156768	27345	36	90	760	1.34(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.885	35.919	-2	0.981	163945	33038	54	135	612		
385.8610	35.885	35.919	-2	0.981	305227	61734	74	185	834	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.902	35.936	-2	1.000	188084	38003	50	125	760		
375.8178	35.902	35.936	-2	1.000	145865	30058	36	90	835	1.29(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.778	36.811	-2	1.005	144126	32054	54	135	594		
385.8610	36.778	36.811	-2	1.005	275885	58736	74	185	794	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.795	36.828	-2	1.000	165600	36534	50	125	731		
375.8178	36.795	36.828	-2	1.000	129918	26550	36	90	738	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						50	125			
375.8178	35.028						36	90			
13C-1,2,3,7,8,9-HxCDD											
401.8559	36.584	36.609	-1		607343	130506	48	120	2719		
403.8529	36.584	36.609	-1		478746	99310	49	122	2027	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.096	36.129	-2	0.987	210292	46199	48	120	962		
403.8529	36.096	36.129	-2	0.987	153105	36360	49	122	742	1.37(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.113	36.146	-2	1.000	103693	24385	46	115	530		
391.8127	36.113	36.146	-2	1.000	82444	19647	40	100	491	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.205	36.247	-3	0.990	198634	41443	48	120	863		
403.8529	36.214	36.247	-2	0.990	163619	30578	49	122	624	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.230	36.264	-2	1.001	102690	20786	46	115	452		
391.8127	36.222	36.264	-3	1.000	82185	16426	40	100	411	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.593	36.626	-2	1.014	125348	27119	46	115	590		
391.8127	36.593	36.626	-2	1.014	98273	21584	40	100	540	1.28(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	34.209	35.394	-71	0.945	9440	1670	46	115	36		
391.8127	34.201	35.394	-71	0.945	7287	1198	40	100	30	1.30(1.05-1.43)	
389.8158	35.337	35.394	-3	0.976	4860	903	46	115	20		
	Empc Correction				3974	864	46	115	19		
391.8127	35.337	35.394	-3	0.976	3205	697	40	100	17	1.52(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.601	38.626	-1	1.055	116341	28548	48	120	595		
419.8220	38.601	38.626	-1	1.055	251123	63369	66	165	960	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.610	38.630	-1	1.000	156499	37014	70	175	529		
409.7788	38.610	38.630	-1	1.000	147363	36502	62	155	589	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.856	39.880	-1	1.089	114615	30964	48	120	645		
419.8220	39.856	39.880	-1	1.089	255673	67883	66	165	1029	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.864	39.885	-1	1.000	130687	35326	70	175	505		
409.7788	39.864	39.885	-1	1.000	124809	34163	62	155	551	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	38.972	39.258	-17	1.010	2330	562	70	175	8		
409.7788	38.972	39.258	-17	1.010	1954	524	62	155	8	1.19(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.544	39.569	-1	1.081	179447	47839	39	97	1227		
437.8140	39.552	39.569	-1	1.081	167049	43599	18	45	2422	1.07(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.561	39.582	-1	1.000	133712	35925	43	107	835		
425.7737	39.561	39.582	-1	1.000	129538	34399	35	87	983	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.913	39.258	-21	0.984	49729	12184	43	107	283		
425.7737	38.921	39.258	-20	0.984	47424	11827	35	87	338	1.05(0.88-1.20)	
13C-OCDD											
469.7780	42.042	42.072	-2	1.149	238923	59099	38	95	1555		
471.7750	42.042	42.072	-2	1.149	262111	62170	23	57	2703	0.91(0.76-1.02)	
OCDF											
441.7428	42.143	42.165	-1	1.002	164007	35909	21	52	1710		
443.7399	42.143	42.165	-1	1.002	173327	38634	26	65	1486	0.95(0.76-1.02)	
OCDD											
457.7377	42.059	42.081	-1	1.000	764463	176188	55	137	3203		
459.7348	42.050	42.081	-2	1.000	849131	192526	68	170	2831	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

U - Marked Undetected

a - User Assigned ID

Report Date: 20-Aug-2021 09:55:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	657638	92704

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	657638	92704

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.895	5341	878	7013	1467	1.74	0.76	
18.813	6927	1027	9389	1329	2.30	0.74	
19.217	9513	1553	13372	1903	3.22	0.71	
19.706	99834	14573	116922	16542	30.5	0.85	
20.093	3268	598	4496	809	1.09	0.73	
21.209	16094	2005	19961	2667	5.08	0.81	
23.589	16179	2525	18985	2944	4.95	0.85	
Signal Totals:							
	157156	23159	190138	27661			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	347294	50820				0.83	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 48.889 = (347294 * 100.000) / (657638 * 1.080)

Report Date: 20-Aug-2021 09:55:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	487963	64358

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	487963	64358

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
19.646	832	169	971	198	0.3436	0.86	
20.789	353	126	120	50	0.0901	2.94	RQ
20.789	92	38	120	50	0.0404		Empc Correction
21.621	1595	402	1526	303	0.5948	1.05	RQ
21.621	1175	233	1526	303	0.5147		Empc Correction
22.446	3415	496	2009	541	1.03	1.70	RQ
22.446	1546	416	2009	541	0.6775		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	561807	86412
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	609085	89975

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	585446	88193

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.036	135	34	187	46	0.0533	0.72	RQ
24.036	135	34	87	21	0.0368		Empc Correction

Compound is Marked ND

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	561807	86412
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	609085	89975

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	585446	88193

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.789	4095	700	2338	398	1.07	1.75	
27.828	2321	449	2764	329	0.8424	0.84	RQ
27.828	2321	449	1497	289	0.6325		Empc Correction
Signal Totals:							
	6416	1149	3835	687			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11518	1876				1.26	RQ
	10251	1836					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.908 = (11518 * 100.000) / (585446 * 1.031)

Empc Amount: 1.698 = (10251 * 100.000) / (585446 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	354202	47284

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	354202	47284

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.034	861	158	1220	243	0.5614	0.71	RQ
26.034	861	158	555	101	0.3820		Empc Correction
26.884	831	139	259	67	0.2941	3.21	RQ
26.884	401	103	259	67	0.1781		Empc Correction
27.929	1019	170	597	110	0.4360	1.71	
Signal Totals:							
	2281	431	1411	278			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4787	887				1.31	RQ
	3692	709					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.291 = (4787 * 100.000) / (354202 * 1.046)
Empc Amount: 0.996 = (3692 * 100.000) / (354202 * 1.046)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	363397	82559
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	362253	72021
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	362825	77290

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.209	9440	1670	7287	1198	4.37	1.30	
35.337	4860	903	3205	697	2.11	1.52	RQ
35.337	3974	864	3205	697	1.88		Empc Correction
Signal Totals:							
	13414	2534	10492	1895			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	24792	4468				1.36	RQ
	23906	4429					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 6.480 = (24792 * 100.000) / (362825 * 1.055)

Empc Amount: 6.248 = (23906 * 100.000) / (362825 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Lims ID:	320-76901-A-2-B MS		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 06:18:00	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	49

Non-2,3,7,8-sub-HpCDF, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.442	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	367464	91917
1,2,3,4,7,8,9-HpCDF	1.309	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	370288	98847

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.376		100.000	368876	95382

Sum the Uncalibrated Results

RT	407.7817 Area	407.7817 Height	409.7788 Area	409.7788 Height	Amount	Ratio	Flags
38.972	2330	562	1954	524	0.8443	1.19	
Signal Totals:							
	2330	562	1954	524			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4284	1086				1.19	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.8443 = (4284 * 100.000) / (368876 * 1.376)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d
Lims ID: 320-76901-A-2-B MS
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Inject. Date: 19-Aug-2021 06:18:00 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: DFS 1 Operator: Xcalibur_System
Lims Batch ID: 517462 Lims Sample ID: 49

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	346496	91438

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	346496	91438

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.913	49729	12184	47424	11827	26.7	1.05	
Signal Totals:							
	49729	12184	47424	11827			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	97153	24011				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 26.696 = (97153 * 100.000) / (346496 * 1.050)

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

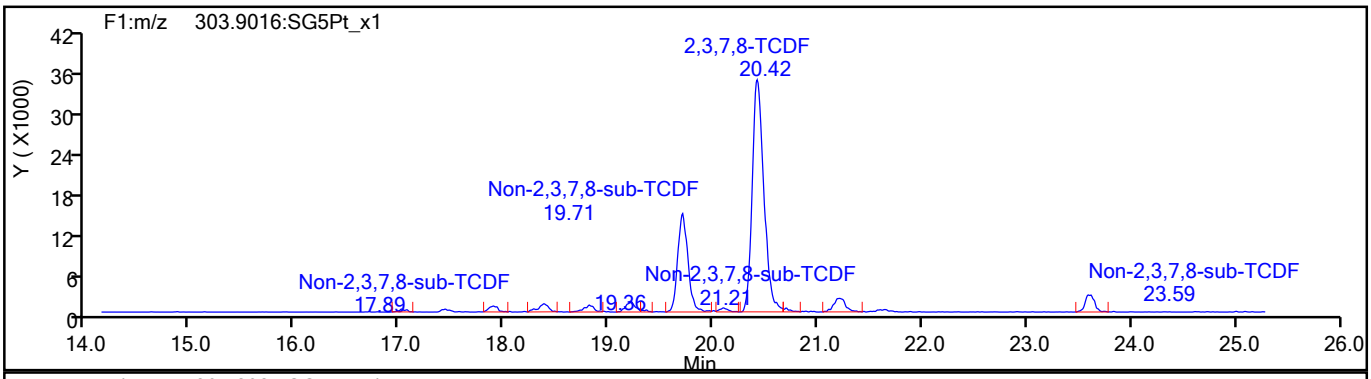

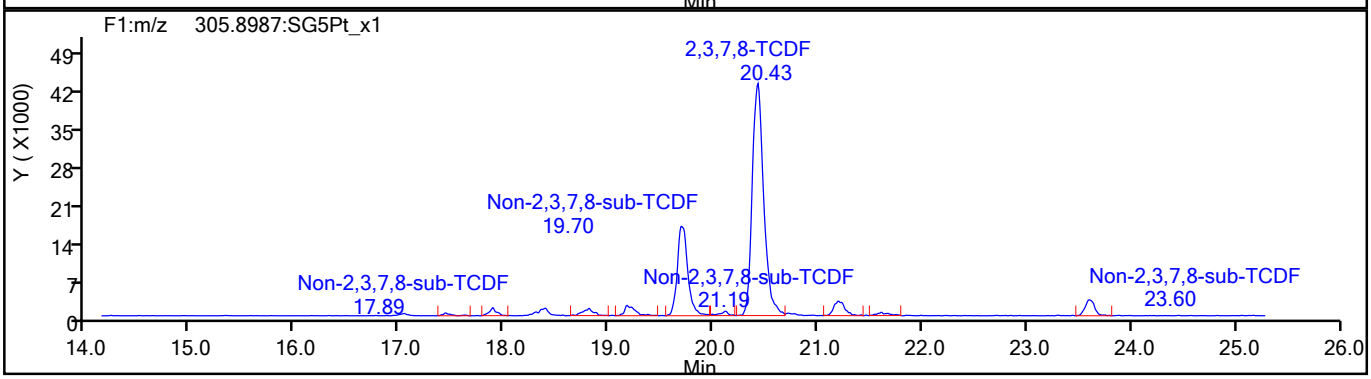

TCDF Standards

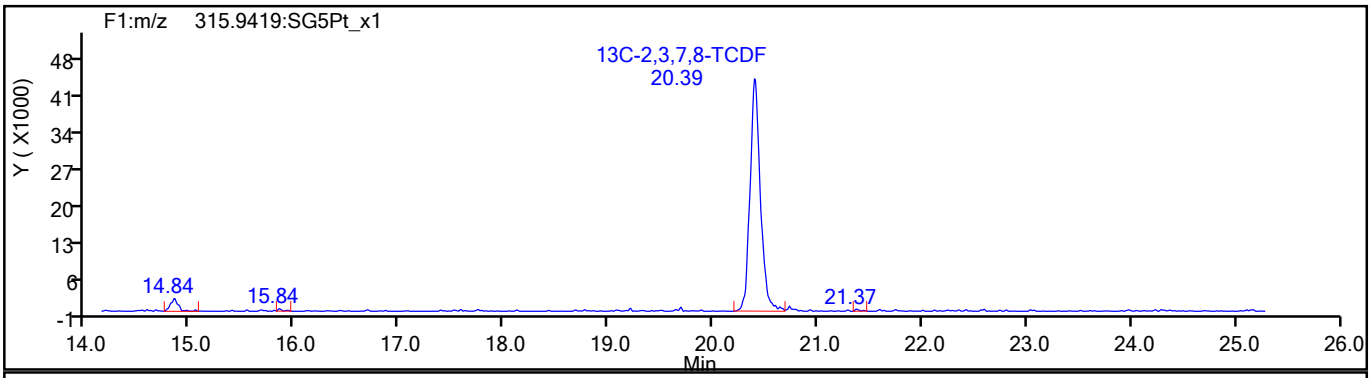

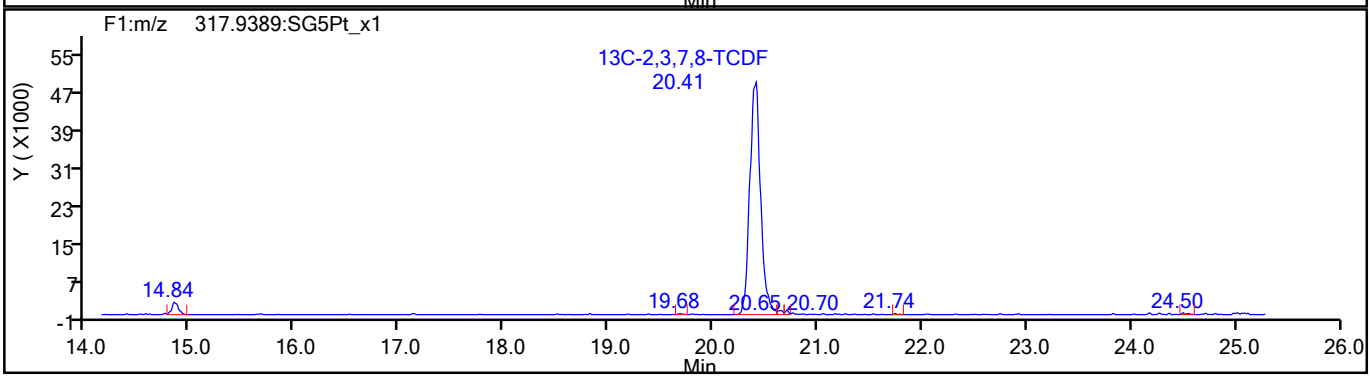

790523

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

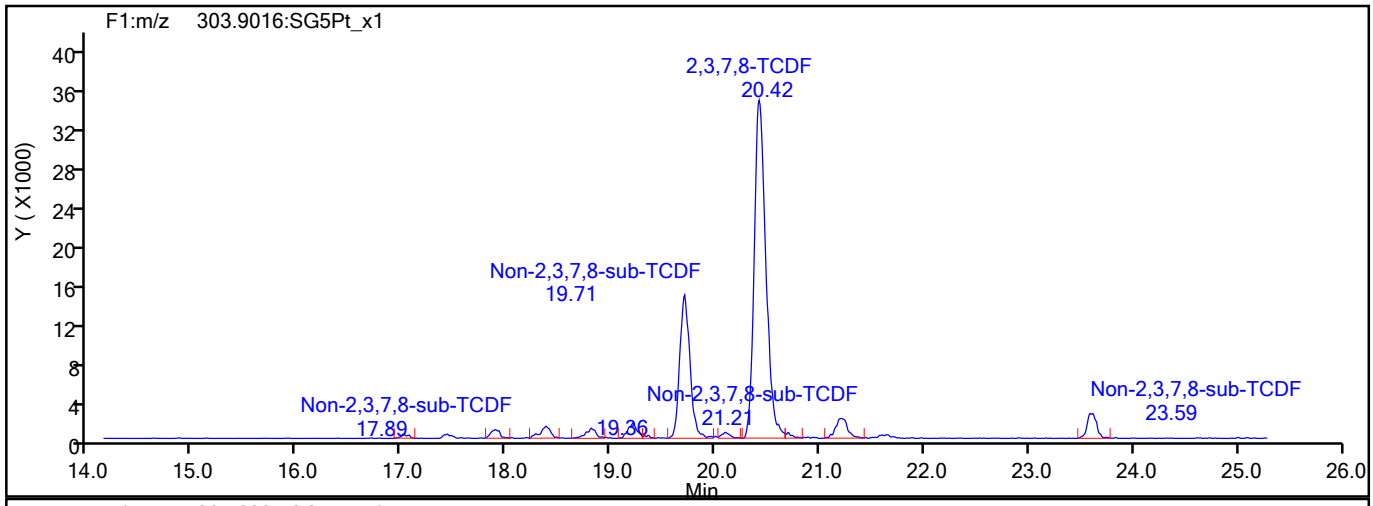

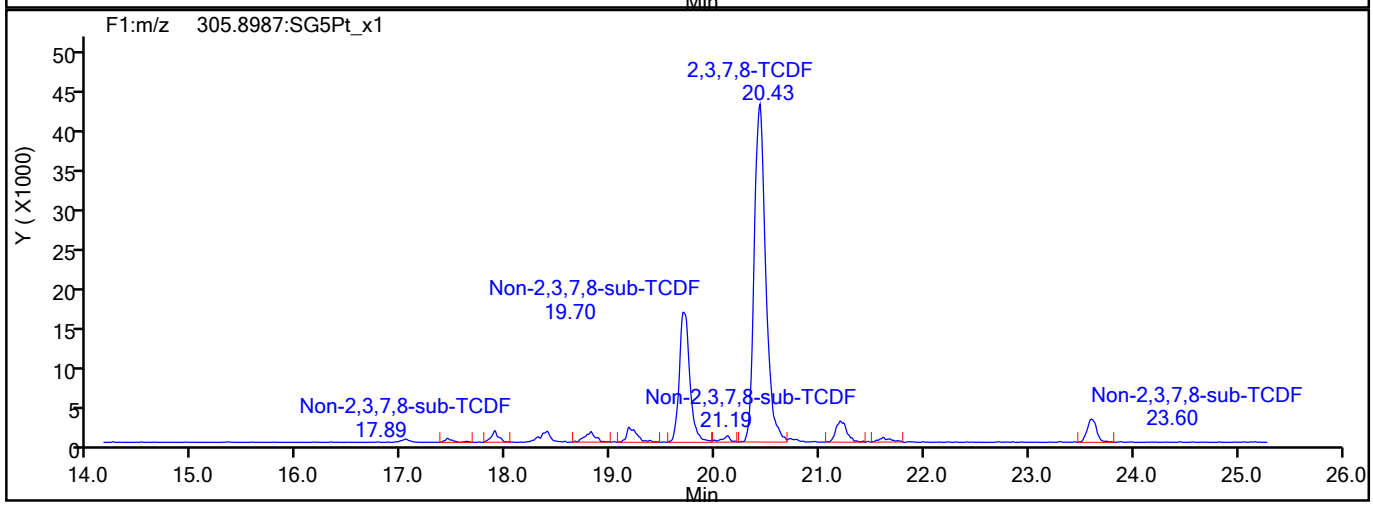

TCDF Interference Mass

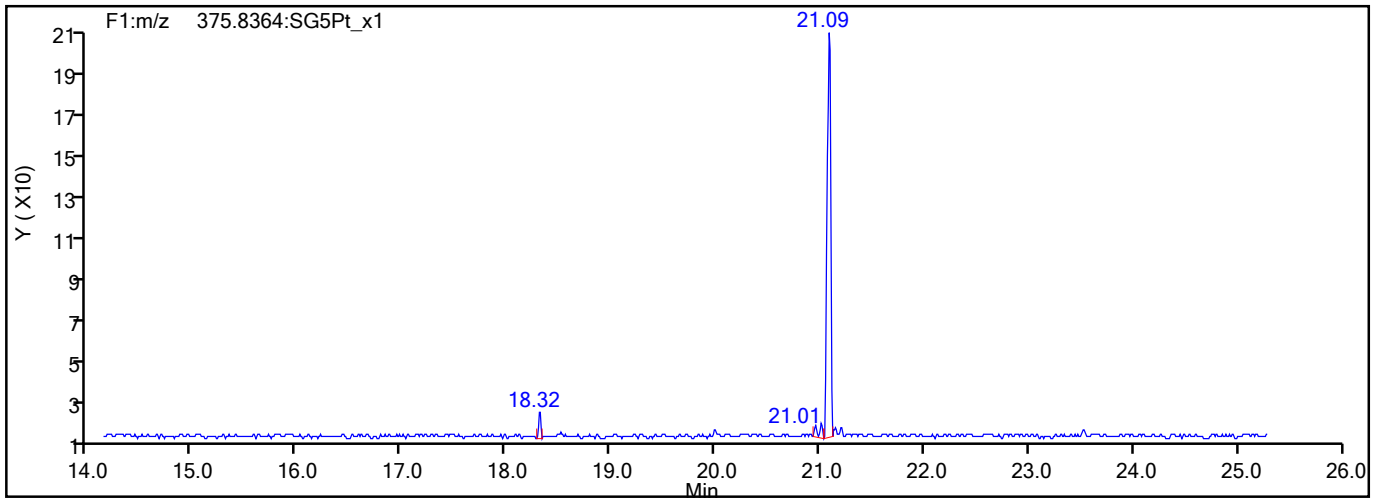

790524

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

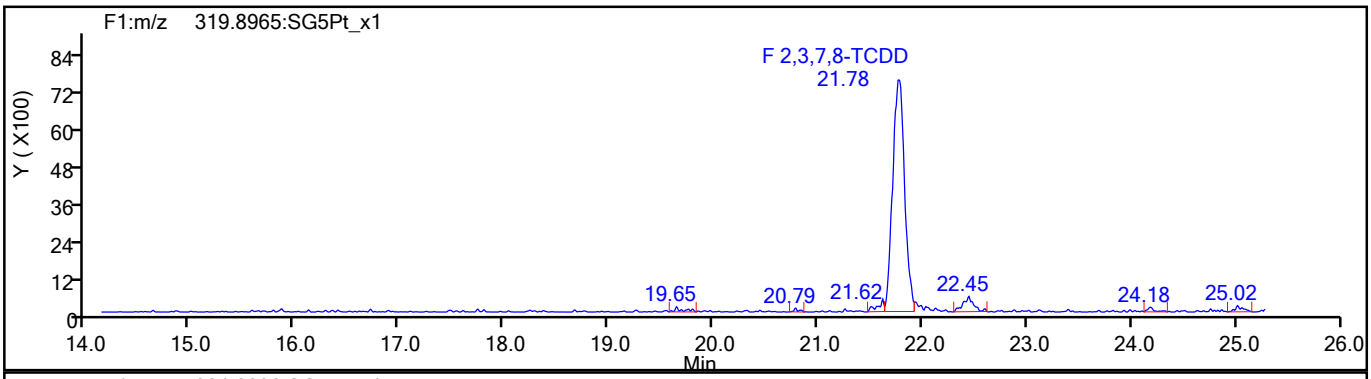

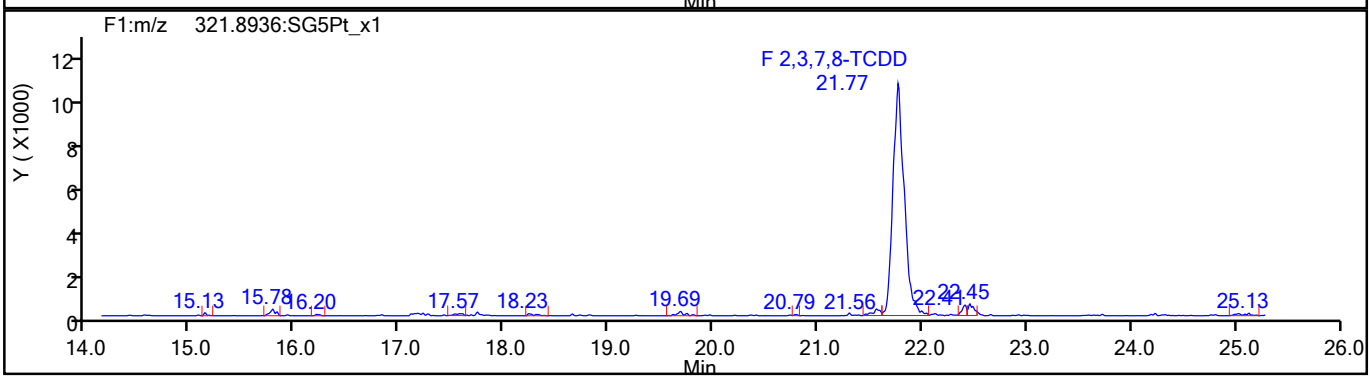

TCDD Standards

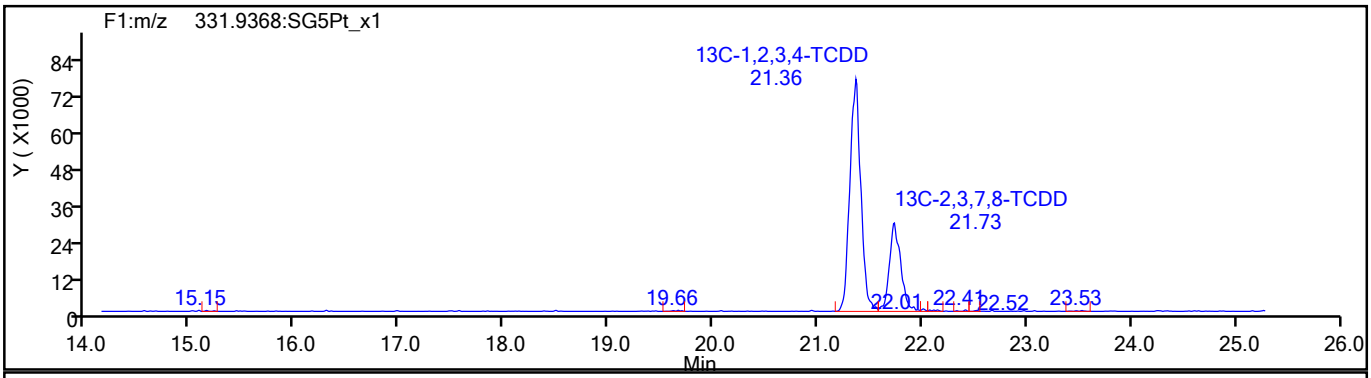

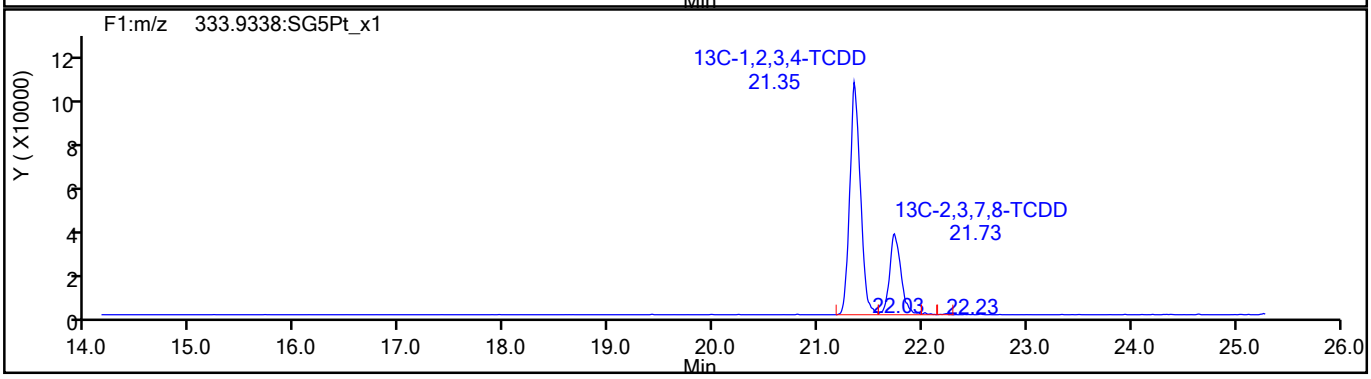

790525

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

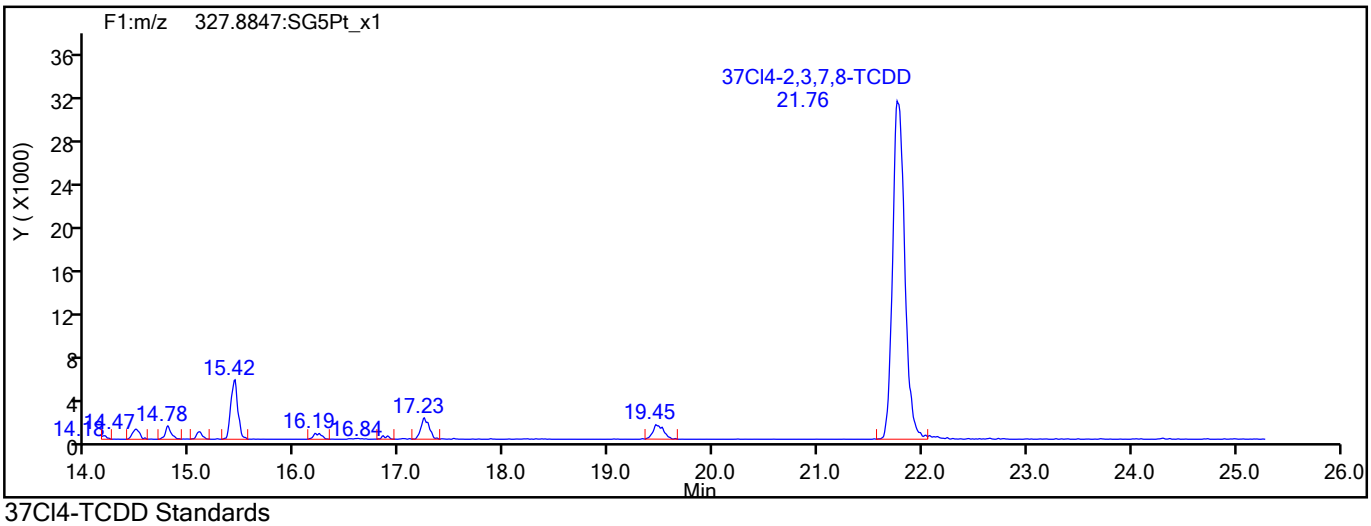

37Cl4-TCDD Standards

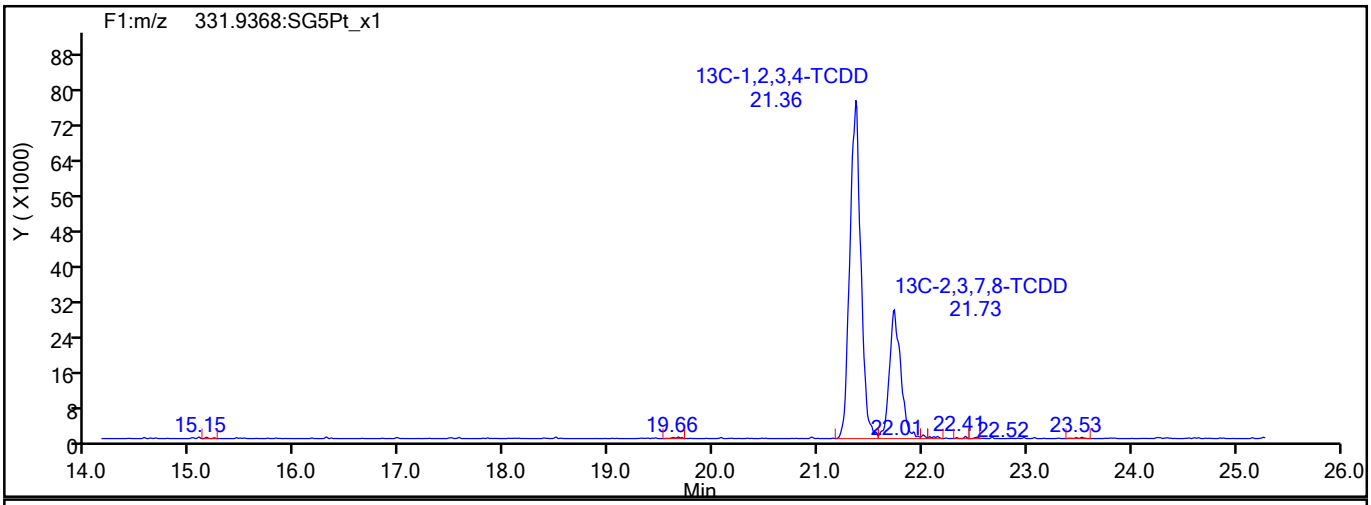

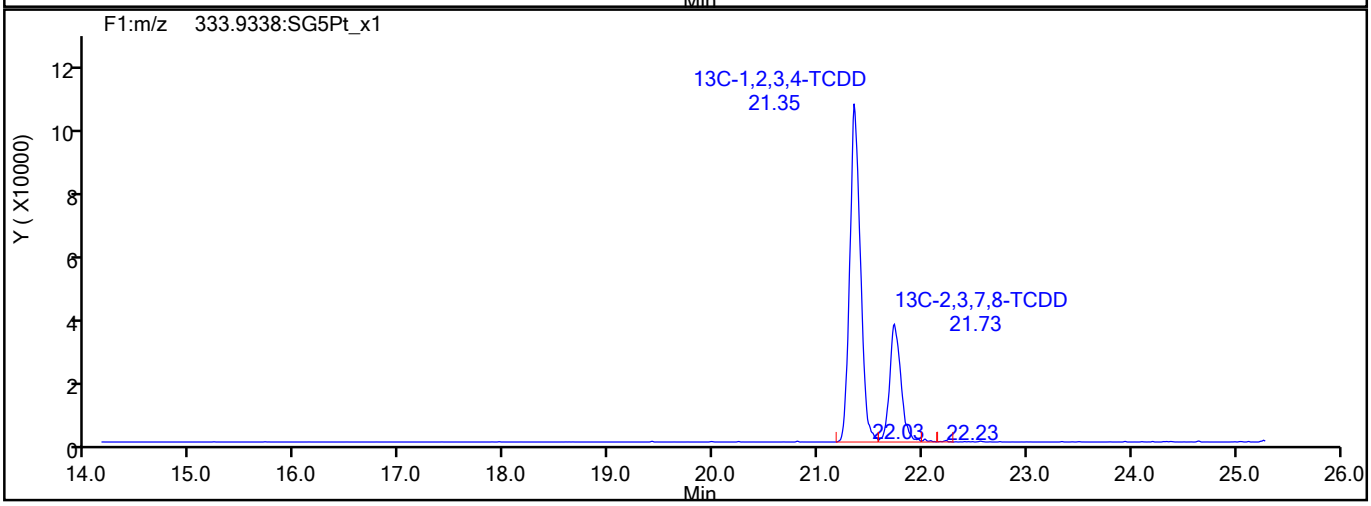

790526

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

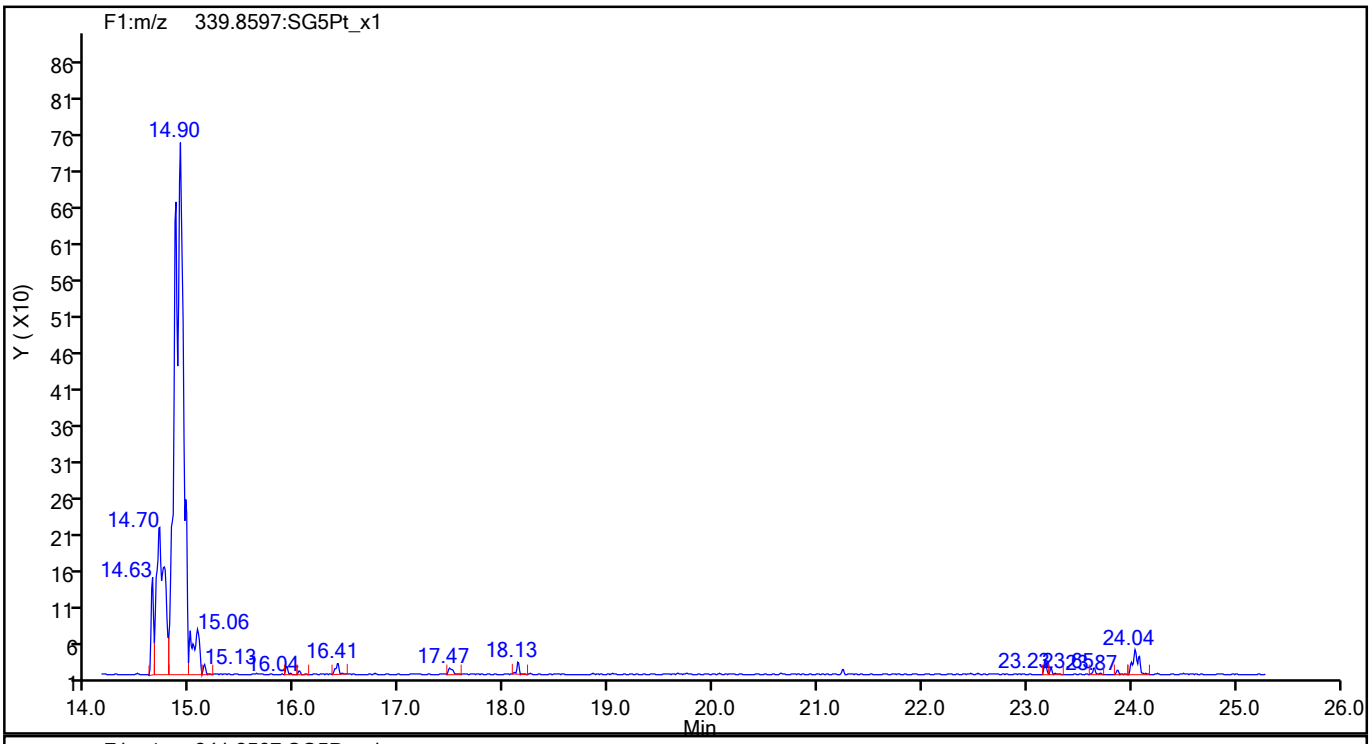

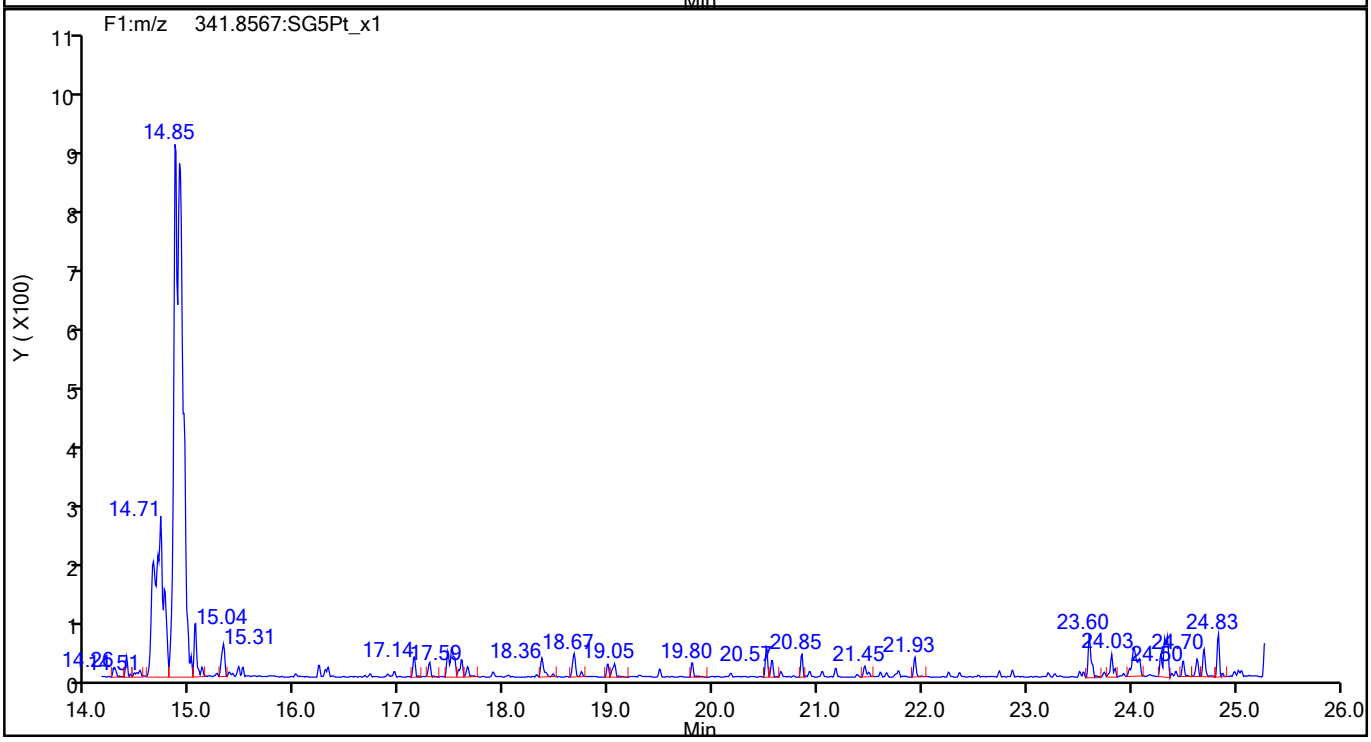

790527

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

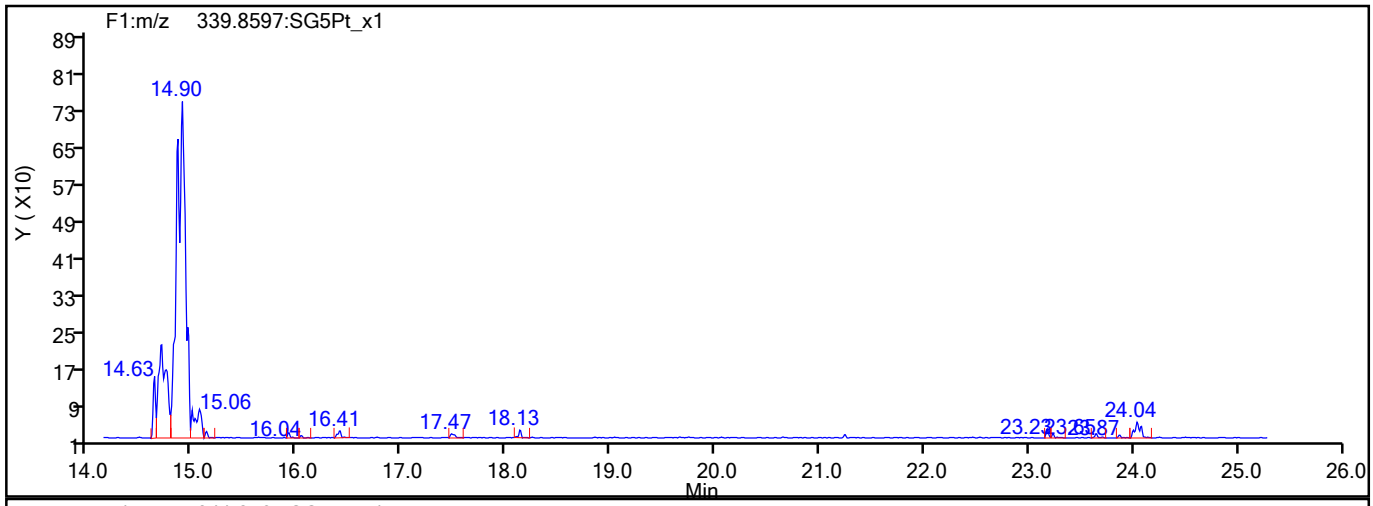

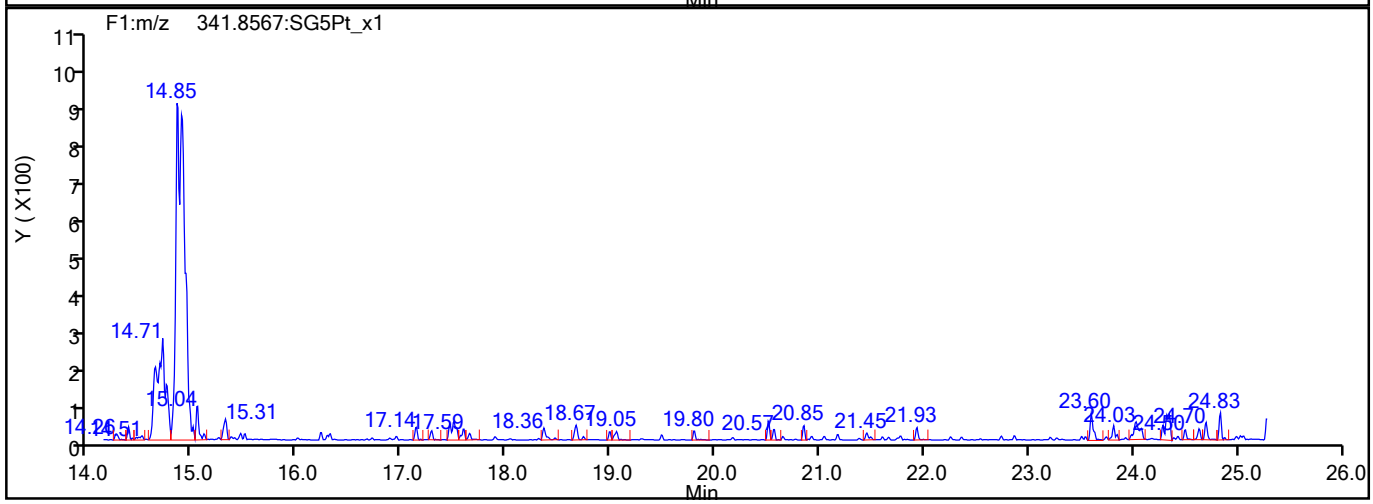

F1 PeCDFs Interference Mass

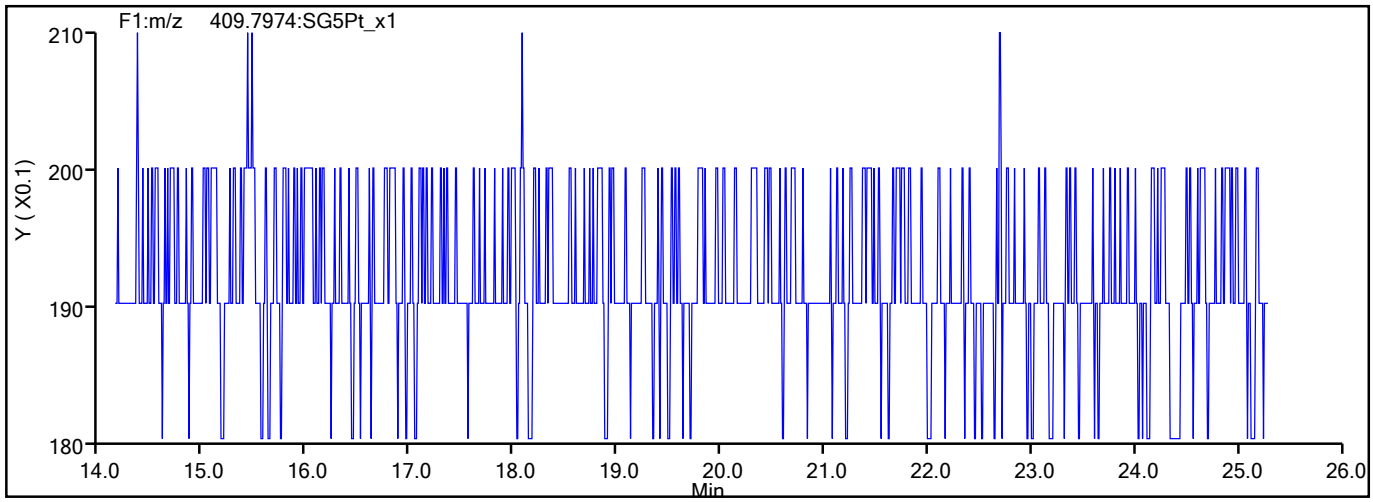

790528

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

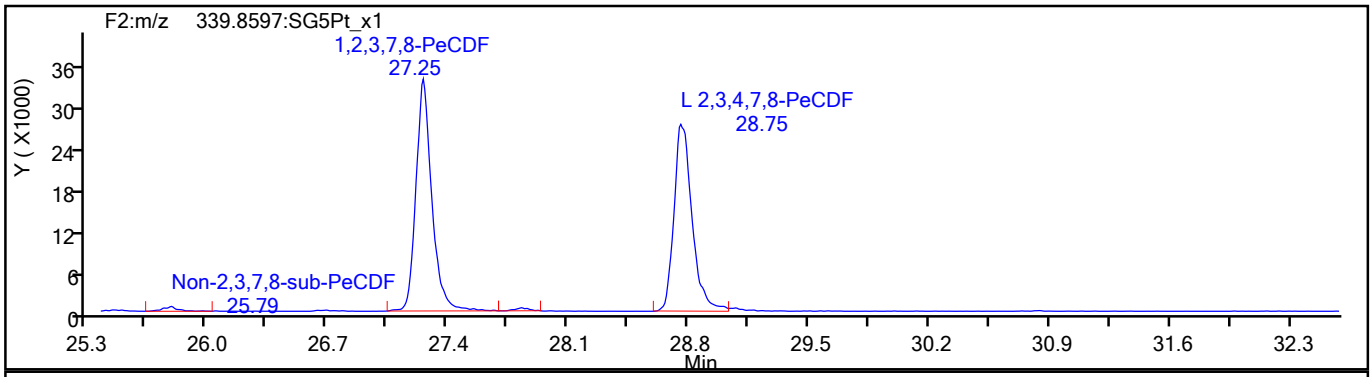

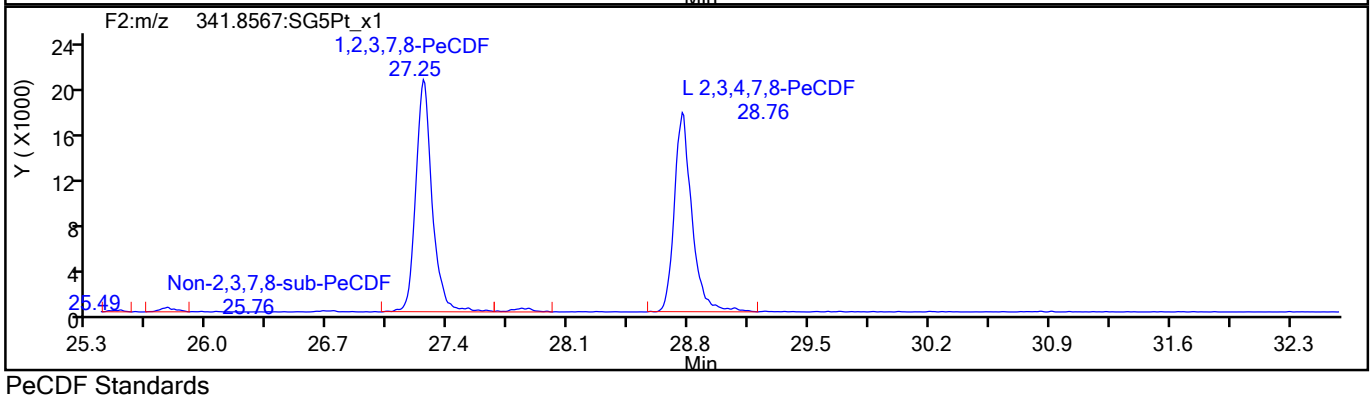

PeCDF Standards

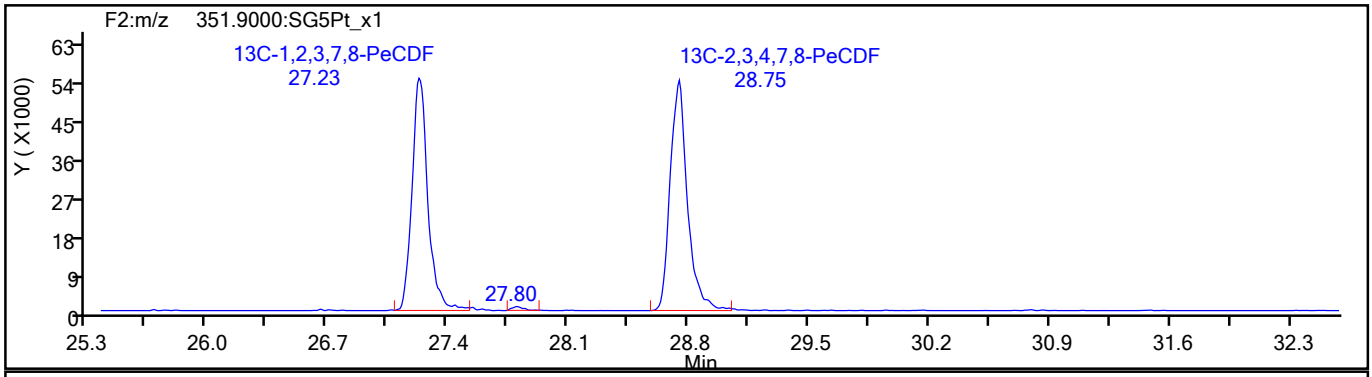

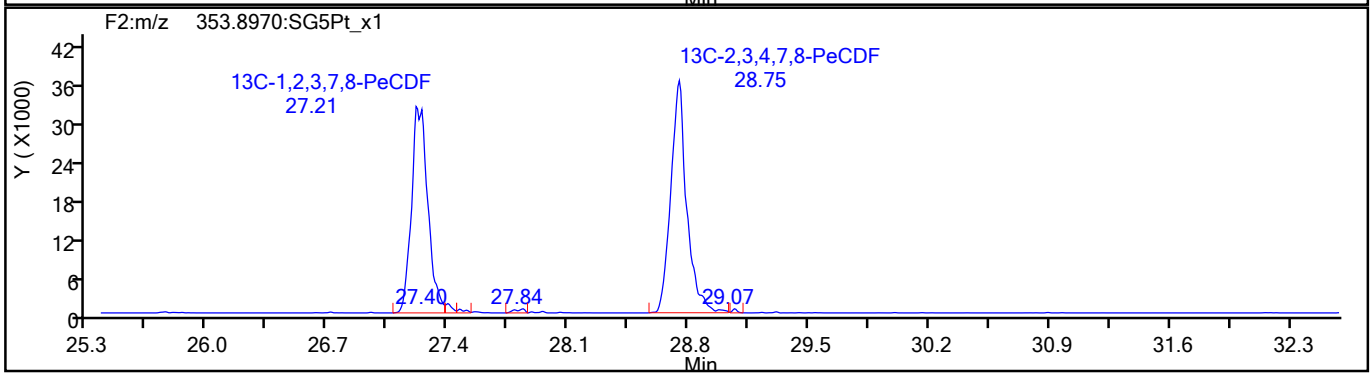

790529

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

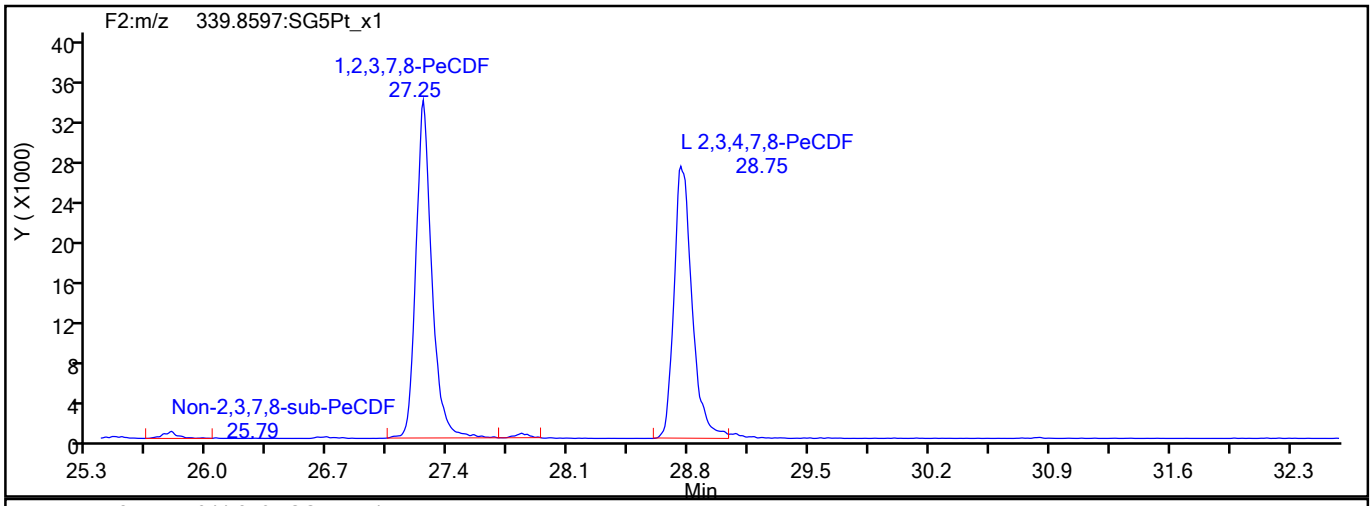

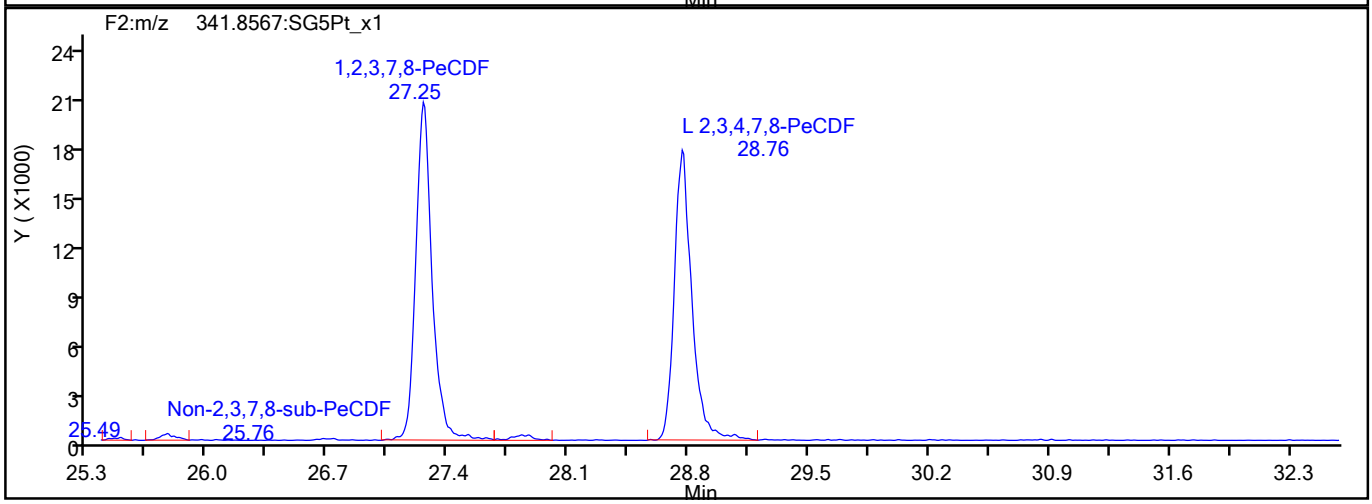

PeCDF Interference Mass

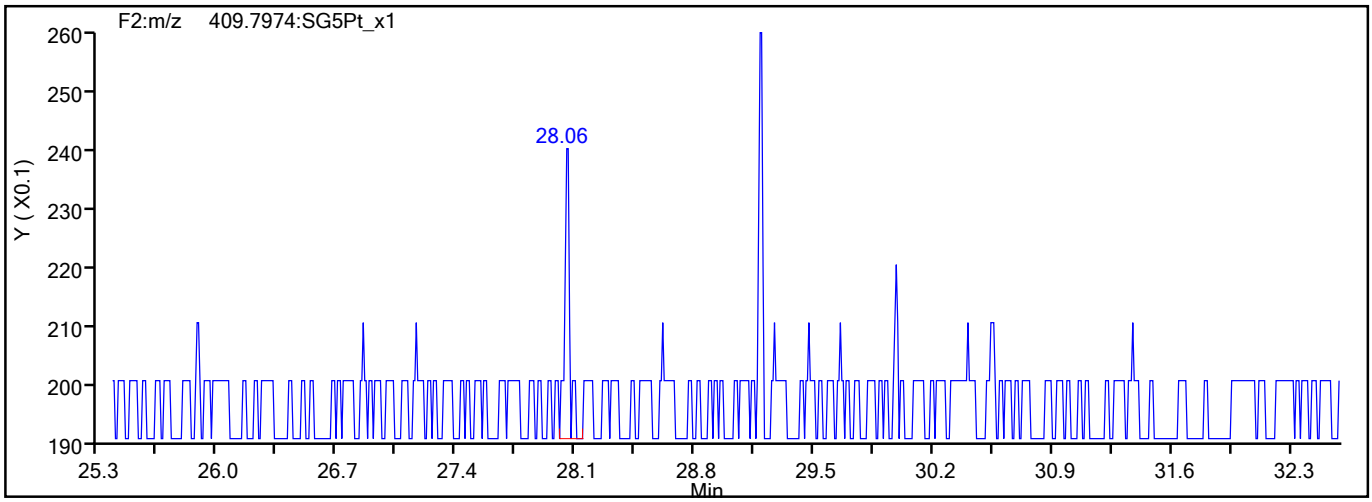

790530

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

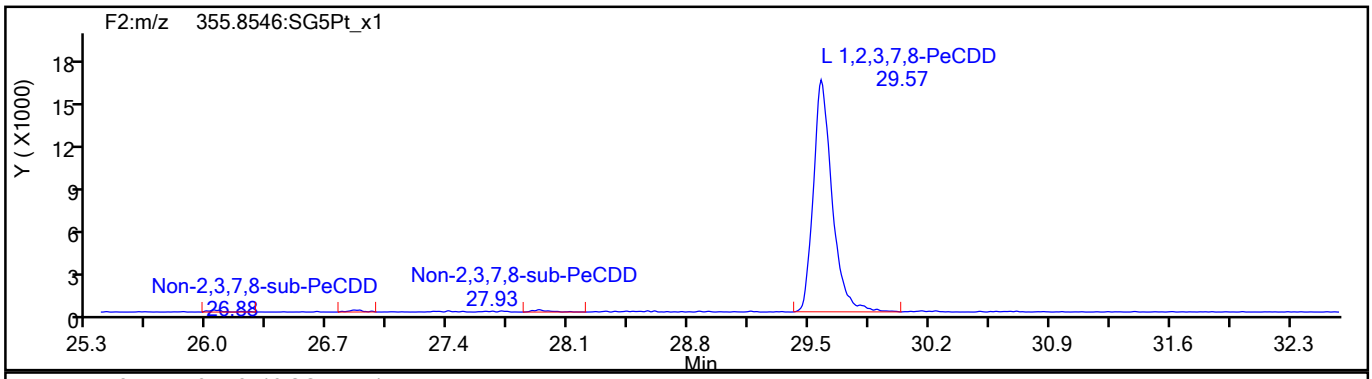

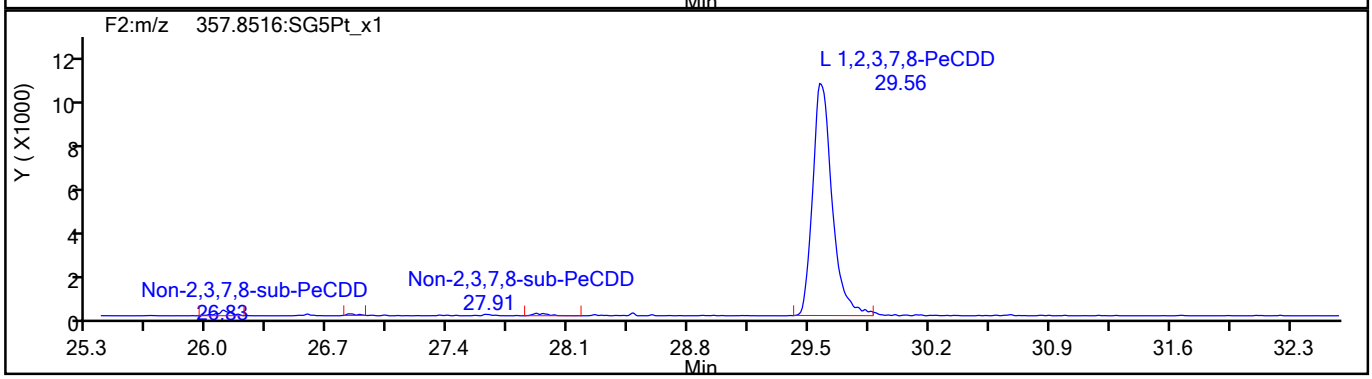

PeCDD Standards

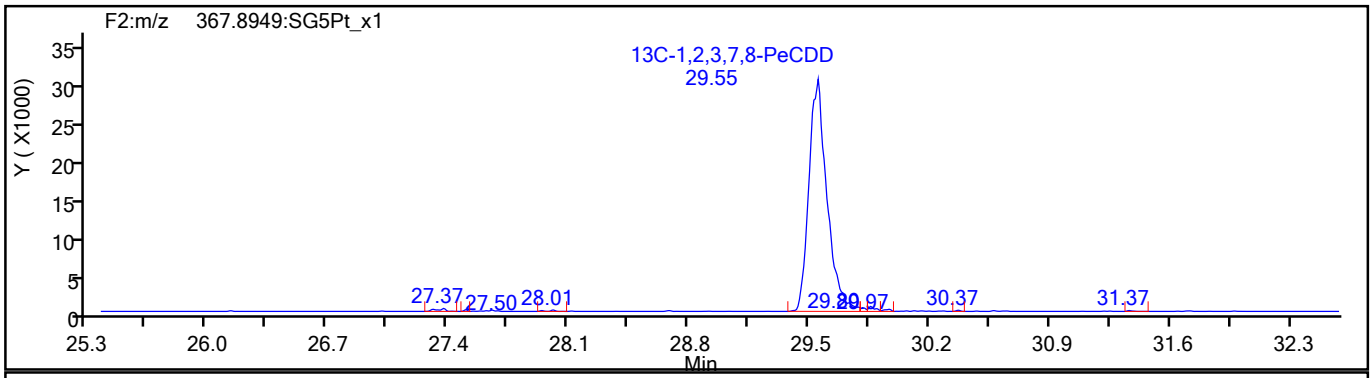

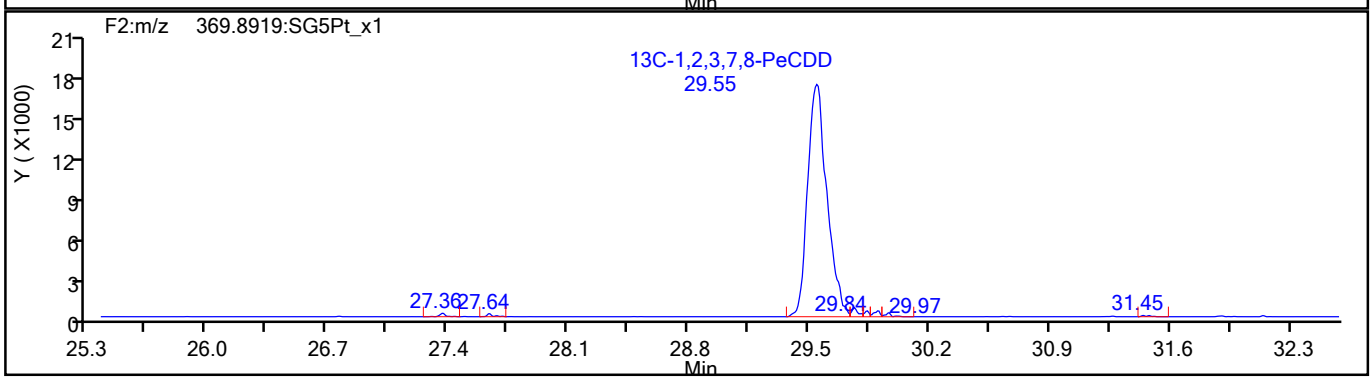

790531

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

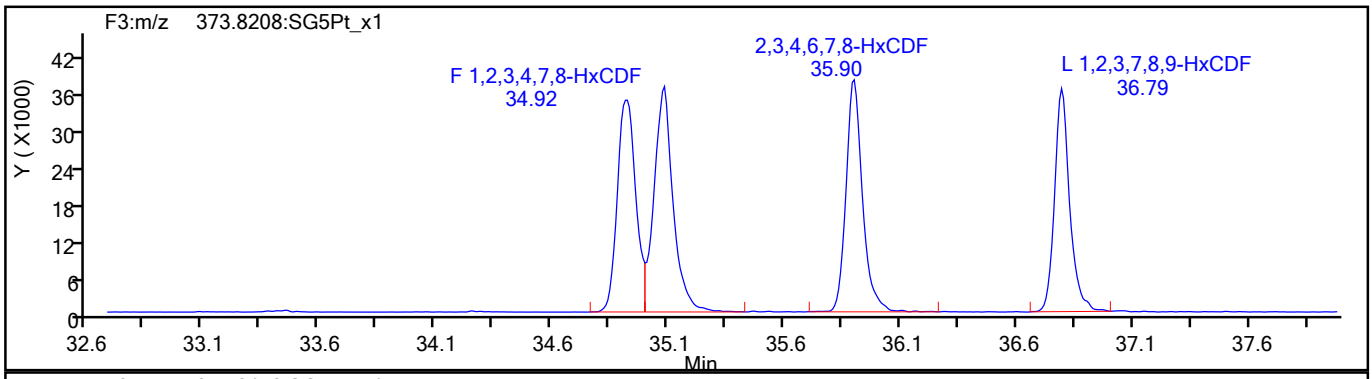

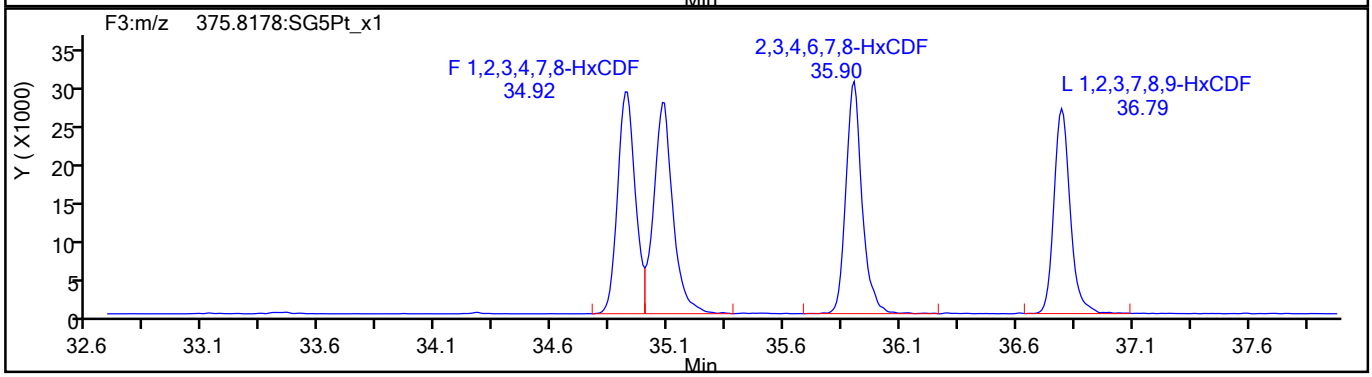

HxCDF Standards

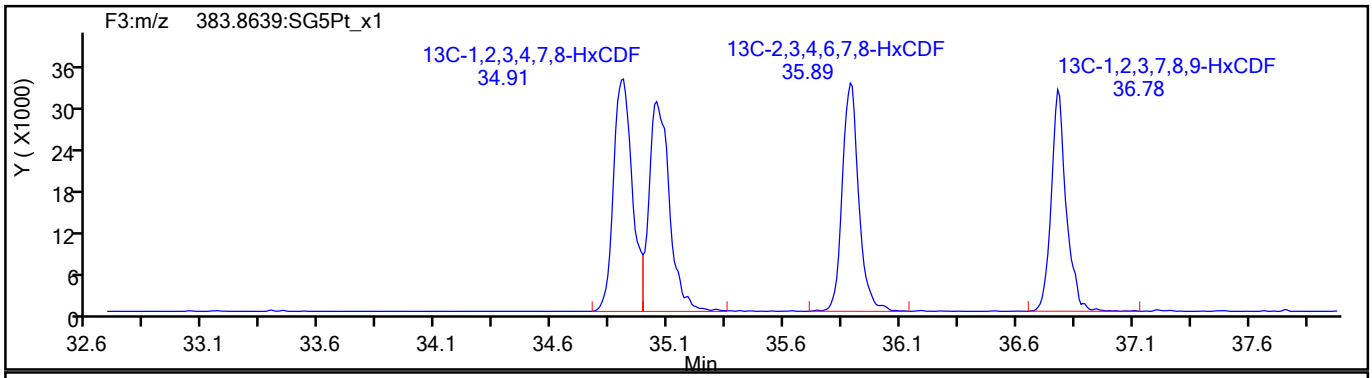

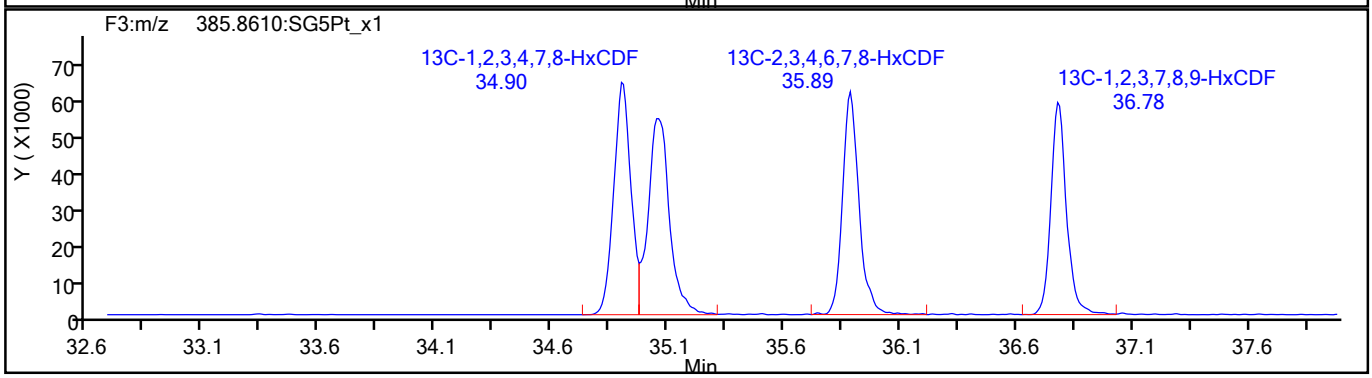

790532

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

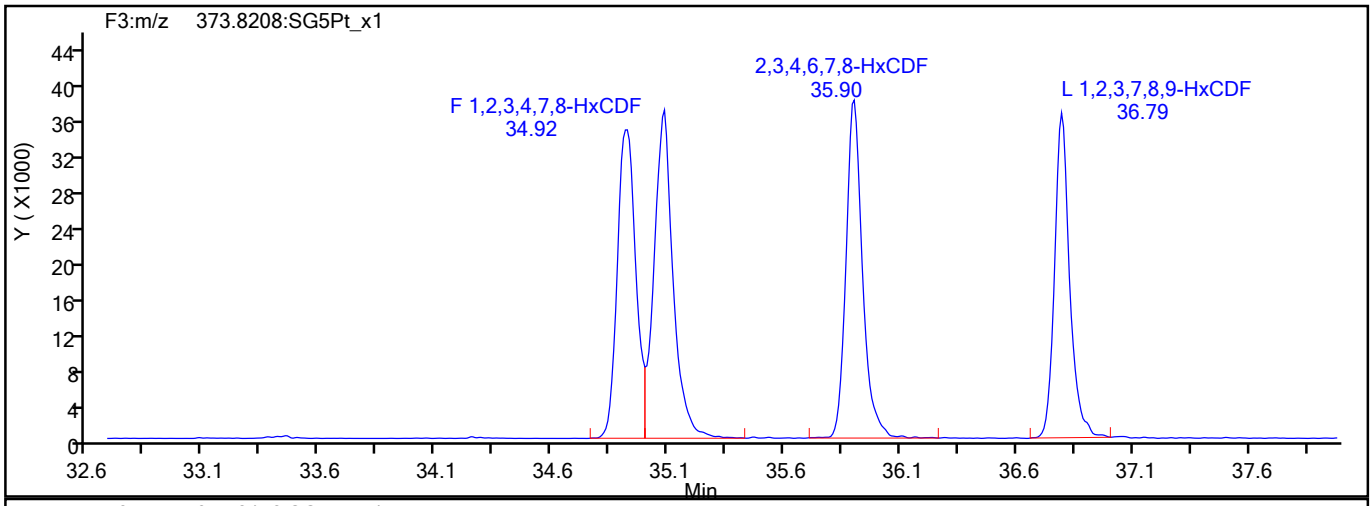

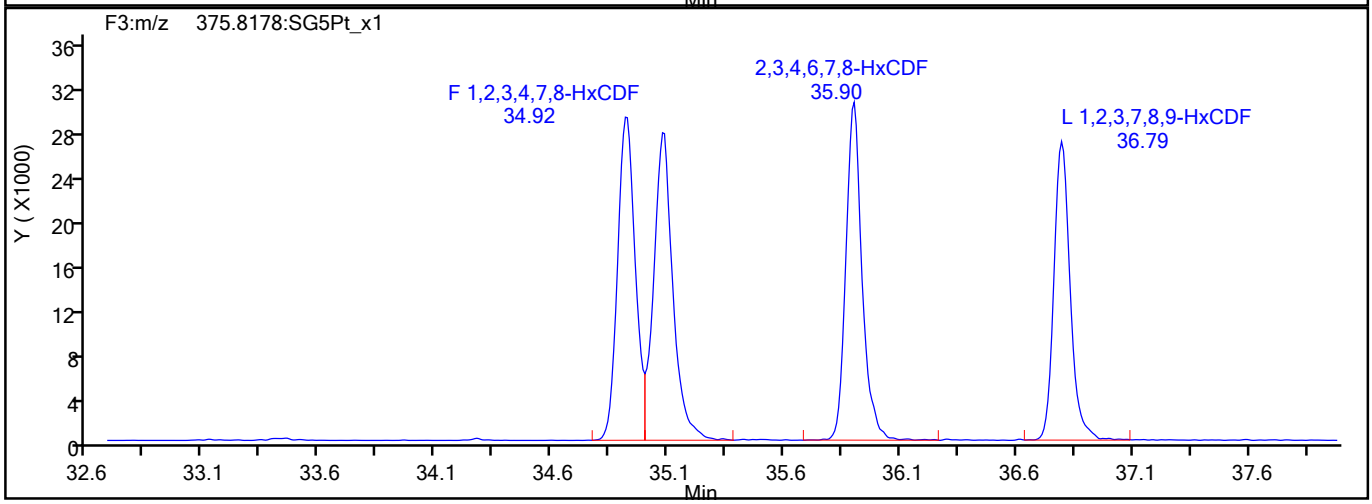

HxCDF Interference Mass

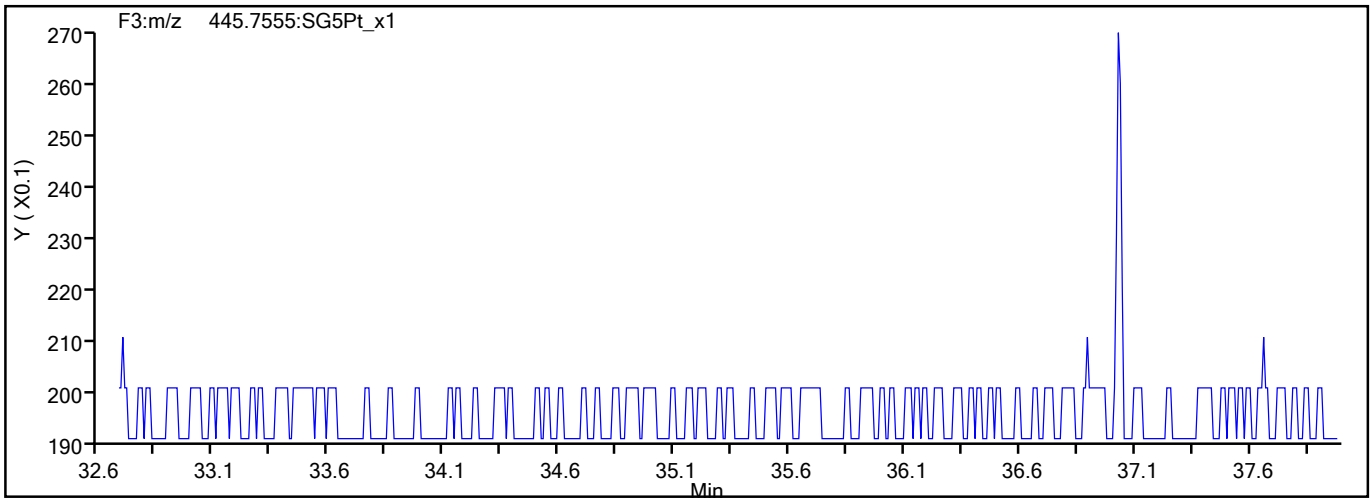

790533

Report Date: 20-Aug-2021 09:55:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

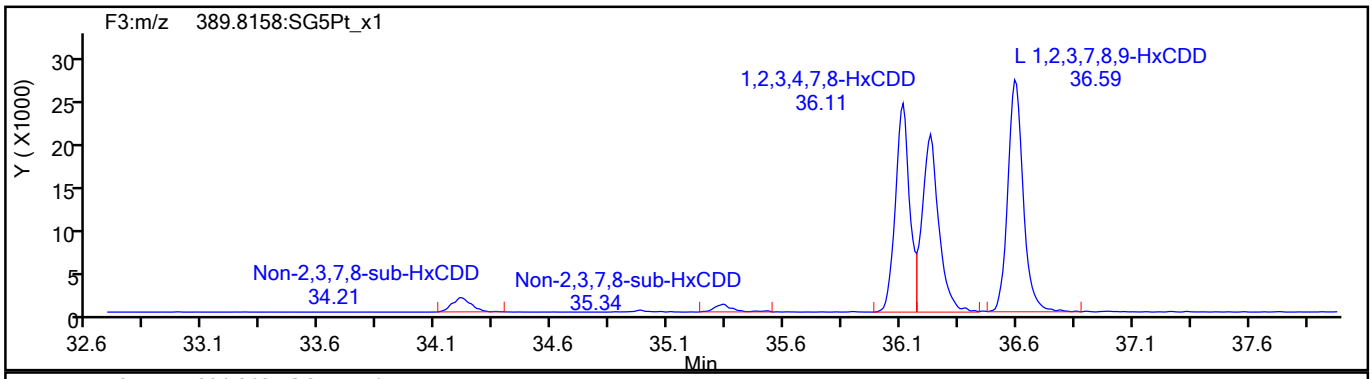

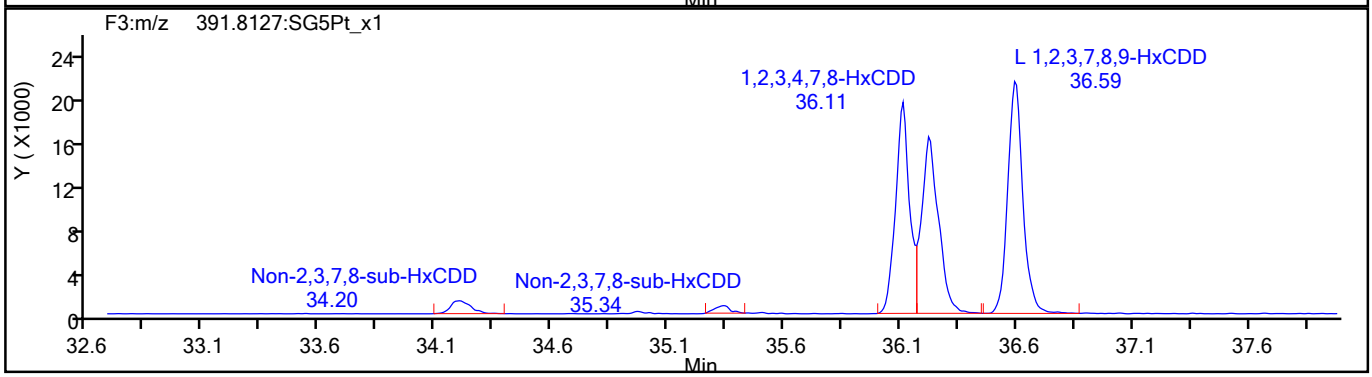

HxCDD Standards

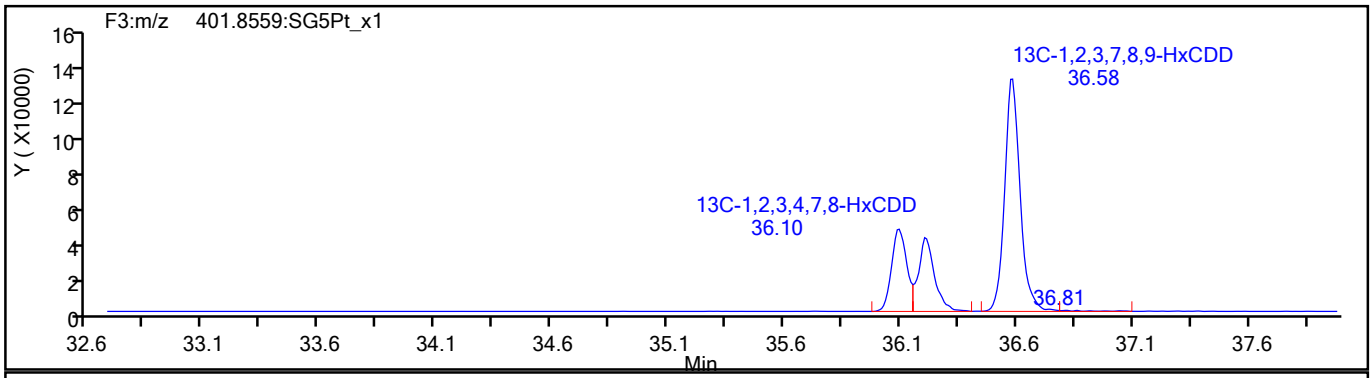

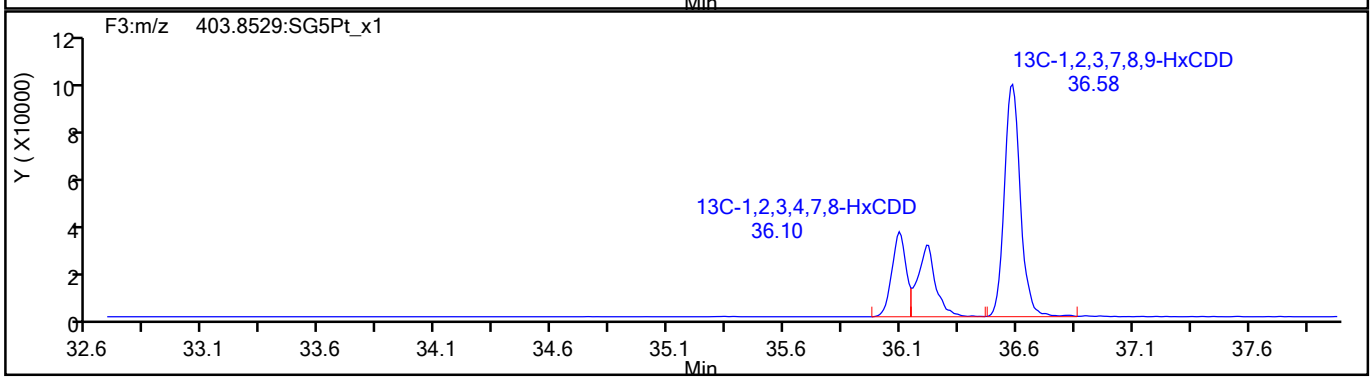

790534

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

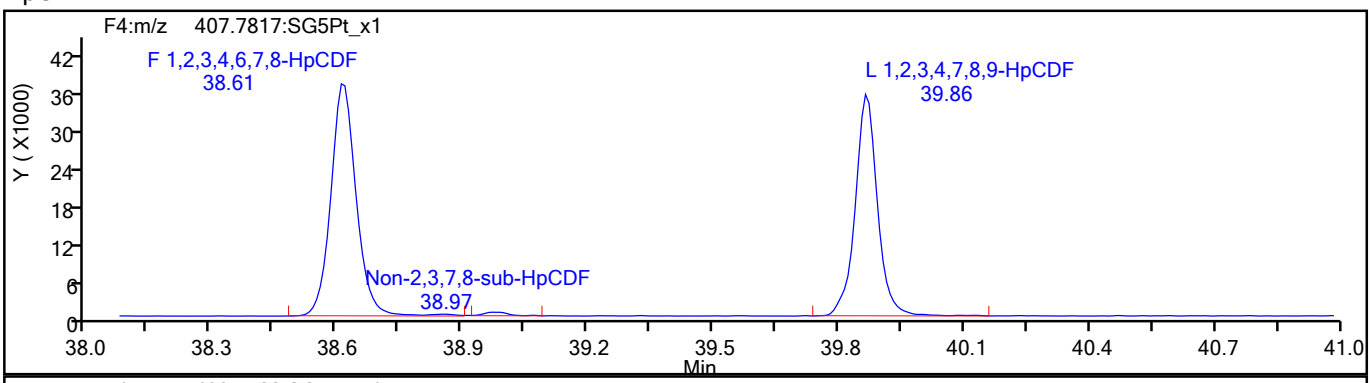

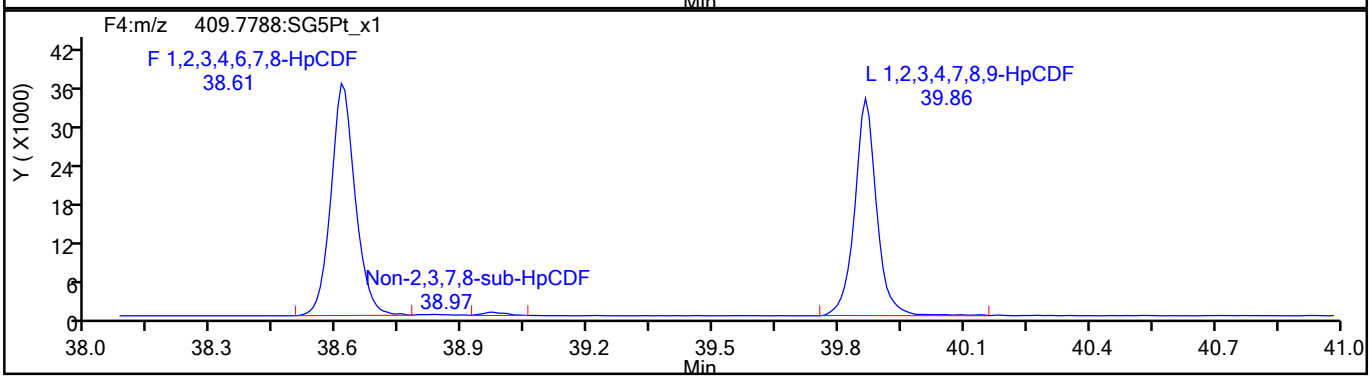

HpCDF Standards

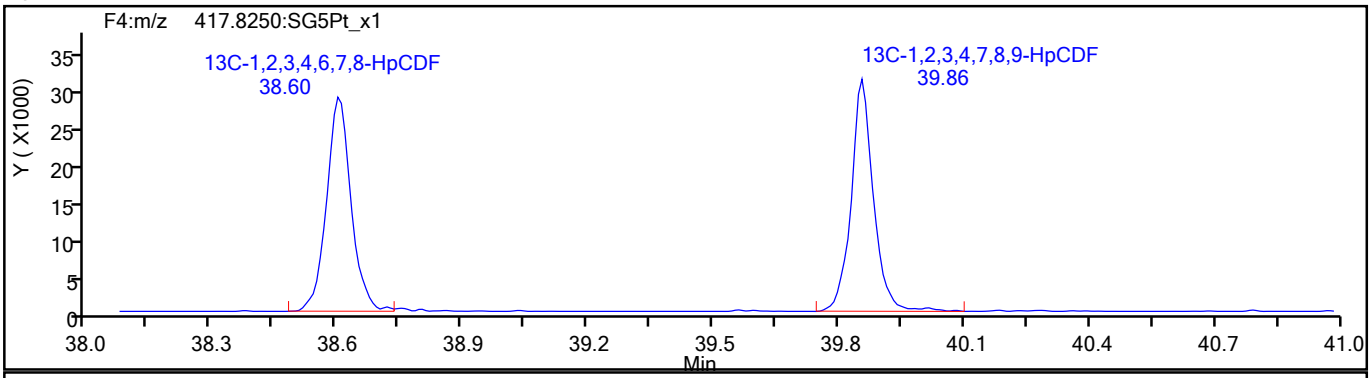

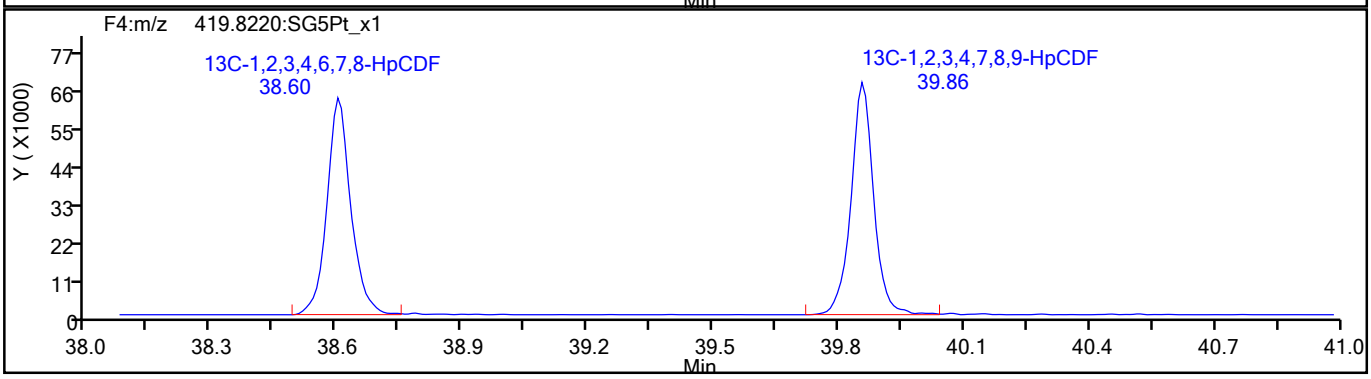

790535

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

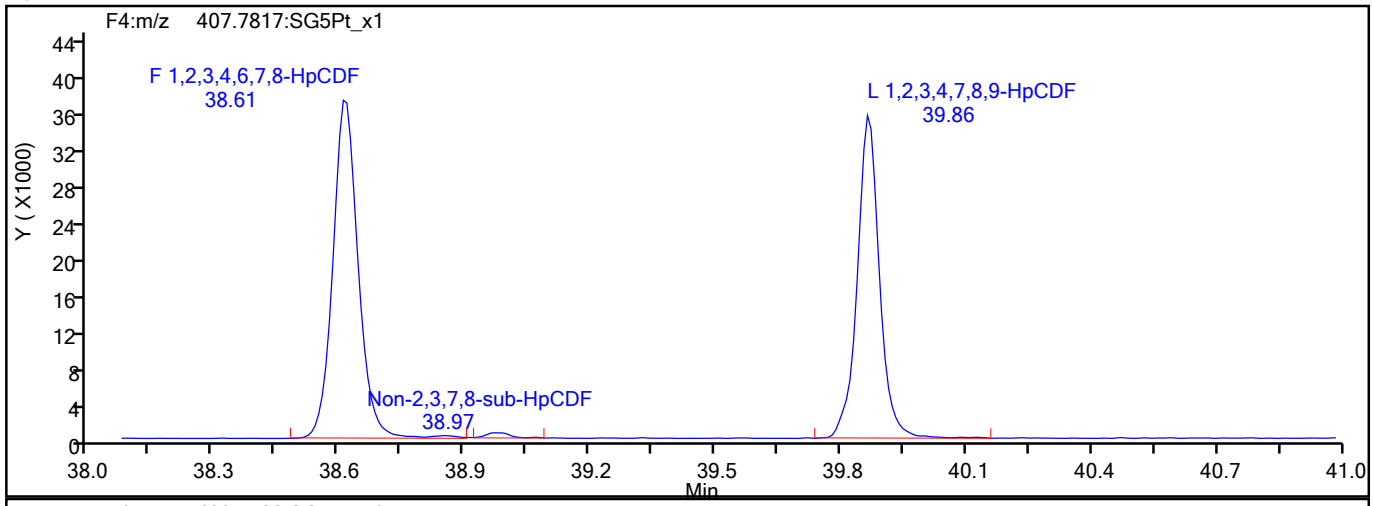

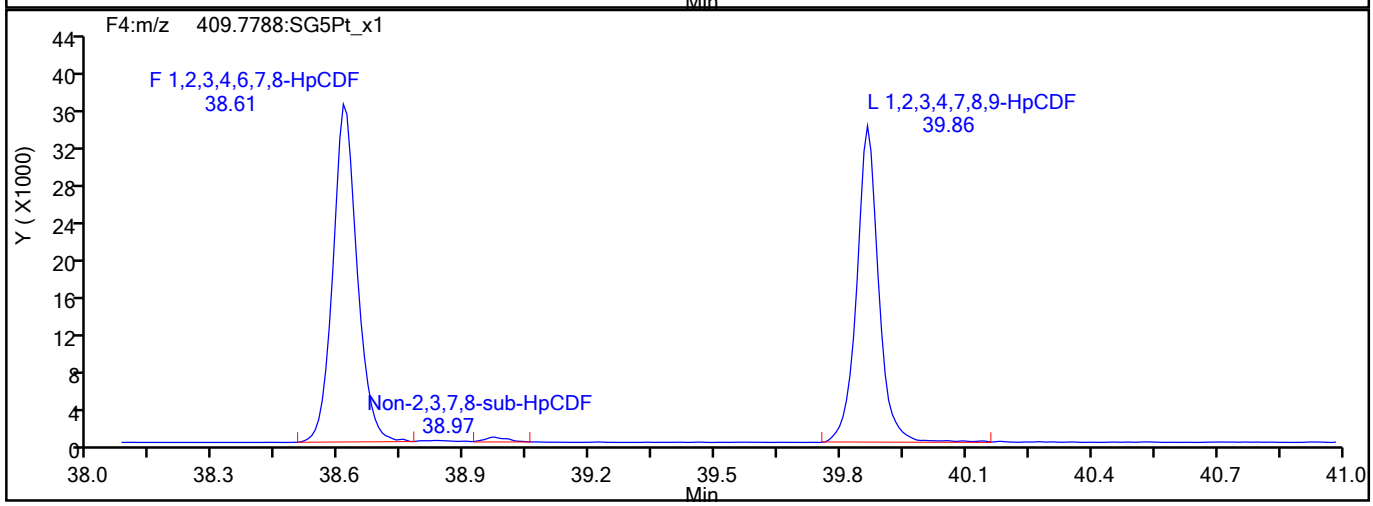

HpCDF Interference Mass

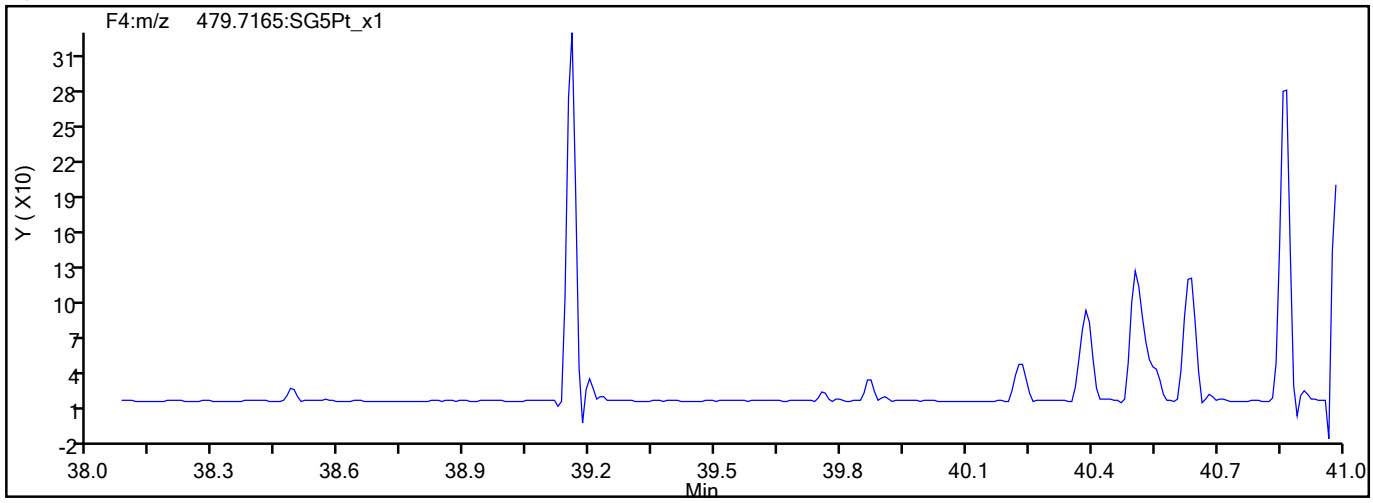

790536

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

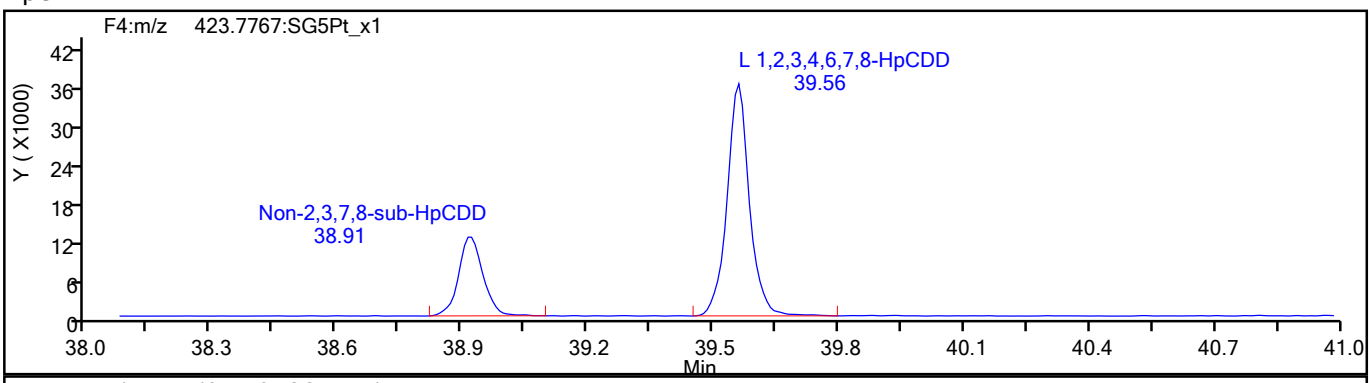

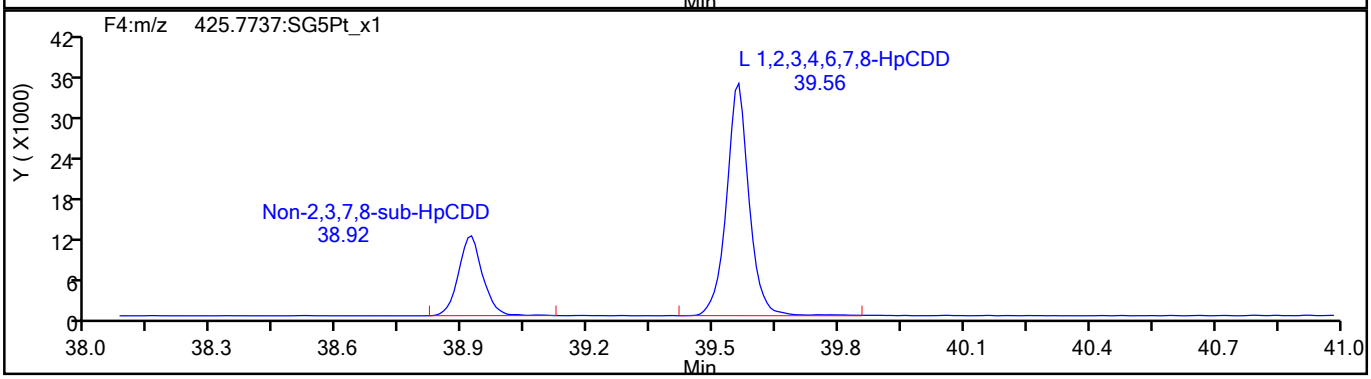

HpCDD Standards

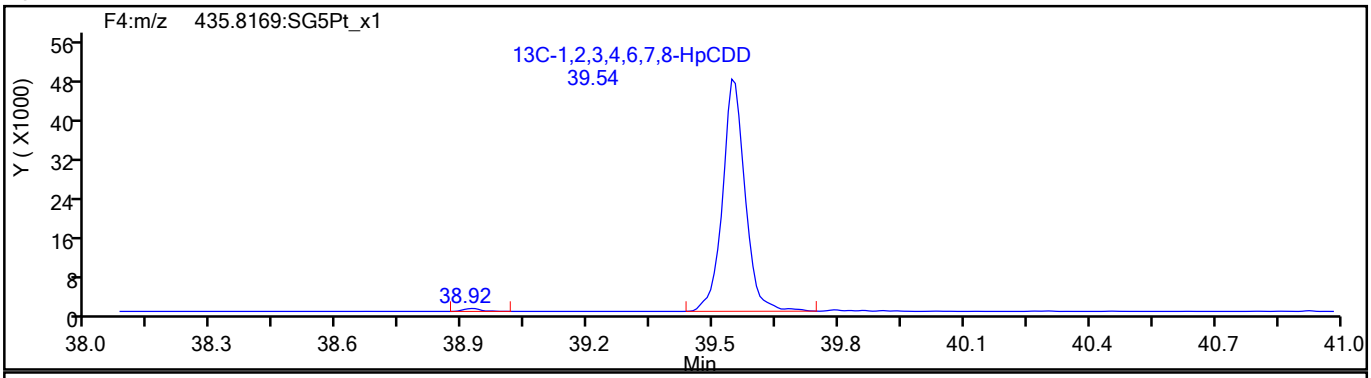

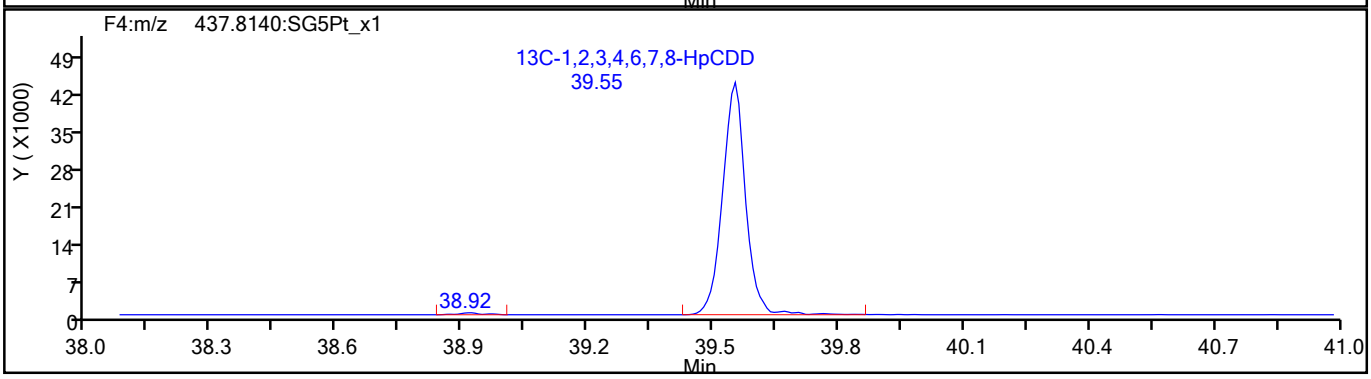

790537

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

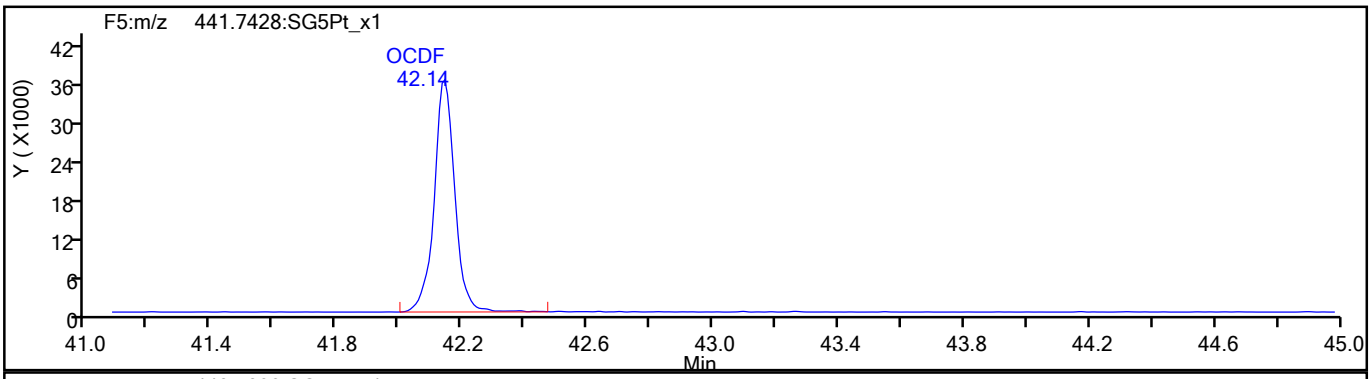

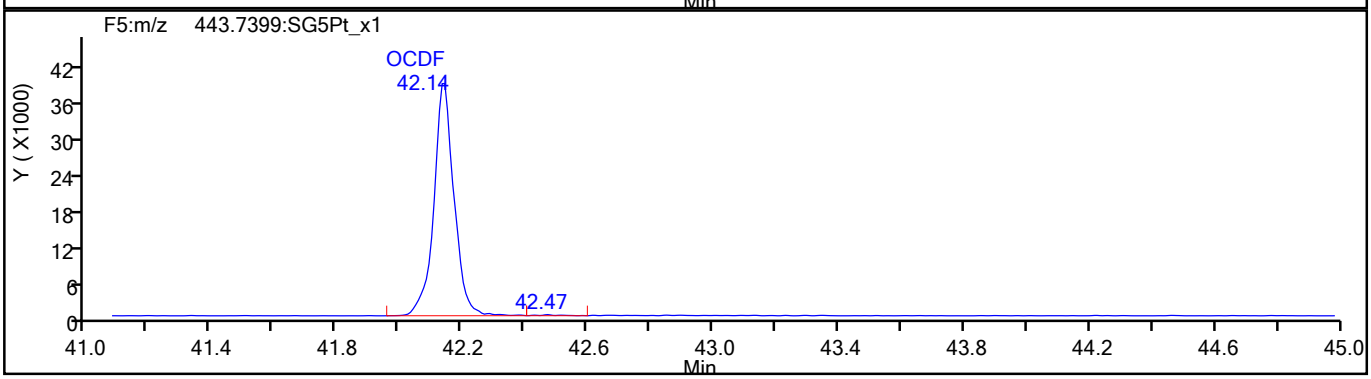

OCDF Standards

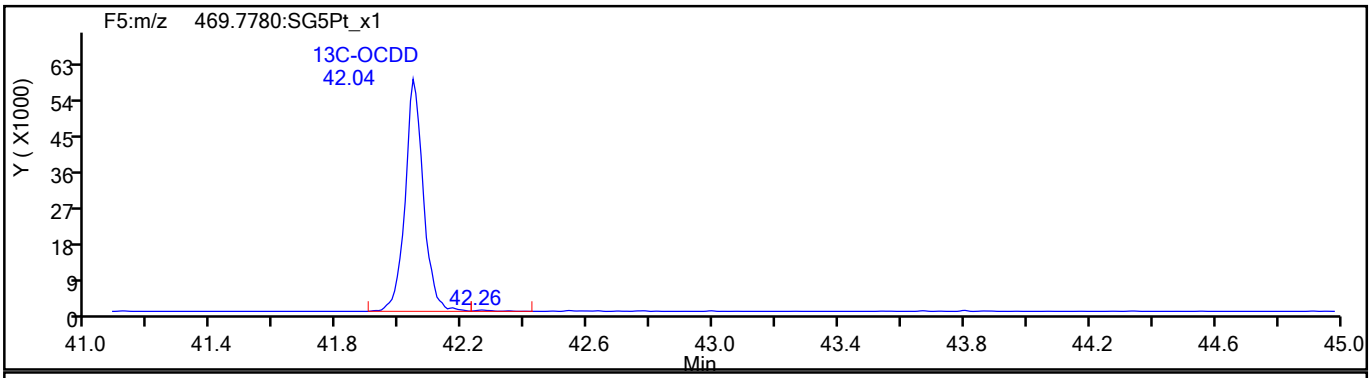

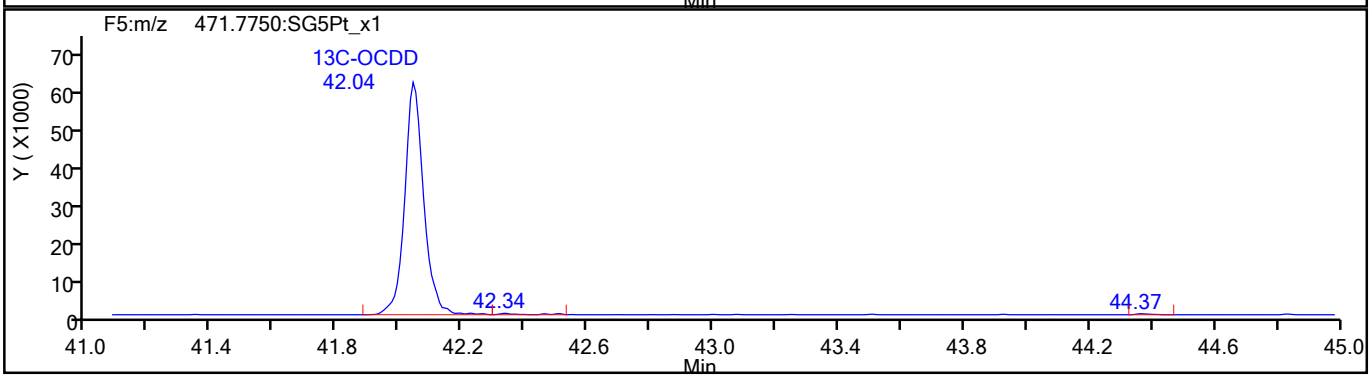

790538

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

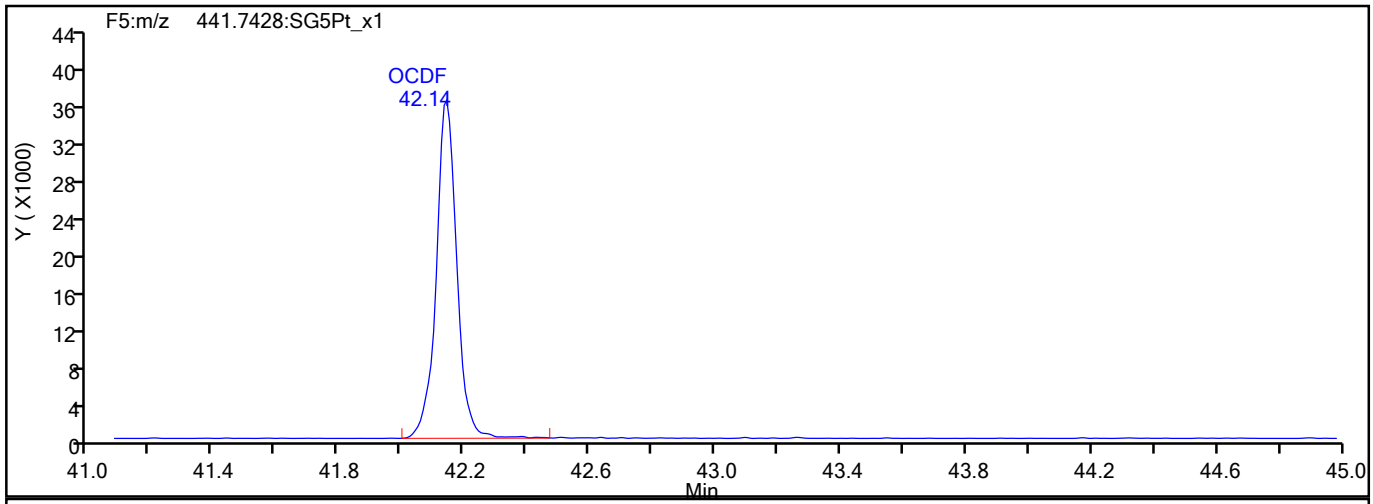

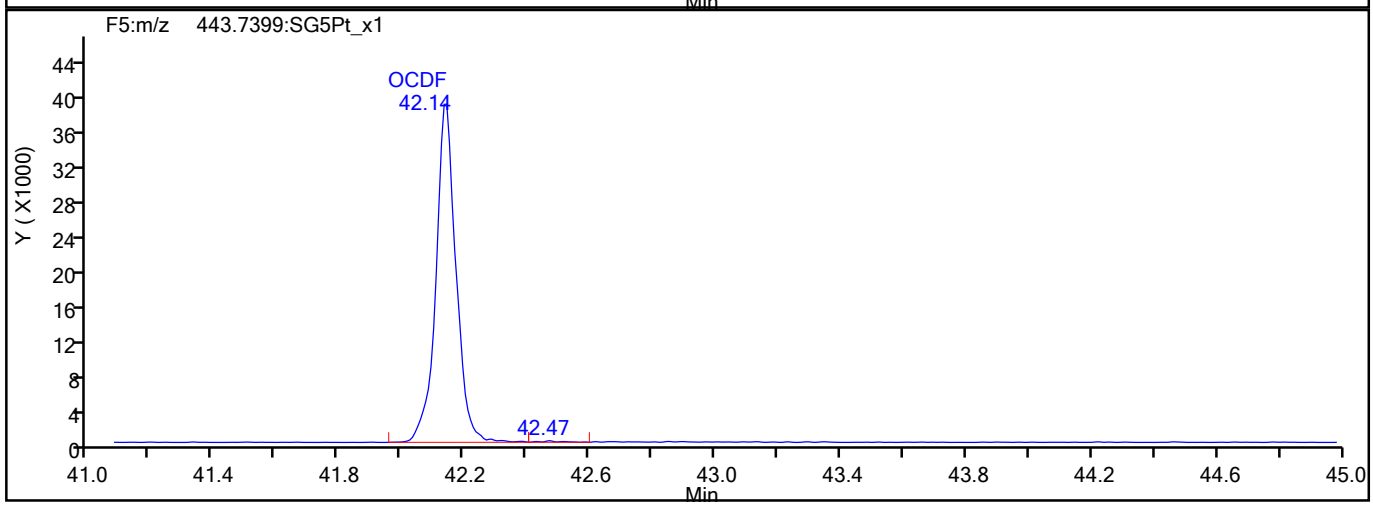

OCDF Interference Mass

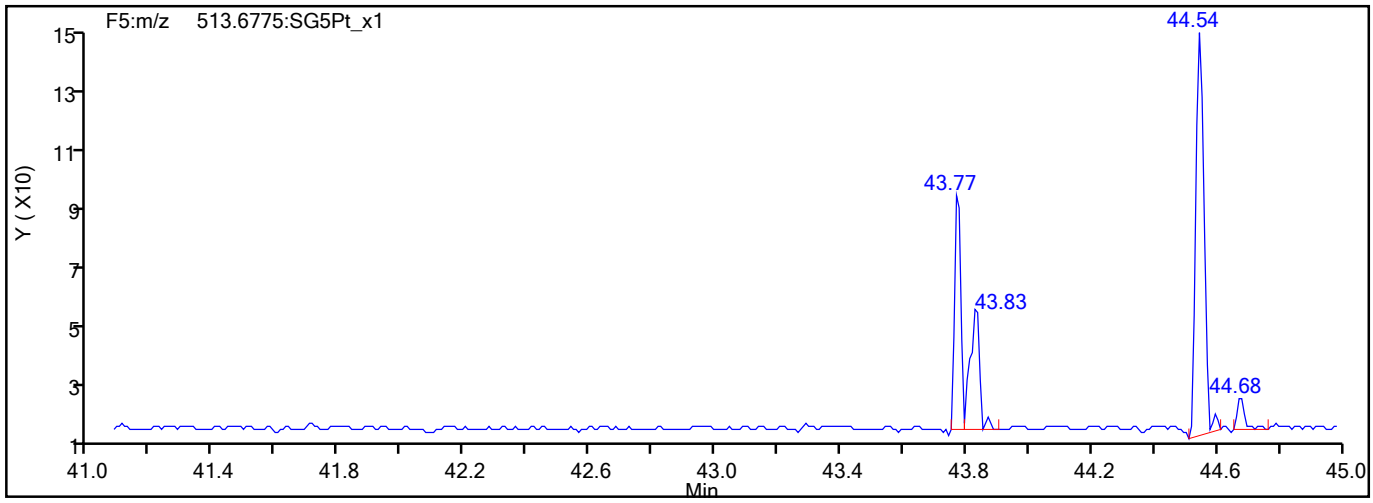

790539

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

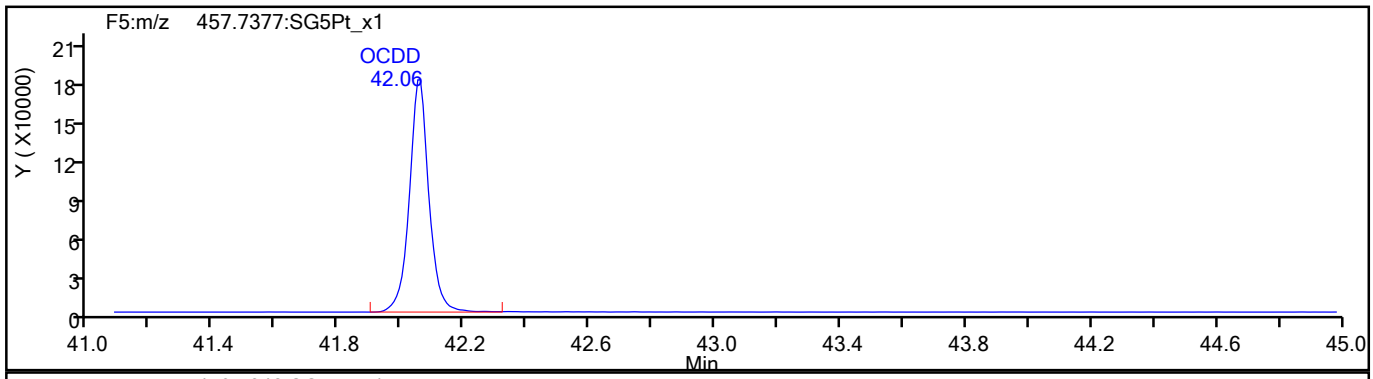

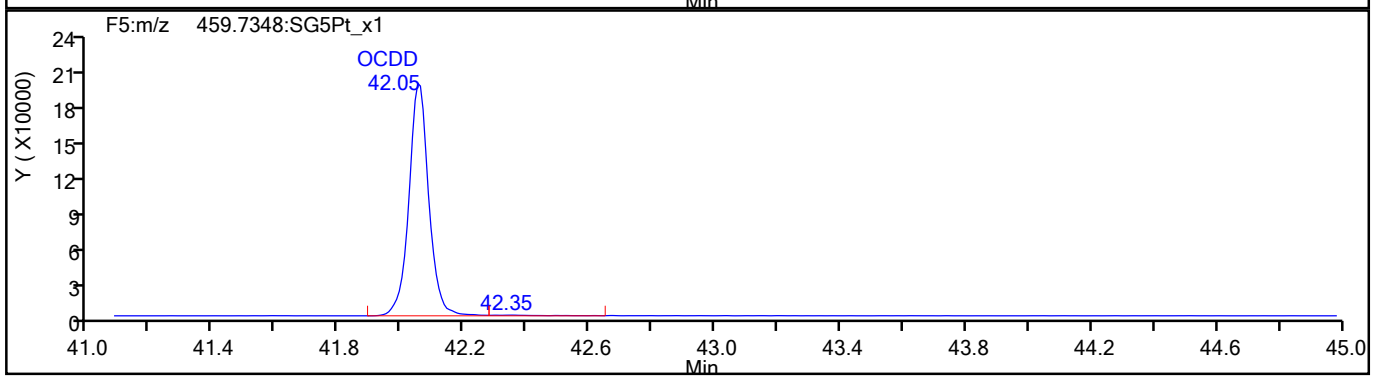

OCDD Standards

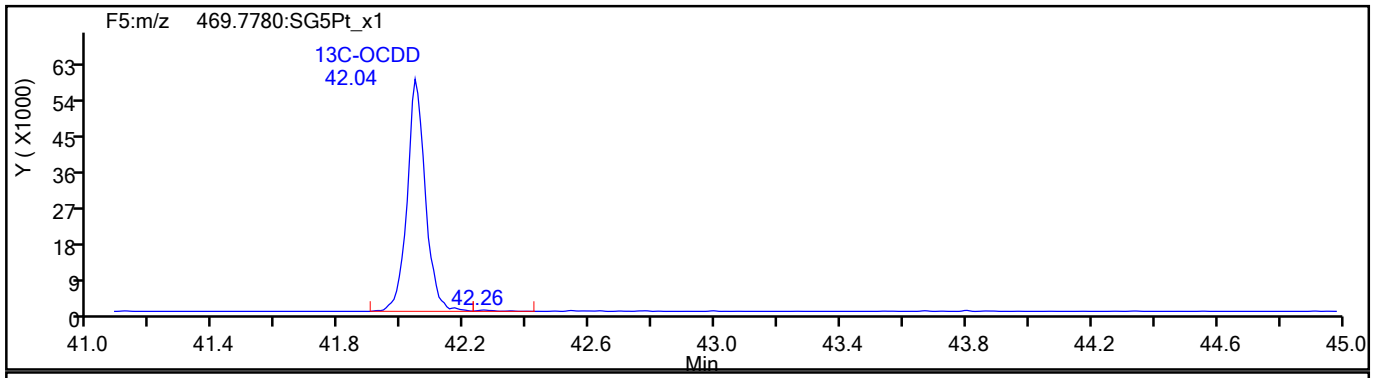

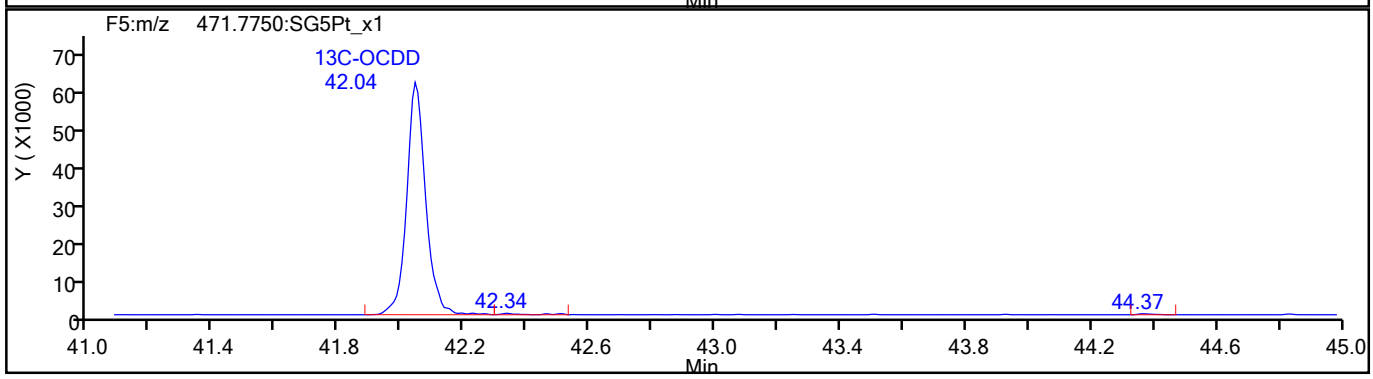

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

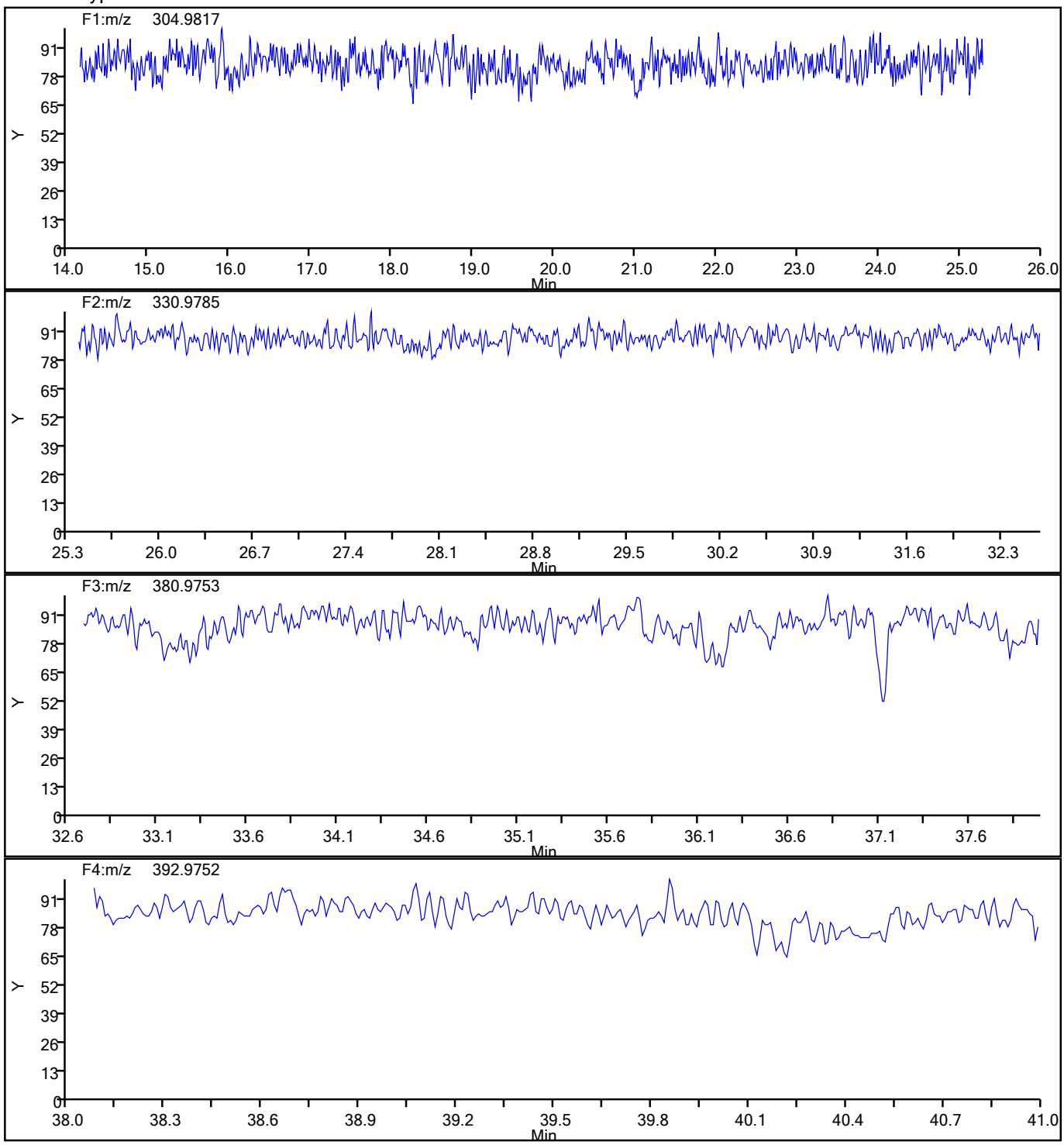

790541

Report Date: 20-Aug-2021 09:55:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_53.d		
Injection Date:	19-Aug-2021 06:18:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	49
Column Type:	DB-5	Column Dia:	0.32 mm

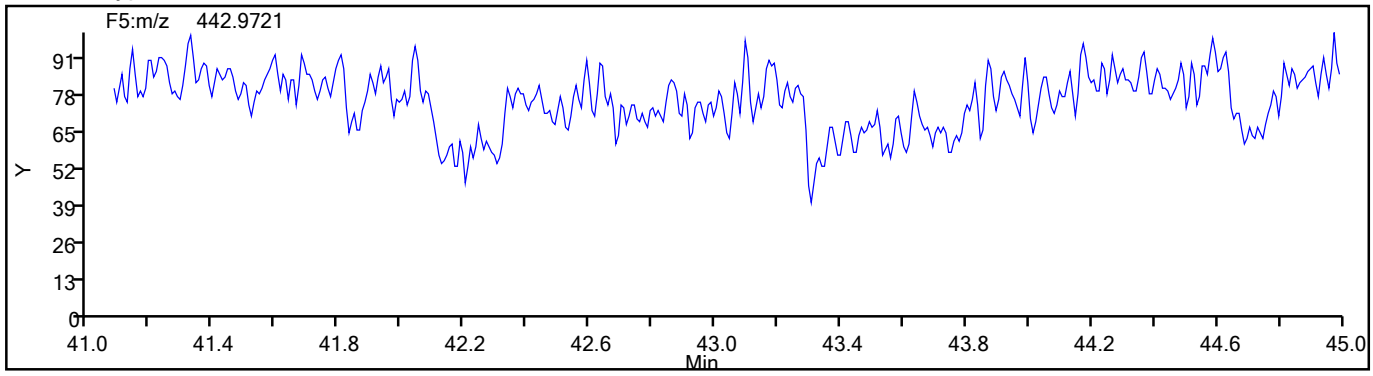

790542

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76901-A-2-B MS RA
Matrix: Sediment
Lab File ID: 27AU2111D2_007.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.08(g)
Date Analyzed: 08/27/2021 12:52
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	200		1.4	0.60

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	43		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	58		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_007.d
Lims ID: 320-76901-A-2-B MS
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MS
Inject. Date: 27-Aug-2021 12:52:12 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-2-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:50:03

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.287	56841542	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.604	32347604	0.85	1.3327	42.7	42.7	0.2401	0.2401	42.70	
2,3,7,8-TCDF	17.631	23612841	0.79	0.9978	73.2	73.2	0.2204	0.2204	732	
D 13C-2,3,7,8-TCDD	16.054	20171625	0.73	0.8749	40.6	40.6	1.087	1.087	40.56	
2,3,7,8-TCDD	16.081	6500016	0.77	1.0570	30.5	30.5	0.2300	0.2300	305	
$ 37Cl4-2,3,7,8-TCDD	16.081	11386455		0.8648	23.2	23.2	0.0725	0.0725	57.91	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_007.d
Lims ID: 320-76901-A-2-B MS
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MS
Inject. Date: 27-Aug-2021 12:52:12 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-2-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:50:03

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.287	16.284	0		24563745	5300789	21290	53225	249		
333.9339	16.287	16.284	0		32277797	7092114	25841	64602	274	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.604	17.614	-1	1.081	14840225	2856793	7831	19577	365		
317.9389	17.604	17.614	-1	1.081	17507379	3208793	8031	20077	400	0.85(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.631	17.628	0	1.002	10436897	1973325	2542	6355	776		
305.8987	17.631	17.628	0	1.002	13175944	2443560	2794	6985	875	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.054	16.064	-1	0.986	8530947	1886793	21290	53225	89		
333.9339	16.068	16.064	0	0.987	11640678	2664386	25841	64602	103	0.73(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.081	16.078	0	1.002	2828033	612021	2335	5837	262		
321.8936	16.081	16.078	0	1.002	3671983	827384	2090	5225	396	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.081	16.078	0	0.987	11386455	2548421	3107	7767	820		

QC Flag Legend

Processing Flags

Report Date: 27-Aug-2021 15:52:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_007.d		
Injection Date:	27-Aug-2021 12:52:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

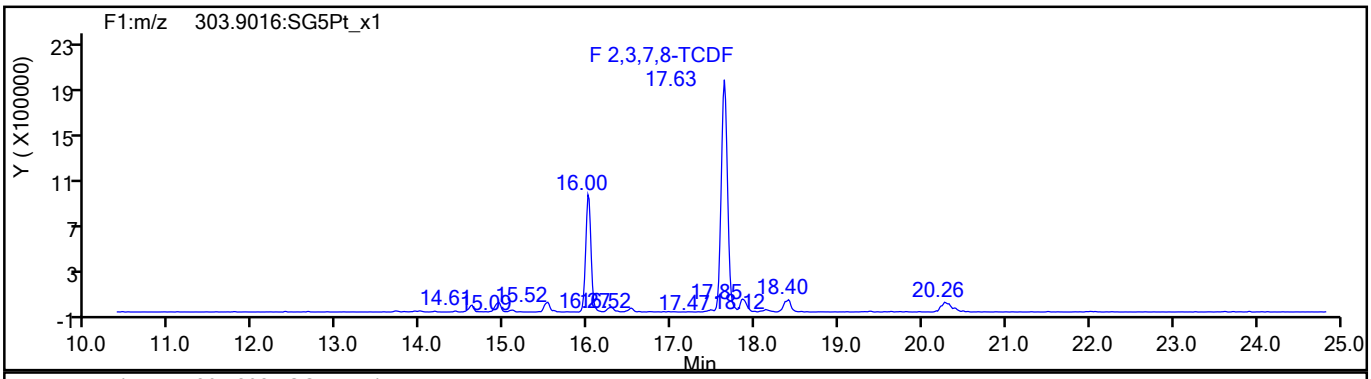

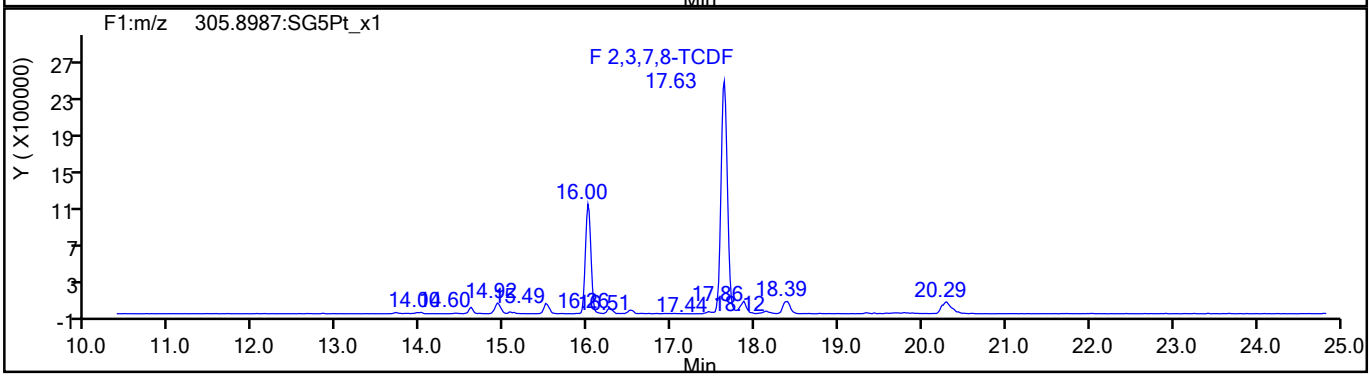

TCDF Standards

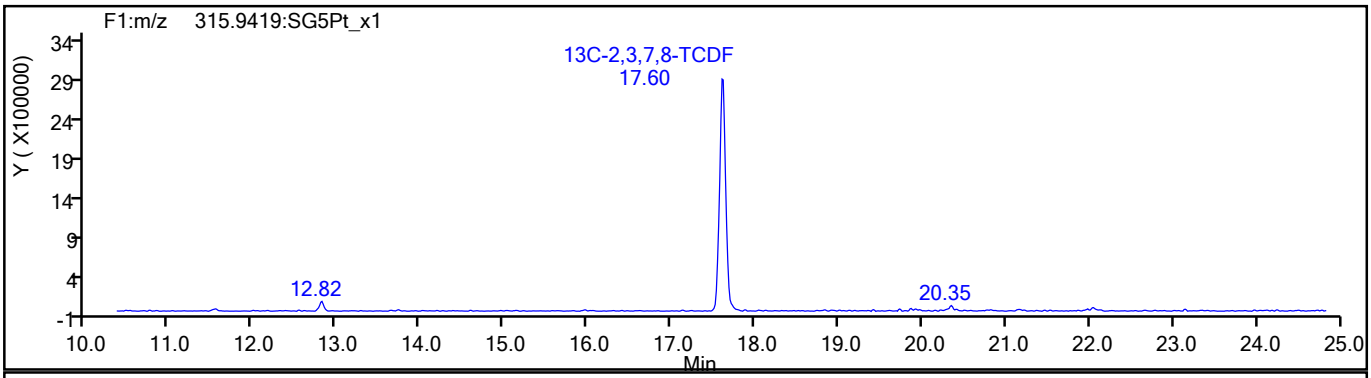

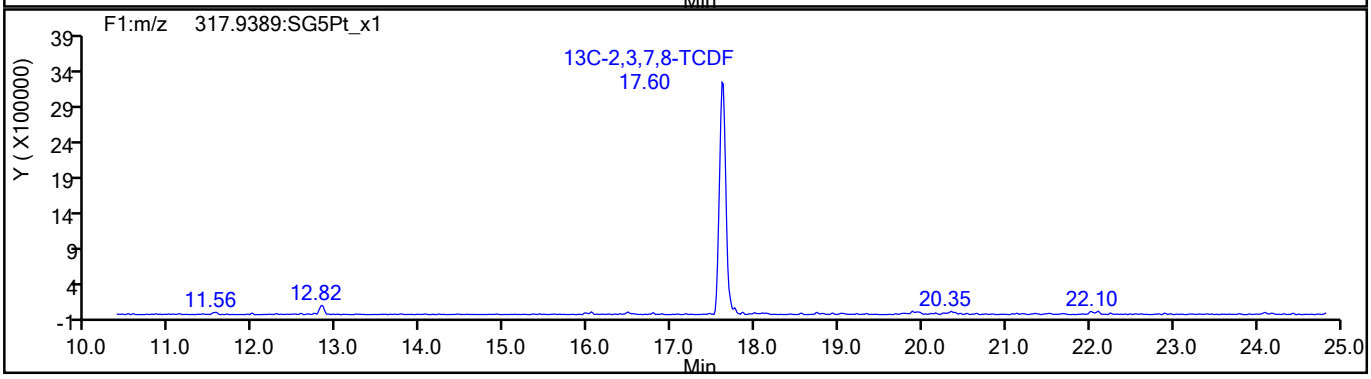

790546

Report Date: 27-Aug-2021 15:52:33 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_007.d		
Injection Date:	27-Aug-2021 12:52:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

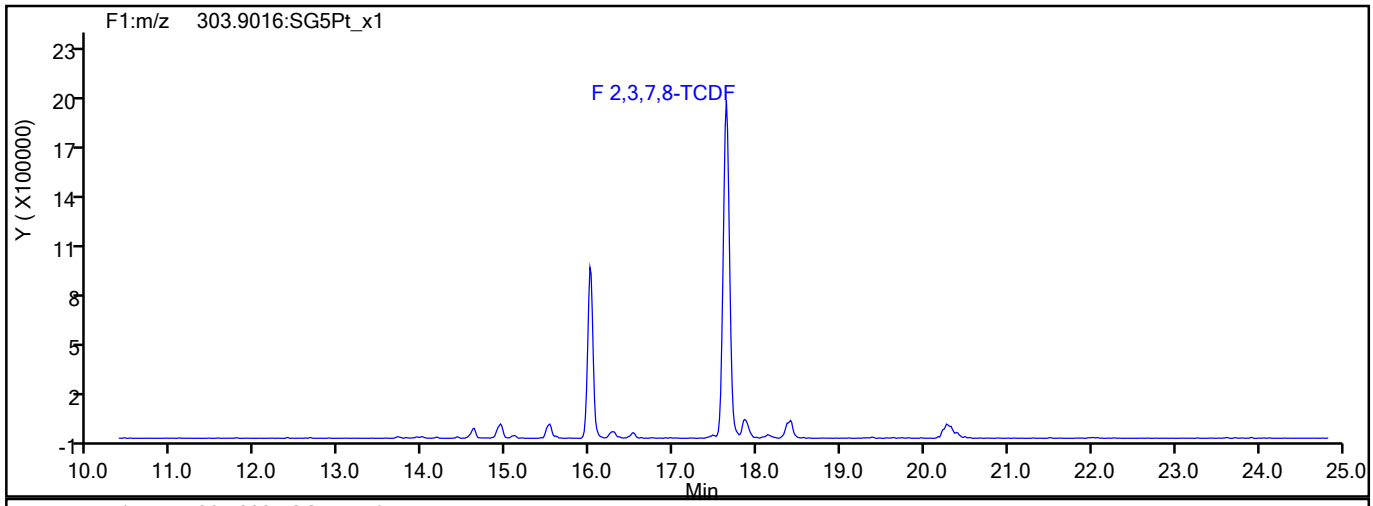

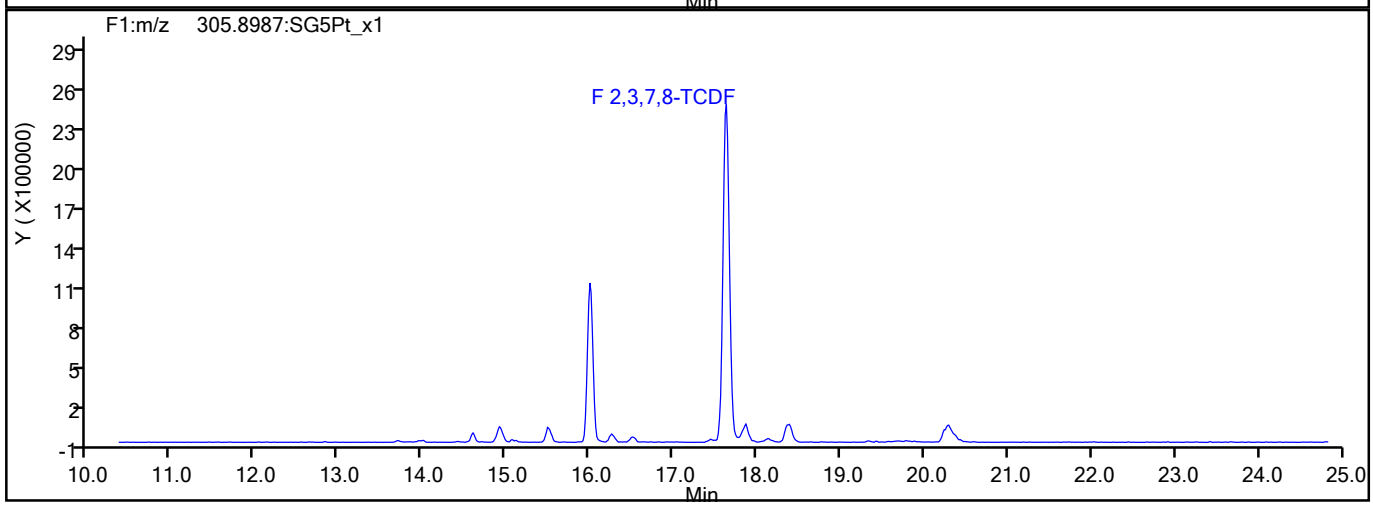

TCDF Interference Mass

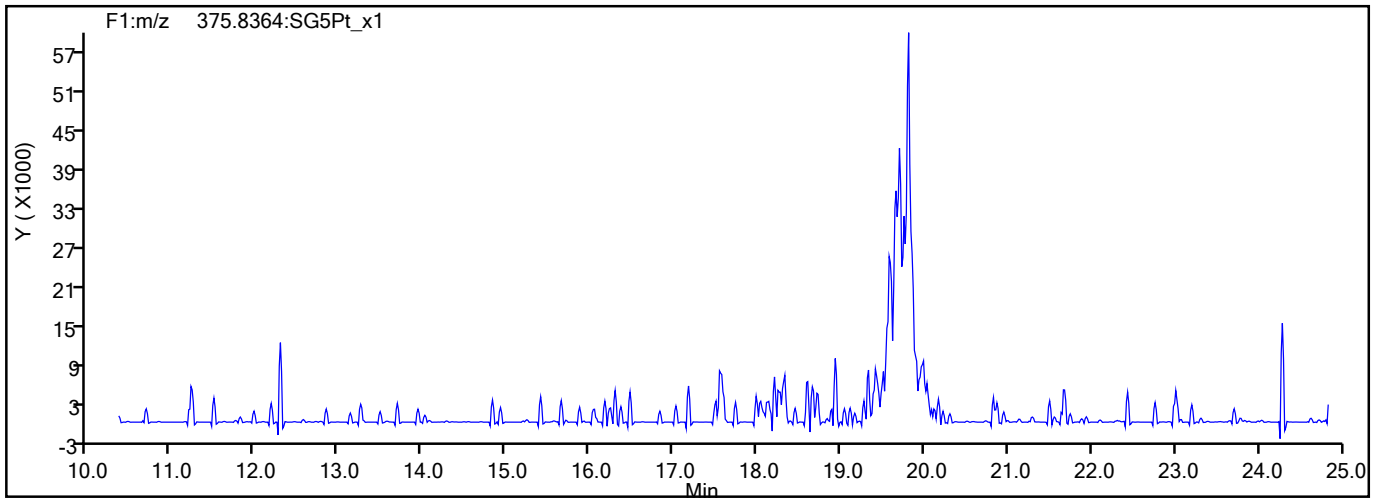

790547

Report Date: 27-Aug-2021 15:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_007.d		
Injection Date:	27-Aug-2021 12:52:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

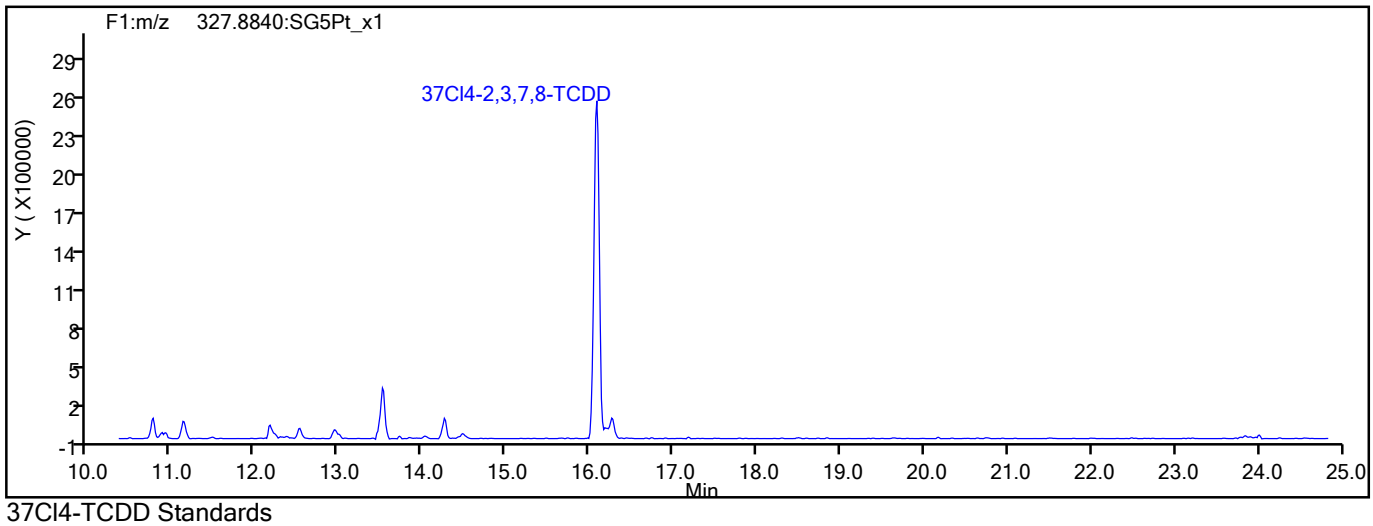

37Cl4-TCDD Standards

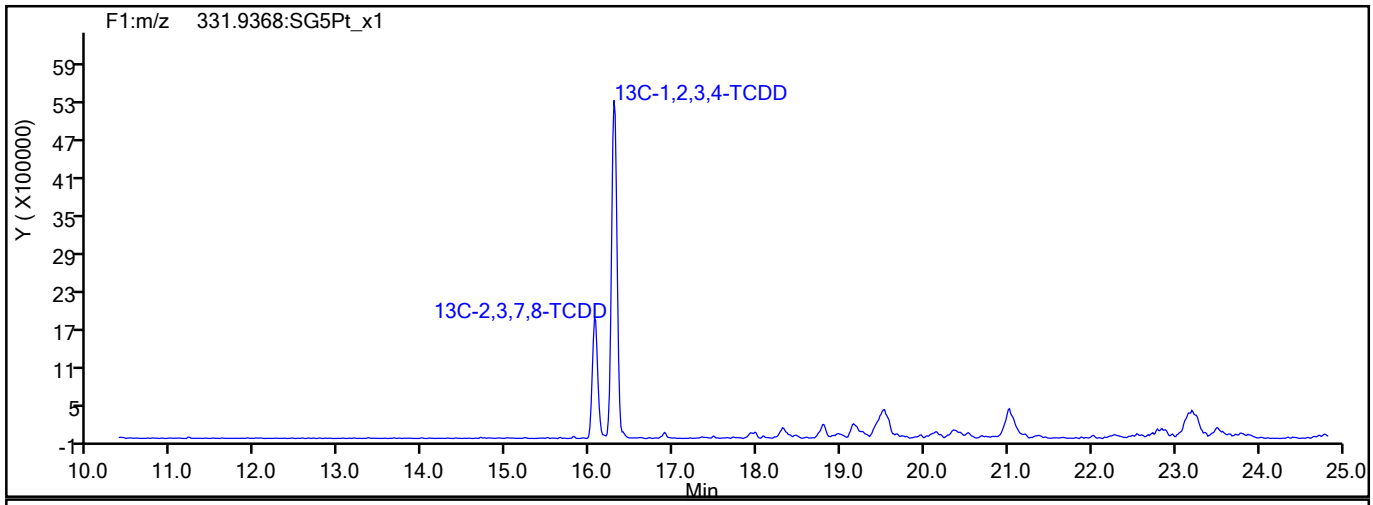

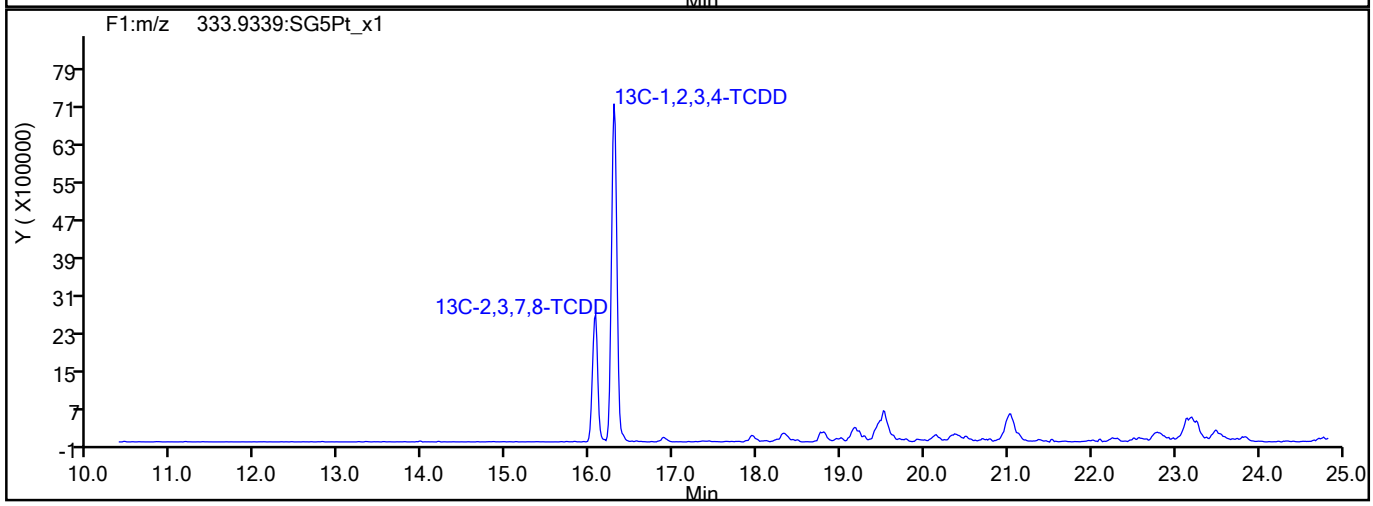

790548

Report Date: 27-Aug-2021 15:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_007.d		
Injection Date:	27-Aug-2021 12:52:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

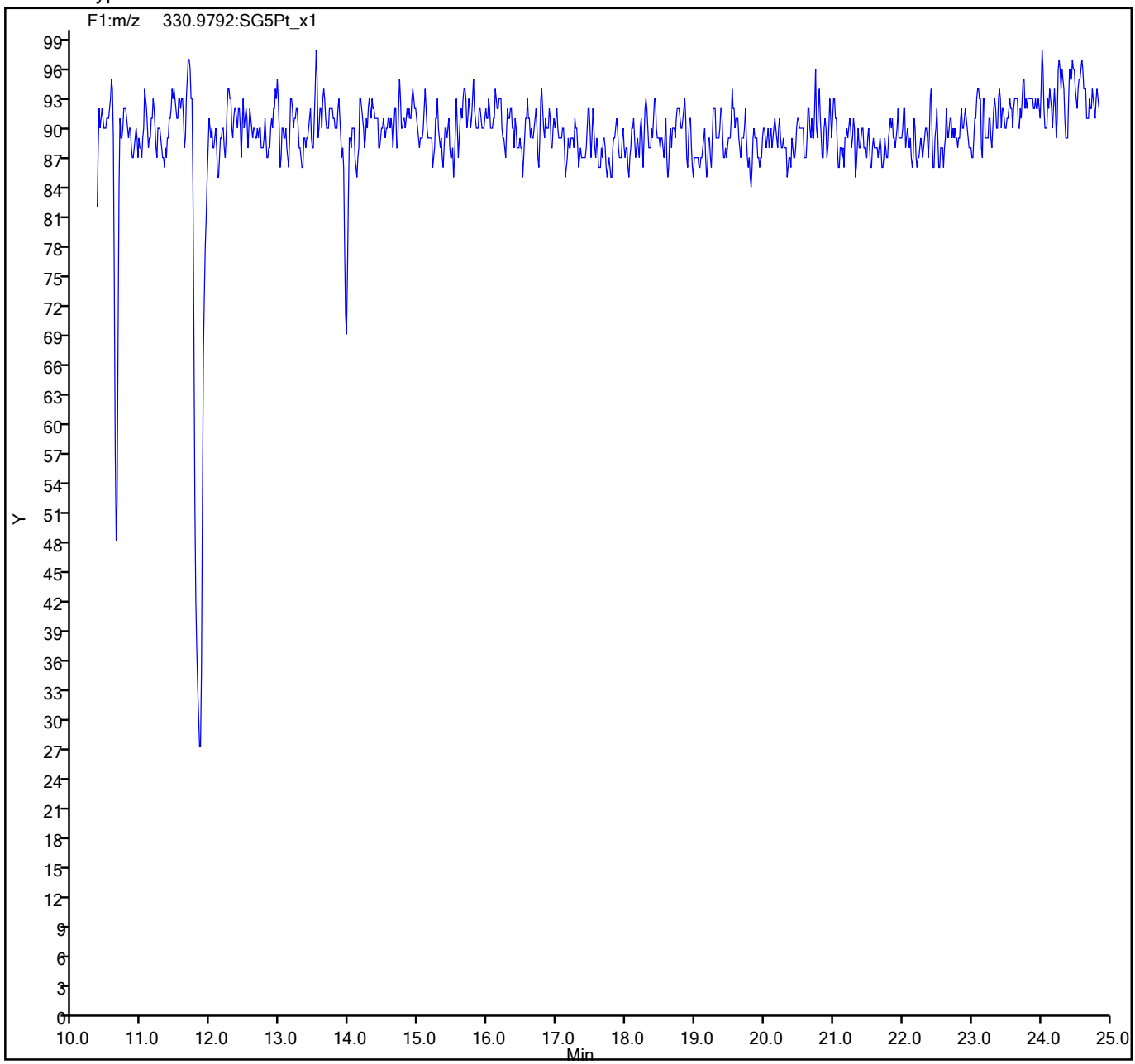

790549

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76901-A-2-C MSD
Matrix: Sediment
Lab File ID: 17au21dfs1_54.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.20(g)
Date Analyzed: 08/19/2021 07:06
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 517462
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	65.4		1.3	0.28
40321-76-4	1,2,3,7,8-PeCDD	151		6.7	0.68
57117-41-6	1,2,3,7,8-PeCDF	161		6.7	0.67
57117-31-4	2,3,4,7,8-PeCDF	147		6.7	0.71
39227-28-6	1,2,3,4,7,8-HxCDD	137		6.7	0.82
57653-85-7	1,2,3,6,7,8-HxCDD	142		6.7	0.94
19408-74-3	1,2,3,7,8,9-HxCDD	119		6.7	0.81
70648-26-9	1,2,3,4,7,8-HxCDF	153		6.7	0.58
57117-44-9	1,2,3,6,7,8-HxCDF	161		6.7	0.67
72918-21-9	1,2,3,7,8,9-HxCDF	155		6.7	0.78
60851-34-5	2,3,4,6,7,8-HxCDF	164		6.7	0.63
35822-46-9	1,2,3,4,6,7,8-HpCDD	193		6.7	0.47
67562-39-4	1,2,3,4,6,7,8-HpCDF	152		6.7	0.71
55673-89-7	1,2,3,4,7,8,9-HpCDF	144		6.7	0.65
3268-87-9	OCDD	1450		13	1.2
39001-02-0	OCDF	326		13	0.38
41903-57-5	Total TCDD	68.2		1.3	0.28
30402-14-3	Total TCDF	308		1.3	0.93
36088-22-9	Total PeCDD	153		6.7	0.68
30402-15-4	Total PeCDF	313		6.7	0.69
34465-46-8	Total HxCDD	412		6.7	0.86
55684-94-1	Total HxCDF	634		6.7	0.67
37871-00-4	Total HpCDD	260		6.7	0.47
38998-75-3	Total HpCDF	296		6.7	0.68

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Client Sample ID: Lab Sample ID: 320-76901-A-2-C MSD

Matrix: Sediment Lab File ID: 17au21dfs1_54.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/06/2021 12:58

Sample wt/vol: 10.20(g) Date Analyzed: 08/19/2021 07:06

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 27.3 GPC Cleanup:(Y/N) N

Analysis Batch No.: 517462 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	46		25-164
89059-46-1	13C-2,3,7,8-TCDF	43		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	43		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	45		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	48		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	57		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	67		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	56		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	41		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	50		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	55		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	55		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	61		26-138
114423-97-1	13C-OCDD	62		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	57		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d
Lims ID: 320-76901-A-2-C MSD
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MSD
Inject. Date: 19-Aug-2021 07:06:00 ALS Bottle#: 0 Worklist Smp#: 50
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-2-c msd
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:56:43 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:30:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	21.329	1248189	0.83	2.1E+04	100.0	100.0				a
D 13C-2,3,7,8-TCDF	20.367	729731	0.84	1.3459	43.4	43.4	0.1654	0.1654	43.44	
2,3,7,8-TCDF	20.401	575157	0.82	1.0802	73.0	73.0	0.3457	0.3457	730	
A Non-2,3,7,8-sub-TCDF	19.878	324005	0.77	1.0802	41.5	41.1	0.3457	27.9	0.00	RQ
S Total TCDF					114.4	114.1	0.3457	0.3457		RQ
D 13C-2,3,7,8-TCDD	21.715	530739	0.82	0.9317	45.6	45.6	0.1641	0.1641	45.64	
2,3,7,8-TCDD	21.775	138356	0.78	1.0753	24.2	24.2	0.1056	0.1056	242	
$ 37Cl4-2,3,7,8-TCDD	21.758	287102		1.0083	22.8	22.8	0.0451	0.0451	57.03	
A Non-2,3,7,8-sub-TCDD	20.707	6078	0.89	1.0753	1.065	1.065	0.1056	1.065	0.00	a
S Total TCDD					25.3	25.3	0.1056	0.1056		
D 13C-1,2,3,7,8-PeCDF	27.247	643396	1.60	1.1405	45.2	45.2	0.1500	0.1500	45.20	
1,2,3,7,8-PeCDF	27.273	405542	1.61	1.0543	59.8	59.8	0.2474	0.2474	120	
D 13C-2,3,4,7,8-PeCDF	28.755	677367	1.59	1.1253	48.2	48.2	0.1520	0.1520	48.22	
2,3,4,7,8-PeCDF	28.780	371066	1.60	1.0079	54.4	54.4	0.2642	0.2642	109	
A F1 PeCDFs	24.648						0.0123	0.1074		U
A Non-2,3,7,8-sub-PeCDF	28.125	12772	1.55	1.0311	2.034	1.876	0.2556	0.9466	0.00	RQ
S Total PeCDF					116.2	116.0	0.2558	0.2558		RQ
D 13C-1,2,3,7,8-PeCDD	29.564	386850	1.60	0.7165	43.3	43.3	0.1482	0.1482	43.26	
1,2,3,7,8-PeCDD	29.597	226890	1.53	1.0465	56.0	56.0	0.2523	0.2523	112	
A Non-2,3,7,8-sub-PeCDD	28.489	3259	1.55	1.0465	1.096	0.8050	0.2523	0.3431	0.00	RQ
S Total PeCDD					57.1	56.8	0.2523	0.2523		RQ
D 13C-1,2,3,4,7,8-HxCDF	34.915	586830	0.53	0.9648	67.5	67.5	0.1928	0.1928	67.50	
1,2,3,4,7,8-HxCDF	34.924	381545	1.27	1.1474	56.7	56.7	0.2134	0.2134	113	
D 13C-1,2,3,6,7,8-HxCDF	35.075	535800	0.54	1.0708	55.5	55.5	0.1737	0.1737	55.53	
1,2,3,6,7,8-HxCDF	35.084	390501	1.31	1.2178	59.8	59.8	0.2472	0.2472	120	
D 13C-2,3,4,6,7,8-HxCDF	35.892	468106	0.52	1.0413	49.9	49.9	0.1786	0.1786	49.89	
2,3,4,6,7,8-HxCDF	35.900	346772	1.33	1.2145	61.0	61.0	0.2348	0.2348	122	
D 13C-1,2,3,7,8,9-HxCDF	36.776	357245	0.53	0.9731	40.7	40.7	0.1912	0.1912	40.74	
1,2,3,7,8,9-HxCDF	36.801	255449	1.34	1.2401	57.7	57.7	0.2911	0.2911	115	
A Non-2,3,7,8-sub-HxCDF	35.028						0.2426	0.2426		
S Total HxCDF					235.2	235.2	0.2466	0.2466		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	36.574	901101	1.27	1.8E+04	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	36.094	390499	1.14	0.7587	57.1	57.1	0.1168	0.1168	57.12	
1,2,3,4,7,8-HxCDD	36.111	209743	1.20	1.0608	50.6	50.6	0.3027	0.3027	101	
D 13C-1,2,3,6,7,8-HxCDD	36.212	430290	1.25	0.8593	55.6	55.6	0.1031	0.1031	55.57	
1,2,3,6,7,8-HxCDD	36.229	225667	1.26	0.9933	52.8	52.8	0.3497	0.3497	106	
1,2,3,7,8,9-HxCDD	36.591	201566	1.27	1.1094	44.3	44.3	0.3008	0.3008	88.54	
A Non-2,3,7,8-sub-HxCDD	35.394	22737	1.24	1.0545	5.593	5.254	0.3165	3.541	0.00	RQ
S Total HxCDD					153.3	153.0	0.3178	0.3178		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	38.599	362194	0.46	0.7359	54.6	54.6	0.1919	0.1919	54.62	
1,2,3,4,6,7,8-HpCDF	38.607	294882	1.02	1.4421	56.5	56.5	0.2630	0.2630	113	
D 13C-1,2,3,4,7,8,9-HpCDF	39.845	376400	0.43	0.6854	60.9	60.9	0.2061	0.2061	60.95	
1,2,3,4,7,8,9-HpCDF	39.862	262323	1.05	1.3092	53.2	53.2	0.2393	0.2393	106	
A Non-2,3,7,8-sub-HpCDF	39.258						0.2495	0.2495		
S Total HpCDF					109.7	109.7	0.2512	0.2512		
D 13C-1,2,3,4,6,7,8-HpCDD	39.542	336170	1.06	0.6745	55.3	55.3	0.1242	0.1242	55.31	
1,2,3,4,6,7,8-HpCDD	39.550	252425	1.07	1.0503	71.5	71.5	0.1759	0.1759	143	
A Non-2,3,7,8-sub-HpCDD	39.258	88130	1.04	1.0503	25.0	25.0	0.1759	25.0	0.00	
S Total HpCDD					96.5	96.5	0.1759	0.1759		
D 13C-OCDD	42.039	610449	0.91	0.5446	124.4	124.4	0.1207	0.1207	62.19	
OCDF	42.140	486329	0.94	1.3168	121.0	121.0	0.1408	0.1408	121	
OCDD	42.056	1748962	0.89	1.0620	539.6	539.6	0.4398	0.4398	540	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d
Lims ID: 320-76901-A-2-C MSD
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MSD
Inject. Date: 19-Aug-2021 07:06:00 ALS Bottle#: 0 Worklist Smp#: 50
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-a-2-c msd
Operator ID: Xcalibur_System Instrument ID: DFS 1

Method: \\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\Dioxin_DFS1.m
Limit Group: HR - 1613B - ICAL
Last Update: 20-Aug-2021 09:56:43 Calib Date: 08-Jun-2021 17:30:00
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\DFS1\20210608-120705.b\08jn21adfs1_8.d

Column 1 : DB-5 (0.32 mm) Det: F1(14.80 :26.00)
Process Host: CTX1665

First Level Reviewer: stephensk Date: 19-Aug-2021 11:30:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	21.329	21.427	-6		564969	72927	66	165	1105		a
333.9338	21.337	21.427	-5		683220	91920	35	87	2626	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	20.367	20.401	-2	0.955	332911	45753	101	252	453		
317.9389	20.367	20.401	-2	0.955	396820	54659	46	115	1188	0.84(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	20.401	20.436	-2	1.002	258753	33760	68	170	496		
305.8987	20.418	20.436	-1	1.003	316404	40055	82	205	488	0.82(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	17.851	19.878	-121	0.876	4802	1013	68	170	15		
305.8987	17.851	19.878	-121	0.876	5527	992	82	205	12	0.87(0.65-0.89)	
303.9016	19.191	19.878	-41	0.942	8894	1332	68	170	20		
305.8987	19.165	19.878	-43	0.941	12405	1657	82	205	20	0.72(0.65-0.89)	
303.9016	19.689	19.878	-11	0.967	100135	14610	68	170	215		
305.8987	19.671	19.878	-12	0.966	120067	17602	82	205	215	0.83(0.65-0.89)	
303.9016	20.101	19.878	13	0.987	4020	601	68	170	9		
305.8987	20.075	19.878	12	0.986	5037	801	82	205	10	0.80(0.65-0.89)	
303.9016	21.183	19.878	78	1.040	17010	2287	68	170	34		
	Empc Correction				14122	2053	68	170	30		
305.8987	21.191	19.878	79	1.040	18341	2667	82	205	33	0.93(0.65-0.89)	
303.9016	23.580	19.878	222	1.158	13008	2161	68	170	32		
305.8987	23.580	19.878	222	1.158	17647	2927	82	205	36	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	21.715	21.743	-2	1.018	239494	30600	66	165	464		
333.9338	21.732	21.743	-1	1.019	291245	37212	35	87	1063	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											
319.8965	21.775	21.777	0	1.003	60835	7898	20	50	395		
321.8936	21.758	21.777	-1	1.002	77521	10545	11	27	959	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	21.758	21.849	-5	1.020	287102	36718	30	75	1224		
A Non-2,3,7,8-sub-TCDD											a
319.8965	22.420	20.707	103	1.032	2870	515	20	50	26		a
321.8936	22.429	20.707	103	1.033	3208	593	11	27	54	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	27.247	27.288	-2	1.277	395686	60175	58	145	1038		
353.8970	27.256	27.288	-2	1.278	247710	35689	55	137	649	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	27.273	27.313	-2	1.001	250374	36533	63	157	580		
341.8567	27.264	27.313	-3	1.001	155168	22637	37	92	612	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	28.755	28.795	-2	1.348	415584	58542	58	145	1009		
353.8970	28.772	28.795	-1	1.349	261783	35351	55	137	643	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	28.780	28.820	-2	1.001	228456	31189	63	157	495		
341.8567	28.780	28.820	-2	1.001	142610	19298	37	92	522	1.60(1.32-1.78)	
A F1 PeCDFs											U
339.8597	24.061	24.648	-35	0.883	420	133	1	2	133		
341.8567	24.001	24.648	-39	0.881	311	81	4	10	20	1.35(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	25.782	28.125	-140	0.946	3846	669	63	157	11		
341.8567	25.782	28.125	-140	0.946	2973	464	37	92	13	1.29(1.32-1.78)	
	Empc Correction				2481	431	37	92	12		
339.8597	27.846	28.125	-17	1.022	3918	623	63	157	10		
341.8567	27.880	28.125	-15	1.023	3113	373	37	92	10	1.26(1.32-1.78)	
	Empc Correction				2527	401	37	92	11		
13C-1,2,3,7,8-PeCDD											
367.8949	29.564	29.612	-3	1.386	237975	32092	31	77	1035		
369.8919	29.580	29.612	-2	1.387	148875	17909	39	97	459	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	29.597	29.637	-2	1.001	137153	17946	31	77	579		
357.8516	29.606	29.637	-2	1.001	89737	11079	22	55	504	1.53(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	26.052	28.489	-146	0.881	341	123	31	77	4		
357.8516	26.077	28.489	-144	0.882	1072	179	22	55	8	0.32(1.32-1.78)	
	Empc Correction				220	79	22	55	4		
355.8546	26.877	28.489	-97	0.909	796	191	31	77	6		
357.8516	26.877	28.489	-97	0.909	608	138	22	55	6	1.31(1.32-1.78)	
	Empc Correction				513	123	22	55	6		
355.8546	27.989	28.489	-30	0.947	1075	186	31	77	6		
	Empc Correction				844	269	31	77	9		
357.8516	27.989	28.489	-30	0.947	545	174	22	55	8	1.97(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDF											
383.8639	34.915	34.942	-2	0.955	203983	39880	61	152	654		
385.8610	34.907	34.942	-2	0.954	382847	73272	92	230	796	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	34.924	34.959	-2	1.000	213742	42412	64	160	663		
375.8178	34.924	34.959	-2	1.000	167803	33033	47	117	703	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	35.075	35.111	-2	0.959	188549	32997	61	152	541		
385.8610	35.067	35.111	-3	0.959	347251	59005	92	230	641	0.54(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	35.084	35.119	-2	1.000	221568	38639	64	160	604		
375.8178	35.084	35.119	-2	1.000	168933	29151	47	117	620	1.31(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	35.892	35.919	-2	0.981	160833	34312	61	152	562		
385.8610	35.883	35.919	-2	0.981	307273	62815	92	230	683	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	35.900	35.936	-2	1.000	198054	40921	64	160	639		
375.8178	35.900	35.936	-2	1.000	148718	31392	47	117	668	1.33(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	36.776	36.811	-2	1.006	123988	27807	61	152	456		
385.8610	36.784	36.811	-2	1.006	233257	48936	92	230	532	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	36.801	36.828	-2	1.001	146499	31299	64	160	489		
375.8178	36.793	36.828	-2	1.000	108950	23360	47	117	497	1.34(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	35.028						64	160			
375.8178	35.028						47	117			
13C-1,2,3,7,8,9-HxCDD											a
401.8559	36.574	36.609	-2		503379	116384	48	120	2425		a
403.8529	36.574	36.609	-2		397722	88961	25	62	3558	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	36.094	36.129	-2	0.987	207820	50883	48	120	1060		
403.8529	36.094	36.129	-2	0.987	182679	43162	25	62	1726	1.14(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8158	36.111	36.146	-2	1.000	114487	24766	55	137	450		
391.8127	36.111	36.146	-2	1.000	95256	20560	66	165	312	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	36.212	36.247	-2	0.990	238902	46755	48	120	974		
403.8529	36.212	36.247	-2	0.990	191388	40181	25	62	1607	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8158	36.229	36.264	-2	1.000	126027	25564	55	137	465		
391.8127	36.229	36.264	-2	1.000	99640	21249	66	165	322	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8158	36.591	36.626	-2	1.014	112709	22960	55	137	417		
391.8127	36.582	36.626	-3	1.014	88857	18321	66	165	278	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDD											RQ
389.8158	34.208	35.394	-71	0.945	8270	1375	55	137	25		
391.8127	34.233	35.394	-70	0.945	7054	1150	66	165	17	1.17(1.05-1.43)	
389.8158	35.328	35.394	-4	0.976	4104	957	55	137	17		
391.8127	35.336	35.394	-3	0.976	4778	862	66	165	13	0.86(1.05-1.43)	
	Empc Correction				3309	771	66	165	12		
13C-1,2,3,4,6,7,8-HpCDF											
417.8250	38.599	38.626	-2	1.055	113757	25033	39	97	642		
419.8220	38.599	38.626	-2	1.055	248437	59327	77	192	770	0.46(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7817	38.607	38.630	-1	1.000	149066	35087	71	177	494		
409.7788	38.607	38.630	-1	1.000	145816	33825	57	142	593	1.02(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8250	39.845	39.880	-2	1.089	113001	30686	39	97	787		
419.8220	39.853	39.880	-2	1.090	263399	71461	77	192	928	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7817	39.862	39.885	-1	1.000	134057	35489	71	177	500		
409.7788	39.862	39.885	-1	1.000	128266	34295	57	142	602	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7817	39.258						71	177			
409.7788	39.258						57	142			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	39.542	39.569	-2	1.081	173345	46882	26	65	1803		
437.8140	39.542	39.569	-2	1.081	162825	43499	43	107	1012	1.06(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7767	39.550	39.582	-2	1.000	130452	33383	31	77	1077		
425.7737	39.550	39.582	-2	1.000	121973	30663	36	90	852	1.07(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7767	38.919	39.258	-20	0.984	44952	11791	31	77	380		
425.7737	38.919	39.258	-20	0.984	43178	11254	36	90	313	1.04(0.88-1.20)	
13C-OCDD											
469.7780	42.039	42.072	-2	1.149	290062	69327	27	67	2568		
471.7750	42.047	42.072	-1	1.150	320387	76258	27	67	2824	0.91(0.76-1.02)	
OCDF											
441.7428	42.140	42.165	-1	1.002	235923	54742	23	57	2380		
443.7399	42.140	42.165	-1	1.002	250406	58376	31	77	1883	0.94(0.76-1.02)	
OCDD											
457.7377	42.056	42.081	-1	1.000	823958	195903	65	162	3014		
459.7348	42.056	42.081	-1	1.000	925004	218785	71	177	3081	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

U - Marked Undetected

a - User Assigned ID

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

Non-2,3,7,8-sub-TCDF, RT: 19.878

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.080	D 13C-2,3,7,8-TCDF	100.000	729731	100412

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.080		100.000	729731	100412

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.851	4802	1013	5527	992	1.31	0.87	
19.191	8894	1332	12405	1657	2.70	0.72	
19.689	100135	14610	120067	17602	27.9	0.83	
20.101	4020	601	5037	801	1.15	0.80	
21.183	17010	2287	18341	2667	4.48	0.93	RQ
21.183	14122	2053	18341	2667	4.12		Empc Correction
23.580	13008	2161	17647	2927	3.89	0.74	
Signal Totals:							
	144981	21770	179024	26646			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	326893	48650				0.83	RQ
	324005	48416					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 41.471 = (326893 * 100.000) / (729731 * 1.080)
Empc Amount: 41.104 = (324005 * 100.000) / (729731 * 1.080)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

Non-2,3,7,8-sub-TCDD, RT: 20.707

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.075	D 13C-2,3,7,8-TCDD	100.000	530739	67812

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.075		100.000	530739	67812

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
22.420	2870	515	3208	593	1.06	0.89	a
Signal Totals:							
	2870	515	3208	593			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6078	1108				0.89	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.065 = (6078 * 100.000) / (530739 * 1.075)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

F1 PeCDFs, RT: 24.648

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	643396	95864
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	677367	93893

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	660381	94878

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
24.061	420	133	311	81	0.1074	1.35	

Compound is Marked ND

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

Non-2,3,7,8-sub-PeCDF, RT: 28.125

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.054	D 13C-1,2,3,7,8-PeCDF	100.000	643396	95864
2,3,4,7,8-PeCDF	1.008	D 13C-2,3,4,7,8-PeCDF	100.000	677367	93893

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.031		100.000	660381	94878

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
25.782	3846	669	2973	464	1.00	1.29	RQ
25.782	3846	669	2481	431	0.9292		Empc Correction
27.846	3918	623	3113	373	1.03	1.26	RQ
27.846	3918	623	2527	401	0.9466		Empc Correction
Signal Totals:							
	7764	1292	5008	832			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13850	2129				1.28	RQ
	12772	2124					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.034 = (13850 * 100.000) / (660381 * 1.031)

Empc Amount: 1.876 = (12772 * 100.000) / (660381 * 1.031)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

Non-2,3,7,8-sub-PeCDD, RT: 28.489

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.046	D 13C-1,2,3,7,8-PeCDD	100.000	386850	50001

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.046		100.000	386850	50001

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
26.052	341	123	1072	179	0.3490	0.32	RQ
26.052	341	123	220	79	0.1386		Empc Correction
26.877	796	191	608	138	0.3468	1.31	RQ
26.877	796	191	513	123	0.3233		Empc Correction
27.989	1075	186	545	174	0.4002	1.97	RQ
27.989	844	269	545	174	0.3431		Empc Correction
Signal Totals:							
	1981	583	1278	376			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4437	991				0.99	RQ
	3259	959					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.096 = (4437 * 100.000) / (386850 * 1.046)

Empc Amount: 0.8050 = (3259 * 100.000) / (386850 * 1.046)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

Non-2,3,7,8-sub-HxCDD, RT: 35.394

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.061	D 13C-1,2,3,4,7,8-HxCDD	100.000	390499	94045
1,2,3,6,7,8-HxCDD	0.993	D 13C-1,2,3,6,7,8-HxCDD	100.000	430290	86936
1,2,3,7,8,9-HxCDD	1.109				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.055		100.000	410394	90490

Sum the Uncalibrated Results

RT	389.8158 Area	389.8158 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
34.208	8270	1375	7054	1150	3.54	1.17	
35.328	4104	957	4778	862	2.05	0.86	RQ
35.328	4104	957	3309	771	1.71		Empc Correction
Signal Totals:							
	12374	2332	10363	1921			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	24206	4344				1.05	RQ
	22737	4253					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 5.593 = (24206 * 100.000) / (410394 * 1.055)

Empc Amount: 5.254 = (22737 * 100.000) / (410394 * 1.055)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Lims ID:	320-76901-A-2-C MSD		
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Inject. Date:	19-Aug-2021 07:06:00	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	DFS 1	Operator:	Xcalibur_System
Lims Batch ID:	517462	Lims Sample ID:	50

Non-2,3,7,8-sub-HpCDD, RT: 39.258

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.050	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	336170	90381

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.050		100.000	336170	90381

Sum the Uncalibrated Results

RT	423.7767 Area	423.7767 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
38.919	44952	11791	43178	11254	25.0	1.04	
Signal Totals:							
	44952	11791	43178	11254			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	88130	23045				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 24.960 = (88130 * 100.000) / (336170 * 1.050)

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

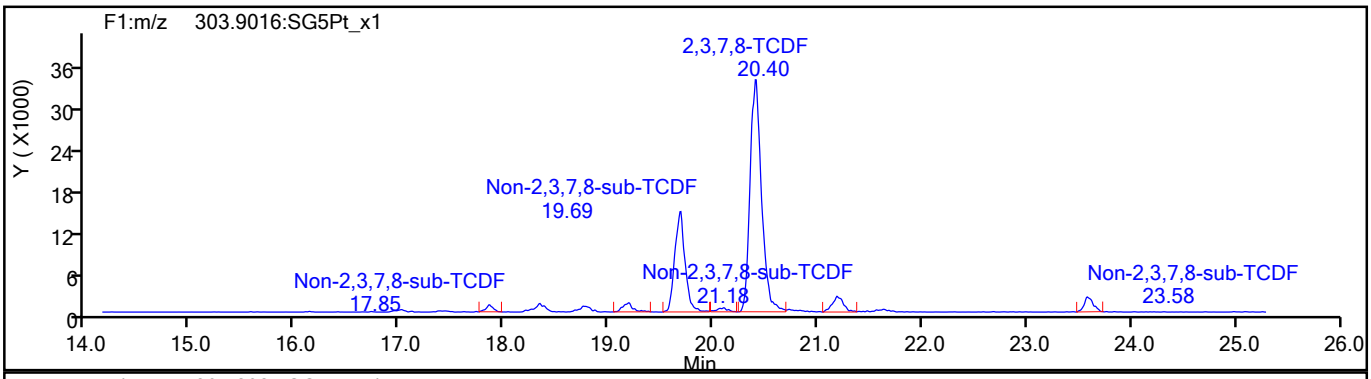

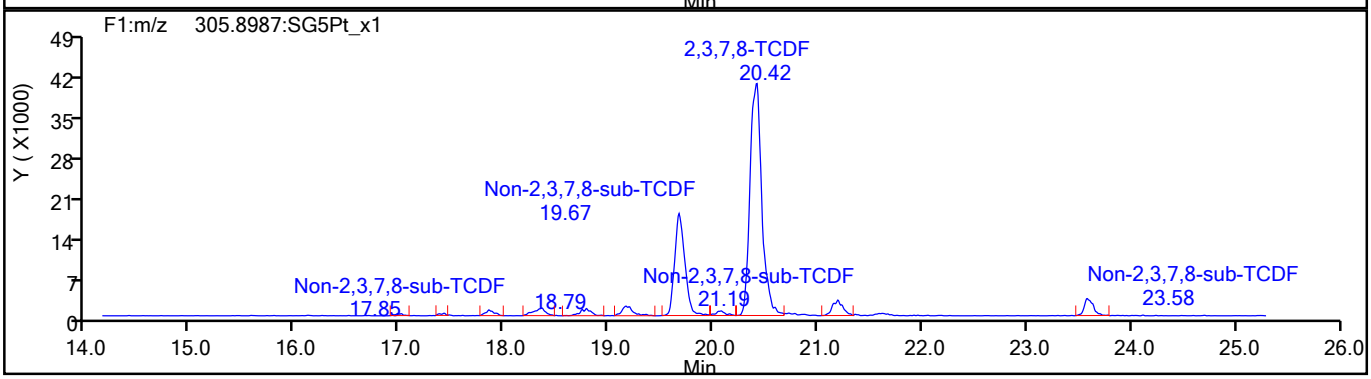

TCDF Standards

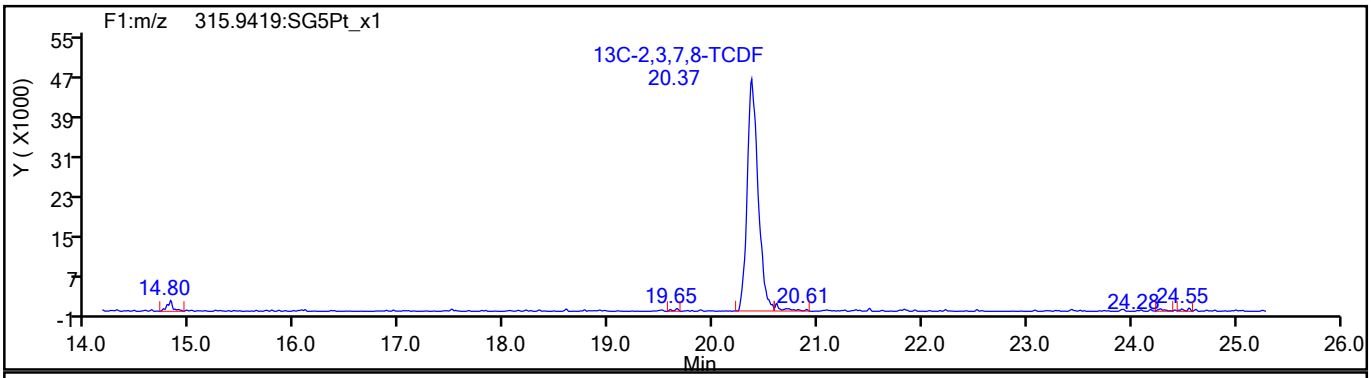

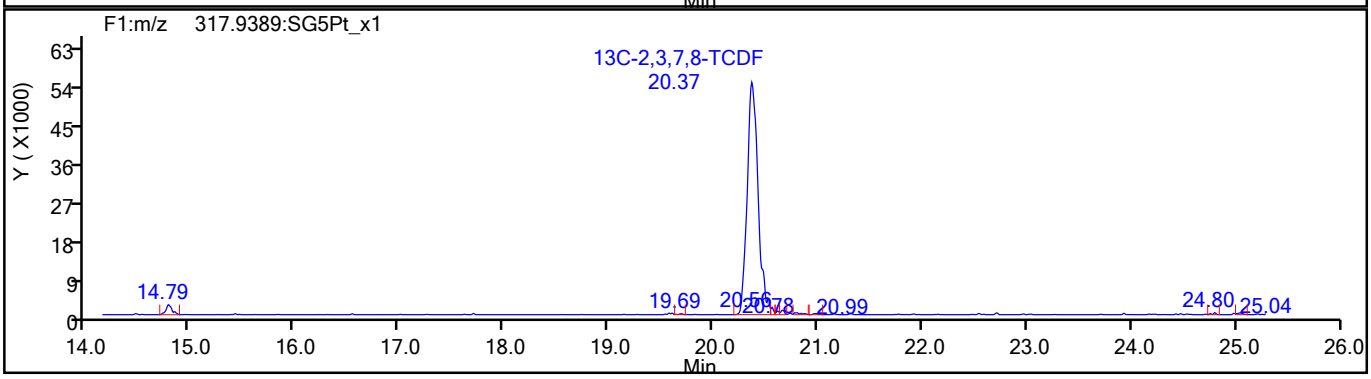

790566

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

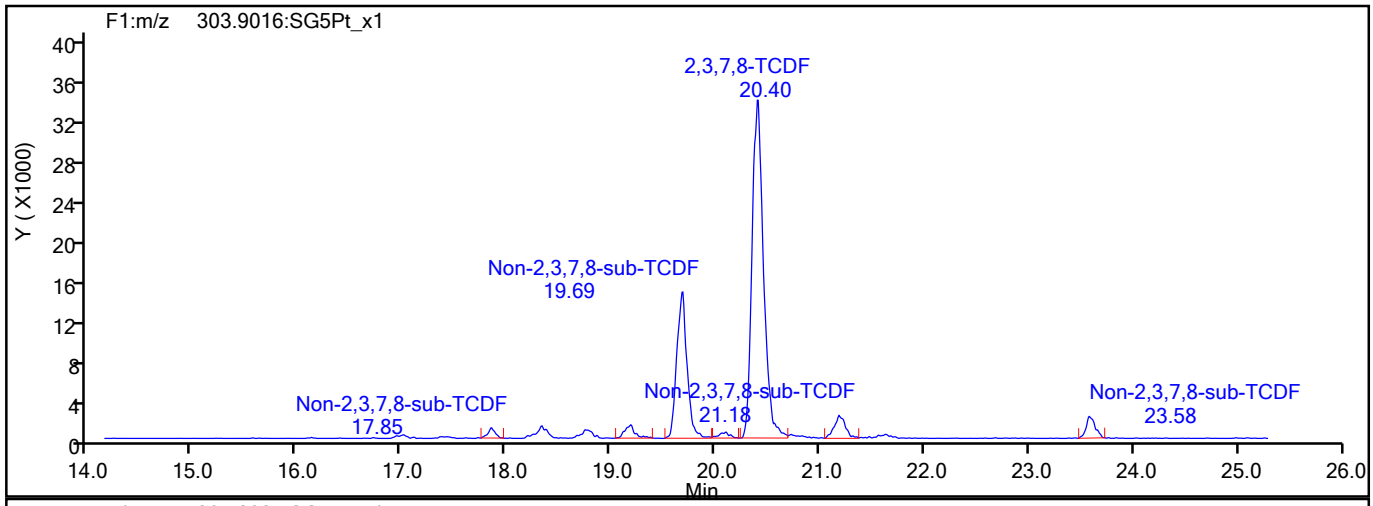

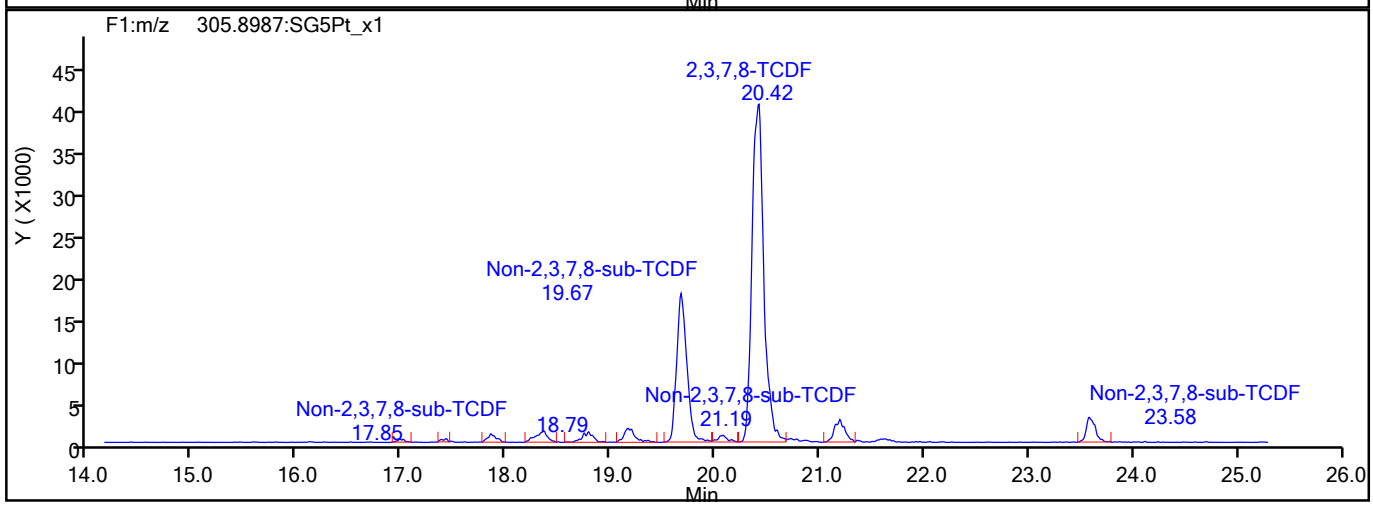

TCDF Interference Mass

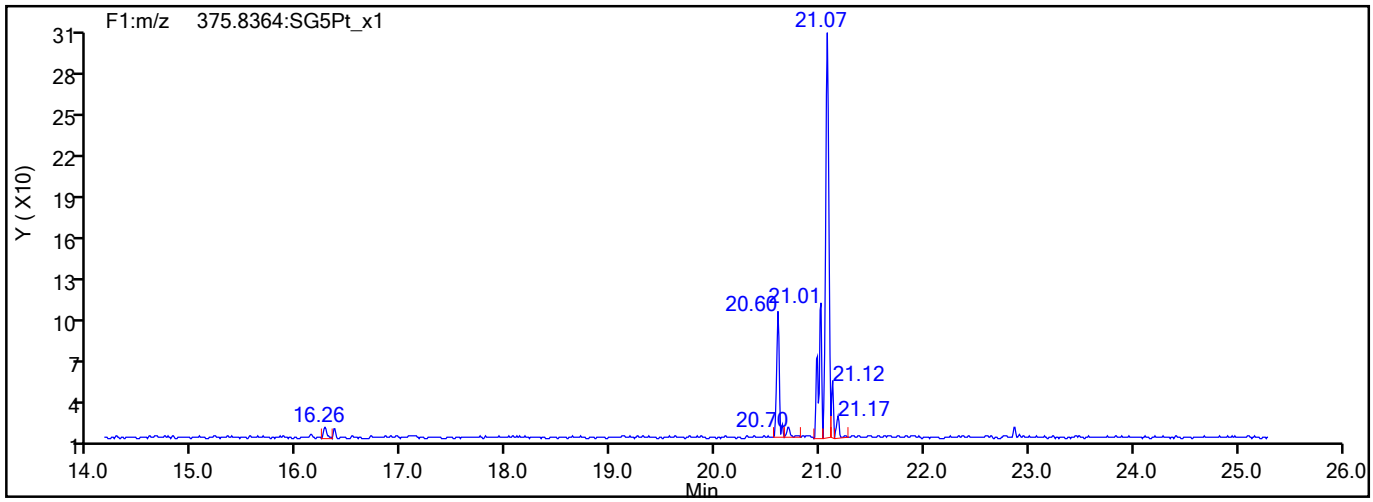

790567

Report Date: 20-Aug-2021 09:56:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

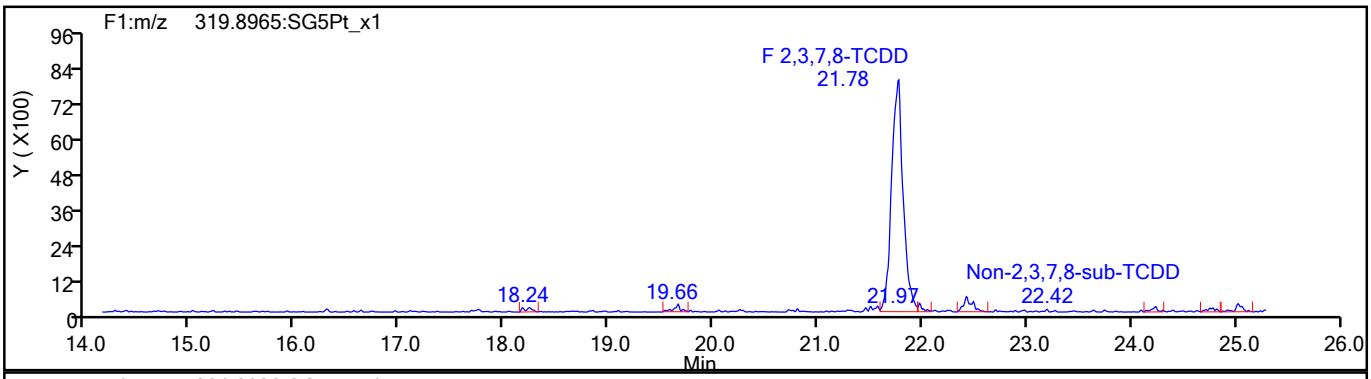

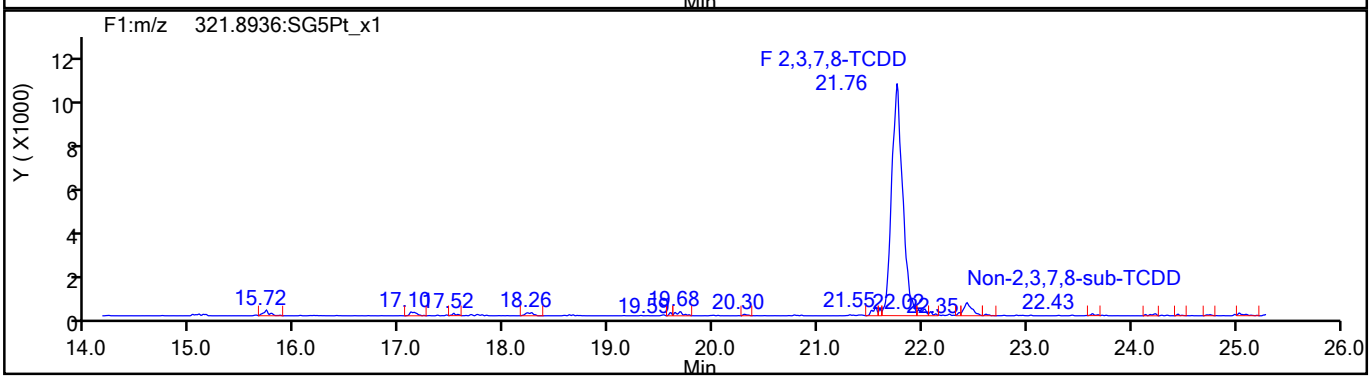

TCDD Standards

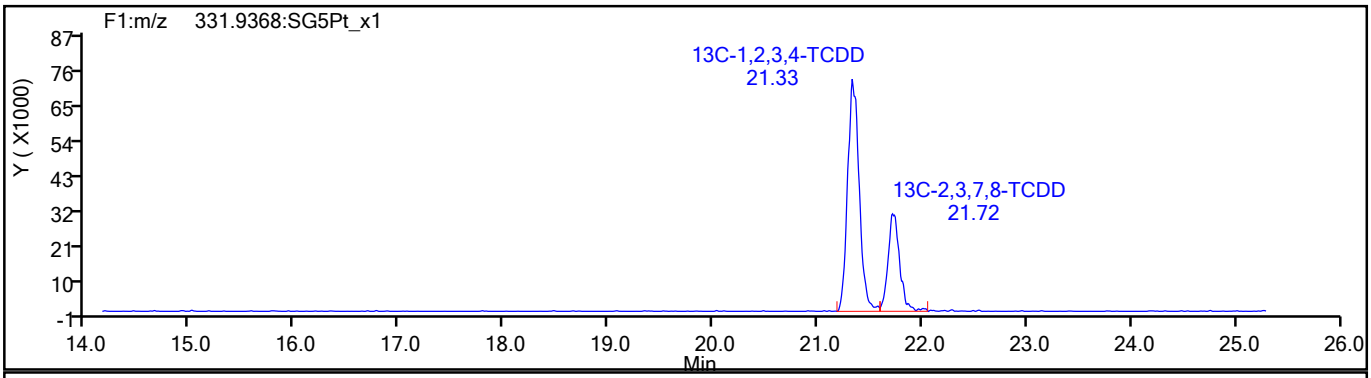

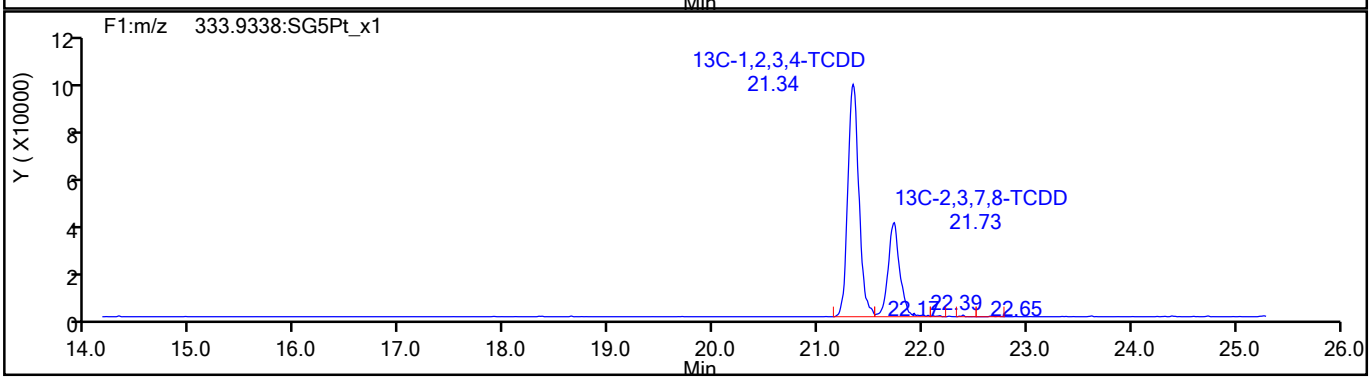

790568

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

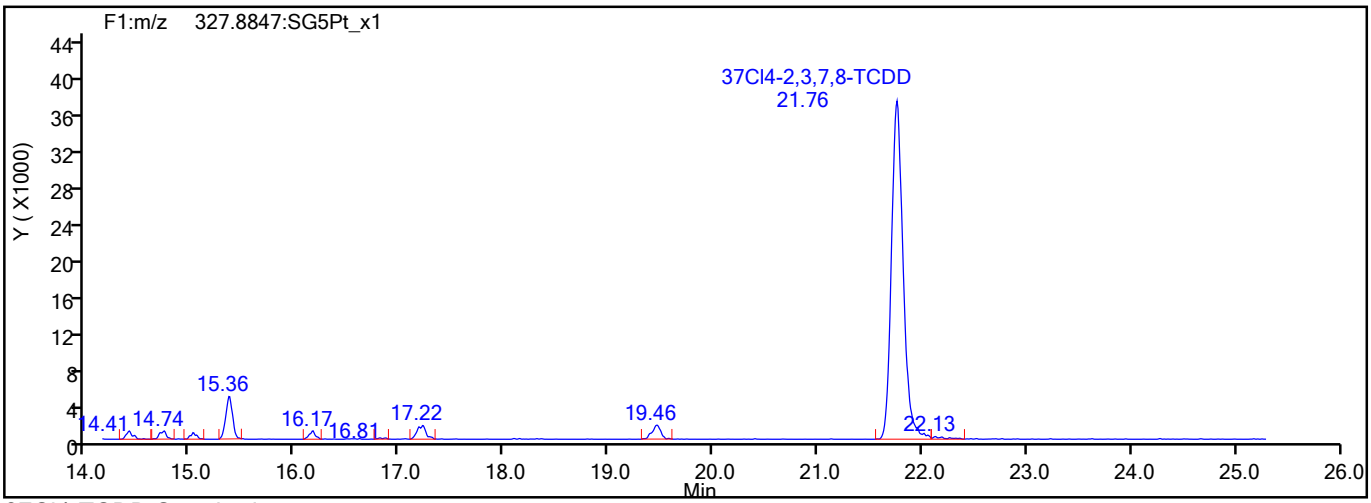

37Cl4-TCDD Standards

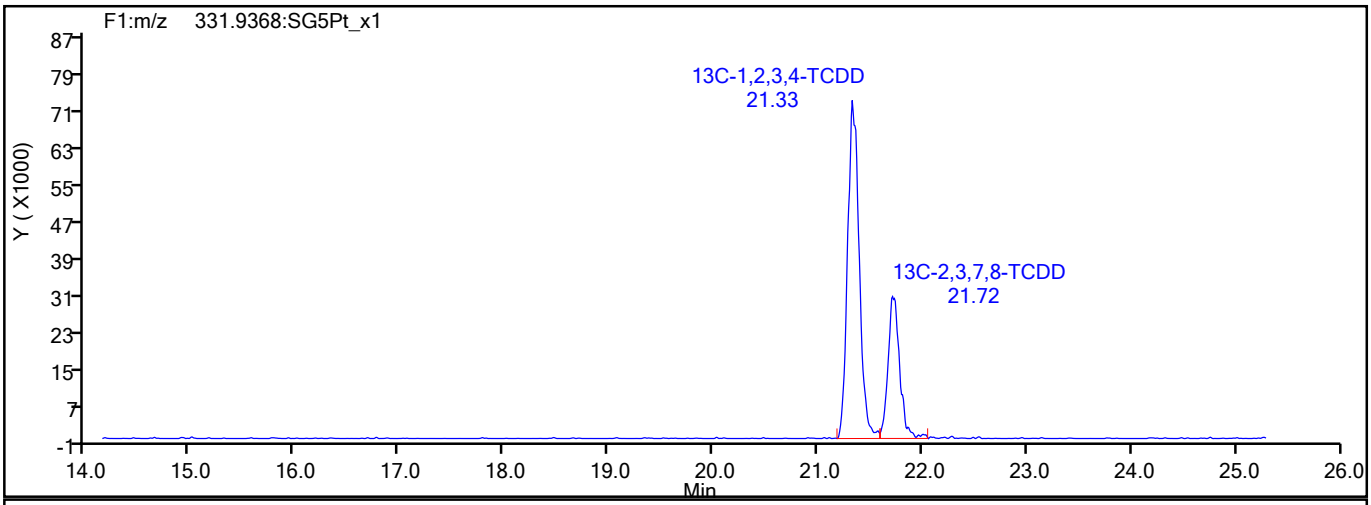

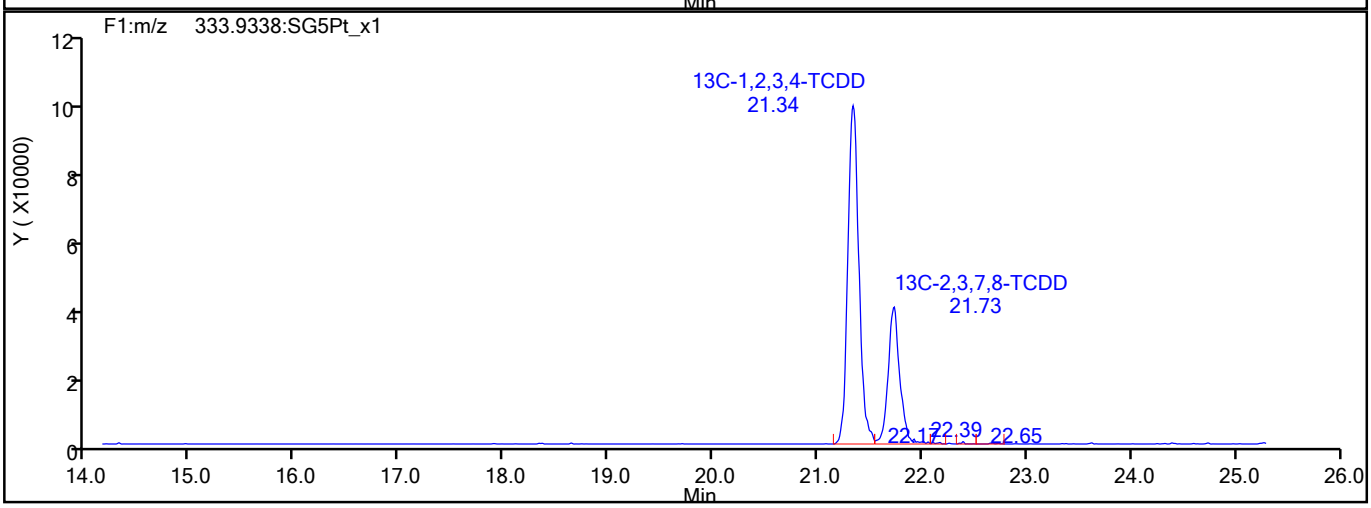

790569

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

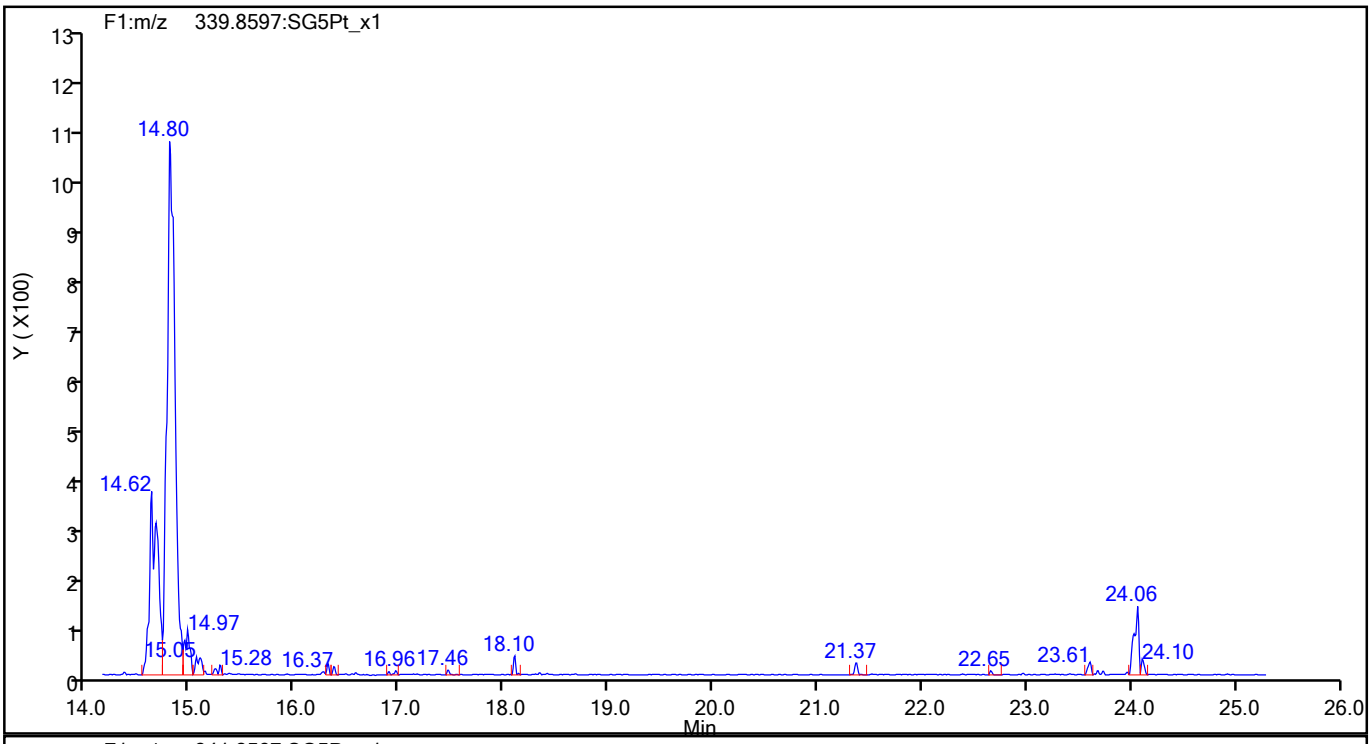

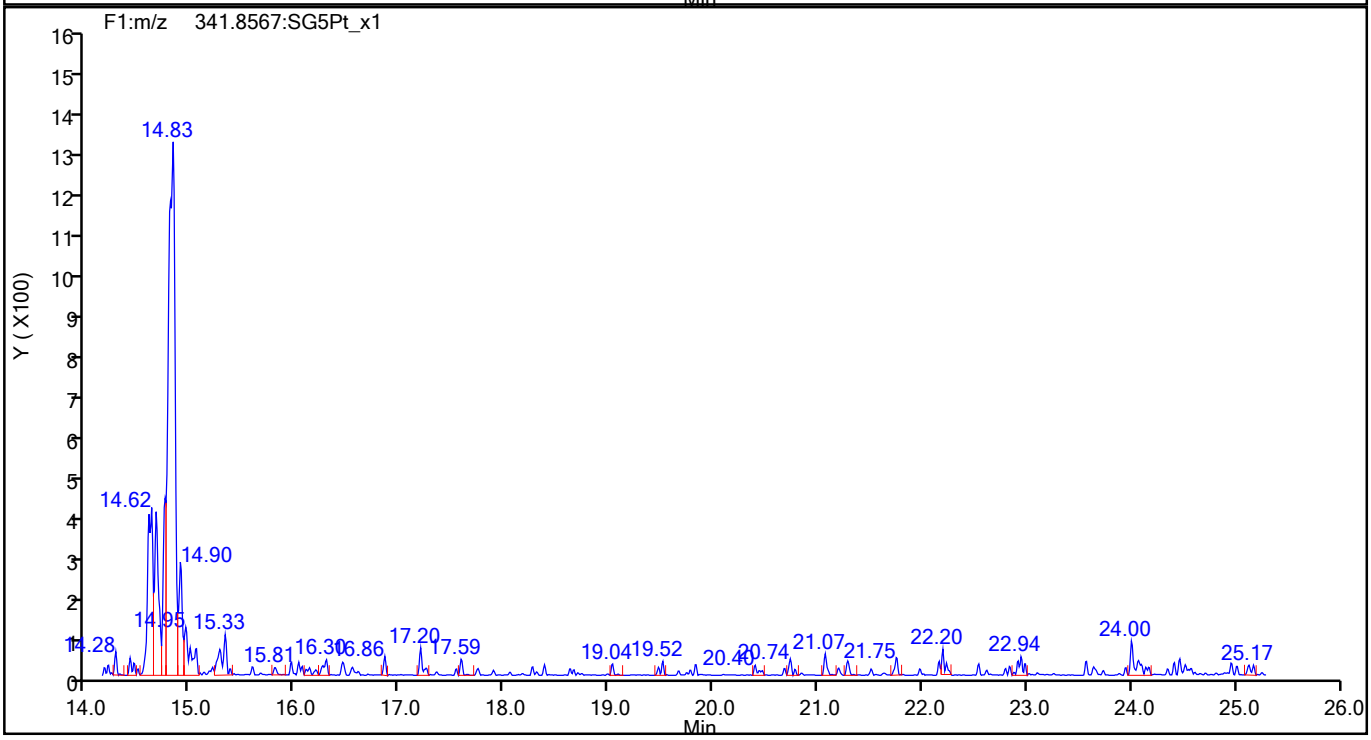

790570

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

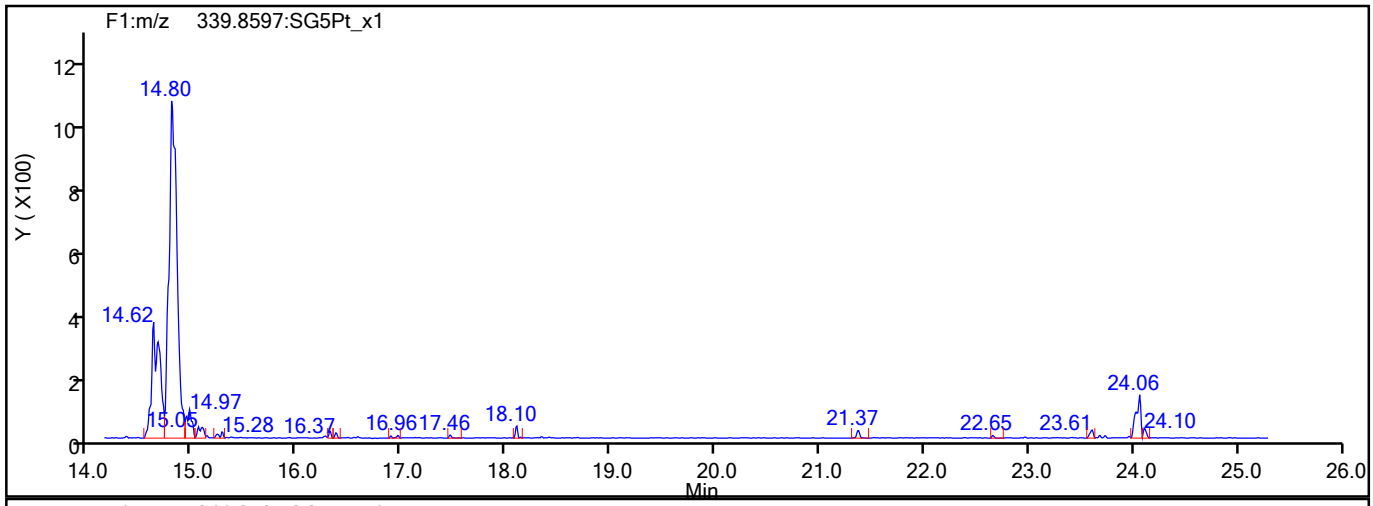

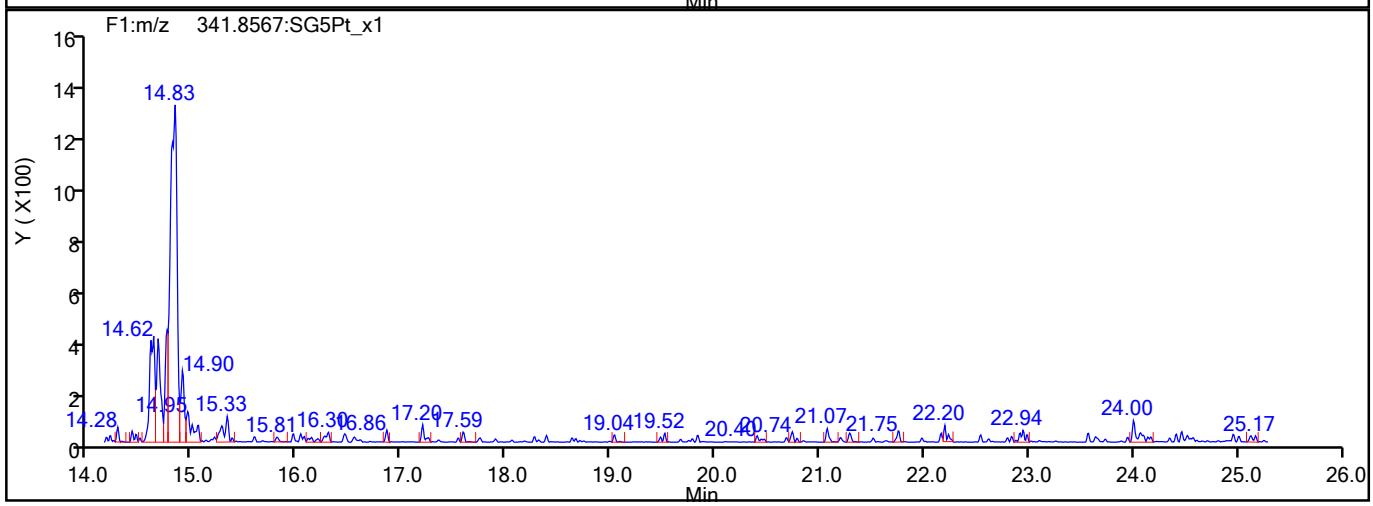

F1 PeCDFs Interference Mass

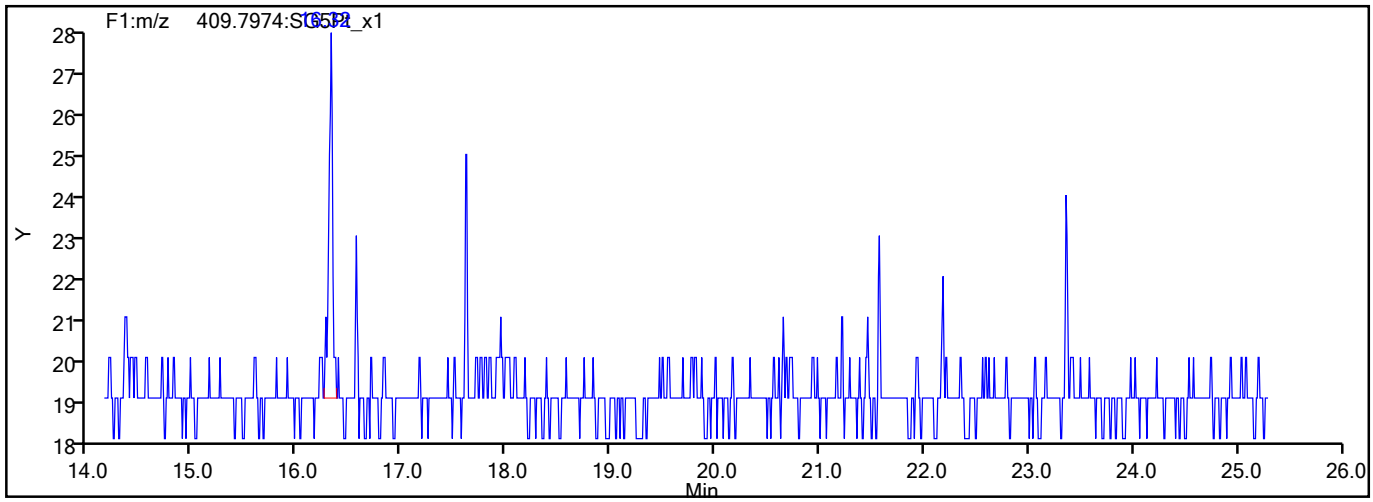

790571

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

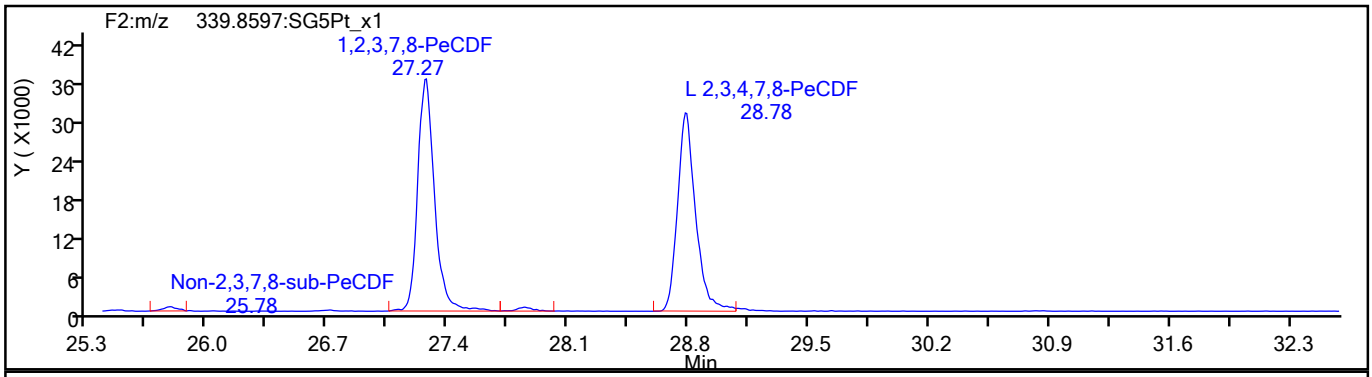

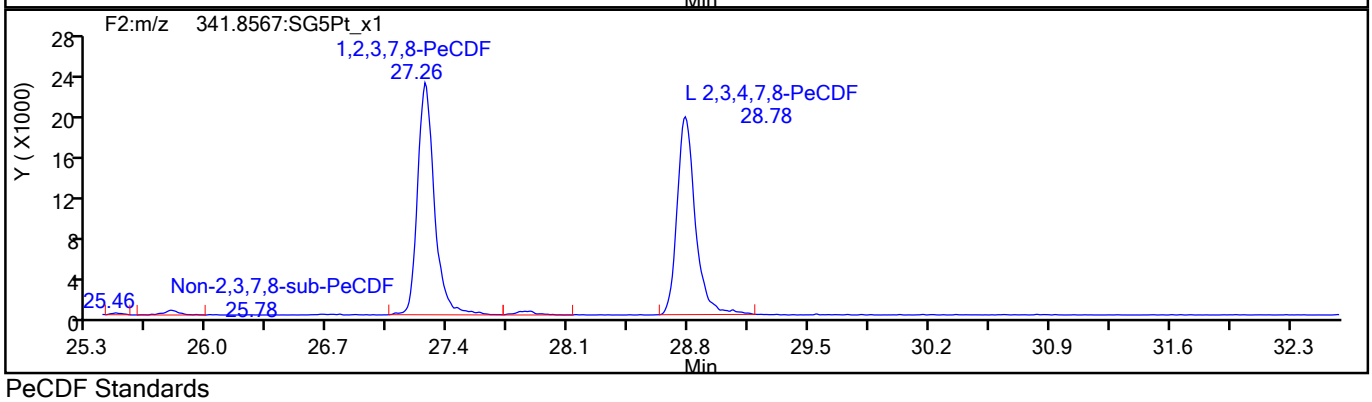

PeCDF Standards

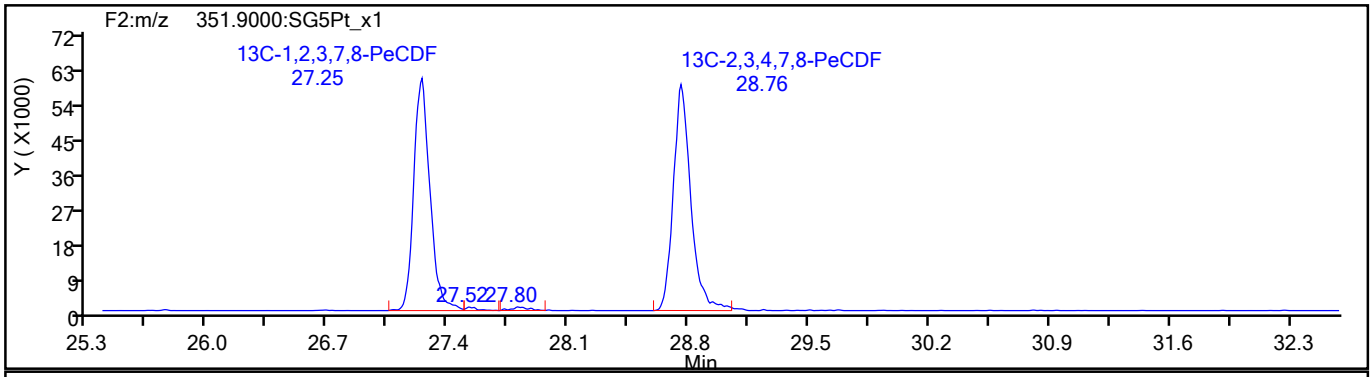

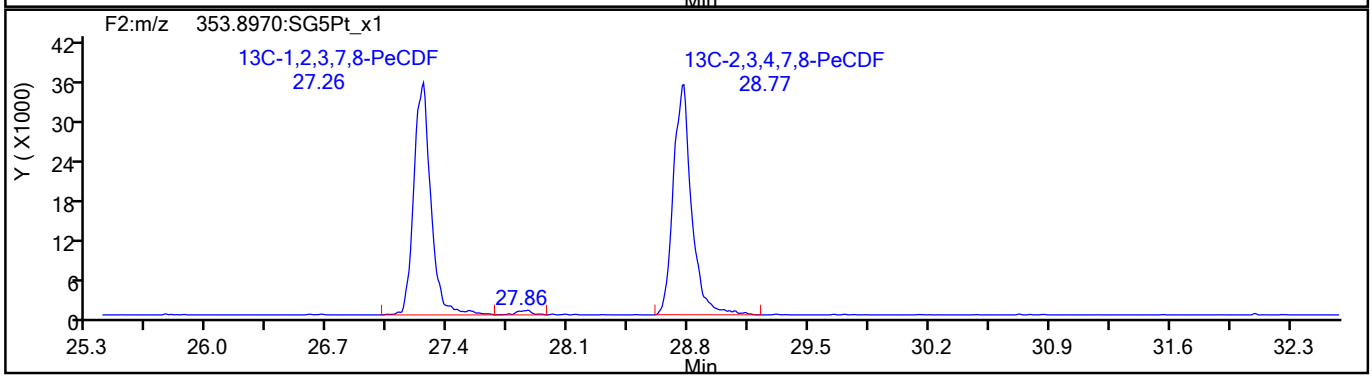

790572

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

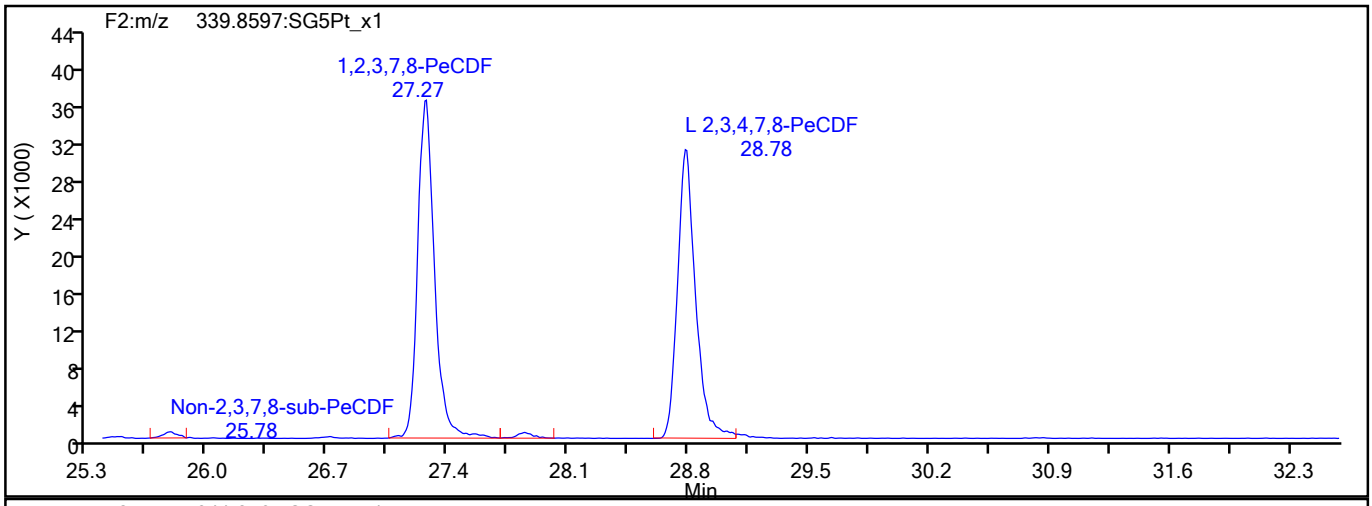

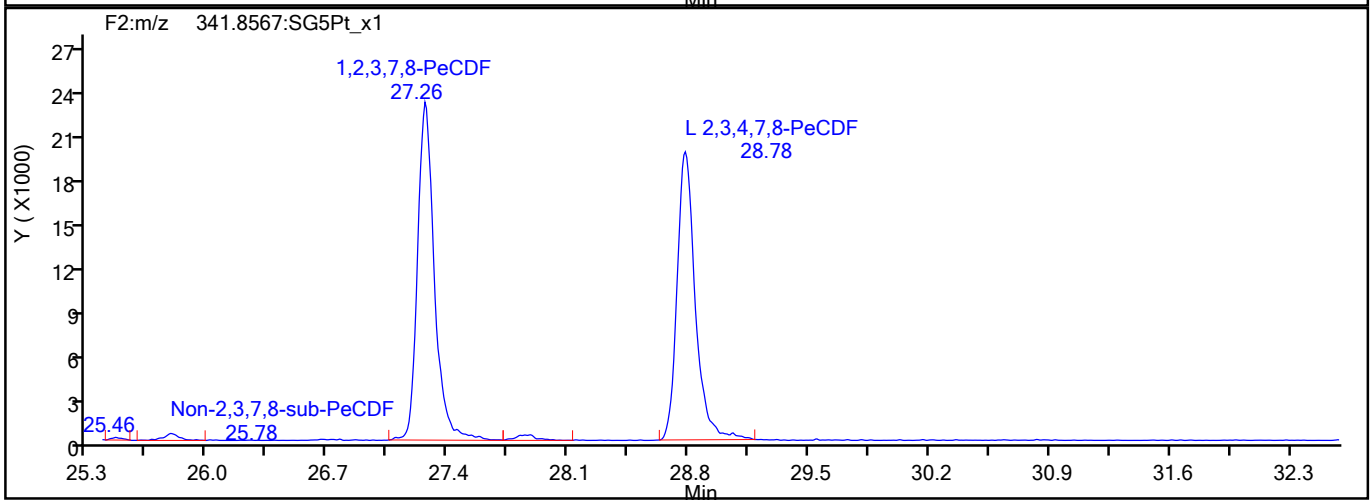

PeCDF Interference Mass

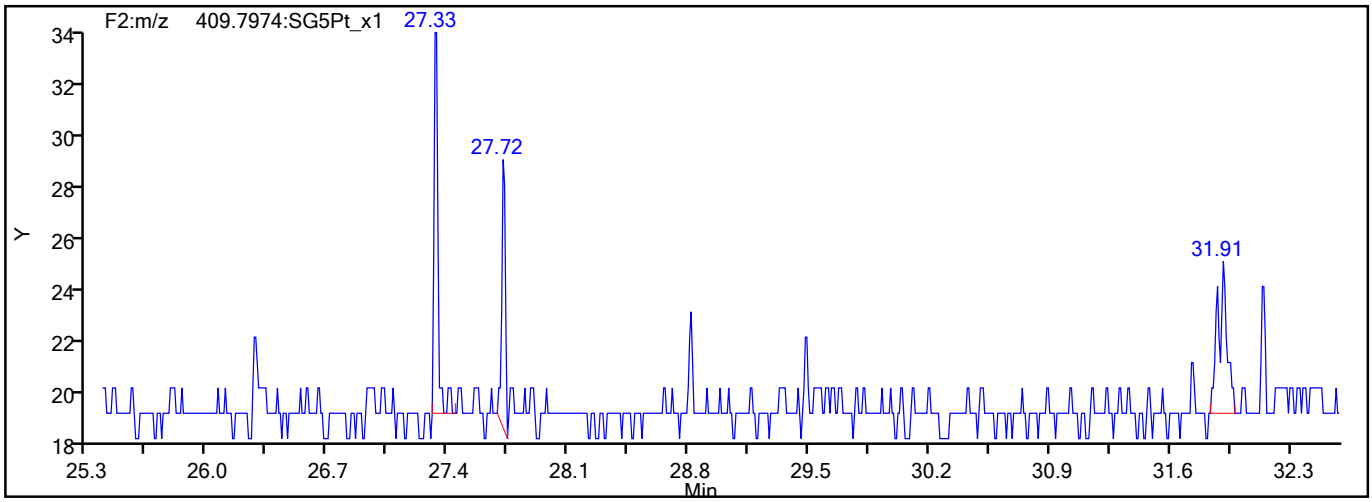

790573

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

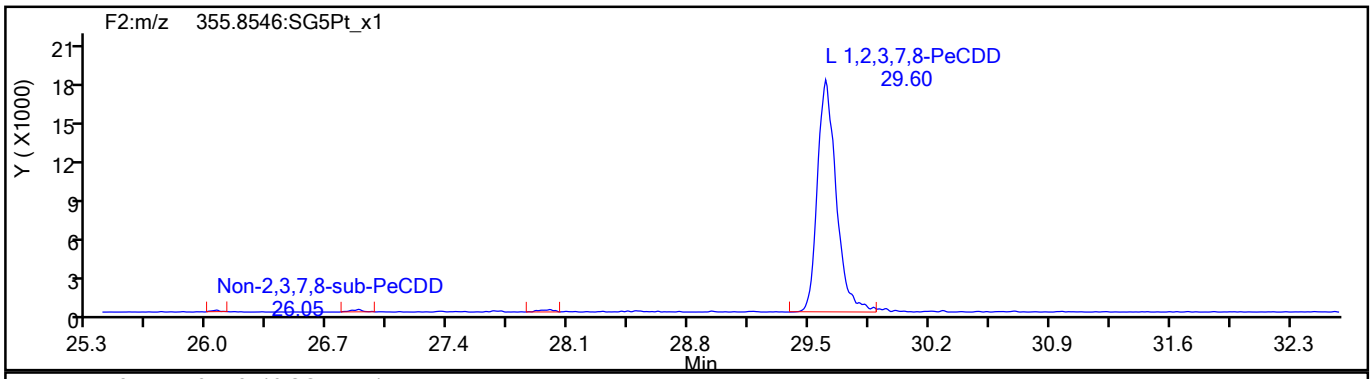

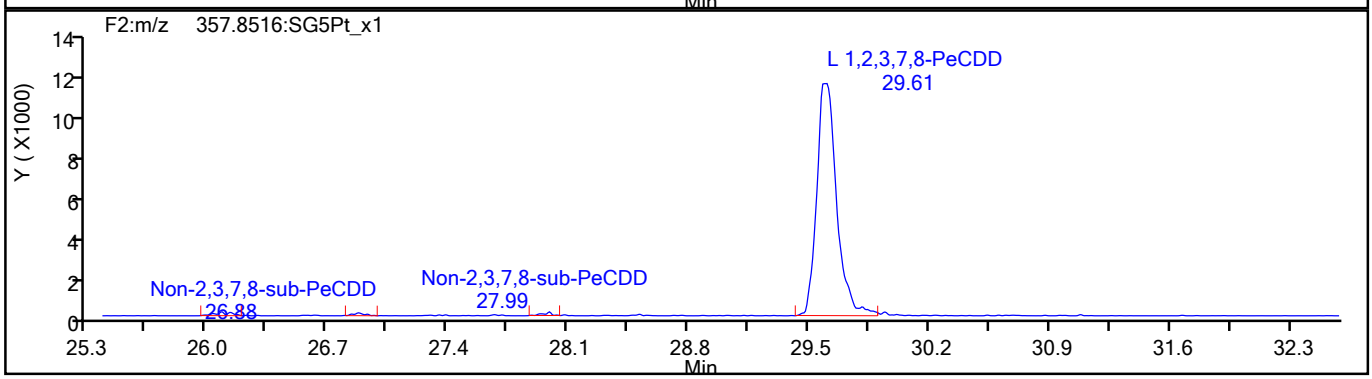

PeCDD Standards

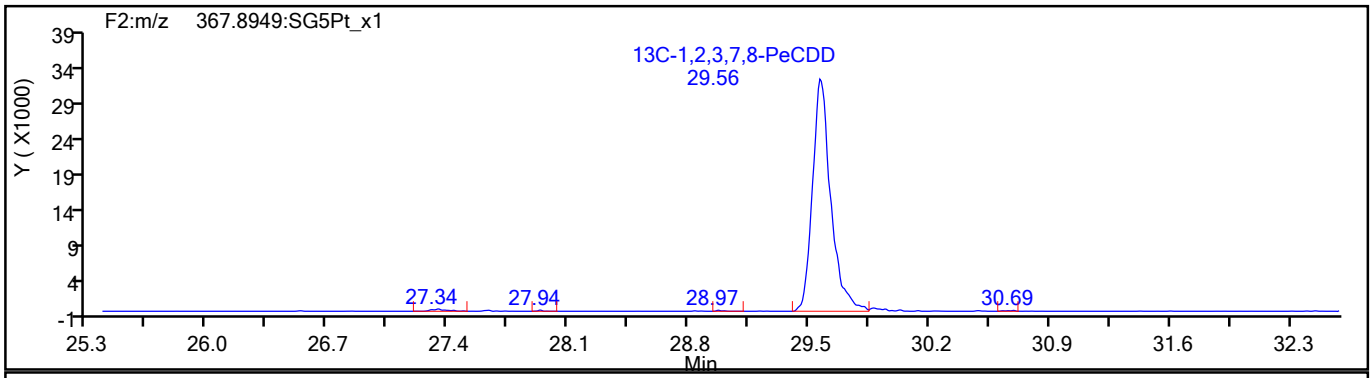

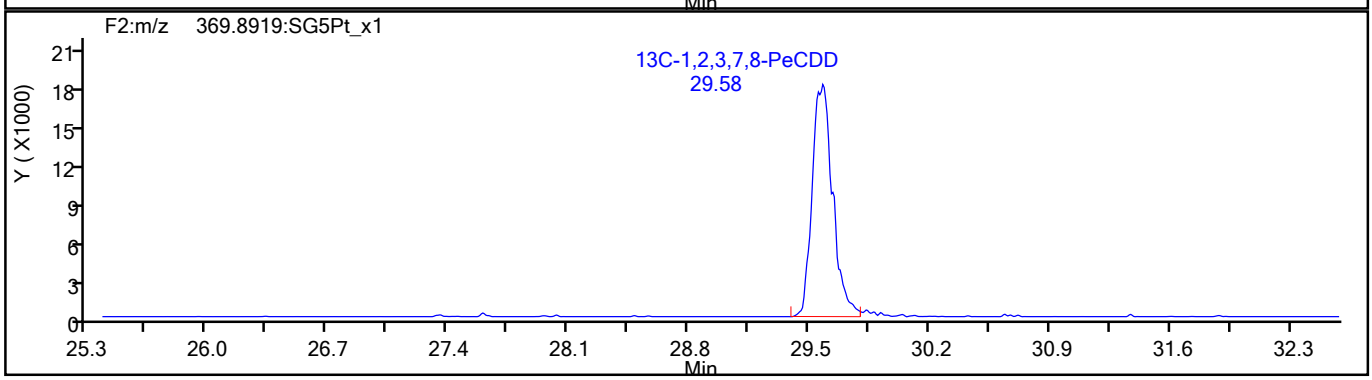

790574

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

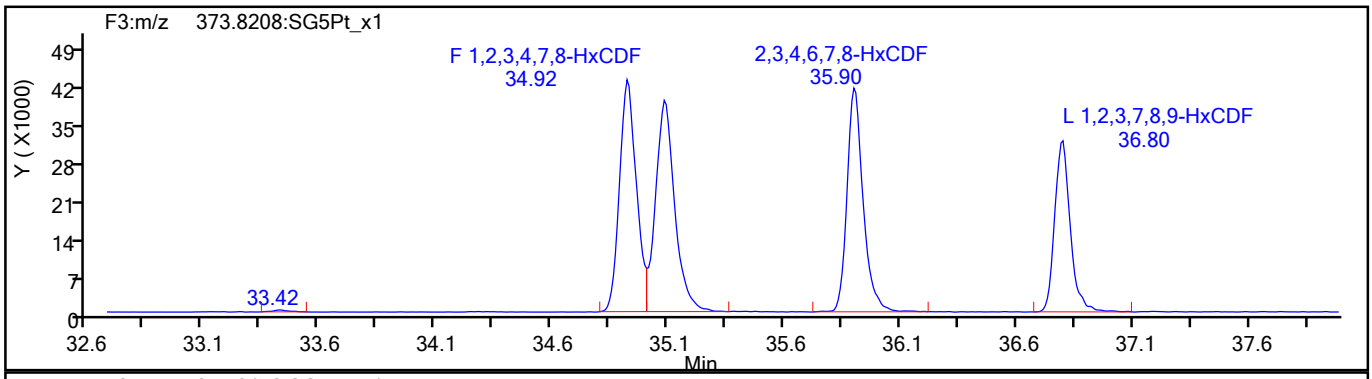

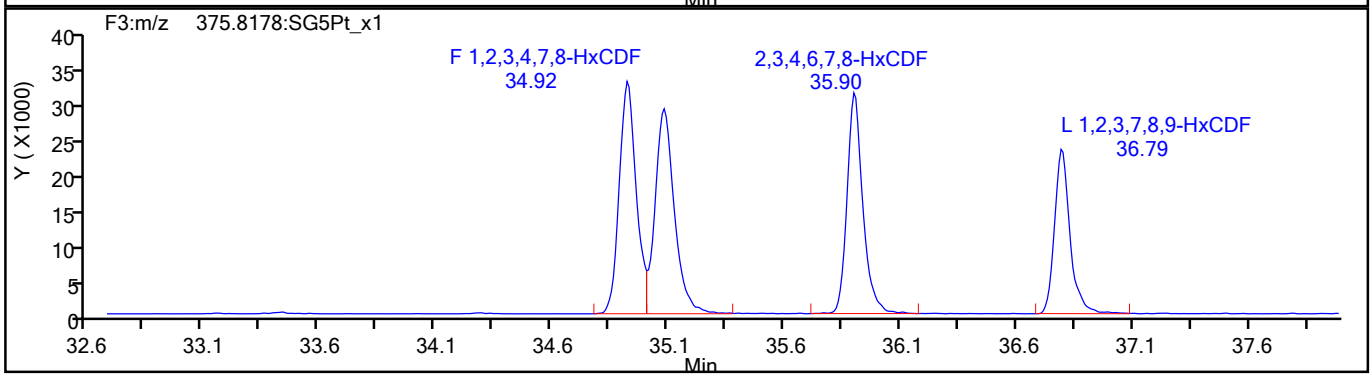

HxCDF Standards

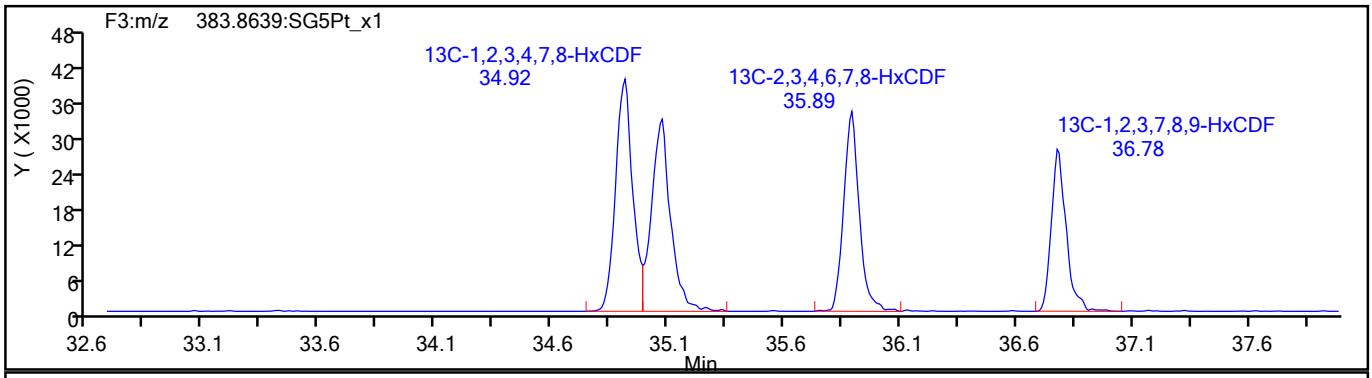

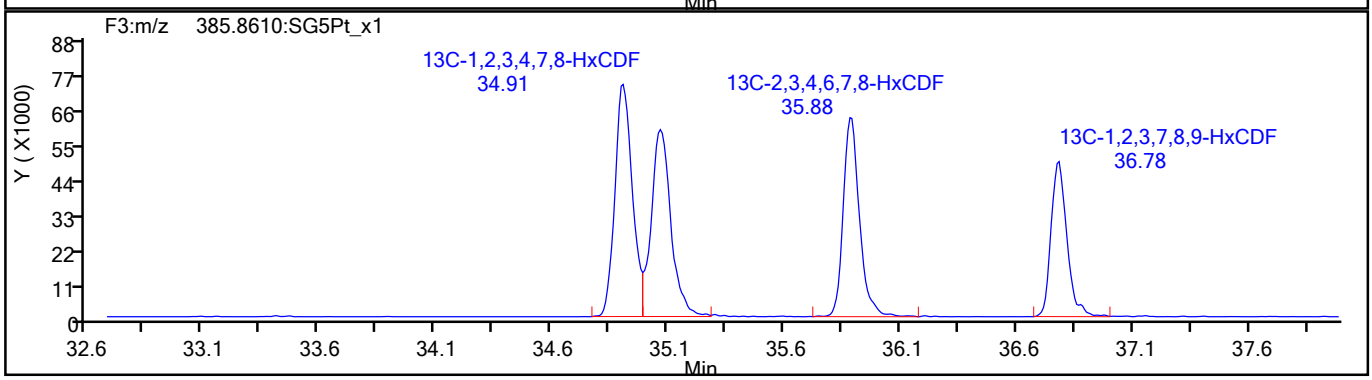

790575

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

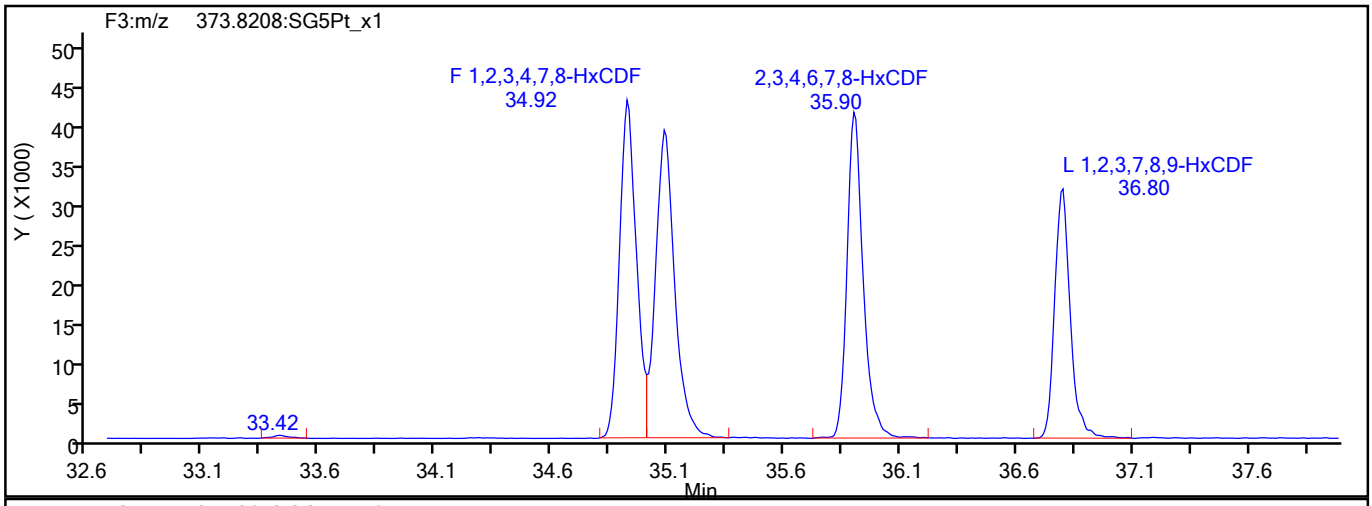

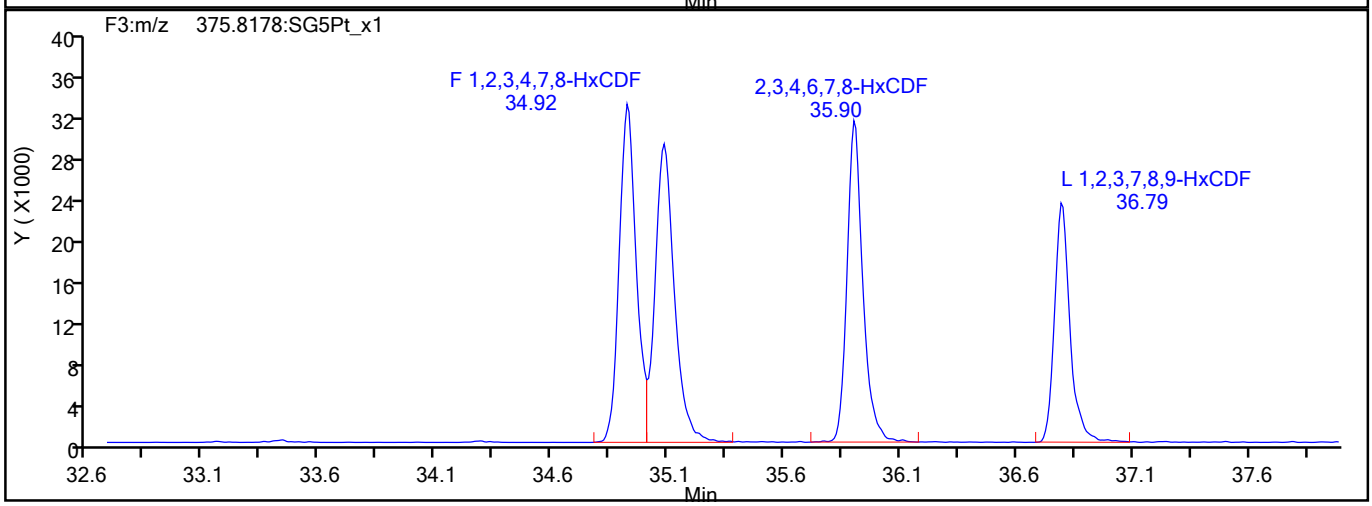

HxCDF Interference Mass

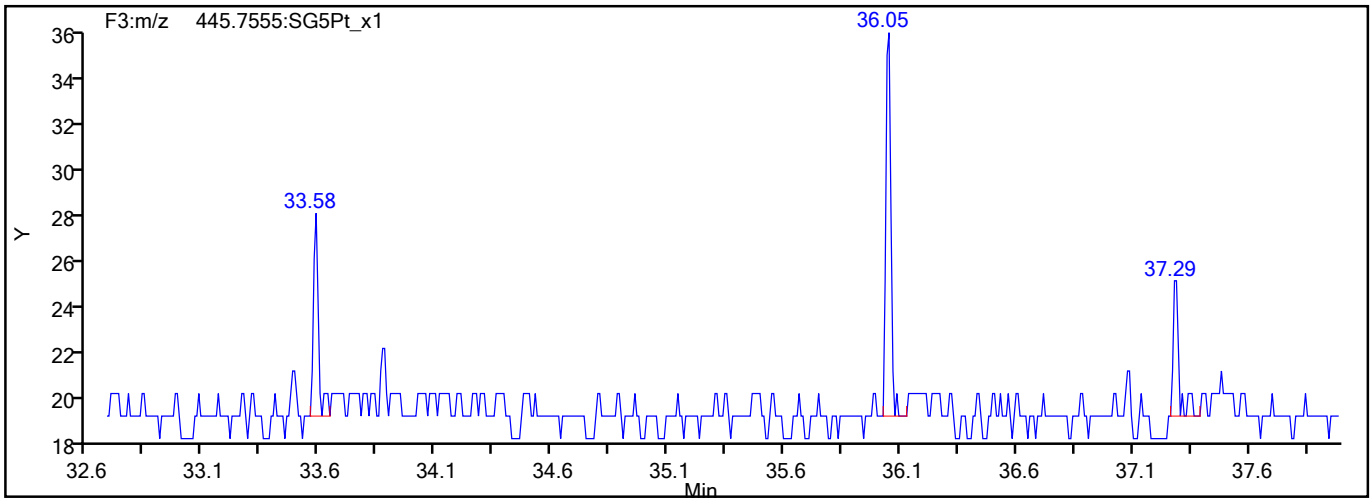

790576

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

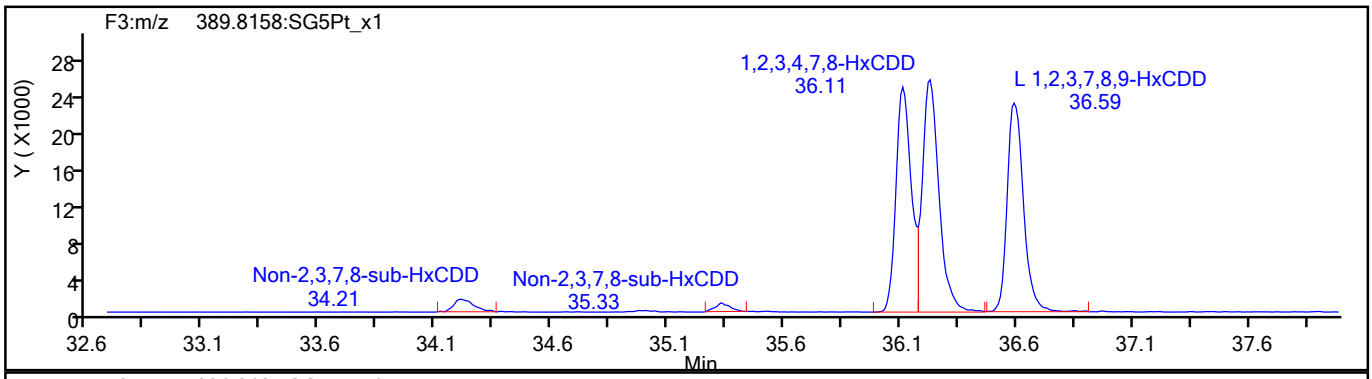

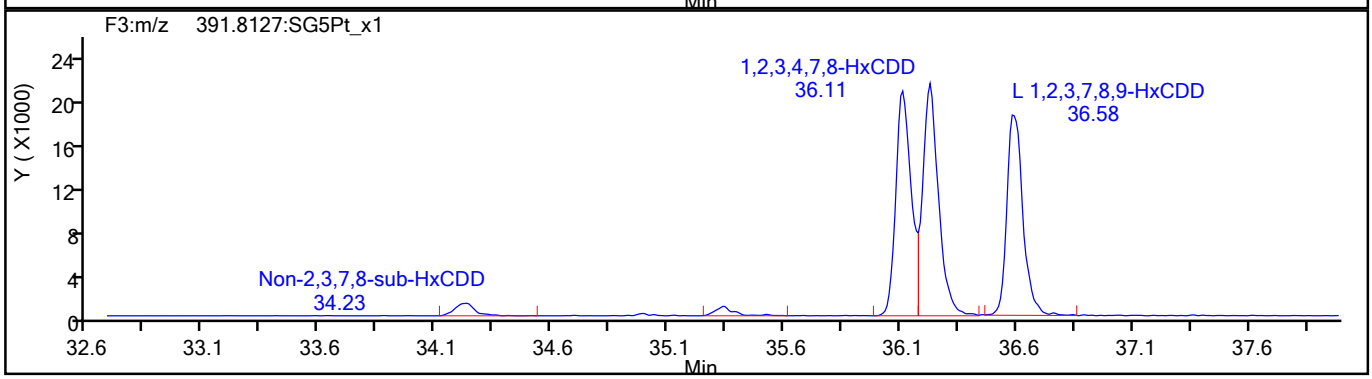

HxCDD Standards

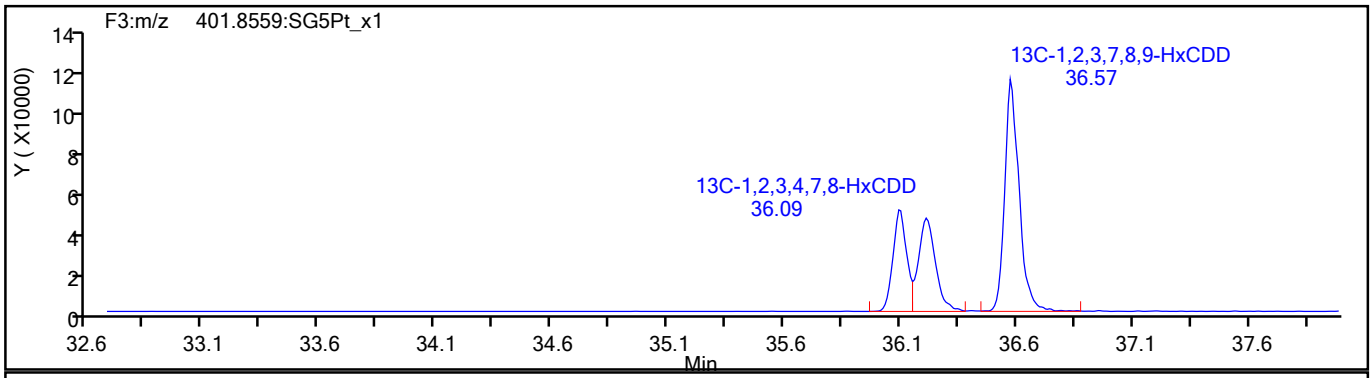

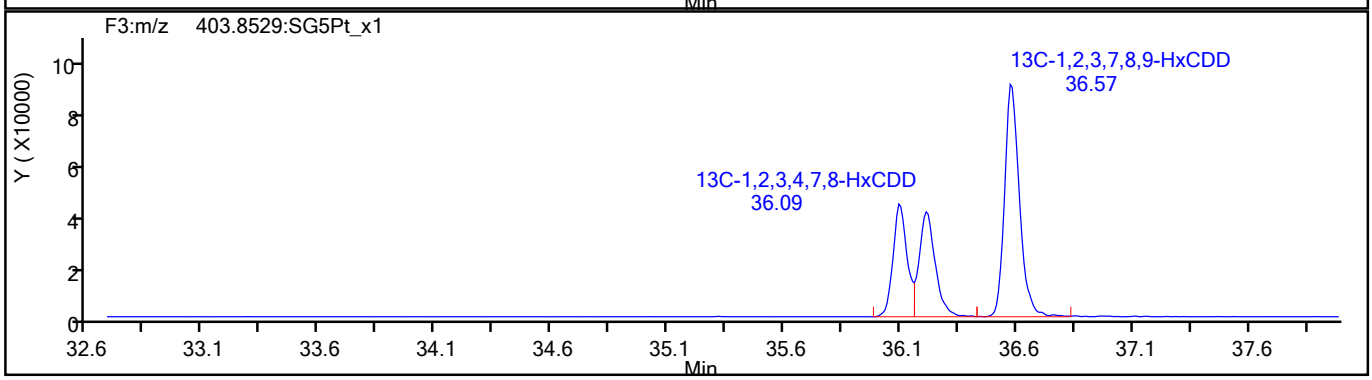

790577

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

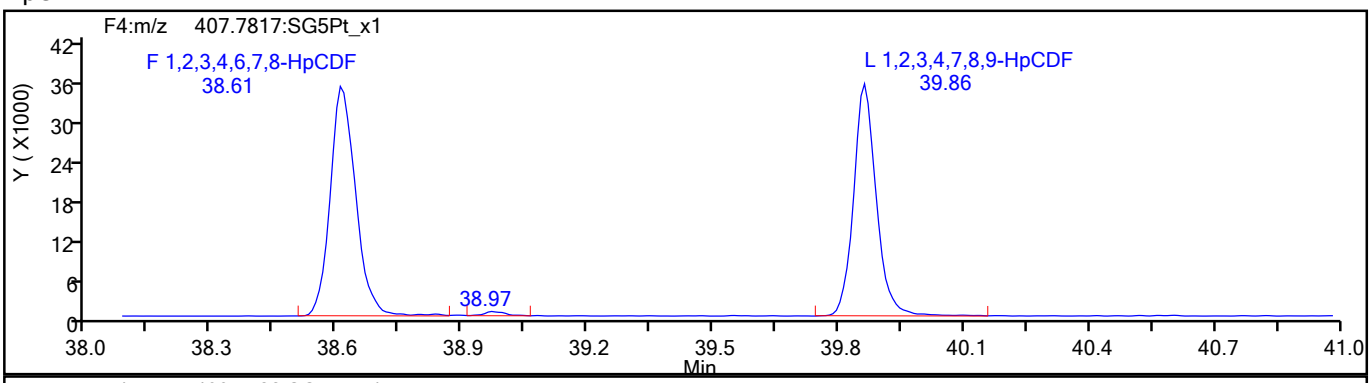

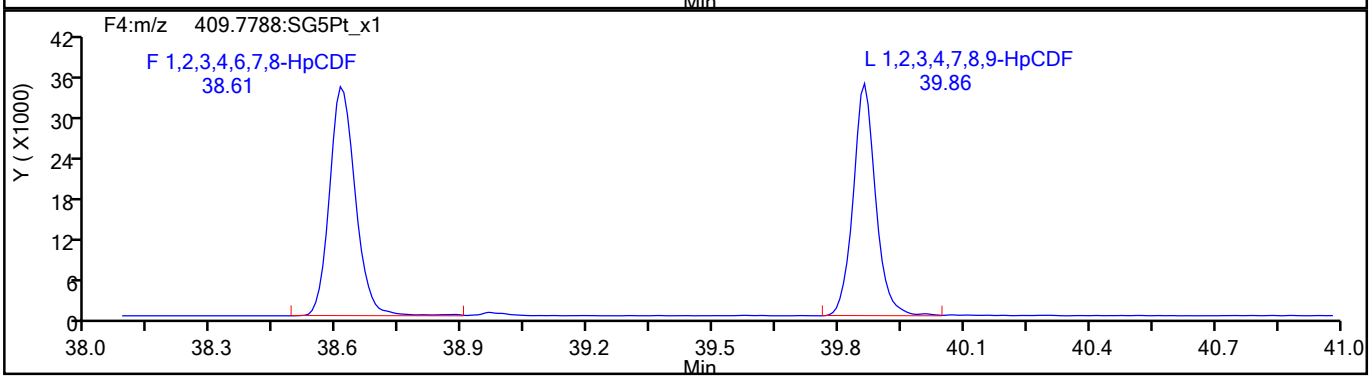

HpCDF Standards

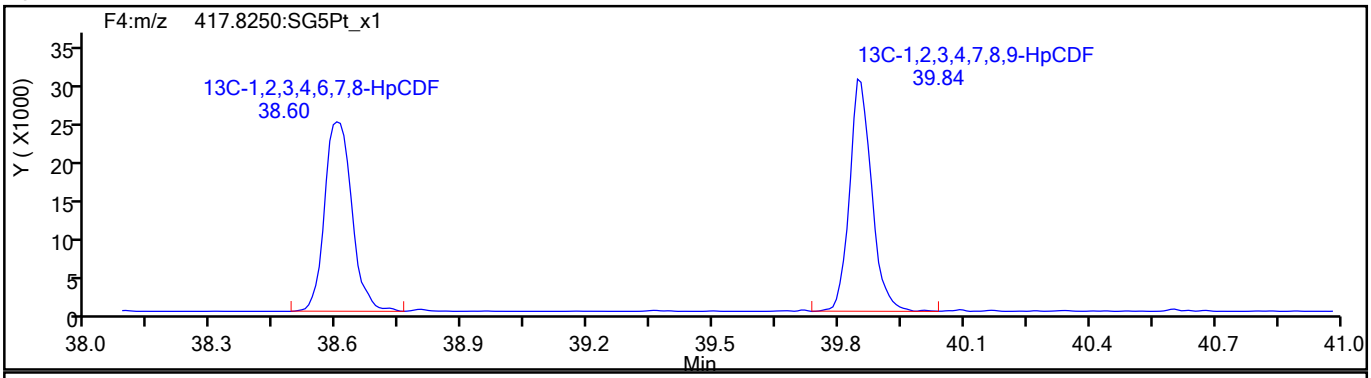

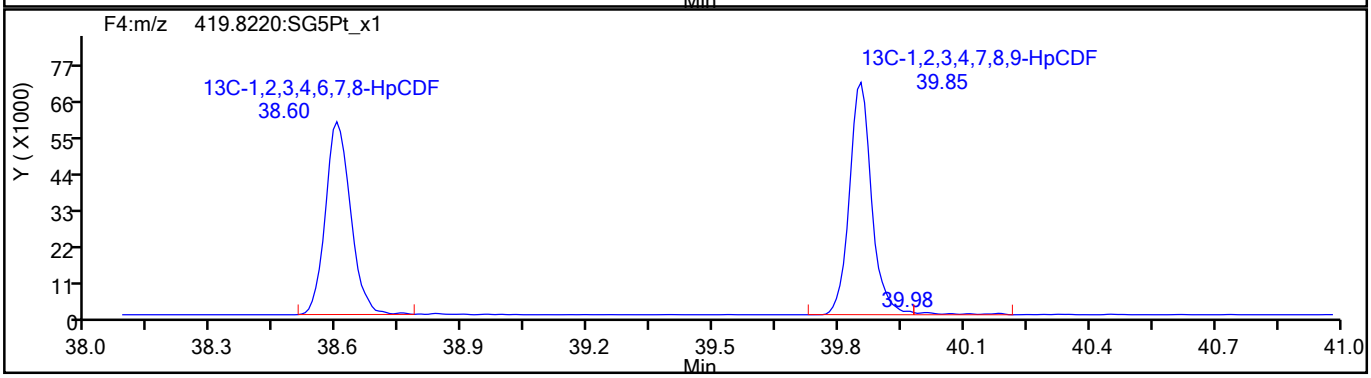

790578

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

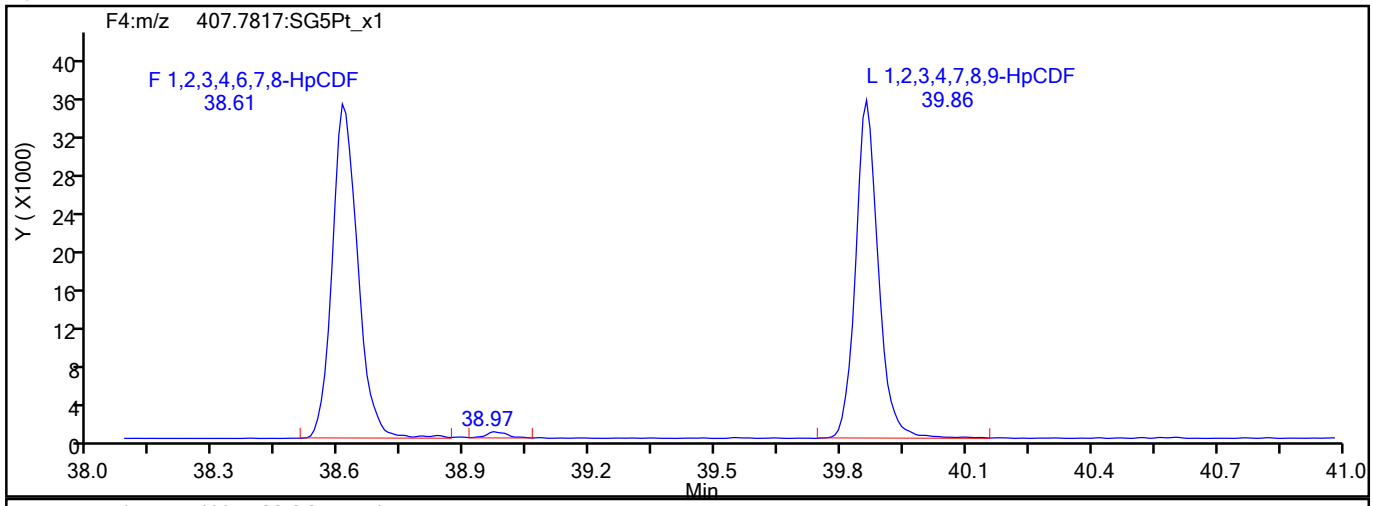

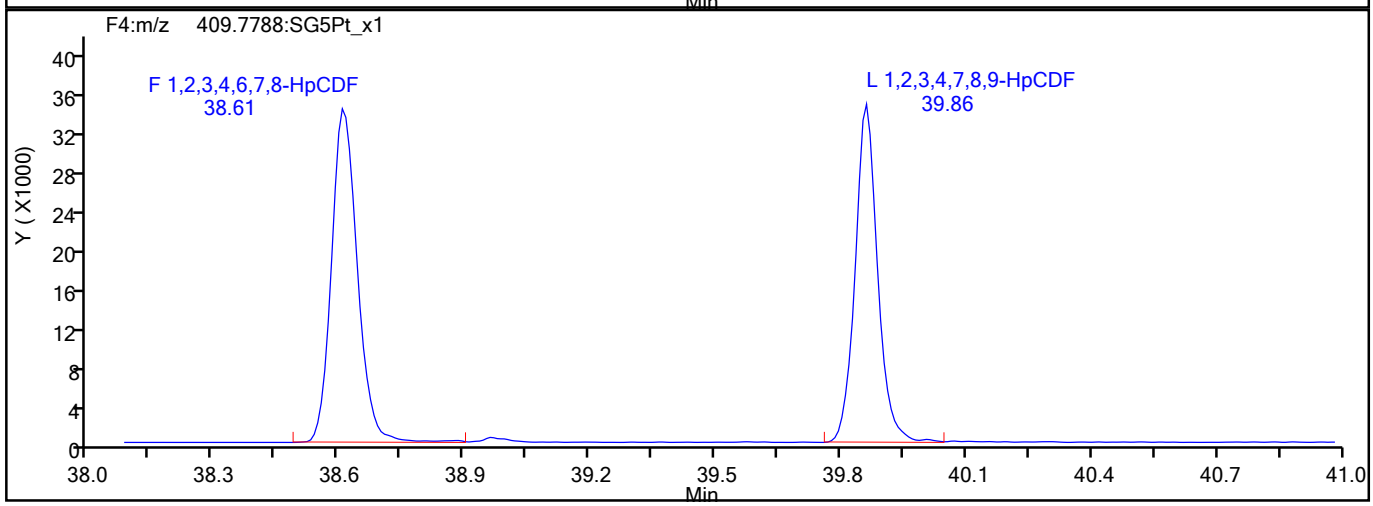

HpCDF Interference Mass

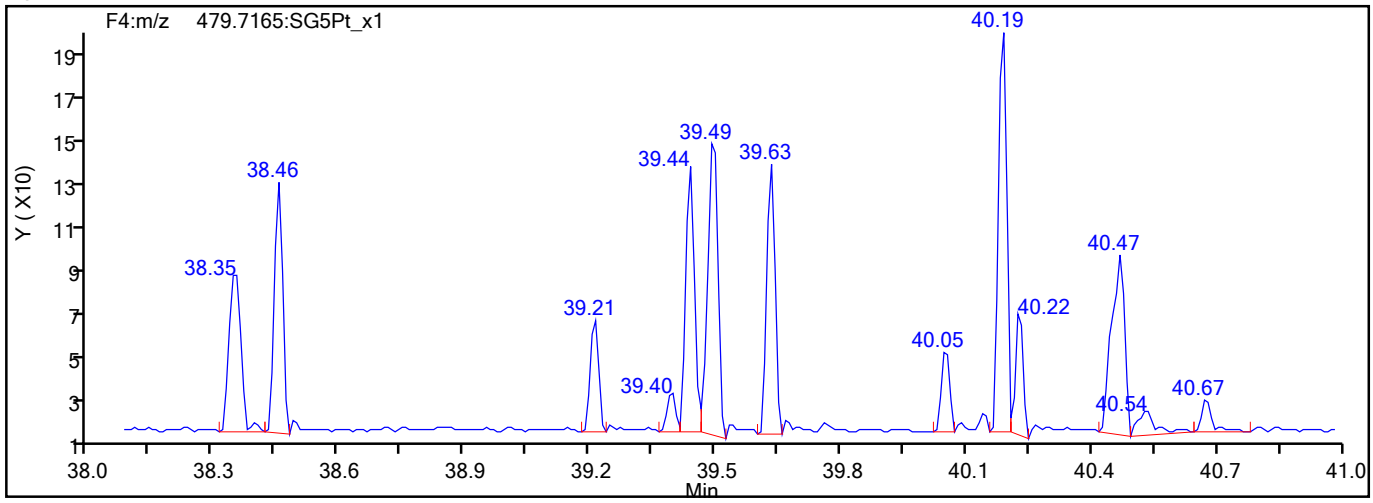

790579

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

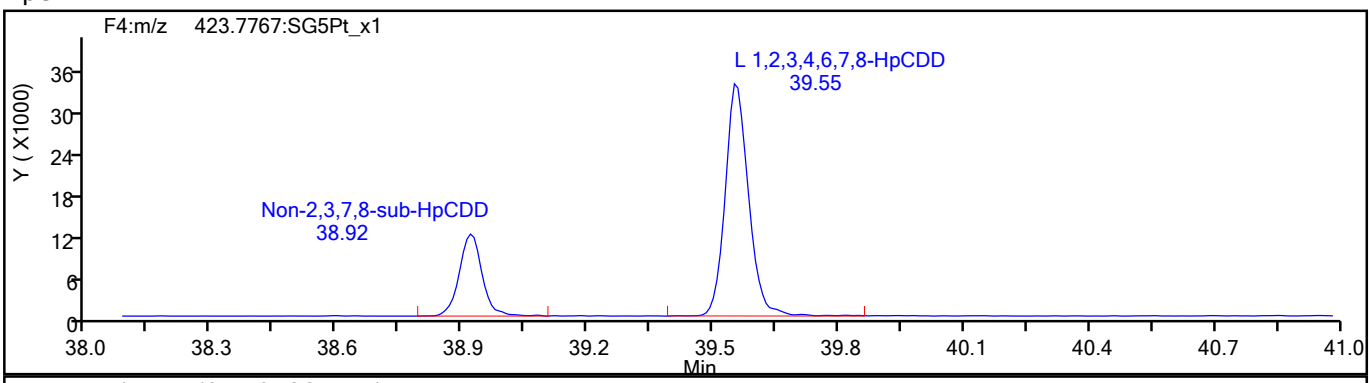

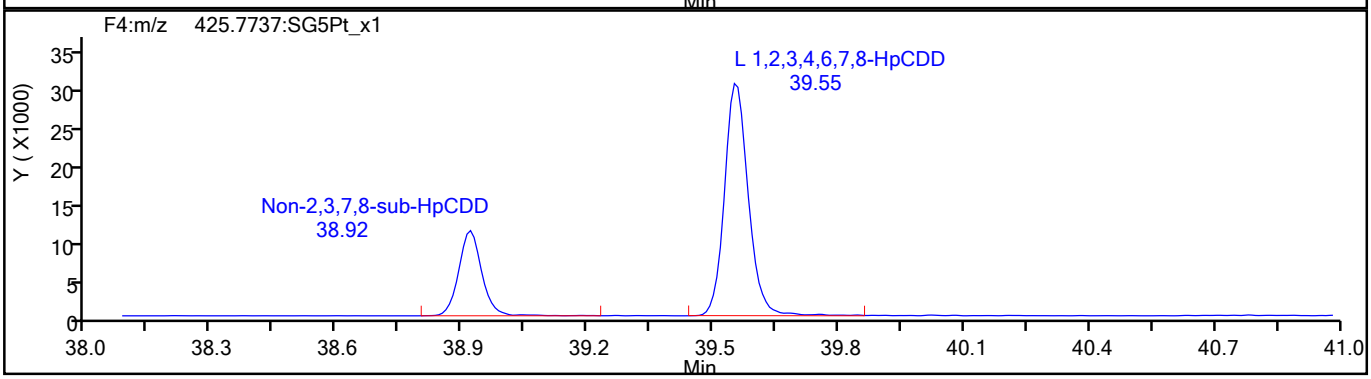

HpCDD Standards

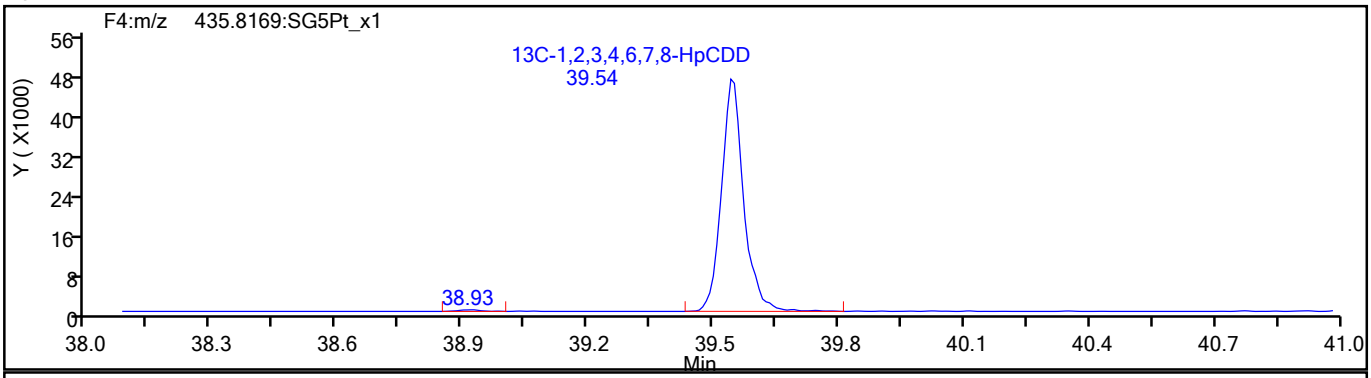

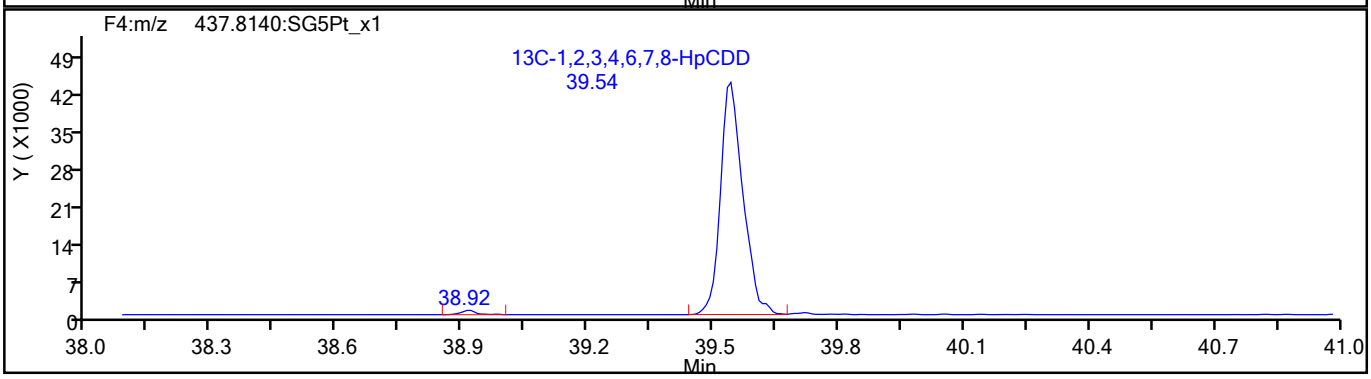

790580

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

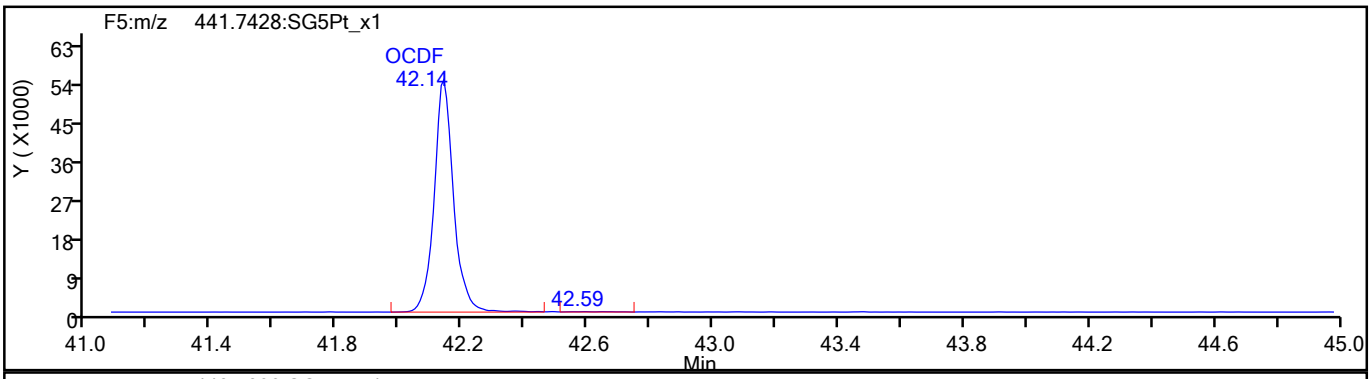

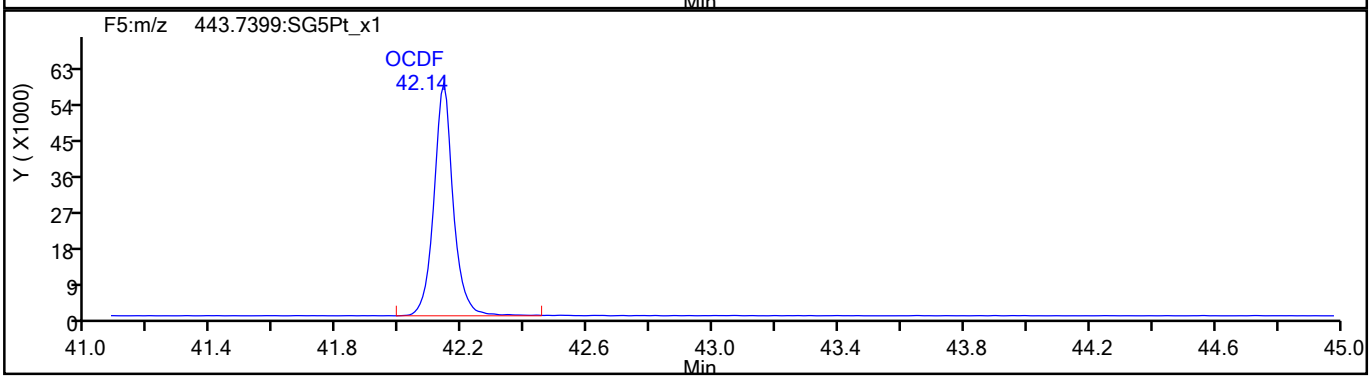

OCDF Standards

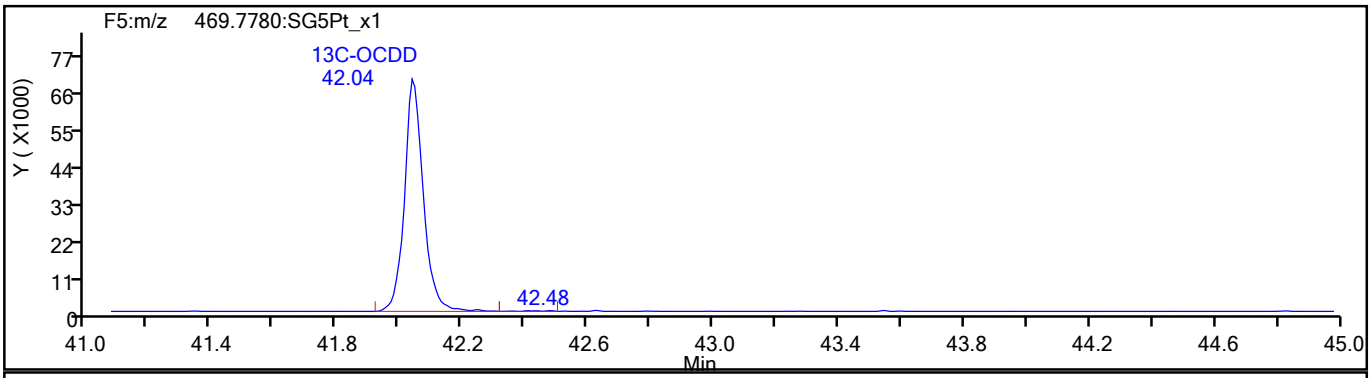

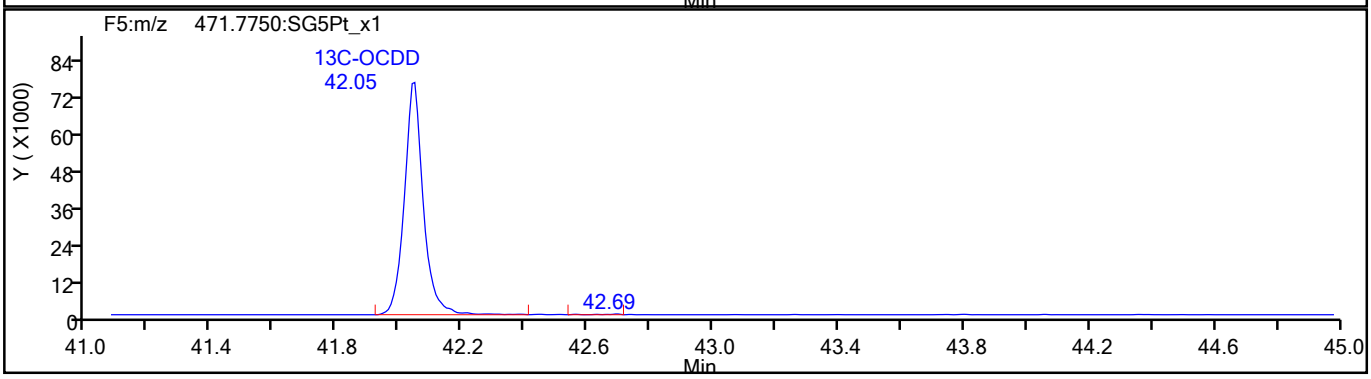

790581

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

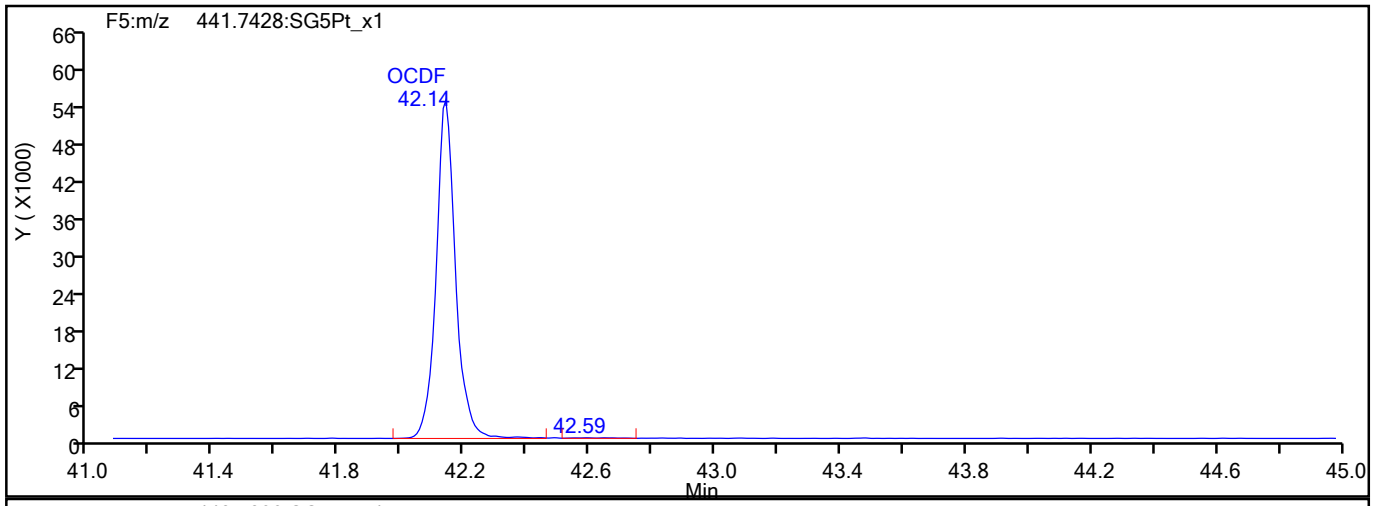

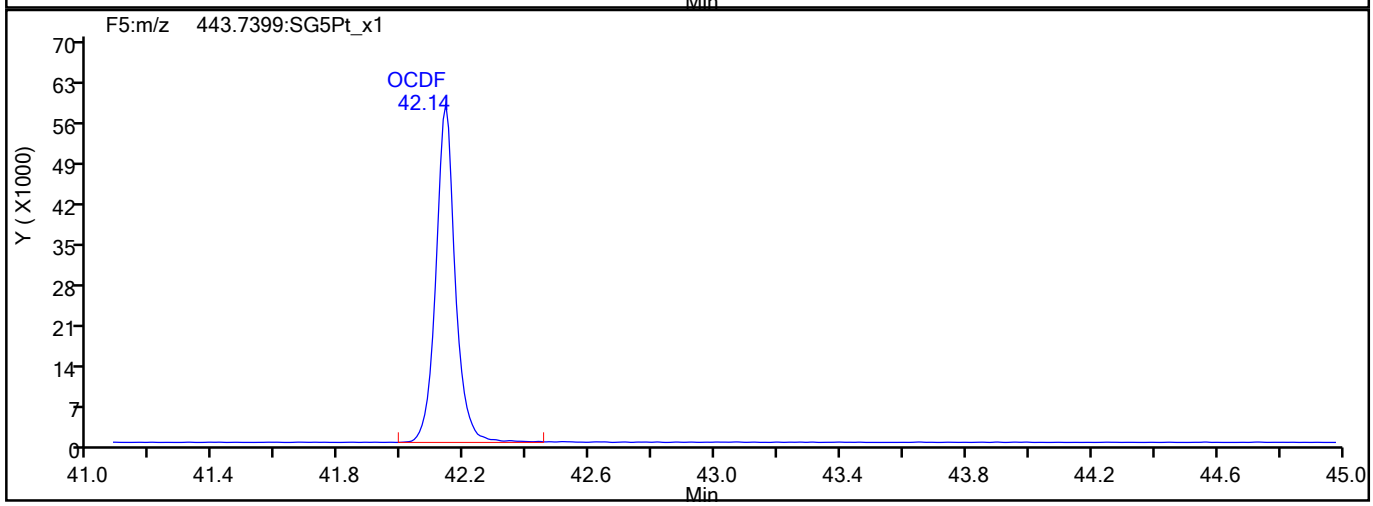

OCDF Interference Mass

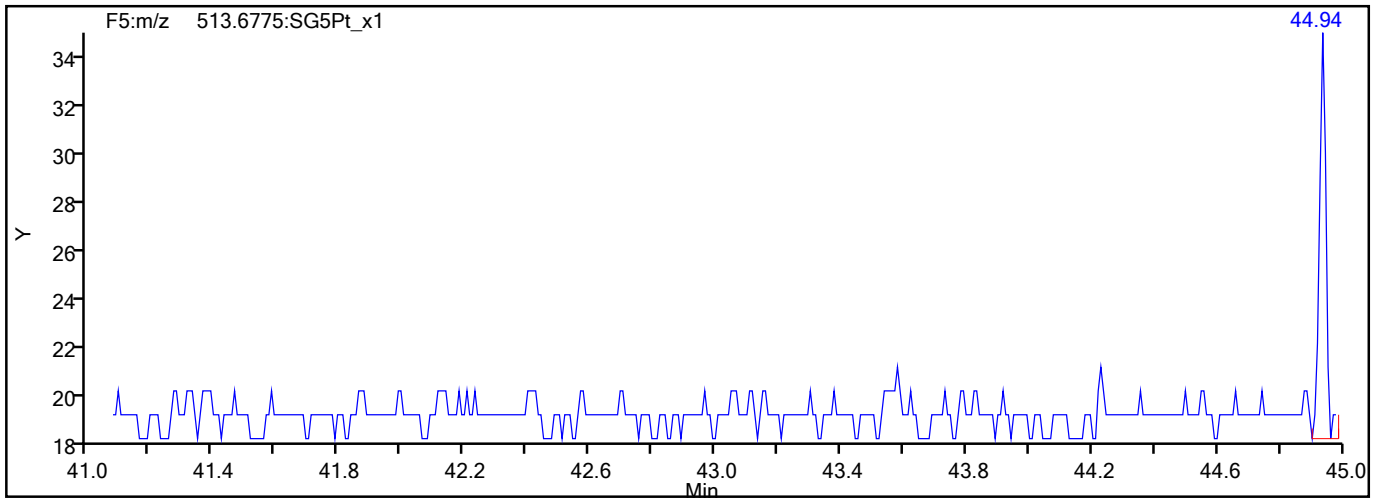

790582

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

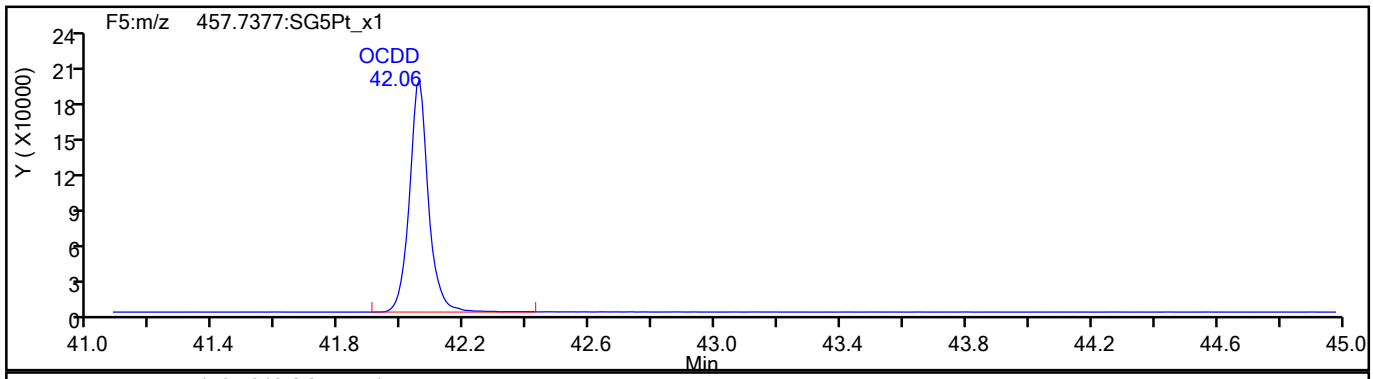

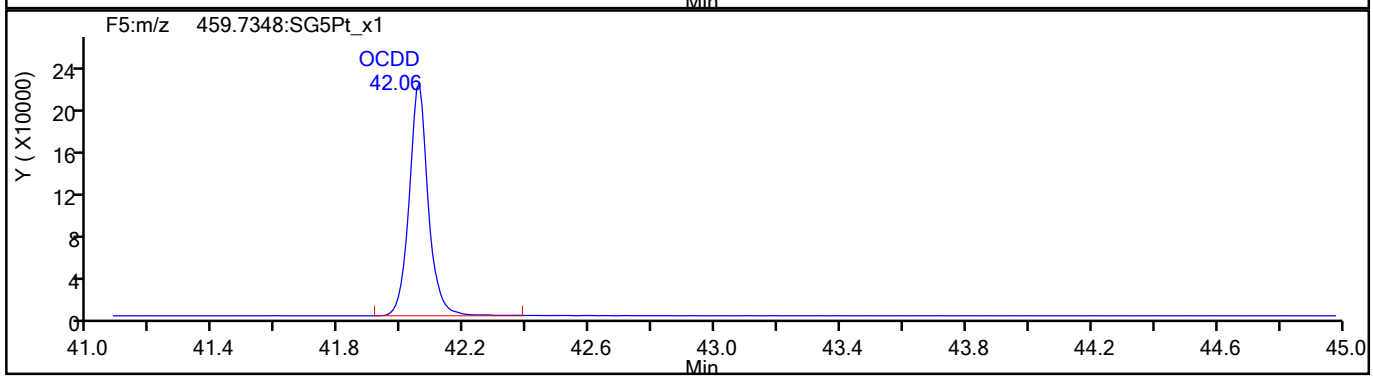

OCDD Standards

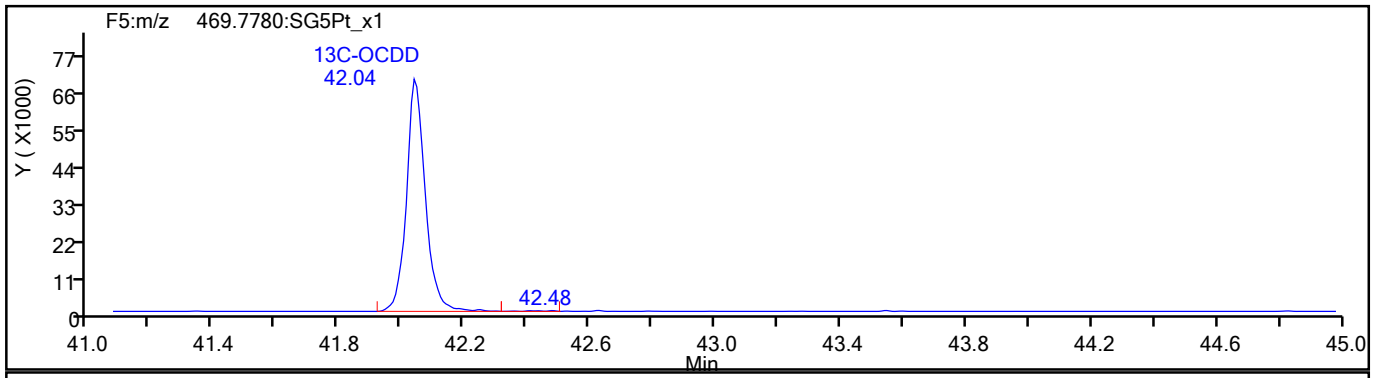

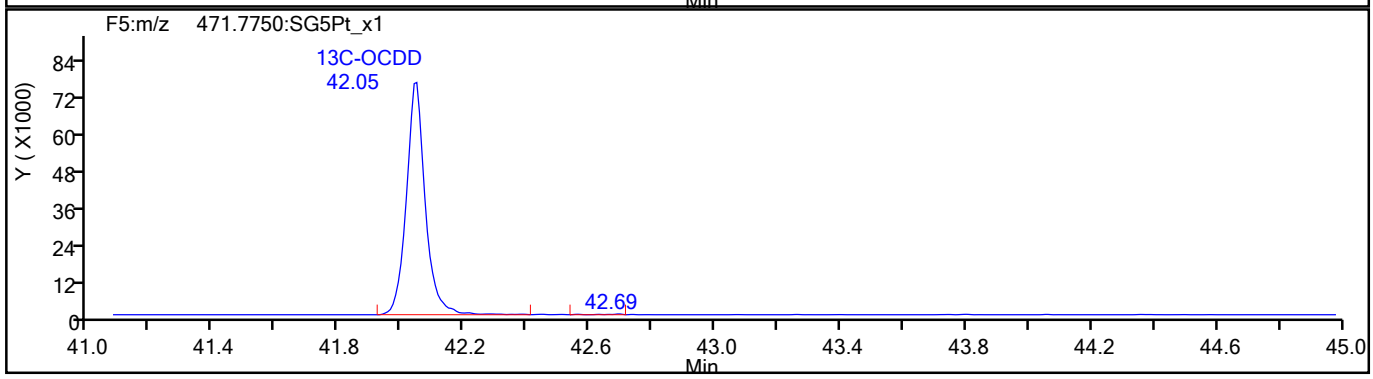

790583

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

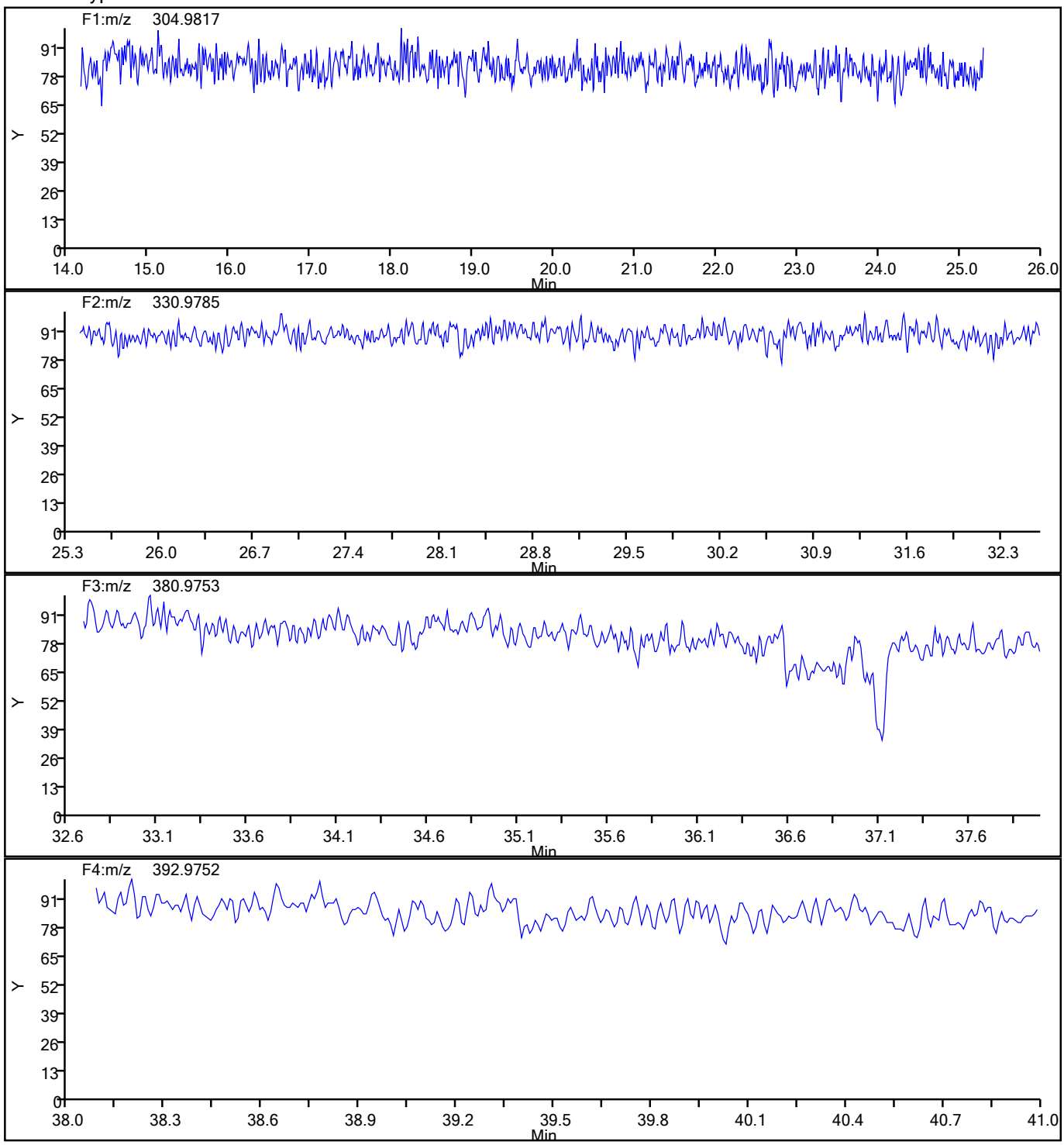

790584

Report Date: 20-Aug-2021 09:56:44 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\DFS1\20210818-125224.b\17au21dfs1_54.d		
Injection Date:	19-Aug-2021 07:06:00	Injection Vol:	2.0 ul
Instrument ID:	DFS 1	Operator ID:	Xcalibur_System
Method:	Dioxin_DFS1	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	517462	Sample Line#:	50
Column Type:	DB-5	Column Dia:	0.32 mm

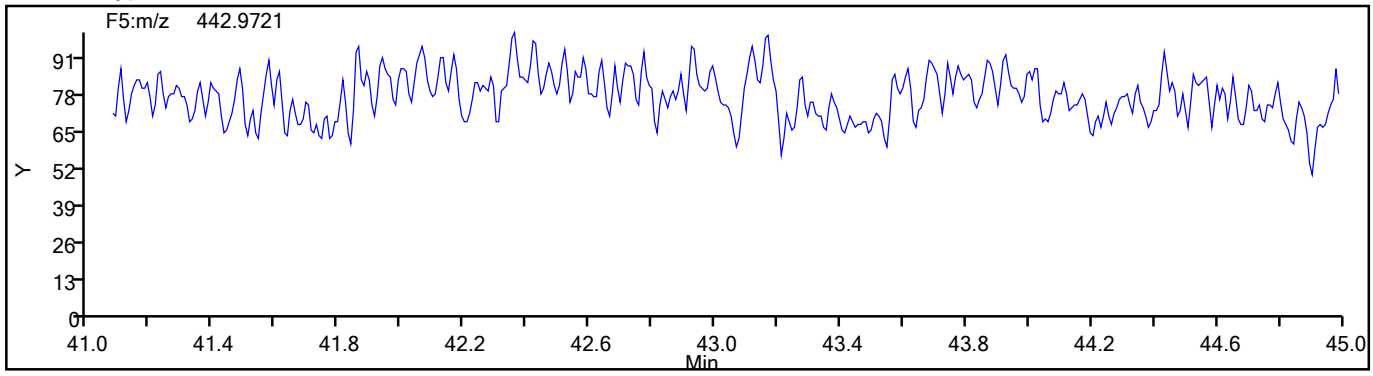

790585

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-76901-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-76901-A-2-C MSD RA
Matrix: Sediment
Lab File ID: 27AU2111D2_008.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/06/2021 12:58
Sample wt/vol: 10.20(g)
Date Analyzed: 08/27/2021 13:30
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 27.3
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520438
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	172		1.3	0.58

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	50		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	65		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_008.d
Lims ID: 320-76901-A-2-C MSD
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MSD
Inject. Date: 27-Aug-2021 13:30:30 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-2-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:50:14

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.299	57429416	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.601	38185418	0.78	1.3327	49.9	49.9	0.2772	0.2772	49.89	
2,3,7,8-TCDF	17.629	24296820	0.80	0.9978	63.8	63.8	0.2142	0.2142	638	
D 13C-2,3,7,8-TCDD	16.065	22815502	0.79	0.8749	45.4	45.4	1.344	1.344	45.41	
2,3,7,8-TCDD	16.079	6655982	0.81	1.0570	27.6	27.6	0.2274	0.2274	276	
$ 37Cl4-2,3,7,8-TCDD	16.079	12978451		0.8648	26.1	26.1	0.0833	0.0833	65.33	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

790587

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_008.d
Lims ID: 320-76901-A-2-C MSD
Client ID: 11215702-072821-BN-SJSB095 (2-4)
Sample Type: MSD
Inject. Date: 27-Aug-2021 13:30:30 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-76901-A-2-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 15:52:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1681

First Level Reviewer: bennettd Date: 27-Aug-2021 15:50:14

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.299	16.284	1		25198303	5260855	25703	64257	205		
333.9339	16.285	16.284	0		32231113	6910984	31545	78862	219	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.601	17.614	-1	1.080	16792584	3098268	7403	18507	419		
317.9389	17.615	17.614	0	1.081	21392834	4038299	10586	26465	381	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.628	0	1.002	10773418	2053603	2434	6085	844		
305.8987	17.629	17.628	0	1.002	13523402	2556005	3668	9170	697	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.064	0	0.986	10051386	2319807	25703	64257	90		
333.9339	16.065	16.064	0	0.986	12764116	2828992	31545	78862	90	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.079	16.078	0	1.001	2979646	658555	2387	5967	276		
321.8936	16.079	16.078	0	1.001	3676336	792542	2563	6407	309	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.079	16.078	0	0.987	12978451	2996421	3506	8765	855		

QC Flag Legend

Processing Flags

Report Date: 27-Aug-2021 15:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_008.d		
Injection Date:	27-Aug-2021 13:30:30	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

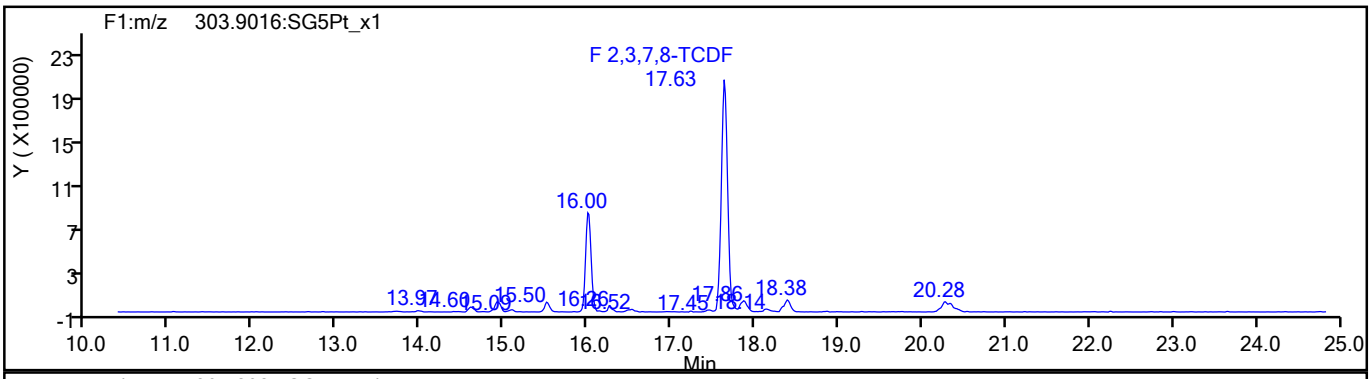

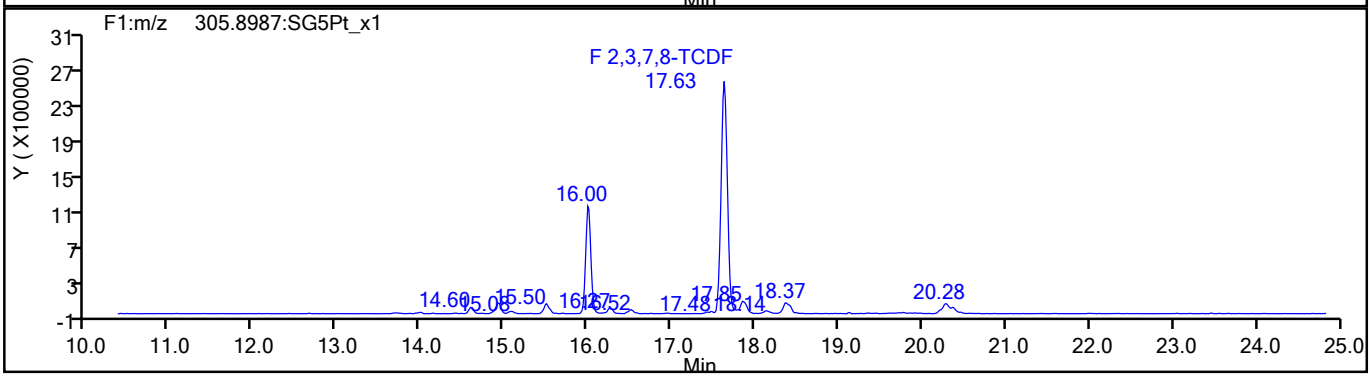

TCDF Standards

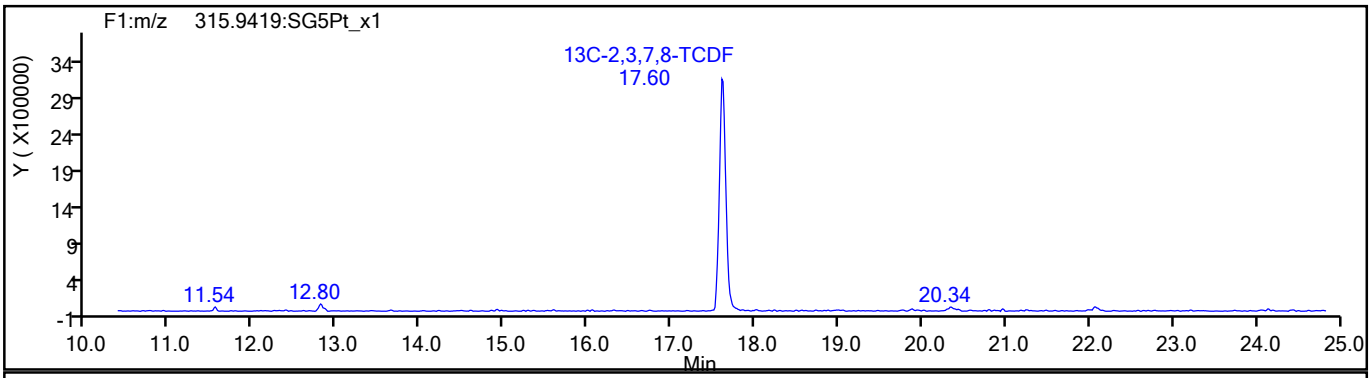

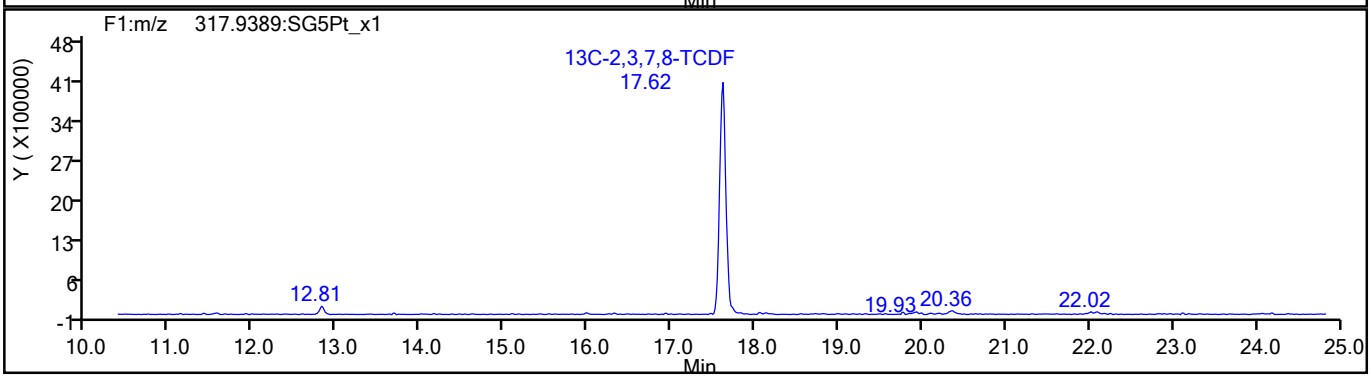

790589

Report Date: 27-Aug-2021 15:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_008.d		
Injection Date:	27-Aug-2021 13:30:30	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

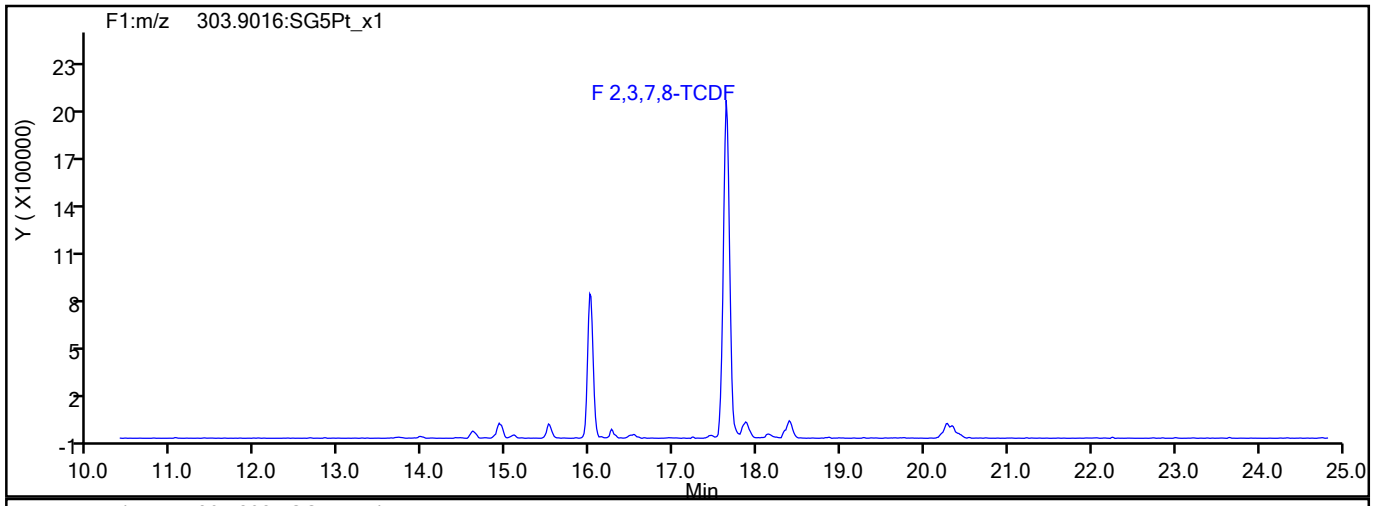

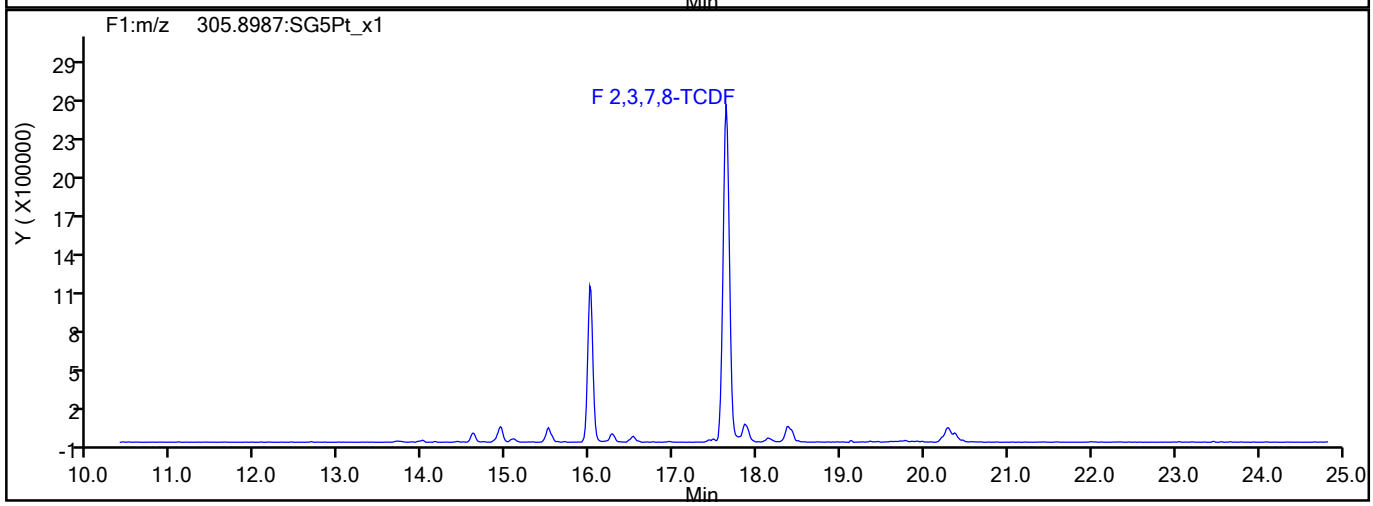

TCDF Interference Mass

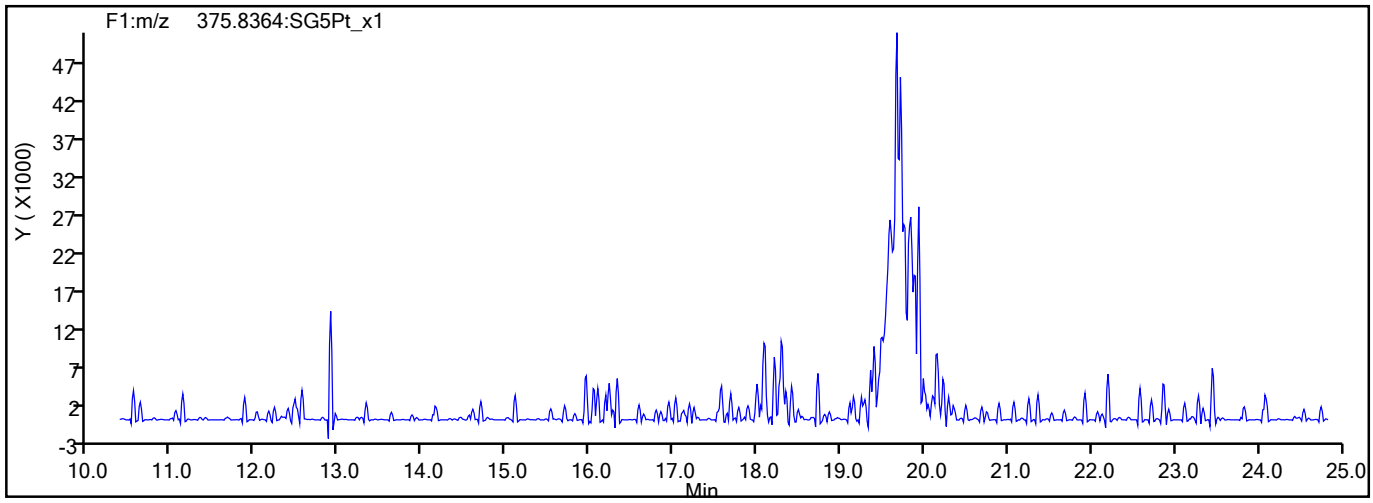

790590

Report Date: 27-Aug-2021 15:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_008.d		
Injection Date:	27-Aug-2021 13:30:30	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

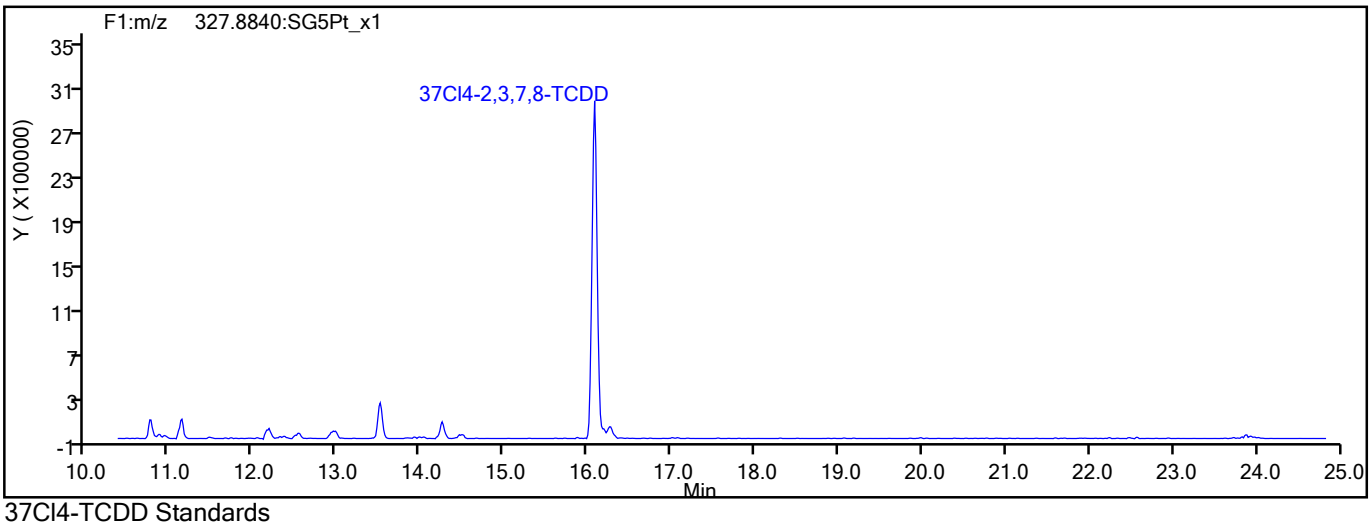

37Cl4-TCDD Standards

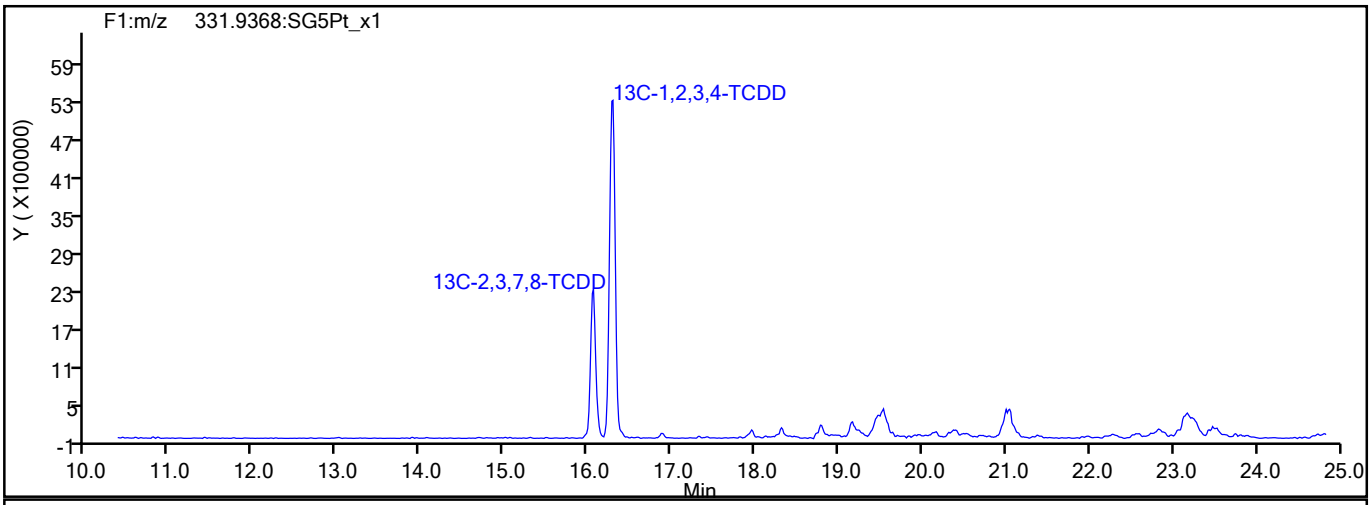

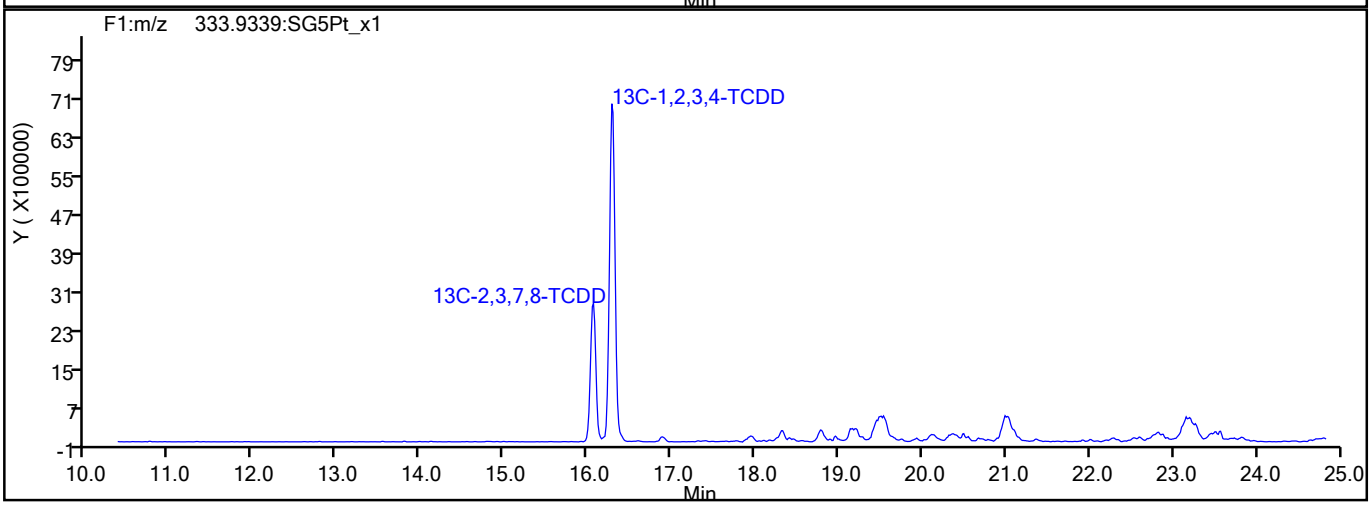

790591

Report Date: 27-Aug-2021 15:52:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125880.b\27AU2111D2_008.d		
Injection Date:	27-Aug-2021 13:30:30	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-072821-BN-SJSB095 (2-4)		
Worklist#:	520438	Sample Line#:	8
Column Type:	DB-225	Column Dia:	0.32 mm

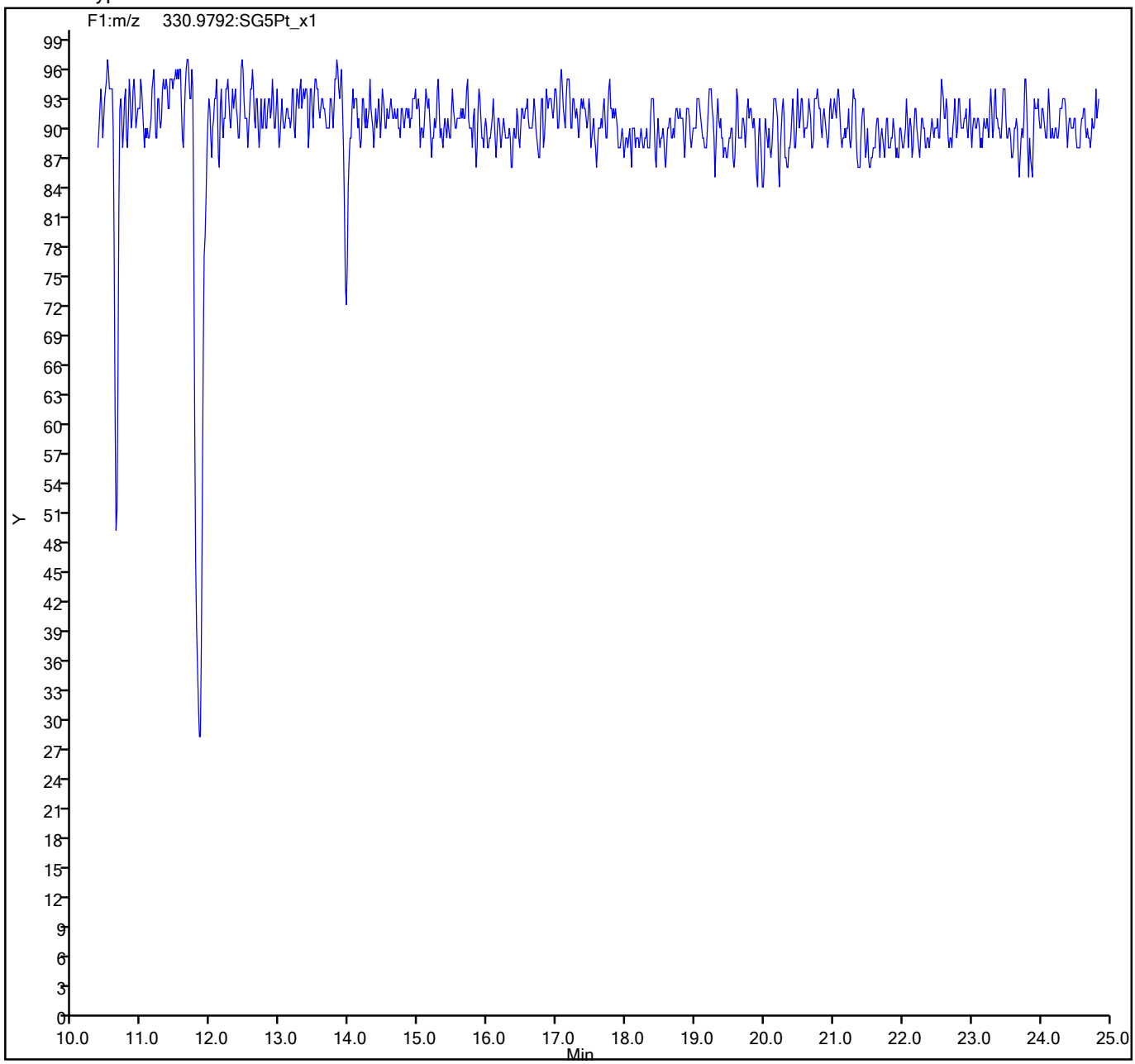

790592

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Instrument ID: DFS 1 Start Date: 06/08/2021 12:40

Analysis Batch Number: 496688 End Date: 06/08/2021 19:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-496688/1		06/08/2021 12:40	1		DB-5 0.32(mm)
IC 320-496688/3		06/08/2021 14:18	1	08jn21adfs1_4.d	DB-5 0.32(mm)
IC 320-496688/4		06/08/2021 15:06	1	08jn21adfs1_5.d	DB-5 0.32(mm)
IC 320-496688/5		06/08/2021 15:54	1	08jn21adfs1_6.d	DB-5 0.32(mm)
IC 320-496688/6		06/08/2021 16:42	1	08jn21adfs1_7.d	DB-5 0.32(mm)
IC 320-496688/7		06/08/2021 17:30	1	08jn21adfs1_8.d	DB-5 0.32(mm)
ICV 320-496688/9		06/08/2021 19:25	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Instrument ID: DFS 1 Start Date: 08/19/2021 01:32

Analysis Batch Number: 517462 End Date: 08/19/2021 11:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-517462/43		08/19/2021 01:32	1	17au21dfs1_47.d	DB-5 0.32(mm)
WDM 320-517462/44		08/19/2021 02:19	1	17au21dfs1_48.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 03:55	1		DB-5 0.32(mm)
LCS 320-513879/2-A		08/19/2021 04:43	1	17au21dfs1_51.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 05:30	1		DB-5 0.32(mm)
320-76901-A-2-B MS		08/19/2021 06:18	1	17au21dfs1_53.d	DB-5 0.32(mm)
320-76901-A-2-C MSD		08/19/2021 07:06	1	17au21dfs1_54.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 07:54	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 08:42	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 09:30	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 10:18	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 11:06	1		DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Instrument ID: DFS 1 Start Date: 08/19/2021 13:59

Analysis Batch Number: 517891 End Date: 08/19/2021 23:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-517891/1		08/19/2021 13:59	1	19au21dfs1_2.d	DB-5 0.32(mm)
CCV 320-517891/2		08/19/2021 14:46	1	19au21dfs1_3.d	DB-5 0.32(mm)
MB 320-513879/1-A		08/19/2021 16:27	1	19au21dfs1_5.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 17:15	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 18:03	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 18:51	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 19:39	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 20:27	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 21:15	1		DB-5 0.32(mm)
ZZZZZ		08/19/2021 22:02	1		DB-5 0.32(mm)
320-76901-9	11215702-072821-BN-SJ SB095 (16-18)	08/19/2021 22:50	1	19au21dfs1_13.d	DB-5 0.32(mm)
ZZZZZ		08/19/2021 23:38	1		DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/24/2021 08:28

Analysis Batch Number: 519438 End Date: 08/24/2021 15:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-519438/1		08/24/2021 08:28	1	24AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-519438/2		08/24/2021 09:07	1	24AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/24/2021 09:45	1		DB-225 0.32(mm)
MB 320-513879/1-A RA		08/24/2021 10:23	1	24AU2111D2_004.d	DB-225 0.32(mm)
ZZZZZ		08/24/2021 11:02	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 11:40	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 12:18	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 12:57	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 13:35	5		DB-225 0.32(mm)
ZZZZZ		08/24/2021 14:13	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 14:51	1		DB-225 0.32(mm)
ZZZZZ		08/24/2021 15:30	1		DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/27/2021 08:59

Analysis Batch Number: 520438 End Date: 08/27/2021 14:47

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-520438/1		08/27/2021 08:59	1	27AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-520438/2		08/27/2021 09:37	1	27AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/27/2021 10:57	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 11:35	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 12:13	1		DB-225 0.32(mm)
320-76901-A-2-B MS RA		08/27/2021 12:52	1	27AU2111D2_007.d	DB-225 0.32(mm)
320-76901-A-2-C MSD RA		08/27/2021 13:30	1	27AU2111D2_008.d	DB-225 0.32(mm)
ZZZZZ		08/27/2021 14:08	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 14:47	1		DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/27/2021 15:38

Analysis Batch Number: 520456 End Date: 08/28/2021 02:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-520456/1		08/27/2021 15:38	1	27AU21A11D2_001 .d	DB-225 0.32(mm)
CCV 320-520456/2		08/27/2021 16:16	1	27AU21A11D2_002 .d	DB-225 0.32(mm)
ZZZZZ		08/27/2021 17:33	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 18:11	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 18:50	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 19:28	1		DB-225 0.32(mm)
320-76901-9 RA	11215702-072821-BN-SJ SB095 (16-18) RA	08/27/2021 20:06	1	27AU21A11D2_008 .d	DB-225 0.32(mm)
ZZZZZ		08/27/2021 20:45	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 21:23	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 22:01	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 22:40	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 23:18	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 23:56	1		DB-225 0.32(mm)
ZZZZZ		08/28/2021 00:35	1		DB-225 0.32(mm)
ZZZZZ		08/28/2021 01:13	1		DB-225 0.32(mm)
ZZZZZ		08/28/2021 01:52	1		DB-225 0.32(mm)
ZZZZZ		08/28/2021 02:30	1		DB-225 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76901-2

SDG No.:

Batch Number: 513879 Batch Start Date: 08/06/21 12:57 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/14/21 06:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-513879/1		HRMS-Sox, 1613B		10 g	20.0 uL	C,1	66	1	1 mL
LCS 320-513879/2		HRMS-Sox, 1613B		10 g	20.0 uL	2	39	3	1 mL
320-76901-A-2 MS		HRMS-Sox, 1613B	T	10.08 g	20.0 uL	5	114	1	1 mL
320-76901-A-2 MSD		HRMS-Sox, 1613B	T	10.20 g	20.0 uL	6	6	3	1 mL
320-76901-A-9	11215702-072821-BN-SJSB095 (16-18)	HRMS-Sox, 1613B	T	10.71 g	20.0 uL	J,1	100	1	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-513879/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-513879/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-76901-A-2 MS		HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76901-A-2 MSD		HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-76901-A-9	11215702-072821-BN-SJSB095 (16-18)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76901-2

SDG No.:

Batch Number: 513879 Batch Start Date: 08/06/21 12:57 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/14/21 06:30

Batch Notes	
20% DCM:Hexane ID	DH28_00193 mL
65% DCM:Hexane ID	DH6535_00546
Acid Silica Gel ID	SA5644_00732
Acid Alumina ID	Acid_Alumina_00019
Balance ID	QA-0
Sulfuric Acid Lot Number	H2SO400152
Hexane ID	Hexane_00285
IFB Clean Up	GLB 8-14-21
Na2SO4 ID	SodiumSulfate_00166
Analyst ID - IDA Reagent Drop	HD05018 HRDXNIDA_00479 B-2/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	EMG 8/7/21
Analyst ID - IS Reagent Drop	GLB 8-14-21 DB15270 HRDXNIS00137 B 1/4 20uL
Analyst ID - IS Reagent Drop Witness	HK 8-14-21
Analyst ID - SU Reagent Drop	SR 8/13/21 HD05018 HRDXNSU00255 B 4/5 1.0mL
Analyst ID - SU Reagent Drop Witness	TGL 8-13-21
Analyst ID - TA Reagent Drop	DB15270 HRDXNTA_00137 B-4/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	EMG 8/7/21
Silica Gel ID	SilicaGel_00373
Soxhlet/Soxtherm End	8/7/21 10:00
Soxhlet/Soxtherm Start	8/7/21 7:00
Storage Box ID	DXN -267
Toluene ID	Toluene_00110

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-76901-2

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-072821-BN-SJSB095 (16-18)	320-76901-9

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76901-2

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-76901-2

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-76901-2

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 07/30/2021 12:30 End Date: 07/30/2021 12:30

Lab Sample Id	D/F	Type	Time	Analytes																								
				% Sol	Moist																							
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
320-76901-9	1	T	12:30	X	X																							
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									
ZZZZZZ			12:30																									

Prep Types:
T = Total/NA

FORM XIII-IN

790606

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-76901-2

SDG No.:

Batch Number: 511711 Batch Start Date: 07/30/21 12:30 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/02/21 09:08

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-76901-A-9	11215702-072821-BN-SJSB095 (16-18)	D 2216	T	10	1.02 g	8.73 g	6.36 g	30.7392996108949 %	69.2607003891051 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	08/02/2021 08:37
Date and Time Samples out of Desiccator	08/02/2021 09:08
Date samples were placed in the oven	07/30/2021
Oven Temp In	114 Degrees C
Time samples were place in the oven	12:30
Date samples were removed from oven	08/02/2021
Oven Temp Out	113 Degrees C
Time Samples were removed from oven	08:37
Oven ID	Soil Prep #2
Thermometer ID	151969607

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-76901-2

Batch: 511711
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-76901-A-9

Analysis Date: Jul 30, 2021 12:30

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	30.7392996108949	%
Percent Solids	None	1	69.2607003891051	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P
1.00	1.00	200.00	200.00	8/1/2021	DM	WT-3	P
1.00	1.00	200.00	200.00	08/02/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams):

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

790611

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

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Chain of Custody Record

Client Information			
Client Contact: Janie Smith	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):
Company: GHD Services Inc.	Phone: 501-454-9966	E-Mail:	COC No:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:		Page: 1 of 2
City: Baton Rouge	TAT Requested (days): 15 business days		Job #:
State, Zip: LA, 70808			
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested		
Email: janie.smith@ghd.com	WO #:		
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702		
Site: San Jacinto Waste Pits	SSOW#: 11215702 - 2021-001		

Analysis Requested

320-76901 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072821-BN-SJSB095 (0-2)	7-28-21	1100	G	S	N	N	X	X	X	1	
(2-4)		1105			N	Y	X	X	X	1	MS/MSD
(4-6)		1110			N	N	X	X	X		
(6-8)		1115			N	N	X	X	X		
(8-10)		1120			N	N	X	X	X		
(10-12)		1125			N	N	X	X	X		
(12-14)		1130			N	N	X	X	X		
(14-16)		1135			N	N	X	X	X		
(16-18)		1140			N	N	X	X	X		PRIORITY
(18-20)		1145			N	N	X	X	X		HOLD
(20-22)		1150			N	N	X	X	X		HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: Fedex		
Relinquished by: Breanna North	Date/Time: 7-28-21 1500	Company: GHD	Received by: [signature]	Date/Time: 7/29/21 945	Company: GHD
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: 15192663		Cooler Temperature(s) °C and Other Remarks: 1.5		

Ver: 01/16/2019

790612

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

eurofins

Chain of Custody Record

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 2 of 2
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=soil, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	16138	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-072821-BN-SJSB095(22-24)	7-28-21	1155	G	S	N	N	X	X	X		HOLD
11215702-072821-BN-DUP-10	7-28-21	—	G	S	N	N	X	X	X		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: Fedex		
Relinquished by: Breanna North	Date/Time: 7-28-21 1500	Company: GHD	Received by: [signature]	Date/Time: 7/29/21 945	Company: EMAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: X Yes Δ No	Custody Seal No.: 1519263		Cooler Temperature(s) °C and Other Remarks: 1.5		

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-76901-2

Login Number: 76901
List Number: 1
Creator: Cahill, Nicholas P

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1519263
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Job Number: 320-77214-1

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
9/2/2021 1:58 PM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
09/02/2021

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 320-77214-1
Project/Site: SJRWP Supplemental Design Investigation

Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 8/5/2021 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.4º C.

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: 11215702-080221-BN-SJSB090 (0-2) (320-77214-1), 11215702-080221-BN-SJSB090 (2-4) (320-77214-2), 11215702-080221-BN-SJSB090 (2-4) (320-77214-2[MS]), 11215702-080221-BN-SJSB090 (2-4) (320-77214-2[MSD]), 11215702-080221-BN-SJSB090 (4-6) (320-77214-3), 11215702-080221-BN-SJSB090 (6-8) (320-77214-4), 11215702-080221-BN-SJSB090 (8-10) (320-77214-5), 11215702-080221-BN-SJSB090 (10-12) (320-77214-6), 11215702-080221-BN-SJSB090 (12-14) (320-77214-7), (CCV 320-519953/2), (LCS 320-515492/2-A) and (MB 320-515492/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: 11215702-080221-BN-SJSB090 (14-16) (320-77214-8), 11215702-080221-BN-DUP-11 (320-77214-13) and (CCV 320-519955/1). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following sample run on instrument 10D5 exceeded this criteria: 11215702-080221-BN-SJSB090 (0-2) (320-77214-1) and (CCV 320-520325/2). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The concentration of one or more analytes associated with the following samples exceeded the instrument calibration range: 11215702-080221-BN-SJSB090 (0-2) (320-77214-1), 11215702-080221-BN-SJSB090 (2-4) (320-77214-2), 11215702-080221-BN-SJSB090 (2-4) (320-77214-2[MS]), 11215702-080221-BN-SJSB090 (2-4) (320-77214-2[MSD]), 11215702-080221-BN-SJSB090 (4-6) (320-77214-3), & 11215702-080221-BN-SJSB090 (8-10) (320-77214-5). These analytes have been qualified with an 'E' flag; however, the peak(s) did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Method 1613B: The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the estimated detection limit (EDL): 11215702-080221-BN-SJSB090 (0-2) (320-77214-1), 11215702-080221-BN-SJSB090 (2-4) (320-77214-2), 11215702-080221-BN-SJSB090 (2-4) (320-77214-2[MS]), 11215702-080221-BN-SJSB090 (2-4) (320-77214-2[MSD]), 11215702-080221-BN-SJSB090 (4-6) (320-77214-3) and 11215702-080221-BN-SJSB090 (8-10) (320-77214-5) . The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method 1613B: Some of the matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 320-515492 and analytical batch 320-519953 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 1613B: The ending resolution check did not print due to instrument error. A manual resolution check was performed more than 12 hours from the previous check without tuning the instrument indicating the Instrument maintained the greater than 10,000 resolution. All samples were analyzed within the 12 hour analytical clock requirement. There is no adverse impact on the data reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-SJSB090 (0-2) — Lab Sample ID: 320-77214-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDD	4.8	J	9.7	0.39	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	25		9.7	0.38	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	9.5	J	9.7	0.35	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	1800		9.7	9.0	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	110	q	9.7	8.5	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	200	G	9.8	9.8	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	360	B	9.7	4.5	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	2000		9.7	4.9	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	650		9.7	4.6	pg/g	1	☼	1613B	Total/NA
OCDD	5100	B	19	11	pg/g	1	☼	1613B	Total/NA
OCDF	820	B	19	0.51	pg/g	1	☼	1613B	Total/NA
Total HxCDD	180	q	9.7	0.37	pg/g	1	☼	1613B	Total/NA
Total HxCDF	9800	q	9.7	9.7	pg/g	1	☼	1613B	Total/NA
Total HpCDD	740	B	9.7	4.5	pg/g	1	☼	1613B	Total/NA
Total HpCDF	3100		9.7	4.8	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDD - DL	49000	E G	170	170	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDD - DL	320		97	4.8	pg/g	10	☼	1613B	Total/NA
1,2,3,7,8-PeCDF - DL	5000		97	26	pg/g	10	☼	1613B	Total/NA
2,3,4,7,8-PeCDF - DL	2600		97	23	pg/g	10	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF - DL	6800		97	21	pg/g	10	☼	1613B	Total/NA
Total TCDD - DL	56000	G	170	170	pg/g	10	☼	1613B	Total/NA
Total TCDF - DL	220000	G B	420	420	pg/g	10	☼	1613B	Total/NA
Total PeCDD - DL	330		97	4.8	pg/g	10	☼	1613B	Total/NA
Total PeCDF - DL	12000		97	25	pg/g	10	☼	1613B	Total/NA
2,3,7,8-TCDF - RADL	110000	G E B	140	140	pg/g	10	☼	1613B	Total/NA

Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) — Lab Sample ID: 320-77214-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	5100	E G	19	19	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	35		6.4	0.58	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	410	F1	6.4	2.5	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	230	F1	6.4	2.2	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.84	J q	6.4	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	4.0	J	6.4	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.4	J	6.4	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	1000		6.4	5.3	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	240	F1	6.4	4.9	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	9.6		6.4	4.0	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	18		6.4	4.0	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	83	B	6.4	0.52	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	390	F1	6.4	2.0	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	130	F1	6.4	2.0	pg/g	1	☼	1613B	Total/NA
OCDD	1600	B	13	0.91	pg/g	1	☼	1613B	Total/NA
OCDF	170	F1 B	13	0.14	pg/g	1	☼	1613B	Total/NA
Total TCDD	5800	G	19	19	pg/g	1	☼	1613B	Total/NA
Total TCDF	25000	B G	46	46	pg/g	1	☼	1613B	Total/NA
Total PeCDD	39	q	6.4	0.58	pg/g	1	☼	1613B	Total/NA
Total PeCDF	1000		6.4	2.3	pg/g	1	☼	1613B	Total/NA
Total HxCDD	40	q	6.4	0.12	pg/g	1	☼	1613B	Total/NA
Total HxCDF	1400		6.4	4.5	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) (Continued) Lab Sample ID: 320-77214-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HpCDD	190	B	6.4	0.52	pg/g	1	☼	1613B	Total/NA
Total HpCDF	610		6.4	2.0	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	12000	E B G	25	25	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-080221-BN-SJSB090 (4-6) Lab Sample ID: 320-77214-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	700	E G	1.8	1.8	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	5.3	J	7.0	0.16	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	57		7.0	0.40	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	34		7.0	0.39	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.68	J	7.0	0.083	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.5	J	7.0	0.089	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.6	J	7.0	0.078	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	73		7.0	0.30	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	18		7.0	0.30	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	1.4	J	7.0	0.22	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	2.1	J	7.0	0.22	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	54	B	7.0	0.45	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	20		7.0	0.16	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	7.4		7.0	0.18	pg/g	1	☼	1613B	Total/NA
OCDD	850	B	14	0.68	pg/g	1	☼	1613B	Total/NA
OCDF	11	J B	14	0.072	pg/g	1	☼	1613B	Total/NA
Total TCDD	780	q G	1.8	1.8	pg/g	1	☼	1613B	Total/NA
Total TCDF	3600	B G	6.0	6.0	pg/g	1	☼	1613B	Total/NA
Total PeCDD	8.5	q	7.0	0.16	pg/g	1	☼	1613B	Total/NA
Total PeCDF	140	q	7.0	0.40	pg/g	1	☼	1613B	Total/NA
Total HxCDD	26		7.0	0.084	pg/g	1	☼	1613B	Total/NA
Total HxCDF	100		7.0	0.26	pg/g	1	☼	1613B	Total/NA
Total HpCDD	120	B	7.0	0.45	pg/g	1	☼	1613B	Total/NA
Total HpCDF	36		7.0	0.17	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	2000	E G B	1.9	1.9	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-080221-BN-SJSB090 (6-8) Lab Sample ID: 320-77214-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	4.5		1.4	0.43	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.71	J	7.2	0.26	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.55	J	7.2	0.28	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.39	J q	7.2	0.30	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.88	J	7.2	0.20	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	11	B	7.2	0.24	pg/g	1	☼	1613B	Total/NA
OCDD	250	B	14	0.44	pg/g	1	☼	1613B	Total/NA
OCDF	0.52	J B	14	0.21	pg/g	1	☼	1613B	Total/NA
Total TCDD	4.5		1.4	0.43	pg/g	1	☼	1613B	Total/NA
Total TCDF	23	B q	1.4	0.47	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.71	J	7.2	0.27	pg/g	1	☼	1613B	Total/NA
Total HxCDD	7.1	J q	7.2	0.28	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.88	J	7.2	0.18	pg/g	1	☼	1613B	Total/NA
Total HpCDD	36	B	7.2	0.24	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	12	B	1.4	0.23	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Job ID: 320-77214-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-080221-BN-SJSB090 (8-10) — Lab Sample ID: 320-77214-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	190		1.3	0.50	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	1.7	J	6.4	0.091	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	29		6.4	0.18	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	15		6.4	0.18	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.49	J	6.4	0.068	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.75	J	6.4	0.074	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.5	J	6.4	0.065	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	31		6.4	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	8.2		6.4	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.66	J	6.4	0.084	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	1.0	J	6.4	0.089	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	28	B	6.4	0.30	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	7.8		6.4	0.062	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	2.8	J	6.4	0.069	pg/g	1	☼	1613B	Total/NA
OCDD	630	B	13	0.42	pg/g	1	☼	1613B	Total/NA
OCDF	3.3	J B	13	0.039	pg/g	1	☼	1613B	Total/NA
Total TCDD	210	q	1.3	0.50	pg/g	1	☼	1613B	Total/NA
Total TCDF	1100	B G	1.7	1.7	pg/g	1	☼	1613B	Total/NA
Total PeCDD	3.7	J q	6.4	0.091	pg/g	1	☼	1613B	Total/NA
Total PeCDF	70	q	6.4	0.18	pg/g	1	☼	1613B	Total/NA
Total HxCDD	16		6.4	0.069	pg/g	1	☼	1613B	Total/NA
Total HxCDF	45		6.4	0.10	pg/g	1	☼	1613B	Total/NA
Total HpCDD	73	B	6.4	0.30	pg/g	1	☼	1613B	Total/NA
Total HpCDF	13		6.4	0.065	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	620	E B	1.3	0.70	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-080221-BN-SJSB090 (10-12) — Lab Sample ID: 320-77214-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	2.5		1.6	0.088	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.31	J	8.0	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.51	J	8.0	0.055	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.19	J q	8.0	0.055	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.76	J	8.0	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.3	J	8.0	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.2	J	8.0	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.54	J	8.0	0.043	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.14	J	8.0	0.045	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.14	J	8.0	0.031	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	59	B	8.0	0.92	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.23	J q	8.0	0.044	pg/g	1	☼	1613B	Total/NA
OCDD	1400	B	16	1.1	pg/g	1	☼	1613B	Total/NA
OCDF	0.28	J B q	16	0.044	pg/g	1	☼	1613B	Total/NA
Total TCDD	8.6	q	1.6	0.088	pg/g	1	☼	1613B	Total/NA
Total TCDF	14	B q	1.6	0.087	pg/g	1	☼	1613B	Total/NA
Total PeCDD	7.3	J q	8.0	0.11	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.92	J q	8.0	0.055	pg/g	1	☼	1613B	Total/NA
Total HxCDD	48	q	8.0	0.13	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.83	J	8.0	0.038	pg/g	1	☼	1613B	Total/NA
Total HpCDD	190	B	8.0	0.92	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.23	J q	8.0	0.046	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-080221-BN-SJSB090 (10-12) (Continued) Lab Sample ID: 320-77214-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF - RA	7.5	B	1.6	0.13	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-080221-BN-SJSB090 (12-14) Lab Sample ID: 320-77214-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	5.5		1.4	0.084	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.22	J	6.8	0.087	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.86	J	6.8	0.047	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.39	J	6.8	0.047	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.55	J	6.8	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.81	J	6.8	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.8	J	6.8	0.10	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	4.8	J	6.8	0.057	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	1.1	J	6.8	0.058	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.17	J	6.8	0.041	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.092	J	6.8	0.044	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	36	B	6.8	0.44	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	1.9	J	6.8	0.050	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8,9-HpCDF	0.83	J	6.8	0.056	pg/g	1	☼	1613B	Total/NA
OCDD	890	B	14	0.69	pg/g	1	☼	1613B	Total/NA
OCDF	1.8	J B	14	0.045	pg/g	1	☼	1613B	Total/NA
Total TCDD	8.9	q	1.4	0.084	pg/g	1	☼	1613B	Total/NA
Total TCDF	29	B	1.4	0.094	pg/g	1	☼	1613B	Total/NA
Total PeCDD	4.1	J q	6.8	0.087	pg/g	1	☼	1613B	Total/NA
Total PeCDF	2.0	J q	6.8	0.047	pg/g	1	☼	1613B	Total/NA
Total HxCDD	26	q	6.8	0.11	pg/g	1	☼	1613B	Total/NA
Total HxCDF	6.5	J	6.8	0.050	pg/g	1	☼	1613B	Total/NA
Total HpCDD	110	B	6.8	0.44	pg/g	1	☼	1613B	Total/NA
Total HpCDF	3.3	J	6.8	0.053	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	16	B	1.4	0.19	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-080221-BN-SJSB090 (14-16) Lab Sample ID: 320-77214-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	2.3		1.4	0.066	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.28	J	7.0	0.041	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.18	J q	7.0	0.042	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.57	J	7.0	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.72	J	7.0	0.15	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	1.8	J	7.0	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.61	J	7.0	0.036	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.19	J	7.0	0.037	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.10	J	7.0	0.026	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	31	B	7.0	0.60	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.45	J	7.0	0.042	pg/g	1	☼	1613B	Total/NA
OCDD	780	B	14	0.66	pg/g	1	☼	1613B	Total/NA
OCDF	0.51	J B	14	0.037	pg/g	1	☼	1613B	Total/NA
Total TCDD	5.5	q	1.4	0.066	pg/g	1	☼	1613B	Total/NA
Total TCDF	14	q B	1.4	0.061	pg/g	1	☼	1613B	Total/NA
Total PeCDD	3.0	J q	7.0	0.075	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.79	J q	7.0	0.041	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-080221-BN-SJSB090 (14-16) (Continued) Lab Sample ID: 320-77214-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HxCDD	28		7.0	0.14	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.90	J	7.0	0.031	pg/g	1	☼	1613B	Total/NA
Total HpCDD	120	B	7.0	0.60	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.45	J	7.0	0.046	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	7.4	B	1.4	0.24	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-080221-BN-DUP-11 Lab Sample ID: 320-77214-13

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	1.9		1.3	0.070	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.19	J q	6.4	0.063	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.16	J	6.4	0.062	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.33	J	6.4	0.093	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.44	J	6.4	0.098	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.75	J	6.4	0.087	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.25	J	6.4	0.065	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.11	J	6.4	0.067	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.11	J	6.4	0.047	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	12	B	6.4	0.33	pg/g	1	☼	1613B	Total/NA
OCDD	280	B	13	0.30	pg/g	1	☼	1613B	Total/NA
OCDF	0.12	J q B	13	0.045	pg/g	1	☼	1613B	Total/NA
Total TCDD	2.8	q	1.3	0.070	pg/g	1	☼	1613B	Total/NA
Total TCDF	8.0	q B	1.3	0.064	pg/g	1	☼	1613B	Total/NA
Total PeCDD	1.3	J	6.4	0.089	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.35	J q	6.4	0.063	pg/g	1	☼	1613B	Total/NA
Total HxCDD	13	q	6.4	0.093	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.47	J	6.4	0.057	pg/g	1	☼	1613B	Total/NA
Total HpCDD	47	B	6.4	0.33	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	4.9	B	1.3	0.24	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-SJSB090 (0-2)

Lab Sample ID: 320-77214-1
Date Collected: 08/02/21 13:10
Matrix: Sediment
Date Received: 08/05/21 09:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	50.4		0.1	0.1	%			08/06/21 14:43	1
Percent Solids	49.6		0.1	0.1	%			08/06/21 14:43	1

Client Sample ID: 11215702-080221-BN-SJSB090 (0-2)

Lab Sample ID: 320-77214-1
Date Collected: 08/02/21 13:10
Matrix: Sediment
Date Received: 08/05/21 09:35
Percent Solids: 49.6

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDD	4.8	J	9.7	0.39	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
1,2,3,6,7,8-HxCDD	25		9.7	0.38	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
1,2,3,7,8,9-HxCDD	9.5	J	9.7	0.35	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
1,2,3,6,7,8-HxCDF	1800		9.7	9.0	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
1,2,3,7,8,9-HxCDF	110	q	9.7	8.5	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
2,3,4,6,7,8-HxCDF	200	G	9.8	9.8	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
1,2,3,4,6,7,8-HpCDD	360	B	9.7	4.5	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
1,2,3,4,6,7,8-HpCDF	2000		9.7	4.9	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
1,2,3,4,7,8,9-HpCDF	650		9.7	4.6	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
OCDD	5100	B	19	11	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
OCDF	820	B	19	0.51	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
Total HxCDD	180	q	9.7	0.37	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
Total HxCDF	9800	q	9.7	9.7	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
Total HpCDD	740	B	9.7	4.5	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1
Total HpCDF	3100		9.7	4.8	pg/g	☼	08/12/21 05:19	08/25/21 12:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,7,8-HxCDD	*52*		*32 - 141*	*08/12/21 05:19*	*08/25/21 12:50*	*1*
13C-1,2,3,6,7,8-HxCDD	*47*		*28 - 130*	*08/12/21 05:19*	*08/25/21 12:50*	*1*
13C-1,2,3,4,7,8-HxCDF	*66*		*26 - 152*	*08/12/21 05:19*	*08/25/21 12:50*	*1*
13C-1,2,3,6,7,8-HxCDF	*54*		*26 - 123*	*08/12/21 05:19*	*08/25/21 12:50*	*1*
13C-1,2,3,7,8,9-HxCDF	*48*		*29 - 147*	*08/12/21 05:19*	*08/25/21 12:50*	*1*
13C-2,3,4,6,7,8-HxCDF	*53*		*28 - 136*	*08/12/21 05:19*	*08/25/21 12:50*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*64*		*23 - 140*	*08/12/21 05:19*	*08/25/21 12:50*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*53*		*28 - 143*	*08/12/21 05:19*	*08/25/21 12:50*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*68*		*26 - 138*	*08/12/21 05:19*	*08/25/21 12:50*	*1*
13C-OCDD	*81*		*17 - 157*	*08/12/21 05:19*	*08/25/21 12:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*77*		*35 - 197*	*08/12/21 05:19*	*08/25/21 12:50*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	49000	E G	170	170	pg/g	☼	08/12/21 05:19	08/26/21 21:51	10
1,2,3,7,8-PeCDD	320		97	4.8	pg/g	☼	08/12/21 05:19	08/26/21 21:51	10
1,2,3,7,8-PeCDF	5000		97	26	pg/g	☼	08/12/21 05:19	08/26/21 21:51	10
2,3,4,7,8-PeCDF	2600		97	23	pg/g	☼	08/12/21 05:19	08/26/21 21:51	10
1,2,3,4,7,8-HxCDF	6800		97	21	pg/g	☼	08/12/21 05:19	08/26/21 21:51	10
Total TCDD	56000	G	170	170	pg/g	☼	08/12/21 05:19	08/26/21 21:51	10
Total TCDF	220000	G B	420	420	pg/g	☼	08/12/21 05:19	08/26/21 21:51	10
Total PeCDD	330		97	4.8	pg/g	☼	08/12/21 05:19	08/26/21 21:51	10
Total PeCDF	12000		97	25	pg/g	☼	08/12/21 05:19	08/26/21 21:51	10

Client Sample ID: 11215702-080221-BN-SJSB090 (0-2) Lab Sample ID: 320-77214-1

Date Collected: 08/02/21 13:10 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 49.6**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	38		25 - 164	08/12/21 05:19	08/26/21 21:51	10
13C-2,3,7,8-TCDF	53		24 - 169	08/12/21 05:19	08/26/21 21:51	10
13C-1,2,3,7,8-PeCDD	80		25 - 181	08/12/21 05:19	08/26/21 21:51	10
13C-1,2,3,7,8-PeCDF	66		24 - 185	08/12/21 05:19	08/26/21 21:51	10
13C-2,3,4,7,8-PeCDF	73		21 - 178	08/12/21 05:19	08/26/21 21:51	10
13C-1,2,3,4,7,8-HxCDF	65		26 - 152	08/12/21 05:19	08/26/21 21:51	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	111		35 - 197	08/12/21 05:19	08/26/21 21:51	10

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RADL

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	110000	G E B	140	140	pg/g	☼	08/12/21 05:19	09/01/21 14:37	10

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	52		24 - 169	08/12/21 05:19	09/01/21 14:37	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	124		35 - 197	08/12/21 05:19	09/01/21 14:37	10

Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) Lab Sample ID: 320-77214-2

Date Collected: 08/02/21 13:15 **Matrix: Sediment**
Date Received: 08/05/21 09:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23.9		0.1	0.1	%			08/06/21 14:43	1
Percent Solids	76.1		0.1	0.1	%			08/06/21 14:43	1

Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) Lab Sample ID: 320-77214-2

Date Collected: 08/02/21 13:15 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 76.0**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	5100	E G	19	19	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
1,2,3,7,8-PeCDD	35		6.4	0.58	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
1,2,3,7,8-PeCDF	410	F1	6.4	2.5	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
2,3,4,7,8-PeCDF	230	F1	6.4	2.2	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
1,2,3,4,7,8-HxCDD	0.84	J q	6.4	0.13	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
1,2,3,6,7,8-HxCDD	4.0	J	6.4	0.13	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
1,2,3,7,8,9-HxCDD	2.4	J	6.4	0.12	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
1,2,3,4,7,8-HxCDF	1000		6.4	5.3	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
1,2,3,6,7,8-HxCDF	240	F1	6.4	4.9	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
1,2,3,7,8,9-HxCDF	9.6		6.4	4.0	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
2,3,4,6,7,8-HxCDF	18		6.4	4.0	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
1,2,3,4,6,7,8-HpCDD	83	B	6.4	0.52	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
1,2,3,4,6,7,8-HpCDF	390	F1	6.4	2.0	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
1,2,3,4,7,8,9-HpCDF	130	F1	6.4	2.0	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
OCDD	1600	B	13	0.91	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
OCDF	170	F1 B	13	0.14	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
Total TCDD	5800	G	19	19	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
Total TCDF	25000	B G	46	46	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1

Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) Lab Sample ID: 320-77214-2

Date Collected: 08/02/21 13:15 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 76.0**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDD	39	q	6.4	0.58	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
Total PeCDF	1000		6.4	2.3	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
Total HxCDD	40	q	6.4	0.12	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
Total HxCDF	1400		6.4	4.5	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
Total HpCDD	190	B	6.4	0.52	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1
Total HpCDF	610		6.4	2.0	pg/g	☼	08/12/21 05:19	08/25/21 13:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*38*		*25 - 164*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-2,3,7,8-TCDF	*55*		*24 - 169*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-1,2,3,7,8-PeCDD	*86*		*25 - 181*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-1,2,3,7,8-PeCDF	*70*		*24 - 185*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-2,3,4,7,8-PeCDF	*78*		*21 - 178*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-1,2,3,4,7,8-HxCDD	*62*		*32 - 141*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-1,2,3,6,7,8-HxCDD	*55*		*28 - 130*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-1,2,3,4,7,8-HxCDF	*70*		*26 - 152*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-1,2,3,6,7,8-HxCDF	*60*		*26 - 123*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-1,2,3,7,8,9-HxCDF	*55*		*29 - 147*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-2,3,4,6,7,8-HxCDF	*58*		*28 - 136*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*54*		*23 - 140*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*46*		*28 - 143*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*57*		*26 - 138*	*08/12/21 05:19*	*08/25/21 13:35*	*1*
13C-OCDD	*61*		*17 - 157*	*08/12/21 05:19*	*08/25/21 13:35*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*60*		*35 - 197*	*08/12/21 05:19*	*08/25/21 13:35*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	12000	E B G	25	25	pg/g	☼	08/12/21 05:19	08/31/21 22:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*49*		*24 - 169*	*08/12/21 05:19*	*08/31/21 22:10*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*79*		*35 - 197*	*08/12/21 05:19*	*08/31/21 22:10*	*1*

Client Sample ID: 11215702-080221-BN-SJSB090 (4-6) Lab Sample ID: 320-77214-3

Date Collected: 08/02/21 13:20 **Matrix: Sediment**
Date Received: 08/05/21 09:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	29.8		0.1	0.1	%			08/06/21 14:43	1
Percent Solids	70.2		0.1	0.1	%			08/06/21 14:43	1

Client Sample ID: 11215702-080221-BN-SJSB090 (4-6) Lab Sample ID: 320-77214-3

Date Collected: 08/02/21 13:20 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 70.2**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	700	E G	1.8	1.8	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1

Client Sample ID: 11215702-080221-BN-SJSB090 (4-6) Lab Sample ID: 320-77214-3

Date Collected: 08/02/21 13:20 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 70.2**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8-PeCDD	5.3	J	7.0	0.16	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
1,2,3,7,8-PeCDF	57		7.0	0.40	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
2,3,4,7,8-PeCDF	34		7.0	0.39	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
1,2,3,4,7,8-HxCDD	0.68	J	7.0	0.083	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
1,2,3,6,7,8-HxCDD	1.5	J	7.0	0.089	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
1,2,3,7,8,9-HxCDD	2.6	J	7.0	0.078	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
1,2,3,4,7,8-HxCDF	73		7.0	0.30	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
1,2,3,6,7,8-HxCDF	18		7.0	0.30	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
1,2,3,7,8,9-HxCDF	1.4	J	7.0	0.22	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
2,3,4,6,7,8-HxCDF	2.1	J	7.0	0.22	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
1,2,3,4,6,7,8-HpCDD	54	B	7.0	0.45	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
1,2,3,4,6,7,8-HpCDF	20		7.0	0.16	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
1,2,3,4,7,8,9-HpCDF	7.4		7.0	0.18	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
OCDD	850	B	14	0.68	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
OCDF	11	J B	14	0.072	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
Total TCDD	780	q G	1.8	1.8	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
Total TCDF	3600	B G	6.0	6.0	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
Total PeCDD	8.5	q	7.0	0.16	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
Total PeCDF	140	q	7.0	0.40	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
Total HxCDD	26		7.0	0.084	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
Total HxCDF	100		7.0	0.26	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
Total HpCDD	120	B	7.0	0.45	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1
Total HpCDF	36		7.0	0.17	pg/g	☼	08/12/21 05:19	08/25/21 15:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*51*		*25 - 164*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-2,3,7,8-TCDF	*54*		*24 - 169*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-1,2,3,7,8-PeCDD	*62*		*25 - 181*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-1,2,3,7,8-PeCDF	*58*		*24 - 185*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-2,3,4,7,8-PeCDF	*64*		*21 - 178*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-1,2,3,4,7,8-HxCDD	*64*		*32 - 141*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-1,2,3,6,7,8-HxCDD	*53*		*28 - 130*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-1,2,3,4,7,8-HxCDF	*63*		*26 - 152*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-1,2,3,6,7,8-HxCDF	*54*		*26 - 123*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-1,2,3,7,8,9-HxCDF	*55*		*29 - 147*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-2,3,4,6,7,8-HxCDF	*55*		*28 - 136*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*53*		*23 - 140*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*49*		*28 - 143*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*57*		*26 - 138*	*08/12/21 05:19*	*08/25/21 15:50*	*1*
13C-OCDD	*58*		*17 - 157*	*08/12/21 05:19*	*08/25/21 15:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*71*		*35 - 197*	*08/12/21 05:19*	*08/25/21 15:50*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	2000	E G B	1.9	1.9	pg/g	☼	08/12/21 05:19	08/28/21 01:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*64*		*24 - 169*	*08/12/21 05:19*	*08/28/21 01:13*	*1*

Client Sample ID: 11215702-080221-BN-SJSB090 (4-6) Lab Sample ID: 320-77214-3

Date Collected: 08/02/21 13:20 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 70.2**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	79		35 - 197	08/12/21 05:19	08/28/21 01:13	1

Client Sample ID: 11215702-080221-BN-SJSB090 (6-8) Lab Sample ID: 320-77214-4

Date Collected: 08/02/21 13:25 **Matrix: Sediment**
Date Received: 08/05/21 09:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	30.9		0.1	0.1	%			08/06/21 14:43	1
Percent Solids	69.1		0.1	0.1	%			08/06/21 14:43	1

Client Sample ID: 11215702-080221-BN-SJSB090 (6-8) Lab Sample ID: 320-77214-4

Date Collected: 08/02/21 13:25 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 69.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	4.5		1.4	0.43	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
1,2,3,7,8-PeCDD	ND		7.2	0.38	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
1,2,3,7,8-PeCDF	0.71	J	7.2	0.26	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
2,3,4,7,8-PeCDF	ND		7.2	0.27	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
1,2,3,4,7,8-HxCDD	0.55	J	7.2	0.28	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
1,2,3,6,7,8-HxCDD	0.39	J q	7.2	0.30	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
1,2,3,7,8,9-HxCDD	ND		7.2	0.27	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
1,2,3,4,7,8-HxCDF	0.88	J	7.2	0.20	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
1,2,3,6,7,8-HxCDF	ND		7.2	0.21	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
1,2,3,7,8,9-HxCDF	ND		7.2	0.14	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
2,3,4,6,7,8-HxCDF	ND		7.2	0.15	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
1,2,3,4,6,7,8-HpCDD	11	B	7.2	0.24	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
1,2,3,4,6,7,8-HpCDF	ND		7.2	0.22	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
1,2,3,4,7,8,9-HpCDF	ND		7.2	0.25	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
OCDD	250	B	14	0.44	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
OCDF	0.52	J B	14	0.21	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
Total TCDD	4.5		1.4	0.43	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
Total TCDF	23	B q	1.4	0.47	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
Total PeCDD	ND		7.2	0.38	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
Total PeCDF	0.71	J	7.2	0.27	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
Total HxCDD	7.1	J q	7.2	0.28	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
Total HxCDF	0.88	J	7.2	0.18	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
Total HpCDD	36	B	7.2	0.24	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1
Total HpCDF	ND		7.2	0.25	pg/g	☼	08/12/21 05:19	08/25/21 16:35	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	54		25 - 164	08/12/21 05:19	08/25/21 16:35	1
13C-2,3,7,8-TCDF	50		24 - 169	08/12/21 05:19	08/25/21 16:35	1
13C-1,2,3,7,8-PeCDD	54		25 - 181	08/12/21 05:19	08/25/21 16:35	1
13C-1,2,3,7,8-PeCDF	52		24 - 185	08/12/21 05:19	08/25/21 16:35	1
13C-2,3,4,7,8-PeCDF	57		21 - 178	08/12/21 05:19	08/25/21 16:35	1
13C-1,2,3,4,7,8-HxCDD	56		32 - 141	08/12/21 05:19	08/25/21 16:35	1
13C-1,2,3,6,7,8-HxCDD	48		28 - 130	08/12/21 05:19	08/25/21 16:35	1
13C-1,2,3,4,7,8-HxCDF	55		26 - 152	08/12/21 05:19	08/25/21 16:35	1
13C-1,2,3,6,7,8-HxCDF	49		26 - 123	08/12/21 05:19	08/25/21 16:35	1

Client Sample ID: 11215702-080221-BN-SJSB090 (6-8) Lab Sample ID: 320-77214-4

Date Collected: 08/02/21 13:25 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 69.1**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	51		29 - 147	08/12/21 05:19	08/25/21 16:35	1
13C-2,3,4,6,7,8-HxCDF	50		28 - 136	08/12/21 05:19	08/25/21 16:35	1
13C-1,2,3,4,6,7,8-HpCDD	50		23 - 140	08/12/21 05:19	08/25/21 16:35	1
13C-1,2,3,4,6,7,8-HpCDF	48		28 - 143	08/12/21 05:19	08/25/21 16:35	1
13C-1,2,3,4,7,8,9-HpCDF	55		26 - 138	08/12/21 05:19	08/25/21 16:35	1
13C-OCDD	56		17 - 157	08/12/21 05:19	08/25/21 16:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	71		35 - 197	08/12/21 05:19	08/25/21 16:35	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	12	B	1.4	0.23	pg/g	☼	08/12/21 05:19	08/27/21 23:18	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	54		24 - 169	08/12/21 05:19	08/27/21 23:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	75		35 - 197	08/12/21 05:19	08/27/21 23:18	1

Client Sample ID: 11215702-080221-BN-SJSB090 (8-10) Lab Sample ID: 320-77214-5

Date Collected: 08/02/21 13:30 **Matrix: Sediment**
Date Received: 08/05/21 09:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22.4		0.1	0.1	%			08/06/21 14:43	1
Percent Solids	77.6		0.1	0.1	%			08/06/21 14:43	1

Client Sample ID: 11215702-080221-BN-SJSB090 (8-10) Lab Sample ID: 320-77214-5

Date Collected: 08/02/21 13:30 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 77.6**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	190		1.3	0.50	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
1,2,3,7,8-PeCDD	1.7	J	6.4	0.091	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
1,2,3,7,8-PeCDF	29		6.4	0.18	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
2,3,4,7,8-PeCDF	15		6.4	0.18	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
1,2,3,4,7,8-HxCDD	0.49	J	6.4	0.068	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
1,2,3,6,7,8-HxCDD	0.75	J	6.4	0.074	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
1,2,3,7,8,9-HxCDD	1.5	J	6.4	0.065	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
1,2,3,4,7,8-HxCDF	31		6.4	0.12	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
1,2,3,6,7,8-HxCDF	8.2		6.4	0.12	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
1,2,3,7,8,9-HxCDF	0.66	J	6.4	0.084	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
2,3,4,6,7,8-HxCDF	1.0	J	6.4	0.089	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
1,2,3,4,6,7,8-HpCDD	28	B	6.4	0.30	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
1,2,3,4,6,7,8-HpCDF	7.8		6.4	0.062	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
1,2,3,4,7,8,9-HpCDF	2.8	J	6.4	0.069	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
OCDD	630	B	13	0.42	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
OCDF	3.3	J B	13	0.039	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
Total TCDD	210	q	1.3	0.50	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1

Client Sample ID: 11215702-080221-BN-SJSB090 (8-10) Lab Sample ID: 320-77214-5

Date Collected: 08/02/21 13:30 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 77.6**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	1100	B G	1.7	1.7	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
Total PeCDD	3.7	J q	6.4	0.091	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
Total PeCDF	70	q	6.4	0.18	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
Total HxCDD	16		6.4	0.069	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
Total HxCDF	45		6.4	0.10	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
Total HpCDD	73	B	6.4	0.30	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1
Total HpCDF	13		6.4	0.065	pg/g	☼	08/12/21 05:19	08/25/21 17:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*56*		*25 - 164*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-2,3,7,8-TCDF	*53*		*24 - 169*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-1,2,3,7,8-PeCDD	*57*		*25 - 181*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-1,2,3,7,8-PeCDF	*55*		*24 - 185*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-2,3,4,7,8-PeCDF	*59*		*21 - 178*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-1,2,3,4,7,8-HxCDD	*65*		*32 - 141*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-1,2,3,6,7,8-HxCDD	*53*		*28 - 130*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-1,2,3,4,7,8-HxCDF	*64*		*26 - 152*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-1,2,3,6,7,8-HxCDF	*54*		*26 - 123*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-1,2,3,7,8,9-HxCDF	*55*		*29 - 147*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-2,3,4,6,7,8-HxCDF	*55*		*28 - 136*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*55*		*23 - 140*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*50*		*28 - 143*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*57*		*26 - 138*	*08/12/21 05:19*	*08/25/21 17:20*	*1*
13C-OCDD	*59*		*17 - 157*	*08/12/21 05:19*	*08/25/21 17:20*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*72*		*35 - 197*	*08/12/21 05:19*	*08/25/21 17:20*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	620	E B	1.3	0.70	pg/g	☼	08/12/21 05:19	08/28/21 00:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*60*		*24 - 169*	*08/12/21 05:19*	*08/28/21 00:35*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*76*		*35 - 197*	*08/12/21 05:19*	*08/28/21 00:35*	*1*

Client Sample ID: 11215702-080221-BN-SJSB090 (10-12) Lab Sample ID: 320-77214-6

Date Collected: 08/02/21 13:35 **Matrix: Sediment**
Date Received: 08/05/21 09:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	37.1		0.1	0.1	%			08/06/21 14:43	1
Percent Solids	62.9		0.1	0.1	%			08/06/21 14:43	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-SJSB090 (10-12)

Lab Sample ID: 320-77214-6
Date Collected: 08/02/21 13:35
Matrix: Sediment
Date Received: 08/05/21 09:35
Percent Solids: 62.9

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	2.5		1.6	0.088	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
1,2,3,7,8-PeCDD	0.31	J	8.0	0.11	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
1,2,3,7,8-PeCDF	0.51	J	8.0	0.055	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
2,3,4,7,8-PeCDF	0.19	J q	8.0	0.055	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
1,2,3,4,7,8-HxCDD	0.76	J	8.0	0.13	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
1,2,3,6,7,8-HxCDD	1.3	J	8.0	0.14	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
1,2,3,7,8,9-HxCDD	3.2	J	8.0	0.12	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
1,2,3,4,7,8-HxCDF	0.54	J	8.0	0.043	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
1,2,3,6,7,8-HxCDF	0.14	J	8.0	0.045	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
1,2,3,7,8,9-HxCDF	0.14	J	8.0	0.031	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
2,3,4,6,7,8-HxCDF	ND		8.0	0.033	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
1,2,3,4,6,7,8-HpCDD	59	B	8.0	0.92	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
1,2,3,4,6,7,8-HpCDF	0.23	J q	8.0	0.044	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
1,2,3,4,7,8,9-HpCDF	ND		8.0	0.049	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
OCDD	1400	B	16	1.1	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
OCDF	0.28	J B q	16	0.044	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
Total TCDD	8.6	q	1.6	0.088	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
Total TCDF	14	B q	1.6	0.087	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
Total PeCDD	7.3	J q	8.0	0.11	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
Total PeCDF	0.92	J q	8.0	0.055	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
Total HxCDD	48	q	8.0	0.13	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
Total HxCDF	0.83	J	8.0	0.038	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
Total HpCDD	190	B	8.0	0.92	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1
Total HpCDF	0.23	J q	8.0	0.046	pg/g	☼	08/12/21 05:19	08/25/21 18:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*55*		*25 - 164*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-2,3,7,8-TCDF	*52*		*24 - 169*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-1,2,3,7,8-PeCDD	*55*		*25 - 181*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-1,2,3,7,8-PeCDF	*52*		*24 - 185*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-2,3,4,7,8-PeCDF	*58*		*21 - 178*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-1,2,3,4,7,8-HxCDD	*63*		*32 - 141*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-1,2,3,6,7,8-HxCDD	*51*		*28 - 130*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-1,2,3,4,7,8-HxCDF	*61*		*26 - 152*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-1,2,3,6,7,8-HxCDF	*52*		*26 - 123*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-1,2,3,7,8,9-HxCDF	*53*		*29 - 147*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-2,3,4,6,7,8-HxCDF	*53*		*28 - 136*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*52*		*23 - 140*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*48*		*28 - 143*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*56*		*26 - 138*	*08/12/21 05:19*	*08/25/21 18:05*	*1*
13C-OCDD	*56*		*17 - 157*	*08/12/21 05:19*	*08/25/21 18:05*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*70*		*35 - 197*	*08/12/21 05:19*	*08/25/21 18:05*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	7.5	B	1.6	0.13	pg/g	☼	08/12/21 05:19	08/27/21 22:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*61*		*24 - 169*	*08/12/21 05:19*	*08/27/21 22:01*	*1*

Client Sample ID: 11215702-080221-BN-SJSB090 (10-12) Lab Sample ID: 320-77214-6

Date Collected: 08/02/21 13:35 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 62.9**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	77		35 - 197	08/12/21 05:19	08/27/21 22:01	1

Client Sample ID: 11215702-080221-BN-SJSB090 (12-14) Lab Sample ID: 320-77214-7

Date Collected: 08/02/21 13:40 **Matrix: Sediment**
Date Received: 08/05/21 09:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26.5		0.1	0.1	%			08/06/21 14:43	1
Percent Solids	73.5		0.1	0.1	%			08/06/21 14:43	1

Client Sample ID: 11215702-080221-BN-SJSB090 (12-14) Lab Sample ID: 320-77214-7

Date Collected: 08/02/21 13:40 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 73.5**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	5.5		1.4	0.084	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
1,2,3,7,8-PeCDD	0.22	J	6.8	0.087	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
1,2,3,7,8-PeCDF	0.86	J	6.8	0.047	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
2,3,4,7,8-PeCDF	0.39	J	6.8	0.047	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
1,2,3,4,7,8-HxCDD	0.55	J	6.8	0.11	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
1,2,3,6,7,8-HxCDD	0.81	J	6.8	0.11	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
1,2,3,7,8,9-HxCDD	1.8	J	6.8	0.10	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
1,2,3,4,7,8-HxCDF	4.8	J	6.8	0.057	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
1,2,3,6,7,8-HxCDF	1.1	J	6.8	0.058	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
1,2,3,7,8,9-HxCDF	0.17	J	6.8	0.041	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
2,3,4,6,7,8-HxCDF	0.092	J	6.8	0.044	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
1,2,3,4,6,7,8-HpCDD	36	B	6.8	0.44	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
1,2,3,4,6,7,8-HpCDF	1.9	J	6.8	0.050	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
1,2,3,4,7,8,9-HpCDF	0.83	J	6.8	0.056	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
OCDD	890	B	14	0.69	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
OCDF	1.8	J B	14	0.045	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
Total TCDD	8.9	q	1.4	0.084	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
Total TCDF	29	B	1.4	0.094	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
Total PeCDD	4.1	J q	6.8	0.087	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
Total PeCDF	2.0	J q	6.8	0.047	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
Total HxCDD	26	q	6.8	0.11	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
Total HxCDF	6.5	J	6.8	0.050	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
Total HpCDD	110	B	6.8	0.44	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1
Total HpCDF	3.3	J	6.8	0.053	pg/g	☼	08/12/21 05:19	08/25/21 18:50	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	52		25 - 164	08/12/21 05:19	08/25/21 18:50	1
13C-2,3,7,8-TCDF	49		24 - 169	08/12/21 05:19	08/25/21 18:50	1
13C-1,2,3,7,8-PeCDD	52		25 - 181	08/12/21 05:19	08/25/21 18:50	1
13C-1,2,3,7,8-PeCDF	50		24 - 185	08/12/21 05:19	08/25/21 18:50	1
13C-2,3,4,7,8-PeCDF	54		21 - 178	08/12/21 05:19	08/25/21 18:50	1
13C-1,2,3,4,7,8-HxCDD	58		32 - 141	08/12/21 05:19	08/25/21 18:50	1
13C-1,2,3,6,7,8-HxCDD	48		28 - 130	08/12/21 05:19	08/25/21 18:50	1
13C-1,2,3,4,7,8-HxCDF	58		26 - 152	08/12/21 05:19	08/25/21 18:50	1
13C-1,2,3,6,7,8-HxCDF	50		26 - 123	08/12/21 05:19	08/25/21 18:50	1

Client Sample ID: 11215702-080221-BN-SJSB090 (12-14) Lab Sample ID: 320-77214-7

Date Collected: 08/02/21 13:40 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 73.5**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8,9-HxCDF	50		29 - 147	08/12/21 05:19	08/25/21 18:50	1
13C-2,3,4,6,7,8-HxCDF	50		28 - 136	08/12/21 05:19	08/25/21 18:50	1
13C-1,2,3,4,6,7,8-HpCDD	49		23 - 140	08/12/21 05:19	08/25/21 18:50	1
13C-1,2,3,4,6,7,8-HpCDF	45		28 - 143	08/12/21 05:19	08/25/21 18:50	1
13C-1,2,3,4,7,8,9-HpCDF	52		26 - 138	08/12/21 05:19	08/25/21 18:50	1
13C-OCDD	52		17 - 157	08/12/21 05:19	08/25/21 18:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	69		35 - 197	08/12/21 05:19	08/25/21 18:50	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	16	B	1.4	0.19	pg/g	☼	08/12/21 05:19	08/27/21 23:56	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	57		24 - 169	08/12/21 05:19	08/27/21 23:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	77		35 - 197	08/12/21 05:19	08/27/21 23:56	1

Client Sample ID: 11215702-080221-BN-SJSB090 (14-16) Lab Sample ID: 320-77214-8

Date Collected: 08/02/21 13:45 **Matrix: Sediment**
Date Received: 08/05/21 09:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	31.7		0.1	0.1	%			08/06/21 14:43	1
Percent Solids	68.3		0.1	0.1	%			08/06/21 14:43	1

Client Sample ID: 11215702-080221-BN-SJSB090 (14-16) Lab Sample ID: 320-77214-8

Date Collected: 08/02/21 13:45 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 68.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	2.3		1.4	0.066	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
1,2,3,7,8-PeCDD	ND		7.0	0.075	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
1,2,3,7,8-PeCDF	0.28	J	7.0	0.041	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
2,3,4,7,8-PeCDF	0.18	J q	7.0	0.042	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
1,2,3,4,7,8-HxCDD	0.57	J	7.0	0.14	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
1,2,3,6,7,8-HxCDD	0.72	J	7.0	0.15	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
1,2,3,7,8,9-HxCDD	1.8	J	7.0	0.13	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
1,2,3,4,7,8-HxCDF	0.61	J	7.0	0.036	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
1,2,3,6,7,8-HxCDF	0.19	J	7.0	0.037	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
1,2,3,7,8,9-HxCDF	0.10	J	7.0	0.026	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
2,3,4,6,7,8-HxCDF	ND		7.0	0.027	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
1,2,3,4,6,7,8-HpCDD	31	B	7.0	0.60	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
1,2,3,4,6,7,8-HpCDF	0.45	J	7.0	0.042	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
1,2,3,4,7,8,9-HpCDF	ND		7.0	0.050	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
OCDD	780	B	14	0.66	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
OCDF	0.51	J B	14	0.037	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
Total TCDD	5.5	q	1.4	0.066	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1

Client Sample ID: 11215702-080221-BN-SJSB090 (14-16) Lab Sample ID: 320-77214-8

Date Collected: 08/02/21 13:45 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 68.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	14	q B	1.4	0.061	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
Total PeCDD	3.0	J q	7.0	0.075	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
Total PeCDF	0.79	J q	7.0	0.041	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
Total HxCDD	28		7.0	0.14	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
Total HxCDF	0.90	J	7.0	0.031	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
Total HpCDD	120	B	7.0	0.60	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1
Total HpCDF	0.45	J	7.0	0.046	pg/g	☼	08/12/21 05:19	08/25/21 23:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*58*		*25 - 164*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-2,3,7,8-TCDF	*55*		*24 - 169*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-1,2,3,7,8-PeCDD	*57*		*25 - 181*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-1,2,3,7,8-PeCDF	*55*		*24 - 185*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-2,3,4,7,8-PeCDF	*60*		*21 - 178*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-1,2,3,4,7,8-HxCDD	*65*		*32 - 141*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-1,2,3,6,7,8-HxCDD	*56*		*28 - 130*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-1,2,3,4,7,8-HxCDF	*66*		*26 - 152*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-1,2,3,6,7,8-HxCDF	*56*		*26 - 123*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-1,2,3,7,8,9-HxCDF	*56*		*29 - 147*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-2,3,4,6,7,8-HxCDF	*57*		*28 - 136*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*55*		*23 - 140*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*52*		*28 - 143*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*59*		*26 - 138*	*08/12/21 05:19*	*08/25/21 23:05*	*1*
13C-OCDD	*59*		*17 - 157*	*08/12/21 05:19*	*08/25/21 23:05*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*67*		*35 - 197*	*08/12/21 05:19*	*08/25/21 23:05*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	7.4	B	1.4	0.24	pg/g	☼	08/12/21 05:19	08/27/21 22:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*61*		*24 - 169*	*08/12/21 05:19*	*08/27/21 22:40*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*73*		*35 - 197*	*08/12/21 05:19*	*08/27/21 22:40*	*1*

Client Sample ID: 11215702-080221-BN-DUP-11 Lab Sample ID: 320-77214-13

Date Collected: 08/02/21 00:00 **Matrix: Sediment**
Date Received: 08/05/21 09:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22.8		0.1	0.1	%			08/06/21 14:43	1
Percent Solids	77.2		0.1	0.1	%			08/06/21 14:43	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-DUP-11

Date Collected: 08/02/21 00:00
Date Received: 08/05/21 09:35

Lab Sample ID: 320-77214-13

Matrix: Sediment
Percent Solids: 77.2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**1.9**		1.3	0.070	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
1,2,3,7,8-PeCDD	ND		6.4	0.089	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
1,2,3,7,8-PeCDF	**0.19**	**J q**	6.4	0.063	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
2,3,4,7,8-PeCDF	**0.16**	**J**	6.4	0.062	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
1,2,3,4,7,8-HxCDD	**0.33**	**J**	6.4	0.093	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
1,2,3,6,7,8-HxCDD	**0.44**	**J**	6.4	0.098	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
1,2,3,7,8,9-HxCDD	**0.75**	**J**	6.4	0.087	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
1,2,3,4,7,8-HxCDF	**0.25**	**J**	6.4	0.065	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
1,2,3,6,7,8-HxCDF	**0.11**	**J**	6.4	0.067	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
1,2,3,7,8,9-HxCDF	**0.11**	**J**	6.4	0.047	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
2,3,4,6,7,8-HxCDF	ND		6.4	0.048	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
1,2,3,4,6,7,8-HpCDD	**12**	**B**	6.4	0.33	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
1,2,3,4,6,7,8-HpCDF	ND		6.4	0.057	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
1,2,3,4,7,8,9-HpCDF	ND		6.4	0.062	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
OCDD	**280**	**B**	13	0.30	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
OCDF	**0.12**	**J q B**	13	0.045	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
Total TCDD	**2.8**	**q**	1.3	0.070	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
Total TCDF	**8.0**	**q B**	1.3	0.064	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
Total PeCDD	**1.3**	**J**	6.4	0.089	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
Total PeCDF	**0.35**	**J q**	6.4	0.063	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
Total HxCDD	**13**	**q**	6.4	0.093	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
Total HxCDF	**0.47**	**J**	6.4	0.057	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
Total HpCDD	**47**	**B**	6.4	0.33	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1
Total HpCDF	ND		6.4	0.062	pg/g	☼	08/12/21 05:19	08/26/21 00:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*57*		*25 - 164*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-2,3,7,8-TCDF	*55*		*24 - 169*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-1,2,3,7,8-PeCDD	*57*		*25 - 181*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-1,2,3,7,8-PeCDF	*55*		*24 - 185*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-2,3,4,7,8-PeCDF	*60*		*21 - 178*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-1,2,3,4,7,8-HxCDD	*62*		*32 - 141*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-1,2,3,6,7,8-HxCDD	*52*		*28 - 130*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-1,2,3,4,7,8-HxCDF	*62*		*26 - 152*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-1,2,3,6,7,8-HxCDF	*52*		*26 - 123*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-1,2,3,7,8,9-HxCDF	*55*		*29 - 147*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-2,3,4,6,7,8-HxCDF	*54*		*28 - 136*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*56*		*23 - 140*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*52*		*28 - 143*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*60*		*26 - 138*	*08/12/21 05:19*	*08/26/21 00:35*	*1*
13C-OCDD	*60*		*17 - 157*	*08/12/21 05:19*	*08/26/21 00:35*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*76*		*35 - 197*	*08/12/21 05:19*	*08/26/21 00:35*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**4.9**	**B**	1.3	0.24	pg/g	☼	08/12/21 05:19	08/27/21 21:23	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*61*		*24 - 169*	*08/12/21 05:19*	*08/27/21 21:23*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-DUP-11

Date Collected: 08/02/21 00:00
Date Received: 08/05/21 09:35

Lab Sample ID: 320-77214-13

Matrix: Sediment
Percent Solids: 77.2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	80		35 - 197	08/12/21 05:19	08/27/21 21:23	1

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-SJSB090 (0-2) — Lab Sample ID: 320-77214-1

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,7,8-HxCDD	4.8	J	9.7	0.39	pg/g	0.1	0.48	1613B
1,2,3,6,7,8-HxCDD	25		9.7	0.38	pg/g	0.1	2.5	1613B
1,2,3,7,8,9-HxCDD	9.5	J	9.7	0.35	pg/g	0.1	0.95	1613B
1,2,3,6,7,8-HxCDF	1800		9.7	9.0	pg/g	0.1	180	1613B
1,2,3,7,8,9-HxCDF	110	q	9.7	8.5	pg/g	0.1	11	1613B
2,3,4,6,7,8-HxCDF	200	G	9.8	9.8	pg/g	0.1	20	1613B
1,2,3,4,6,7,8-HpCDD	360	B	9.7	4.5	pg/g	0.01	3.6	1613B
1,2,3,4,6,7,8-HpCDF	2000		9.7	4.9	pg/g	0.01	20	1613B
1,2,3,4,7,8,9-HpCDF	650		9.7	4.6	pg/g	0.01	6.5	1613B
OCDD	5100	B	19	11	pg/g	0.0003	1.5	1613B
OCDF	820	B	19	0.51	pg/g	0.0003	0.25	1613B
2,3,7,8-TCDD - DL	49000	E G	170	170	pg/g	1	49000	1613B
1,2,3,7,8-PeCDD - DL	320		97	4.8	pg/g	1	320	1613B
1,2,3,7,8-PeCDF - DL	5000		97	26	pg/g	0.03	150	1613B
2,3,4,7,8-PeCDF - DL	2600		97	23	pg/g	0.3	780	1613B
1,2,3,4,7,8-HxCDF - DL	6800		97	21	pg/g	0.1	680	1613B
2,3,7,8-TCDF - RADL	110000	G E B	140	140	pg/g	0.1	11000	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		62000	TEQ

Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) — Lab Sample ID: 320-77214-2

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	5100	E G	19	19	pg/g	1	5100	1613B
1,2,3,7,8-PeCDD	35		6.4	0.58	pg/g	1	35	1613B
1,2,3,7,8-PeCDF	410	F1	6.4	2.5	pg/g	0.03	12	1613B
2,3,4,7,8-PeCDF	230	F1	6.4	2.2	pg/g	0.3	69	1613B
1,2,3,4,7,8-HxCDD	0.84	J q	6.4	0.13	pg/g	0.1	0.084	1613B
1,2,3,6,7,8-HxCDD	4.0	J	6.4	0.13	pg/g	0.1	0.40	1613B
1,2,3,7,8,9-HxCDD	2.4	J	6.4	0.12	pg/g	0.1	0.24	1613B
1,2,3,4,7,8-HxCDF	1000		6.4	5.3	pg/g	0.1	100	1613B
1,2,3,6,7,8-HxCDF	240	F1	6.4	4.9	pg/g	0.1	24	1613B
1,2,3,7,8,9-HxCDF	9.6		6.4	4.0	pg/g	0.1	0.96	1613B
2,3,4,6,7,8-HxCDF	18		6.4	4.0	pg/g	0.1	1.8	1613B
1,2,3,4,6,7,8-HpCDD	83	B	6.4	0.52	pg/g	0.01	0.83	1613B
1,2,3,4,6,7,8-HpCDF	390	F1	6.4	2.0	pg/g	0.01	3.9	1613B
1,2,3,4,7,8,9-HpCDF	130	F1	6.4	2.0	pg/g	0.01	1.3	1613B
OCDD	1600	B	13	0.91	pg/g	0.0003	0.48	1613B
OCDF	170	F1 B	13	0.14	pg/g	0.0003	0.051	1613B
2,3,7,8-TCDF - RA	12000	E B G	25	25	pg/g	0.1	1200	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) (Continued) — Lab Sample ID: 320-77214-2

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		6600	TEQ

Client Sample ID: 11215702-080221-BN-SJSB090 (4-6) — Lab Sample ID: 320-77214-3

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**700**	**E G**	1.8	1.8	pg/g	1	**700**	1613B
1,2,3,7,8-PeCDD	**5.3**	**J**	7.0	0.16	pg/g	1	**5.3**	1613B
1,2,3,7,8-PeCDF	**57**		7.0	0.40	pg/g	0.03	**1.7**	1613B
2,3,4,7,8-PeCDF	**34**		7.0	0.39	pg/g	0.3	**10**	1613B
1,2,3,4,7,8-HxCDD	**0.68**	**J**	7.0	0.083	pg/g	0.1	**0.068**	1613B
1,2,3,6,7,8-HxCDD	**1.5**	**J**	7.0	0.089	pg/g	0.1	**0.15**	1613B
1,2,3,7,8,9-HxCDD	**2.6**	**J**	7.0	0.078	pg/g	0.1	**0.26**	1613B
1,2,3,4,7,8-HxCDF	**73**		7.0	0.30	pg/g	0.1	**7.3**	1613B
1,2,3,6,7,8-HxCDF	**18**		7.0	0.30	pg/g	0.1	**1.8**	1613B
1,2,3,7,8,9-HxCDF	**1.4**	**J**	7.0	0.22	pg/g	0.1	**0.14**	1613B
2,3,4,6,7,8-HxCDF	**2.1**	**J**	7.0	0.22	pg/g	0.1	**0.21**	1613B
1,2,3,4,6,7,8-HpCDD	**54**	**B**	7.0	0.45	pg/g	0.01	**0.54**	1613B
1,2,3,4,6,7,8-HpCDF	**20**		7.0	0.16	pg/g	0.01	**0.20**	1613B
1,2,3,4,7,8,9-HpCDF	**7.4**		7.0	0.18	pg/g	0.01	**0.074**	1613B
OCDD	**850**	**B**	14	0.68	pg/g	0.0003	**0.26**	1613B
OCDF	**11**	**J B**	14	0.072	pg/g	0.0003	**0.0033**	1613B
2,3,7,8-TCDF - RA	**2000**	**E G B**	1.9	1.9	pg/g	0.1	**200**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		930	TEQ

Client Sample ID: 11215702-080221-BN-SJSB090 (6-8) — Lab Sample ID: 320-77214-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**4.5**		1.4	0.43	pg/g	1	**4.5**	1613B
1,2,3,7,8-PeCDD	ND		7.2	0.38	pg/g	1	0.19	1613B
1,2,3,7,8-PeCDF	**0.71**	**J**	7.2	0.26	pg/g	0.03	**0.021**	1613B
2,3,4,7,8-PeCDF	ND		7.2	0.27	pg/g	0.3	0.041	1613B
1,2,3,4,7,8-HxCDD	**0.55**	**J**	7.2	0.28	pg/g	0.1	**0.055**	1613B
1,2,3,6,7,8-HxCDD	**0.39**	**J q**	7.2	0.30	pg/g	0.1	**0.039**	1613B
1,2,3,7,8,9-HxCDD	ND		7.2	0.27	pg/g	0.1	0.014	1613B
1,2,3,4,7,8-HxCDF	**0.88**	**J**	7.2	0.20	pg/g	0.1	**0.088**	1613B
1,2,3,6,7,8-HxCDF	ND		7.2	0.21	pg/g	0.1	0.011	1613B
1,2,3,7,8,9-HxCDF	ND		7.2	0.14	pg/g	0.1	0.0070	1613B
2,3,4,6,7,8-HxCDF	ND		7.2	0.15	pg/g	0.1	0.0075	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-SJSB090 (6-8) (Continued) — Lab Sample ID: 320-77214-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDD	11	B	7.2	0.24	pg/g	0.01	0.11	1613B
1,2,3,4,6,7,8-HpCDF	ND		7.2	0.22	pg/g	0.01	0.0011	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.2	0.25	pg/g	0.01	0.0013	1613B
OCDD	250	B	14	0.44	pg/g	0.0003	0.075	1613B
OCDF	0.52	J B	14	0.21	pg/g	0.0003	0.00016	1613B
2,3,7,8-TCDF - RA	12	B	1.4	0.23	pg/g	0.1	1.2	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		6.4	TEQ

Client Sample ID: 11215702-080221-BN-SJSB090 (8-10) — Lab Sample ID: 320-77214-5

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	190		1.3	0.50	pg/g	1	190	1613B
1,2,3,7,8-PeCDD	1.7	J	6.4	0.091	pg/g	1	1.7	1613B
1,2,3,7,8-PeCDF	29		6.4	0.18	pg/g	0.03	0.87	1613B
2,3,4,7,8-PeCDF	15		6.4	0.18	pg/g	0.3	4.5	1613B
1,2,3,4,7,8-HxCDD	0.49	J	6.4	0.068	pg/g	0.1	0.049	1613B
1,2,3,6,7,8-HxCDD	0.75	J	6.4	0.074	pg/g	0.1	0.075	1613B
1,2,3,7,8,9-HxCDD	1.5	J	6.4	0.065	pg/g	0.1	0.15	1613B
1,2,3,4,7,8-HxCDF	31		6.4	0.12	pg/g	0.1	3.1	1613B
1,2,3,6,7,8-HxCDF	8.2		6.4	0.12	pg/g	0.1	0.82	1613B
1,2,3,7,8,9-HxCDF	0.66	J	6.4	0.084	pg/g	0.1	0.066	1613B
2,3,4,6,7,8-HxCDF	1.0	J	6.4	0.089	pg/g	0.1	0.10	1613B
1,2,3,4,6,7,8-HpCDD	28	B	6.4	0.30	pg/g	0.01	0.28	1613B
1,2,3,4,6,7,8-HpCDF	7.8		6.4	0.062	pg/g	0.01	0.078	1613B
1,2,3,4,7,8,9-HpCDF	2.8	J	6.4	0.069	pg/g	0.01	0.028	1613B
OCDD	630	B	13	0.42	pg/g	0.0003	0.19	1613B
OCDF	3.3	J B	13	0.039	pg/g	0.0003	0.00099	1613B
2,3,7,8-TCDF - RA	620	E B	1.3	0.70	pg/g	0.1	62	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		260	TEQ

Client Sample ID: 11215702-080221-BN-SJSB090 (10-12) — Lab Sample ID: 320-77214-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	2.5		1.6	0.088	pg/g	1	2.5	1613B
1,2,3,7,8-PeCDD	0.31	J	8.0	0.11	pg/g	1	0.31	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-SJSB090 (10-12) (Continued)

Lab Sample ID: 320-77214-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDF	0.51	J	8.0	0.055	pg/g	0.03	0.015	1613B
2,3,4,7,8-PeCDF	0.19	J q	8.0	0.055	pg/g	0.3	0.057	1613B
1,2,3,4,7,8-HxCDD	0.76	J	8.0	0.13	pg/g	0.1	0.076	1613B
1,2,3,6,7,8-HxCDD	1.3	J	8.0	0.14	pg/g	0.1	0.13	1613B
1,2,3,7,8,9-HxCDD	3.2	J	8.0	0.12	pg/g	0.1	0.32	1613B
1,2,3,4,7,8-HxCDF	0.54	J	8.0	0.043	pg/g	0.1	0.054	1613B
1,2,3,6,7,8-HxCDF	0.14	J	8.0	0.045	pg/g	0.1	0.014	1613B
1,2,3,7,8,9-HxCDF	0.14	J	8.0	0.031	pg/g	0.1	0.014	1613B
2,3,4,6,7,8-HxCDF	ND		8.0	0.033	pg/g	0.1	0.0017	1613B
1,2,3,4,6,7,8-HpCDD	59	B	8.0	0.92	pg/g	0.01	0.59	1613B
1,2,3,4,6,7,8-HpCDF	0.23	J q	8.0	0.044	pg/g	0.01	0.0023	1613B
1,2,3,4,7,8,9-HpCDF	ND		8.0	0.049	pg/g	0.01	0.00025	1613B
OCDD	1400	B	16	1.1	pg/g	0.0003	0.42	1613B
OCDF	0.28	J B q	16	0.044	pg/g	0.0003	0.000084	1613B
2,3,7,8-TCDF - RA	7.5	B	1.6	0.13	pg/g	0.1	0.75	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		5.3	TEQ

Client Sample ID: 11215702-080221-BN-SJSB090 (12-14)

Lab Sample ID: 320-77214-7

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	5.5		1.4	0.084	pg/g	1	5.5	1613B
1,2,3,7,8-PeCDD	0.22	J	6.8	0.087	pg/g	1	0.22	1613B
1,2,3,7,8-PeCDF	0.86	J	6.8	0.047	pg/g	0.03	0.026	1613B
2,3,4,7,8-PeCDF	0.39	J	6.8	0.047	pg/g	0.3	0.12	1613B
1,2,3,4,7,8-HxCDD	0.55	J	6.8	0.11	pg/g	0.1	0.055	1613B
1,2,3,6,7,8-HxCDD	0.81	J	6.8	0.11	pg/g	0.1	0.081	1613B
1,2,3,7,8,9-HxCDD	1.8	J	6.8	0.10	pg/g	0.1	0.18	1613B
1,2,3,4,7,8-HxCDF	4.8	J	6.8	0.057	pg/g	0.1	0.48	1613B
1,2,3,6,7,8-HxCDF	1.1	J	6.8	0.058	pg/g	0.1	0.11	1613B
1,2,3,7,8,9-HxCDF	0.17	J	6.8	0.041	pg/g	0.1	0.017	1613B
2,3,4,6,7,8-HxCDF	0.092	J	6.8	0.044	pg/g	0.1	0.0092	1613B
1,2,3,4,6,7,8-HpCDD	36	B	6.8	0.44	pg/g	0.01	0.36	1613B
1,2,3,4,6,7,8-HpCDF	1.9	J	6.8	0.050	pg/g	0.01	0.019	1613B
1,2,3,4,7,8,9-HpCDF	0.83	J	6.8	0.056	pg/g	0.01	0.0083	1613B
OCDD	890	B	14	0.69	pg/g	0.0003	0.27	1613B
OCDF	1.8	J B	14	0.045	pg/g	0.0003	0.00054	1613B
2,3,7,8-TCDF - RA	16	B	1.4	0.19	pg/g	0.1	1.6	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Client Sample ID: 11215702-080221-BN-SJSB090 (12-14) (Continued) — Lab Sample ID: 320-77214-7

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		9.1	TEQ

Client Sample ID: 11215702-080221-BN-SJSB090 (14-16) — Lab Sample ID: 320-77214-8

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**2.3**		1.4	0.066	pg/g	1	**2.3**	1613B
1,2,3,7,8-PeCDD	ND		7.0	0.075	pg/g	1	0.038	1613B
1,2,3,7,8-PeCDF	**0.28**	**J**	7.0	0.041	pg/g	0.03	**0.0084**	1613B
2,3,4,7,8-PeCDF	**0.18**	**J q**	7.0	0.042	pg/g	0.3	**0.054**	1613B
1,2,3,4,7,8-HxCDD	**0.57**	**J**	7.0	0.14	pg/g	0.1	**0.057**	1613B
1,2,3,6,7,8-HxCDD	**0.72**	**J**	7.0	0.15	pg/g	0.1	**0.072**	1613B
1,2,3,7,8,9-HxCDD	**1.8**	**J**	7.0	0.13	pg/g	0.1	**0.18**	1613B
1,2,3,4,7,8-HxCDF	**0.61**	**J**	7.0	0.036	pg/g	0.1	**0.061**	1613B
1,2,3,6,7,8-HxCDF	**0.19**	**J**	7.0	0.037	pg/g	0.1	**0.019**	1613B
1,2,3,7,8,9-HxCDF	**0.10**	**J**	7.0	0.026	pg/g	0.1	**0.010**	1613B
2,3,4,6,7,8-HxCDF	ND		7.0	0.027	pg/g	0.1	0.0014	1613B
1,2,3,4,6,7,8-HpCDD	**31**	**B**	7.0	0.60	pg/g	0.01	**0.31**	1613B
1,2,3,4,6,7,8-HpCDF	**0.45**	**J**	7.0	0.042	pg/g	0.01	**0.0045**	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.0	0.050	pg/g	0.01	0.00025	1613B
OCDD	**780**	**B**	14	0.66	pg/g	0.0003	**0.23**	1613B
OCDF	**0.51**	**J B**	14	0.037	pg/g	0.0003	**0.00015**	1613B
2,3,7,8-TCDF - RA	**7.4**	**B**	1.4	0.24	pg/g	0.1	**0.74**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		4.1	TEQ

Client Sample ID: 11215702-080221-BN-DUP-11 — Lab Sample ID: 320-77214-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**1.9**		1.3	0.070	pg/g	1	**1.9**	1613B
1,2,3,7,8-PeCDD	ND		6.4	0.089	pg/g	1	0.045	1613B
1,2,3,7,8-PeCDF	**0.19**	**J q**	6.4	0.063	pg/g	0.03	**0.0057**	1613B
2,3,4,7,8-PeCDF	**0.16**	**J**	6.4	0.062	pg/g	0.3	**0.048**	1613B
1,2,3,4,7,8-HxCDD	**0.33**	**J**	6.4	0.093	pg/g	0.1	**0.033**	1613B
1,2,3,6,7,8-HxCDD	**0.44**	**J**	6.4	0.098	pg/g	0.1	**0.044**	1613B
1,2,3,7,8,9-HxCDD	**0.75**	**J**	6.4	0.087	pg/g	0.1	**0.075**	1613B
1,2,3,4,7,8-HxCDF	**0.25**	**J**	6.4	0.065	pg/g	0.1	**0.025**	1613B
1,2,3,6,7,8-HxCDF	**0.11**	**J**	6.4	0.067	pg/g	0.1	**0.011**	1613B
1,2,3,7,8,9-HxCDF	**0.11**	**J**	6.4	0.047	pg/g	0.1	**0.011**	1613B
2,3,4,6,7,8-HxCDF	ND		6.4	0.048	pg/g	0.1	0.0024	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-DUP-11 (Continued) — Lab Sample ID: 320-77214-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDD	**12**	**B**	6.4	0.33	pg/g	0.01	**0.12**	1613B
1,2,3,4,6,7,8-HpCDF	ND		6.4	0.057	pg/g	0.01	0.00029	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.4	0.062	pg/g	0.01	0.00031	1613B
OCDD	**280**	**B**	13	0.30	pg/g	0.0003	**0.084**	1613B
OCDF	**0.12**	**J q B**	13	0.045	pg/g	0.0003	**0.000036**	1613B
2,3,7,8-TCDF - RA	**4.9**	**B**	1.3	0.24	pg/g	0.1	**0.49**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2.9	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-77214-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	37TCDD (35-197)
320-77214-1	11215702-080221-BN-SJSB090	77
320-77214-1 - DL	11215702-080221-BN-SJSB090 (0-2)	111
320-77214-1 - RADL	11215702-080221-BN-SJSB090 (0-2)	124
320-77214-2	11215702-080221-BN-SJSB090 (2-4)	60
320-77214-2 - RA	11215702-080221-BN-SJSB090 (2-4)	79
320-77214-2 MS	11215702-080221-BN-SJSB090 (2-4)	63
320-77214-2 MS - RA	11215702-080221-BN-SJSB090 (2-4)	52
320-77214-2 MSD	11215702-080221-BN-SJSB090 (2-4)	67
320-77214-2 MSD - RA	11215702-080221-BN-SJSB090 (2-4)	53
320-77214-3	11215702-080221-BN-SJSB090 (4-6)	71
320-77214-3 - RA	11215702-080221-BN-SJSB090 (4-6)	79
320-77214-4	11215702-080221-BN-SJSB090 (6-8)	71
320-77214-4 - RA	11215702-080221-BN-SJSB090 (6-8)	75
320-77214-5	11215702-080221-BN-SJSB090 (8-10)	72
320-77214-5 - RA	11215702-080221-BN-SJSB090 (8-10)	76
320-77214-6	11215702-080221-BN-SJSB090 (10-12)	70
320-77214-6 - RA	11215702-080221-BN-SJSB090 (10-12)	77
320-77214-7	11215702-080221-BN-SJSB090 (12-14)	69
320-77214-7 - RA	11215702-080221-BN-SJSB090 (12-14)	77
320-77214-8	11215702-080221-BN-SJSB090 (14-16)	67
320-77214-8 - RA	11215702-080221-BN-SJSB090 (14-16)	73
320-77214-13	11215702-080221-BN-DUP-11	76
320-77214-13 - RA	11215702-080221-BN-DUP-11	80
MB 320-515492/1-A	Method Blank	66

Percent Surrogate Recovery (Acceptance Limits)

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	37TCDD (31-191)
LCS 320-515492/2-A	Lab Control Sample	65

Percent Surrogate Recovery (Acceptance Limits)

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-77214-1
Project/Site: SJRWP Supplemental Design Investigation

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-77214-1	11215702-080221-BN-SJSB090						52	47	66
320-77214-1 - DL	11215702-080221-BN-SJSB090 (0-2)	38	53	80	66	73			65
320-77214-1 - RADL	11215702-080221-BN-SJSB090 (0-2)		52						
320-77214-2	11215702-080221-BN-SJSB090 (2-4)	38	55	86	70	78	62	55	70
320-77214-2 - RA	11215702-080221-BN-SJSB090 (2-4)		49						
320-77214-2 MS	11215702-080221-BN-SJSB090 (2-4)	40	57	81	68	76	63	56	67
320-77214-2 MS - RA	11215702-080221-BN-SJSB090 (2-4)		38						
320-77214-2 MSD	11215702-080221-BN-SJSB090 (2-4)	45	60	83	73	80	65	59	69
320-77214-2 MSD - RA	11215702-080221-BN-SJSB090 (2-4)		45						
320-77214-3	11215702-080221-BN-SJSB090 (4-6)	51	54	62	58	64	64	53	63
320-77214-3 - RA	11215702-080221-BN-SJSB090 (4-6)		64						
320-77214-4	11215702-080221-BN-SJSB090 (6-8)	54	50	54	52	57	56	48	55
320-77214-4 - RA	11215702-080221-BN-SJSB090 (6-8)		54						
320-77214-5	11215702-080221-BN-SJSB090 (8-10)	56	53	57	55	59	65	53	64
320-77214-5 - RA	11215702-080221-BN-SJSB090 (8-10)		60						
320-77214-6	11215702-080221-BN-SJSB090 (10-12)	55	52	55	52	58	63	51	61
320-77214-6 - RA	11215702-080221-BN-SJSB090 (10-12)		61						
320-77214-7	11215702-080221-BN-SJSB090 (12-14)	52	49	52	50	54	58	48	58
320-77214-7 - RA	11215702-080221-BN-SJSB090 (12-14)		57						
320-77214-8	11215702-080221-BN-SJSB090 (14-16)	58	55	57	55	60	65	56	66
320-77214-8 - RA	11215702-080221-BN-SJSB090 (14-16)		61						
320-77214-13	11215702-080221-BN-DUP-11	57	55	57	55	60	62	52	62
320-77214-13 - RA	11215702-080221-BN-DUP-11		61						
MB 320-515492/1-A	Method Blank	54	52	57	54	59	58	49	58

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-77214-1	11215702-080221-BN-SJSB090	54	48	53	64	53	68	81
320-77214-1 - DL	11215702-080221-BN-SJSB090 (0-2)							
320-77214-1 - RADL	11215702-080221-BN-SJSB090 (0-2)							
320-77214-2	11215702-080221-BN-SJSB090 (2-4)	60	55	58	54	46	57	61

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-77214-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-77214-2 - RA	11215702-080221-BN-SJSB090							
320-77214-2 MS	11215702-080221-BN-SJSB090 (2-4)	57	56	57	54	47	58	59
320-77214-2 MS - RA	11215702-080221-BN-SJSB090 (2-4)							
320-77214-2 MSD	11215702-080221-BN-SJSB090 (2-4)	59	59	60	57	51	61	64
320-77214-2 MSD - RA	11215702-080221-BN-SJSB090 (2-4)							
320-77214-3	11215702-080221-BN-SJSB090 (4-6)	54	55	55	53	49	57	58
320-77214-3 - RA	11215702-080221-BN-SJSB090 (4-6)							
320-77214-4	11215702-080221-BN-SJSB090 (6-8)	49	51	50	50	48	55	56
320-77214-4 - RA	11215702-080221-BN-SJSB090 (6-8)							
320-77214-5	11215702-080221-BN-SJSB090 (8-10)	54	55	55	55	50	57	59
320-77214-5 - RA	11215702-080221-BN-SJSB090 (8-10)							
320-77214-6	11215702-080221-BN-SJSB090 (10-12)	52	53	53	52	48	56	56
320-77214-6 - RA	11215702-080221-BN-SJSB090 (10-12)							
320-77214-7	11215702-080221-BN-SJSB090 (12-14)	50	50	50	49	45	52	52
320-77214-7 - RA	11215702-080221-BN-SJSB090 (12-14)							
320-77214-8	11215702-080221-BN-SJSB090 (14-16)	56	56	57	55	52	59	59
320-77214-8 - RA	11215702-080221-BN-SJSB090 (14-16)							
320-77214-13	11215702-080221-BN-DUP-11	52	55	54	56	52	60	60
320-77214-13 - RA	11215702-080221-BN-DUP-11							
MB 320-515492/1-A	Method Blank	49	52	51	51	49	54	59

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-77214-1

Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**TCDD (20-175)**	**TCDF (22-152)**	**PeCDD (21-227)**	**PeCDF (21-192)**	**PeCF (13-328)**	**HxCDD (21-193)**	**HxDD (25-163)**	**HxCDF (19-202)**
LCS 320-515492/2-A	Lab Control Sample	47	46	50	47	50	54	47	54

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**HxDF (21-159)**	**HxCF (17-205)**	**13CHxCF (22-176)**	**HpCDD (26-166)**	**HpCDF (21-158)**	**HpCDF2 (20-186)**	**OCDD (13-199)**	
LCS 320-515492/2-A	Lab Control Sample	47	47	47	46	44	48	50	

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-515492/1-A
Matrix: Sediment
Analysis Batch: 519953

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 515492

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.14	pg/g		08/12/21 05:19	08/25/21 11:20	1
2,3,7,8-TCDF	0.190	J q	1.0	0.073	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,7,8-PeCDD	ND		5.0	0.16	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,7,8-PeCDF	ND		5.0	0.13	pg/g		08/12/21 05:19	08/25/21 11:20	1
2,3,4,7,8-PeCDF	ND		5.0	0.13	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.10	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.11	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.099	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.093	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.093	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.061	pg/g		08/12/21 05:19	08/25/21 11:20	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.065	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,6,7,8-HpCDD	0.227	J q	5.0	0.055	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	0.092	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.11	pg/g		08/12/21 05:19	08/25/21 11:20	1
OCDD	1.16	J	10	0.10	pg/g		08/12/21 05:19	08/25/21 11:20	1
OCDF	0.668	J q	10	0.095	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total TCDD	ND		1.0	0.14	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total TCDF	0.190	J q	1.0	0.073	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total PeCDD	ND		5.0	0.16	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total PeCDF	ND		5.0	0.13	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total HxCDD	ND		5.0	0.11	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total HxCDF	ND		5.0	0.093	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total HpCDD	0.423	J q	5.0	0.055	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total HpCDF	ND		5.0	0.11	pg/g		08/12/21 05:19	08/25/21 11:20	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*54*		*25 - 164*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-2,3,7,8-TCDF	*52*		*24 - 169*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,7,8-PeCDD	*57*		*25 - 181*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,7,8-PeCDF	*54*		*24 - 185*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-2,3,4,7,8-PeCDF	*59*		*21 - 178*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,7,8-HxCDD	*58*		*32 - 141*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,6,7,8-HxCDD	*49*		*28 - 130*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,7,8-HxCDF	*58*		*26 - 152*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,6,7,8-HxCDF	*49*		*26 - 123*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,7,8,9-HxCDF	*52*		*29 - 147*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-2,3,4,6,7,8-HxCDF	*51*		*28 - 136*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*51*		*23 - 140*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*49*		*28 - 143*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*54*		*26 - 138*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-OCDD	*59*		*17 - 157*	*08/12/21 05:19*	*08/25/21 11:20*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*66*		*35 - 197*	*08/12/21 05:19*	*08/25/21 11:20*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-515492/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519953 **Prep Batch: 515492**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	21.3		pg/g		106	67 - 158
2,3,7,8-TCDF	20.0	21.7		pg/g		109	75 - 158
1,2,3,7,8-PeCDD	100	108		pg/g		108	70 - 142
1,2,3,7,8-PeCDF	100	111		pg/g		111	80 - 134
2,3,4,7,8-PeCDF	100	102		pg/g		102	68 - 160
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	70 - 164
1,2,3,6,7,8-HxCDD	100	111		pg/g		111	76 - 134
1,2,3,7,8,9-HxCDD	100	107		pg/g		107	64 - 162
1,2,3,4,7,8-HxCDF	100	96.9		pg/g		97	72 - 134
1,2,3,6,7,8-HxCDF	100	108		pg/g		108	84 - 130
1,2,3,7,8,9-HxCDF	100	107		pg/g		107	78 - 130
2,3,4,6,7,8-HxCDF	100	107		pg/g		107	70 - 156
1,2,3,4,6,7,8-HpCDD	100	109		pg/g		109	70 - 140
1,2,3,4,6,7,8-HpCDF	100	108		pg/g		108	82 - 122
1,2,3,4,7,8,9-HpCDF	100	102		pg/g		102	78 - 138
OCDD	200	213		pg/g		106	78 - 144
OCDF	200	208		pg/g		104	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*47*		*20 - 175*
13C-2,3,7,8-TCDF	*46*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*50*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*47*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*50*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*54*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*47*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*54*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*47*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*47*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*47*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*46*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*44*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*48*		*20 - 186*
13C-OCDD	*50*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*65*		*31 - 191*

Lab Sample ID: 320-77214-2 MS **Client Sample ID: 11215702-080221-BN-SJSB090 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519953 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	5100	E G	27.1	3690	E 4 G	pg/g	☼	-5063	67 - 158
1,2,3,7,8-PeCDD	35		136	178		pg/g	☼	105	70 - 142
1,2,3,7,8-PeCDF	410	F1	136	416	F1	pg/g	☼	5	80 - 134
2,3,4,7,8-PeCDF	230	F1	136	305	F1	pg/g	☼	52	68 - 160
1,2,3,4,7,8-HxCDD	0.84	J q	136	139		pg/g	☼	102	70 - 164

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-77214-2 MS **Client Sample ID: 11215702-080221-BN-SJSB090 (2-4)**

Matrix: Sediment **Prep Type: Total/NA**

Analysis Batch: 519953 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	4.0	J	136	156		pg/g	☼	112	76 - 134
1,2,3,7,8,9-HxCDD	2.4	J	136	143		pg/g	☼	104	64 - 162
1,2,3,4,7,8-HxCDF	1000		136	454	4	pg/g	☼	-425	72 - 134
1,2,3,6,7,8-HxCDF	240	F1	136	237	F1	pg/g	☼	-1	84 - 130
1,2,3,7,8,9-HxCDF	9.6		136	147		pg/g	☼	101	78 - 130
2,3,4,6,7,8-HxCDF	18		136	160		pg/g	☼	104	70 - 156
1,2,3,4,6,7,8-HpCDD	83	B	136	211		pg/g	☼	94	70 - 140
1,2,3,4,6,7,8-HpCDF	390	F1	136	255	F1	pg/g	☼	-96	82 - 122
1,2,3,4,7,8,9-HpCDF	130	F1	136	172	F1	pg/g	☼	34	78 - 138
OCDD	1600	B	271	1340	4	pg/g	☼	-79	78 - 144
OCDF	170	F1 B	271	338	F1	pg/g	☼	62	63 - 170

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*40*		*25 - 164*
13C-2,3,7,8-TCDF	*57*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*81*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*68*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*76*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*63*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*56*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*67*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*57*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*56*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*57*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*54*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*47*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*58*		*26 - 138*
13C-OCDD	*59*		*17 - 157*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*63*		*35 - 197*

Lab Sample ID: 320-77214-2 MSD **Client Sample ID: 11215702-080221-BN-SJSB090 (2-4)**

Matrix: Sediment **Prep Type: Total/NA**

Analysis Batch: 519953 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	5100	E G	26.2	2400	E 4 G	pg/g	☼	-10179	67 - 158	42	50
1,2,3,7,8-PeCDD	35		131	161		pg/g	☼	96	70 - 142	10	50
1,2,3,7,8-PeCDF	410	F1	131	389	F1	pg/g	☼	-16	80 - 134	7	50
2,3,4,7,8-PeCDF	230	F1	131	266	F1	pg/g	☼	24	68 - 160	13	50
1,2,3,4,7,8-HxCDD	0.84	J q	131	137		pg/g	☼	104	70 - 164	2	50
1,2,3,6,7,8-HxCDD	4.0	J	131	141		pg/g	☼	105	76 - 134	10	50
1,2,3,7,8,9-HxCDD	2.4	J	131	137		pg/g	☼	103	64 - 162	4	50
1,2,3,4,7,8-HxCDF	1000		131	432	4	pg/g	☼	-457	72 - 134	5	50
1,2,3,6,7,8-HxCDF	240	F1	131	223	F1	pg/g	☼	-12	84 - 130	6	50
1,2,3,7,8,9-HxCDF	9.6		131	144		pg/g	☼	102	78 - 130	2	50
2,3,4,6,7,8-HxCDF	18		131	151		pg/g	☼	101	70 - 156	6	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-77214-2 MSD **Client Sample ID: 11215702-080221-BN-SJSB090 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519953 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	83	B	131	198		pg/g	☼	88	70 - 140	6	50
1,2,3,4,6,7,8-HpCDF	390	F1	131	230	F1	pg/g	☼	-119	82 - 122	10	50
1,2,3,4,7,8,9-HpCDF	130	F1	131	162	F1	pg/g	☼	28	78 - 138	6	50
OCDD	1600	B	262	1350	4	pg/g	☼	-78	78 - 144	1	50
OCDF	170	F1 B	262	323	F1	pg/g	☼	58	63 - 170	5	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*45*		*25 - 164*
13C-2,3,7,8-TCDF	*60*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*83*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*73*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*80*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*65*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*59*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*69*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*59*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*59*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*60*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*57*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*51*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*61*		*26 - 138*
13C-OCDD	*64*		*17 - 157*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*67*		*35 - 197*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: 320-77214-2 MS **Client Sample ID: 11215702-080221-BN-SJSB090 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 520997 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDF - RA	12000	E B G	27.1	9380	E 4 G	pg/g	☼	-9885	75 - 158		

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDF - RA	*38*		*24 - 169*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD - RA	*52*		*35 - 197*

Lab Sample ID: 320-77214-2 MSD **Client Sample ID: 11215702-080221-BN-SJSB090 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 520997 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	12000	E B G	26.2	5870	E 4 G	pg/g	☼	-2365	75 - 158	46	50

2

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA (Continued)

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDF - RA	*45*		*24 - 169*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD - RA	*53*		*35 - 197*

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-77194-B-1 DU **Client Sample ID: Duplicate**

Matrix: Sediment **Prep Type: Total/NA**

Analysis Batch: 513947

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	16.5			16.6		%				0.9	20
Percent Solids	83.5			83.4		%				0.2	20

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-77214-1
Project/Site: SJRWP Supplemental Design Investigation

Specialty Organics

Prep Batch: 515492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-1 - DL	11215702-080221-BN-SJSB090 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-77214-1	11215702-080221-BN-SJSB090 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-77214-1 - RADL	11215702-080221-BN-SJSB090 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-77214-2	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-77214-2 - RA	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-77214-3	11215702-080221-BN-SJSB090 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-77214-3 - RA	11215702-080221-BN-SJSB090 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-77214-4	11215702-080221-BN-SJSB090 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-77214-4 - RA	11215702-080221-BN-SJSB090 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-77214-5	11215702-080221-BN-SJSB090 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-77214-5 - RA	11215702-080221-BN-SJSB090 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-77214-6	11215702-080221-BN-SJSB090 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-77214-6 - RA	11215702-080221-BN-SJSB090 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-77214-7	11215702-080221-BN-SJSB090 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-77214-7 - RA	11215702-080221-BN-SJSB090 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-77214-8	11215702-080221-BN-SJSB090 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-77214-8 - RA	11215702-080221-BN-SJSB090 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-77214-13	11215702-080221-BN-DUP-11	Total/NA	Sediment	HRMS-Sox	
320-77214-13 - RA	11215702-080221-BN-DUP-11	Total/NA	Sediment	HRMS-Sox	
MB 320-515492/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-515492/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-77214-2 MS	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-77214-2 MS - RA	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-77214-2 MSD	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-77214-2 MSD - RA	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	HRMS-Sox	

Analysis Batch: 519953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-1	11215702-080221-BN-SJSB090 (0-2)	Total/NA	Sediment	1613B	515492
320-77214-2	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	1613B	515492
320-77214-3	11215702-080221-BN-SJSB090 (4-6)	Total/NA	Sediment	1613B	515492
320-77214-4	11215702-080221-BN-SJSB090 (6-8)	Total/NA	Sediment	1613B	515492
320-77214-5	11215702-080221-BN-SJSB090 (8-10)	Total/NA	Sediment	1613B	515492
320-77214-6	11215702-080221-BN-SJSB090 (10-12)	Total/NA	Sediment	1613B	515492
320-77214-7	11215702-080221-BN-SJSB090 (12-14)	Total/NA	Sediment	1613B	515492
MB 320-515492/1-A	Method Blank	Total/NA	Sediment	1613B	515492
LCS 320-515492/2-A	Lab Control Sample	Total/NA	Sediment	1613B	515492
320-77214-2 MS	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	1613B	515492
320-77214-2 MSD	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	1613B	515492

Analysis Batch: 519955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-8	11215702-080221-BN-SJSB090 (14-16)	Total/NA	Sediment	1613B	515492
320-77214-13	11215702-080221-BN-DUP-11	Total/NA	Sediment	1613B	515492

Analysis Batch: 520325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-1 - DL	11215702-080221-BN-SJSB090 (0-2)	Total/NA	Sediment	1613B	515492

QC Association Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Specialty Organics

Analysis Batch: 520456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-3 - RA	11215702-080221-BN-SJSB090 (4-6)	Total/NA	Sediment	1613B	515492
320-77214-4 - RA	11215702-080221-BN-SJSB090 (6-8)	Total/NA	Sediment	1613B	515492
320-77214-5 - RA	11215702-080221-BN-SJSB090 (8-10)	Total/NA	Sediment	1613B	515492
320-77214-6 - RA	11215702-080221-BN-SJSB090 (10-12)	Total/NA	Sediment	1613B	515492
320-77214-7 - RA	11215702-080221-BN-SJSB090 (12-14)	Total/NA	Sediment	1613B	515492
320-77214-8 - RA	11215702-080221-BN-SJSB090 (14-16)	Total/NA	Sediment	1613B	515492
320-77214-13 - RA	11215702-080221-BN-DUP-11	Total/NA	Sediment	1613B	515492

Analysis Batch: 520997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-2 - RA	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	1613B	515492
320-77214-2 MS - RA	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	1613B	515492
320-77214-2 MSD - RA	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	1613B	515492

Analysis Batch: 521760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-1 - RADL	11215702-080221-BN-SJSB090 (0-2)	Total/NA	Sediment	1613B	515492

General Chemistry

Analysis Batch: 513947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-1	11215702-080221-BN-SJSB090 (0-2)	Total/NA	Sediment	D 2216	
320-77214-2	11215702-080221-BN-SJSB090 (2-4)	Total/NA	Sediment	D 2216	
320-77214-3	11215702-080221-BN-SJSB090 (4-6)	Total/NA	Sediment	D 2216	
320-77214-4	11215702-080221-BN-SJSB090 (6-8)	Total/NA	Sediment	D 2216	
320-77214-5	11215702-080221-BN-SJSB090 (8-10)	Total/NA	Sediment	D 2216	
320-77214-6	11215702-080221-BN-SJSB090 (10-12)	Total/NA	Sediment	D 2216	
320-77214-7	11215702-080221-BN-SJSB090 (12-14)	Total/NA	Sediment	D 2216	
320-77214-8	11215702-080221-BN-SJSB090 (14-16)	Total/NA	Sediment	D 2216	
320-77214-13	11215702-080221-BN-DUP-11	Total/NA	Sediment	D 2216	
320-77194-B-1 DU	Duplicate	Total/NA	Sediment	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-SJSB090 (0-2)
Lab Sample ID: 320-77214-1
Date Collected: 08/02/21 13:10
Matrix: Sediment
Date Received: 08/05/21 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	513947	08/06/21 14:43	TCS	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (0-2)
Lab Sample ID: 320-77214-1
Date Collected: 08/02/21 13:10
Matrix: Sediment
Date Received: 08/05/21 09:35
Percent Solids: 49.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519953	08/25/21 12:50	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	DL		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	DL	10	520325	08/26/21 21:51	SMA	TAL SAC
Total/NA	Prep	HRMS-Sox	RADL		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RADL	10	521760	09/01/21 14:37	DB	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (2-4)
Lab Sample ID: 320-77214-2
Date Collected: 08/02/21 13:15
Matrix: Sediment
Date Received: 08/05/21 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	513947	08/06/21 14:43	TCS	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (2-4)
Lab Sample ID: 320-77214-2
Date Collected: 08/02/21 13:15
Matrix: Sediment
Date Received: 08/05/21 09:35
Percent Solids: 76.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519953	08/25/21 13:35	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520997	08/31/21 22:10	DB	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (4-6)
Lab Sample ID: 320-77214-3
Date Collected: 08/02/21 13:20
Matrix: Sediment
Date Received: 08/05/21 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	513947	08/06/21 14:43	TCS	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (4-6)
Lab Sample ID: 320-77214-3
Date Collected: 08/02/21 13:20
Matrix: Sediment
Date Received: 08/05/21 09:35
Percent Solids: 70.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519953	08/25/21 15:50	DB	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-SJSB090 (4-6)

Lab Sample ID: 320-77214-3
Date Collected: 08/02/21 13:20
Matrix: Sediment
Date Received: 08/05/21 09:35
Percent Solids: 70.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/28/21 01:13	DB	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (6-8)

Lab Sample ID: 320-77214-4
Date Collected: 08/02/21 13:25
Matrix: Sediment
Date Received: 08/05/21 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	513947	08/06/21 14:43	TCS	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (6-8)

Lab Sample ID: 320-77214-4
Date Collected: 08/02/21 13:25
Matrix: Sediment
Date Received: 08/05/21 09:35
Percent Solids: 69.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519953	08/25/21 16:35	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/27/21 23:18	DB	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (8-10)

Lab Sample ID: 320-77214-5
Date Collected: 08/02/21 13:30
Matrix: Sediment
Date Received: 08/05/21 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	513947	08/06/21 14:43	TCS	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (8-10)

Lab Sample ID: 320-77214-5
Date Collected: 08/02/21 13:30
Matrix: Sediment
Date Received: 08/05/21 09:35
Percent Solids: 77.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519953	08/25/21 17:20	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/28/21 00:35	DB	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (10-12)

Lab Sample ID: 320-77214-6
Date Collected: 08/02/21 13:35
Matrix: Sediment
Date Received: 08/05/21 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	513947	08/06/21 14:43	TCS	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (10-12) Lab Sample ID: 320-77214-6

Date Collected: 08/02/21 13:35 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 62.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519953	08/25/21 18:05	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/27/21 22:01	DB	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (12-14) Lab Sample ID: 320-77214-7

Date Collected: 08/02/21 13:40 **Matrix: Sediment**
Date Received: 08/05/21 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	513947	08/06/21 14:43	TCS	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (12-14) Lab Sample ID: 320-77214-7

Date Collected: 08/02/21 13:40 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 73.5**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519953	08/25/21 18:50	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/27/21 23:56	DB	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (14-16) Lab Sample ID: 320-77214-8

Date Collected: 08/02/21 13:45 **Matrix: Sediment**
Date Received: 08/05/21 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	513947	08/06/21 14:43	TCS	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (14-16) Lab Sample ID: 320-77214-8

Date Collected: 08/02/21 13:45 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 68.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519955	08/25/21 23:05	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/27/21 22:40	DB	TAL SAC

Client Sample ID: 11215702-080221-BN-DUP-11 Lab Sample ID: 320-77214-13

Date Collected: 08/02/21 00:00 **Matrix: Sediment**
Date Received: 08/05/21 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	513947	08/06/21 14:43	TCS	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Client Sample ID: 11215702-080221-BN-DUP-11

Date Collected: 08/02/21 00:00
Date Received: 08/05/21 09:35

Lab Sample ID: 320-77214-13

Matrix: Sediment
Percent Solids: 77.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519955	08/26/21 00:35	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/27/21 21:23	DB	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-77214-1
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDD
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDF
1613B	HRMS-Sox	Sediment	OCDD
1613B	HRMS-Sox	Sediment	OCDF
1613B	HRMS-Sox	Sediment	Total HpCDD
1613B	HRMS-Sox	Sediment	Total HpCDF
1613B	HRMS-Sox	Sediment	Total HxCDD
1613B	HRMS-Sox	Sediment	Total HxCDF
1613B	HRMS-Sox	Sediment	Total PeCDD
1613B	HRMS-Sox	Sediment	Total PeCDF
1613B	HRMS-Sox	Sediment	Total TCDD
1613B	HRMS-Sox	Sediment	Total TCDF
D 2216		Sediment	Percent Moisture
D 2216		Sediment	Percent Solids
TEQ		Sediment	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-77214-1	11215702-080221-BN-SJSB090 (0-2)	Sediment	08/02/21 13:10	08/05/21 09:35
320-77214-2	11215702-080221-BN-SJSB090 (2-4)	Sediment	08/02/21 13:15	08/05/21 09:35
320-77214-3	11215702-080221-BN-SJSB090 (4-6)	Sediment	08/02/21 13:20	08/05/21 09:35
320-77214-4	11215702-080221-BN-SJSB090 (6-8)	Sediment	08/02/21 13:25	08/05/21 09:35
320-77214-5	11215702-080221-BN-SJSB090 (8-10)	Sediment	08/02/21 13:30	08/05/21 09:35
320-77214-6	11215702-080221-BN-SJSB090 (10-12)	Sediment	08/02/21 13:35	08/05/21 09:35
320-77214-7	11215702-080221-BN-SJSB090 (12-14)	Sediment	08/02/21 13:40	08/05/21 09:35
320-77214-8	11215702-080221-BN-SJSB090 (14-16)	Sediment	08/02/21 13:45	08/05/21 09:35
320-77214-13	11215702-080221-BN-DUP-11	Sediment	08/02/21 00:00	08/05/21 09:35

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: WDM 320-510264/1 Client Sample ID:

Date Analyzed: 07/26/21 09:21 Lab File ID: 26JL2110D5_1.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,6,8-TCDF	15.13	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,6,8-TCDD	16.07	Peak assignment corrected	arghestanis	07/26/21 12:21
2,3,4,7-TCDF	17.63	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,7-TCDD	18.22	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDD	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDF	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,8,9-TCDD	19.47	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,8,9-TCDF	19.49	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,4,6,8-PeCDF	19.76	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,4,7,9-PeCDD	21.58	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDD	25.91	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDF	26.14	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,8-HxCDF	28.48	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,4,6,7,9-HxCDD	30.02	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,7-HxCDD	32.30	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,3,4,8,9-HxCDF	32.61	Peak assignment corrected	arghestanis	07/26/21 12:23

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: IC 320-510264/3 Client Sample ID:

Date Analyzed: 07/26/21 10:51 Lab File ID: 26JL2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.35	Invalid Compound ID	stephensk	07/27/21 08:15

Lab Sample ID: IC 320-510264/4 Client Sample ID:

Date Analyzed: 07/26/21 11:36 Lab File ID: 26JL2110D5_4.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,4,7,8-PeCDF	24.13	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDF	30.84	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDD	31.93	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8,9-HpCDF	35.01	Peak assignment corrected	arghestanis	07/26/21 12:31

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519953

Lab Sample ID: MB 320-515492/1-A Client Sample ID:

Date Analyzed: 08/25/21 11:20 Lab File ID: 25AU2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/27/21 09:25
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/27/21 09:25
2,3,7,8-TCDF	17.07	Baseline	dadunj	08/27/21 09:25
1,2,3,4,6,7,8-HpCDD	34.41	Split Peak	dadunj	08/27/21 09:25
OCDD	36.71	Split Peak	dadunj	08/27/21 09:26
OCDF	36.80	Split Peak	dadunj	08/27/21 09:26

Lab Sample ID: 320-77214-1 Client Sample ID: 11215702-080221-BN-SJSB090 (0-2)

Date Analyzed: 08/25/21 12:50 Lab File ID: 25AU2110D5_5.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	18.54	Baseline	dadunj	08/27/21 09:30
1,2,3,4,7,8-HxCDF	30.64	Split Peak	dadunj	08/27/21 09:32
1,2,3,6,7,8-HxCDF	30.80	Split Peak	dadunj	08/27/21 09:32
13C-2,3,4,6,7,8-HxCDF	31.57	Split Peak	dadunj	08/27/21 09:32
2,3,4,6,7,8-HxCDF	31.58	Split Peak	dadunj	08/27/21 09:32
1,2,3,4,7,8-HxCDD	31.77	Split Peak	dadunj	08/27/21 09:33
1,2,3,6,7,8-HxCDD	31.86	Split Peak	dadunj	08/27/21 09:33
1,2,3,7,8,9-HxCDD	32.17	Split Peak	dadunj	08/27/21 09:38
13C-1,2,3,7,8,9-HxCDF	32.34	Split Peak	dadunj	08/27/21 09:32
1,2,3,7,8,9-HxCDF	32.36	Split Peak	dadunj	08/27/21 09:32

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519953

Lab Sample ID: 320-77214-2 Client Sample ID: 11215702-080221-BN-SJSB090 (2-4)

Date Analyzed: 08/25/21 13:35 Lab File ID: 25AU2110D5_6.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.22	Peak assignment corrected	bennettd	08/26/21 10:00
13C-2,3,7,8-TCDD	17.96	Peak assignment corrected	bennettd	08/26/21 09:56
2,3,7,8-TCDD	17.98	Peak assignment corrected	bennettd	08/26/21 10:01
37Cl4-2,3,7,8-TCDD	17.98	Split Peak	dadunj	08/27/21 09:39
1,2,3,7,8-PeCDF	22.21	Invalid Compound ID	dadunj	08/27/21 09:40
2,3,4,7,8-PeCDF	23.51	Split Peak	dadunj	08/27/21 09:40
1,2,3,7,8-PeCDD	24.20	Split Peak	dadunj	08/27/21 09:41
1,2,3,4,7,8-HxCDD	31.56	Invalid Compound ID	dadunj	08/27/21 09:42
1,2,3,6,7,8-HxCDD	31.66	Split Peak	dadunj	08/27/21 09:42

Lab Sample ID: 320-77214-2 MS Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) MS

Date Analyzed: 08/25/21 14:20 Lab File ID: 25AU2110D5_7.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.19	Peak assignment corrected	bennettd	08/26/21 10:01
13C-2,3,7,8-TCDD	17.93	Peak assignment corrected	bennettd	08/26/21 09:58
2,3,7,8-TCDD	17.95	Peak assignment corrected	bennettd	08/26/21 10:02
1,2,3,7,8-PeCDF	22.17	Invalid Compound ID	dadunj	08/27/21 09:44

Lab Sample ID: 320-77214-2 MSD Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) MSD

Date Analyzed: 08/25/21 15:05 Lab File ID: 25AU2110D5_8.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDD	17.89	Peak assignment corrected	bennettd	08/26/21 09:59
2,3,7,8-TCDD	17.90	Peak assignment corrected	bennettd	08/26/21 10:02
1,2,3,7,8-PeCDF	22.13	Invalid Compound ID	dadunj	08/27/21 09:47

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519953

Lab Sample ID: 320-77214-3 Client Sample ID: 11215702-080221-BN-SJSB090 (4-6)

Date Analyzed: 08/25/21 15:50 Lab File ID: 25AU2110D5_9.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	17.84	Peak assignment corrected	bennettd	08/26/21 10:03

Lab Sample ID: 320-77214-4 Client Sample ID: 11215702-080221-BN-SJSB090 (6-8)

Date Analyzed: 08/25/21 16:35 Lab File ID: 25AU2110D5_10.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.08	Split Peak	dadunj	08/27/21 09:54
2,3,7,8-TCDD	17.79	Split Peak	dadunj	08/27/21 09:54
1,2,3,7,8-PeCDF	22.07	Split Peak	dadunj	08/27/21 09:55
1,2,3,4,7,8-HxCDF	30.24	Split Peak	dadunj	08/27/21 09:55
1,2,3,4,7,8-HxCDD	31.53	Split Peak	dadunj	08/27/21 09:56
1,2,3,6,7,8-HxCDD	31.65	Invalid Compound ID	dadunj	08/27/21 09:56

Lab Sample ID: 320-77214-6 Client Sample ID: 11215702-080221-BN-SJSB090 (10-12)

Date Analyzed: 08/25/21 18:05 Lab File ID: 25AU2110D5_12.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.05	Split Peak	dadunj	08/27/21 10:03
2,3,4,7,8-PeCDF	23.37	Split Peak	dadunj	08/27/21 10:00
1,2,3,7,8,9-HxCDF	32.17	Split Peak	dadunj	08/27/21 10:01
OCDF	36.80	Split Peak	dadunj	08/27/21 10:02

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519953

Lab Sample ID: 320-77214-7 Client Sample ID: 11215702-080221-BN-SJSB090 (12-14)

Date Analyzed: 08/25/21 18:50 Lab File ID: 25AU2110D5_13.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.05	Baseline	dadunj	08/27/21 10:04
2,3,4,6,7,8-HxCDF	31.30	Split Peak	dadunj	08/27/21 10:04
1,2,3,7,8,9-HxCDD	31.96	Split Peak	dadunj	08/27/21 10:04
1,2,3,4,6,7,8-HpCDF	33.62	Split Peak	dadunj	08/27/21 10:05
1,2,3,4,7,8,9-HpCDF	34.69	Split Peak	dadunj	08/27/21 10:05
OCDF	36.80	Split Peak	dadunj	08/27/21 10:05

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519955

Lab Sample ID: 320-77214-8 Client Sample ID: 11215702-080221-BN-SJSB090 (14-16)

Date Analyzed: 08/25/21 23:05 Lab File ID: 25AU2110D5_18.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.05	Split Peak	dadunj	08/27/21 08:15
2,3,4,7,8-PeCDF	23.36	Split Peak	dadunj	08/27/21 08:15
1,2,3,4,7,8-HxCDF	30.20	Baseline	dadunj	08/27/21 08:16
1,2,3,6,7,8-HxCDF	30.41	Baseline	dadunj	08/27/21 08:16
1,2,3,7,8,9-HxCDF	32.14	Split Peak	dadunj	08/27/21 08:16
1,2,3,4,6,7,8-HpCDF	33.62	Split Peak	dadunj	08/27/21 08:16
OCDF	36.79	Split Peak	dadunj	08/27/21 08:17

Lab Sample ID: 320-77214-13 Client Sample ID: 11215702-080221-BN-DUP-11

Date Analyzed: 08/26/21 00:35 Lab File ID: 25AU2110D5_20.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	17.78	Split Peak	dadunj	08/27/21 08:22
1,2,3,7,8-PeCDF	22.03	Split Peak	dadunj	08/27/21 08:22
2,3,4,7,8-PeCDF	23.37	Baseline	dadunj	08/27/21 08:22
1,2,3,4,7,8-HxCDF	30.20	Split Peak	dadunj	08/27/21 08:23
1,2,3,6,7,8-HxCDF	30.41	Split Peak	dadunj	08/27/21 08:23
1,2,3,4,7,8-HxCDD	31.52	Invalid Compound ID	dadunj	08/27/21 08:23
1,2,3,6,7,8-HxCDD	31.62	Split Peak	dadunj	08/27/21 08:23
1,2,3,7,8,9-HxCDF	32.16	Split Peak	dadunj	08/27/21 08:23
OCDF	36.80	Split Peak	dadunj	08/27/21 08:25

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 520325

Lab Sample ID: 320-77214-1 DL Client Sample ID: 11215702-080221-BN-SJSB090 (0-2) DL

Date Analyzed: 08/26/21 21:51 Lab File ID: 25AU2110D5_47.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.19	Peak assignment corrected	arghestanis	08/27/21 10:12
13C-2,3,7,8-TCDD	17.92	Peak assignment corrected	arghestanis	08/27/21 10:12
2,3,7,8-TCDD	17.93	Split Peak	dadunj	08/30/21 09:52
1,2,3,7,8-PeCDF	22.16	Invalid Compound ID	dadunj	08/30/21 09:53

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

1613B

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 520456

Lab Sample ID: 320-77214-13 RA Client Sample ID: 11215702-080221-BN-DUP-11 RA

Date Analyzed: 08/27/21 21:23 Lab File ID: 27AU21A11D2_010.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.67	Baseline	bennettd	08/30/21 09:43

Lab Sample ID: 320-77214-6 RA Client Sample ID: 11215702-080221-BN-SJSB090 (10-12) RA

Date Analyzed: 08/27/21 22:01 Lab File ID: 27AU21A11D2_011.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.63	Peak Tail	bennettd	08/30/21 09:44

Lab Sample ID: 320-77214-4 RA Client Sample ID: 11215702-080221-BN-SJSB090 (6-8) RA

Date Analyzed: 08/27/21 23:18 Lab File ID: 27AU21A11D2_013.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.64	Peak Tail	bennettd	08/30/21 09:45

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 520997

Lab Sample ID: 320-77214-2 RA Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) RA

Date Analyzed: 08/31/21 22:10 Lab File ID: 31AU2111D2_015.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.71	Baseline	bennettd	09/01/21 09:46

Lab Sample ID: 320-77214-2 MS RA Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) MS RA

Date Analyzed: 08/31/21 22:48 Lab File ID: 31AU2111D2_016.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.69	Poor chromatography	bennettd	09/01/21 09:48

Lab Sample ID: 320-77214-2 MSD RA Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) MSD RA

Date Analyzed: 08/31/21 23:27 Lab File ID: 31AU2111D2_017.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.65	Poor chromatography	bennettd	09/01/21 09:50

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 521760

Lab Sample ID: 320-77214-1 RADL Client Sample ID: 11215702-080221-BN-SJSB090 (0-2) RADL

Date Analyzed: 09/01/21 14:37 Lab File ID: 01SE2111D2_009.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
37Cl4-2,3,7,8-TCDD	16.13	Wrong peak	bennettd	09/01/21 15:40
13C-2,3,7,8-TCDF	17.68	Missed Peak	bennettd	09/01/21 15:42

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25	CIL, Lot ER03111502			(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

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REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30		CIL, Lot ER09031903		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

790694

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

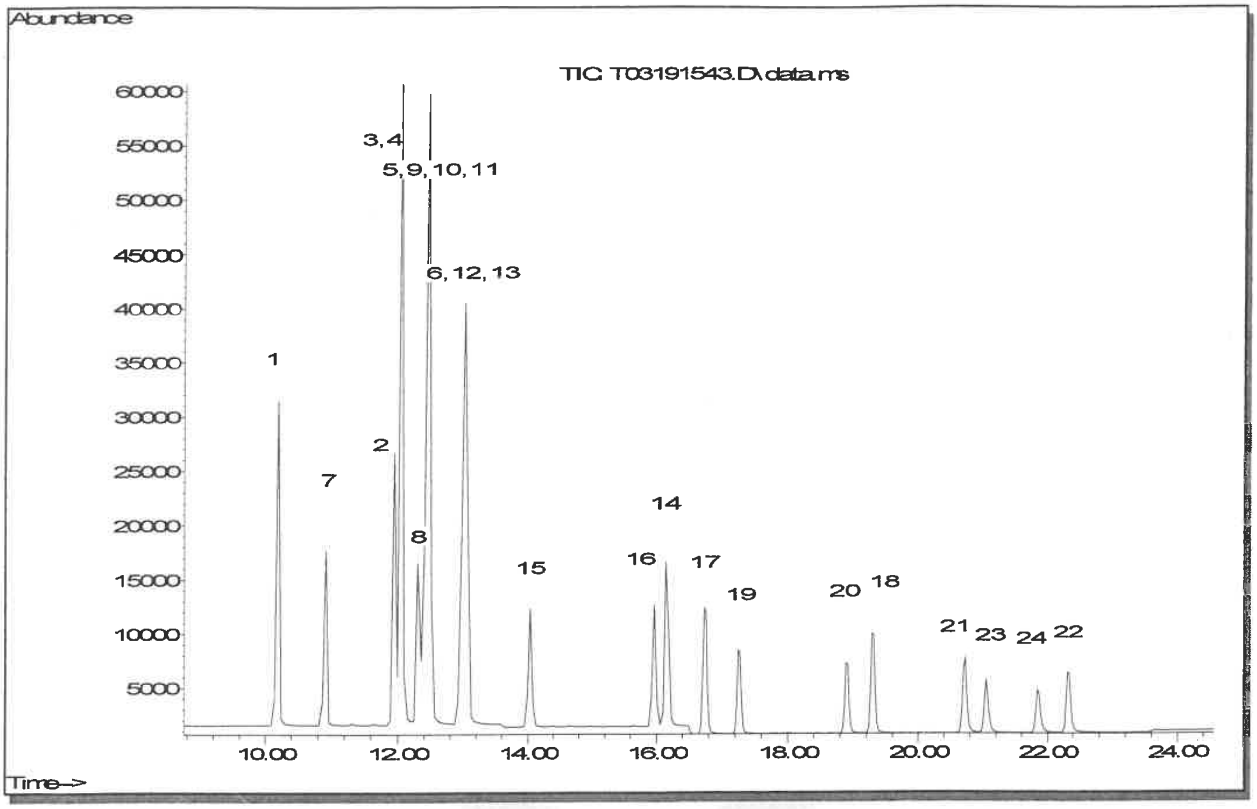

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

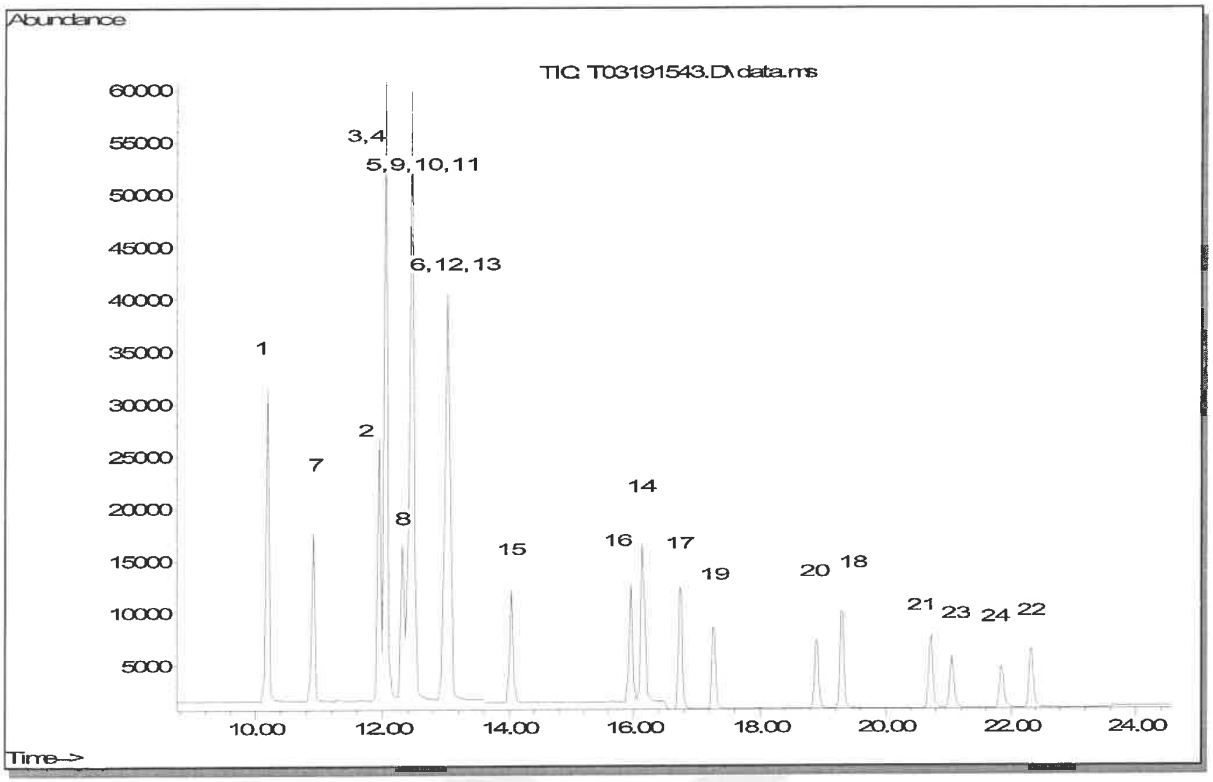

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r: 3/30/20

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

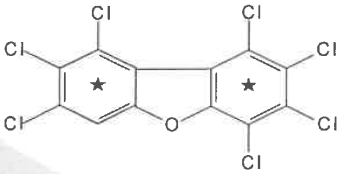

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

790708

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

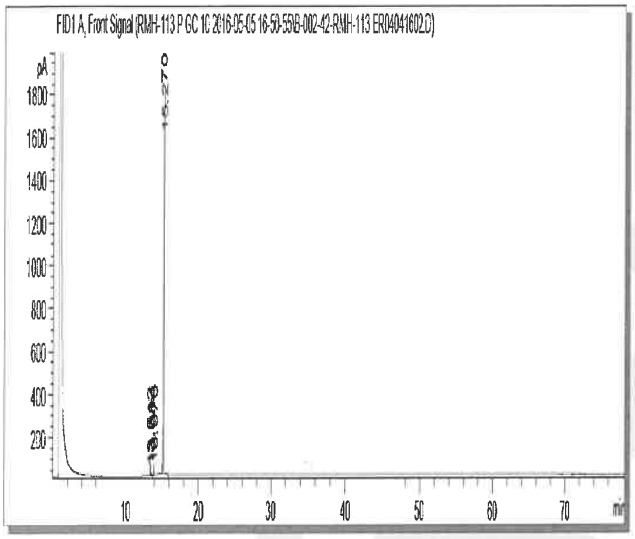

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

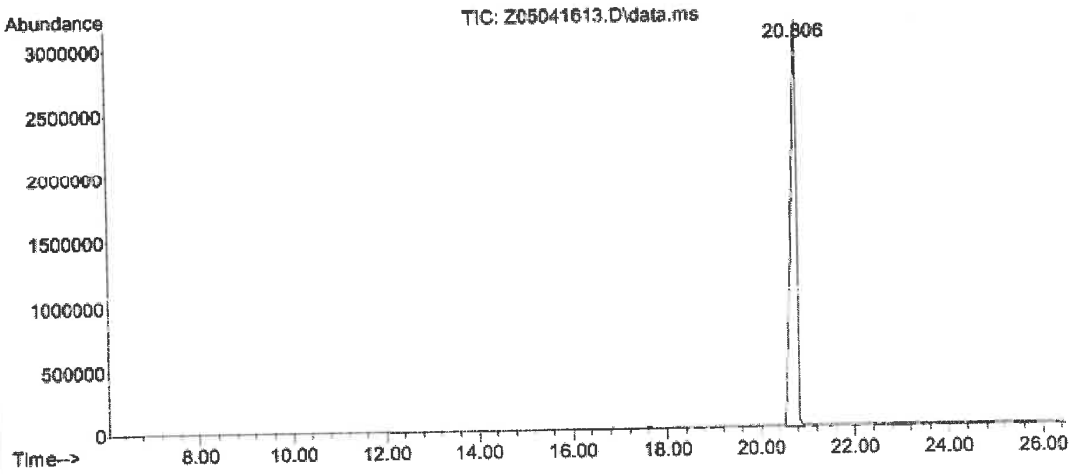

Mass Spectrum

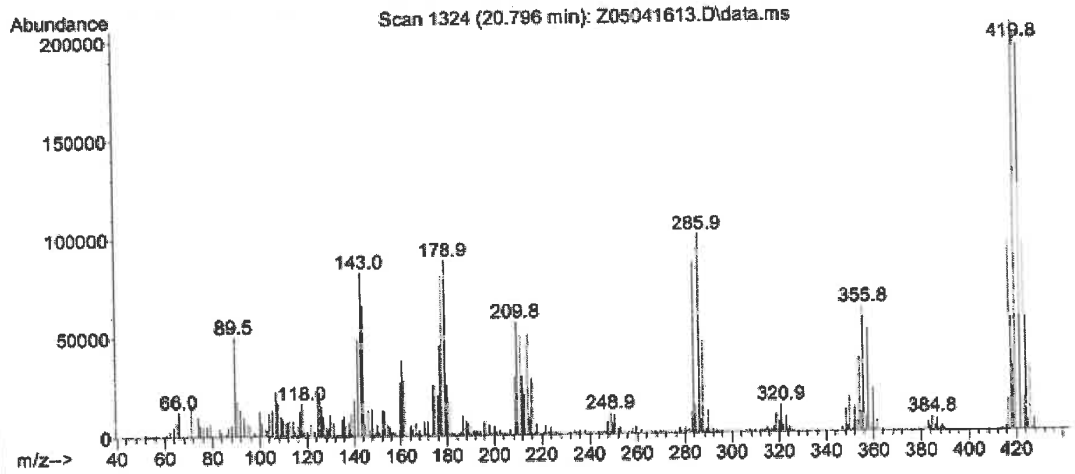

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 [illegible]

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Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

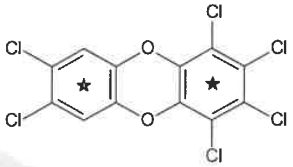

Catalog Number:	ED-946
Solution Lot:	ER04211601
Expiration Date:	June 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

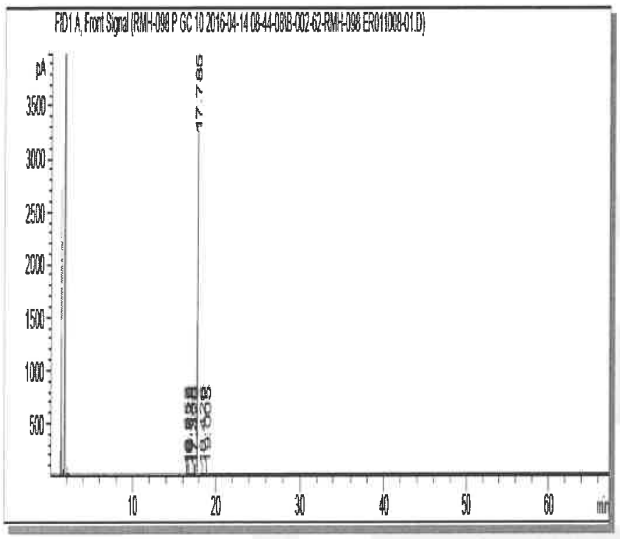

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument:	GC#10
Sample Name:	ER011008-01
Acquired:	April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

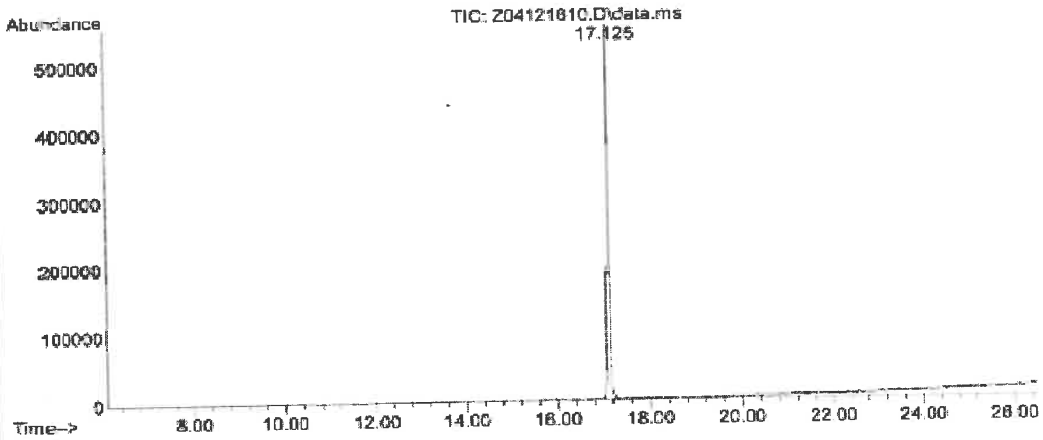

Mass Spectrum

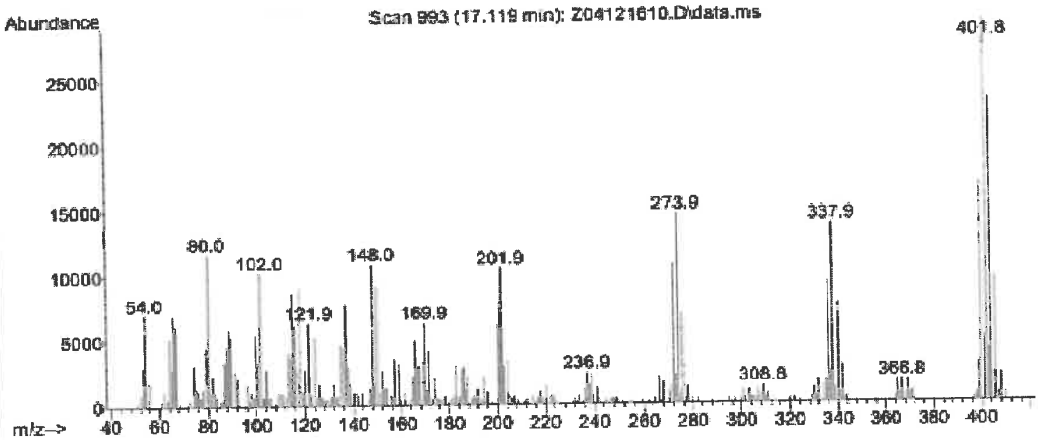

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

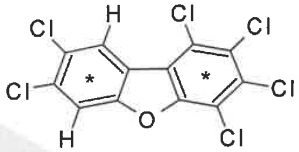

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

790720

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}Cl_6H_2O$
Compound Lot:	ER11281601	**CAS Number:**	114423-98-2
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

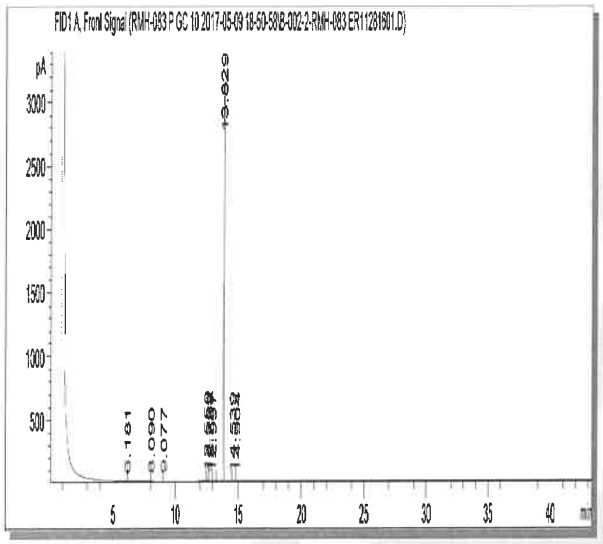

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

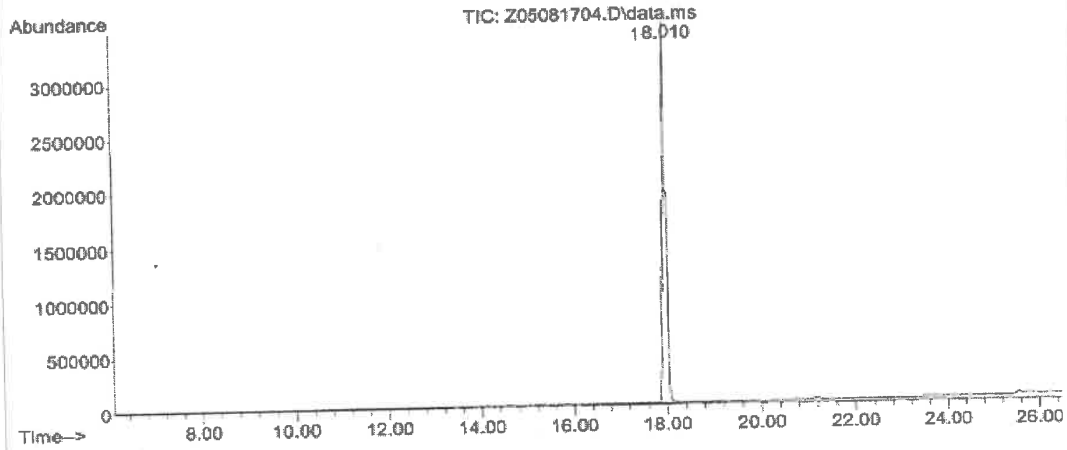

Mass Spectrum

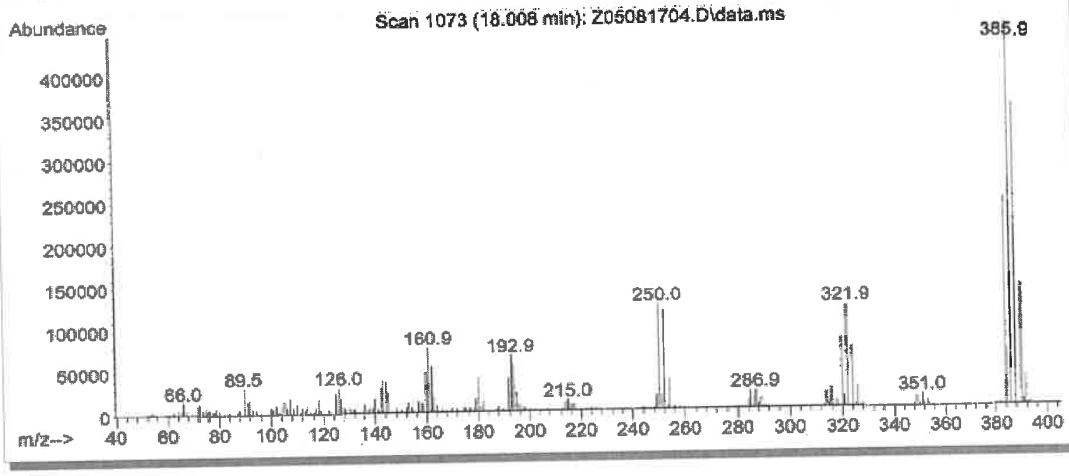

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

Cerilliant
Analytical Reference Standards
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CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

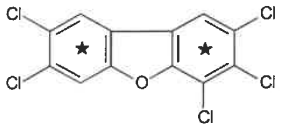

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

790725

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

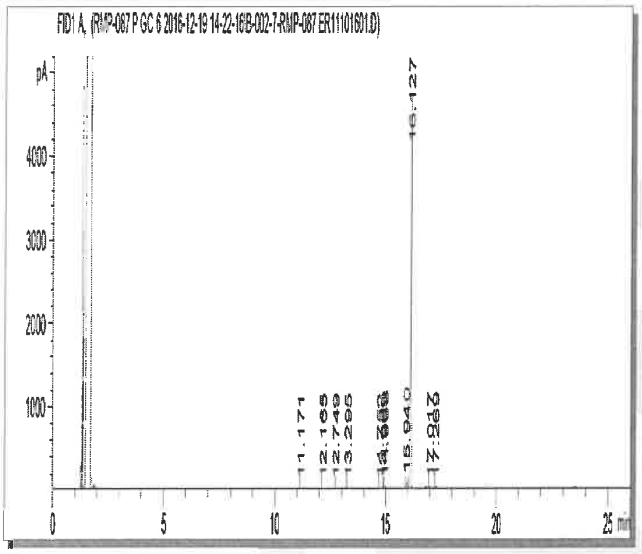

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

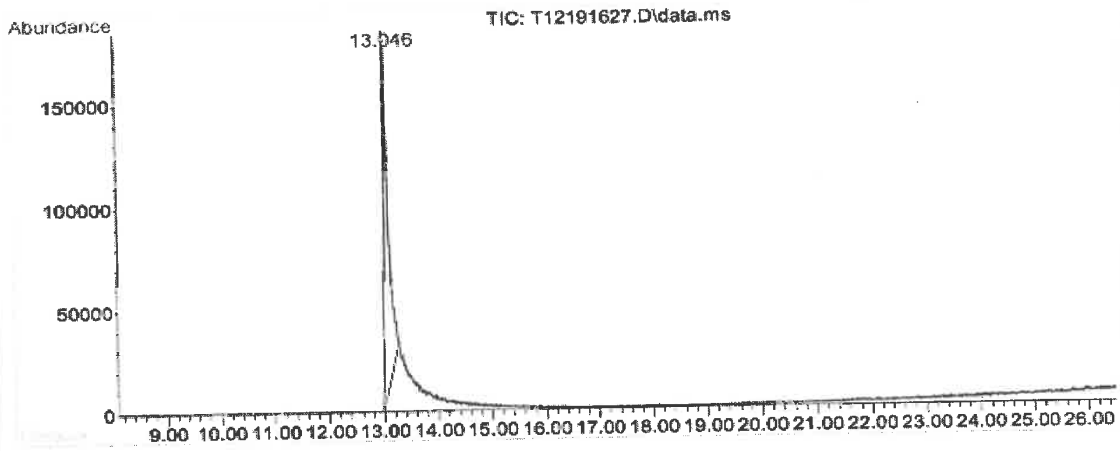

Mass Spectrum

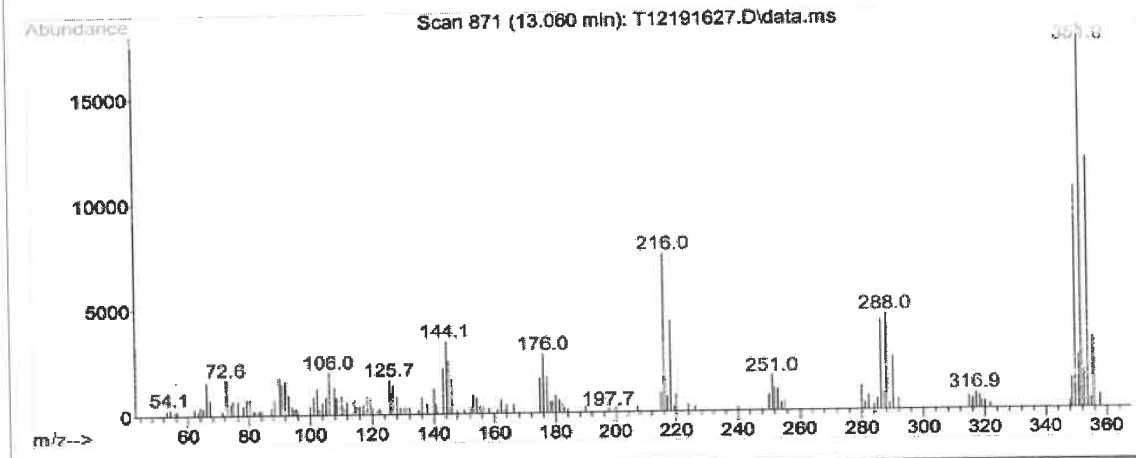

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

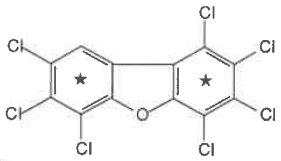

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

790730

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER020507-02

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-84-8
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

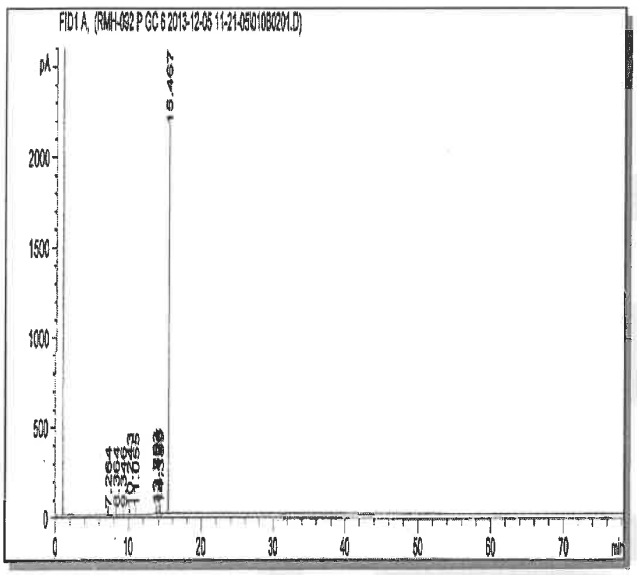

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument:	GC#6
Sample Name:	ER020507-02
Acquired:	December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

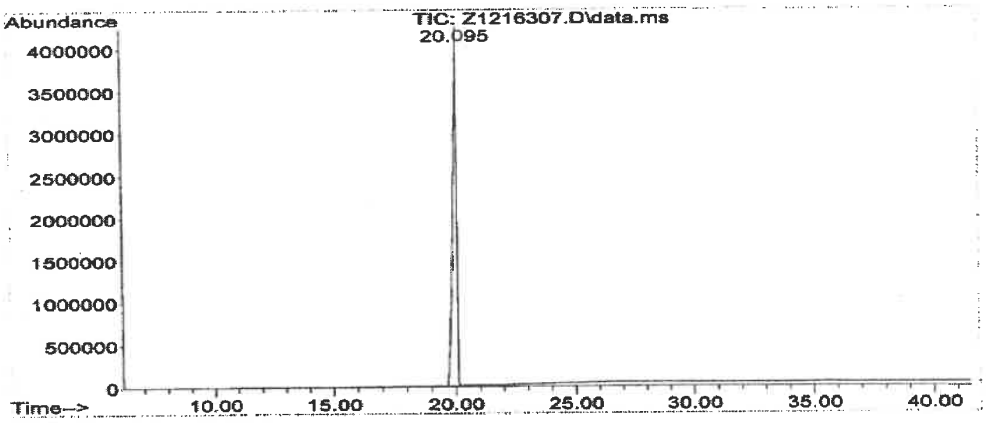

Mass Spectrum

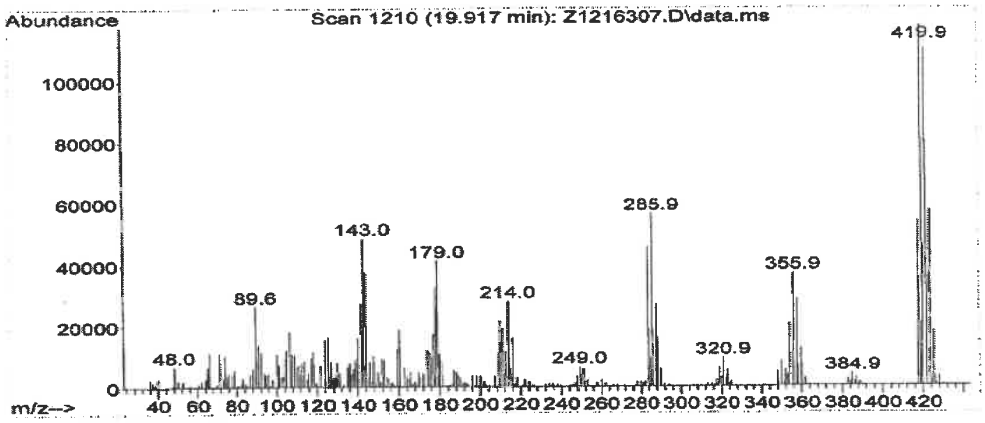

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

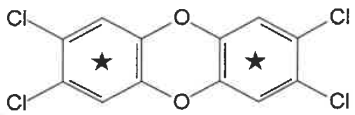

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

790737

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

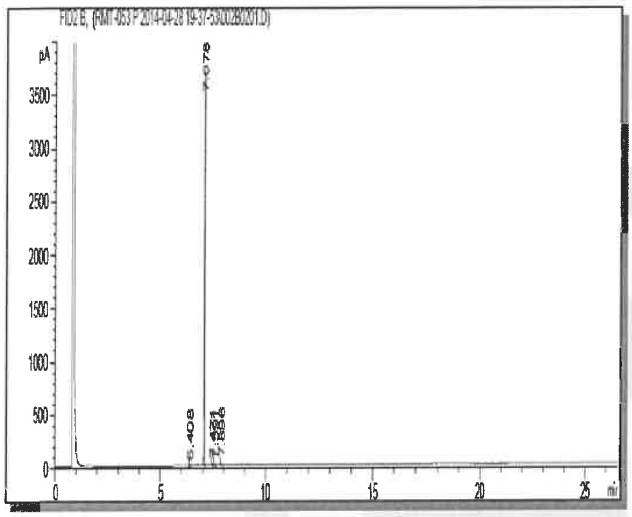

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

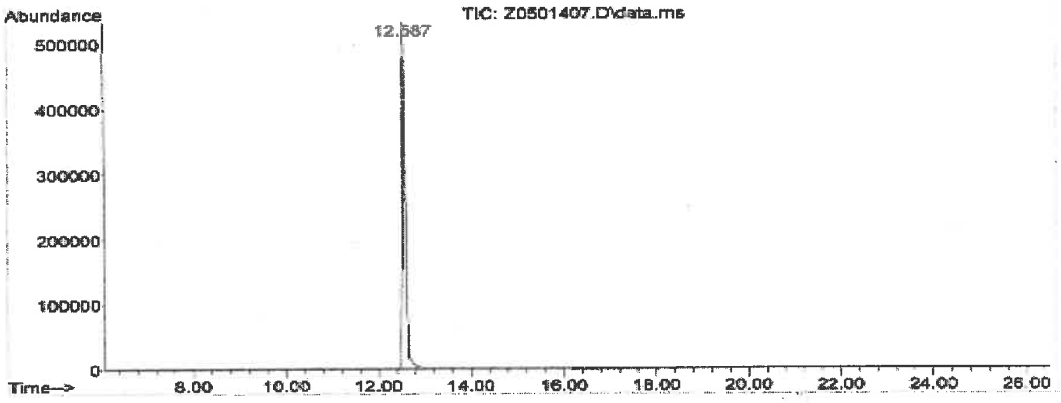

Mass Spectrum

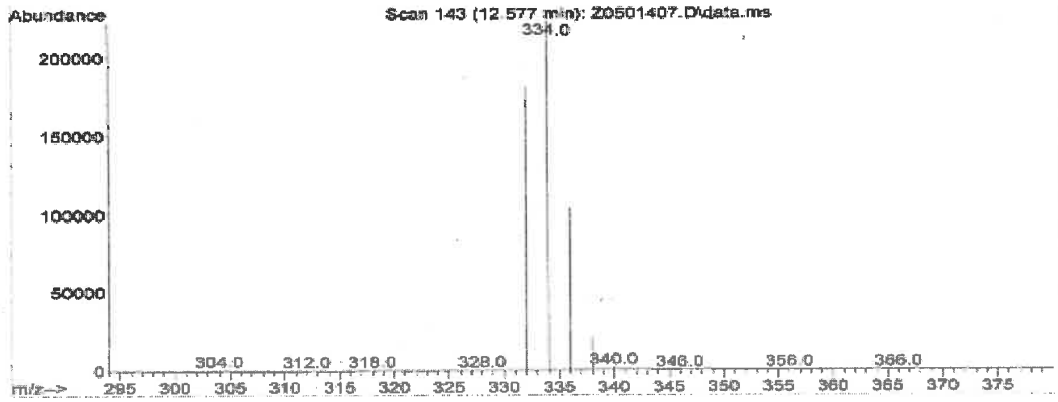

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

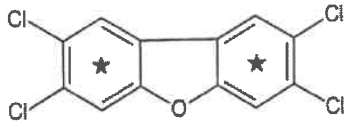

Catalog Number: EF-904
Solution Lot: ER09131601
Expiration Date: September 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

790742

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/FID

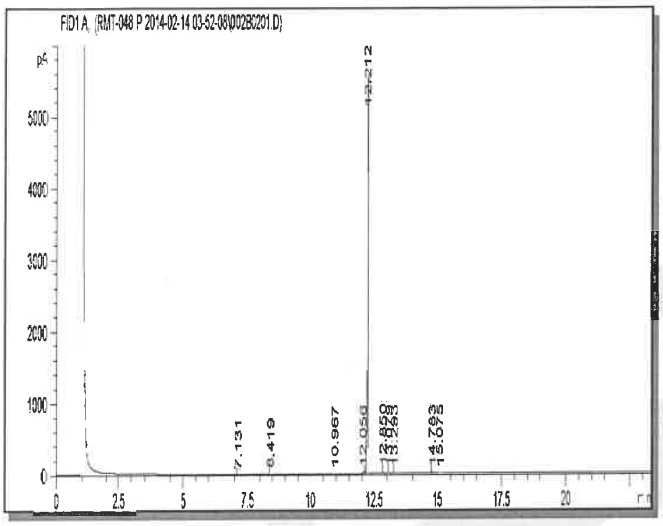

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

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GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

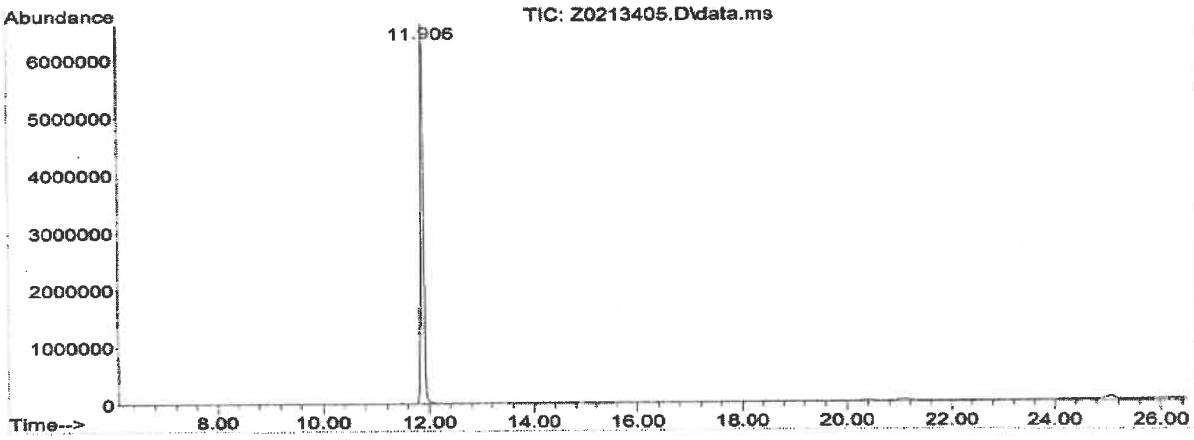

Mass Spectrum

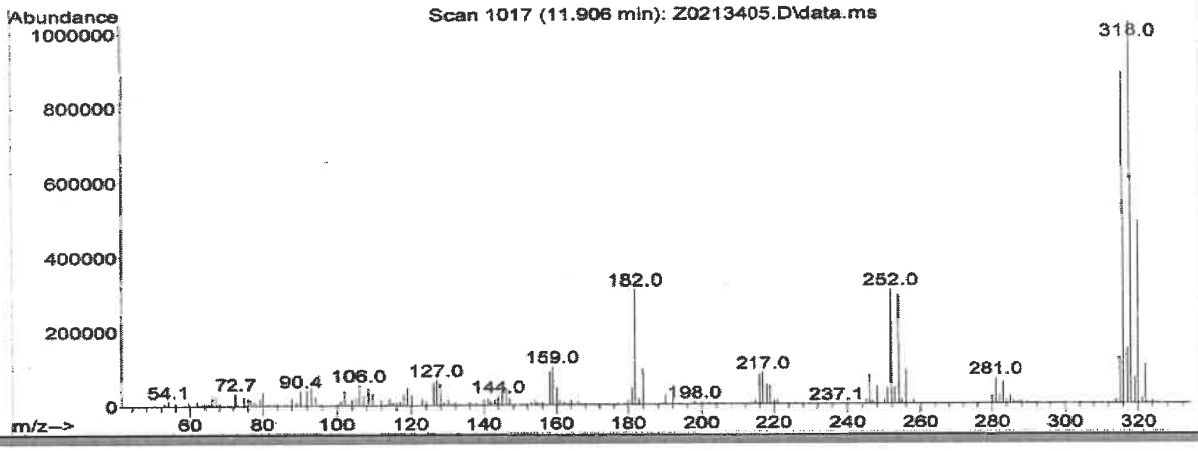

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Reagent

HRDXNIDA_00443

Rev'ed 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

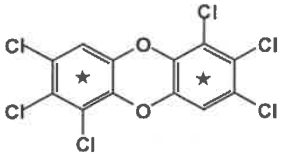

Catalog Number:	ED-966
Solution Lot:	ER03151801
Expiration Date:	March 2028
Solvent:	n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

790747

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

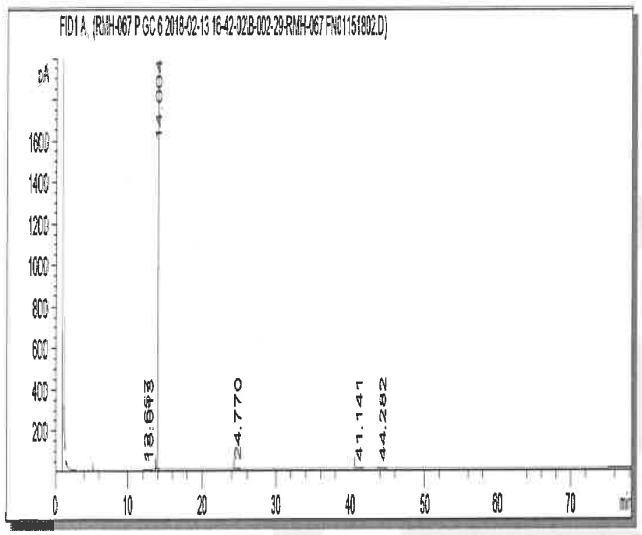

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: FN01151802
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Mar 05 10:17:33 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

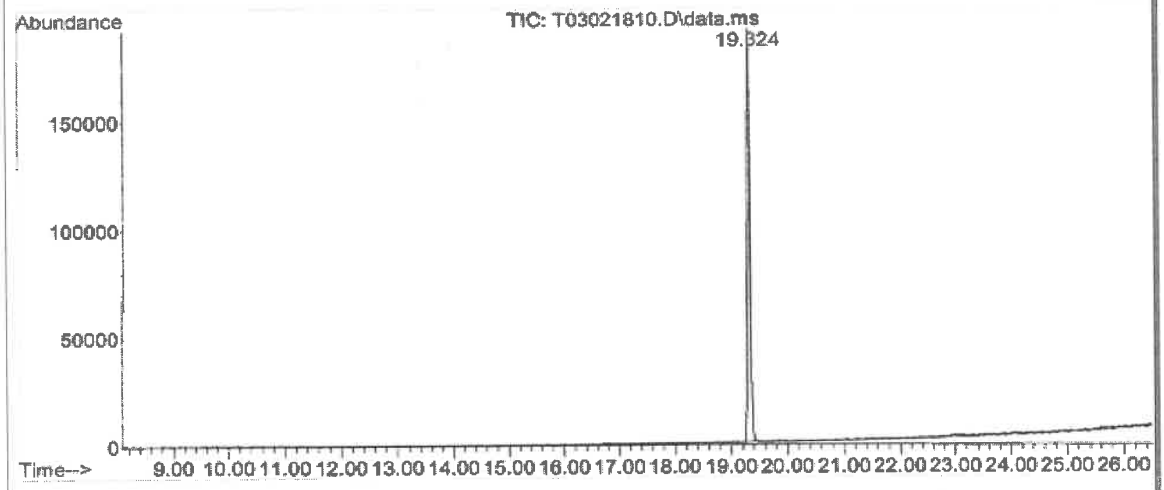

Mass Spectrum

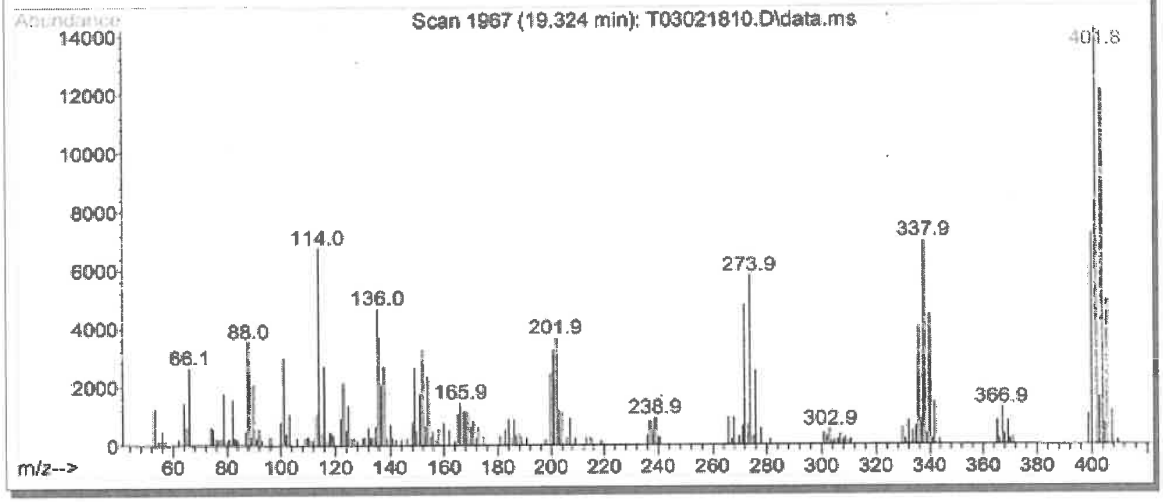

Reagent

HRDXNIDA_00457

r: 1/18/21 SW

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

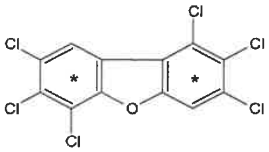

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

790752

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

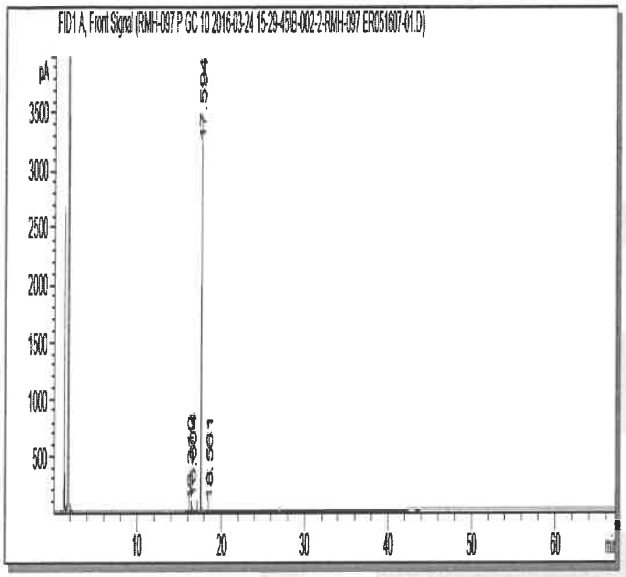

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

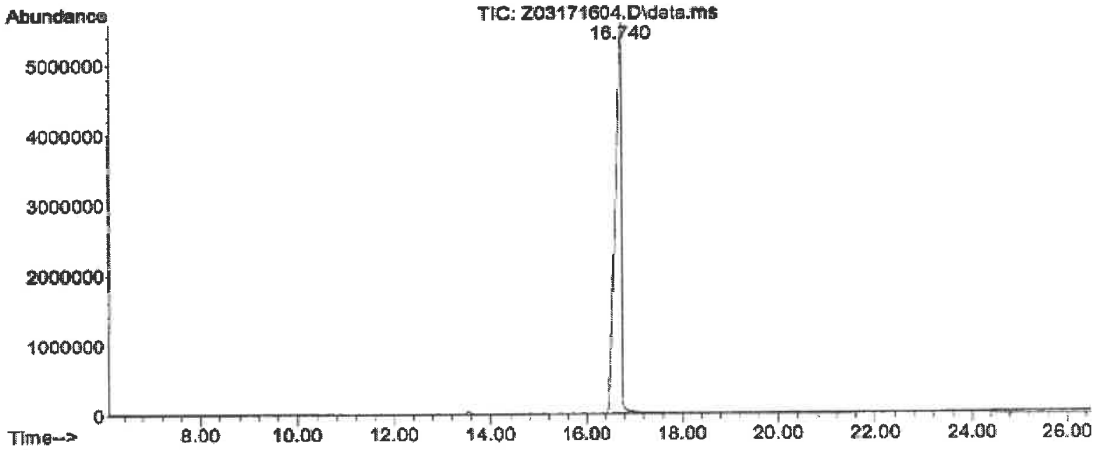

Mass Spectrum

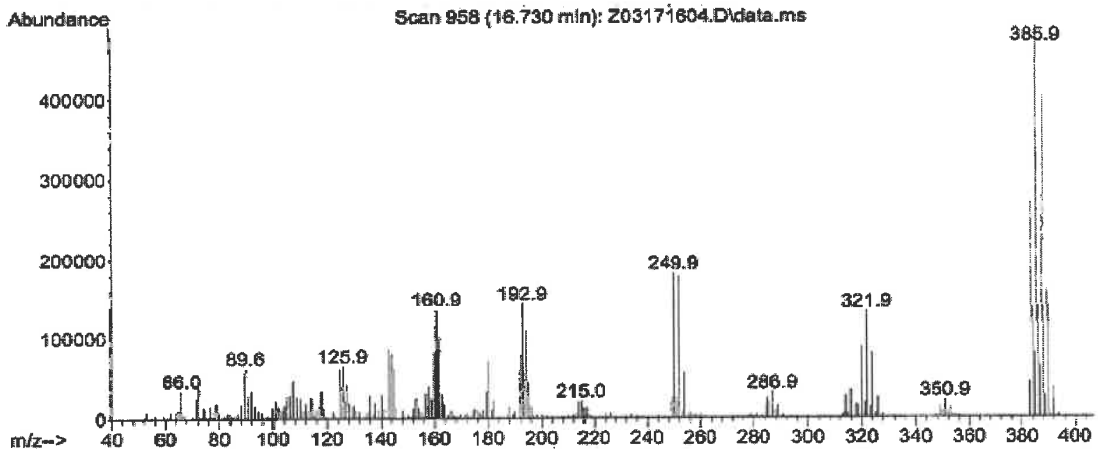

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

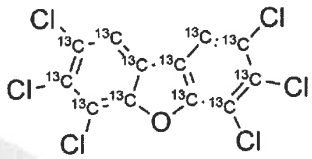

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

790759

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER09051801	**CAS Number:**	116843-05-1
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

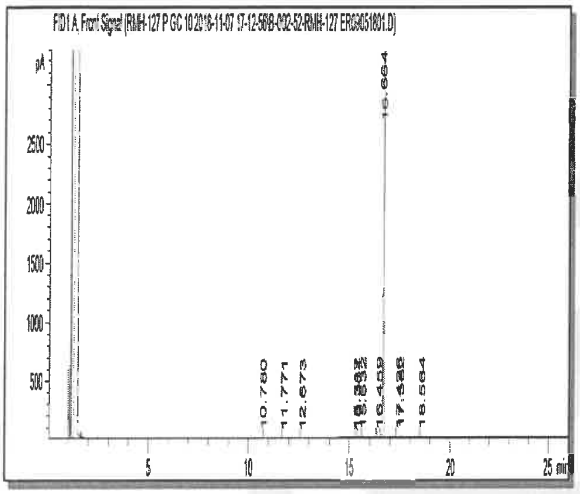

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

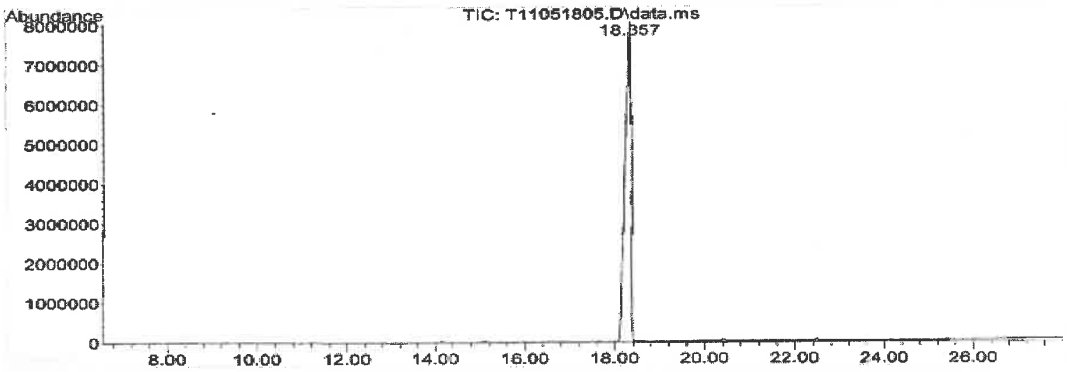

Mass Spectrum

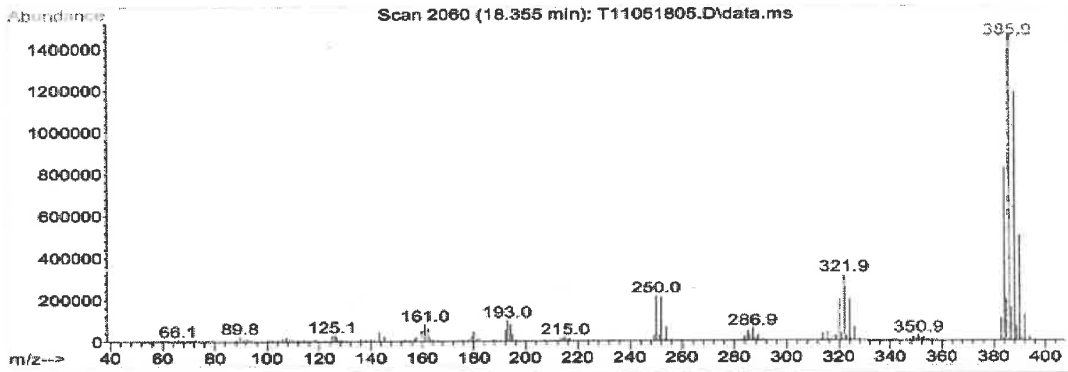

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

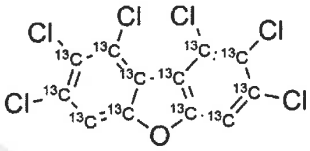

Catalog Number: EF-986
Solution Lot: ER01062016
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

790766

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

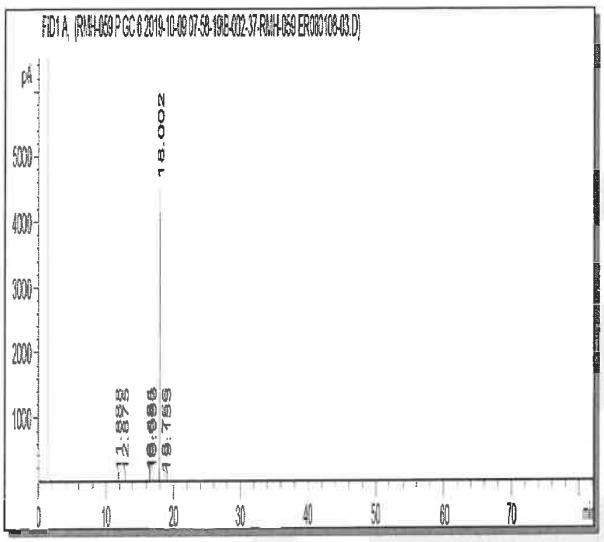

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

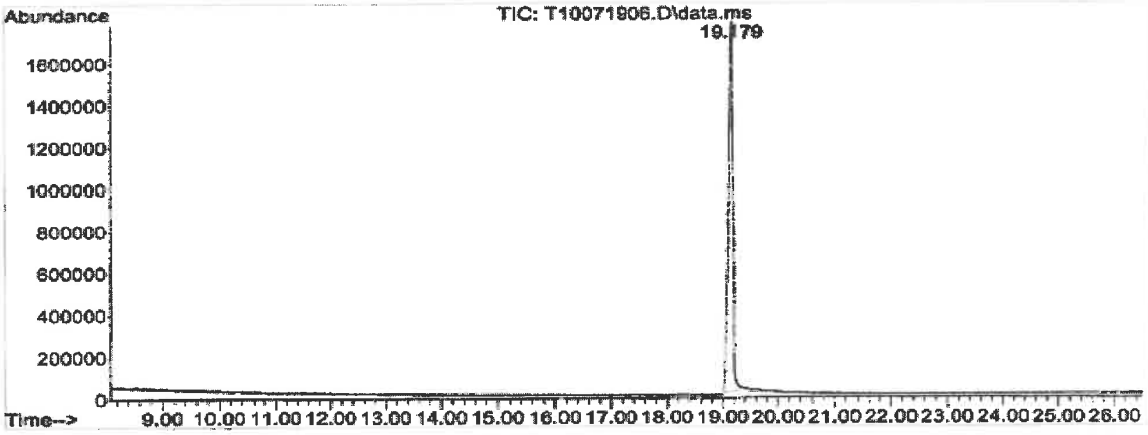

Mass Spectrum

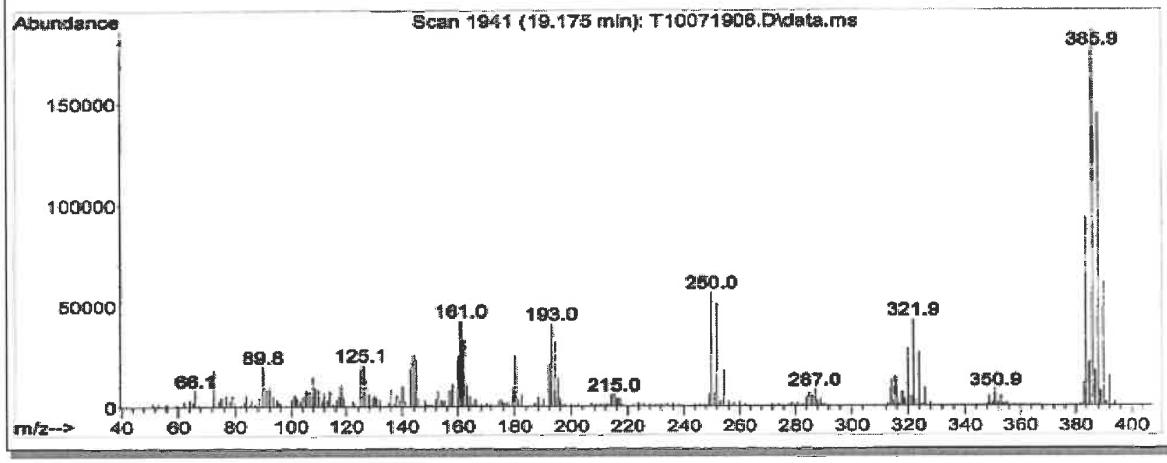

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

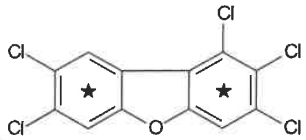

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O$
Compound Lot:	ER090110-01	**CAS Number:**	109719-77-9
		Molecular Weight:	352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

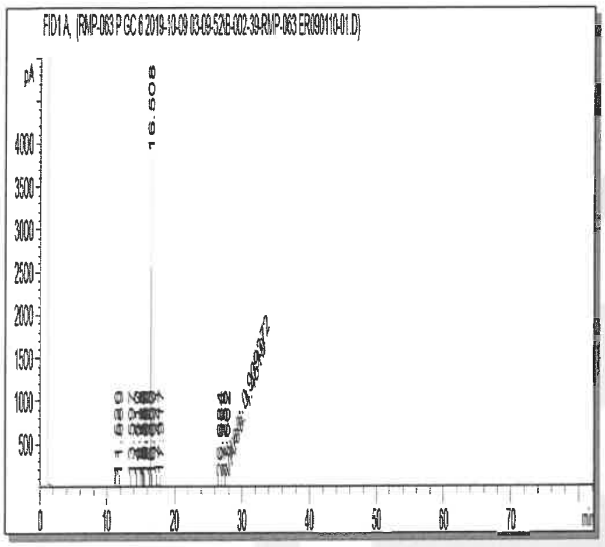

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Sample Name: ER090110-01
Acquired: October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

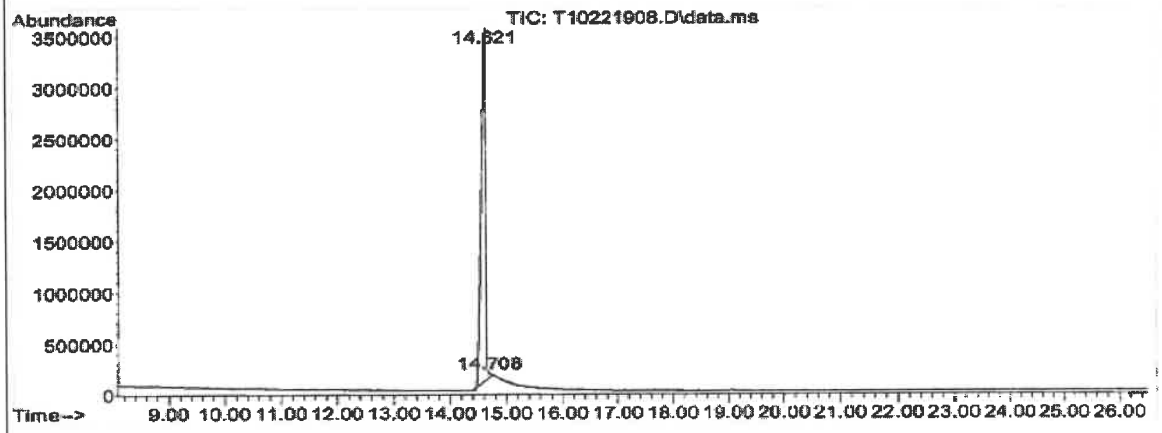

Mass Spectrum

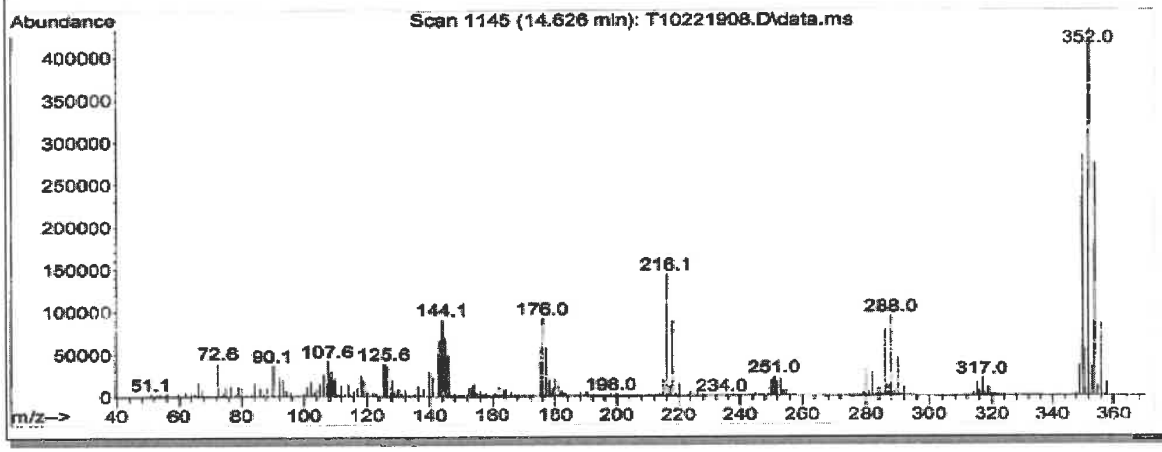

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

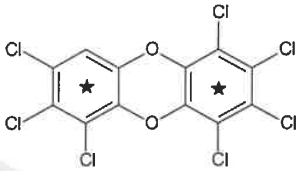

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

790780

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 0.999

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER100110-01

Chemical Formula: $^{13}C_{12}HCl_7O_2$
CAS Number: 109719-83-7
Molecular Weight: 437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

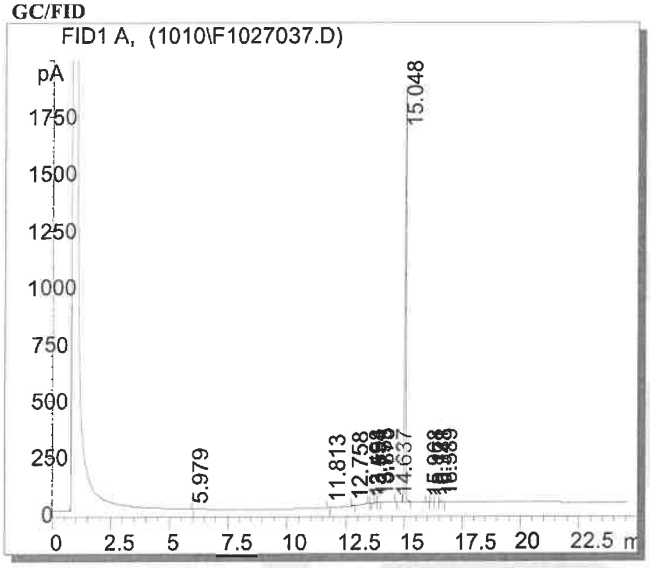

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

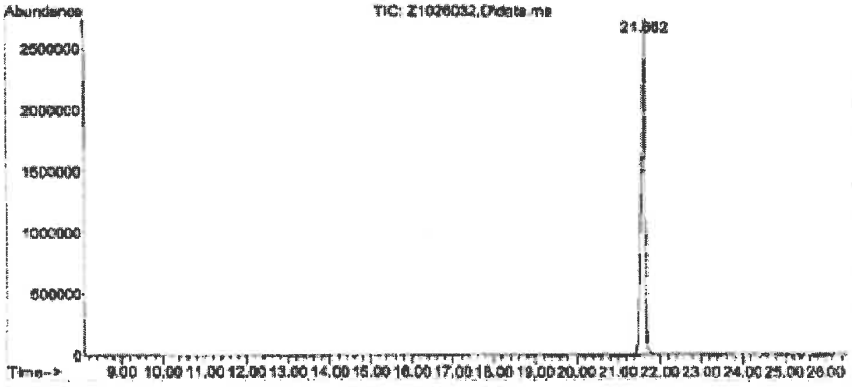

Mass Spectrum

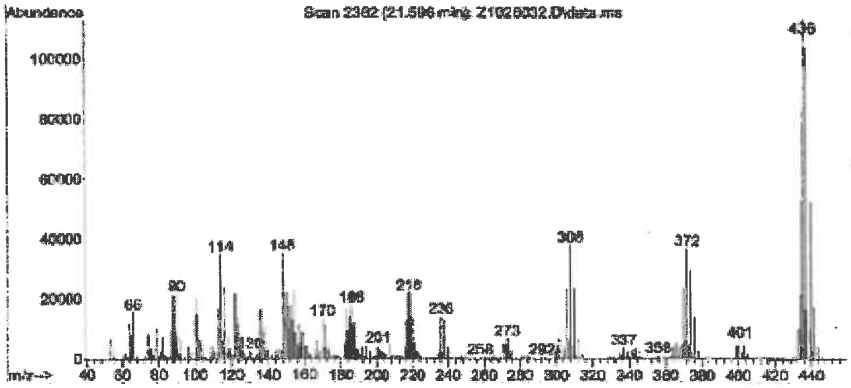

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

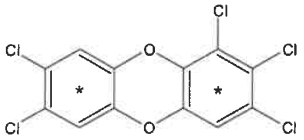

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

790785

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O_2$
Compound Lot:	ER06241403	**CAS Number:**	109719-79-1
		Molecular Weight:	368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

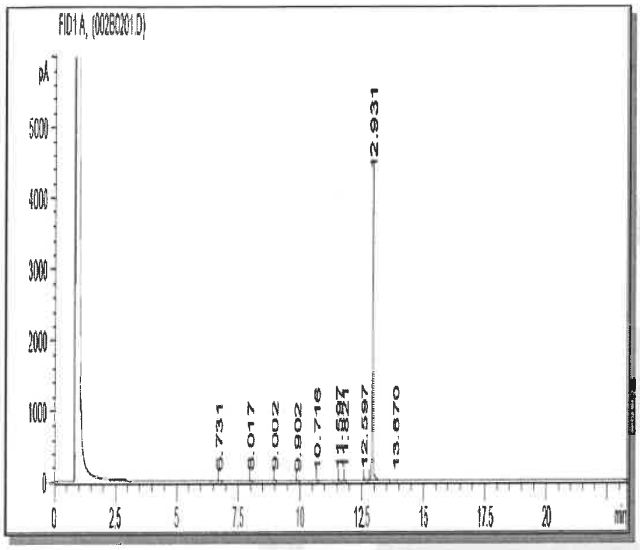

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

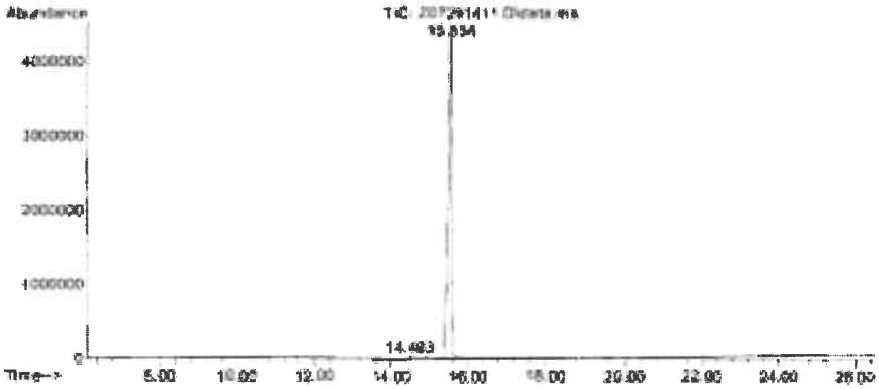

Mass Spectrum

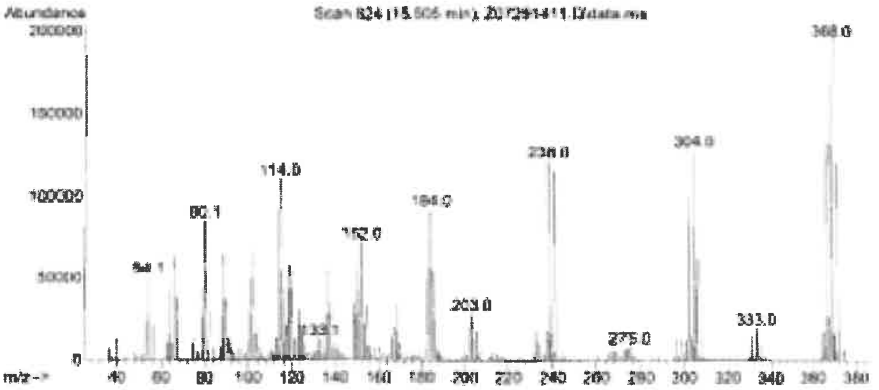

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

Cerilliant
Analytical Reference Standards
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CIL

Certificate of Analysis

ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

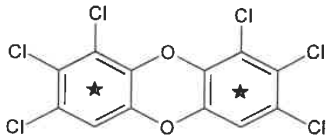

Catalog Number: ED-996
Solution Lot: ER08221601
Expiration Date: September 2026
Solvent: n-Nonane:Toluene (80:20)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

790792

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

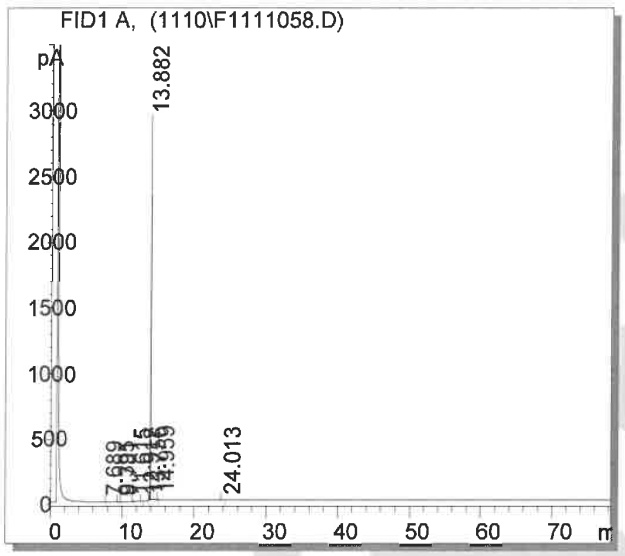

Column:	DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1110\F1111058.D
Instrument:	GC#6
Sample Name:	ER110510-01
Acquired:	November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

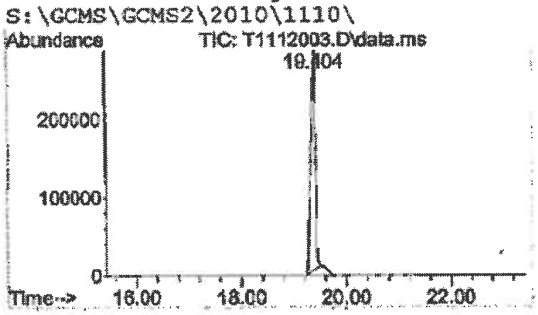

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

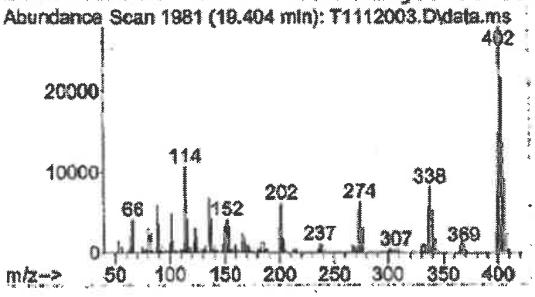

SIM Ion Chromatogram 1

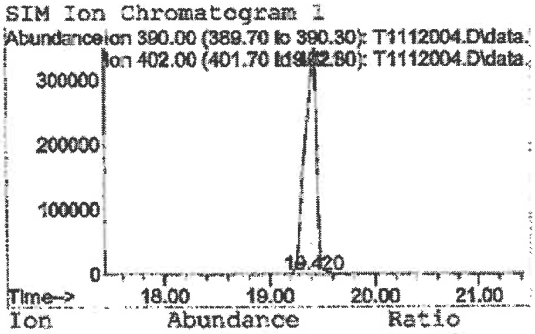

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

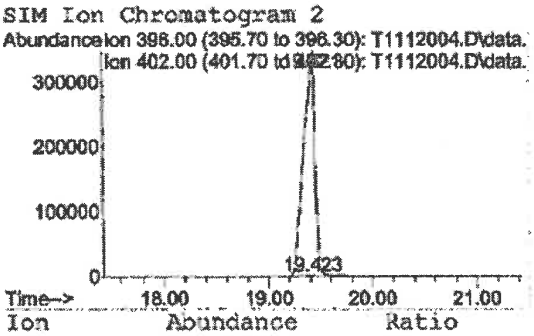

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

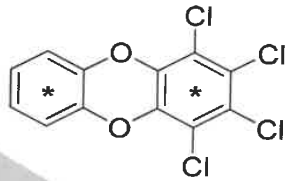

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 13194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

790799

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

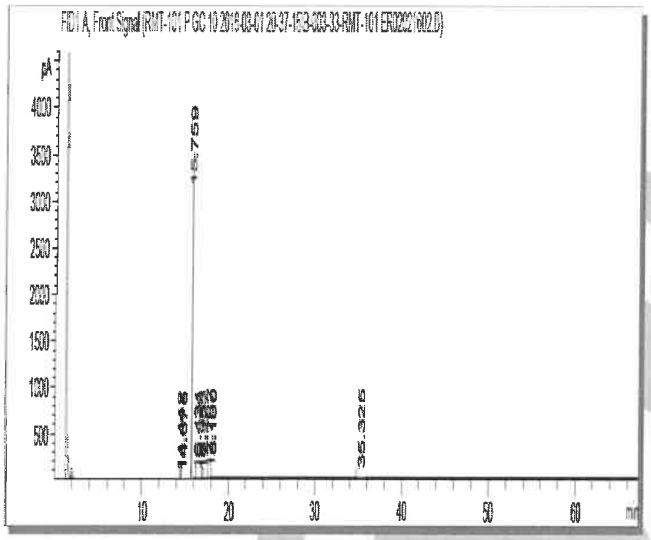

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

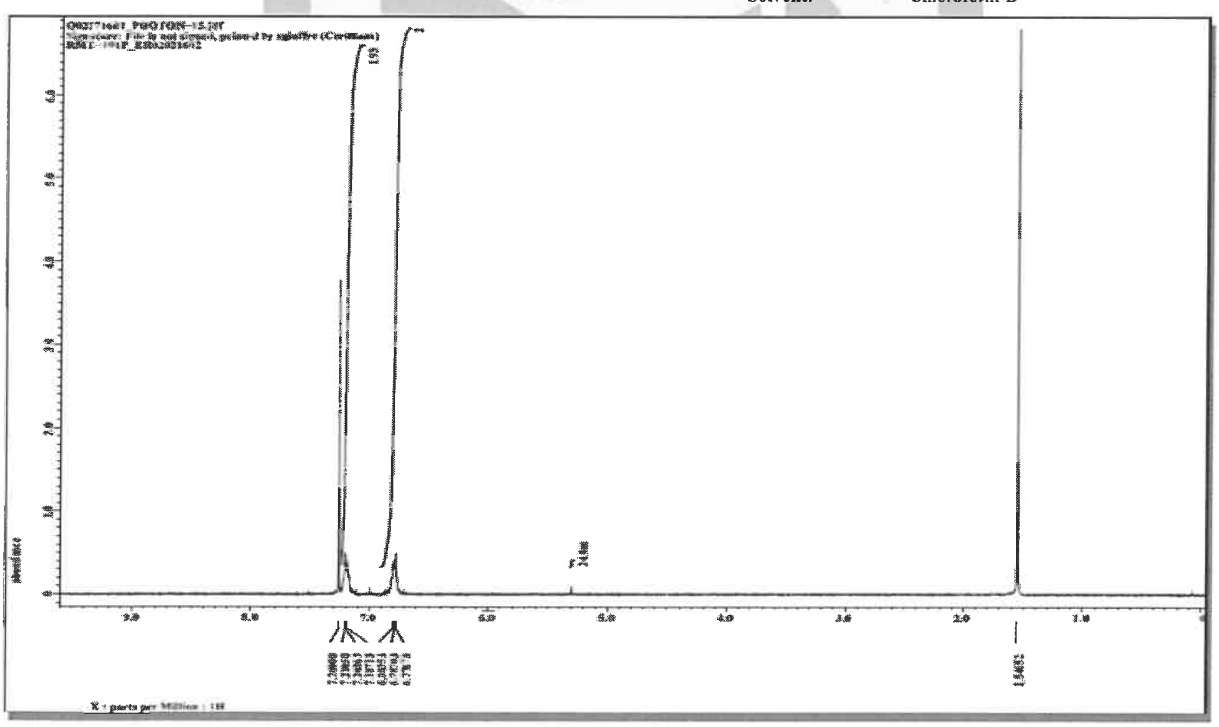

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER02021602
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Fri Feb 19 12:55:12 2016
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

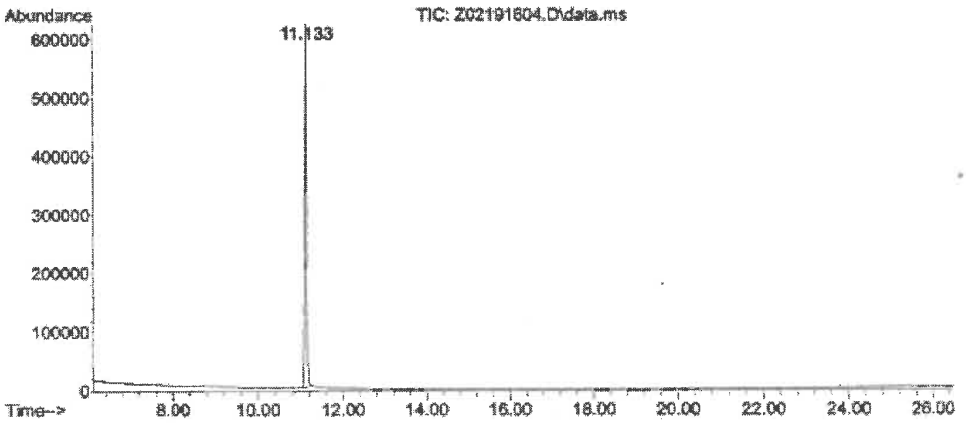

Mass Spectrum

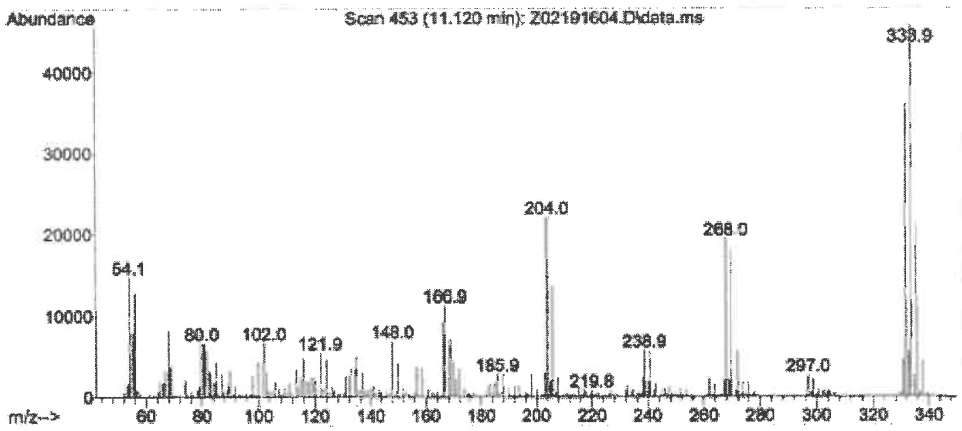

Reagent

HRDXNTA_00108

(2) P: 4ba/19 SKJ

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

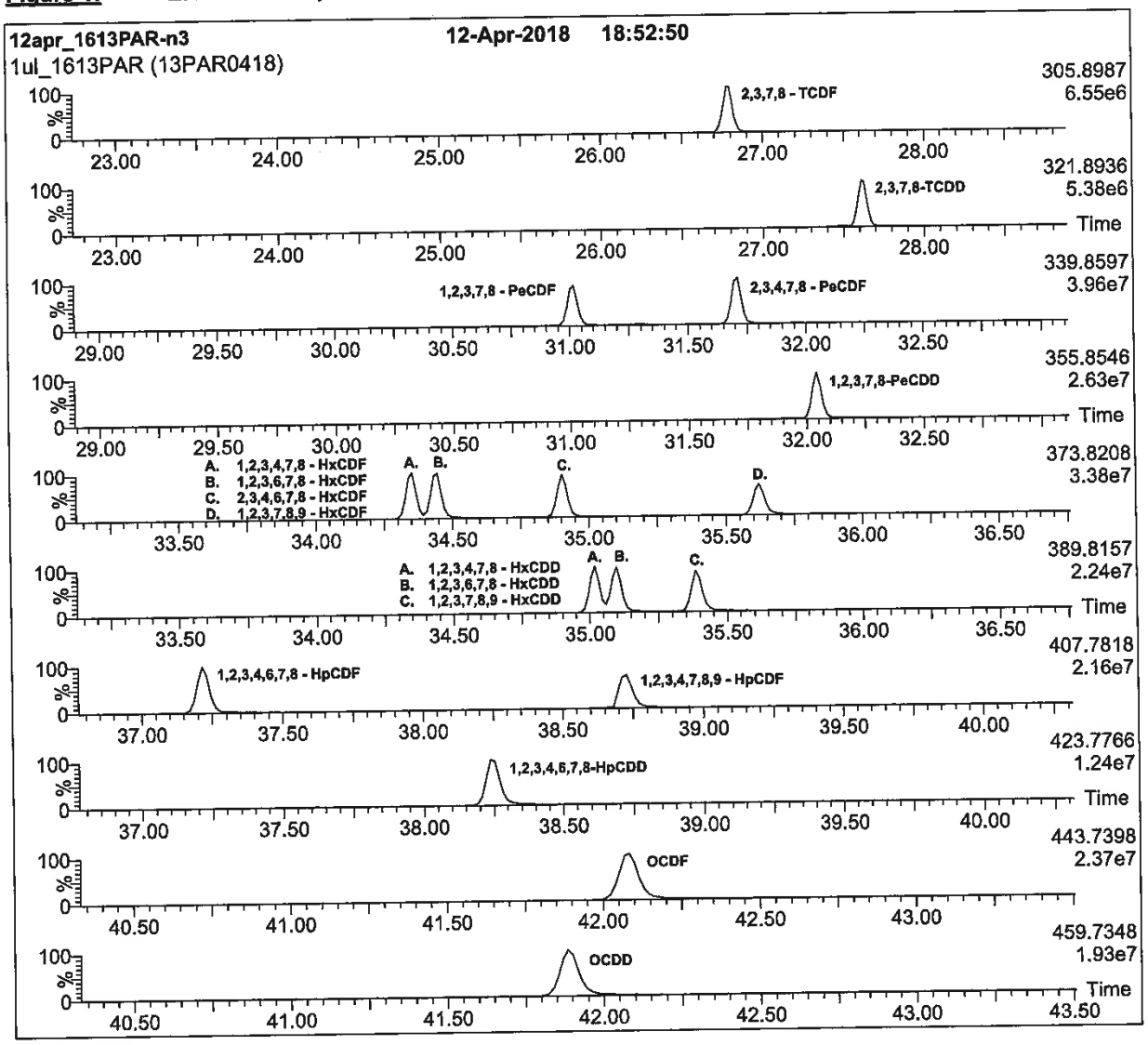

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

(3)

P: 4/3dic SXV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number: EDF-7999-10X
Solution Lot: ER02241602
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

790809

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method: GC/ECD
Column: DB-5ms, 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program: 140°C to 200°C at 40°C/min, 200°C to 300°C at 4°C/min hold 3 min
Injector Temp: Cool on-column
Detector Temp: 280°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397.1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386.6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0.8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0.7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

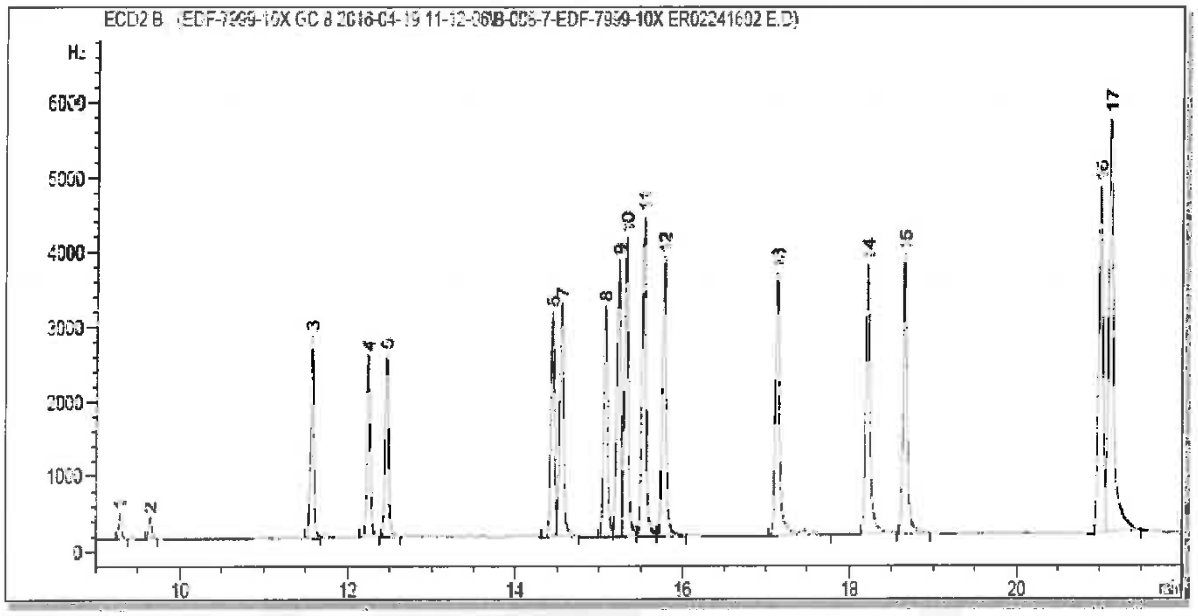

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Method 1613 PAR Stock Solution

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

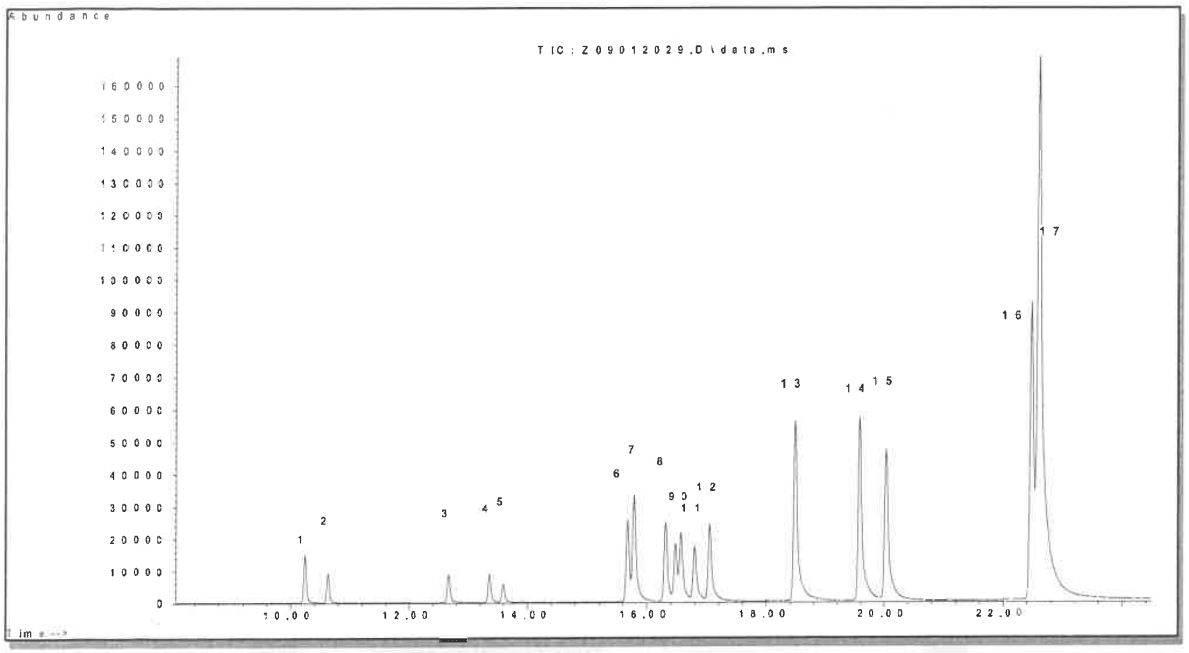

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	37TCDD #	HxCDF #	HxDF #	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #
11215702-080221-BN -SJSB090 (0-2)	320-77214-1	77	66	54	53	52	47	48	53

	QC LIMITS
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	HpCDD #	HpCDF2 #	OCDD #
11215702-080221-BN -SJSB090 (0-2)	320-77214-1	64	68	81

	QC LIMITS
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-515492/2-A	46	47	65	47	50	50	54	47

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-515492/2-A	47	54	47	47	44	46	48	50

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-080221-BN -SJSB090 (0-2) RADL	320-77214-1 RADL	52	124
11215702-080221-BN -SJSB090 (2-4) RA	320-77214-2 RA	49	79
11215702-080221-BN -SJSB090 (4-6) RA	320-77214-3 RA	64	79
11215702-080221-BN -SJSB090 (6-8) RA	320-77214-4 RA	54	75
11215702-080221-BN -SJSB090 (8-10) RA	320-77214-5 RA	60	76
11215702-080221-BN -SJSB090 (10-12) RA	320-77214-6 RA	61	77
11215702-080221-BN -SJSB090 (12-14) RA	320-77214-7 RA	57	77
11215702-080221-BN -SJSB090 (14-16) RA	320-77214-8 RA	61	73
11215702-080221-BN -DUP-11 RA	320-77214-13 RA	61	80
11215702-080221-BN -SJSB090 (2-4) MS RA	320-77214-2 MS RA	38	52
11215702-080221-BN -SJSB090 (2-4) MSD RA	320-77214-2 MSD RA	45	53

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #
11215702-080221-BN -SJSB090 (0-2) DL	320-77214-1 DL	53	38	111	66	73	80	65

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-080221-BN -SJSB090 (2-4)	320-77214-2	55	38	60	70	78	86	70	60
11215702-080221-BN -SJSB090 (4-6)	320-77214-3	54	51	71	58	64	62	63	54
11215702-080221-BN -SJSB090 (6-8)	320-77214-4	50	54	71	52	57	54	55	49
11215702-080221-BN -SJSB090 (8-10)	320-77214-5	53	56	72	55	59	57	64	54
11215702-080221-BN -SJSB090 (10-12)	320-77214-6	52	55	70	52	58	55	61	52
11215702-080221-BN -SJSB090 (12-14)	320-77214-7	49	52	69	50	54	52	58	50
11215702-080221-BN -SJSB090 (14-16)	320-77214-8	55	58	67	55	60	57	66	56
11215702-080221-BN -DUP-11	320-77214-13	55	57	76	55	60	57	62	52
	MB 320-515492/1-A	52	54	66	54	59	57	58	49
11215702-080221-BN -SJSB090 (2-4) MS	320-77214-2 MS	57	40	63	68	76	81	67	57
11215702-080221-BN -SJSB090 (2-4) MSD	320-77214-2 MSD	60	45	67	73	80	83	69	59

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-080221-BN -SJSB090 (2-4)	320-77214-2	58	62	55	55	46	54	57	61
11215702-080221-BN -SJSB090 (4-6)	320-77214-3	55	64	53	55	49	53	57	58
11215702-080221-BN -SJSB090 (6-8)	320-77214-4	50	56	48	51	48	50	55	56
11215702-080221-BN -SJSB090 (8-10)	320-77214-5	55	65	53	55	50	55	57	59
11215702-080221-BN -SJSB090 (10-12)	320-77214-6	53	63	51	53	48	52	56	56
11215702-080221-BN -SJSB090 (12-14)	320-77214-7	50	58	48	50	45	49	52	52
11215702-080221-BN -SJSB090 (14-16)	320-77214-8	57	65	56	56	52	55	59	59
11215702-080221-BN -DUP-11	320-77214-13	54	62	52	55	52	56	60	60
	MB 320-515492/1-A	51	58	49	52	49	51	54	59
11215702-080221-BN -SJSB090 (2-4) MS	320-77214-2 MS	57	63	56	56	47	54	58	59
11215702-080221-BN -SJSB090 (2-4) MSD	320-77214-2 MSD	60	65	59	59	51	57	61	64

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2110D5_4.d

Lab ID: LCS 320-515492/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	21.3	106	67-158	
2,3,7,8-TCDF	20.0	21.7	109	75-158	
1,2,3,7,8-PeCDD	100	108	108	70-142	
1,2,3,7,8-PeCDF	100	111	111	80-134	
2,3,4,7,8-PeCDF	100	102	102	68-160	
1,2,3,4,7,8-HxCDD	100	101	101	70-164	
1,2,3,6,7,8-HxCDD	100	111	111	76-134	
1,2,3,7,8,9-HxCDD	100	107	107	64-162	
1,2,3,4,7,8-HxCDF	100	96.9	97	72-134	
1,2,3,6,7,8-HxCDF	100	108	108	84-130	
1,2,3,7,8,9-HxCDF	100	107	107	78-130	
2,3,4,6,7,8-HxCDF	100	107	107	70-156	
1,2,3,4,6,7,8-HpCDD	100	109	109	70-140	
1,2,3,4,6,7,8-HpCDF	100	108	108	82-122	
1,2,3,4,7,8,9-HpCDF	100	102	102	78-138	
OCDD	200	213	106	78-144	
OCDF	200	208	104	63-170	
13C-2,3,7,8-TCDD	200	94.9	47	20-175	
13C-2,3,7,8-TCDF	200	91.2	46	22-152	
13C-1,2,3,7,8-PeCDD	200	99.6	50	21-227	
13C-1,2,3,7,8-PeCDF	200	93.5	47	21-192	
13C-2,3,4,7,8-PeCDF	200	99.3	50	13-328	
13C-1,2,3,4,7,8-HxCDD	200	108	54	21-193	
13C-1,2,3,6,7,8-HxCDD	200	93.3	47	25-163	
13C-1,2,3,4,7,8-HxCDF	200	108	54	19-202	
13C-1,2,3,6,7,8-HxCDF	200	94.4	47	21-159	
13C-1,2,3,7,8,9-HxCDF	200	93.1	47	17-205	
13C-2,3,4,6,7,8-HxCDF	200	94.8	47	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	91.9	46	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	88.9	44	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	96.8	48	20-186	
13C-OCDD	400	199	50	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2110D5_7.d

Lab ID: 320-77214-2 MS Client ID: 11215702-080221-BN-SJSB090 (2-4

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	27.1	5100	3690	-5063	67-158	E 4 G
1,2,3,7,8-PeCDD	136	35	178	105	70-142	
1,2,3,7,8-PeCDF	136	410	416	5	80-134	F1
2,3,4,7,8-PeCDF	136	230	305	52	68-160	F1
1,2,3,4,7,8-HxCDD	136	0.84 J	139	102	70-164	
1,2,3,6,7,8-HxCDD	136	4.0 J	156	112	76-134	
1,2,3,7,8,9-HxCDD	136	2.4 J	143	104	64-162	
1,2,3,4,7,8-HxCDF	136	1000	454	-425	72-134	4
1,2,3,6,7,8-HxCDF	136	240	237	-1	84-130	F1
1,2,3,7,8,9-HxCDF	136	9.6	147	101	78-130	
2,3,4,6,7,8-HxCDF	136	18	160	104	70-156	
1,2,3,4,6,7,8-HpCDD	136	83	211	94	70-140	
1,2,3,4,6,7,8-HpCDF	136	390	255	-96	82-122	F1
1,2,3,4,7,8,9-HpCDF	136	130	172	34	78-138	F1
OCDD	271	1600	1340	-79	78-144	4
OCDF	271	170	338	62	63-170	F1
13C-2,3,7,8-TCDD	271	96	109	40	25-164	
13C-2,3,7,8-TCDF	271	140	154	57	24-169	
13C-1,2,3,7,8-PeCDD	271	220	219	81	25-181	
13C-1,2,3,7,8-PeCDF	271	180	186	68	24-185	
13C-2,3,4,7,8-PeCDF	271	200	206	76	21-178	
13C-1,2,3,4,7,8-HxCDD	271	160	171	63	32-141	
13C-1,2,3,6,7,8-HxCDD	271	140	151	56	28-130	
13C-1,2,3,4,7,8-HxCDF	271	180	181	67	26-152	
13C-1,2,3,6,7,8-HxCDF	271	150	155	57	26-123	
13C-1,2,3,7,8,9-HxCDF	271	140	151	56	29-147	
13C-2,3,4,6,7,8-HxCDF	271	150	155	57	28-136	
13C-1,2,3,4,6,7,8-HpCDD	271	140	147	54	23-140	
13C-1,2,3,4,6,7,8-HpCDF	271	120	127	47	28-143	
13C-1,2,3,4,7,8,9-HpCDF	271	150	156	58	26-138	
13C-OCDD	543	310	320	59	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 31AU2111D2_016.d

Lab ID: 320-77214-2 MS RA Client ID: 11215702-080221-BN-SJSB090 (2-4

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	27.1	12000	9380	-9885	75-158	E 4 G
13C-2,3,7,8-TCDF	271	130	102	38	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2110D5_8.d

Lab ID: 320-77214-2 MSD Client ID: 11215702-080221-BN-SJSB090 (2-4

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	26.2	2400	-10179	42	50	67-158	E 4 G
1,2,3,7,8-PeCDD	131	161	96	10	50	70-142	
1,2,3,7,8-PeCDF	131	389	-16	7	50	80-134	F1
2,3,4,7,8-PeCDF	131	266	24	13	50	68-160	F1
1,2,3,4,7,8-HxCDD	131	137	104	2	50	70-164	
1,2,3,6,7,8-HxCDD	131	141	105	10	50	76-134	
1,2,3,7,8,9-HxCDD	131	137	103	4	50	64-162	
1,2,3,4,7,8-HxCDF	131	432	-457	5	50	72-134	4
1,2,3,6,7,8-HxCDF	131	223	-12	6	50	84-130	F1
1,2,3,7,8,9-HxCDF	131	144	102	2	50	78-130	
2,3,4,6,7,8-HxCDF	131	151	101	6	50	70-156	
1,2,3,4,6,7,8-HpCDD	131	198	88	6	50	70-140	
1,2,3,4,6,7,8-HpCDF	131	230	-119	10	50	82-122	F1
1,2,3,4,7,8,9-HpCDF	131	162	28	6	50	78-138	F1
OCDD	262	1350	-78	1	50	78-144	4
OCDF	262	323	58	5	50	63-170	F1
13C-2,3,7,8-TCDD	262	118	45			25-164	
13C-2,3,7,8-TCDF	262	158	60			24-169	
13C-1,2,3,7,8-PeCDD	262	218	83			25-181	
13C-1,2,3,7,8-PeCDF	262	191	73			24-185	
13C-2,3,4,7,8-PeCDF	262	209	80			21-178	
13C-1,2,3,4,7,8-HxCDD	262	170	65			32-141	
13C-1,2,3,6,7,8-HxCDD	262	156	59			28-130	
13C-1,2,3,4,7,8-HxCDF	262	181	69			26-152	
13C-1,2,3,6,7,8-HxCDF	262	155	59			26-123	
13C-1,2,3,7,8,9-HxCDF	262	153	59			29-147	
13C-2,3,4,6,7,8-HxCDF	262	156	60			28-136	
13C-1,2,3,4,6,7,8-HpCDD	262	149	57			23-140	
13C-1,2,3,4,6,7,8-HpCDF	262	133	51			28-143	
13C-1,2,3,4,7,8,9-HpCDF	262	160	61			26-138	
13C-OCDD	523	334	64			17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 31AU2111D2_017.d

Lab ID: 320-77214-2 MSD RA Client ID: 11215702-080221-BN-SJSB090 (2-4

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDF	26.2	5870	-23652	46	50	75-158	E 4 G
13C-2,3,7,8-TCDF	262	118	45			24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab File ID: 25AU2110D5_3.d Lab Sample ID: MB 320-515492/1-A

Matrix: Sediment Date Extracted: 08/12/2021 05:19

Instrument ID: 10D5 Date Analyzed: 08/25/2021 11:20

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-515492/2-A	25AU2110D5_4.d	08/25/2021 12:05
11215702-080221-BN-SJSB090 (0-2)	320-77214-1	25AU2110D5_5.d	08/25/2021 12:50
11215702-080221-BN-SJSB090 (2-4)	320-77214-2	25AU2110D5_6.d	08/25/2021 13:35
11215702-080221-BN-SJSB090 (2-4) MS	320-77214-2 MS	25AU2110D5_7.d	08/25/2021 14:20
11215702-080221-BN-SJSB090 (2-4) MSD	320-77214-2 MSD	25AU2110D5_8.d	08/25/2021 15:05
11215702-080221-BN-SJSB090 (4-6)	320-77214-3	25AU2110D5_9.d	08/25/2021 15:50
11215702-080221-BN-SJSB090 (6-8)	320-77214-4	25AU2110D5_10.d	08/25/2021 16:35
11215702-080221-BN-SJSB090 (8-10)	320-77214-5	25AU2110D5_11.d	08/25/2021 17:20
11215702-080221-BN-SJSB090 (10-12)	320-77214-6	25AU2110D5_12.d	08/25/2021 18:05
11215702-080221-BN-SJSB090 (12-14)	320-77214-7	25AU2110D5_13.d	08/25/2021 18:50
11215702-080221-BN-SJSB090 (14-16)	320-77214-8	25AU2110D5_18.d	08/25/2021 23:05
11215702-080221-BN-DUP-11	320-77214-13	25AU2110D5_20.d	08/26/2021 00:35
11215702-080221-BN-SJSB090 (0-2) DL	320-77214-1 DL	25AU2110D5_47.d	08/26/2021 21:51
11215702-080221-BN-DUP-11 RA	320-77214-13 RA	27AU21A11D2_010.d	08/27/2021 21:23
11215702-080221-BN-SJSB090 (10-12) RA	320-77214-6 RA	27AU21A11D2_011.d	08/27/2021 22:01
11215702-080221-BN-SJSB090 (14-16) RA	320-77214-8 RA	27AU21A11D2_012.d	08/27/2021 22:40
11215702-080221-BN-SJSB090 (6-8) RA	320-77214-4 RA	27AU21A11D2_013.d	08/27/2021 23:18
11215702-080221-BN-SJSB090 (12-14) RA	320-77214-7 RA	27AU21A11D2_014.d	08/27/2021 23:56
11215702-080221-BN-SJSB090 (8-10) RA	320-77214-5 RA	27AU21A11D2_015.d	08/28/2021 00:35
11215702-080221-BN-SJSB090 (4-6) RA	320-77214-3 RA	27AU21A11D2_016.d	08/28/2021 01:13
11215702-080221-BN-SJSB090 (2-4) RA	320-77214-2 RA	31AU2111D2_015.d	08/31/2021 22:10
11215702-080221-BN-SJSB090 (2-4) MS RA	320-77214-2 MS RA	31AU2111D2_016.d	08/31/2021 22:48

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab File ID: 25AU2110D5_3.d Lab Sample ID: MB 320-515492/1-A

Matrix: Sediment Date Extracted: 08/12/2021 05:19

Instrument ID: 10D5 Date Analyzed: 08/25/2021 11:20

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
11215702-080221-BN-SJSB090 (2-4) MSD RA	320-77214-2 MSD RA	31AU2111D2_017.d	08/31/2021 23:27
11215702-080221-BN-SJSB090 (0-2) RADL	320-77214-1 RADL	01SE2111D2_009.d	09/01/2021 14:37

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (0-2)
Lab Sample ID: 320-77214-1
Matrix: Sediment
Lab File ID: 25AU2110D5_5.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:10
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.38(g)
Date Analyzed: 08/25/2021 12:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 50.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
39227-28-6	1,2,3,4,7,8-HxCDD	4.8	J	9.7	0.39
57653-85-7	1,2,3,6,7,8-HxCDD	25		9.7	0.38
19408-74-3	1,2,3,7,8,9-HxCDD	9.5	J	9.7	0.35
57117-44-9	1,2,3,6,7,8-HxCDF	1800		9.7	9.0
72918-21-9	1,2,3,7,8,9-HxCDF	110	q	9.7	8.5
60851-34-5	2,3,4,6,7,8-HxCDF	200	G	9.8	9.8
35822-46-9	1,2,3,4,6,7,8-HpCDD	360	B	9.7	4.5
67562-39-4	1,2,3,4,6,7,8-HpCDF	2000		9.7	4.9
55673-89-7	1,2,3,4,7,8,9-HpCDF	650		9.7	4.6
3268-87-9	OCDD	5100	B	19	11
39001-02-0	OCDF	820	B	19	0.51
34465-46-8	Total HxCDD	180	q	9.7	0.37
55684-94-1	Total HxCDF	9800	q	9.7	9.7
37871-00-4	Total HpCDD	740	B	9.7	4.5
38998-75-3	Total HpCDF	3100		9.7	4.8

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
109719-80-4	13C-1,2,3,4,7,8-HxCDD	52		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	47		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	66		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	54		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	48		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	53		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	64		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	53		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	68		26-138
114423-97-1	13C-OCDD	81		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	77		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Sample Type: Client
Inject. Date: 25-Aug-2021 12:50:47 ALS Bottle#: 6 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-1-A 320-77214-A-1-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:38:58 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:56:25

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	39273170	0.76	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.628	26307155	0.84	1.6249	41.2	41.2	2.410	2.410	41.22	
2,3,7,8-TCDF	17.643	8399199864	0.77	1.0239	31182	31182	121.5	121.5		EM
A Non-2,3,7,8-sub-TCDF	17.076	7084430871	0.78	1.0239	26301	26301	121.5	19888		M
S Total TCDF					57483	57483	121.5	121.5		
D 13C-2,3,7,8-TCDD	18.127						1.761	1.761		U
2,3,7,8-TCDD	18.535						0.0	0.0		U
$ 37Cl4-2,3,7,8-TCDD	18.535	13327033		1.1071	30.7	30.7	3.495	3.495	76.63	M
A Non-2,3,7,8-sub-TCDD	17.537						8.575	2996.5		U
S Total TCDD							2996.5	2996.5		
D 13C-1,2,3,7,8-PeCDF	22.852	32085974	1.62	1.2101	67.5	67.5	1.365	1.365	67.52	
1,2,3,7,8-PeCDF	22.865	428023800	1.58	1.0611	1257.1	1257.1	10.1	10.1		Ea
D 13C-2,3,4,7,8-PeCDF	24.065	41429263	1.59	1.2395	85.1	85.1	1.332	1.332	85.11	
2,3,4,7,8-PeCDF	24.093	270857532	1.59	1.0184	642.0	642.0	6.036	6.036		a
A F1 PeCDFs	19.851	2080181	1.55	1.0398	8.366	5.443	0.0566	4.553		RQ
A Non-2,3,7,8-sub-PeCDF	23.067	378829671	1.59	1.0398	991.2	991.2	7.510	409.4		a
S Total PeCDF					2898.7	2895.7	8.061	8.061		RQ
D 13C-1,2,3,7,8-PeCDD	24.733	28983006	1.61	0.7612	96.9	96.9	0.3694	0.3694	96.95	
1,2,3,7,8-PeCDD	24.761	25575913	1.62	1.0484	84.2	84.2	0.8418	0.8418		a
A Non-2,3,7,8-sub-PeCDD	23.696	1877927	1.55	1.0484	10.0	6.180	0.8418	4.225		RQMa
S Total PeCDD					94.2	90.3	0.8418	0.8418		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.611	49098415	0.53	1.0837	66.0	66.0	0.2424	0.2424	66.05	
1,2,3,4,7,8-HxCDF	30.638	899098684	1.22	1.0851	1687.6	1687.6	2.949	2.949		Ea
D 13C-1,2,3,6,7,8-HxCDF	30.785	41468800	0.52	1.1279	53.6	53.6	0.2329	0.2329	53.59	
1,2,3,6,7,8-HxCDF	30.798	216973613	1.19	1.1260	464.7	464.7	2.309	2.309		a
D 13C-2,3,4,6,7,8-HxCDF	31.570	38580289	0.54	1.0637	52.9	52.9	0.2470	0.2470	52.87	a
2,3,4,6,7,8-HxCDF	31.583	23425739	1.21	1.1675	52.0	52.0	2.517	2.517		a
D 13C-1,2,3,7,8,9-HxCDF	32.342	32100401	0.52	0.9676	48.4	48.4	0.2715	0.2715	48.36	a
1,2,3,7,8,9-HxCDF	32.355	10524843	1.24	1.1664	30.9	28.1	2.182	2.182		RQa
A Non-2,3,7,8-sub-HxCDF	30.338	128690092	1.20	1.1363	281.0	281.0	2.461	102.7		a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					2516.1	2513.3	2.489	2.489		RQ
* 13C-1,2,3,7,8,9-HxCDD	32.155	68599939	1.25	6.2E+05	100.0	100.0				a
D 13C-1,2,3,4,7,8-HxCDD	31.756	26027015	1.26	0.7334	51.7	51.7	0.1229	0.1229	51.73	
1,2,3,4,7,8-HxCDD	31.770	343046	1.28	1.0640	1.239	1.239	0.0998	0.0998		a
D 13C-1,2,3,6,7,8-HxCDD	31.849	28647928	1.25	0.8802	47.4	47.4	0.1024	0.1024	47.45	
1,2,3,6,7,8-HxCDD	31.863	1861053	1.24	1.0001	6.496	6.496	0.0972	0.0972		a
1,2,3,7,8,9-HxCDD	32.169	756239	1.33	1.1325	2.443	2.443	0.0896	0.0896		Ma
A Non-2,3,7,8-sub-HxCDD	30.525	10452114	1.24	1.0655	36.0	35.9	0.0952	22.5		RQMa
S Total HxCDD					46.1	46.1	0.0955	0.0955		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.724	28037512	0.43	0.7730	52.9	52.9	0.3779	0.3779	52.87	
1,2,3,4,6,7,8-HpCDF	33.736	207787888	1.05	1.4413	514.2	514.2	1.266	1.266		
D 13C-1,2,3,4,7,8,9-HpCDF	34.757	32574936	0.43	0.7008	67.8	67.8	0.4169	0.4169	67.76	
1,2,3,4,7,8,9-HpCDF	34.769	71540225	1.04	1.3174	166.7	166.7	1.192	1.192		
A Non-2,3,7,8-sub-HpCDF	34.150	52693817	1.08	1.3793	126.1	126.1	1.224	126.1		
S Total HpCDF					807.0	807.0	1.229	1.229		
D 13C-1,2,3,4,6,7,8-HpCDD	34.478	28386467	1.03	0.6472	63.9	63.9	0.2506	0.2506	63.93	
1,2,3,4,6,7,8-HpCDD	34.490	29111033	1.04	1.0943	93.7	93.7	1.156	1.156		
A Non-2,3,7,8-sub-HpCDD	34.223	30337744	1.10	1.0943	97.7	97.7	1.156	97.7		
S Total HpCDD					191.4	191.4	1.156	1.156		
D 13C-OCDD	36.773	49454976	0.89	0.4472	161.2	161.2	0.1901	0.1901	80.61	
OCDF	36.869	75479064	0.89	1.4382	212.2	212.2	0.1321	0.1321		
OCDD	36.773	360388042	0.90	1.1070	1316.5	1316.5	2.786	2.786		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Sample Type: Client
Inject. Date: 25-Aug-2021 12:50:47 ALS Bottle#: 6 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-1-A 320-77214-A-1-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:38:58 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:56:25

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	18.127	17.598	32		16971666	2502150	12778	31945	196		a
333.9339	18.127	17.598	32		22301504	3077723	22567	56417	136	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.099	32	0.972	12012404	2648614	34806	87015	76		
317.9389	17.628	17.099	32	0.972	14294751	3291820	52580	131450	63	0.84(0.65-0.89)	
2,3,7,8-TCDF											EM
303.9016	17.643	17.114	32	1.001	3665195086	842448071	13024313256077		647		M
305.8987	17.643	17.114	32	1.001	4734004778	1046453453	16537794134447		633	0.77(0.65-0.89)	Me
A Non-2,3,7,8-sub-TCDF											M
303.9016	16.207	17.076	-52	0.919	55684550	12476080	13024313256077		10		
305.8987	16.207	17.076	-52	0.919	69905190	15977555	16537794134447		10	0.80(0.65-0.89)	
303.9016	16.509	17.076	-34	0.937	97598601	16796635	13024313256077		13		
305.8987	16.509	17.076	-34	0.937	125554499	21640354	16537794134447		13	0.78(0.65-0.89)	
303.9016	16.751	17.076	-19	0.950	90519163	23858055	13024313256077		18		
305.8987	16.751	17.076	-19	0.950	115955041	30708822	16537794134447		19	0.78(0.65-0.89)	
303.9016	16.948	17.076	-8	0.961	196112513	55204901	13024313256077		42		
305.8987	16.948	17.076	-8	0.961	252613858	70424762	16537794134447		43	0.78(0.65-0.89)	
303.9016	17.205	17.076	8	0.976	2354551171	361293960	13024313256077		277		
305.8987	17.205	17.076	8	0.976	3002587773	457189662	16537794134447		276	0.78(0.65-0.89)	
303.9016	17.462	17.076	23	0.991	51964508	8060792	13024313256077		6		
305.8987	17.462	17.076	23	0.991	67242727	10480043	16537794134447		6	0.77(0.65-0.89)	
303.9016	18.066	17.076	59	1.025	265594340	44746030	13024313256077		34		
305.8987	18.066	17.076	59	1.025	338546937	57497092	16537794134447		35	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											U
331.9368	17.794						12778	31945			
333.9339	17.794						22567	56417			
2,3,7,8-TCDD											U
319.8965	17.809						139573	348932			
321.8936	17.809						100457	251142			
37Cl4-2,3,7,8-TCDD											M
327.8847	18.535	17.809	43	1.023	13327033	987979	86360	215900	11		M
A Non-2,3,7,8-sub-TCDD											U
319.8965	17.205	17.537	-20	1.000	3942446	688633	139573	348932	5		
321.8936	17.190	17.537	-21	1.000	5397244	903063	100457	251142	9	0.73(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.852	22.020	50	1.261	19841313	2482585	23307	58267	107		
353.8970	22.838	22.020	49	1.260	12244661	1567251	13553	33882	116	1.62(1.32-1.78)	
1,2,3,7,8-PeCDF											Ea
339.8597	22.865	22.047	49	1.001	262348809	32970594	107489	268722	307		a
341.8567	22.865	22.047	49	1.001	165674991	21063939	65877	164692	320	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.065	23.343	43	1.328	25442153	4297972	23307	58267	184		
353.8970	24.065	23.343	43	1.328	15987110	2752611	13553	33882	203	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	24.093	23.370	43	1.001	166232091	28825638	107489	268722	268		a
341.8567	24.093	23.370	43	1.001	104625441	18069366	65877	164692	274	1.59(1.32-1.78)	
A F1 PeCDFs											RQ
339.8597	19.654	19.851	-12	0.860	1323874	155755	640	1600	243		
	Empc Correction				206717	26675	640	1600	42		
341.8567	19.654	19.851	-12	0.860	133366	17210	666	1665	26	9.93(1.32-1.78)	
339.8597	19.941	19.851	5	0.873	1065370	240209	640	1600	375		
341.8567	19.941	19.851	5	0.873	674728	156155	666	1665	234	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											a
339.8597	21.461	23.067	-96	0.939	95882470	19082690	107489	268722	178		
341.8567	21.461	23.067	-96	0.939	60607555	12022250	65877	164692	182	1.58(1.32-1.78)	
339.8597	23.138	23.067	4	1.013	2521753	856362	107489	268722	8		
341.8567	23.124	23.067	3	1.012	1596742	521228	65877	164692	8	1.58(1.32-1.78)	
339.8597	23.315	23.067	15	1.020	72158575	16781009	107489	268722	156		a
341.8567	23.315	23.067	15	1.020	45677605	10521701	65877	164692	160	1.58(1.32-1.78)	
339.8597	24.420	23.067	81	1.069	47869380	6781590	107489	268722	63		a
341.8567	24.420	23.067	81	1.069	29964515	4286749	65877	164692	65	1.60(1.32-1.78)	
339.8597	25.933	23.067	172	1.135	14049308	2199829	107489	268722	20		a
341.8567	25.920	23.067	171	1.134	8501768	1359446	65877	164692	21	1.65(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.733	24.052	41	1.364	17896395	3117608	3953	9882	789		
369.8919	24.733	24.052	41	1.364	11086611	1905516	2324	5810	820	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											a
355.8546	24.761	24.079	41	1.001	15830547	2466551	8810	22025	280		a
357.8516	24.761	24.079	41	1.001	9745366	1525306	8923	22307	171	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											RQMa
355.8546	23.097	23.696	-36	0.934	352034	127628	8810	22025	14		a
357.8516	23.097	23.696	-36	0.934	242162	89082	8923	22307	10	1.45(1.32-1.78)	
355.8546	25.279	23.696	95	1.022	1944925	225198	8810	22025	26		a
	Empc Correction				780307	97603	8810	22025	11		
357.8516	25.292	23.696	96	1.023	503424	62970	8923	22307	7	3.86(1.32-1.78)	M
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.611	30.186	25	0.952	17064431	3557754	10904	27260	326		
385.8610	30.625	30.186	26	0.952	32033984	6556149	9110	22775	720	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											Ea
373.8208	30.638	30.213	25	1.001	493440128	98965594	71765	179412	1379		a
375.8178	30.638	30.213	25	1.001	405658556	81403750	57704	144260	1411	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.785	30.399	23	0.957	14275968	4322980	10904	27260	396		
385.8610	30.785	30.399	23	0.957	27192832	8124229	9110	22775	892	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											a
373.8208	30.798	30.412	23	1.000	118101390	34545655	71765	179412	481		a
375.8178	30.798	30.412	23	1.000	98872223	28186533	57704	144260	488	1.19(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											a
383.8639	31.570	31.291	17	0.982	13470698	3705066	10904	27260	340		a
385.8610	31.570	31.291	17	0.982	25109591	7308868	9110	22775	802	0.54(0.43-0.59)	
2,3,4,6,7,8-HxCDF											a
373.8208	31.583	31.317	16	1.000	12841152	3664567	71765	179412	51		a
375.8178	31.583	31.317	16	1.000	10584587	3115887	57704	144260	54	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											a
383.8639	32.342	32.143	12	1.006	10946830	4348594	10904	27260	399		a
385.8610	32.342	32.143	12	1.006	21153571	8369473	9110	22775	919	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQa
373.8208	32.355	32.156	12	1.000	6864627	2700494	71765	179412	38		a
	Empc Correction				5826252	2709702	71765	179412	38		
375.8178	32.355	32.156	12	1.000	4698591	2185244	57704	144260	38	1.46(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											a
373.8208	28.788	30.338	-93	0.940	25859326	5474136	71765	179412	76		a
375.8178	28.788	30.338	-93	0.940	21161537	4436469	57704	144260	77	1.22(1.05-1.43)	
373.8208	29.920	30.338	-25	0.977	14667743	3273576	71765	179412	46		a
375.8178	29.920	30.338	-25	0.977	11944627	2640560	57704	144260	46	1.23(1.05-1.43)	
373.8208	31.477	30.338	68	1.028	9008706	2166849	71765	179412	30		a
375.8178	31.477	30.338	68	1.028	7345365	1734204	57704	144260	30	1.23(1.05-1.43)	
373.8208	32.422	30.338	125	1.059	20637788	6843850	71765	179412	95		a
375.8178	32.409	30.338	124	1.059	18065000	5747444	57704	144260	100	1.14(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	32.155	31.956	12		38092358	10567654	3707	9267	2851		a
403.8529	32.155	31.956	12		30507581	8478633	3158	7895	2685	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.756	31.504	15	0.988	14507987	4442782	3707	9267	1198		
403.8529	31.756	31.504	15	0.988	11519028	3465827	3158	7895	1097	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDD											a
389.8157	31.770	31.517	15	1.000	192789	60823	1747	4367	35		a
391.8127	31.770	31.517	15	1.000	150257	47823	1611	4027	30	1.28(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.849	31.610	14	0.990	15943262	4797339	3707	9267	1294		
403.8529	31.849	31.610	14	0.990	12704666	3840670	3158	7895	1216	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											a
389.8157	31.863	31.624	14	1.000	1030636	314659	1747	4367	180		a
391.8127	31.863	31.624	14	1.000	830417	245841	1611	4027	153	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											Ma
389.8157	32.169	31.969	12	1.013	432360	131058	1747	4367	75		M
391.8127	32.169	31.969	12	1.013	323879	100875	1611	4027	63	1.33(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQMa
389.8157	29.786	30.525	-44	0.935	1615571	218882	1747	4367	125		
391.8127	29.786	30.525	-44	0.935	1306562	168934	1611	4027	105	1.24(1.05-1.43)	
389.8157	30.691	30.525	10	0.964	329767	75485	1747	4367	43		
391.8127	30.691	30.525	10	0.964	249099	58265	1611	4027	36	1.32(1.05-1.43)	
389.8157	31.024	30.525	30	0.974	3622422	749467	1747	4367	429		
391.8127	31.024	30.525	30	0.974	2939420	589124	1611	4027	366	1.23(1.05-1.43)	
389.8157	31.237	30.525	43	0.981	86525	23381	1747	4367	13		
391.8127	31.237	30.525	43	0.981	94539	20825	1611	4027	13	0.92(1.05-1.43)	
	Empc Correction				69778	18855	1611	4027	12		
389.8157	32.142	30.525	97	1.009	126579	76364	1747	4367	44		M
391.8127	32.142	30.525	97	1.009	106391	67179	1611	4027	42	1.19(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.724	33.603	7	1.049	8480564	3178867	7825	19562	406		
419.8220	33.724	33.603	7	1.049	19556948	7134037	14433	36082	494	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.736	33.615	7	1.000	106425146	38681716	38737	96842	999		
409.7789	33.736	33.615	7	1.000	101362742	36930224	36535	91337	1011	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.757	34.672	5	1.081	9780233	3645683	7825	19562	466		
419.8220	34.757	34.672	5	1.081	22794703	8342541	14433	36082	578	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.769	34.685	5	1.000	36502679	13038995	38737	96842	337		
409.7789	34.769	34.685	5	1.000	35037546	12255081	36535	91337	335	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.016	34.150	-8	1.009	27325097	10841240	38737	96842	280		
409.7789	34.016	34.150	-8	1.009	25368720	10371643	36535	91337	284	1.08(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.478	34.393	5	1.072	14427130	5174768	5725	14312	904		
437.8140	34.478	34.393	5	1.072	13959337	5038267	6633	16582	760	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.490	34.405	5	1.000	14875287	5199419	38933	97332	134		
425.7737	34.490	34.405	5	1.000	14235746	4858582	12758	31895	381	1.04(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.955	34.223	-16	0.985	15921139	6004192	38933	97332	154		
425.7737	33.955	34.223	-16	0.985	14416605	5949276	12758	31895	466	1.10(0.88-1.20)	
13C-OCDD											
469.7779	36.773	36.701	4	1.144	23219778	7215511	3219	8047	2242		
471.7750	36.773	36.701	4	1.144	26235198	8103609	3258	8145	2487	0.89(0.76-1.02)	
OCDF											
441.7428	36.869	36.797	4	1.003	35549250	10941117	2687	6717	4072		
443.7399	36.857	36.797	4	1.002	39929814	12295208	3132	7830	3926	0.89(0.76-1.02)	
OCDD											
457.7377	36.773	36.713	4	1.000	170619287	52770373	37324	93310	1414		
459.7348	36.773	36.713	4	1.000	189768755	59603055	57167	142917	1043	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Inject. Date: 25-Aug-2021 12:50:47 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	26307155	5940434

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	26307155	5940434

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.207	55684550	12476080	69905190	15977555	466.2	0.80	
16.509	97598601	16796635	125554499	21640354	828.5	0.78	
16.751	90519163	23858055	115955041	30708822	766.5	0.78	
16.948	196112513	55204901	252613858	70424762	1665.9	0.78	
17.205	2354551171	361293960	3002587773	457189662	19888	0.78	
17.462	51964508	8060792	67242727	10480043	442.6	0.77	
18.066	265594340	44746030	338546937	57497092	2242.9	0.78	
Signal Totals:	3112024846	522436453	3972406025	663918290			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7084430871	1186354743				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 26301 = (7084430871 * 100.000) / (26307155 * 1.024)

Report Date: 27-Aug-2021 09:38:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Lims ID:	320-77214-A-1-A		
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Inject. Date:	25-Aug-2021 12:50:47	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	5

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.205	3942446	688633	5397244	903063		0.73	
18.535	652706869	49191718	823174167	63073973		0.79	
18.716	120427419	31673852	149012614	40034683		0.81	

Compound is Marked ND

Report Date: 27-Aug-2021 09:38:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Lims ID:	320-77214-A-1-A		
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Inject. Date:	25-Aug-2021 12:50:47	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	5

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	32085974	4049836
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	41429263	7050583

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	36757618	5550209

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.654	1323874	155755	133366	17210	3.81	9.93	RQ
19.654	206717	26675	133366	17210	0.8898		Empc Correction
19.941	1065370	240209	674728	156155	4.55	1.58	
Signal Totals:							
	1272087	266884	808094	173365			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3197338	569329				2.96	RQ
	2080181	440249					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 8.366 = (3197338 * 100.000) / (36757618 * 1.040)

Empc Amount: 5.443 = (2080181 * 100.000) / (36757618 * 1.040)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Inject. Date: 25-Aug-2021 12:50:47 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 5

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	32085974	4049836
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	41429263	7050583

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	36757618	5550209

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.461	95882470	19082690	60607555	12022250	409.4	1.58	
23.138	2521753	856362	1596742	521228	10.8	1.58	
23.315	72158575	16781009	45677605	10521701	308.3	1.58	a
24.420	47869380	6781590	29964515	4286749	203.6	1.60	a
25.933	14049308	2199829	8501768	1359446	59.0	1.65	a
Signal Totals:							
	232481486	45701480	146348185	28711374			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	378829671	74412854				1.59	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 991.189 = (378829671 * 100.000) / (36757618 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:38:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Inject. Date: 25-Aug-2021 12:50:47 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 5

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	28983006	5023124

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	28983006	5023124

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
23.097	352034	127628	242162	89082	1.96	1.45	a
25.279	1944925	225198	503424	62970	8.06	3.86	RQM
25.279	780307	97603	503424	62970	4.22		Empc Correction
Signal Totals:							
	1132341	225231	745586	152052			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3042545	504878				3.08	RQMa
	1877927	377283					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 10.013 = (3042545 * 100.000) / (28983006 * 1.048)
Empc Amount: 6.180 = (1877927 * 100.000) / (28983006 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Inject. Date: 25-Aug-2021 12:50:47 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 5

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	49098415	10113903
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	41468800	12447209
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	38580289	11013934
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	32100401	12718067

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	40311976	11573278

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
28.788	25859326	5474136	21161537	4436469	102.7	1.22	a
29.920	14667743	3273576	11944627	2640560	58.1	1.23	a
31.477	9008706	2166849	7345365	1734204	35.7	1.23	a
32.422	20637788	6843850	18065000	5747444	84.5	1.14	a
Signal Totals:							
	70173563	17758411	58516529	14558677			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	128690092	32317088				1.20	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 280.953 = (128690092 * 100.000) / (40311976 * 1.136)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Inject. Date: 25-Aug-2021 12:50:47 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 5

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	26027015	7908609
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	28647928	8638009
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	27337471	8273309

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.786	1615571	218882	1306562	168934	10.0	1.24	
30.691	329767	75485	249099	58265	1.99	1.32	
31.024	3622422	749467	2939420	589124	22.5	1.23	
31.237	86525	23381	94539	20825	0.6216	0.92	RQ
31.237	86525	23381	69778	18855	0.5366		Empc Correction
32.142	126579	76364	106391	67179	0.7998	1.19	Ma
Signal Totals:							
	5780864	1143579	4671250	902357			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10476875	2047906				1.23	RQMa
	10452114	2045936					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 35.967 = (10476875 * 100.000) / (27337471 * 1.066)
Empc Amount: 35.882 = (10452114 * 100.000) / (27337471 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Inject. Date: 25-Aug-2021 12:50:47 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 5

Non-2,3,7,8-sub-HpCDF, RT: 34.150

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	28037512	10312904
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	32574936	11988224

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	30306224	11150564

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
34.016	27325097	10841240	25368720	10371643	126.1	1.08	
Signal Totals:							
	27325097	10841240	25368720	10371643			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	52693817	21212883				1.08	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 126.054 = (52693817 * 100.000) / (30306224 * 1.379)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Inject. Date: 25-Aug-2021 12:50:47 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 5

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	28386467	10213035

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	28386467	10213035

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.955	15921139	6004192	14416605	5949276	97.7	1.10	
Signal Totals:							
	15921139	6004192	14416605	5949276			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	30337744	11953468				1.10	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 97.664 = (30337744 * 100.000) / (28386467 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d				
Injection Date:	25-Aug-2021 12:50:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Not Detected
Expected RT: 17.81

Processing Integration Results

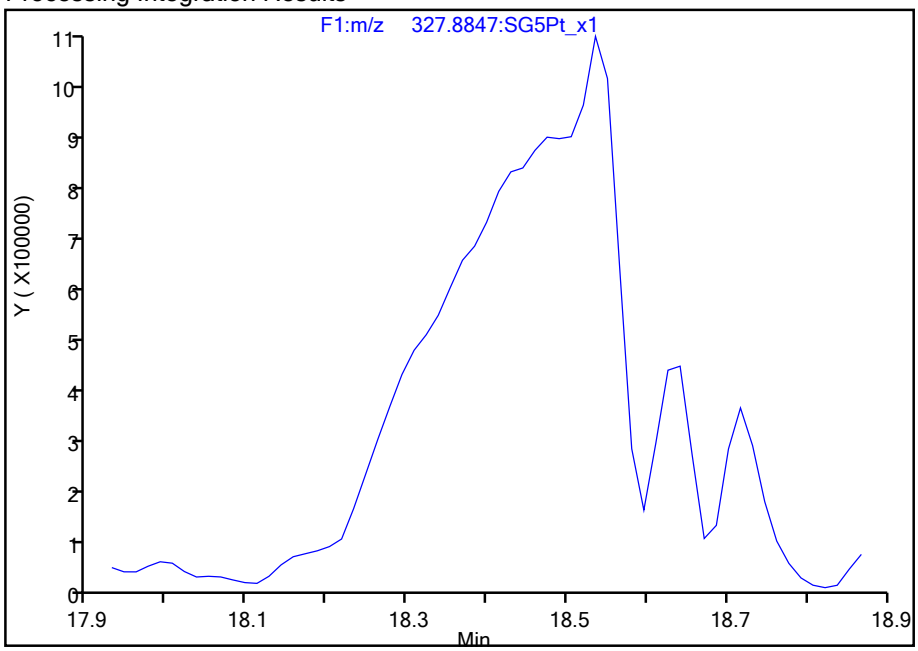

Manual Integration Results

RT: 18.54
Area: 13327033
Amount: 30.650142
Amount Units: pg/ul

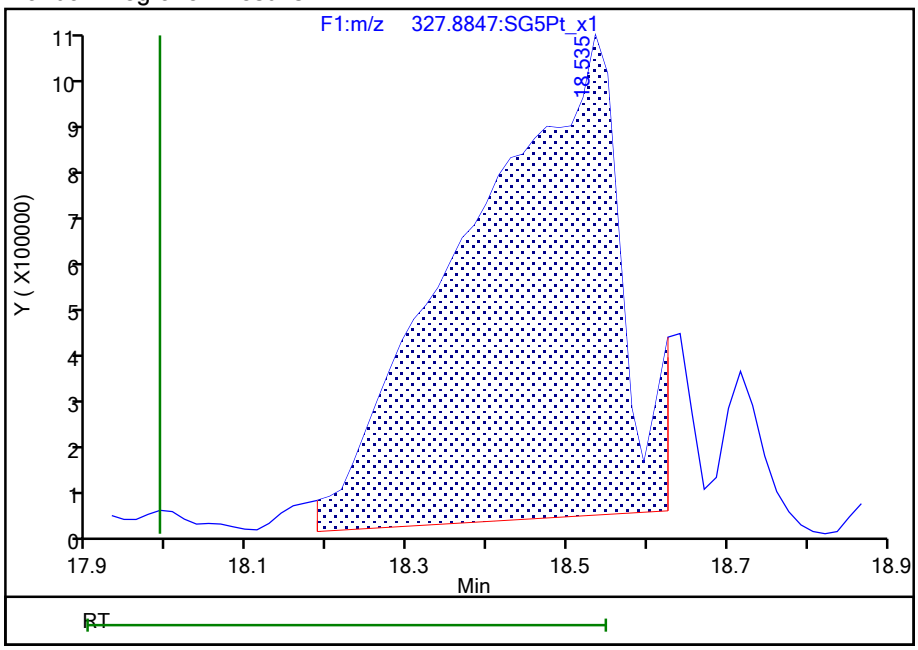

Reviewer: dadunj, 27-Aug-2021 09:30:25
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d				
Injection Date:	25-Aug-2021 12:50:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.21

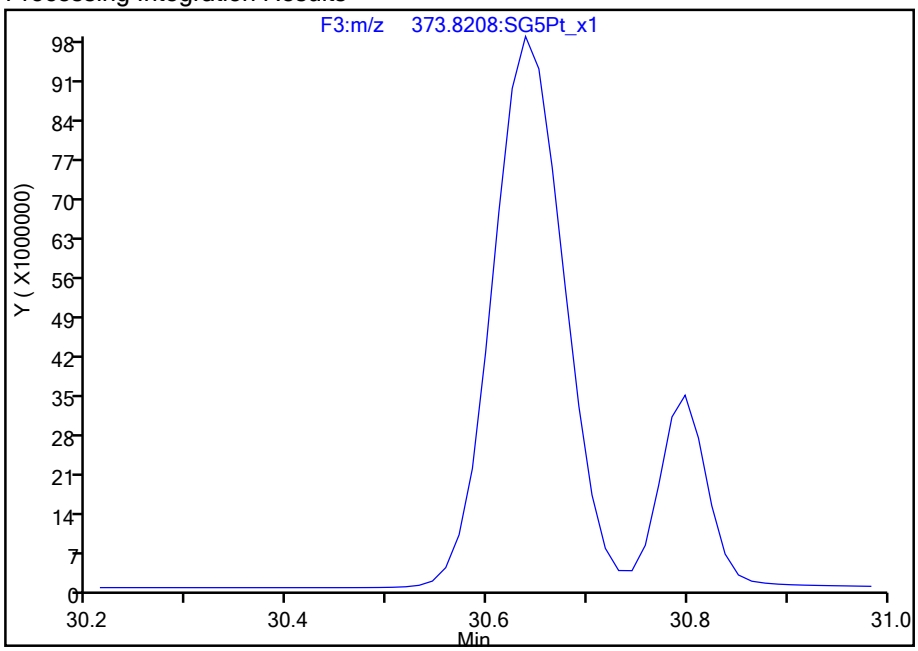

Manual Integration Results

RT: 30.64
Area: 493440128
Amount: 1687.5607
Amount Units: pg/ul

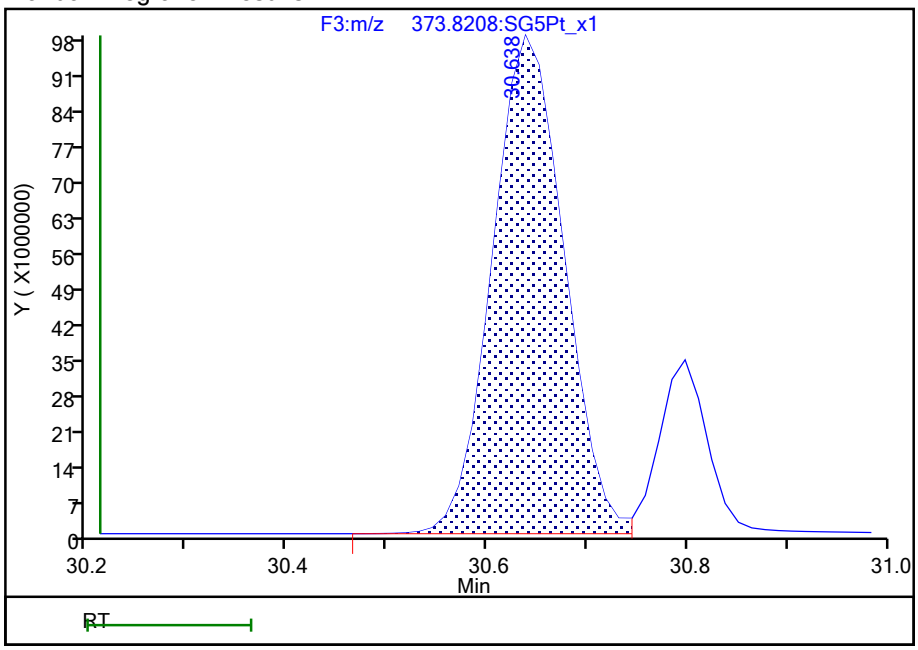

Reviewer: dadunj, 27-Aug-2021 09:32:22
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d				
Injection Date:	25-Aug-2021 12:50:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Not Detected
Expected RT: 30.41

Processing Integration Results

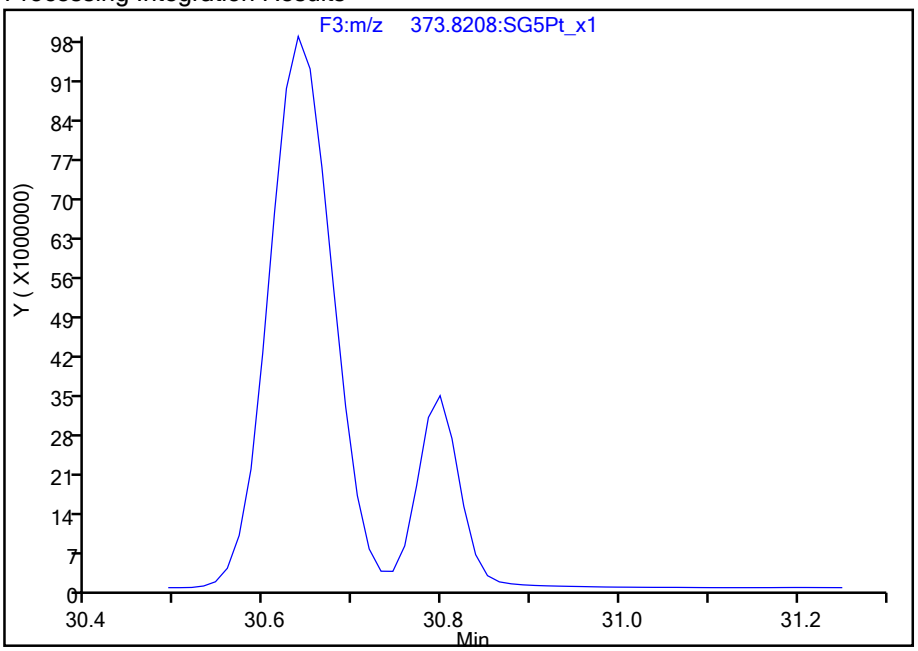

Manual Integration Results

RT: 30.80
Area: 118101390
Amount: 464.6675
Amount Units: pg/ul

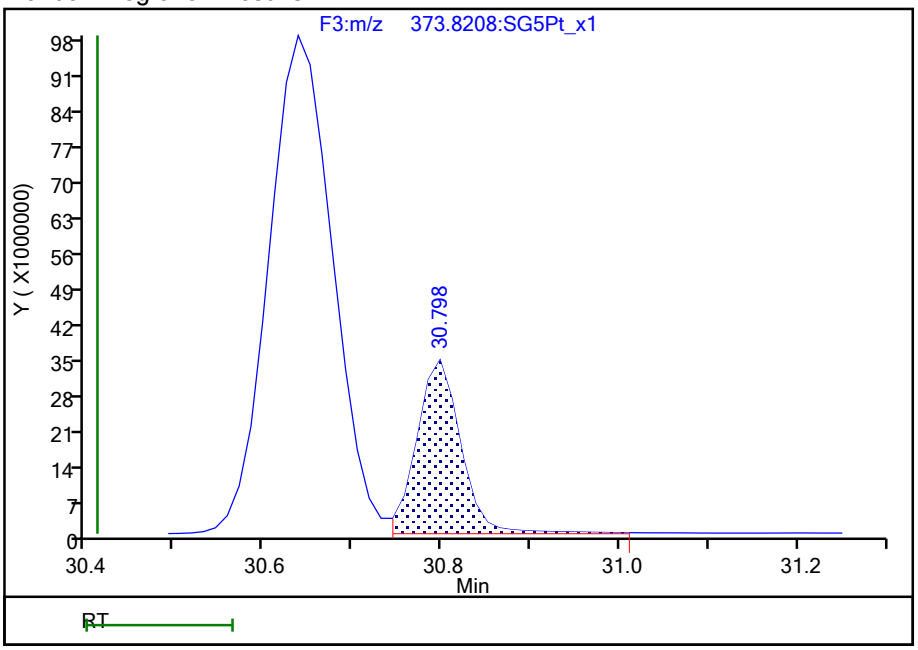

Reviewer: dadunj, 27-Aug-2021 09:32:45
Audit Action: Assigned Compound ID Audit Reason: Split Peak

790855

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d				
Injection Date:	25-Aug-2021 12:50:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-2,3,4,6,7,8-HxCDF, CAS: 116843-05-1

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.29

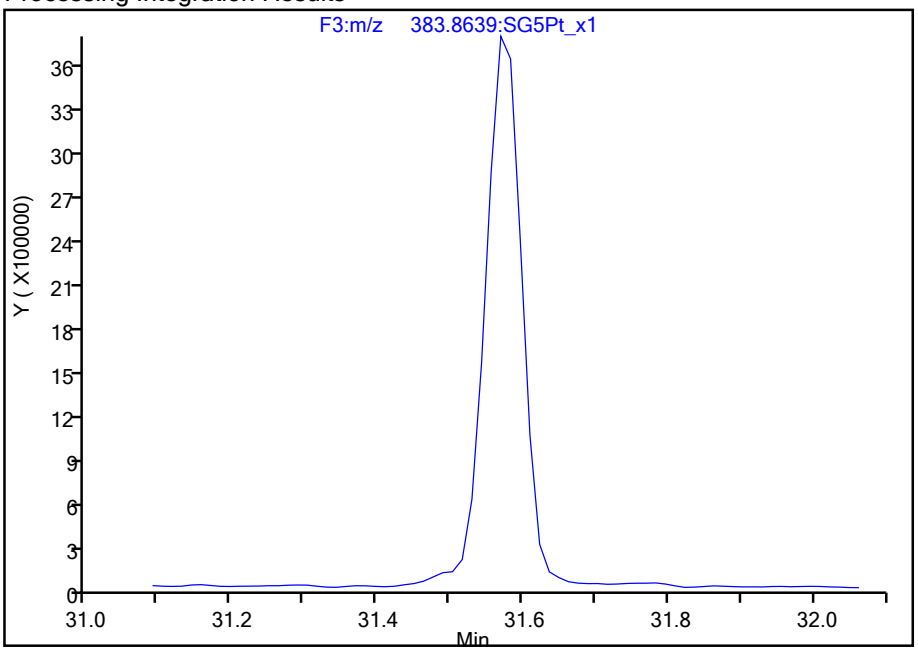

Manual Integration Results

RT: 31.57
Area: 13470698
Amount: 52.870136
Amount Units: pg/ul

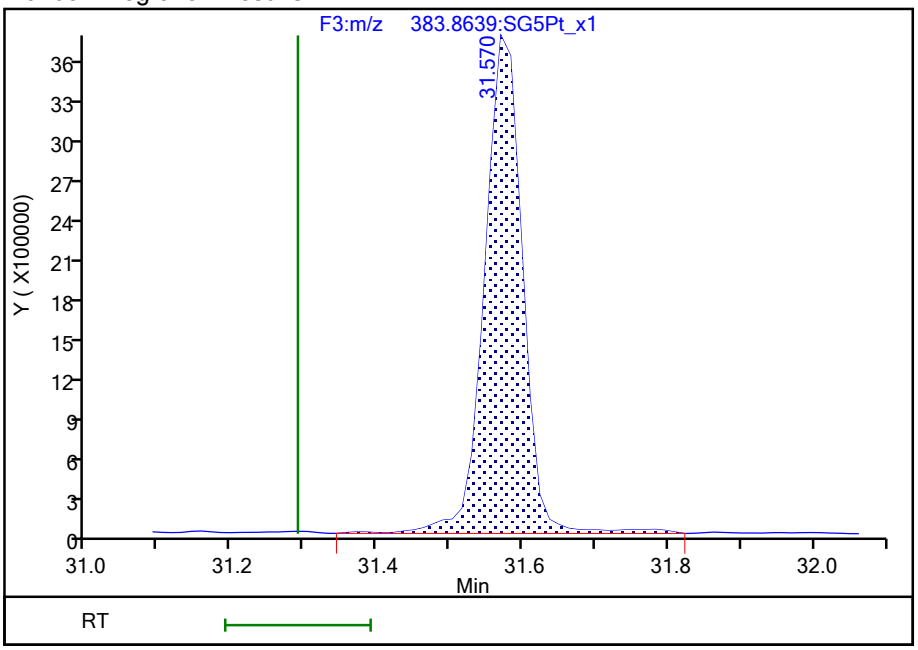

Reviewer: dadunj, 27-Aug-2021 09:32:33
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d				
Injection Date:	25-Aug-2021 12:50:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.32

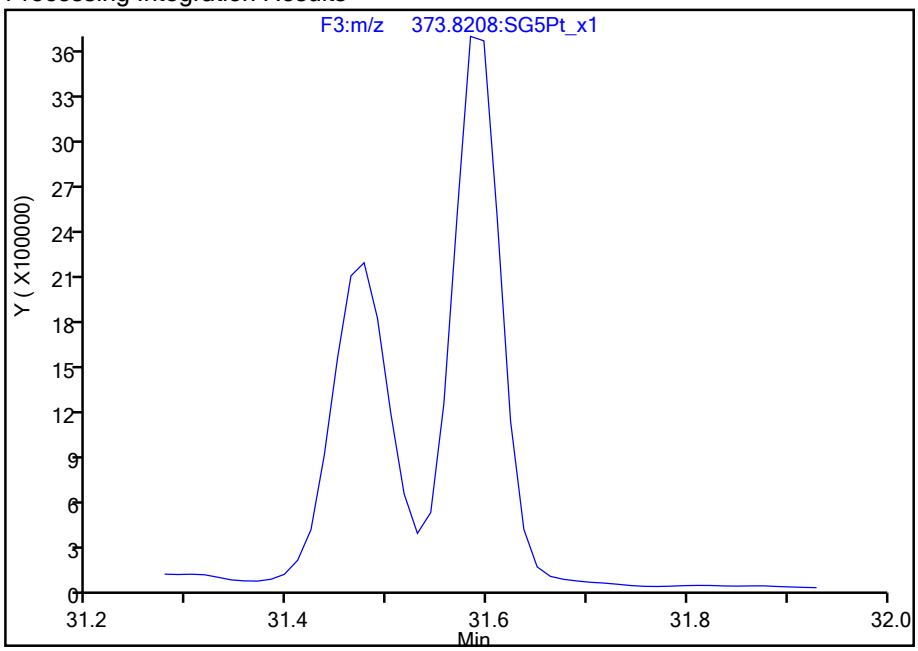

Manual Integration Results

RT: 31.58
Area: 12841152
Amount: 52.006350
Amount Units: pg/ul

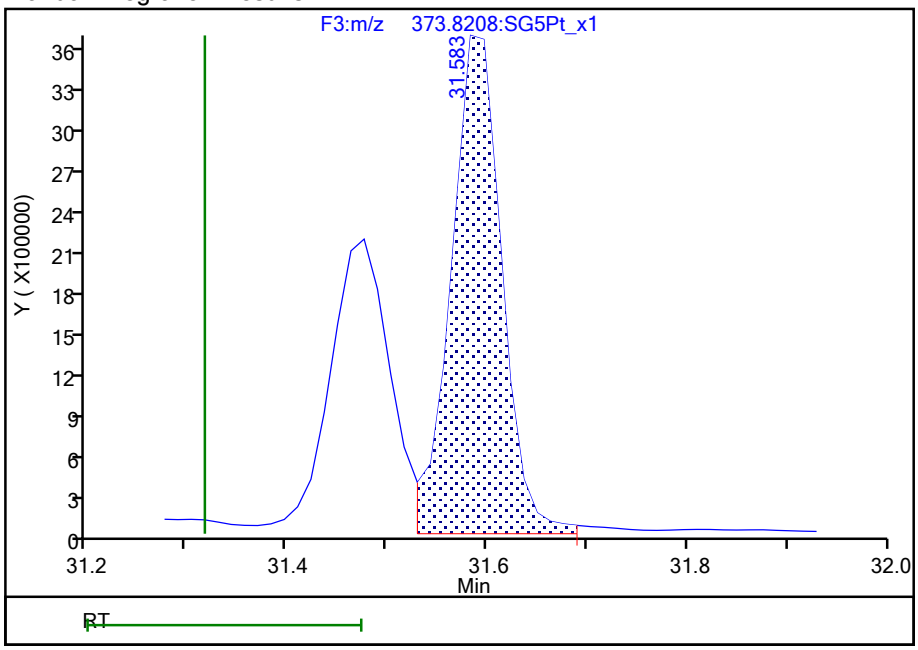

Reviewer: dadunj, 27-Aug-2021 09:32:51
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d				
Injection Date:	25-Aug-2021 12:50:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,7,8,9-HxCDF, CAS: 116843-04-0

Signal: 1

Processing Integration Results

RT: 31.57
Area: 13470698
Amount: 0
Amount Units: pg/ul

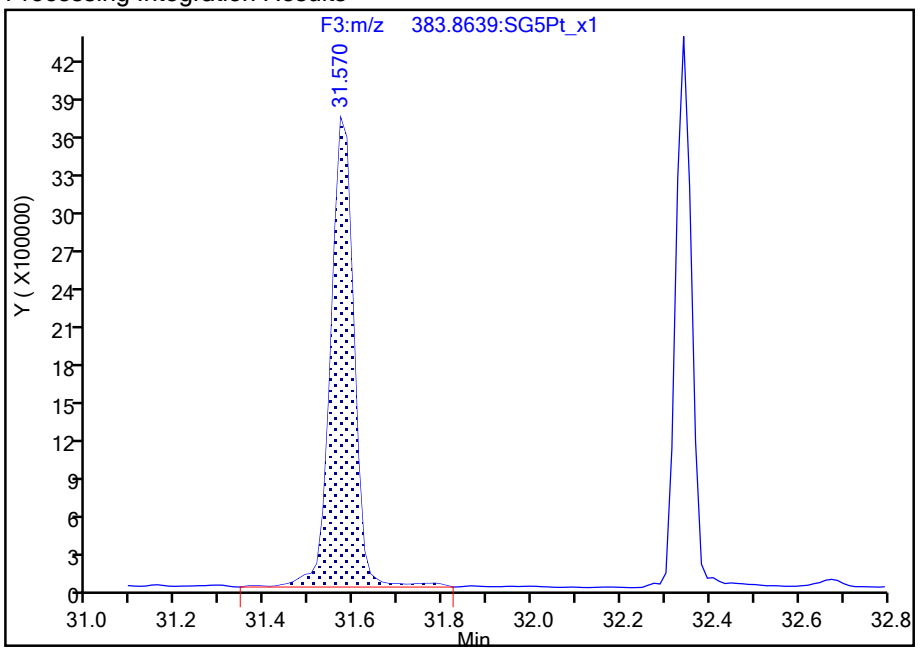

Manual Integration Results

RT: 32.34
Area: 10946830
Amount: 48.362125
Amount Units: pg/ul

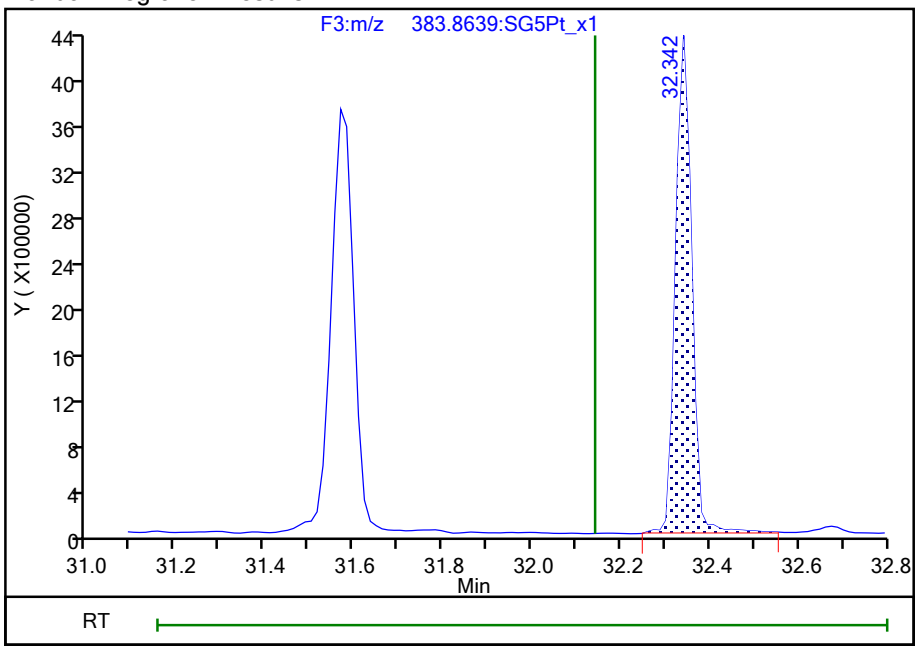

Reviewer: dadunj, 27-Aug-2021 09:32:38

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d				
Injection Date:	25-Aug-2021 12:50:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 32.16

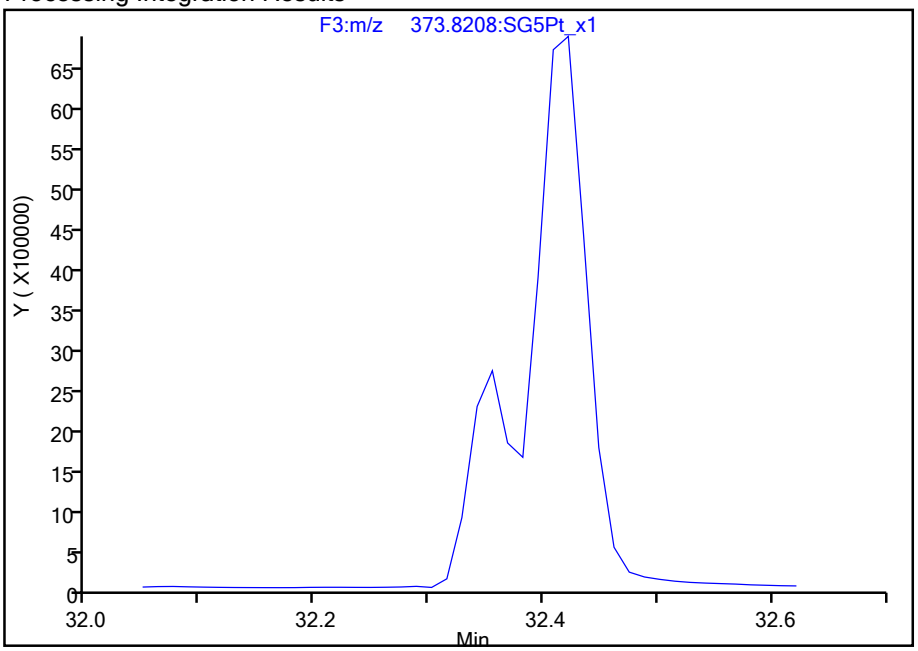

Manual Integration Results

RT: 32.36
Area: 6864627
Amount: 30.884378
Amount Units: pg/ul

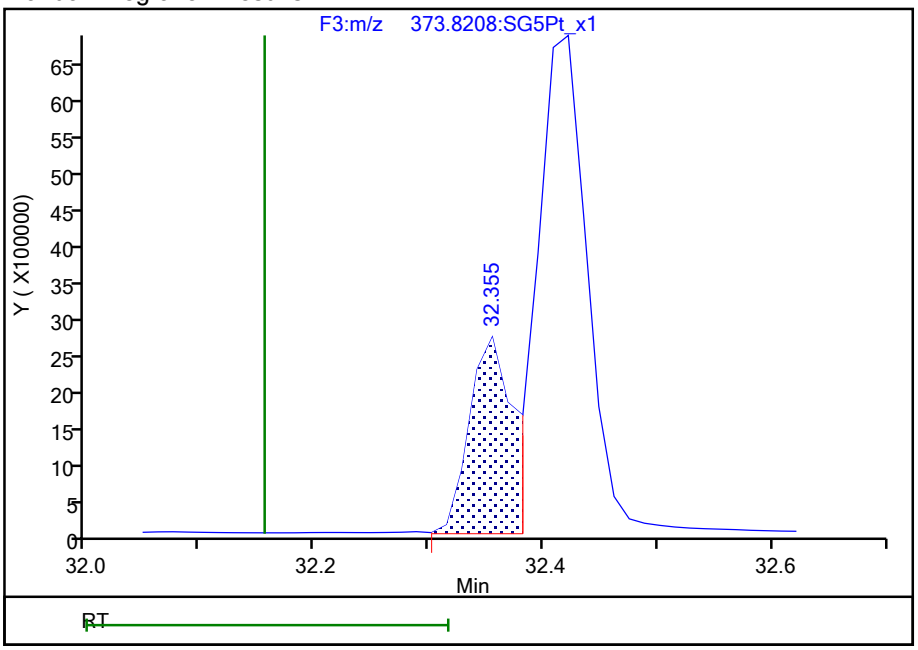

Reviewer: dadunj, 27-Aug-2021 09:32:58
Audit Action: Assigned Compound ID Audit Reason: Split Peak

790859

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d				
Injection Date:	25-Aug-2021 12:50:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.52

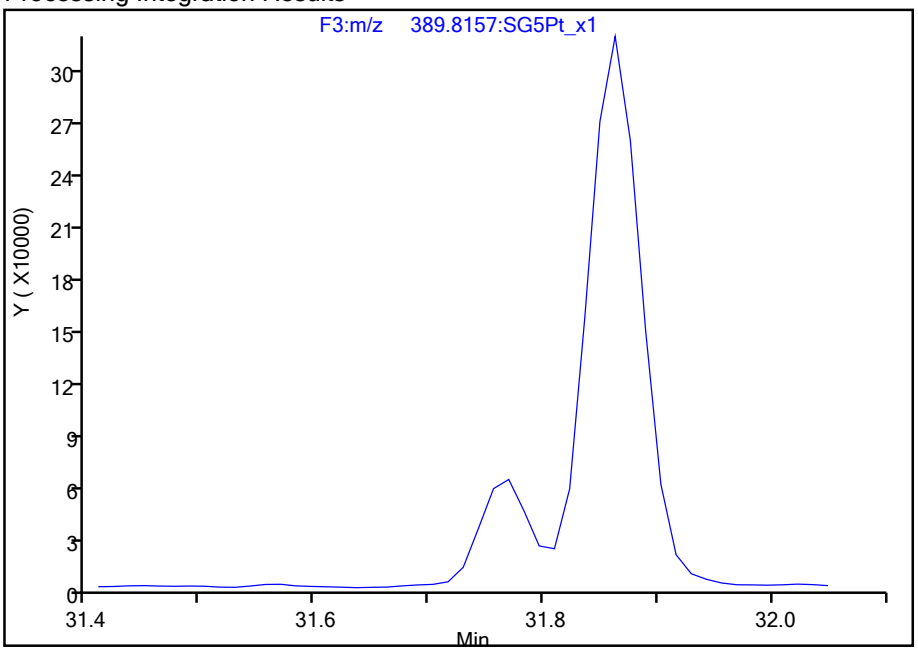

Manual Integration Results

RT: 31.77
Area: 192789
Amount: 1.238718
Amount Units: pg/ul

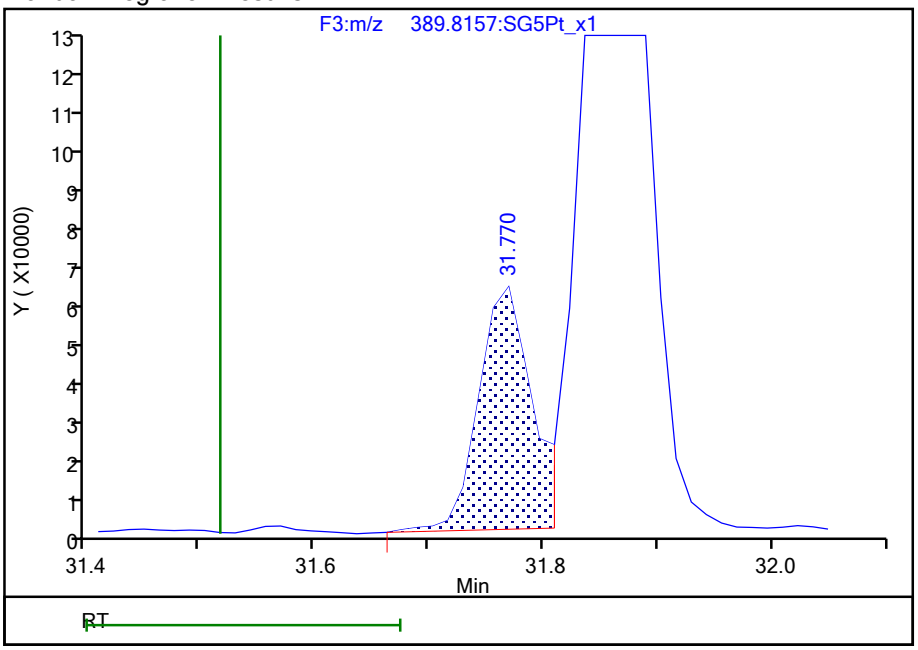

Reviewer: dadunj, 27-Aug-2021 09:33:35
Audit Action: Assigned Compound ID Audit Reason: Split Peak

790860

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d				
Injection Date:	25-Aug-2021 12:50:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.77
Area: 192789
Amount: 1.197361
Amount Units: pg/ul

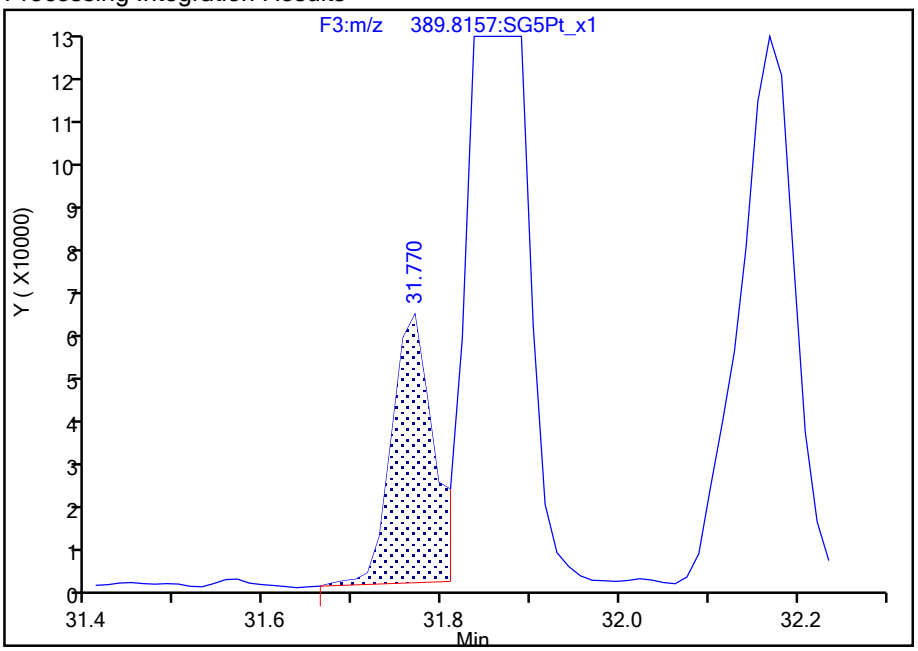

Manual Integration Results

RT: 31.86
Area: 1030636
Amount: 6.495782
Amount Units: pg/ul

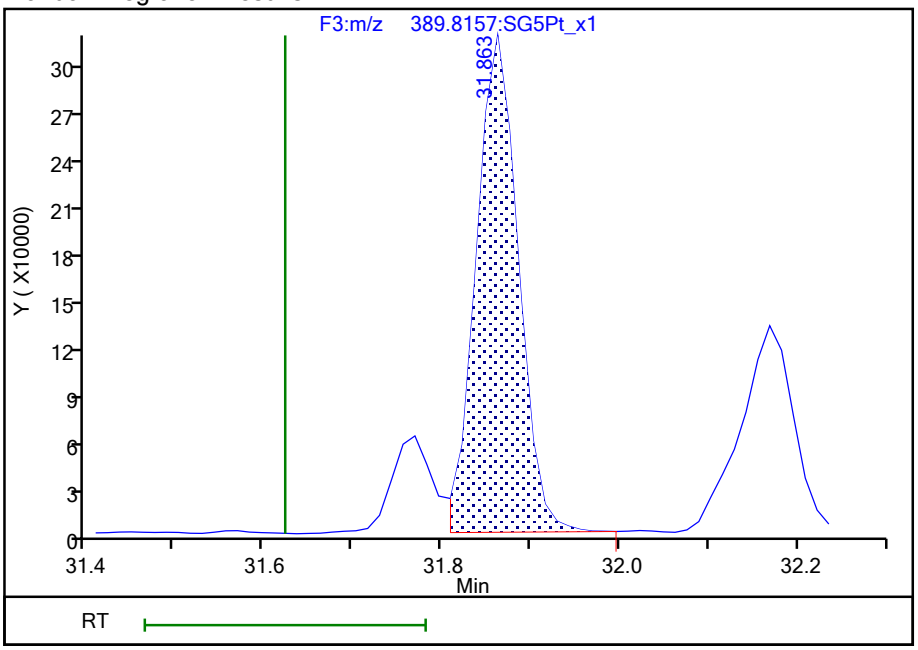

Reviewer: dadunj, 27-Aug-2021 09:33:40

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d				
Injection Date:	25-Aug-2021 12:50:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 31.86
Area: 1030636
Amount: 6.011092
Amount Units: pg/ul

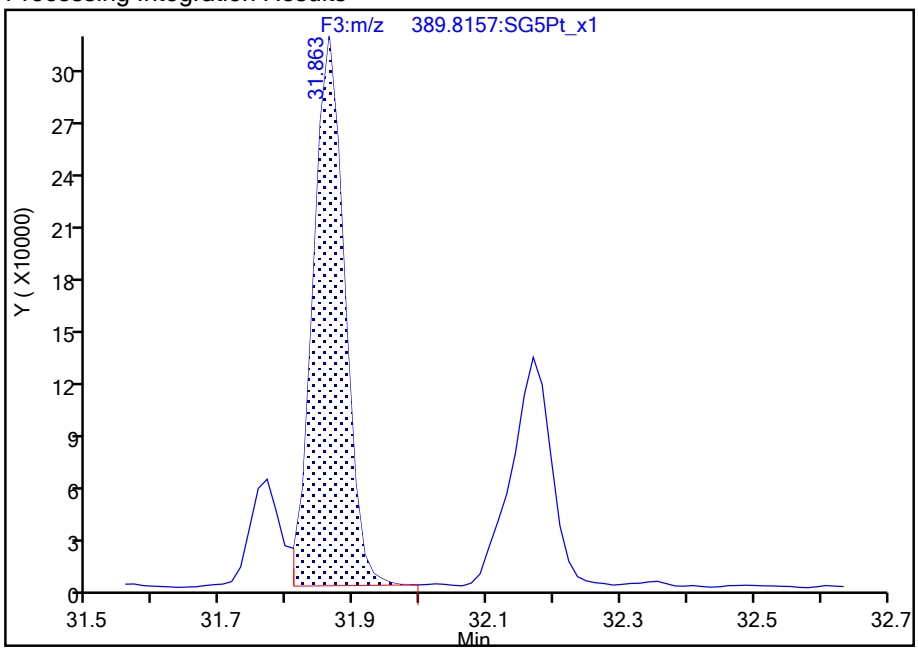

Manual Integration Results

RT: 32.17
Area: 432360
Amount: 2.442608
Amount Units: pg/ul

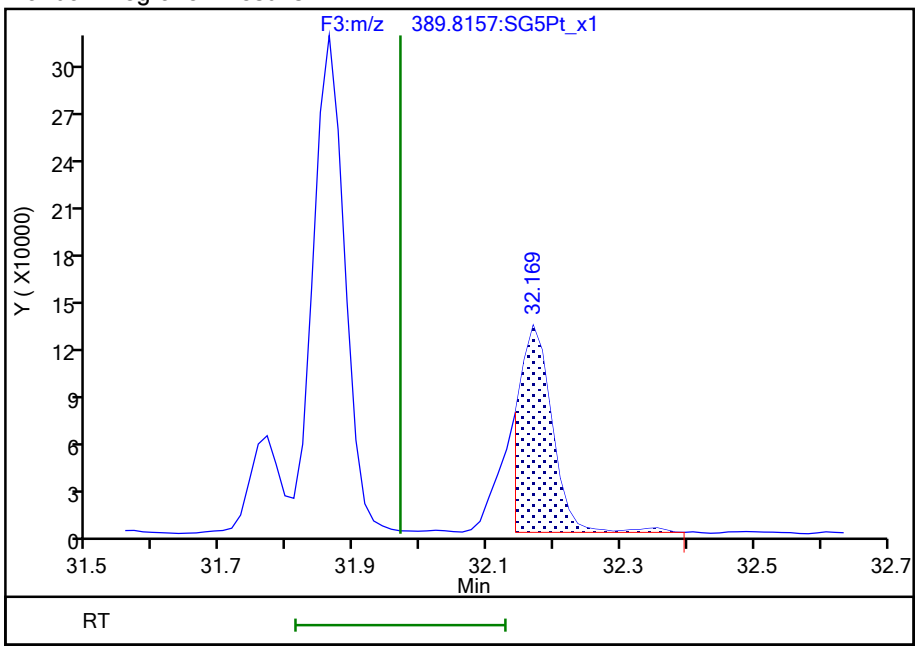

Reviewer: dadunj, 27-Aug-2021 09:38:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d				
Injection Date:	25-Aug-2021 12:50:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 31.86
Area: 830417
Amount: 6.011092
Amount Units: pg/ul

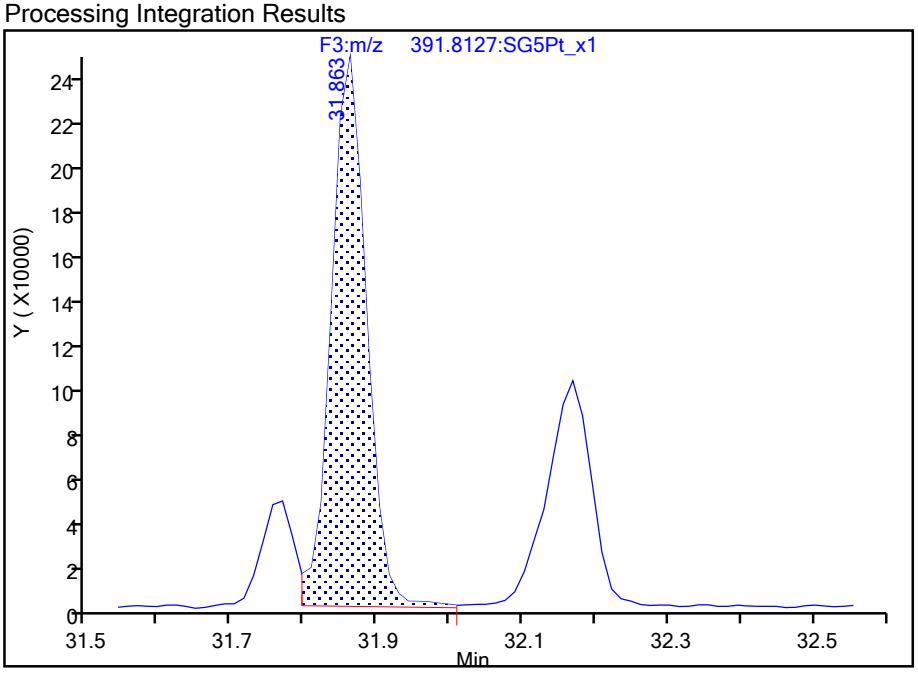

Manual Integration Results

RT: 32.17
Area: 323879
Amount: 2.442608
Amount Units: pg/ul

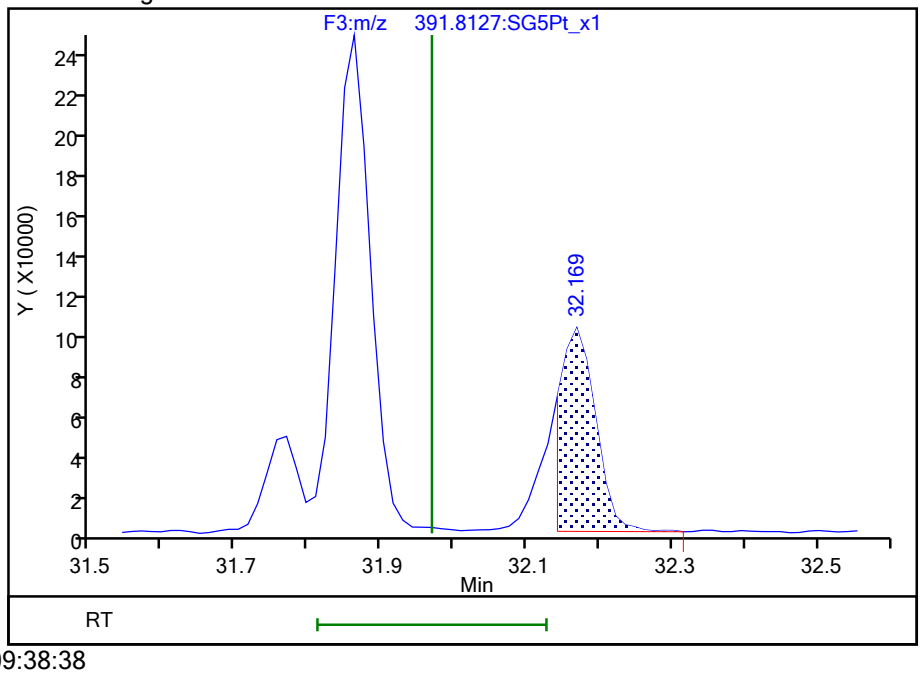

Reviewer: dadunj, 27-Aug-2021 09:38:38

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

790863

Report Date: 27-Aug-2021 09:38:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d				
Injection Date:	25-Aug-2021 12:50:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	SMA	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (28.83- 32.22)

Signal: 1

Not Detected

RT: 28.83- 32.22

Processing Integration Results

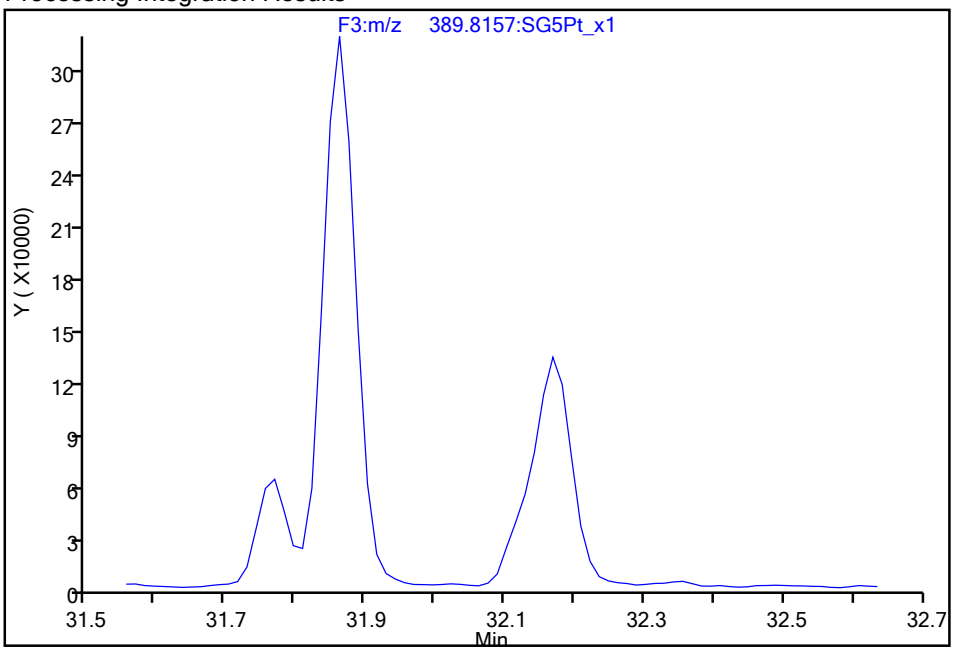

RT = 32.142 Area = 126579 M

Manual Integration Results

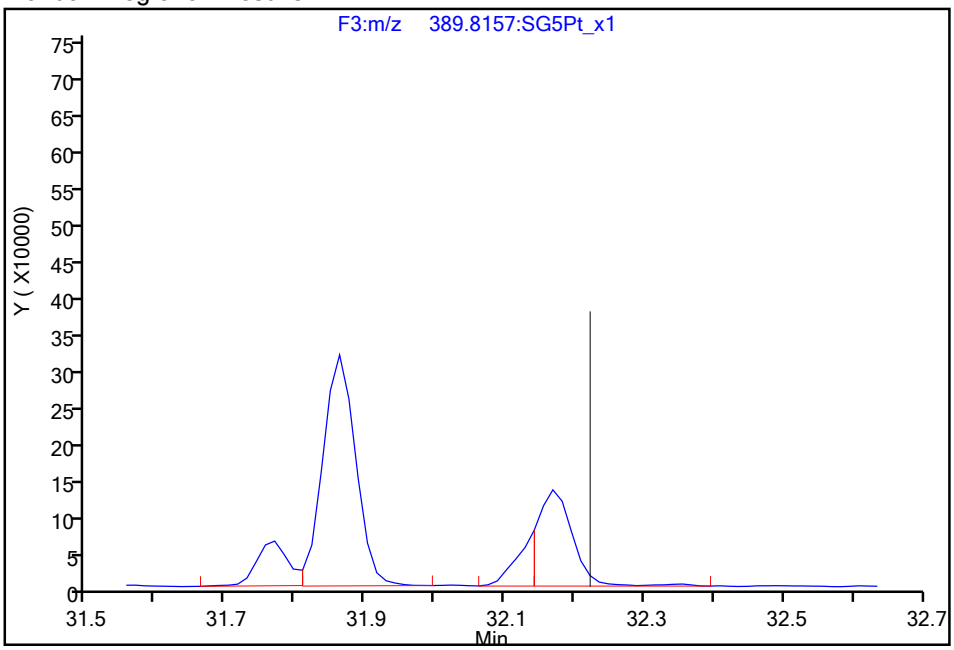

Reviewer: dadunj, 27-Aug-2021 09:38:45

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

790864

Report Date: 27-Aug-2021 09:38:59 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Injection Date:	25-Aug-2021 12:50:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	519953	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

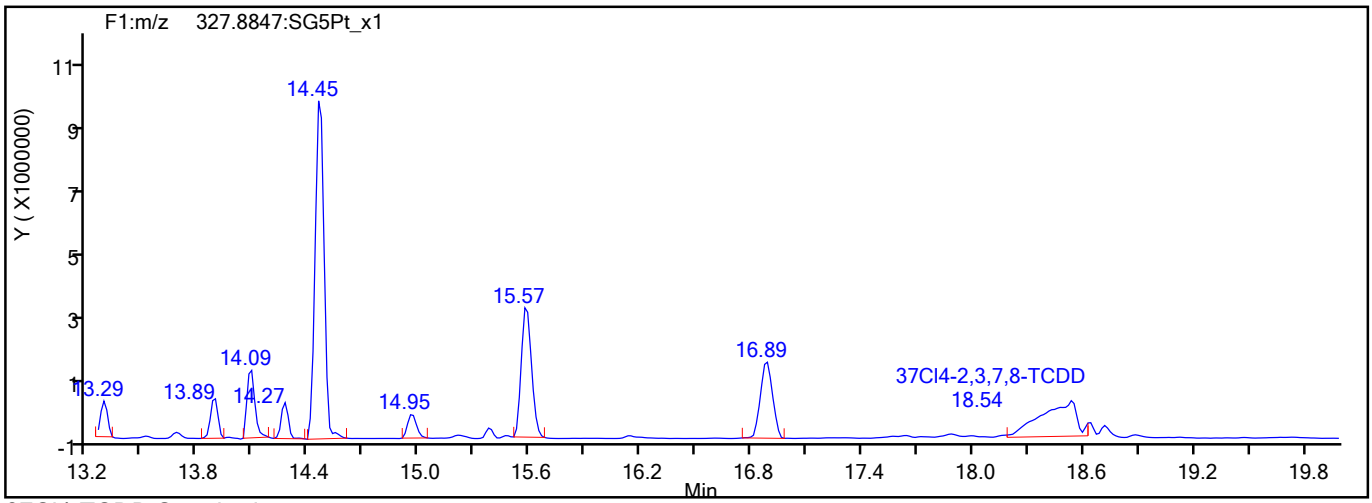

37Cl4-TCDD Standards

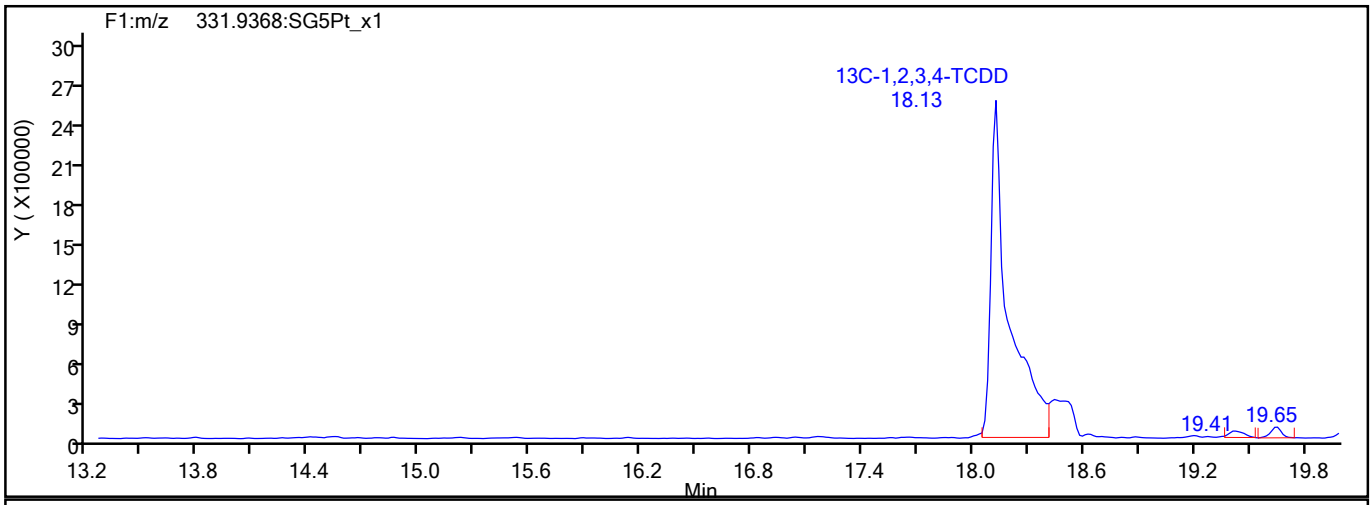

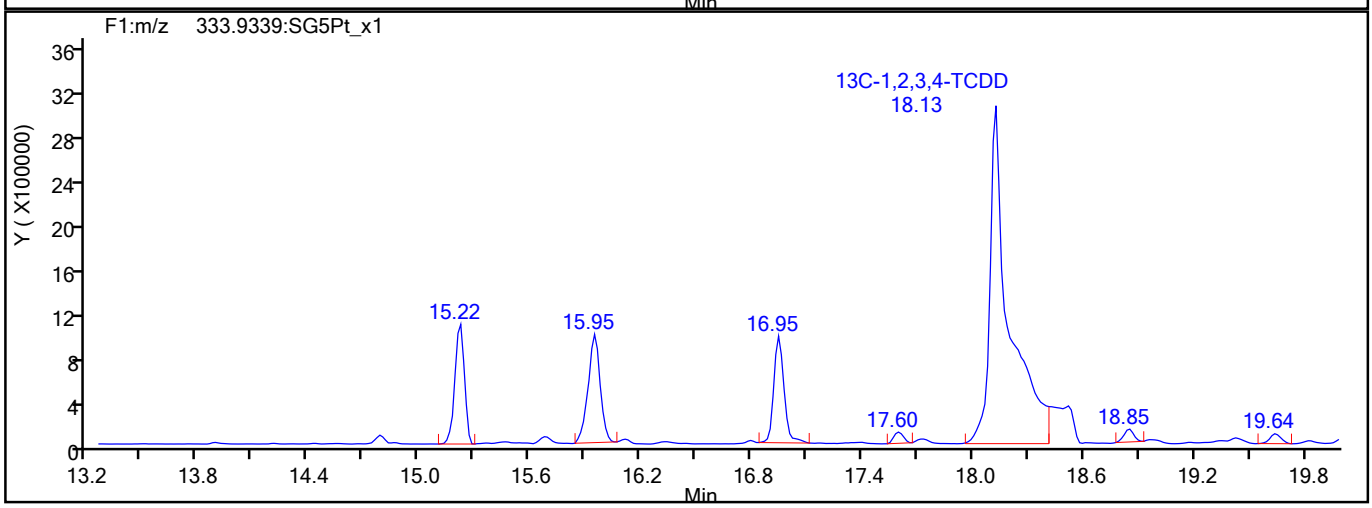

790865

Report Date: 27-Aug-2021 09:39:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Injection Date:	25-Aug-2021 12:50:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	519953	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

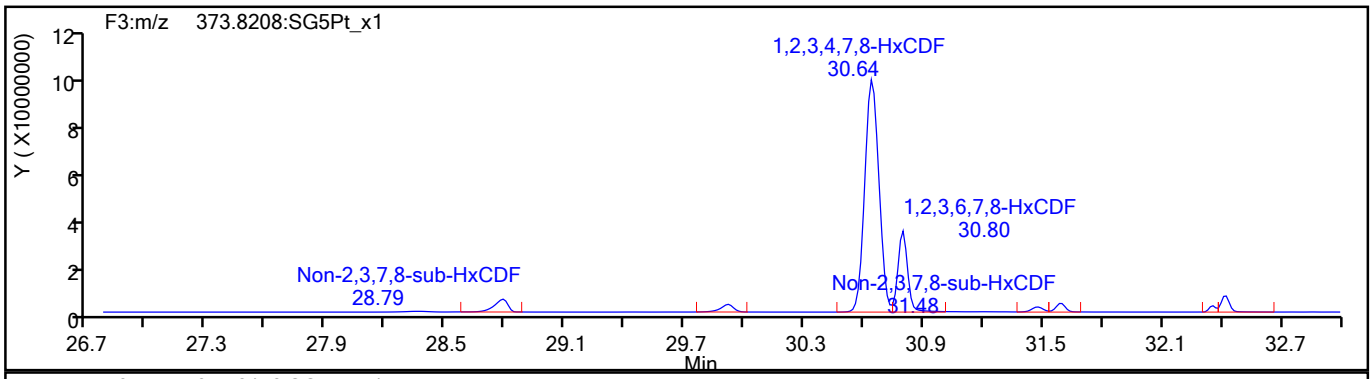

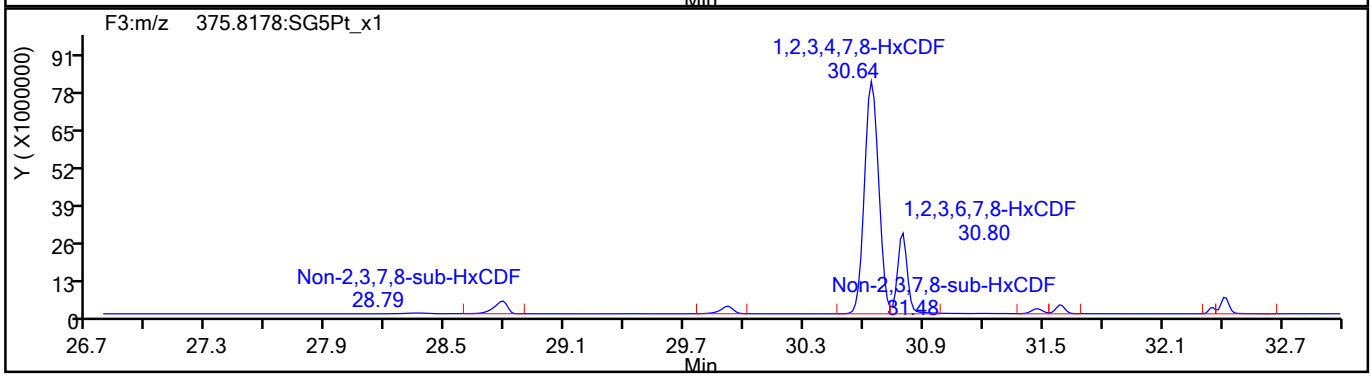

HxCDF Standards

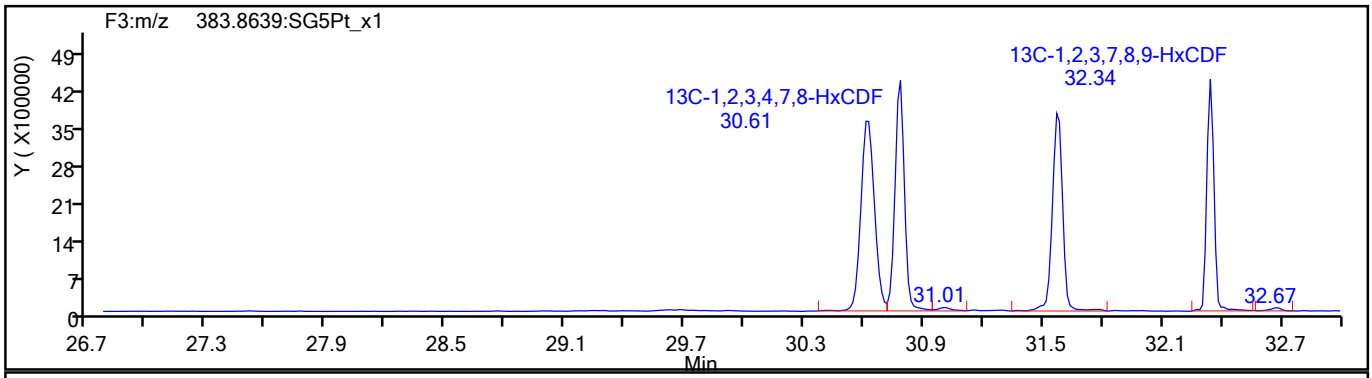

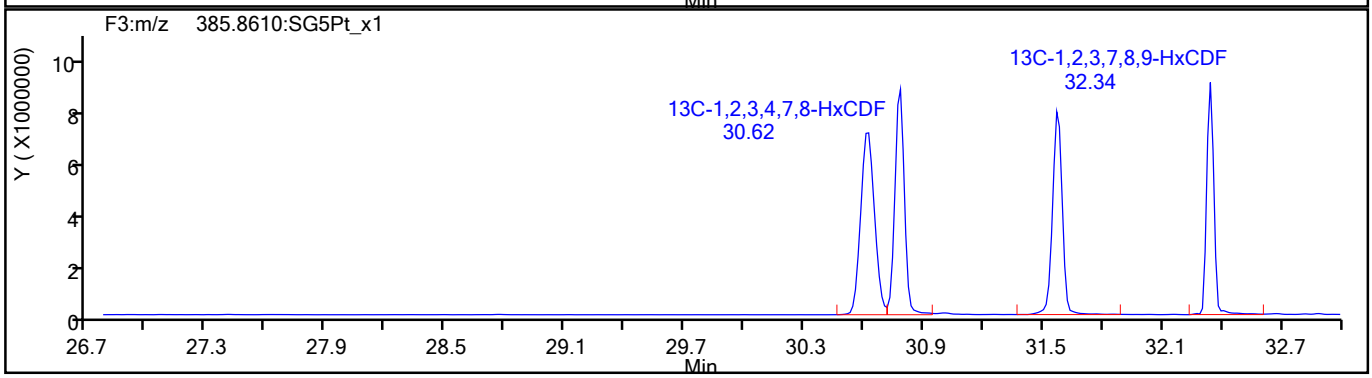

790866

Report Date: 27-Aug-2021 09:39:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Injection Date:	25-Aug-2021 12:50:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	519953	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

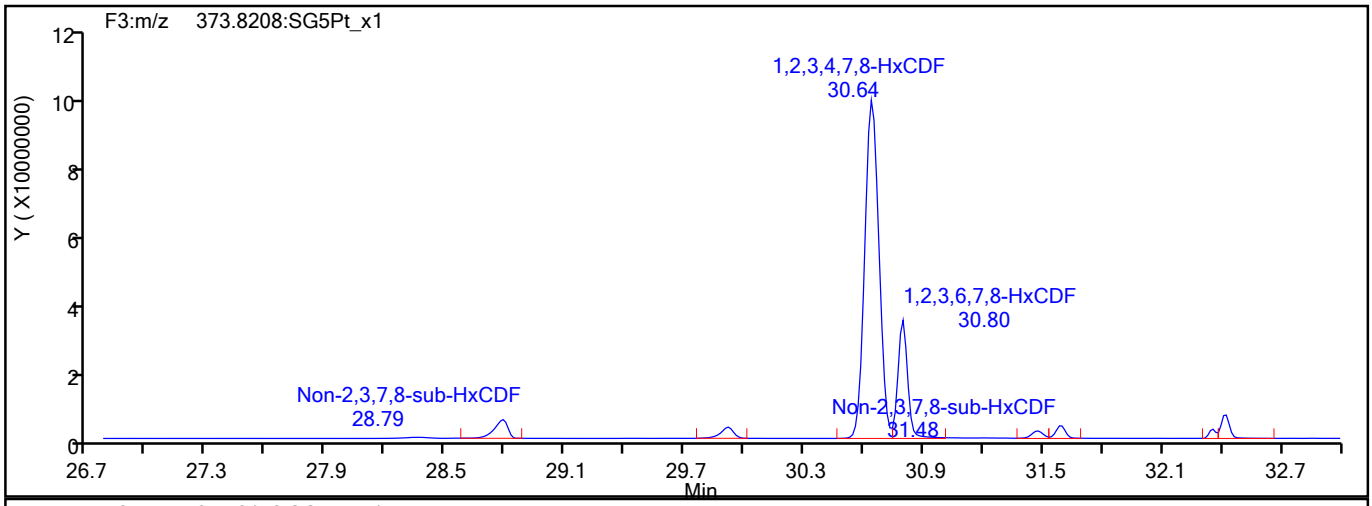

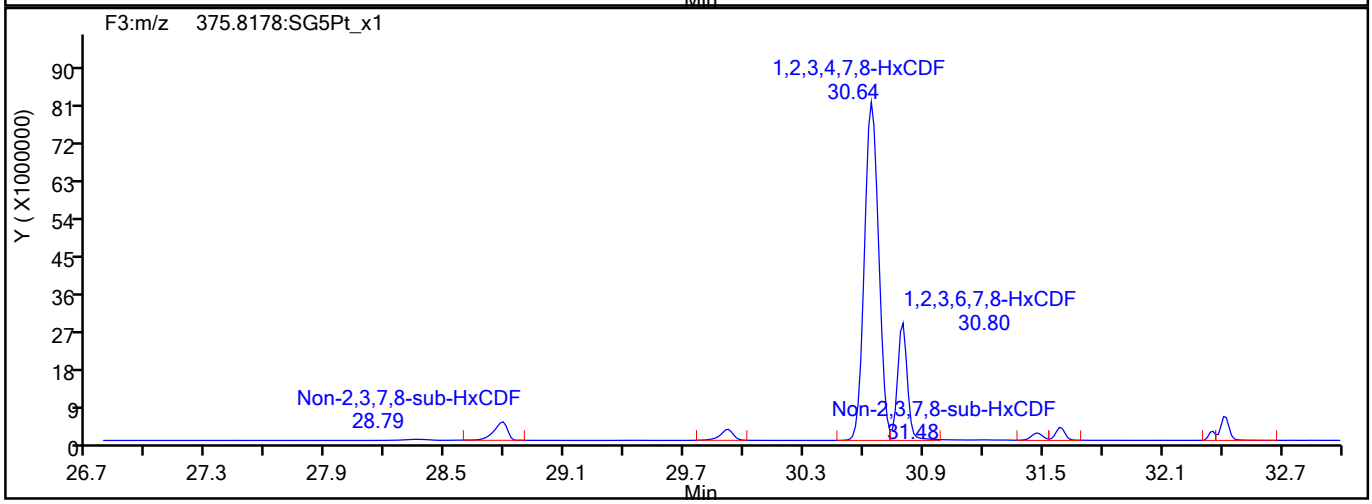

HxCDF Interference Mass

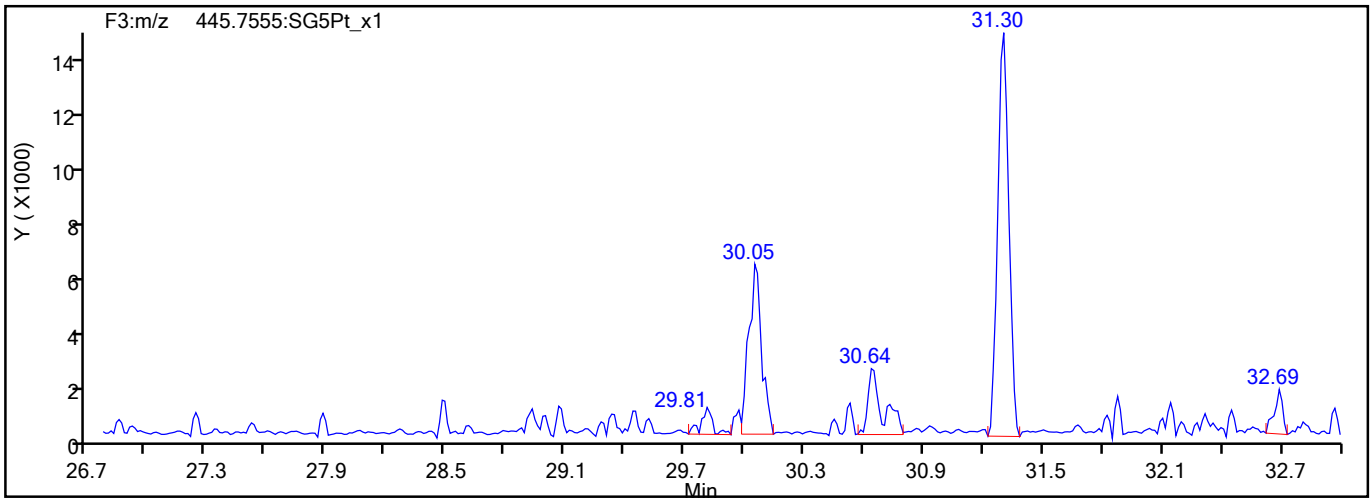

790867

Report Date: 27-Aug-2021 09:39:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Injection Date:	25-Aug-2021 12:50:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	519953	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

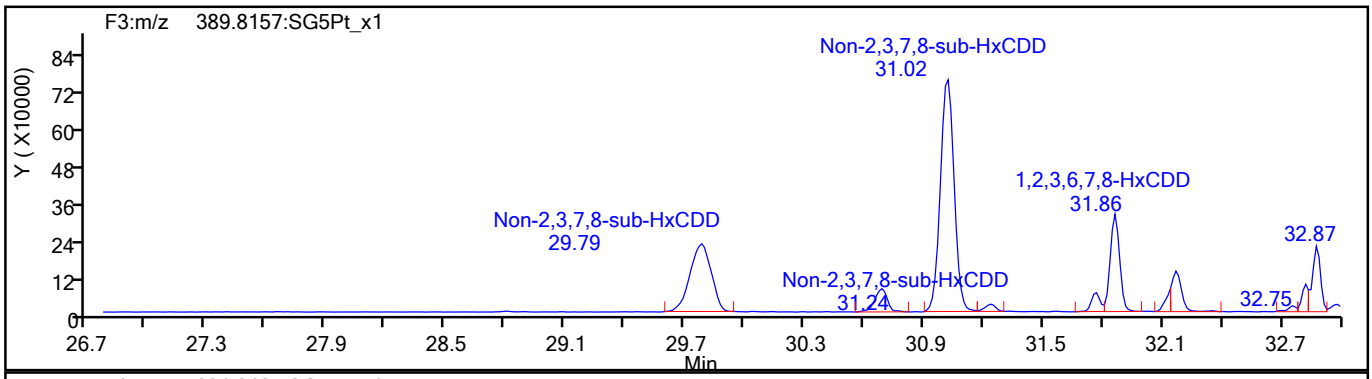

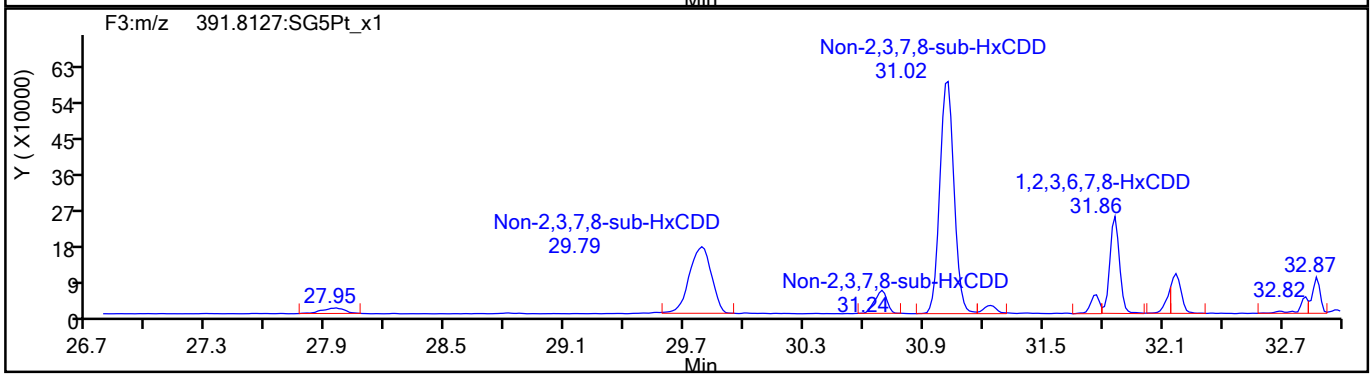

HxCDD Standards

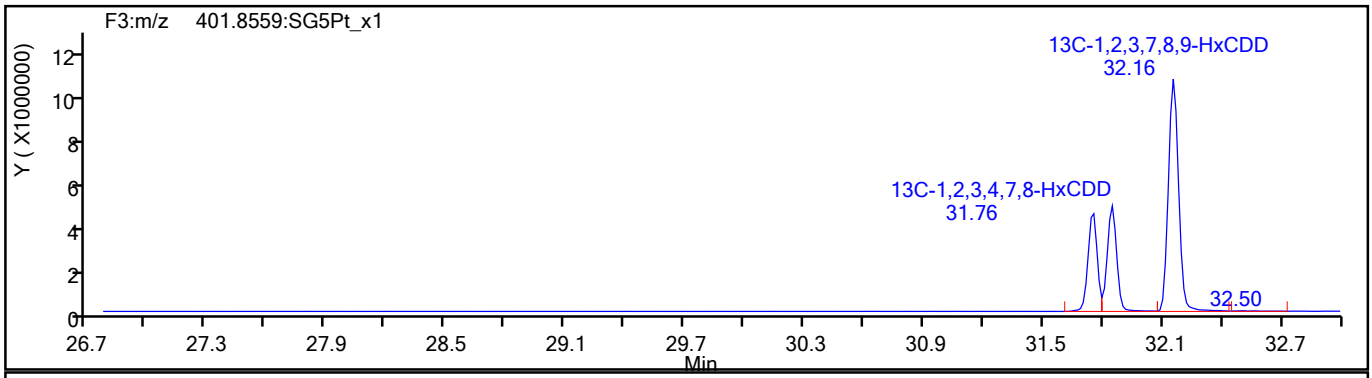

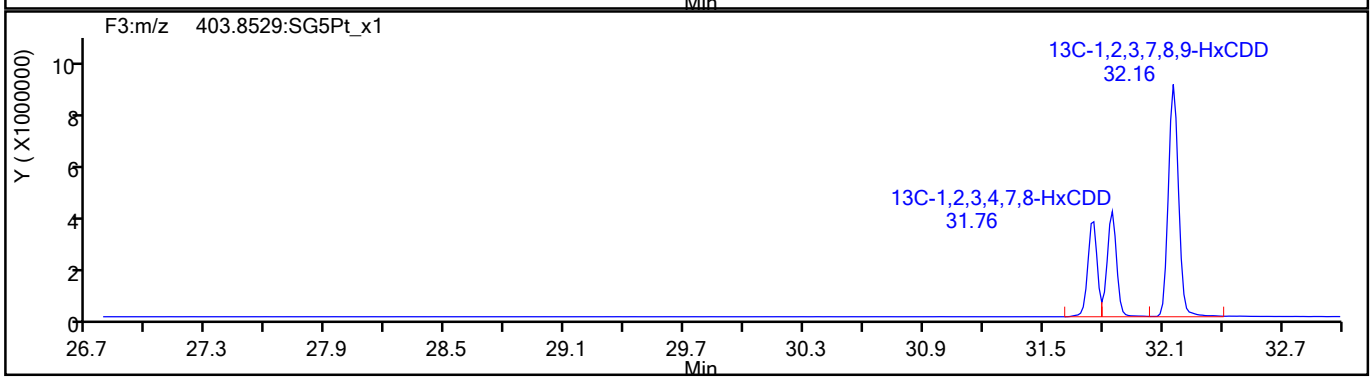

790868

Report Date: 27-Aug-2021 09:39:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Injection Date:	25-Aug-2021 12:50:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	519953	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

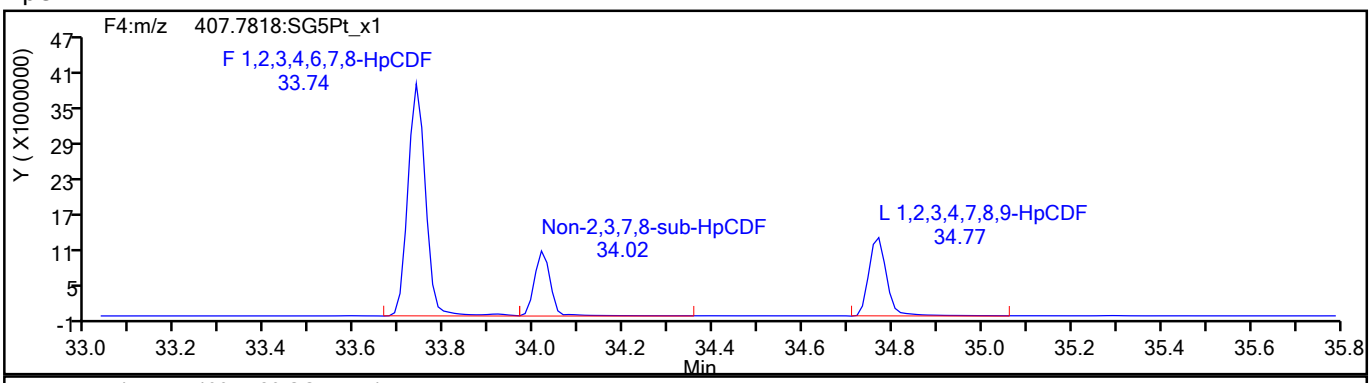

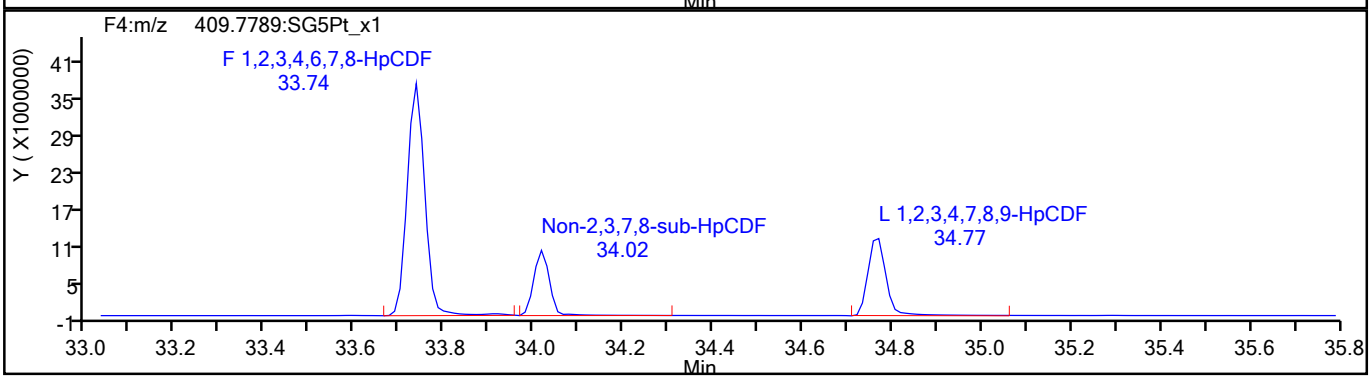

HpCDF Standards

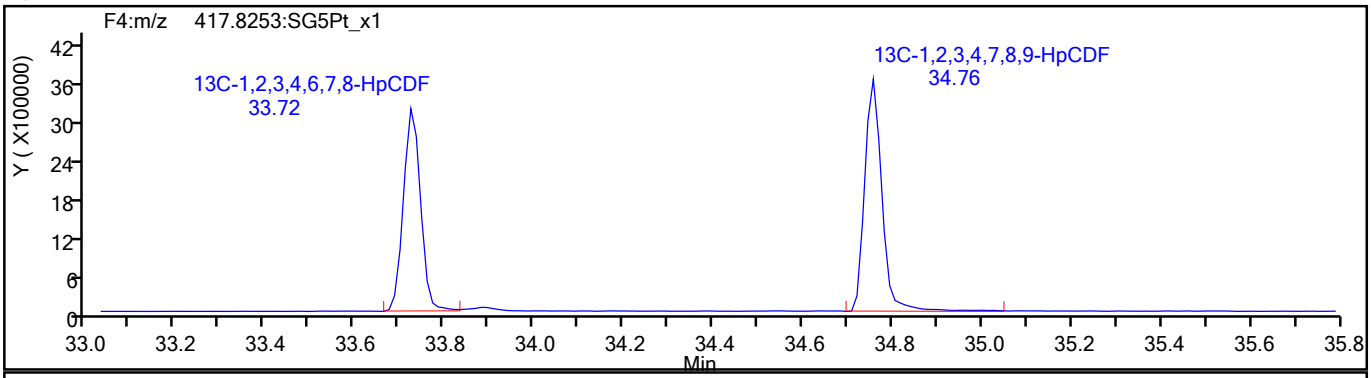

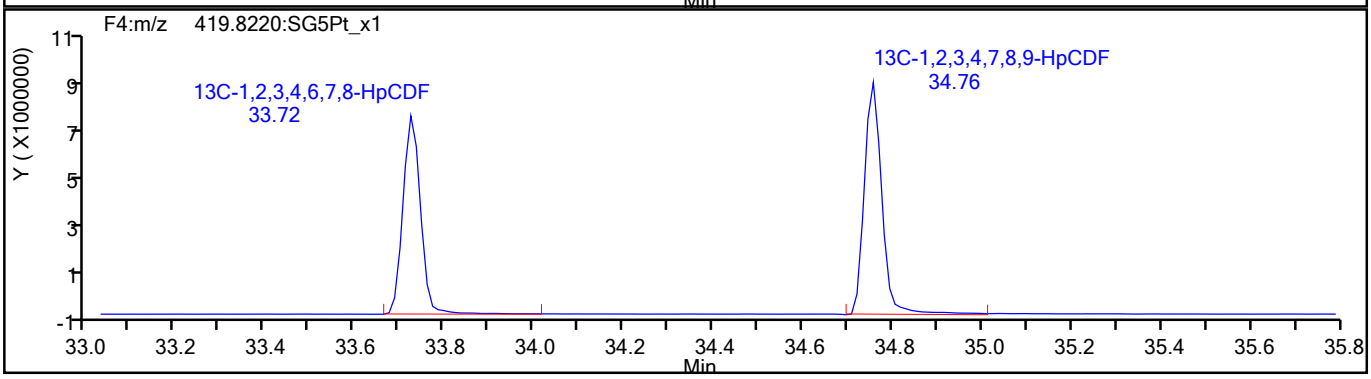

790869

Report Date: 27-Aug-2021 09:39:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Injection Date:	25-Aug-2021 12:50:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	519953	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

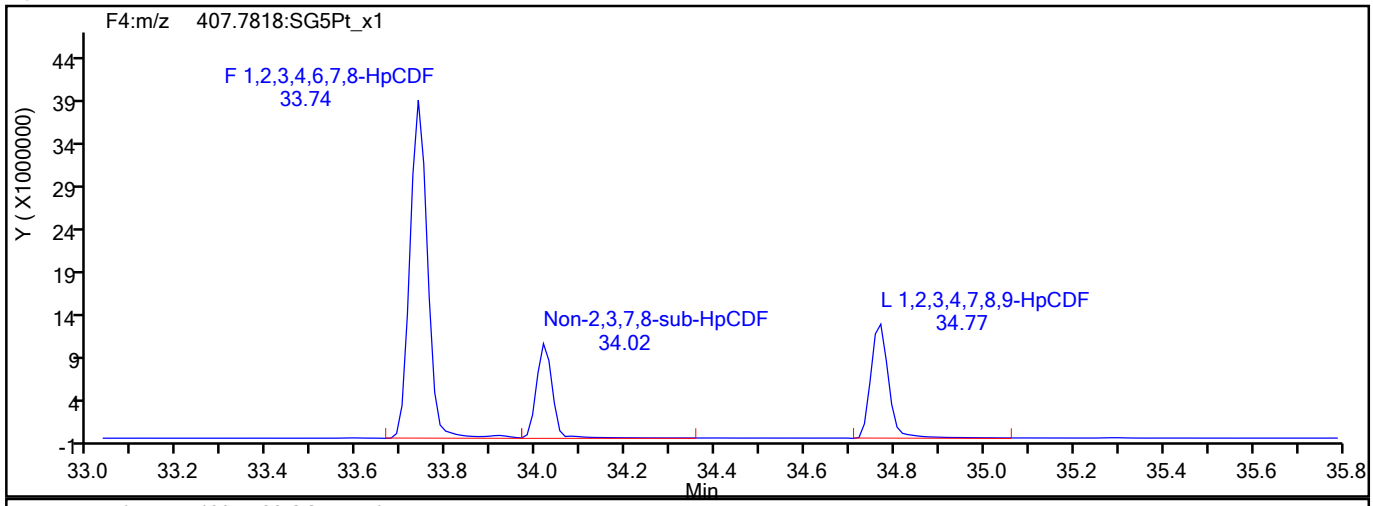

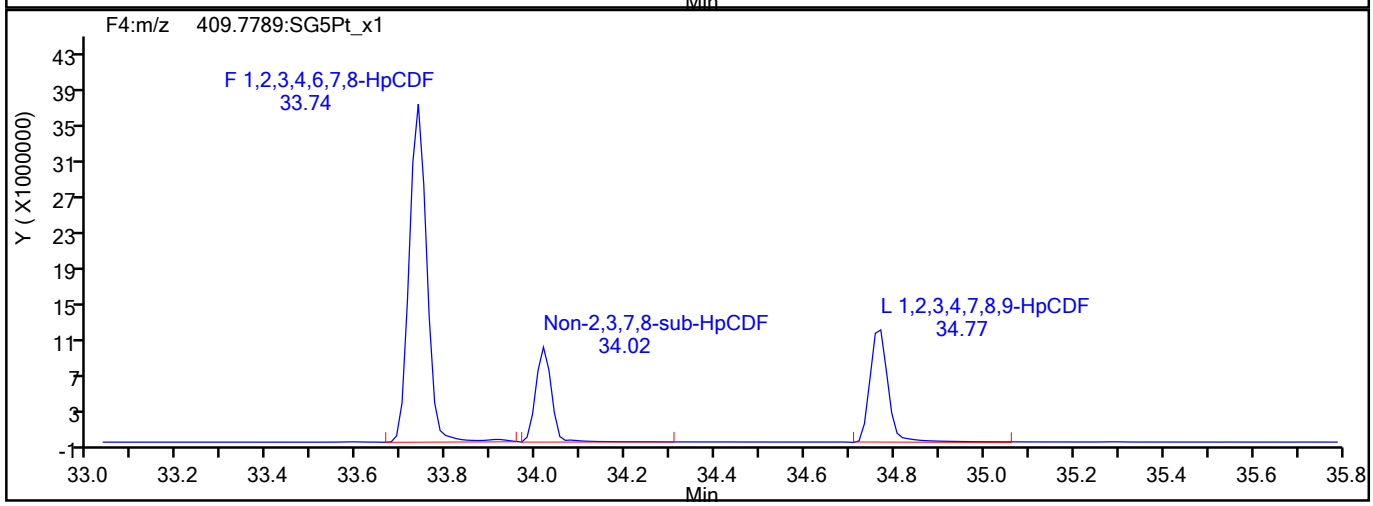

HpCDF Interference Mass

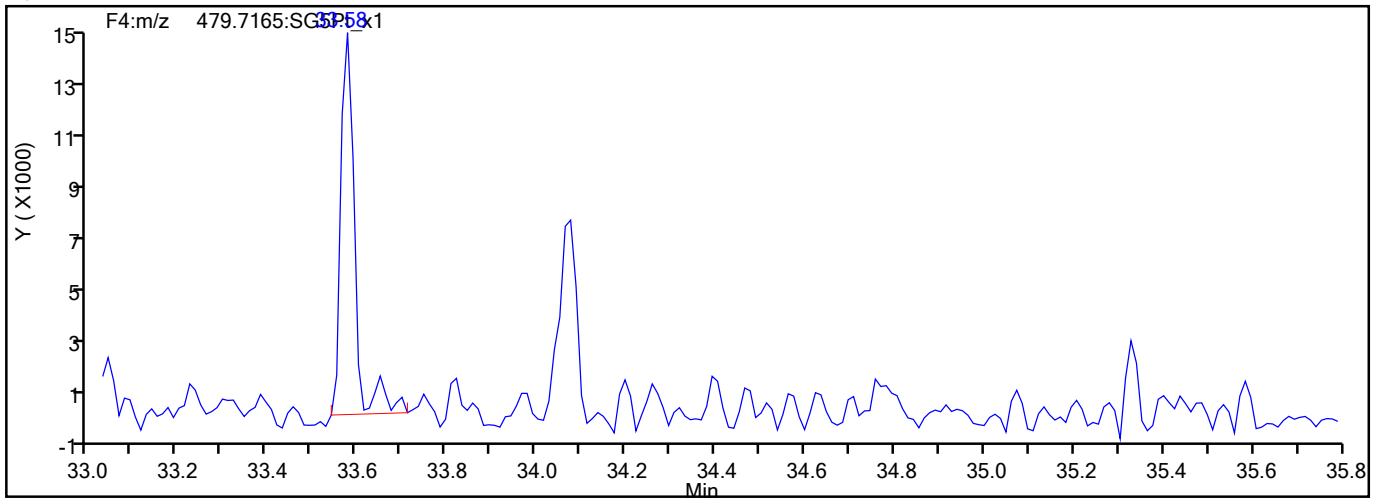

790870

Report Date: 27-Aug-2021 09:39:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Injection Date:	25-Aug-2021 12:50:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	519953	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

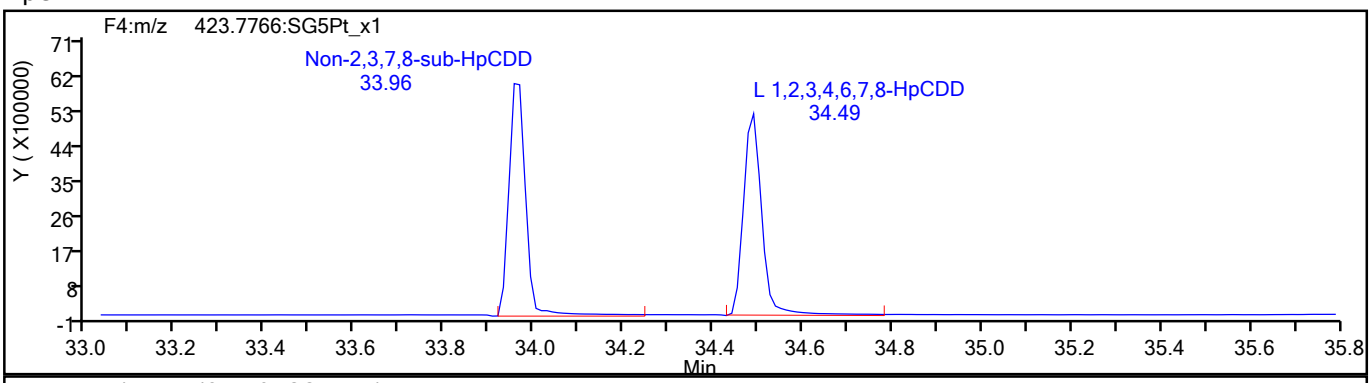

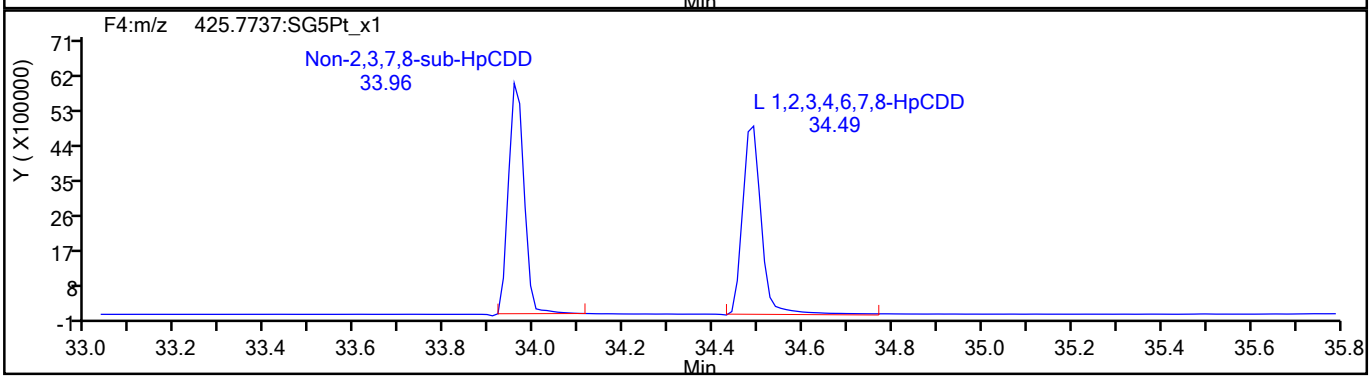

HpCDD Standards

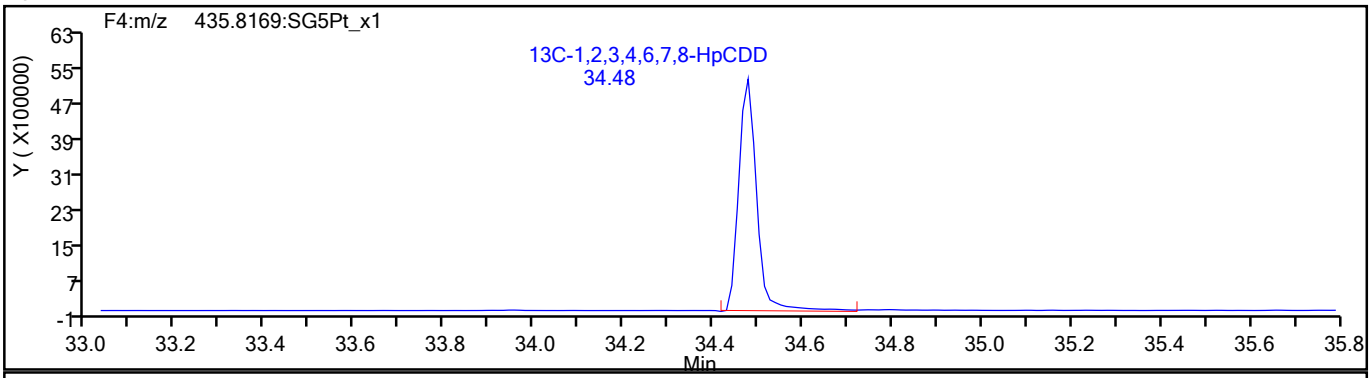

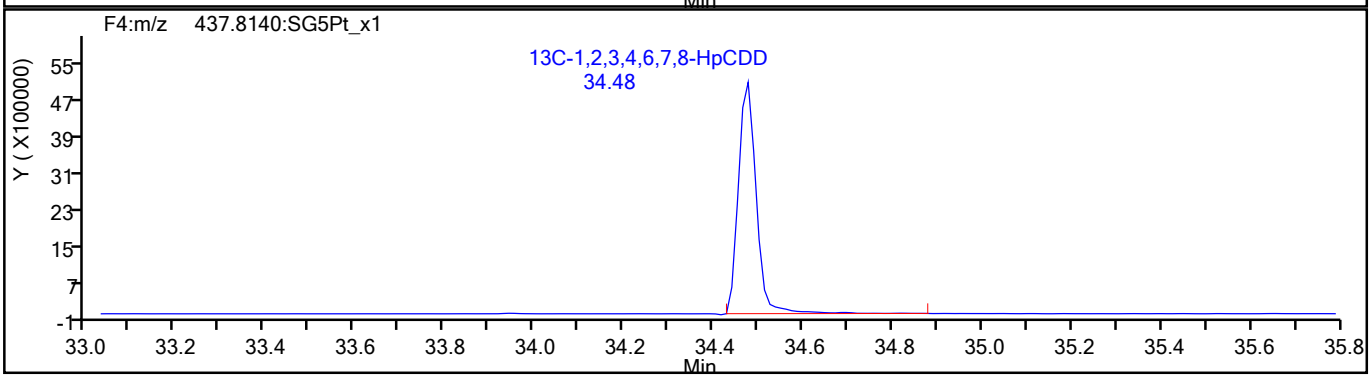

790871

Report Date: 27-Aug-2021 09:39:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Injection Date:	25-Aug-2021 12:50:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	519953	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

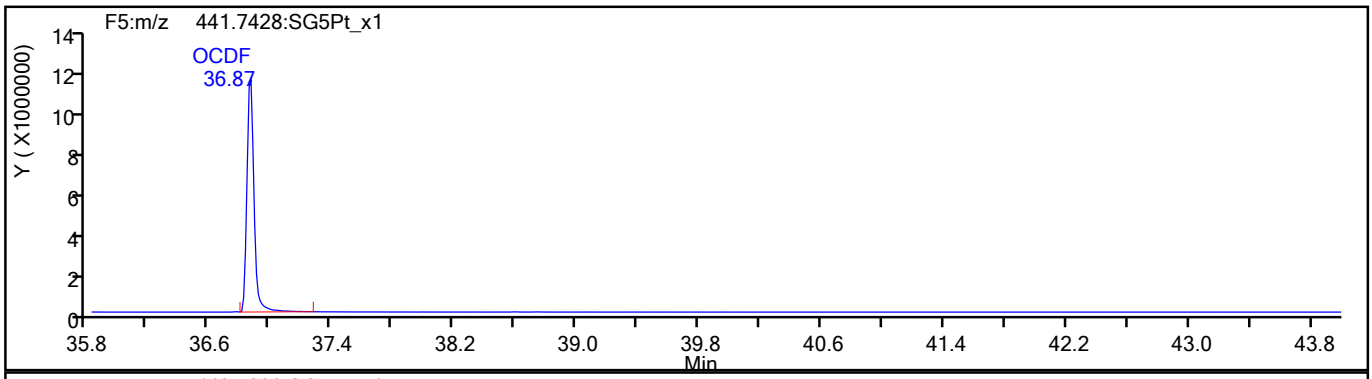

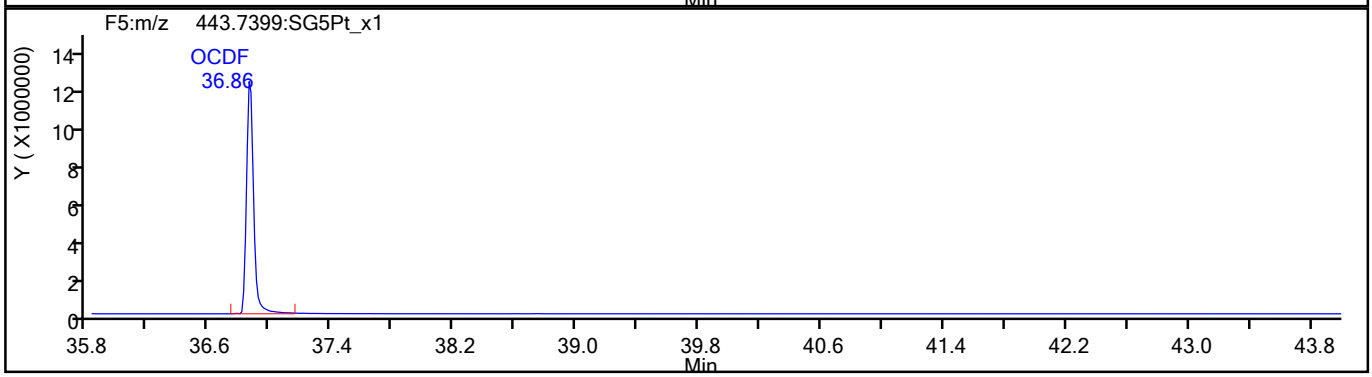

OCDF Standards

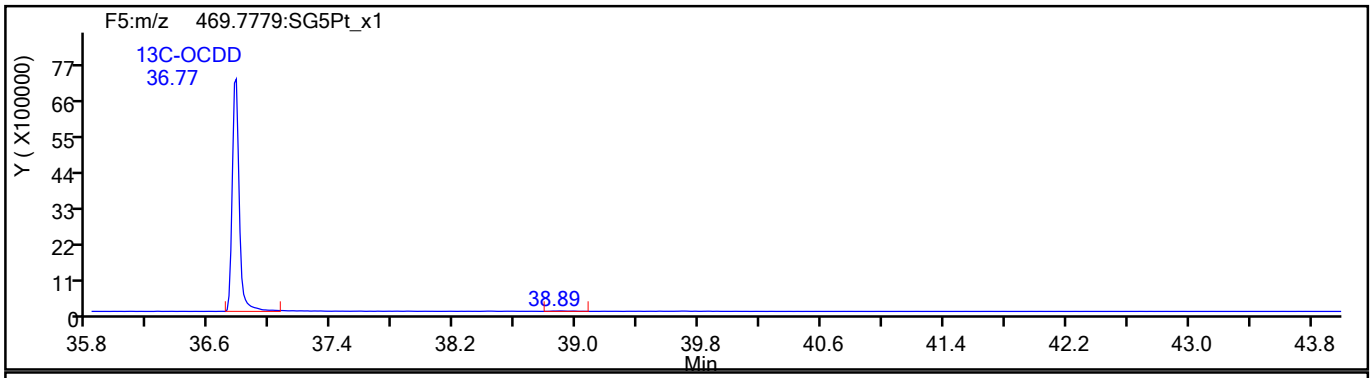

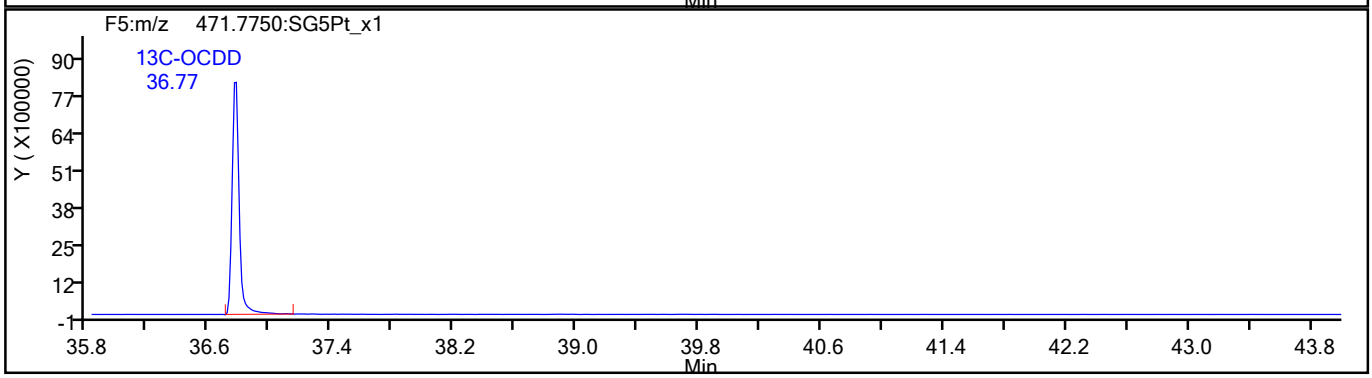

790872

Report Date: 27-Aug-2021 09:39:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Injection Date:	25-Aug-2021 12:50:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	519953	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

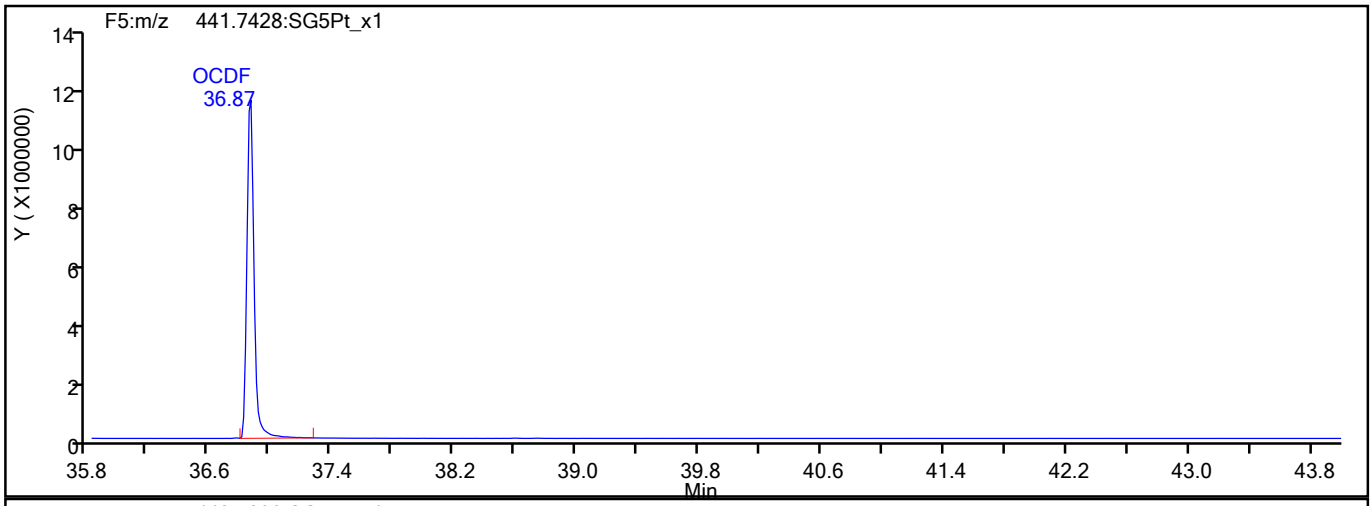

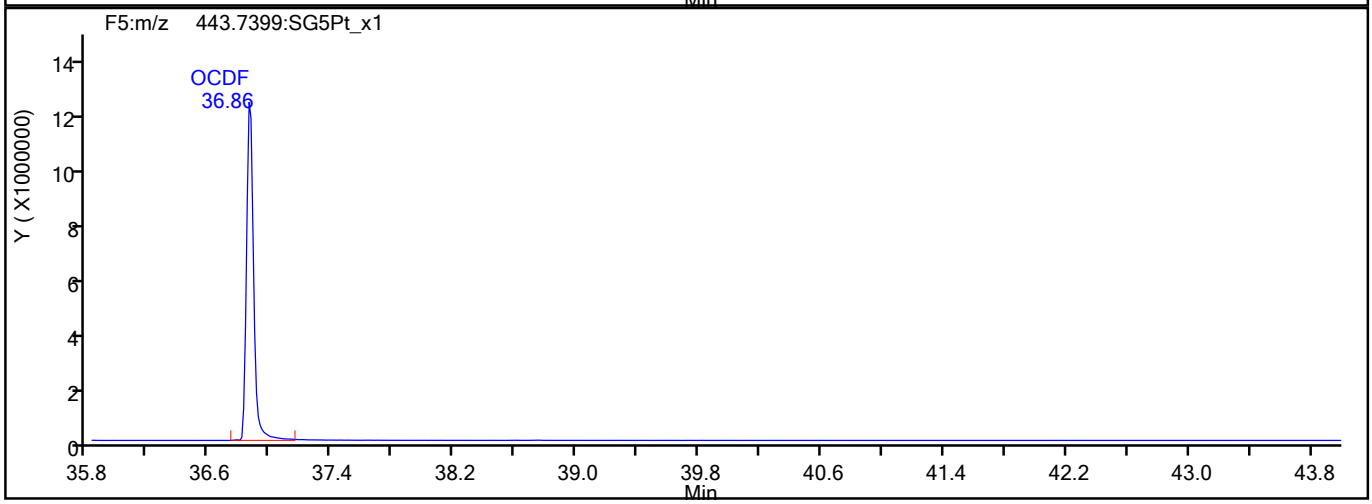

OCDF Interference Mass

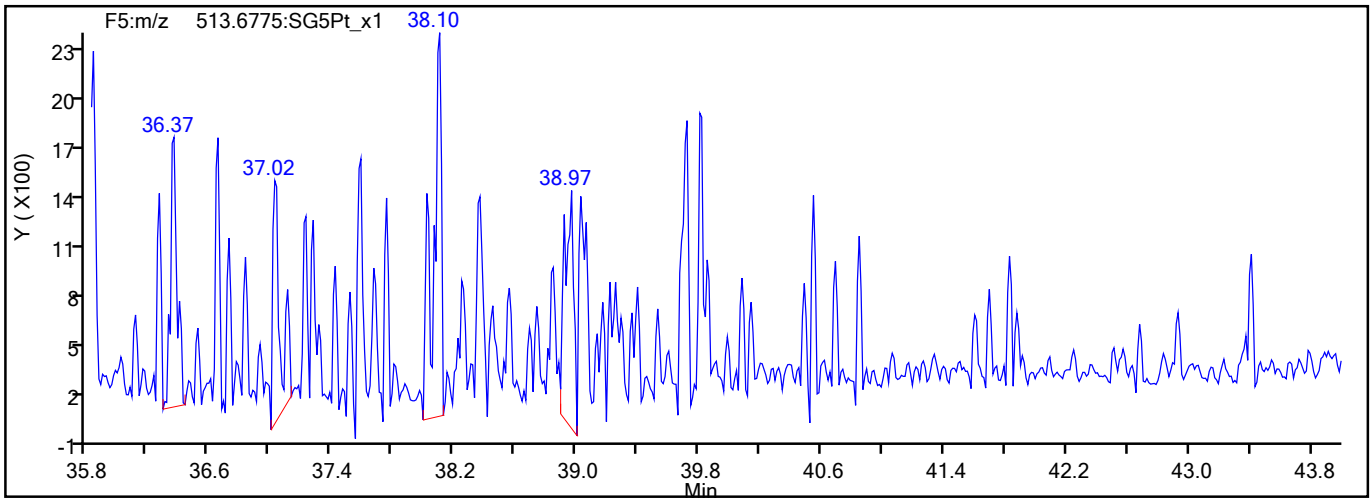

790873

Report Date: 27-Aug-2021 09:39:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Injection Date:	25-Aug-2021 12:50:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	519953	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

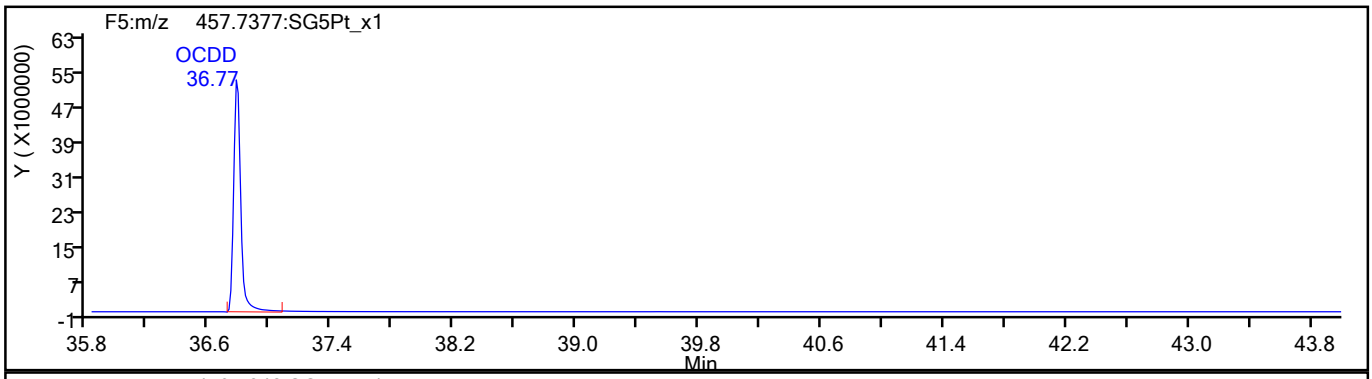

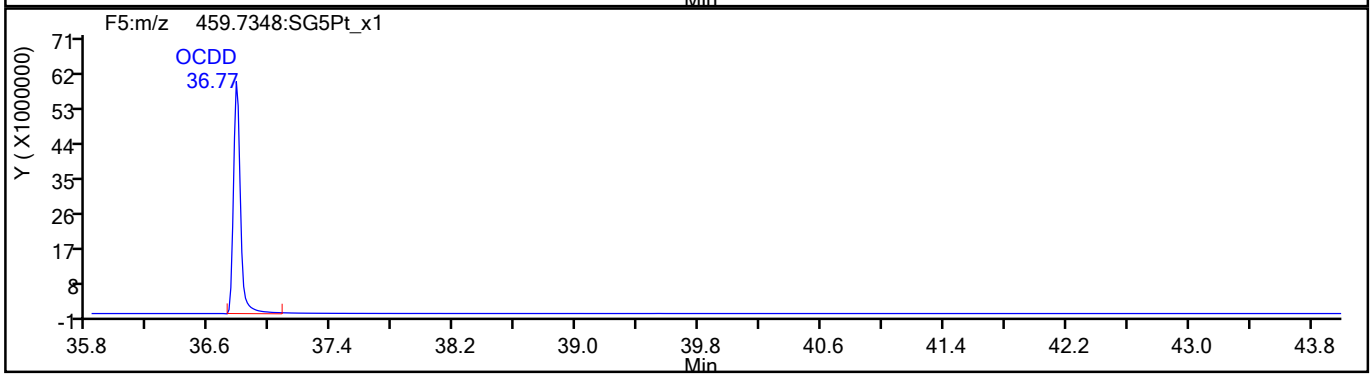

OCDD Standards

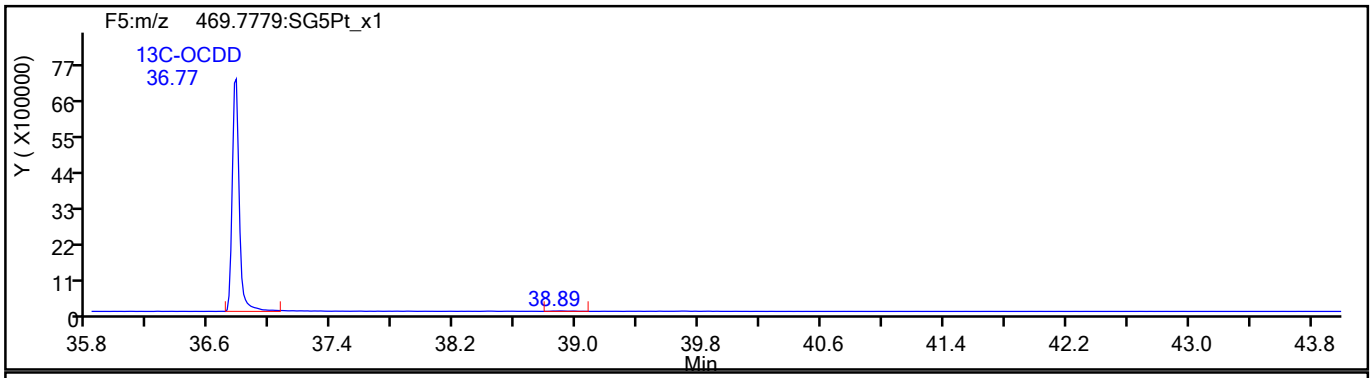

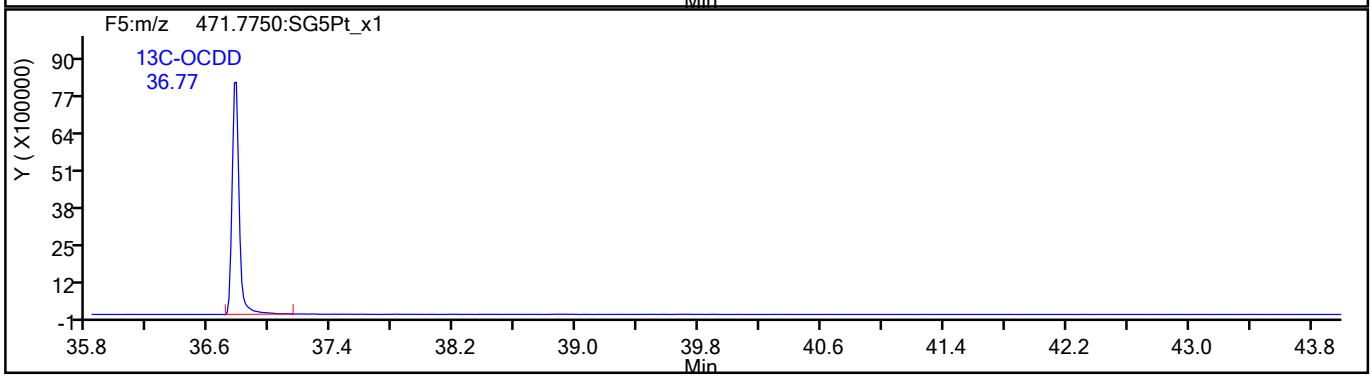

790874

Report Date: 27-Aug-2021 09:39:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Injection Date:	25-Aug-2021 12:50:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	519953	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

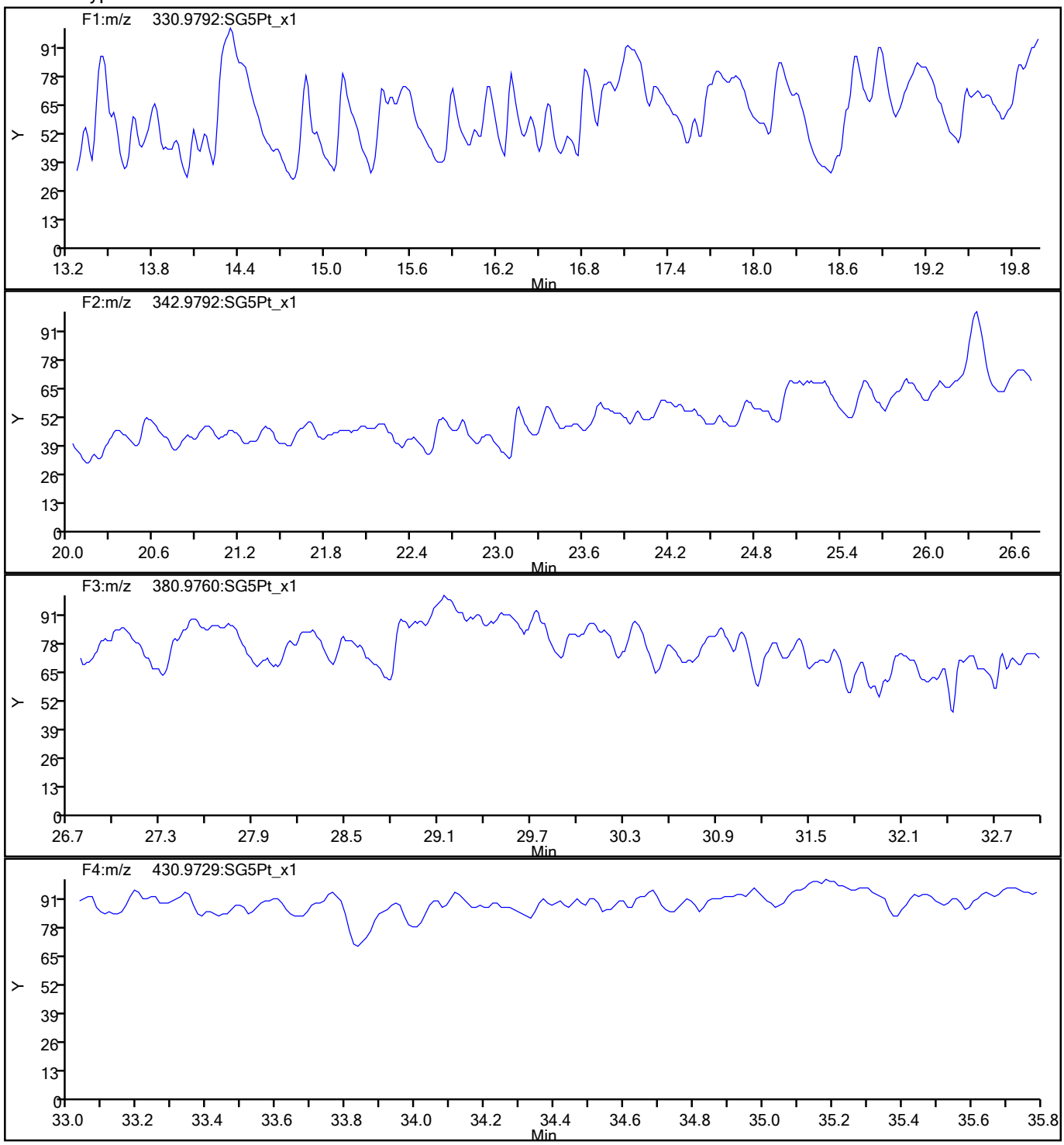

790875

Report Date: 27-Aug-2021 09:39:00 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_5.d		
Injection Date:	25-Aug-2021 12:50:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	519953	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

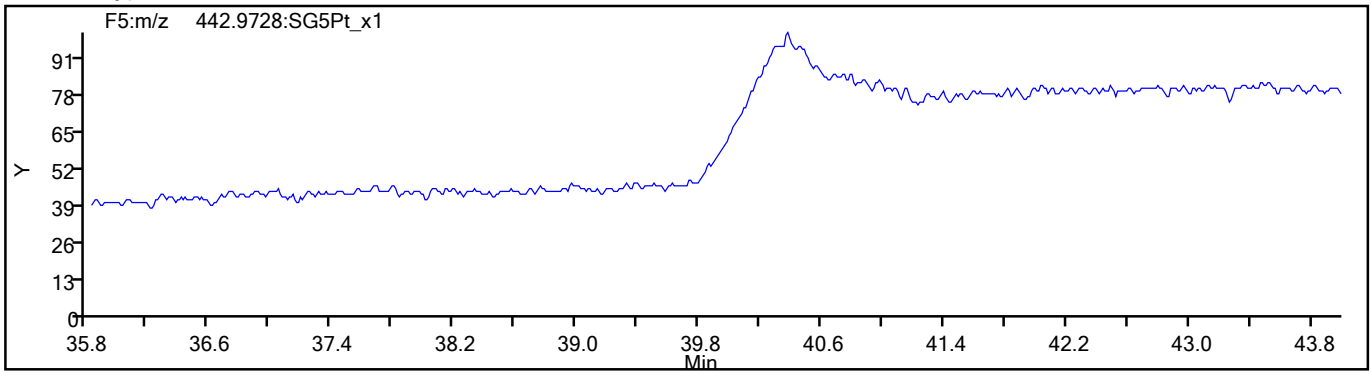

790876

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (0-2) DL
Lab Sample ID: 320-77214-1 DL
Matrix: Sediment
Lab File ID: 25AU2110D5_47.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:10
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.38(g)
Date Analyzed: 08/26/2021 21:51
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 50.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520325
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	49000	E G	170	170
40321-76-4	1,2,3,7,8-PeCDD	320		97	4.8
57117-41-6	1,2,3,7,8-PeCDF	5000		97	26
57117-31-4	2,3,4,7,8-PeCDF	2600		97	23
70648-26-9	1,2,3,4,7,8-HxCDF	6800		97	21
41903-57-5	Total TCDD	56000	G	170	170
30402-14-3	Total TCDF	220000	G B	420	420
36088-22-9	Total PeCDD	330		97	4.8
30402-15-4	Total PeCDF	12000		97	25

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	38		25-164
89059-46-1	13C-2,3,7,8-TCDF	53		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	80		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	66		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	73		21-178
114423-98-2	13C-1,2,3,4,7,8-HxCDF	65		26-152

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	111		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Sample Type: Client
Inject. Date: 26-Aug-2021 21:51:04 ALS Bottle#: 58 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-77214-a-1-a X10 320-77214-a-1-a X10
Misc. Info.: 25AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:54:36 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1637

First Level Reviewer: arghestanis Date: 27-Aug-2021 10:42:33

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.688	10322705	0.72	6.2E+05	10.0	10.0				a
D 13C-2,3,7,8-TCDF	17.174	8960813	0.79	1.6249	5.342	5.342	0.2385	0.2385	53.42	
2,3,7,8-TCDF	17.190	2842206500	0.77	1.0239	3097.7	3097.7	10.8	10.8		Ea
A Non-2,3,7,8-sub-TCDF	17.069	2292056323	0.78	1.0239	2498.1	2498.1	10.8	1665.7		
S Total TCDF					5595.9	5595.9	10.8	10.8		
D 13C-2,3,7,8-TCDD	17.915	3488843	0.73	0.8993	3.758	3.758	0.1625	0.1625	37.58	a
2,3,7,8-TCDD	17.930	549373507	0.79	1.2541	1255.6	1255.6	4.442	4.442		EMa
$ 37Cl4-2,3,7,8-TCDD	17.930	5083111		1.1071	4.448	4.448	0.1221	0.1221	111	
A Non-2,3,7,8-sub-TCDD	17.530	79840946	0.80	1.2541	182.5	182.5	4.442	168.1		Ma
S Total TCDD					1438.1	1438.1	4.442	4.442		
D 13C-1,2,3,7,8-PeCDF	22.129	8257617	1.63	1.2101	6.611	6.611	0.1136	0.1136	66.11	
1,2,3,7,8-PeCDF	22.156	113285572	1.58	1.0611	129.3	129.3	0.6697	0.6697		a
D 13C-2,3,4,7,8-PeCDF	23.438	9388032	1.61	1.2395	7.337	7.337	0.1109	0.1109	73.37	
2,3,4,7,8-PeCDF	23.452	63347094	1.59	1.0184	66.3	66.3	0.5996	0.5996		
A F1 PeCDFs	19.851						0.0153	0.0153		
A Non-2,3,7,8-sub-PeCDF	23.067	100909036	1.60	1.0398	110.0	110.0	0.6317	45.3		a
S Total PeCDF					305.5	305.5	0.6346	0.6346		
D 13C-1,2,3,7,8-PeCDD	24.120	6261652	1.59	0.7612	7.969	7.969	0.0389	0.0389	79.69	
1,2,3,7,8-PeCDD	24.147	5331192	1.64	1.0484	8.121	8.121	0.1233	0.1233		
A Non-2,3,7,8-sub-PeCDD	23.696	183217	1.37	1.0484	0.2791	0.2791	0.1233	0.2791		
S Total PeCDD					8.400	8.400	0.1233	0.1233		
D 13C-1,2,3,4,7,8-HxCDF	30.226	9050481	0.53	1.0837	6.528	6.528	0.0273	0.0273	65.28	
1,2,3,4,7,8-HxCDF	30.252	172459378	1.21	1.0851	175.6	175.6	0.5427	0.5427		
D 13C-1,2,3,6,7,8-HxCDF	30.425	7815705	0.52	1.1279	5.416	5.416	0.0262	0.0262	54.16	
1,2,3,6,7,8-HxCDF	30.452	41558801	1.21	1.1260	47.2	47.2	0.5539	0.5539		
D 13C-2,3,4,6,7,8-HxCDF	31.317	7485193	0.53	1.0637	5.500	5.500	0.0278	0.0278	55.00	
2,3,4,6,7,8-HxCDF	31.330	4261136	1.20	1.1675	4.876	4.876	0.4148	0.4148		
D 13C-1,2,3,7,8,9-HxCDF	32.156	6584938	0.52	0.9676	5.320	5.320	0.0305	0.0305	53.20	
1,2,3,7,8,9-HxCDF	32.169	2084189	1.12	1.1664	2.714	2.714	0.4210	0.4210		
A Non-2,3,7,8-sub-HxCDF	30.331	17046104	1.20	1.1363	19.4	19.4	0.4756	10.5		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					249.8	249.8	0.4831	0.4831		
* 13C-1,2,3,7,8,9-HxCDD	31.969	12793237	1.24	6.2E+05	10.0	10.0				a
D 13C-1,2,3,4,7,8-HxCDD	31.517	5552015	1.29	0.7334	5.917	5.917	0.0330	0.0330	59.17	
1,2,3,4,7,8-HxCDD	31.530	60932	1.24	1.0640	0.1235	0.1031	0.0199	0.0199		RQ
D 13C-1,2,3,6,7,8-HxCDD	31.623	5975404	1.25	0.8802	5.307	5.307	0.0275	0.0275	53.07	
1,2,3,6,7,8-HxCDD	31.650	406687	1.35	1.0001	0.6805	0.6805	0.0214	0.0214		
1,2,3,7,8,9-HxCDD	31.983	186475	1.24	1.1325	0.3139	0.2857	0.0188	0.0188		RQ
A Non-2,3,7,8-sub-HxCDD	30.512	1833957	1.24	1.0655	3.019	2.986	0.0200	1.908		RQ
S Total HxCDD					4.137	4.056	0.0200	0.0200		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.615	4513535	0.43	0.7730	4.564	4.564	0.0503	0.0503	45.64	
1,2,3,4,6,7,8-HpCDF	33.627	33221179	1.04	1.4413	51.1	51.1	0.2731	0.2731		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	5095931	0.42	0.7008	5.684	5.684	0.0554	0.0554	56.84	
1,2,3,4,7,8,9-HpCDF	34.684	10748221	1.04	1.3174	16.0	16.0	0.2789	0.2789		
A Non-2,3,7,8-sub-HpCDF	34.150	8841372	1.00	1.3793	13.3	13.3	0.2756	13.3		
S Total HpCDF					80.4	80.4	0.2760	0.2760		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	4443049	0.99	0.6472	5.366	5.366	0.0470	0.0470	53.66	
1,2,3,4,6,7,8-HpCDD	34.405	4473534	1.00	1.0943	9.201	9.201	0.0865	0.0865		
A Non-2,3,7,8-sub-HpCDD	34.223	5017498	1.02	1.0943	10.3	10.3	0.0865	10.3		
S Total HpCDD					19.5	19.5	0.0865	0.0865		
D 13C-OCDD	36.701	6547595	0.85	0.4472	11.4	11.4	0.0357	0.0357	57.23	
OCDF	36.797	9943479	0.88	1.4382	21.1	21.1	0.0240	0.0240		
OCDD	36.713	47629391	0.89	1.1070	131.4	131.4	0.1147	0.1147		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Sample Type: Client
Inject. Date: 26-Aug-2021 21:51:04 ALS Bottle#: 58 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-77214-a-1-a X10 320-77214-a-1-a X10
Misc. Info.: 25AU2110D5
Operator ID: DB Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:54:36 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1637

First Level Reviewer: arghestanis Date: 27-Aug-2021 10:42:33

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.688	17.583	6		4325009	812190	4609	11522	176		a
333.9339	17.688	17.583	6		5997696	1085997	6487	16217	167	0.72(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.174	17.084	5	0.971	3960916	1106608	15030	37575	74		
317.9389	17.174	17.084	5	0.971	4999897	1446052	14390	35975	100	0.79(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.190	17.099	5	1.001	1239846242	325849332	463989	1159972	702		a
305.8987	17.190	17.099	5	1.001	1602360258	422530939	669196	1672990	631	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.542	17.069	-91	0.905	7537515	2302294	463989	1159972	5		
305.8987	15.542	17.069	-91	0.905	9335505	2995162	669196	1672990	4	0.81(0.65-0.89)	
303.9016	15.799	17.069	-76	0.920	23114756	6785774	463989	1159972	15		
305.8987	15.799	17.069	-76	0.920	29483171	8764499	669196	1672990	13	0.78(0.65-0.89)	
303.9016	16.086	17.069	-59	0.937	32803069	5423991	463989	1159972	12		
305.8987	16.086	17.069	-59	0.937	42592704	7009072	669196	1672990	10	0.77(0.65-0.89)	
303.9016	16.313	17.069	-45	0.950	32261031	8450566	463989	1159972	18		
305.8987	16.313	17.069	-45	0.950	41715418	10749109	669196	1672990	16	0.77(0.65-0.89)	
303.9016	16.539	17.069	-32	0.963	55691097	15155345	463989	1159972	33		
305.8987	16.539	17.069	-32	0.963	73015133	19761572	669196	1672990	30	0.76(0.65-0.89)	
303.9016	16.796	17.069	-16	0.978	668009625	165282432	463989	1159972	356		
305.8987	16.796	17.069	-16	0.978	860275778	216106453	669196	1672990	323	0.78(0.65-0.89)	
303.9016	17.613	17.069	33	1.026	88606079	24433266	463989	1159972	53		
305.8987	17.613	17.069	33	1.026	113976752	31144862	669196	1672990	47	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	19.004	17.069	116	1.107	93583580	22221191	463989	1159972	48		
305.8987	19.004	17.069	116	1.107	120055110	28468091	669196	1672990	43	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	17.915	17.779	8	1.013	1467683	399361	4609	11522	87		a
333.9339	17.915	17.779	8	1.013	2021160	553038	6487	16217	85	0.73(0.65-0.89)	
2,3,7,8-TCDD											EMa
319.8965	17.930	17.794	8	1.001	242840764	69330659	86202	215505	804		M
321.8936	17.930	17.794	8	1.001	306532743	88628425	126025	315062	703	0.79(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	17.930	17.794	8	1.014	5083111	1498226	10260	25650	146		
A Non-2,3,7,8-sub-TCDD											Ma
319.8965	17.824	17.530	18	0.995	2756101	736589	86202	215505	9		M
321.8936	17.824	17.530	18	0.995	3539572	946312	126025	315062	8	0.78(0.65-0.89)	
319.8965	18.233	17.530	42	1.018	32737091	7997747	86202	215505	93		
321.8936	18.233	17.530	42	1.018	40808182	9976137	126025	315062	79	0.80(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.129	21.993	8	1.251	5118065	919043	6303	15757	146		
353.8970	22.129	21.993	8	1.251	3139552	556394	4133	10332	135	1.63(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.156	22.020	8	1.001	69383306	12175849	25640	64100	475		a
341.8567	22.156	22.020	8	1.001	43902266	7697620	16298	40745	472	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.438	23.315	7	1.325	5789967	1075325	6303	15757	171		
353.8970	23.424	23.315	7	1.324	3598065	641692	4133	10332	155	1.61(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.452	23.343	7	1.001	38842814	7109989	25640	64100	277		
341.8567	23.452	23.343	7	1.001	24504280	4507329	16298	40745	277	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						407	1017			
341.8567	19.851						612	1530			
A Non-2,3,7,8-sub-PeCDF											a
339.8597	20.820	23.067	-135	0.941	25603432	5326379	25640	64100	208		
341.8567	20.820	23.067	-135	0.941	15942390	3314506	16298	40745	203	1.61(1.32-1.78)	
339.8597	21.638	23.067	-86	0.978	1811217	221006	25640	64100	9		
341.8567	21.625	23.067	-86	0.977	1047053	127249	16298	40745	8	1.73(1.32-1.78)	
339.8597	22.020	23.067	-63	0.995	3890877	970815	25640	64100	38		a
341.8567	22.020	23.067	-63	0.995	2446978	599981	16298	40745	37	1.59(1.32-1.78)	
339.8597	22.429	23.067	-38	1.014	758855	162420	25640	64100	6		
341.8567	22.429	23.067	-38	1.014	469990	100237	16298	40745	6	1.61(1.32-1.78)	
339.8597	22.647	23.067	-25	1.023	17105630	3276169	25640	64100	128		
341.8567	22.647	23.067	-25	1.023	10787437	2063084	16298	40745	127	1.59(1.32-1.78)	
339.8597	23.779	23.067	43	1.075	10361854	1640997	25640	64100	64		
341.8567	23.779	23.067	43	1.075	6510473	1016121	16298	40745	62	1.59(1.32-1.78)	
339.8597	25.333	23.067	136	1.145	2561565	410050	25640	64100	16		
341.8567	25.333	23.067	136	1.145	1611285	267612	16298	40745	16	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.120	24.024	6	1.364	3840203	652068	1315	3287	496		
369.8919	24.120	24.024	6	1.364	2421449	417902	934	2335	447	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.147	24.038	7	1.001	3315488	588042	3244	8110	181		
357.8516	24.147	24.038	7	1.001	2015704	352582	2291	5727	154	1.64(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	22.415	23.696	-77	0.929	105870	22620	3244	8110	7		
357.8516	22.415	23.696	-77	0.929	77347	17348	2291	5727	8	1.37(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.226	30.159	4	0.945	3144063	545240	2260	5650	241		
385.8610	30.226	30.159	4	0.945	5906418	1083255	2055	5137	527	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.252	30.173	5	1.001	94491055	16864713	23036	57590	732		
375.8178	30.239	30.173	4	1.000	77968323	14014835	15326	38315	914	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.425	30.372	3	0.952	2671158	521884	2260	5650	231		
385.8610	30.425	30.372	3	0.952	5144547	1015743	2055	5137	494	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.452	30.385	4	1.001	22733656	4533899	23036	57590	197		
375.8178	30.452	30.385	4	1.001	18825145	3668593	15326	38315	239	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.317	31.277	2	0.980	2602795	677980	2260	5650	300		
385.8610	31.317	31.277	2	0.980	4882398	1302092	2055	5137	634	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.330	31.291	2	1.000	2326846	635058	23036	57590	28		
375.8178	31.330	31.291	2	1.000	1934290	519609	15326	38315	34	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.156	32.116	2	1.006	2256940	658886	2260	5650	292		
385.8610	32.156	32.116	2	1.006	4327998	1294234	2055	5137	630	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.169	32.129	2	1.000	1099373	397478	23036	57590	17		
375.8178	32.156	32.129	2	1.000	984816	333117	15326	38315	22	1.12(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	29.281	30.331	-63	0.969	2690153	383273	23036	57590	17		
375.8178	29.281	30.331	-63	0.969	2247500	306596	15326	38315	20	1.20(1.05-1.43)	
373.8208	31.211	30.331	53	1.033	1548744	403256	23036	57590	18		
375.8178	31.211	30.331	53	1.033	1305768	327835	15326	38315	21	1.19(1.05-1.43)	
373.8208	32.249	30.331	115	1.067	5045132	1701654	23036	57590	74		
375.8178	32.249	30.331	115	1.067	4208807	1403877	15326	38315	92	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											a
401.8559	31.969	31.930	2		7091703	2036899	1995	4987	1021		a
403.8529	31.969	31.930	2		5701534	1615047	1543	3857	1047	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.517	31.477	2	0.986	3132051	917260	1995	4987	460		
403.8529	31.517	31.477	2	0.986	2419964	704050	1543	3857	456	1.29(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDD											RQ
389.8157	31.530	31.490	2	1.000	45749	12222	633	1582	19		
	Empc Correction				33730	10449	633	1582	17		
391.8127	31.530	31.490	2	1.000	27202	8427	738	1845	11	1.68(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.623	31.597	2	0.989	3317631	889863	1995	4987	446		
403.8529	31.623	31.597	2	0.989	2657773	710246	1543	3857	460	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.650	31.610	2	1.001	233522	65647	633	1582	104		
391.8127	31.636	31.610	2	1.000	173165	48530	738	1845	66	1.35(1.05-1.43)	
1,2,3,7,8,9-HxCDD											RQ
389.8157	31.983	31.943	2	1.015	121648	28766	633	1582	45		
	Empc Correction				103227	24258	633	1582	38		
391.8127	31.969	31.943	2	1.014	83248	19563	738	1845	27	1.46(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.121	30.512	-83	0.921	281319	37625	633	1582	59		
391.8127	29.121	30.512	-83	0.921	240612	31329	738	1845	42	1.17(1.05-1.43)	
389.8157	30.319	30.512	-12	0.959	52225	11228	633	1582	18		
391.8127	30.319	30.512	-12	0.959	55499	10558	738	1845	14	0.94(1.05-1.43)	
	Empc Correction				42116	9054	738	1845	12		
389.8157	30.731	30.512	13	0.972	655701	128564	633	1582	203		
391.8127	30.718	30.512	12	0.971	516249	101299	738	1845	137	1.27(1.05-1.43)	
389.8157	30.931	30.512	25	0.978	25318	3794	633	1582	6		
391.8127	30.931	30.512	25	0.978	27184	5323	738	1845	7	0.93(1.05-1.43)	
	Empc Correction				20417	3059	738	1845	4		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.615	33.591	1	1.051	1364451	487173	2434	6085	200		
419.8220	33.615	33.591	1	1.051	3149084	1168791	3242	8105	361	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.627	33.603	1	1.000	16955153	6133857	11807	29517	520		
409.7789	33.627	33.603	1	1.000	16266026	5757492	14270	35675	403	1.04(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.660	1	1.085	1504596	515262	2434	6085	212		
419.8220	34.672	34.660	1	1.085	3591335	1258852	3242	8105	388	0.42(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.684	34.672	1	1.000	5477258	1959927	11807	29517	166		
409.7789	34.684	34.672	1	1.000	5270963	1853050	14270	35675	130	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	33.919	34.150	-14	1.009	4423050	1729559	11807	29517	146		
409.7789	33.919	34.150	-14	1.009	4418322	1590457	14270	35675	111	1.00(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.381	1	1.076	2210694	814201	2629	6572	310		
437.8140	34.393	34.381	1	1.076	2232355	798722	1811	4527	441	0.99(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.393	1	1.000	2240719	793946	2583	6457	307		
425.7737	34.405	34.393	1	1.000	2232815	776356	3527	8817	220	1.00(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.858	34.223	-22	0.984	2534753	926344	2583	6457	359		
425.7737	33.858	34.223	-22	0.984	2482745	926946	3527	8817	263	1.02(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.689	1	1.148	3015568	915892	1446	3615	633		
471.7750	36.701	36.689	1	1.148	3532027	1050260	885	2212	1187	0.85(0.76-1.02)	
OCDF											
441.7428	36.797	36.785	1	1.003	4654445	1432144	664	1660	2157		
443.7399	36.797	36.785	1	1.003	5289034	1624876	692	1730	2348	0.88(0.76-1.02)	
OCDD											
457.7377	36.713	36.701	1	1.000	22432372	6743828	2474	6185	2726		
459.7348	36.713	36.701	1	1.000	25197019	7425067	2518	6295	2949	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Inject. Date: 26-Aug-2021 21:51:04 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 520325 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	8960813	2552660

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		10.000	8960813	2552660

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.542	7537515	2302294	9335505	2995162	18.4	0.81	
15.799	23114756	6785774	29483171	8764499	57.3	0.78	
16.086	32803069	5423991	42592704	7009072	82.2	0.77	
16.313	32261031	8450566	41715418	10749109	80.6	0.77	
16.539	55691097	15155345	73015133	19761572	140.3	0.76	
16.796	668009625	165282432	860275778	216106453	1665.7	0.78	
17.613	88606079	24433266	113976752	31144862	220.8	0.78	
19.004	93583580	22221191	120055110	28468091	232.8	0.78	
Signal Totals:							
	1001606752	250054859	1290449571	324998820			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2292056323	575053679				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2498.1 = (2292056323 * 10.000) / (8960813 * 1.024)

Report Date: 30-Aug-2021 09:54:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Inject. Date: 26-Aug-2021 21:51:04 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 520325 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	3488843	952399

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		10.000	3488843	952399

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.824	2756101	736589	3539572	946312	14.4	0.78	Ma
18.233	32737091	7997747	40808182	9976137	168.1	0.80	
Signal Totals:							
	35493192	8734336	44347754	10922449			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	79840946	19656785				0.80	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 182.476 = (79840946 * 10.000) / (3488843 * 1.254)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 30-Aug-2021 09:54:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Lims ID:	320-77214-A-1-A		
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Inject. Date:	26-Aug-2021 21:51:04	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	520325	Lims Sample ID:	5

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	8257617	1475437
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	9388032	1717017

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		10.000	8822824	1596227

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.820	25603432	5326379	15942390	3314506	45.3	1.61	
21.638	1811217	221006	1047053	127249	3.12	1.73	
22.020	3890877	970815	2446978	599981	6.91	1.59	a
22.429	758855	162420	469990	100237	1.34	1.61	
22.647	17105630	3276169	10787437	2063084	30.4	1.59	
23.779	10361854	1640997	6510473	1016121	18.4	1.59	
25.333	2561565	410050	1611285	267612	4.55	1.59	
Signal Totals:							
	62093430	12007836	38815606	7488790			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	100909036	19496626				1.60	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 109.997 = (100909036 * 10.000) / (8822824 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 30-Aug-2021 09:54:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Lims ID:	320-77214-A-1-A		
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Inject. Date:	26-Aug-2021 21:51:04	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	520325	Lims Sample ID:	5

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	6261652	1069970

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		10.000	6261652	1069970

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.415	105870	22620	77347	17348	0.2791	1.37	
Signal Totals:							
	105870	22620	77347	17348			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	183217	39968				1.37	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.2791 = (183217 * 10.000) / (6261652 * 1.048)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Inject. Date: 26-Aug-2021 21:51:04 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 520325 Lims Sample ID: 5

Non-2,3,7,8-sub-HxCDF, RT: 30.331

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	9050481	1628495
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	7815705	1537627
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	7485193	1980072
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	6584938	1953120

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		10.000	7734079	1774828

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.281	2690153	383273	2247500	306596	5.62	1.20	
31.211	1548744	403256	1305768	327835	3.25	1.19	
32.249	5045132	1701654	4208807	1403877	10.5	1.20	
Signal Totals:							
	9284029	2488183	7762075	2038308			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	17046104	4526491				1.20	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 19.397 = (17046104 * 10.000) / (7734079 * 1.136)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Lims ID:	320-77214-A-1-A		
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Inject. Date:	26-Aug-2021 21:51:04	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	520325	Lims Sample ID:	5

Non-2,3,7,8-sub-HxCDD, RT: 30.512

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	5552015	1621310
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	5975404	1600109
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		10.000	5763709	1610709

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.121	281319	37625	240612	31329	0.8498	1.17	
30.319	52225	11228	55499	10558	0.1754	0.94	RQ
30.319	52225	11228	42116	9054	0.1536		Empc Correction
30.731	655701	128564	516249	101299	1.91	1.27	
30.931	25318	3794	27184	5323	0.0855	0.93	RQ
30.931	25318	3794	20417	3059	0.0745		Empc Correction
Signal Totals:							
	1014563	181211	819394	144741			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1854107	329720				1.21	RQ
	1833957	325952					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.019 = (1854107 * 10.000) / (5763709 * 1.066)
Empc Amount: 2.986 = (1833957 * 10.000) / (5763709 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Lims ID:	320-77214-A-1-A		
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Inject. Date:	26-Aug-2021 21:51:04	Dil. Factor:	10.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	DB
Lims Batch ID:	520325	Lims Sample ID:	5

Non-2,3,7,8-sub-HpCDF, RT: 34.150

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	4513535	1655964
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	5095931	1774114

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		10.000	4804733	1715039

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
33.919	4423050	1729559	4418322	1590457	13.3	1.00	
Signal Totals:							
	4423050	1729559	4418322	1590457			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8841372	3320016				1.00	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.341 = (8841372 * 10.000) / (4804733 * 1.379)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Inject. Date: 26-Aug-2021 21:51:04 Dil. Factor: 10.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: DB
Lims Batch ID: 520325 Lims Sample ID: 5

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	4443049	1612923

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		10.000	4443049	1612923

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.858	2534753	926344	2482745	926946	10.3	1.02	
Signal Totals:							
	2534753	926344	2482745	926946			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5017498	1853290				1.02	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 10.320 = (5017498 * 10.000) / (4443049 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d				
Injection Date:	26-Aug-2021 21:51:04	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.04
Area: 17499600
Amount: 42.957203
Amount Units: pg/ul

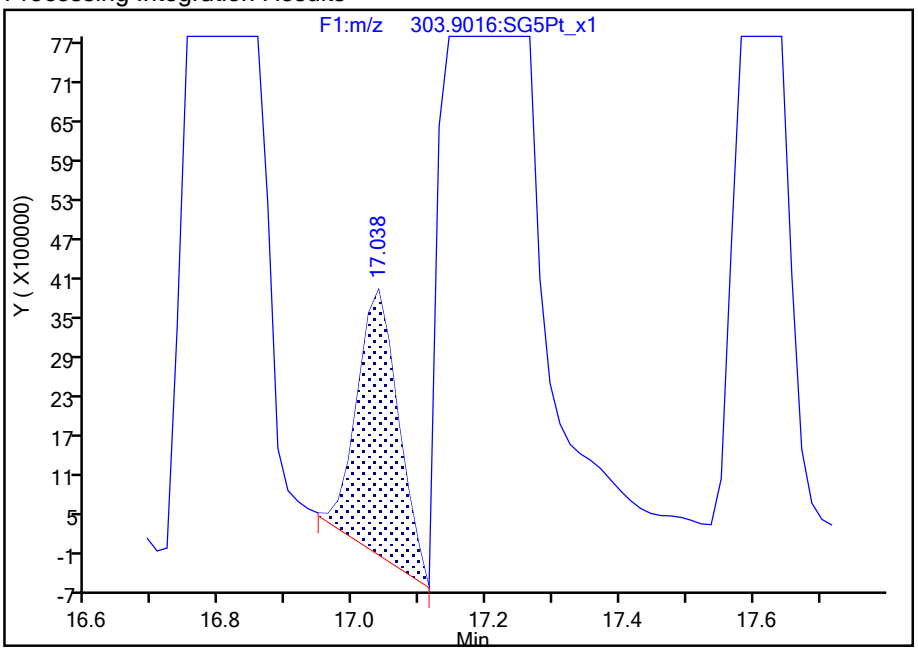

Manual Integration Results

RT: 17.19
Area: 1239846242
Amount: 3097.7489
Amount Units: pg/ul

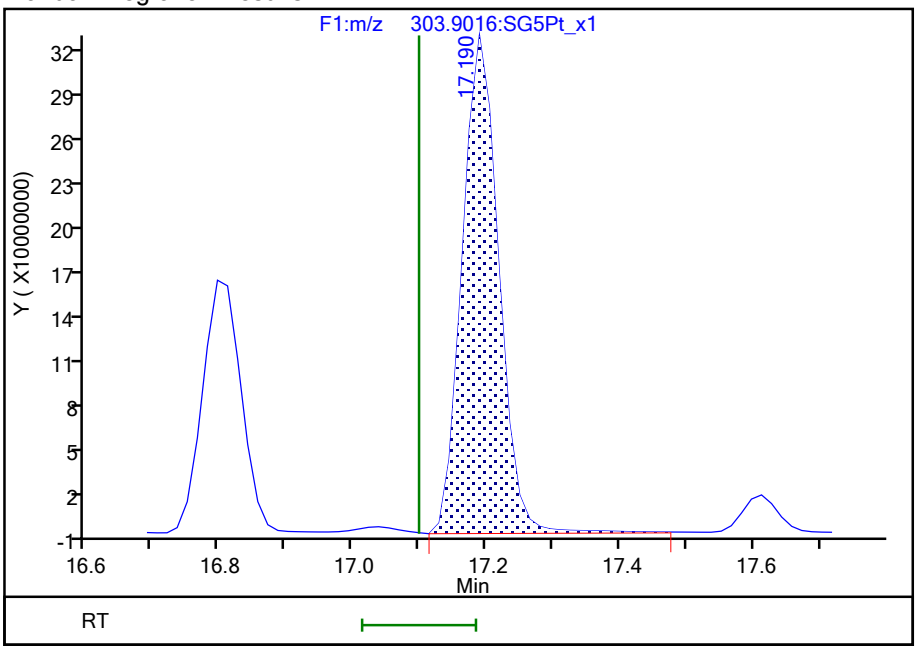

Reviewer: arghestanis, 27-Aug-2021 10:12:26

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d				
Injection Date:	26-Aug-2021 21:51:04	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 17.69
Area: 4325009
Amount: 11.119554
Amount Units: pg/ul

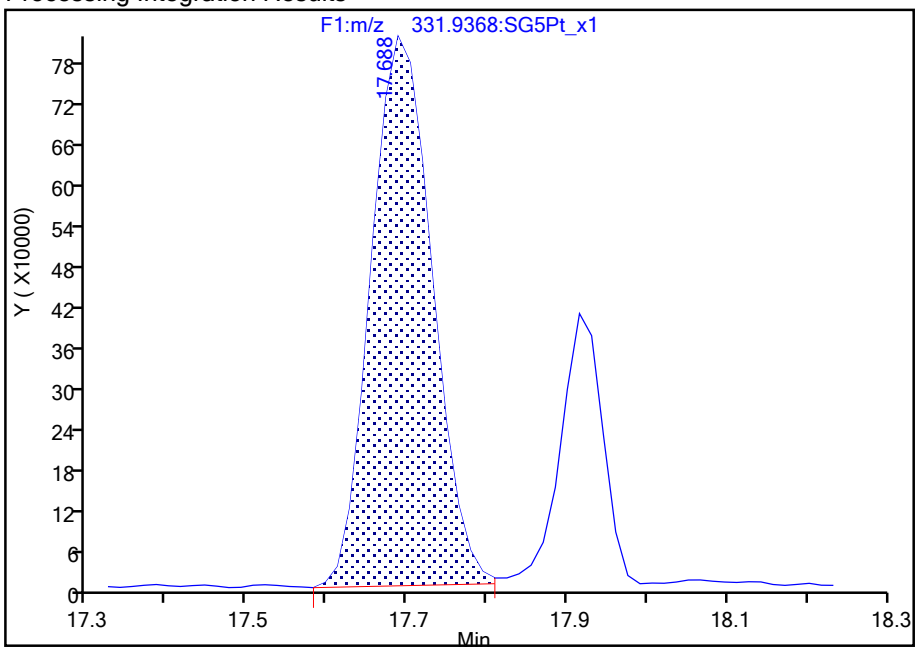

Manual Integration Results

RT: 17.92
Area: 1467683
Amount: 3.758160
Amount Units: pg/ul

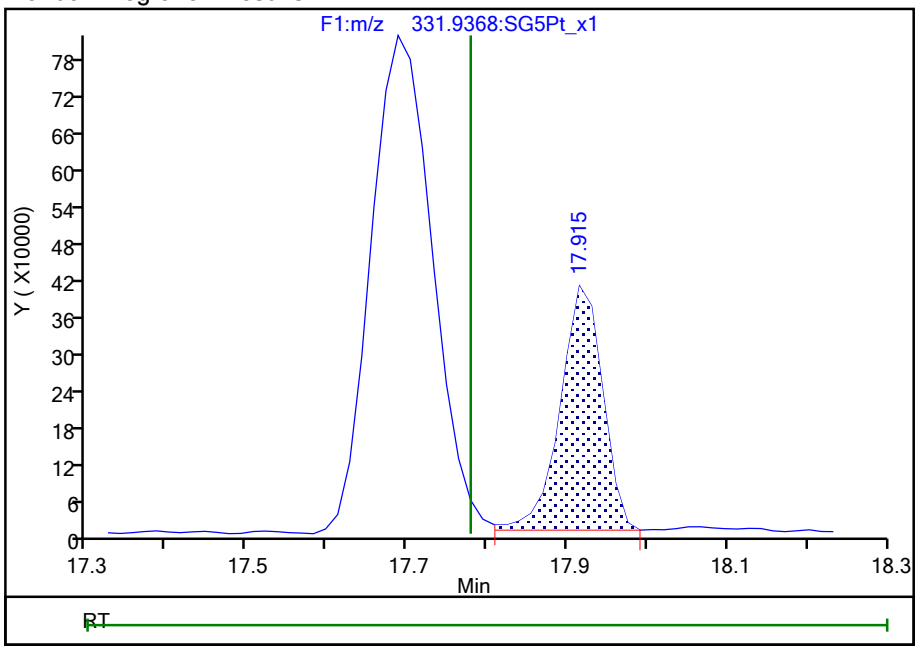

Reviewer: arghestanis, 27-Aug-2021 10:12:34
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d				
Injection Date:	26-Aug-2021 21:51:04	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.79

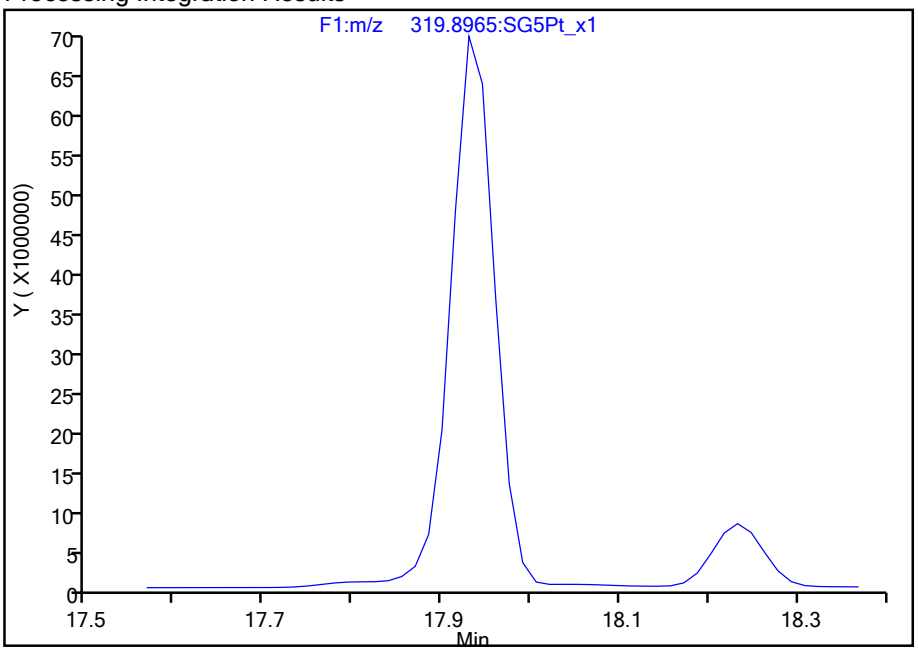

Manual Integration Results

RT: 17.93
Area: 242840764
Amount: 1255.5883
Amount Units: pg/ul

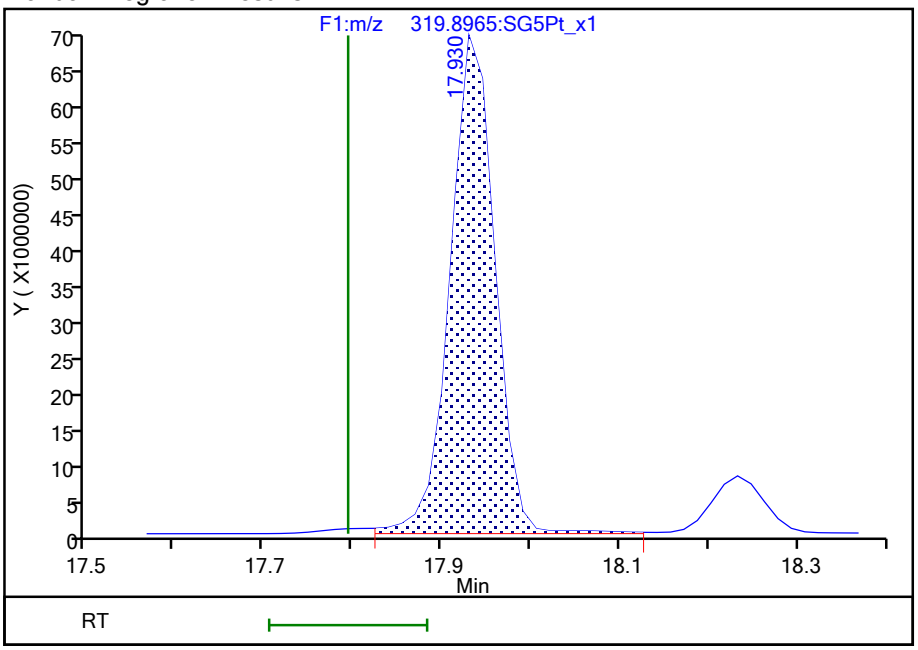

Reviewer: dadunj, 30-Aug-2021 09:52:35
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d				
Injection Date:	26-Aug-2021 21:51:04	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Not Detected
Expected RT: 17.79

Processing Integration Results

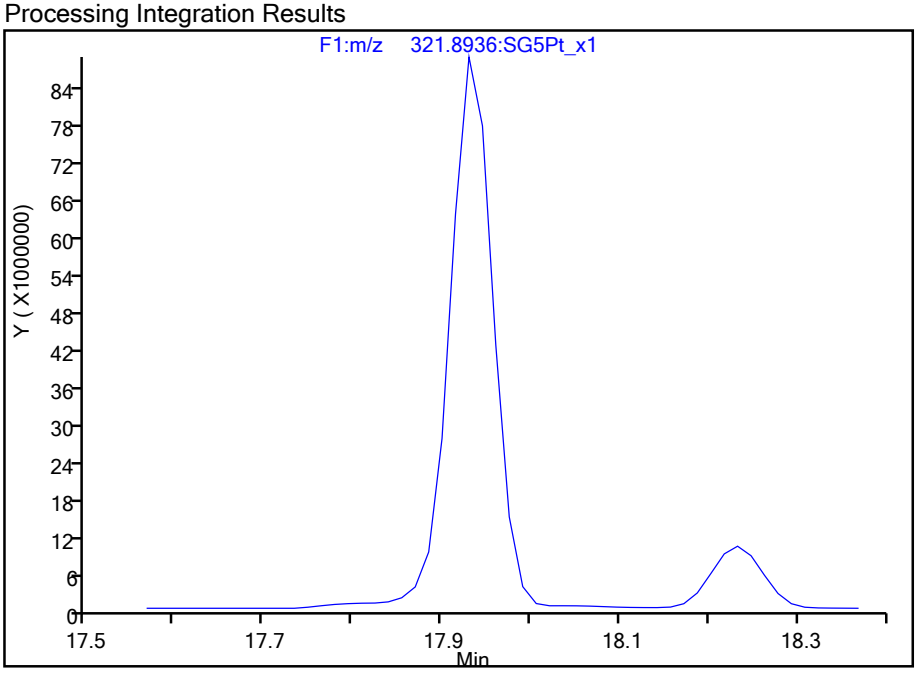

Manual Integration Results

RT: 17.93
Area: 306532743
Amount: 1255.5883
Amount Units: pg/ul

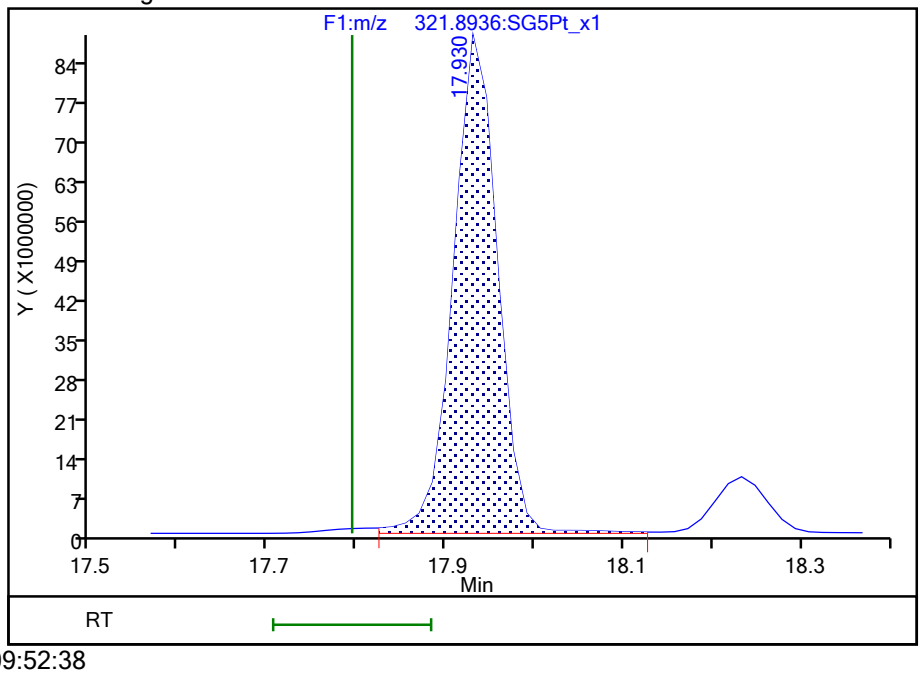

Reviewer: dadunj, 30-Aug-2021 09:52:38
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

790896

Report Date: 30-Aug-2021 09:54:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d				
Injection Date:	26-Aug-2021 21:51:04	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.59- 19.47)

Signal: 1

Processing Integration Results

Not Detected

RT: 15.59- 19.47

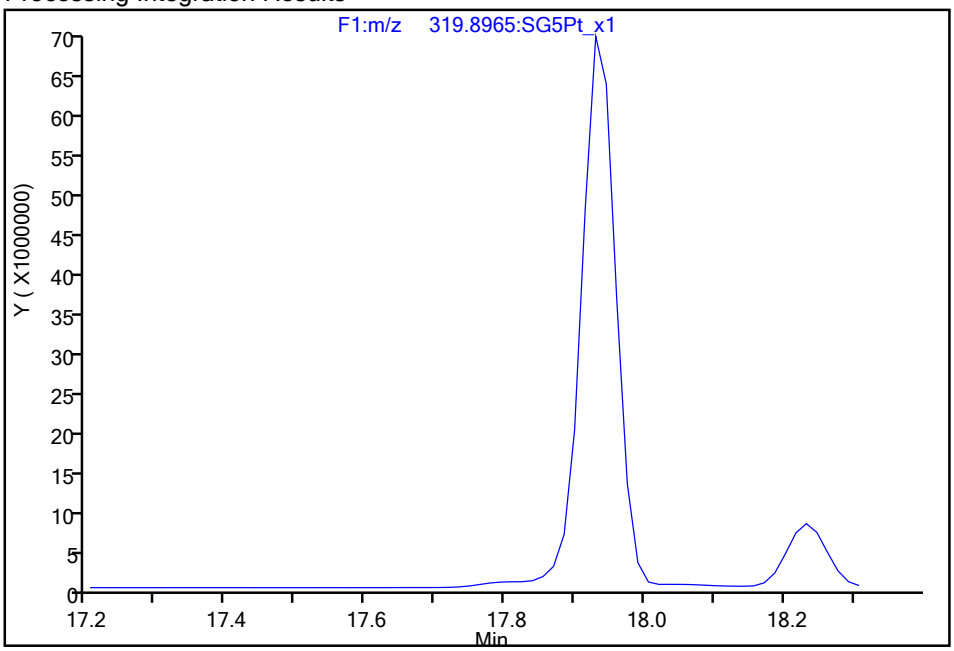

Manual Integration Results

RT = 17.824 Area = 2756101 M

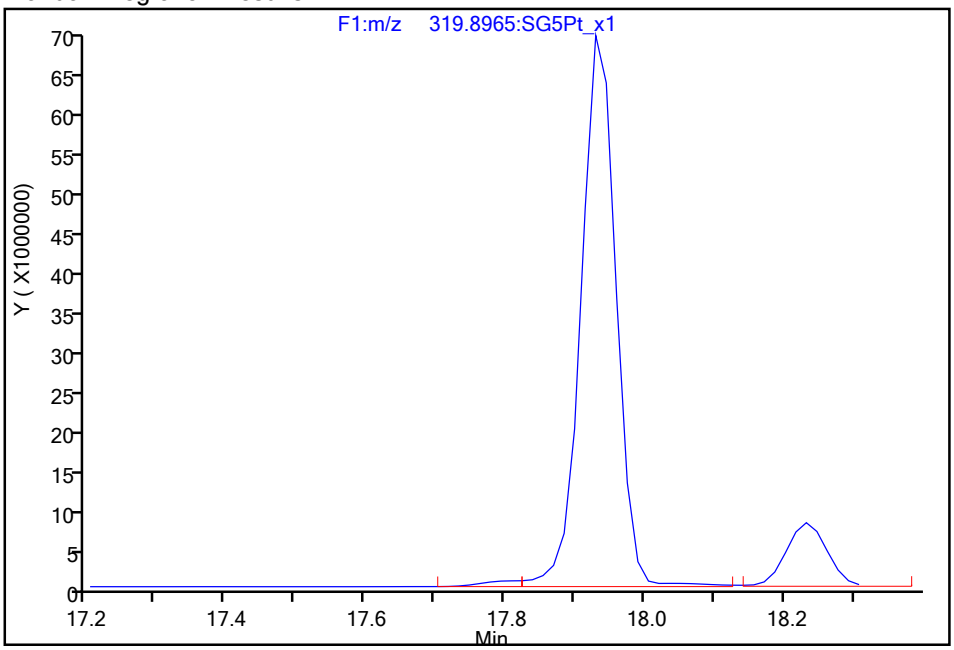

Reviewer: dadunj, 30-Aug-2021 09:52:47

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d				
Injection Date:	26-Aug-2021 21:51:04	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.02
Area: 2446978
Amount: 7.232976
Amount Units: pg/ul

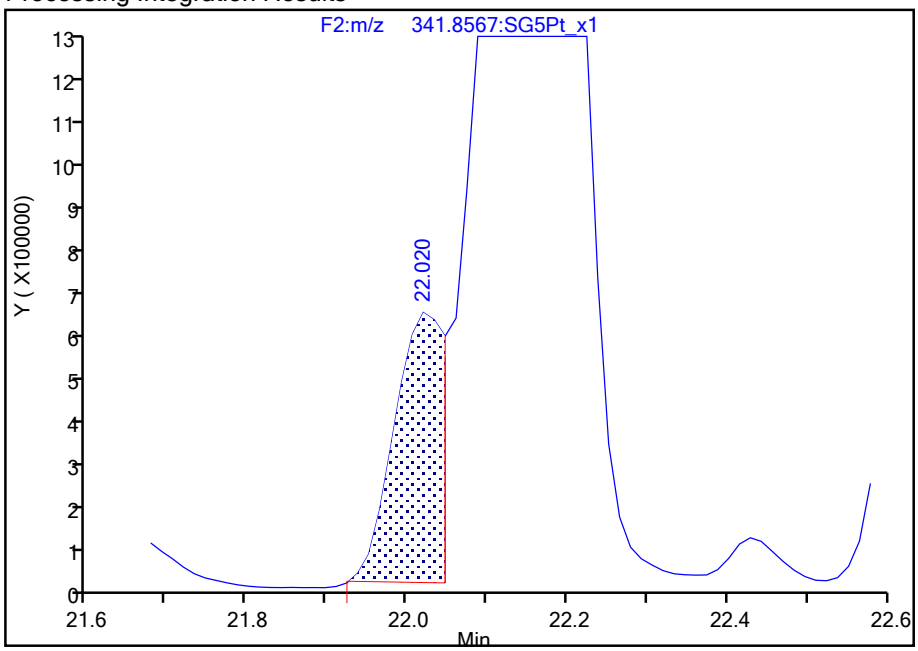

Manual Integration Results

RT: 22.16
Area: 43902266
Amount: 129.2854
Amount Units: pg/ul

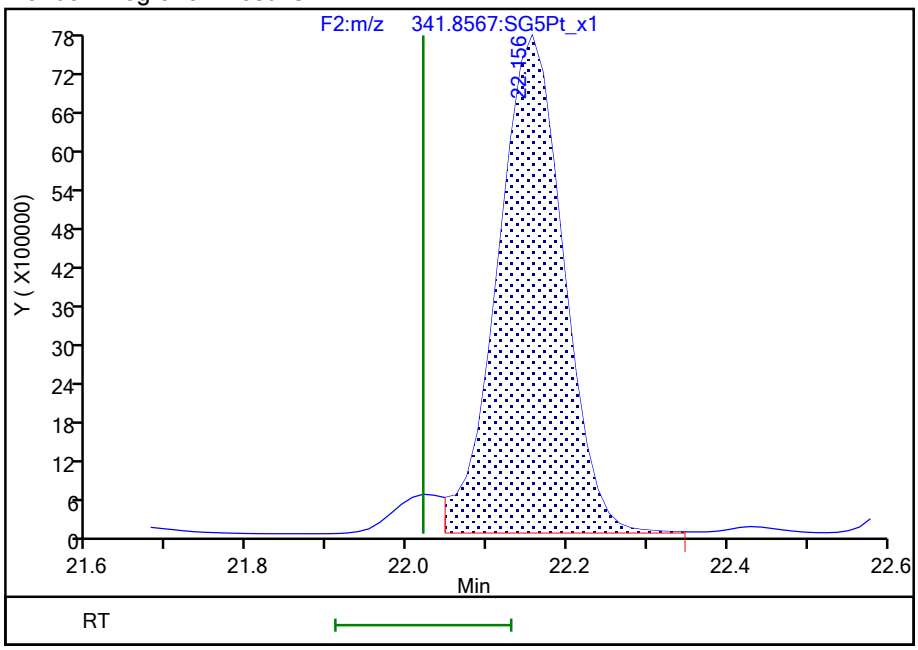

Reviewer: dadunj, 30-Aug-2021 09:53:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

790898

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d				
Injection Date:	26-Aug-2021 21:51:04	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

RT: 22.02
Area: 6337855
Amount: 7.232976
Amount Units: pg/ul

Processing Integration Results

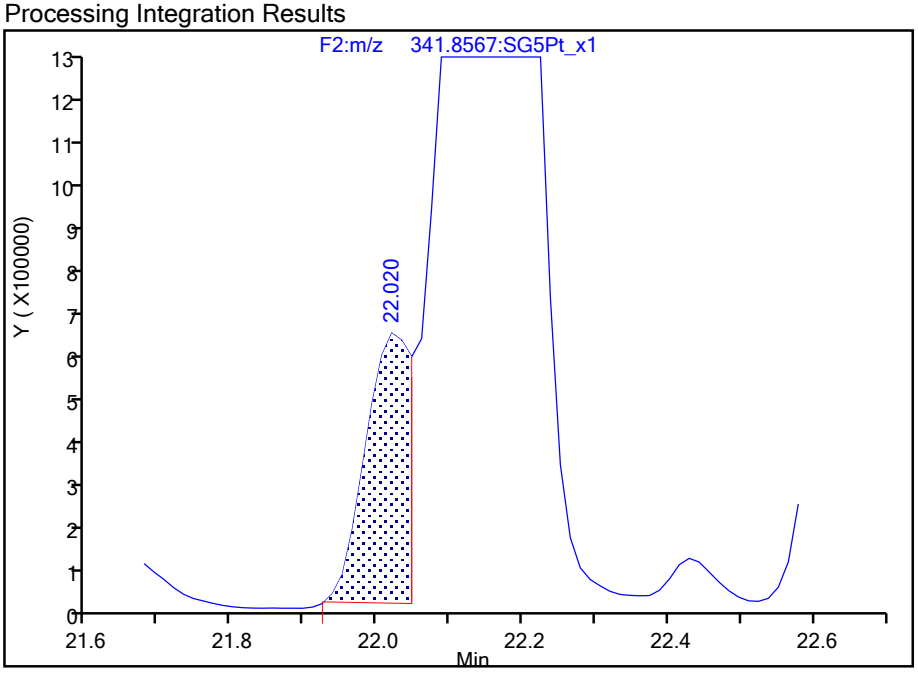

Manual Integration Results

RT: 22.16
Area: 113285572
Amount: 129.2854
Amount Units: pg/ul
Reviewer: dadunj, 30-Aug-2021 09:53:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

790899

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d				
Injection Date:	26-Aug-2021 21:51:04	Instrument ID:	10D5		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:	DB	ALS Bottle#:	58	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.02
Area: 3890877
Amount: 7.232976
Amount Units: pg/ul

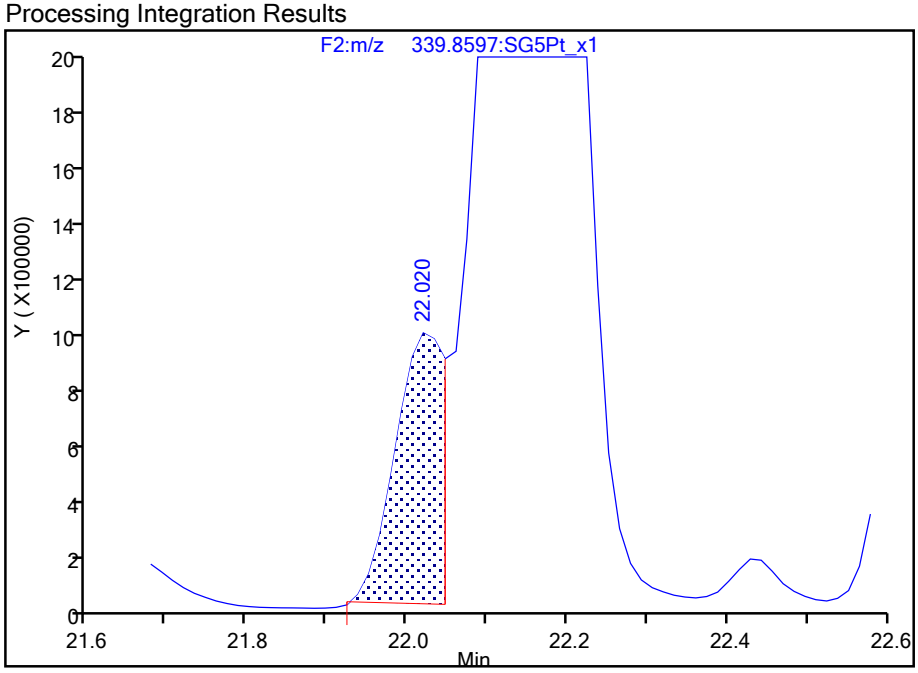

Manual Integration Results

RT: 22.16
Area: 69383306
Amount: 129.2854
Amount Units: pg/ul

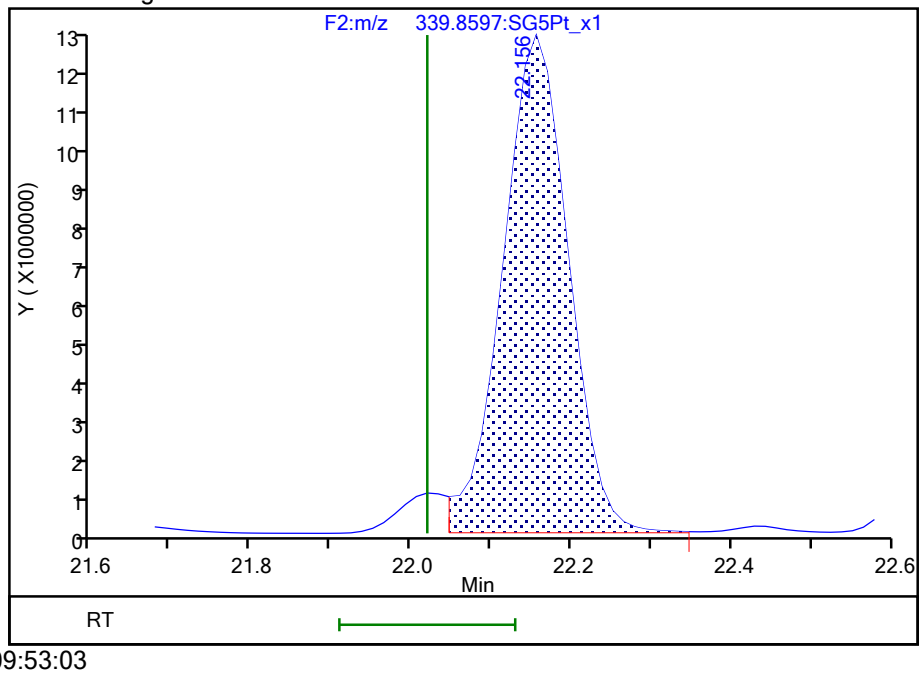

Reviewer: dadunj, 30-Aug-2021 09:53:03
Audit Action: Assigned Compound ID Audit Reason: Split Peak

790900

Report Date: 30-Aug-2021 09:54:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

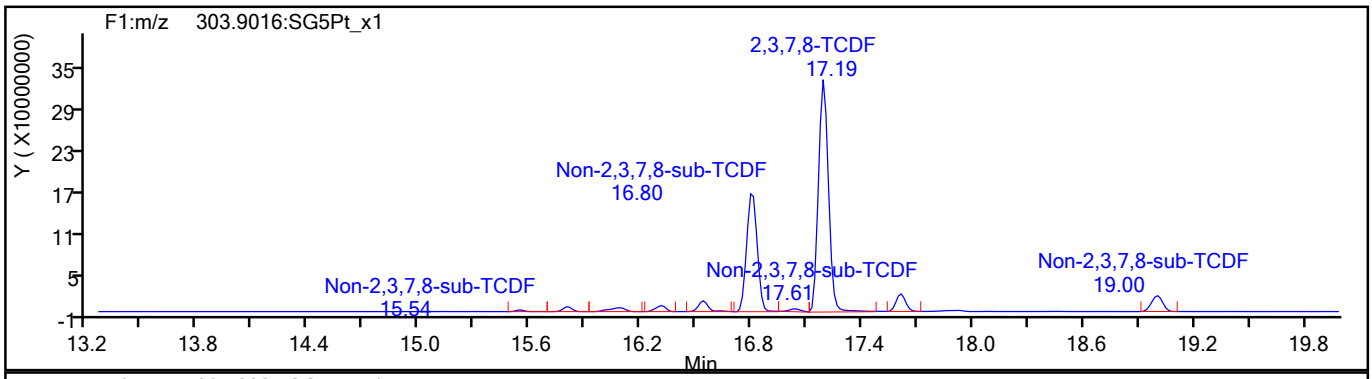

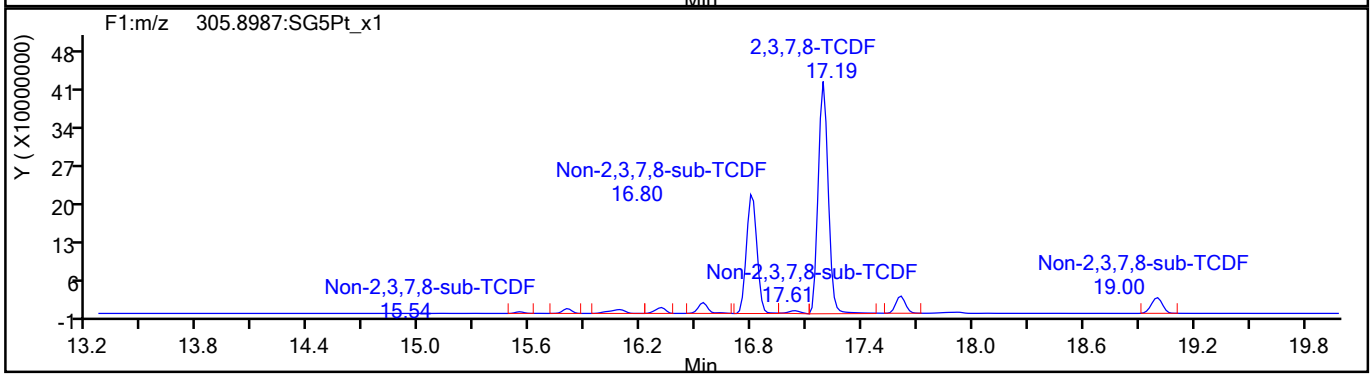

TCDF Standards

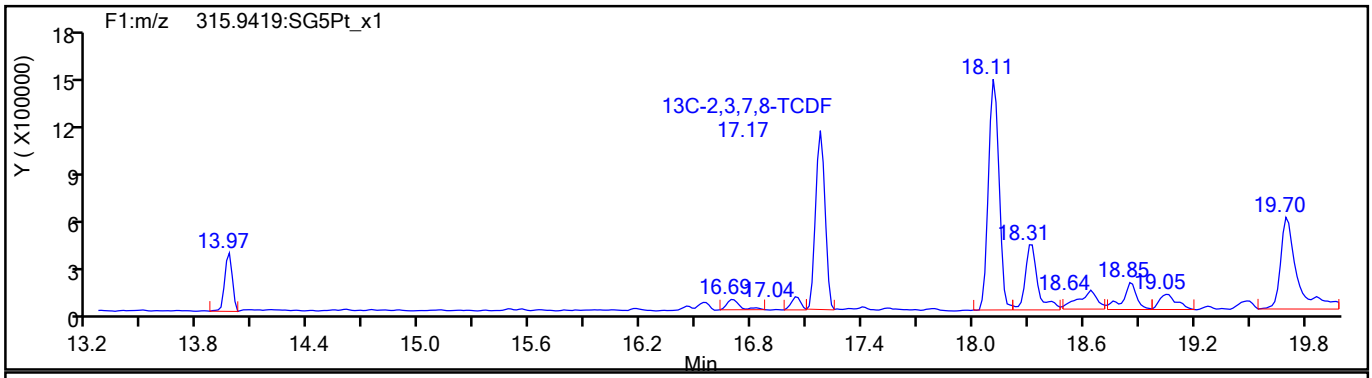

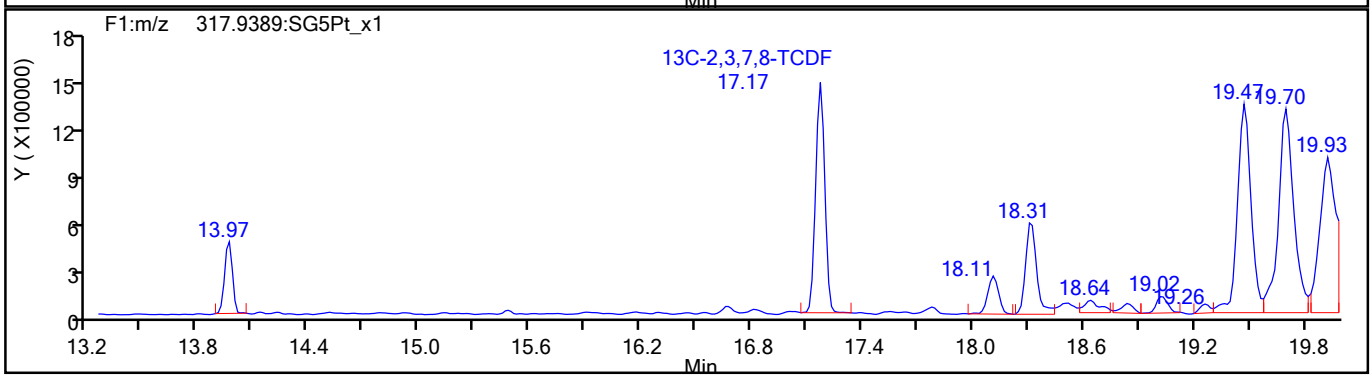

790901

Report Date: 30-Aug-2021 09:54:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

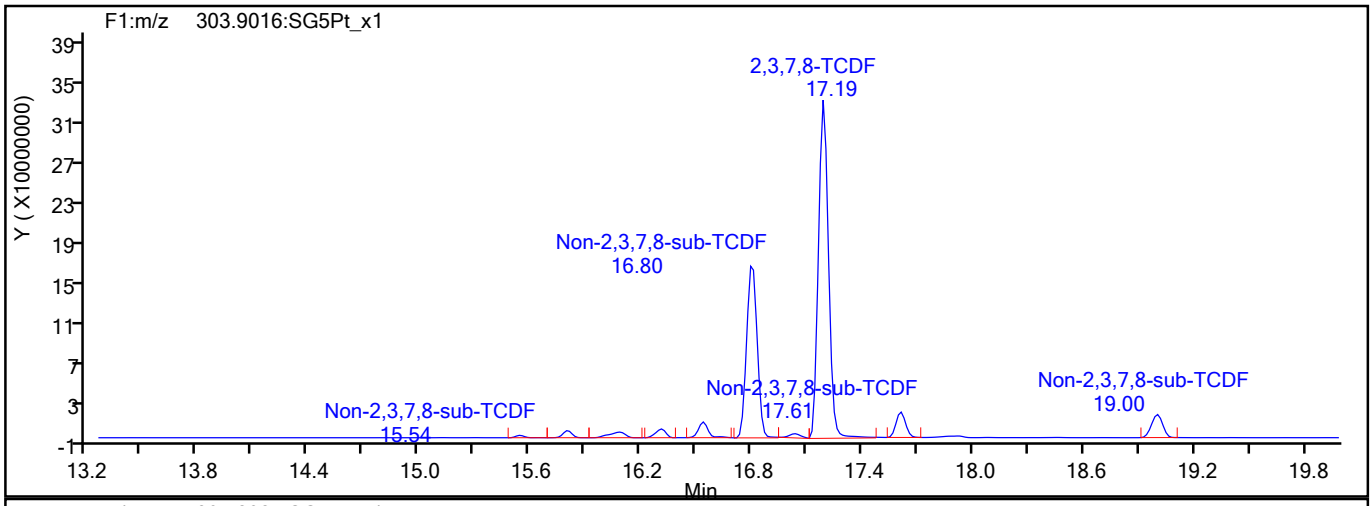

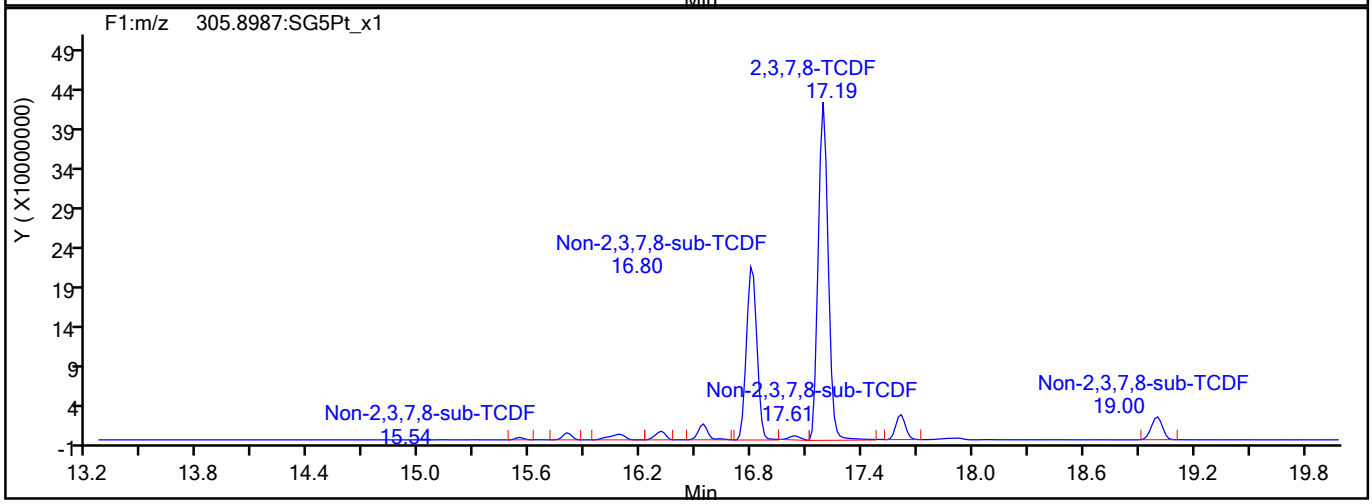

TCDF Interference Mass

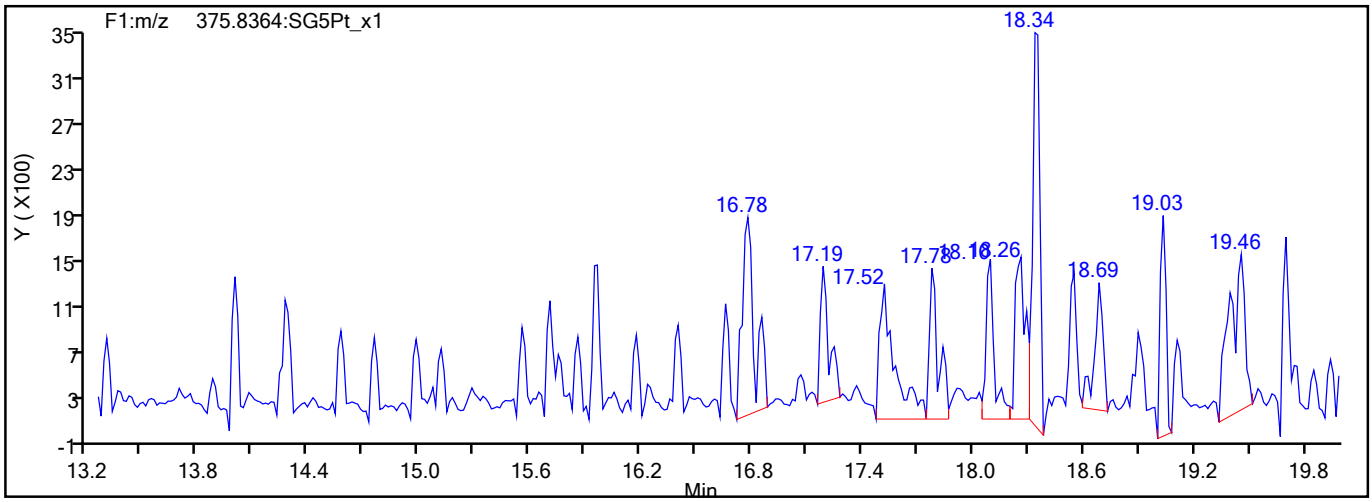

790902

Report Date: 30-Aug-2021 09:54:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

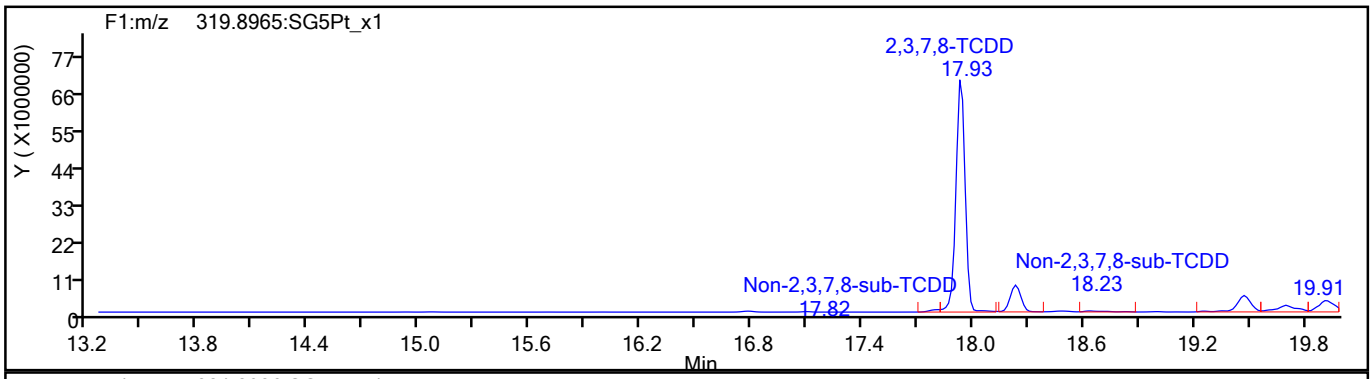

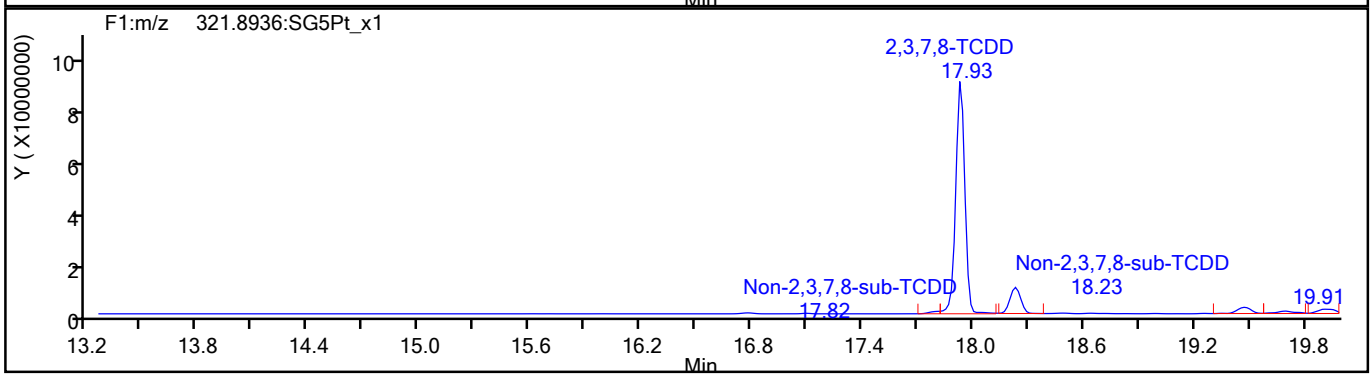

TCDD Standards

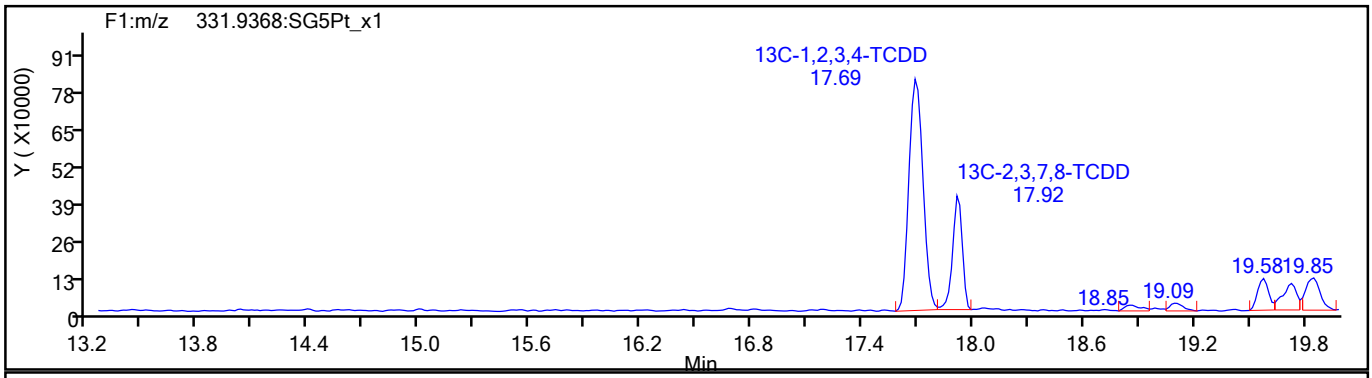

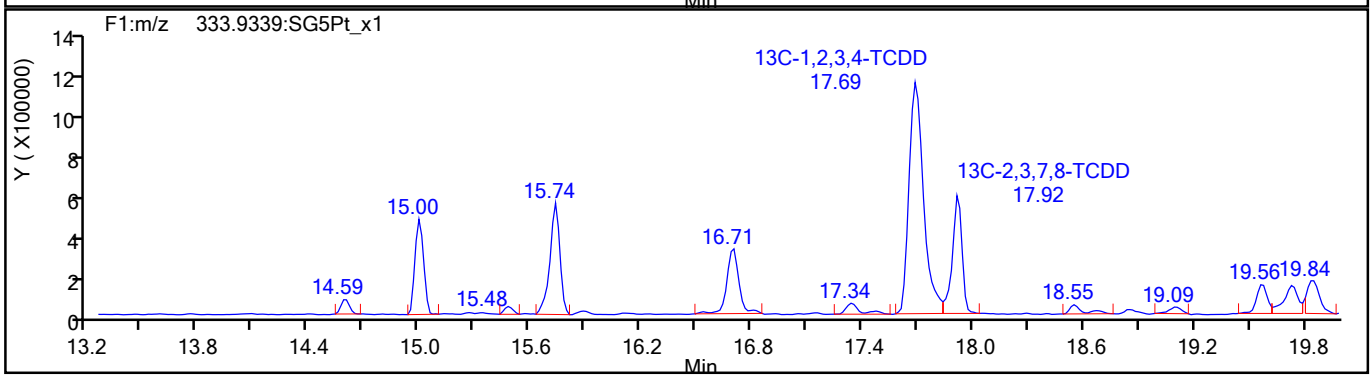

790903

Report Date: 30-Aug-2021 09:54:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

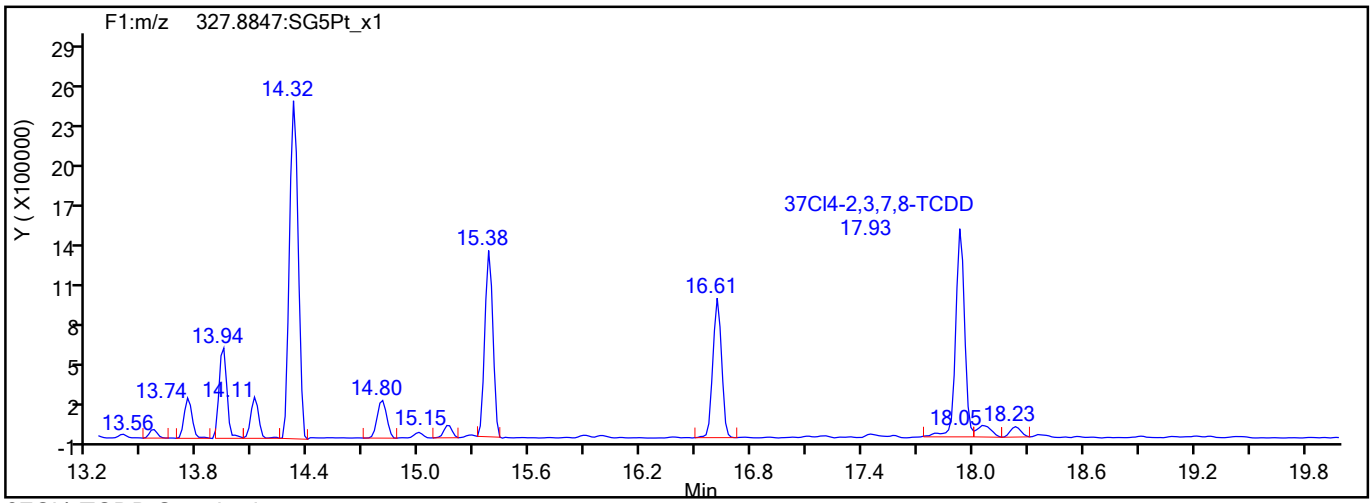

37Cl4-TCDD Standards

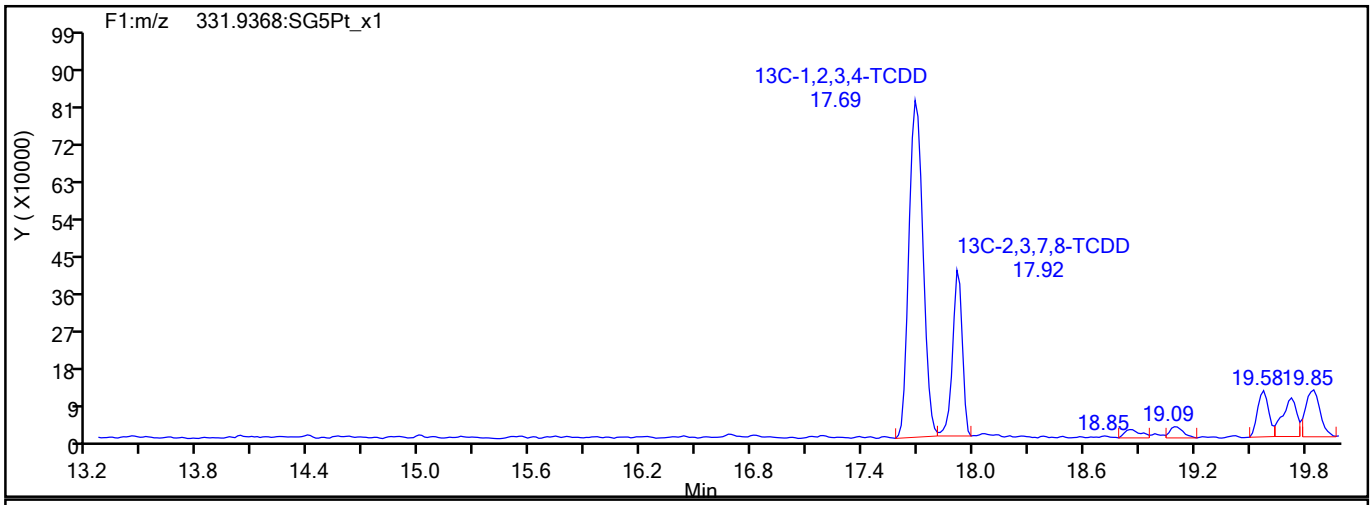

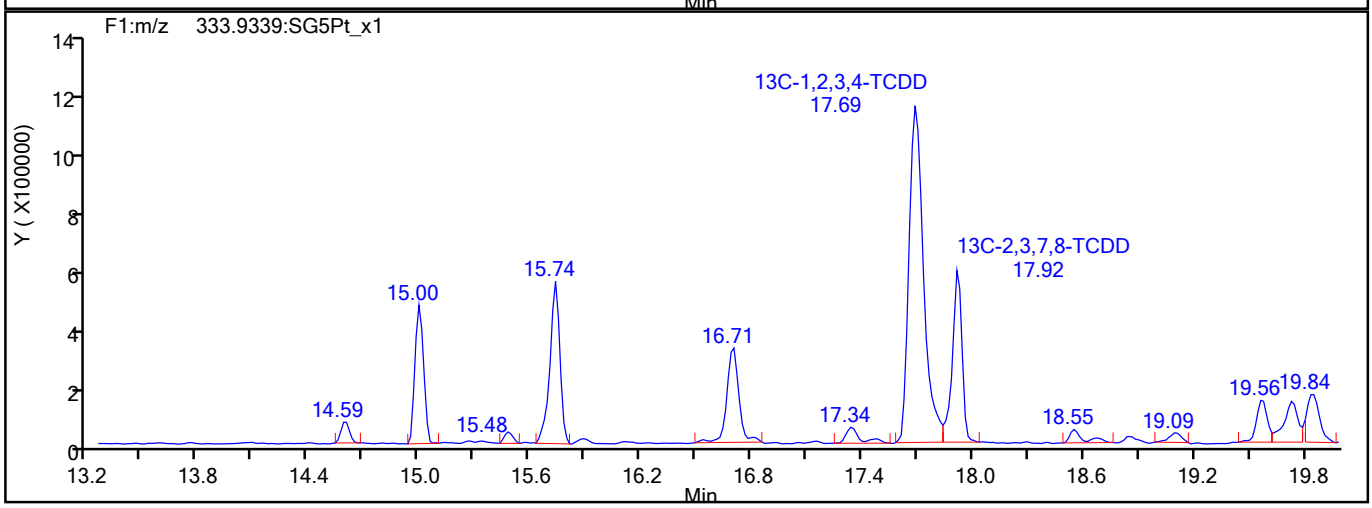

790904

Report Date: 30-Aug-2021 09:54:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

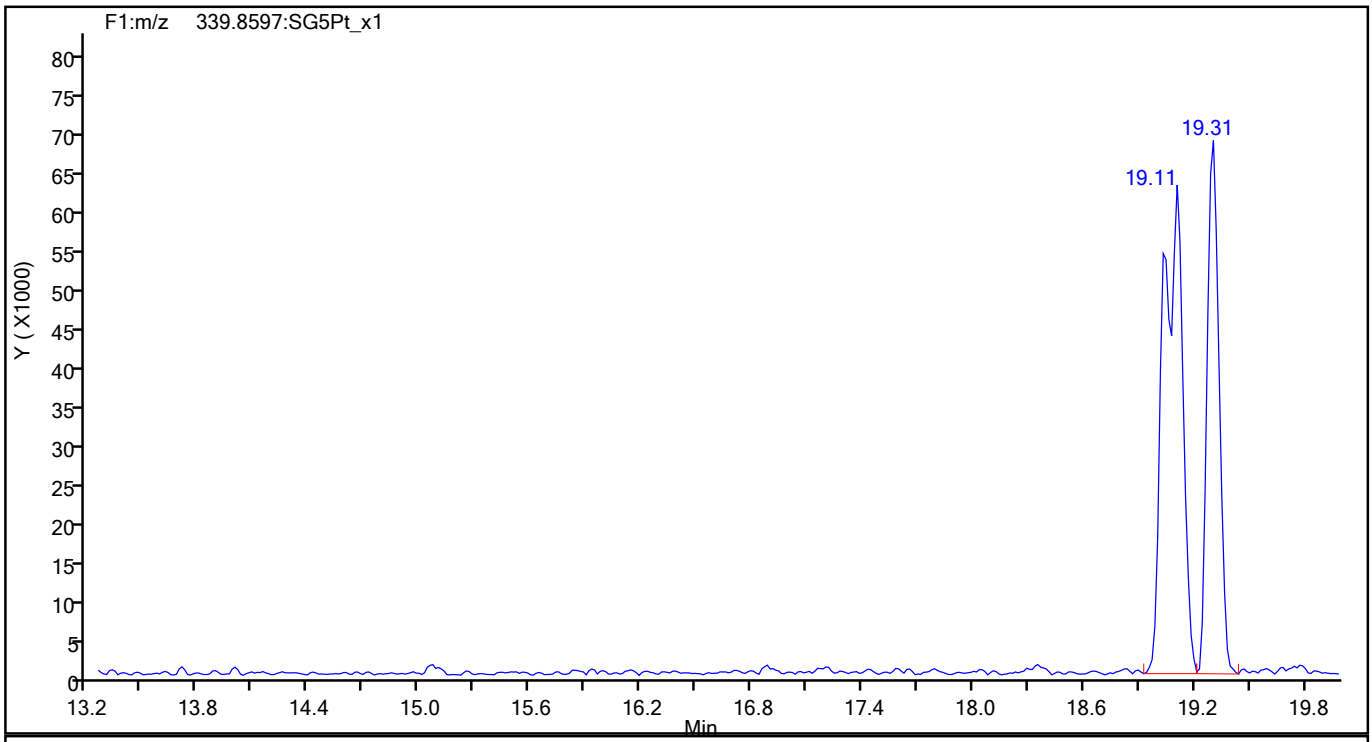

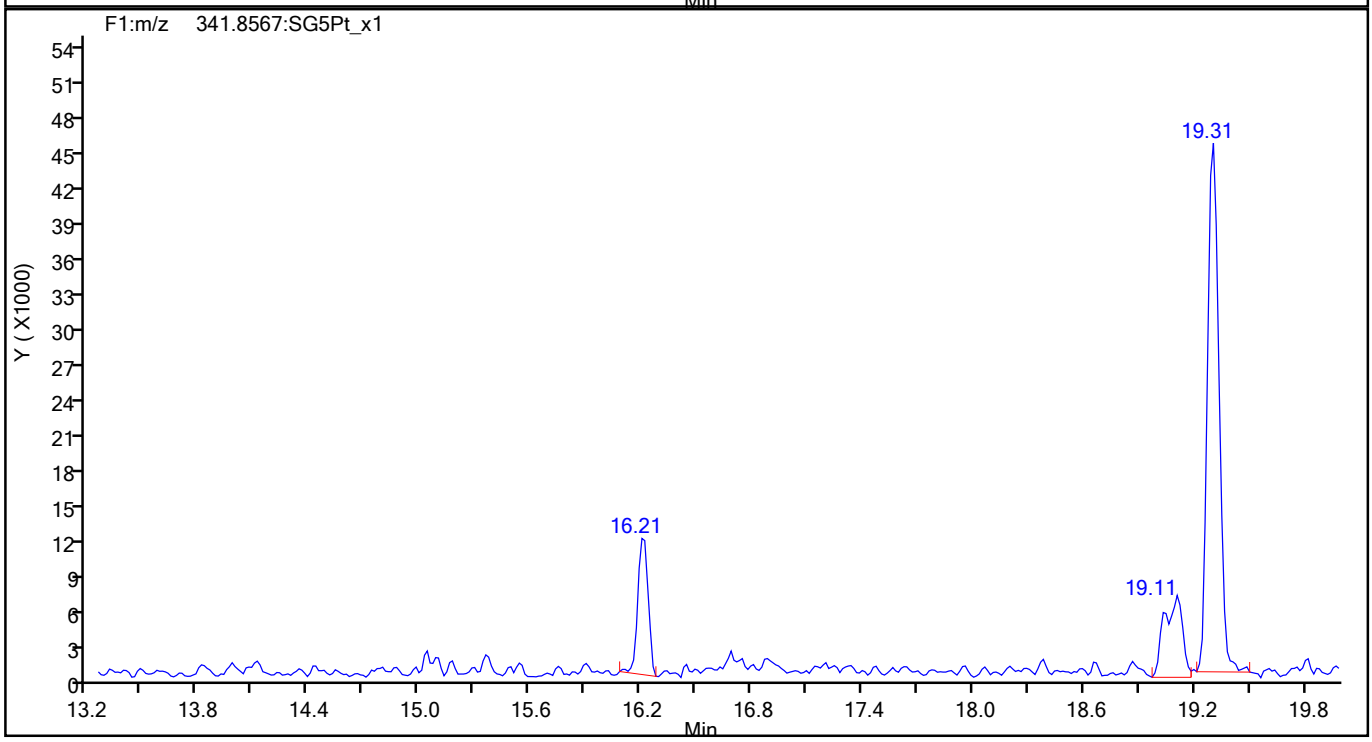

790905

Report Date: 30-Aug-2021 09:54:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

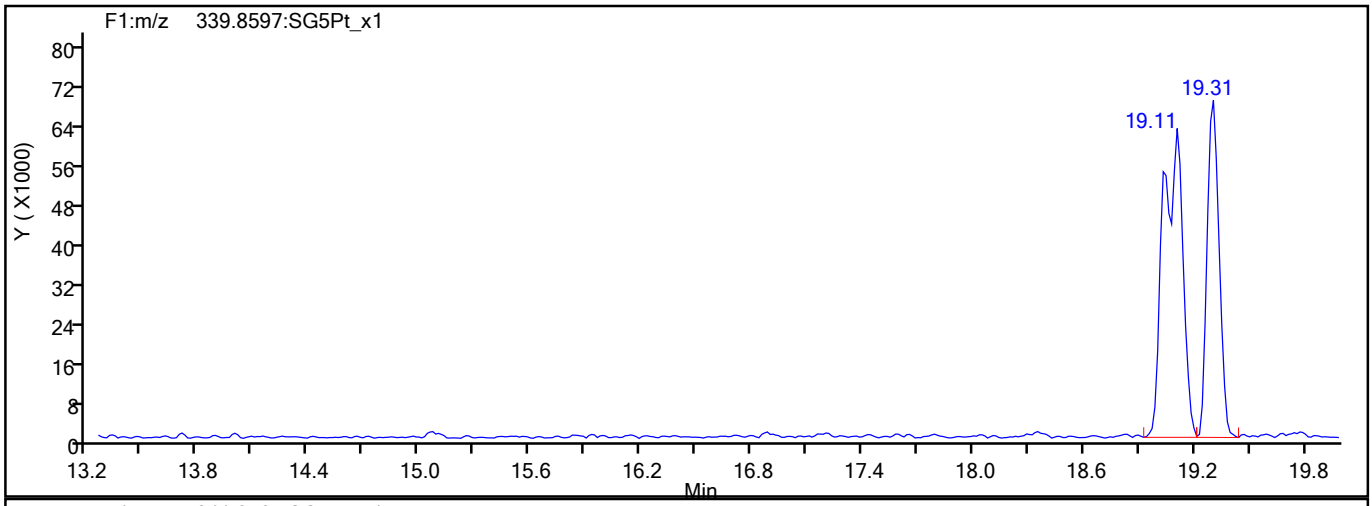

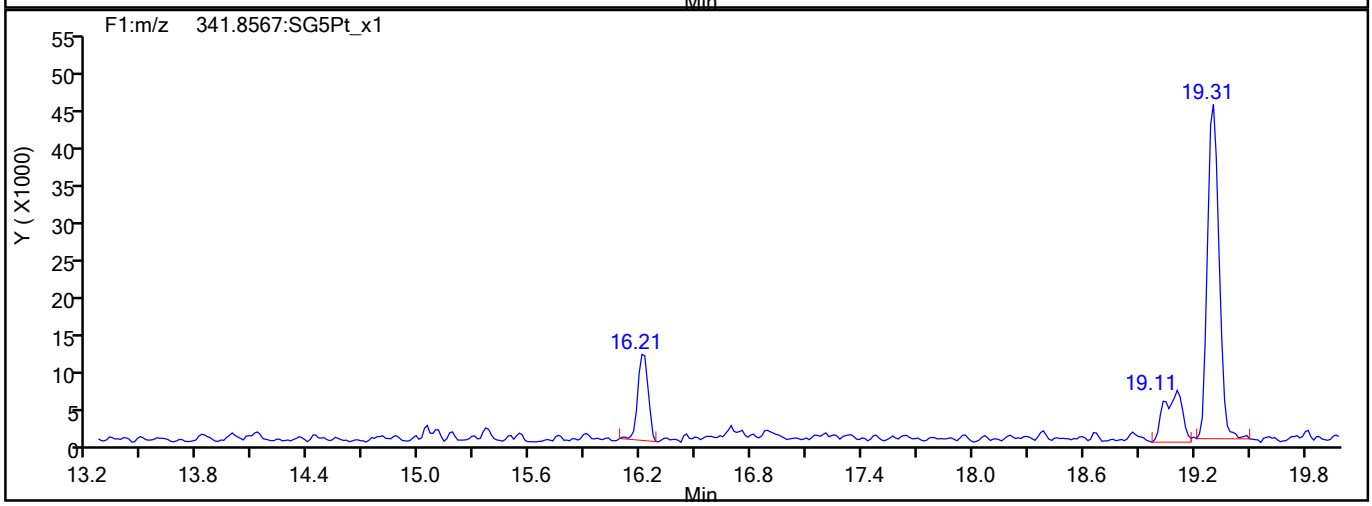

F1 PeCDFs Interference Mass

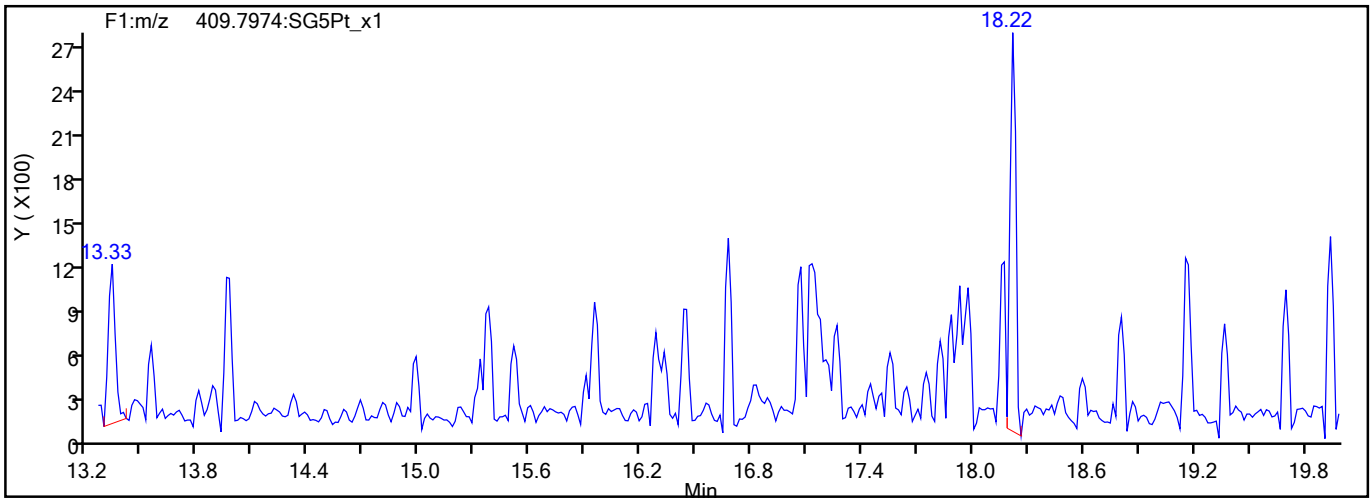

790906

Report Date: 30-Aug-2021 09:54:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

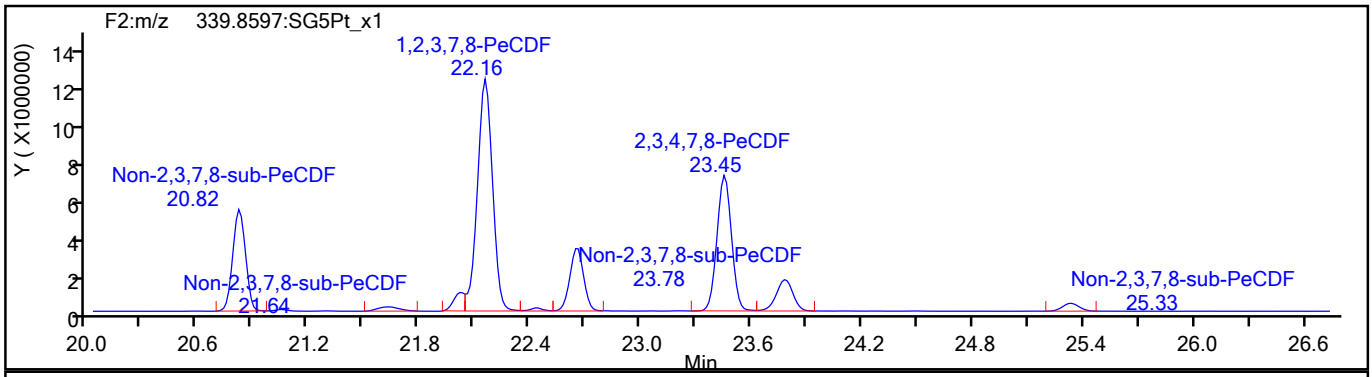

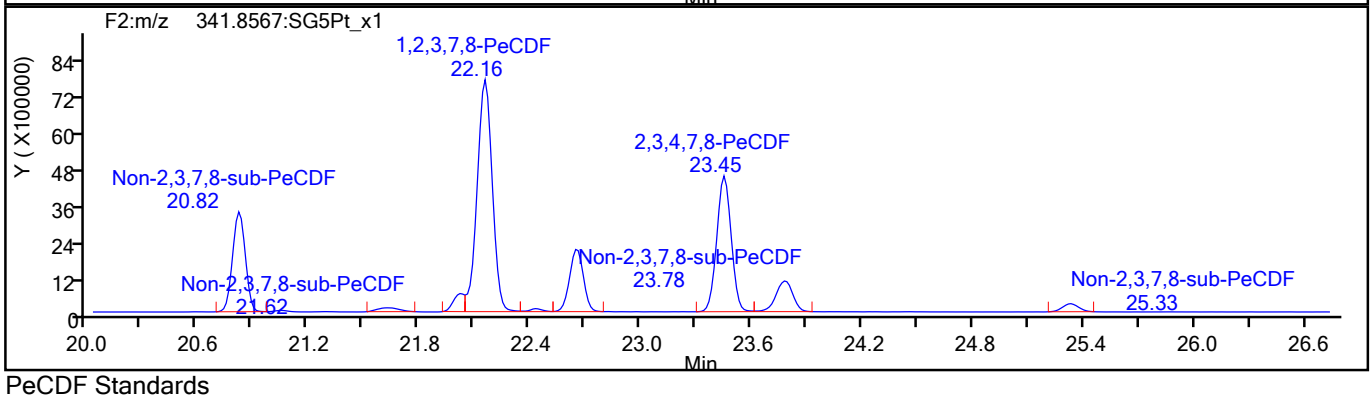

PeCDF Standards

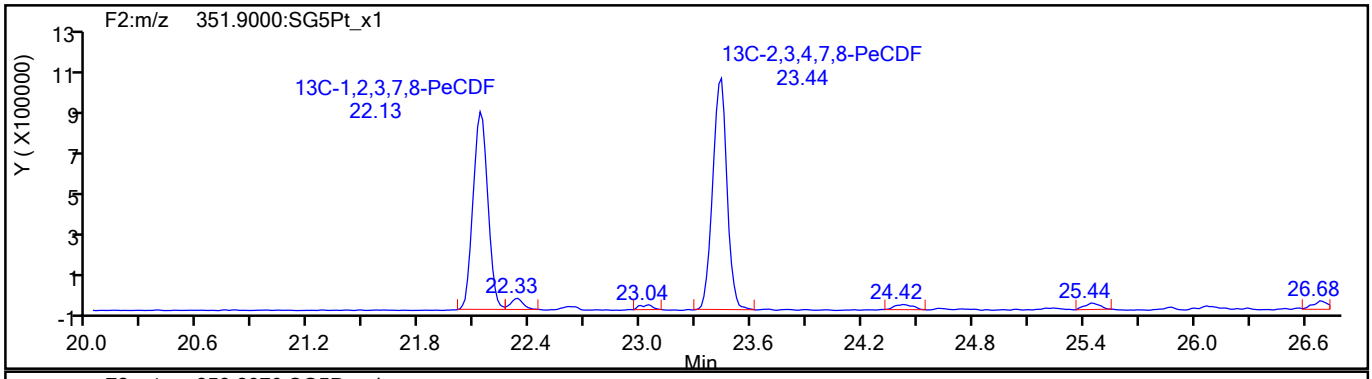

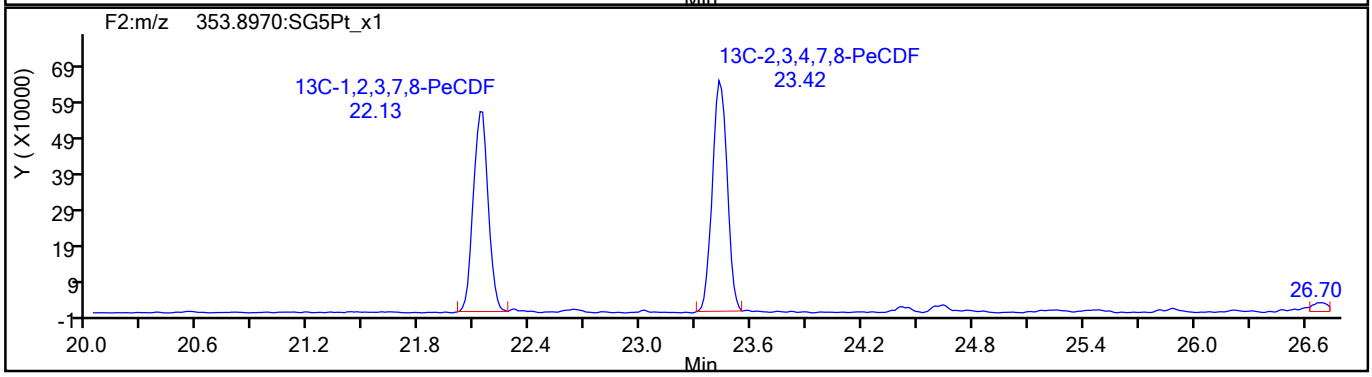

790907

Report Date: 30-Aug-2021 09:54:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

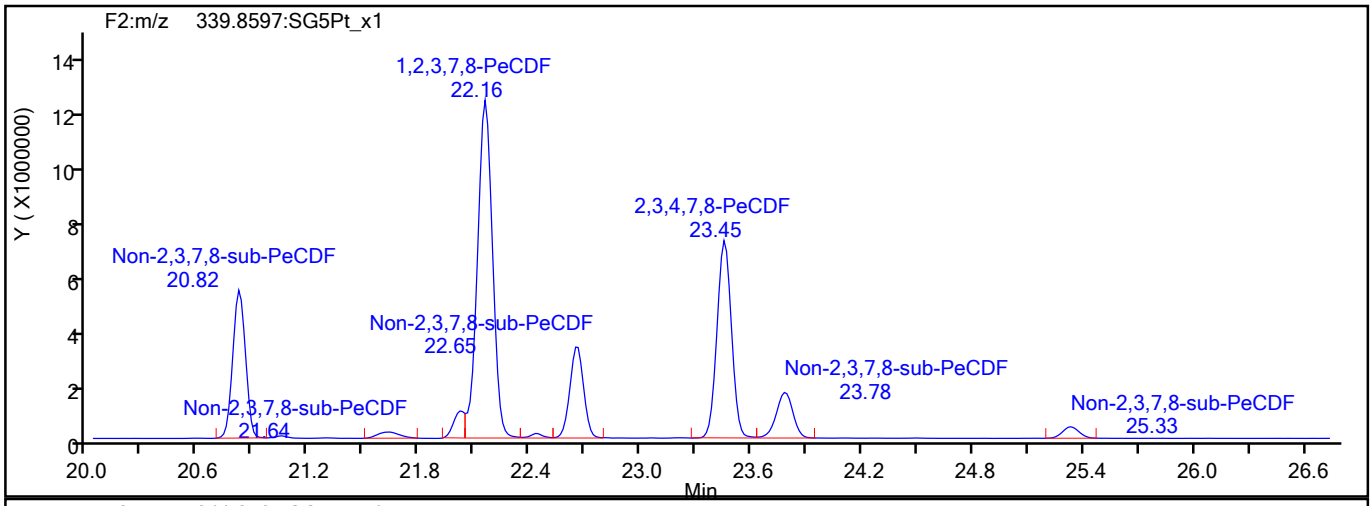

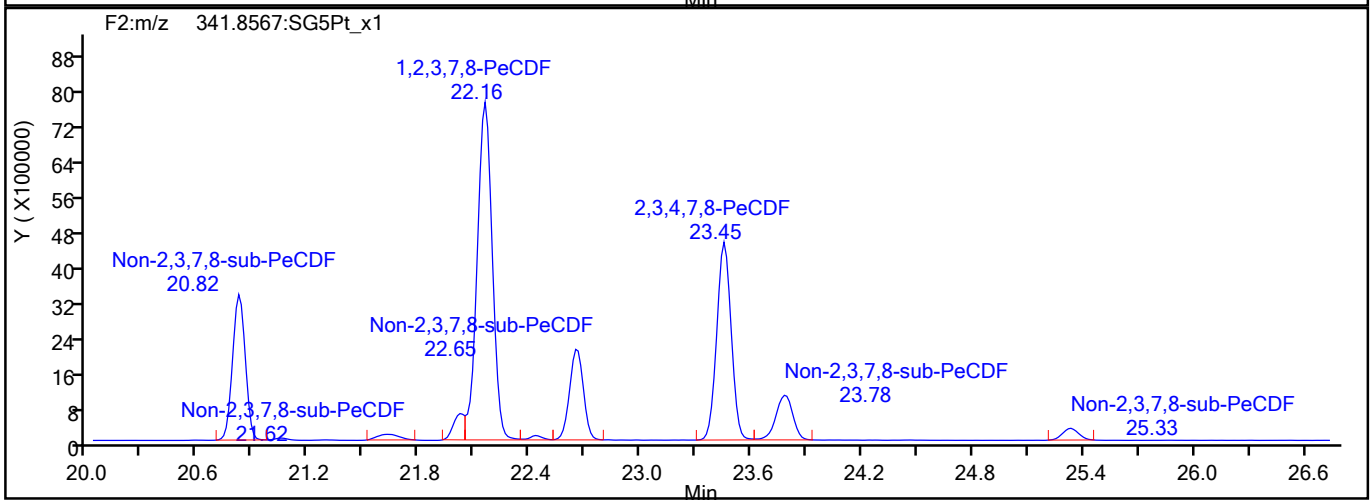

PeCDF Interference Mass

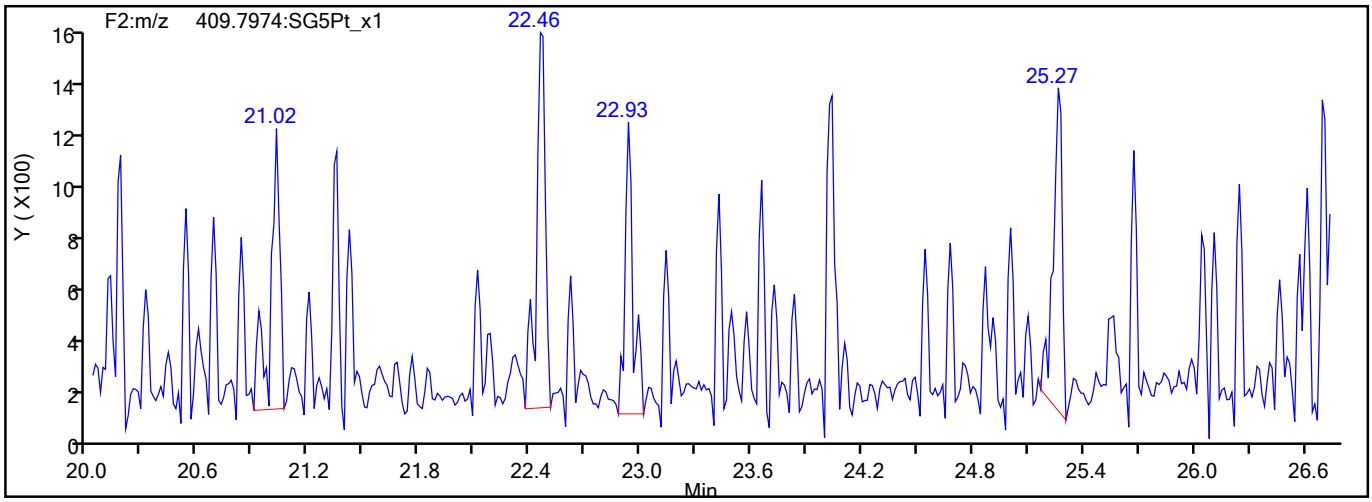

790908

Report Date: 30-Aug-2021 09:54:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

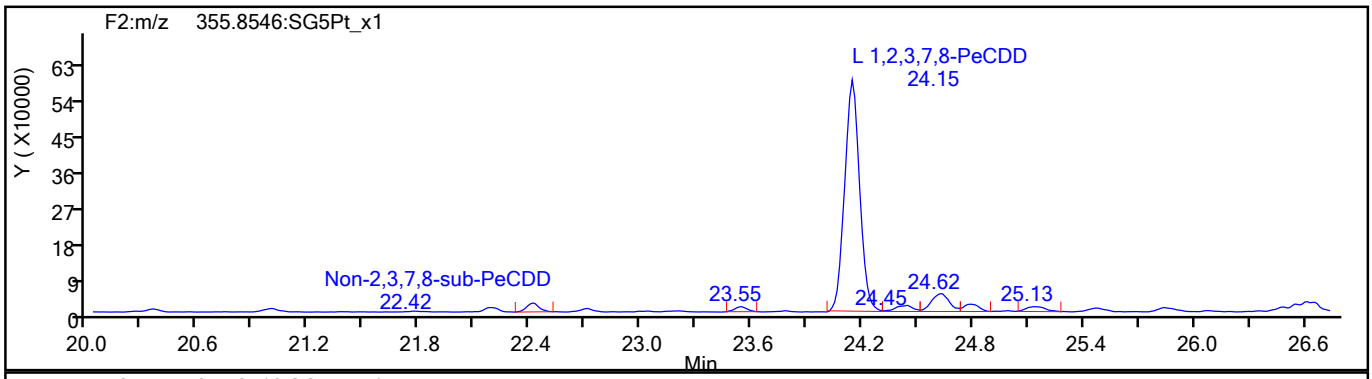

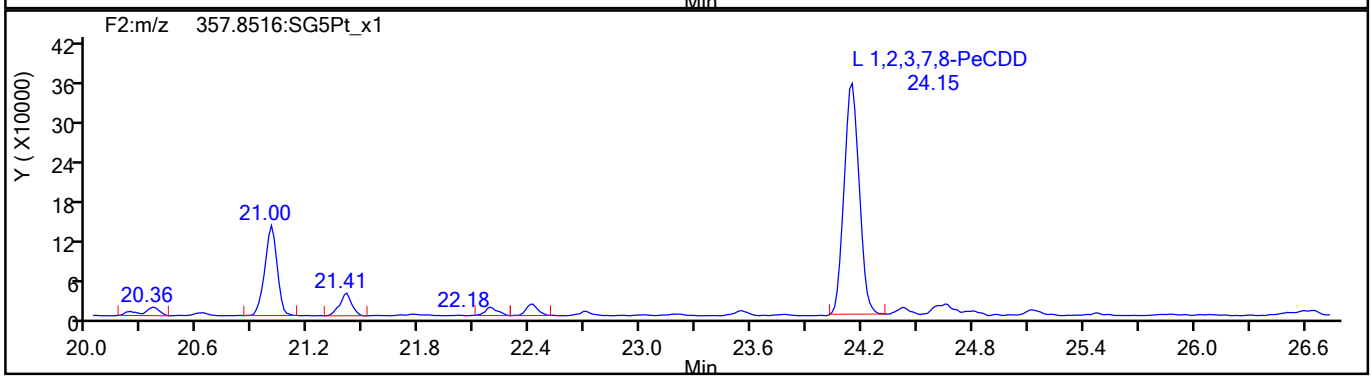

PeCDD Standards

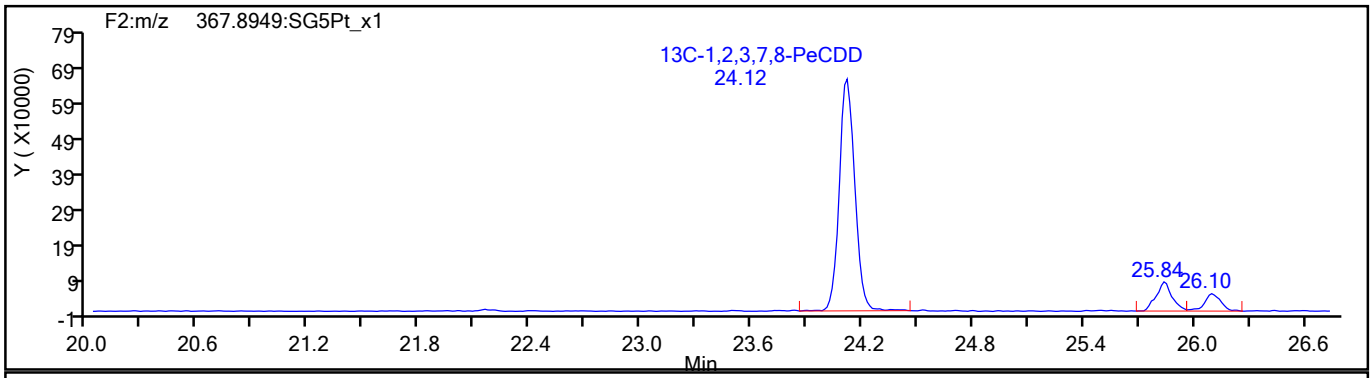

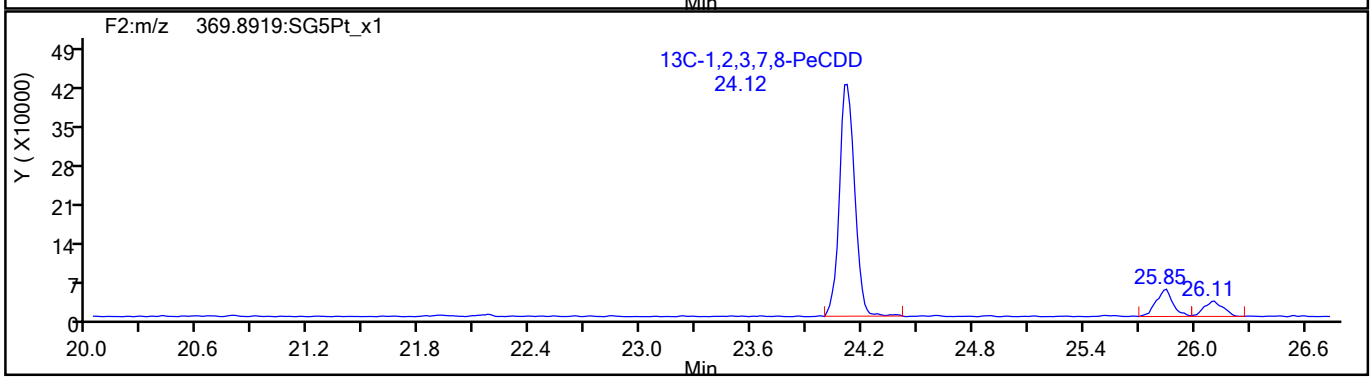

790909

Report Date: 30-Aug-2021 09:54:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

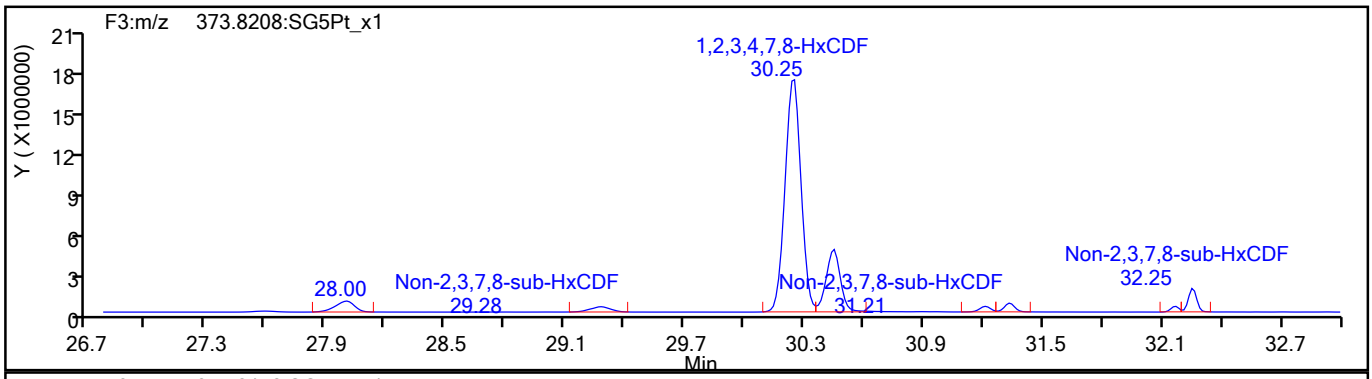

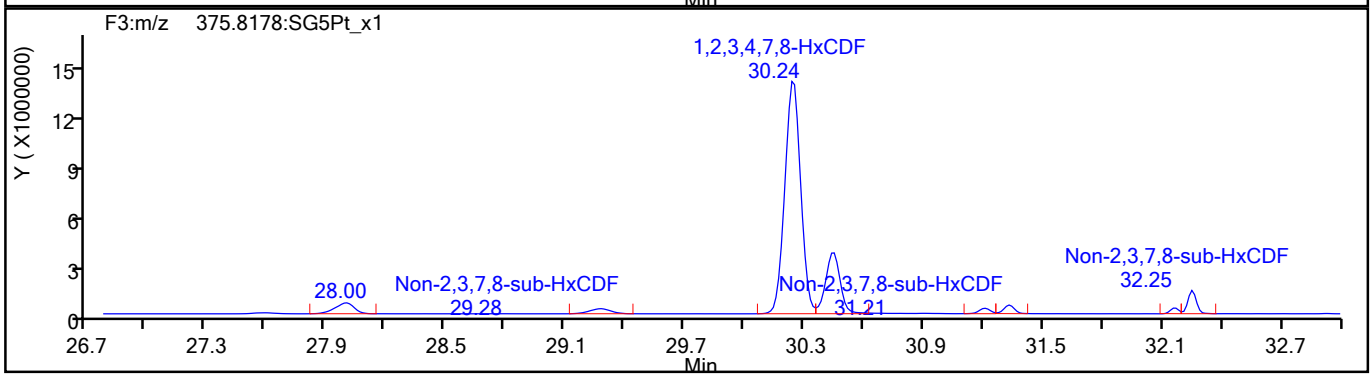

HxCDF Standards

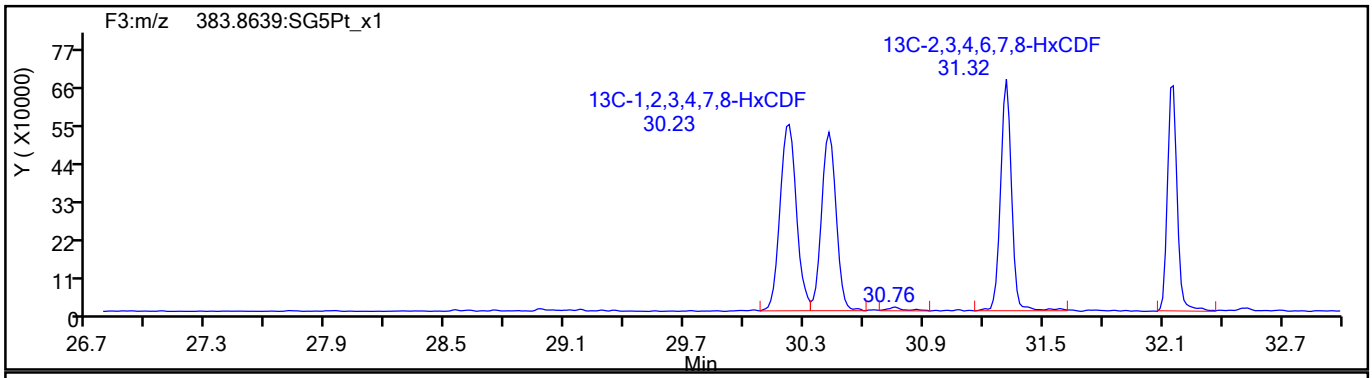

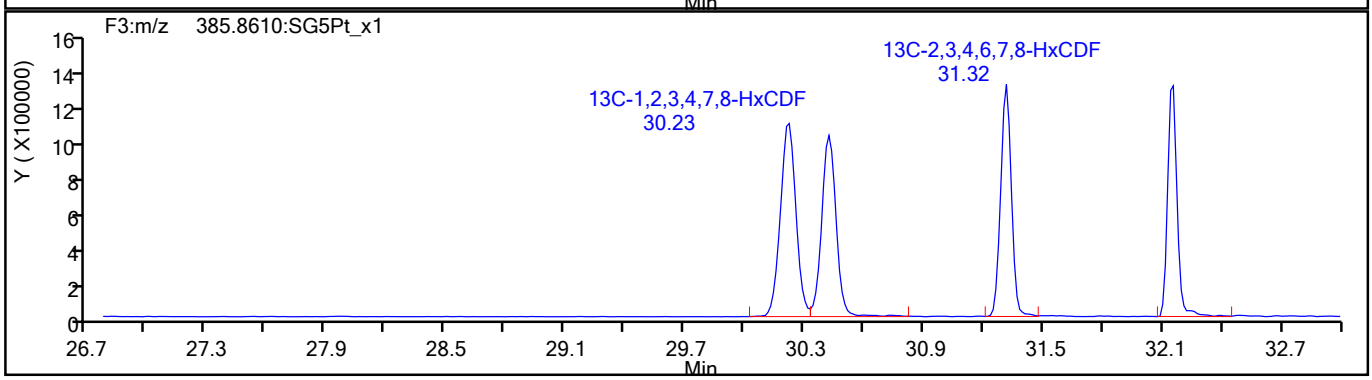

790910

Report Date: 30-Aug-2021 09:54:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

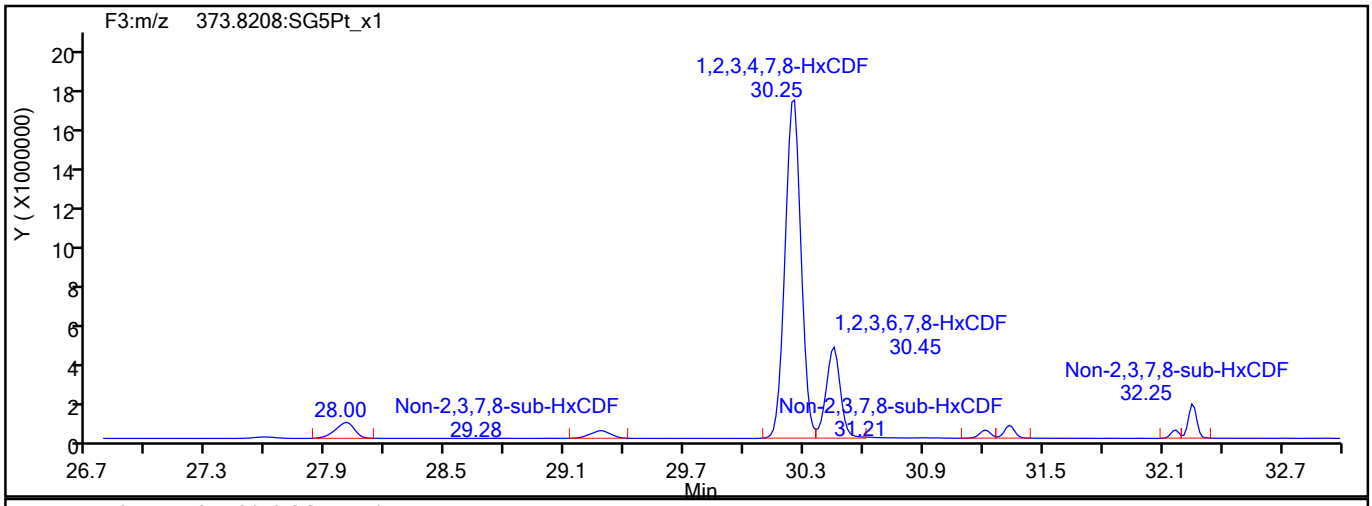

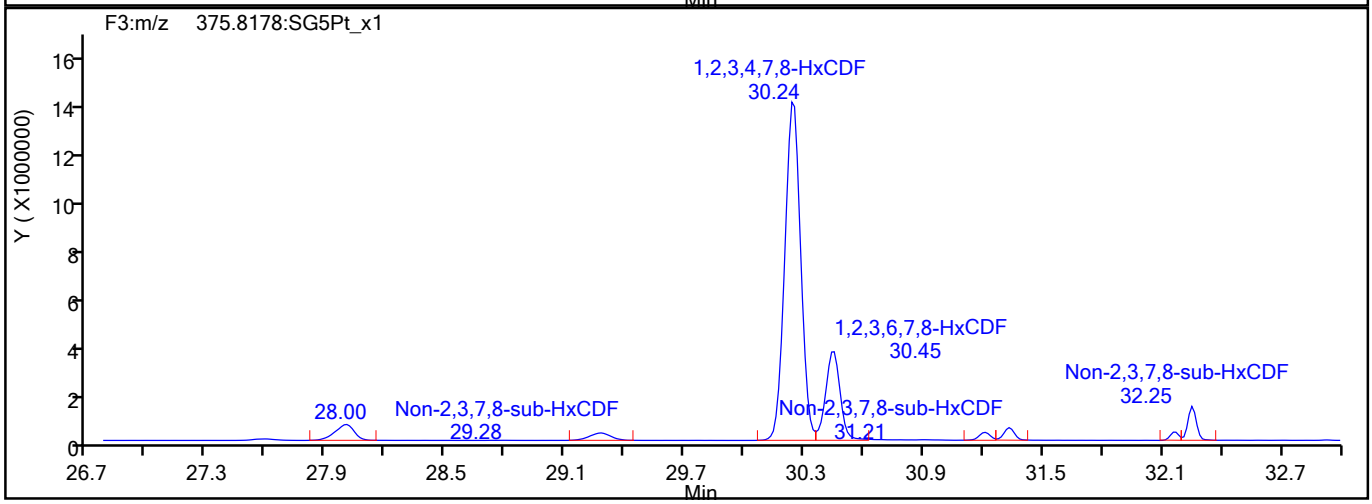

HxCDF Interference Mass

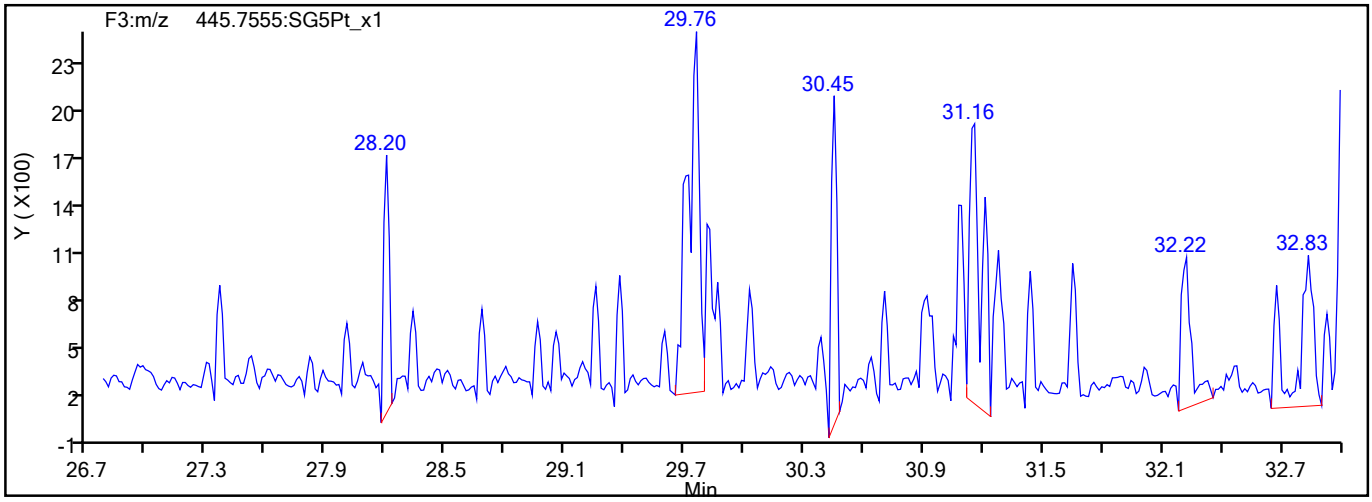

790911

Report Date: 30-Aug-2021 09:54:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

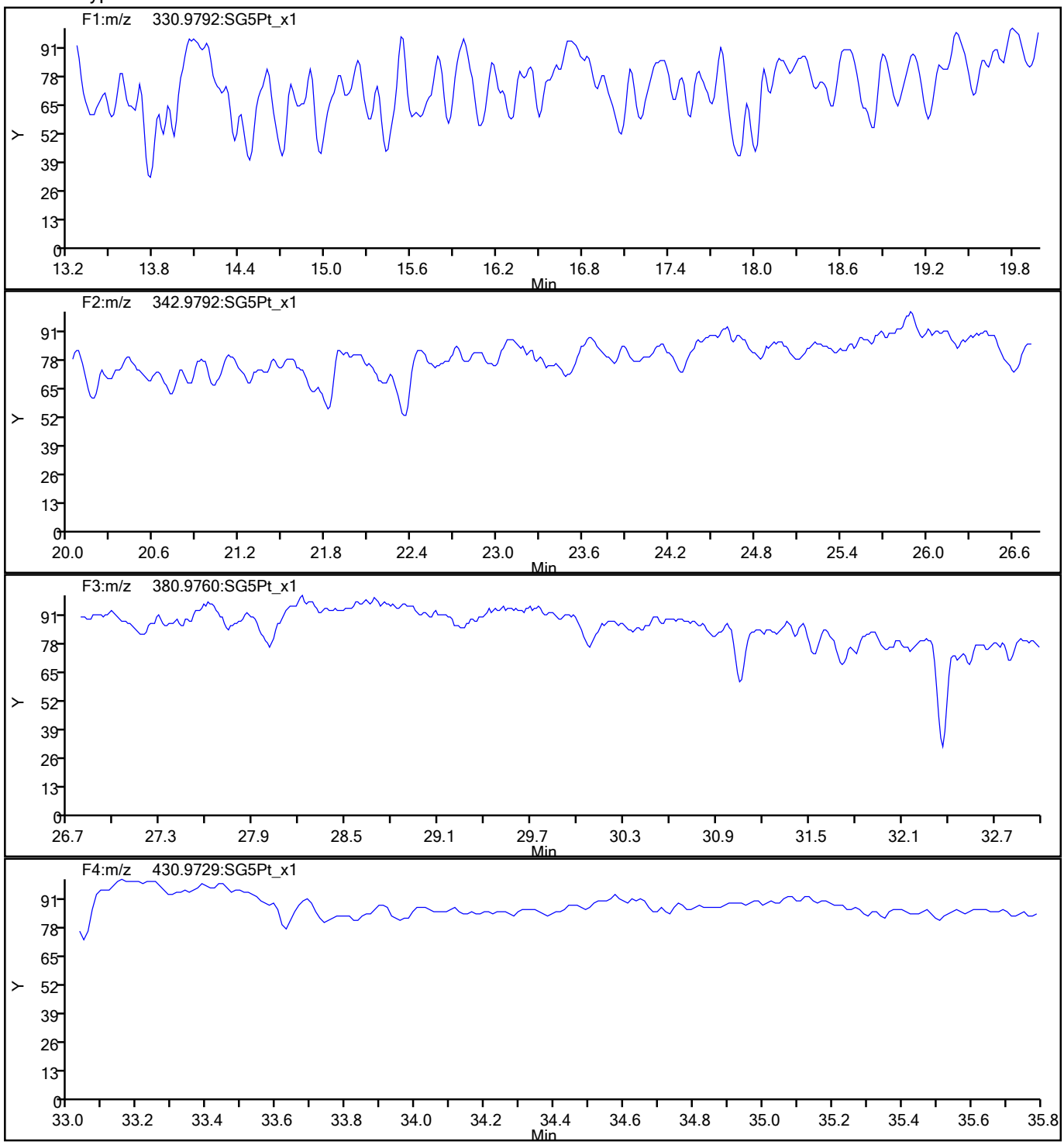

790912

Report Date: 30-Aug-2021 09:54:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_47.d		
Injection Date:	26-Aug-2021 21:51:04	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	DB
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	520325	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

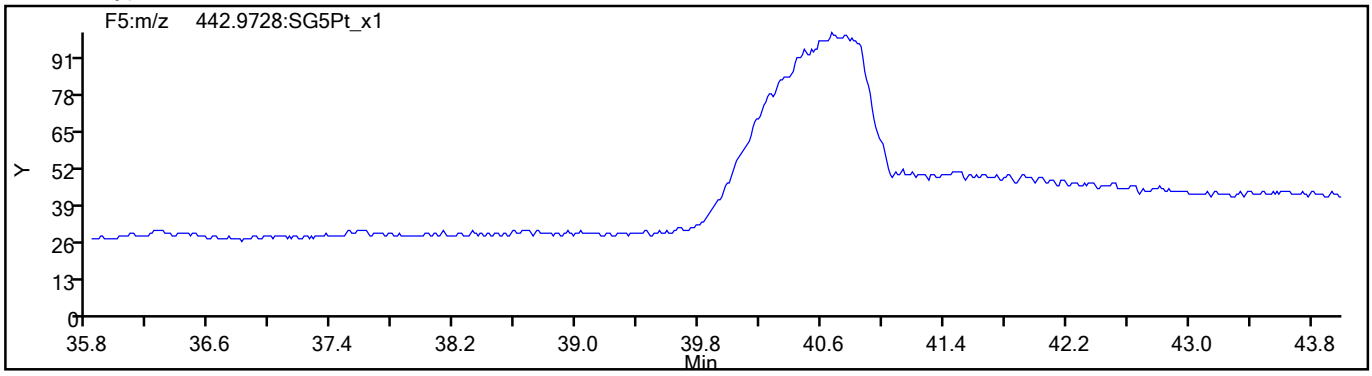

790913

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (0-2) RADL
Lab Sample ID: 320-77214-1 RADL
Matrix: Sediment
Lab File ID: 01SE2111D2_009.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:10
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.38(g)
Date Analyzed: 09/01/2021 14:37
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 10
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 50.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 521760
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	110000	G E B	140	140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	52		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	124		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_009.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Sample Type: Client
Inject. Date: 01-Sep-2021 14:37:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-77214-A-1-A X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 15:43:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 15:43:03

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.320	1742218	0.84	7.2E+05	10.0	10.0				nM
D 13C-2,3,7,8-TCDF	17.678	1196308	0.71	1.3327	5.152	5.152	4.397	4.397	51.52	nM
2,3,7,8-TCDF	17.692	329864956	0.79	0.9978	2763.4	2763.4	3.563	3.563		E
D 13C-2,3,7,8-TCDD	16.073	654648	0.71	0.8749	4.295	4.295	17.6	17.6	42.95	nM
$ 37Cl4-2,3,7,8-TCDD	16.128	746102		0.8648	4.952	4.952	0.5141	0.5141	124	a
2,3,7,8-TCDD	16.114	88983267	0.80	1.0570	1286.0	1286.0	11.0	11.0		Ea
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_009.d
Lims ID: 320-77214-A-1-A
Client ID: 11215702-080221-BN-SJSB090 (0-2)
Sample Type: Client
Inject. Date: 01-Sep-2021 14:37:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 10.0000
Sample Info: 320-77214-A-1-A X10
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 15:43:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 15:43:03

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											nM
331.9368	16.320	16.299	1		795137	226796	150304	375760	2		M
333.9339	16.320	16.299	1		947081	248655	143272	358180	2	0.84(0.65-0.89)	M
13C-2,3,7,8-TCDF											nM
315.9419	17.678	17.616	4	1.083	496279	117072	40409	101022	3		M
317.9389	17.664	17.616	3	1.082	700029	172436	71044	177610	2	0.71(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.692	17.630	4	1.001	145332832	24578416	22141	55352	1110		
305.8987	17.692	17.630	4	1.001	184532124	31363722	19025	47562	1649	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											nM
331.9368	16.073	16.066	0	0.985	271320	68525	150304	375760	0		M
333.9339	16.101	16.066	2	0.987	383328	80189	143272	358180	1	0.71(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											a
327.8840	16.128	16.080	3	0.988	746102	165315	8456	21140	20		a
2,3,7,8-TCDD											Ea
319.8965	16.114	16.094	1	1.003	39542167	9007414	40721	101802	221		a
321.8936	16.114	16.094	1	1.003	49441100	11322568	28339	70847	400	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags
- E - Exceeded Maximum Amount
- n - Failed Sig-To-Noise Test

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_009.d				
Injection Date:	01-Sep-2021 14:37:20	Instrument ID:	11D2		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Not Detected
Expected RT: 17.62

Processing Integration Results

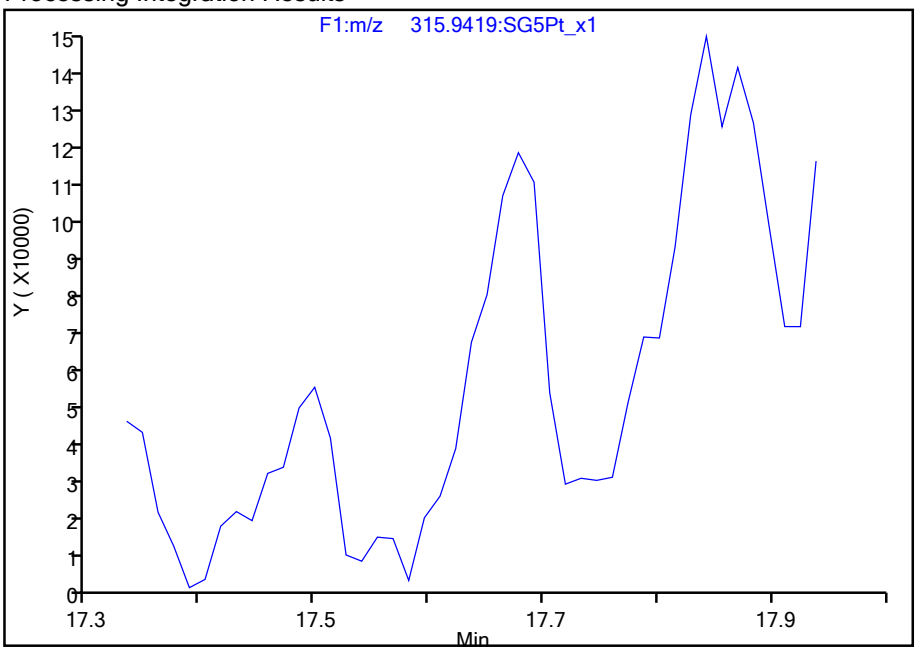

RT: 17.68
Area: 496279
Amount: 5.152437
Amount Units: pg/ul

Manual Integration Results

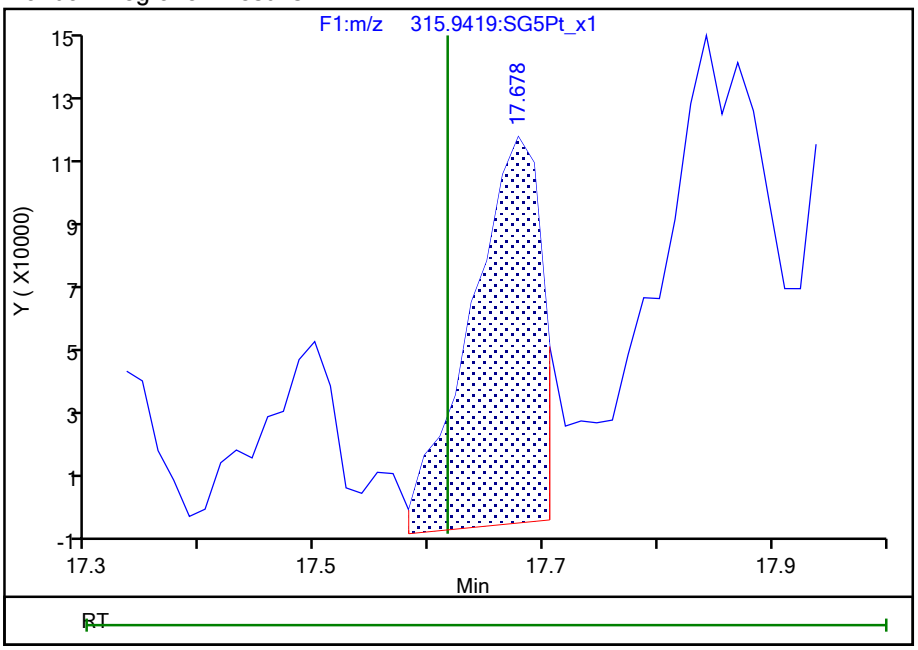

Reviewer: bennettd, 01-Sep-2021 15:42:14
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_009.d				
Injection Date:	01-Sep-2021 14:37:20	Instrument ID:	11D2		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Not Detected
Expected RT: 17.62

Processing Integration Results

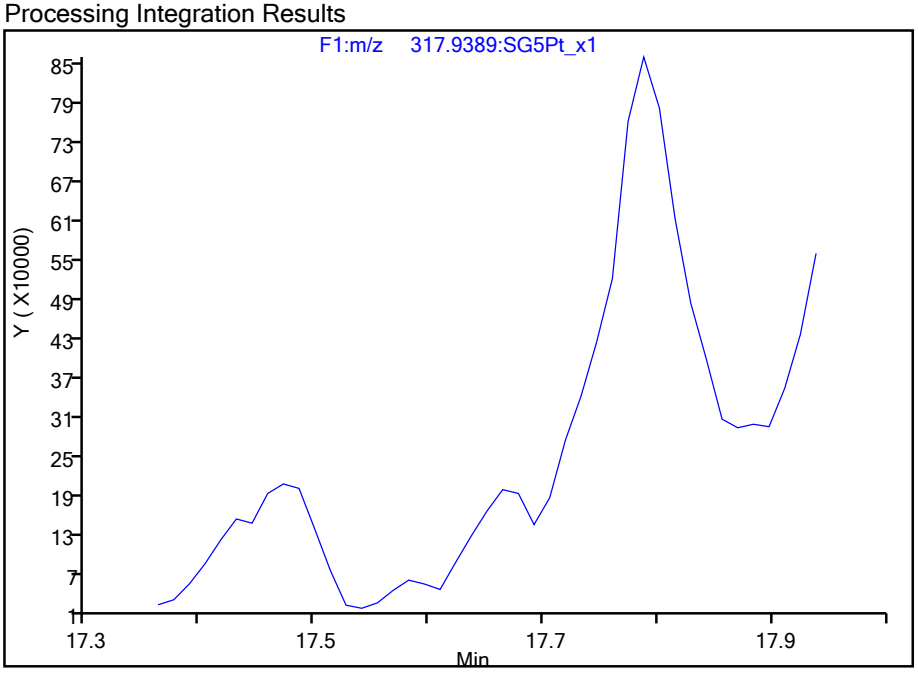

Manual Integration Results

RT: 17.66
Area: 700029
Amount: 5.152437
Amount Units: pg/ul

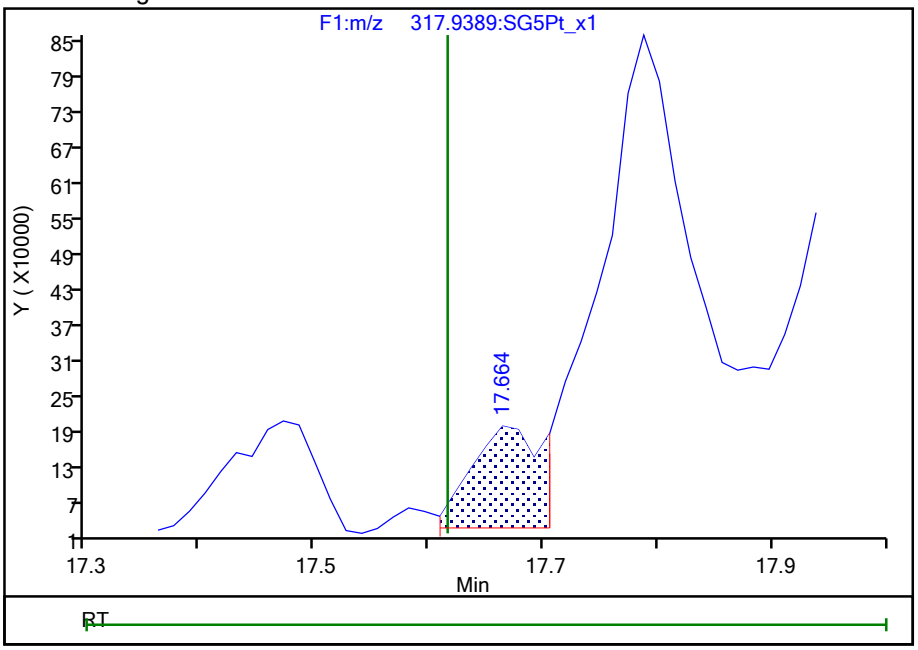

Reviewer: bennettd, 01-Sep-2021 15:42:47
Audit Action: Manually Integrated Audit Reason: Missed Peak

790918

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_009.d				
Injection Date:	01-Sep-2021 14:37:20	Instrument ID:	11D2		
Lims ID:	320-77214-A-1-A	Lab Sample ID:	320-77214-1		
Client ID:	11215702-080221-BN-SJSB090 (0-2)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	10.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 16.08

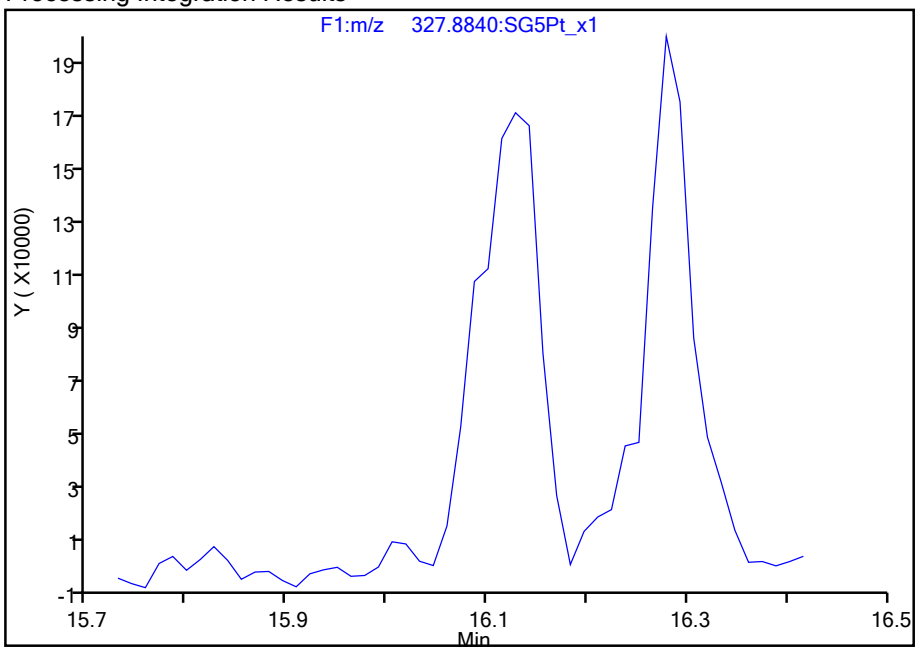

Manual Integration Results

RT: 16.13
Area: 746102
Amount: 4.951900
Amount Units: pg/ul

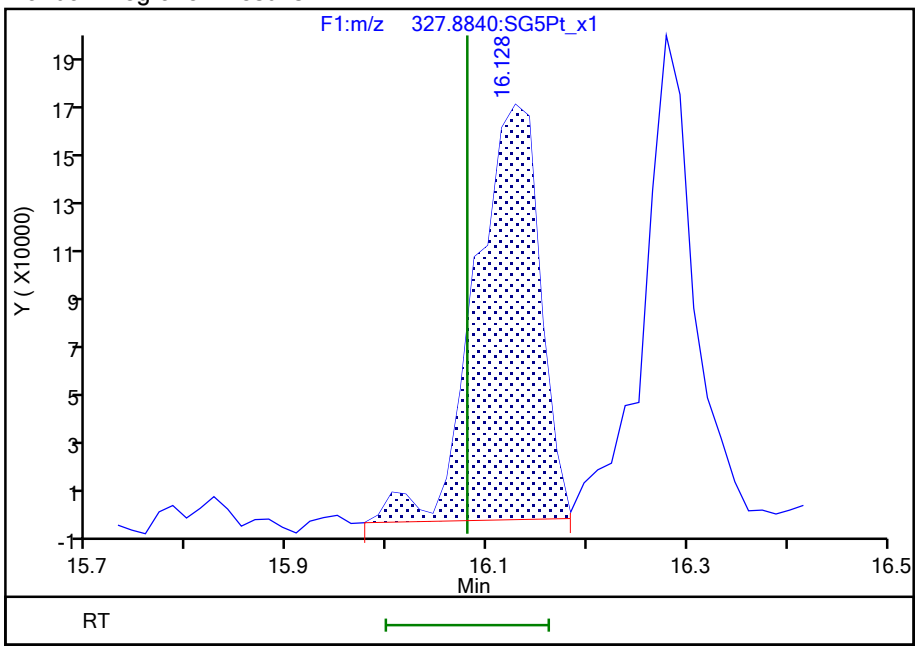

Reviewer: bennettd, 01-Sep-2021 15:40:53
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

Report Date: 01-Sep-2021 15:43:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_009.d		
Injection Date:	01-Sep-2021 14:37:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	521760	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

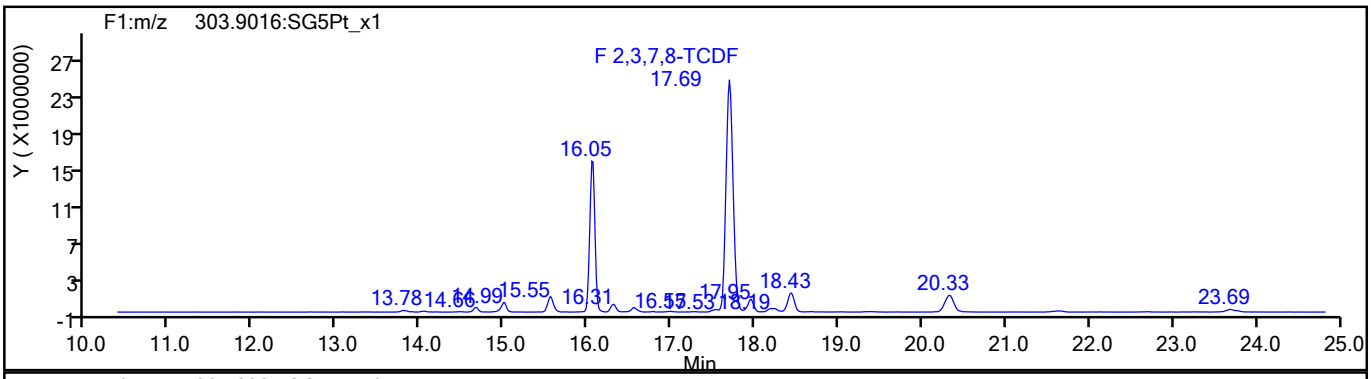

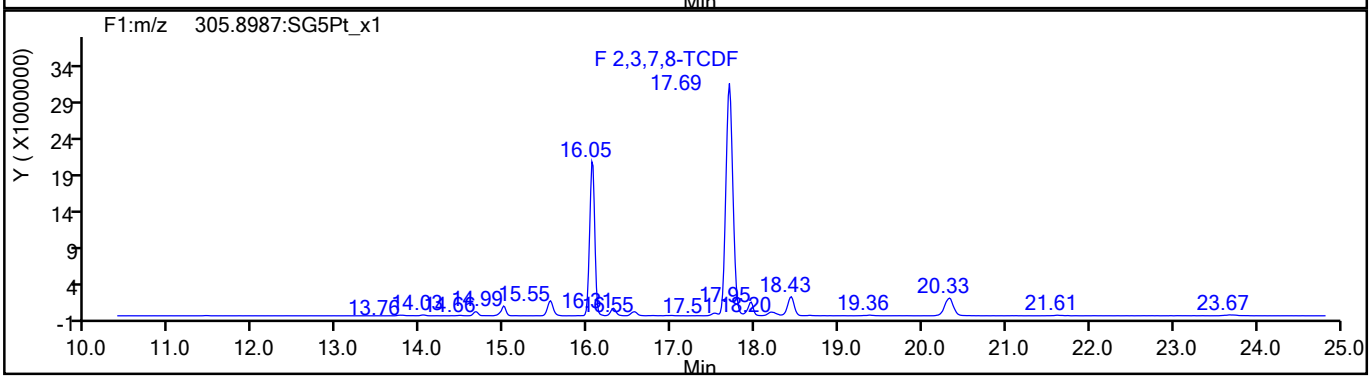

TCDF Standards

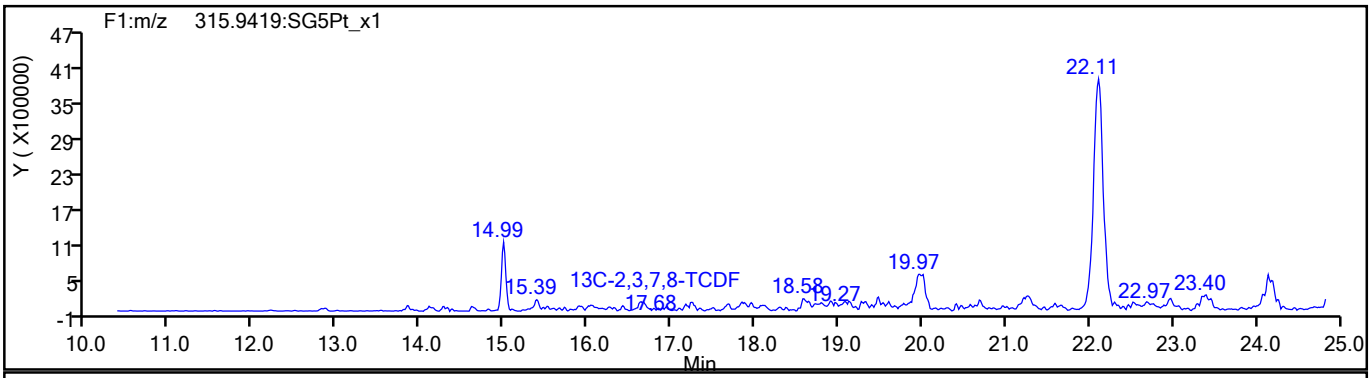

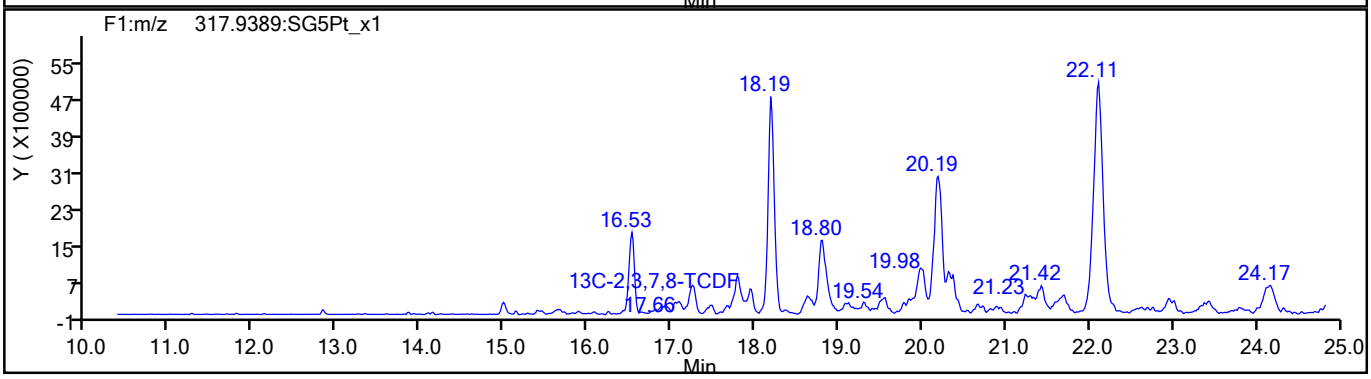

790920

Report Date: 01-Sep-2021 15:43:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_009.d		
Injection Date:	01-Sep-2021 14:37:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	521760	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

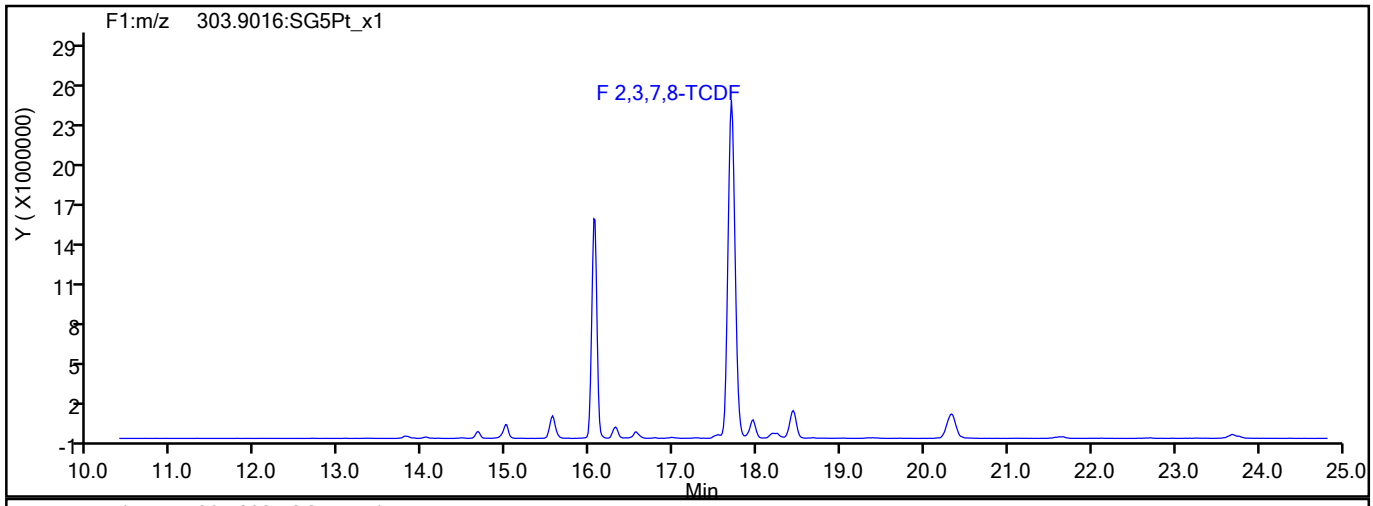

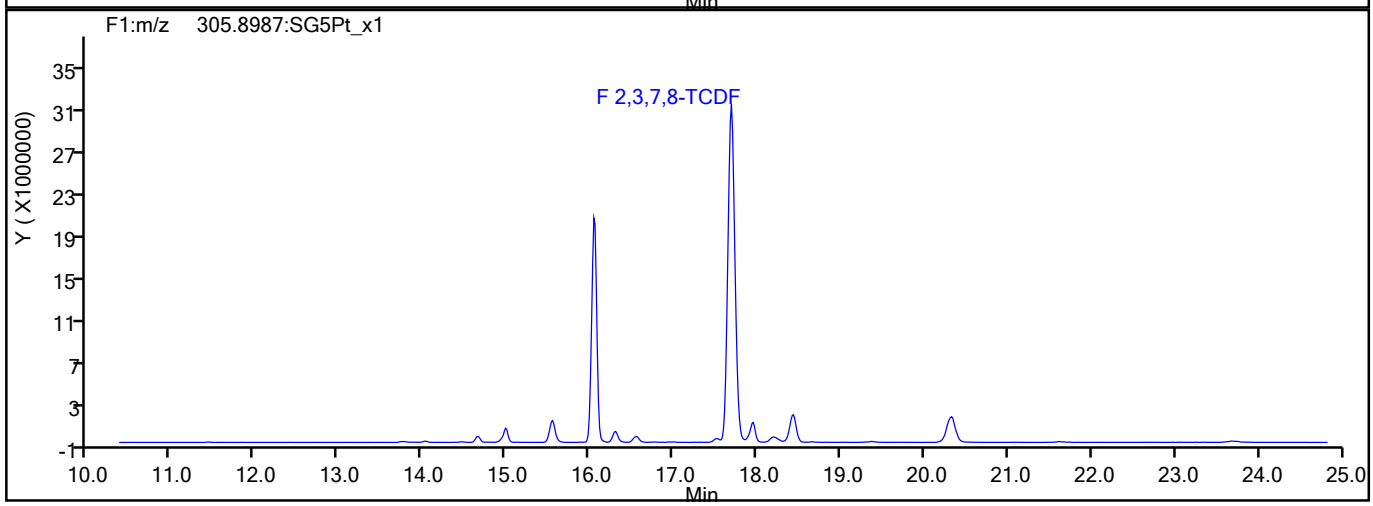

TCDF Interference Mass

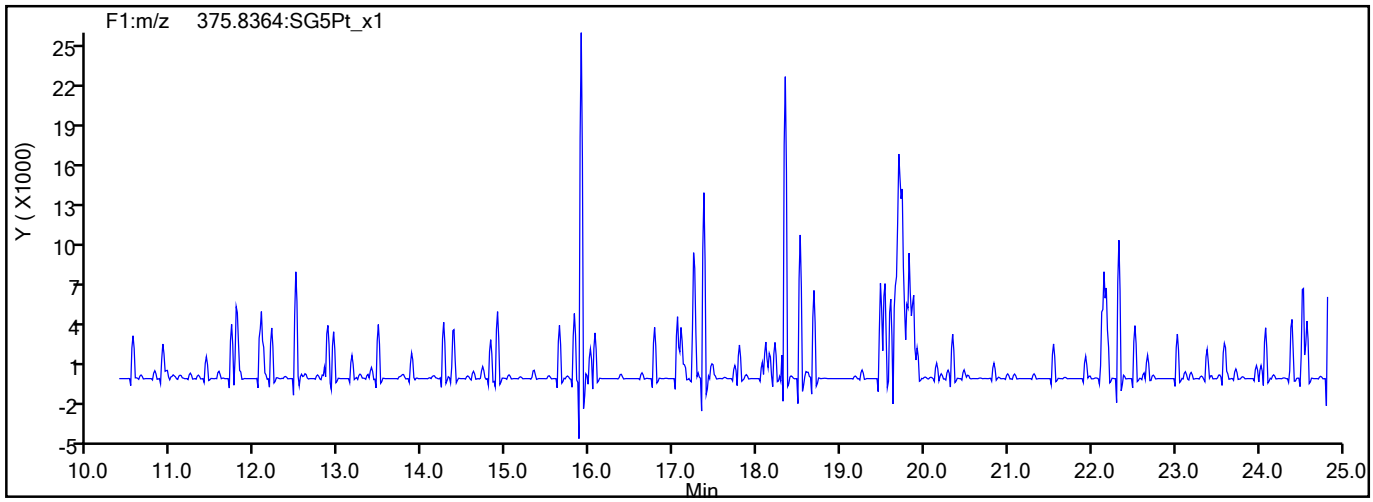

790921

Report Date: 01-Sep-2021 15:43:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_009.d		
Injection Date:	01-Sep-2021 14:37:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	521760	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

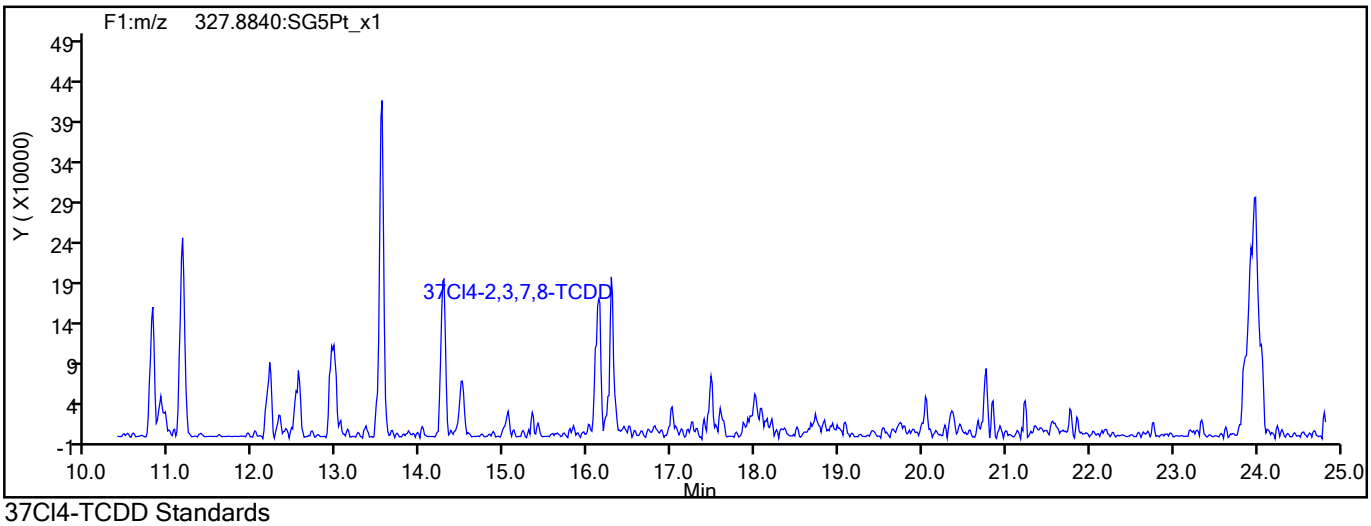

37Cl4-TCDD Standards

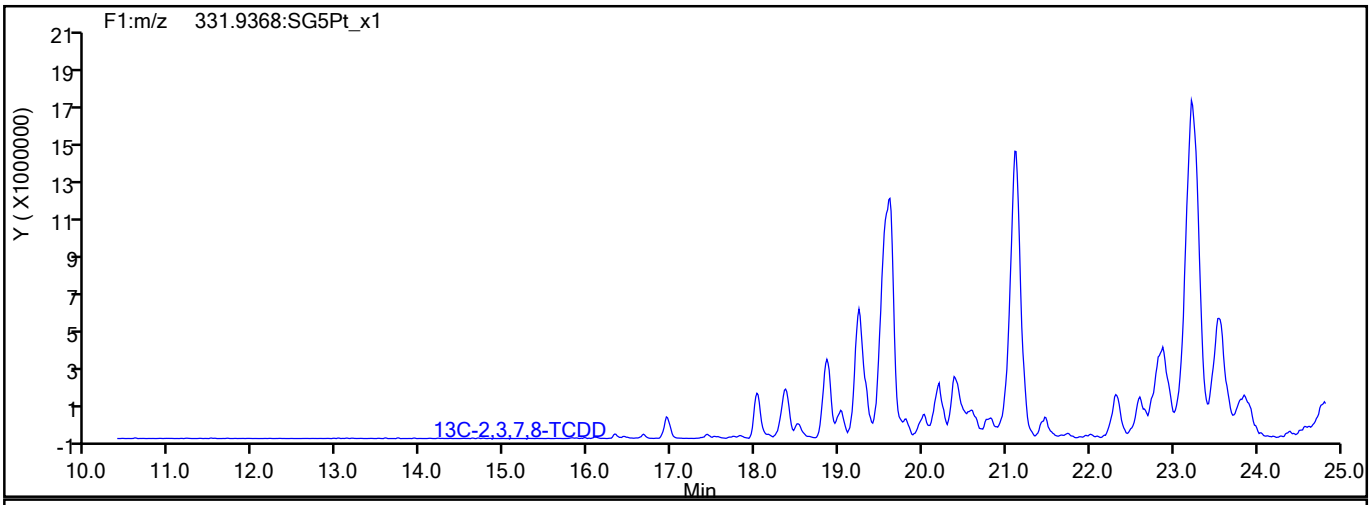

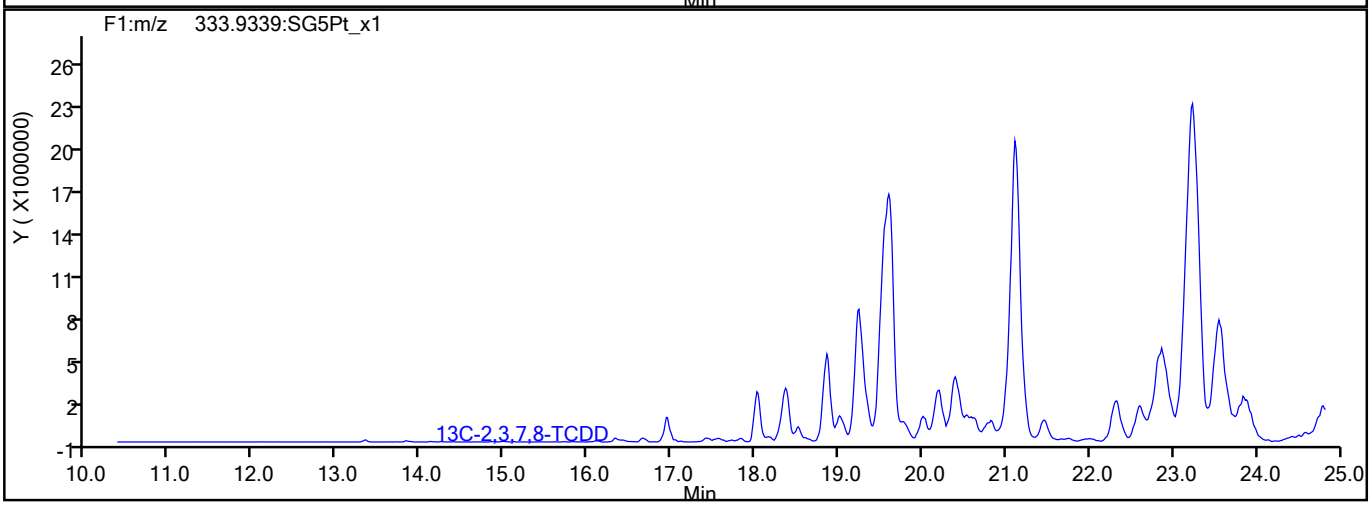

790922

Report Date: 01-Sep-2021 15:43:15 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_009.d		
Injection Date:	01-Sep-2021 14:37:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (0-2)		
Worklist#:	521760	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

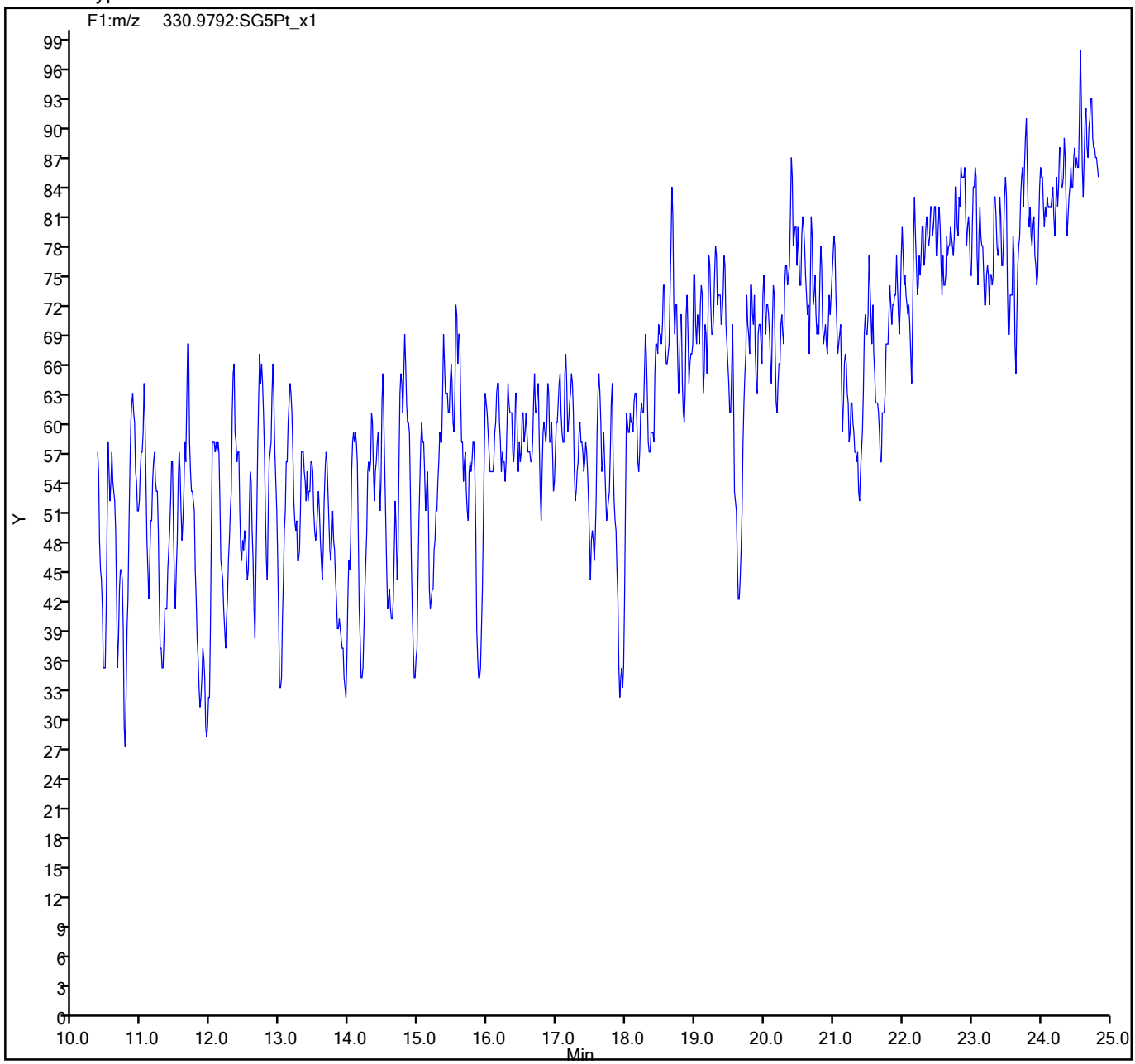

790923

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (2-4)
Lab Sample ID: 320-77214-2
Matrix: Sediment
Lab File ID: 25AU2110D5_6.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.27(g)
Date Analyzed: 08/25/2021 13:35
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	5100	E G	19	19
40321-76-4	1,2,3,7,8-PeCDD	35		6.4	0.58
57117-41-6	1,2,3,7,8-PeCDF	410	F1	6.4	2.5
57117-31-4	2,3,4,7,8-PeCDF	230	F1	6.4	2.2
39227-28-6	1,2,3,4,7,8-HxCDD	0.84	J q	6.4	0.13
57653-85-7	1,2,3,6,7,8-HxCDD	4.0	J	6.4	0.13
19408-74-3	1,2,3,7,8,9-HxCDD	2.4	J	6.4	0.12
70648-26-9	1,2,3,4,7,8-HxCDF	1000		6.4	5.3
57117-44-9	1,2,3,6,7,8-HxCDF	240	F1	6.4	4.9
72918-21-9	1,2,3,7,8,9-HxCDF	9.6		6.4	4.0
60851-34-5	2,3,4,6,7,8-HxCDF	18		6.4	4.0
35822-46-9	1,2,3,4,6,7,8-HpCDD	83	B	6.4	0.52
67562-39-4	1,2,3,4,6,7,8-HpCDF	390	F1	6.4	2.0
55673-89-7	1,2,3,4,7,8,9-HpCDF	130	F1	6.4	2.0
3268-87-9	OCDD	1600	B	13	0.91
39001-02-0	OCDF	170	F1 B	13	0.14
41903-57-5	Total TCDD	5800	G	19	19
30402-14-3	Total TCDF	25000	B G	46	46
36088-22-9	Total PeCDD	39	q	6.4	0.58
30402-15-4	Total PeCDF	1000		6.4	2.3
34465-46-8	Total HxCDD	40	q	6.4	0.12
55684-94-1	Total HxCDF	1400		6.4	4.5
37871-00-4	Total HpCDD	190	B	6.4	0.52
38998-75-3	Total HpCDF	610		6.4	2.0

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) Lab Sample ID: 320-77214-2

Matrix: Sediment Lab File ID: 25AU2110D5_6.d

Analysis Method: 1613B Date Collected: 08/02/2021 13:15

Extract. Method: HRMS-Sox Date Extracted: 08/12/2021 05:19

Sample wt/vol: 10.27(g) Date Analyzed: 08/25/2021 13:35

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 23.9 GPC Cleanup:(Y/N) N

Analysis Batch No.: 519953 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	38		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	86		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	70		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	78		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	62		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	55		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	70		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	60		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	58		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	54		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	46		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	57		26-138
114423-97-1	13C-OCDD	61		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	60		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d
Lims ID: 320-77214-A-2-A
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: Client
Inject. Date: 25-Aug-2021 13:35:48 ALS Bottle#: 7 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-A 320-77214-A-2-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:26 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:57:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.719	80294999	0.81	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.205	71182345	0.79	1.6249	54.6	54.6	0.5138	0.5138	54.56	
2,3,7,8-TCDF	17.220	3906364852	0.78	1.0239	5359.7	5359.7	17.9	17.9		Ea
A Non-2,3,7,8-sub-TCDF	17.076	3129702976	0.77	1.0239	4294.1	4294.1	17.9	2929.2		
S Total TCDF					9653.7	9653.7	17.9	17.9		
D 13C-2,3,7,8-TCDD	17.961	27185341	0.77	0.8993	37.6	37.6	0.6621	0.6621	37.65	a
2,3,7,8-TCDD	17.976	674763848	0.79	1.2541	1979.1	1979.1	7.330	7.330		Ea
$ 37Cl4-2,3,7,8-TCDD	17.976	21268884		1.1071	23.9	23.9	0.1856	0.1856	59.81	M
A Non-2,3,7,8-sub-TCDD	17.537	94692494	0.79	1.2541	277.7	277.7	7.330	277.7		
S Total TCDD					2256.9	2256.9	7.330	7.330		
D 13C-1,2,3,7,8-PeCDF	22.184	68450828	1.59	1.2101	70.4	70.4	0.3331	0.3331	70.45	
1,2,3,7,8-PeCDF	22.211	116064524	1.59	1.0611	159.8	159.8	0.9724	0.9724		a
D 13C-2,3,4,7,8-PeCDF	23.479	77310593	1.57	1.2395	77.7	77.7	0.3252	0.3252	77.68	
2,3,4,7,8-PeCDF	23.506	72084362	1.59	1.0184	91.6	91.6	0.8426	0.8426		a
A F1 PeCDFs	19.851	504561	1.53	1.0398	0.6658	0.6658	0.0309	0.6658		a
A Non-2,3,7,8-sub-PeCDF	23.067	104352566	1.59	1.0398	137.7	137.7	0.9012	52.6		a
S Total PeCDF					389.7	389.7	0.9075	0.9075		
D 13C-1,2,3,7,8-PeCDD	24.174	52650307	1.62	0.7612	86.1	86.1	0.2198	0.2198	86.14	
1,2,3,7,8-PeCDD	24.202	7580167	1.57	1.0484	13.7	13.7	0.2268	0.2268		a
A Non-2,3,7,8-sub-PeCDD	23.696	728309	1.55	1.0484	1.613	1.319	0.2268	0.5670		RQM
S Total PeCDD					15.3	15.1	0.2268	0.2268		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.266	74969238	0.52	1.0837	69.5	69.5	0.1387	0.1387	69.54	
1,2,3,4,7,8-HxCDF	30.292	327307740	1.21	1.0851	402.3	402.3	2.055	2.055		
D 13C-1,2,3,6,7,8-HxCDF	30.465	67159556	0.52	1.1279	59.8	59.8	0.1333	0.1333	59.85	
1,2,3,6,7,8-HxCDF	30.479	70354729	1.22	1.1260	93.0	93.0	1.924	1.924		
D 13C-2,3,4,6,7,8-HxCDF	31.344	61909067	0.52	1.0637	58.5	58.5	0.1413	0.1413	58.50	
2,3,4,6,7,8-HxCDF	31.357	5084503	1.22	1.1675	7.034	7.034	1.574	1.574		
D 13C-1,2,3,7,8,9-HxCDF	32.169	52992954	0.52	0.9676	55.0	55.0	0.1554	0.1554	55.05	
1,2,3,7,8,9-HxCDF	32.182	2307484	1.18	1.1664	3.733	3.733	1.547	1.547		
A Non-2,3,7,8-sub-HxCDF	30.338	23236846	1.22	1.1363	31.8	31.8	1.753	16.7		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					538.0	538.0	1.775	1.775		
* 13C-1,2,3,7,8,9-HxCDD	31.983	99490254	1.26	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.544	45020218	1.26	0.7334	61.7	61.7	0.1793	0.1793	61.70	
1,2,3,4,7,8-HxCDD	31.557	156515	1.24	1.0640	0.3635	0.3267	0.0499	0.0499		RQMa
D 13C-1,2,3,6,7,8-HxCDD	31.650	48402675	1.23	0.8802	55.3	55.3	0.1494	0.1494	55.27	
1,2,3,6,7,8-HxCDD	31.663	761705	1.27	1.0001	1.574	1.574	0.0502	0.0502		M
1,2,3,7,8,9-HxCDD	31.996	496701	1.18	1.1325	0.9389	0.9389	0.0455	0.0455		
A Non-2,3,7,8-sub-HxCDD	30.525	6276073	1.24	1.0655	12.7	12.6	0.0484	7.183		RQ
S Total HxCDD					15.5	15.4	0.0485	0.0485		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.627	35753840	0.43	0.7730	46.5	46.5	0.3299	0.3299	46.49	
1,2,3,4,6,7,8-HpCDF	33.627	77575549	1.05	1.4413	150.5	150.5	0.7828	0.7828		
D 13C-1,2,3,4,7,8,9-HpCDF	34.684	39985937	0.43	0.7008	57.3	57.3	0.3639	0.3639	57.35	
1,2,3,4,7,8,9-HpCDF	34.696	25859887	1.05	1.3174	49.1	49.1	0.7649	0.7649		
A Non-2,3,7,8-sub-HpCDF	34.150	20262522	1.04	1.3793	38.8	38.8	0.7718	38.8		
S Total HpCDF					238.4	238.4	0.7739	0.7739		
D 13C-1,2,3,4,6,7,8-HpCDD	34.405	34744736	1.03	0.6472	54.0	54.0	0.3409	0.3409	53.96	
1,2,3,4,6,7,8-HpCDD	34.405	12374386	1.03	1.0943	32.5	32.5	0.2046	0.2046		
A Non-2,3,7,8-sub-HpCDD	34.223	15388856	1.09	1.0943	40.5	40.5	0.2046	40.5		
S Total HpCDD					73.0	73.0	0.2046	0.2046		
D 13C-OCDD	36.713	54163770	0.88	0.4472	121.8	121.8	0.1867	0.1867	60.88	
OCDF	36.809	25982112	0.87	1.4382	66.7	66.7	0.0532	0.0532		
OCDD	36.713	181635543	0.90	1.1070	605.9	605.9	0.3544	0.3544		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d
Lims ID: 320-77214-A-2-A
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: Client
Inject. Date: 25-Aug-2021 13:35:48 ALS Bottle#: 7 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-A 320-77214-A-2-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:43:26 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:57:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.719	17.598	7		35856583	6520427	14818	37045	440		a
333.9339	17.719	17.598	7		44438416	8017681	19806	49515	405	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.205	17.099	6	0.971	31388258	8720594	23491	58727	371		
317.9389	17.205	17.099	6	0.971	39794087	10947807	25058	62645	437	0.79(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.220	17.114	6	1.001	1712848400	448844755	626519	1566297	716		a
305.8987	17.220	17.114	6	1.001	2193516452	569358279	814024	2035060	699	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.829	17.076	-75	0.920	27441267	7998446	626519	1566297	13		
305.8987	15.829	17.076	-75	0.920	35253239	10141828	814024	2035060	12	0.78(0.65-0.89)	
303.9016	16.116	17.076	-57	0.937	39975115	6540806	626519	1566297	10		
305.8987	16.116	17.076	-57	0.937	51812230	8432197	814024	2035060	10	0.77(0.65-0.89)	
303.9016	16.328	17.076	-45	0.949	43221017	10599533	626519	1566297	17		
305.8987	16.328	17.076	-45	0.949	55176112	13690691	814024	2035060	17	0.78(0.65-0.89)	
303.9016	16.570	17.076	-30	0.963	67182405	19541943	626519	1566297	31		
305.8987	16.555	17.076	-31	0.962	100725322	26668471	814024	2035060	33	0.67(0.65-0.89)	
303.9016	16.827	17.076	-15	0.978	932346162	229294799	626519	1566297	366		
305.8987	16.827	17.076	-15	0.978	1202561122	293813045	814024	2035060	361	0.78(0.65-0.89)	
303.9016	17.628	17.076	33	1.025	123252771	32467323	626519	1566297	52		
305.8987	17.628	17.076	33	1.025	158633831	42230345	814024	2035060	52	0.78(0.65-0.89)	
303.9016	19.034	17.076	117	1.106	128339914	29445490	626519	1566297	47		
305.8987	19.034	17.076	117	1.106	163782469	37831517	814024	2035060	46	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											a
331.9368	17.961	17.794	10	1.014	11855696	3008675	14818	37045	203		a
333.9339	17.961	17.794	10	1.014	15329645	3923453	19806	49515	198	0.77(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	17.976	17.809	10	1.001	297991604	81291512	133657	334142	608		a
321.8936	17.976	17.809	10	1.001	376772244	104076687	121250	303125	858	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											M
327.8847	17.976	17.809	10	1.015	21268884	6130864	11949	29872	513		M
A Non-2,3,7,8-sub-TCDD											
319.8965	18.263	17.537	43	1.017	41683003	9984988	133657	334142	75		
321.8936	18.263	17.537	43	1.017	53009491	12739381	121250	303125	105	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.184	22.020	10	1.252	42048532	7176503	13354	33385	537		
353.8970	22.184	22.020	10	1.252	26402296	4529859	10089	25222	449	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.211	22.047	10	1.001	71194522	11843128	29673	74182	399		a
341.8567	22.211	22.047	10	1.001	44870002	7455426	18645	46612	400	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.479	23.343	8	1.325	47222246	8616839	13354	33385	645		
353.8970	23.479	23.343	8	1.325	30088347	5459319	10089	25222	541	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											a
339.8597	23.506	23.370	8	1.001	44262647	8095200	29673	74182	273		a
341.8567	23.506	23.370	8	1.001	27821715	5119151	18645	46612	275	1.59(1.32-1.78)	
A F1 PeCDFs											a
339.8597	19.337	19.851	-31	0.872	304872	65405	752	1880	87		a
341.8567	19.337	19.851	-31	0.872	199689	44020	906	2265	49	1.53(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											a
339.8597	20.861	23.067	-132	0.940	24439010	5016283	29673	74182	169		
341.8567	20.861	23.067	-132	0.940	15402864	3137603	18645	46612	168	1.59(1.32-1.78)	
339.8597	21.679	23.067	-83	0.977	2024148	265931	29673	74182	9		
341.8567	21.666	23.067	-84	0.977	1348735	168874	18645	46612	9	1.50(1.32-1.78)	
339.8597	22.074	23.067	-59	0.995	4284446	1028355	29673	74182	35		a
341.8567	22.074	23.067	-59	0.995	2734342	649804	18645	46612	35	1.57(1.32-1.78)	
339.8597	22.484	23.067	-35	1.014	782080	194398	29673	74182	7		
341.8567	22.484	23.067	-35	1.014	510085	124763	18645	46612	7	1.53(1.32-1.78)	
339.8597	22.702	23.067	-22	1.023	17899922	3509601	29673	74182	118		
341.8567	22.702	23.067	-22	1.023	11124457	2195559	18645	46612	118	1.61(1.32-1.78)	
339.8597	23.834	23.067	46	1.074	11262095	1764581	29673	74182	59		
341.8567	23.834	23.067	46	1.074	7083719	1126499	18645	46612	60	1.59(1.32-1.78)	
339.8597	25.375	23.067	138	1.144	3381237	546464	29673	74182	18		
341.8567	25.375	23.067	138	1.144	2075426	334067	18645	46612	18	1.63(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.174	24.052	7	1.364	32547658	5574902	5870	14675	950		
369.8919	24.174	24.052	7	1.364	20102649	3493844	3862	9655	905	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											a
355.8546	24.202	24.079	7	1.001	4631788	806819	4906	12265	164		a
357.8516	24.202	24.079	7	1.001	2948379	514835	3721	9302	138	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	22.456	23.696	-74	0.929	137790	34344	4906	12265	7		
357.8516	22.456	23.696	-74	0.929	91882	24059	3721	9302	6	1.50(1.32-1.78)	
355.8546	22.743	23.696	-57	0.941	112850	23025	4906	12265	5		
357.8516	22.756	23.696	-56	0.941	86603	15923	3721	9302	4	1.30(1.32-1.78)	
	Empc Correction				72806	14854	3721	9302	4		
355.8546	24.666	23.696	58	1.020	338693	54346	4906	12265	11		M
	Empc Correction				190243	26072	4906	12265	5		
357.8516	24.693	23.696	60	1.021	122738	16821	3721	9302	5	2.76(1.32-1.78)	M
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.266	30.186	5	0.946	25770676	4707929	7283	18207	646		
385.8610	30.266	30.186	5	0.946	49198562	8864965	10563	26407	839	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.292	30.213	5	1.001	178929138	32584045	66413	166032	491		
375.8178	30.292	30.213	5	1.001	148378602	27111764	54657	136642	496	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.465	30.399	4	0.953	22947936	4809549	7283	18207	660		
385.8610	30.465	30.399	4	0.953	44211620	9162905	10563	26407	867	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.479	30.412	4	1.000	38639698	7935475	66413	166032	119		
375.8178	30.479	30.412	4	1.000	31715031	6543405	54657	136642	120	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.344	31.291	3	0.980	21257611	5654887	7283	18207	776		
385.8610	31.344	31.291	3	0.980	40651456	10818890	10563	26407	1024	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.357	31.317	2	1.000	2790301	812174	66413	166032	12		
375.8178	31.357	31.317	2	1.000	2294202	657625	54657	136642	12	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.169	32.143	2	1.006	18189313	5806495	7283	18207	797		
385.8610	32.169	32.143	2	1.006	34803641	10964054	10563	26407	1038	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.182	32.156	2	1.000	1247077	468104	66413	166032	7		
375.8178	32.182	32.156	2	1.000	1060407	386243	54657	136642	7	1.18(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	29.347	30.338	-59	0.970	3992345	572790	66413	166032	9		
375.8178	29.347	30.338	-59	0.970	3298877	470941	54657	136642	9	1.21(1.05-1.43)	
373.8208	31.237	30.338	54	1.032	2011843	514028	66413	166032	8		
375.8178	31.237	30.338	54	1.032	1704064	430559	54657	136642	8	1.18(1.05-1.43)	
373.8208	32.262	30.338	115	1.066	6785820	2258749	66413	166032	34		
375.8178	32.262	30.338	115	1.066	5443897	1863724	54657	136642	34	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.983	31.956	2		55377500	16605063	8736	21840	1901		
403.8529	31.983	31.956	2		44112754	13070101	6870	17175	1902	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.544	31.504	2	0.986	25122487	7203024	8736	21840	825		
403.8529	31.544	31.504	2	0.986	19897731	5675601	6870	17175	826	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQMa
389.8157	31.557	31.517	2	1.000	104237	24732	1472	3680	17		M
	Empc Correction				86642	25845	1472	3680	18		
391.8127	31.557	31.517	2	1.000	69873	20843	1263	3157	17	1.49(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.650	31.610	2	0.990	26684754	7482793	8736	21840	857		
403.8529	31.650	31.610	2	0.990	21717921	6149045	6870	17175	895	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.663	31.624	2	1.000	426681	118943	1472	3680	81		M
391.8127	31.663	31.624	2	1.000	335024	96124	1263	3157	76	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.996	31.969	2	1.014	268422	65037	1472	3680	44		
391.8127	31.983	31.969	1	1.014	228279	58378	1263	3157	46	1.18(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.188	30.525	-80	0.922	1986381	256308	1472	3680	174		
391.8127	29.188	30.525	-80	0.922	1588969	205177	1263	3157	162	1.25(1.05-1.43)	
389.8157	30.346	30.525	-11	0.959	149975	28093	1472	3680	19		
391.8127	30.359	30.525	-10	0.959	119139	22926	1263	3157	18	1.26(1.05-1.43)	
389.8157	30.758	30.525	14	0.972	1280478	256618	1472	3680	174		
391.8127	30.758	30.525	14	0.972	1051704	204884	1263	3157	162	1.22(1.05-1.43)	
389.8157	30.971	30.525	27	0.979	55040	12832	1472	3680	9		
391.8127	30.958	30.525	26	0.978	73819	16316	1263	3157	13	0.75(1.05-1.43)	
	Empc Correction				44387	10348	1263	3157	8		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.627	33.603	1	1.051	10789057	3909633	8743	21857	447		
419.8220	33.627	33.603	1	1.051	24964783	8893854	21527	53817	413	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.627	33.615	1	1.000	39770385	14018851	30968	77420	453		
409.7789	33.627	33.615	1	1.000	37805164	13858107	26812	67030	517	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.684	34.672	1	1.084	12070723	4382537	8743	21857	501		
419.8220	34.684	34.672	1	1.084	27915214	9951712	21527	53817	462	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.696	34.685	1	1.000	13268072	4755034	30968	77420	154		
409.7789	34.684	34.685	0	1.000	12591815	4497133	26812	67030	168	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	33.919	34.150	-14	1.009	10346718	3944496	30968	77420	127		
409.7789	33.919	34.150	-14	1.009	9915804	3876744	26812	67030	145	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.405	34.393	1	1.076	17591772	6178073	16366	40915	377		
437.8140	34.405	34.393	1	1.076	17152964	6108493	9825	24562	622	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	6264914	2227374	5762	14405	387		
425.7737	34.405	34.405	0	1.000	6109472	2229083	5242	13105	425	1.03(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.870	34.223	-21	0.984	8008687	3053408	5762	14405	530		
425.7737	33.870	34.223	-21	0.984	7380169	2887322	5242	13105	551	1.09(0.88-1.20)	
13C-OCDD											
469.7779	36.713	36.701	1	1.148	25396190	8033694	6123	15307	1312		
471.7750	36.713	36.701	1	1.148	28767580	8947345	3788	9470	2362	0.88(0.76-1.02)	
OCDF											
441.7428	36.809	36.797	1	1.003	12068754	3796293	1204	3010	3153		
443.7399	36.809	36.797	1	1.003	13913358	4272473	1395	3487	3063	0.87(0.76-1.02)	
OCDD											
457.7377	36.713	36.713	0	1.000	86223308	26247763	6108	15270	4297		
459.7348	36.713	36.713	0	1.000	95412235	29743393	7217	18042	4121	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 27-Aug-2021 09:43:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d
Lims ID: 320-77214-A-2-A
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 13:35:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	71182345	19668401

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	71182345	19668401

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.829	27441267	7998446	35253239	10141828	86.0	0.78	
16.116	39975115	6540806	51812230	8432197	125.9	0.77	
16.328	43221017	10599533	55176112	13690691	135.0	0.78	
16.570	67182405	19541943	100725322	26668471	230.4	0.67	
16.827	932346162	229294799	1202561122	293813045	2929.2	0.78	
17.628	123252771	32467323	158633831	42230345	386.8	0.78	
19.034	128339914	29445490	163782469	37831517	400.8	0.78	
Signal Totals:							
	1361758651	335888340	1767944325	432808094			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3129702976	768696434				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4294.1 = (3129702976 * 100.000) / (71182345 * 1.024)

Report Date: 27-Aug-2021 09:43:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Lims ID:	320-77214-A-2-A		
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Inject. Date:	25-Aug-2021 13:35:48	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	6

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	27185341	6932128

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	27185341	6932128

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.263	41683003	9984988	53009491	12739381	277.7	0.79	
Signal Totals:							
	41683003	9984988	53009491	12739381			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	94692494	22724369				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 277.742 = (94692494 * 100.000) / (27185341 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d
Lims ID: 320-77214-A-2-A
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 13:35:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 6

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68450828	11706362
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	77310593	14076158

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	72880710	12891260

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.337	304872	65405	199689	44020	0.6658	1.53	a
Signal Totals:							
	304872	65405	199689	44020			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	504561	109425				1.53	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6658 = (504561 * 100.000) / (72880710 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d
Lims ID: 320-77214-A-2-A
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 13:35:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 6

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68450828	11706362
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	77310593	14076158

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	72880710	12891260

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.861	24439010	5016283	15402864	3137603	52.6	1.59	
21.679	2024148	265931	1348735	168874	4.45	1.50	
22.074	4284446	1028355	2734342	649804	9.26	1.57	a
22.484	782080	194398	510085	124763	1.71	1.53	
22.702	17899922	3509601	11124457	2195559	38.3	1.61	
23.834	11262095	1764581	7083719	1126499	24.2	1.59	
25.375	3381237	546464	2075426	334067	7.20	1.63	
Signal Totals:							
	64072938	12325613	40279628	7737169			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	104352566	20062782				1.59	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 137.705 = (104352566 * 100.000) / (72880710 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d
Lims ID: 320-77214-A-2-A
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 13:35:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 6

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	52650307	9068746

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	52650307	9068746

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.456	137790	34344	91882	24059	0.4161	1.50	
22.743	112850	23025	86603	15923	0.3613	1.30	RQ
22.743	112850	23025	72806	14854	0.3363		Empc Correction
24.666	338693	54346	122738	16821	0.8359	2.76	RQM
24.666	190243	26072	122738	16821	0.5670		Empc Correction
Signal Totals:							
	440883	83441	287426	55734			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	890556	168518				1.96	RQM
	728309	139175					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.613 = (890556 * 100.000) / (52650307 * 1.048)
Empc Amount: 1.319 = (728309 * 100.000) / (52650307 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d
Lims ID: 320-77214-A-2-A
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 13:35:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 6

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	74969238	13572894
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	67159556	13972454
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	61909067	16473777
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	52992954	16770549

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	64257703	15197418

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.347	3992345	572790	3298877	470941	9.99	1.21	
31.237	2011843	514028	1704064	430559	5.09	1.18	
32.262	6785820	2258749	5443897	1863724	16.7	1.25	
Signal Totals:							
	12790008	3345567	10446838	2765224			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	23236846	6110791				1.22	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 31.826 = (23236846 * 100.000) / (64257703 * 1.136)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d
Lims ID: 320-77214-A-2-A
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 13:35:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 6

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	45020218	12878625
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	48402675	13631838
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	46711446	13255231

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.188	1986381	256308	1588969	205177	7.18	1.25	
30.346	149975	28093	119139	22926	0.5407	1.26	
30.758	1280478	256618	1051704	204884	4.69	1.22	
30.971	55040	12832	73819	16316	0.2589	0.75	RQ
30.971	55040	12832	44387	10348	0.1998		Empc Correction
Signal Totals:							
	3471874	553851	2804199	443335			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6305505	1003154				1.23	RQ
	6276073	997186					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 12.668 = (6305505 * 100.000) / (46711446 * 1.066)
Empc Amount: 12.609 = (6276073 * 100.000) / (46711446 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 09:43:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d
Lims ID: 320-77214-A-2-A
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 13:35:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 6

Non-2,3,7,8-sub-HpCDF, RT: 34.150

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	35753840	12803487
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	39985937	14334249

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	37869888	13568868

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
33.919	10346718	3944496	9915804	3876744	38.8	1.04	
Signal Totals:							
	10346718	3944496	9915804	3876744			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	20262522	7821240				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 38.791 = (20262522 * 100.000) / (37869888 * 1.379)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d
Lims ID: 320-77214-A-2-A
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 13:35:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 6

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	34744736	12286566

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	34744736	12286566

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.870	8008687	3053408	7380169	2887322	40.5	1.09	
Signal Totals:							
	8008687	3053408	7380169	2887322			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	15388856	5940730				1.09	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 40.474 = (15388856 * 100.000) / (34744736 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.05
Area: 21231379
Amount: 67.995157
Amount Units: pg/ul

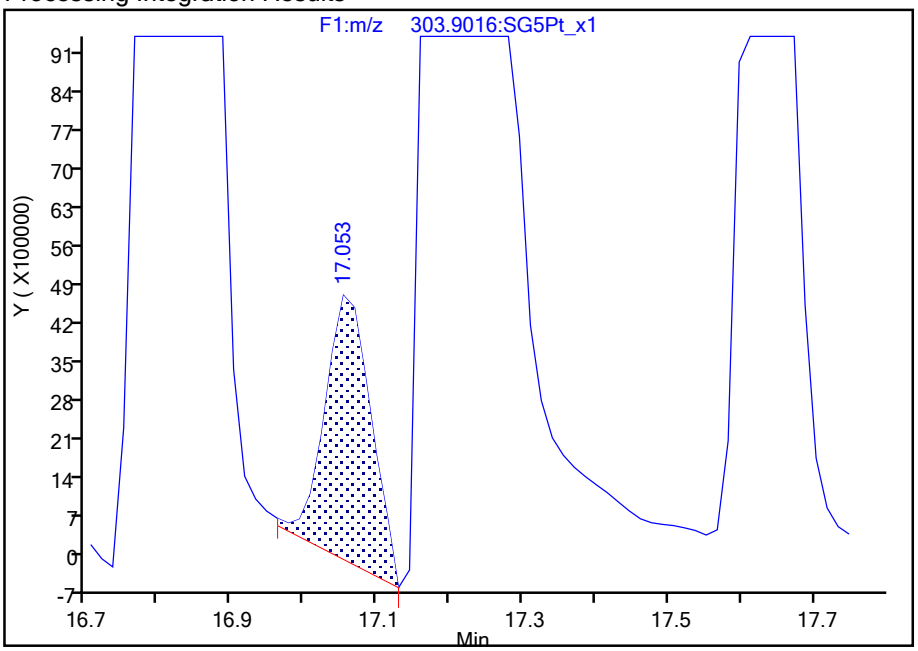

Manual Integration Results

RT: 17.22
Area: 1712848400
Amount: 5359.6757
Amount Units: pg/ul

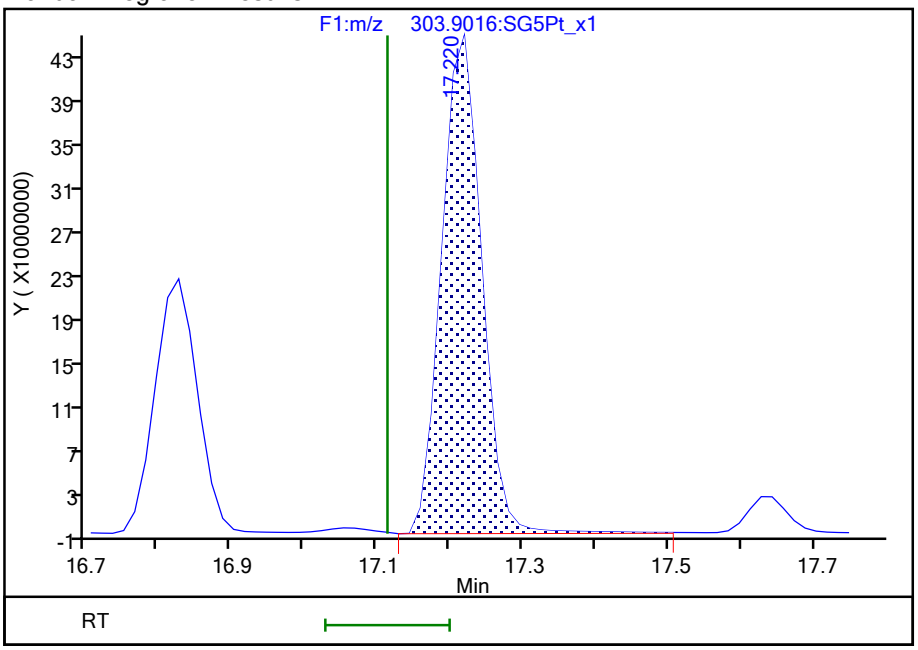

Reviewer: bennettd, 26-Aug-2021 10:00:38

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 17.72
Area: 35856583
Amount: 111.1955
Amount Units: pg/ul

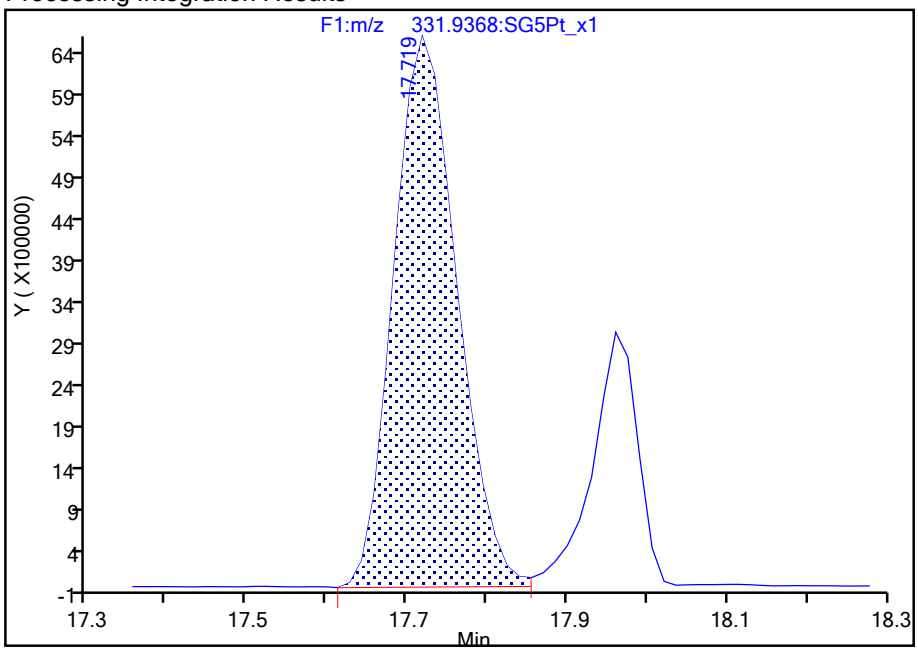

Manual Integration Results

RT: 17.96
Area: 11855696
Amount: 37.647285
Amount Units: pg/ul

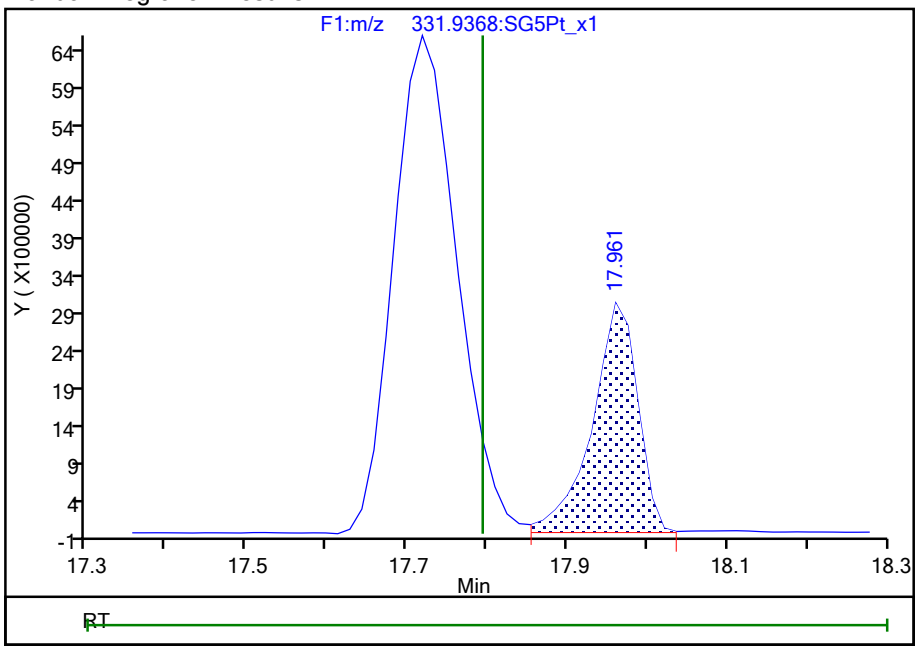

Reviewer: bennettd, 26-Aug-2021 09:56:48

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.81

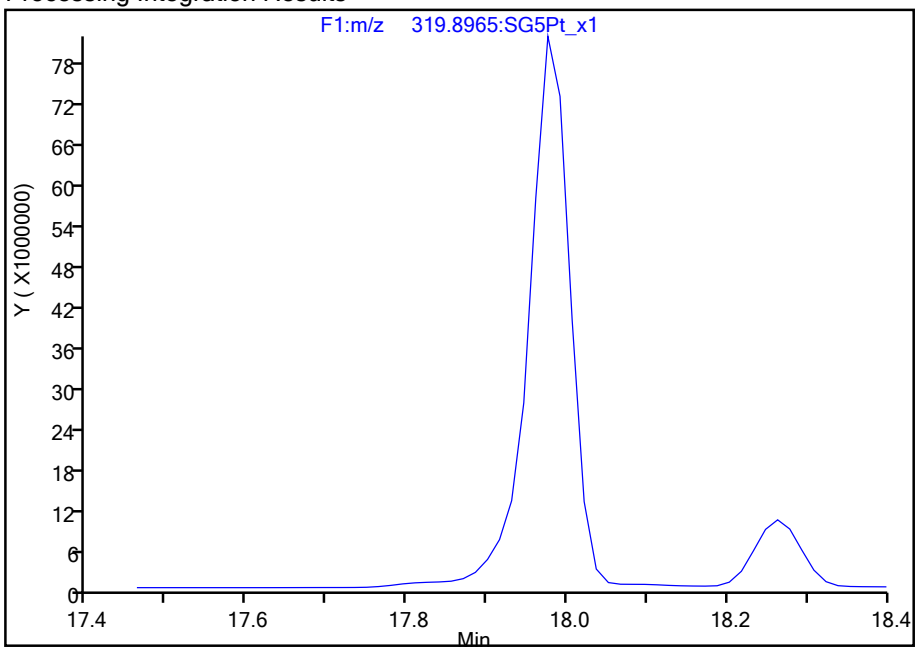

Manual Integration Results

RT: 17.98
Area: 297991604
Amount: 1979.1467
Amount Units: pg/ul

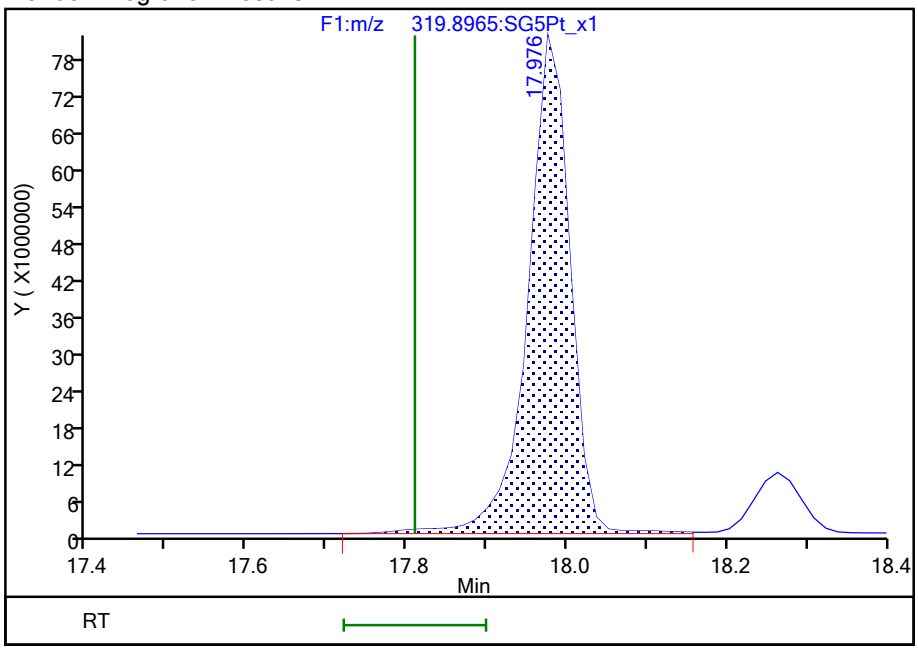

Reviewer: bennettd, 26-Aug-2021 10:01:20
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

790945

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

37Cl4-2,3,7,8-TCDD, CAS: 85508-50-5

Signal: 1

Processing Integration Results

RT: 17.98
Area: 21843560
Amount: 24.571400
Amount Units: pg/ul

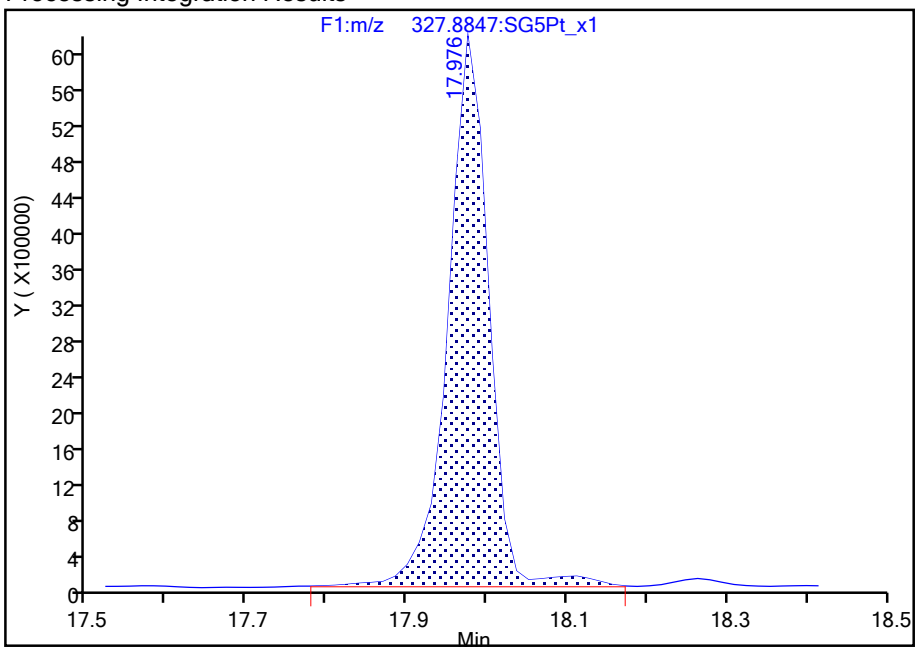

Manual Integration Results

RT: 17.98
Area: 21268884
Amount: 23.924958
Amount Units: pg/ul

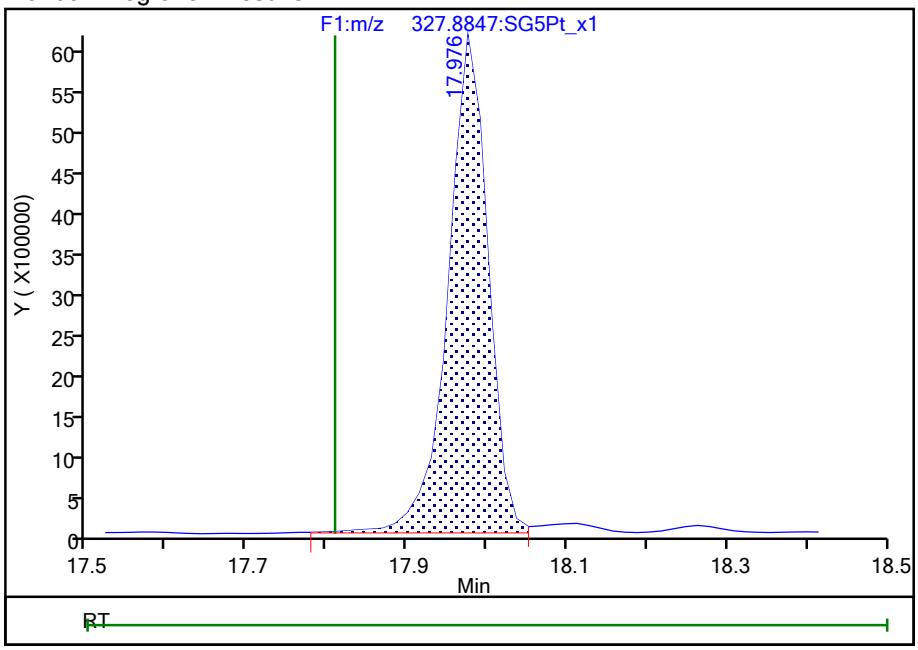

Reviewer: dadunj, 27-Aug-2021 09:39:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.07
Area: 2734342
Amount: 9.663021
Amount Units: pg/ul

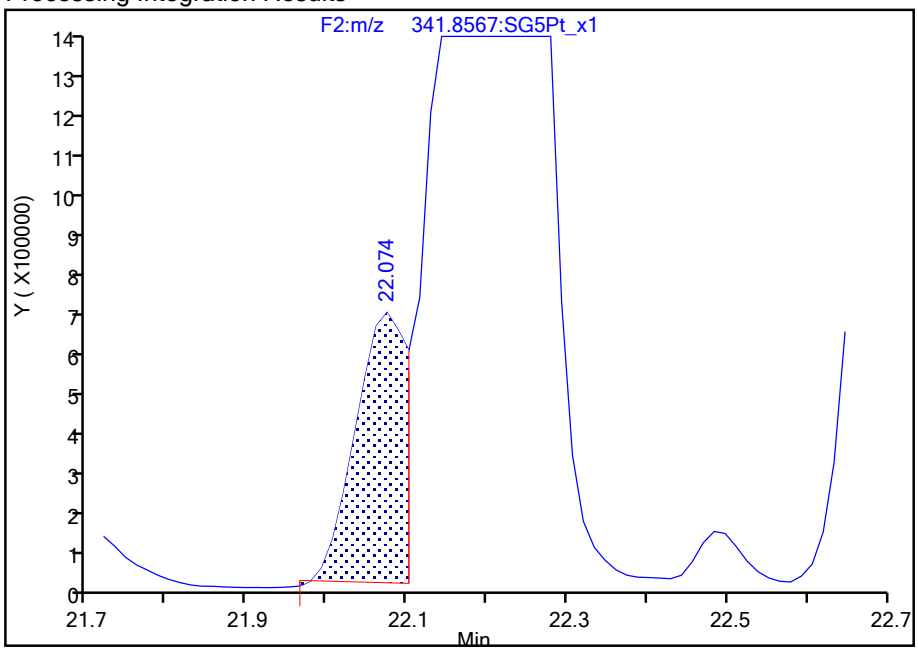

Manual Integration Results

RT: 22.21
Area: 44870002
Amount: 159.7902
Amount Units: pg/ul

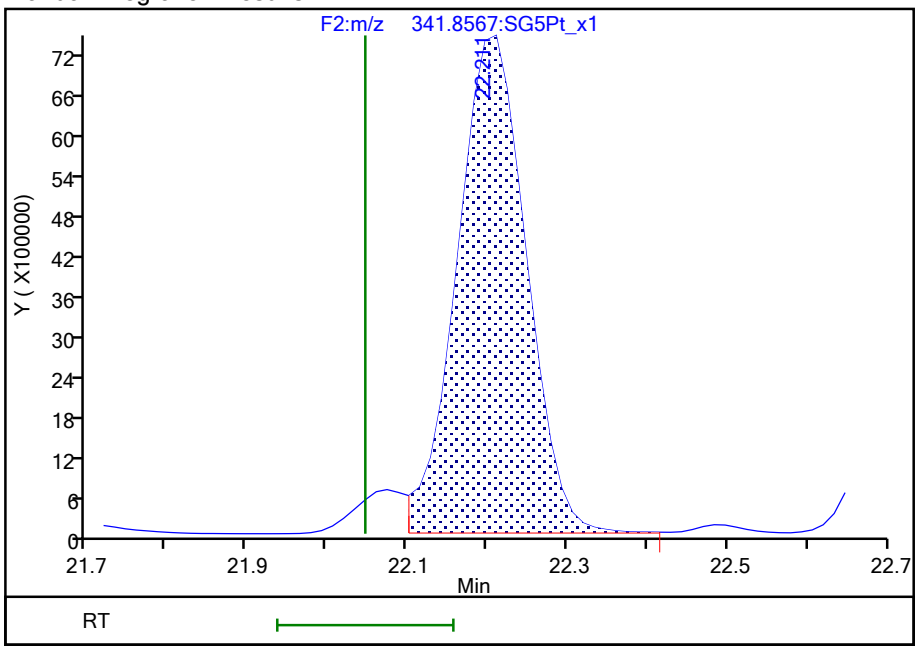

Reviewer: dadunj, 27-Aug-2021 09:40:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

RT: 22.07
Area: 7018788
Amount: 9.663021
Amount Units: pg/ul

Processing Integration Results

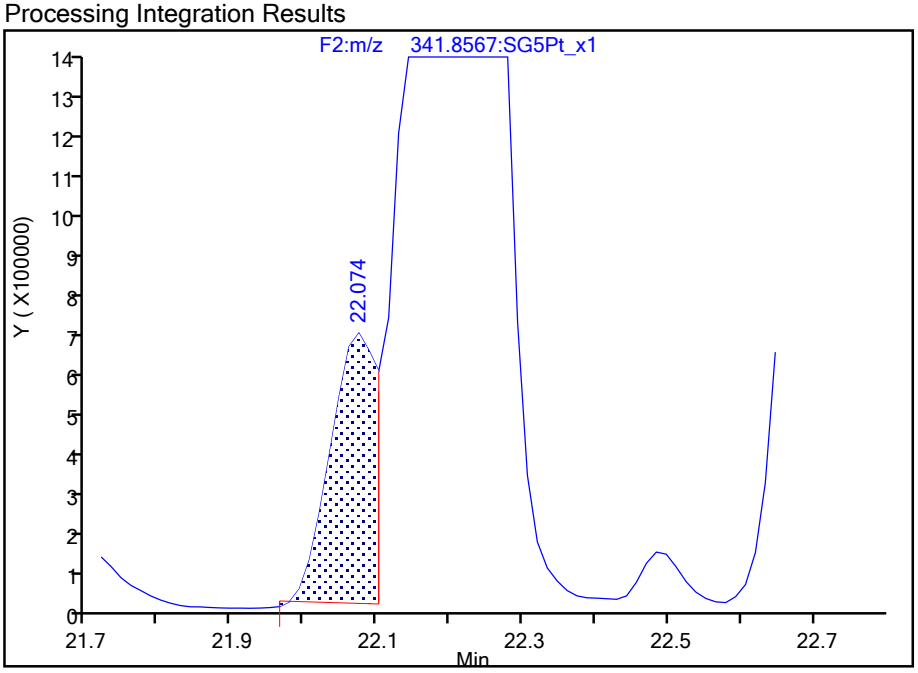

Manual Integration Results

RT: 22.21
Area: 116064524
Amount: 159.7902
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 09:40:53
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.07
Area: 4284446
Amount: 9.663021
Amount Units: pg/ul

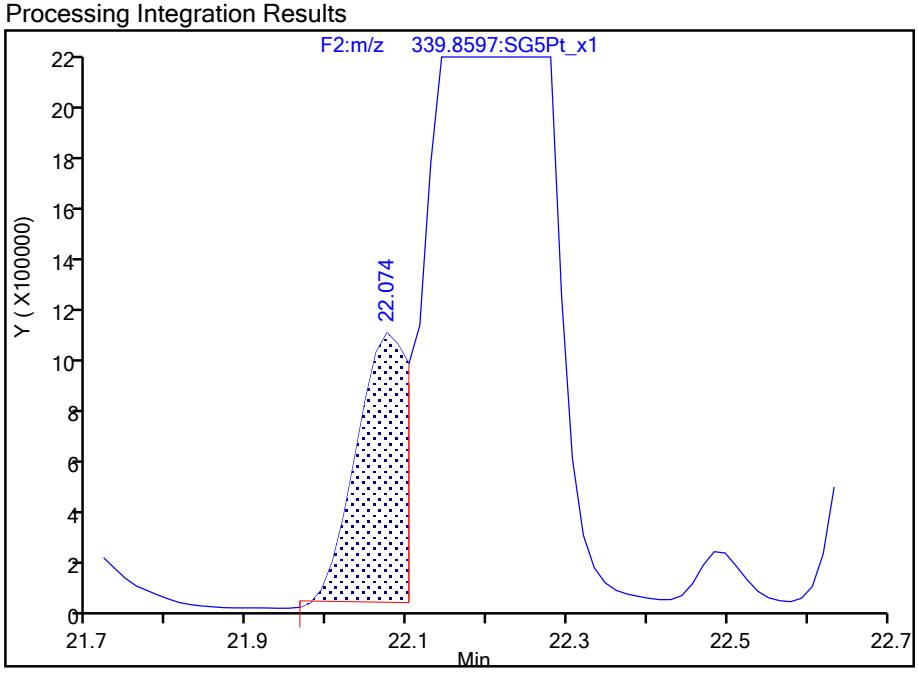

Manual Integration Results

RT: 22.21
Area: 71194522
Amount: 159.7902
Amount Units: pg/ul

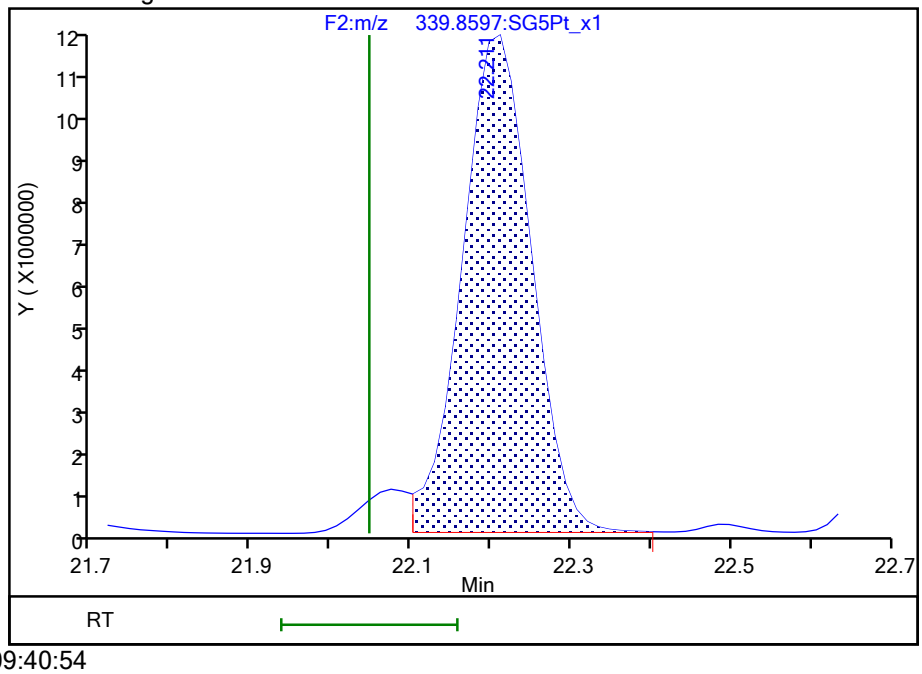

Reviewer: dadunj, 27-Aug-2021 09:40:54
Audit Action: Assigned Compound ID Audit Reason: Split Peak

790949

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 23.37

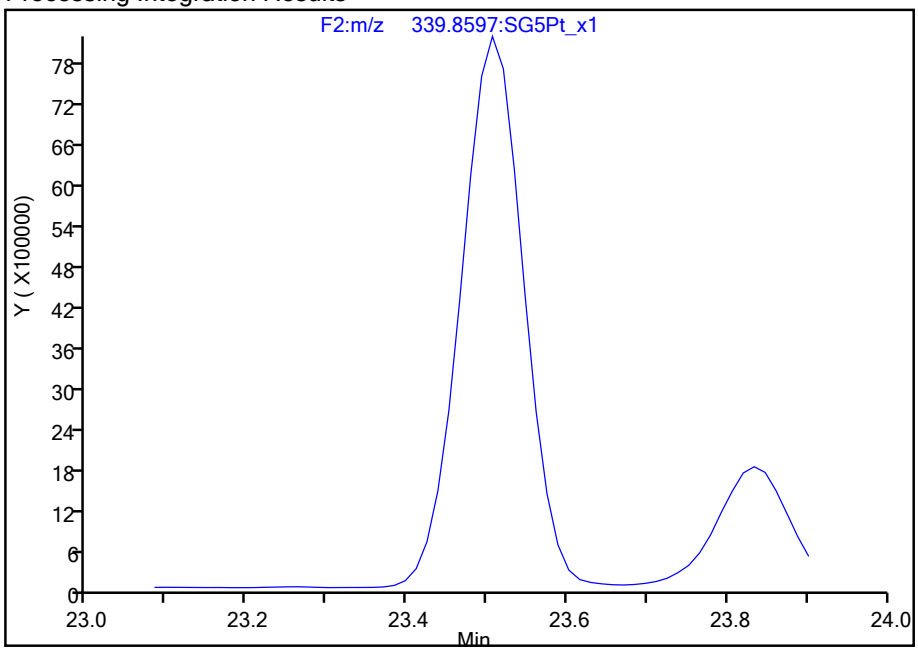

Manual Integration Results

RT: 23.51
Area: 44262647
Amount: 91.553713
Amount Units: pg/ul

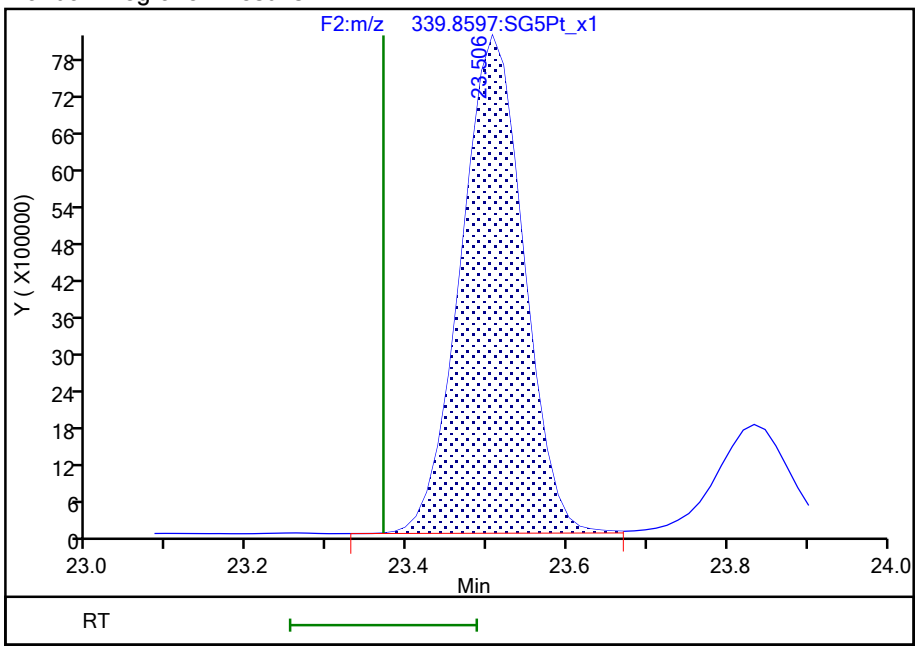

Reviewer: dadunj, 27-Aug-2021 09:40:58
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.08

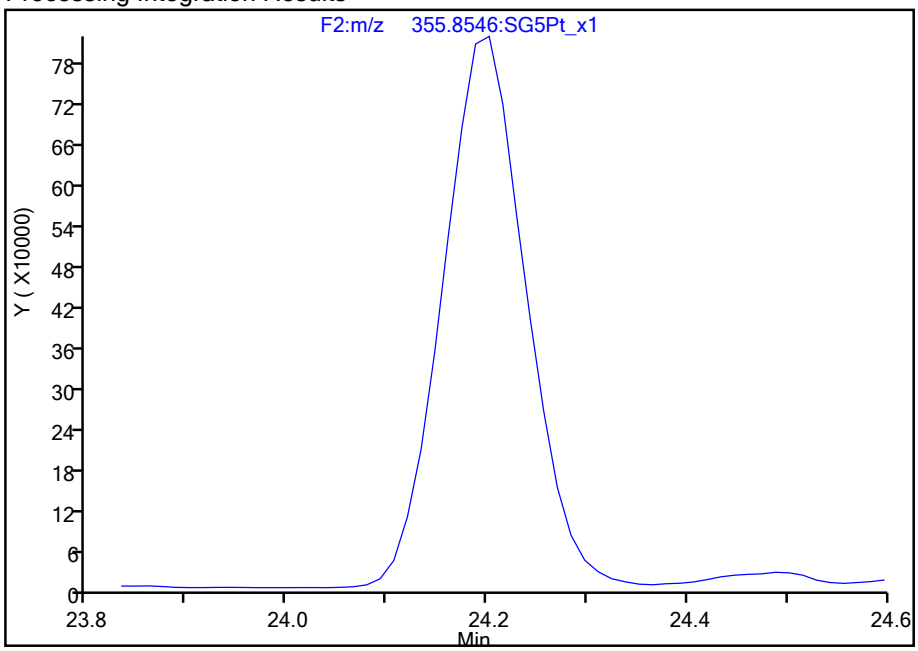

Manual Integration Results

RT: 24.20
Area: 4631788
Amount: 13.732140
Amount Units: pg/ul

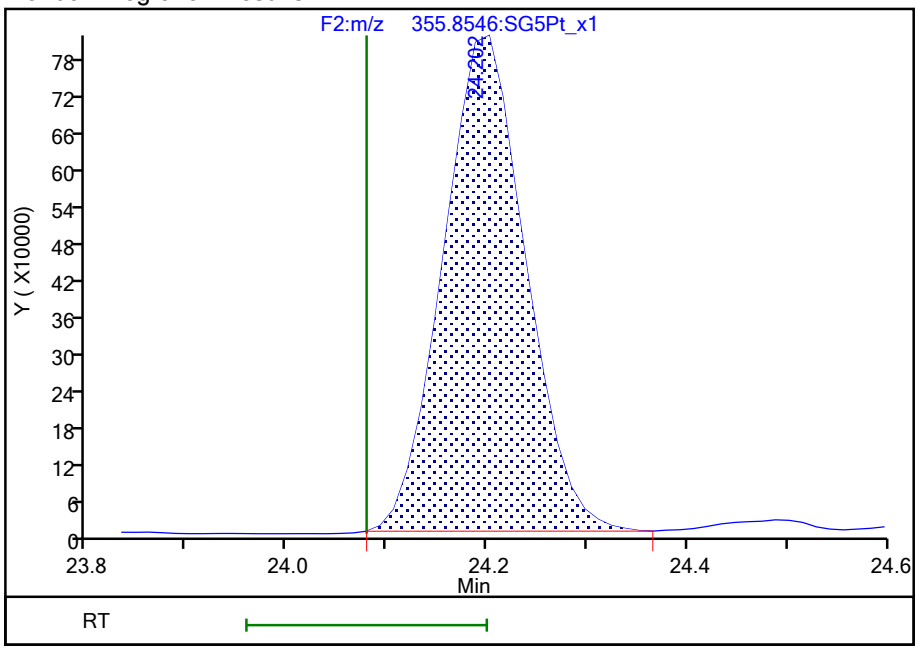

Reviewer: dadunj, 27-Aug-2021 09:41:45
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 24.666 Area = 469947

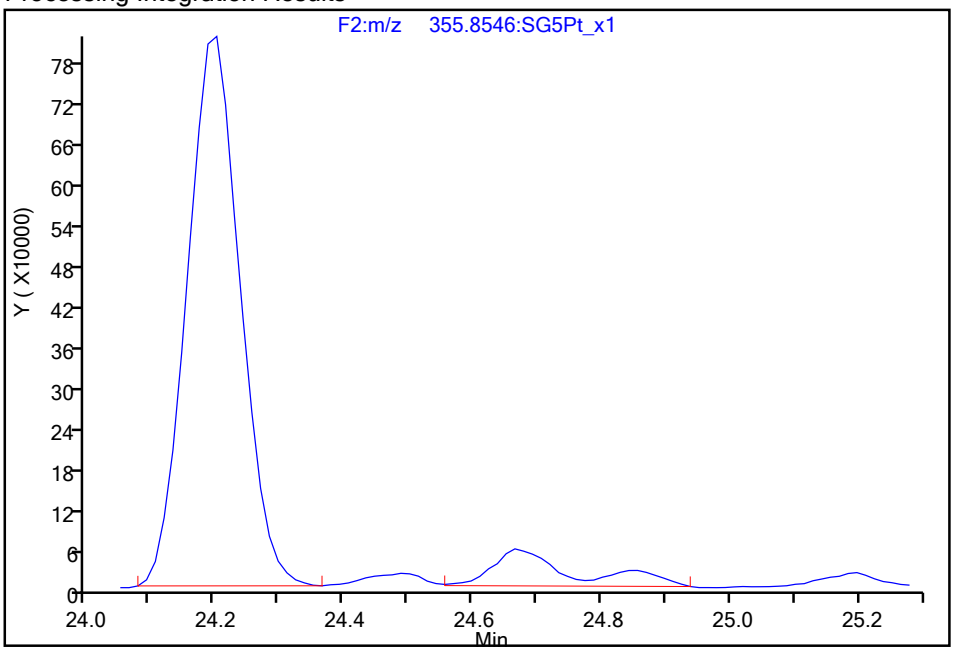

Manual Integration Results

RT = 24.666 Area = 338693 M

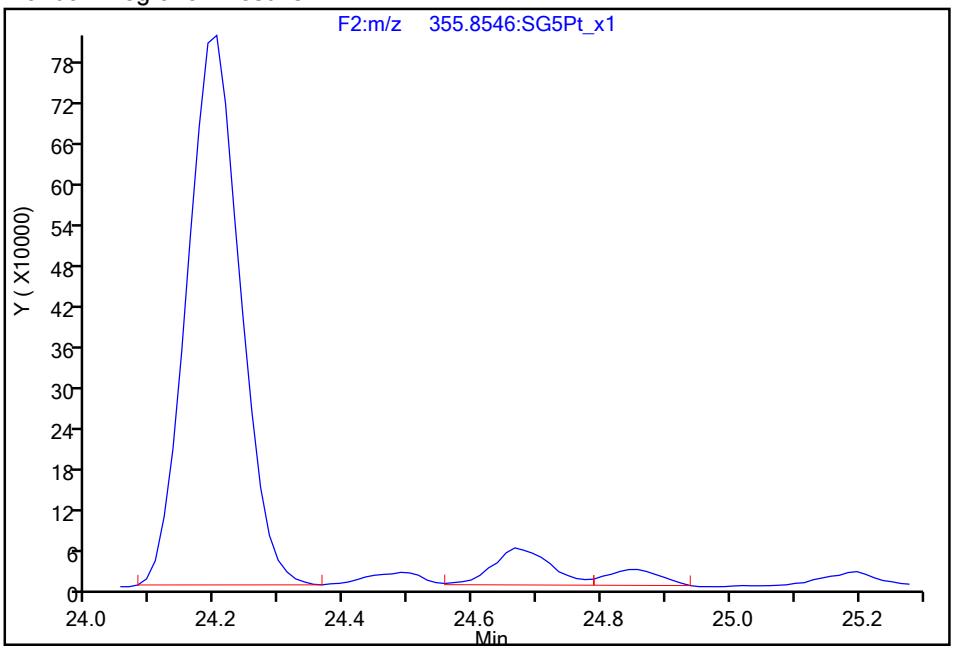

Reviewer: dadunj, 27-Aug-2021 09:41:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.50- 25.89)

Signal: 2

Processing Integration Results

RT = 24.693 Area = 162094

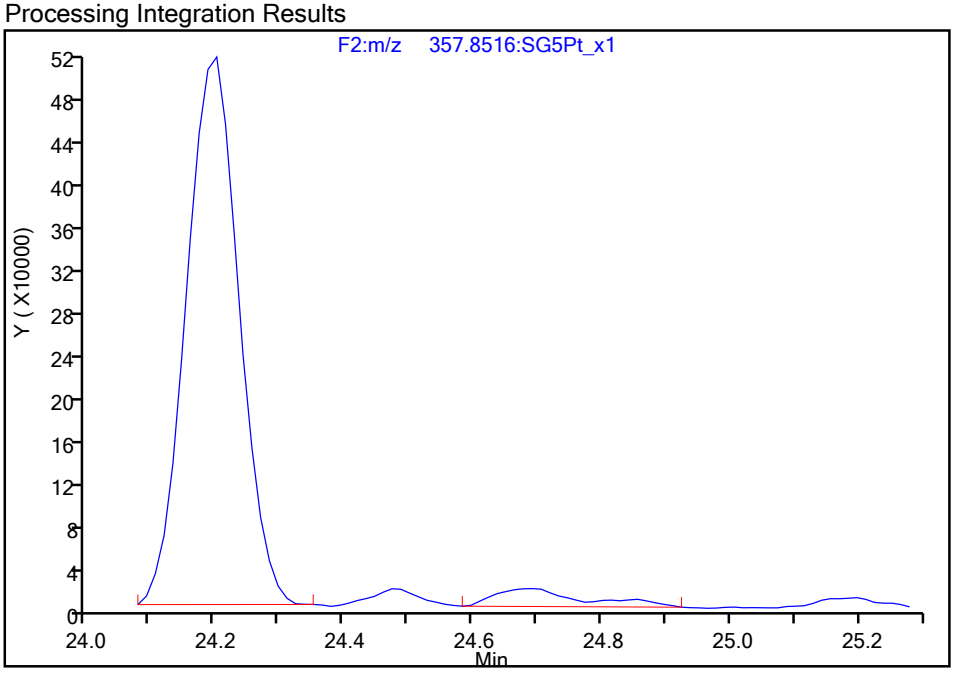

Manual Integration Results

RT = 24.693 Area = 122738 M

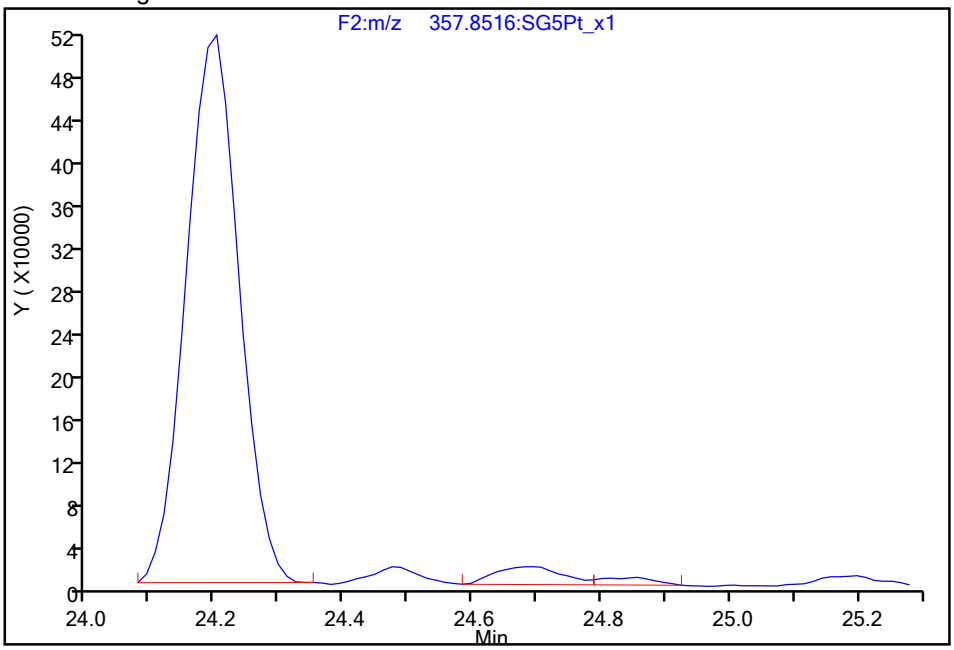

Reviewer: dadunj, 27-Aug-2021 09:41:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.66
Area: 335024
Amount: 1.807705
Amount Units: pg/ul

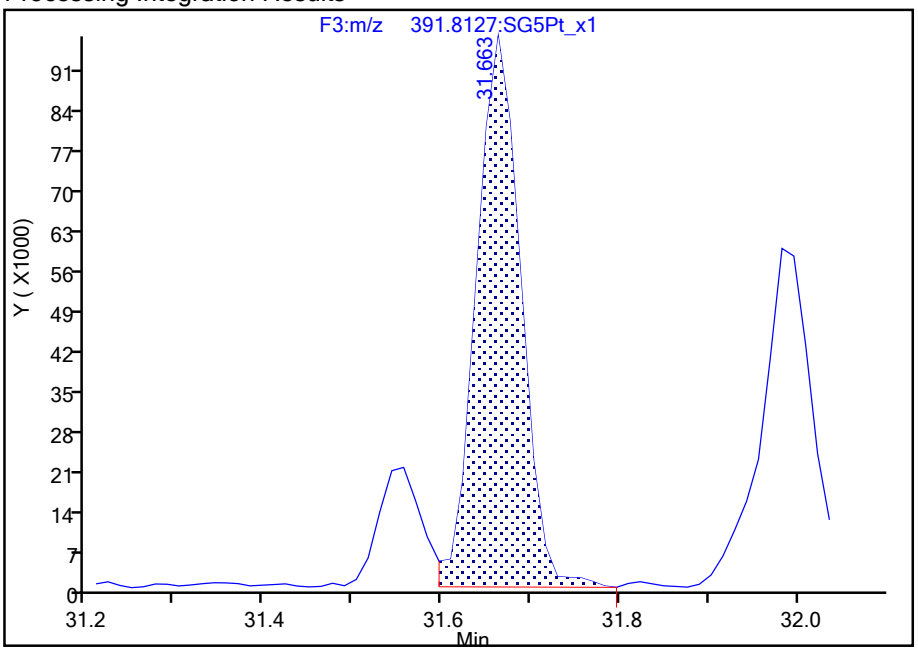

Manual Integration Results

RT: 31.56
Area: 69873
Amount: 0.363463
Amount Units: pg/ul

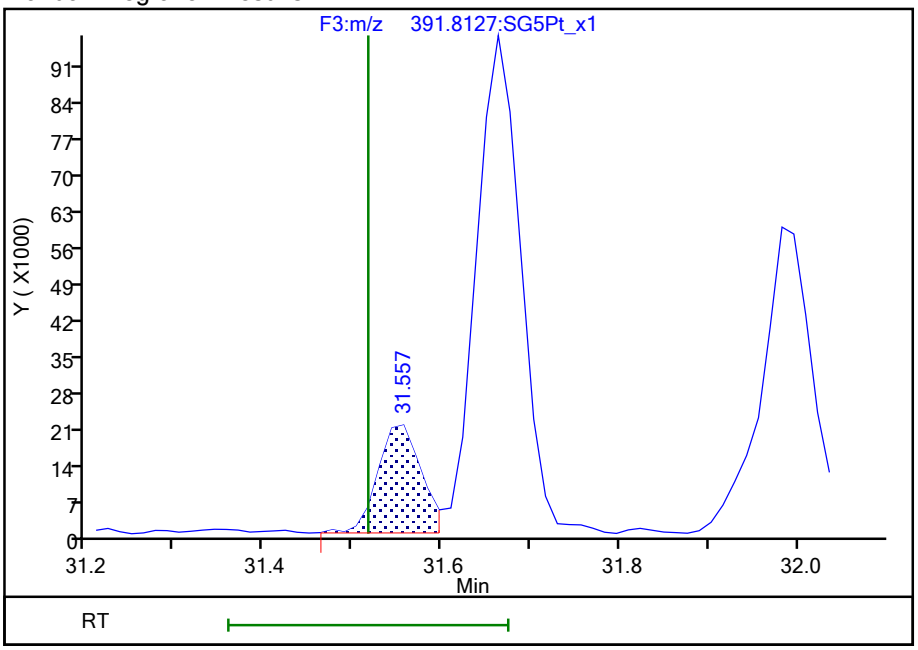

Reviewer: dadunj, 27-Aug-2021 09:42:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

RT: 31.66
Area: 865946
Amount: 1.807705
Amount Units: pg/ul

Processing Integration Results

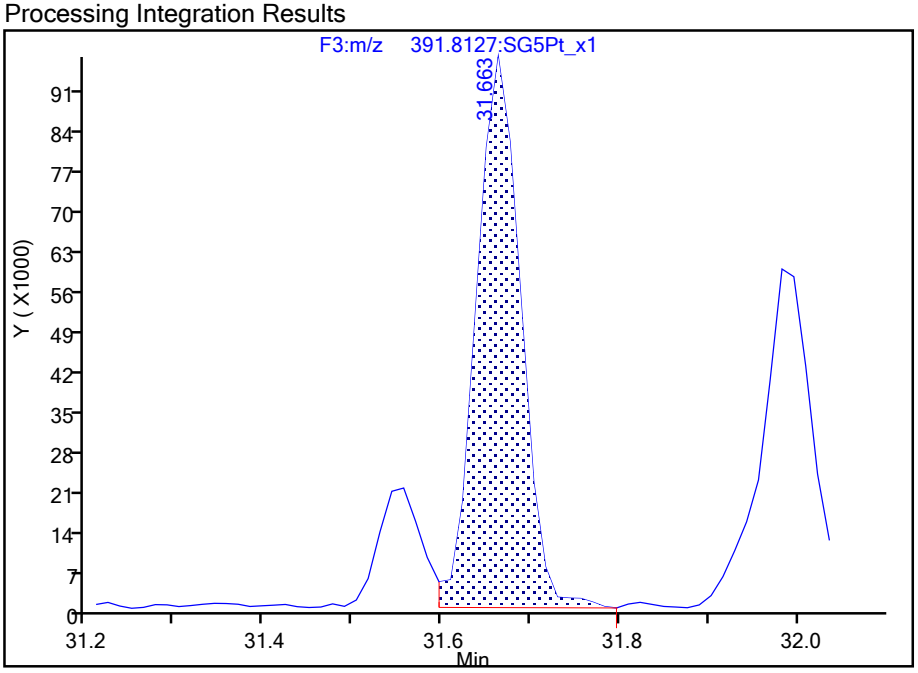

Manual Integration Results

RT: 31.56
Area: 174110
Amount: 0.363463
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 09:42:24
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

790955

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.66
Area: 530922
Amount: 1.807705
Amount Units: pg/ul

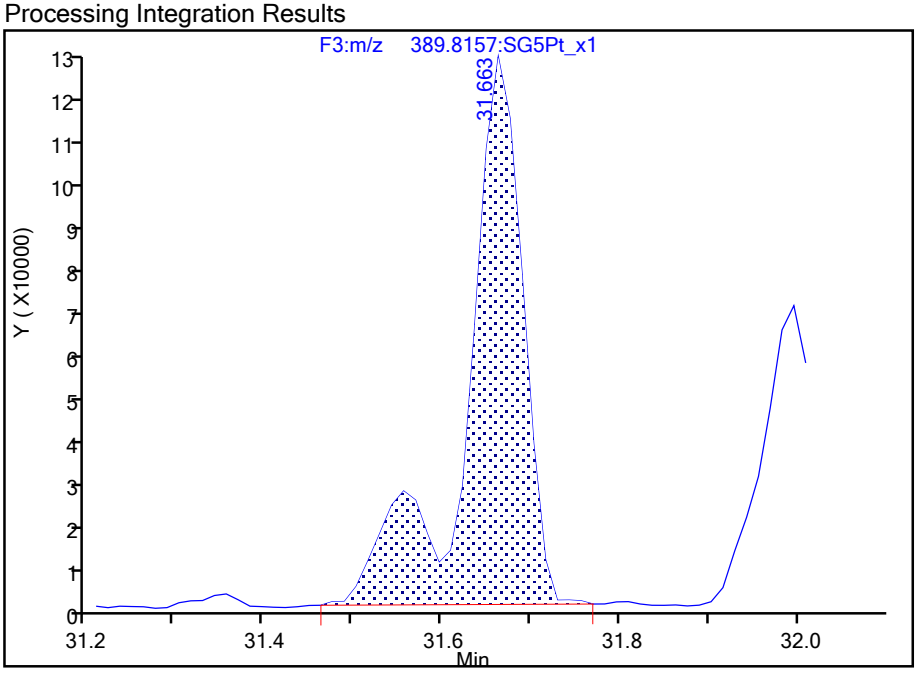

Manual Integration Results

RT: 31.56
Area: 104237
Amount: 0.363463
Amount Units: pg/ul

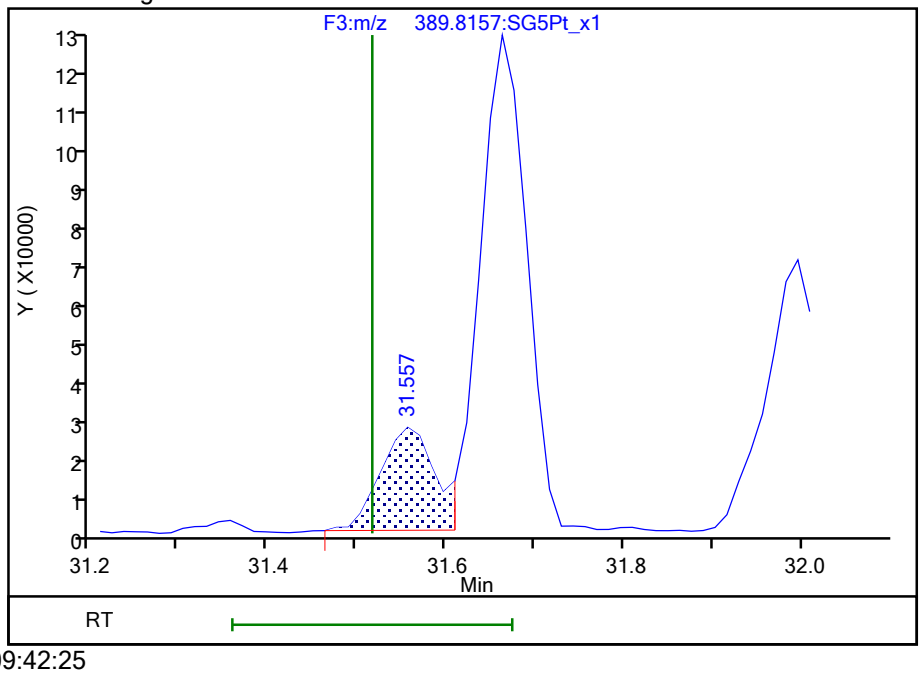

Reviewer: dadunj, 27-Aug-2021 09:42:25

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

790956

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d				
Injection Date:	25-Aug-2021 13:35:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	7	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.66
Area: 530922
Amount: 1.788905
Amount Units: pg/ul

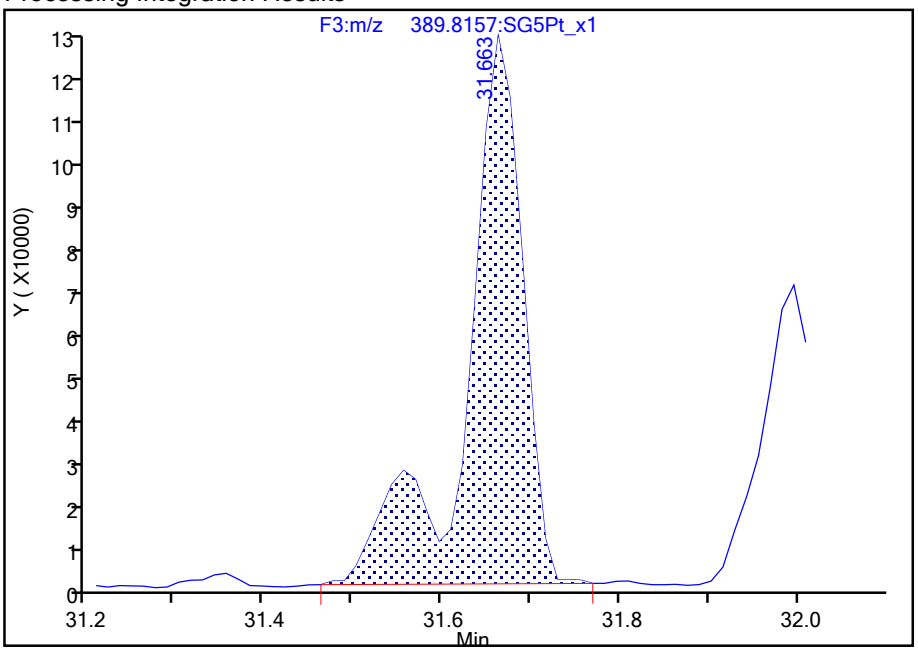

Manual Integration Results

RT: 31.66
Area: 426681
Amount: 1.573560
Amount Units: pg/ul

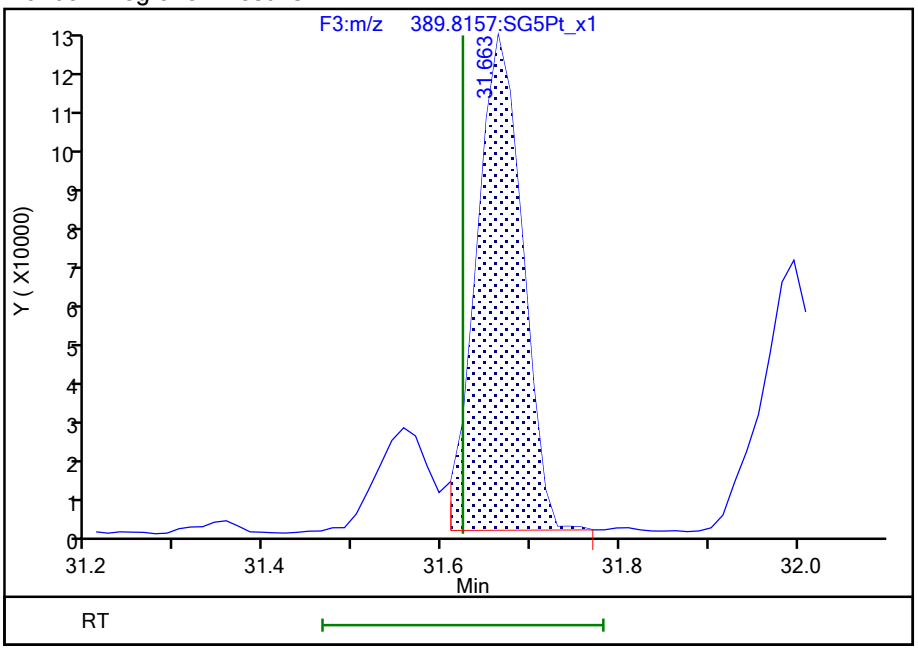

Reviewer: dadunj, 27-Aug-2021 09:42:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

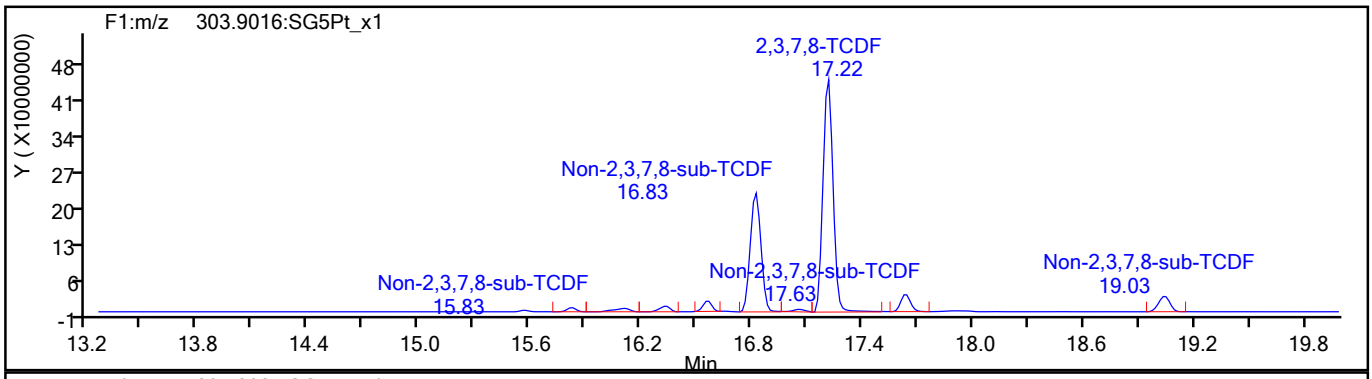

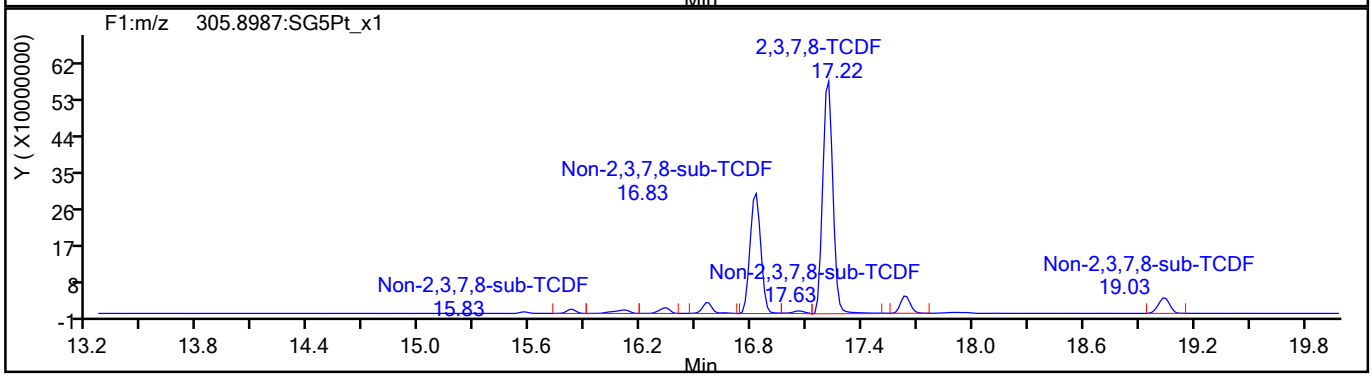

TCDF Standards

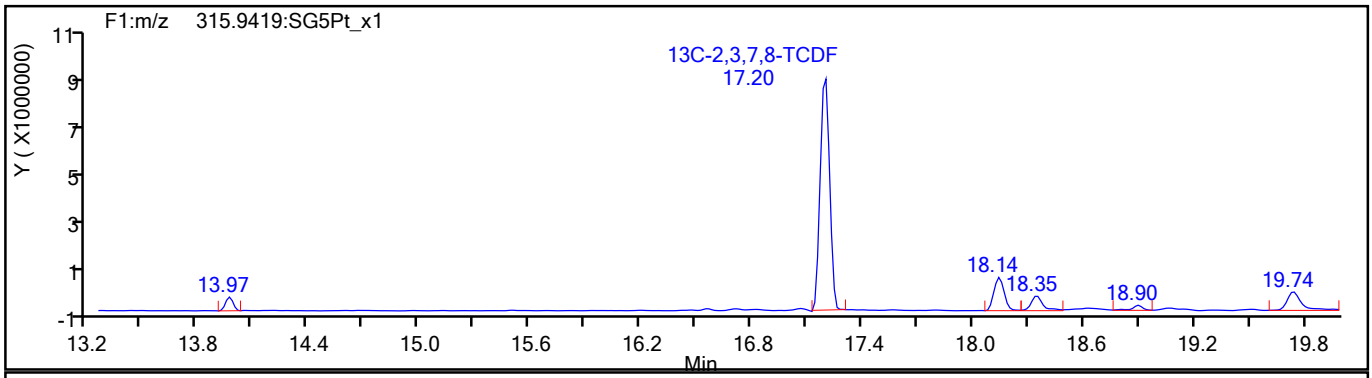

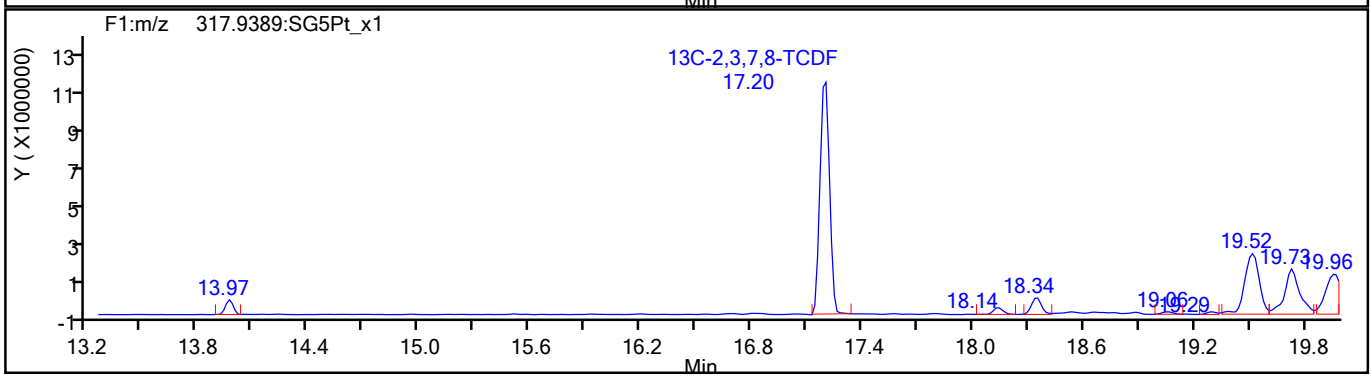

790958

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

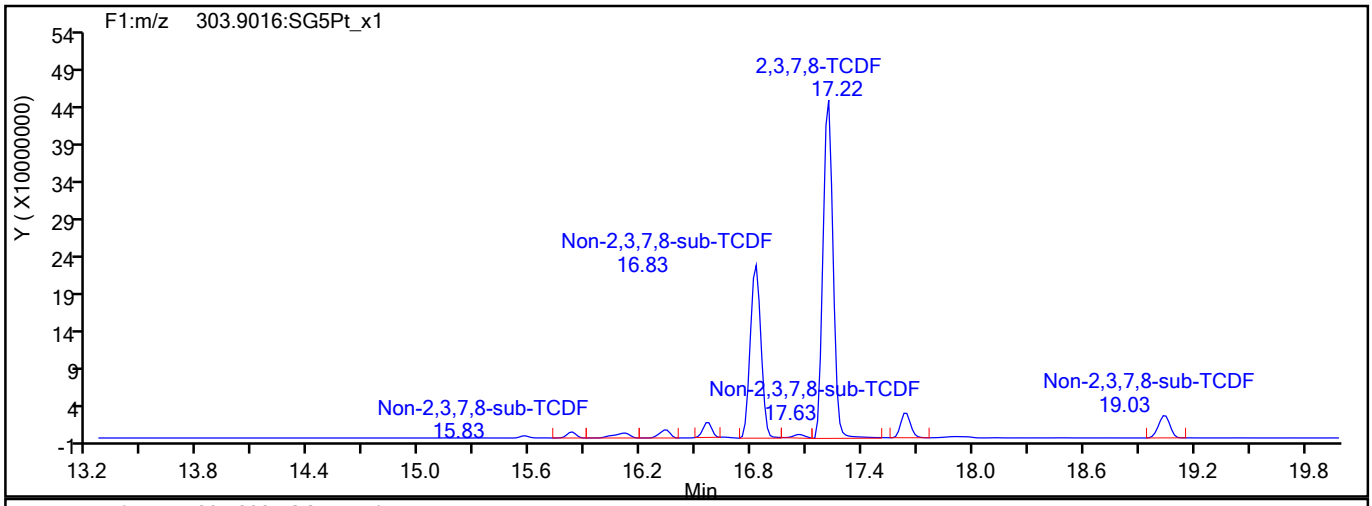

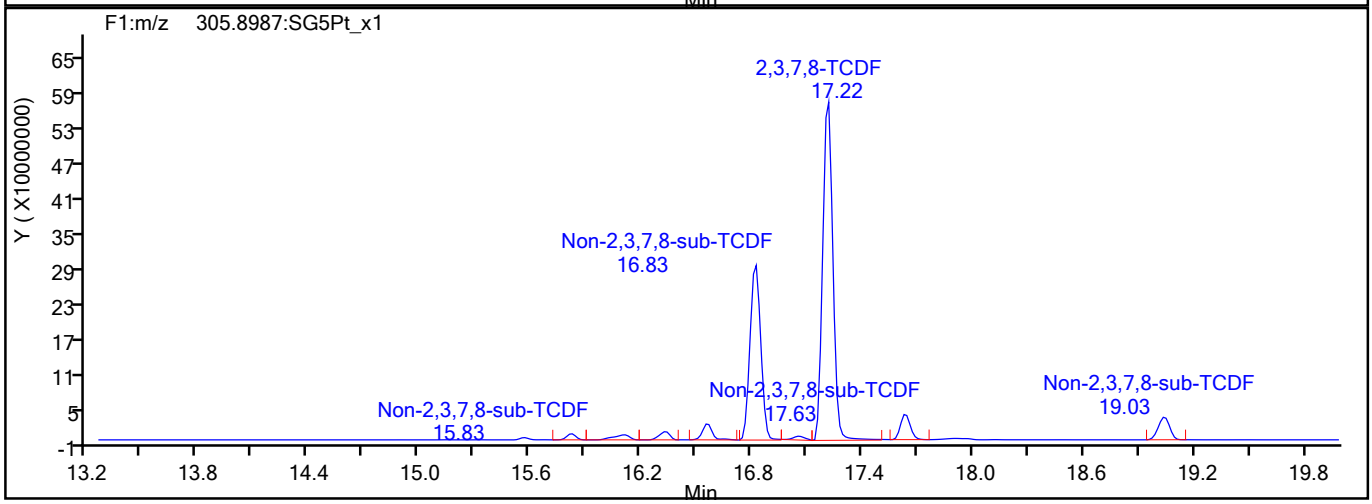

TCDF Interference Mass

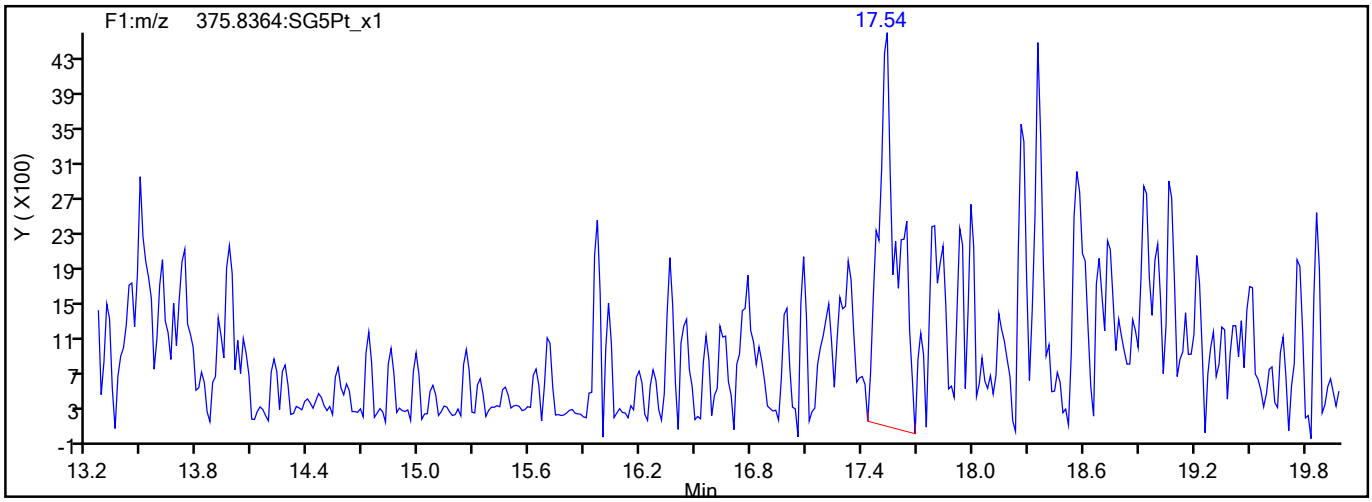

790959

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

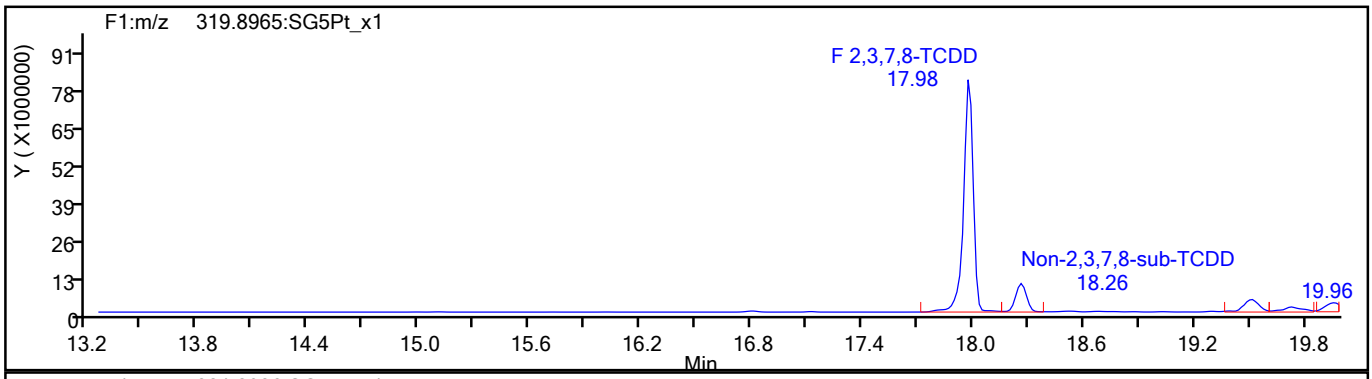

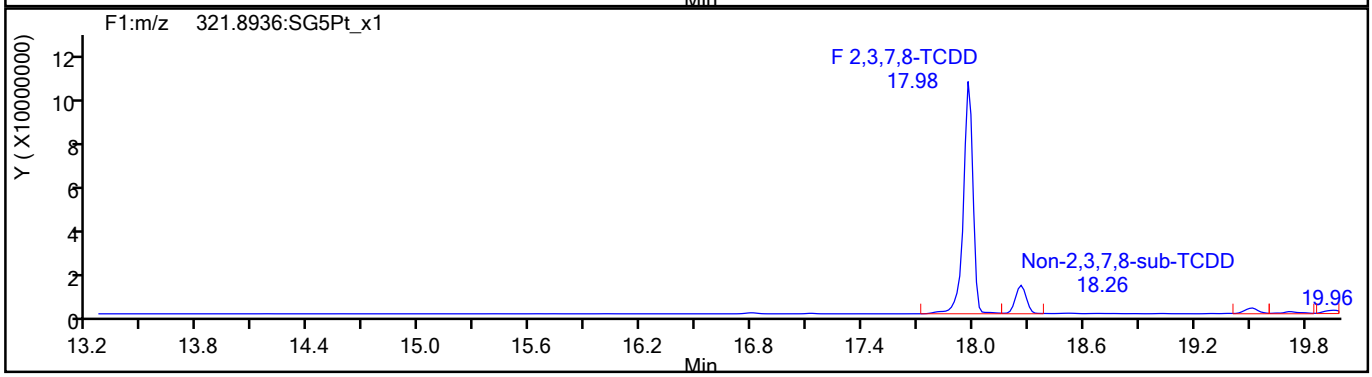

TCDD Standards

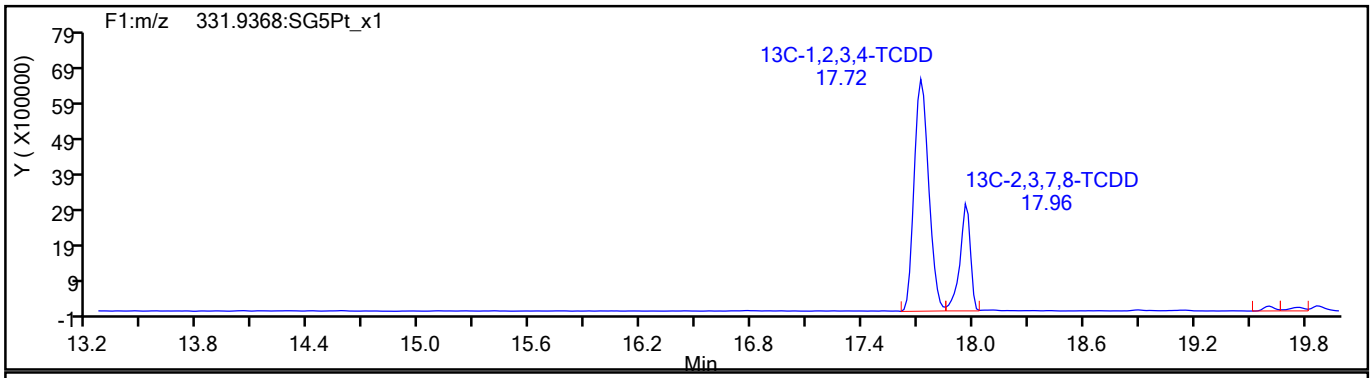

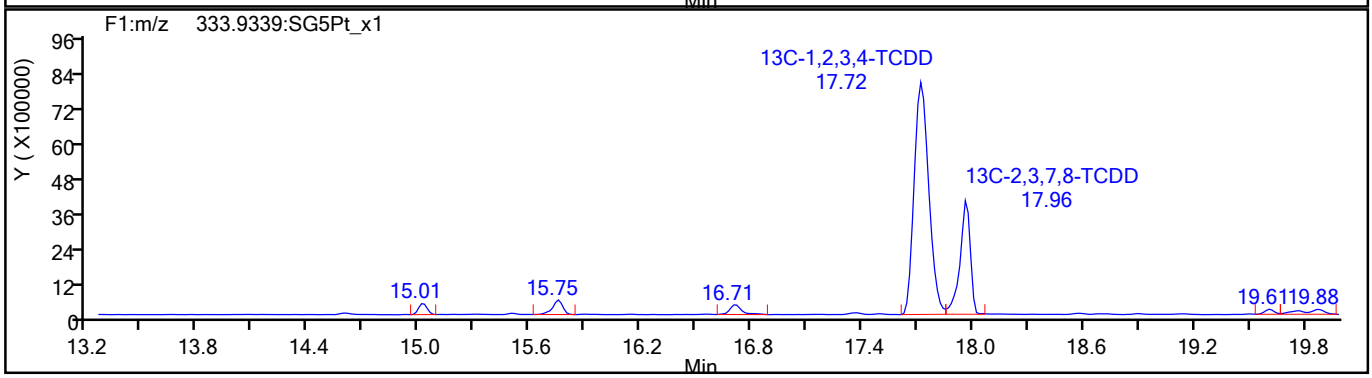

790960

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

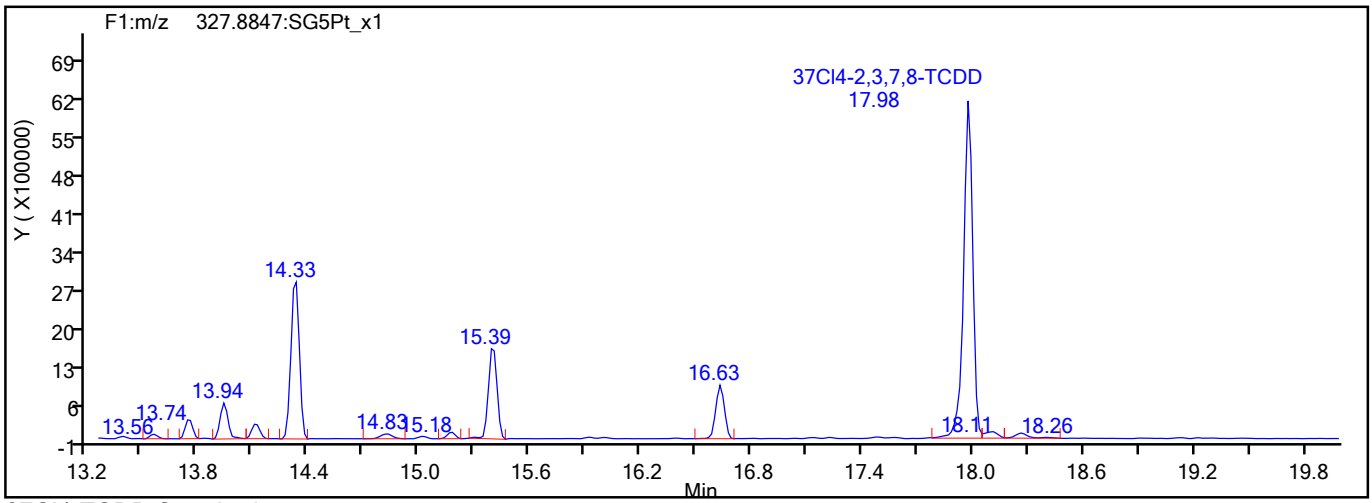

37Cl4-TCDD Standards

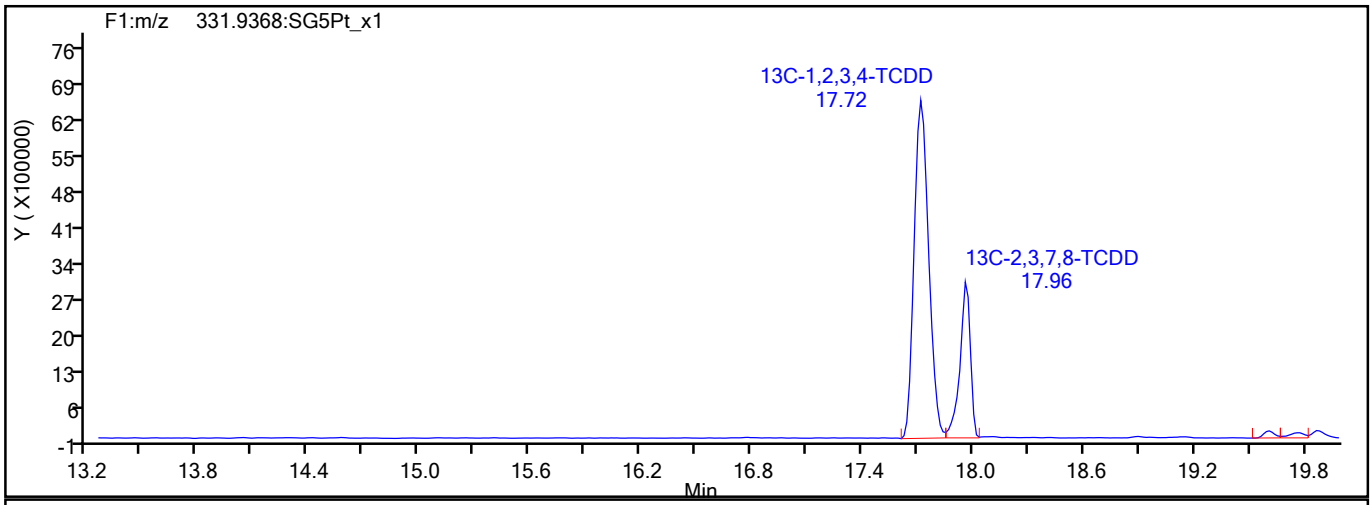

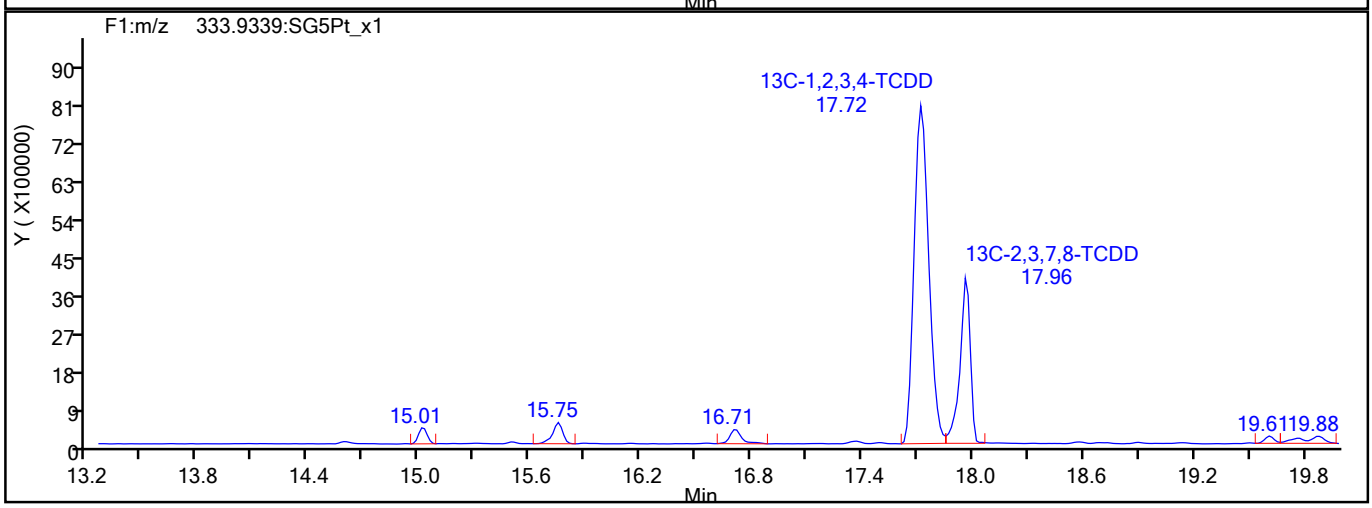

790961

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

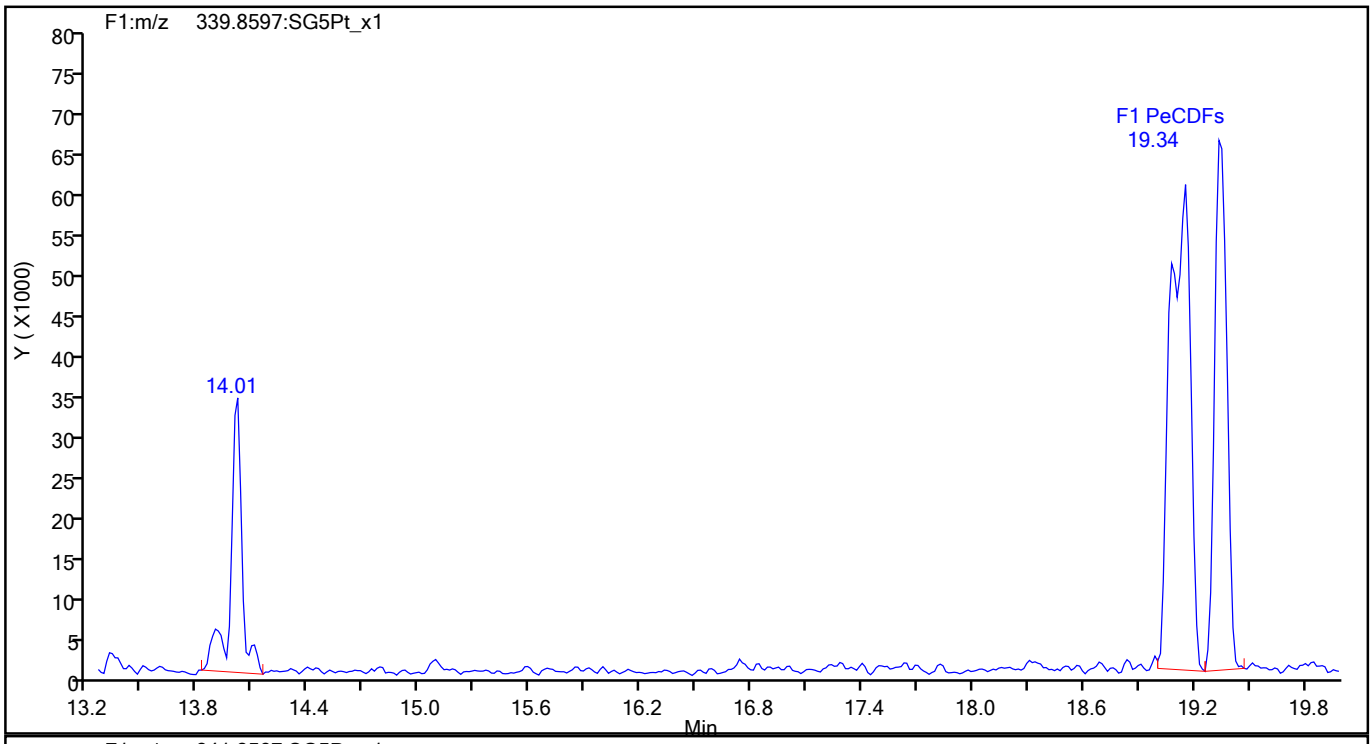

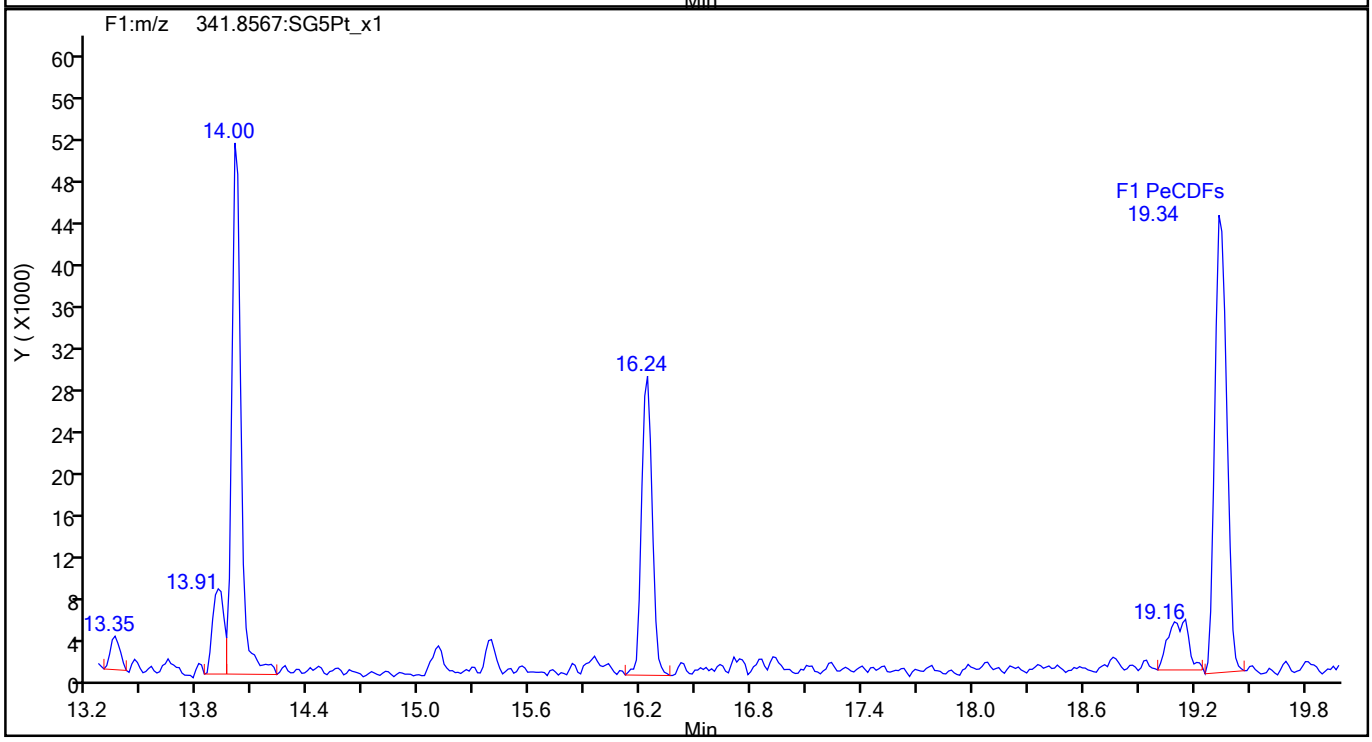

790962

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

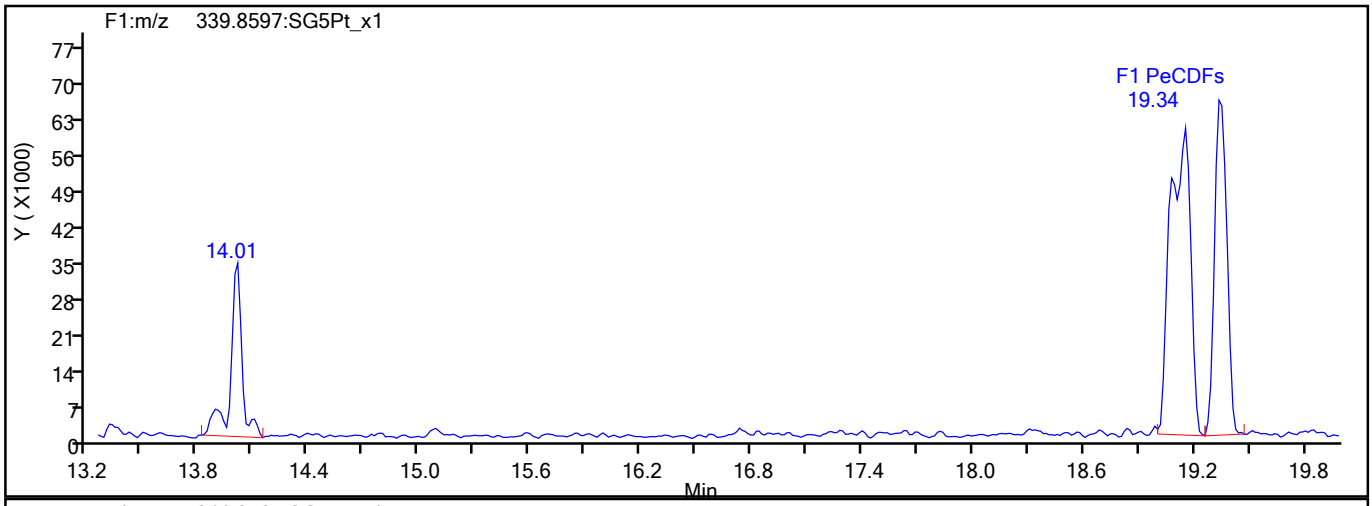

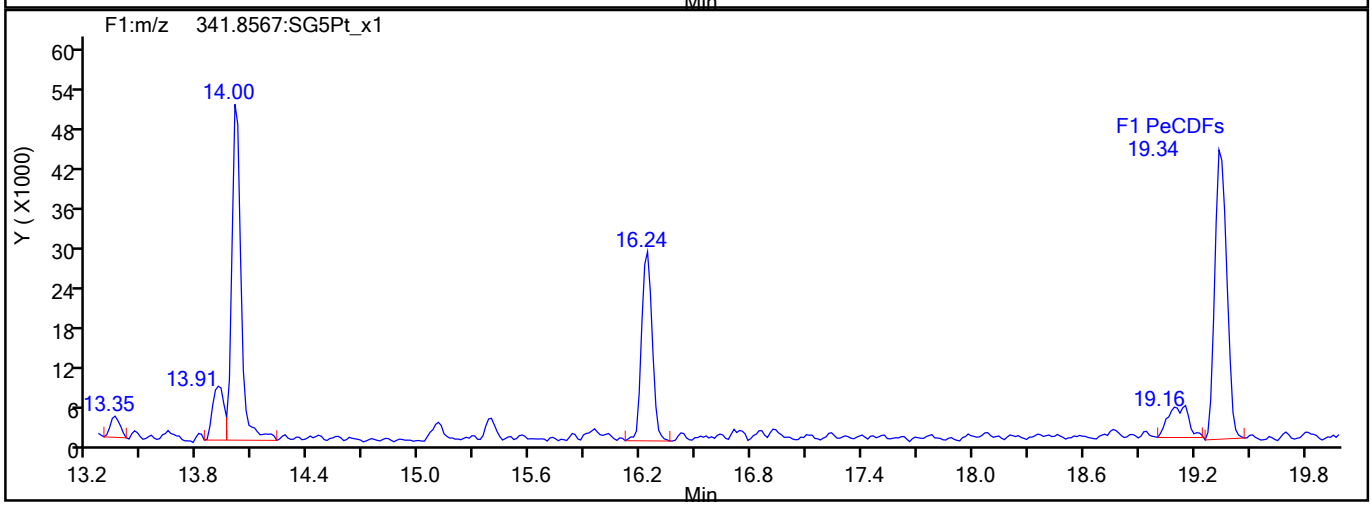

F1 PeCDFs Interference Mass

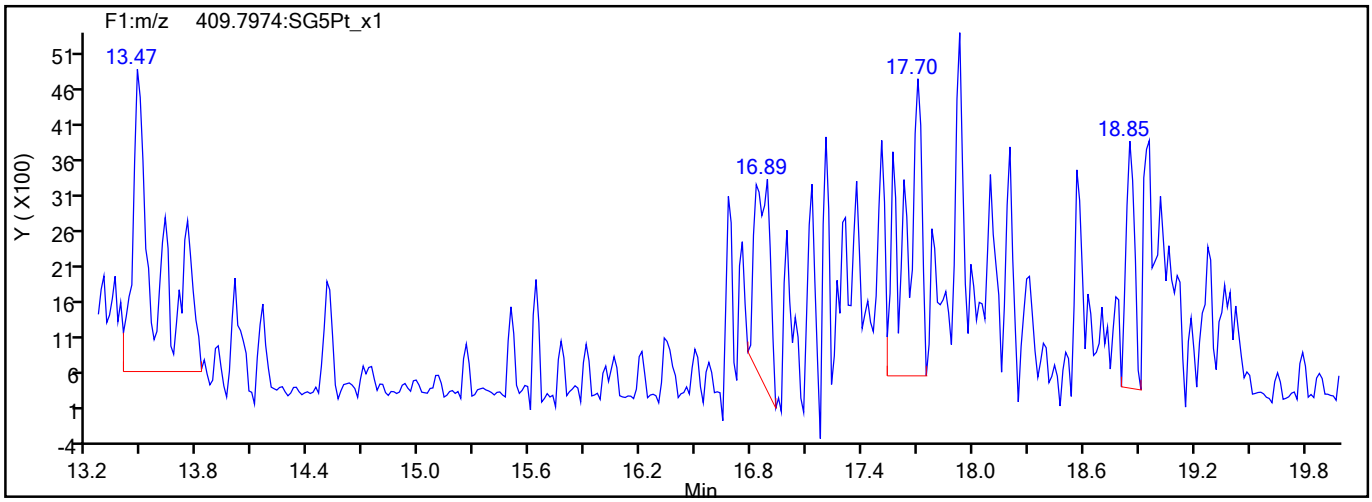

790963

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

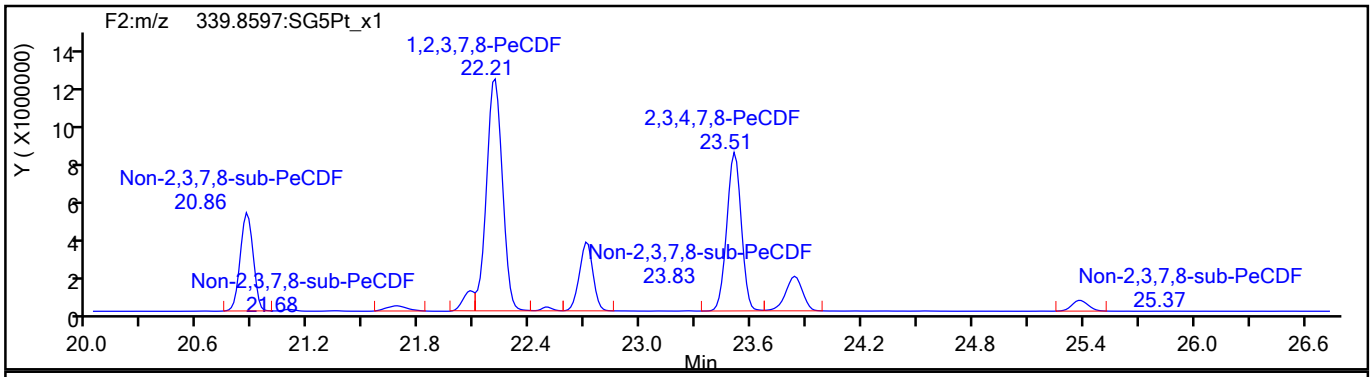

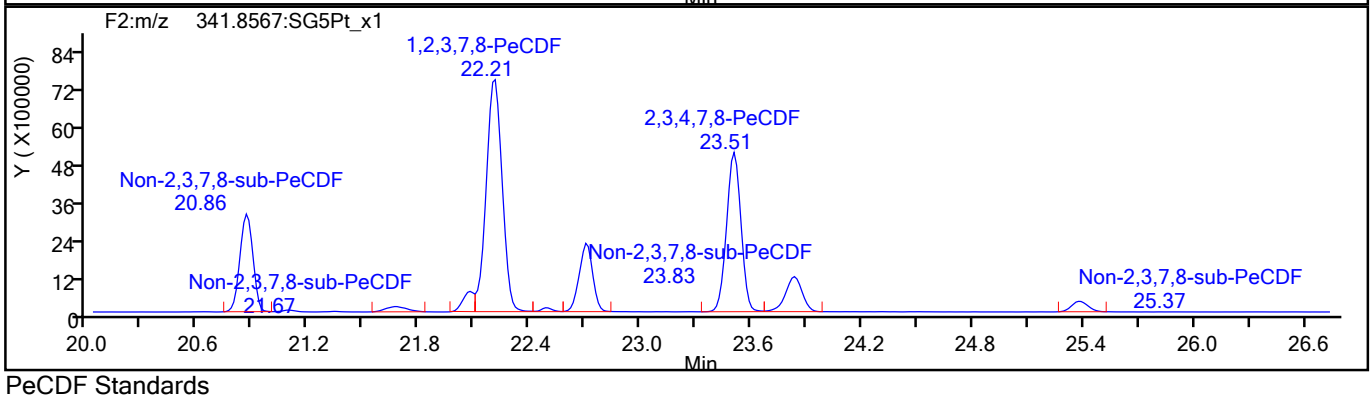

PeCDF Standards

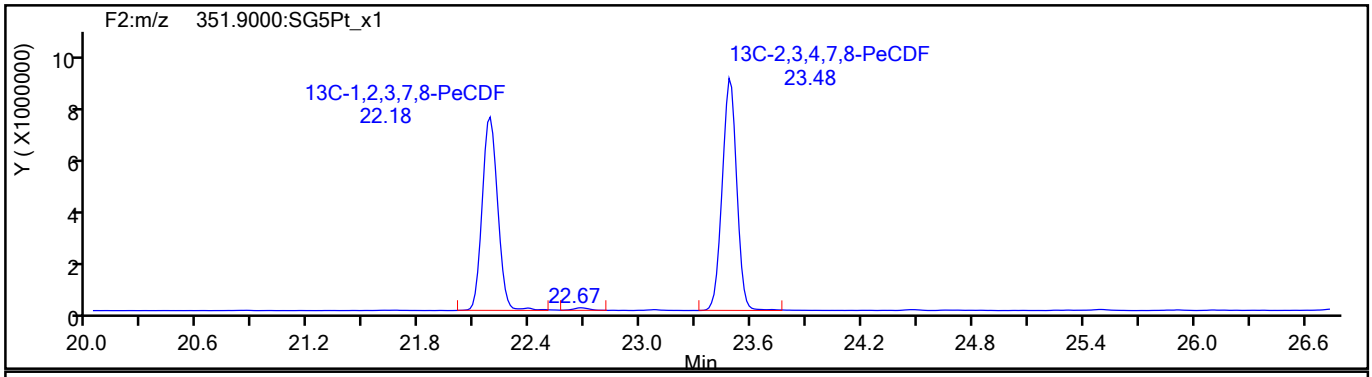

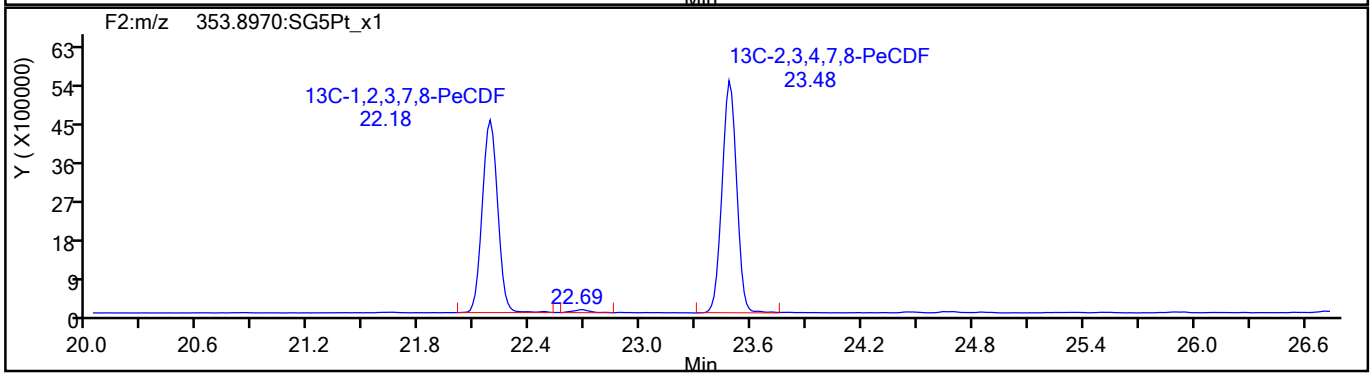

790964

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

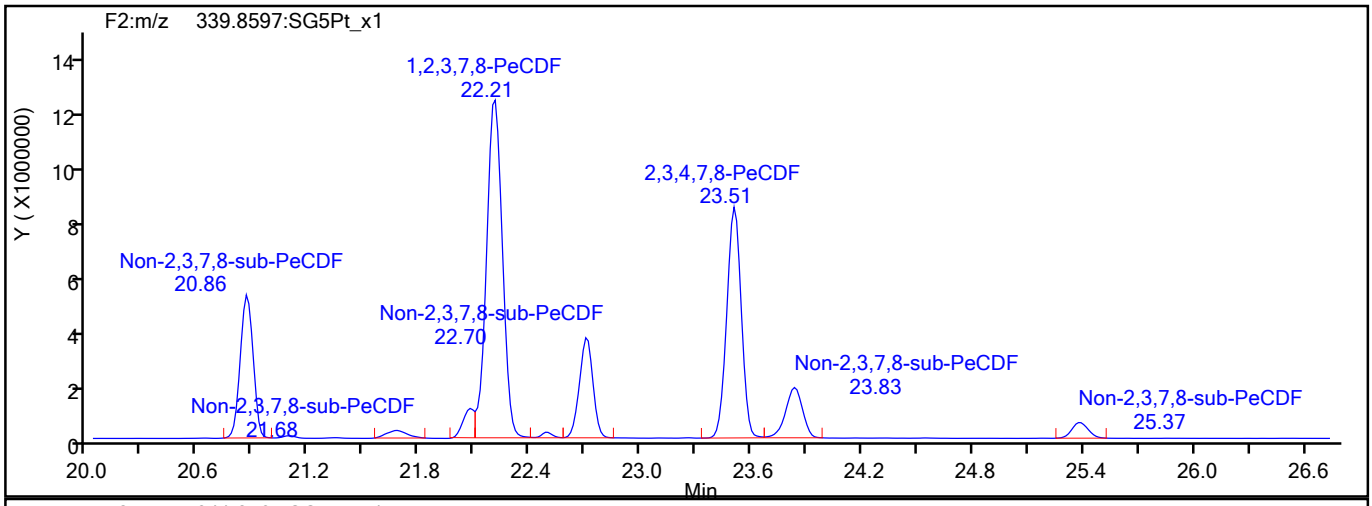

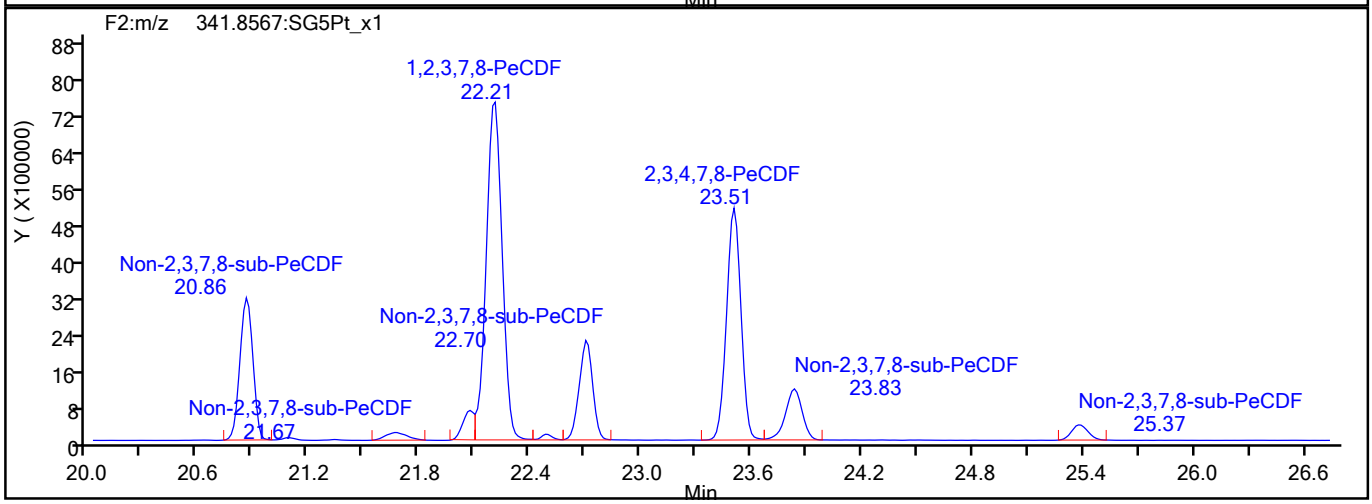

PeCDF Interference Mass

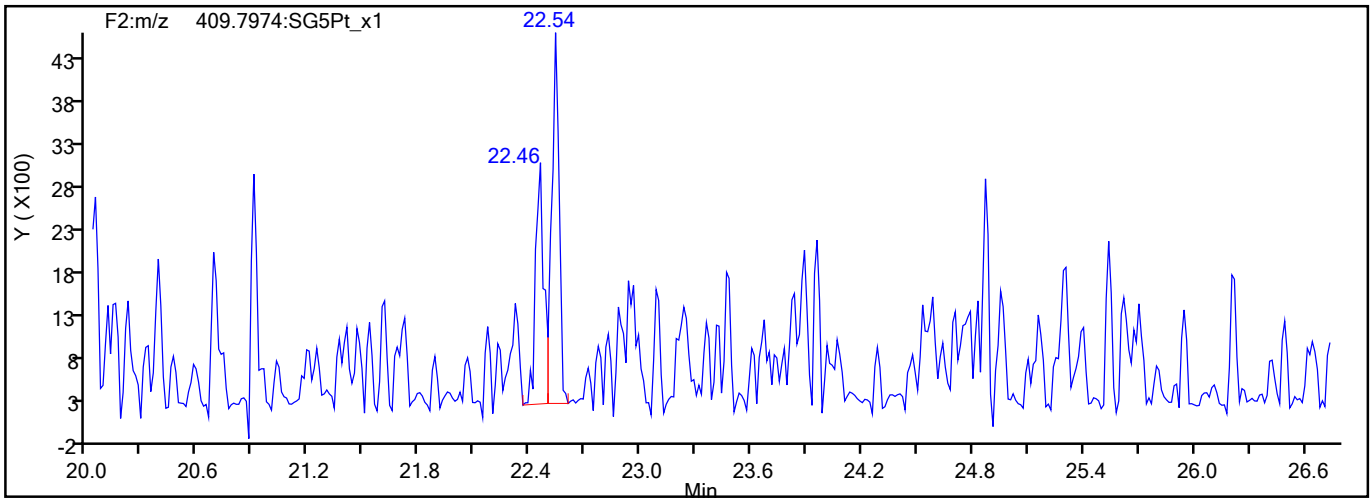

790965

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

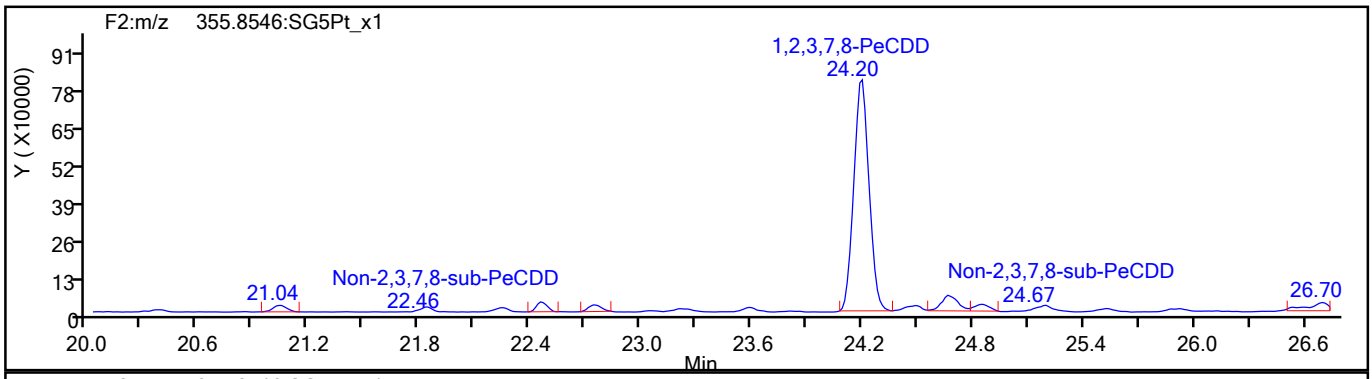

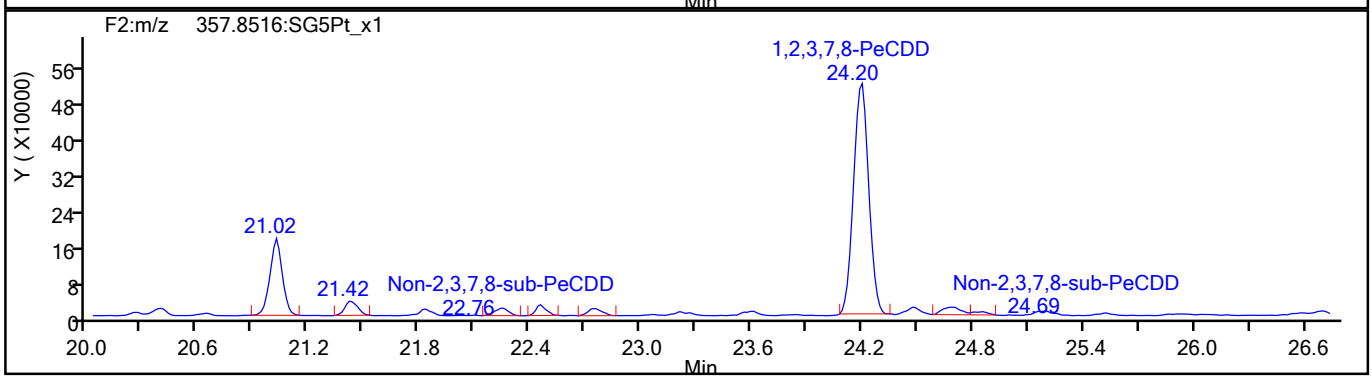

PeCDD Standards

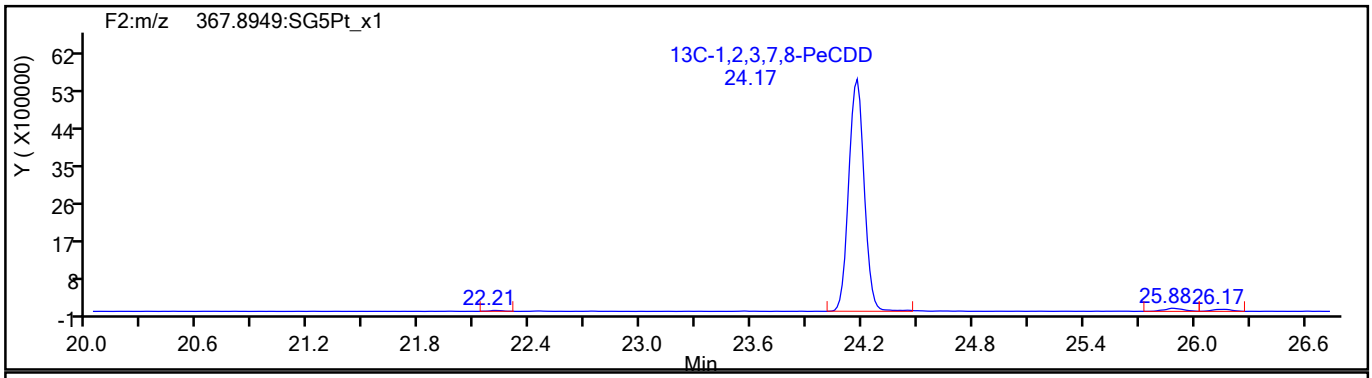

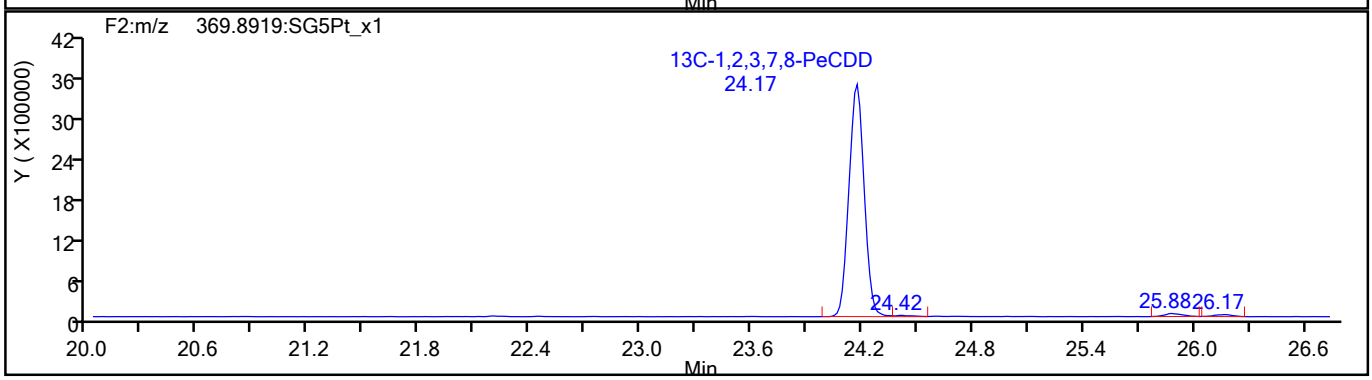

790966

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

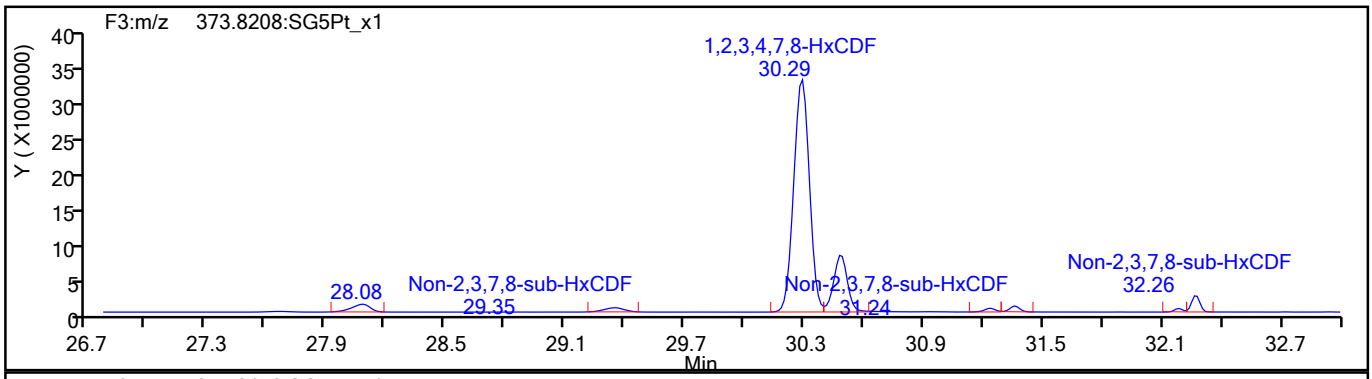

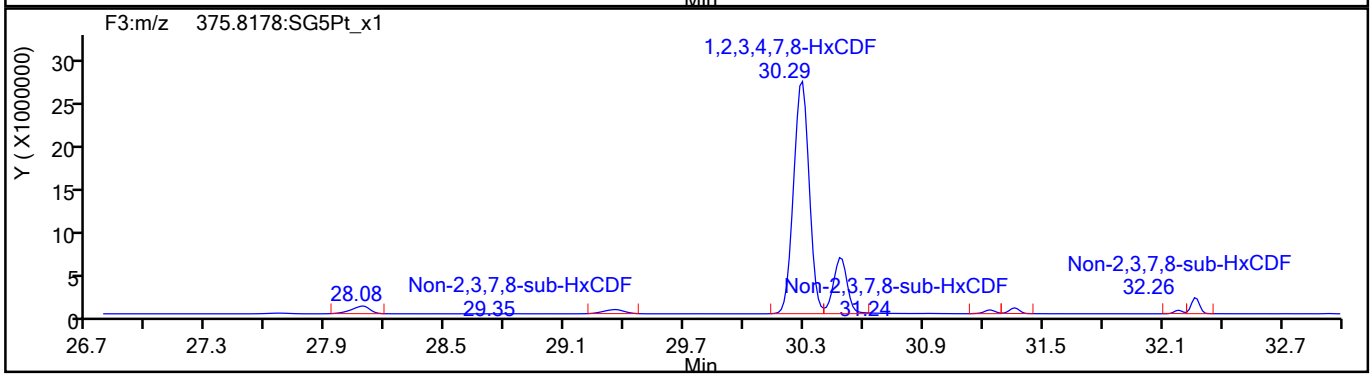

HxCDF Standards

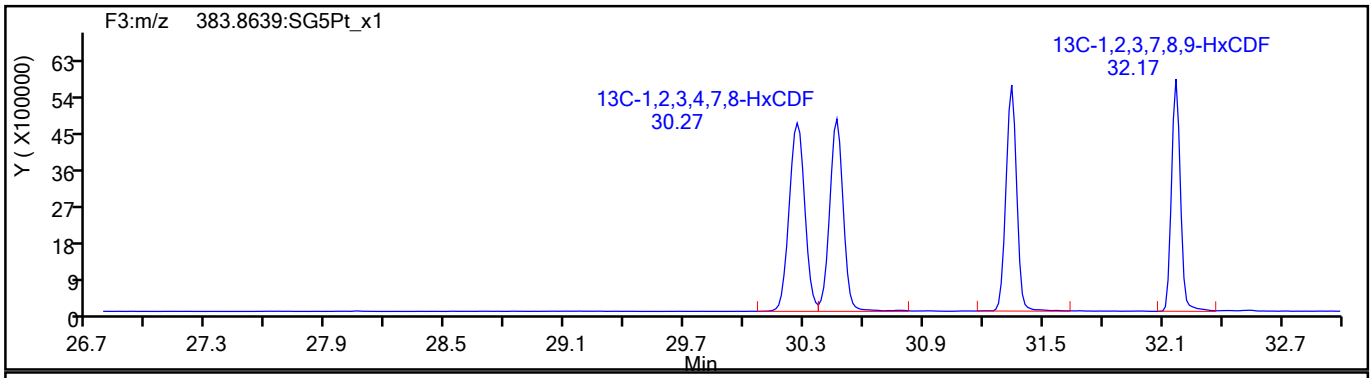

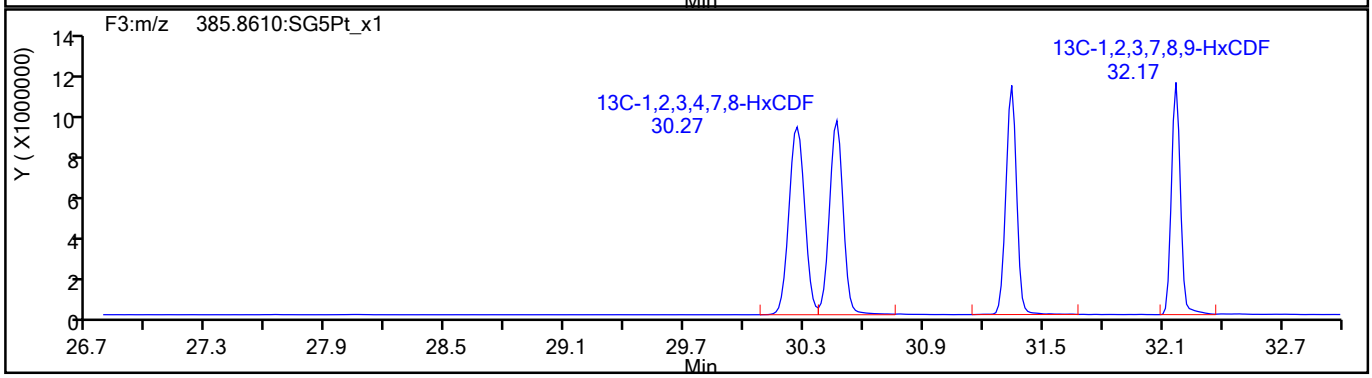

790967

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

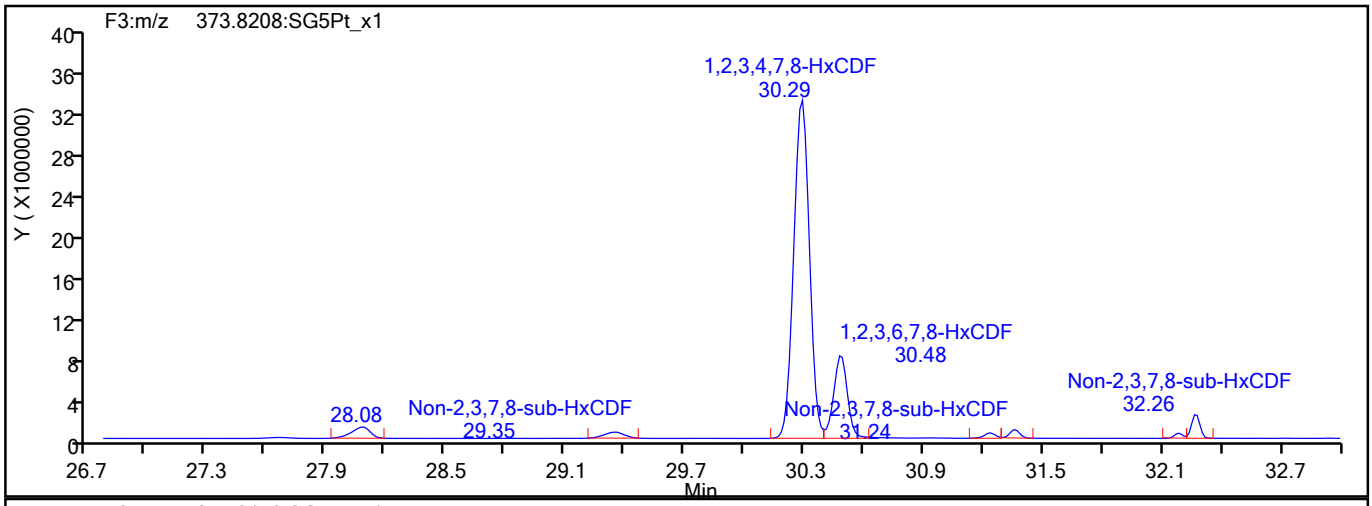

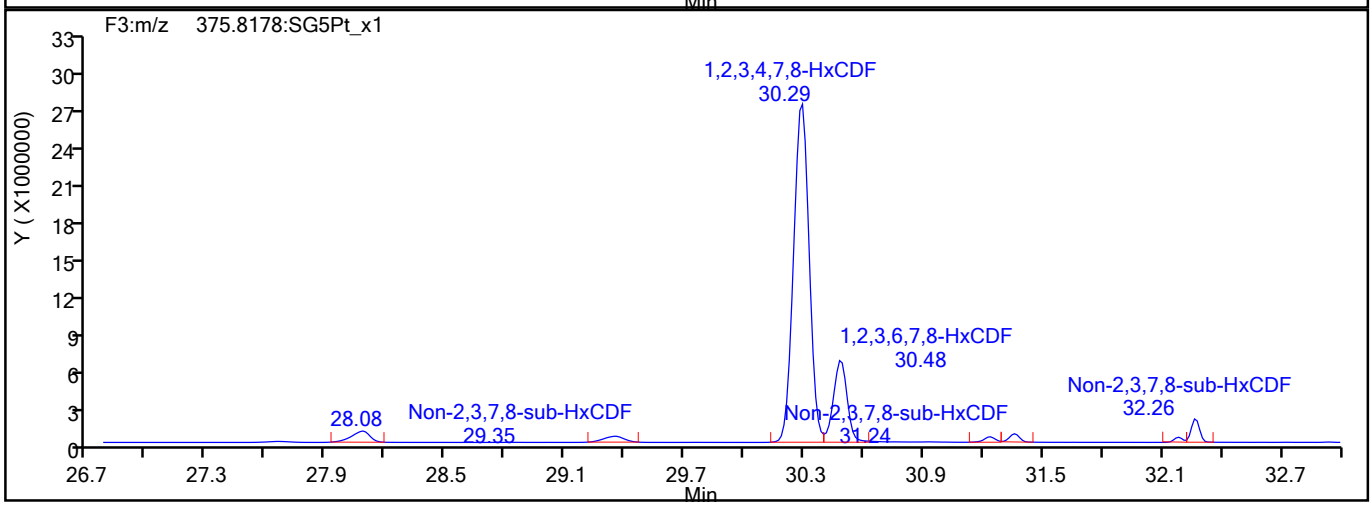

HxCDF Interference Mass

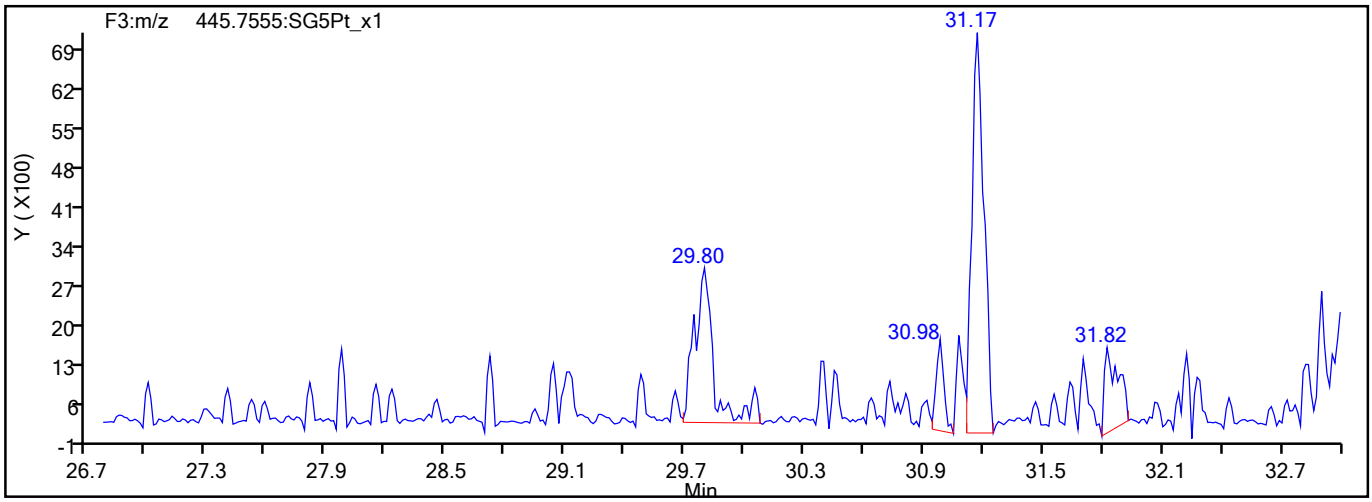

790968

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

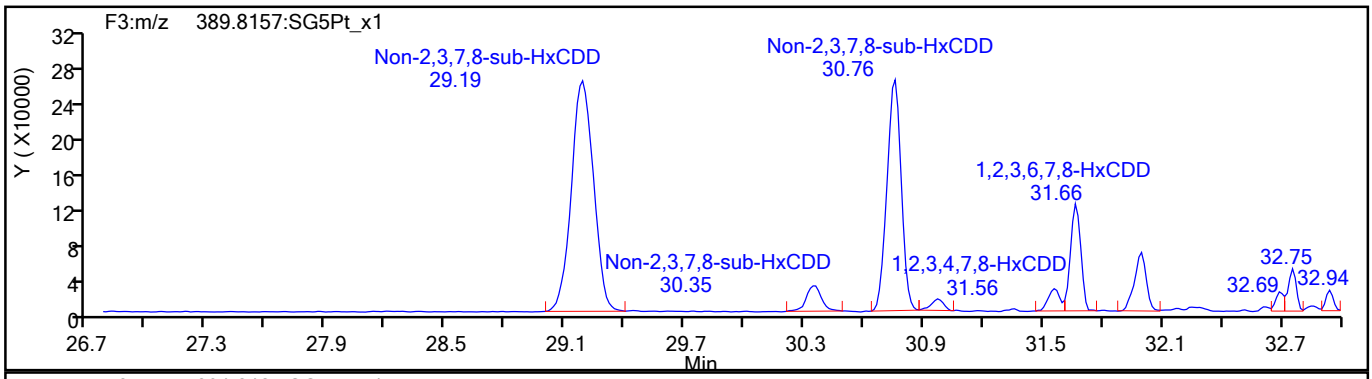

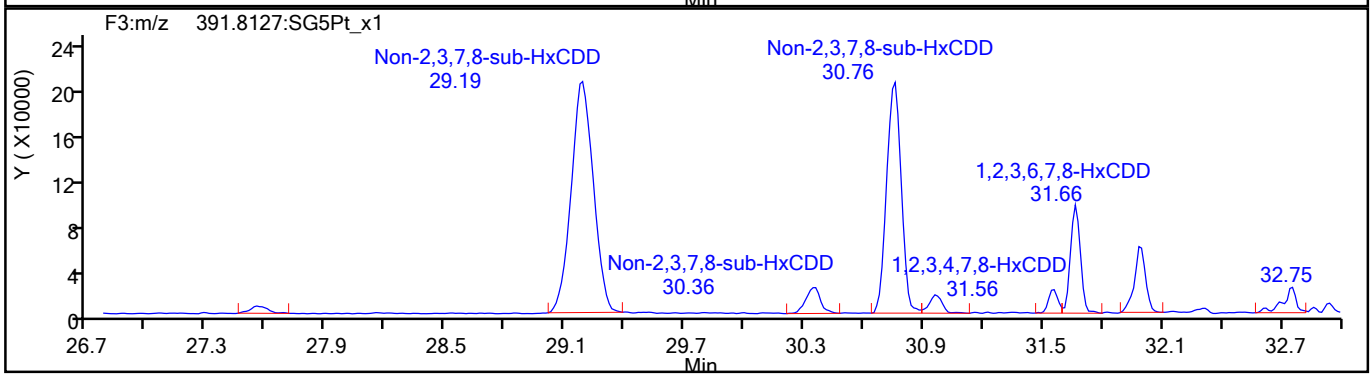

HxCDD Standards

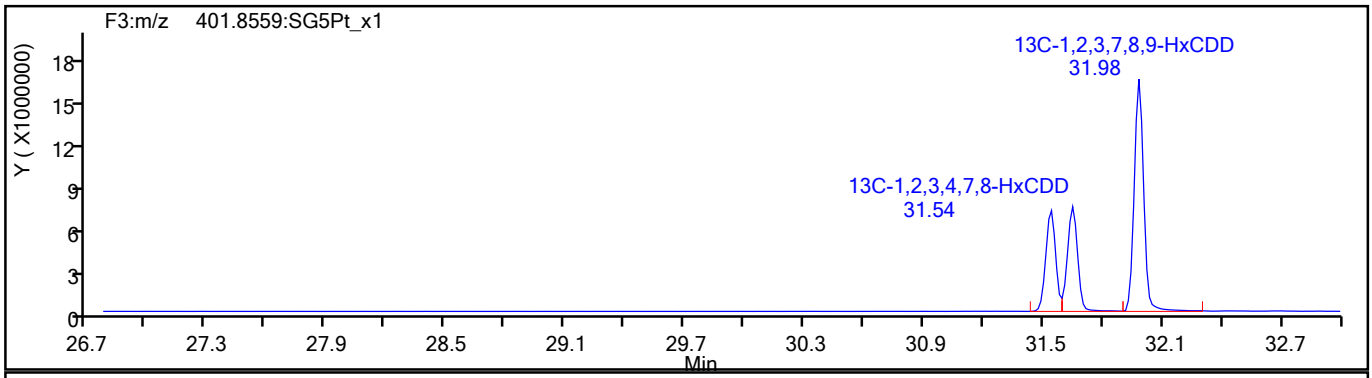

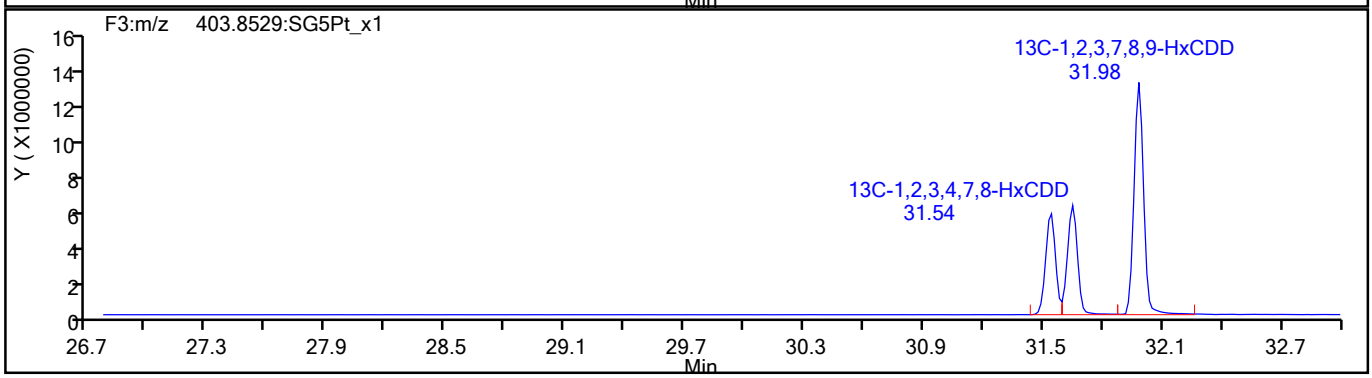

790969

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

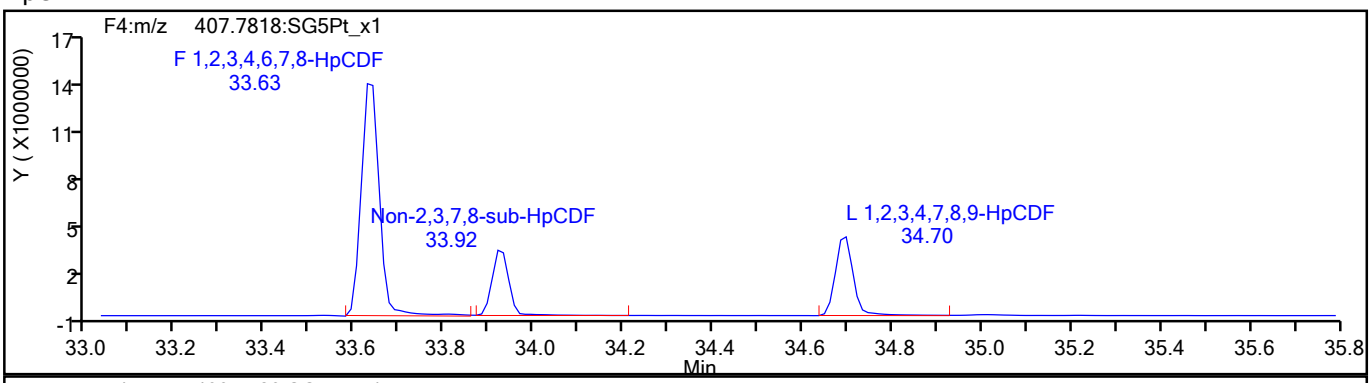

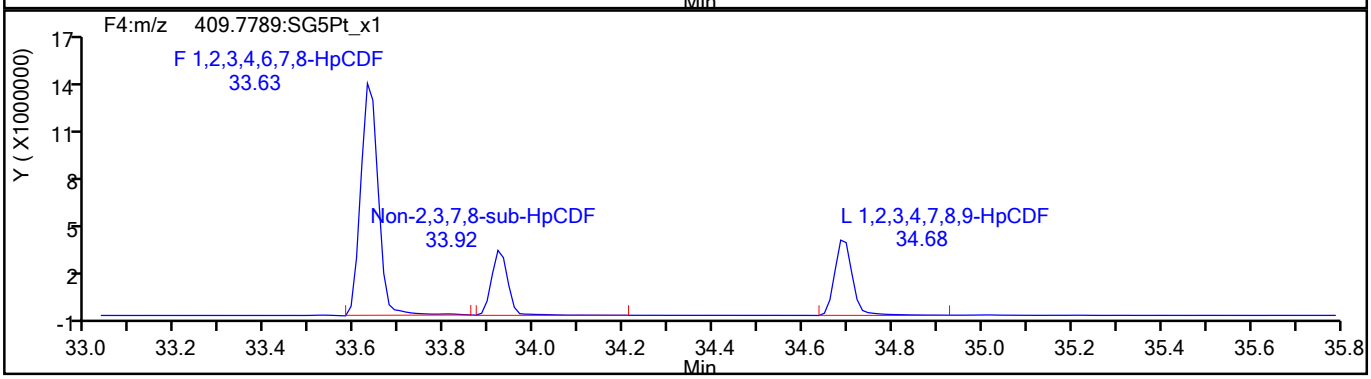

HpCDF Standards

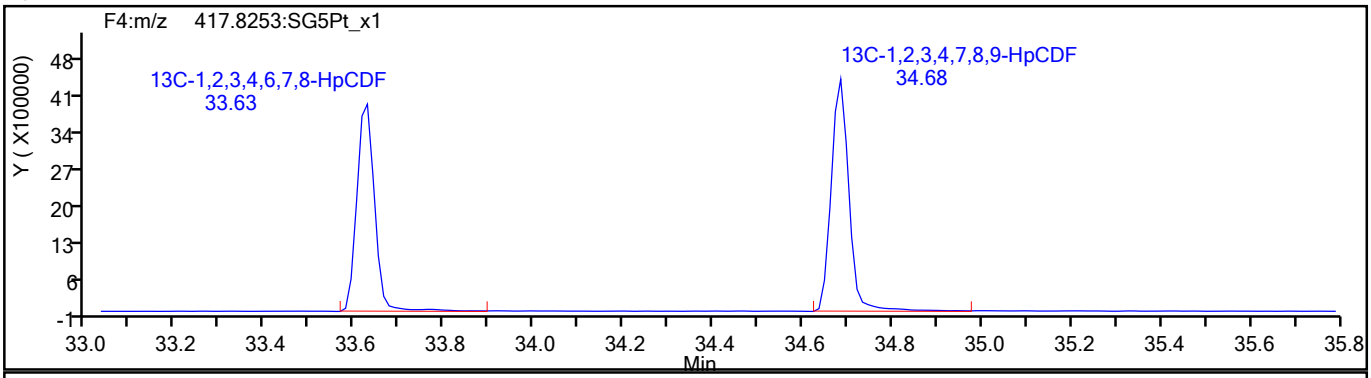

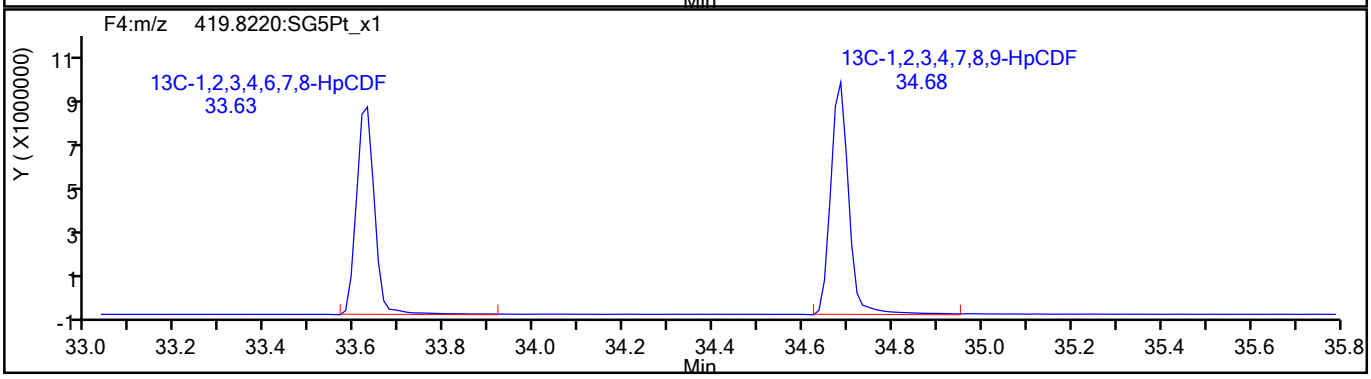

790970

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

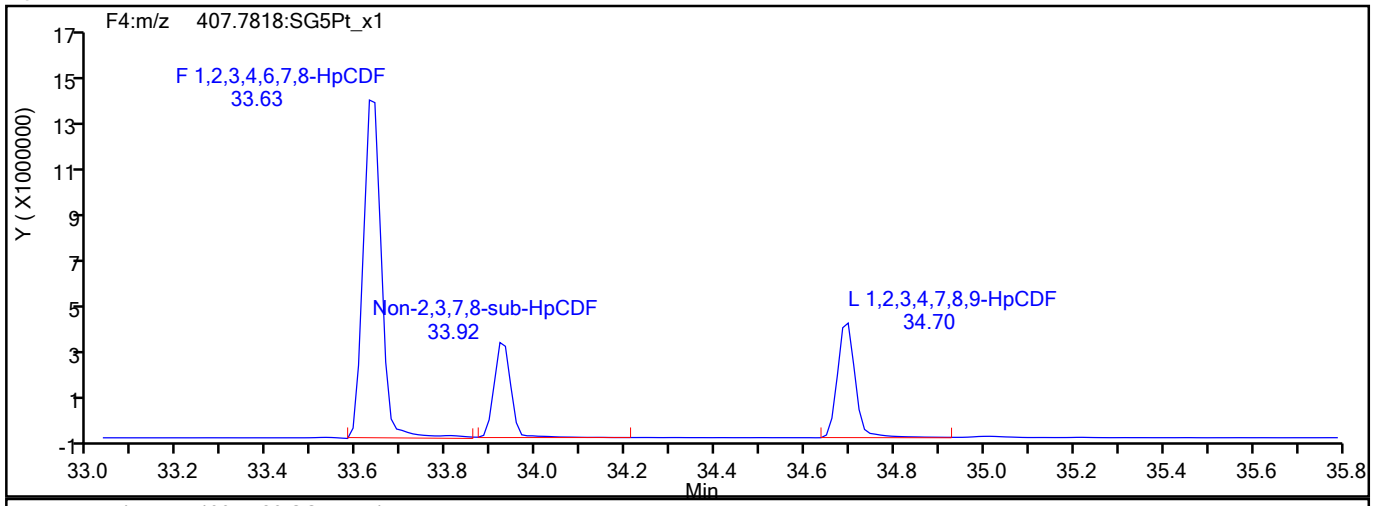

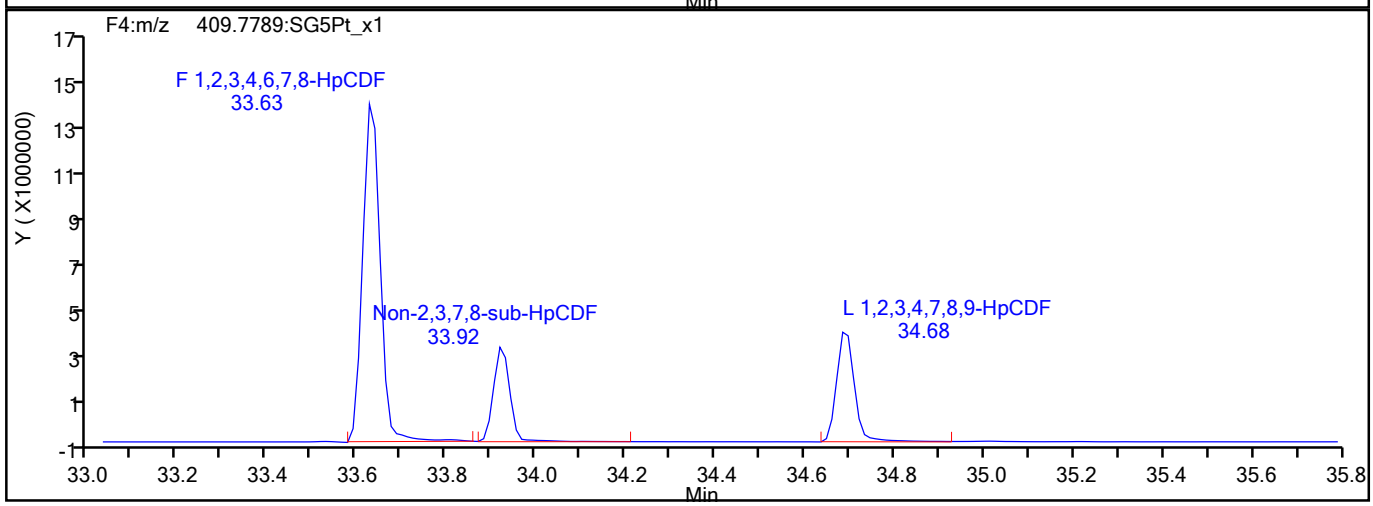

HpCDF Interference Mass

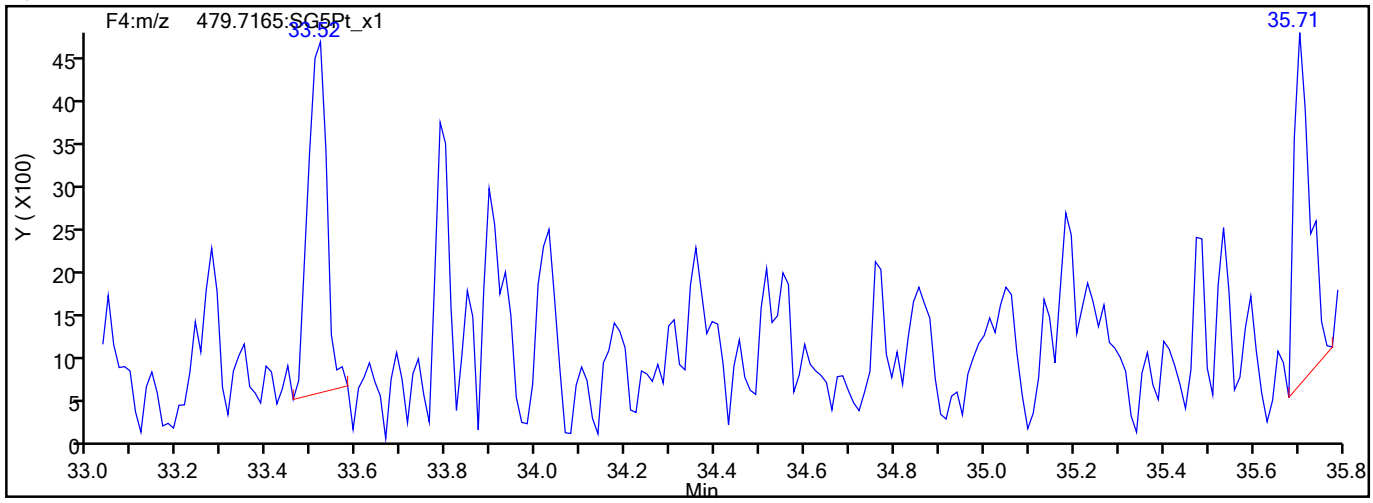

790971

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

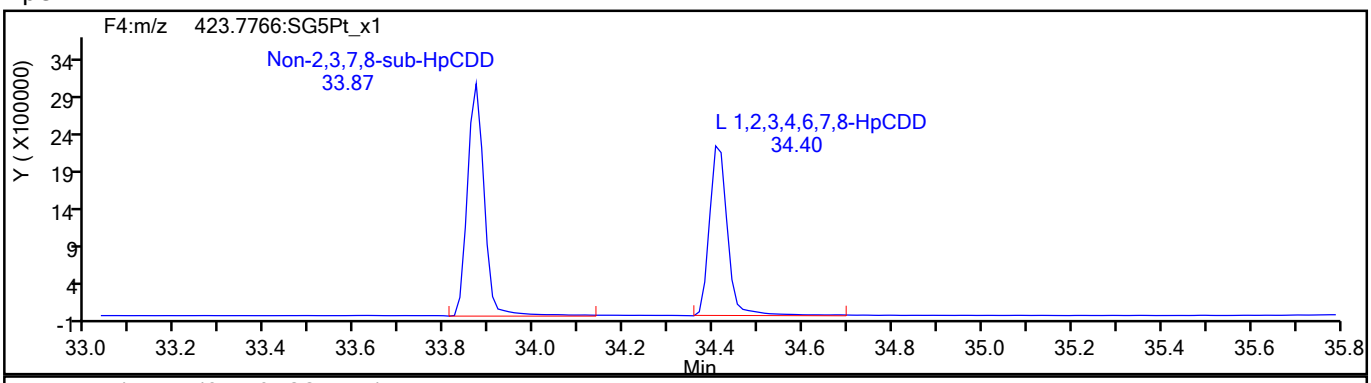

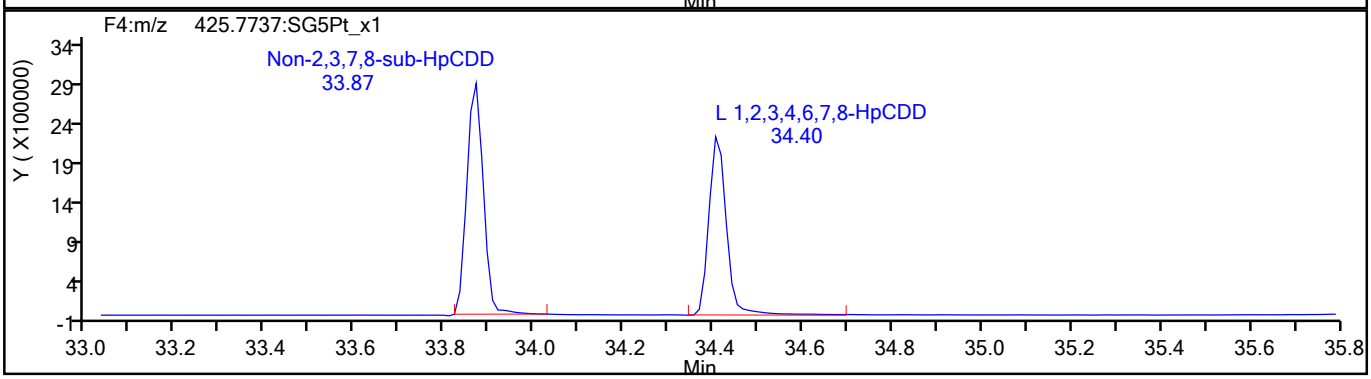

HpCDD Standards

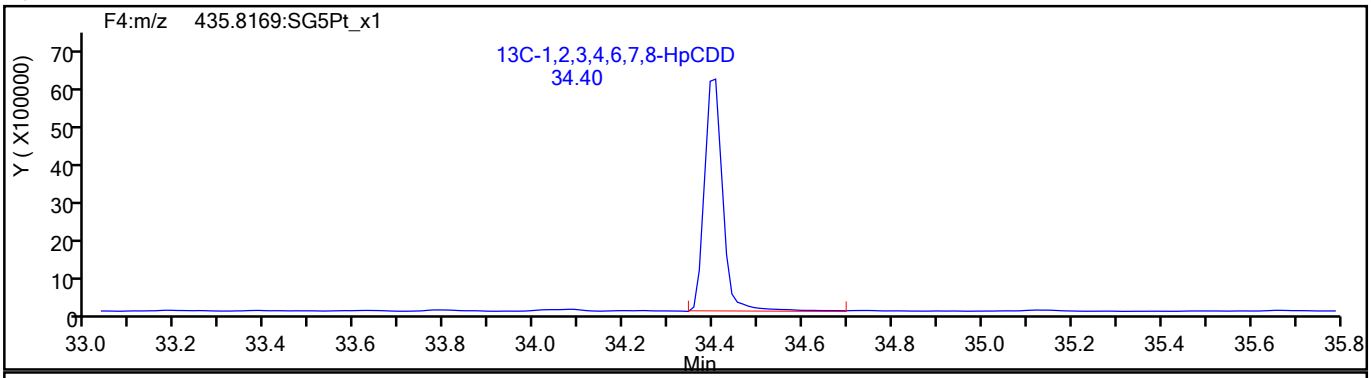

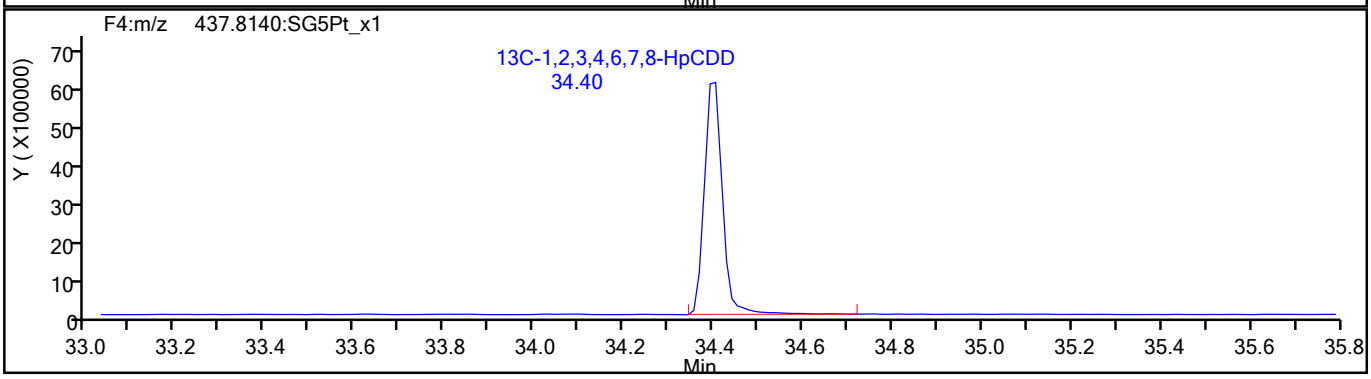

790972

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

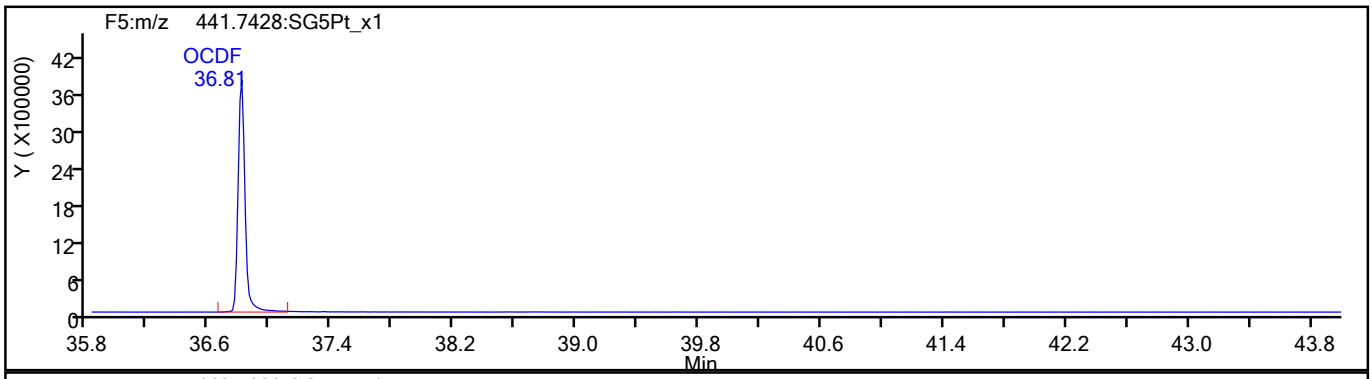

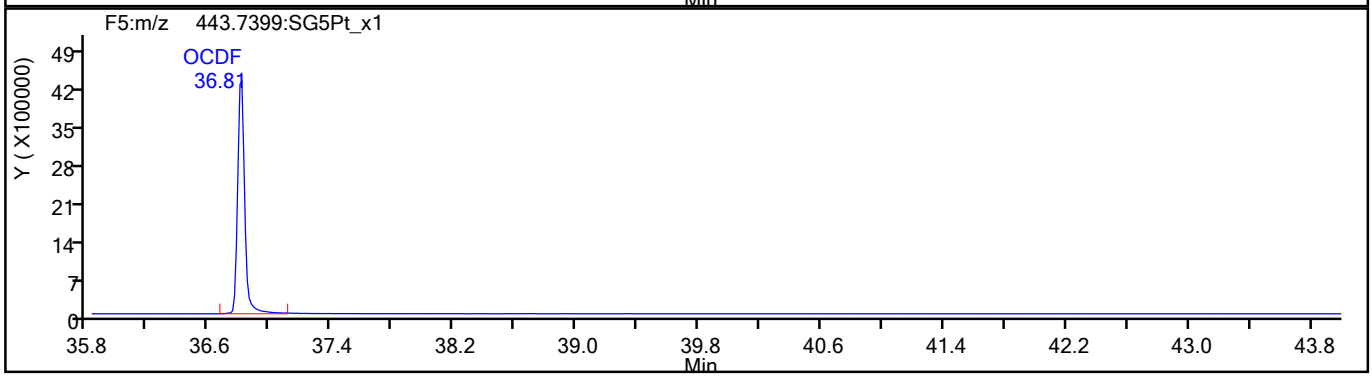

OCDF Standards

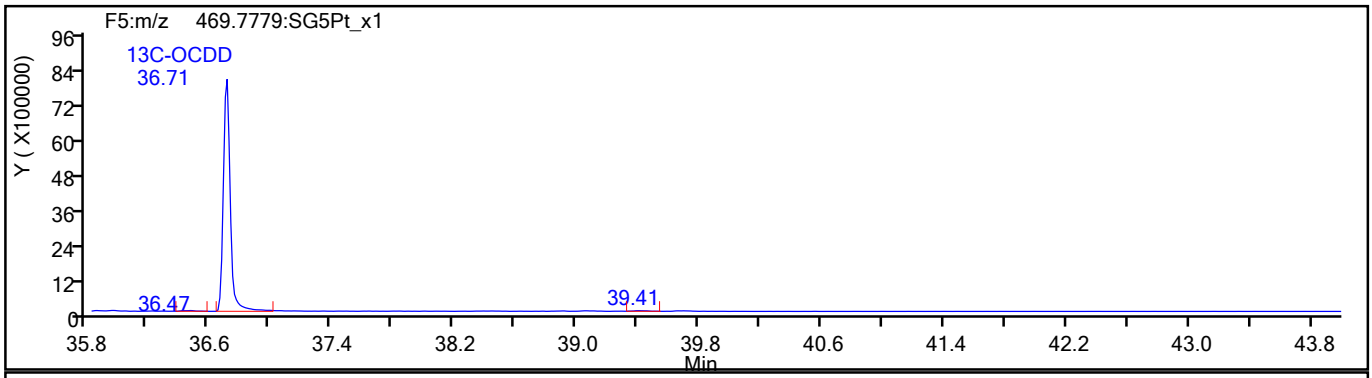

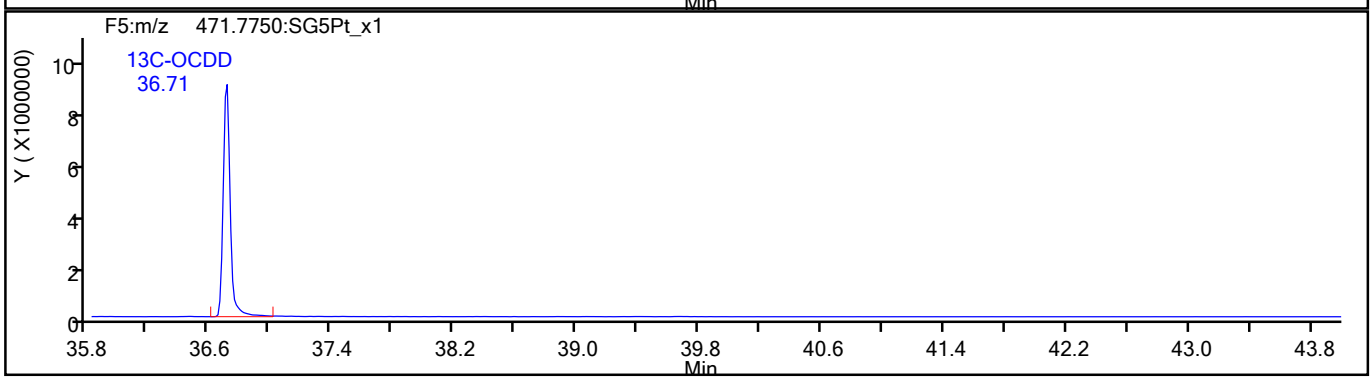

790973

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

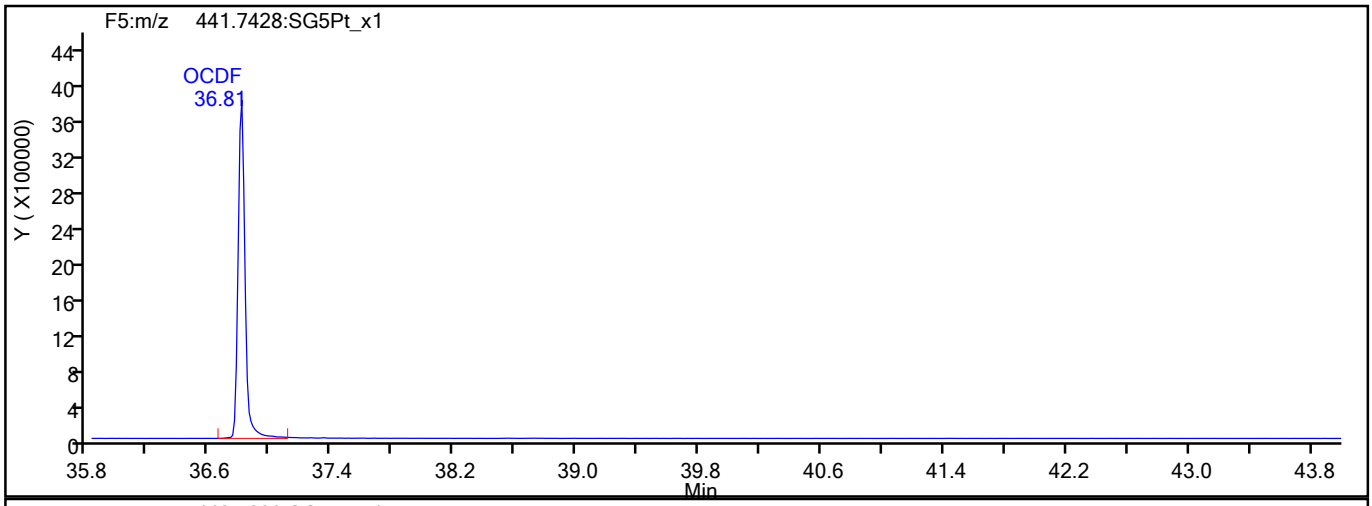

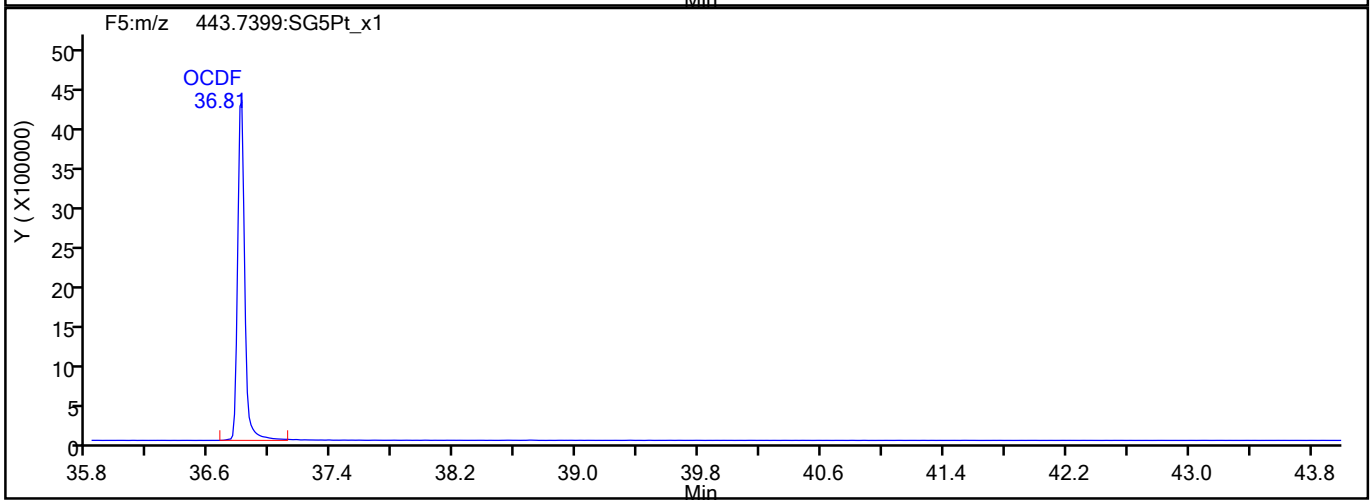

OCDF Interference Mass

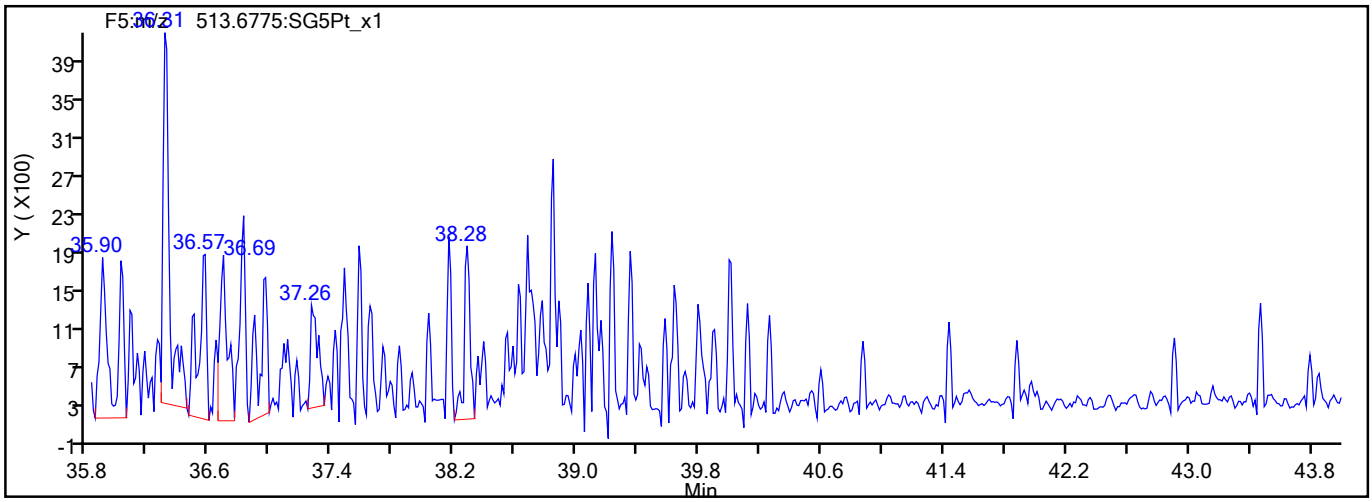

790974

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

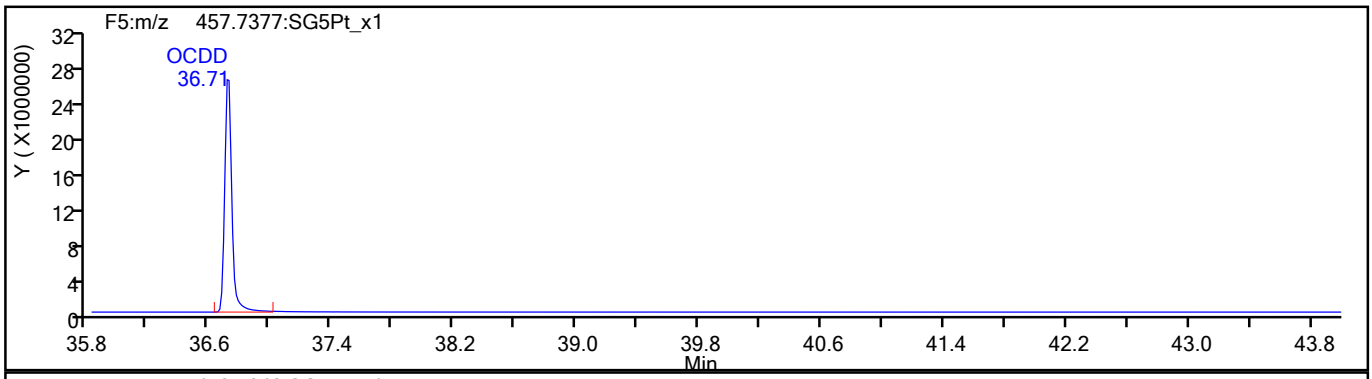

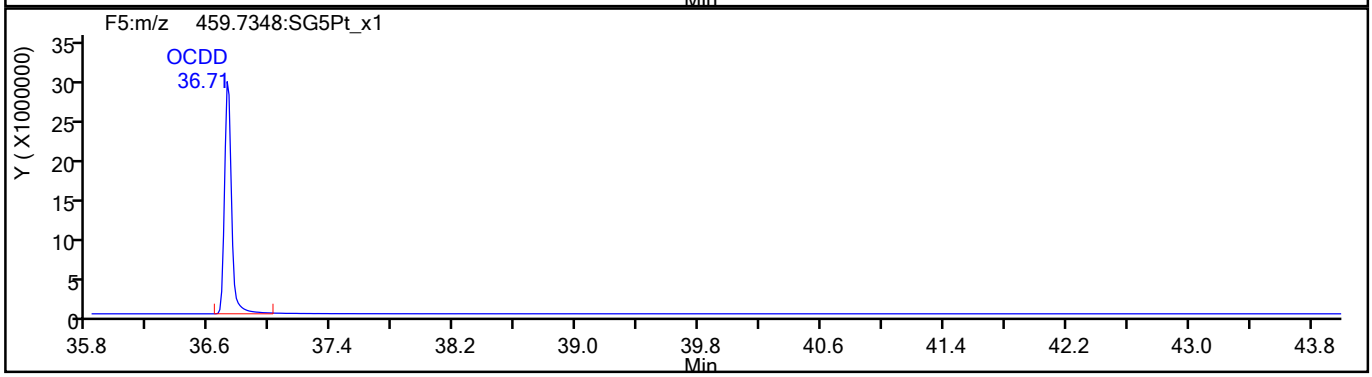

OCDD Standards

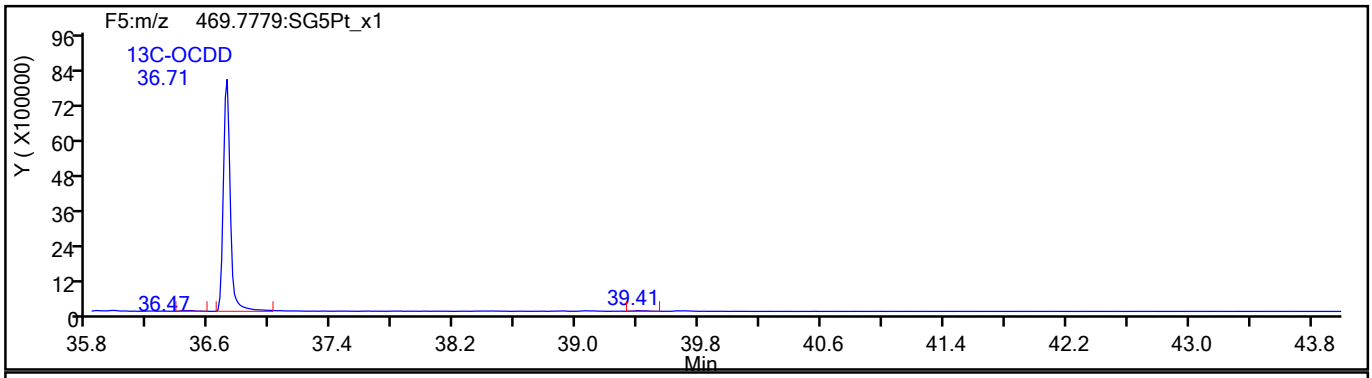

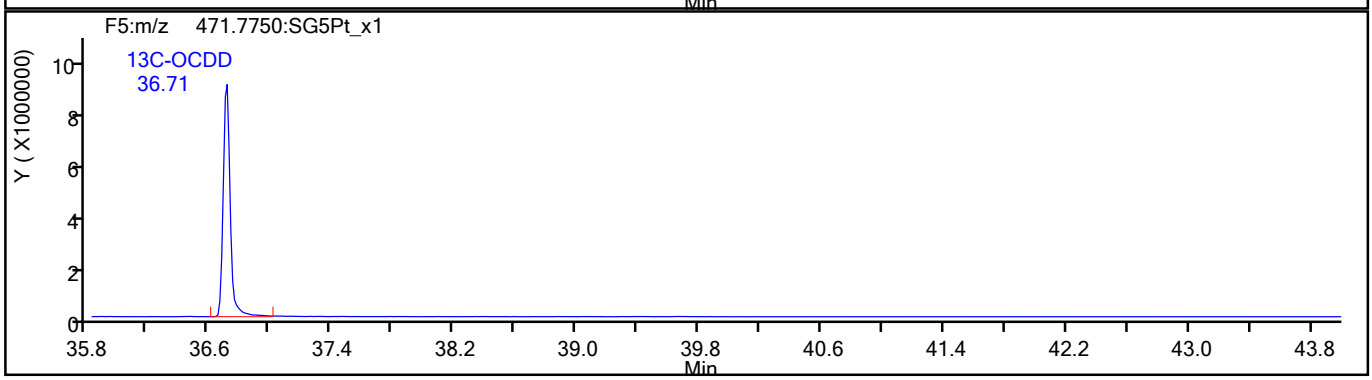

790975

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

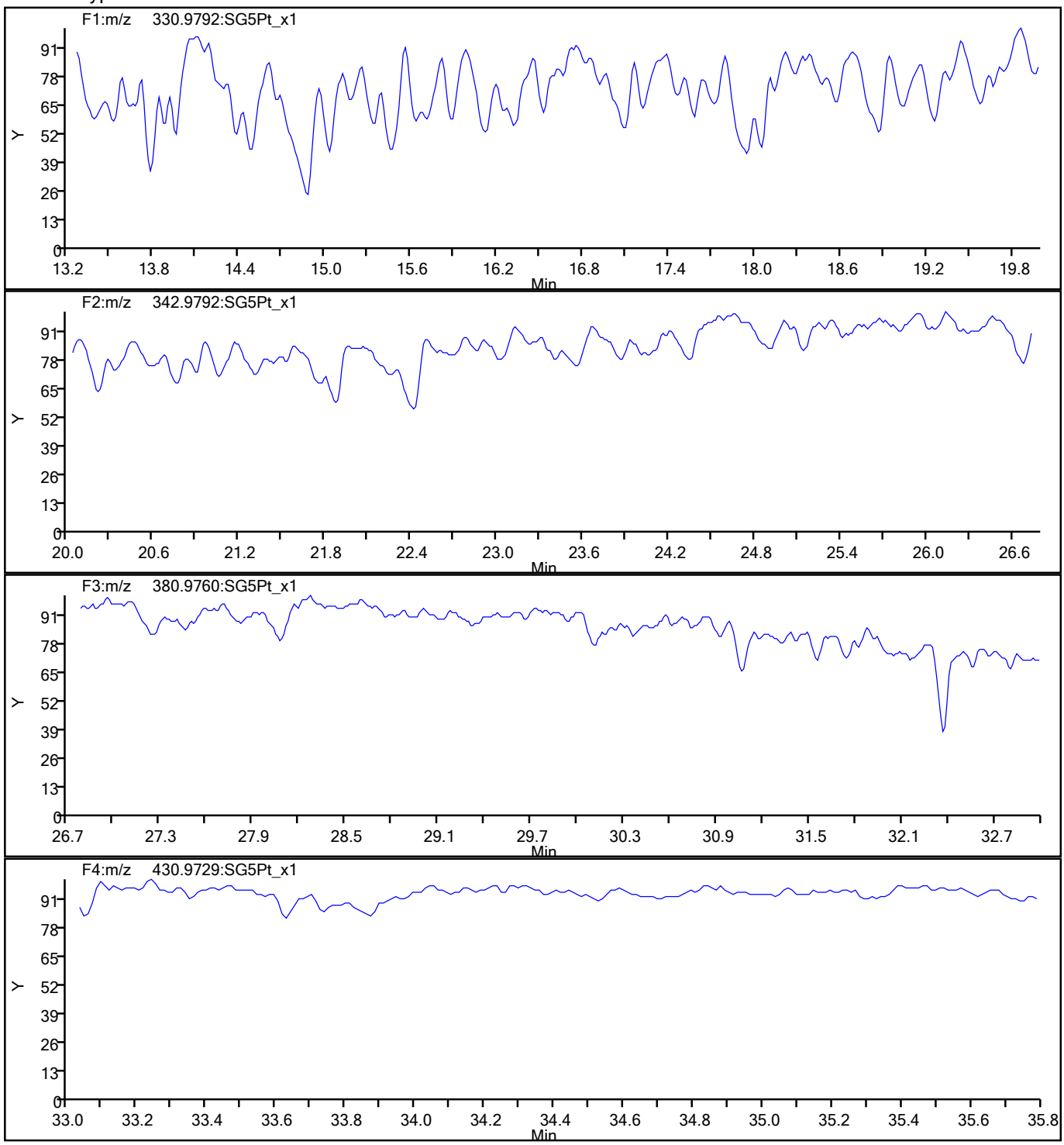

790976

Report Date: 27-Aug-2021 09:43:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_6.d		
Injection Date:	25-Aug-2021 13:35:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

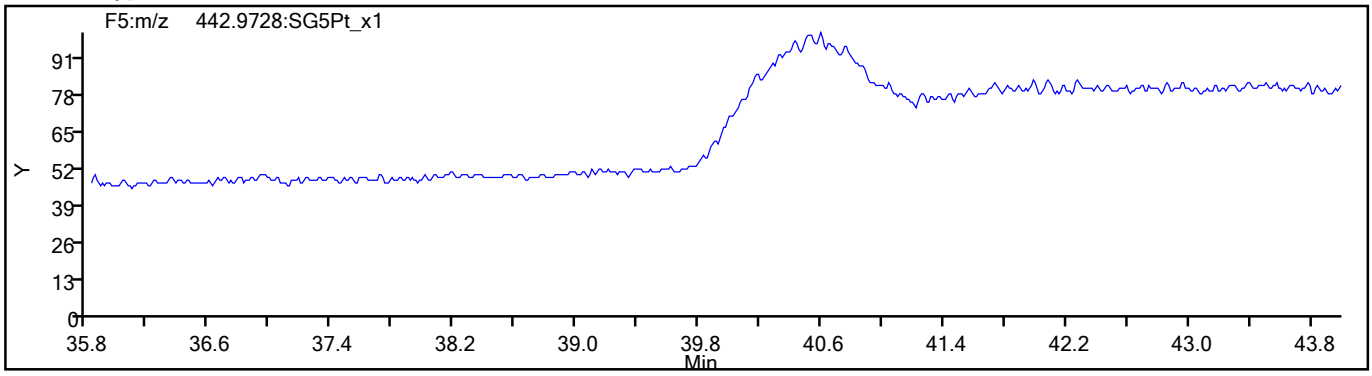

790977

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) RA
Lab Sample ID: 320-77214-2 RA
Matrix: Sediment
Lab File ID: 31AU2111D2_015.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.27(g)
Date Analyzed: 08/31/2021 22:10
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520997
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	12000	E B G	25	25

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	49		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	79		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_015.d
Lims ID: 320-77214-A-2-A
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: Client
Inject. Date: 31-Aug-2021 22:10:34 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:46:22

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.365	26511625	0.79	7.2E+05	100.0	100.0				M
D 13C-2,3,7,8-TCDF	17.709	17473014	0.73	1.3327	49.5	49.5	7.994	7.994	49.45	M
2,3,7,8-TCDF	17.736	820986127	0.79	0.9978	4708.9	4708.9	9.578	9.578		E
D 13C-2,3,7,8-TCDD	16.132	13482722	0.76	0.8749	58.1	58.1	39.3	39.3	58.13	Ma
2,3,7,8-TCDD	16.145	239286522	0.79	1.0570	1679.1	1679.1	15.8	15.8		Ea
$ 37Cl4-2,3,7,8-TCDD	16.159	7201370		0.8648	31.4	31.4	0.8360	0.8360	78.52	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_015.d
Lims ID: 320-77214-A-2-A
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: Client
Inject. Date: 31-Aug-2021 22:10:34 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:46:22

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.365	16.275	5		11676287	2556365	326897	817242	8		M
333.9339	16.365	16.275	5		14835338	3333809	482564	1206410	7	0.79(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.709	17.605	6	1.082	7346376	1190129	94469	236172	13		M
317.9389	17.723	17.605	7	1.083	10126638	1612651	156550	391375	10	0.73(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.736	17.619	7	1.002	361495706	58072825	55433	138582	1048		
305.8987	17.736	17.619	7	1.002	459490421	73563103	51712	129280	1423	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											Ma
331.9368	16.132	16.055	5	0.986	5801884	1207561	326897	817242	4		M
333.9339	16.132	16.055	5	0.986	7680838	1637681	482564	1206410	3	0.76(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	16.145	16.069	5	1.001	105909200	23769616	118487	296217	201		a
321.8936	16.145	16.069	5	1.001	133377322	30249796	72072	180180	420	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.159	16.069	5	0.987	7201370	1790399	17035	42587	105		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated
a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_015.d				
Injection Date:	31-Aug-2021 22:10:34	Instrument ID:	11D2		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.72
Area: 8692392
Amount: 44.612508
Amount Units: pg/ul

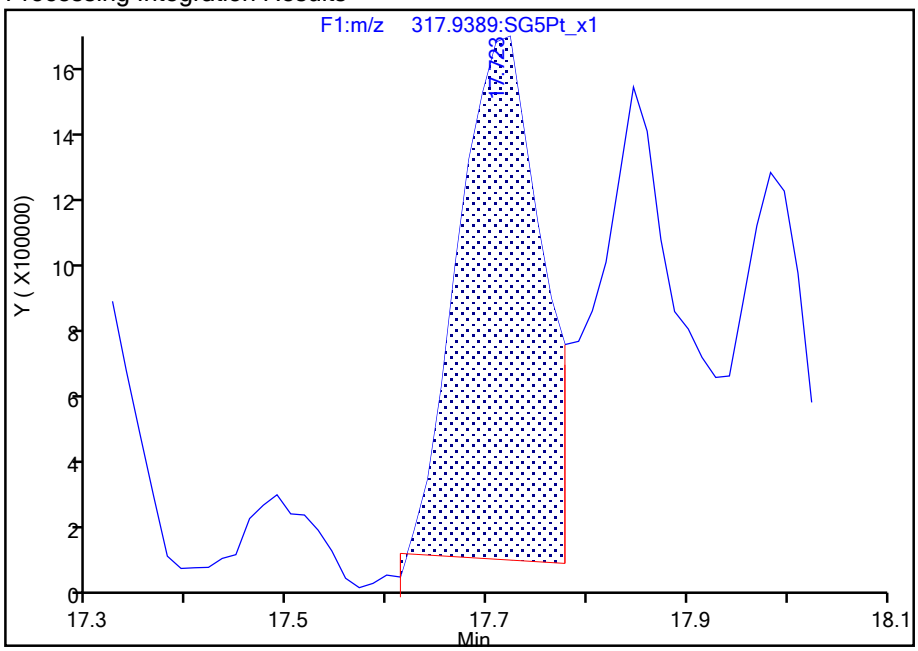

Manual Integration Results

RT: 17.72
Area: 10126638
Amount: 49.454252
Amount Units: pg/ul

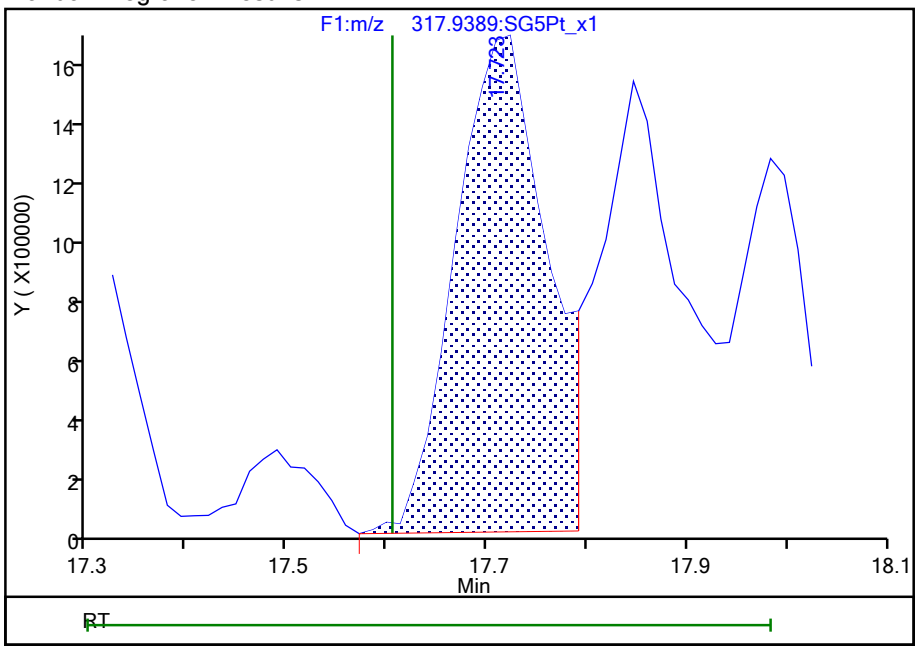

Reviewer: bennettd, 01-Sep-2021 09:46:07

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_015.d				
Injection Date:	31-Aug-2021 22:10:34	Instrument ID:	11D2		
Lims ID:	320-77214-A-2-A	Lab Sample ID:	320-77214-2		
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.71
Area: 7069953
Amount: 44.612508
Amount Units: pg/ul

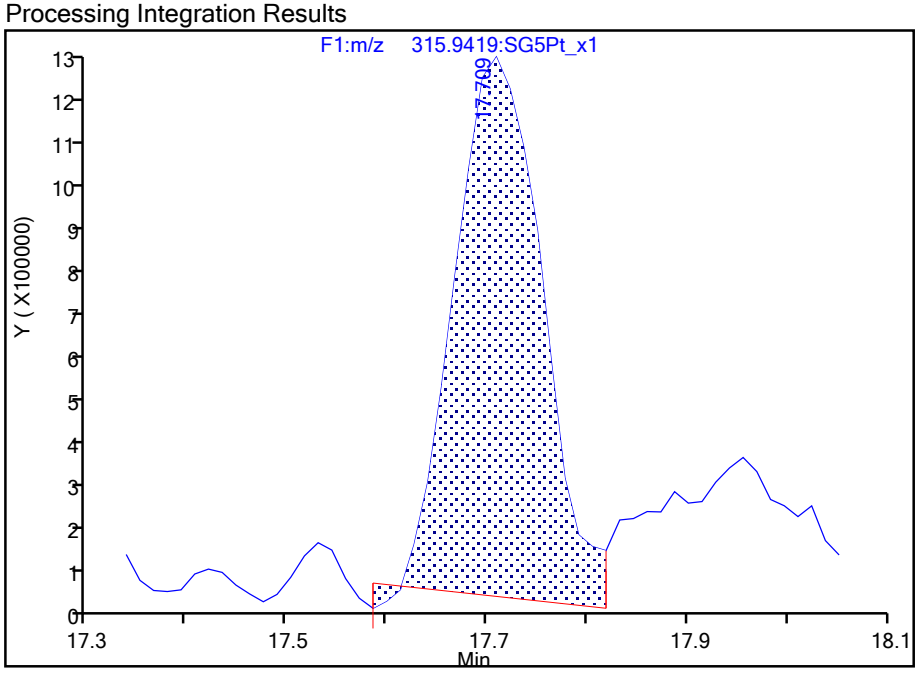

Manual Integration Results

RT: 17.71
Area: 7346376
Amount: 49.454252
Amount Units: pg/ul

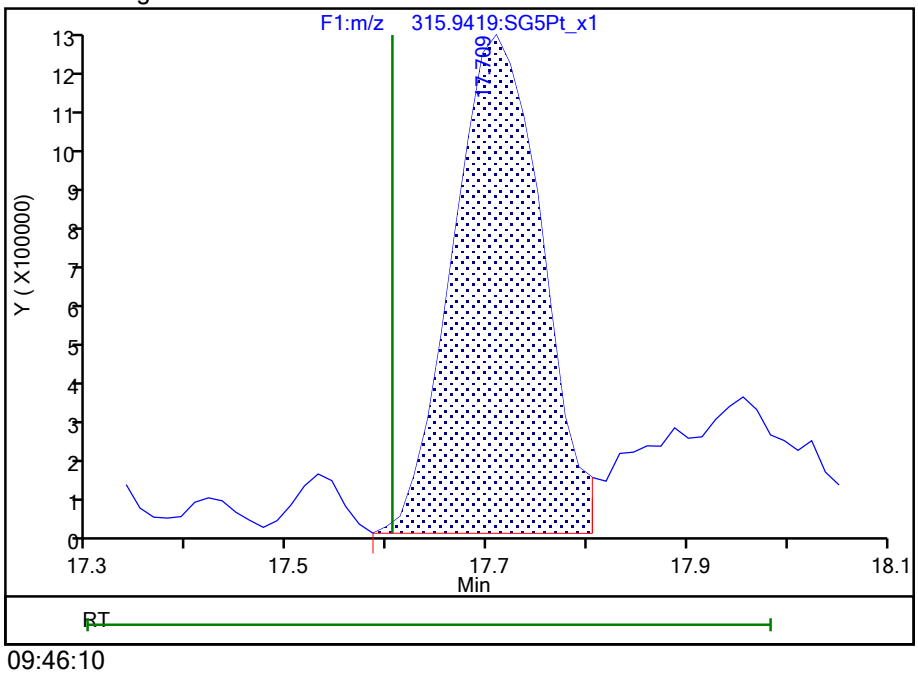

Reviewer: bennettd, 01-Sep-2021 09:46:10

Audit Action: Split an Integrated Peak Audit Reason: Baseline

790982

Report Date: 01-Sep-2021 09:57:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_015.d		
Injection Date:	31-Aug-2021 22:10:34	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

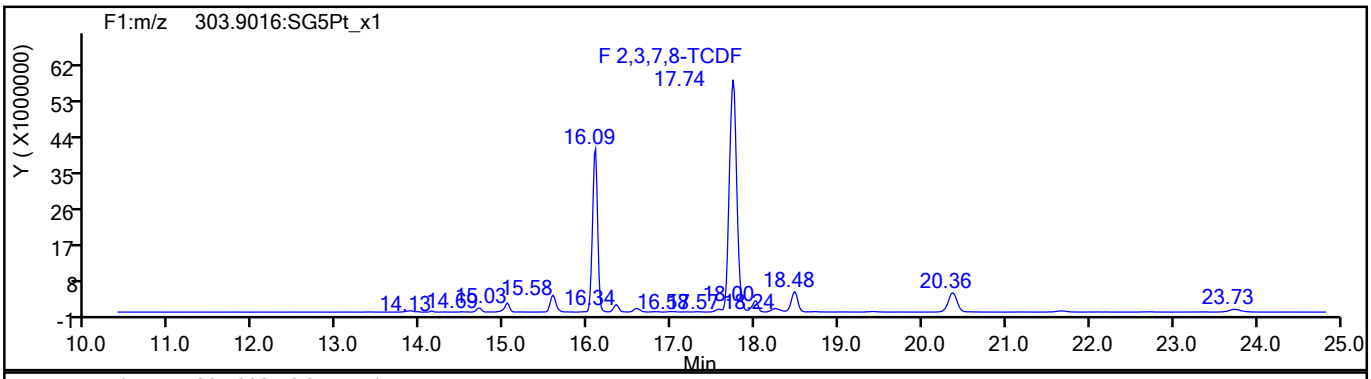

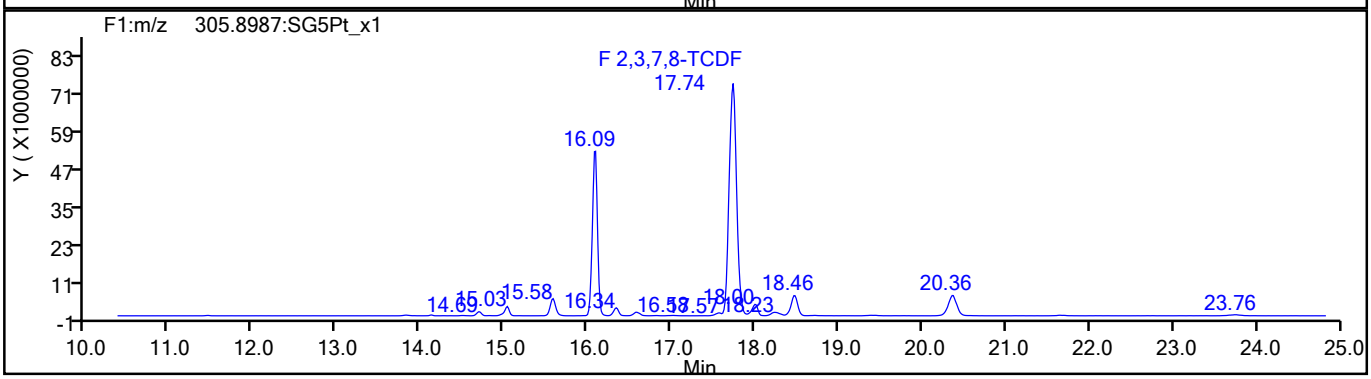

TCDF Standards

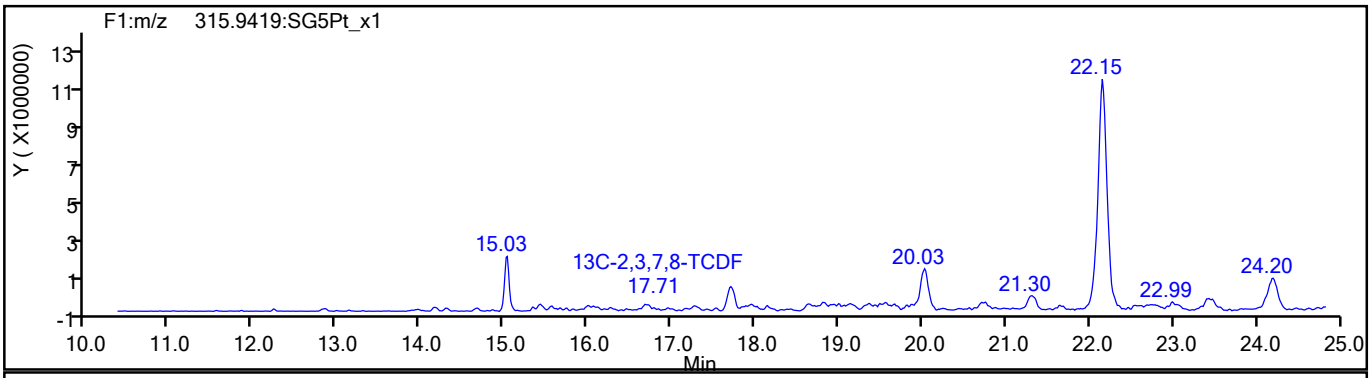

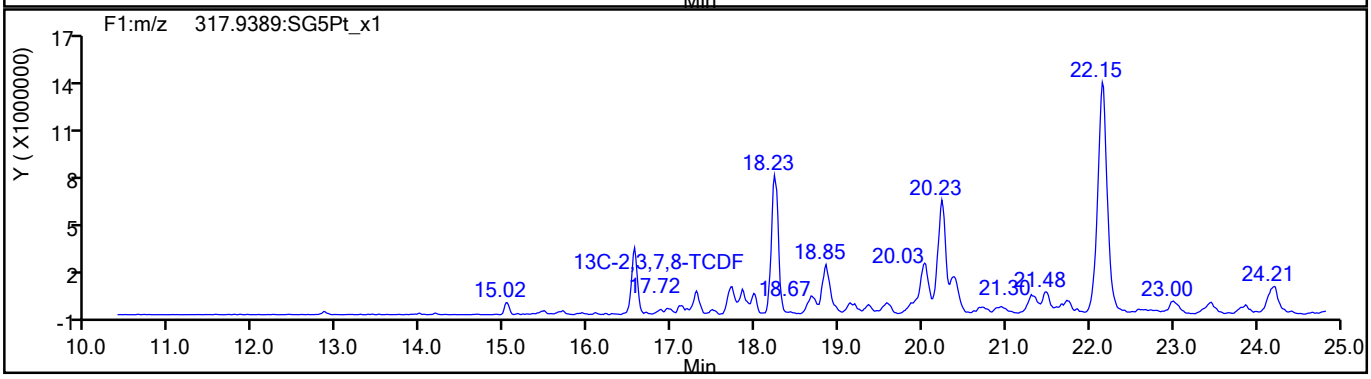

790983

Report Date: 01-Sep-2021 09:57:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_015.d		
Injection Date:	31-Aug-2021 22:10:34	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

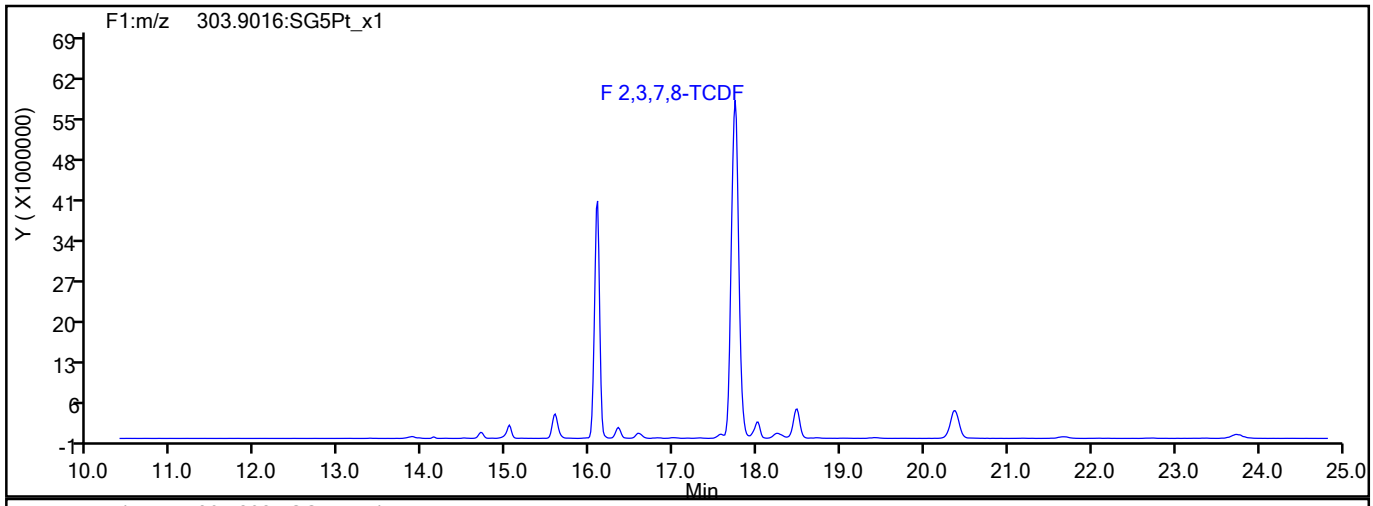

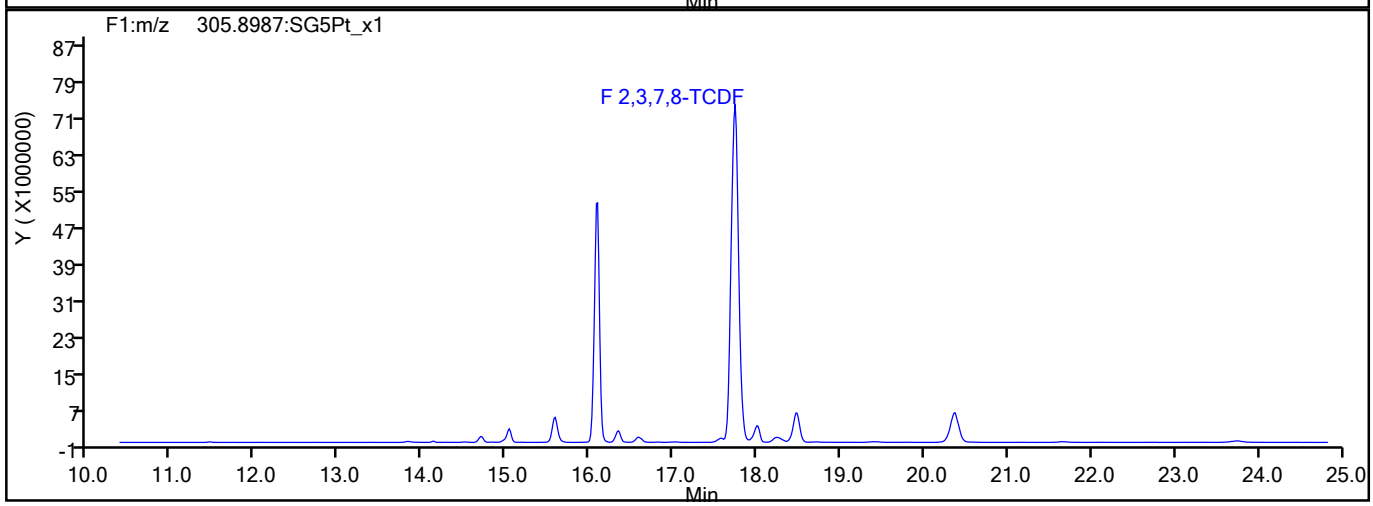

TCDF Interference Mass

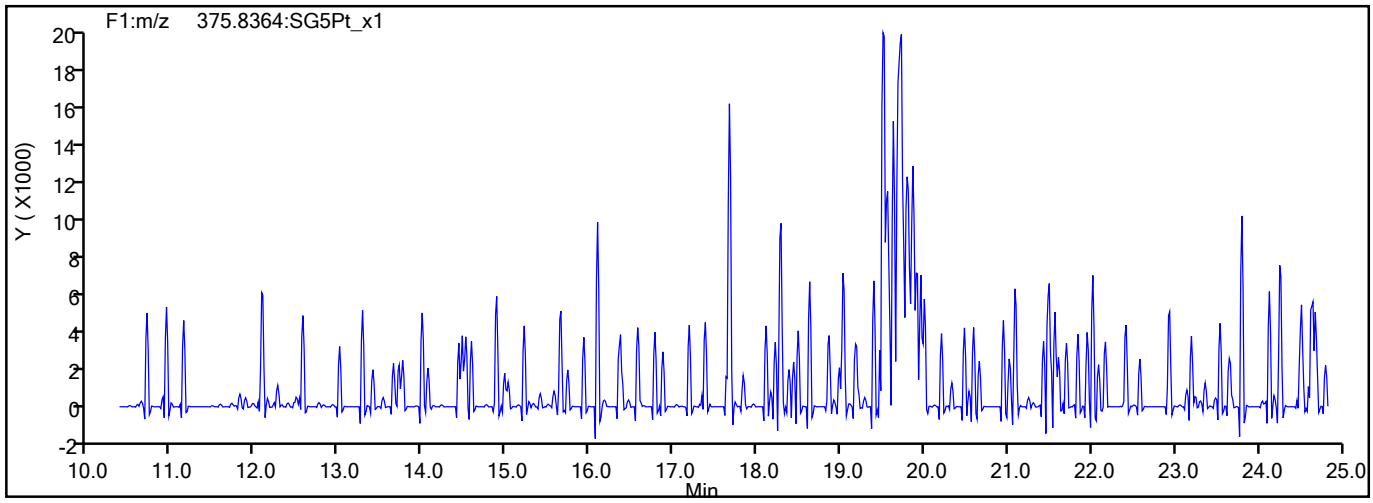

790984

Report Date: 01-Sep-2021 09:57:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_015.d		
Injection Date:	31-Aug-2021 22:10:34	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

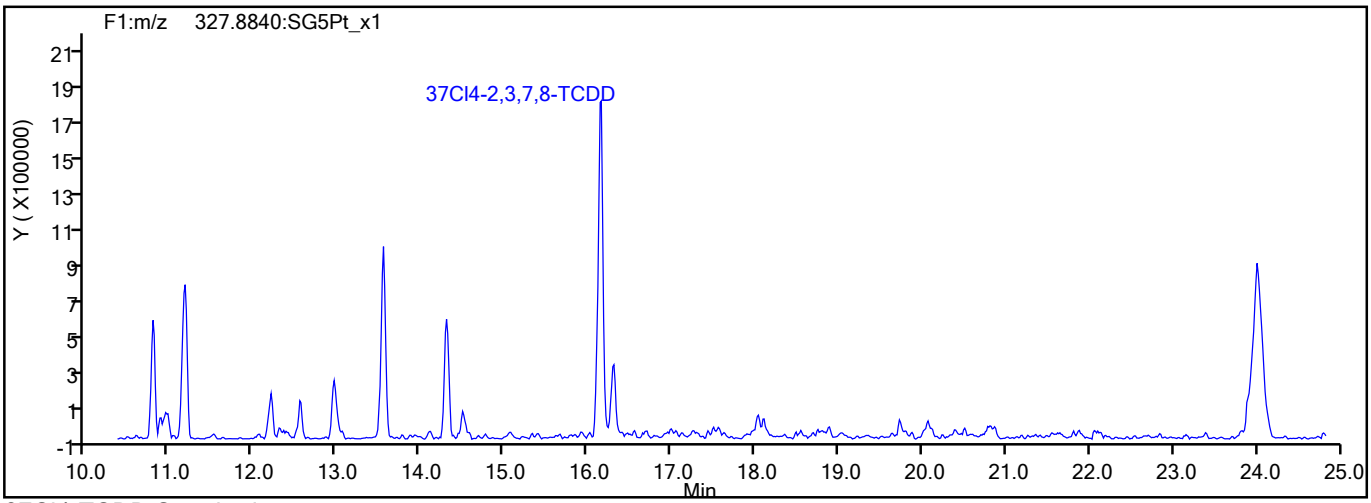

37Cl4-TCDD Standards

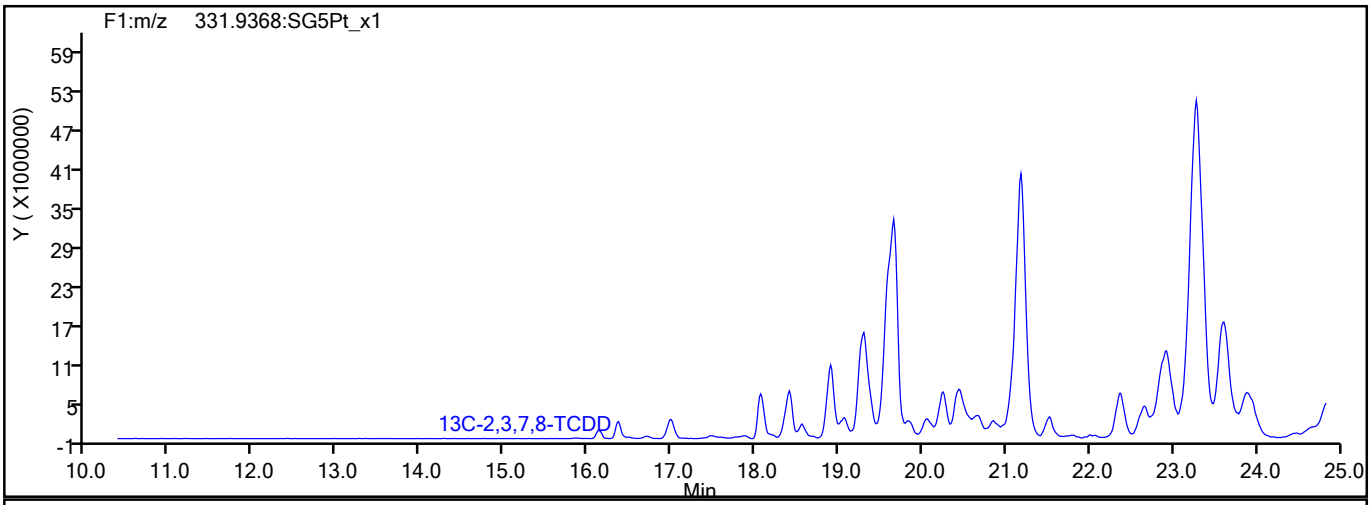

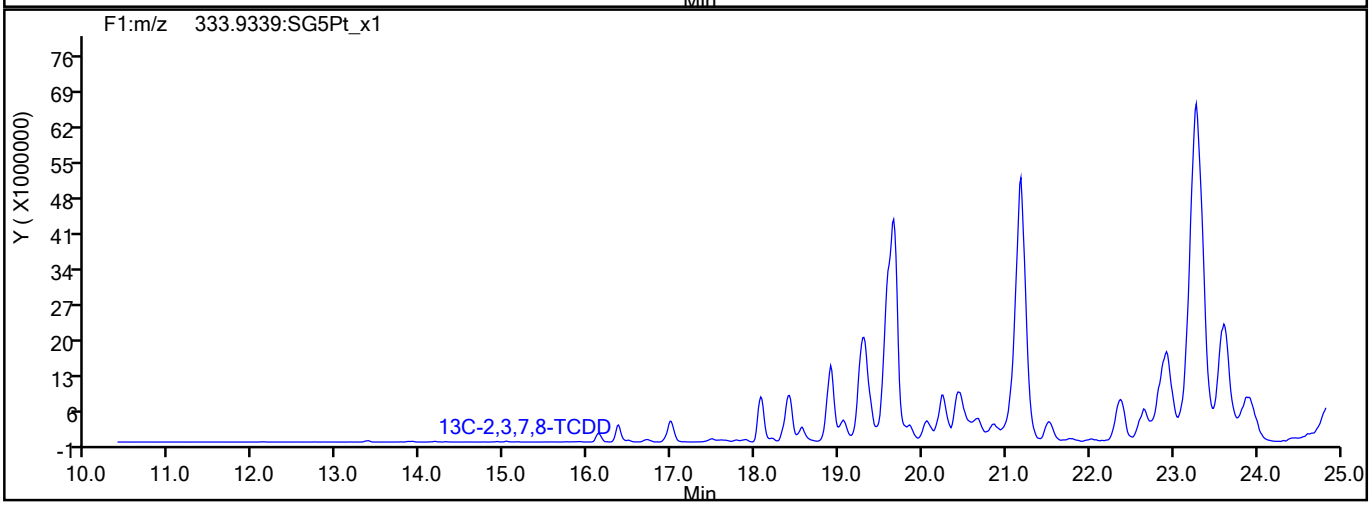

790985

Report Date: 01-Sep-2021 09:57:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_015.d		
Injection Date:	31-Aug-2021 22:10:34	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

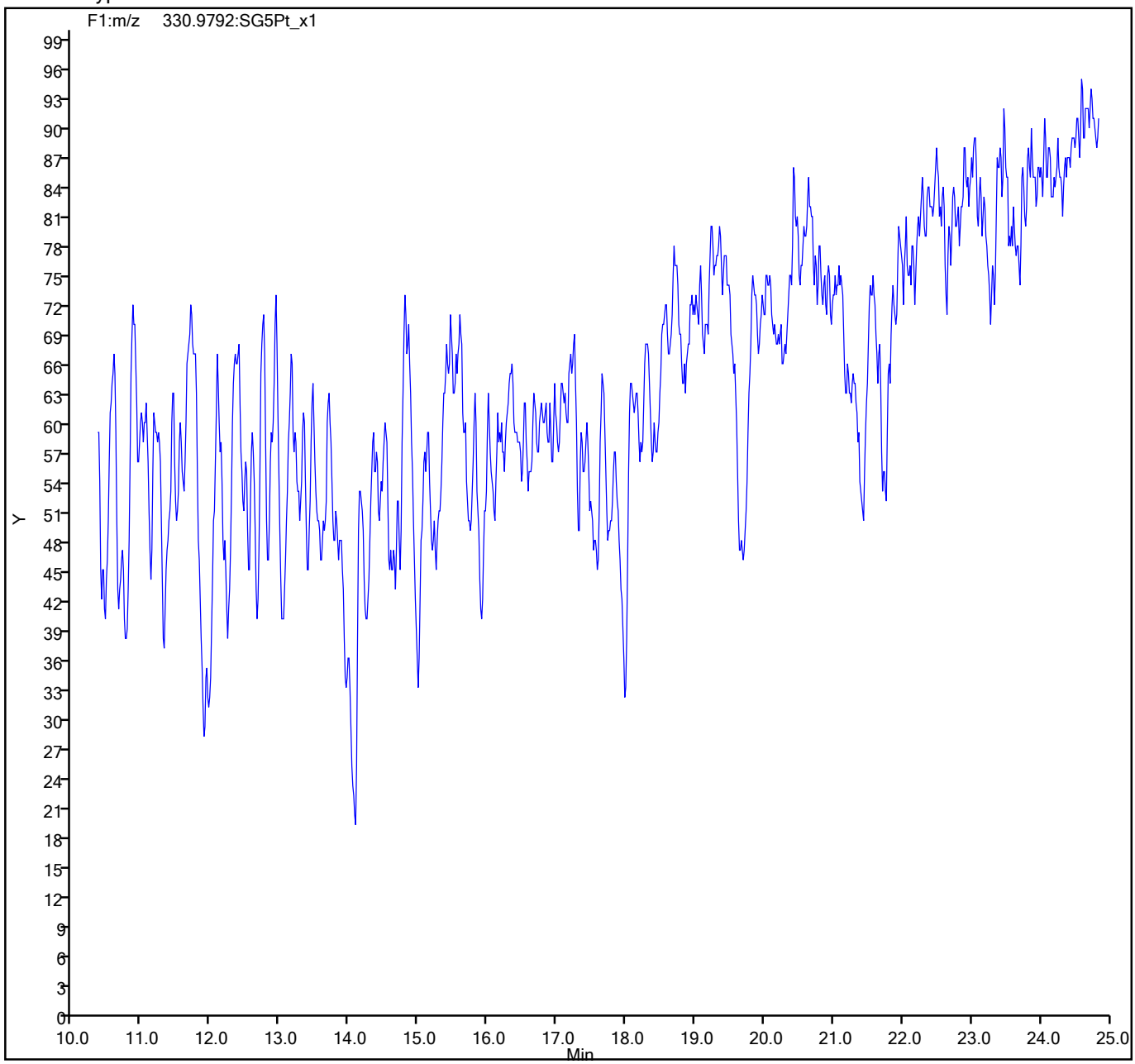

790986

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (4-6)
Lab Sample ID: 320-77214-3
Matrix: Sediment
Lab File ID: 25AU2110D5_9.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:20
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.12(g)
Date Analyzed: 08/25/2021 15:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 29.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	700	E G	1.8	1.8
40321-76-4	1,2,3,7,8-PeCDD	5.3	J	7.0	0.16
57117-41-6	1,2,3,7,8-PeCDF	57		7.0	0.40
57117-31-4	2,3,4,7,8-PeCDF	34		7.0	0.39
39227-28-6	1,2,3,4,7,8-HxCDD	0.68	J	7.0	0.083
57653-85-7	1,2,3,6,7,8-HxCDD	1.5	J	7.0	0.089
19408-74-3	1,2,3,7,8,9-HxCDD	2.6	J	7.0	0.078
70648-26-9	1,2,3,4,7,8-HxCDF	73		7.0	0.30
57117-44-9	1,2,3,6,7,8-HxCDF	18		7.0	0.30
72918-21-9	1,2,3,7,8,9-HxCDF	1.4	J	7.0	0.22
60851-34-5	2,3,4,6,7,8-HxCDF	2.1	J	7.0	0.22
35822-46-9	1,2,3,4,6,7,8-HpCDD	54	B	7.0	0.45
67562-39-4	1,2,3,4,6,7,8-HpCDF	20		7.0	0.16
55673-89-7	1,2,3,4,7,8,9-HpCDF	7.4		7.0	0.18
3268-87-9	OCDD	850	B	14	0.68
39001-02-0	OCDF	11	J B	14	0.072
41903-57-5	Total TCDD	780	q G	1.8	1.8
30402-14-3	Total TCDF	3600	B G	6.0	6.0
36088-22-9	Total PeCDD	8.5	q	7.0	0.16
30402-15-4	Total PeCDF	140	q	7.0	0.40
34465-46-8	Total HxCDD	26		7.0	0.084
55684-94-1	Total HxCDF	100		7.0	0.26
37871-00-4	Total HpCDD	120	B	7.0	0.45
38998-75-3	Total HpCDF	36		7.0	0.17

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (4-6)
Lab Sample ID: 320-77214-3
Matrix: Sediment
Lab File ID: 25AU2110D5_9.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:20
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.12(g)
Date Analyzed: 08/25/2021 15:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 29.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	51		25-164
89059-46-1	13C-2,3,7,8-TCDF	54		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	62		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	58		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	64		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	64		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	53		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	63		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	54		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	55		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	53		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	49		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	57		26-138
114423-97-1	13C-OCDD	58		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	71		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d
Lims ID: 320-77214-A-3-A
Client ID: 11215702-080221-BN-SJSB090 (4-6)
Sample Type: Client
Inject. Date: 25-Aug-2021 15:50:42 ALS Bottle#: 10 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-3-A 320-77214-A-3-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:54:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:03:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.628	114825737	0.81	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.114	100667226	0.77	1.6249	54.0	54.0	0.2178	0.2178	53.95	
2,3,7,8-TCDF	17.129	764934306	0.78	1.0239	742.1	742.1	2.117	2.117		E
A Non-2,3,7,8-sub-TCDF	17.076	570430106	0.78	1.0239	553.4	553.4	2.117	343.4		
S Total TCDF					1295.5	1295.5	2.117	2.117		
D 13C-2,3,7,8-TCDD	17.824	52682426	0.80	0.8993	51.0	51.0	0.1949	0.1949	51.02	
2,3,7,8-TCDD	17.840	165321632	0.79	1.2541	250.2	250.2	0.6434	0.6434		Ea
$ 37Cl4-2,3,7,8-TCDD	17.840	35892950		1.1071	28.2	28.2	0.0659	0.0659	70.58	
A Non-2,3,7,8-sub-TCDD	17.537	16925976	0.77	1.2541	28.8	25.6	0.6434	21.6		RQ
S Total TCDD					279.0	275.8	0.6434	0.6434		RQ
D 13C-1,2,3,7,8-PeCDF	22.061	80925107	1.56	1.2101	58.2	58.2	0.0983	0.0983	58.24	
1,2,3,7,8-PeCDF	22.088	17346658	1.62	1.0611	20.2	20.2	0.1436	0.1436		
D 13C-2,3,4,7,8-PeCDF	23.384	90703146	1.57	1.2395	63.7	63.7	0.0960	0.0960	63.73	
2,3,4,7,8-PeCDF	23.397	11039697	1.62	1.0184	12.0	12.0	0.1389	0.1389		
A F1 PeCDFs	19.851	85506	1.55	1.0398	0.1149	0.0958	0.0204	0.0958		RQa
A Non-2,3,7,8-sub-PeCDF	23.067	16167917	1.58	1.0398	18.1	18.1	0.1411	7.396		
S Total PeCDF					50.4	50.4	0.1412	0.1412		RQ
D 13C-1,2,3,7,8-PeCDD	24.079	53812105	1.64	0.7612	61.6	61.6	0.0614	0.0614	61.56	
1,2,3,7,8-PeCDD	24.106	1062604	1.52	1.0484	1.883	1.883	0.0570	0.0570		
A Non-2,3,7,8-sub-PeCDD	23.696	642680	1.55	1.0484	1.162	1.139	0.0570	0.4207		RQ
S Total PeCDD					3.046	3.023	0.0570	0.0570		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.212	75872846	0.52	1.0837	62.9	62.9	0.1194	0.1194	62.91	
1,2,3,4,7,8-HxCDF	30.239	21422533	1.24	1.0851	26.0	26.0	0.1053	0.1053		
D 13C-1,2,3,6,7,8-HxCDF	30.412	68400038	0.52	1.1279	54.5	54.5	0.1147	0.1147	54.49	
1,2,3,6,7,8-HxCDF	30.439	4950791	1.25	1.1260	6.428	6.428	0.1081	0.1081		
D 13C-2,3,4,6,7,8-HxCDF	31.317	65259378	0.52	1.0637	55.1	55.1	0.1217	0.1217	55.13	
2,3,4,6,7,8-HxCDF	31.331	562448	1.29	1.1675	0.7382	0.7382	0.0789	0.0789		
D 13C-1,2,3,7,8,9-HxCDF	32.156	59186398	0.51	0.9676	55.0	55.0	0.1337	0.1337	54.97	
1,2,3,7,8,9-HxCDF	32.169	343872	1.33	1.1664	0.4981	0.4981	0.0769	0.0769		
A Non-2,3,7,8-sub-HxCDF	30.338	2377175	1.19	1.1363	3.114	3.114	0.0903	1.534		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					36.8	36.8	0.0923	0.0923		
* 13C-1,2,3,7,8,9-HxCDD	31.969	111286802	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.517	52285183	1.23	0.7334	64.1	64.1	0.1444	0.1444	64.06	
1,2,3,4,7,8-HxCDD	31.530	134996	1.33	1.0640	0.2427	0.2427	0.0296	0.0296		
D 13C-1,2,3,6,7,8-HxCDD	31.624	52378314	1.21	0.8802	53.5	53.5	0.1203	0.1203	53.47	
1,2,3,6,7,8-HxCDD	31.637	275281	1.40	1.0001	0.5255	0.5255	0.0316	0.0316		
1,2,3,7,8,9-HxCDD	31.969	540657	1.42	1.1325	0.9122	0.9122	0.0278	0.0278		
A Non-2,3,7,8-sub-HxCDD	30.525	4178060	1.22	1.0655	7.493	7.493	0.0296	4.502		
S Total HxCDD					9.173	9.173	0.0297	0.0297		
D 13C-1,2,3,4,6,7,8-HpCDF	33.615	41797021	0.44	0.7730	48.6	48.6	0.6343	0.6343	48.59	
1,2,3,4,6,7,8-HpCDF	33.627	4279725	1.05	1.4413	7.104	7.104	0.0585	0.0585		
D 13C-1,2,3,4,7,8,9-HpCDF	34.685	44617406	0.44	0.7008	57.2	57.2	0.6997	0.6997	57.21	
1,2,3,4,7,8,9-HpCDF	34.697	1554753	0.98	1.3174	2.645	2.645	0.0643	0.0643		
A Non-2,3,7,8-sub-HpCDF	34.150	1862453	1.06	1.3793	3.125	3.125	0.0613	3.125		
S Total HpCDF					12.9	12.9	0.0614	0.0614		
D 13C-1,2,3,4,6,7,8-HpCDD	34.405	38031198	0.98	0.6472	52.8	52.8	0.2262	0.2262	52.80	
1,2,3,4,6,7,8-HpCDD	34.405	7926290	1.05	1.0943	19.0	19.0	0.1588	0.1588		
A Non-2,3,7,8-sub-HpCDD	34.223	9300679	0.99	1.0943	22.3	22.3	0.1588	22.3		
S Total HpCDD					41.4	41.4	0.1588	0.1588		
D 13C-OCDD	36.713	57781411	0.87	0.4472	116.1	116.1	0.1405	0.1405	58.06	
OCDF	36.809	1679403	0.90	1.4382	4.042	4.042	0.0256	0.0256		
OCDD	36.725	96905361	0.90	1.1070	303.0	303.0	0.2429	0.2429		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d
Lims ID: 320-77214-A-3-A
Client ID: 11215702-080221-BN-SJSB090 (4-6)
Sample Type: Client
Inject. Date: 25-Aug-2021 15:50:42 ALS Bottle#: 10 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-3-A 320-77214-A-3-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:54:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:03:57

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.628	17.598	2		51379810	12249773	6284	15710	1949		a
333.9339	17.628	17.598	2		63445927	15040309	12850	32125	1170	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.114	17.099	1	0.971	43877619	11671304	15887	39717	735		
317.9389	17.114	17.099	1	0.971	56789607	15182441	22754	56885	667	0.77(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.129	17.114	1	1.001	334468586	82645970	116158	290395	711		
305.8987	17.129	17.114	1	1.001	430465720	106953904	116634	291585	917	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.738	17.076	-80	0.920	5030286	1444384	116158	290395	12		
305.8987	15.738	17.076	-80	0.920	6614962	1870364	116634	291585	16	0.76(0.65-0.89)	
303.9016	16.010	17.076	-64	0.936	9392412	1979878	116158	290395	17		
305.8987	16.010	17.076	-64	0.936	12217160	2620180	116634	291585	22	0.77(0.65-0.89)	
303.9016	16.237	17.076	-50	0.949	9844948	2557534	116158	290395	22		
305.8987	16.237	17.076	-50	0.949	12854469	3353046	116634	291585	29	0.77(0.65-0.89)	
303.9016	16.479	17.076	-36	0.963	14146976	3752333	116158	290395	32		
305.8987	16.479	17.076	-36	0.963	18655177	4806884	116634	291585	41	0.76(0.65-0.89)	
303.9016	16.751	17.076	-19	0.979	155104148	41260740	116158	290395	355		
305.8987	16.751	17.076	-19	0.979	198864288	53202047	116634	291585	456	0.78(0.65-0.89)	
303.9016	16.978	17.076	-6	0.992	4733642	1220473	116158	290395	11		
305.8987	16.978	17.076	-6	0.992	6102180	1589315	116634	291585	14	0.78(0.65-0.89)	
303.9016	17.552	17.076	29	1.026	22628881	5643463	116158	290395	49		
305.8987	17.552	17.076	29	1.026	29556346	7484693	116634	291585	64	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.824	17.076	45	1.042	3692100	819041	116158	290395	7		
305.8987	17.824	17.076	45	1.042	4752674	1062765	116634	291585	9	0.78(0.65-0.89)	
303.9016	18.928	17.076	111	1.106	24547963	5851322	116158	290395	50		
305.8987	18.928	17.076	111	1.106	31691494	7580806	116634	291585	65	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.824	17.794	2	1.011	23392525	6332081	6284	15710	1008		
333.9339	17.824	17.794	2	1.011	29289901	7821838	12850	32125	609	0.80(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	17.840	17.809	2	1.001	72835427	19475955	22705	56762	858		a
321.8936	17.840	17.809	2	1.001	92486205	24814688	22978	57445	1080	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.840	17.809	2	1.012	35892950	9648633	7960	19900	1212		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	18.187	17.537	39	1.020	6179756	1515081	22705	56762	67		
321.8936	18.187	17.537	39	1.020	8090950	1966194	22978	57445	86	0.76(0.65-0.89)	
319.8965	19.397	17.537	111	1.088	3264553	620751	22705	56762	27		
	Empc Correction				1155117	241747	22705	56762	11		
321.8936	19.412	17.537	112	1.089	1500153	313958	22978	57445	14	2.18(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.061	22.020	2	1.251	49290967	8935445	7676	19190	1164		
353.8970	22.061	22.020	2	1.251	31634140	5769465	5310	13275	1087	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.088	22.047	2	1.001	10729501	1977579	5189	12972	381		
341.8567	22.088	22.047	2	1.001	6617157	1203464	3773	9432	319	1.62(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.384	23.343	2	1.327	55442463	9753472	7676	19190	1271		
353.8970	23.384	23.343	2	1.327	35260683	6087823	5310	13275	1146	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.397	23.370	2	1.001	6823357	1203499	5189	12972	232		
341.8567	23.397	23.370	2	1.001	4216340	748319	3773	9432	198	1.62(1.32-1.78)	
A F1 PeCDFs											RQa
339.8597	19.231	19.851	-37	0.872	69022	14382	464	1160	31		a
	Empc Correction				51974	13762	464	1160	30		
341.8567	19.231	19.851	-37	0.872	33532	8879	829	2072	11	2.06(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											
339.8597	20.765	23.067	-138	0.941	4054910	807728	5189	12972	156		
341.8567	20.765	23.067	-138	0.941	2544745	508728	3773	9432	135	1.59(1.32-1.78)	
339.8597	21.583	23.067	-89	0.978	335990	46150	5189	12972	9		
341.8567	21.570	23.067	-90	0.978	248592	32089	3773	9432	9	1.35(1.32-1.78)	
339.8597	21.952	23.067	-67	0.995	771492	167127	5189	12972	32		
341.8567	21.965	23.067	-66	0.996	499241	107887	3773	9432	29	1.55(1.32-1.78)	
339.8597	22.593	23.067	-28	1.024	2730637	502092	5189	12972	97		
341.8567	22.593	23.067	-28	1.024	1690723	311044	3773	9432	82	1.62(1.32-1.78)	
339.8597	23.738	23.067	40	1.076	1569202	238347	5189	12972	46		
341.8567	23.738	23.067	40	1.076	1010221	156351	3773	9432	41	1.55(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	25.293	23.067	133	1.146	437270	66634	5189	12972	13		
341.8567	25.306	23.067	134	1.147	274894	47146	3773	9432	12	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.079	24.052	2	1.366	33456689	5424826	2971	7427	1826		
369.8919	24.079	24.052	2	1.366	20355416	3356329	2128	5320	1577	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.106	24.079	2	1.001	640726	103519	1310	3275	79		
357.8516	24.106	24.079	2	1.001	421878	70871	789	1972	90	1.52(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.693	23.696	-120	0.901	146210	27154	1310	3275	21		
357.8516	21.693	23.696	-120	0.901	91150	19230	789	1972	24	1.60(1.32-1.78)	
355.8546	22.347	23.696	-81	0.928	49308	11449	1310	3275	9		
357.8516	22.375	23.696	-79	0.929	31306	5633	789	1972	7	1.58(1.32-1.78)	
355.8546	22.647	23.696	-63	0.941	70192	12846	1310	3275	10		
357.8516	22.647	23.696	-63	0.941	51494	9131	789	1972	12	1.36(1.32-1.78)	
355.8546	23.138	23.696	-33	0.961	104013	13956	1310	3275	11		
357.8516	23.138	23.696	-33	0.961	61533	10130	789	1972	13	1.69(1.32-1.78)	
355.8546	25.088	23.696	83	1.042	35917	5737	1310	3275	4		
	Empc Correction				22778	5141	1310	3275	4		
357.8516	25.088	23.696	83	1.042	14696	3317	789	1972	4	2.44(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.212	30.186	2	0.945	25852455	4669729	5876	14690	795		
385.8610	30.212	30.186	2	0.945	50020391	8966842	10498	26245	854	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.239	30.213	2	1.001	11848439	2150190	3174	7935	677		
375.8178	30.226	30.213	1	1.000	9574094	1740863	3060	7650	569	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.412	30.399	1	0.951	23387225	4390914	5876	14690	747		
385.8610	30.412	30.399	1	0.951	45012813	8415842	10498	26245	802	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.439	30.412	2	1.001	2750164	529635	3174	7935	167		
375.8178	30.439	30.412	2	1.001	2200627	425132	3060	7650	139	1.25(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.317	31.291	2	0.980	22335033	5841521	5876	14690	994		
385.8610	31.317	31.291	2	0.980	42924345	11071518	10498	26245	1055	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.331	31.317	1	1.000	317182	78126	3174	7935	25		
375.8178	31.331	31.317	1	1.000	245266	64525	3060	7650	21	1.29(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.156	32.143	1	1.006	20078142	5914199	5876	14690	1007		
385.8610	32.156	32.143	1	1.006	39108256	11460307	10498	26245	1092	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.169	32.156	1	1.000	196168	60908	3174	7935	19		
375.8178	32.156	32.156	0	1.000	147704	50210	3060	7650	16	1.33(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
373.8208	29.267	30.338	-64	0.969	458620	59114	3174	7935	19		
375.8178	29.241	30.338	-66	0.968	362584	48602	3060	7650	16	1.26(1.05-1.43)	
373.8208	31.211	30.338	52	1.033	214320	57064	3174	7935	18		
375.8178	31.211	30.338	52	1.033	170784	41893	3060	7650	14	1.25(1.05-1.43)	
373.8208	32.249	30.338	114	1.067	620370	191005	3174	7935	60		
375.8178	32.249	30.338	114	1.067	550497	172220	3060	7650	56	1.13(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.969	31.956	1		61438425	17440592	7716	19290	2260		
403.8529	31.956	31.956	0		49848377	14192369	5680	14200	2499	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.517	31.504	1	0.986	28847216	8154633	7716	19290	1057		
403.8529	31.517	31.504	1	0.986	23437967	6582900	5680	14200	1159	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.530	31.517	1	1.000	77142	22869	816	2040	28		
391.8127	31.530	31.517	1	1.000	57854	16423	1042	2605	16	1.33(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.624	31.610	1	0.989	28722919	8103951	7716	19290	1050		
403.8529	31.624	31.610	1	0.989	23655395	6617330	5680	14200	1165	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.637	31.624	1	1.000	160729	44700	816	2040	55		
391.8127	31.637	31.624	1	1.000	114552	33384	1042	2605	32	1.40(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.969	31.969	0	1.014	317222	74651	816	2040	91		
391.8127	31.969	31.969	0	1.014	223435	56252	1042	2605	54	1.42(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.094	30.525	-86	0.920	1372587	173336	816	2040	212		
391.8127	29.094	30.525	-86	0.920	1137650	141051	1042	2605	135	1.21(1.05-1.43)	
389.8157	30.306	30.525	-13	0.958	85959	14451	816	2040	18		
391.8127	30.306	30.525	-13	0.958	65274	10497	1042	2605	10	1.32(1.05-1.43)	
389.8157	30.718	30.525	12	0.971	781074	155998	816	2040	191		
391.8127	30.718	30.525	12	0.971	629200	121558	1042	2605	117	1.24(1.05-1.43)	
389.8157	30.931	30.525	24	0.978	58331	13093	816	2040	16		
391.8127	30.945	30.525	25	0.979	47985	12266	1042	2605	12	1.22(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.615	33.603	1	1.051	12745198	4895343	17979	44947	272		
419.8220	33.615	33.603	1	1.051	29051823	11076741	44063	110157	251	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.627	33.615	1	1.000	2190185	801499	3847	9617	208		
409.7789	33.627	33.615	1	1.000	2089540	769061	1538	3845	500	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.685	34.672	1	1.085	13548862	4826845	17979	44947	268		
419.8220	34.685	34.672	1	1.085	31068544	11069525	44063	110157	251	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.697	34.685	1	1.000	770834	269363	3847	9617	70		
409.7789	34.697	34.685	1	1.000	783919	267315	1538	3845	174	0.98(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	33.919	34.150	-14	1.009	959567	362448	3847	9617	94		
409.7789	33.919	34.150	-14	1.009	902886	344825	1538	3845	224	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.405	34.393	1	1.076	18852171	6796793	9177	22942	741		
437.8140	34.405	34.393	1	1.076	19179027	6674293	9348	23370	714	0.98(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	4059235	1417459	4386	10965	323		
425.7737	34.405	34.405	0	1.000	3867055	1394932	4977	12442	280	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.870	34.223	-21	0.984	4631637	1746757	4386	10965	398		
425.7737	33.870	34.223	-21	0.984	4669042	1673618	4977	12442	336	0.99(0.88-1.20)	
13C-OCDD											
469.7779	36.713	36.701	1	1.148	26886139	8440226	4953	12382	1704		
471.7750	36.713	36.701	1	1.148	30895272	9620631	2995	7487	3212	0.87(0.76-1.02)	
OCDF											
441.7428	36.809	36.797	1	1.003	794656	247017	711	1777	347		
443.7399	36.809	36.797	1	1.003	884747	276745	618	1545	448	0.90(0.76-1.02)	
OCDD											
457.7377	36.725	36.713	1	1.000	45790702	14043965	4353	10882	3226		
459.7348	36.713	36.713	0	1.000	51114659	15484672	5362	13405	2888	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d
Lims ID: 320-77214-A-3-A
Client ID: 11215702-080221-BN-SJSB090 (4-6)
Inject. Date: 25-Aug-2021 15:50:42 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 9

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	100667226	26853745

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	100667226	26853745

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.738	5030286	1444384	6614962	1870364	11.3	0.76	
16.010	9392412	1979878	12217160	2620180	21.0	0.77	
16.237	9844948	2557534	12854469	3353046	22.0	0.77	
16.479	14146976	3752333	18655177	4806884	31.8	0.76	
16.751	155104148	41260740	198864288	53202047	343.4	0.78	
16.978	4733642	1220473	6102180	1589315	10.5	0.78	
17.552	22628881	5643463	29556346	7484693	50.6	0.77	
17.824	3692100	819041	4752674	1062765	8.19	0.78	
18.928	24547963	5851322	31691494	7580806	54.6	0.77	
Signal Totals:							
	249121356	64529168	321308750	83570100			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	570430106	148099268				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 553.417 = (570430106 * 100.000) / (100667226 * 1.024)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d
Lims ID: 320-77214-A-3-A
Client ID: 11215702-080221-BN-SJSB090 (4-6)
Inject. Date: 25-Aug-2021 15:50:42 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 9

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	52682426	14153919

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	52682426	14153919

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.187	6179756	1515081	8090950	1966194	21.6	0.76	
19.397	3264553	620751	1500153	313958	7.21	2.18	RQ
19.397	1155117	241747	1500153	313958	4.02		Empc Correction
Signal Totals:							
	7334873	1756828	9591103	2280152			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	19035412	4415984				0.98	RQ
	16925976	4036980					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 28.811 = (19035412 * 100.000) / (52682426 * 1.254)
Empc Amount: 25.618 = (16925976 * 100.000) / (52682426 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d
Lims ID: 320-77214-A-3-A
Client ID: 11215702-080221-BN-SJSB090 (4-6)
Inject. Date: 25-Aug-2021 15:50:42 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 9

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	80925107	14704910
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	90703146	15841295

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	85814126	15273102

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.231	69022	14382	33532	8879	0.1149	2.06	RQa
19.231	51974	13762	33532	8879	0.0958		Empc Correction
Signal Totals:							
	51974	13762	33532	8879			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	102554	23261				2.06	RQa
	85506	22641					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1149 = (102554 * 100.000) / (85814126 * 1.040)
Empc Amount: 0.0958 = (85506 * 100.000) / (85814126 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d
Lims ID: 320-77214-A-3-A
Client ID: 11215702-080221-BN-SJSB090 (4-6)
Inject. Date: 25-Aug-2021 15:50:42 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 9

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	80925107	14704910
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	90703146	15841295

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	85814126	15273102

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.765	4054910	807728	2544745	508728	7.40	1.59	
21.583	335990	46150	248592	32089	0.6552	1.35	
21.952	771492	167127	499241	107887	1.42	1.55	
22.593	2730637	502092	1690723	311044	4.96	1.62	
23.738	1569202	238347	1010221	156351	2.89	1.55	
25.293	437270	66634	274894	47146	0.7981	1.59	
Signal Totals:							
	9899501	1828078	6268416	1163245			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	16167917	2991323				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 18.120 = (16167917 * 100.000) / (85814126 * 1.040)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Lims ID:	320-77214-A-3-A		
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Inject. Date:	25-Aug-2021 15:50:42	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	9

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	53812105	8781155

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	53812105	8781155

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.693	146210	27154	91150	19230	0.4207	1.60	
22.347	49308	11449	31306	5633	0.1429	1.58	
22.647	70192	12846	51494	9131	0.2157	1.36	
23.138	104013	13956	61533	10130	0.2934	1.69	
25.088	35917	5737	14696	3317	0.0897	2.44	RQ
25.088	22778	5141	14696	3317	0.0664		Empc Correction
Signal Totals:							
	392501	70546	250179	47441			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	655819	118583				1.62	RQ
	642680	117987					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.162 = (655819 * 100.000) / (53812105 * 1.048)

Empc Amount: 1.139 = (642680 * 100.000) / (53812105 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d
Lims ID: 320-77214-A-3-A
Client ID: 11215702-080221-BN-SJSB090 (4-6)
Inject. Date: 25-Aug-2021 15:50:42 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 9

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	75872846	13636571
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	68400038	12806756
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	65259378	16913039
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	59186398	17374506

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	67179665	15182718

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.267	458620	59114	362584	48602	1.08	1.26	
31.211	214320	57064	170784	41893	0.5045	1.25	
32.249	620370	191005	550497	172220	1.53	1.13	
Signal Totals:							
	1293310	307183	1083865	262715			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2377175	569898				1.19	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.114 = (2377175 * 100.000) / (67179665 * 1.136)

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d
Lims ID: 320-77214-A-3-A
Client ID: 11215702-080221-BN-SJSB090 (4-6)
Inject. Date: 25-Aug-2021 15:50:42 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 9

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	52285183	14737533
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	52378314	14721281
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	52331748	14729407

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.094	1372587	173336	1137650	141051	4.50	1.21	
30.306	85959	14451	65274	10497	0.2712	1.32	
30.718	781074	155998	629200	121558	2.53	1.24	
30.931	58331	13093	47985	12266	0.1907	1.22	
Signal Totals:							
	2297951	356878	1880109	285372			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4178060	642250				1.22	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.493 = (4178060 * 100.000) / (52331748 * 1.066)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d
Lims ID: 320-77214-A-3-A
Client ID: 11215702-080221-BN-SJSB090 (4-6)
Inject. Date: 25-Aug-2021 15:50:42 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 9

Non-2,3,7,8-sub-HpCDF, RT: 34.150

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	41797021	15972084
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	44617406	15896370

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	43207213	15934227

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
33.919	959567	362448	902886	344825	3.13	1.06	
Signal Totals:							
	959567	362448	902886	344825			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1862453	707273				1.06	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.125 = (1862453 * 100.000) / (43207213 * 1.379)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d
Lims ID: 320-77214-A-3-A
Client ID: 11215702-080221-BN-SJSB090 (4-6)
Inject. Date: 25-Aug-2021 15:50:42 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 9

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	38031198	13471086

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	38031198	13471086

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.870	4631637	1746757	4669042	1673618	22.3	0.99	
Signal Totals:							
	4631637	1746757	4669042	1673618			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9300679	3420375				0.99	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 22.348 = (9300679 * 100.000) / (38031198 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d				
Injection Date:	25-Aug-2021 15:50:42	Instrument ID:	10D5		
Lims ID:	320-77214-A-3-A	Lab Sample ID:	320-77214-3		
Client ID:	11215702-080221-BN-SJSB090 (4-6)				
Operator ID:	SMA	ALS Bottle#:	10	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 17.73
Area: 773549
Amount: 2.751191
Amount Units: pg/ul

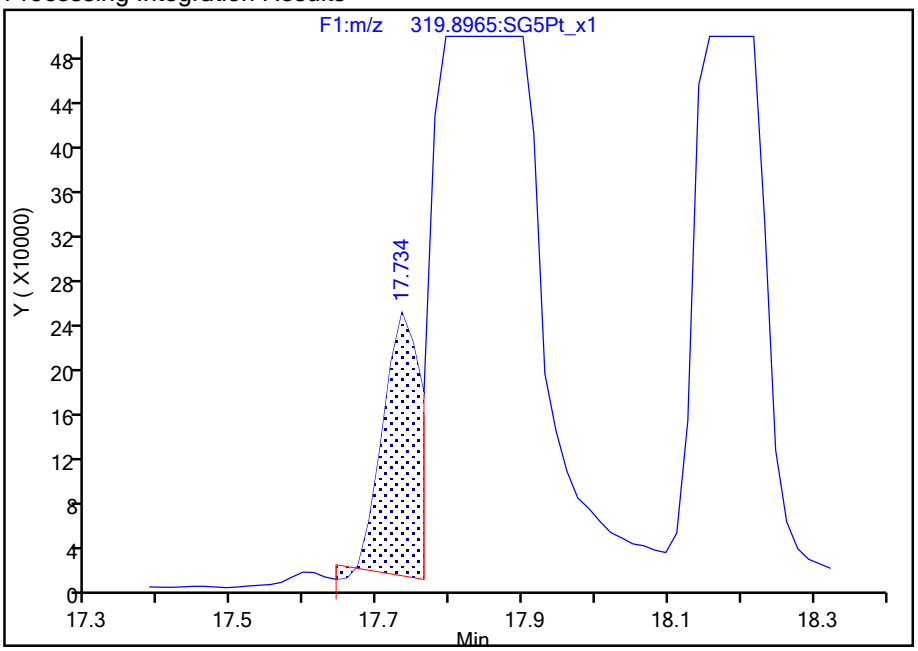

Manual Integration Results

RT: 17.84
Area: 72835427
Amount: 250.2217
Amount Units: pg/ul

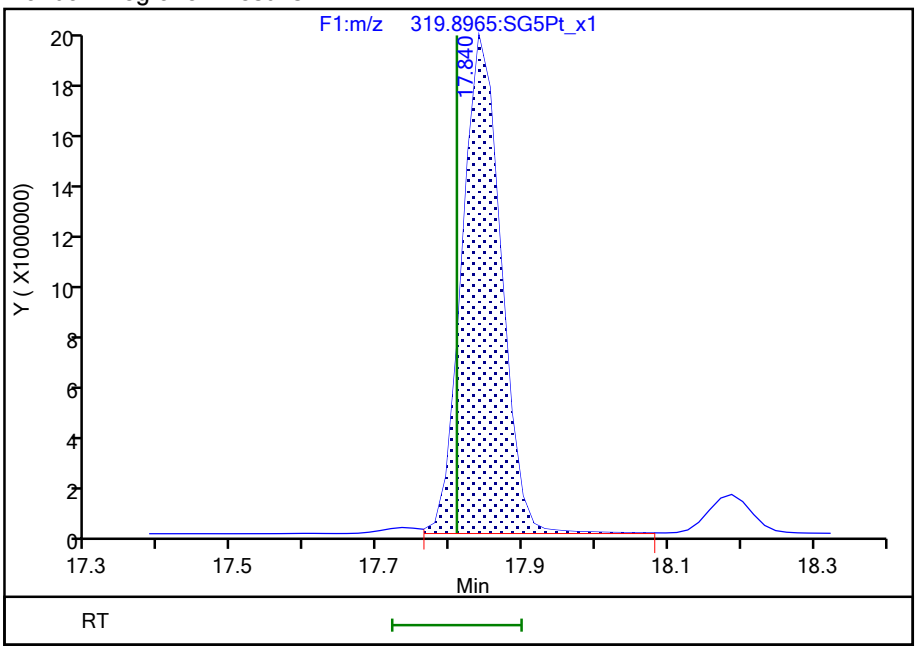

Reviewer: bennettd, 26-Aug-2021 10:03:37

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

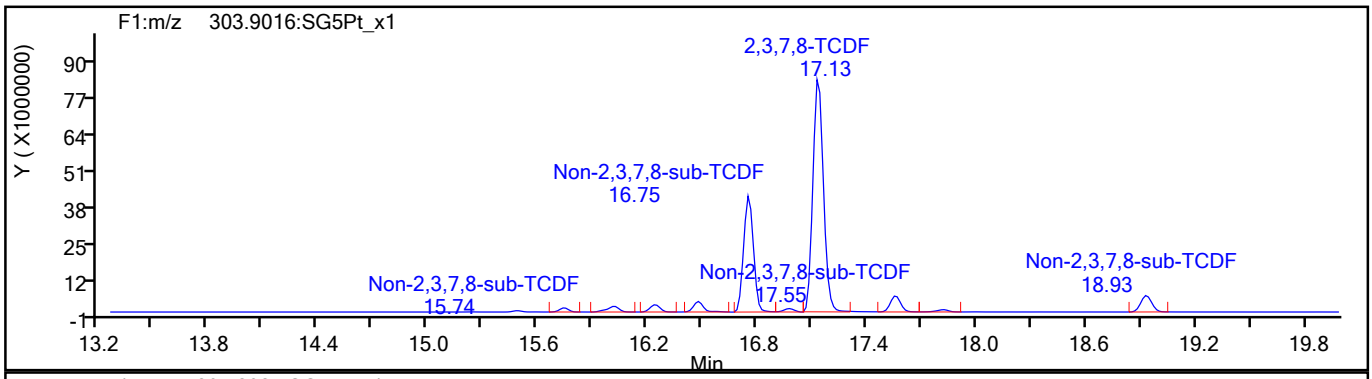

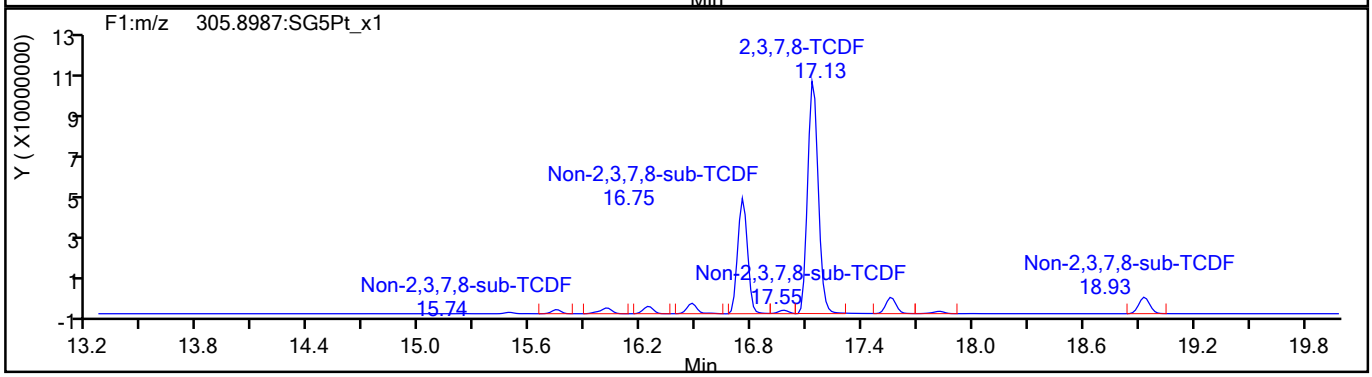

TCDF Standards

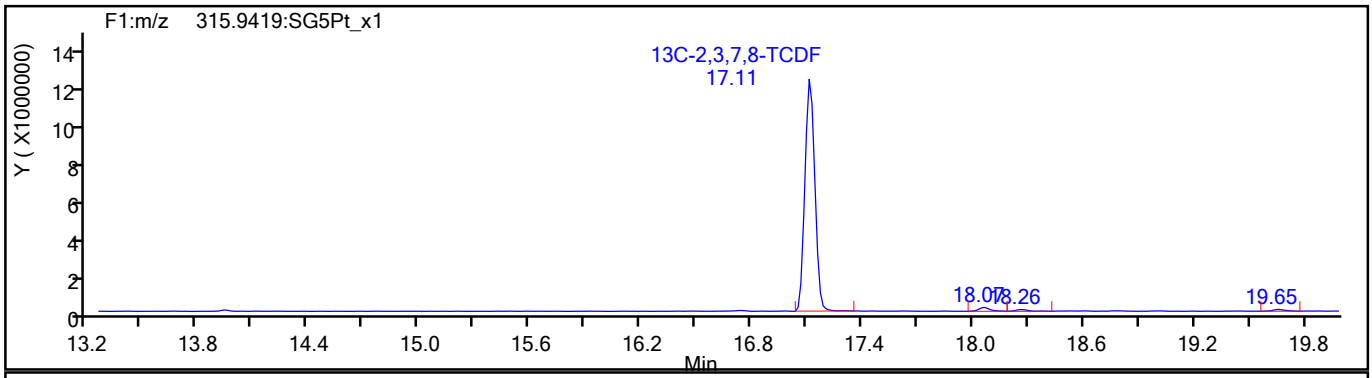

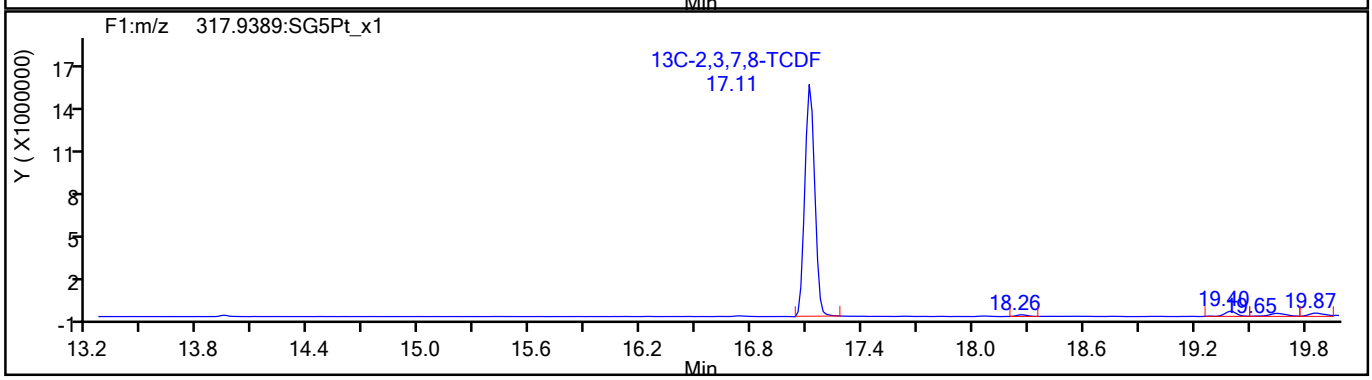

791006

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

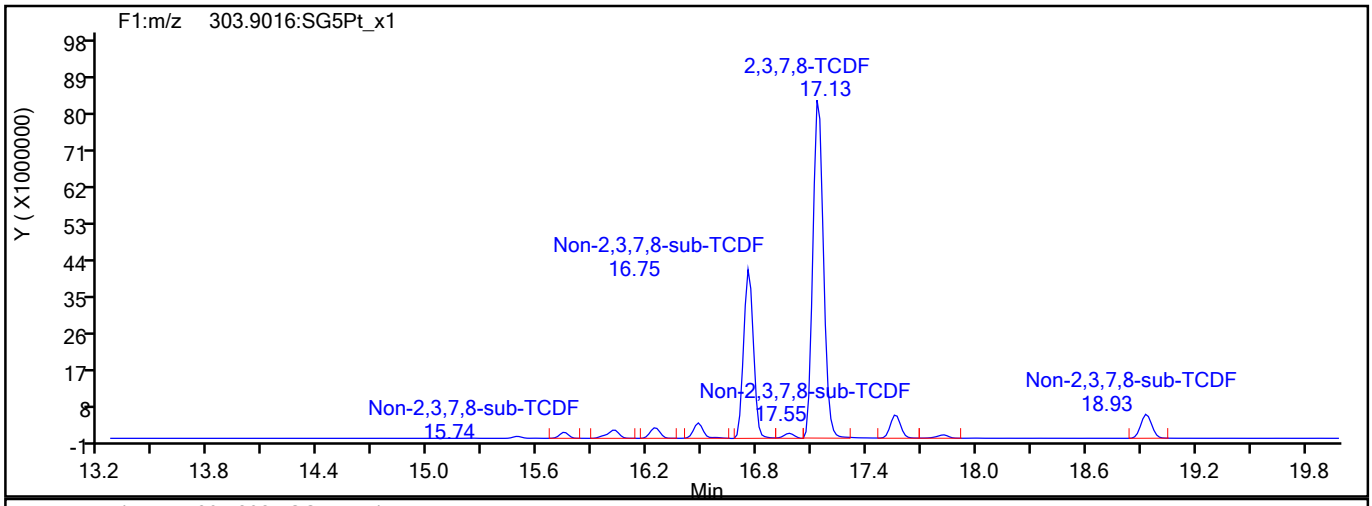

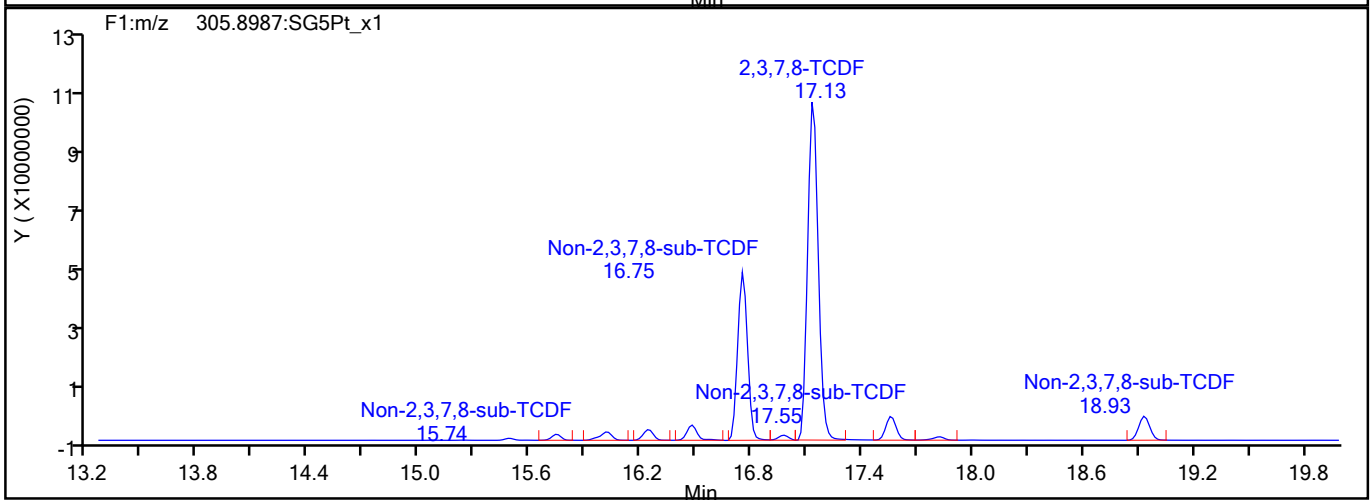

TCDF Interference Mass

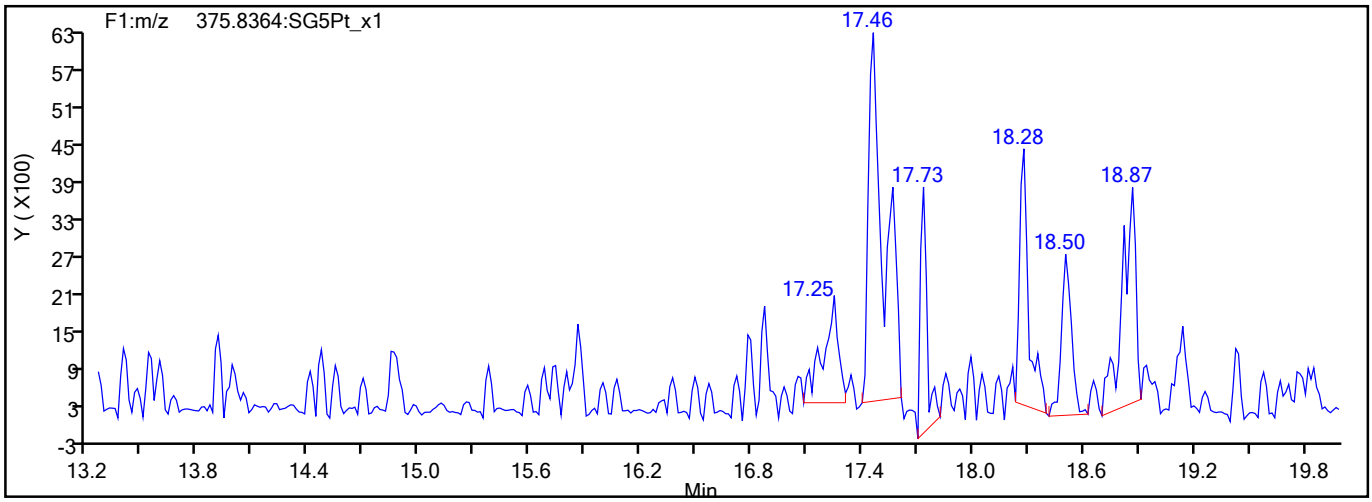

791007

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

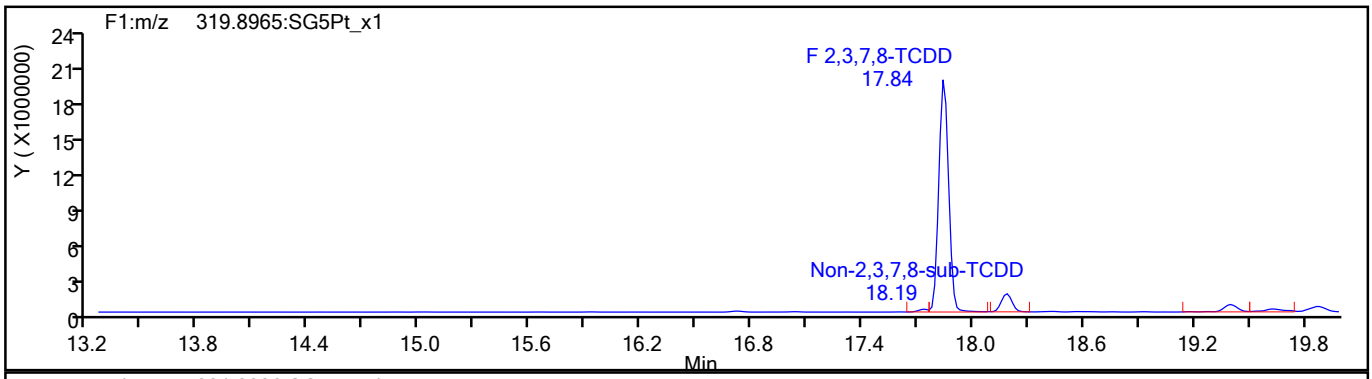

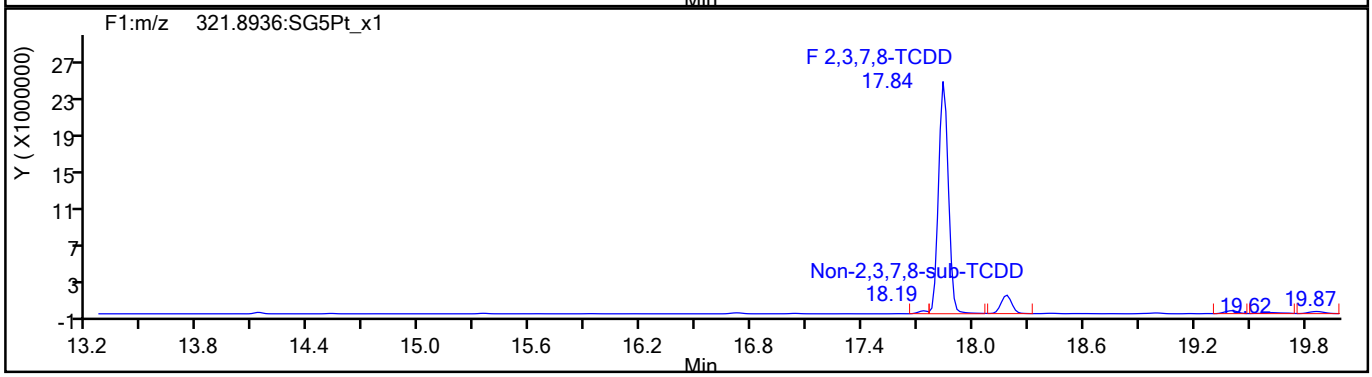

TCDD Standards

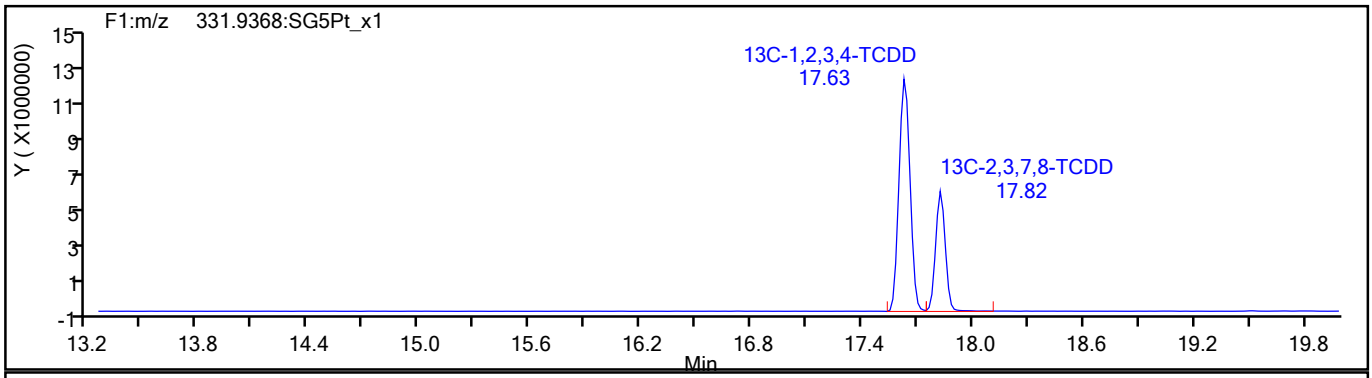

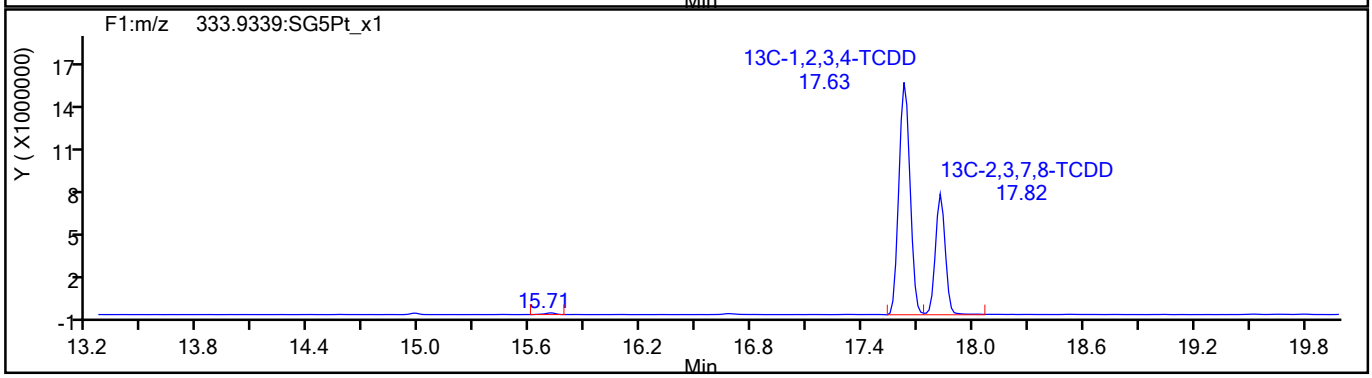

791008

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

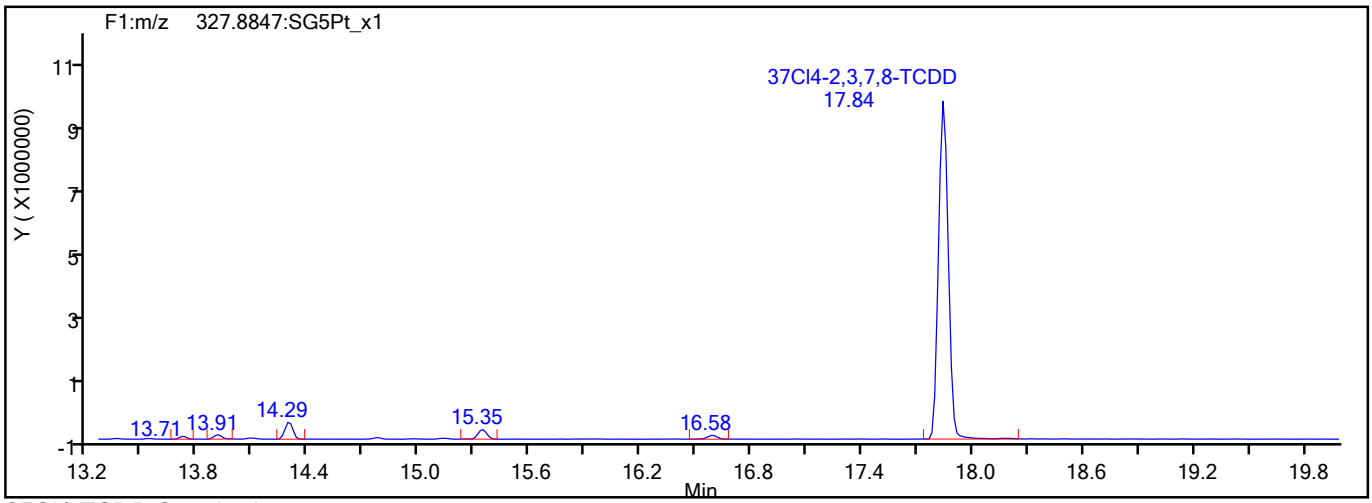

37Cl4-TCDD Standards

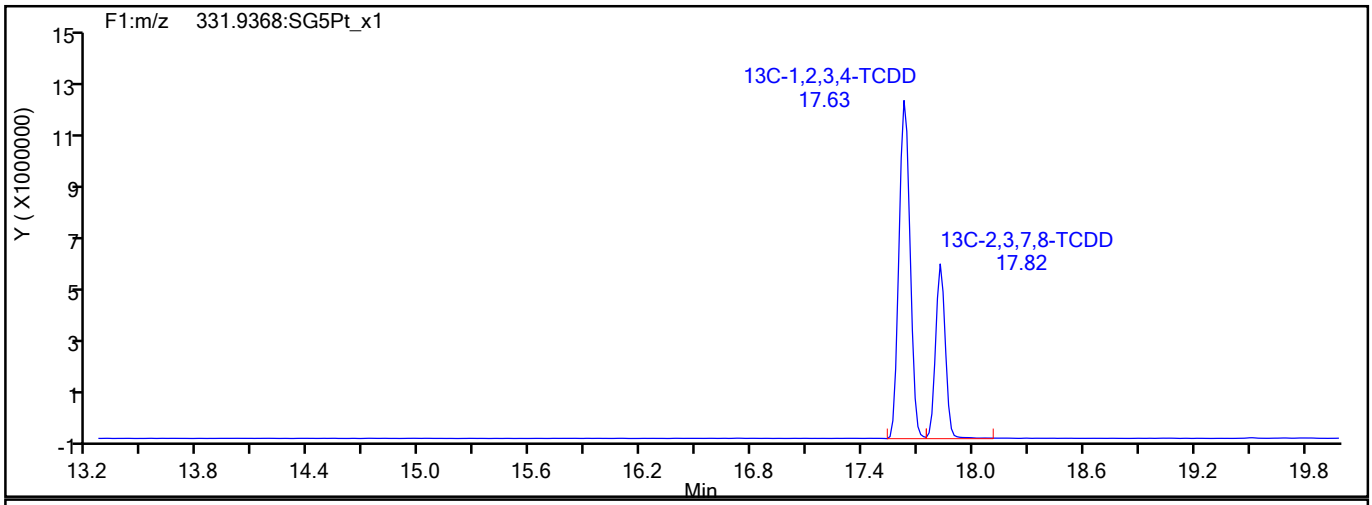

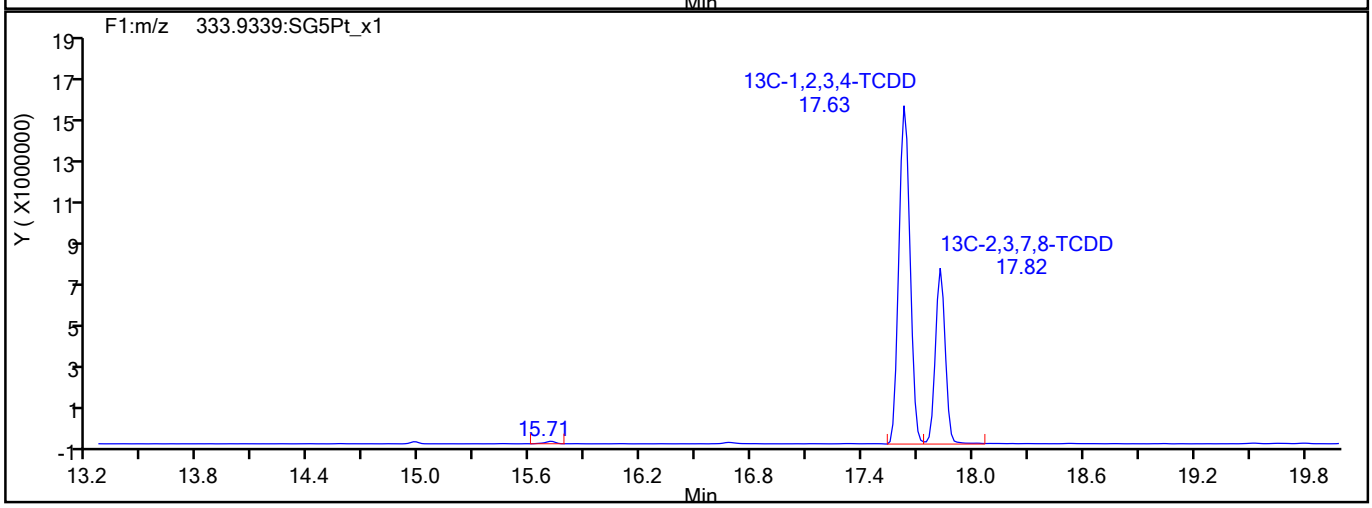

791009

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

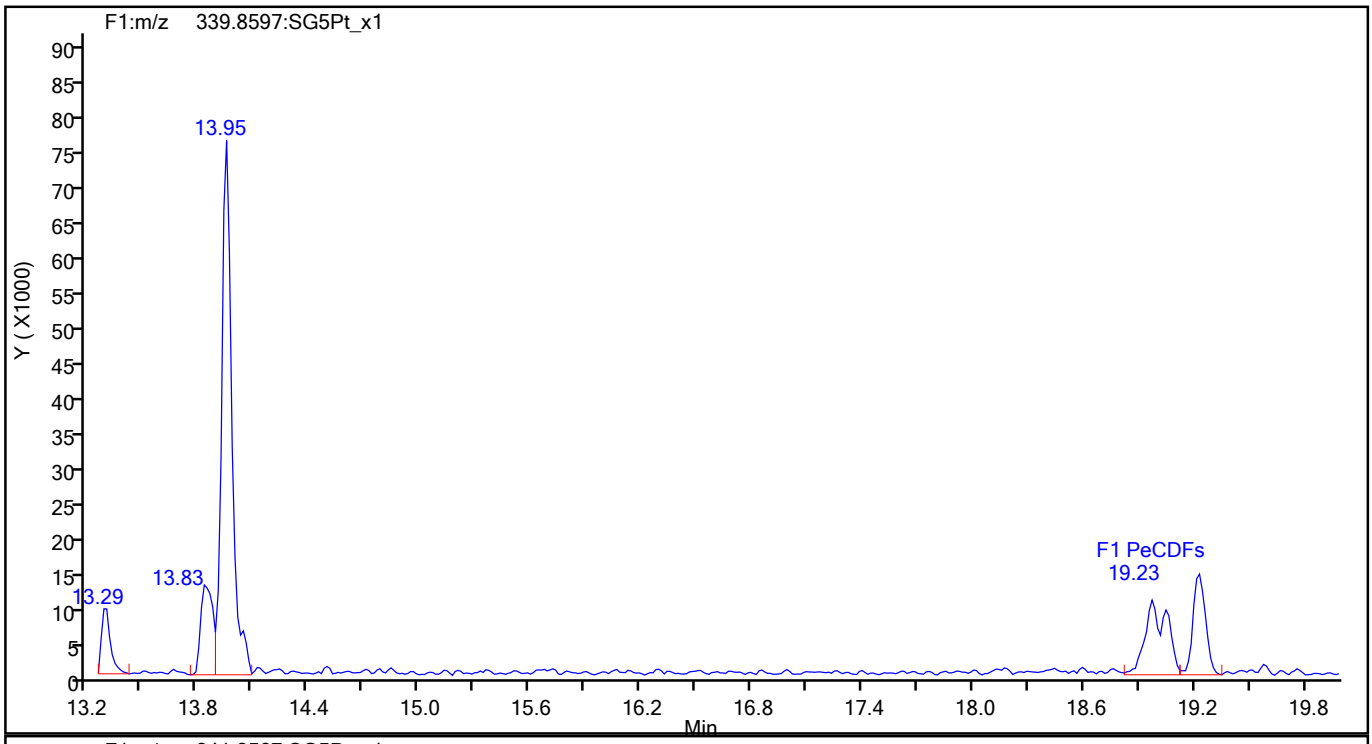

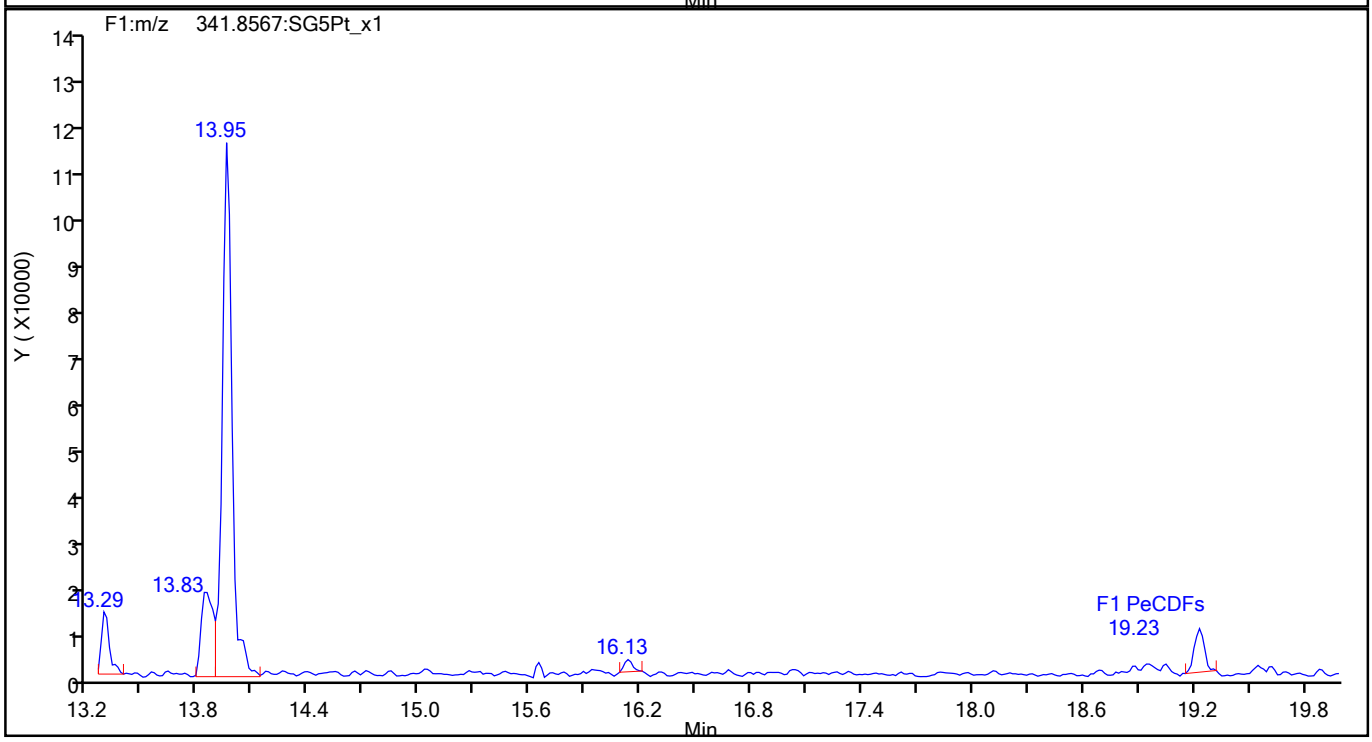

791010

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

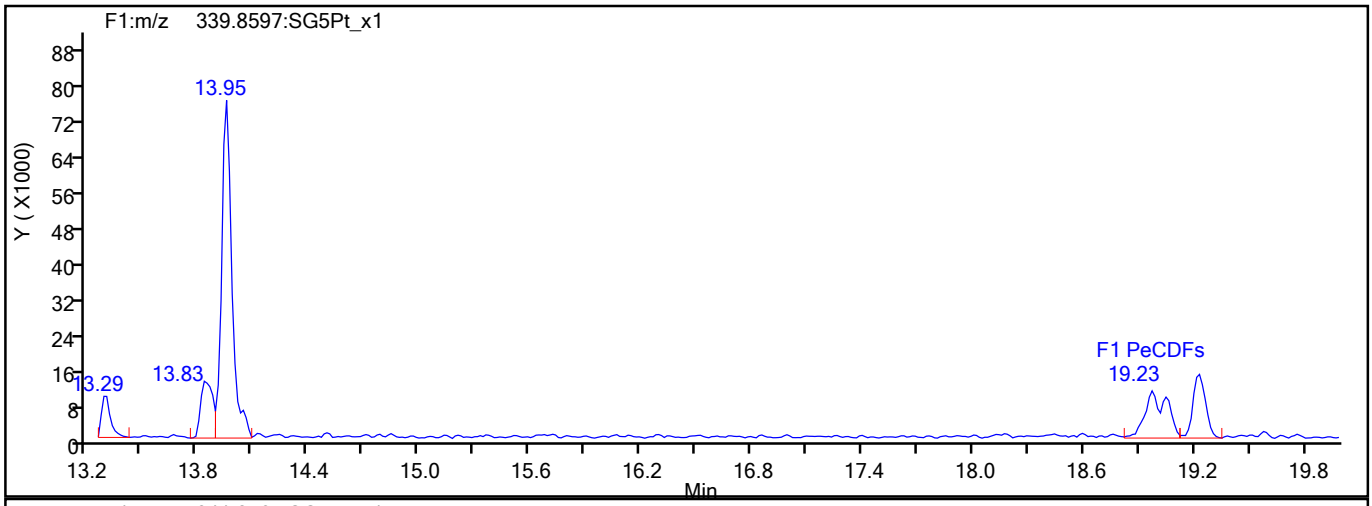

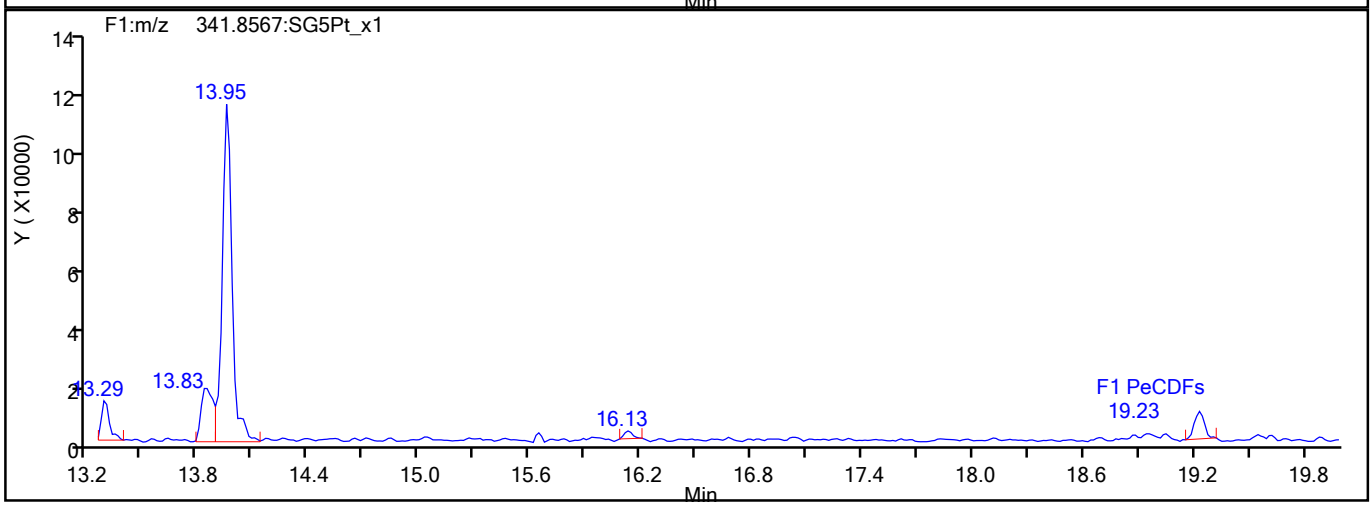

F1 PeCDFs Interference Mass

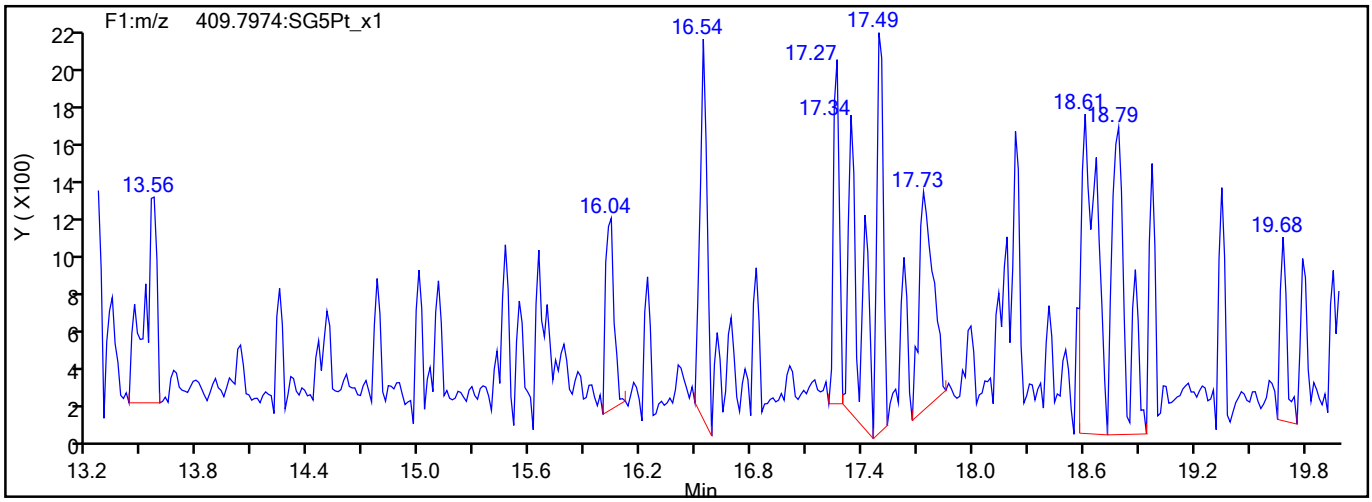

791011

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

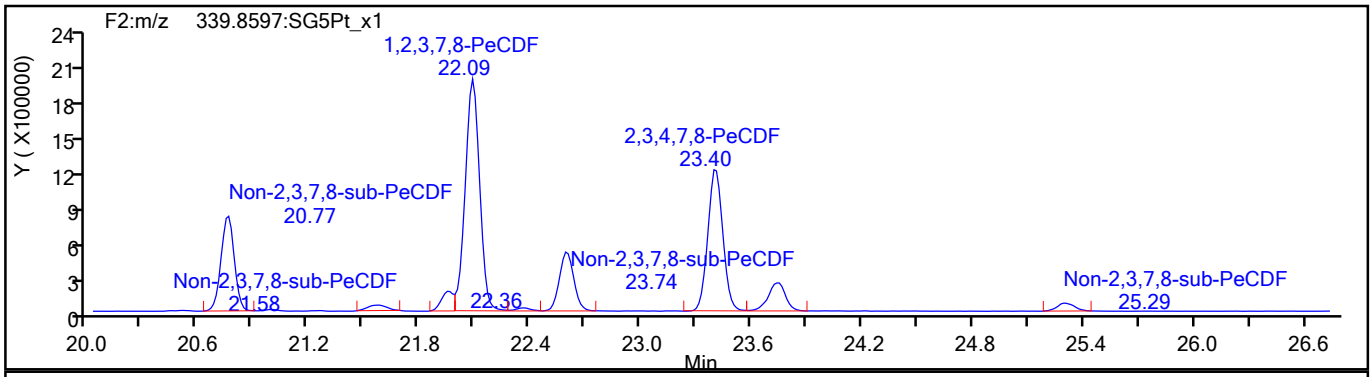

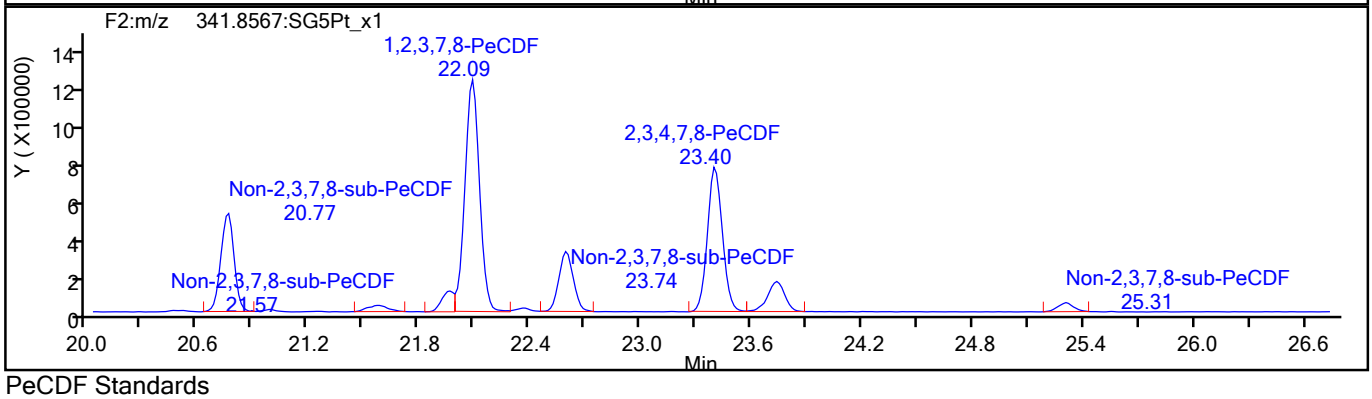

PeCDF Standards

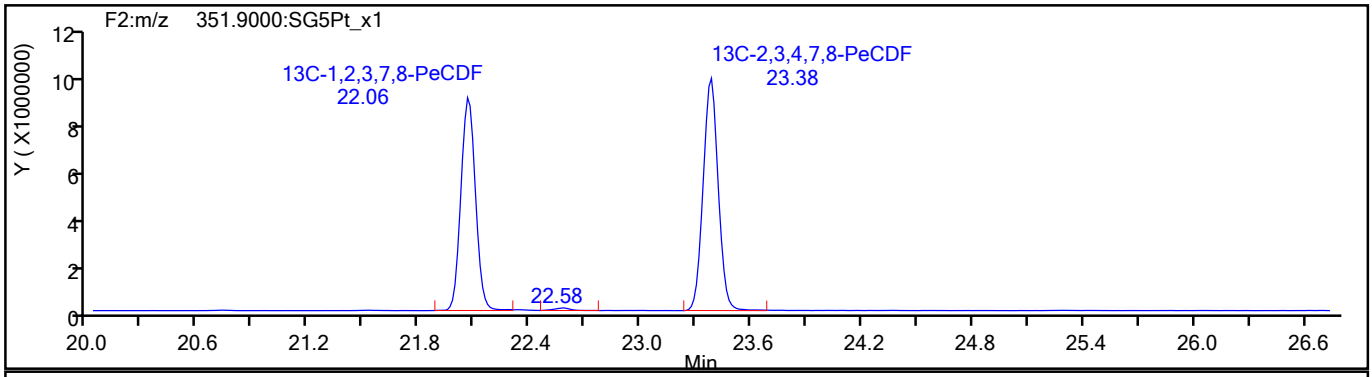

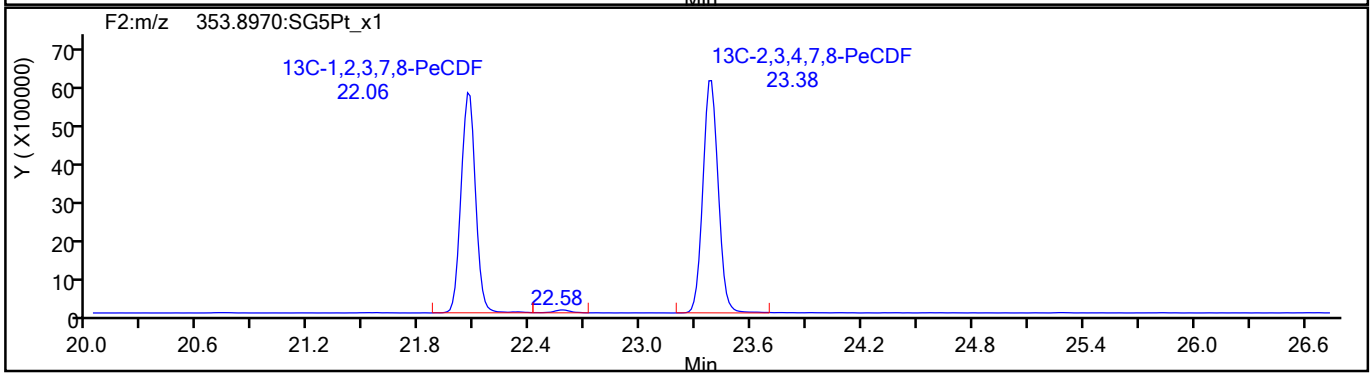

791012

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

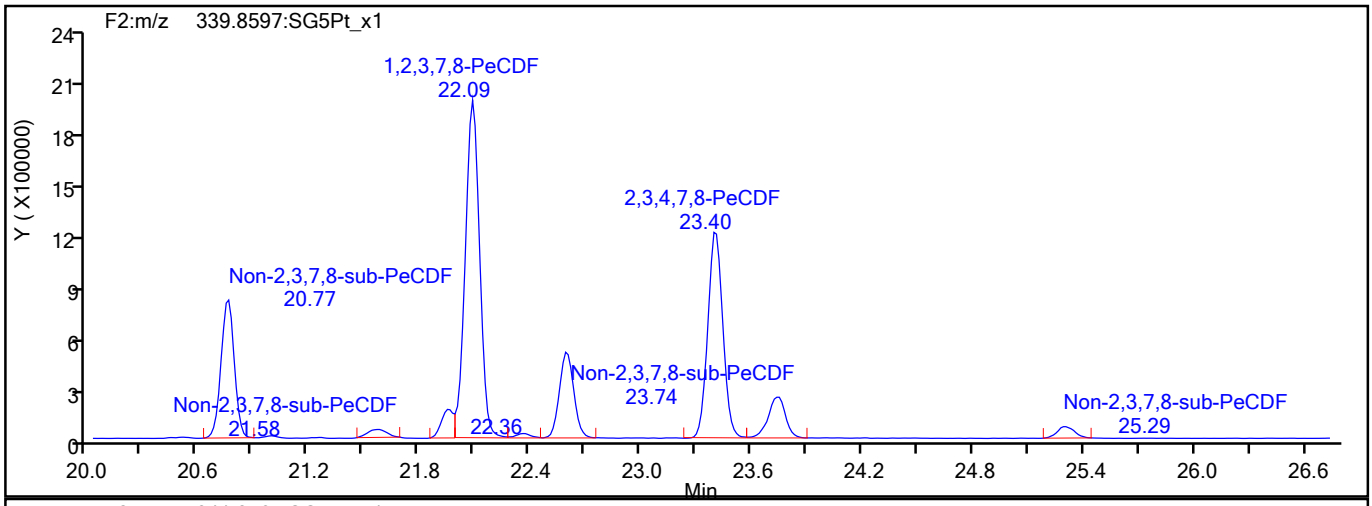

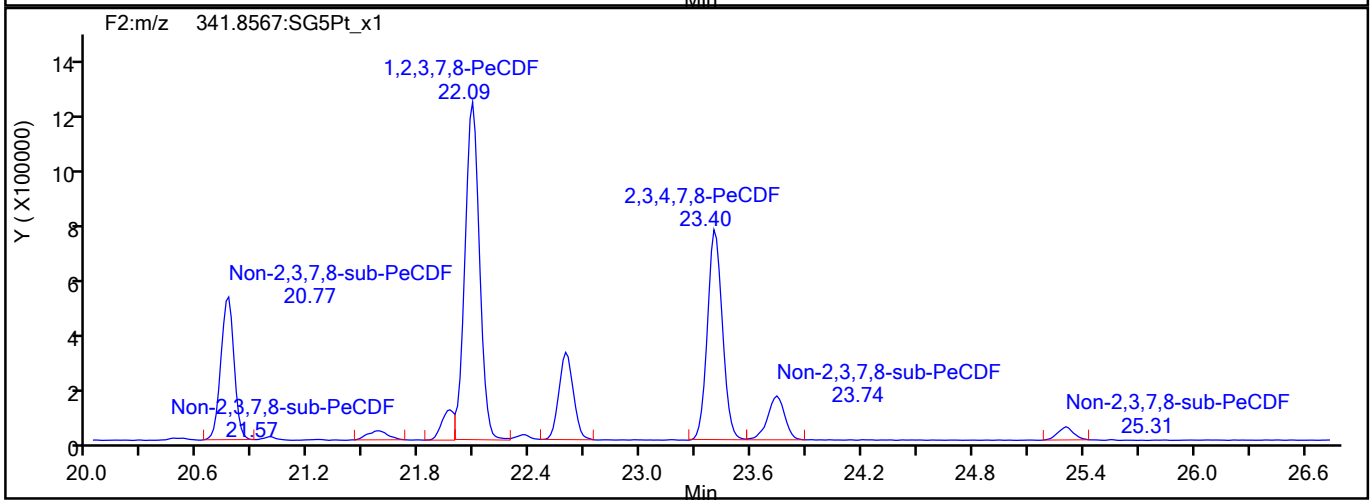

PeCDF Interference Mass

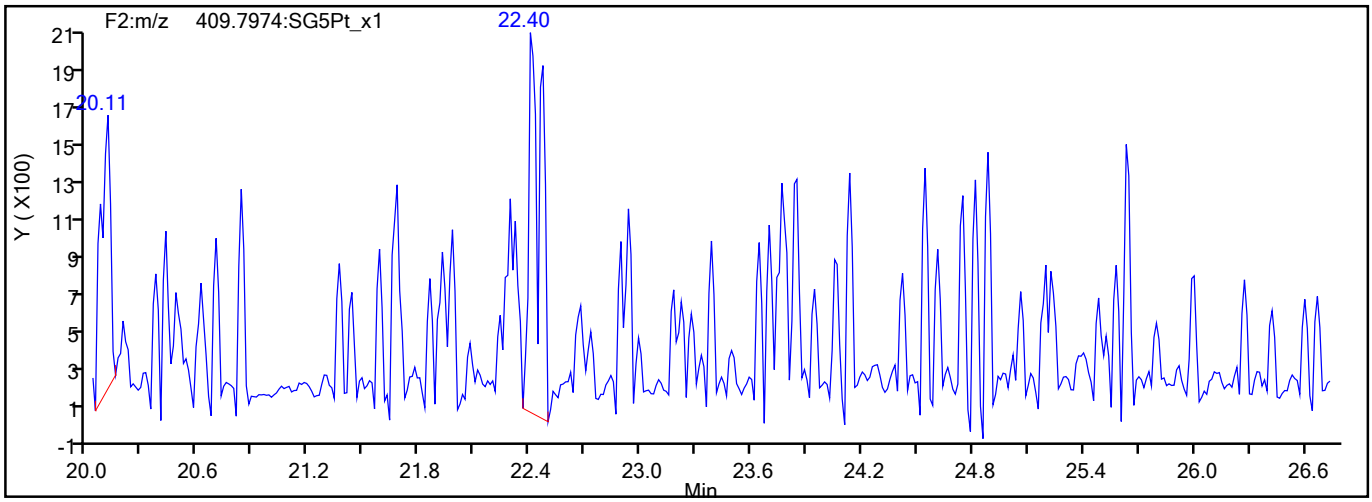

791013

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

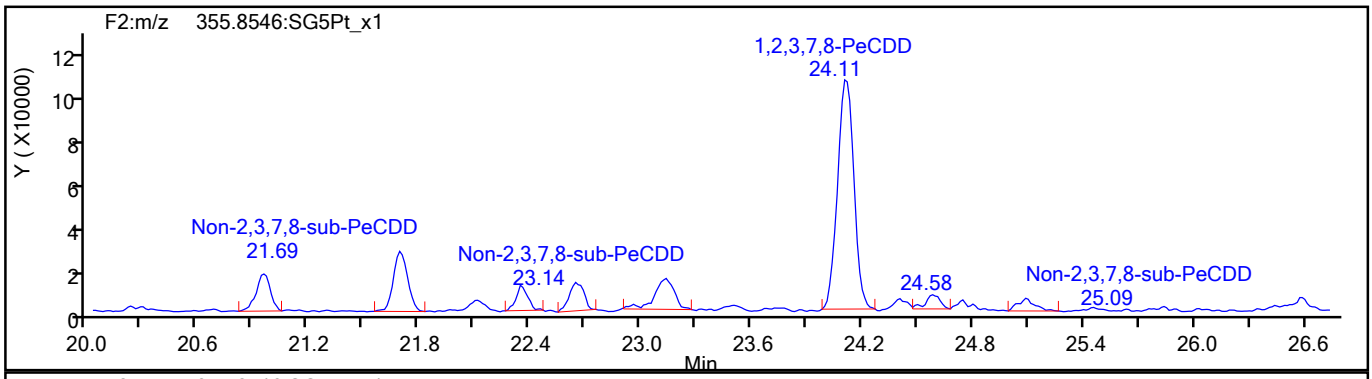

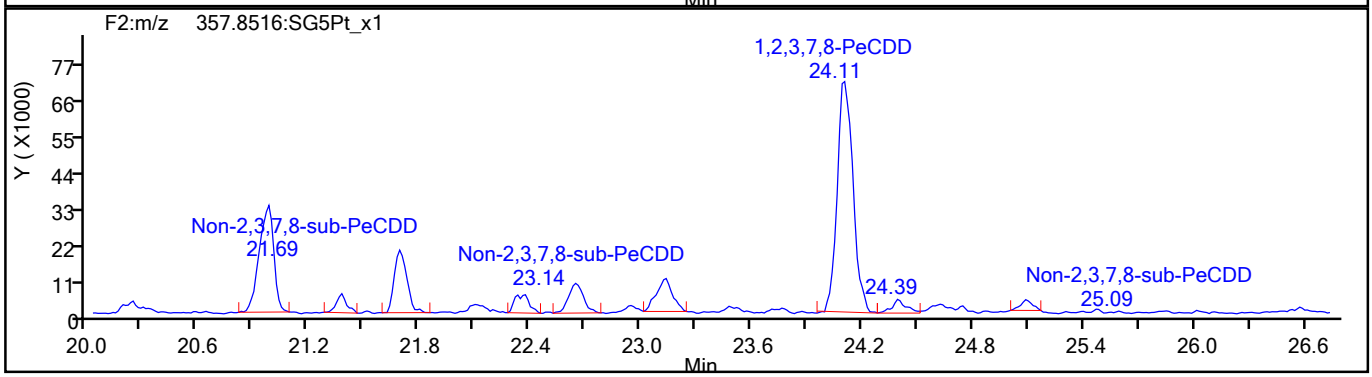

PeCDD Standards

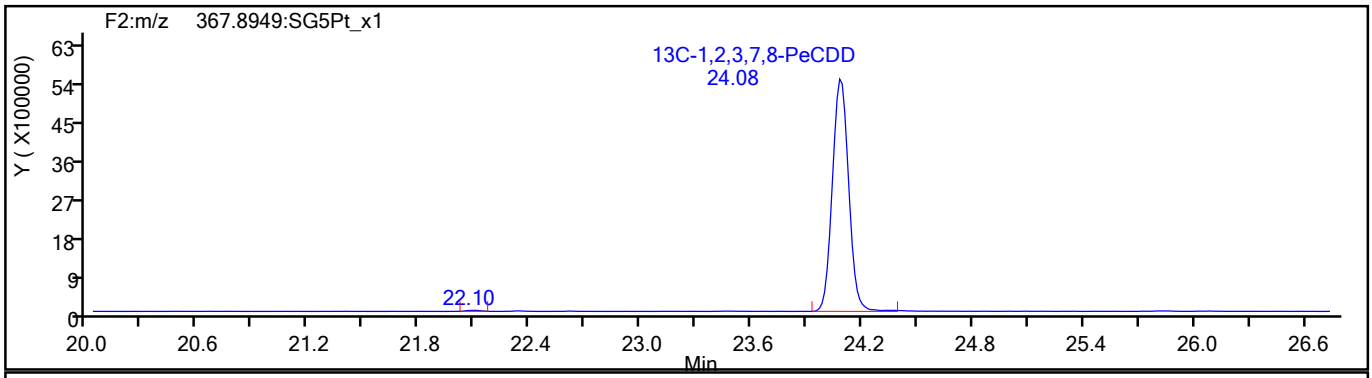

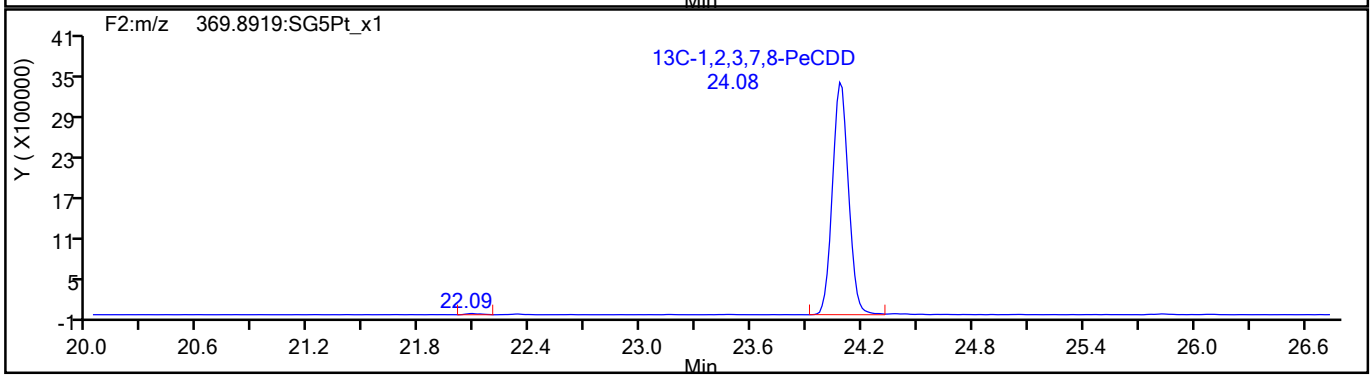

791014

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

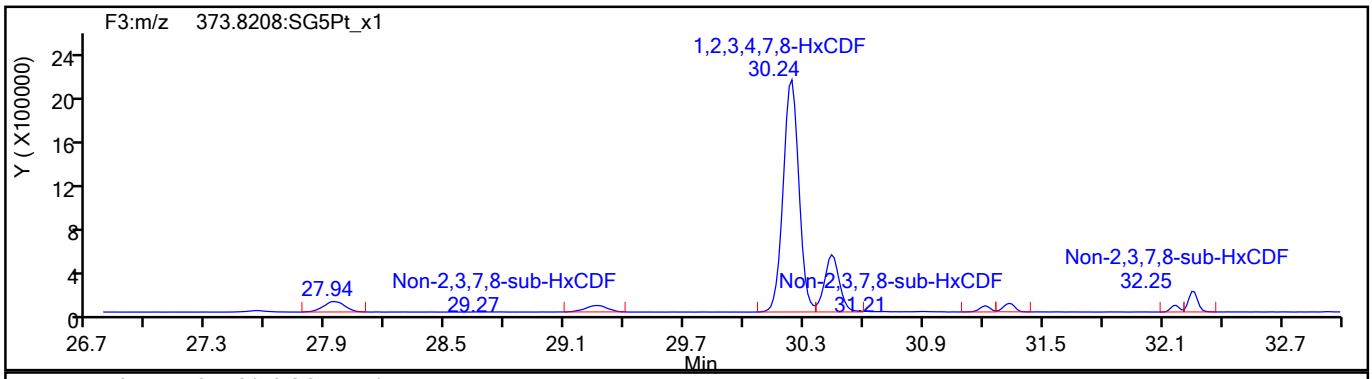

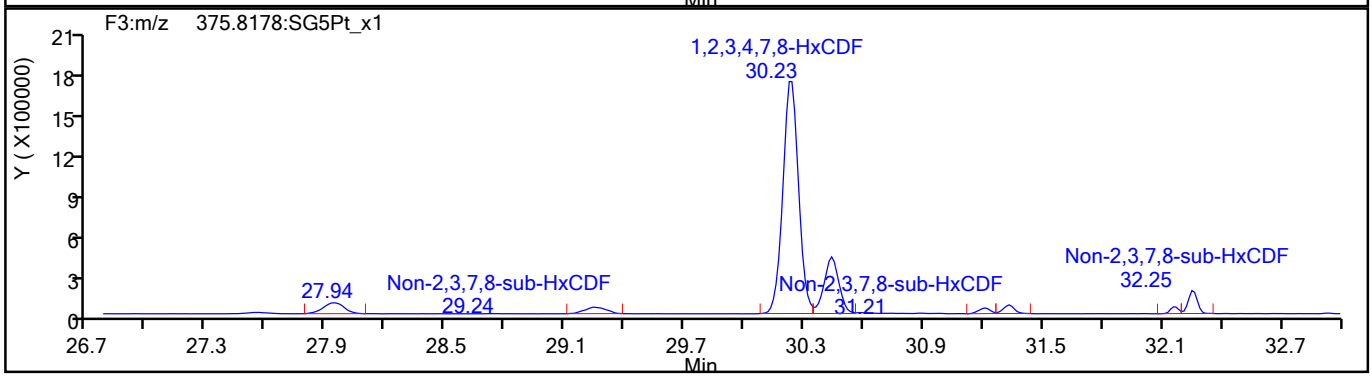

HxCDF Standards

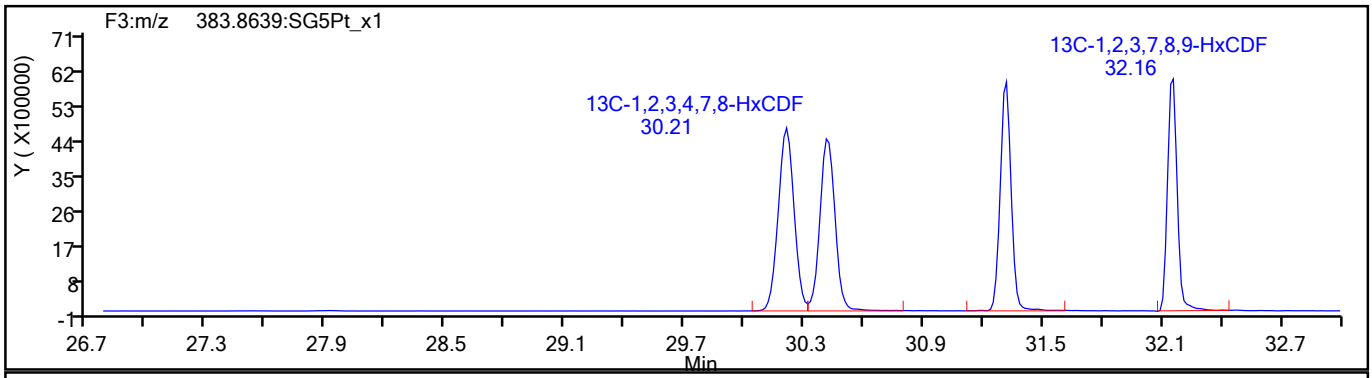

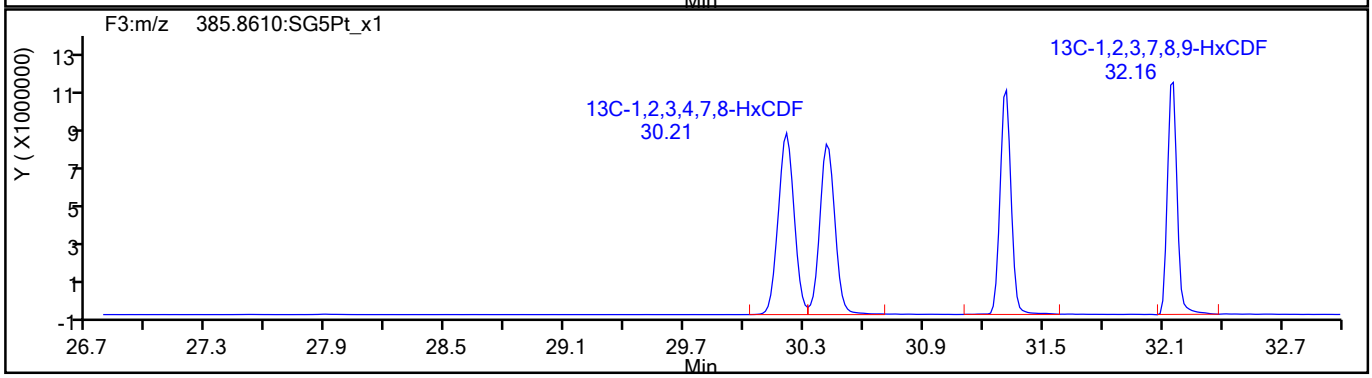

791015

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

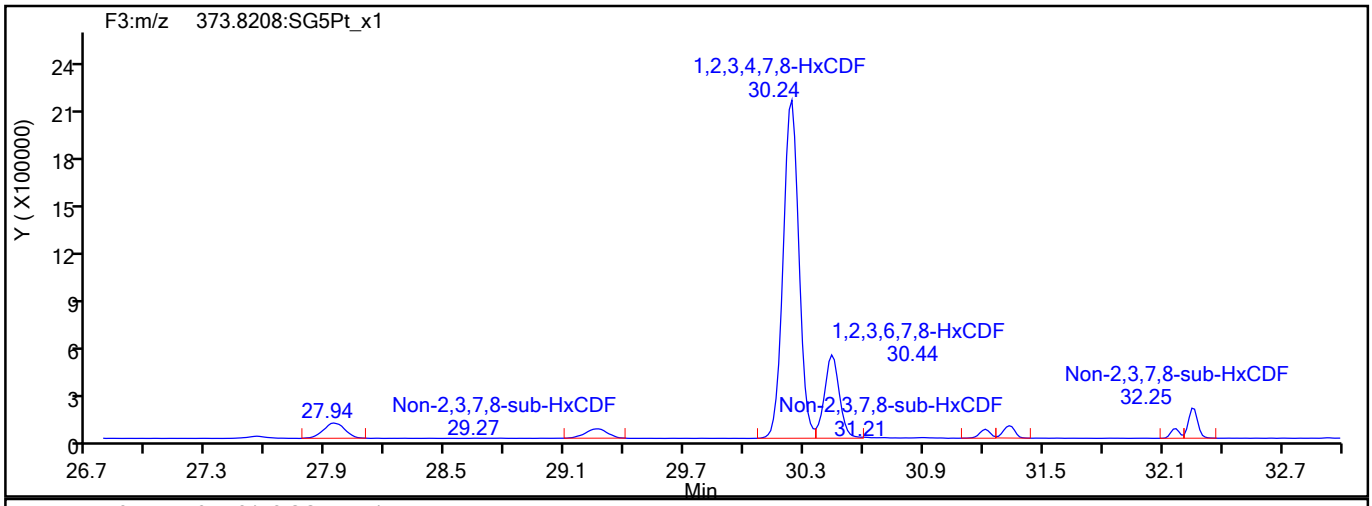

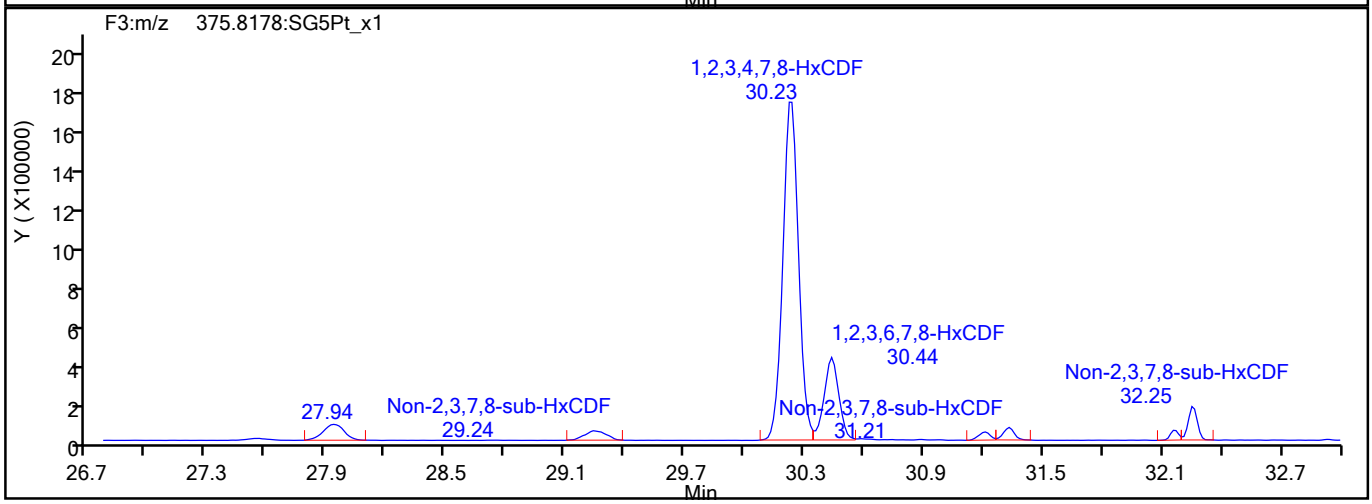

HxCDF Interference Mass

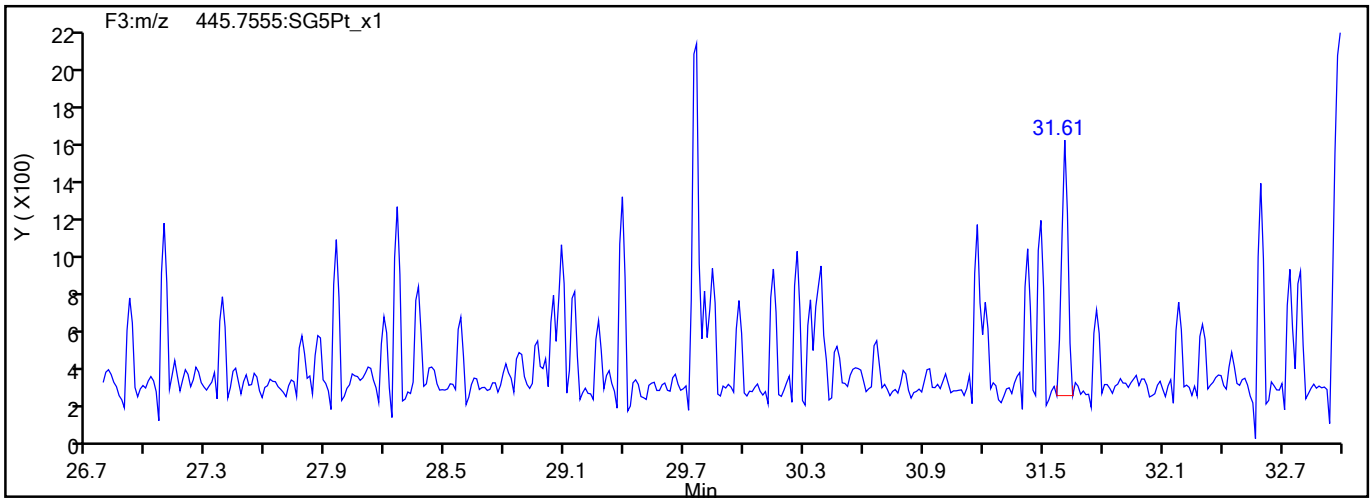

791016

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

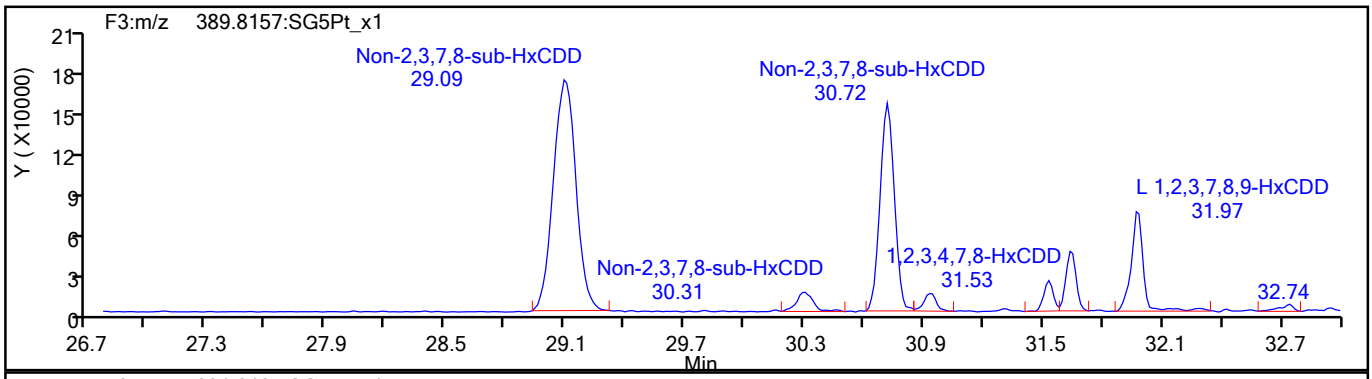

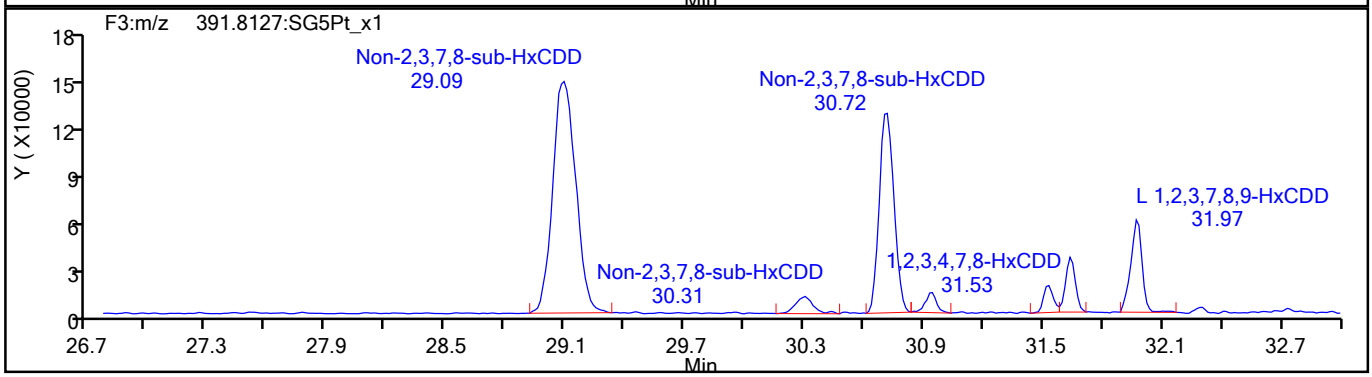

HxCDD Standards

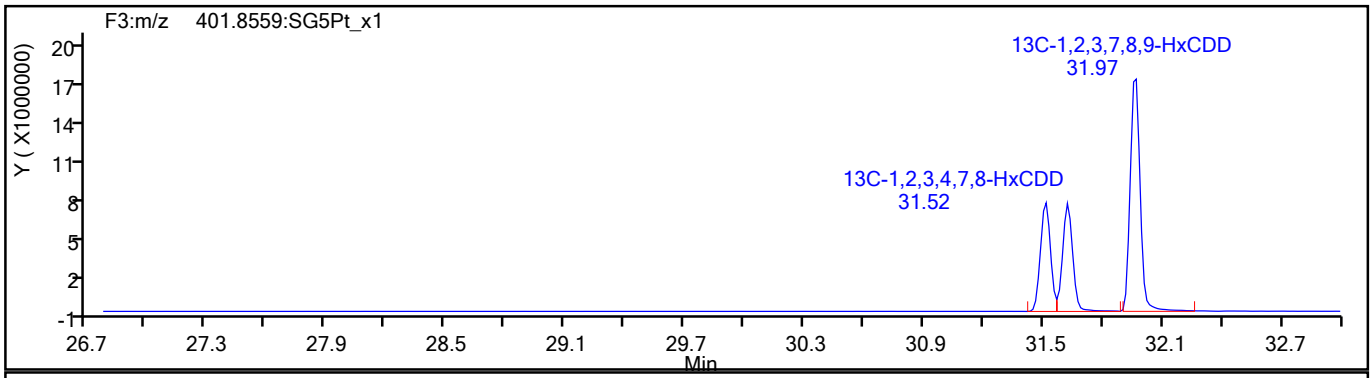

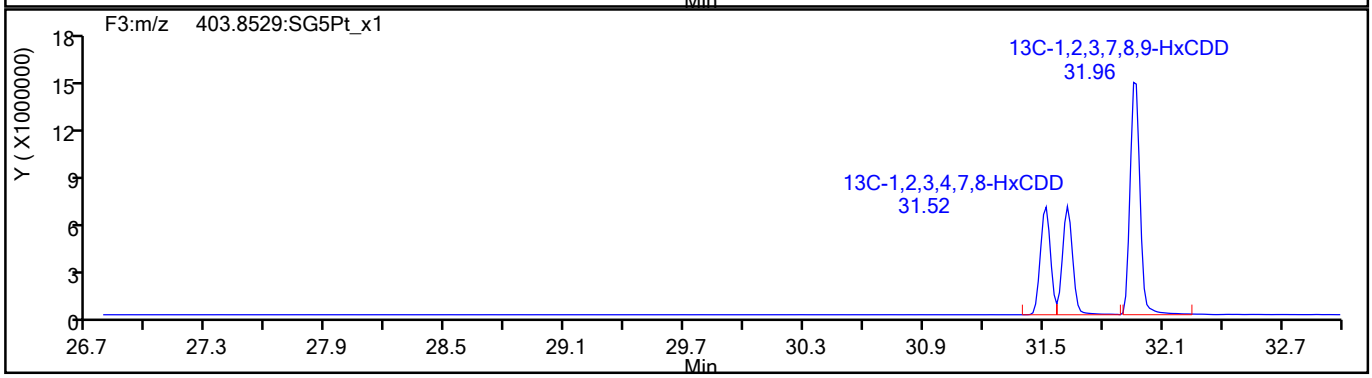

791017

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

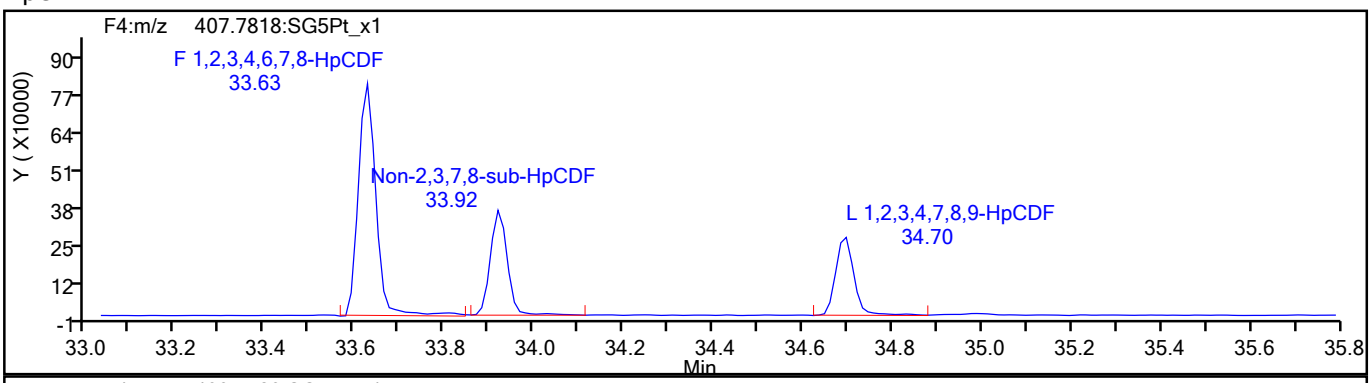

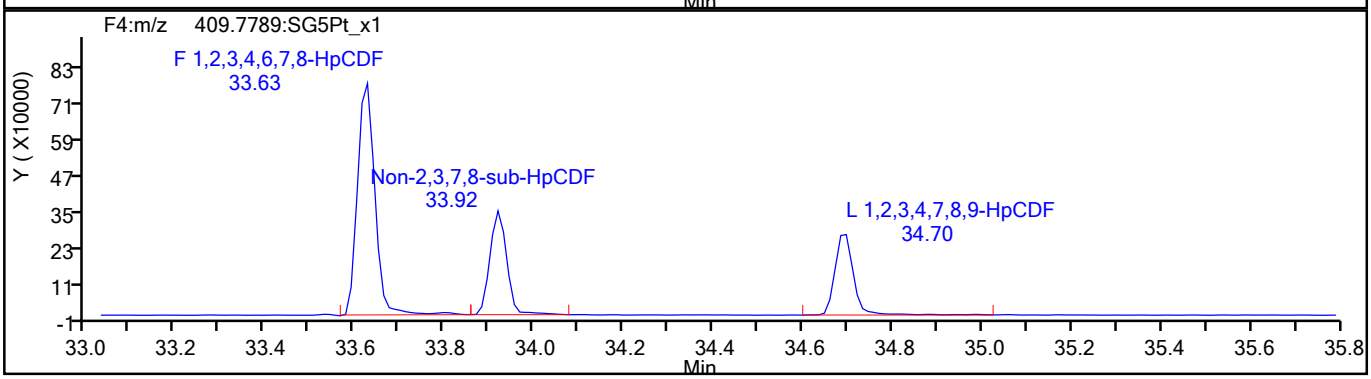

HpCDF Standards

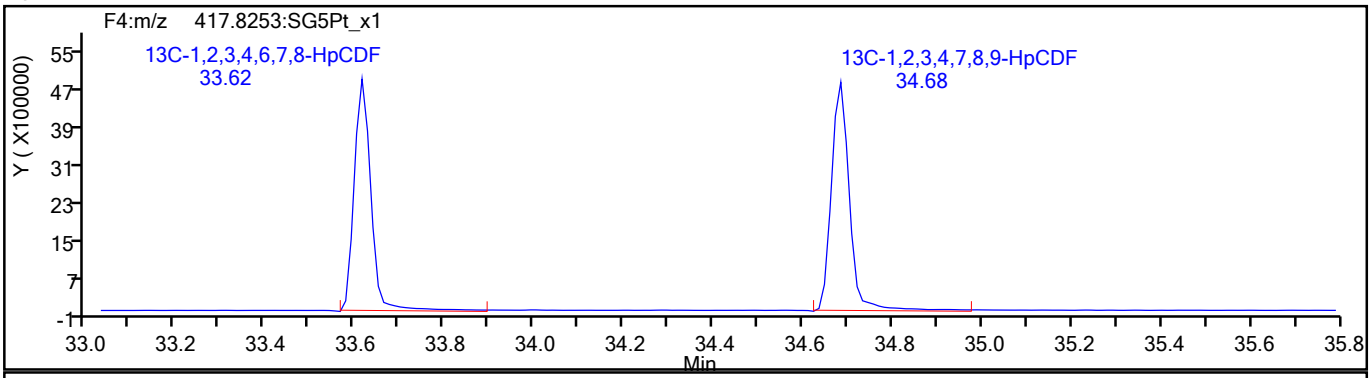

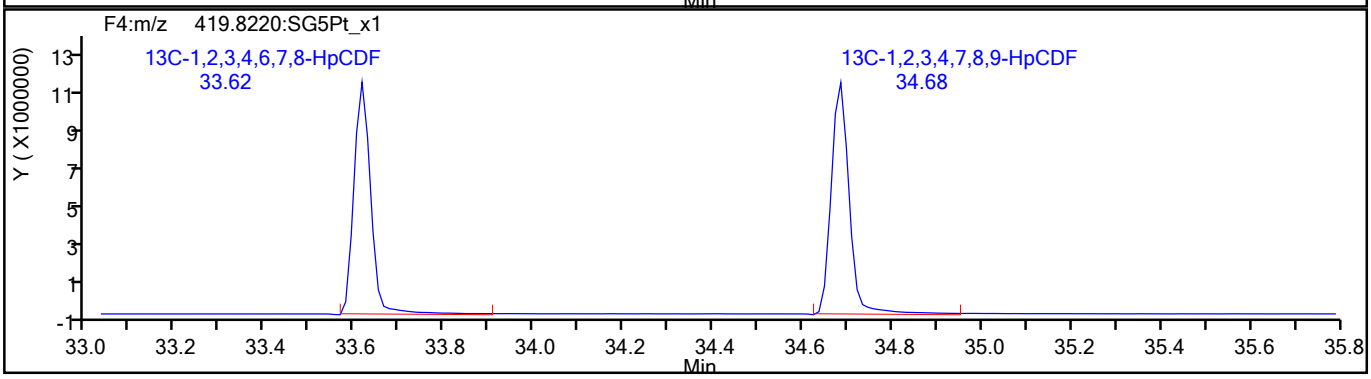

791018

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

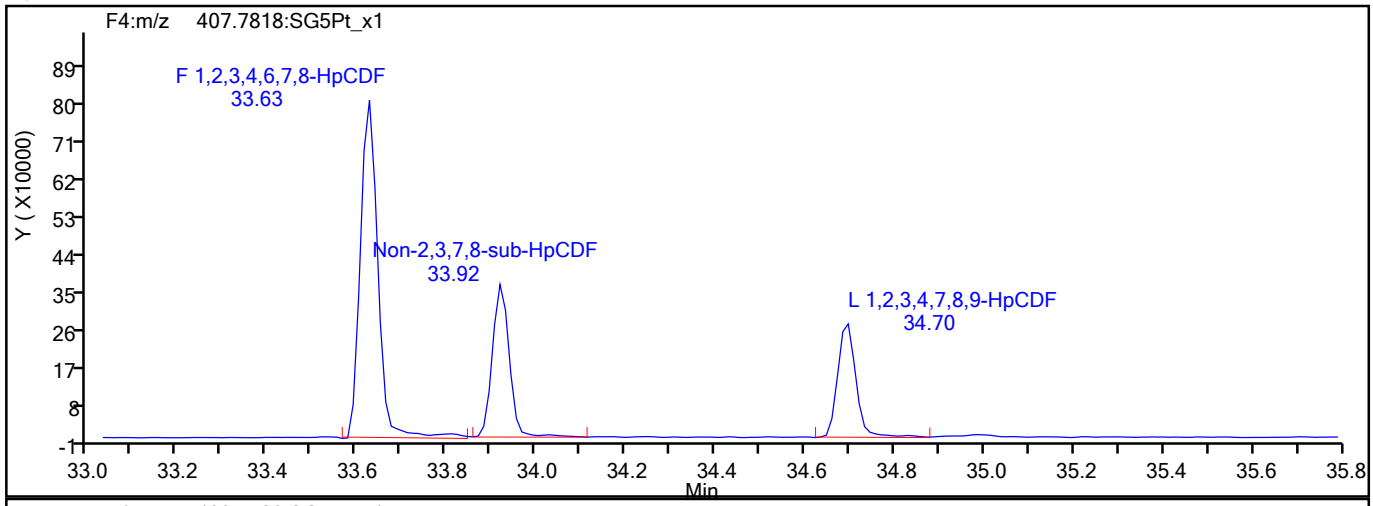

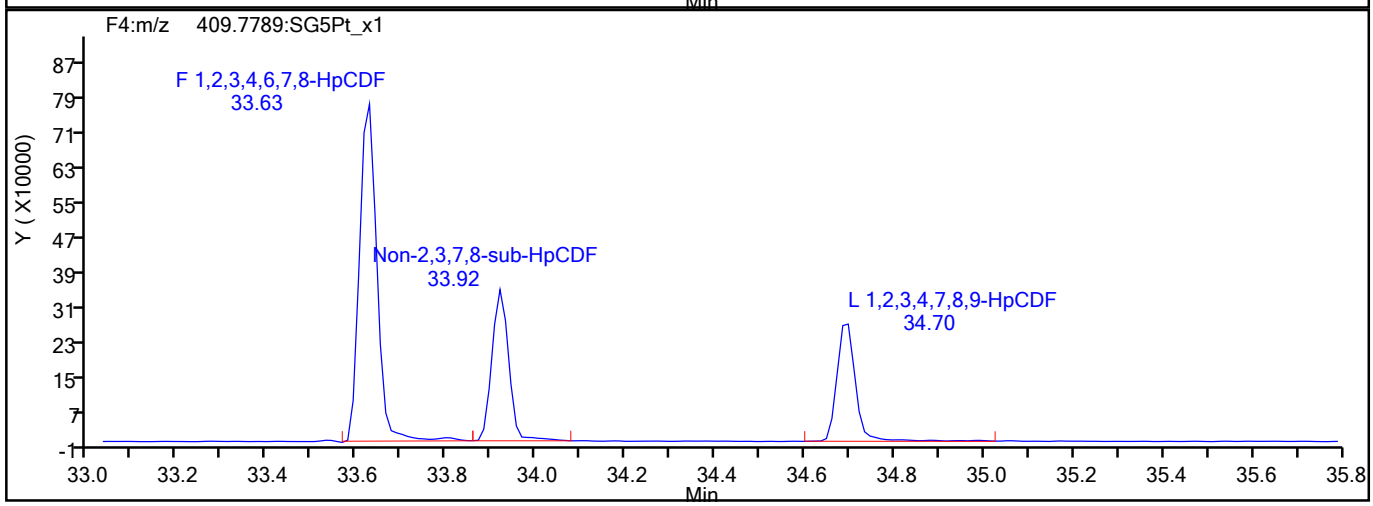

HpCDF Interference Mass

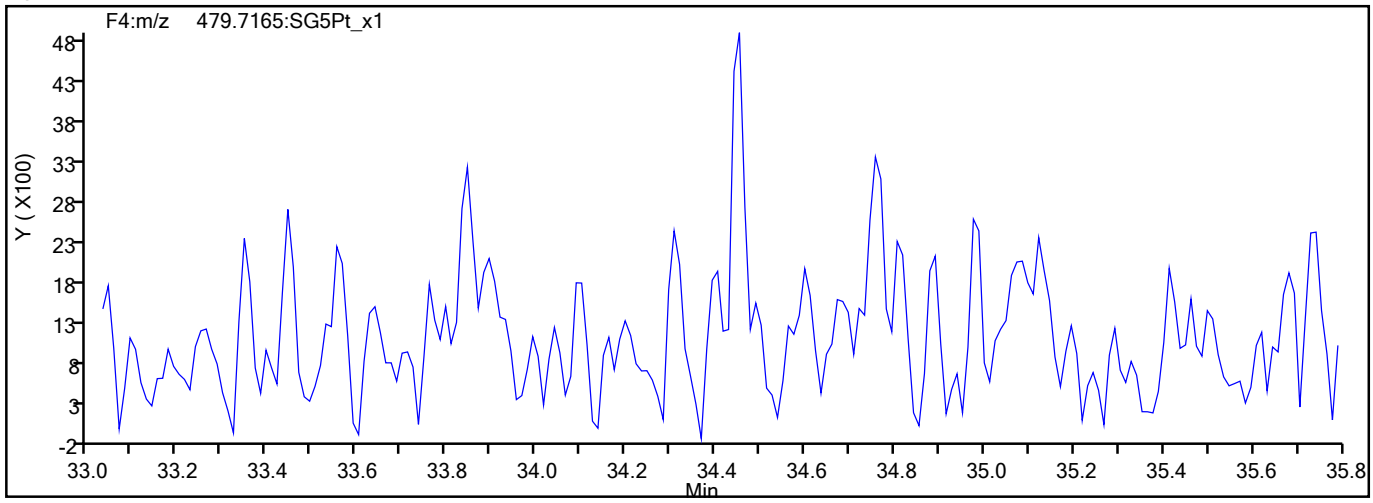

791019

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

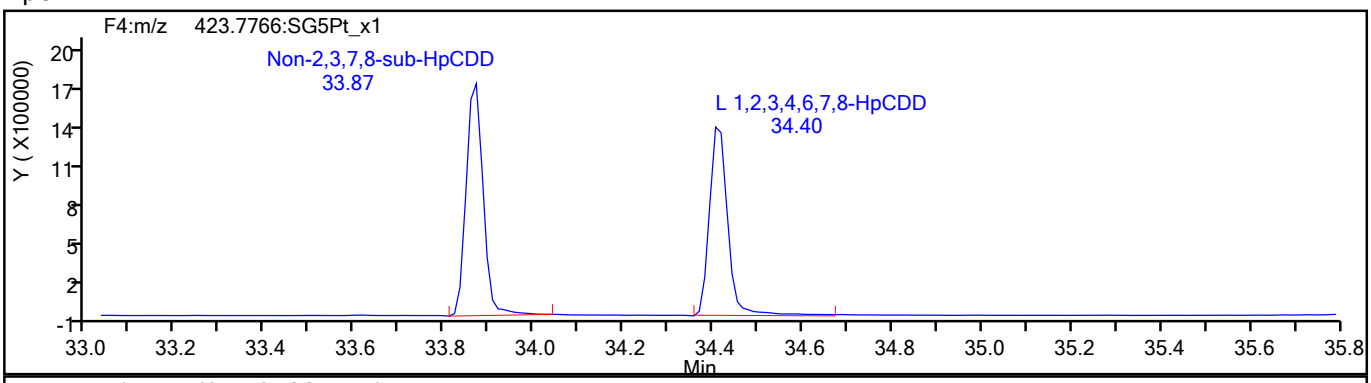

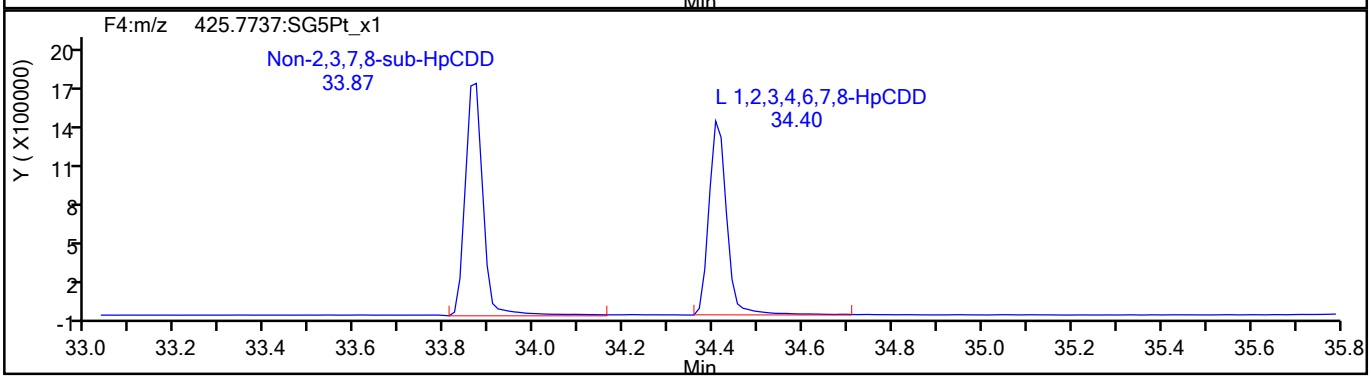

HpCDD Standards

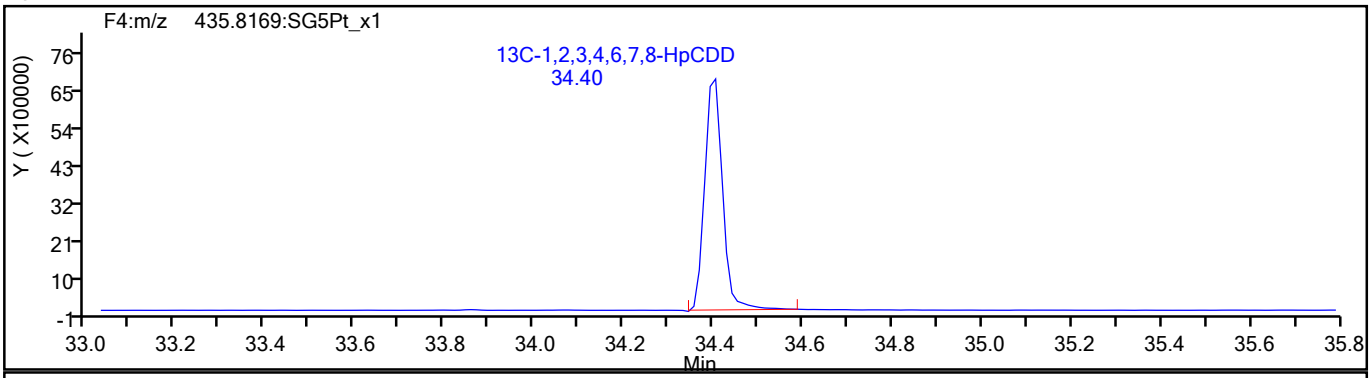

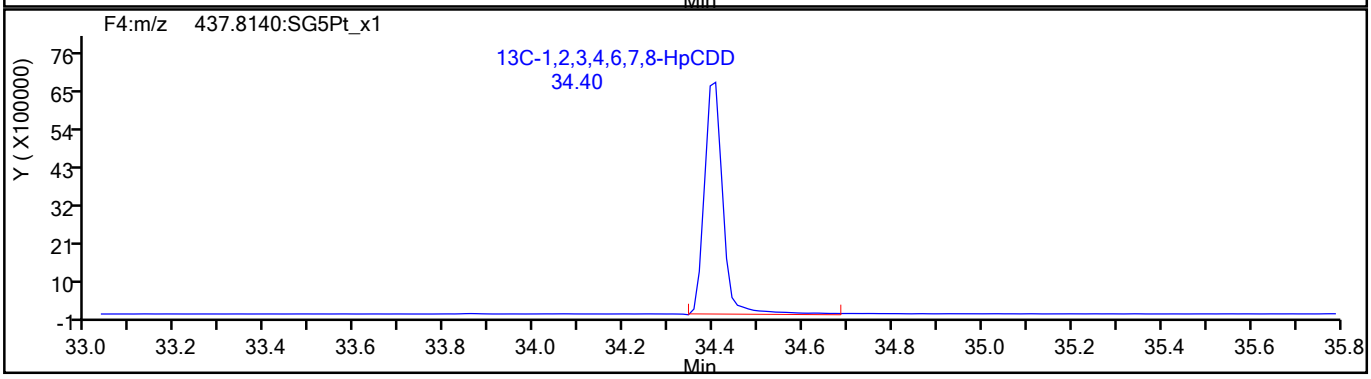

791020

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

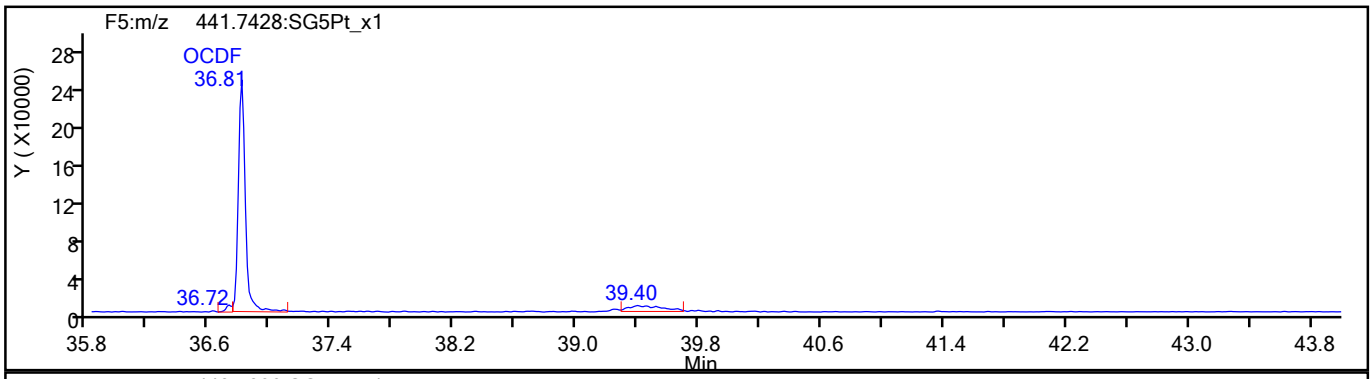

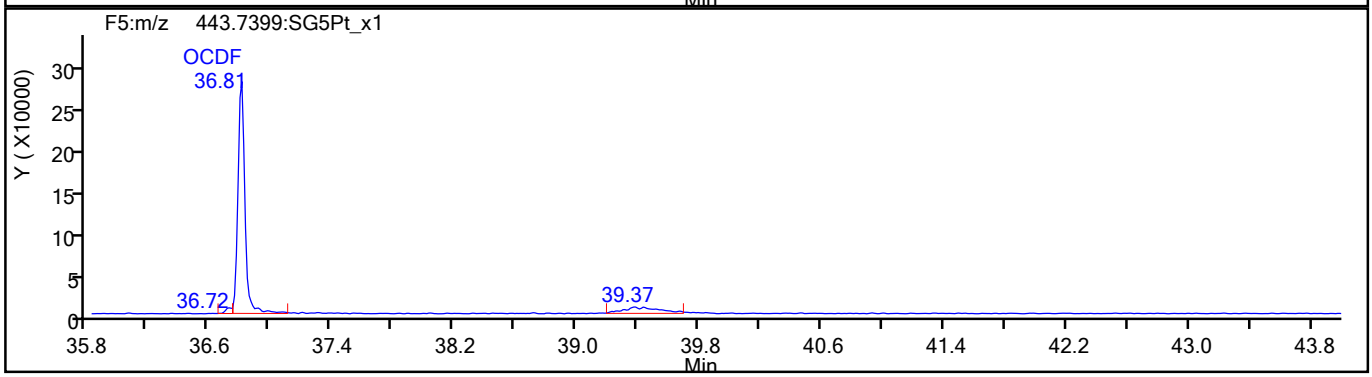

OCDF Standards

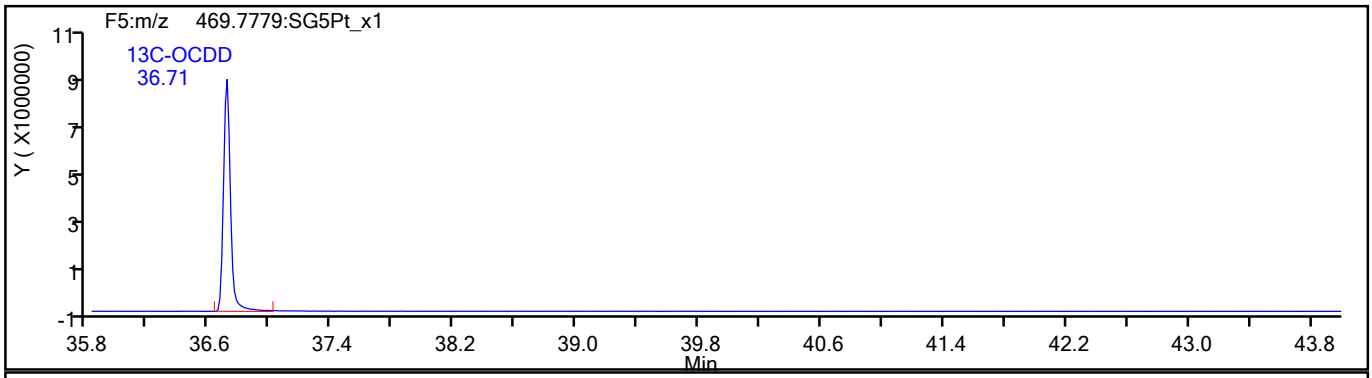

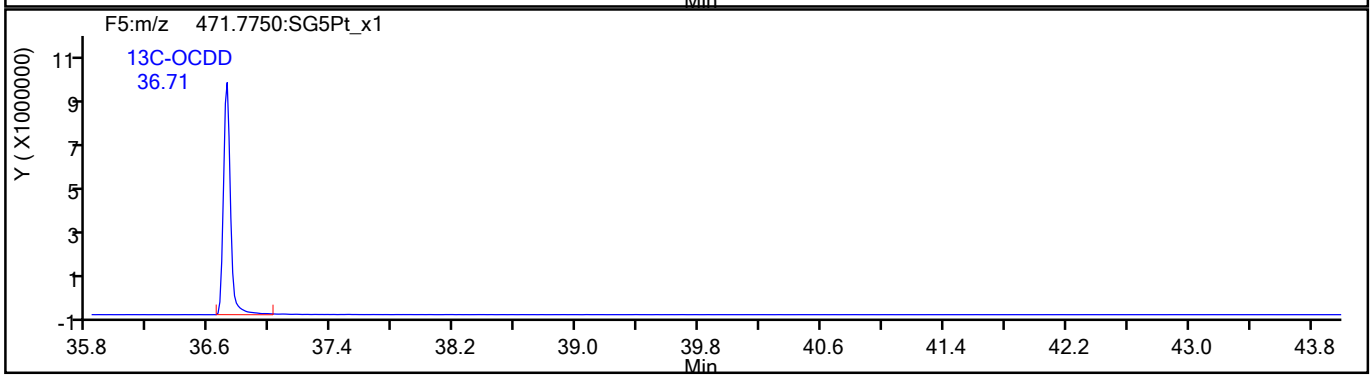

791021

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
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OCDF

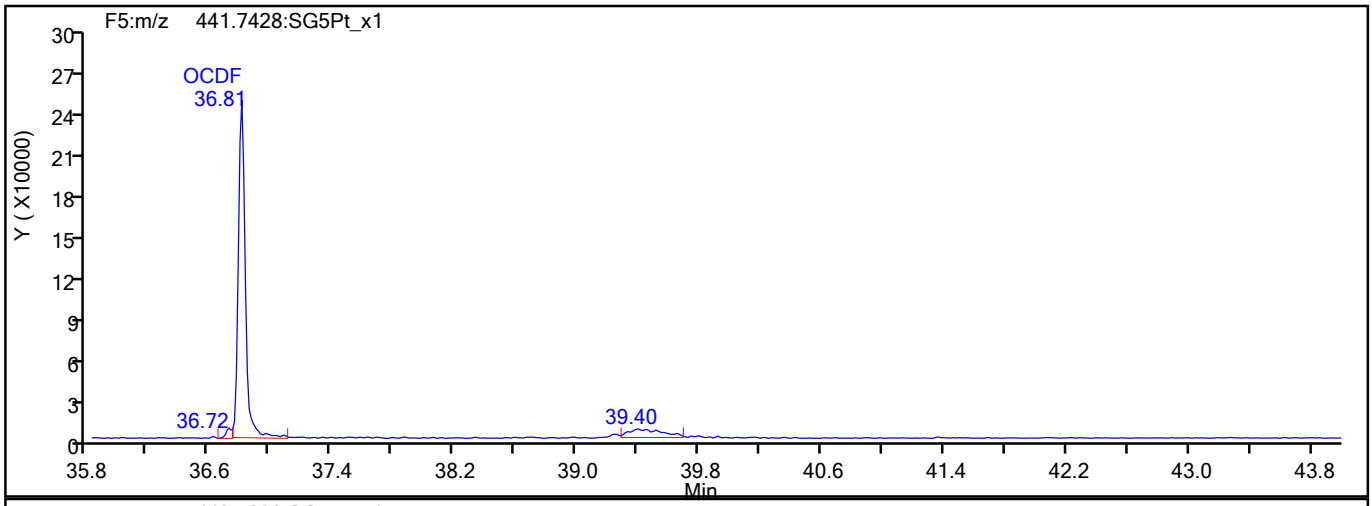

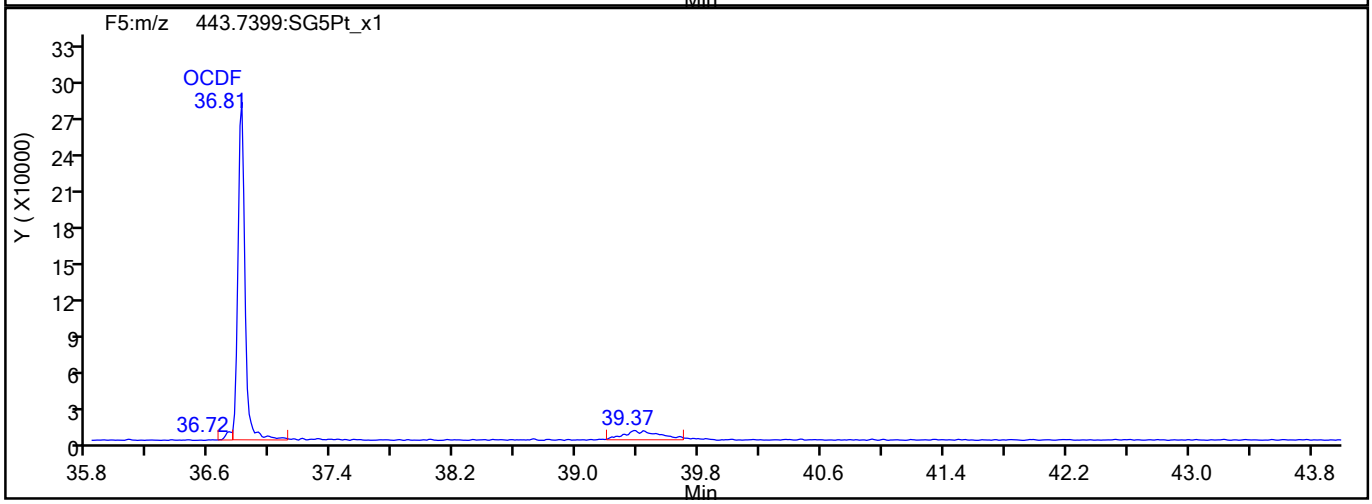

OCDF Interference Mass

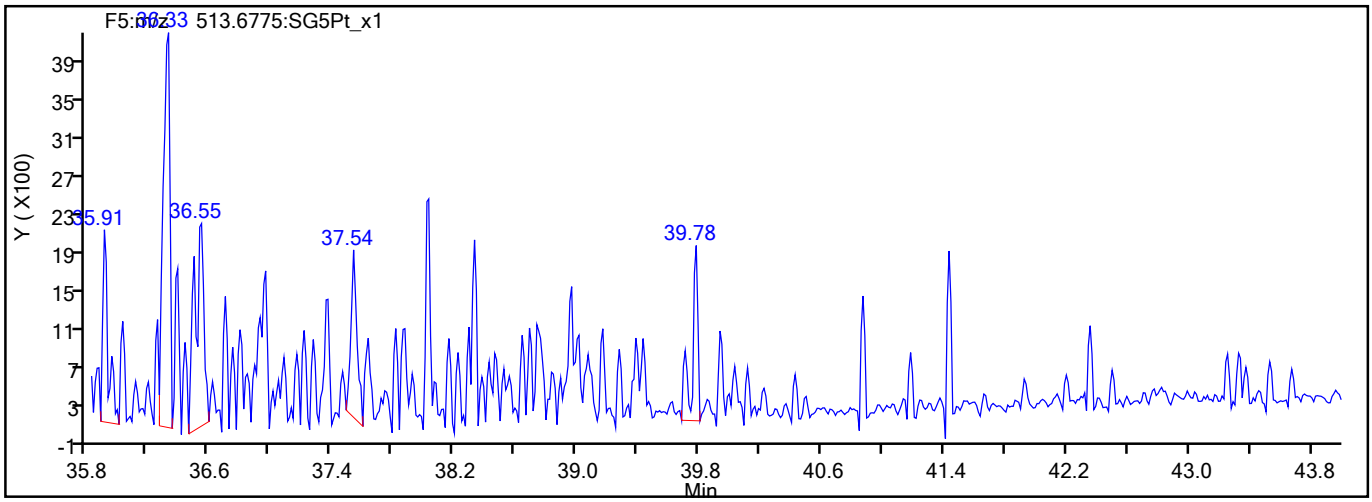

791022

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

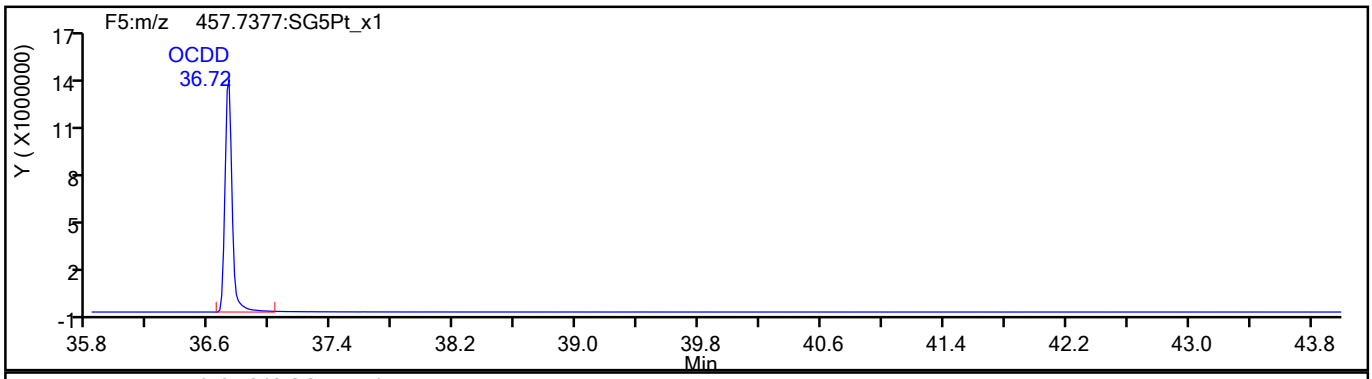

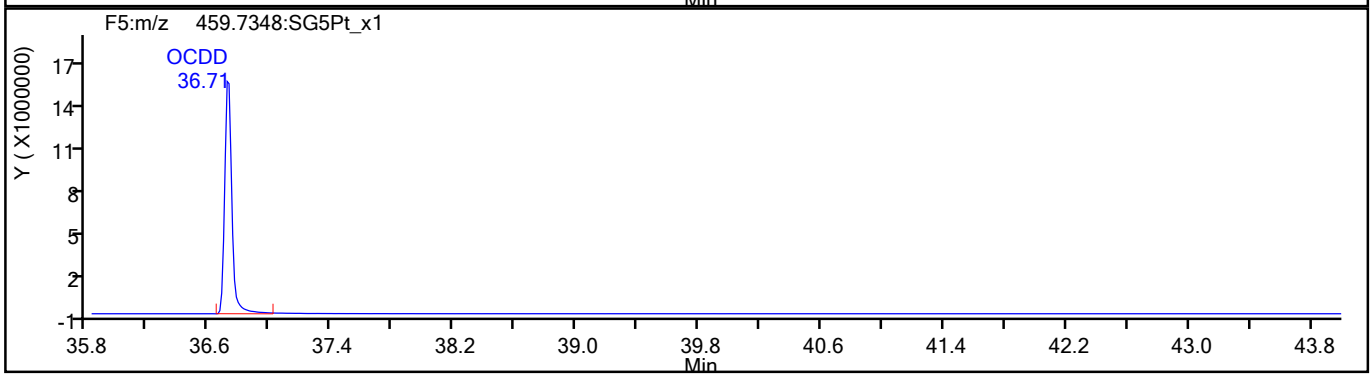

OCDD Standards

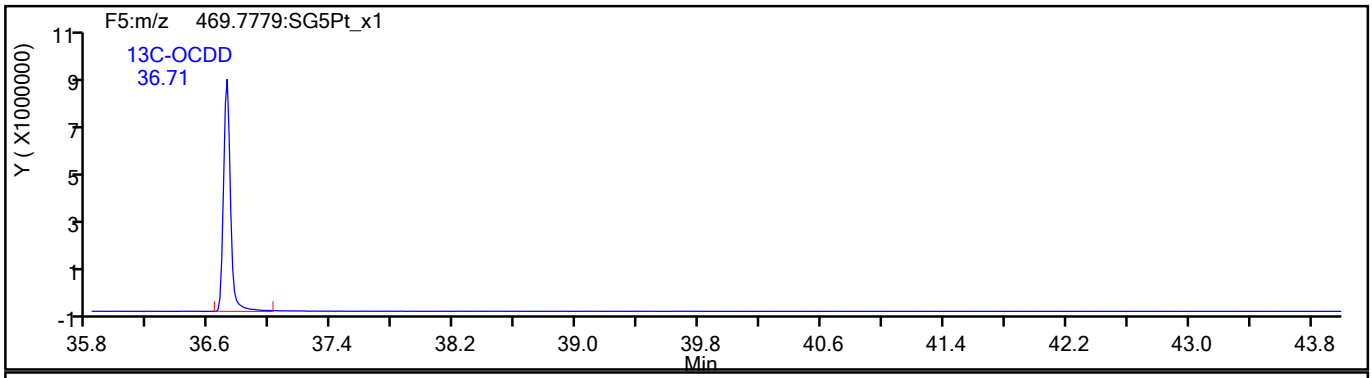

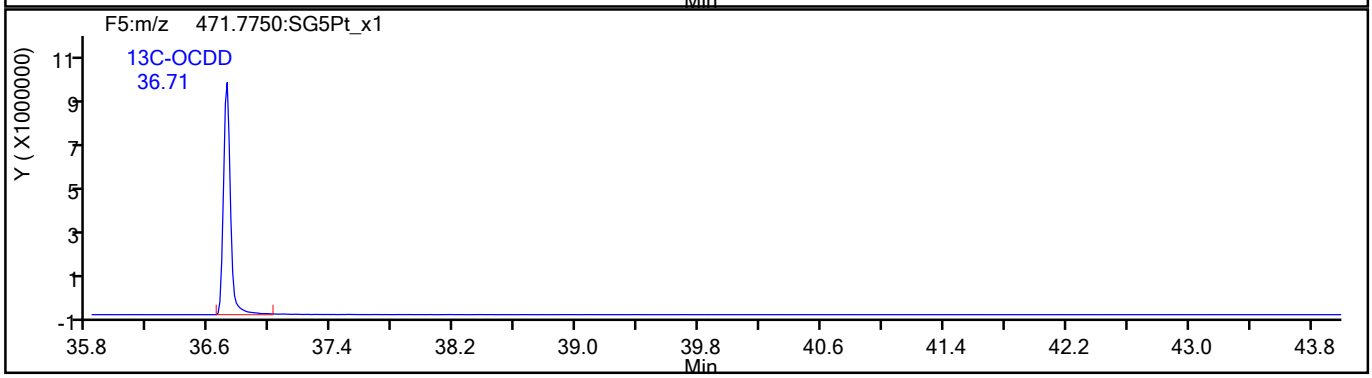

791023

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

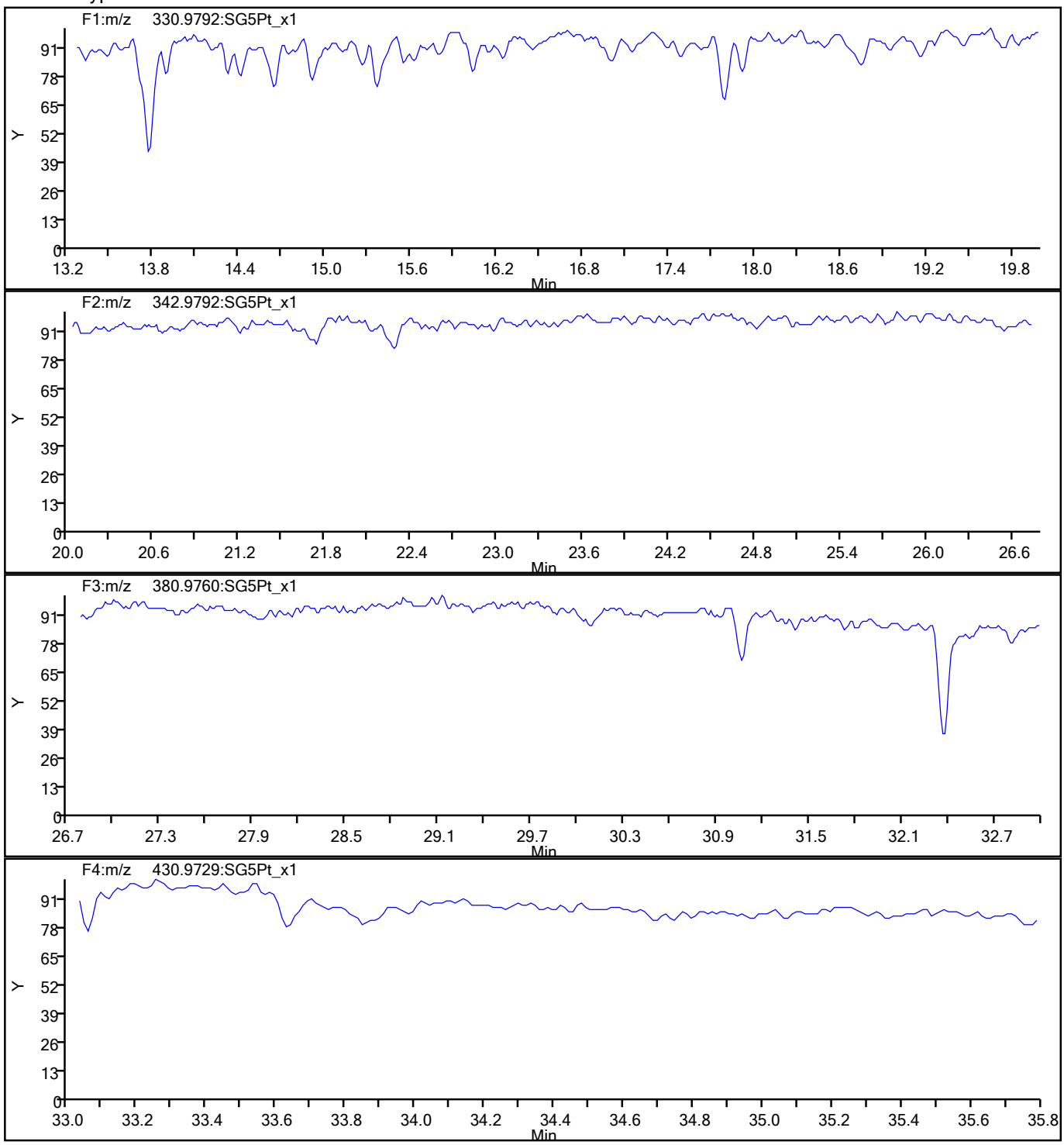

791024

Report Date: 27-Aug-2021 09:54:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_9.d		
Injection Date:	25-Aug-2021 15:50:42	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	519953	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

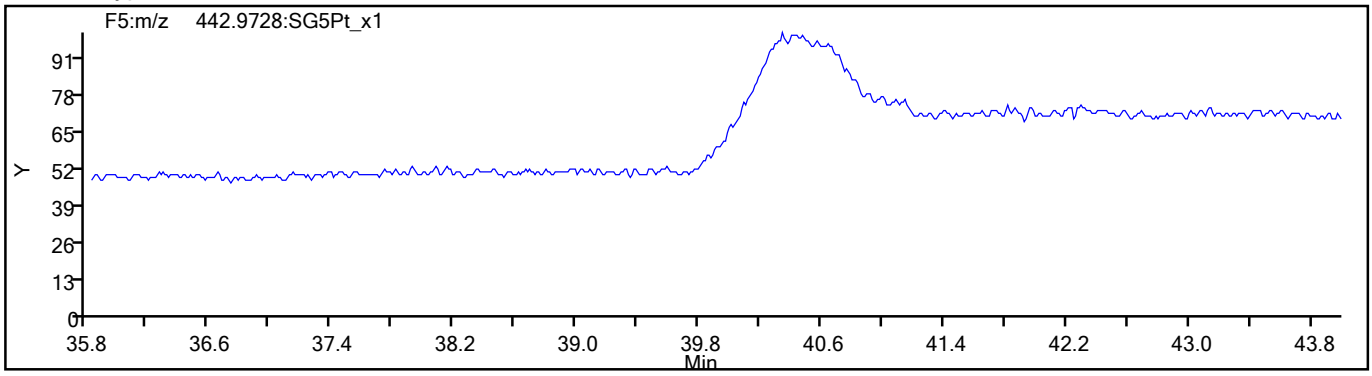

791025

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (4-6) RA
Lab Sample ID: 320-77214-3 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_016.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:20
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.12(g)
Date Analyzed: 08/28/2021 01:13
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 29.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	2000	E G B	1.9	1.9

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	64		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	79		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_016.d
Lims ID: 320-77214-A-3-A
Client ID: 11215702-080221-BN-SJSB090 (4-6)
Sample Type: Client
Inject. Date: 28-Aug-2021 01:13:43 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-3-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:46:43

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.292	62434608	0.80	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.623	52973652	0.73	1.3327	63.7	63.7	0.5877	0.5877	63.67	
2,3,7,8-TCDF	17.636	373440551	0.80	0.9978	706.5	706.5	0.6856	0.6856		E
D 13C-2,3,7,8-TCDD	16.059	30054191	0.80	0.8749	55.0	55.0	5.825	5.825	55.02	
2,3,7,8-TCDD	16.087	88537342	0.79	1.0570	278.7	278.7	1.010	1.010		E
$ 37Cl4-2,3,7,8-TCDD	16.073	17039257		0.8648	31.6	31.6	0.1428	0.1428	78.89	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Report Date: 30-Aug-2021 09:51:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_016.d
Lims ID: 320-77214-A-3-A
Client ID: 11215702-080221-BN-SJSB090 (4-6)
Sample Type: Client
Inject. Date: 28-Aug-2021 01:13:43 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-3-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:46:43

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.292	16.300	0		27709573	6258927	160978	402445	39		
333.9339	16.292	16.300	0		34725035	7781283	125240	313100	62	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.623	17.616	0	1.082	22436203	4184928	19391	48477	216		
317.9389	17.609	17.616	0	1.081	30537449	5559866	24596	61490	226	0.73(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.636	17.644	0	1.001	165495450	30807972	11784	29460	2614		
305.8987	17.636	17.644	0	1.001	207945101	38537827	14881	37202	2590	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.059	16.066	0	0.986	13402191	3271907	160978	402445	20		
333.9339	16.059	16.066	0	0.986	16652000	4010191	125240	313100	32	0.80(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	16.087	16.080	0	1.002	39139342	8533345	16900	42250	505		
321.8936	16.073	16.080	0	1.001	49398000	10814764	14199	35497	762	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.073	16.080	0	0.987	17039257	3796842	6935	17337	547		

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 30-Aug-2021 09:51:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_016.d		
Injection Date:	28-Aug-2021 01:13:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	520456	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

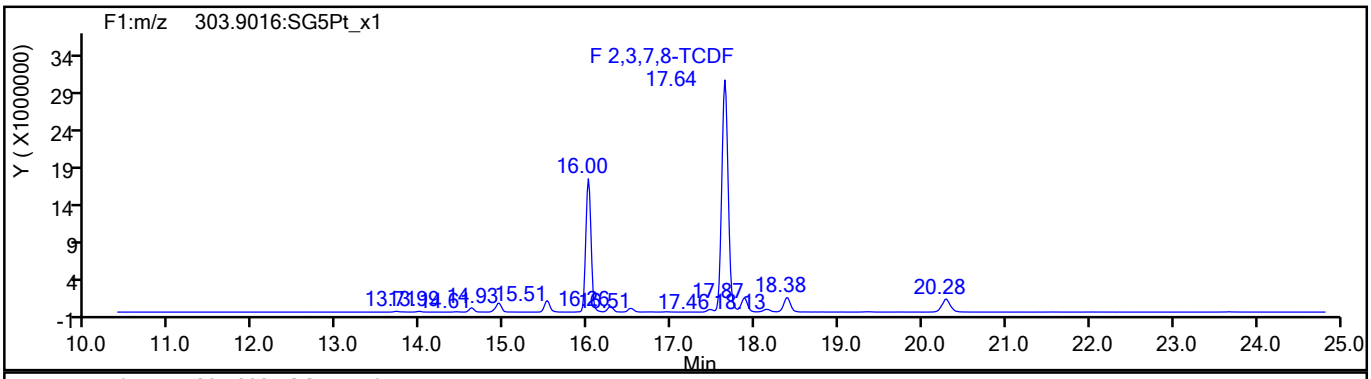

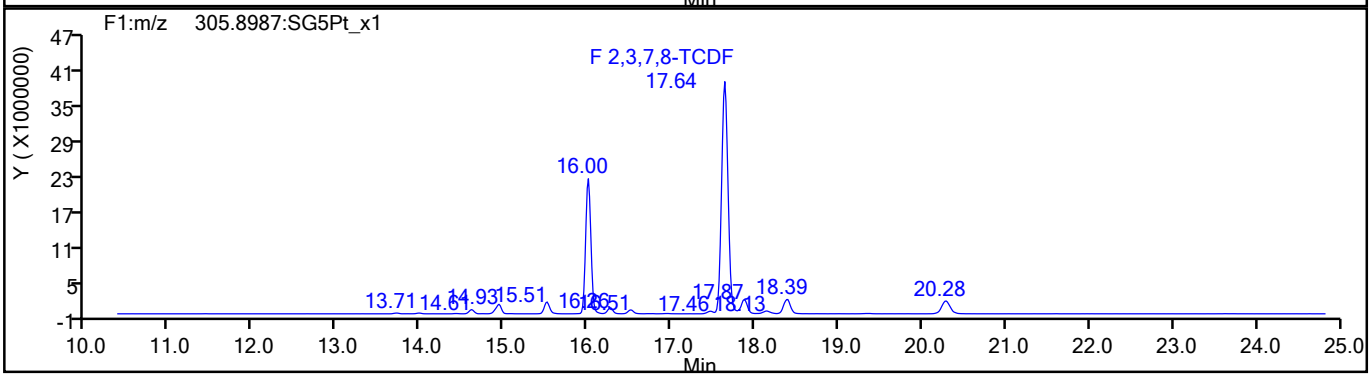

TCDF Standards

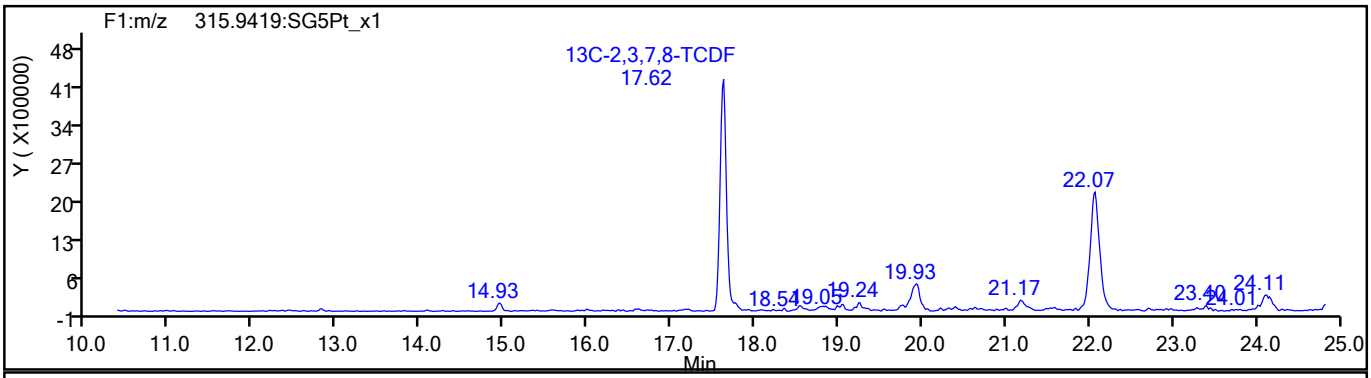

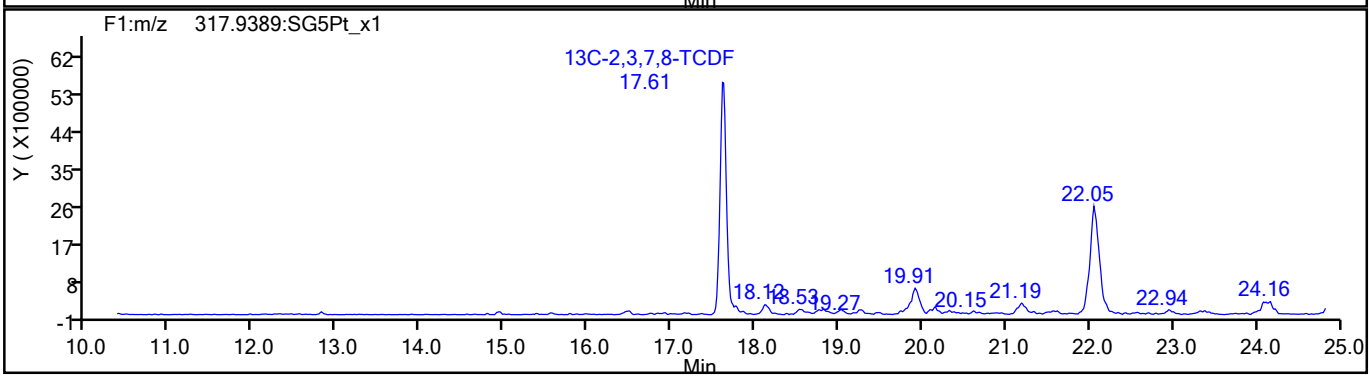

791029

Report Date: 30-Aug-2021 09:51:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_016.d		
Injection Date:	28-Aug-2021 01:13:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	520456	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

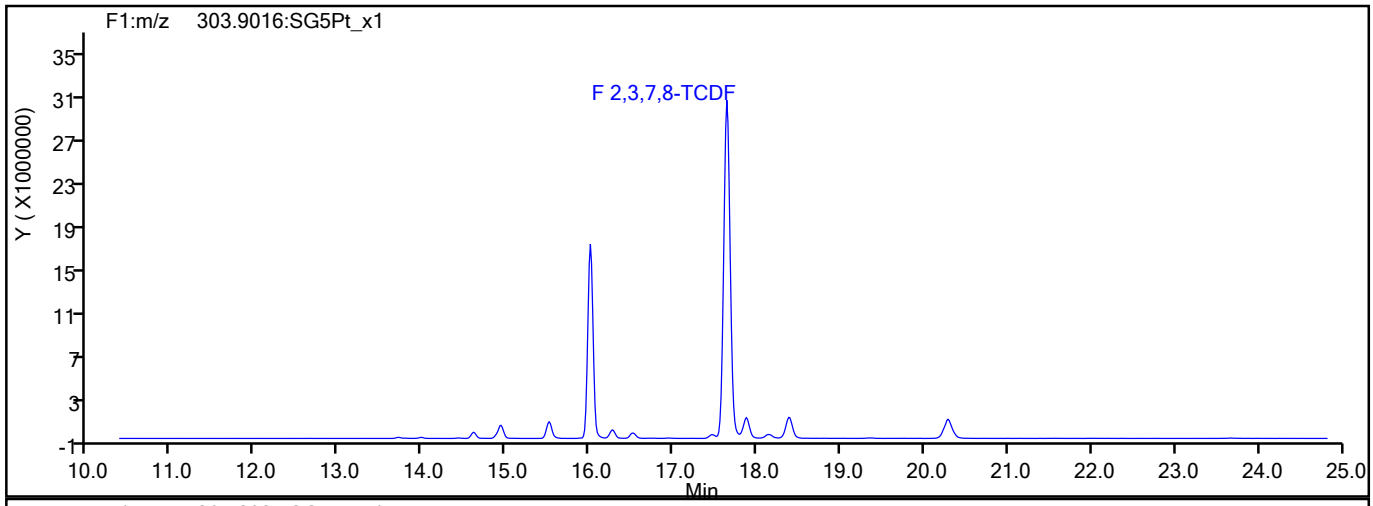

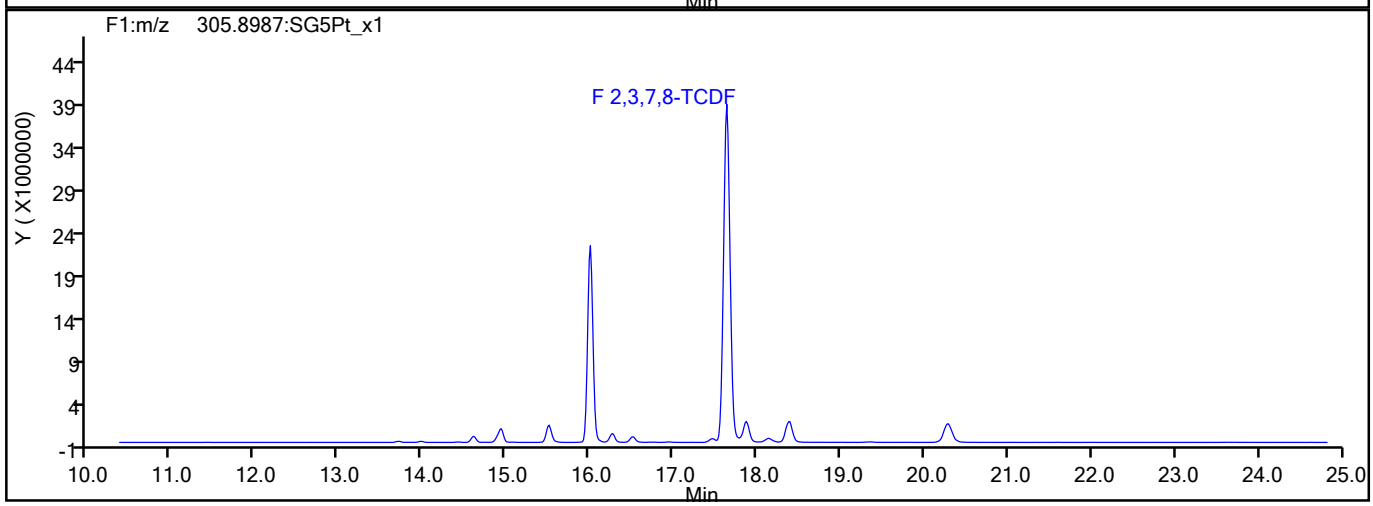

TCDF Interference Mass

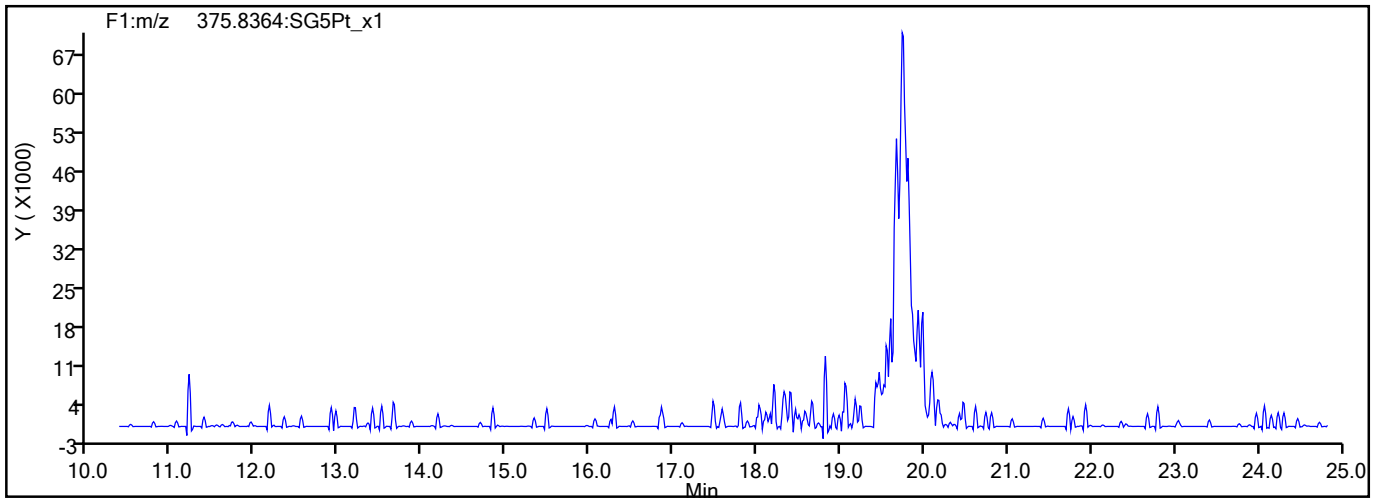

791030

Report Date: 30-Aug-2021 09:51:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_016.d		
Injection Date:	28-Aug-2021 01:13:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	520456	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

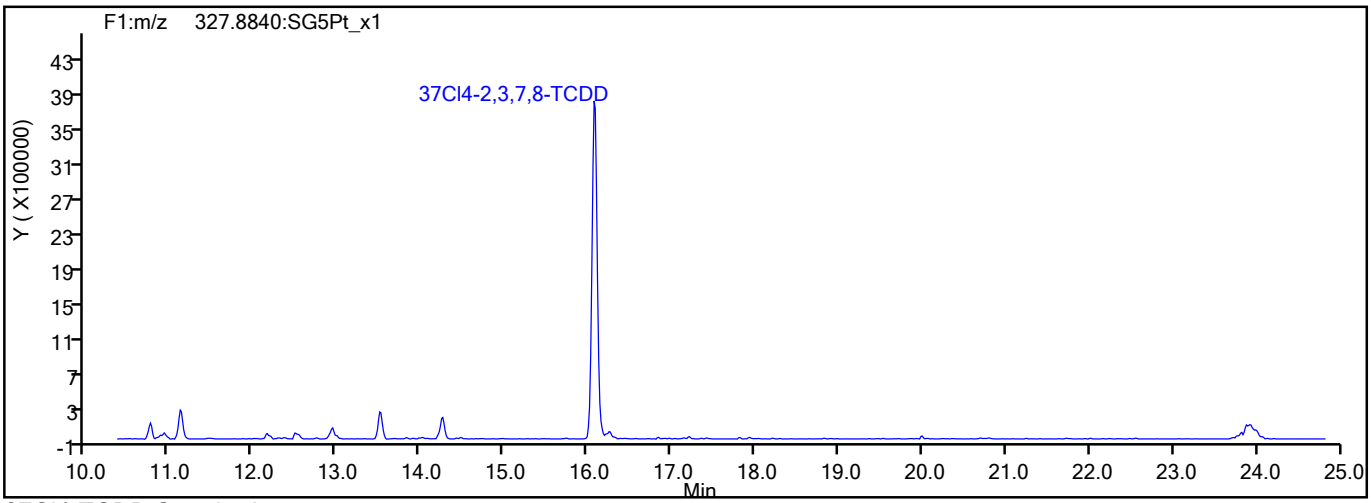

37Cl4-TCDD Standards

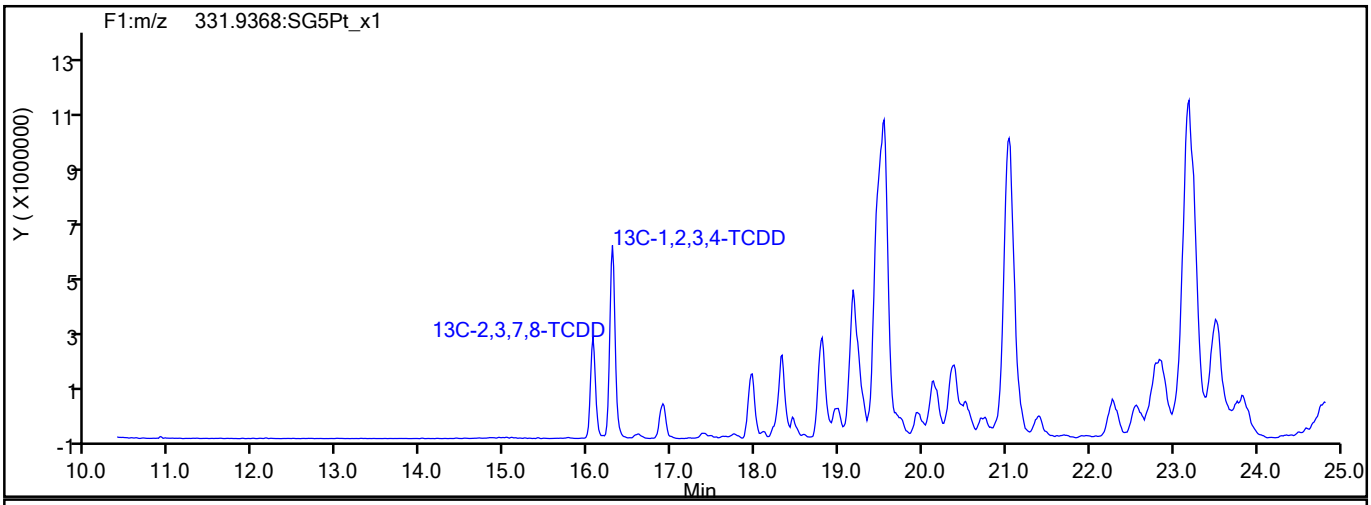

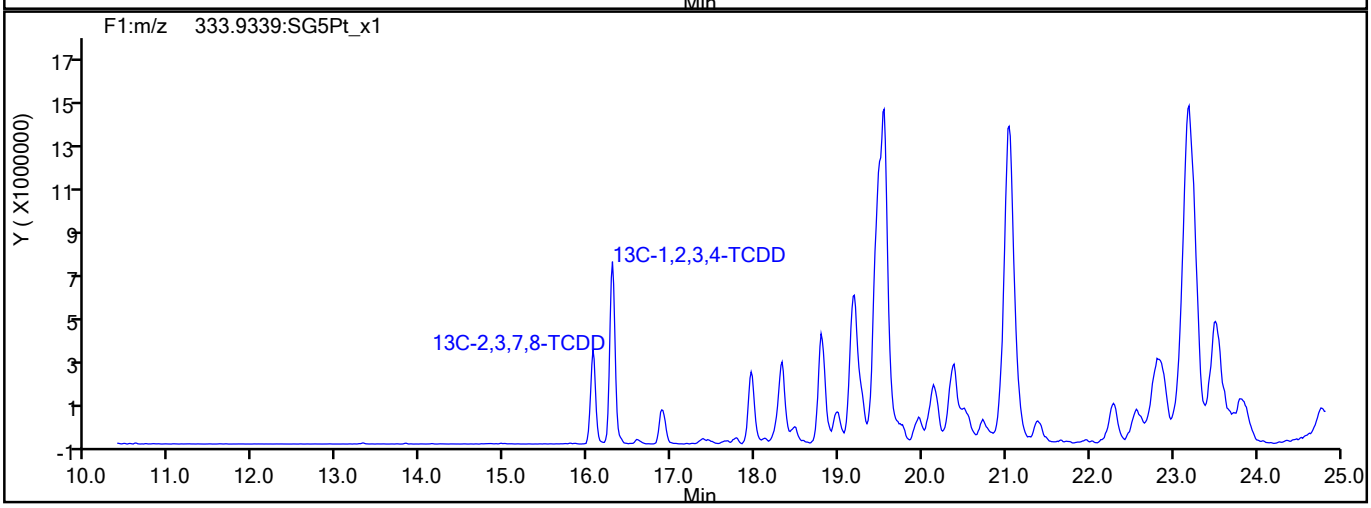

791031

Report Date: 30-Aug-2021 09:51:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_016.d		
Injection Date:	28-Aug-2021 01:13:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (4-6)		
Worklist#:	520456	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

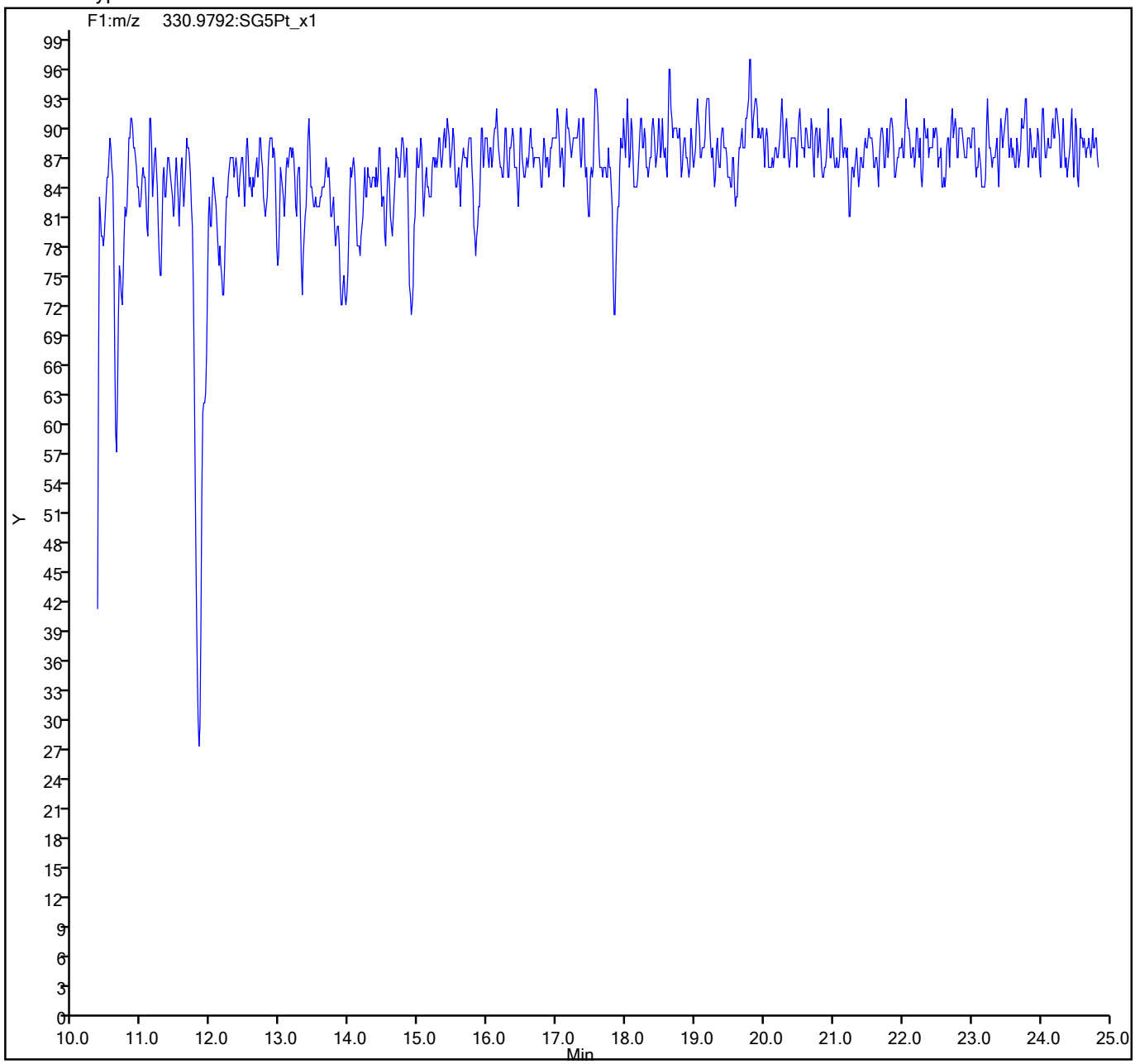

791032

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (6-8)
Lab Sample ID: 320-77214-4
Matrix: Sediment
Lab File ID: 25AU2110D5_10.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:25
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.11(g)
Date Analyzed: 08/25/2021 16:35
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	4.5		1.4	0.43
40321-76-4	1,2,3,7,8-PeCDD	ND		7.2	0.38
57117-41-6	1,2,3,7,8-PeCDF	0.71	J	7.2	0.26
57117-31-4	2,3,4,7,8-PeCDF	ND		7.2	0.27
39227-28-6	1,2,3,4,7,8-HxCDD	0.55	J	7.2	0.28
57653-85-7	1,2,3,6,7,8-HxCDD	0.39	J q	7.2	0.30
19408-74-3	1,2,3,7,8,9-HxCDD	ND		7.2	0.27
70648-26-9	1,2,3,4,7,8-HxCDF	0.88	J	7.2	0.20
57117-44-9	1,2,3,6,7,8-HxCDF	ND		7.2	0.21
72918-21-9	1,2,3,7,8,9-HxCDF	ND		7.2	0.14
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.2	0.15
35822-46-9	1,2,3,4,6,7,8-HpCDD	11	B	7.2	0.24
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		7.2	0.22
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.2	0.25
3268-87-9	OCDD	250	B	14	0.44
39001-02-0	OCDF	0.52	J B	14	0.21
41903-57-5	Total TCDD	4.5		1.4	0.43
30402-14-3	Total TCDF	23	B q	1.4	0.47
36088-22-9	Total PeCDD	ND		7.2	0.38
30402-15-4	Total PeCDF	0.71	J	7.2	0.27
34465-46-8	Total HxCDD	7.1	J q	7.2	0.28
55684-94-1	Total HxCDF	0.88	J	7.2	0.18
37871-00-4	Total HpCDD	36	B	7.2	0.24
38998-75-3	Total HpCDF	ND		7.2	0.25

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (6-8)
Lab Sample ID: 320-77214-4
Matrix: Sediment
Lab File ID: 25AU2110D5_10.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:25
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.11(g)
Date Analyzed: 08/25/2021 16:35
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		25-164
89059-46-1	13C-2,3,7,8-TCDF	50		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	54		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	52		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	57		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	56		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	48		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	55		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	49		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	51		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	50		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	50		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	48		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	55		26-138
114423-97-1	13C-OCDD	56		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	71		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d
Lims ID: 320-77214-A-4-A
Client ID: 11215702-080221-BN-SJSB090 (6-8)
Sample Type: Client
Inject. Date: 25-Aug-2021 16:35:39 ALS Bottle#: 11 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-4-A 320-77214-A-4-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:58:17 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:05:00

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.583	20628083	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.069	16725285	0.76	1.6249	49.9	49.9	0.3345	0.3345	49.90	
2,3,7,8-TCDF	17.084	867246	0.76	1.0239	5.064	5.064	0.1626	0.1626		M
A Non-2,3,7,8-sub-TCDF	17.076	481029	0.77	1.0239	2.844	2.809	0.1626	2.135		RQM
S Total TCDF					7.908	7.873	0.1626	0.1626		RQ
D 13C-2,3,7,8-TCDD	17.764	10016329	0.78	0.8993	54.0	54.0	0.3648	0.3648	53.99	
2,3,7,8-TCDD	17.794	198057	0.67	1.2541	1.577	1.577	0.1494	0.1494		M
$ 37Cl4-2,3,7,8-TCDD	17.794	6467631		1.1071	28.3	28.3	0.0601	0.0601	70.80	
A Non-2,3,7,8-sub-TCDD	17.537						0.1494	0.1494		U
S Total TCDD					1.577	1.577	0.1494	0.1494		
D 13C-1,2,3,7,8-PeCDF	22.034	13001556	1.61	1.2101	52.1	52.1	0.1290	0.1290	52.09	
1,2,3,7,8-PeCDF	22.074	34140	1.46	1.0611	0.2475	0.2475	0.0923	0.0923		M
D 13C-2,3,4,7,8-PeCDF	23.370	14615795	1.59	1.2395	57.2	57.2	0.1259	0.1259	57.16	
2,3,4,7,8-PeCDF	23.370						0.0940	0.0940		
A F1 PeCDFs	19.851						0.0852	0.0852		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0931	0.0931		U
S Total PeCDF					0.2475	0.2475	0.0932	0.0932		
D 13C-1,2,3,7,8-PeCDD	24.079	8530201	1.59	0.7612	54.3	54.3	0.1289	0.1289	54.32	
1,2,3,7,8-PeCDD	24.079						0.1341	0.1341		
A Non-2,3,7,8-sub-PeCDD	23.696						0.1341	0.1341		
S Total PeCDD							0.1341	0.1341		
D 13C-1,2,3,4,7,8-HxCDF	30.212	12327756	0.52	1.0837	55.3	55.3	0.1537	0.1537	55.29	
1,2,3,4,7,8-HxCDF	30.239	41128	1.32	1.0851	0.3074	0.3074	0.0705	0.0705		M
D 13C-1,2,3,6,7,8-HxCDF	30.425	11260691	0.50	1.1279	48.5	48.5	0.1477	0.1477	48.52	
1,2,3,6,7,8-HxCDF	30.412						0.0735	0.0735		
D 13C-2,3,4,6,7,8-HxCDF	31.317	10840927	0.52	1.0637	49.5	49.5	0.1566	0.1566	49.53	
2,3,4,6,7,8-HxCDF	31.317						0.0521	0.0521		
D 13C-1,2,3,7,8,9-HxCDF	32.156	10190512	0.51	0.9676	51.2	51.2	0.1721	0.1721	51.18	
1,2,3,7,8,9-HxCDF	32.156						0.0485	0.0485		
A Non-2,3,7,8-sub-HxCDF	30.338						0.0594	0.0594		
S Total HxCDF					0.3074	0.3074	0.0611	0.0611		

Report Date: 27-Aug-2021 09:58:17 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	31.969	20577020	1.22	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.517	8467026	1.18	0.7334	56.1	56.1	0.2382	0.2382	56.10	
1,2,3,4,7,8-HxCDD	31.530	17314	1.30	1.0640	0.1922	0.1922	0.0995	0.0995		M
D 13C-1,2,3,6,7,8-HxCDD	31.623	8732957	1.26	0.8802	48.2	48.2	0.1985	0.1985	48.22	
1,2,3,6,7,8-HxCDD	31.650	11801	1.24	1.0001	0.1469	0.1351	0.1041	0.1041		RQMa
1,2,3,7,8,9-HxCDD	31.969						0.0927	0.0927		
A Non-2,3,7,8-sub-HxCDD	30.525	197546	1.25	1.0655	2.156	2.156	0.0986	2.156		Ma
S Total HxCDD					2.495	2.483	0.0988	0.0988		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.615	7658921	0.44	0.7730	48.1	48.1	0.6554	0.6554	48.15	
1,2,3,4,6,7,8-HpCDF	33.615						0.0770	0.0770		
D 13C-1,2,3,4,7,8,9-HpCDF	34.685	7989076	0.43	0.7008	55.4	55.4	0.7229	0.7229	55.40	
1,2,3,4,7,8,9-HpCDF	34.685						0.0856	0.0856		
A Non-2,3,7,8-sub-HpCDF	34.150						0.0811	0.0811		
S Total HpCDF							0.0856	0.0856		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	6701475	1.02	0.6472	50.3	50.3	0.3766	0.3766	50.32	
1,2,3,4,6,7,8-HpCDD	34.405	272356	1.01	1.0943	3.714	3.714	0.0850	0.0850		
A Non-2,3,7,8-sub-HpCDD	34.223	658512	1.04	1.0943	8.980	8.980	0.0850	8.980		
S Total HpCDD					12.7	12.7	0.0850	0.0850		
D 13C-OCDD	36.713	10346015	0.88	0.4472	112.4	112.4	0.4985	0.4985	56.22	
OCDF	36.821	13448	0.88	1.4382	0.1808	0.1808	0.0720	0.0720		
OCDD	36.725	4955134	0.90	1.1070	86.5	86.5	0.1537	0.1537		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d
Lims ID: 320-77214-A-4-A
Client ID: 11215702-080221-BN-SJSB090 (6-8)
Sample Type: Client
Inject. Date: 25-Aug-2021 16:35:39 ALS Bottle#: 11 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-4-A 320-77214-A-4-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:58:17 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:05:00

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.583	17.598	-1		9209284	2287633	3614	9035	633		
333.9339	17.583	17.598	-1		11418799	2843775	3120	7800	911	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.069	17.099	-2	0.971	7196309	1822680	7495	18737	243		
317.9389	17.069	17.099	-2	0.971	9528976	2436867	3660	9150	666	0.76(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.084	17.114	-2	1.001	374235	89322	1139	2847	78		M
305.8987	17.084	17.114	-2	1.001	493011	117039	1697	4242	69	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	16.706	17.076	-22	0.979	160481	47223	1139	2847	41		M
305.8987	16.706	17.076	-22	0.979	205061	55268	1697	4242	33	0.78(0.65-0.89)	M
303.9016	17.507	17.076	26	1.026	27905	7312	1139	2847	6		
	Empc Correction				21880	5244	1139	2847	5		
305.8987	17.507	17.076	26	1.026	28416	6811	1697	4242	4	0.98(0.65-0.89)	
303.9016	18.898	17.076	109	1.107	29386	5891	1139	2847	5		
305.8987	18.868	17.076	107	1.105	35805	9328	1697	4242	5	0.82(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.764	17.794	-2	1.010	4377370	995699	3614	9035	276		
333.9339	17.764	17.794	-2	1.010	5638959	1270507	3120	7800	407	0.78(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	17.794	17.809	-1	1.002	79538	18572	915	2287	20		M
321.8936	17.794	17.809	-1	1.002	118519	28173	784	1960	36	0.67(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	17.794	17.809	-1	1.012	6467631	1547218	1367	3417	1132		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											U
319.8965	17.537						915	2287			
321.8936	17.537						784	1960			
13C-1,2,3,7,8-PeCDF											
351.9000	22.034	22.020	1	1.253	8026462	1509536	1681	4202	898		
353.8970	22.034	22.020	1	1.253	4975094	895846	1523	3807	588	1.61(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.074	22.047	2	1.002	20254	3584	296	740	12		M
341.8567	22.047	22.047	0	1.001	13886	2587	647	1617	4	1.46(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.370	23.343	2	1.329	8982562	1530116	1681	4202	910		
353.8970	23.356	23.343	1	1.328	5633233	932418	1523	3807	612	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370						296	740			
341.8567	23.370						647	1617			
A F1 PeCDFs											
339.8597	19.851						273	682			
341.8567	19.851						590	1475			
A Non-2,3,7,8-sub-PeCDF											U
339.8597	23.067						296	740			
341.8567	23.067						647	1617			
13C-1,2,3,7,8-PeCDD											
367.8949	24.079	24.052	2	1.369	5233928	846914	1182	2955	717		
369.8919	24.079	24.052	2	1.369	3296273	531014	832	2080	638	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079						532	1330			
357.8516	24.079						243	607			
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						532	1330			
357.8516	23.696						243	607			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.212	30.186	2	0.945	4205477	760877	1405	3512	542		
385.8610	30.212	30.186	2	0.945	8122279	1500459	2615	6537	574	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											M
373.8208	30.239	30.213	2	1.001	23403	4184	374	935	11		
375.8178	30.239	30.213	2	1.001	17725	3169	318	795	10	1.32(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.425	30.399	2	0.952	3768513	707154	1405	3512	503		
385.8610	30.425	30.399	2	0.952	7492178	1383698	2615	6537	529	0.50(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412						374	935			
375.8178	30.412						318	795			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.317	31.291	2	0.980	3717086	961136	1405	3512	684		
385.8610	31.317	31.291	2	0.980	7123841	1880278	2615	6537	719	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.317						374	935			
375.8178	31.317						318	795			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.156	32.143	1	1.006	3429061	1032949	1405	3512	735		
385.8610	32.156	32.143	1	1.006	6761451	2028037	2615	6537	776	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.156						374	935			
375.8178	32.156						318	795			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.338						374	935			
375.8178	30.338						318	795			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.969	31.956	1		11309335	3338143	2447	6117	1364		
403.8529	31.969	31.956	1		9267685	2696242	1770	4425	1523	1.22(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.517	31.504	1	0.986	4589557	1297649	2447	6117	530		
403.8529	31.517	31.504	1	0.986	3877469	1128878	1770	4425	638	1.18(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.530	31.517	1	1.000	9795	2500	565	1412	4		M
391.8127	31.530	31.517	1	1.000	7519	1868	463	1157	4	1.30(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.623	31.610	1	0.989	4862285	1363016	2447	6117	557		
403.8529	31.623	31.610	1	0.989	3870672	1104651	1770	4425	624	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQMa
389.8157	31.650	31.624	2	1.001	6533	2208	565	1412	4		M
391.8127	31.637	31.624	1	1.000	6298	1788	463	1157	4	1.04(1.05-1.43)	M
	Empc Correction				5268	1780	463	1157	4		
1,2,3,7,8,9-HxCDD											
389.8157	31.969						565	1412			
391.8127	31.969						463	1157			
A Non-2,3,7,8-sub-HxCDD											Ma
389.8157	29.121	30.525	-84	0.921	109571	16044	565	1412	28		M
391.8127	29.108	30.525	-85	0.920	87975	10639	463	1157	23	1.25(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.615	33.603	1	1.051	2326415	916953	3779	9447	243		
419.8220	33.615	33.603	1	1.051	5332506	2053273	8450	21125	243	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615						950	2375			
409.7789	33.615						368	920			
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.685	34.672	1	1.085	2395950	900144	3779	9447	238		
419.8220	34.685	34.672	1	1.085	5593126	2022457	8450	21125	239	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685						950	2375			
409.7789	34.685						368	920			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						950	2375			
409.7789	34.150						368	920			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	3376815	1198390	2576	6440	465		
437.8140	34.405	34.393	1	1.076	3324660	1162290	3307	8267	351	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	136728	47166	419	1047	113		
425.7737	34.405	34.405	0	1.000	135628	44331	459	1147	97	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.870	34.223	-21	0.985	335824	122317	419	1047	292		
425.7737	33.858	34.223	-22	0.984	322688	113974	459	1147	248	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.713	36.701	1	1.148	4855594	1522806	2997	7492	508		
471.7750	36.713	36.701	1	1.148	5490421	1768631	2383	5957	742	0.88(0.76-1.02)	
OCDF											
441.7428	36.821	36.797	1	1.003	6287	2117	290	725	7		
443.7399	36.809	36.797	1	1.003	7161	1854	392	980	5	0.88(0.76-1.02)	
OCDD											
457.7377	36.725	36.713	1	1.000	2344212	716364	583	1457	1229		
459.7348	36.725	36.713	1	1.000	2610922	800330	537	1342	1490	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Lims ID:	320-77214-A-4-A		
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Inject. Date:	25-Aug-2021 16:35:39	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	10

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	16725285	4259547

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	16725285	4259547

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.706	160481	47223	205061	55268	2.13	0.78	M
17.507	27905	7312	28416	6811	0.3289	0.98	RQ
17.507	21880	5244	28416	6811	0.2937		Empc Correction
18.898	29386	5891	35805	9328	0.3807	0.82	
Signal Totals:							
	211747	58358	269282	71407			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	487054	131833				0.81	RQM
	481029	129765					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.844 = (487054 * 100.000) / (16725285 * 1.024)
Empc Amount: 2.809 = (481029 * 100.000) / (16725285 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Lims ID:	320-77214-A-4-A		
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Inject. Date:	25-Aug-2021 16:35:39	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	10

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	10016329	2266206

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	10016329	2266206

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Lims ID:	320-77214-A-4-A		
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Inject. Date:	25-Aug-2021 16:35:39	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	10

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	13001556	2405382
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	14615795	2462534

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	13808675	2433958

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d
Lims ID: 320-77214-A-4-A
Client ID: 11215702-080221-BN-SJSB090 (6-8)
Inject. Date: 25-Aug-2021 16:35:39 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 10

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	8467026	2426527
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	8732957	2467667
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	8599991	2447097

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.121	109571	16044	87975	10639	2.16	1.25	Ma
Signal Totals:							
	109571	16044	87975	10639			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	197546	26683				1.25	Ma

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.156 = (197546 * 100.000) / (8599991 * 1.066)

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Lims ID:	320-77214-A-4-A		
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Inject. Date:	25-Aug-2021 16:35:39	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	10

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	6701475	2360680

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	6701475	2360680

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.870	335824	122317	322688	113974	8.98	1.04	
Signal Totals:							
	335824	122317	322688	113974			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	658512	236291				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 8.980 = (658512 * 100.000) / (6701475 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.08
Area: 380568
Amount: 5.101133
Amount Units: pg/ul

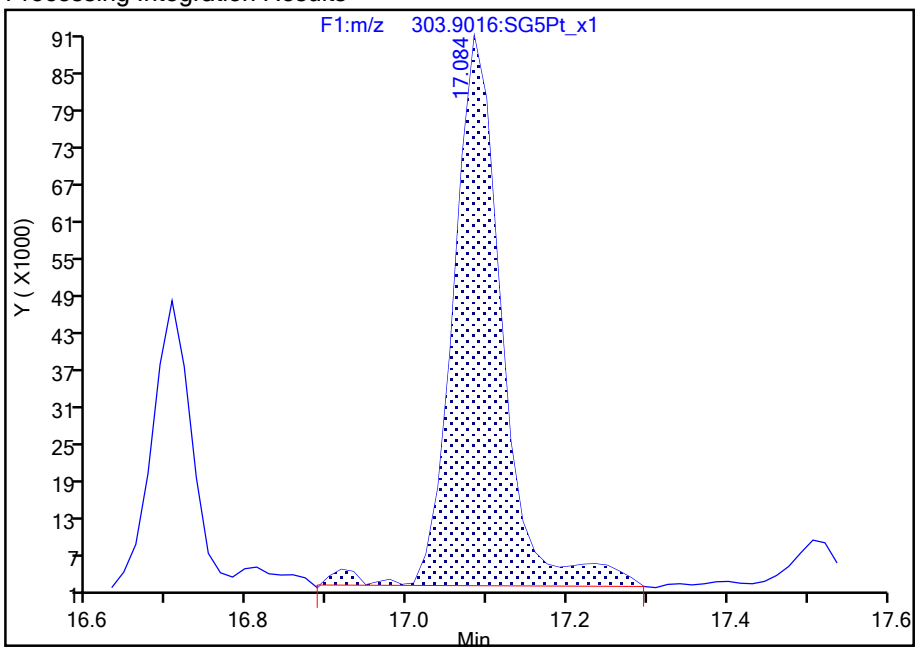

Manual Integration Results

RT: 17.08
Area: 374235
Amount: 5.064153
Amount Units: pg/ul

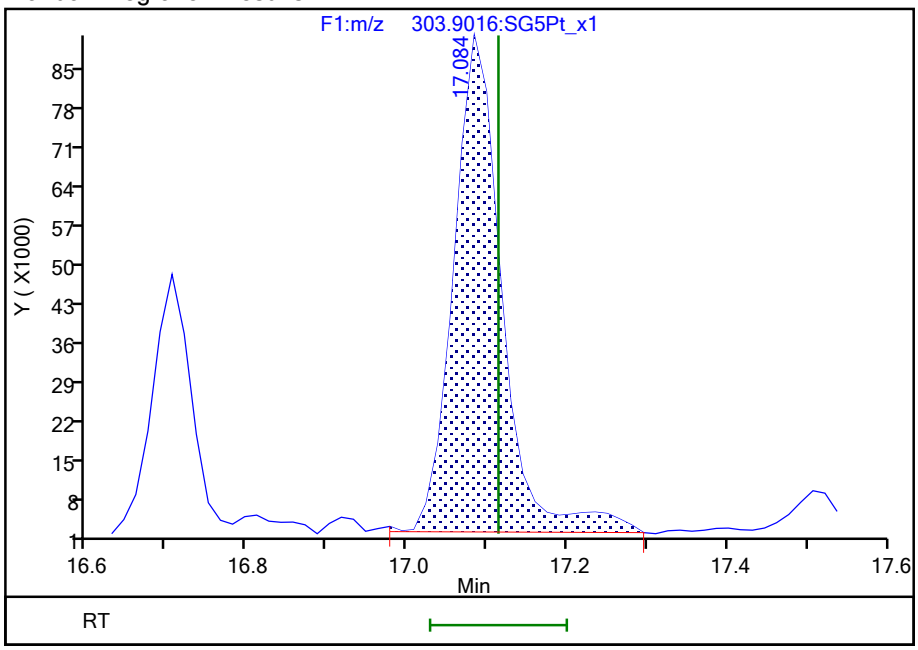

Reviewer: dadunj, 27-Aug-2021 09:54:46

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.70- 19.46)

Signal: 1

Processing Integration Results

RT = 16.706 Area = 178213

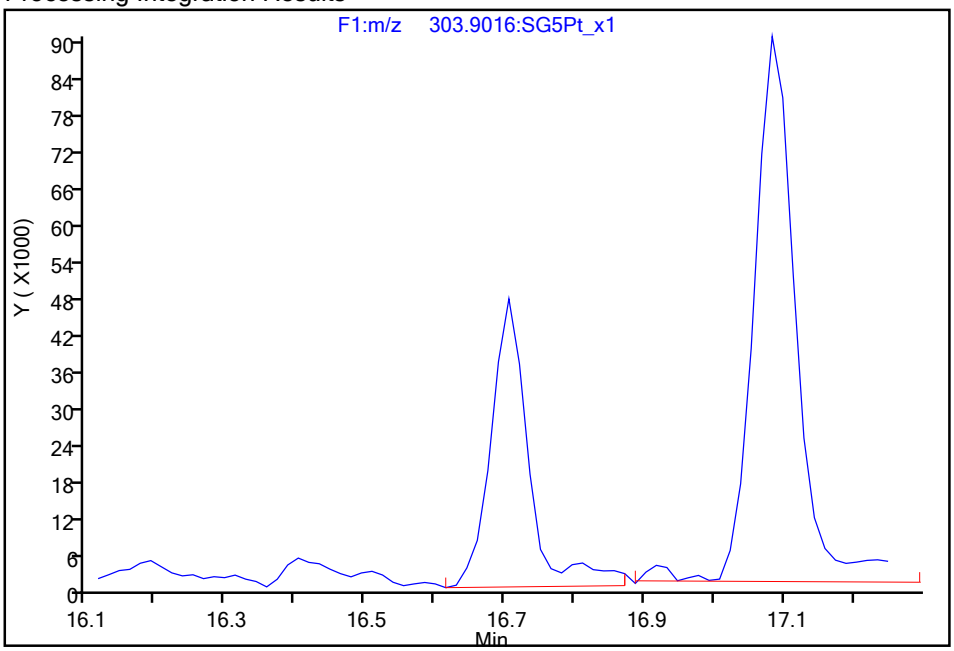

Manual Integration Results

RT = 16.706 Area = 160481 M

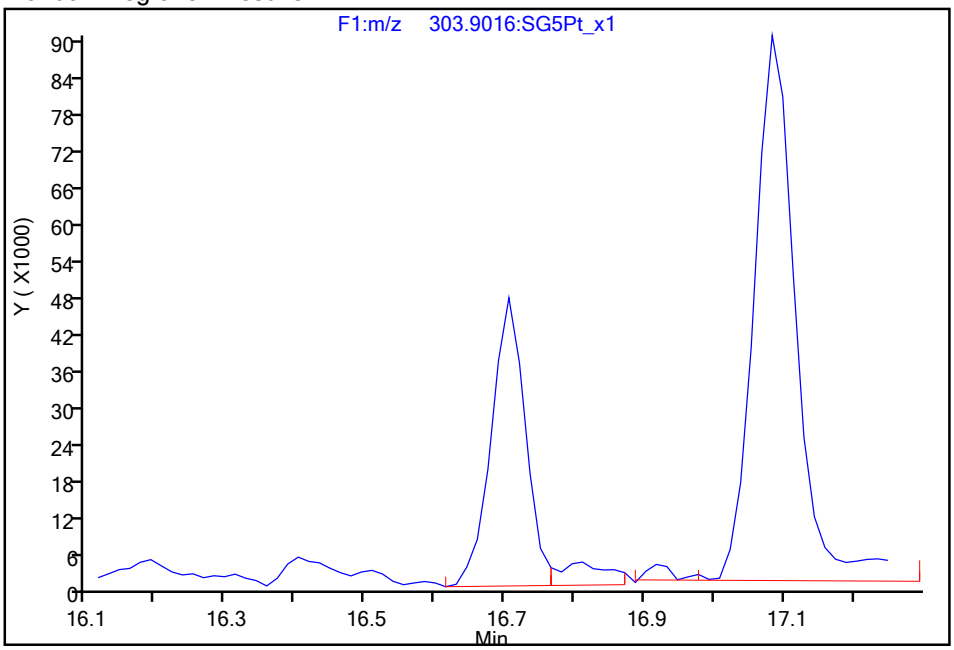

Reviewer: dadunj, 27-Aug-2021 09:54:50

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.70- 19.46)

Signal: 2

Processing Integration Results

RT = 16.706 Area = 215155

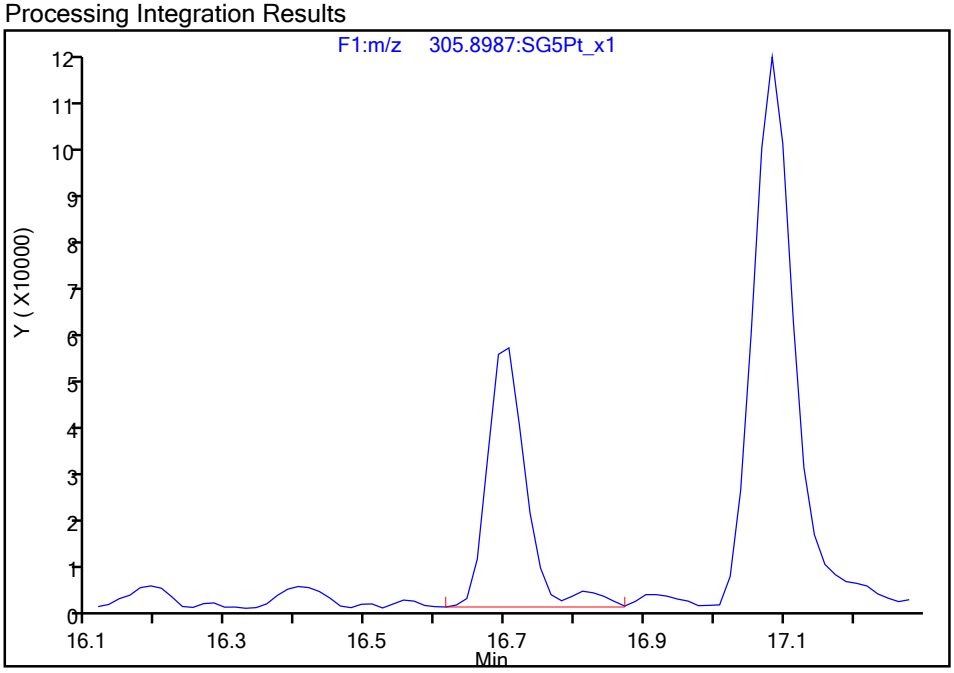

Manual Integration Results

RT = 16.706 Area = 205061 M

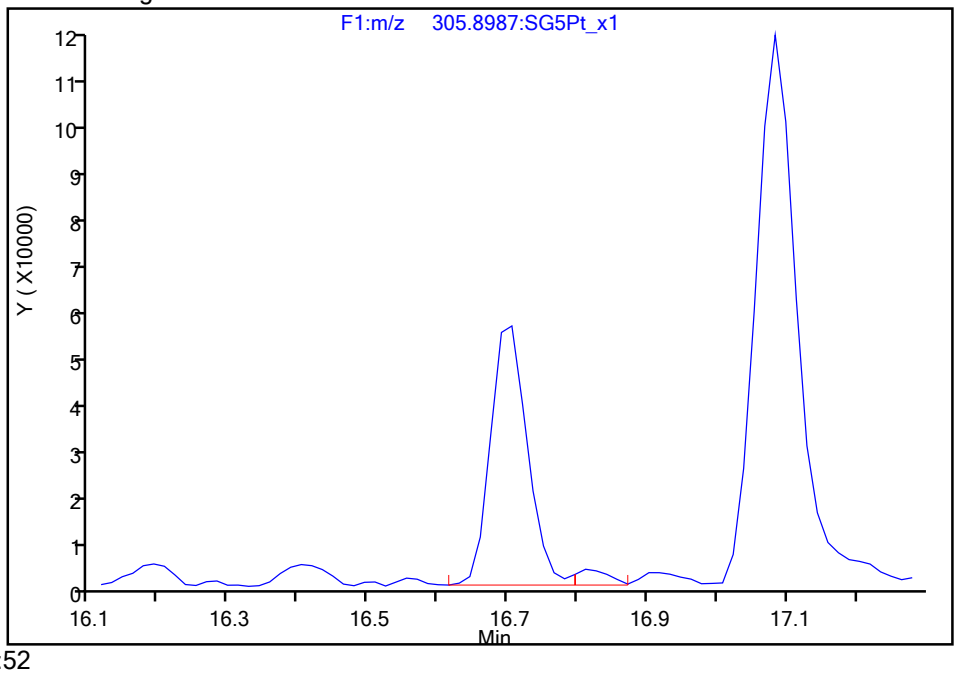

Reviewer: dadunj, 27-Aug-2021 09:54:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 17.79
Area: 126161
Amount: 1.660885
Amount Units: pg/ul

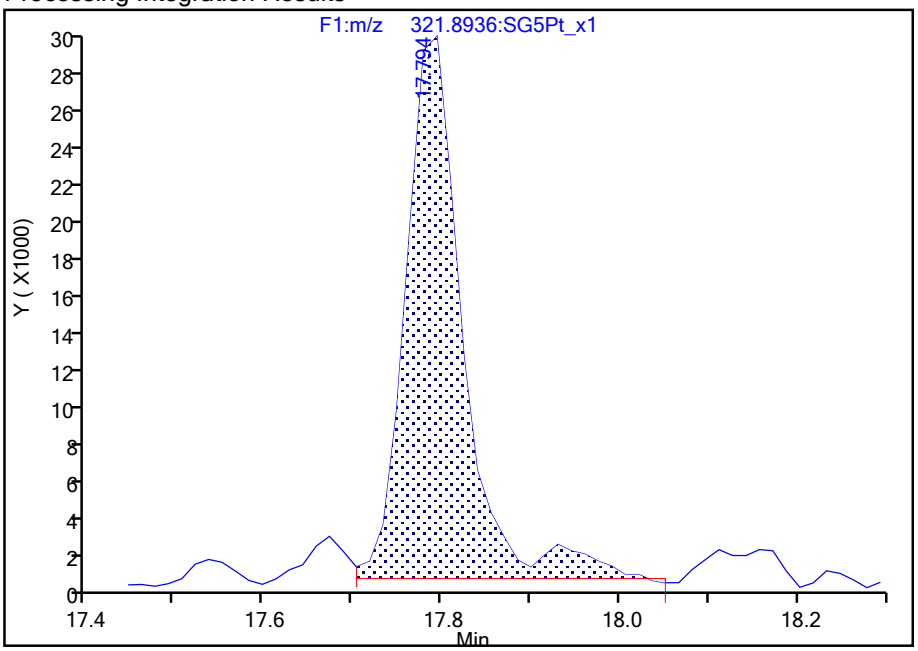

Manual Integration Results

RT: 17.79
Area: 118519
Amount: 1.576676
Amount Units: pg/ul

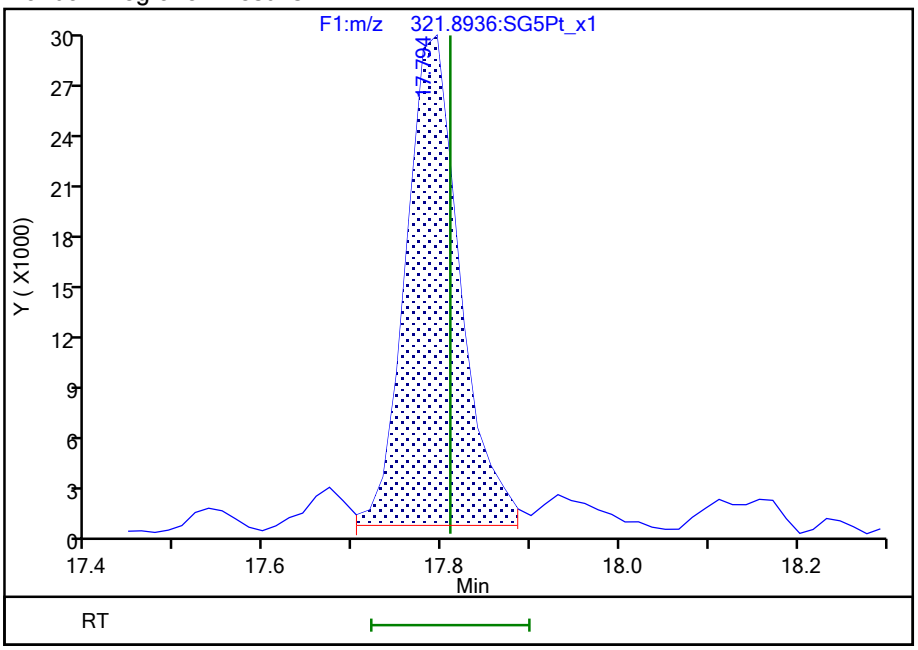

Reviewer: dadunj, 27-Aug-2021 09:54:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 17.79
Area: 82474
Amount: 1.660885
Amount Units: pg/ul

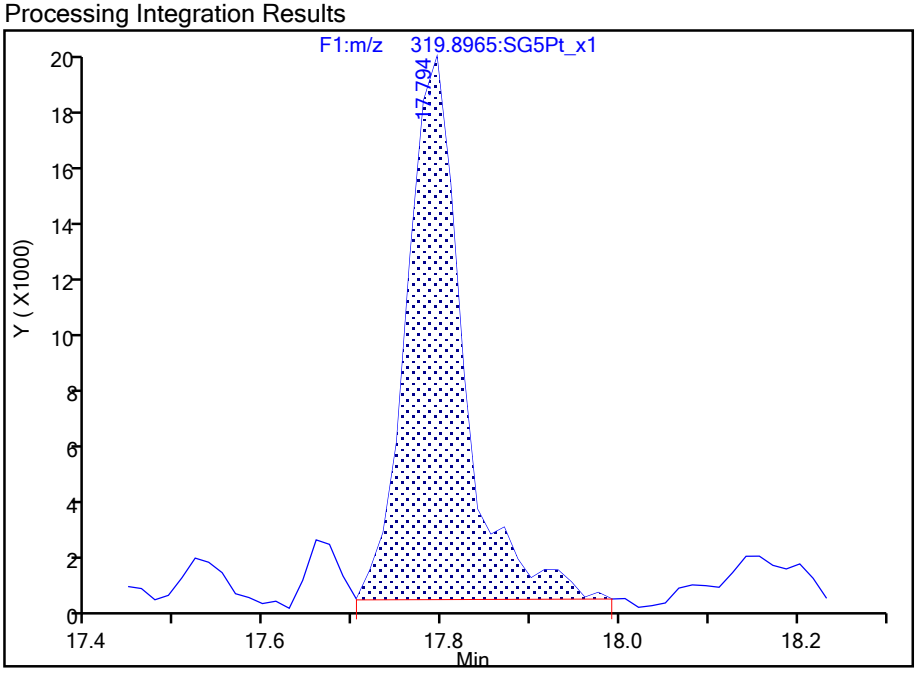

Manual Integration Results

RT: 17.79
Area: 79538
Amount: 1.576676
Amount Units: pg/ul

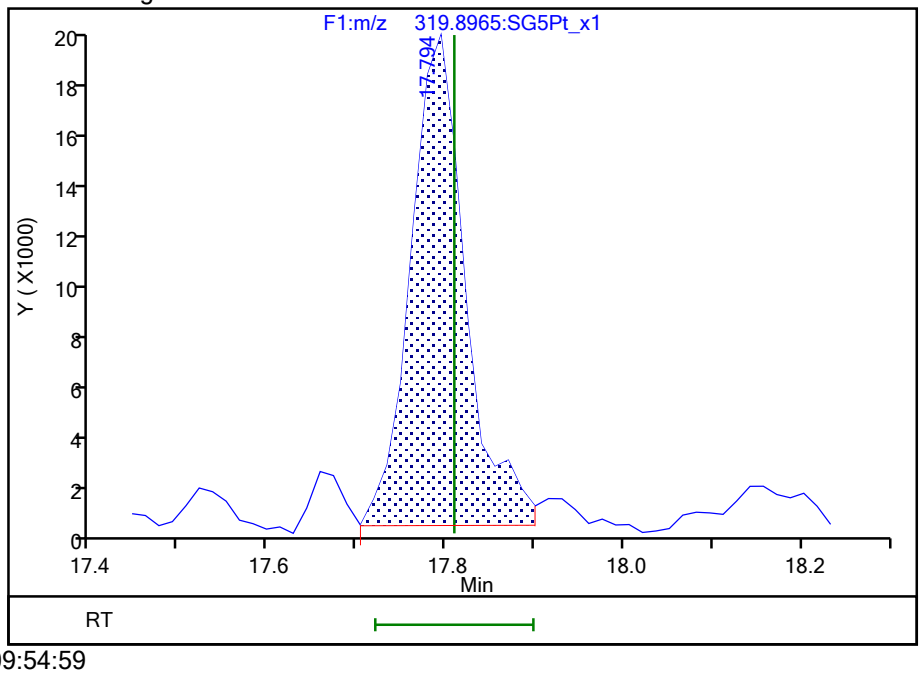

Reviewer: dadunj, 27-Aug-2021 09:54:59

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.05
Area: 16673
Amount: 0.279479
Amount Units: pg/ul

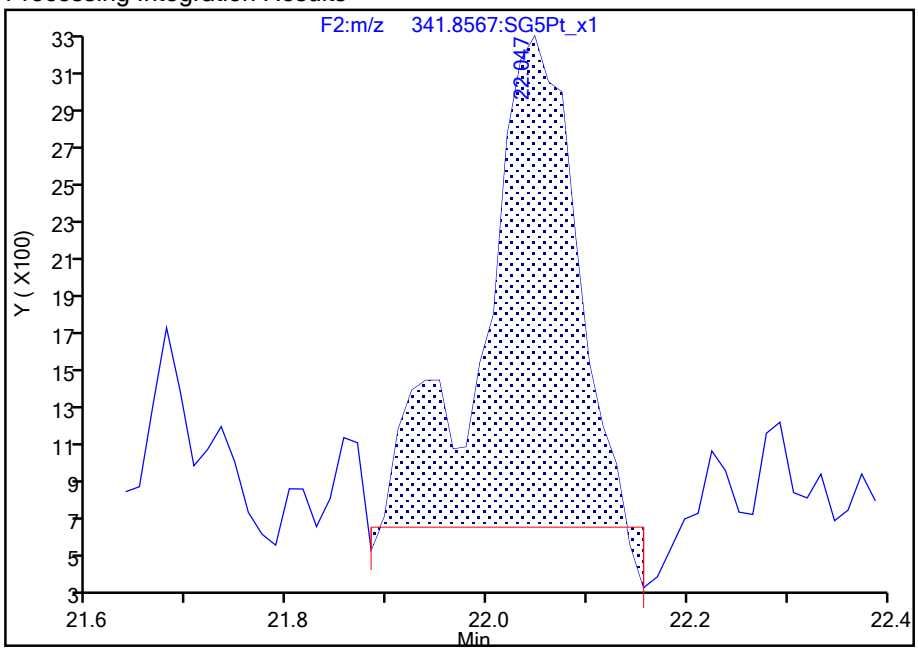

Manual Integration Results

RT: 22.05
Area: 13886
Amount: 0.247456
Amount Units: pg/ul

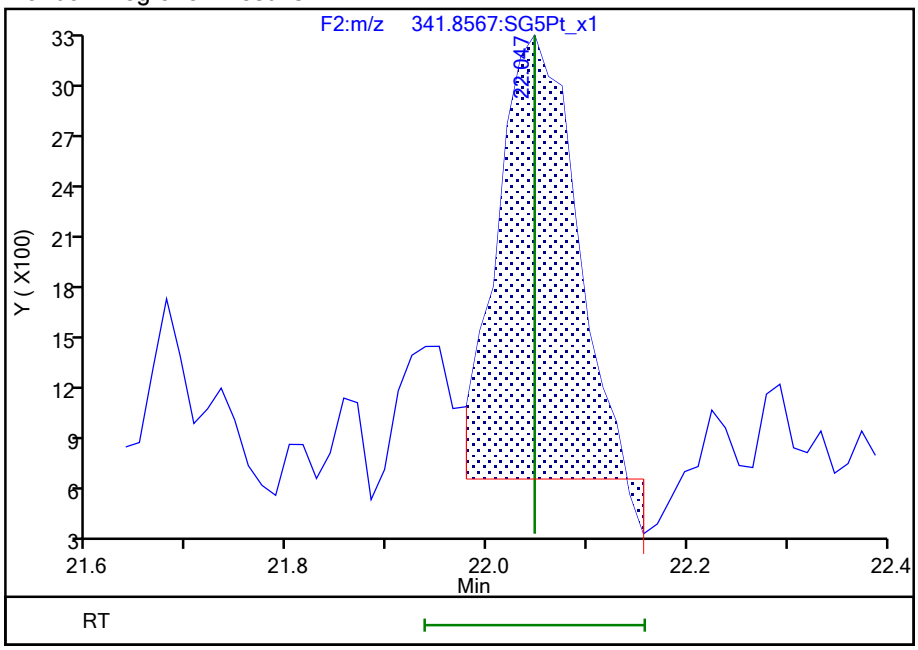

Reviewer: dadunj, 27-Aug-2021 09:55:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.07
Area: 21885
Amount: 0.279479
Amount Units: pg/ul

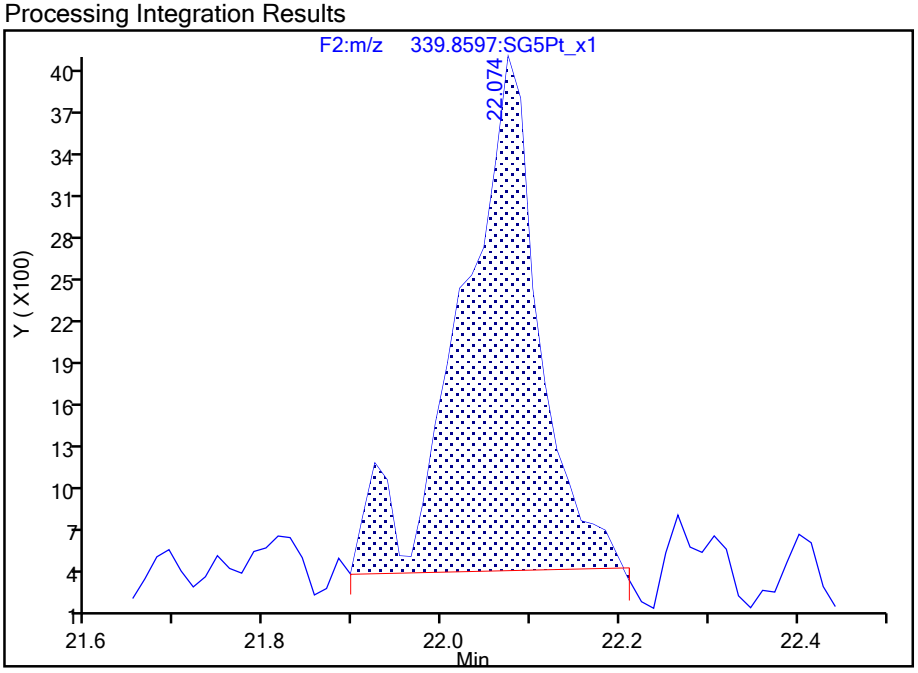

Manual Integration Results

RT: 22.07
Area: 20254
Amount: 0.247456
Amount Units: pg/ul

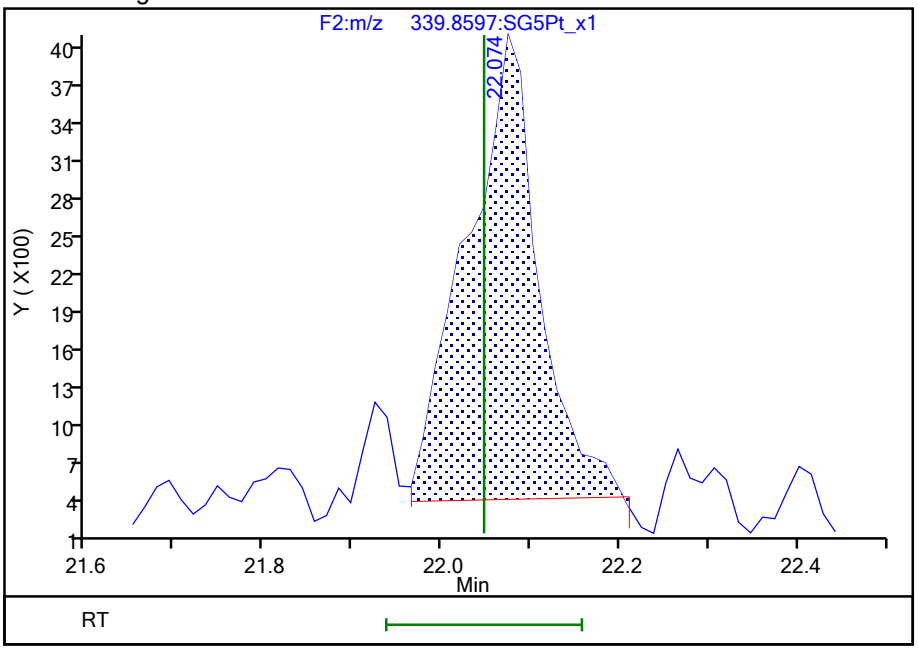

Reviewer: dadunj, 27-Aug-2021 09:55:12
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 2

Processing Integration Results

RT: 30.24
Area: 16181
Amount: 0.295907
Amount Units: pg/ul

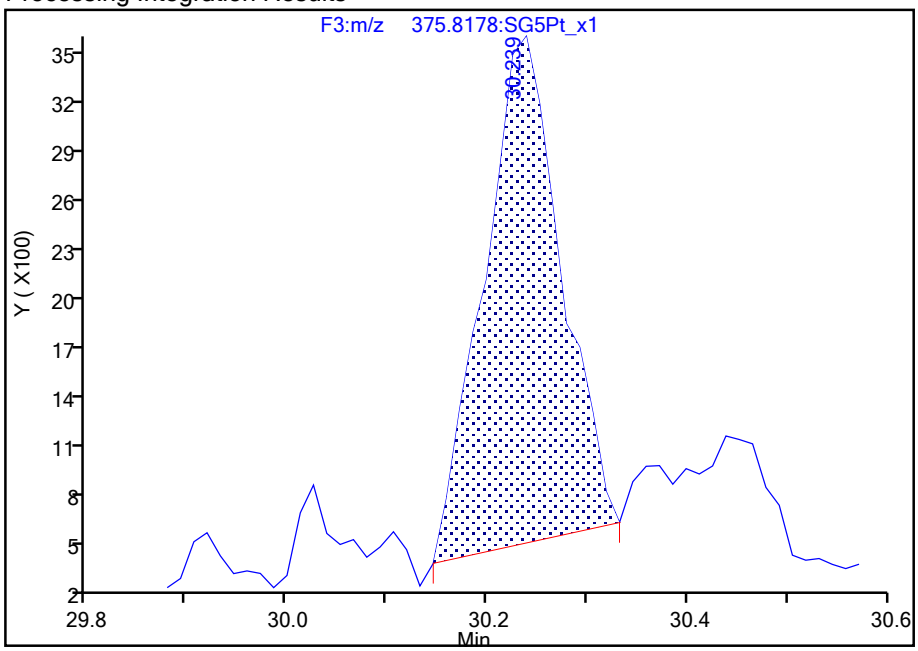

Manual Integration Results

RT: 30.24
Area: 17725
Amount: 0.307449
Amount Units: pg/ul

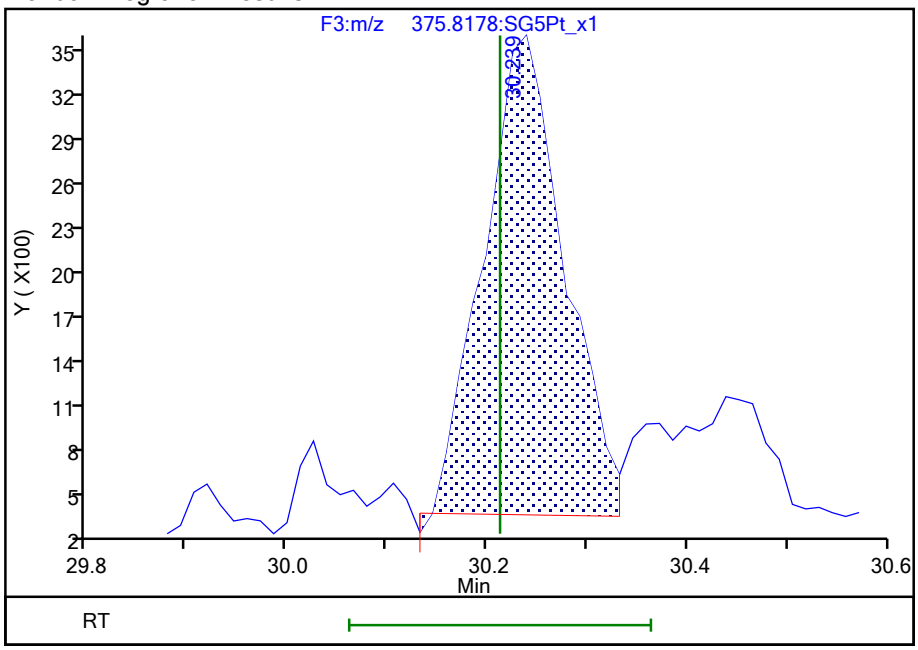

Reviewer: dadunj, 27-Aug-2021 09:55:36

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.53
Area: 16019
Amount: 0.396272
Amount Units: pg/ul

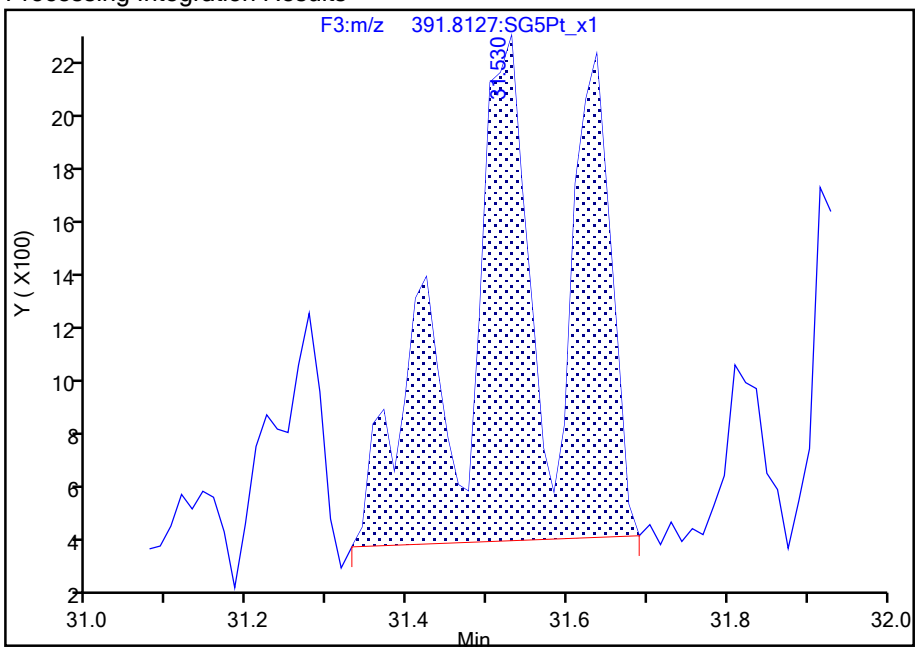

Manual Integration Results

RT: 31.53
Area: 7519
Amount: 0.192181
Amount Units: pg/ul

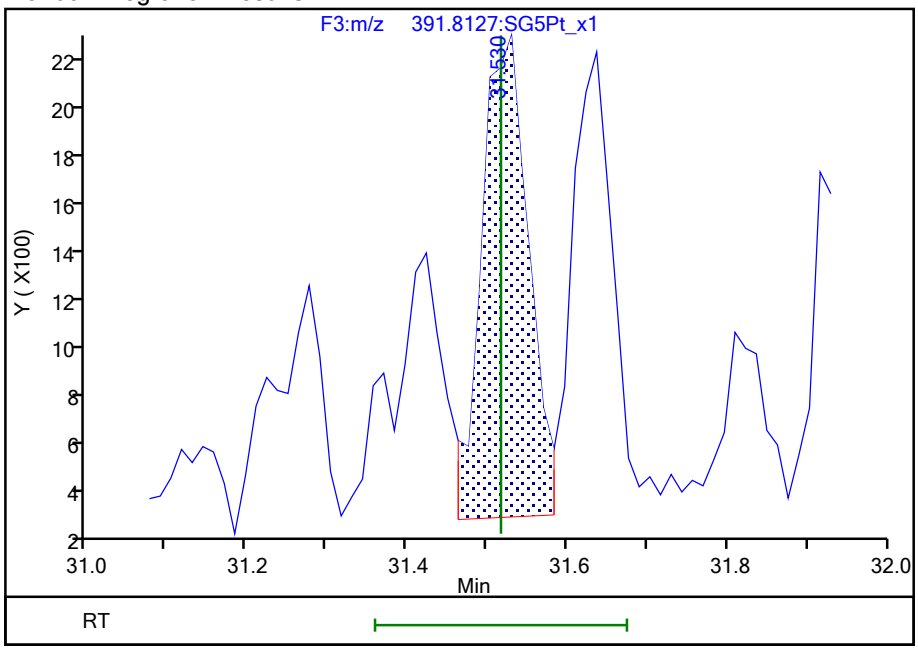

Reviewer: dadunj, 27-Aug-2021 09:56:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.53
Area: 19682
Amount: 0.396272
Amount Units: pg/ul

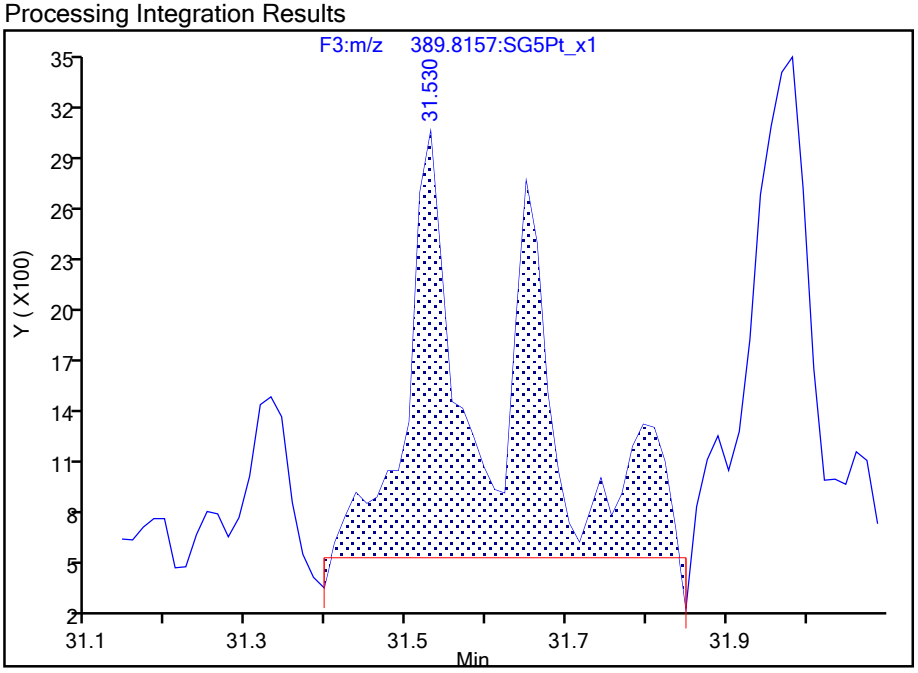

Manual Integration Results

RT: 31.53
Area: 9795
Amount: 0.192181
Amount Units: pg/ul

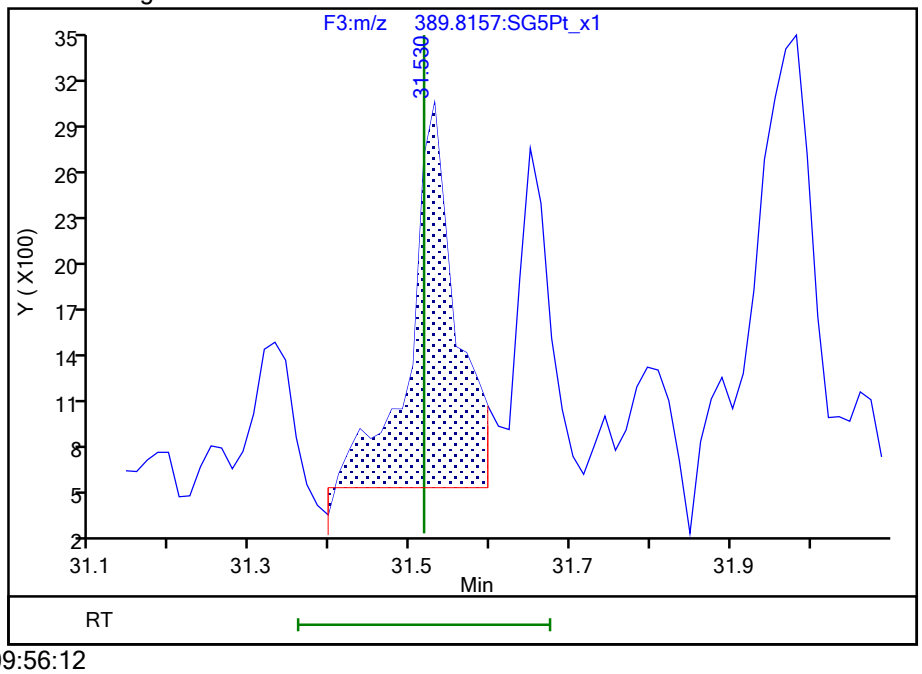

Reviewer: dadunj, 27-Aug-2021 09:56:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 3

Processing Integration Results

RT: 31.53
Area: 35701
Amount: 0.408776
Amount Units: pg/ul

Manual Integration Results

RT: 31.65
Area: 12831
Amount: 0.146915
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 09:56:18
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.53
Area: 19682
Amount: 0.408776
Amount Units: pg/ul

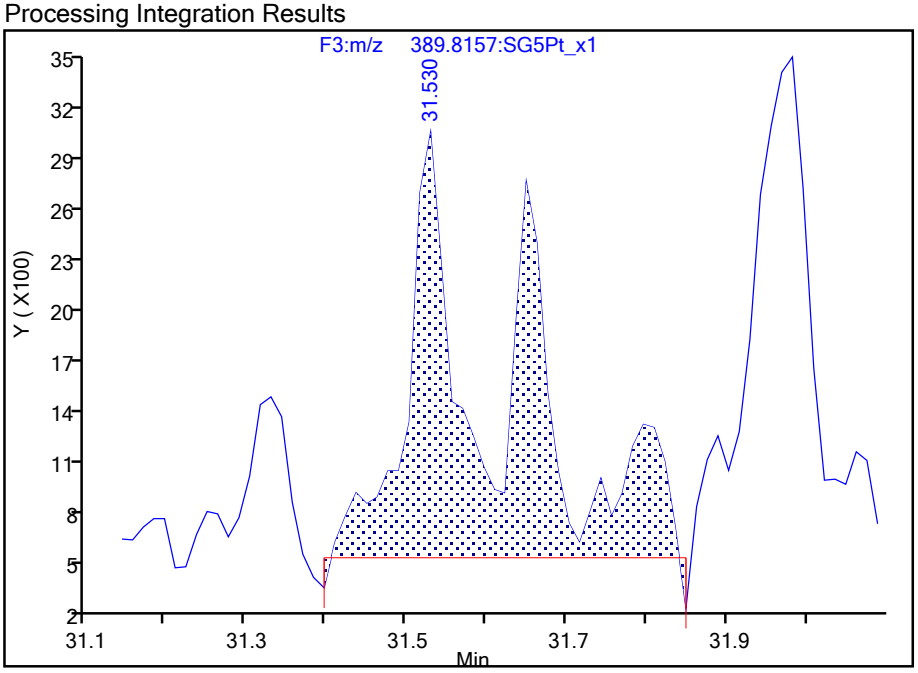

Manual Integration Results

RT: 31.65
Area: 6533
Amount: 0.146915
Amount Units: pg/ul

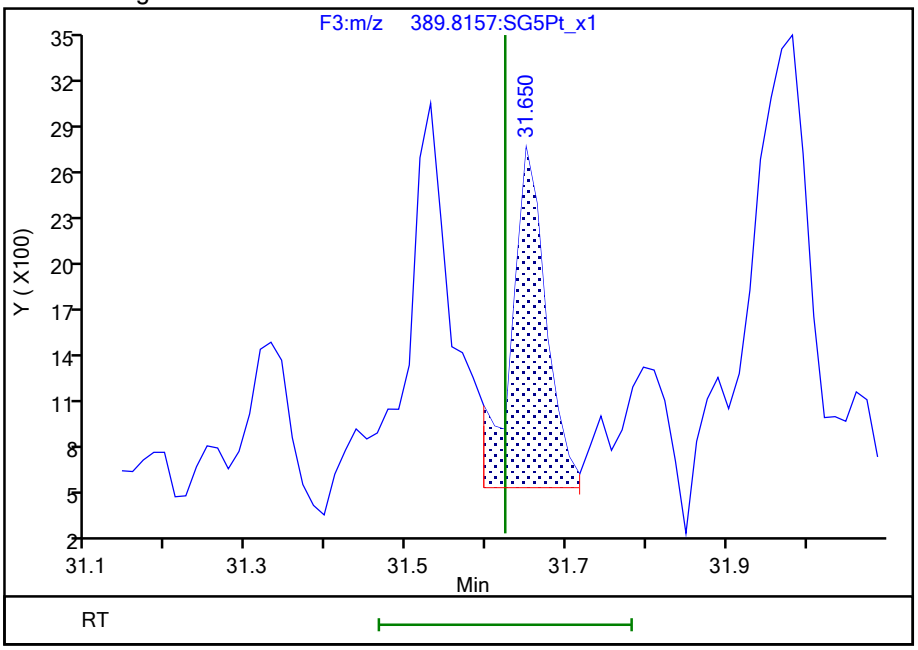

Reviewer: dadunj, 27-Aug-2021 09:56:19

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.53
Area: 16019
Amount: 0.408776
Amount Units: pg/ul

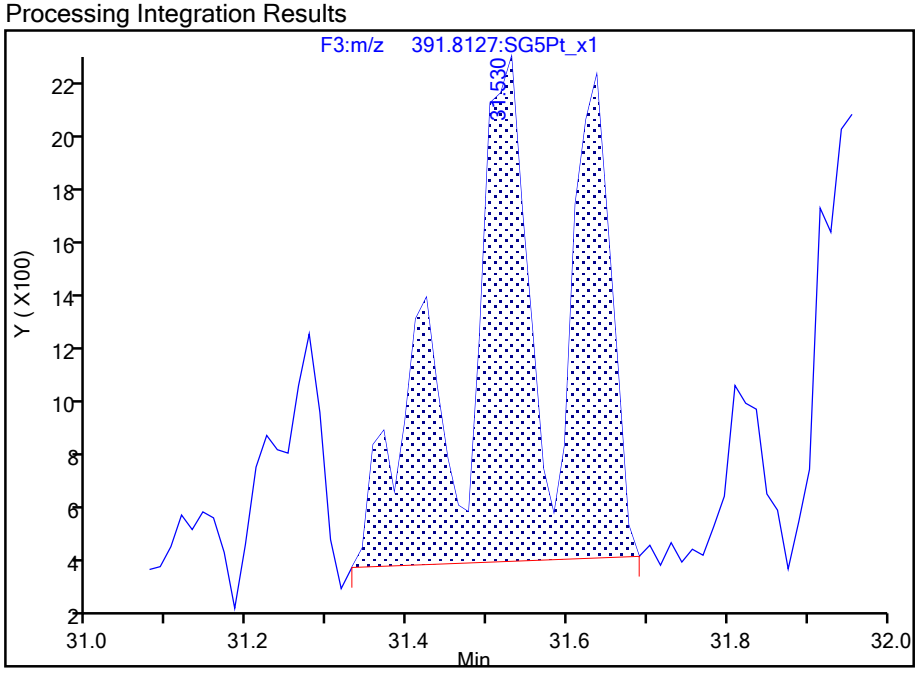

Manual Integration Results

RT: 31.64
Area: 6298
Amount: 0.146915
Amount Units: pg/ul

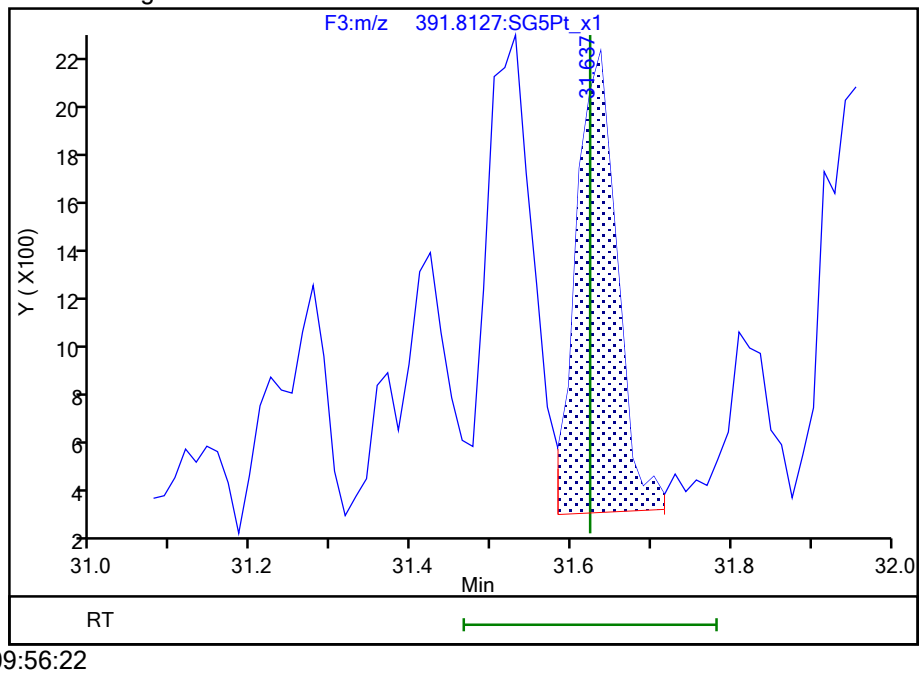

Reviewer: dadunj, 27-Aug-2021 09:56:22

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d				
Injection Date:	25-Aug-2021 16:35:39	Instrument ID:	10D5		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:	SMA	ALS Bottle#:	11	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (28.83- 32.22)

Signal: 1

Processing Integration Results

RT = 29.121 Area = 109571

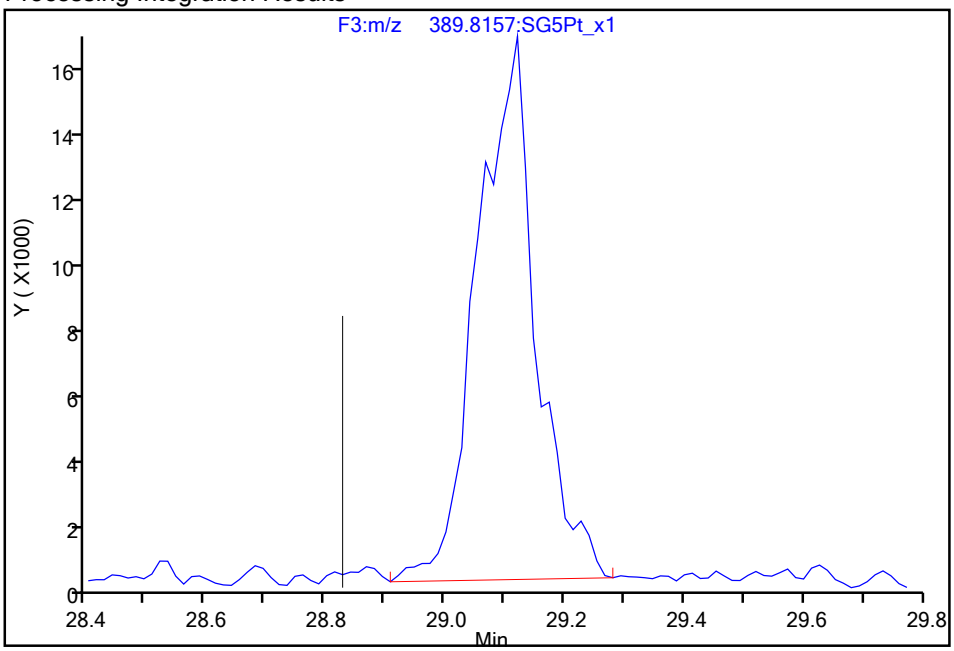

Manual Integration Results

RT = 29.121 Area = 109571

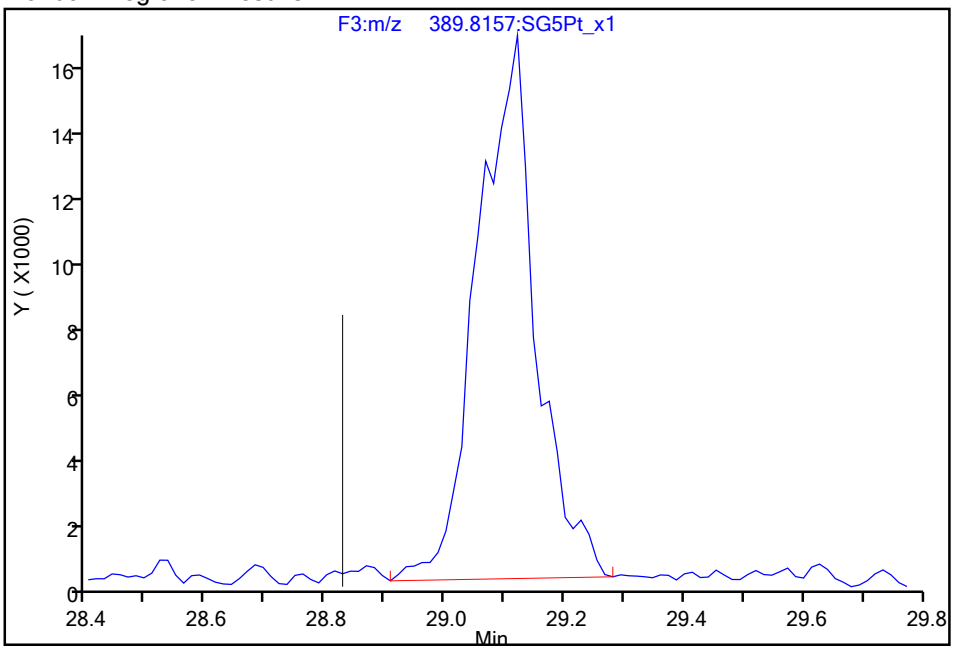

Reviewer: dadunj, 27-Aug-2021 09:56:47

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

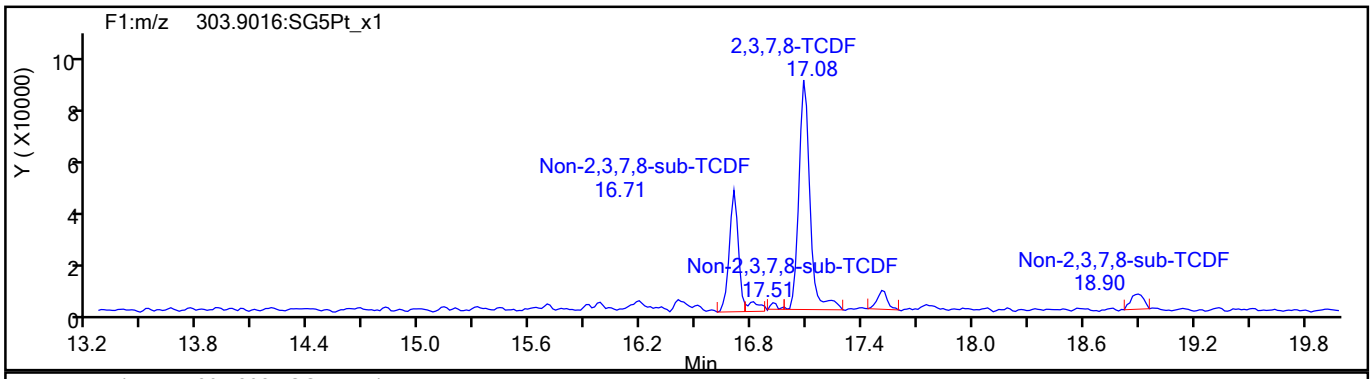

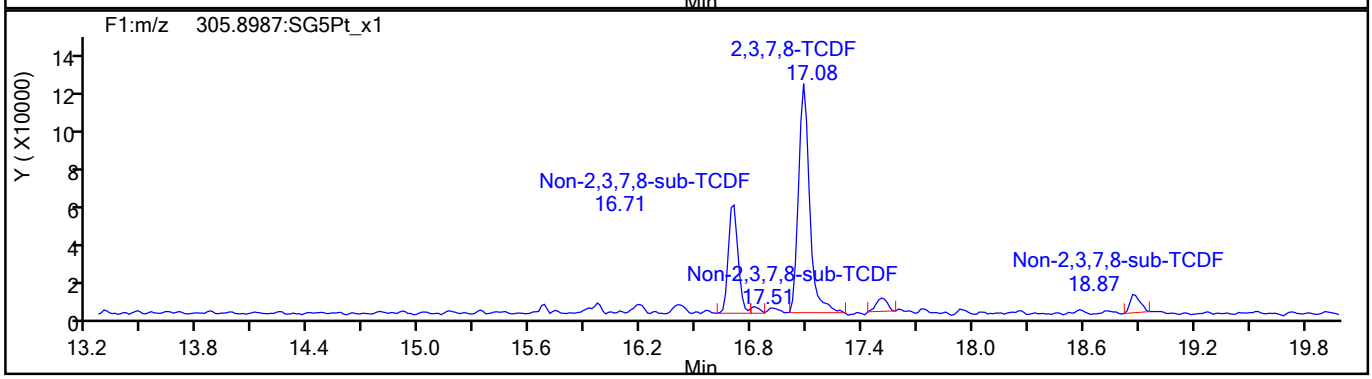

TCDF Standards

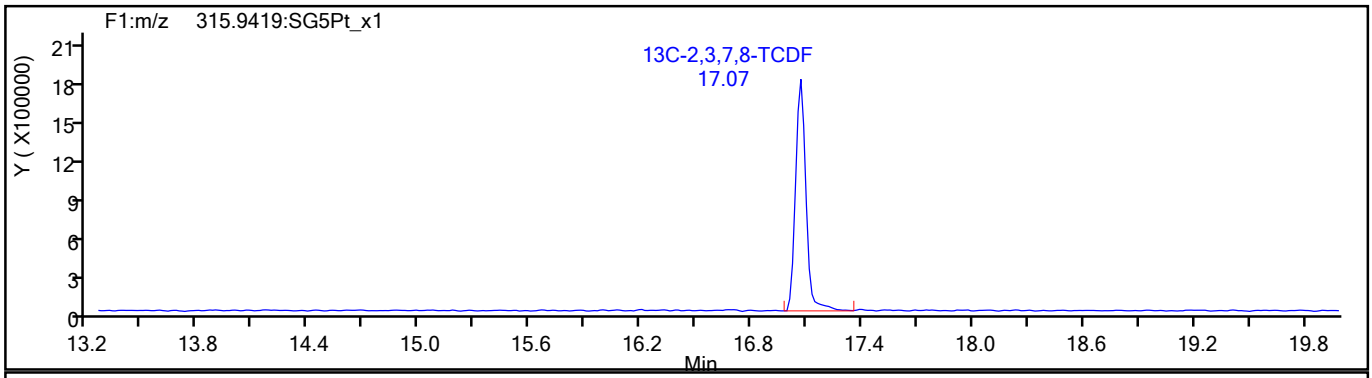

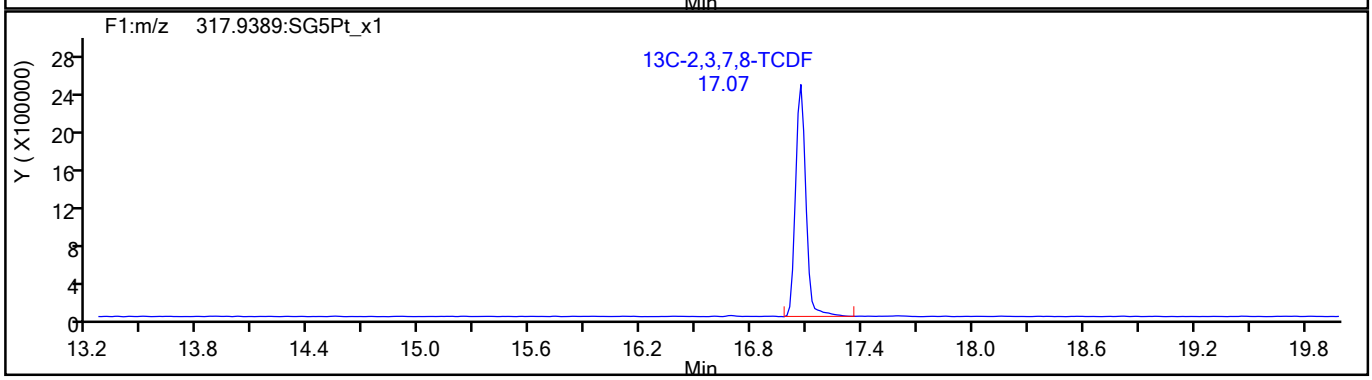

791060

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

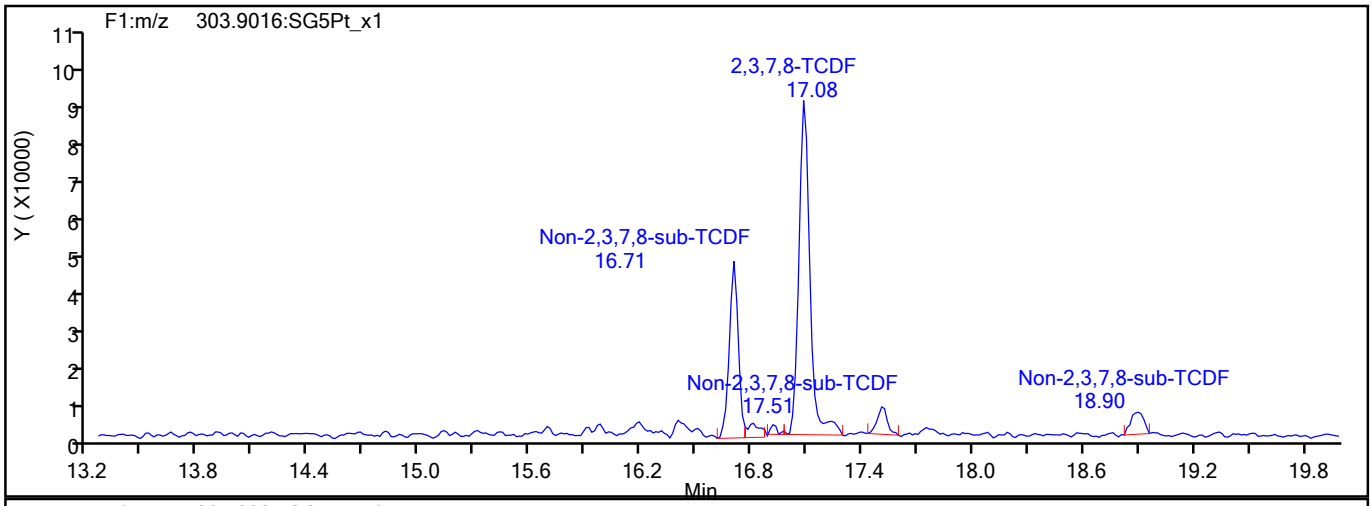

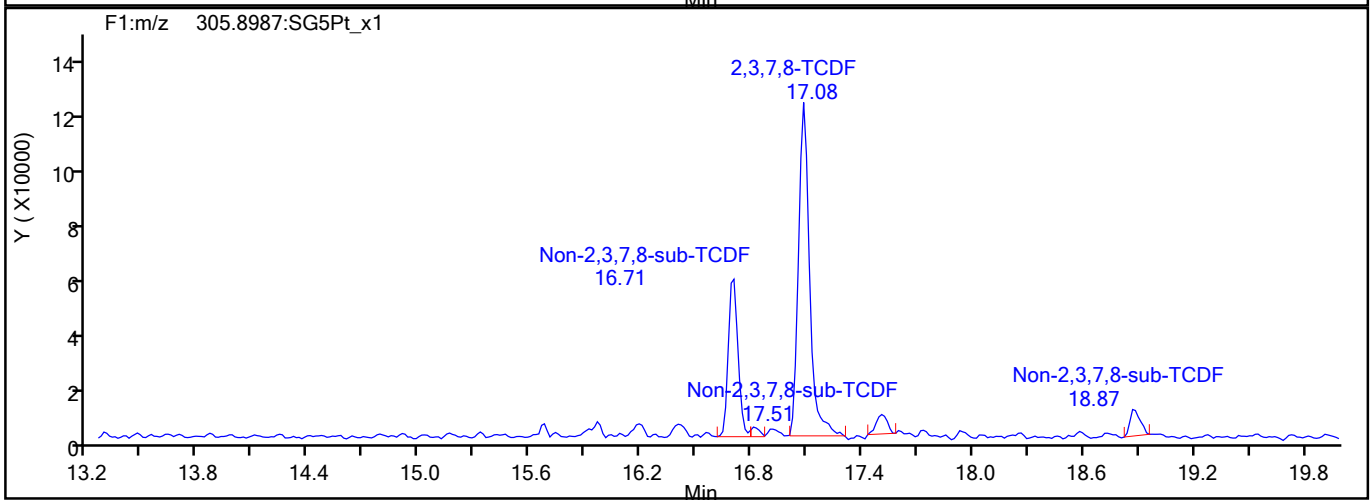

TCDF Interference Mass

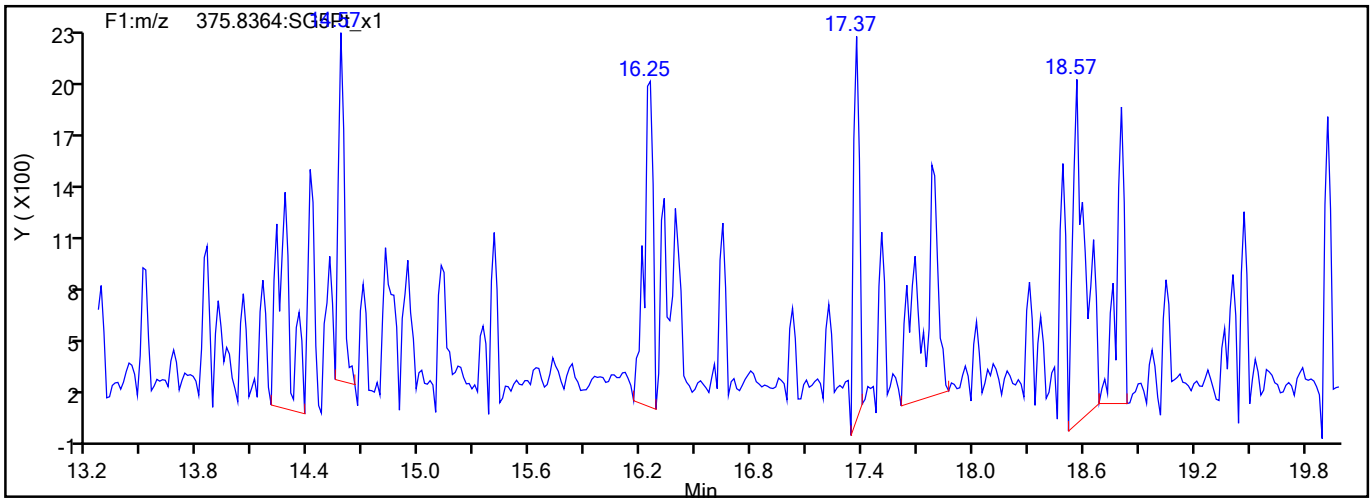

791061

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

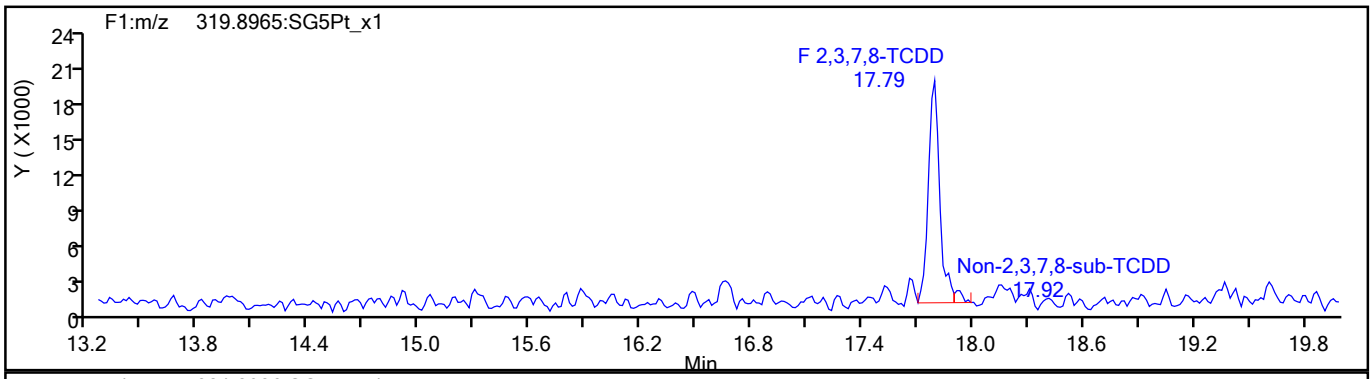

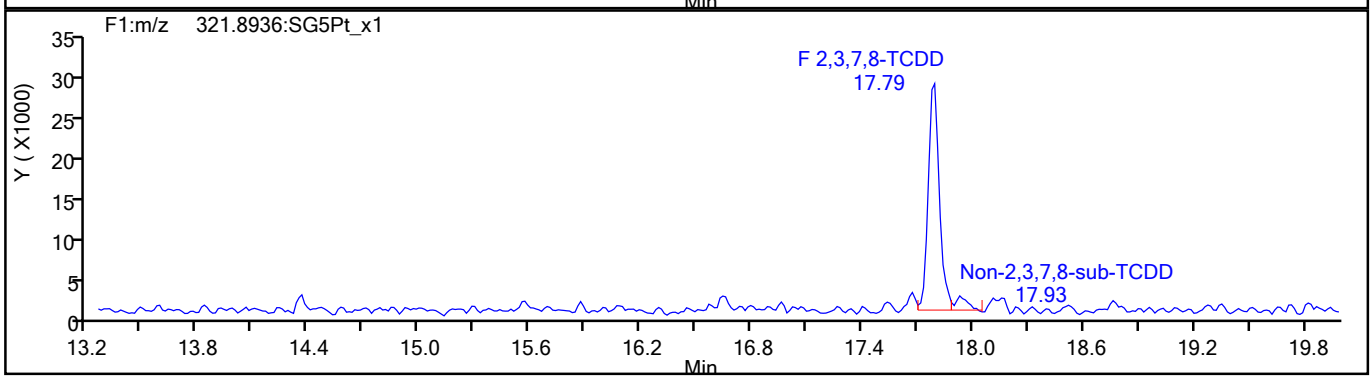

TCDD Standards

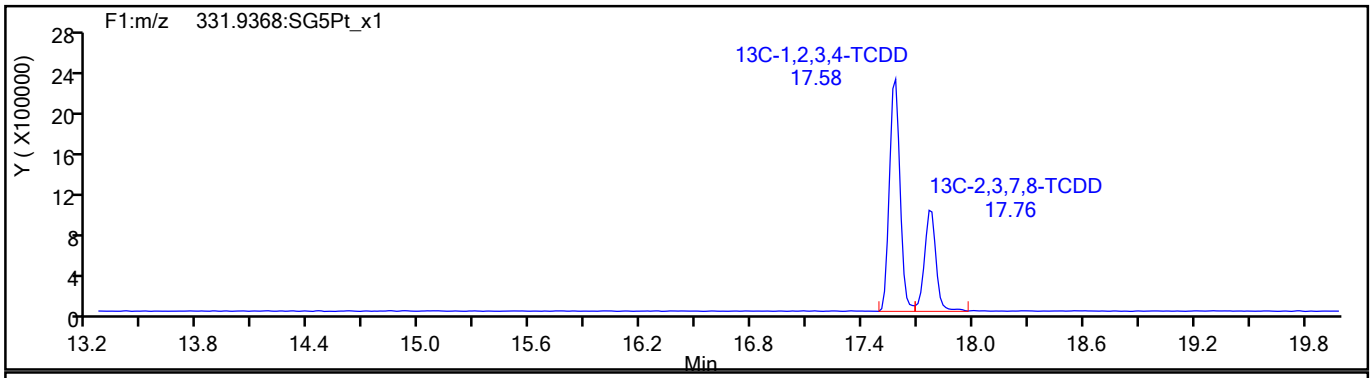

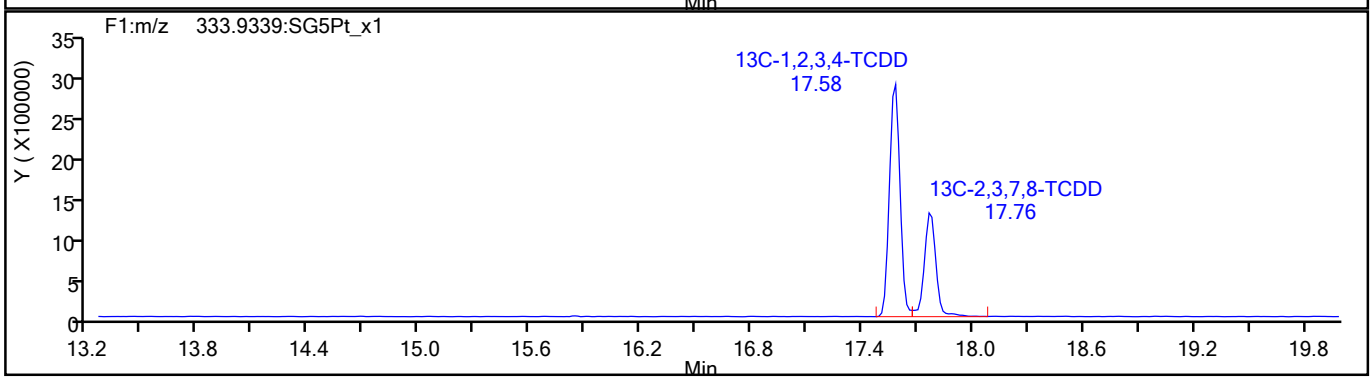

791062

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

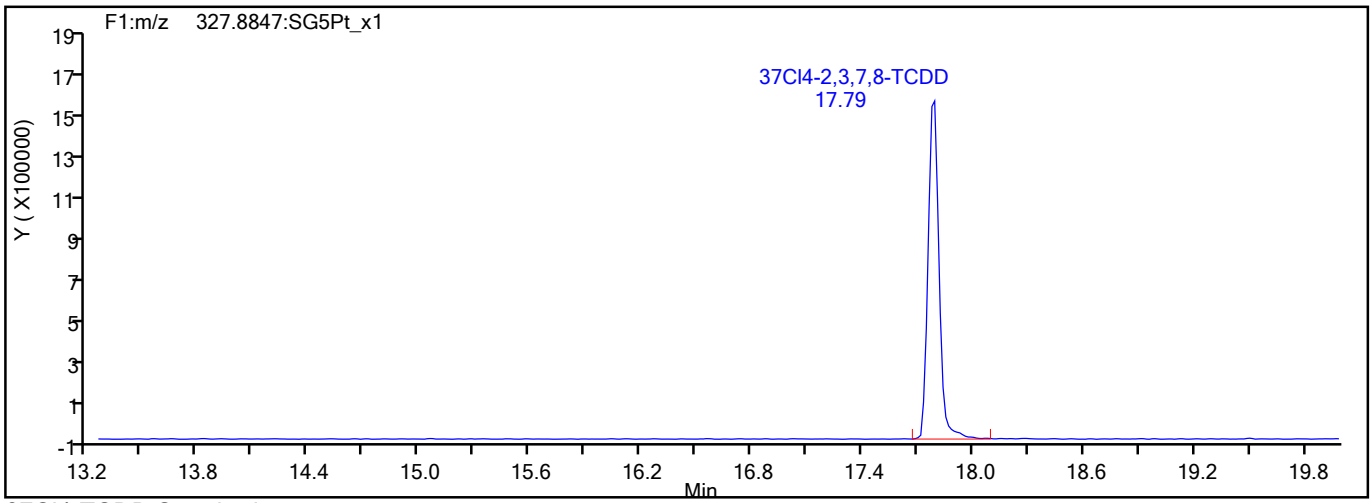

37Cl4-TCDD Standards

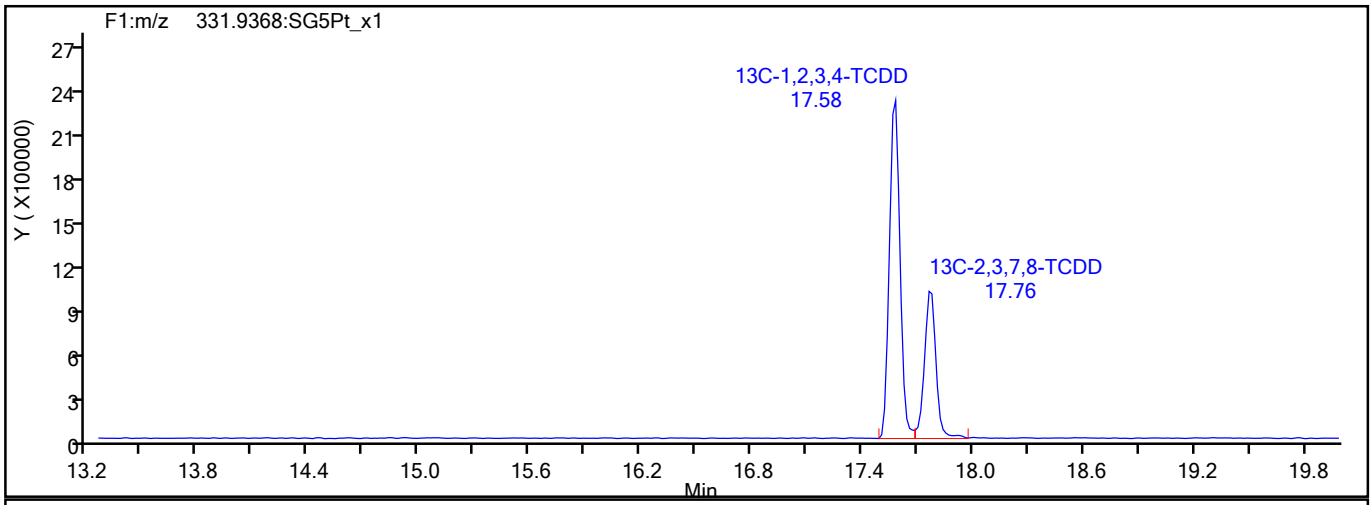

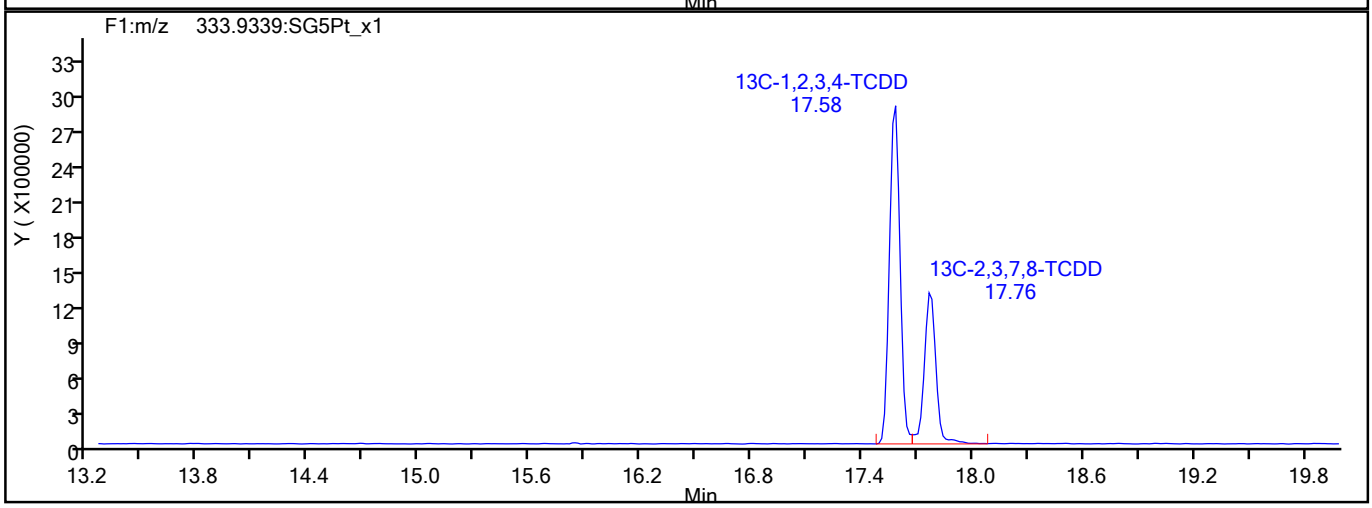

791063

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

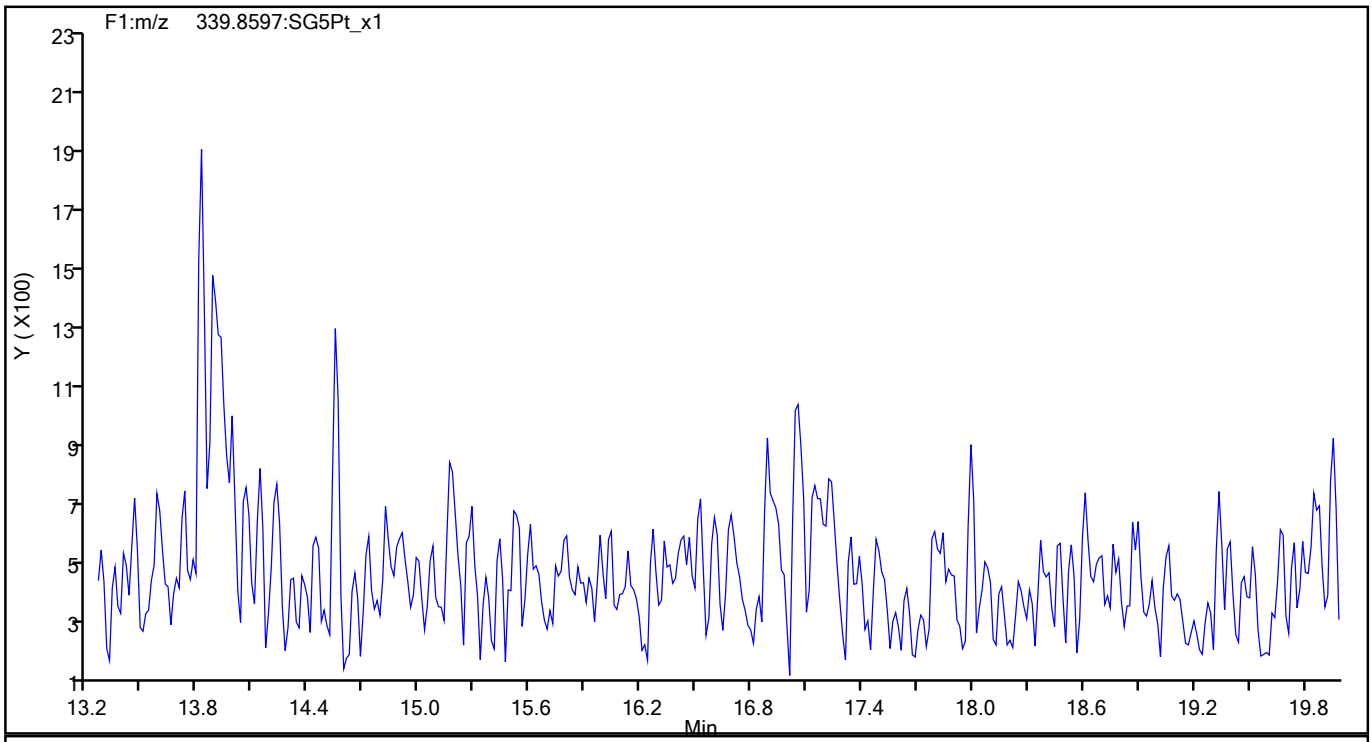

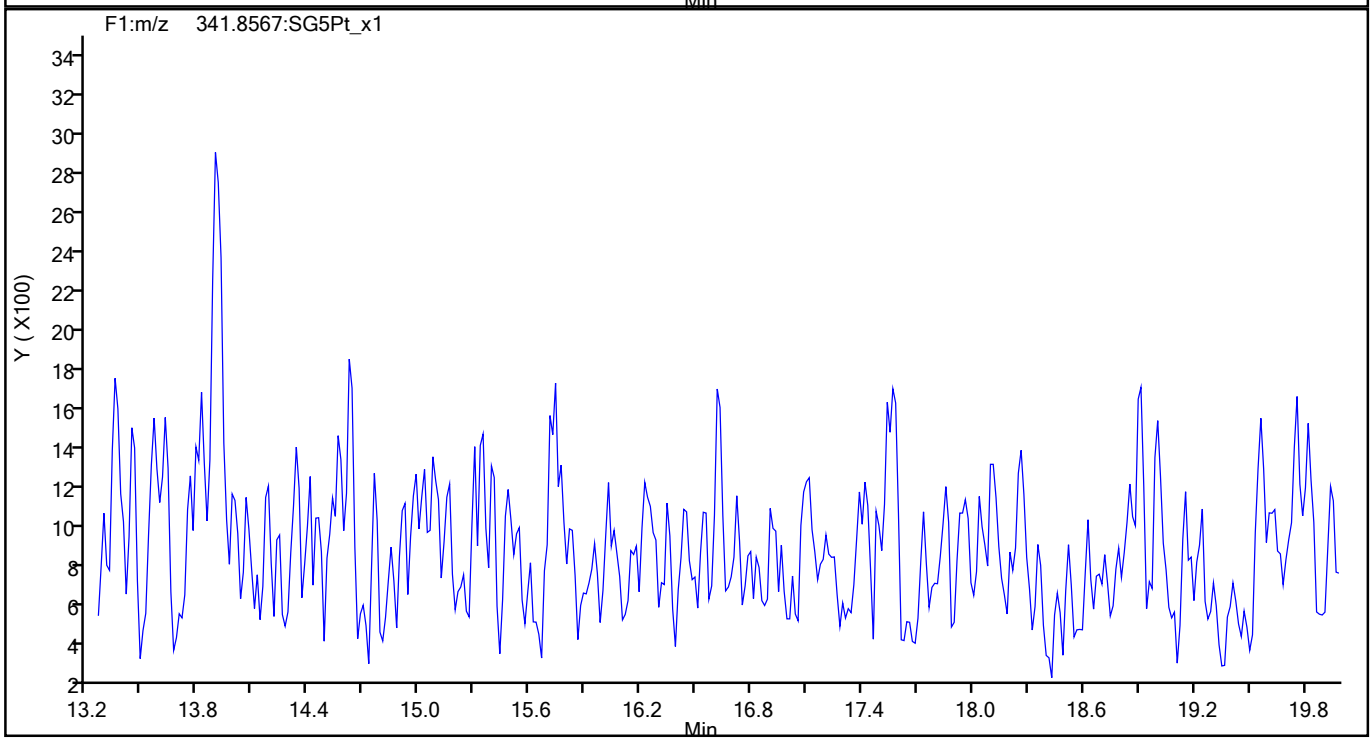

791064

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

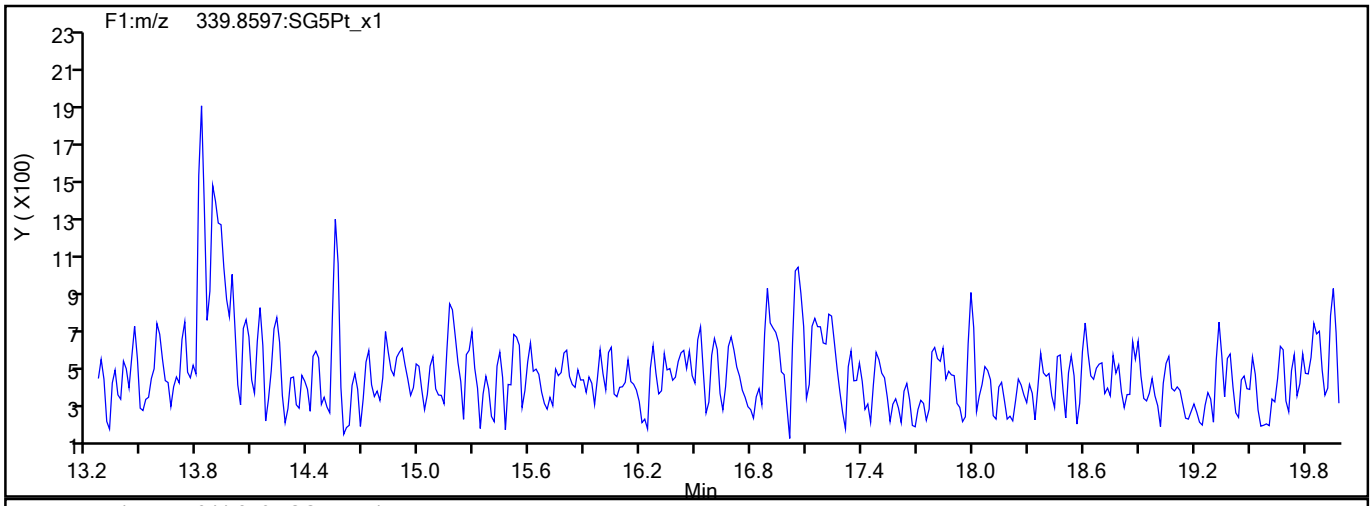

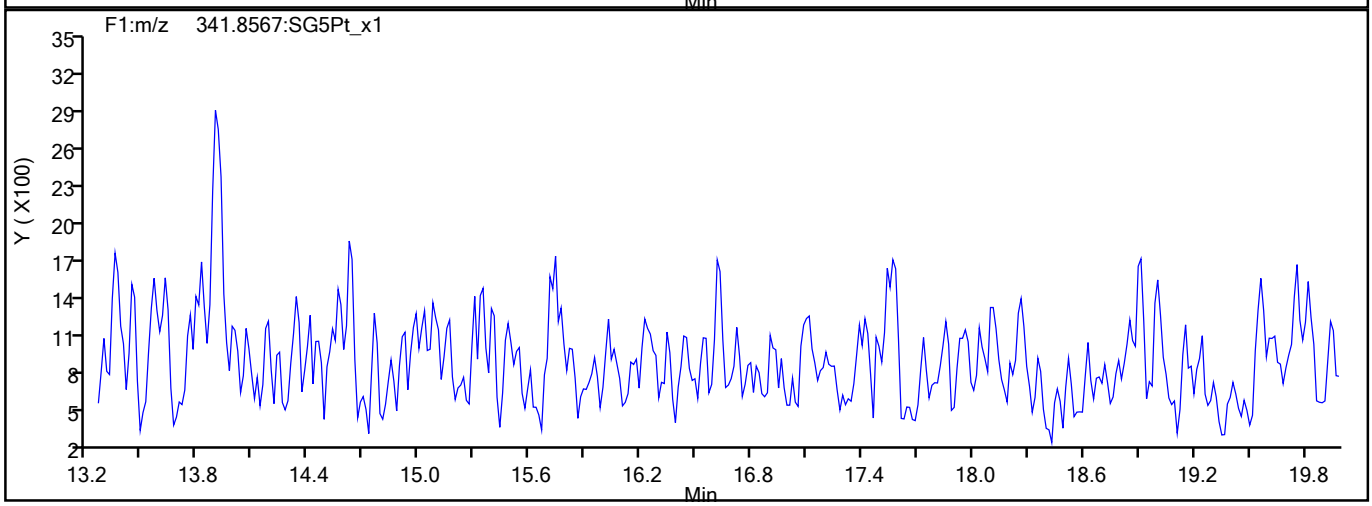

F1 PeCDFs Interference Mass

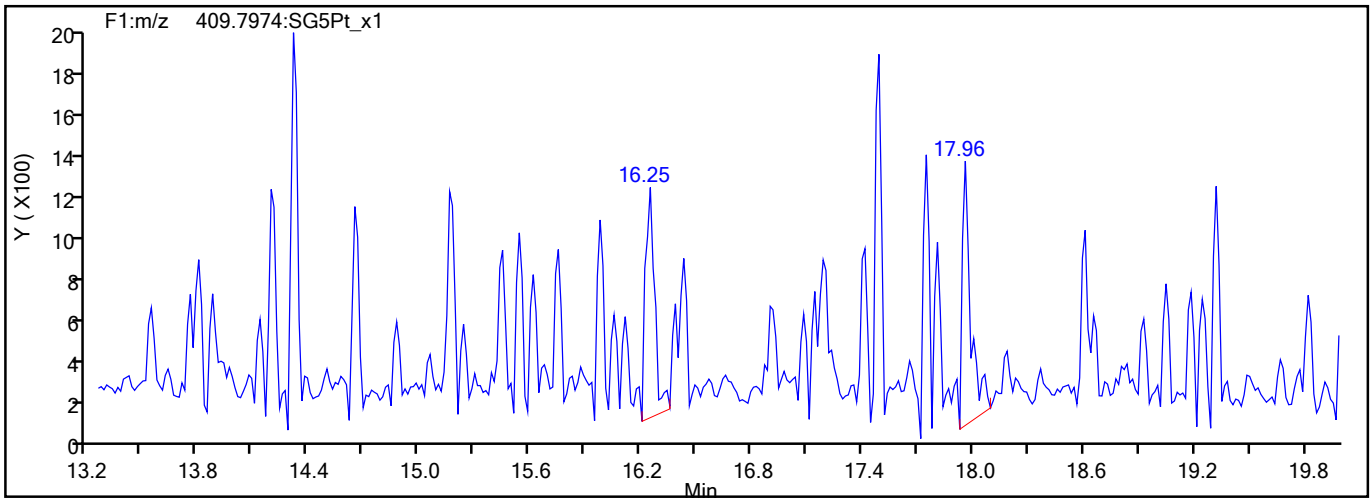

791065

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

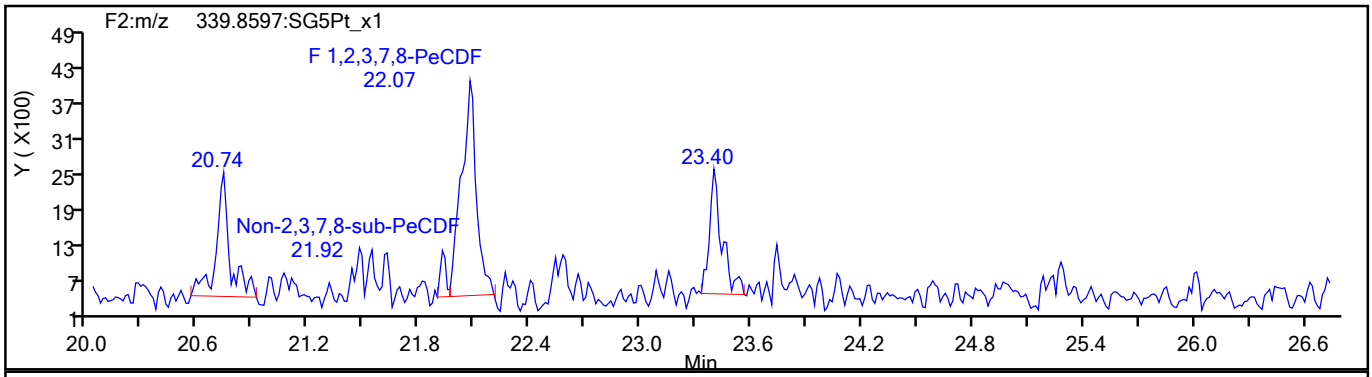

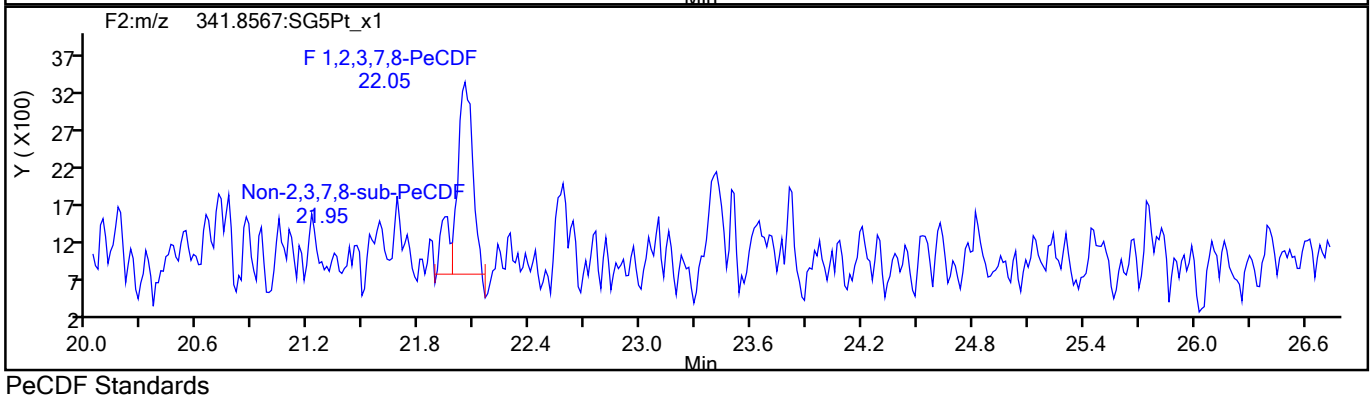

PeCDF Standards

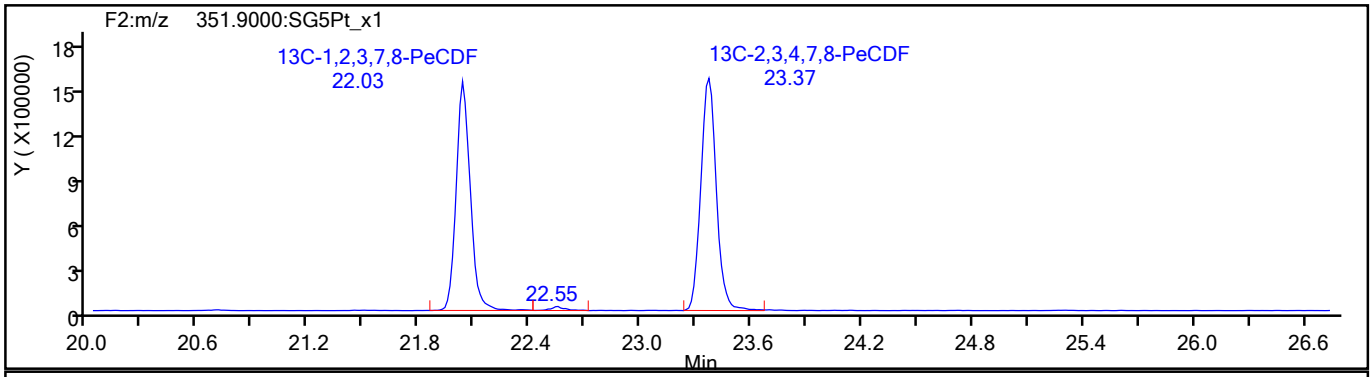

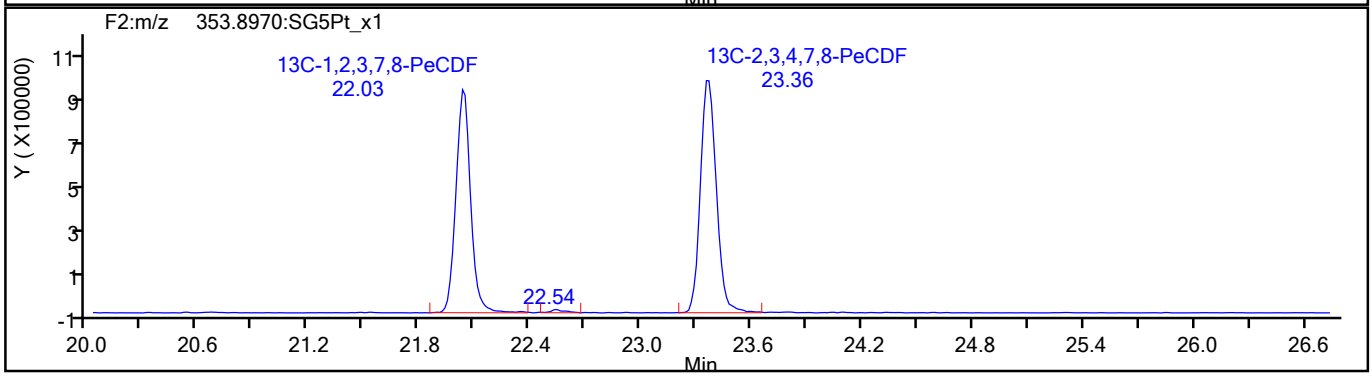

791066

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

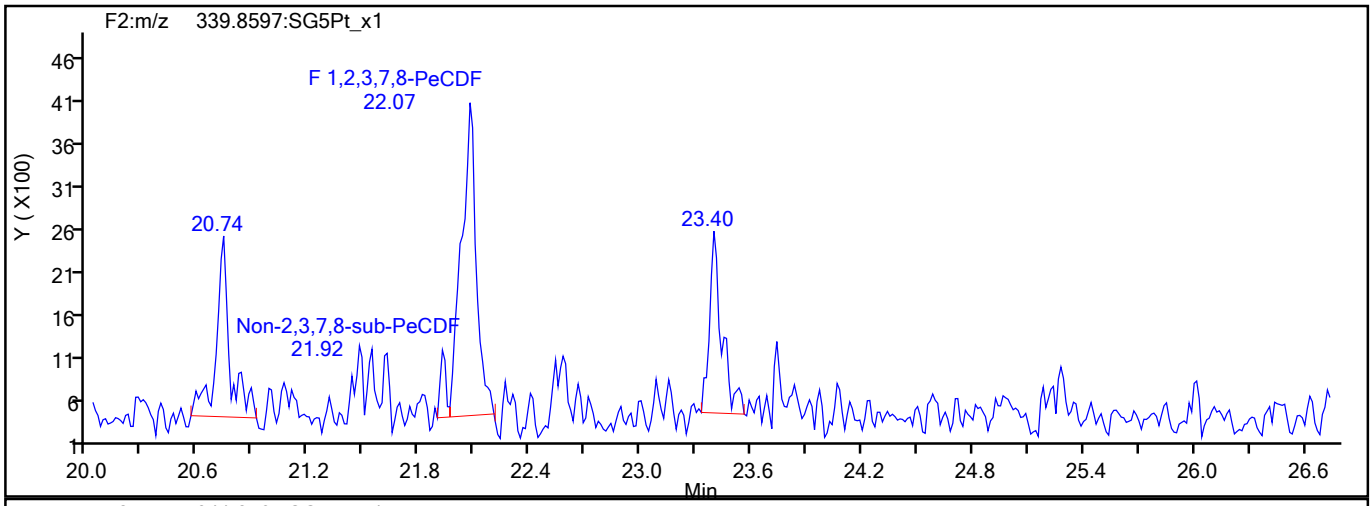

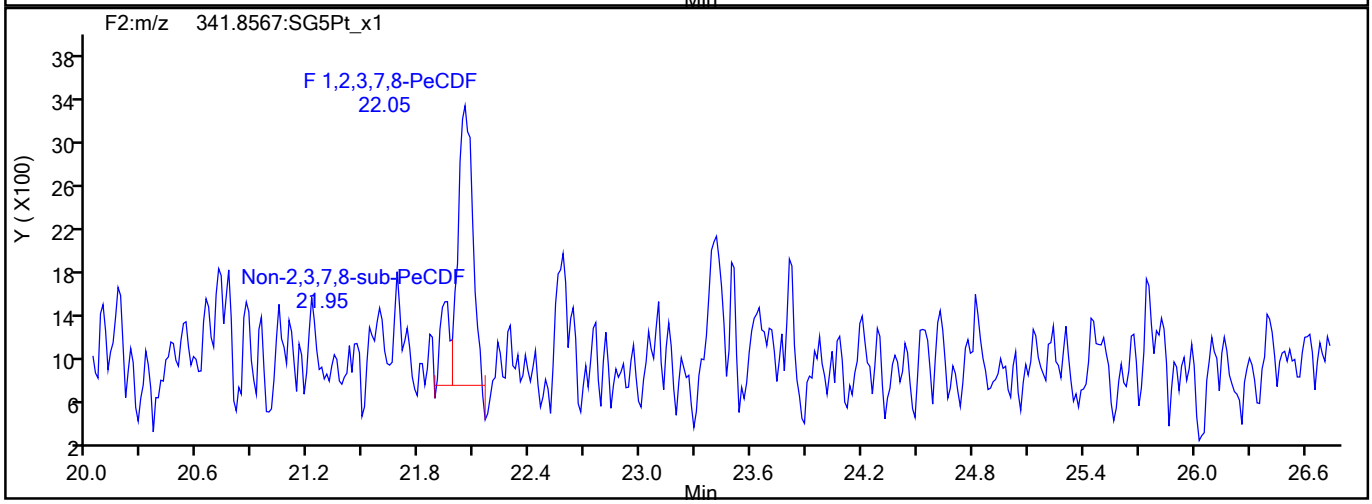

PeCDF Interference Mass

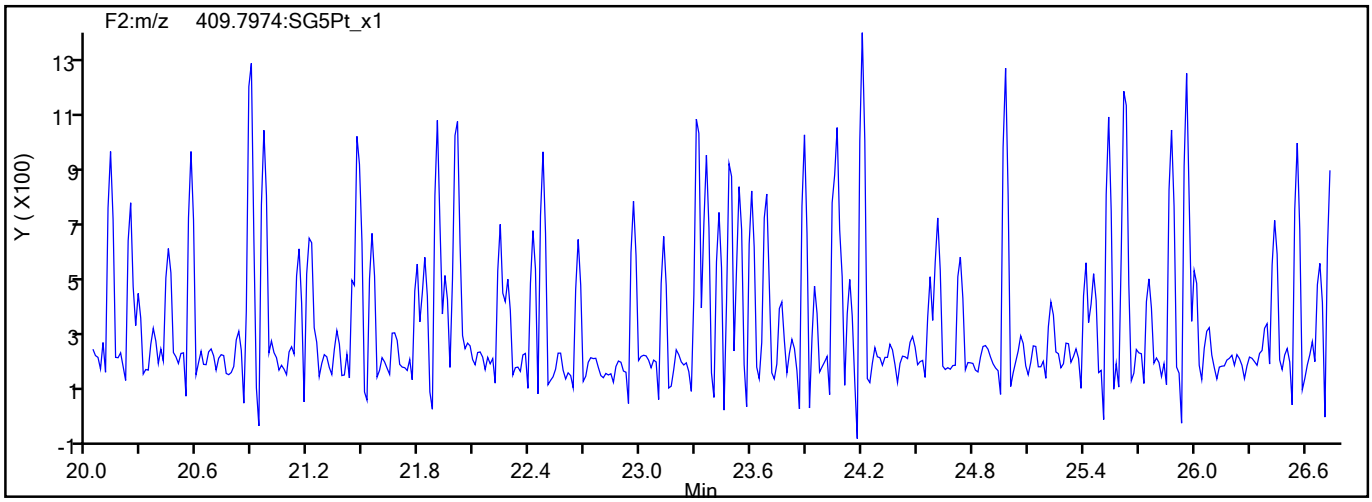

791067

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

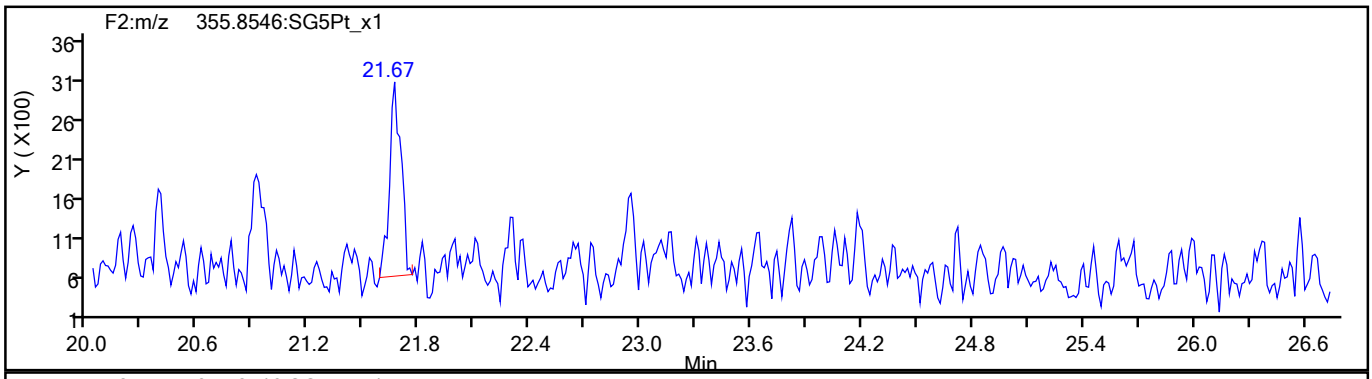

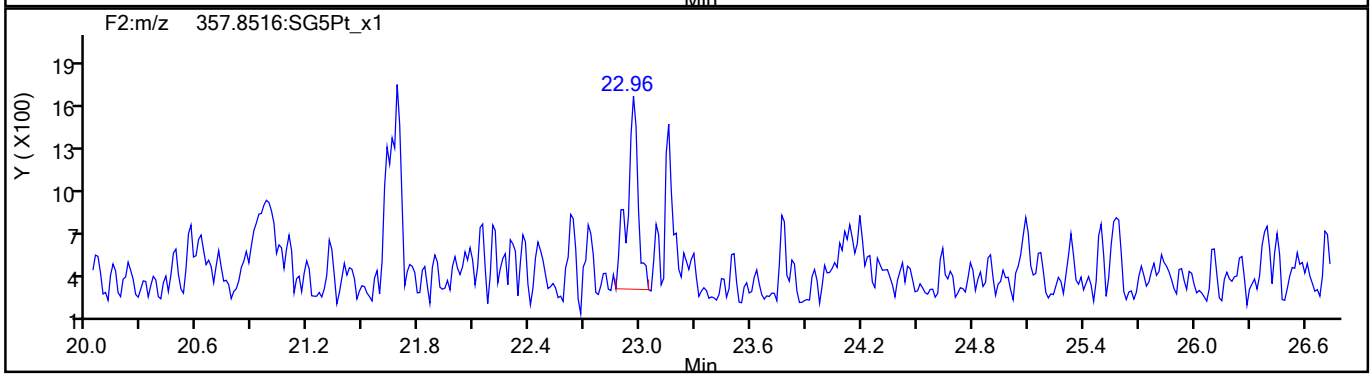

PeCDD Standards

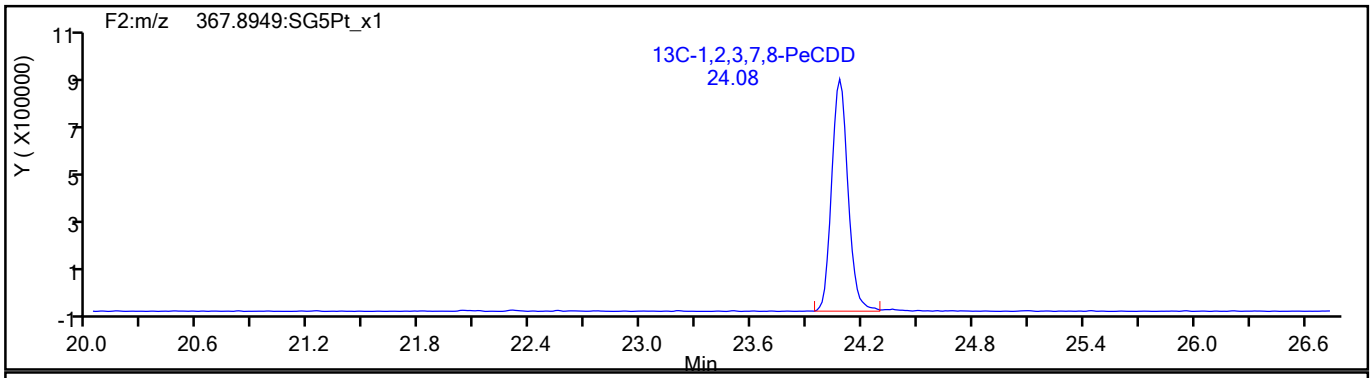

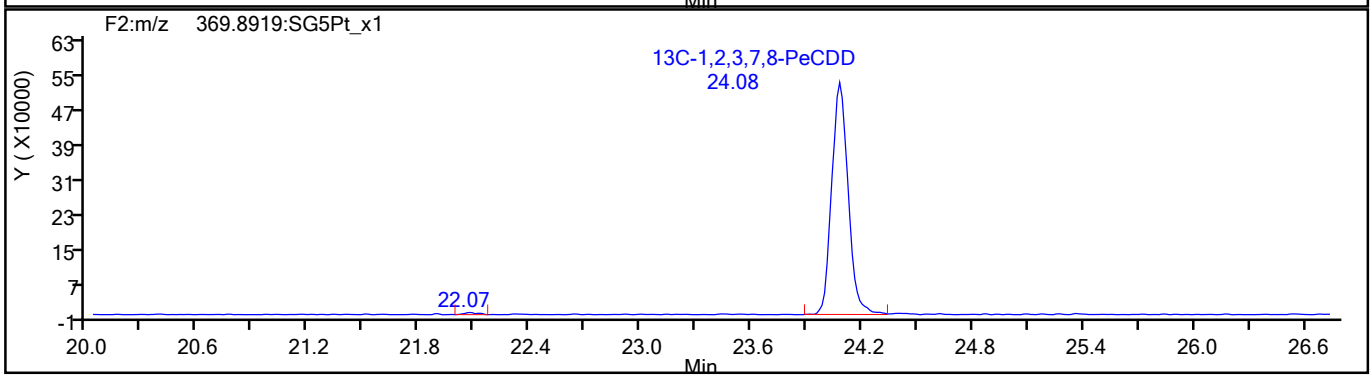

791068

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

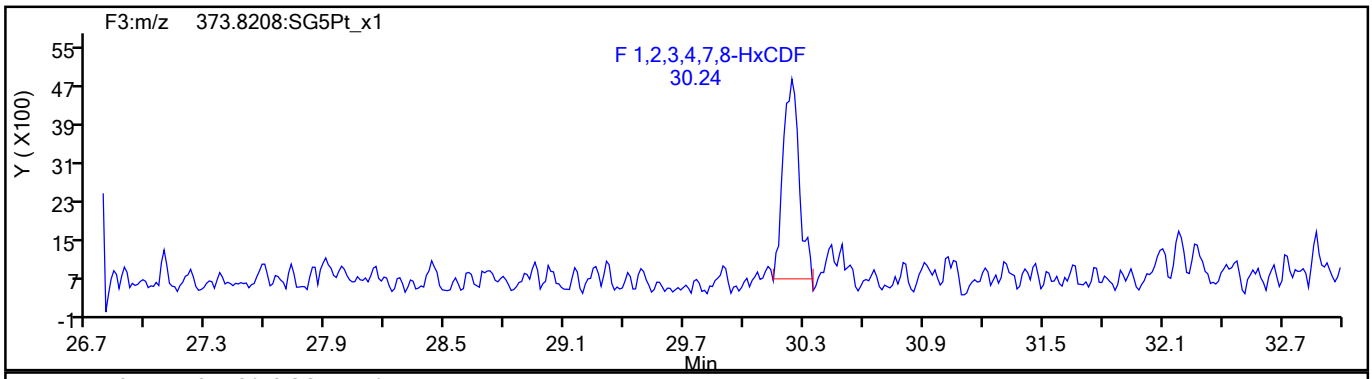

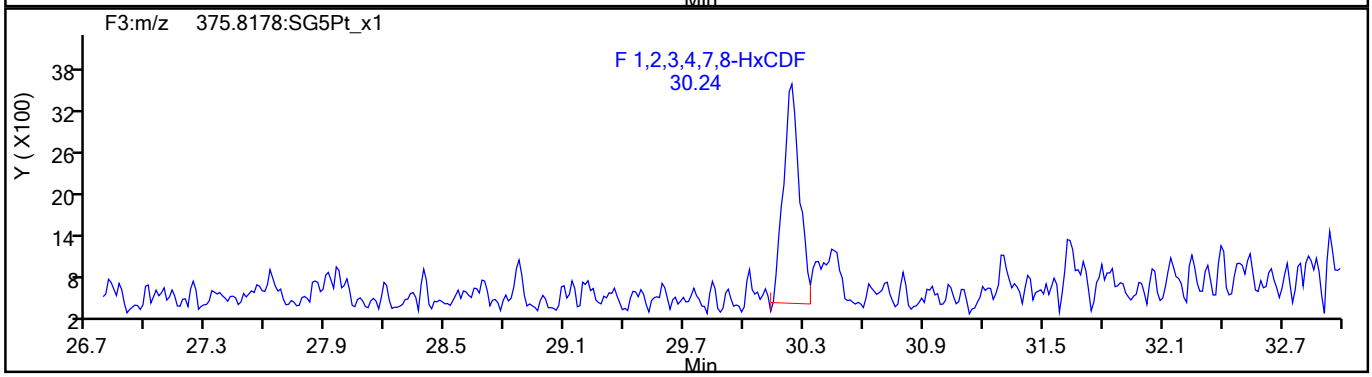

HxCDF Standards

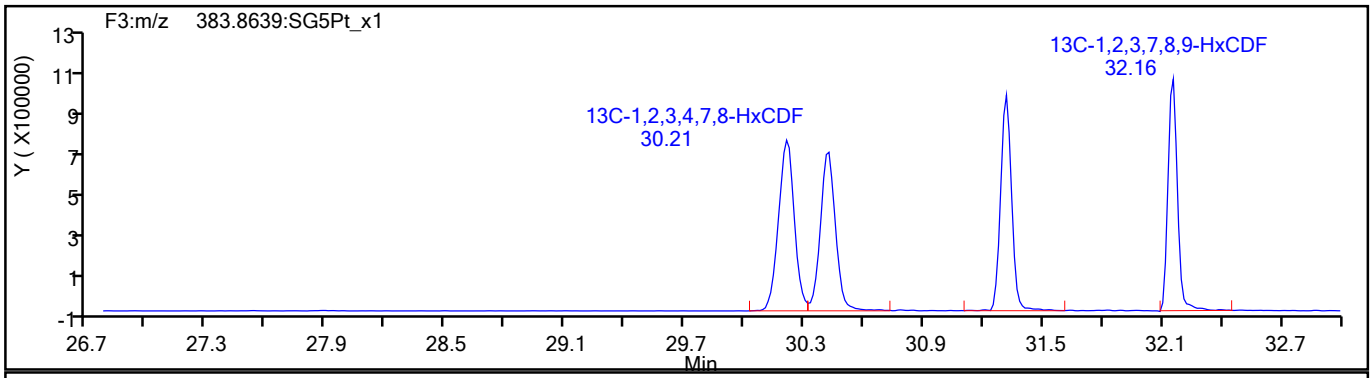

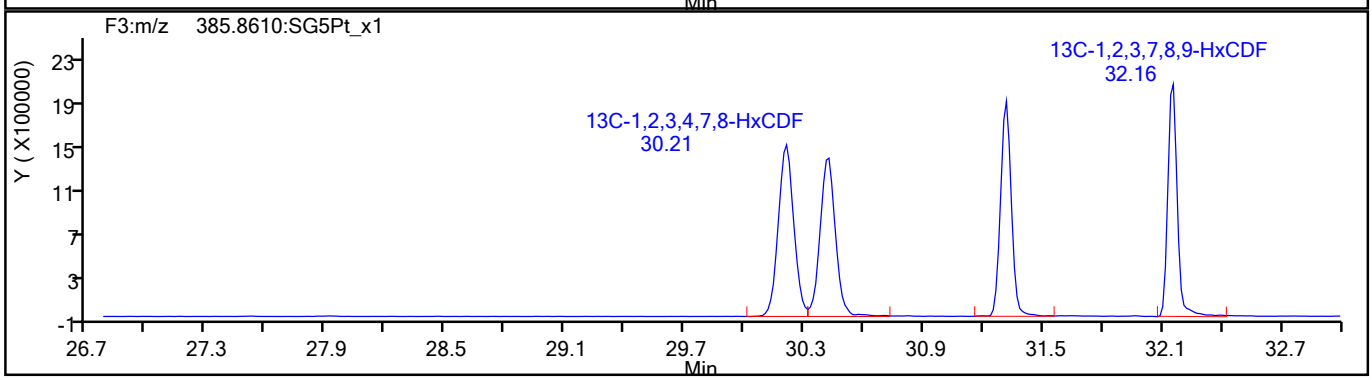

791069

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

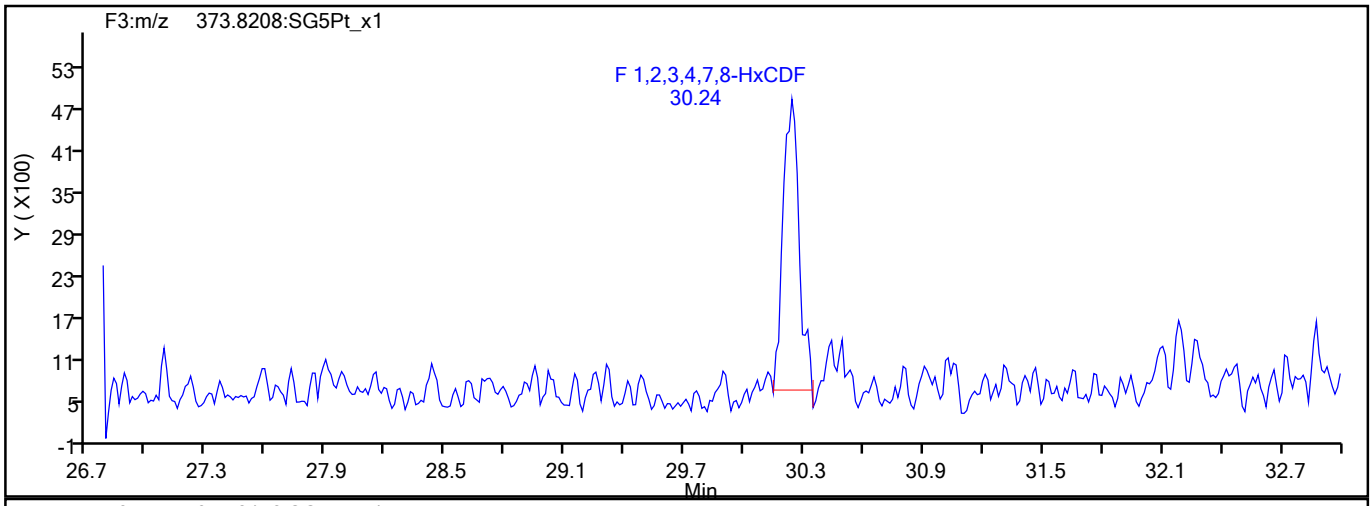

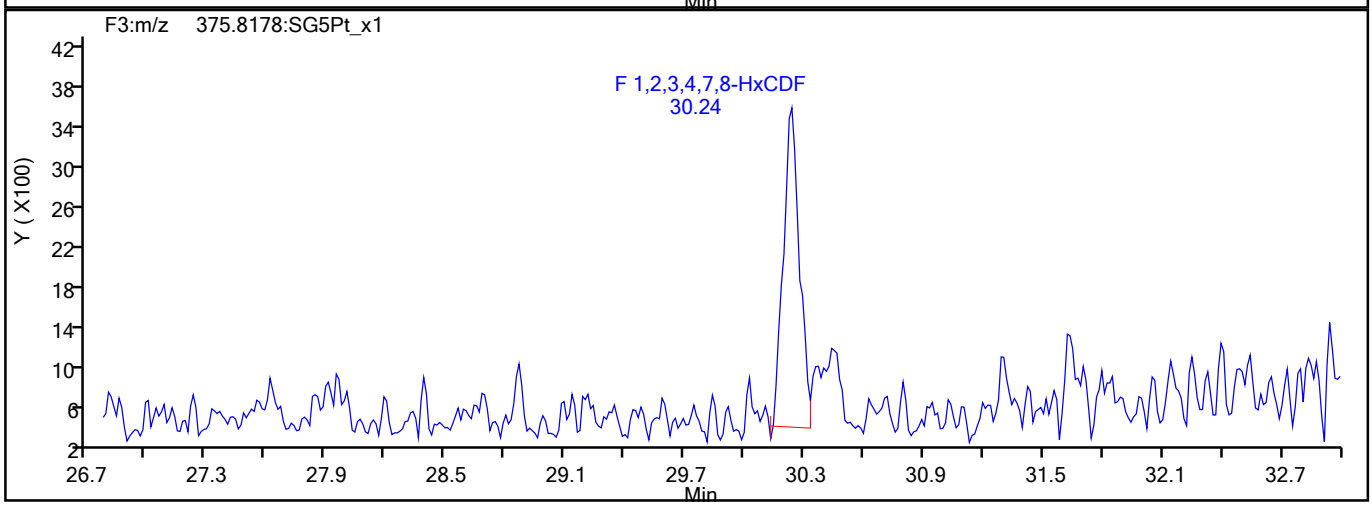

HxCDF Interference Mass

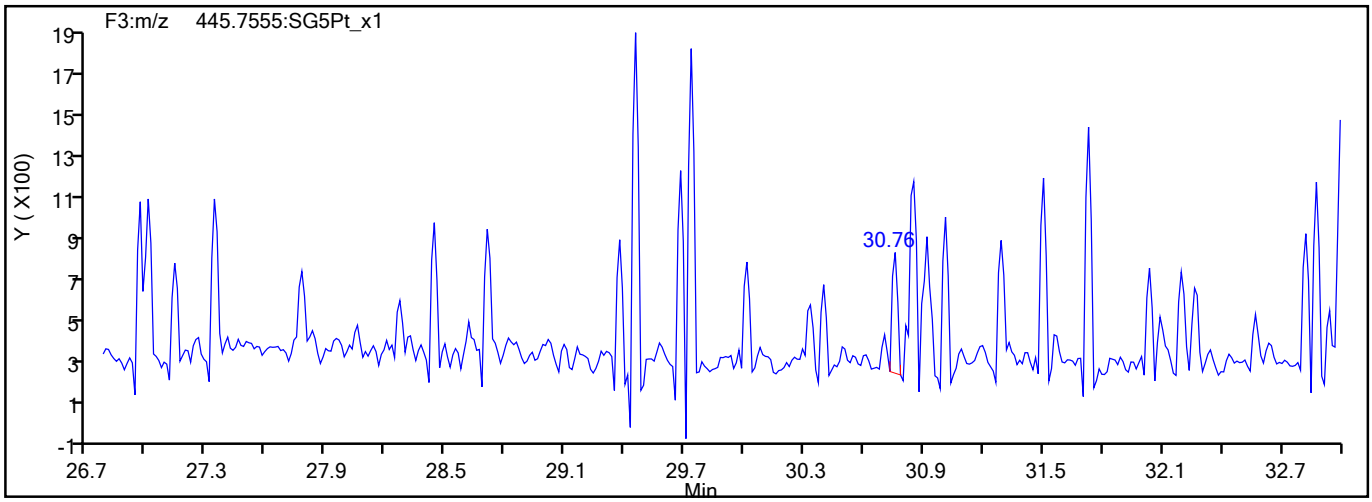

791070

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

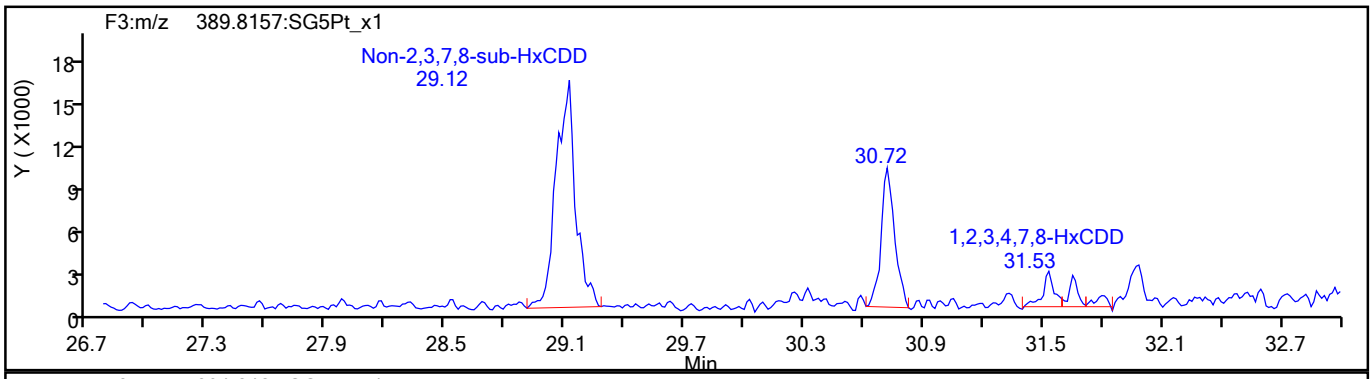

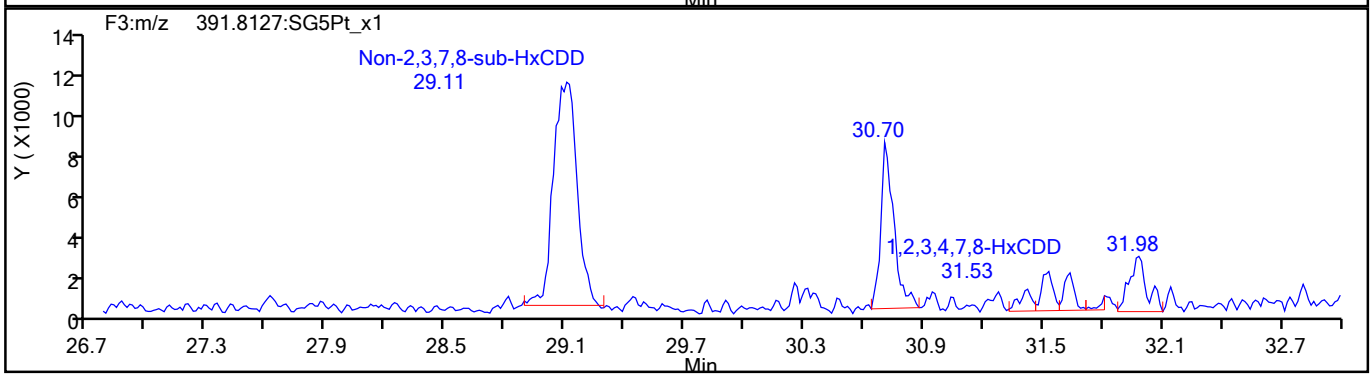

HxCDD Standards

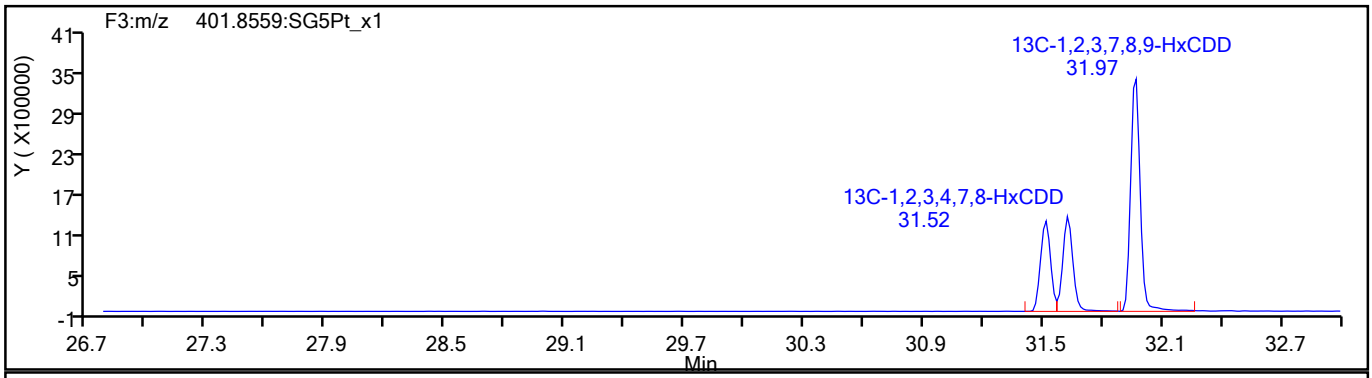

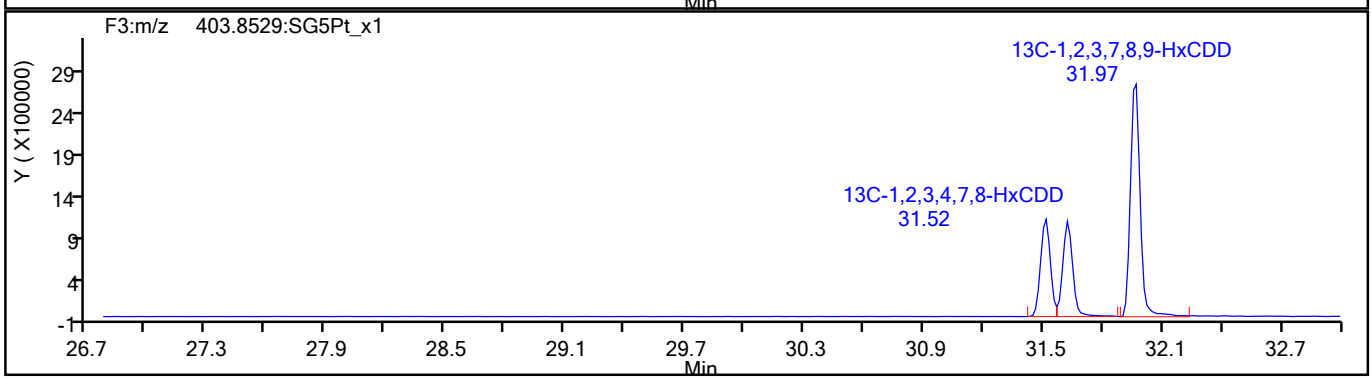

791071

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

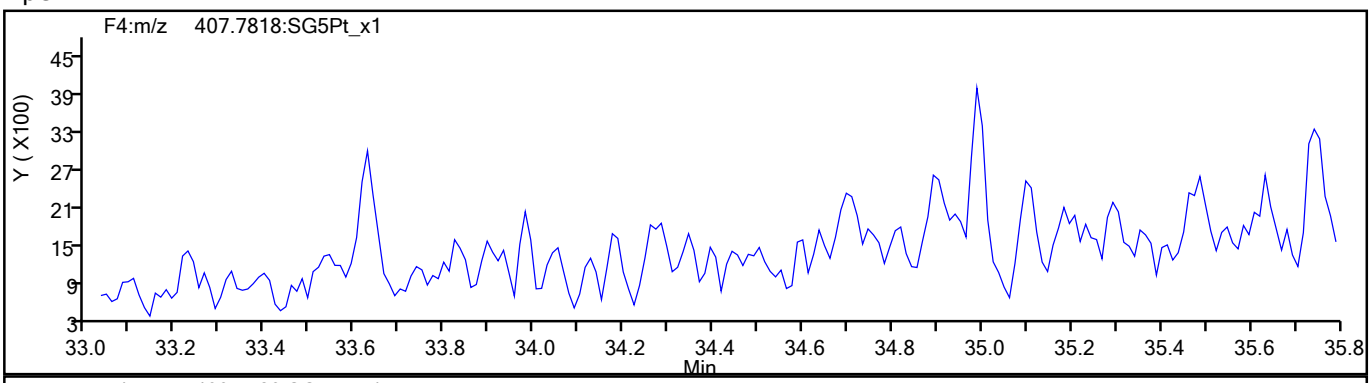

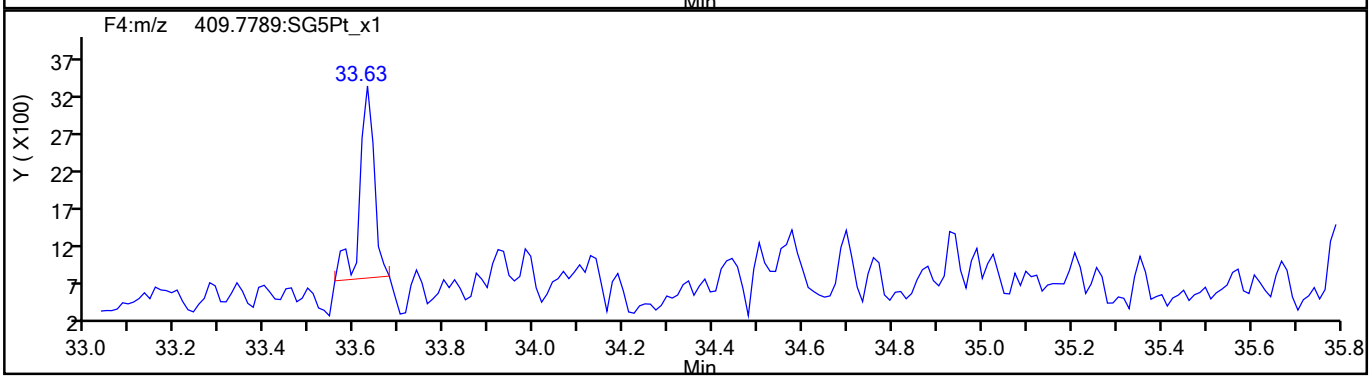

HpCDF Standards

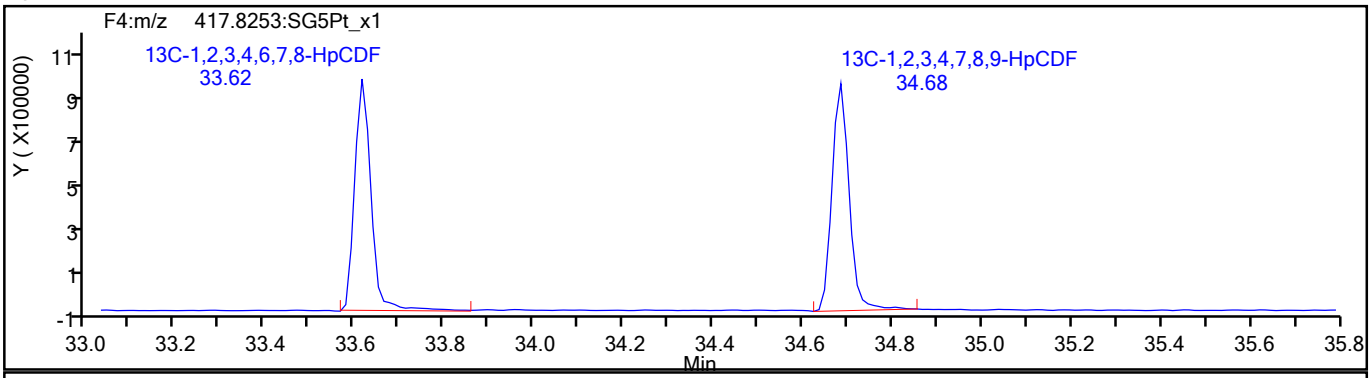

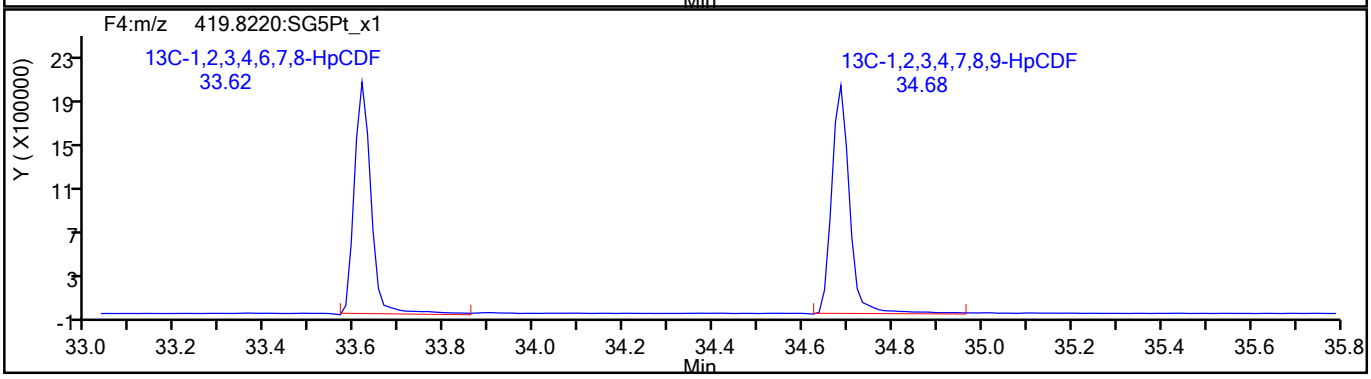

791072

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

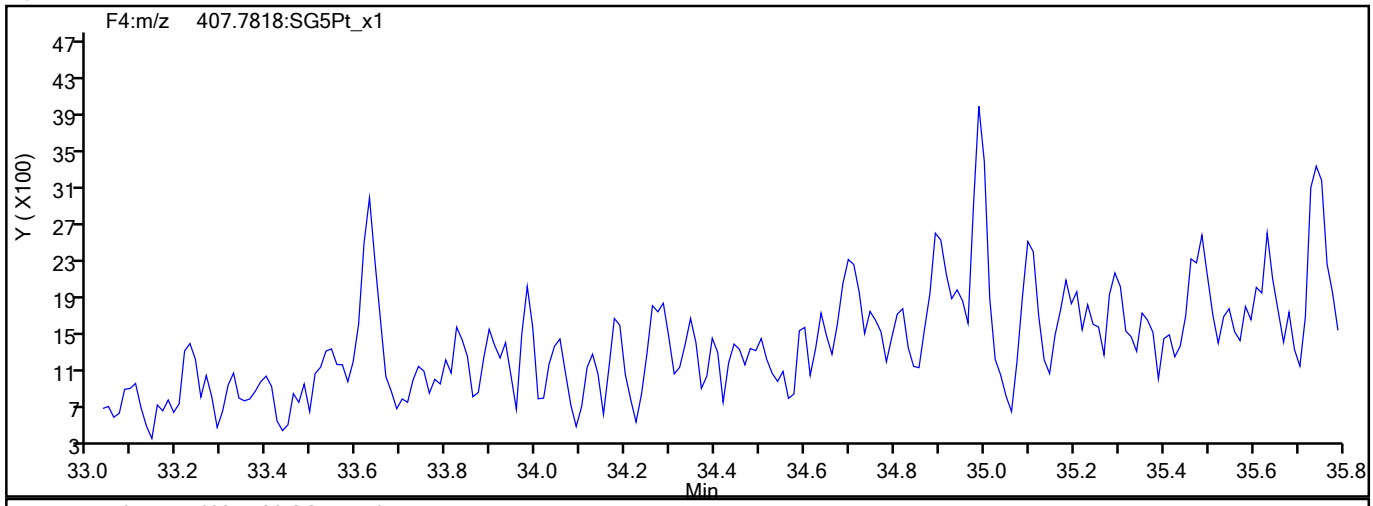

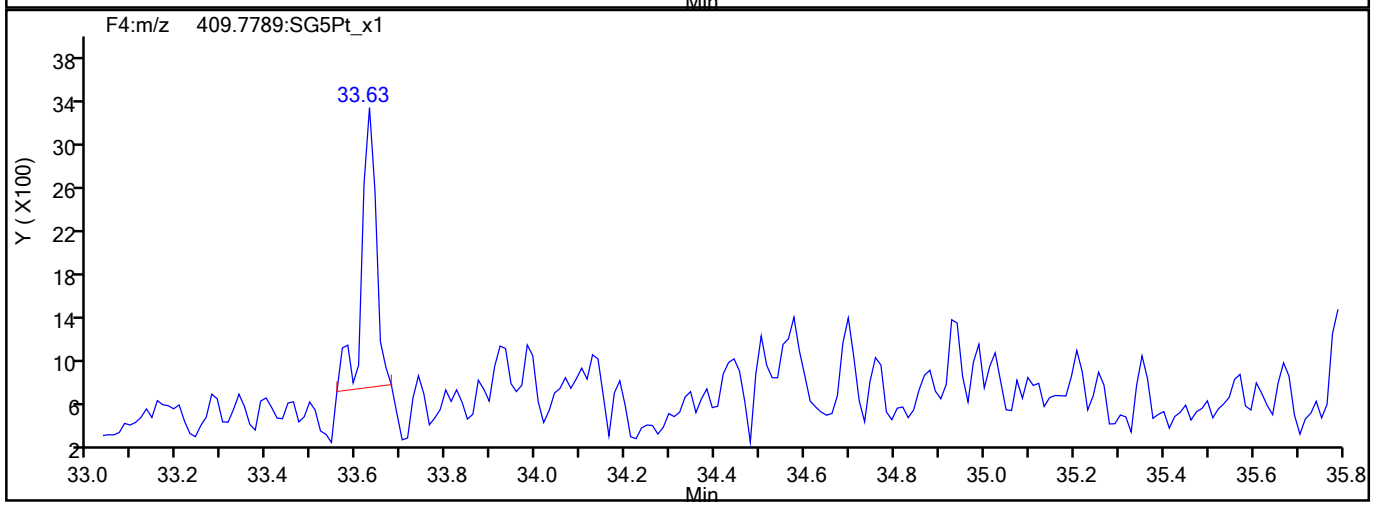

HpCDF Interference Mass

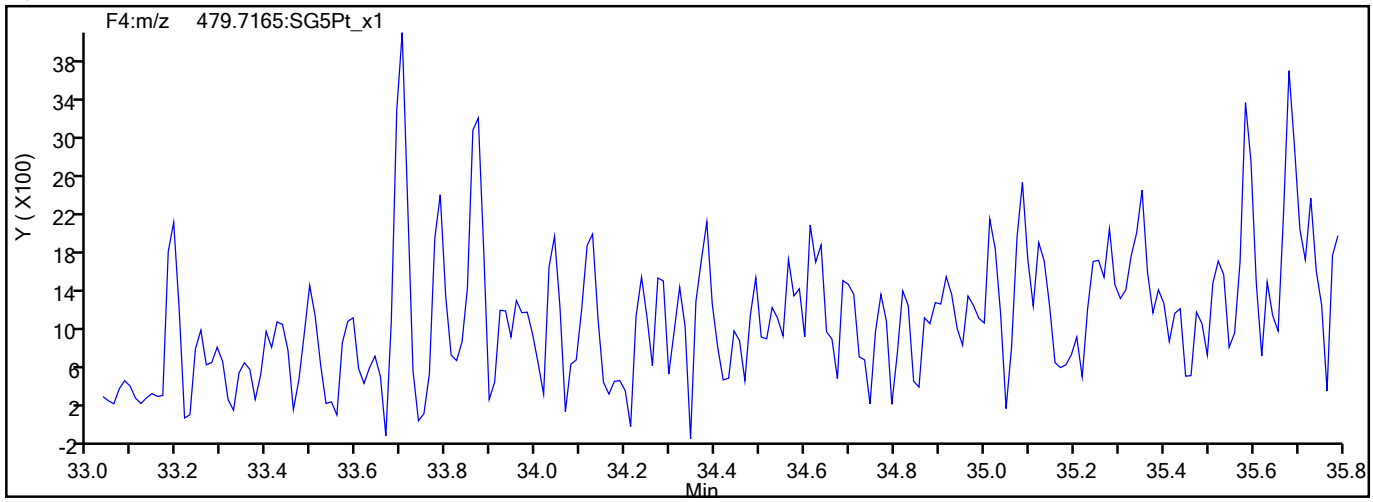

791073

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

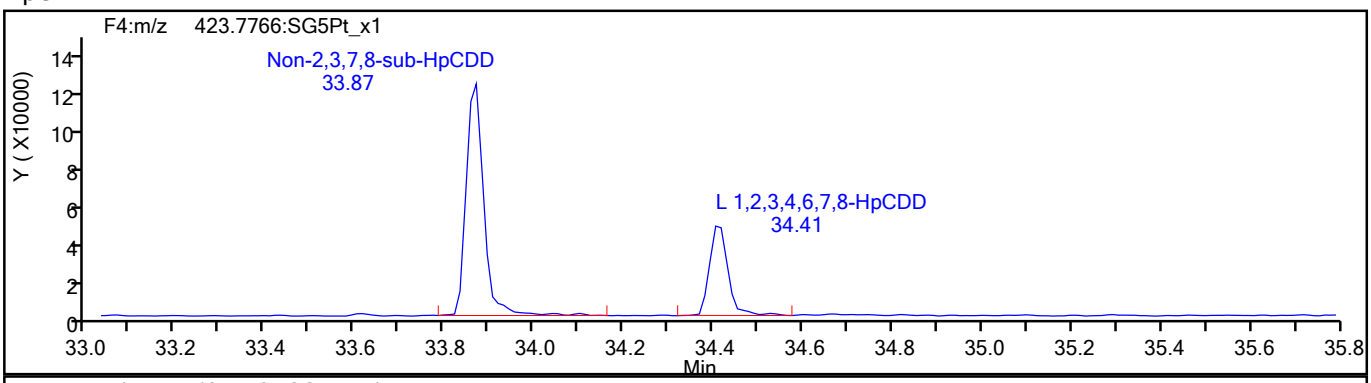

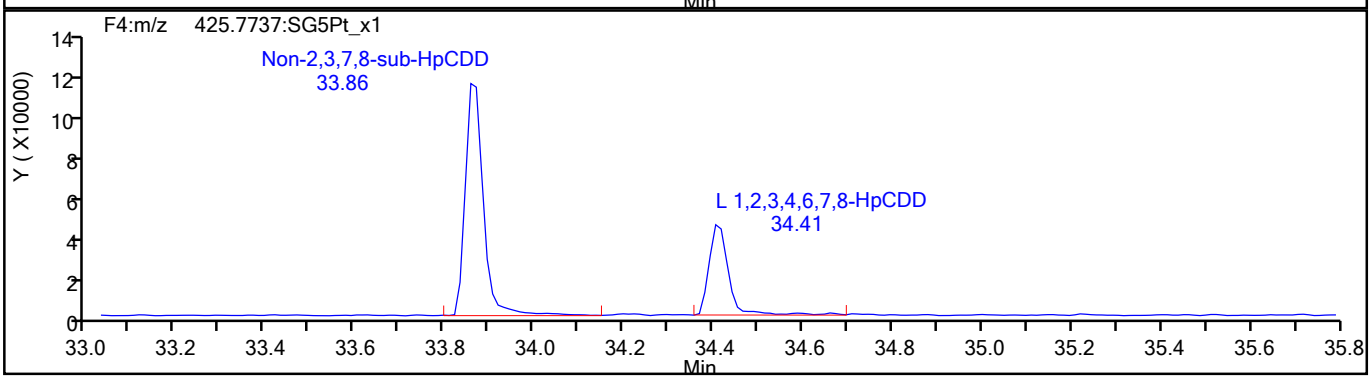

HpCDD Standards

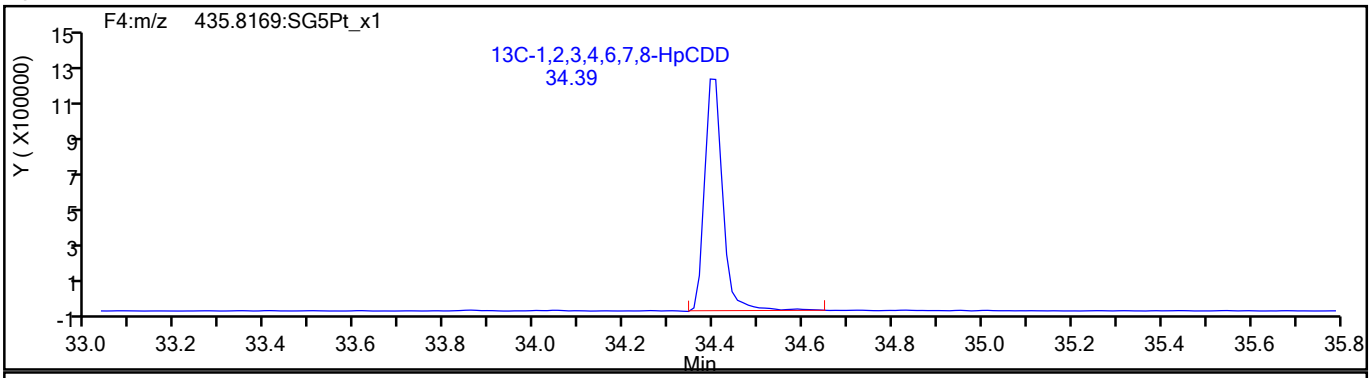

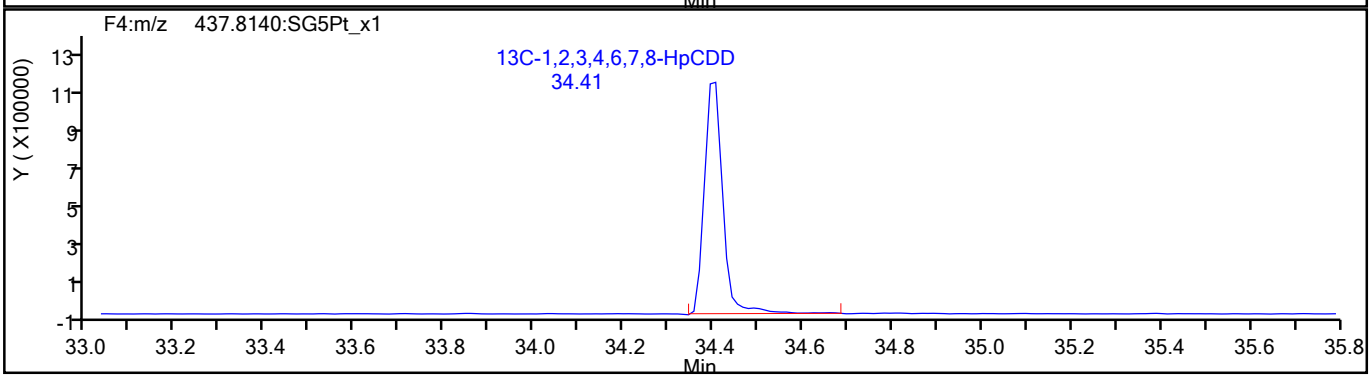

791074

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

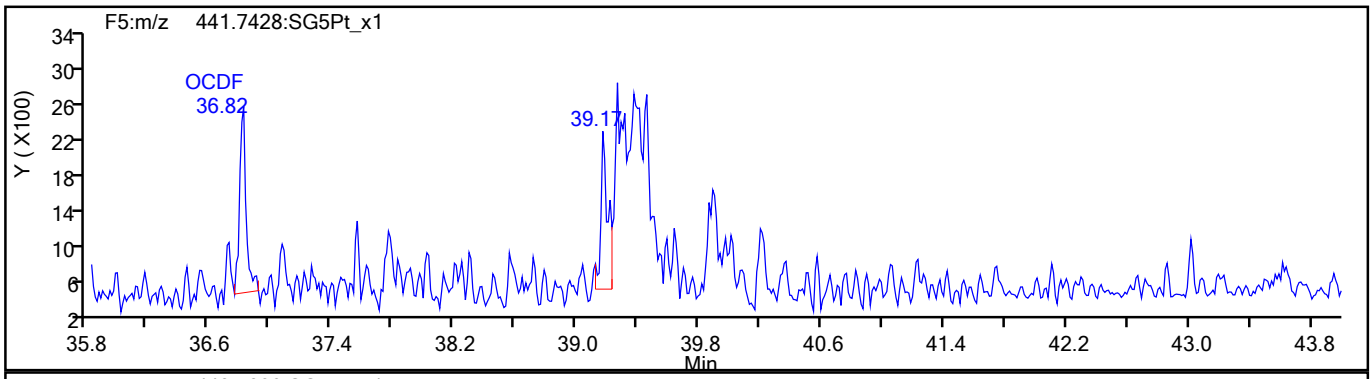

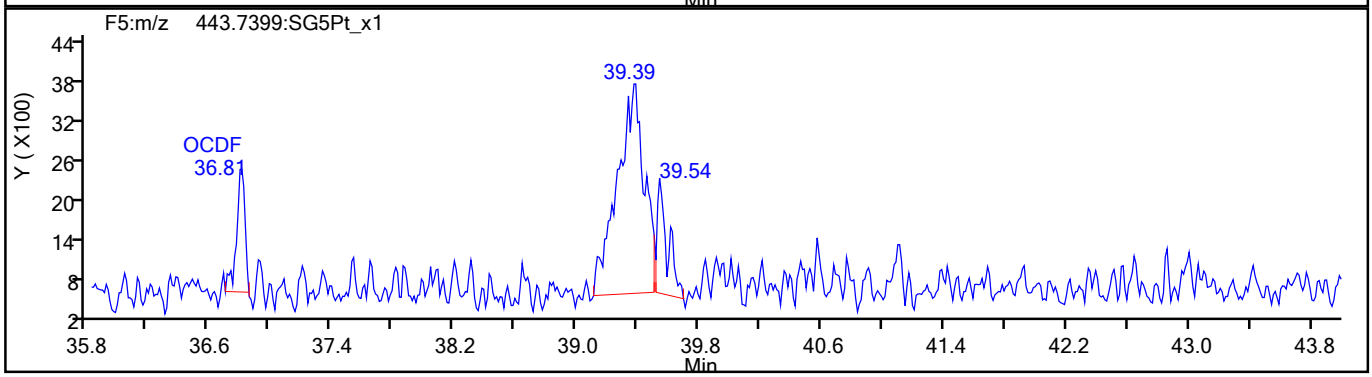

OCDF Standards

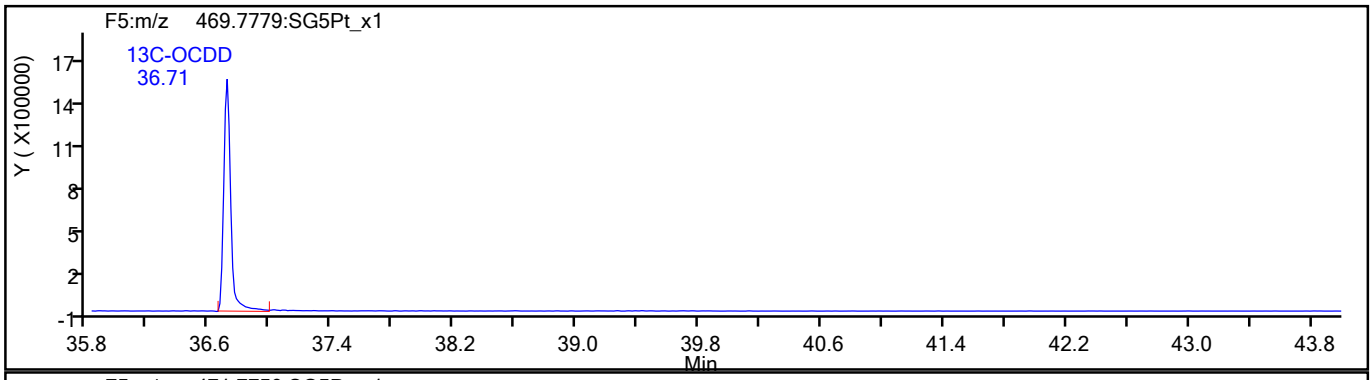

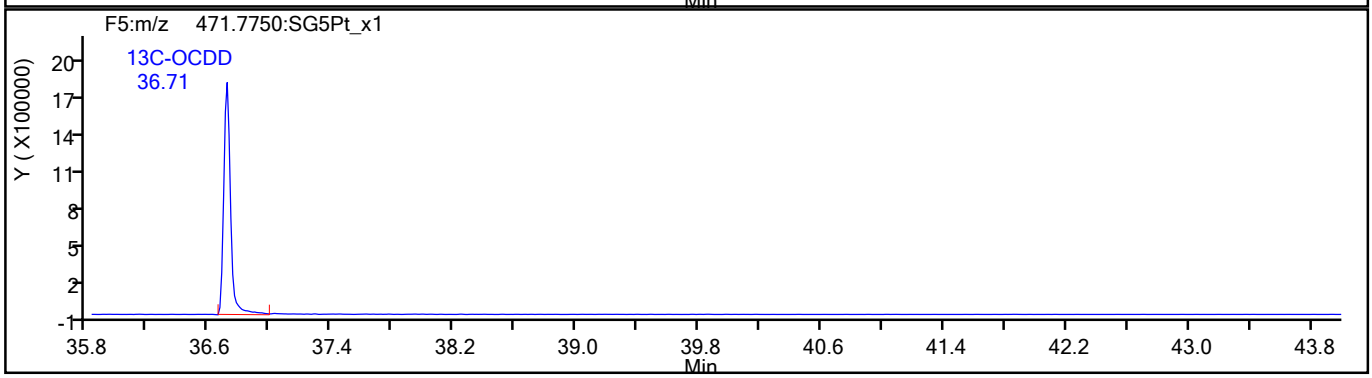

791075

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

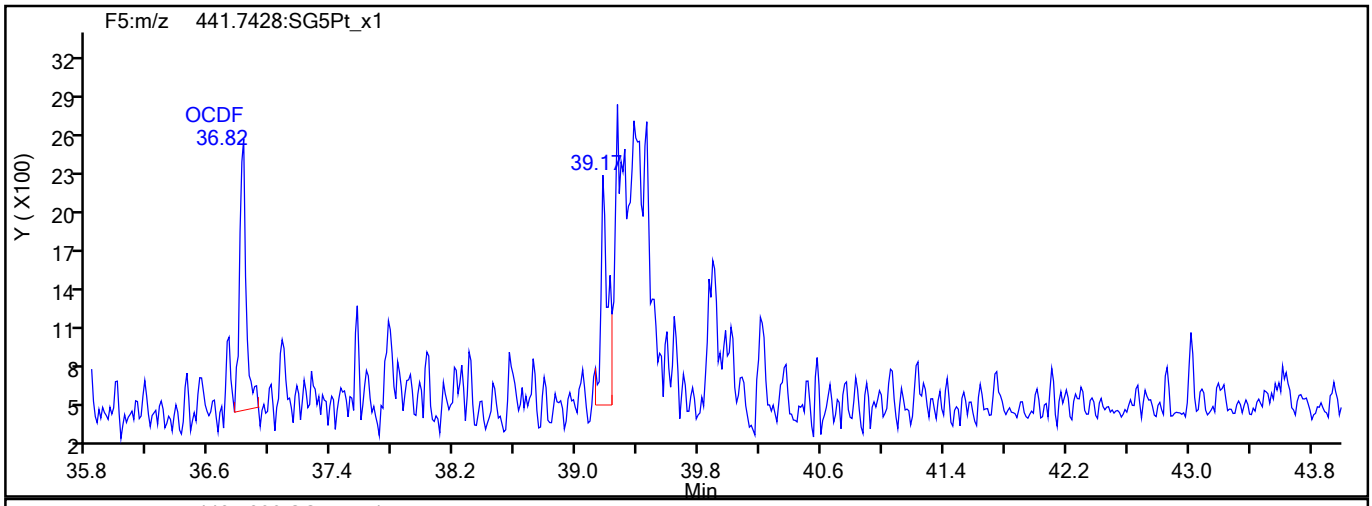

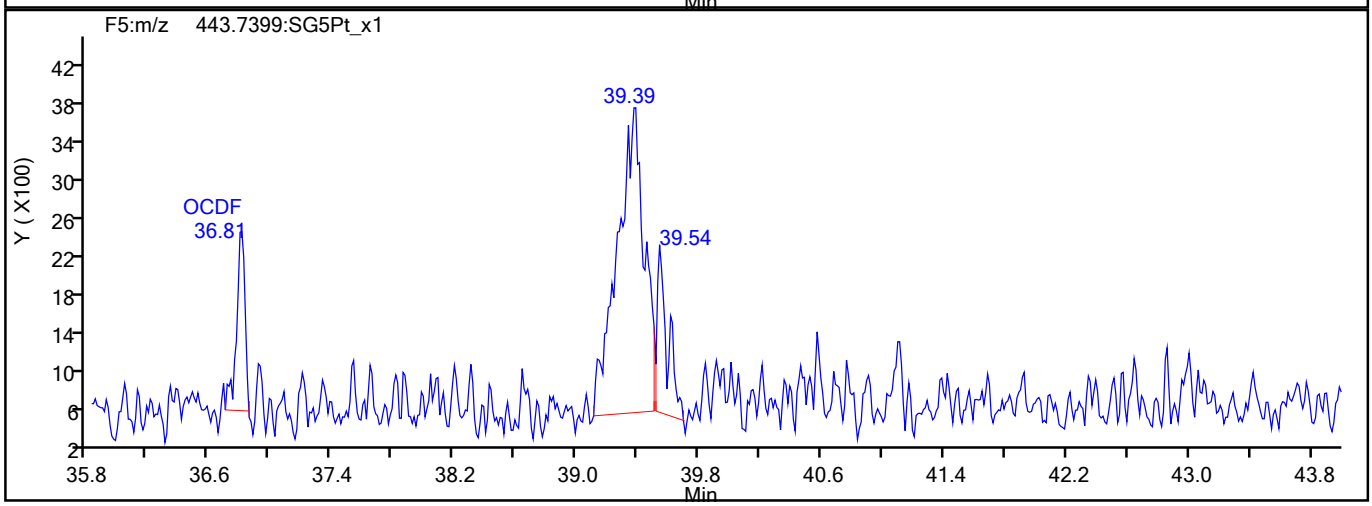

OCDF Interference Mass

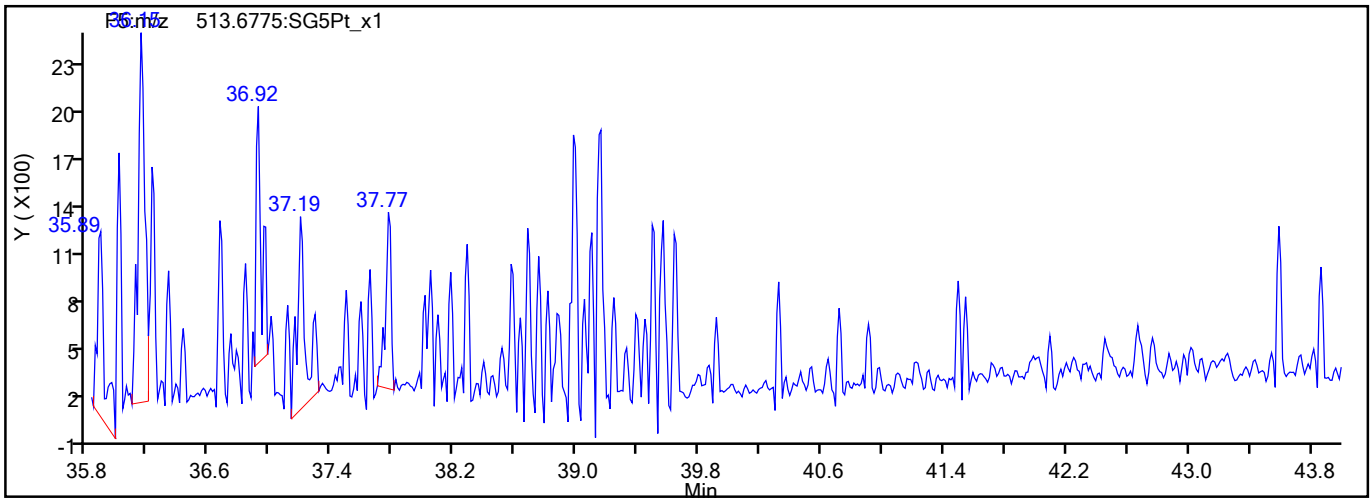

791076

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

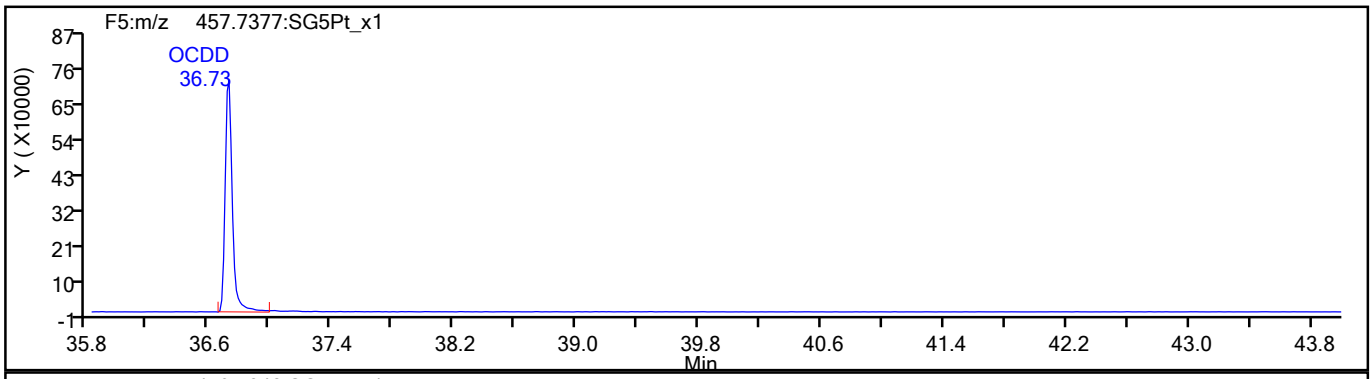

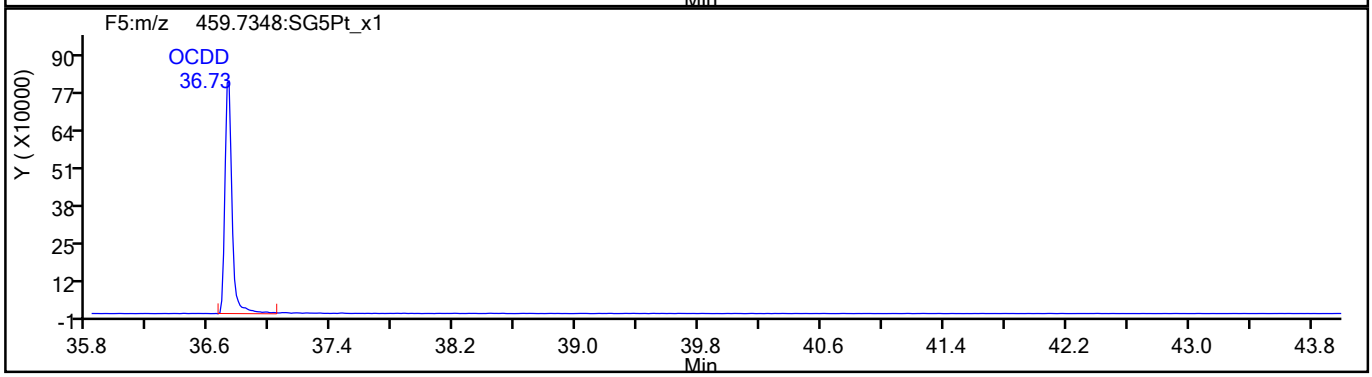

OCDD Standards

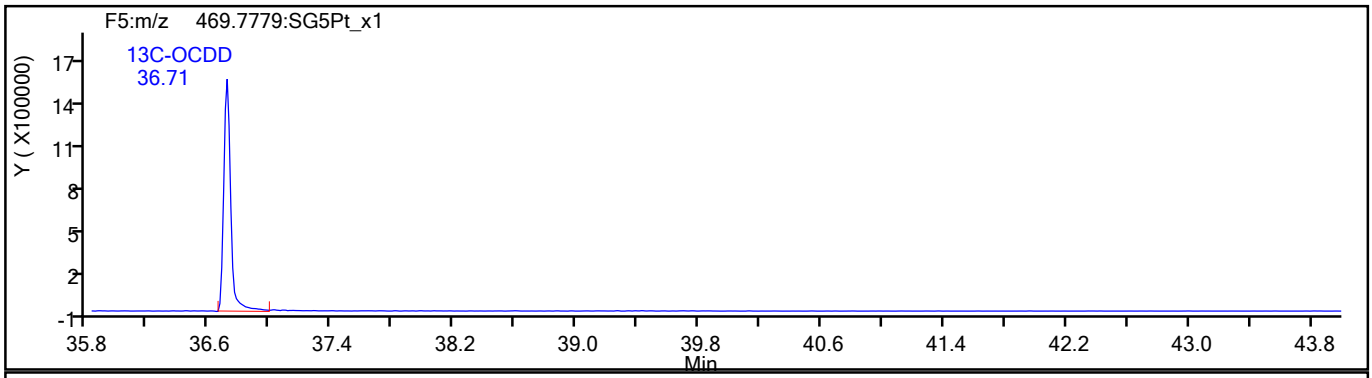

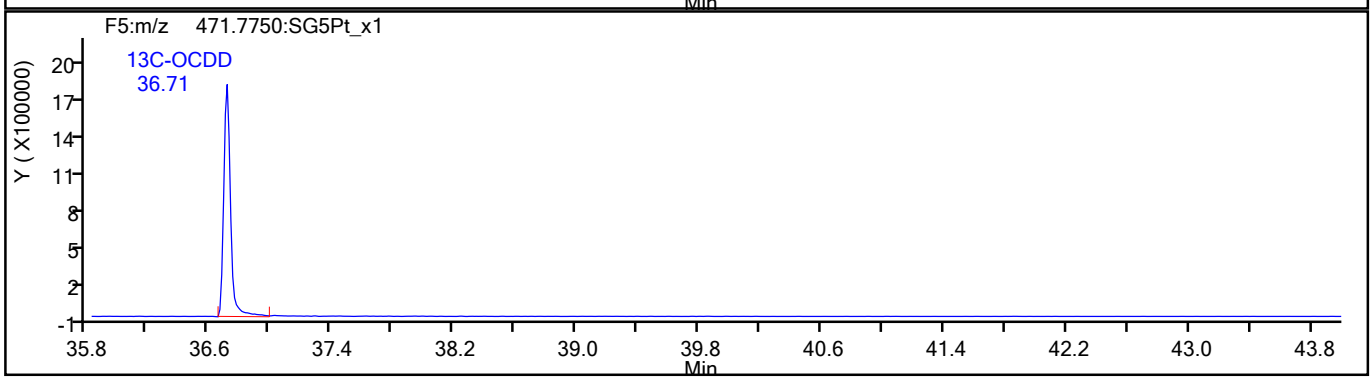

791077

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

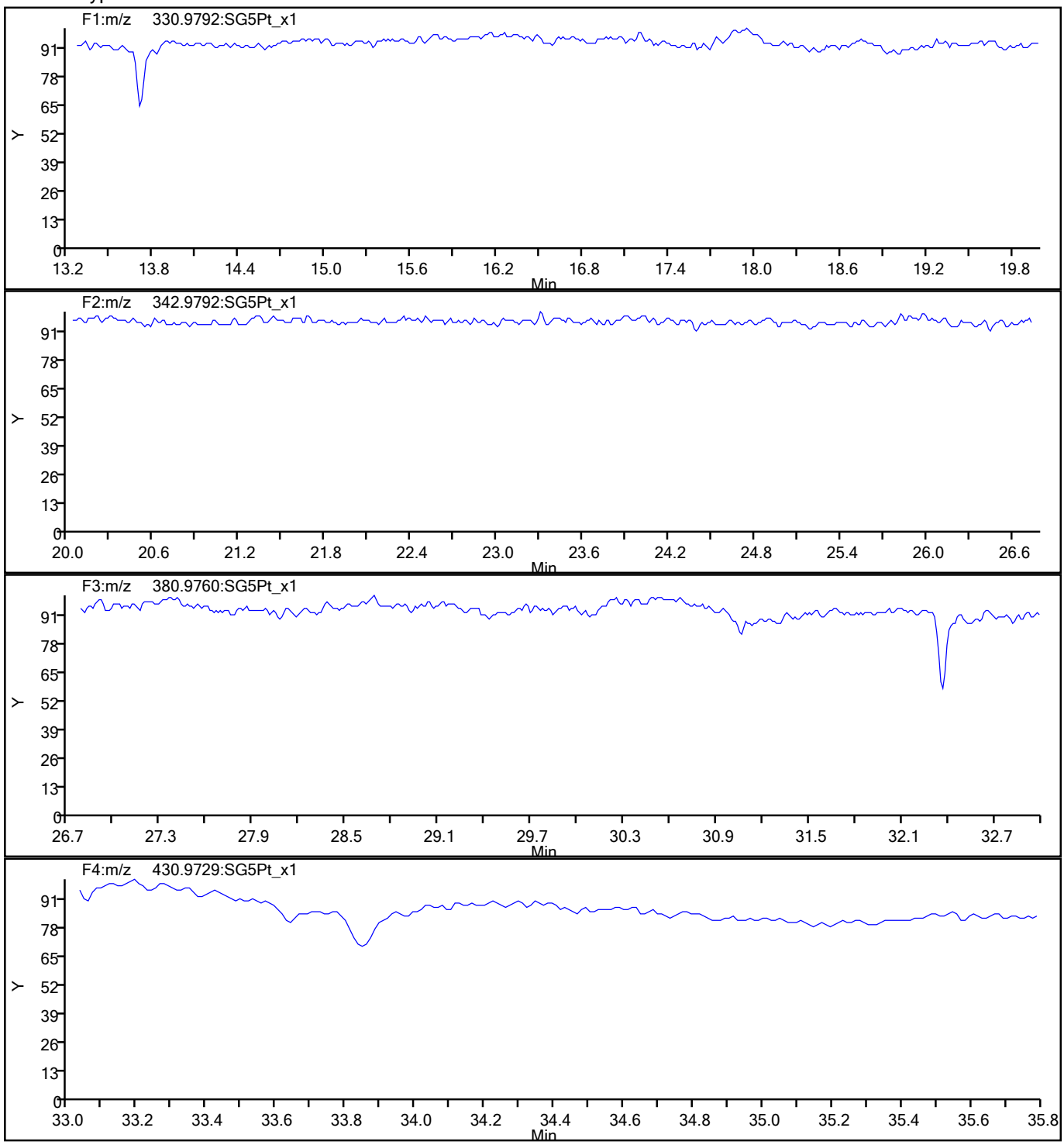

791078

Report Date: 27-Aug-2021 09:58:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_10.d		
Injection Date:	25-Aug-2021 16:35:39	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	519953	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

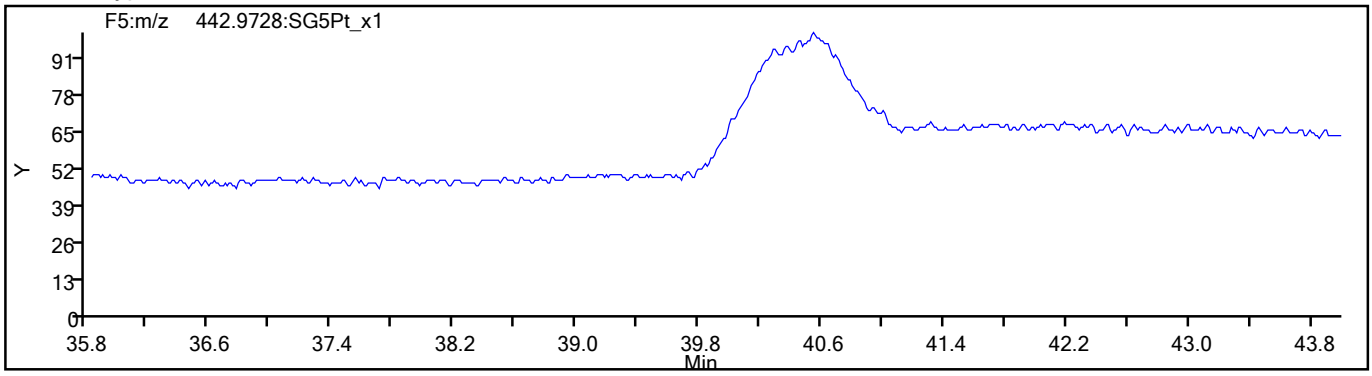

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (6-8) RA
Lab Sample ID: 320-77214-4 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_013.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:25
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.11(g)
Date Analyzed: 08/27/2021 23:18
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 30.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	12	B	1.4	0.23

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	54		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	75		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_013.d
Lims ID: 320-77214-A-4-A
Client ID: 11215702-080221-BN-SJSB090 (6-8)
Sample Type: Client
Inject. Date: 27-Aug-2021 23:18:36 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-4-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:45:38

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.299	55449088	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.616	39936012	0.80	1.3327	54.0	54.0	0.1786	0.1786	54.04	
2,3,7,8-TCDF	17.644	1633706	0.83	0.9978	4.100	4.100	0.0810	0.0810		M
D 13C-2,3,7,8-TCDD	16.080	25188730	0.74	0.8749	51.9	51.9	0.4532	0.4532	51.92	
2,3,7,8-TCDD	16.094	440104	0.69	1.0570	1.653	1.653	0.0938	0.0938		
$ 37Cl4-2,3,7,8-TCDD	16.094	14429900		0.8648	30.1	30.1	0.0630	0.0630	75.23	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_013.d
Lims ID: 320-77214-A-4-A
Client ID: 11215702-080221-BN-SJSB090 (6-8)
Sample Type: Client
Inject. Date: 27-Aug-2021 23:18:36 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-4-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:45:38

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.299	16.300	0		24131815	5241313	9852	24630	532		
333.9339	16.299	16.300	0		31317273	6936787	9462	23655	733	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.616	17.616	0	1.081	17726682	3303408	4953	12382	667		
317.9389	17.616	17.616	0	1.081	22209330	4145156	6641	16602	624	0.80(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.644	17.644	0	1.002	739734	136728	683	1707	200		
305.8987	17.644	17.644	0	1.002	893972	166667	1726	4315	97	0.83(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.080	16.066	1	0.987	10686986	2351337	9852	24630	239		
333.9339	16.066	16.066	0	0.986	14501744	3402289	9462	23655	360	0.74(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.094	16.080	1	1.001	179337	43943	909	2272	48		
321.8936	16.080	16.080	0	1.000	260767	54975	1373	3432	40	0.69(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.094	16.080	1	0.987	14429900	3201929	2656	6640	1206		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_013.d				
Injection Date:	27-Aug-2021 23:18:36	Instrument ID:	11D2		
Lims ID:	320-77214-A-4-A	Lab Sample ID:	320-77214-4		
Client ID:	11215702-080221-BN-SJSB090 (6-8)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.64
Area: 971965
Amount: 4.295525
Amount Units: pg/ul

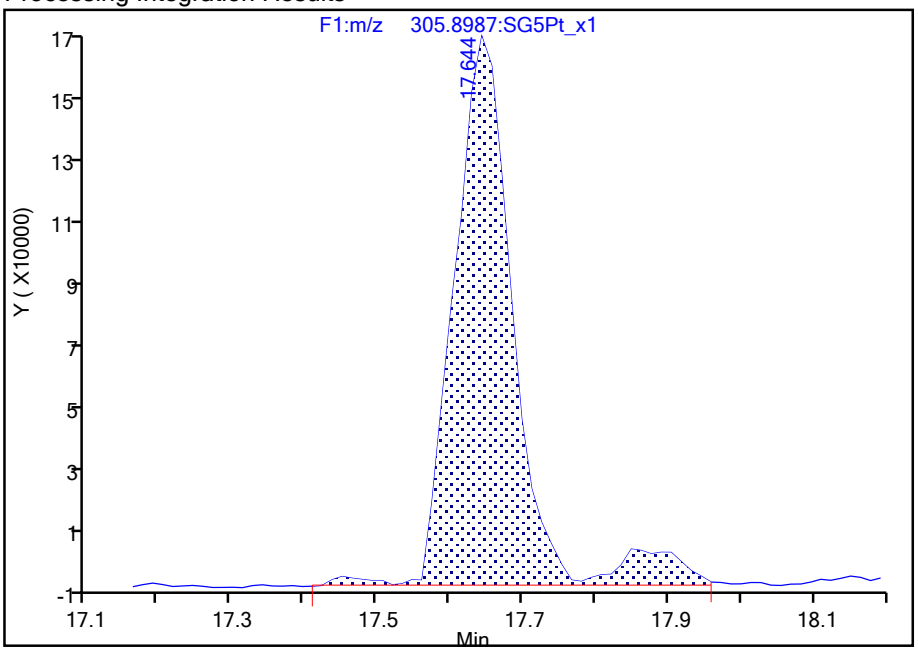

Manual Integration Results

RT: 17.64
Area: 893972
Amount: 4.099801
Amount Units: pg/ul

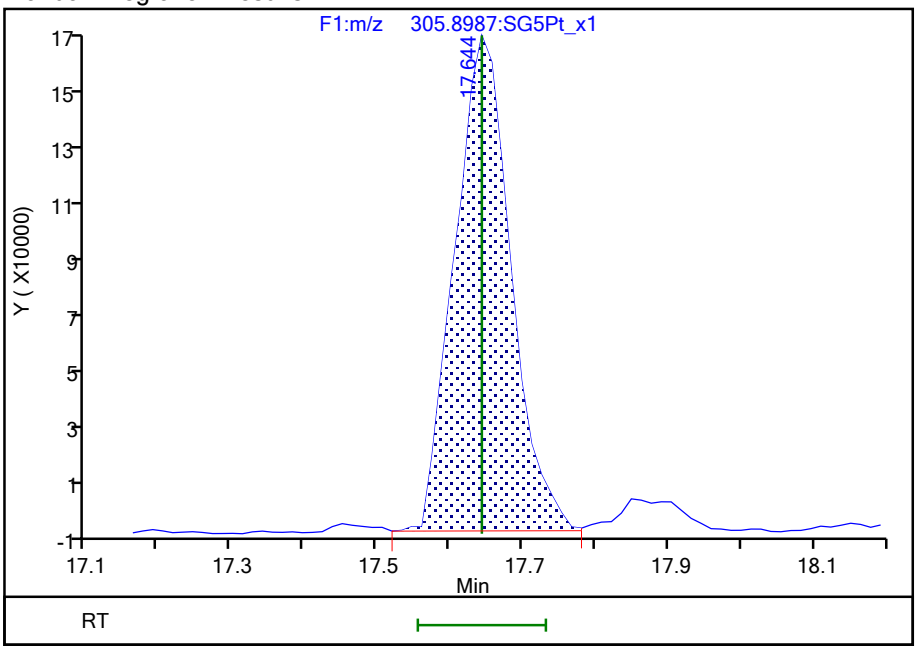

Reviewer: bennettd, 30-Aug-2021 09:45:29

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 30-Aug-2021 09:51:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_013.d		
Injection Date:	27-Aug-2021 23:18:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	520456	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

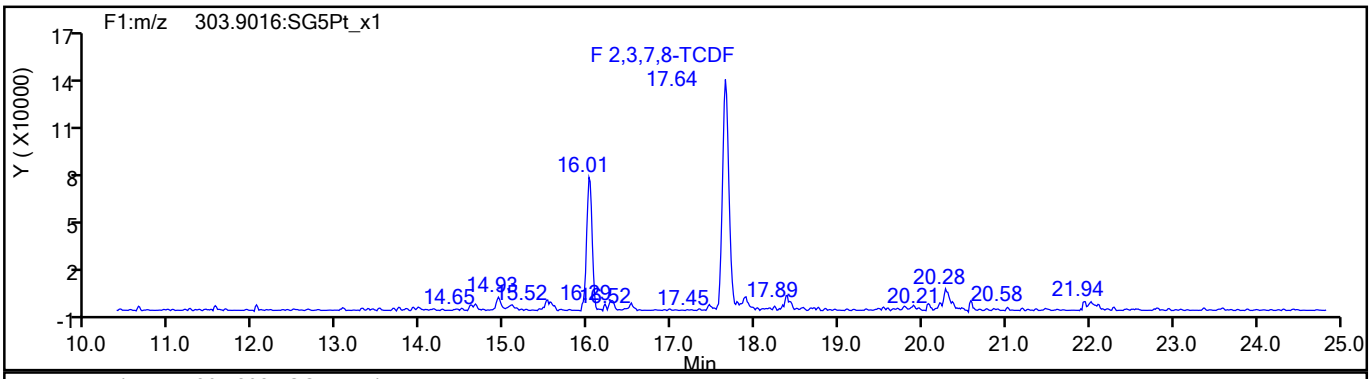

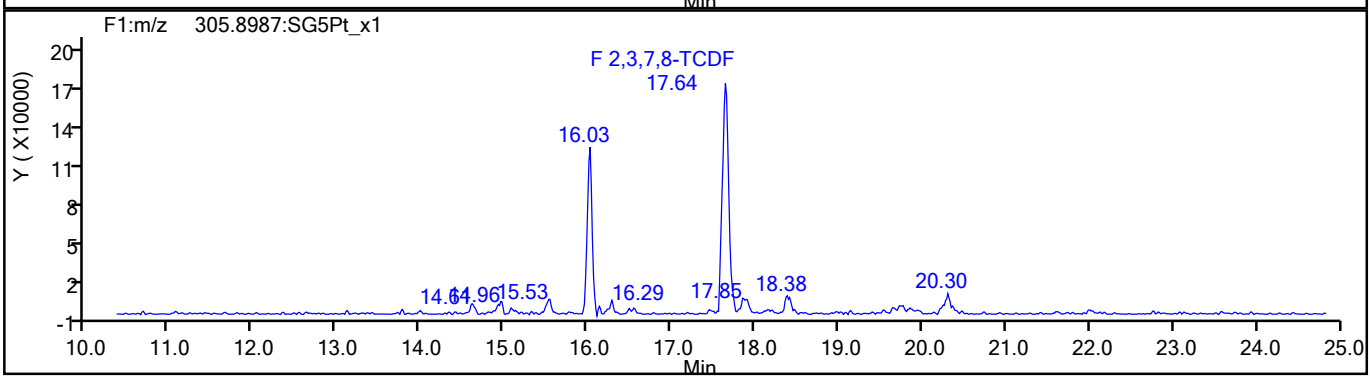

TCDF Standards

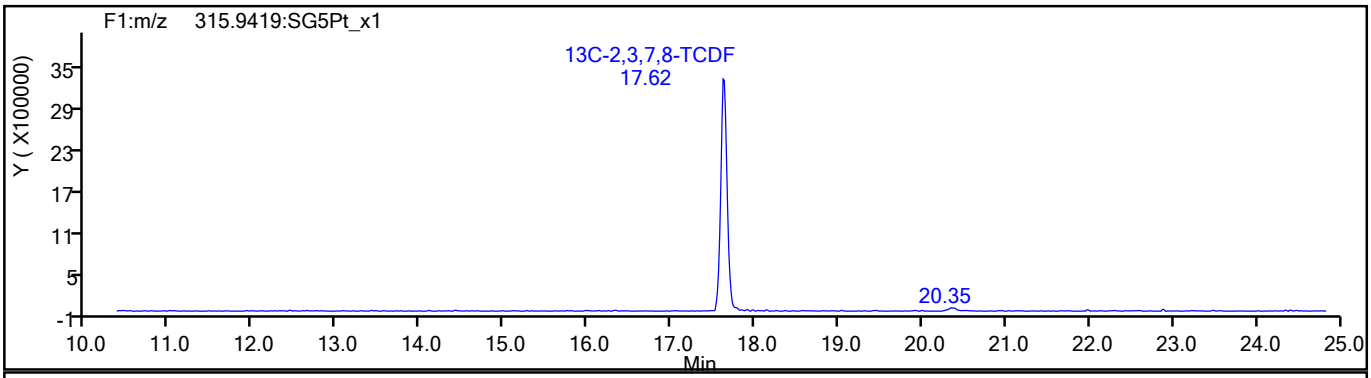

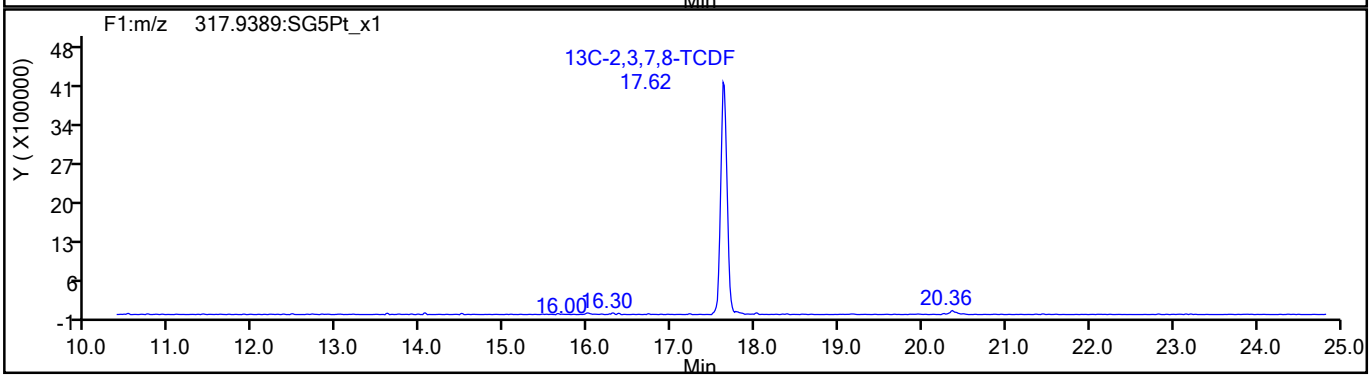

791084

Report Date: 30-Aug-2021 09:51:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_013.d		
Injection Date:	27-Aug-2021 23:18:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	520456	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

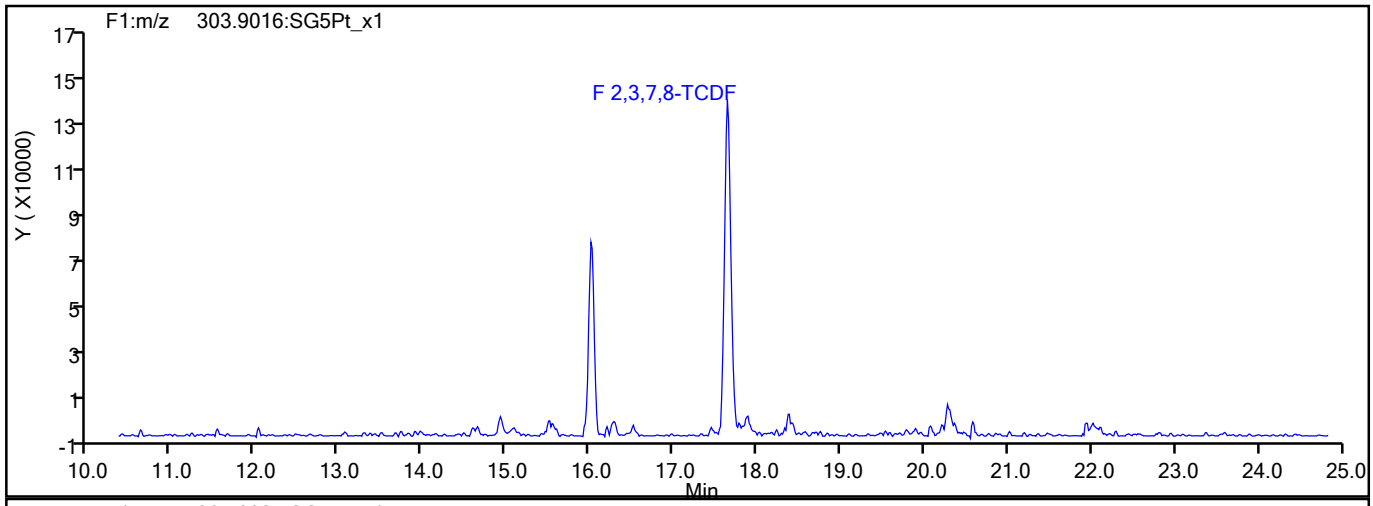

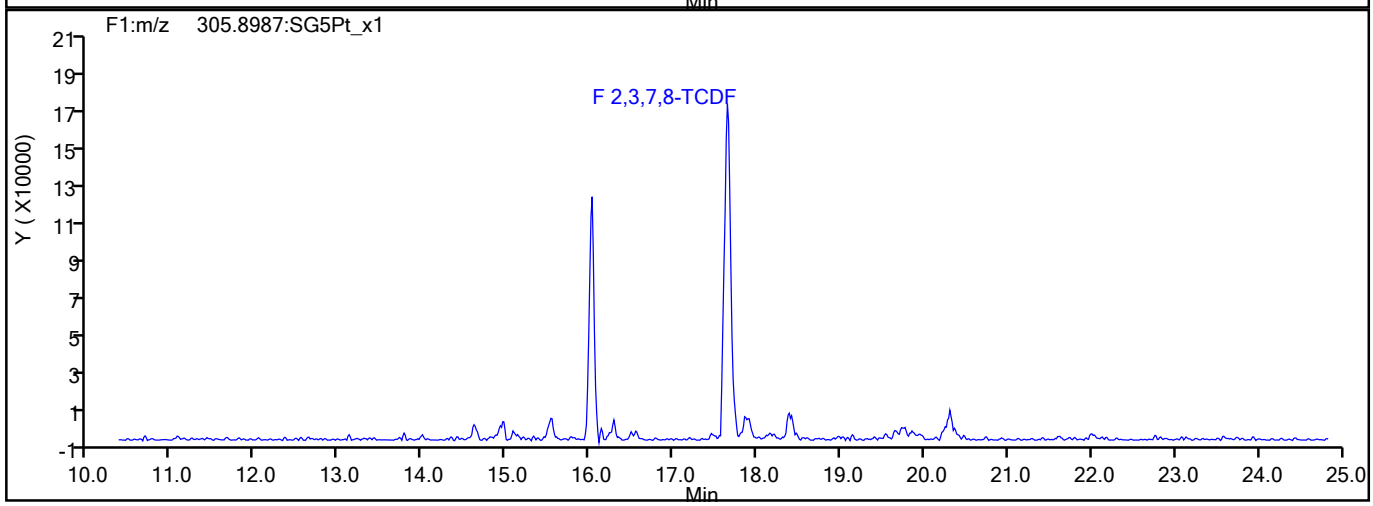

TCDF Interference Mass

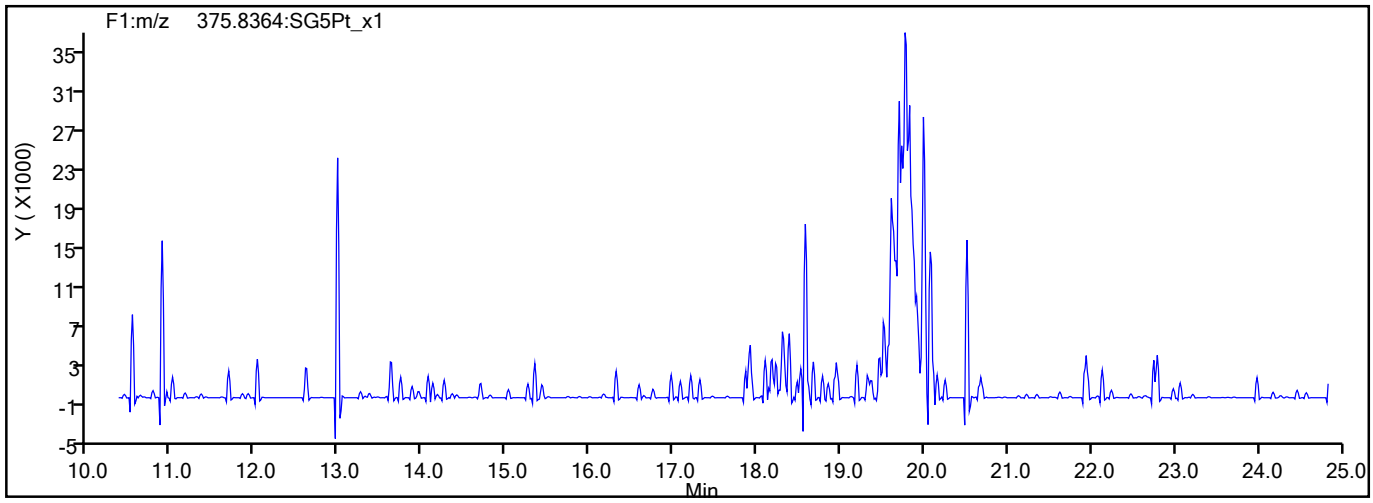

791085

Report Date: 30-Aug-2021 09:51:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_013.d		
Injection Date:	27-Aug-2021 23:18:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	520456	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

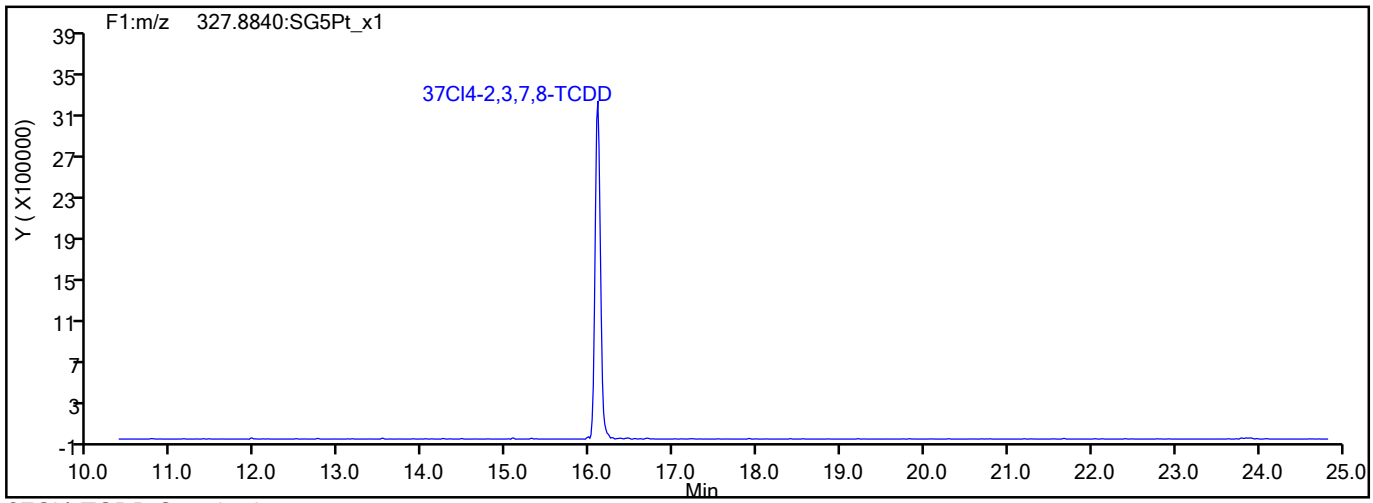

37Cl4-TCDD Standards

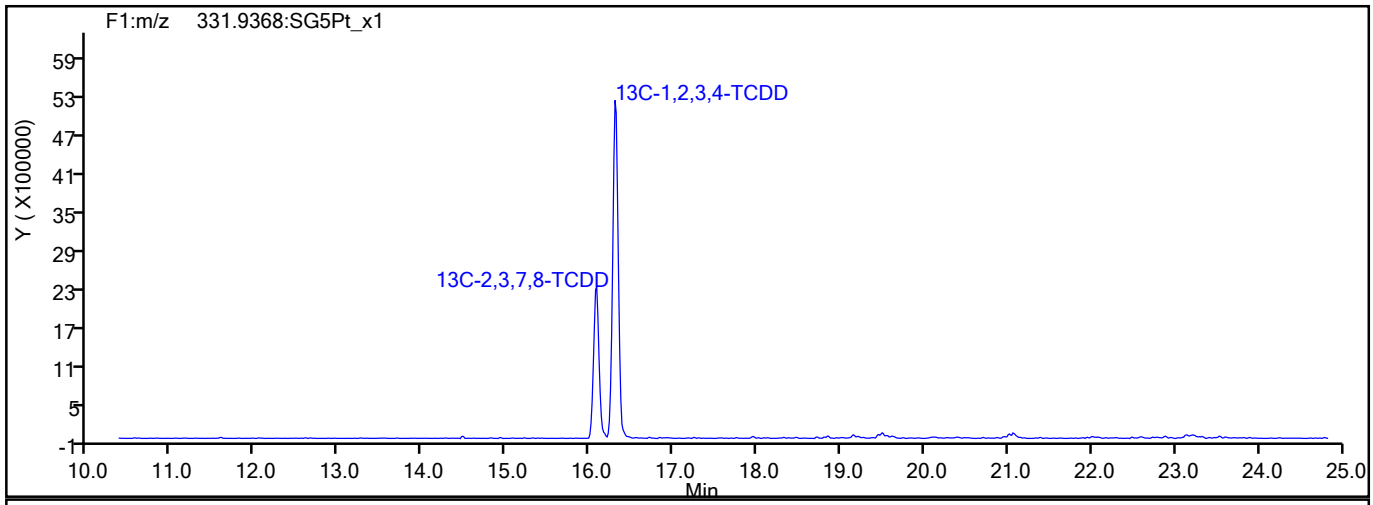

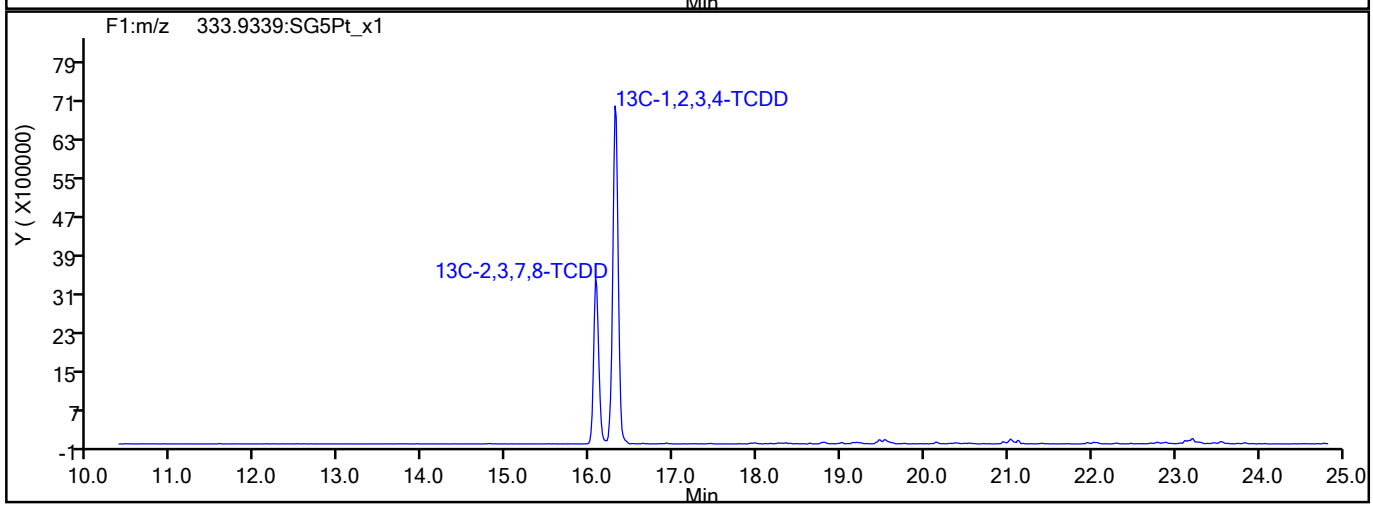

791086

Report Date: 30-Aug-2021 09:51:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_013.d		
Injection Date:	27-Aug-2021 23:18:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (6-8)		
Worklist#:	520456	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

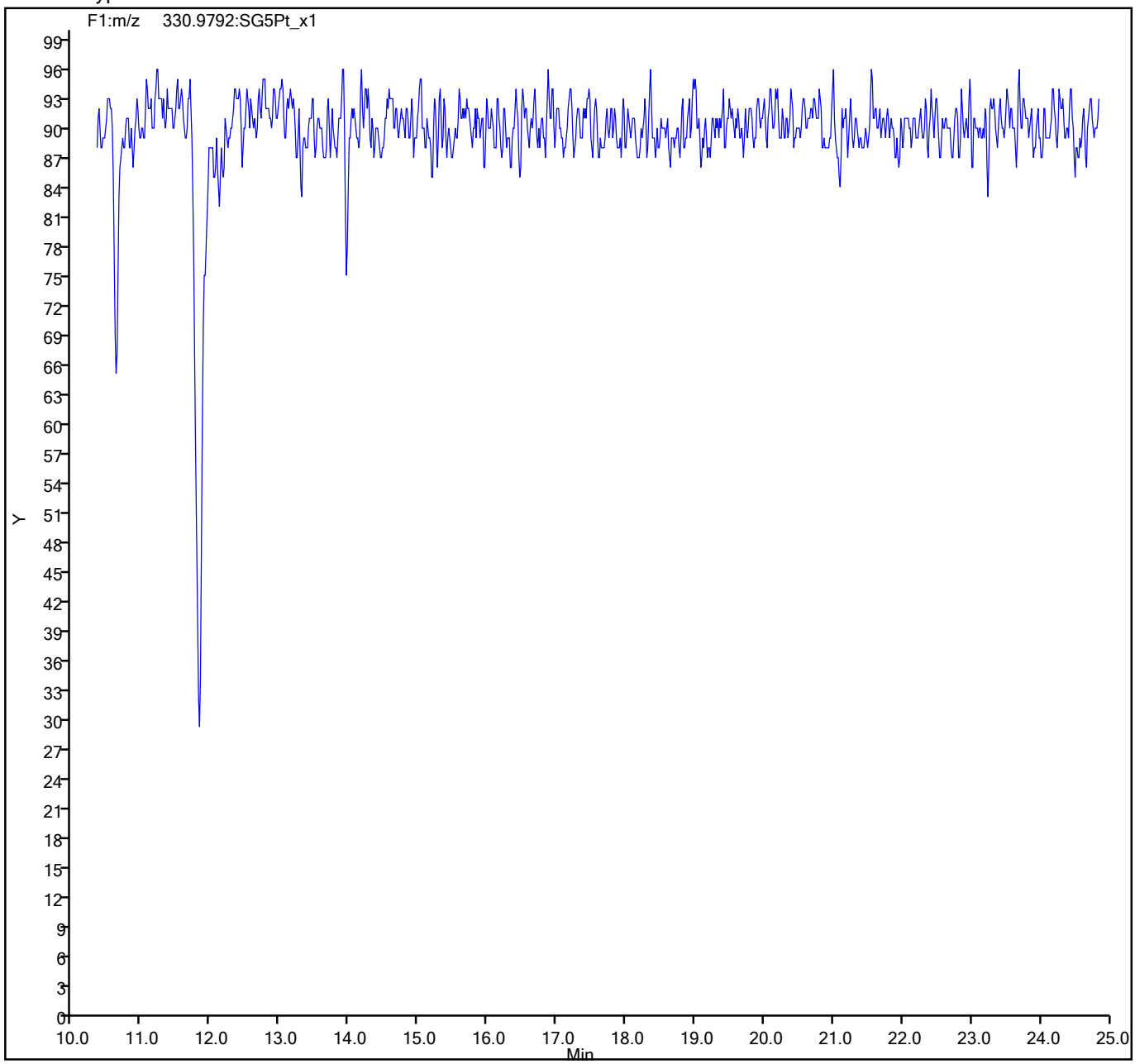

791087

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (8-10)
Lab Sample ID: 320-77214-5
Matrix: Sediment
Lab File ID: 25AU2110D5_11.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:30
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.15(g)
Date Analyzed: 08/25/2021 17:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 22.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	190		1.3	0.50
40321-76-4	1,2,3,7,8-PeCDD	1.7	J	6.4	0.091
57117-41-6	1,2,3,7,8-PeCDF	29		6.4	0.18
57117-31-4	2,3,4,7,8-PeCDF	15		6.4	0.18
39227-28-6	1,2,3,4,7,8-HxCDD	0.49	J	6.4	0.068
57653-85-7	1,2,3,6,7,8-HxCDD	0.75	J	6.4	0.074
19408-74-3	1,2,3,7,8,9-HxCDD	1.5	J	6.4	0.065
70648-26-9	1,2,3,4,7,8-HxCDF	31		6.4	0.12
57117-44-9	1,2,3,6,7,8-HxCDF	8.2		6.4	0.12
72918-21-9	1,2,3,7,8,9-HxCDF	0.66	J	6.4	0.084
60851-34-5	2,3,4,6,7,8-HxCDF	1.0	J	6.4	0.089
35822-46-9	1,2,3,4,6,7,8-HpCDD	28	B	6.4	0.30
67562-39-4	1,2,3,4,6,7,8-HpCDF	7.8		6.4	0.062
55673-89-7	1,2,3,4,7,8,9-HpCDF	2.8	J	6.4	0.069
3268-87-9	OCDD	630	B	13	0.42
39001-02-0	OCDF	3.3	J B	13	0.039
41903-57-5	Total TCDD	210	q	1.3	0.50
30402-14-3	Total TCDF	1100	B G	1.7	1.7
36088-22-9	Total PeCDD	3.7	J q	6.4	0.091
30402-15-4	Total PeCDF	70	q	6.4	0.18
34465-46-8	Total HxCDD	16		6.4	0.069
55684-94-1	Total HxCDF	45		6.4	0.10
37871-00-4	Total HpCDD	73	B	6.4	0.30
38998-75-3	Total HpCDF	13		6.4	0.065

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (8-10)
Lab Sample ID: 320-77214-5
Matrix: Sediment
Lab File ID: 25AU2110D5_11.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:30
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.15(g)
Date Analyzed: 08/25/2021 17:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 22.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	56		25-164
89059-46-1	13C-2,3,7,8-TCDF	53		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	57		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	55		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	59		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	65		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	53		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	64		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	54		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	55		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	55		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	50		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	57		26-138
114423-97-1	13C-OCDD	59		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d
Lims ID: 320-77214-A-5-A
Client ID: 11215702-080221-BN-SJSB090 (8-10)
Sample Type: Client
Inject. Date: 25-Aug-2021 17:20:37 ALS Bottle#: 15 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-5-A 320-77214-A-5-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 10:00:11 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:05:51

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	124039911	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	107397665	0.78	1.6249	53.3	53.3	0.1126	0.1126	53.28	
2,3,7,8-TCDF	17.114	277104958	0.77	1.0239	252.0	252.0	0.6851	0.6851		E
A Non-2,3,7,8-sub-TCDF	17.076	204297734	0.76	1.0239	185.8	185.8	0.6851	115.4		
S Total TCDF					437.8	437.8	0.6851	0.6851		
D 13C-2,3,7,8-TCDD	17.794	62619743	0.80	0.8993	56.1	56.1	0.1065	0.1065	56.14	
2,3,7,8-TCDD	17.809	58980174	0.79	1.2541	75.1	75.1	0.1979	0.1979		
$ 37Cl4-2,3,7,8-TCDD	17.809	39346700		1.1071	28.7	28.7	0.0434	0.0434	71.63	
A Non-2,3,7,8-sub-TCDD	17.537	6867666	0.77	1.2541	9.614	8.745	0.1979	6.137		RQ
S Total TCDD					84.7	83.8	0.1979	0.1979		RQ
D 13C-1,2,3,7,8-PeCDF	22.020	83047271	1.57	1.2101	55.3	55.3	0.0817	0.0817	55.33	
1,2,3,7,8-PeCDF	22.047	10201198	1.55	1.0611	11.6	11.6	0.0695	0.0695		
D 13C-2,3,4,7,8-PeCDF	23.343	90721576	1.54	1.2395	59.0	59.0	0.0797	0.0797	59.01	
2,3,4,7,8-PeCDF	23.370	5540250	1.63	1.0184	5.996	5.996	0.0713	0.0713		
A F1 PeCDFs	19.851	59032	1.63	1.0398	0.0653	0.0653	0.0160	0.0653		a
A Non-2,3,7,8-sub-PeCDF	23.067	9127980	1.55	1.0398	10.2	10.1	0.0703	4.270		RQ
S Total PeCDF					27.8	27.7	0.0704	0.0704		RQ
D 13C-1,2,3,7,8-PeCDD	24.052	54063105	1.64	0.7612	57.3	57.3	0.0412	0.0412	57.26	
1,2,3,7,8-PeCDD	24.079	374228	1.56	1.0484	0.6602	0.6602	0.0357	0.0357		
A Non-2,3,7,8-sub-PeCDD	23.696	450805	1.55	1.0484	0.8283	0.7953	0.0357	0.3018		RQ
S Total PeCDD					1.489	1.456	0.0357	0.0357		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.186	76608014	0.53	1.0837	64.0	64.0	0.1228	0.1228	64.02	
1,2,3,4,7,8-HxCDF	30.212	10244822	1.22	1.0851	12.3	12.3	0.0478	0.0478		
D 13C-1,2,3,6,7,8-HxCDF	30.385	67389878	0.52	1.1279	54.1	54.1	0.1180	0.1180	54.10	
1,2,3,6,7,8-HxCDF	30.412	2435522	1.20	1.1260	3.210	3.210	0.0477	0.0477		
D 13C-2,3,4,6,7,8-HxCDF	31.291	64622321	0.53	1.0637	55.0	55.0	0.1251	0.1251	55.01	
2,3,4,6,7,8-HxCDF	31.304	311510	1.23	1.1675	0.4129	0.4129	0.0352	0.0352		
D 13C-1,2,3,7,8,9-HxCDF	32.129	59147139	0.52	0.9676	55.4	55.4	0.1375	0.1375	55.35	
1,2,3,7,8,9-HxCDF	32.143	180294	1.37	1.1664	0.2613	0.2613	0.0330	0.0330		
A Non-2,3,7,8-sub-HxCDF	30.338	1196955	1.18	1.1363	1.574	1.574	0.0399	0.8991		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					17.8	17.8	0.0409	0.0409		
* 13C-1,2,3,7,8,9-HxCDD	31.943	110432360	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.490	52833675	1.25	0.7334	65.2	65.2	0.1381	0.1381	65.23	
1,2,3,4,7,8-HxCDD	31.504	109485	1.19	1.0640	0.1948	0.1948	0.0268	0.0268		
D 13C-1,2,3,6,7,8-HxCDD	31.610	51941865	1.25	0.8802	53.4	53.4	0.1151	0.1151	53.44	
1,2,3,6,7,8-HxCDD	31.623	152839	1.19	1.0001	0.2942	0.2942	0.0291	0.0291		
1,2,3,7,8,9-HxCDD	31.956	356543	1.24	1.1325	0.6009	0.6009	0.0254	0.0254		
A Non-2,3,7,8-sub-HxCDD	30.525	2839231	1.26	1.0655	5.086	5.086	0.0270	3.214		
S Total HxCDD					6.176	6.176	0.0271	0.0271		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	42281671	0.44	0.7730	49.5	49.5	0.3467	0.3467	49.53	
1,2,3,4,6,7,8-HpCDF	33.615	1868730	1.05	1.4413	3.066	3.066	0.0242	0.0242		
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	44362081	0.44	0.7008	57.3	57.3	0.3824	0.3824	57.32	
1,2,3,4,7,8,9-HpCDF	34.685	644558	1.02	1.3174	1.103	1.103	0.0273	0.0273		
A Non-2,3,7,8-sub-HpCDF	34.150	526353	1.08	1.3793	0.8808	0.8808	0.0257	0.8808		
S Total HpCDF					5.050	5.050	0.0257	0.0257		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	39207516	1.01	0.6472	54.9	54.9	0.3308	0.3308	54.85	
1,2,3,4,6,7,8-HpCDD	34.393	4755842	1.02	1.0943	11.1	11.1	0.1162	0.1162		
A Non-2,3,7,8-sub-HpCDD	34.223	7537762	1.04	1.0943	17.6	17.6	0.1162	17.6		
S Total HpCDD					28.7	28.7	0.1162	0.1162		
D 13C-OCDD	36.701	58228493	0.88	0.4472	117.9	117.9	0.0970	0.0970	58.96	
OCDF	36.797	542137	0.83	1.4382	1.295	1.295	0.0155	0.0155		
OCDD	36.713	79563762	0.89	1.1070	246.9	246.9	0.1653	0.1653		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d
Lims ID: 320-77214-A-5-A
Client ID: 11215702-080221-BN-SJSB090 (8-10)
Sample Type: Client
Inject. Date: 25-Aug-2021 17:20:37 ALS Bottle#: 15 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-5-A 320-77214-A-5-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 10:00:11 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:05:51

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		55356981	13529010	4888	12220	2768		
333.9339	17.598	17.598	0		68682930	16864506	6752	16880	2498	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	0.972	46999240	12594846	10946	27365	1151		
317.9389	17.099	17.099	0	0.972	60398425	16204255	11302	28255	1434	0.78(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.114	17.114	0	1.001	120918613	30854994	35182	87955	877		
305.8987	17.114	17.114	0	1.001	156186345	39782624	45629	114072	872	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.723	17.076	-81	0.920	2163905	603113	35182	87955	17		
305.8987	15.723	17.076	-81	0.920	2855436	803937	45629	114072	18	0.76(0.65-0.89)	
303.9016	15.995	17.076	-65	0.935	3498627	762780	35182	87955	22		
305.8987	15.995	17.076	-65	0.935	4555681	1020430	45629	114072	22	0.77(0.65-0.89)	
303.9016	16.222	17.076	-51	0.949	3404912	913922	35182	87955	26		
305.8987	16.222	17.076	-51	0.949	4356320	1160339	45629	114072	25	0.78(0.65-0.89)	
303.9016	16.464	17.076	-37	0.963	5054139	1274330	35182	87955	36		
305.8987	16.464	17.076	-37	0.963	6551169	1676279	45629	114072	37	0.77(0.65-0.89)	
303.9016	16.736	17.076	-20	0.979	54908885	15140995	35182	87955	430		
305.8987	16.736	17.076	-20	0.979	72003232	19817450	45629	114072	434	0.76(0.65-0.89)	
303.9016	16.963	17.076	-7	0.992	1733508	454466	35182	87955	13		
305.8987	16.963	17.076	-7	0.992	2330725	596783	45629	114072	13	0.74(0.65-0.89)	
303.9016	17.537	17.076	28	1.026	7835990	2009391	35182	87955	57		
305.8987	17.537	17.076	28	1.026	10383859	2654437	45629	114072	58	0.75(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.779	17.076	42	1.040	1391026	312776	35182	87955	9		
305.8987	17.779	17.076	42	1.040	1831655	422625	45629	114072	9	0.76(0.65-0.89)	
303.9016	18.898	17.076	109	1.105	8427203	1989839	35182	87955	57		
305.8987	18.898	17.076	109	1.105	11011462	2598610	45629	114072	57	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.011	27786970	7182940	4888	12220	1470		
333.9339	17.794	17.794	0	1.011	34832773	8936375	6752	16880	1324	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	26060661	6738333	8247	20617	817		
321.8936	17.809	17.809	0	1.001	32919513	8509492	7757	19392	1097	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	39346700	10106581	5848	14620	1728		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	16.691	17.537	-51	0.938	179572	45498	8247	20617	6		
321.8936	16.691	17.537	-51	0.938	205721	48625	7757	19392	6	0.87(0.65-0.89)	
319.8965	17.704	17.537	10	0.995	305351	91346	8247	20617	11		
321.8936	17.704	17.537	10	0.995	390519	116830	7757	19392	15	0.78(0.65-0.89)	
319.8965	18.157	17.537	37	1.020	2061574	500224	8247	20617	61		
321.8936	18.157	17.537	37	1.020	2758000	668539	7757	19392	86	0.75(0.65-0.89)	
319.8965	19.367	17.537	110	1.088	1102764	237435	8247	20617	29		
	Empc Correction				420641	95597	8247	20617	12		
321.8936	19.367	17.537	110	1.088	546288	124152	7757	19392	16	2.02(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	50734429	9289011	7116	17790	1305		
353.8970	22.020	22.020	0	1.251	32312842	5988018	4900	12250	1222	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.047	22.047	0	1.001	6200511	1145511	2485	6212	461		
341.8567	22.047	22.047	0	1.001	4000687	722542	2019	5047	358	1.55(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.326	54986385	9375385	7116	17790	1318		
353.8970	23.343	23.343	0	1.326	35735191	6138816	4900	12250	1253	1.54(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370	23.370	0	1.001	3434441	603829	2485	6212	243		
341.8567	23.370	23.370	0	1.001	2105809	358872	2019	5047	178	1.63(1.32-1.78)	
A F1 PeCDFs											a
339.8597	19.200	19.851	-39	0.872	36544	7344	337	842	22		a
341.8567	19.200	19.851	-39	0.872	22488	4136	688	1720	6	1.63(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.724	23.067	-140	0.941	2365702	485767	2485	6212	195		
341.8567	20.724	23.067	-140	0.941	1491387	304112	2019	5047	151	1.59(1.32-1.78)	
339.8597	21.529	23.067	-92	0.978	139712	16047	2485	6212	6		
341.8567	21.556	23.067	-90	0.979	106664	11635	2019	5047	6	1.31(1.32-1.78)	
	Empc Correction				90136	10352	2019	5047	5		
339.8597	21.911	23.067	-69	0.995	383916	88738	2485	6212	36		
	Empc Correction				323181	86573	2485	6212	35		
341.8567	21.924	23.067	-68	0.996	208504	55854	2019	5047	28	1.84(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	22.306	23.067	-46	1.013	83879	13991	2485	6212	6		
341.8567	22.333	23.067	-44	1.014	58726	9235	2019	5047	5	1.43(1.32-1.78)	
339.8597	22.565	23.067	-30	1.025	1560805	287346	2485	6212	116		
341.8567	22.552	23.067	-31	1.024	1006851	178489	2019	5047	88	1.55(1.32-1.78)	
339.8597	23.697	23.067	38	1.076	884572	133583	2485	6212	54		
341.8567	23.697	23.067	38	1.076	574855	89637	2019	5047	44	1.54(1.32-1.78)	
339.8597	25.265	23.067	132	1.147	196054	33728	2485	6212	14		
341.8567	25.252	23.067	131	1.147	143616	23909	2019	5047	12	1.37(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.367	33554741	5473950	2137	5342	2562		
369.8919	24.038	24.052	-1	1.366	20508364	3352597	1676	4190	2000	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079	24.079	0	1.001	227963	38721	818	2045	47		
357.8516	24.065	24.079	-1	1.001	146265	26241	504	1260	52	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.652	23.696	-122	0.900	108567	19916	818	2045	24		
357.8516	21.652	23.696	-122	0.900	62489	10967	504	1260	22	1.74(1.32-1.78)	
355.8546	22.088	23.696	-96	0.918	18380	3859	818	2045	5		
357.8516	22.061	23.696	-98	0.917	17312	2370	504	1260	5	1.06(1.32-1.78)	
	Empc Correction				11858	2489	504	1260	5		
355.8546	22.320	23.696	-82	0.928	22220	4269	818	2045	5		
357.8516	22.306	23.696	-83	0.927	19010	3336	504	1260	7	1.17(1.32-1.78)	
	Empc Correction				14335	2754	504	1260	5		
355.8546	22.620	23.696	-64	0.940	39362	8439	818	2045	10		
357.8516	22.620	23.696	-64	0.940	26930	5674	504	1260	11	1.46(1.32-1.78)	
355.8546	22.947	23.696	-45	0.954	12350	2845	818	2045	3		
357.8516	22.934	23.696	-46	0.954	12254	2940	504	1260	6	1.01(1.32-1.78)	
	Empc Correction				7967	1835	504	1260	4		
355.8546	23.111	23.696	-35	0.961	59346	9194	818	2045	11		
357.8516	23.097	23.696	-36	0.960	40997	6390	504	1260	13	1.45(1.32-1.78)	
355.8546	25.047	23.696	81	1.041	20084	2658	818	2045	3		
	Empc Correction				15806	3368	818	2045	4		
357.8516	25.047	23.696	81	1.041	10198	2173	504	1260	4	1.97(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.186	30.186	0	0.945	26468255	4578502	6104	15260	750		
385.8610	30.186	30.186	0	0.945	50139759	8478300	10809	27022	784	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.212	30.213	0	1.001	5638553	981277	1514	3785	648		
375.8178	30.199	30.213	-1	1.000	4606269	796849	1197	2992	666	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.385	30.399	-1	0.951	23099867	4380727	6104	15260	718		
385.8610	30.385	30.399	-1	0.951	44290011	8249838	10809	27022	763	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.001	1327903	246521	1514	3785	163		
375.8178	30.412	30.412	0	1.001	1107619	202318	1197	2992	169	1.20(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.980	22317800	5703652	6104	15260	934		
385.8610	31.291	31.291	0	0.980	42304521	10794539	10809	27022	999	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.304	31.317	-1	1.000	171885	40137	1514	3785	27		
375.8178	31.317	31.317	0	1.001	139625	34679	1197	2992	29	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.143	-1	1.006	20242731	6036544	6104	15260	989		
385.8610	32.129	32.143	-1	1.006	38904408	11549758	10809	27022	1069	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.143	32.156	-1	1.000	104135	35414	1514	3785	23		
375.8178	32.143	32.156	-1	1.000	76159	26047	1197	2992	22	1.37(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	29.201	30.338	-68	0.967	163796	21286	1514	3785	14		
375.8178	29.241	30.338	-66	0.969	129990	17672	1197	2992	15	1.26(1.05-1.43)	
373.8208	31.198	30.338	51	1.034	121009	28550	1514	3785	19		
375.8178	31.184	30.338	51	1.033	98245	21618	1197	2992	18	1.23(1.05-1.43)	
373.8208	32.236	30.338	114	1.068	362864	115602	1514	3785	76		
375.8178	32.236	30.338	114	1.068	321051	99438	1197	2992	83	1.13(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.956	-1		61134254	17539881	6992	17480	2509		
403.8529	31.943	31.956	-1		49298106	14239364	5881	14702	2421	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.490	31.504	-1	0.986	29396803	8048345	6992	17480	1151		
403.8529	31.490	31.504	-1	0.986	23436872	6428766	5881	14702	1093	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.504	31.517	-1	1.000	59385	15170	1102	2755	14		
391.8127	31.517	31.517	0	1.001	50100	12973	552	1380	24	1.19(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.990	28867033	7944317	6992	17480	1136		
403.8529	31.610	31.610	0	0.990	23074832	6282569	5881	14702	1068	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.623	31.624	0	1.000	83173	23106	1102	2755	21		
391.8127	31.623	31.624	0	1.000	69666	21564	552	1380	39	1.19(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.956	31.969	-1	1.015	197462	47143	1102	2755	43		
391.8127	31.956	31.969	-1	1.015	159081	36339	552	1380	66	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.068	30.525	-87	0.920	1004831	126286	1102	2755	115		
391.8127	29.055	30.525	-88	0.919	789504	97571	552	1380	177	1.27(1.05-1.43)	
389.8157	30.306	30.525	-13	0.959	46151	7436	1102	2755	7		
391.8127	30.266	30.525	-16	0.957	34410	6648	552	1380	12	1.34(1.05-1.43)	
389.8157	30.692	30.525	10	0.971	489753	90725	1102	2755	82		
391.8127	30.692	30.525	10	0.971	396236	77722	552	1380	141	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
389.8157	30.905	30.525	23	0.978	41962	9256	1102	2755	8		
391.8127	30.918	30.525	24	0.978	36384	8303	552	1380	15	1.15(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	12958375	5022877	11157	27892	450		
419.8220	33.603	33.603	0	1.052	29323296	11092569	22910	57275	484	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.615	0	1.000	956370	348778	1366	3415	255		
409.7789	33.615	33.615	0	1.000	912360	328083	884	2210	371	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.672	0	1.085	13556585	4849809	11157	27892	435		
419.8220	34.672	34.672	0	1.085	30805496	10806692	22910	57275	472	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685	34.685	0	1.000	325049	108074	1366	3415	79		
409.7789	34.685	34.685	0	1.000	319509	109500	884	2210	124	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	33.907	34.150	-15	1.009	272905	87332	1366	3415	64		
409.7789	33.907	34.150	-15	1.009	253448	91414	884	2210	103	1.08(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.077	19740903	6879664	13462	33655	511		
437.8140	34.393	34.393	0	1.077	19466613	6725650	13754	34385	489	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.405	-1	1.000	2406125	815228	3382	8455	241		
425.7737	34.393	34.405	-1	1.000	2349717	832588	3540	8850	235	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.858	34.223	-22	0.984	3842056	1391597	3382	8455	411		
425.7737	33.846	34.223	-23	0.984	3695706	1326591	3540	8850	375	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.701	0	1.149	27251350	8293042	2681	6702	3093		
471.7750	36.701	36.701	0	1.149	30977143	9455154	2833	7082	3338	0.88(0.76-1.02)	
OCDF											
441.7428	36.797	36.797	0	1.003	245674	74897	346	865	216		
443.7399	36.797	36.797	0	1.003	296463	88330	446	1115	198	0.83(0.76-1.02)	
OCDD											
457.7377	36.713	36.713	0	1.000	37458591	11470504	2916	7290	3934		
459.7348	36.713	36.713	0	1.000	42105171	12668214	3579	8947	3540	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d
Lims ID: 320-77214-A-5-A
Client ID: 11215702-080221-BN-SJSB090 (8-10)
Inject. Date: 25-Aug-2021 17:20:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 11

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	107397665	28799101

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	107397665	28799101

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.723	2163905	603113	2855436	803937	4.56	0.76	
15.995	3498627	762780	4555681	1020430	7.32	0.77	
16.222	3404912	913922	4356320	1160339	7.06	0.78	
16.464	5054139	1274330	6551169	1676279	10.6	0.77	
16.736	54908885	15140995	72003232	19817450	115.4	0.76	
16.963	1733508	454466	2330725	596783	3.70	0.74	
17.537	7835990	2009391	10383859	2654437	16.6	0.75	
17.779	1391026	312776	1831655	422625	2.93	0.76	
18.898	8427203	1989839	11011462	2598610	17.7	0.77	
Signal Totals:							
	88418195	23461612	115879539	30750890			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	204297734	54212502				0.76	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 185.783 = (204297734 * 100.000) / (107397665 * 1.024)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d
Lims ID: 320-77214-A-5-A
Client ID: 11215702-080221-BN-SJSB090 (8-10)
Inject. Date: 25-Aug-2021 17:20:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 11

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	62619743	16119315

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	62619743	16119315

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.691	179572	45498	205721	48625	0.4906	0.87	
17.704	305351	91346	390519	116830	0.8861	0.78	
18.157	2061574	500224	2758000	668539	6.14	0.75	
19.367	1102764	237435	546288	124152	2.10	2.02	RQ
19.367	420641	95597	546288	124152	1.23		Empc Correction
Signal Totals:							
	2967138	732665	3900528	958146			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7549789	1832649				0.94	RQ
	6867666	1690811					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 9.614 = (7549789 * 100.000) / (62619743 * 1.254)
Empc Amount: 8.745 = (6867666 * 100.000) / (62619743 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d
Lims ID: 320-77214-A-5-A
Client ID: 11215702-080221-BN-SJSB090 (8-10)
Inject. Date: 25-Aug-2021 17:20:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 11

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	83047271	15277029
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	90721576	15514201

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	86884423	15395615

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.200	36544	7344	22488	4136	0.0653	1.63	a
Signal Totals:							
	36544	7344	22488	4136			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	59032	11480				1.63	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0653 = (59032 * 100.000) / (86884423 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d
Lims ID: 320-77214-A-5-A
Client ID: 11215702-080221-BN-SJSB090 (8-10)
Inject. Date: 25-Aug-2021 17:20:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 11

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	83047271	15277029
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	90721576	15514201

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	86884423	15395615

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.724	2365702	485767	1491387	304112	4.27	1.59	
21.529	139712	16047	106664	11635	0.2727	1.31	RQ
21.529	139712	16047	90136	10352	0.2544		Empc Correction
21.911	383916	88738	208504	55854	0.6558	1.84	RQ
21.911	323181	86573	208504	55854	0.5885		Empc Correction
22.306	83879	13991	58726	9235	0.1579	1.43	
22.565	1560805	287346	1006851	178489	2.84	1.55	
23.697	884572	133583	574855	89637	1.62	1.54	
25.265	196054	33728	143616	23909	0.3760	1.37	
Signal Totals:							
	5553905	1057035	3574075	671588			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9205243	1732071				1.56	RQ
	9127980	1728623					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 10.190 = (9205243 * 100.000) / (86884423 * 1.040)
Empc Amount: 10.104 = (9127980 * 100.000) / (86884423 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Lims ID:	320-77214-A-5-A		
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Inject. Date:	25-Aug-2021 17:20:37	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	11

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	54063105	8826547

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	54063105	8826547

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.652	108567	19916	62489	10967	0.3018	1.74	
22.088	18380	3859	17312	2370	0.0630	1.06	RQ
22.088	18380	3859	11858	2489	0.0533		Empc Correction
22.320	22220	4269	19010	3336	0.0727	1.17	RQ
22.320	22220	4269	14335	2754	0.0645		Empc Correction
22.620	39362	8439	26930	5674	0.1170	1.46	
22.947	12350	2845	12254	2940	0.0434	1.01	RQ
22.947	12350	2845	7967	1835	0.0358		Empc Correction
23.111	59346	9194	40997	6390	0.1770	1.45	
25.047	20084	2658	10198	2173	0.0534	1.97	RQ
25.047	15806	3368	10198	2173	0.0459		Empc Correction
Signal Totals:							
	276031	51890	174774	32282			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	469499	85030				1.48	RQ
	450805	84172					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.8283 = (469499 * 100.000) / (54063105 * 1.048)

Empc Amount: 0.7953 = (450805 * 100.000) / (54063105 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d
Lims ID: 320-77214-A-5-A
Client ID: 11215702-080221-BN-SJSB090 (8-10)
Inject. Date: 25-Aug-2021 17:20:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 11

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	76608014	13056802
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	67389878	12630565
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	64622321	16498191
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	59147139	17586302

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	66941838	14942965

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.201	163796	21286	129990	17672	0.3862	1.26	
31.198	121009	28550	98245	21618	0.2883	1.23	
32.236	362864	115602	321051	99438	0.8991	1.13	
Signal Totals:							
	647669	165438	549286	138728			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1196955	304166				1.18	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.574 = (1196955 * 100.000) / (66941838 * 1.136)

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Lims ID:	320-77214-A-5-A		
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Inject. Date:	25-Aug-2021 17:20:37	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	11

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	52833675	14477111
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	51941865	14226886
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	52387770	14351998

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.068	1004831	126286	789504	97571	3.21	1.27	
30.306	46151	7436	34410	6648	0.1443	1.34	
30.692	489753	90725	396236	77722	1.59	1.24	
30.905	41962	9256	36384	8303	0.1404	1.15	
Signal Totals:							
	1582697	233703	1256534	190244			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2839231	423947				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 5.086 = (2839231 * 100.000) / (52387770 * 1.066)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d
Lims ID: 320-77214-A-5-A
Client ID: 11215702-080221-BN-SJSB090 (8-10)
Inject. Date: 25-Aug-2021 17:20:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 11

Non-2,3,7,8-sub-HpCDF, RT: 34.150

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	42281671	16115446
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	44362081	15656501

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	43321876	15885973

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
33.907	272905	87332	253448	91414	0.8808	1.08	
Signal Totals:							
	272905	87332	253448	91414			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	526353	178746				1.08	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8808 = (526353 * 100.000) / (43321876 * 1.379)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d
Lims ID: 320-77214-A-5-A
Client ID: 11215702-080221-BN-SJSB090 (8-10)
Inject. Date: 25-Aug-2021 17:20:37 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 11

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	39207516	13605314

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	39207516	13605314

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.858	3842056	1391597	3695706	1326591	17.6	1.04	
Signal Totals:							
	3842056	1391597	3695706	1326591			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7537762	2718188				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 17.569 = (7537762 * 100.000) / (39207516 * 1.094)

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

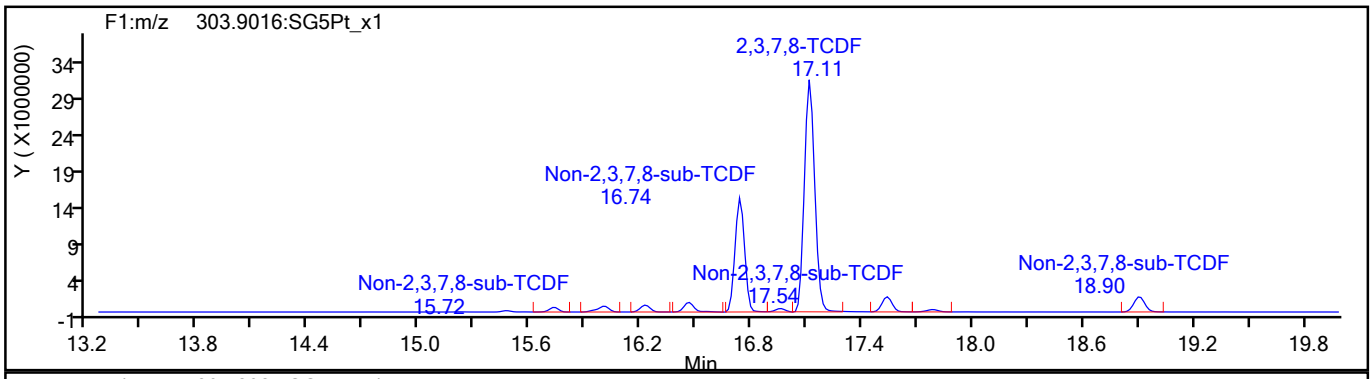

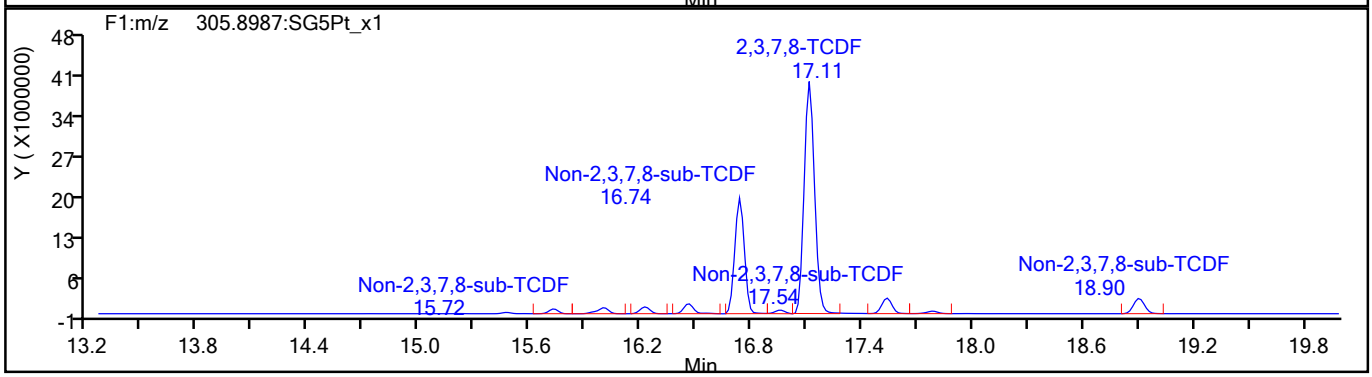

TCDF Standards

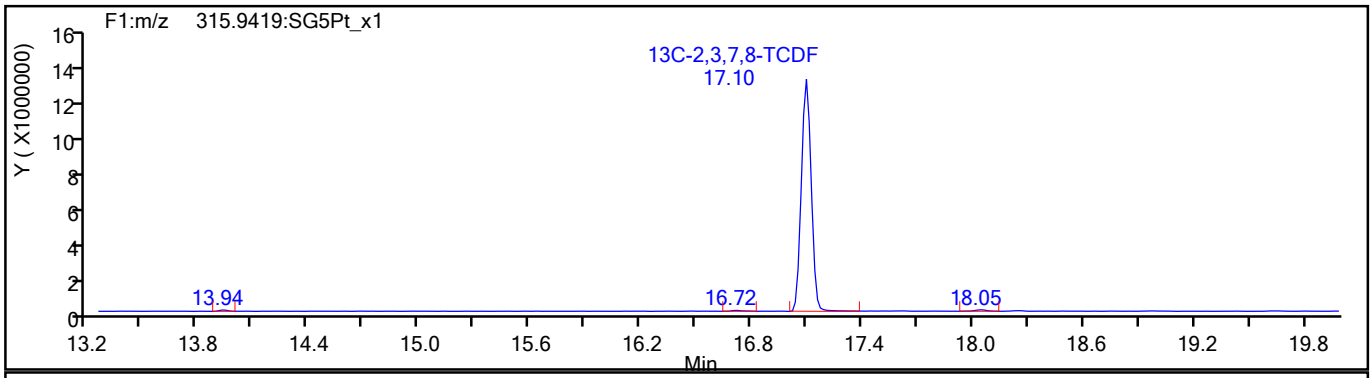

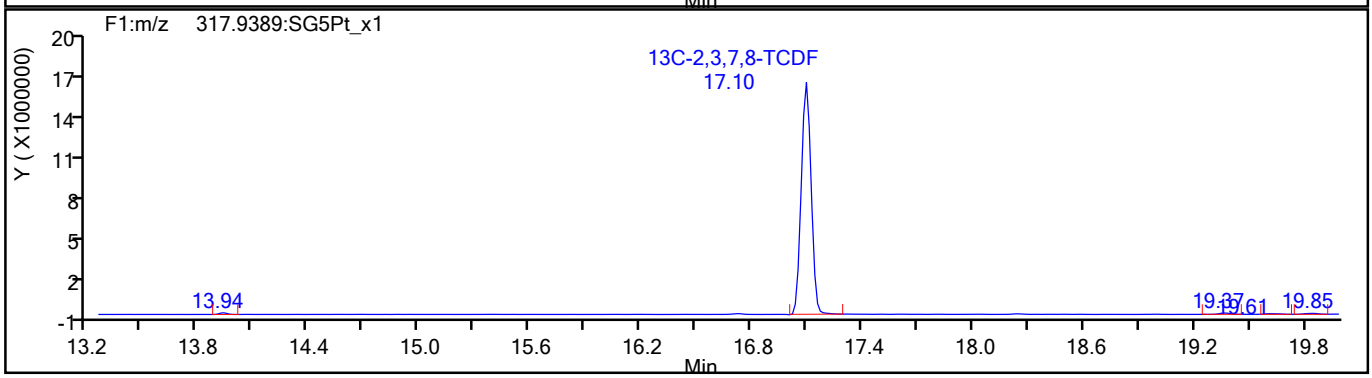

791108

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

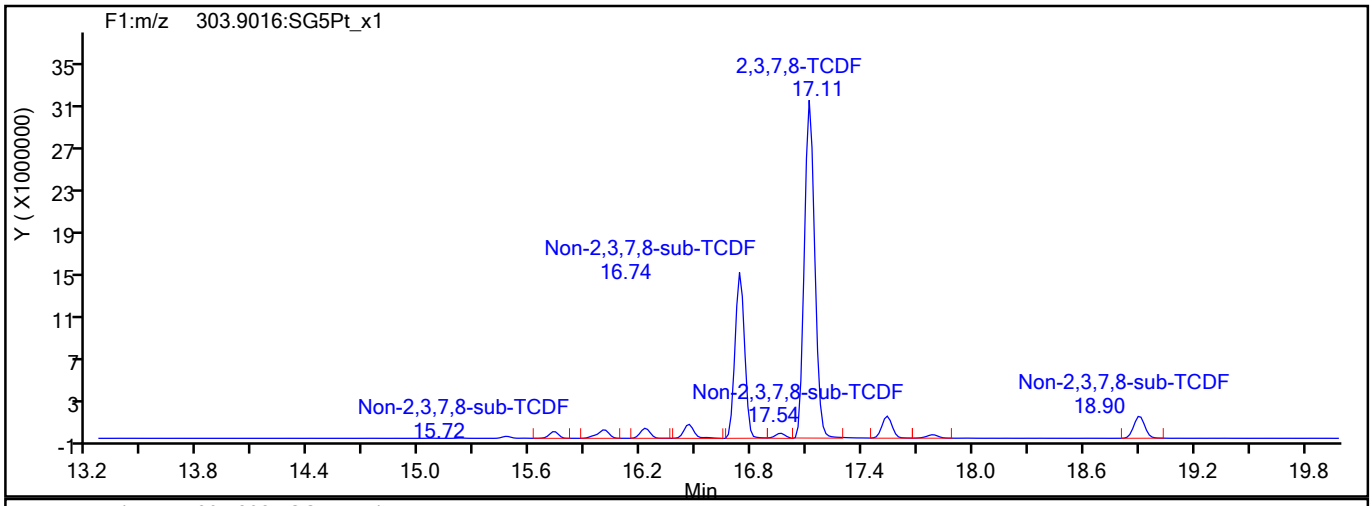

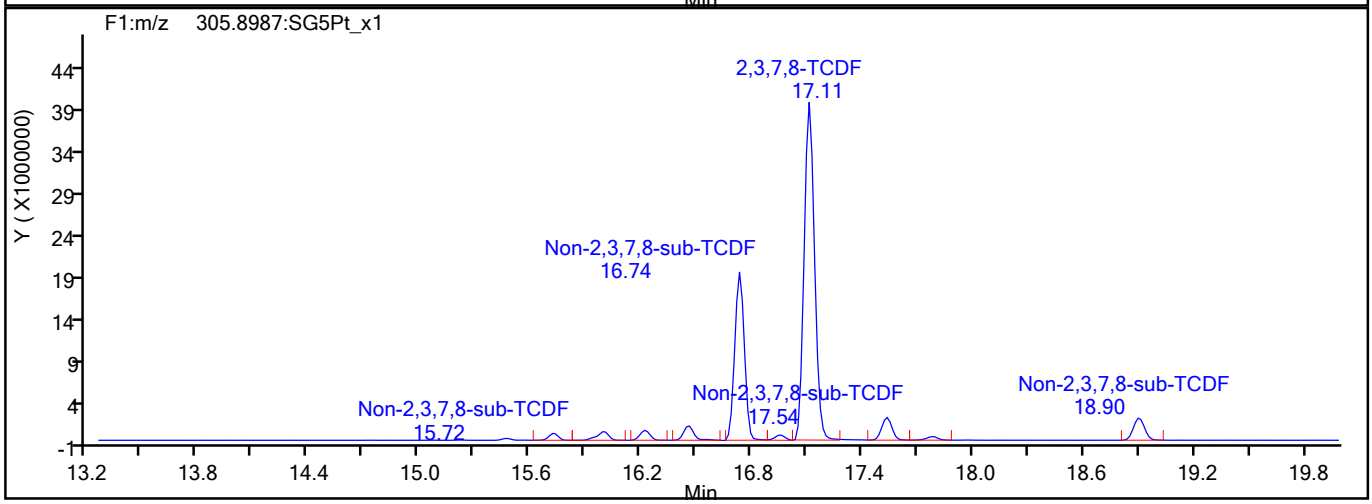

TCDF Interference Mass

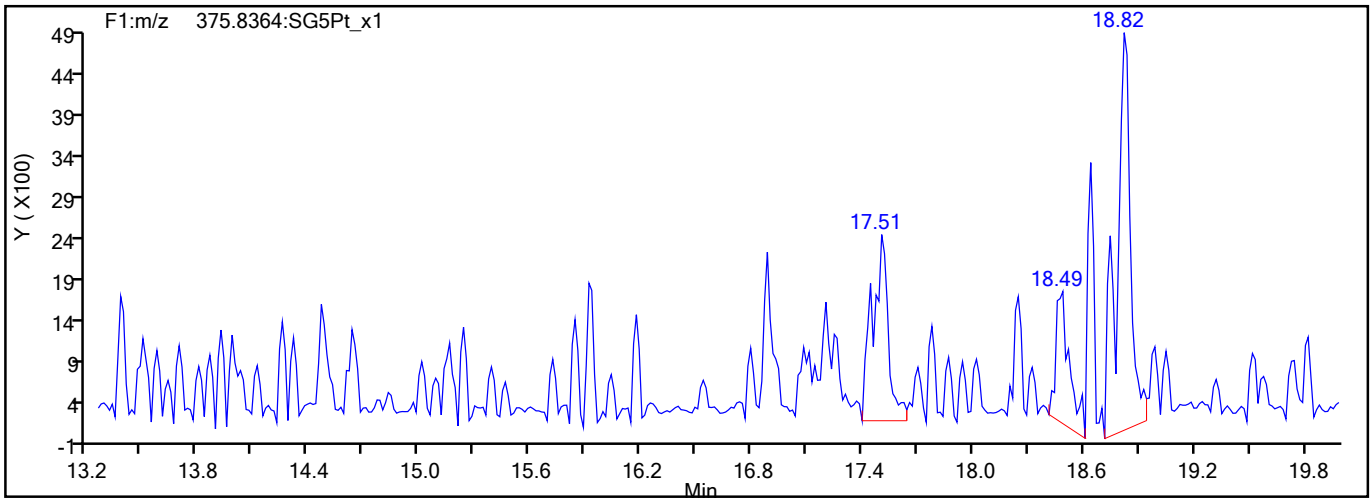

791109

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

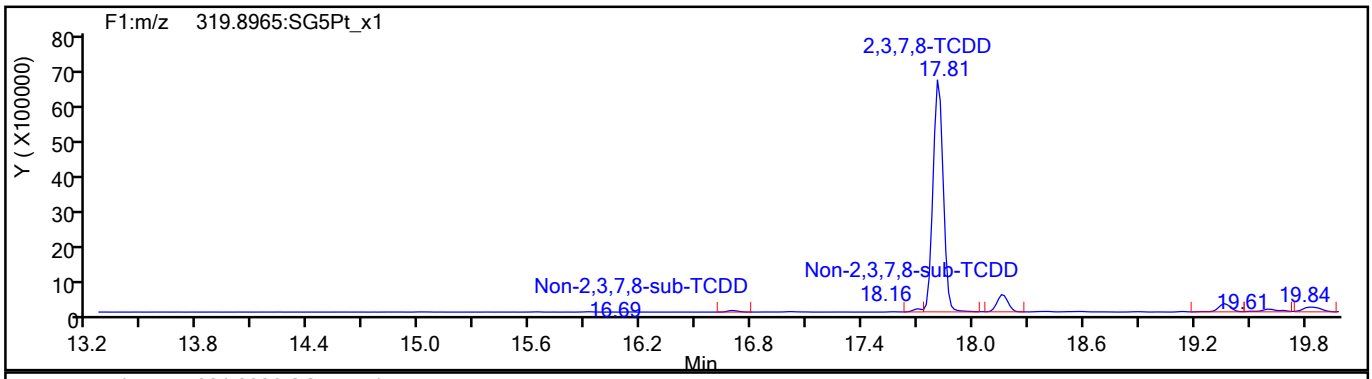

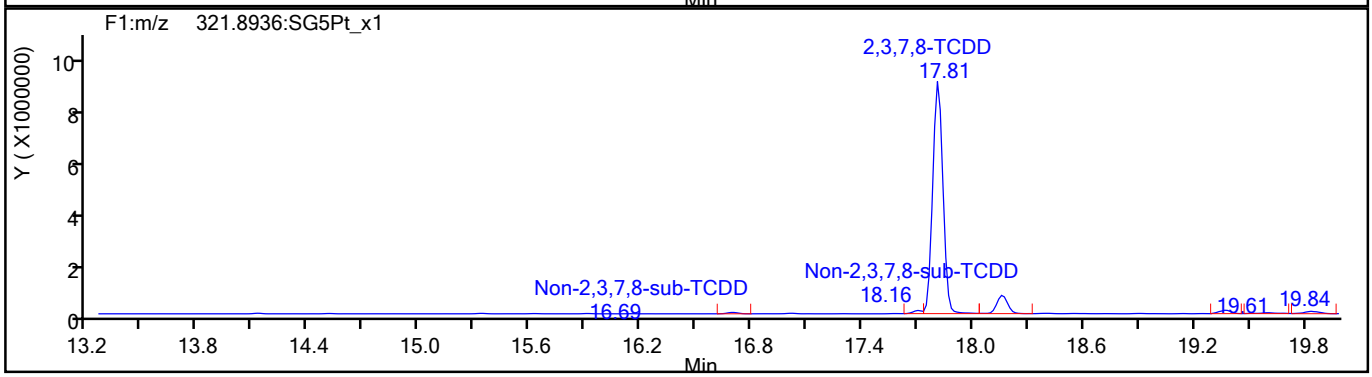

TCDD Standards

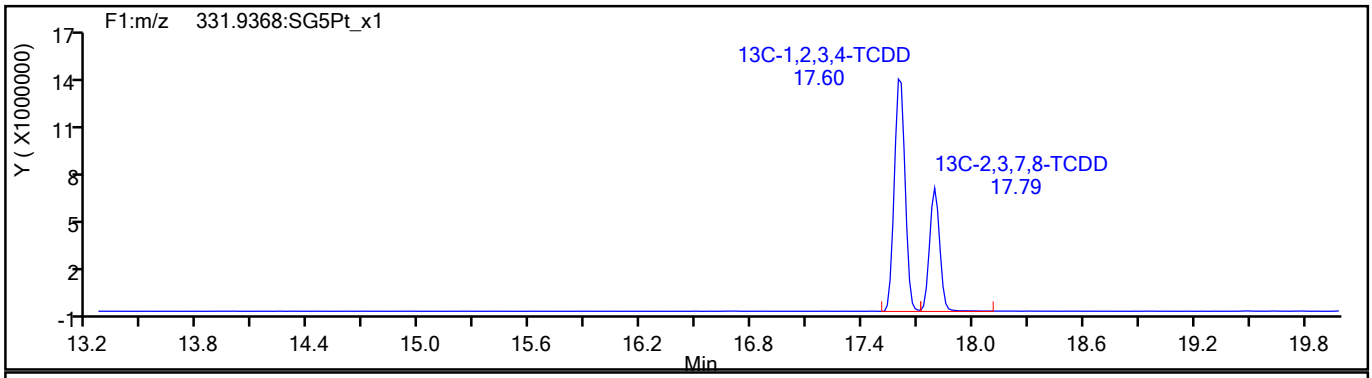

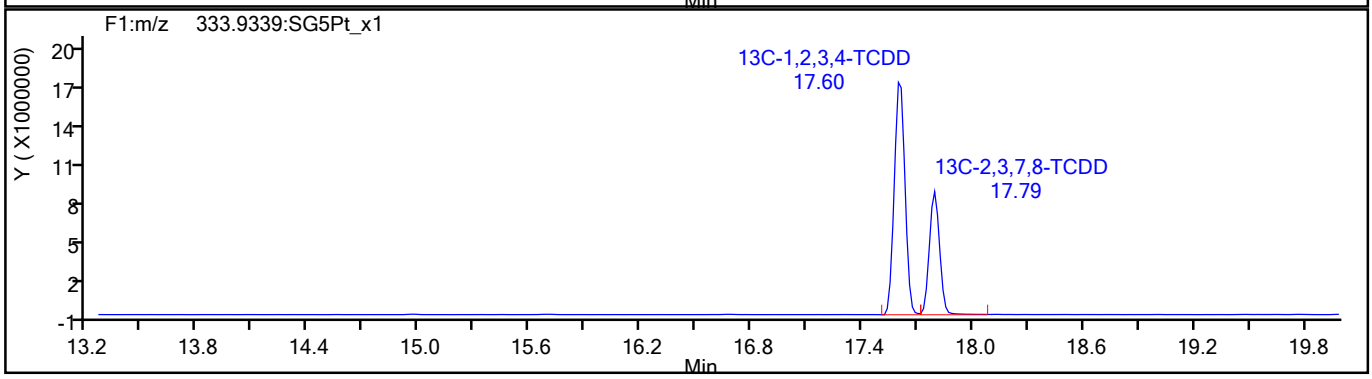

791110

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

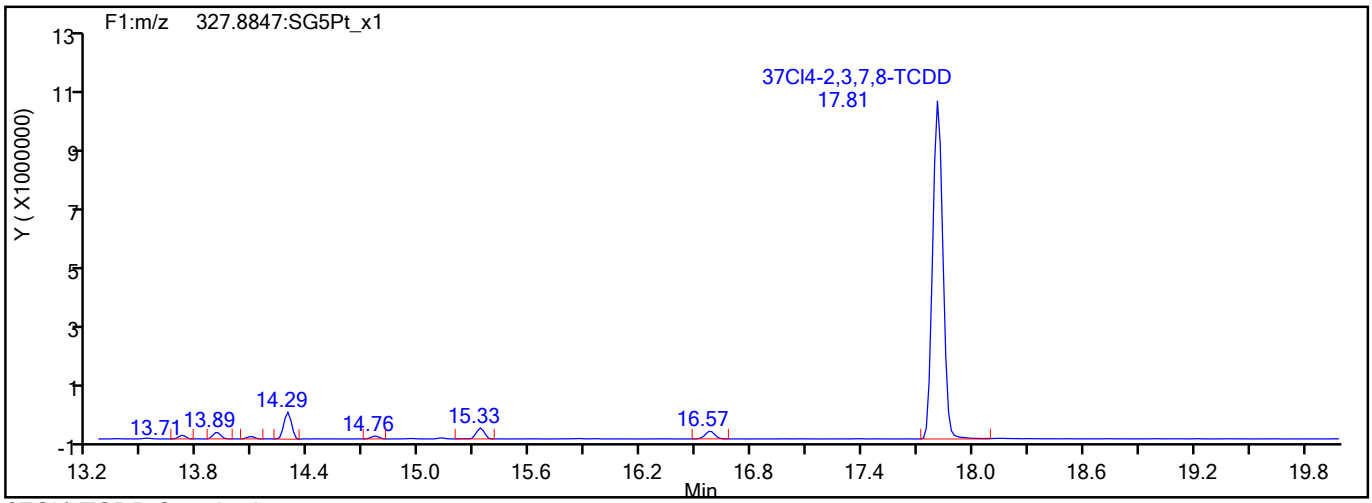

37Cl4-TCDD Standards

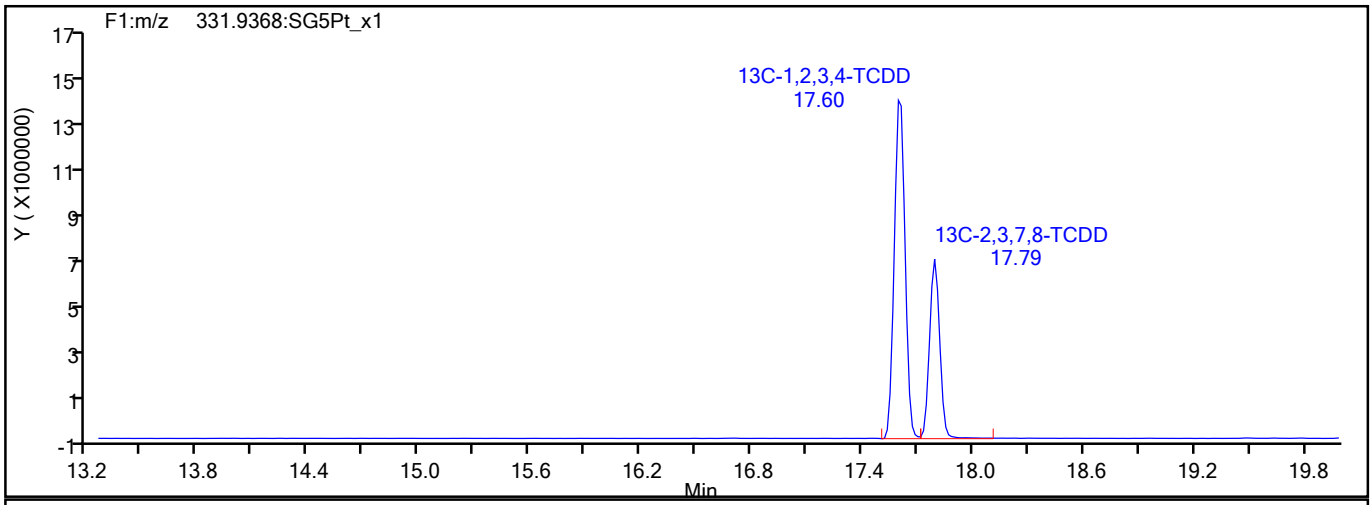

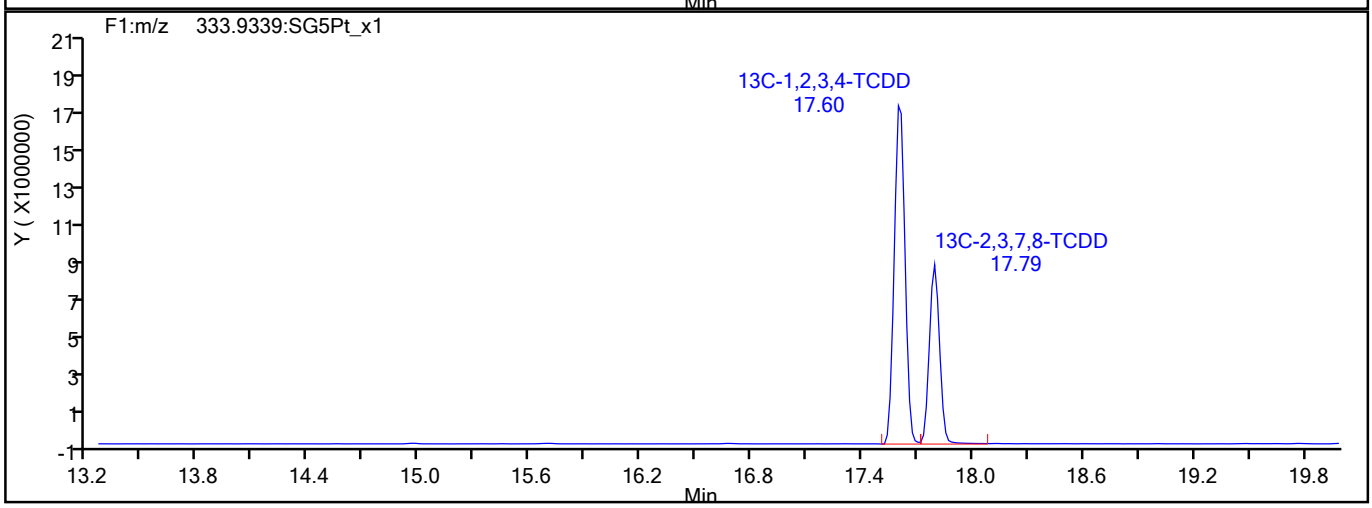

791111

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

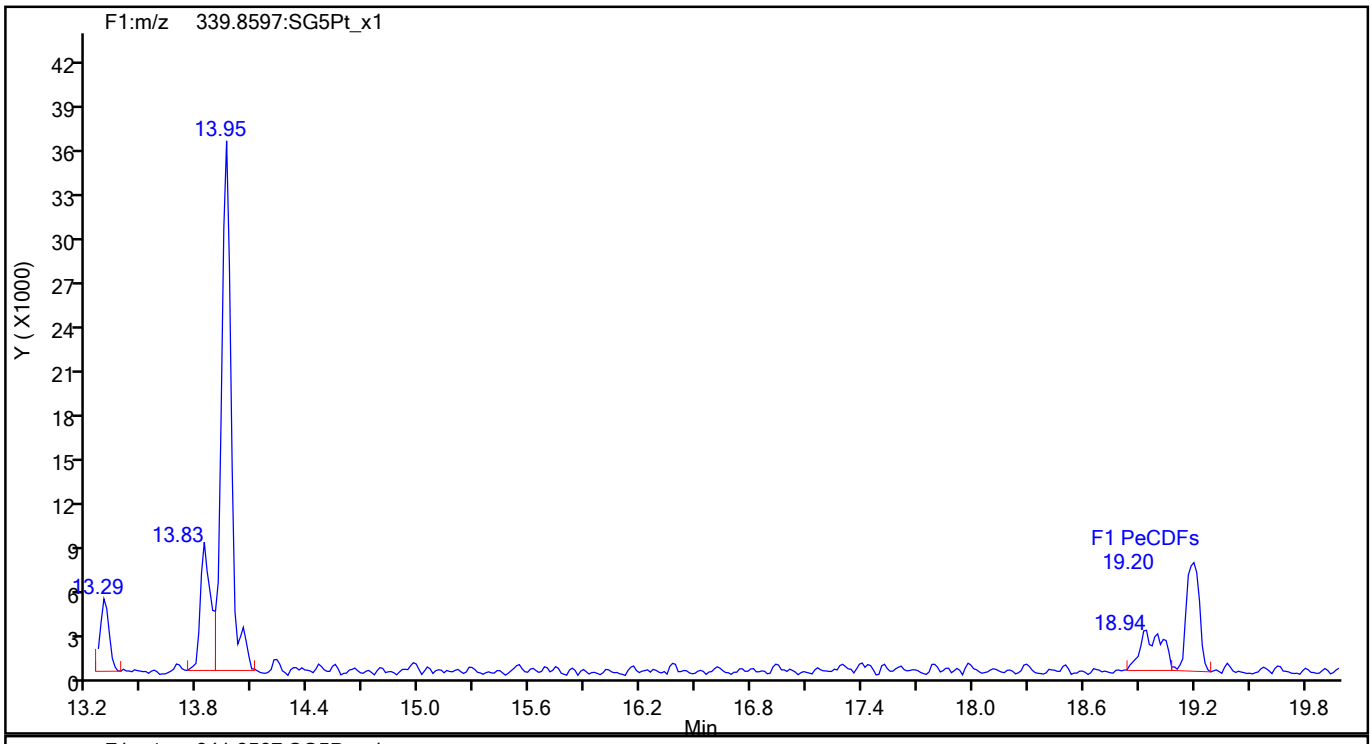

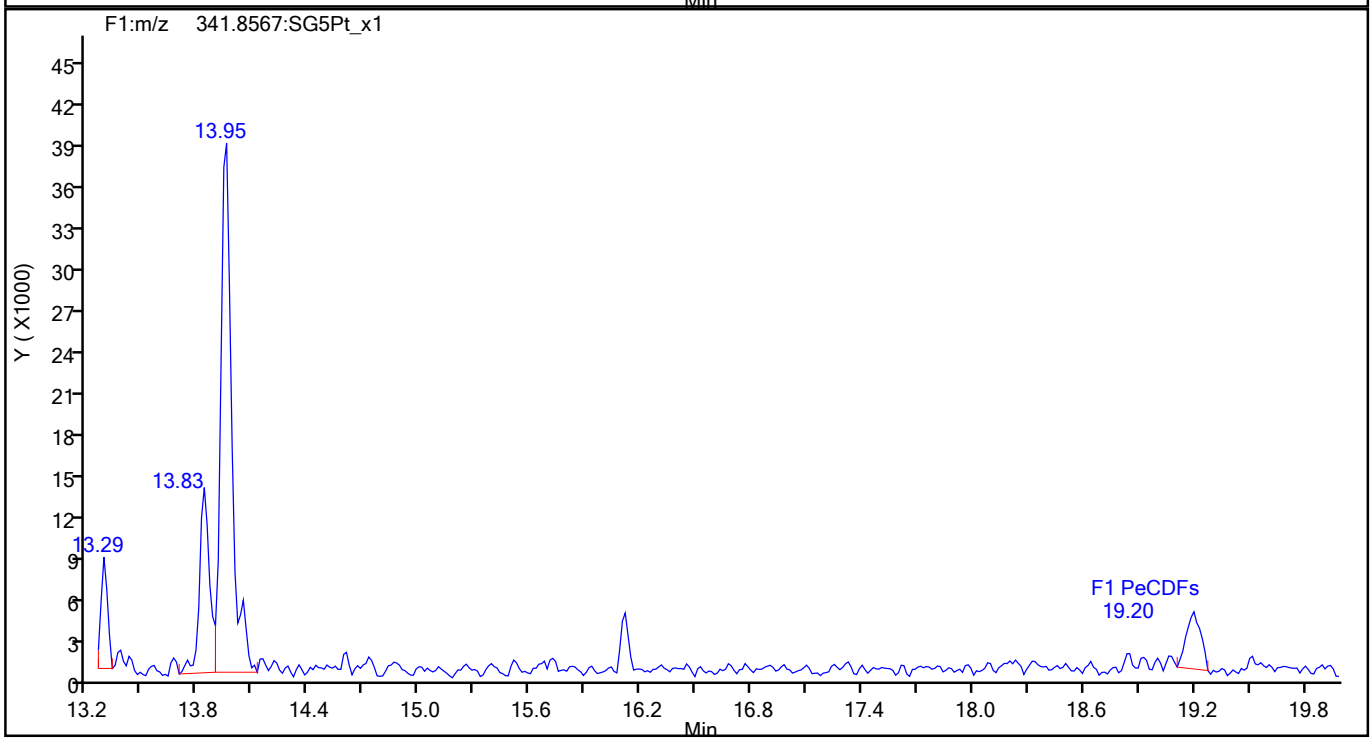

791112

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

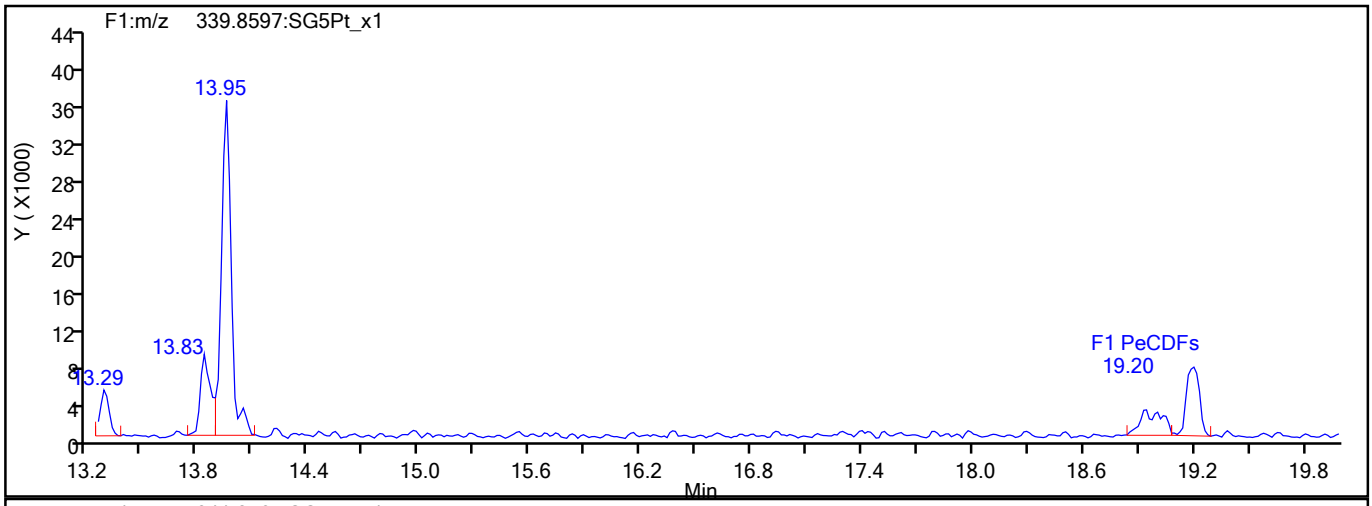

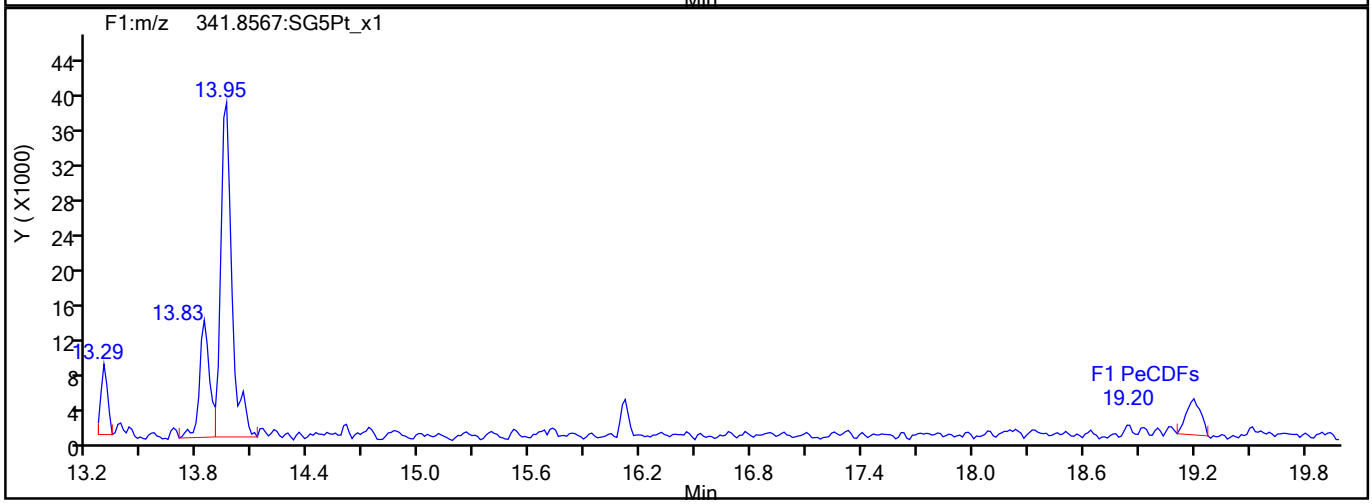

F1 PeCDFs Interference Mass

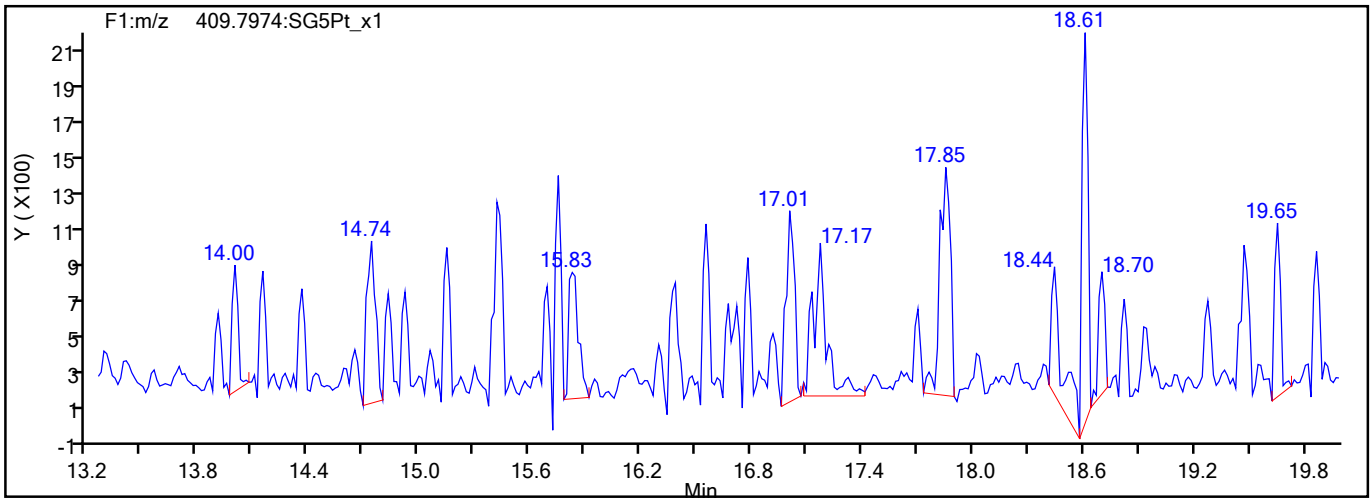

791113

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

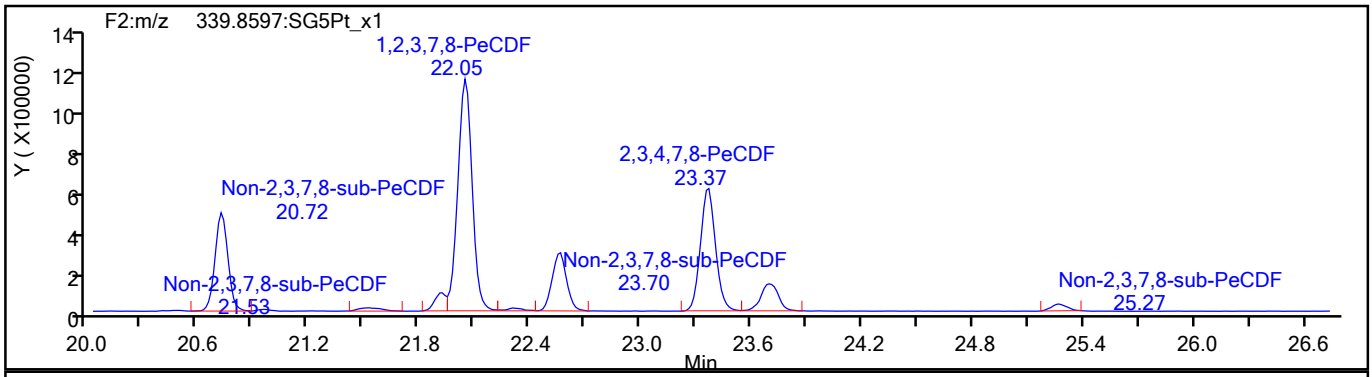

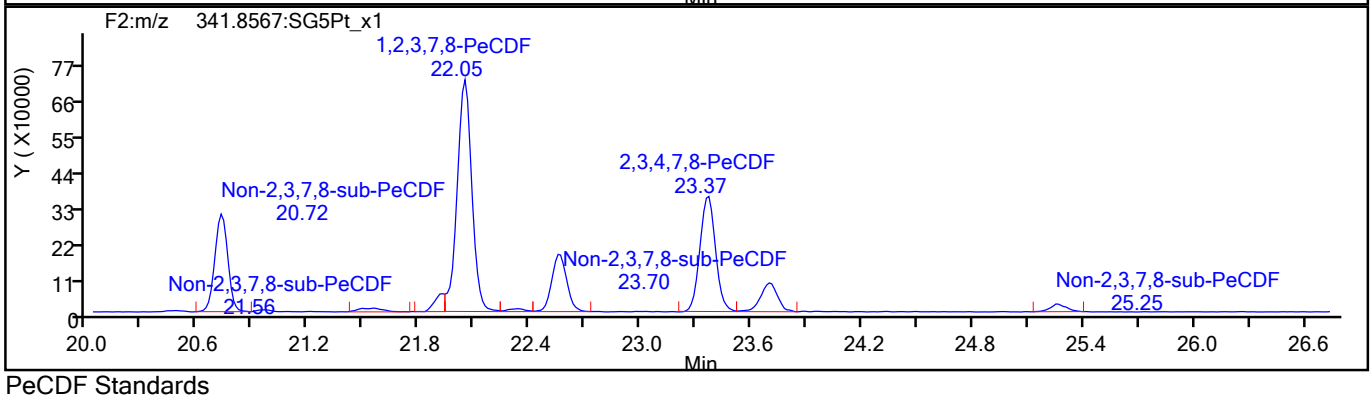

PeCDF Standards

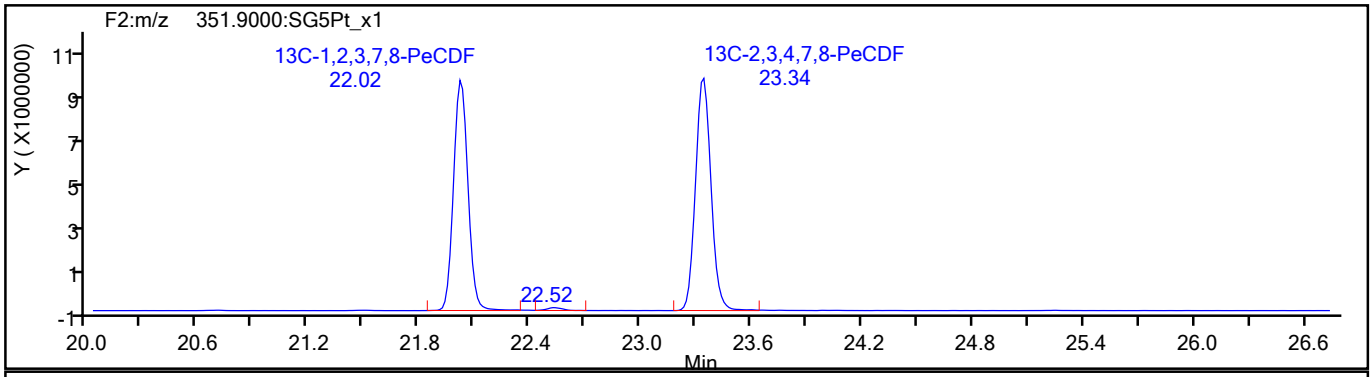

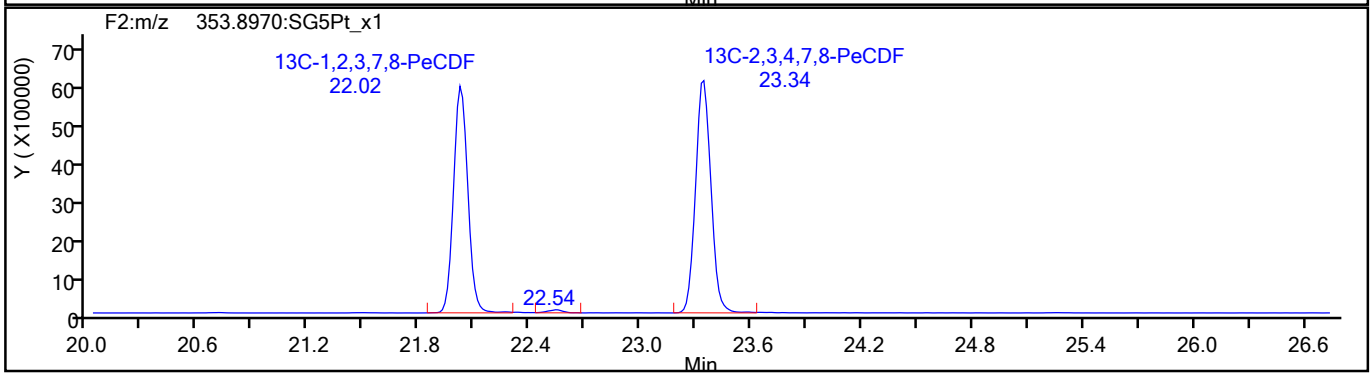

791114

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

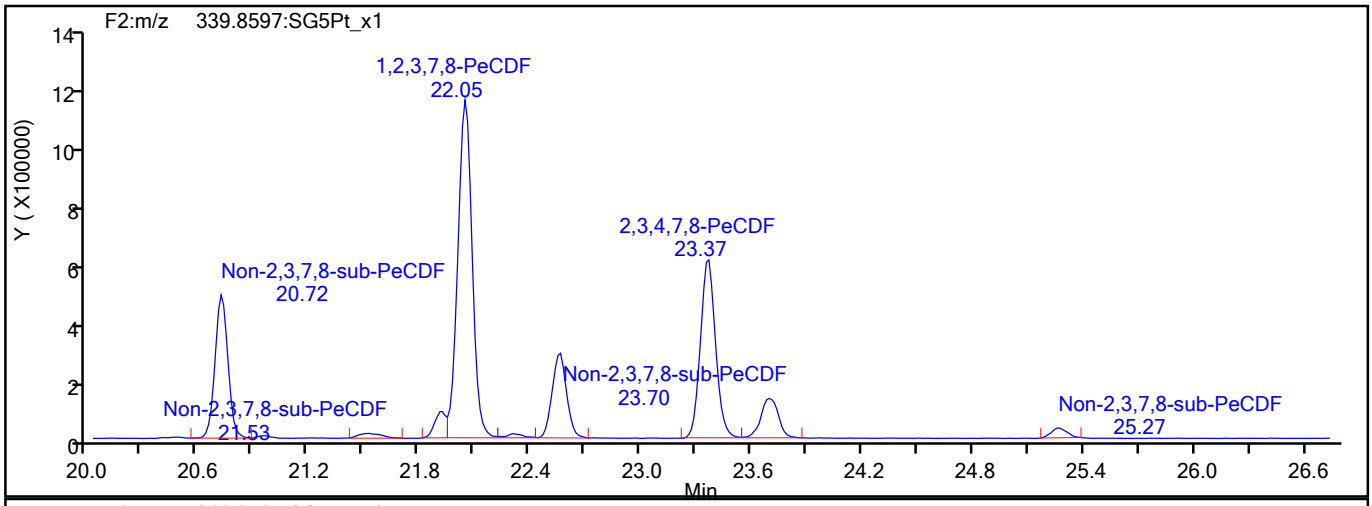

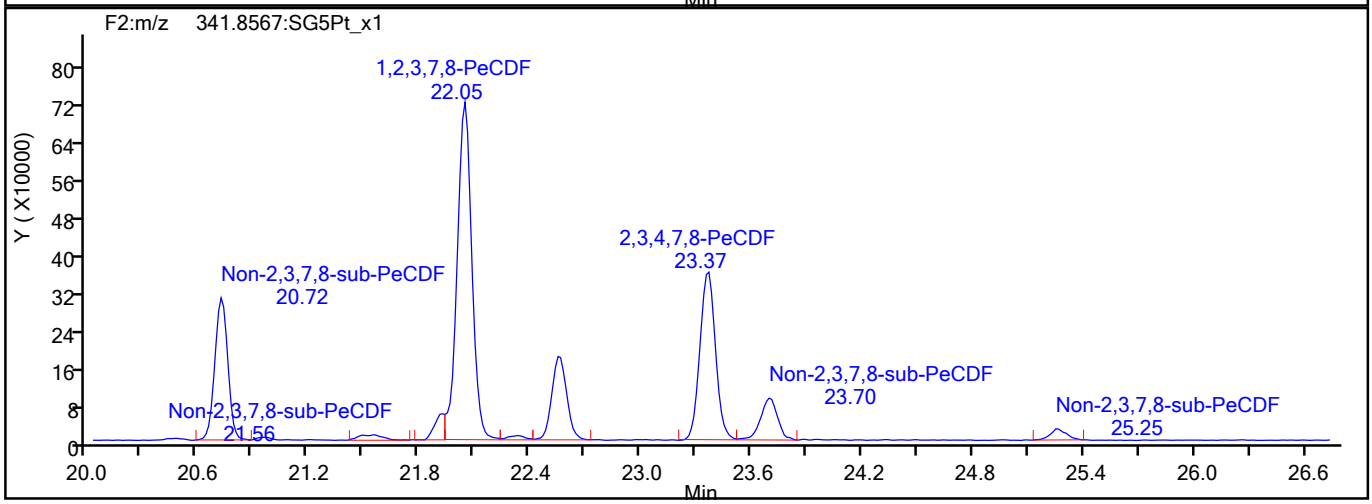

PeCDF Interference Mass

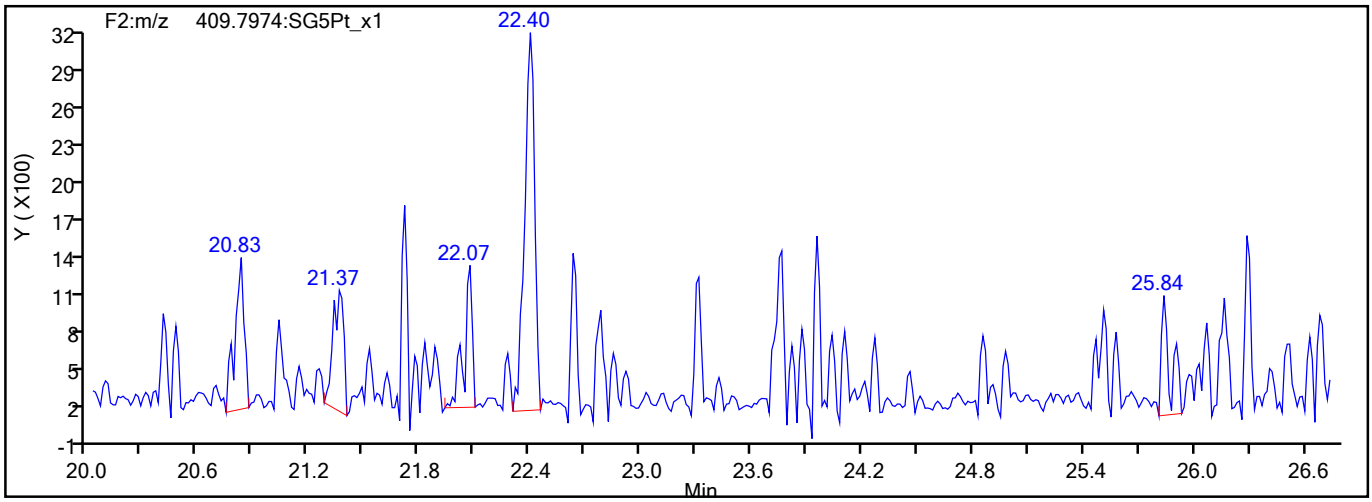

791115

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

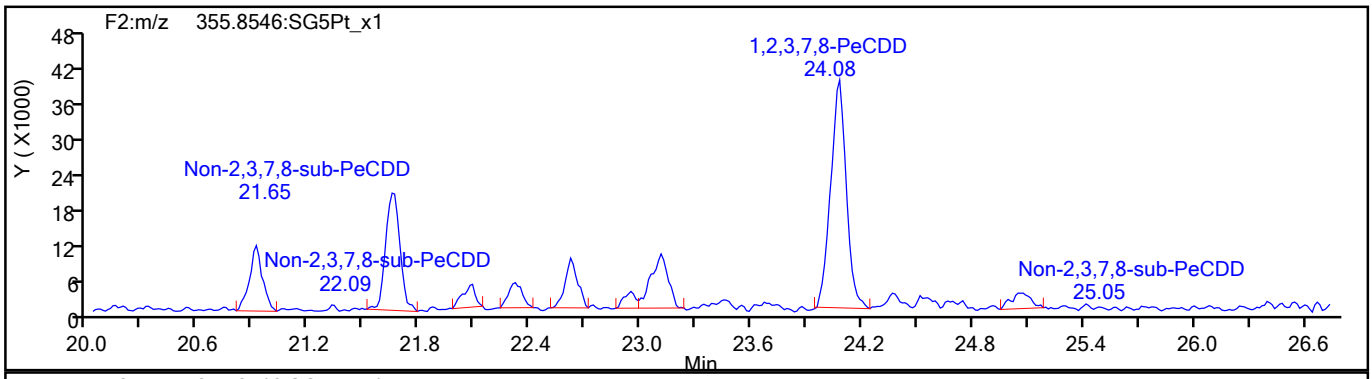

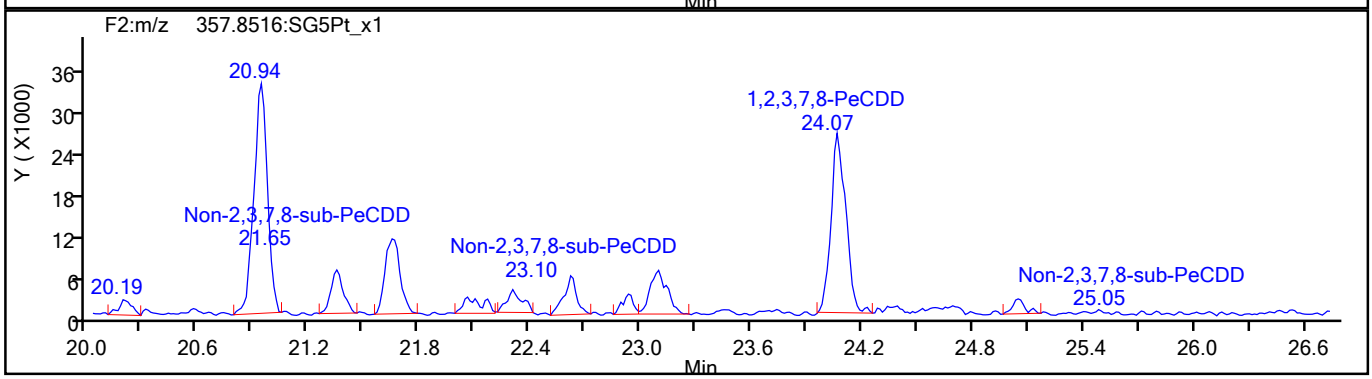

PeCDD Standards

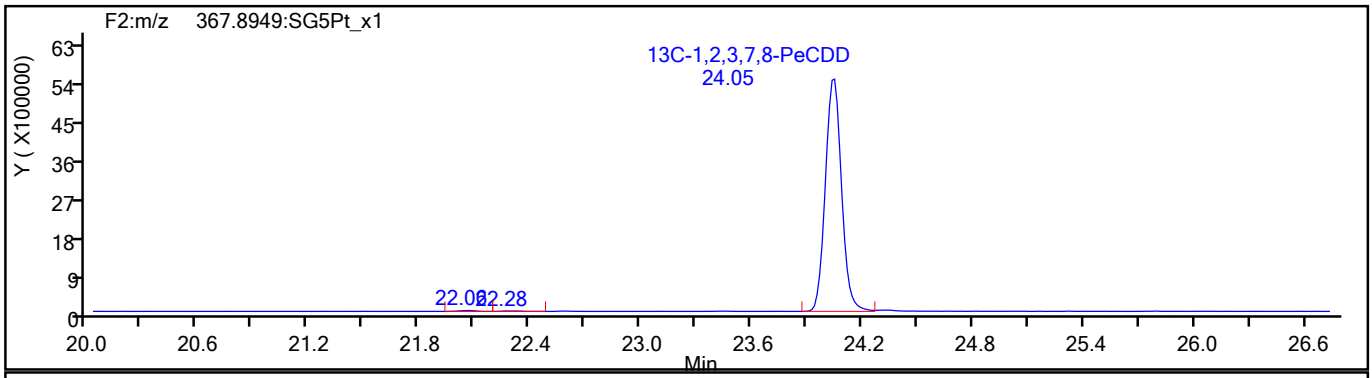

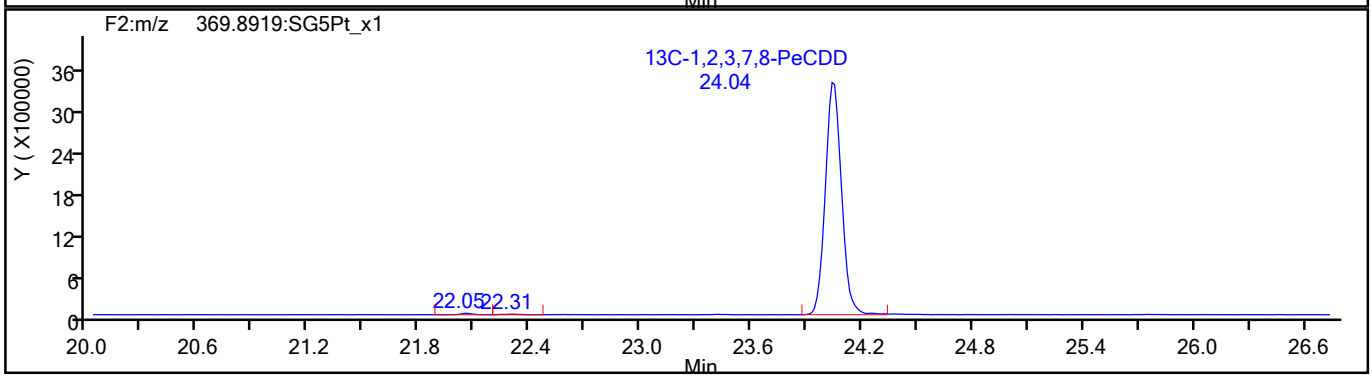

791116

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

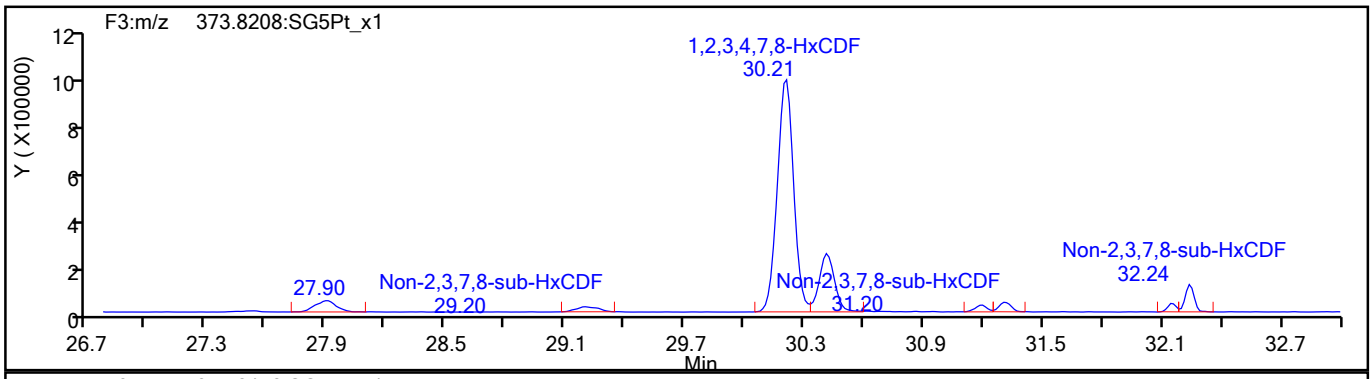

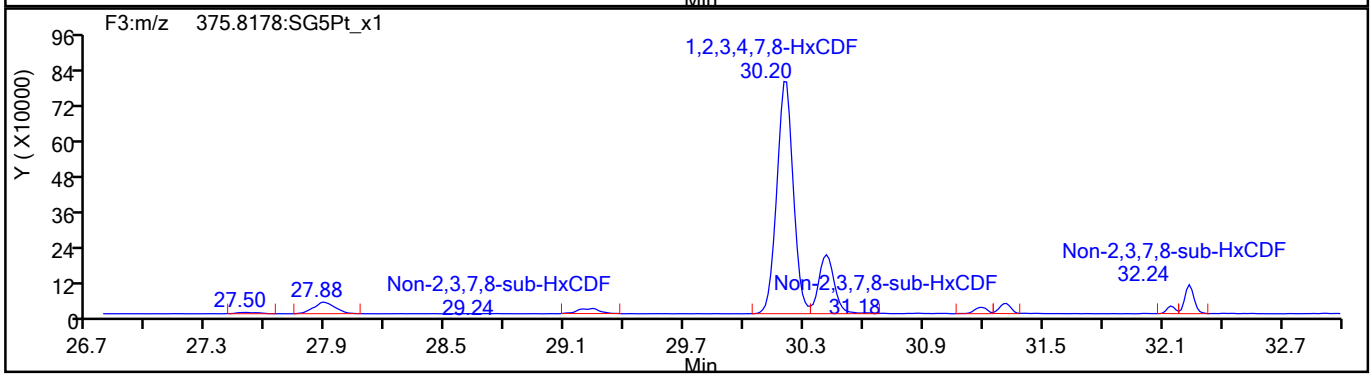

HxCDF Standards

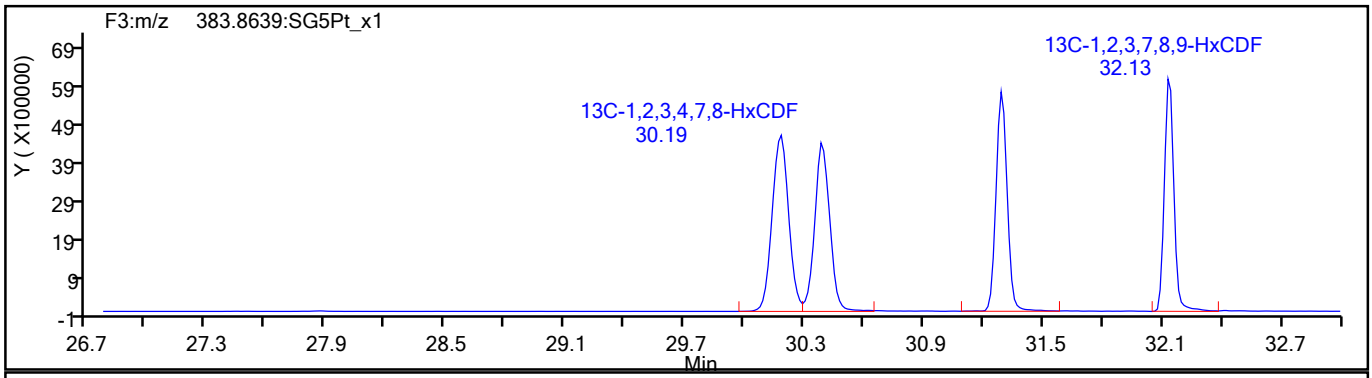

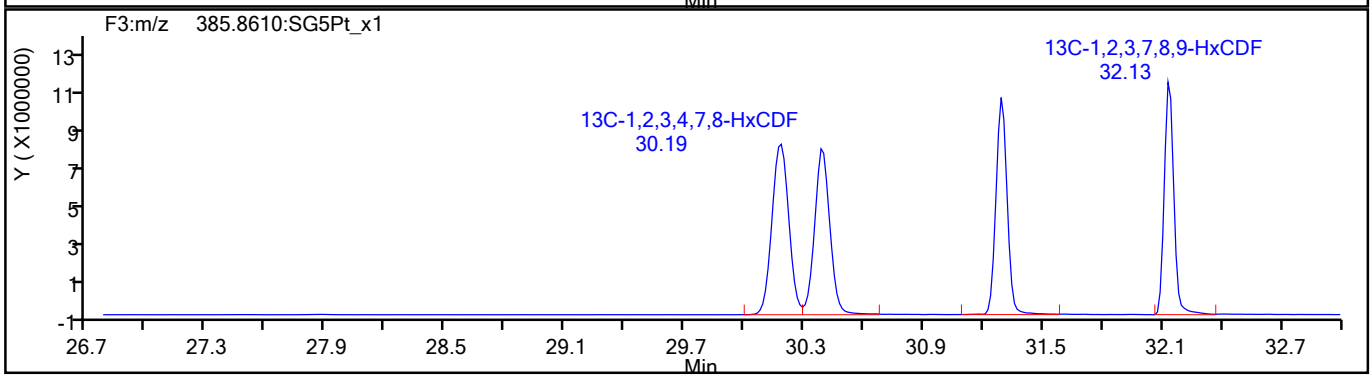

791117

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

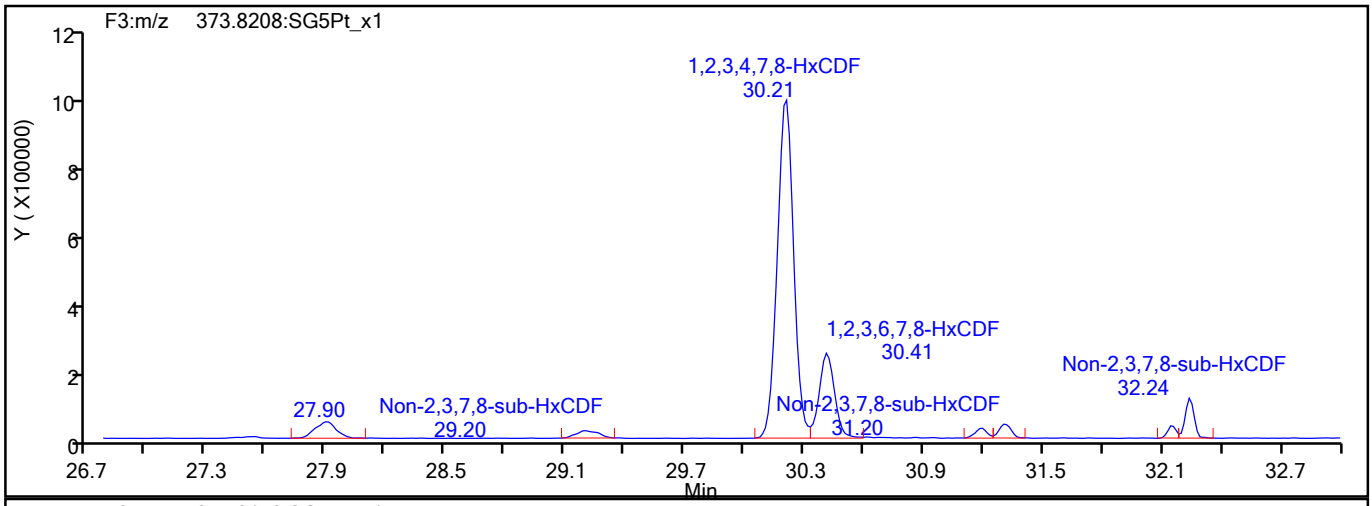

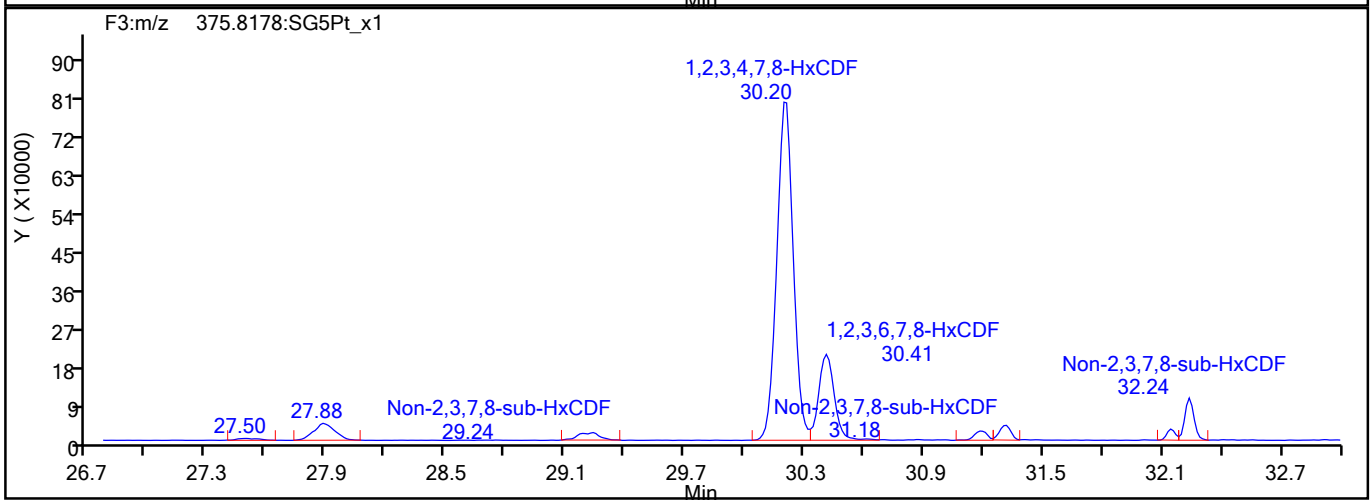

HxCDF Interference Mass

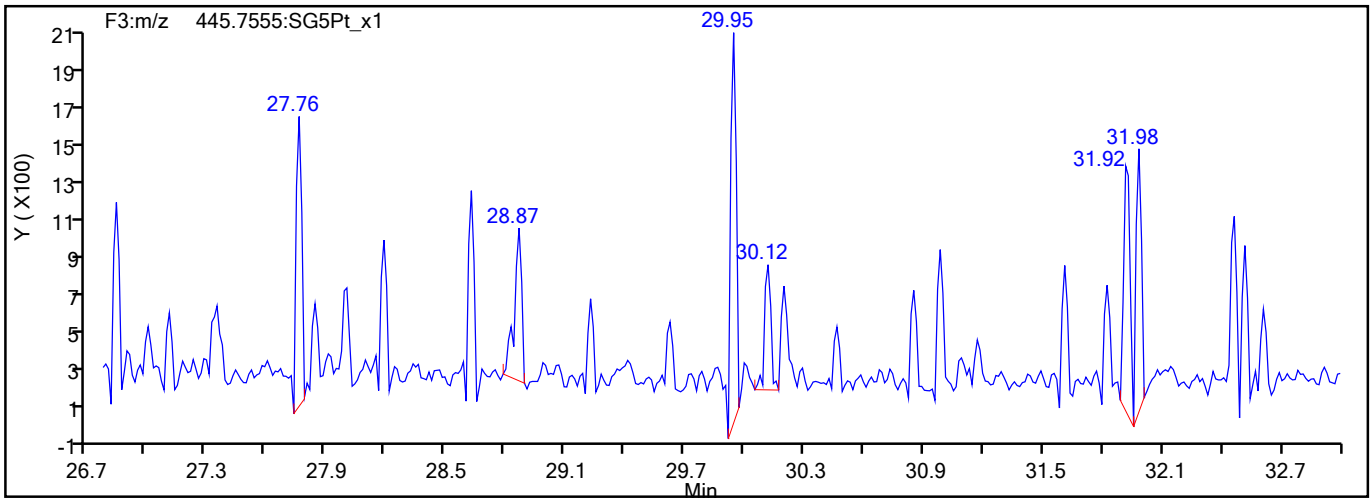

791118

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

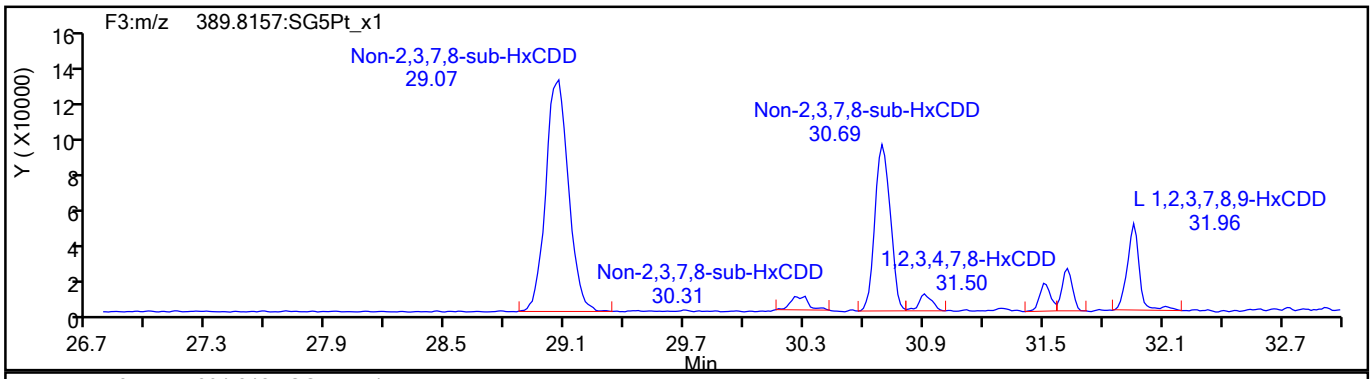

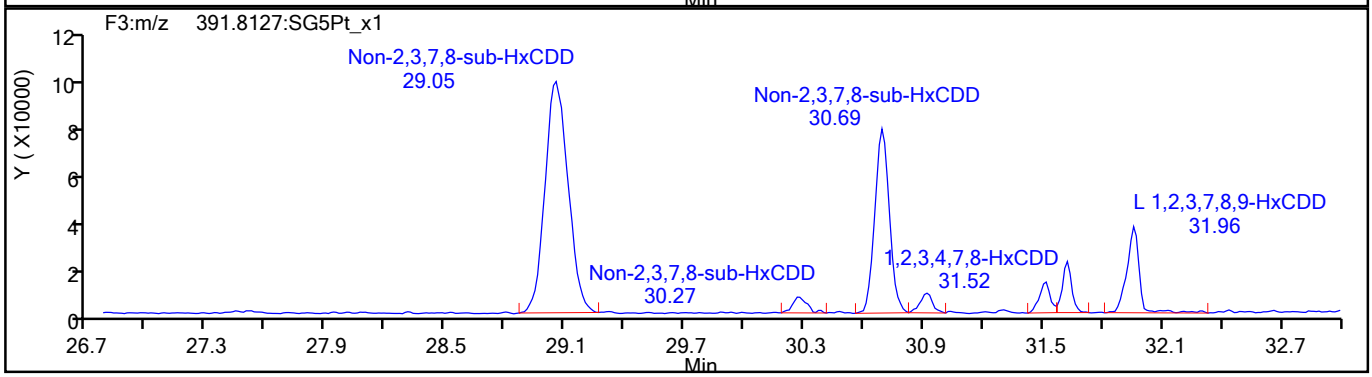

HxCDD Standards

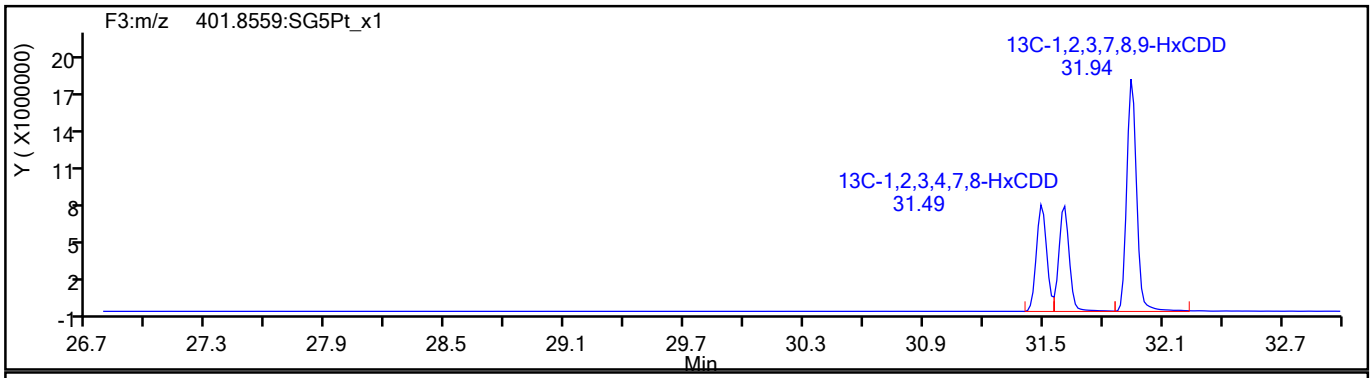

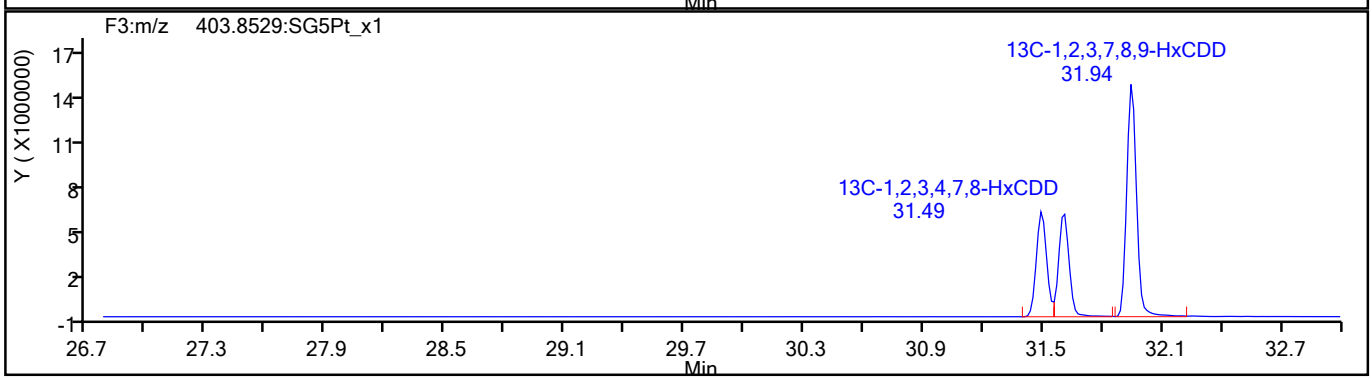

791119

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

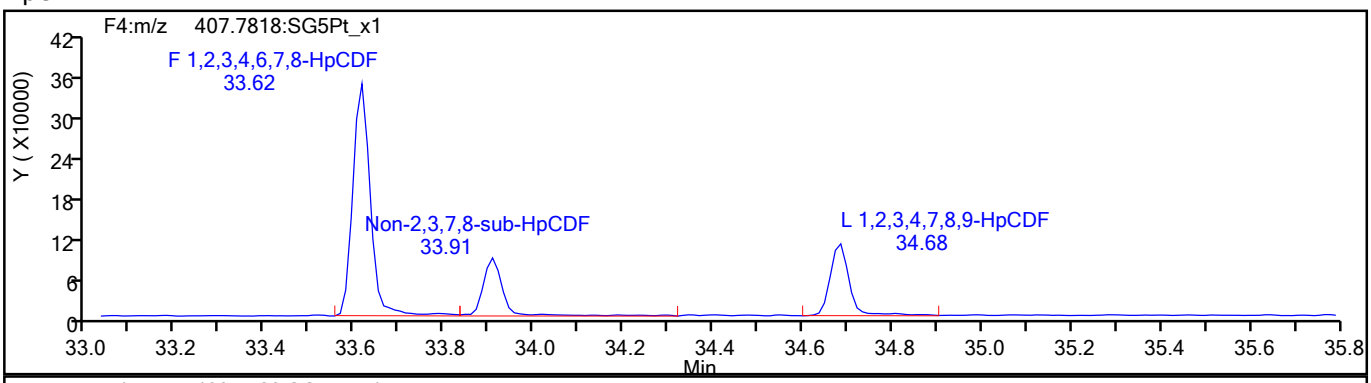

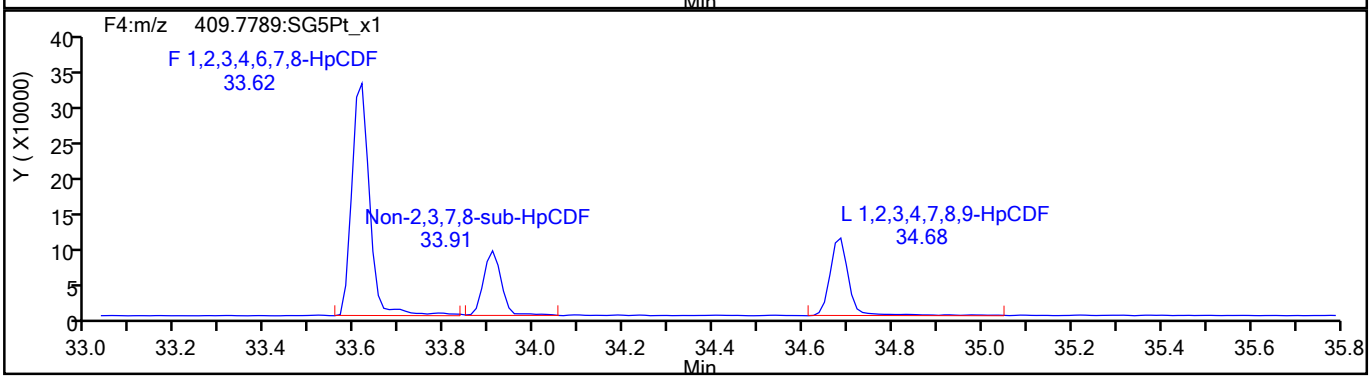

HpCDF Standards

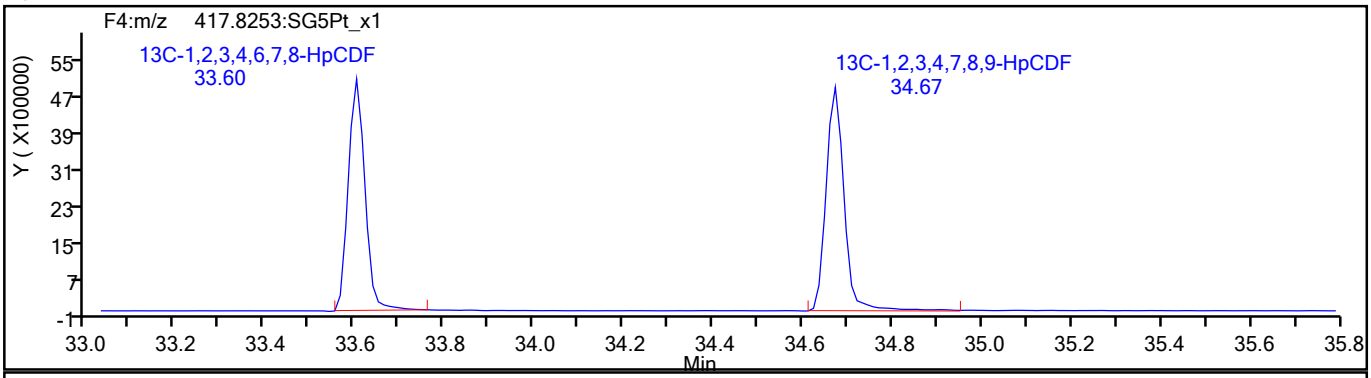

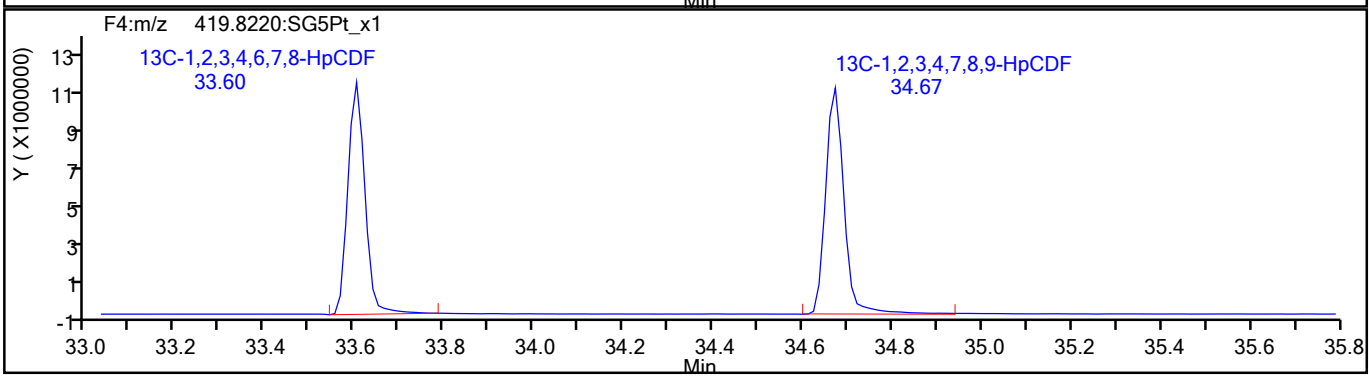

791120

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

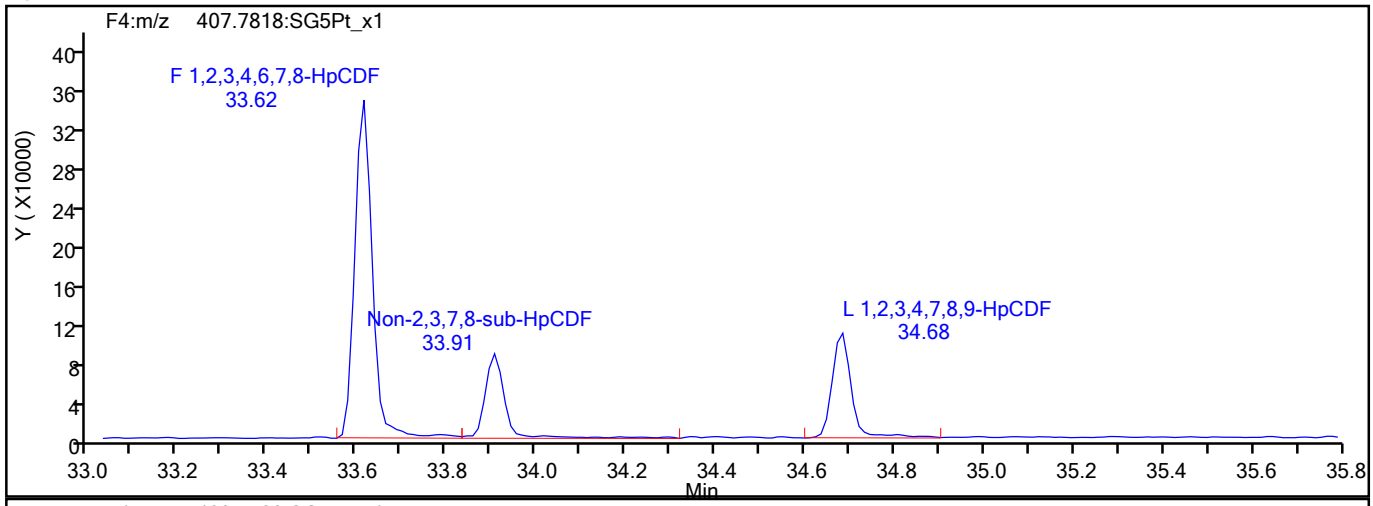

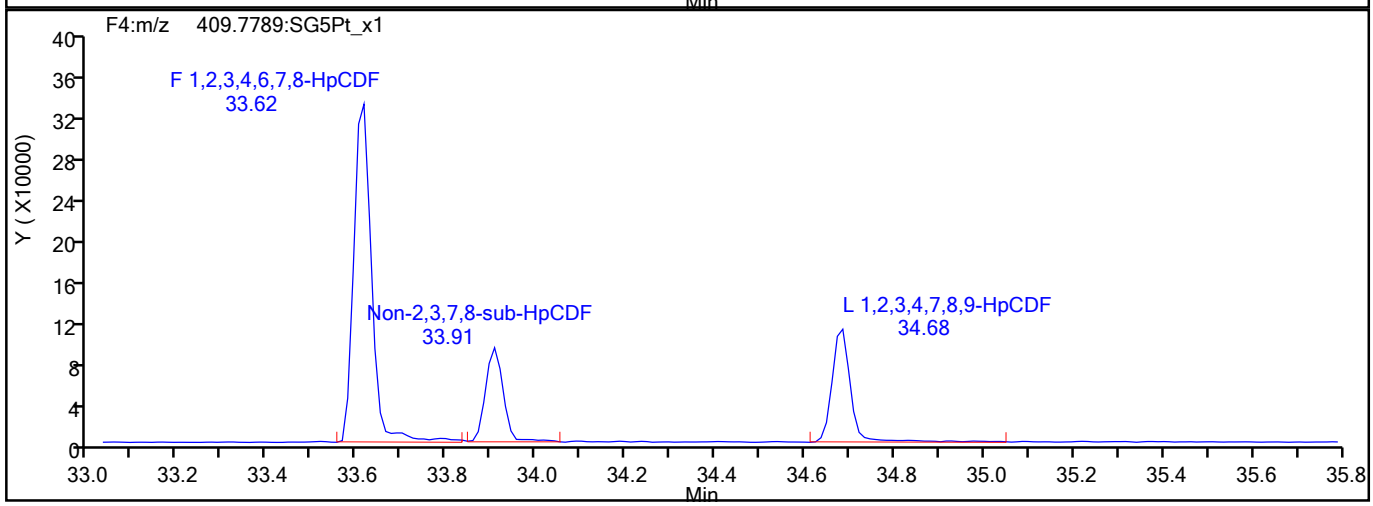

HpCDF Interference Mass

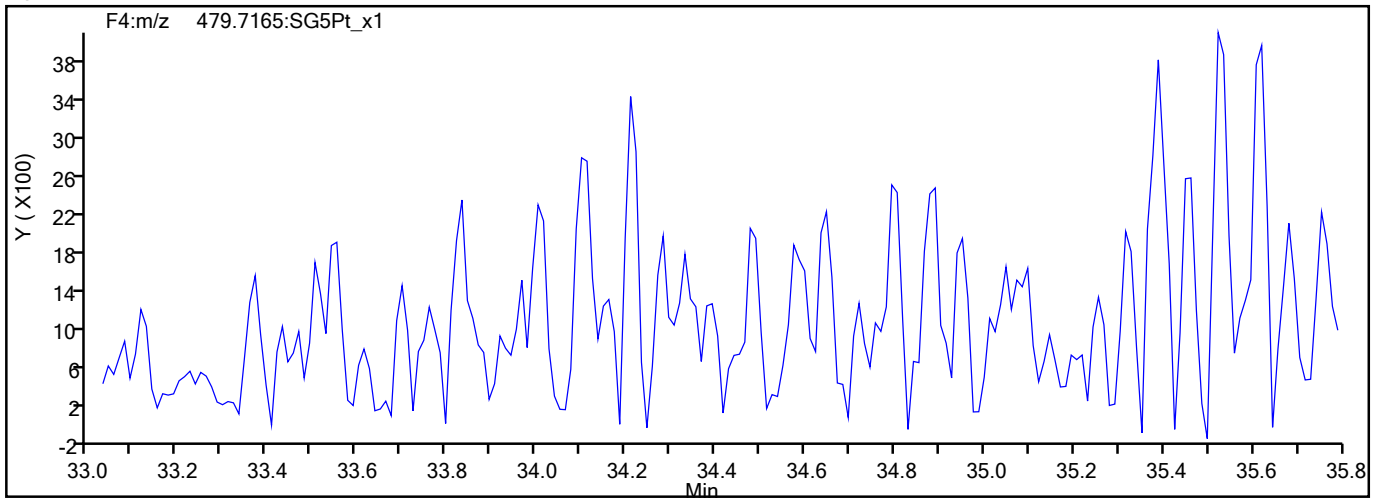

791121

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

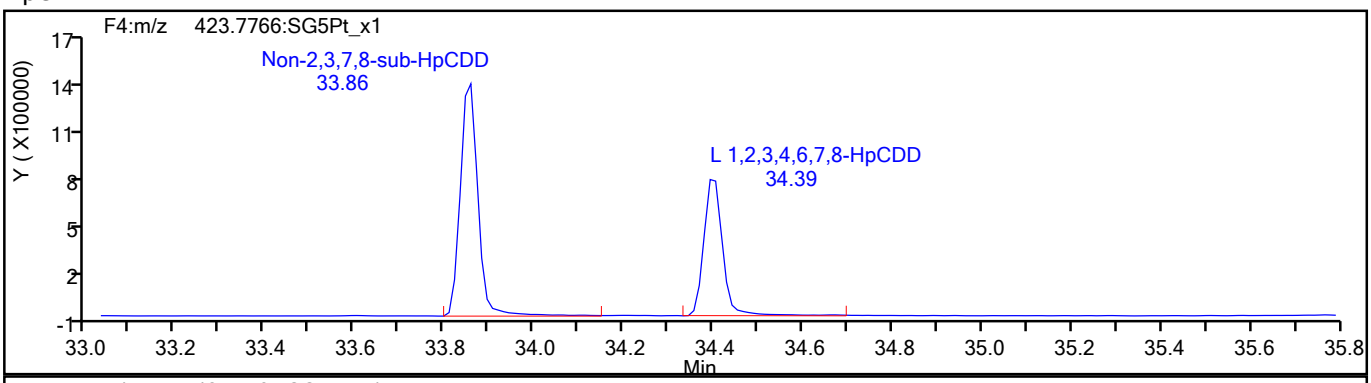

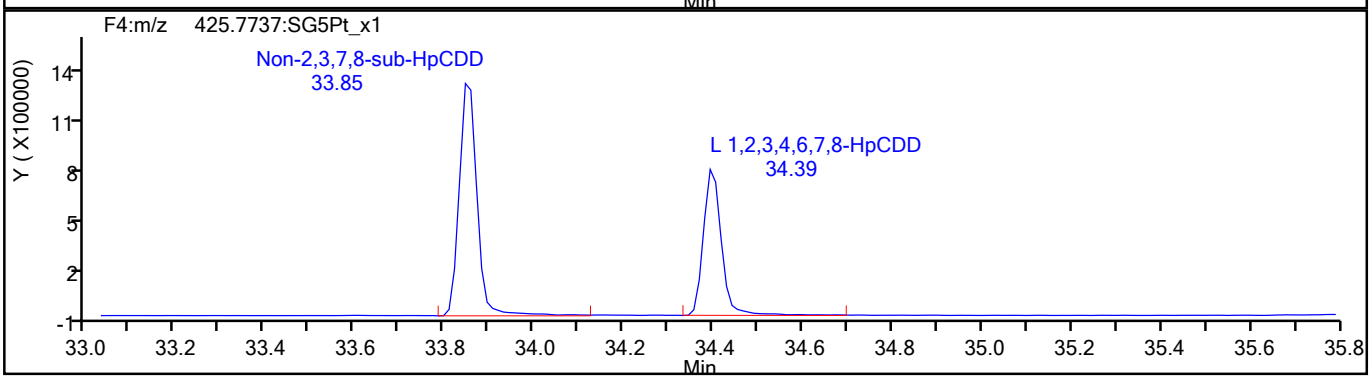

HpCDD Standards

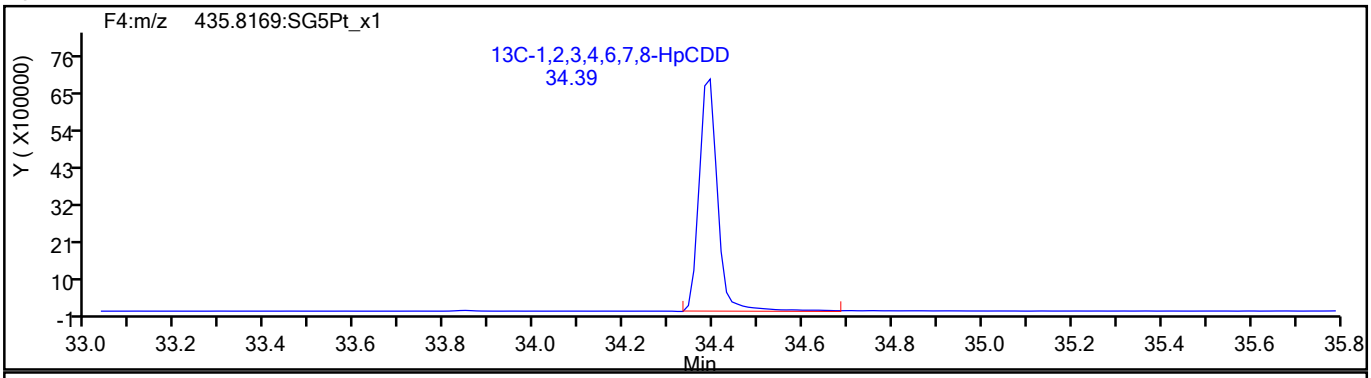

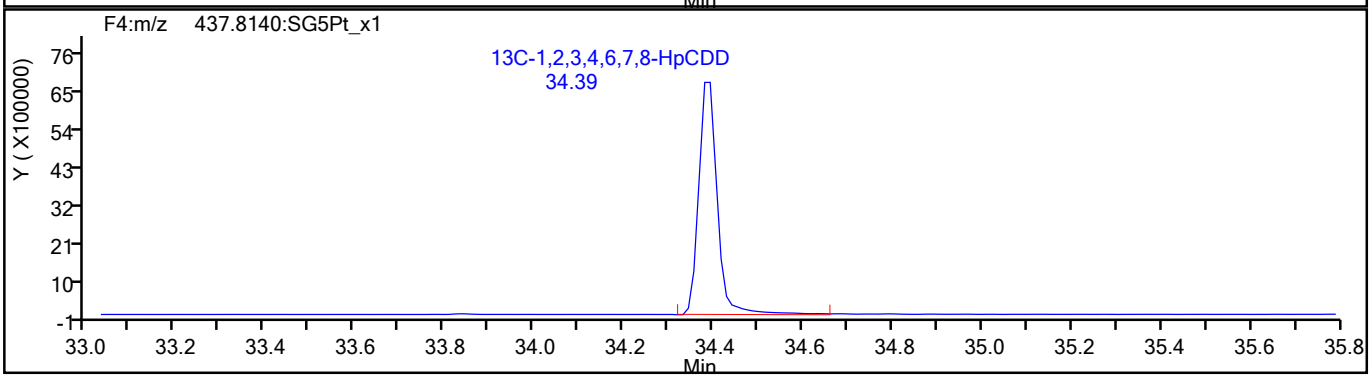

791122

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

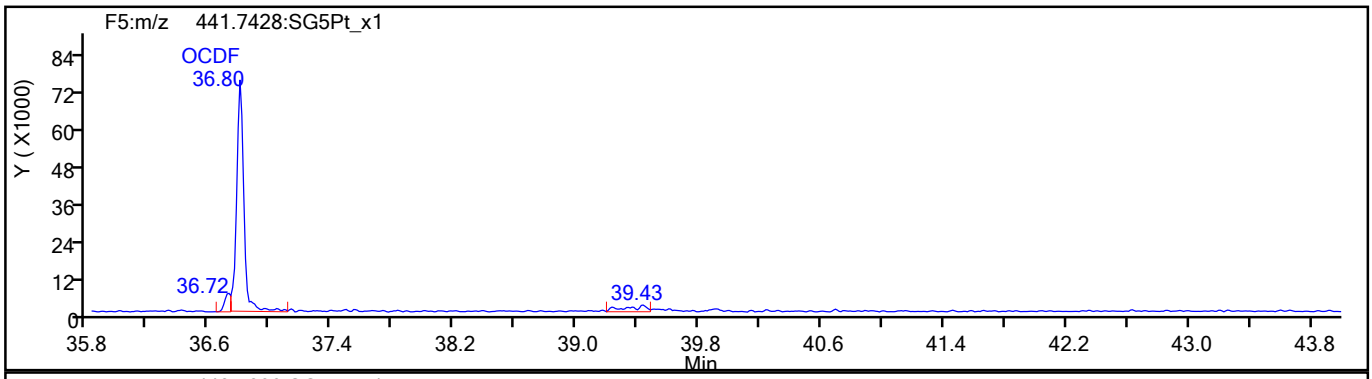

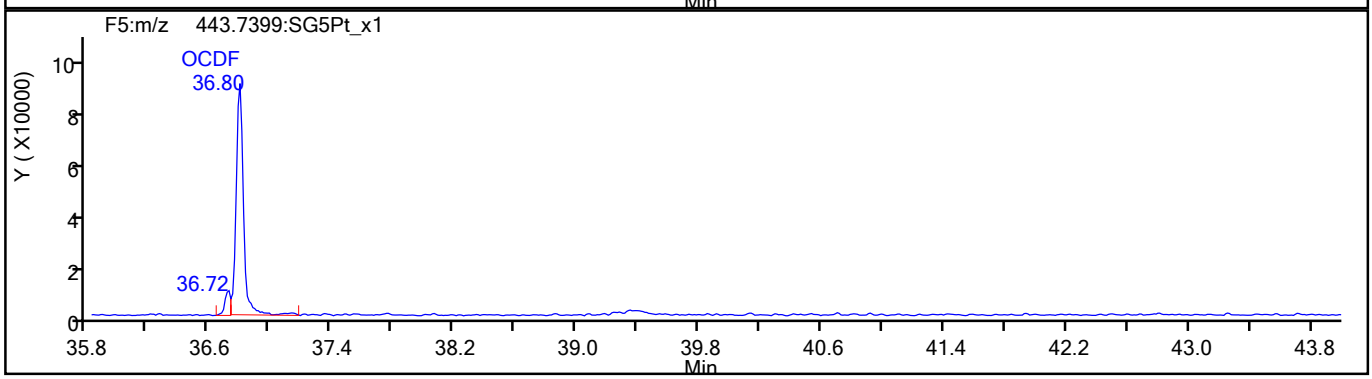

OCDF Standards

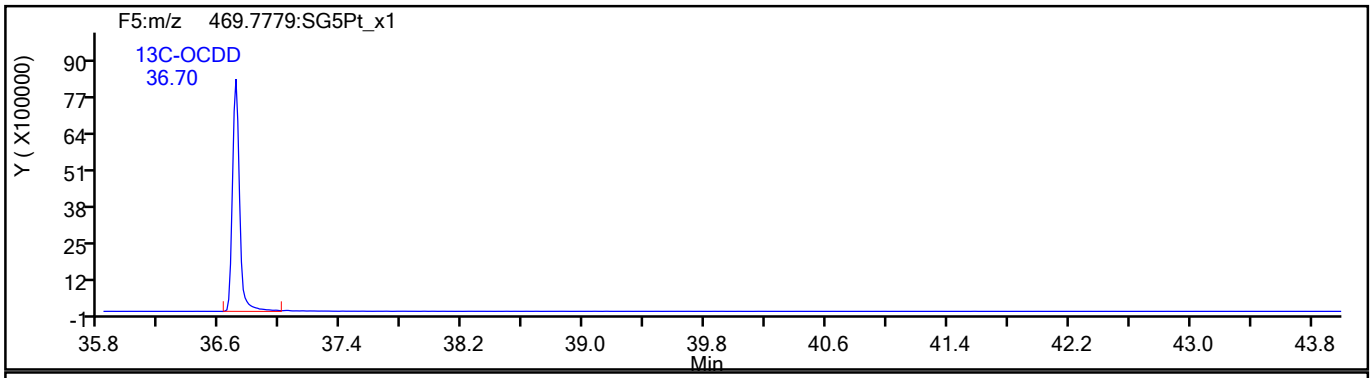

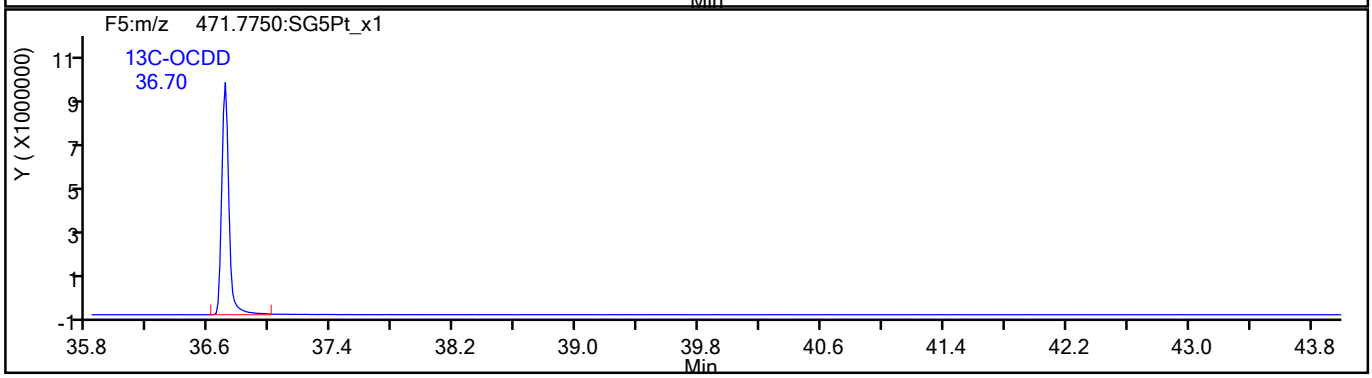

791123

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

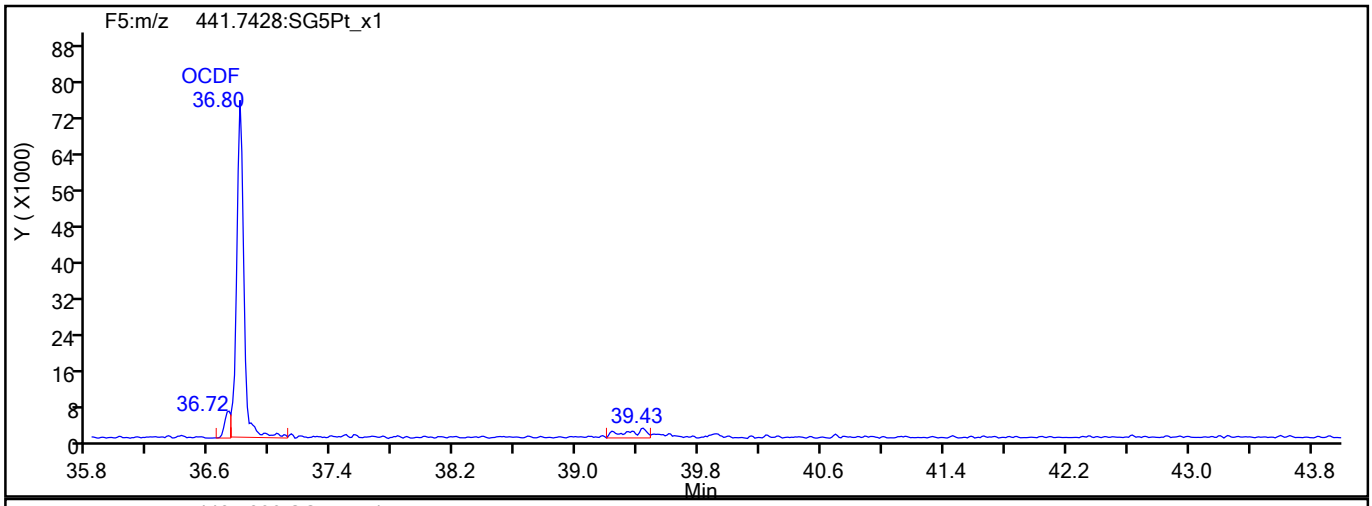

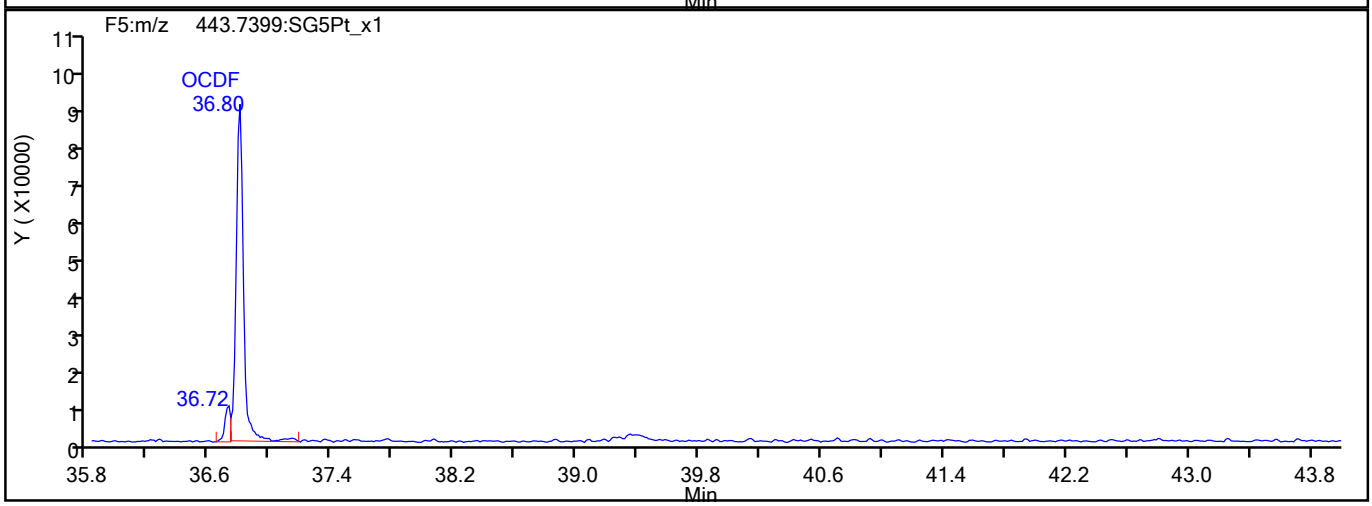

OCDF Interference Mass

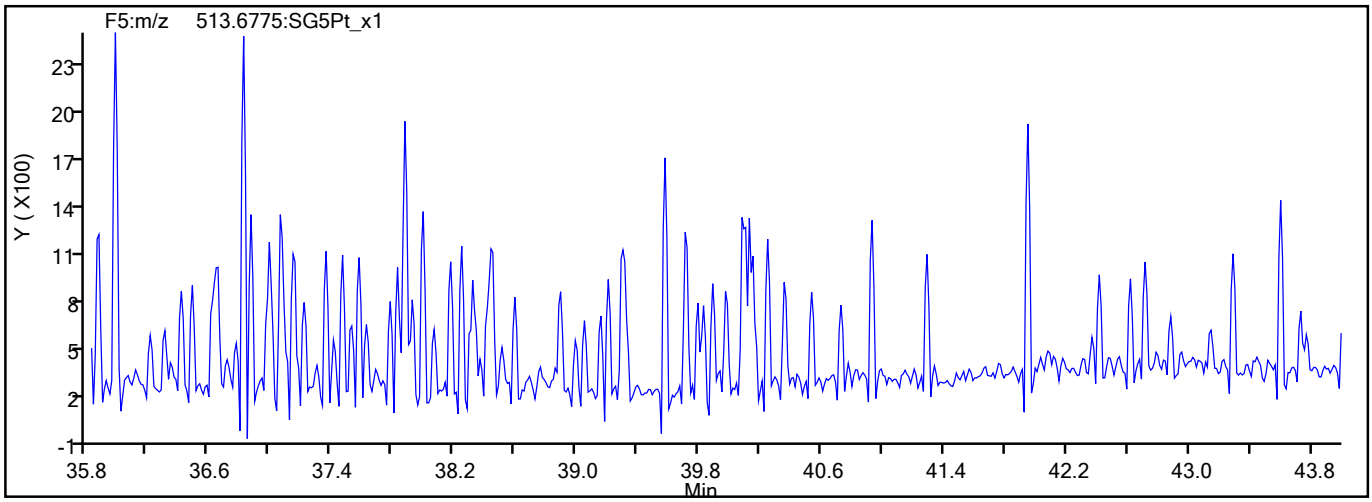

791124

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

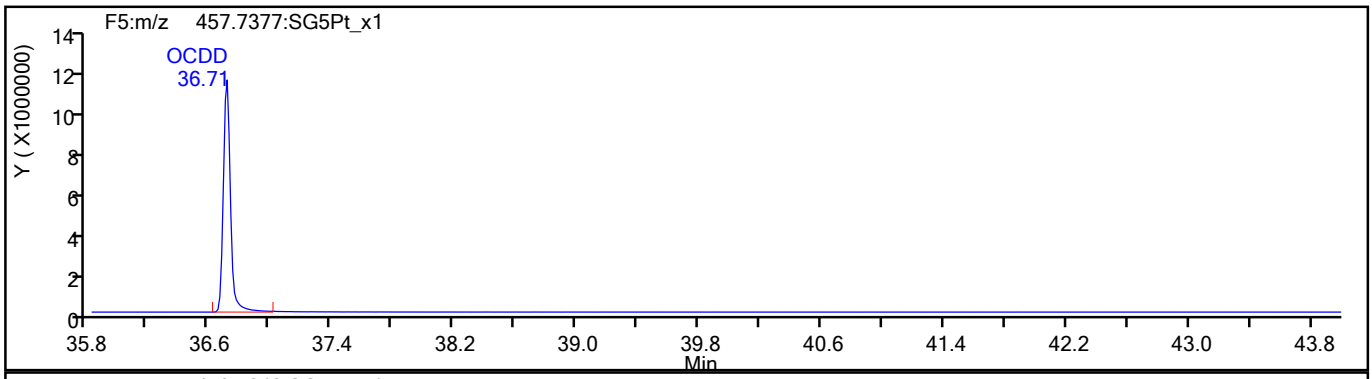

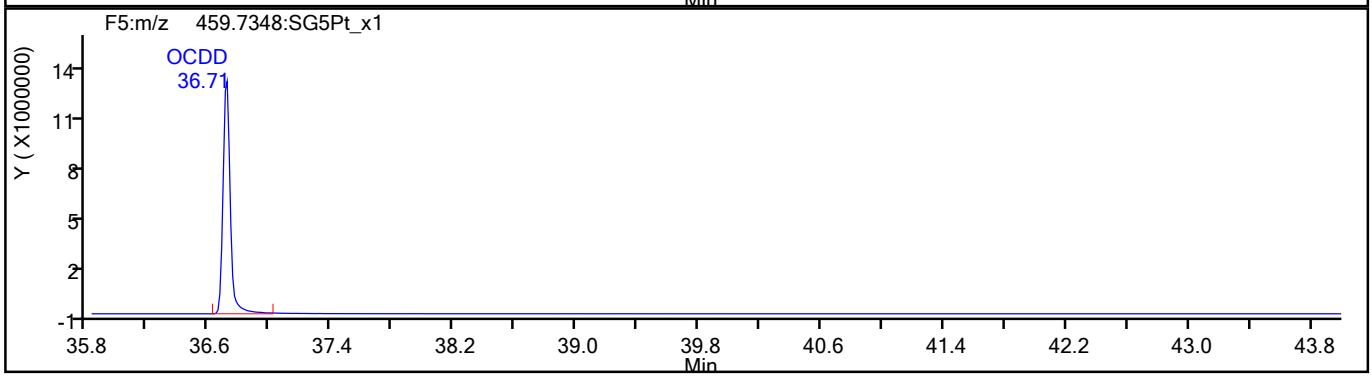

OCDD Standards

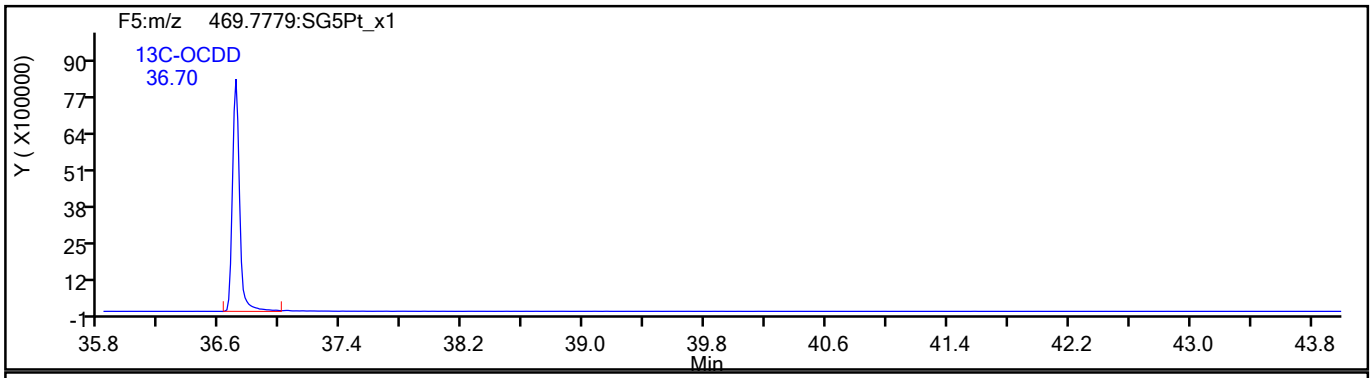

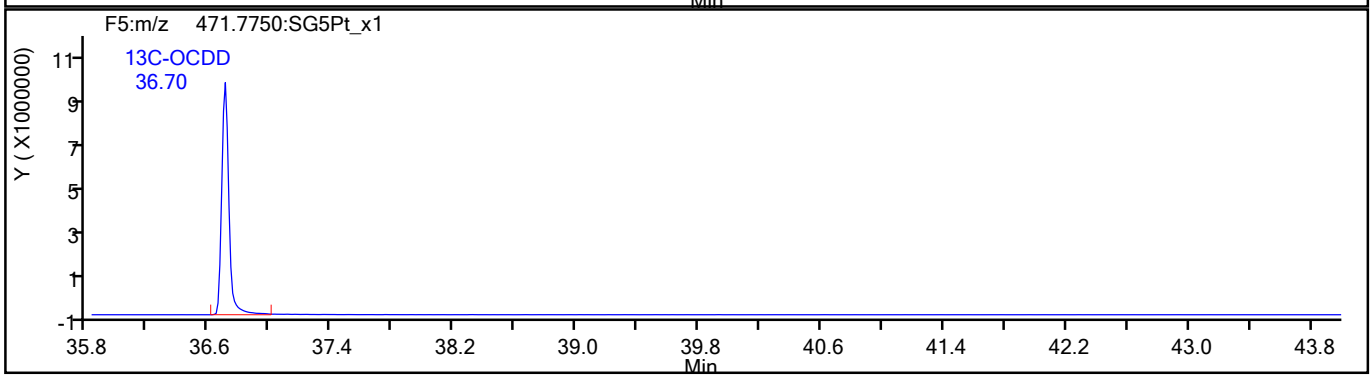

791125

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

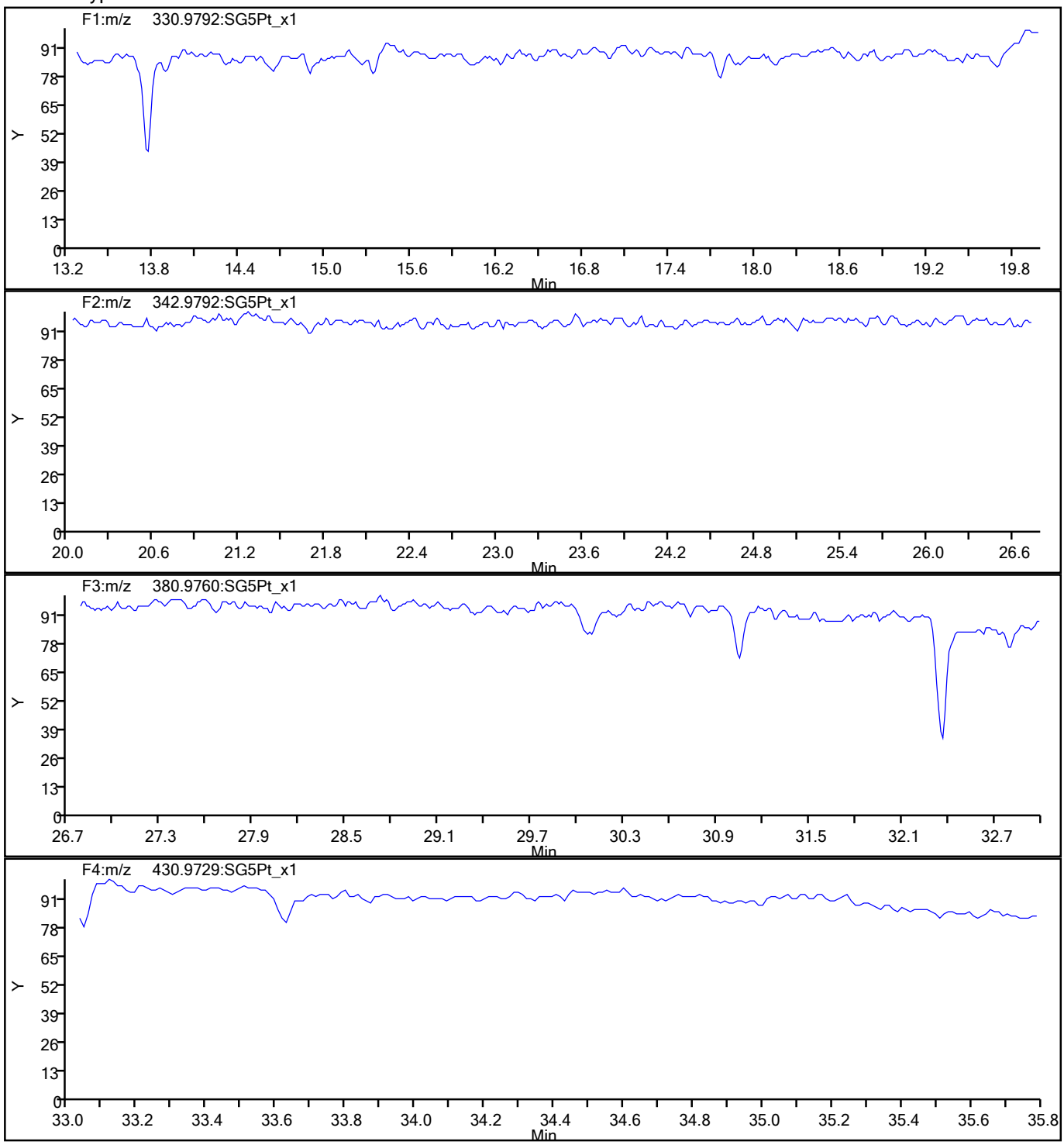

791126

Report Date: 27-Aug-2021 10:00:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_11.d		
Injection Date:	25-Aug-2021 17:20:37	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	519953	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

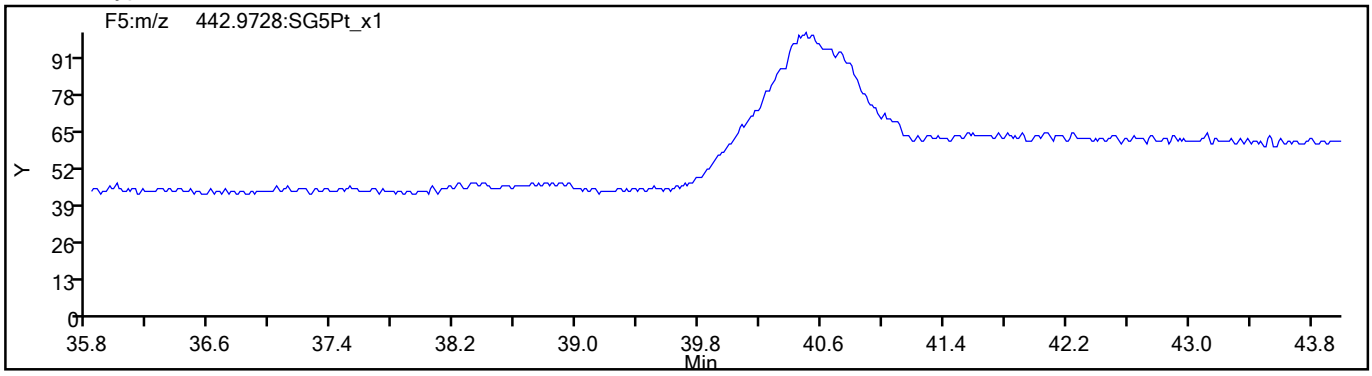

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (8-10) RA
Lab Sample ID: 320-77214-5 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_015.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:30
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.15(g)
Date Analyzed: 08/28/2021 00:35
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 22.4
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	620	E B	1.3	0.70

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	60		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	76		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_015.d
Lims ID: 320-77214-A-5-A
Client ID: 11215702-080221-BN-SJSB090 (8-10)
Sample Type: Client
Inject. Date: 28-Aug-2021 00:35:21 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-5-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:46:22

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.300	64330794	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.631	51839205	0.78	1.3327	60.5	60.5	0.3324	0.3324	60.47	
2,3,7,8-TCDF	17.645	125673415	0.79	0.9978	243.0	243.0	0.2737	0.2737		E
D 13C-2,3,7,8-TCDD	16.067	32198965	0.78	0.8749	57.2	57.2	2.640	2.640	57.21	
2,3,7,8-TCDD	16.095	27721713	0.79	1.0570	81.5	81.5	0.3728	0.3728		
$ 37Cl4-2,3,7,8-TCDD	16.095	16948597		0.8648	30.5	30.5	0.0982	0.0982	76.16	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_015.d
Lims ID: 320-77214-A-5-A
Client ID: 11215702-080221-BN-SJSB090 (8-10)
Sample Type: Client
Inject. Date: 28-Aug-2021 00:35:21 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-5-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:46:22

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.300	16.300	0		27919703	6259161	56683	141707	110		
333.9339	16.300	16.300	0		36411091	8110007	76074	190185	107	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.631	17.616	1	1.082	22772773	4100800	12094	30235	339		
317.9389	17.617	17.616	0	1.081	29066432	5239775	13368	33420	392	0.78(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.645	17.644	0	1.001	55518459	10697627	4898	12245	2184		
305.8987	17.645	17.644	0	1.001	70154956	13645477	5307	13267	2571	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.066	0	0.986	14131778	3110632	56683	141707	55		
333.9339	16.067	16.066	0	0.986	18067187	4007881	76074	190185	53	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.095	16.080	1	1.002	12233577	2784462	6780	16950	411		
321.8936	16.095	16.080	1	1.002	15488136	3470696	4440	11100	782	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.987	16948597	4064723	4882	12205	833		

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Report Date: 30-Aug-2021 09:51:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_015.d		
Injection Date:	28-Aug-2021 00:35:21	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	520456	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

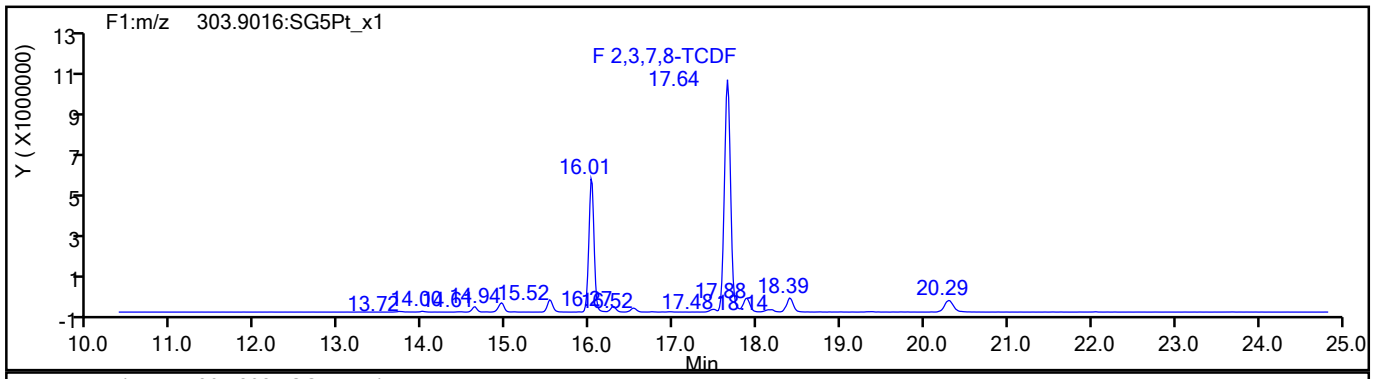

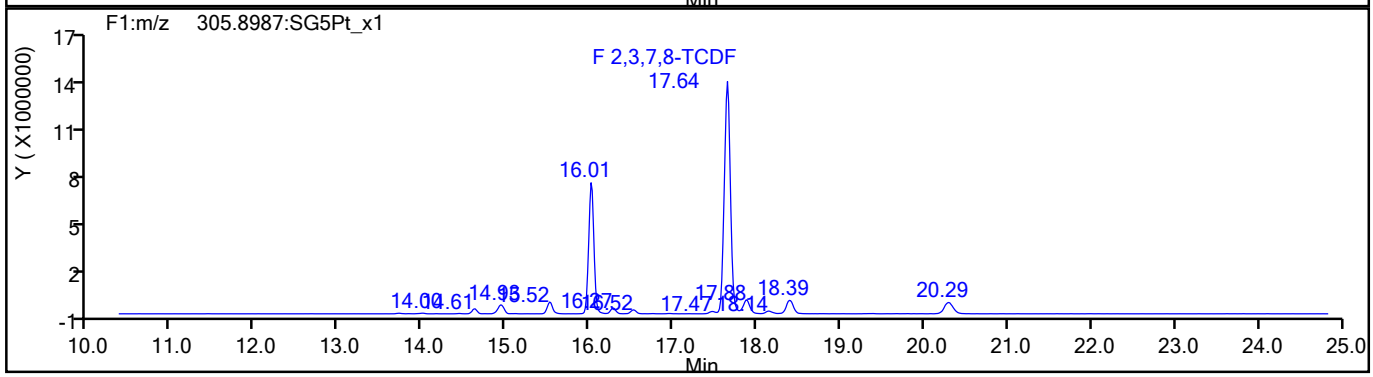

TCDF Standards

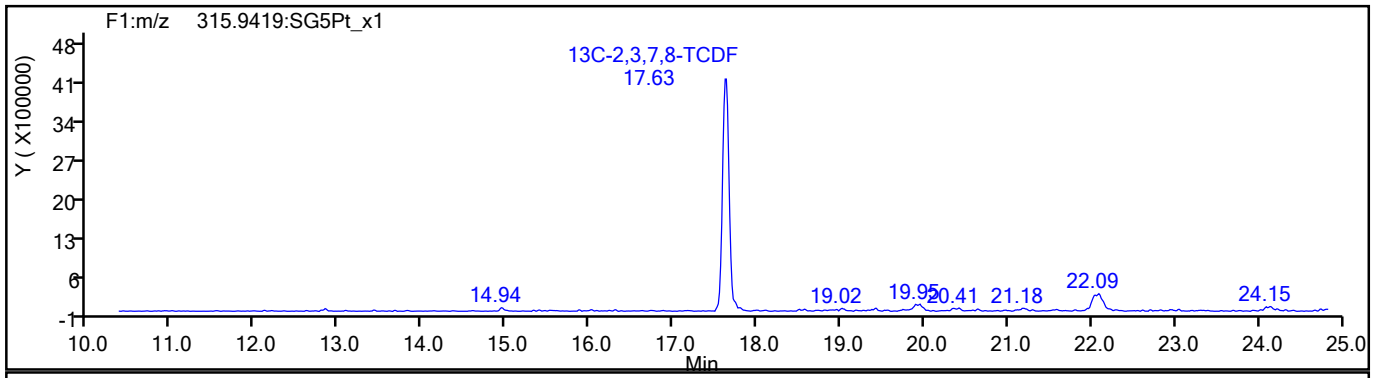

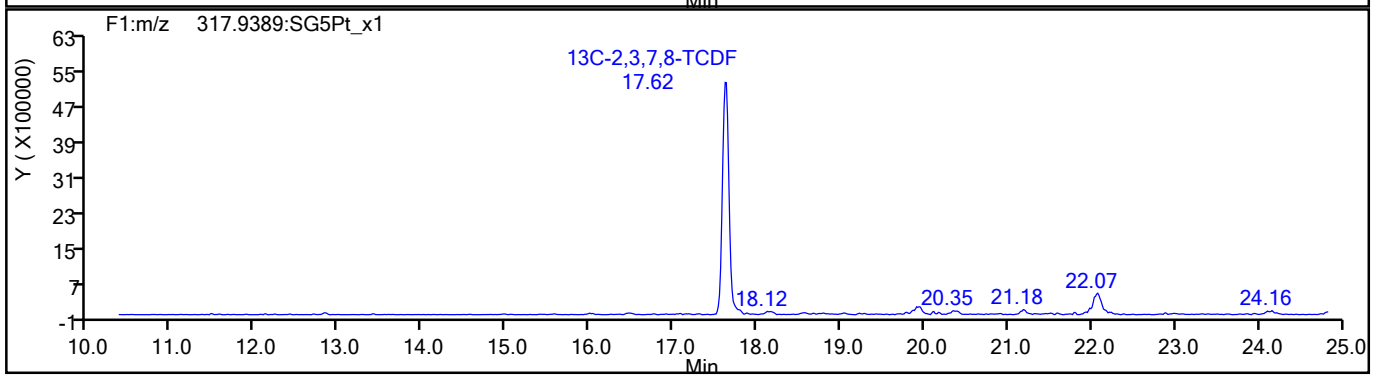

791131

Report Date: 30-Aug-2021 09:51:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_015.d		
Injection Date:	28-Aug-2021 00:35:21	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	520456	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

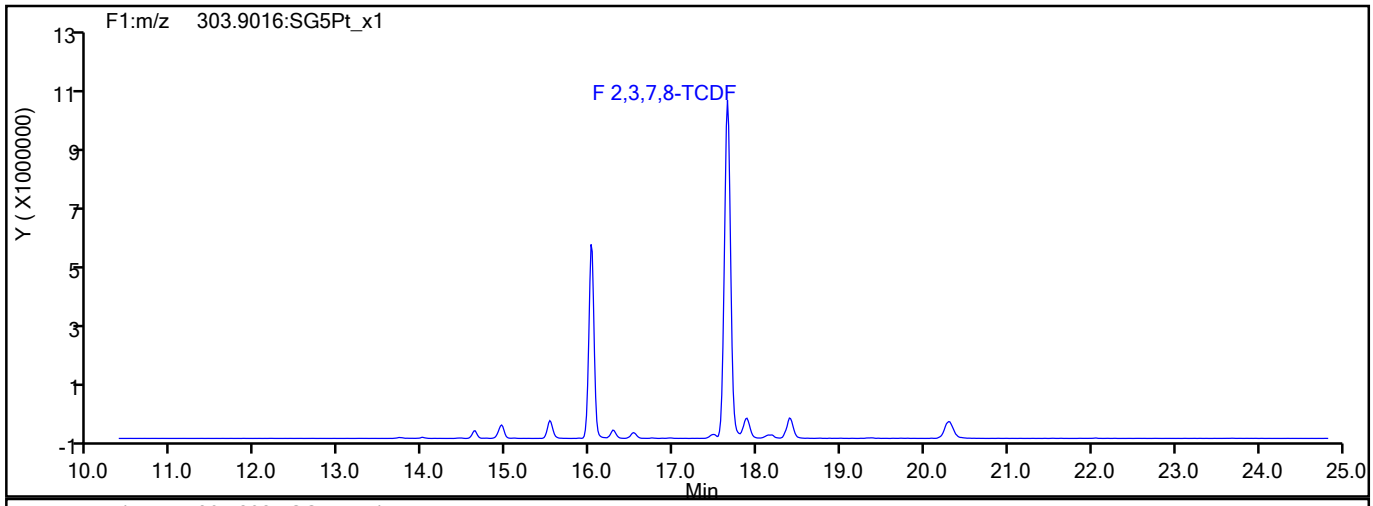

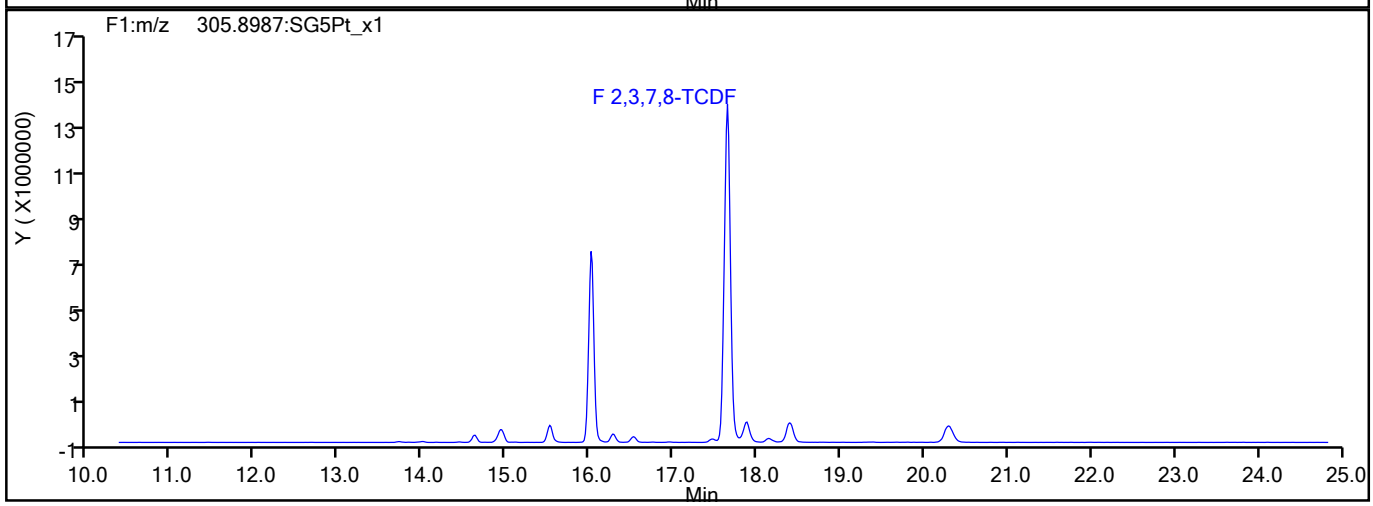

TCDF Interference Mass

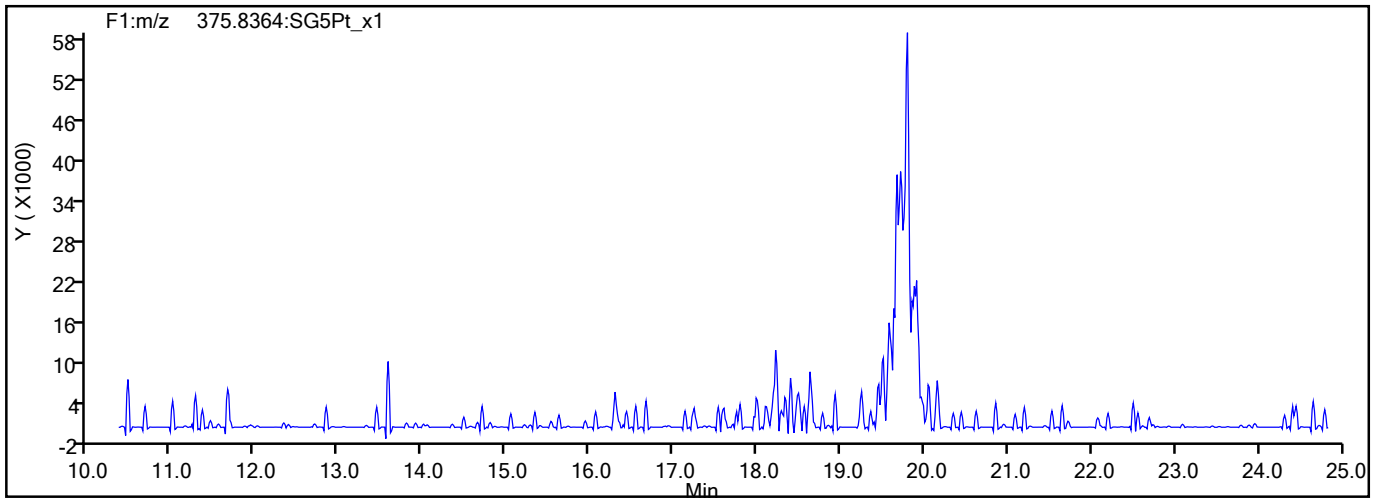

791132

Report Date: 30-Aug-2021 09:51:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_015.d		
Injection Date:	28-Aug-2021 00:35:21	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	520456	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

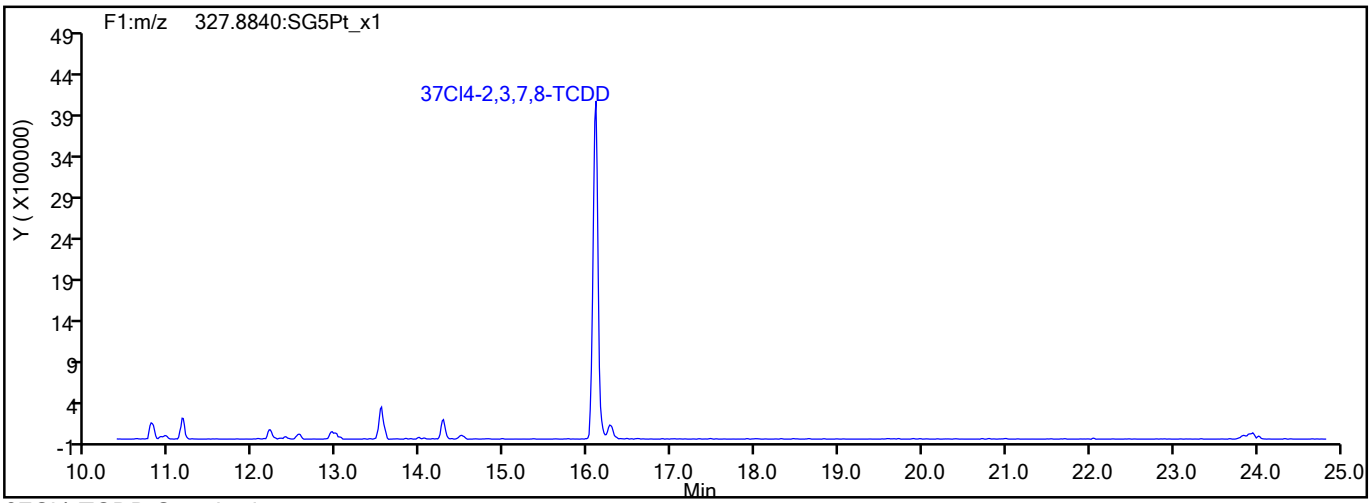

37Cl4-TCDD Standards

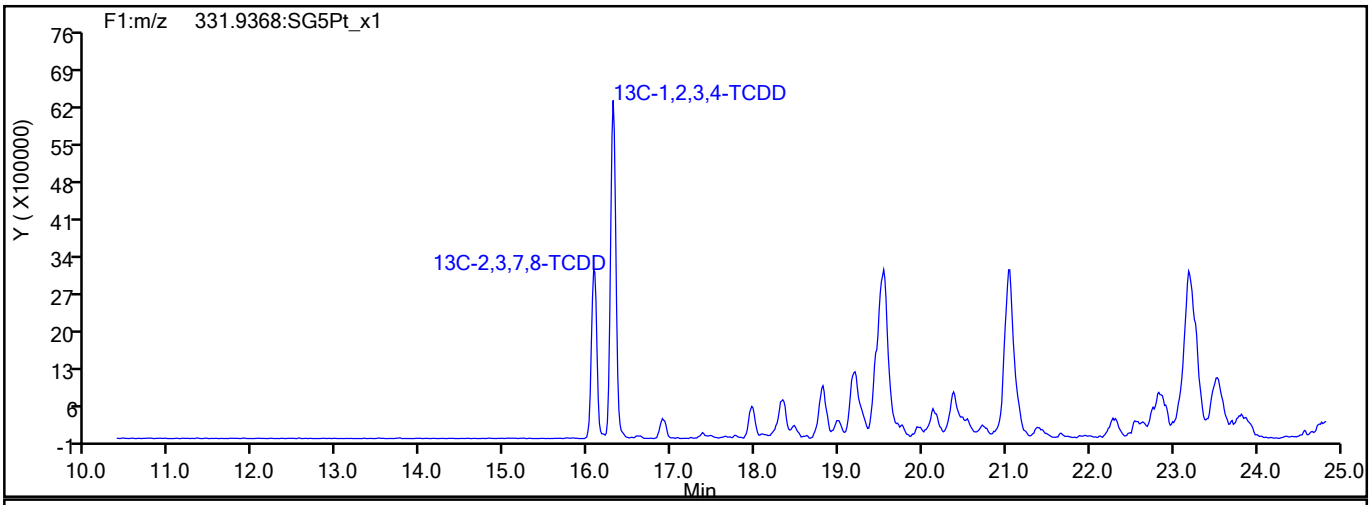

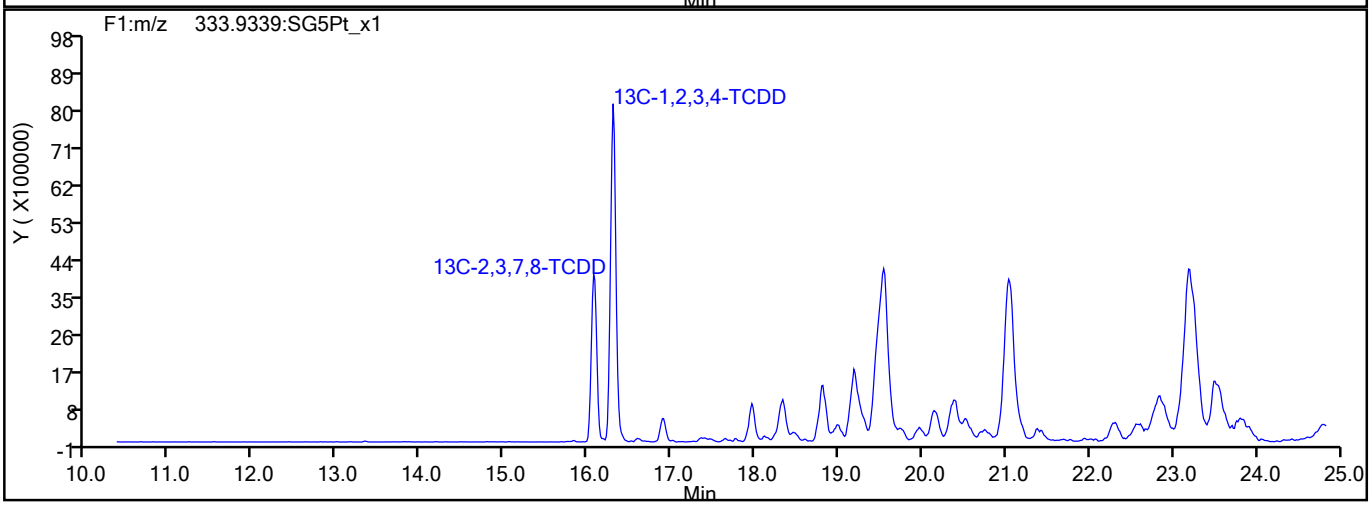

791133

Report Date: 30-Aug-2021 09:51:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_015.d		
Injection Date:	28-Aug-2021 00:35:21	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (8-10)		
Worklist#:	520456	Sample Line#:	15
Column Type:	DB-225	Column Dia:	0.32 mm

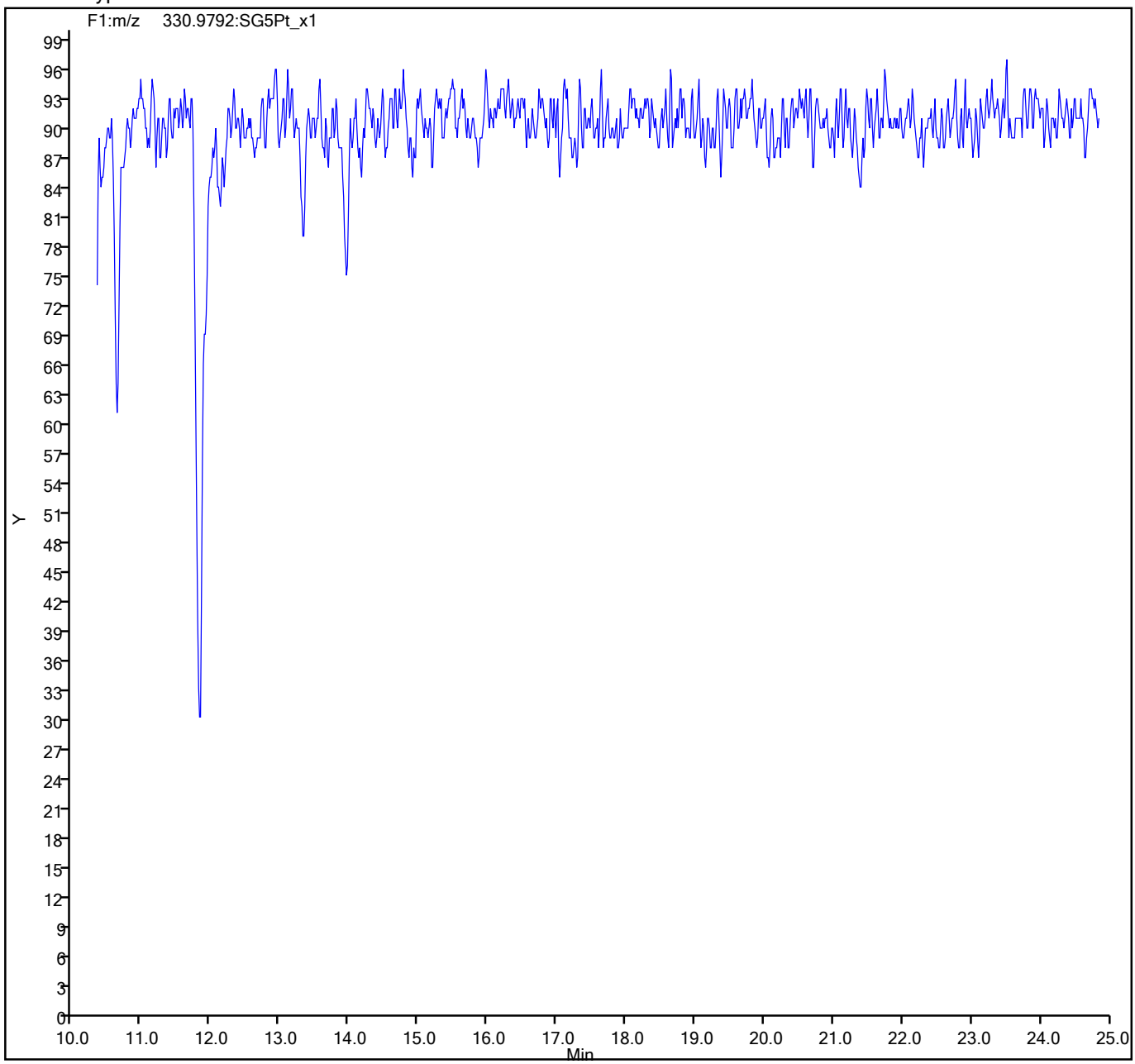

791134

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (10-12)
Lab Sample ID: 320-77214-6
Matrix: Sediment
Lab File ID: 25AU2110D5_12.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.94(g)
Date Analyzed: 08/25/2021 18:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 37.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2.5		1.6	0.088
40321-76-4	1,2,3,7,8-PeCDD	0.31	J	8.0	0.11
57117-41-6	1,2,3,7,8-PeCDF	0.51	J	8.0	0.055
57117-31-4	2,3,4,7,8-PeCDF	0.19	J q	8.0	0.055
39227-28-6	1,2,3,4,7,8-HxCDD	0.76	J	8.0	0.13
57653-85-7	1,2,3,6,7,8-HxCDD	1.3	J	8.0	0.14
19408-74-3	1,2,3,7,8,9-HxCDD	3.2	J	8.0	0.12
70648-26-9	1,2,3,4,7,8-HxCDF	0.54	J	8.0	0.043
57117-44-9	1,2,3,6,7,8-HxCDF	0.14	J	8.0	0.045
72918-21-9	1,2,3,7,8,9-HxCDF	0.14	J	8.0	0.031
60851-34-5	2,3,4,6,7,8-HxCDF	ND		8.0	0.033
35822-46-9	1,2,3,4,6,7,8-HpCDD	59	B	8.0	0.92
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.23	J q	8.0	0.044
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		8.0	0.049
3268-87-9	OCDD	1400	B	16	1.1
39001-02-0	OCDF	0.28	J B q	16	0.044
41903-57-5	Total TCDD	8.6	q	1.6	0.088
30402-14-3	Total TCDF	14	B q	1.6	0.087
36088-22-9	Total PeCDD	7.3	J q	8.0	0.11
30402-15-4	Total PeCDF	0.92	J q	8.0	0.055
34465-46-8	Total HxCDD	48	q	8.0	0.13
55684-94-1	Total HxCDF	0.83	J	8.0	0.038
37871-00-4	Total HpCDD	190	B	8.0	0.92
38998-75-3	Total HpCDF	0.23	J q	8.0	0.046

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (10-12)
Lab Sample ID: 320-77214-6
Matrix: Sediment
Lab File ID: 25AU2110D5_12.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.94(g)
Date Analyzed: 08/25/2021 18:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 37.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	55		25-164
89059-46-1	13C-2,3,7,8-TCDF	52		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	55		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	52		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	58		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	63		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	51		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	61		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	52		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	53		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	53		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	52		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	48		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	56		26-138
114423-97-1	13C-OCDD	56		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	70		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d
Lims ID: 320-77214-A-6-A
Client ID: 11215702-080221-BN-SJSB090 (10-12)
Sample Type: Client
Inject. Date: 25-Aug-2021 18:05:34 ALS Bottle#: 16 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-6-A 320-77214-A-6-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 10:03:39 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:06:42

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.613	134277960	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	112436027	0.76	1.6249	51.5	51.5	0.1122	0.1122	51.53	
2,3,7,8-TCDF	17.129	2772467	0.76	1.0239	2.408	2.408	0.0273	0.0273		
A Non-2,3,7,8-sub-TCDF	17.076	2246858	0.77	1.0239	1.986	1.952	0.0273	1.068		RQ
S Total TCDF					4.394	4.360	0.0273	0.0273		RQ
D 13C-2,3,7,8-TCDD	17.794	65929837	0.79	0.8993	54.6	54.6	0.1349	0.1349	54.60	
2,3,7,8-TCDD	17.824	657456	0.72	1.2541	0.7951	0.7951	0.0276	0.0276		
$ 37Cl4-2,3,7,8-TCDD	17.824	41347701		1.1071	27.8	27.8	0.0174	0.0174	69.53	
A Non-2,3,7,8-sub-TCDD	17.537	1555060	0.77	1.2541	1.893	1.881	0.0276	0.4112		RQMa
S Total TCDD					2.689	2.676	0.0276	0.0276		RQ
D 13C-1,2,3,7,8-PeCDF	22.034	84883861	1.55	1.2101	52.2	52.2	0.0730	0.0730	52.24	
1,2,3,7,8-PeCDF	22.047	142935	1.63	1.0611	0.1587	0.1587	0.0173	0.0173		M
D 13C-2,3,4,7,8-PeCDF	23.356	96696901	1.57	1.2395	58.1	58.1	0.0713	0.0713	58.10	
2,3,4,7,8-PeCDF	23.370	58135	1.55	1.0184	0.0661	0.0590	0.0170	0.0170		RQM
A F1 PeCDFs	19.851						0.0147	0.0147		
A Non-2,3,7,8-sub-PeCDF	23.067	64811	1.55	1.0398	0.0687	0.0687	0.0171	0.0687		M
S Total PeCDF					0.2935	0.2864	0.0172	0.0172		RQ
D 13C-1,2,3,7,8-PeCDD	24.066	56299004	1.61	0.7612	55.1	55.1	0.0413	0.0413	55.08	
1,2,3,7,8-PeCDD	24.093	56528	1.59	1.0484	0.0958	0.0958	0.0354	0.0354		
A Non-2,3,7,8-sub-PeCDD	23.696	1287426	1.55	1.0484	2.221	2.181	0.0354	1.090		RQ
S Total PeCDD					2.317	2.277	0.0354	0.0354		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.199	79926303	0.52	1.0837	61.3	61.3	0.1321	0.1321	61.34	
1,2,3,4,7,8-HxCDF	30.213	146115	1.22	1.0851	0.1685	0.1685	0.0133	0.0133		
D 13C-1,2,3,6,7,8-HxCDF	30.412	70619349	0.51	1.1279	52.1	52.1	0.1269	0.1269	52.07	
1,2,3,6,7,8-HxCDF	30.439	35678	1.05	1.1260	0.0449	0.0449	0.0140	0.0140		
D 13C-2,3,4,6,7,8-HxCDF	31.304	67731373	0.53	1.0637	53.0	53.0	0.1345	0.1345	52.96	
2,3,4,6,7,8-HxCDF	31.317						0.0102	0.0102		
D 13C-1,2,3,7,8,9-HxCDF	32.143	61889213	0.53	0.9676	53.2	53.2	0.1479	0.1479	53.20	
1,2,3,7,8,9-HxCDF	32.169	32244	1.22	1.1664	0.0447	0.0447	0.009605	0.009605		M
A Non-2,3,7,8-sub-HxCDF	30.338						0.0115	0.0115		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.2580	0.2580	0.0118	0.0118		
* 13C-1,2,3,7,8,9-HxCDD	31.956	120232133	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.504	55215521	1.24	0.7334	62.6	62.6	0.1506	0.1506	62.62	
1,2,3,4,7,8-HxCDD	31.517	138762	1.14	1.0640	0.2362	0.2362	0.0392	0.0392		
D 13C-1,2,3,6,7,8-HxCDD	31.624	53641711	1.22	0.8802	50.7	50.7	0.1255	0.1255	50.69	
1,2,3,6,7,8-HxCDD	31.637	213973	1.19	1.0001	0.3989	0.3989	0.0438	0.0438		
1,2,3,7,8,9-HxCDD	31.970	612242	1.15	1.1325	0.993	0.993	0.0378	0.0378		
A Non-2,3,7,8-sub-HxCDD	30.525	7830879	1.24	1.0655	13.5	13.5	0.0401	9.383		RQ
S Total HxCDD					15.2	15.1	0.0403	0.0403		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.615	44343365	0.43	0.7730	47.7	47.7	0.6419	0.6419	47.71	
1,2,3,4,6,7,8-HpCDF	33.640	45957	1.04	1.4413	0.0961	0.0719	0.0138	0.0138		RQ
D 13C-1,2,3,4,7,8,9-HpCDF	34.685	47216127	0.44	0.7008	56.0	56.0	0.7081	0.7081	56.04	
1,2,3,4,7,8,9-HpCDF	34.685						0.0152	0.0152		
A Non-2,3,7,8-sub-HpCDF	34.150						0.0145	0.0145		
S Total HpCDF					0.0961	0.0719	0.0145	0.0145		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.405	40568802	1.01	0.6472	52.1	52.1	0.2628	0.2628	52.13	
1,2,3,4,6,7,8-HpCDD	34.405	8196434	1.02	1.0943	18.5	18.5	0.2886	0.2886		
A Non-2,3,7,8-sub-HpCDD	34.223	18759079	1.03	1.0943	42.3	42.3	0.2886	42.3		
S Total HpCDD					60.7	60.7	0.2886	0.2886		
D 13C-OCDD	36.713	59788760	0.87	0.4472	111.2	111.2	0.0965	0.0965	55.60	
OCDF	36.797	37473	0.89	1.4382	0.1011	0.0872	0.0137	0.0137		RQM
OCDD	36.725	149321504	0.90	1.1070	451.2	451.2	0.3343	0.3343		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d
Lims ID: 320-77214-A-6-A
Client ID: 11215702-080221-BN-SJSB090 (10-12)
Sample Type: Client
Inject. Date: 25-Aug-2021 18:05:34 ALS Bottle#: 16 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-6-A 320-77214-A-6-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 10:03:39 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:06:42

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.613	17.598	1		59577058	15381134	5898	14745	2608		
333.9339	17.613	17.598	1		74700902	19310247	10942	27355	1765	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	0.971	48700244	12442686	11396	28490	1092		
317.9389	17.099	17.099	0	0.971	63735783	16188330	13899	34747	1165	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.129	17.114	1	1.002	1198696	302379	1482	3705	204		
305.8987	17.114	17.114	0	1.001	1573771	379754	1718	4295	221	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	15.239	17.076	-110	0.891	76422	21356	1482	3705	14		
305.8987	15.224	17.076	-111	0.890	98185	30181	1718	4295	18	0.78(0.65-0.89)	
303.9016	15.738	17.076	-80	0.920	35604	8034	1482	3705	5		
305.8987	15.738	17.076	-80	0.920	42063	10981	1718	4295	6	0.85(0.65-0.89)	
303.9016	16.010	17.076	-64	0.936	38408	7777	1482	3705	5		
305.8987	16.010	17.076	-64	0.936	70661	16174	1718	4295	9	0.54(0.65-0.89)	
	Empc Correction				49880	10100	1718	4295	6		
303.9016	16.237	17.076	-50	0.950	53267	11999	1482	3705	8		
305.8987	16.237	17.076	-50	0.950	65373	15726	1718	4295	9	0.81(0.65-0.89)	
303.9016	16.464	17.076	-37	0.963	53529	13111	1482	3705	9		
	Empc Correction				43976	11335	1482	3705	8		
305.8987	16.464	17.076	-37	0.963	57112	14722	1718	4295	9	0.94(0.65-0.89)	
303.9016	16.751	17.076	-19	0.980	532518	140414	1482	3705	95		
305.8987	16.751	17.076	-19	0.980	696454	180148	1718	4295	105	0.76(0.65-0.89)	
303.9016	16.963	17.076	-7	0.992	23188	6664	1482	3705	4		
305.8987	16.963	17.076	-7	0.992	39563	7911	1718	4295	5	0.59(0.65-0.89)	
	Empc Correction				30114	8654	1718	4295	5		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.552	17.076	29	1.027	97408	21002	1482	3705	14		
305.8987	17.552	17.076	29	1.027	117541	26398	1718	4295	15	0.83(0.65-0.89)	
303.9016	18.913	17.076	110	1.106	76034	19275	1482	3705	13		
305.8987	18.913	17.076	110	1.106	113311	26251	1718	4295	15	0.67(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.010	29028257	7050879	5898	14745	1195		
333.9339	17.794	17.794	0	1.010	36901580	8816077	10942	27355	806	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.824	17.809	1	1.002	275019	65637	1086	2715	60		
321.8936	17.824	17.809	1	1.002	382437	95235	1114	2785	85	0.72(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.824	17.809	1	1.012	41347701	10143899	2666	6665	3805		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	15.632	17.537	-114	0.879	33255	8875	1086	2715	8		
321.8936	15.632	17.537	-114	0.879	42331	13049	1114	2785	12	0.79(0.65-0.89)	
319.8965	15.920	17.537	-97	0.895	71448	20526	1086	2715	19		
321.8936	15.920	17.537	-97	0.895	102127	28085	1114	2785	25	0.70(0.65-0.89)	
319.8965	16.146	17.537	-83	0.907	82513	22103	1086	2715	20		
321.8936	16.146	17.537	-83	0.907	93886	26552	1114	2785	24	0.88(0.65-0.89)	
319.8965	16.706	17.537	-50	0.939	145585	36354	1086	2715	33		
321.8936	16.706	17.537	-50	0.939	194391	49510	1114	2785	44	0.75(0.65-0.89)	
319.8965	16.887	17.537	-39	0.949	30895	6823	1086	2715	6		M
321.8936	16.887	17.537	-39	0.949	50645	7409	1114	2785	7	0.61(0.65-0.89)	M
	Empc Correction				40123	8861	1114	2785	8		
319.8965	17.295	17.537	-14	0.972	31420	8880	1086	2715	8		
321.8936	17.310	17.537	-14	0.973	43205	12022	1114	2785	11	0.73(0.65-0.89)	
319.8965	17.583	17.537	3	0.988	76229	20384	1086	2715	19		M
321.8936	17.583	17.537	3	0.988	104973	25902	1114	2785	23	0.73(0.65-0.89)	
319.8965	17.704	17.537	10	0.995	143109	33921	1086	2715	31		M
321.8936	17.704	17.537	10	0.995	196723	48846	1114	2785	44	0.73(0.65-0.89)	
319.8965	18.188	17.537	39	1.022	33005	8264	1086	2715	8		
321.8936	18.188	17.537	39	1.022	42210	9848	1114	2785	9	0.78(0.65-0.89)	
319.8965	18.913	17.537	82	1.063	21371	4960	1086	2715	5		
321.8936	18.898	17.537	81	1.062	26261	5795	1114	2785	5	0.81(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.034	22.020	1	1.251	51560756	9586531	7227	18067	1326		
353.8970	22.034	22.020	1	1.251	33323105	6318510	5036	12590	1255	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.047	22.047	0	1.001	88574	17067	383	957	45		M
341.8567	22.061	22.047	1	1.001	54361	10173	783	1957	13	1.63(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.356	23.343	1	1.326	59033453	10215657	7227	18067	1414		
353.8970	23.356	23.343	1	1.326	37663448	6574768	5036	12590	1306	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											RQM
339.8597	23.370	23.370	0	1.001	35337	5751	383	957	15		
341.8567	23.370	23.370	0	1.001	29792	6261	783	1957	8	1.19(1.32-1.78)	M
	Empc Correction				22798	3710	783	1957	5		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A F1 PeCDFs											
339.8597	19.851						313	782			
341.8567	19.851						686	1715			
A Non-2,3,7,8-sub-PeCDF											M
339.8597	20.738	23.067	-139	0.941	39372	6886	383	957	18		
341.8567	20.725	23.067	-140	0.941	25439	4959	783	1957	6	1.55(1.32-1.78)	M
13C-1,2,3,7,8-PeCDD											
367.8949	24.066	24.052	1	1.366	34723104	5751149	2660	6650	2162		
369.8919	24.066	24.052	1	1.366	21575900	3487820	1703	4257	2048	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.093	24.079	1	1.001	34699	6585	868	2170	8		
357.8516	24.106	24.079	2	1.002	21829	3453	502	1255	7	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.679	23.696	-121	0.901	382027	77382	868	2170	89		
357.8516	21.666	23.696	-122	0.900	261407	53472	502	1255	107	1.46(1.32-1.78)	
355.8546	22.102	23.696	-95	0.918	20588	4732	868	2170	5		
357.8516	22.115	23.696	-95	0.919	14345	2407	502	1255	5	1.44(1.32-1.78)	
355.8546	22.334	23.696	-82	0.928	47810	9373	868	2170	11		
	Empc Correction				27985	7359	868	2170	8		
357.8516	22.320	23.696	-82	0.927	18055	4748	502	1255	9	2.65(1.32-1.78)	
355.8546	22.620	23.696	-64	0.940	32713	5719	868	2170	7		
357.8516	22.606	23.696	-65	0.939	24690	4132	502	1255	8	1.32(1.32-1.78)	
355.8546	22.947	23.696	-45	0.954	99571	18806	868	2170	22		
357.8516	22.947	23.696	-45	0.954	60261	11241	502	1255	22	1.65(1.32-1.78)	
355.8546	23.138	23.696	-33	0.961	191285	23851	868	2170	27		
357.8516	23.125	23.696	-34	0.961	123121	17156	502	1255	34	1.55(1.32-1.78)	
355.8546	25.061	23.696	82	1.041	19073	3844	868	2170	4		
357.8516	25.088	23.696	83	1.042	16179	2582	502	1255	5	1.18(1.32-1.78)	
	Empc Correction				12305	2480	502	1255	5		
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.199	30.186	1	0.945	27277118	4923076	5881	14702	837		
385.8610	30.199	30.186	1	0.945	52649185	9373127	14206	35515	660	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.213	30.213	0	1.000	80277	14081	492	1230	29		
375.8178	30.213	30.213	0	1.000	65838	12079	333	832	36	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.412	30.399	1	0.952	23969949	4492852	5881	14702	764		
385.8610	30.412	30.399	1	0.952	46649400	8565565	14206	35515	603	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.439	30.412	2	1.001	18243	4207	492	1230	9		
375.8178	30.426	30.412	1	1.000	17435	4074	333	832	12	1.05(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.304	31.291	1	0.980	23338948	5914232	5881	14702	1006		
385.8610	31.304	31.291	1	0.980	44392425	11324705	14206	35515	797	0.53(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.317						492	1230			
375.8178	31.317						333	832			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.143	0	1.006	21414094	6371235	5881	14702	1083		
385.8610	32.143	32.143	0	1.006	40475119	12035611	14206	35515	847	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.169	32.156	1	1.001	17733	5262	492	1230	11		M
375.8178	32.156	32.156	0	1.000	14511	5537	333	832	17	1.22(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.338						492	1230			
375.8178	30.338						333	832			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		66350717	19360105	9241	23102	2095		
403.8529	31.956	31.956	0		53881416	15727740	6258	15645	2513	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.504	31.504	0	0.986	30613510	8422883	9241	23102	911		
403.8529	31.504	31.504	0	0.986	24602011	6822541	6258	15645	1090	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.517	31.517	0	1.000	74040	18505	1776	4440	10		
391.8127	31.517	31.517	0	1.000	64722	16119	771	1927	21	1.14(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.624	31.610	1	0.990	29510630	7933183	9241	23102	858		
403.8529	31.624	31.610	1	0.990	24131081	6586599	6258	15645	1053	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.637	31.624	1	1.000	116436	34780	1776	4440	20		
391.8127	31.637	31.624	1	1.000	97537	26397	771	1927	34	1.19(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.970	31.969	0	1.015	327801	71456	1776	4440	40		
391.8127	31.970	31.969	0	1.015	284441	54156	771	1927	70	1.15(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.081	30.525	-86	0.920	2975760	381442	1776	4440	215		
391.8127	29.081	30.525	-86	0.920	2465832	311540	771	1927	404	1.21(1.05-1.43)	
389.8157	30.292	30.525	-14	0.958	104673	18908	1776	4440	11		
391.8127	30.292	30.525	-14	0.958	100788	19491	771	1927	25	1.04(1.05-1.43)	
	Empc Correction				84413	15248	771	1927	20		
389.8157	30.705	30.525	11	0.971	1122150	221993	1776	4440	125		
391.8127	30.719	30.525	12	0.971	906640	171342	771	1927	222	1.24(1.05-1.43)	
389.8157	30.931	30.525	24	0.978	91469	21487	1776	4440	12		
391.8127	30.918	30.525	24	0.978	79942	17425	771	1927	23	1.14(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.615	33.603	1	1.052	13244851	5128433	22895	57237	224		
419.8220	33.615	33.603	1	1.052	31098514	11698764	46750	116875	250	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQ
407.7818	33.640	33.615	1	1.001	38860	10490	979	2447	11		
	Empc Correction				23429	9085	979	2447	9		
409.7789	33.615	33.615	0	1.000	22528	8736	364	910	24	1.72(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.685	34.672	1	1.085	14366679	5200449	22895	57237	227		
419.8220	34.685	34.672	1	1.085	32849448	11603206	46750	116875	248	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685						979	2447			
409.7789	34.685						364	910			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						979	2447			
409.7789	34.150						364	910			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.405	34.393	1	1.077	20426198	7101189	11695	29237	607		
437.8140	34.393	34.393	0	1.076	20142604	6857140	12181	30452	563	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	4142325	1444425	9038	22595	160		
425.7737	34.405	34.405	0	1.000	4054109	1434507	8595	21487	167	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.870	34.223	-21	0.984	9529404	3412534	9038	22595	378		
425.7737	33.858	34.223	-22	0.984	9229675	3193273	8595	21487	372	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.713	36.701	1	1.149	27897226	8625665	2756	6890	3130		
471.7750	36.713	36.701	1	1.149	31891534	9894340	3300	8250	2998	0.87(0.76-1.02)	
OCDF											RQM
441.7428	36.797	36.797	0	1.002	23649	6588	316	790	21		M
	Empc Correction				17646	4823	316	790	15		
443.7399	36.809	36.797	1	1.003	19827	5420	416	1040	13	1.19(0.76-1.02)	M
OCDD											
457.7377	36.725	36.713	1	1.000	70623769	21542136	6974	17435	3089		
459.7348	36.725	36.713	1	1.000	78697735	23582498	6732	16830	3503	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d
Lims ID: 320-77214-A-6-A
Client ID: 11215702-080221-BN-SJSB090 (10-12)
Inject. Date: 25-Aug-2021 18:05:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 12

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	112436027	28631016

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	112436027	28631016

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.239	76422	21356	98185	30181	0.1517	0.78	
15.738	35604	8034	42063	10981	0.0675	0.85	
16.010	38408	7777	70661	16174	0.0947	0.54	RQ
16.010	38408	7777	49880	10100	0.0767		Empc Correction
16.237	53267	11999	65373	15726	0.1031	0.81	
16.464	53529	13111	57112	14722	0.0961	0.94	RQ
16.464	43976	11335	57112	14722	0.0878		Empc Correction
16.751	532518	140414	696454	180148	1.07	0.76	
16.963	23188	6664	39563	7911	0.0545	0.59	RQ
16.963	23188	6664	30114	8654	0.0463		Empc Correction
17.552	97408	21002	117541	26398	0.1867	0.83	
18.913	76034	19275	113311	26251	0.1645	0.67	
Signal Totals:							
	976825	247856	1270033	323161			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2286641	578124				0.76	RQ
	2246858	571017					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.986 = (2286641 * 100.000) / (112436027 * 1.024)
Empc Amount: 1.952 = (2246858 * 100.000) / (112436027 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d
Lims ID: 320-77214-A-6-A
Client ID: 11215702-080221-BN-SJSB090 (10-12)
Inject. Date: 25-Aug-2021 18:05:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 12

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	65929837	15866956

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	65929837	15866956

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.632	33255	8875	42331	13049	0.0914	0.79	
15.920	71448	20526	102127	28085	0.2099	0.70	
16.146	82513	22103	93886	26552	0.2133	0.88	
16.706	145585	36354	194391	49510	0.4112	0.75	
16.887	30895	6823	50645	7409	0.0986	0.61	RQM
16.887	30895	6823	40123	8861	0.0859		Empc Correction
17.295	31420	8880	43205	12022	0.0903	0.73	
17.583	76229	20384	104973	25902	0.2192	0.73	Ma
17.704	143109	33921	196723	48846	0.4110	0.73	M
18.188	33005	8264	42210	9848	0.0910	0.78	
18.913	21371	4960	26261	5795	0.0576	0.81	
Signal Totals:							
	668830	171090	886230	228470			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1565582	398108				0.75	RQMa
	1555060	399560					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.893 = (1565582 * 100.000) / (65929837 * 1.254)
Empc Amount: 1.881 = (1555060 * 100.000) / (65929837 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d
Lims ID: 320-77214-A-6-A
Client ID: 11215702-080221-BN-SJSB090 (10-12)
Inject. Date: 25-Aug-2021 18:05:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 12

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	84883861	15905041
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	96696901	16790425

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	90790381	16347733

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.738	39372	6886	25439	4959	0.0687	1.55	M
Signal Totals:							
	39372	6886	25439	4959			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	64811	11845				1.55	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0687 = (64811 * 100.000) / (90790381 * 1.040)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Lims ID:	320-77214-A-6-A		
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Inject. Date:	25-Aug-2021 18:05:34	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	12

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	56299004	9238969

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	56299004	9238969

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.679	382027	77382	261407	53472	1.09	1.46	
22.102	20588	4732	14345	2407	0.0592	1.44	
22.334	47810	9373	18055	4748	0.1116	2.65	RQ
22.334	27985	7359	18055	4748	0.0780		Empc Correction
22.620	32713	5719	24690	4132	0.0973	1.32	
22.947	99571	18806	60261	11241	0.2708	1.65	
23.138	191285	23851	123121	17156	0.5327	1.55	
25.061	19073	3844	16179	2582	0.0597	1.18	RQ
25.061	19073	3844	12305	2480	0.0532		Empc Correction
Signal Totals:							
	773242	141693	514184	95636			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1311125	239445				1.53	RQ
	1287426	237329					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.221 = (1311125 * 100.000) / (56299004 * 1.048)

Empc Amount: 2.181 = (1287426 * 100.000) / (56299004 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Lims ID:	320-77214-A-6-A		
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Inject. Date:	25-Aug-2021 18:05:34	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	12

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	79926303	14296203
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	70619349	13058417
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	67731373	17238937
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	61889213	18406846

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	70041559	15750100

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d
Lims ID: 320-77214-A-6-A
Client ID: 11215702-080221-BN-SJSB090 (10-12)
Inject. Date: 25-Aug-2021 18:05:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 12

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	55215521	15245424
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	53641711	14519782
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	54428616	14882603

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.081	2975760	381442	2465832	311540	9.38	1.21	
30.292	104673	18908	100788	19491	0.3543	1.04	RQ
30.292	104673	18908	84413	15248	0.3260		Empc Correction
30.705	1122150	221993	906640	171342	3.50	1.24	
30.931	91469	21487	79942	17425	0.2956	1.14	
Signal Totals:							
	4294052	643830	3536827	515555			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7847254	1163628				1.21	RQ
	7830879	1159385					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 13.531 = (7847254 * 100.000) / (54428616 * 1.066)
Empc Amount: 13.502 = (7830879 * 100.000) / (54428616 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d
Lims ID: 320-77214-A-6-A
Client ID: 11215702-080221-BN-SJSB090 (10-12)
Inject. Date: 25-Aug-2021 18:05:34 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 12

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	40568802	13958329

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	40568802	13958329

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.870	9529404	3412534	9229675	3193273	42.3	1.03	
Signal Totals:							
	9529404	3412534	9229675	3193273			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	18759079	6605807				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 42.255 = (18759079 * 100.000) / (40568802 * 1.094)

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d				
Injection Date:	25-Aug-2021 18:05:34	Instrument ID:	10D5		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:	SMA	ALS Bottle#:	16	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.60- 19.47)

Signal: 1

Processing Integration Results

RT = 16.887 Area = 63604

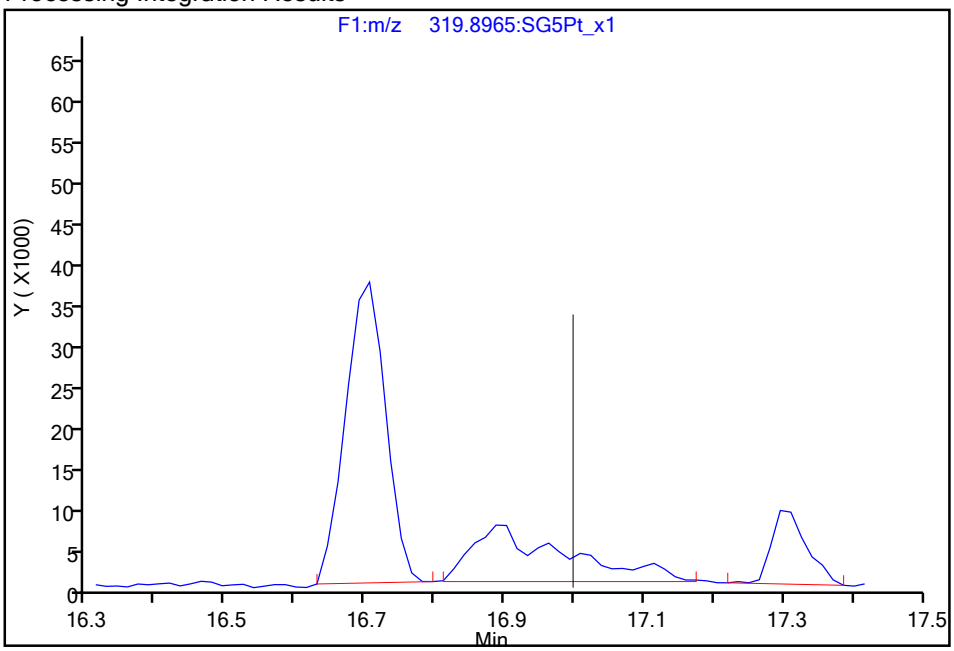

Manual Integration Results

RT = 16.887 Area = 30895 M

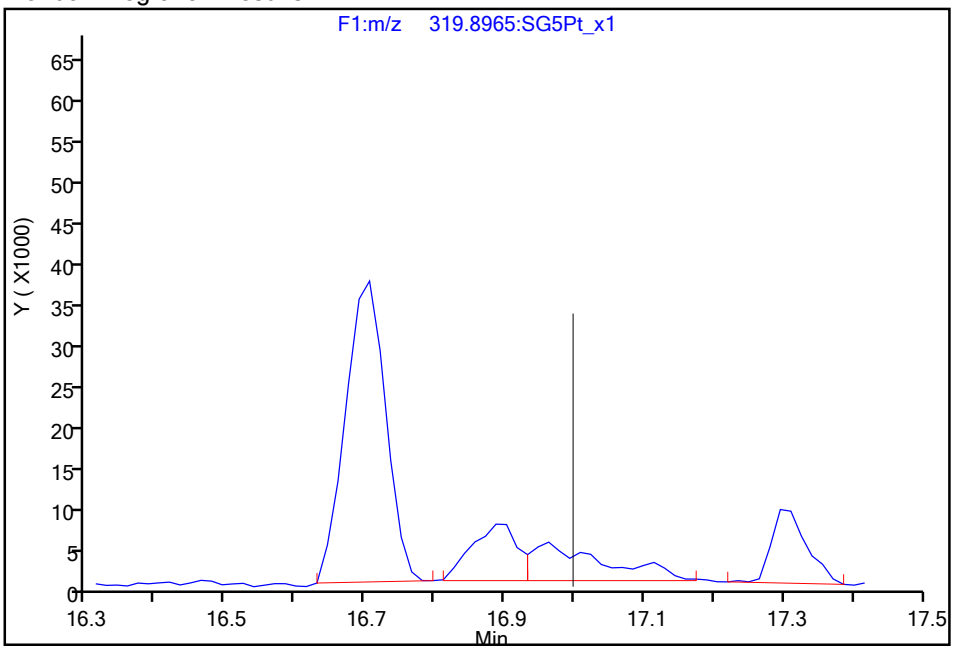

Reviewer: dadunj, 27-Aug-2021 10:02:35

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

791154

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d				
Injection Date:	25-Aug-2021 18:05:34	Instrument ID:	10D5		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:	SMA	ALS Bottle#:	16	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (15.60- 19.47)

Signal: 2

Processing Integration Results

RT = 16.887 Area = 74460

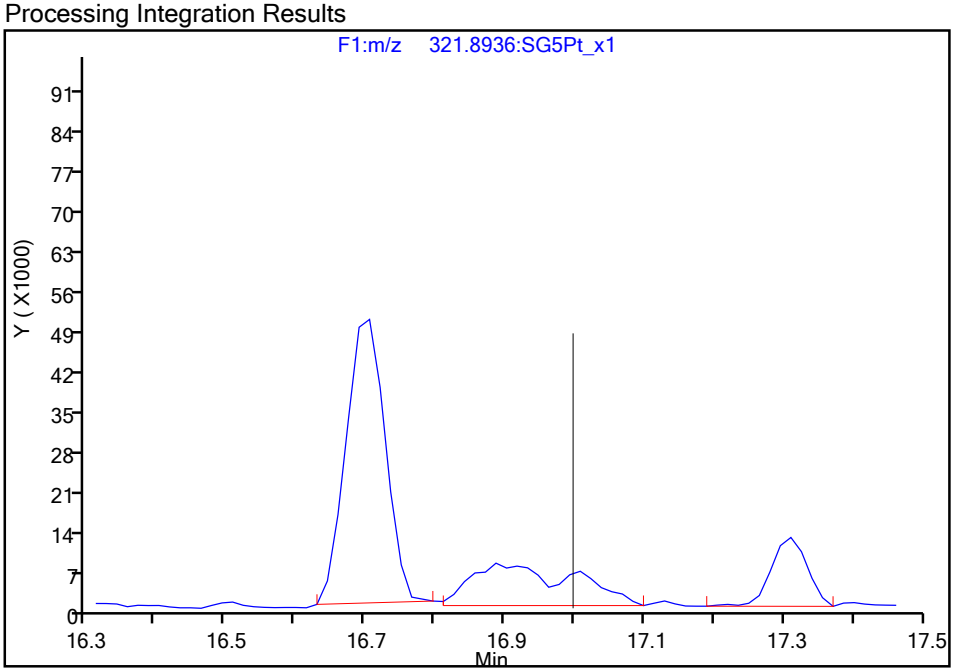

Manual Integration Results

RT = 16.887 Area = 50645 M

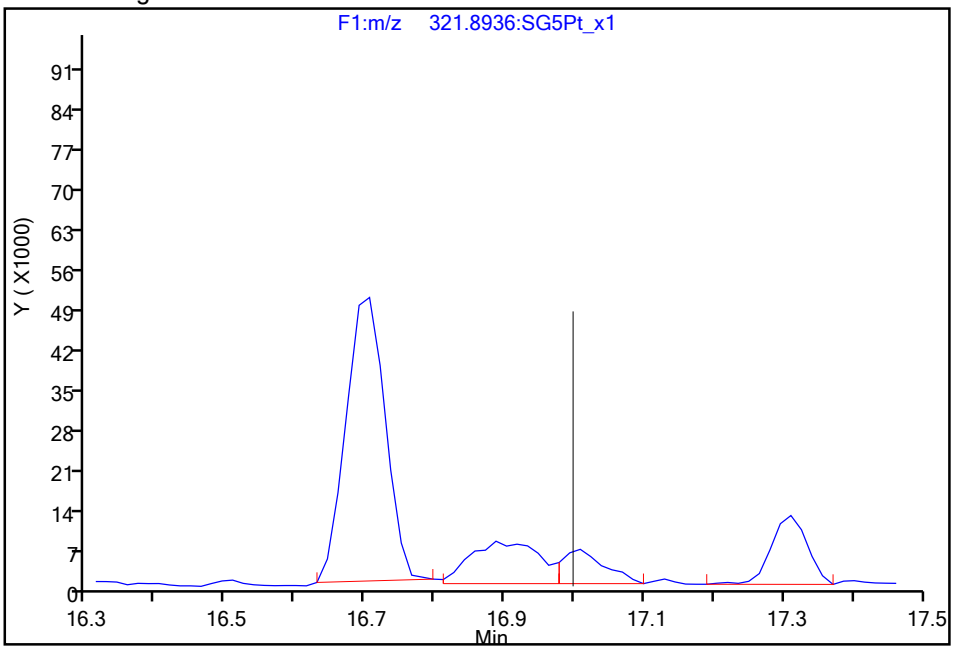

Reviewer: dadunj, 27-Aug-2021 10:00:38

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d				
Injection Date:	25-Aug-2021 18:05:34	Instrument ID:	10D5		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:	SMA	ALS Bottle#:	16	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.60- 19.47)

Signal: 1

Not Detected
RT: 15.60- 19.47

Processing Integration Results

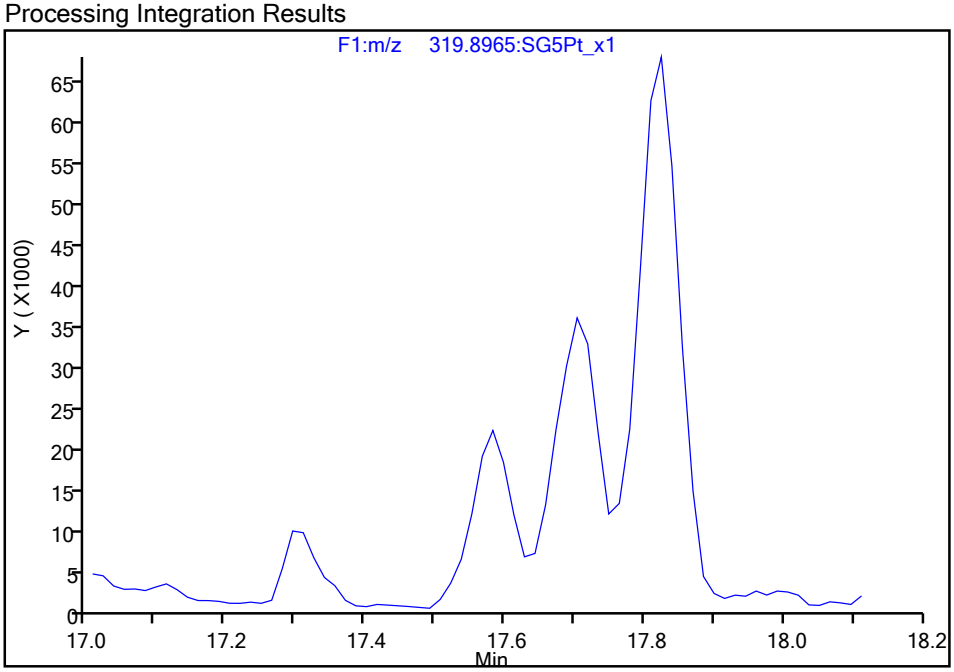

RT = 17.583 Area = 76229 M

Manual Integration Results

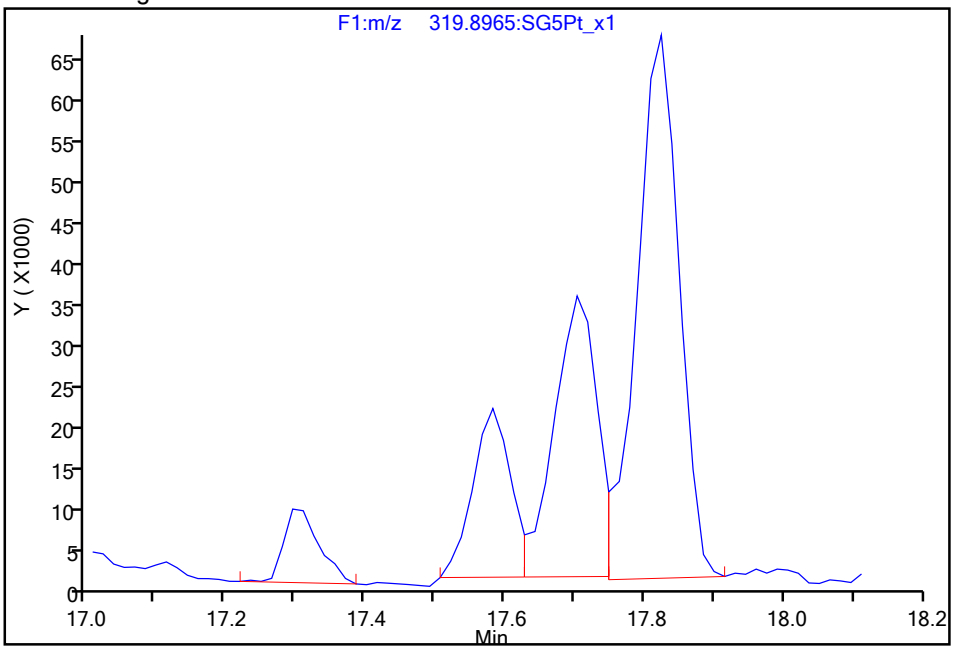

Reviewer: dadunj, 27-Aug-2021 10:02:35
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

791156

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d				
Injection Date:	25-Aug-2021 18:05:34	Instrument ID:	10D5		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:	SMA	ALS Bottle#:	16	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.60- 19.47)

Signal: 1

Processing Integration Results

RT = 17.704 Area = 219345

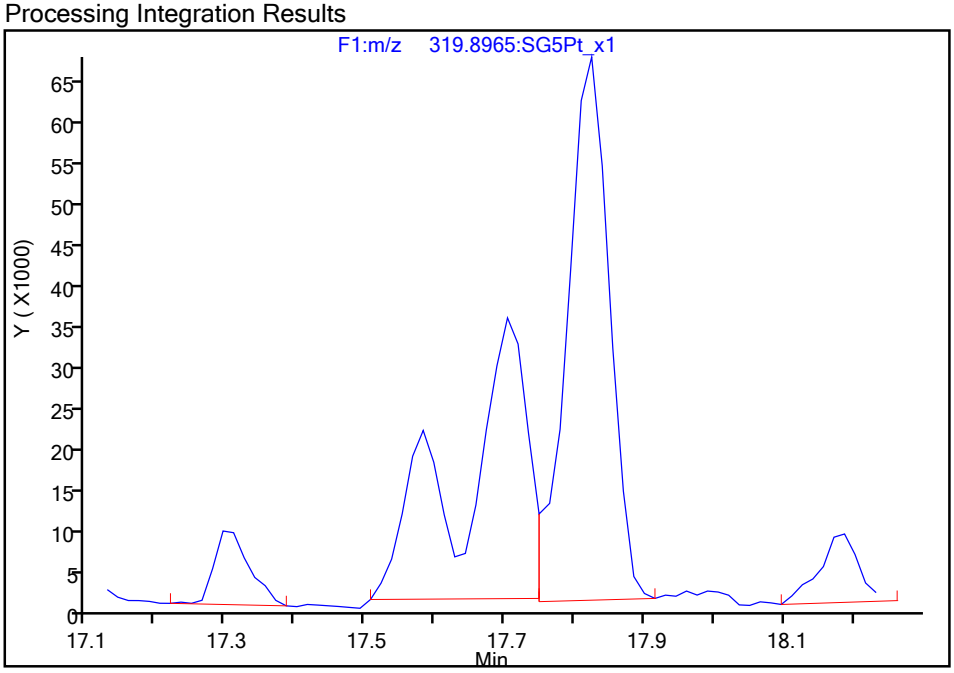

Manual Integration Results

RT = 17.704 Area = 143109 M

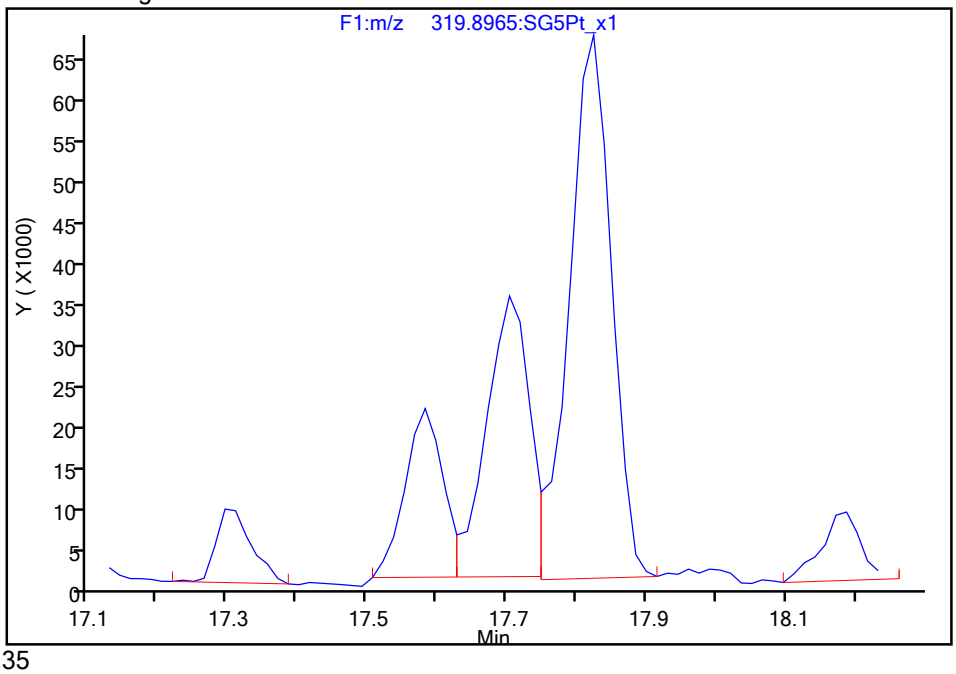

Reviewer: dadunj, 27-Aug-2021 10:02:35

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d				
Injection Date:	25-Aug-2021 18:05:34	Instrument ID:	10D5		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:	SMA	ALS Bottle#:	16	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.05
Area: 93300
Amount: 0.178239
Amount Units: pg/ul

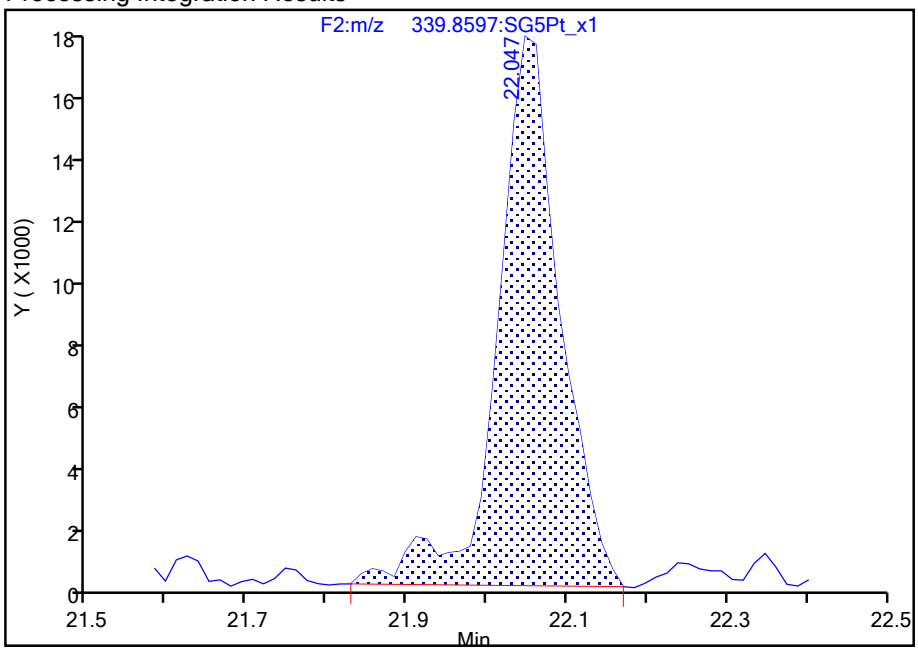

Manual Integration Results

RT: 22.05
Area: 88574
Amount: 0.158688
Amount Units: pg/ul

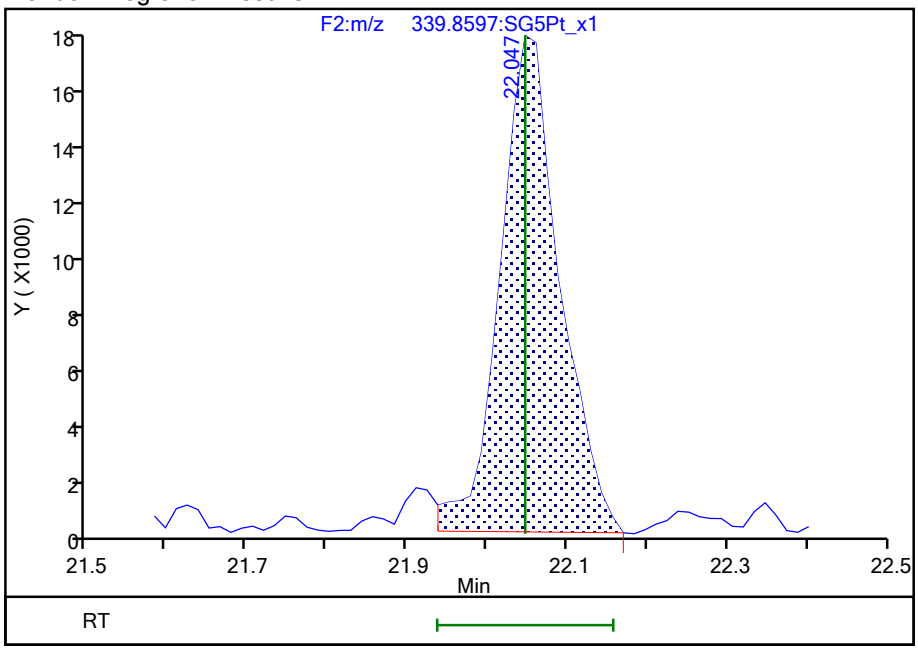

Reviewer: dadunj, 27-Aug-2021 10:03:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

791158

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d				
Injection Date:	25-Aug-2021 18:05:34	Instrument ID:	10D5		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:	SMA	ALS Bottle#:	16	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.06
Area: 67246
Amount: 0.178239
Amount Units: pg/ul

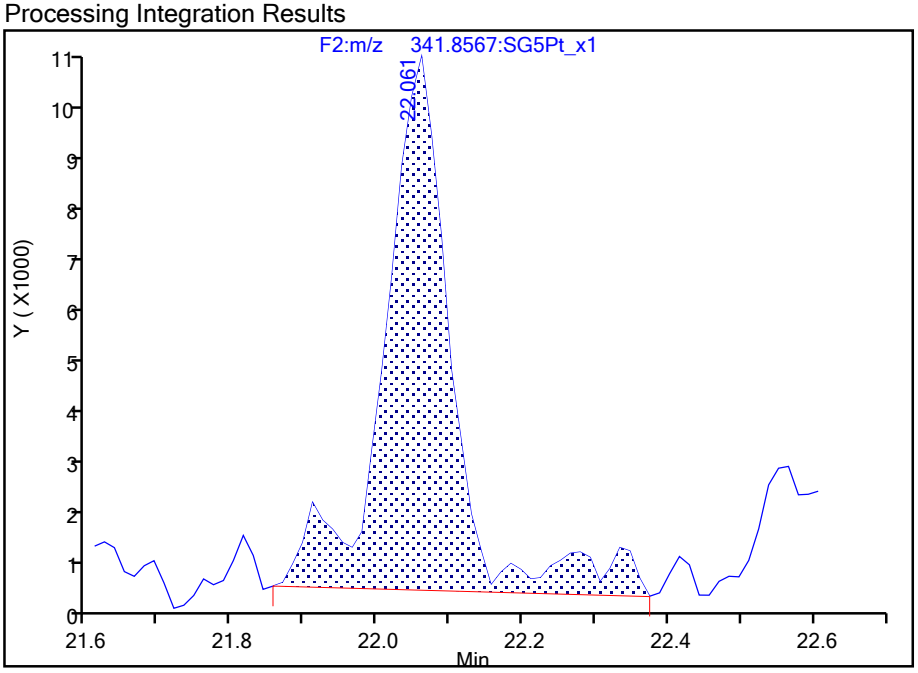

Manual Integration Results

RT: 22.06
Area: 54361
Amount: 0.158688
Amount Units: pg/ul

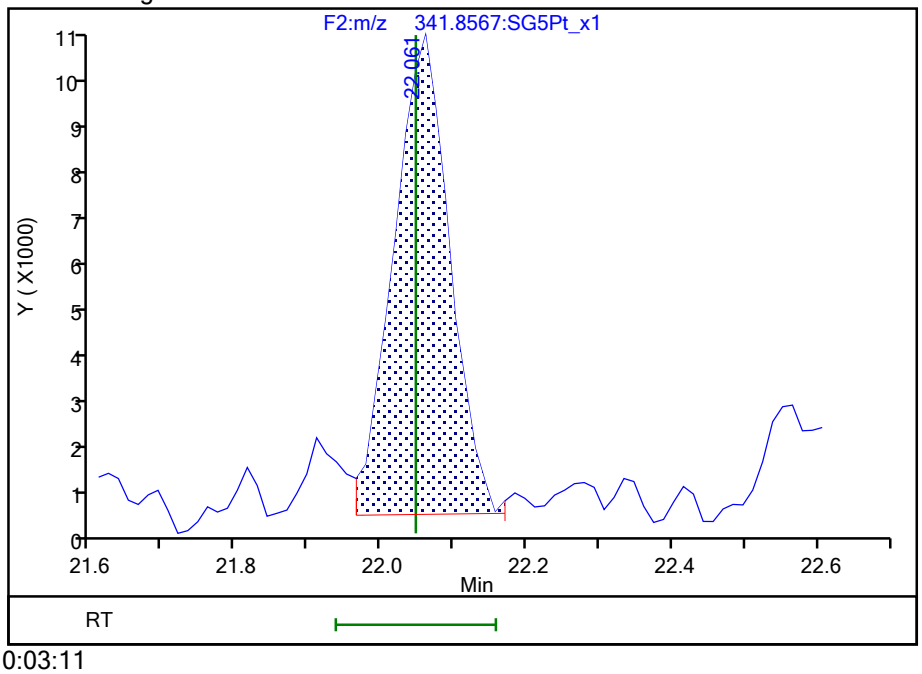

Reviewer: dadunj, 27-Aug-2021 10:03:11
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

791159

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d				
Injection Date:	25-Aug-2021 18:05:34	Instrument ID:	10D5		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:	SMA	ALS Bottle#:	16	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.37
Area: 32678
Amount: 0.069066
Amount Units: pg/ul

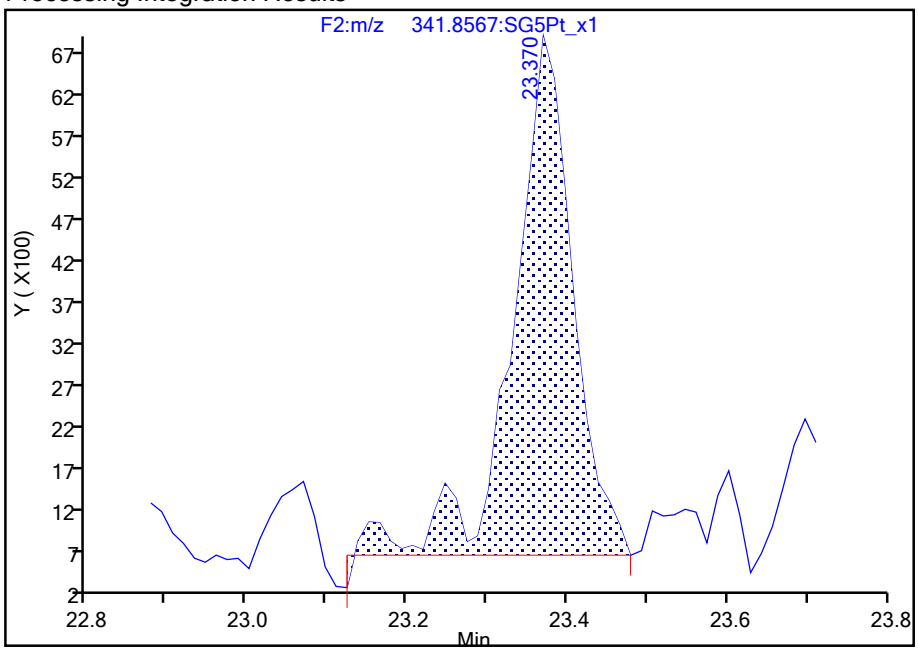

Manual Integration Results

RT: 23.37
Area: 29792
Amount: 0.066136
Amount Units: pg/ul

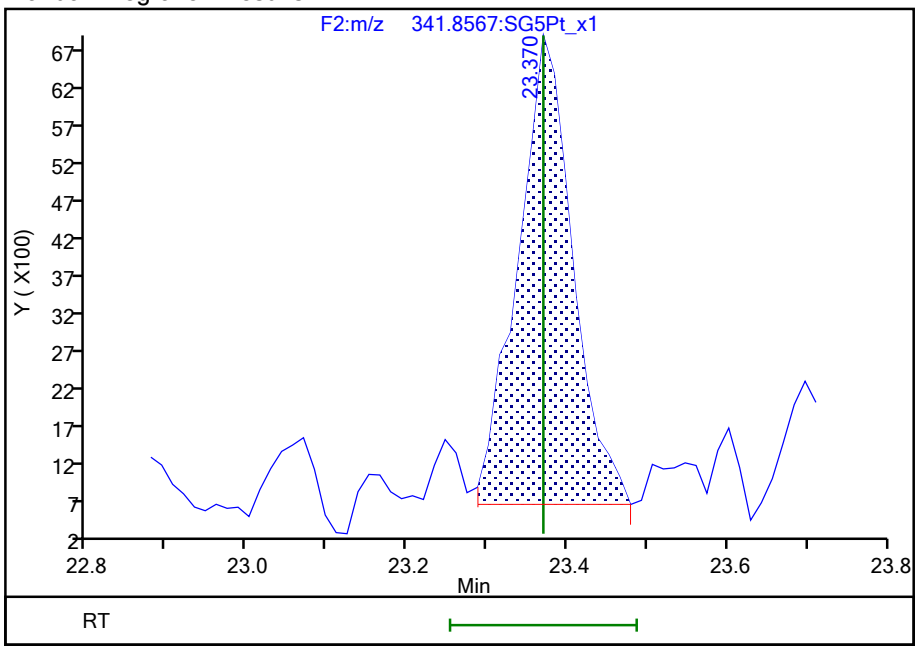

Reviewer: dadunj, 27-Aug-2021 10:00:55

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d				
Injection Date:	25-Aug-2021 18:05:34	Instrument ID:	10D5		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:	SMA	ALS Bottle#:	16	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 2, m/z: 341.8567, RT: (20.02- 26.12)

Signal: 2

Processing Integration Results

RT = 20.725 Area = 59011

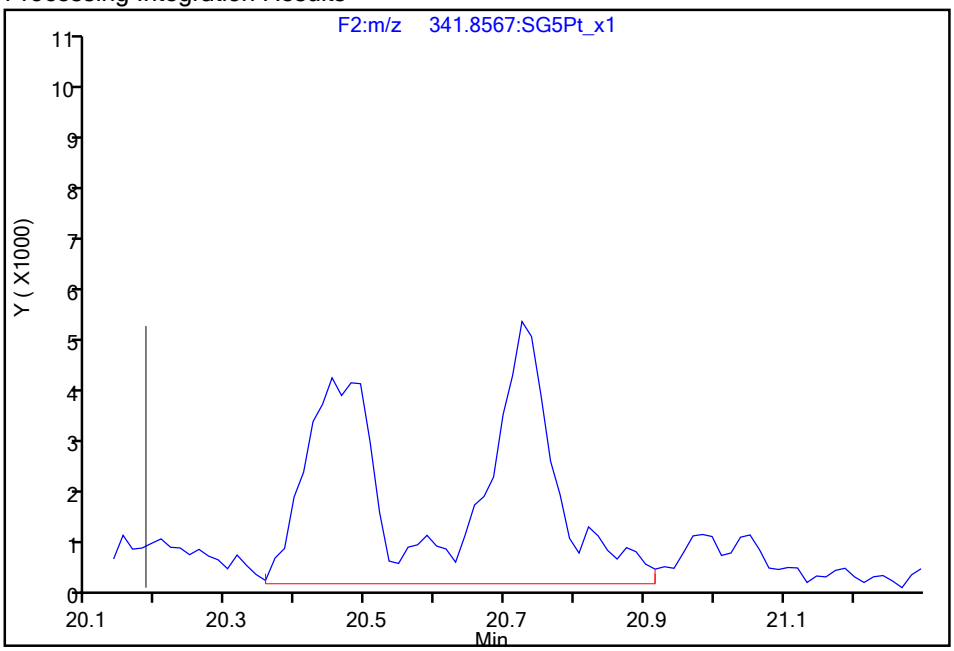

Manual Integration Results

RT = 20.725 Area = 25439 M

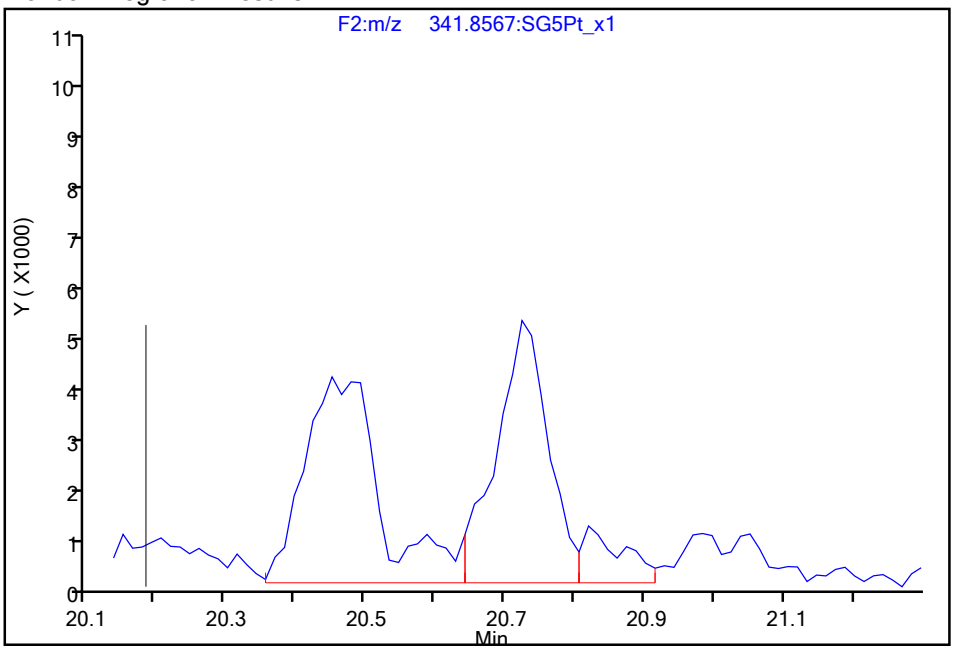

Reviewer: dadunj, 27-Aug-2021 10:01:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d				
Injection Date:	25-Aug-2021 18:05:34	Instrument ID:	10D5		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:	SMA	ALS Bottle#:	16	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.17
Area: 25002
Amount: 0.060854
Amount Units: pg/ul

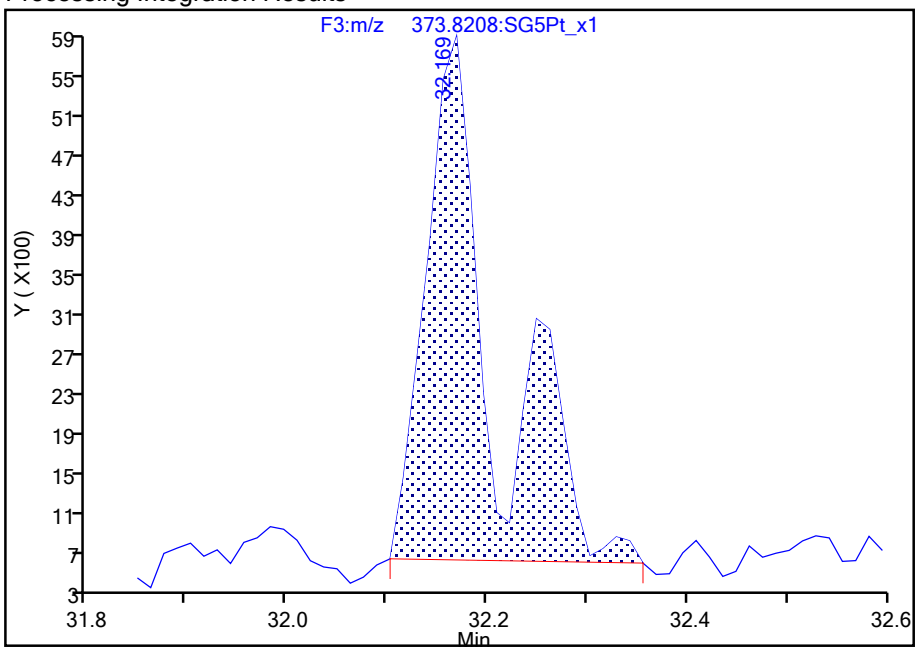

Manual Integration Results

RT: 32.17
Area: 17733
Amount: 0.044669
Amount Units: pg/ul

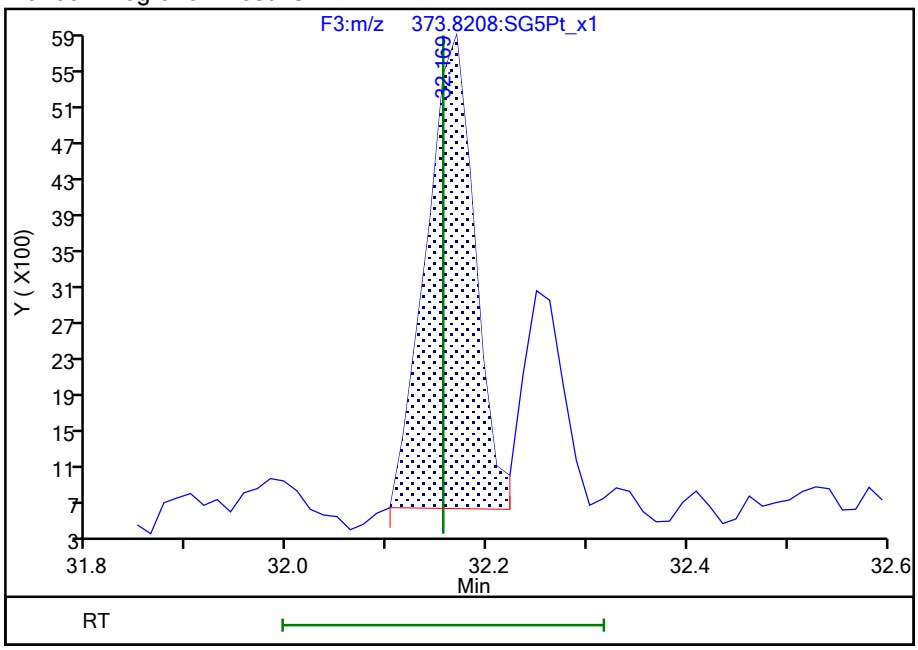

Reviewer: dadunj, 27-Aug-2021 10:01:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d				
Injection Date:	25-Aug-2021 18:05:34	Instrument ID:	10D5		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:	SMA	ALS Bottle#:	16	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.16
Area: 18925
Amount: 0.060854
Amount Units: pg/ul

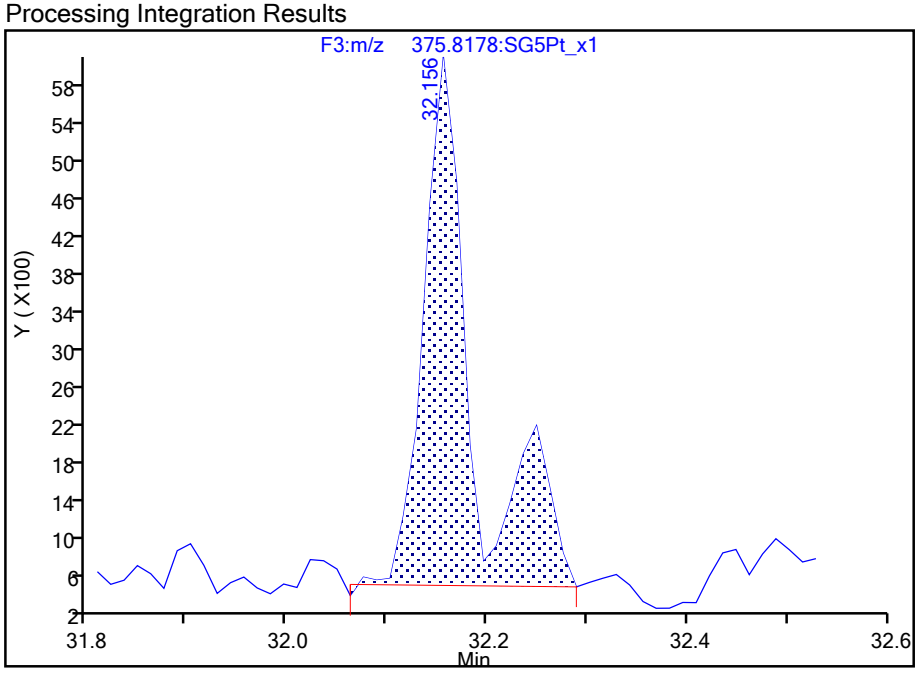

Manual Integration Results

RT: 32.16
Area: 14511
Amount: 0.044669
Amount Units: pg/ul

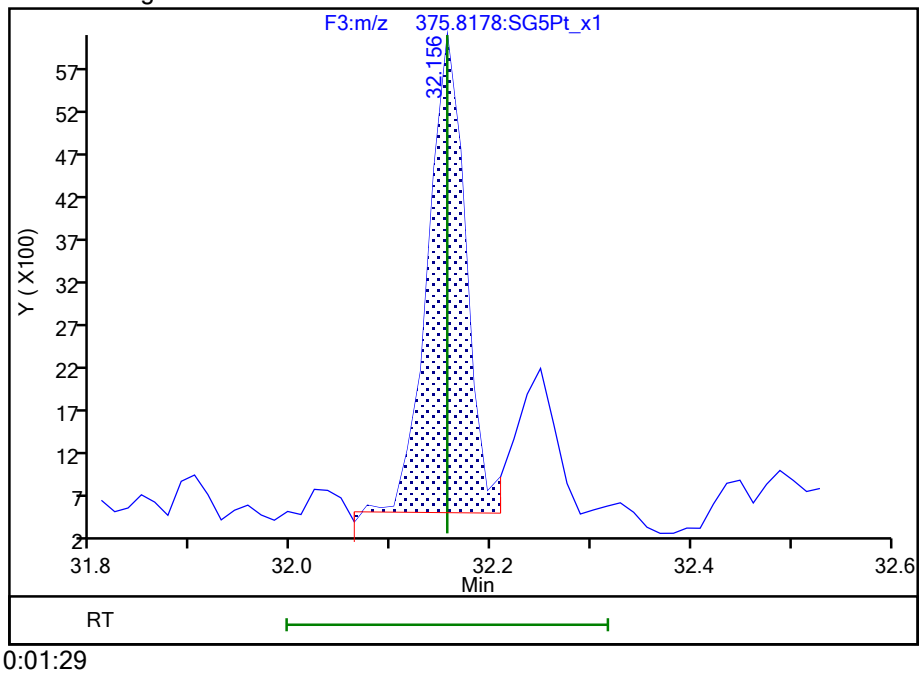

Reviewer: dadunj, 27-Aug-2021 10:01:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d				
Injection Date:	25-Aug-2021 18:05:34	Instrument ID:	10D5		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:	SMA	ALS Bottle#:	16	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.72
Area: 75242
Amount: 0.275178
Amount Units: pg/ul

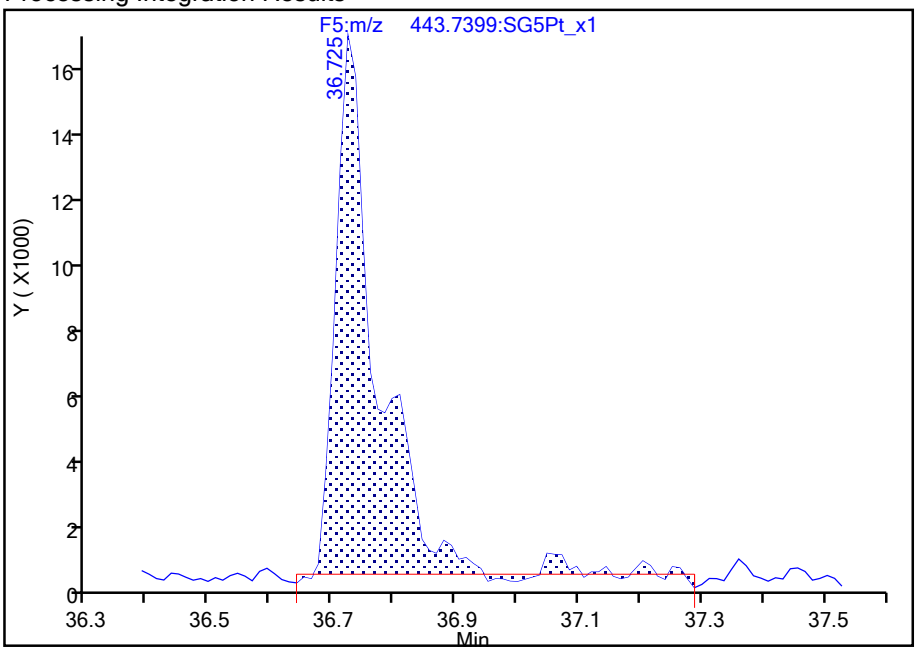

Manual Integration Results

RT: 36.81
Area: 19827
Amount: 0.101124
Amount Units: pg/ul

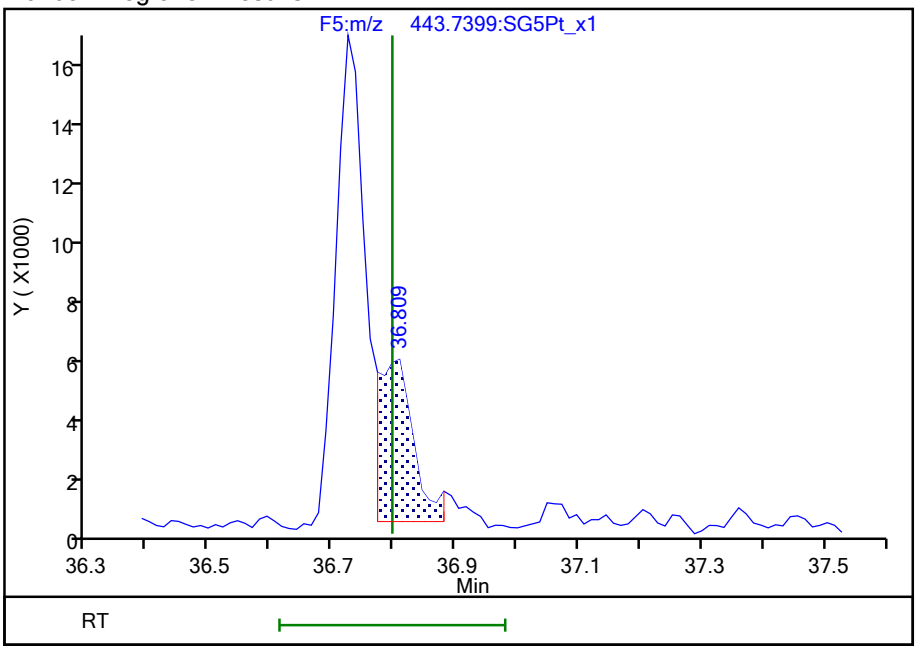

Reviewer: dadunj, 27-Aug-2021 10:02:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d				
Injection Date:	25-Aug-2021 18:05:34	Instrument ID:	10D5		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:	SMA	ALS Bottle#:	16	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.74
Area: 43065
Amount: 0.275178
Amount Units: pg/ul

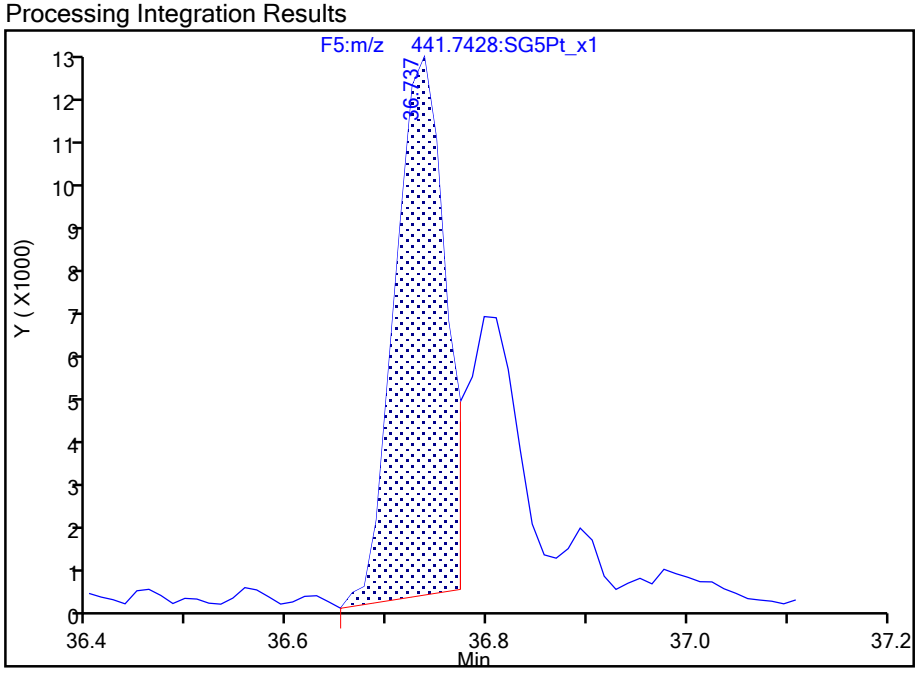

Manual Integration Results

RT: 36.80
Area: 23649
Amount: 0.101124
Amount Units: pg/ul

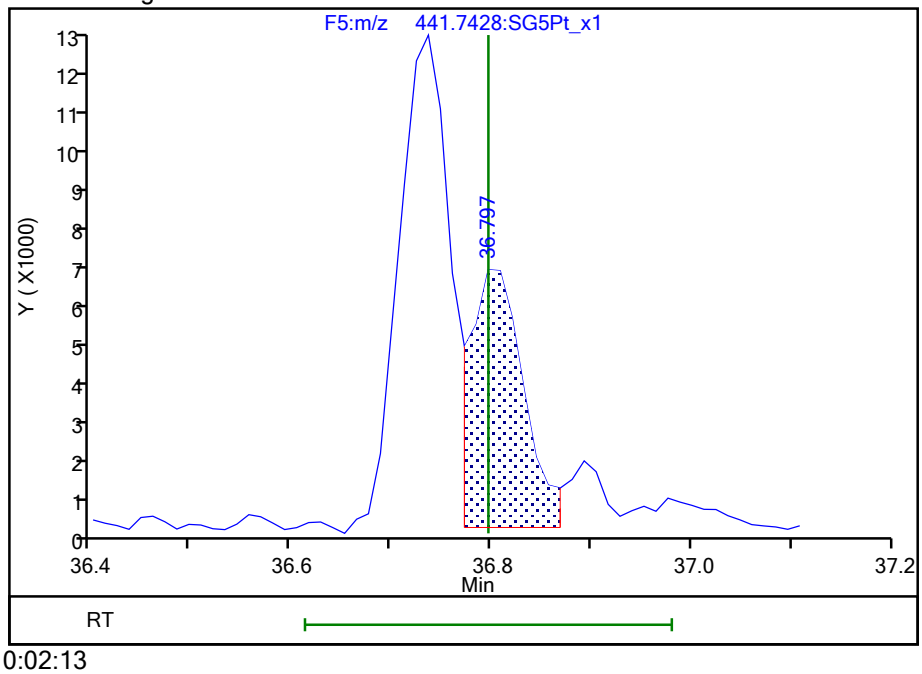

Reviewer: dadunj, 27-Aug-2021 10:02:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

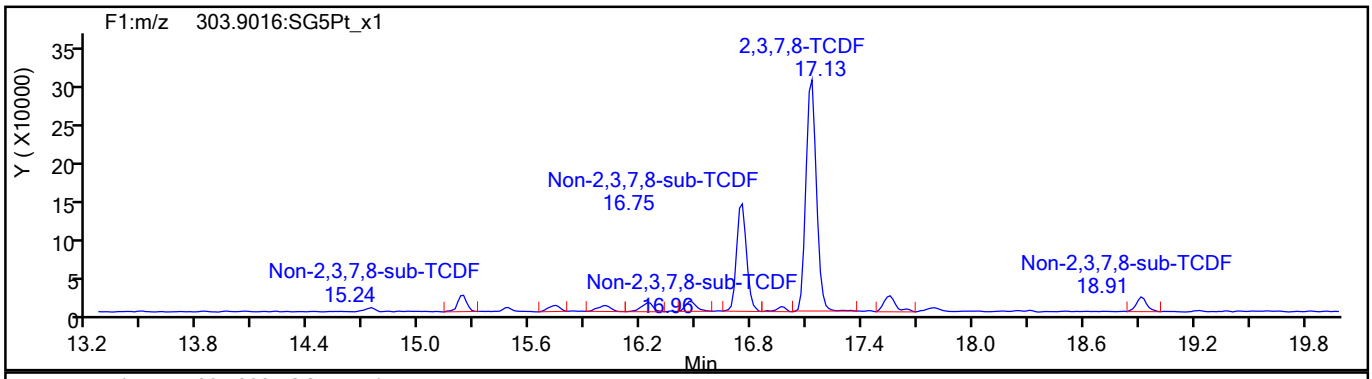

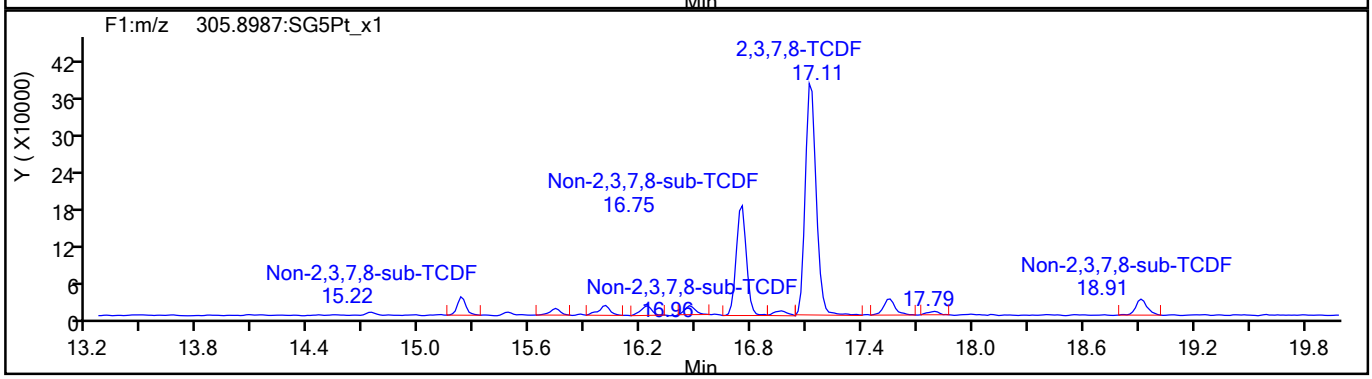

TCDF Standards

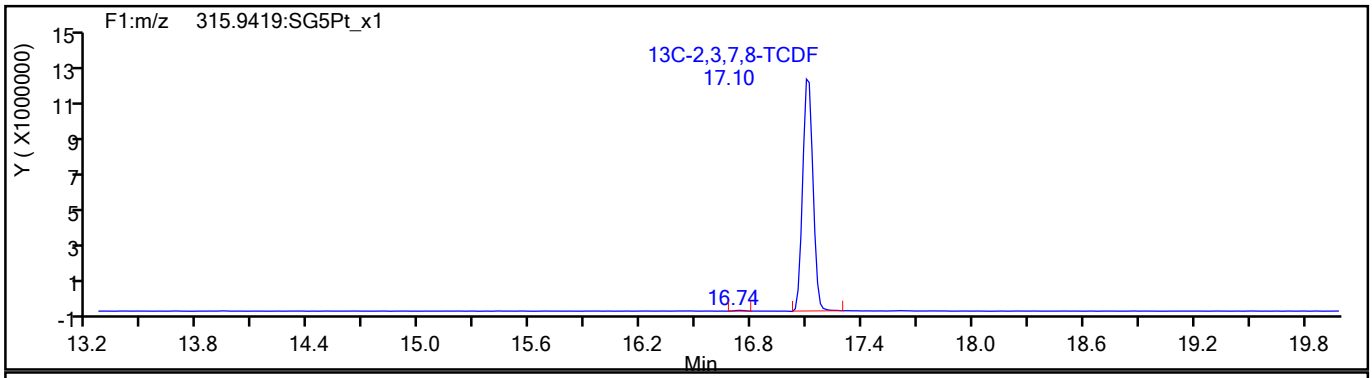

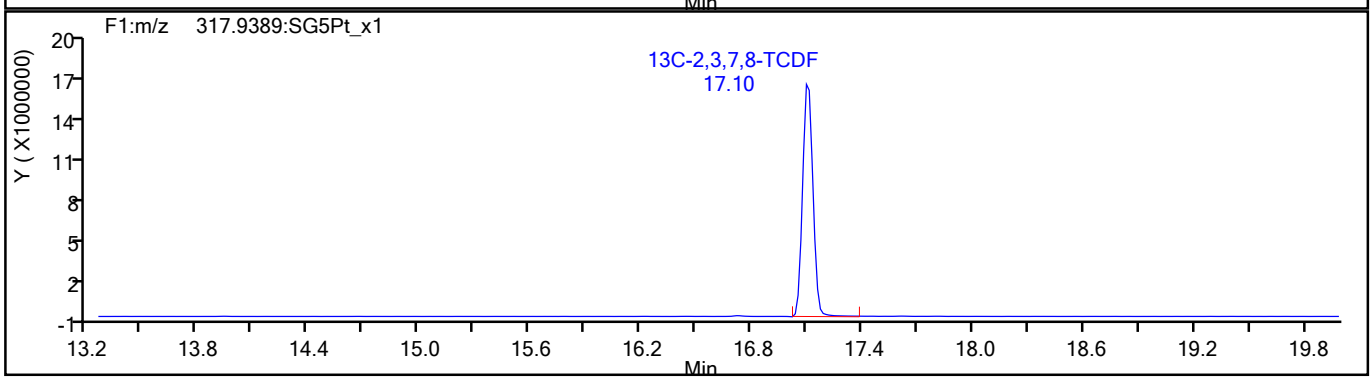

791166

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

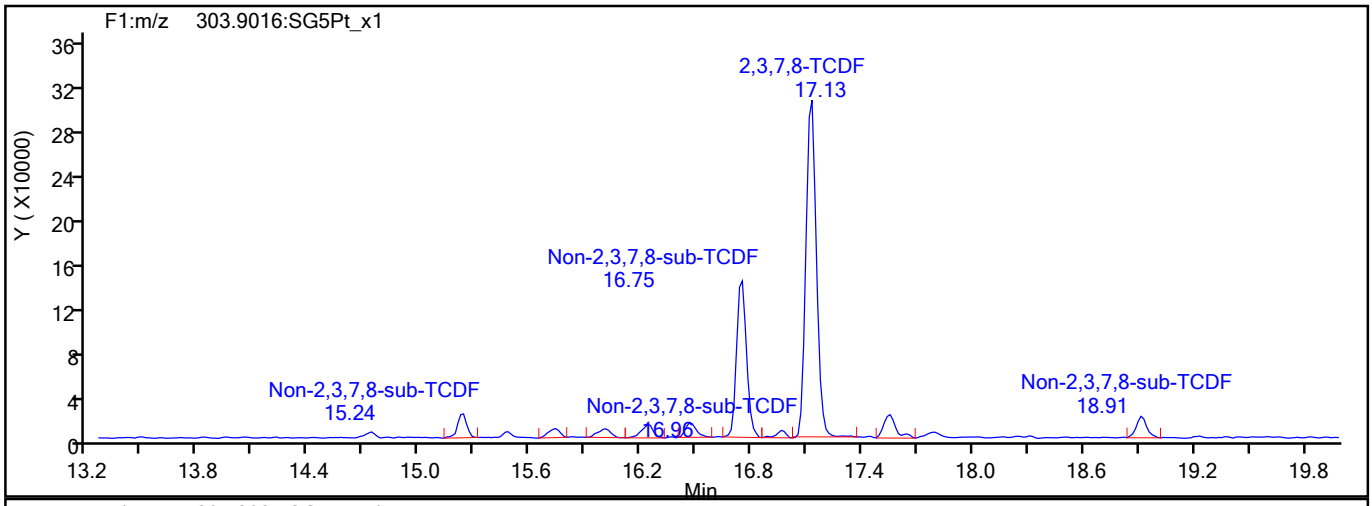

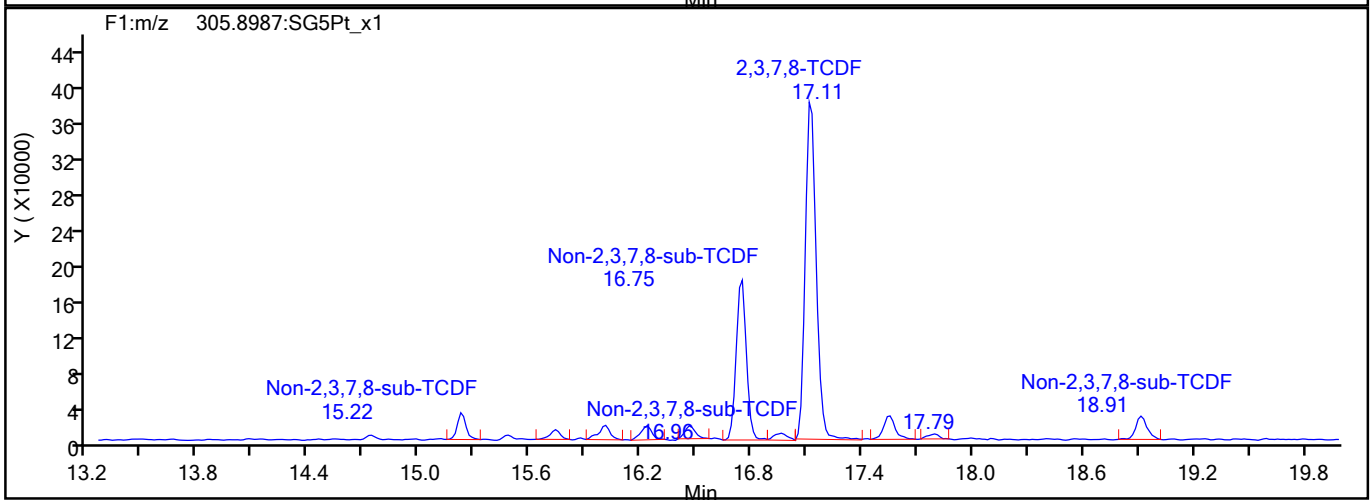

TCDF Interference Mass

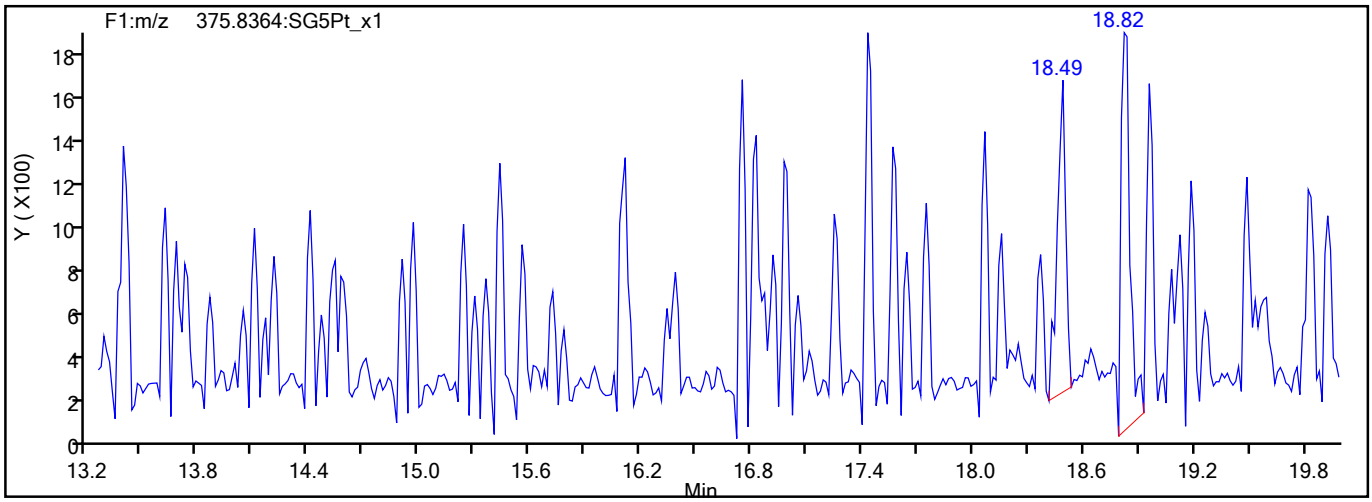

791167

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

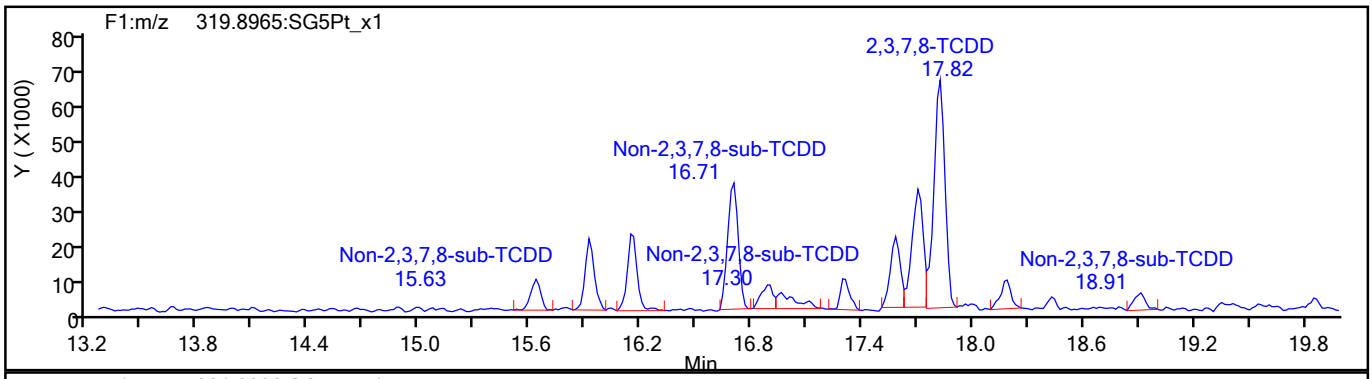

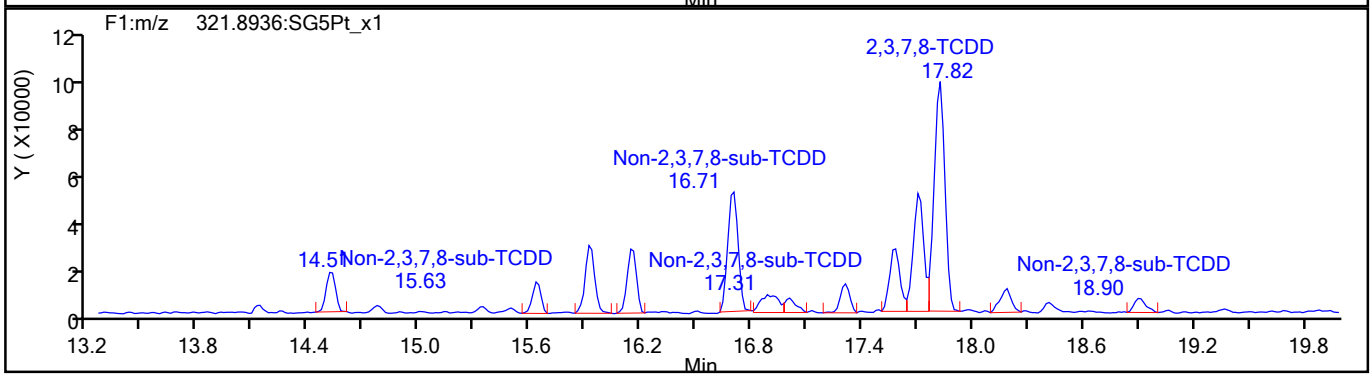

TCDD Standards

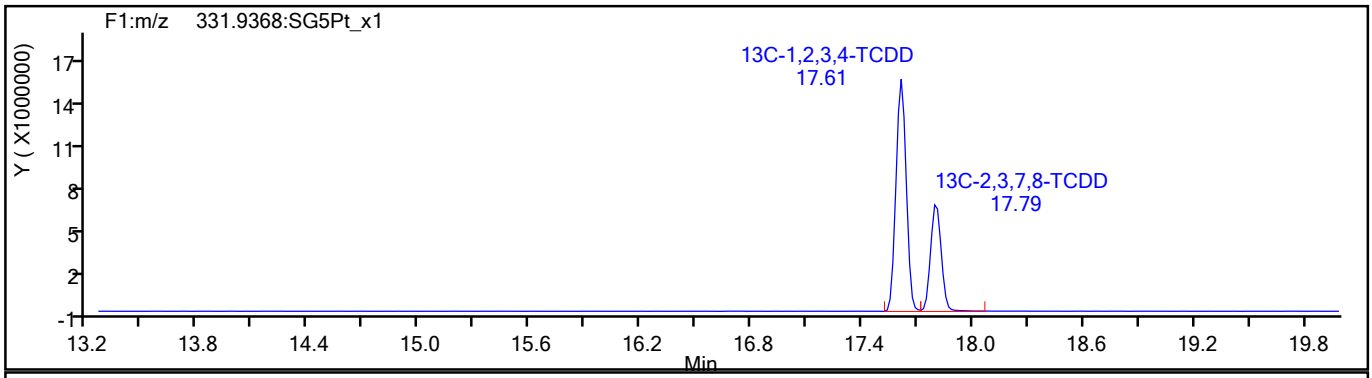

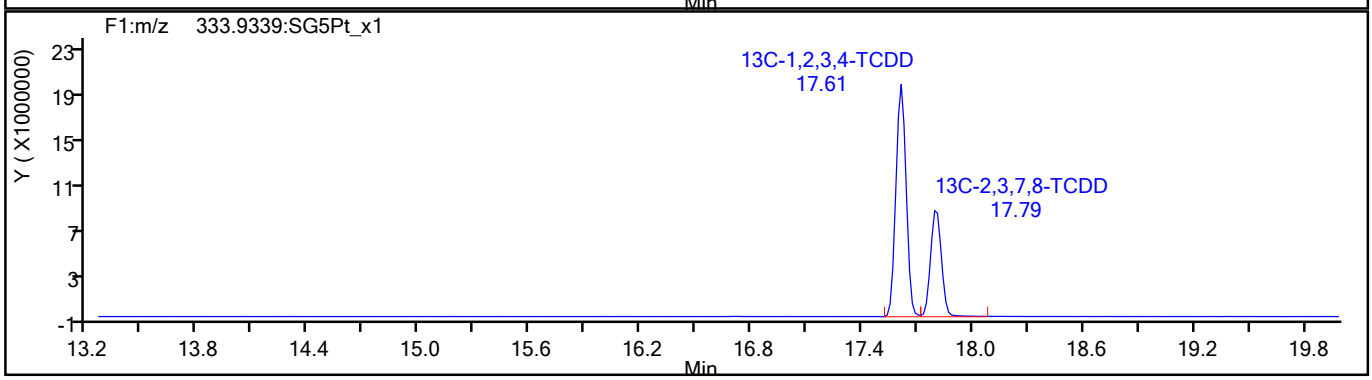

791168

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

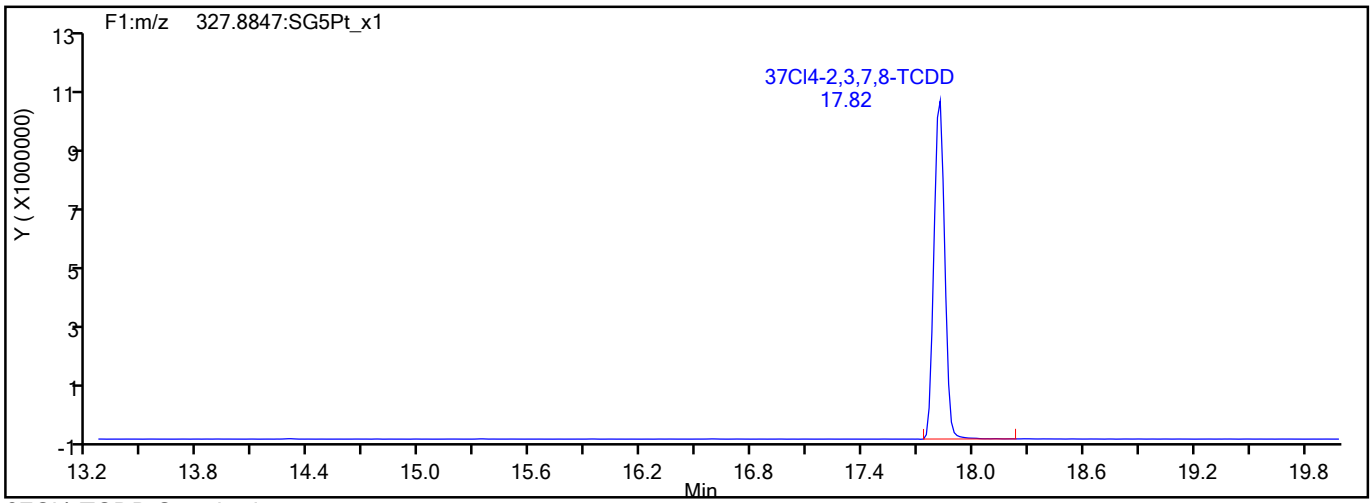

37Cl4-TCDD Standards

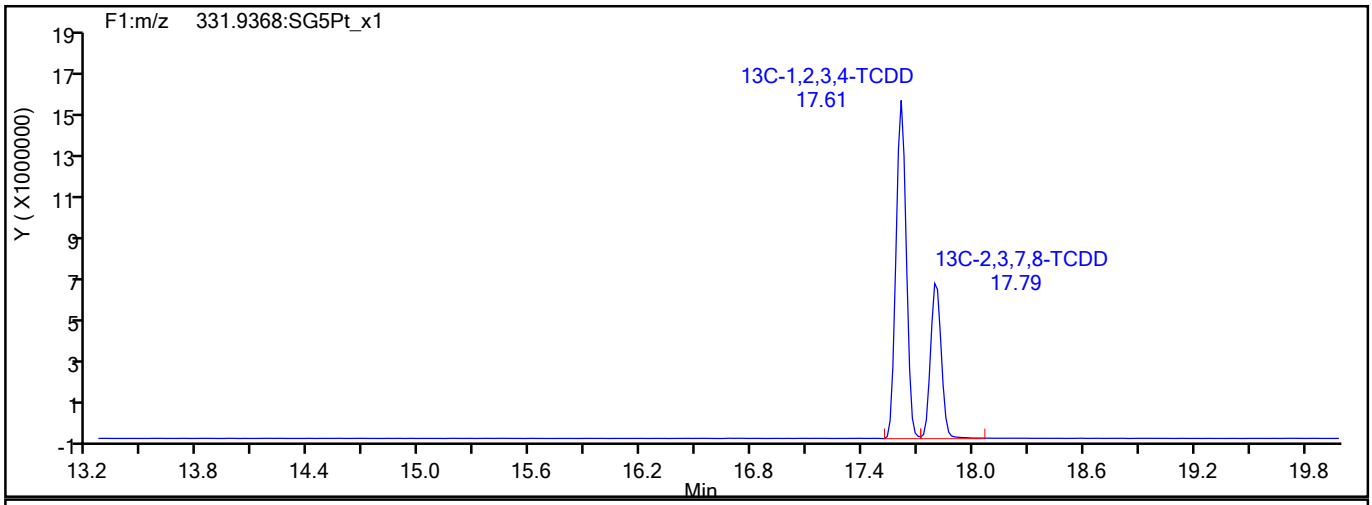

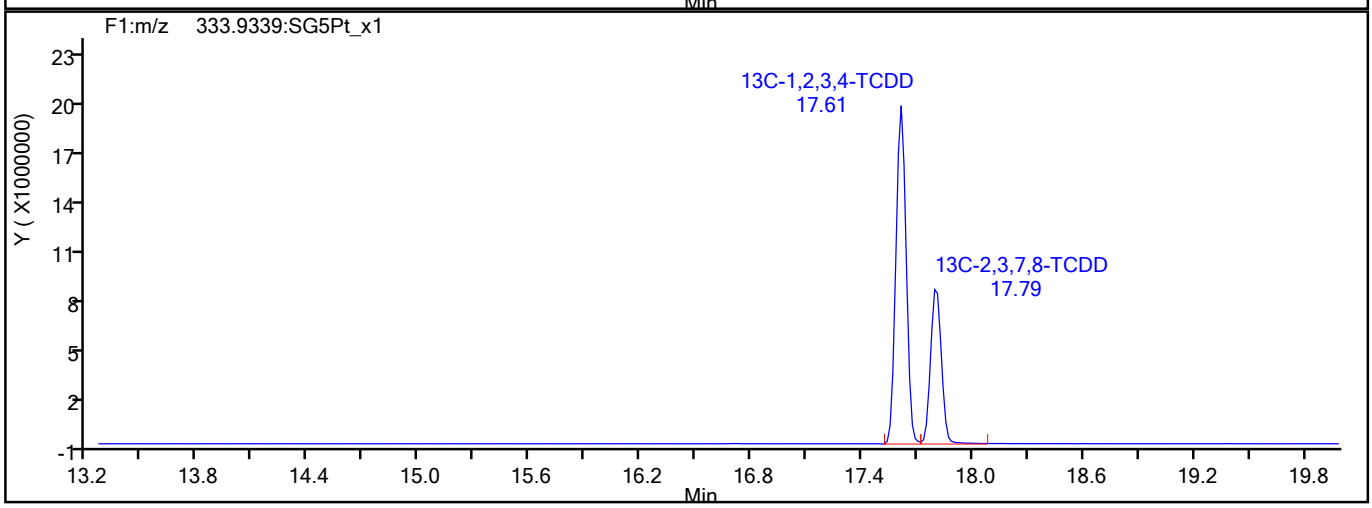

791169

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

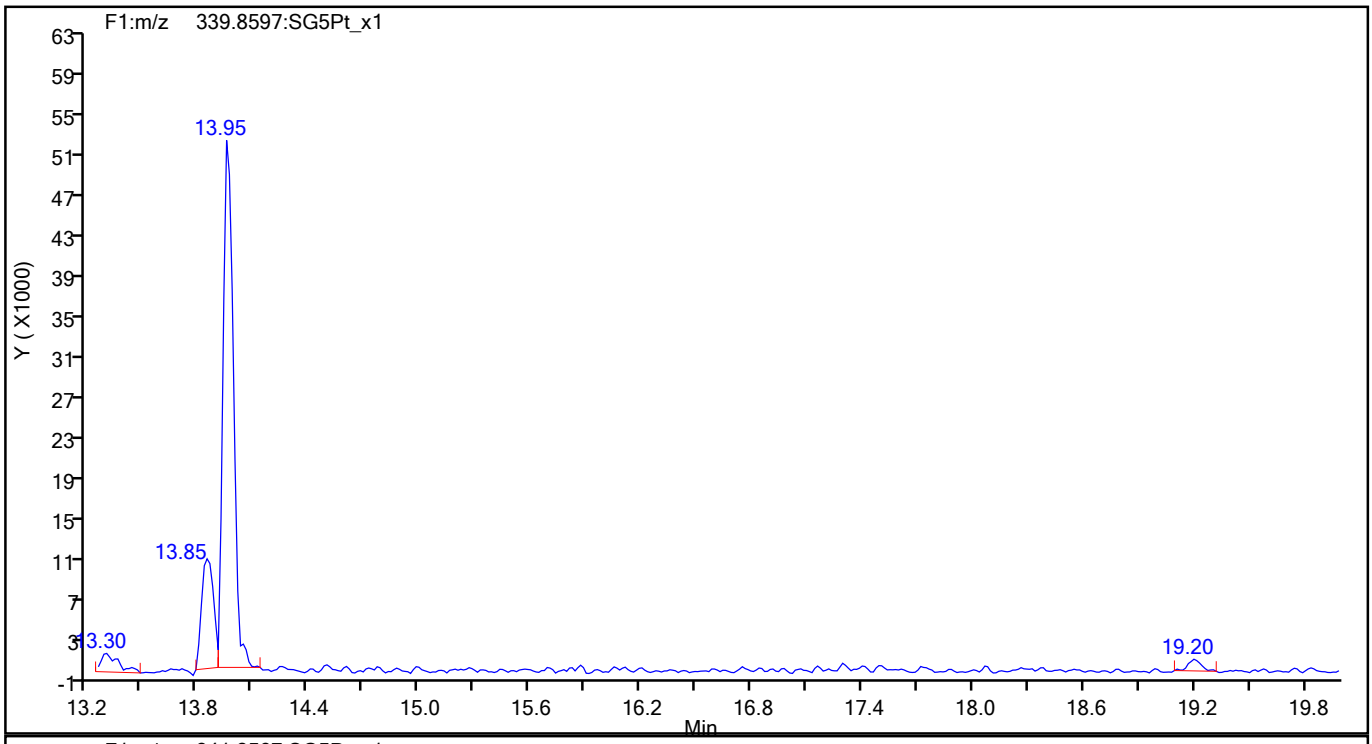

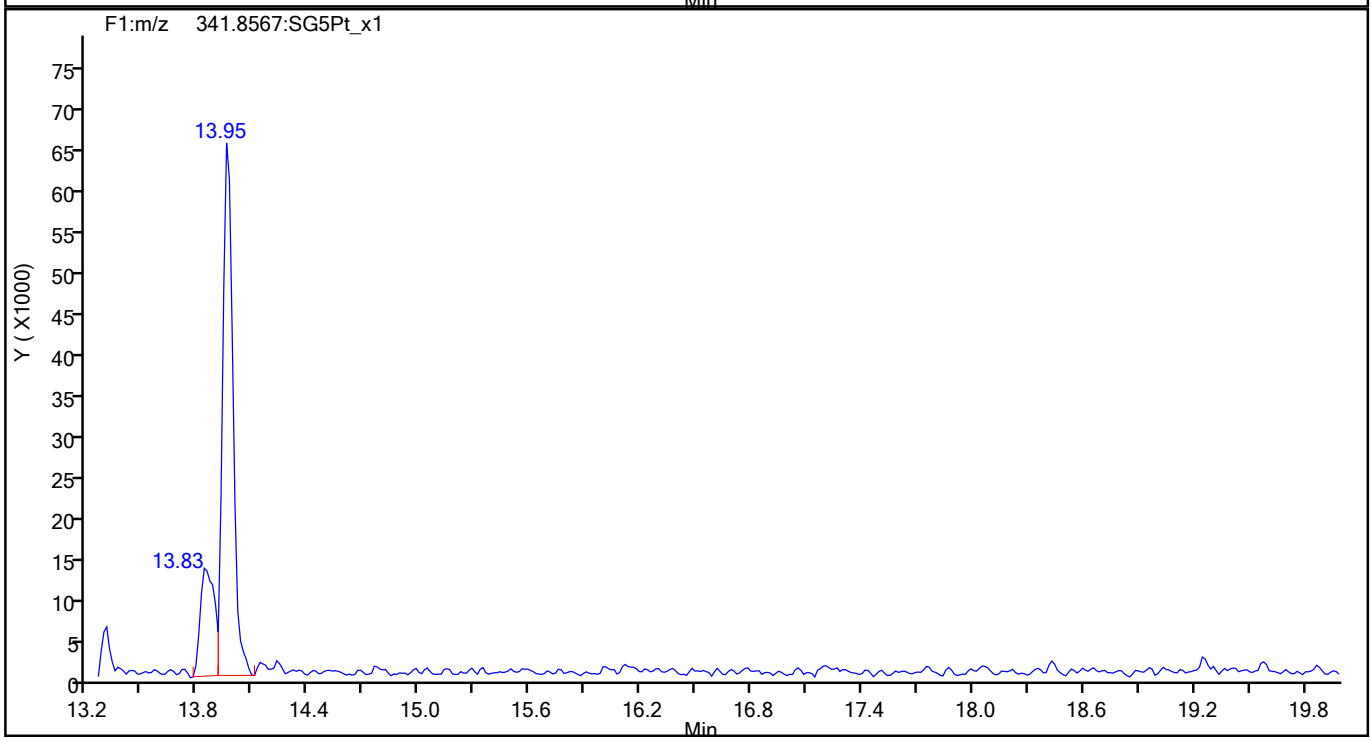

791170

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

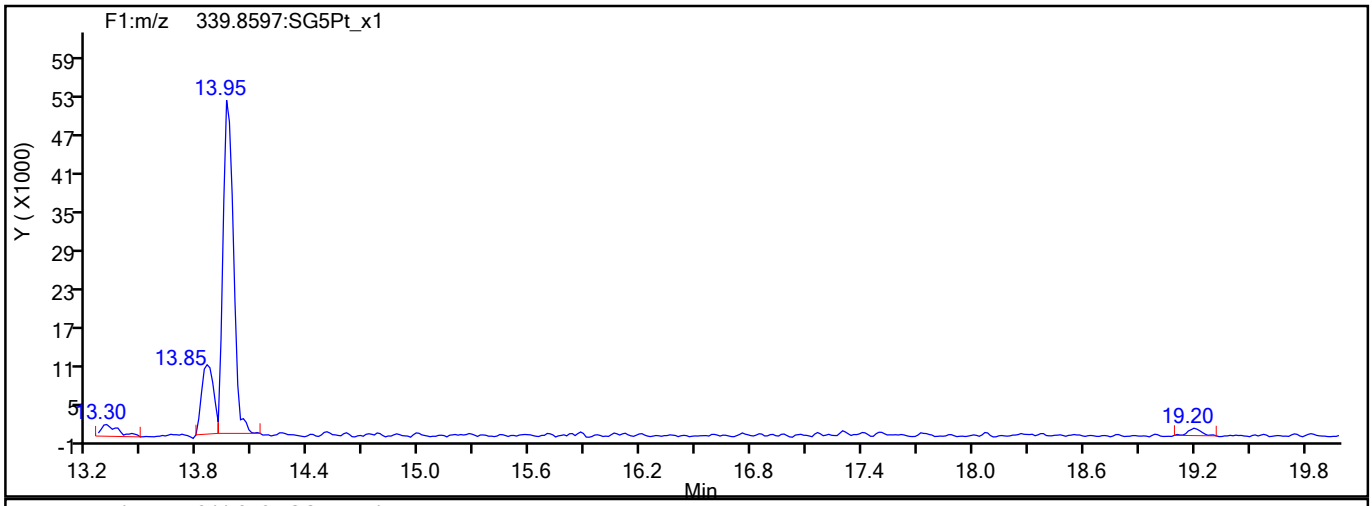

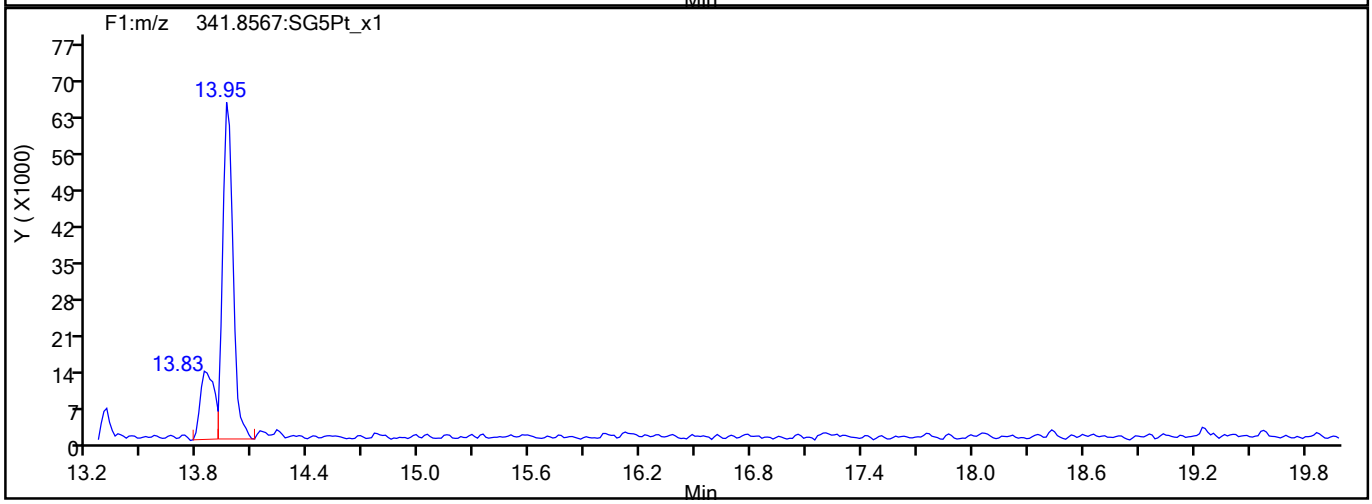

F1 PeCDFs Interference Mass

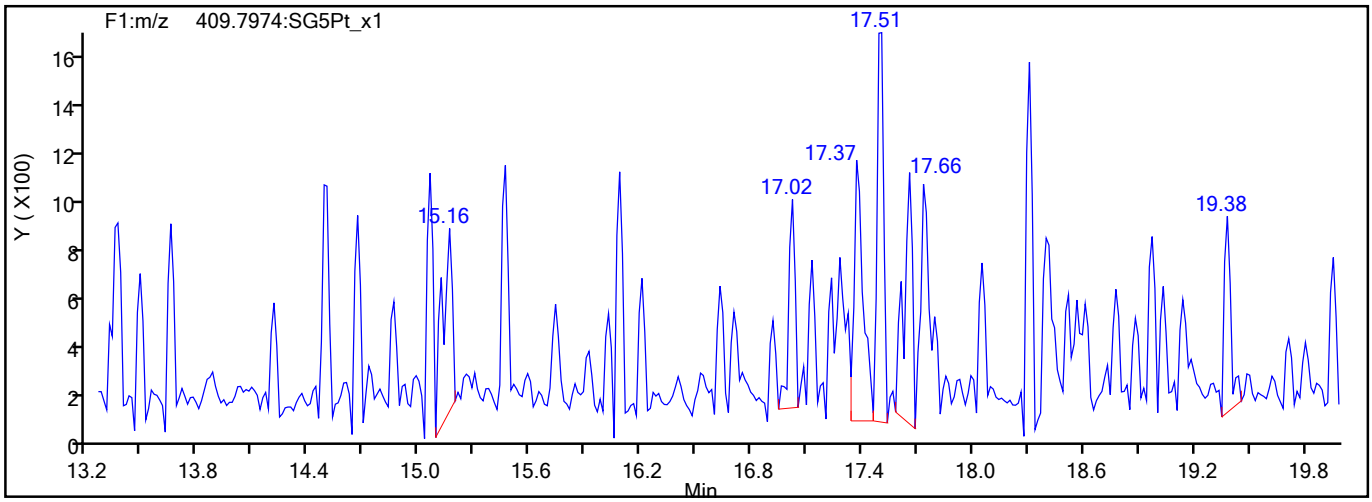

791171

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

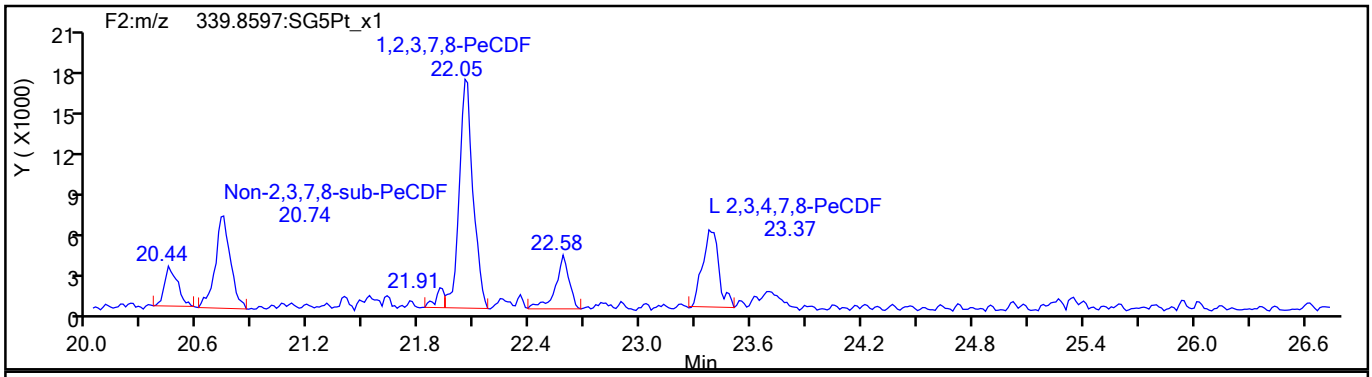

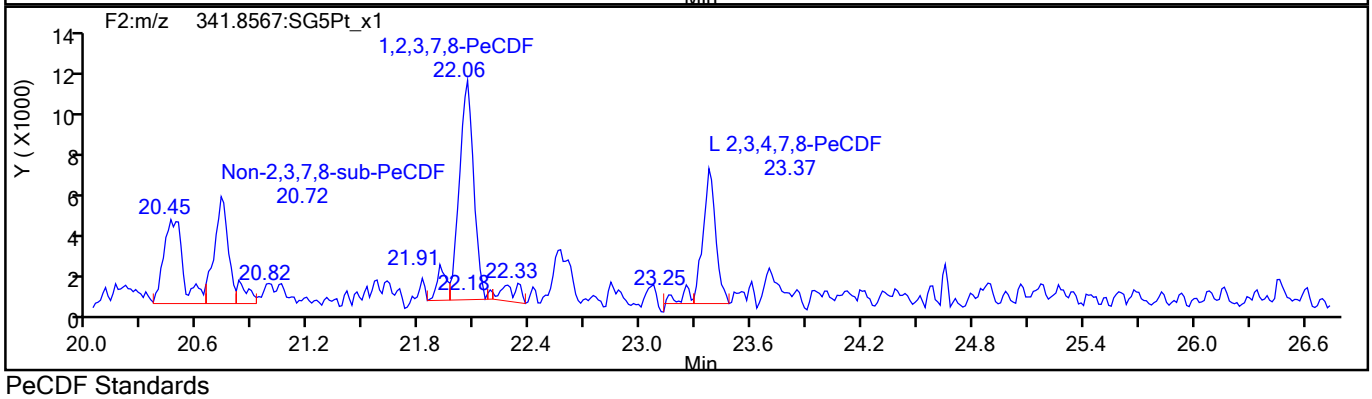

PeCDF Standards

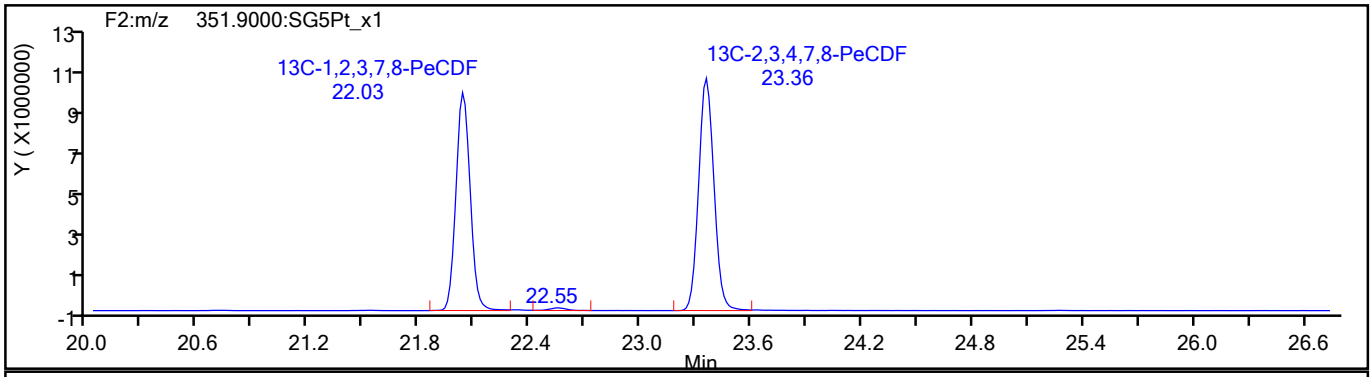

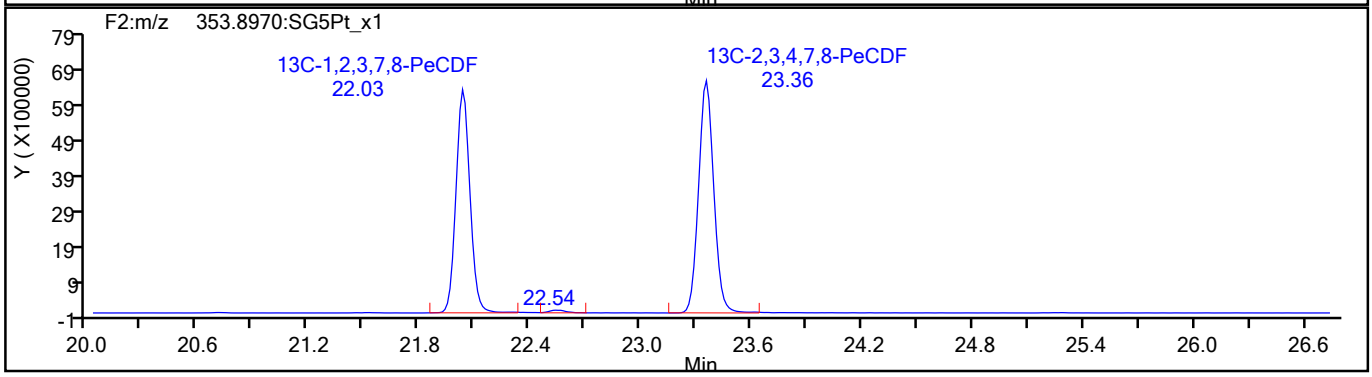

791172

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

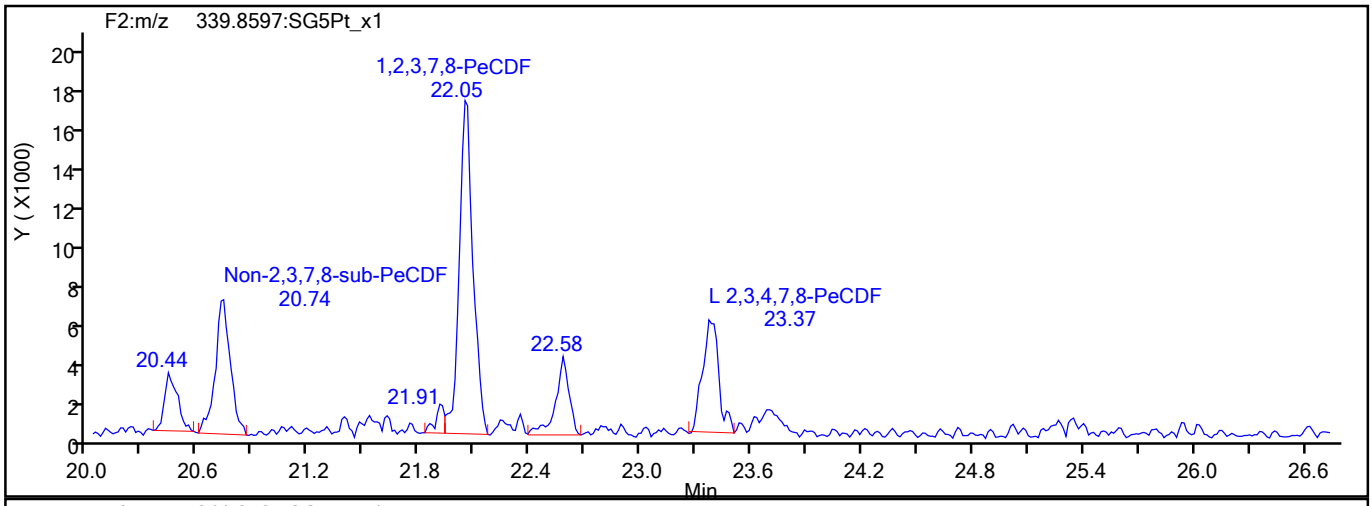

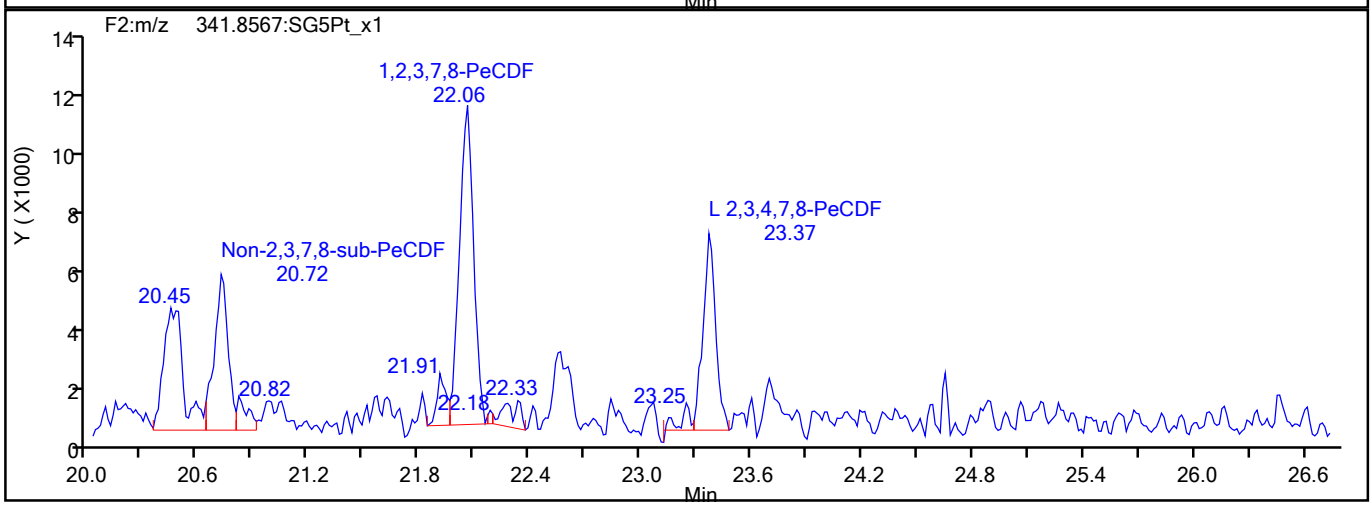

PeCDF Interference Mass

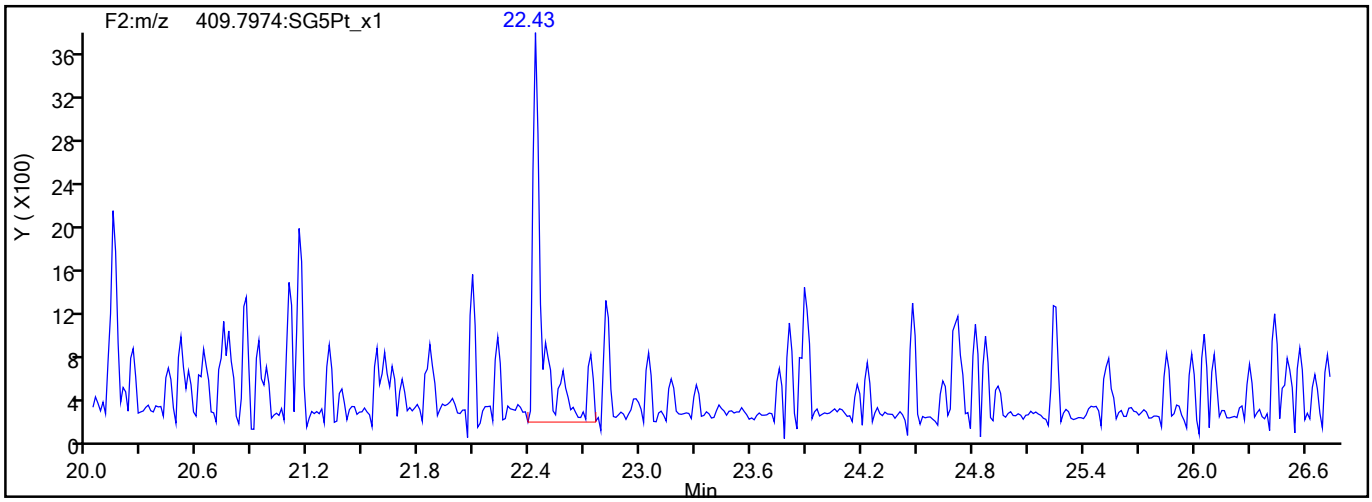

791173

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

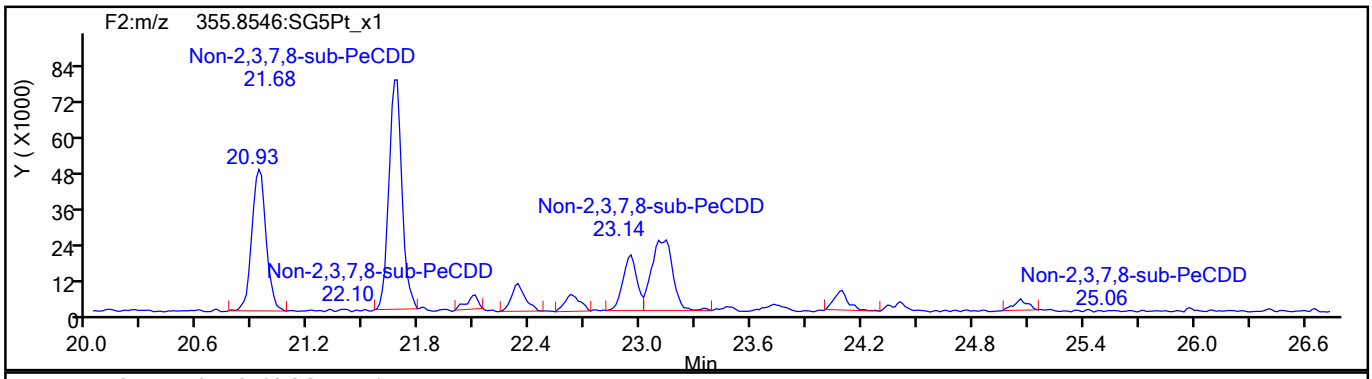

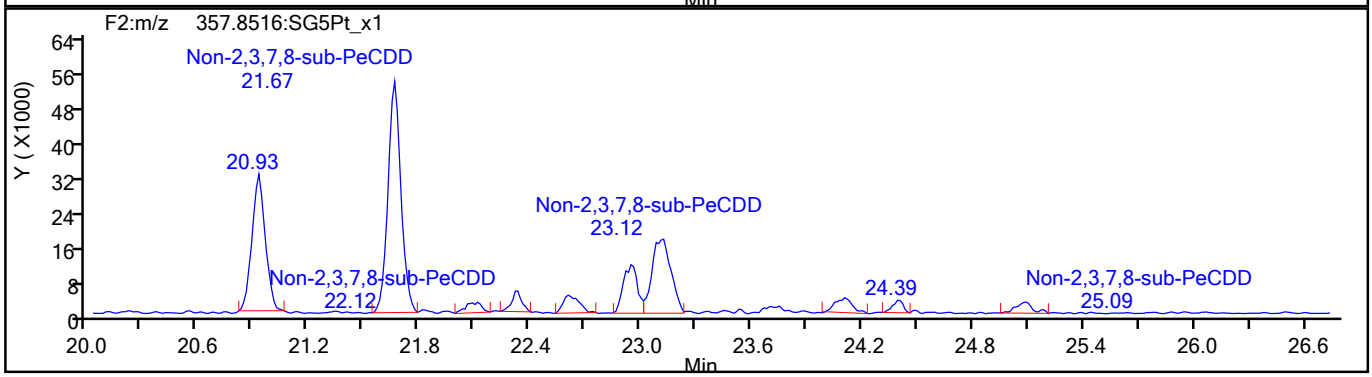

PeCDD Standards

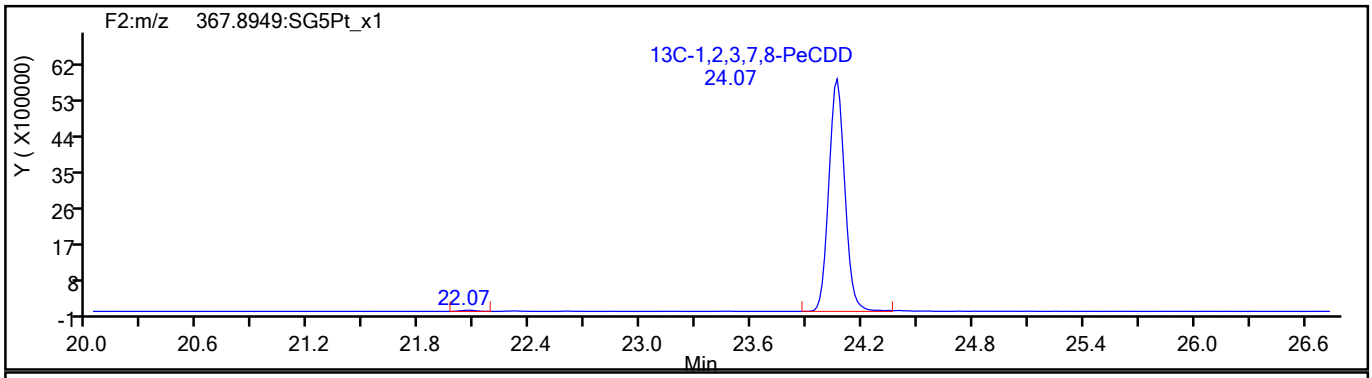

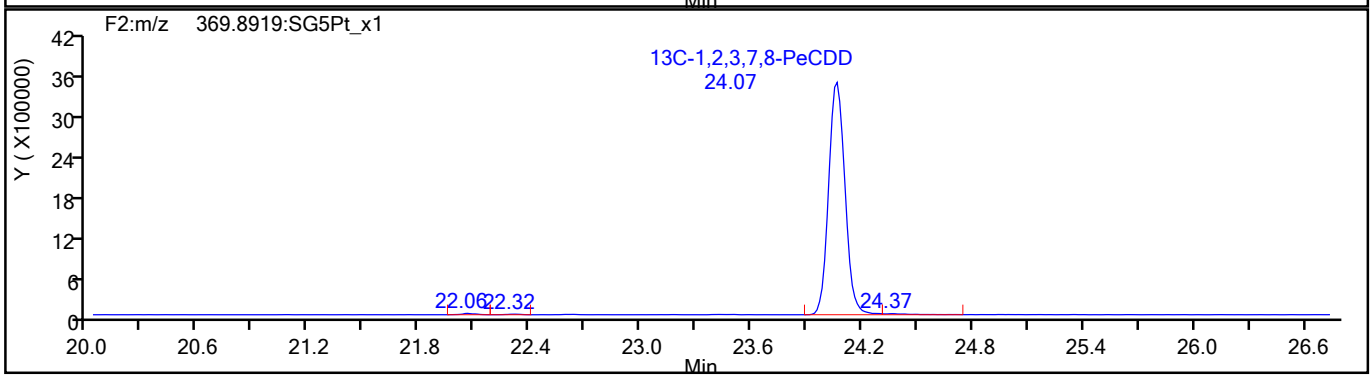

791174

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

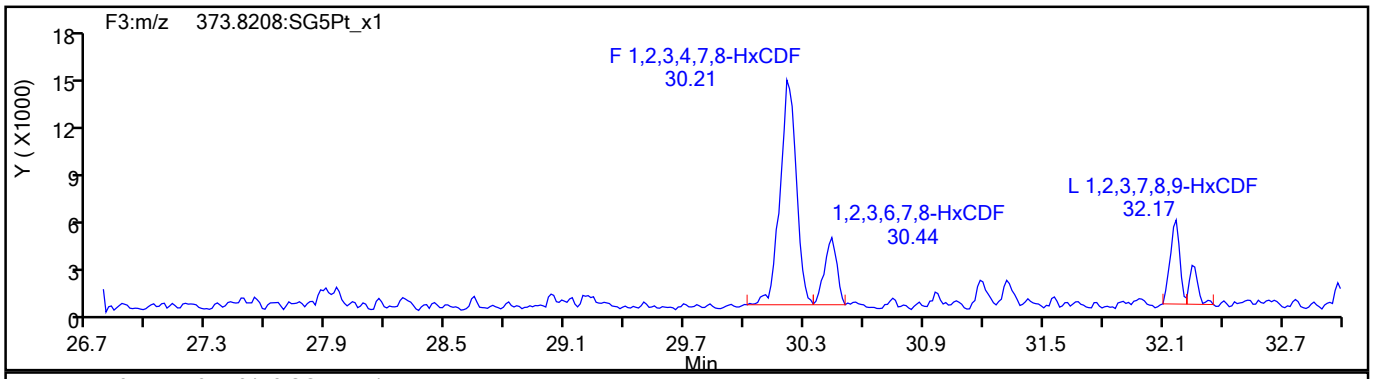

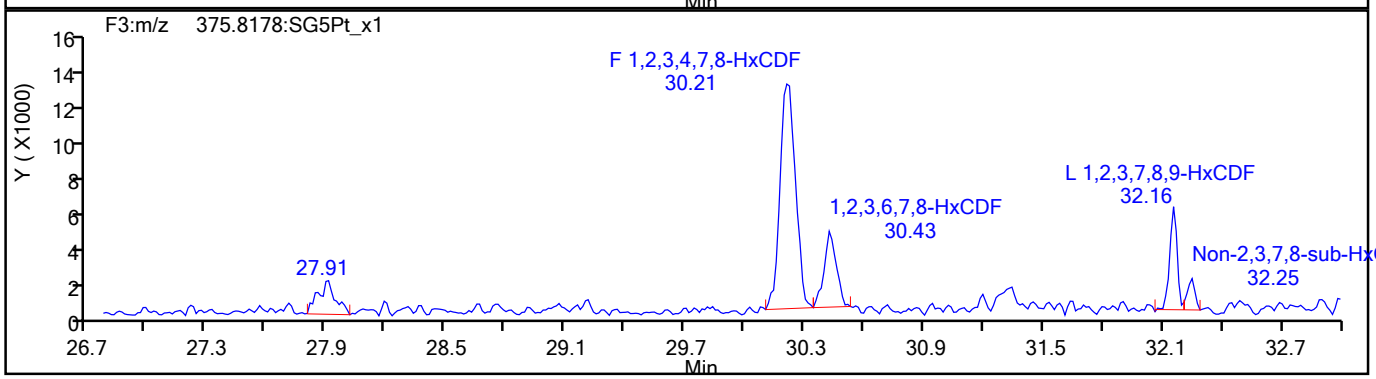

HxCDF Standards

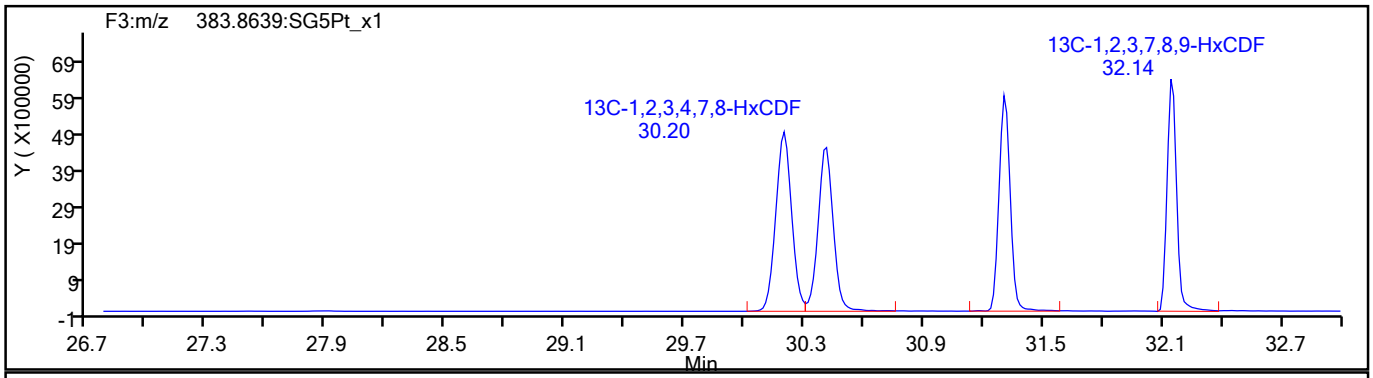

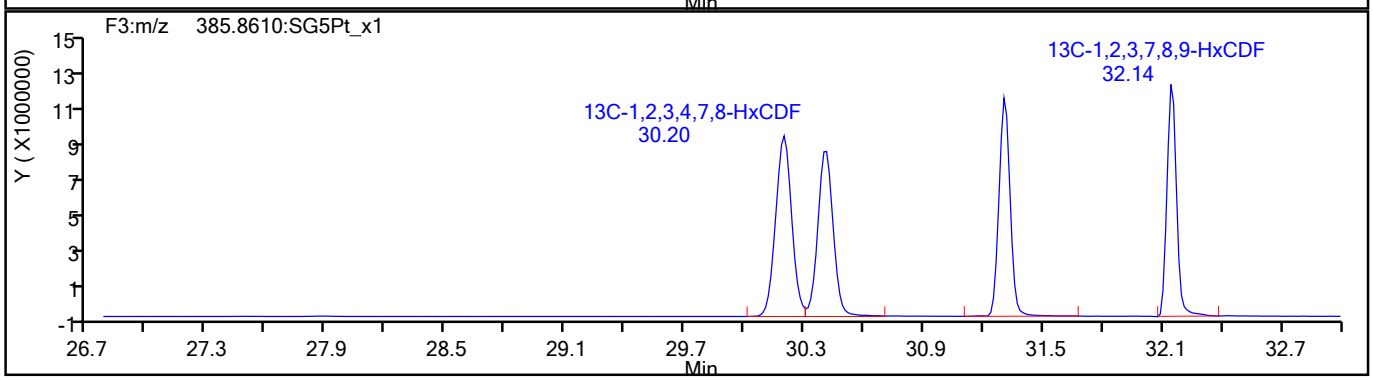

791175

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

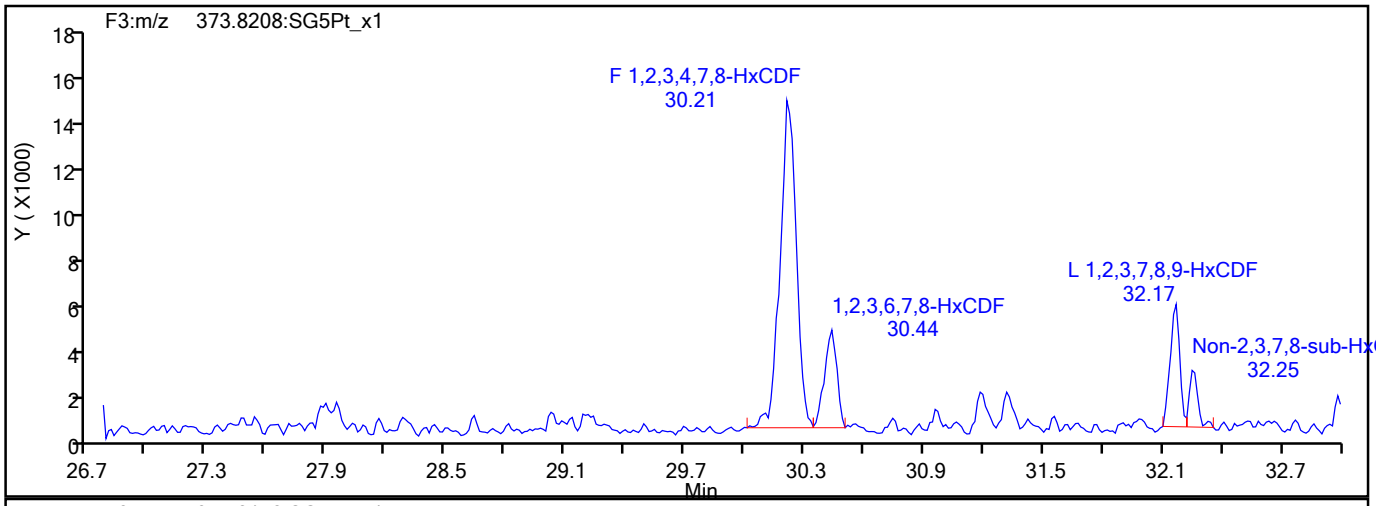

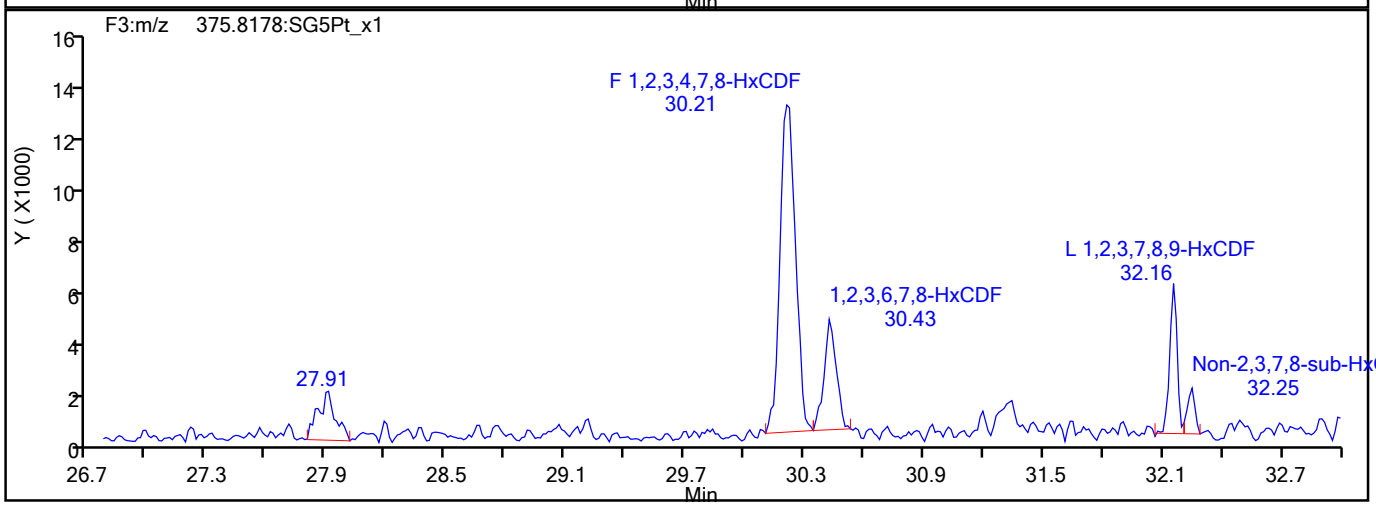

HxCDF Interference Mass

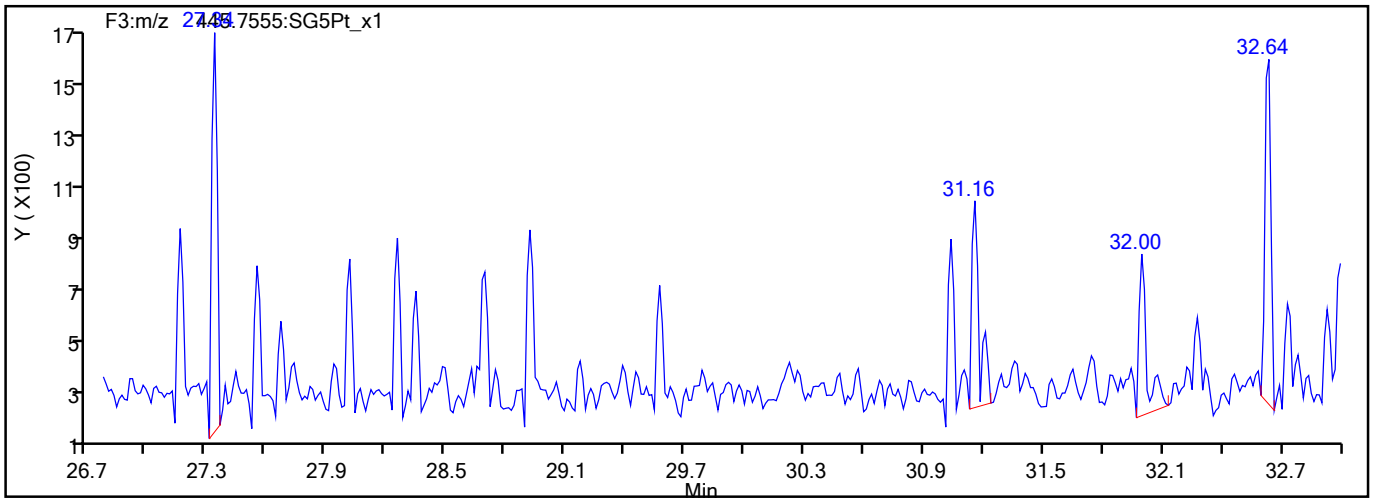

791176

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

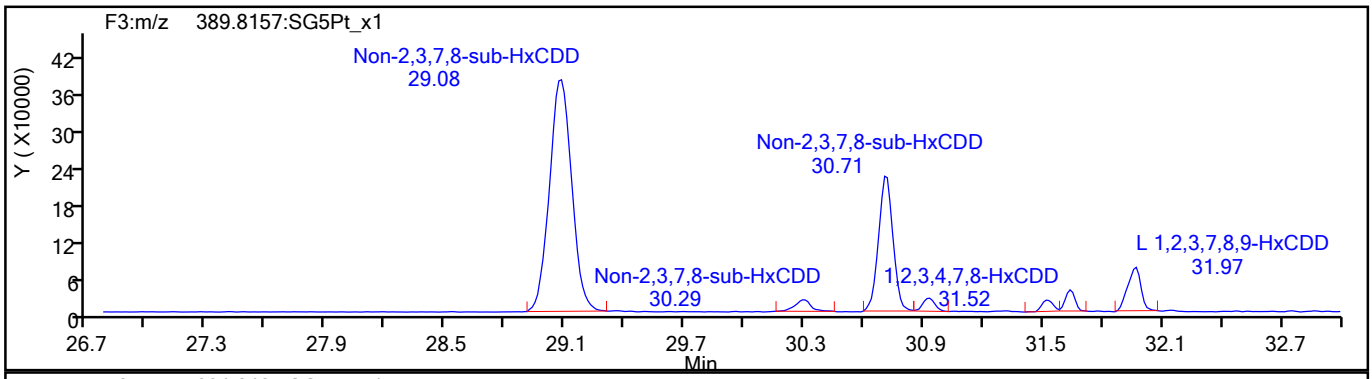

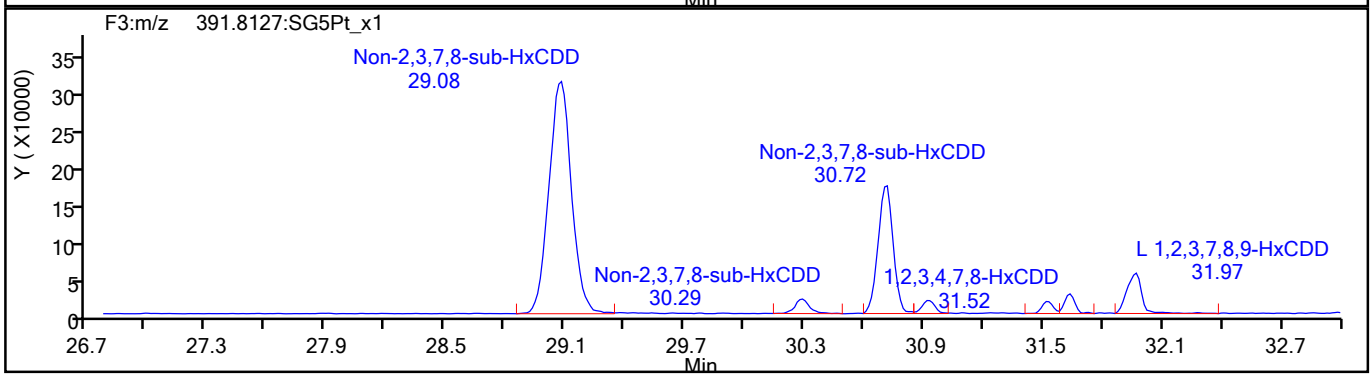

HxCDD Standards

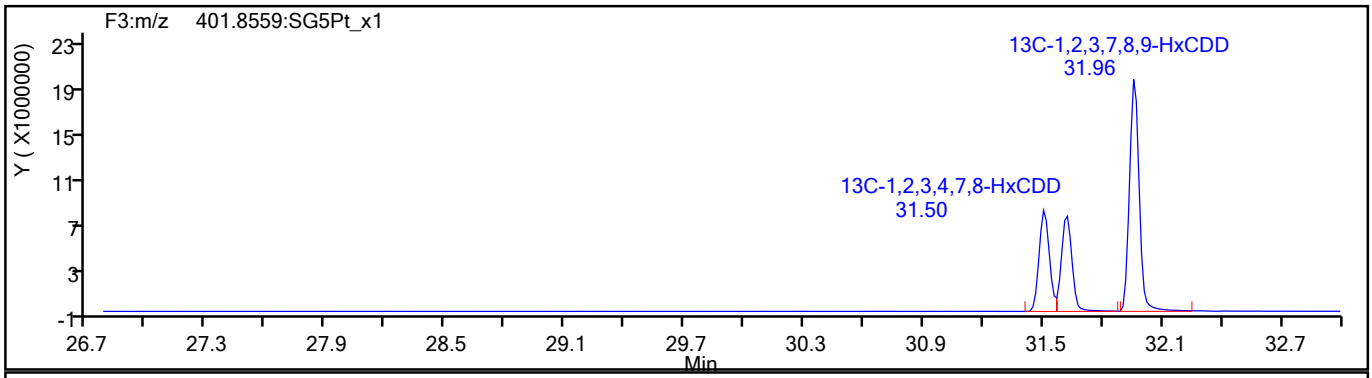

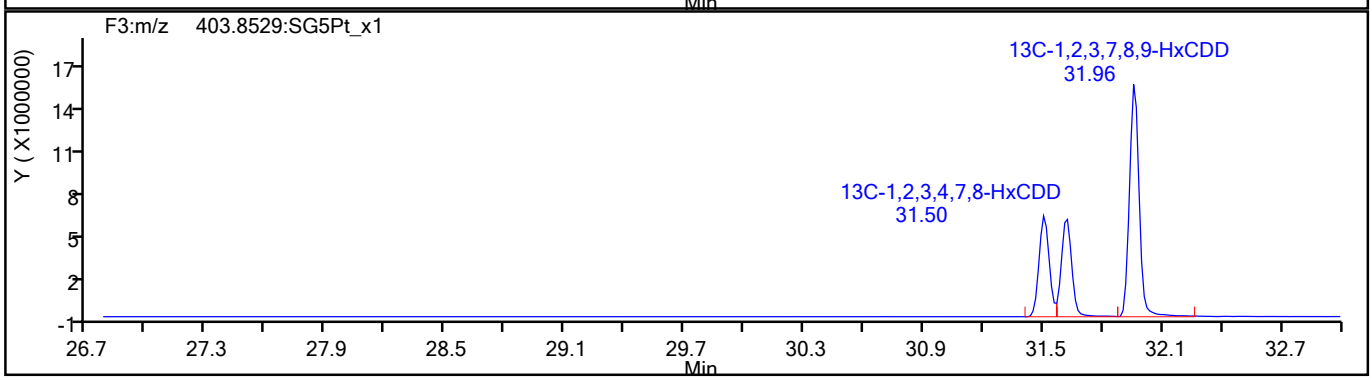

791177

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

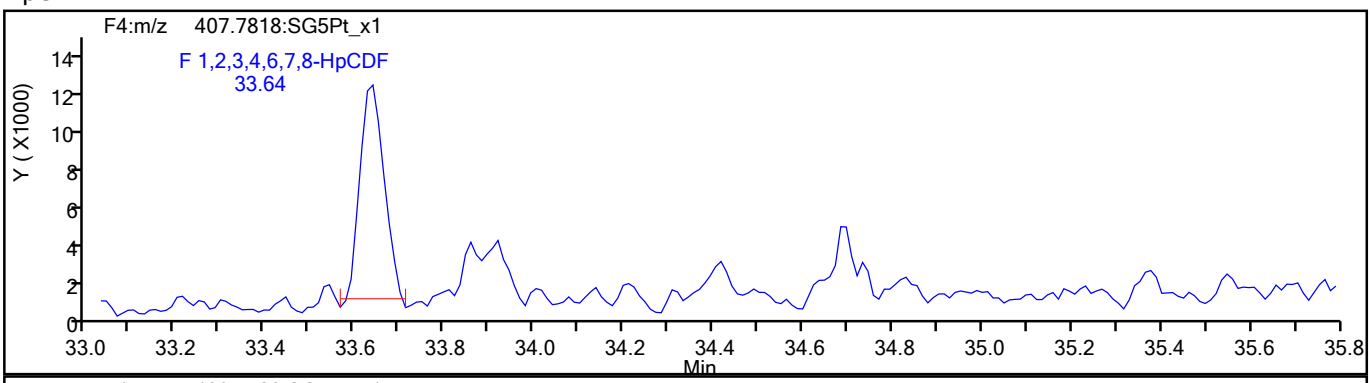

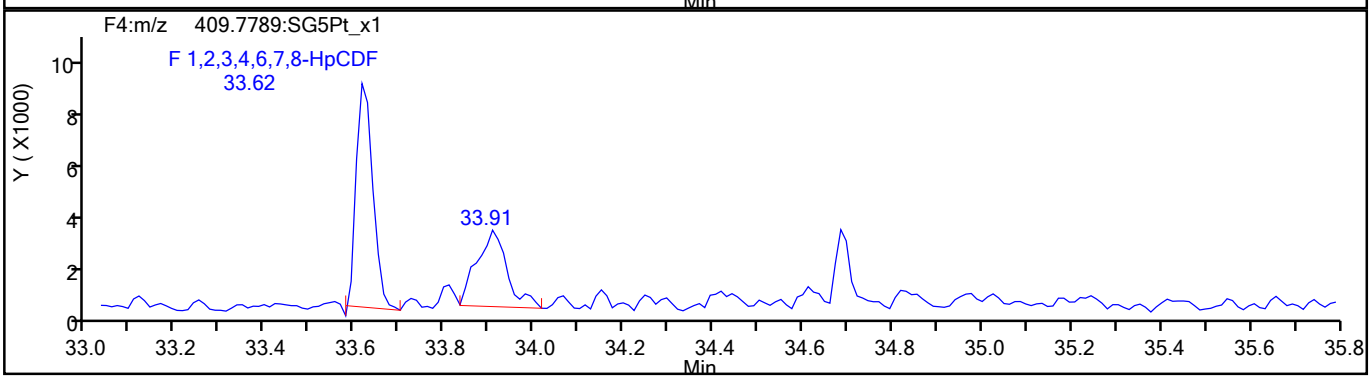

HpCDF Standards

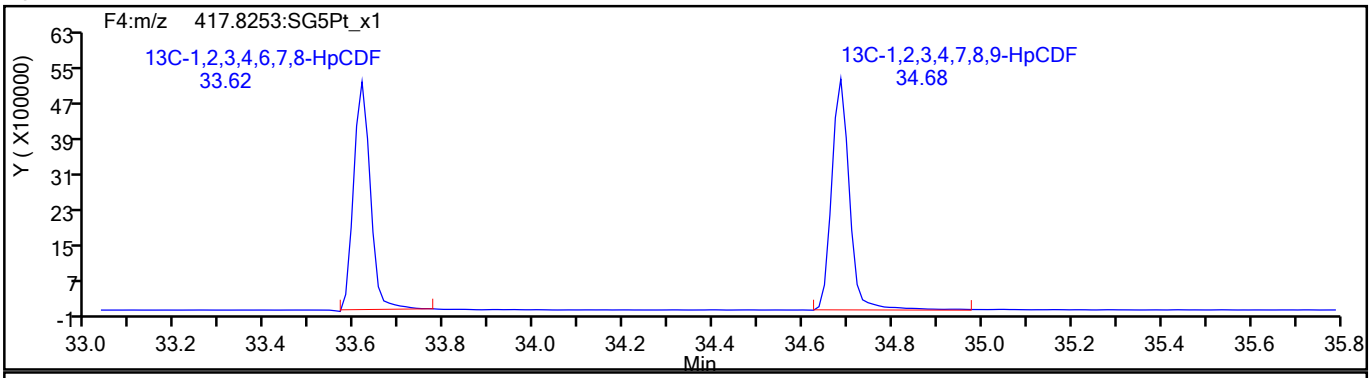

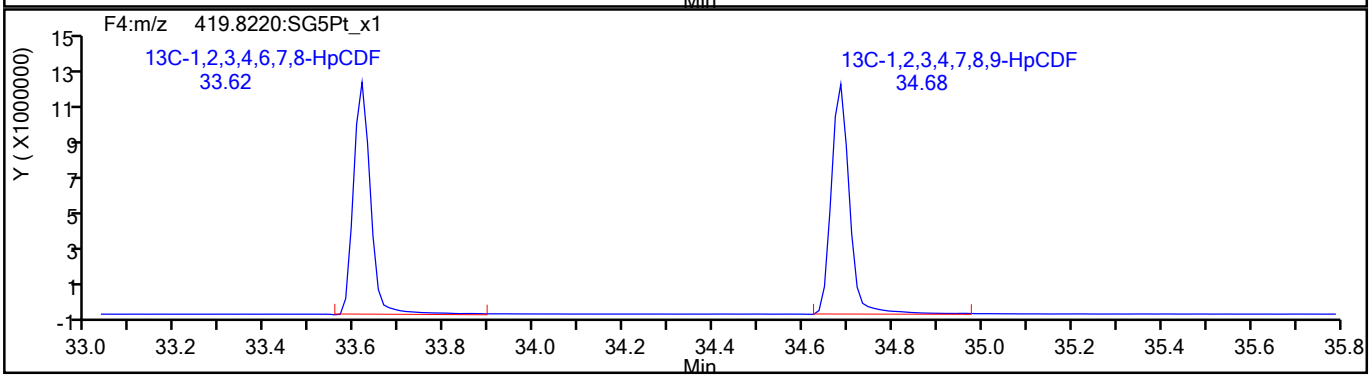

791178

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

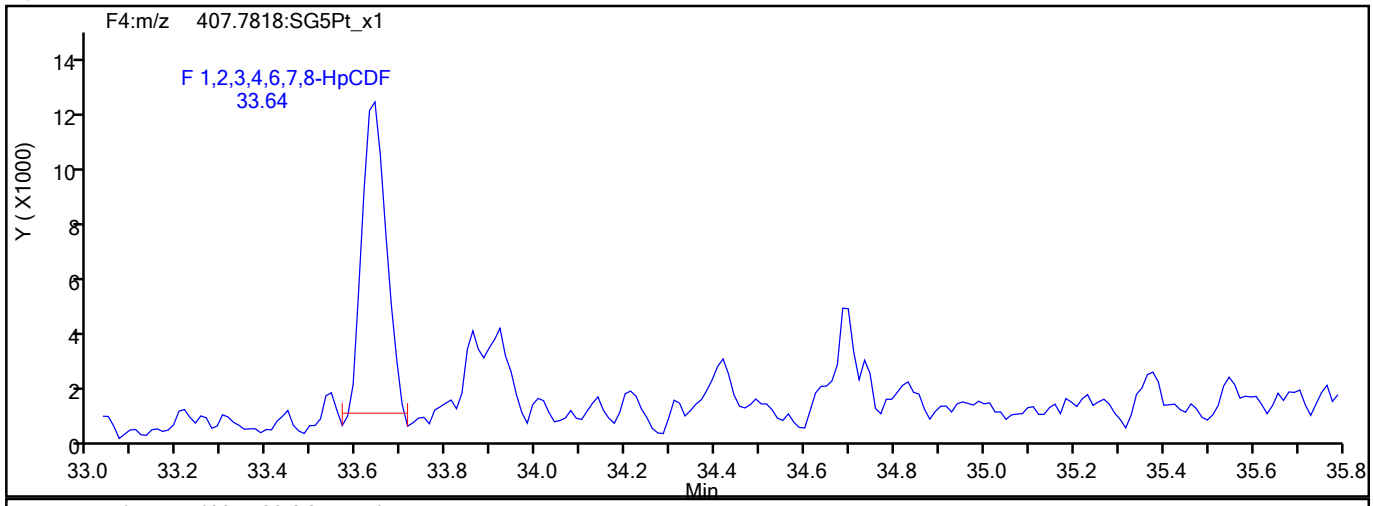

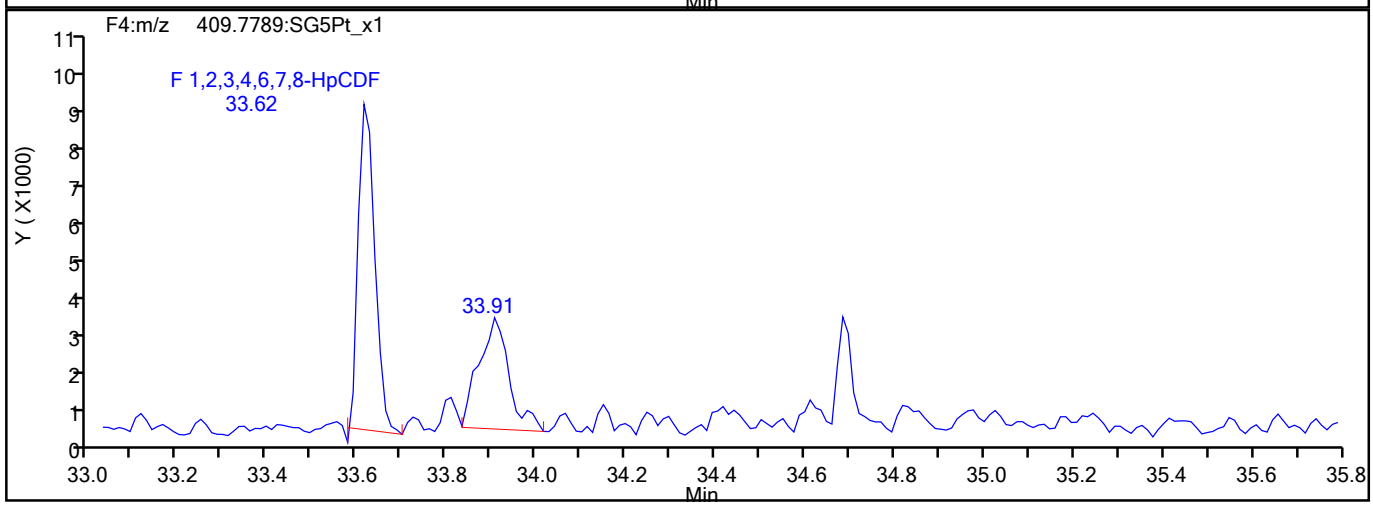

HpCDF Interference Mass

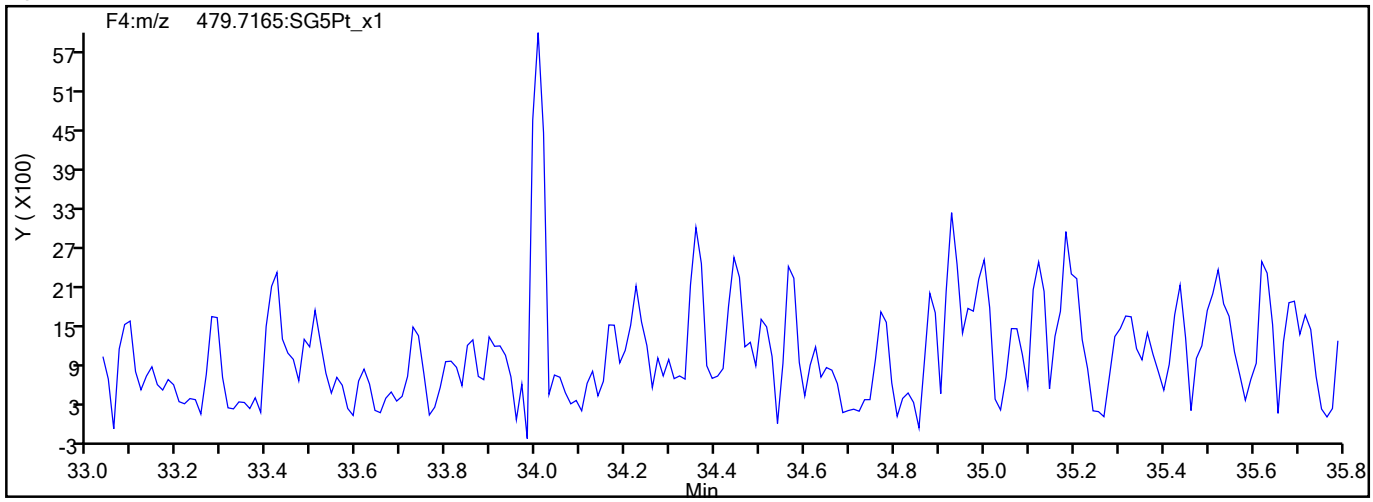

791179

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

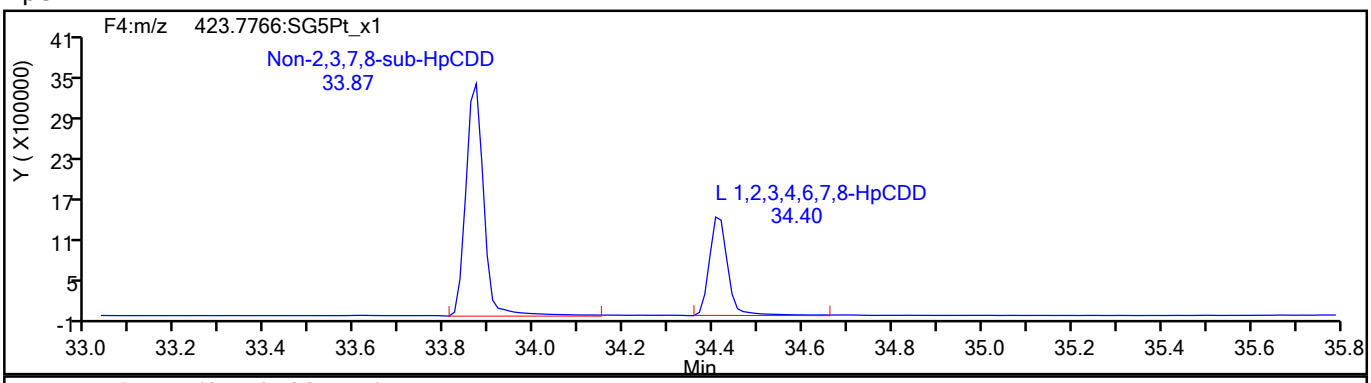

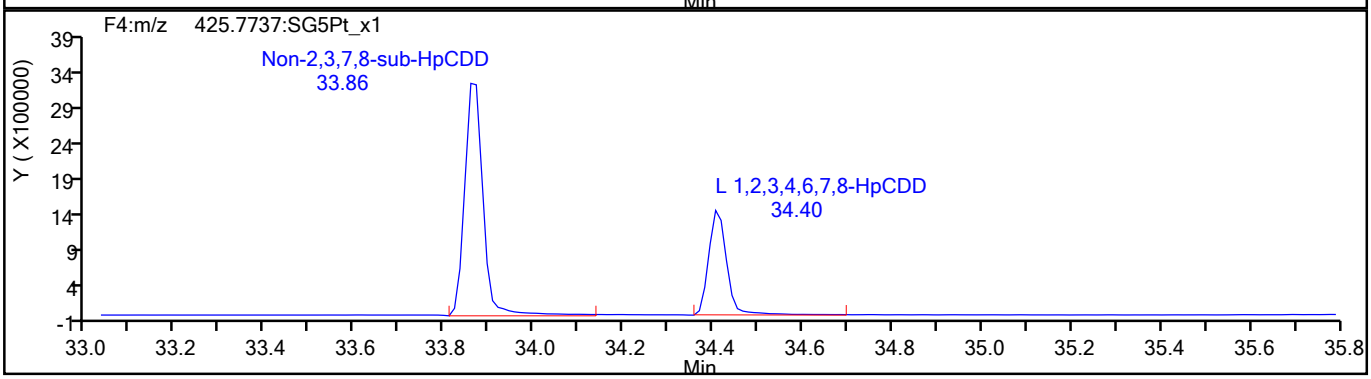

HpCDD Standards

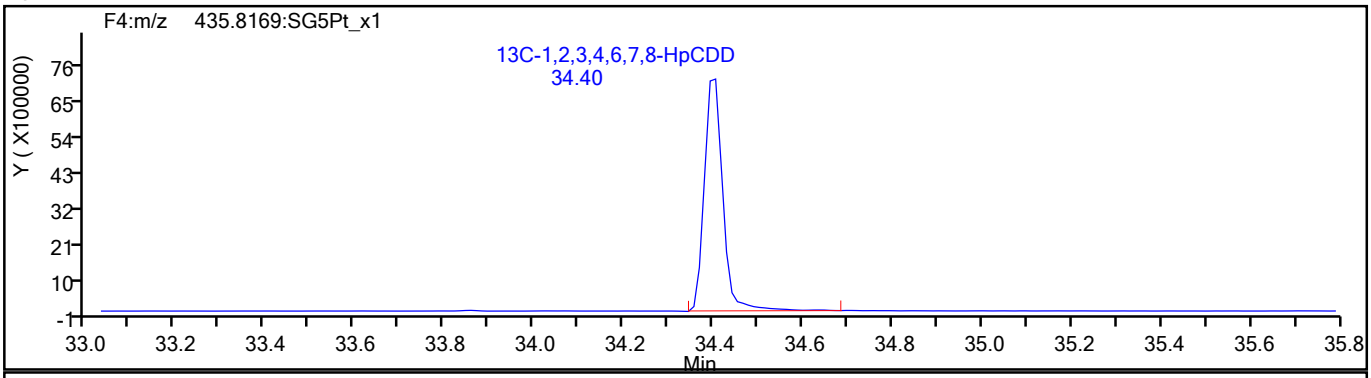

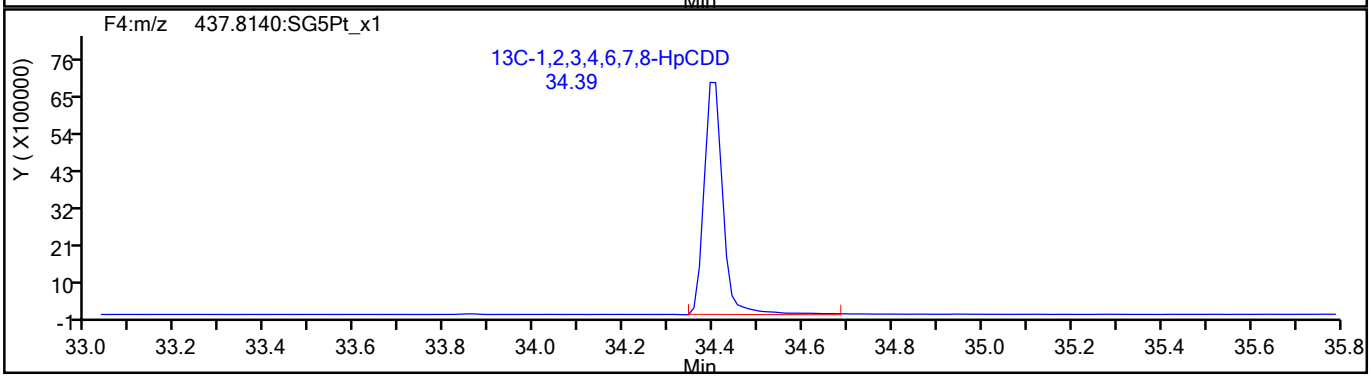

791180

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

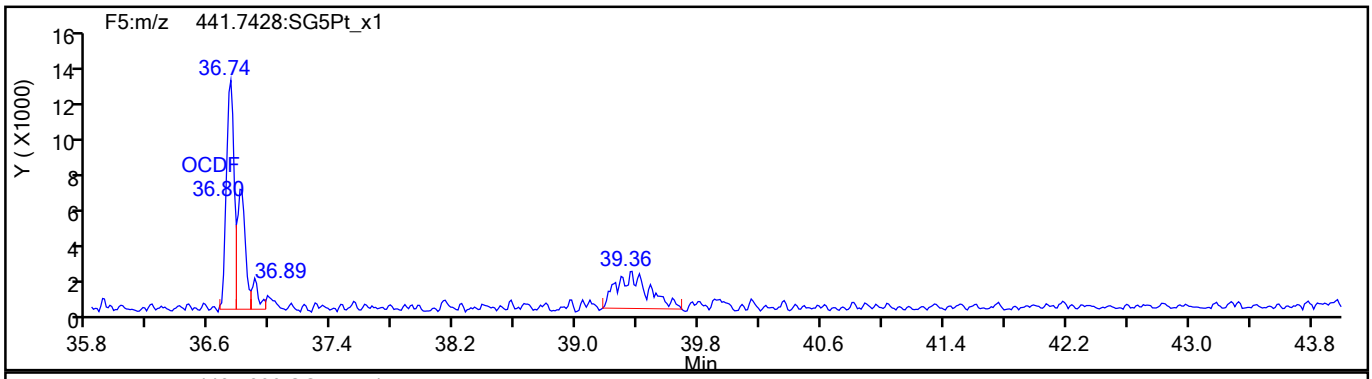

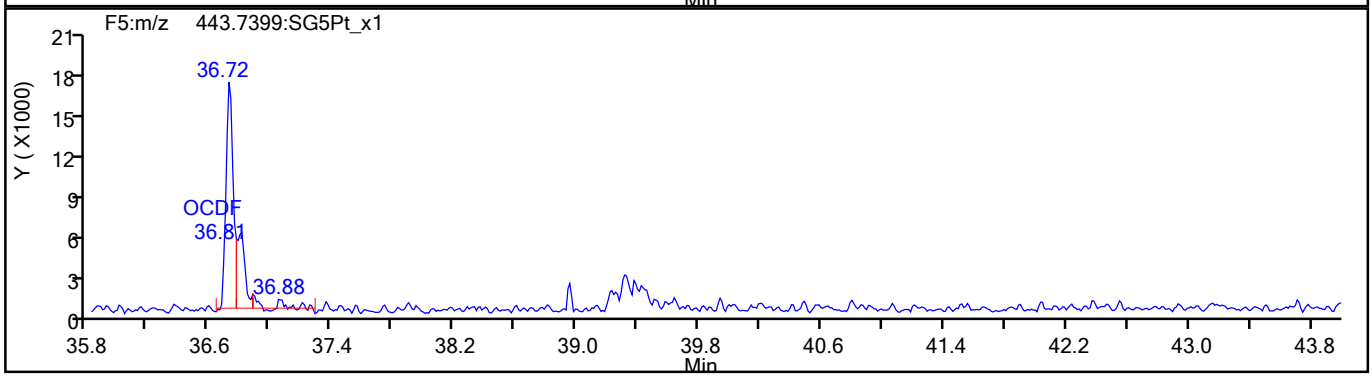

OCDF Standards

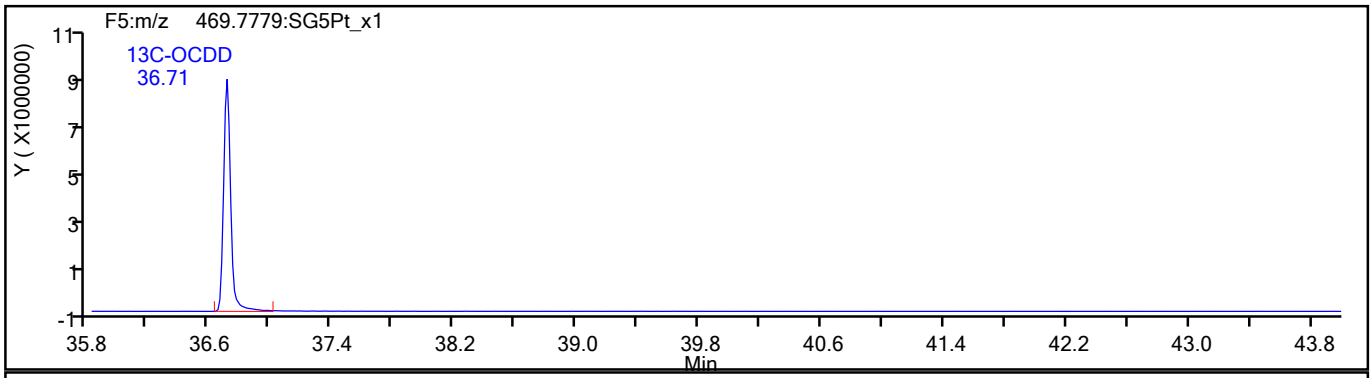

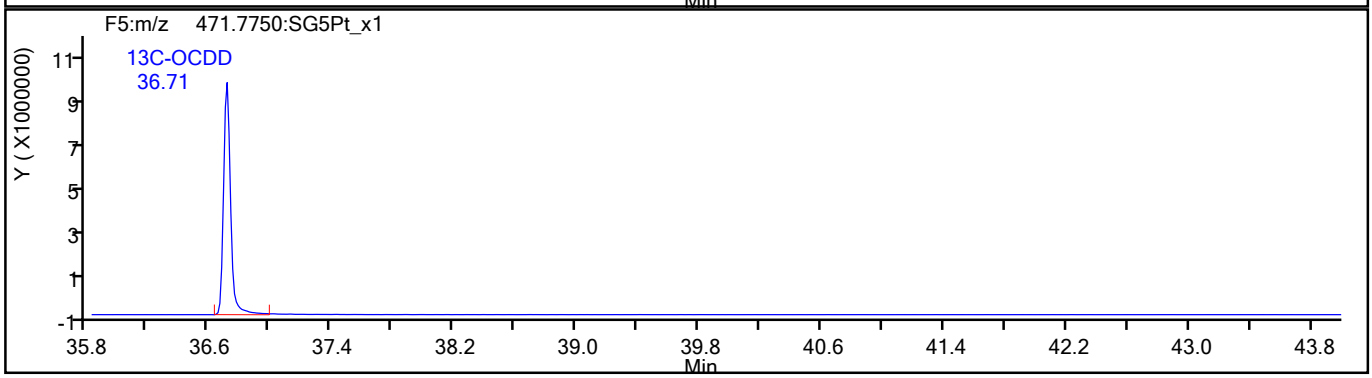

791181

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

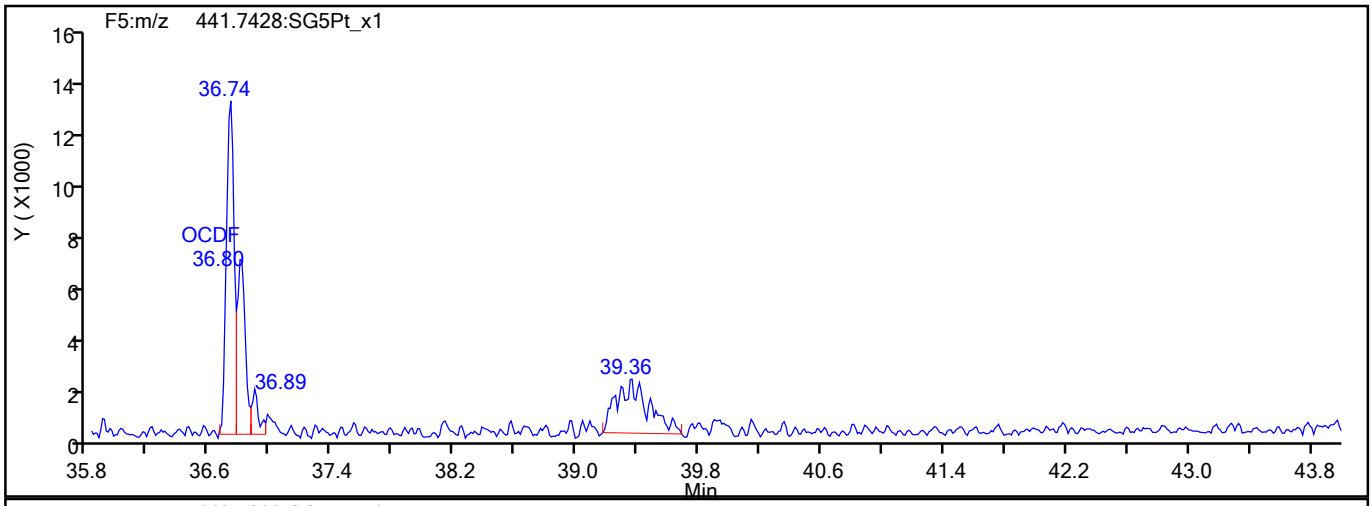

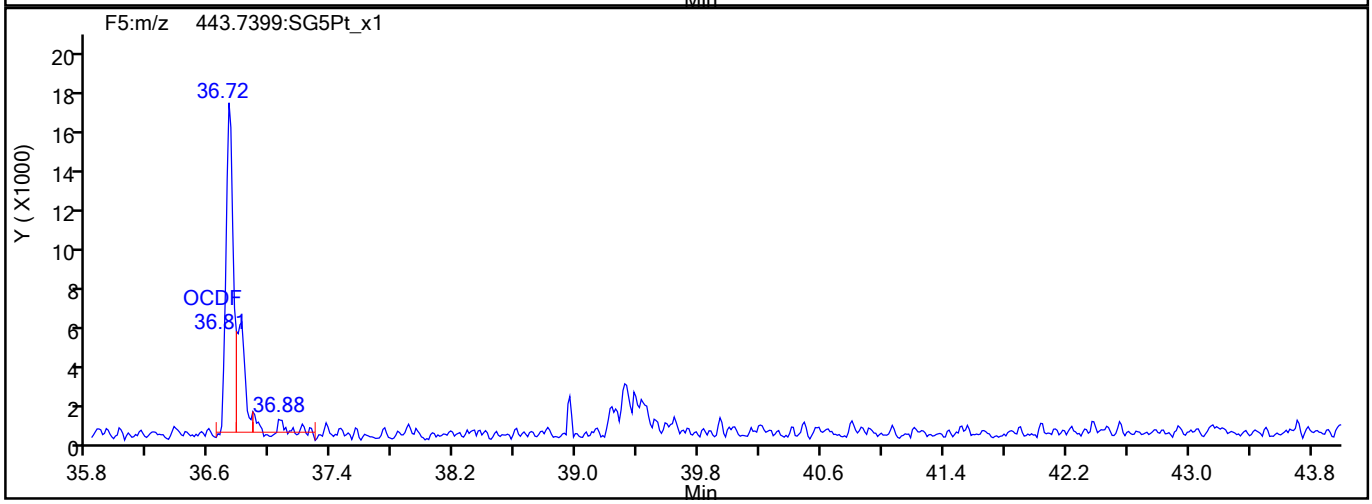

OCDF Interference Mass

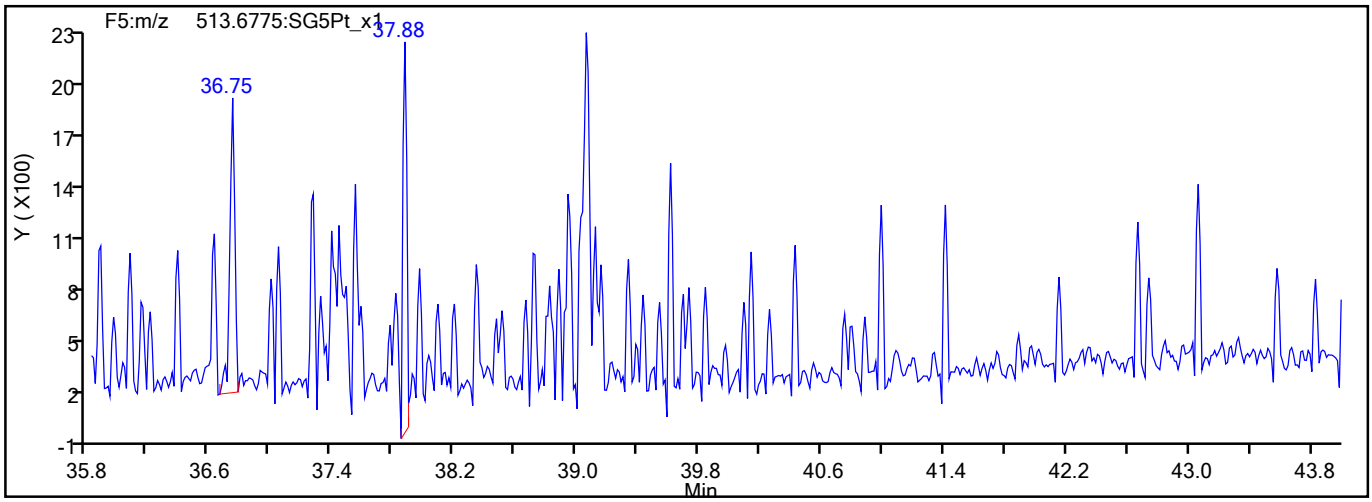

791182

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

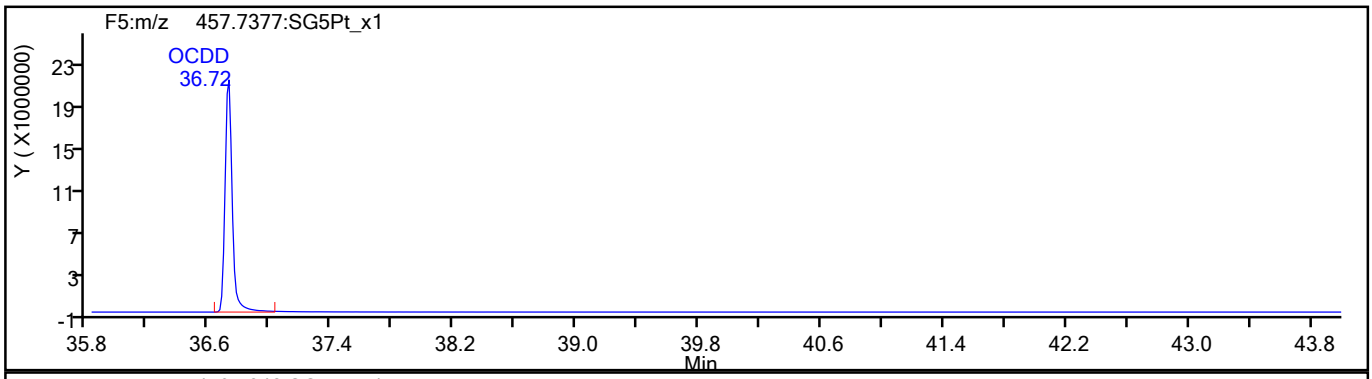

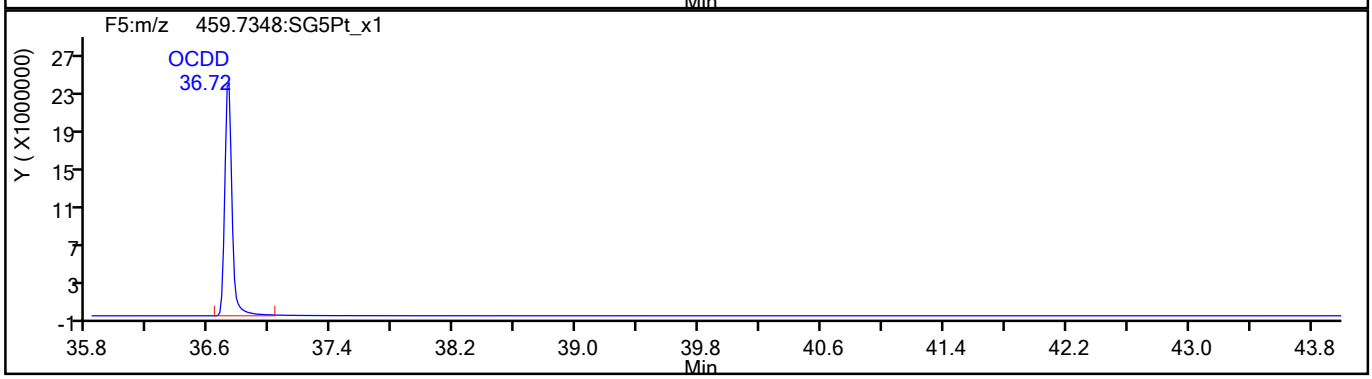

OCDD Standards

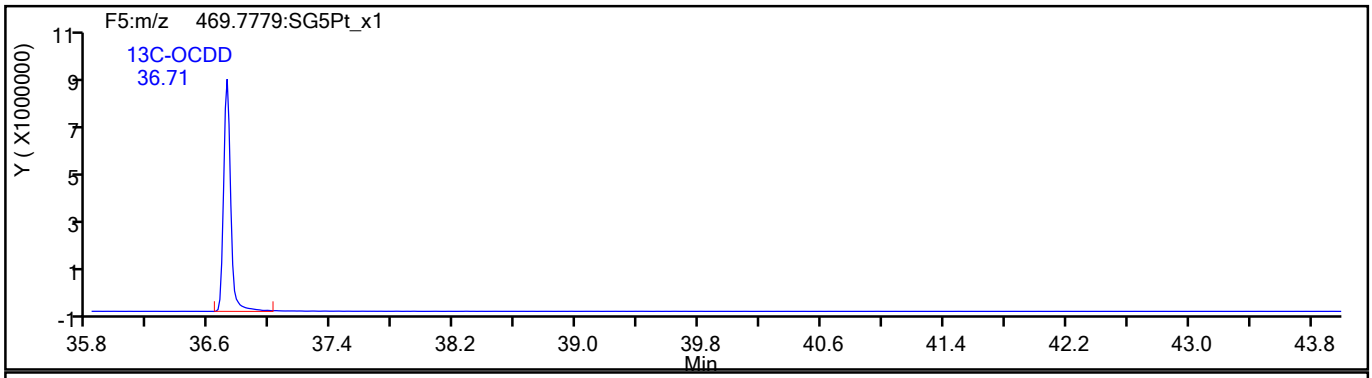

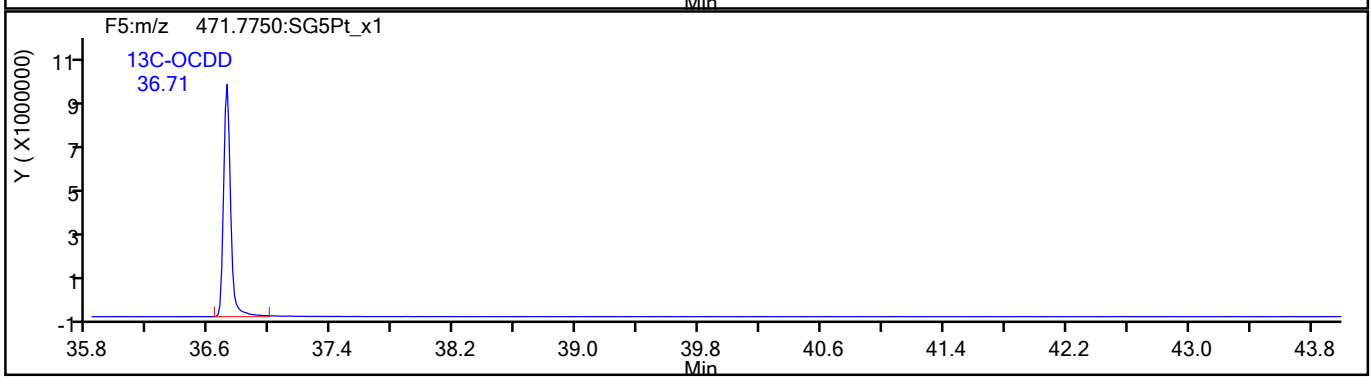

791183

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

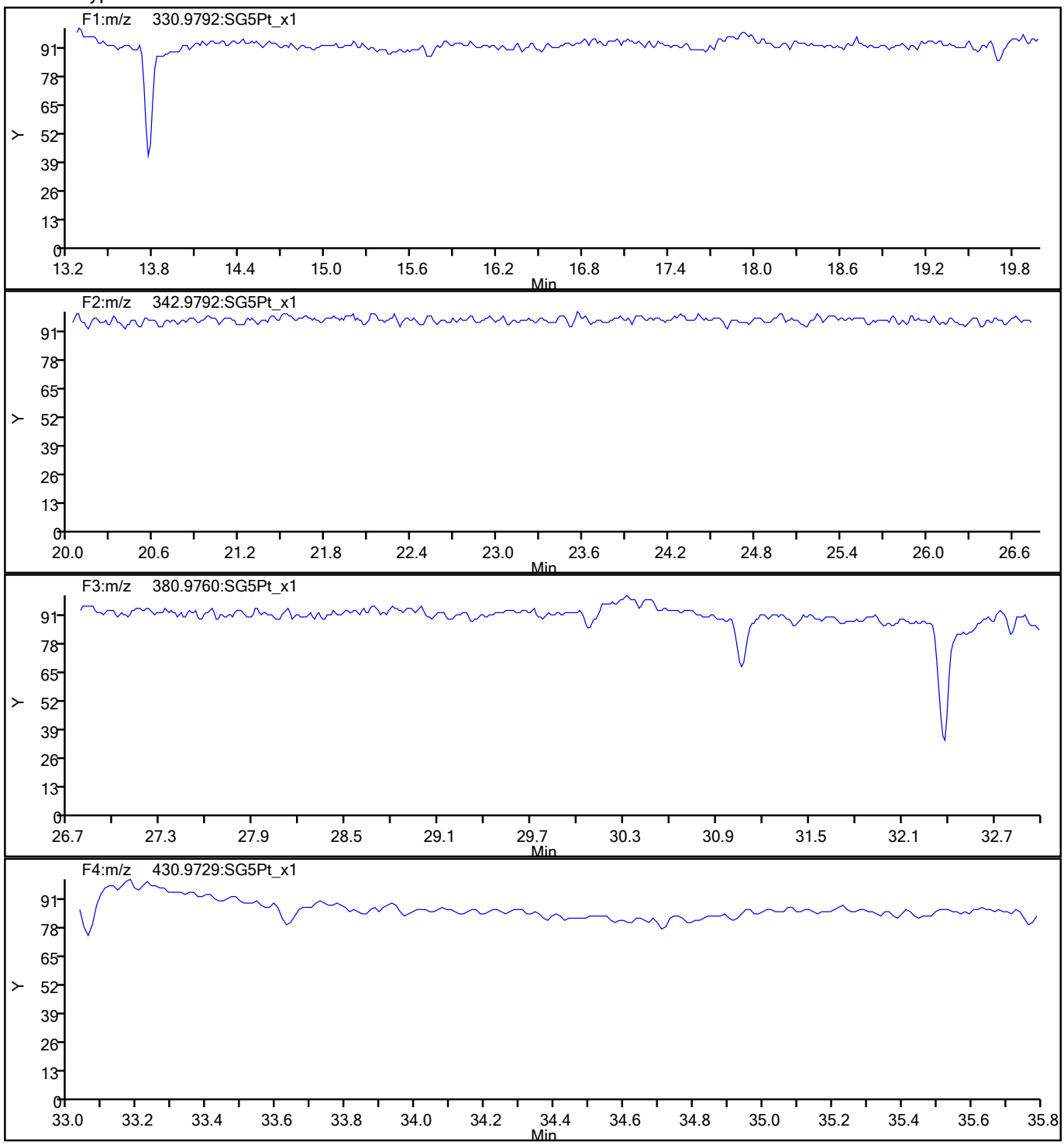

791184

Report Date: 27-Aug-2021 10:03:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_12.d		
Injection Date:	25-Aug-2021 18:05:34	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	519953	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

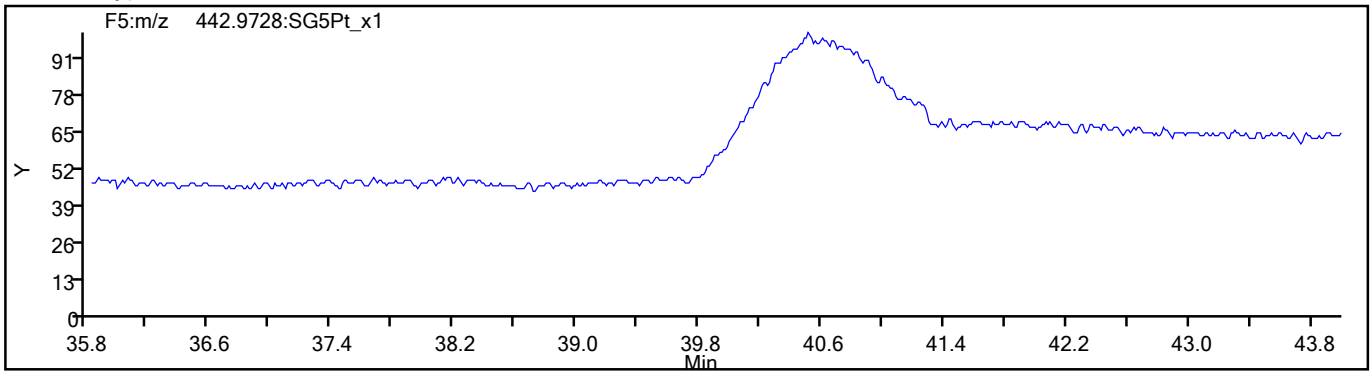

791185

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (10-12) RA
Lab Sample ID: 320-77214-6 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_011.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.94(g)
Date Analyzed: 08/27/2021 22:01
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 37.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	7.5	B	1.6	0.13

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	61		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	77		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_011.d
Lims ID: 320-77214-A-6-A
Client ID: 11215702-080221-BN-SJSB090 (10-12)
Sample Type: Client
Inject. Date: 27-Aug-2021 22:01:52 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-6-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:44:39

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.295	65387075	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.612	53212897	0.79	1.3327	61.1	61.1	0.2060	0.2060	61.07	
2,3,7,8-TCDF	17.626	1236915	0.85	0.9978	2.330	2.330	0.0405	0.0405		M
D 13C-2,3,7,8-TCDD	16.062	32564850	0.76	0.8749	56.9	56.9	0.3045	0.3045	56.92	
2,3,7,8-TCDD	16.076	340623	0.70	1.0570	0.9896	0.9896	0.0677	0.0677		
$ 37Cl4-2,3,7,8-TCDD	16.076	17523706		0.8648	31.0	31.0	0.0830	0.0830	77.47	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_011.d
Lims ID: 320-77214-A-6-A
Client ID: 11215702-080221-BN-SJSB090 (10-12)
Sample Type: Client
Inject. Date: 27-Aug-2021 22:01:52 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-6-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:44:39

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.295	16.300	0		28784043	6241670	8575	21437	728		
333.9339	16.282	16.300	-1		36603032	8068310	6673	16682	1209	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.612	17.616	0	1.081	23483545	4634471	7811	19527	593		
317.9389	17.612	17.616	0	1.081	29729352	5792369	7900	19750	733	0.79(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.626	17.644	-1	1.001	569646	100767	676	1690	149		
305.8987	17.626	17.644	-1	1.001	667269	124934	1011	2527	124	0.85(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.062	16.066	0	0.986	14048976	3239299	8575	21437	378		
333.9339	16.062	16.066	0	0.986	18515874	4254695	6673	16682	638	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.076	16.080	0	1.001	139716	30602	1001	2502	31		
321.8936	16.076	16.080	0	1.001	200907	49298	1143	2857	43	0.70(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.076	16.080	0	0.987	17523706	3945553	4108	10270	960		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_011.d				
Injection Date:	27-Aug-2021 22:01:52	Instrument ID:	11D2		
Lims ID:	320-77214-A-6-A	Lab Sample ID:	320-77214-6		
Client ID:	11215702-080221-BN-SJSB090 (10-12)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.63
Area: 672408
Amount: 2.339253
Amount Units: pg/ul

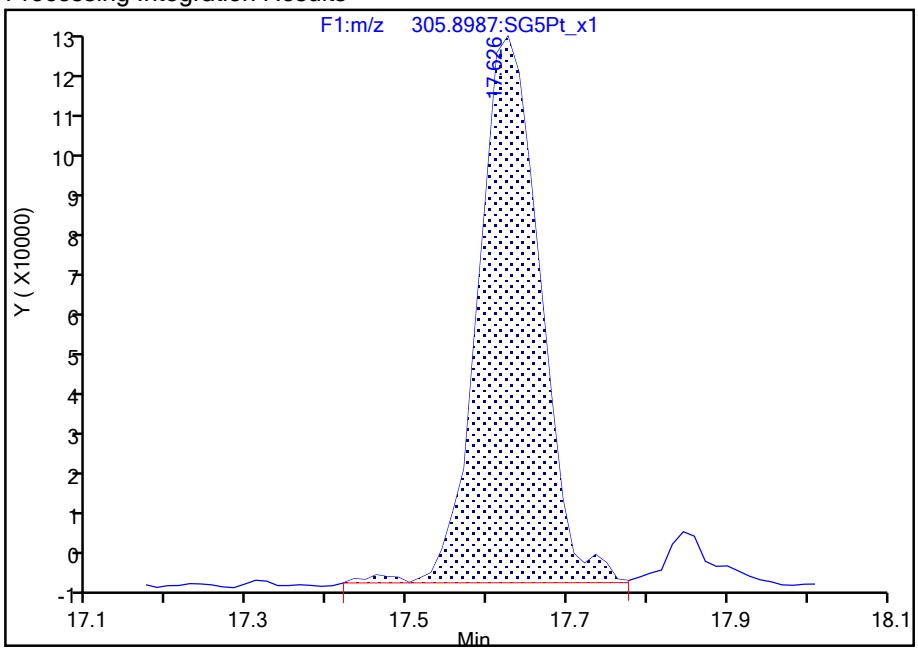

Manual Integration Results

RT: 17.63
Area: 667269
Amount: 2.329574
Amount Units: pg/ul

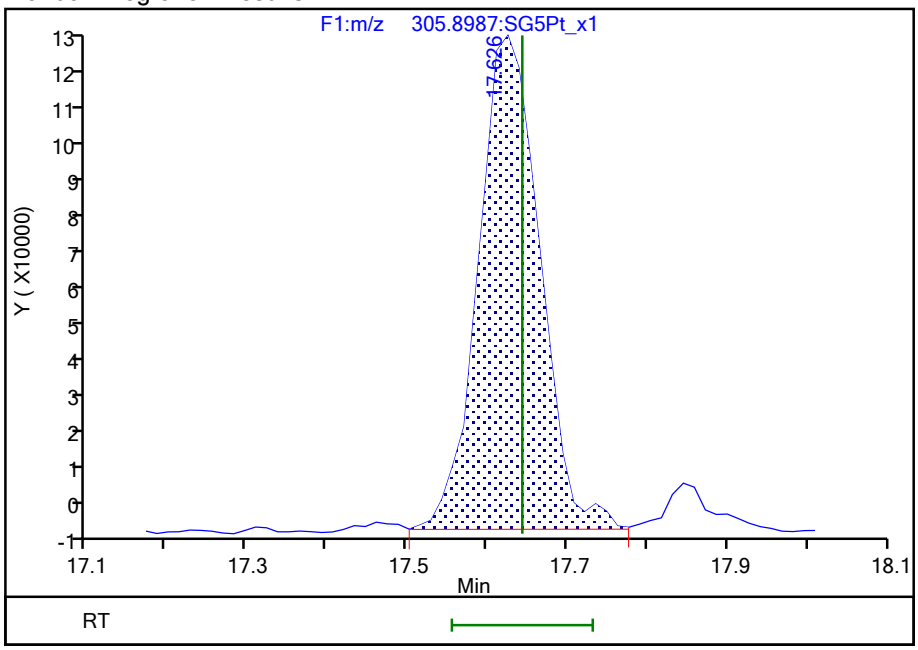

Reviewer: bennettd, 30-Aug-2021 09:44:29

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 30-Aug-2021 09:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_011.d		
Injection Date:	27-Aug-2021 22:01:52	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	520456	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

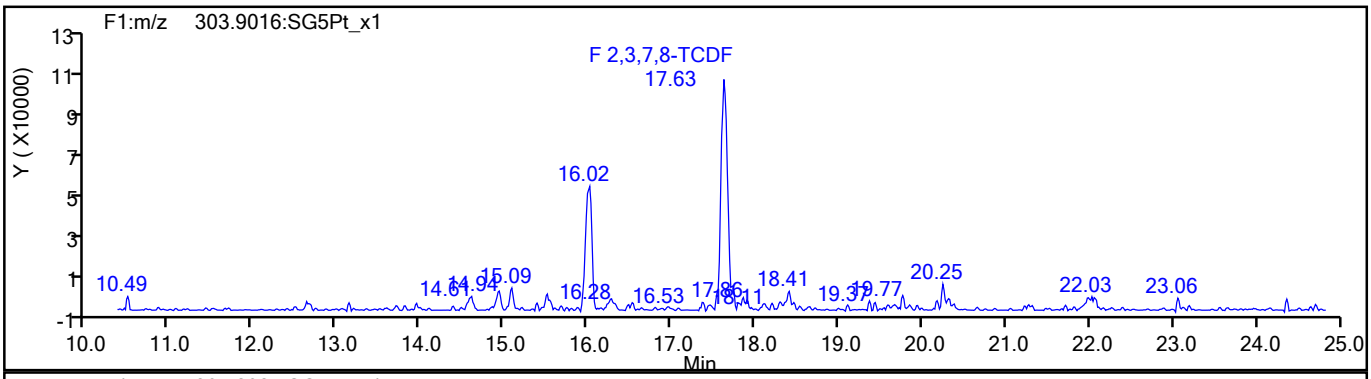

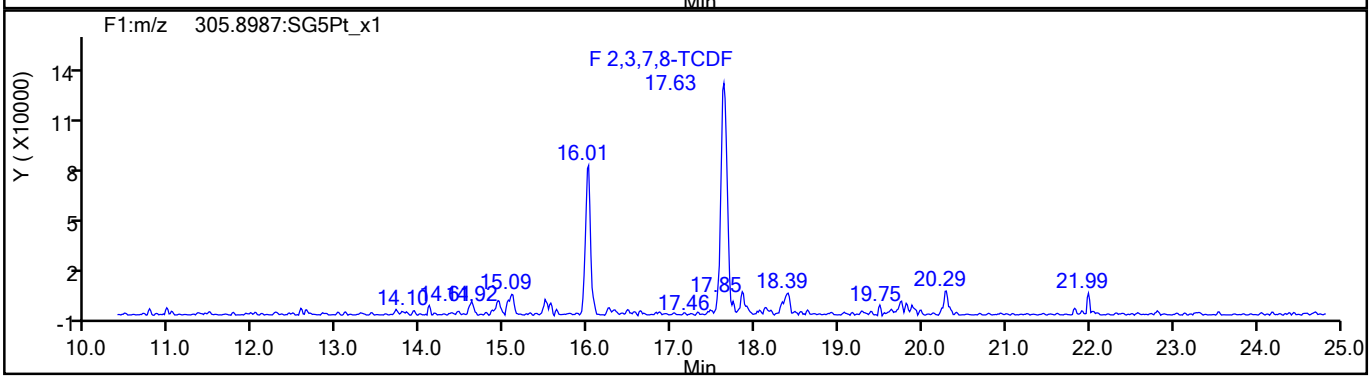

TCDF Standards

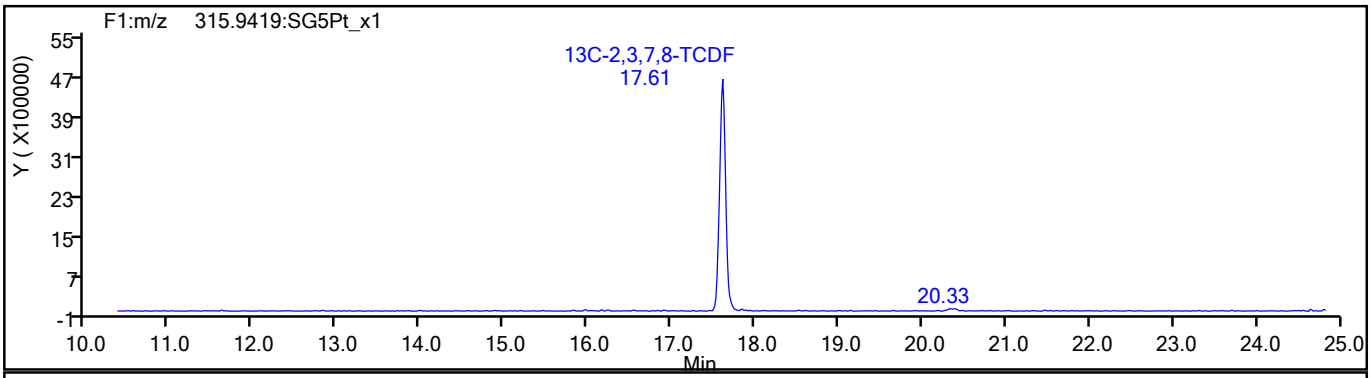

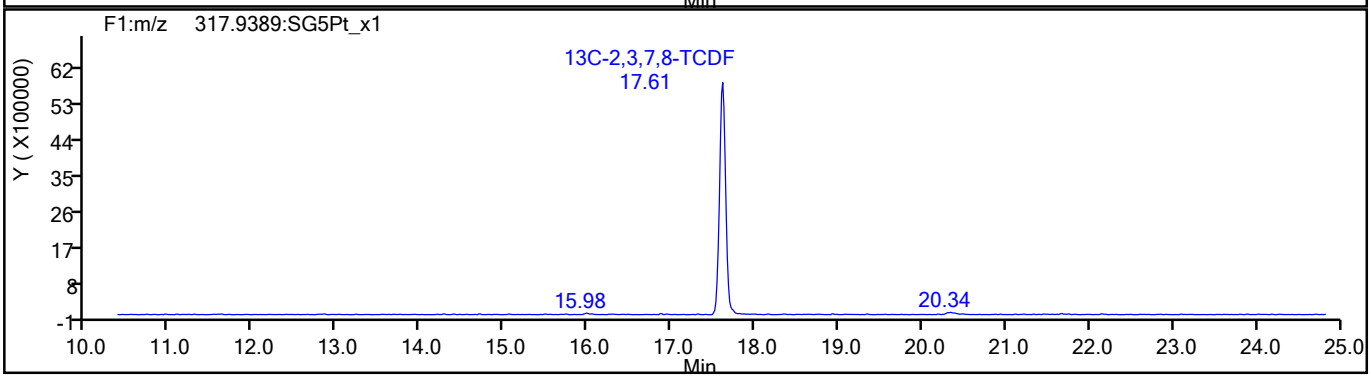

791190

Report Date: 30-Aug-2021 09:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_011.d		
Injection Date:	27-Aug-2021 22:01:52	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	520456	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

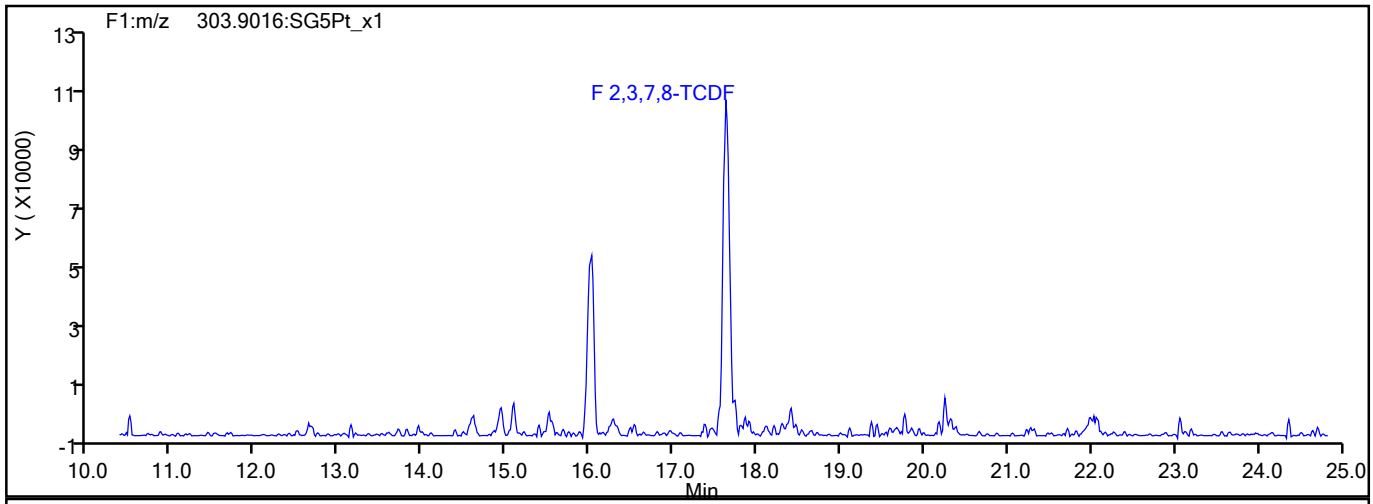

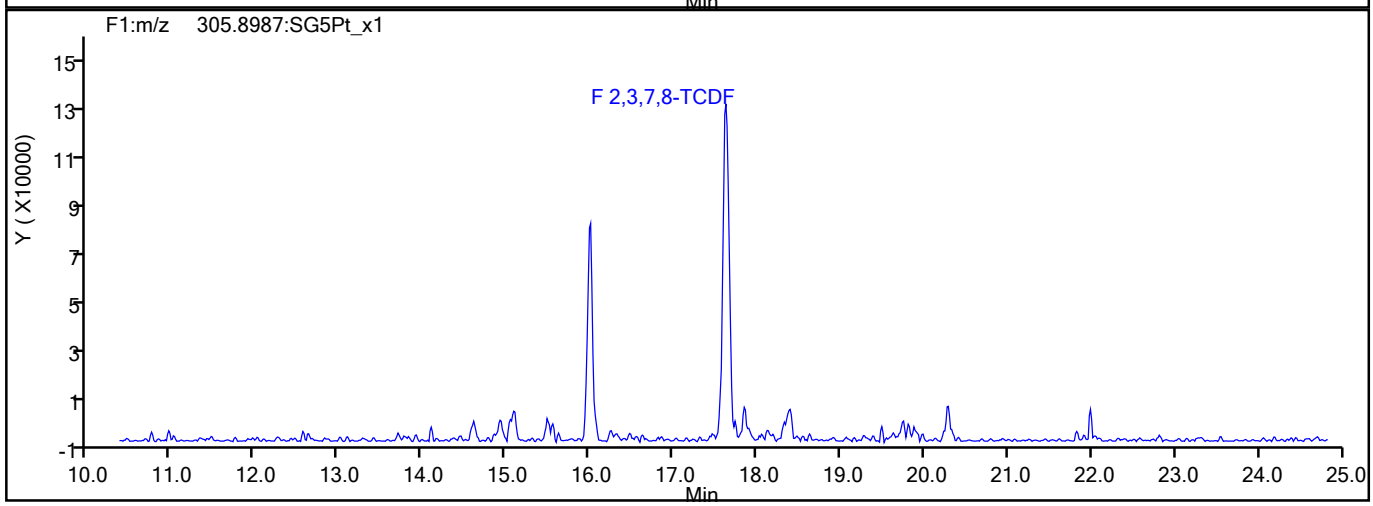

TCDF Interference Mass

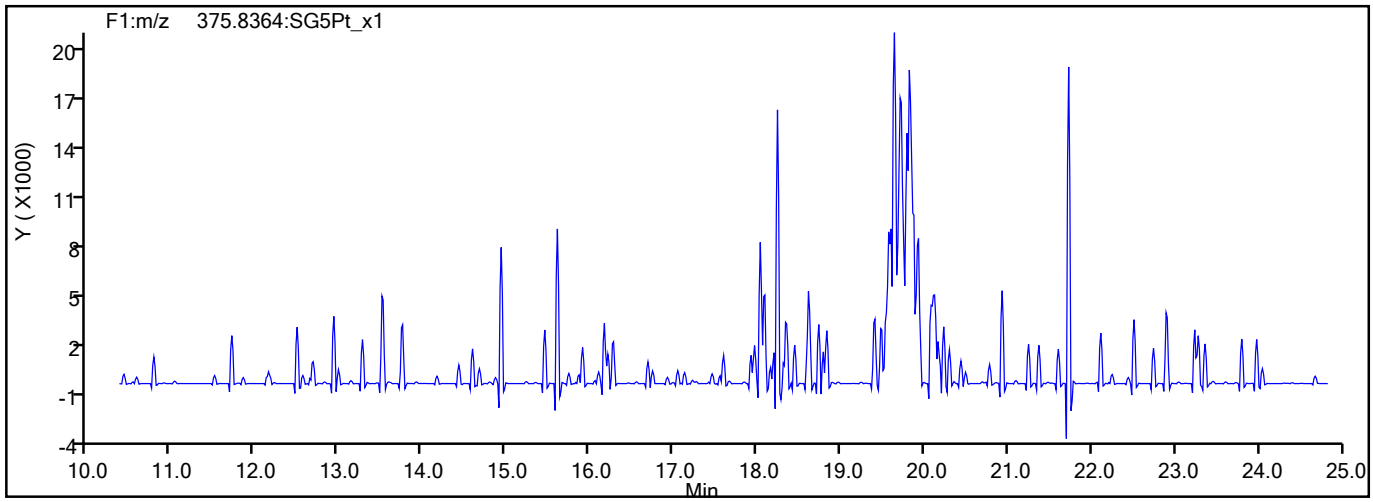

791191

Report Date: 30-Aug-2021 09:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_011.d		
Injection Date:	27-Aug-2021 22:01:52	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	520456	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

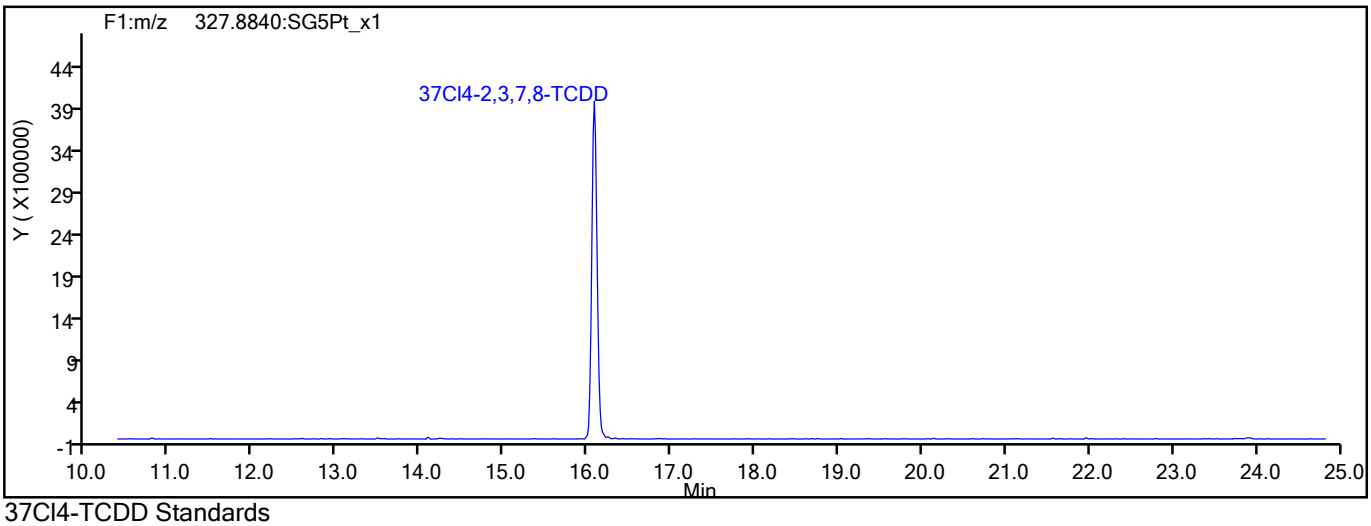

37Cl4-TCDD Standards

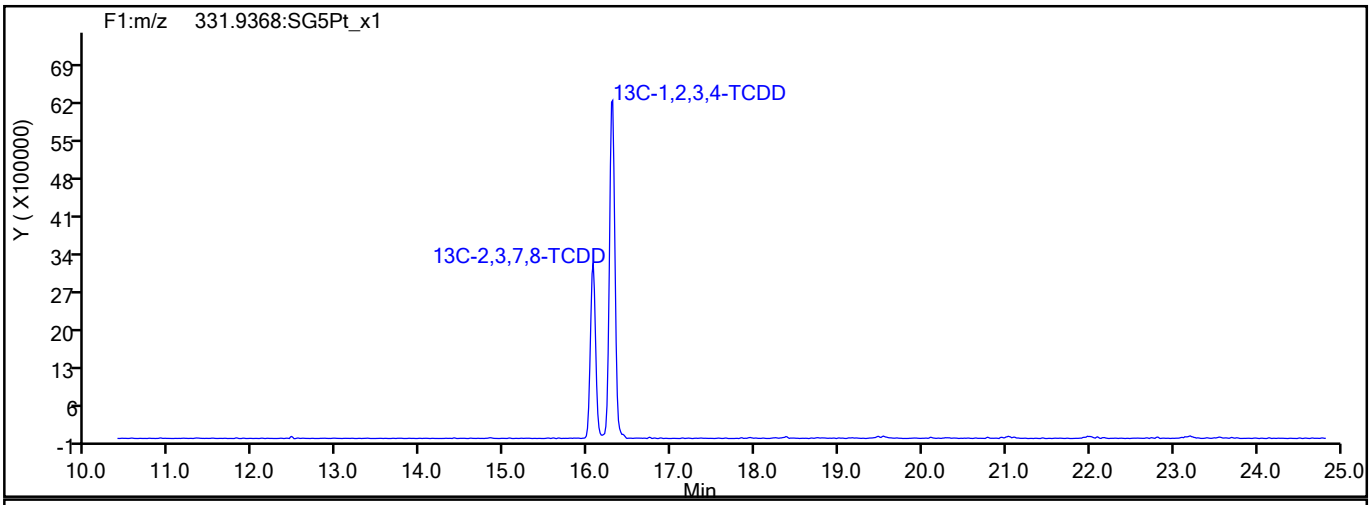

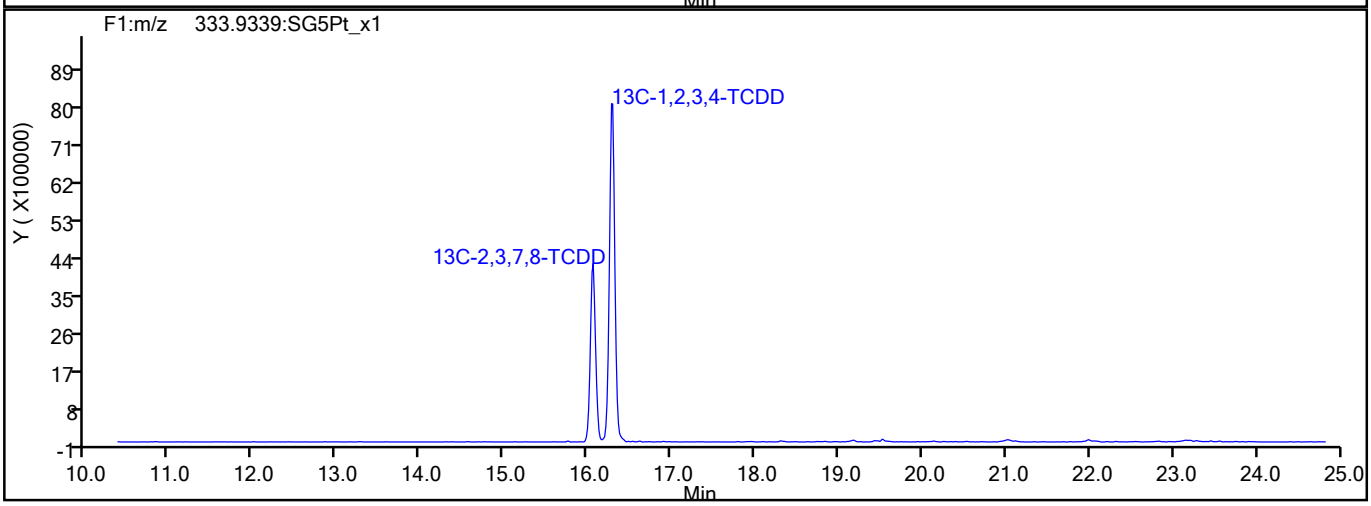

791192

Report Date: 30-Aug-2021 09:51:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_011.d		
Injection Date:	27-Aug-2021 22:01:52	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (10-12)		
Worklist#:	520456	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

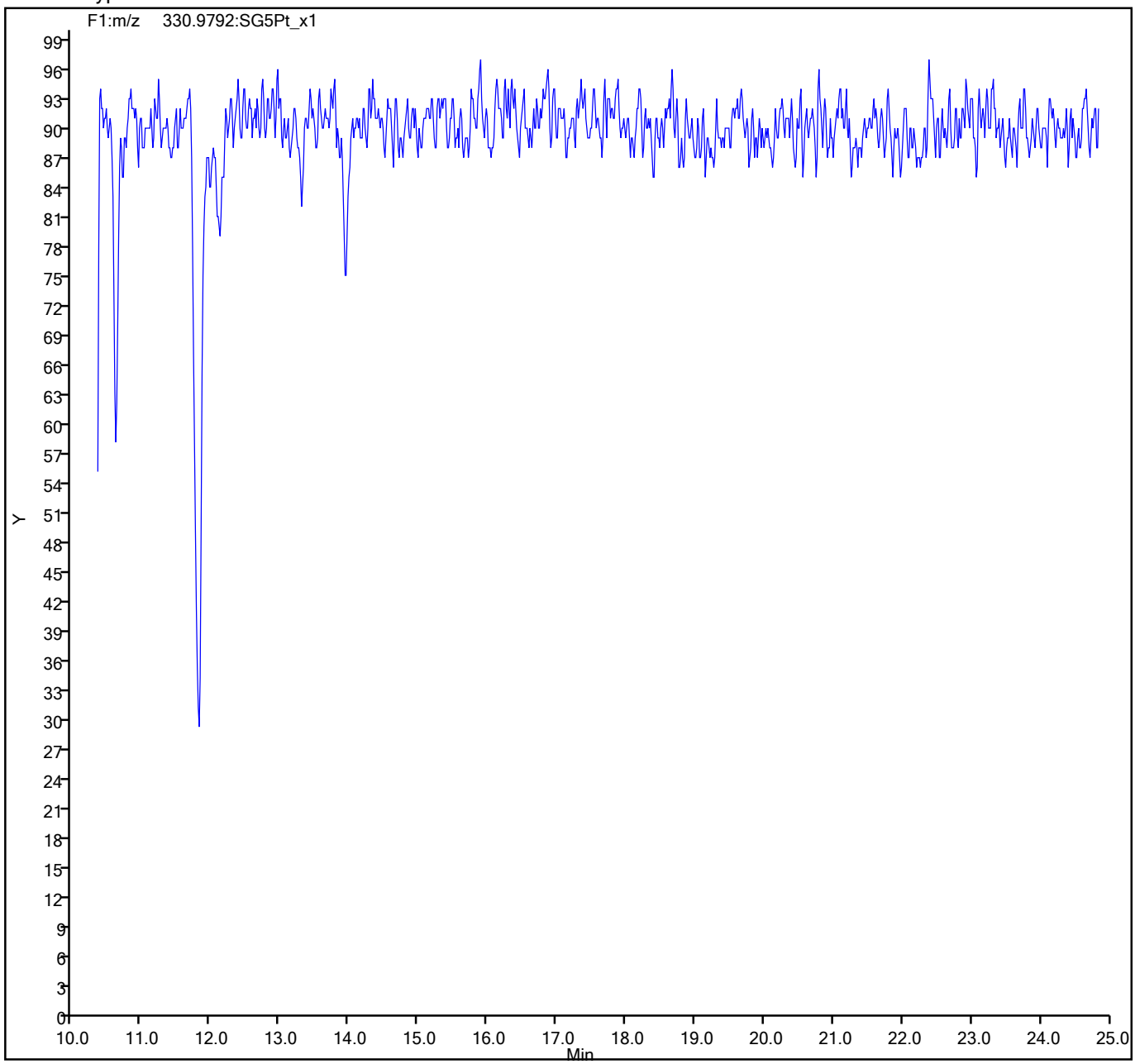

791193

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (12-14)
Lab Sample ID: 320-77214-7
Matrix: Sediment
Lab File ID: 25AU2110D5_13.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:40
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.05(g)
Date Analyzed: 08/25/2021 18:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 26.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	5.5		1.4	0.084
40321-76-4	1,2,3,7,8-PeCDD	0.22	J	6.8	0.087
57117-41-6	1,2,3,7,8-PeCDF	0.86	J	6.8	0.047
57117-31-4	2,3,4,7,8-PeCDF	0.39	J	6.8	0.047
39227-28-6	1,2,3,4,7,8-HxCDD	0.55	J	6.8	0.11
57653-85-7	1,2,3,6,7,8-HxCDD	0.81	J	6.8	0.11
19408-74-3	1,2,3,7,8,9-HxCDD	1.8	J	6.8	0.10
70648-26-9	1,2,3,4,7,8-HxCDF	4.8	J	6.8	0.057
57117-44-9	1,2,3,6,7,8-HxCDF	1.1	J	6.8	0.058
72918-21-9	1,2,3,7,8,9-HxCDF	0.17	J	6.8	0.041
60851-34-5	2,3,4,6,7,8-HxCDF	0.092	J	6.8	0.044
35822-46-9	1,2,3,4,6,7,8-HpCDD	36	B	6.8	0.44
67562-39-4	1,2,3,4,6,7,8-HpCDF	1.9	J	6.8	0.050
55673-89-7	1,2,3,4,7,8,9-HpCDF	0.83	J	6.8	0.056
3268-87-9	OCDD	890	B	14	0.69
39001-02-0	OCDF	1.8	J B	14	0.045
41903-57-5	Total TCDD	8.9	q	1.4	0.084
30402-14-3	Total TCDF	29	B	1.4	0.094
36088-22-9	Total PeCDD	4.1	J q	6.8	0.087
30402-15-4	Total PeCDF	2.0	J q	6.8	0.047
34465-46-8	Total HxCDD	26	q	6.8	0.11
55684-94-1	Total HxCDF	6.5	J	6.8	0.050
37871-00-4	Total HpCDD	110	B	6.8	0.44
38998-75-3	Total HpCDF	3.3	J	6.8	0.053

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (12-14)
Lab Sample ID: 320-77214-7
Matrix: Sediment
Lab File ID: 25AU2110D5_13.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:40
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.05(g)
Date Analyzed: 08/25/2021 18:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 26.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	52		25-164
89059-46-1	13C-2,3,7,8-TCDF	49		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	52		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	50		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	54		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	48		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	58		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	50		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	50		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	50		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	49		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	45		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	52		26-138
114423-97-1	13C-OCDD	52		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	69		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d
Lims ID: 320-77214-A-7-A
Client ID: 11215702-080221-BN-SJSB090 (12-14)
Sample Type: Client
Inject. Date: 25-Aug-2021 18:50:31 ALS Bottle#: 17 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-7-A 320-77214-A-7-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 10:06:19 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:12:12

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	125534137	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	100595932	0.77	1.6249	49.3	49.3	0.0687	0.0687	49.32	
2,3,7,8-TCDF	17.114	6448238	0.77	1.0239	6.260	6.260	0.0348	0.0348		
A Non-2,3,7,8-sub-TCDF	17.076	4671161	0.80	1.0239	4.535	4.535	0.0348	2.739		
S Total TCDF					10.8	10.8	0.0348	0.0348		
D 13C-2,3,7,8-TCDD	17.794	58996765	0.81	0.8993	52.3	52.3	0.0965	0.0965	52.26	
2,3,7,8-TCDD	17.809	1497292	0.73	1.2541	2.024	2.024	0.0311	0.0311		
$ 37Cl4-2,3,7,8-TCDD	17.809	38094767		1.1071	27.4	27.4	0.0234	0.0234	68.52	
A Non-2,3,7,8-sub-TCDD	17.537	944526	0.77	1.2541	1.300	1.277	0.0311	0.4148		RQ
S Total TCDD					3.324	3.300	0.0311	0.0311		RQ
D 13C-1,2,3,7,8-PeCDF	22.020	75404850	1.56	1.2101	49.6	49.6	0.0689	0.0689	49.64	
1,2,3,7,8-PeCDF	22.047	254653	1.59	1.0611	0.3183	0.3183	0.0175	0.0175		M
D 13C-2,3,4,7,8-PeCDF	23.343	84448785	1.57	1.2395	54.3	54.3	0.0673	0.0673	54.27	
2,3,4,7,8-PeCDF	23.384	125219	1.51	1.0184	0.1456	0.1456	0.0175	0.0175		
A F1 PeCDFs	19.851						0.0164	0.0164		
A Non-2,3,7,8-sub-PeCDF	23.067	216751	1.55	1.0398	0.2656	0.2608	0.0175	0.1405		RQ
S Total PeCDF					0.7294	0.7247	0.0175	0.0175		RQ
D 13C-1,2,3,7,8-PeCDD	24.052	49439060	1.61	0.7612	51.7	51.7	0.0436	0.0436	51.74	
1,2,3,7,8-PeCDD	24.093	41788	1.67	1.0484	0.0806	0.0806	0.0322	0.0322		
A Non-2,3,7,8-sub-PeCDD	23.696	733768	1.55	1.0484	1.442	1.416	0.0322	0.7692		RQ
S Total PeCDD					1.522	1.496	0.0322	0.0322		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.186	69380684	0.52	1.0837	58.0	58.0	0.1136	0.1136	58.02	
1,2,3,4,7,8-HxCDF	30.213	1331095	1.26	1.0851	1.768	1.768	0.0211	0.0211		
D 13C-1,2,3,6,7,8-HxCDF	30.399	61656101	0.51	1.1279	49.5	49.5	0.1091	0.1091	49.54	
1,2,3,6,7,8-HxCDF	30.412	272008	1.26	1.1260	0.3918	0.3918	0.0214	0.0214		
D 13C-2,3,4,6,7,8-HxCDF	31.291	58743824	0.53	1.0637	50.0	50.0	0.1157	0.1157	50.04	
2,3,4,6,7,8-HxCDF	31.304	23199	1.30	1.1675	0.0338	0.0338	0.0164	0.0164		M
D 13C-1,2,3,7,8,9-HxCDF	32.129	53711635	0.52	0.9676	50.3	50.3	0.1272	0.1272	50.31	
1,2,3,7,8,9-HxCDF	32.156	39602	1.39	1.1664	0.0632	0.0632	0.0153	0.0153		
A Non-2,3,7,8-sub-HxCDF	30.338	104102	1.10	1.1363	0.1505	0.1505	0.0182	0.0941		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					2.407	2.407	0.0185	0.0185		
* 13C-1,2,3,7,8,9-HxCDD	31.943	110350678	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.490	47135879	1.25	0.7334	58.2	58.2	0.1415	0.1415	58.24	
1,2,3,4,7,8-HxCDD	31.517	101180	1.11	1.0640	0.2017	0.2017	0.0399	0.0399		
D 13C-1,2,3,6,7,8-HxCDD	31.610	46782979	1.23	0.8802	48.2	48.2	0.1179	0.1179	48.17	
1,2,3,6,7,8-HxCDD	31.624	140719	1.34	1.0001	0.3008	0.3008	0.0422	0.0422		
1,2,3,7,8,9-HxCDD	31.956	348391	1.15	1.1325	0.6551	0.6551	0.0374	0.0374		M
A Non-2,3,7,8-sub-HxCDD	30.525	4294464	1.24	1.0655	8.641	8.583	0.0397	6.150		RQ
S Total HxCDD					9.799	9.740	0.0398	0.0398		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	38306600	0.43	0.7730	44.9	44.9	0.4882	0.4882	44.91	
1,2,3,4,6,7,8-HpCDF	33.616	382858	1.05	1.4413	0.6934	0.6934	0.0186	0.0186		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.673	40364522	0.44	0.7008	52.2	52.2	0.5385	0.5385	52.19	
1,2,3,4,7,8,9-HpCDF	34.685	163729	1.12	1.3174	0.3079	0.3079	0.0208	0.0208		M
A Non-2,3,7,8-sub-HpCDF	34.150	114000	1.00	1.3793	0.2101	0.2101	0.0196	0.2101		M
S Total HpCDF					1.211	1.211	0.0197	0.0197		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	34761893	1.00	0.6472	48.7	48.7	0.1791	0.1791	48.67	
1,2,3,4,6,7,8-HpCDD	34.405	4988917	1.04	1.0943	13.1	13.1	0.1635	0.1635		
A Non-2,3,7,8-sub-HpCDD	34.223	10940227	1.05	1.0943	28.8	28.8	0.1635	28.8		
S Total HpCDD					41.9	41.9	0.1635	0.1635		
D 13C-OCDD	36.701	50915487	0.88	0.4472	103.2	103.2	0.1200	0.1200	51.59	
OCDF	36.797	245069	0.86	1.4382	0.6694	0.6694	0.0166	0.0166		M
OCDD	36.713	93130748	0.90	1.1070	330.5	330.5	0.2538	0.2538		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d
Lims ID: 320-77214-A-7-A
Client ID: 11215702-080221-BN-SJSB090 (12-14)
Sample Type: Client
Inject. Date: 25-Aug-2021 18:50:31 ALS Bottle#: 17 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-7-A 320-77214-A-7-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 10:06:19 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:12:12

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		55902359	14309399	6445	16112	2220		
333.9339	17.598	17.598	0		69631778	17834724	4718	11795	3780	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	0.972	43639428	11294727	7158	17895	1578		
317.9389	17.099	17.099	0	0.972	56956504	14855993	7205	18012	2062	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	2802200	714764	1615	4037	443		
305.8987	17.114	17.114	0	1.001	3646038	906893	2116	5290	429	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.224	17.076	-111	0.890	44460	11890	1615	4037	7		
305.8987	15.224	17.076	-111	0.890	55553	16558	2116	5290	8	0.80(0.65-0.89)	
303.9016	15.723	17.076	-81	0.920	45926	12699	1615	4037	8		
305.8987	15.723	17.076	-81	0.920	63423	19388	2116	5290	9	0.72(0.65-0.89)	
303.9016	15.995	17.076	-65	0.935	81246	19781	1615	4037	12		
305.8987	15.995	17.076	-65	0.935	112914	25232	2116	5290	12	0.72(0.65-0.89)	
303.9016	16.222	17.076	-51	0.949	94891	22561	1615	4037	14		
305.8987	16.222	17.076	-51	0.949	106099	26983	2116	5290	13	0.89(0.65-0.89)	
303.9016	16.464	17.076	-37	0.963	113290	28940	1615	4037	18		
305.8987	16.464	17.076	-37	0.963	141773	38921	2116	5290	18	0.80(0.65-0.89)	
303.9016	16.736	17.076	-20	0.979	1255830	336777	1615	4037	209		
305.8987	16.736	17.076	-20	0.979	1565457	437855	2116	5290	207	0.80(0.65-0.89)	
303.9016	16.963	17.076	-7	0.992	45432	10526	1615	4037	7		
305.8987	16.948	17.076	-8	0.991	64663	16606	2116	5290	8	0.70(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.537	17.076	28	1.026	188918	44095	1615	4037	27		
305.8987	17.537	17.076	28	1.026	241999	62726	2116	5290	30	0.78(0.65-0.89)	
303.9016	18.913	17.076	110	1.106	204748	43235	1615	4037	27		
305.8987	18.898	17.076	109	1.105	244539	53404	2116	5290	25	0.84(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.011	26463888	6577273	6445	16112	1021		
333.9339	17.794	17.794	0	1.011	32532877	8195996	4718	11795	1737	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	631230	159256	1149	2872	139		
321.8936	17.809	17.809	0	1.001	866062	218480	1156	2890	189	0.73(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	38094767	9553227	3325	8312	2873		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	15.920	17.537	-97	0.895	51443	15696	1149	2872	14		
321.8936	15.905	17.537	-98	0.894	61330	17810	1156	2890	15	0.84(0.65-0.89)	
319.8965	16.146	17.537	-83	0.907	29852	7896	1149	2872	7		
321.8936	16.146	17.537	-83	0.907	41056	11146	1156	2890	10	0.73(0.65-0.89)	
319.8965	16.691	17.537	-51	0.938	139564	34866	1149	2872	30		
321.8936	16.691	17.537	-51	0.938	167317	44164	1156	2890	38	0.83(0.65-0.89)	
319.8965	17.295	17.537	-14	0.972	14043	3871	1149	2872	3		
321.8936	17.295	17.537	-14	0.972	16586	5110	1156	2890	4	0.85(0.65-0.89)	
319.8965	17.567	17.537	2	0.987	53958	15318	1149	2872	13		
321.8936	17.567	17.537	2	0.987	61469	13851	1156	2890	12	0.88(0.65-0.89)	
319.8965	17.688	17.537	9	0.994	76138	19886	1149	2872	17		
321.8936	17.704	17.537	10	0.995	94971	24734	1156	2890	21	0.80(0.65-0.89)	
319.8965	18.157	17.537	37	1.020	77130	18056	1149	2872	16		
	Empc Correction				59511	16337	1149	2872	14		
321.8936	18.157	17.537	37	1.020	77288	21217	1156	2890	18	1.00(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	45898883	8551661	6398	15995	1337		
353.8970	22.020	22.020	0	1.251	29505967	5446651	4323	10807	1260	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.047	22.047	0	1.001	156312	28290	358	895	79		
341.8567	22.061	22.047	1	1.002	98341	17932	681	1702	26	1.59(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.326	51588994	8882776	6398	15995	1388		
353.8970	23.343	23.343	0	1.326	32859791	5711048	4323	10807	1321	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.384	23.370	1	1.002	75428	12351	358	895	35		
341.8567	23.384	23.370	1	1.002	49791	8363	681	1702	12	1.51(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						268	670			
341.8567	19.851						706	1765			
A Non-2,3,7,8-sub-PeCDF											RQ

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	20.738	23.067	-139	0.942	71717	13520	358	895	38		
341.8567	20.725	23.067	-140	0.941	45083	7677	681	1702	11	1.59(1.32-1.78)	
339.8597	22.566	23.067	-30	1.025	41397	8376	358	895	23		
341.8567	22.579	23.067	-29	1.025	24259	4237	681	1702	6	1.71(1.32-1.78)	
339.8597	23.684	23.067	37	1.076	20846	2980	358	895	8		
341.8567	23.697	23.067	38	1.076	17424	3367	681	1702	5	1.20(1.32-1.78)	
	Empc Correction				13449	1922	681	1702	3		
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.367	30480696	4933863	2543	6357	1940		
369.8919	24.052	24.052	0	1.367	18958364	3141598	1726	4315	1820	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.093	24.079	1	1.002	26108	4691	714	1785	7		
357.8516	24.093	24.079	1	1.002	15680	2726	377	942	7	1.67(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.666	23.696	-122	0.901	230029	45991	714	1785	64		
357.8516	21.666	23.696	-122	0.901	168675	32535	377	942	86	1.36(1.32-1.78)	
355.8546	22.334	23.696	-82	0.929	26705	5157	714	1785	7		
357.8516	22.320	23.696	-82	0.928	15664	2913	377	942	8	1.70(1.32-1.78)	
355.8546	22.620	23.696	-64	0.940	19744	3747	714	1785	5		
357.8516	22.634	23.696	-64	0.941	17259	4482	377	942	12	1.14(1.32-1.78)	
	Empc Correction				12738	2417	377	942	6		
355.8546	22.920	23.696	-46	0.953	40953	7938	714	1785	11		
357.8516	22.920	23.696	-46	0.953	35334	7498	377	942	20	1.16(1.32-1.78)	
	Empc Correction				26421	5121	377	942	14		
355.8546	23.138	23.696	-33	0.962	110500	13427	714	1785	19		
357.8516	23.125	23.696	-34	0.961	82339	10949	377	942	29	1.34(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.186	30.186	0	0.945	23675084	4185694	5311	13277	788		
385.8610	30.186	30.186	0	0.945	45705600	7978427	10125	25312	788	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.213	30.213	0	1.001	742295	126664	684	1710	185		
375.8178	30.213	30.213	0	1.001	588800	102318	428	1070	239	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.952	20863732	3921312	5311	13277	738		
385.8610	30.399	30.399	0	0.952	40792369	7626471	10125	25312	753	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.000	151761	28548	684	1710	42		
375.8178	30.412	30.412	0	1.000	120247	22810	428	1070	53	1.26(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.980	20267107	5009456	5311	13277	943		
385.8610	31.291	31.291	0	0.980	38476717	9483386	10125	25312	937	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											M
373.8208	31.304	31.317	-1	1.000	13131	3890	684	1710	6		
375.8178	31.304	31.317	-1	1.000	10068	2493	428	1070	6	1.30(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.143	-1	1.006	18375077	5343794	5311	13277	1006		
385.8610	32.129	32.143	-1	1.006	35336558	10244049	10125	25312	1012	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.156	32.156	0	1.001	23054	7106	684	1710	10		
375.8178	32.143	32.156	-1	1.000	16548	5050	428	1070	12	1.39(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	29.215	30.338	-67	0.968	20507	3145	684	1710	5		
375.8178	29.188	30.338	-69	0.967	18491	2310	428	1070	5	1.11(1.05-1.43)	
373.8208	32.249	30.338	114	1.068	33956	9398	684	1710	14		
375.8178	32.236	30.338	114	1.068	31148	9285	428	1070	22	1.09(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.956	-1		61059465	17248843	7287	18217	2367		
403.8529	31.943	31.956	-1		49291213	14097990	5724	14310	2463	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.490	31.504	-1	0.986	26167129	7094547	7287	18217	974		
403.8529	31.490	31.504	-1	0.986	20968750	5680552	5724	14310	992	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.517	31.517	0	1.001	53330	14174	870	2175	16		
391.8127	31.504	31.517	-1	1.000	47850	12238	1298	3245	9	1.11(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.990	25830782	7042200	7287	18217	966		
403.8529	31.610	31.610	0	0.990	20952197	5795079	5724	14310	1012	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.624	31.624	0	1.000	80659	21247	870	2175	24		
391.8127	31.624	31.624	0	1.000	60060	15988	1298	3245	12	1.34(1.05-1.43)	
1,2,3,7,8,9-HxCDD											M
389.8157	31.956	31.969	-1	1.015	186693	39289	870	2175	45		M
391.8127	31.956	31.969	-1	1.015	161698	33464	1298	3245	26	1.15(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.068	30.525	-87	0.920	1731652	217575	870	2175	250		
391.8127	29.055	30.525	-88	0.919	1345806	170293	1298	3245	131	1.29(1.05-1.43)	
389.8157	30.292	30.525	-14	0.958	73927	13491	870	2175	16		
	Empc Correction				44421	8304	870	2175	10		
391.8127	30.279	30.525	-15	0.958	35824	6697	1298	3245	5	2.06(1.05-1.43)	
389.8157	30.692	30.525	10	0.971	587192	106475	870	2175	122		
391.8127	30.705	30.525	11	0.971	449838	82765	1298	3245	64	1.31(1.05-1.43)	
389.8157	30.918	30.525	24	0.978	57771	13549	870	2175	16		
391.8127	30.918	30.525	24	0.978	41960	9226	1298	3245	7	1.38(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	11551831	4353790	16952	42380	257		
419.8220	33.603	33.603	0	1.052	26754769	10043294	30369	75922	331	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.616	33.615	0	1.000	196483	69173	1077	2692	64		M
409.7789	33.616	33.615	0	1.000	186375	73601	464	1160	159	1.05(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.673	34.672	0	1.085	12302387	4306699	16952	42380	254		
419.8220	34.673	34.672	0	1.085	28062135	9782719	30369	75922	322	0.44(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8,9-HpCDF											M
407.7818	34.685	34.685	0	1.000	86342	28942	1077	2692	27		M
409.7789	34.685	34.685	0	1.000	77387	25624	464	1160	55	1.12(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											M
407.7818	33.907	34.150	-15	1.009	57053	21391	1077	2692	20		M
409.7789	33.907	34.150	-15	1.009	56947	18670	464	1160	40	1.00(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.077	17397108	6081973	8981	22452	677		
437.8140	34.393	34.393	0	1.077	17364785	5956901	5552	13880	1073	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	2538287	856359	3669	9172	233		
425.7737	34.393	34.405	-1	1.000	2450630	857016	4946	12365	173	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.859	34.223	-22	0.984	5611056	2003635	3669	9172	546		
425.7737	33.859	34.223	-22	0.984	5329171	1885086	4946	12365	381	1.05(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.701	0	1.149	23893677	7416858	3074	7685	2413		
471.7750	36.701	36.701	0	1.149	27021810	8365875	3656	9140	2288	0.88(0.76-1.02)	
OCDF											M
441.7428	36.797	36.797	0	1.003	113285	33565	342	855	98		M
443.7399	36.797	36.797	0	1.003	131784	40993	410	1025	100	0.86(0.76-1.02)	M
OCDD											
457.7377	36.713	36.713	0	1.000	44040165	13449359	3757	9392	3580		
459.7348	36.713	36.713	0	1.000	49090583	14723750	5113	12782	2880	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d
Lims ID: 320-77214-A-7-A
Client ID: 11215702-080221-BN-SJSB090 (12-14)
Inject. Date: 25-Aug-2021 18:50:31 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 13

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	100595932	26150720

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	100595932	26150720

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.224	44460	11890	55553	16558	0.0971	0.80	
15.723	45926	12699	63423	19388	0.1062	0.72	
15.995	81246	19781	112914	25232	0.1885	0.72	
16.222	94891	22561	106099	26983	0.1951	0.89	
16.464	113290	28940	141773	38921	0.2476	0.80	
16.736	1255830	336777	1565457	437855	2.74	0.80	
16.963	45432	10526	64663	16606	0.1069	0.70	
17.537	188918	44095	241999	62726	0.4184	0.78	
18.913	204748	43235	244539	53404	0.4362	0.84	
Signal Totals:							
	2074741	530504	2596420	697673			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4671161	1228177				0.80	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.535 = (4671161 * 100.000) / (100595932 * 1.024)

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Lims ID:	320-77214-A-7-A		
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Inject. Date:	25-Aug-2021 18:50:31	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	13

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	58996765	14773269

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	58996765	14773269

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.920	51443	15696	61330	17810	0.1524	0.84	
16.146	29852	7896	41056	11146	0.0958	0.73	
16.691	139564	34866	167317	44164	0.4148	0.83	
17.295	14043	3871	16586	5110	0.0414	0.85	
17.567	53958	15318	61469	13851	0.1560	0.88	
17.688	76138	19886	94971	24734	0.2313	0.80	
18.157	77130	18056	77288	21217	0.2087	1.00	RQ
18.157	59511	16337	77288	21217	0.1849		Empc Correction
Signal Totals:							
	424509	113870	520017	138032			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	962145	253621				0.85	RQ
	944526	251902					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.300 = (962145 * 100.000) / (58996765 * 1.254)

Empc Amount: 1.277 = (944526 * 100.000) / (58996765 * 1.254)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Lims ID:	320-77214-A-7-A		
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Inject. Date:	25-Aug-2021 18:50:31	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	13

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	75404850	13998312
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	84448785	14593824

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	79926817	14296068

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.738	71717	13520	45083	7677	0.1405	1.59	
22.566	41397	8376	24259	4237	0.0790	1.71	
23.684	20846	2980	17424	3367	0.0460	1.20	RQ
23.684	20846	2980	13449	1922	0.0413		Empc Correction
Signal Totals:							
	133960	24876	82791	13836			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	220726	40157				1.54	RQ
	216751	38712					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2656 = (220726 * 100.000) / (79926817 * 1.040)
Empc Amount: 0.2608 = (216751 * 100.000) / (79926817 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Lims ID:	320-77214-A-7-A		
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Inject. Date:	25-Aug-2021 18:50:31	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	13

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	49439060	8075461

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	49439060	8075461

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.666	230029	45991	168675	32535	0.7692	1.36	
22.334	26705	5157	15664	2913	0.0817	1.70	
22.620	19744	3747	17259	4482	0.0714	1.14	RQ
22.620	19744	3747	12738	2417	0.0627		Empc Correction
22.920	40953	7938	35334	7498	0.1472	1.16	RQ
22.920	40953	7938	26421	5121	0.1300		Empc Correction
23.138	110500	13427	82339	10949	0.3720	1.34	
Signal Totals:							
	427931	76260	305837	53935			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	747202	134637				1.34	RQ
	733768	130195					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.442 = (747202 * 100.000) / (49439060 * 1.048)
Empc Amount: 1.416 = (733768 * 100.000) / (49439060 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d
Lims ID: 320-77214-A-7-A
Client ID: 11215702-080221-BN-SJSB090 (12-14)
Inject. Date: 25-Aug-2021 18:50:31 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 13

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	69380684	12164121
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	61656101	11547783
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	58743824	14492842
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	53711635	15587843

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	60873061	13448147

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.215	20507	3145	18491	2310	0.0564	1.11	
32.249	33956	9398	31148	9285	0.0941	1.09	
Signal Totals:							
	54463	12543	49639	11595			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	104102	24138				1.10	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1505 = (104102 * 100.000) / (60873061 * 1.136)

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Lims ID:	320-77214-A-7-A		
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Inject. Date:	25-Aug-2021 18:50:31	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	13

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	47135879	12775099
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	46782979	12837279
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	46959429	12806189

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.068	1731652	217575	1345806	170293	6.15	1.29	
30.292	73927	13491	35824	6697	0.2193	2.06	RQ
30.292	44421	8304	35824	6697	0.1604		Empc Correction
30.692	587192	106475	449838	82765	2.07	1.31	
30.918	57771	13549	41960	9226	0.1993	1.38	
Signal Totals:							
	2421036	345903	1873428	268981			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4323970	620071				1.31	RQ
	4294464	614884					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 8.641 = (4323970 * 100.000) / (46959429 * 1.066)

Empc Amount: 8.583 = (4294464 * 100.000) / (46959429 * 1.066)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d
Lims ID: 320-77214-A-7-A
Client ID: 11215702-080221-BN-SJSB090 (12-14)
Inject. Date: 25-Aug-2021 18:50:31 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 13

Non-2,3,7,8-sub-HpCDF, RT: 34.150

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	38306600	14397084
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	40364522	14089418

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	39335561	14243251

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
33.907	57053	21391	56947	18670	0.2101	1.00	M
Signal Totals:							
	57053	21391	56947	18670			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	114000	40061				1.00	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2101 = (114000 * 100.000) / (39335561 * 1.379)

QC Flag Legend

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d
Lims ID: 320-77214-A-7-A
Client ID: 11215702-080221-BN-SJSB090 (12-14)
Inject. Date: 25-Aug-2021 18:50:31 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 13

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	34761893	12038874

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	34761893	12038874

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.859	5611056	2003635	5329171	1885086	28.8	1.05	
Signal Totals:							
	5611056	2003635	5329171	1885086			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10940227	3888721				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 28.760 = (10940227 * 100.000) / (34761893 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d				
Injection Date:	25-Aug-2021 18:50:31	Instrument ID:	10D5		
Lims ID:	320-77214-A-7-A	Lab Sample ID:	320-77214-7		
Client ID:	11215702-080221-BN-SJSB090 (12-14)				
Operator ID:	SMA	ALS Bottle#:	17	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.06
Area: 111984
Amount: 0.335308
Amount Units: pg/ul

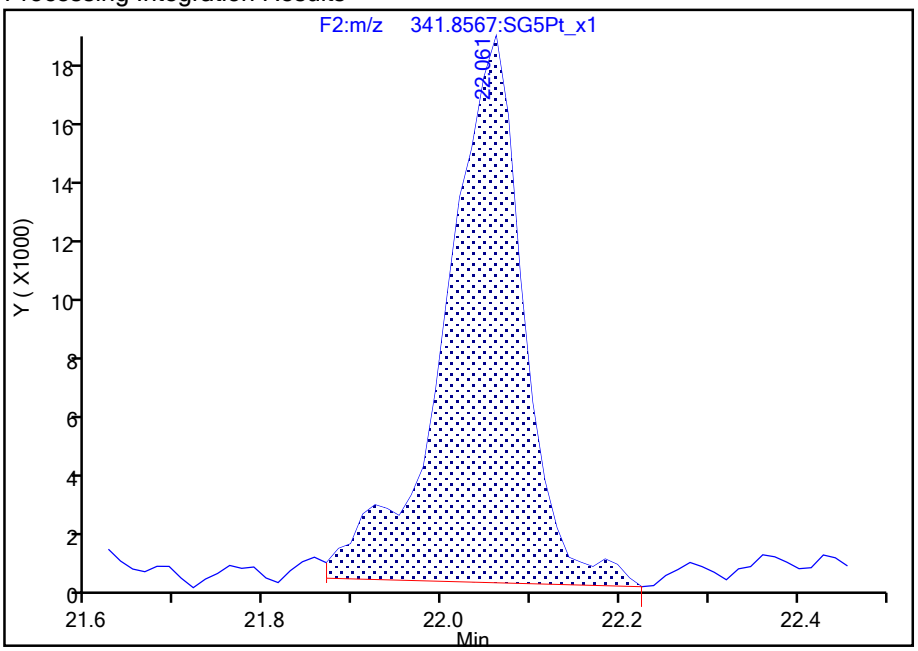

Manual Integration Results

RT: 22.06
Area: 98341
Amount: 0.318258
Amount Units: pg/ul

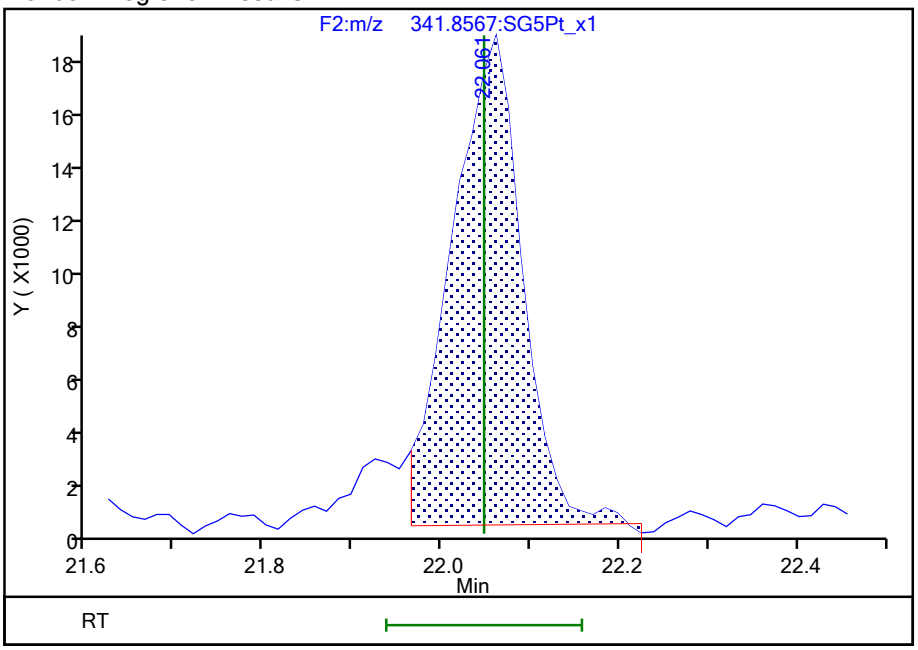

Reviewer: dadunj, 27-Aug-2021 10:04:11

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d				
Injection Date:	25-Aug-2021 18:50:31	Instrument ID:	10D5		
Lims ID:	320-77214-A-7-A	Lab Sample ID:	320-77214-7		
Client ID:	11215702-080221-BN-SJSB090 (12-14)				
Operator ID:	SMA	ALS Bottle#:	17	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.30
Area: 19221
Amount: 0.047170
Amount Units: pg/ul

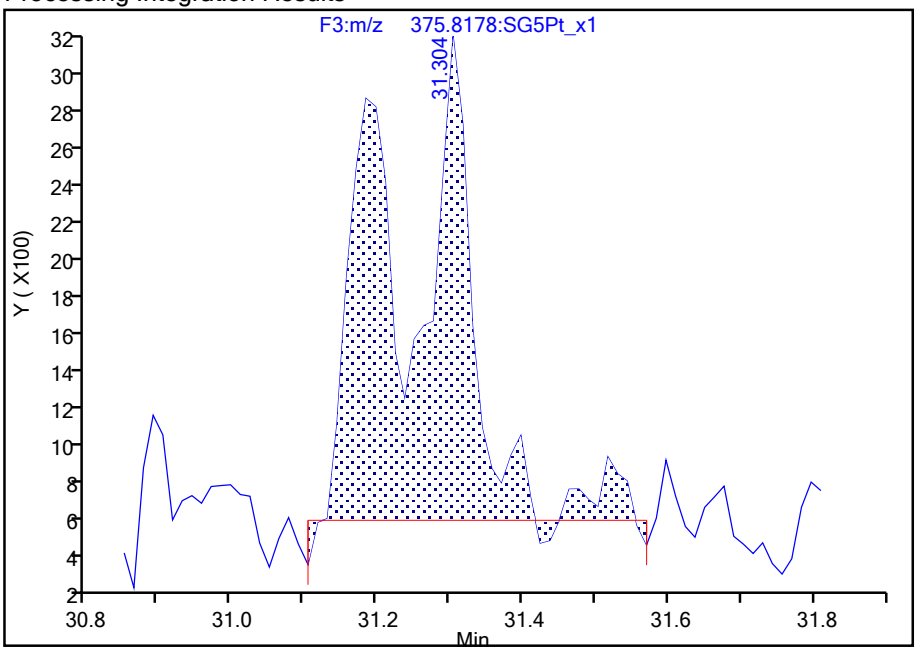

Manual Integration Results

RT: 31.30
Area: 10068
Amount: 0.033825
Amount Units: pg/ul

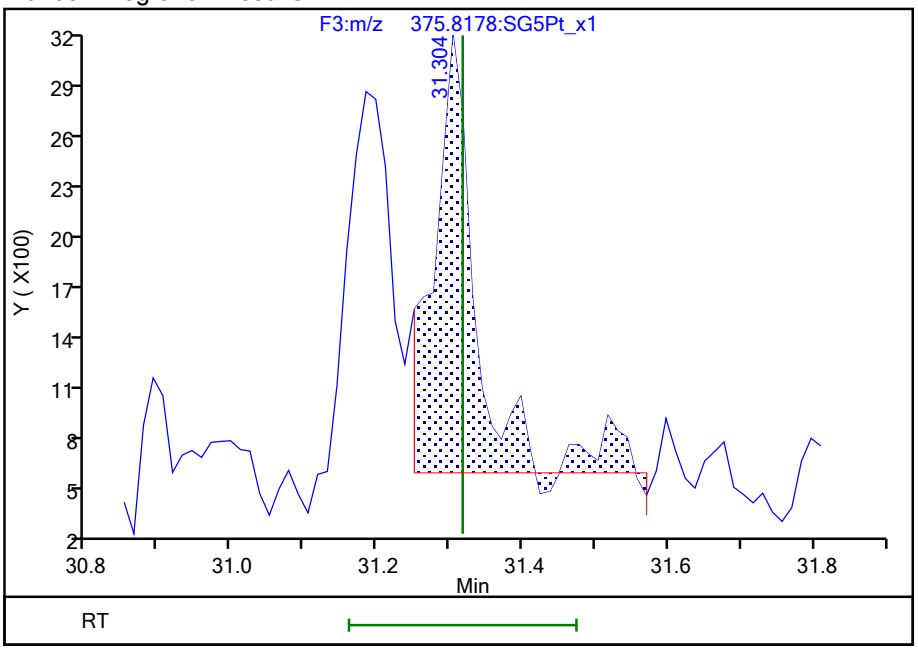

Reviewer: dadunj, 27-Aug-2021 10:04:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d				
Injection Date:	25-Aug-2021 18:50:31	Instrument ID:	10D5		
Lims ID:	320-77214-A-7-A	Lab Sample ID:	320-77214-7		
Client ID:	11215702-080221-BN-SJSB090 (12-14)				
Operator ID:	SMA	ALS Bottle#:	17	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 31.96
Area: 205189
Amount: 0.689862
Amount Units: pg/ul

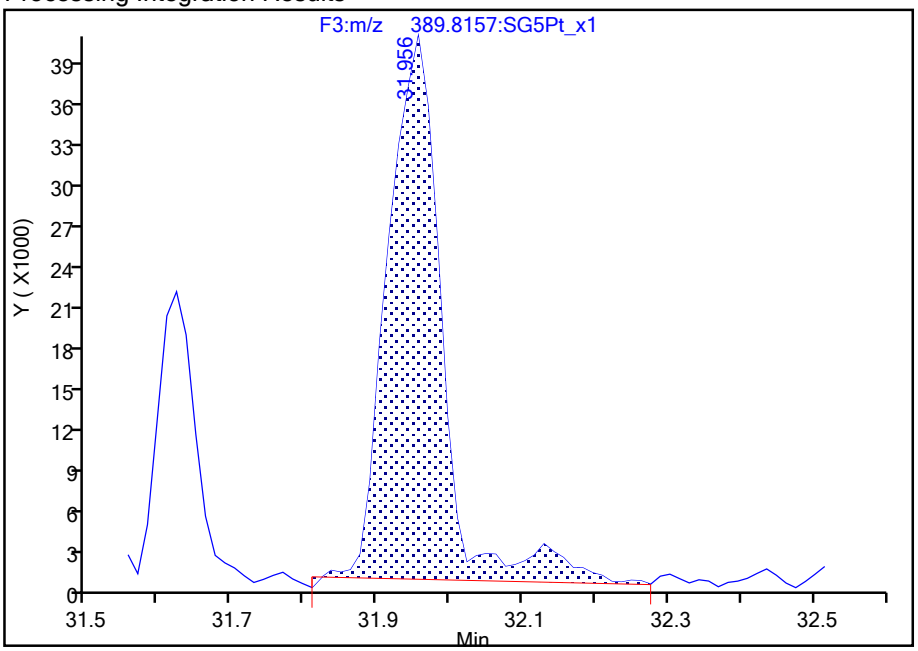

Manual Integration Results

RT: 31.96
Area: 186693
Amount: 0.655084
Amount Units: pg/ul

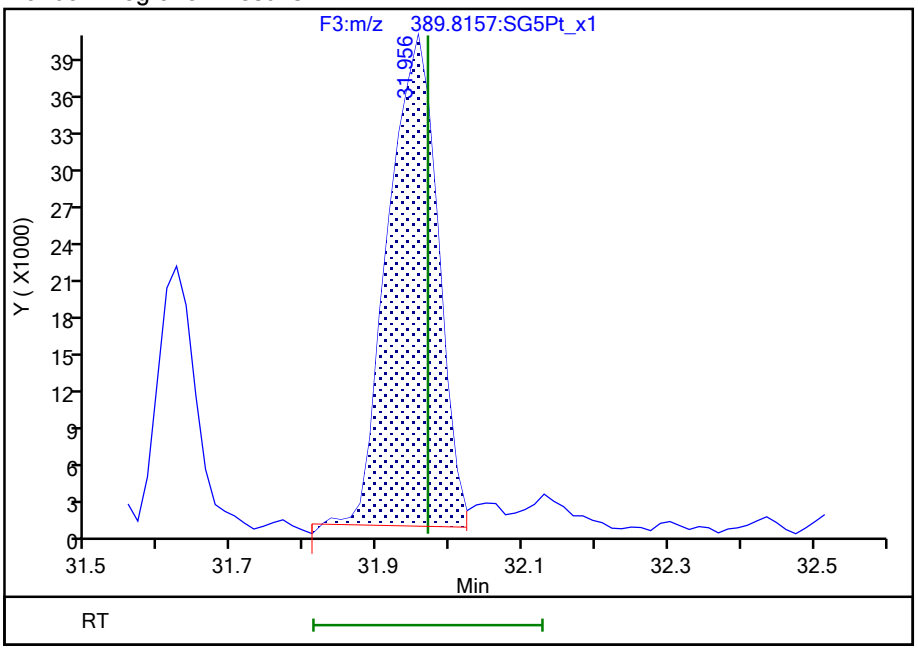

Reviewer: dadunj, 27-Aug-2021 10:04:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d				
Injection Date:	25-Aug-2021 18:50:31	Instrument ID:	10D5		
Lims ID:	320-77214-A-7-A	Lab Sample ID:	320-77214-7		
Client ID:	11215702-080221-BN-SJSB090 (12-14)				
Operator ID:	SMA	ALS Bottle#:	17	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.62
Area: 189622
Amount: 0.709337
Amount Units: pg/ul

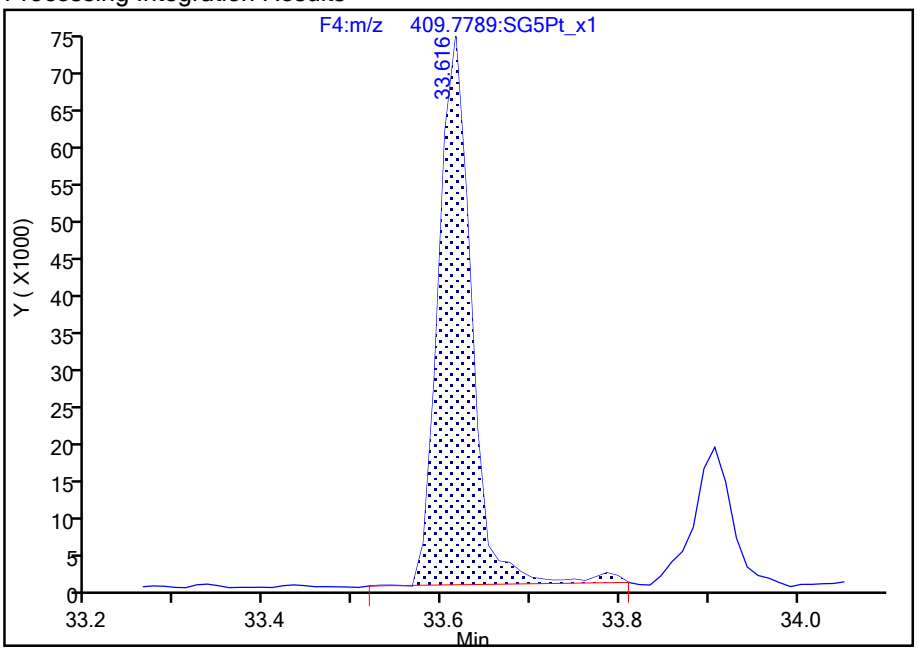

Manual Integration Results

RT: 33.62
Area: 186375
Amount: 0.693446
Amount Units: pg/ul

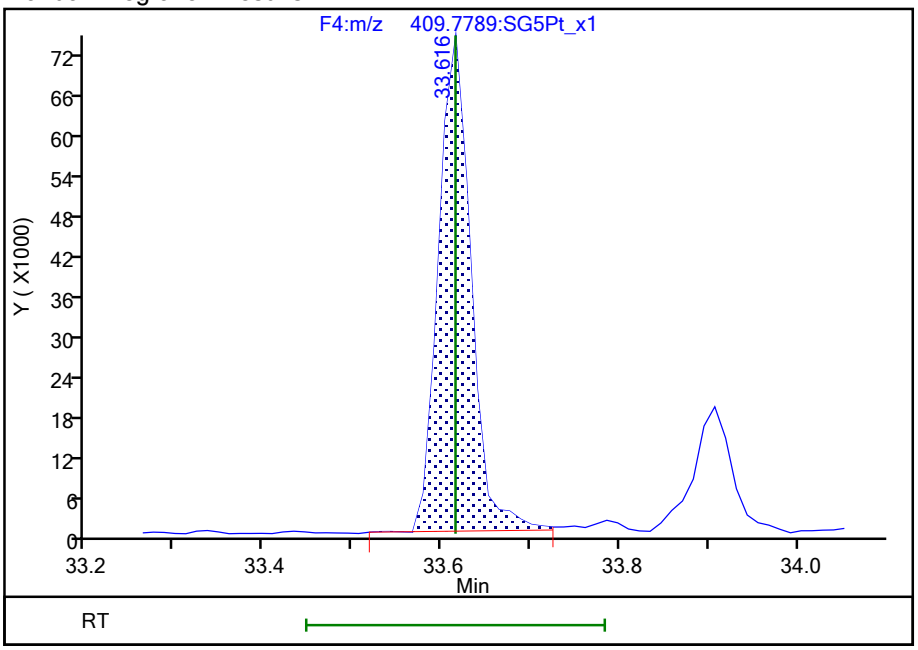

Reviewer: dadunj, 27-Aug-2021 10:05:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d				
Injection Date:	25-Aug-2021 18:50:31	Instrument ID:	10D5		
Lims ID:	320-77214-A-7-A	Lab Sample ID:	320-77214-7		
Client ID:	11215702-080221-BN-SJSB090 (12-14)				
Operator ID:	SMA	ALS Bottle#:	17	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.62
Area: 202010
Amount: 0.709337
Amount Units: pg/ul

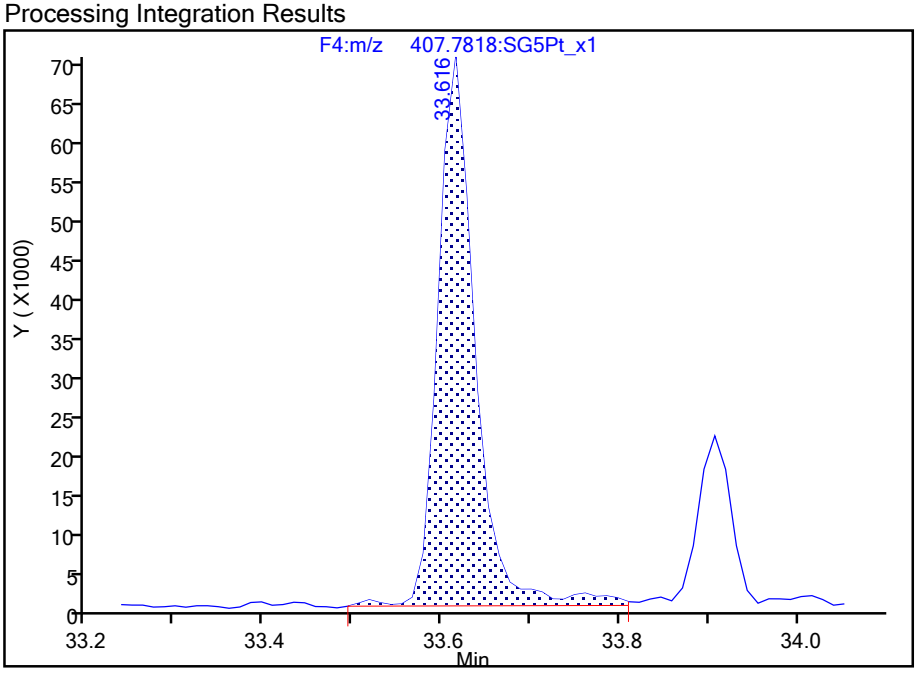

Manual Integration Results

RT: 33.62
Area: 196483
Amount: 0.693446
Amount Units: pg/ul

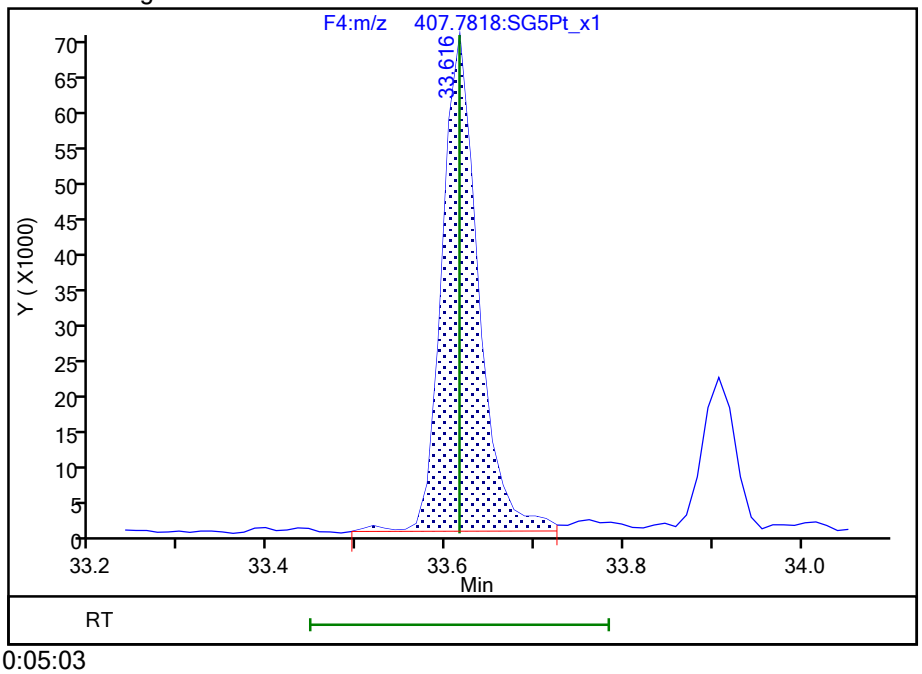

Reviewer: dadunj, 27-Aug-2021 10:05:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d				
Injection Date:	25-Aug-2021 18:50:31	Instrument ID:	10D5		
Lims ID:	320-77214-A-7-A	Lab Sample ID:	320-77214-7		
Client ID:	11215702-080221-BN-SJSB090 (12-14)				
Operator ID:	SMA	ALS Bottle#:	17	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,7,8,9-HpCDF, CAS: 55673-89-7

Signal: 1

Processing Integration Results

RT: 34.68
Area: 93984
Amount: 0.322274
Amount Units: pg/ul

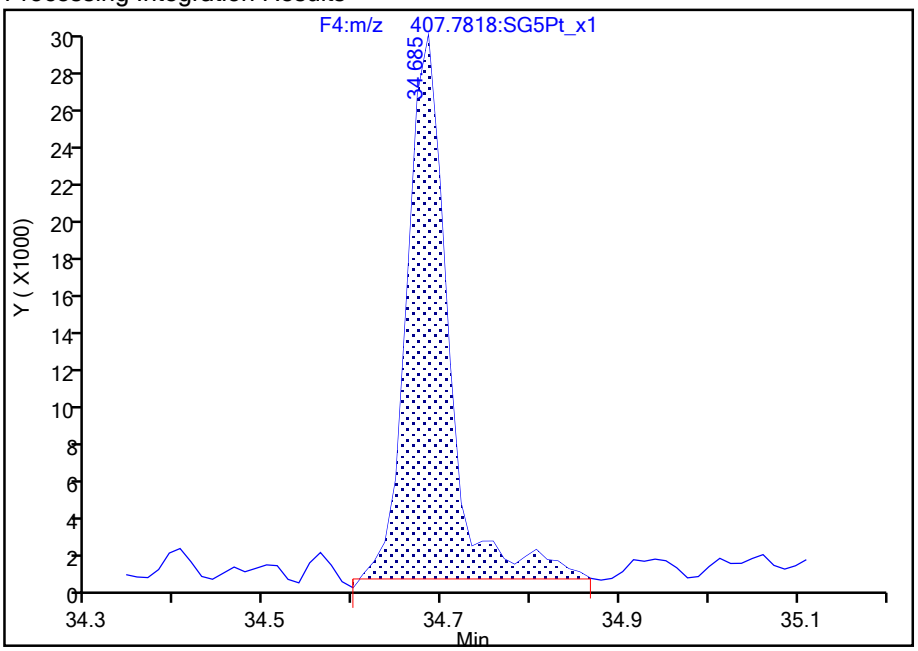

Manual Integration Results

RT: 34.68
Area: 86342
Amount: 0.307903
Amount Units: pg/ul

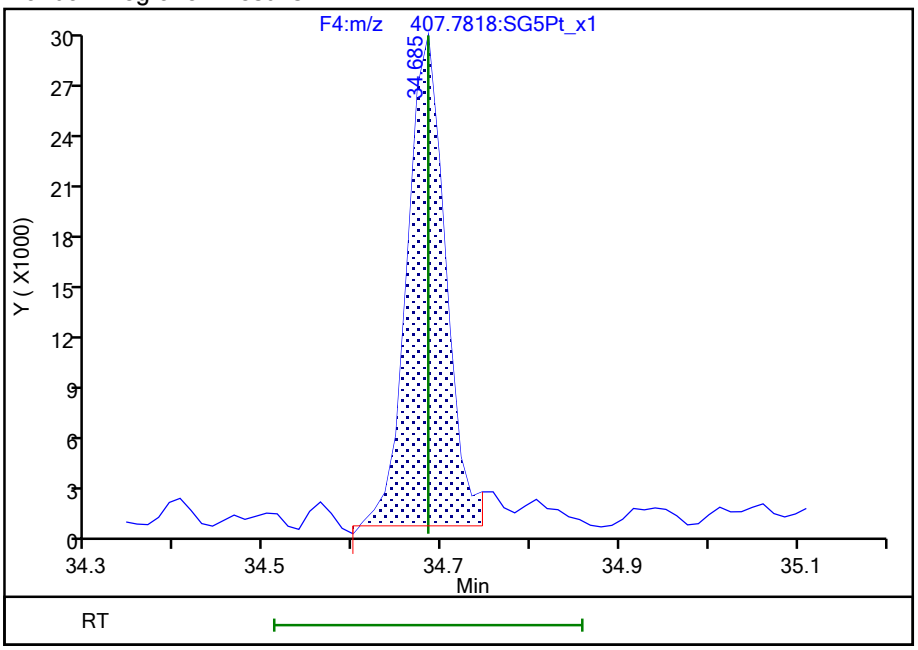

Reviewer: dadunj, 27-Aug-2021 10:05:07

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d				
Injection Date:	25-Aug-2021 18:50:31	Instrument ID:	10D5		
Lims ID:	320-77214-A-7-A	Lab Sample ID:	320-77214-7		
Client ID:	11215702-080221-BN-SJSB090 (12-14)				
Operator ID:	SMA	ALS Bottle#:	17	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7818, RT: (33.59- 34.71)

Signal: 1

Processing Integration Results

RT = 33.907 Area = 61336

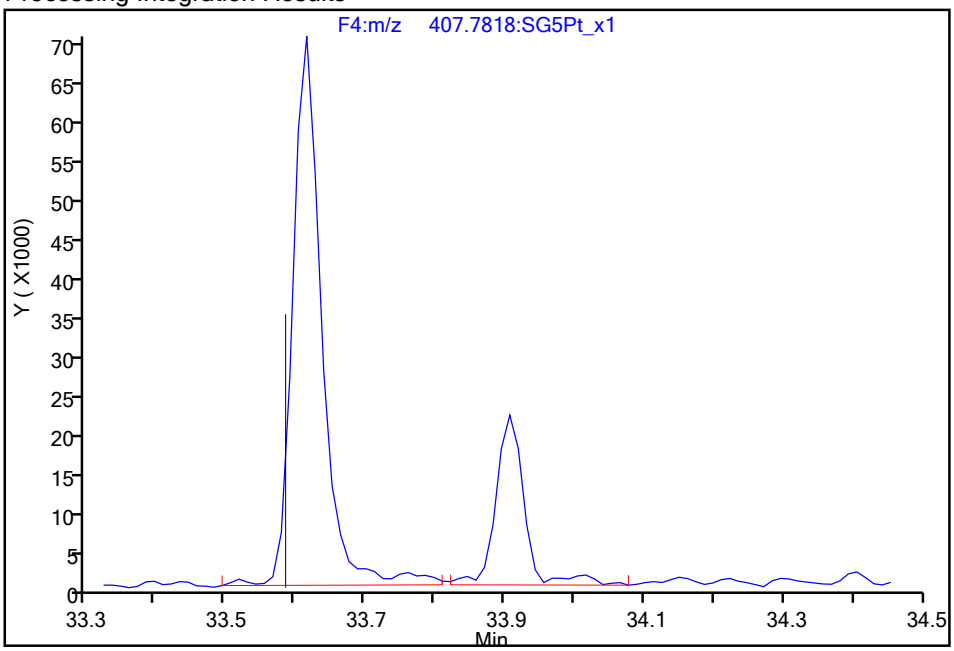

Manual Integration Results

RT = 33.907 Area = 57053 M

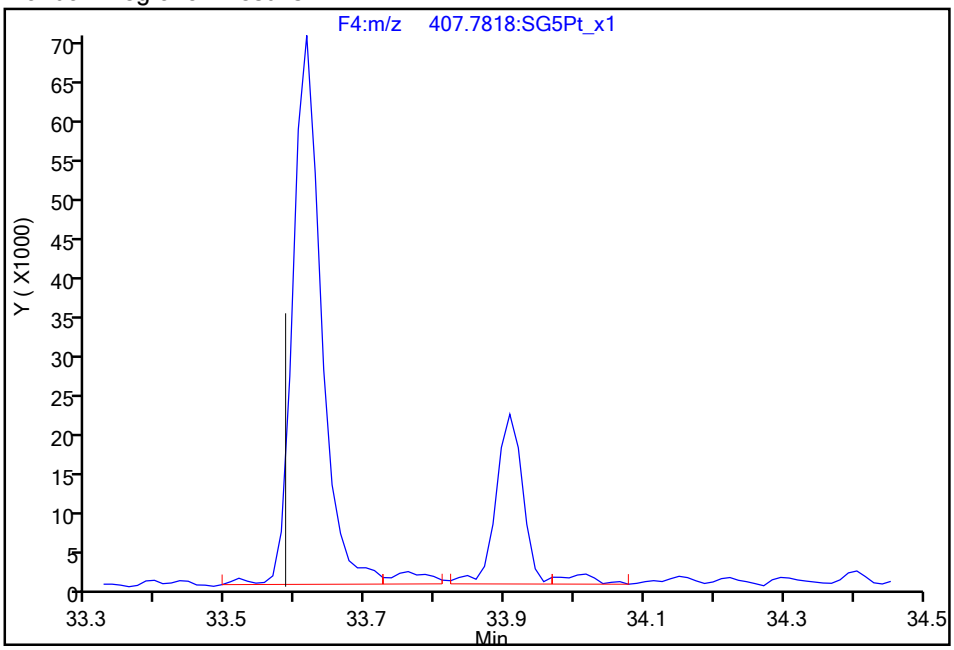

Reviewer: dadunj, 27-Aug-2021 10:05:09

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d				
Injection Date:	25-Aug-2021 18:50:31	Instrument ID:	10D5		
Lims ID:	320-77214-A-7-A	Lab Sample ID:	320-77214-7		
Client ID:	11215702-080221-BN-SJSB090 (12-14)				
Operator ID:	SMA	ALS Bottle#:	17	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.80
Area: 149407
Amount: 0.871269
Amount Units: pg/ul

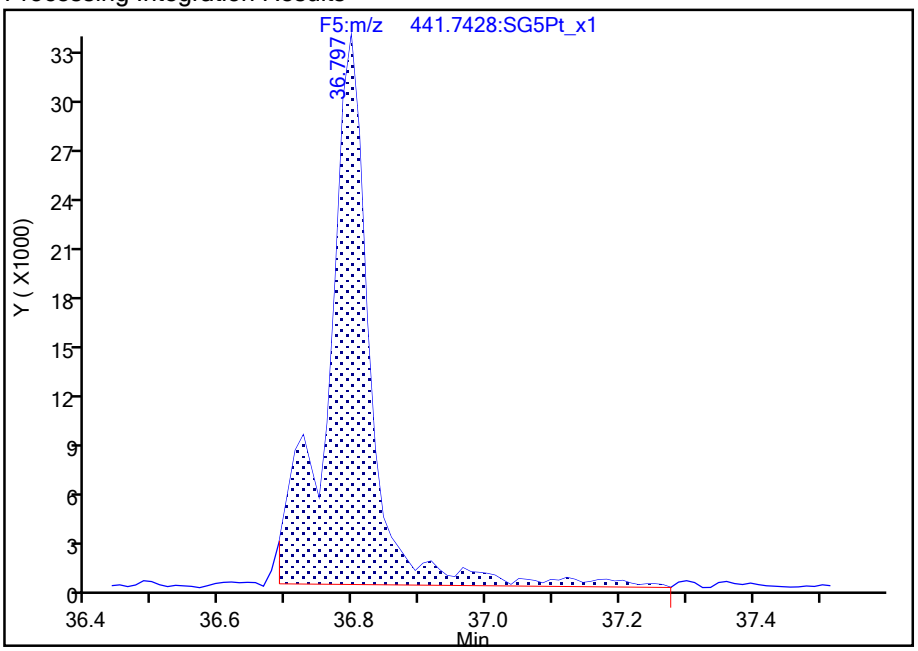

Manual Integration Results

RT: 36.80
Area: 113285
Amount: 0.669362
Amount Units: pg/ul

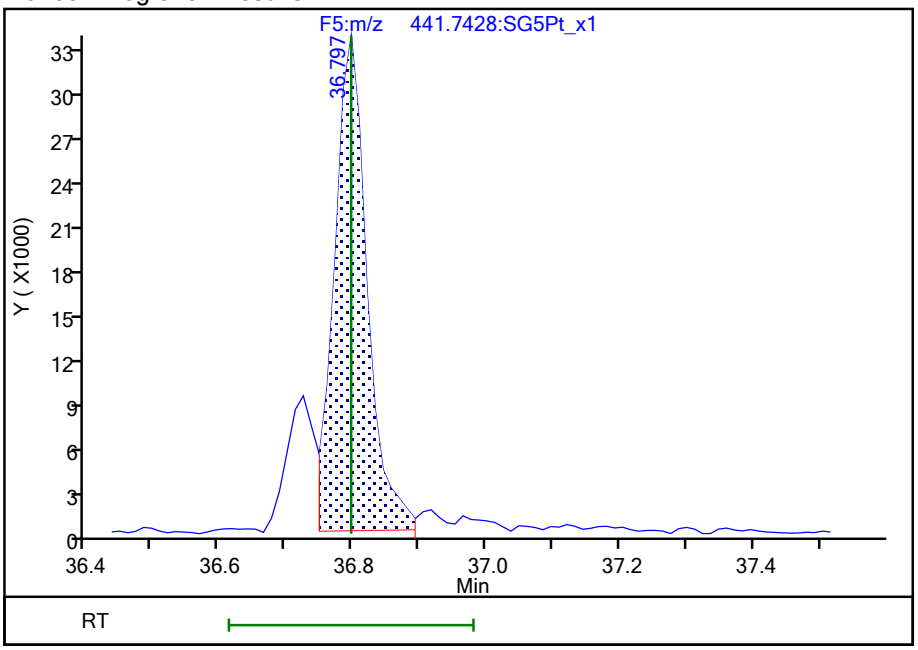

Reviewer: dadunj, 27-Aug-2021 10:05:33

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d				
Injection Date:	25-Aug-2021 18:50:31	Instrument ID:	10D5		
Lims ID:	320-77214-A-7-A	Lab Sample ID:	320-77214-7		
Client ID:	11215702-080221-BN-SJSB090 (12-14)				
Operator ID:	SMA	ALS Bottle#:	17	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.80
Area: 169585
Amount: 0.871269
Amount Units: pg/ul

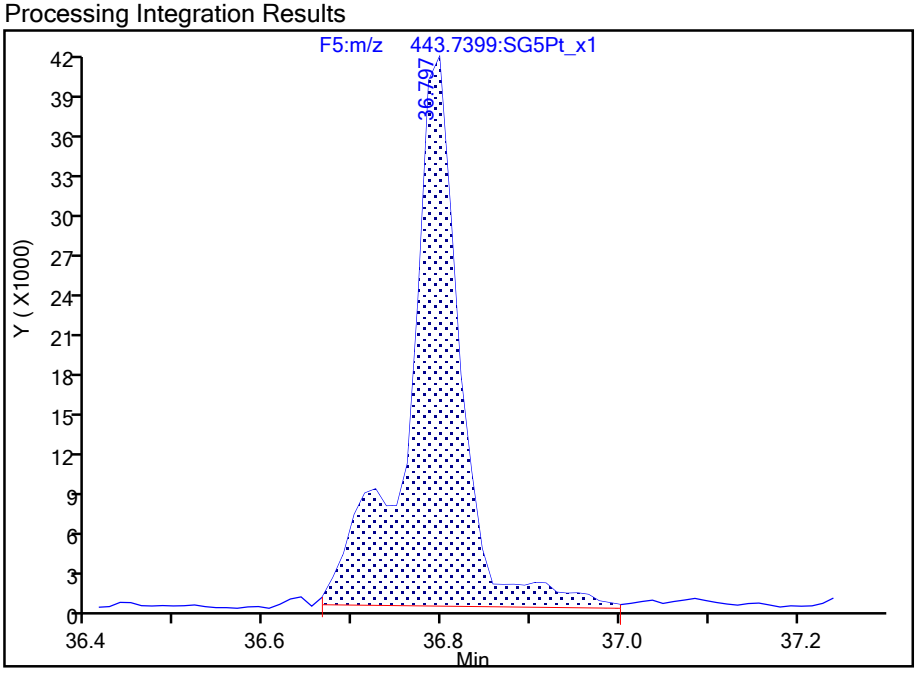

Manual Integration Results

RT: 36.80
Area: 131784
Amount: 0.669362
Amount Units: pg/ul

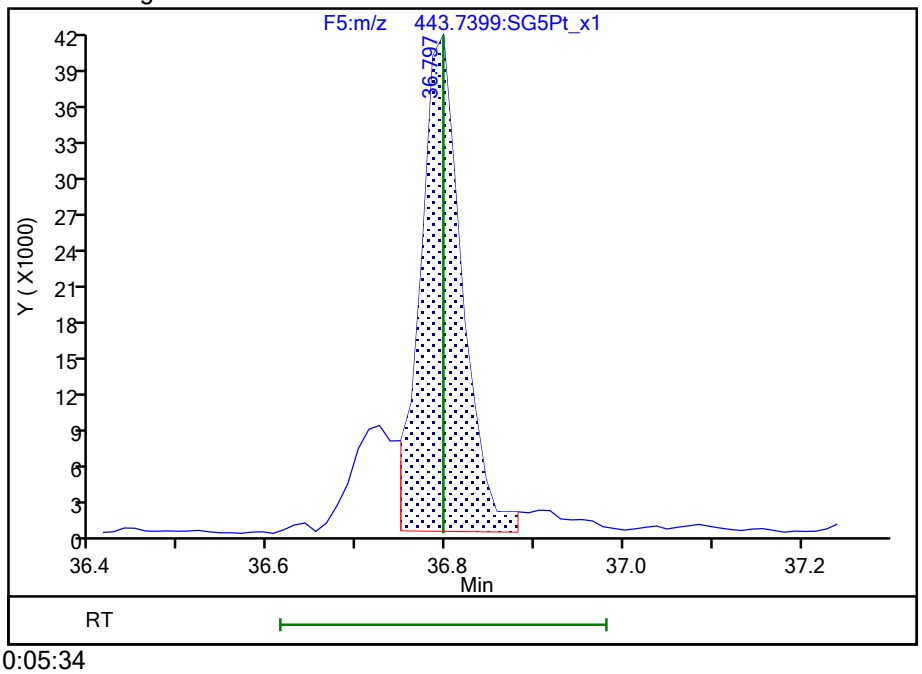

Reviewer: dadunj, 27-Aug-2021 10:05:34

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

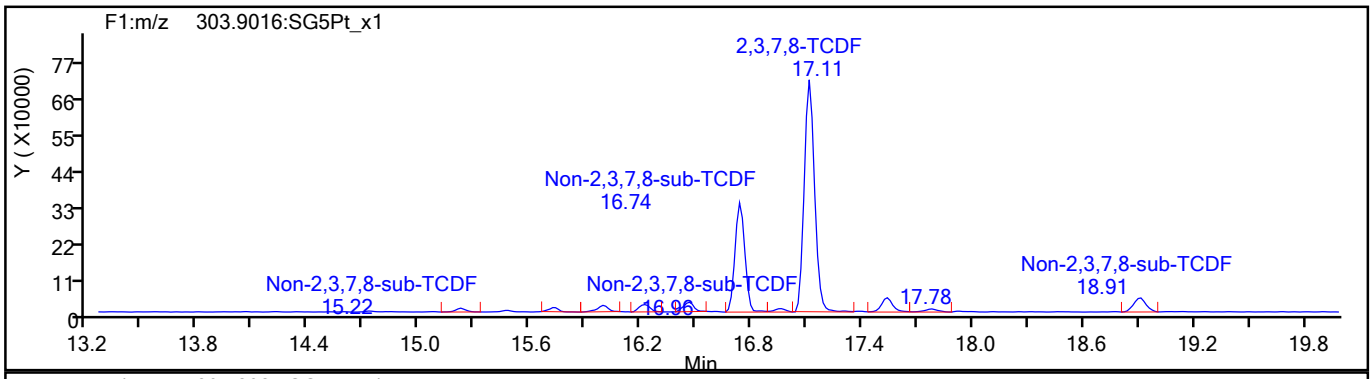

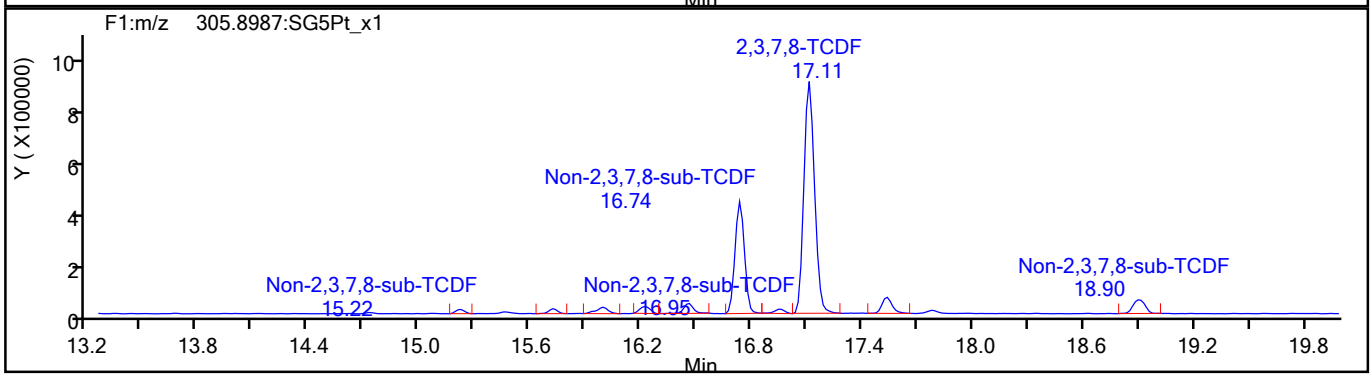

TCDF Standards

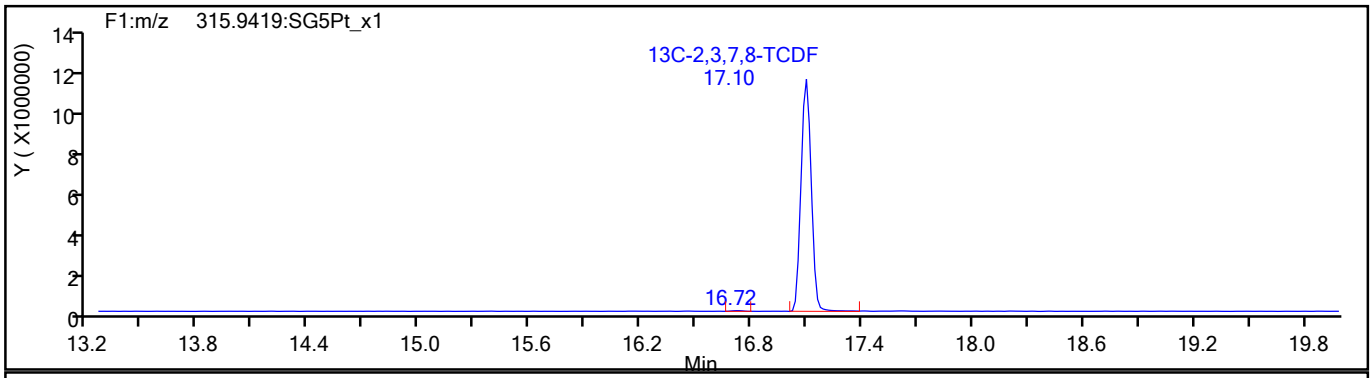

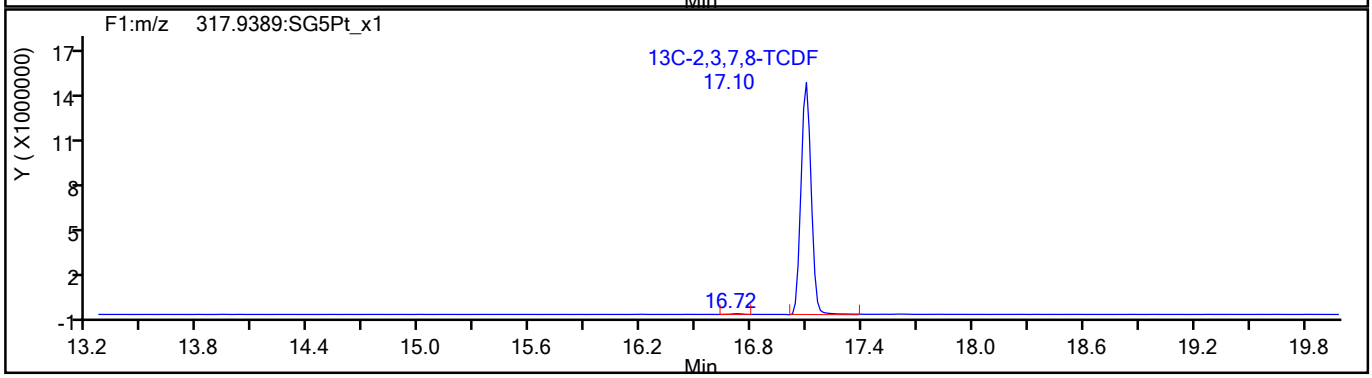

791220

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

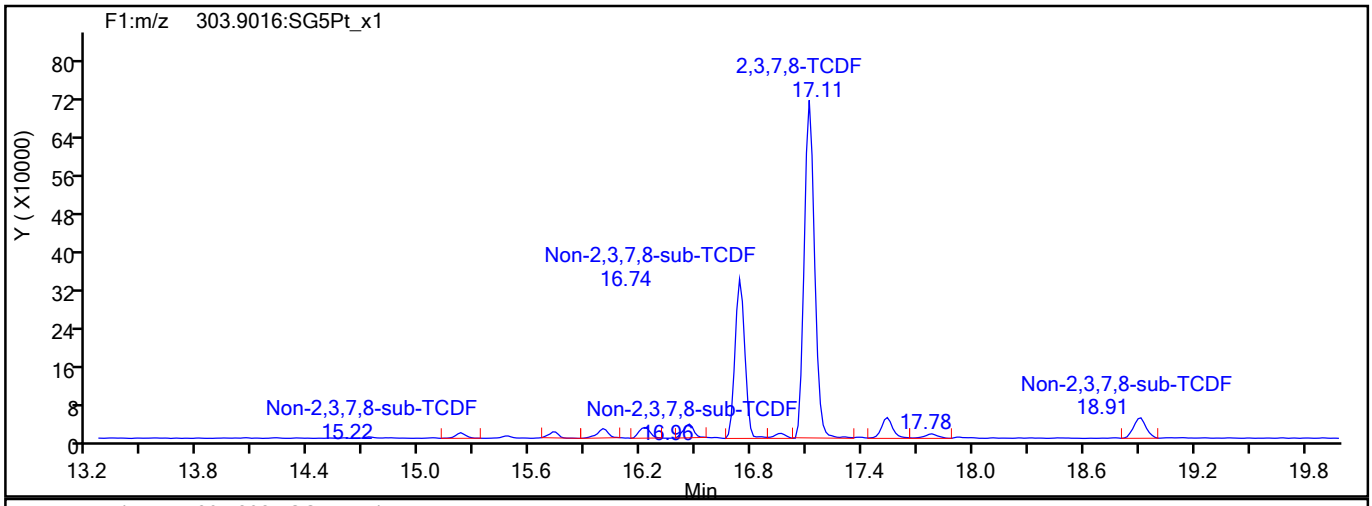

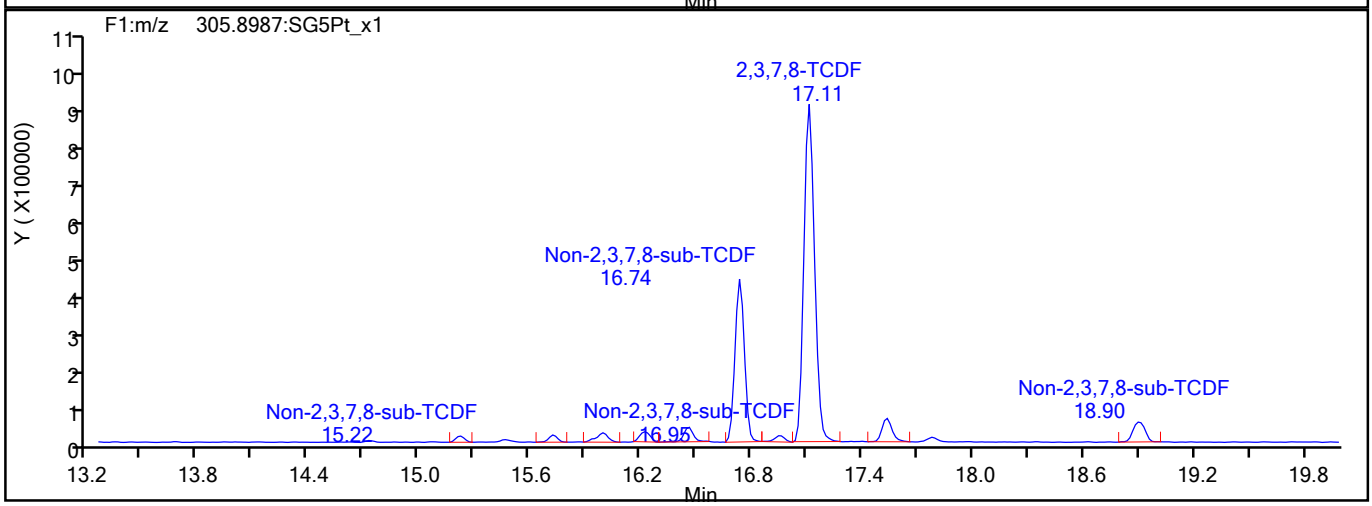

TCDF Interference Mass

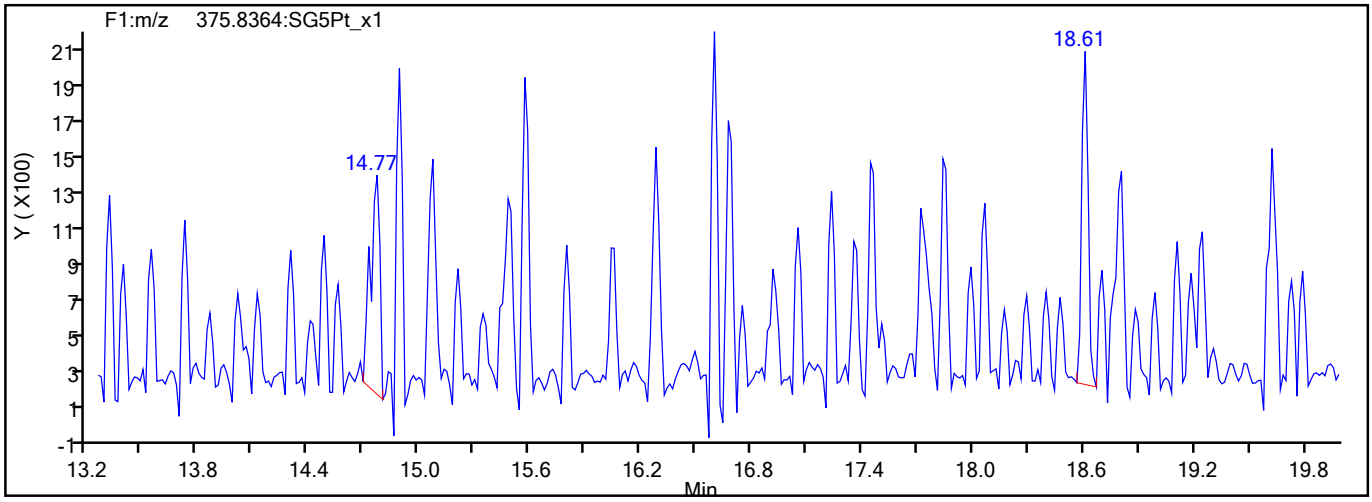

791221

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

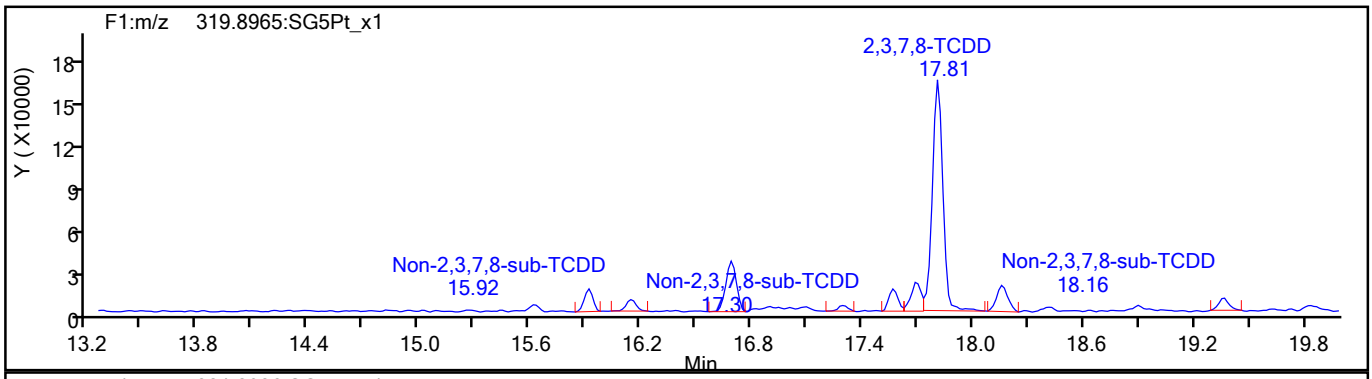

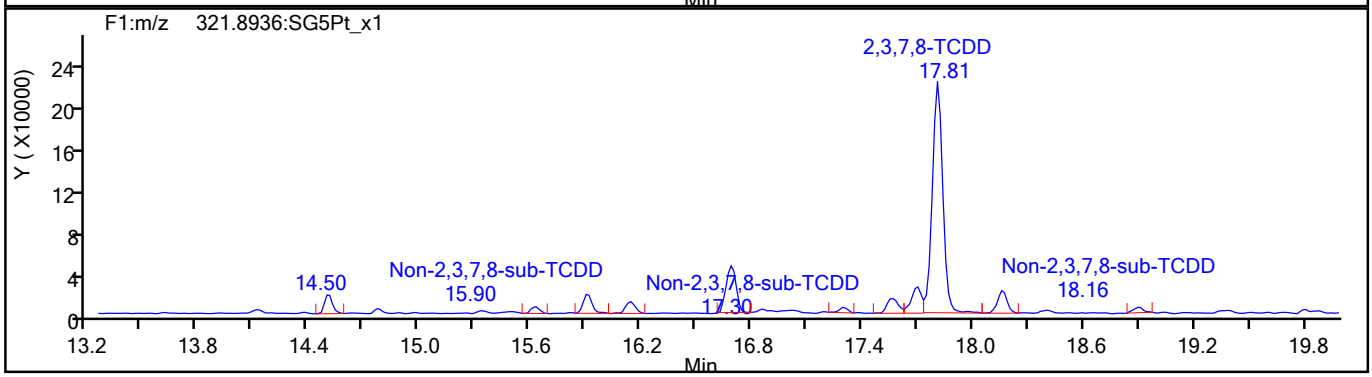

TCDD Standards

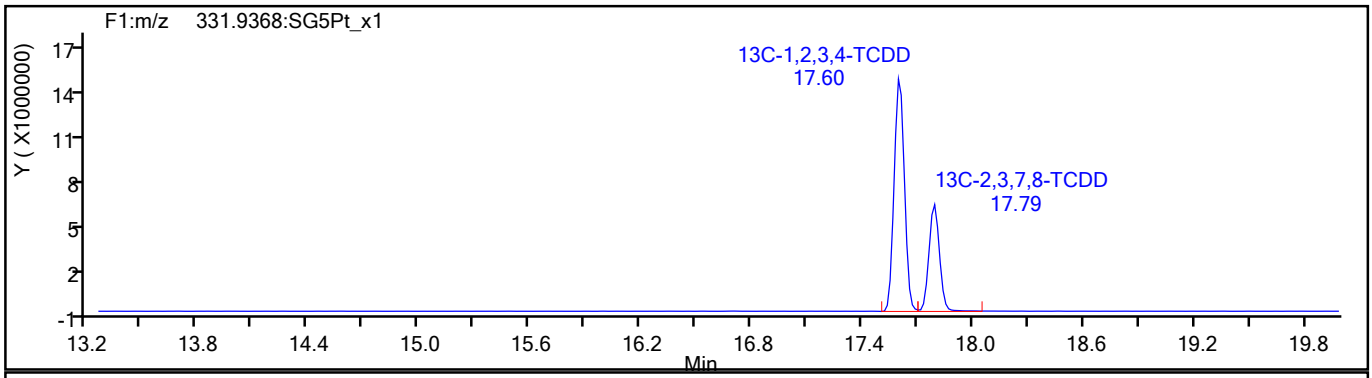

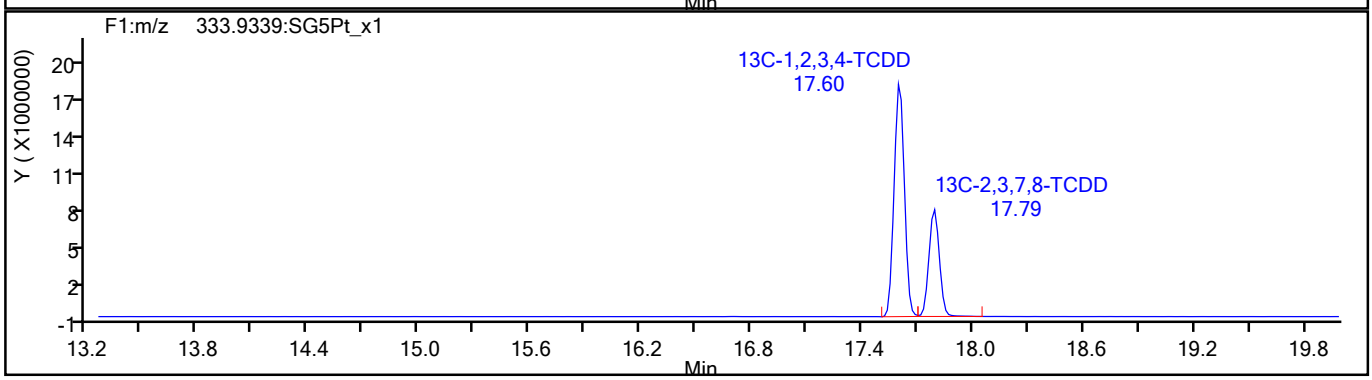

791222

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

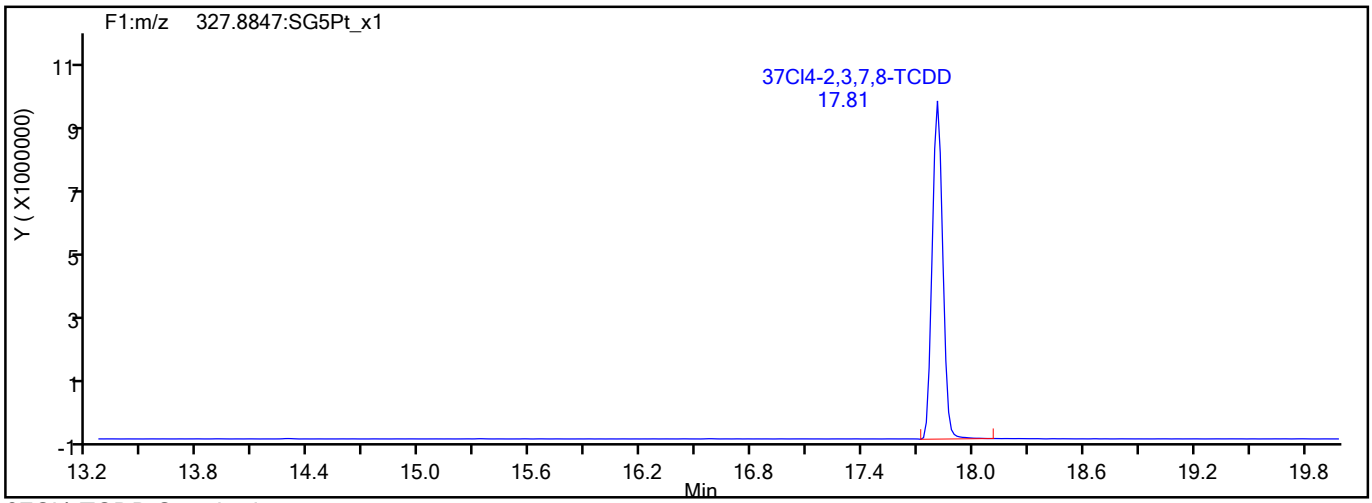

37Cl4-TCDD Standards

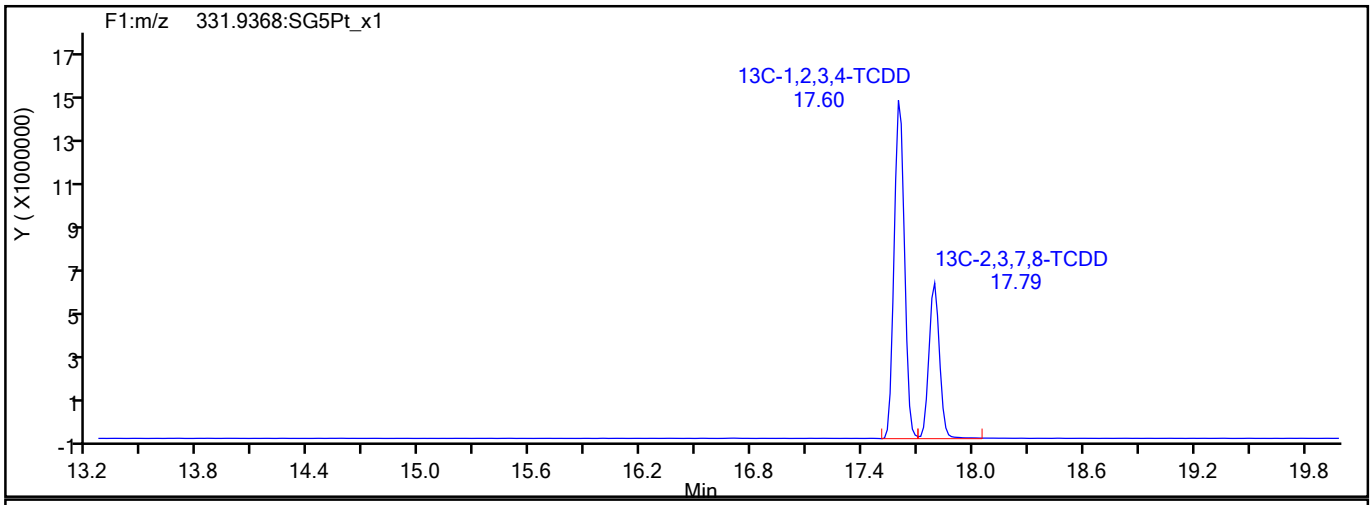

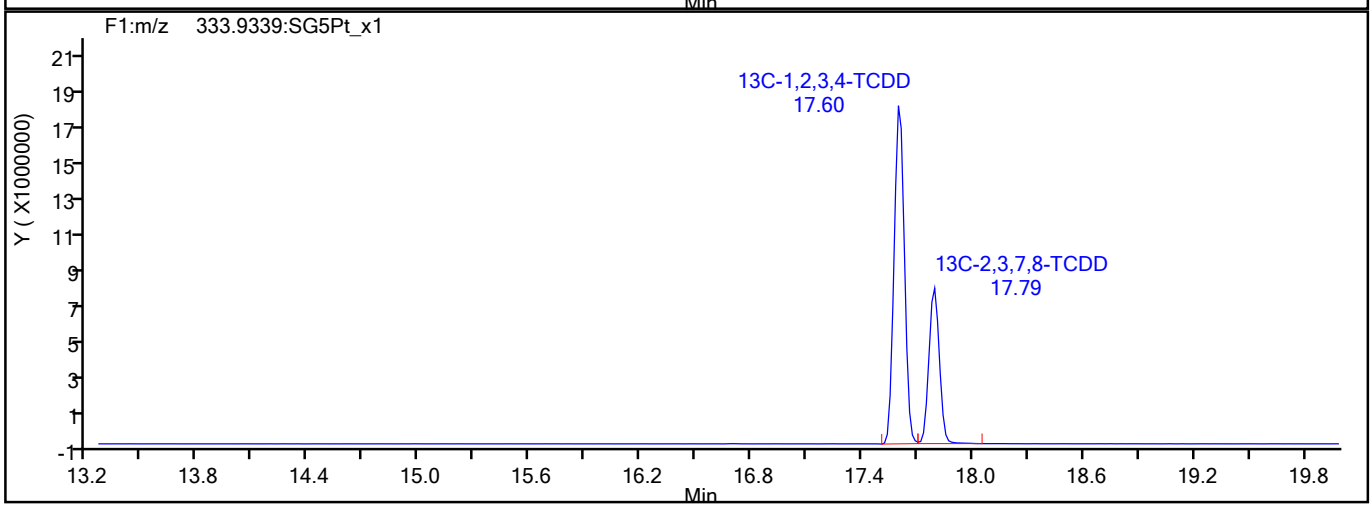

791223

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

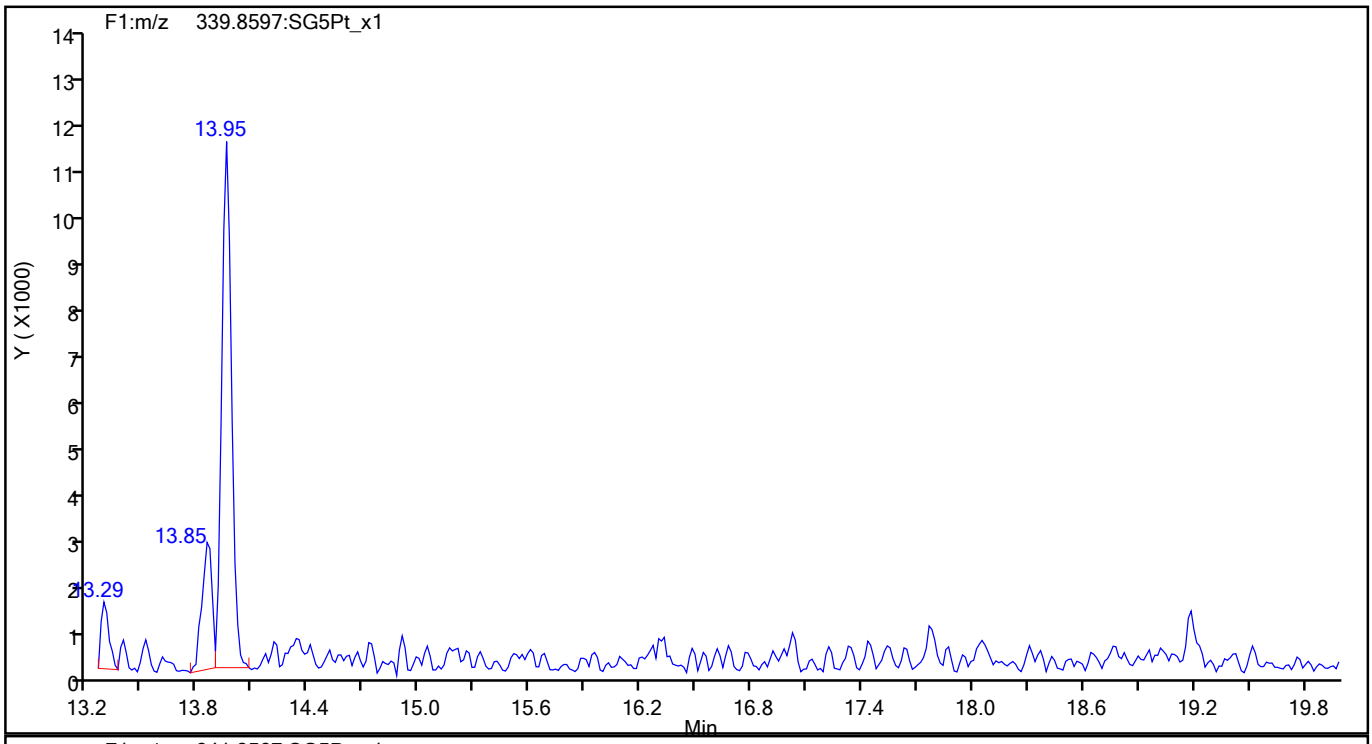

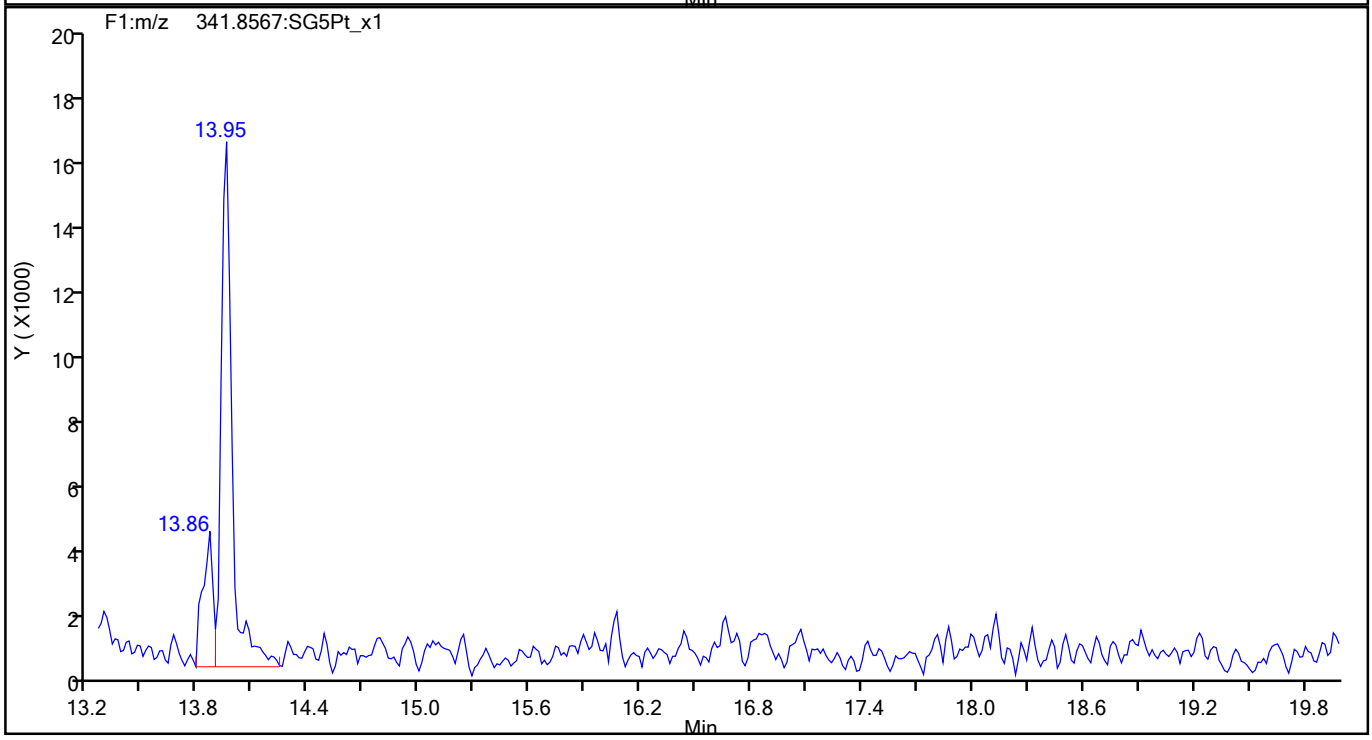

791224

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

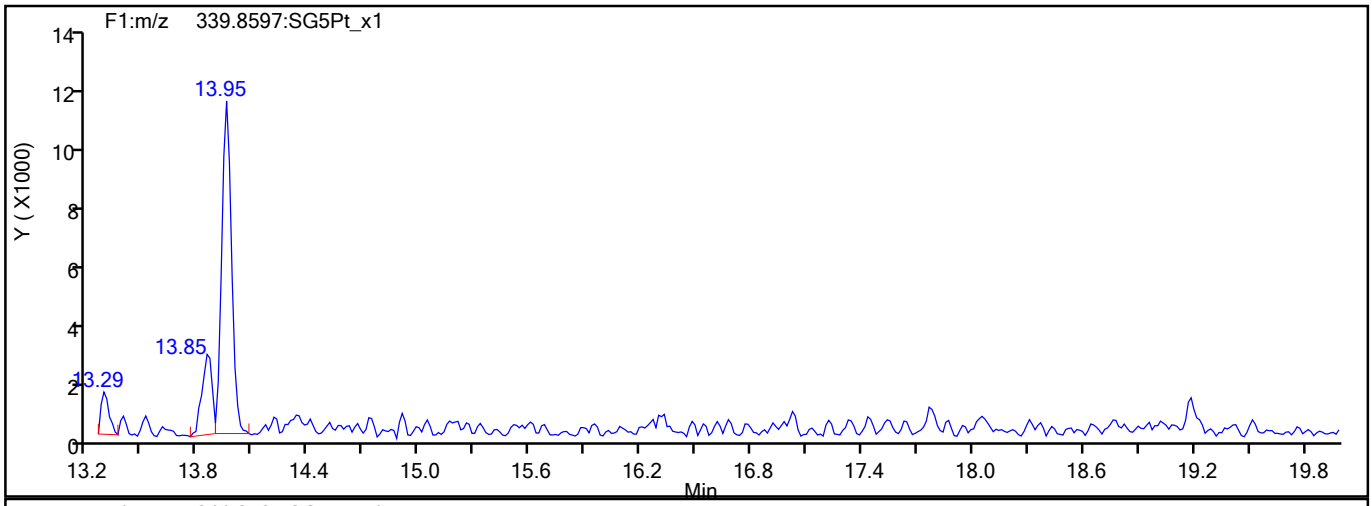

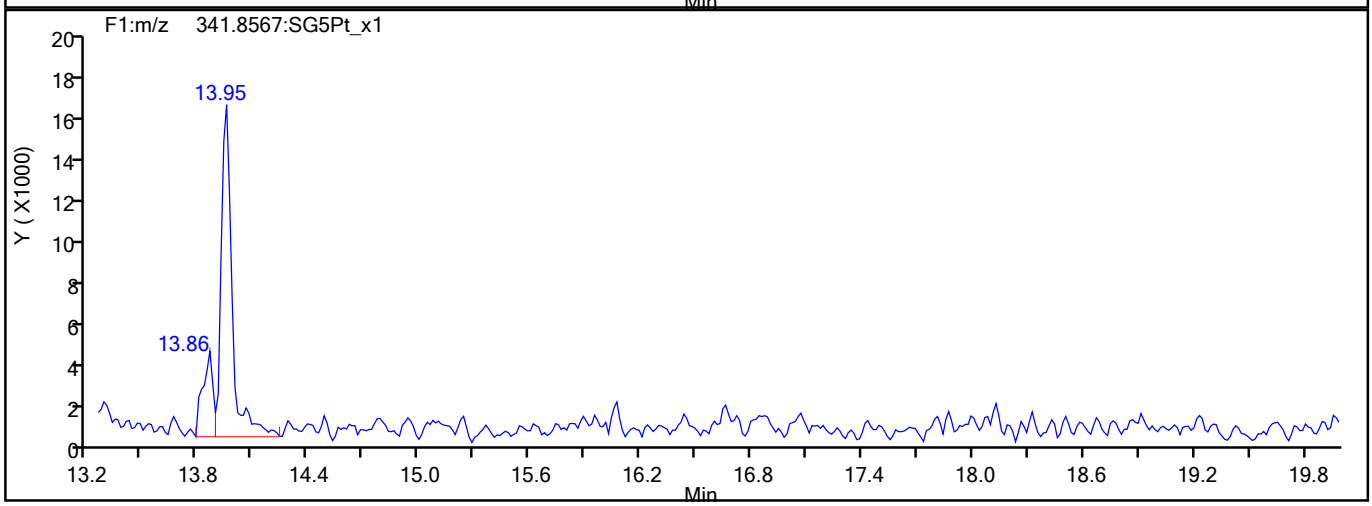

F1 PeCDFs Interference Mass

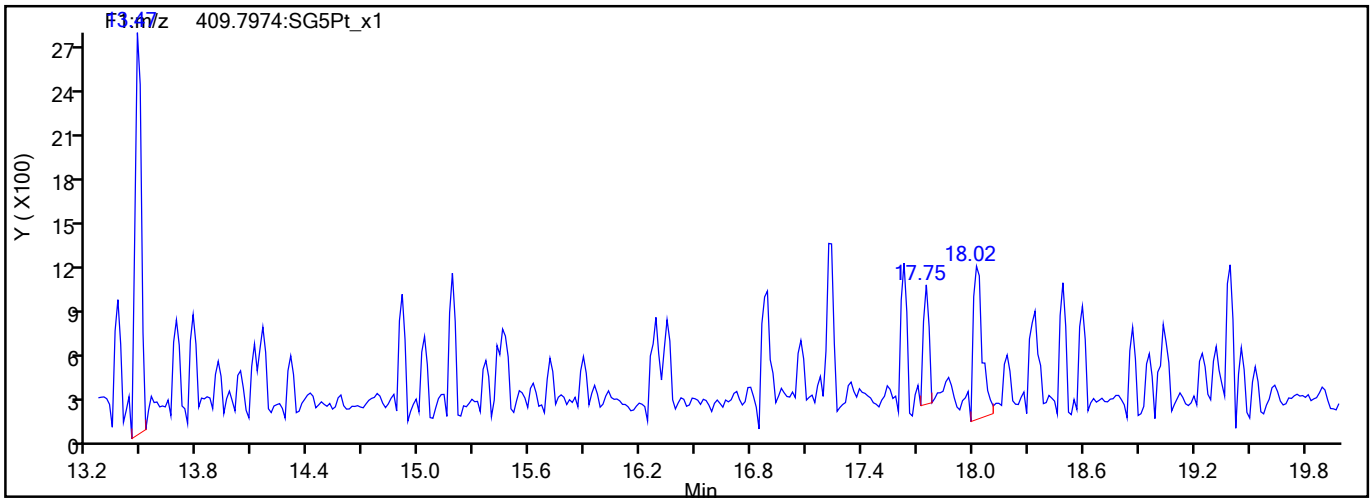

791225

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

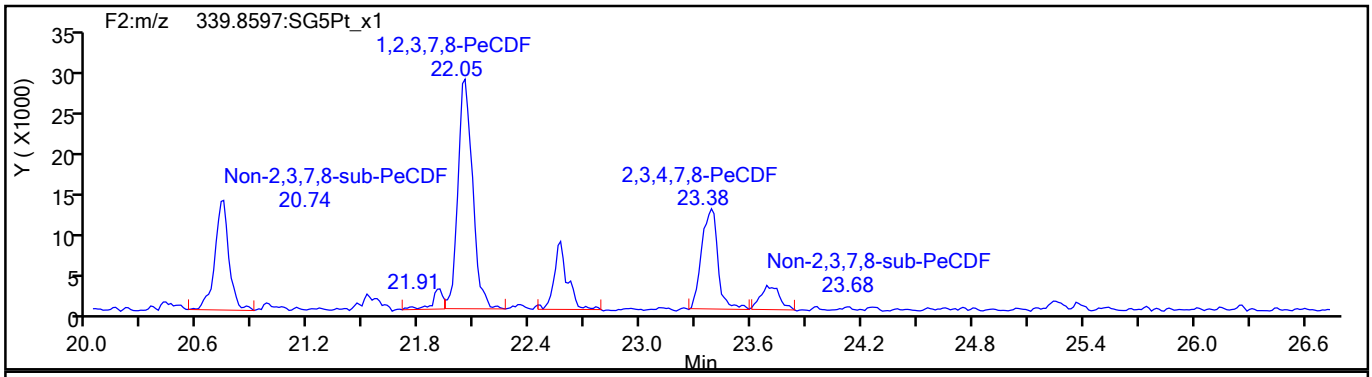

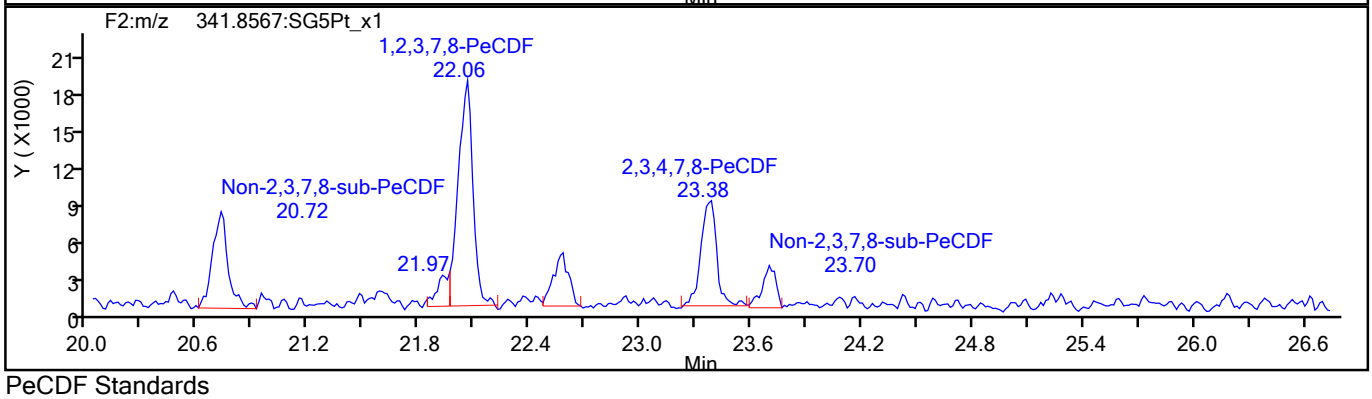

PeCDF Standards

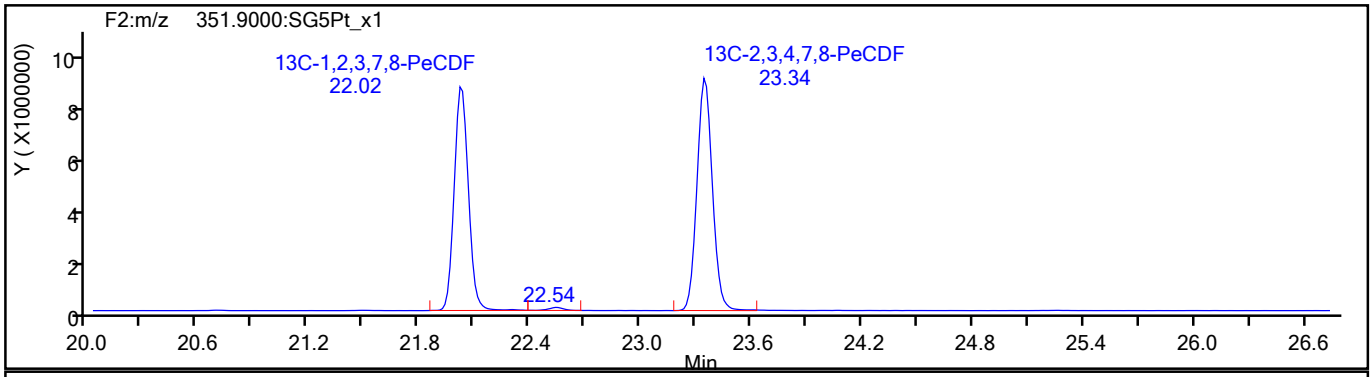

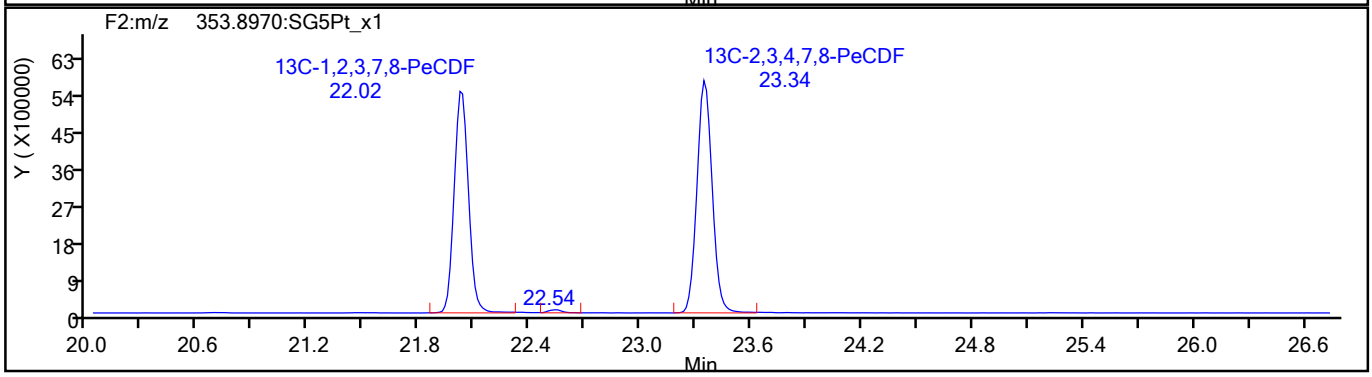

791226

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

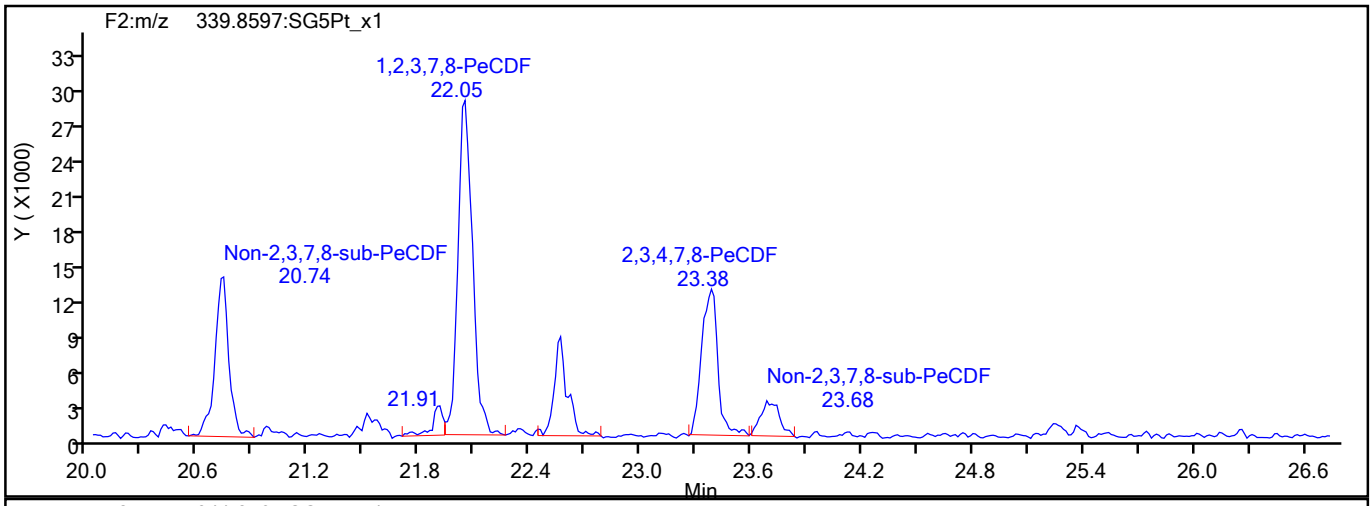

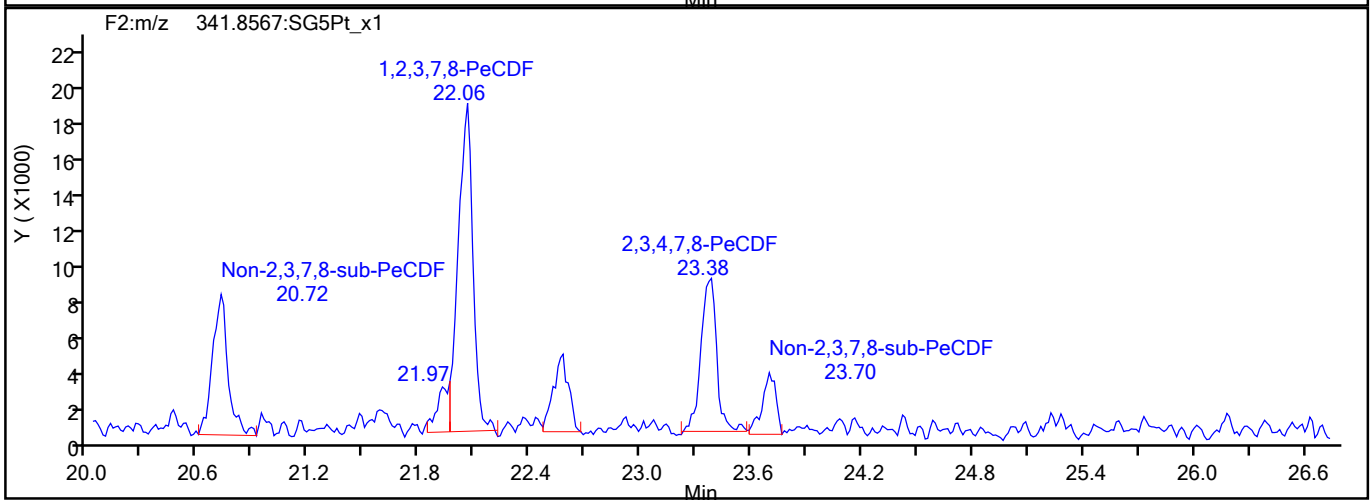

PeCDF Interference Mass

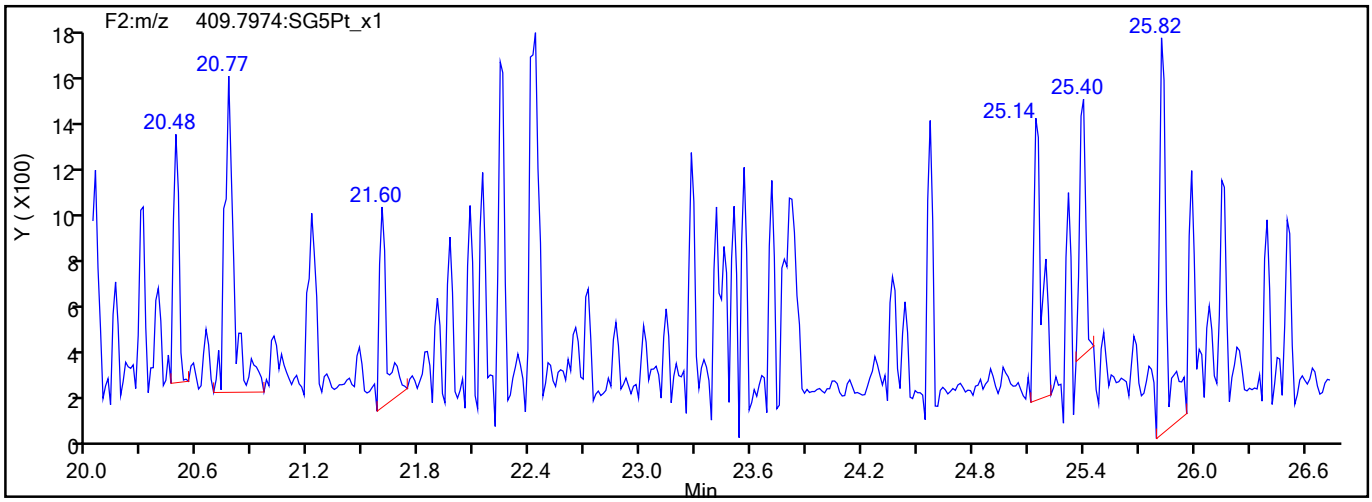

791227

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

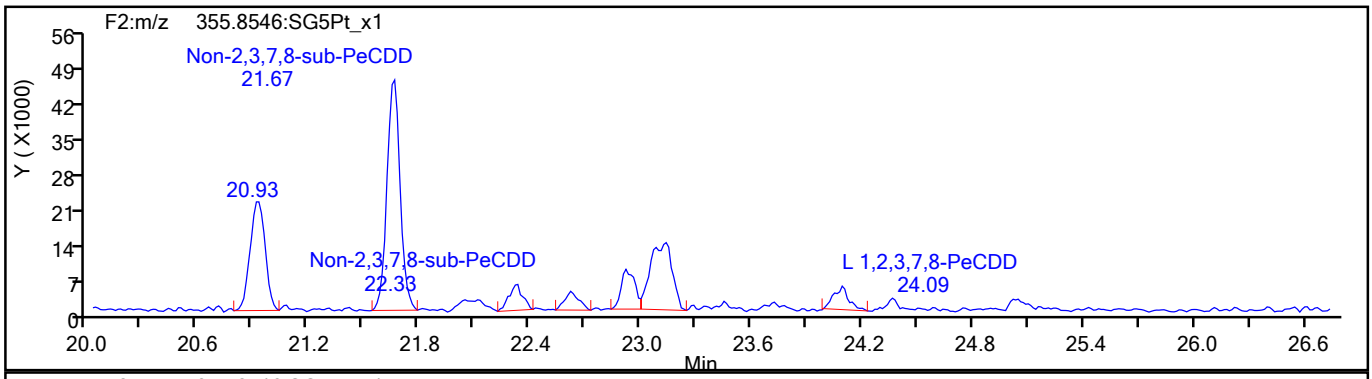

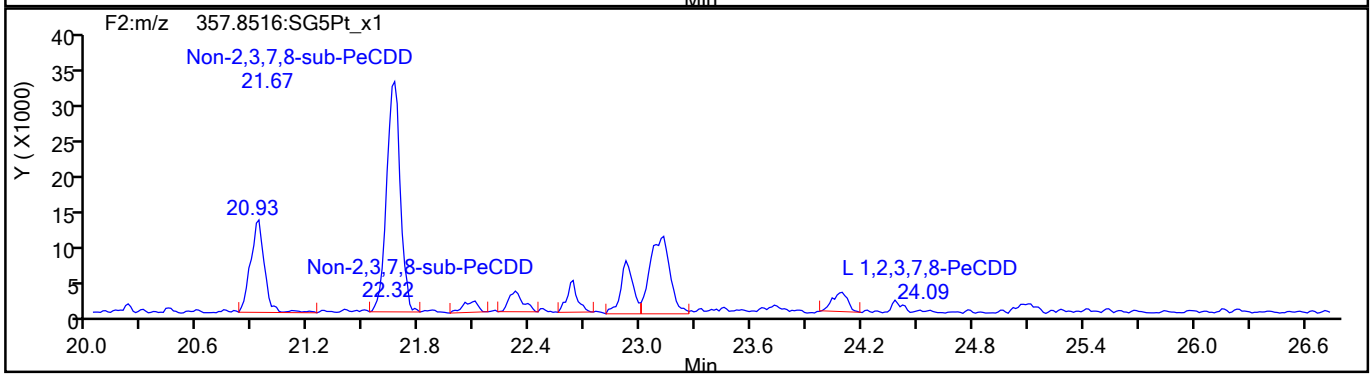

PeCDD Standards

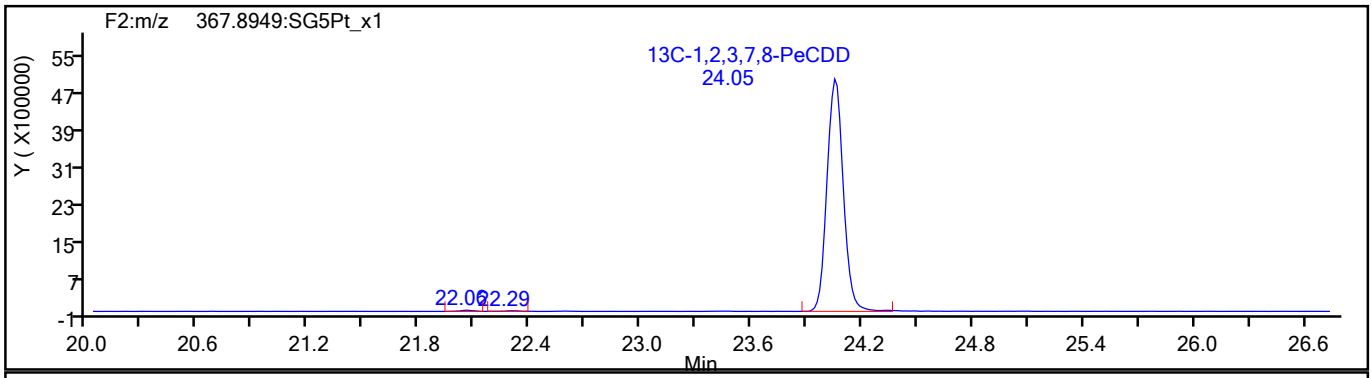

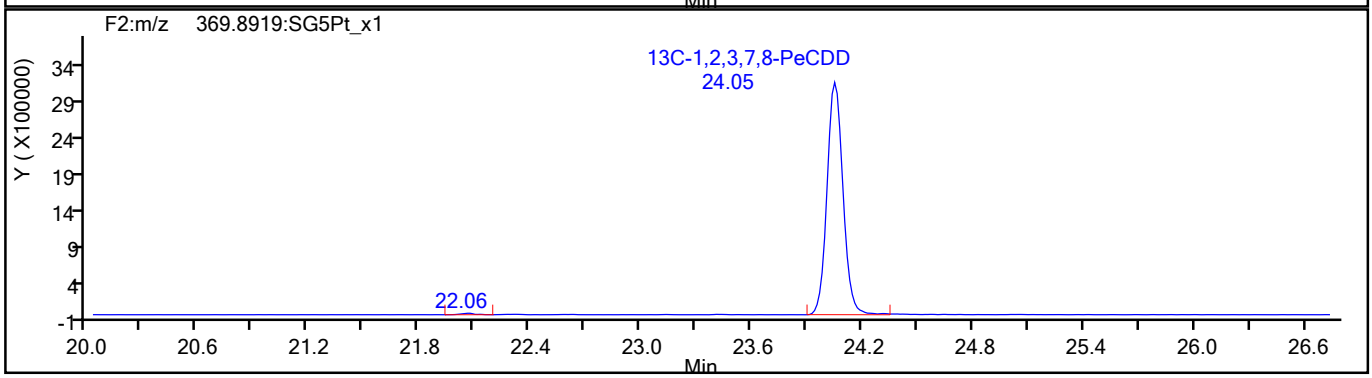

791228

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

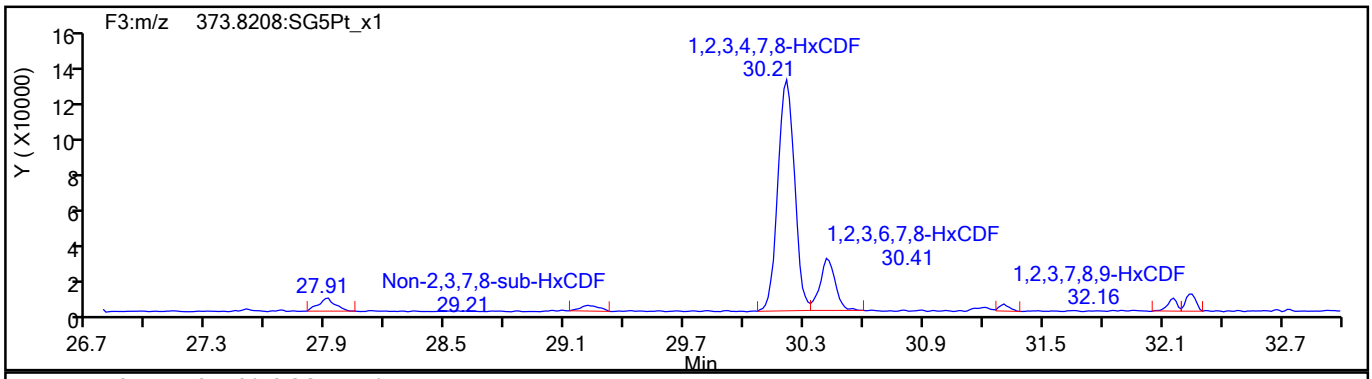

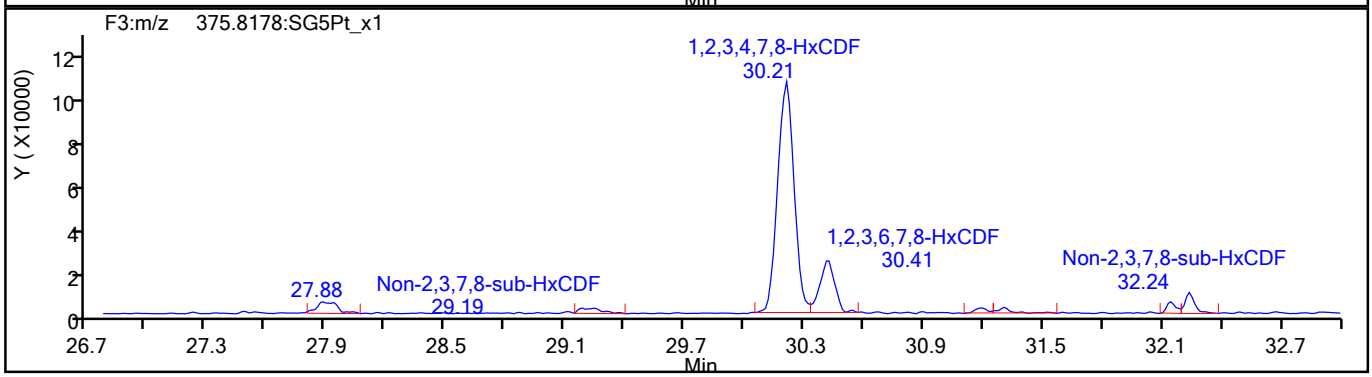

HxCDF Standards

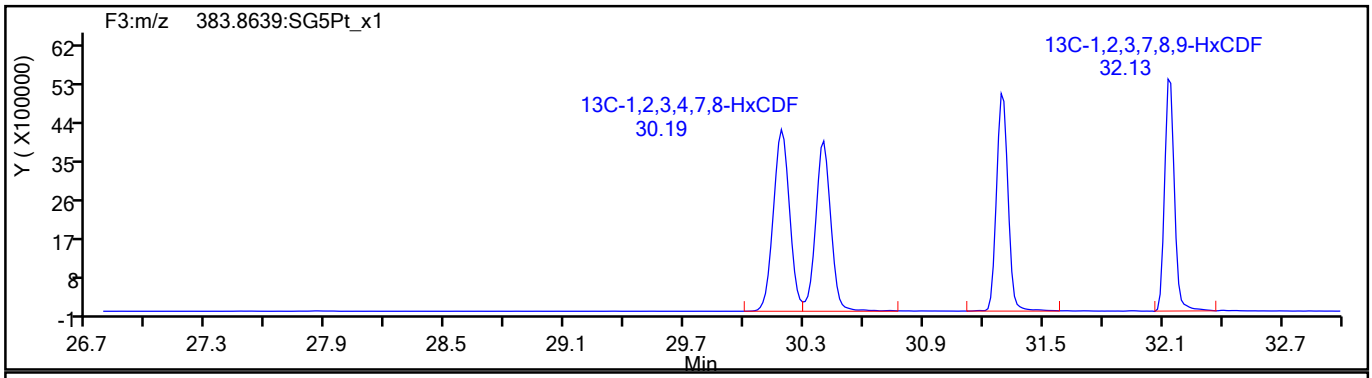

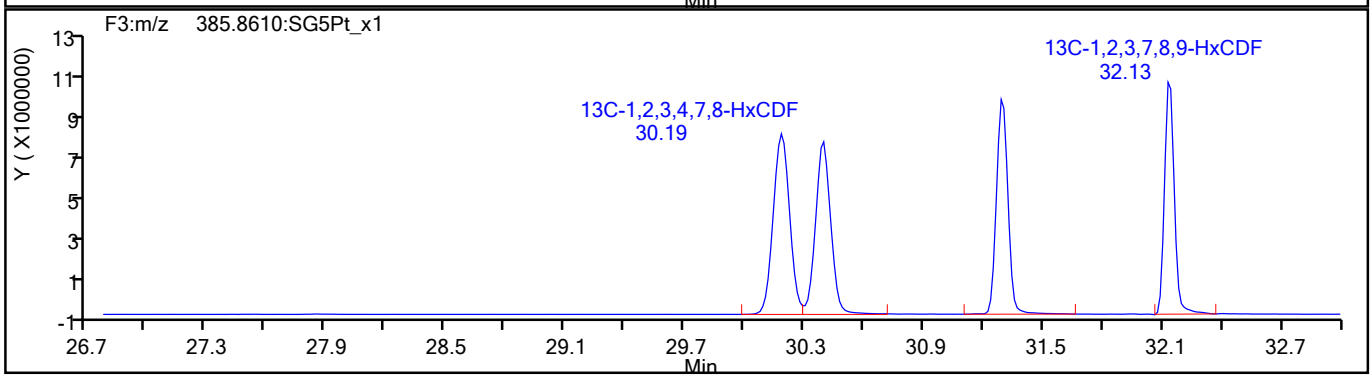

791229

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

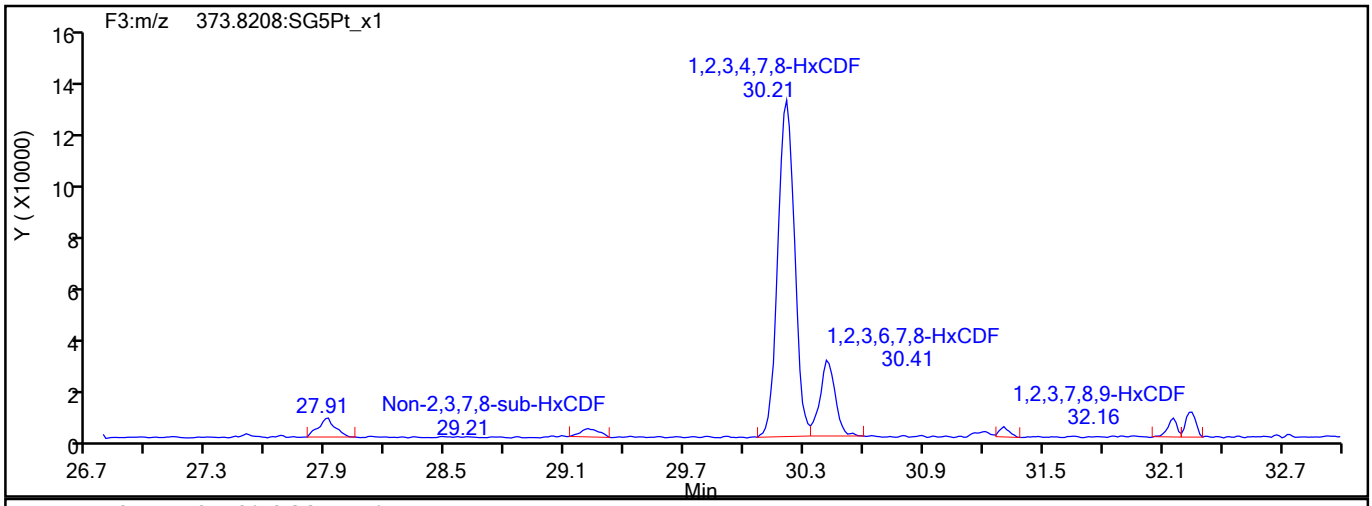

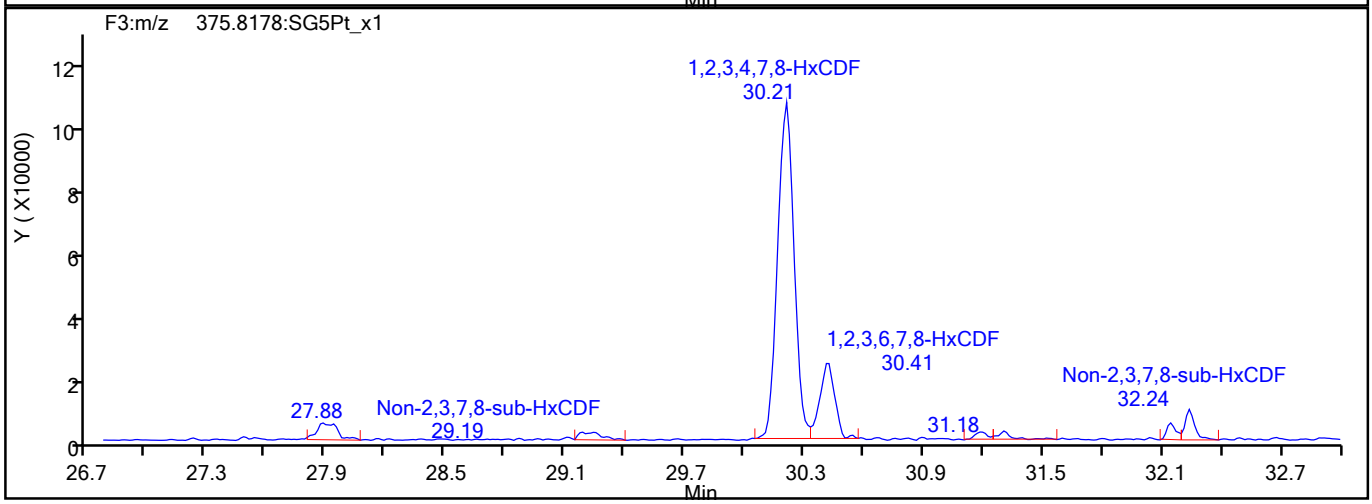

HxCDF Interference Mass

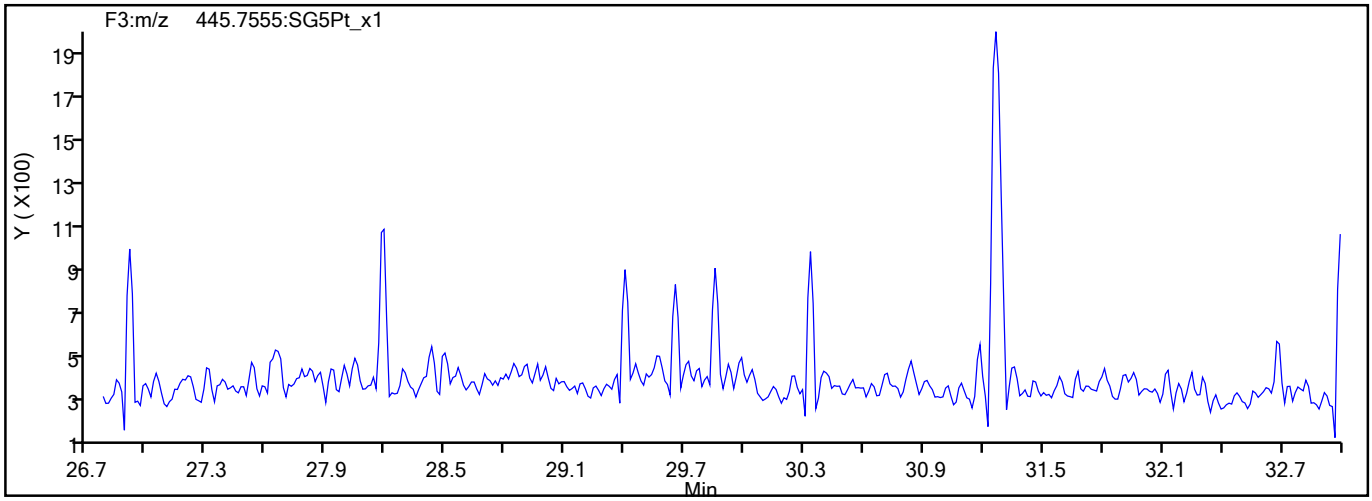

791230

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

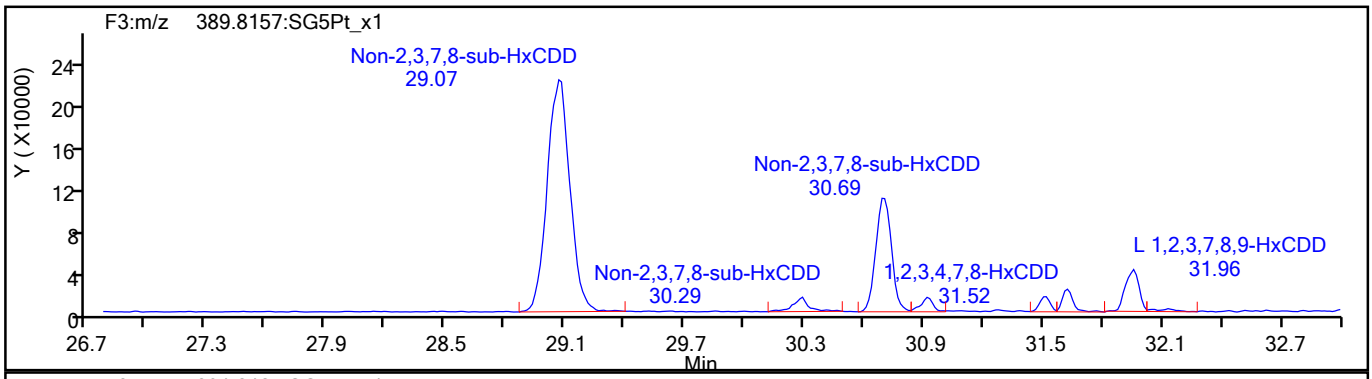

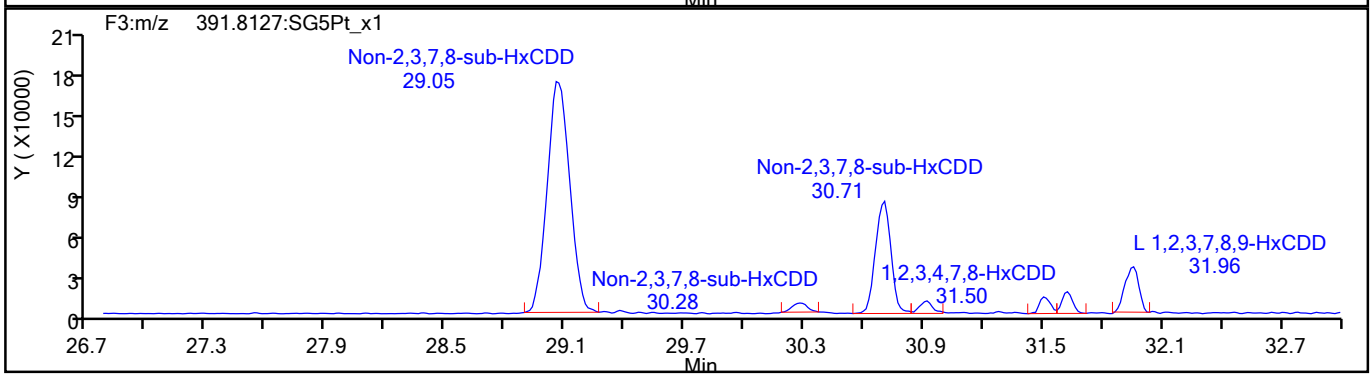

HxCDD Standards

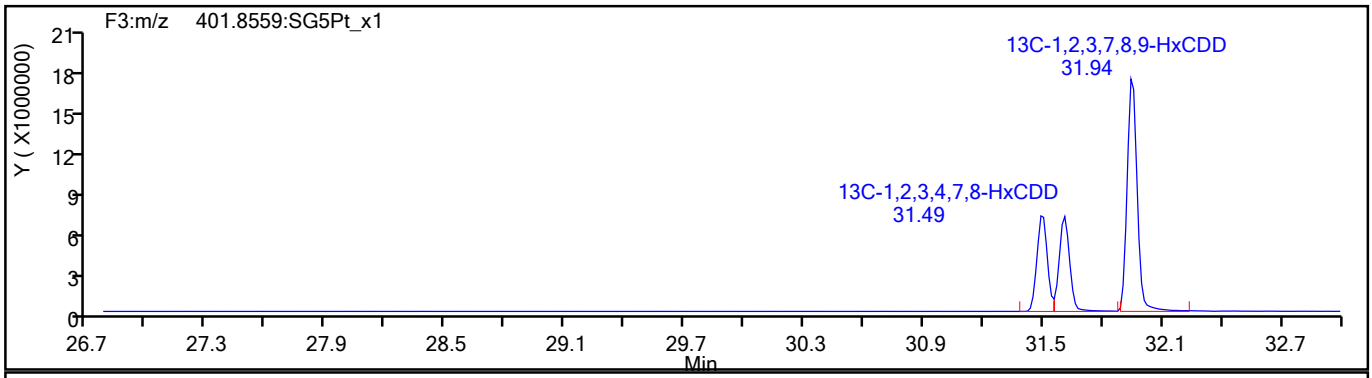

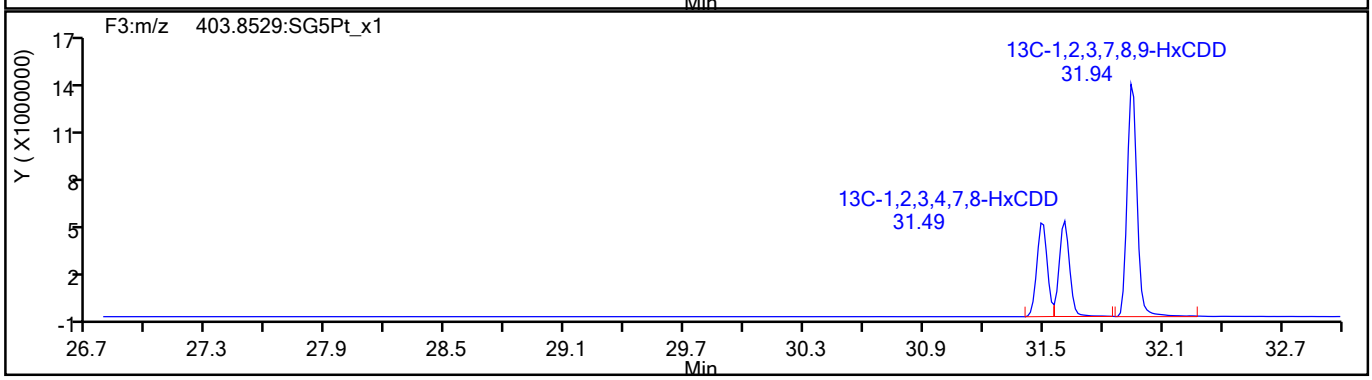

791231

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

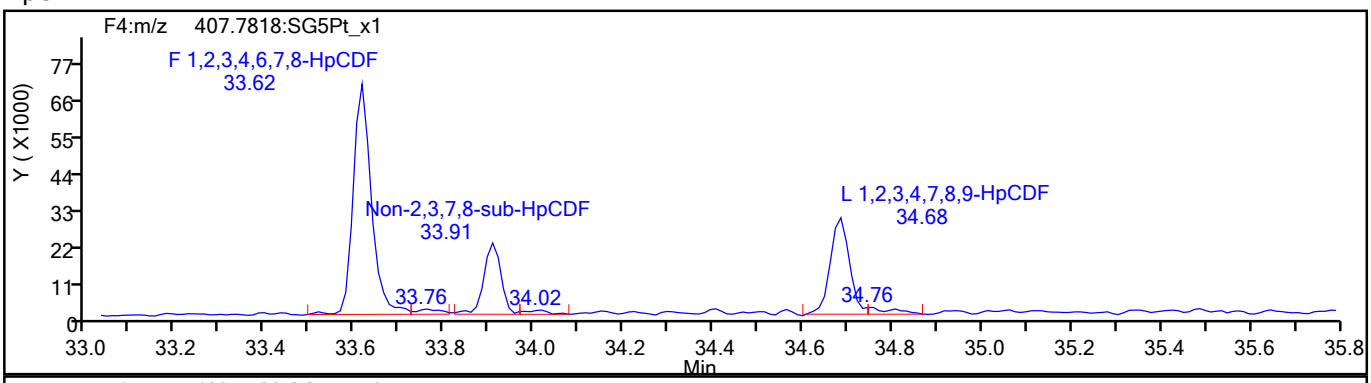

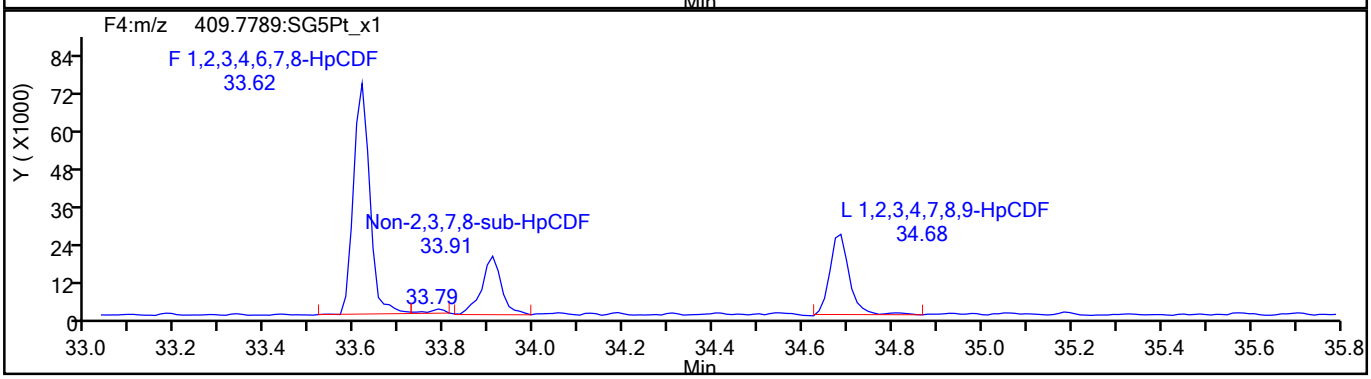

HpCDF Standards

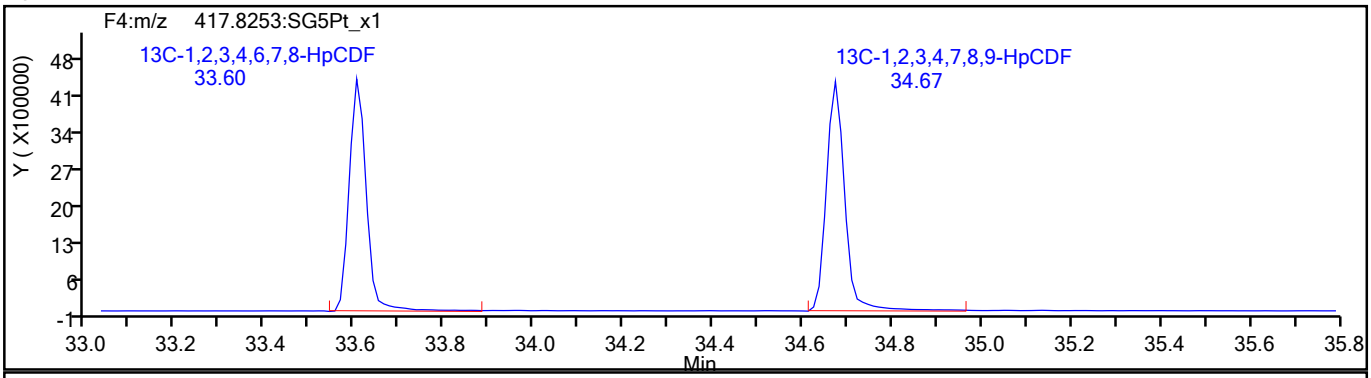

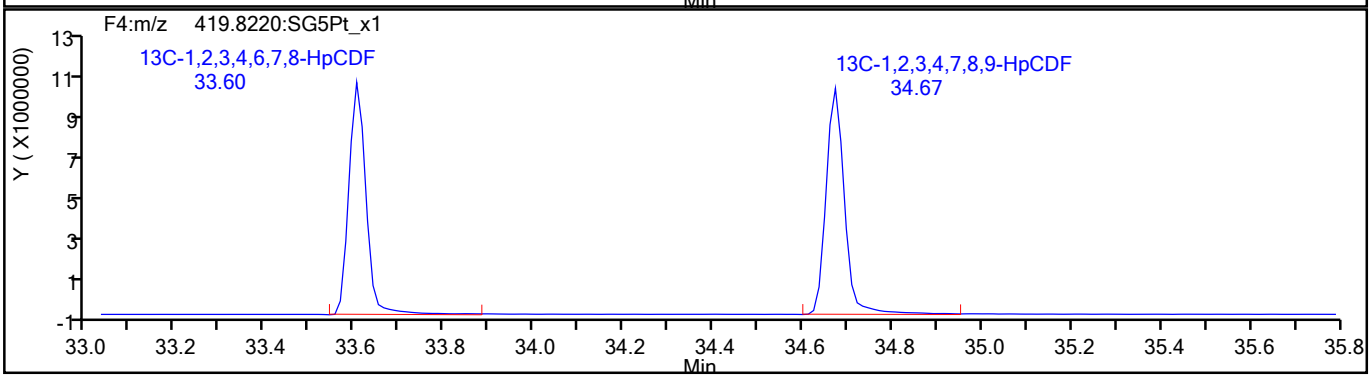

791232

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

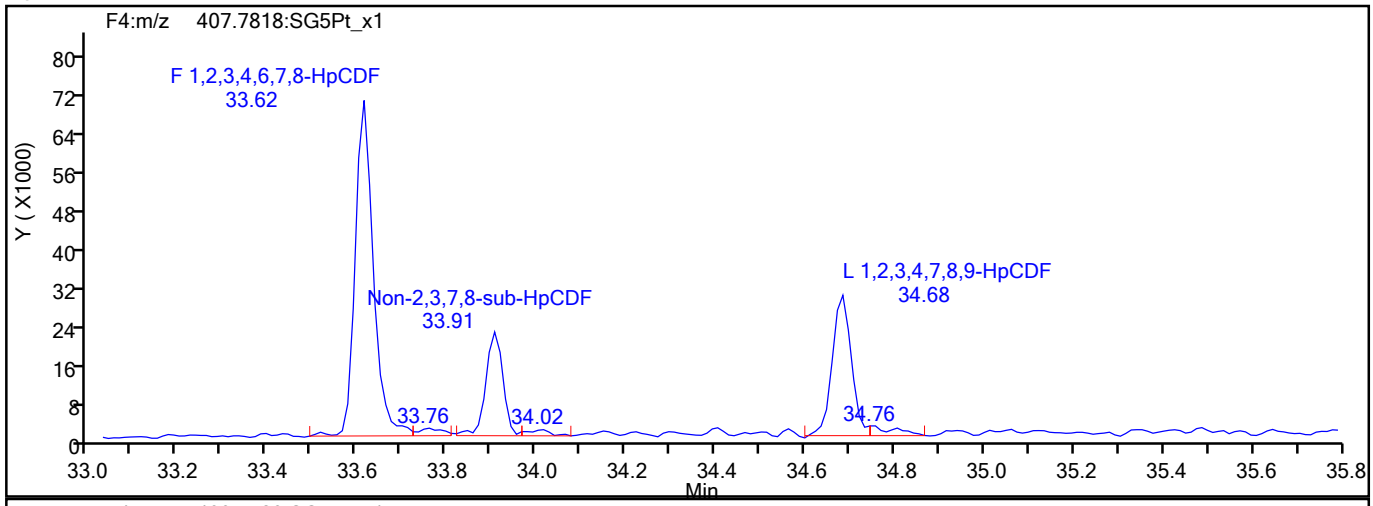

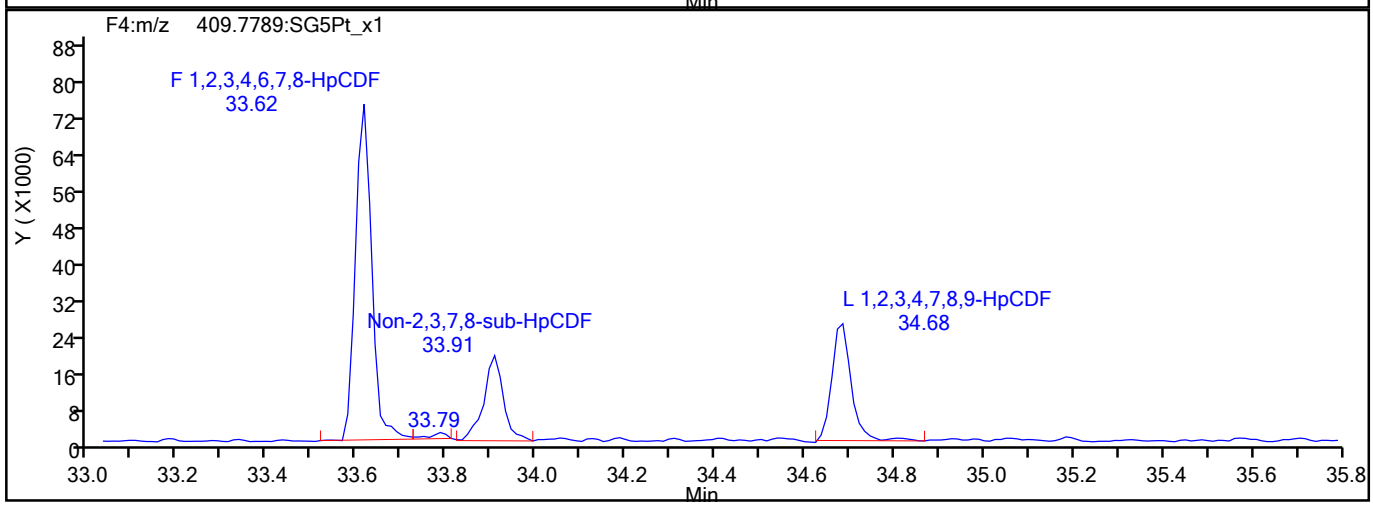

HpCDF Interference Mass

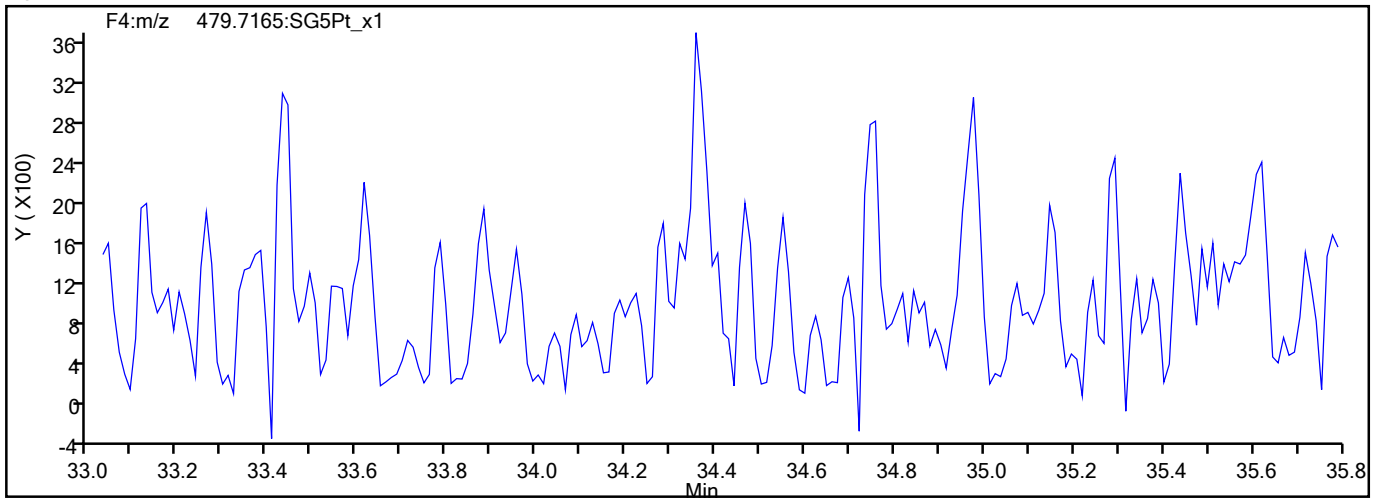

791233

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

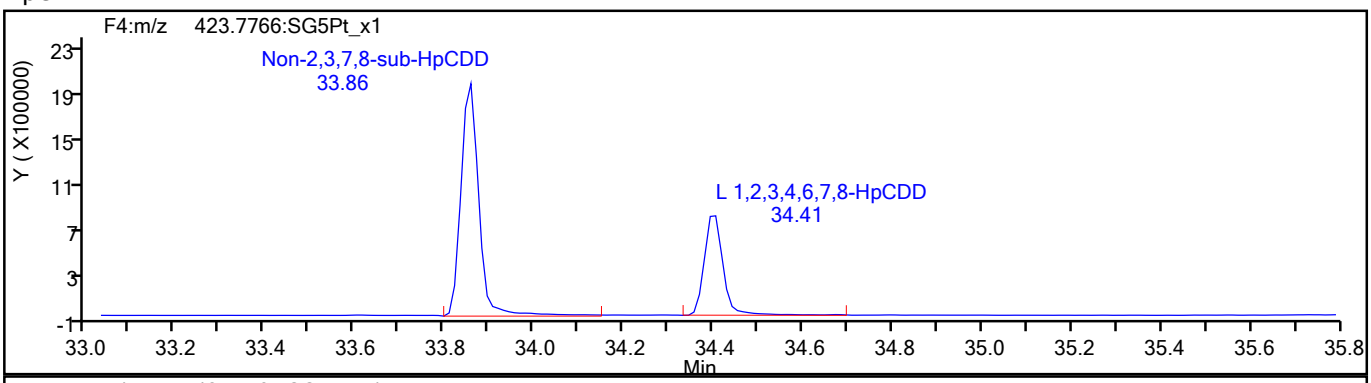

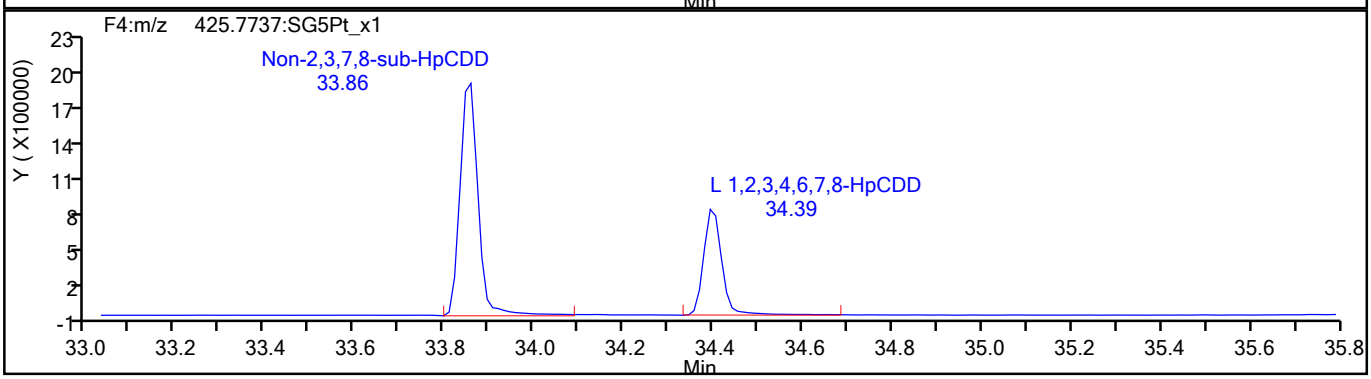

HpCDD Standards

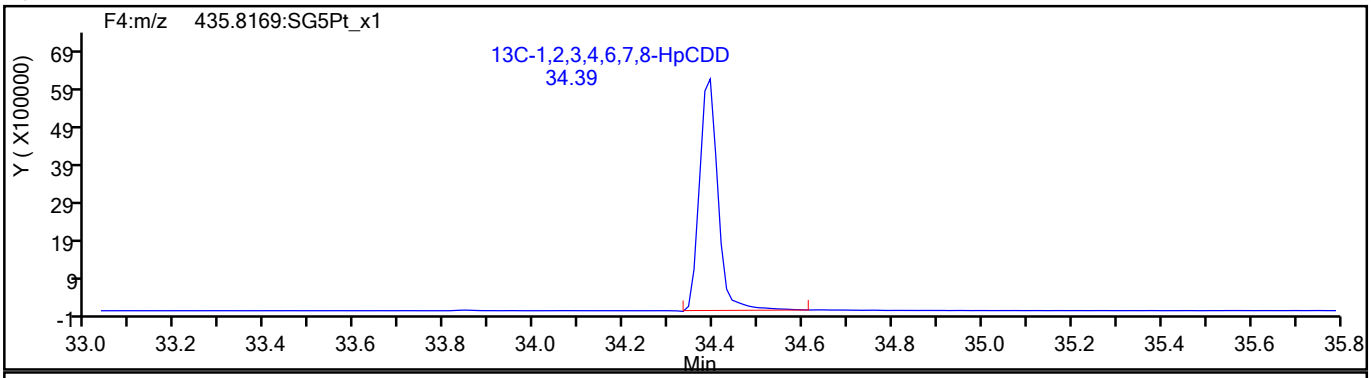

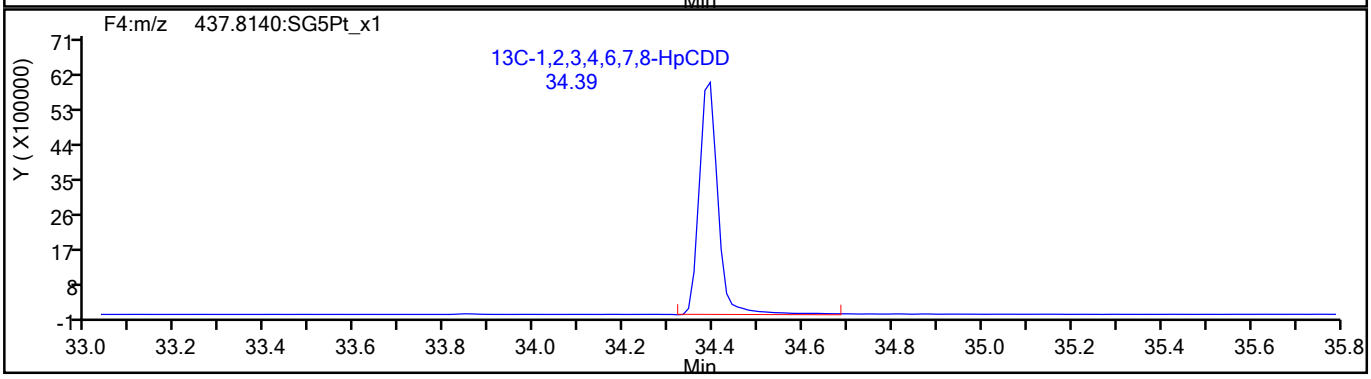

791234

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

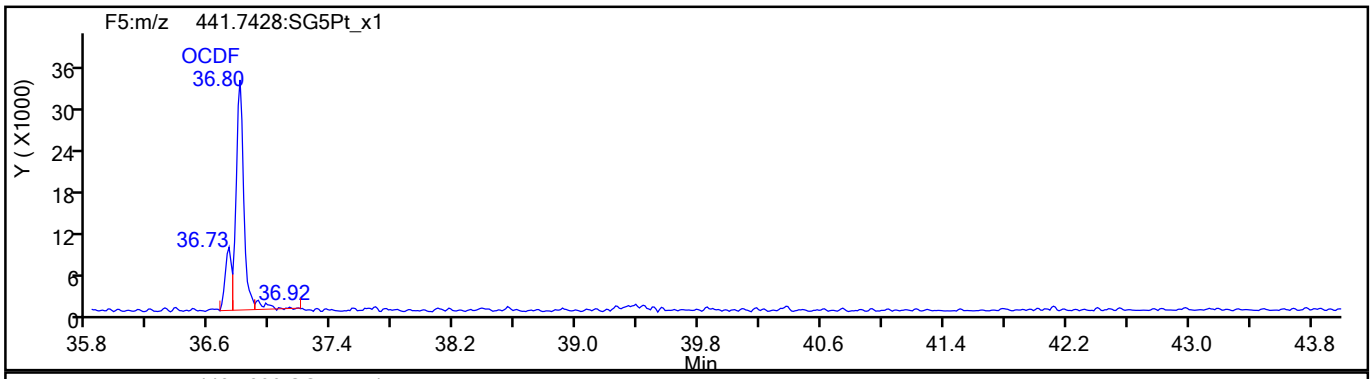

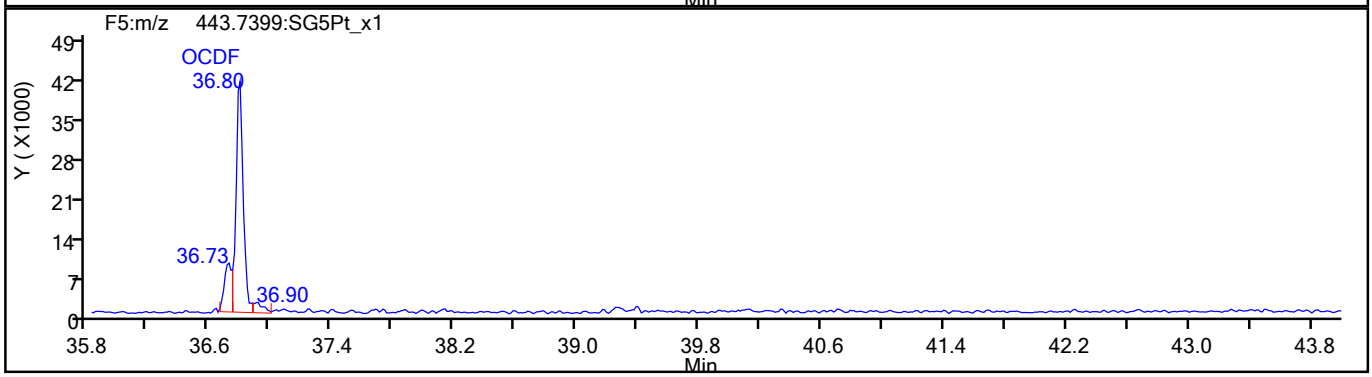

OCDF Standards

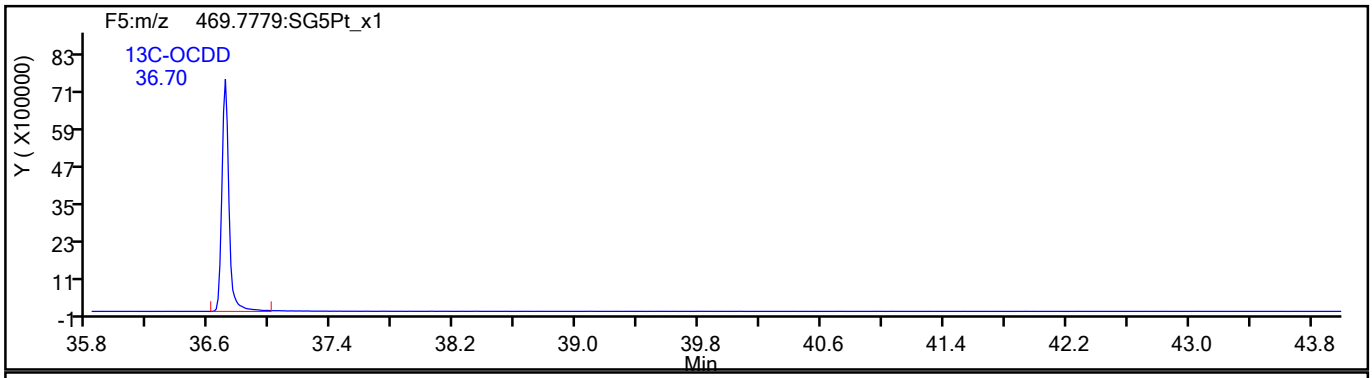

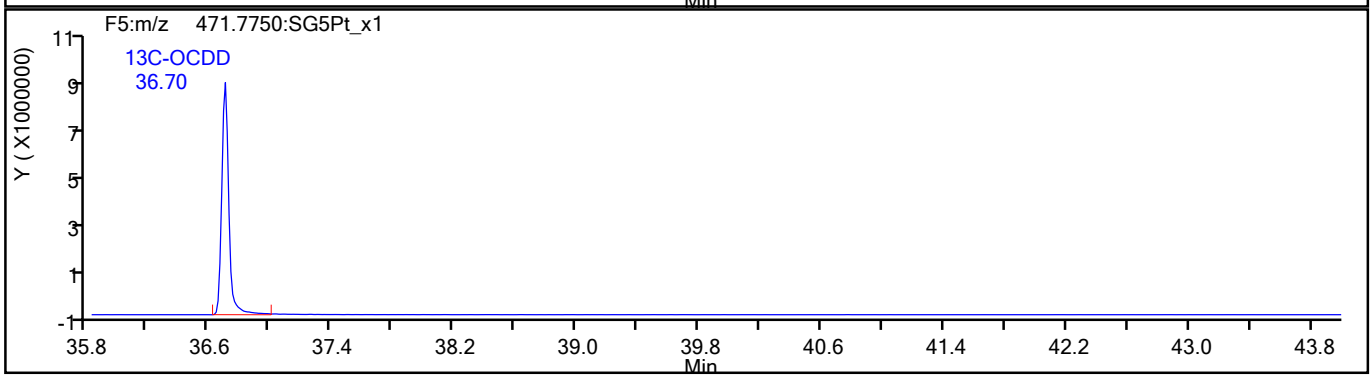

791235

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

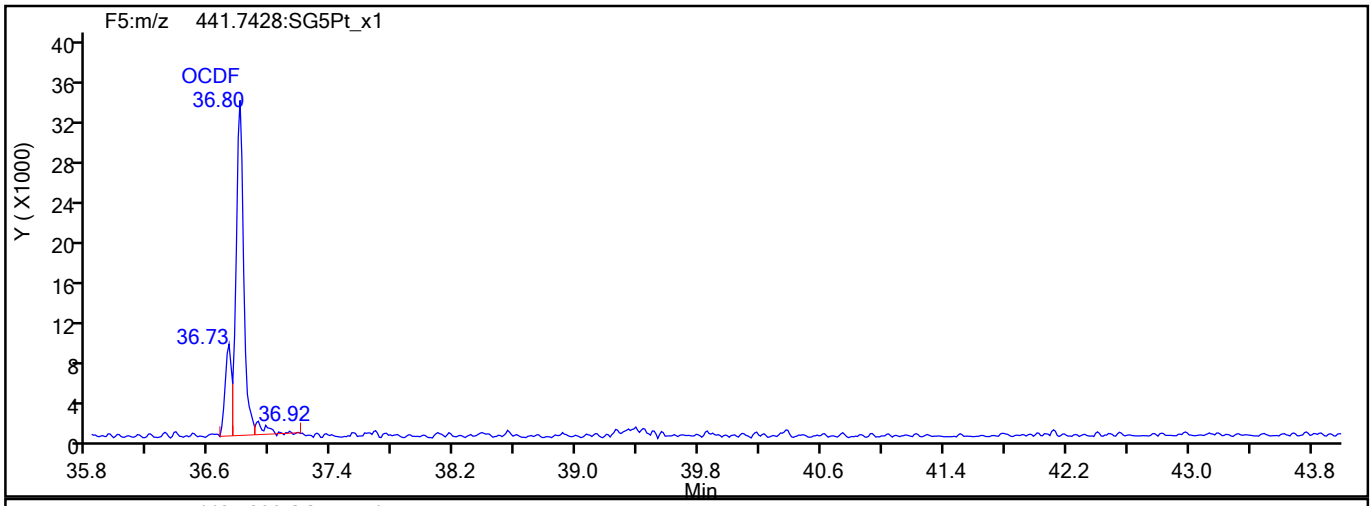

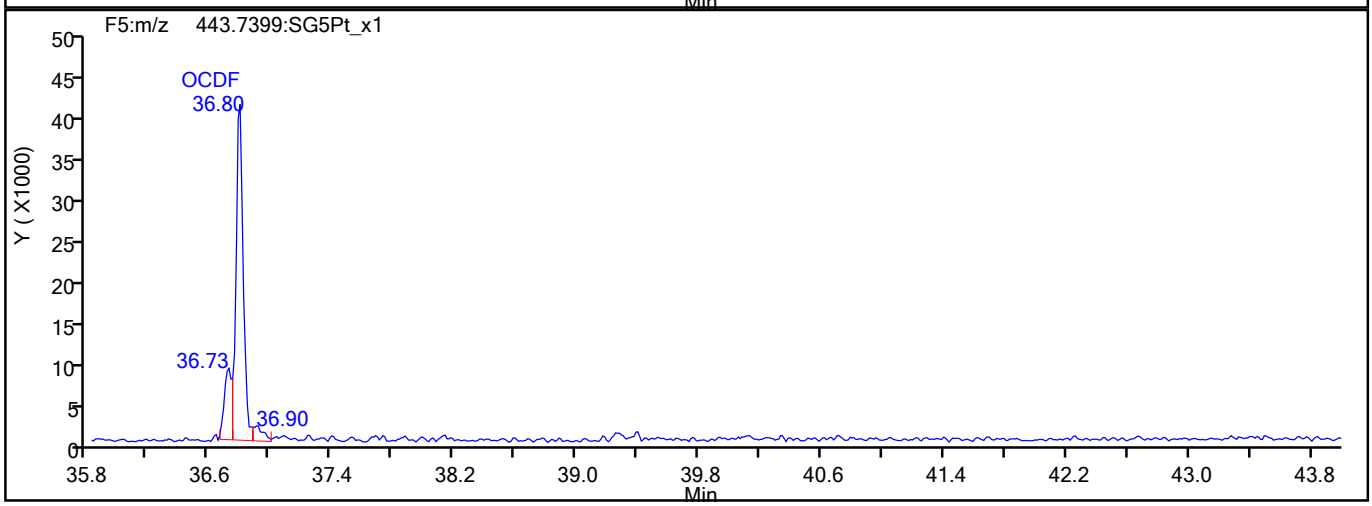

OCDF Interference Mass

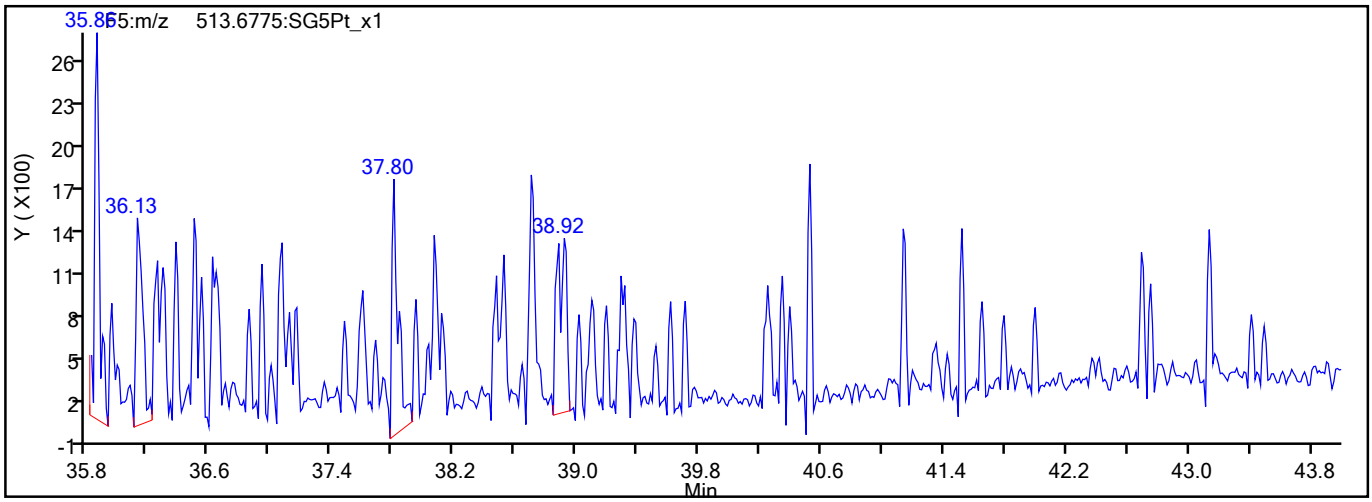

791236

Report Date: 27-Aug-2021 10:06:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

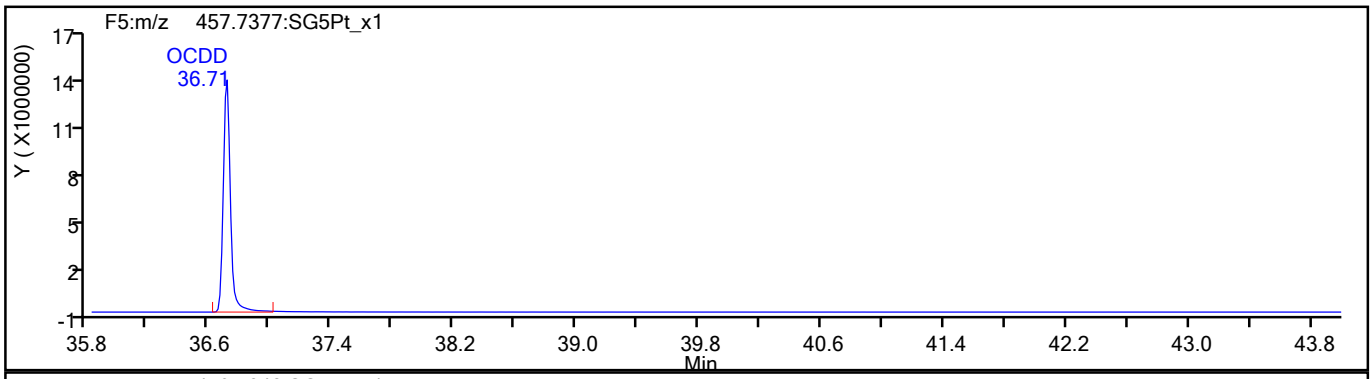

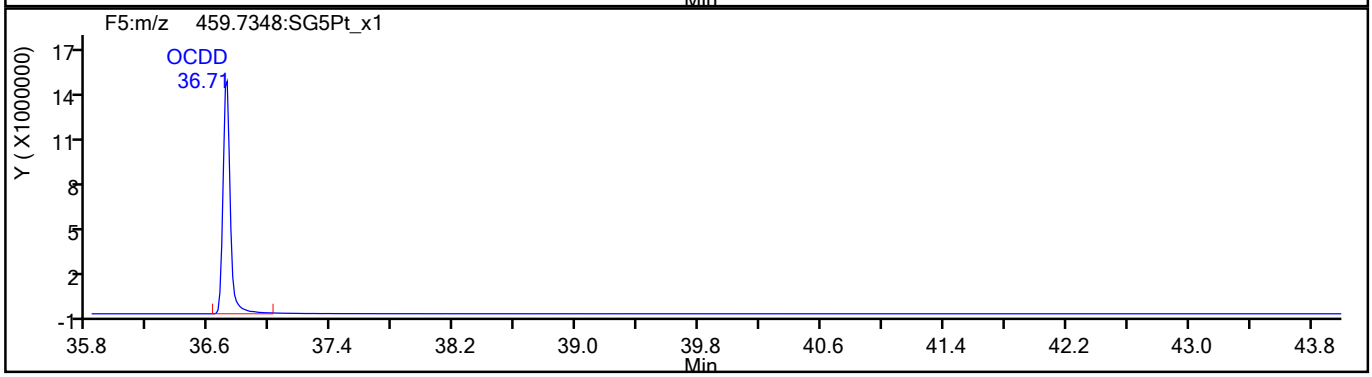

OCDD Standards

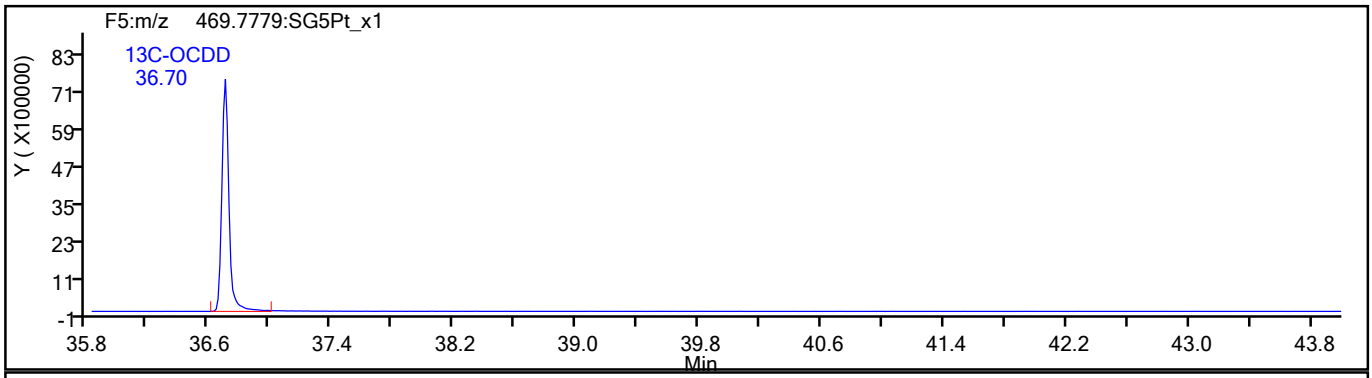

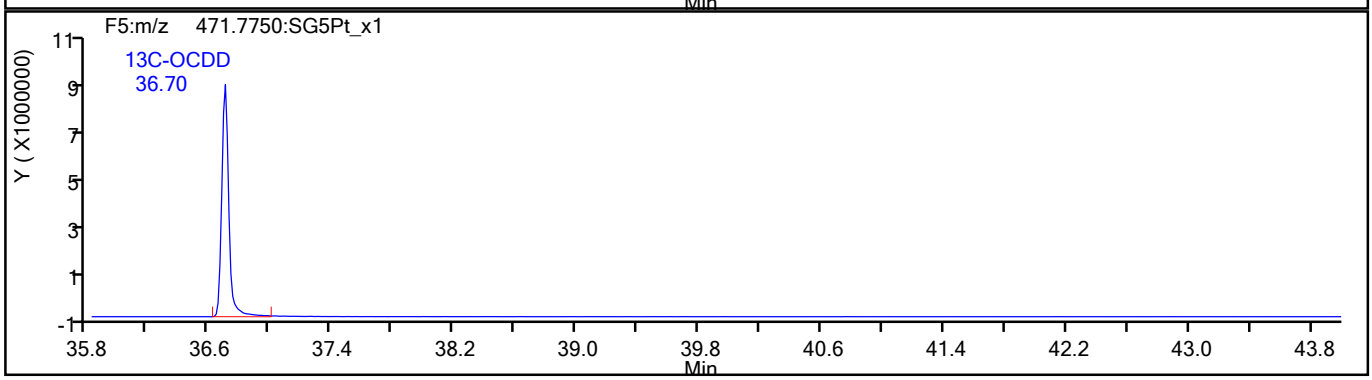

791237

Report Date: 27-Aug-2021 10:06:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

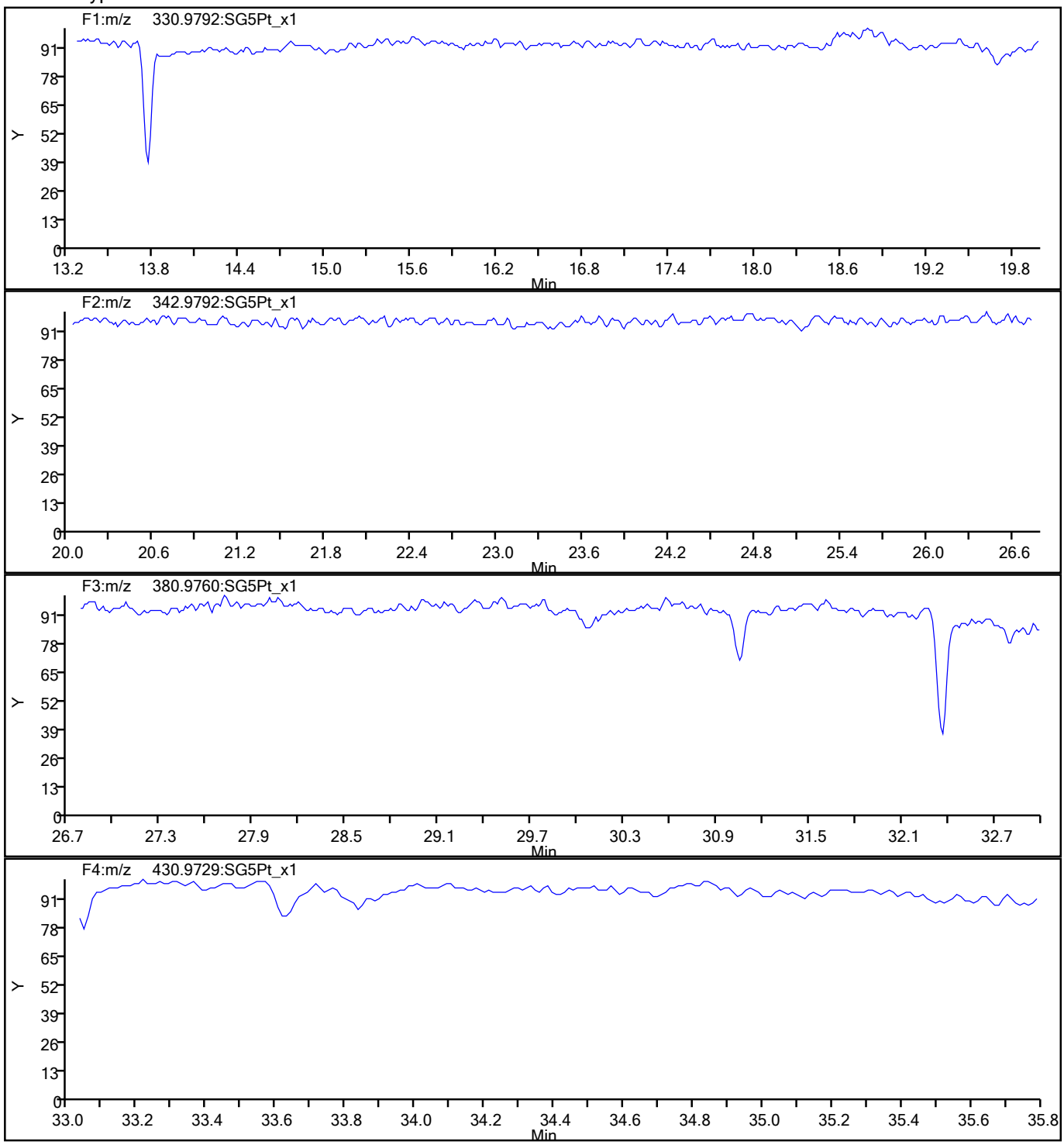

791238

Report Date: 27-Aug-2021 10:06:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_13.d		
Injection Date:	25-Aug-2021 18:50:31	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	519953	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

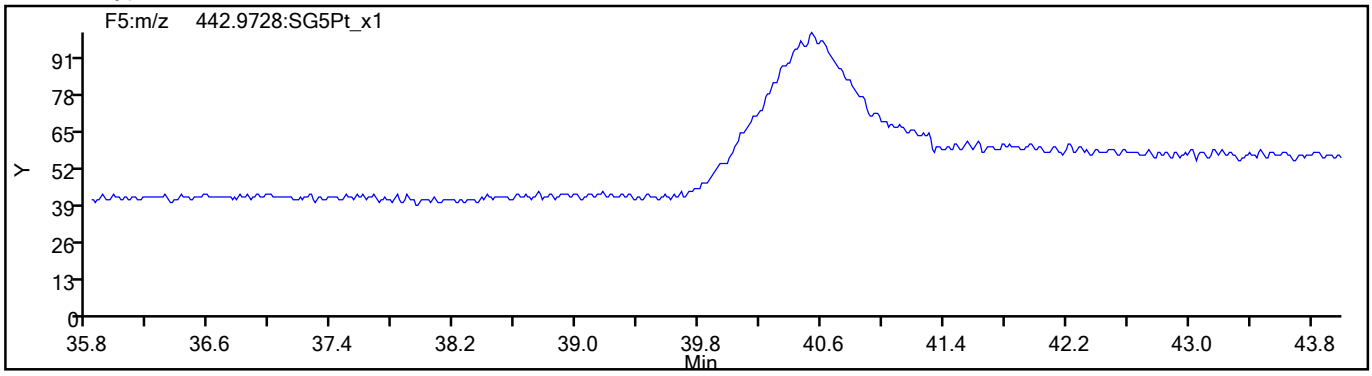

791239

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (12-14) RA
Lab Sample ID: 320-77214-7 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_014.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:40
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.05(g)
Date Analyzed: 08/27/2021 23:56
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 26.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	16	B	1.4	0.19

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	57		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	77		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_014.d
Lims ID: 320-77214-A-7-A
Client ID: 11215702-080221-BN-SJSB090 (12-14)
Sample Type: Client
Inject. Date: 27-Aug-2021 23:56:59 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-7-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:45:50

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.300	61740370	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.617	47237241	0.76	1.3327	57.4	57.4	0.1997	0.1997	57.41	
2,3,7,8-TCDF	17.644	2765825	0.85	0.9978	5.868	5.868	0.0697	0.0697		
D 13C-2,3,7,8-TCDD	16.067	29461889	0.77	0.8749	54.5	54.5	0.4770	0.4770	54.54	
2,3,7,8-TCDD	16.081	626842	0.77	1.0570	2.237	2.013	0.0742	0.0742		RQ
$ 37Cl4-2,3,7,8-TCDD	16.081	16341072		0.8648	30.6	30.6	0.0461	0.0461	76.51	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_014.d
Lims ID: 320-77214-A-7-A
Client ID: 11215702-080221-BN-SJSB090 (12-14)
Sample Type: Client
Inject. Date: 27-Aug-2021 23:56:59 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-7-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:45:50

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.300	16.300	0		26786199	6067638	10701	26752	567		
333.9339	16.300	16.300	0		34954171	7640754	12183	30457	627	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.617	17.616	0	1.081	20413297	3777584	7842	19605	482		
317.9389	17.617	17.616	0	1.081	26823944	4969304	6751	16877	736	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.644	0	1.002	1267823	218777	971	2427	225		
305.8987	17.644	17.644	0	1.002	1498002	276306	1461	3652	189	0.85(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.066	0	0.986	12832598	2966222	10701	26752	277		
333.9339	16.067	16.066	0	0.986	16629291	3849490	12183	30457	316	0.77(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.081	16.080	0	1.001	272694	60243	1125	2812	54		
321.8936	16.081	16.080	0	1.001	424002	87176	1014	2535	86	0.64(0.65-0.89)	
	Empc Correction				354148	78237	1014	2535	77		
37Cl4-2,3,7,8-TCDD											
327.8840	16.081	16.080	0	0.987	16341072	3582739	2184	5460	1640		

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 30-Aug-2021 09:51:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_014.d		
Injection Date:	27-Aug-2021 23:56:59	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	520456	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

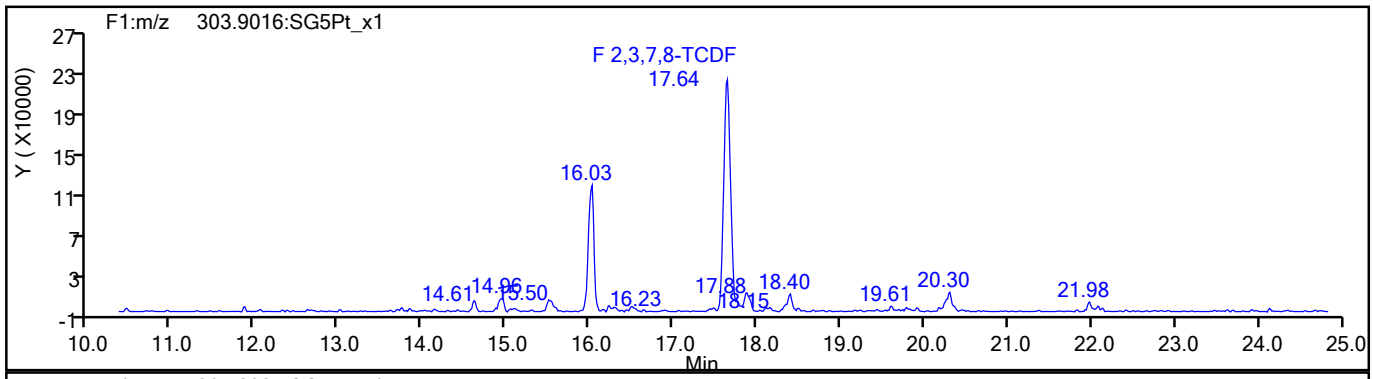

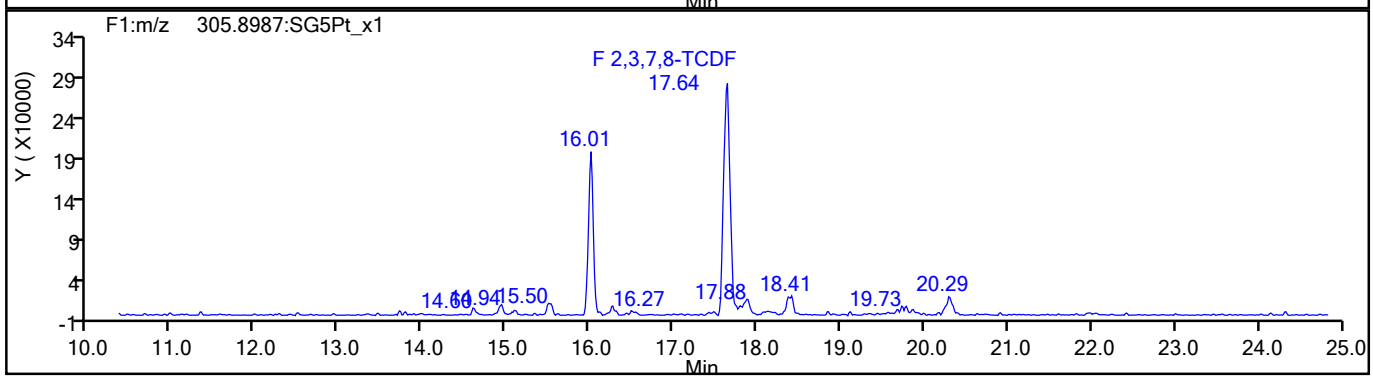

TCDF Standards

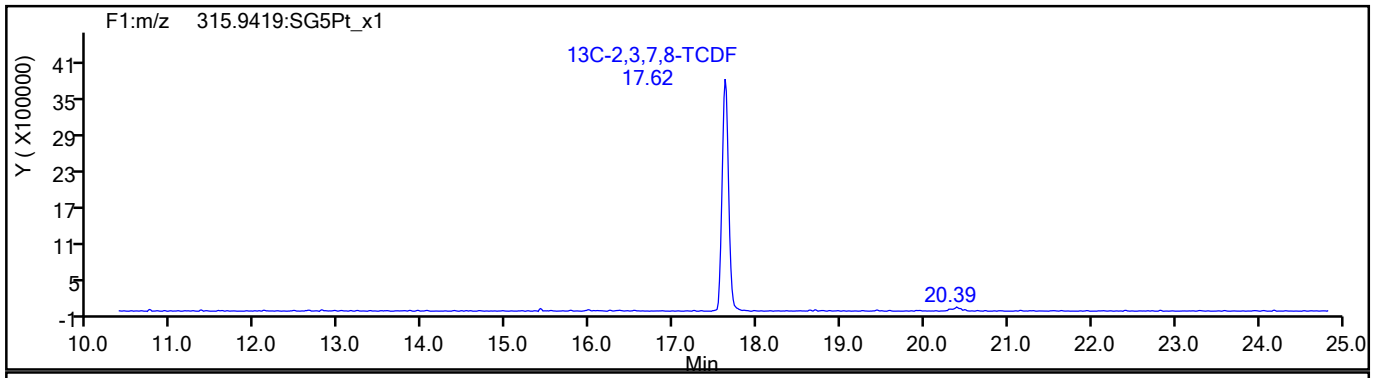

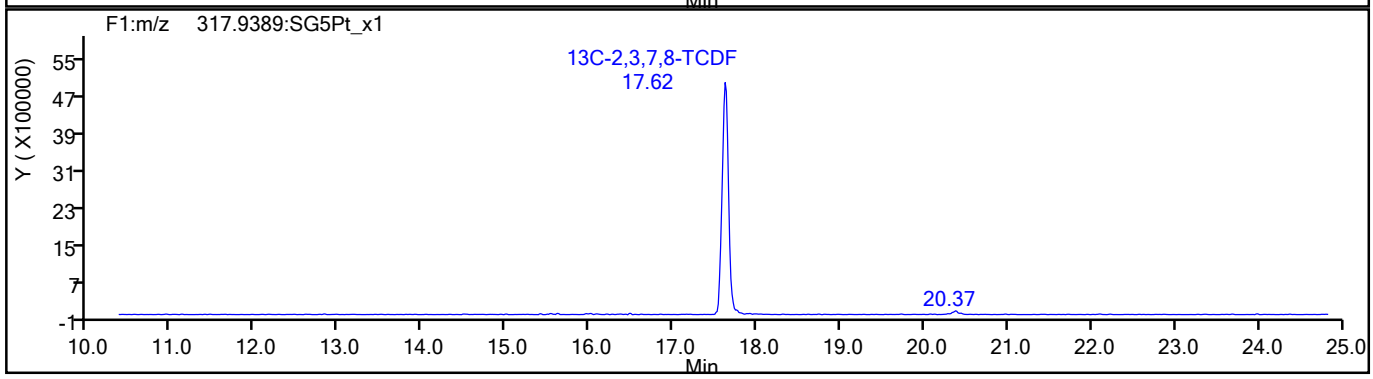

791243

Report Date: 30-Aug-2021 09:51:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_014.d		
Injection Date:	27-Aug-2021 23:56:59	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	520456	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

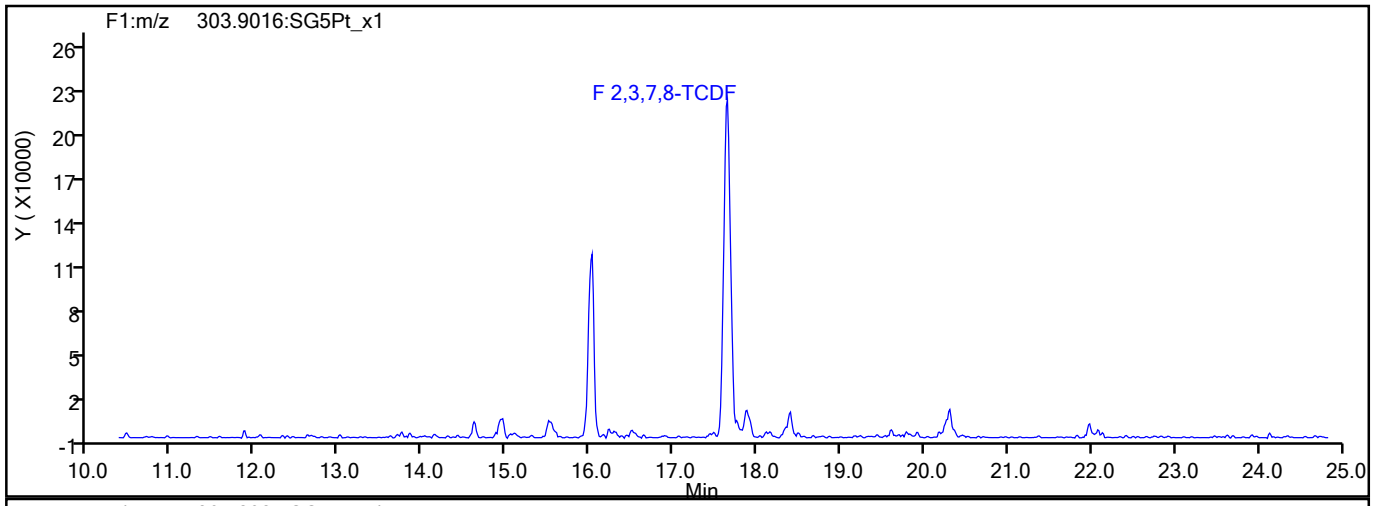

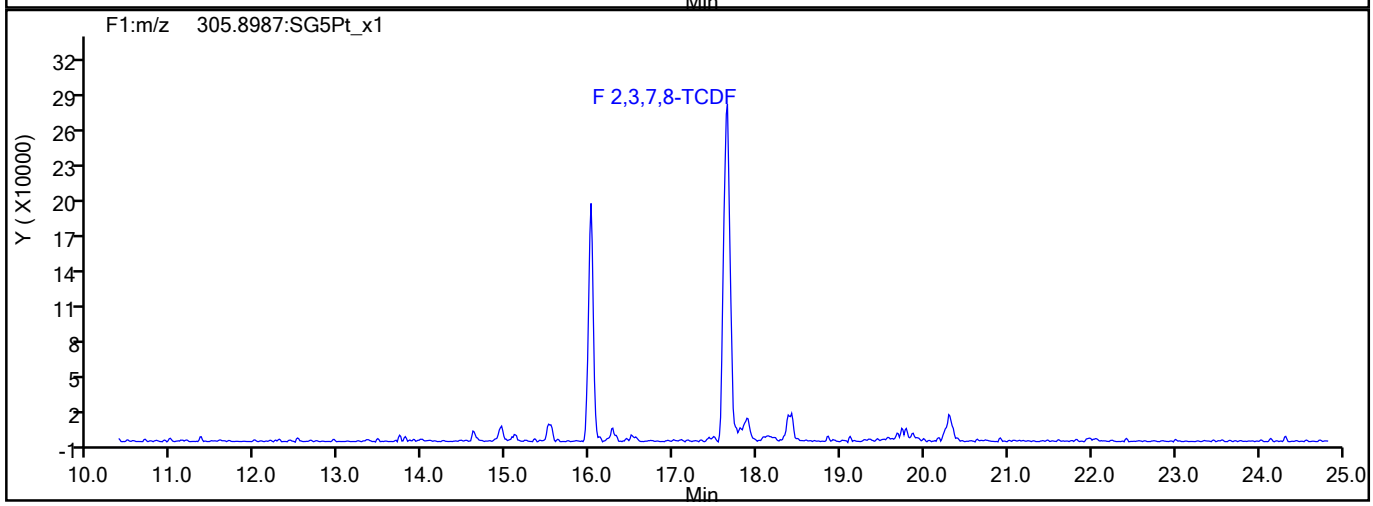

TCDF Interference Mass

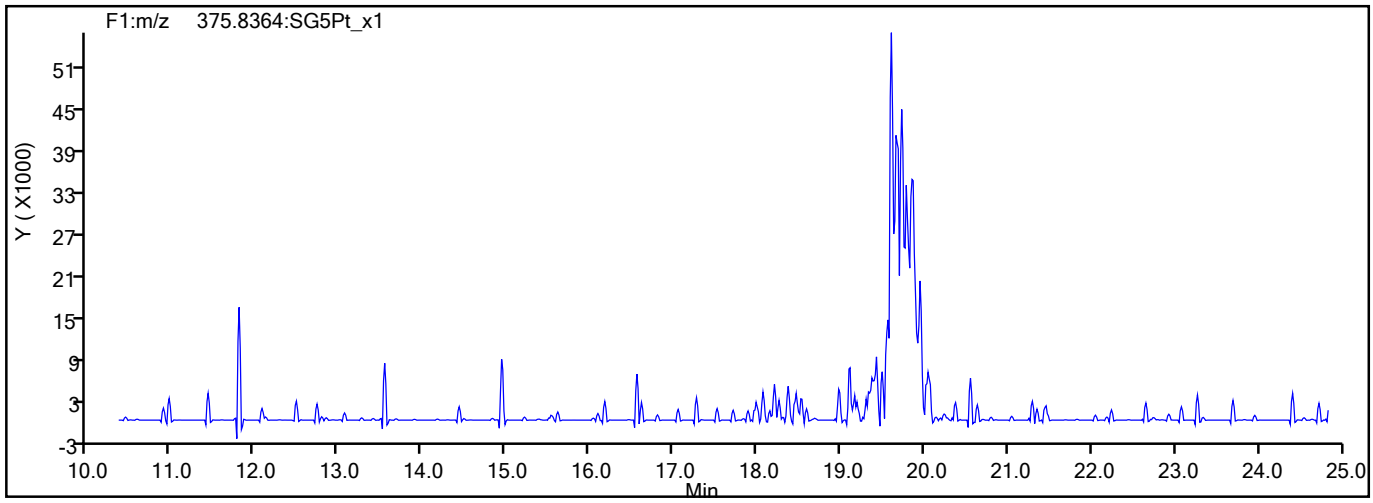

791244

Report Date: 30-Aug-2021 09:51:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_014.d		
Injection Date:	27-Aug-2021 23:56:59	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	520456	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

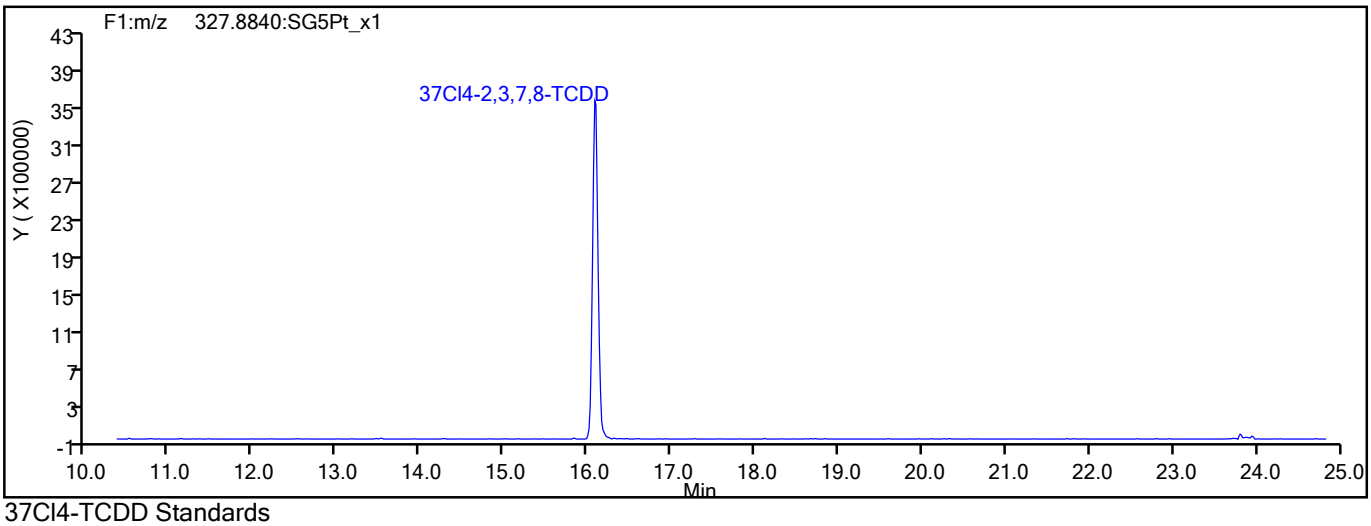

37Cl4-TCDD Standards

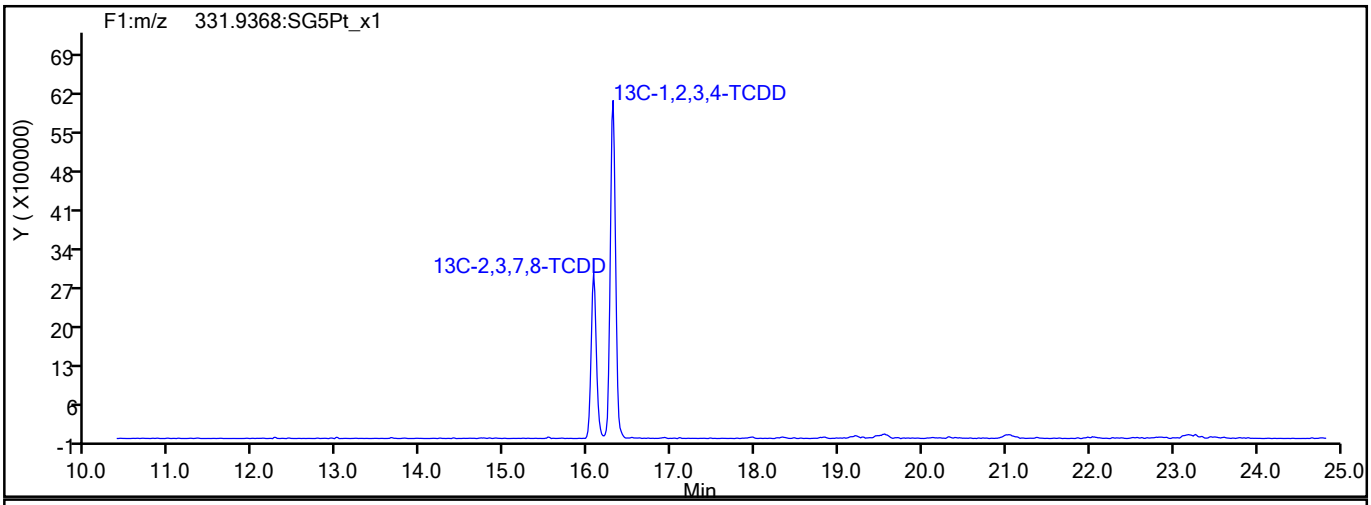

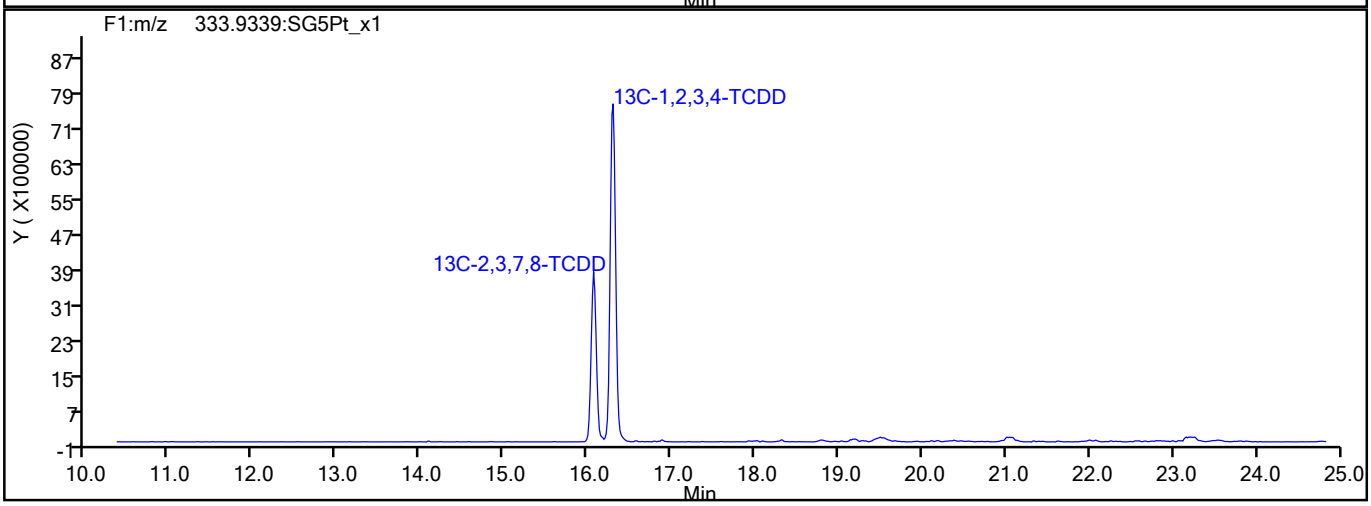

791245

Report Date: 30-Aug-2021 09:51:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_014.d		
Injection Date:	27-Aug-2021 23:56:59	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (12-14)		
Worklist#:	520456	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

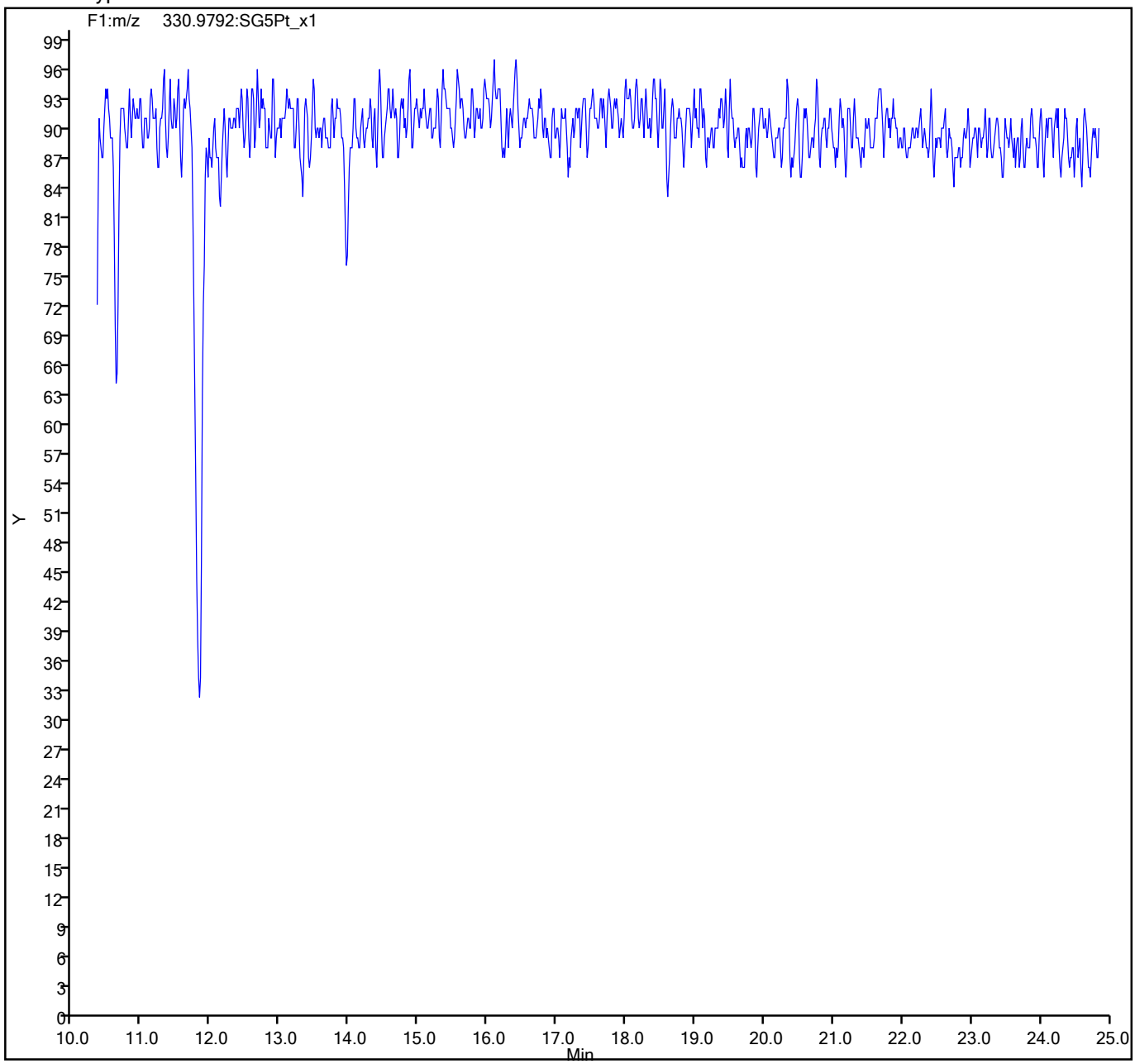

791246

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (14-16)
Lab Sample ID: 320-77214-8
Matrix: Sediment
Lab File ID: 25AU2110D5_18.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:45
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.43(g)
Date Analyzed: 08/25/2021 23:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 31.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2.3		1.4	0.066
40321-76-4	1,2,3,7,8-PeCDD	ND		7.0	0.075
57117-41-6	1,2,3,7,8-PeCDF	0.28	J	7.0	0.041
57117-31-4	2,3,4,7,8-PeCDF	0.18	J q	7.0	0.042
39227-28-6	1,2,3,4,7,8-HxCDD	0.57	J	7.0	0.14
57653-85-7	1,2,3,6,7,8-HxCDD	0.72	J	7.0	0.15
19408-74-3	1,2,3,7,8,9-HxCDD	1.8	J	7.0	0.13
70648-26-9	1,2,3,4,7,8-HxCDF	0.61	J	7.0	0.036
57117-44-9	1,2,3,6,7,8-HxCDF	0.19	J	7.0	0.037
72918-21-9	1,2,3,7,8,9-HxCDF	0.10	J	7.0	0.026
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.0	0.027
35822-46-9	1,2,3,4,6,7,8-HpCDD	31	B	7.0	0.60
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.45	J	7.0	0.042
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.0	0.050
3268-87-9	OCDD	780	B	14	0.66
39001-02-0	OCDF	0.51	J B	14	0.037
41903-57-5	Total TCDD	5.5	q	1.4	0.066
30402-14-3	Total TCDF	14	q B	1.4	0.061
36088-22-9	Total PeCDD	3.0	J q	7.0	0.075
30402-15-4	Total PeCDF	0.79	J q	7.0	0.041
34465-46-8	Total HxCDD	28		7.0	0.14
55684-94-1	Total HxCDF	0.90	J	7.0	0.031
37871-00-4	Total HpCDD	120	B	7.0	0.60
38998-75-3	Total HpCDF	0.45	J	7.0	0.046

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (14-16)
Lab Sample ID: 320-77214-8
Matrix: Sediment
Lab File ID: 25AU2110D5_18.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:45
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.43(g)
Date Analyzed: 08/25/2021 23:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 31.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	58		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	57		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	55		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	60		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	65		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	66		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	56		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	56		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	57		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	55		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	52		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	59		26-138
114423-97-1	13C-OCDD	59		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	67		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d
Lims ID: 320-77214-A-8-A
Client ID: 11215702-080221-BN-SJSB090 (14-16)
Sample Type: Client
Inject. Date: 25-Aug-2021 23:05:48 ALS Bottle#: 29 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-8-A 320-77214-A-8-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:19:00 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:36:48

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	123396407	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	110094494	0.77	1.6249	54.9	54.9	0.1008	0.1008	54.91	
2,3,7,8-TCDF	17.114	3068444	0.76	1.0239	2.722	2.722	0.0216	0.0216		
A Non-2,3,7,8-sub-TCDF	17.069	2377065	0.77	1.0239	2.148	2.109	0.0216	1.147		RQM
S Total TCDF					4.870	4.831	0.0216	0.0216		RQ
D 13C-2,3,7,8-TCDD	17.779	63916506	0.81	0.8993	57.6	57.6	0.1212	0.1212	57.60	
2,3,7,8-TCDD	17.809	646151	0.70	1.2541	0.8061	0.8061	0.0235	0.0235		
$ 37Cl4-2,3,7,8-TCDD	17.809	36445346		1.1071	26.7	26.7	0.0180	0.0180	66.69	
A Non-2,3,7,8-sub-TCDD	17.530	937175	0.77	1.2541	1.183	1.169	0.0235	0.3522		RQ
S Total TCDD					1.989	1.975	0.0235	0.0235		RQ
D 13C-1,2,3,7,8-PeCDF	22.020	82866034	1.57	1.2101	55.5	55.5	0.0785	0.0785	55.50	
1,2,3,7,8-PeCDF	22.047	88164	1.57	1.0611	0.1003	0.1003	0.0148	0.0148		M
D 13C-2,3,4,7,8-PeCDF	23.329	91926512	1.55	1.2395	60.1	60.1	0.0766	0.0766	60.10	
2,3,4,7,8-PeCDF	23.356	60786	1.55	1.0184	0.0725	0.0649	0.0148	0.0148		RQM
A F1 PeCDFs	19.851						0.0162	0.0162		
A Non-2,3,7,8-sub-PeCDF	23.067	106273	1.55	1.0398	0.1370	0.1169	0.0148	0.0578		RQ
S Total PeCDF					0.3098	0.2821	0.0148	0.0148		RQ
D 13C-1,2,3,7,8-PeCDD	24.038	53715828	1.59	0.7612	57.2	57.2	0.0481	0.0481	57.18	
1,2,3,7,8-PeCDD	24.079						0.0267	0.0267		
A Non-2,3,7,8-sub-PeCDD	23.696	592740	1.55	1.0484	1.060	1.053	0.0267	0.4981		RQ
S Total PeCDD					1.060	1.053	0.0267	0.0267		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.172	78042856	0.52	1.0837	66.2	66.2	0.1582	0.1582	66.22	
1,2,3,4,7,8-HxCDF	30.199	184895	1.23	1.0851	0.2183	0.2183	0.0129	0.0129		M
D 13C-1,2,3,6,7,8-HxCDF	30.385	68804079	0.52	1.1279	56.1	56.1	0.1520	0.1520	56.09	
1,2,3,6,7,8-HxCDF	30.412	51102	1.12	1.1260	0.0660	0.0660	0.0132	0.0132		M
D 13C-2,3,4,6,7,8-HxCDF	31.291	65498974	0.52	1.0637	56.6	56.6	0.1611	0.1611	56.62	
2,3,4,6,7,8-HxCDF	31.317						0.009514	0.009514		
D 13C-1,2,3,7,8,9-HxCDF	32.129	59287912	0.52	0.9676	56.3	56.3	0.1772	0.1772	56.34	
1,2,3,7,8,9-HxCDF	32.142	25739	1.32	1.1664	0.0372	0.0372	0.009240	0.009240		M
A Non-2,3,7,8-sub-HxCDF	30.331						0.0109	0.0109		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.3215	0.3215	0.0112	0.0112		
* 13C-1,2,3,7,8,9-HxCDD	31.943	108759711	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.490	51739152	1.26	0.7334	64.9	64.9	0.1694	0.1694	64.86	
1,2,3,4,7,8-HxCDD	31.503	112483	1.21	1.0640	0.2043	0.2043	0.0486	0.0486		
D 13C-1,2,3,6,7,8-HxCDD	31.597	53290933	1.24	0.8802	55.7	55.7	0.1411	0.1411	55.67	
1,2,3,6,7,8-HxCDD	31.610	137241	1.37	1.0001	0.2575	0.2575	0.0523	0.0523		
1,2,3,7,8,9-HxCDD	31.956	390841	1.23	1.1325	0.6572	0.6572	0.0459	0.0459		
A Non-2,3,7,8-sub-HxCDD	30.519	5017540	1.26	1.0655	8.967	8.967	0.0488	6.572		
S Total HxCDD					10.1	10.1	0.0490	0.0490		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	43769021	0.42	0.7730	52.1	52.1	0.4171	0.4171	52.06	
1,2,3,4,6,7,8-HpCDF	33.615	101260	1.00	1.4413	0.1605	0.1605	0.0149	0.0149		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	44758894	0.43	0.7008	58.7	58.7	0.4601	0.4601	58.72	
1,2,3,4,7,8,9-HpCDF	34.673						0.0178	0.0178		
A Non-2,3,7,8-sub-HpCDF	34.138						0.0163	0.0163		
S Total HpCDF					0.1605	0.1605	0.0164	0.0164		
D 13C-1,2,3,4,6,7,8-HpCDD	34.381	38971458	1.01	0.6472	55.4	55.4	0.1844	0.1844	55.36	
1,2,3,4,6,7,8-HpCDD	34.393	4746525	1.05	1.0943	11.1	11.1	0.2129	0.2129		
A Non-2,3,7,8-sub-HpCDD	34.223	12917355	1.03	1.0943	30.3	30.3	0.2129	30.3		
S Total HpCDD					41.4	41.4	0.2129	0.2129		
D 13C-OCDD	36.689	57071437	0.89	0.4472	117.4	117.4	0.1355	0.1355	58.68	
OCDF	36.785	74337	0.89	1.4382	0.1811	0.1811	0.0132	0.0132		M
OCDD	36.701	87951111	0.90	1.1070	278.4	278.4	0.2348	0.2348		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d
Lims ID: 320-77214-A-8-A
Client ID: 11215702-080221-BN-SJSB090 (14-16)
Sample Type: Client
Inject. Date: 25-Aug-2021 23:05:48 ALS Bottle#: 29 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-8-A 320-77214-A-8-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:19:00 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:36:48

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		55196211	14451363	5243	13107	2756		
333.9339	17.598	17.598	0		68200196	17782643	8806	22015	2019	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.084	1	0.972	47832313	12279017	8225	20562	1493		
317.9389	17.099	17.084	1	0.972	62262181	15949938	12884	32210	1238	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.099	1	1.001	1321816	326419	1053	2632	310		
305.8987	17.114	17.099	1	1.001	1746628	431026	1444	3610	298	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	15.224	17.069	-110	0.890	63536	19222	1053	2632	18		
305.8987	15.224	17.069	-110	0.890	81662	25299	1444	3610	18	0.78(0.65-0.89)	
303.9016	15.723	17.069	-81	0.920	47012	12512	1053	2632	12		
305.8987	15.723	17.069	-81	0.920	60714	15593	1444	3610	11	0.77(0.65-0.89)	
303.9016	15.995	17.069	-64	0.935	40628	12965	1053	2632	12		M
305.8987	15.995	17.069	-64	0.935	54054	16718	1444	3610	12	0.75(0.65-0.89)	
303.9016	16.207	17.069	-52	0.948	58686	14402	1053	2632	14		
305.8987	16.222	17.069	-51	0.949	74235	20019	1444	3610	14	0.79(0.65-0.89)	
303.9016	16.464	17.069	-36	0.963	59252	12616	1053	2632	12		
305.8987	16.449	17.069	-37	0.962	92640	22577	1444	3610	16	0.64(0.65-0.89)	
	Empc Correction				76950	16384	1444	3610	11		
303.9016	16.736	17.069	-20	0.979	559285	150223	1053	2632	143		
305.8987	16.736	17.069	-20	0.979	733705	201520	1444	3610	140	0.76(0.65-0.89)	
303.9016	16.963	17.069	-6	0.992	31779	6554	1053	2632	6		
	Empc Correction				23602	6060	1053	2632	6		
305.8987	16.948	17.069	-7	0.991	30652	7871	1444	3610	5	1.04(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.537	17.069	28	1.026	98274	21906	1053	2632	21		
305.8987	17.522	17.069	27	1.025	128695	30307	1444	3610	21	0.76(0.65-0.89)	
303.9016	18.898	17.069	110	1.105	80969	19308	1053	2632	18		
305.8987	18.898	17.069	110	1.105	125819	30436	1444	3610	21	0.64(0.65-0.89)	
	Empc Correction				105154	25075	1444	3610	17		
13C-2,3,7,8-TCDD											
331.9368	17.779	17.779	0	1.010	28653630	6990833	5243	13107	1333		
333.9339	17.779	17.779	0	1.010	35262876	8715979	8806	22015	990	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.794	1	1.002	266798	64091	1054	2635	61		
321.8936	17.809	17.794	1	1.002	379353	91616	801	2002	114	0.70(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	36445346	8897065	2563	6407	3471		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	15.632	17.530	-114	0.879	39777	10534	1054	2635	10		
	Empc Correction				33598	9471	1054	2635	9		
321.8936	15.617	17.530	-115	0.878	43634	12301	801	2002	15	0.91(0.65-0.89)	
319.8965	15.920	17.530	-96	0.895	60384	16494	1054	2635	16		
321.8936	15.904	17.530	-97	0.895	80506	21480	801	2002	27	0.75(0.65-0.89)	
319.8965	16.131	17.530	-84	0.907	30225	9999	1054	2635	9		
321.8936	16.146	17.530	-83	0.908	35418	11796	801	2002	15	0.85(0.65-0.89)	
319.8965	16.691	17.530	-50	0.939	80795	20233	1054	2635	19		
321.8936	16.691	17.530	-50	0.939	94577	24054	801	2002	30	0.85(0.65-0.89)	
319.8965	17.295	17.530	-14	0.973	22748	5935	1054	2635	6		
	Empc Correction				18175	4848	1054	2635	5		
321.8936	17.295	17.530	-14	0.973	23604	6297	801	2002	8	0.96(0.65-0.89)	
319.8965	17.567	17.530	2	0.988	39645	9663	1054	2635	9		
321.8936	17.567	17.530	2	0.988	48091	10119	801	2002	13	0.82(0.65-0.89)	
319.8965	17.688	17.530	10	0.995	120581	28268	1054	2635	27		
321.8936	17.688	17.530	10	0.995	161760	38658	801	2002	48	0.75(0.65-0.89)	
319.8965	18.157	17.530	38	1.021	27994	8298	1054	2635	8		
321.8936	18.157	17.530	38	1.021	38188	10846	801	2002	14	0.73(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	50633222	9318996	7355	18387	1267		
353.8970	22.020	22.020	0	1.251	32232812	5938123	4887	12217	1215	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.047	22.047	0	1.001	53885	10793	362	905	30		M
341.8567	22.034	22.047	-1	1.001	34279	6086	594	1485	10	1.57(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.329	23.343	-1	1.326	55923341	9531603	7355	18387	1296		
353.8970	23.329	23.343	-1	1.326	36003171	6323187	4887	12217	1294	1.55(1.32-1.78)	
2,3,4,7,8-PeCDF											RQM
339.8597	23.356	23.370	-1	1.001	44033	9738	362	905	27		M
	Empc Correction				36948	6809	362	905	19		
341.8567	23.356	23.370	-1	1.001	23838	4393	594	1485	7	1.85(1.32-1.78)	M

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A F1 PeCDFs											
339.8597	19.851						291	727			
341.8567	19.851						759	1897			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.438	23.067	-157	0.928	14554	2811	362	905	8		
341.8567	20.452	23.067	-157	0.929	14958	3052	594	1485	5	0.97(1.32-1.78)	
	Empc Correction				9389	1813	594	1485	3		
339.8597	20.711	23.067	-141	0.941	31924	6975	362	905	19		
341.8567	20.724	23.067	-140	0.941	27737	4034	594	1485	7	1.15(1.32-1.78)	
	Empc Correction				20596	4500	594	1485	8		
339.8597	22.552	23.067	-31	1.024	18120	3391	362	905	9		
341.8567	22.552	23.067	-31	1.024	17200	2769	594	1485	5	1.05(1.32-1.78)	
	Empc Correction				11690	2187	594	1485	4		
13C-1,2,3,7,8-PeCDD											
367.8949	24.038	24.052	-1	1.366	33015171	5447679	2724	6810	2000		
369.8919	24.038	24.052	-1	1.366	20700657	3392422	1995	4987	1700	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079						595	1487			
357.8516	24.079						396	990			
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.652	23.696	-122	0.901	174678	34792	595	1487	58		
357.8516	21.638	23.696	-123	0.900	105859	20882	396	990	53	1.65(1.32-1.78)	
355.8546	22.320	23.696	-82	0.929	30845	5862	595	1487	10		
	Empc Correction				26580	5003	595	1487	8		
357.8516	22.333	23.696	-82	0.929	17149	3228	396	990	8	1.80(1.32-1.78)	
355.8546	22.606	23.696	-65	0.940	29739	5119	595	1487	9		
357.8516	22.620	23.696	-64	0.941	19244	4354	396	990	11	1.55(1.32-1.78)	
355.8546	23.097	23.696	-36	0.961	116821	15108	595	1487	25		
357.8516	23.083	23.696	-37	0.960	74663	10165	396	990	26	1.56(1.32-1.78)	
355.8546	25.034	23.696	80	1.041	17040	2988	595	1487	5		
357.8516	25.047	23.696	81	1.042	10967	1989	396	990	5	1.55(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.172	30.186	-1	0.945	26575850	4627068	6277	15692	737		
385.8610	30.172	30.186	-1	0.945	51467006	8886627	15310	38275	580	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											M
373.8208	30.199	30.212	-1	1.001	101894	18448	416	1040	44		
375.8178	30.186	30.212	-2	1.000	83001	12954	338	845	38	1.23(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.385	30.399	-1	0.951	23420221	4300572	6277	15692	685		
385.8610	30.385	30.399	-1	0.951	45383858	8353312	15310	38275	546	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											M
373.8208	30.412	30.412	0	1.001	27036	4445	416	1040	11		
375.8178	30.372	30.412	-2	1.000	24066	3992	338	845	12	1.12(1.05-1.43)	M
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.980	22451480	5873860	6277	15692	936		
385.8610	31.291	31.291	0	0.980	43047494	11095841	15310	38275	725	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.317						416	1040			
375.8178	31.317						338	845			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.142	-1	1.006	20292242	6009654	6277	15692	957		
385.8610	32.129	32.142	-1	1.006	38995670	11481046	15310	38275	750	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.142	32.156	-1	1.000	14657	4750	416	1040	11		M
375.8178	32.142	32.156	-1	1.000	11082	3820	338	845	11	1.32(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.331						416	1040			
375.8178	30.331						338	845			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.956	-1		60219660	17345859	9470	23675	1832		
403.8529	31.943	31.956	-1		48540051	14138564	6176	15440	2289	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.490	31.503	-1	0.986	28822426	8055602	9470	23675	851		
403.8529	31.490	31.503	-1	0.986	22916726	6403367	6176	15440	1037	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.503	31.517	-1	1.000	61659	15833	1851	4627	9		
391.8127	31.503	31.517	-1	1.000	50824	12144	1142	2855	11	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.597	31.610	-1	0.989	29492551	7855108	9470	23675	829		
403.8529	31.597	31.610	-1	0.989	23798382	6447226	6176	15440	1044	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.610	31.623	-1	1.000	79343	20264	1851	4627	11		
391.8127	31.610	31.623	-1	1.000	57898	17314	1142	2855	15	1.37(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.956	31.969	-1	1.015	215612	46243	1851	4627	25		
391.8127	31.956	31.969	-1	1.015	175229	37368	1142	2855	33	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.054	30.519	-88	0.920	2038029	263528	1851	4627	142		
391.8127	29.041	30.519	-88	0.919	1639712	210560	1142	2855	184	1.24(1.05-1.43)	
389.8157	30.265	30.519	-15	0.958	69922	14505	1851	4627	8		
391.8127	30.279	30.519	-14	0.958	53961	10002	1142	2855	9	1.30(1.05-1.43)	
389.8157	30.691	30.519	10	0.971	634186	121464	1851	4627	66		
391.8127	30.691	30.519	10	0.971	488897	96743	1142	2855	85	1.30(1.05-1.43)	
389.8157	30.918	30.519	24	0.979	52825	11461	1851	4627	6		
391.8127	30.904	30.519	23	0.978	40008	10016	1142	2855	9	1.32(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	13032441	5017445	11196	27990	448		
419.8220	33.603	33.603	0	1.052	30736580	11321571	29408	73520	385	0.42(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.615	33.603	1	1.000	50592	16525	1108	2770	15		M
409.7789	33.603	33.603	0	1.000	50668	18159	297	742	61	1.00(0.88-1.20)	M

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.672	0	1.085	13534385	4598326	11196	27990	411		
419.8220	34.672	34.672	0	1.085	31224509	10378652	29408	73520	353	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673						1108	2770			
409.7789	34.673						297	742			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						1108	2770			
409.7789	34.138						297	742			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.381	34.393	-1	1.076	19599861	6910887	7079	17697	976		
437.8140	34.381	34.393	-1	1.076	19371597	6848240	7948	19870	862	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	2426901	851517	6529	16322	130		
425.7737	34.393	34.393	0	1.000	2319624	819522	6296	15740	130	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.846	34.223	-23	0.984	6552234	2330255	6529	16322	357		
425.7737	33.846	34.223	-23	0.984	6365121	2297319	6296	15740	365	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.689	36.701	-1	1.149	26816995	7990017	3965	9912	2015		
471.7750	36.689	36.701	-1	1.149	30254442	8997899	3668	9170	2453	0.89(0.76-1.02)	
OCDF											M
441.7428	36.785	36.797	-1	1.003	35086	9155	319	797	29		M
443.7399	36.785	36.797	-1	1.003	39251	9494	328	820	29	0.89(0.76-1.02)	M
OCDD											
457.7377	36.701	36.713	-1	1.000	41587327	12655931	4253	10632	2976		
459.7348	36.701	36.713	-1	1.000	46363784	14285571	4578	11445	3120	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d
Lims ID: 320-77214-A-8-A
Client ID: 11215702-080221-BN-SJSB090 (14-16)
Inject. Date: 25-Aug-2021 23:05:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	110094494	28228955

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	110094494	28228955

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.224	63536	19222	81662	25299	0.1288	0.78	
15.723	47012	12512	60714	15593	0.0956	0.77	
15.995	40628	12965	54054	16718	0.0840	0.75	M
16.207	58686	14402	74235	20019	0.1179	0.79	
16.464	59252	12616	92640	22577	0.1347	0.64	RQ
16.464	59252	12616	76950	16384	0.1208		Empc Correction
16.736	559285	150223	733705	201520	1.15	0.76	
16.963	31779	6554	30652	7871	0.0554	1.04	RQ
16.963	23602	6060	30652	7871	0.0481		Empc Correction
17.537	98274	21906	128695	30307	0.2013	0.76	
18.898	80969	19308	125819	30436	0.1834	0.64	RQ
18.898	80969	19308	105154	25075	0.1651		Empc Correction
Signal Totals:							
	1031244	269214	1345821	358786			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2421597	640048				0.75	RQM
	2377065	628000					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.148 = (2421597 * 100.000) / (110094494 * 1.024)
Empc Amount: 2.109 = (2377065 * 100.000) / (110094494 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d
Lims ID: 320-77214-A-8-A
Client ID: 11215702-080221-BN-SJSB090 (14-16)
Inject. Date: 25-Aug-2021 23:05:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	63916506	15706812

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	63916506	15706812

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.632	39777	10534	43634	12301	0.1041	0.91	RQ
15.632	33598	9471	43634	12301	0.0963		Empc Correction
15.920	60384	16494	80506	21480	0.1758	0.75	
16.131	30225	9999	35418	11796	0.0819	0.85	
16.691	80795	20233	94577	24054	0.2188	0.85	
17.295	22748	5935	23604	6297	0.0578	0.96	RQ
17.295	18175	4848	23604	6297	0.0521		Empc Correction
17.567	39645	9663	48091	10119	0.1095	0.82	
17.688	120581	28268	161760	38658	0.3522	0.75	
18.157	27994	8298	38188	10846	0.0826	0.73	
Signal Totals:							
	411397	107274	525778	135551			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	947927	244975				0.80	RQ
	937175	242825					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.183 = (947927 * 100.000) / (63916506 * 1.254)
Empc Amount: 1.169 = (937175 * 100.000) / (63916506 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d
Lims ID: 320-77214-A-8-A
Client ID: 11215702-080221-BN-SJSB090 (14-16)
Inject. Date: 25-Aug-2021 23:05:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 4

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	82866034	15257119
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	91926512	15854790

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	87396273	15555954

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.438	14554	2811	14958	3052	0.0325	0.97	RQ
20.438	14554	2811	9389	1813	0.0263		Empc Correction
20.711	31924	6975	27737	4034	0.0657	1.15	RQ
20.711	31924	6975	20596	4500	0.0578		Empc Correction
22.552	18120	3391	17200	2769	0.0389	1.05	RQ
22.552	18120	3391	11690	2187	0.0328		Empc Correction
Signal Totals:							
	64598	13177	41675	8500			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	124493	23032				1.08	RQ
	106273	21677					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1370 = (124493 * 100.000) / (87396273 * 1.040)
Empc Amount: 0.1169 = (106273 * 100.000) / (87396273 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d
Lims ID: 320-77214-A-8-A
Client ID: 11215702-080221-BN-SJSB090 (14-16)
Inject. Date: 25-Aug-2021 23:05:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 4

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	53715828	8840101

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	53715828	8840101

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.652	174678	34792	105859	20882	0.4981	1.65	
22.320	30845	5862	17149	3228	0.0852	1.80	RQ
22.320	26580	5003	17149	3228	0.0776		Empc Correction
22.606	29739	5119	19244	4354	0.0870	1.55	
23.097	116821	15108	74663	10165	0.3400	1.56	
25.034	17040	2988	10967	1989	0.0497	1.55	
Signal Totals:							
	364858	63010	227882	40618			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	597005	104487				1.62	RQ
	592740	103628					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.060 = (597005 * 100.000) / (53715828 * 1.048)
Empc Amount: 1.053 = (592740 * 100.000) / (53715828 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d
Lims ID: 320-77214-A-8-A
Client ID: 11215702-080221-BN-SJSB090 (14-16)
Inject. Date: 25-Aug-2021 23:05:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 4

Non-2,3,7,8-sub-HxCDF, RT: 30.331

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	78042856	13513695
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	68804079	12653884
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	65498974	16969701
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	59287912	17490700

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	67908455	15156995

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d
Lims ID: 320-77214-A-8-A
Client ID: 11215702-080221-BN-SJSB090 (14-16)
Inject. Date: 25-Aug-2021 23:05:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 4

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	51739152	14458969
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	53290933	14302334
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	52515042	14380651

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.054	2038029	263528	1639712	210560	6.57	1.24	
30.265	69922	14505	53961	10002	0.2214	1.30	
30.691	634186	121464	488897	96743	2.01	1.30	
30.918	52825	11461	40008	10016	0.1659	1.32	
Signal Totals:							
	2794962	410958	2222578	327321			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5017540	738279				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 8.967 = (5017540 * 100.000) / (52515042 * 1.066)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d
Lims ID: 320-77214-A-8-A
Client ID: 11215702-080221-BN-SJSB090 (14-16)
Inject. Date: 25-Aug-2021 23:05:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 4

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	38971458	13759127

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	38971458	13759127

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.846	6552234	2330255	6365121	2297319	30.3	1.03	
Signal Totals:							
	6552234	2330255	6365121	2297319			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12917355	4627574				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 30.289 = (12917355 * 100.000) / (38971458 * 1.094)

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.68- 19.46)

Signal: 1

Processing Integration Results

RT = 15.995 Area = 55828

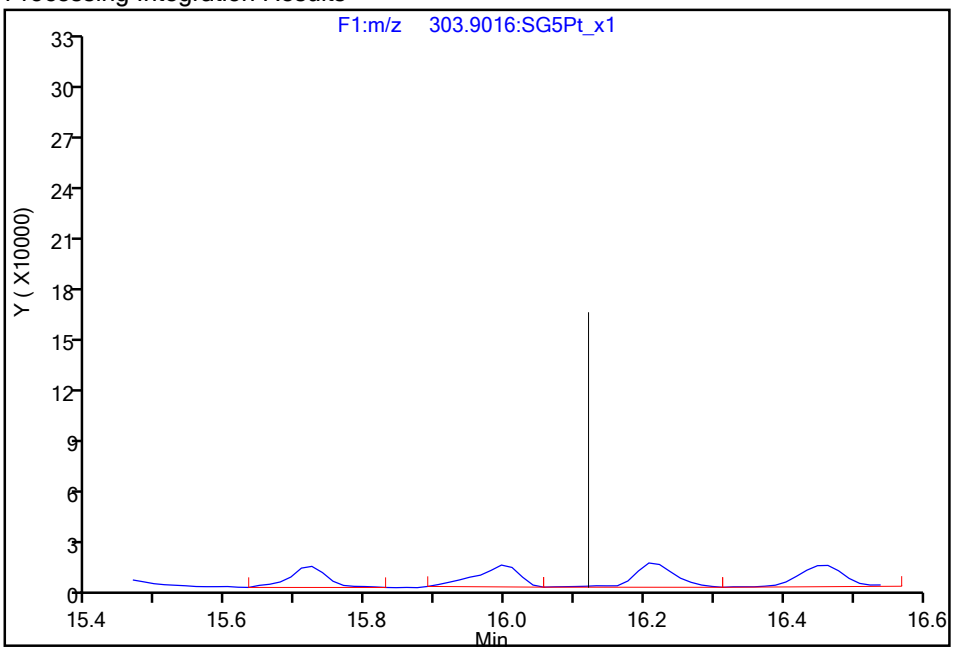

Manual Integration Results

RT = 15.995 Area = 40628 M

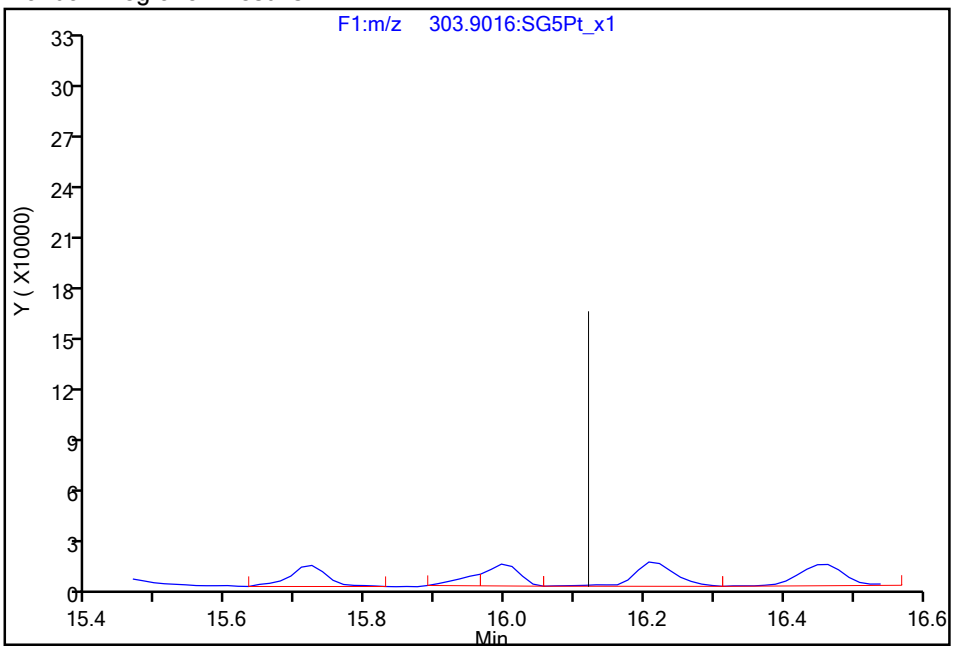

Reviewer: dadunj, 27-Aug-2021 08:14:41

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.05
Area: 57003
Amount: 0.110600
Amount Units: pg/ul

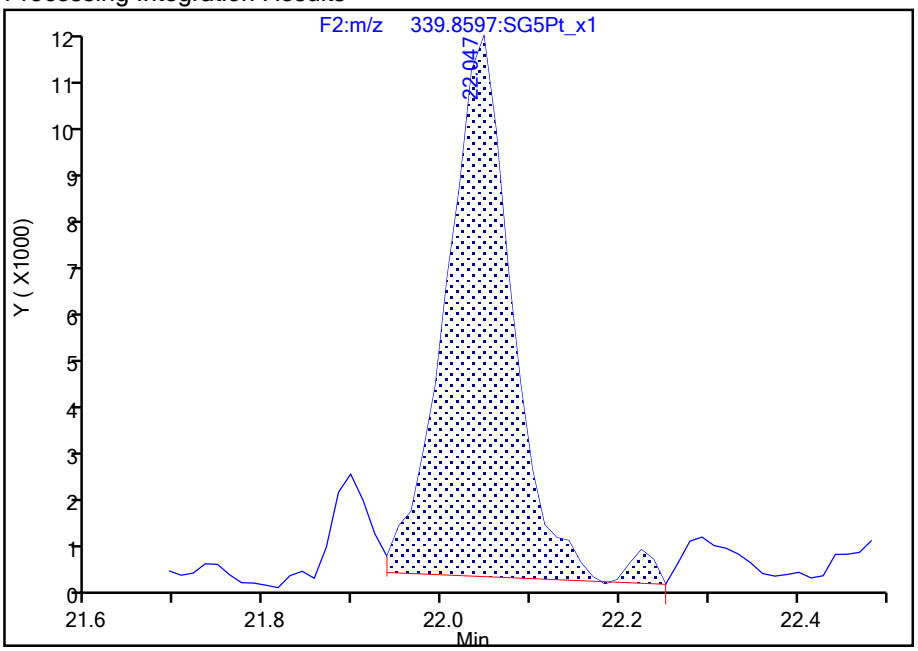

Manual Integration Results

RT: 22.05
Area: 53885
Amount: 0.100264
Amount Units: pg/ul

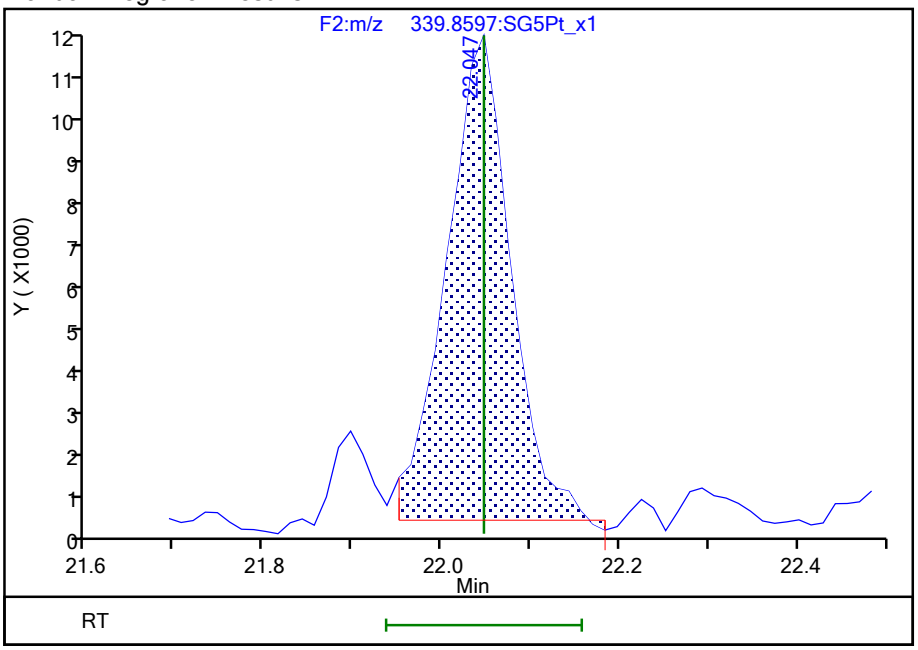

Reviewer: dadunj, 27-Aug-2021 08:15:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.03
Area: 40250
Amount: 0.110600
Amount Units: pg/ul

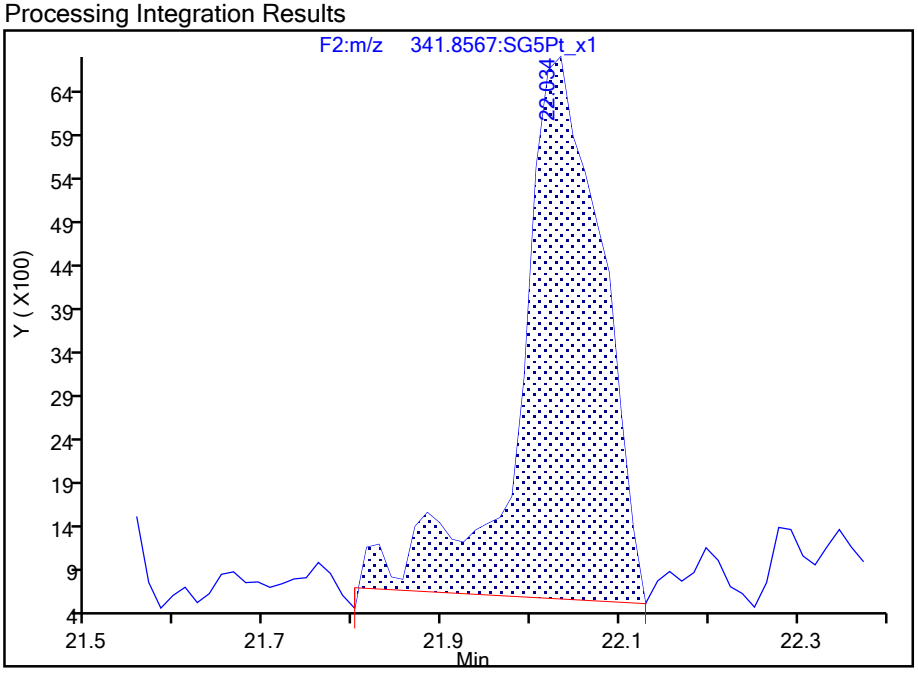

Manual Integration Results

RT: 22.03
Area: 34279
Amount: 0.100264
Amount Units: pg/ul

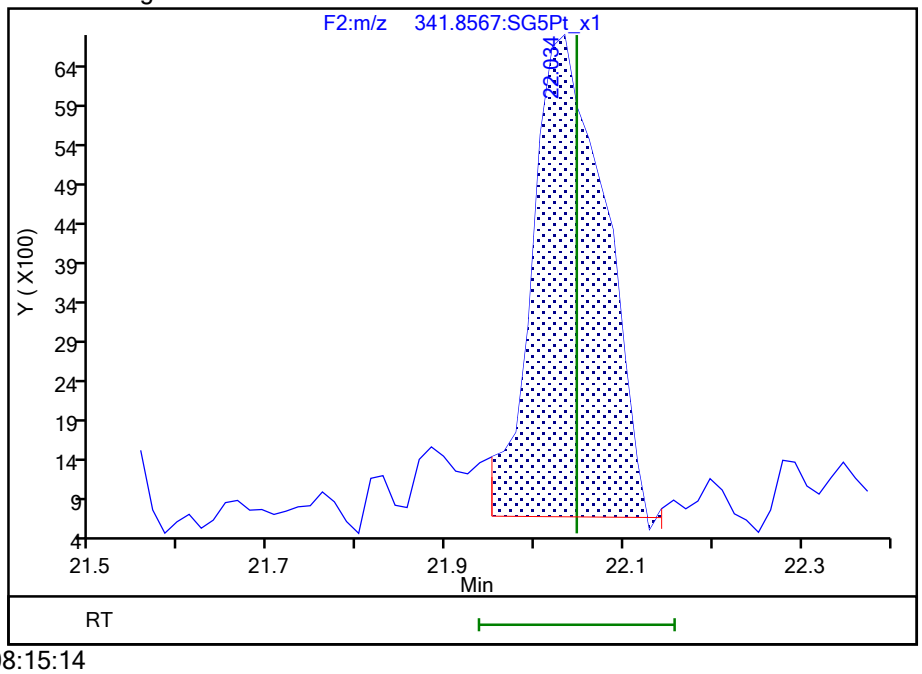

Reviewer: dadunj, 27-Aug-2021 08:15:14
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 23.36
Area: 43055
Amount: 0.079558
Amount Units: pg/ul

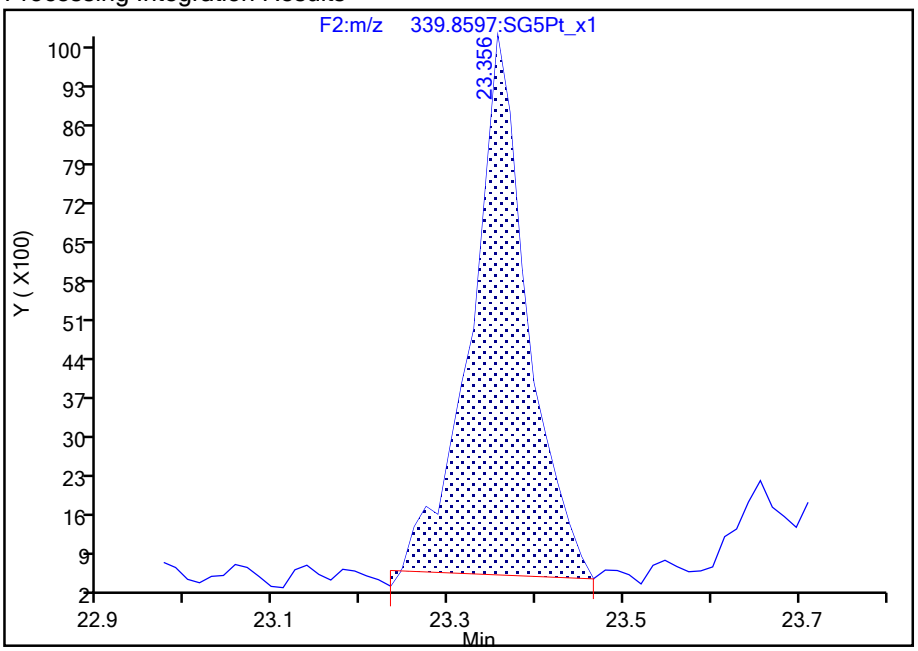

Manual Integration Results

RT: 23.36
Area: 44033
Amount: 0.072497
Amount Units: pg/ul

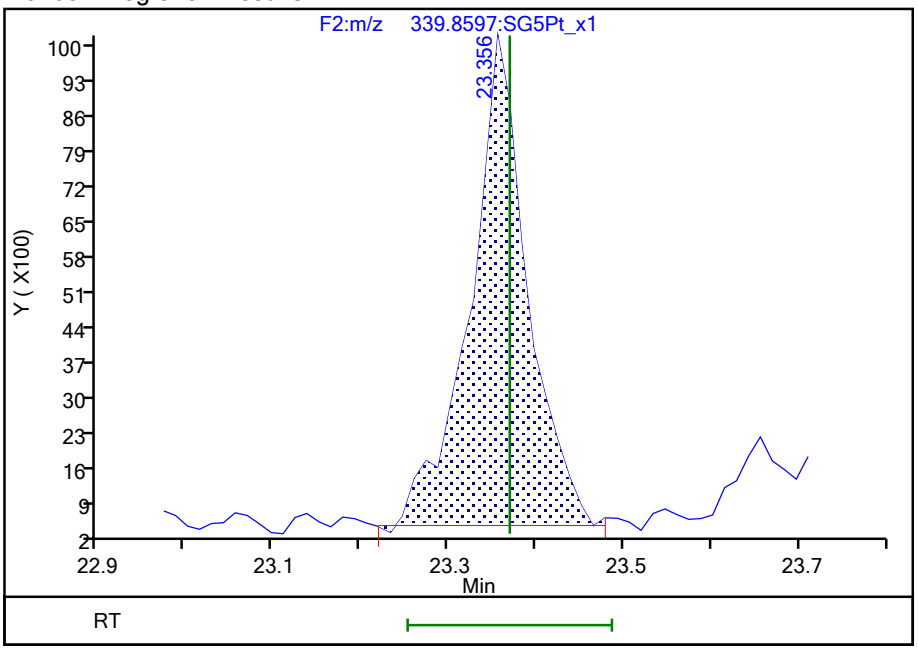

Reviewer: dadunj, 27-Aug-2021 08:15:31

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.36
Area: 31427
Amount: 0.079558
Amount Units: pg/ul

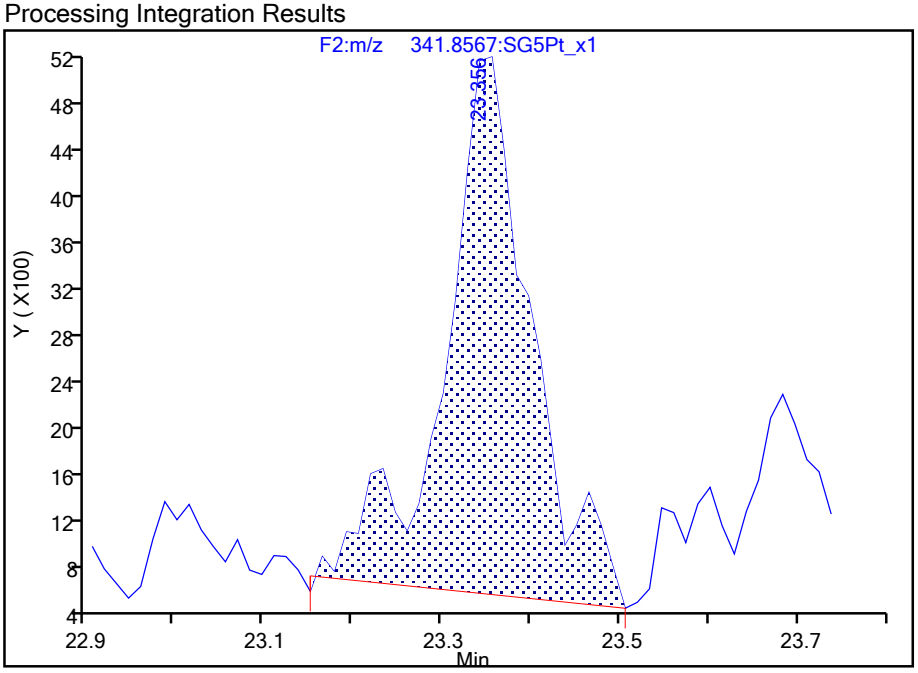

Manual Integration Results

RT: 23.36
Area: 23838
Amount: 0.072497
Amount Units: pg/ul

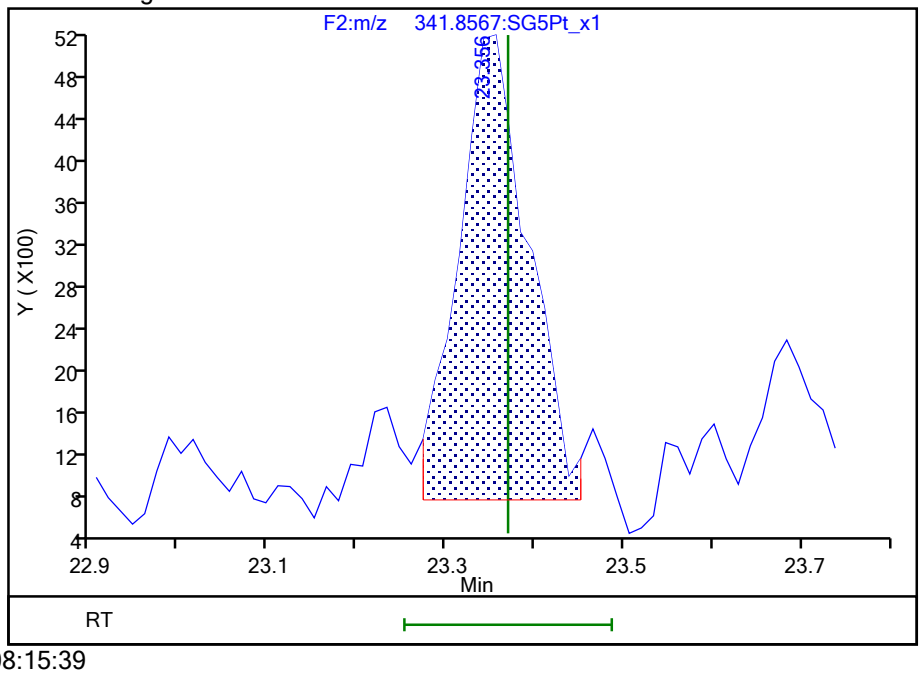

Reviewer: dadunj, 27-Aug-2021 08:15:39
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

791269

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 2

Processing Integration Results

RT: 30.19
Area: 85114
Amount: 0.220824
Amount Units: pg/ul

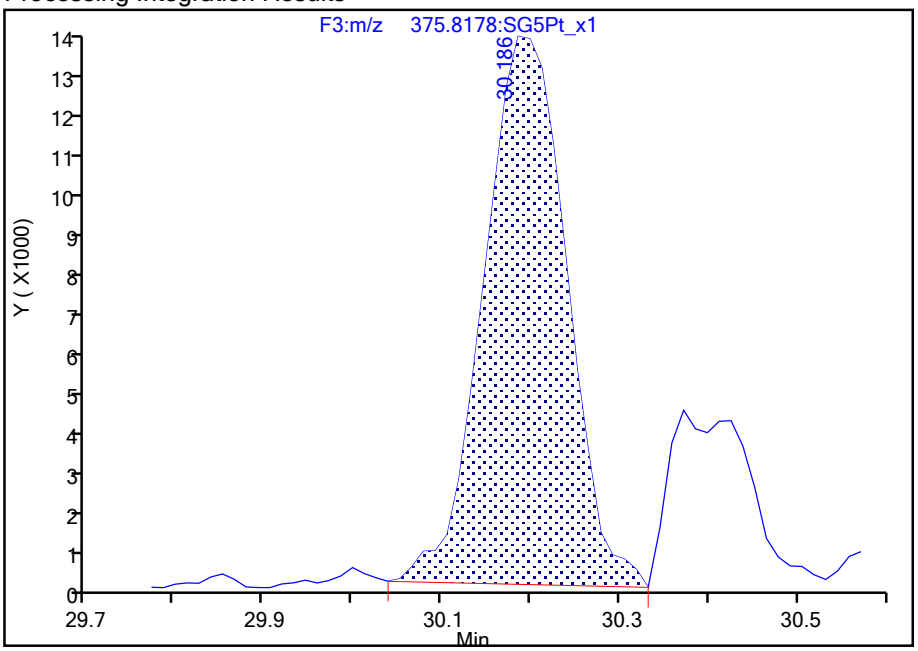

Manual Integration Results

RT: 30.19
Area: 83001
Amount: 0.218329
Amount Units: pg/ul

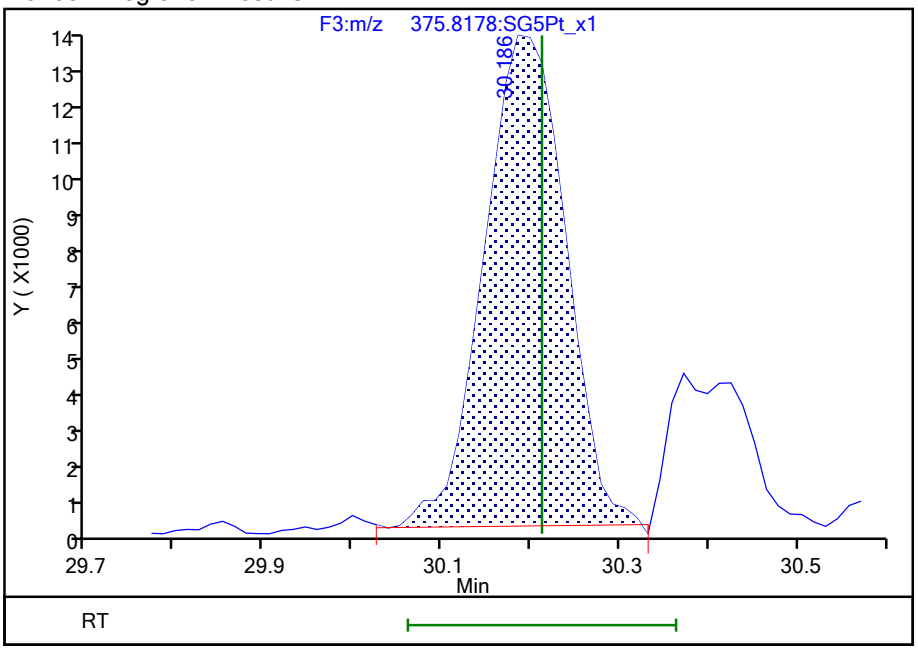

Reviewer: dadunj, 27-Aug-2021 08:16:24

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 30.37
Area: 30073
Amount: 0.073714
Amount Units: pg/ul

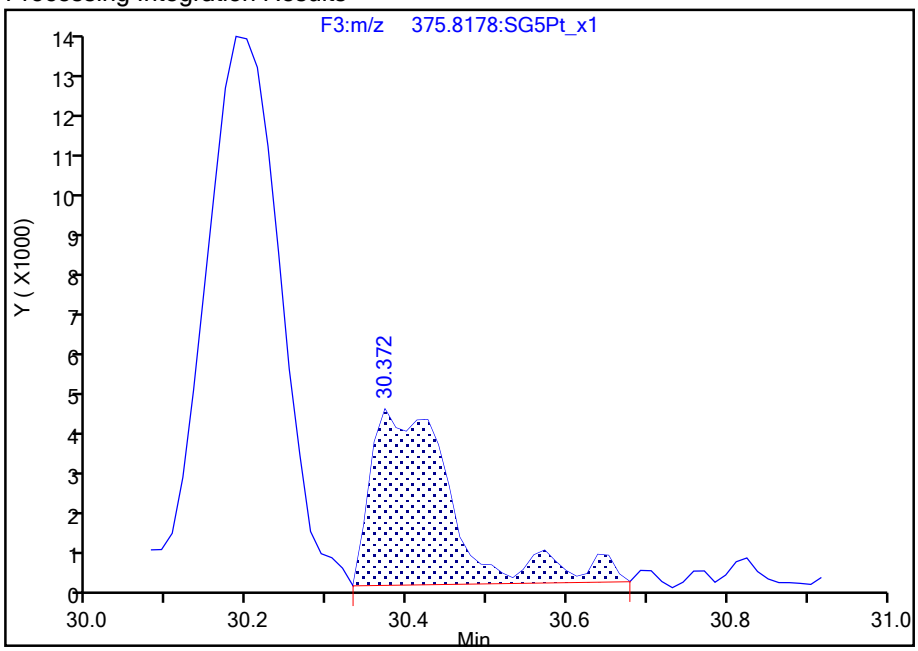

Manual Integration Results

RT: 30.37
Area: 24066
Amount: 0.065960
Amount Units: pg/ul

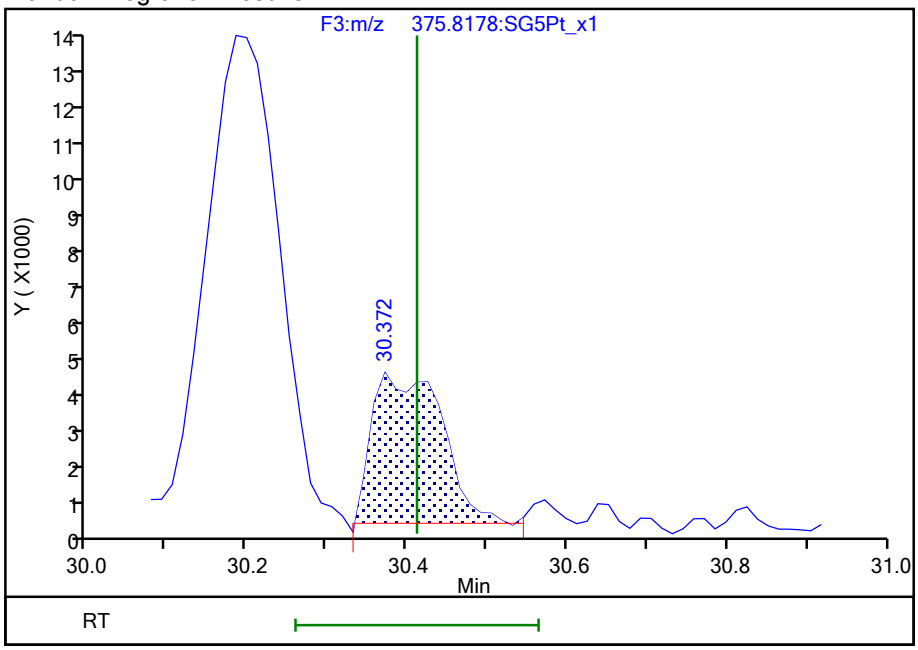

Reviewer: dadunj, 27-Aug-2021 08:16:24

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.14
Area: 25207
Amount: 0.063853
Amount Units: pg/ul

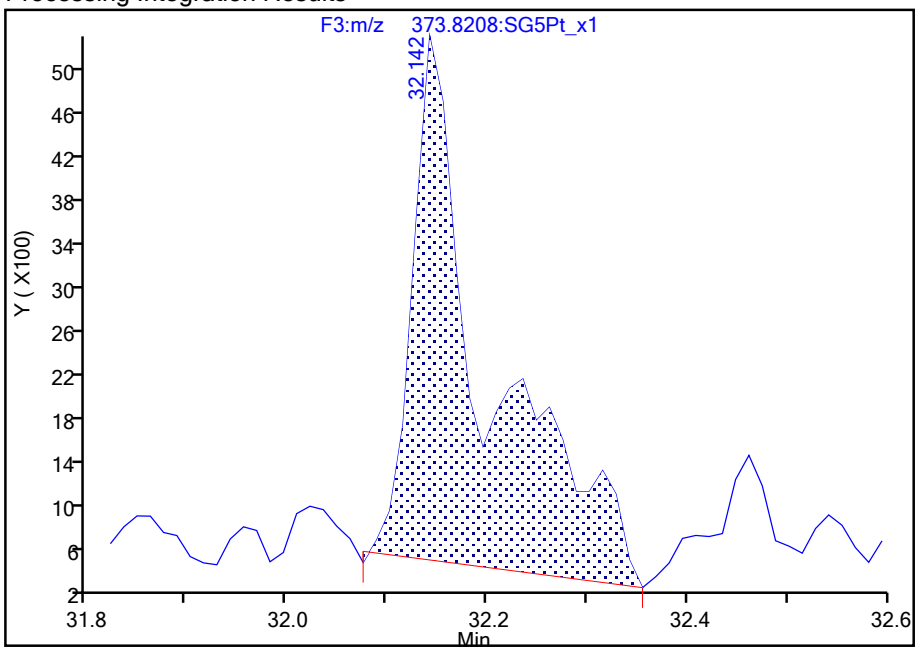

Manual Integration Results

RT: 32.14
Area: 14657
Amount: 0.037222
Amount Units: pg/ul

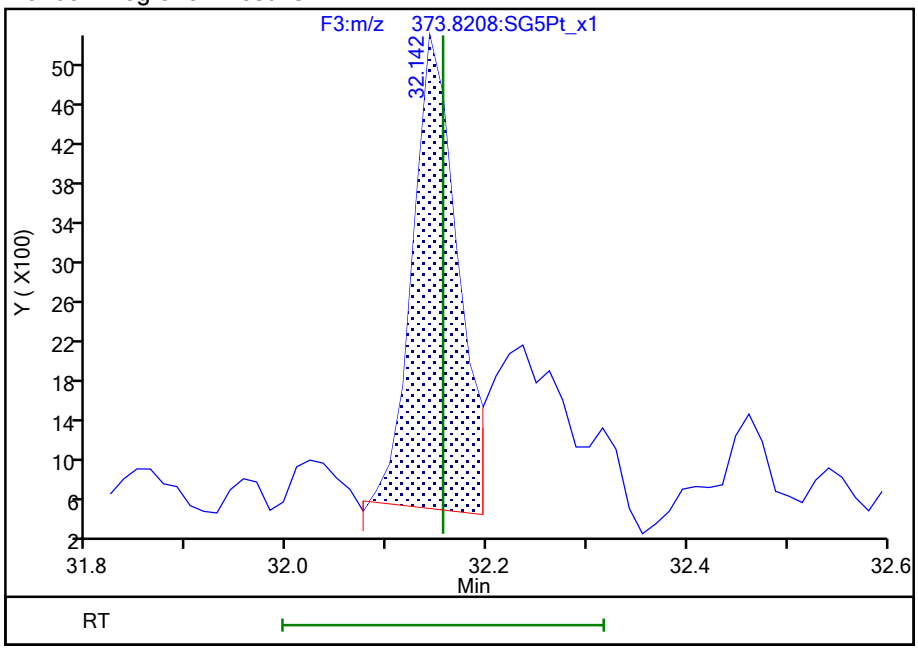

Reviewer: dadunj, 27-Aug-2021 08:16:34

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.14
Area: 18948
Amount: 0.063853
Amount Units: pg/ul

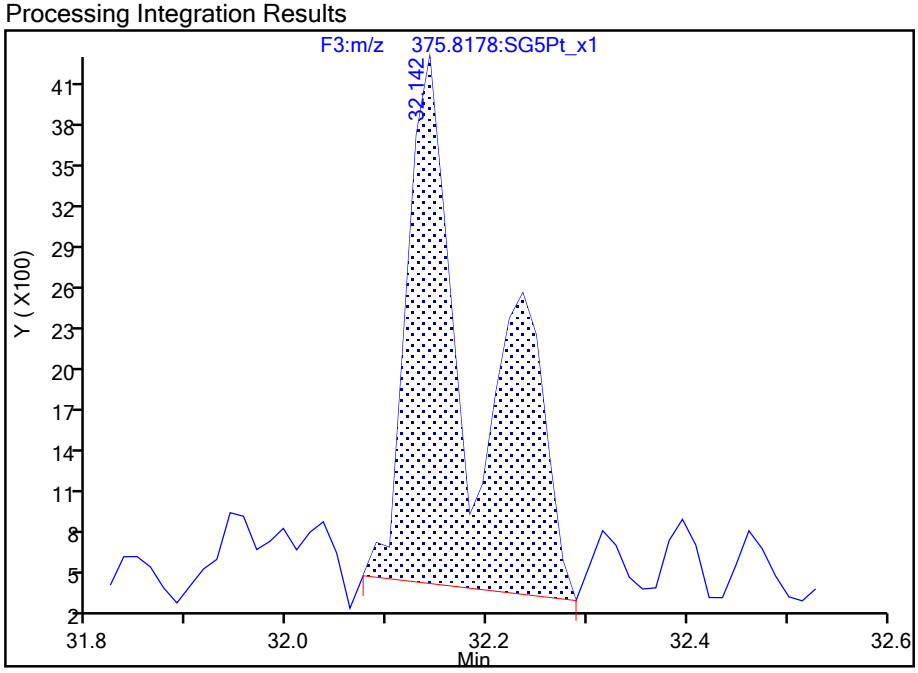

Manual Integration Results

RT: 32.14
Area: 11082
Amount: 0.037222
Amount Units: pg/ul

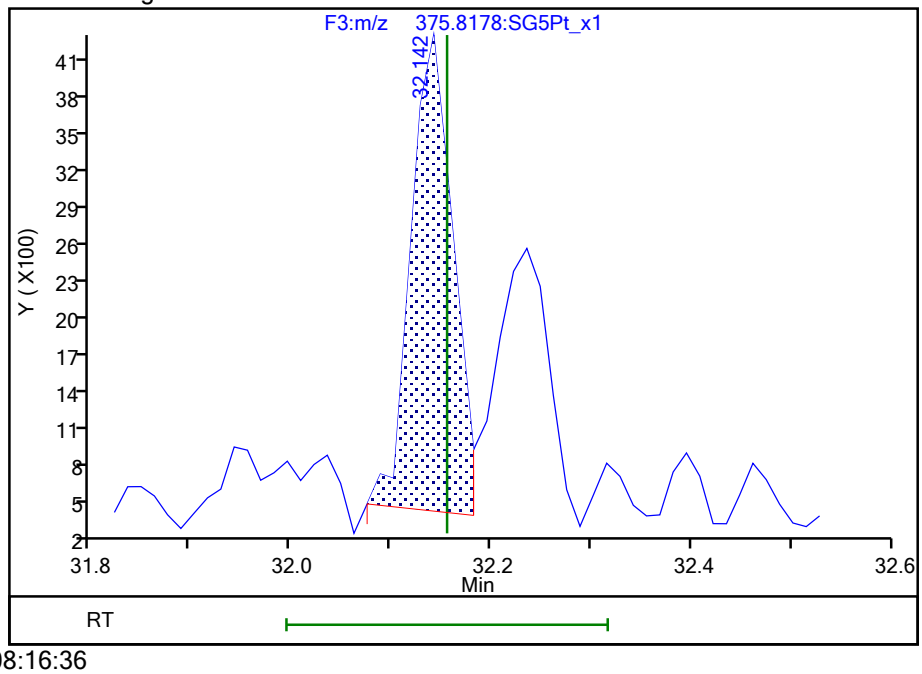

Reviewer: dadunj, 27-Aug-2021 08:16:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.62
Area: 48998
Amount: 0.158976
Amount Units: pg/ul

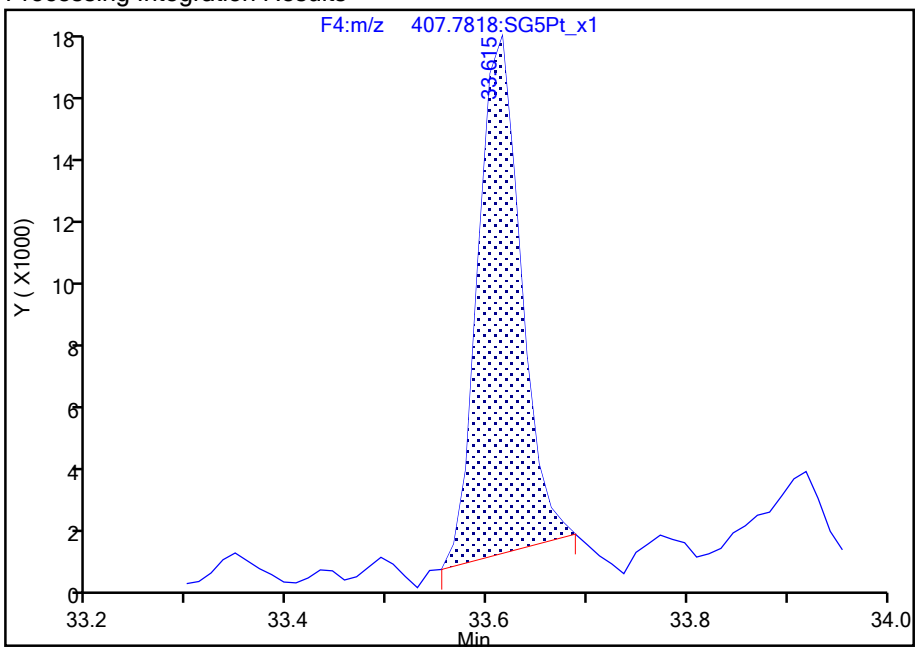

Manual Integration Results

RT: 33.62
Area: 50592
Amount: 0.160516
Amount Units: pg/ul

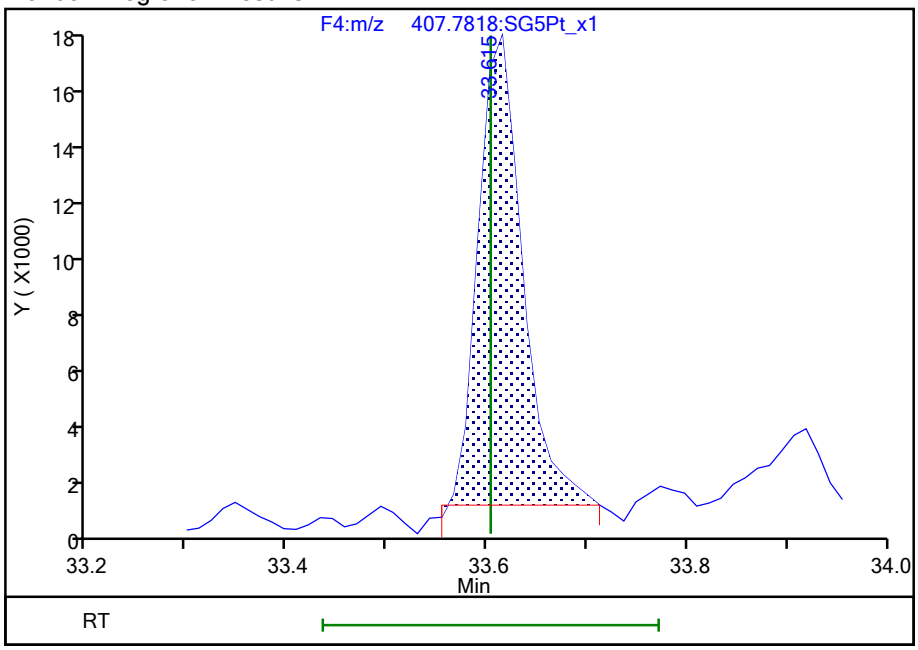

Reviewer: dadunj, 27-Aug-2021 08:16:58

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.60
Area: 51290
Amount: 0.158976
Amount Units: pg/ul

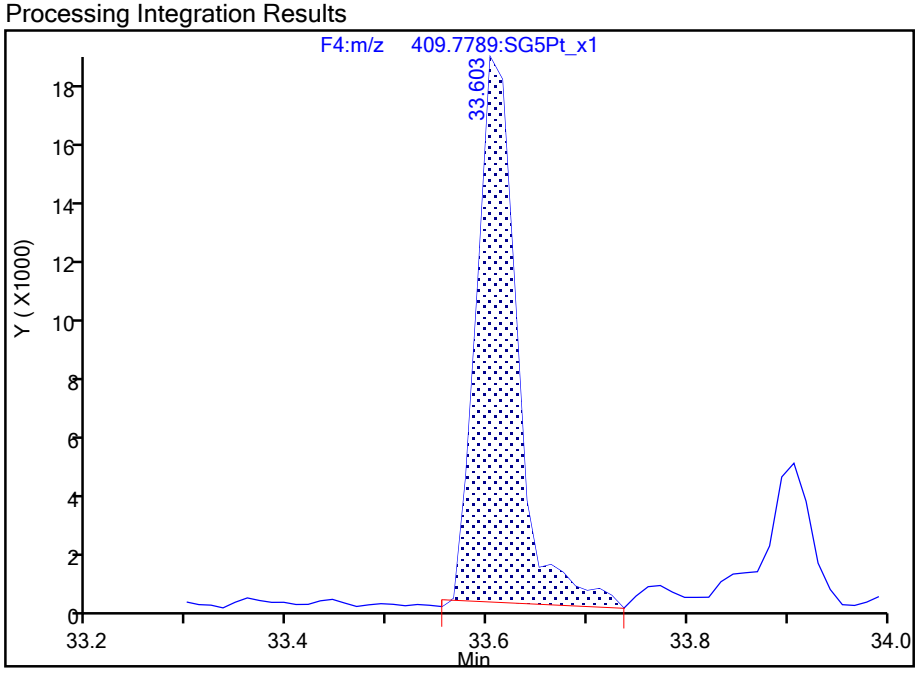

Manual Integration Results

RT: 33.60
Area: 50668
Amount: 0.160516
Amount Units: pg/ul

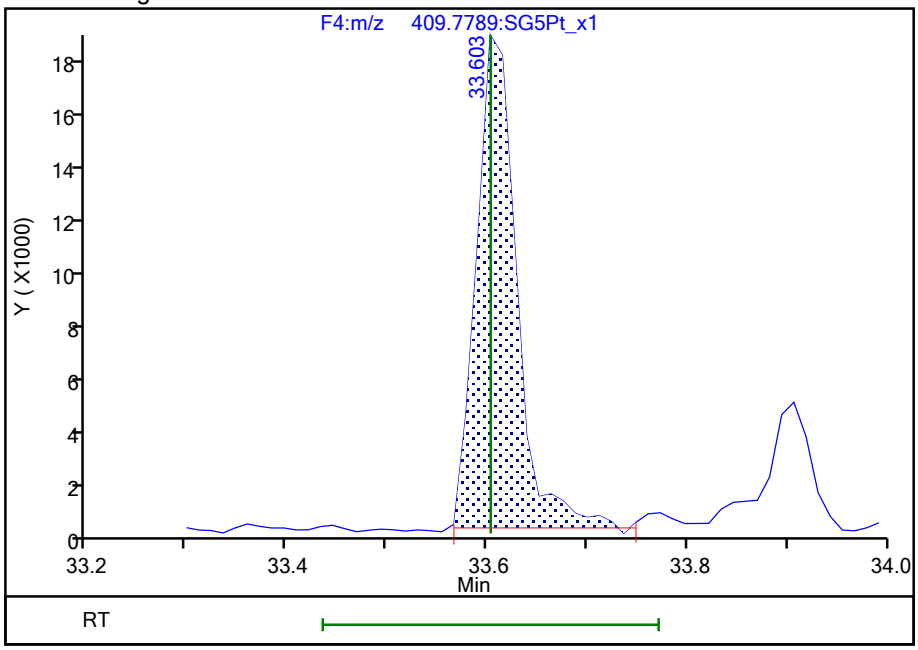

Reviewer: dadunj, 27-Aug-2021 08:17:01

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.78
Area: 35945
Amount: 0.171364
Amount Units: pg/ul

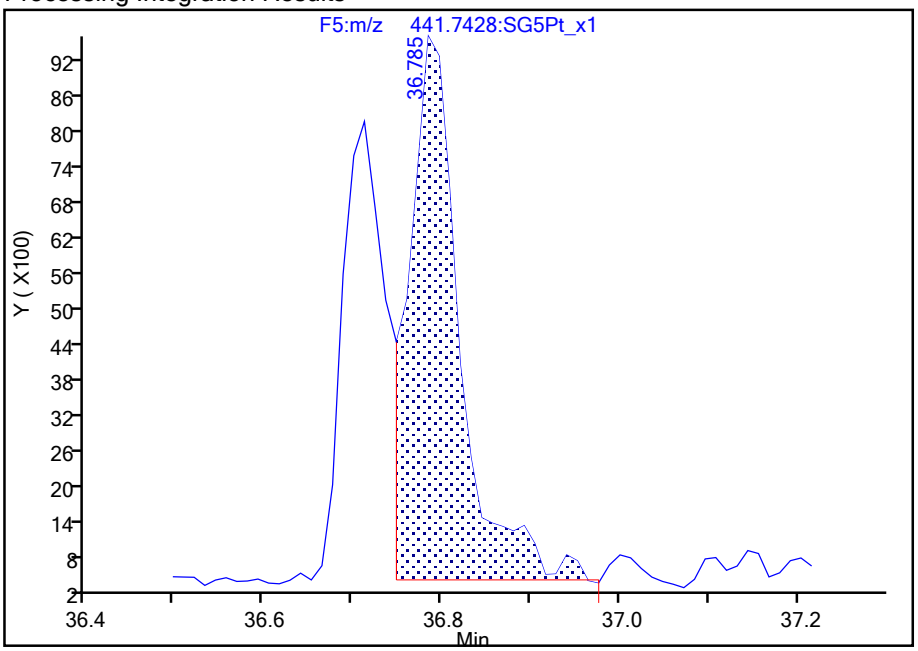

Manual Integration Results

RT: 36.78
Area: 35086
Amount: 0.181138
Amount Units: pg/ul

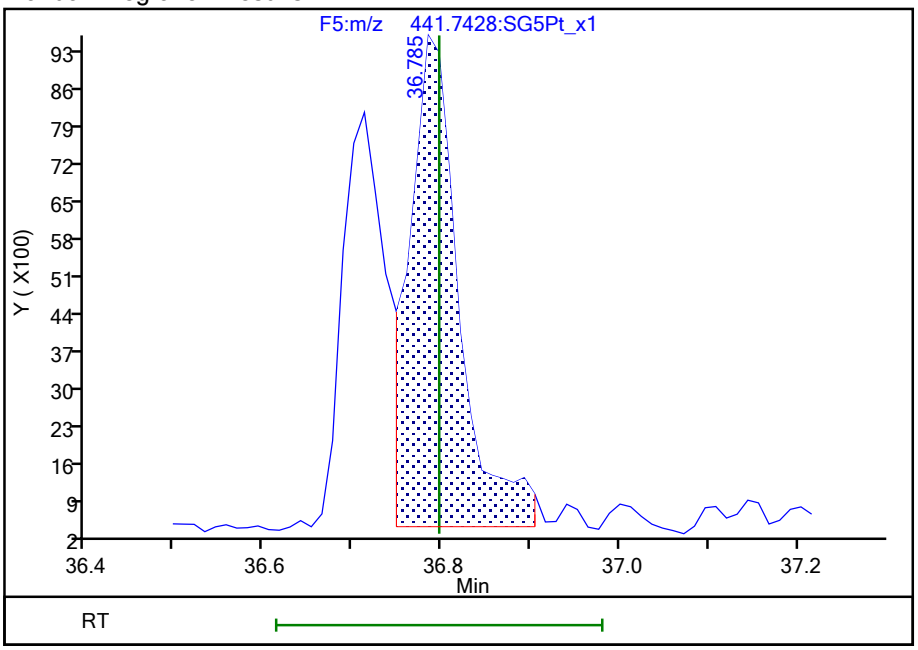

Reviewer: dadunj, 27-Aug-2021 08:17:30

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d				
Injection Date:	25-Aug-2021 23:05:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-8-A	Lab Sample ID:	320-77214-8		
Client ID:	11215702-080221-BN-SJSB090 (14-16)				
Operator ID:	SMA	ALS Bottle#:	29	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.78
Area: 34381
Amount: 0.171364
Amount Units: pg/ul

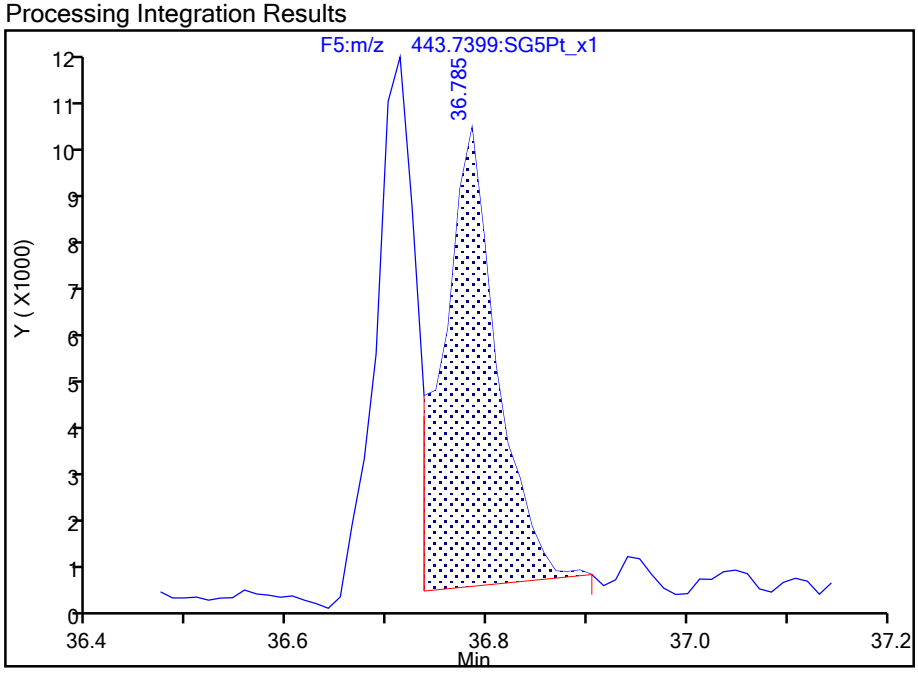

Manual Integration Results

RT: 36.78
Area: 39251
Amount: 0.181138
Amount Units: pg/ul

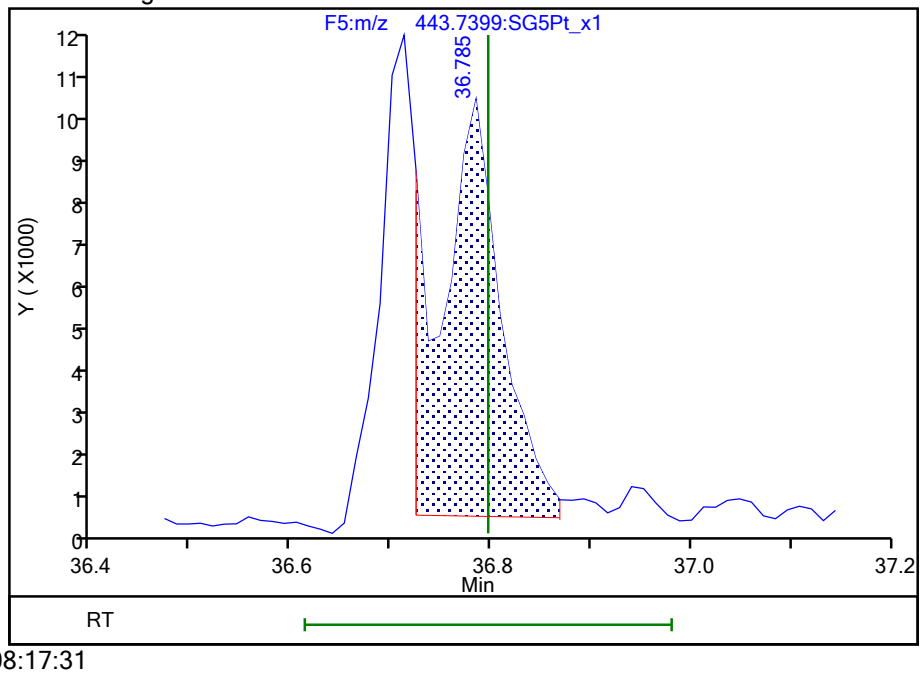

Reviewer: dadunj, 27-Aug-2021 08:17:31

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	519955	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

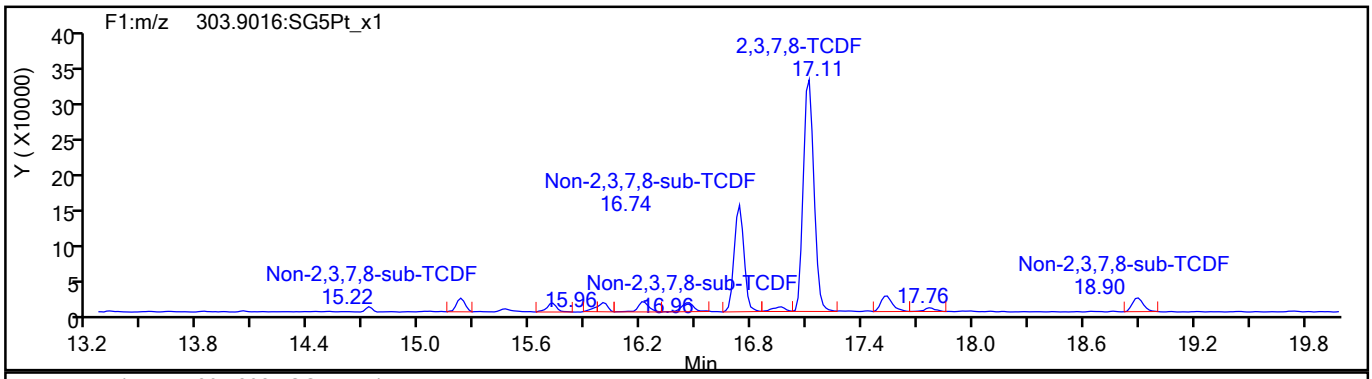

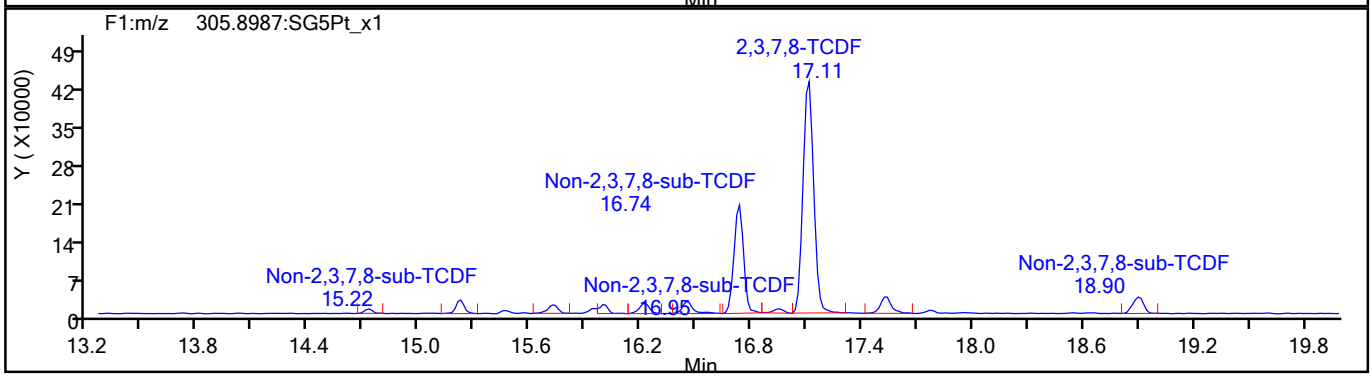

TCDF Standards

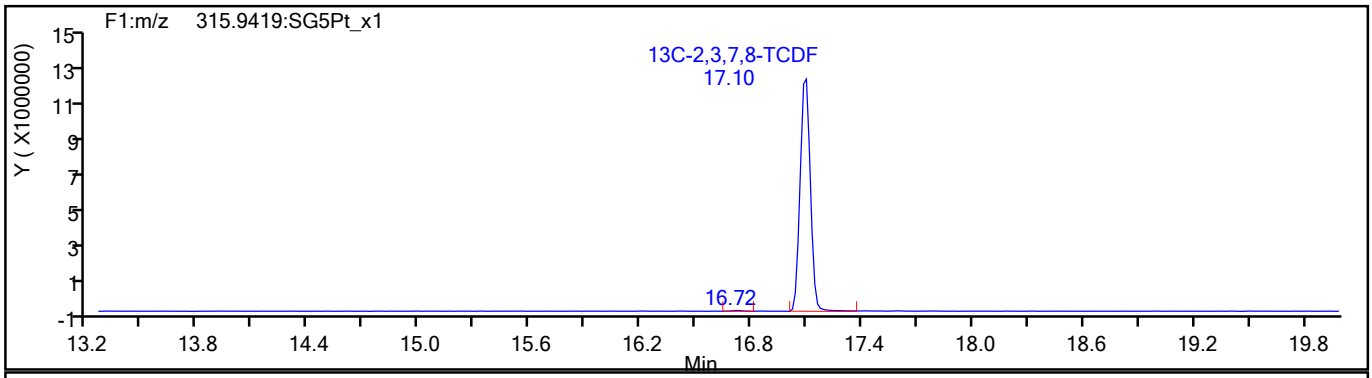

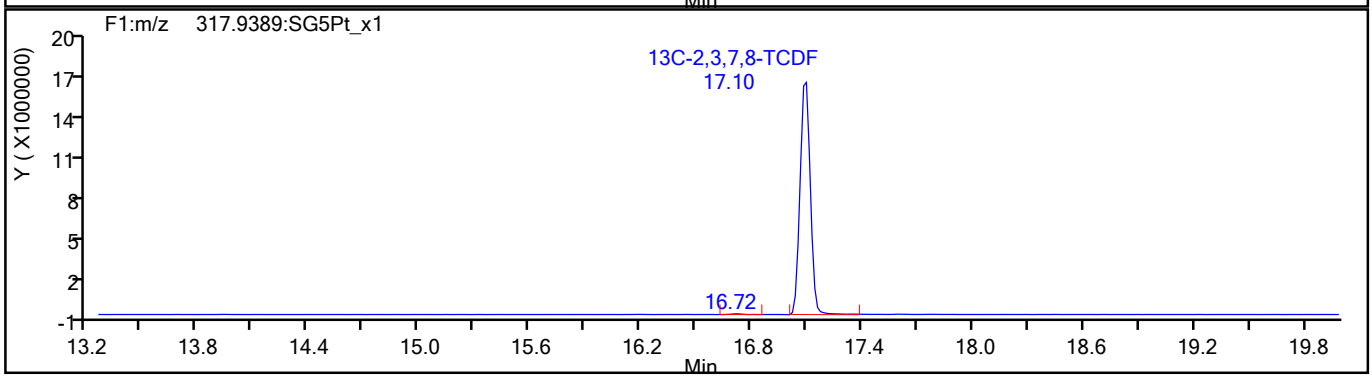

791278

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	519955	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

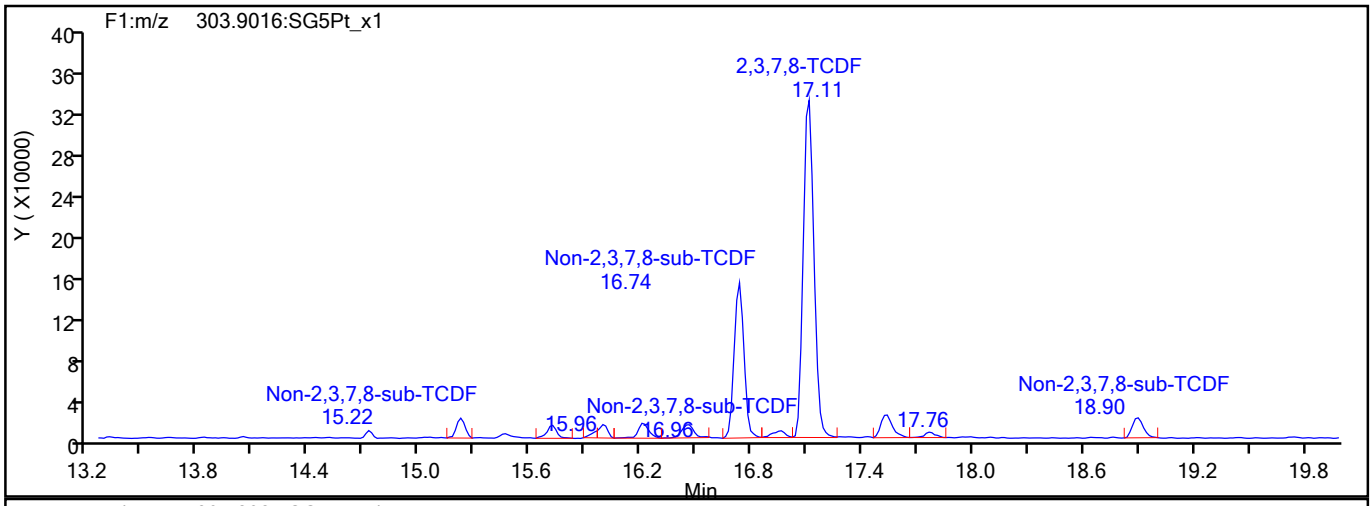

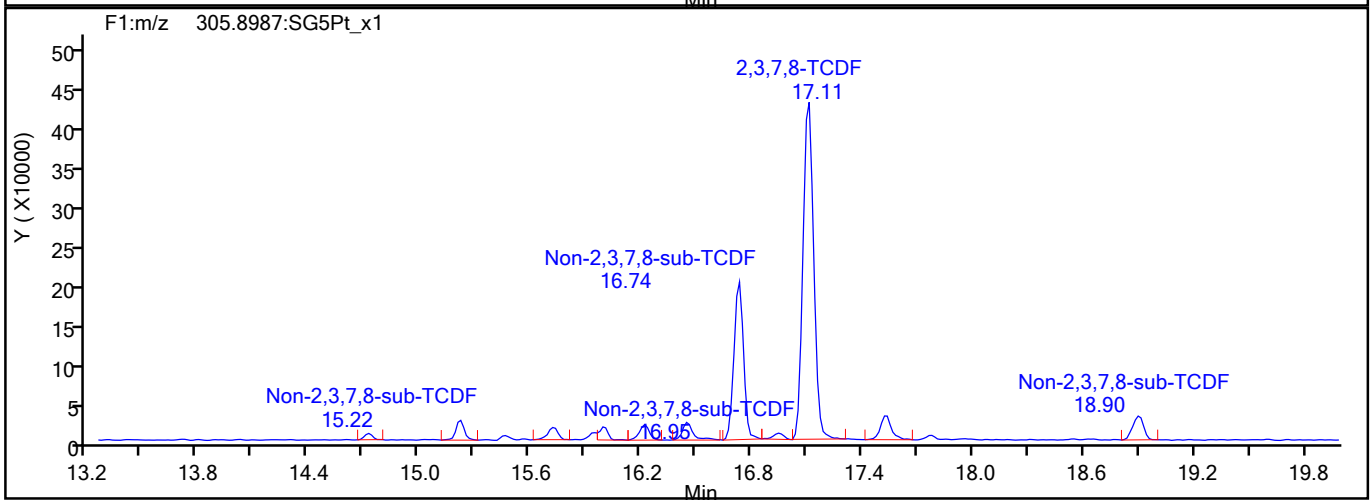

TCDF Interference Mass

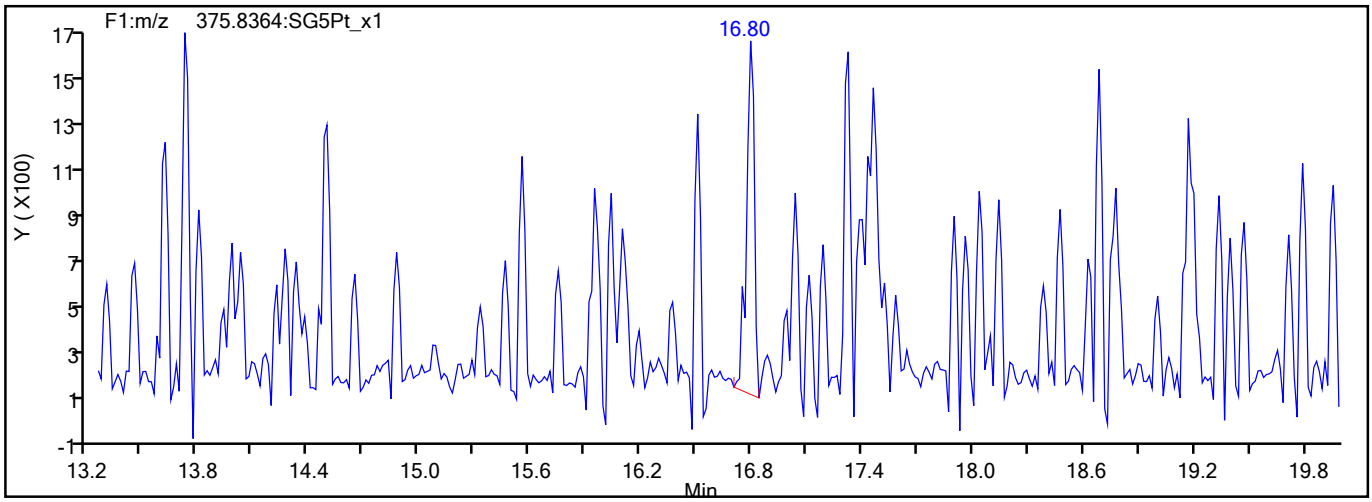

791279

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	519955	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

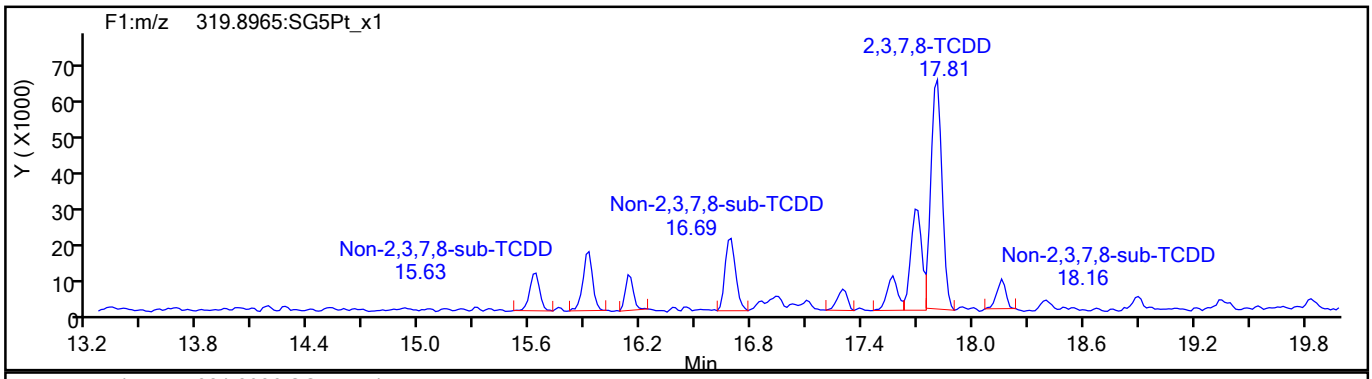

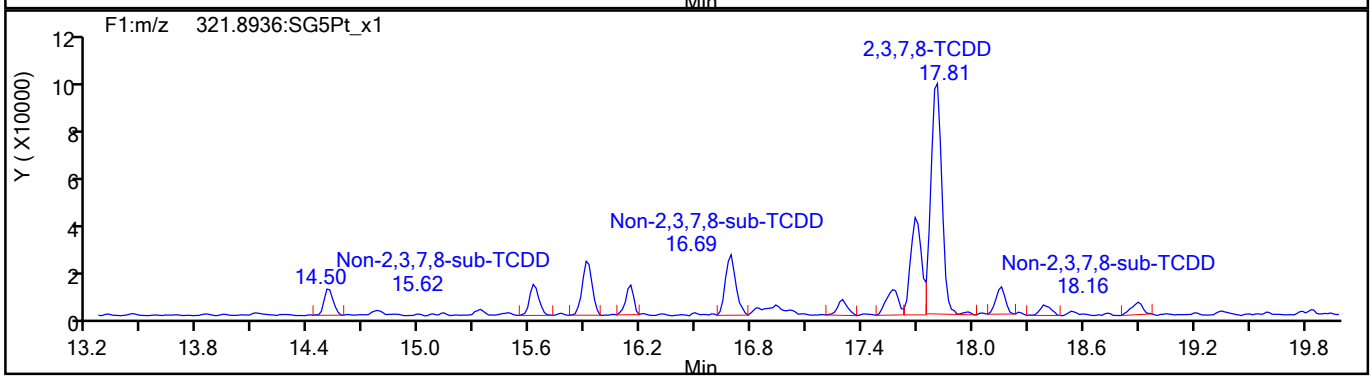

TCDD Standards

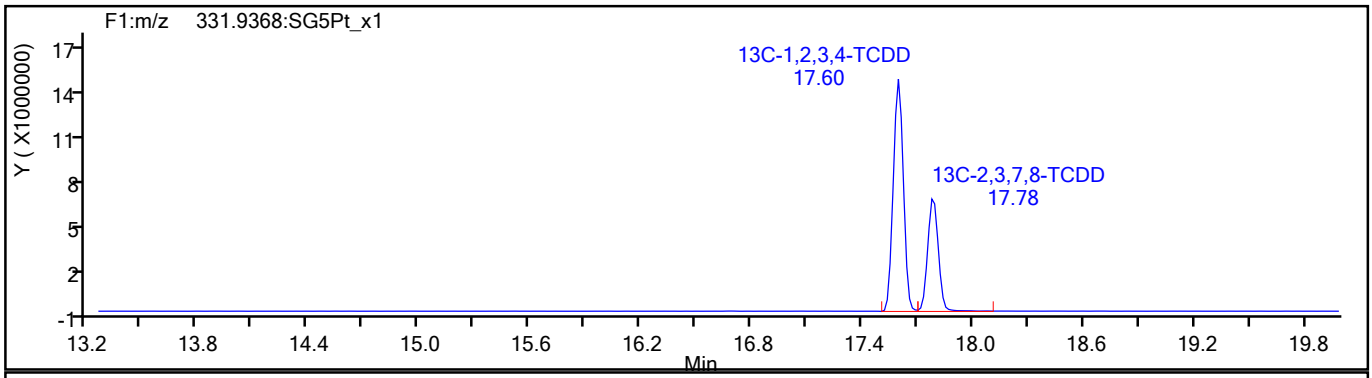

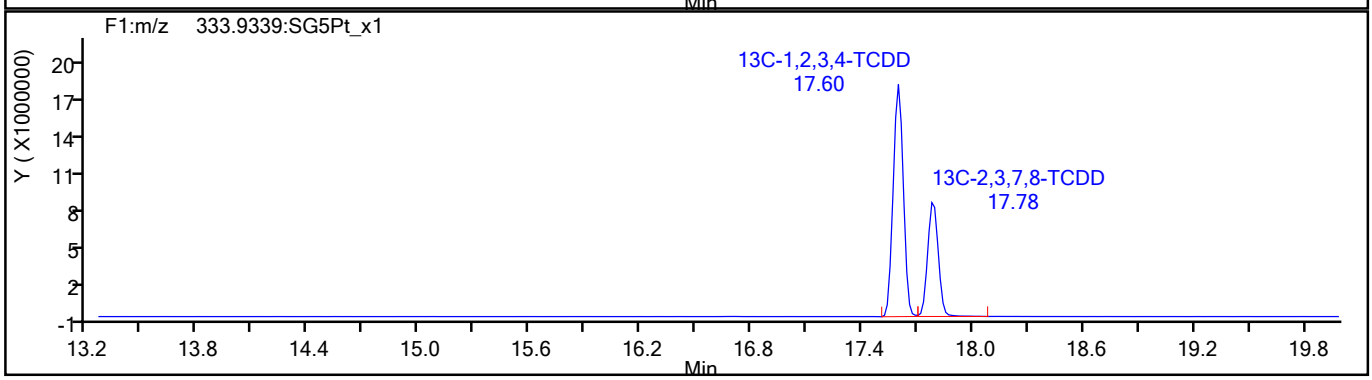

791280

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	519955	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

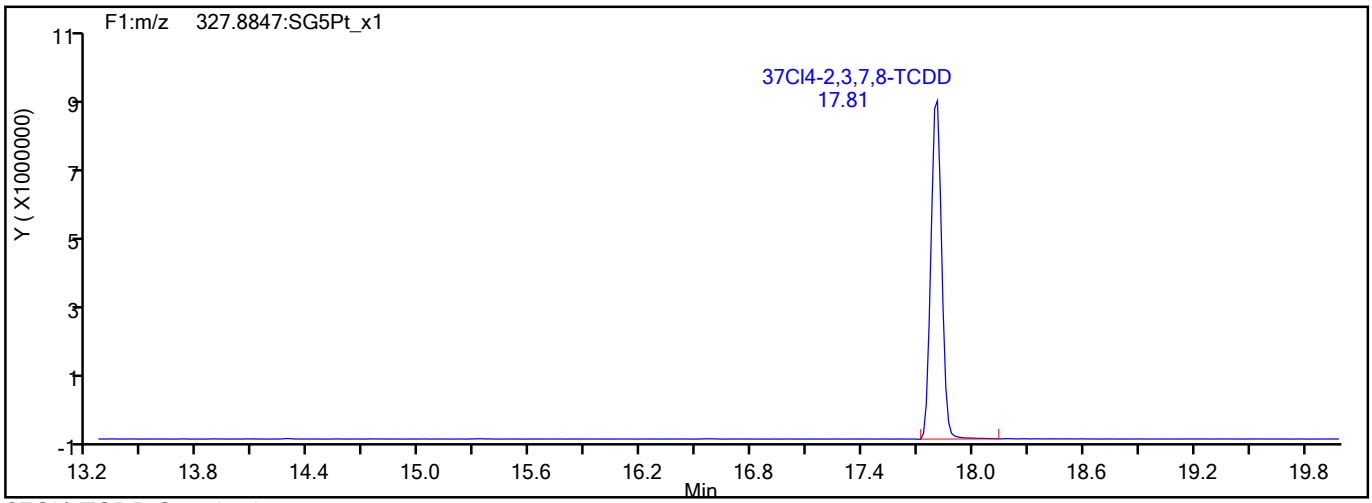

37Cl4-TCDD Standards

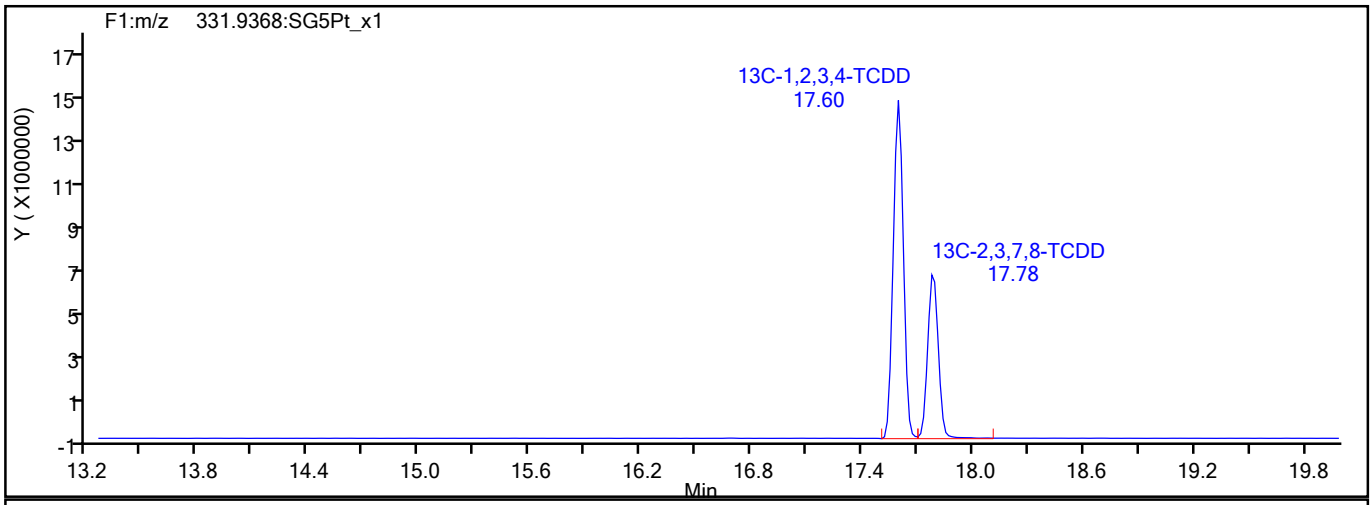

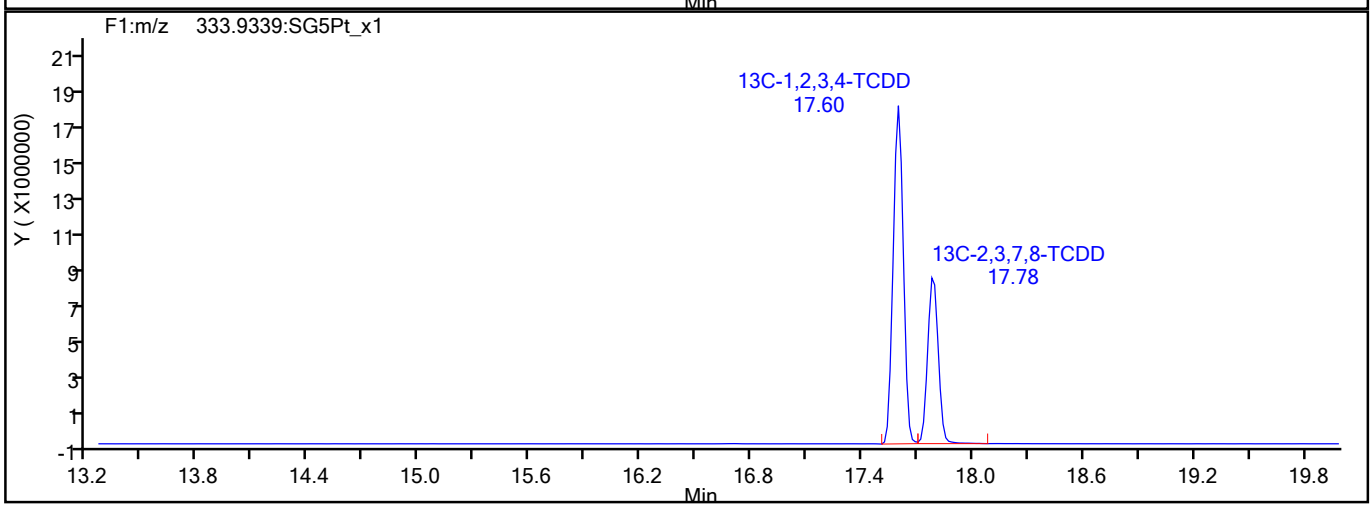

791281

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	519955	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

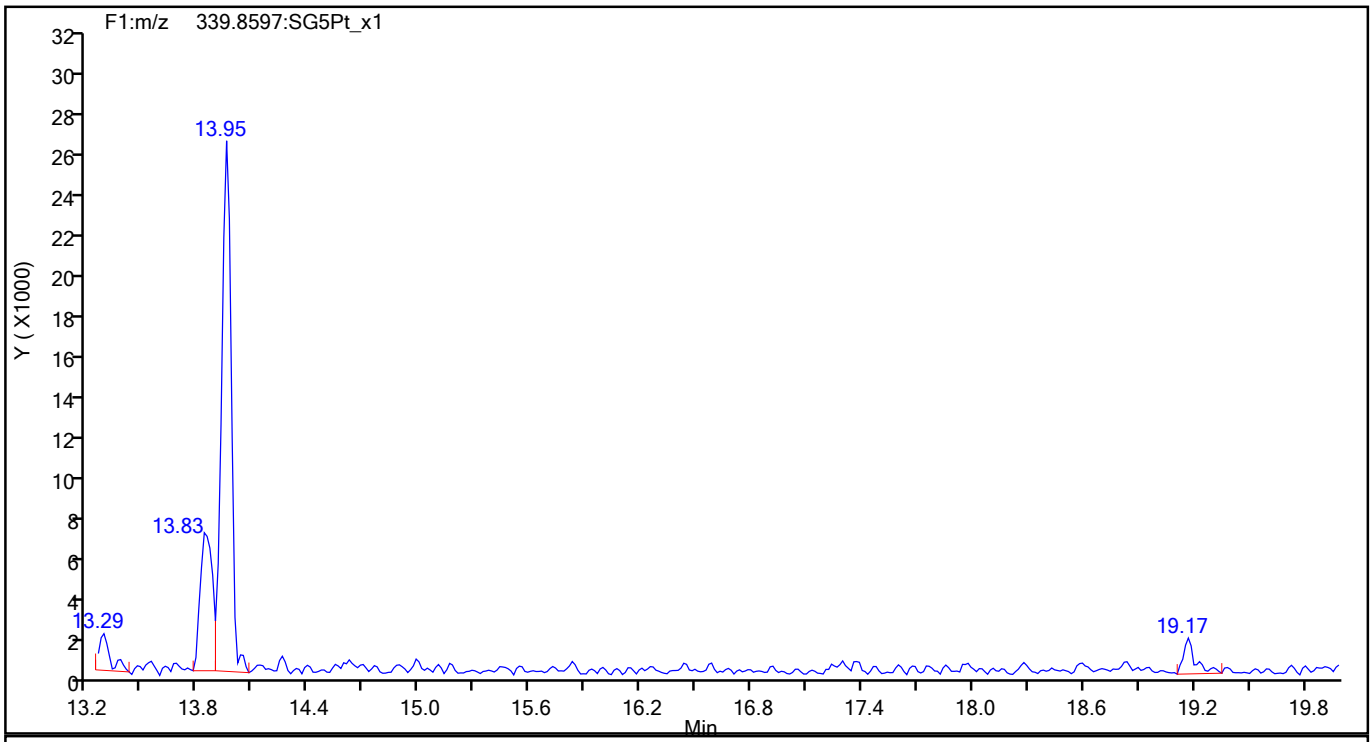

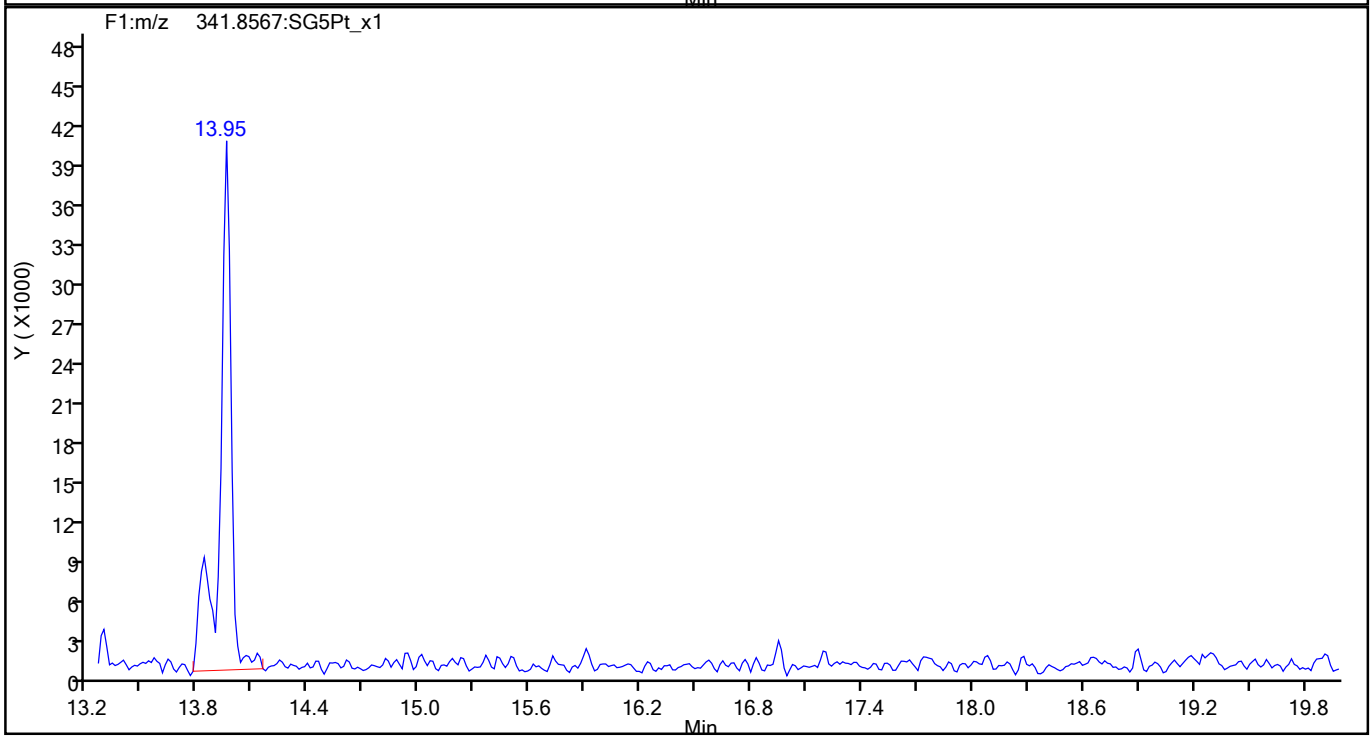

791282

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	519955	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

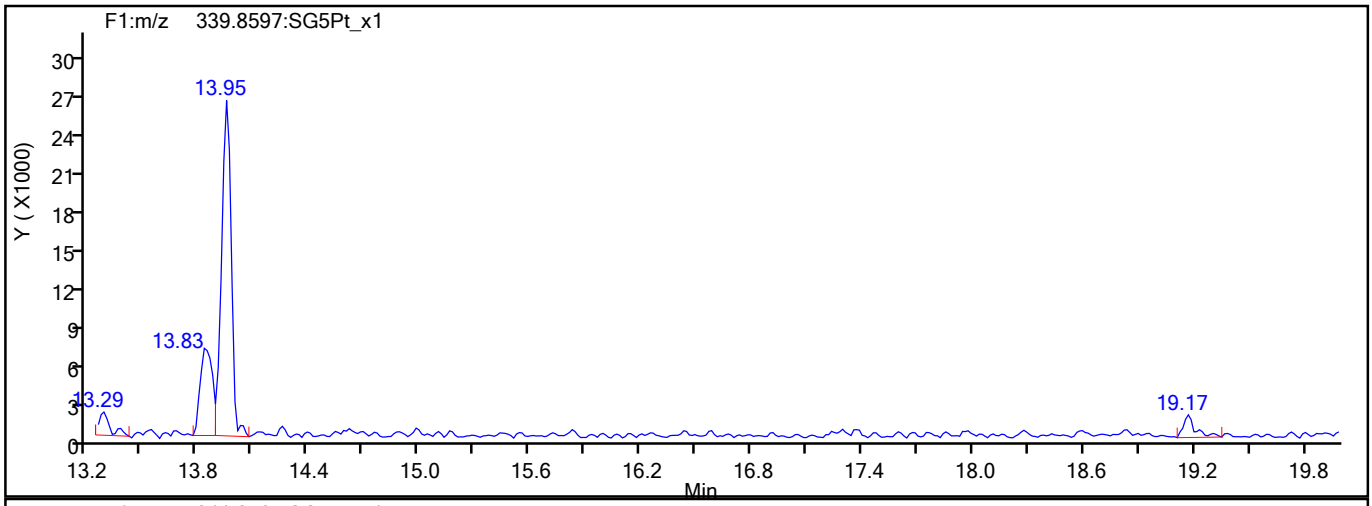

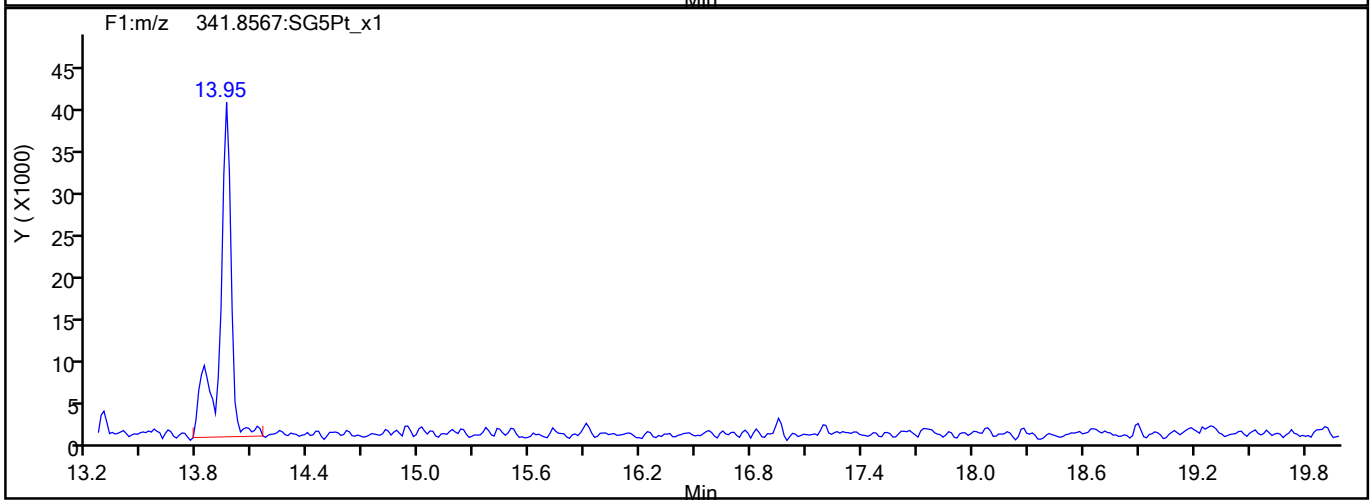

F1 PeCDFs Interference Mass

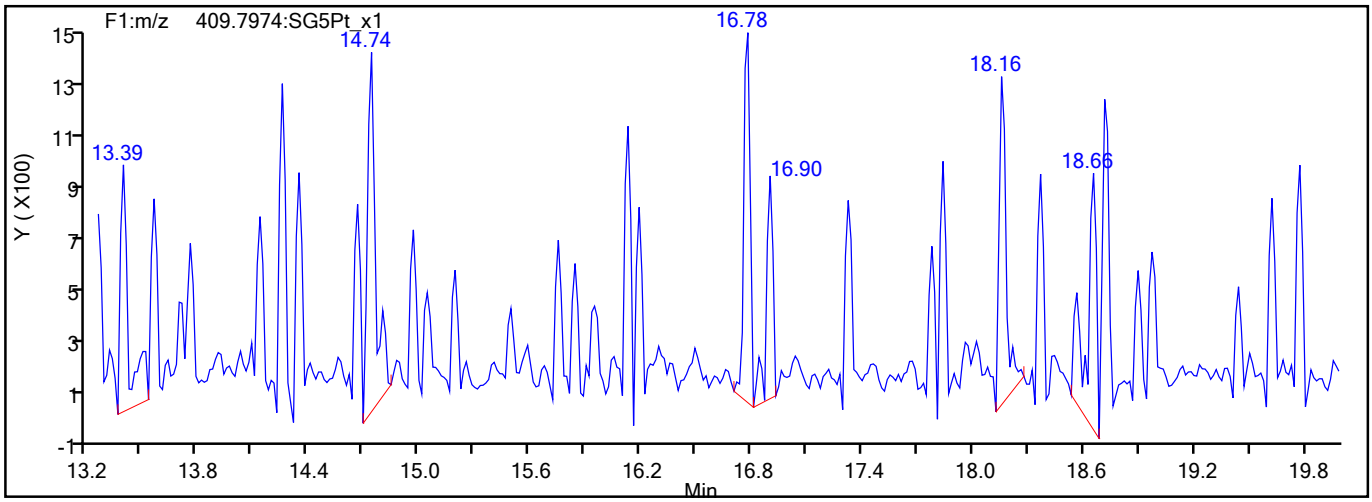

791283

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	519955	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

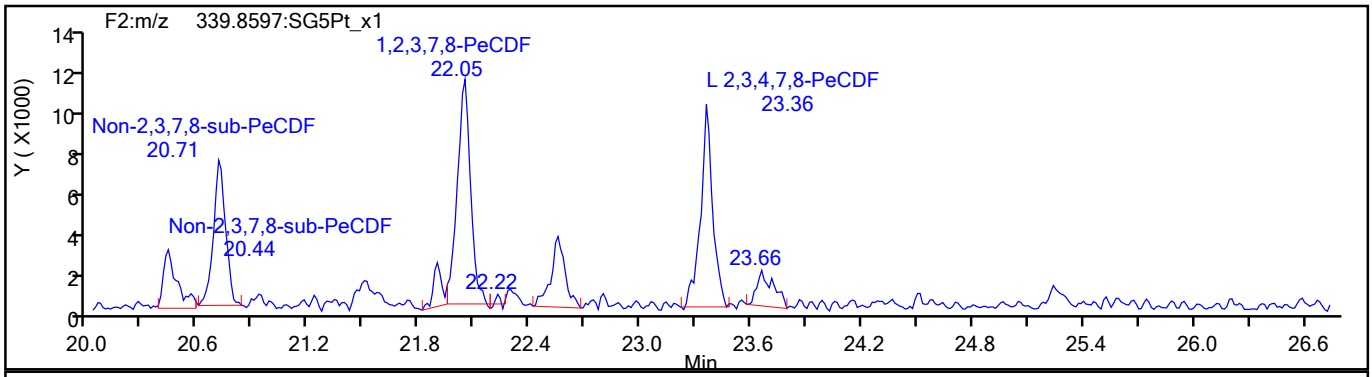

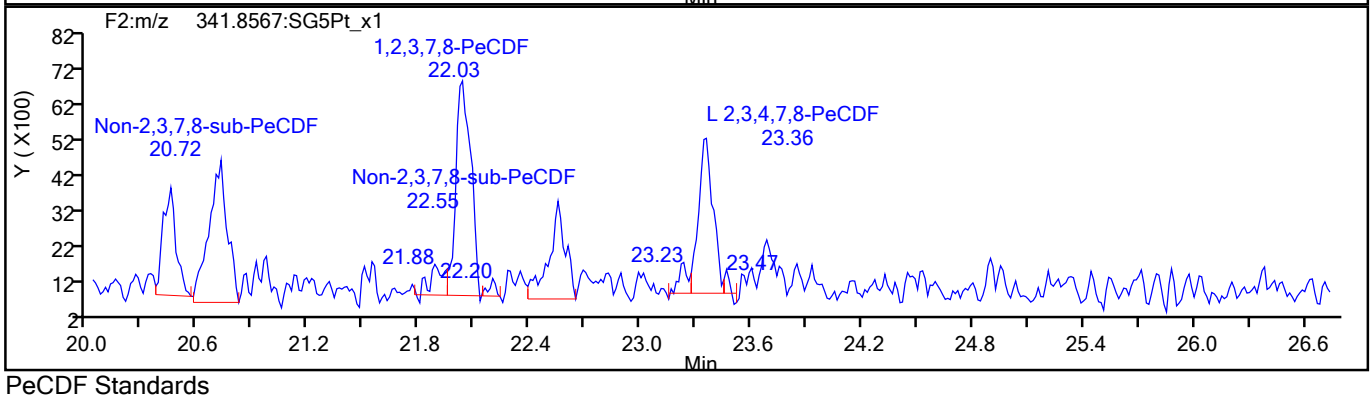

PeCDF Standards

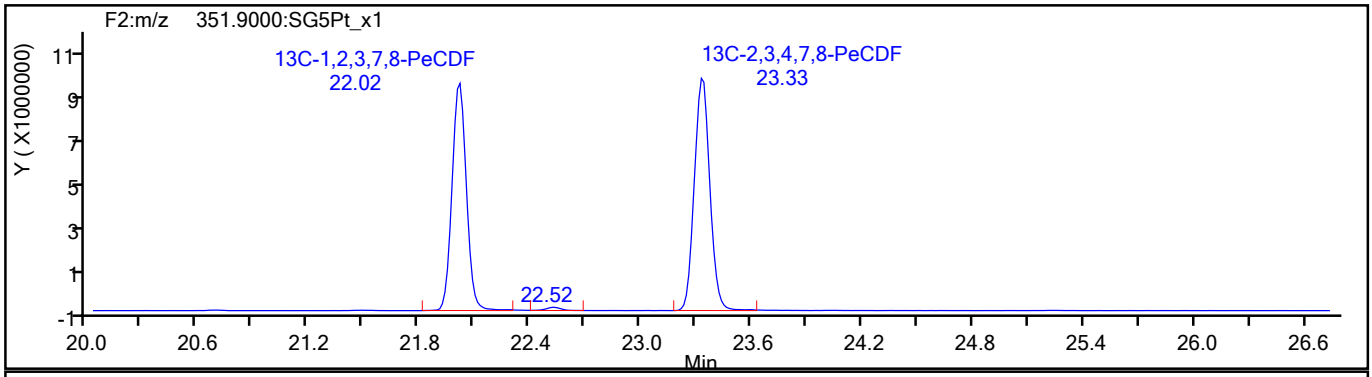

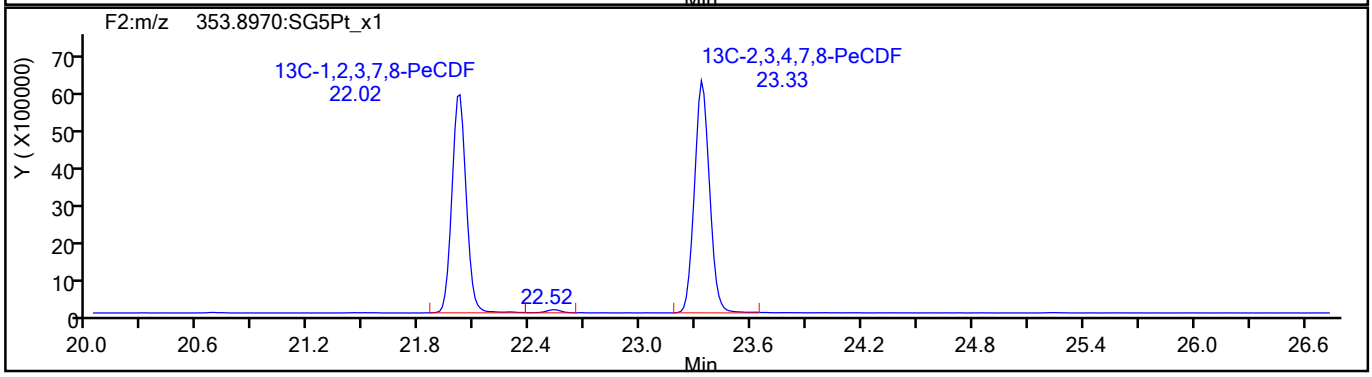

791284

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	519955	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

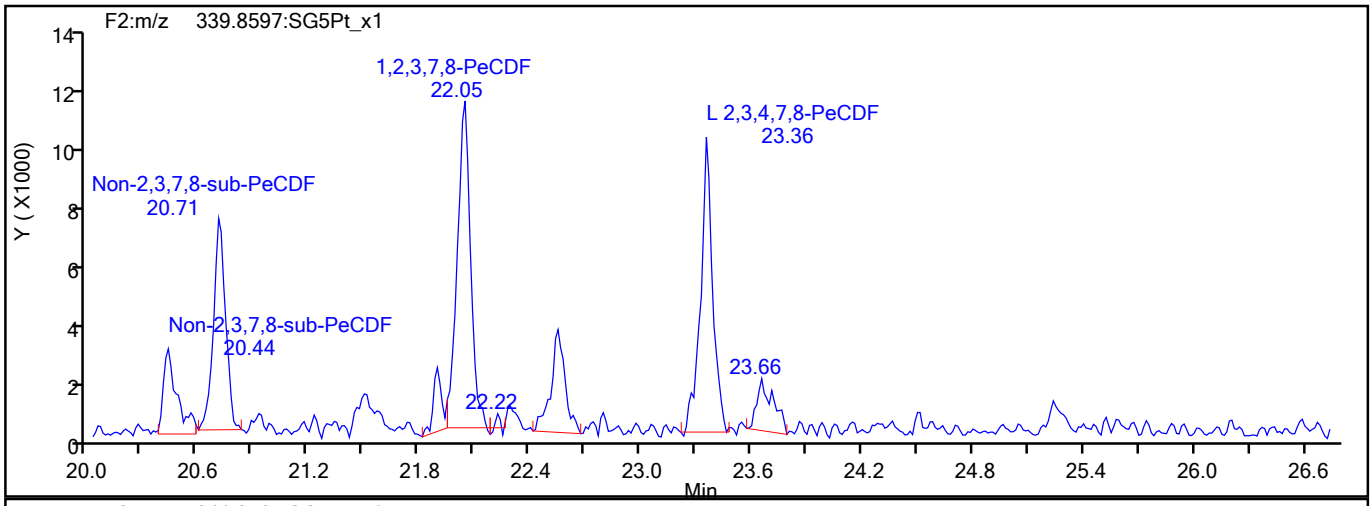

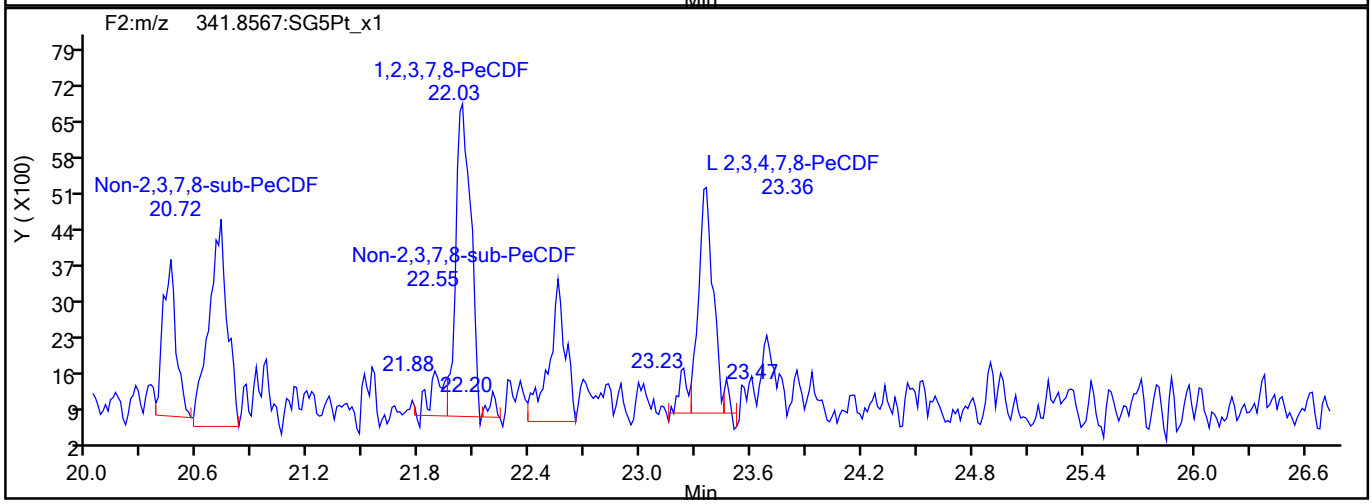

PeCDF Interference Mass

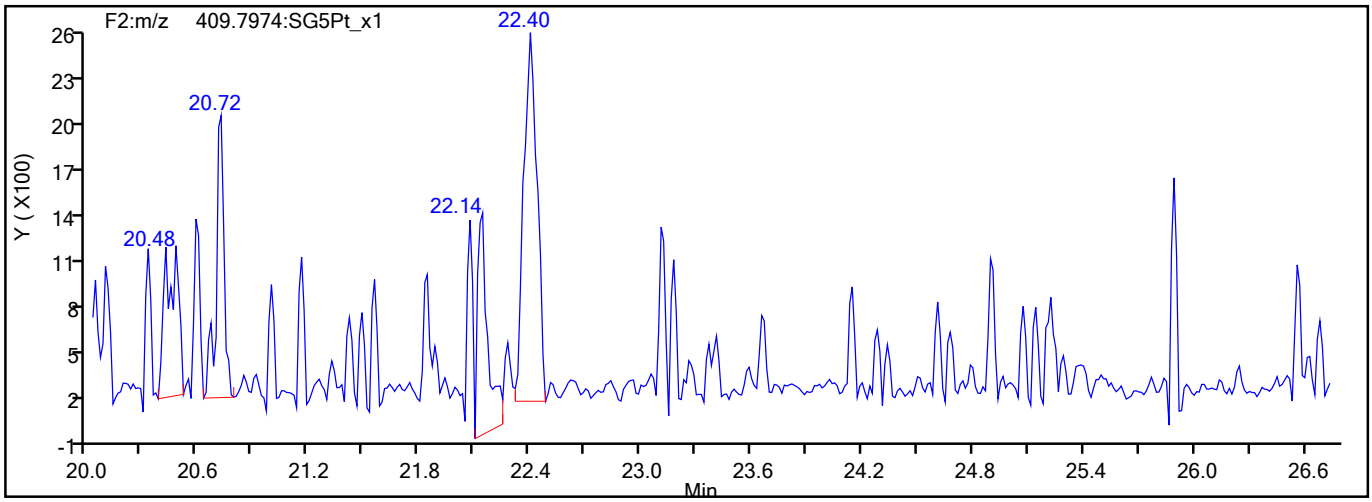

791285

Report Date: 27-Aug-2021 08:19:01 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	519955	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

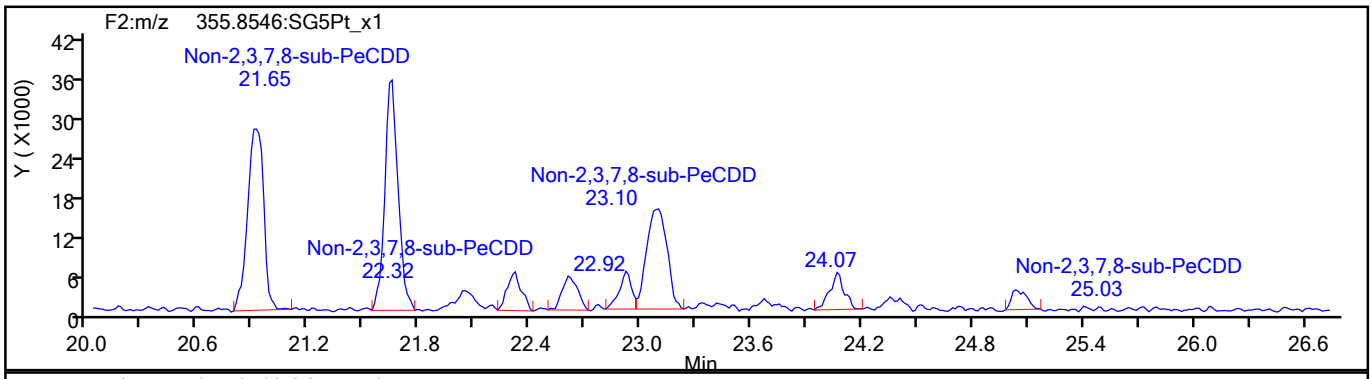

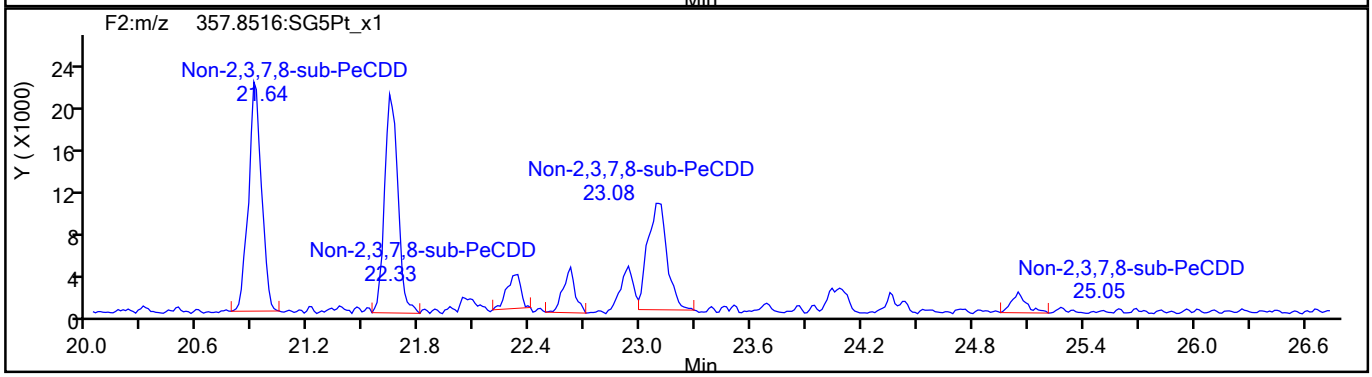

PeCDD Standards

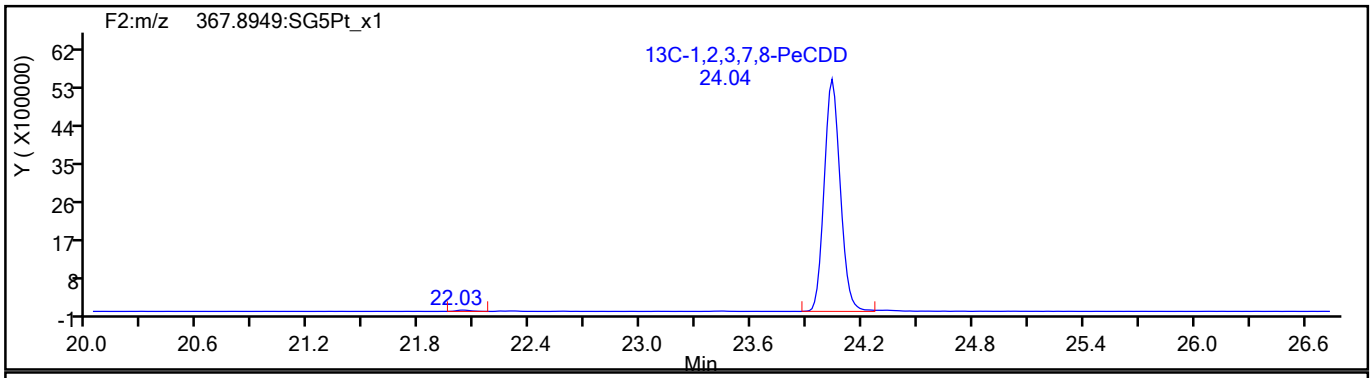

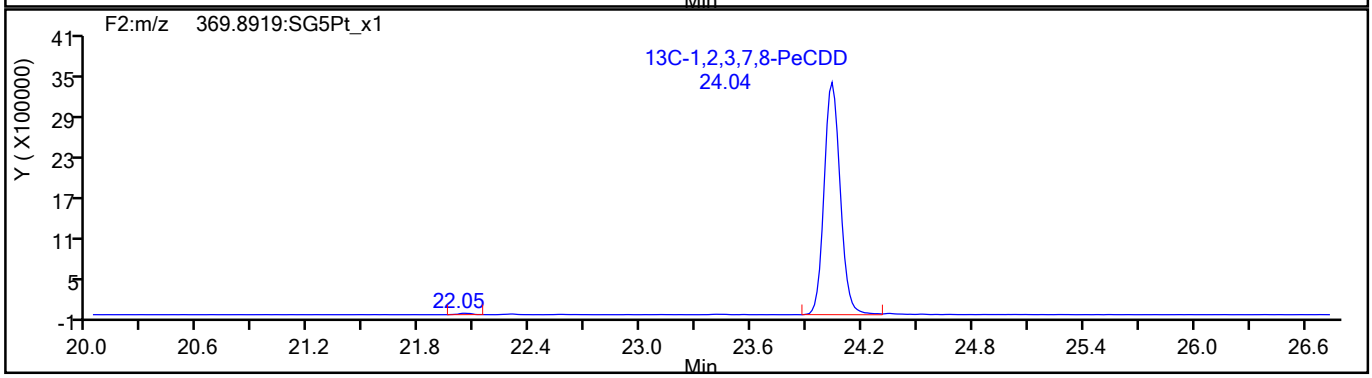

791286

Report Date: 27-Aug-2021 08:19:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

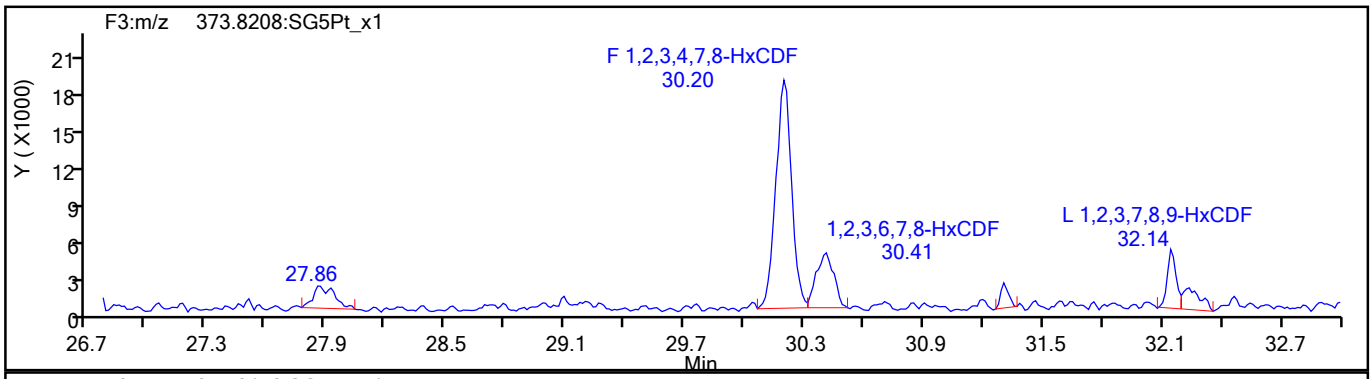

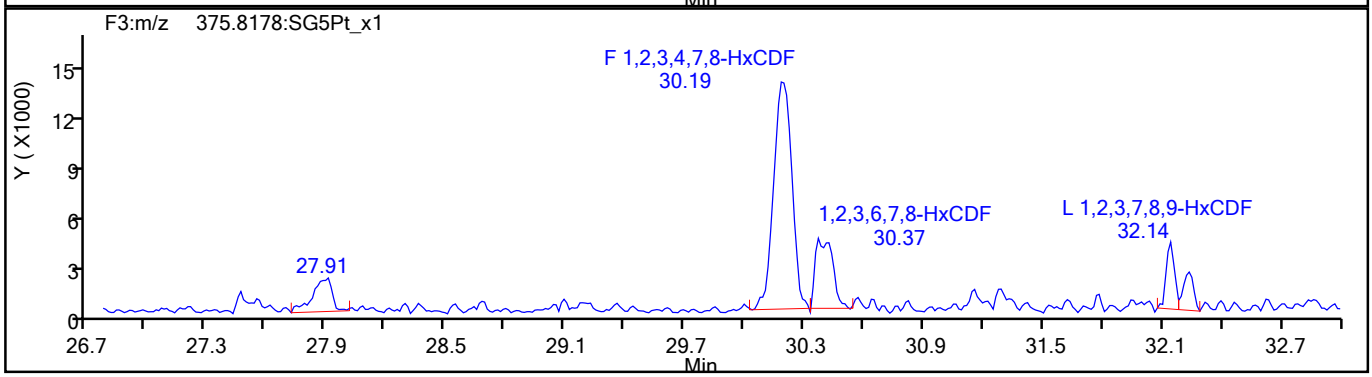

HxCDF Standards

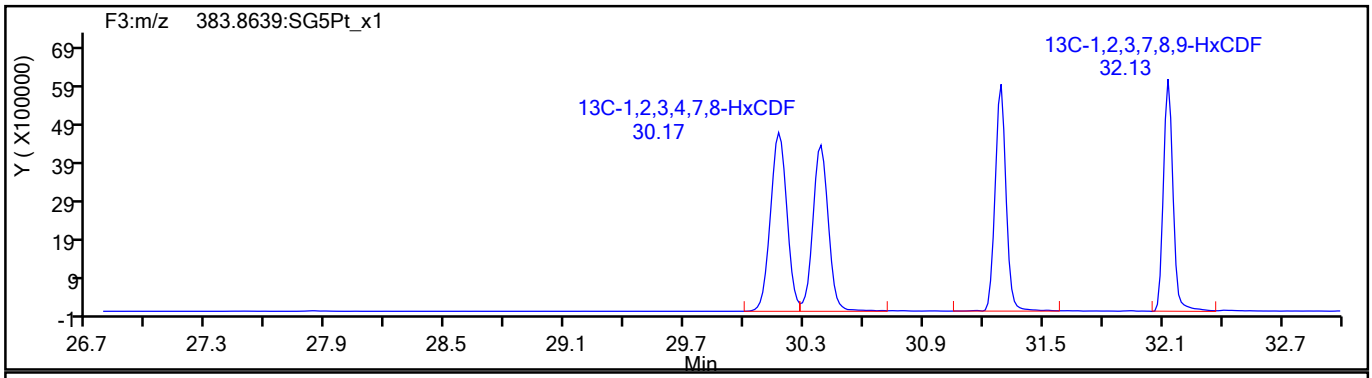

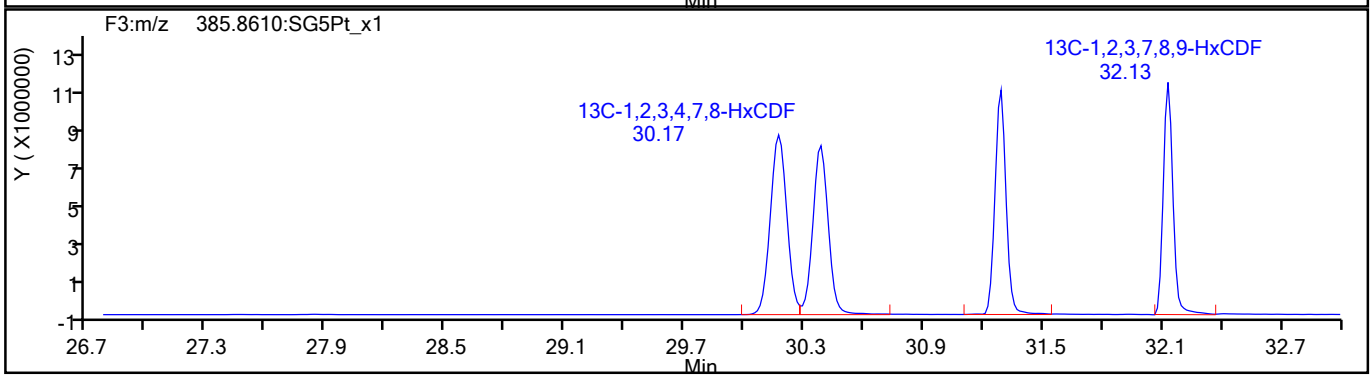

791287

Report Date: 27-Aug-2021 08:19:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
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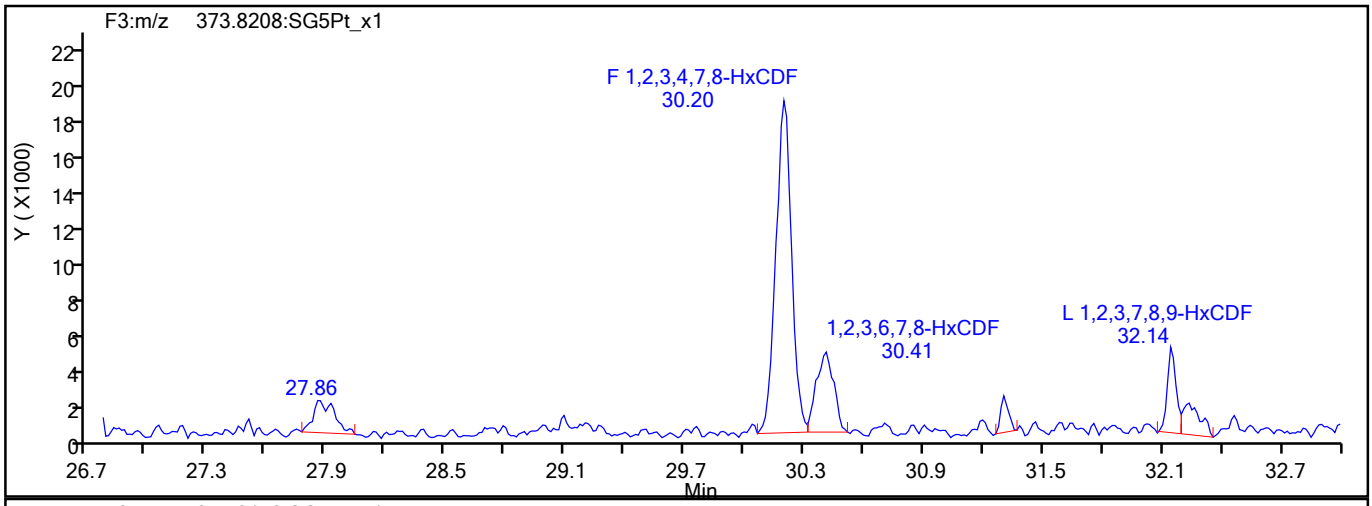

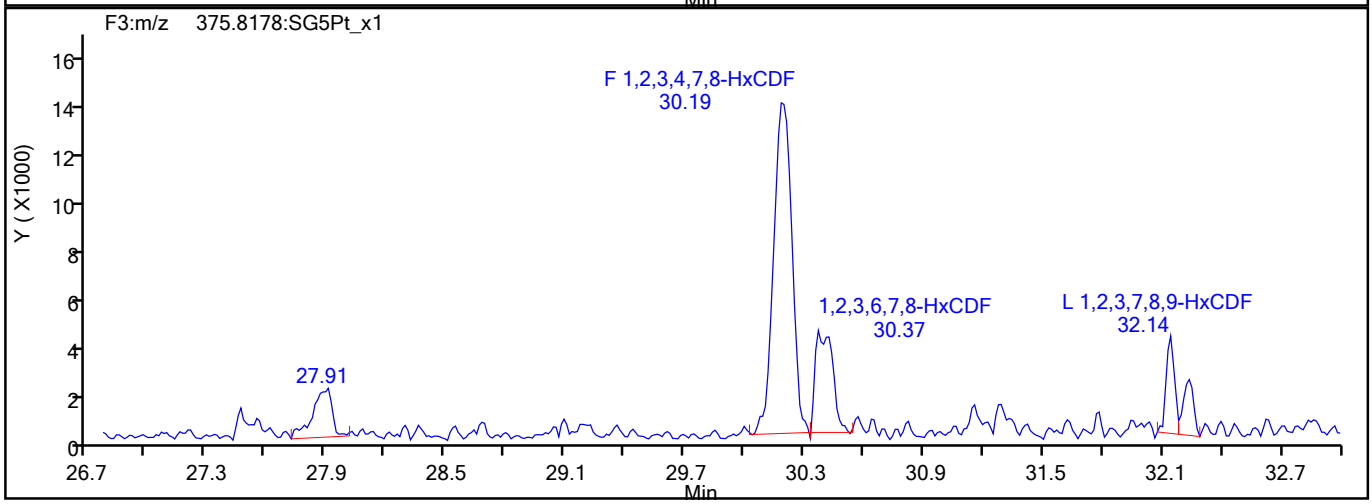

HxCDF Interference Mass

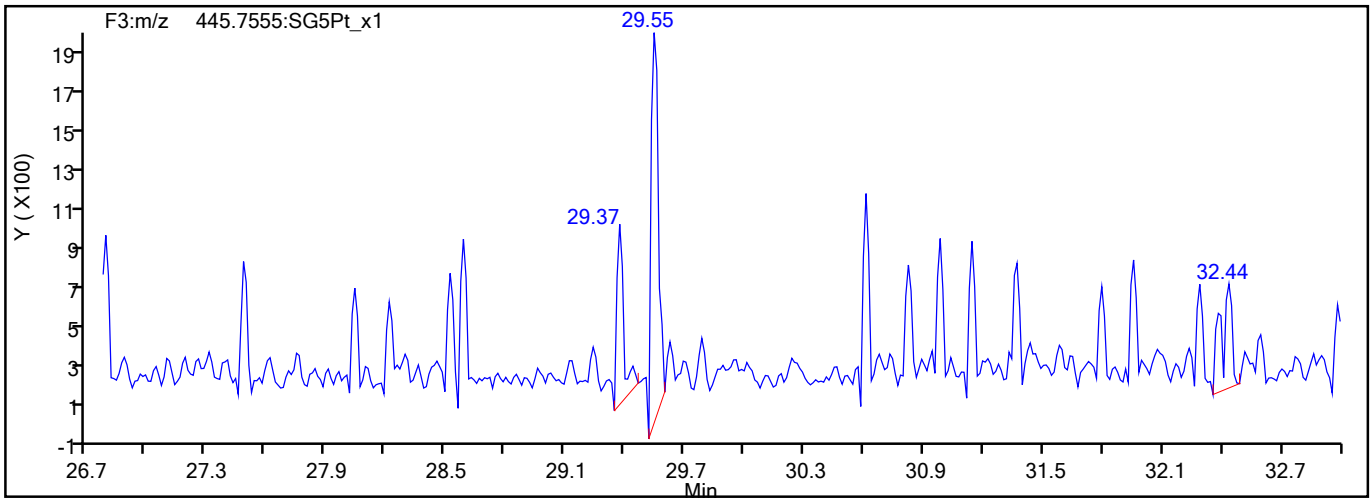

791288

Report Date: 27-Aug-2021 08:19:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

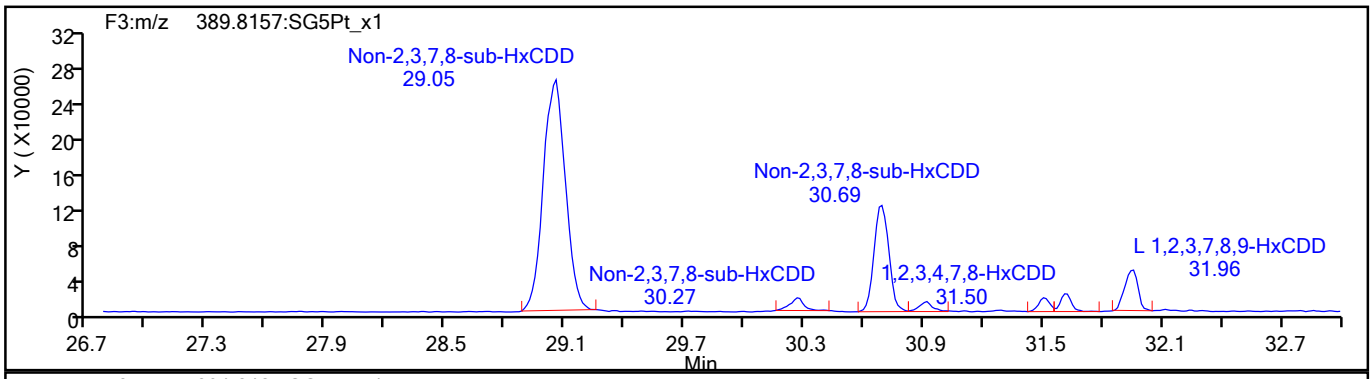

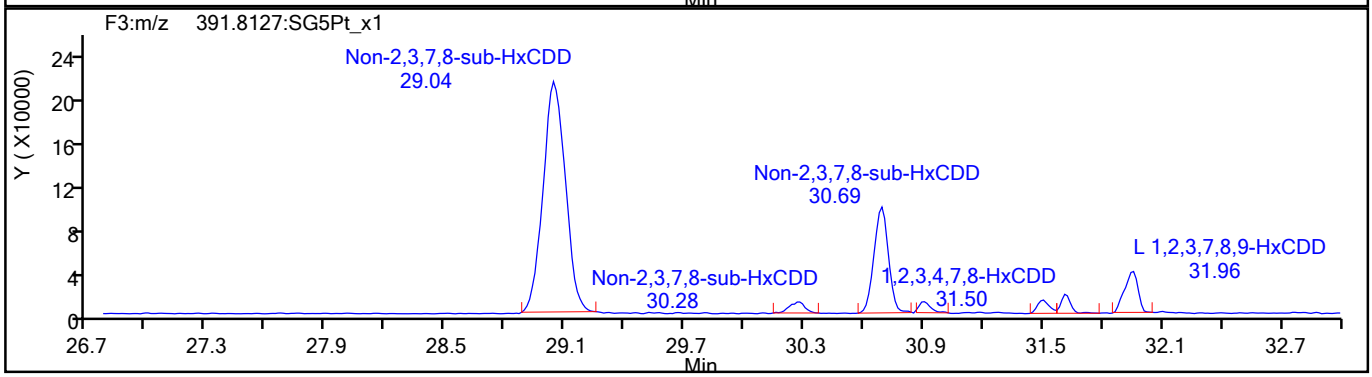

HxCDD Standards

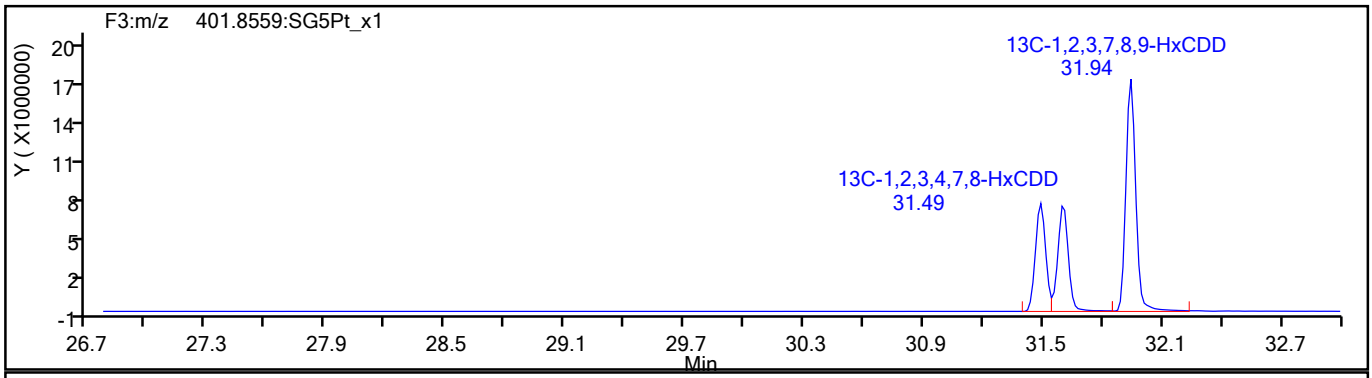

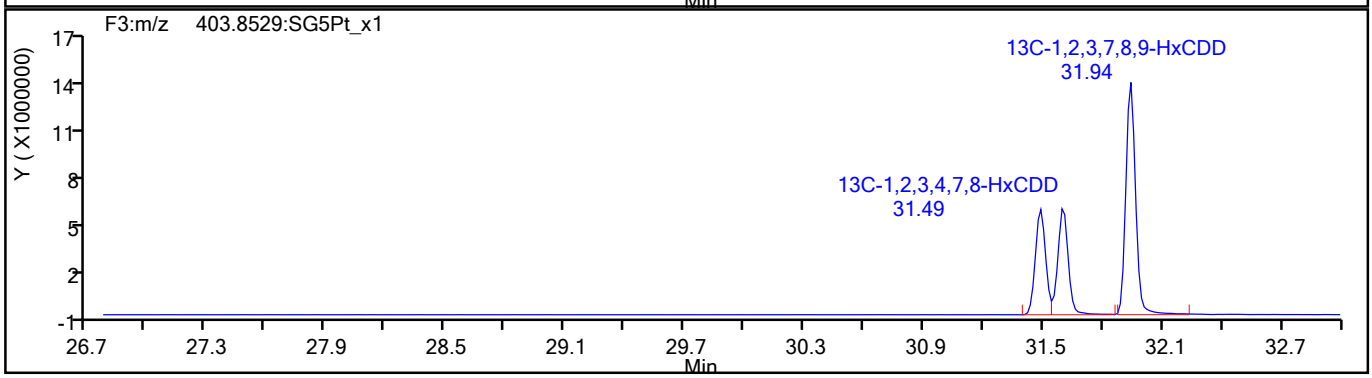

791289

Report Date: 27-Aug-2021 08:19:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

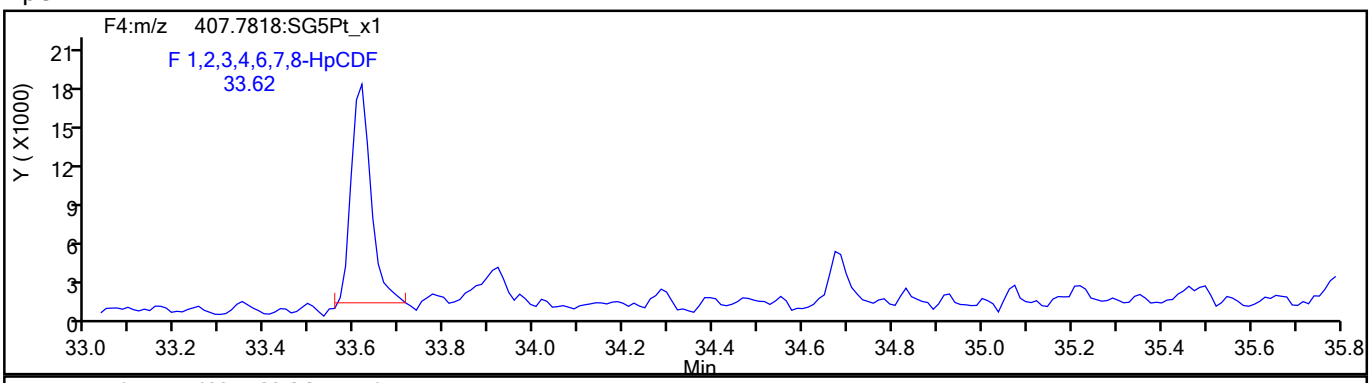

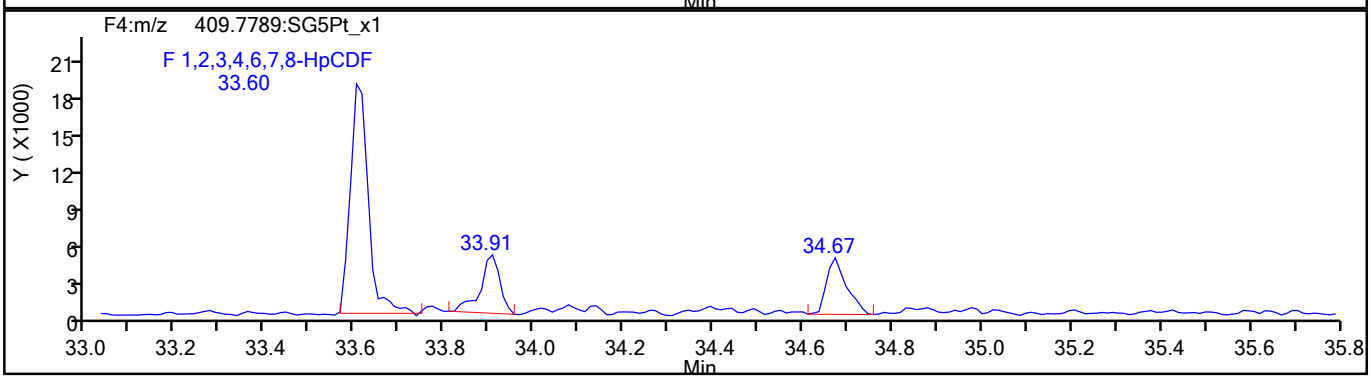

HpCDF Standards

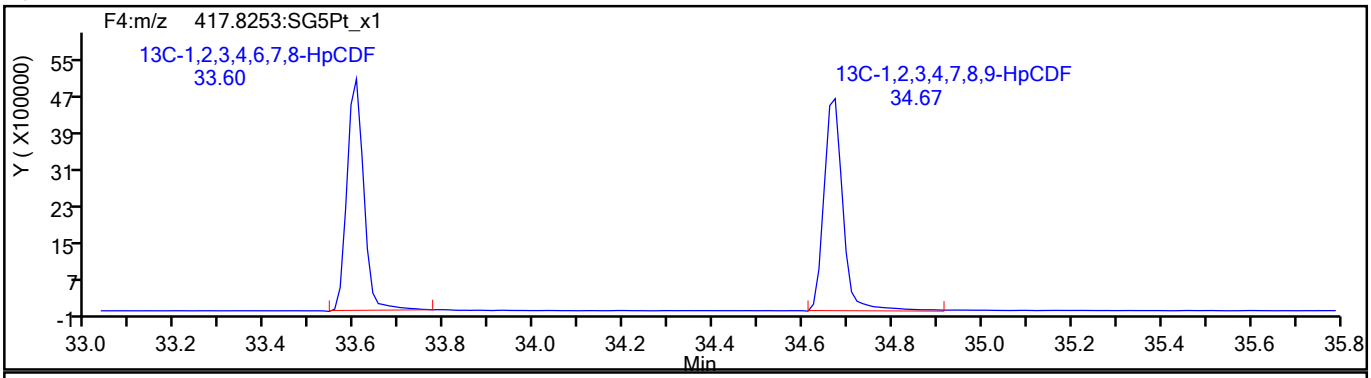

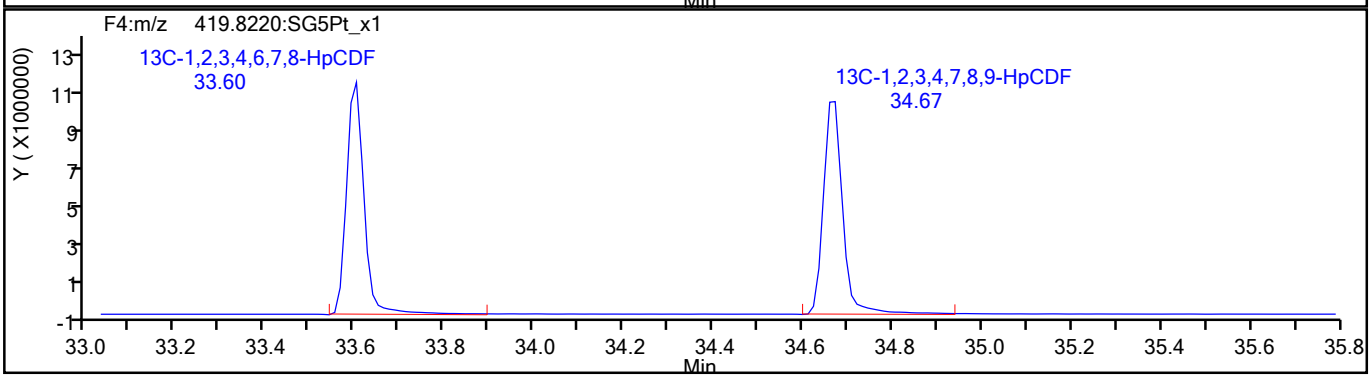

791290

Report Date: 27-Aug-2021 08:19:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

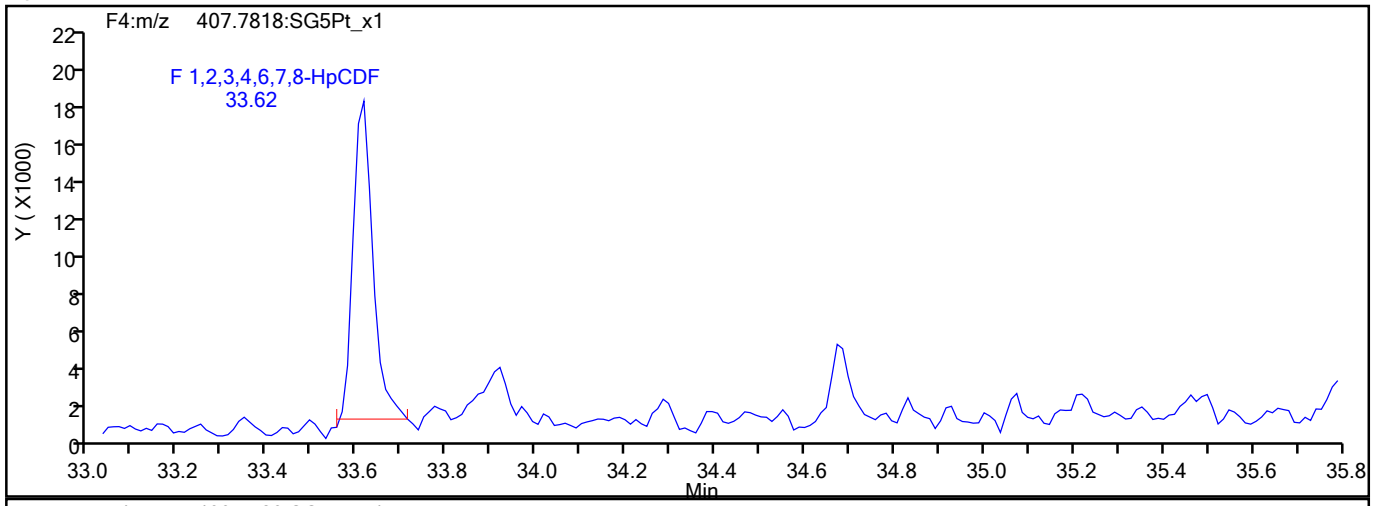

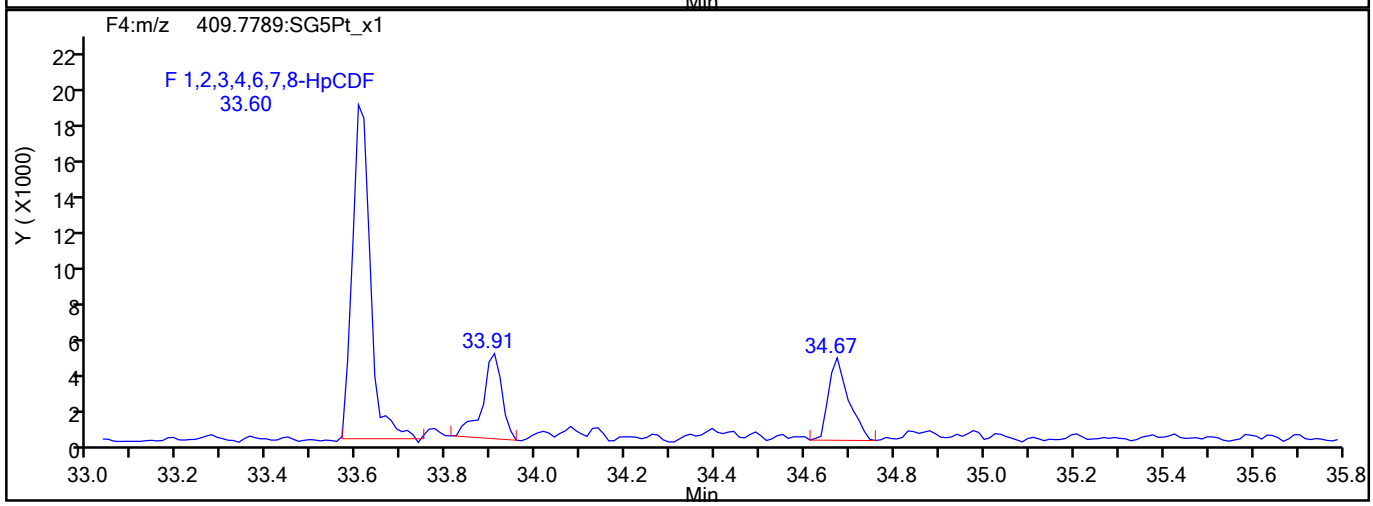

HpCDF Interference Mass

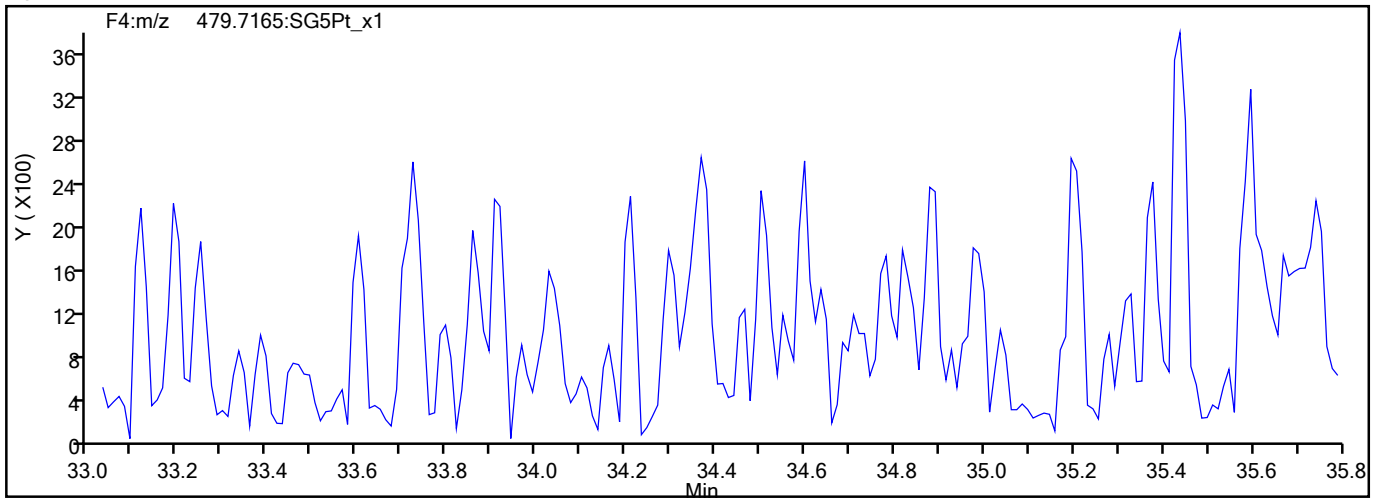

791291

Report Date: 27-Aug-2021 08:19:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
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HpCDD

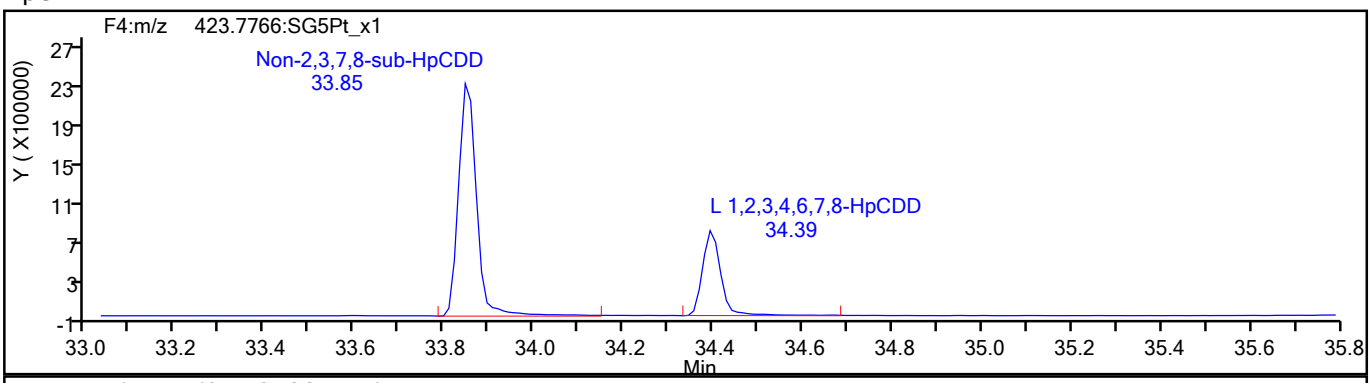

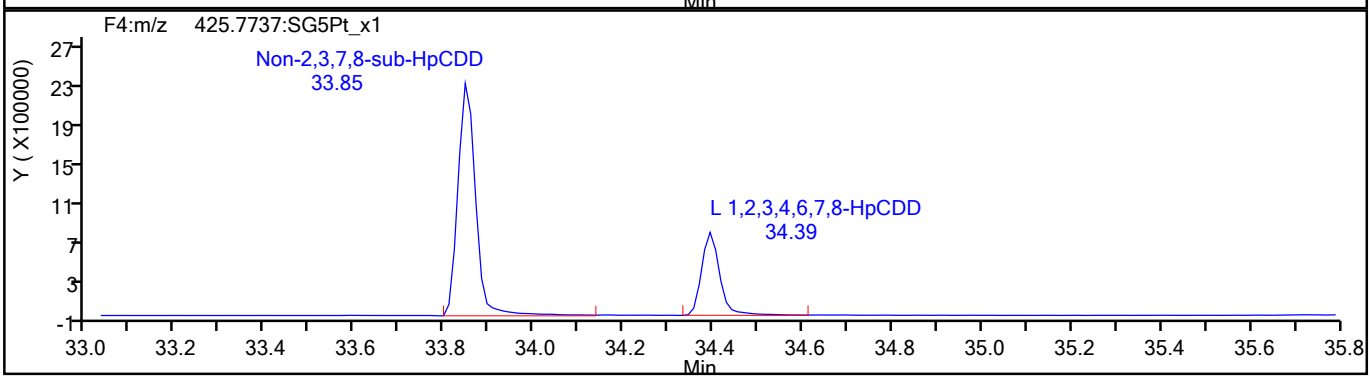

HpCDD Standards

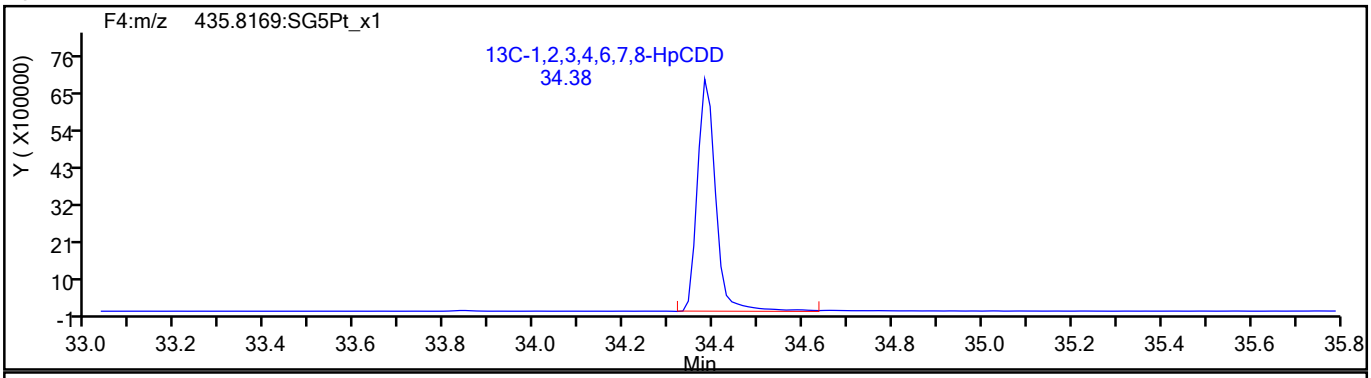

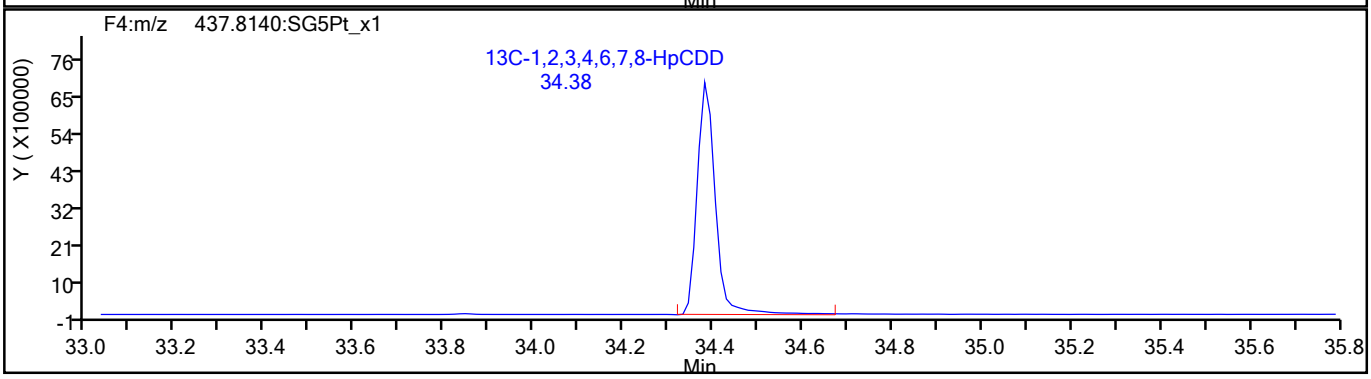

791292

Report Date: 27-Aug-2021 08:19:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
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OCDF

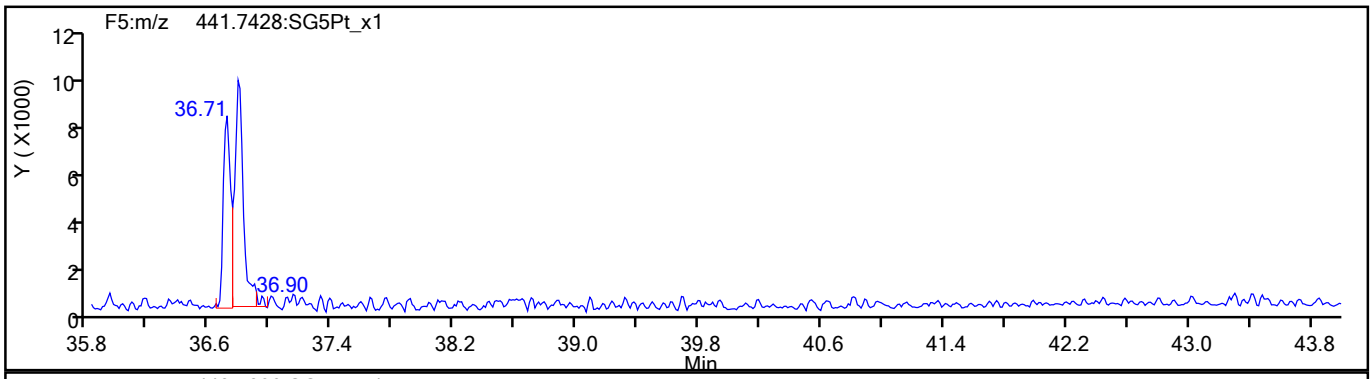

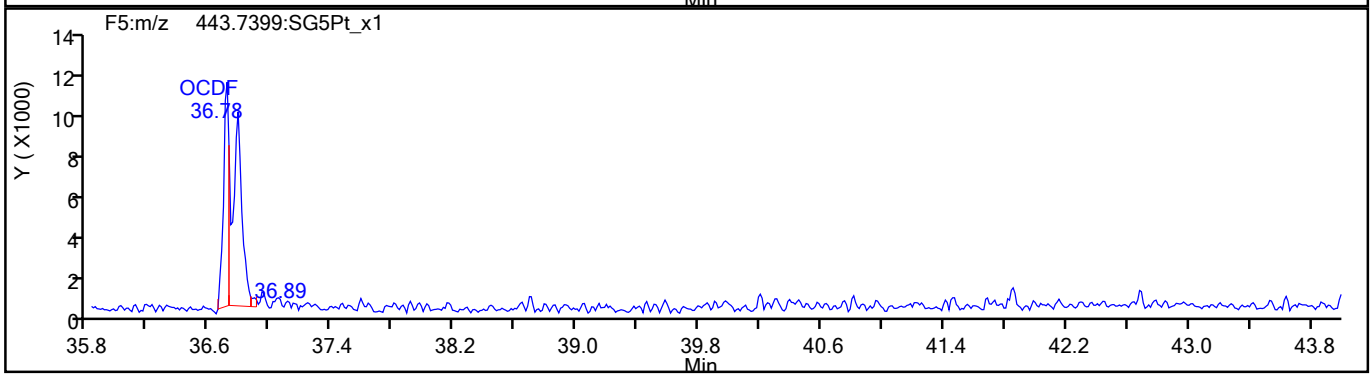

OCDF Standards

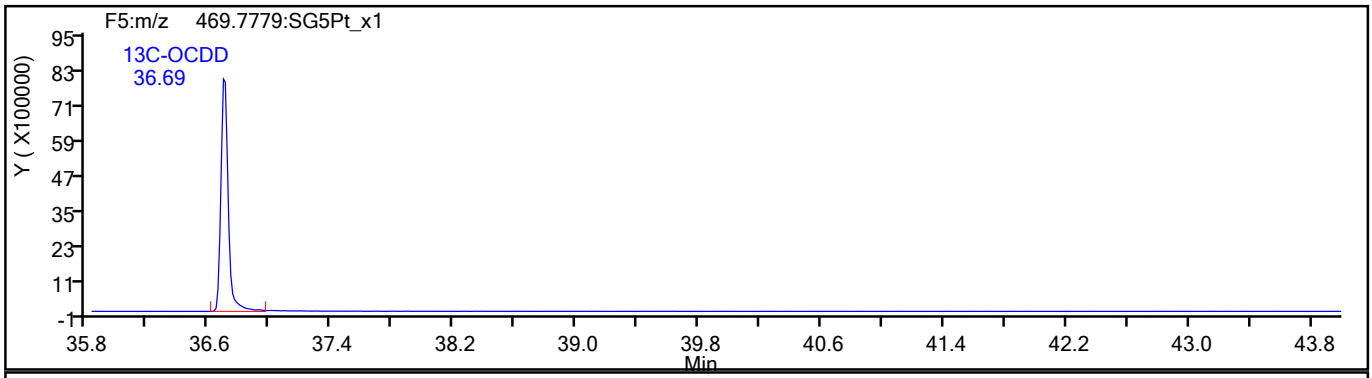

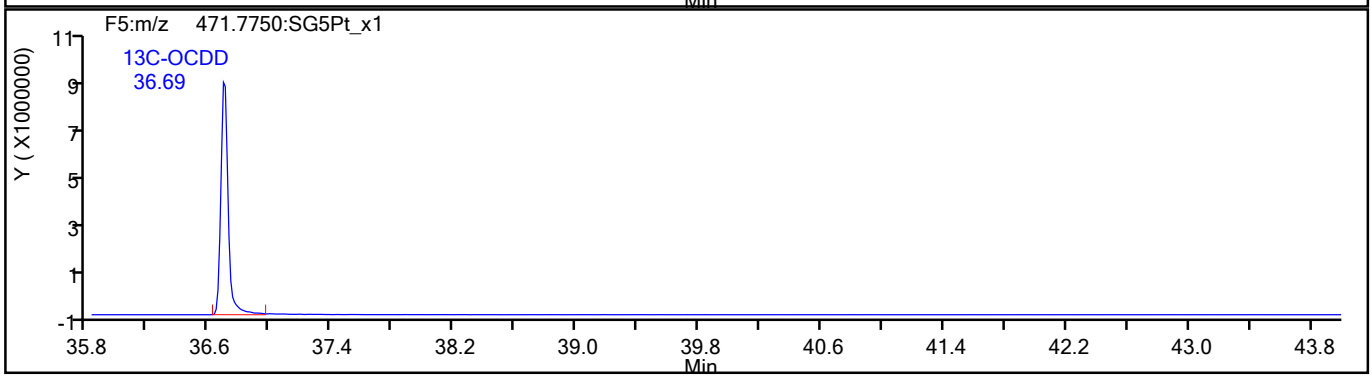

791293

Report Date: 27-Aug-2021 08:19:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

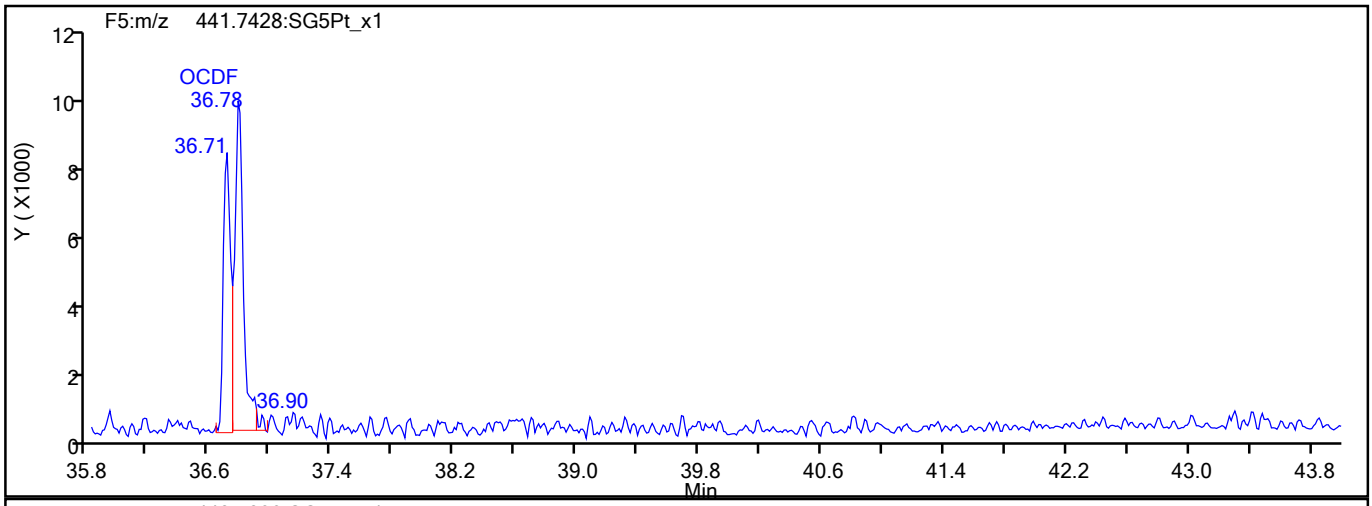

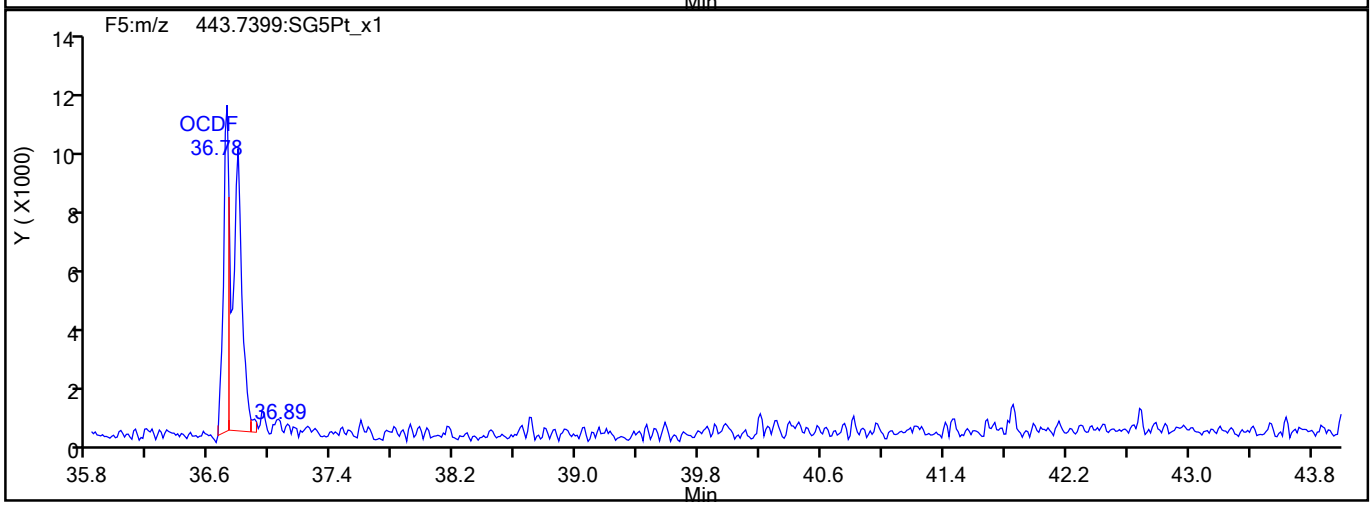

OCDF Interference Mass

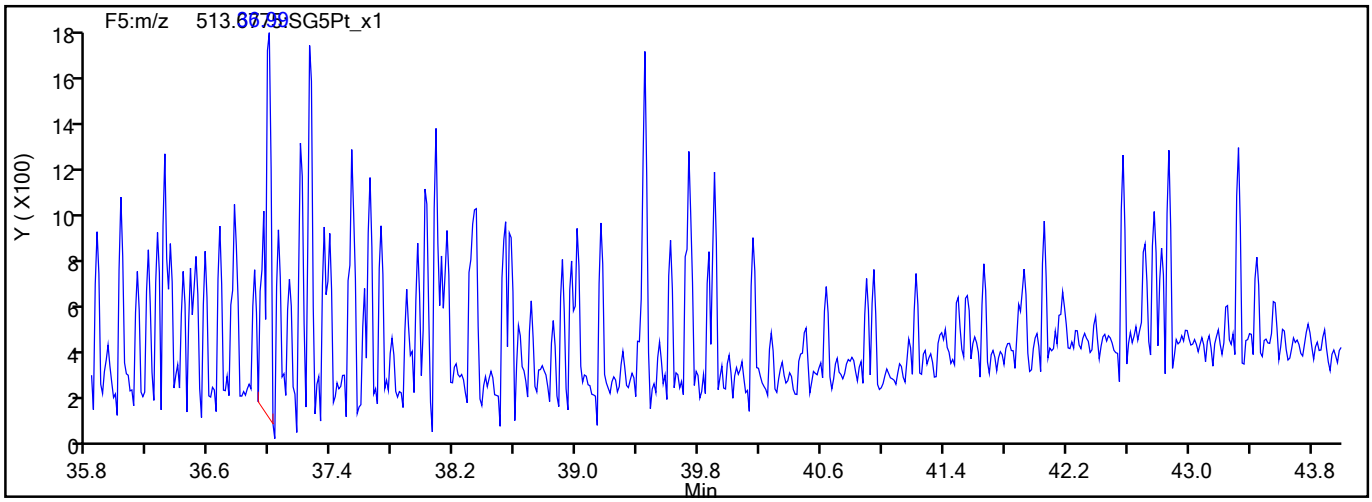

791294

Report Date: 27-Aug-2021 08:19:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

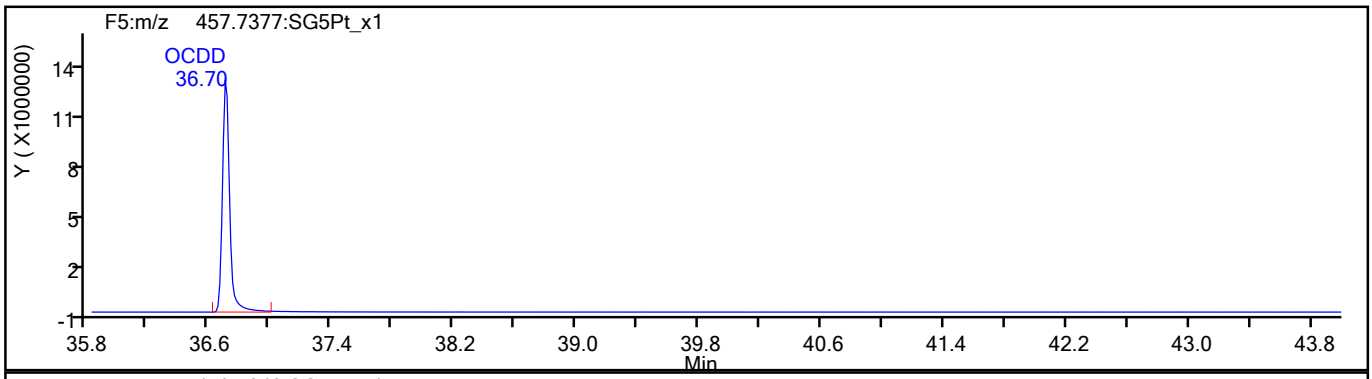

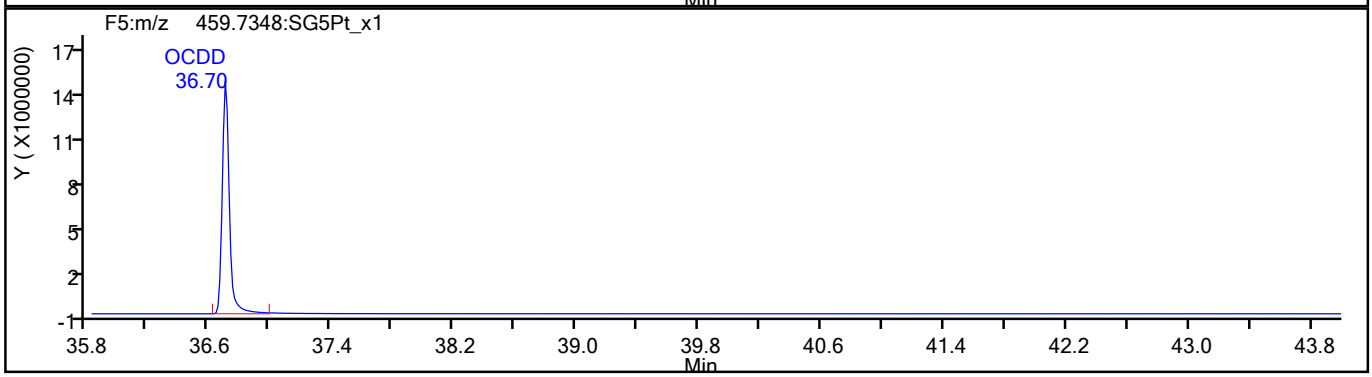

OCDD Standards

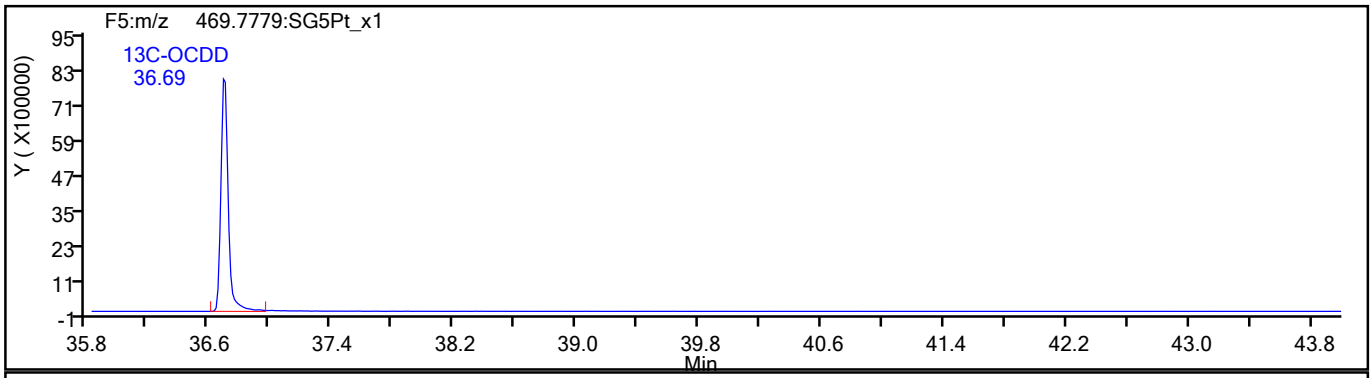

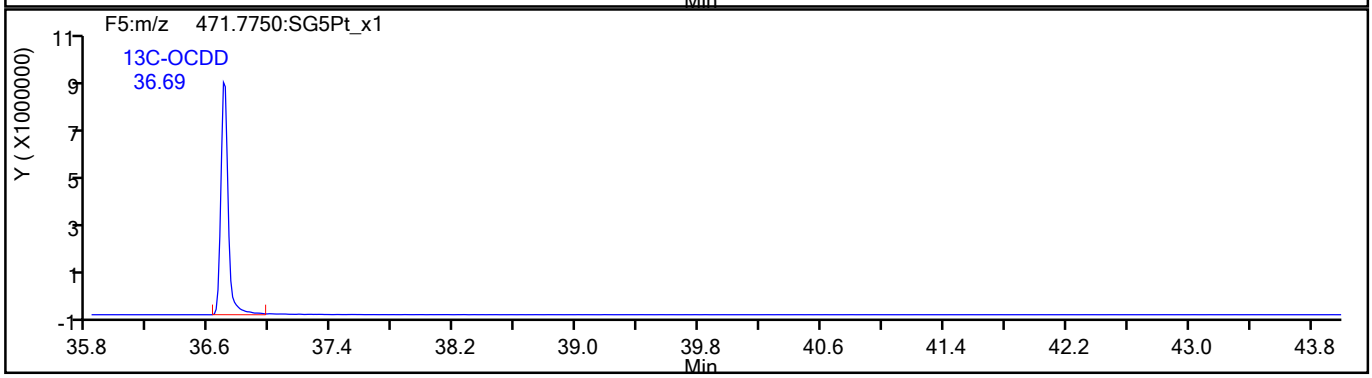

791295

Report Date: 27-Aug-2021 08:19:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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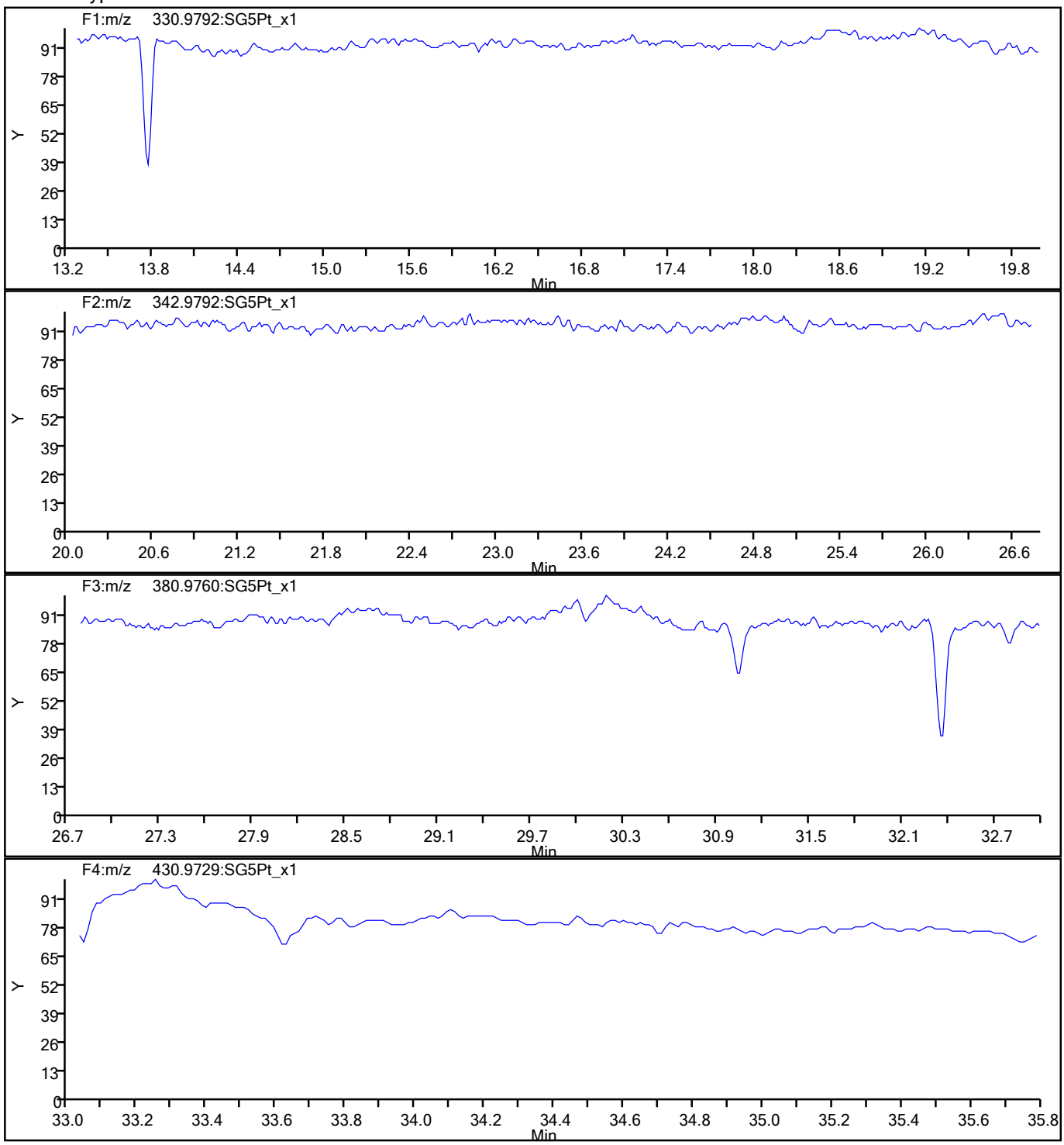

791296

Report Date: 27-Aug-2021 08:19:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_18.d		
Injection Date:	25-Aug-2021 23:05:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	519955	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

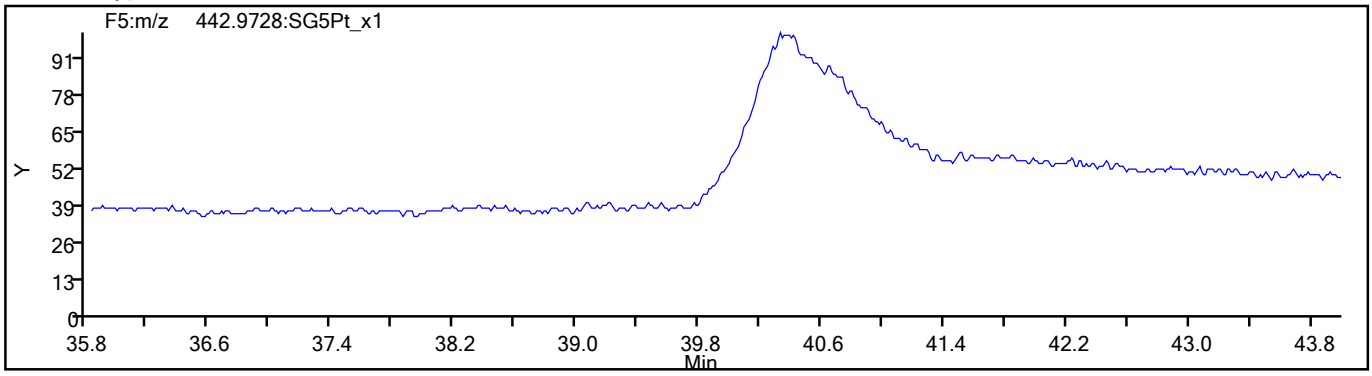

791297

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (14-16) RA
Lab Sample ID: 320-77214-8 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_012.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:45
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.43(g)
Date Analyzed: 08/27/2021 22:40
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 31.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	7.4	B	1.4	0.24

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	61		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	73		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_012.d
Lims ID: 320-77214-A-8-A
Client ID: 11215702-080221-BN-SJSB090 (14-16)
Sample Type: Client
Inject. Date: 27-Aug-2021 22:40:14 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-8-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:44:53

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.304	36746638	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.621	29913915	0.76	1.3327	61.1	61.1	0.2316	0.2316	61.08	
2,3,7,8-TCDF	17.648	787802	0.84	0.9978	2.639	2.639	0.0864	0.0864		
D 13C-2,3,7,8-TCDD	16.071	18718944	0.72	0.8749	58.2	58.2	0.4252	0.4252	58.22	
2,3,7,8-TCDD	16.084	155896	0.77	1.0570	1.080	0.7879	0.0956	0.0956		RQ
$ 37Cl4-2,3,7,8-TCDD	16.084	9326085		0.8648	29.3	29.3	0.0471	0.0471	73.37	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_012.d
Lims ID: 320-77214-A-8-A
Client ID: 11215702-080221-BN-SJSB090 (14-16)
Sample Type: Client
Inject. Date: 27-Aug-2021 22:40:14 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-8-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:44:53

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.304	16.300	0		16108588	3393003	6394	15985	531		
333.9339	16.304	16.300	0		20638050	4378167	5170	12925	847	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.621	17.616	0	1.081	12931759	2411529	4768	11920	506		
317.9389	17.621	17.616	0	1.081	16982156	3334373	4825	12062	691	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.648	17.644	0	1.002	360083	64973	838	2095	78		
305.8987	17.648	17.644	0	1.002	427719	81489	1143	2857	71	0.84(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.071	16.066	0	0.986	7829342	1849128	6394	15985	289		
333.9339	16.071	16.066	0	0.986	10889602	2529270	5170	12925	489	0.72(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.084	16.080	0	1.001	125657	19151	873	2182	22		
	Empc Correction				67819	15195	873	2182	17		
321.8936	16.084	16.080	0	1.001	88077	19735	897	2242	22	1.43(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.084	16.080	0	0.987	9326085	2210182	1267	3167	1744		

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 30-Aug-2021 09:51:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_012.d		
Injection Date:	27-Aug-2021 22:40:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	520456	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

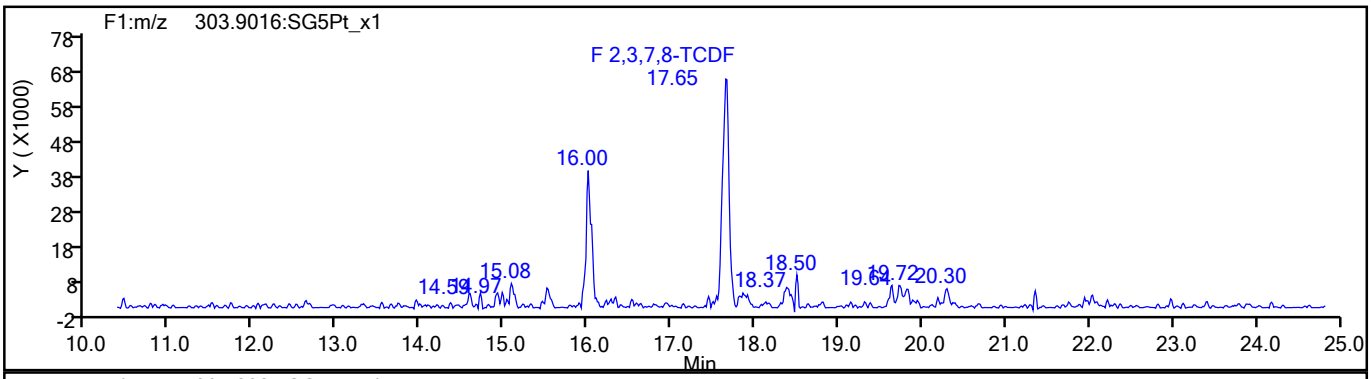

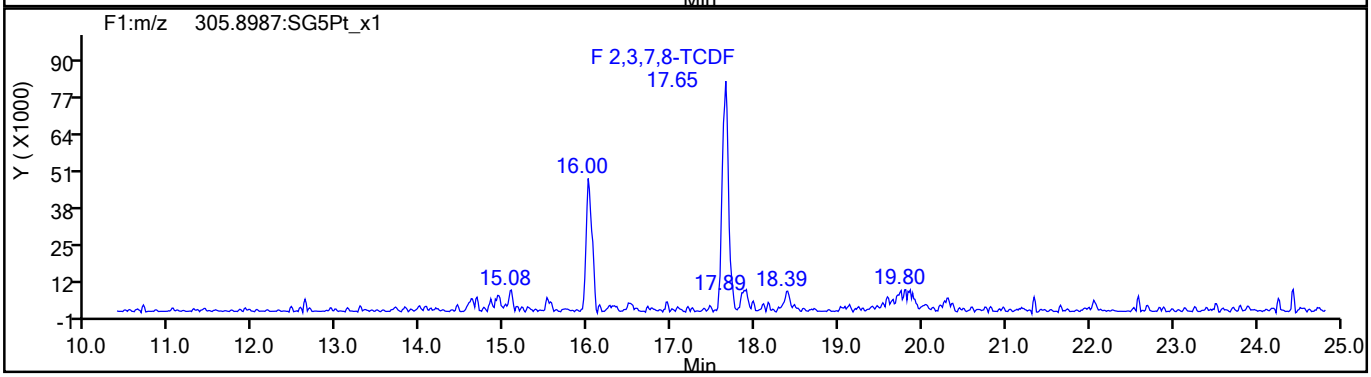

TCDF Standards

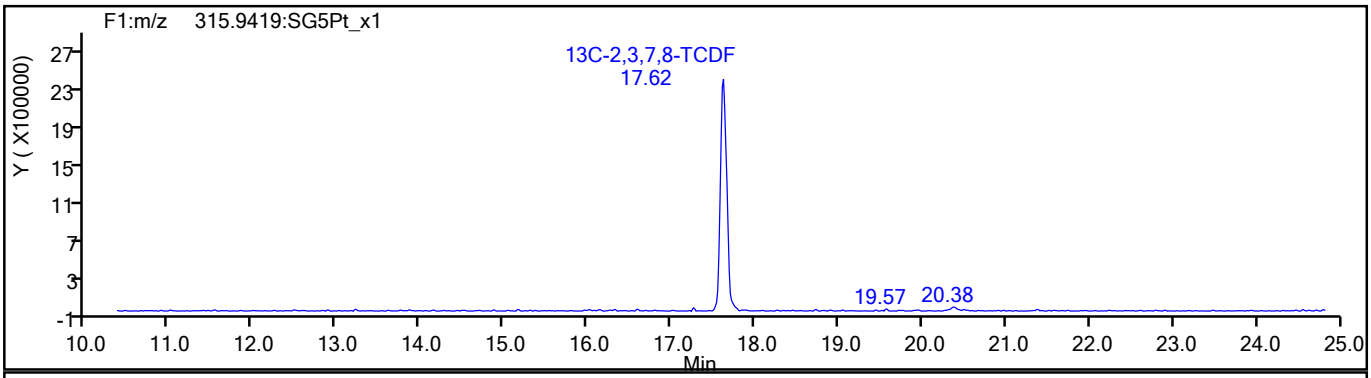

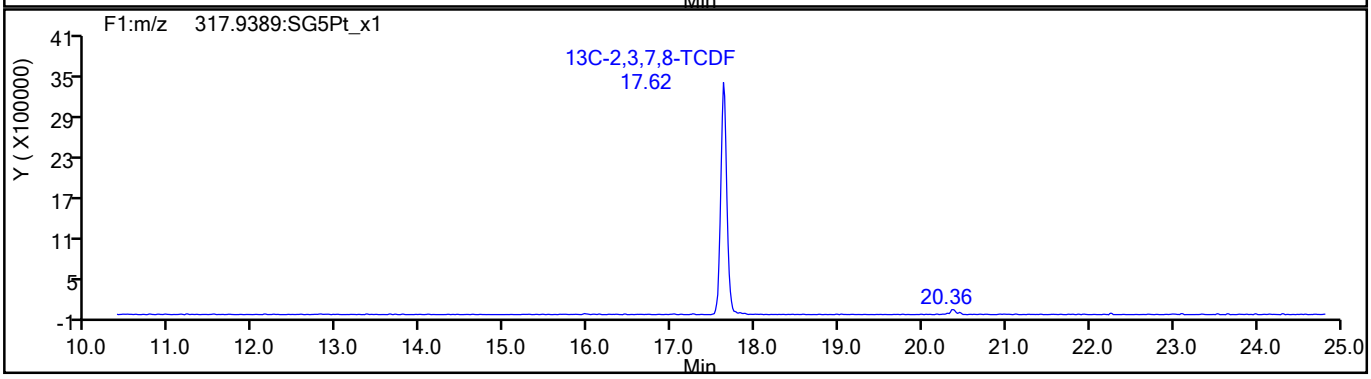

791301

Report Date: 30-Aug-2021 09:51:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_012.d		
Injection Date:	27-Aug-2021 22:40:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	520456	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

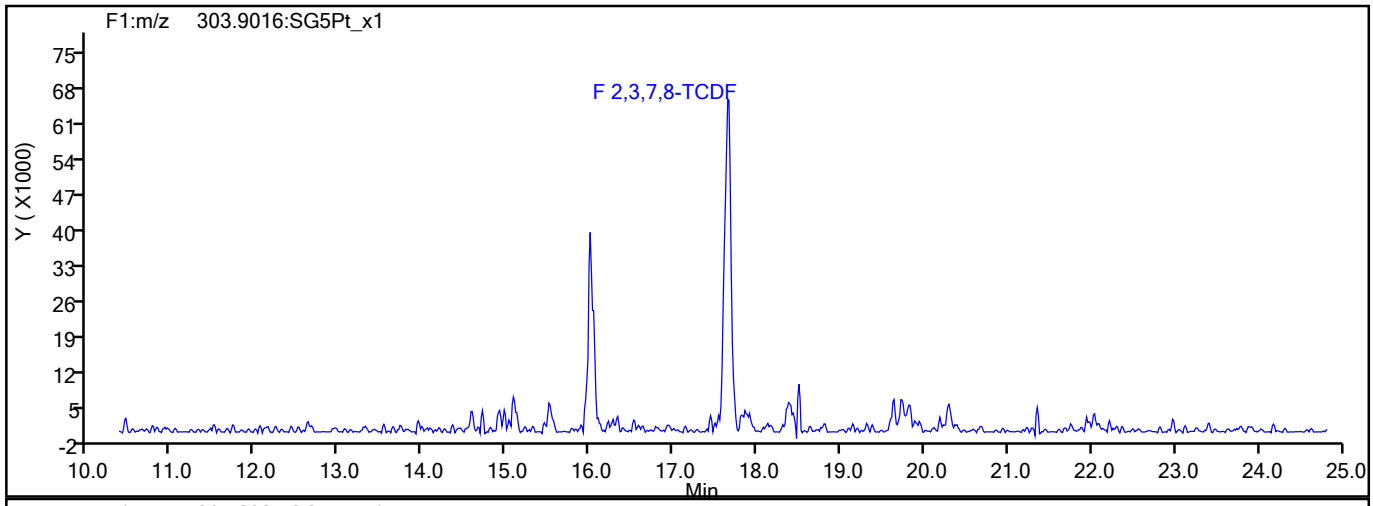

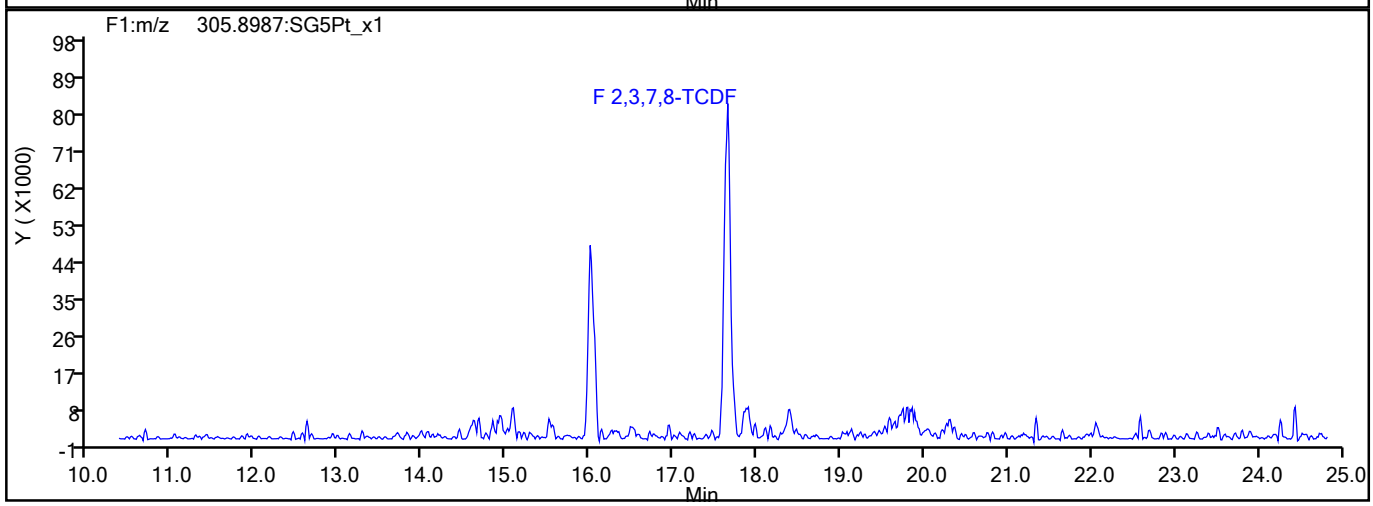

TCDF Interference Mass

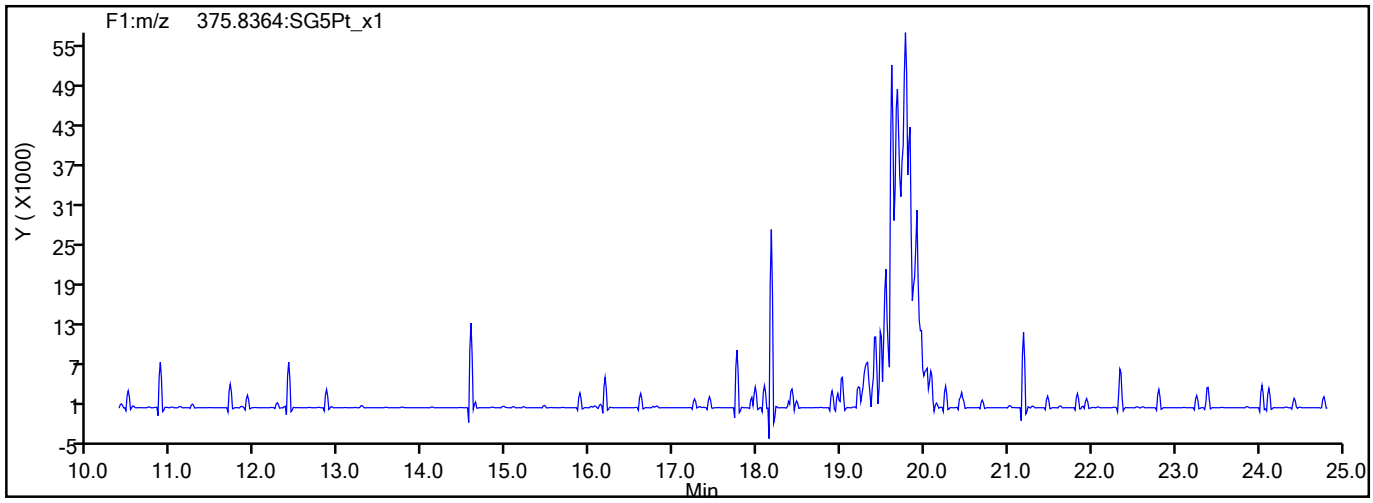

791302

Report Date: 30-Aug-2021 09:51:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_012.d		
Injection Date:	27-Aug-2021 22:40:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	520456	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

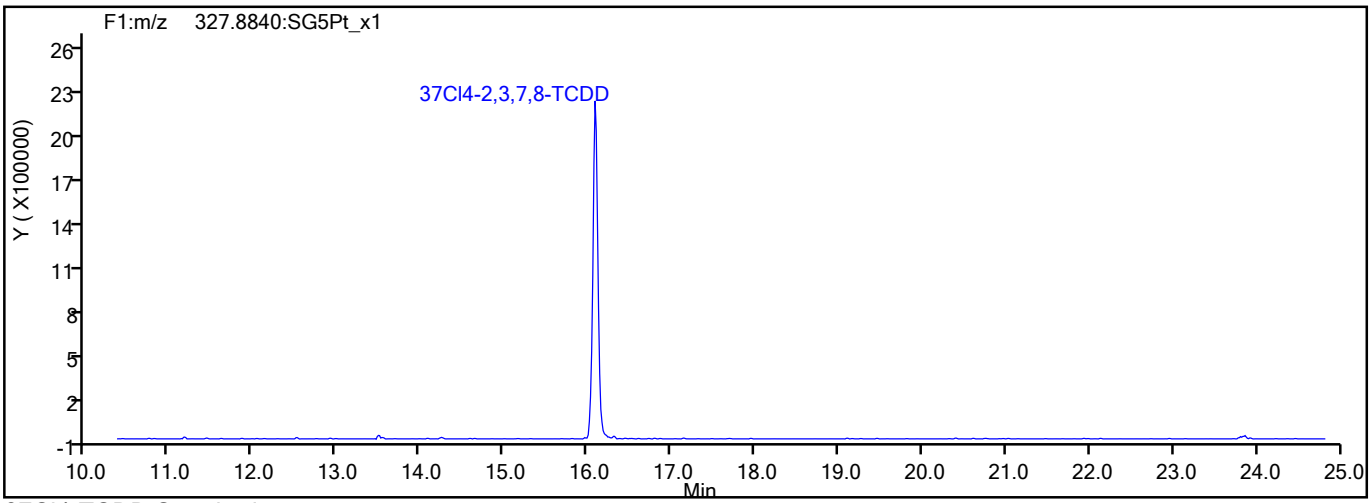

37Cl4-TCDD Standards

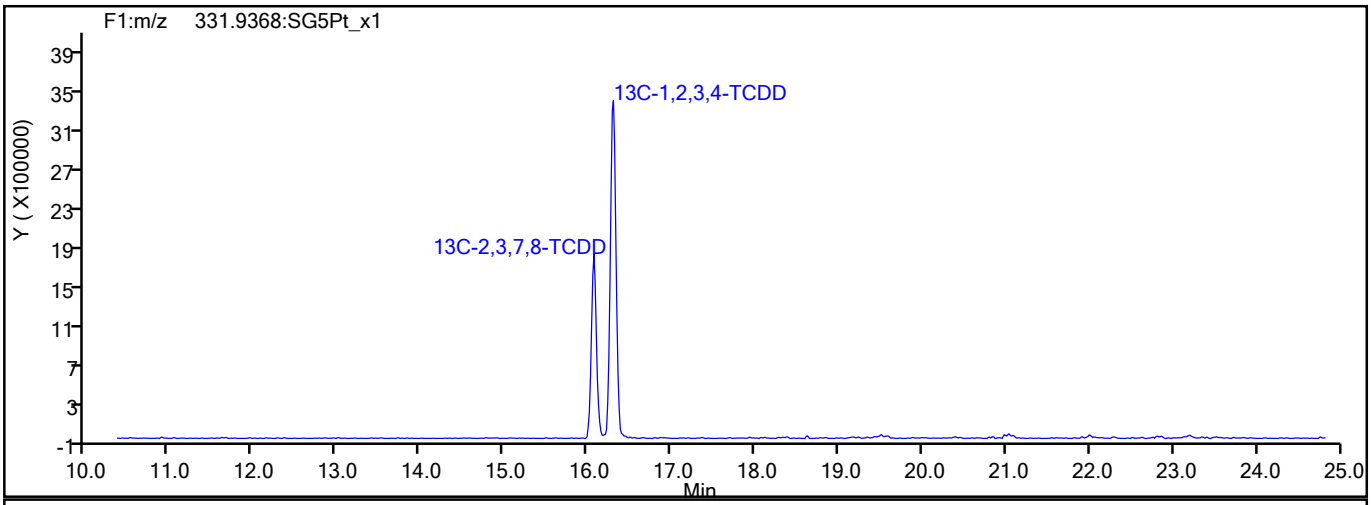

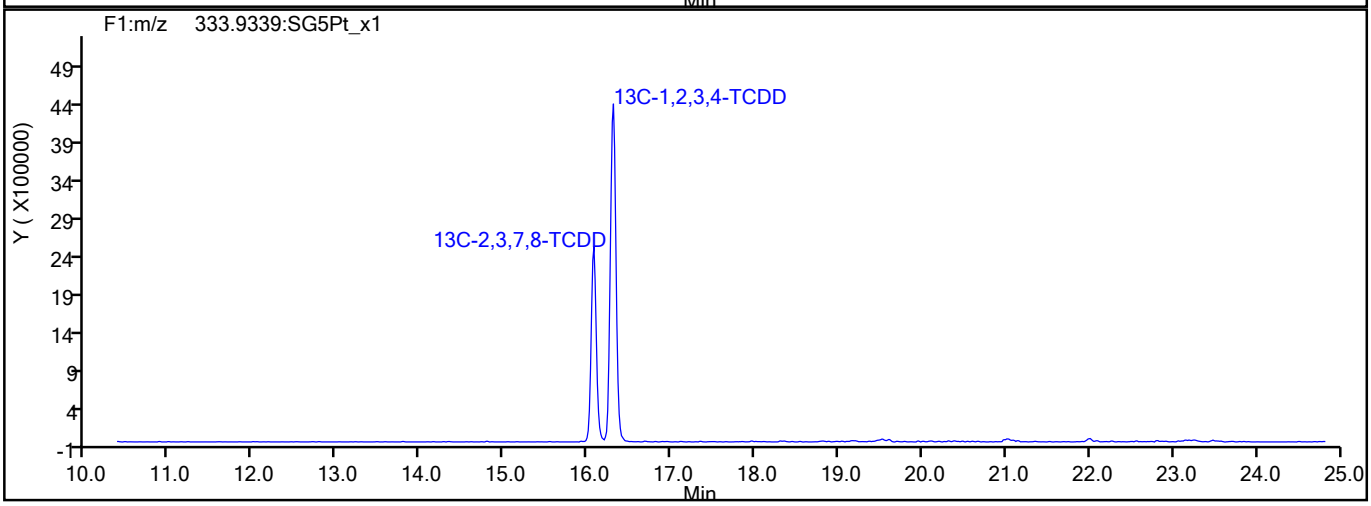

791303

Report Date: 30-Aug-2021 09:51:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_012.d		
Injection Date:	27-Aug-2021 22:40:14	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (14-16)		
Worklist#:	520456	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

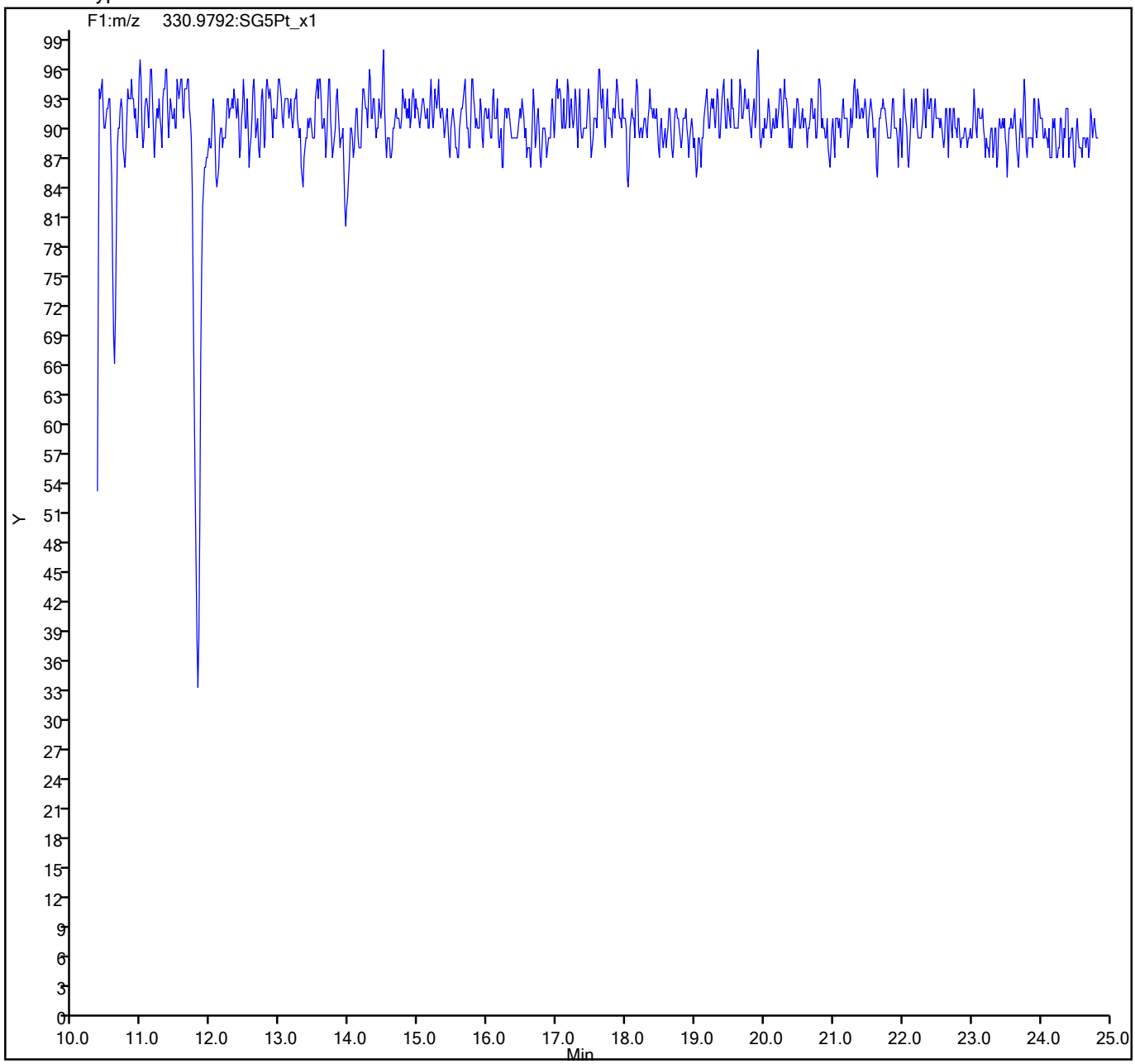

791304

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Client Sample ID: 11215702-080221-BN-DUP-11 Lab Sample ID: 320-77214-13

Matrix: Sediment Lab File ID: 25AU2110D5_20.d

Analysis Method: 1613B Date Collected: 08/02/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/12/2021 05:19

Sample wt/vol: 10.10(g) Date Analyzed: 08/26/2021 00:35

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 22.8 GPC Cleanup:(Y/N) N

Analysis Batch No.: 519955 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	1.9		1.3	0.070
40321-76-4	1,2,3,7,8-PeCDD	ND		6.4	0.089
57117-41-6	1,2,3,7,8-PeCDF	0.19	J q	6.4	0.063
57117-31-4	2,3,4,7,8-PeCDF	0.16	J	6.4	0.062
39227-28-6	1,2,3,4,7,8-HxCDD	0.33	J	6.4	0.093
57653-85-7	1,2,3,6,7,8-HxCDD	0.44	J	6.4	0.098
19408-74-3	1,2,3,7,8,9-HxCDD	0.75	J	6.4	0.087
70648-26-9	1,2,3,4,7,8-HxCDF	0.25	J	6.4	0.065
57117-44-9	1,2,3,6,7,8-HxCDF	0.11	J	6.4	0.067
72918-21-9	1,2,3,7,8,9-HxCDF	0.11	J	6.4	0.047
60851-34-5	2,3,4,6,7,8-HxCDF	ND		6.4	0.048
35822-46-9	1,2,3,4,6,7,8-HpCDD	12	B	6.4	0.33
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		6.4	0.057
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.4	0.062
3268-87-9	OCDD	280	B	13	0.30
39001-02-0	OCDF	0.12	J q B	13	0.045
41903-57-5	Total TCDD	2.8	q	1.3	0.070
30402-14-3	Total TCDF	8.0	q B	1.3	0.064
36088-22-9	Total PeCDD	1.3	J	6.4	0.089
30402-15-4	Total PeCDF	0.35	J q	6.4	0.063
34465-46-8	Total HxCDD	13	q	6.4	0.093
55684-94-1	Total HxCDF	0.47	J	6.4	0.057
37871-00-4	Total HpCDD	47	B	6.4	0.33
38998-75-3	Total HpCDF	ND		6.4	0.062

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Client Sample ID: 11215702-080221-BN-DUP-11 Lab Sample ID: 320-77214-13

Matrix: Sediment Lab File ID: 25AU2110D5_20.d

Analysis Method: 1613B Date Collected: 08/02/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/12/2021 05:19

Sample wt/vol: 10.10(g) Date Analyzed: 08/26/2021 00:35

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 22.8 GPC Cleanup:(Y/N) N

Analysis Batch No.: 519955 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	57		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	55		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	60		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	62		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	52		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	62		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	52		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	56		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	52		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	60		26-138
114423-97-1	13C-OCDD	60		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	76		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d
Lims ID: 320-77214-A-13-A
Client ID: 11215702-080221-BN-DUP-11
Sample Type: Client
Inject. Date: 26-Aug-2021 00:35:47 ALS Bottle#: 31 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-13-A 320-77214-A-13-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:26:44 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:41:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.583	66621970	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.069	59391953	0.77	1.6249	54.9	54.9	0.0897	0.0897	54.86	
2,3,7,8-TCDF	17.084	1080901	0.79	1.0239	1.777	1.777	0.0251	0.0251		
A Non-2,3,7,8-sub-TCDF	17.069	807839	0.77	1.0239	1.343	1.328	0.0251	0.8167		RQ
S Total TCDF					3.120	3.106	0.0251	0.0251		RQ
D 13C-2,3,7,8-TCDD	17.764	33924619	0.80	0.8993	56.6	56.6	0.1269	0.1269	56.62	
2,3,7,8-TCDD	17.779	312628	0.69	1.2541	0.7348	0.7348	0.0271	0.0271		M
$ 37Cl4-2,3,7,8-TCDD	17.779	22450460		1.1071	30.4	30.4	0.0357	0.0357	76.09	
A Non-2,3,7,8-sub-TCDD	17.530	157405	0.77	1.2541	0.4125	0.3700	0.0271	0.2166		RQMa
S Total TCDD					1.147	1.105	0.0271	0.0271		RQ
D 13C-1,2,3,7,8-PeCDF	22.007	44673889	1.58	1.2101	55.4	55.4	0.0902	0.0902	55.41	
1,2,3,7,8-PeCDF	22.034	35385	1.55	1.0611	0.0860	0.0746	0.0244	0.0244		RQM
D 13C-2,3,4,7,8-PeCDF	23.329	49731104	1.57	1.2395	60.2	60.2	0.0880	0.0880	60.22	
2,3,4,7,8-PeCDF	23.370	31325	1.33	1.0184	0.0618	0.0618	0.0243	0.0243		M
A F1 PeCDFs	19.851						0.0227	0.0227		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0244	0.0244		
S Total PeCDF					0.1478	0.1365	0.0244	0.0244		RQ
D 13C-1,2,3,7,8-PeCDD	24.038	28892600	1.61	0.7612	57.0	57.0	0.0561	0.0561	56.97	
1,2,3,7,8-PeCDD	24.079						0.0347	0.0347		
A Non-2,3,7,8-sub-PeCDD	23.696	156163	1.61	1.0484	0.5155	0.5155	0.0347	0.2541		M
S Total PeCDD					0.5155	0.5155	0.0347	0.0347		
D 13C-1,2,3,4,7,8-HxCDF	30.173	42627029	0.52	1.0837	61.9	61.9	0.1371	0.1371	61.95	
1,2,3,4,7,8-HxCDF	30.199	45617	1.22	1.0851	0.0986	0.0986	0.0255	0.0255		M
D 13C-1,2,3,6,7,8-HxCDF	30.386	37186312	0.51	1.1279	51.9	51.9	0.1317	0.1317	51.92	
1,2,3,6,7,8-HxCDF	30.413	17150	1.06	1.1260	0.0410	0.0410	0.0263	0.0263		nMa
D 13C-2,3,4,6,7,8-HxCDF	31.291	36242852	0.52	1.0637	53.7	53.7	0.1397	0.1397	53.66	
2,3,4,6,7,8-HxCDF	31.317						0.0186	0.0186		
D 13C-1,2,3,7,8,9-HxCDF	32.143	33591215	0.52	0.9676	54.7	54.7	0.1536	0.1536	54.67	
1,2,3,7,8,9-HxCDF	32.156	17303	1.17	1.1664	0.0442	0.0442	0.0181	0.0181		M
A Non-2,3,7,8-sub-HxCDF	30.331						0.0215	0.0215		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.1837	0.1837	0.0221	0.0221		
* 13C-1,2,3,7,8,9-HxCDD	31.943	63499322	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.490	29028291	1.26	0.7334	62.3	62.3	0.1656	0.1656	62.33	
1,2,3,4,7,8-HxCDD	31.517	40284	1.36	1.0640	0.1304	0.1304	0.0363	0.0363		Ma
D 13C-1,2,3,6,7,8-HxCDD	31.610	28972660	1.27	0.8802	51.8	51.8	0.1379	0.1379	51.84	
1,2,3,6,7,8-HxCDD	31.624	49499	1.39	1.0001	0.1708	0.1708	0.0382	0.0382		M
1,2,3,7,8,9-HxCDD	31.956	96004	1.08	1.1325	0.2923	0.2923	0.0339	0.0339		
A Non-2,3,7,8-sub-HxCDD	30.519	1345805	1.24	1.0655	4.363	4.355	0.0360	3.020		RQ
S Total HxCDD					4.956	4.949	0.0361	0.0361		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	25290304	0.45	0.7730	51.5	51.5	0.5065	0.5065	51.52	
1,2,3,4,6,7,8-HpCDF	33.603						0.0221	0.0221		
D 13C-1,2,3,4,7,8,9-HpCDF	34.673	26594819	0.42	0.7008	59.8	59.8	0.5587	0.5587	59.76	
1,2,3,4,7,8,9-HpCDF	34.673						0.0240	0.0240		
A Non-2,3,7,8-sub-HpCDF	34.138						0.0230	0.0230		
S Total HpCDF							0.0240	0.0240		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	23161131	0.99	0.6472	56.4	56.4	0.5345	0.5345	56.36	
1,2,3,4,6,7,8-HpCDD	34.405	1205007	1.02	1.0943	4.754	4.754	0.1291	0.1291		
A Non-2,3,7,8-sub-HpCDD	34.223	3438520	1.02	1.0943	13.6	13.6	0.1291	13.6		
S Total HpCDD					18.3	18.3	0.1291	0.1291		
D 13C-OCDD	36.701	33967891	0.88	0.4472	119.6	119.6	0.2980	0.2980	59.82	
OCDF	36.797	11094	0.89	1.4382	0.0600	0.0454	0.0177	0.0177		RQM
OCDD	36.713	20192728	0.90	1.1070	107.4	107.4	0.1186	0.1186		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- n - Failed Sig-To-Noise Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d
Lims ID: 320-77214-A-13-A
Client ID: 11215702-080221-BN-DUP-11
Sample Type: Client
Inject. Date: 26-Aug-2021 00:35:47 ALS Bottle#: 31 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-13-A 320-77214-A-13-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:26:44 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:41:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.583	17.598	-1		29737481	7490968	4743	11857	1579		
333.9339	17.583	17.598	-1		36884489	9327651	2937	7342	3176	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.069	17.084	-1	0.971	25864539	6862529	6317	15792	1086		
317.9389	17.069	17.084	-1	0.971	33527414	8867587	3485	8712	2545	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.084	17.099	-1	1.001	477007	117401	688	1720	171		
305.8987	17.084	17.099	-1	1.001	603894	152991	930	2325	165	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	15.194	17.069	-112	0.890	16654	3453	688	1720	5		
305.8987	15.194	17.069	-112	0.890	20889	5495	930	2325	6	0.80(0.65-0.89)	
303.9016	16.192	17.069	-53	0.949	19852	4737	688	1720	7		
305.8987	16.192	17.069	-53	0.949	27383	6634	930	2325	7	0.72(0.65-0.89)	
303.9016	16.419	17.069	-39	0.962	24292	6174	688	1720	9		
305.8987	16.434	17.069	-38	0.963	29299	6261	930	2325	7	0.83(0.65-0.89)	
303.9016	16.706	17.069	-22	0.979	223113	59817	688	1720	87		
305.8987	16.706	17.069	-22	0.979	273515	70758	930	2325	76	0.82(0.65-0.89)	
303.9016	17.507	17.069	26	1.026	46182	8664	688	1720	13		
	Empc Correction				37319	8384	688	1720	12		
305.8987	17.507	17.069	26	1.026	48467	10889	930	2325	12	0.95(0.65-0.89)	
303.9016	18.883	17.069	109	1.106	38210	9859	688	1720	14		
305.8987	18.883	17.069	109	1.106	48846	11209	930	2325	12	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.764	17.779	-1	1.010	15080392	3812556	4743	11857	804		
333.9339	17.764	17.779	-1	1.010	18844227	4689727	2937	7342	1597	0.80(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											M
319.8965	17.779	17.794	-1	1.001	127295	31175	707	1767	44		M
321.8936	17.779	17.794	-1	1.001	185333	44869	449	1122	100	0.69(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	17.779	17.809	-2	1.011	22450460	5632479	2658	6645	2119		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	15.874	17.530	-99	0.894	11489	3034	707	1767	4		M
321.8936	15.874	17.530	-99	0.894	23038	5475	449	1122	12	0.50(0.65-0.89)	M
	Empc Correction				14920	3940	449	1122	9		
319.8965	16.660	17.530	-52	0.938	37674	9885	707	1767	14		
321.8936	16.660	17.530	-52	0.938	54486	15461	449	1122	34	0.69(0.65-0.89)	
319.8965	17.674	17.530	9	0.995	16895	4350	707	1767	6		M
321.8936	17.658	17.530	8	0.994	31933	6628	449	1122	15	0.53(0.65-0.89)	
	Empc Correction				21941	5649	449	1122	13		
13C-1,2,3,7,8-PeCDF											
351.9000	22.007	22.020	-1	1.252	27369176	5151251	4360	10900	1181		
353.8970	22.007	22.020	-1	1.252	17304713	3245446	2980	7450	1089	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											RQM
339.8597	22.034	22.047	-1	1.001	21509	4102	246	615	17		M
341.8567	22.034	22.047	-1	1.001	19254	3281	624	1560	5	1.12(1.32-1.78)	
	Empc Correction				13876	2646	624	1560	4		
13C-2,3,4,7,8-PeCDF											
351.9000	23.329	23.343	-1	1.327	30350128	5407086	4360	10900	1240		
353.8970	23.329	23.343	-1	1.327	19380976	3367395	2980	7450	1130	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											M
339.8597	23.370	23.370	0	1.002	17901	3120	246	615	13		M
341.8567	23.329	23.370	-2	1.000	13424	2088	624	1560	3	1.33(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						242	605			
341.8567	19.851						568	1420			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.067						246	615			
341.8567	23.067						624	1560			
13C-1,2,3,7,8-PeCDD											
367.8949	24.038	24.052	-1	1.367	17827919	3034534	1721	4302	1763		
369.8919	24.038	24.052	-1	1.367	11064681	1860513	1153	2882	1614	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079						430	1075			
357.8516	24.079						283	707			
A Non-2,3,7,8-sub-PeCDD											M
355.8546	21.652	23.696	-122	0.901	48070	8998	430	1075	21		M
357.8516	21.638	23.696	-123	0.900	28891	5770	283	707	20	1.66(1.32-1.78)	
355.8546	22.920	23.696	-46	0.953	24941	4179	430	1075	10		
357.8516	22.906	23.696	-47	0.953	16976	3332	283	707	12	1.47(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
355.8546	23.084	23.696	-37	0.960	23428	3592	430	1075	8		M
357.8516	23.125	23.696	-34	0.962	13857	1996	283	707	7	1.69(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.173	30.186	-1	0.945	14517681	2547895	3528	8820	722		
385.8610	30.173	30.186	-1	0.945	28109348	4912851	7190	17975	683	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											M
373.8208	30.199	30.212	-1	1.001	25045	4115	608	1520	7		M
375.8178	30.186	30.212	-2	1.000	20572	3922	218	545	18	1.22(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.386	30.399	-1	0.951	12639308	2365864	3528	8820	671		
385.8610	30.386	30.399	-1	0.951	24547004	4615859	7190	17975	642	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											nMa
373.8208	30.413	30.412	0	1.001	8818	1442	608	1520	2		M
375.8178	30.426	30.412	1	1.001	8332	1652	218	545	8	1.06(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.980	12321396	3268078	3528	8820	926		
385.8610	31.291	31.291	0	0.980	23921456	6263788	7190	17975	871	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317						608	1520			
375.8178	31.317						218	545			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.142	0	1.006	11525698	3405173	3528	8820	965		
385.8610	32.143	32.142	0	1.006	22065517	6358425	7190	17975	884	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.156	32.156	0	1.000	9341	2690	608	1520	4		M
375.8178	32.156	32.156	0	1.000	7962	1799	218	545	8	1.17(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.331						608	1520			
375.8178	30.331						218	545			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.956	-1		35029180	9961490	4916	12290	2026		
403.8529	31.943	31.956	-1		28470142	8071007	3842	9605	2101	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.490	31.503	-1	0.986	16190909	4402945	4916	12290	896		
403.8529	31.490	31.503	-1	0.986	12837382	3518770	3842	9605	916	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											Ma
389.8157	31.517	31.517	0	1.001	23201	6153	760	1900	8		M
391.8127	31.517	31.517	0	1.001	17083	5592	465	1162	12	1.36(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.990	16205450	4485218	4916	12290	912		
403.8529	31.610	31.610	0	0.990	12767210	3537696	3842	9605	921	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.624	31.623	0	1.000	28819	7273	760	1900	10		M
391.8127	31.624	31.623	0	1.000	20680	4775	465	1162	10	1.39(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.956	31.969	-1	1.015	49946	11361	760	1900	15		
391.8127	31.970	31.969	0	1.015	46058	10425	465	1162	22	1.08(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.042	30.519	-88	0.919	510696	65091	760	1900	86		
391.8127	29.055	30.519	-88	0.919	422395	53747	465	1162	116	1.21(1.05-1.43)	
389.8157	30.705	30.519	11	0.971	198808	37910	760	1900	50		
391.8127	30.692	30.519	10	0.971	187220	36447	465	1162	78	1.06(1.05-1.43)	
389.8157	30.905	30.519	23	0.978	14773	3223	760	1900	4		
391.8127	30.905	30.519	23	0.978	14189	3422	465	1162	7	1.04(1.05-1.43)	
	Empc Correction				11913	2599	465	1162	6		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	7802127	2833871	9094	22735	312		
419.8220	33.603	33.603	0	1.052	17488177	6387044	19148	47870	334	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603						904	2260			
409.7789	33.603						271	677			
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.673	34.672	0	1.085	7901718	2749426	9094	22735	302		
419.8220	34.673	34.672	0	1.085	18693101	6546978	19148	47870	342	0.42(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673						904	2260			
409.7789	34.673						271	677			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						904	2260			
409.7789	34.138						271	677			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.077	11497136	4152362	12044	30110	345		
437.8140	34.393	34.393	0	1.077	11663995	4249016	12907	32267	329	0.99(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.393	1	1.000	608530	218824	2157	5392	101		
425.7737	34.405	34.393	1	1.000	596477	207246	2591	6477	80	1.02(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.859	34.223	-22	0.984	1736458	660487	2157	5392	306		
425.7737	33.859	34.223	-22	0.984	1702062	638430	2591	6477	246	1.02(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.701	0	1.149	15868030	4838309	5772	14430	838		
471.7750	36.701	36.701	0	1.149	18099861	5523291	3838	9595	1439	0.88(0.76-1.02)	
OCDF											RQM
441.7428	36.797	36.797	0	1.003	8797	2632	232	580	11		M
	Empc Correction				5224	1672	232	580	7		
443.7399	36.797	36.797	0	1.003	5870	1879	295	737	6	1.50(0.76-1.02)	M
OCDD											
457.7377	36.713	36.713	0	1.000	9591205	2936700	1102	2755	2665		
459.7348	36.713	36.713	0	1.000	10601523	3284063	1619	4047	2028	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d
Lims ID: 320-77214-A-13-A
Client ID: 11215702-080221-BN-DUP-11
Inject. Date: 26-Aug-2021 00:35:47 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	59391953	15730116

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	59391953	15730116

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.194	16654	3453	20889	5495	0.0617	0.80	
16.192	19852	4737	27383	6634	0.0777	0.72	
16.419	24292	6174	29299	6261	0.0881	0.83	
16.706	223113	59817	273515	70758	0.8167	0.82	
17.507	46182	8664	48467	10889	0.1556	0.95	RQ
17.507	37319	8384	48467	10889	0.1411		Empc Correction
18.883	38210	9859	48846	11209	0.1432	0.78	
Signal Totals:							
	359440	92424	448399	111246			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	816702	203950				0.82	RQ
	807839	203670					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.343 = (816702 * 100.000) / (59391953 * 1.024)
Empc Amount: 1.328 = (807839 * 100.000) / (59391953 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Lims ID:	320-77214-A-13-A		
Client ID:	11215702-080221-BN-DUP-11		
Inject. Date:	26-Aug-2021 00:35:47	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	6

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	33924619	8502283

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	33924619	8502283

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.874	11489	3034	23038	5475	0.0812	0.50	RQM
15.874	11489	3034	14920	3940	0.0621		Empc Correction
16.660	37674	9885	54486	15461	0.2166	0.69	
17.674	16895	4350	31933	6628	0.1148	0.53	RQMa
17.674	16895	4350	21941	5649	0.0913		Empc Correction
Signal Totals:							
	66058	17269	91347	25050			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	175515	44833				0.60	RQMa
	157405	42319					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4125 = (175515 * 100.000) / (33924619 * 1.254)
Empc Amount: 0.3700 = (157405 * 100.000) / (33924619 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d
Lims ID: 320-77214-A-13-A
Client ID: 11215702-080221-BN-DUP-11
Inject. Date: 26-Aug-2021 00:35:47 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 6

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	28892600	4895047

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	28892600	4895047

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.652	48070	8998	28891	5770	0.2541	1.66	M
22.920	24941	4179	16976	3332	0.1384	1.47	
23.084	23428	3592	13857	1996	0.1231	1.69	M
Signal Totals:							
	96439	16769	59724	11098			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	156163	27867				1.61	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.5155 = (156163 * 100.000) / (28892600 * 1.048)

QC Flag Legend

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Lims ID:	320-77214-A-13-A		
Client ID:	11215702-080221-BN-DUP-11		
Inject. Date:	26-Aug-2021 00:35:47	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	6

Non-2,3,7,8-sub-HxCDF, RT: 30.331

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	42627029	7460746
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	37186312	6981723
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	36242852	9531866
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	33591215	9763598

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	37411852	8434483

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Lims ID:	320-77214-A-13-A		
Client ID:	11215702-080221-BN-DUP-11		
Inject. Date:	26-Aug-2021 00:35:47	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	6

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	29028291	7921715
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	28972660	8022914
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	29000475	7972314

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.042	510696	65091	422395	53747	3.02	1.21	
30.705	198808	37910	187220	36447	1.25	1.06	
30.905	14773	3223	14189	3422	0.0937	1.04	RQ
30.905	14773	3223	11913	2599	0.0864		Empc Correction
Signal Totals:							
	724277	106224	621528	92793			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1348081	199840				1.16	RQ
	1345805	199017					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.363 = (1348081 * 100.000) / (29000475 * 1.066)

Empc Amount: 4.355 = (1345805 * 100.000) / (29000475 * 1.066)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Lims ID:	320-77214-A-13-A		
Client ID:	11215702-080221-BN-DUP-11		
Inject. Date:	26-Aug-2021 00:35:47	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	6

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	23161131	8401378

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	23161131	8401378

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.859	1736458	660487	1702062	638430	13.6	1.02	
Signal Totals:							
	1736458	660487	1702062	638430			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3438520	1298917				1.02	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 13.567 = (3438520 * 100.000) / (23161131 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 17.78
Area: 144234
Amount: 0.849692
Amount Units: pg/ul

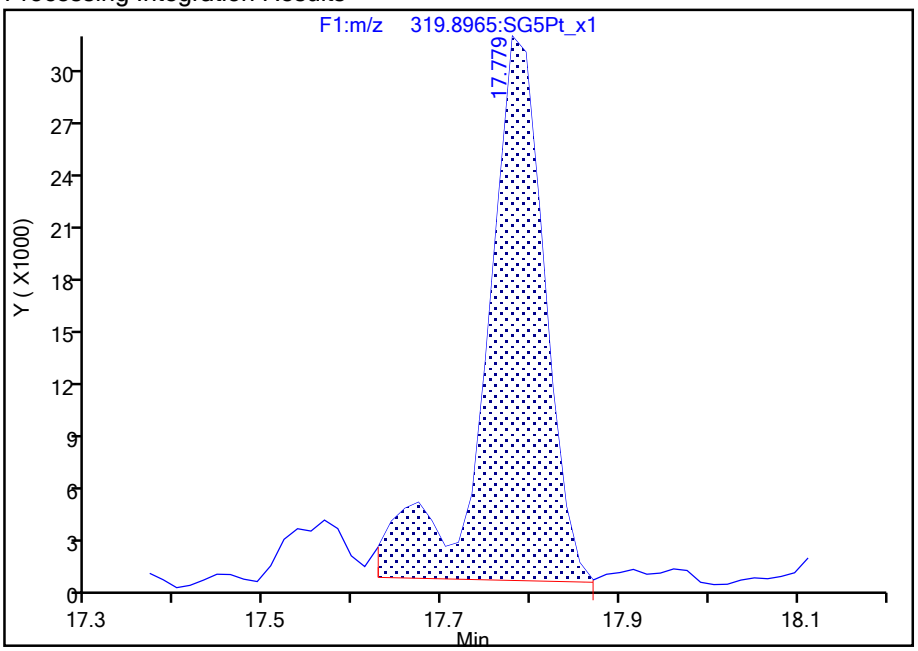

Manual Integration Results

RT: 17.78
Area: 127295
Amount: 0.734808
Amount Units: pg/ul

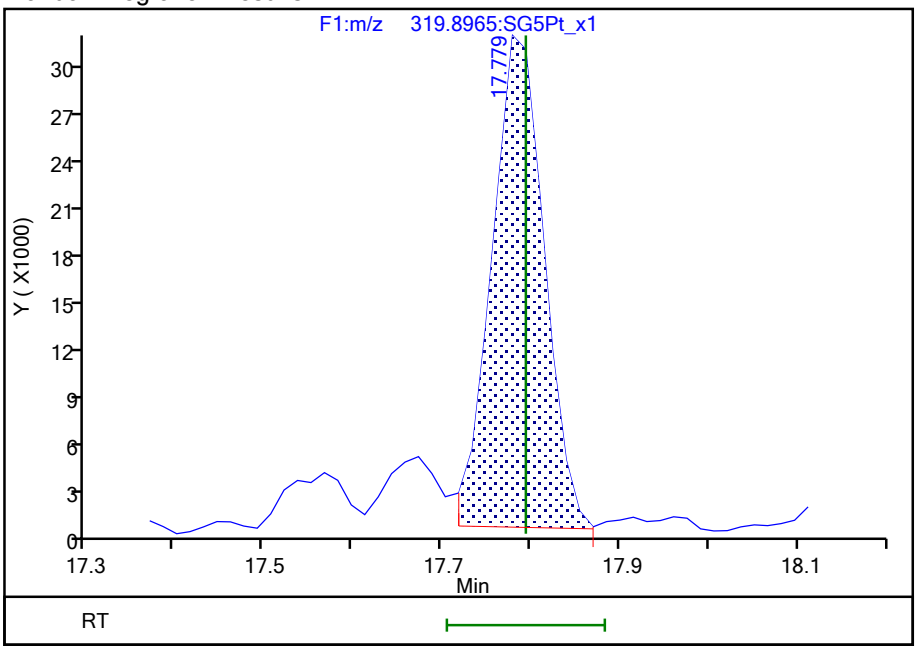

Reviewer: dadunj, 27-Aug-2021 08:22:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 17.78
Area: 217272
Amount: 0.849692
Amount Units: pg/ul

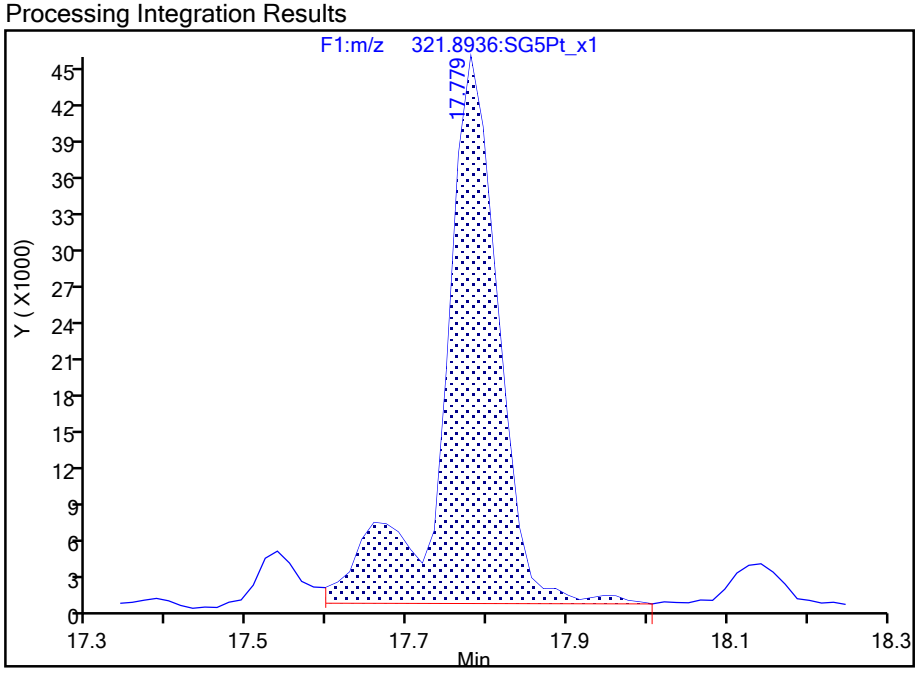

Manual Integration Results

RT: 17.78
Area: 185333
Amount: 0.734808
Amount Units: pg/ul

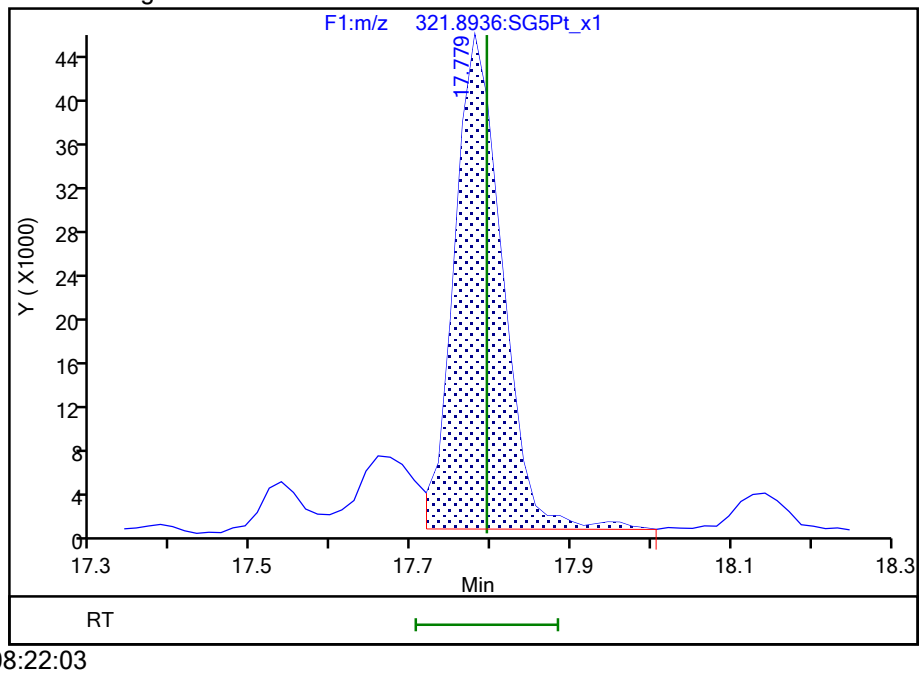

Reviewer: dadunj, 27-Aug-2021 08:22:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.59- 19.47)

Signal: 1

Processing Integration Results

RT = 15.874 Area = 13243

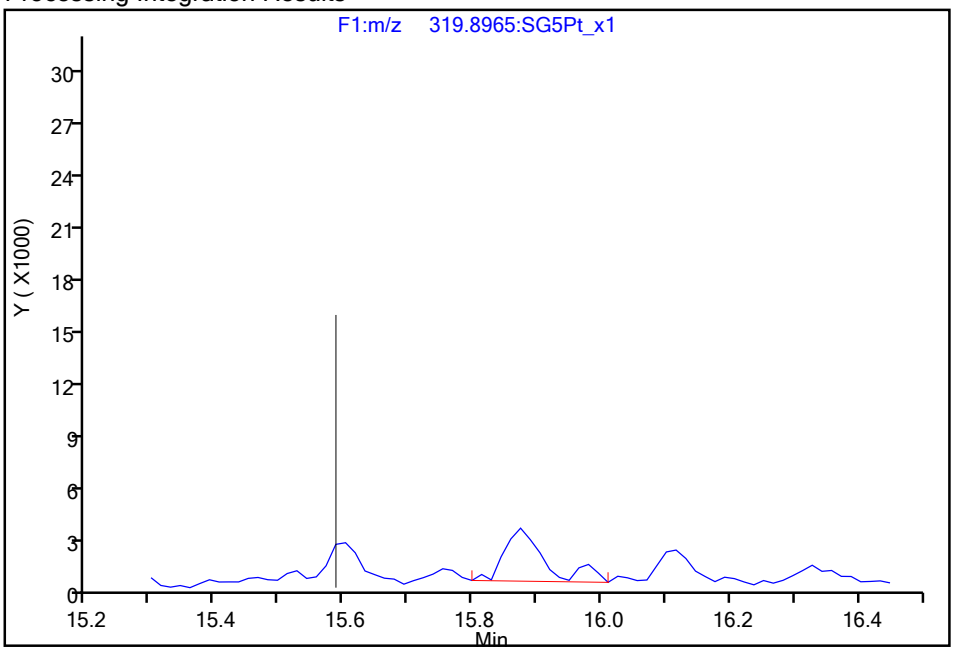

Manual Integration Results

RT = 15.874 Area = 11489 M

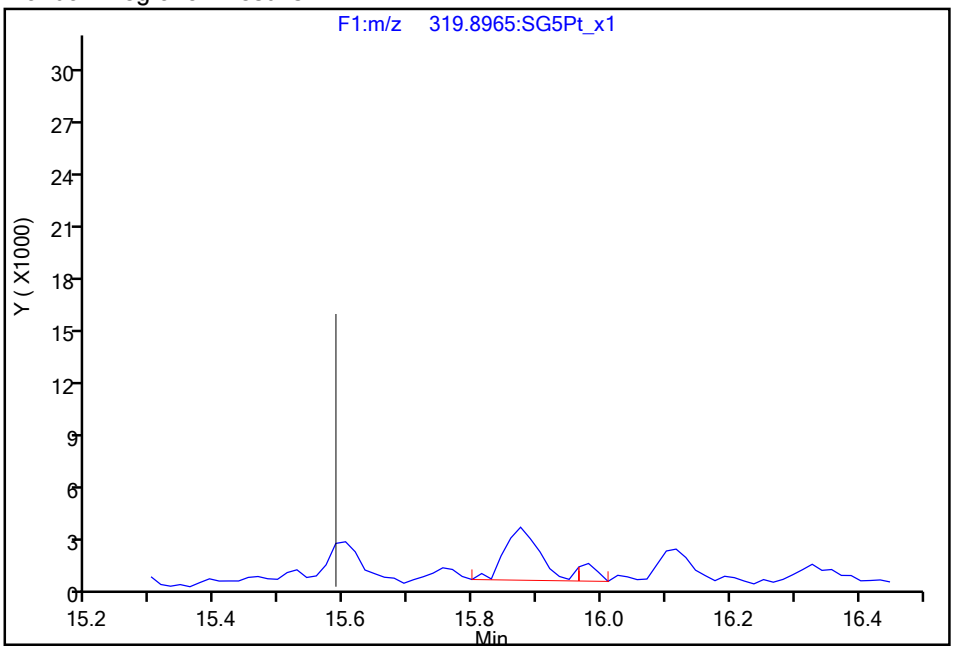

Reviewer: dadunj, 27-Aug-2021 08:22:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (15.59- 19.47)

Signal: 2

Processing Integration Results

RT = 15.874 Area = 25455

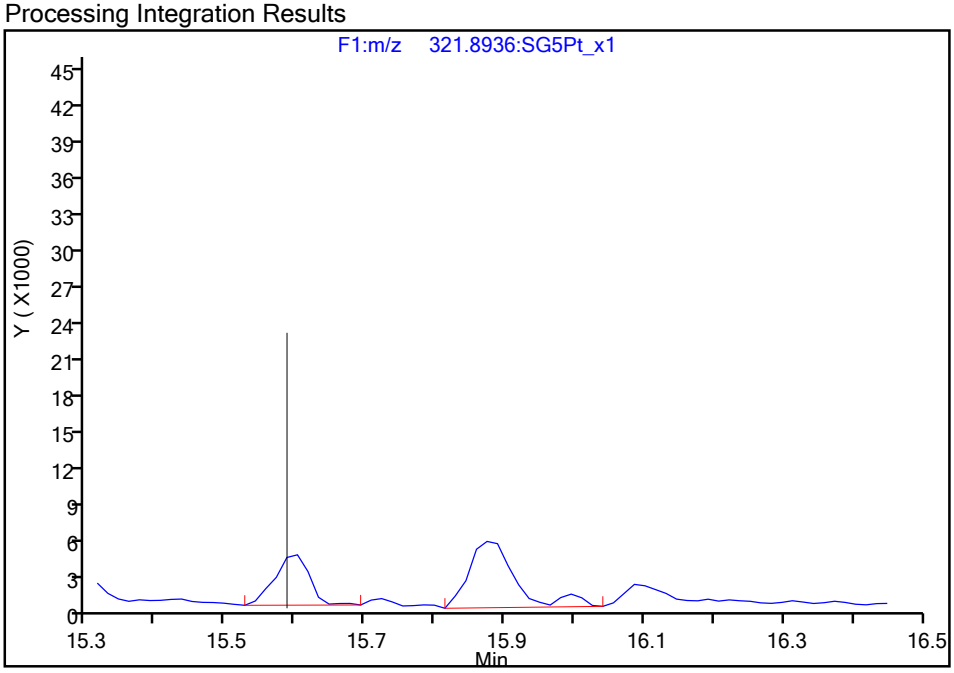

Manual Integration Results

RT = 15.874 Area = 23038 M

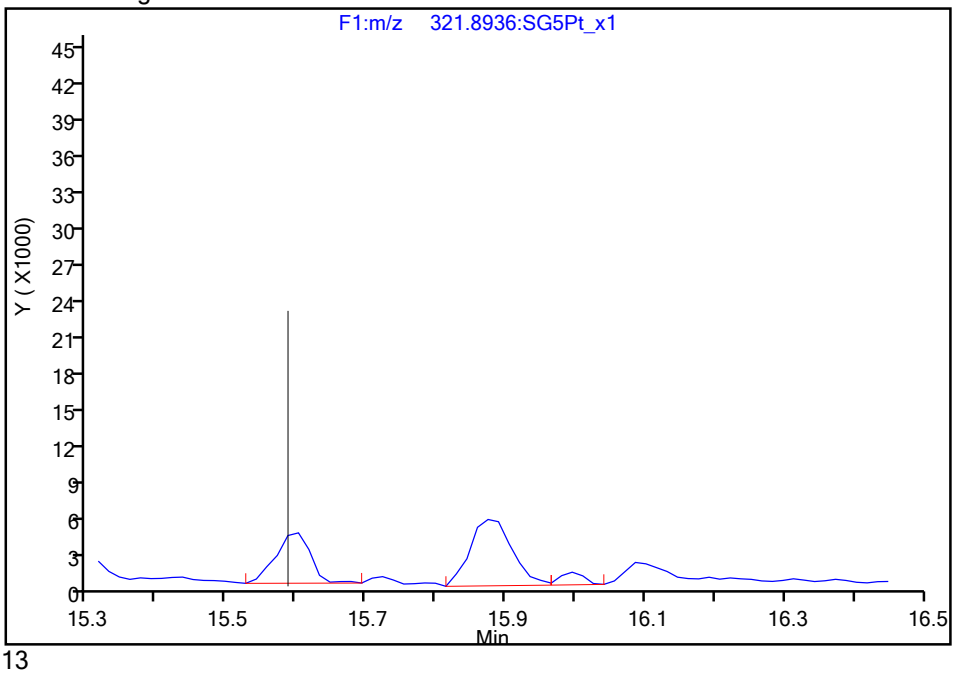

Reviewer: dadunj, 27-Aug-2021 08:22:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.59- 19.47)

Signal: 1

Processing Integration Results

Not Detected
RT: 15.59- 19.47

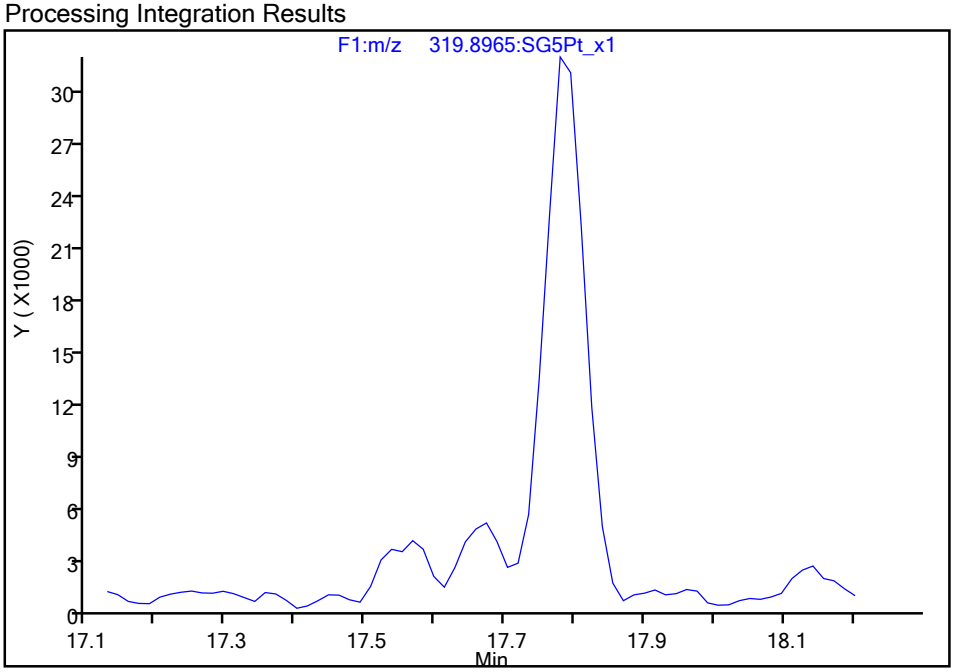

Manual Integration Results

RT = 17.674 Area = 16895 M

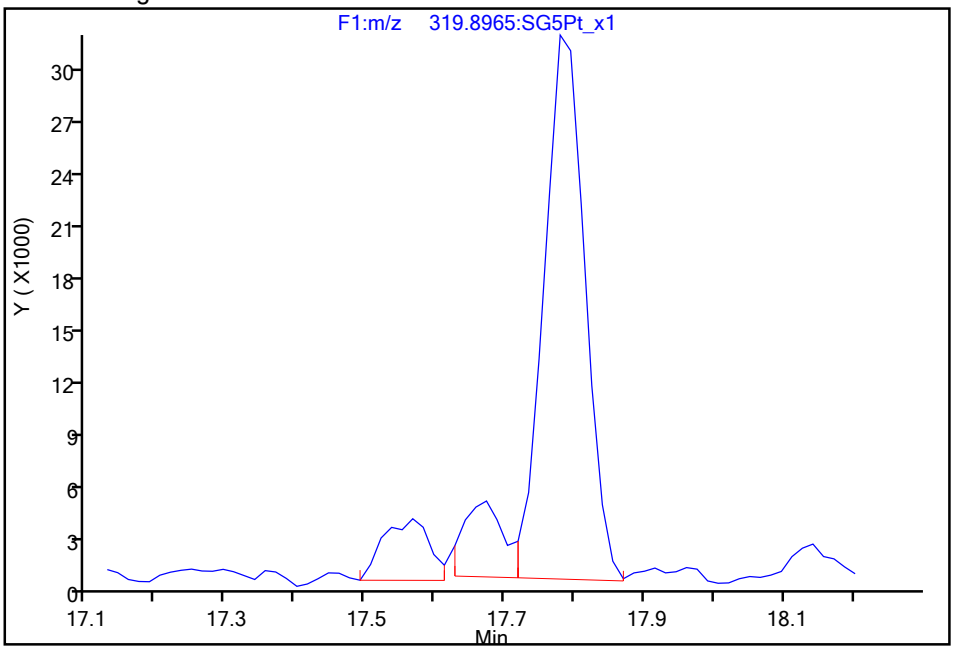

Reviewer: dadunj, 27-Aug-2021 08:22:12
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.03
Area: 23724
Amount: 0.090661
Amount Units: pg/ul

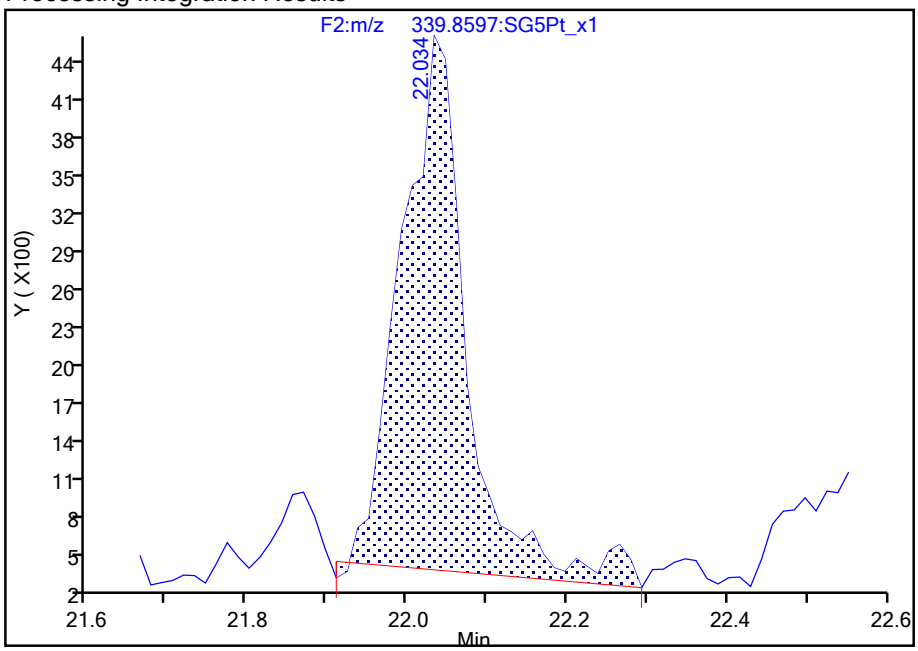

Manual Integration Results

RT: 22.03
Area: 21509
Amount: 0.085989
Amount Units: pg/ul

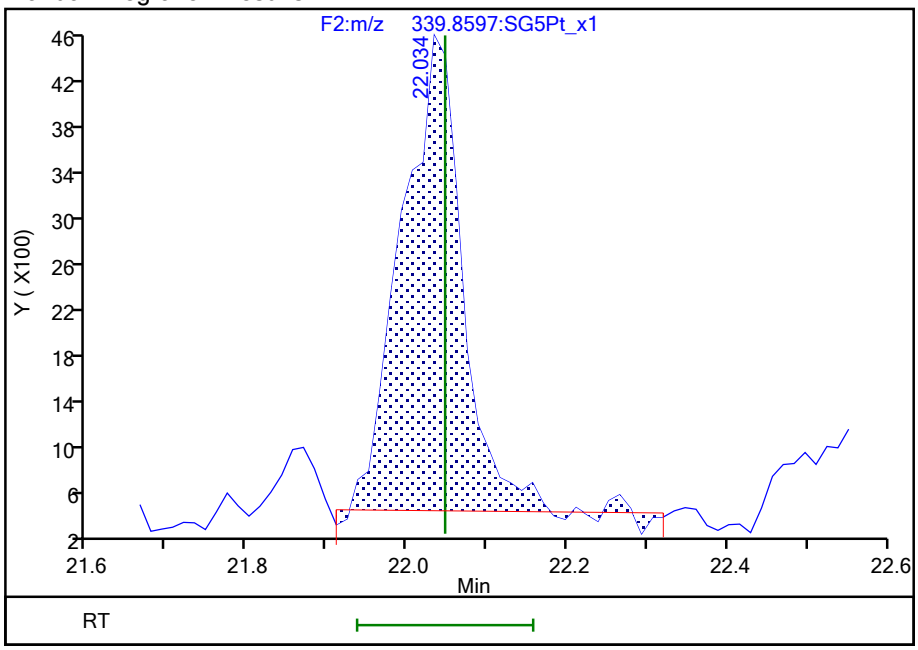

Reviewer: dadunj, 27-Aug-2021 08:22:29

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 23.37
Area: 16770
Amount: 0.059616
Amount Units: pg/ul

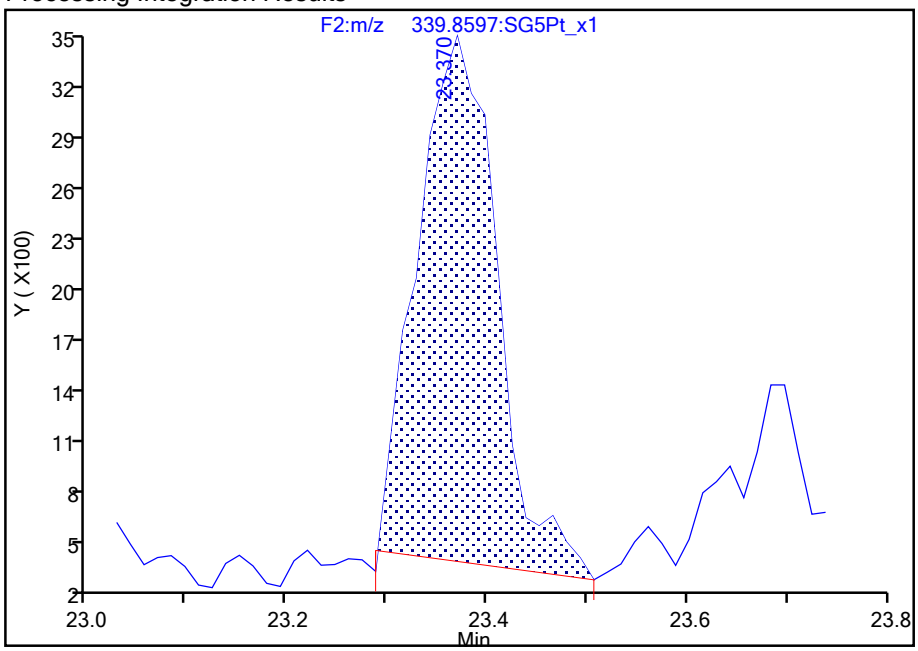

Manual Integration Results

RT: 23.37
Area: 17901
Amount: 0.061850
Amount Units: pg/ul

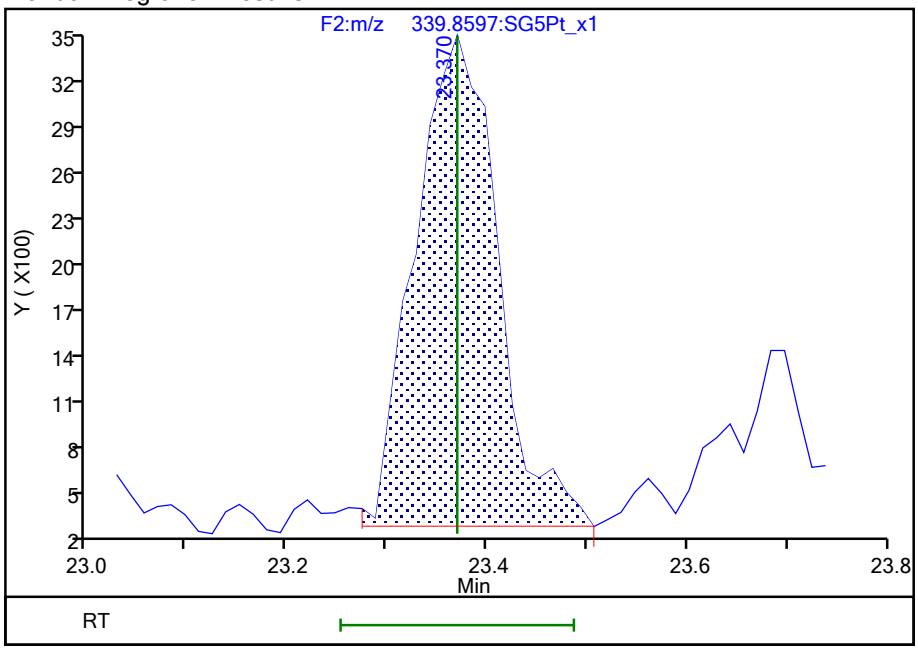

Reviewer: dadunj, 27-Aug-2021 08:22:41

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 21.652 Area = 49380

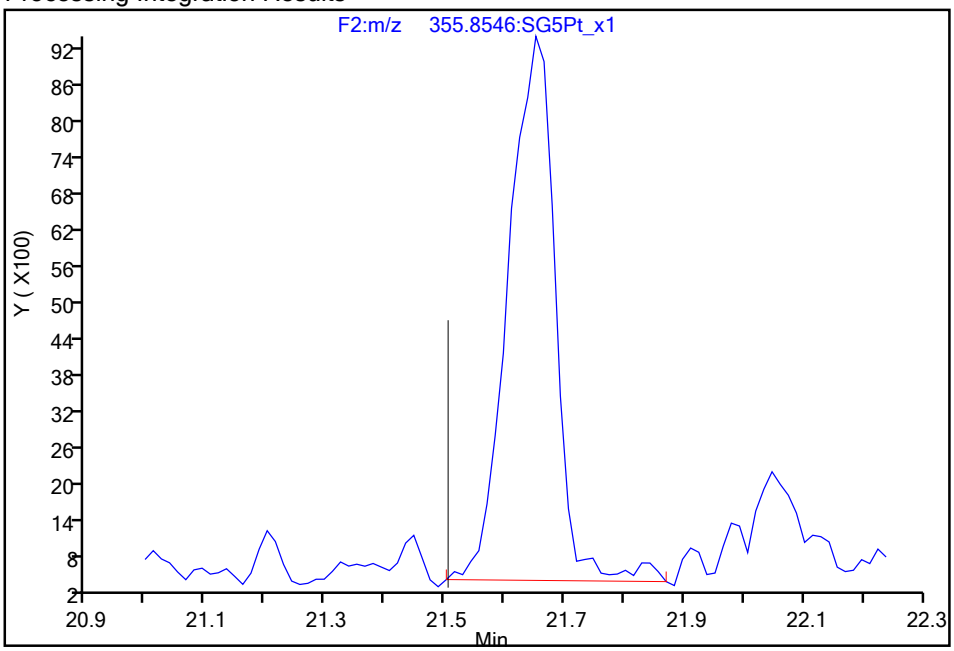

Manual Integration Results

RT = 21.652 Area = 48070 M

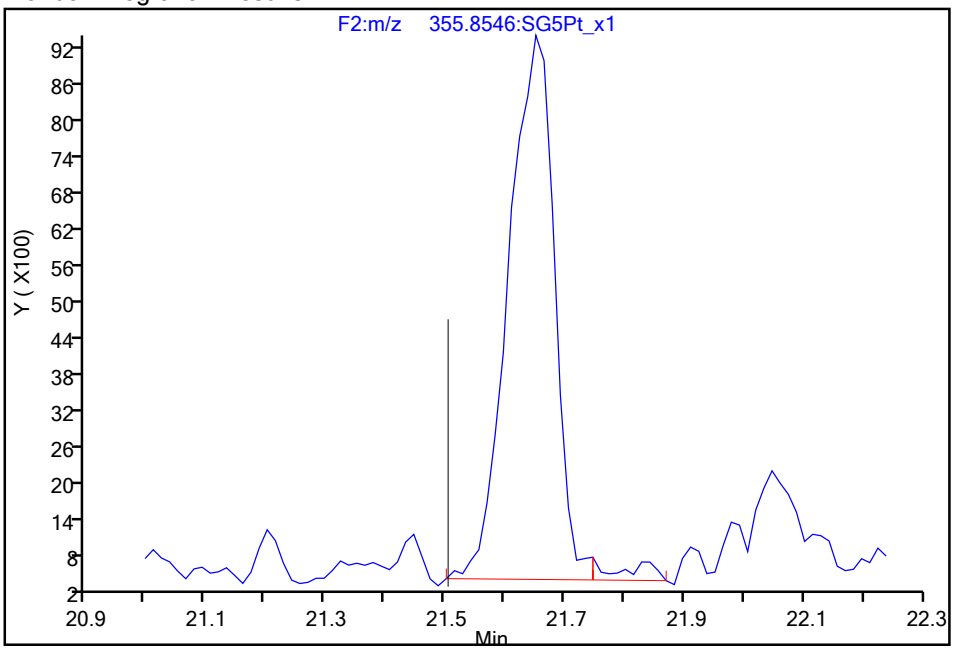

Reviewer: dadunj, 27-Aug-2021 08:22:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 23.084 Area = 27022

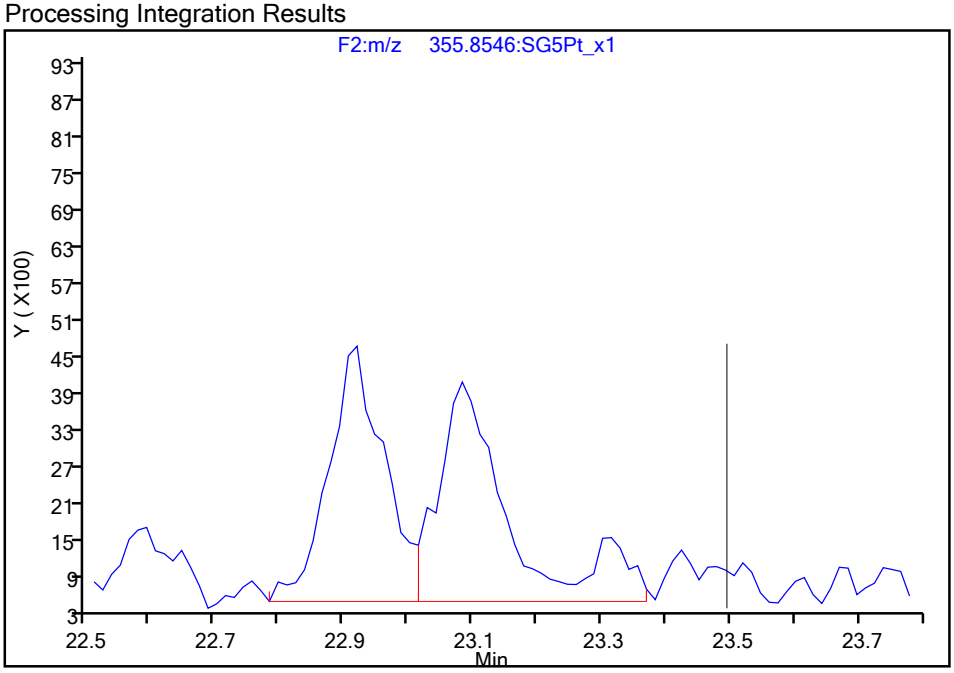

Manual Integration Results

RT = 23.084 Area = 23428 M

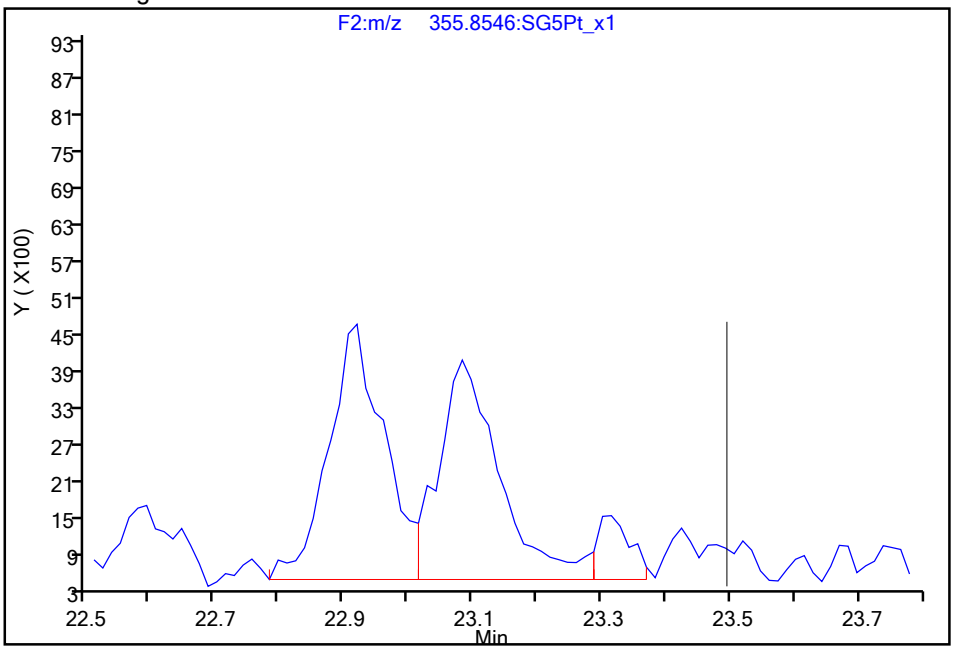

Reviewer: dadunj, 27-Aug-2021 08:22:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

RT: 30.20
Area: 33864
Amount: 0.120000
Amount Units: pg/ul

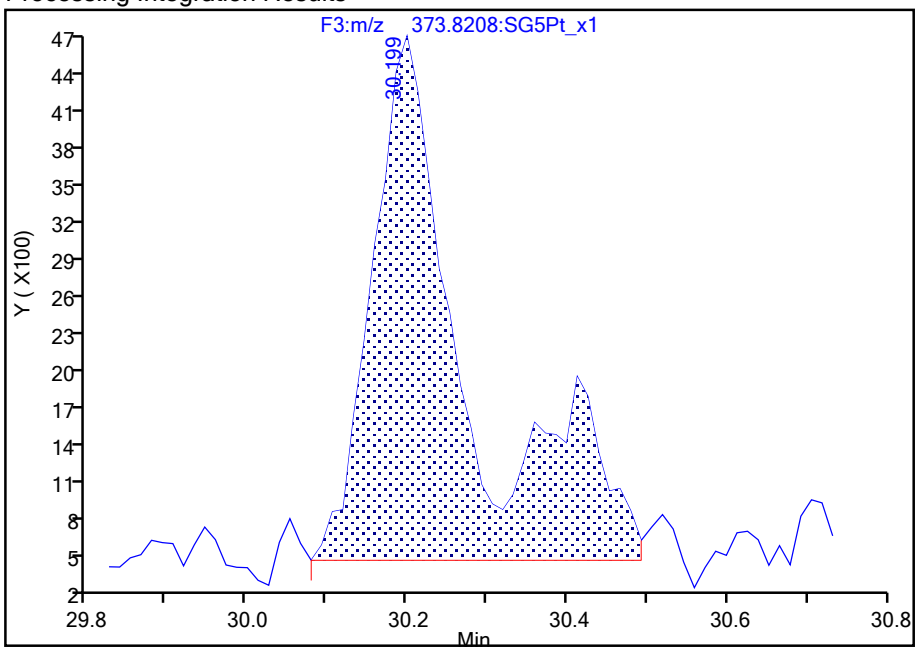

Manual Integration Results

RT: 30.20
Area: 25045
Amount: 0.098619
Amount Units: pg/ul

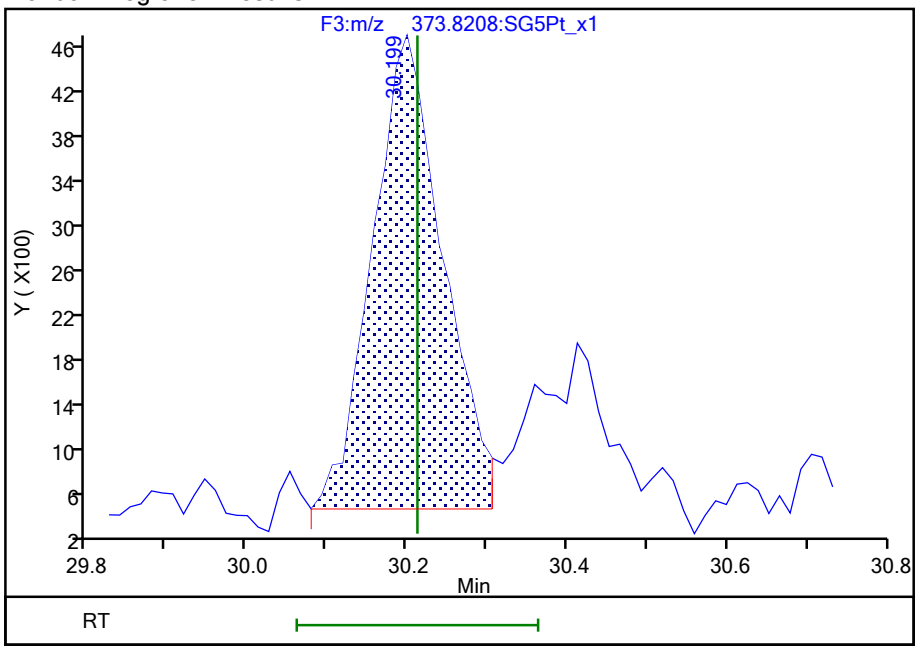

Reviewer: dadunj, 27-Aug-2021 08:23:06

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 2

Processing Integration Results

RT: 30.19
Area: 21643
Amount: 0.120000
Amount Units: pg/ul

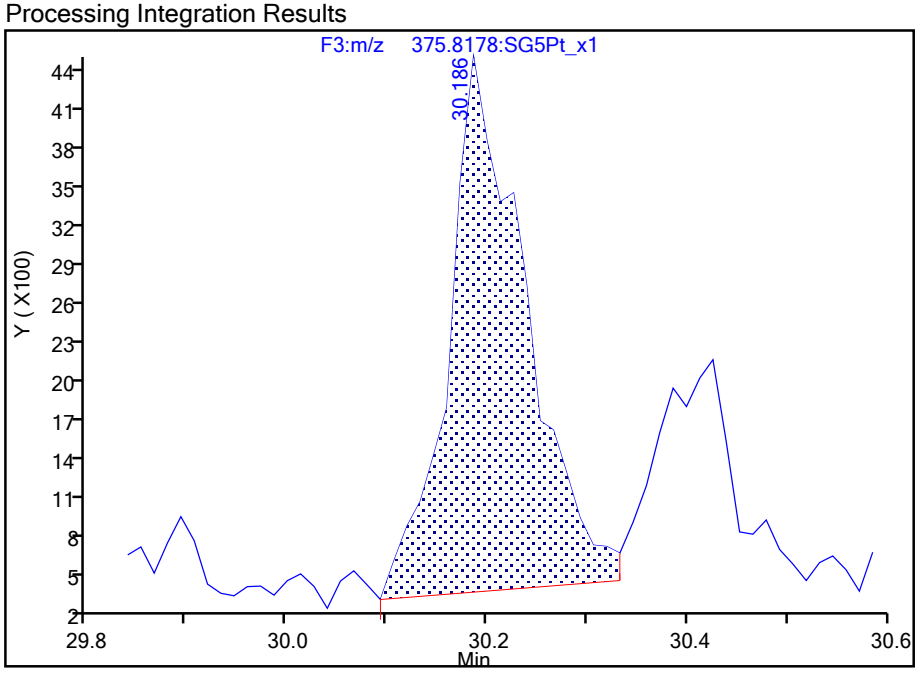

Manual Integration Results

RT: 30.19
Area: 20572
Amount: 0.098619
Amount Units: pg/ul

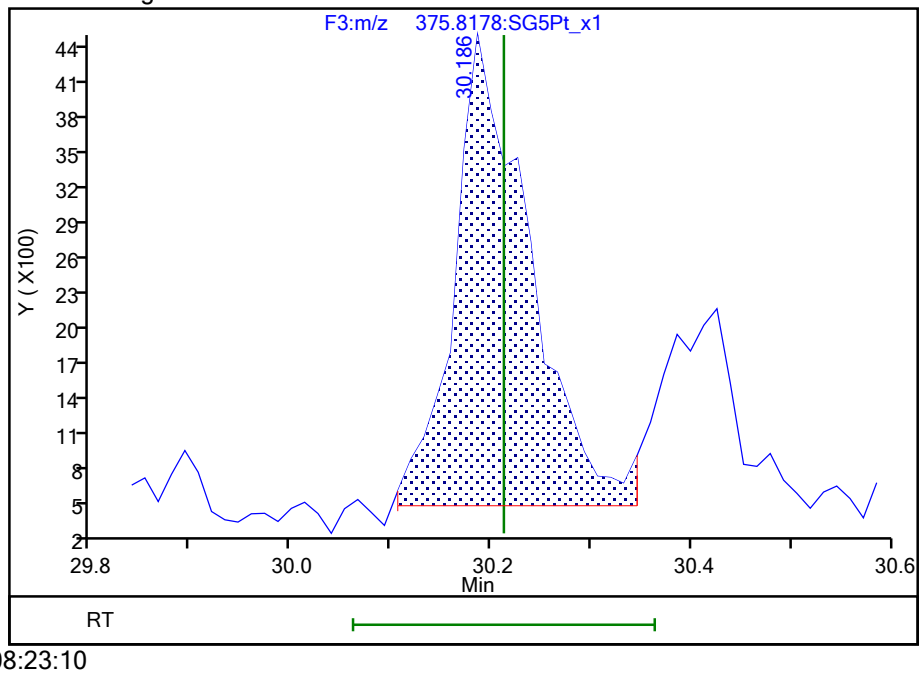

Reviewer: dadunj, 27-Aug-2021 08:23:10

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Not Detected
Expected RT: 30.41

Processing Integration Results

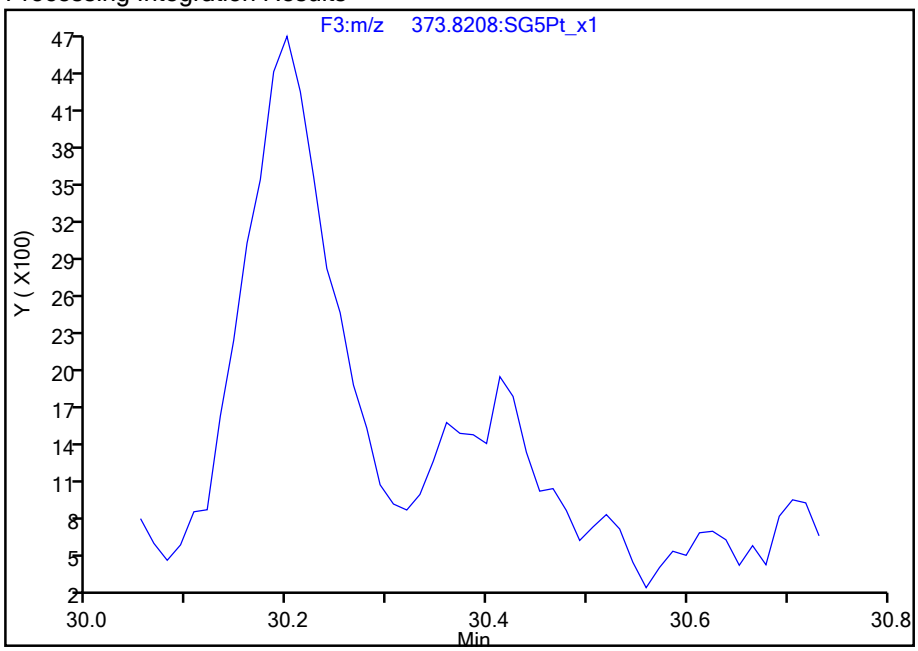

Manual Integration Results

RT: 30.41
Area: 8818
Amount: 0.040958
Amount Units: pg/ul

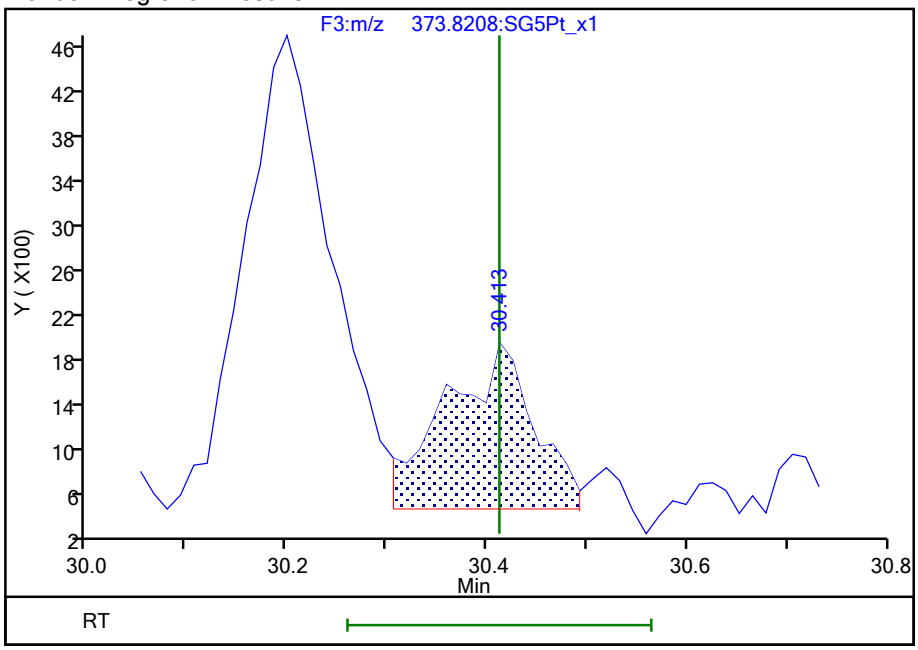

Reviewer: dadunj, 27-Aug-2021 08:23:16
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

791332

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.16
Area: 11940
Amount: 0.057462
Amount Units: pg/ul

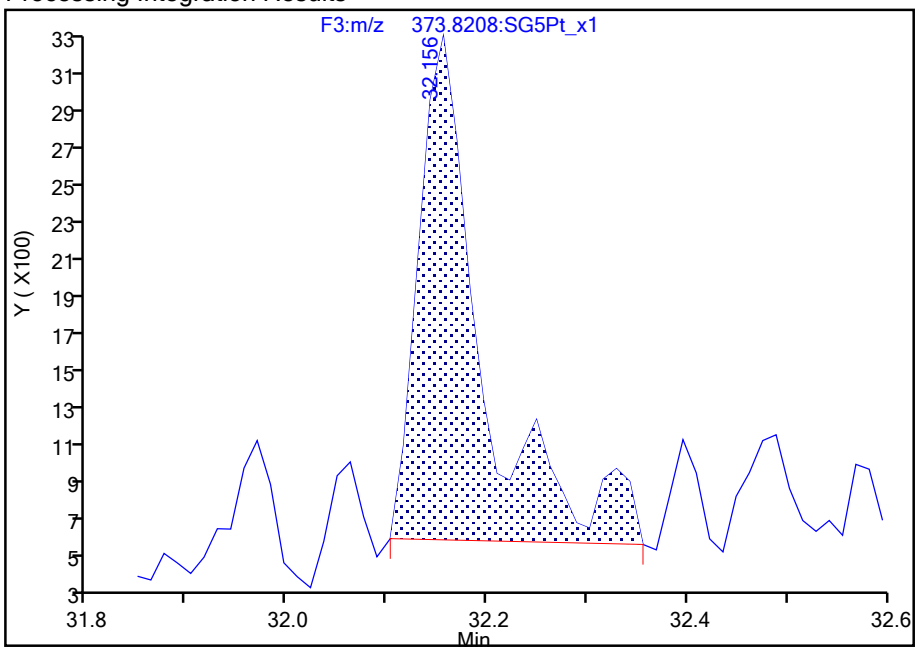

Manual Integration Results

RT: 32.16
Area: 9341
Amount: 0.044164
Amount Units: pg/ul

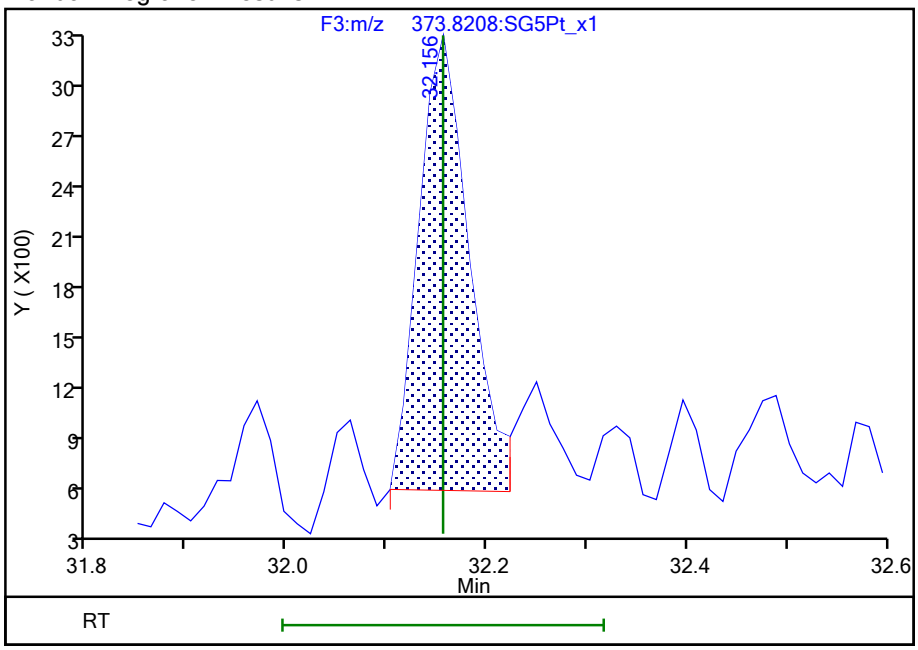

Reviewer: dadunj, 27-Aug-2021 08:23:40

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.16
Area: 10573
Amount: 0.057462
Amount Units: pg/ul

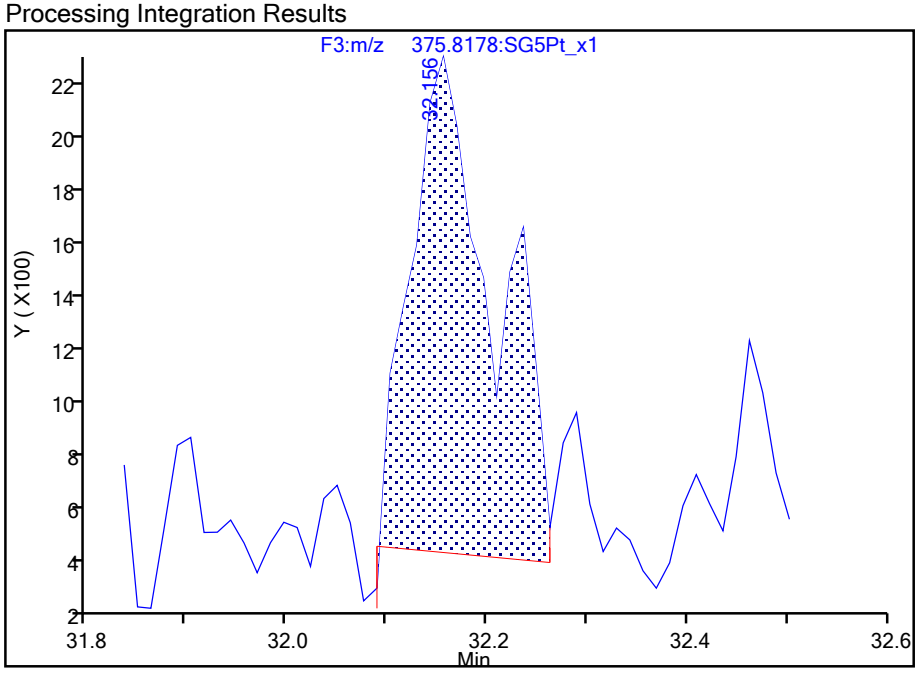

Manual Integration Results

RT: 32.16
Area: 7962
Amount: 0.044164
Amount Units: pg/ul

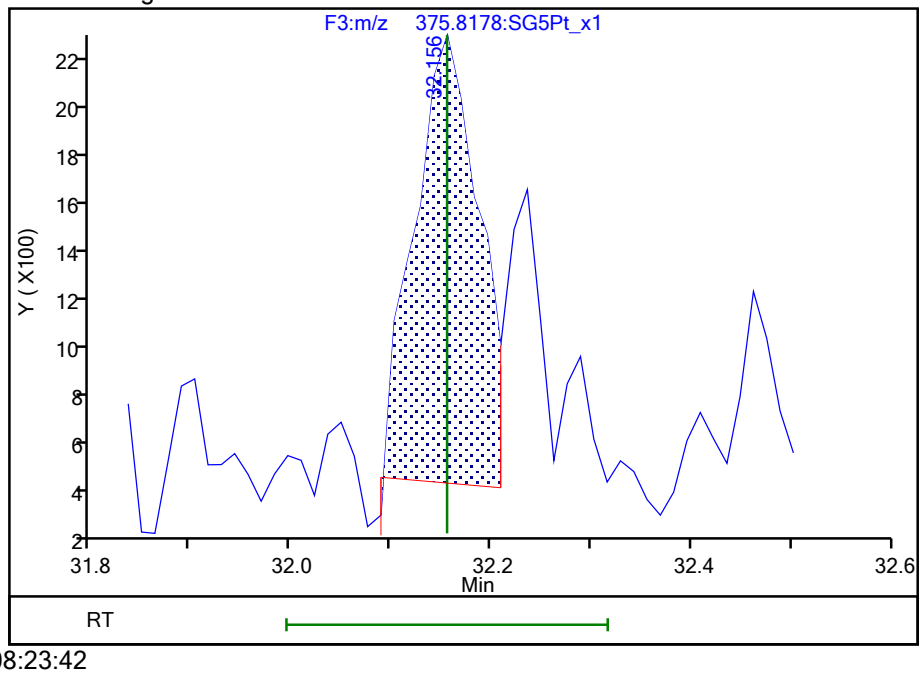

Reviewer: dadunj, 27-Aug-2021 08:23:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.62
Area: 20680
Amount: 0.235441
Amount Units: pg/ul

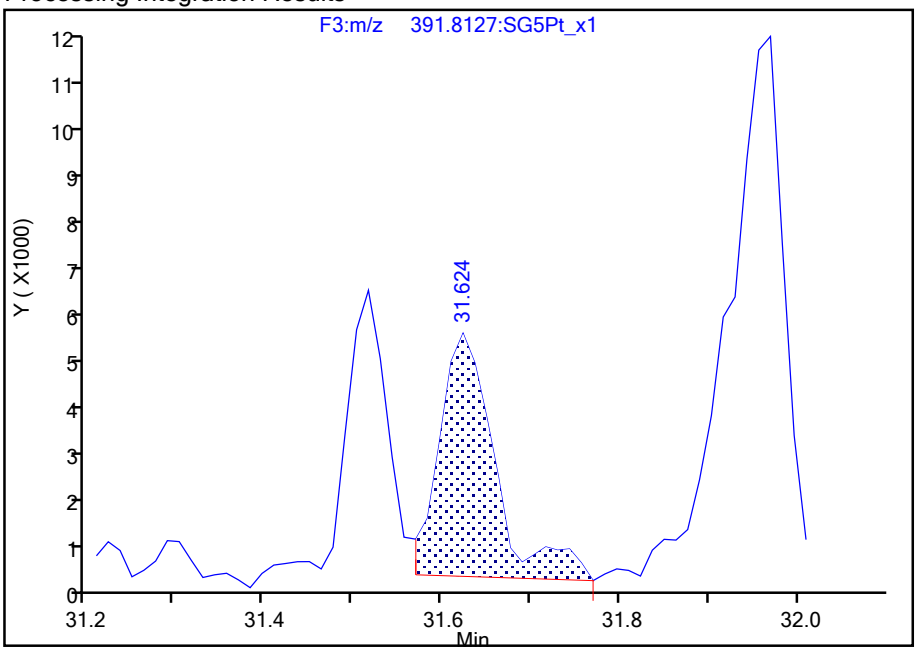

Manual Integration Results

RT: 31.52
Area: 17083
Amount: 0.130423
Amount Units: pg/ul

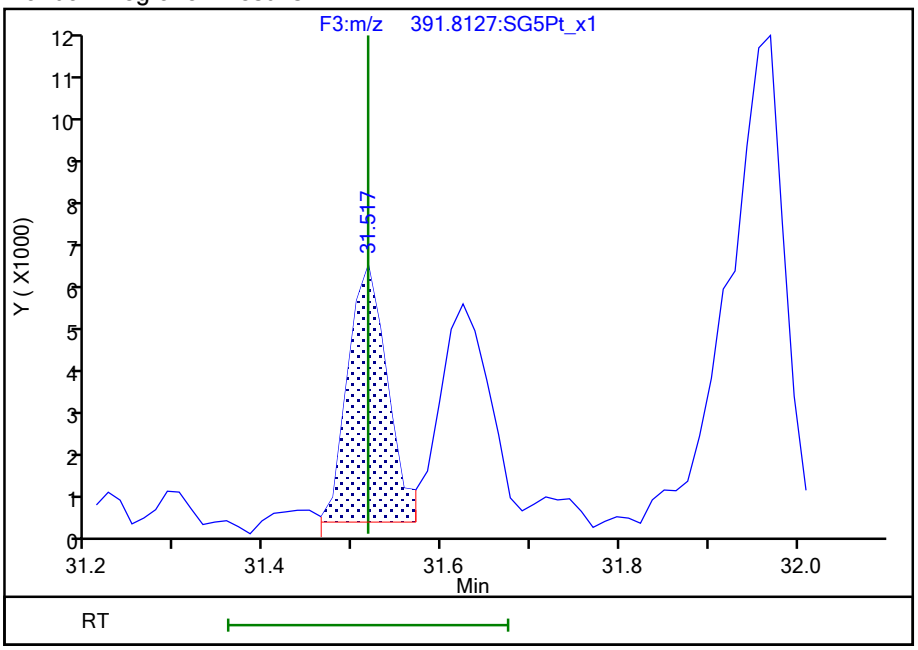

Reviewer: dadunj, 27-Aug-2021 08:23:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

Processing Integration Results

RT: 31.62
Area: 72721
Amount: 0.235441
Amount Units: pg/ul

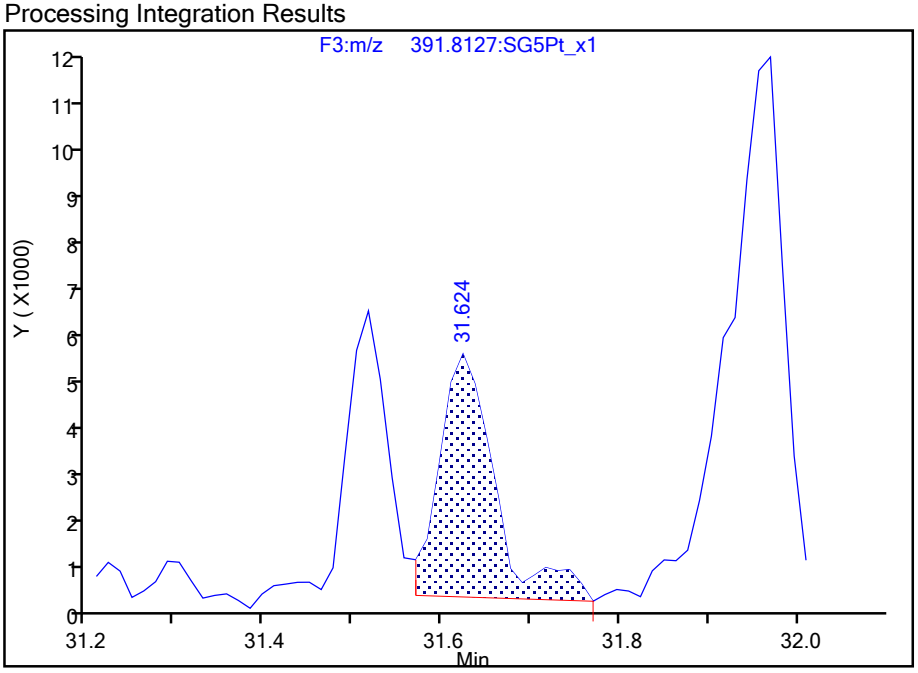

Manual Integration Results

RT: 31.52
Area: 40284
Amount: 0.130423
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 08:23:54
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.62
Area: 52041
Amount: 0.235441
Amount Units: pg/ul

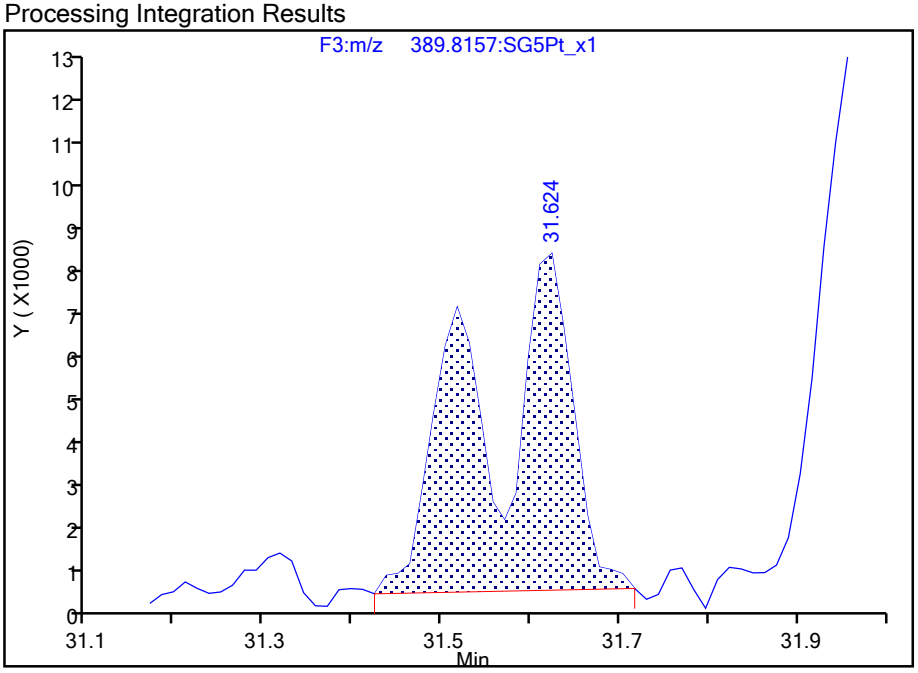

Manual Integration Results

RT: 31.52
Area: 23201
Amount: 0.130423
Amount Units: pg/ul

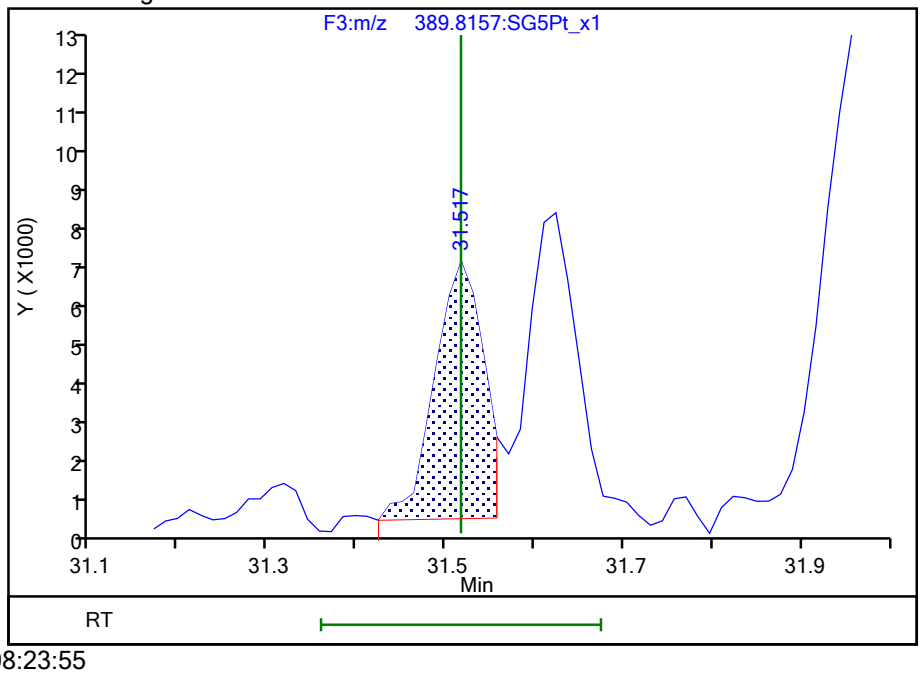

Reviewer: dadunj, 27-Aug-2021 08:23:55

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.62
Area: 52041
Amount: 0.250979
Amount Units: pg/ul

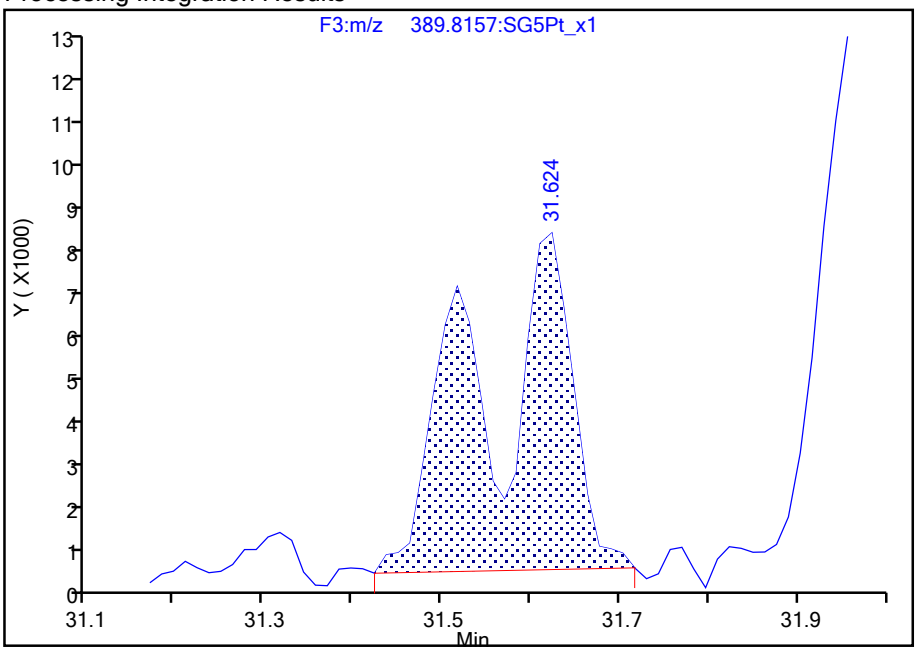

Manual Integration Results

RT: 31.62
Area: 28819
Amount: 0.170834
Amount Units: pg/ul

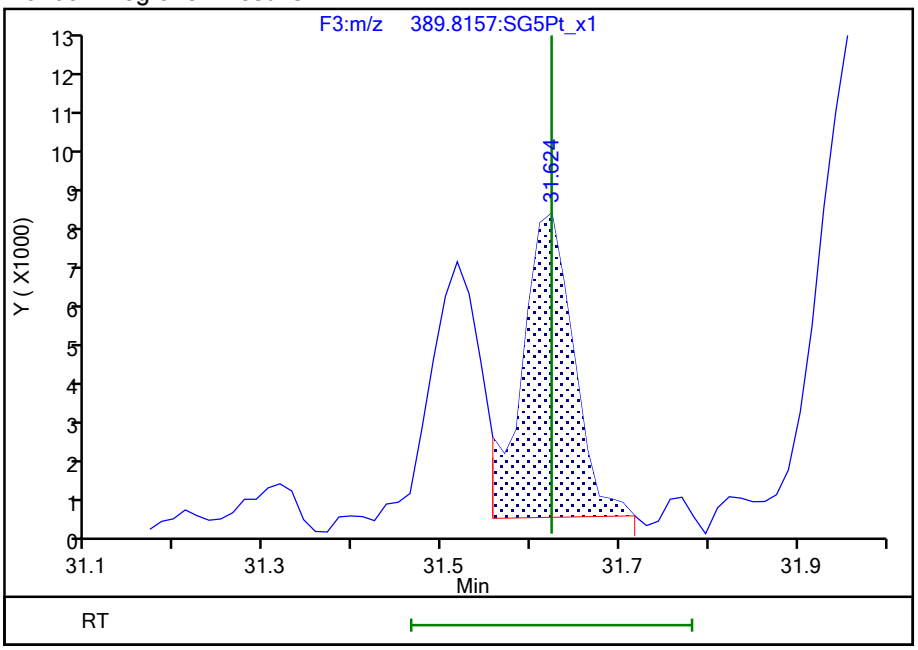

Reviewer: dadunj, 27-Aug-2021 08:23:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

791338

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.73
Area: 14349
Amount: 0.072915
Amount Units: pg/ul

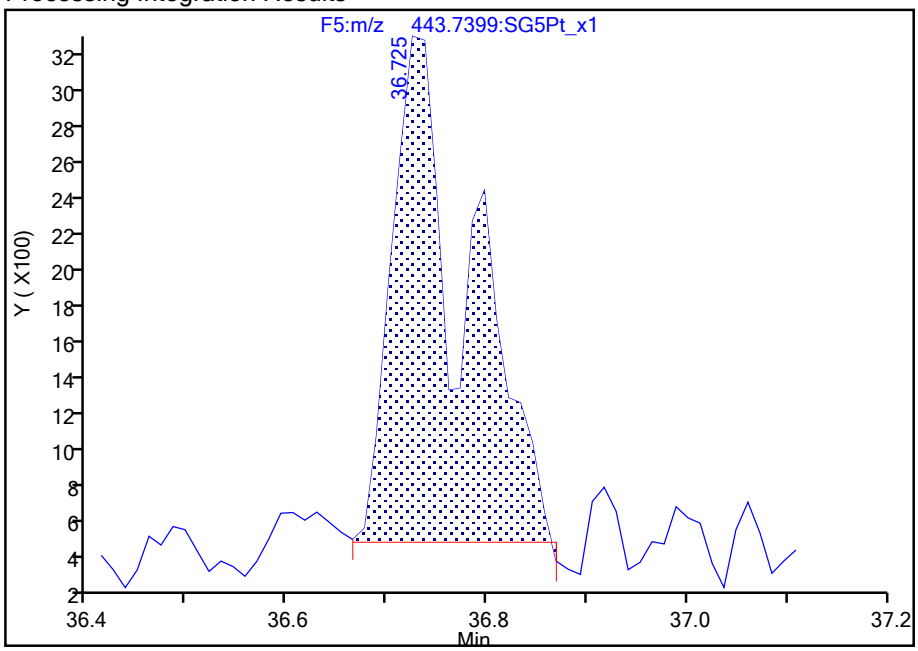

Manual Integration Results

RT: 36.80
Area: 5870
Amount: 0.060048
Amount Units: pg/ul

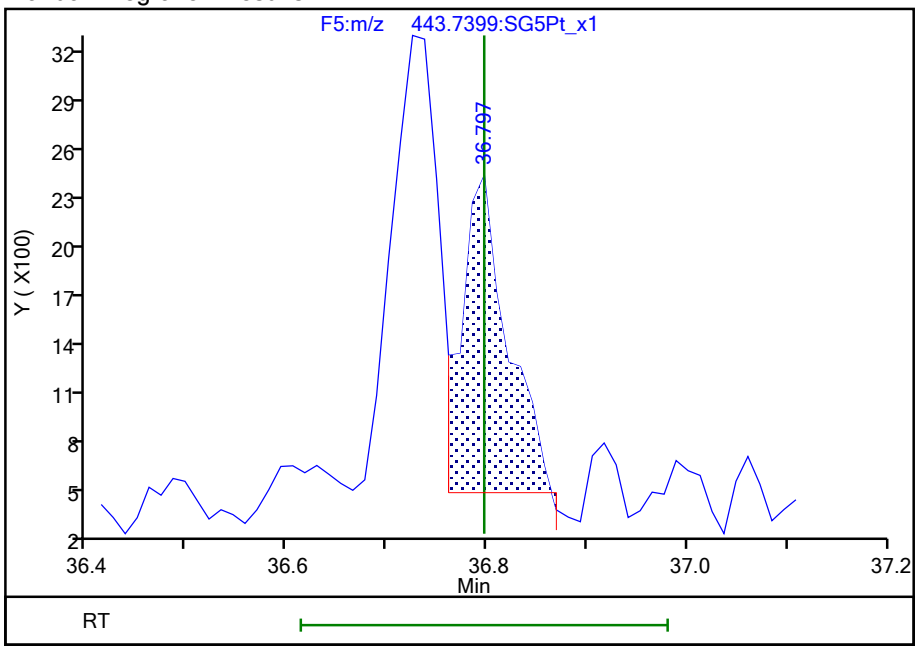

Reviewer: dadunj, 27-Aug-2021 08:25:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d				
Injection Date:	26-Aug-2021 00:35:47	Instrument ID:	10D5		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:	SMA	ALS Bottle#:	31	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.73
Area: 3461
Amount: 0.072915
Amount Units: pg/ul

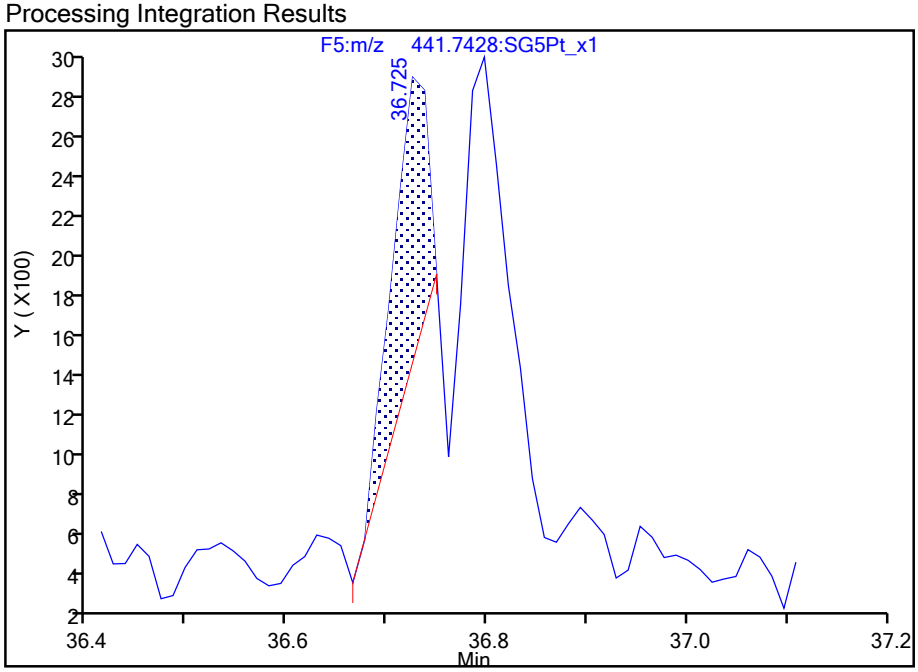

Manual Integration Results

RT: 36.80
Area: 8797
Amount: 0.060048
Amount Units: pg/ul

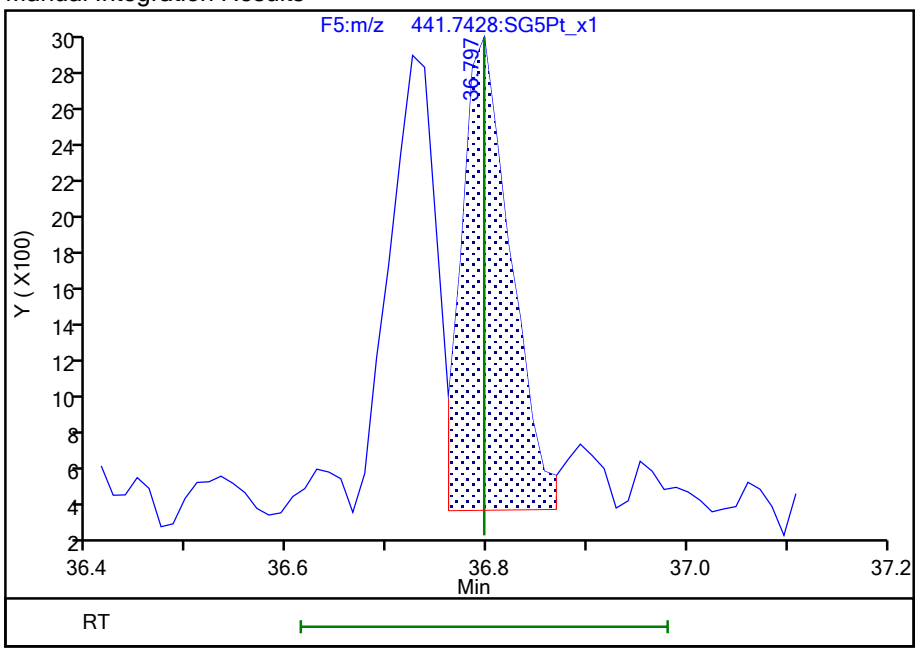

Reviewer: dadunj, 27-Aug-2021 08:25:04

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

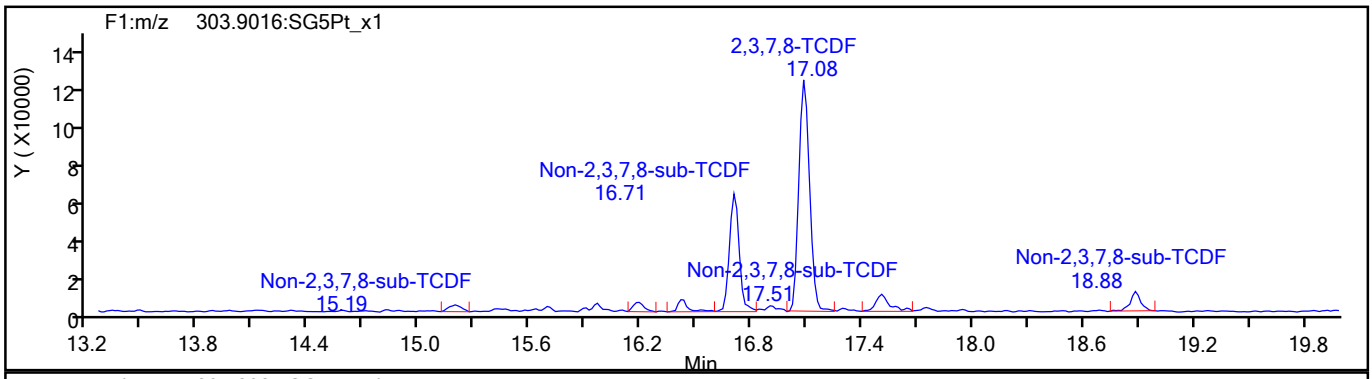

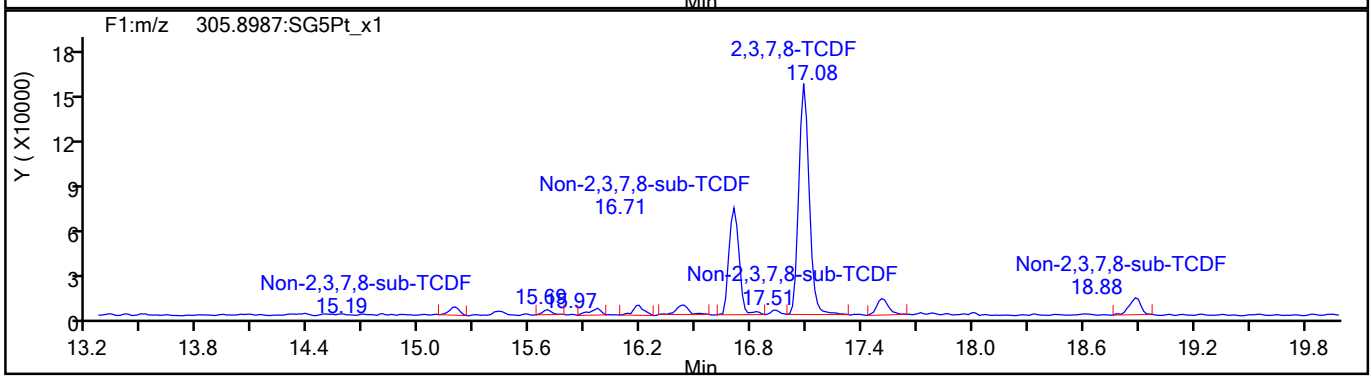

TCDF Standards

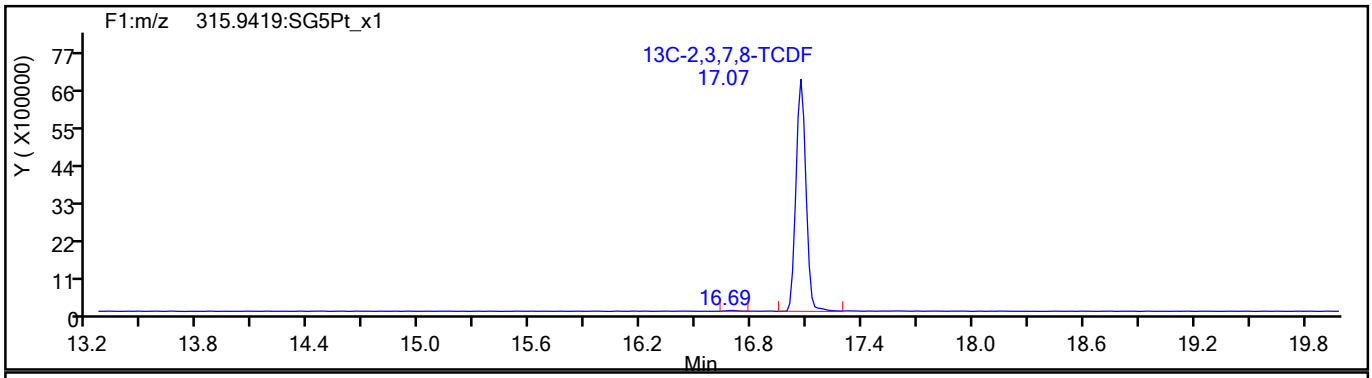

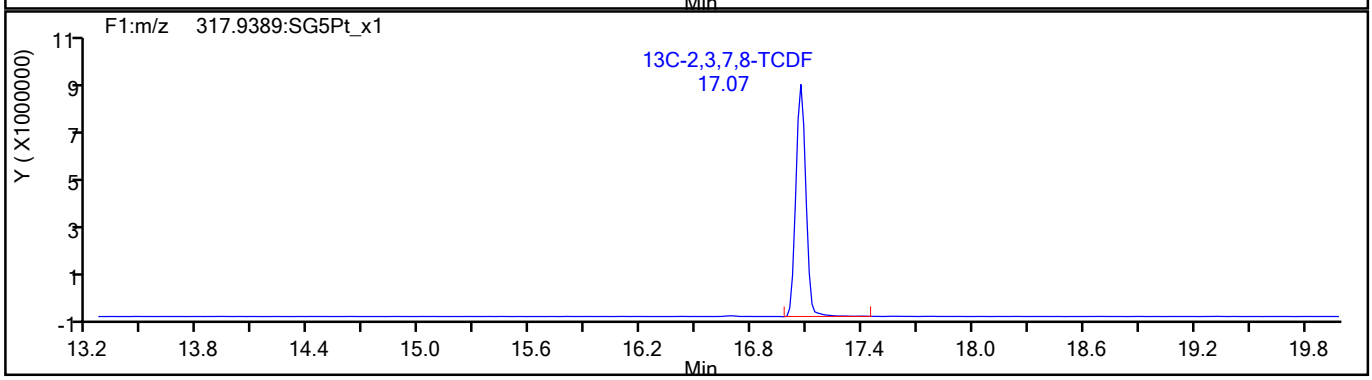

791341

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

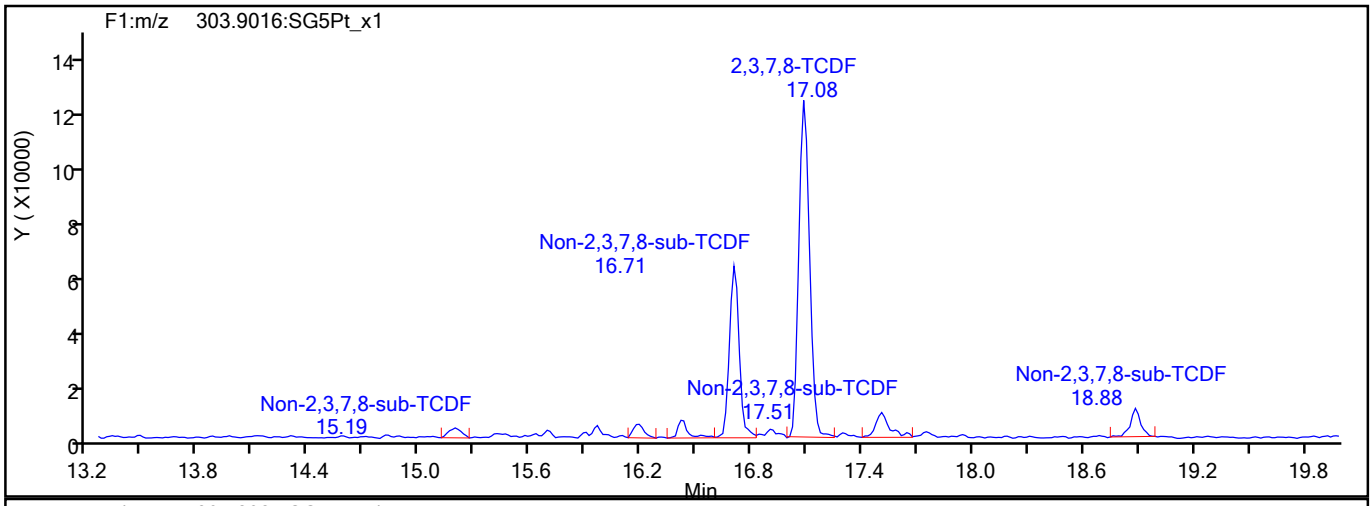

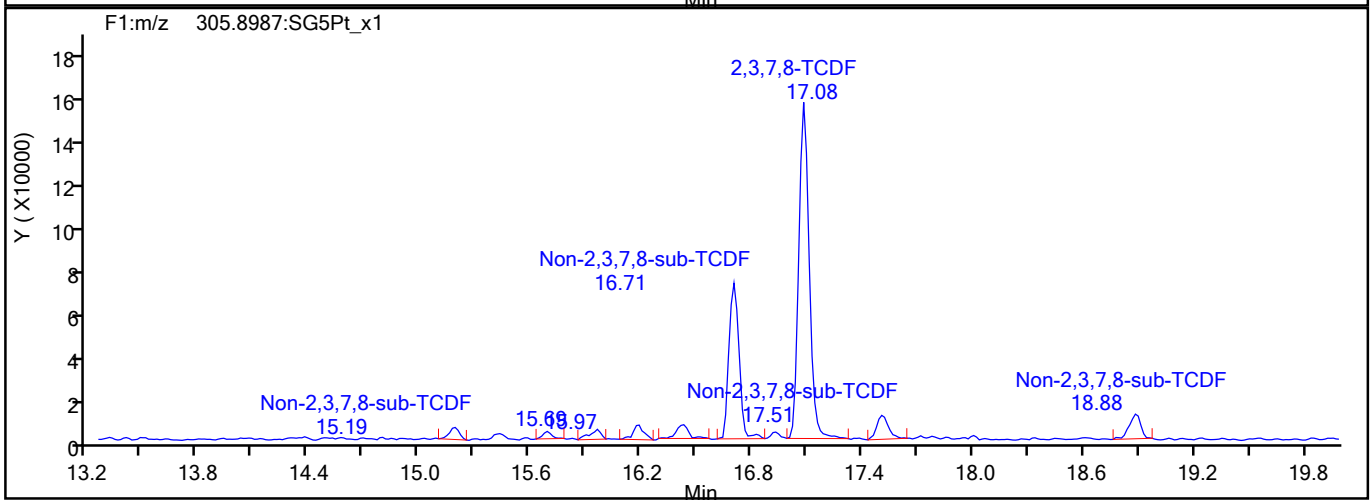

TCDF Interference Mass

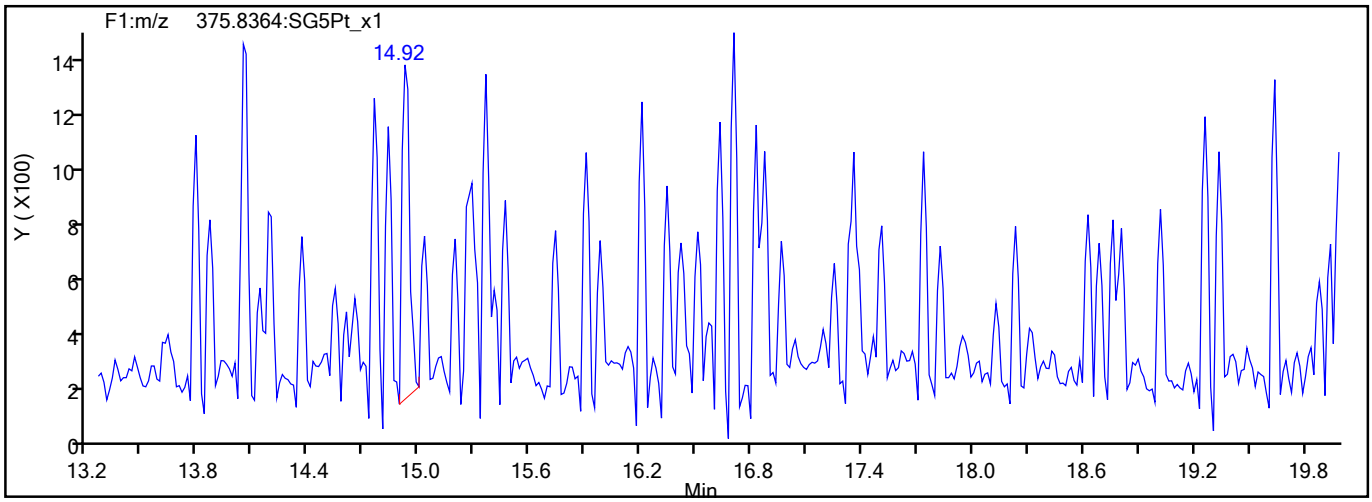

791342

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

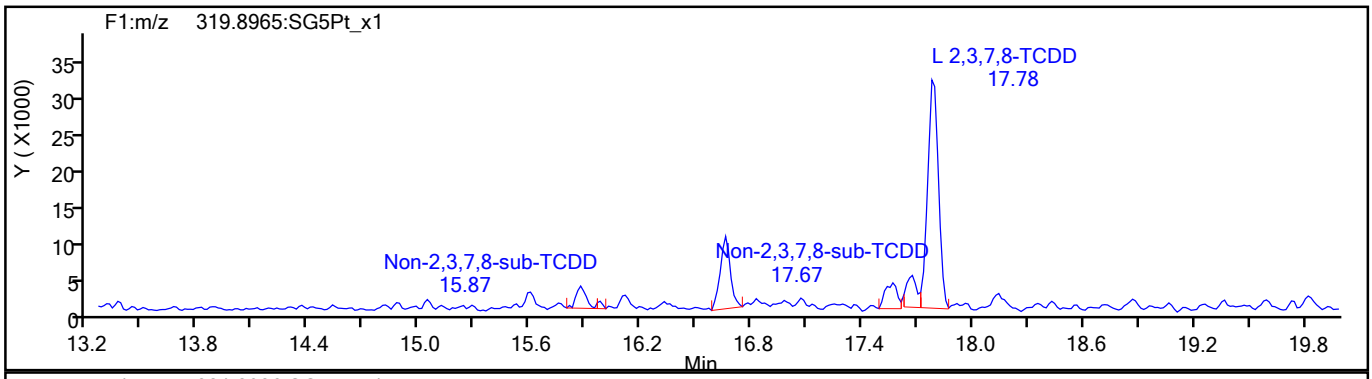

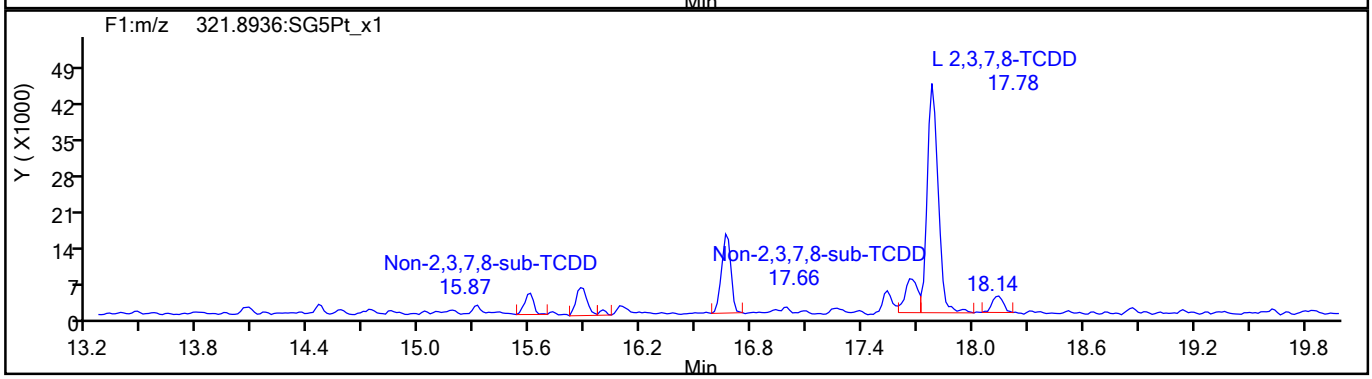

TCDD Standards

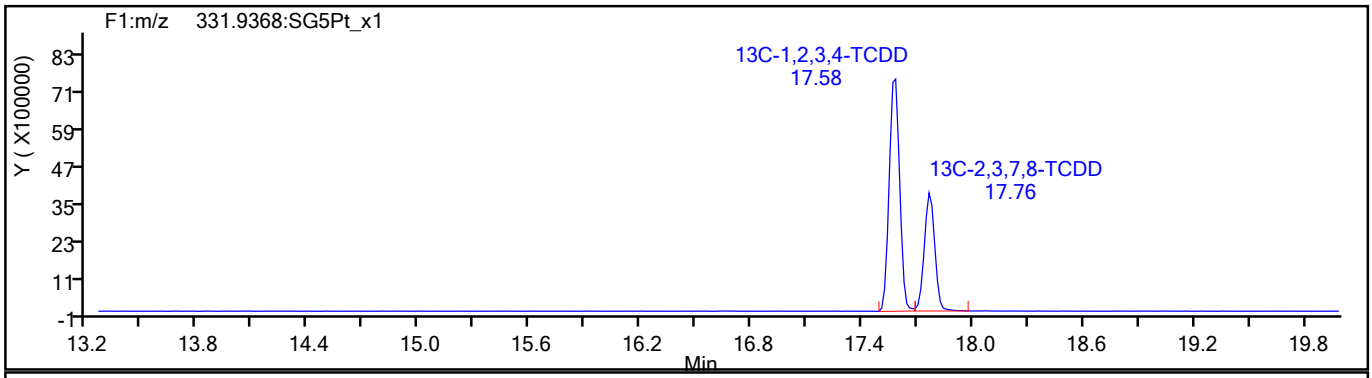

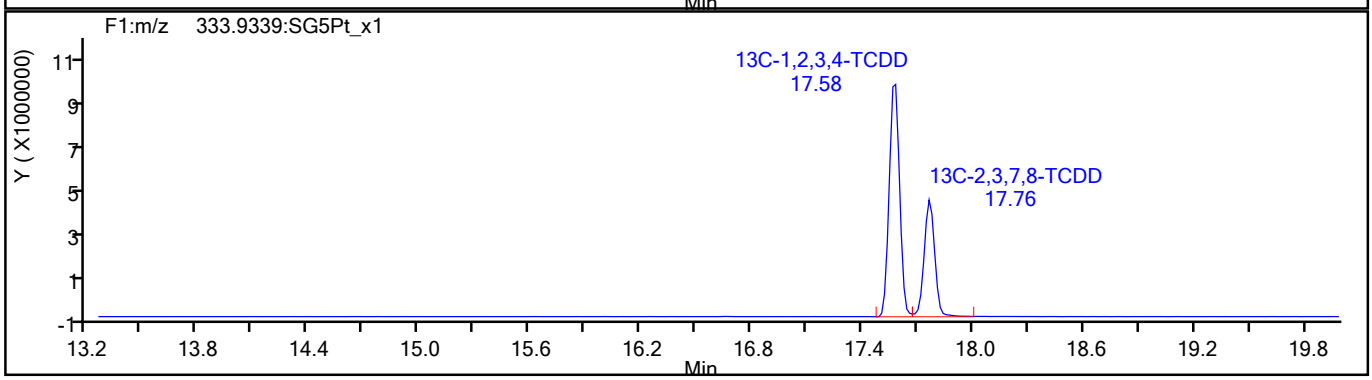

791343

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

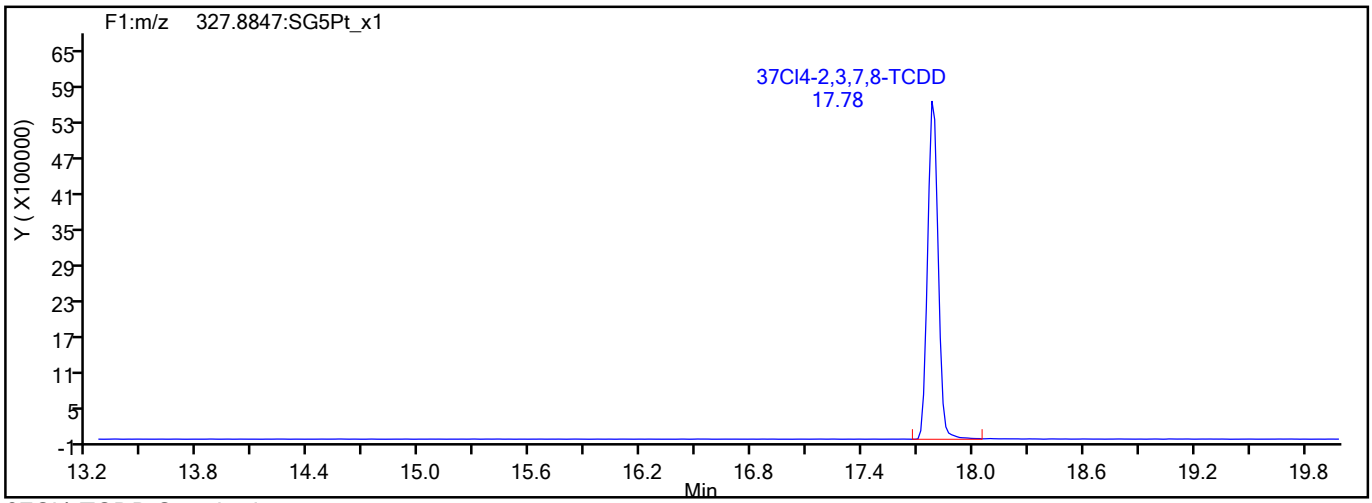

37Cl4-TCDD Standards

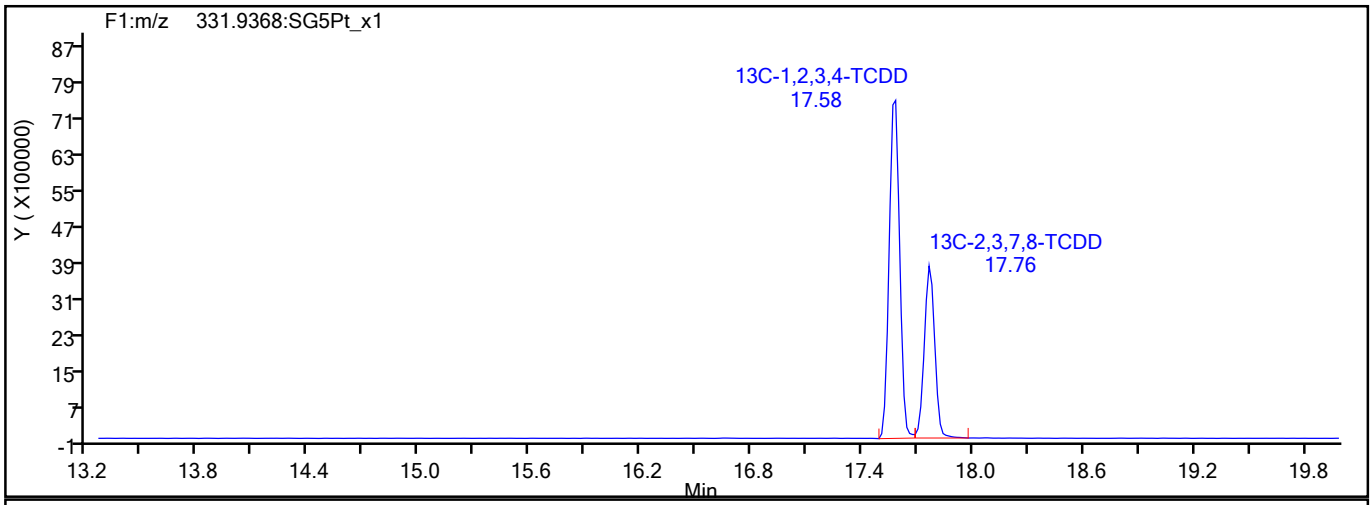

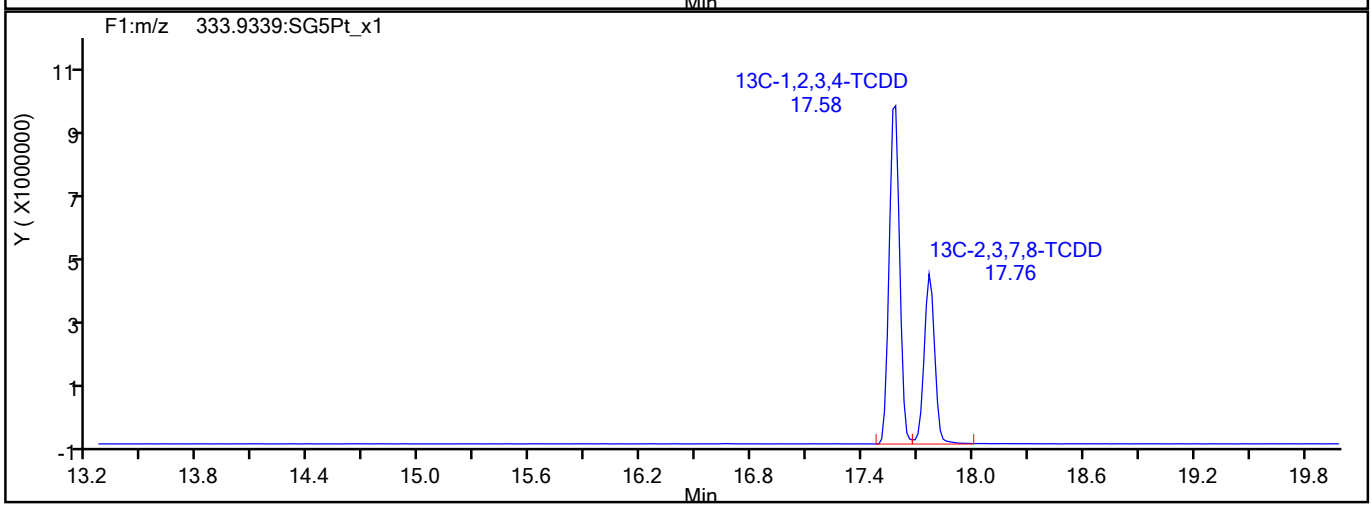

791344

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

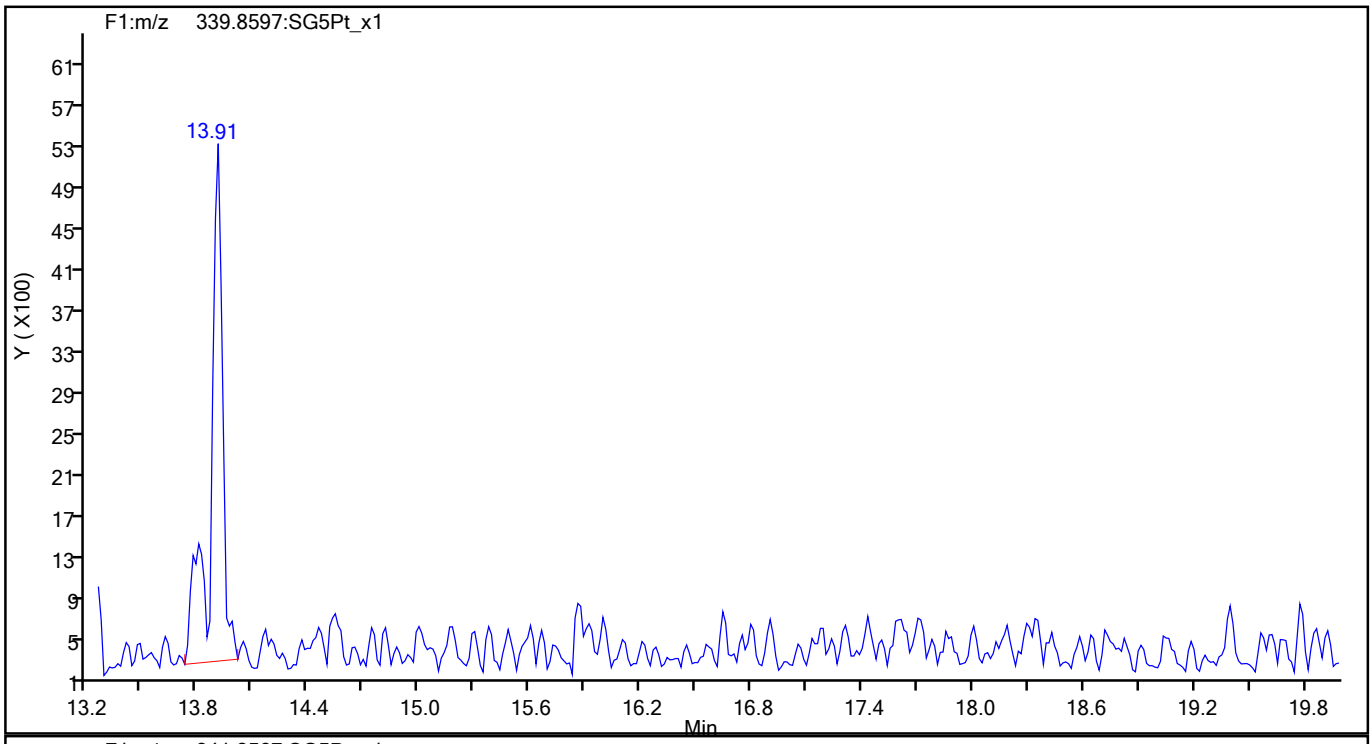

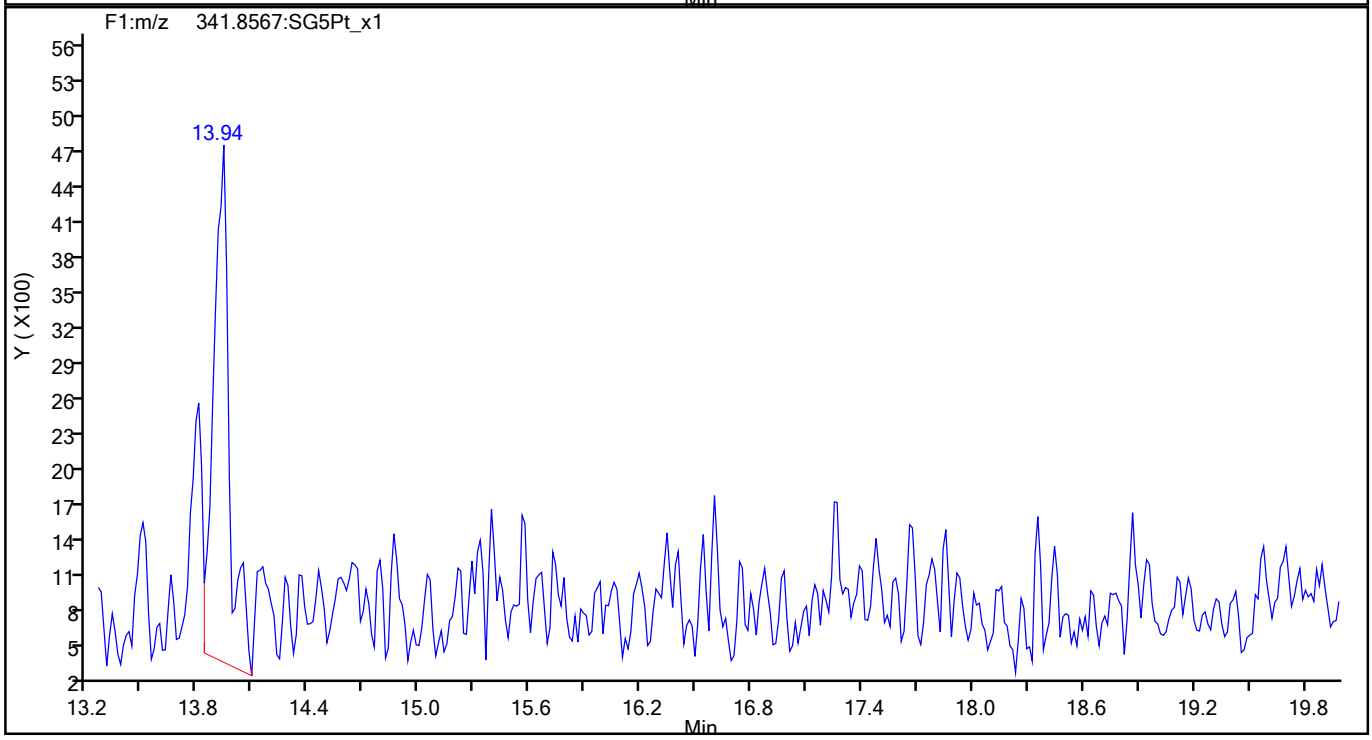

791345

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

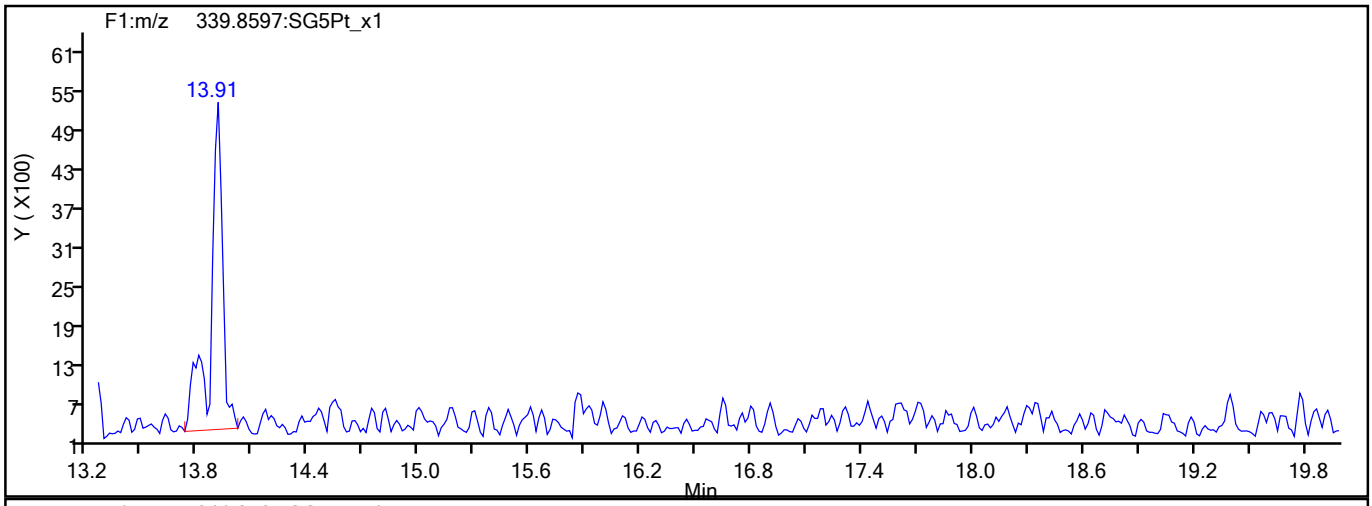

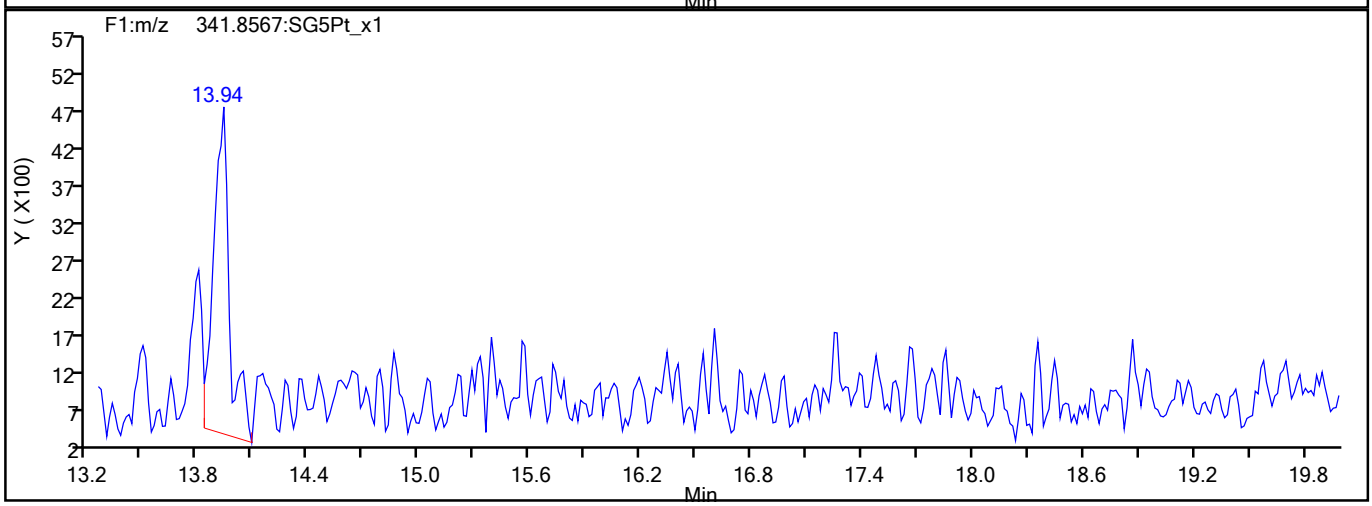

F1 PeCDFs Interference Mass

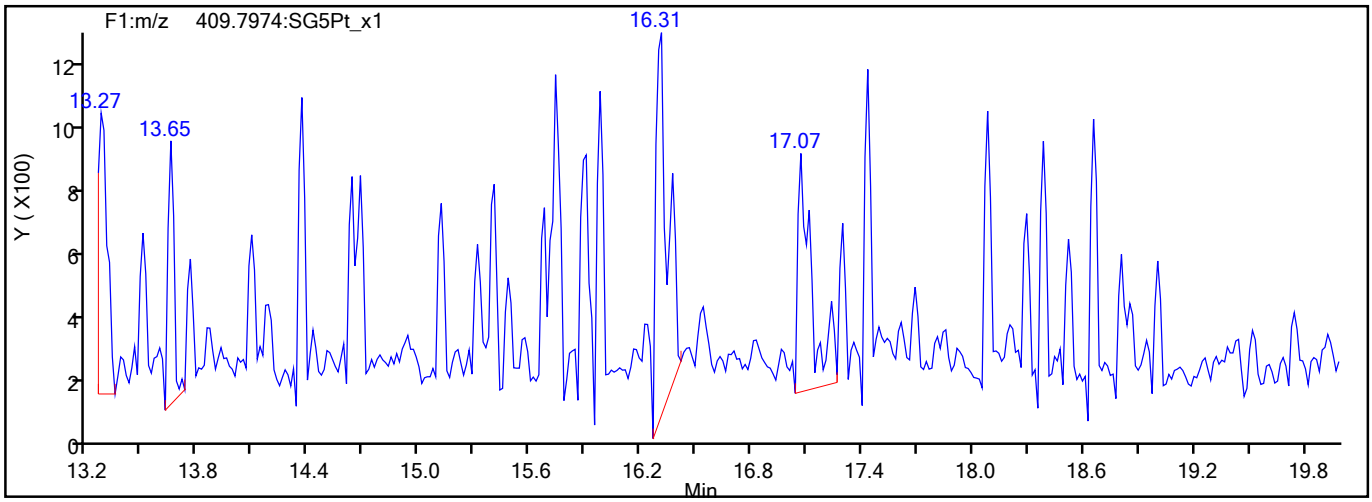

791346

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

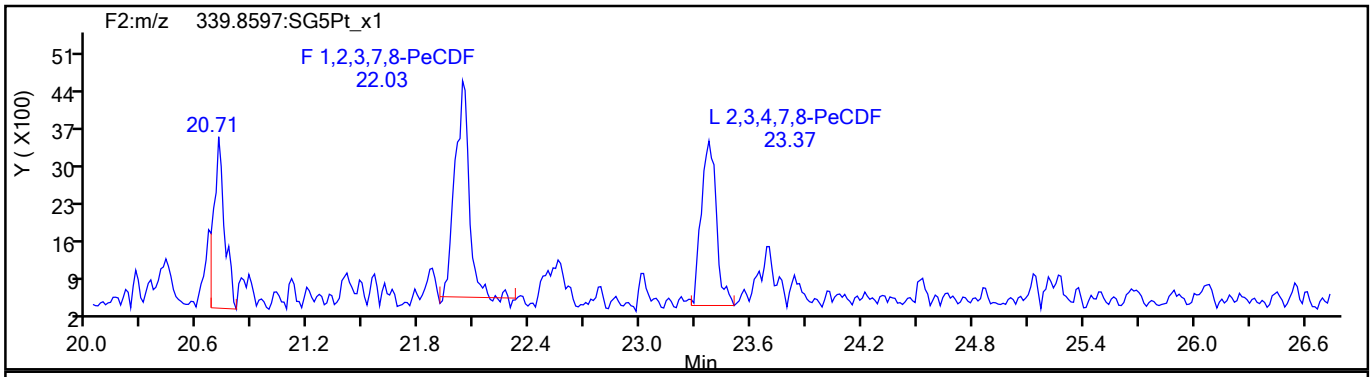

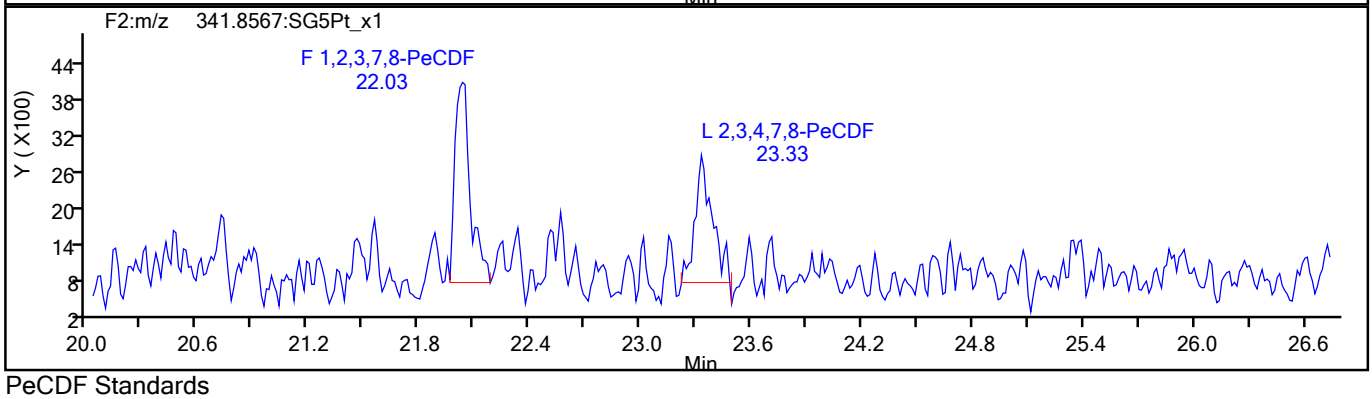

PeCDF Standards

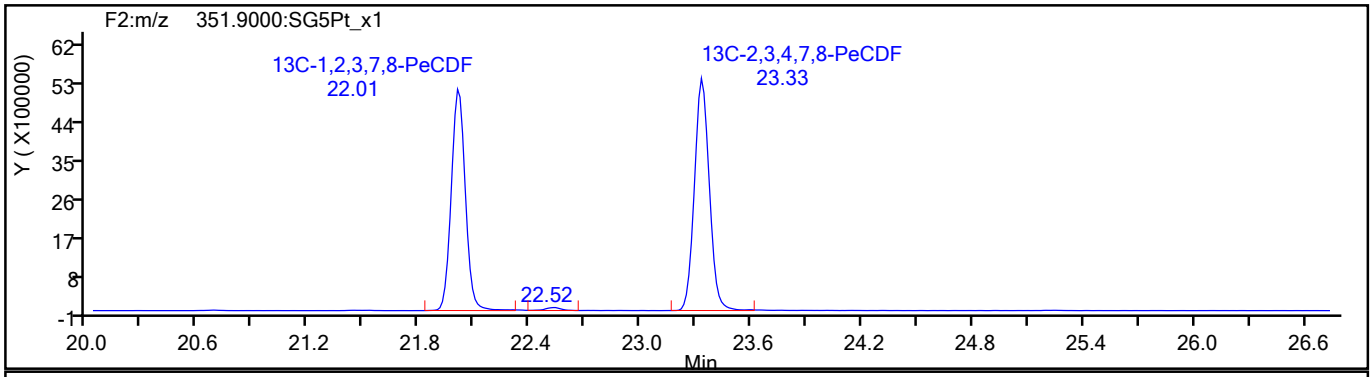

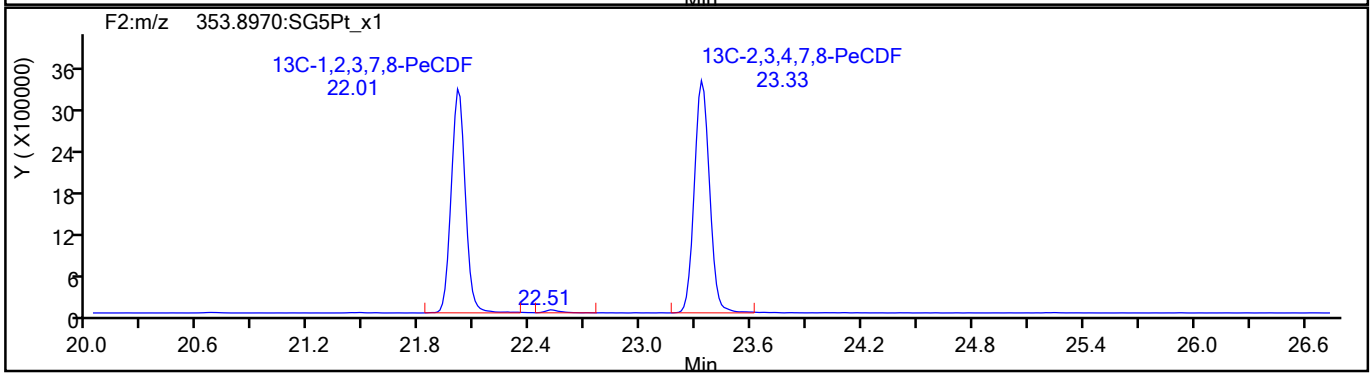

791347

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

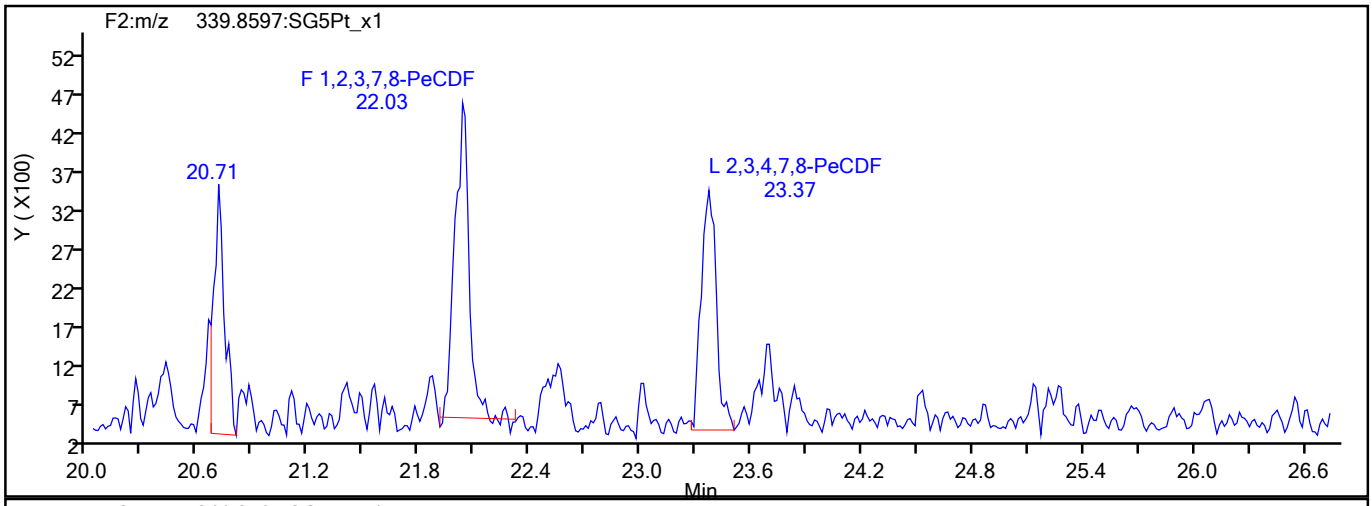

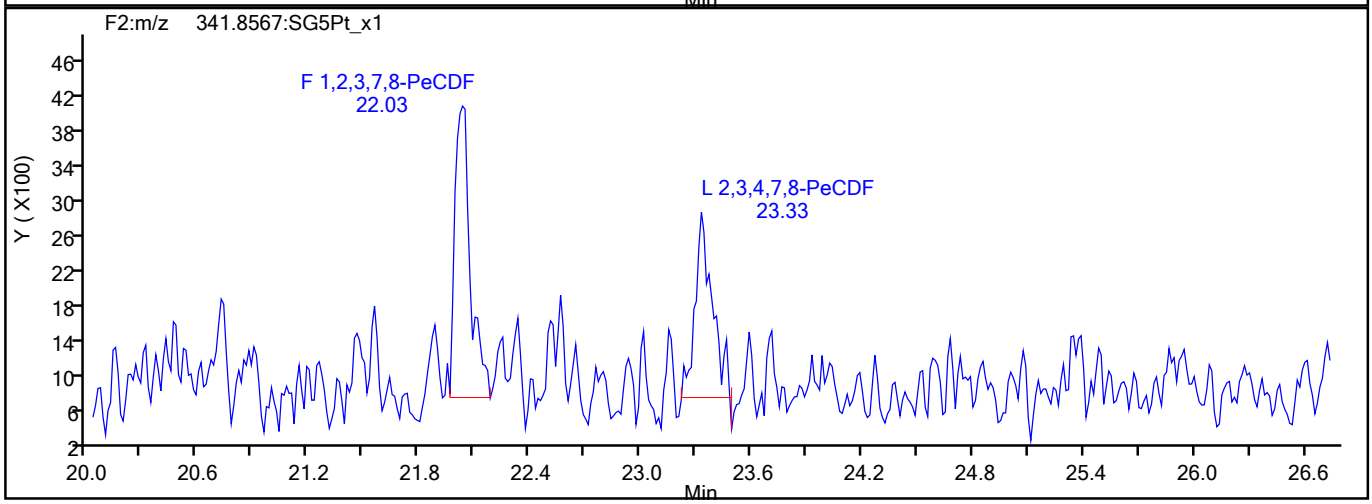

PeCDF Interference Mass

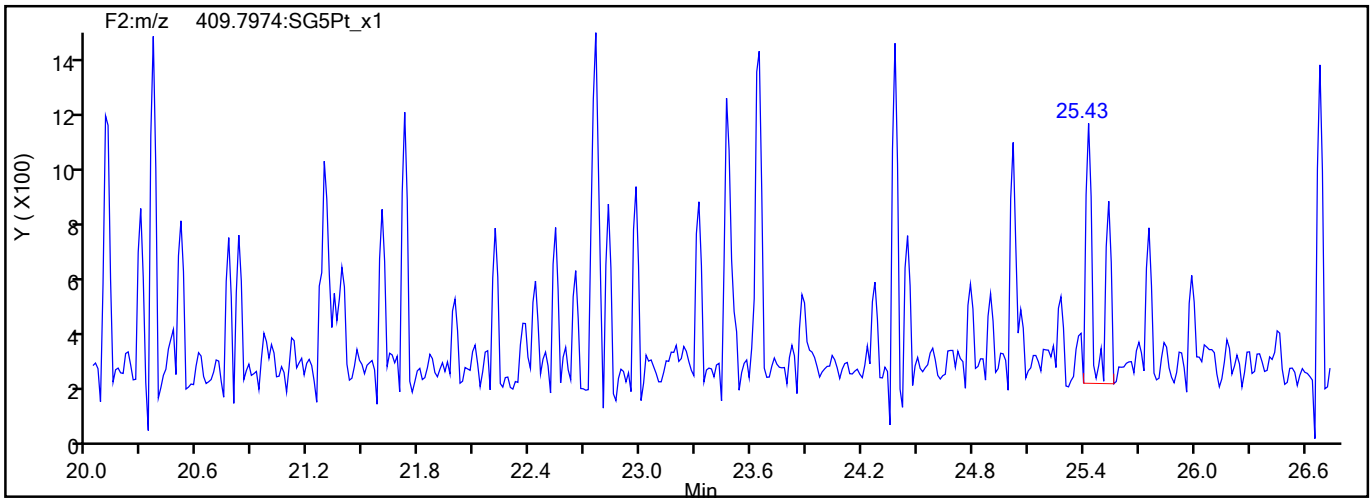

791348

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

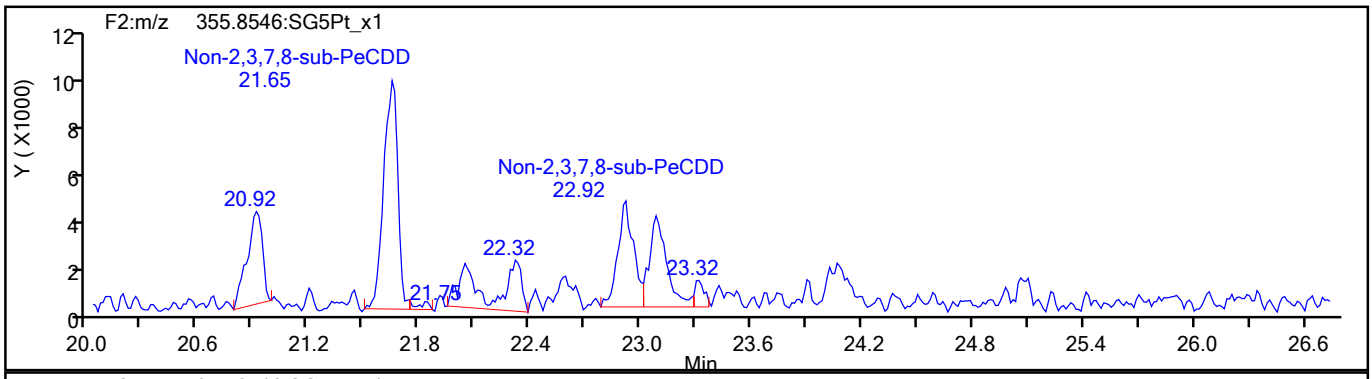

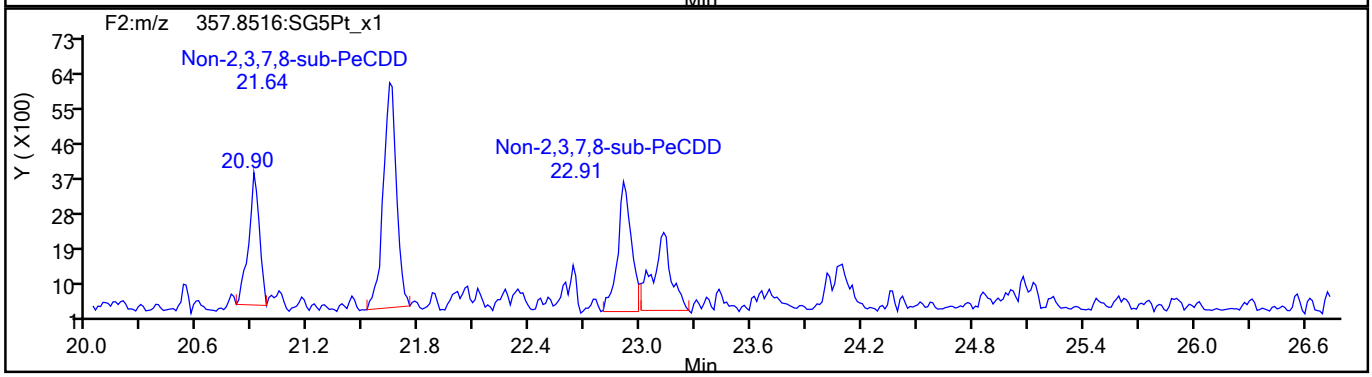

PeCDD Standards

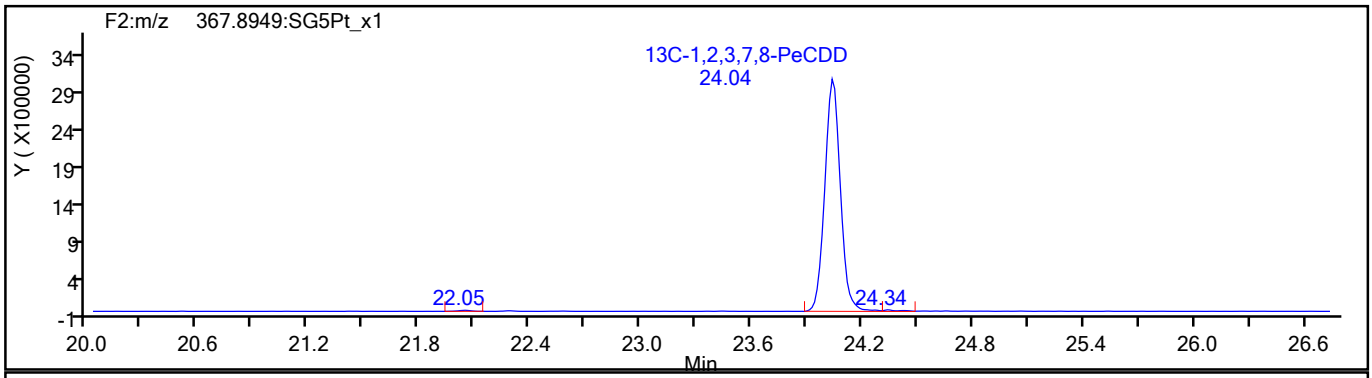

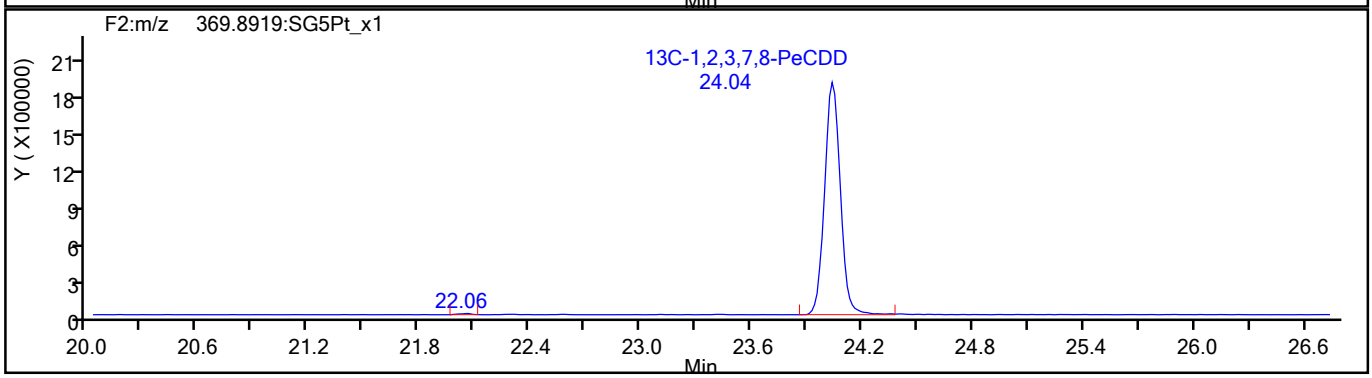

791349

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

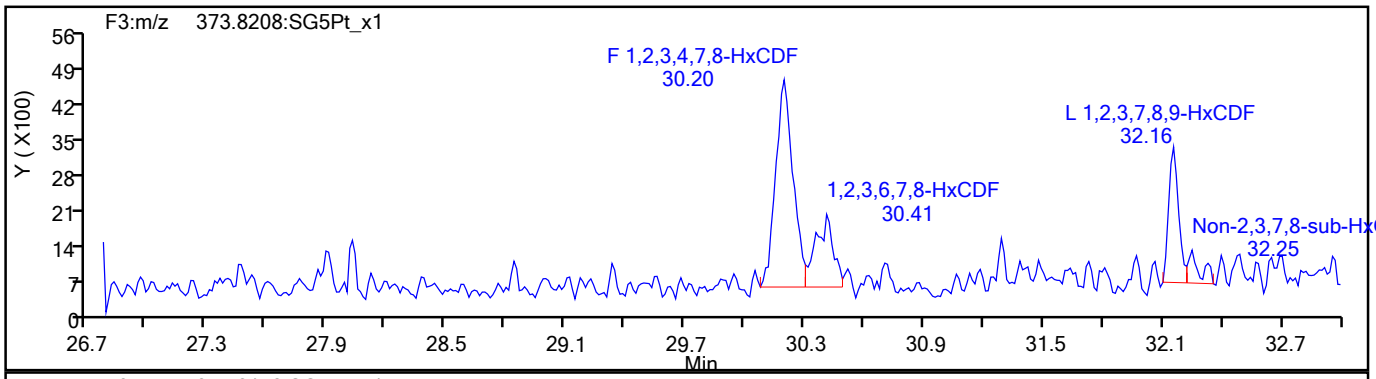

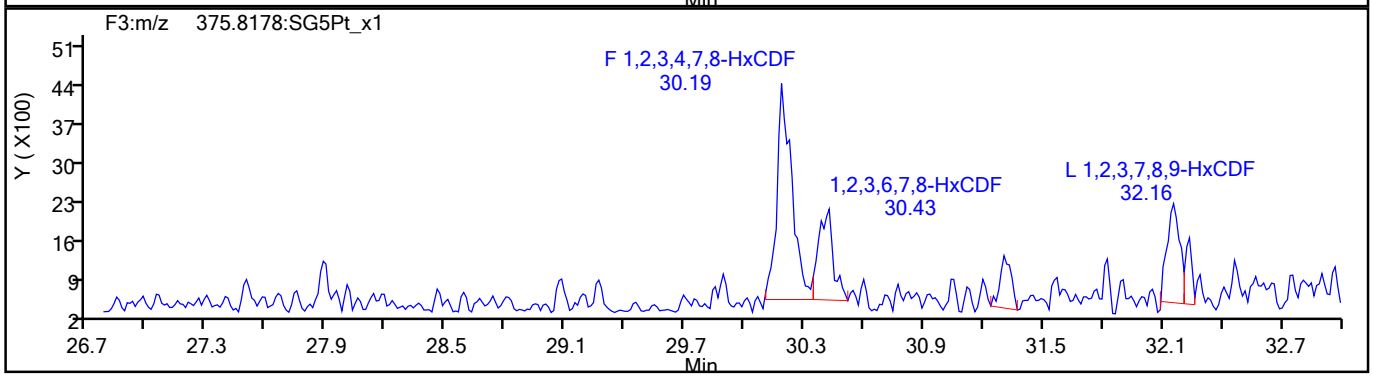

HxCDF Standards

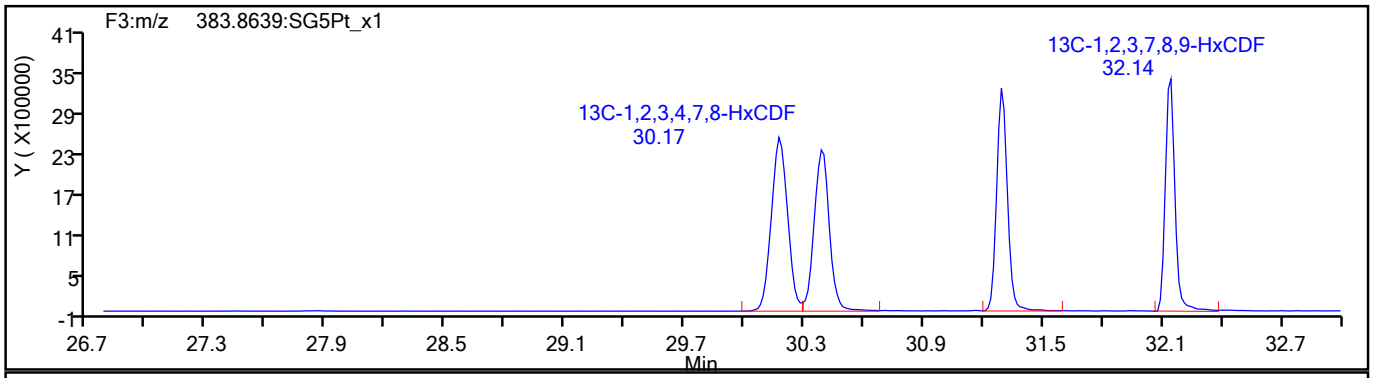

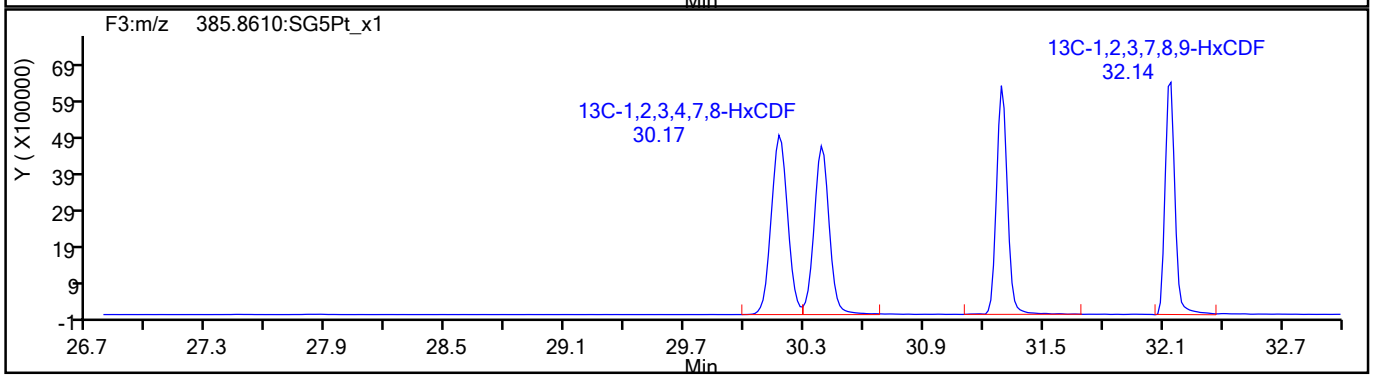

791350

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

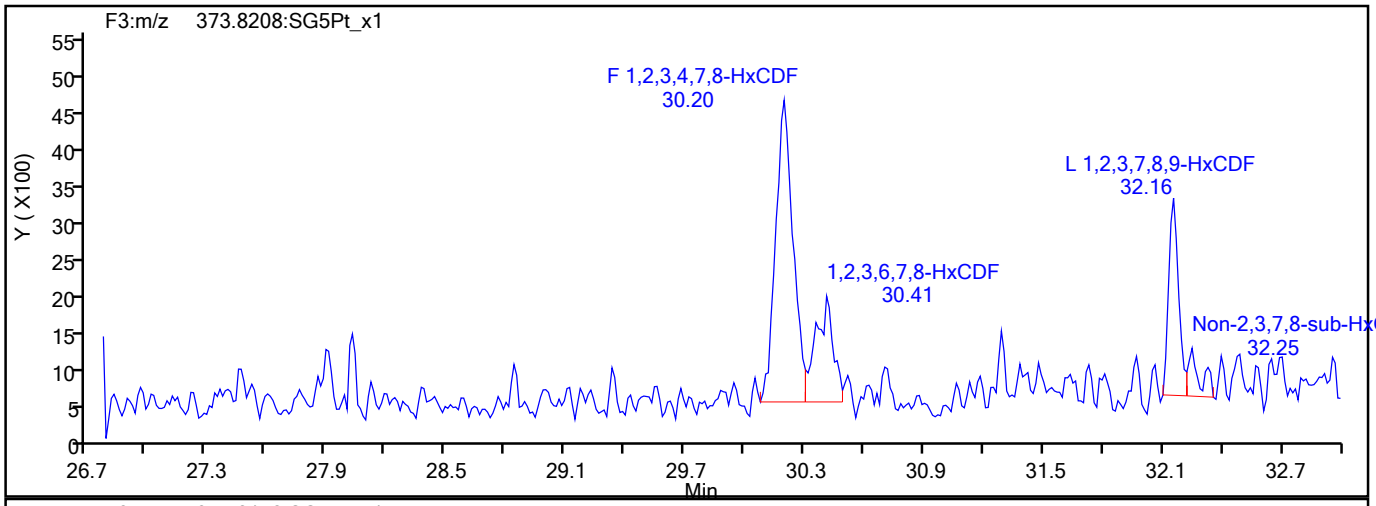

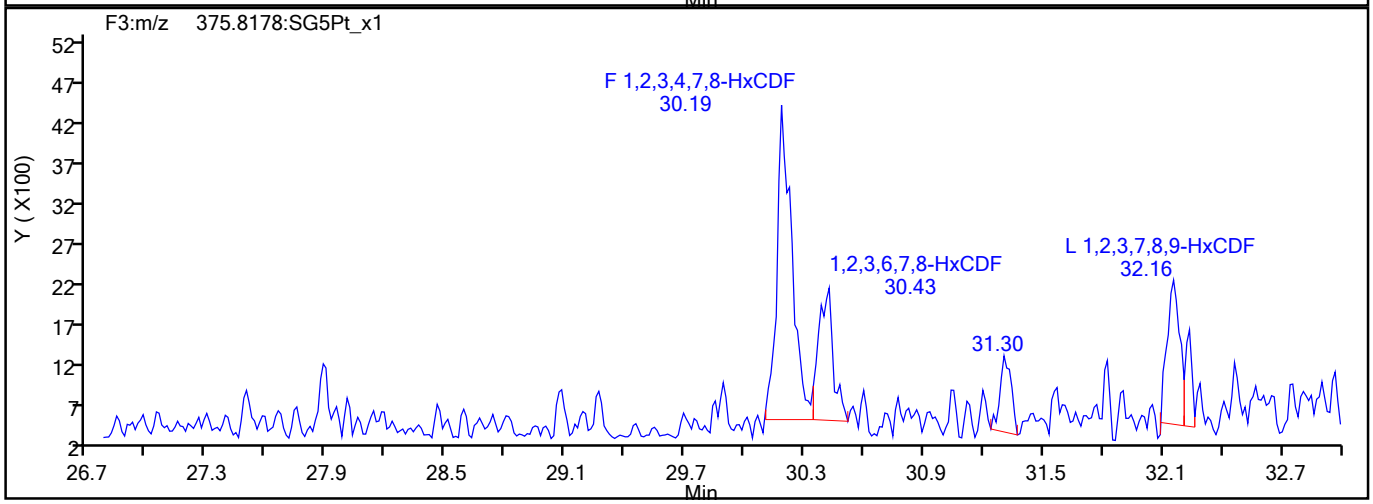

HxCDF Interference Mass

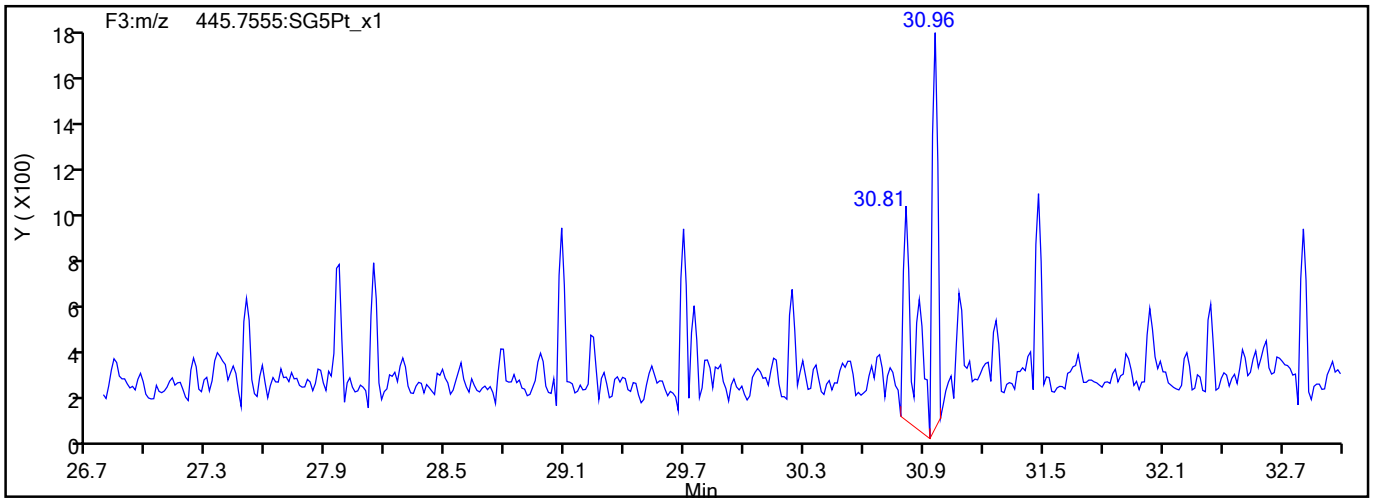

791351

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

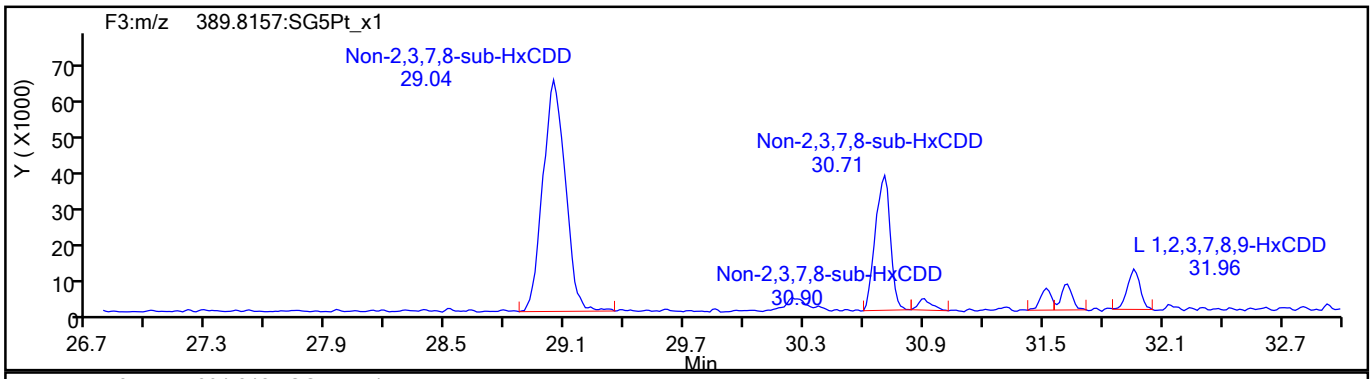

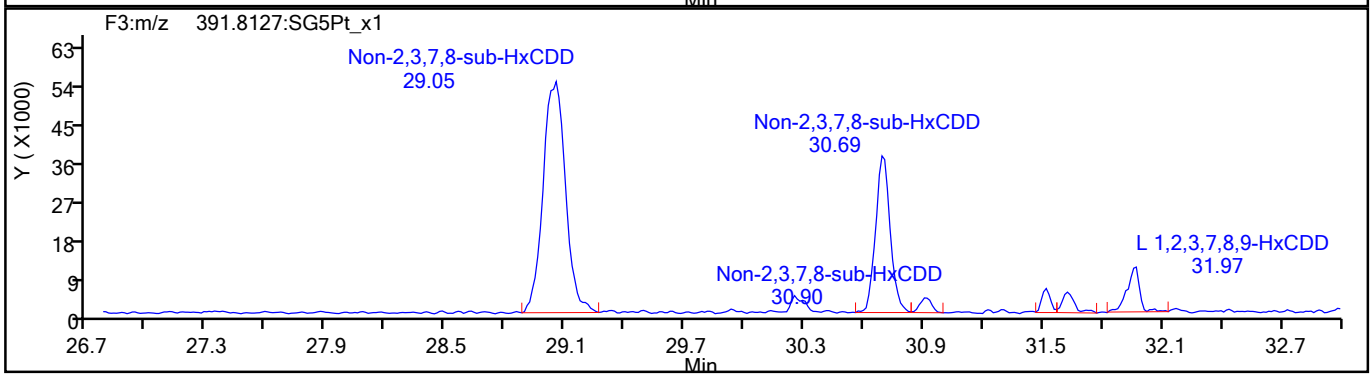

HxCDD Standards

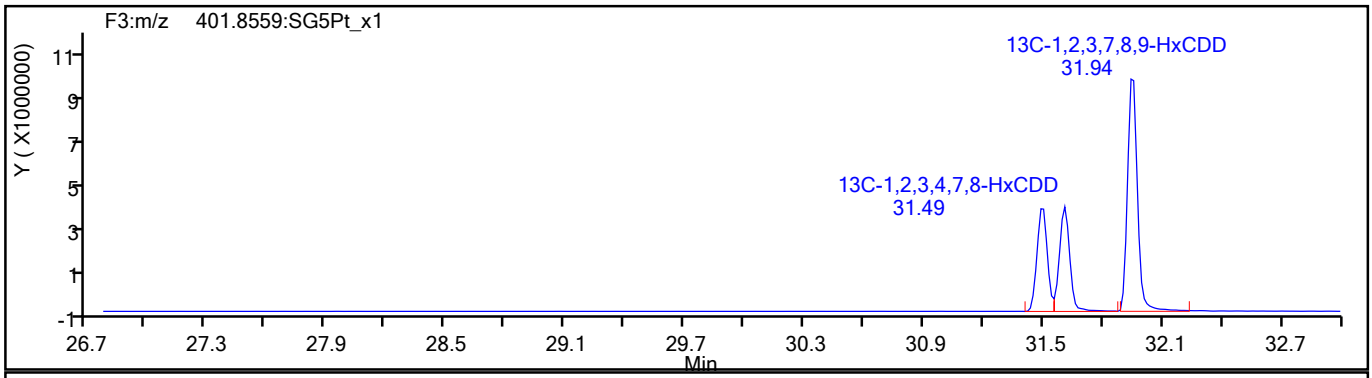

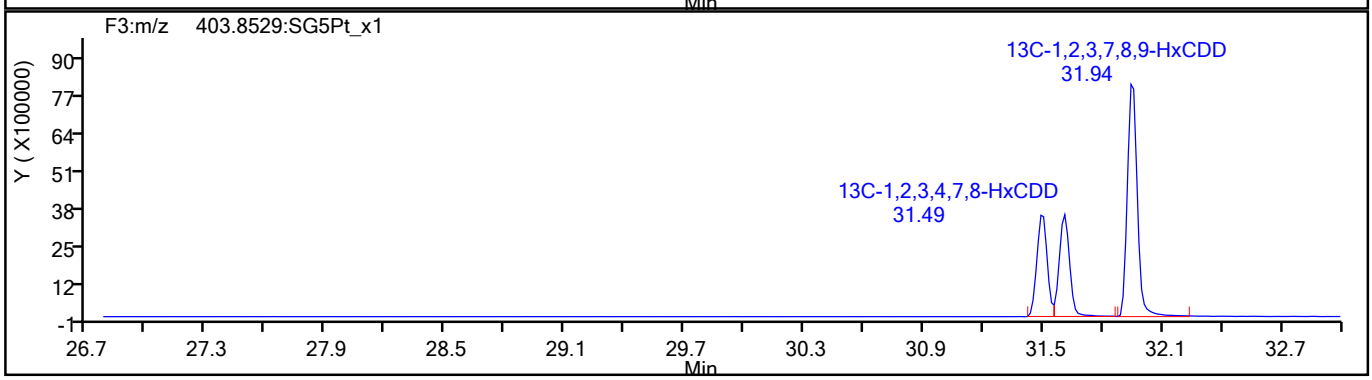

791352

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

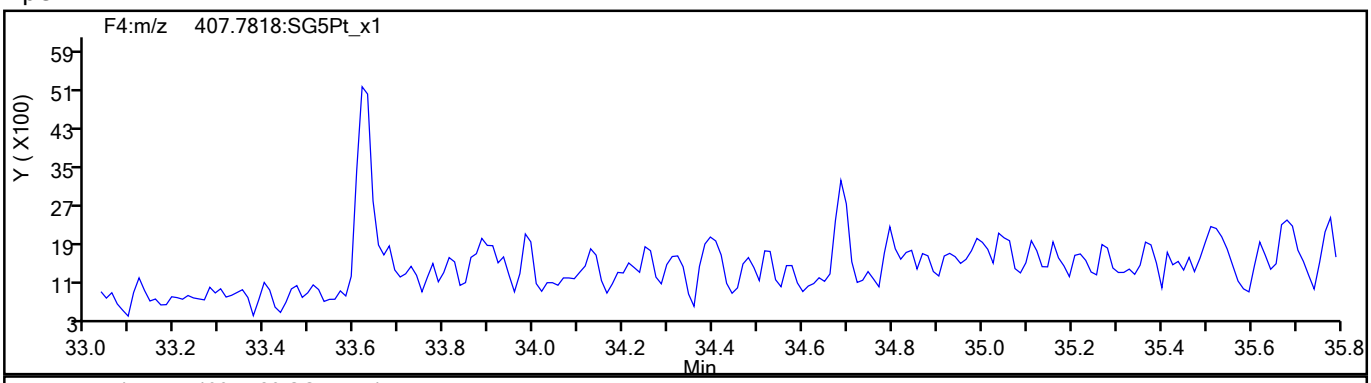

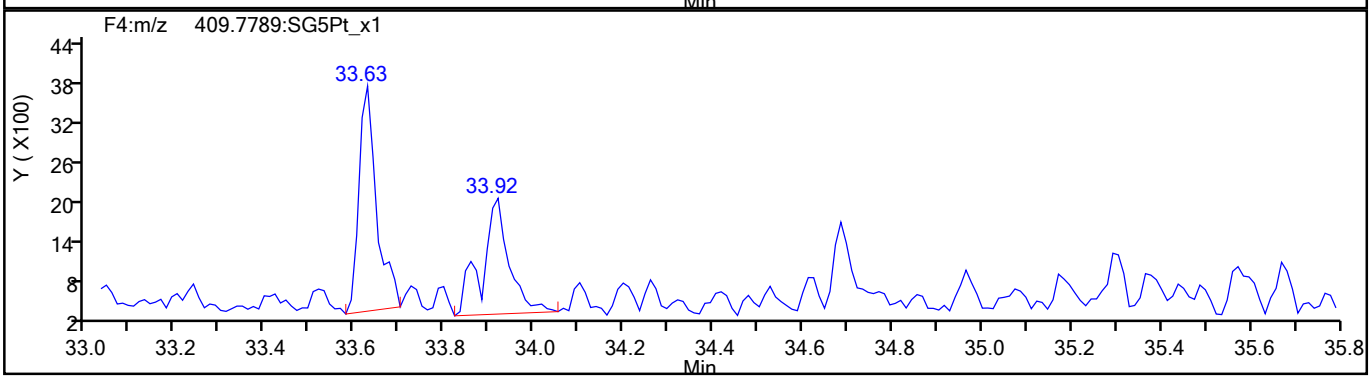

HpCDF Standards

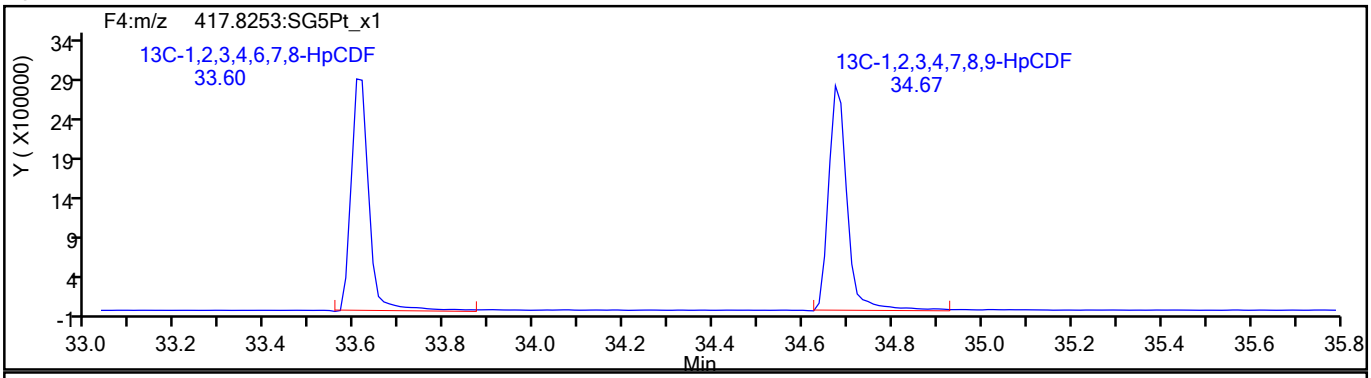

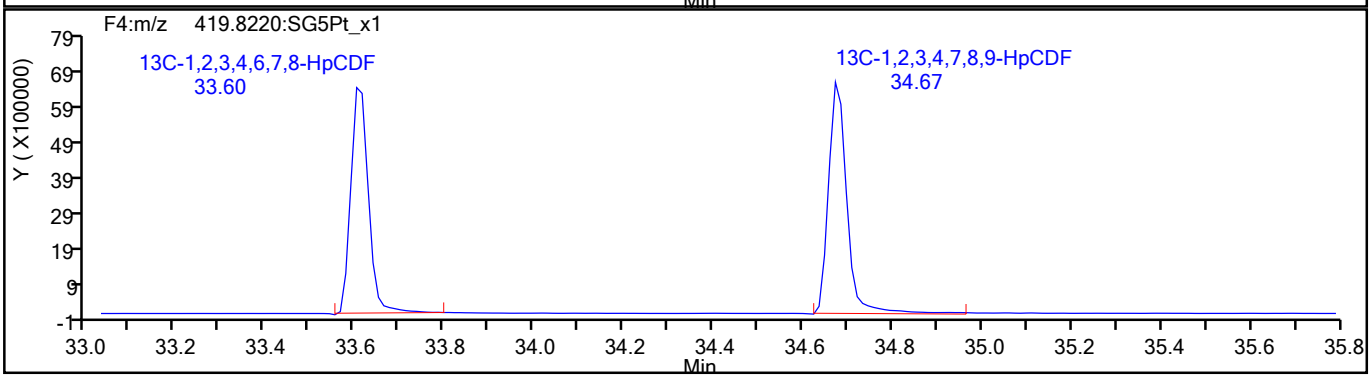

791353

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

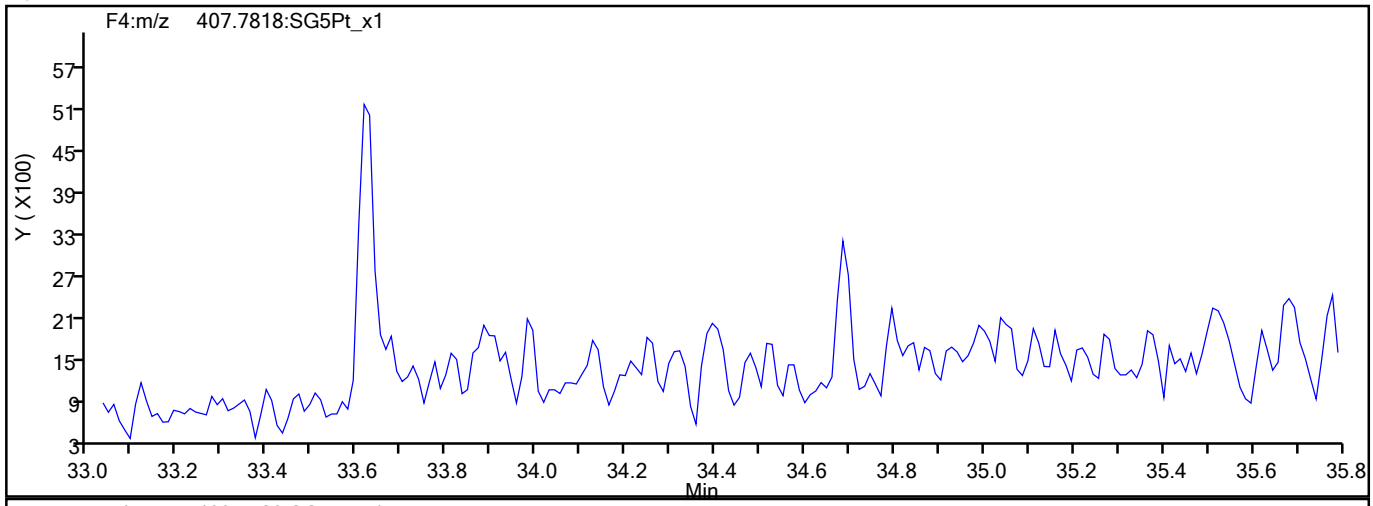

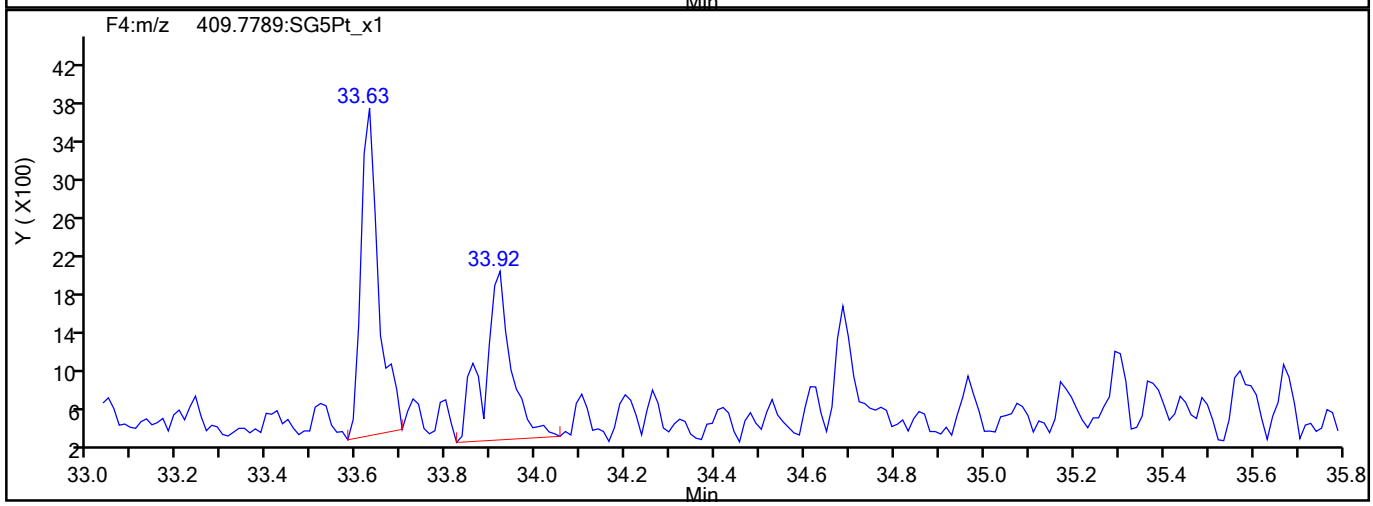

HpCDF Interference Mass

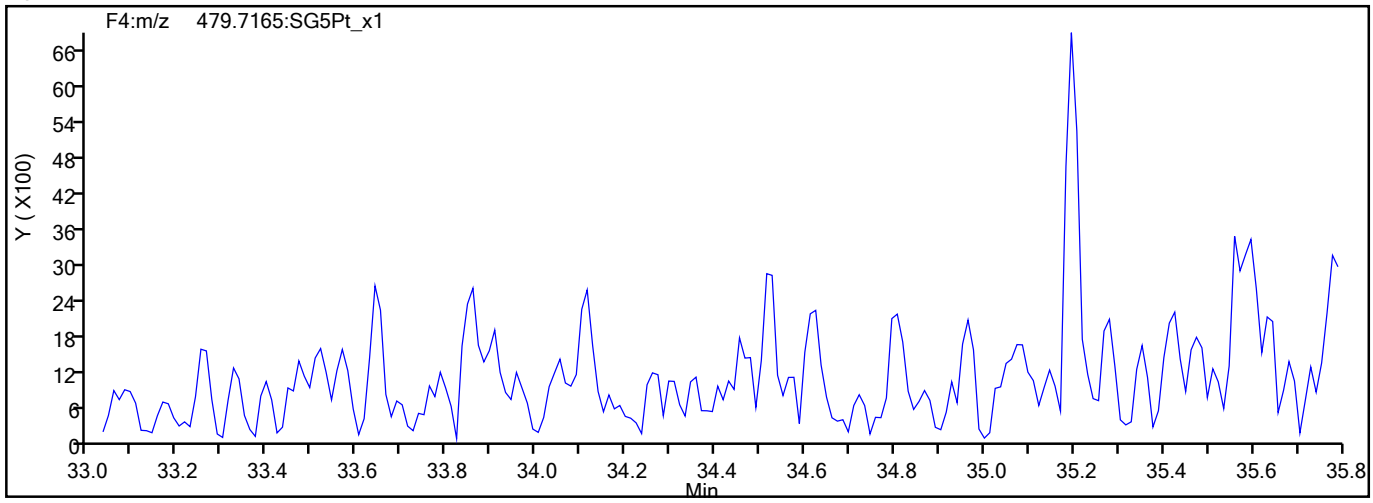

791354

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

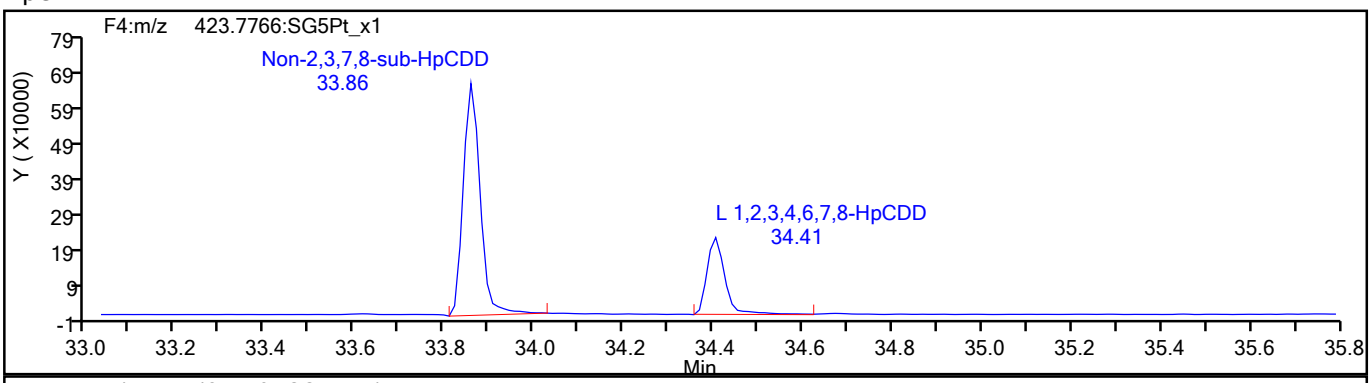

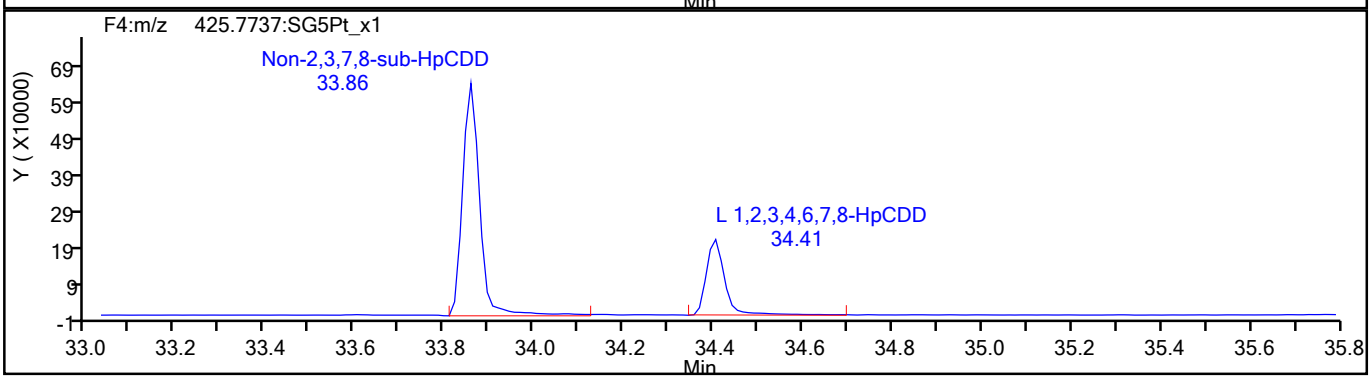

HpCDD Standards

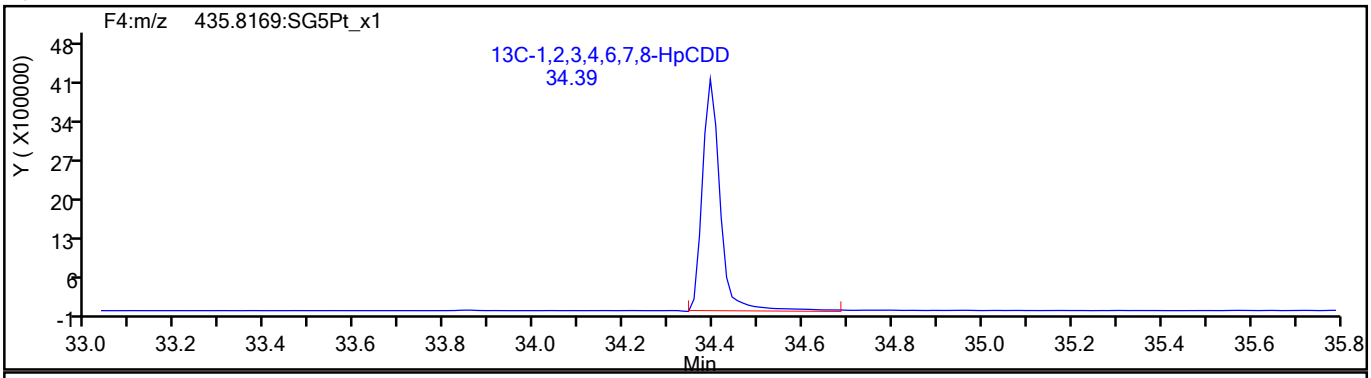

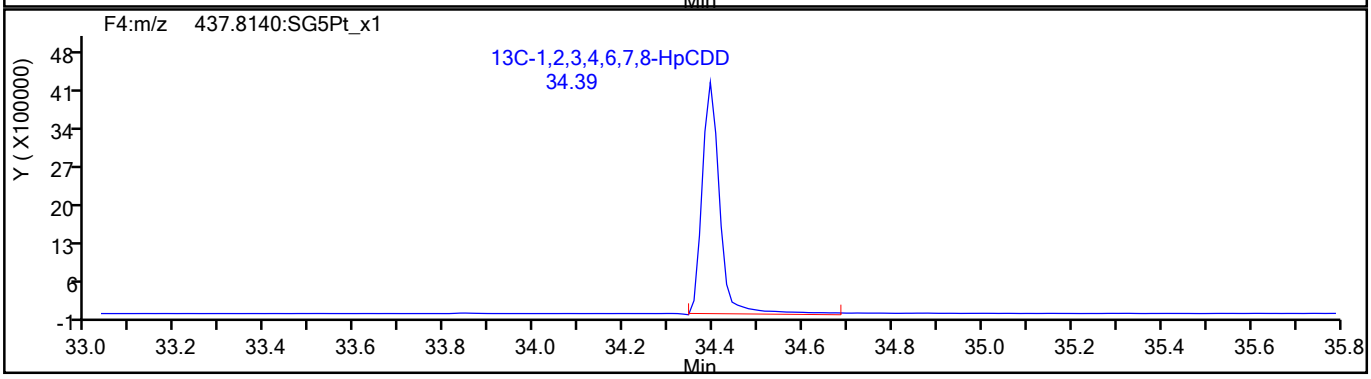

791355

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

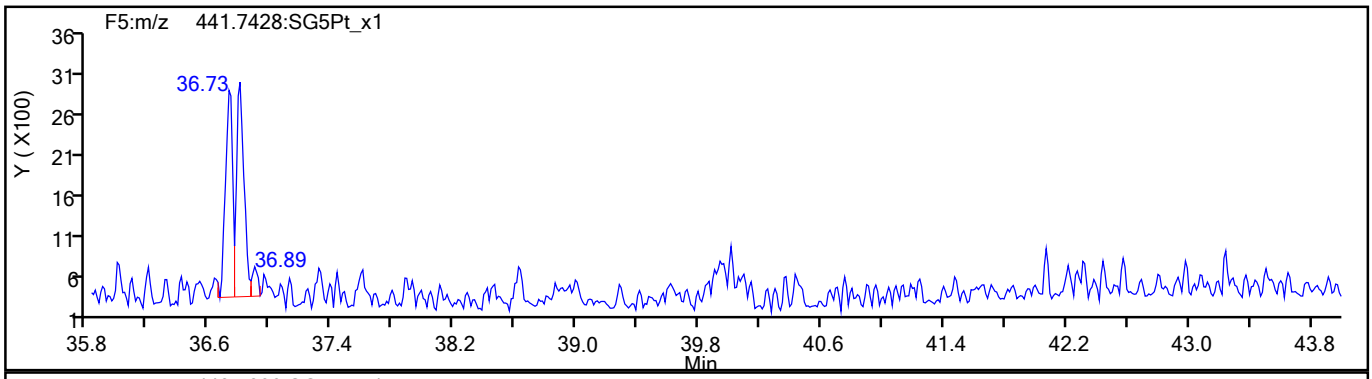

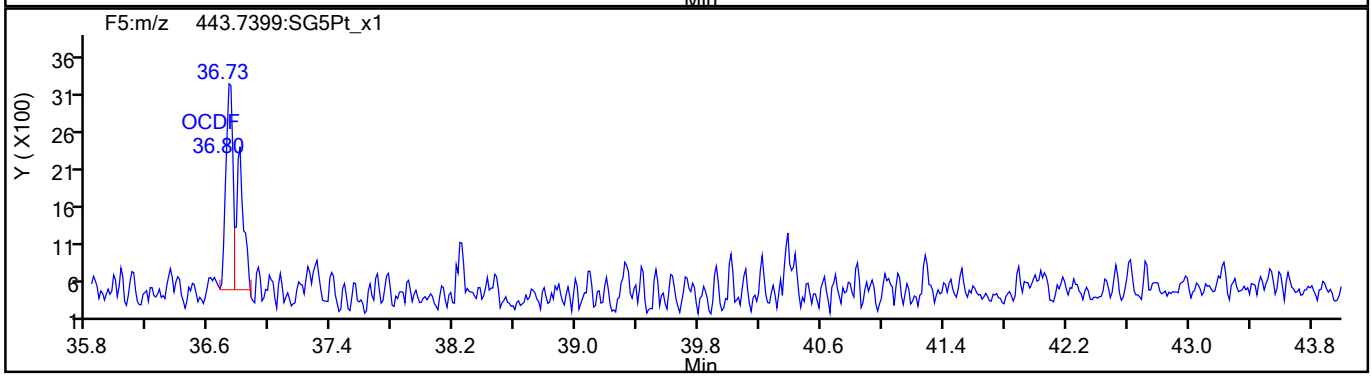

OCDF Standards

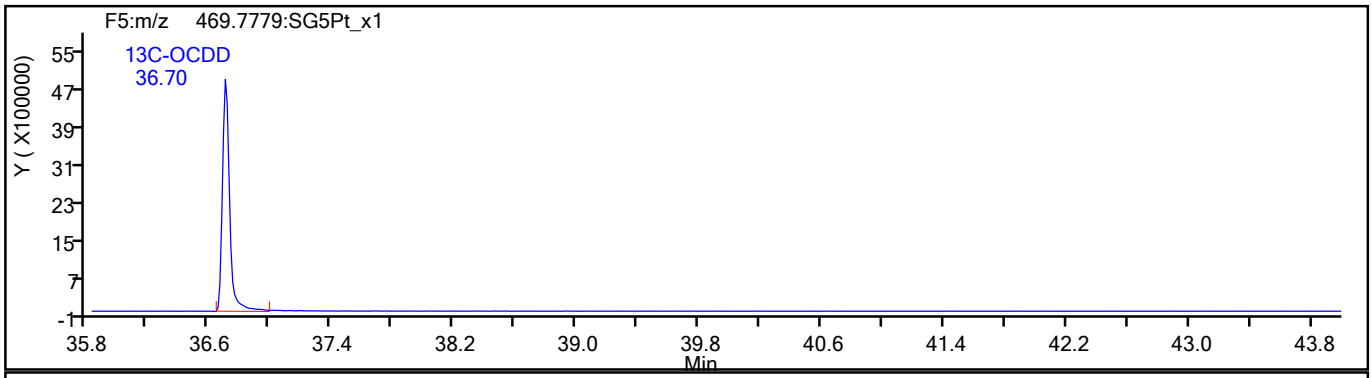

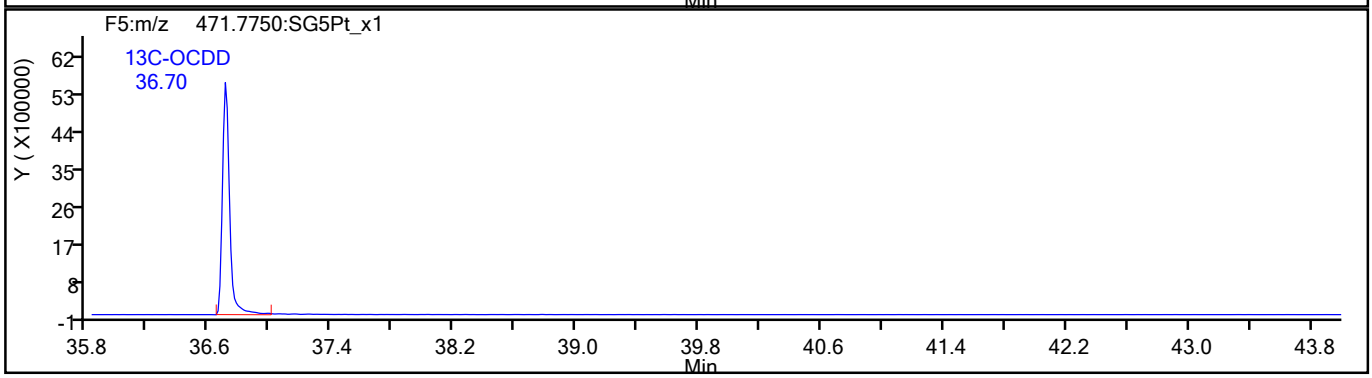

791356

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

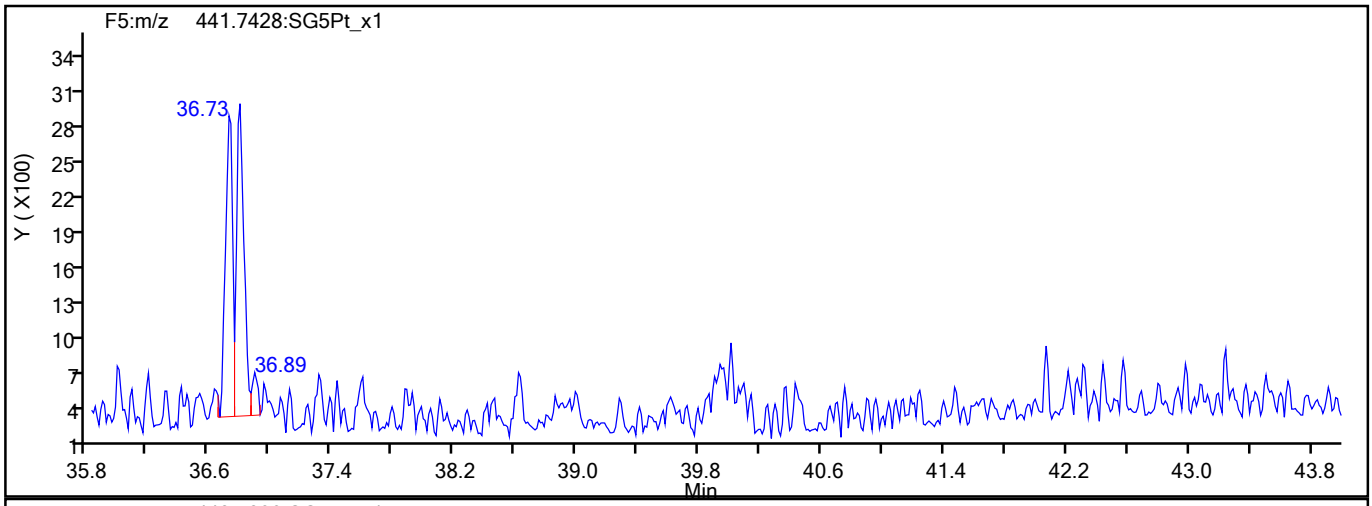

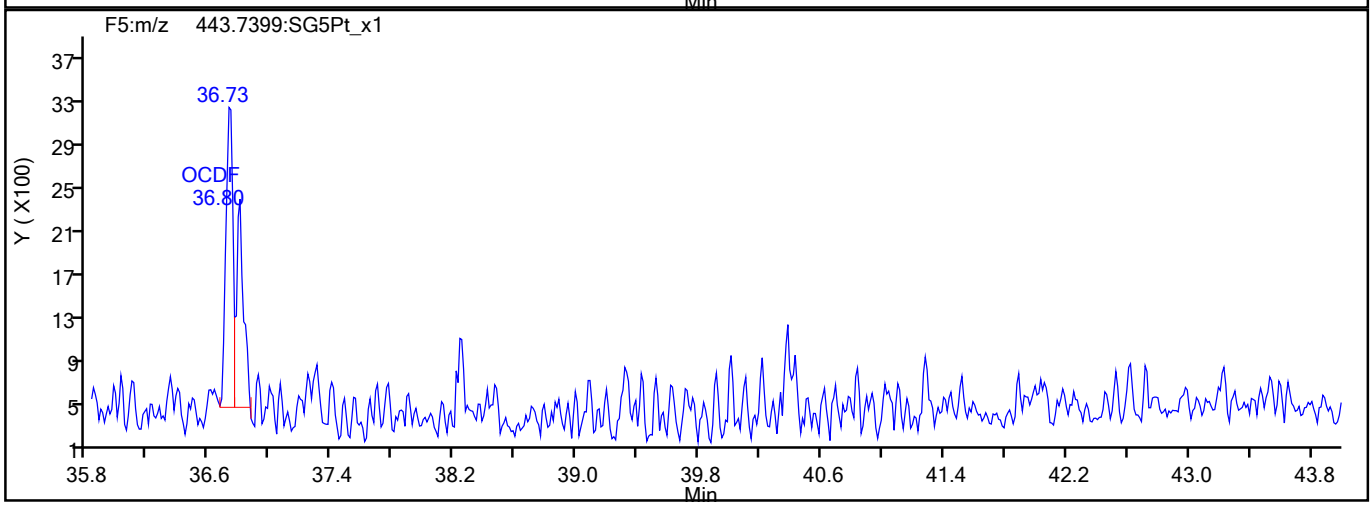

OCDF Interference Mass

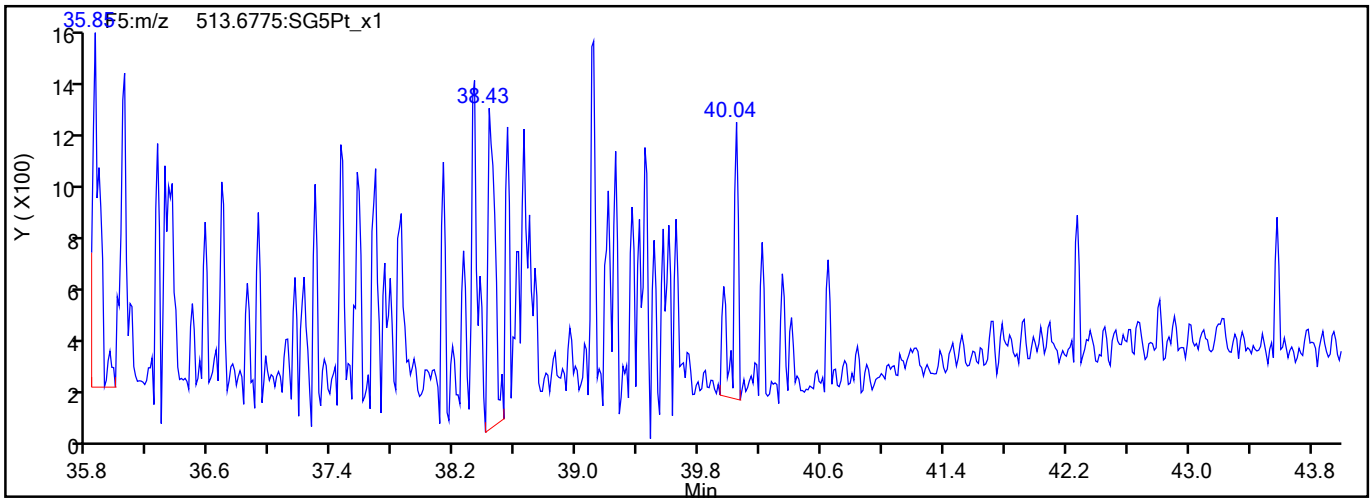

791357

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

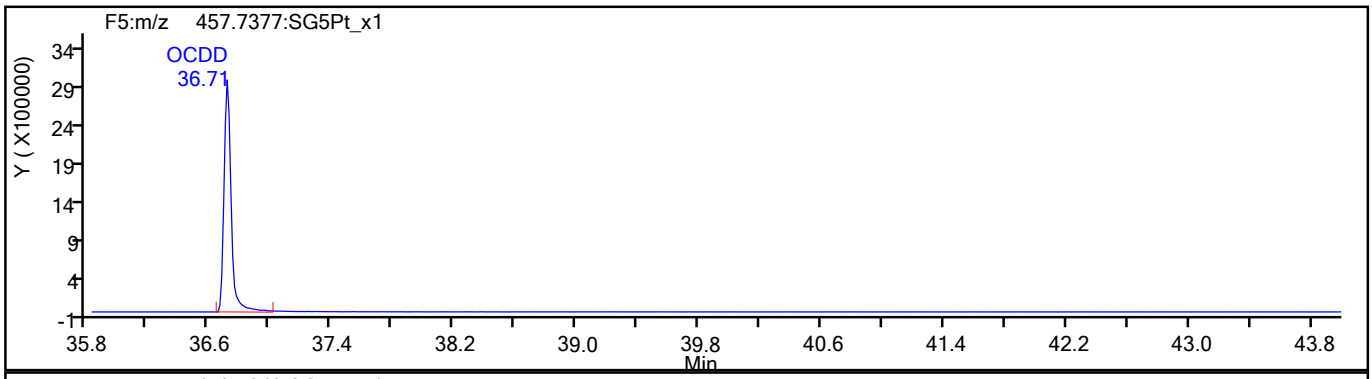

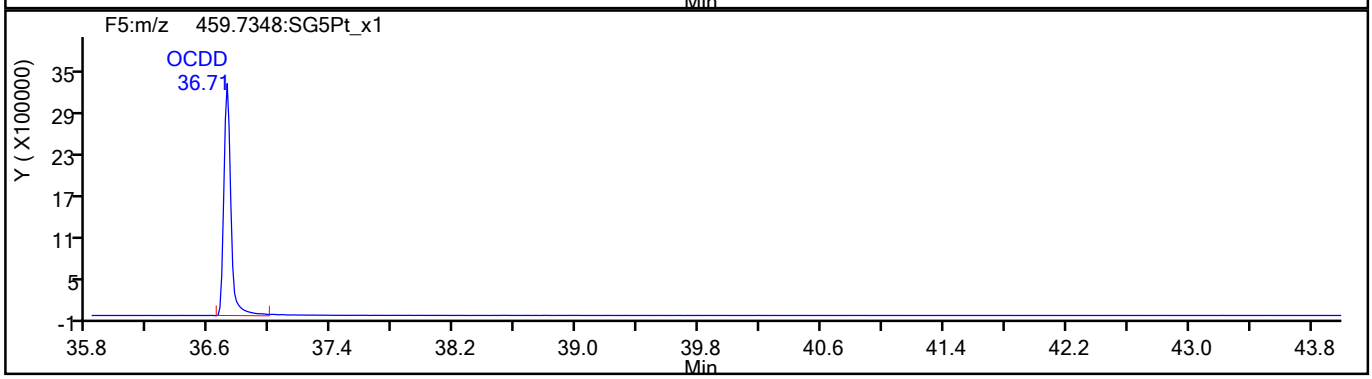

OCDD Standards

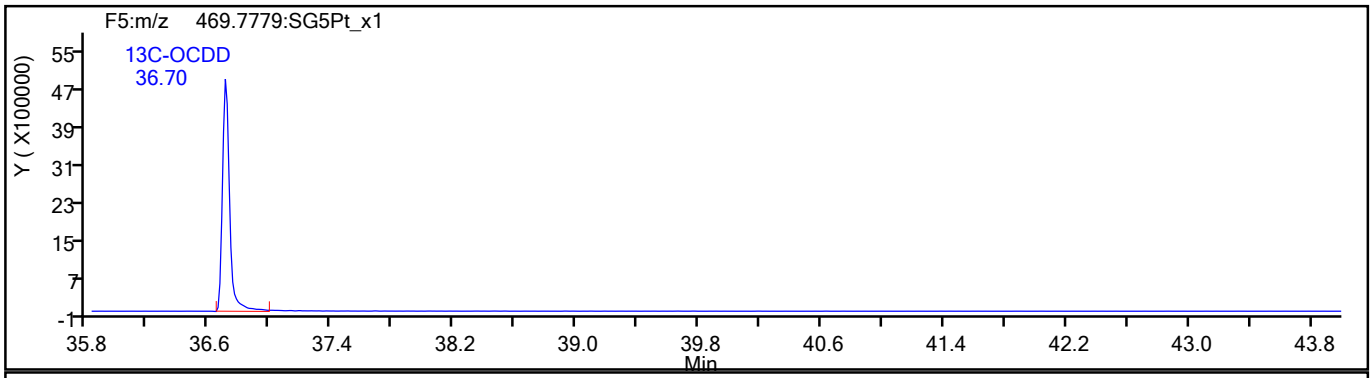

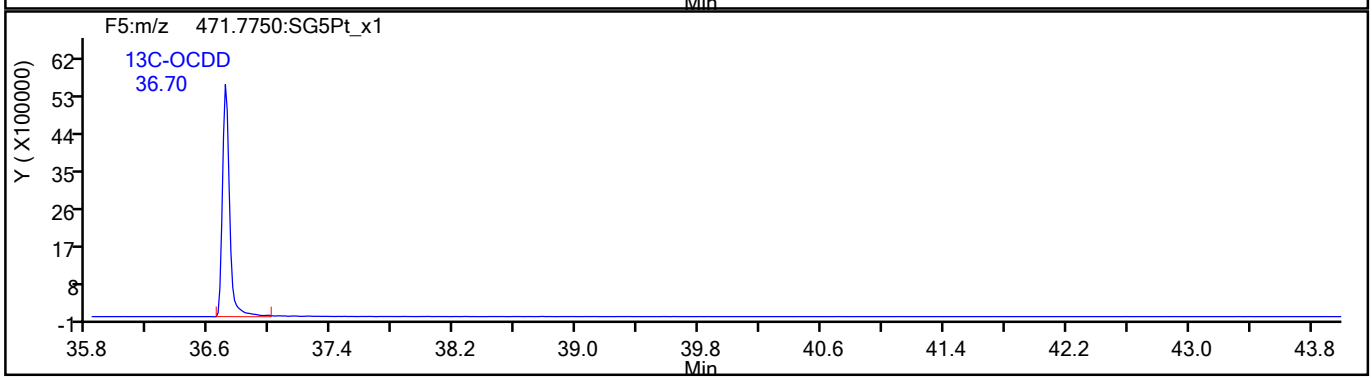

791358

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

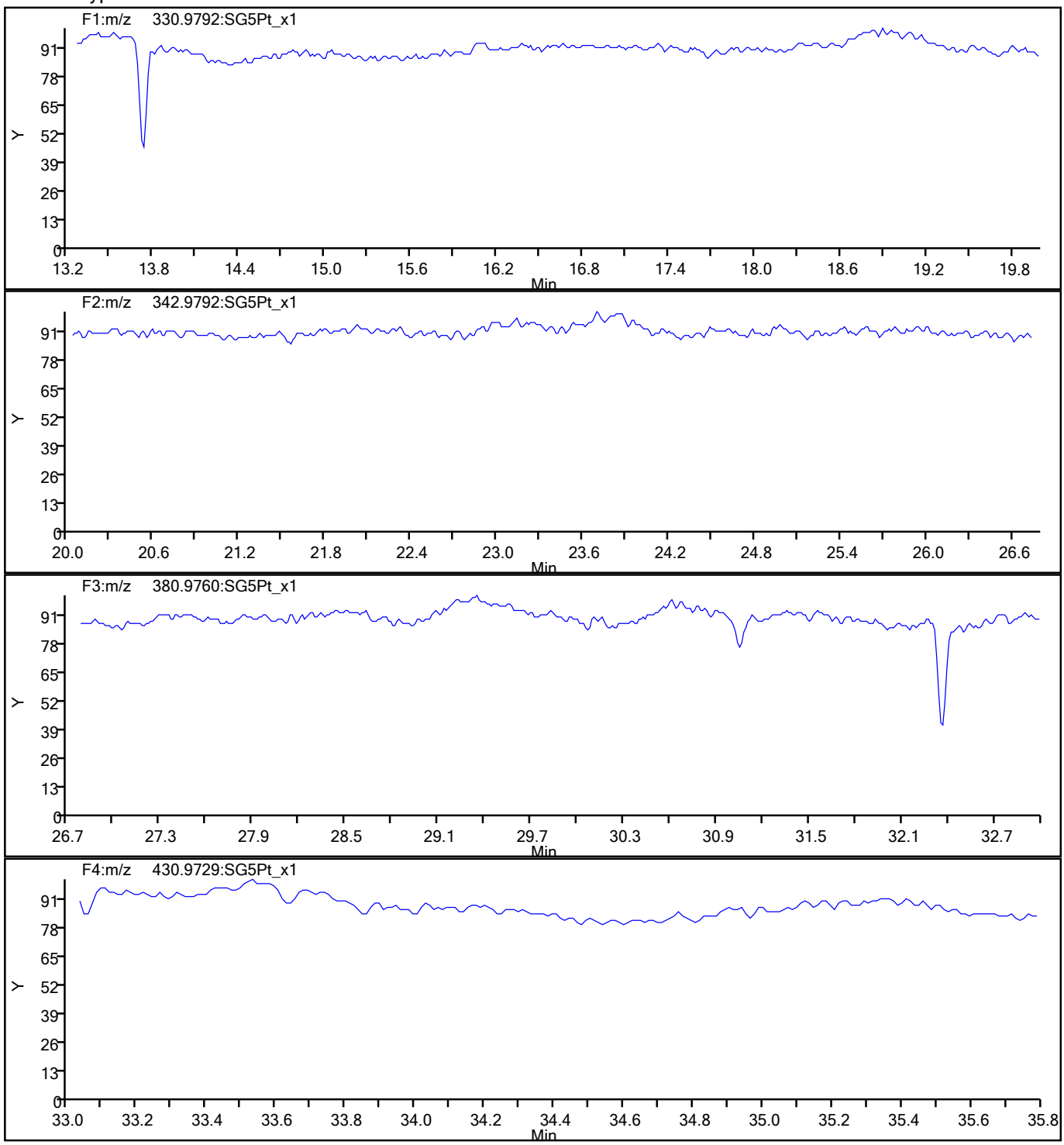

791359

Report Date: 27-Aug-2021 08:26:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_20.d		
Injection Date:	26-Aug-2021 00:35:47	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	519955	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

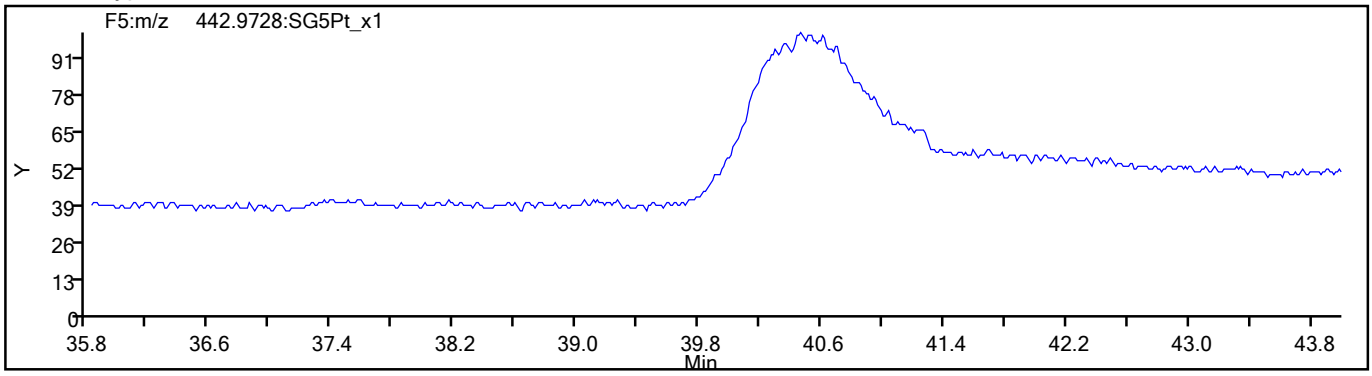

791360

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-DUP-11 RA
Lab Sample ID: 320-77214-13 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_010.d
Analysis Method: 1613B
Date Collected: 08/02/2021 00:00
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.10(g)
Date Analyzed: 08/27/2021 21:23
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 22.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	4.9	B	1.3	0.24

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	61		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	80		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_010.d
Lims ID: 320-77214-A-13-A
Client ID: 11215702-080221-BN-DUP-11
Sample Type: Client
Inject. Date: 27-Aug-2021 21:23:29 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-13-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:44:06

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	25648270	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	20950517	0.79	1.3327	61.3	61.3	0.4524	0.4524	61.29	
2,3,7,8-TCDF	17.669	399495	0.74	0.9978	1.911	1.911	0.0942	0.0942		M
D 13C-2,3,7,8-TCDD	16.092	12731781	0.79	0.8749	56.7	56.7	0.5796	0.5796	56.74	
2,3,7,8-TCDD	16.106	129869	0.77	1.0570	1.078	0.9650	0.1828	0.1828		RQ
$ 37Cl4-2,3,7,8-TCDD	16.120	7088449		0.8648	32.0	32.0	0.0902	0.0902	79.89	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_010.d
Lims ID: 320-77214-A-13-A
Client ID: 11215702-080221-BN-DUP-11
Sample Type: Client
Inject. Date: 27-Aug-2021 21:23:29 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-13-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:44:06

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.300	2		11192332	2504427	6149	15372	407		
333.9339	16.325	16.300	2		14455938	3240544	5504	13760	589	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.616	2	1.081	9246714	1797196	6080	15200	296		
317.9389	17.656	17.616	2	1.081	11703803	2212986	7774	19435	285	0.79(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.669	17.644	2	1.001	169838	41631	700	1750	59		M
305.8987	17.656	17.644	1	1.000	229657	43351	808	2020	54	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.092	16.066	2	0.986	5630610	1233949	6149	15372	201		
333.9339	16.092	16.066	2	0.986	7101171	1713970	5504	13760	311	0.79(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.106	16.080	2	1.001	56497	10912	1110	2775	10		
321.8936	16.106	16.080	2	1.001	88563	19551	1168	2920	17	0.64(0.65-0.89)	
	Empc Correction				73372	14171	1168	2920	12		
37Cl4-2,3,7,8-TCDD											
327.8840	16.120	16.080	2	0.987	7088449	1516213	1792	4480	846		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_010.d				
Injection Date:	27-Aug-2021 21:23:29	Instrument ID:	11D2		
Lims ID:	320-77214-A-13-A	Lab Sample ID:	320-77214-13		
Client ID:	11215702-080221-BN-DUP-11				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	10
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.67
Area: 191180
Amount: 2.013134
Amount Units: pg/ul

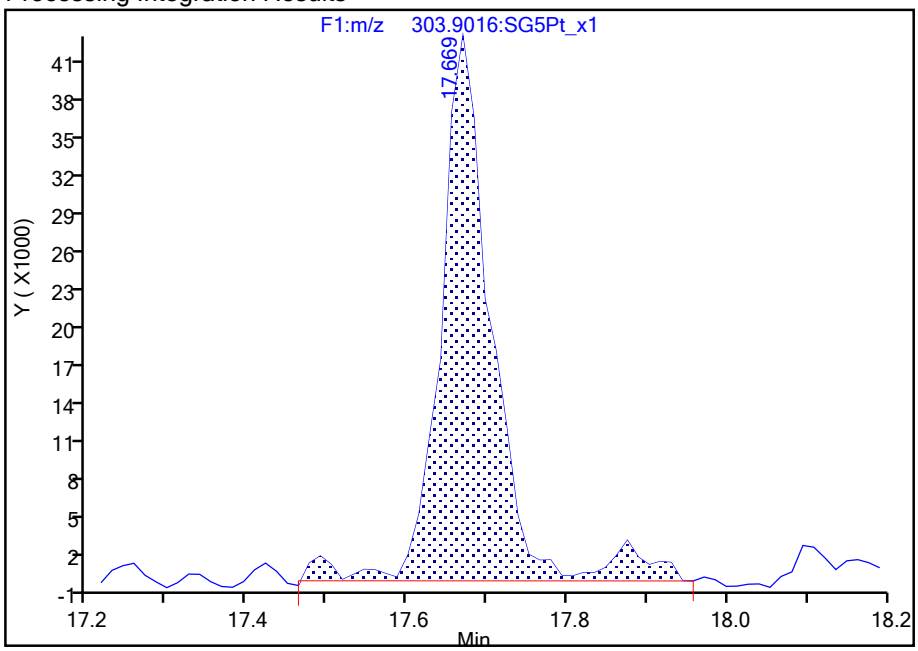

Manual Integration Results

RT: 17.67
Area: 169838
Amount: 1.911042
Amount Units: pg/ul

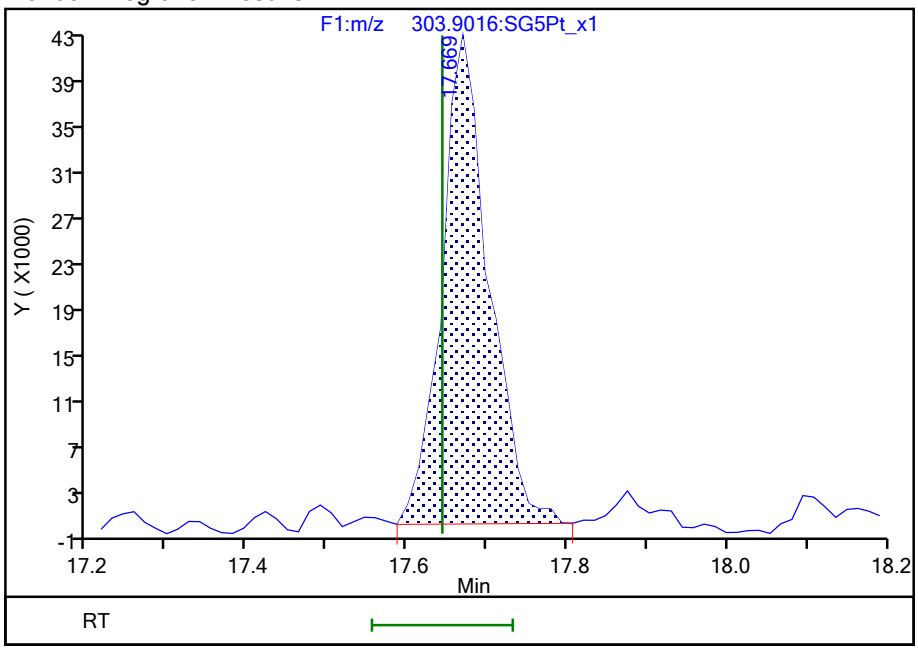

Reviewer: bennettd, 30-Aug-2021 09:43:56

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 30-Aug-2021 09:51:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_010.d		
Injection Date:	27-Aug-2021 21:23:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	520456	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

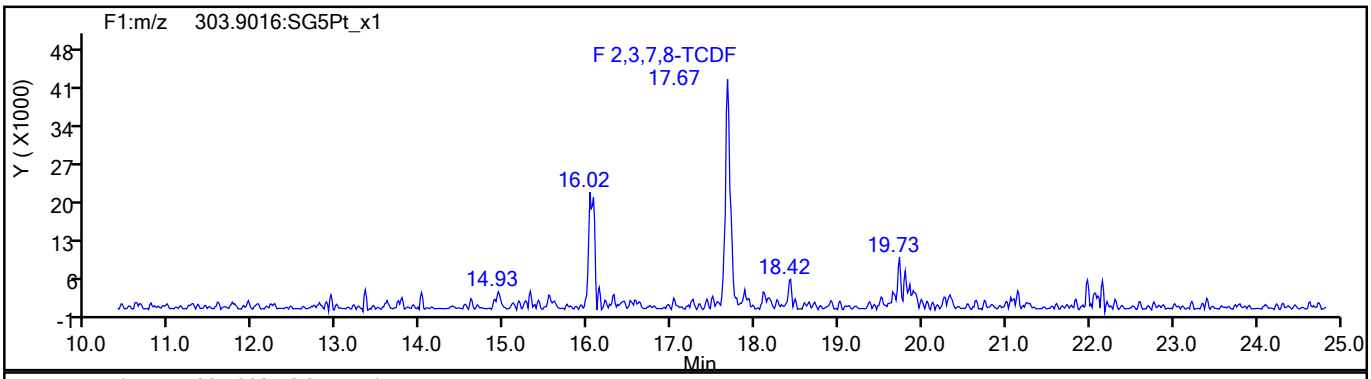

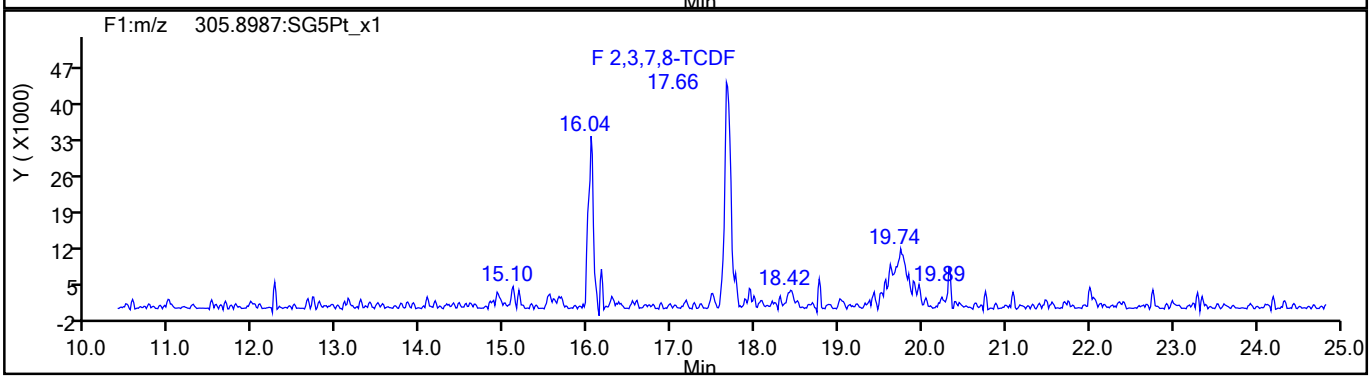

TCDF Standards

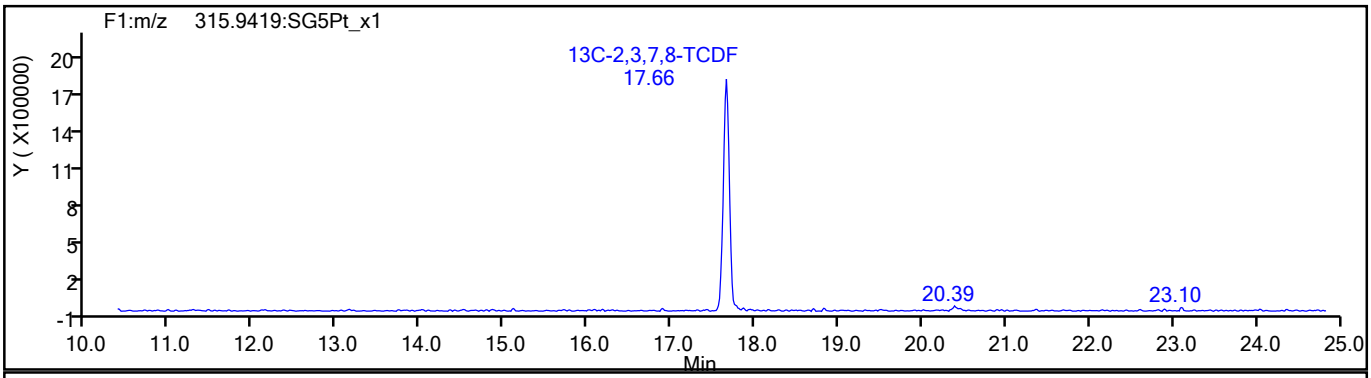

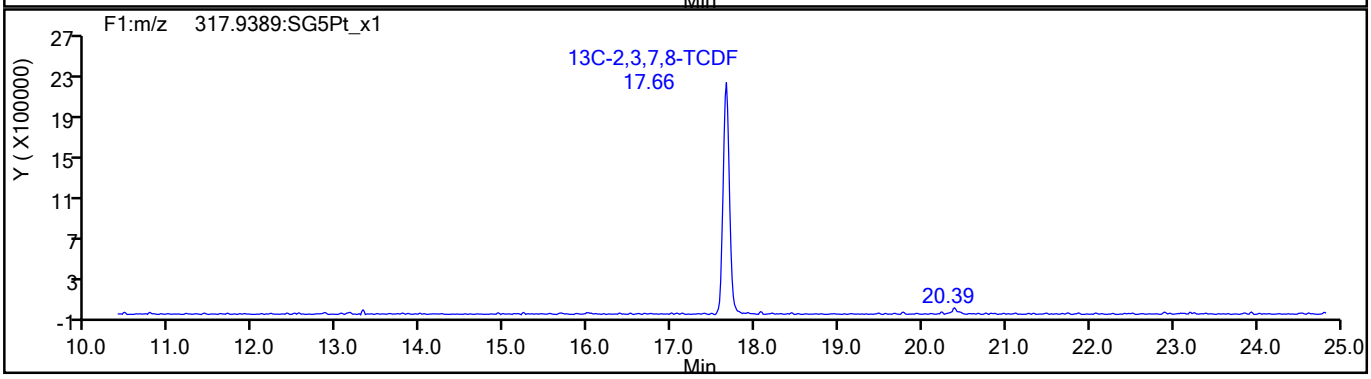

791365

Report Date: 30-Aug-2021 09:51:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_010.d		
Injection Date:	27-Aug-2021 21:23:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	520456	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

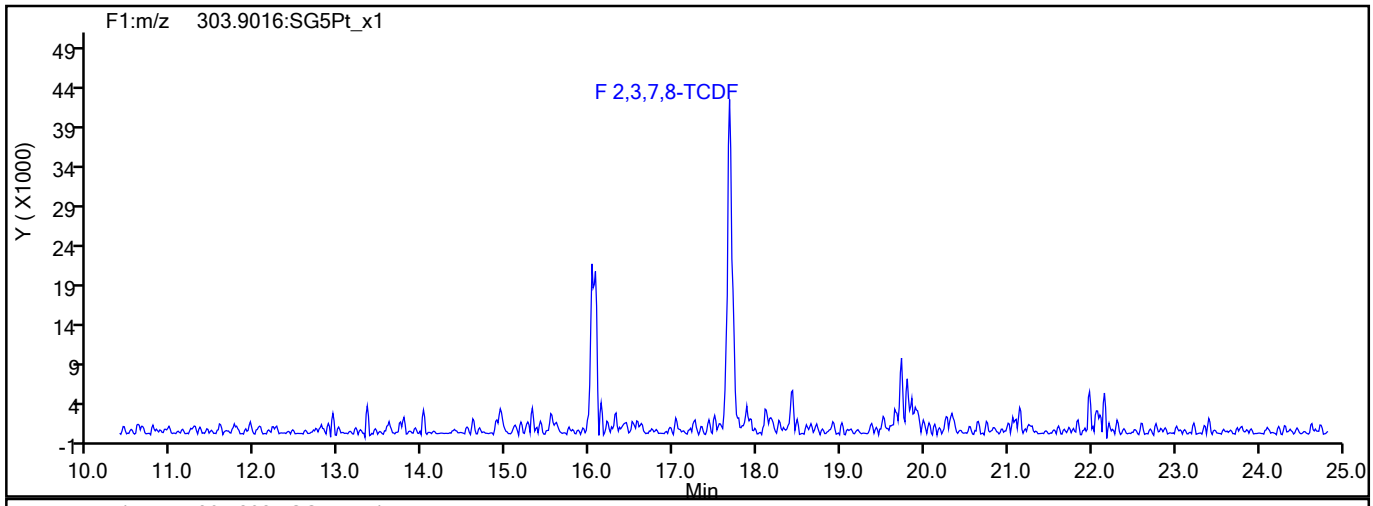

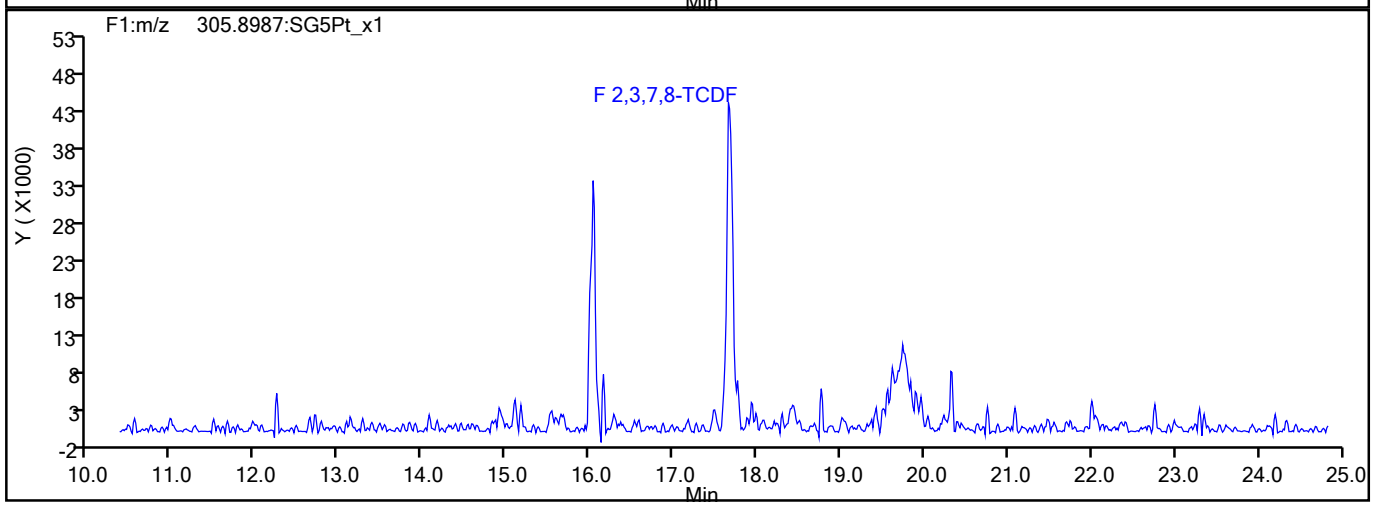

TCDF Interference Mass

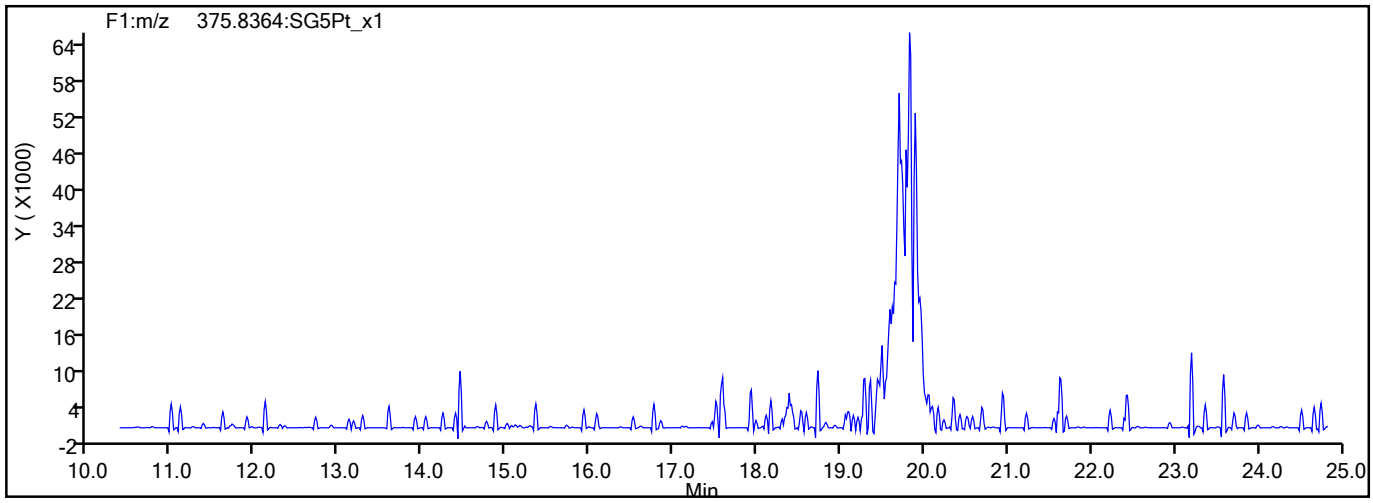

791366

Report Date: 30-Aug-2021 09:51:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_010.d		
Injection Date:	27-Aug-2021 21:23:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	520456	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

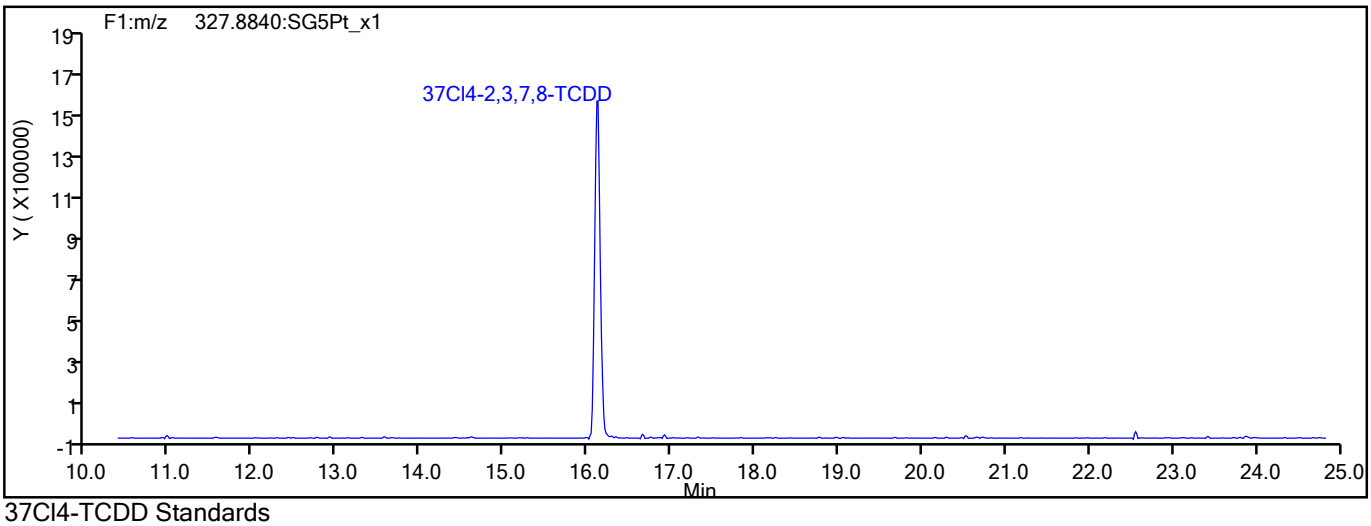

37Cl4-TCDD Standards

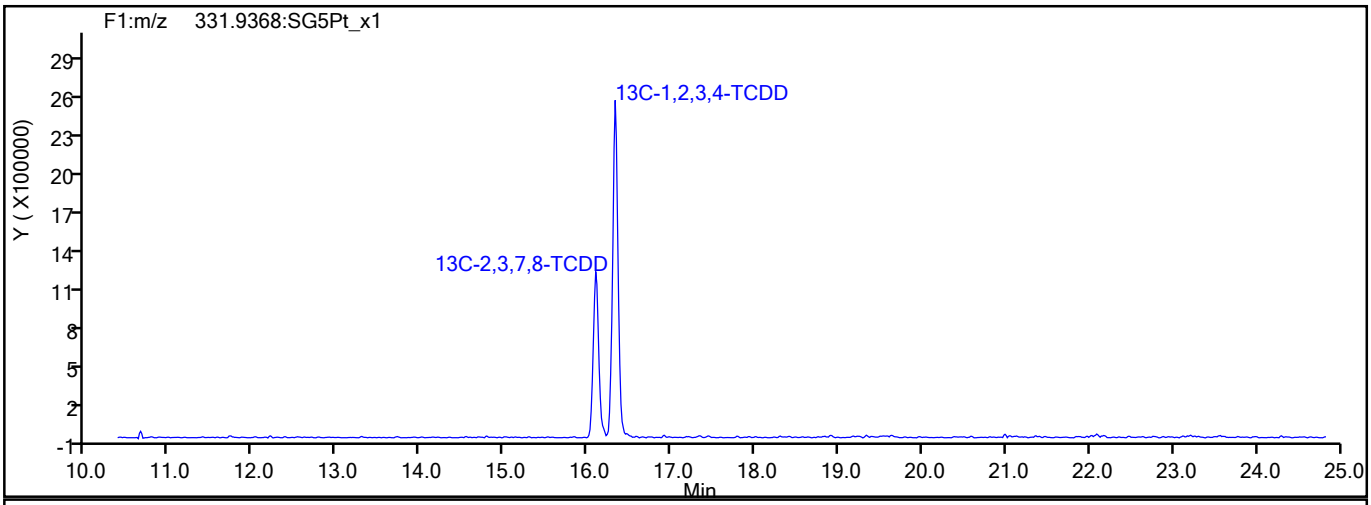

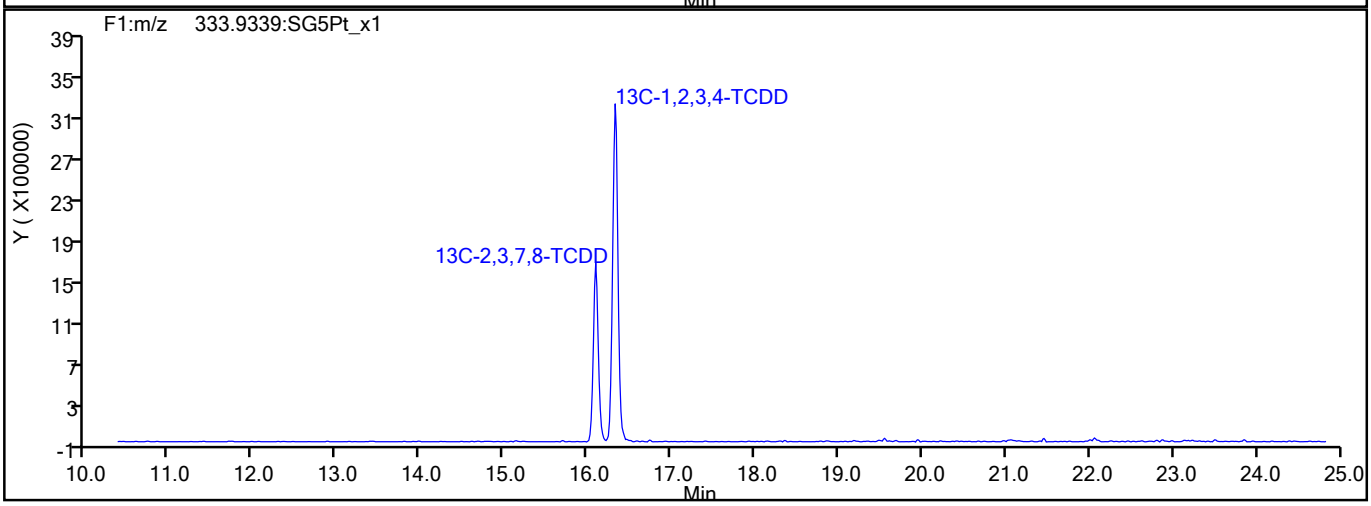

791367

Report Date: 30-Aug-2021 09:51:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_010.d		
Injection Date:	27-Aug-2021 21:23:29	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-DUP-11		
Worklist#:	520456	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

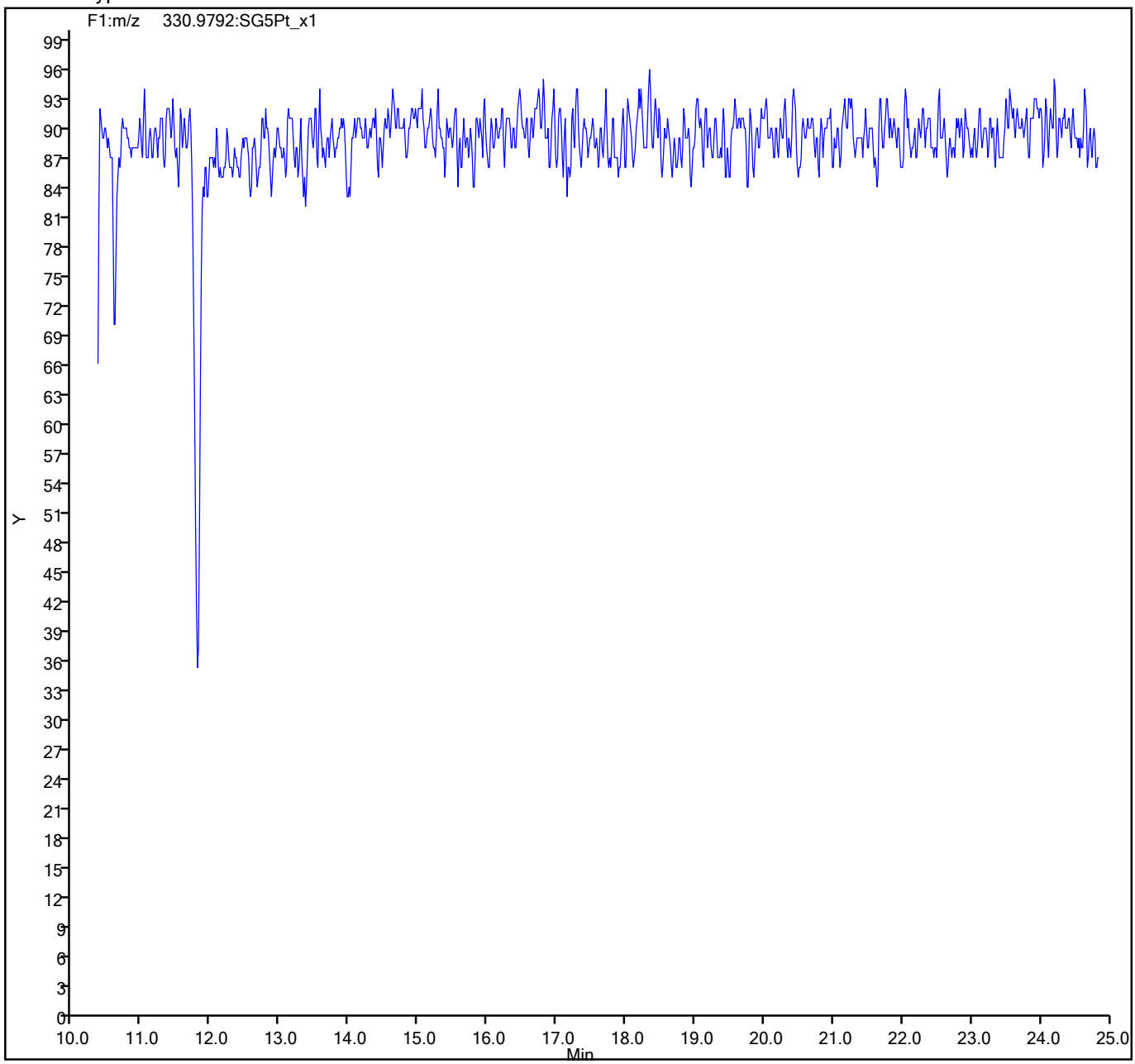

791368

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.0287	0.8698	1.0458	1.1094	1.0657	AveID		1.0239				8.9		20.0			
2,3,7,8-TCDD	1.2575	1.0971	1.2651	1.3434	1.3075	AveID		1.2541				7.5		20.0			
1,2,3,7,8-PeCDF	1.0739	0.9128	1.0891	1.1370	1.0928	AveID		1.0611				8.1		20.0			
2,3,4,7,8-PeCDF	1.0408	0.8610	1.0466	1.1082	1.0356	AveID		1.0184				9.1		20.0			
1,2,3,7,8-PeCDD	1.0578	0.9031	1.0680	1.1310	1.0823	AveID		1.0484				8.2		20.0			
1,2,3,4,7,8-HxCDF	1.1222	0.9192	1.1025	1.1936	1.0881	AveID		1.0851				9.3		20.0			
1,2,3,6,7,8-HxCDF	1.1488	0.9637	1.1546	1.1966	1.1664	AveID		1.1260				8.2		20.0			
2,3,4,6,7,8-HxCDF	1.2223	0.9863	1.1858	1.2415	1.2018	AveID		1.1675				8.9		20.0			
1,2,3,4,7,8-HxCDD	1.0979	0.8906	1.1304	1.1671	1.0341	AveID		1.0640				10.2		20.0			
1,2,3,6,7,8-HxCDD	1.0294	0.8529	1.0113	1.0930	1.0138	AveID		1.0001				8.9		20.0			
1,2,3,7,8,9-HxCDD	1.1551	0.9428	1.1999	1.2421	1.1227	AveID		1.1325				10.2		20.0			
1,2,3,7,8,9-HxCDF	1.1733	1.0136	1.1898	1.2479	1.2072	AveID		1.1664				7.7		20.0			
1,2,3,4,6,7,8-HpCDF	1.4474	1.2413	1.4986	1.5485	1.4706	AveID		1.4413				8.2		20.0			
1,2,3,4,6,7,8-HpCDD	1.1119	0.9539	1.1176	1.1675	1.1205	AveID		1.0943				7.5		20.0			
1,2,3,4,7,8,9-HpCDF	1.3136	1.1269	1.3622	1.4520	1.3321	AveID		1.3174				9.0		20.0			
OCDD	1.1009	0.9635	1.1652	1.1829	1.1226	AveID		1.1070				7.8		20.0			
OCDF	1.3863	1.1912	1.5145	1.5858	1.5129	AveID		1.4382				10.8		20.0			
13C-2,3,7,8-TCDF	1.6500	1.5631	1.6241	1.6170	1.6703	Ave		1.6249				2.5		35.0			
13C-2,3,7,8-TCDD	0.9128	0.8588	0.8965	0.8940	0.9345	Ave		0.8993				3.1		35.0			
13C-1,2,3,7,8-PeCDF	1.1977	1.1539	1.2193	1.2121	1.2674	Ave		1.2101				3.4		35.0			
13C-2,3,4,7,8-PeCDF	1.2269	1.1924	1.2487	1.2129	1.3165	Ave		1.2395				3.8		35.0			
13C-1,2,3,7,8-PeCDD	0.7558	0.7433	0.7524	0.7498	0.8049	Ave		0.7612				3.3		35.0			
13C-1,2,3,4,7,8-HxCDF	1.0875	1.1006	1.0706	1.0371	1.1225	Ave		1.0837				3.0		35.0			
13C-1,2,3,6,7,8-HxCDF	1.1466	1.1401	1.1115	1.1251	1.1163	Ave		1.1279				1.3		35.0			
13C-2,3,4,6,7,8-HxCDF	1.0781	1.0785	1.0541	1.0562	1.0518	Ave		1.0637				1.3		35.0			
13C-1,2,3,4,7,8-HxCDD	0.7413	0.7515	0.6926	0.7049	0.7769	Ave		0.7334				4.7		35.0			
13C-1,2,3,6,7,8-HxCDD	0.8884	0.8870	0.8694	0.8685	0.8876	Ave		0.8802				1.2		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9787	0.9851	0.9497	0.9522	0.9722	Ave		0.9676				1.6		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.8030	0.7818	0.7501	0.7625	0.7677	Ave		0.7730				2.6		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6554	0.6478	0.6343	0.6458	0.6528	Ave		0.6472				1.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6985	0.7093	0.6800	0.6816	0.7346	Ave		0.7008				3.2		35.0			
13C-OCDD	0.4462	0.4357	0.4273	0.4575	0.4691	Ave		0.4472				3.7		35.0			
37Cl4-2,3,7,8-TCDD	0.9705	0.9794	1.1718	1.1876	1.2264	Ave		1.1071				11.1					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	557485	1709191	10638776	44524782	204575642	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	376984	1184284	7104238	29808948	140421448	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	2112140	6620354	41588176	171023920	795873691	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	2096967	6452410	40928436	166805723	783403837	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	1312779	4219570	25165054	105236005	500555284	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	1949462	6041767	37525146	155057762	737075796	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	2104086	6561860	40802767	168618976	785709889	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	2104896	6352404	39741365	164241378	762810877	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	1300030	3996910	24891170	103044220	484857042	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	1460747	4517909	27953752	118900298	543061818	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	1503407	4612548	29794954	122394998	563888565	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	1834100	5963032	35924190	148834491	708280047	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	1856599	5795616	35740964	147892240	681312007	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	1164074	3690749	22538791	94435922	441437476	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	1465634	4773949	29450636	123968724	590555312	2.50	10.0	50.0	200	1000
OCDD		AveID	1569338	5013385	31656667	135570174	635652839	5.00	20.0	100	400	2000
OCDF		AveID	1976175	6198469	41147202	181747068	856685987	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	108384725	98246522	101724636	100332269	95980421	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	59957723	53975587	56155483	55471422	53698206	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	78674290	72525655	76368219	75205597	72829681	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	80591659	74944110	78214582	75259591	75649463	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	49643581	46721712	47124414	46524396	46251010	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	69484482	65726932	68075509	64951889	67741189	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	73262388	68089005	70677463	70459920	67363664	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	68885161	64406928	67028498	66145684	63471184	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	47363504	44877133	44039927	44144841	46886171	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	56759108	52974056	55284532	54392394	53564396	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	62528954	58828058	60389284	59636084	58669892	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	51308225	46691158	47697671	47752972	46328151	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	41876556	38689128	40333717	40442950	39395832	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	44628352	42362179	43238622	42687625	44333848	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	57018462	52034518	54338243	57303880	56623863	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	318727	1231219	7339670	29474361	140953034	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\26JL2110D5.SPL
Last Modified: Monday, July 26, 2021 16:58:03 Pacific Daylight Time
Printed: Tuesday, July 27, 2021 07:40:45 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	26JL2110D5_1	WDM HRDXNCP_00042	WDM 072621	Tray01:1	Dioxin		SMA
2	26JL2110D5_2	SB Solvent Blank C-14	SB 072621	Tray01:3			SMA
3	26JL2110D5_3	CS-2 HRDXNL2_00032	IC 072621	Tray01:4	Dioxin		SMA
4	26JL2110D5_4	CS-3 HRDXNL3_00029	IC 072621A	Tray01:5	Dioxin		SMA
5	26JL2110D5_5	CS-4 HRDXNL4_00099	IC 072621B	Tray01:2	Dioxin		SMA
6	26JL2110D5_6	CS-5 HRDXNL5_00032	IC 072621C	Tray01:6	Dioxin		SMA
7	26JL2110D5_7	CS-6 HRDXNL6_00028	IC 072621D	Tray01:7	Dioxin		SMA
8	26JL2110D5_8	SB Solvent Blank C-14	SB 072621A	Tray01:3			SMA
9	26JL2110D5_9	ICV HRDXNIC_00047	ICV 072621	Tray01:8	Dioxin		SMA
10	26JL2110D5_10	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS
11	26JL2110D5_11	WDM HRDXNCP_00042	WDM 031621C	Tray01:1	Dioxin		KSS
12	26JL2110D5_12	SB Solvent Blank C-14	SB 072621B	Tray01:3			KSS
13	26JL2110D5_13	mb 320-508015/1-a	mb 320-508015/1-a	Tray01:9	1613B/8290/Water	D255	KSS
14	26JL2110D5_14	lcs 320-508015/2-a	lcs 320-508015/2-a	Tray01:10	1613B/8290/Water		KSS
15	26JL2110D5_15	lcsd 320-508015/3-a	lcsd 320-508015/3-a	Tray01:11	1613B/8290/Water		KSS
16	26JL2110D5_16	320-76081-a-3-c	320-76081-a-3-c	Tray01:12	1613B/8290/Water		KSS
17	26JL2110D5_17	SB Solvent Blank C-14	SB 072621C	Tray01:3			KSS
18	26JL2110D5_18	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS

LOGFILE CHECKED
DB 7/27/21

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:18:21 Pacific Daylight Time

M 292.9824 R 12499

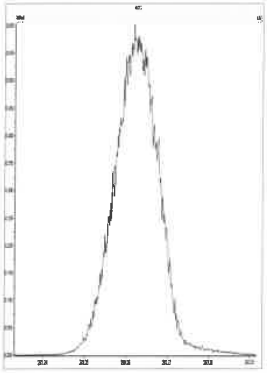

M 304.9824 R 12752

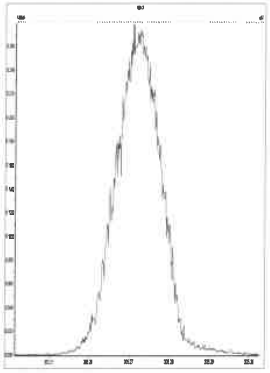

M 318.9792 R 13230

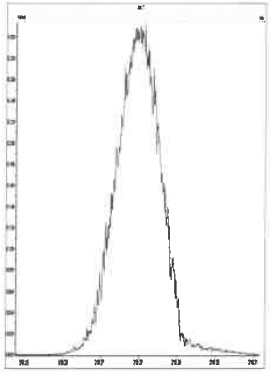

M 330.9792 R 12691

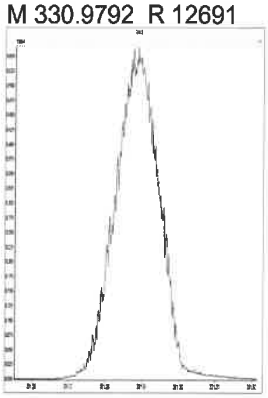

M 342.9792 R 12885

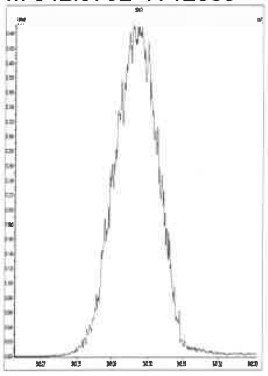

M 354.9792 R 12138

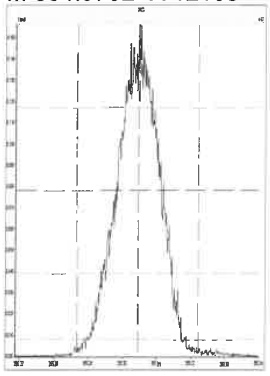

M 366.9792 R 13090

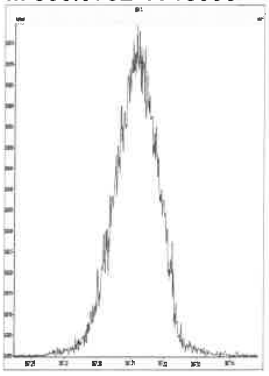

M 380.9760 R 12562

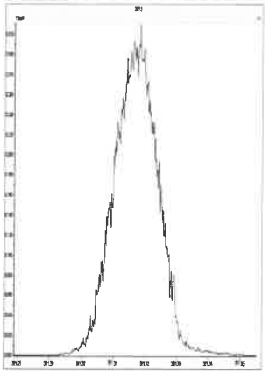

M 392.9760 R 12753

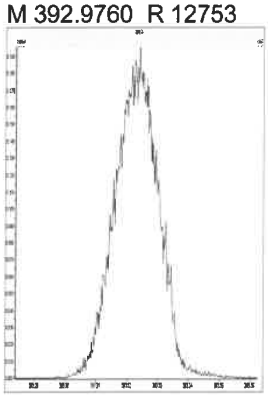

M 404.9760 R 12137

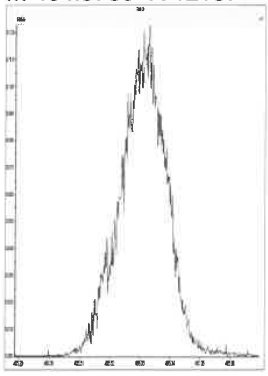

M 416.9760 R 12563

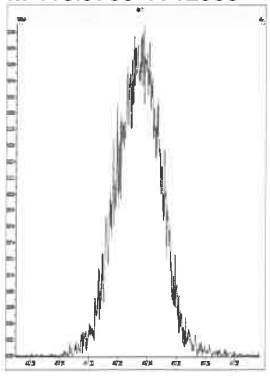

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:04 Pacific Daylight Time

M 318.9792 R 13300

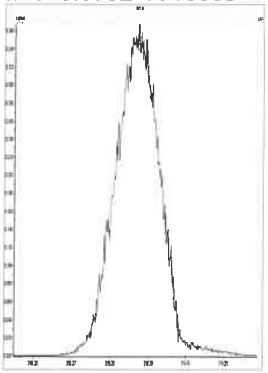

M 330.9792 R 12691

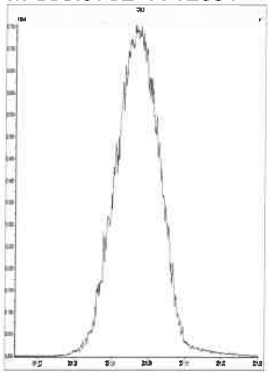

M 342.9792 R 12499

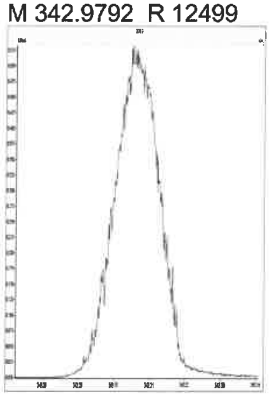

M 354.9792 R 12374

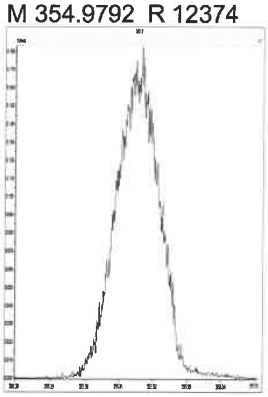

M 366.9792 R 12691

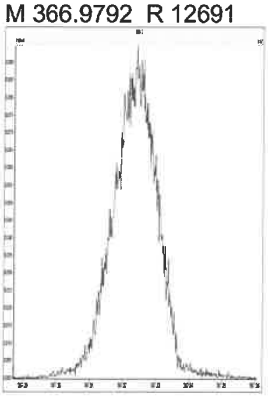

M 380.9760 R 12690

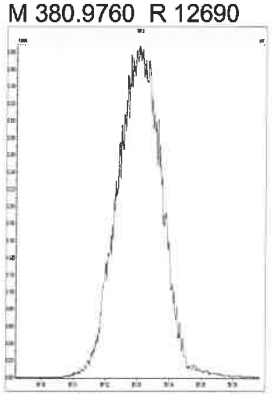

M 392.9760 R 12885

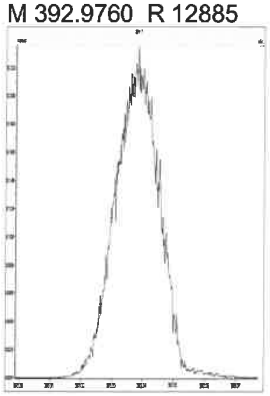

M 404.9760 R 12817

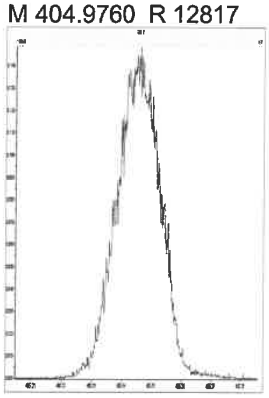

M 416.9760 R 12954

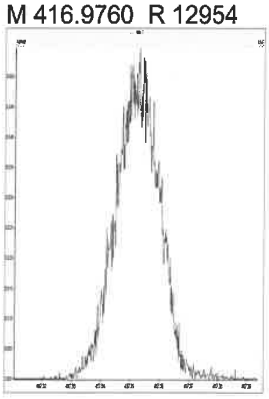

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:43 Pacific Daylight Time

M 366.9792 R 12440

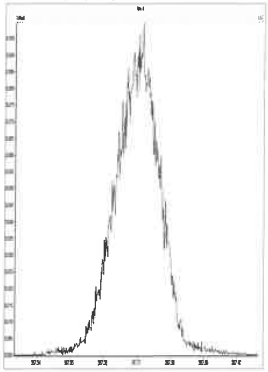

M 380.9760 R 12955

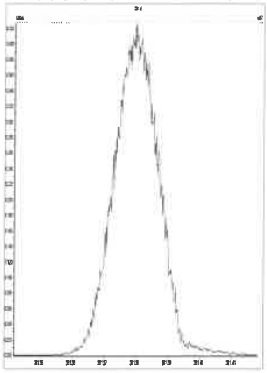

M 392.9760 R 12690

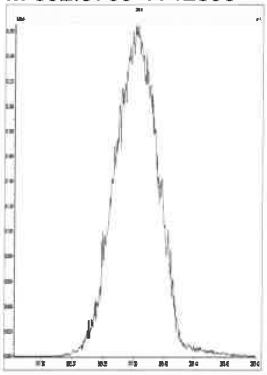

M 404.9760 R 12957

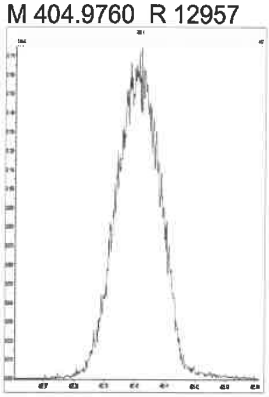

M 416.9760 R 13516

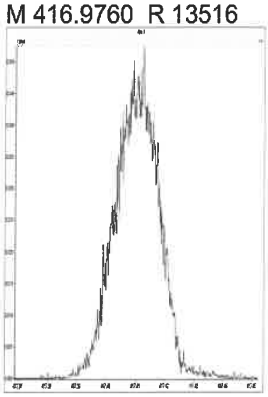

M 430.9728 R 12564

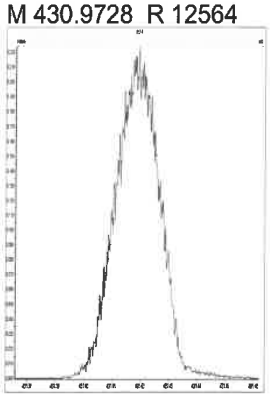

M 442.9728 R 12953

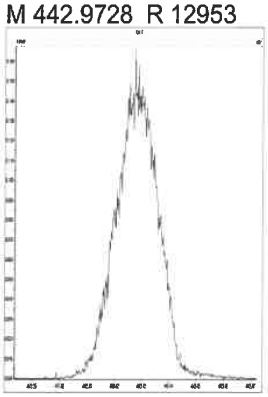

M 454.9728 R 13226

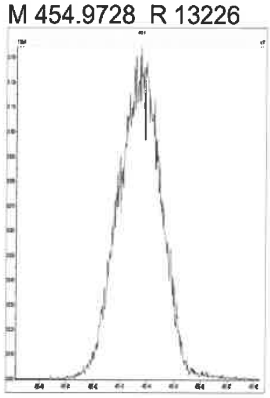

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:20:01 Pacific Daylight Time

M 380.9760 R 12885

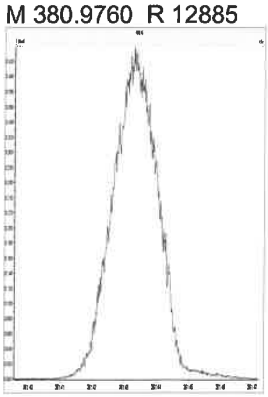

M 392.9760 R 12955

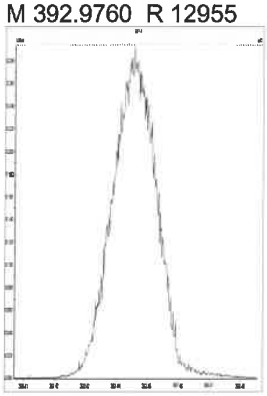

M 404.9760 R 12756

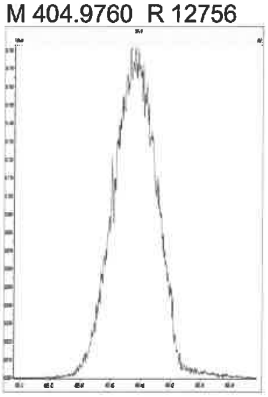

M 416.9760 R 13368

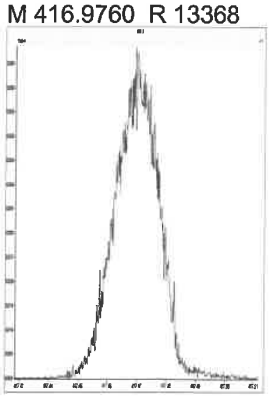

M 430.9728 R 12758

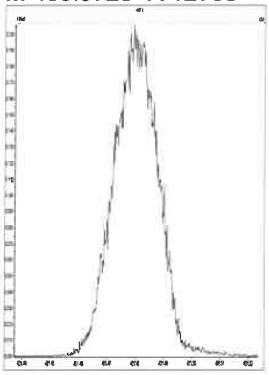

M 442.9728 R 13229

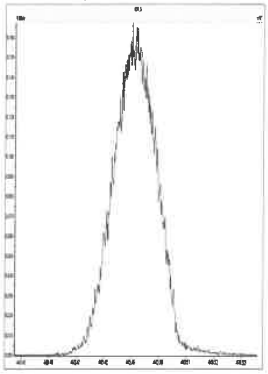

M 454.9728 R 13737

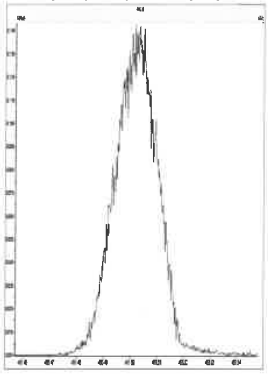

M 466.9728 R 12952

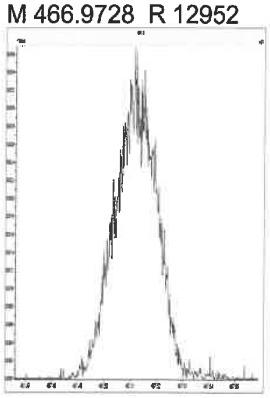

M 480.9696 R 12819

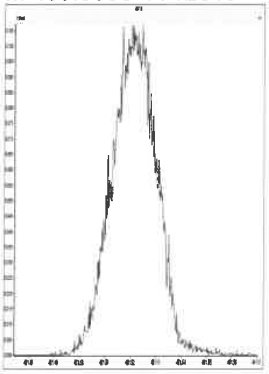

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:21:28 Pacific Daylight Time

M 380.9760 R 12630

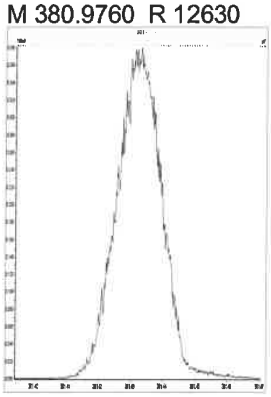

M 392.9760 R 12687

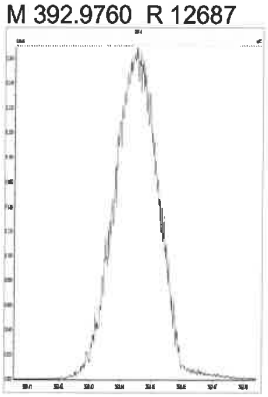

M 404.9760 R 13441

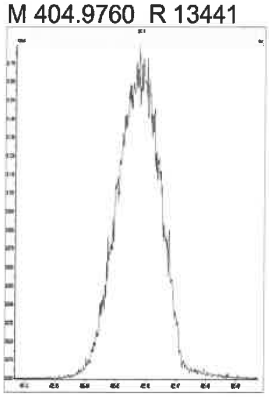

M 416.9760 R 12886

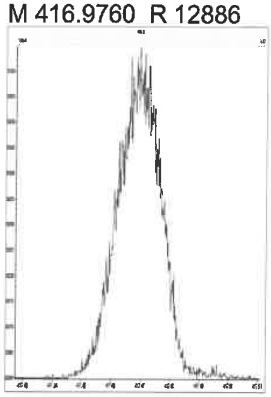

M 430.9728 R 12952

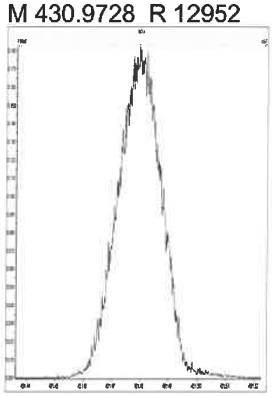

M 442.9728 R 12564

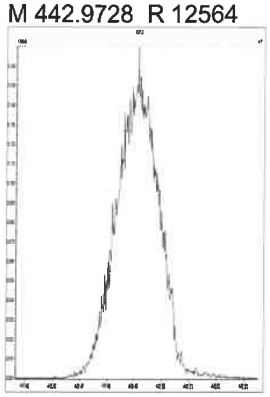

M 454.9728 R 13228

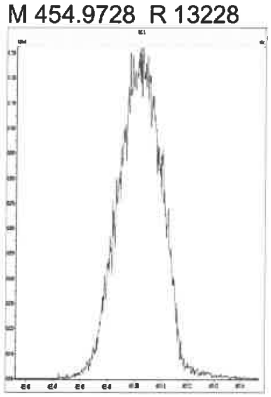

M 466.9728 R 12689

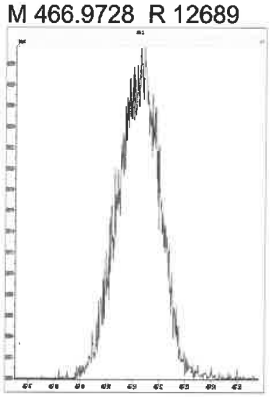

M 480.9696 R 13226

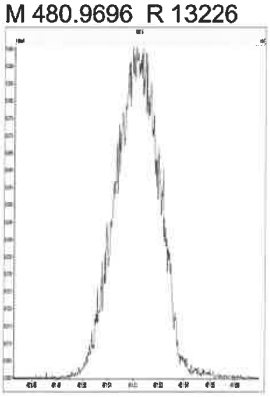

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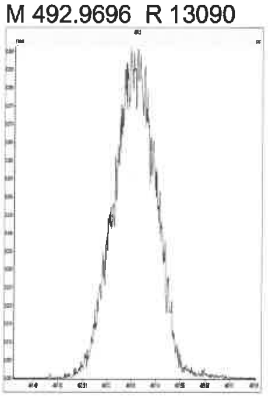

M 504.9696 R 13021

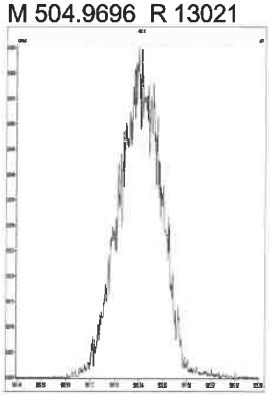

M 516.9697 R 13811

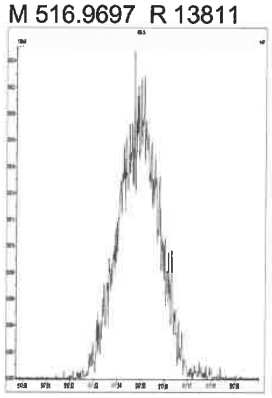

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M 292.9824_R 12322

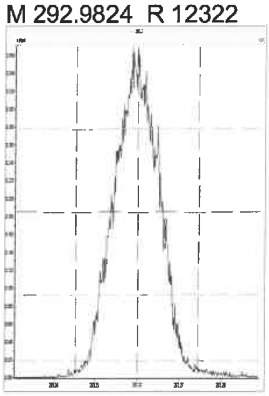

M 304.9824_R 12923

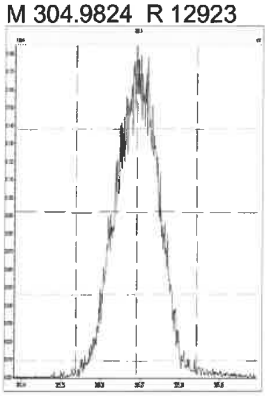

M 318.9792_R 12953

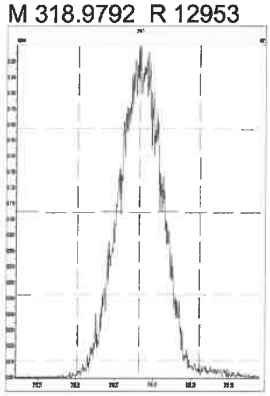

M 330.9792_R 12791

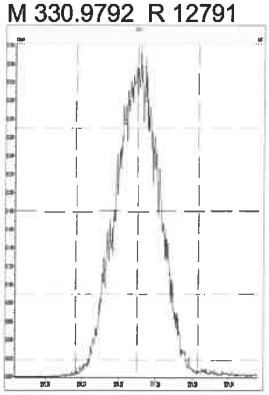

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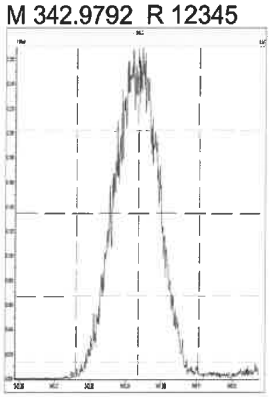

M 354.9792_R 13001

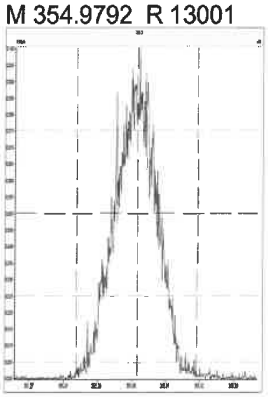

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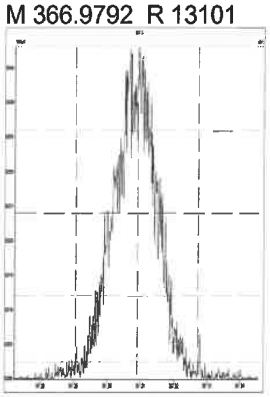

M 380.9760_R 13055

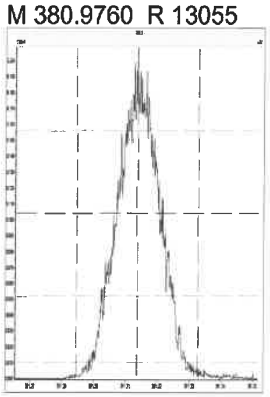

M 392.9760_R 13023

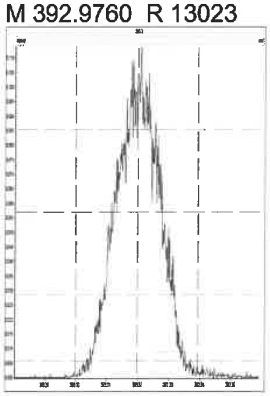

M 404.9760_R 13233

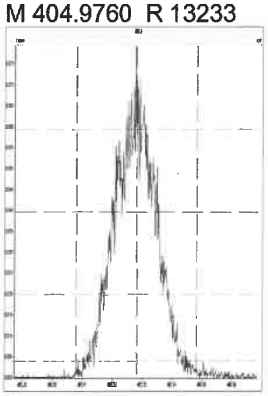

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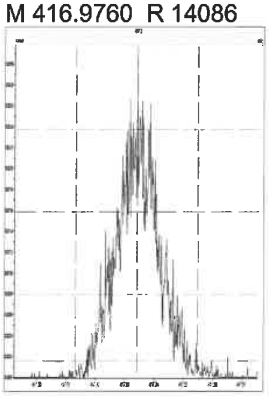

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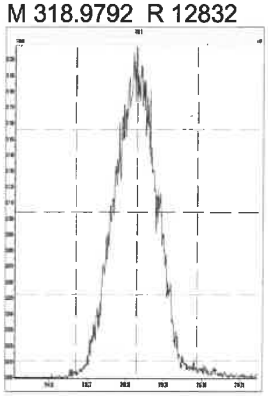

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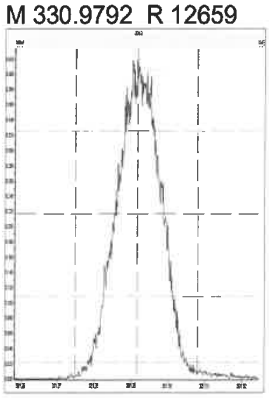

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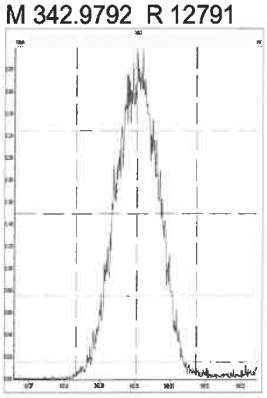

M 354.9792_R 13061

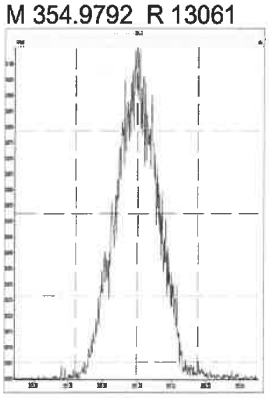

M 366.9792_R 13412

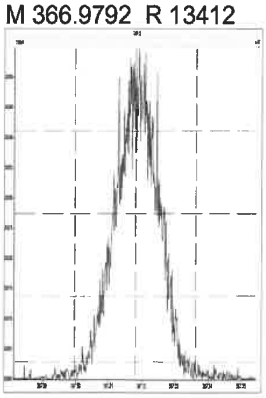

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M 380.9760 R 13021

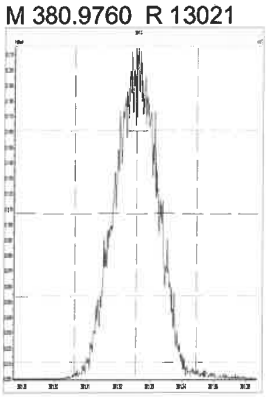

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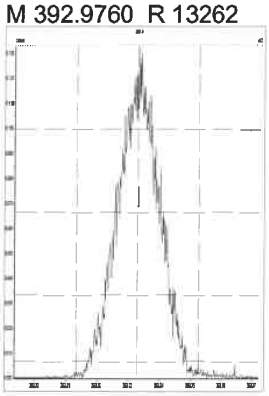

M 404.9760 R 13001

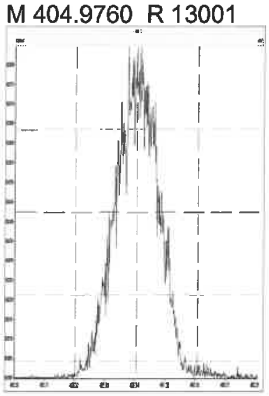

M 416.9760 R 13664

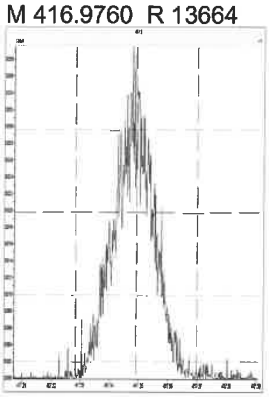

M 366.9792 R 13160

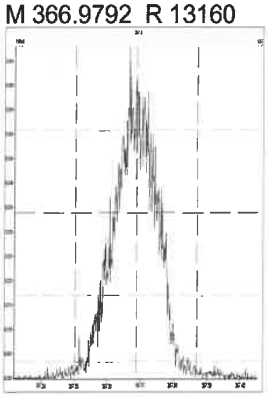

M 380.9760 R 12836

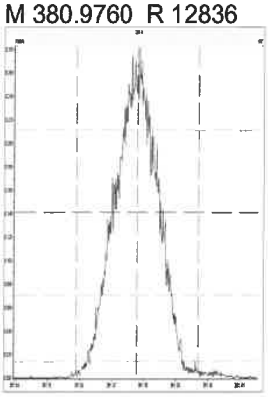

M 392.9760 R 12820

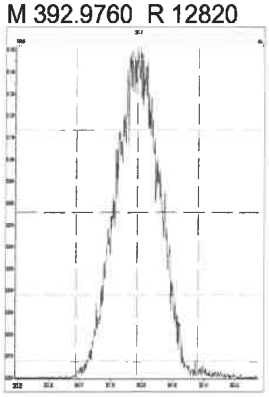

M 404.9760 R 13479

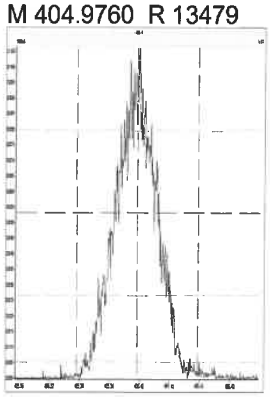

M 416.9760 R 14164

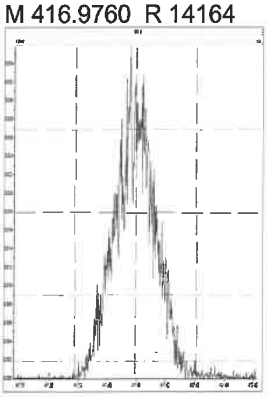

M 430.9728 R 13727

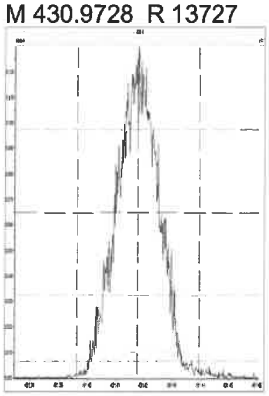

M 442.9728 R 13415

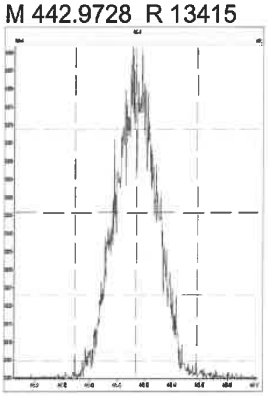

M 454.9728 R 13335

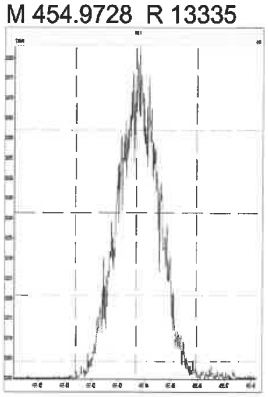

M 380.9760 R 13021

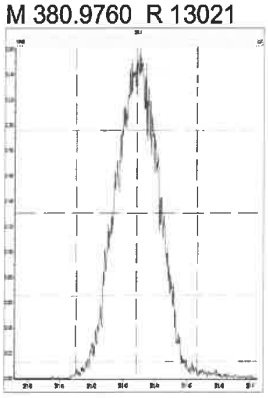

M 392.9760 R 12956

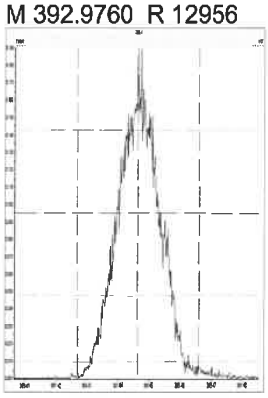

M 404.9760 R 13194

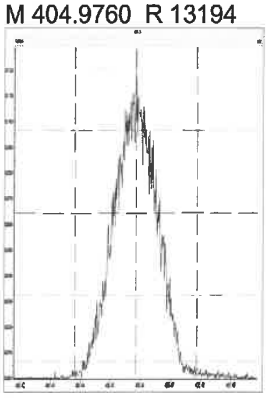

M 416.9760 R 13592

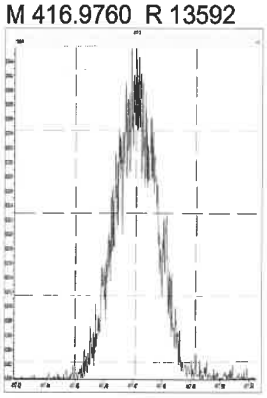

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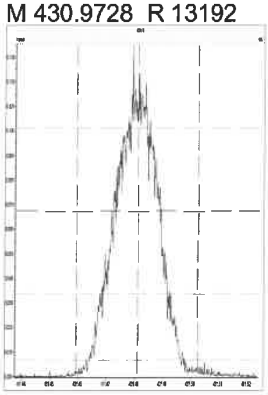

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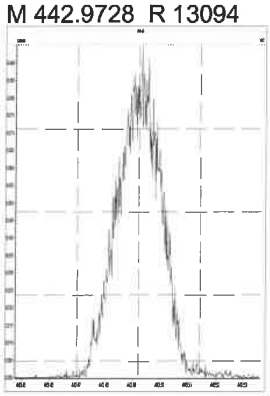

M 454.9728 R 13298

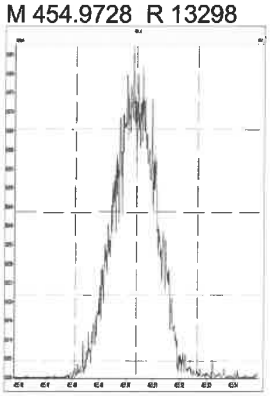

M 466.9728 R 15289

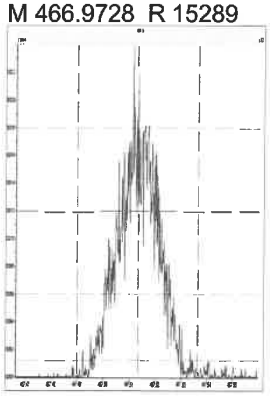

M 480.9696 R 13516

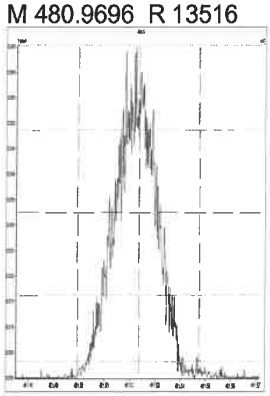

M 380.9760 R 12762

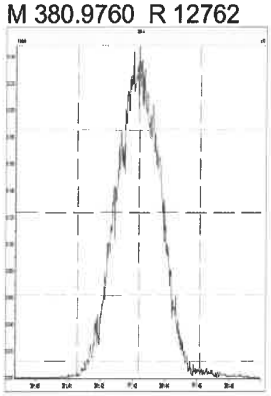

M 392.9760 R 12794

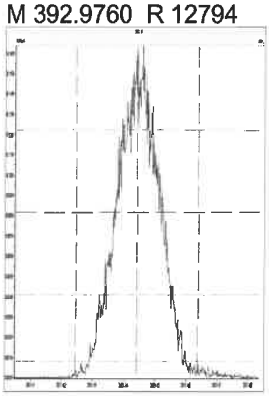

M 404.9760 R 13054

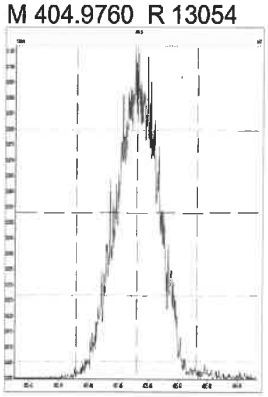

M 416.9760 R 13966

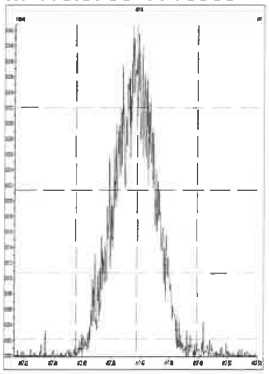

M 430.9728 R 13194

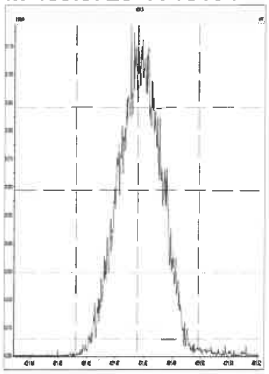

M 442.9728 R 13375

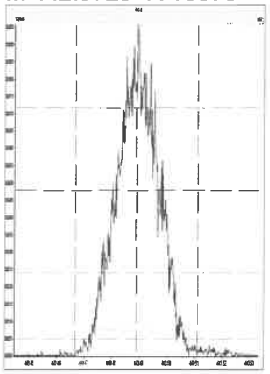

M 454.9728 R 13117

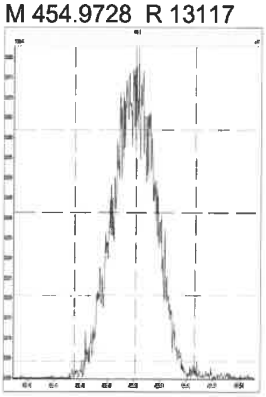

M 466.9728 R 14253

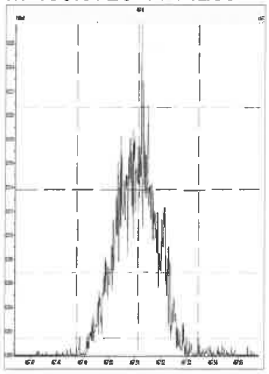

M 480.9696 R 13737

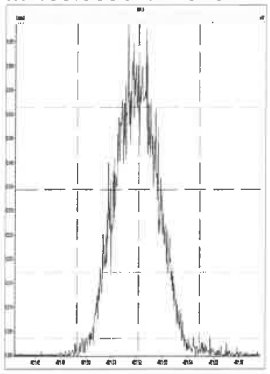

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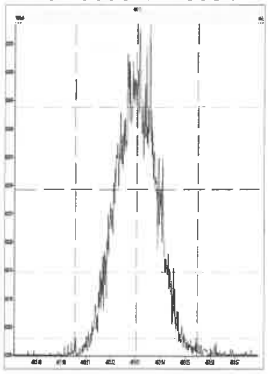

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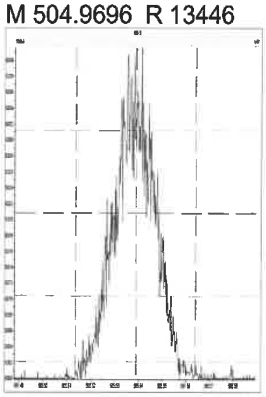

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M 516.9697_R 16567

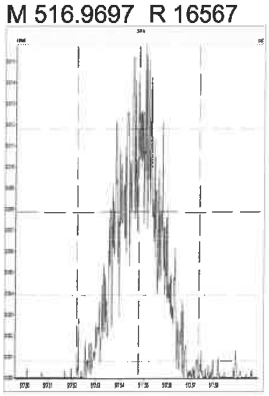

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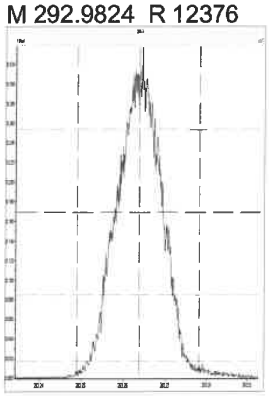

M 304.9824 R 12412

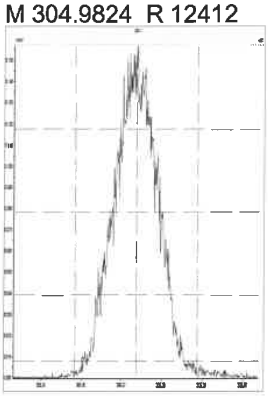

M 318.9792 R 12886

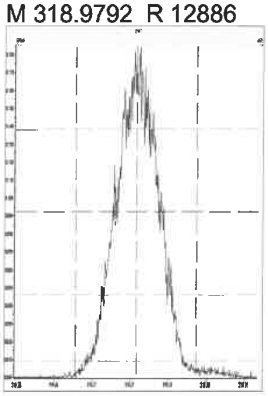

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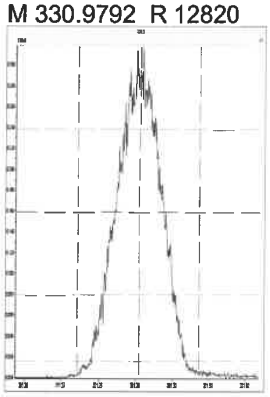

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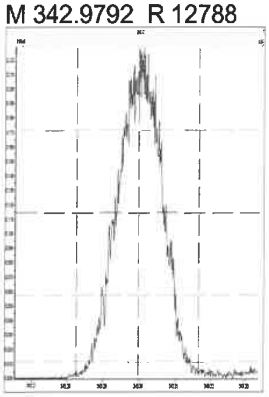

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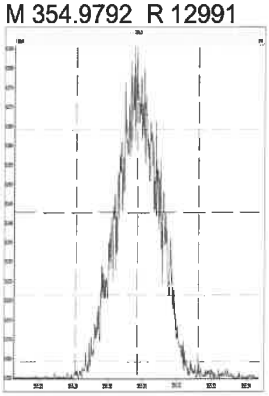

M 366.9792 R 13368

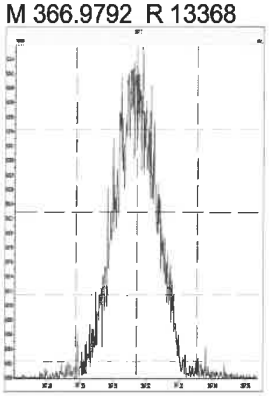

M 380.9760 R 12766

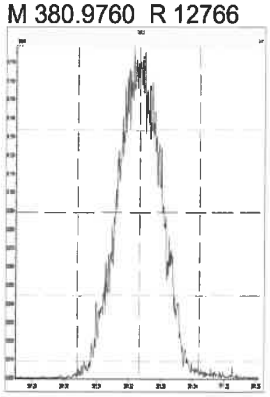

M 392.9760 R 13080

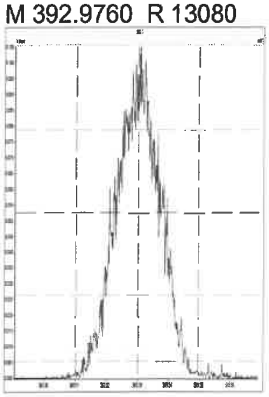

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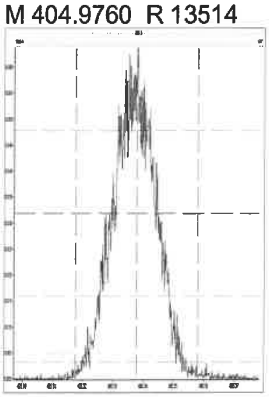

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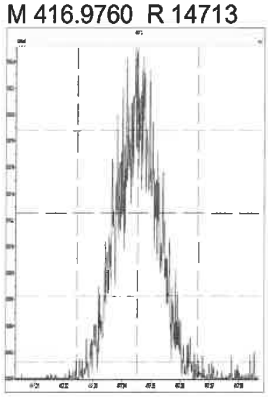

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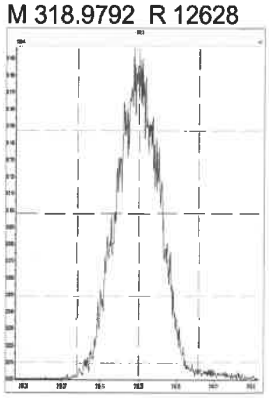

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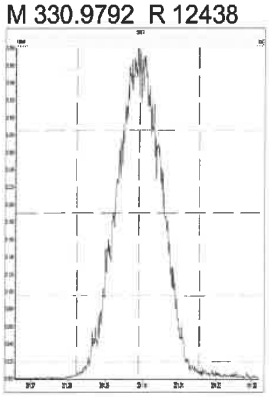

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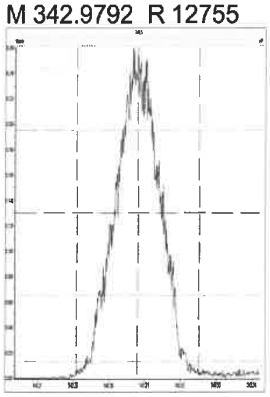

M 354.9792 R 12755

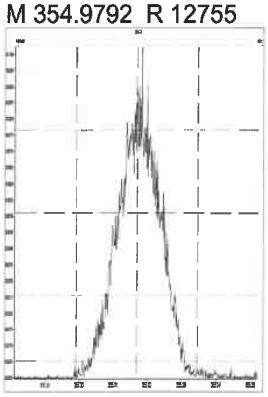

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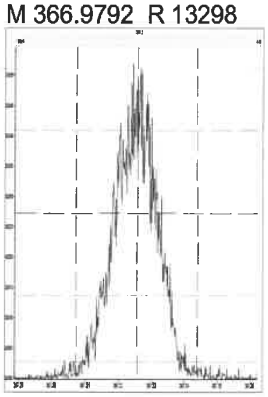

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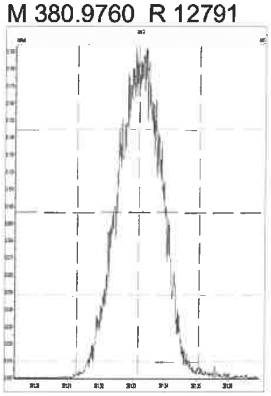

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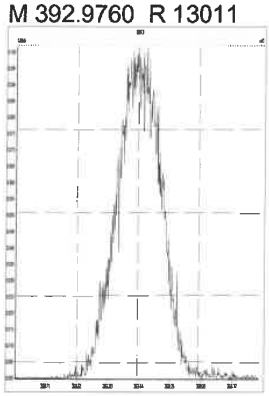

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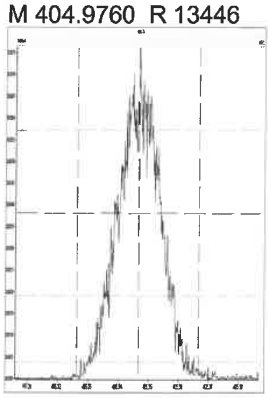

M 416.9760 R 13368

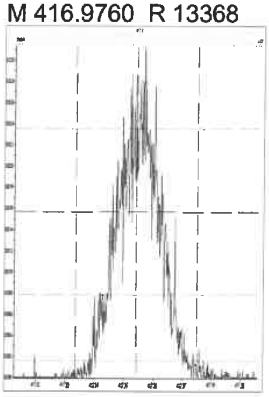

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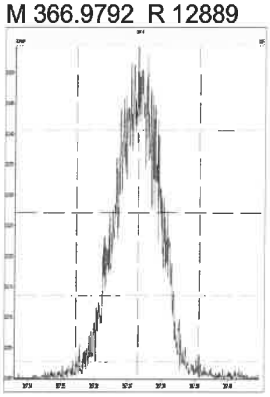

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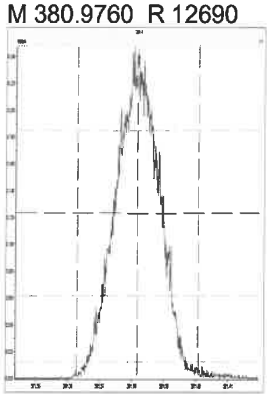

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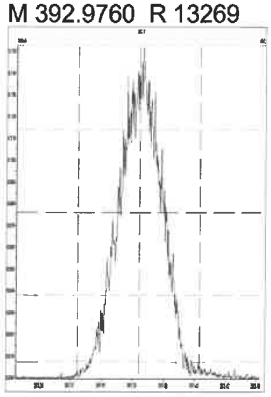

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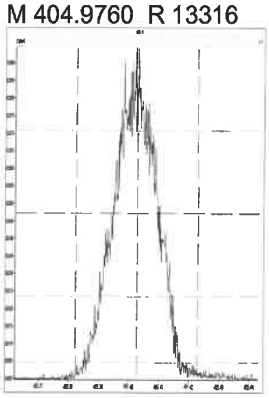

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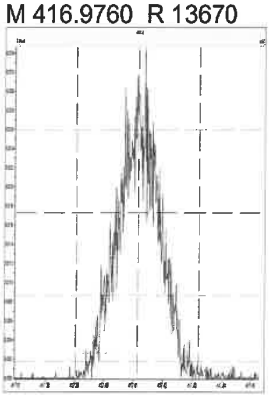

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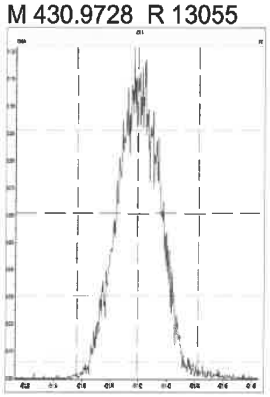

M 442.9728 R 13227

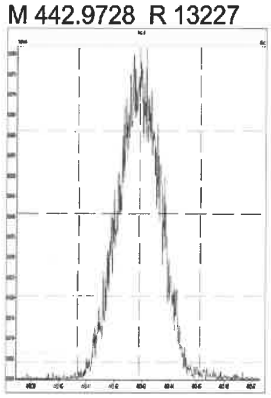

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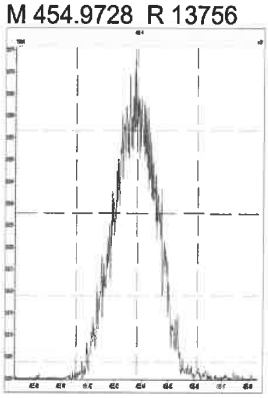

M 380.9760 R 12854

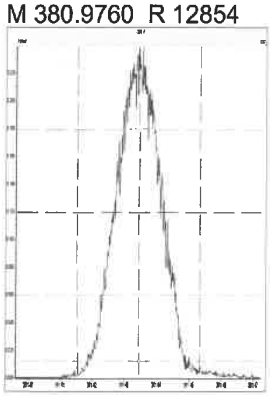

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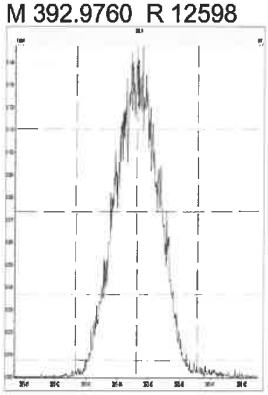

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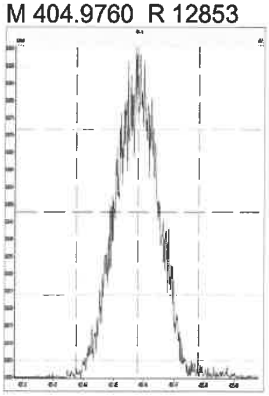

M 416.9760 R 13928

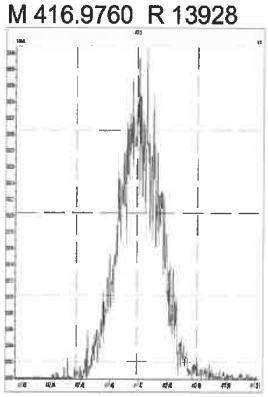

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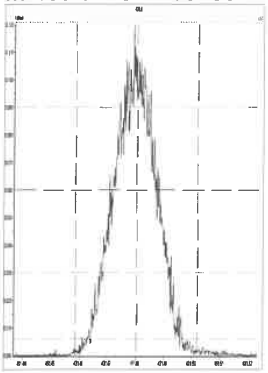

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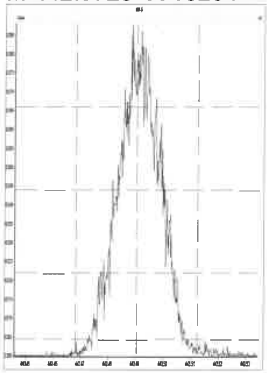

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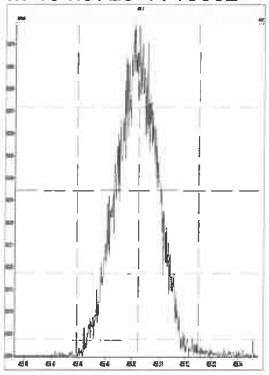

M 466.9728 R 14749

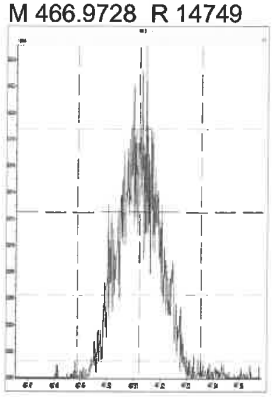

M 480.9696 R 13412

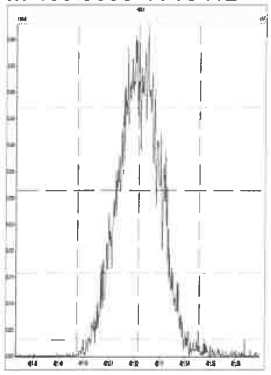

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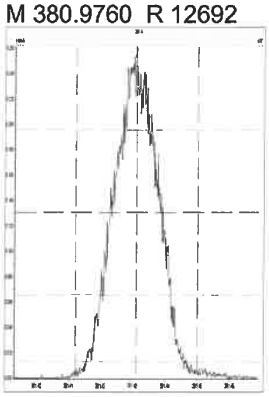

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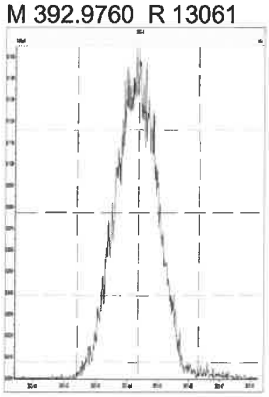

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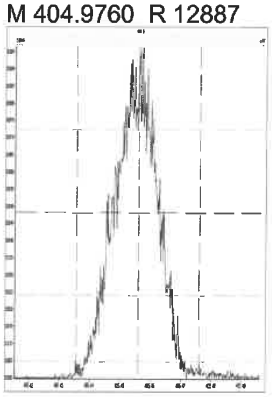

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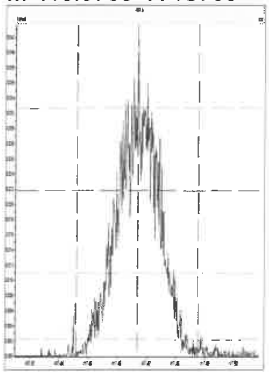

M 430.9728 R 12760

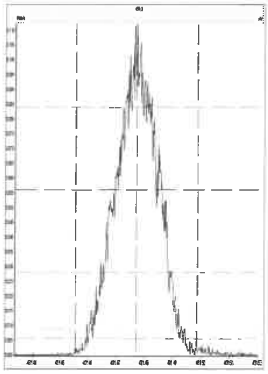

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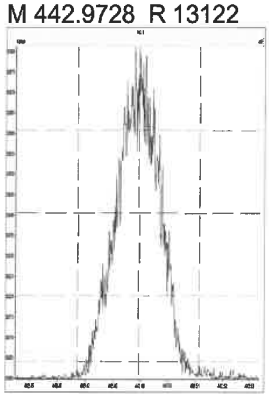

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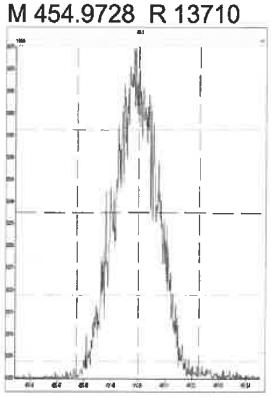

M 466.9728 R 14205

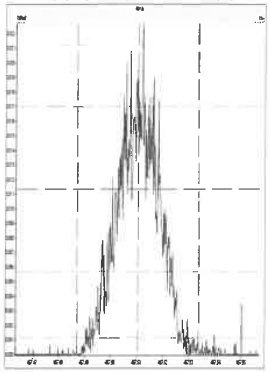

M 480.9696 R 13298

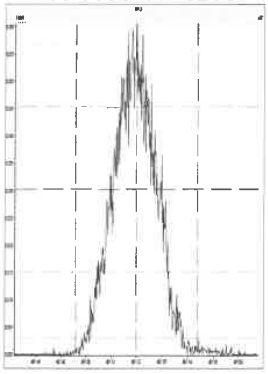

M 492.9696 R 12886

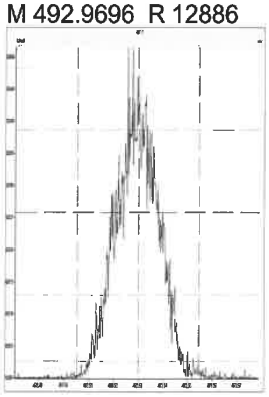

M 504.9696 R 13600

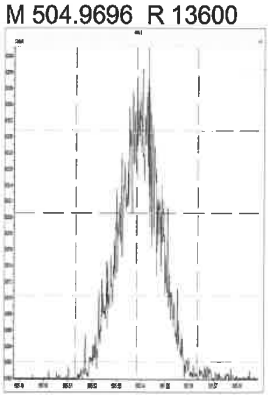

Printed: Monday, July 26, 2021 16:26:55 Pacific Daylight Time

M 516.9697 R 15872

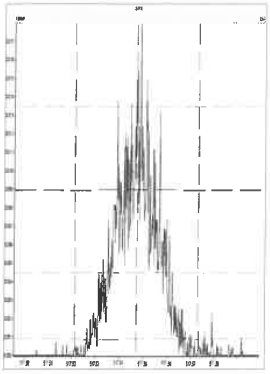

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	65685883	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	108384725	0.78	1.6249	101.5	101.5	0.1385	0.1385	102	
2,3,7,8-TCDF	17.628	557485	0.78	1.0239	0.5023	0.5023	0.009259	0.009259	100	
S Total TCDF					0.5023	0.5023	0.009259	0.009259		
D 13C-2,3,7,8-TCDD	18.338	59957723	0.80	0.8993	101.5	101.5	0.1222	0.1222	101	
$ 37Cl4-2,3,7,8-TCDD	18.338	318727		1.1071	0.4383	0.4383	0.006072	0.006072	87.65	
2,3,7,8-TCDD	18.354	376984	0.89	1.2541	0.5013	0.5013	0.0150	0.0150	100	M
S Total TCDD					0.5013	0.5013	0.0150	0.0150		
D 13C-1,2,3,7,8-PeCDF	22.749	78674290	1.60	1.2101	99.0	99.0	0.2282	0.2282	98.98	
1,2,3,7,8-PeCDF	22.776	2112140	1.63	1.0611	2.530	2.530	0.0220	0.0220	101	
D 13C-2,3,4,7,8-PeCDF	24.126	80591659	1.57	1.2395	99.0	99.0	0.2228	0.2228	98.99	
2,3,4,7,8-PeCDF	24.153	2096967	1.56	1.0184	2.555	2.555	0.0245	0.0245	102	
S Total PeCDF					5.085	5.085	0.0233	0.0233		
D 13C-1,2,3,7,8-PeCDD	24.862	49643581	1.62	0.7612	99.3	99.3	0.1197	0.1197	99.28	
1,2,3,7,8-PeCDD	24.889	1312779	1.42	1.0484	2.522	2.522	0.0218	0.0218	101	
S Total PeCDD					2.522	2.522	0.0218	0.0218		
D 13C-1,2,3,4,7,8-HxCDF	30.835	69484482	0.52	1.0837	100.4	100.4	0.5299	0.5299	100	
1,2,3,4,7,8-HxCDF	30.849	1949462	1.23	1.0851	2.586	2.586	0.0289	0.0289	103	
D 13C-1,2,3,6,7,8-HxCDF	30.995	73262388	0.52	1.1279	101.7	101.7	0.5091	0.5091	102	
1,2,3,6,7,8-HxCDF	31.022	2104086	1.18	1.1260	2.551	2.551	0.0273	0.0273	102	
D 13C-2,3,4,6,7,8-HxCDF	31.754	68885161	0.52	1.0637	101.4	101.4	0.5398	0.5398	101	
2,3,4,6,7,8-HxCDF	31.767	2104896	1.20	1.1675	2.617	2.617	0.0225	0.0225	105	
D 13C-1,2,3,7,8,9-HxCDF	32.512	62528954	0.51	0.9676	101.1	101.1	0.5935	0.5935	101	
1,2,3,7,8,9-HxCDF	32.526	1834100	1.21	1.1664	2.515	2.515	0.0244	0.0244	101	
S Total HxCDF					10.3	10.3	0.0258	0.0258		
* 13C-1,2,3,7,8,9-HxCDD	32.339	63892665	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	47363504	1.27	0.7334	101.1	101.1	0.5001	0.5001	101	
1,2,3,4,7,8-HxCDD	31.940	1300030	1.26	1.0640	2.580	2.580	0.0268	0.0268	103	
D 13C-1,2,3,6,7,8-HxCDD	32.033	56759108	1.25	0.8802	100.9	100.9	0.4167	0.4167	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	1460747	1.28	1.0001	2.573	2.573	0.0268	0.0268	103	
1,2,3,7,8,9-HxCDD	32.353	1503407	1.26	1.1325	2.550	2.550	0.0244	0.0244	102	
S Total HxCDD					7.703	7.703	0.0260	0.0260		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	51308225	0.44	0.7730	103.9	103.9	1.147	1.147	104	
1,2,3,4,6,7,8-HpCDF	33.924	1856599	1.05	1.4413	2.511	2.511	0.0321	0.0321	100	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44628352	0.44	0.7008	99.7	99.7	1.266	1.266	99.67	
1,2,3,4,7,8,9-HpCDF	35.017	1465634	1.06	1.3174	2.493	2.493	0.0442	0.0442	99.72	
S Total HpCDF					5.003	5.003	0.0381	0.0381		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	41876556	1.01	0.6472	101.3	101.3	0.6709	0.6709	101	
1,2,3,4,6,7,8-HpCDD	34.726	1164074	1.06	1.0943	2.540	2.540	0.0284	0.0284	102	
S Total HpCDD					2.540	2.540	0.0284	0.0284		
D 13C-OCDD	37.093	57018462	0.89	0.4472	199.6	199.6	0.2479	0.2479	99.79	
OCDF	37.201	1976175	0.91	1.4382	4.820	4.820	0.0196	0.0196	96.40	
OCDD	37.105	1569338	0.92	1.1070	4.973	4.973	0.0246	0.0246	99.45	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		29725607	7464659	4167	10417	1791		
333.9339	18.142	18.142	0		35960276	9003139	3074	7685	2929	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	47438761	11992473	9243	23107	1297		
317.9389	17.613	17.616	0	0.971	60945964	15328013	5578	13945	2748	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	244966	62557	418	1045	150		
305.8987	17.628	17.631	0	1.001	312519	74119	618	1545	120	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	26677109	6242710	4167	10417	1498		
333.9339	18.338	18.338	0	1.011	33280614	7789380	3074	7685	2534	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.011	318727	66577	443	1107	150		
2,3,7,8-TCDD											M
319.8965	18.354	18.357	0	1.001	177891	43427	698	1745	62		M
321.8936	18.354	18.357	0	1.001	199093	47894	356	890	135	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	48367116	8680931	10780	26950	805		
353.8970	22.749	22.754	0	1.254	30307174	5346402	7413	18532	721	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	1307686	232308	692	1730	336		
341.8567	22.762	22.779	-1	1.001	804454	137466	619	1547	222	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	49186157	7929286	10780	26950	736		
353.8970	24.126	24.129	0	1.330	31405502	5197836	7413	18532	701	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	1276283	202864	692	1730	293		
341.8567	24.153	24.156	0	1.001	820684	134634	619	1547	218	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	30684379	4744795	3870	9675	1226		
369.8919	24.862	24.865	0	1.370	18959202	2913489	2133	5332	1366	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	770345	123302	470	1175	262		
357.8516	24.889	24.892	0	1.001	542434	83964	231	577	363	1.42(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23885791	5080702	12413	31032	409		
385.8610	30.835	30.838	0	0.953	45598691	9653525	24179	60447	399	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.857	0	1.000	1073816	228005	1130	2825	202		
375.8178	30.849	30.857	0	1.000	875646	183719	720	1800	255	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	25163610	5186426	12413	31032	418		
385.8610	30.995	31.003	0	0.958	48098778	9847658	24179	60447	407	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.001	1138605	230252	1130	2825	204		
375.8178	31.008	31.022	-1	1.000	965481	194261	720	1800	270	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	23545536	6005512	12413	31032	484		
385.8610	31.754	31.756	0	0.982	45339625	11622590	24179	60447	481	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	1148495	290976	1130	2825	258		
375.8178	31.767	31.772	0	1.000	956401	245408	720	1800	341	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.512	32.523	-1	1.005	21115296	5525344	12413	31032	445		
385.8610	32.512	32.523	-1	1.005	41413658	10740911	24179	60447	444	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	1004237	260741	1130	2825	231		
375.8178	32.526	32.534	0	1.000	829863	215930	720	1800	300	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		35492157	8840472	14115	35287	626		
403.8529	32.339	32.342	0		28400508	7090007	9259	23147	766	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	26497467	7547113	14115	35287	535		
403.8529	31.927	31.929	0	0.987	20866037	5954906	9259	23147	643	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	725563	201392	885	2212	228		
391.8127	31.940	31.945	0	1.000	574467	160999	657	1642	245	1.26(1.05-1.43)	

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	31586686	7983088	14115	35287	566		
403.8529	32.033	32.033	0	0.991	25172422	6406461	9259	23147	692	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	819435	207367	885	2212	234		
391.8127	32.047	32.047	0	1.000	641312	163363	657	1642	249	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	837706	208716	885	2212	236		
391.8127	32.353	32.355	0	1.013	665701	168193	657	1642	256	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	15666898	4905580	16994	42485	289		
419.8220	33.912	33.914	0	1.049	35641327	11012481	39521	98802	279	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	949994	280926	1603	4007	175		
409.7789	33.924	33.926	0	1.000	906605	280503	1346	3365	208	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13532847	3927195	16994	42485	231		
419.8220	35.005	35.010	0	1.082	31095505	8744356	39521	98802	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	755406	231092	1603	4007	144		
409.7789	35.017	35.020	0	1.000	710228	201627	1346	3365	150	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	21029381	6108519	13979	34947	437		
437.8140	34.714	34.716	0	1.073	20847175	6052425	13690	34225	442	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	599401	178801	821	2052	218		
425.7737	34.726	34.726	0	1.000	564673	160703	693	1732	232	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26904388	6653832	3548	8870	1875		
471.7750	37.093	37.094	0	1.147	30114074	7334467	3515	8787	2087	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	941996	224700	300	750	749		
443.7399	37.189	37.199	-1	1.003	1034179	253612	487	1217	521	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	750544	177364	389	972	456		
459.7348	37.105	37.106	0	1.000	818794	206090	374	935	551	0.92(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.35
Area: 201476
Amount: 0.545465
Amount Units: pg/ul

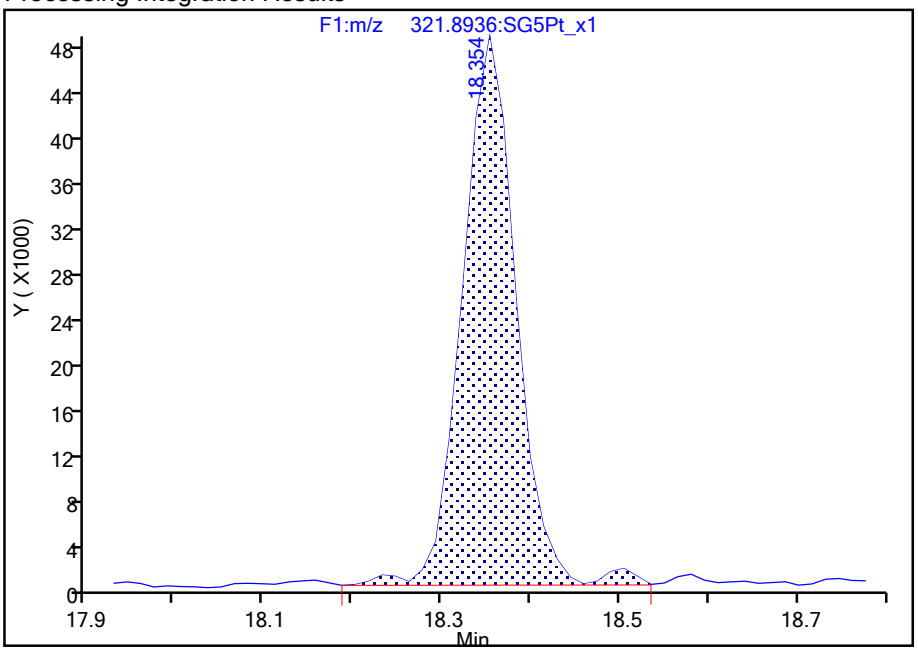

Manual Integration Results

RT: 18.35
Area: 199093
Amount: 0.501347
Amount Units: pg/ul

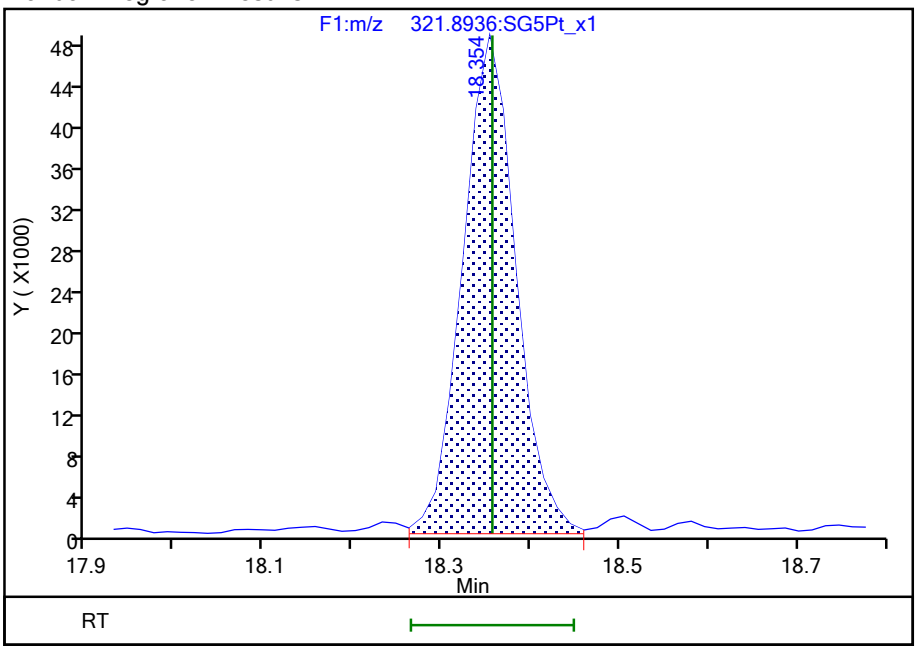

Reviewer: stephensk, 27-Jul-2021 08:15:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

Processing Integration Results

RT: 18.35
Area: 394678
Amount: 0.545465
Amount Units: pg/ul

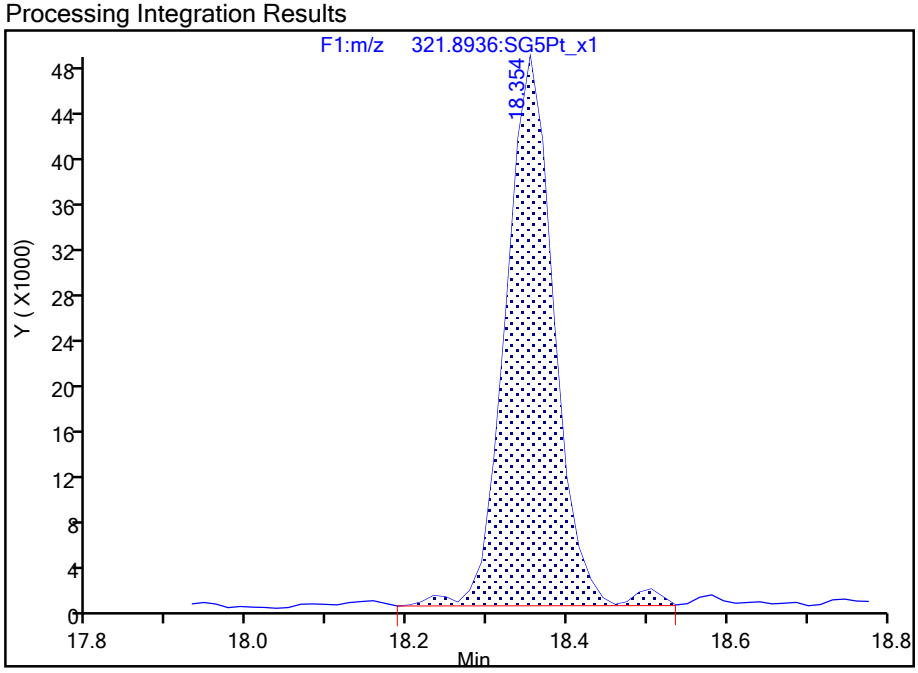

Manual Integration Results

RT: 18.35
Area: 376984
Amount: 0.501347
Amount Units: pg/ul
Reviewer: stephensk, 27-Jul-2021 08:15:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

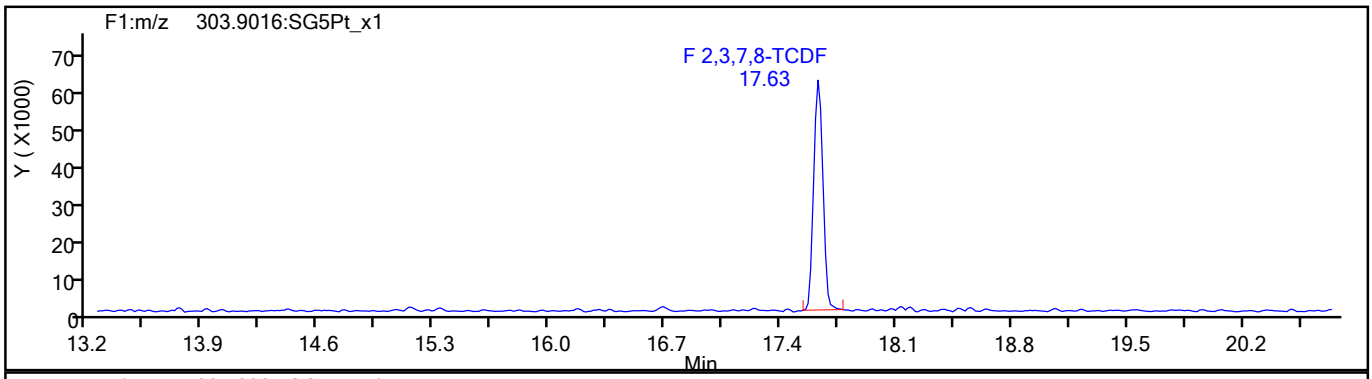

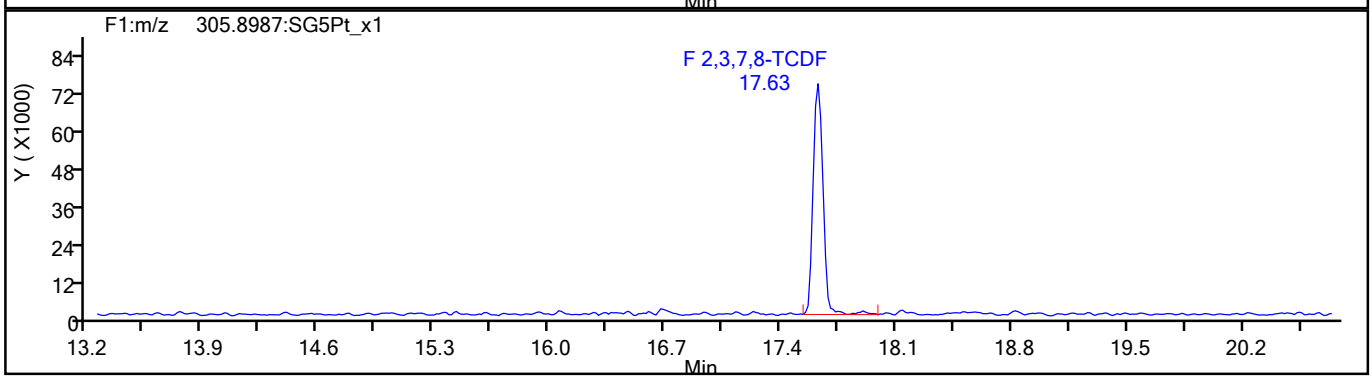

TCDF Standards

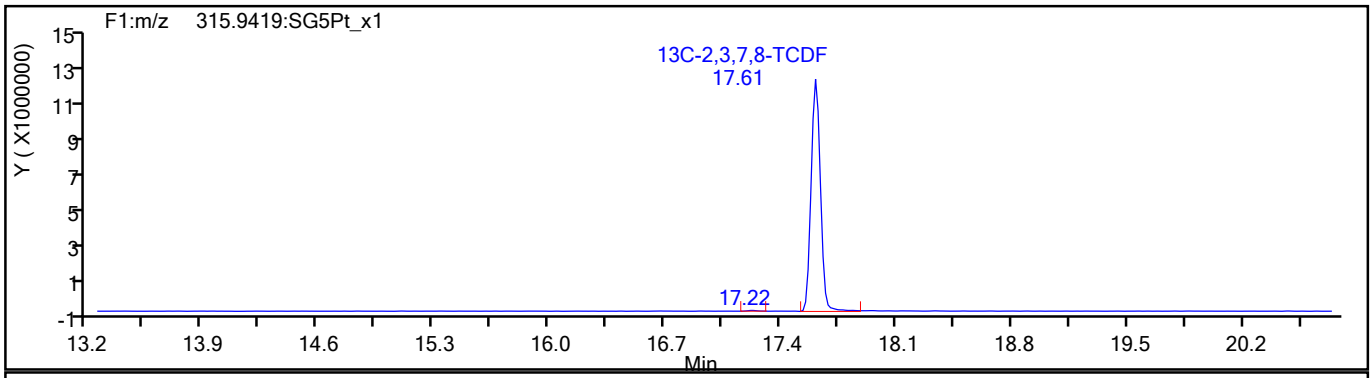

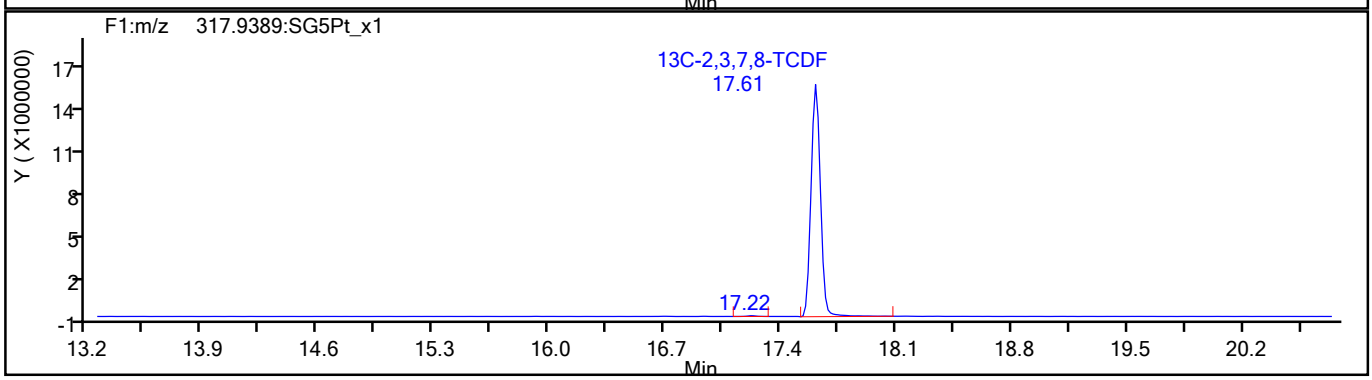

791395

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

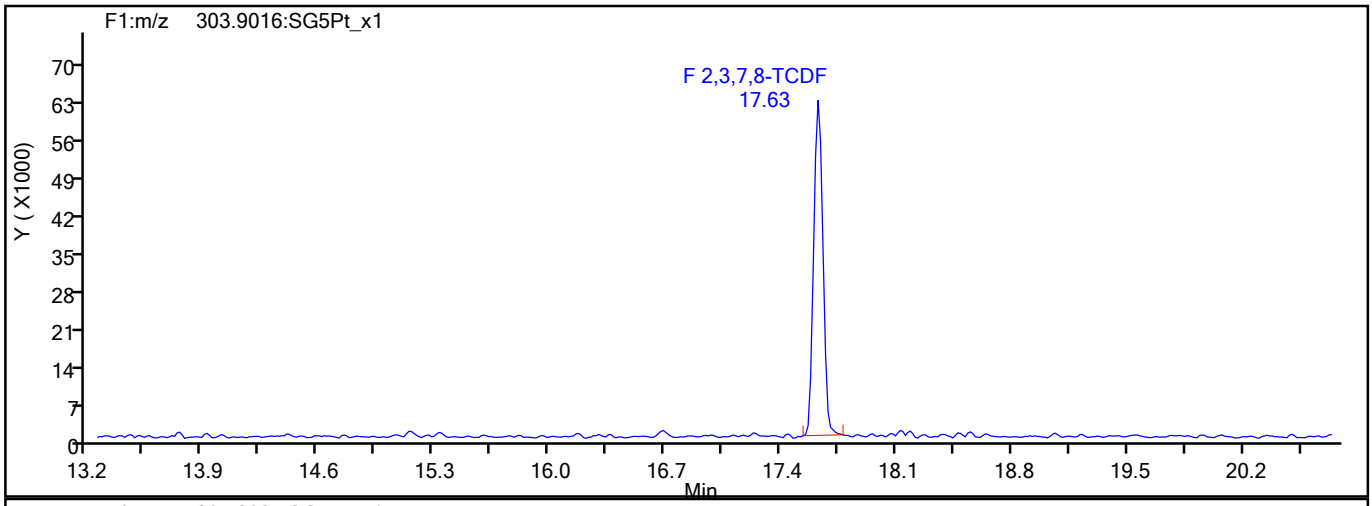

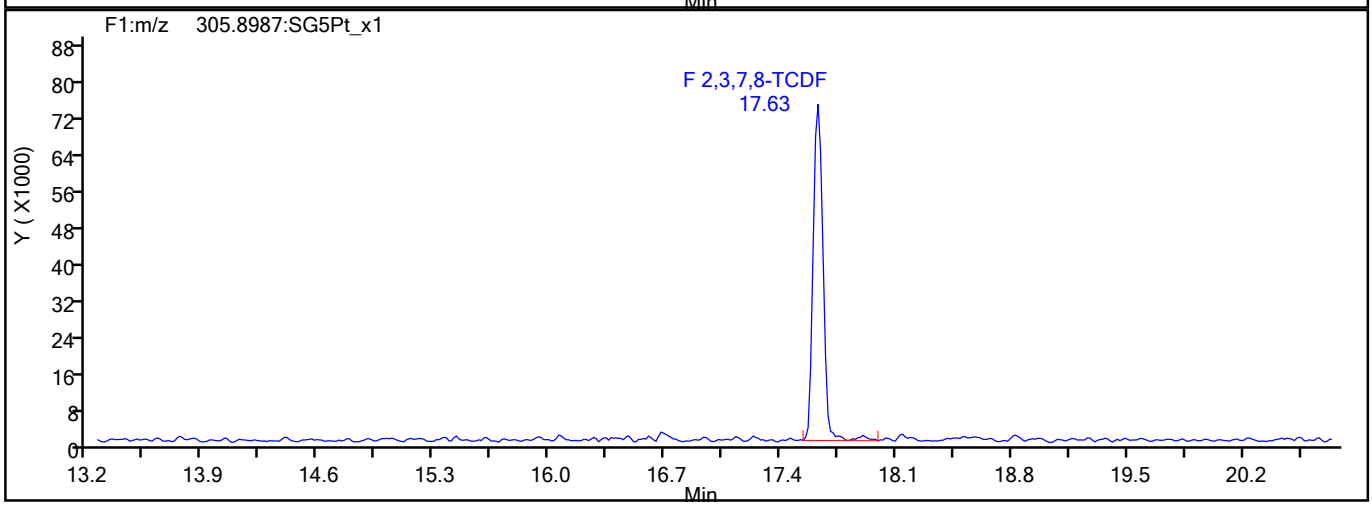

TCDF Interference Mass

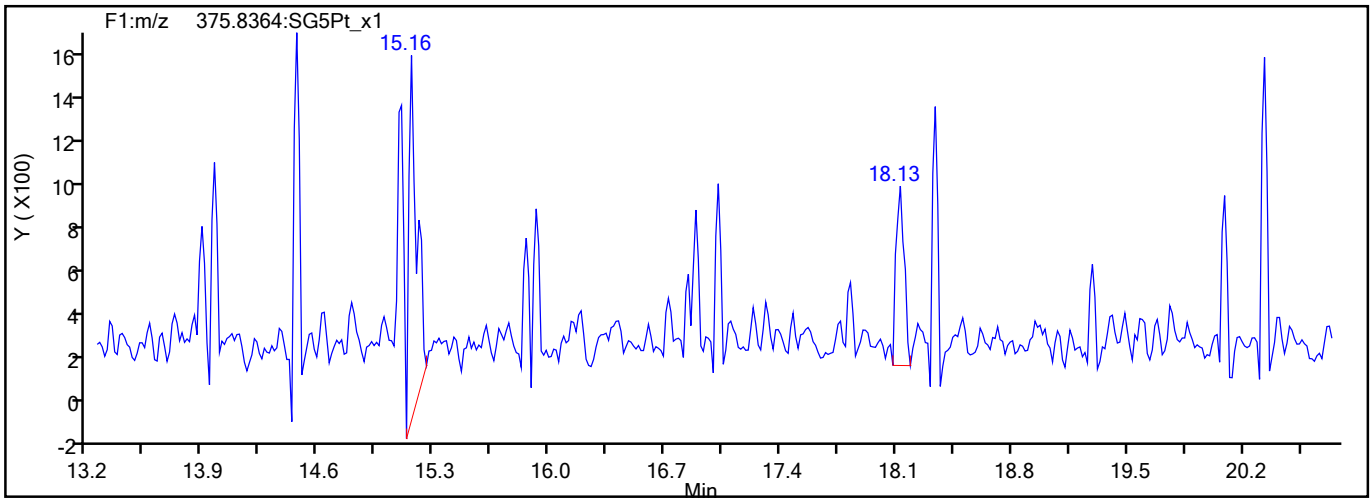

791396

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

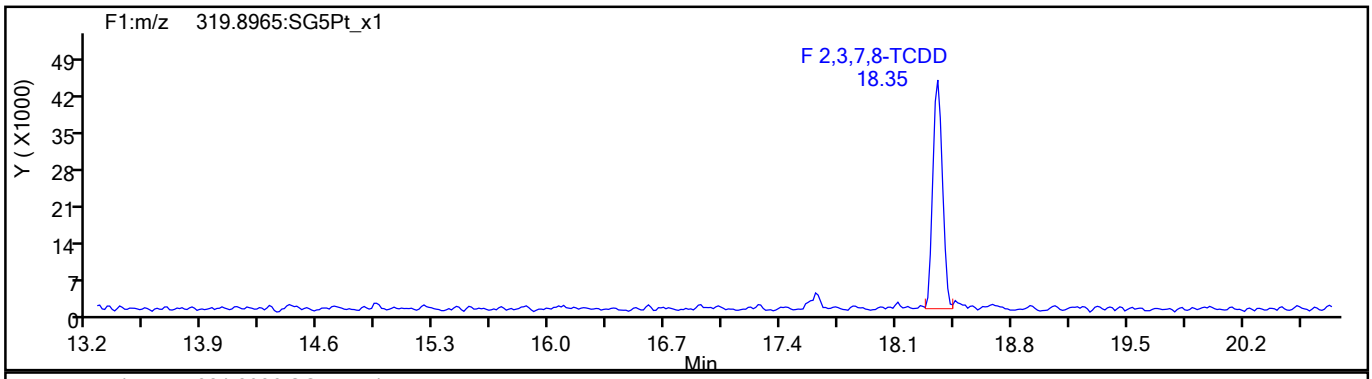

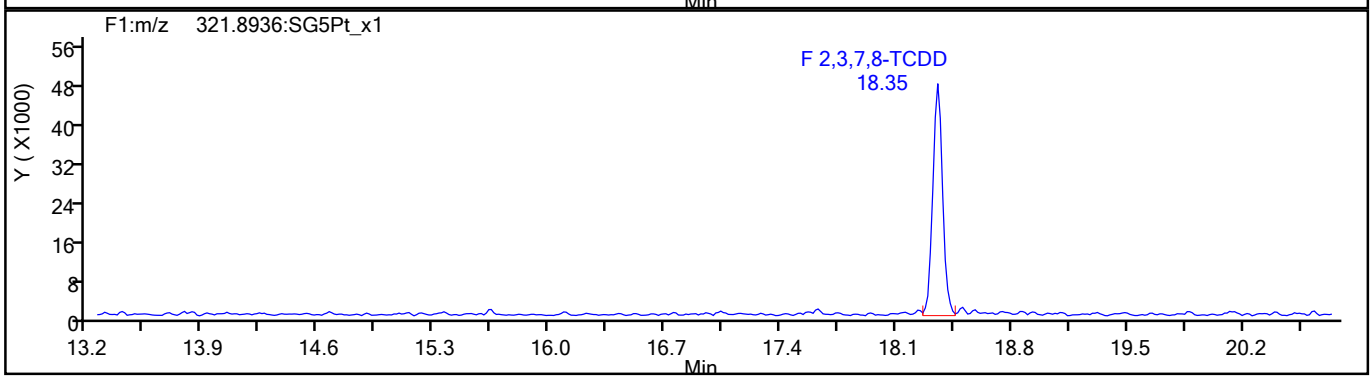

TCDD Standards

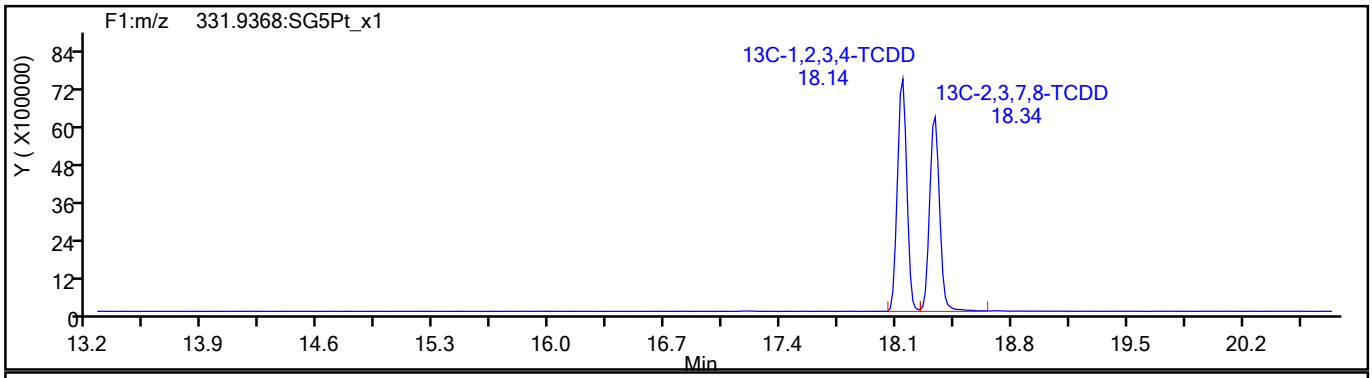

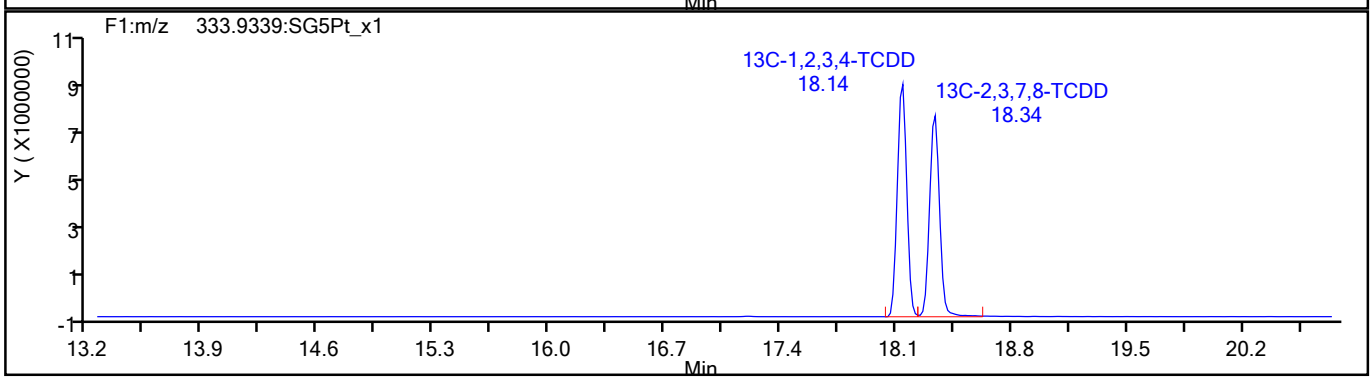

791397

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

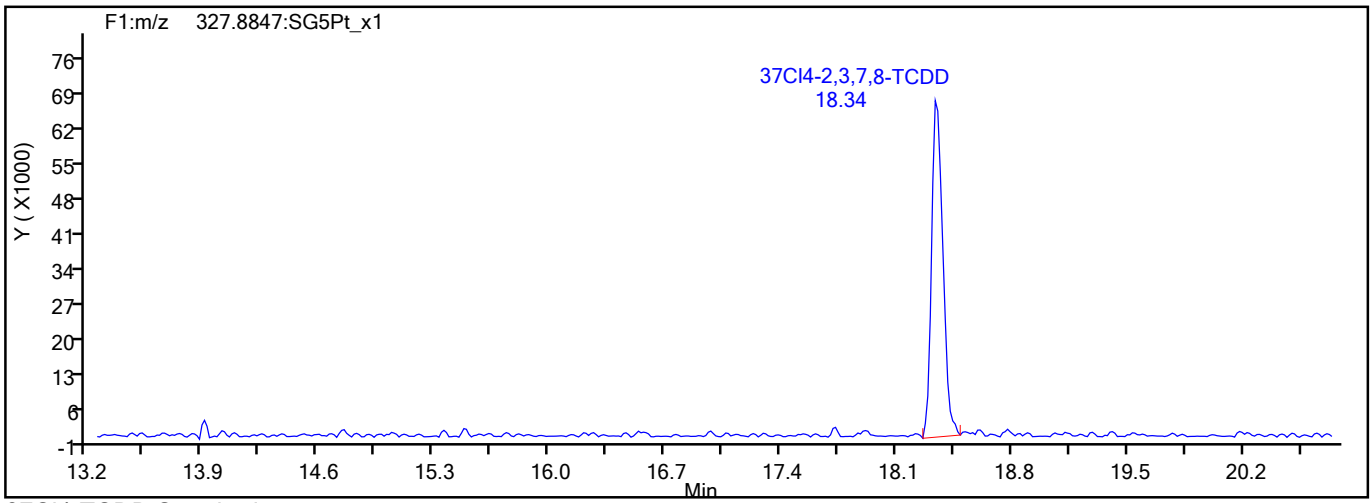

37Cl4-TCDD Standards

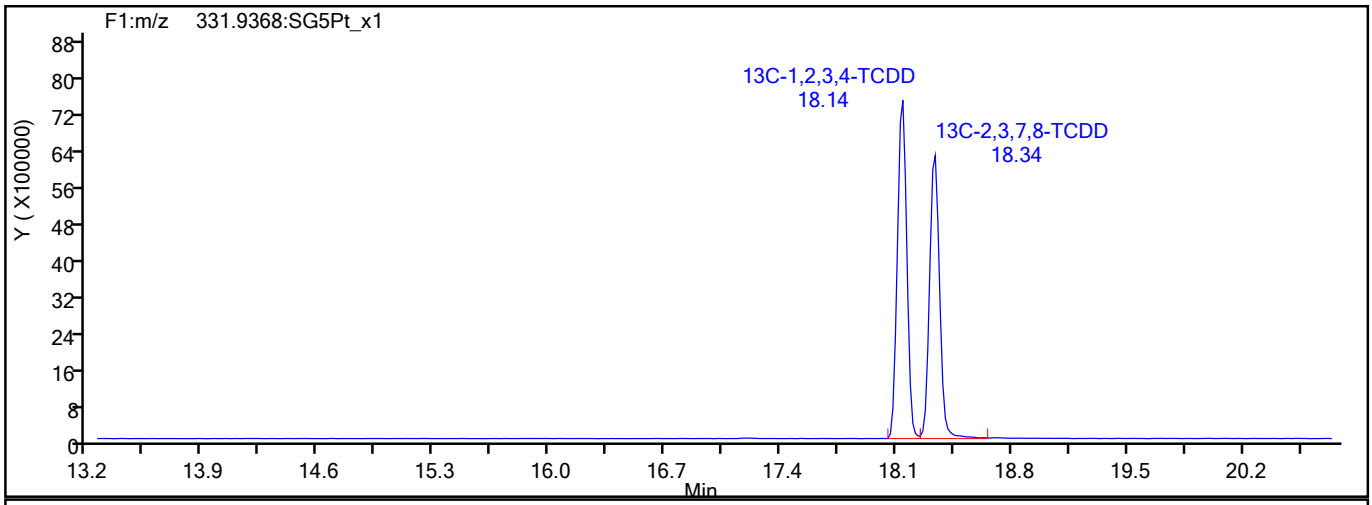

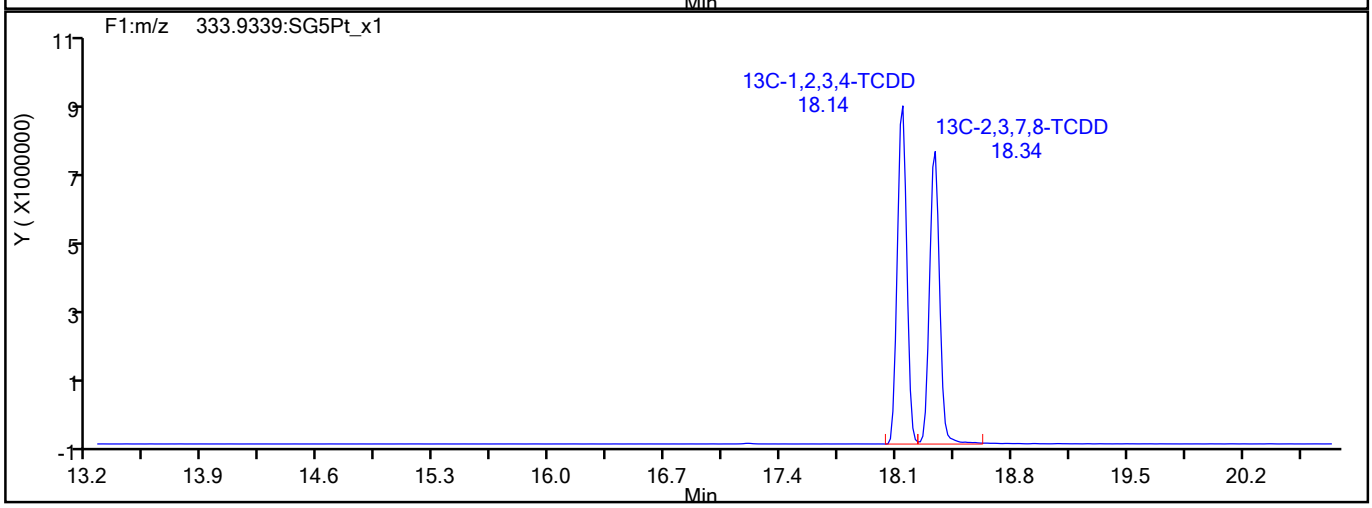

791398

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

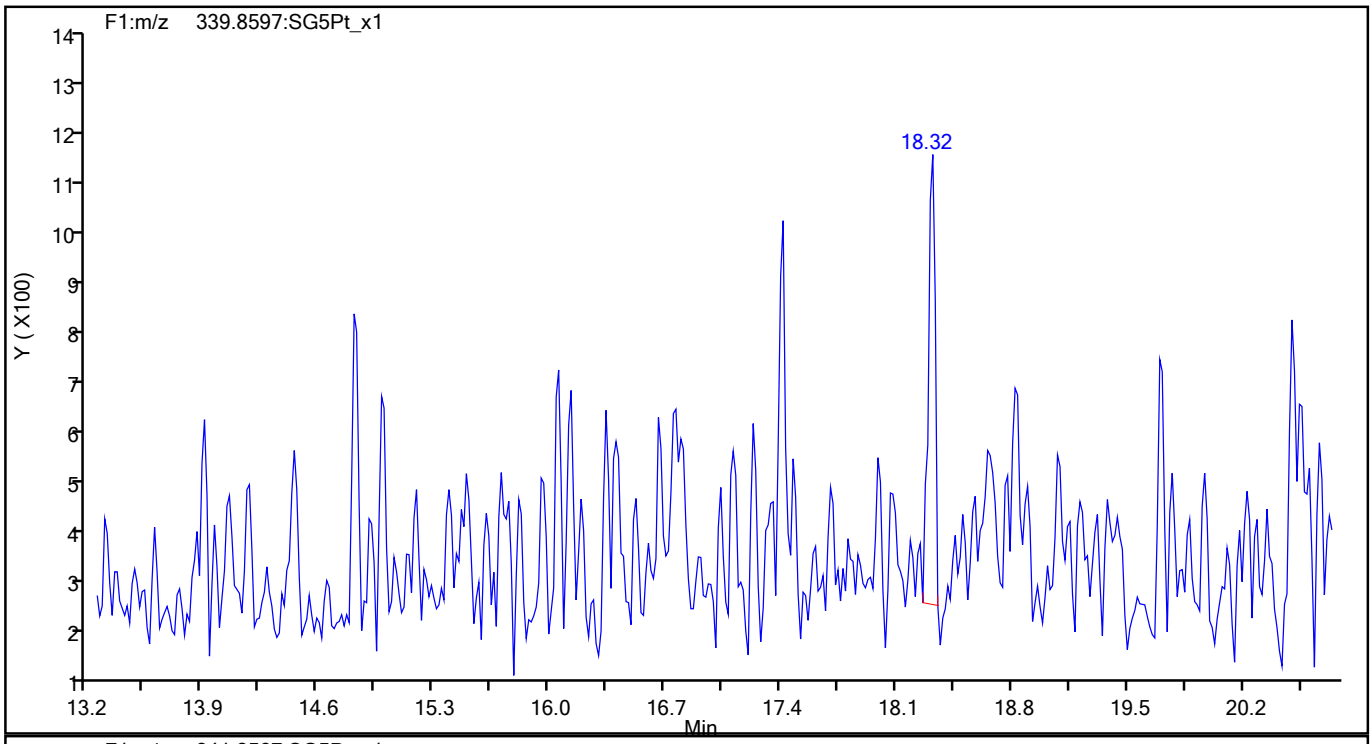

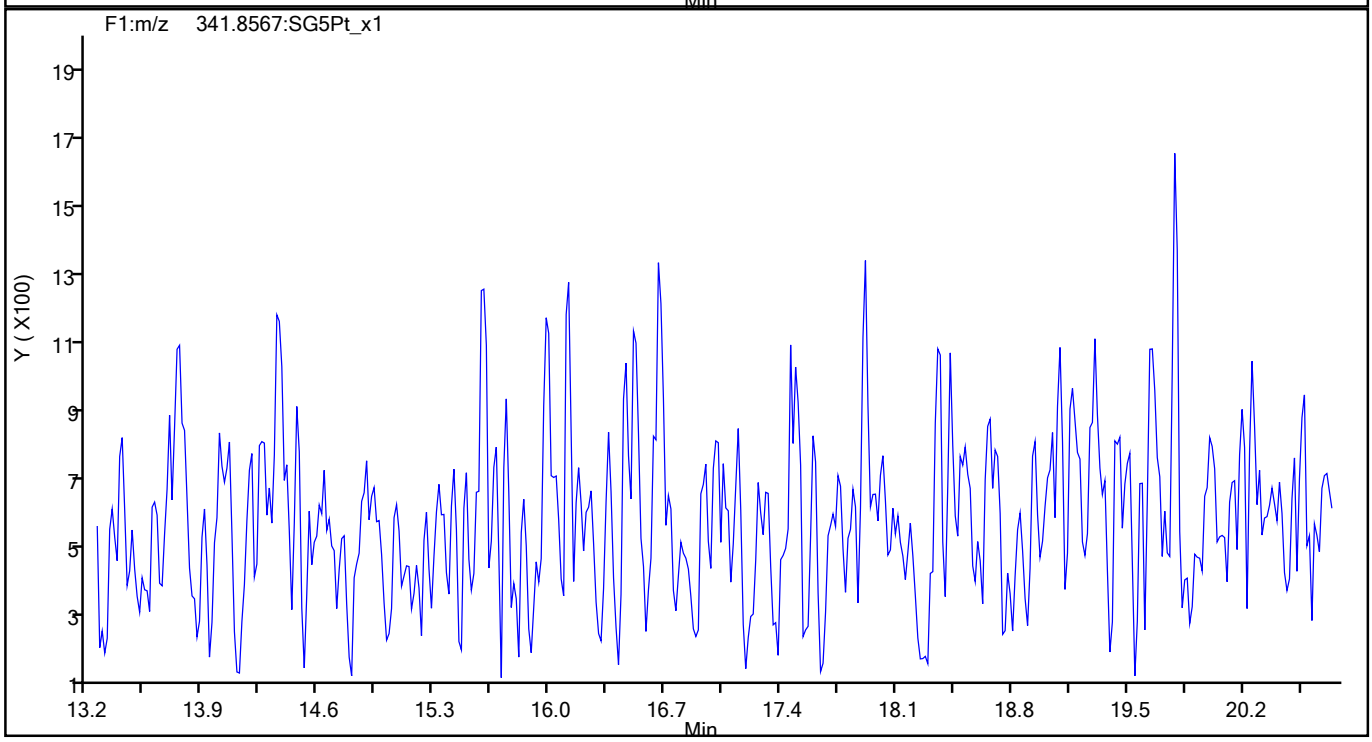

791399

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

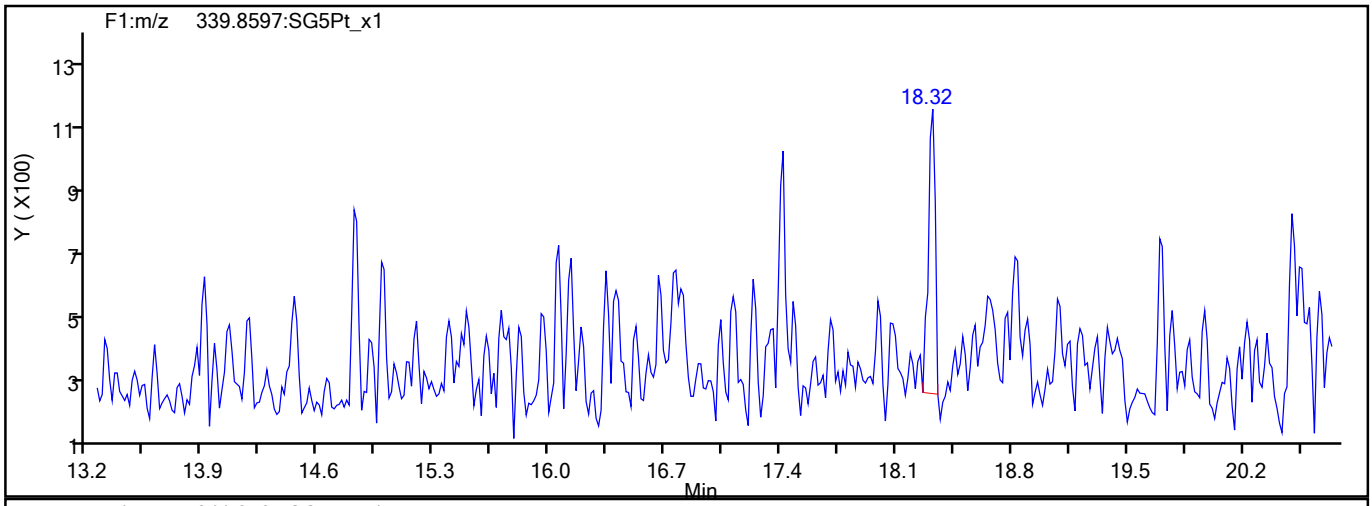

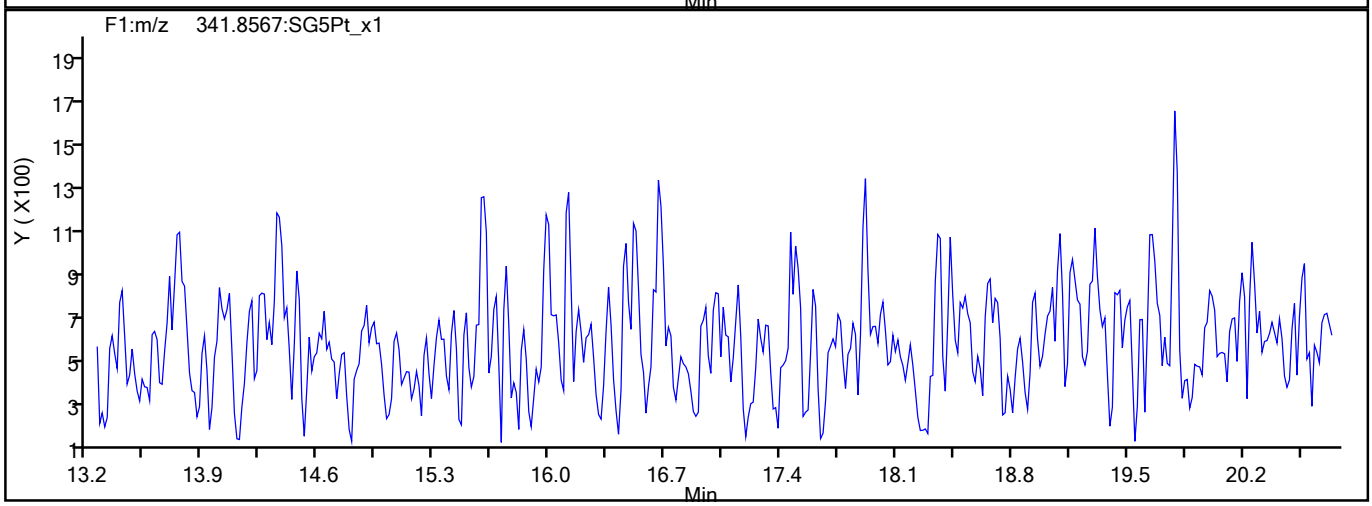

F1 PeCDFs Interference Mass

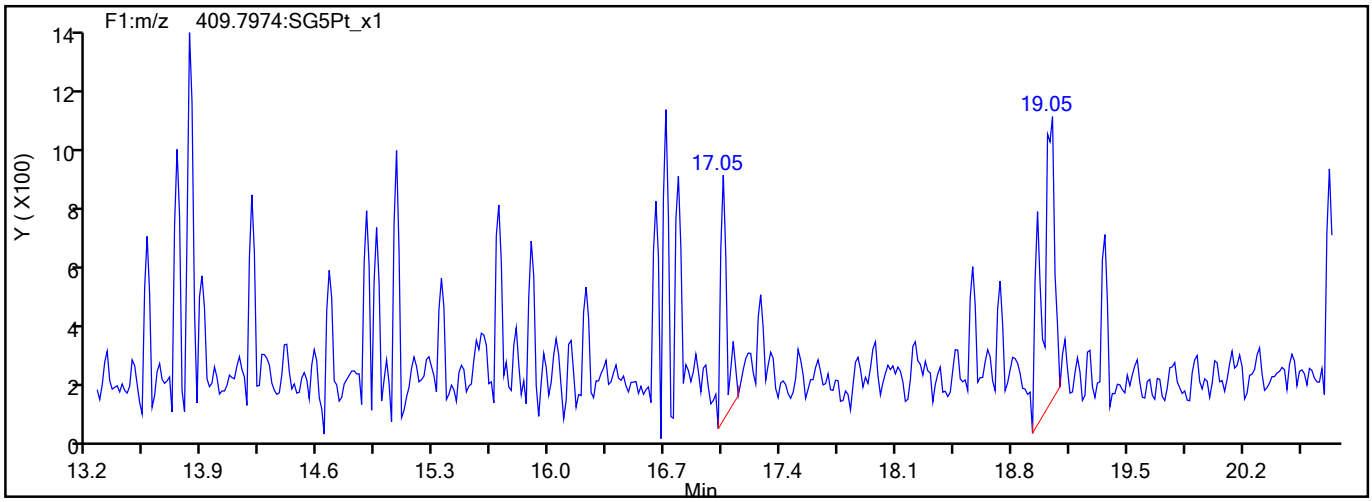

791400

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

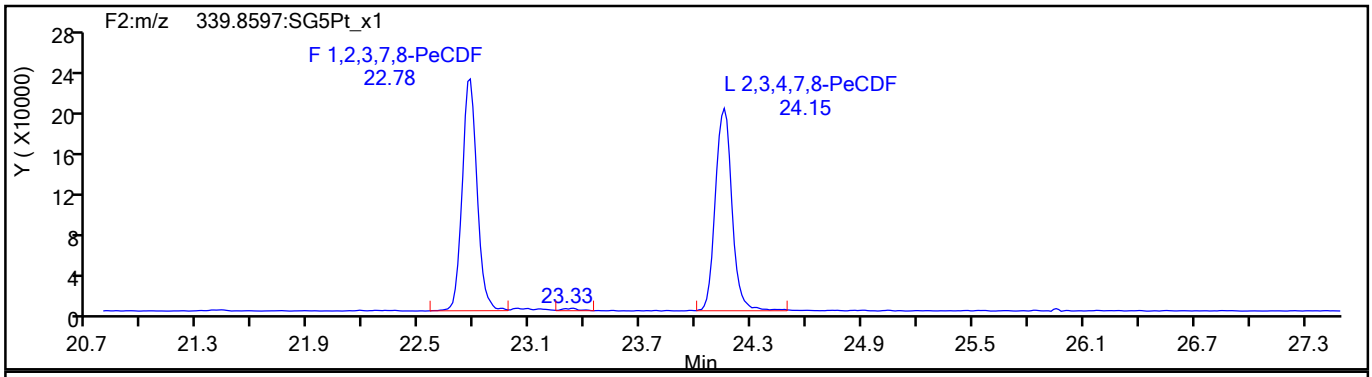

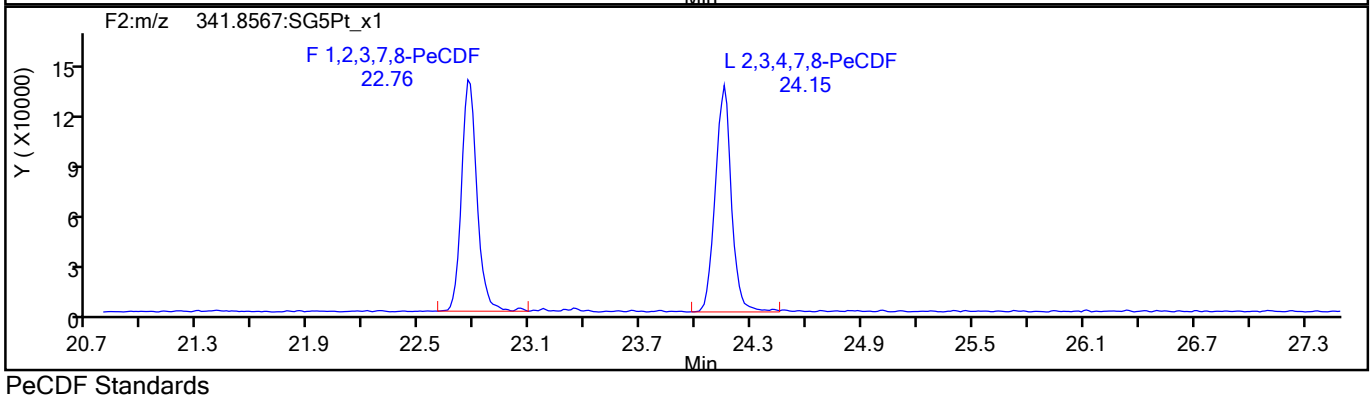

PeCDF Standards

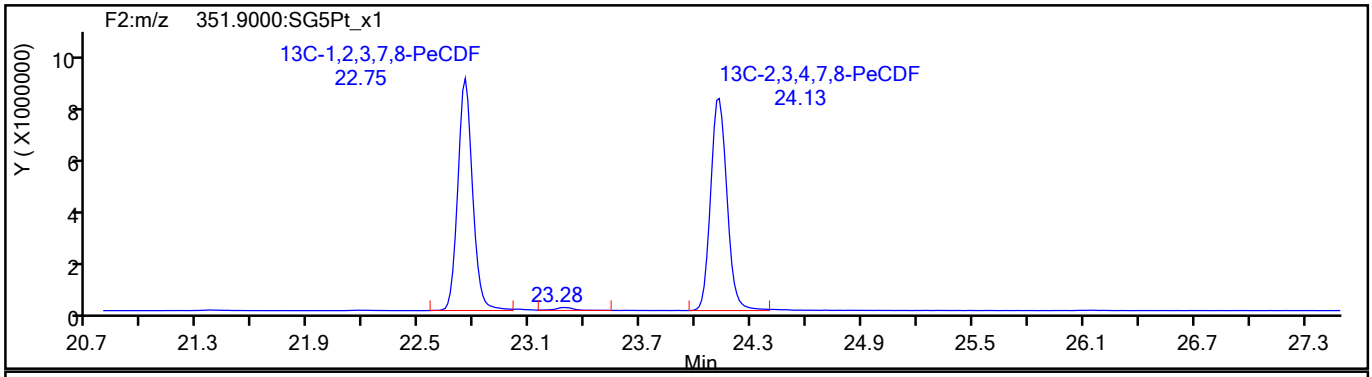

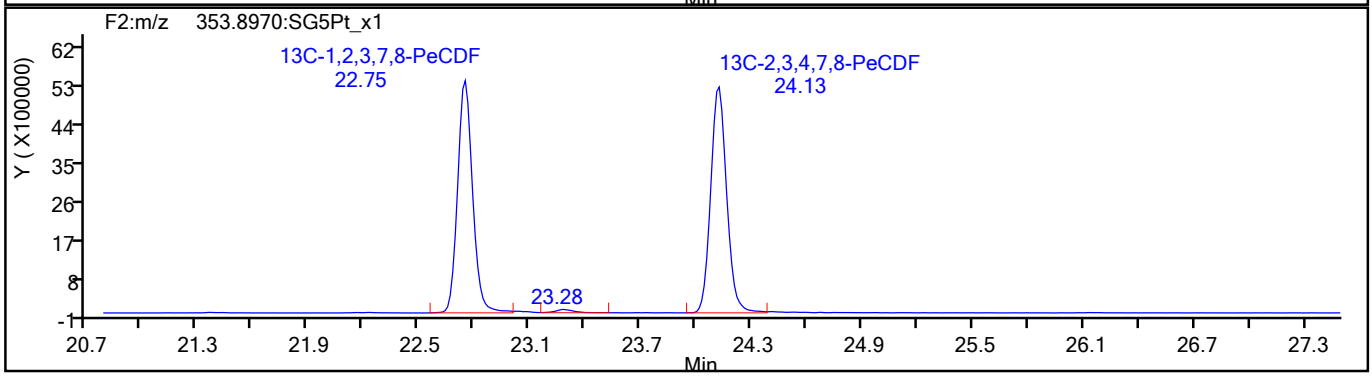

791401

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

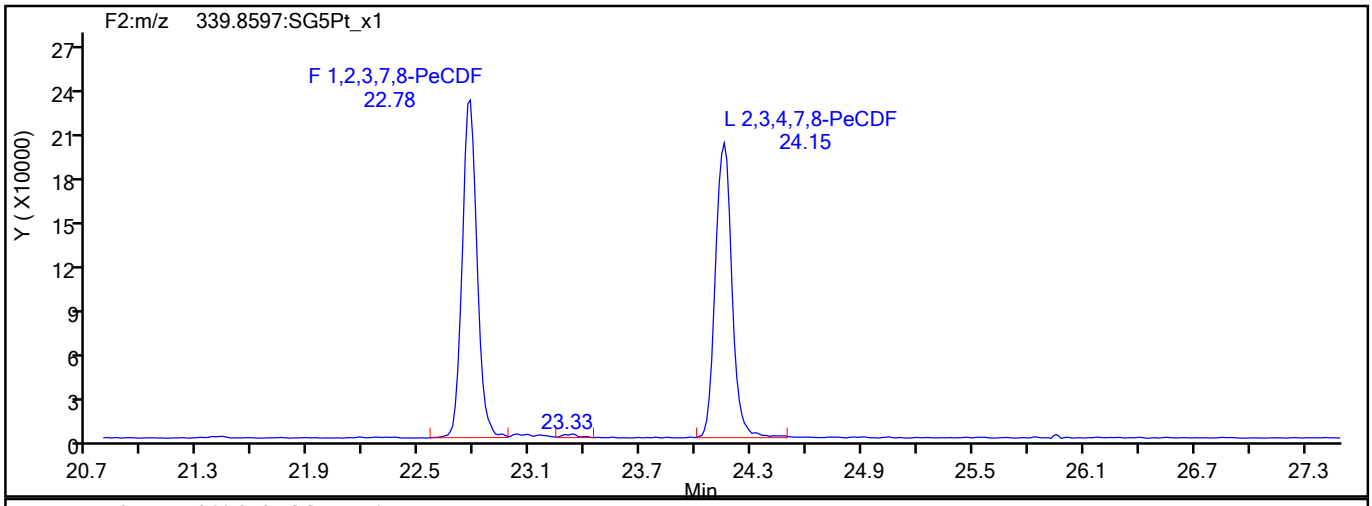

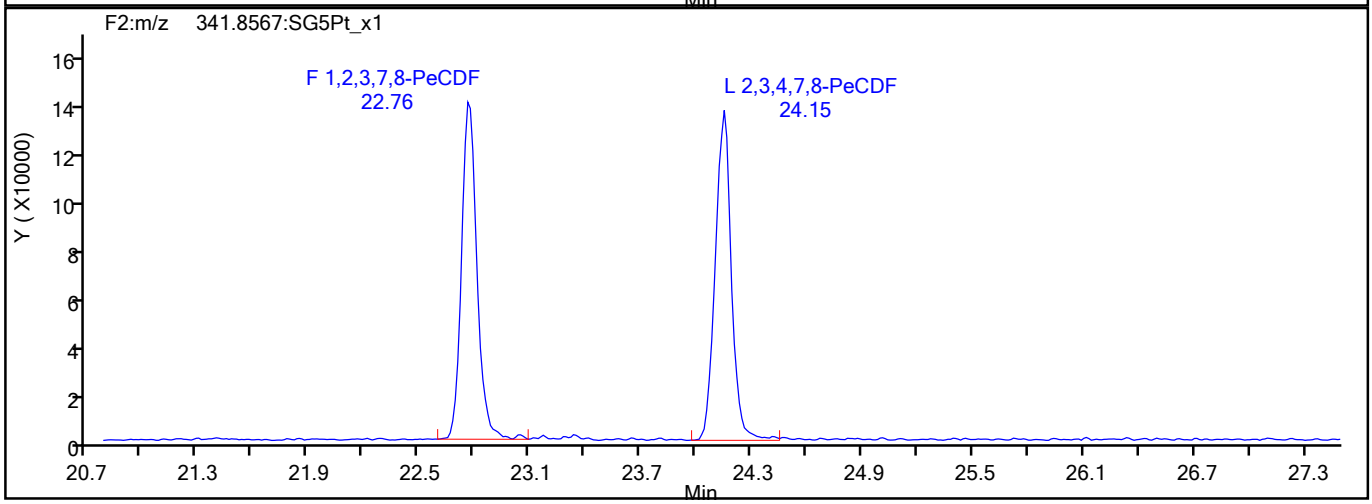

PeCDF Interference Mass

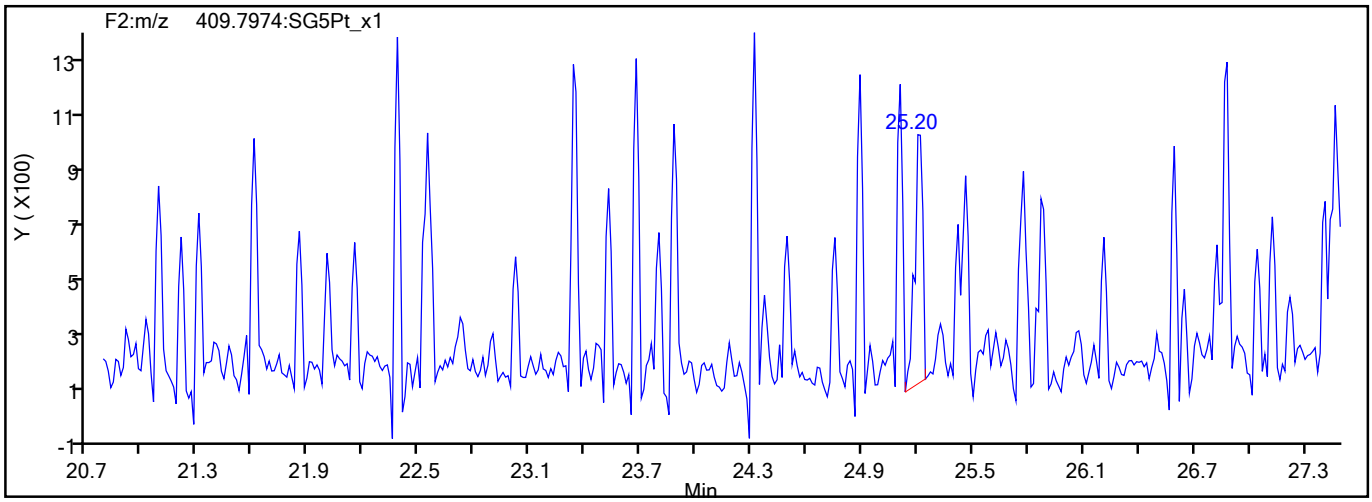

791402

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

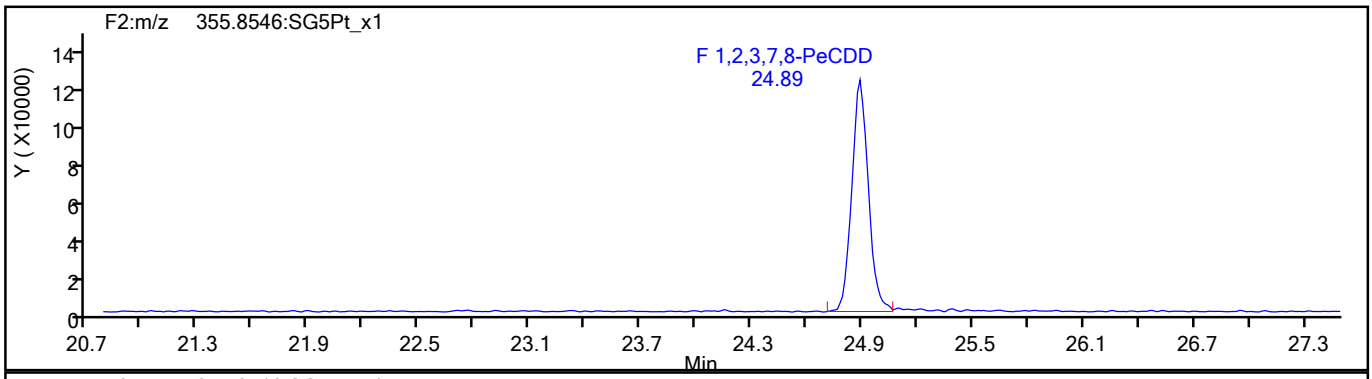

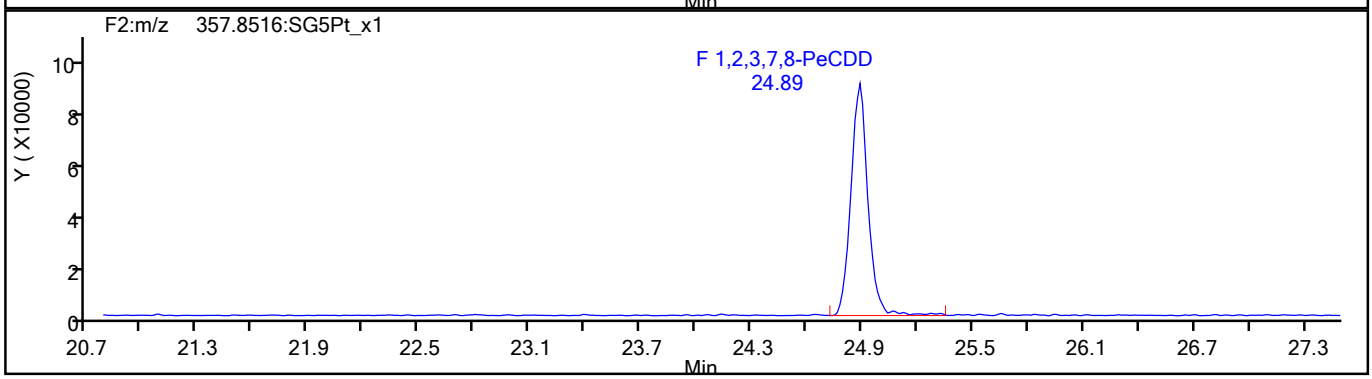

PeCDD Standards

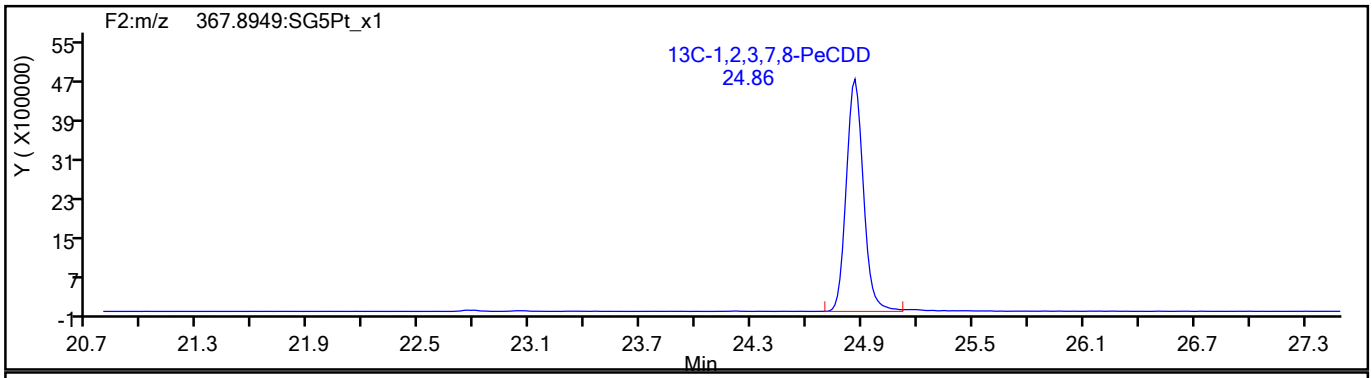

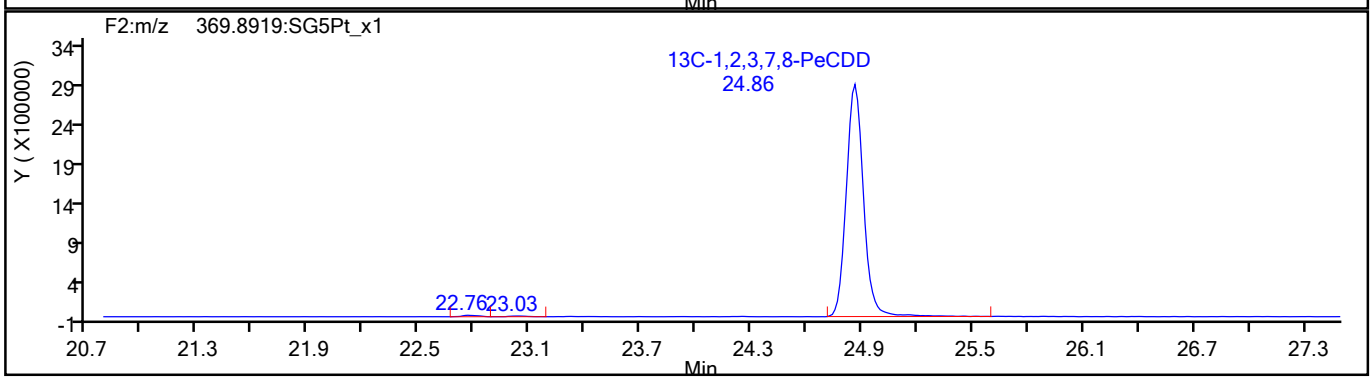

791403

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

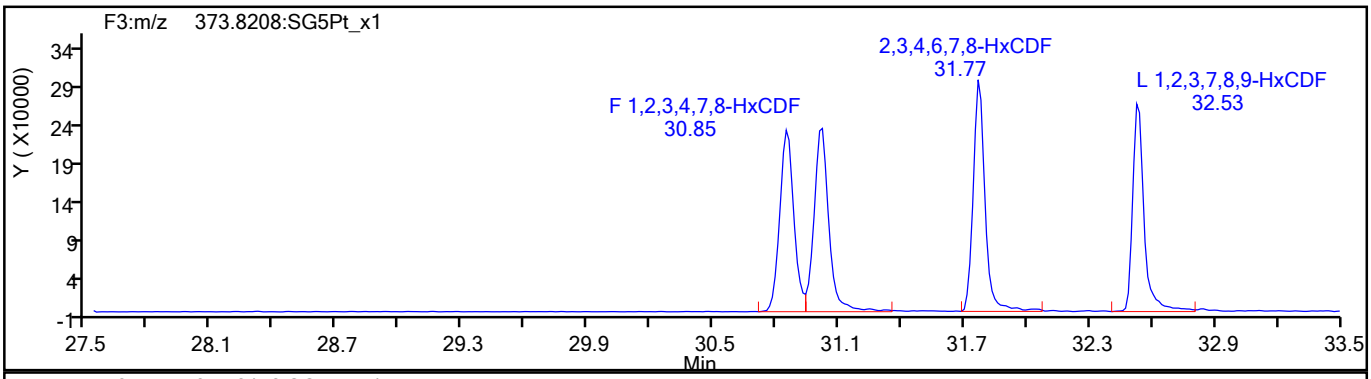

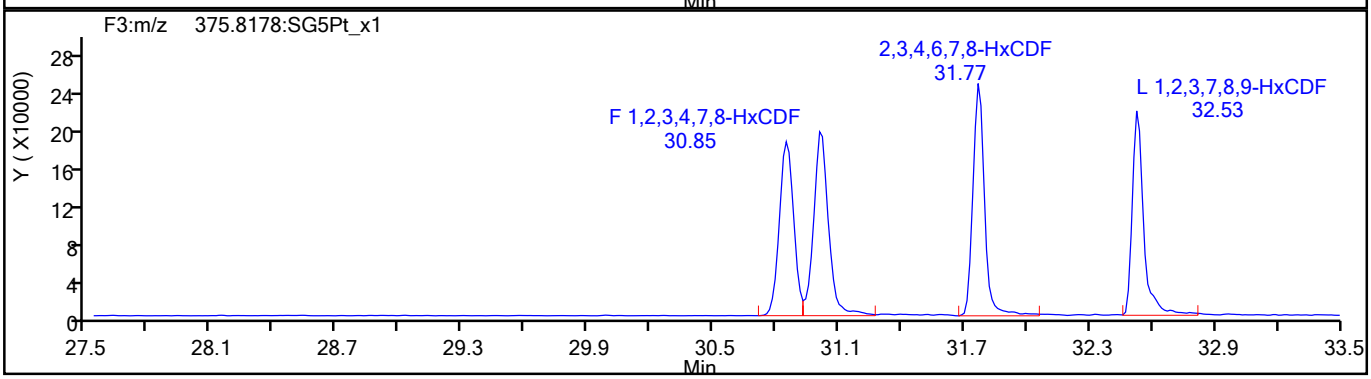

HxCDF Standards

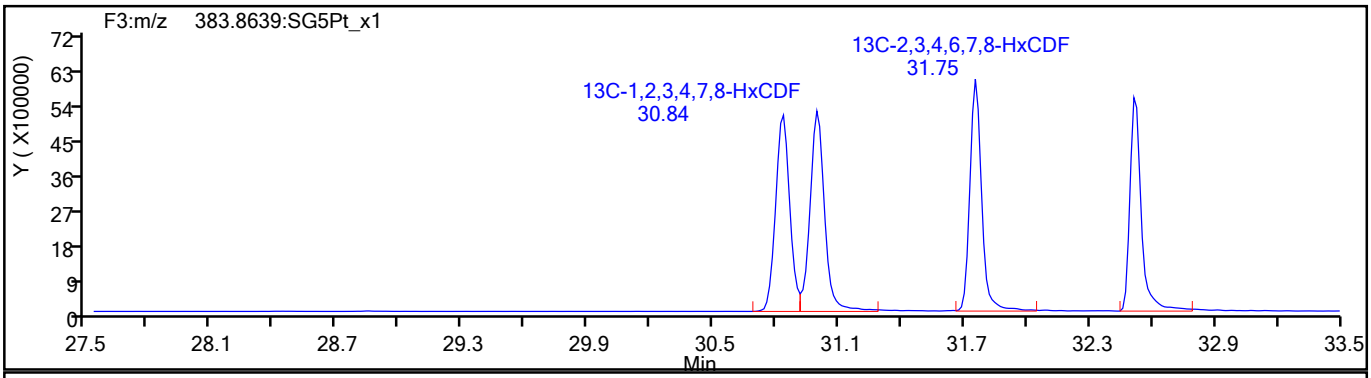

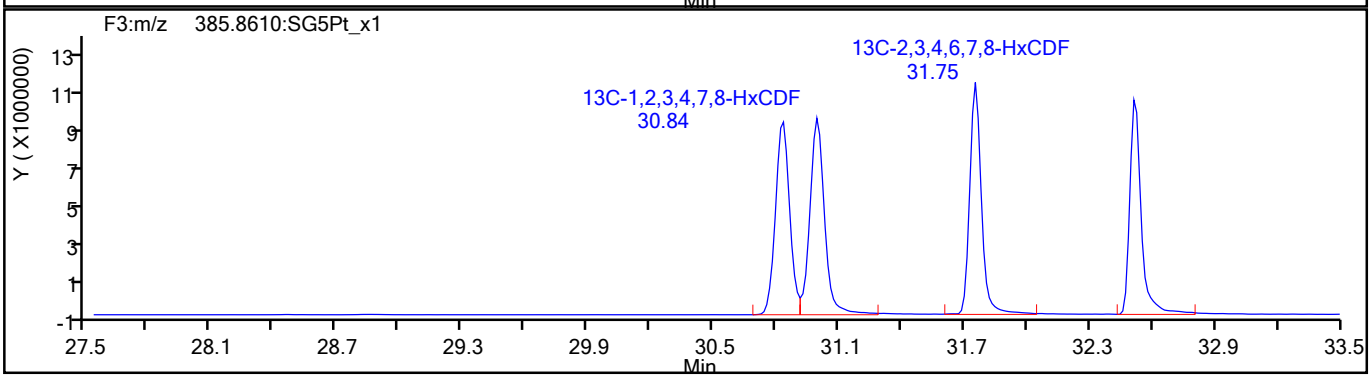

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

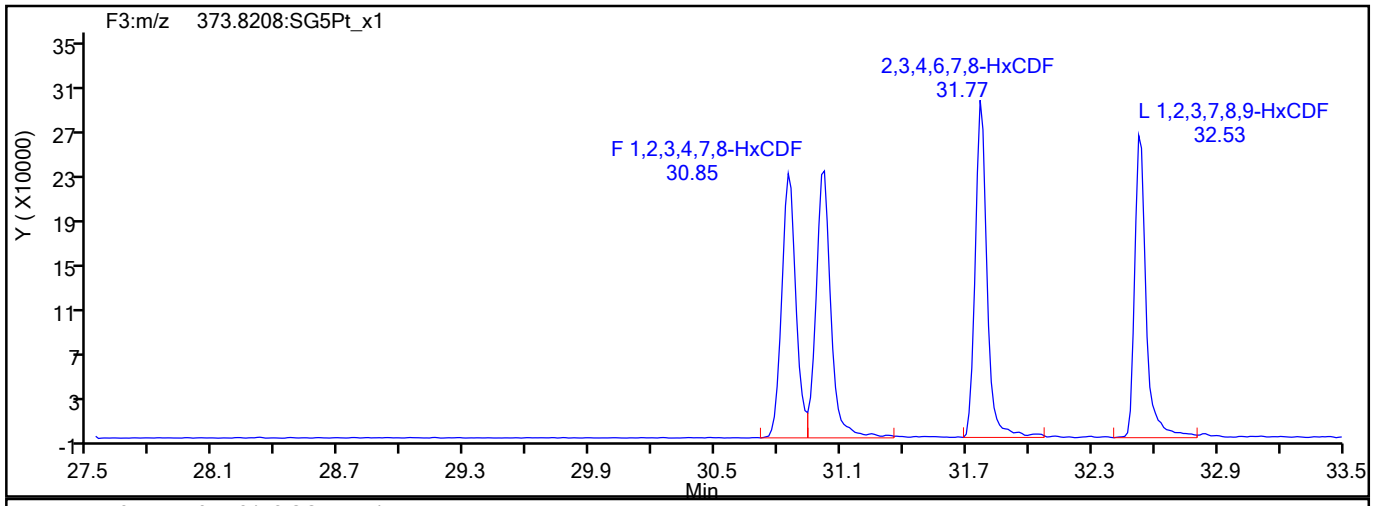

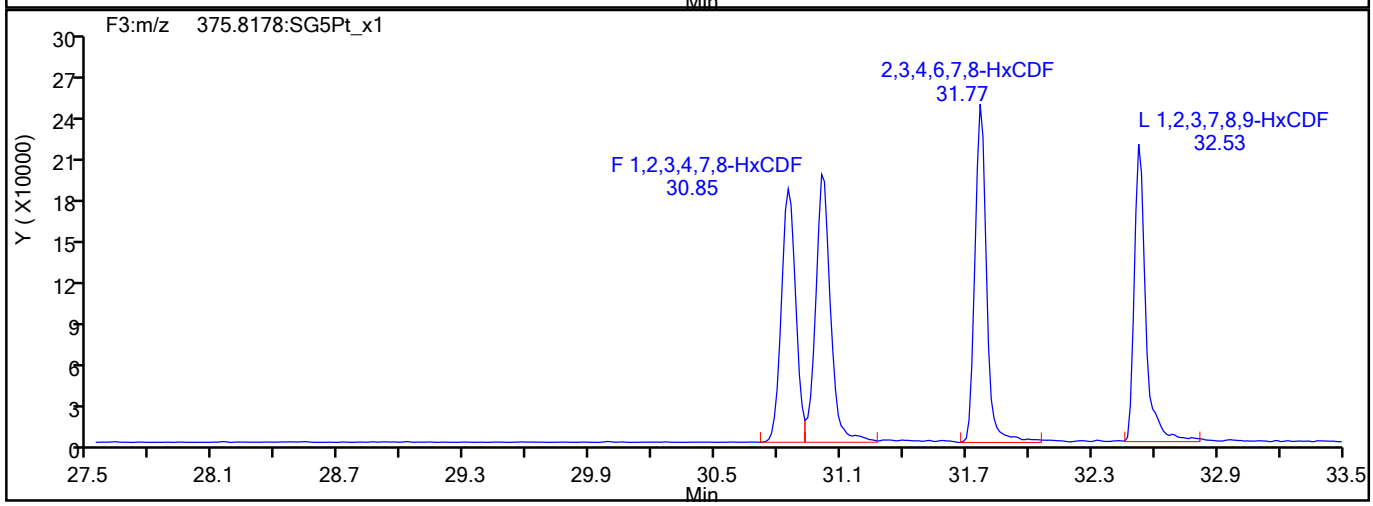

HxCDF Interference Mass

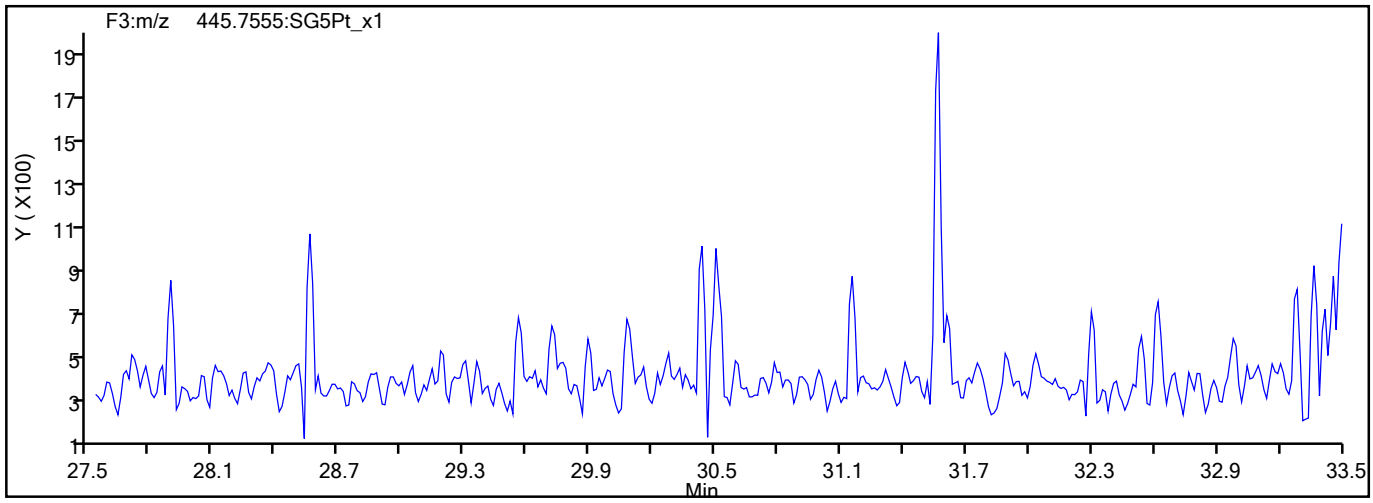

791405

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

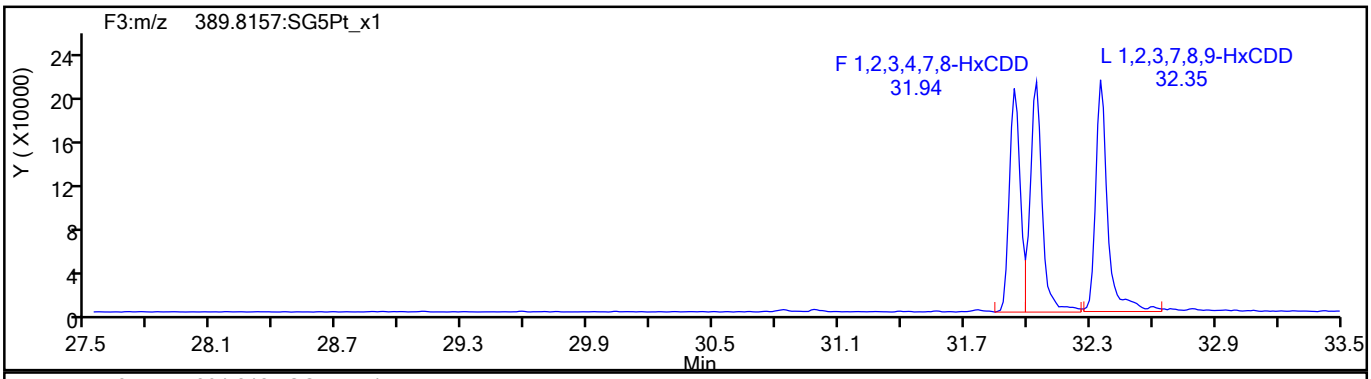

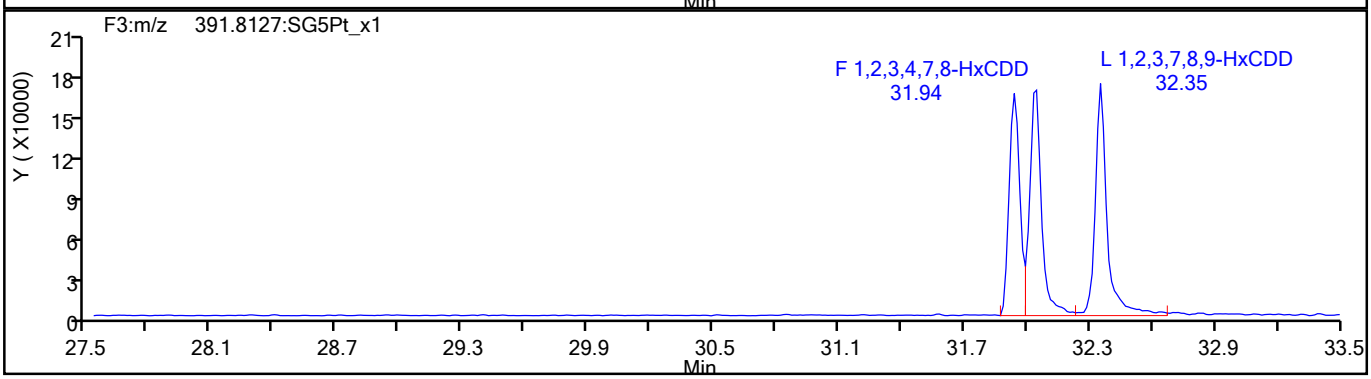

HxCDD Standards

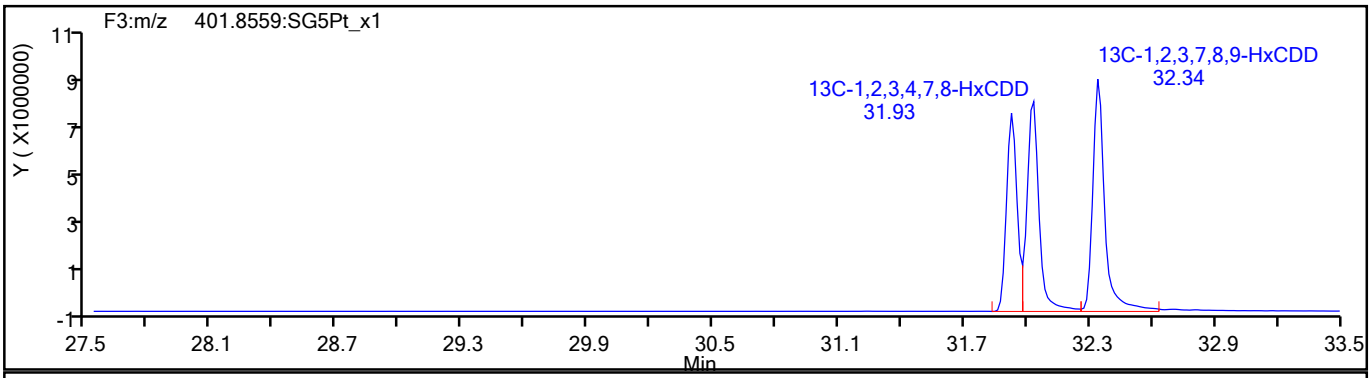

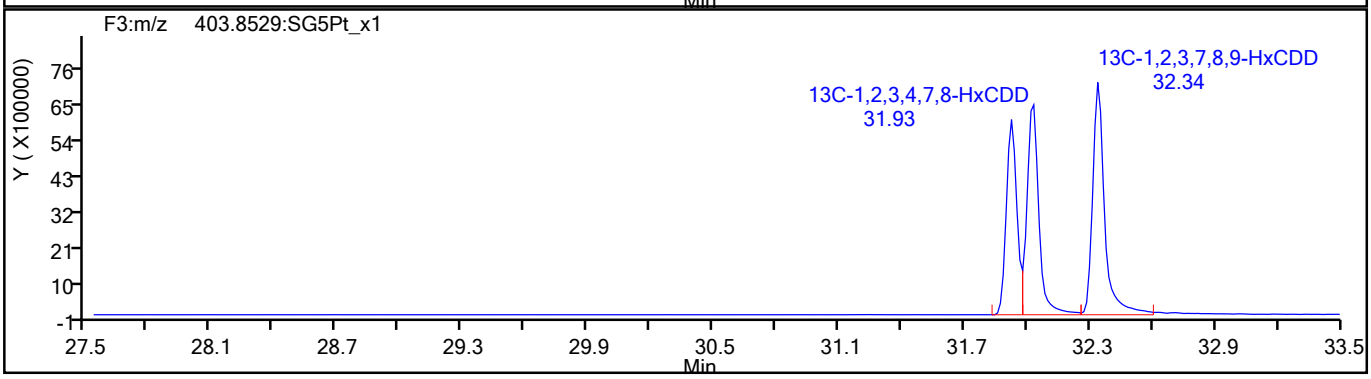

791406

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

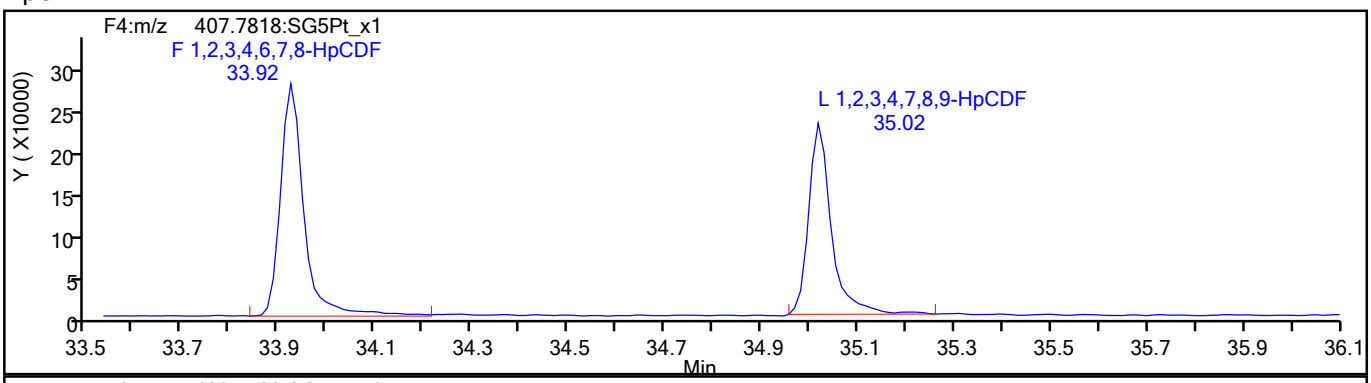

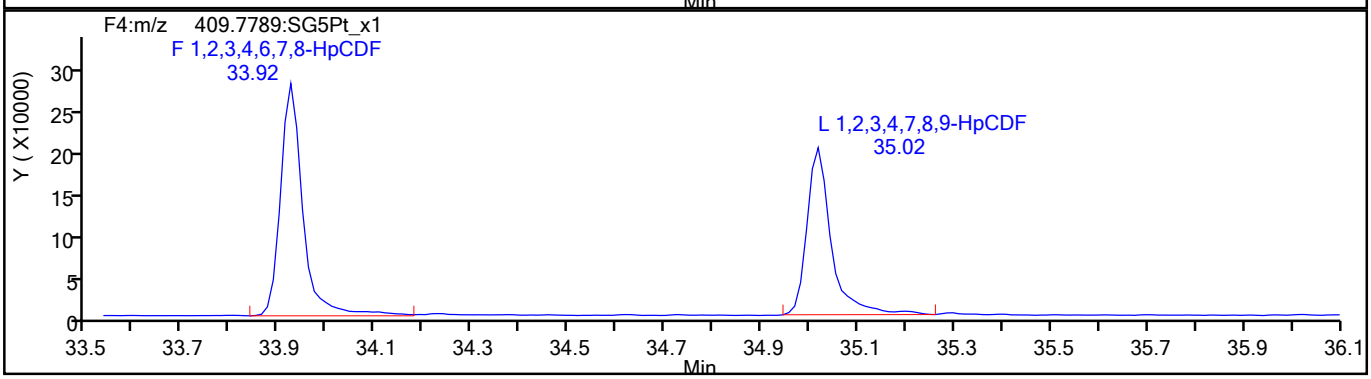

HpCDF Standards

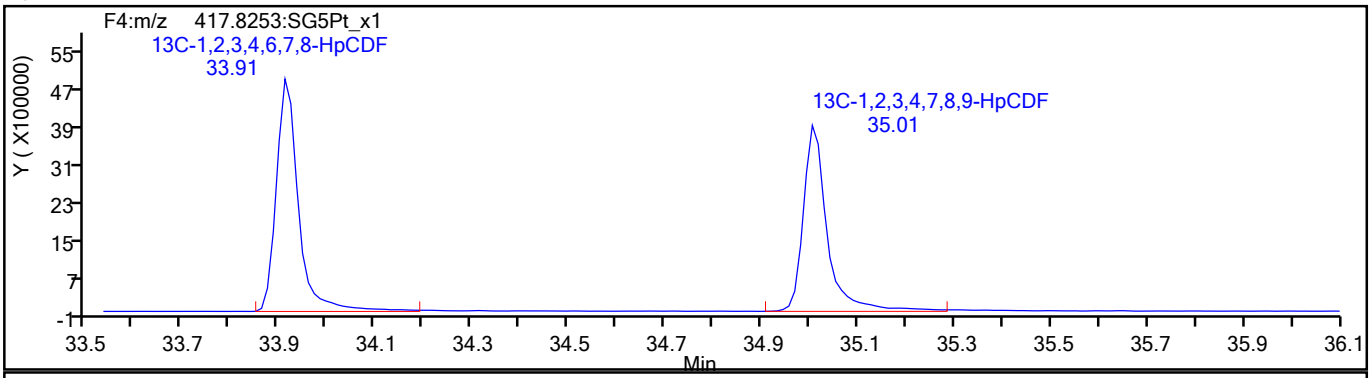

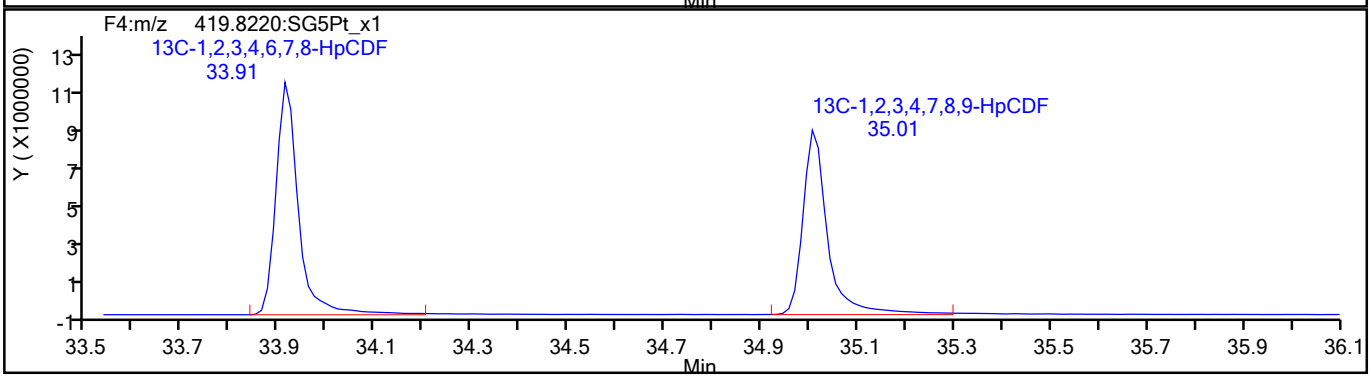

791407

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

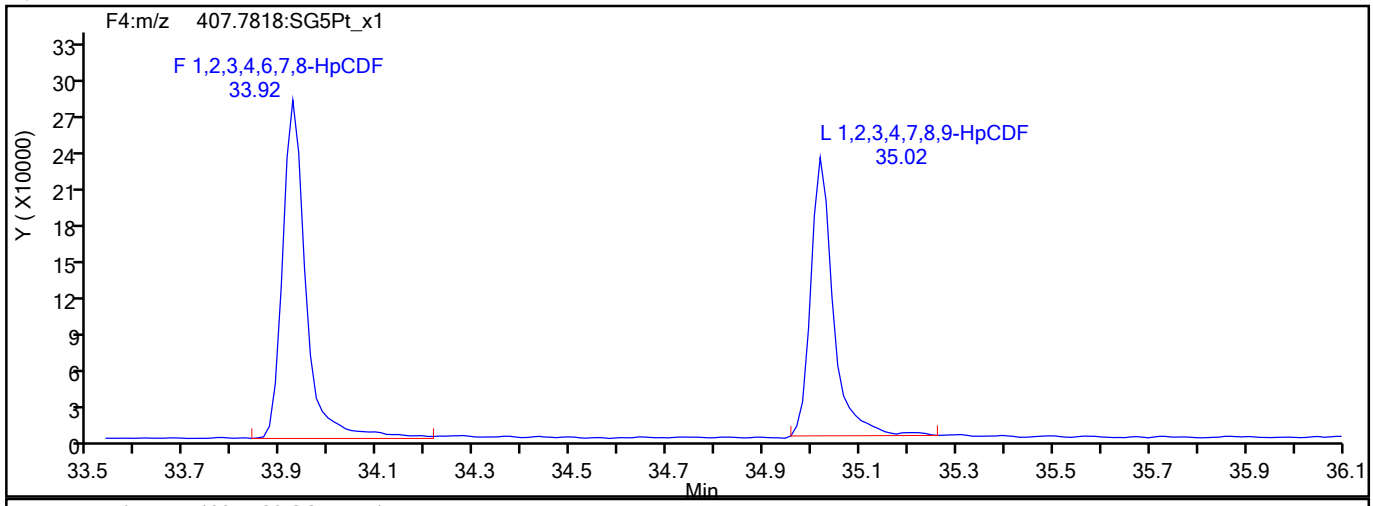

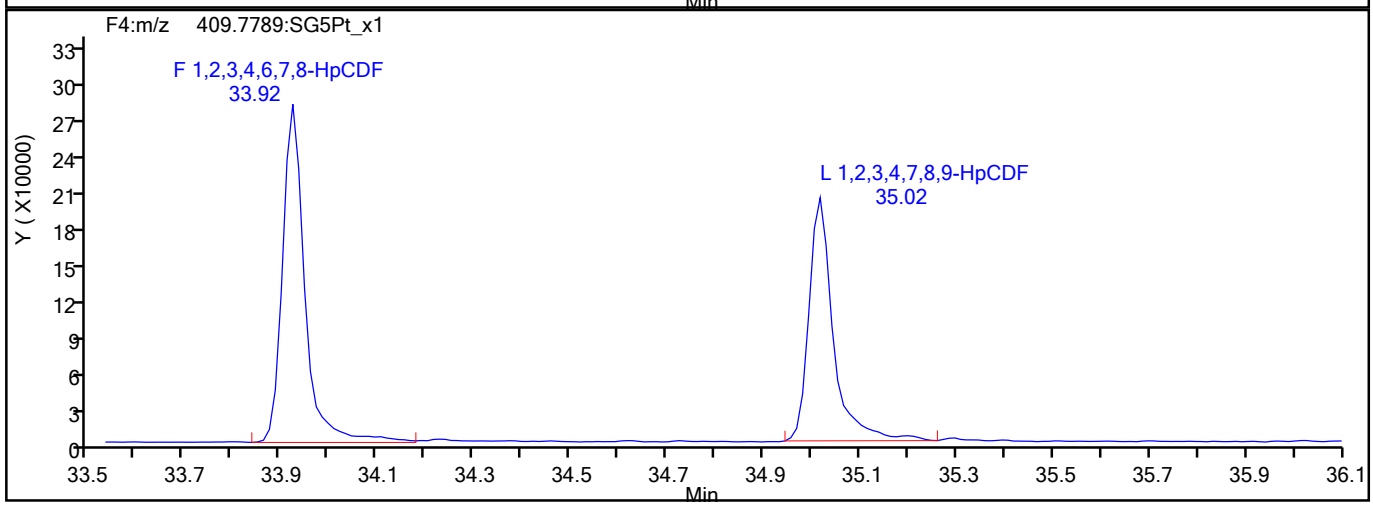

HpCDF Interference Mass

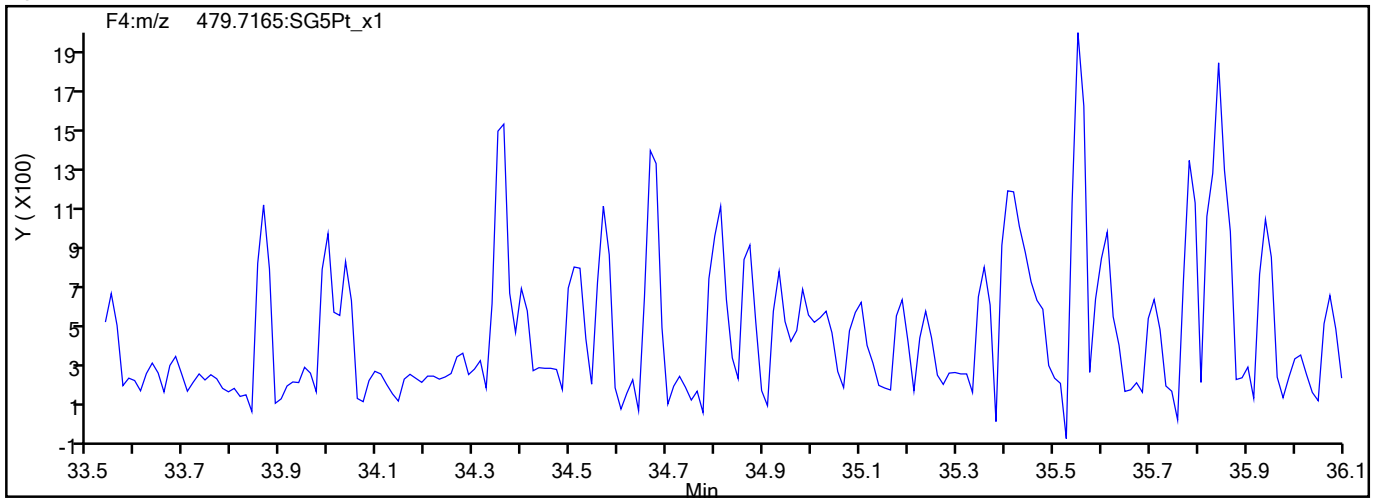

791408

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

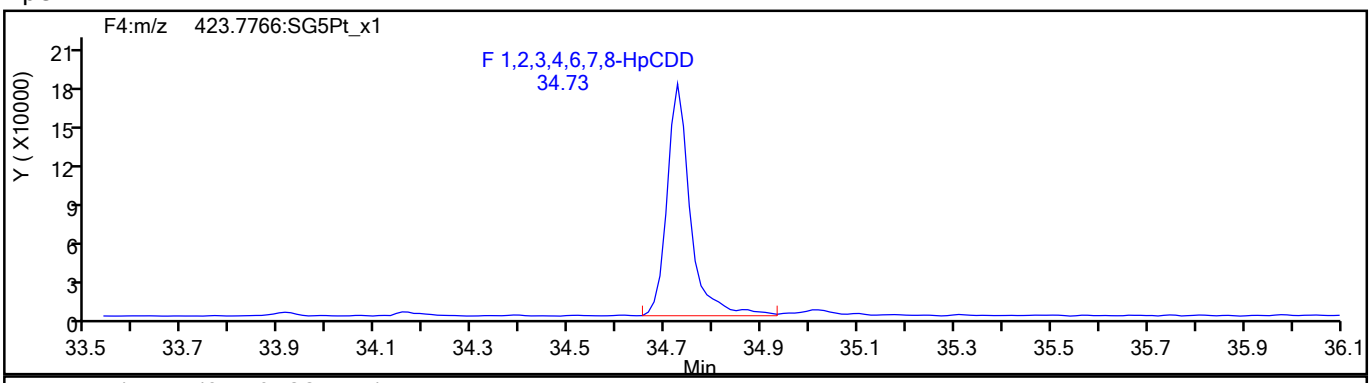

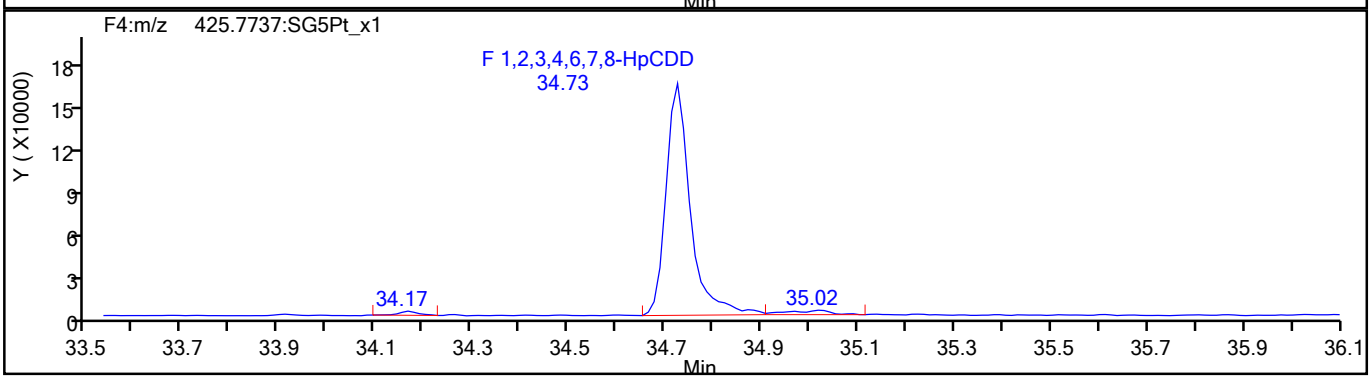

HpCDD Standards

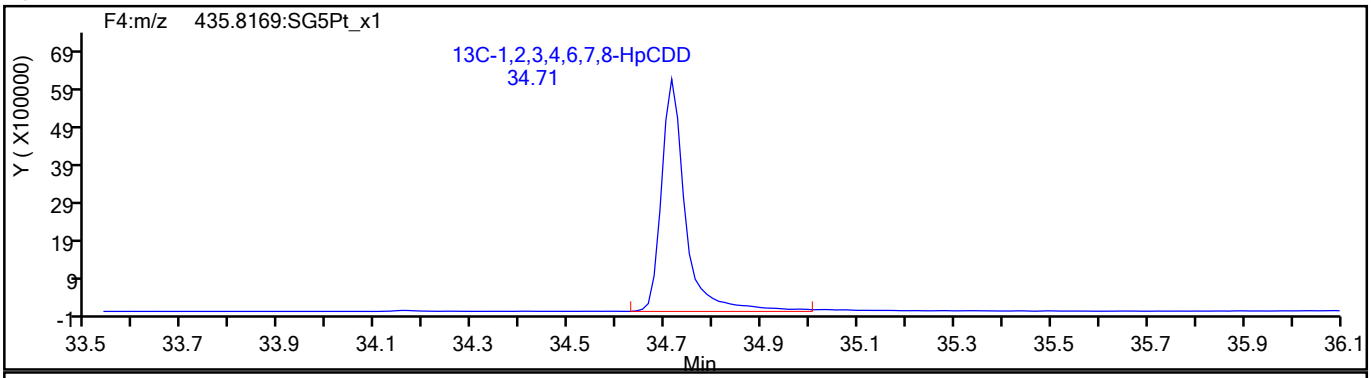

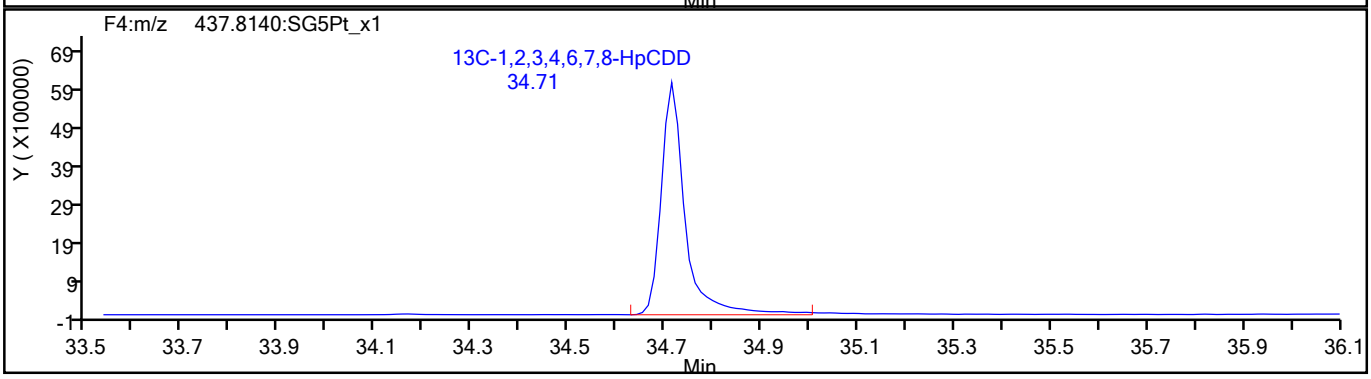

791409

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

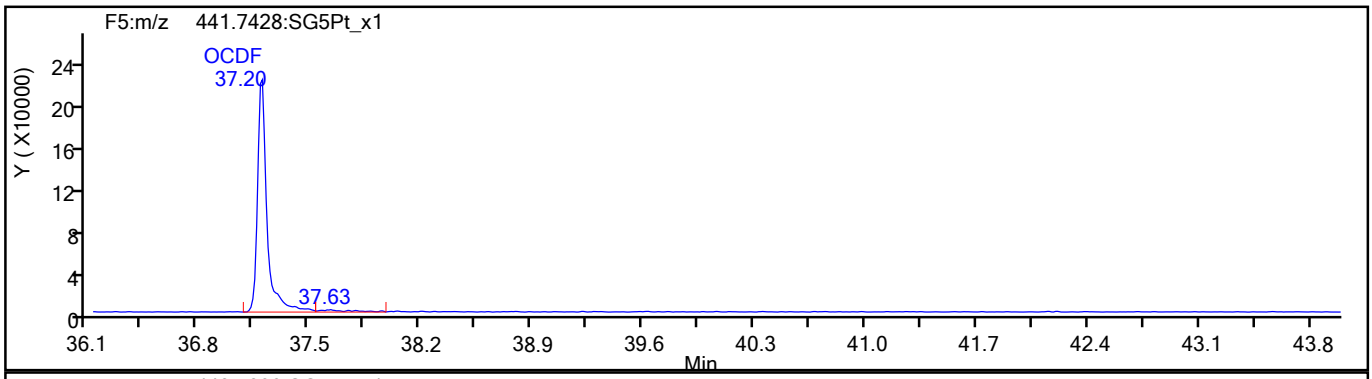

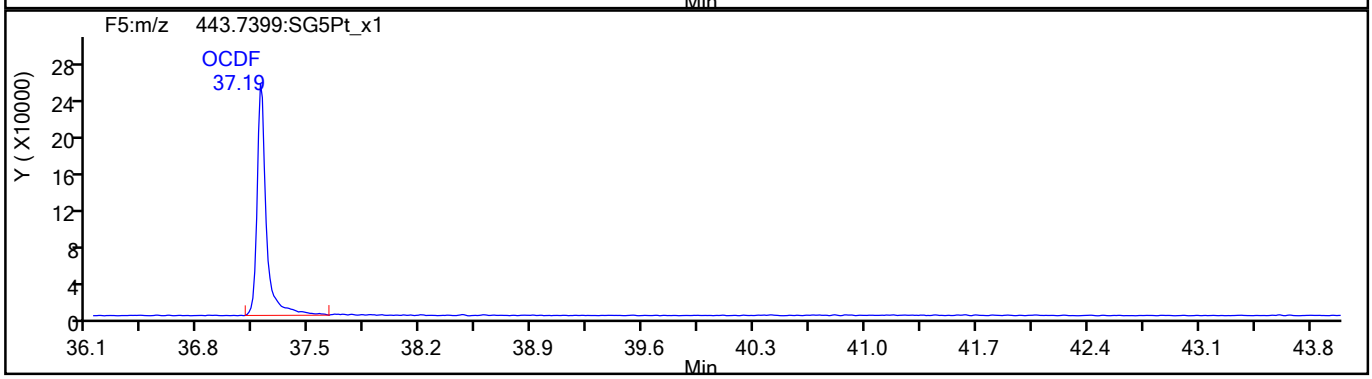

OCDF Standards

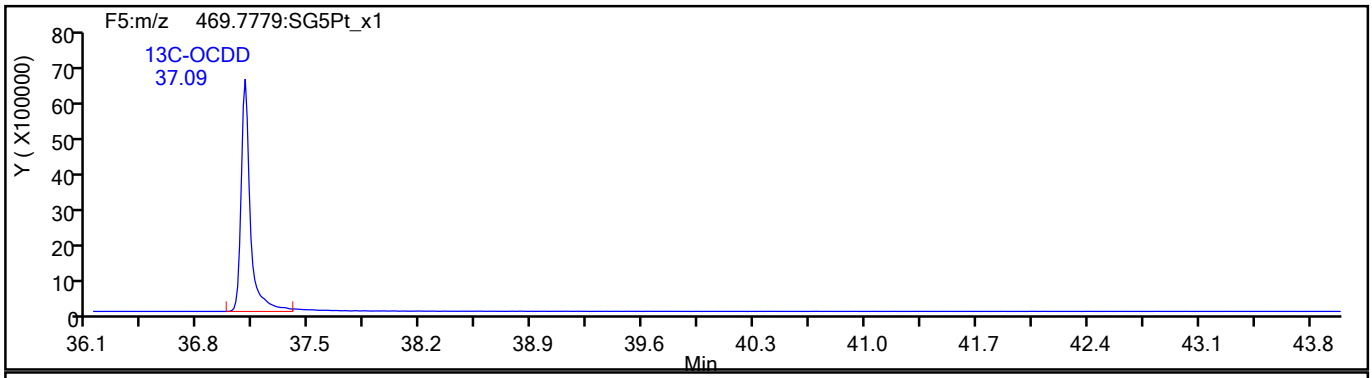

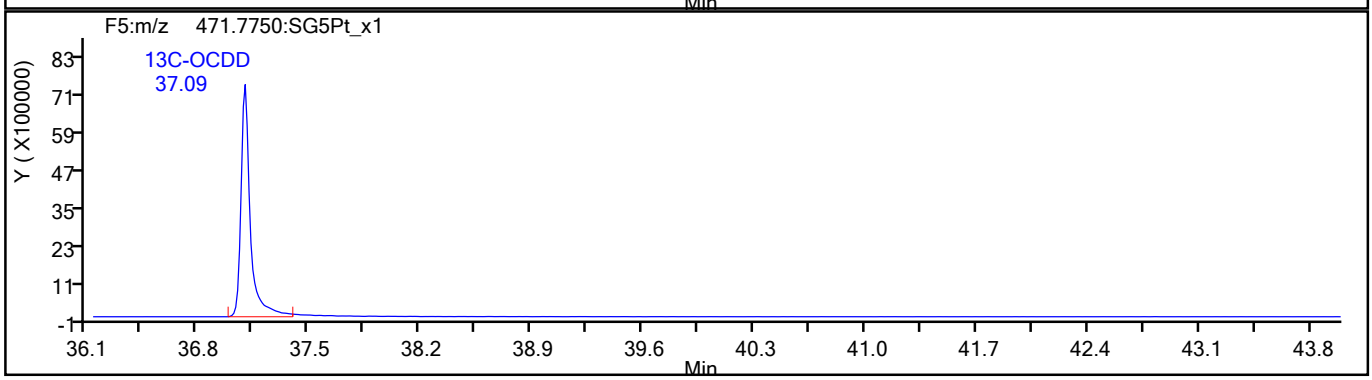

791410

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

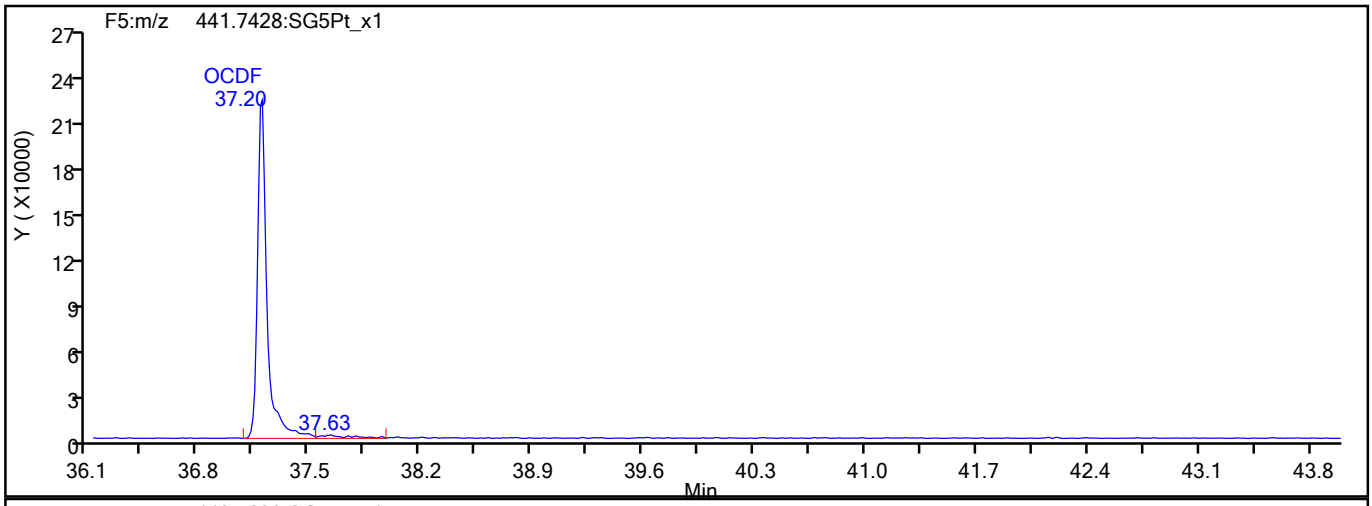

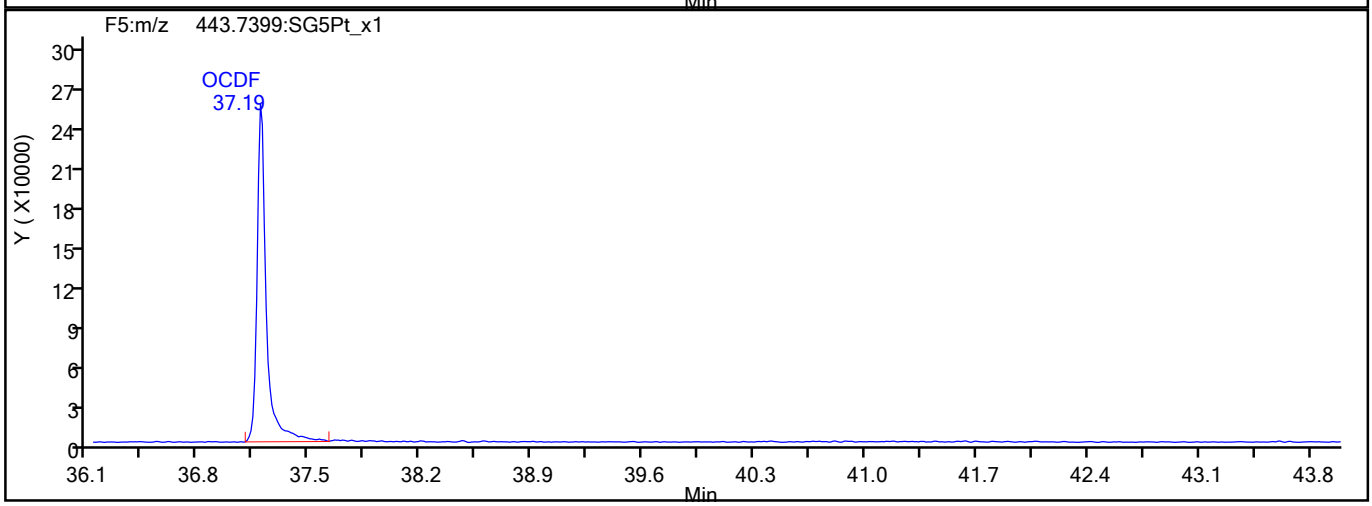

OCDF Interference Mass

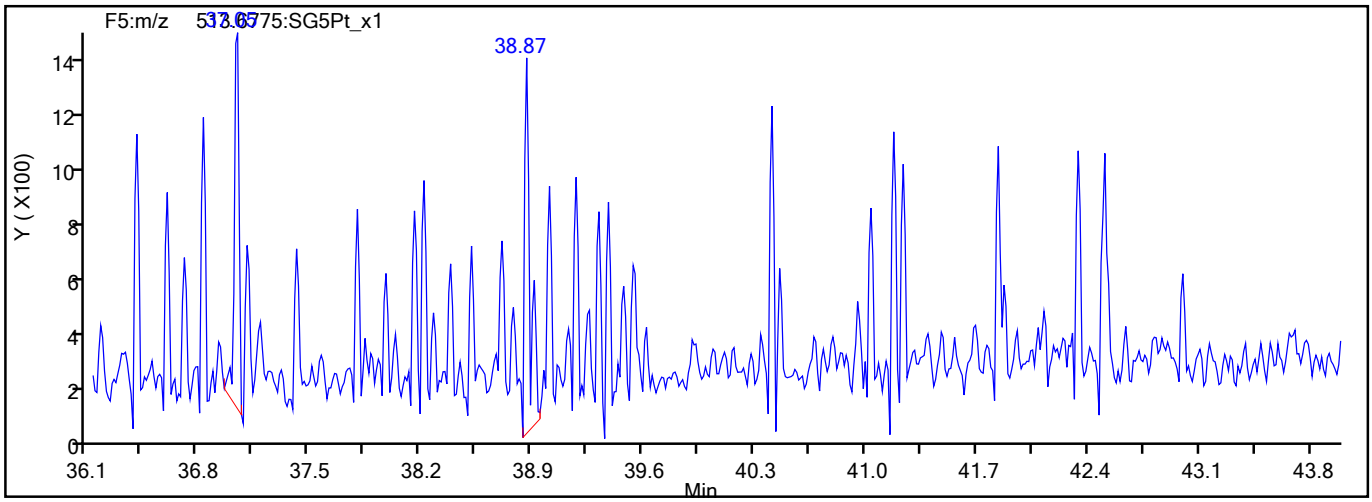

791411

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

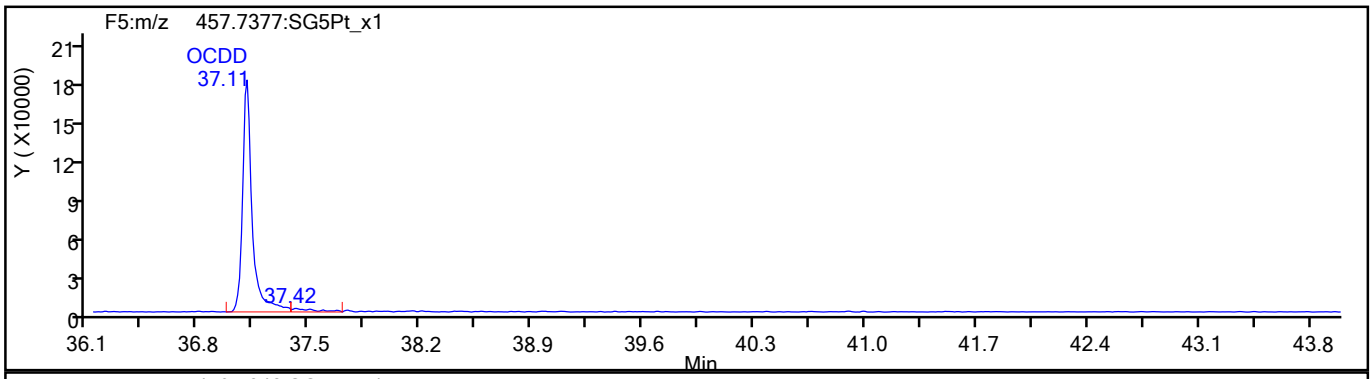

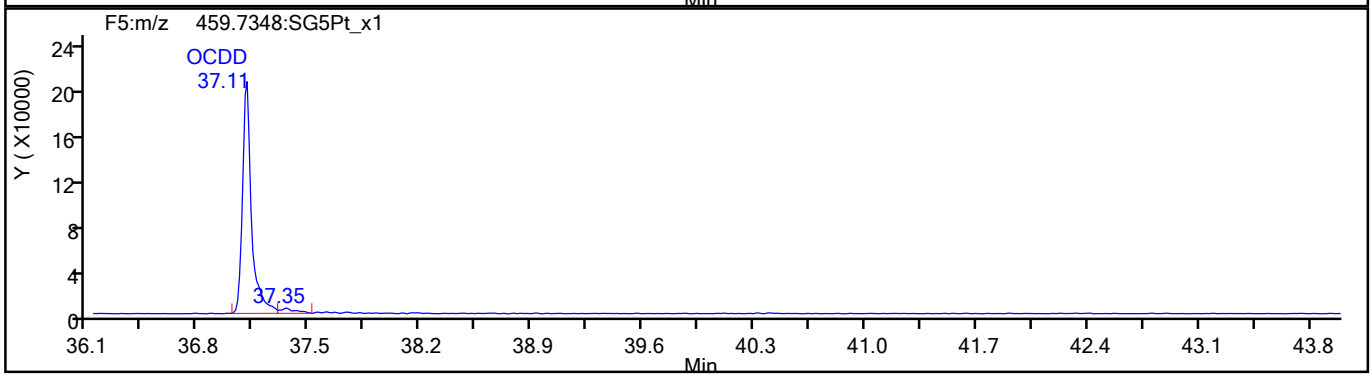

OCDD Standards

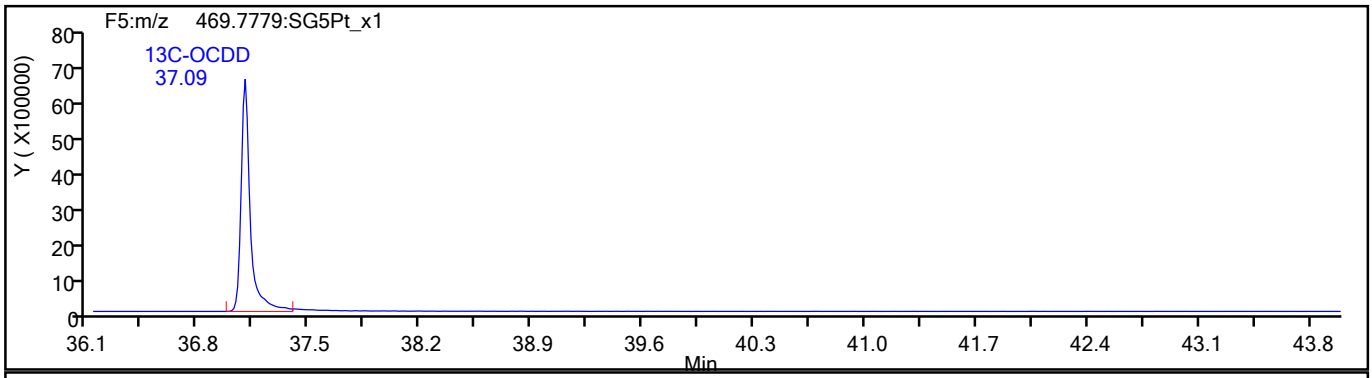

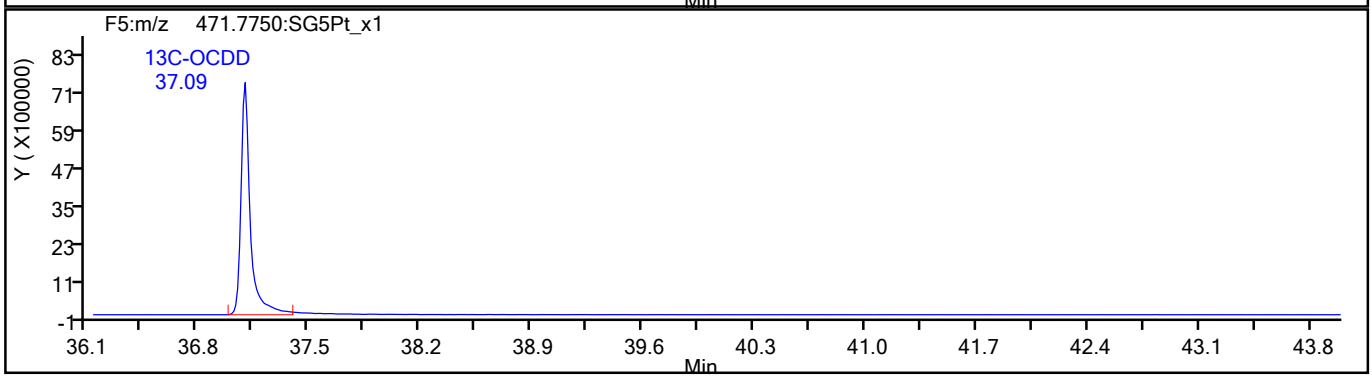

791412

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

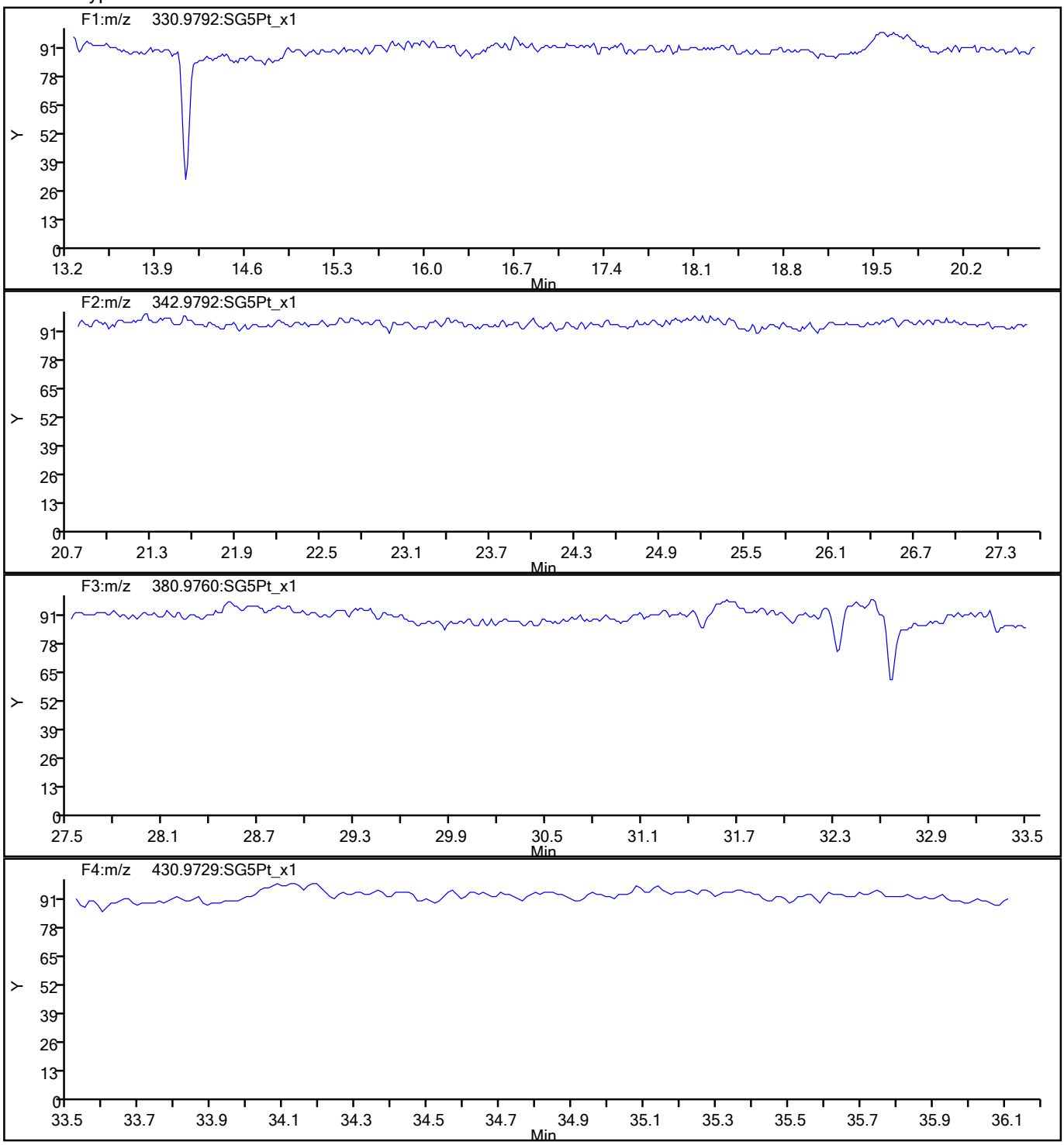

791413

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

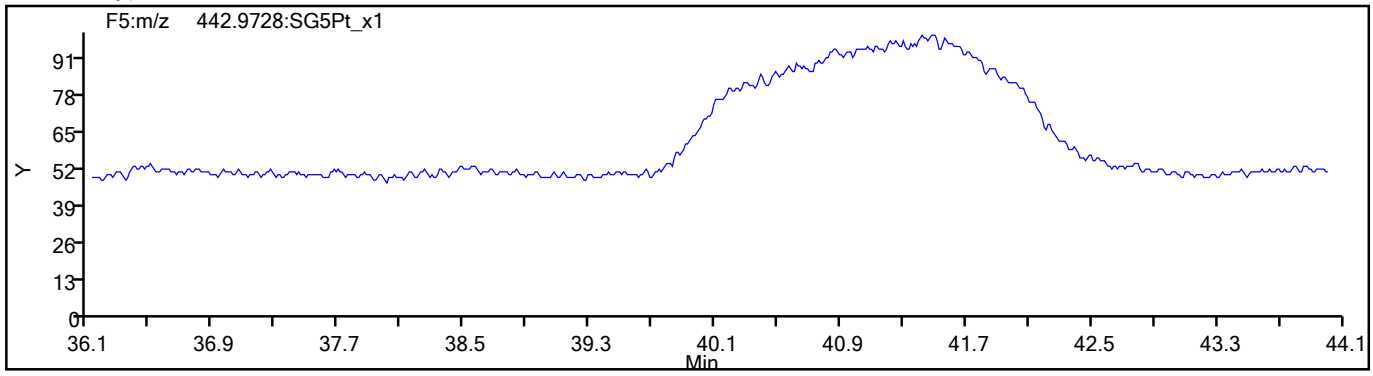

791414

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62853211	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	98246522	0.78	1.6249	96.2	96.2	0.1370	0.1370	96.20	
2,3,7,8-TCDF	17.628	1709191	0.74	1.0239	1.699	1.699	0.0115	0.0115	84.95	
S Total TCDF					1.699	1.699	0.0115	0.0115		
D 13C-2,3,7,8-TCDD	18.338	53975587	0.81	0.8993	95.5	95.5	0.1627	0.1627	95.49	
$ 37Cl4-2,3,7,8-TCDD	18.354	1231219		1.1071	1.769	1.769	0.009070	0.009070	88.47	
2,3,7,8-TCDD	18.354	1184284	0.77	1.2541	1.750	1.750	0.0187	0.0187	87.48	
S Total TCDD					1.750	1.750	0.0187	0.0187		
D 13C-1,2,3,7,8-PeCDF	22.749	72525655	1.59	1.2101	95.4	95.4	0.2163	0.2163	95.36	
1,2,3,7,8-PeCDF	22.776	6620354	1.62	1.0611	8.602	8.602	0.0369	0.0369	86.02	
D 13C-2,3,4,7,8-PeCDF	24.126	74944110	1.59	1.2395	96.2	96.2	0.2111	0.2111	96.20	a
2,3,4,7,8-PeCDF	24.153	6452410	1.61	1.0184	8.454	8.454	0.0398	0.0398	84.54	
S Total PeCDF					17.1	17.1	0.0383	0.0383		
D 13C-1,2,3,7,8-PeCDD	24.862	46721712	1.62	0.7612	97.7	97.7	0.1174	0.1174	97.65	
1,2,3,7,8-PeCDD	24.889	4219570	1.58	1.0484	8.614	8.614	0.0282	0.0282	86.14	
S Total PeCDD					8.614	8.614	0.0282	0.0282		
D 13C-1,2,3,4,7,8-HxCDF	30.835	65726932	0.51	1.0837	101.6	101.6	0.5284	0.5284	102	a
1,2,3,4,7,8-HxCDF	30.848	6041767	1.22	1.0851	8.471	8.471	0.0611	0.0611	84.71	
D 13C-1,2,3,6,7,8-HxCDF	30.995	68089005	0.53	1.1279	101.1	101.1	0.5077	0.5077	101	
1,2,3,6,7,8-HxCDF	31.021	6561860	1.24	1.1260	8.559	8.559	0.0596	0.0596	85.59	
D 13C-2,3,4,6,7,8-HxCDF	31.753	64406928	0.52	1.0637	101.4	101.4	0.5383	0.5383	101	
2,3,4,6,7,8-HxCDF	31.767	6352404	1.21	1.1675	8.448	8.448	0.0492	0.0492	84.48	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58828058	0.51	0.9676	101.8	101.8	0.5918	0.5918	102	
1,2,3,7,8,9-HxCDF	32.526	5963032	1.22	1.1664	8.691	8.691	0.0536	0.0536	86.91	
S Total HxCDF					34.2	34.2	0.0559	0.0559		
* 13C-1,2,3,7,8,9-HxCDD	32.339	59719891	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44877133	1.26	0.7334	102.5	102.5	0.4904	0.4904	102	a
1,2,3,4,7,8-HxCDD	31.940	3996910	1.25	1.0640	8.370	8.370	0.0541	0.0541	83.70	
D 13C-1,2,3,6,7,8-HxCDD	32.033	52974056	1.27	0.8802	100.8	100.8	0.4087	0.4087	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.046	4517909	1.28	1.0001	8.528	8.528	0.0541	0.0541	85.28	
1,2,3,7,8,9-HxCDD	32.353	4612548	1.27	1.1325	8.324	8.324	0.0492	0.0492	83.24	
S Total HxCDD					25.2	25.2	0.0525	0.0525		
D 13C-1,2,3,4,6,7,8-HpCDF	33.911	46691158	0.44	0.7730	101.1	101.1	1.219	1.219	101	
1,2,3,4,6,7,8-HpCDF	33.924	5795616	1.06	1.4413	8.612	8.612	0.0908	0.0908	86.12	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	42362179	0.44	0.7008	101.2	101.2	1.344	1.344	101	a
1,2,3,4,7,8,9-HpCDF	35.017	4773949	1.04	1.3174	8.554	8.554	0.1198	0.1198	85.54	
S Total HpCDF					17.2	17.2	0.1053	0.1053		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	38689128	1.01	0.6472	100.1	100.1	0.6644	0.6644	100	
1,2,3,4,6,7,8-HpCDD	34.725	3690749	1.06	1.0943	8.717	8.717	0.0588	0.0588	87.17	
S Total HpCDD					8.717	8.717	0.0588	0.0588		
D 13C-OCDD	37.093	52034518	0.88	0.4472	194.9	194.9	0.3057	0.3057	97.43	
OCDF	37.189	6198469	0.89	1.4382	16.6	16.6	0.0331	0.0331	82.83	
OCDD	37.105	5013385	0.90	1.1070	17.4	17.4	0.0477	0.0477	87.03	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28386456	7046087	6003	15007	1174		
333.9339	18.142	18.142	0		34466755	8558284	3128	7820	2736	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42972486	10763336	8679	21697	1240		
317.9389	17.613	17.616	0	0.971	55274036	13878642	5218	13045	2660	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	725190	178427	386	965	462		
305.8987	17.628	17.631	0	1.001	984001	248871	771	1927	323	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24153490	5697854	6003	15007	949		
333.9339	18.338	18.338	0	1.011	29822097	7031837	3128	7820	2248	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	1231219	295748	627	1567	472		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	516509	120344	727	1817	166		
321.8936	18.354	18.357	0	1.001	667775	162973	470	1175	347	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44514928	7853181	9659	24147	813		
353.8970	22.749	22.754	0	1.254	28010727	4960984	6675	16687	743	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	4089215	716349	1056	2640	678		
341.8567	22.776	22.779	0	1.001	2531139	446464	949	2372	470	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											a
351.9000	24.126	24.129	0	1.330	46033296	7621284	9659	24147	789		a
353.8970	24.126	24.129	0	1.330	28910814	4739818	6675	16687	710	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	3984657	653372	1056	2640	619		
341.8567	24.153	24.156	0	1.001	2467753	411895	949	2372	434	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28869986	4442492	3510	8775	1266		
369.8919	24.862	24.865	0	1.370	17851726	2719251	2068	5170	1315	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	2584600	398905	491	1227	812		
357.8516	24.889	24.892	0	1.001	1634970	246537	355	887	694	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											a
383.8639	30.835	30.838	0	0.953	22324815	4908430	11721	29302	419		a
385.8610	30.835	30.838	0	0.953	43402117	9487505	22146	55365	428	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.848	30.857	0	1.000	3322045	734549	2125	5312	346		
375.8178	30.848	30.857	0	1.000	2719722	584076	1696	4240	344	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	23443638	4852452	11721	29302	414		
385.8610	30.995	31.003	0	0.958	44645367	9390378	22146	55365	424	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.001	3628802	774738	2125	5312	365		
375.8178	31.021	31.022	0	1.001	2933058	621989	1696	4240	367	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.753	31.756	0	0.982	22116278	5724833	11721	29302	488		
385.8610	31.753	31.756	0	0.982	42290650	10891641	22146	55365	492	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	3476984	900887	2125	5312	424		
375.8178	31.767	31.772	0	1.000	2875420	748664	1696	4240	441	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	19952155	5224965	11721	29302	446		
385.8610	32.512	32.523	-1	1.005	38875903	10047992	22146	55365	454	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	3272570	870864	2125	5312	410		
375.8178	32.526	32.534	0	1.000	2690462	702575	1696	4240	414	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33208186	8207924	11753	29382	698		
403.8529	32.339	32.342	0		26511705	6578059	9521	23802	691	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	31.927	31.929	0	0.987	24991401	7247079	11753	29382	617		a
403.8529	31.927	31.929	0	0.987	19885732	5749736	9521	23802	604	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	2220855	634454	1798	4495	353		
391.8127	31.940	31.945	0	1.000	1776055	520388	1195	2987	435	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29637474	7731021	11753	29382	658		
403.8529	32.033	32.033	0	0.991	23336582	6105317	9521	23802	641	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.046	32.047	0	1.000	2539756	681391	1798	4495	379		
391.8127	32.046	32.047	0	1.000	1978153	525440	1195	2987	440	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	2578931	681238	1798	4495	379		
391.8127	32.353	32.355	0	1.013	2033617	530890	1195	2987	444	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.911	33.914	0	1.049	14324046	4548819	17096	42740	266		
419.8220	33.911	33.914	0	1.049	32367112	10373412	38619	96547	269	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	2984390	989226	3939	9847	251		
409.7789	33.924	33.926	0	1.000	2811226	912647	3871	9677	236	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											a
417.8253	35.005	35.010	0	1.082	12913204	3817815	17096	42740	223		a
419.8220	35.005	35.010	0	1.082	29448975	8551787	38619	96547	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	2430692	699814	3939	9847	178		
409.7789	35.017	35.020	0	1.000	2343257	686031	3871	9677	177	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19472945	5796031	12697	31742	456		
437.8140	34.714	34.716	0	1.073	19216183	5692167	12738	31845	447	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.725	34.726	0	1.000	1901971	557241	1605	4012	347		
425.7737	34.725	34.726	0	1.000	1788778	518346	1352	3380	383	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	24422535	6155132	2912	7280	2114		
471.7750	37.093	37.094	0	1.147	27611983	6845350	5172	12930	1324	0.88(0.76-1.02)	
OCDF											
441.7428	37.189	37.199	-1	1.003	2921445	715883	635	1587	1127		
443.7399	37.189	37.199	-1	1.003	3277024	845078	603	1507	1401	0.89(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	2373314	577341	633	1582	912		
459.7348	37.105	37.106	0	1.000	2640071	638330	739	1847	864	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.13

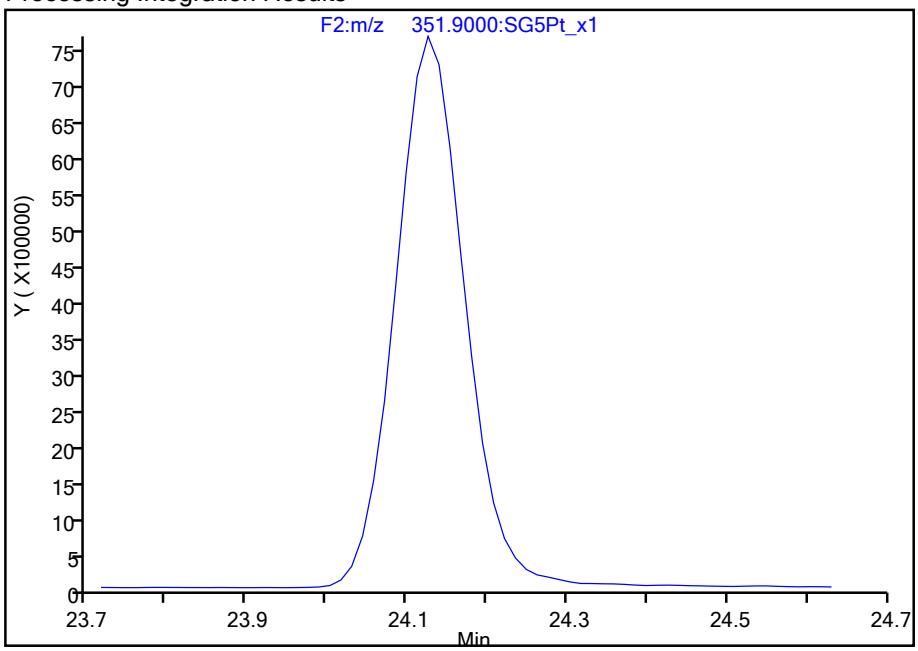

Manual Integration Results

RT: 24.13
Area: 46033296
Amount: 96.198549
Amount Units: pg/ul

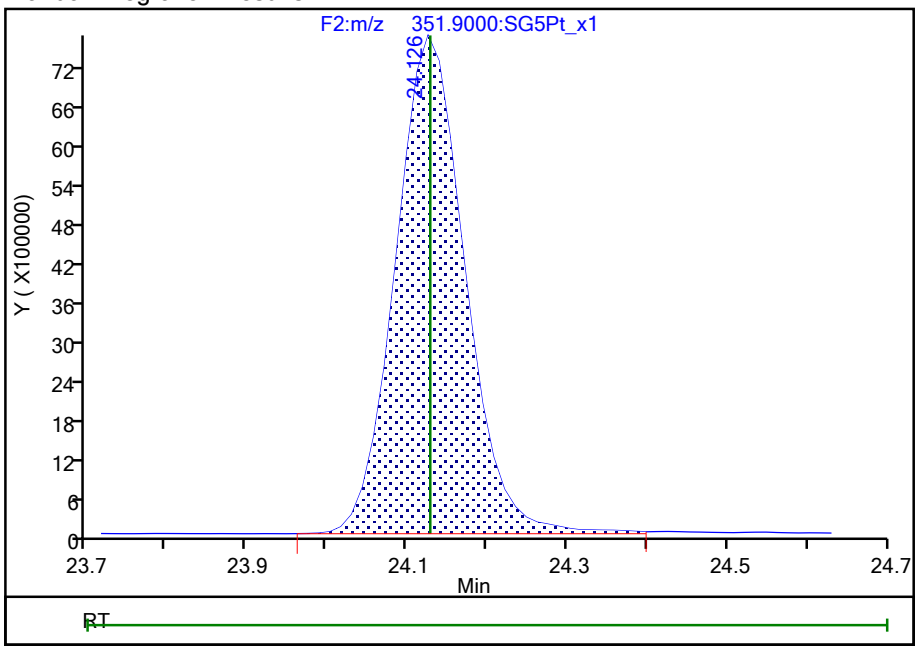

Reviewer: arghestanis, 26-Jul-2021 12:30:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

791420

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDF, CAS: 114423-98-2

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.84

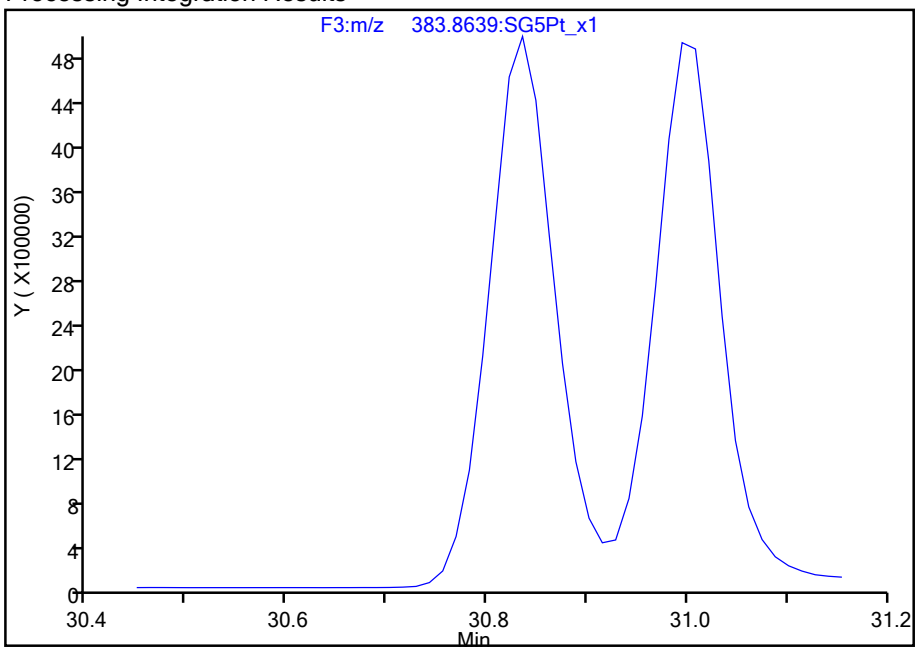

Manual Integration Results

RT: 30.84
Area: 22324815
Amount: 101.5622
Amount Units: pg/ul

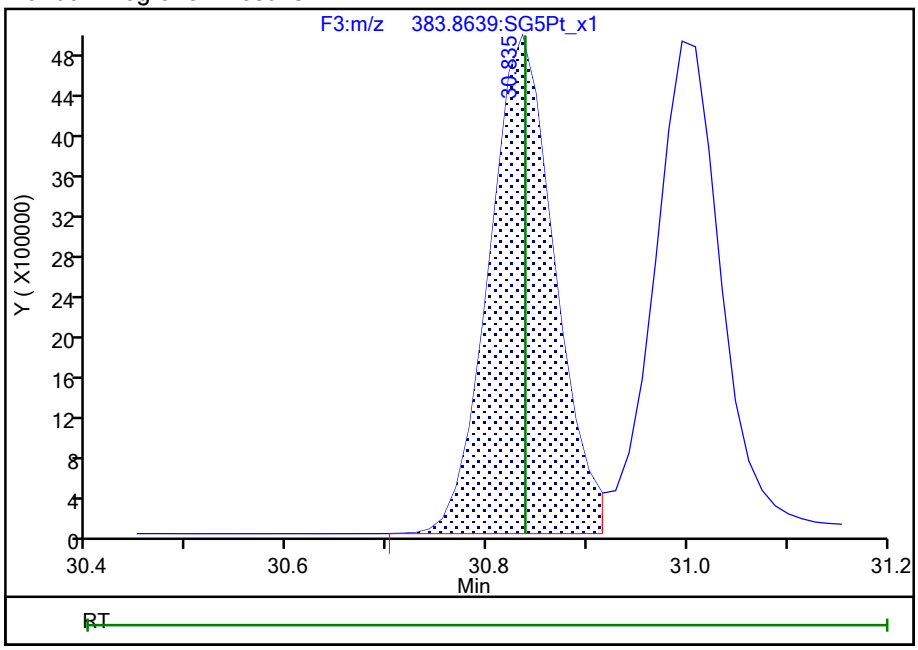

Reviewer: arghestanis, 26-Jul-2021 12:30:40
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

791421

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.93

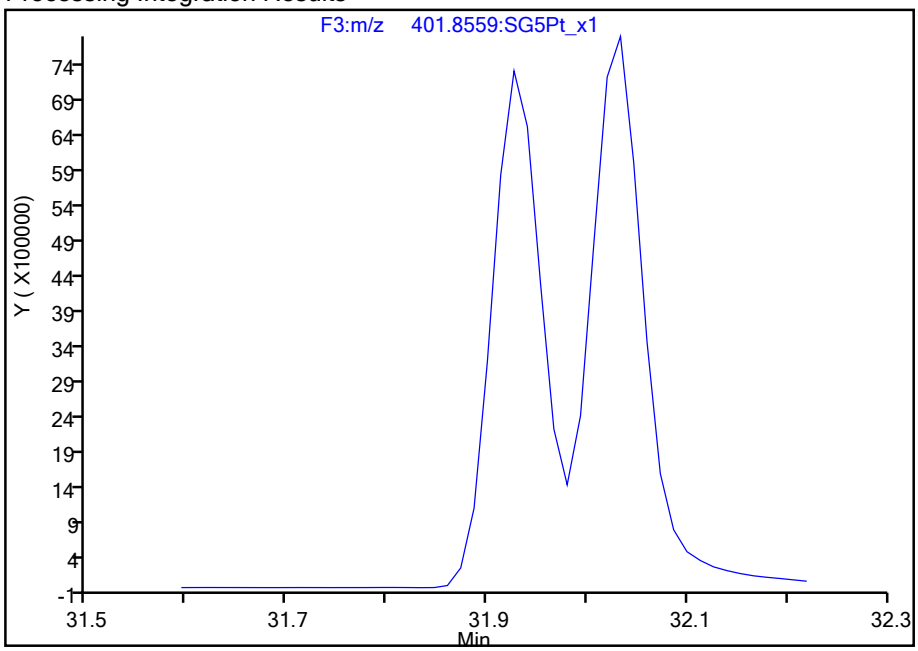

Manual Integration Results

RT: 31.93
Area: 24991401
Amount: 102.4585
Amount Units: pg/ul

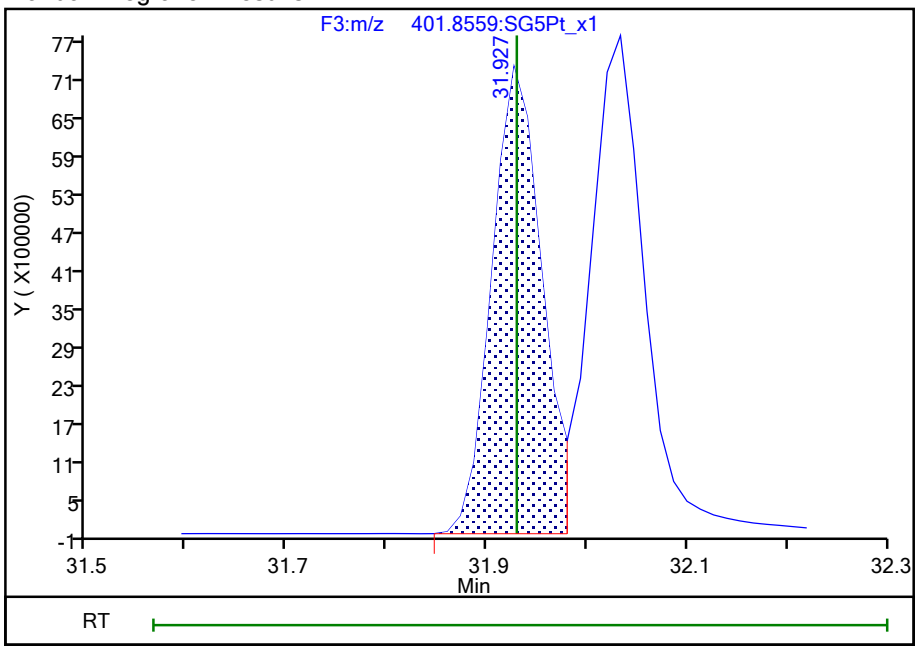

Reviewer: arghestanis, 26-Jul-2021 12:30:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.01

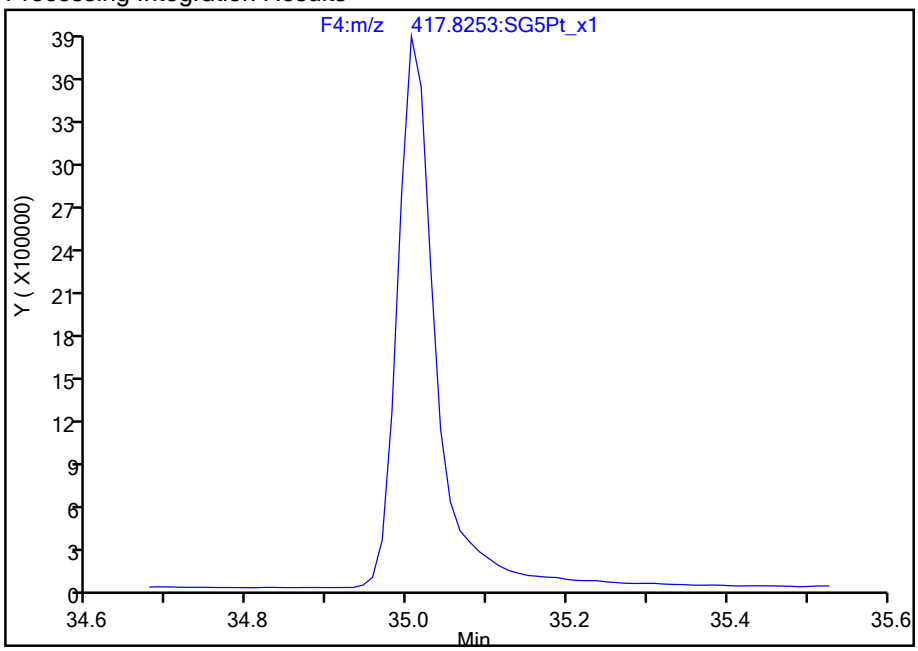

Manual Integration Results

RT: 35.01
Area: 12913204
Amount: 101.2180
Amount Units: pg/ul

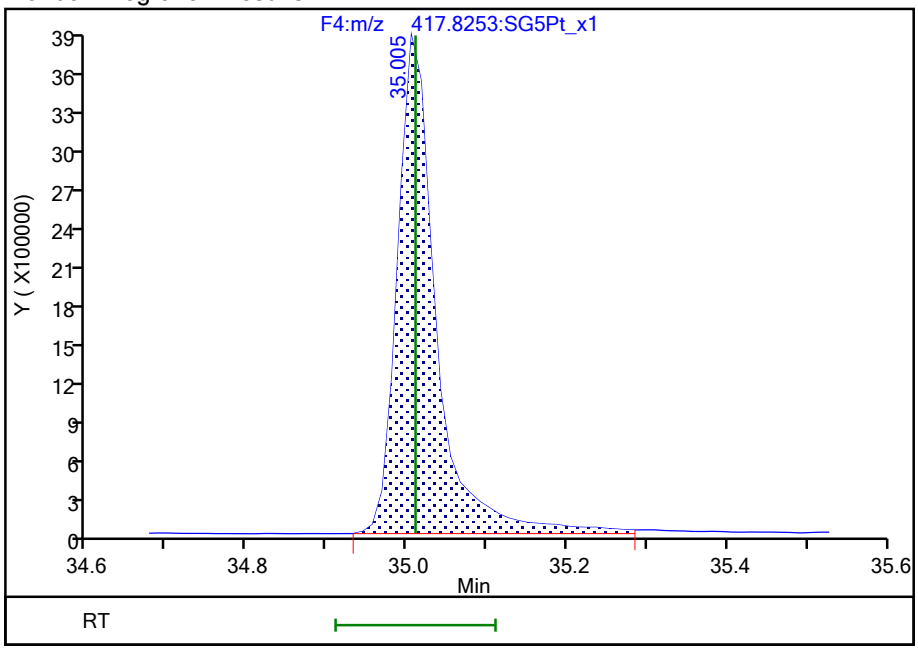

Reviewer: arghestanis, 26-Jul-2021 12:31:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

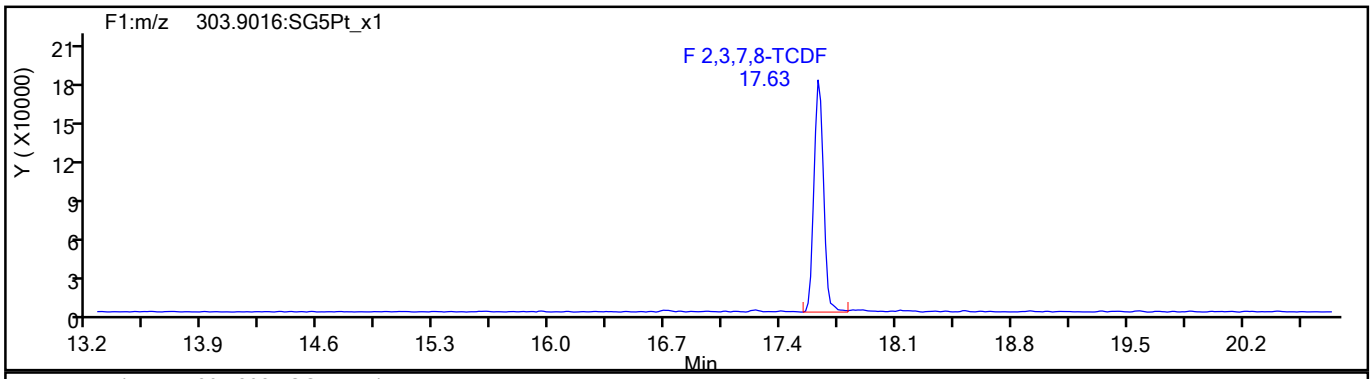

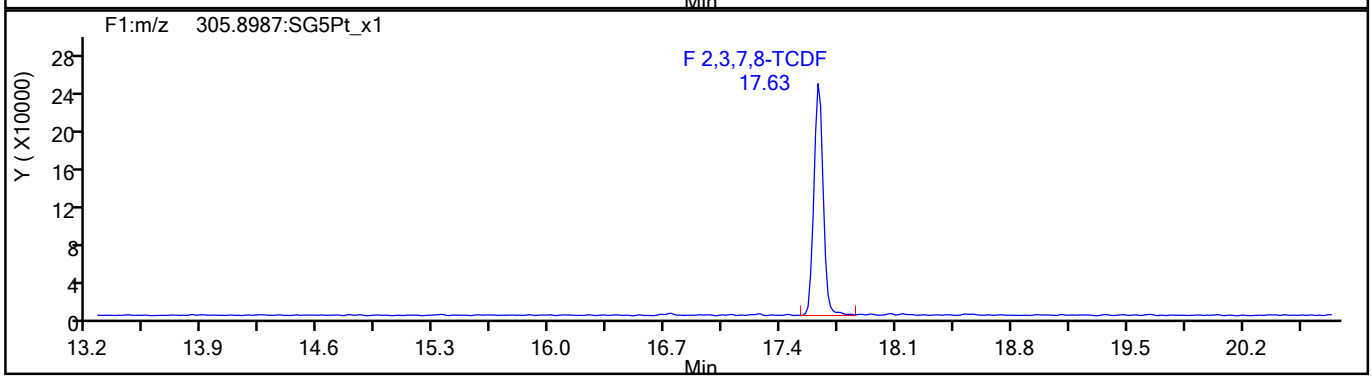

TCDF Standards

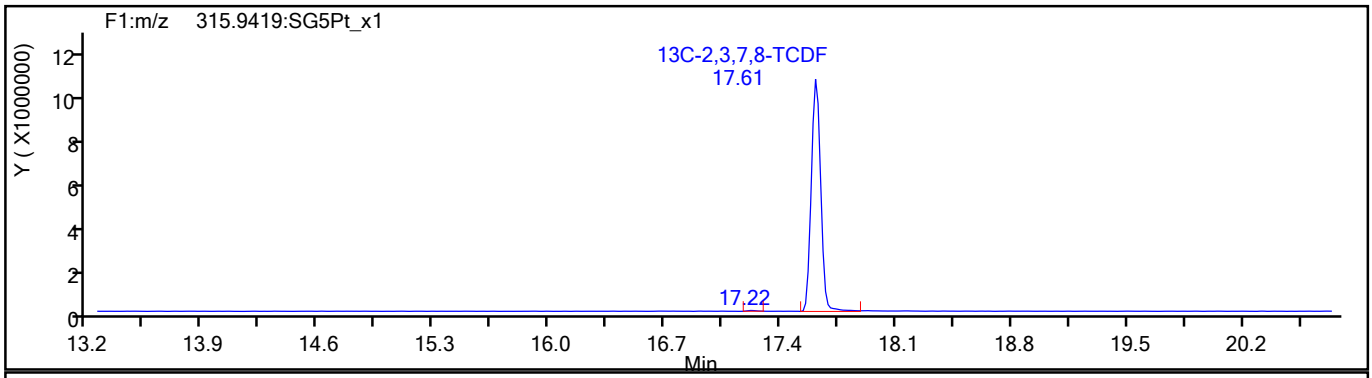

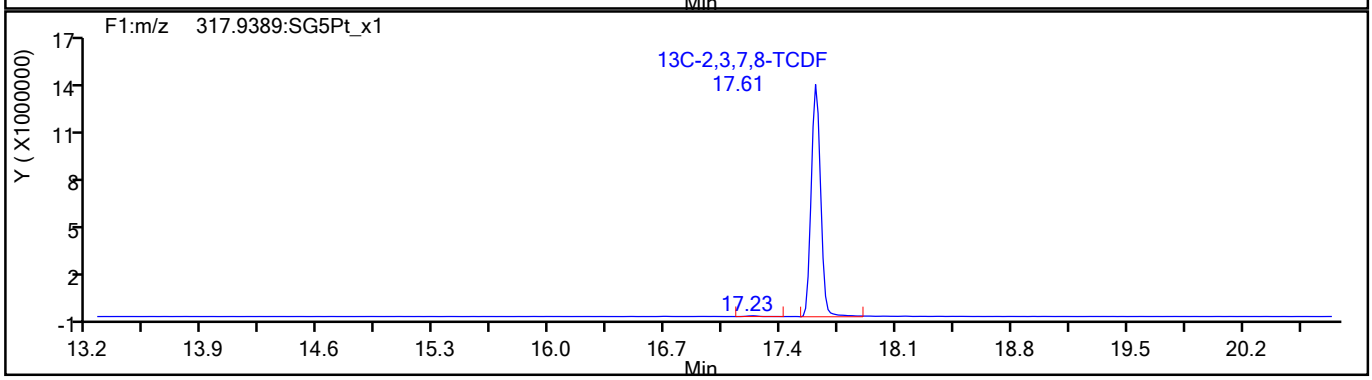

791424

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

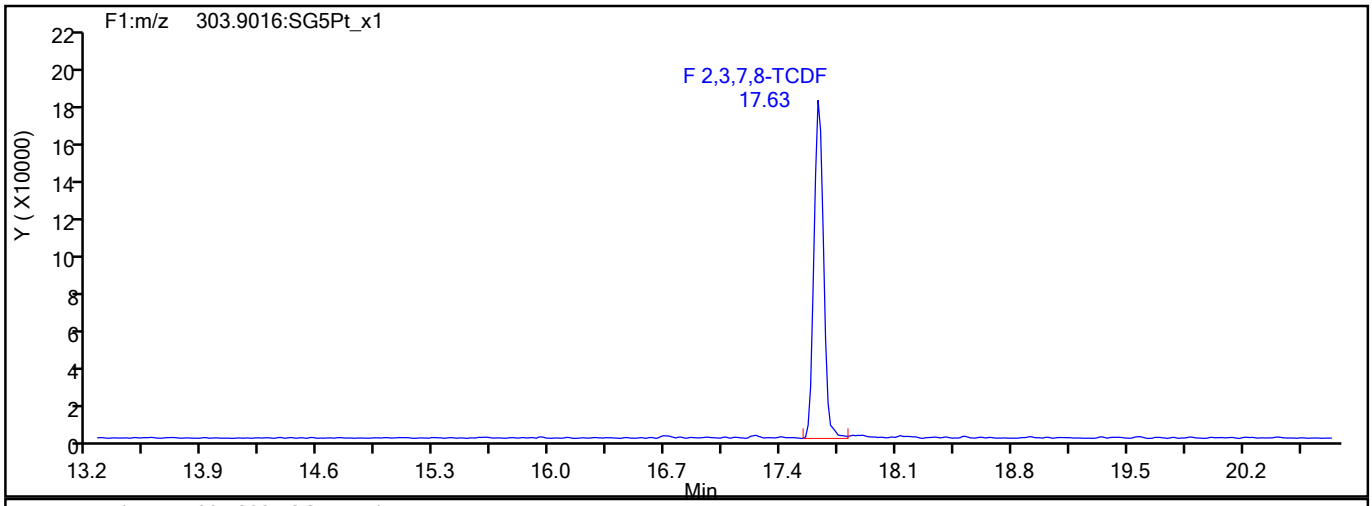

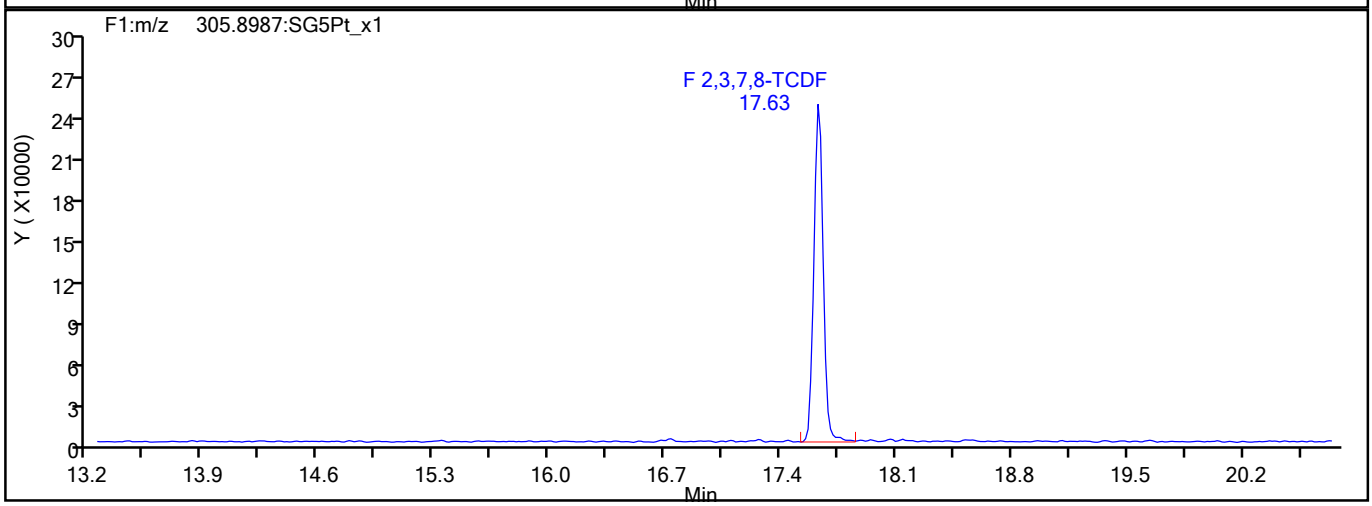

TCDF Interference Mass

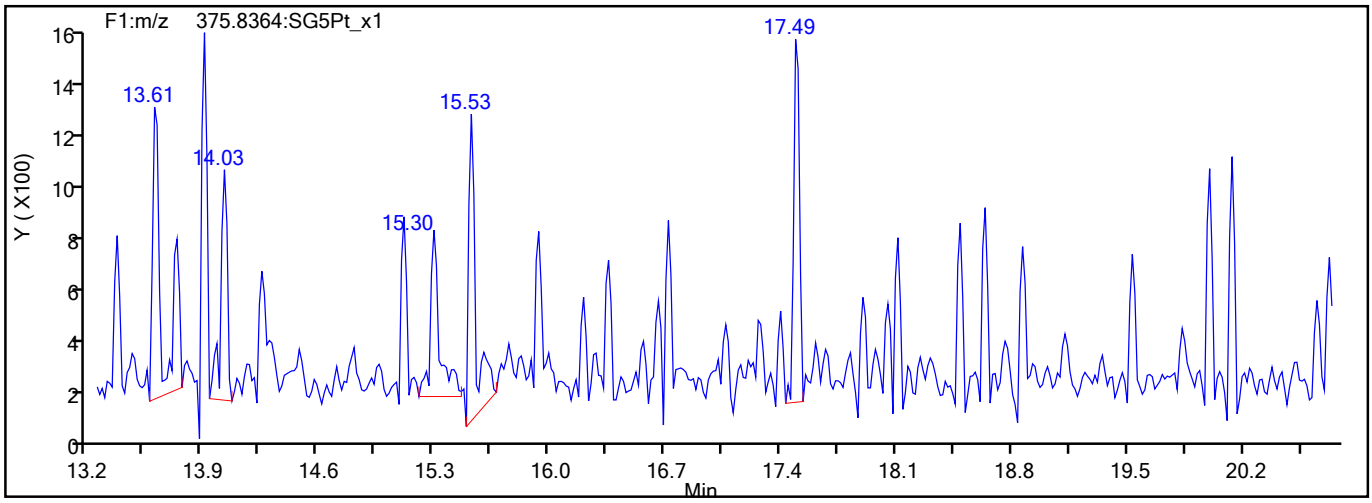

791425

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

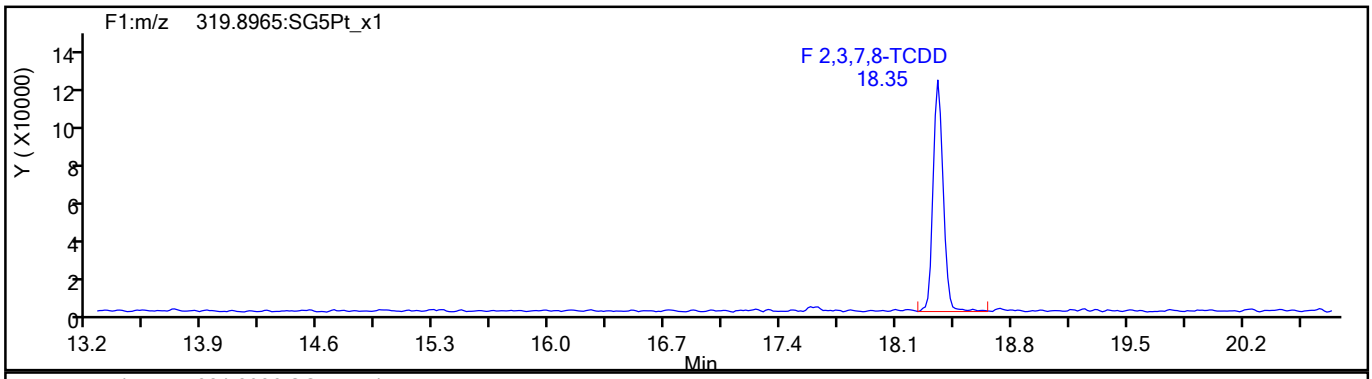

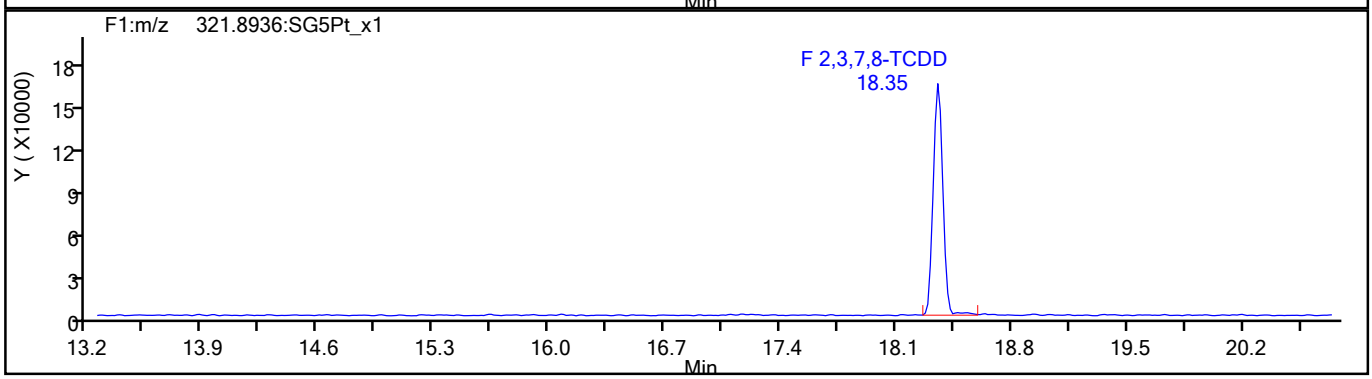

TCDD Standards

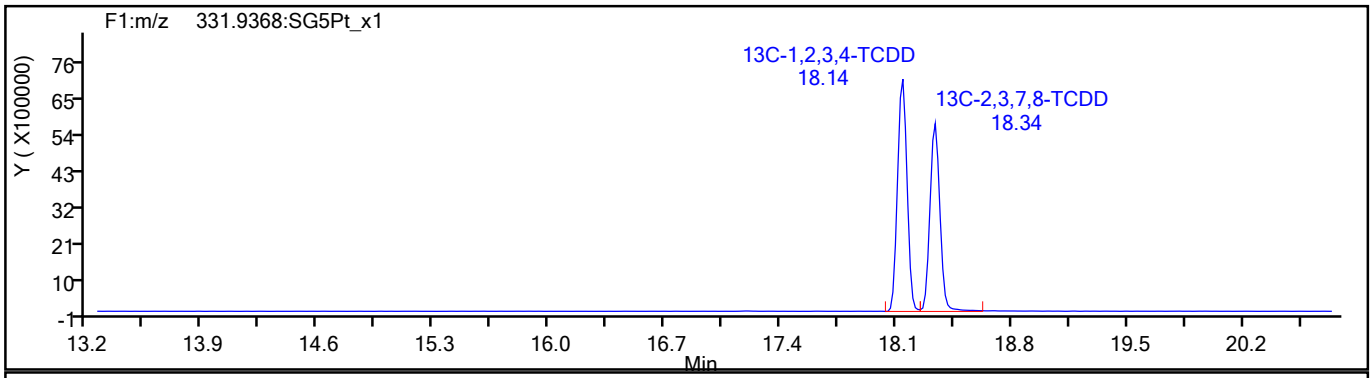

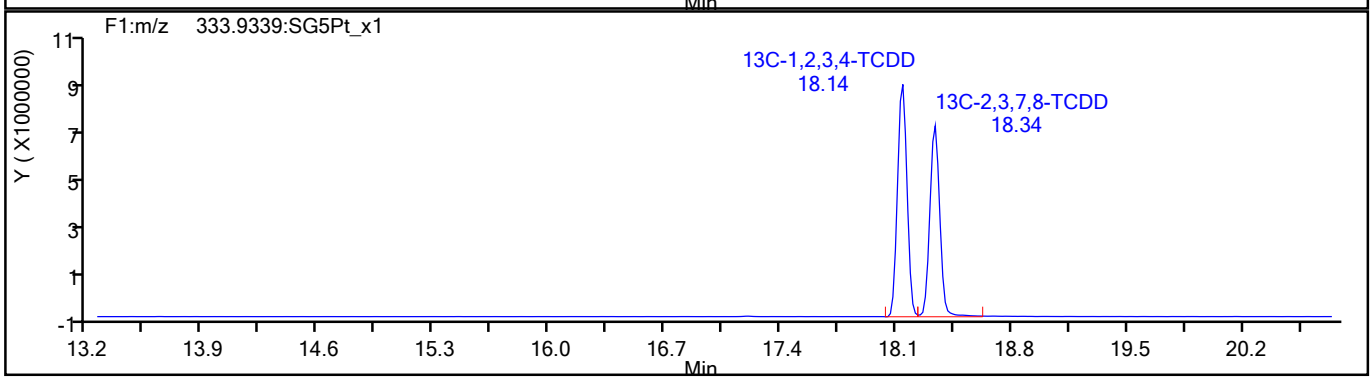

791426

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

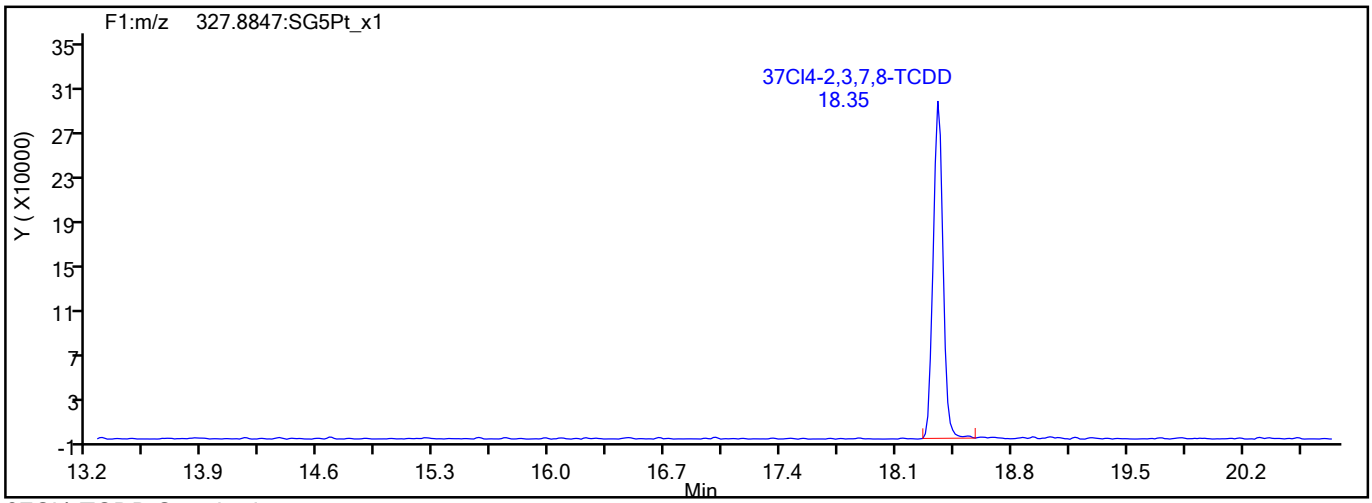

37Cl4-TCDD Standards

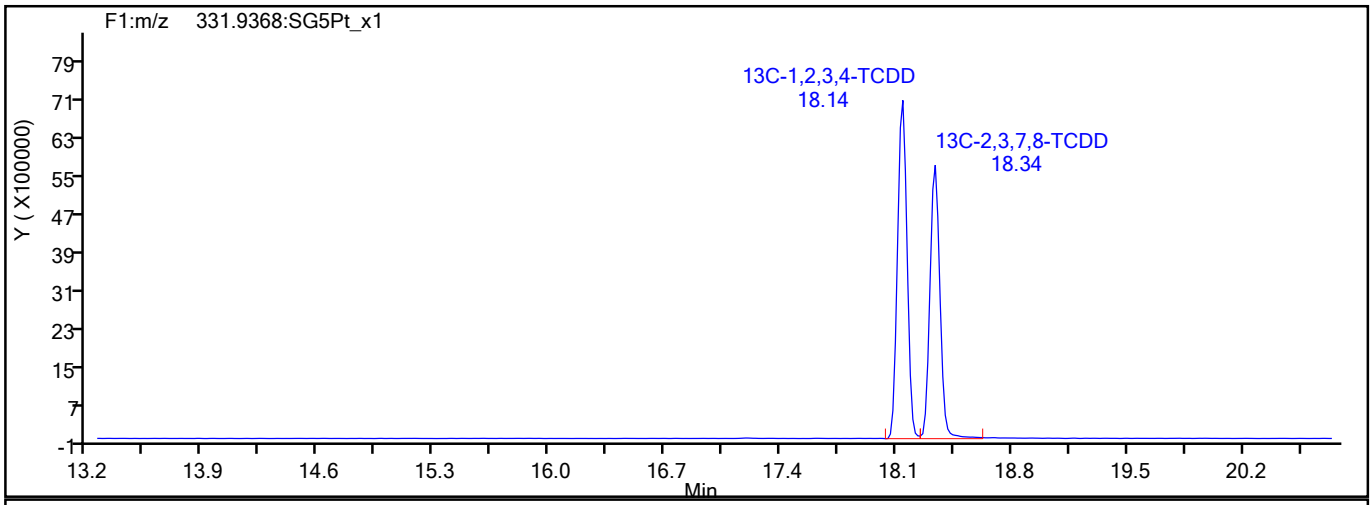

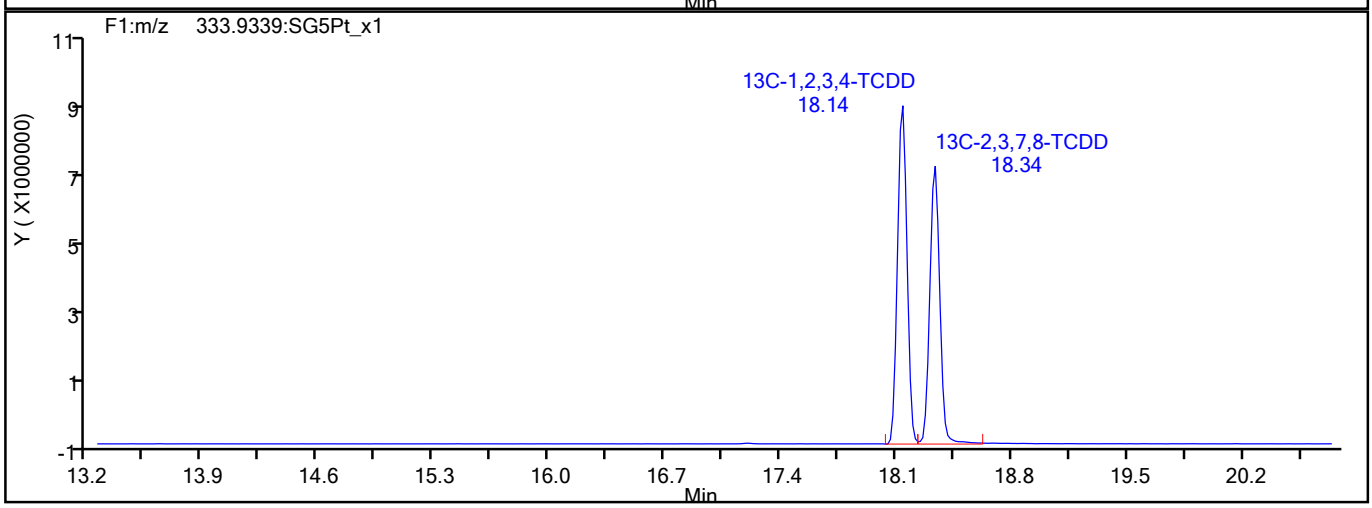

791427

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

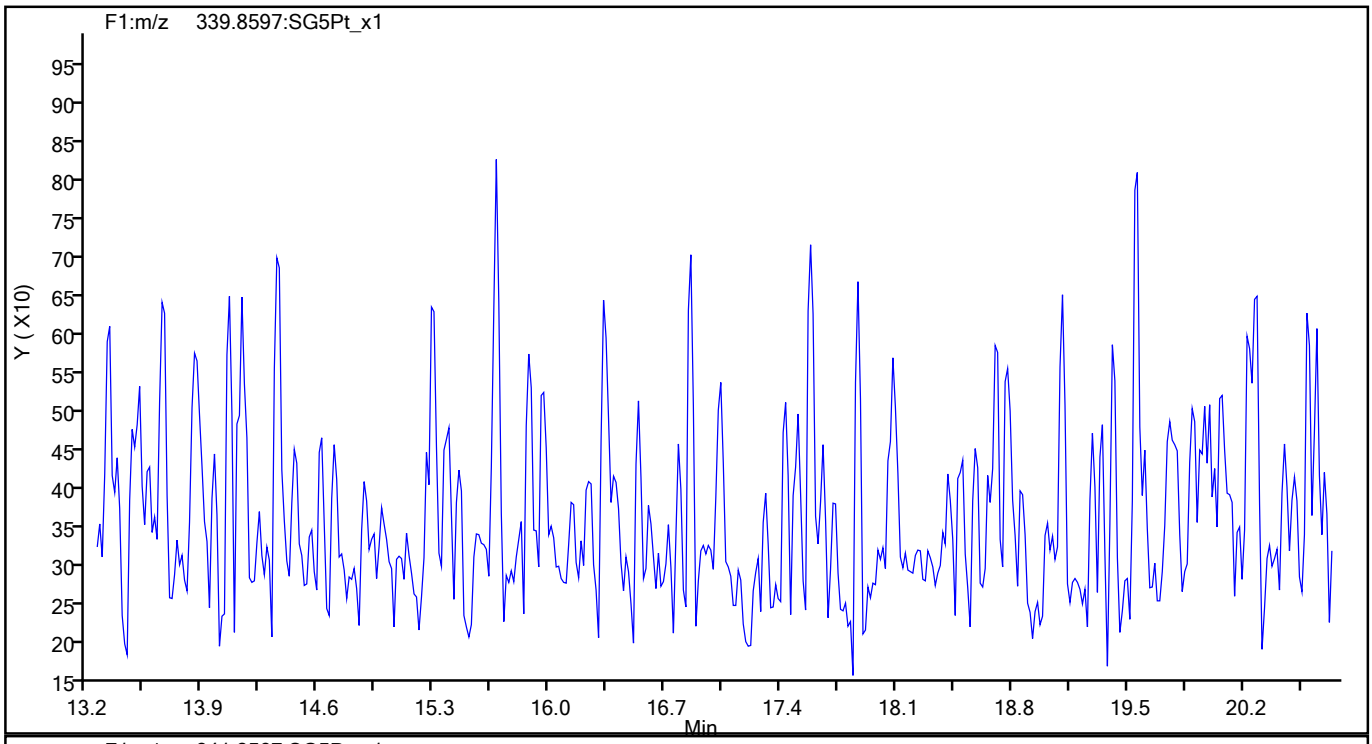

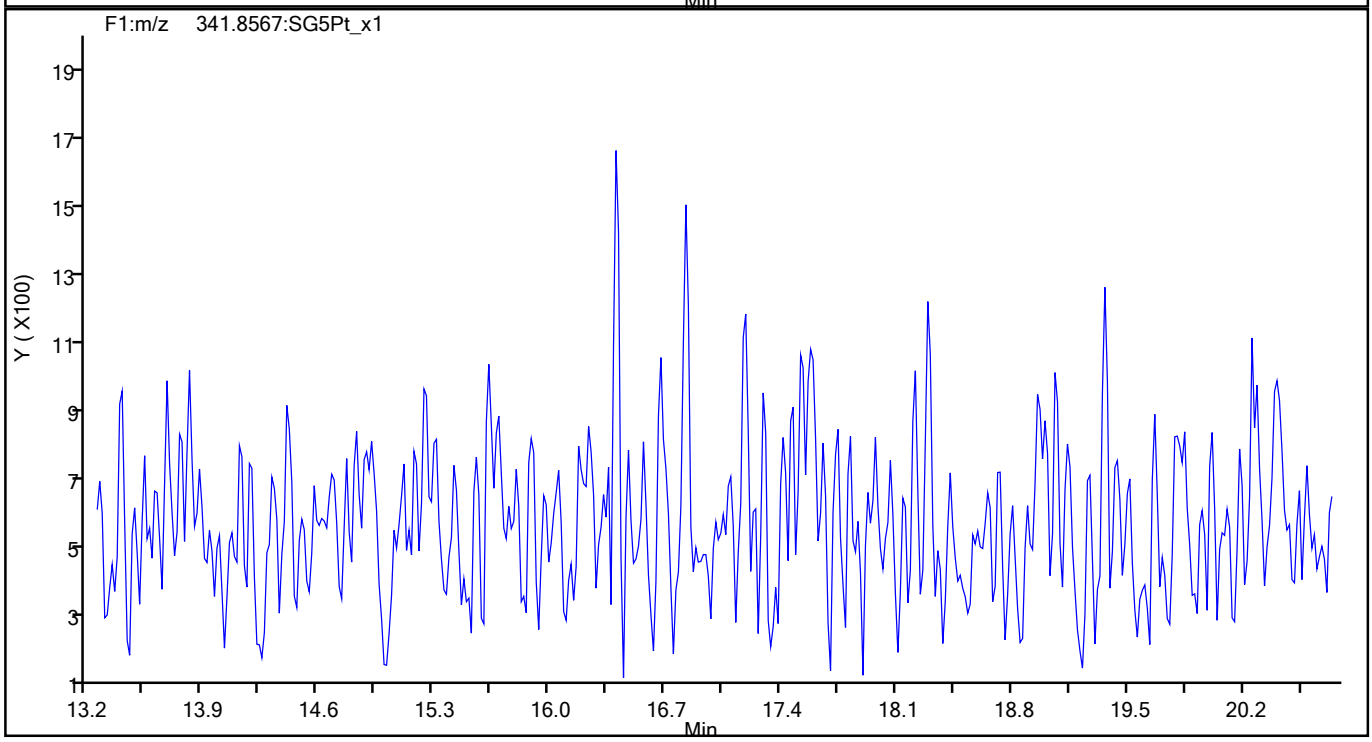

791428

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

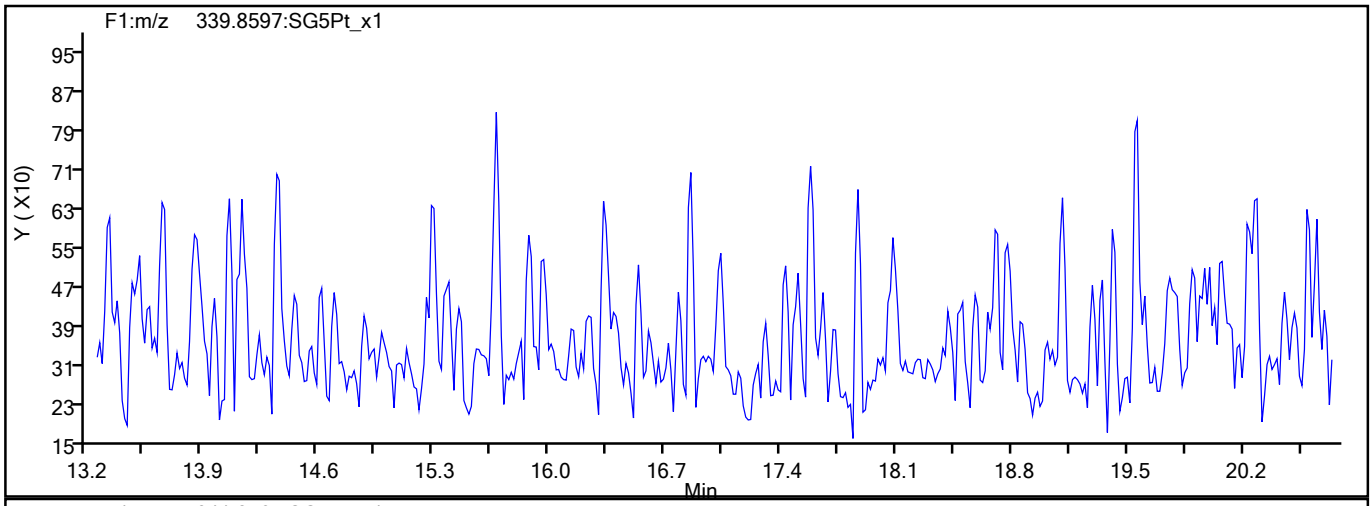

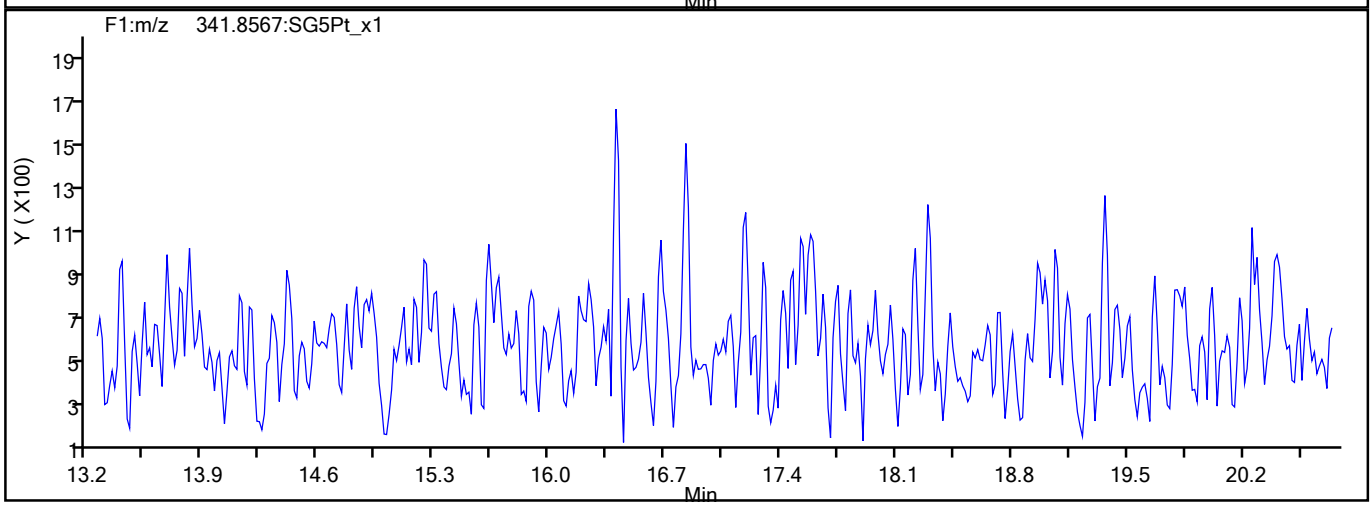

F1 PeCDFs Interference Mass

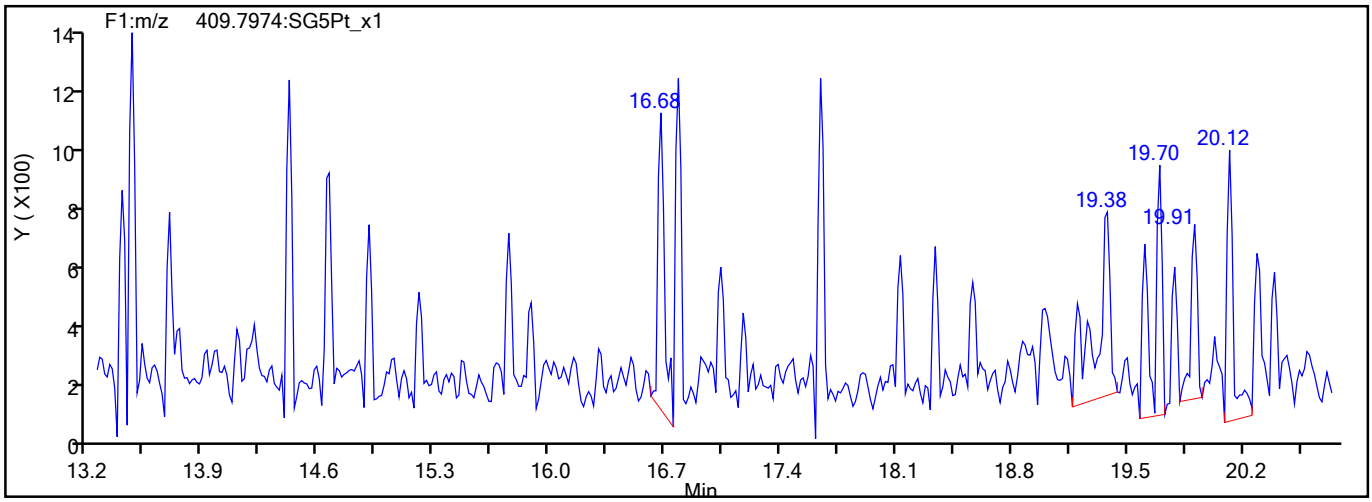

791429

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

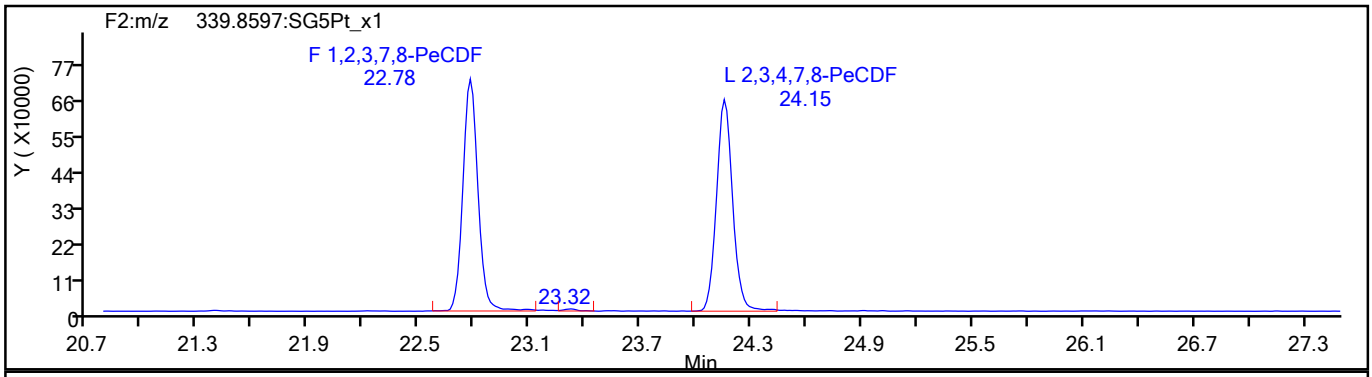

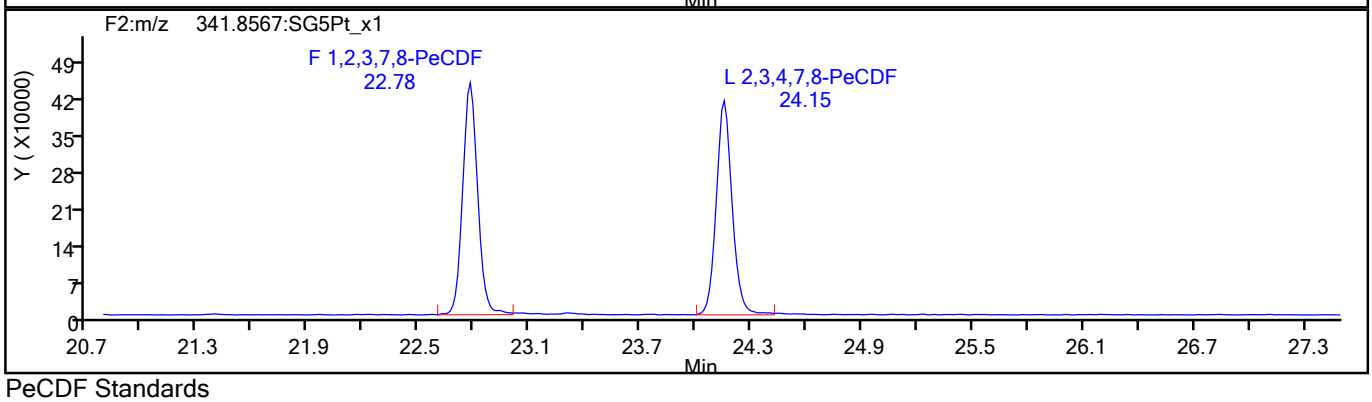

PeCDF Standards

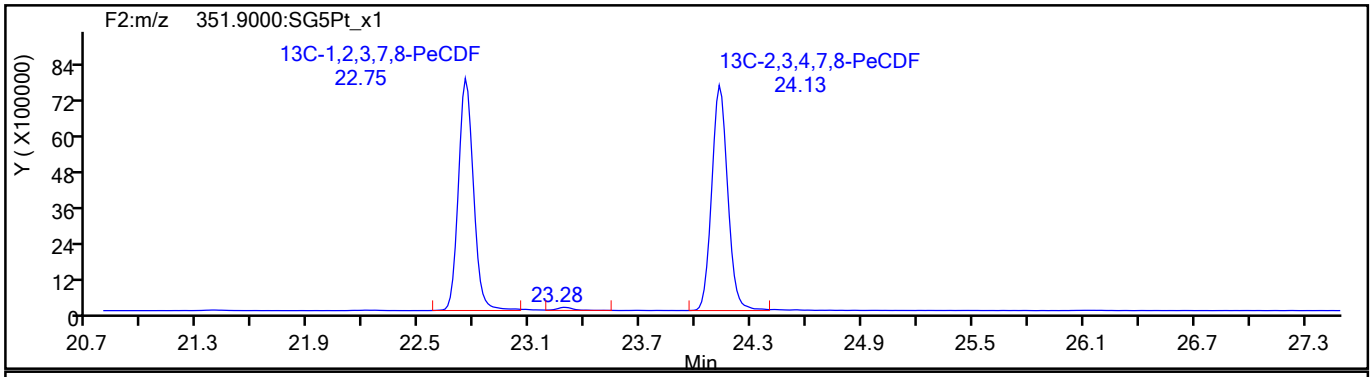

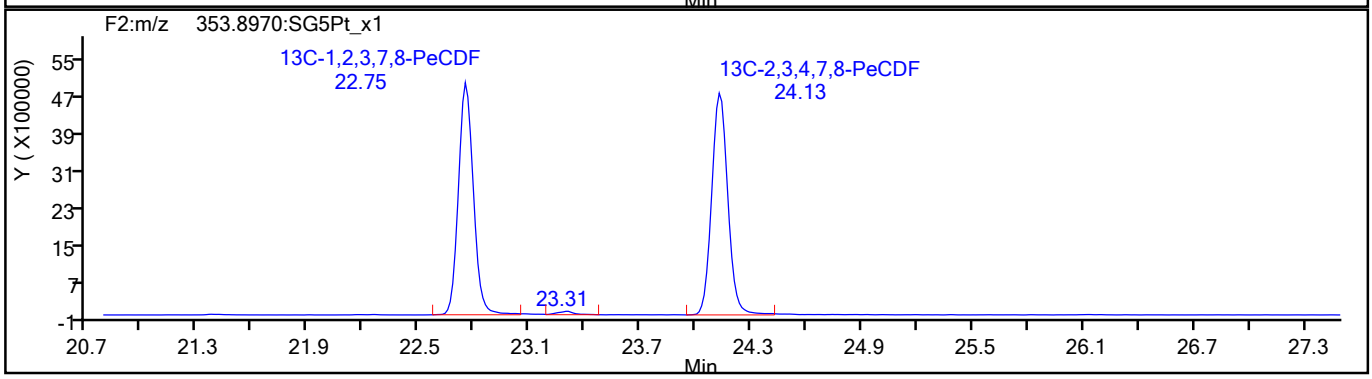

791430

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

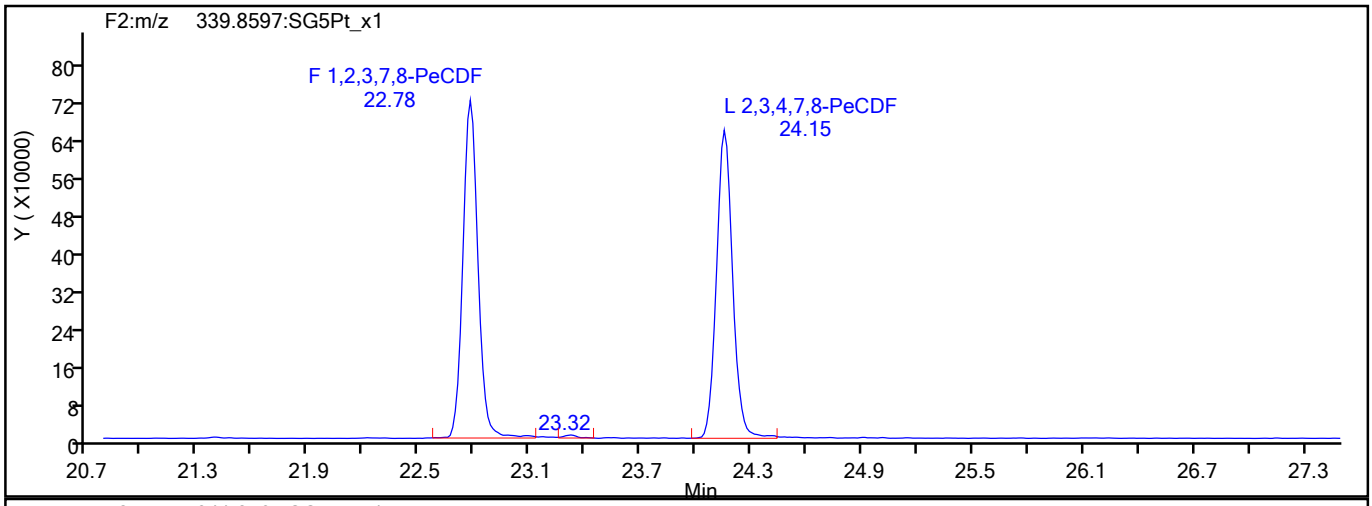

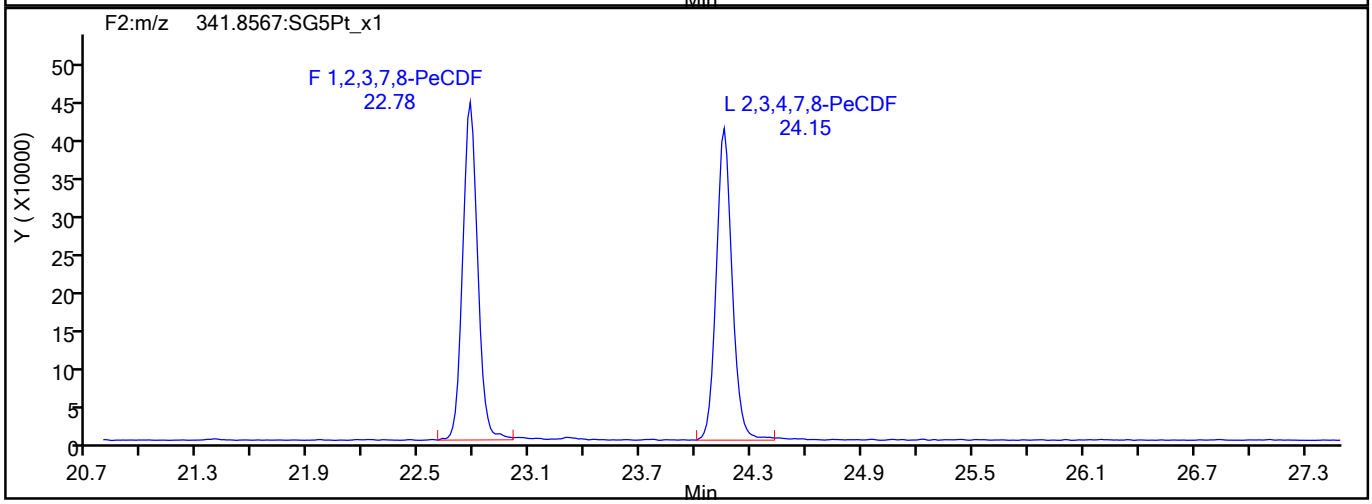

PeCDF Interference Mass

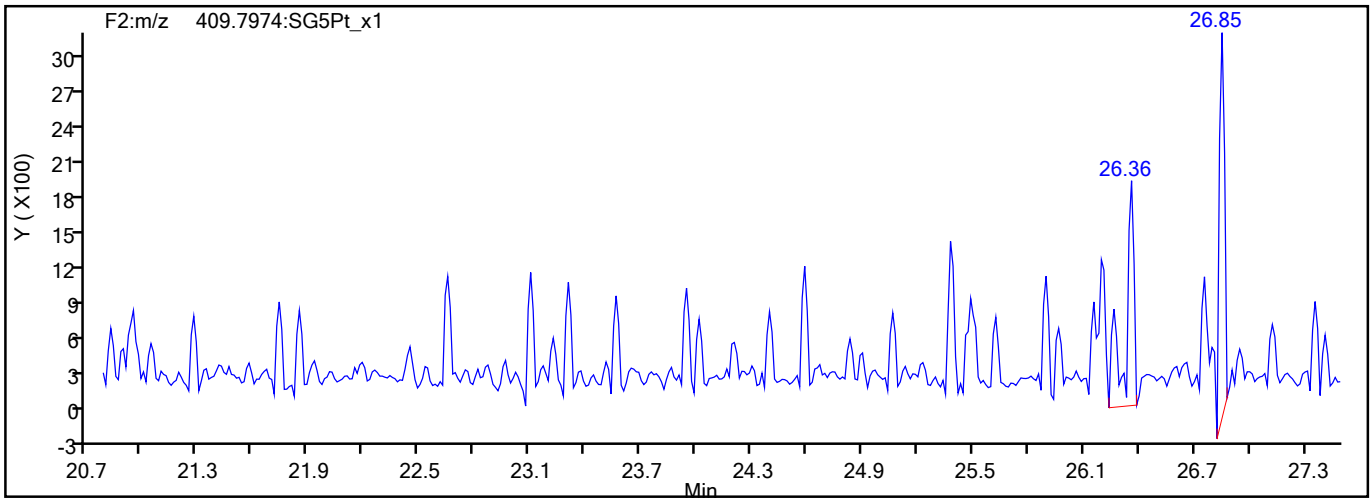

791431

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

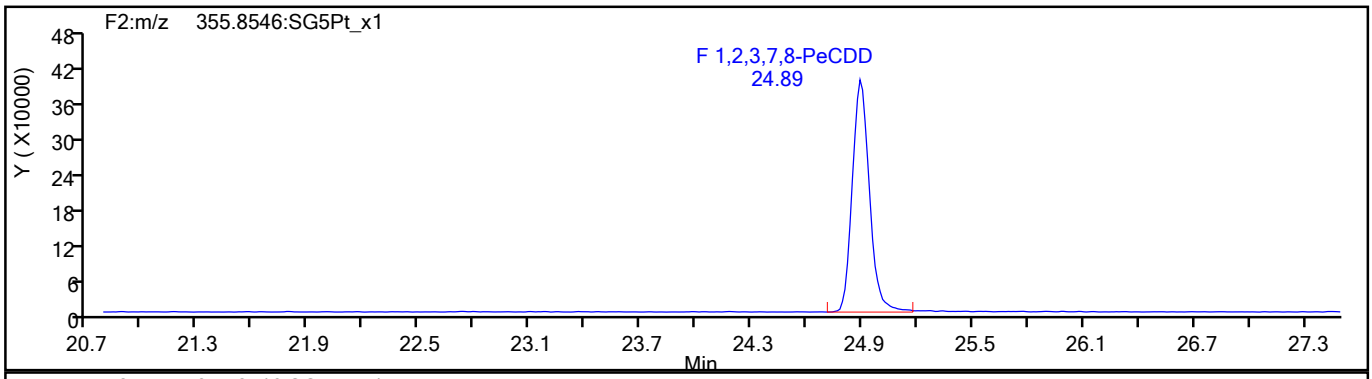

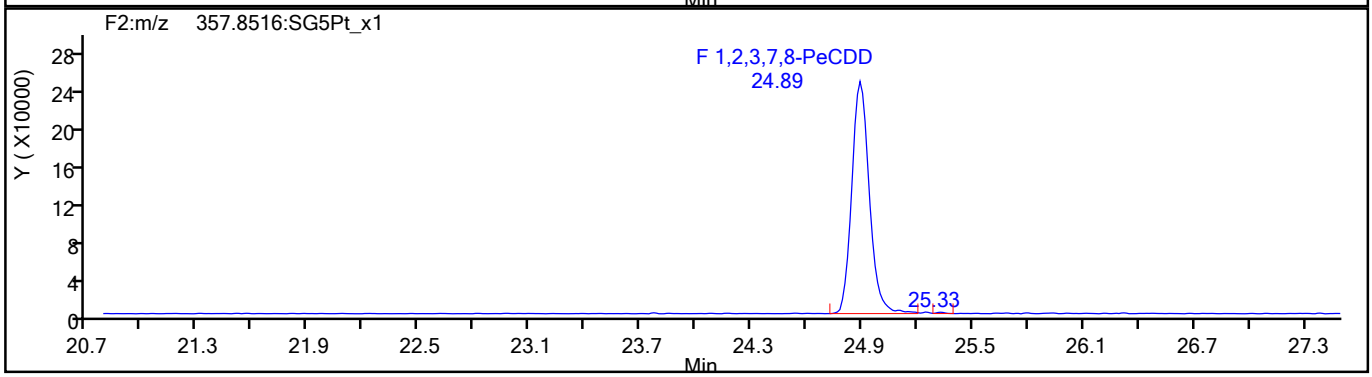

PeCDD Standards

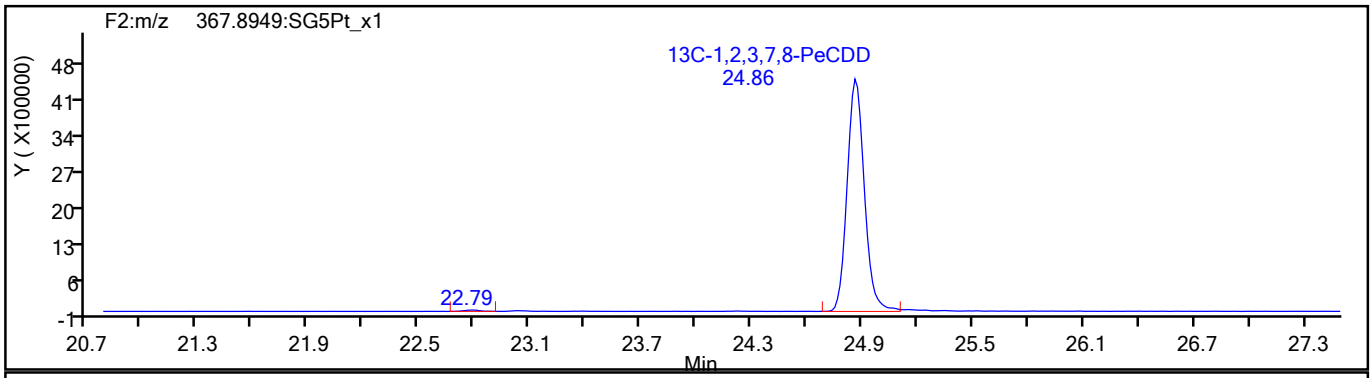

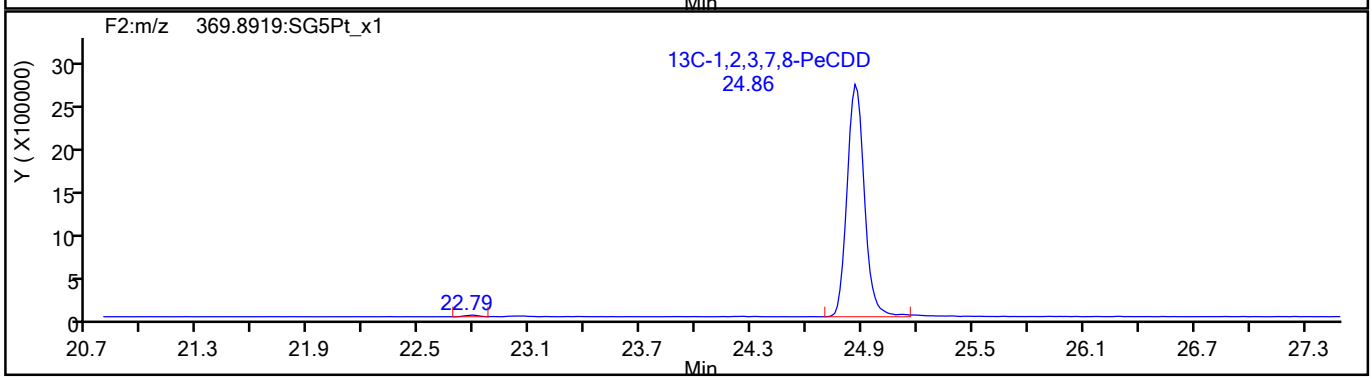

791432

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

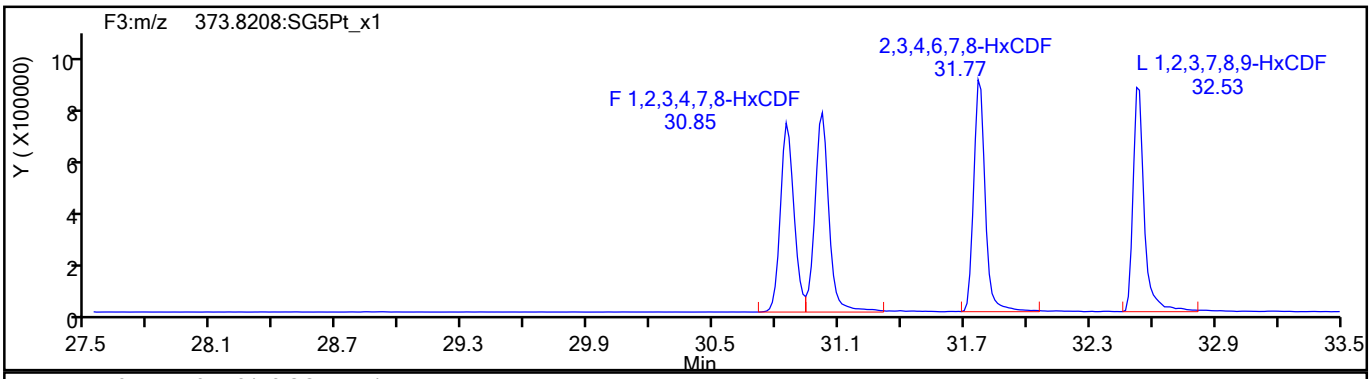

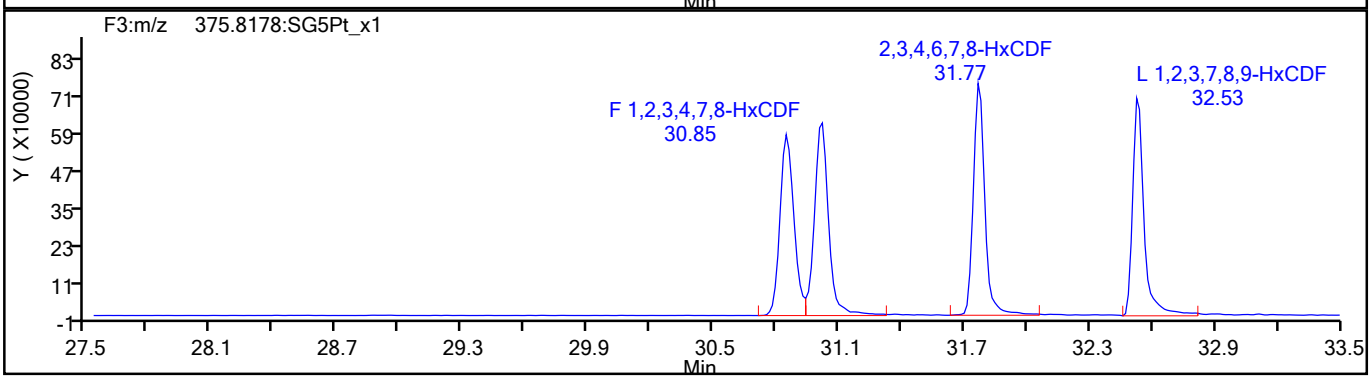

HxCDF Standards

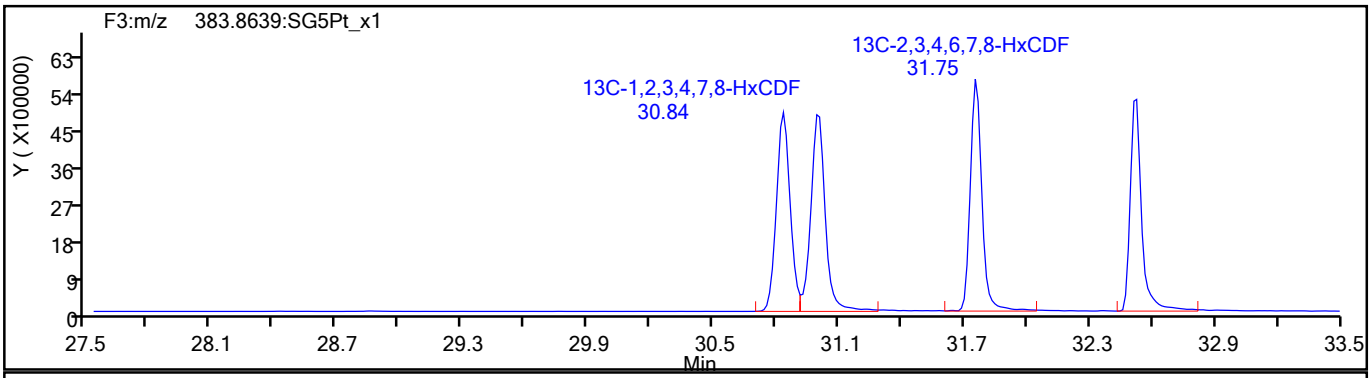

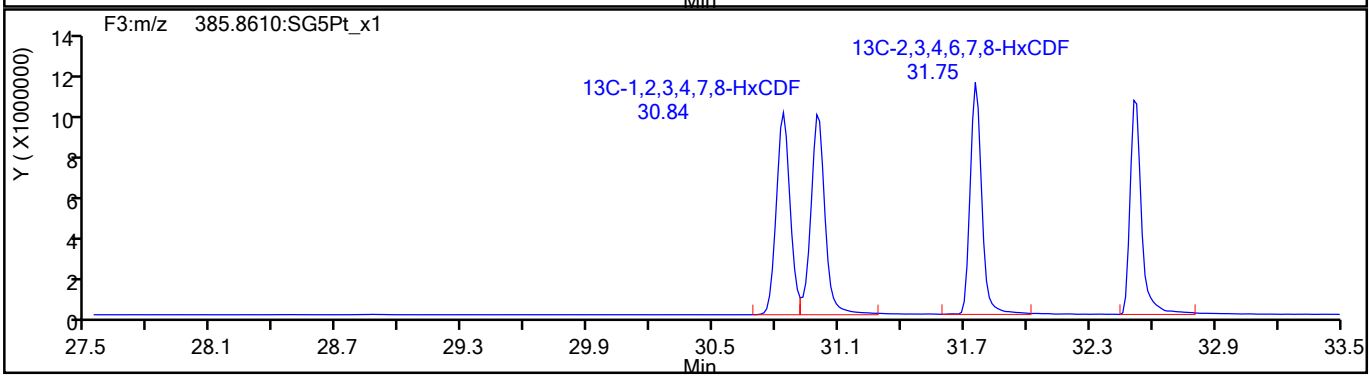

791433

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

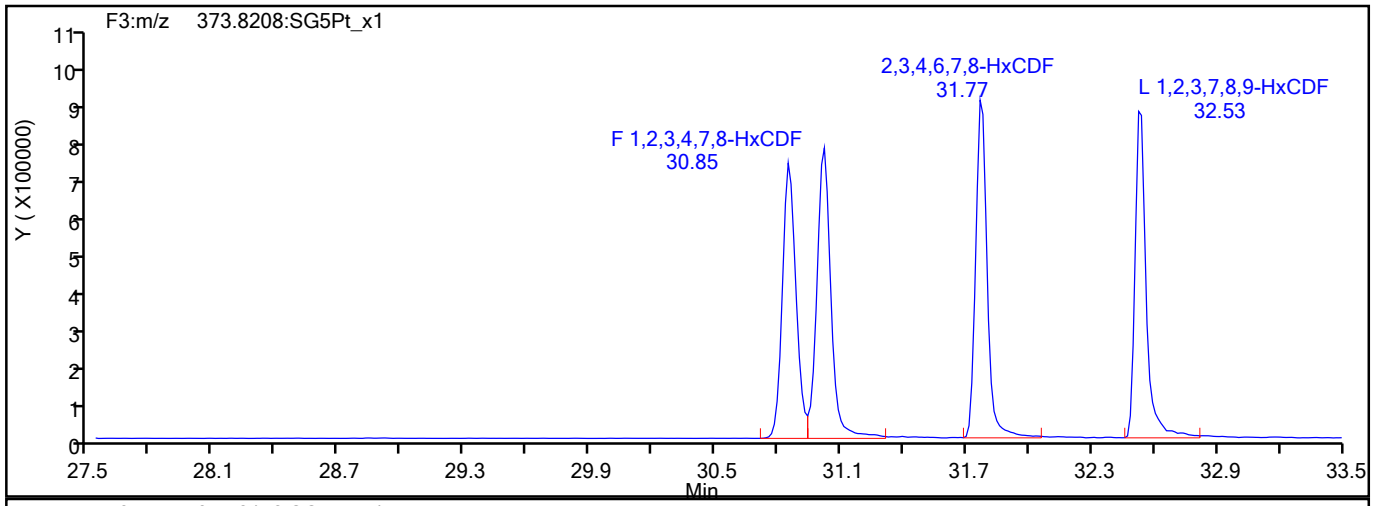

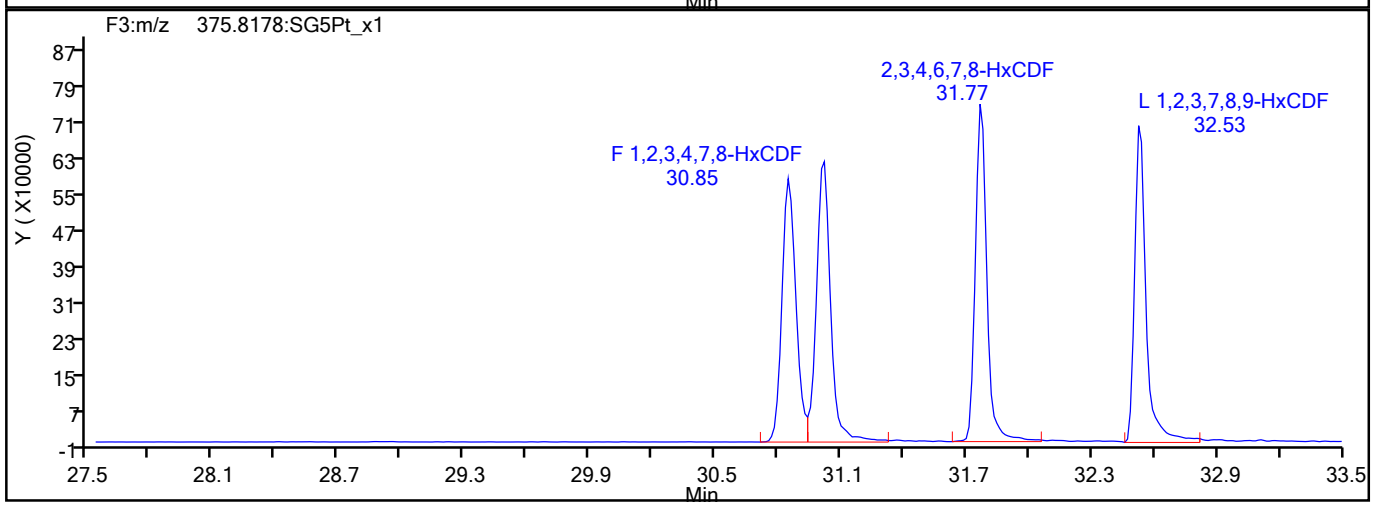

HxCDF Interference Mass

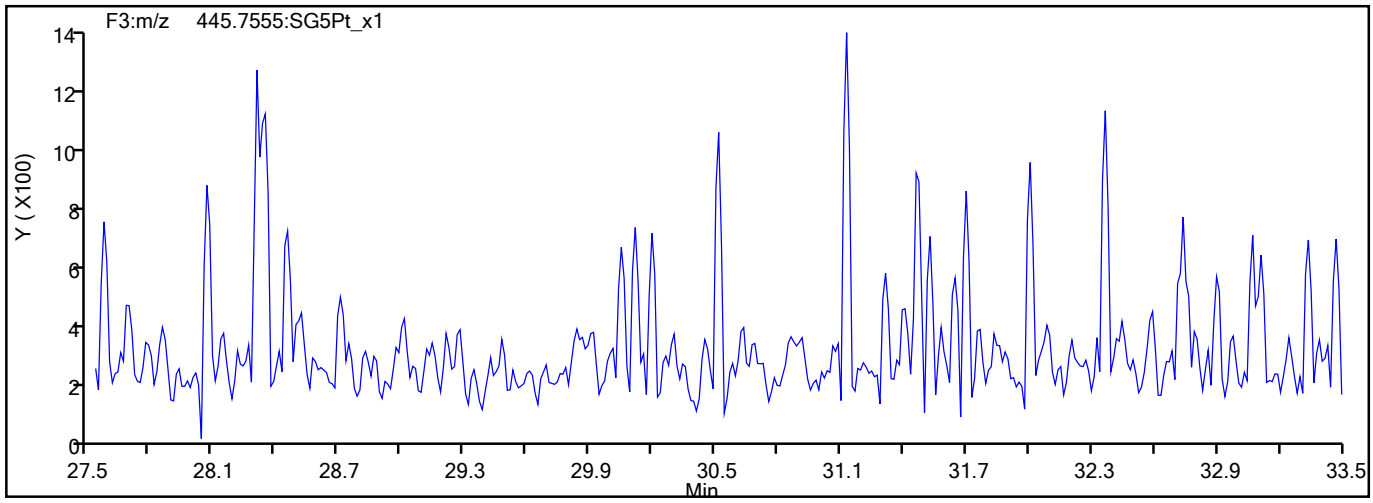

791434

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

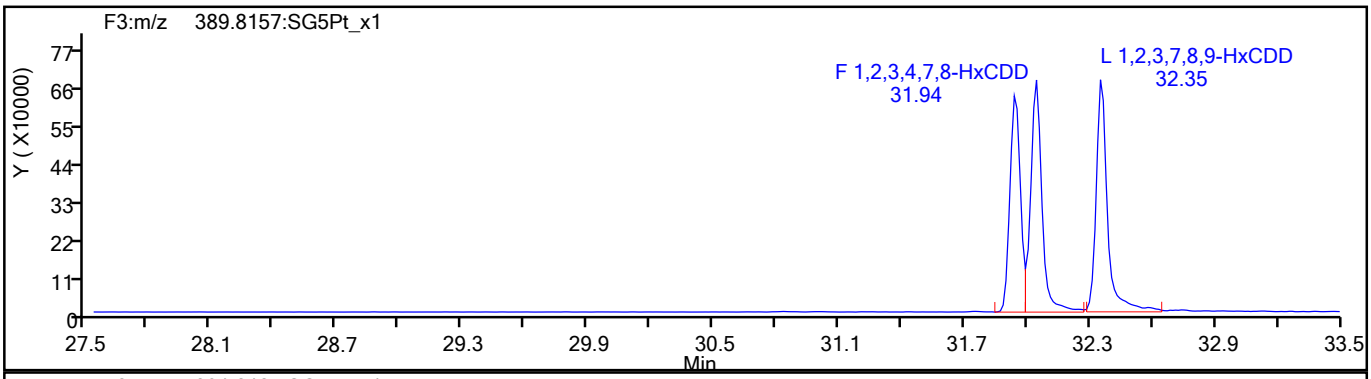

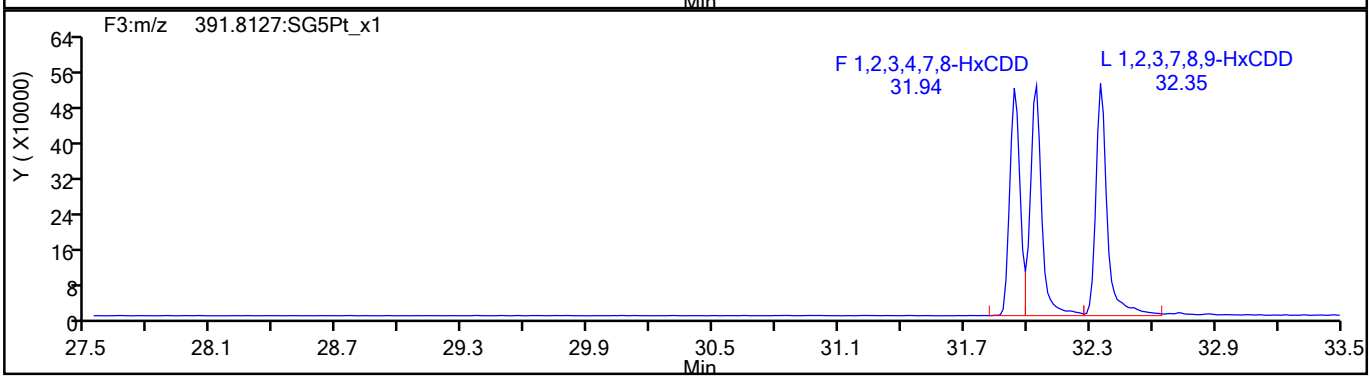

HxCDD Standards

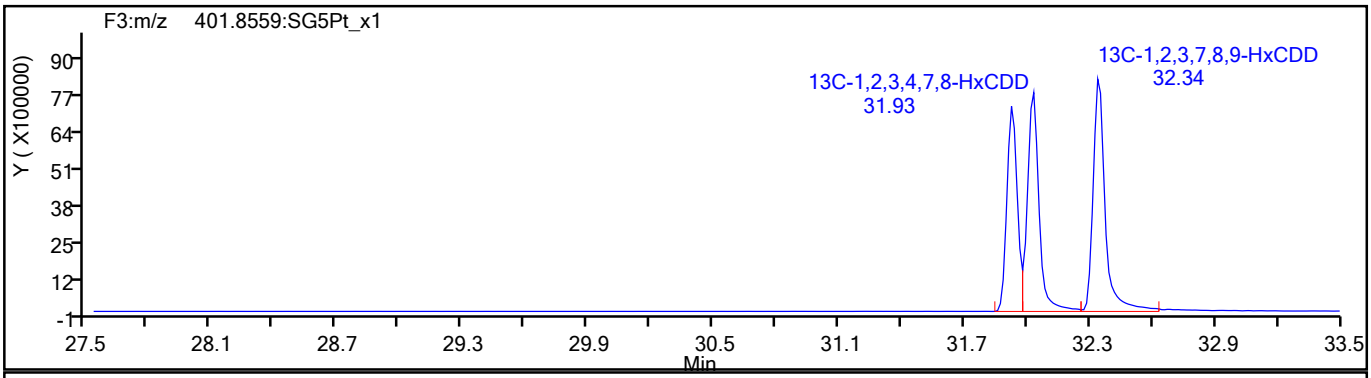

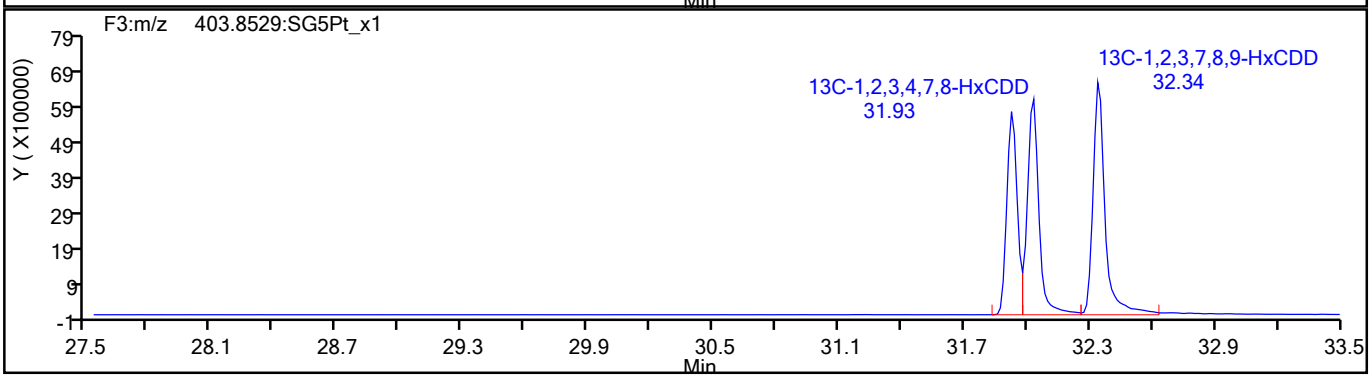

791435

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

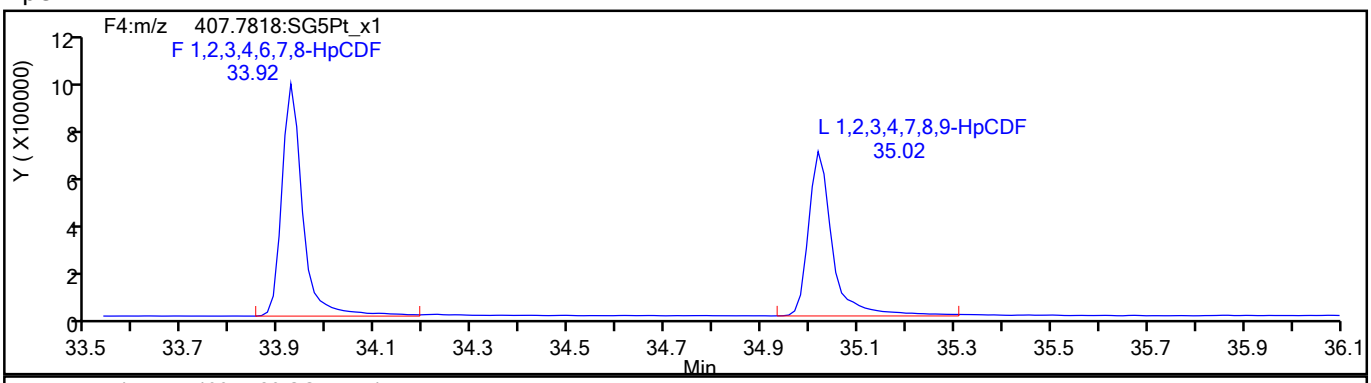

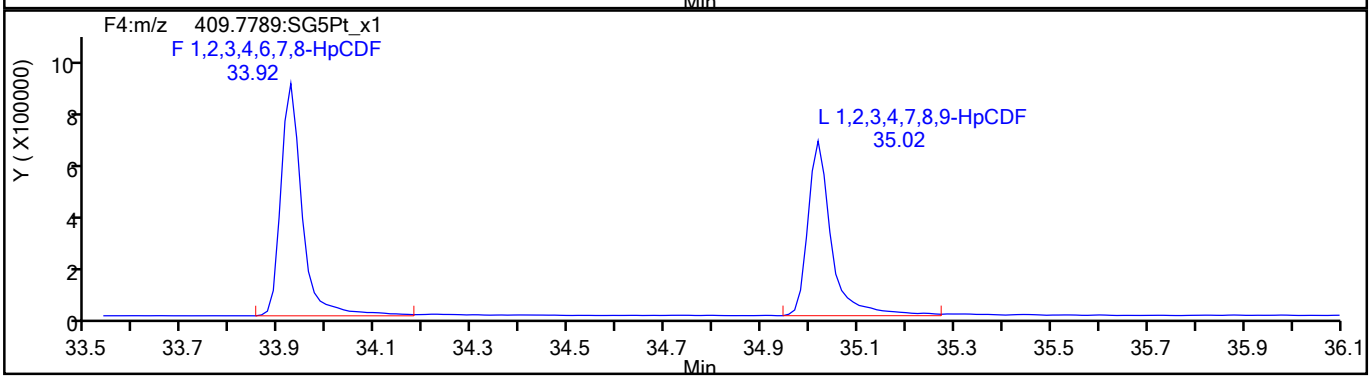

HpCDF Standards

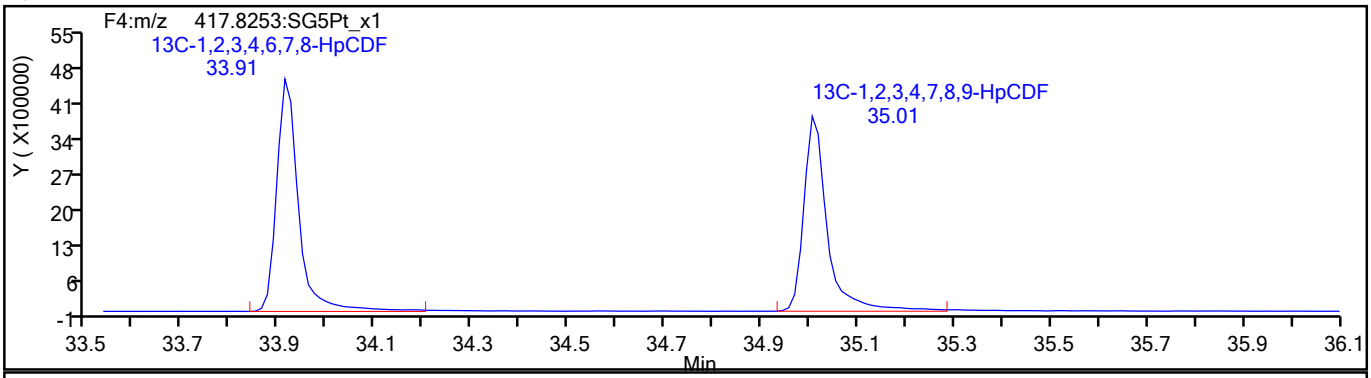

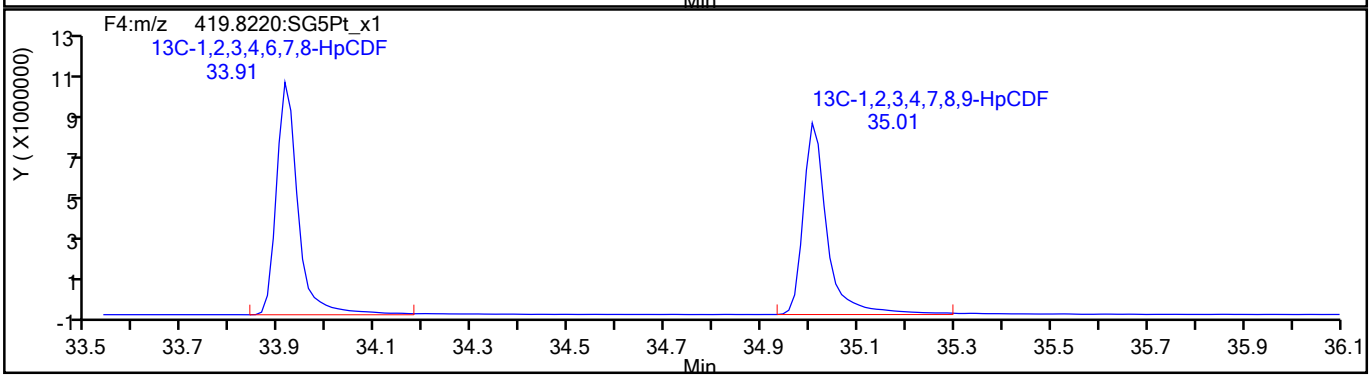

791436

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

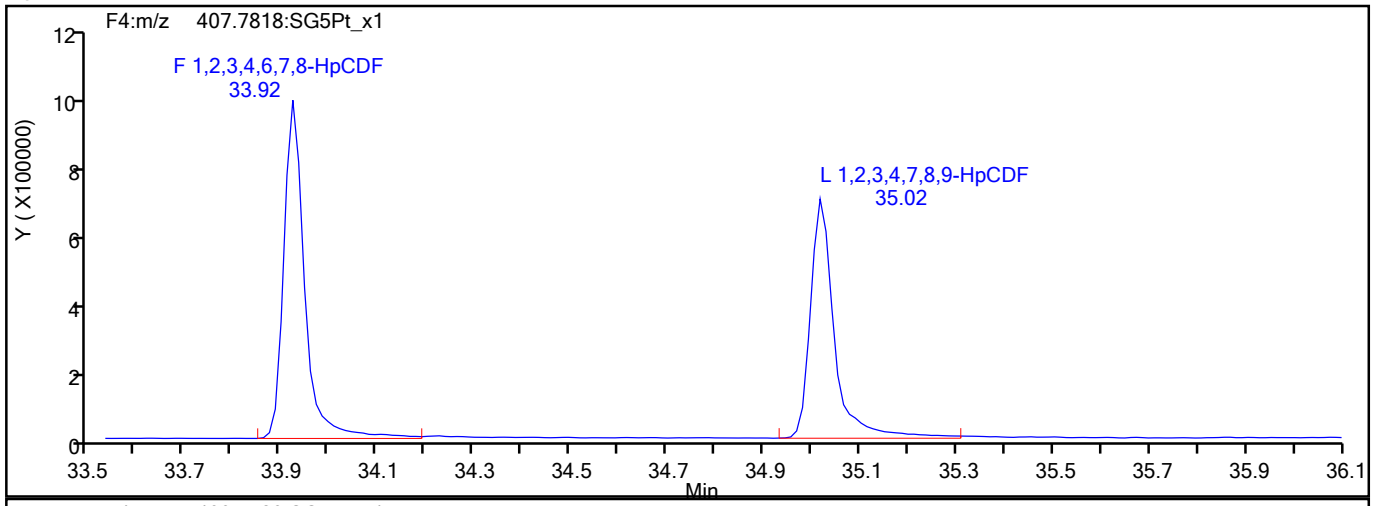

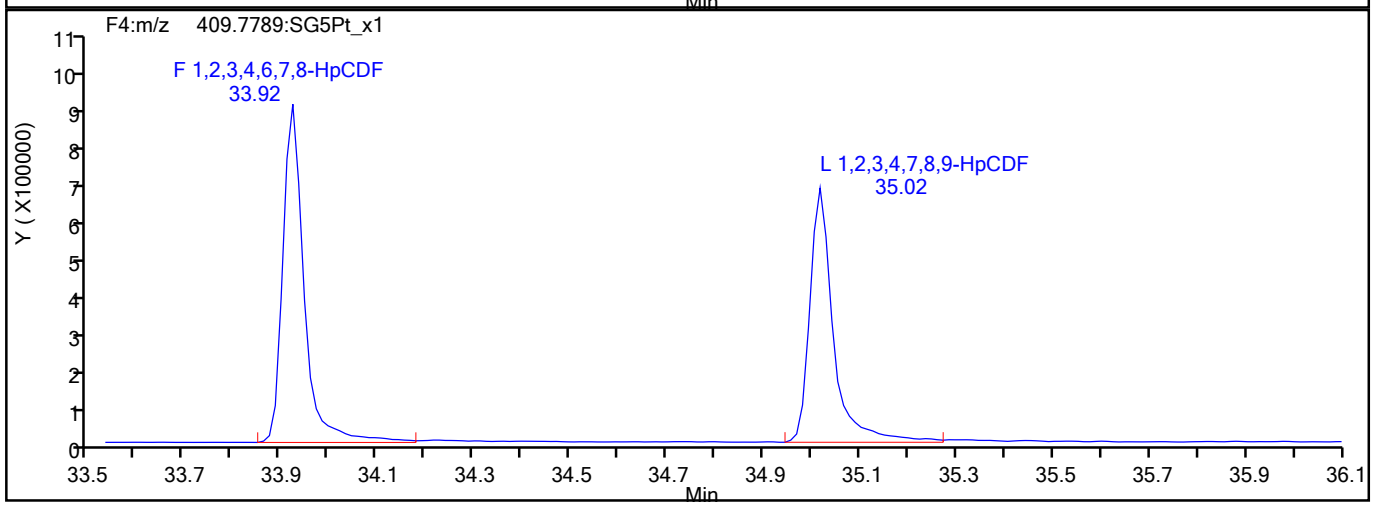

HpCDF Interference Mass

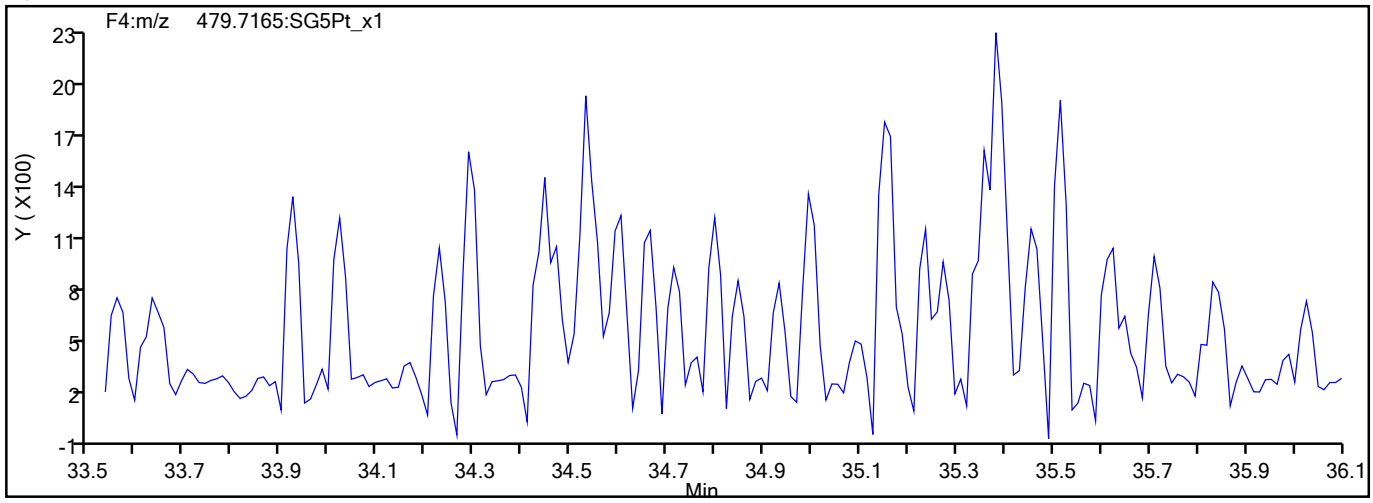

791437

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

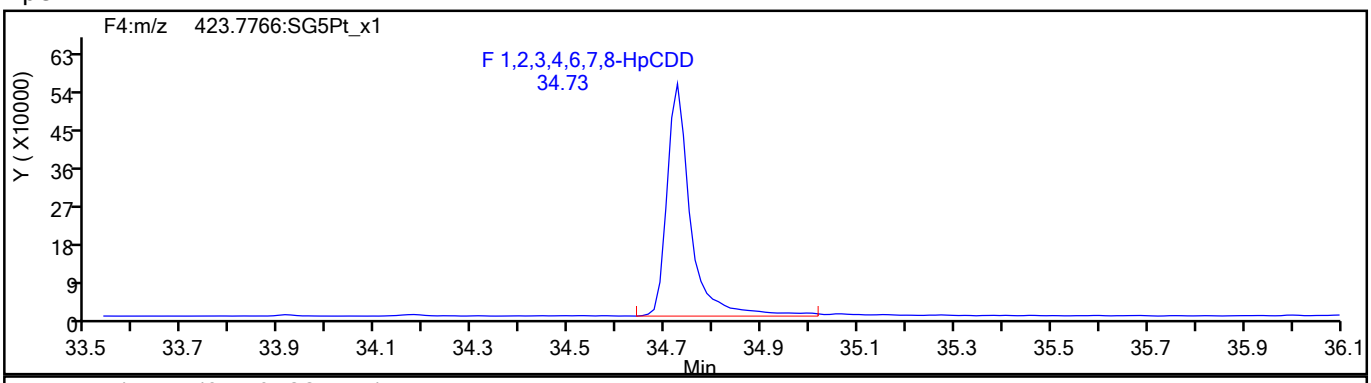

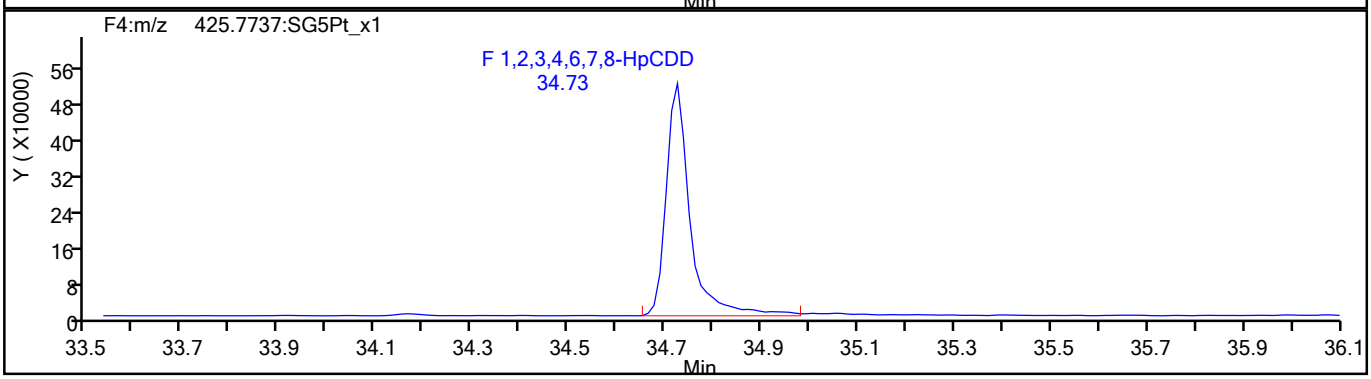

HpCDD Standards

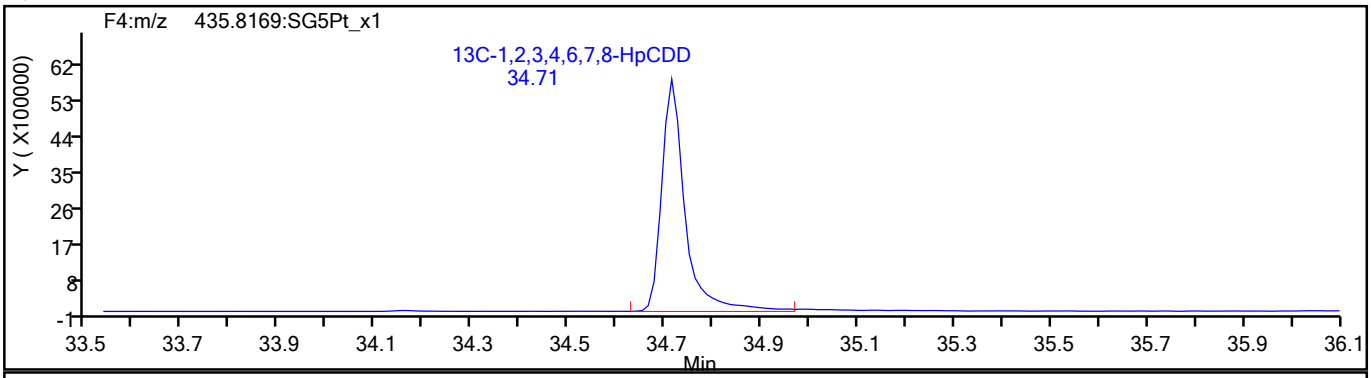

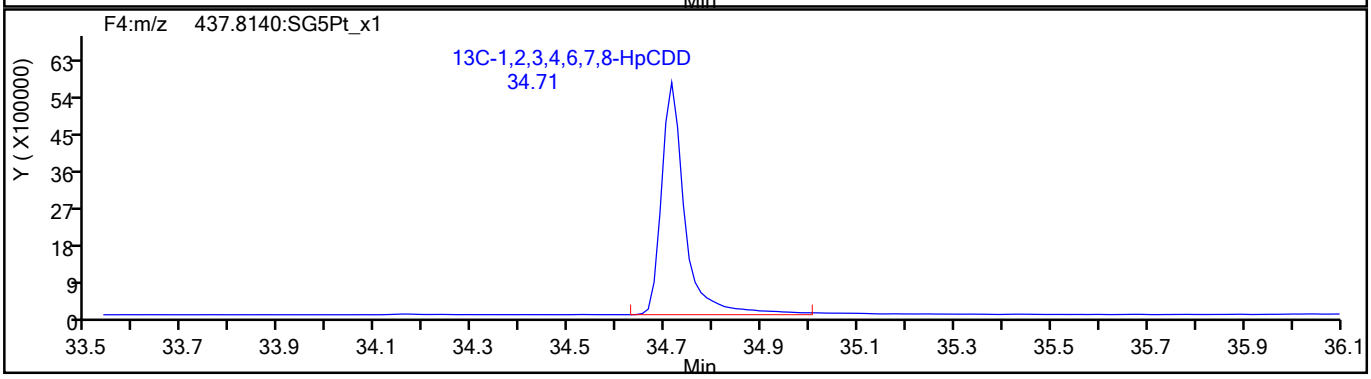

791438

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

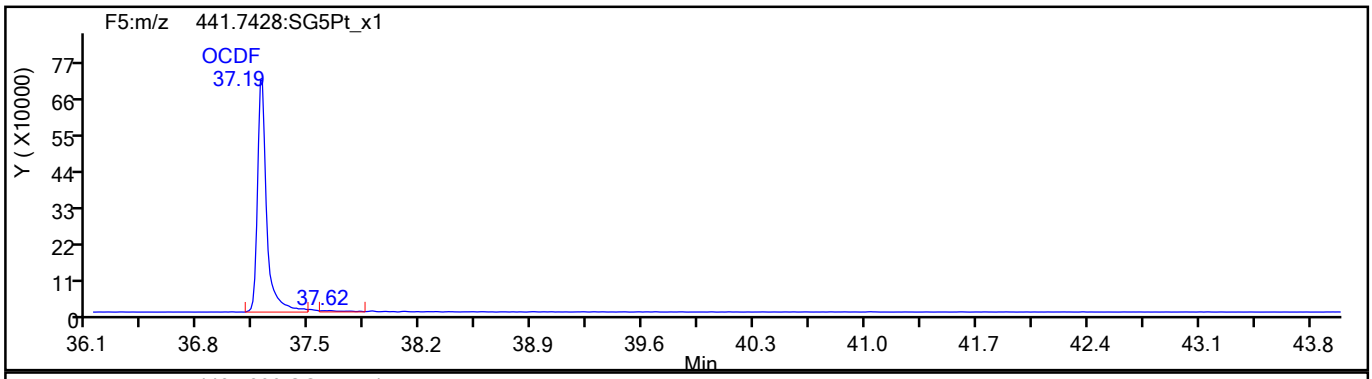

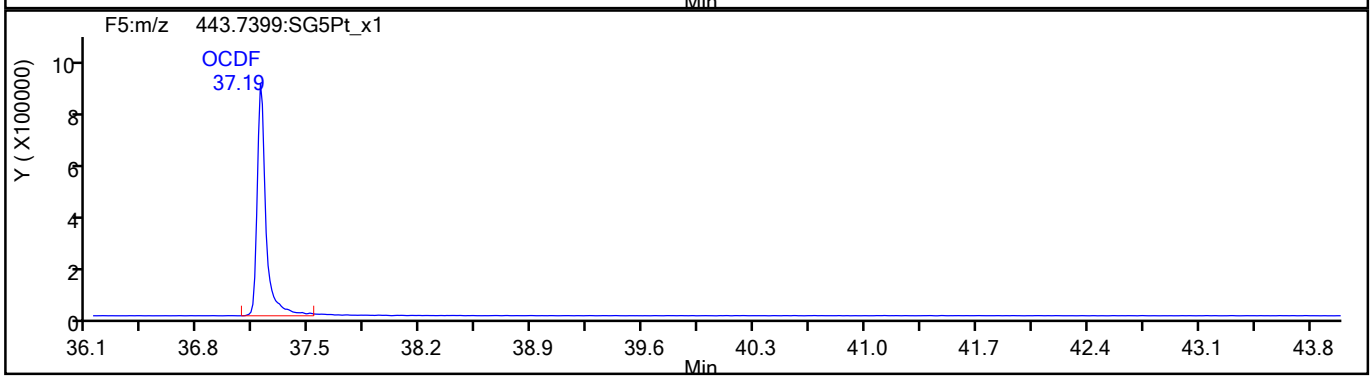

OCDF Standards

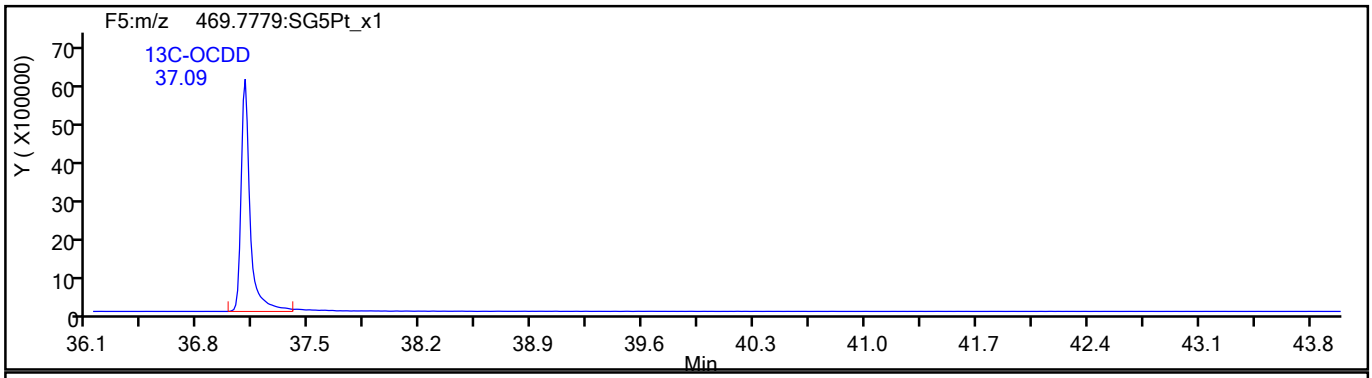

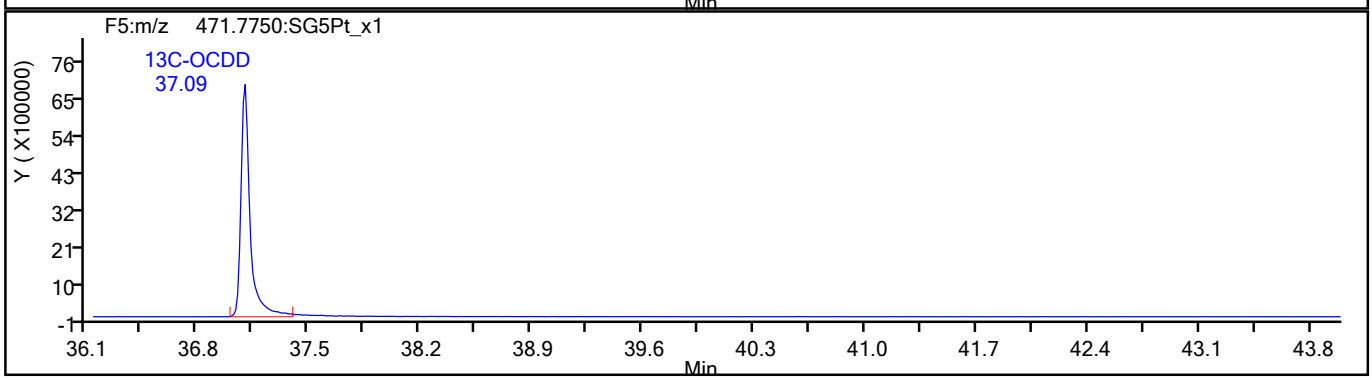

791439

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

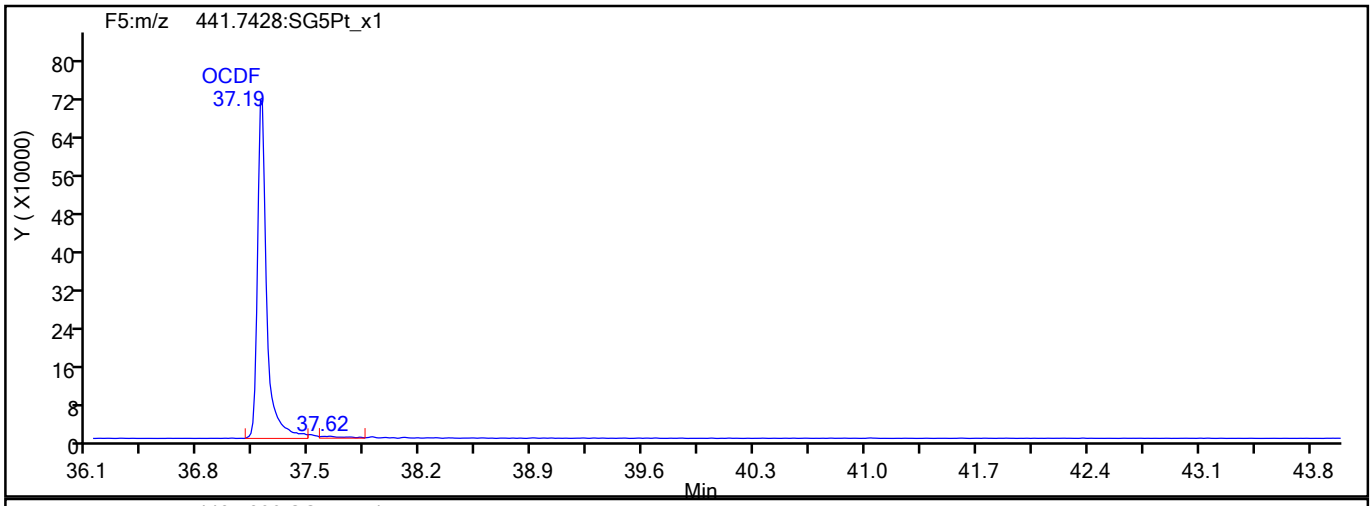

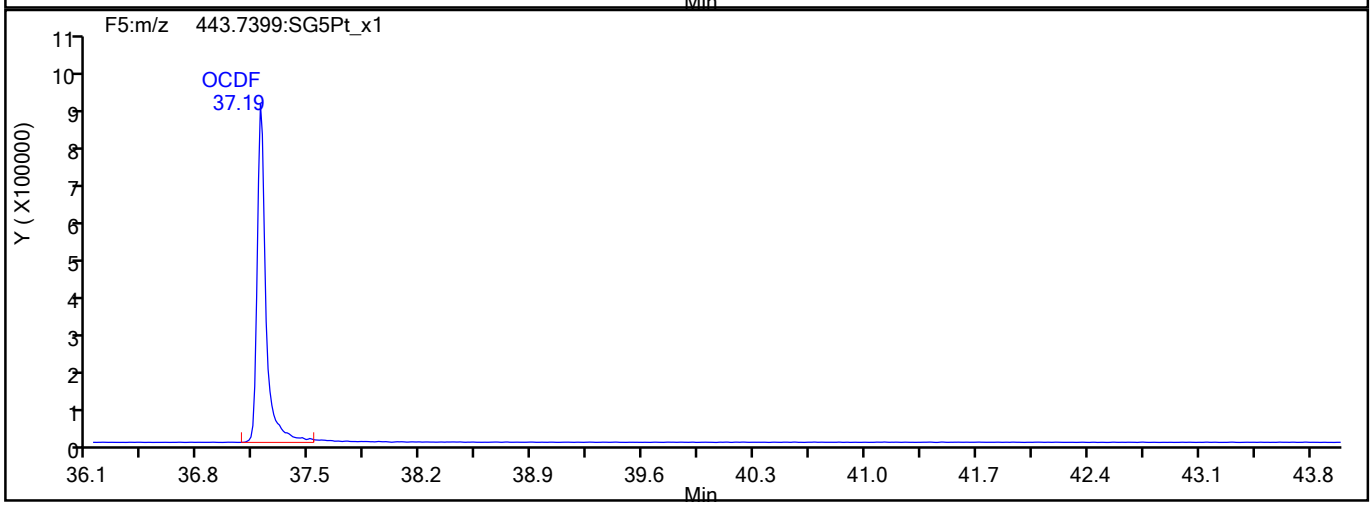

OCDF Interference Mass

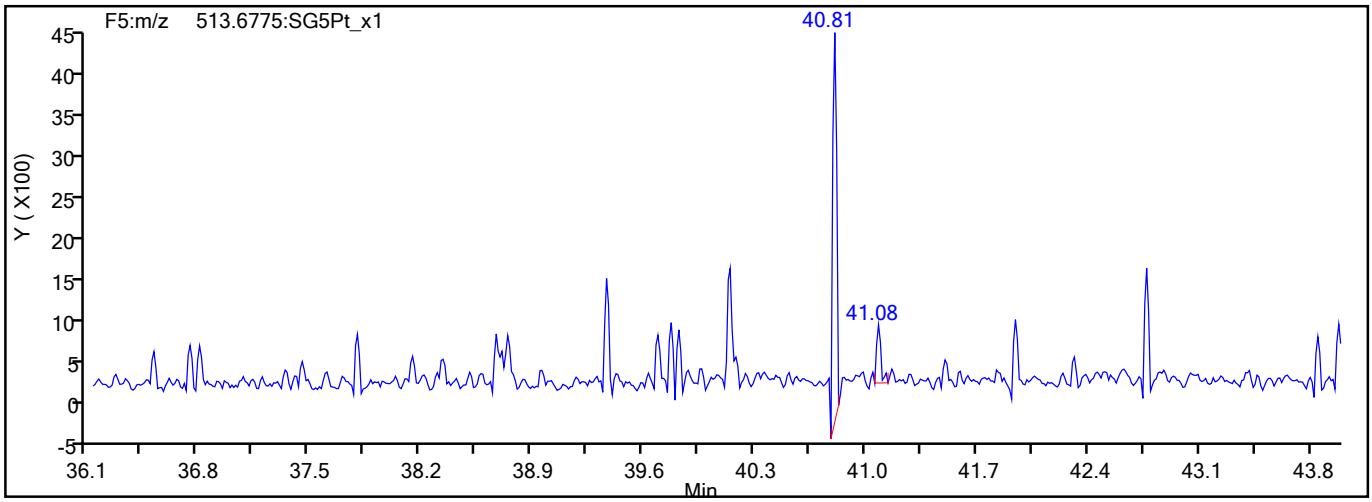

791440

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

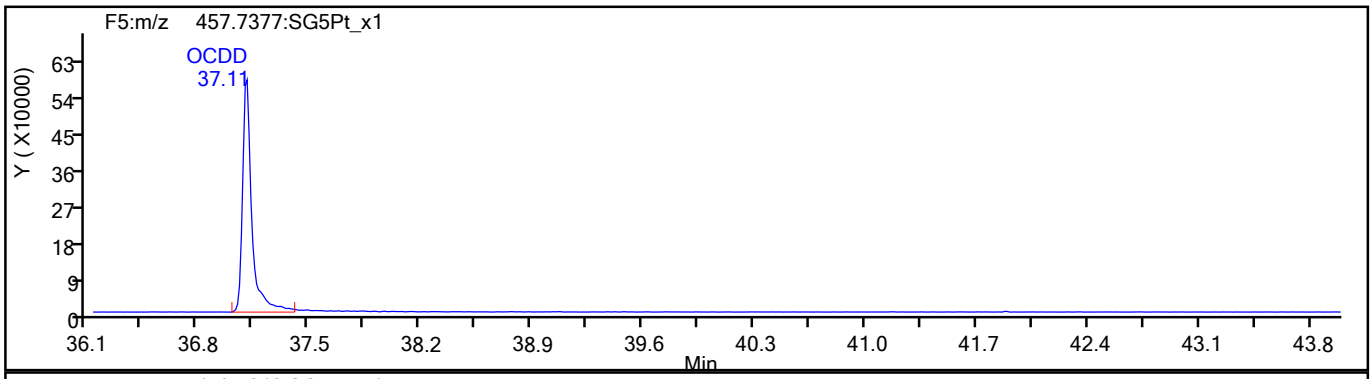

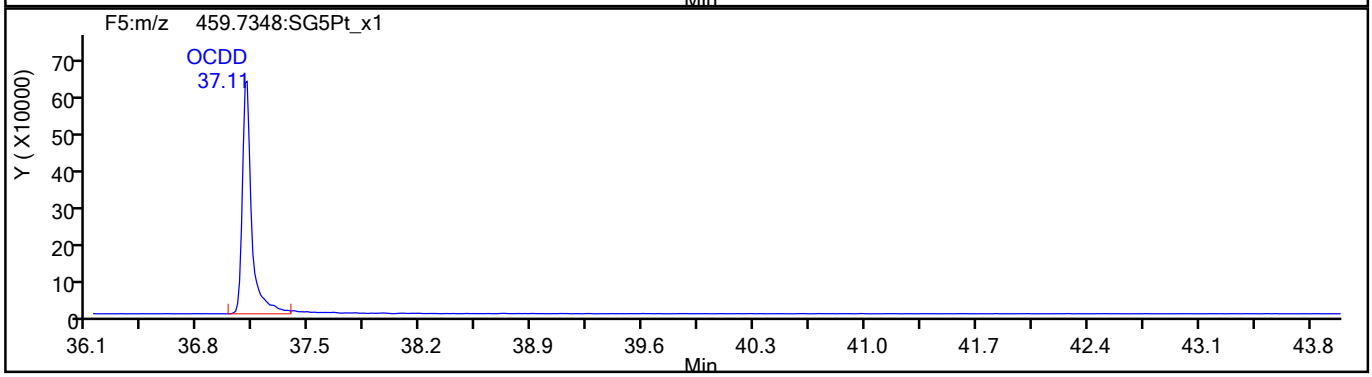

OCDD Standards

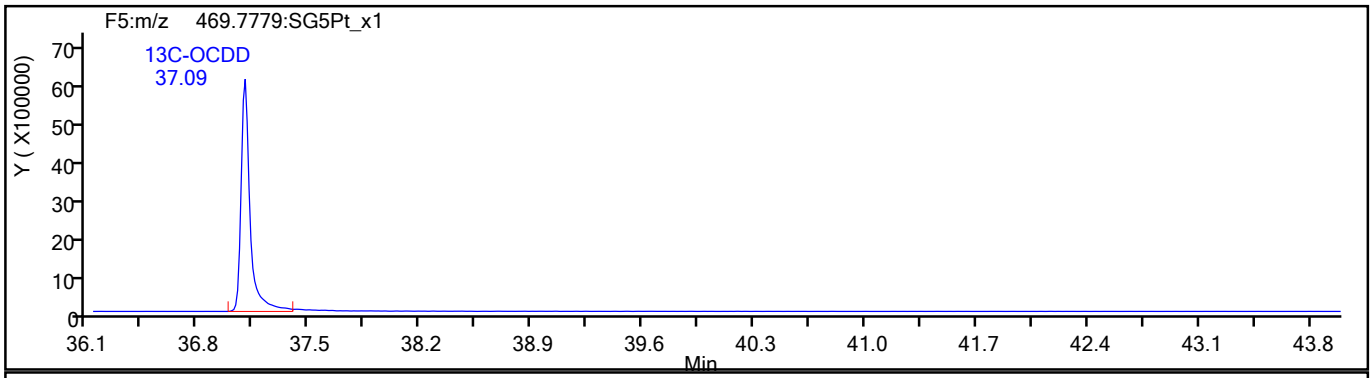

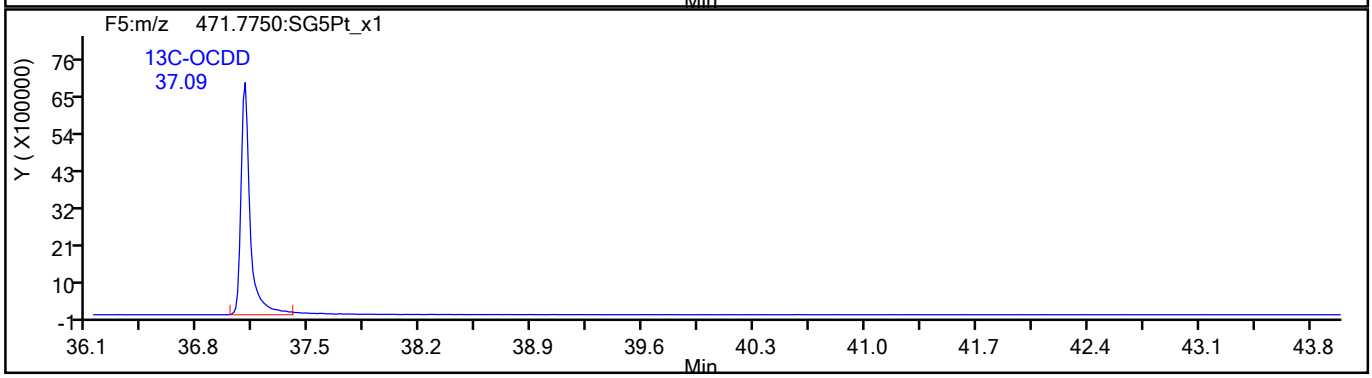

791441

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

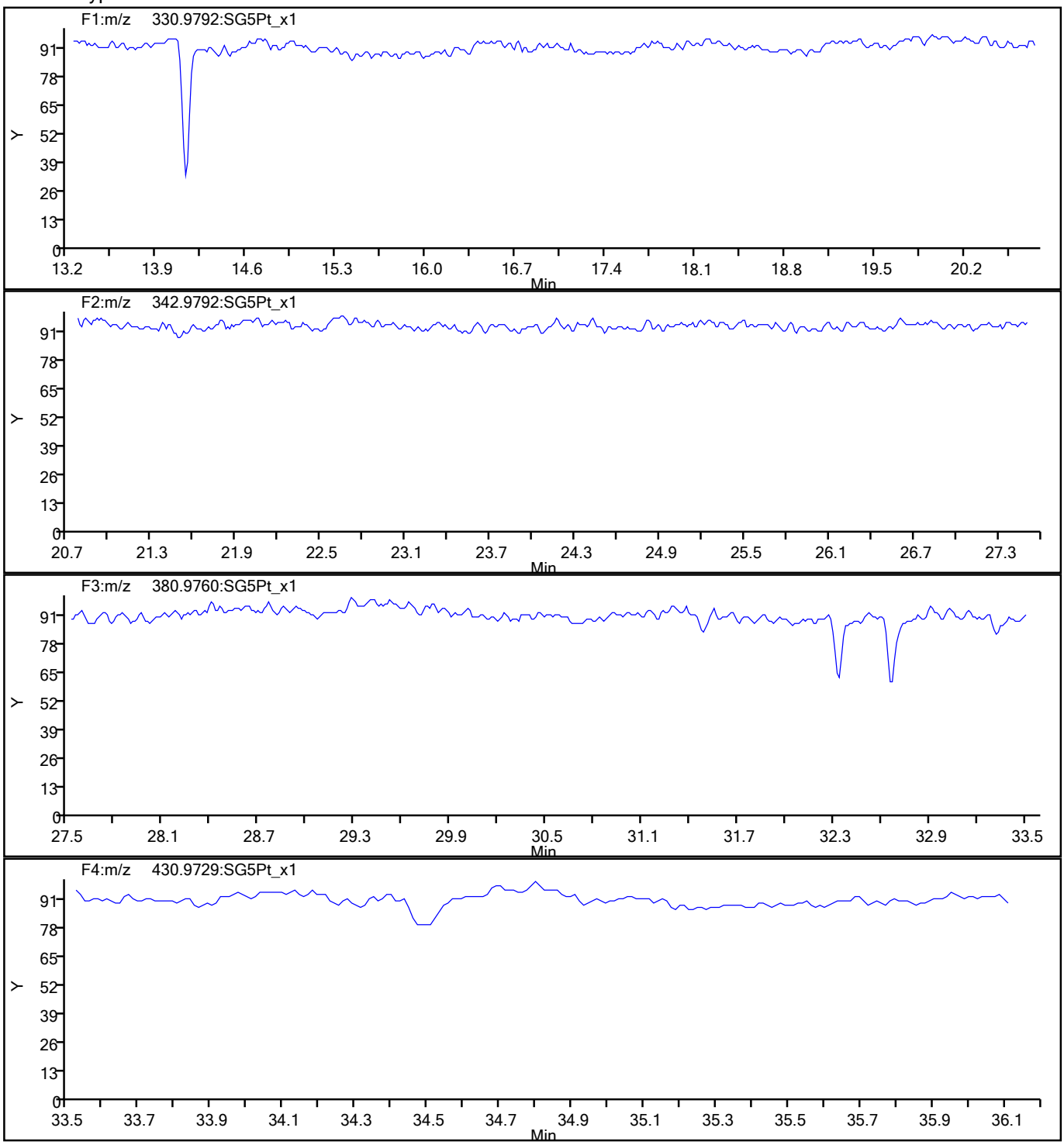

791442

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

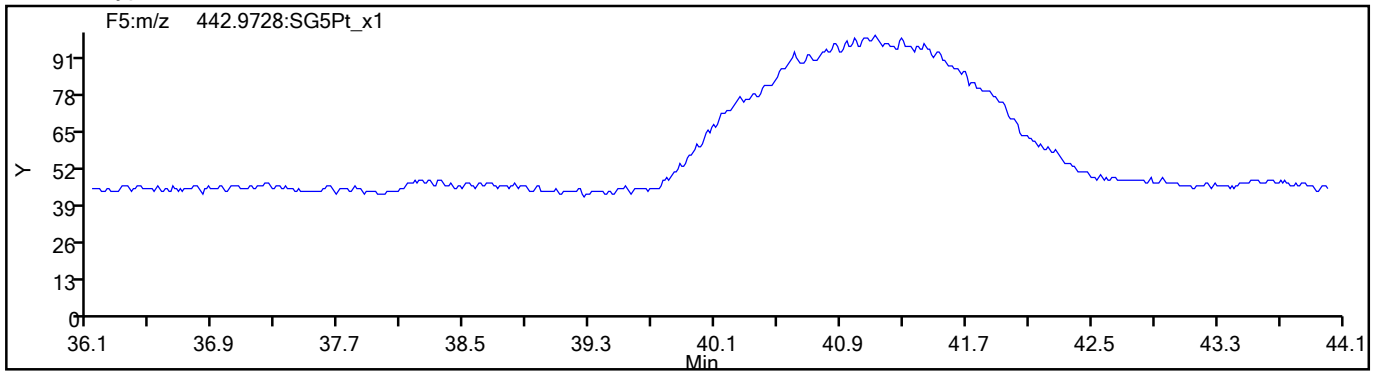

791443

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62635225	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	101724636	0.78	1.6249	99.9	99.9	0.2242	0.2242	99.95	
2,3,7,8-TCDF	17.643	10638776	0.78	1.0239	10.2	10.2	0.0283	0.0283	102	
S Total TCDF					10.2	10.2	0.0283	0.0283		
D 13C-2,3,7,8-TCDD	18.338	56155483	0.81	0.8993	99.7	99.7	0.1510	0.1510	99.69	
$ 37Cl4-2,3,7,8-TCDD	18.369	7339670		1.1071	10.6	10.6	0.0132	0.0132	106	
2,3,7,8-TCDD	18.369	7104238	0.76	1.2541	10.1	10.1	0.0224	0.0224	101	
S Total TCDD					10.1	10.1	0.0224	0.0224		
D 13C-1,2,3,7,8-PeCDF	22.762	76368219	1.58	1.2101	100.8	100.8	0.2109	0.2109	101	
1,2,3,7,8-PeCDF	22.789	41588176	1.62	1.0611	51.3	51.3	0.1508	0.1508	103	
D 13C-2,3,4,7,8-PeCDF	24.139	78214582	1.58	1.2395	100.7	100.7	0.2059	0.2059	101	
2,3,4,7,8-PeCDF	24.167	40928436	1.60	1.0184	51.4	51.4	0.1656	0.1656	103	
S Total PeCDF					102.7	102.7	0.1582	0.1582		
D 13C-1,2,3,7,8-PeCDD	24.876	47124414	1.60	0.7612	98.8	98.8	0.1214	0.1214	98.83	
1,2,3,7,8-PeCDD	24.903	25165054	1.62	1.0484	50.9	50.9	0.0669	0.0669	102	
S Total PeCDD					50.9	50.9	0.0669	0.0669		
D 13C-1,2,3,4,7,8-HxCDF	30.849	68075509	0.52	1.0837	98.8	98.8	0.4389	0.4389	98.79	
1,2,3,4,7,8-HxCDF	30.862	37525146	1.24	1.0851	50.8	50.8	0.2914	0.2914	102	
D 13C-1,2,3,6,7,8-HxCDF	31.009	70677463	0.52	1.1279	98.5	98.5	0.4217	0.4217	98.54	
1,2,3,6,7,8-HxCDF	31.022	40802767	1.21	1.1260	51.3	51.3	0.2729	0.2729	103	
D 13C-2,3,4,6,7,8-HxCDF	31.767	67028498	0.52	1.0637	99.1	99.1	0.4471	0.4471	99.10	
2,3,4,6,7,8-HxCDF	31.781	39741365	1.22	1.1675	50.8	50.8	0.2260	0.2260	102	
D 13C-1,2,3,7,8,9-HxCDF	32.526	60389284	0.52	0.9676	98.2	98.2	0.4916	0.4916	98.15	
1,2,3,7,8,9-HxCDF	32.540	35924190	1.21	1.1664	51.0	51.0	0.2363	0.2363	102	
S Total HxCDF					203.9	203.9	0.2566	0.2566		
* 13C-1,2,3,7,8,9-HxCDD	32.353	63588089	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.941	44039927	1.25	0.7334	94.4	94.4	0.3731	0.3731	94.43	
1,2,3,4,7,8-HxCDD	31.954	24891170	1.33	1.0640	53.1	53.1	0.1747	0.1747	106	
D 13C-1,2,3,6,7,8-HxCDD	32.034	55284532	1.26	0.8802	98.8	98.8	0.3109	0.3109	98.78	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	27953752	1.21	1.0001	50.6	50.6	0.1666	0.1666	101	
1,2,3,7,8,9-HxCDD	32.367	29794954	1.26	1.1325	53.0	53.0	0.1552	0.1552	106	
S Total HxCDD					156.7	156.7	0.1655	0.1655		
D 13C-1,2,3,4,6,7,8-HpCDF	33.924	47697671	0.44	0.7730	97.0	97.0	1.328	1.328	97.03	
1,2,3,4,6,7,8-HpCDF	33.937	35740964	1.05	1.4413	52.0	52.0	0.5190	0.5190	104	
D 13C-1,2,3,4,7,8,9-HpCDF	35.018	43238622	0.44	0.7008	97.0	97.0	1.465	1.465	97.03	
1,2,3,4,7,8,9-HpCDF	35.030	29450636	1.07	1.3174	51.7	51.7	0.6741	0.6741	103	
S Total HpCDF					103.7	103.7	0.5966	0.5966		
D 13C-1,2,3,4,6,7,8-HpCDD	34.726	40333717	1.03	0.6472	98.0	98.0	0.5563	0.5563	98.00	
1,2,3,4,6,7,8-HpCDD	34.726	22538791	1.03	1.0943	51.1	51.1	0.2539	0.2539	102	
S Total HpCDD					51.1	51.1	0.2539	0.2539		
D 13C-OCDD	37.094	54338243	0.87	0.4472	191.1	191.1	0.2612	0.2612	95.55	
OCDF	37.202	41147202	0.91	1.4382	105.3	105.3	0.1155	0.1155	105	
OCDD	37.106	31656667	0.89	1.1070	105.3	105.3	0.1572	0.1572	105	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28287778	7074314	3903	9757	1813		
333.9339	18.142	18.142	0		34347447	8672273	4653	11632	1864	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.616	1	0.972	44652675	10978931	8756	21890	1254		
317.9389	17.628	17.616	1	0.972	57071961	13787474	14192	35480	971	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.631	1	1.001	4665898	1145703	1759	4397	651		
305.8987	17.643	17.631	1	1.001	5972878	1458593	1111	2777	1313	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	25132336	5946858	3903	9757	1524		
333.9339	18.338	18.338	0	1.011	31023147	7337223	4653	11632	1577	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.369	18.354	1	1.012	7339670	1703834	921	2302	1850		
2,3,7,8-TCDD											
319.8965	18.369	18.357	1	1.002	3077636	720367	906	2265	795		
321.8936	18.369	18.357	1	1.002	4026602	947792	588	1470	1612	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46742521	8181774	9794	24485	835		
353.8970	22.762	22.754	0	1.255	29625698	5225925	6278	15695	832	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.789	22.779	1	1.001	25738852	4452039	5088	12720	875		
341.8567	22.789	22.779	1	1.001	15849324	2731041	3494	8735	782	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.139	24.129	1	1.331	47906018	7878060	9794	24485	804		
353.8970	24.139	24.129	1	1.331	30308564	4845446	6278	15695	772	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.167	24.156	1	1.001	25185293	4111601	5088	12720	808		
341.8567	24.167	24.156	1	1.001	15743143	2618923	3494	8735	750	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.876	24.865	1	1.371	29023498	4508866	3701	9252	1218		
369.8919	24.876	24.865	1	1.371	18100916	2812844	2121	5302	1326	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.903	24.892	1	1.001	15548746	2422000	1286	3215	1883		
357.8516	24.903	24.892	1	1.001	9616308	1489099	768	1920	1939	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.849	30.838	1	0.954	23323404	5008910	10853	27132	462		
385.8610	30.849	30.838	1	0.954	44752105	9511743	20971	52427	454	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.000	20753403	4584464	10058	25145	456		
375.8178	30.862	30.857	0	1.000	16771743	3729681	8311	20777	449	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.009	31.003	0	0.958	24213048	5206646	10853	27132	480		
385.8610	31.009	31.003	0	0.958	46464415	9739576	20971	52427	464	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	22352739	4771379	10058	25145	474		
375.8178	31.022	31.022	0	1.000	18450028	3943683	8311	20777	475	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.767	31.756	1	0.982	22835025	6015846	10853	27132	554		
385.8610	31.767	31.756	1	0.982	44193473	11391437	20971	52427	543	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.781	31.772	1	1.000	21800962	5788708	10058	25145	576		
375.8178	31.781	31.772	1	1.000	17940403	4765095	8311	20777	573	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.005	20681548	5801162	10853	27132	535		
385.8610	32.526	32.523	0	1.005	39707736	10862121	20971	52427	518	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.540	32.534	0	1.000	19691436	5514300	10058	25145	548		
375.8178	32.540	32.534	0	1.000	16232754	4594829	8311	20777	553	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.353	32.342	1		35642869	9349119	10403	26007	899		
403.8529	32.353	32.342	1		27945220	7378163	7908	19770	933	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.941	31.929	1	0.987	24473480	7240164	10403	26007	696		
403.8529	31.941	31.929	1	0.987	19566447	5775722	7908	19770	730	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.954	31.945	1	1.000	14220855	4121905	5566	13915	741		
391.8127	31.954	31.945	1	1.000	10670315	3199272	4114	10285	778	1.33(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.034	32.033	0	0.990	30876044	8117648	10403	26007	780		
403.8529	32.034	32.033	0	0.990	24408488	6404371	7908	19770	810	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	15327109	4211681	5566	13915	757		
391.8127	32.047	32.047	0	1.000	12626643	3343117	4114	10285	813	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.367	32.355	1	1.013	16583478	4368640	5566	13915	785		
391.8127	32.353	32.355	0	1.013	13211476	3519862	4114	10285	856	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.924	33.914	1	1.049	14460337	4683854	18083	45207	259		
419.8220	33.924	33.914	1	1.049	33237334	10568693	50629	126572	209	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.937	33.926	1	1.000	18301949	5790856	23497	58742	246		
409.7789	33.924	33.926	0	1.000	17439015	5585138	22139	55347	252	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.018	35.010	0	1.082	13111896	3936331	18083	45207	218		
419.8220	35.018	35.010	0	1.082	30126726	8910423	50629	126572	176	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.030	35.020	1	1.000	15206712	4448229	23497	58742	189		
409.7789	35.018	35.020	0	1.000	14243924	4117019	22139	55347	186	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.726	34.716	1	1.073	20474082	5927612	12552	31380	472		
437.8140	34.714	34.716	0	1.073	19859635	5735510	11540	28850	497	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	11412485	3410093	6511	16277	524		
425.7737	34.726	34.726	0	1.000	11126306	3358586	6451	16127	521	1.03(0.88-1.20)	
13C-OCDD											
469.7779	37.094	37.094	0	1.147	25234291	6398501	3020	7550	2119		
471.7750	37.094	37.094	0	1.147	29103952	7389026	4794	11985	1541	0.87(0.76-1.02)	
OCDF											
441.7428	37.202	37.199	0	1.003	19626693	5149784	2565	6412	2008		
443.7399	37.202	37.199	0	1.003	21520509	5563126	2015	5037	2761	0.91(0.76-1.02)	
OCDD											
457.7377	37.106	37.106	0	1.000	14916504	3846231	2276	5690	1690		
459.7348	37.106	37.106	0	1.000	16740163	4277323	2524	6310	1695	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

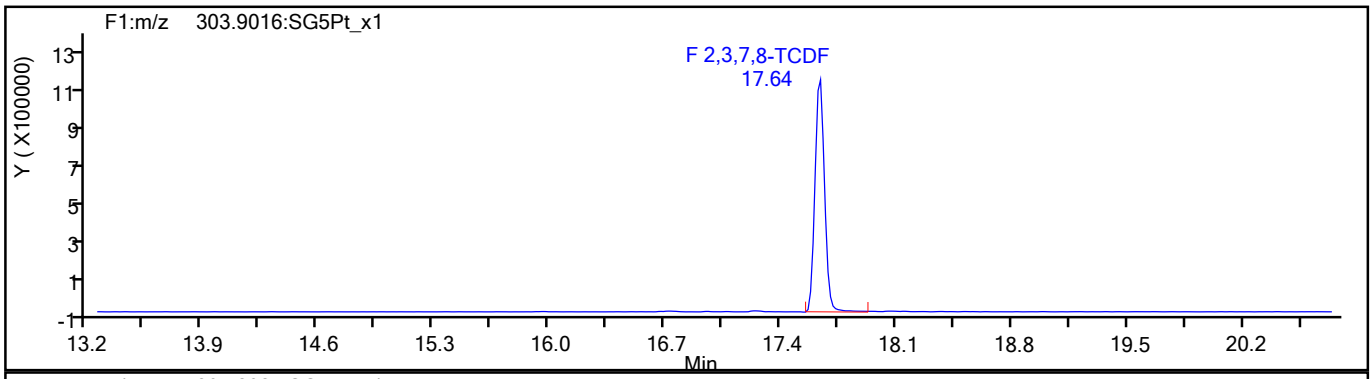

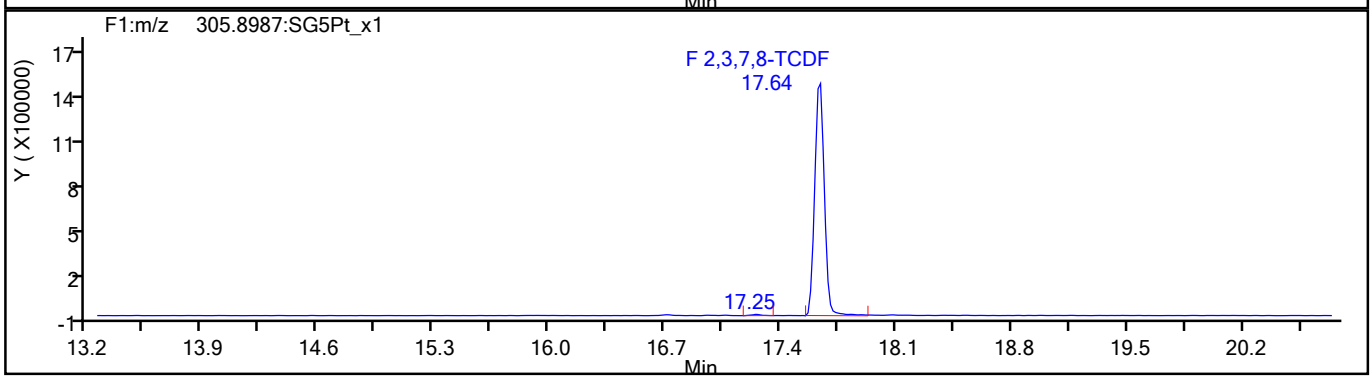

TCDF Standards

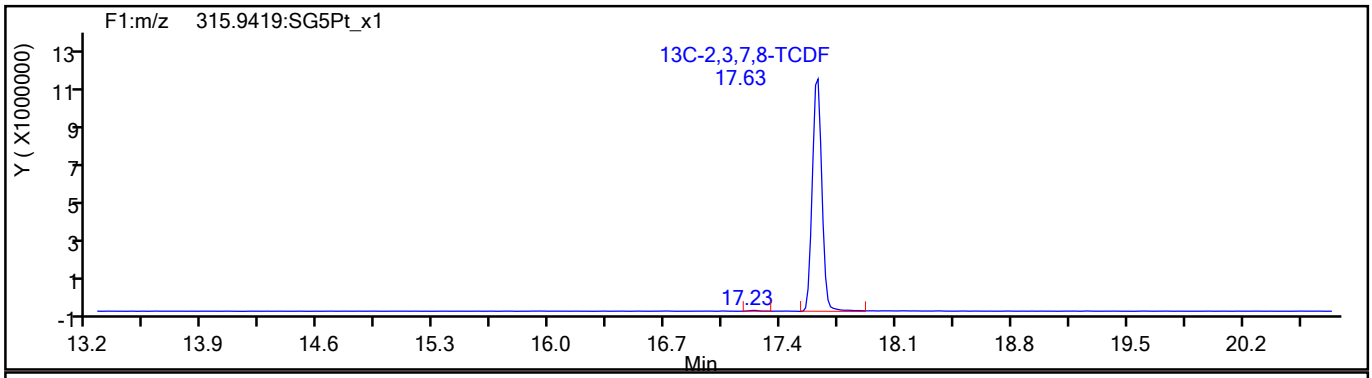

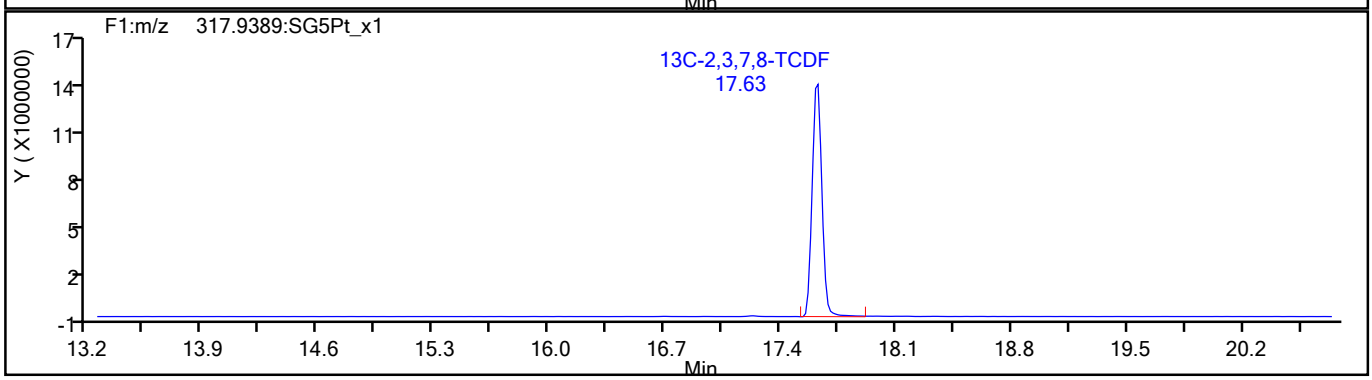

791449

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

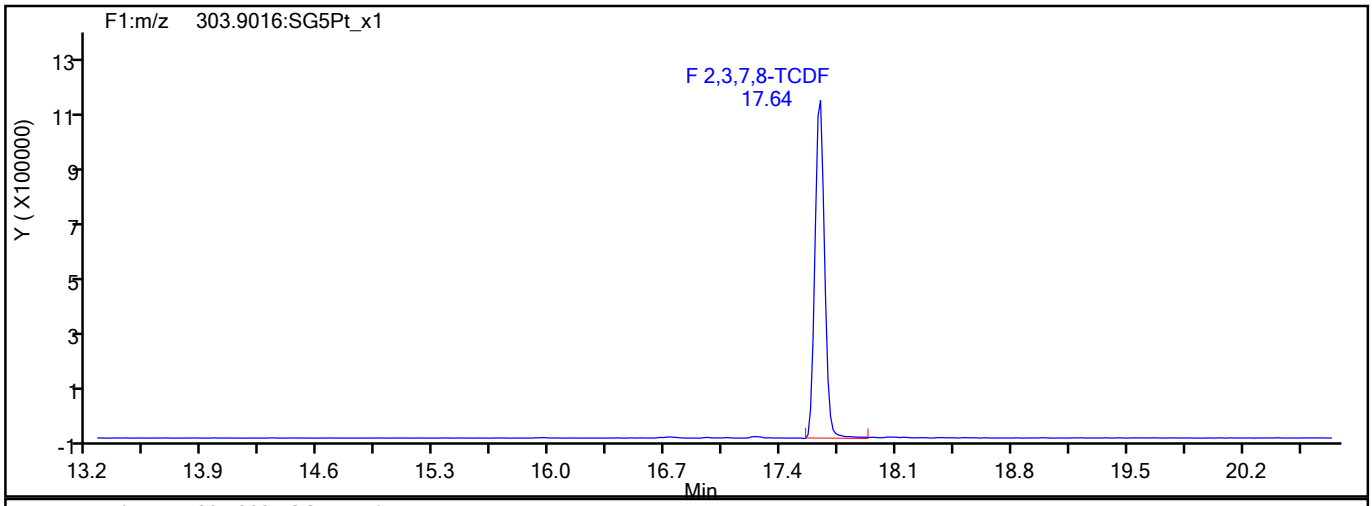

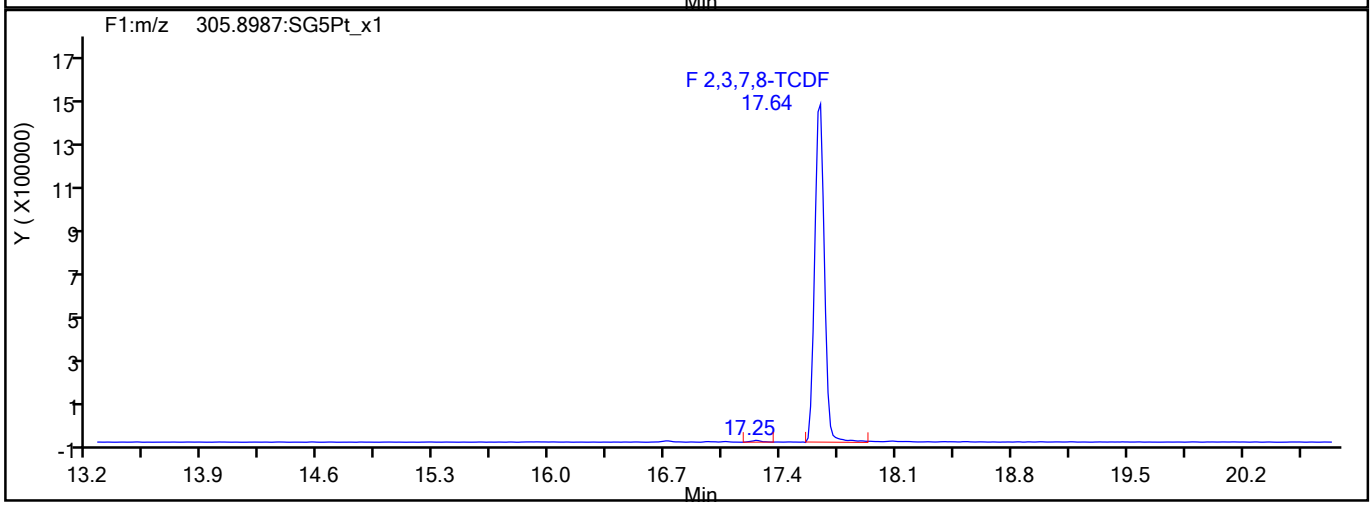

TCDF Interference Mass

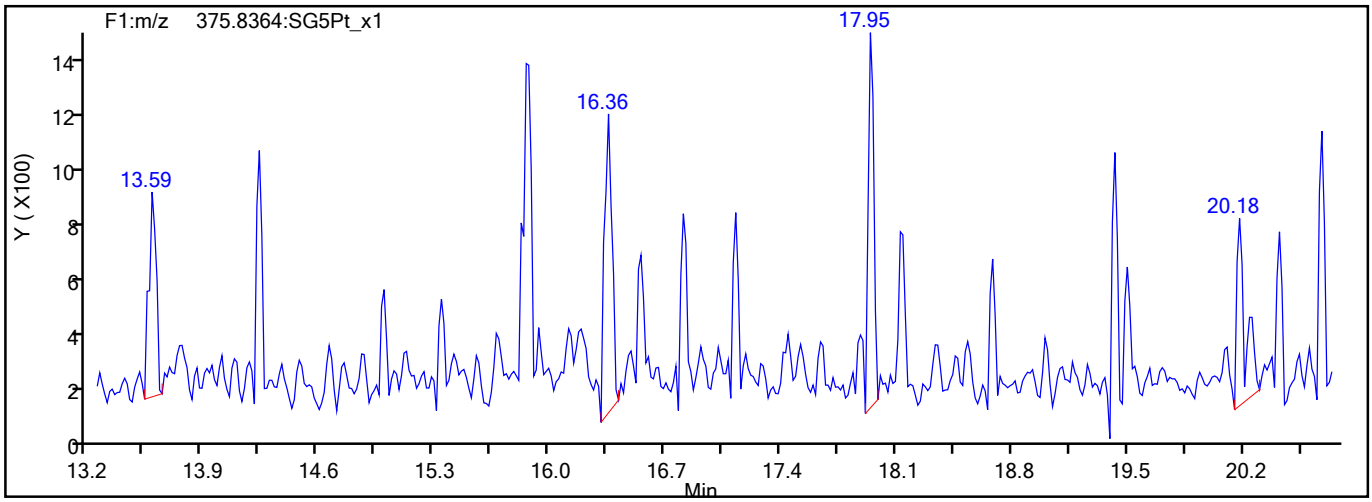

791450

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

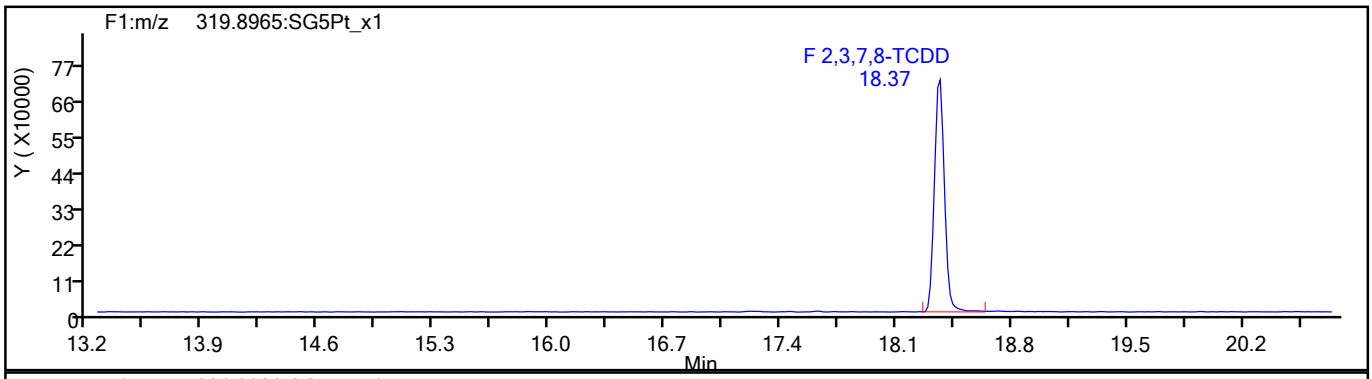

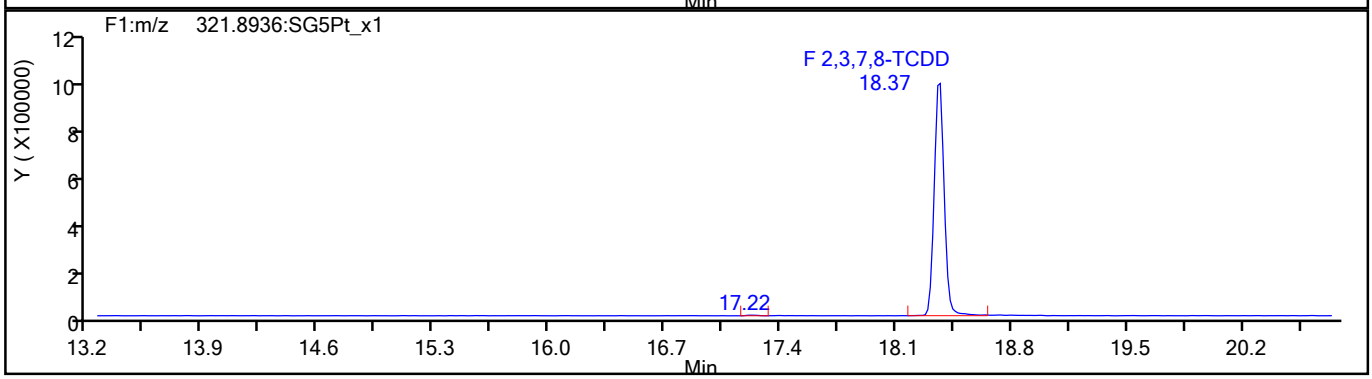

TCDD Standards

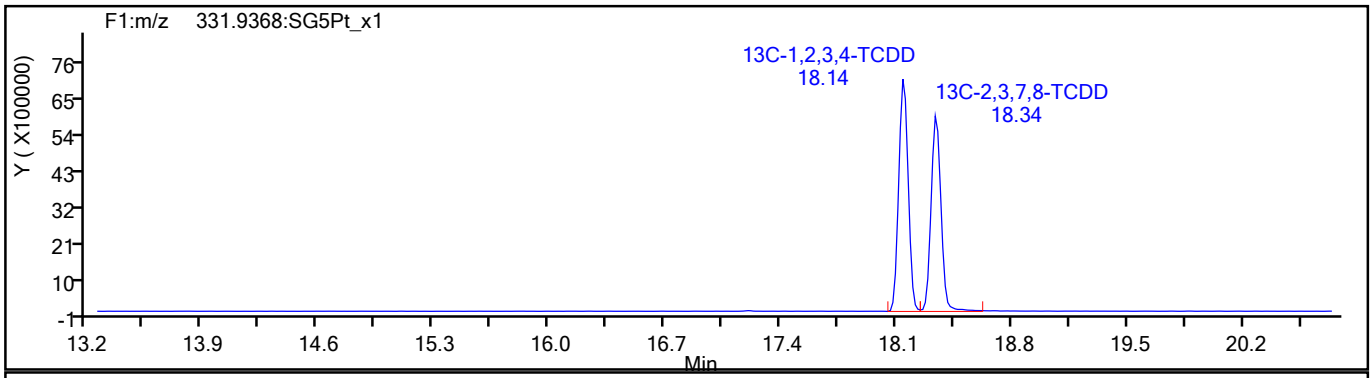

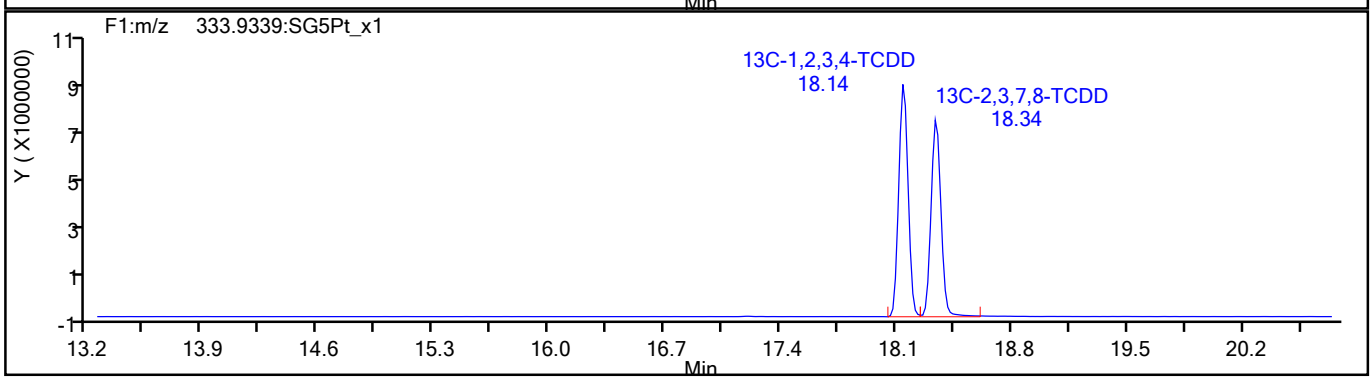

791451

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

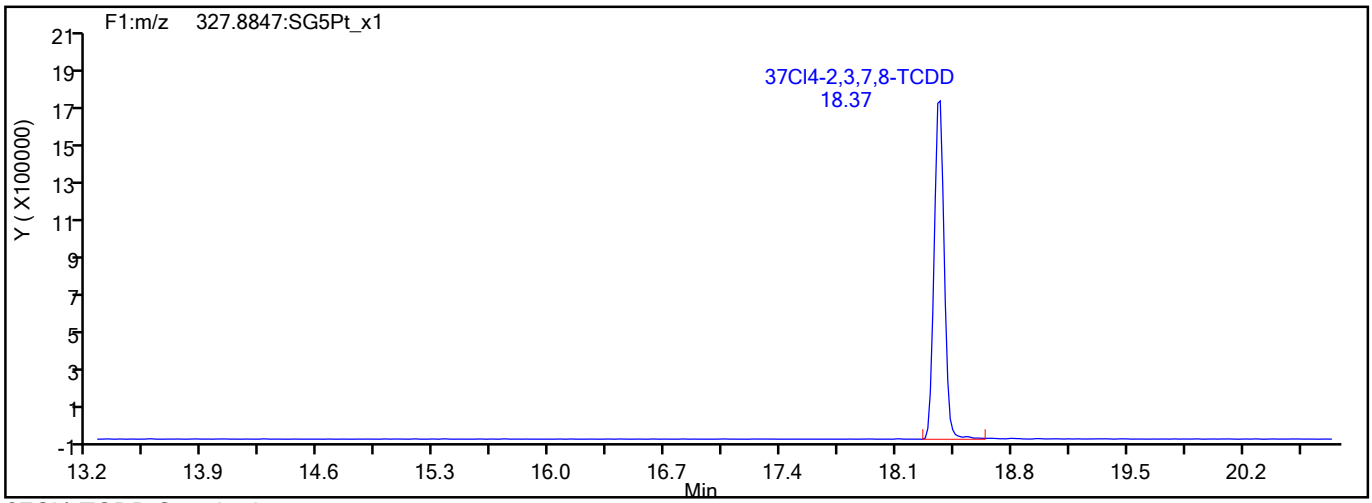

37Cl4-TCDD Standards

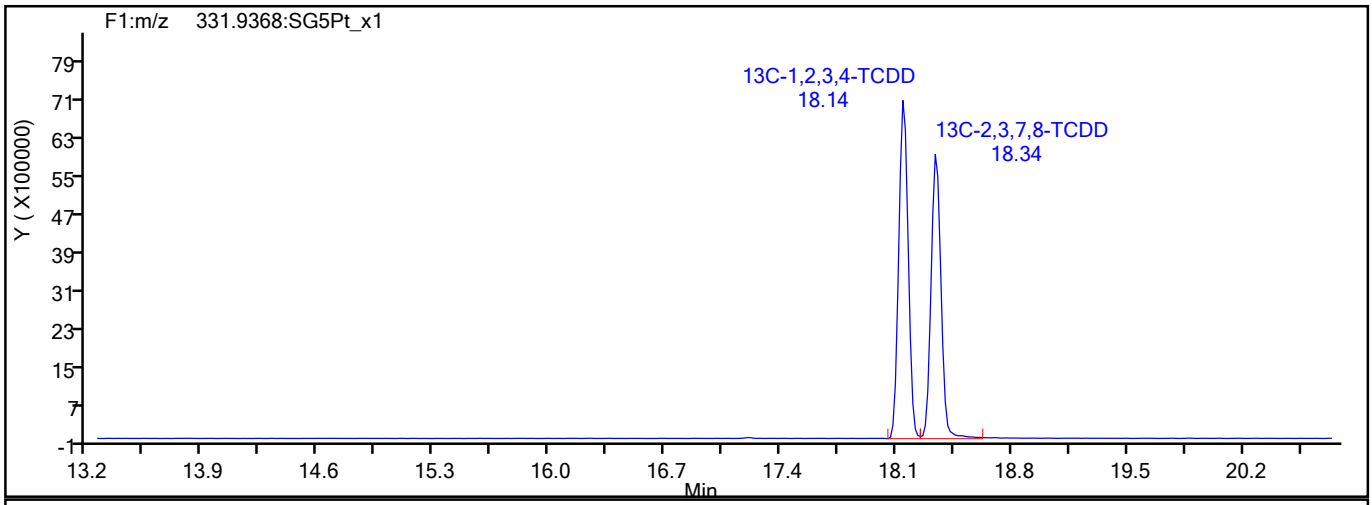

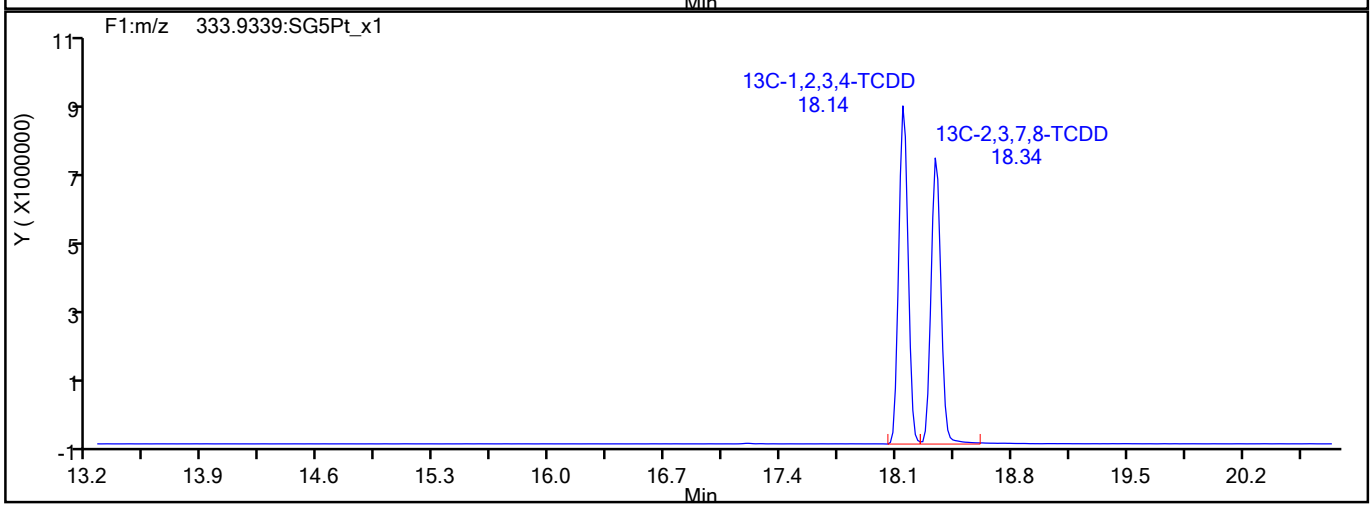

791452

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

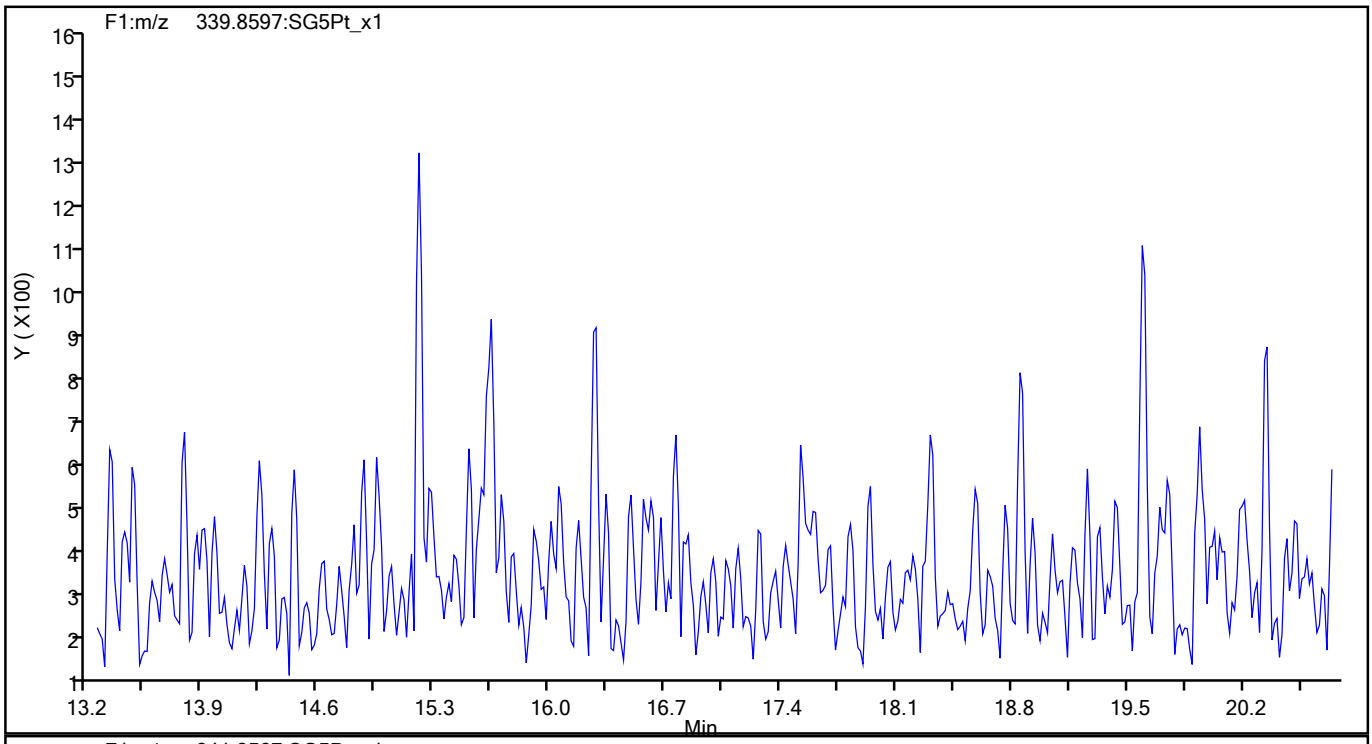

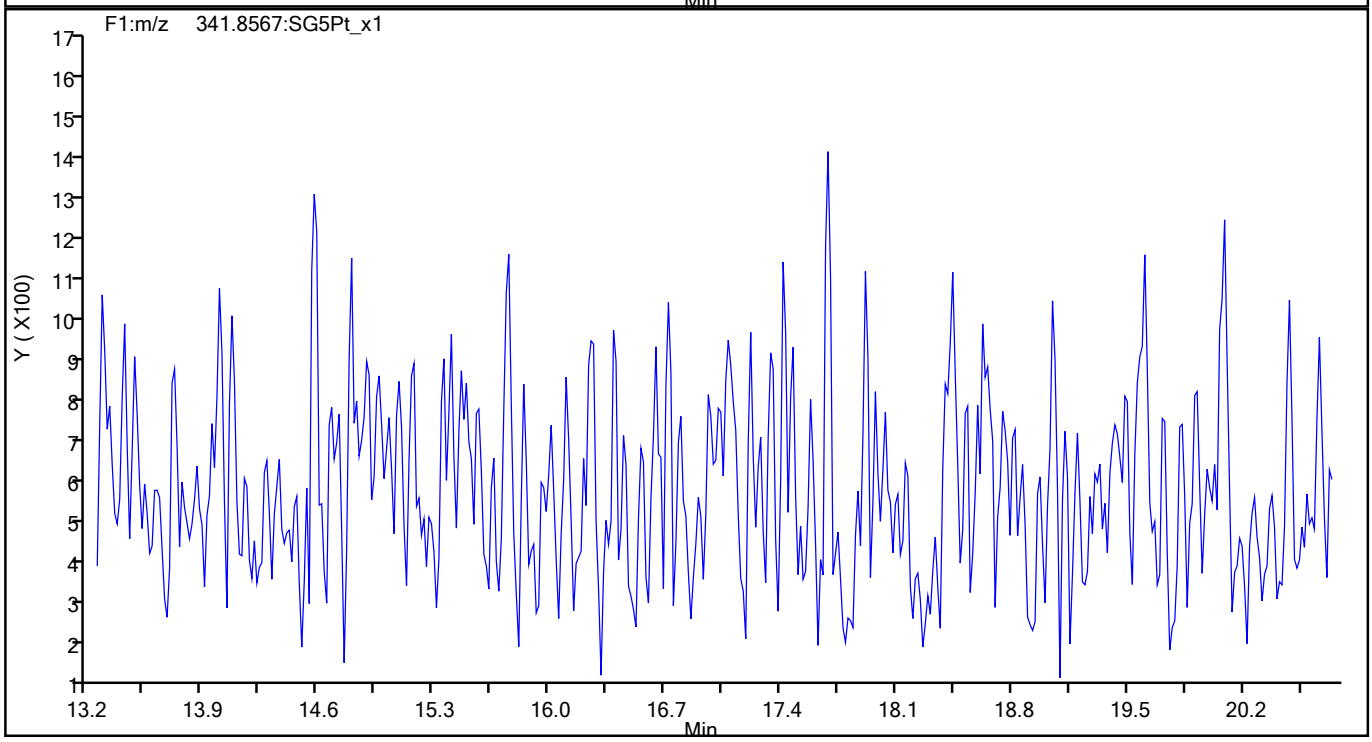

791453

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

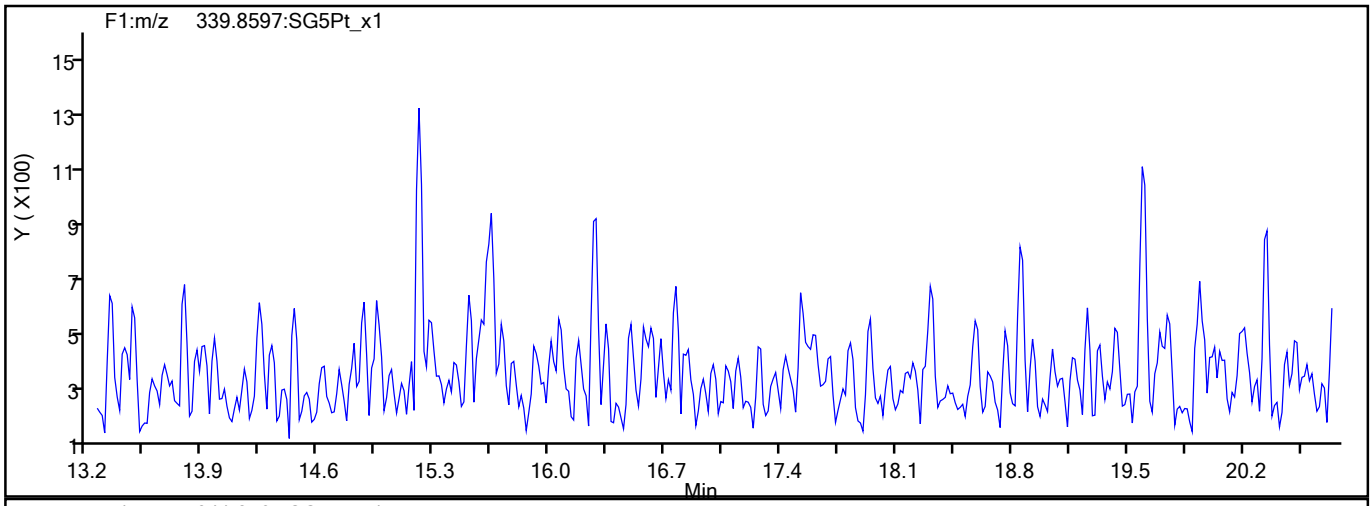

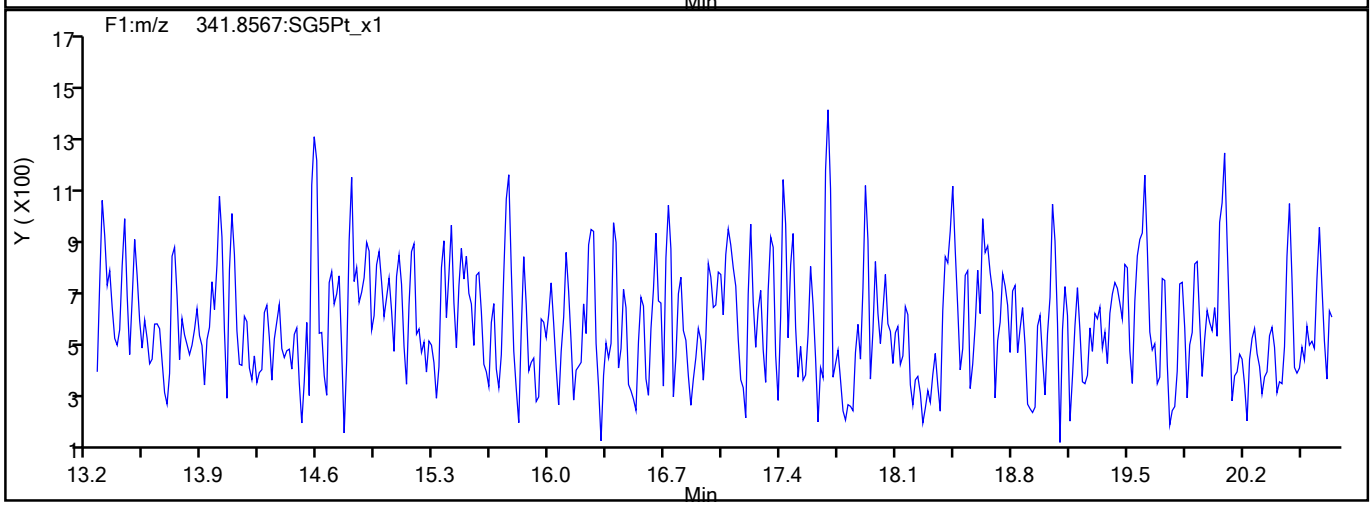

F1 PeCDFs Interference Mass

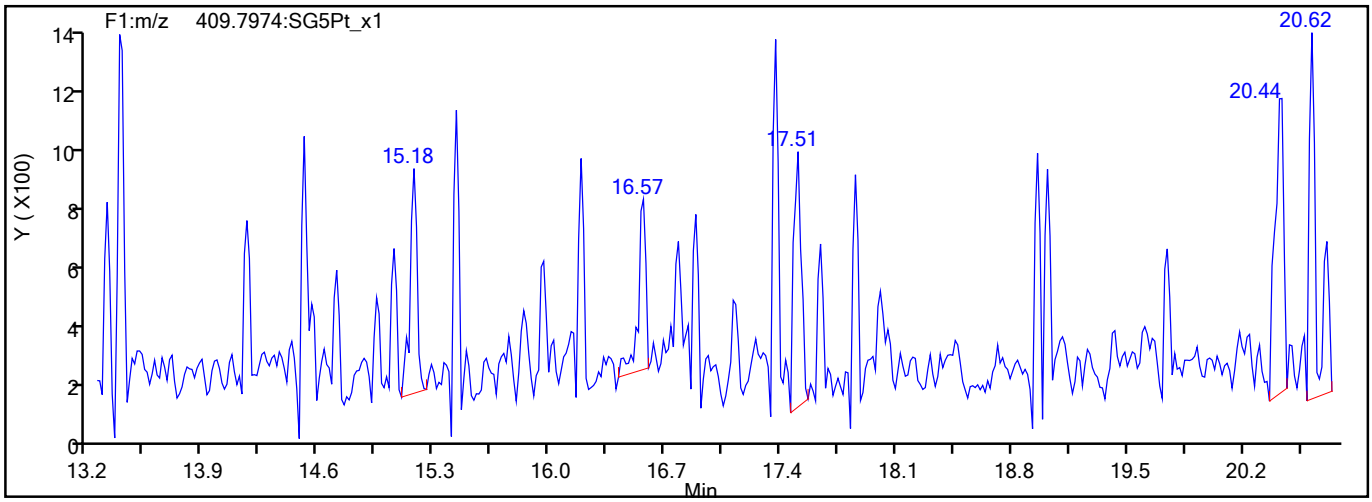

791454

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

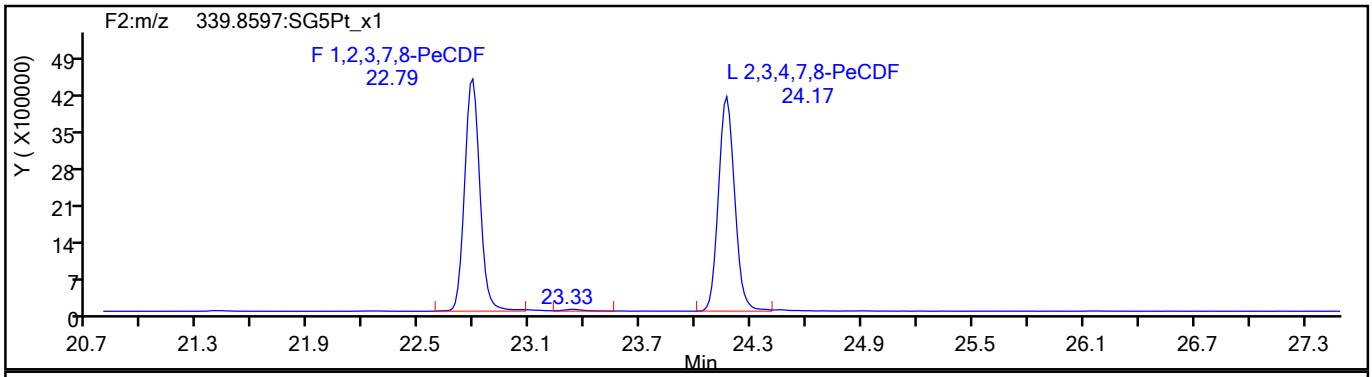

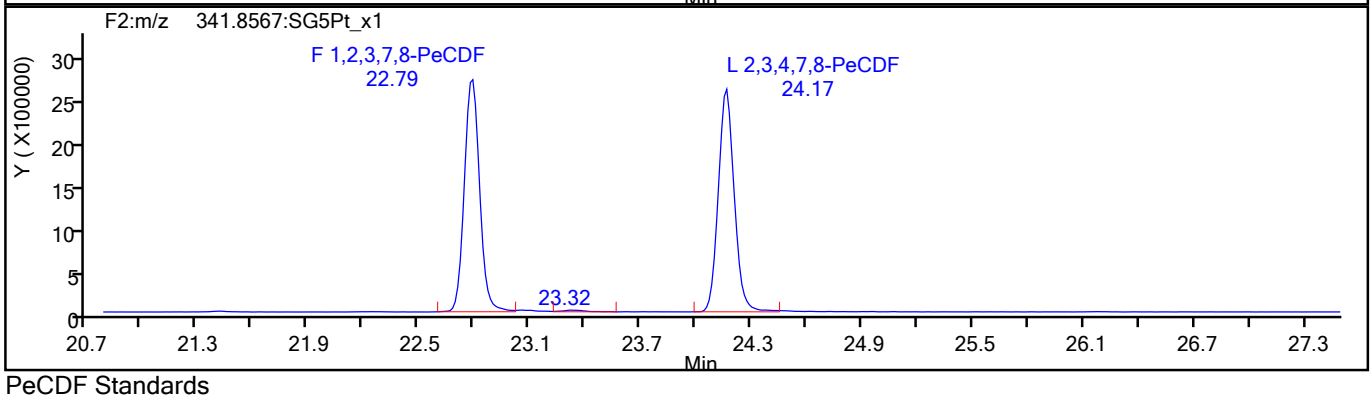

PeCDF Standards

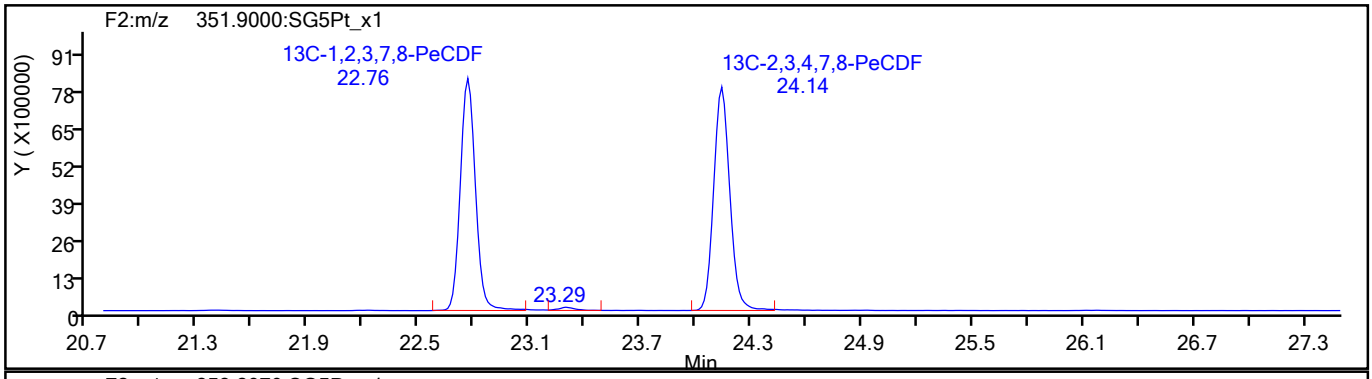

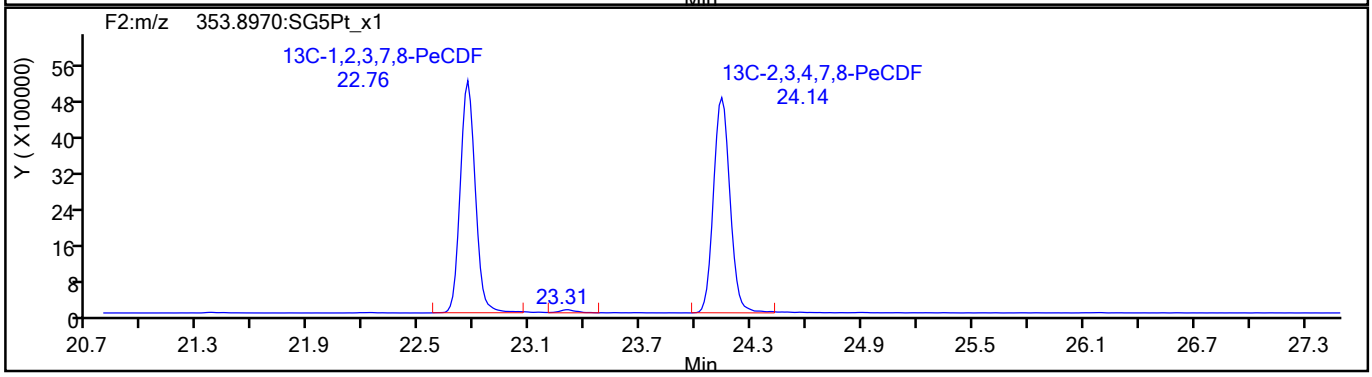

791455

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

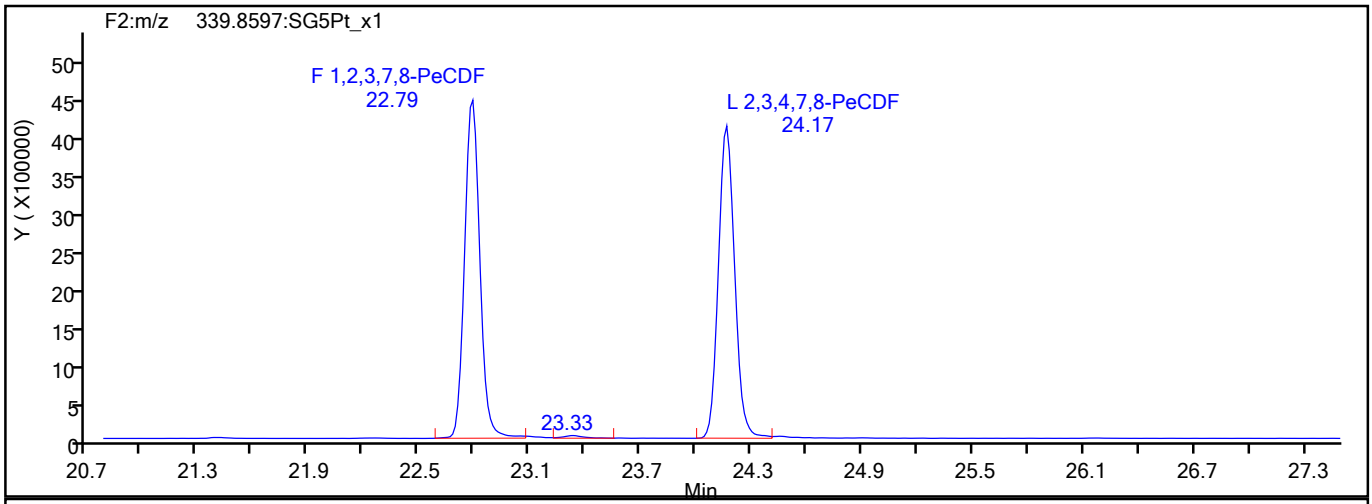

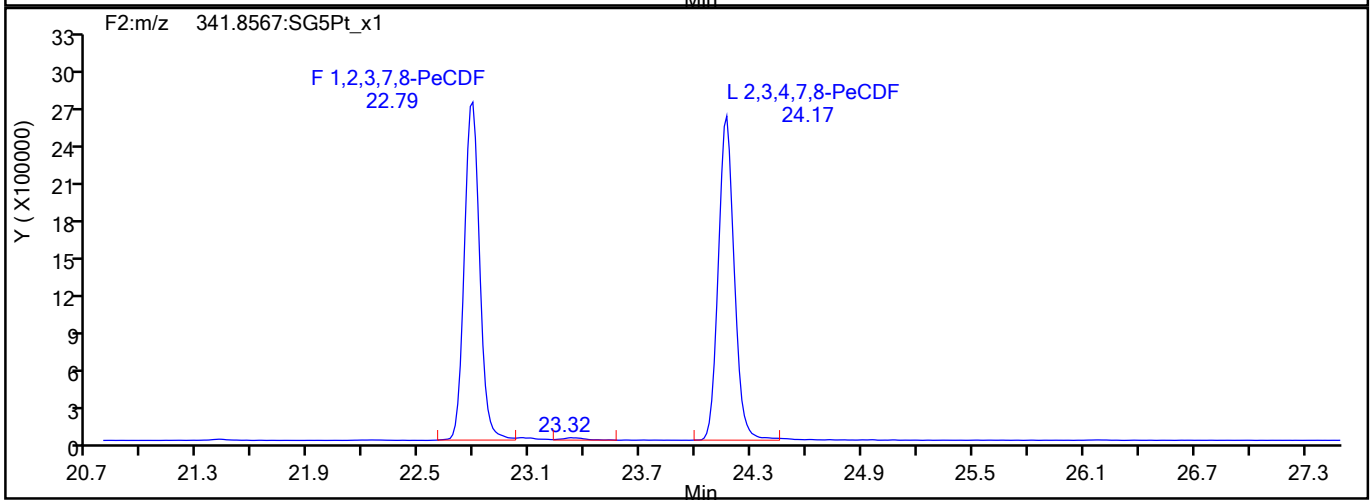

PeCDF Interference Mass

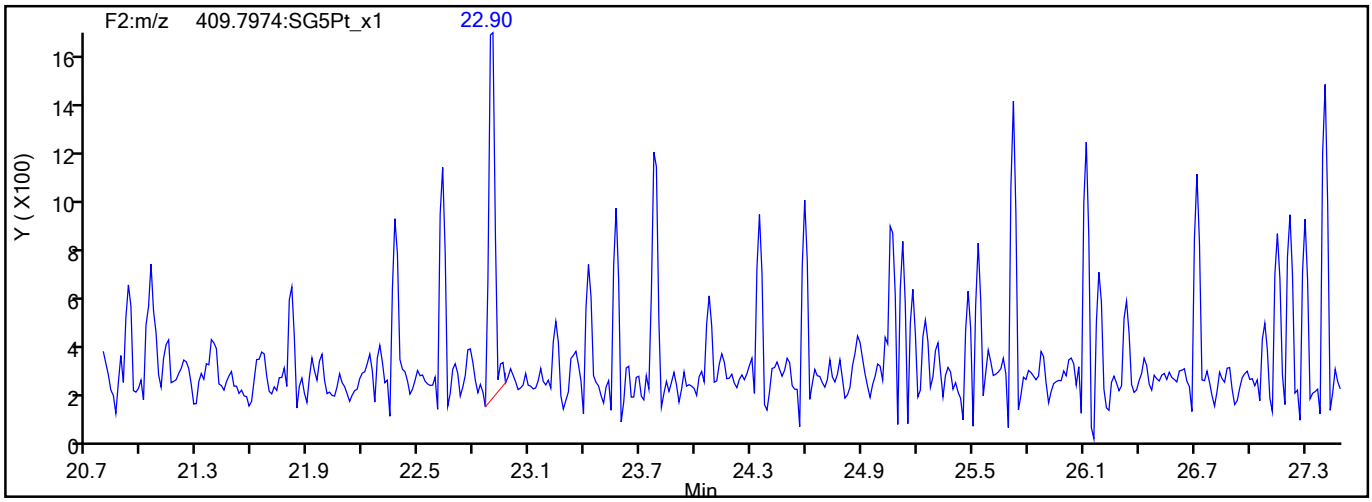

791456

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

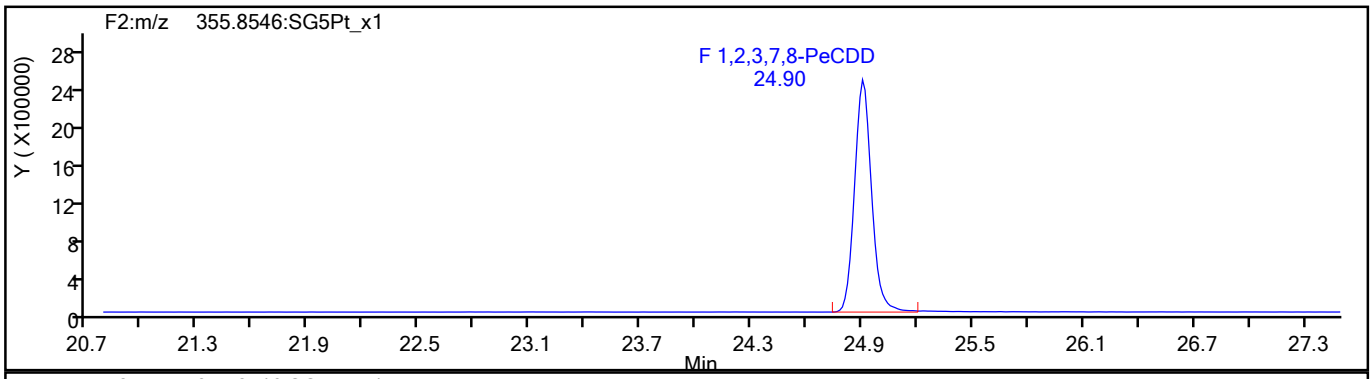

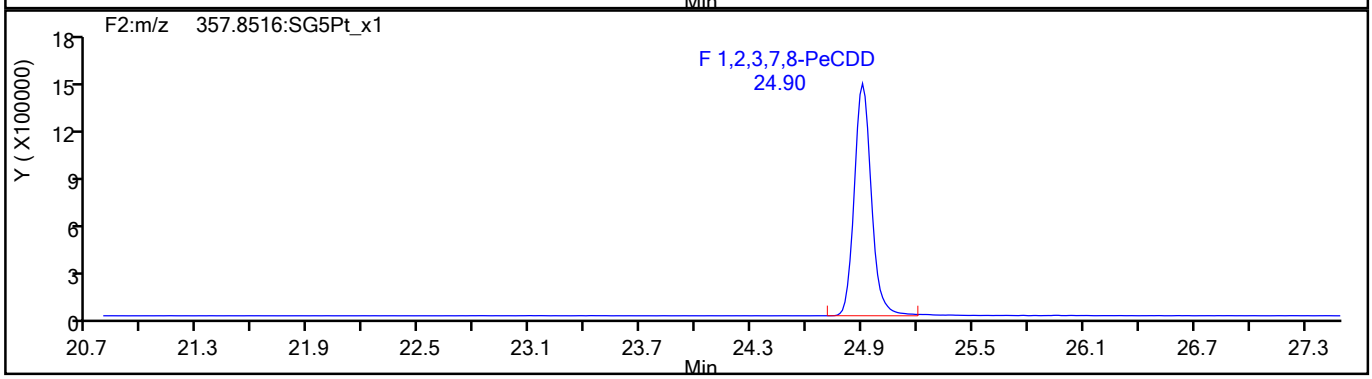

PeCDD Standards

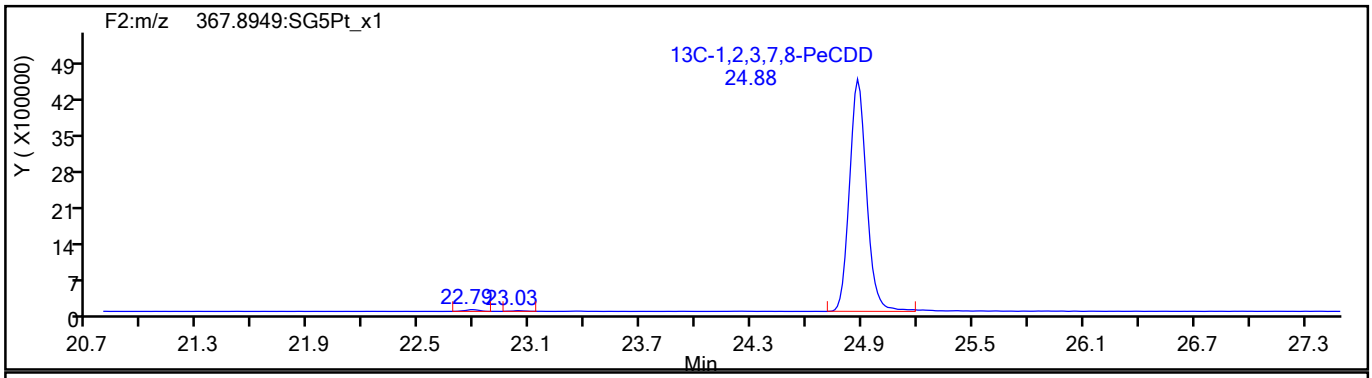

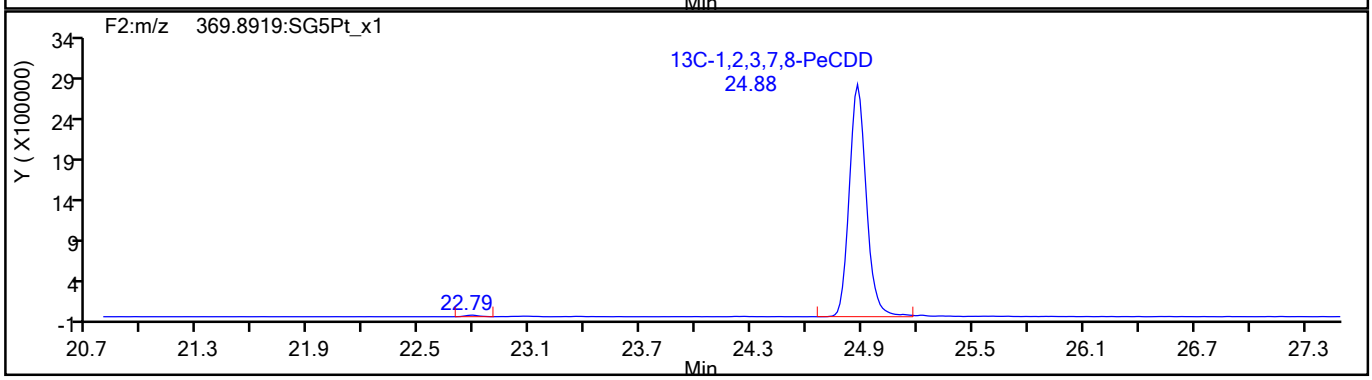

791457

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

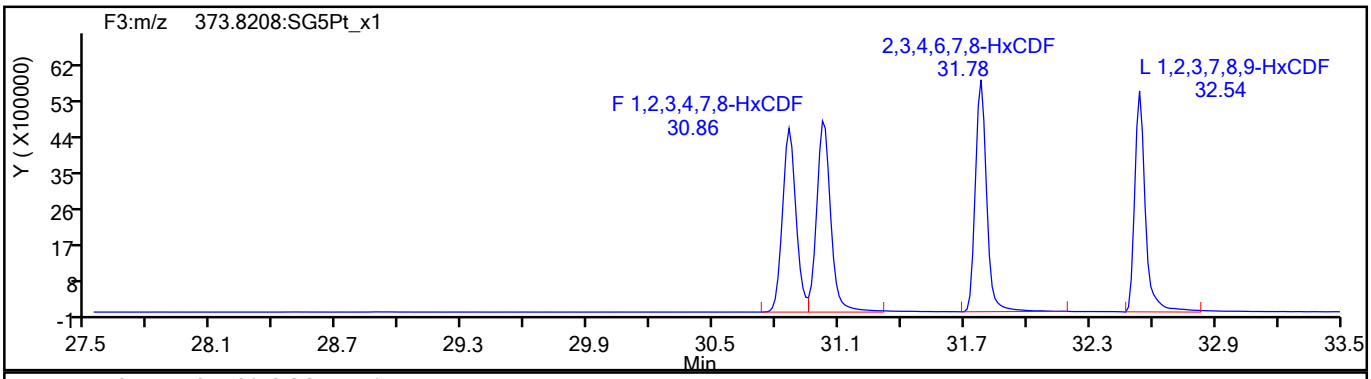

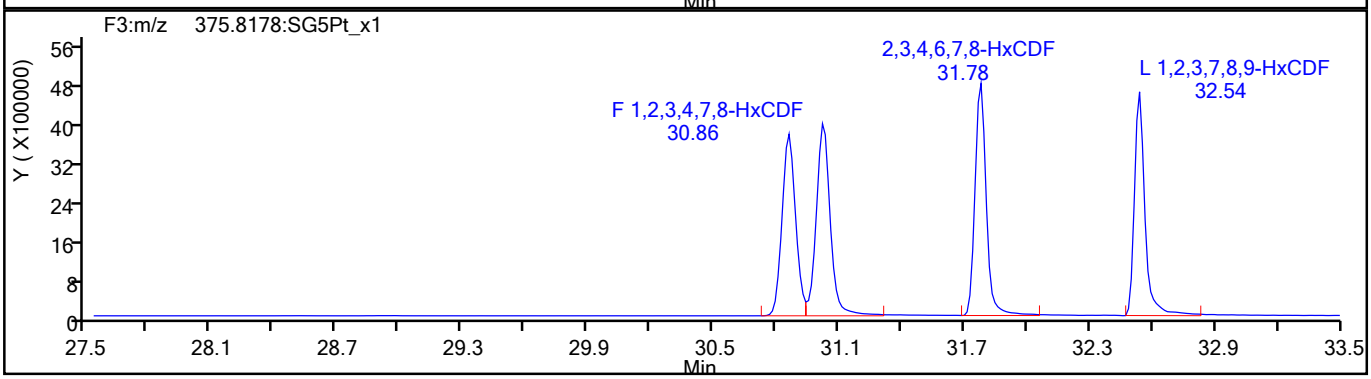

HxCDF Standards

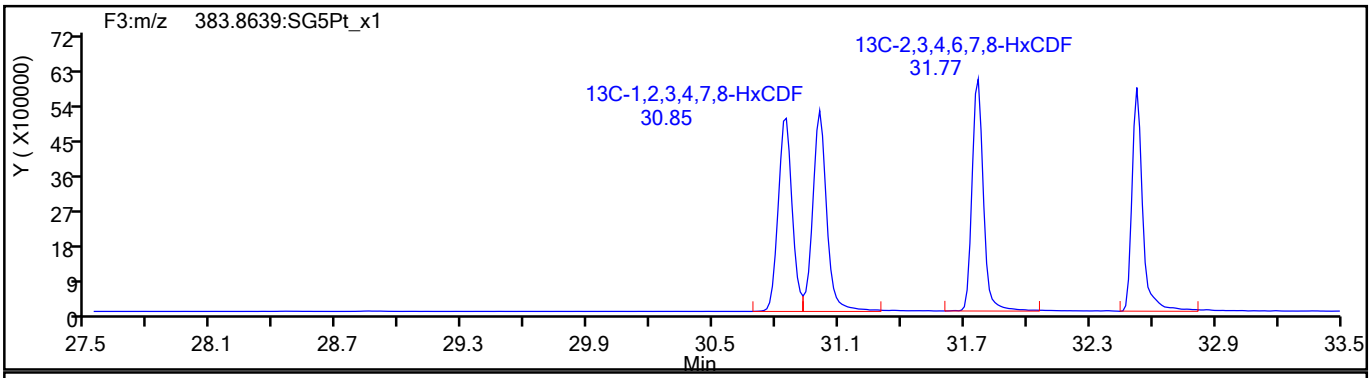

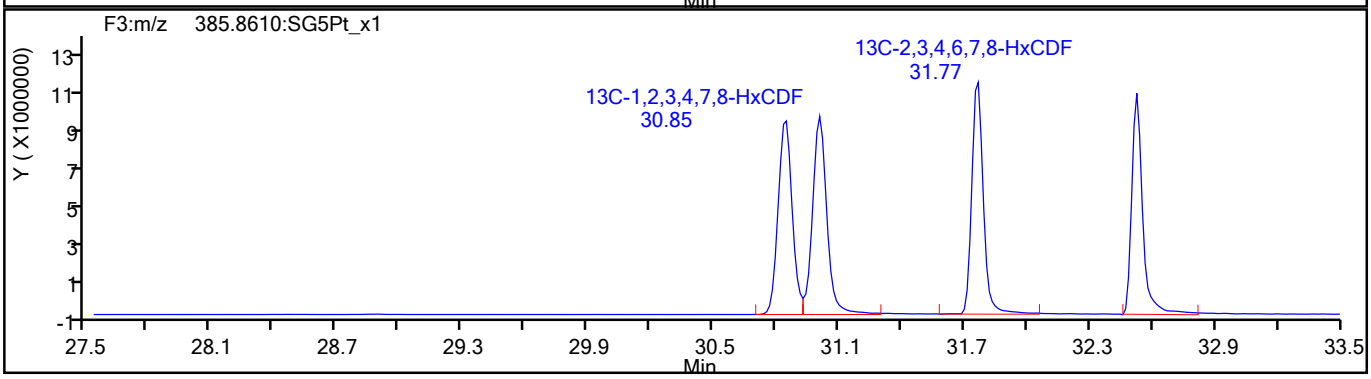

791458

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

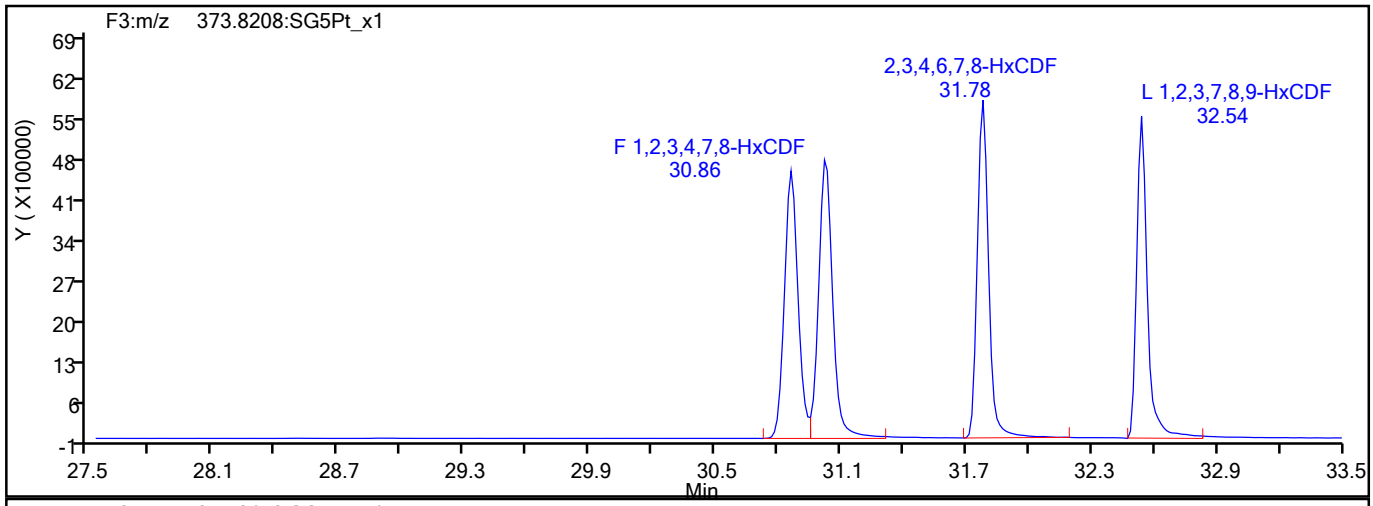

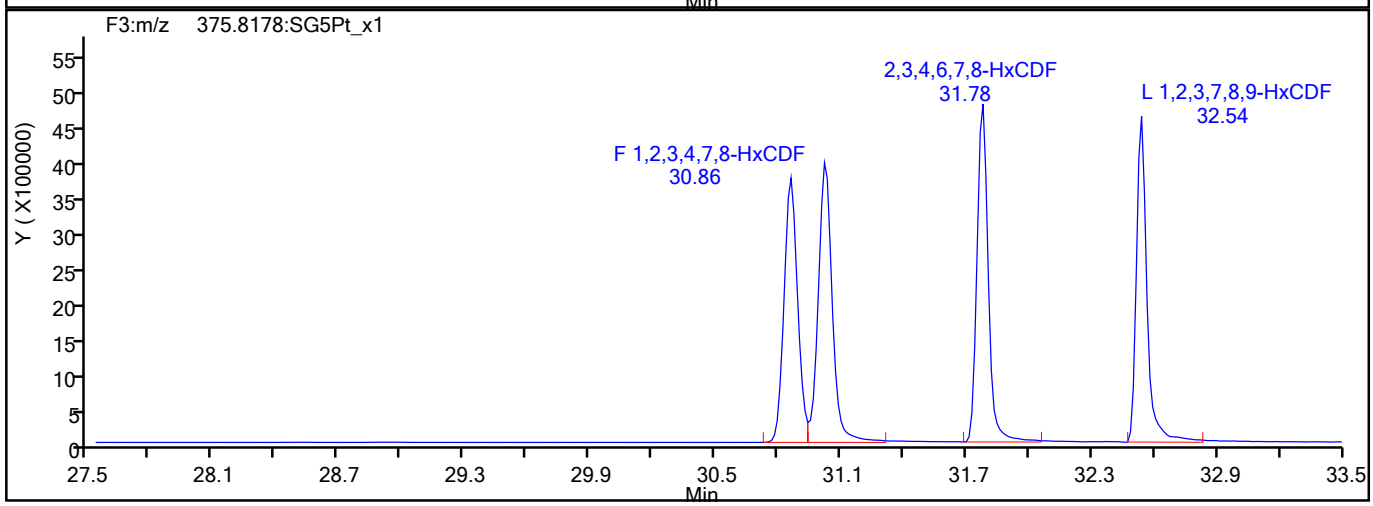

HxCDF Interference Mass

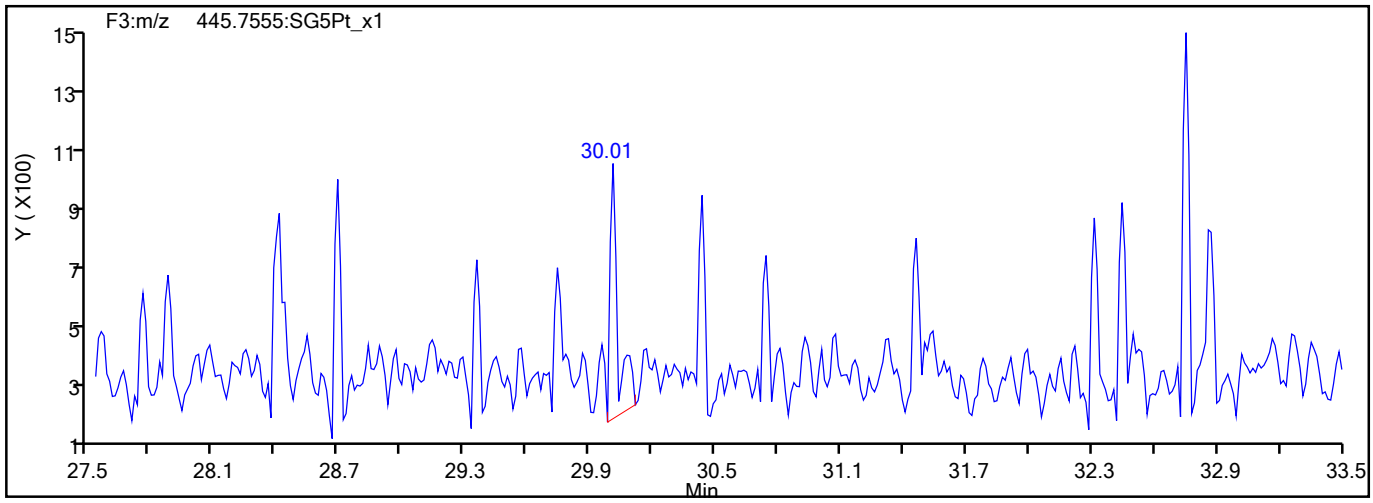

791459

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

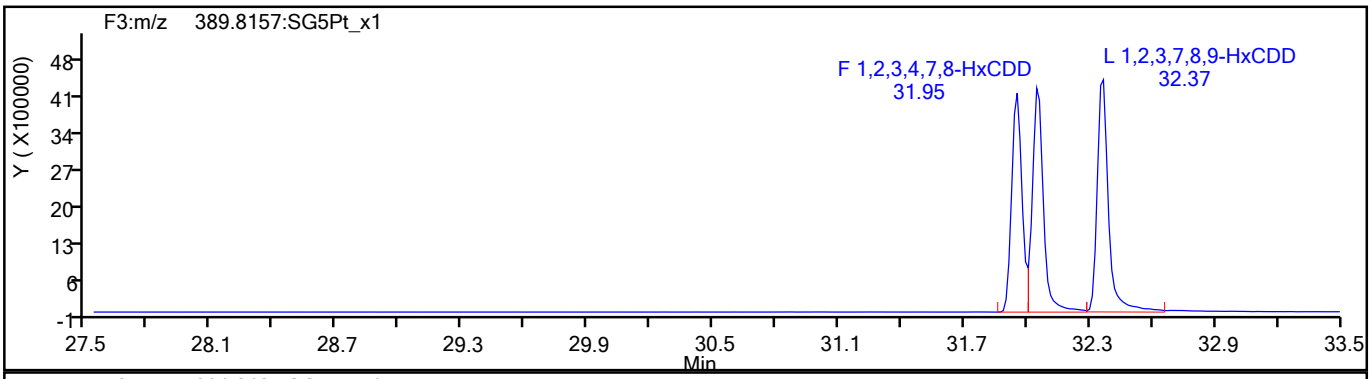

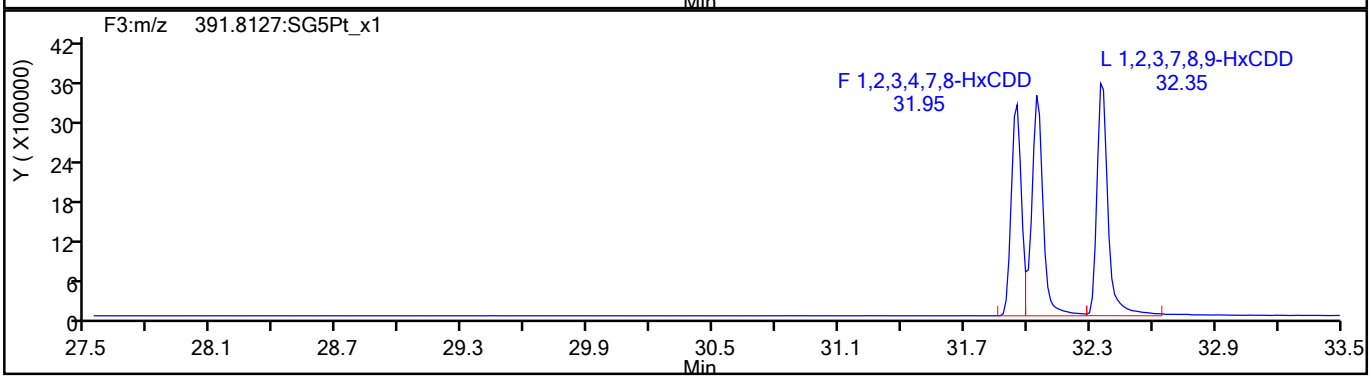

HxCDD Standards

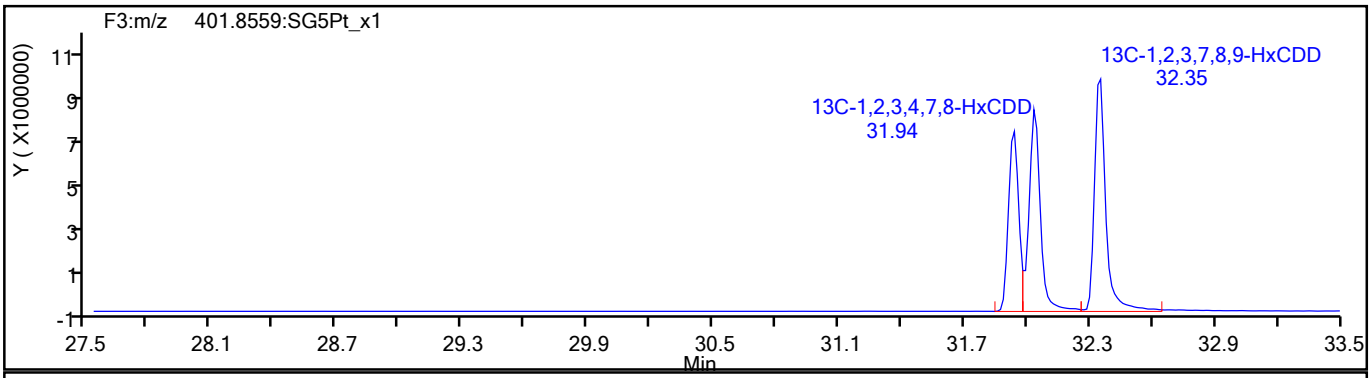

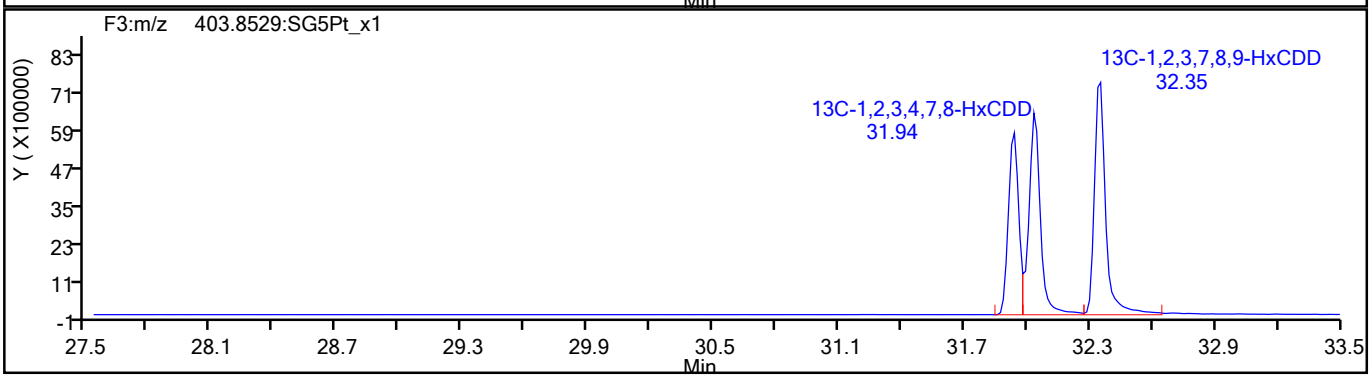

791460

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

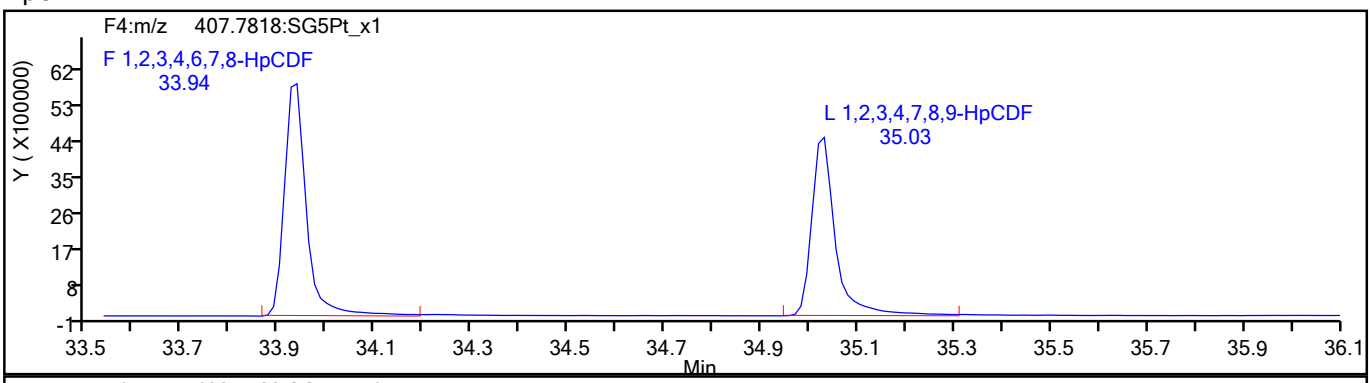

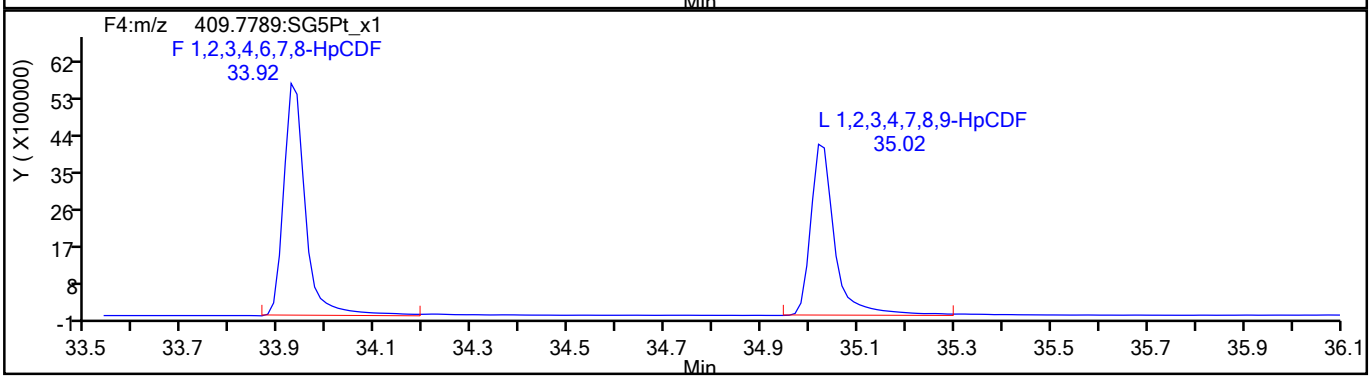

HpCDF Standards

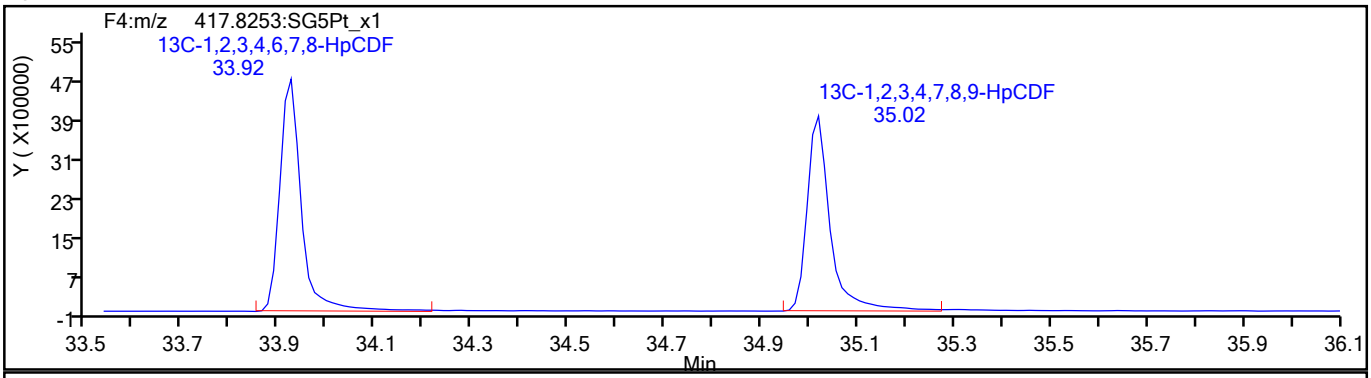

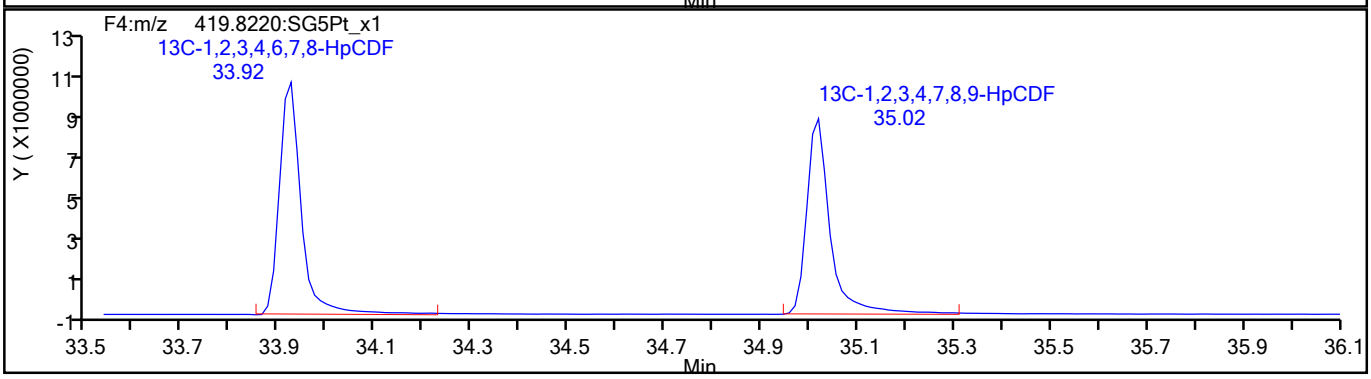

791461

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

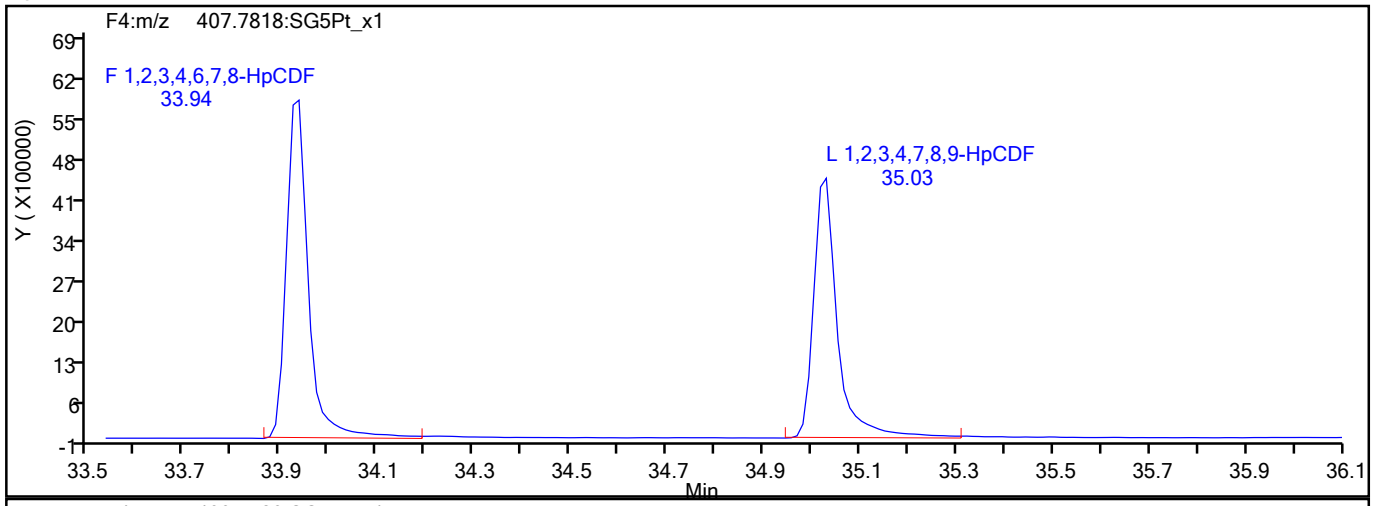

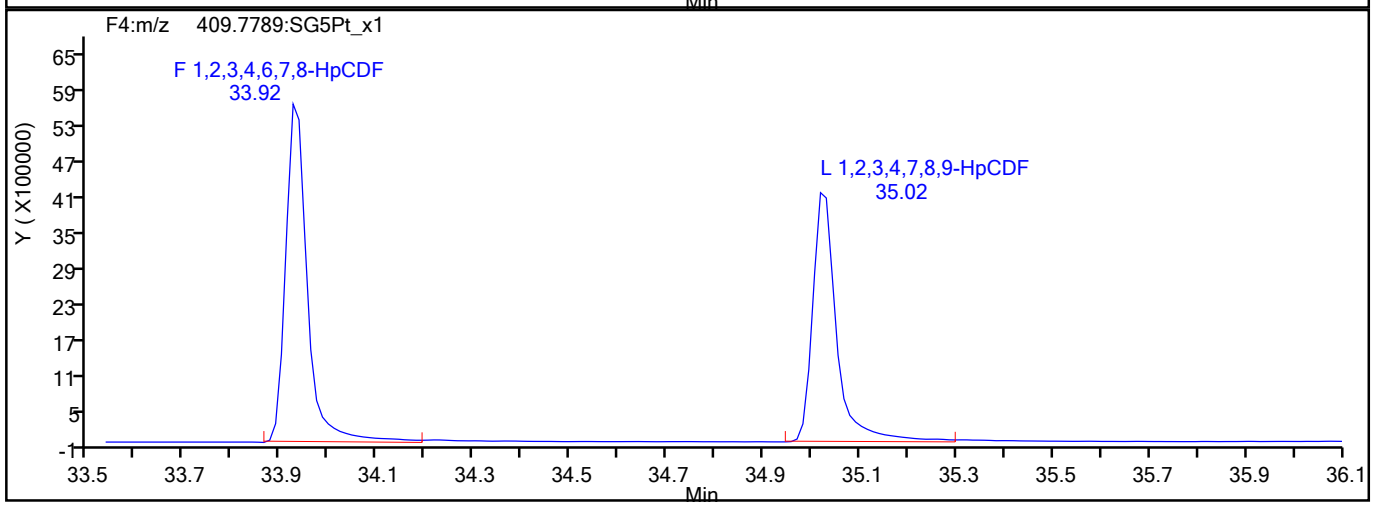

HpCDF Interference Mass

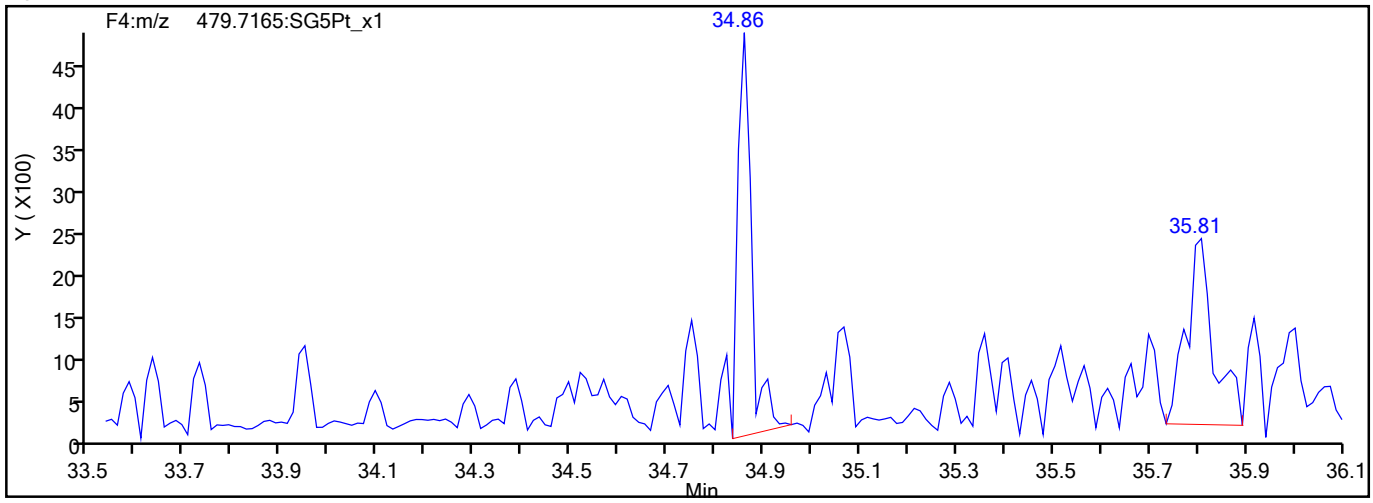

791462

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

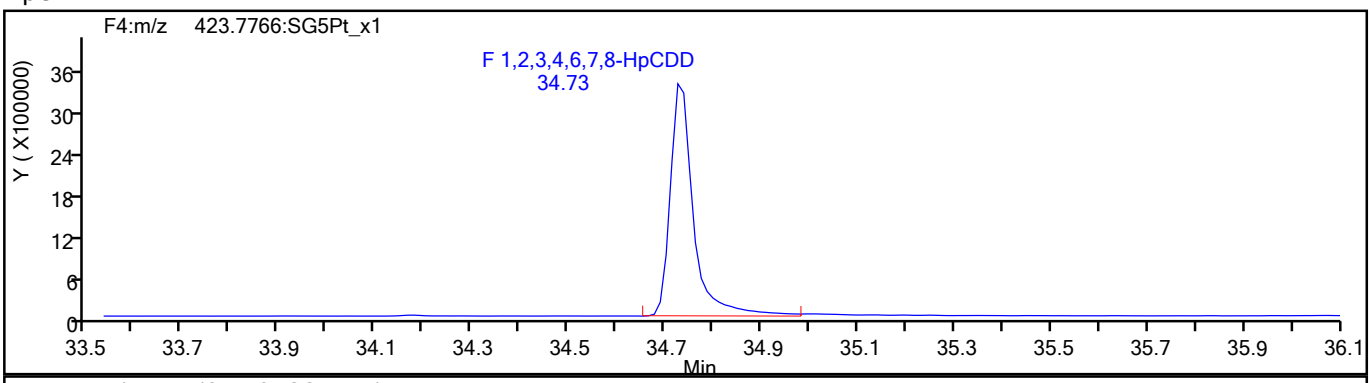

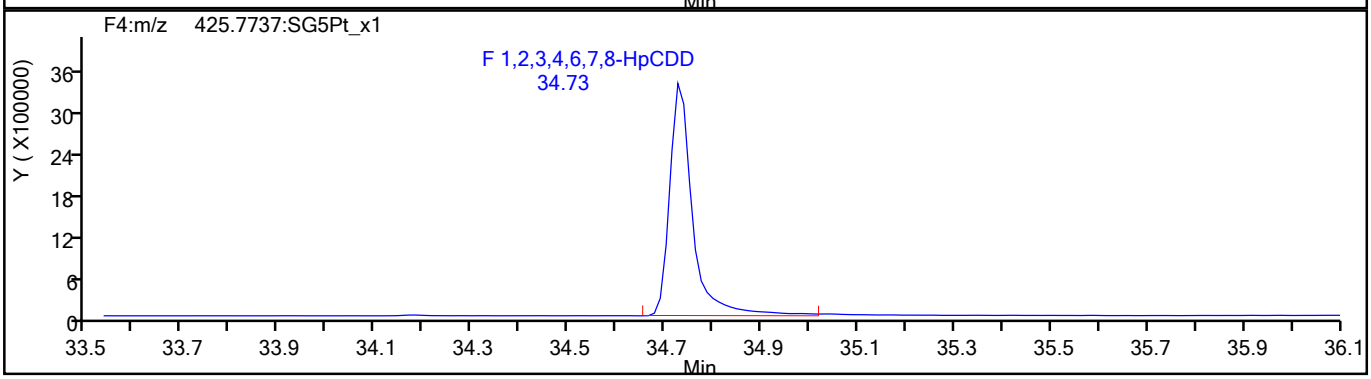

HpCDD Standards

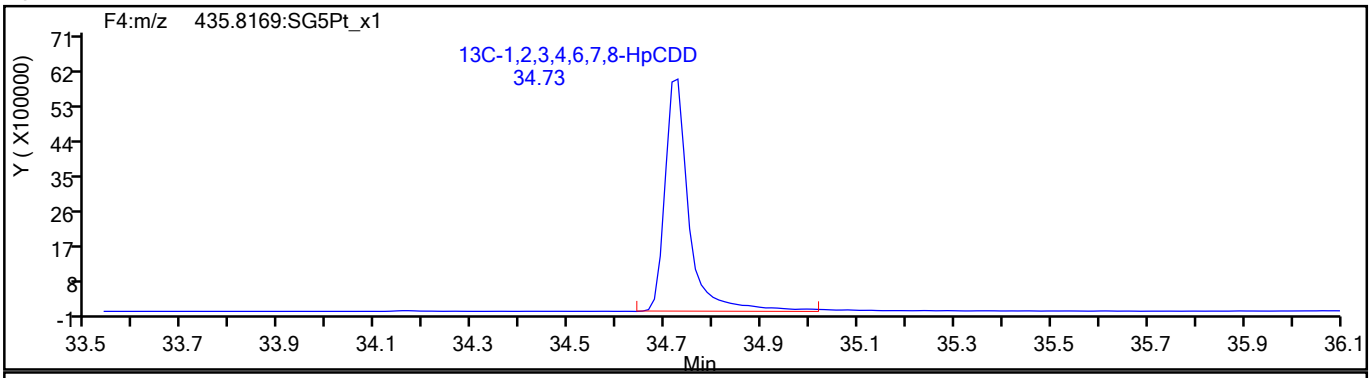

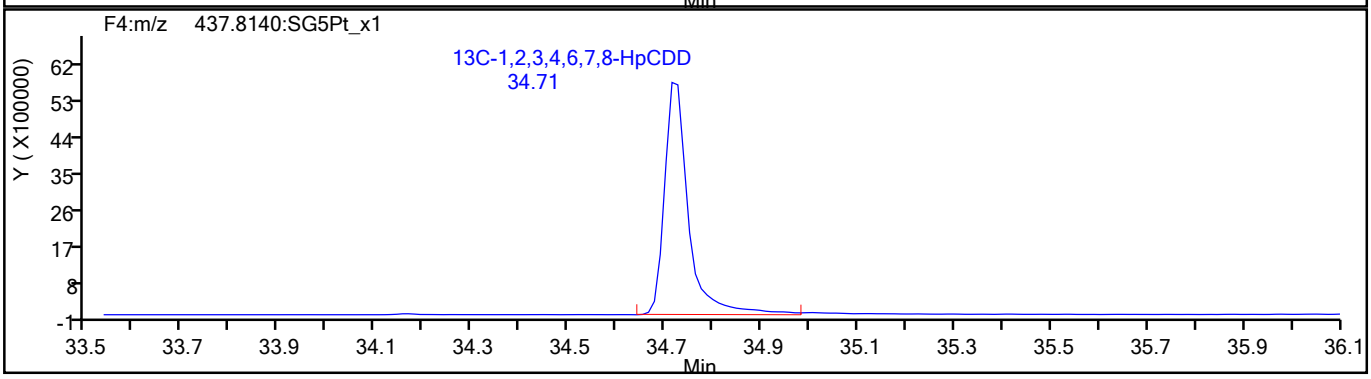

791463

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

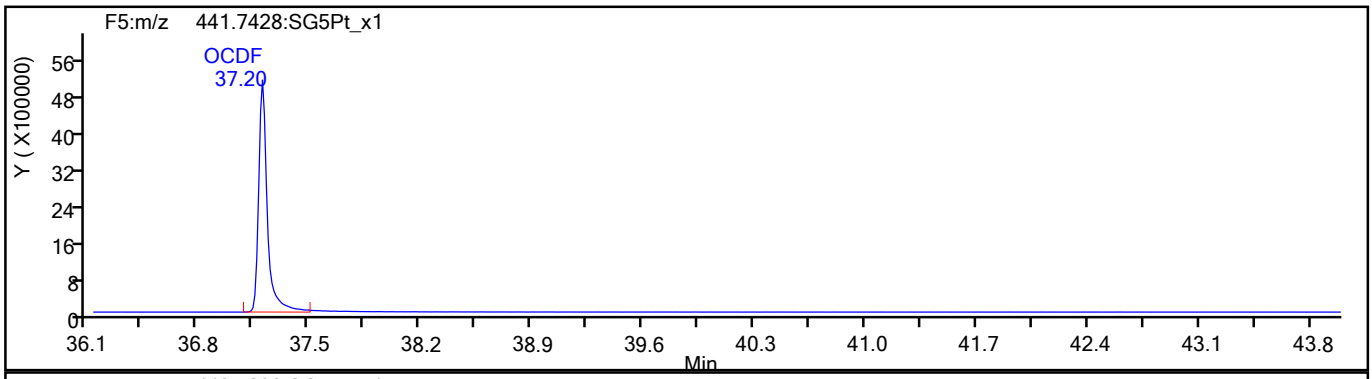

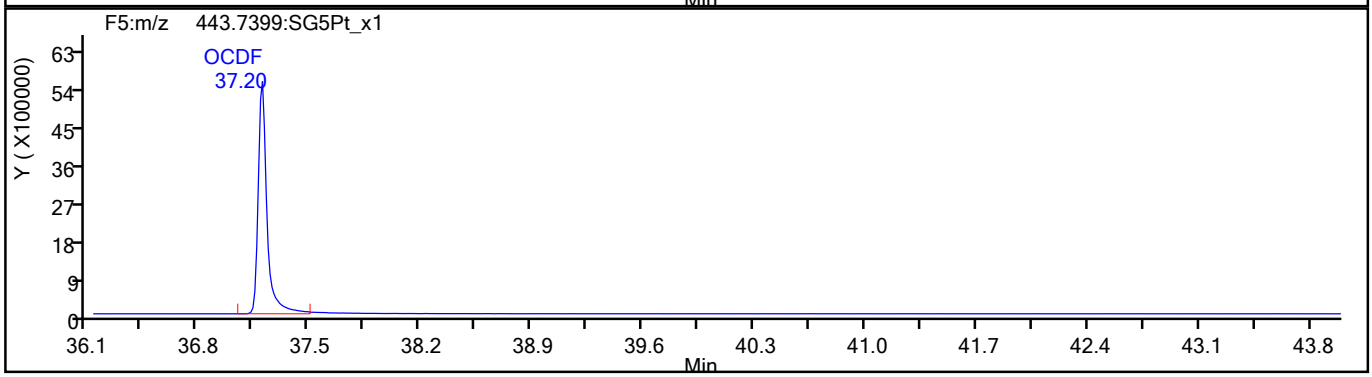

OCDF Standards

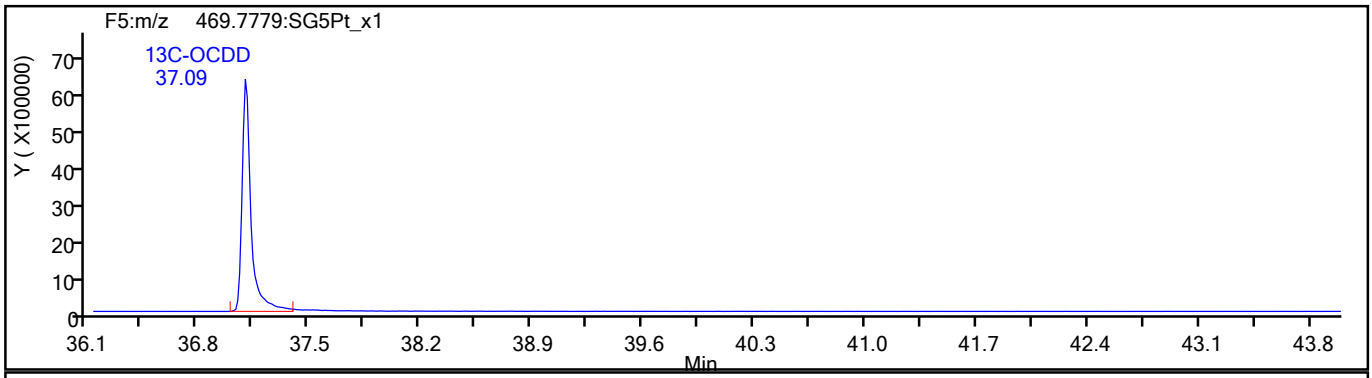

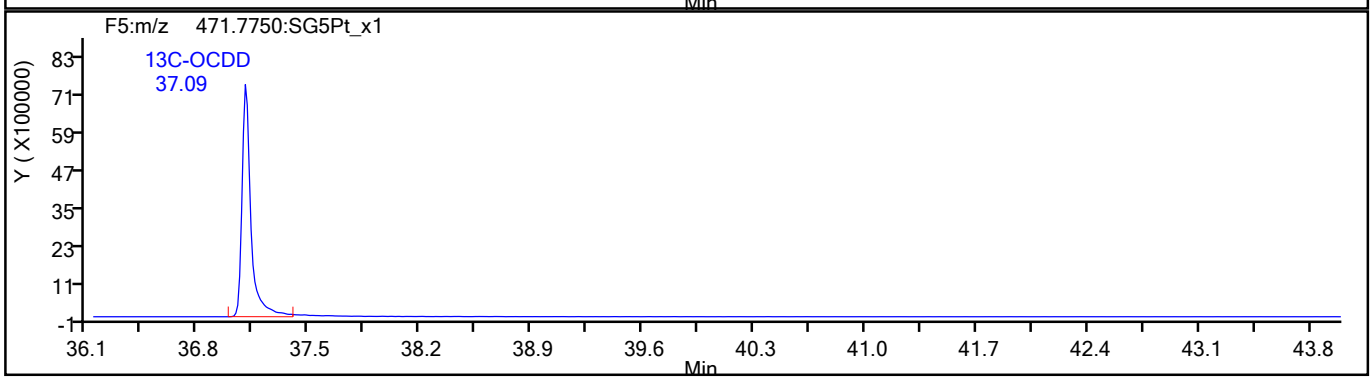

791464

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

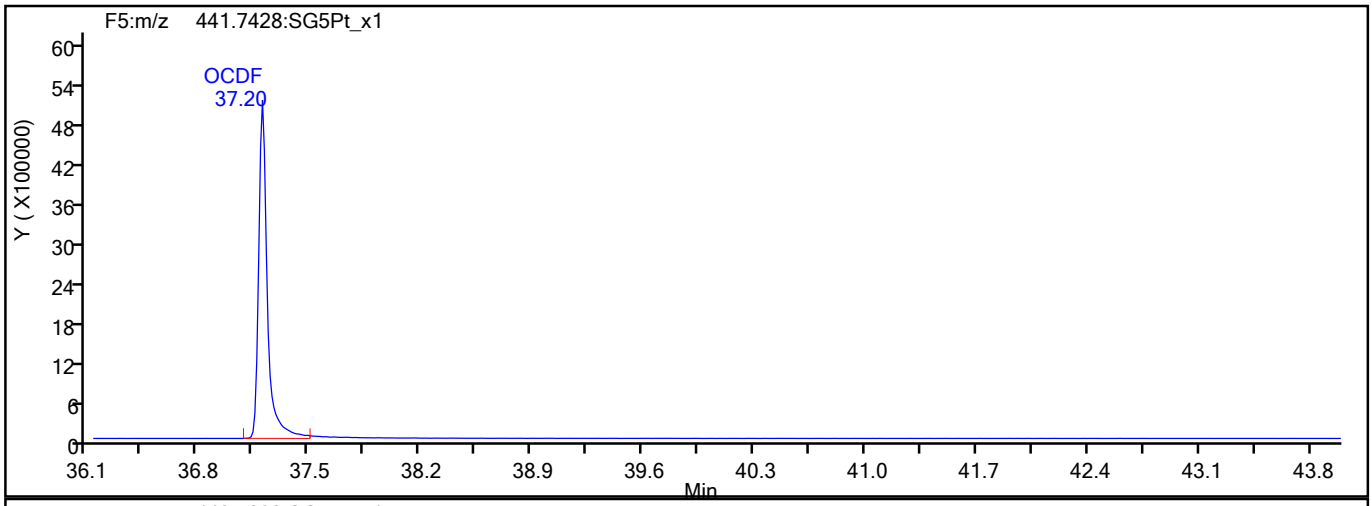

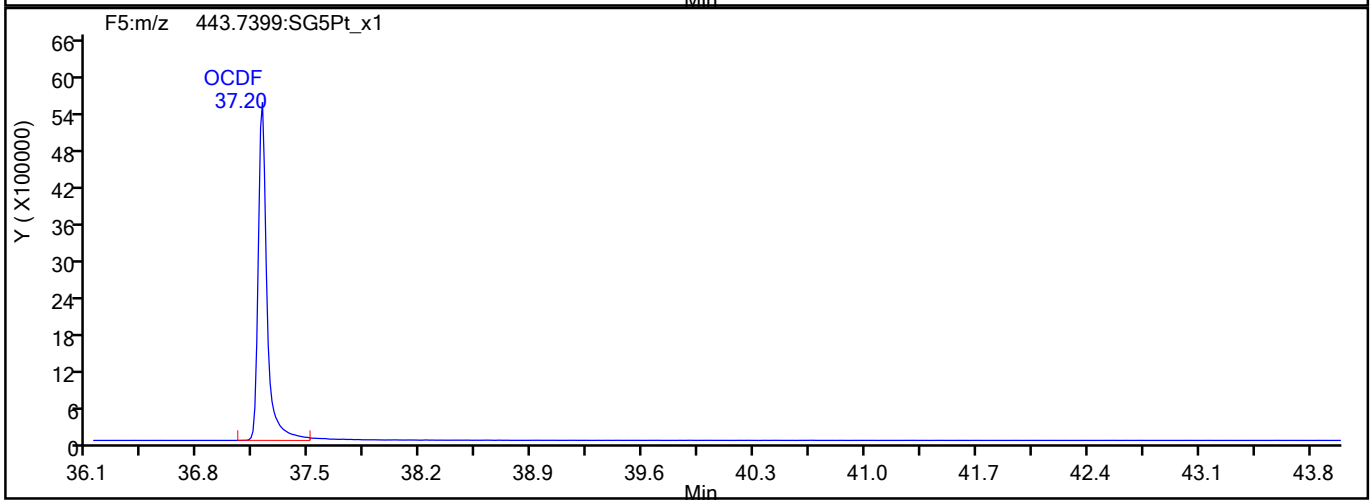

OCDF Interference Mass

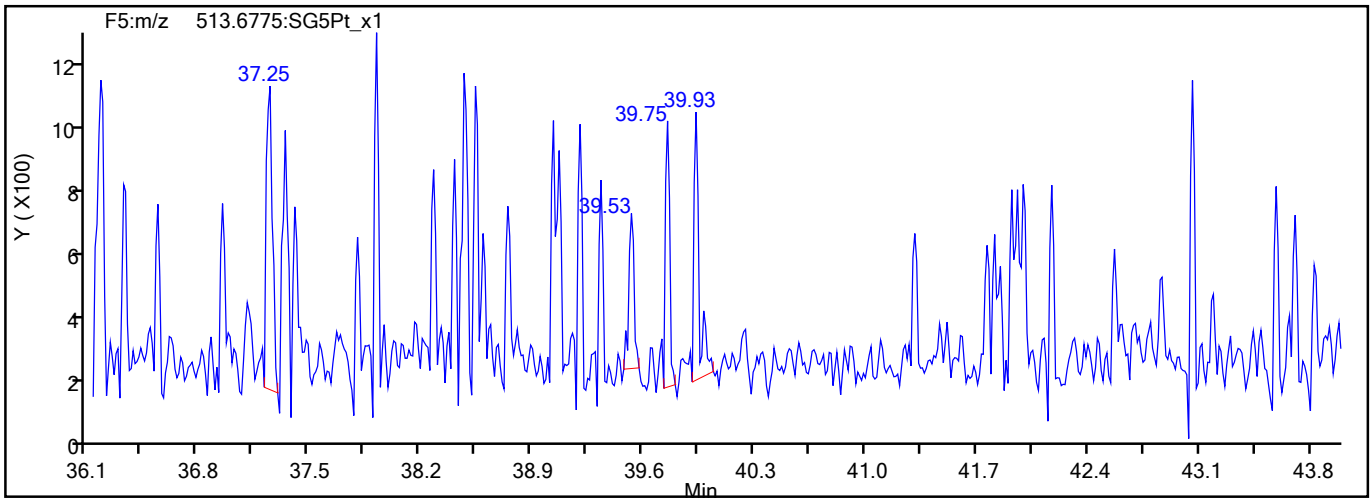

791465

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

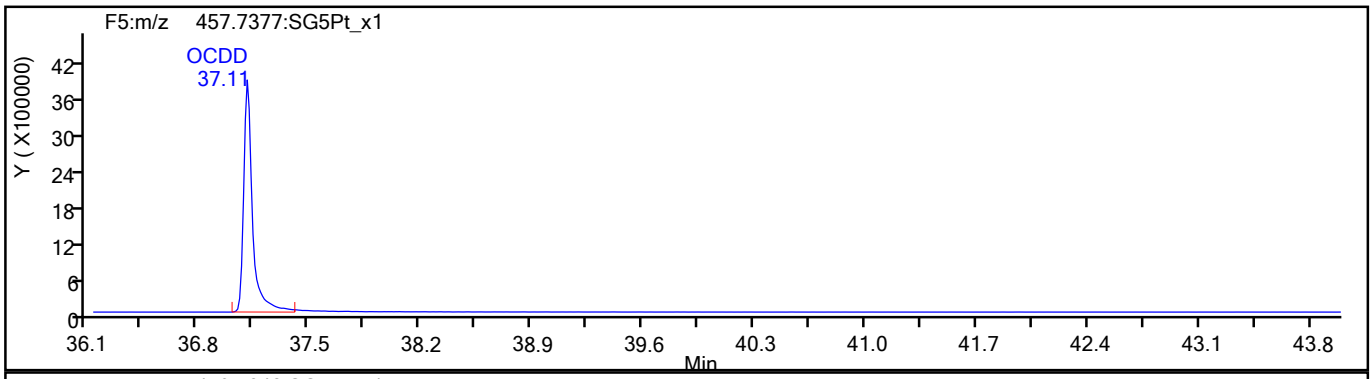

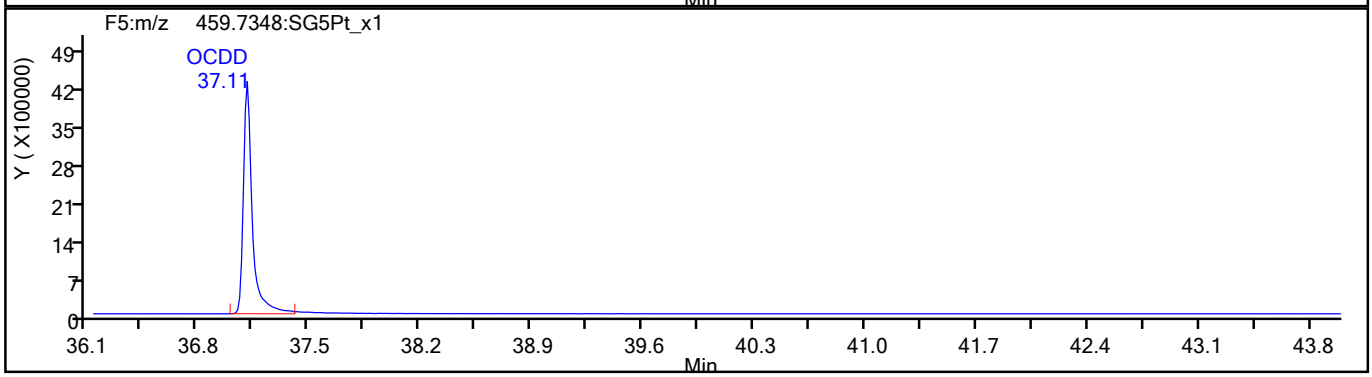

OCDD Standards

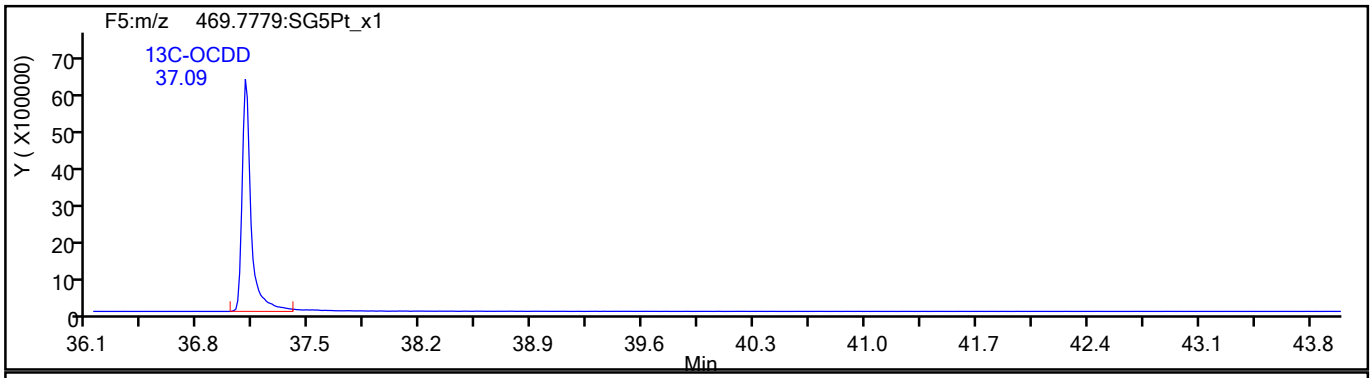

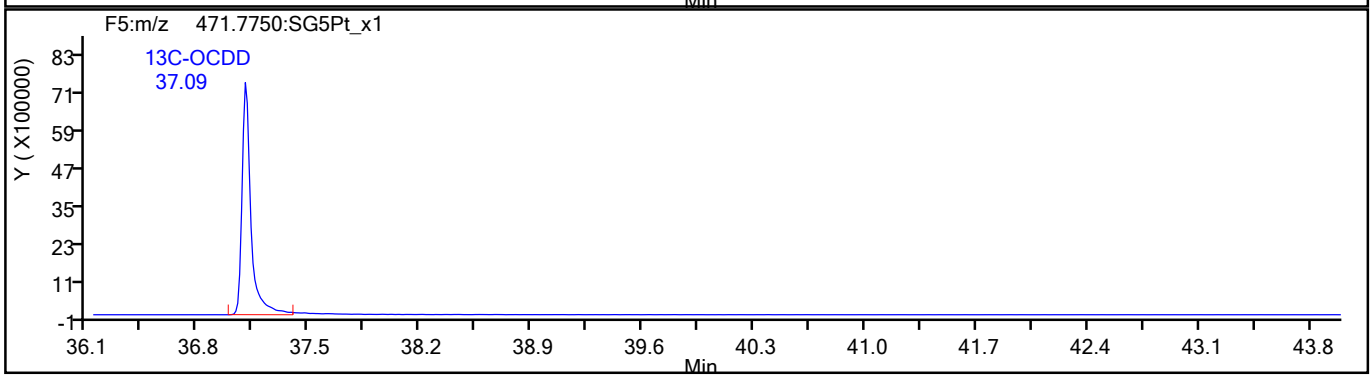

791466

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

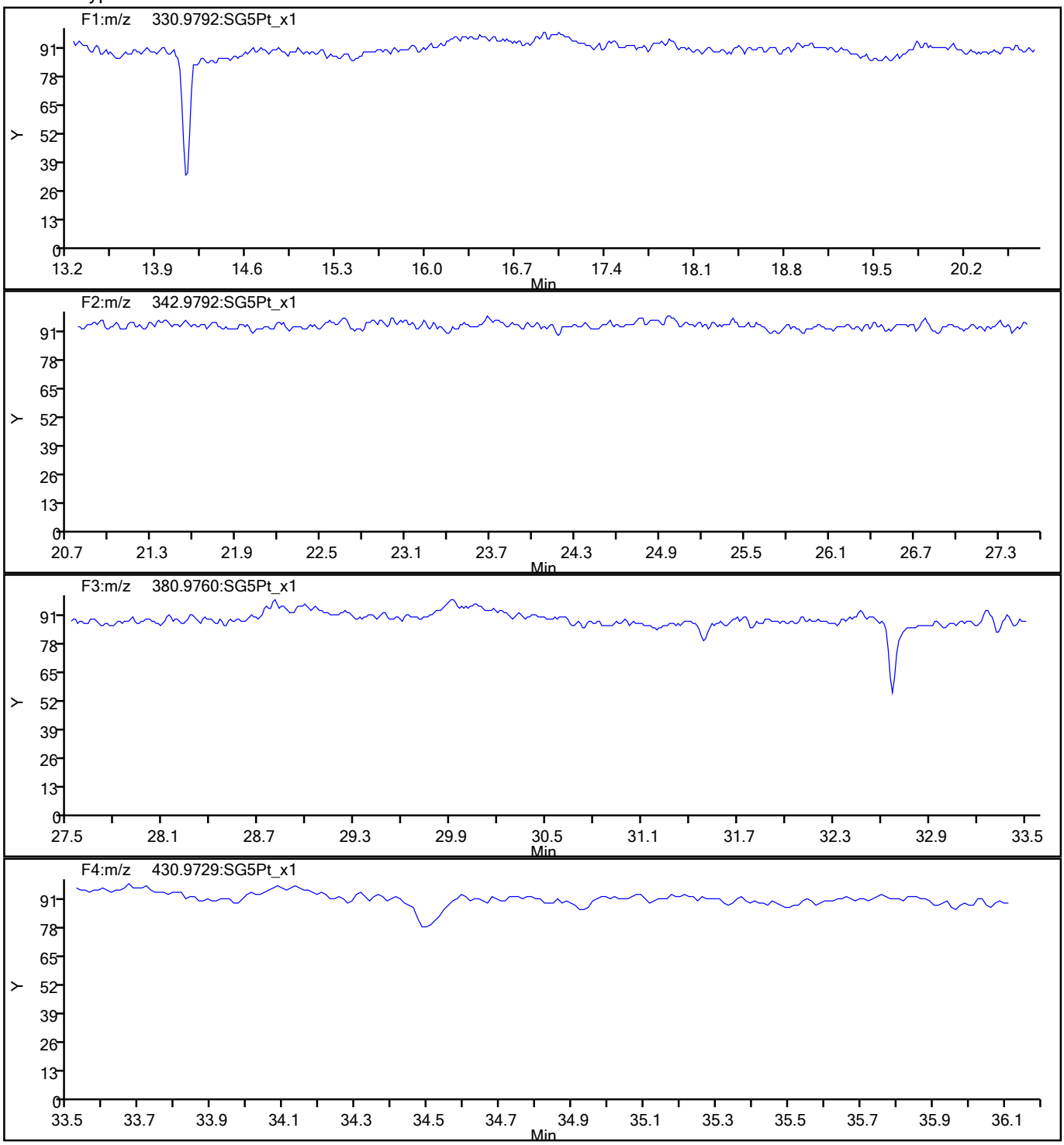

791467

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

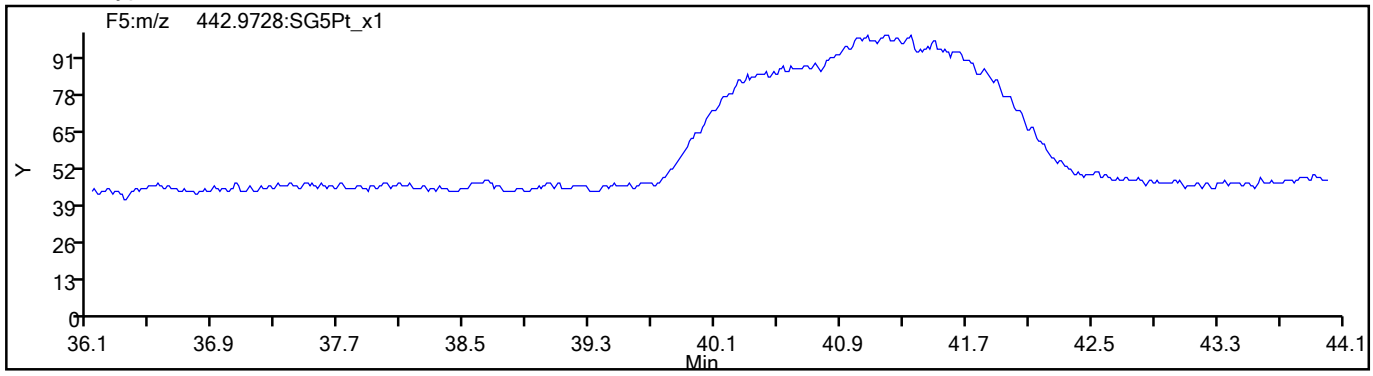

791468

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62046988	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	100332269	0.78	1.6249	99.5	99.5	0.1367	0.1367	99.52	
2,3,7,8-TCDF	17.628	44524782	0.76	1.0239	43.3	43.3	0.0503	0.0503	108	
S Total TCDF					43.3	43.3	0.0503	0.0503		
D 13C-2,3,7,8-TCDD	18.338	55471422	0.81	0.8993	99.4	99.4	0.1780	0.1780	99.41	
$ 37Cl4-2,3,7,8-TCDD	18.354	29474361		1.1071	42.9	42.9	0.0363	0.0363	107	
2,3,7,8-TCDD	18.354	29808948	0.78	1.2541	42.8	42.8	0.0471	0.0471	107	
S Total TCDD					42.8	42.8	0.0471	0.0471		
D 13C-1,2,3,7,8-PeCDF	22.762	75205597	1.60	1.2101	100.2	100.2	0.2087	0.2087	100	
1,2,3,7,8-PeCDF	22.776	171023920	1.60	1.0611	214.3	214.3	0.5904	0.5904	107	
D 13C-2,3,4,7,8-PeCDF	24.126	75259591	1.60	1.2395	97.9	97.9	0.2038	0.2038	97.86	
2,3,4,7,8-PeCDF	24.153	166805723	1.58	1.0184	217.6	217.6	0.6563	0.6563	109	
S Total PeCDF					431.9	431.9	0.6233	0.6233		
D 13C-1,2,3,7,8-PeCDD	24.862	46524396	1.64	0.7612	98.5	98.5	0.1093	0.1093	98.50	
1,2,3,7,8-PeCDD	24.889	105236005	1.57	1.0484	215.7	215.7	0.2317	0.2317	108	
S Total PeCDD					215.7	215.7	0.2317	0.2317		
D 13C-1,2,3,4,7,8-HxCDF	30.835	64951889	0.52	1.0837	95.7	95.7	0.4366	0.4366	95.70	
1,2,3,4,7,8-HxCDF	30.862	155057762	1.22	1.0851	220.0	220.0	1.165	1.165	110	
D 13C-1,2,3,6,7,8-HxCDF	31.008	70459920	0.52	1.1279	99.7	99.7	0.4194	0.4194	99.75	
1,2,3,6,7,8-HxCDF	31.022	168618976	1.23	1.1260	212.5	212.5	1.081	1.081	106	
D 13C-2,3,4,6,7,8-HxCDF	31.754	66145684	0.53	1.0637	99.3	99.3	0.4448	0.4448	99.29	
2,3,4,6,7,8-HxCDF	31.780	164241378	1.21	1.1675	212.7	212.7	0.8912	0.8912	106	
D 13C-1,2,3,7,8,9-HxCDF	32.526	59636084	0.52	0.9676	98.4	98.4	0.4890	0.4890	98.41	
1,2,3,7,8,9-HxCDF	32.539	148834491	1.23	1.1664	214.0	214.0	0.9364	0.9364	107	
S Total HxCDF					859.2	859.2	1.018	1.018		
* 13C-1,2,3,7,8,9-HxCDD	32.339	62627787	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44144841	1.25	0.7334	96.1	96.1	0.3745	0.3745	96.11	
1,2,3,4,7,8-HxCDD	31.953	103044220	1.27	1.0640	219.4	219.4	0.6488	0.6488	110	
D 13C-1,2,3,6,7,8-HxCDD	32.033	54392394	1.25	0.8802	98.7	98.7	0.3120	0.3120	98.67	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	118900298	1.28	1.0001	218.6	218.6	0.5965	0.5965	109	
1,2,3,7,8,9-HxCDD	32.353	122394998	1.26	1.1325	219.4	219.4	0.5651	0.5651	110	
S Total HxCDD					657.3	657.3	0.6034	0.6034		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	47752972	0.44	0.7730	98.6	98.6	1.001	1.001	98.64	
1,2,3,4,6,7,8-HpCDF	33.924	147892240	1.06	1.4413	214.9	214.9	2.024	2.024	107	
D 13C-1,2,3,4,7,8,9-HpCDF	35.017	42687625	0.44	0.7008	97.3	97.3	1.104	1.104	97.26	
1,2,3,4,7,8,9-HpCDF	35.017	123968724	1.06	1.3174	220.4	220.4	2.743	2.743	110	
S Total HpCDF					435.3	435.3	2.383	2.383		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	40442950	1.02	0.6472	99.8	99.8	0.5241	0.5241	99.77	
1,2,3,4,6,7,8-HpCDD	34.726	94435922	1.04	1.0943	213.4	213.4	0.9683	0.9683	107	
S Total HpCDD					213.4	213.4	0.9683	0.9683		
D 13C-OCDD	37.093	57303880	0.88	0.4472	204.6	204.6	0.2753	0.2753	102	
OCDF	37.201	181747068	0.91	1.4382	441.1	441.1	0.4159	0.4159	110	
OCDD	37.105	135570174	0.90	1.1070	427.4	427.4	0.4029	0.4029	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		27754917	7076779	4201	10502	1685		
333.9339	18.142	18.142	0		34292071	8691565	5896	14740	1474	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	43967601	10754823	8470	21175	1270		
317.9389	17.613	17.616	0	0.971	56364668	13840834	5538	13845	2499	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	19278962	4714580	2218	5545	2126		
305.8987	17.628	17.631	0	1.001	25245820	6261705	2854	7135	2194	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24807018	5848000	4201	10502	1392		
333.9339	18.338	18.338	0	1.011	30664404	7186127	5896	14740	1219	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	29474361	7040079	2537	6342	2775		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	13088265	3099418	1571	3927	1973		
321.8936	18.354	18.357	0	1.001	16720683	3961925	1508	3770	2627	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46265218	8069932	9479	23697	851		
353.8970	22.749	22.754	0	1.254	28940379	5072009	6452	16130	786	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	105236981	18677381	20013	50032	933		
341.8567	22.776	22.779	0	1.001	65786939	11693027	12919	32297	905	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46298187	7561650	9479	23697	798		
353.8970	24.126	24.129	0	1.330	28961404	4756017	6452	16130	737	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	102234081	17002363	20013	50032	850		
341.8567	24.153	24.156	0	1.001	64571642	10773383	12919	32297	834	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28884955	4397104	3175	7937	1385		
369.8919	24.862	24.865	0	1.370	17639441	2717935	2071	5177	1312	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	64347111	9837651	3945	9862	2494		
357.8516	24.889	24.892	0	1.001	40888894	6265054	2969	7422	2110	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	22237957	4900100	10775	26937	455		
385.8610	30.835	30.838	0	0.953	42713932	9213265	21190	52975	435	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	85201859	18424877	39257	98142	469		
375.8178	30.849	30.857	0	1.000	69855903	15011303	32096	80240	468	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	23996455	5001651	10775	26937	464		
385.8610	31.008	31.003	0	0.959	46463465	9659865	21190	52975	456	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	92842545	20075526	39257	98142	511		
375.8178	31.022	31.022	0	1.000	75776431	16178695	32096	80240	504	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	22792396	5861290	10775	26937	544		
385.8610	31.754	31.756	0	0.982	43353288	11282982	21190	52975	532	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.780	31.772	0	1.001	89865159	23412461	39257	98142	596		
375.8178	31.767	31.772	0	1.000	74376219	19191516	32096	80240	598	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20506438	5659225	10775	26937	525		
385.8610	32.526	32.523	0	1.006	39129646	10674002	21190	52975	504	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	82057134	22664755	39257	98142	577		
375.8178	32.539	32.534	0	1.000	66777357	17875439	32096	80240	557	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		34509982	9306847	9505	23762	979		
403.8529	32.339	32.342	0		28117805	7584182	9052	22630	838	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	24560847	6976899	9505	23762	734		
403.8529	31.927	31.929	0	0.987	19583994	5667072	9052	22630	626	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.953	31.945	0	1.001	57595942	16510469	19316	48290	855		
391.8127	31.940	31.945	0	1.000	45448278	13107381	15598	38995	840	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	30198617	8138784	9505	23762	856		
403.8529	32.033	32.033	0	0.991	24193777	6493948	9052	22630	717	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	66690137	17959920	19316	48290	930		
391.8127	32.047	32.047	0	1.000	52210161	14135061	15598	38995	906	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	68169382	18483699	19316	48290	957		
391.8127	32.353	32.355	0	1.013	54225616	14872863	15598	38995	954	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14610497	4589210	16388	40970	280		
419.8220	33.912	33.914	0	1.049	33142475	10497182	35883	89707	293	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	75936953	24520194	90693	226732	270		
409.7789	33.924	33.926	0	1.000	71955287	23549459	85368	213420	276	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.017	35.010	0	1.083	12971814	3739945	16388	40970	228		
419.8220	35.017	35.010	0	1.083	29715811	8442322	35883	89707	235	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	63647403	18553677	90693	226732	205		
409.7789	35.017	35.020	0	1.000	60321321	17850429	85368	213420	209	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	20381379	6053926	11567	28917	523		
437.8140	34.714	34.716	0	1.073	20061571	5957434	11351	28377	525	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	48165795	14539111	26079	65197	558		
425.7737	34.726	34.726	0	1.000	46270127	14041663	24831	62077	565	1.04(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26901378	6693523	3896	9740	1718		
471.7750	37.093	37.094	0	1.147	30402502	7661603	4420	11050	1733	0.88(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	86562223	22814939	9244	23110	2468		
443.7399	37.201	37.199	0	1.003	95184845	24785143	7929	19822	3126	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	64116469	16176091	6061	15152	2669		
459.7348	37.105	37.106	0	1.000	71453705	17977820	6746	16865	2665	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

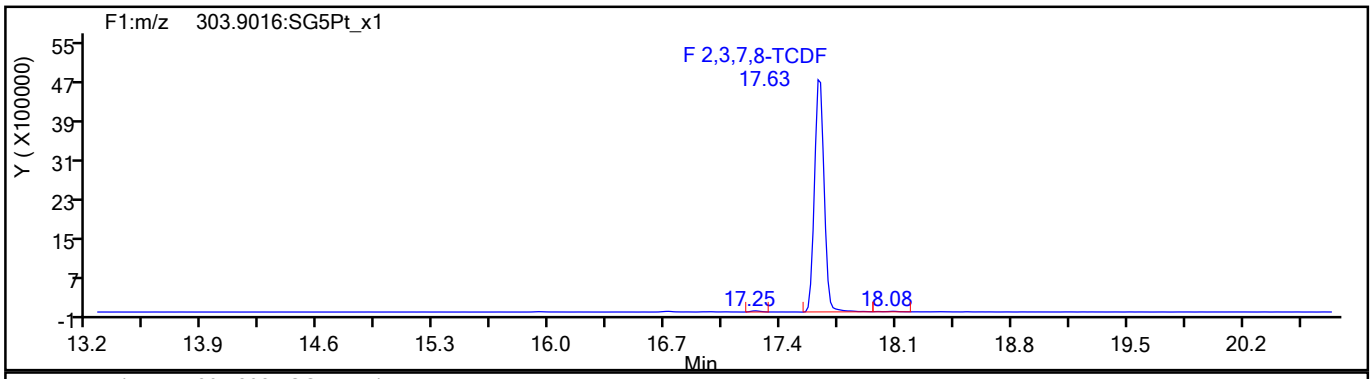

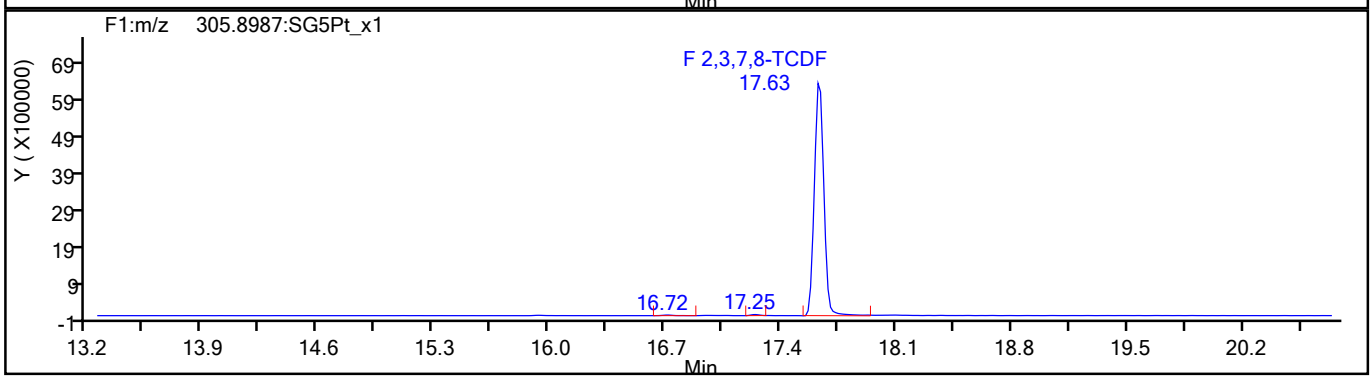

TCDF Standards

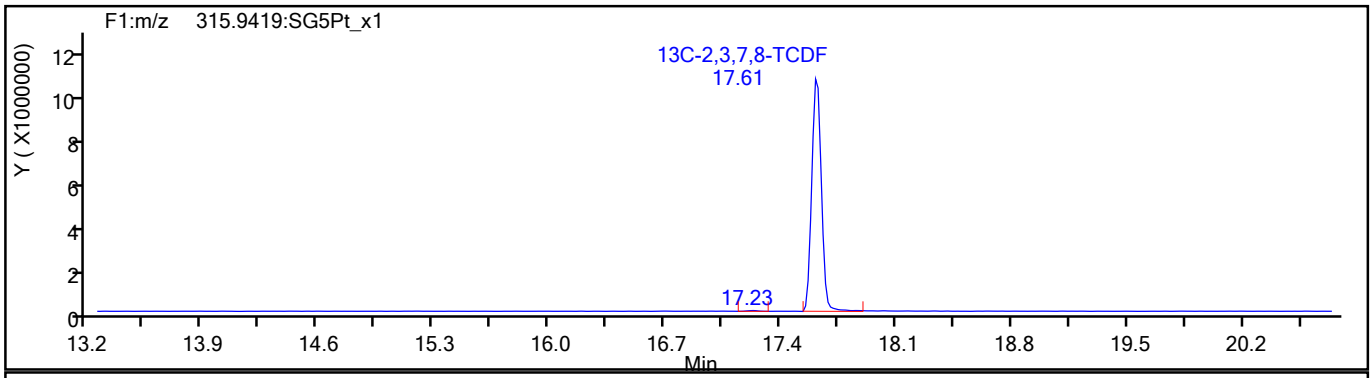

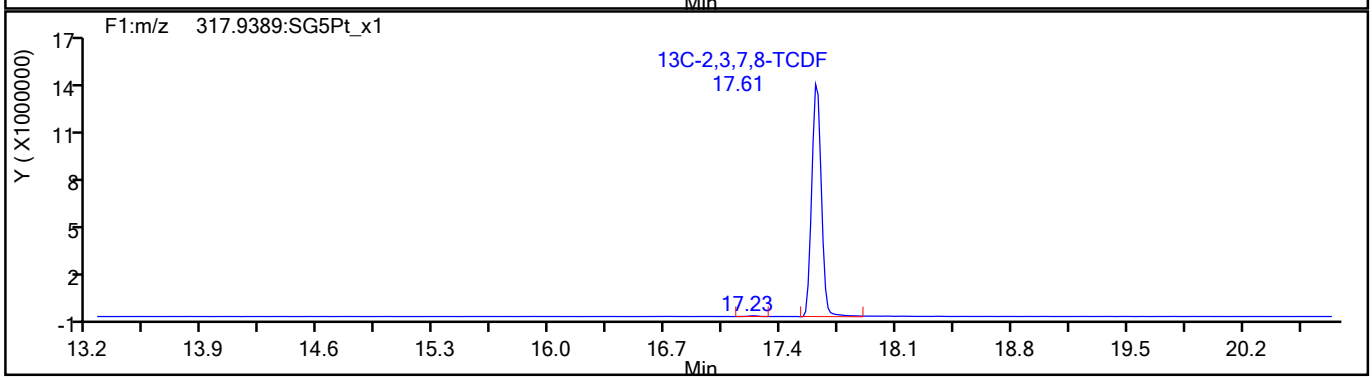

791474

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

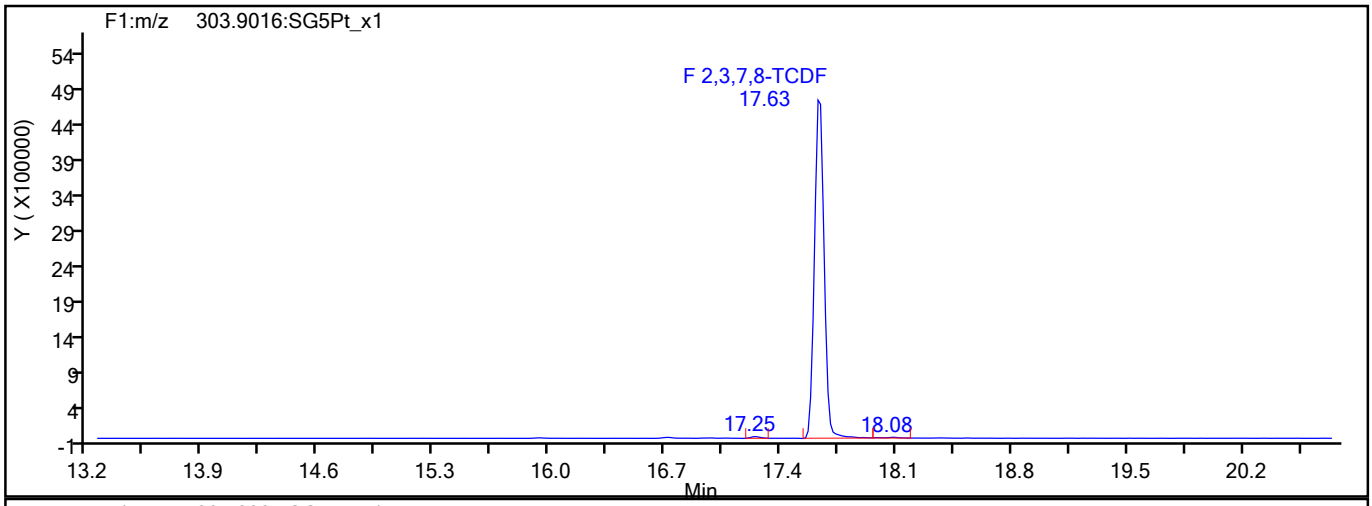

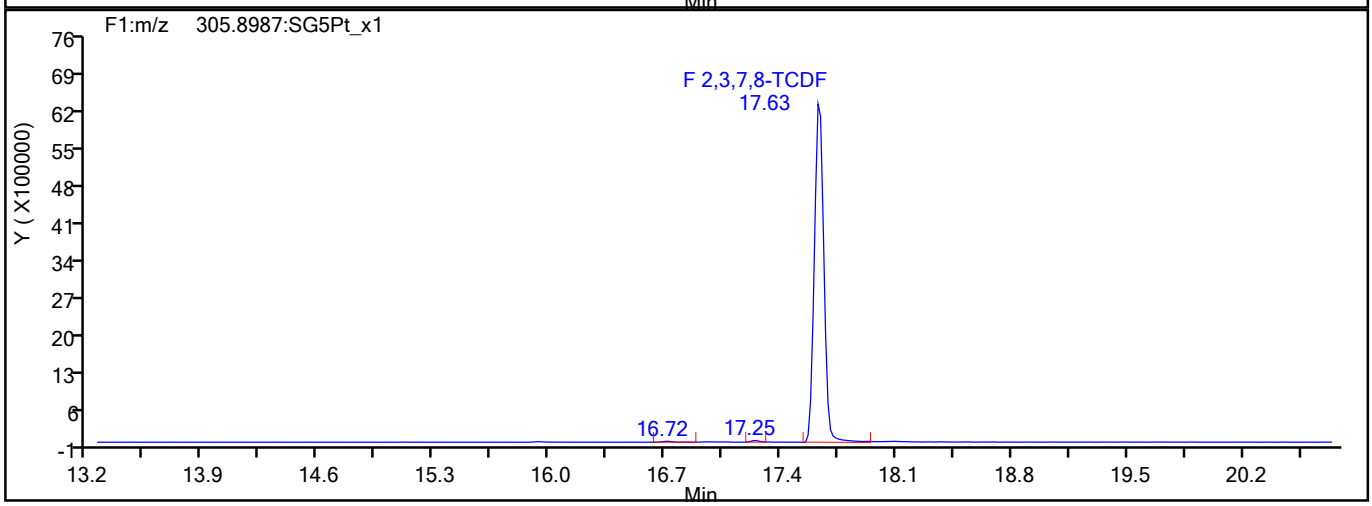

TCDF Interference Mass

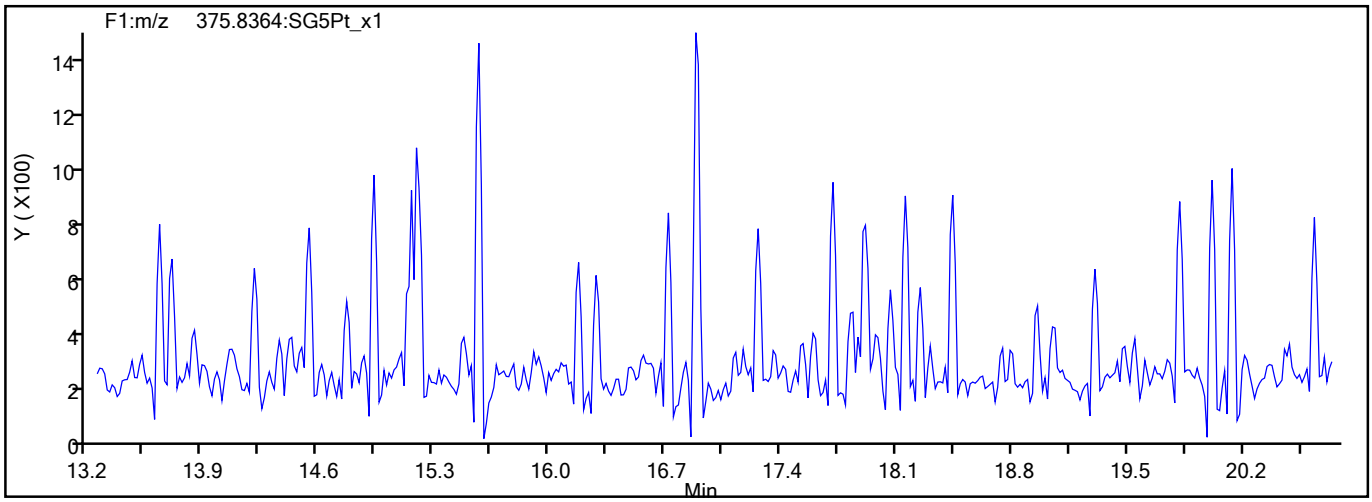

791475

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

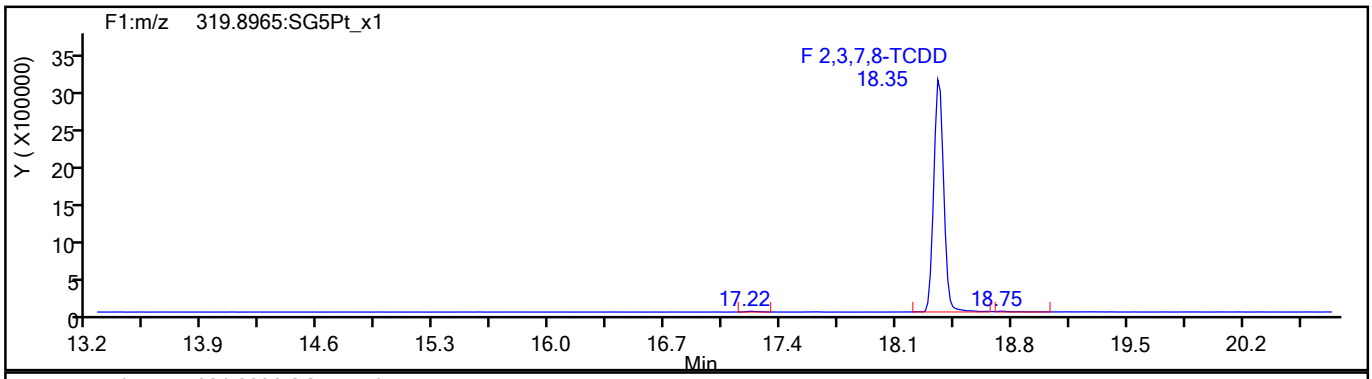

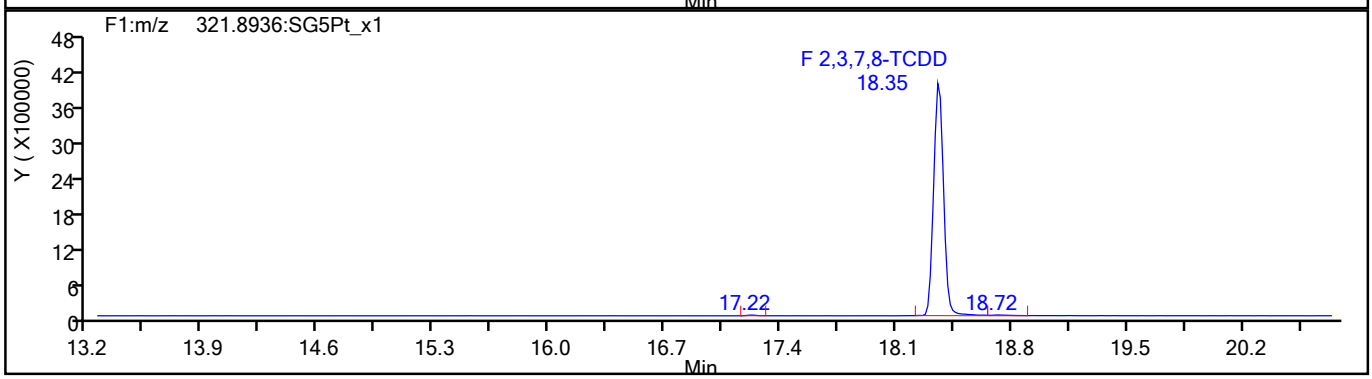

TCDD Standards

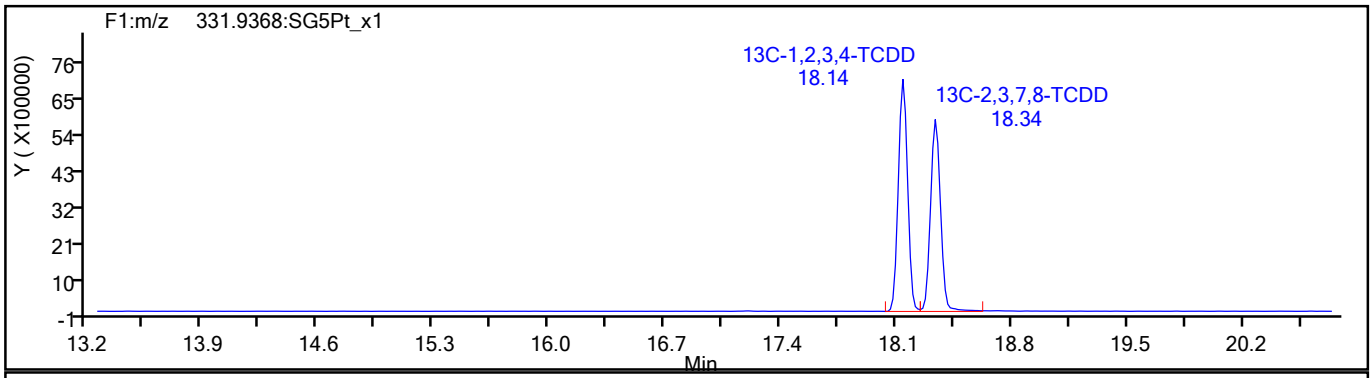

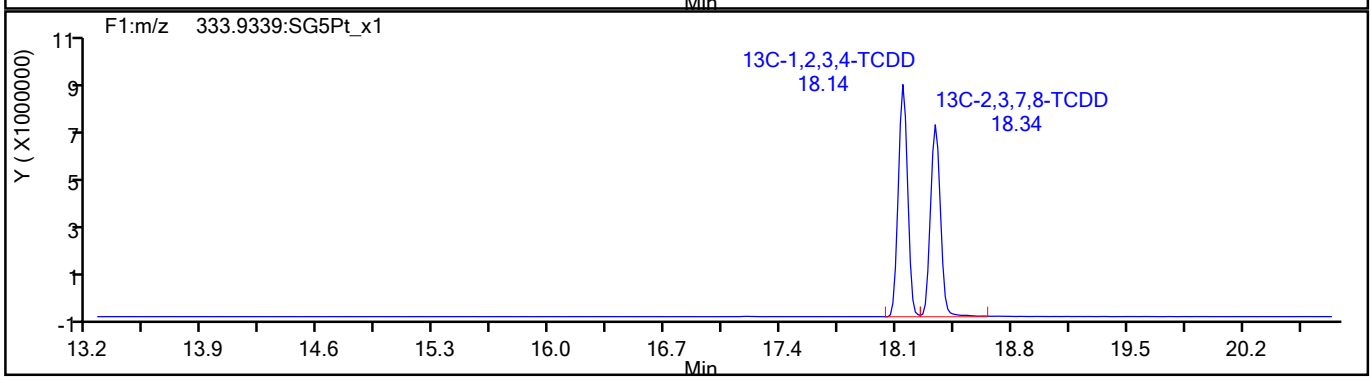

791476

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

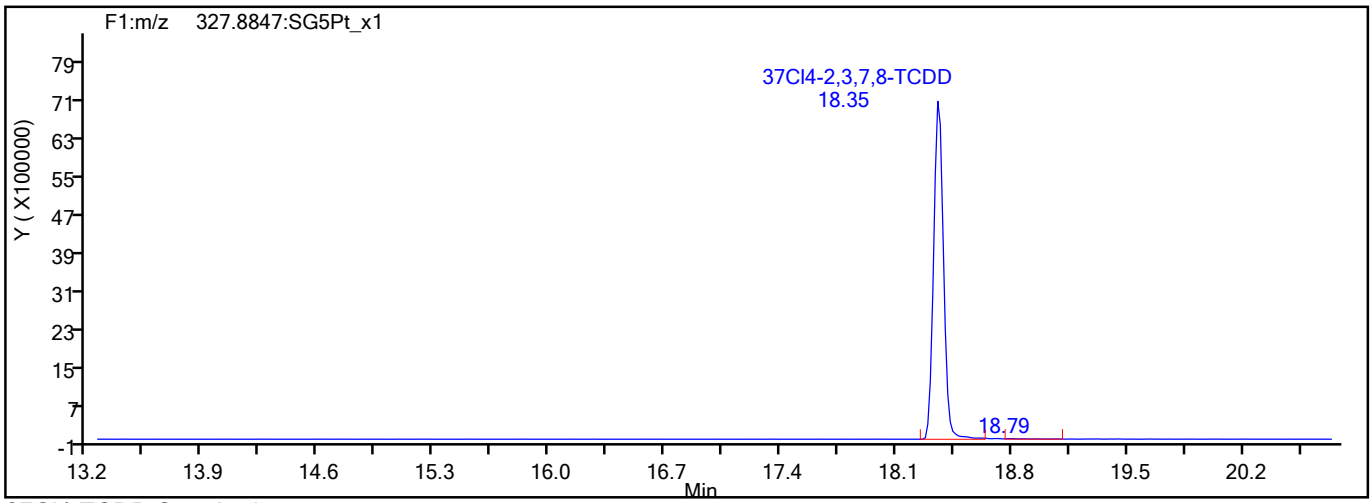

37Cl4-TCDD Standards

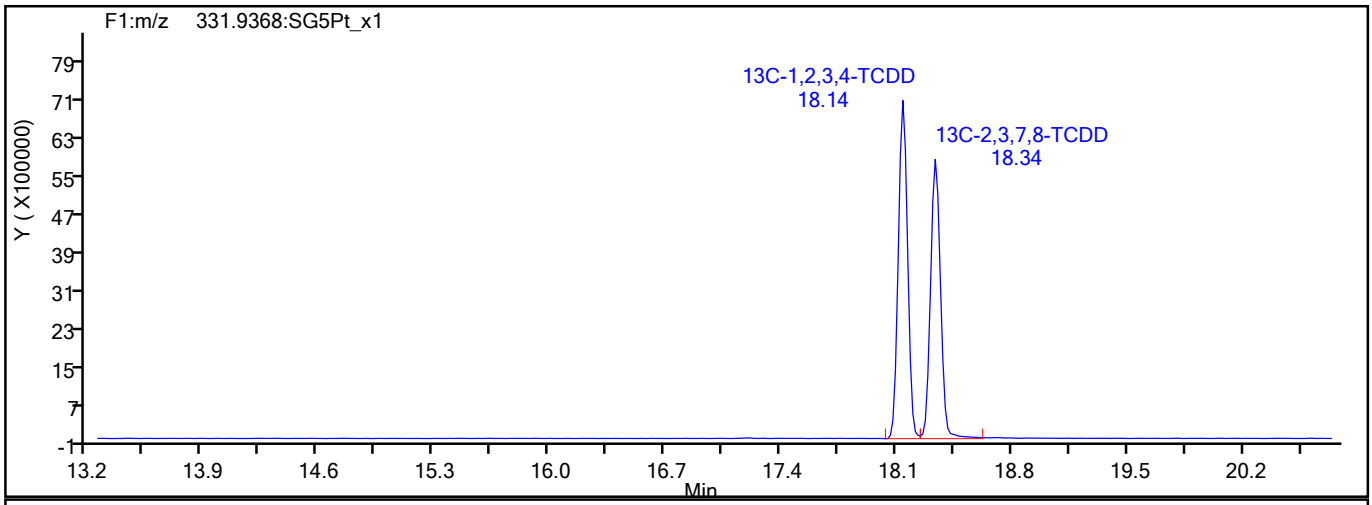

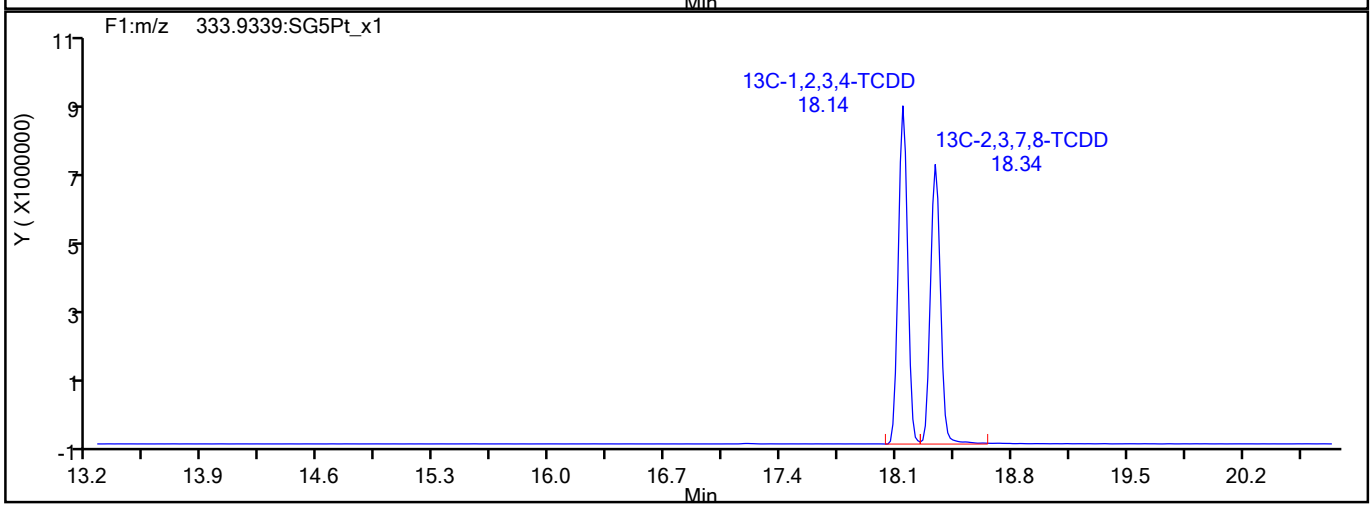

791477

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

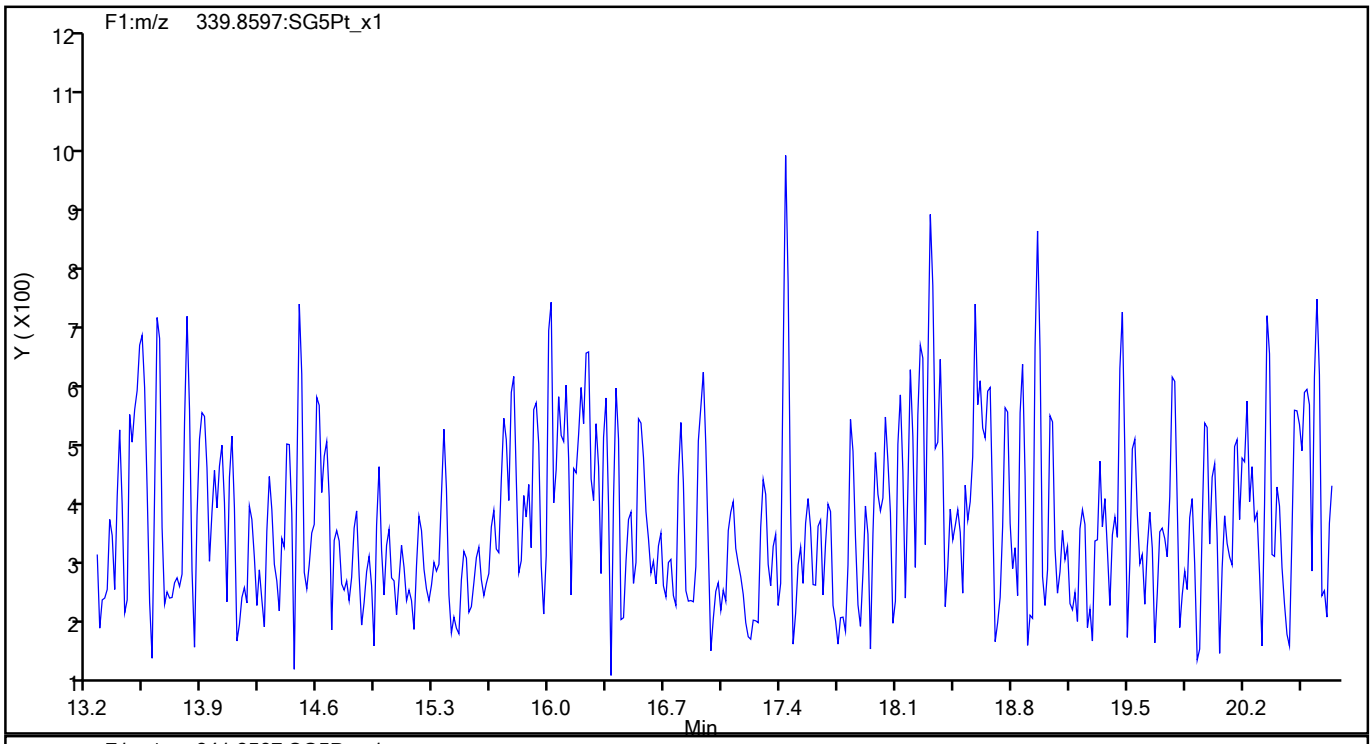

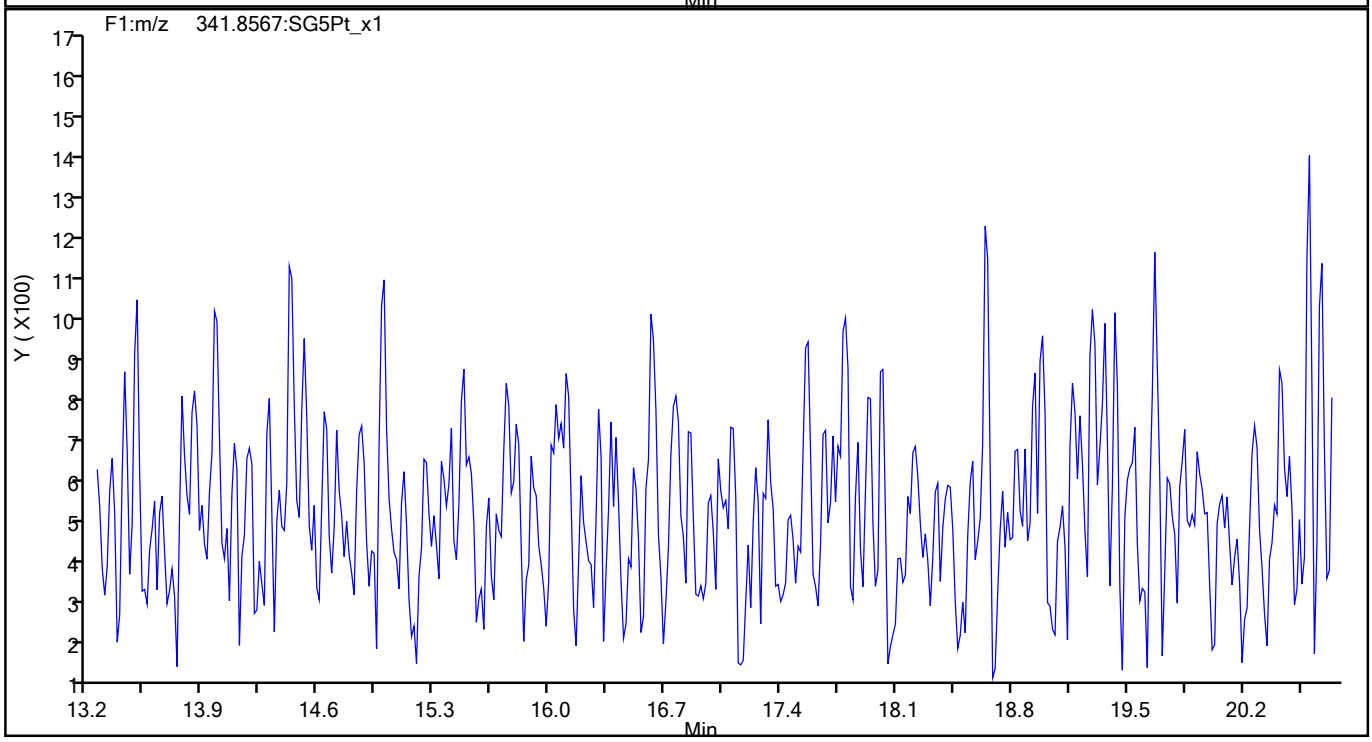

791478

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

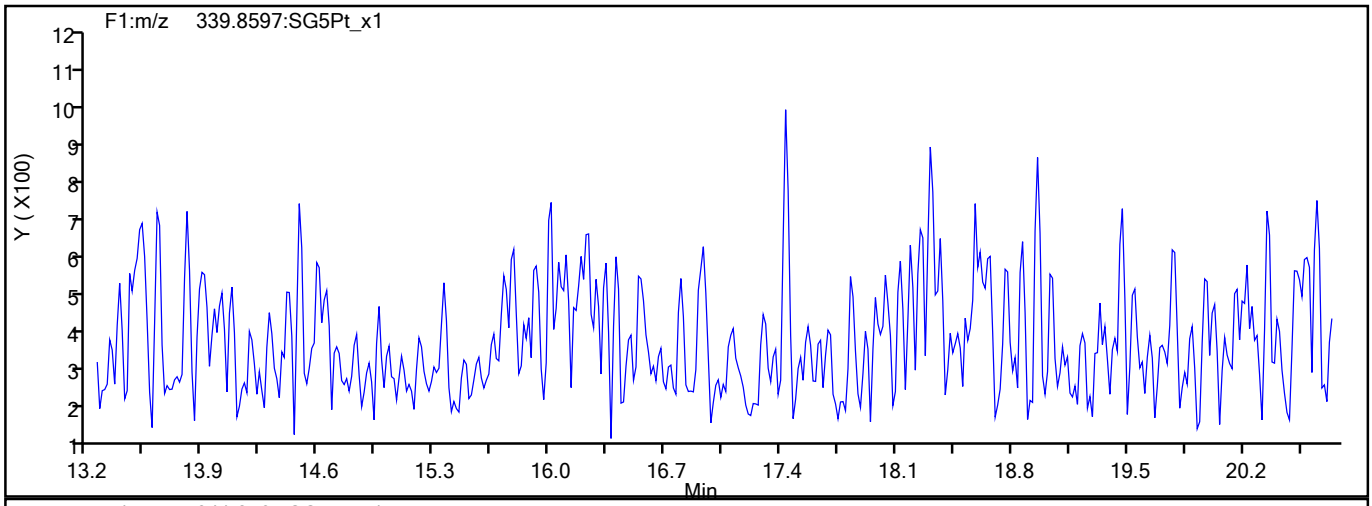

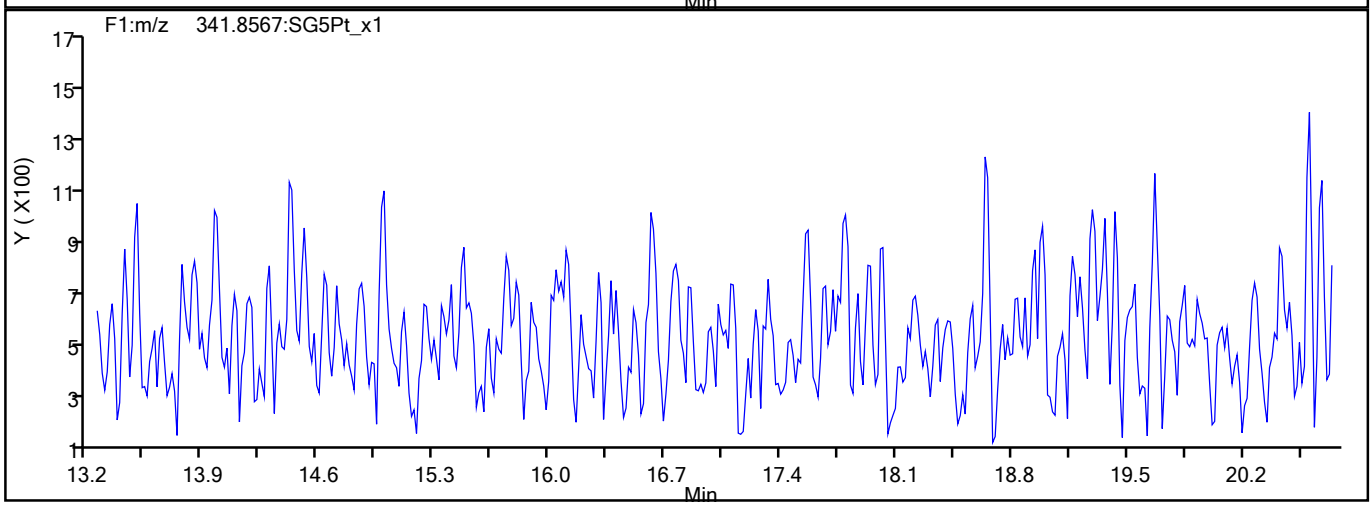

F1 PeCDFs Interference Mass

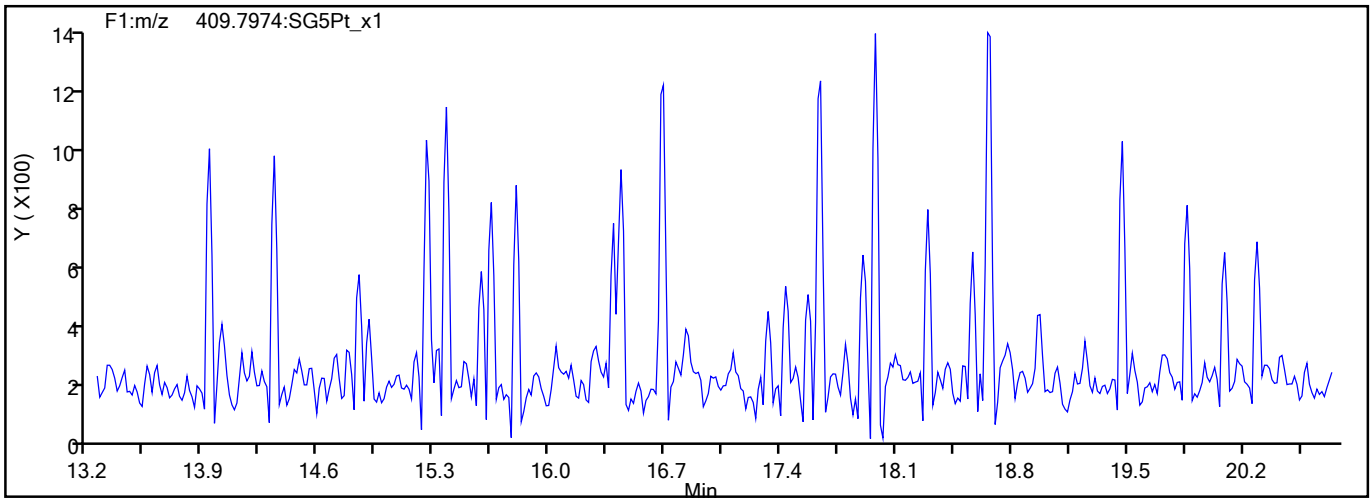

791479

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

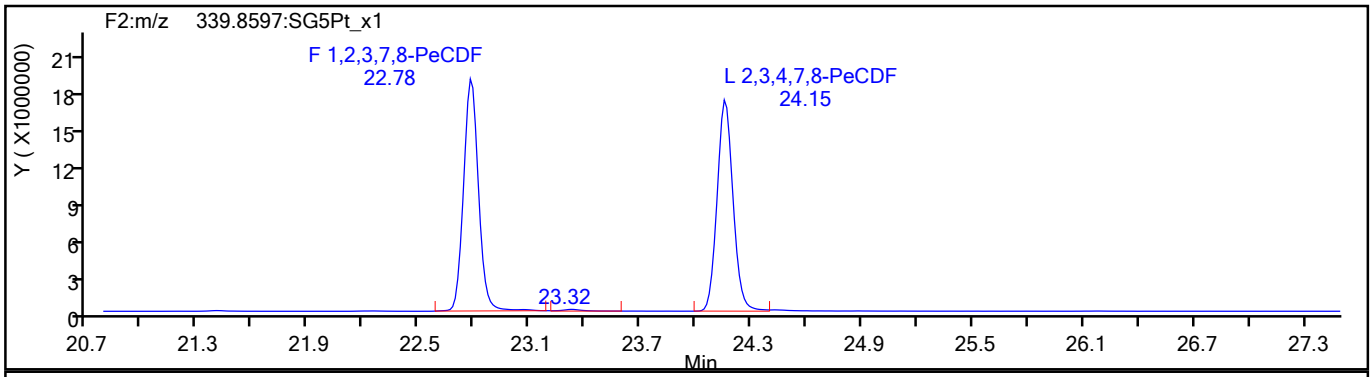

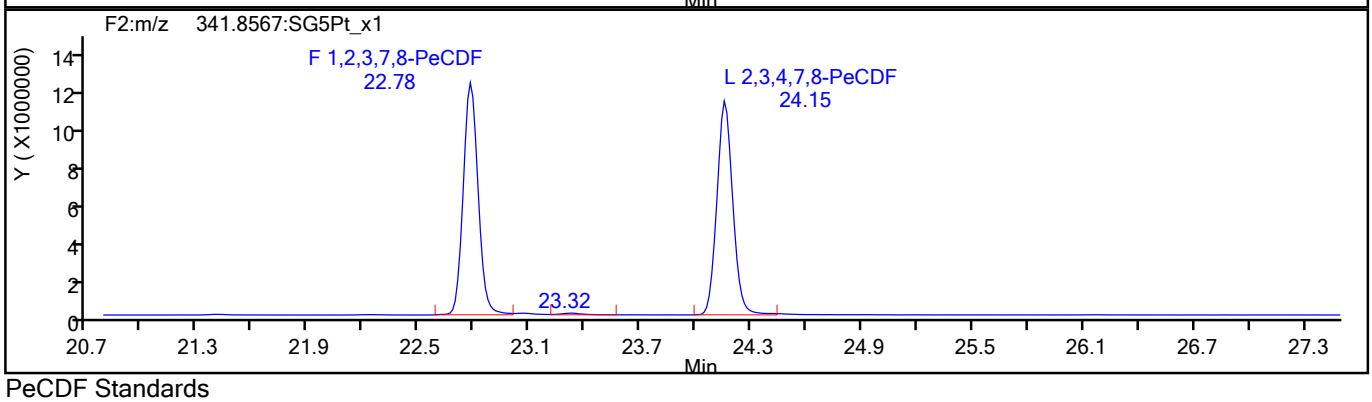

PeCDF Standards

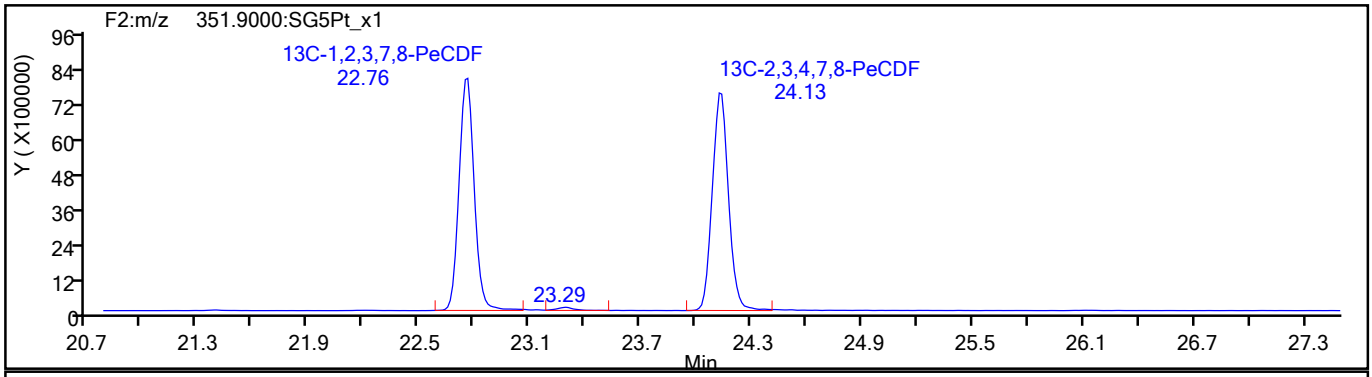

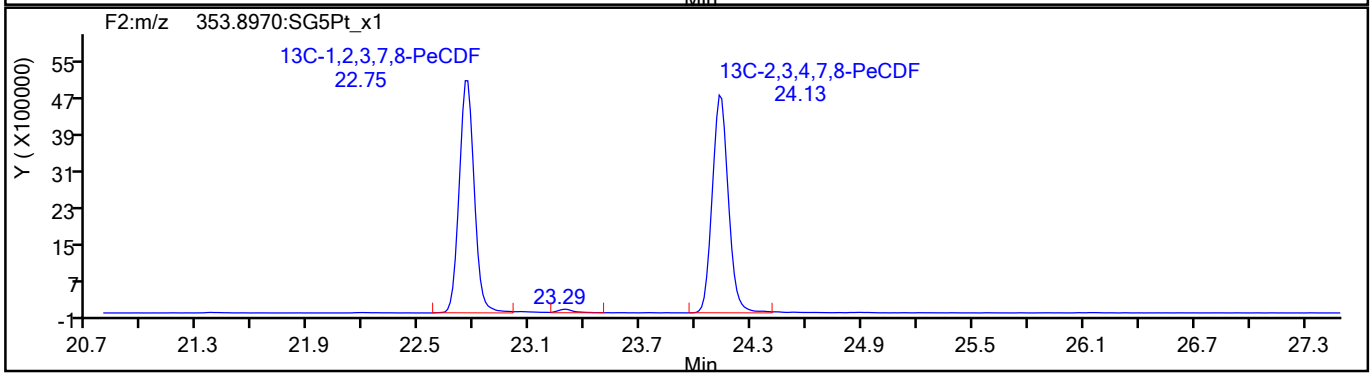

791480

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

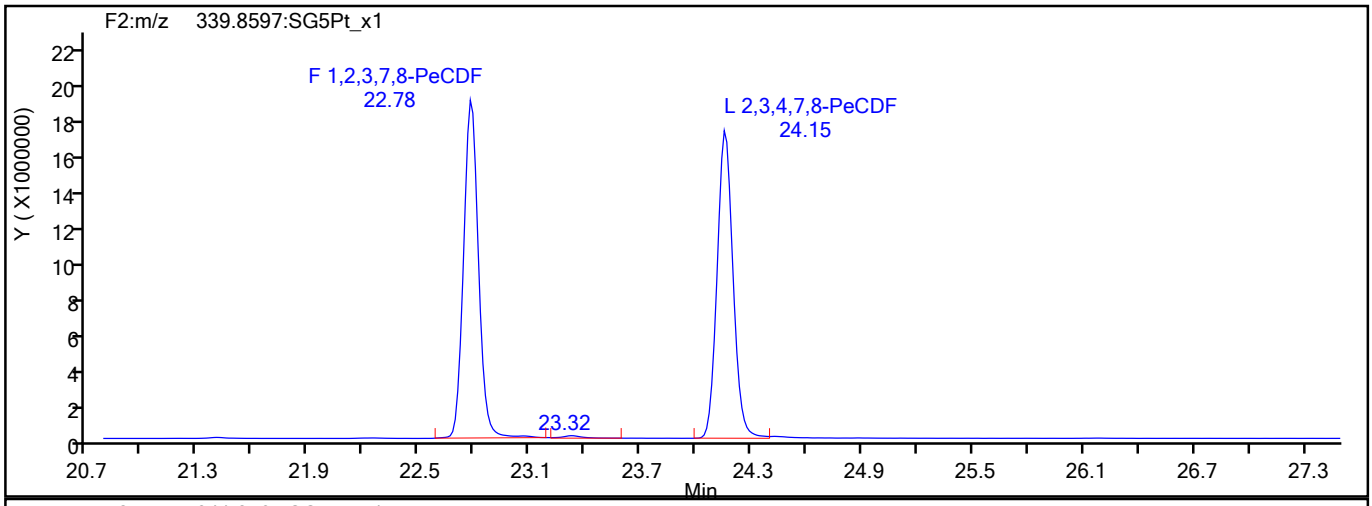

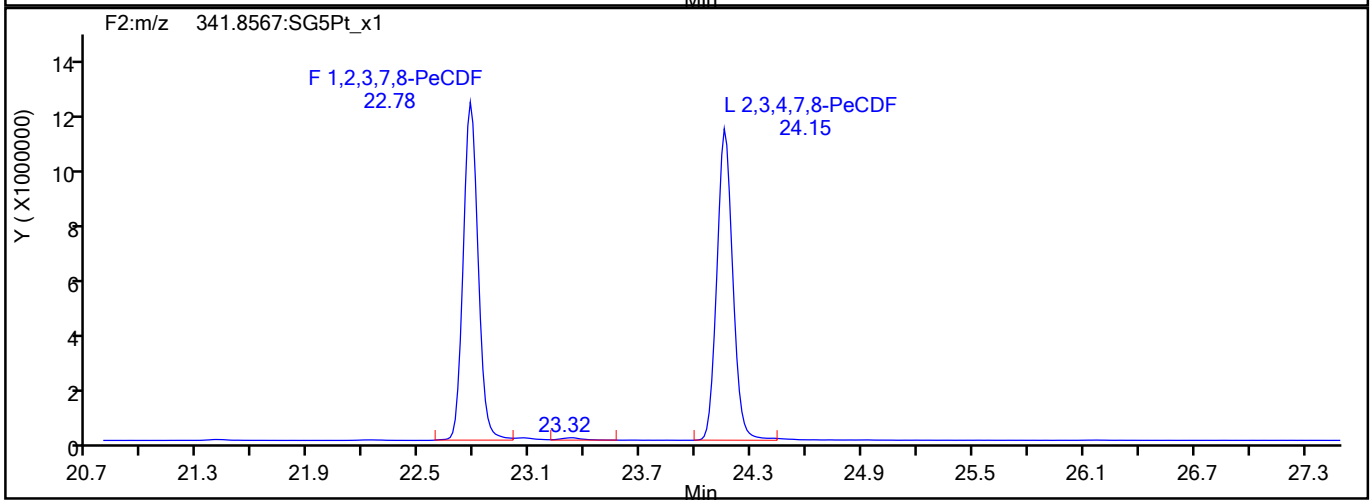

PeCDF Interference Mass

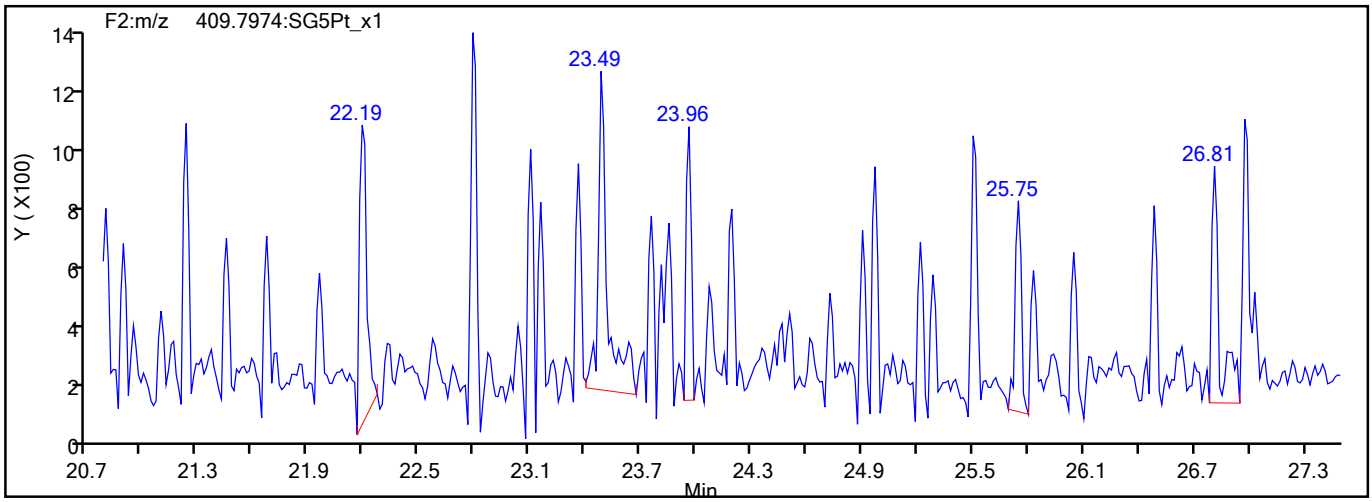

791481

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

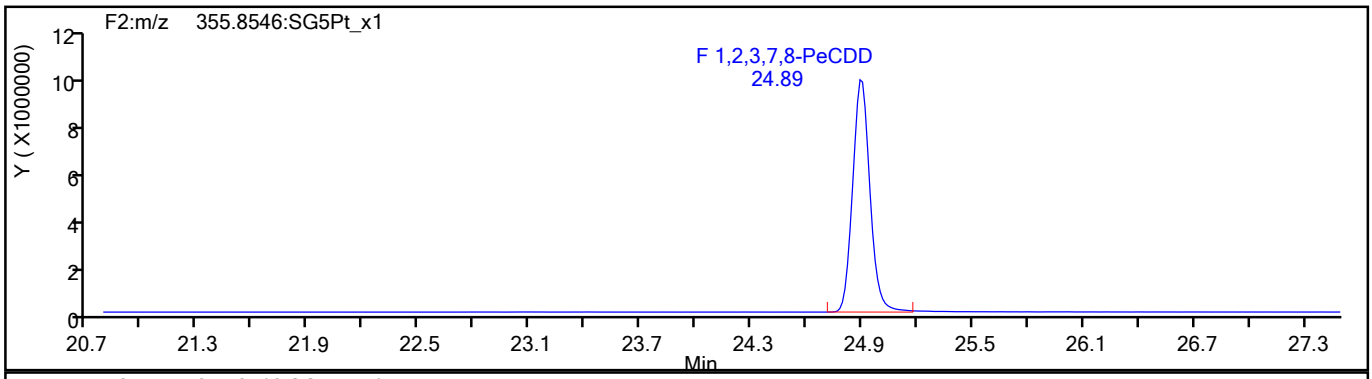

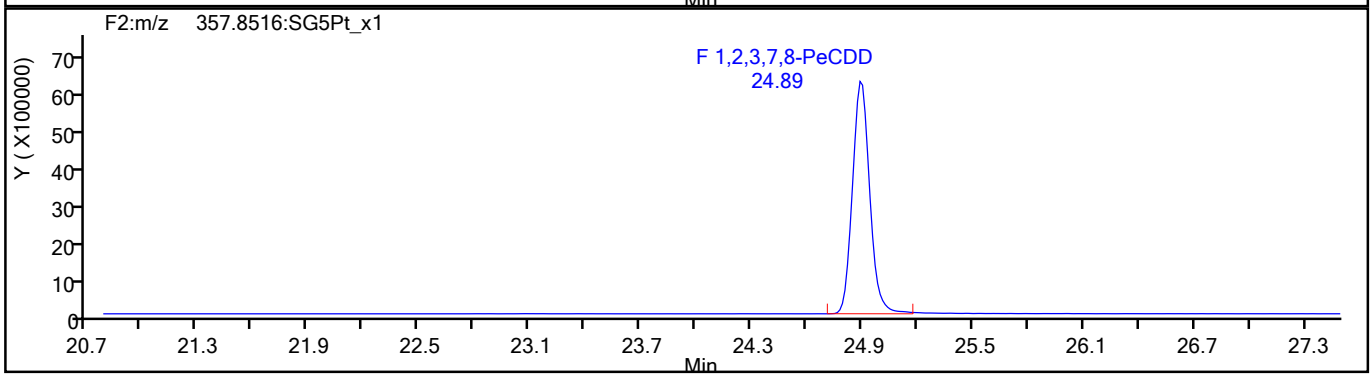

PeCDD Standards

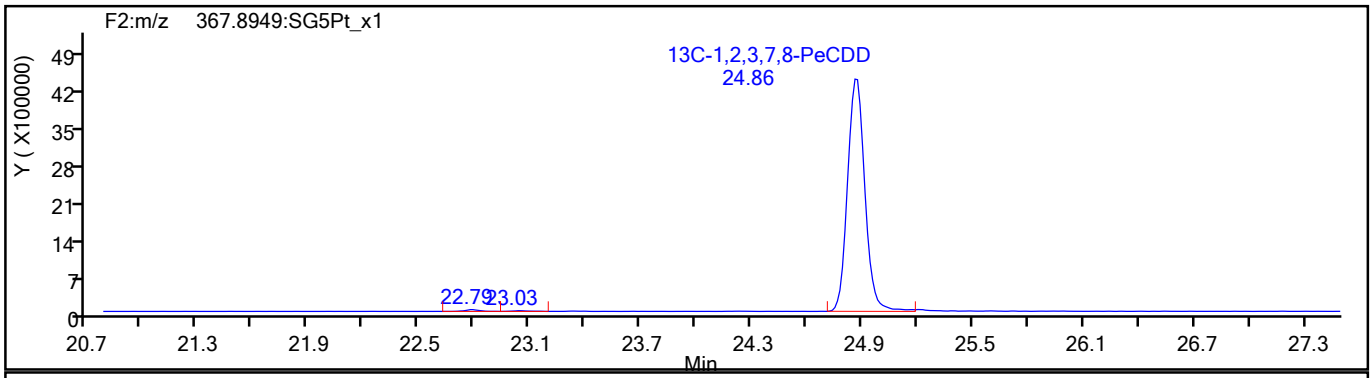

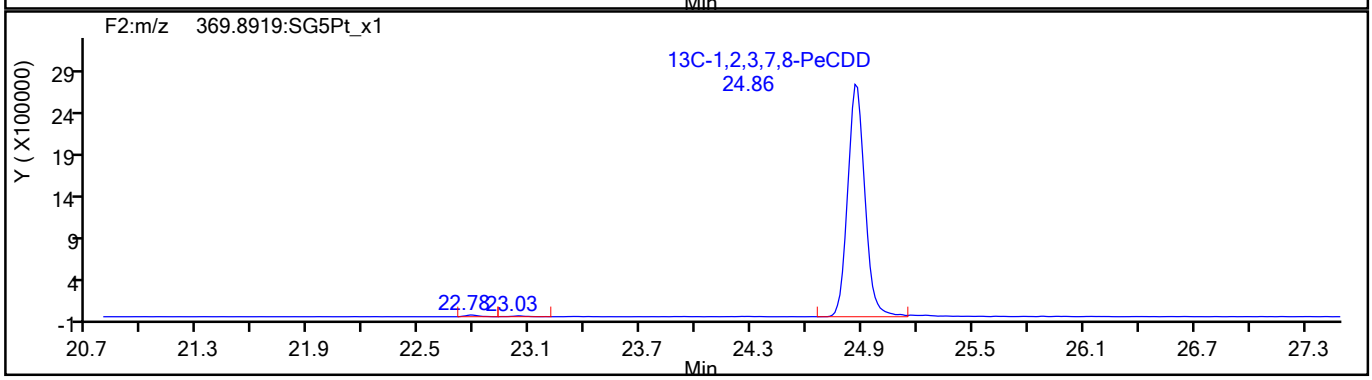

791482

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

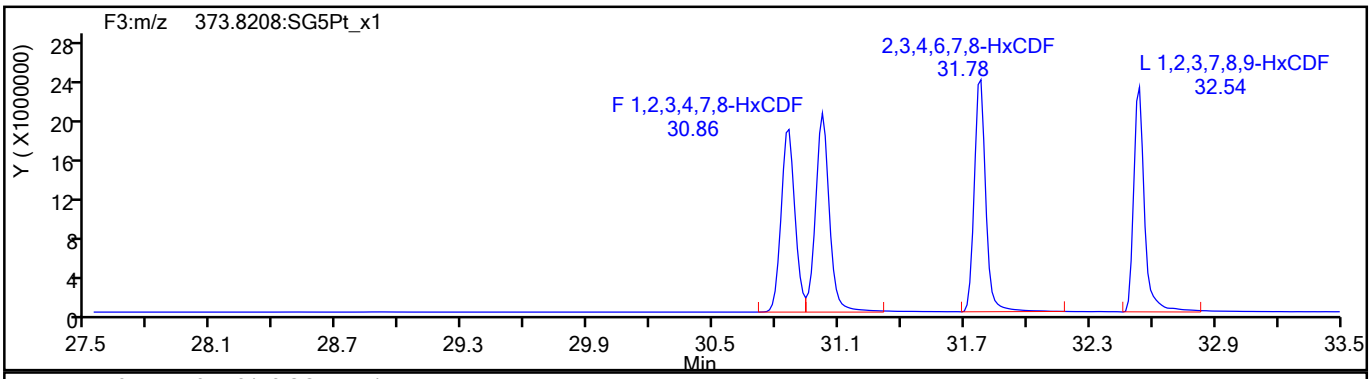

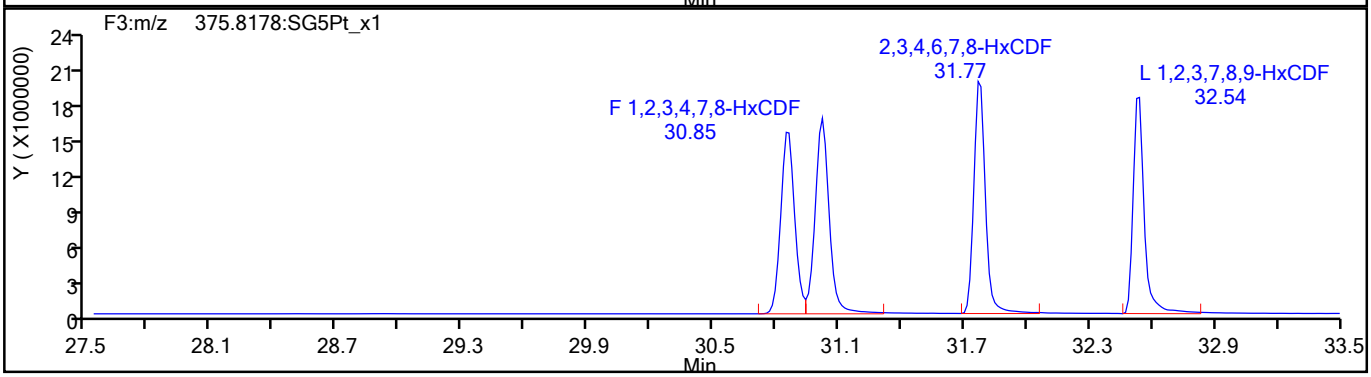

HxCDF Standards

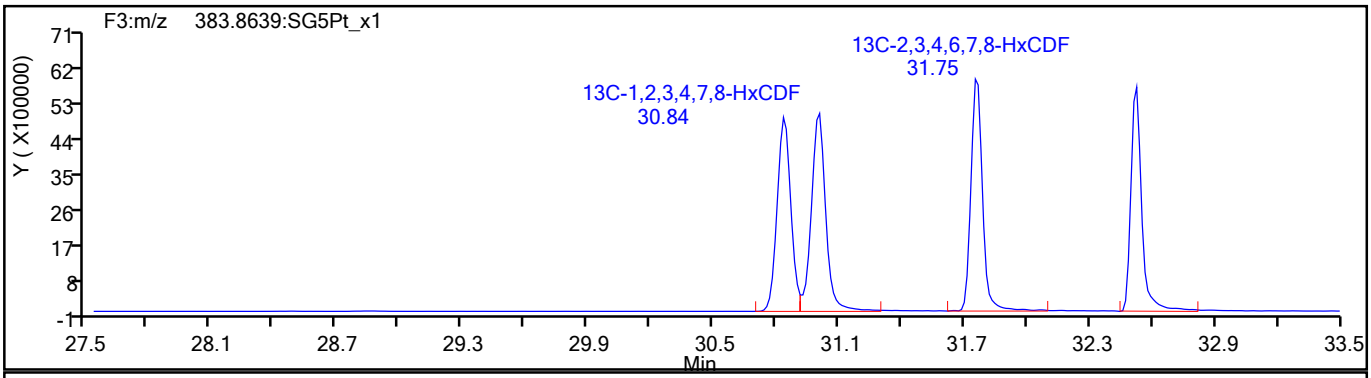

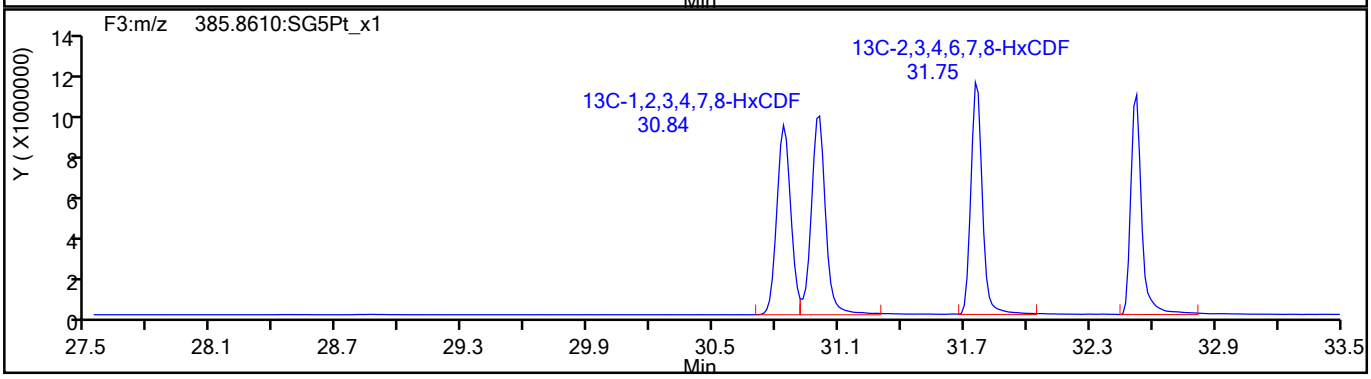

791483

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

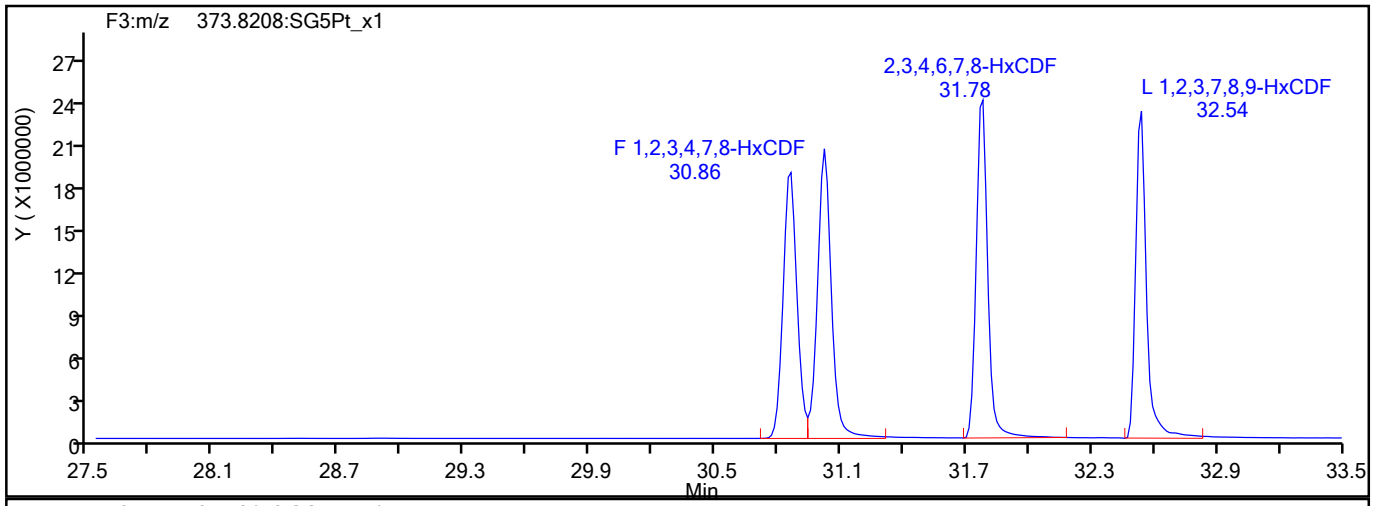

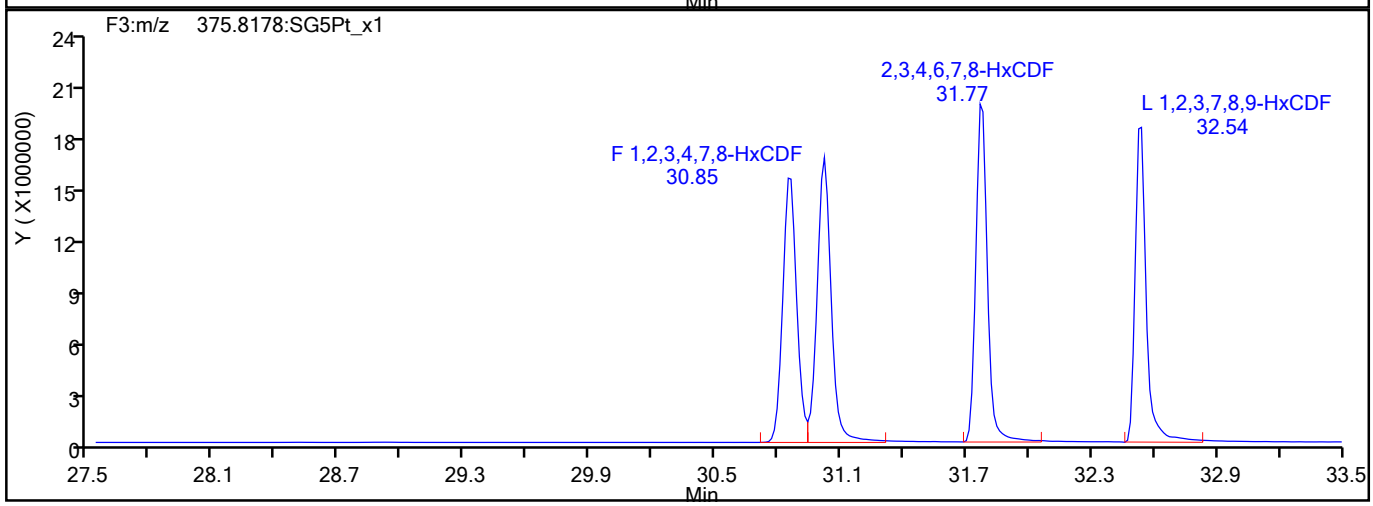

HxCDF Interference Mass

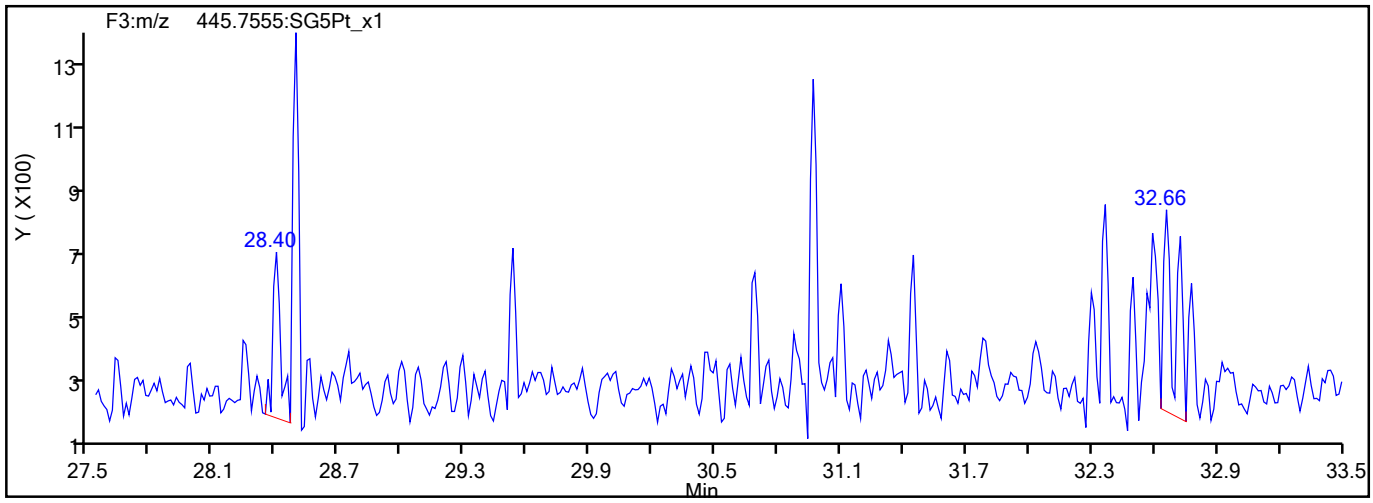

791484

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

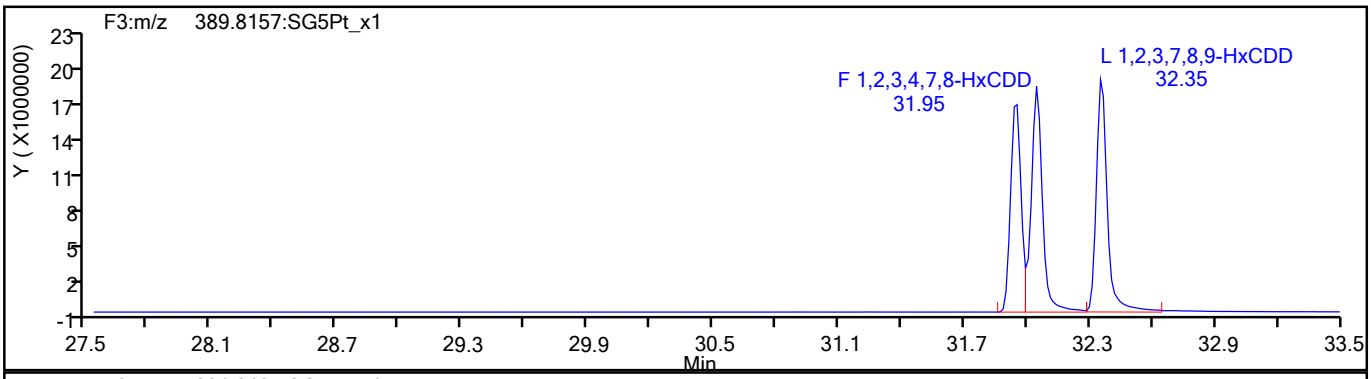

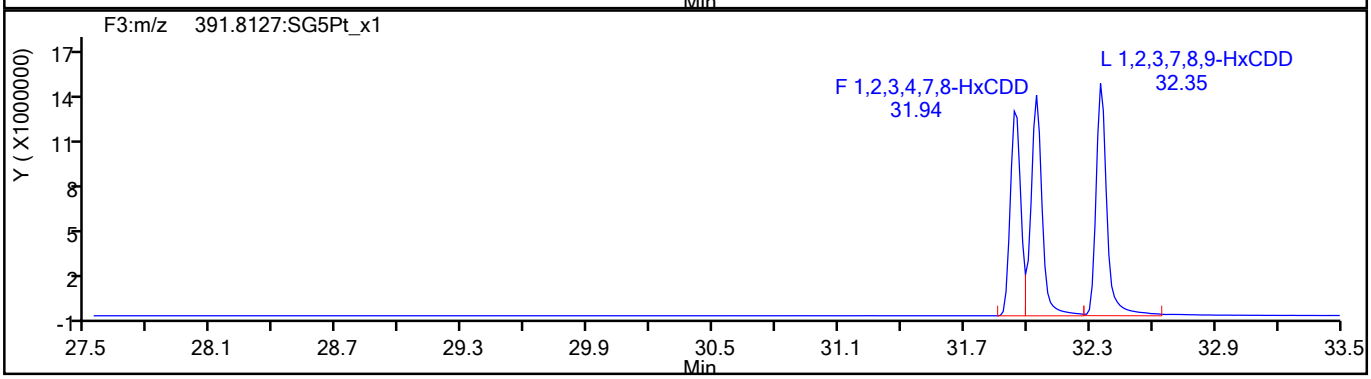

HxCDD Standards

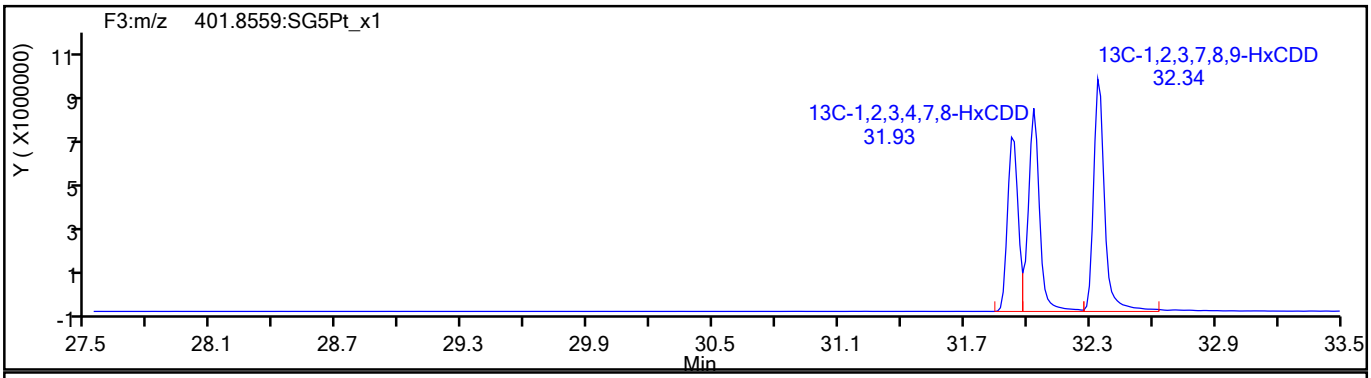

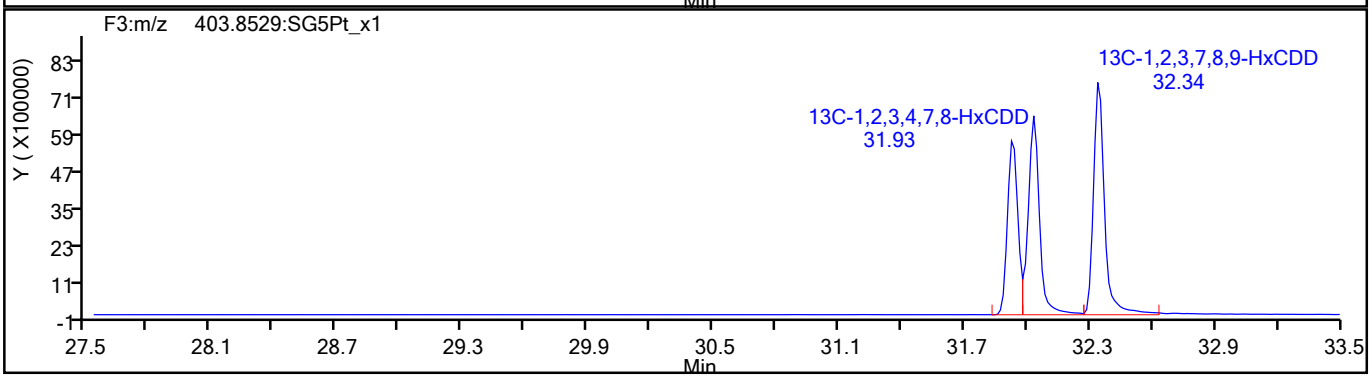

791485

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

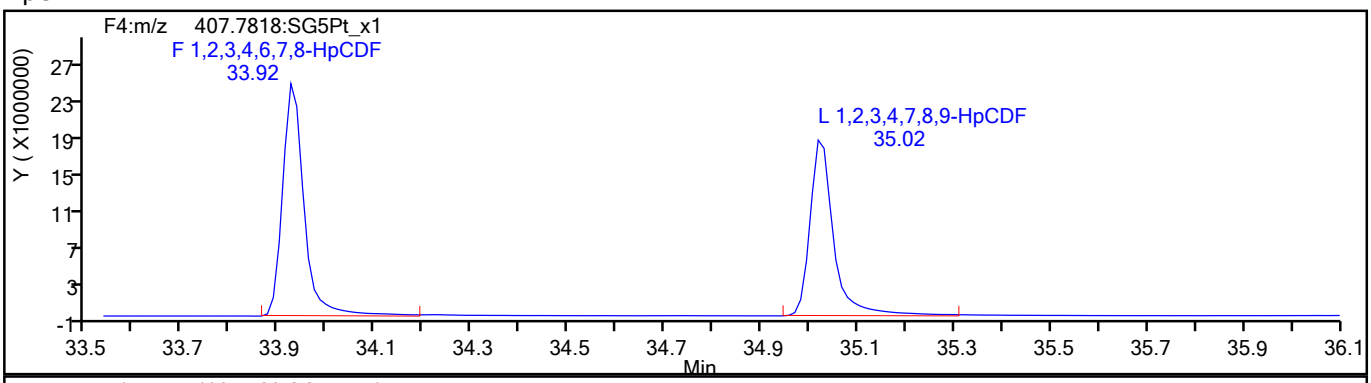

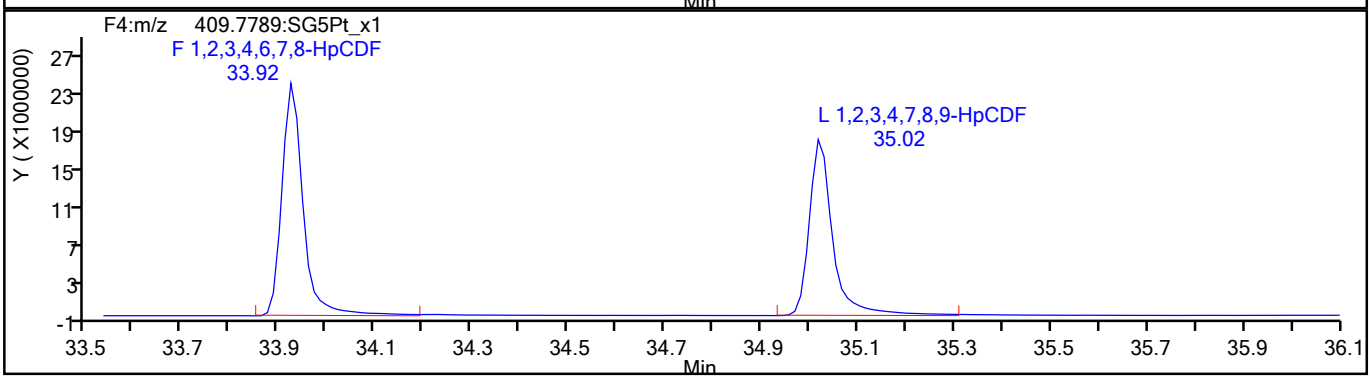

HpCDF Standards

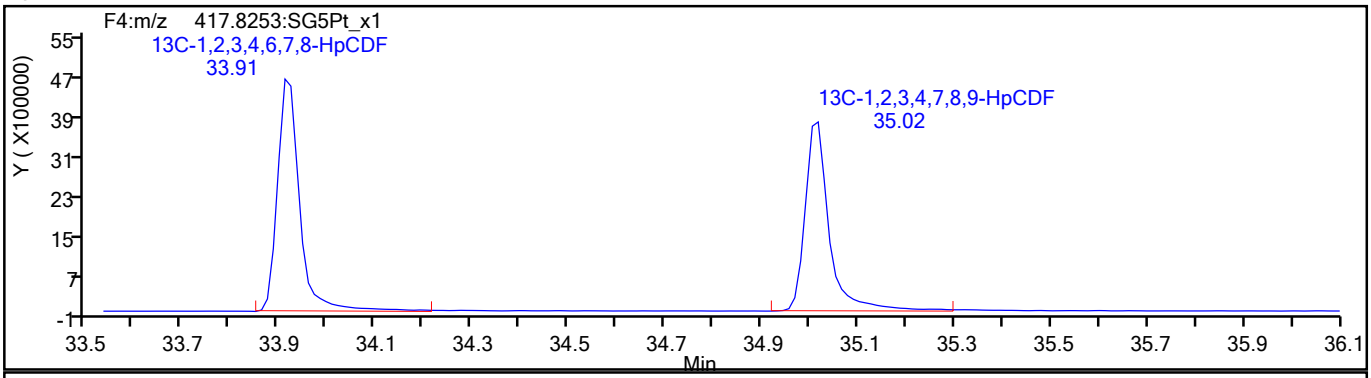

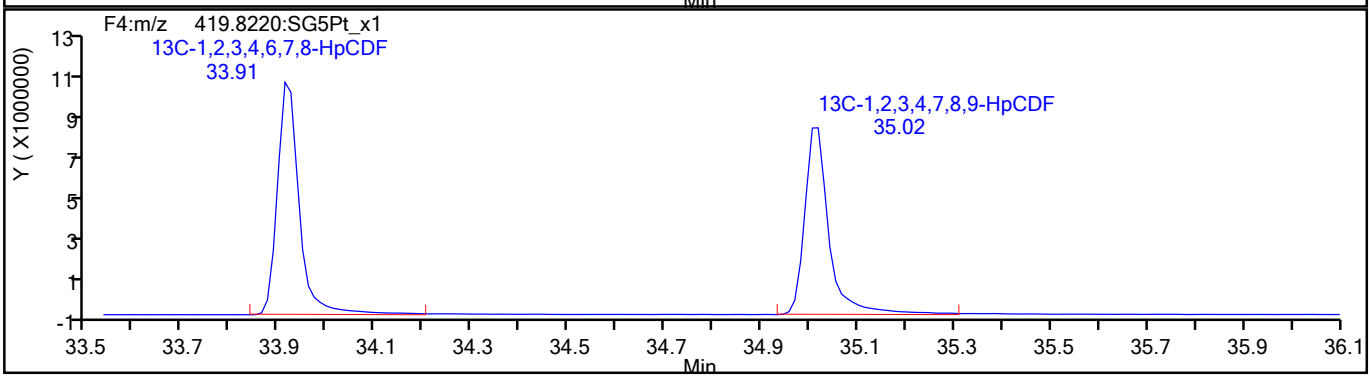

791486

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

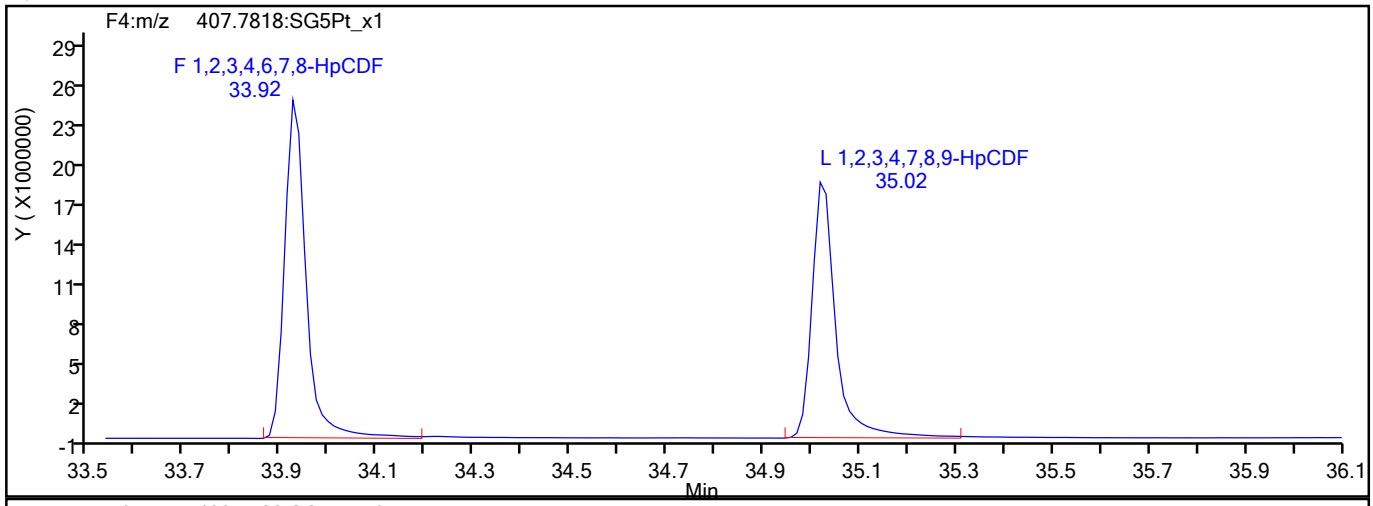

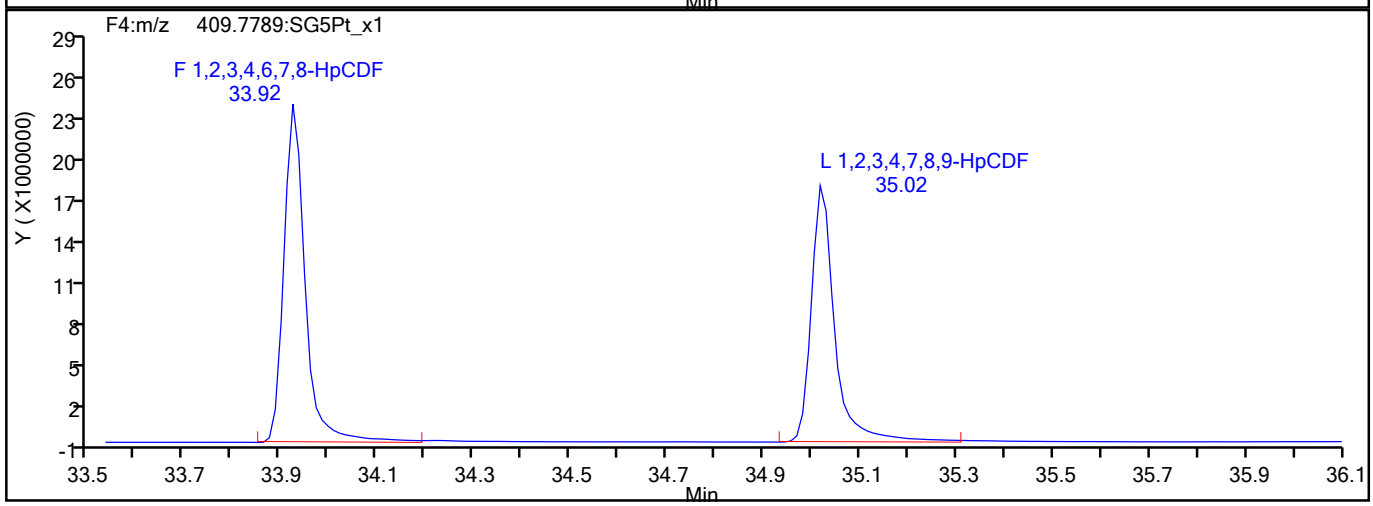

HpCDF Interference Mass

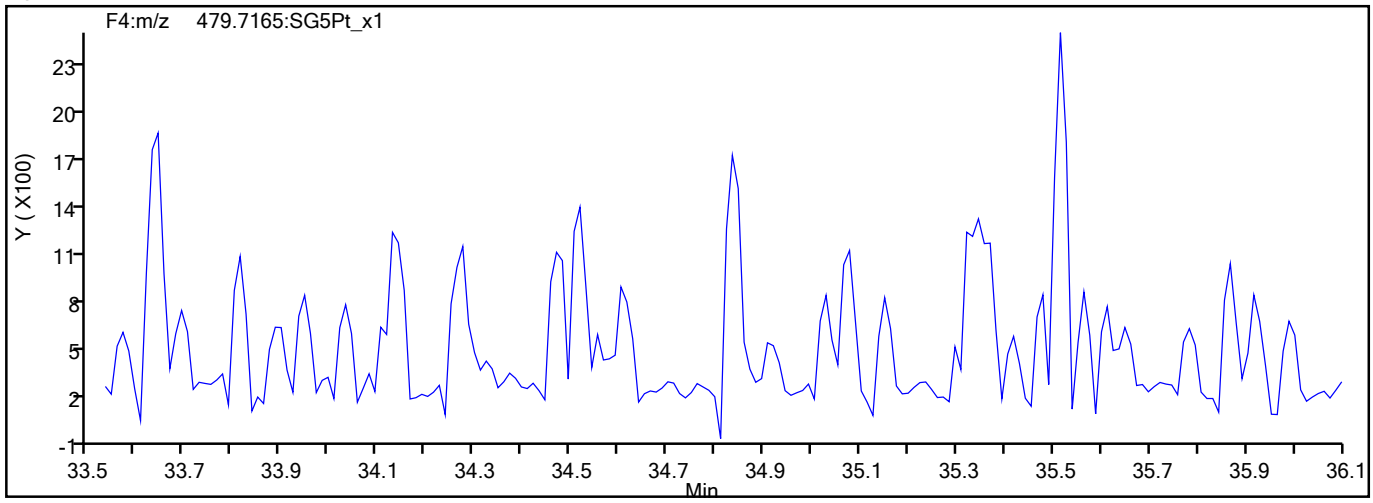

791487

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

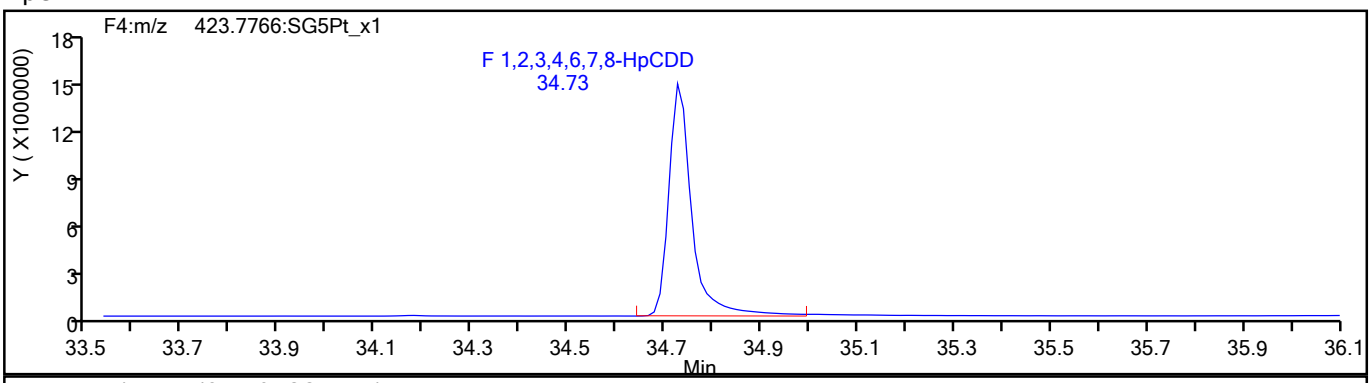

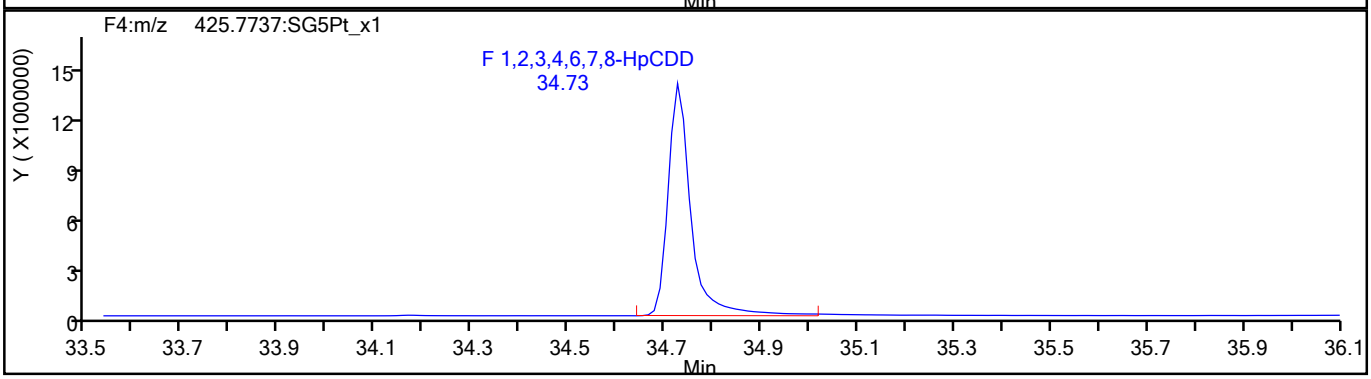

HpCDD Standards

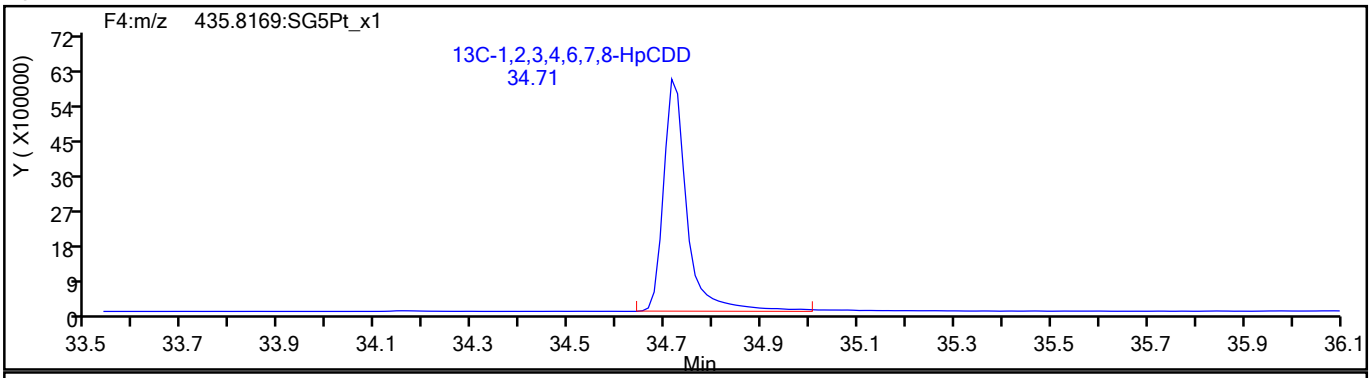

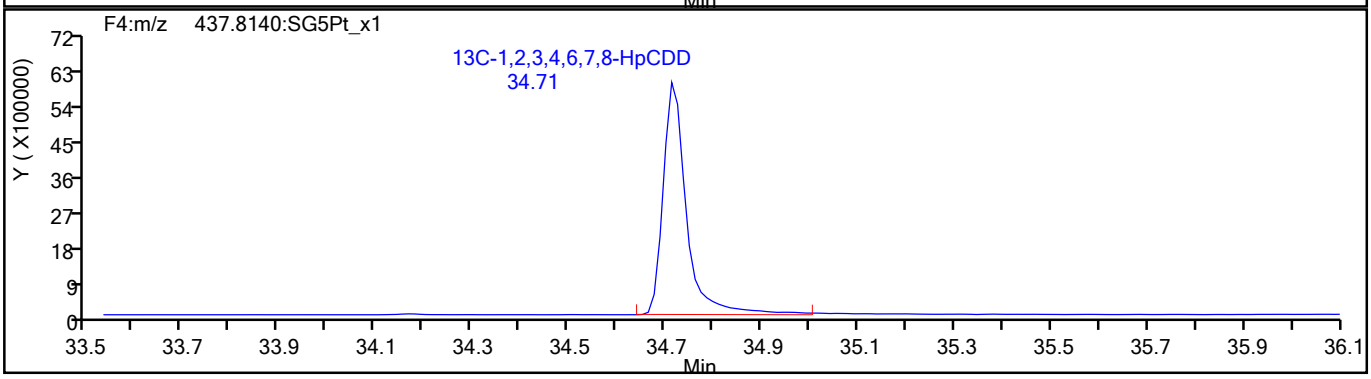

791488

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

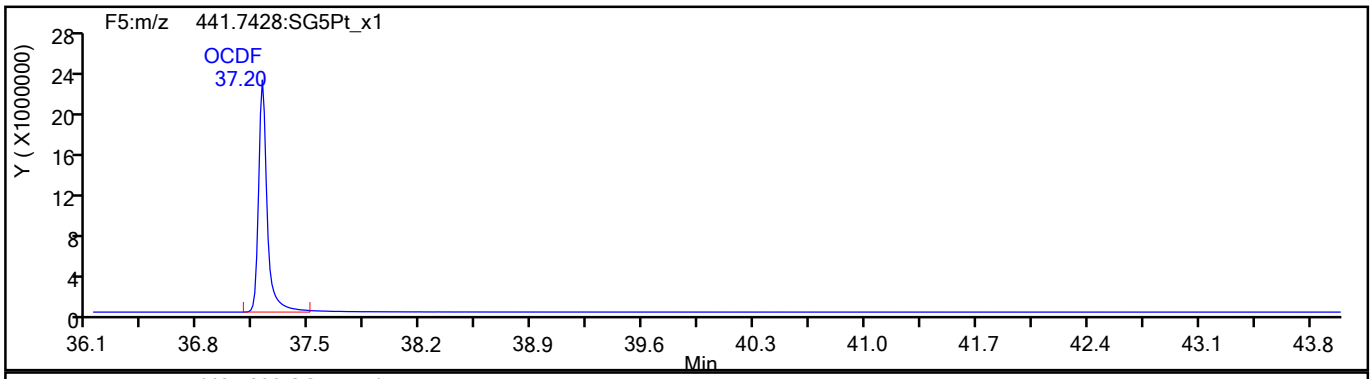

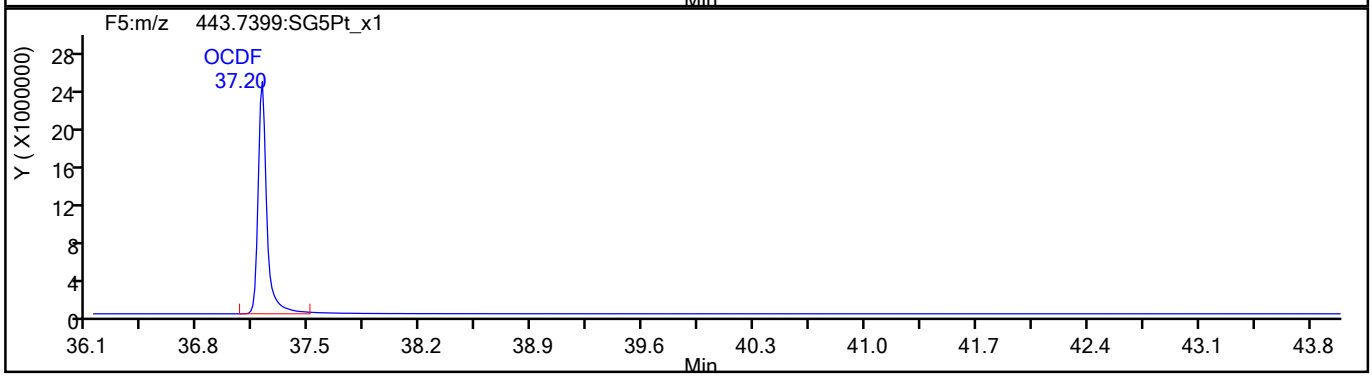

OCDF Standards

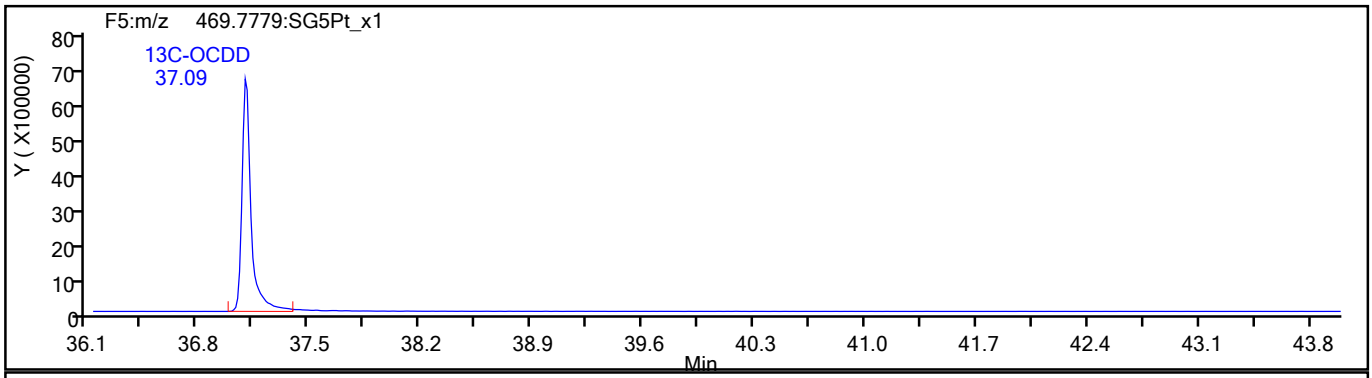

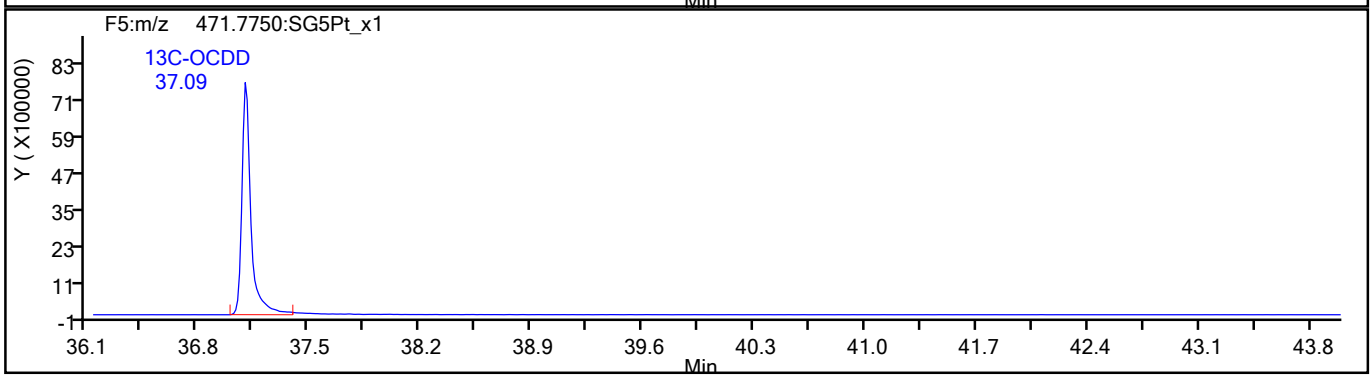

791489

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

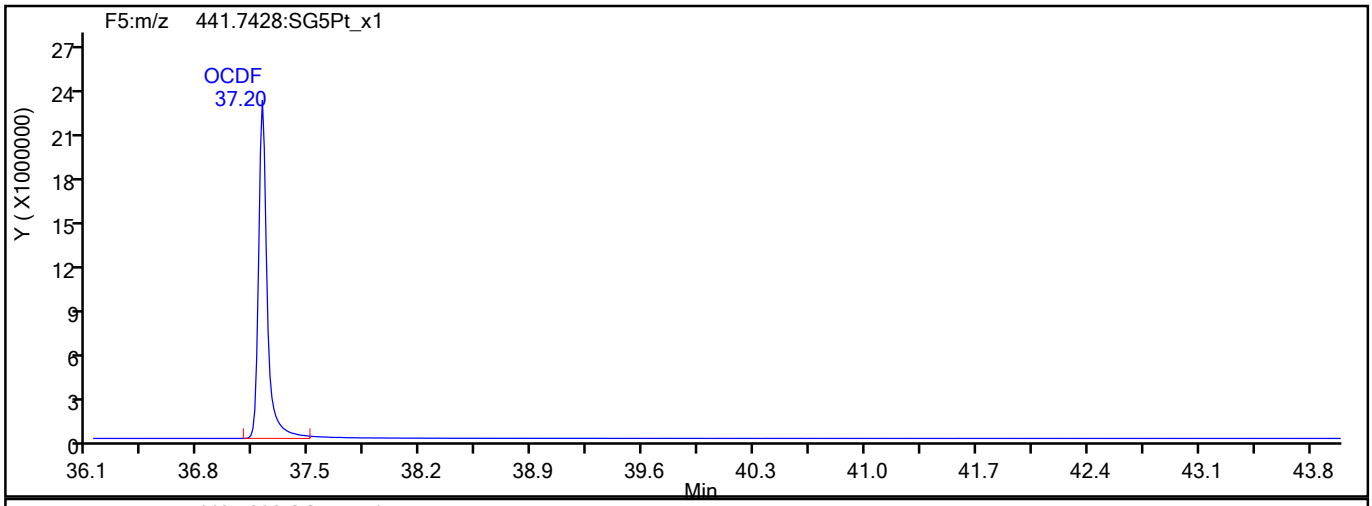

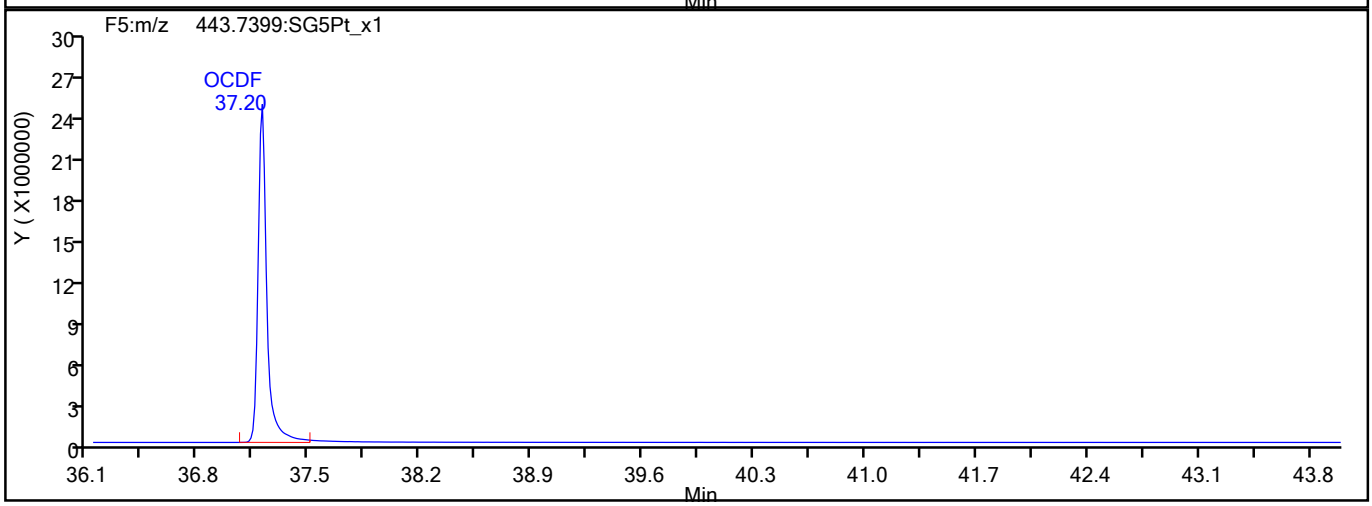

OCDF Interference Mass

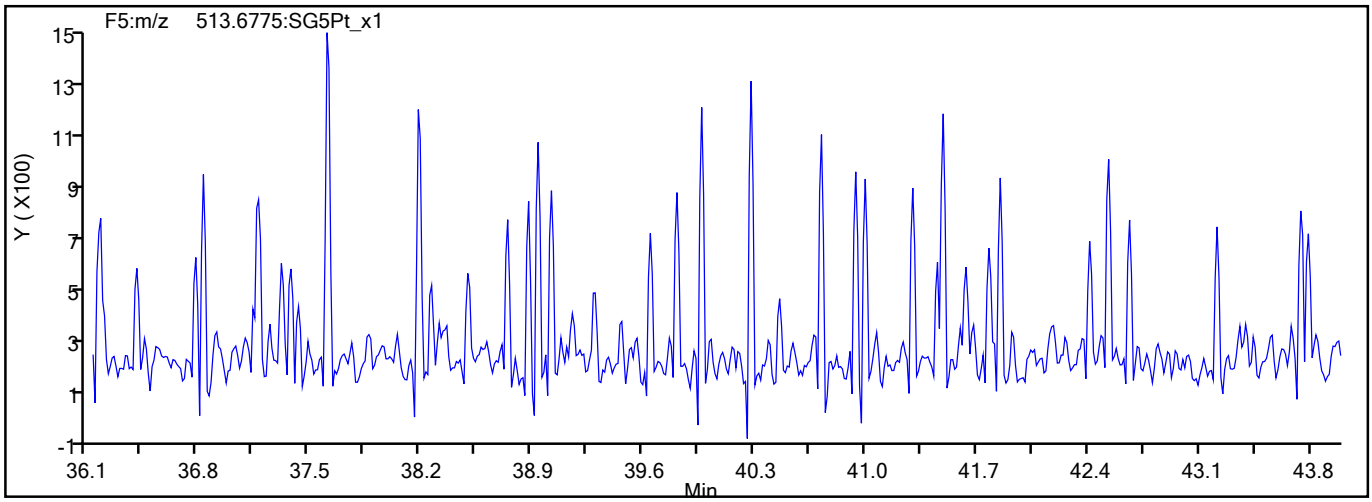

791490

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

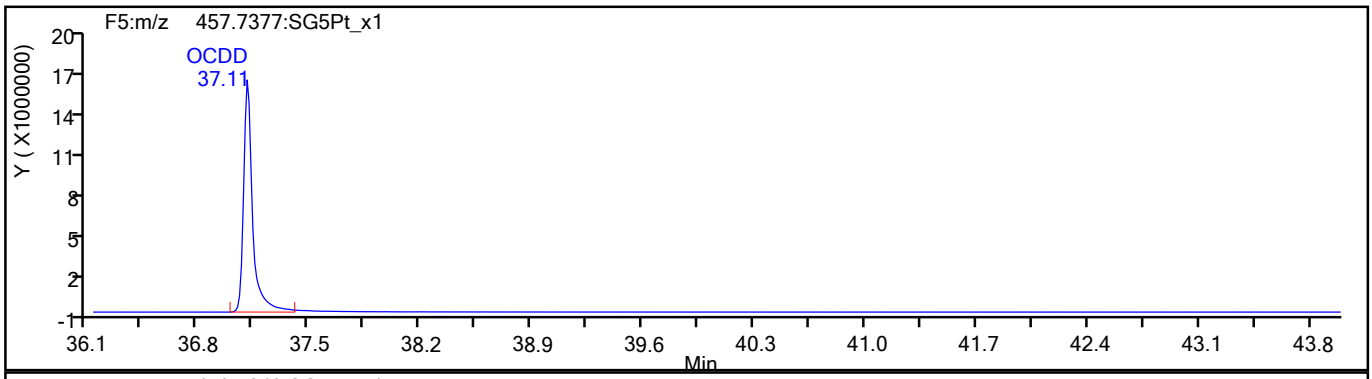

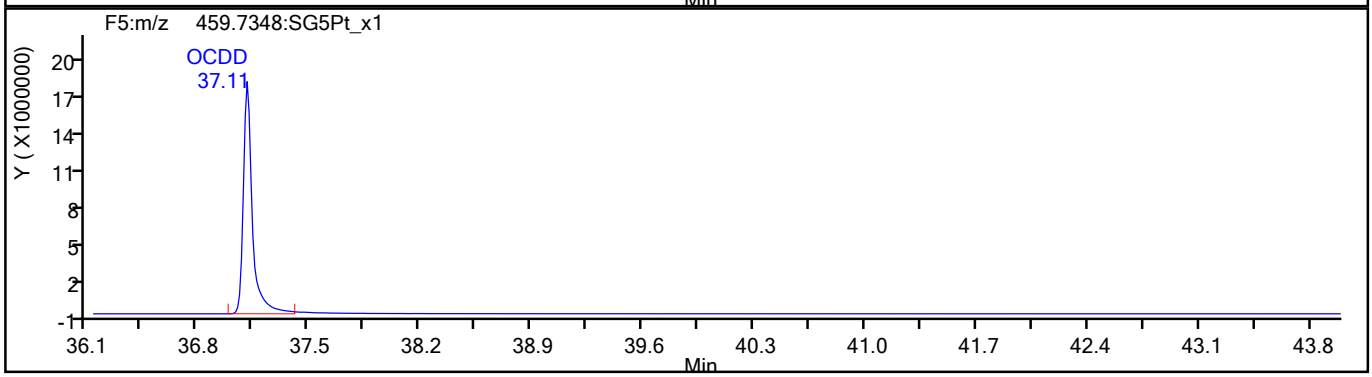

OCDD Standards

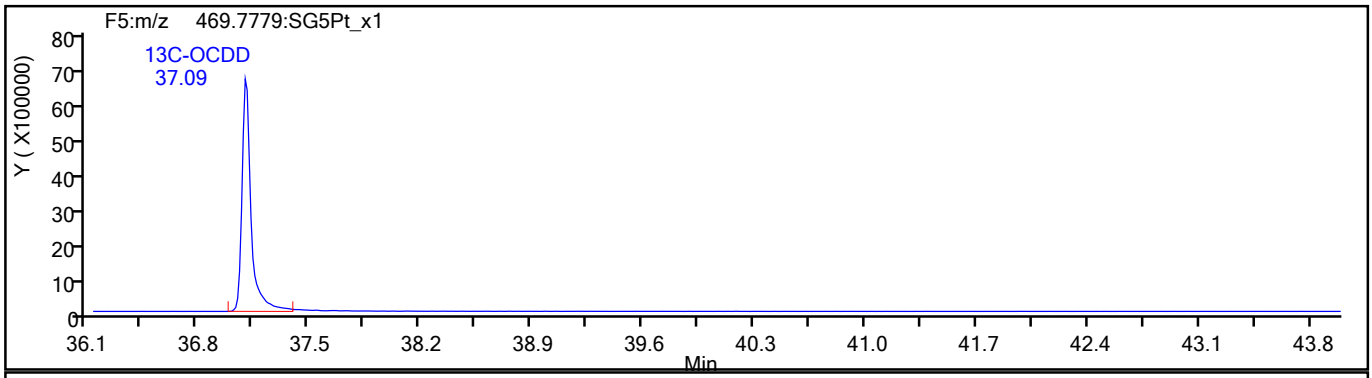

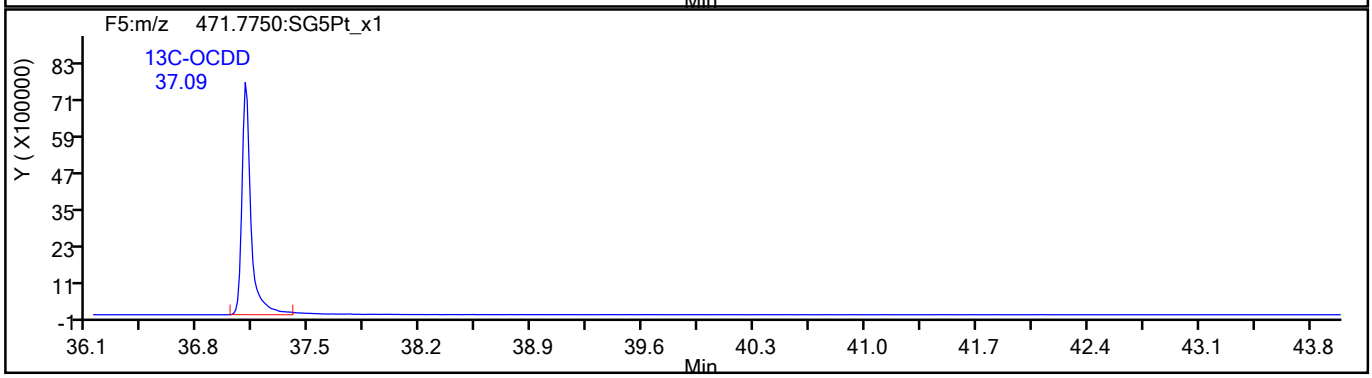

791491

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

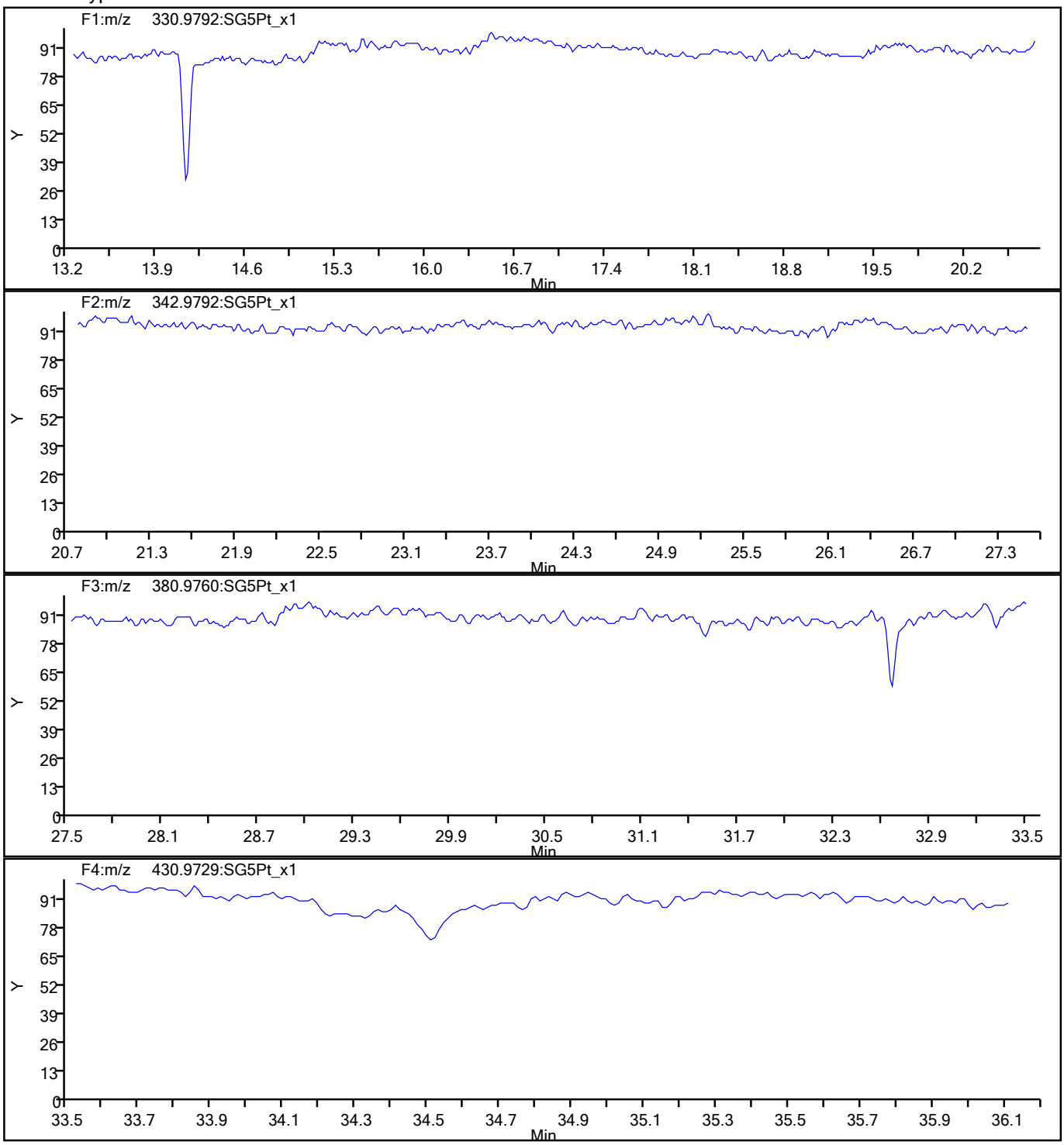

791492

Report Date: 27-Jul-2021 15:17:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

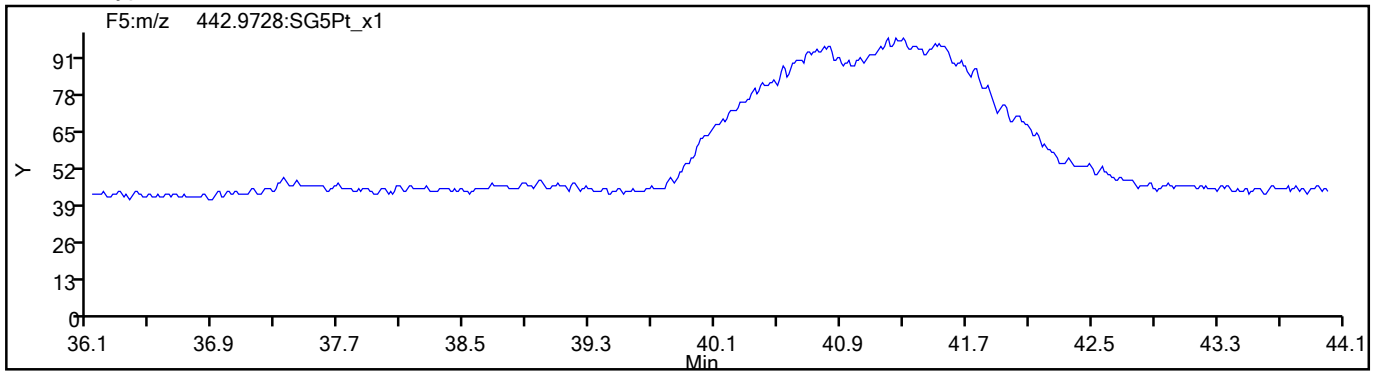

791493

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	57464333	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	95980421	0.79	1.6249	102.8	102.8	0.1660	0.1660	103	
2,3,7,8-TCDF	17.628	204575642	0.78	1.0239	208.2	208.2	0.2336	0.2336	104	
S Total TCDF					208.2	208.2	0.2336	0.2336		
D 13C-2,3,7,8-TCDD	18.338	53698206	0.83	0.8993	103.9	103.9	0.1396	0.1396	104	
$ 37Cl4-2,3,7,8-TCDD	18.354	140953034		1.1071	221.5	221.5	0.1318	0.1318	111	
2,3,7,8-TCDD	18.354	140421448	0.79	1.2541	208.5	208.5	0.1362	0.1362	104	
S Total TCDD					208.5	208.5	0.1362	0.1362		
D 13C-1,2,3,7,8-PeCDF	22.749	72829681	1.58	1.2101	104.7	104.7	0.2112	0.2112	105	
1,2,3,7,8-PeCDF	22.776	795873691	1.61	1.0611	1029.8	1029.8	2.482	2.482	103	
D 13C-2,3,4,7,8-PeCDF	24.126	75649463	1.61	1.2395	106.2	106.2	0.2062	0.2062	106	
2,3,4,7,8-PeCDF	24.153	783403837	1.59	1.0184	1016.8	1016.8	2.723	2.723	102	
S Total PeCDF					2046.7	2046.7	2.602	2.602		
D 13C-1,2,3,7,8-PeCDD	24.862	46251010	1.64	0.7612	105.7	105.7	0.1196	0.1196	106	
1,2,3,7,8-PeCDD	24.889	500555284	1.58	1.0484	1032.3	1032.3	0.8910	0.8910	103	
S Total PeCDD					1032.3	1032.3	0.8910	0.8910		
D 13C-1,2,3,4,7,8-HxCDF	30.835	67741189	0.53	1.0837	103.6	103.6	0.3784	0.3784	104	
1,2,3,4,7,8-HxCDF	30.862	737075796	1.21	1.0851	1002.7	1002.7	4.903	4.903	100	
D 13C-1,2,3,6,7,8-HxCDF	31.008	67363664	0.51	1.1279	99.0	99.0	0.3636	0.3636	98.97	
1,2,3,6,7,8-HxCDF	31.021	785709889	1.22	1.1260	1035.8	1035.8	4.873	4.873	104	
D 13C-2,3,4,6,7,8-HxCDF	31.754	63471184	0.52	1.0637	98.9	98.9	0.3855	0.3855	98.87	
2,3,4,6,7,8-HxCDF	31.767	762810877	1.21	1.1675	1029.4	1029.4	3.909	3.909	103	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58669892	0.52	0.9676	100.5	100.5	0.4238	0.4238	100	
1,2,3,7,8,9-HxCDF	32.539	708280047	1.22	1.1664	1035.0	1035.0	4.123	4.123	104	
S Total HxCDF					4103.0	4103.0	4.452	4.452		
* 13C-1,2,3,7,8,9-HxCDD	32.339	60348148	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	46886171	1.24	0.7334	105.9	105.9	0.3391	0.3391	106	
1,2,3,4,7,8-HxCDD	31.940	484857042	1.26	1.0640	971.9	971.9	2.786	2.786	97.19	
D 13C-1,2,3,6,7,8-HxCDD	32.033	53564396	1.27	0.8802	100.8	100.8	0.2826	0.2826	101	
1,2,3,6,7,8-HxCDD	32.047	543061818	1.27	1.0001	1013.8	1013.8	2.795	2.795	101	
1,2,3,7,8,9-HxCDD	32.353	563888565	1.26	1.1325	991.3	991.3	2.541	2.541	99.13	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDD					2977.0	2977.0	2.707	2.707		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	46328151	0.45	0.7730	99.3	99.3	0.9693	0.9693	99.31	
1,2,3,4,6,7,8-HpCDF	33.924	681312007	1.05	1.4413	1020.4	1020.4	8.187	8.187	102	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44333848	0.44	0.7008	104.8	104.8	1.069	1.069	105	
1,2,3,4,7,8,9-HpCDF	35.017	590555312	1.06	1.3174	1011.1	1011.1	10.5	10.5	101	
S Total HpCDF					2031.5	2031.5	9.356	9.356		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	39395832	1.02	0.6472	100.9	100.9	0.4739	0.4739	101	
1,2,3,4,6,7,8-HpCDD	34.726	441437476	1.05	1.0943	1024.0	1024.0	3.855	3.855	102	
S Total HpCDD					1024.0	1024.0	3.855	3.855		
D 13C-OCDD	37.093	56623863	0.89	0.4472	209.8	209.8	0.2327	0.2327	105	
OCDF	37.201	856685987	0.91	1.4382	2104.0	2104.0	1.905	1.905	105	
OCDD	37.105	635652839	0.90	1.1070	2028.1	2028.1	1.855	1.855	101	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		26125466	6597193	4577	11442	1441		
333.9339	18.142	18.142	0		31338867	7893522	2702	6755	2921	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42243137	10877420	7832	19580	1389		
317.9389	17.613	17.616	0	0.971	53737284	13863668	7802	19505	1777	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	89710432	22799700	10338	25845	2205		
305.8987	17.628	17.631	0	1.001	114865210	29189675	13335	33337	2189	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24360997	5757558	4577	11442	1258		
333.9339	18.338	18.338	0	1.011	29337209	6914283	2702	6755	2559	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	140953034	33738158	8459	21147	3988		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	62065087	14965631	3913	9782	3825		
321.8936	18.354	18.357	0	1.001	78356361	18744482	4747	11867	3949	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44649559	7939527	8573	21432	926		
353.8970	22.749	22.754	0	1.254	28180122	5062354	6242	15605	811	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	490871580	87021007	84135	210337	1034		
341.8567	22.776	22.779	0	1.001	305002111	54503599	52854	132135	1031	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46717935	7613965	8573	21432	888		
353.8970	24.126	24.129	0	1.330	28931528	4737188	6242	15605	759	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	480352978	79104825	84135	210337	940		
341.8567	24.153	24.156	0	1.001	303050859	50060127	52854	132135	947	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28720712	4433240	3087	7717	1436		
369.8919	24.862	24.865	0	1.370	17530298	2751802	2189	5472	1257	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	306292917	47311146	15348	38370	3083		
357.8516	24.889	24.892	0	1.001	194262367	30133208	11499	28747	2621	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23491874	5084915	9674	24185	526		
385.8610	30.835	30.838	0	0.953	44249315	9441190	17790	44475	531	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	404173144	87133654	170642	426605	511		
375.8178	30.848	30.857	0	1.000	332902652	71216591	138478	346195	514	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	22854682	4877346	9674	24185	504		
385.8610	31.008	31.003	0	0.959	44508982	9206926	17790	44475	518	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.000	431948071	93438031	170642	426605	548		
375.8178	31.021	31.022	0	1.000	353761818	76246532	138478	346195	551	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	21747421	5871662	9674	24185	607		
385.8610	31.754	31.756	0	0.982	41723763	11062051	17790	44475	622	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	417841952	110026703	170642	426605	645		
375.8178	31.767	31.772	0	1.000	344968925	92108448	138478	346195	665	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20172563	5575575	9674	24185	576		
385.8610	32.512	32.523	-1	1.005	38497329	10495423	17790	44475	590	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	388834443	107441652	170642	426605	630		
375.8178	32.526	32.534	0	1.000	319445604	89819128	138478	346195	649	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33485933	9289499	8951	22377	1038		
403.8529	32.339	32.342	0		26862215	7454274	7708	19270	967	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	25994948	7598983	8951	22377	849		
403.8529	31.927	31.929	0	0.987	20891223	6054958	7708	19270	786	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	270288224	77533273	86149	215372	900		
391.8127	31.940	31.945	0	1.000	214568818	61952830	75747	189367	818	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29946566	8106259	8951	22377	906		
403.8529	32.033	32.033	0	0.991	23617830	6373294	7708	19270	827	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	303387935	83103965	86149	215372	965		
391.8127	32.047	32.047	0	1.000	239673883	65565020	75747	189367	866	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	314172702	87971106	86149	215372	1021		
391.8127	32.353	32.355	0	1.013	249715863	70210414	75747	189367	927	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14282220	4787635	15981	39952	300		
419.8220	33.912	33.914	0	1.049	32045931	10687518	34202	85505	312	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	349397605	118035783	389676	974190	303		
409.7789	33.924	33.926	0	1.000	331914402	111658032	340706	851765	328	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13509696	4047534	15981	39952	253		
419.8220	35.005	35.010	0	1.082	30824152	9120201	34202	85505	267	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	303260617	91538482	389676	974190	235		
409.7789	35.017	35.020	0	1.000	287294695	87143866	340706	851765	256	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19890119	6131671	10444	26110	587		
437.8140	34.714	34.716	0	1.073	19505713	6051375	10100	25250	599	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	225857690	69087451	102453	256132	674		
425.7737	34.726	34.726	0	1.000	215579786	65898474	103127	257817	639	1.05(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26710485	6689918	2659	6647	2516		
471.7750	37.093	37.094	0	1.147	29913378	7452640	4311	10777	1729	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	409115360	108366645	37076	92690	2923		
443.7399	37.201	37.199	0	1.003	447570627	117808946	40434	101085	2914	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	300559615	76562352	27801	69502	2754		
459.7348	37.105	37.106	0	1.000	335093224	85854399	30277	75692	2836	0.90(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

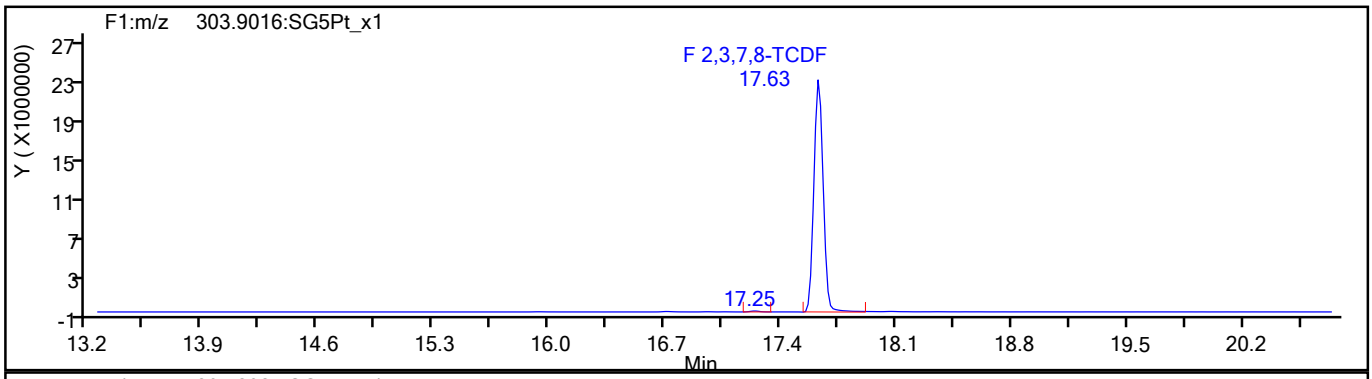

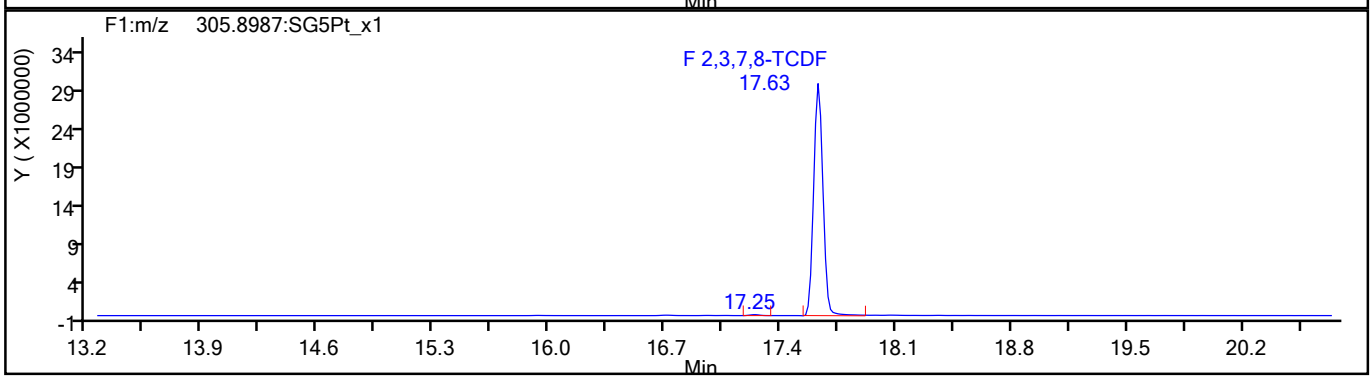

TCDF Standards

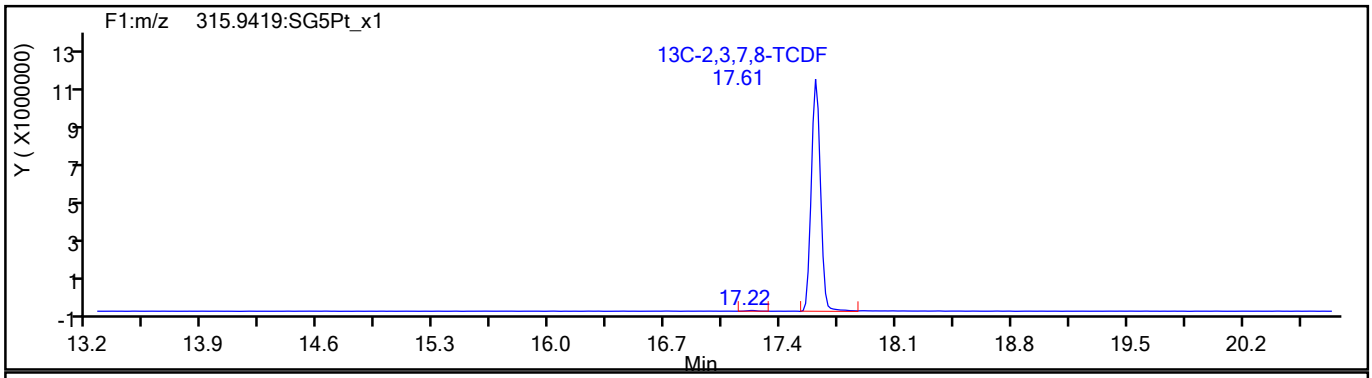

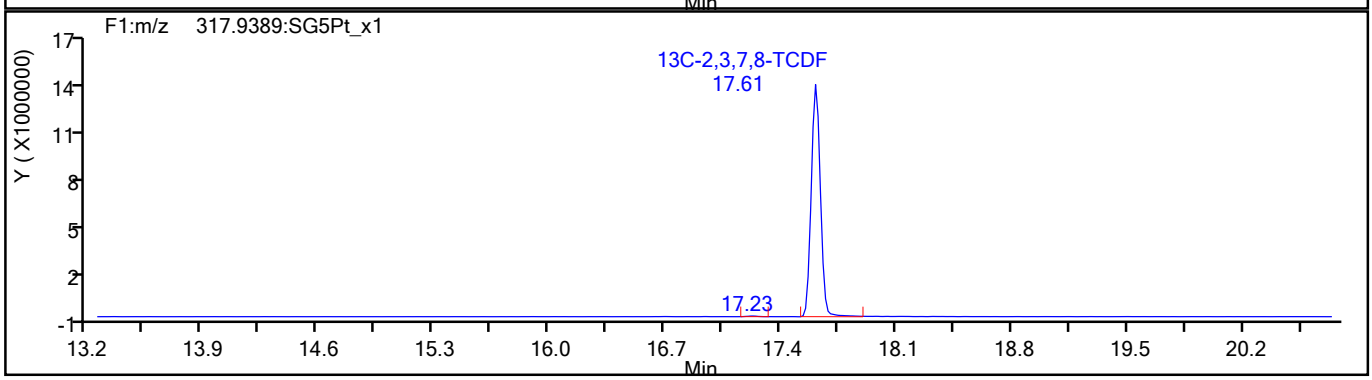

791499

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

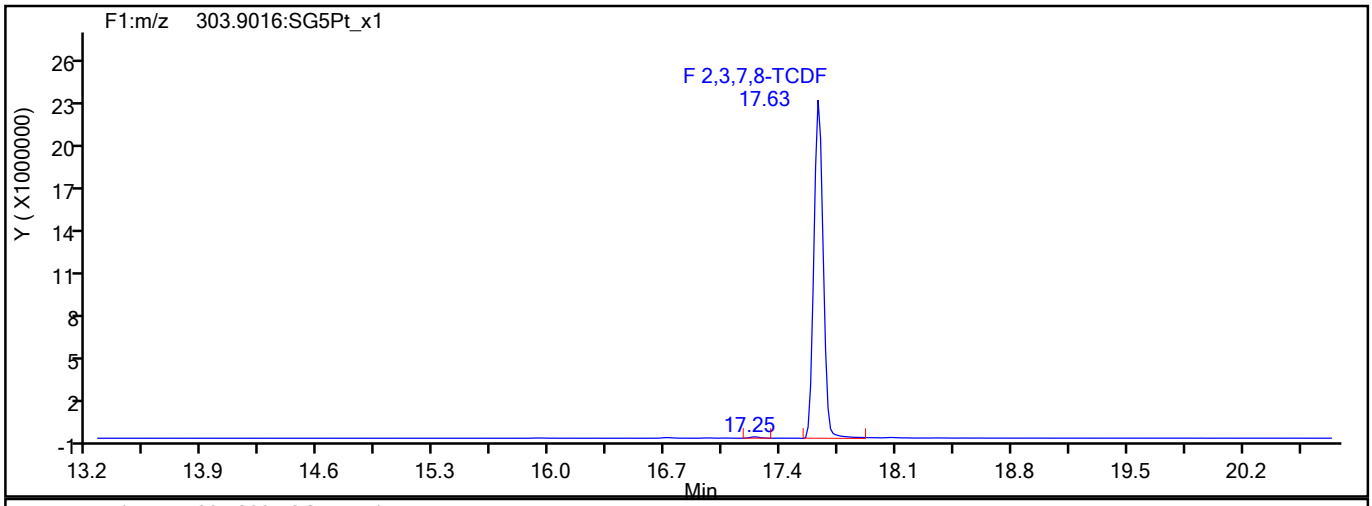

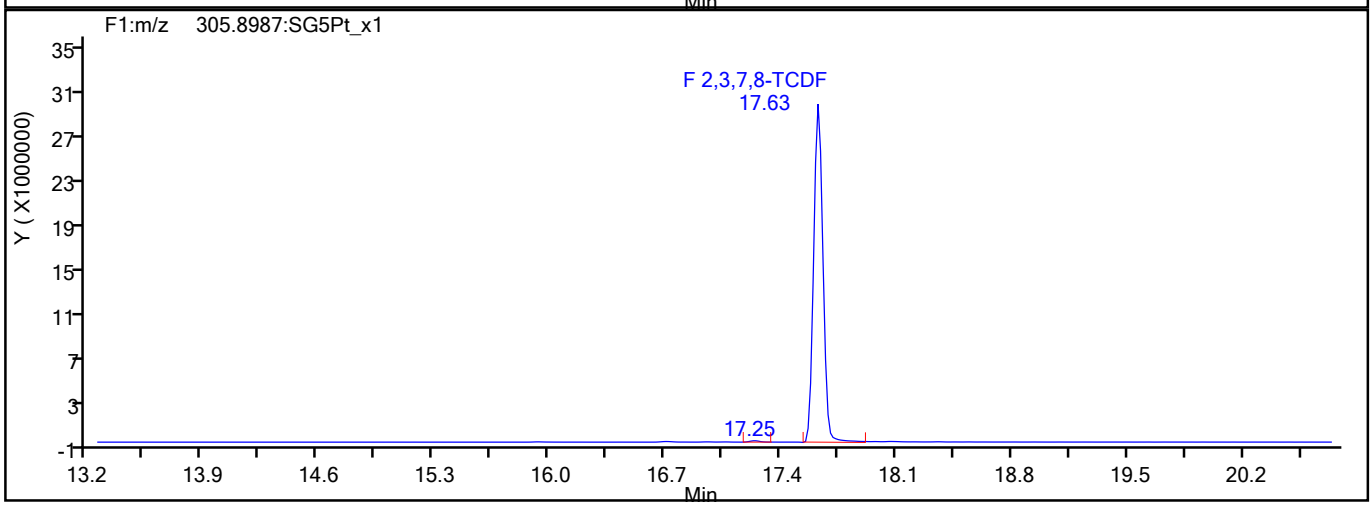

TCDF Interference Mass

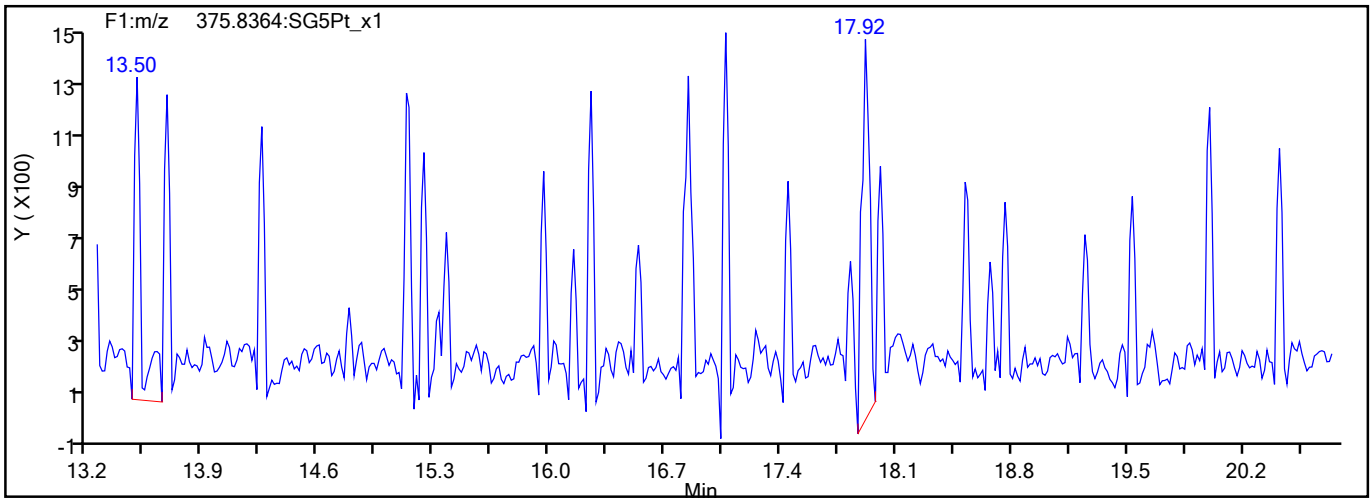

791500

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

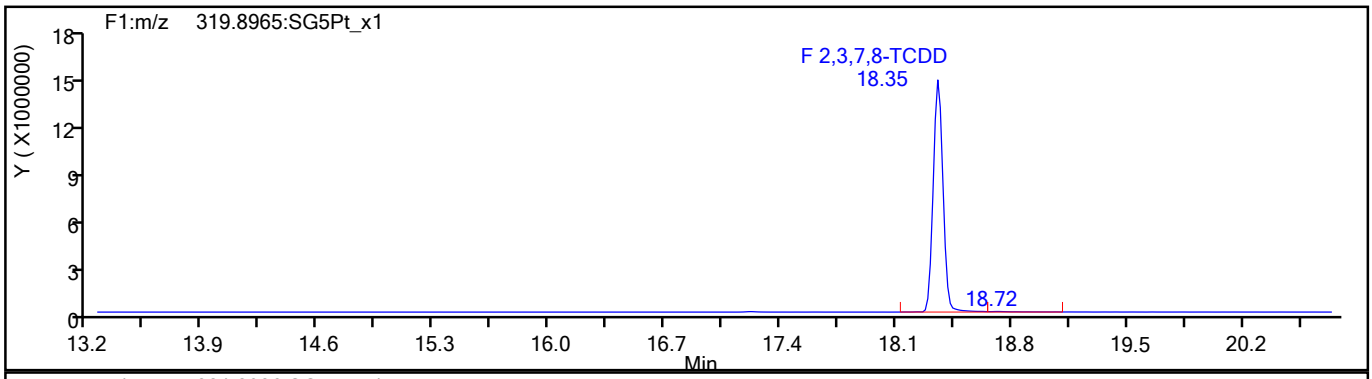

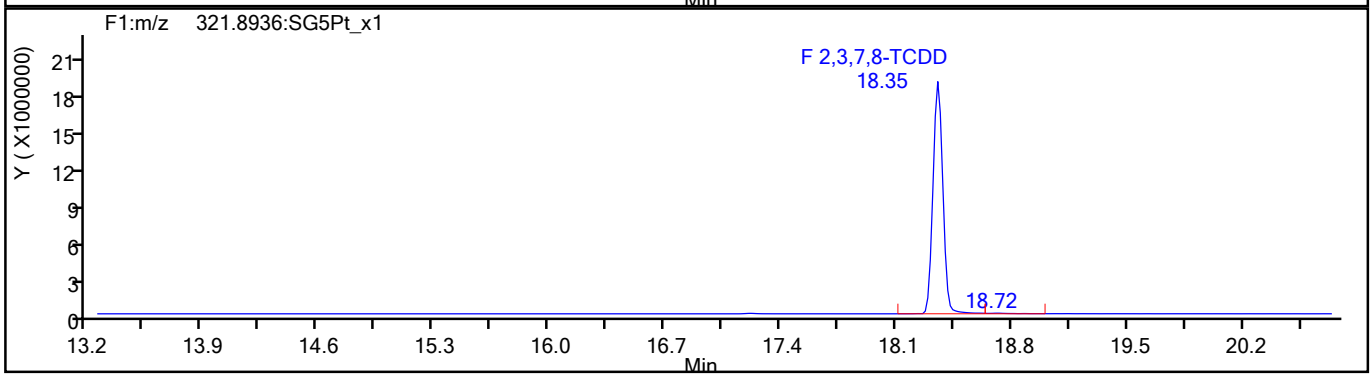

TCDD Standards

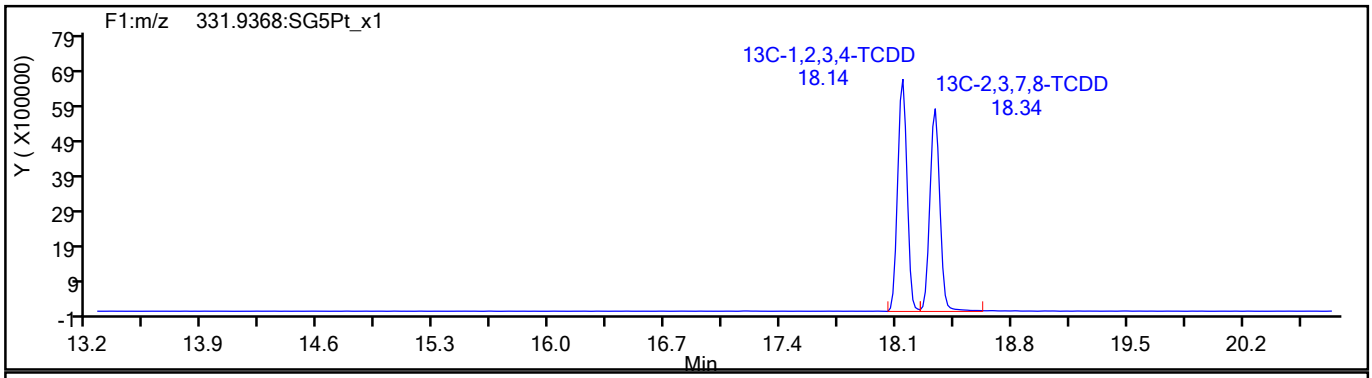

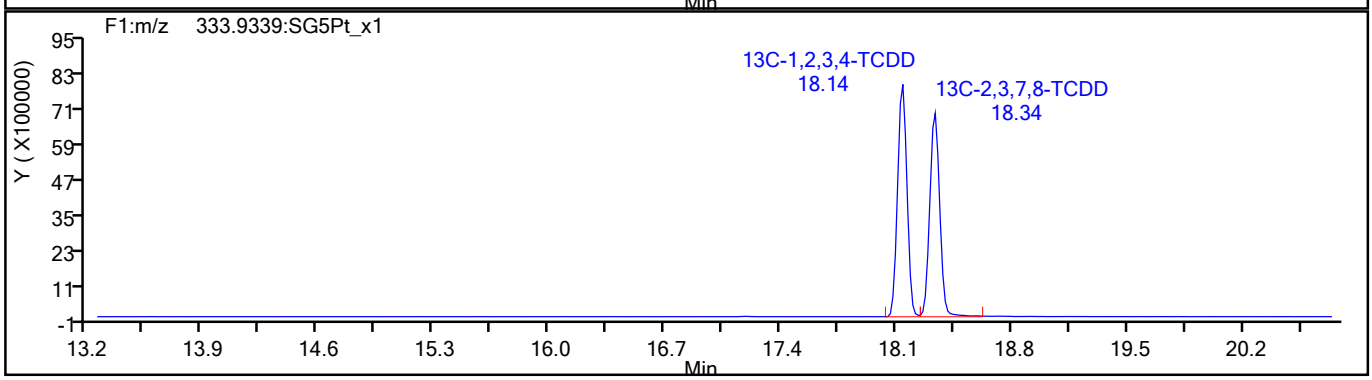

791501

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

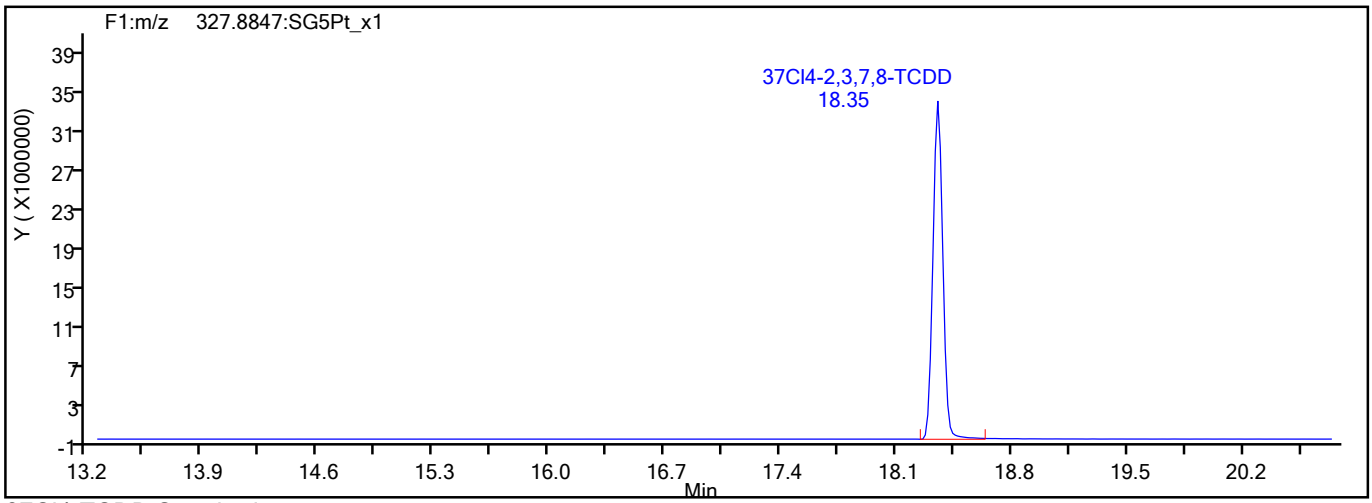

37Cl4-TCDD Standards

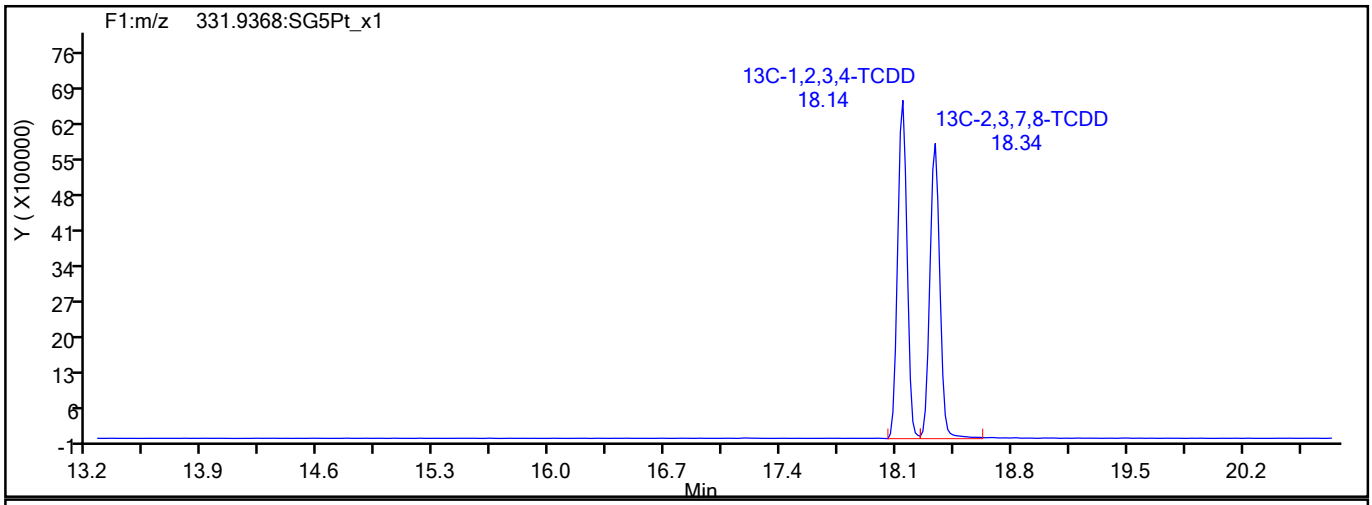

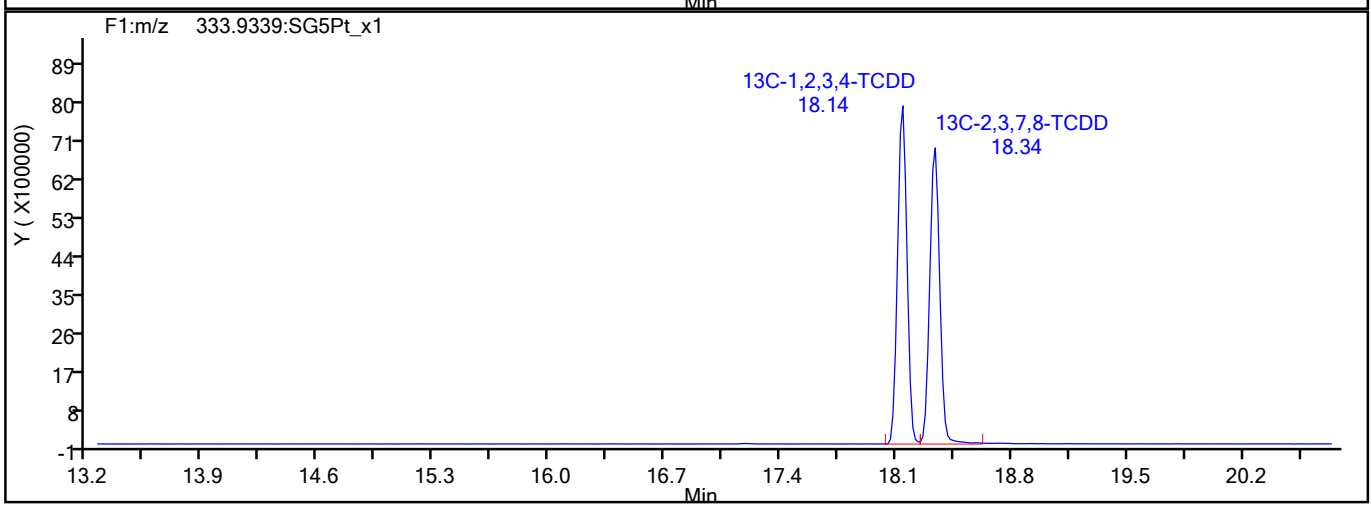

791502

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

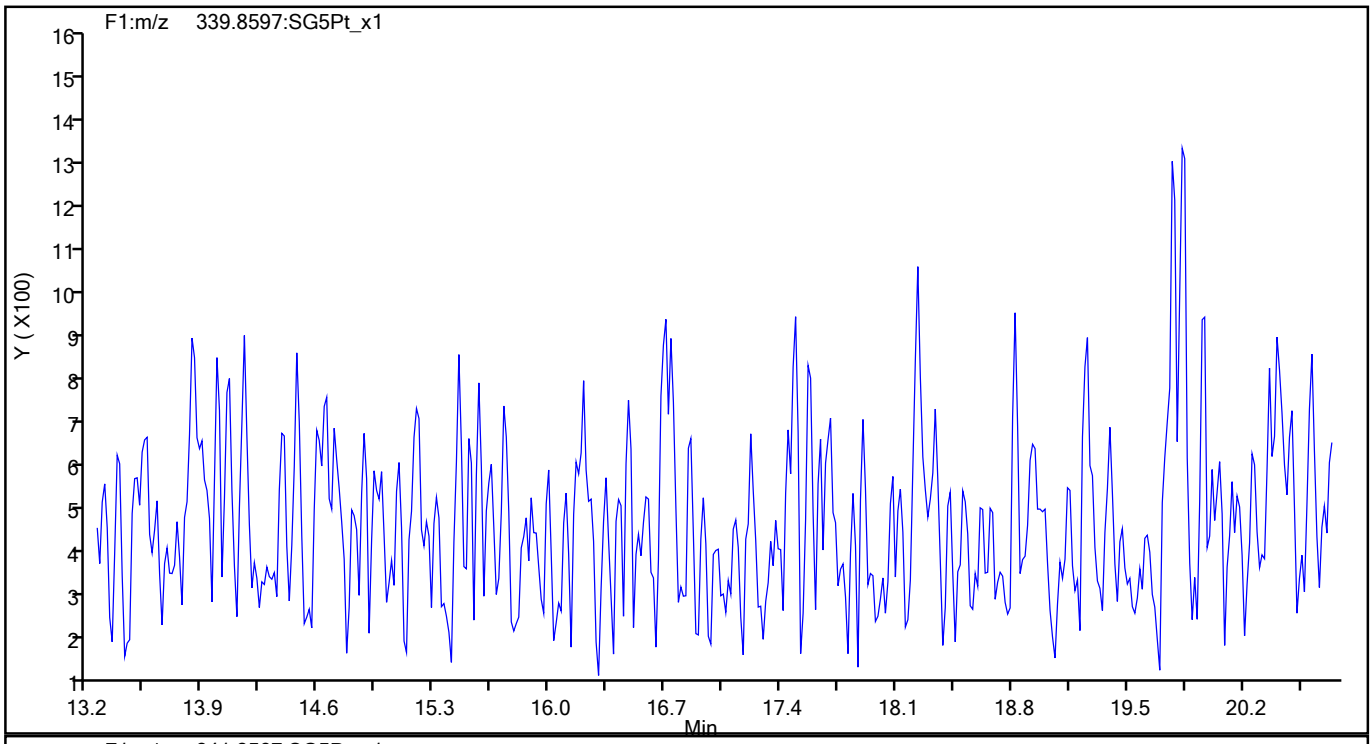

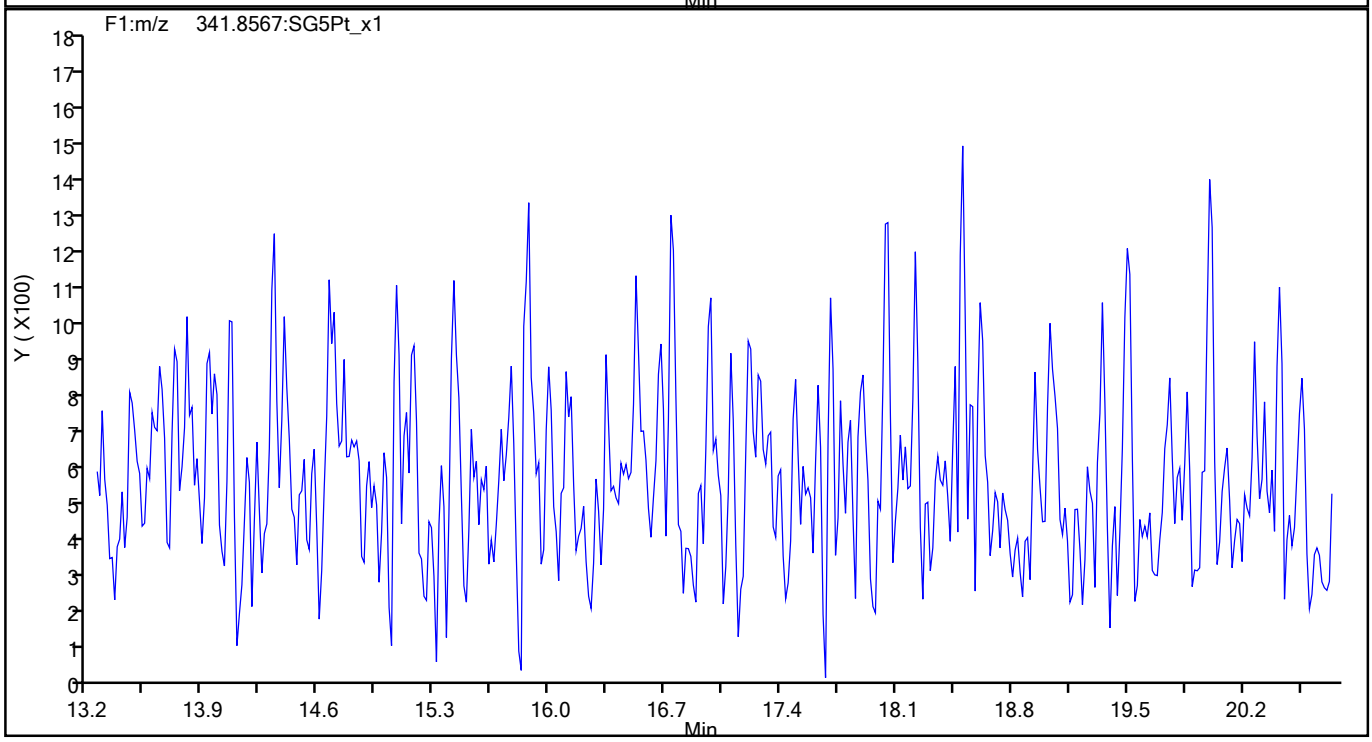

791503

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

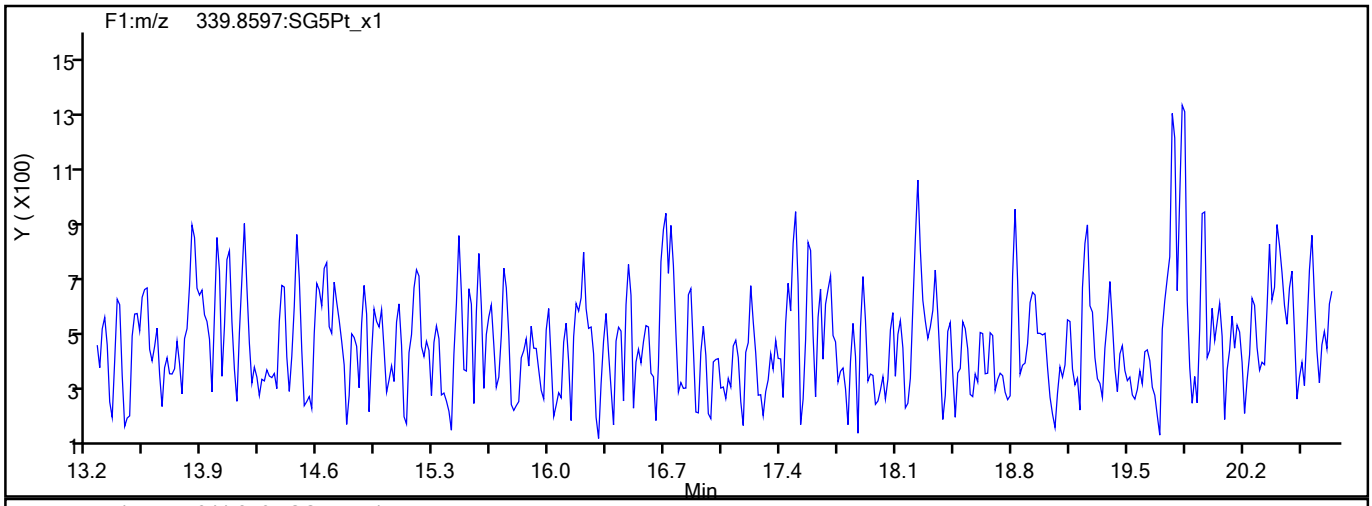

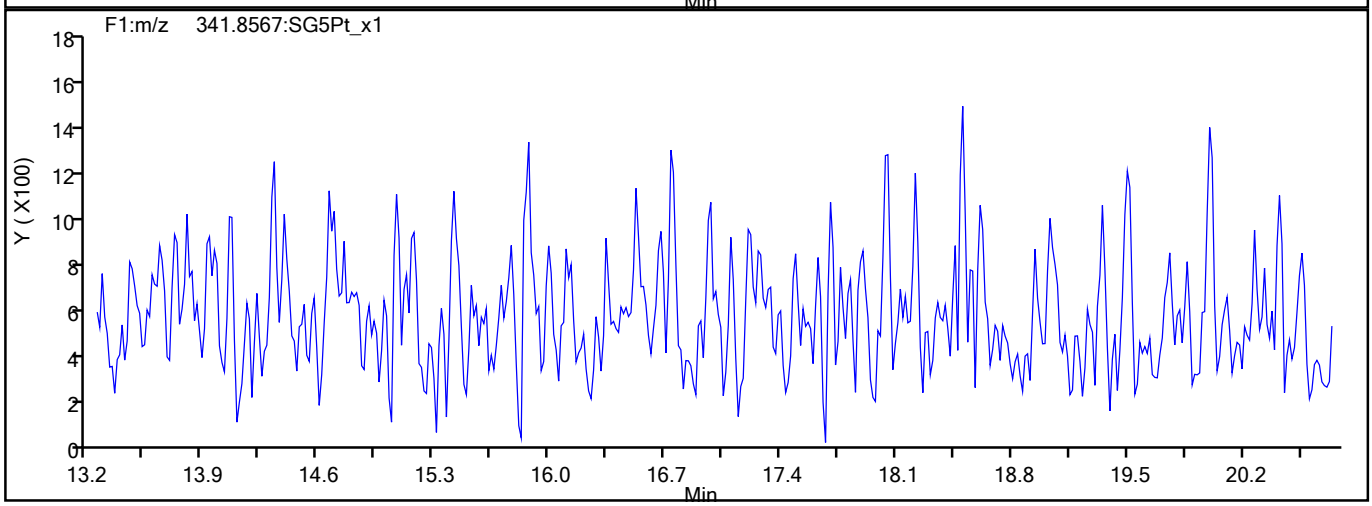

F1 PeCDFs Interference Mass

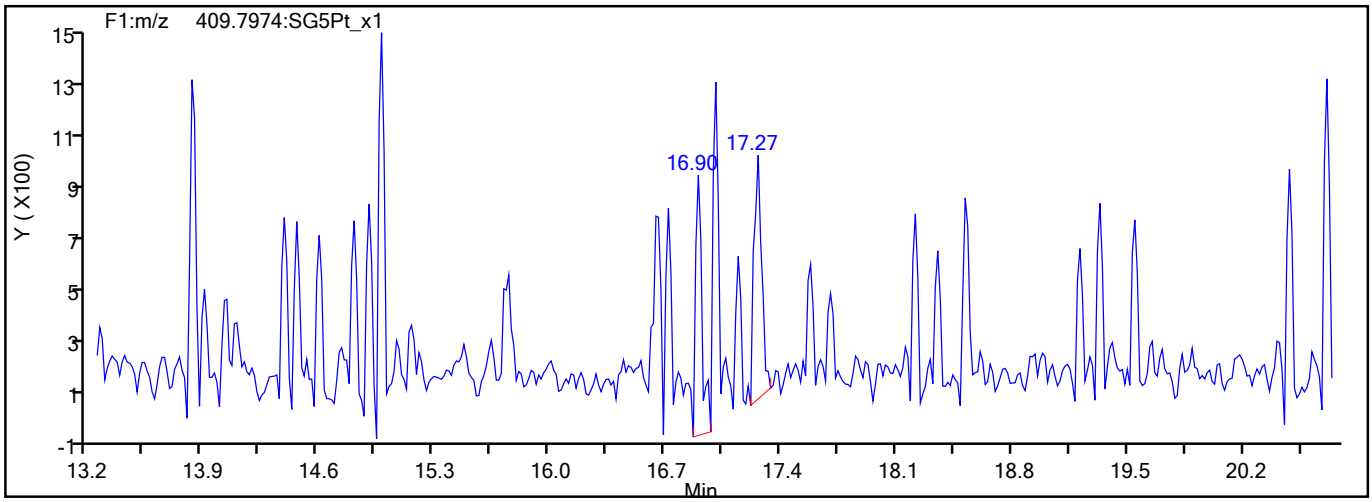

791504

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

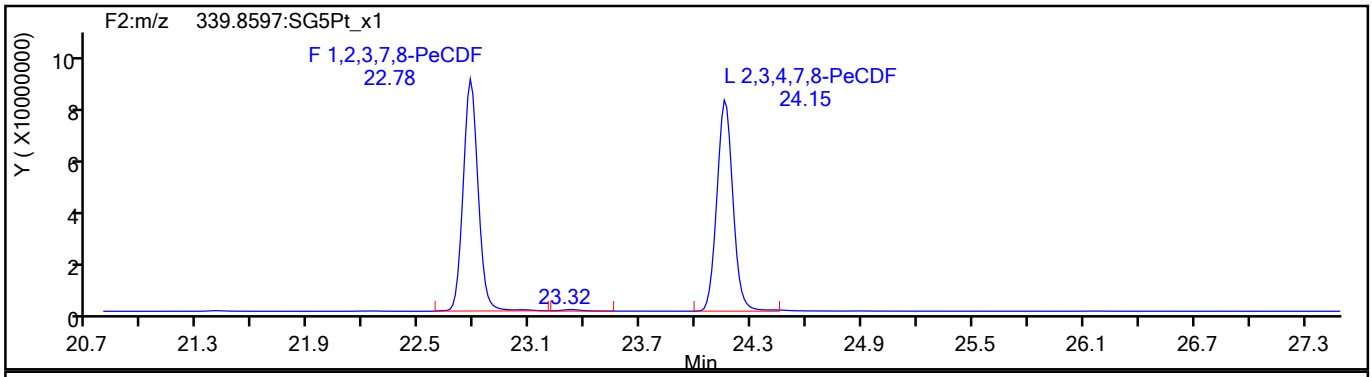

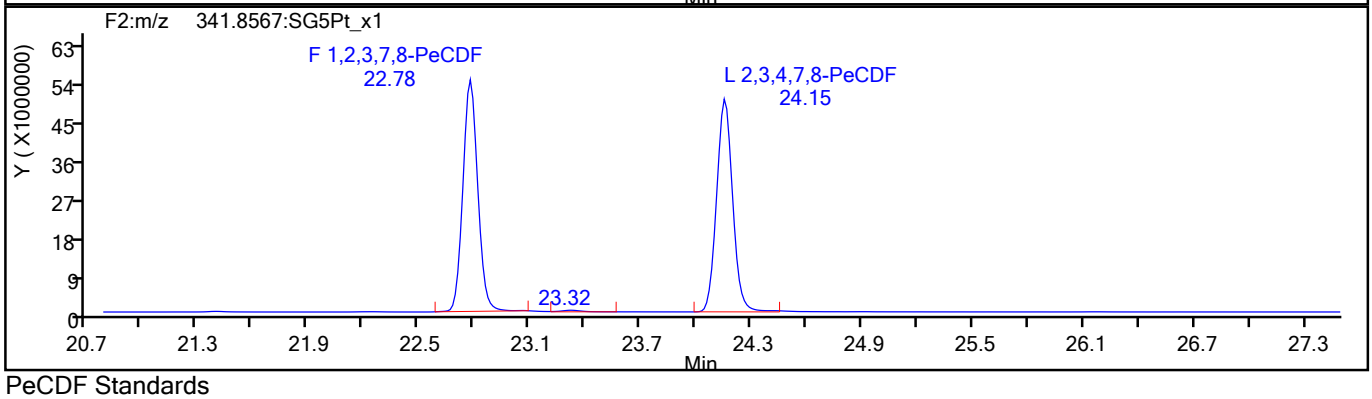

PeCDF Standards

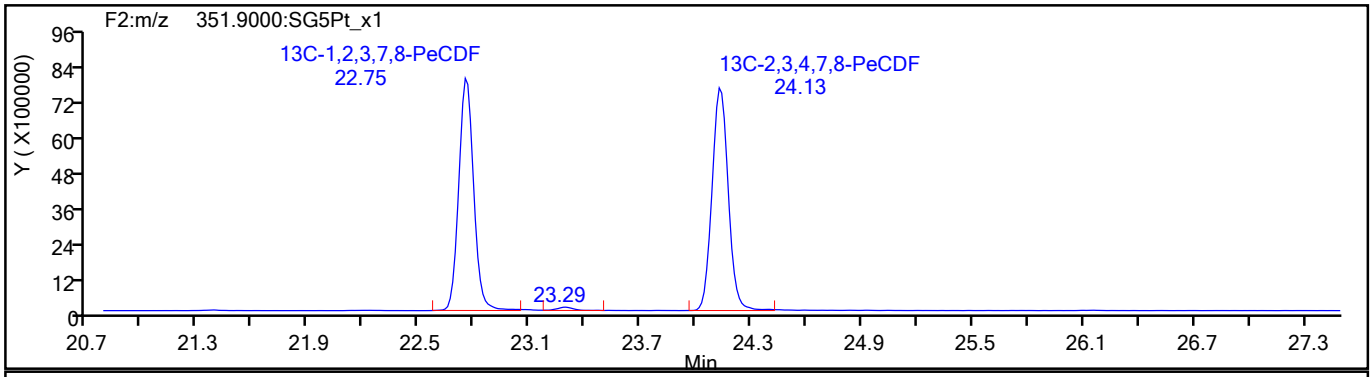

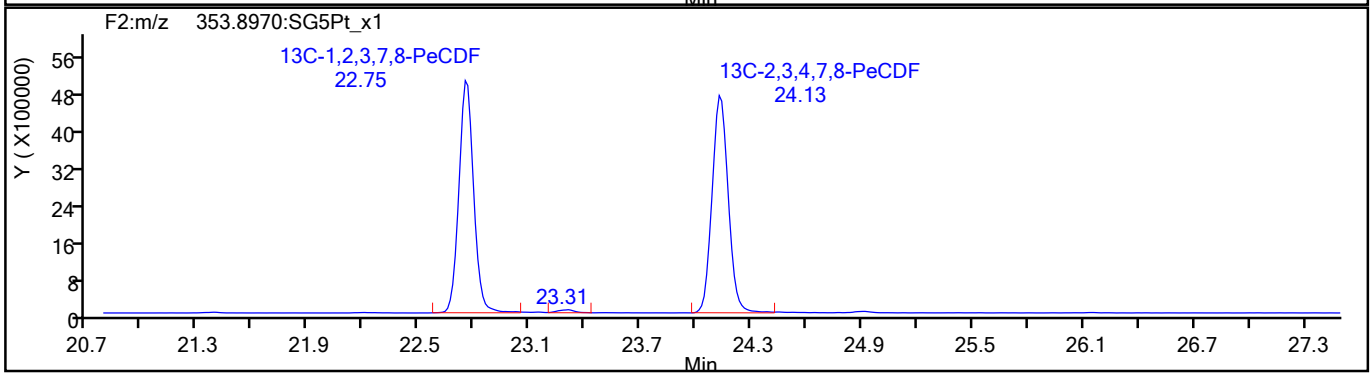

791505

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

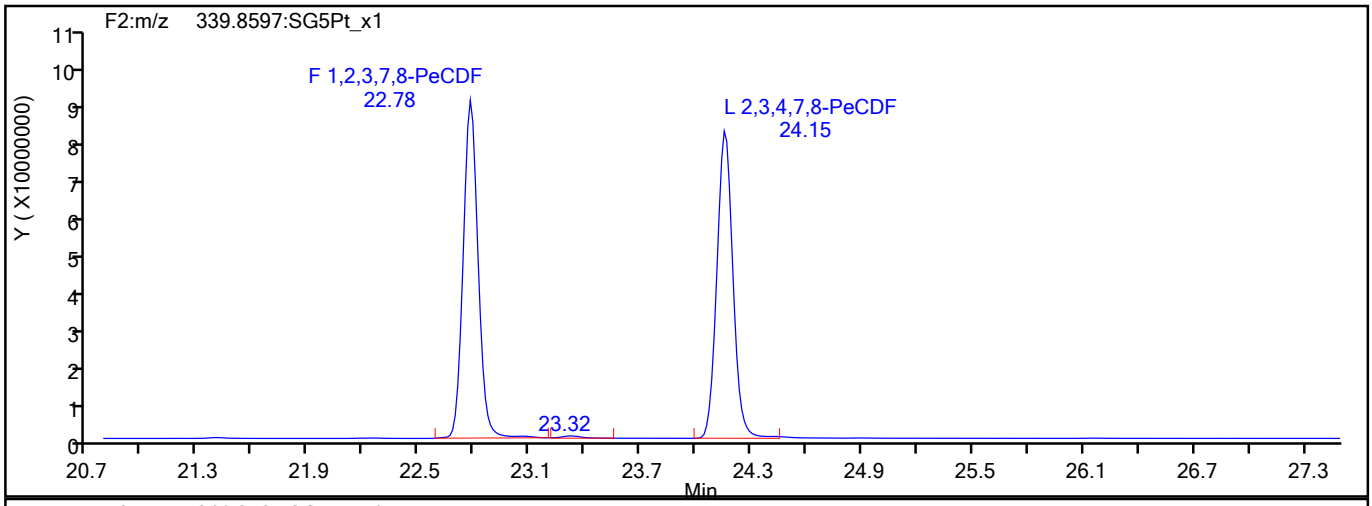

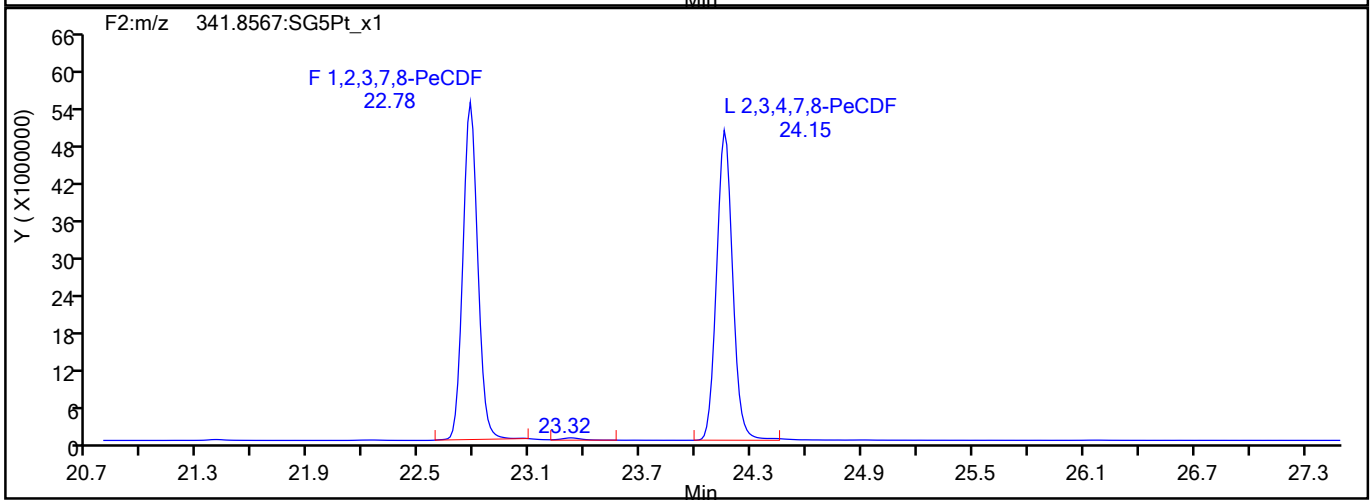

PeCDF Interference Mass

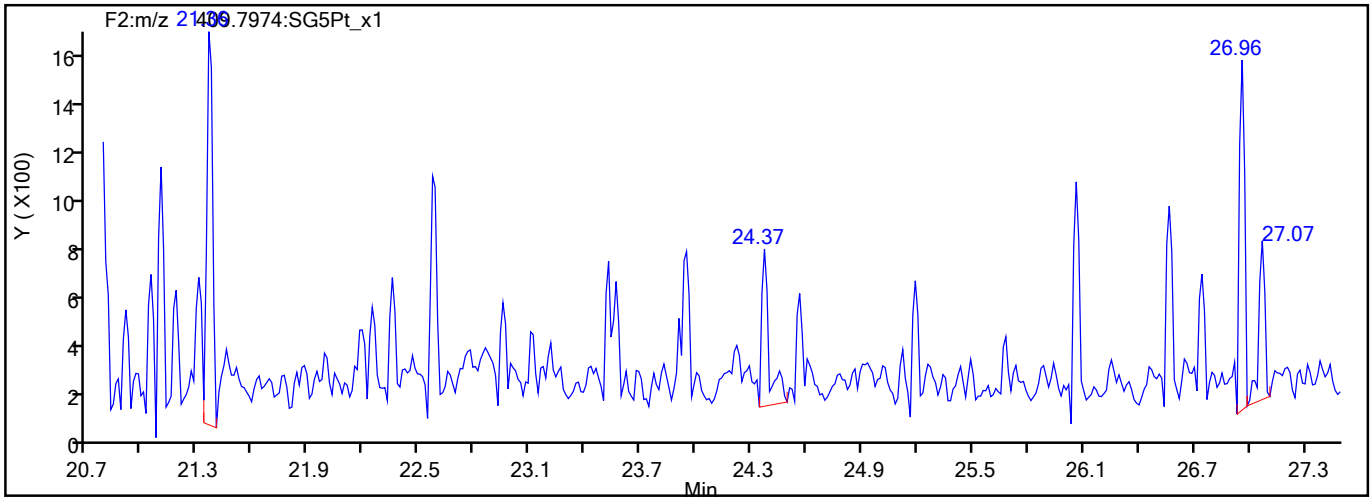

791506

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

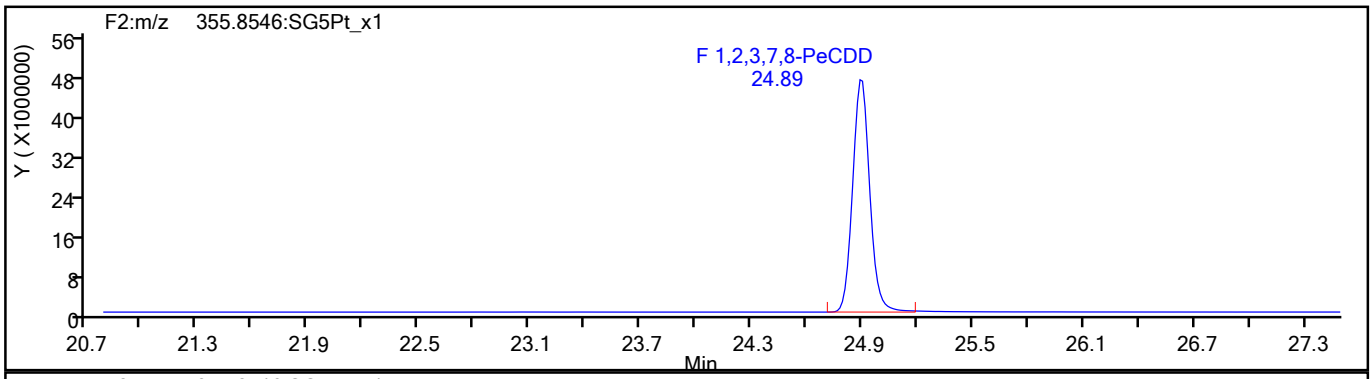

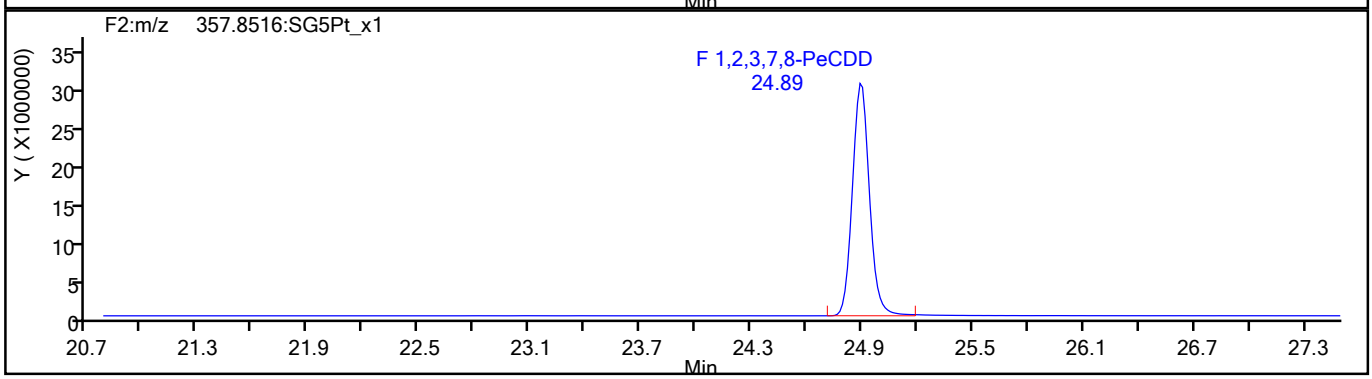

PeCDD Standards

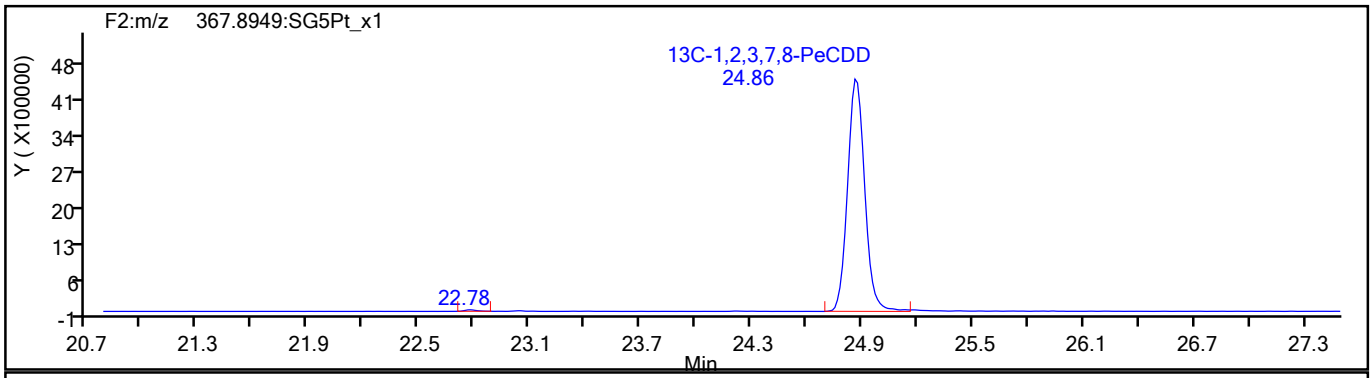

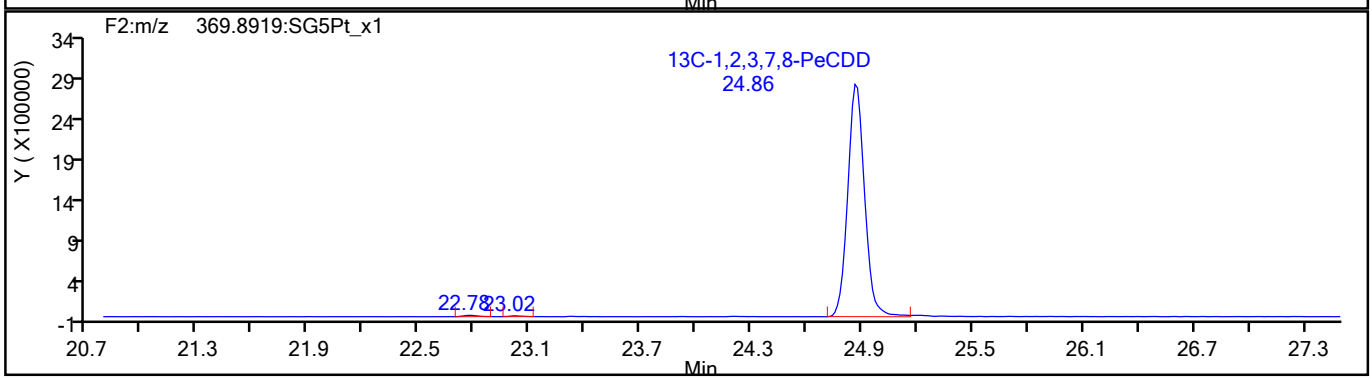

791507

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

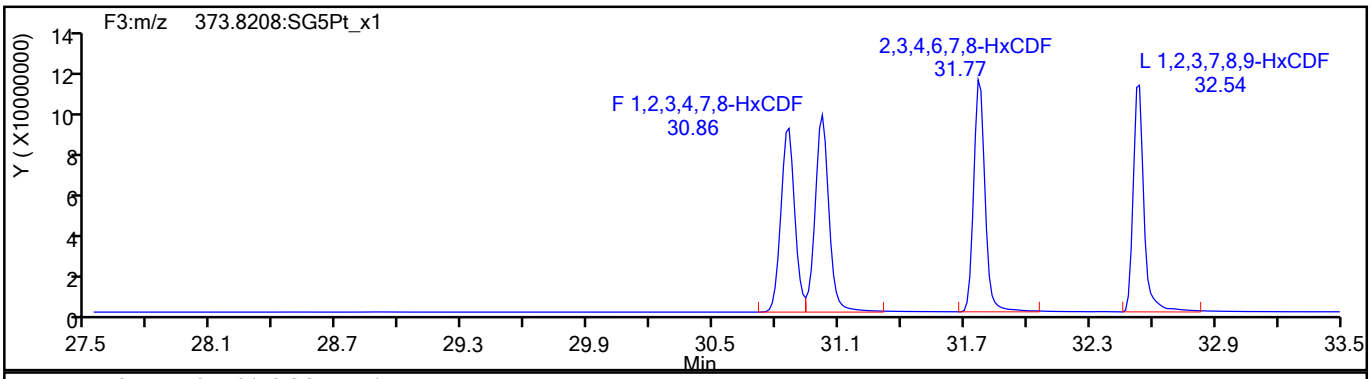

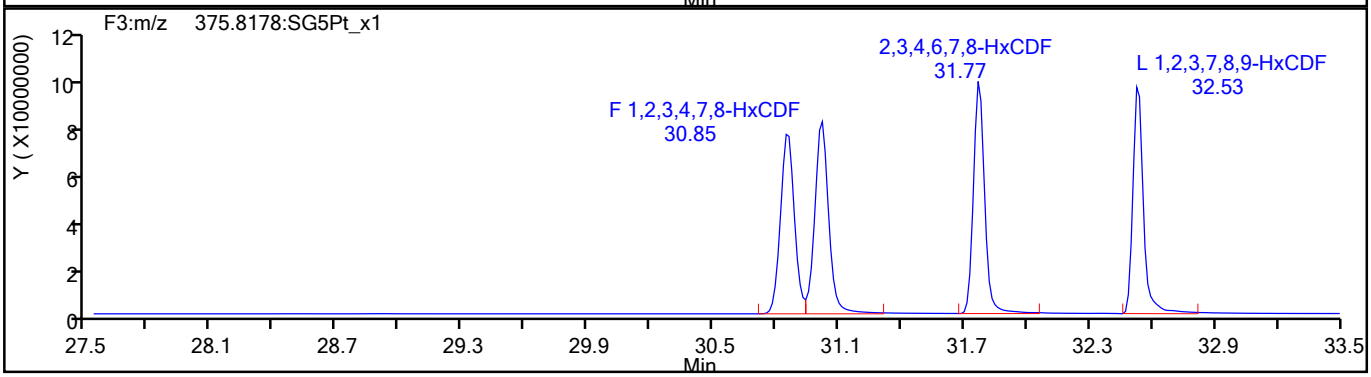

HxCDF Standards

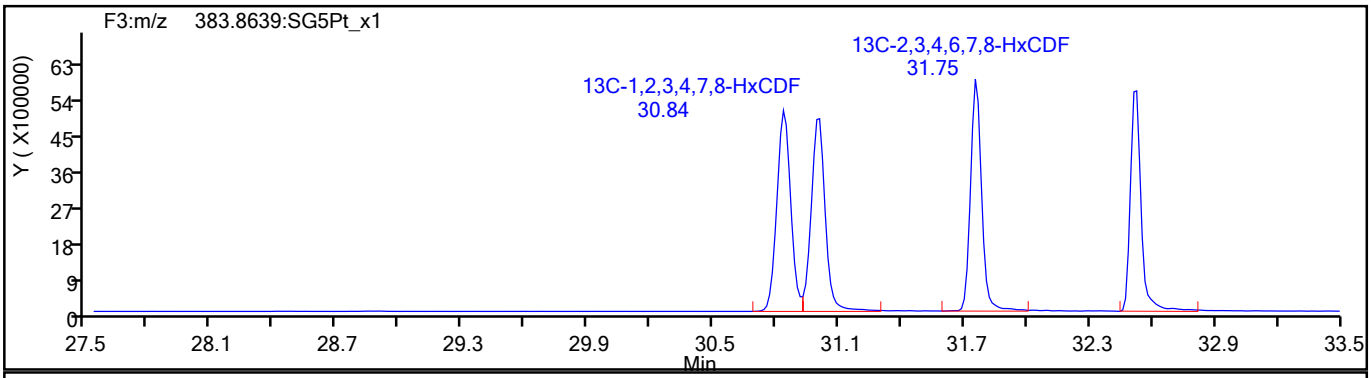

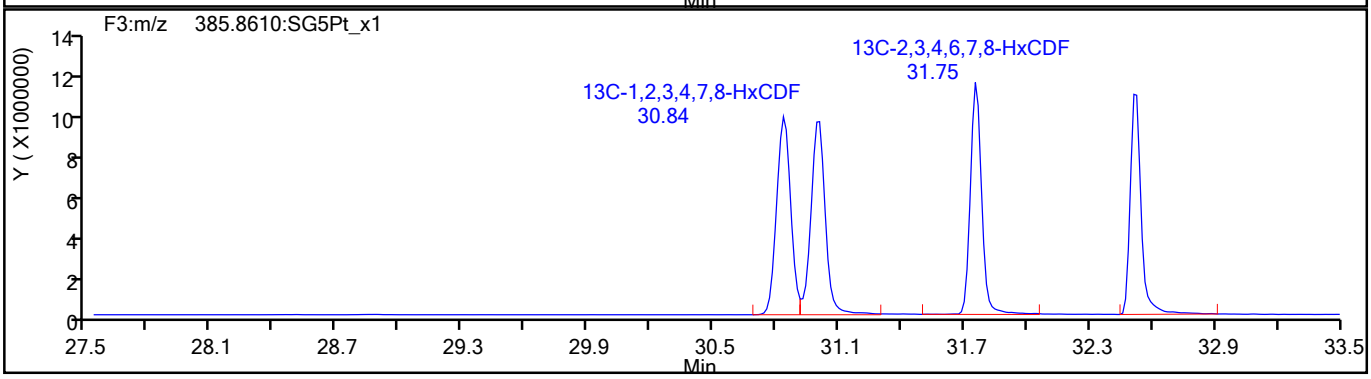

791508

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

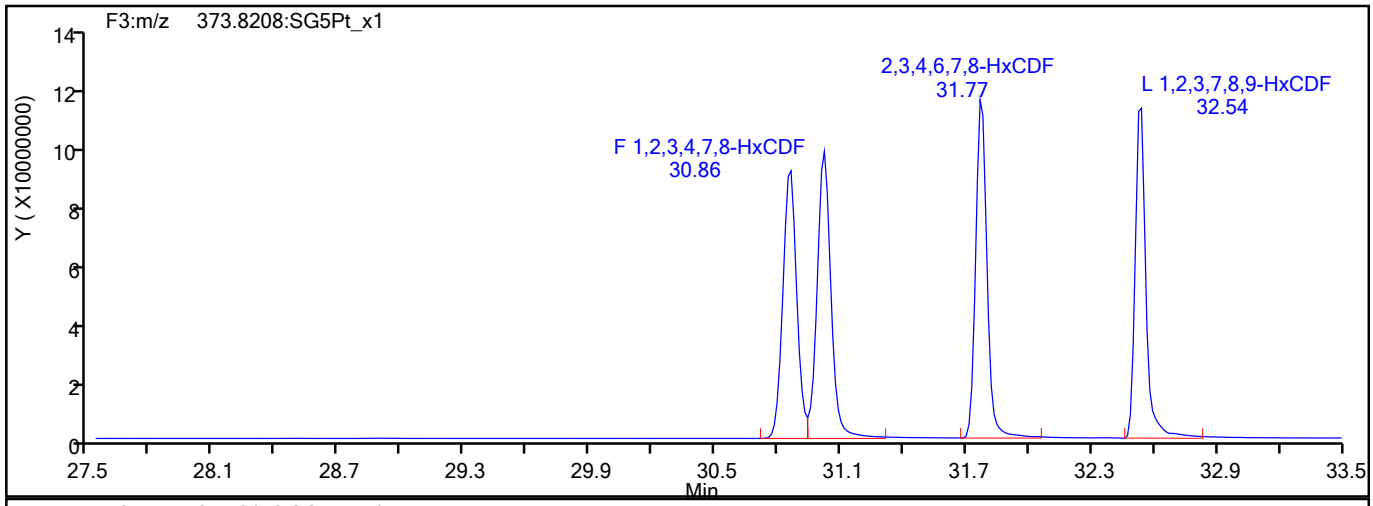

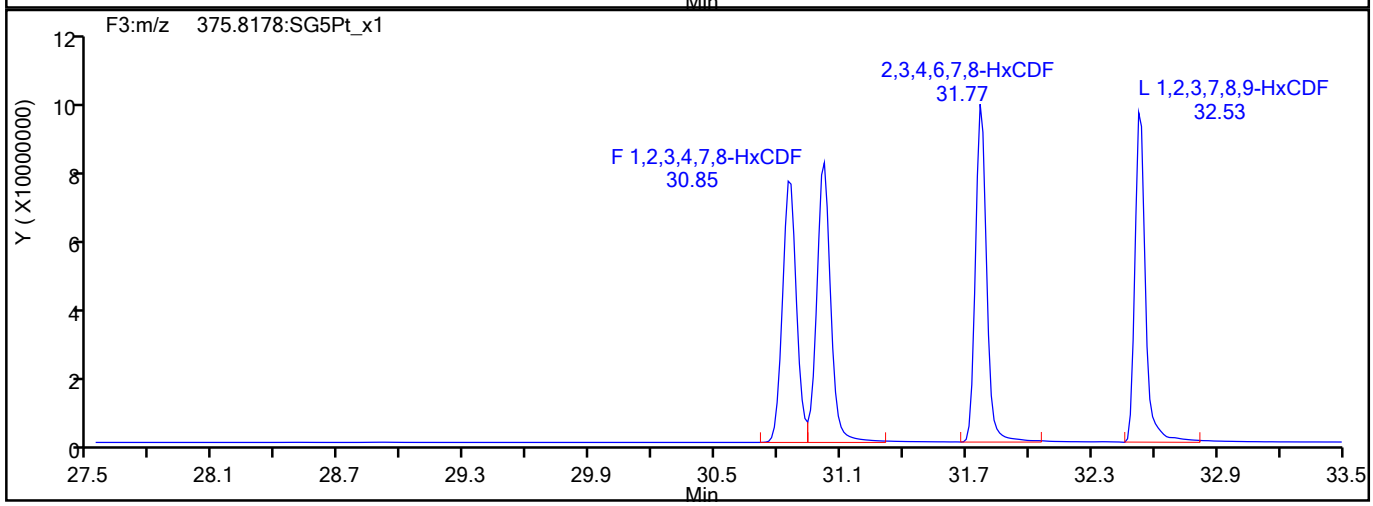

HxCDF Interference Mass

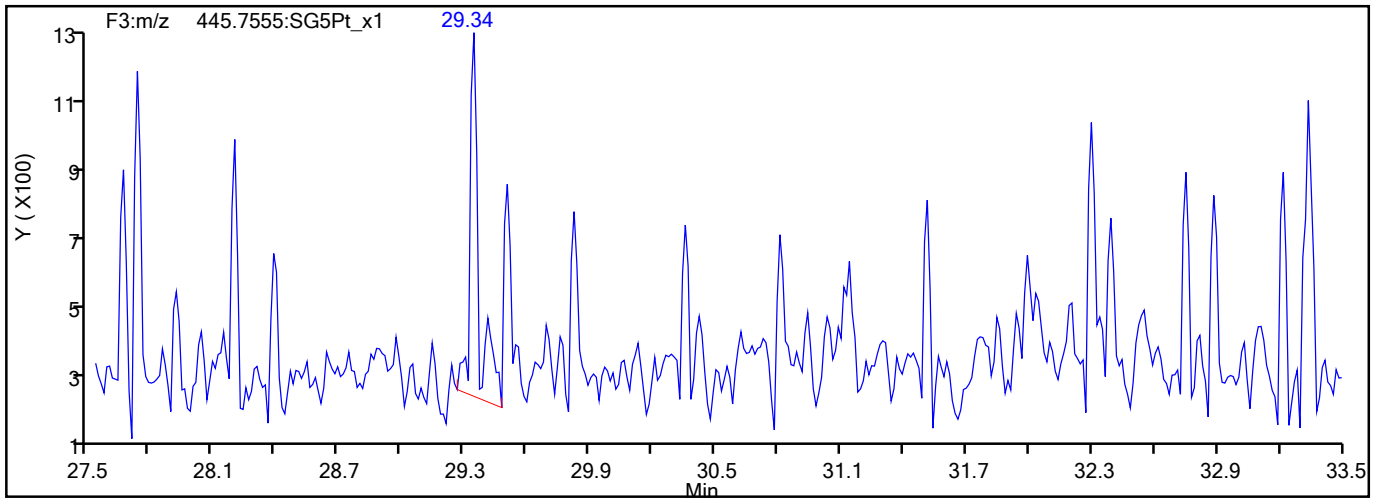

791509

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

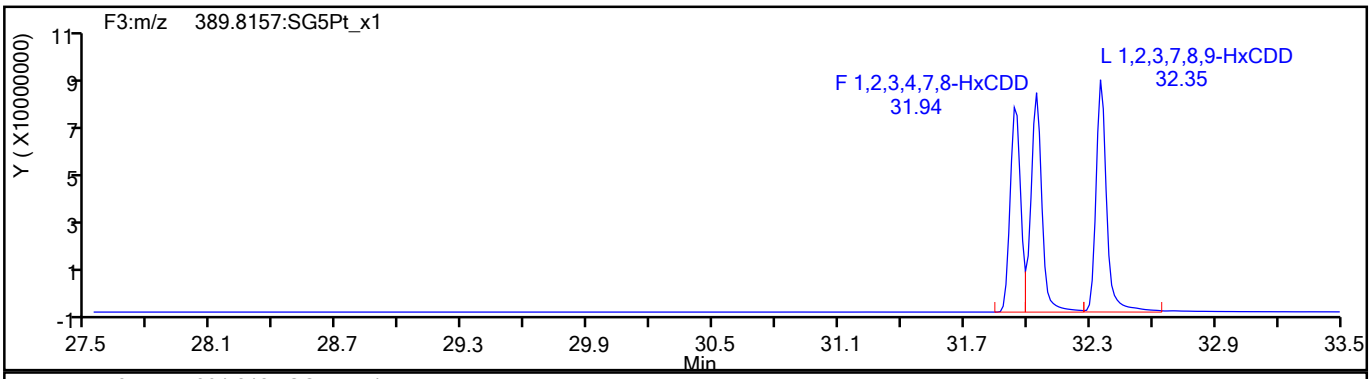

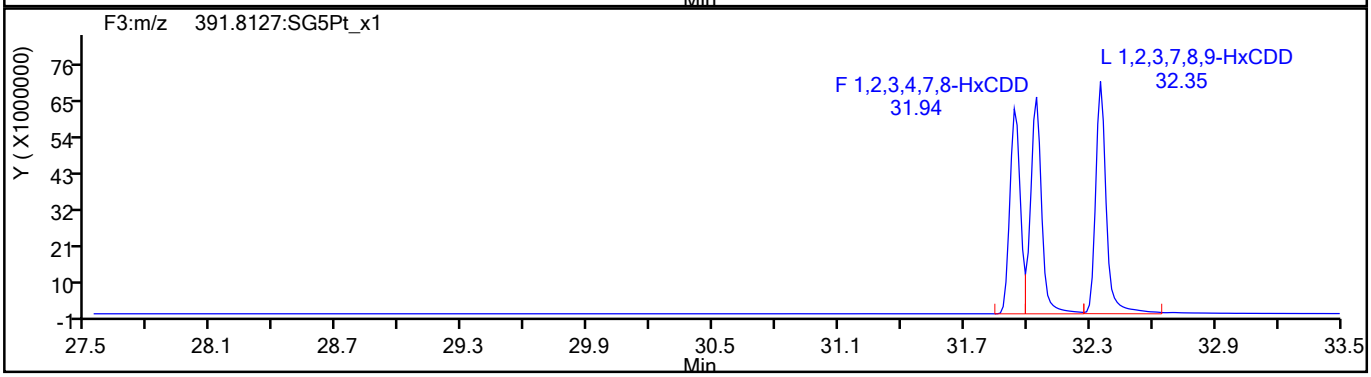

HxCDD Standards

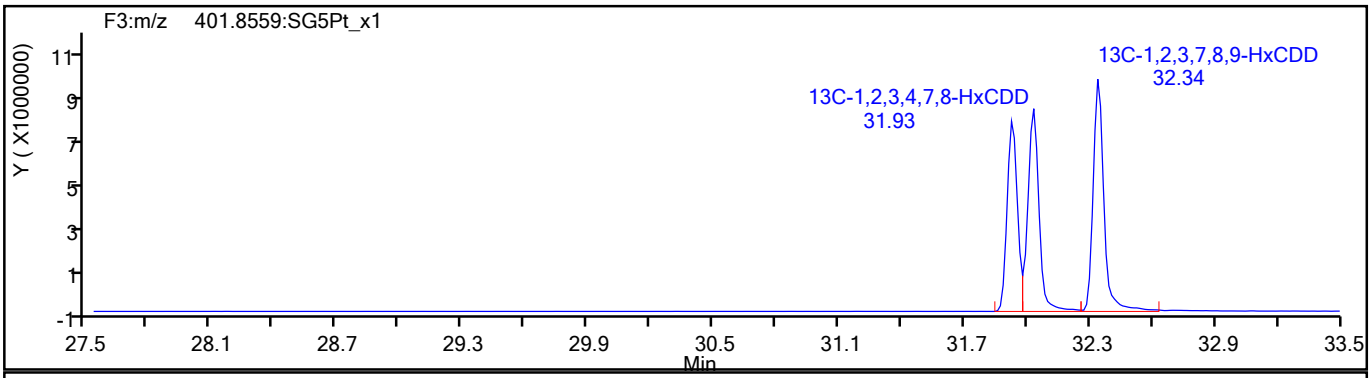

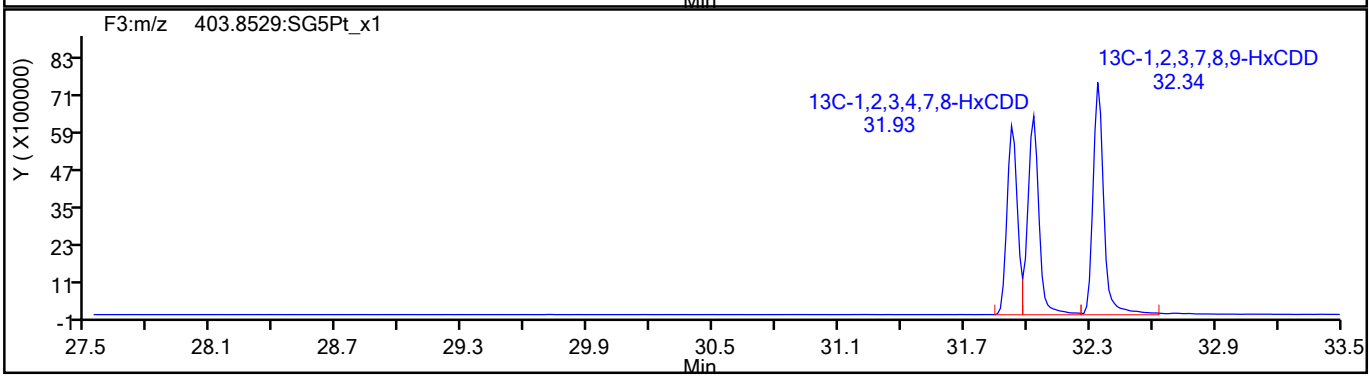

791510

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

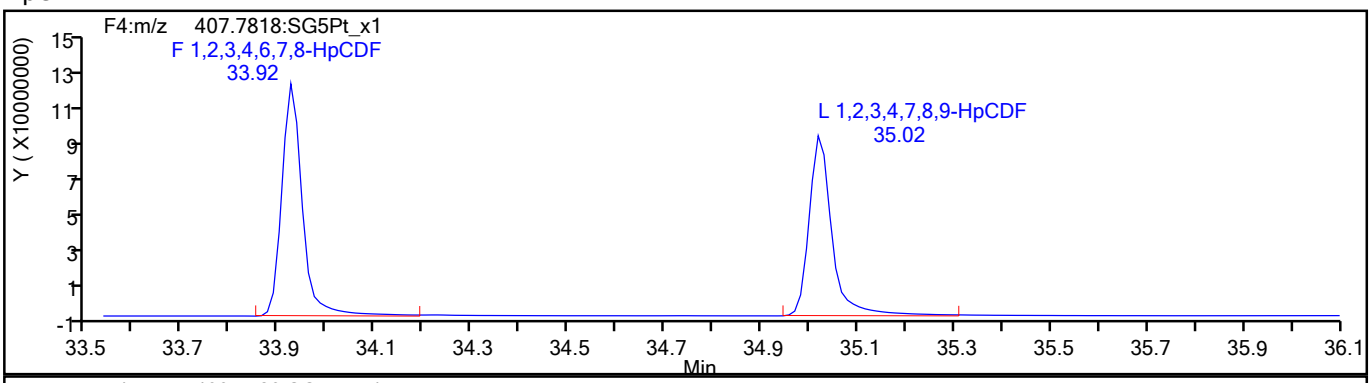

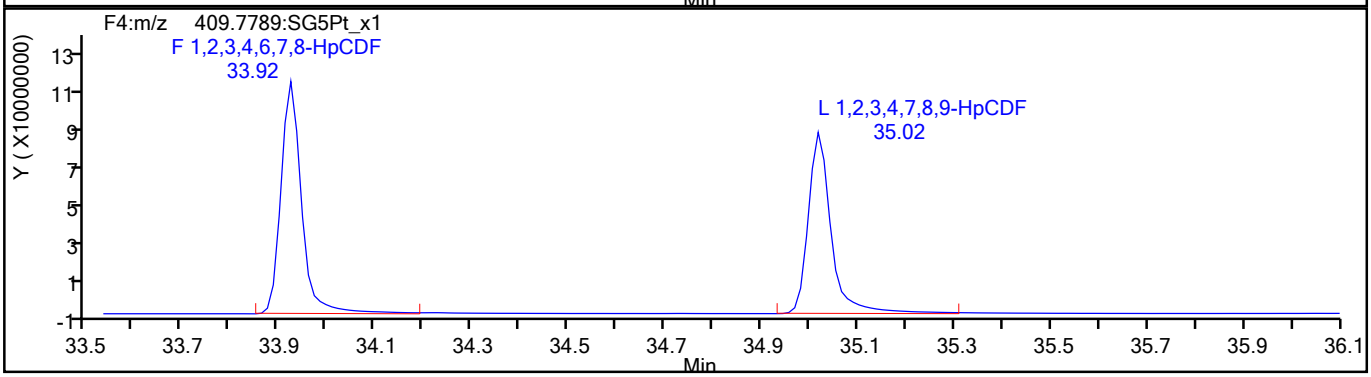

HpCDF Standards

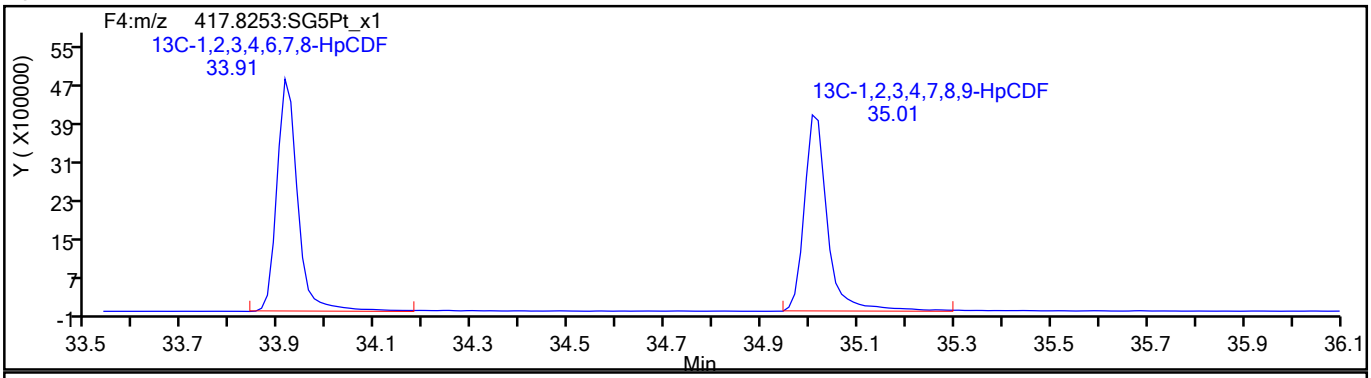

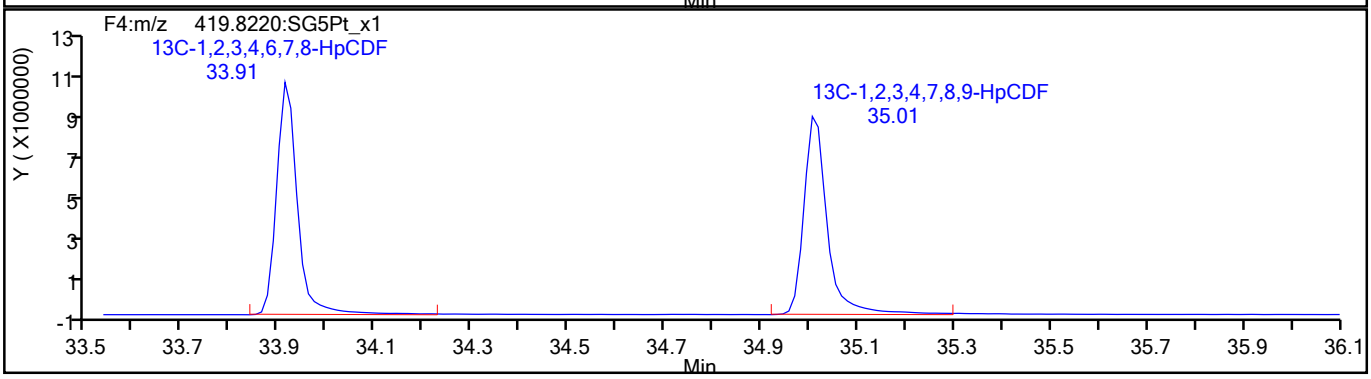

791511

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

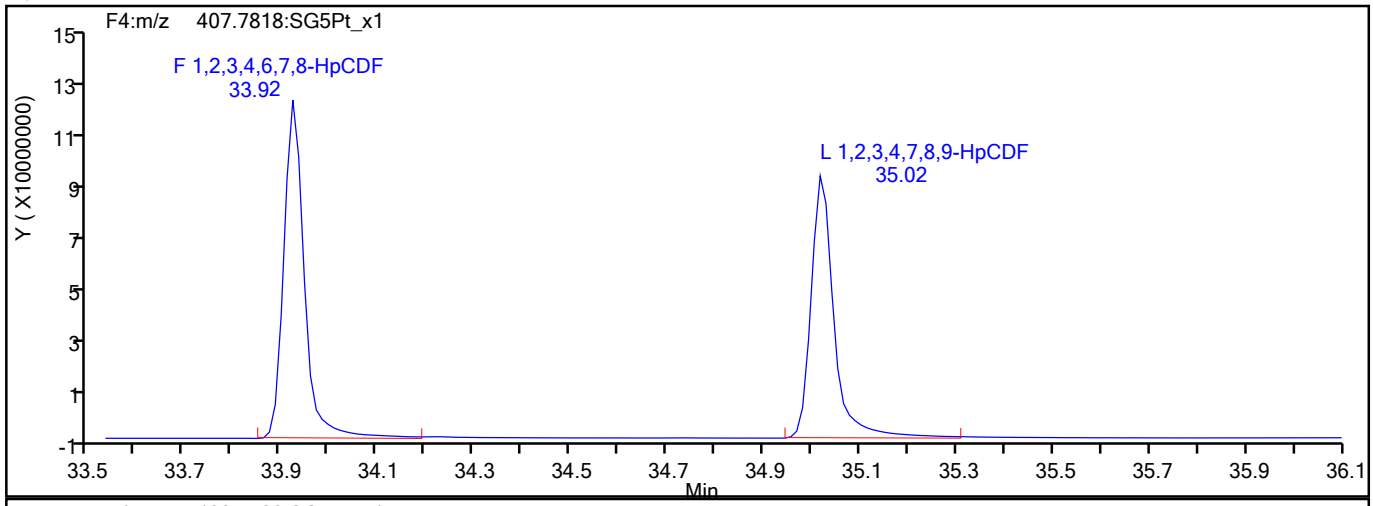

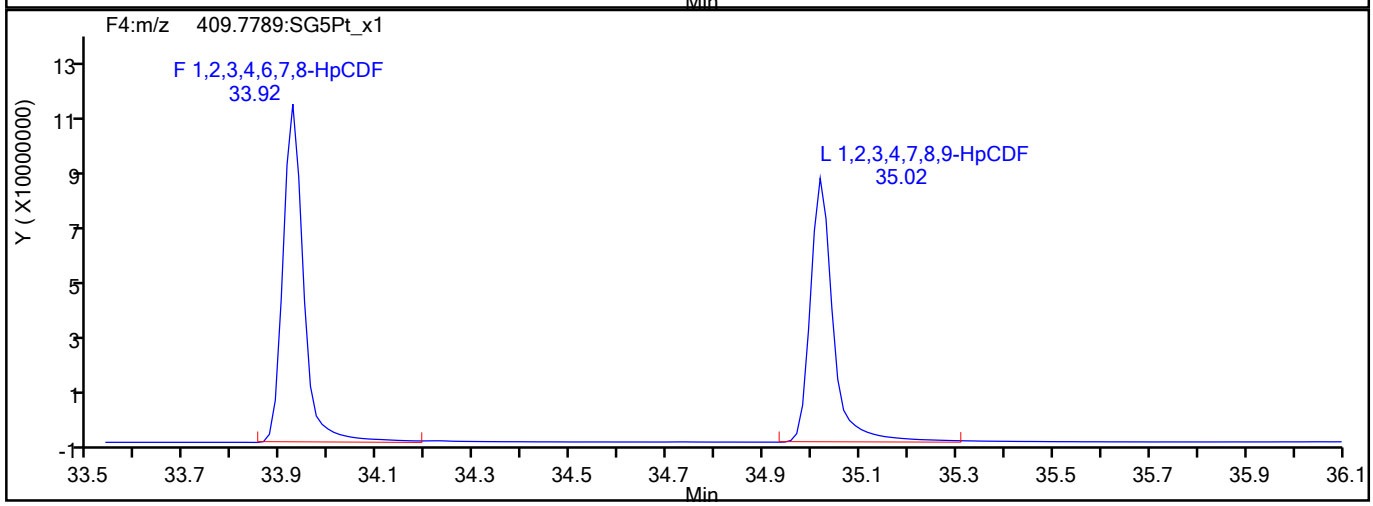

HpCDF Interference Mass

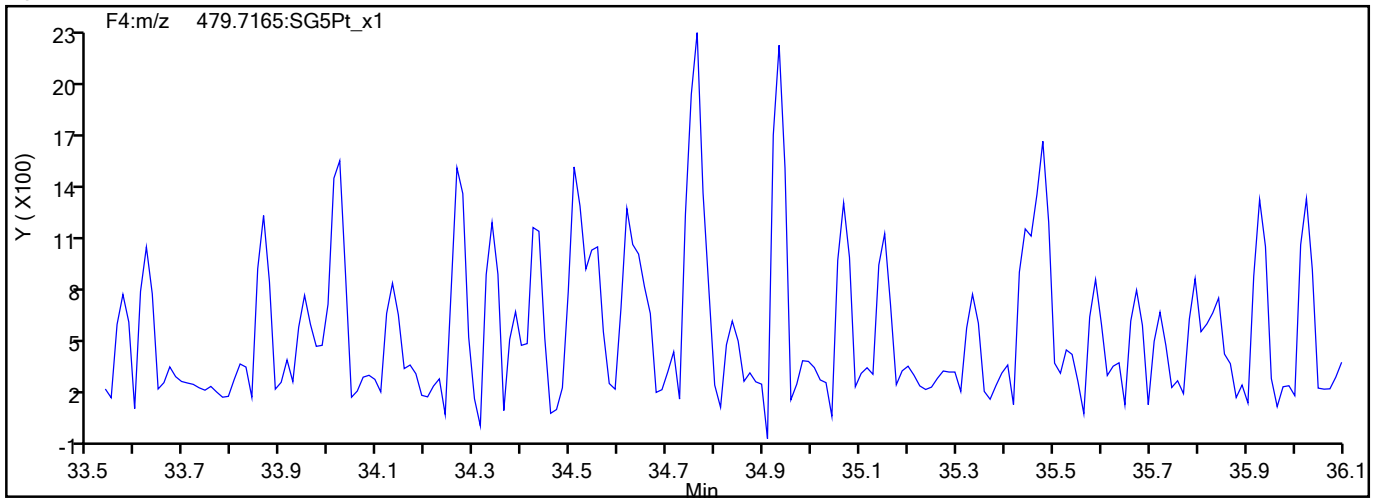

791512

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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HpCDD

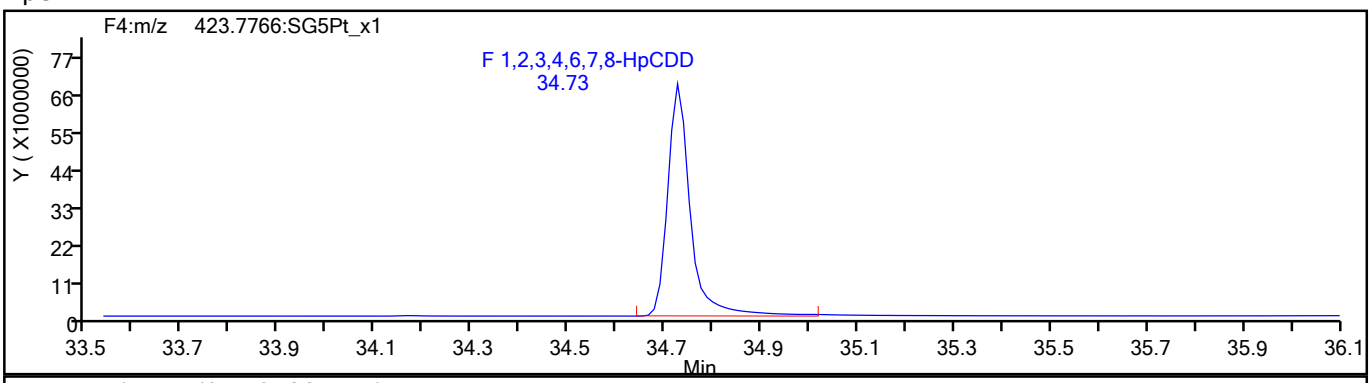

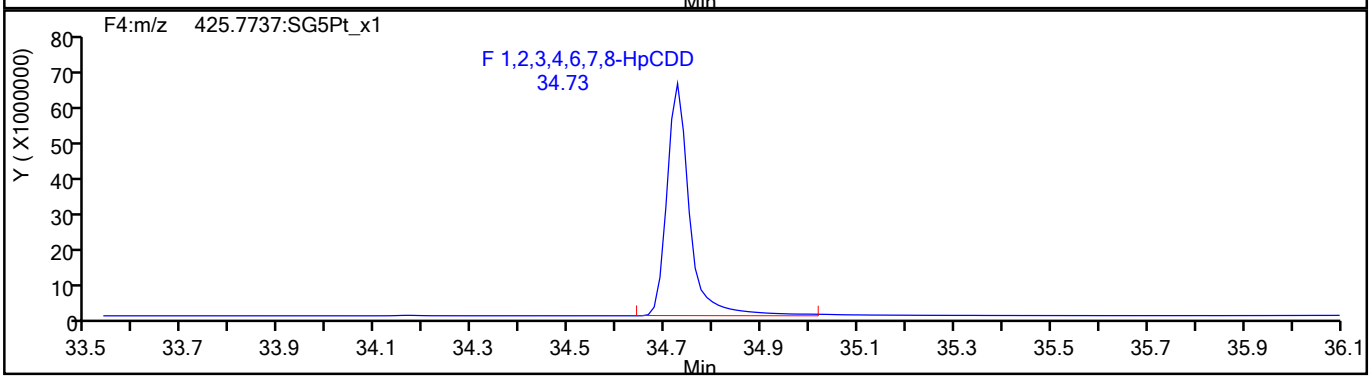

HpCDD Standards

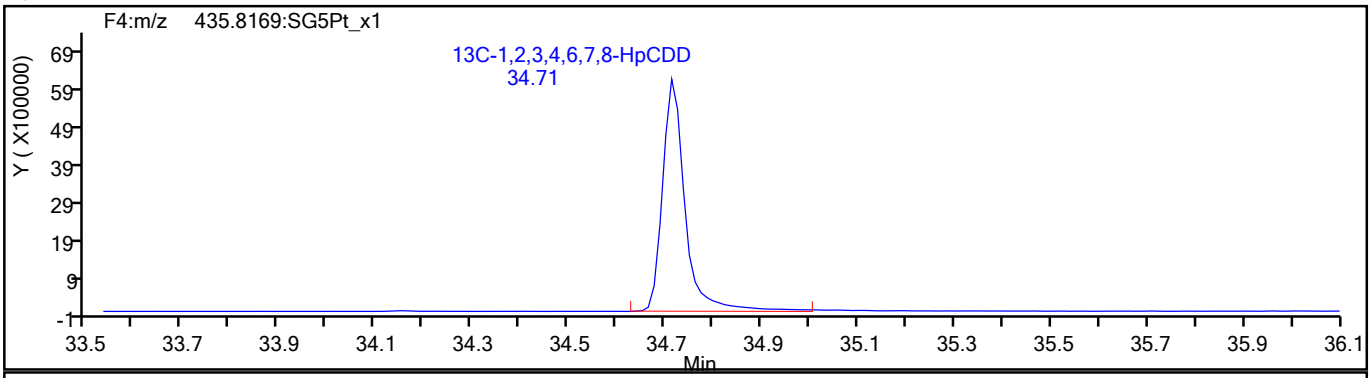

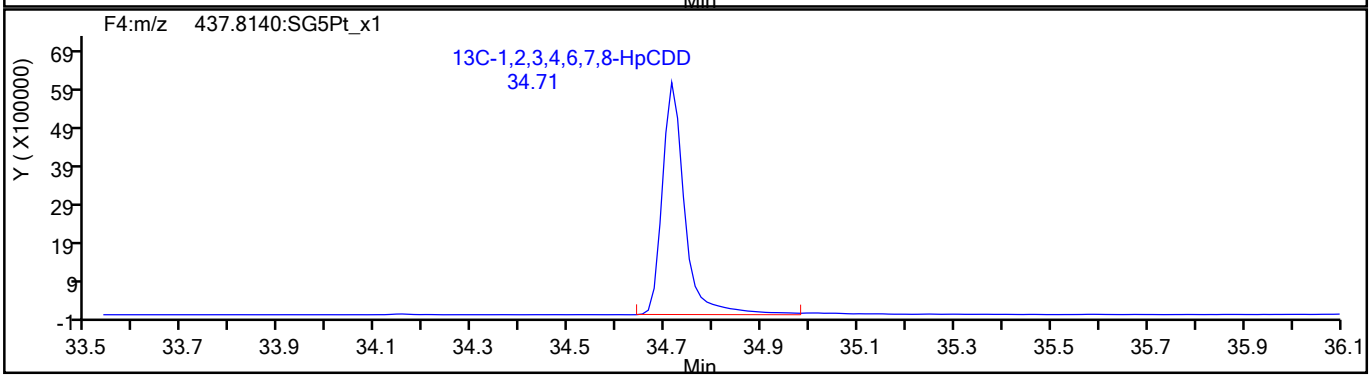

791513

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

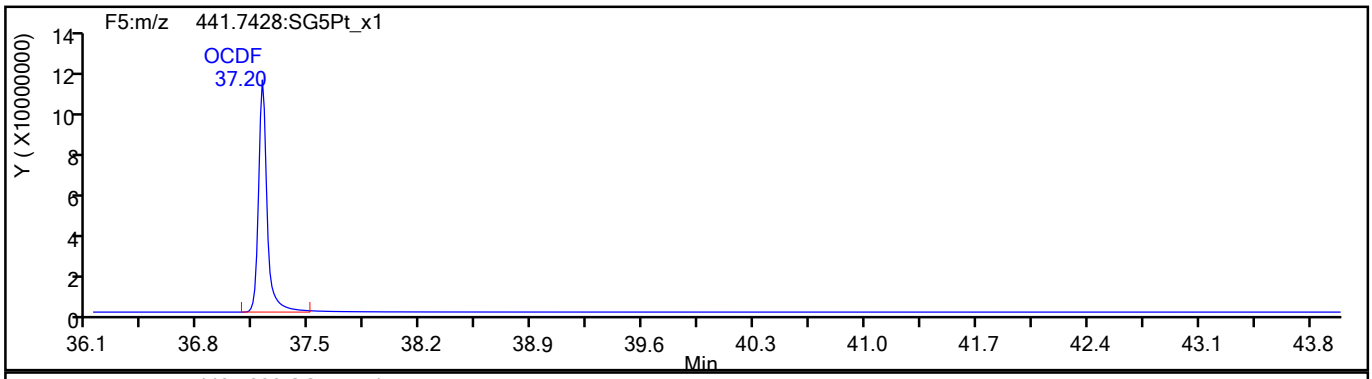

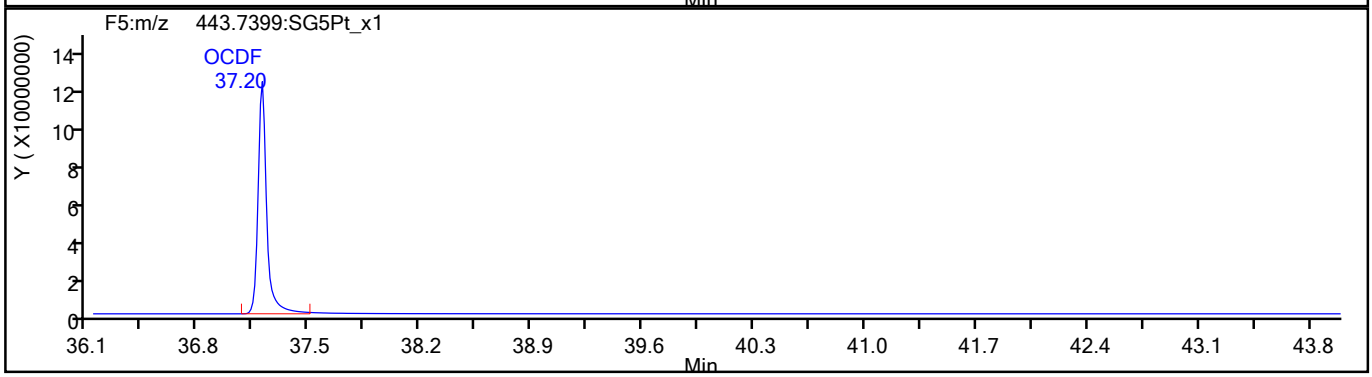

OCDF Standards

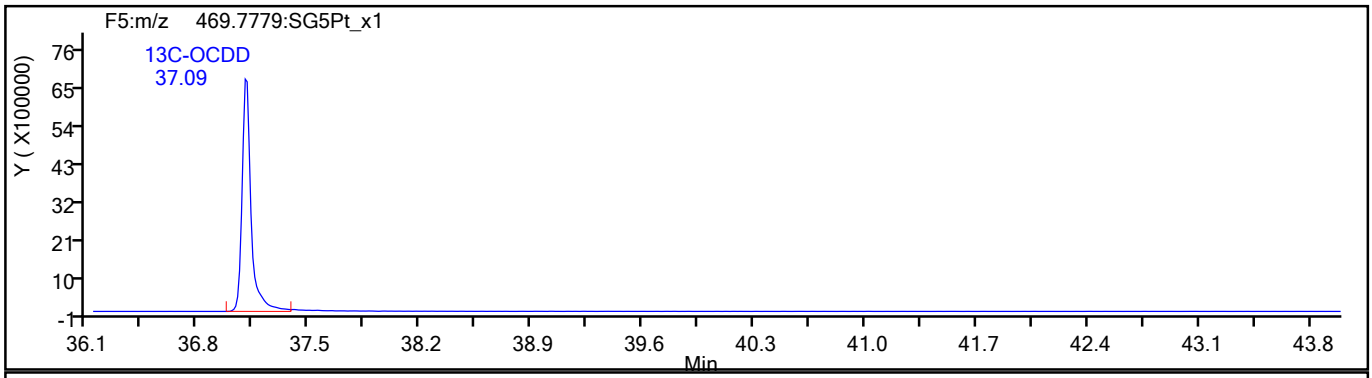

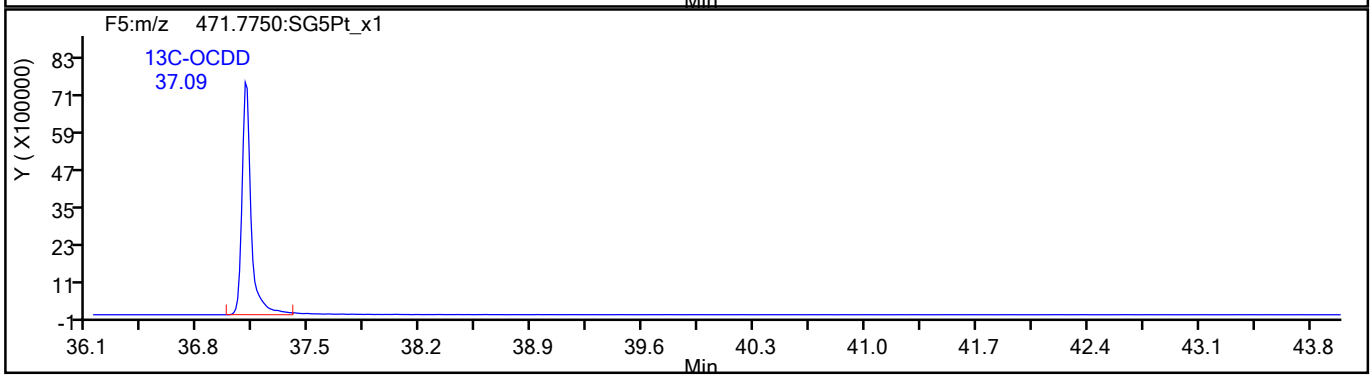

791514

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

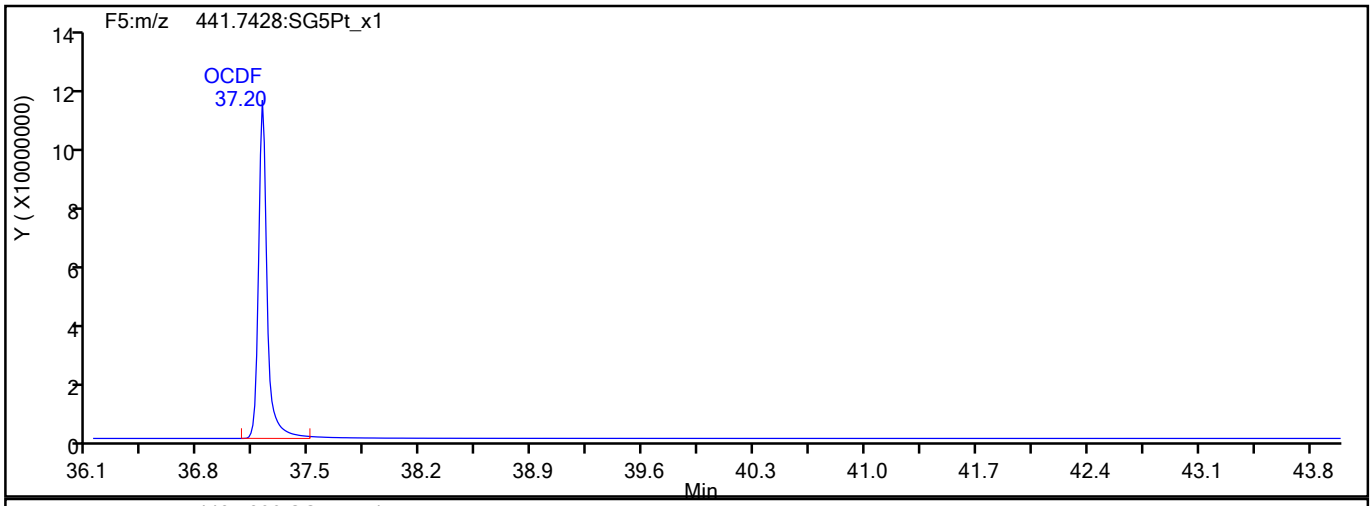

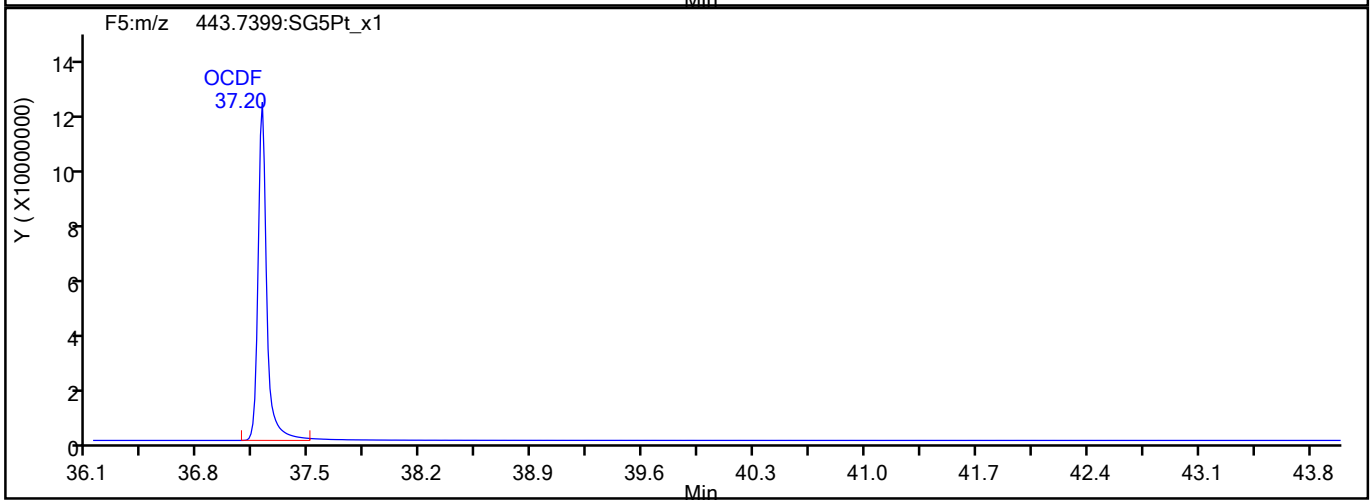

OCDF Interference Mass

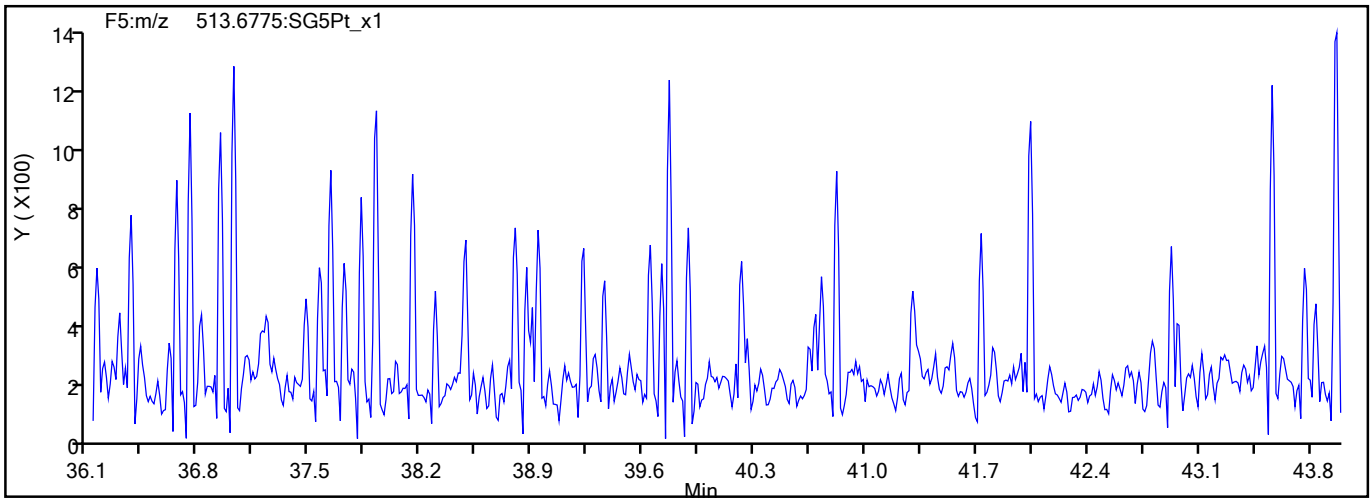

791515

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

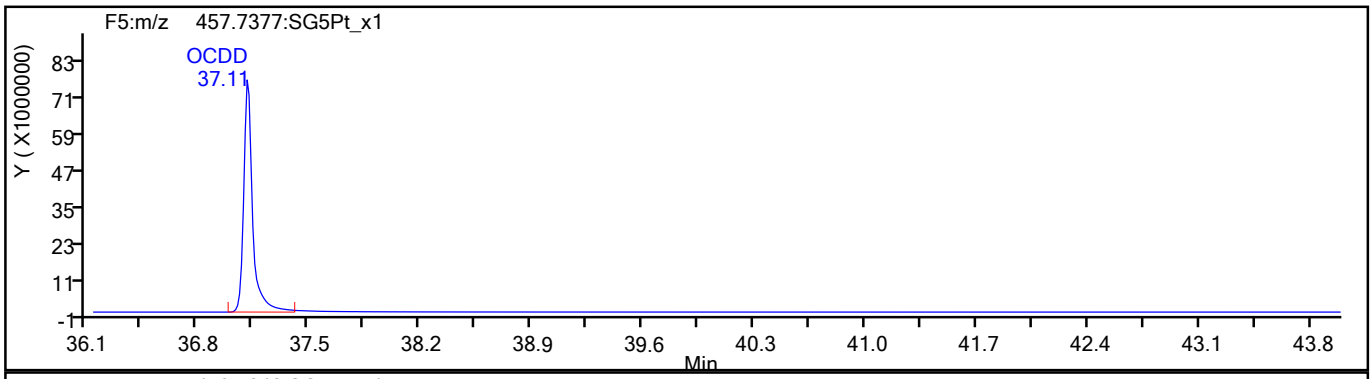

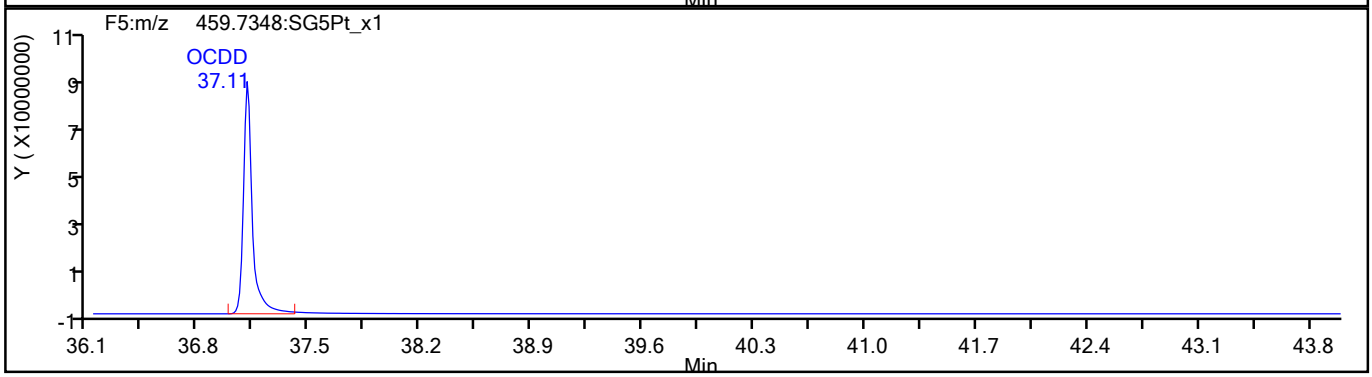

OCDD Standards

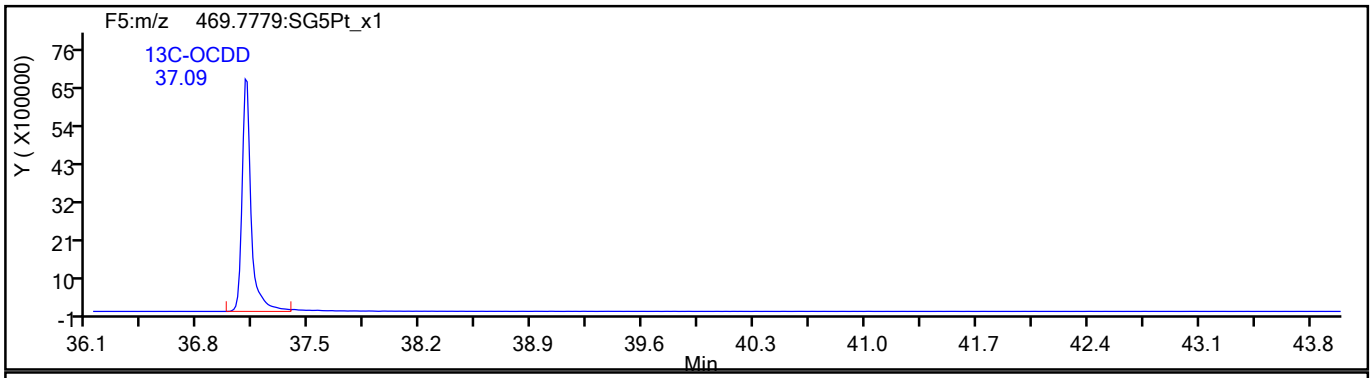

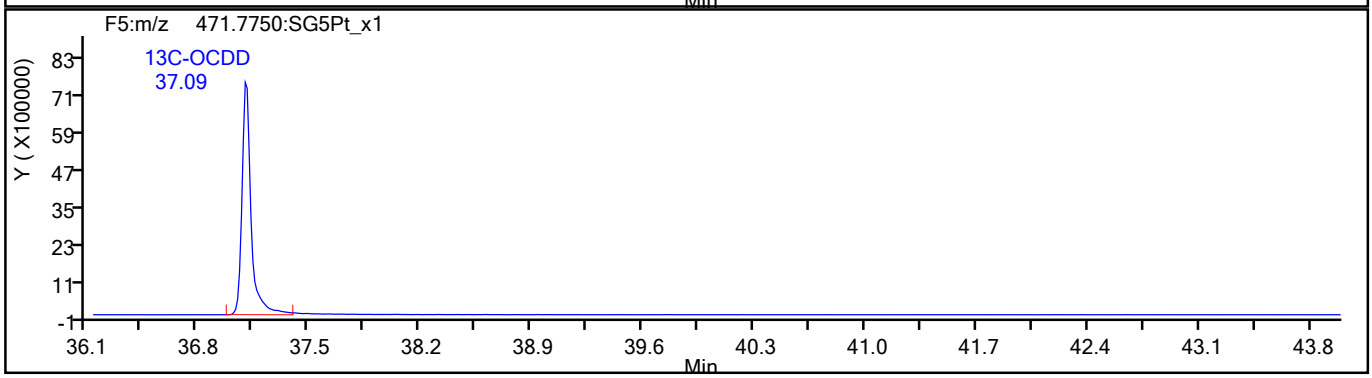

791516

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

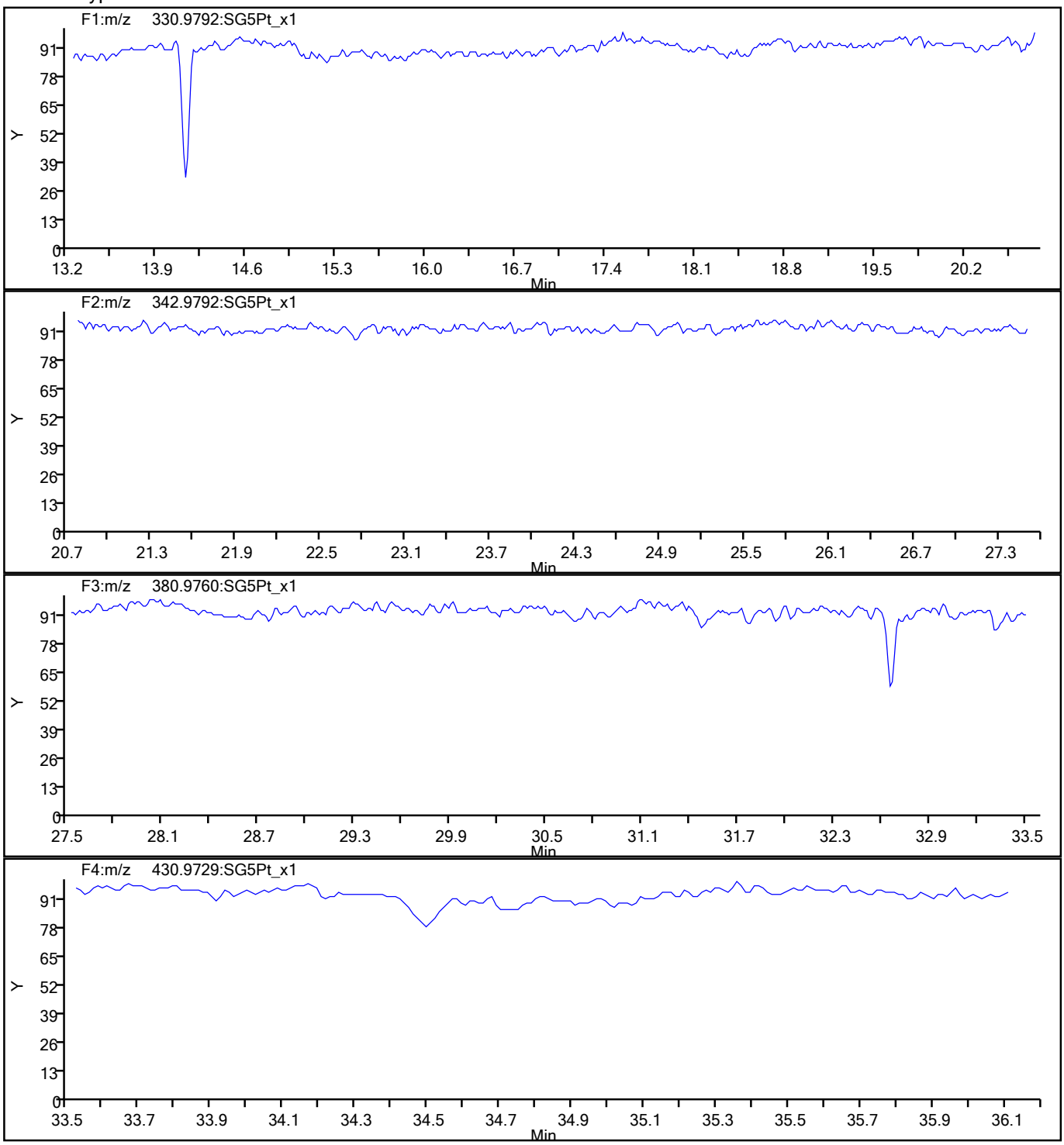

791517

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

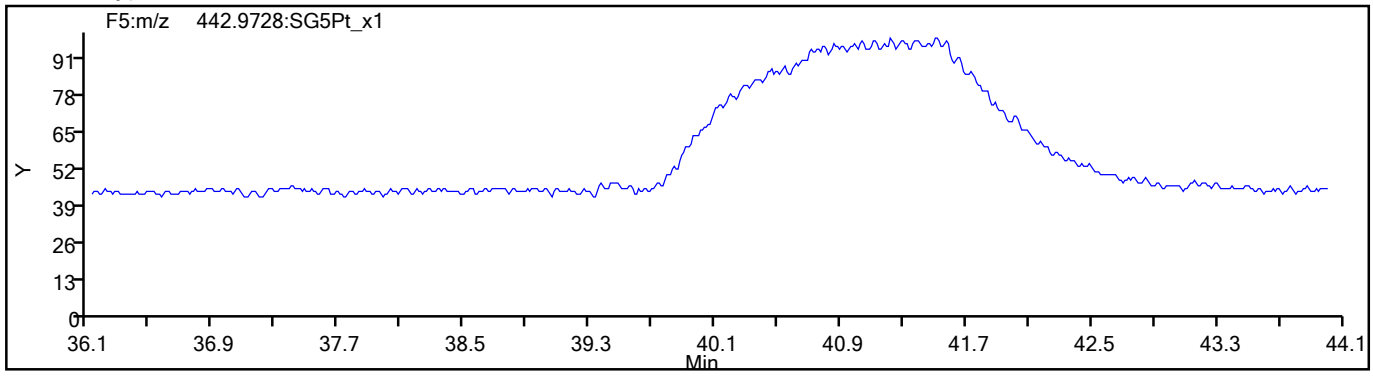

791518

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.094

Error Coefficients

Standard Error:	226000000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.779775	100.0	41876556.0	1.11191	Y
2	IC 320-510264/4	10.0	9.539499	100.0	38689128.0	0.95395	Y
3	IC 320-510264/5	50.0	55.880768	100.0	40333717.0	1.117615	Y
4	IC 320-510264/6	200.0	233.50404	100.0	40442950.0	1.16752	Y
5	IC 320-510264/7	1000.0	1120.518221	100.0	39395832.0	1.120518	Y

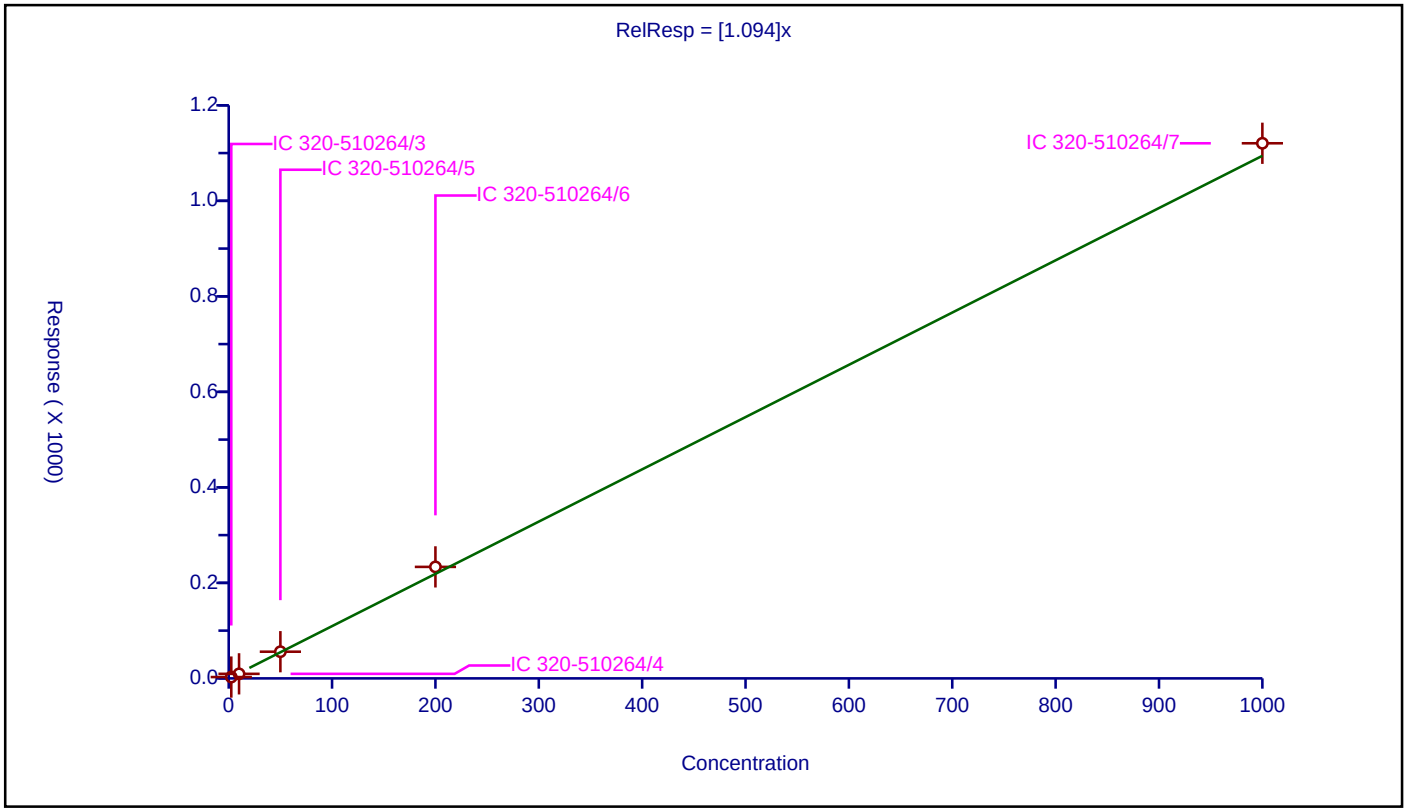

791519

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.441

Error Coefficients

Standard Error:	349000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.618521	100.0	51308225.0	1.447408	Y
2	IC 320-510264/4	10.0	12.412663	100.0	46691158.0	1.241266	Y
3	IC 320-510264/5	50.0	74.932304	100.0	47697671.0	1.498646	Y
4	IC 320-510264/6	200.0	309.702692	100.0	47752972.0	1.548513	Y
5	IC 320-510264/7	1000.0	1470.622057	100.0	46328151.0	1.470622	Y

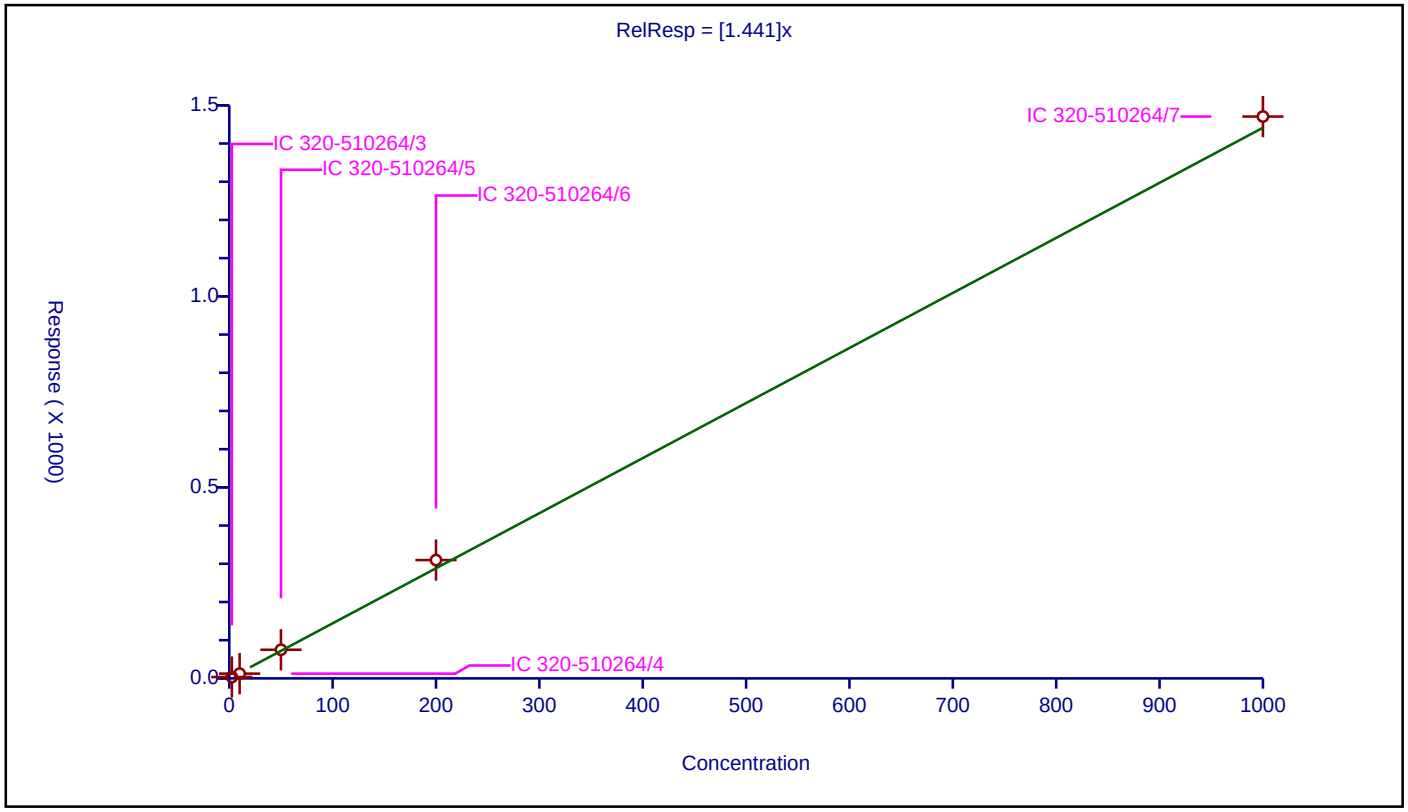

791520

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	302000000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.284087	100.0	44628352.0	1.313635	Y
2	IC 320-510264/4	10.0	11.269366	100.0	42362179.0	1.126937	Y
3	IC 320-510264/5	50.0	68.111875	100.0	43238622.0	1.362237	Y
4	IC 320-510264/6	200.0	290.409045	100.0	42687625.0	1.452045	Y
5	IC 320-510264/7	1000.0	1332.064187	100.0	44333848.0	1.332064	Y

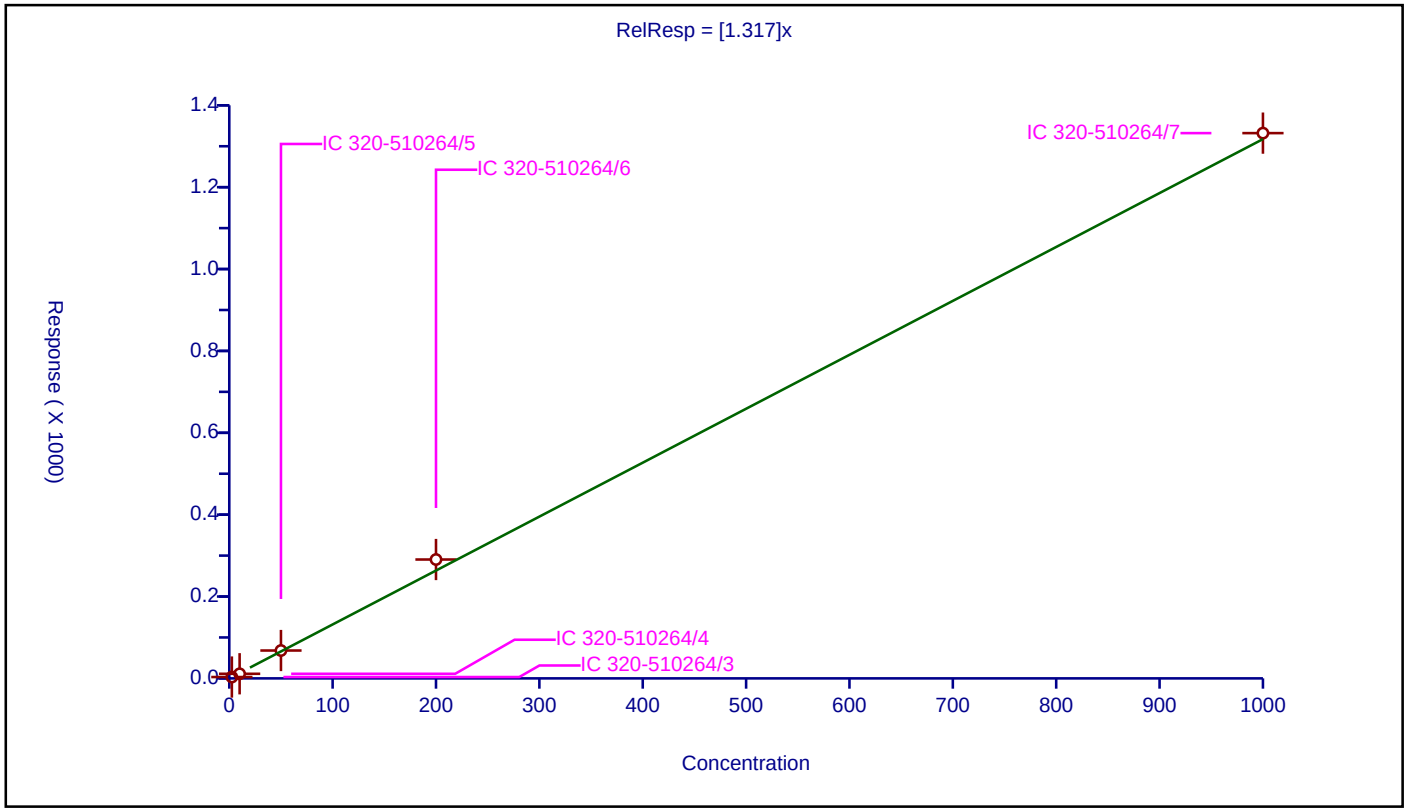

791521

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	248000000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.744793	100.0	47363504.0	1.097917	Y
2	IC 320-510264/4	10.0	8.90634	100.0	44877133.0	0.890634	Y
3	IC 320-510264/5	50.0	56.519553	100.0	44039927.0	1.130391	Y
4	IC 320-510264/6	200.0	233.423018	100.0	44144841.0	1.167115	Y
5	IC 320-510264/7	1000.0	1034.115245	100.0	46886171.0	1.034115	Y

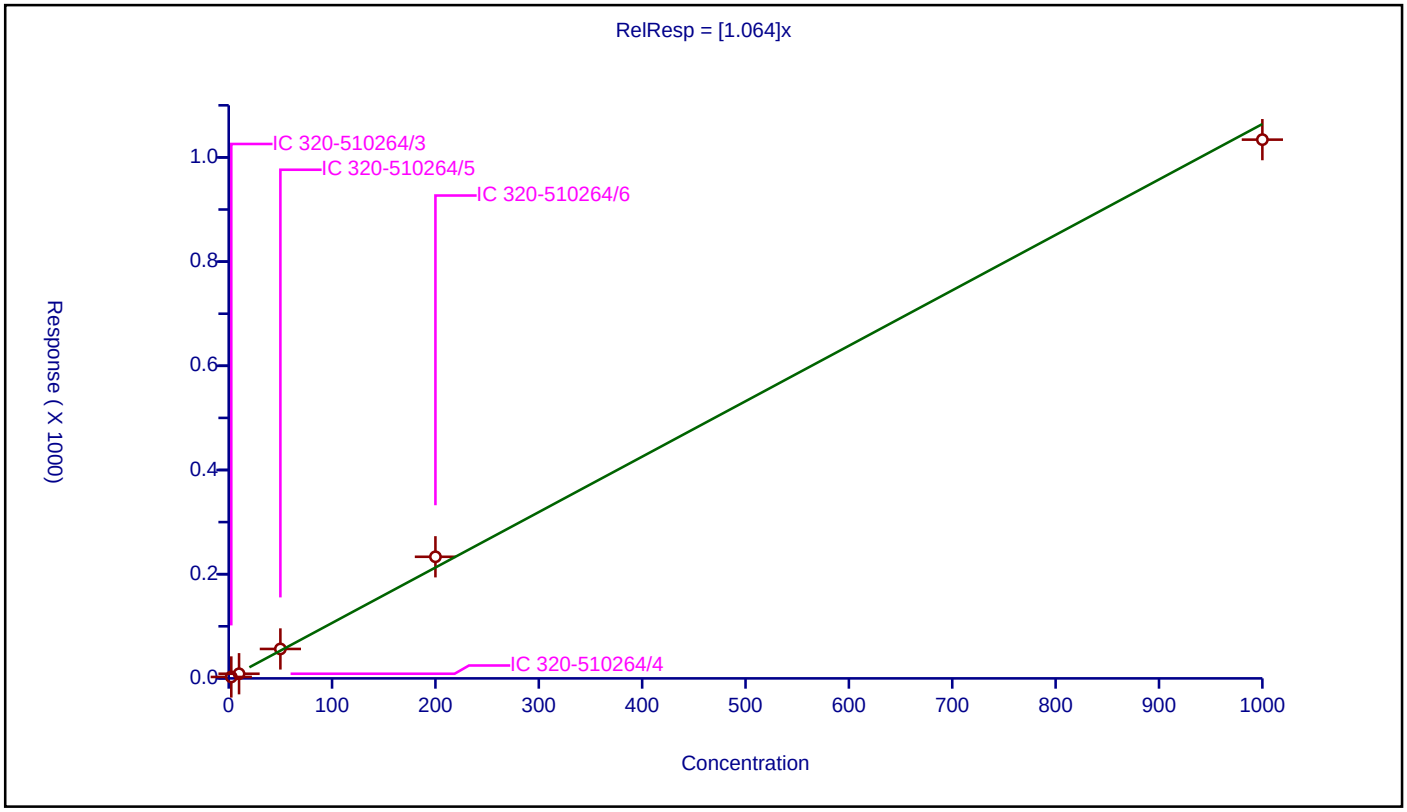

791522

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.085

Error Coefficients

Standard Error:	377000000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.805608	100.0	69484482.0	1.122243	Y
2	IC 320-510264/4	10.0	9.192224	100.0	65726932.0	0.919222	Y
3	IC 320-510264/5	50.0	55.122828	100.0	68075509.0	1.102457	Y
4	IC 320-510264/6	200.0	238.727102	100.0	64951889.0	1.193636	Y
5	IC 320-510264/7	1000.0	1088.07626	100.0	67741189.0	1.088076	Y

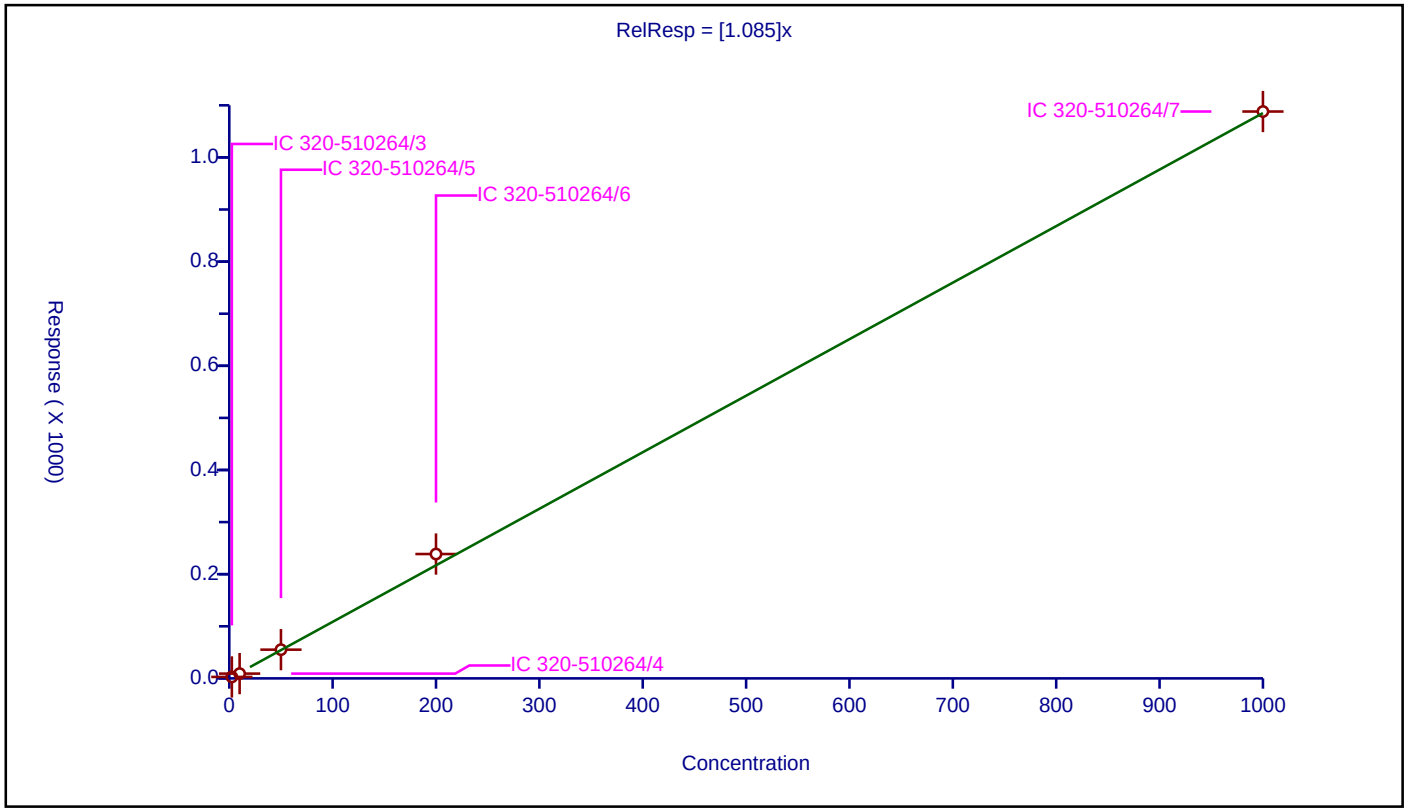

791523

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1

Error Coefficients

Standard Error:	278000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.57359	100.0	56759108.0	1.029436	Y
2	IC 320-510264/4	10.0	8.528531	100.0	52974056.0	0.852853	Y
3	IC 320-510264/5	50.0	50.563423	100.0	55284532.0	1.011268	Y
4	IC 320-510264/6	200.0	218.597288	100.0	54392394.0	1.092986	Y
5	IC 320-510264/7	1000.0	1013.848486	100.0	53564396.0	1.013848	Y

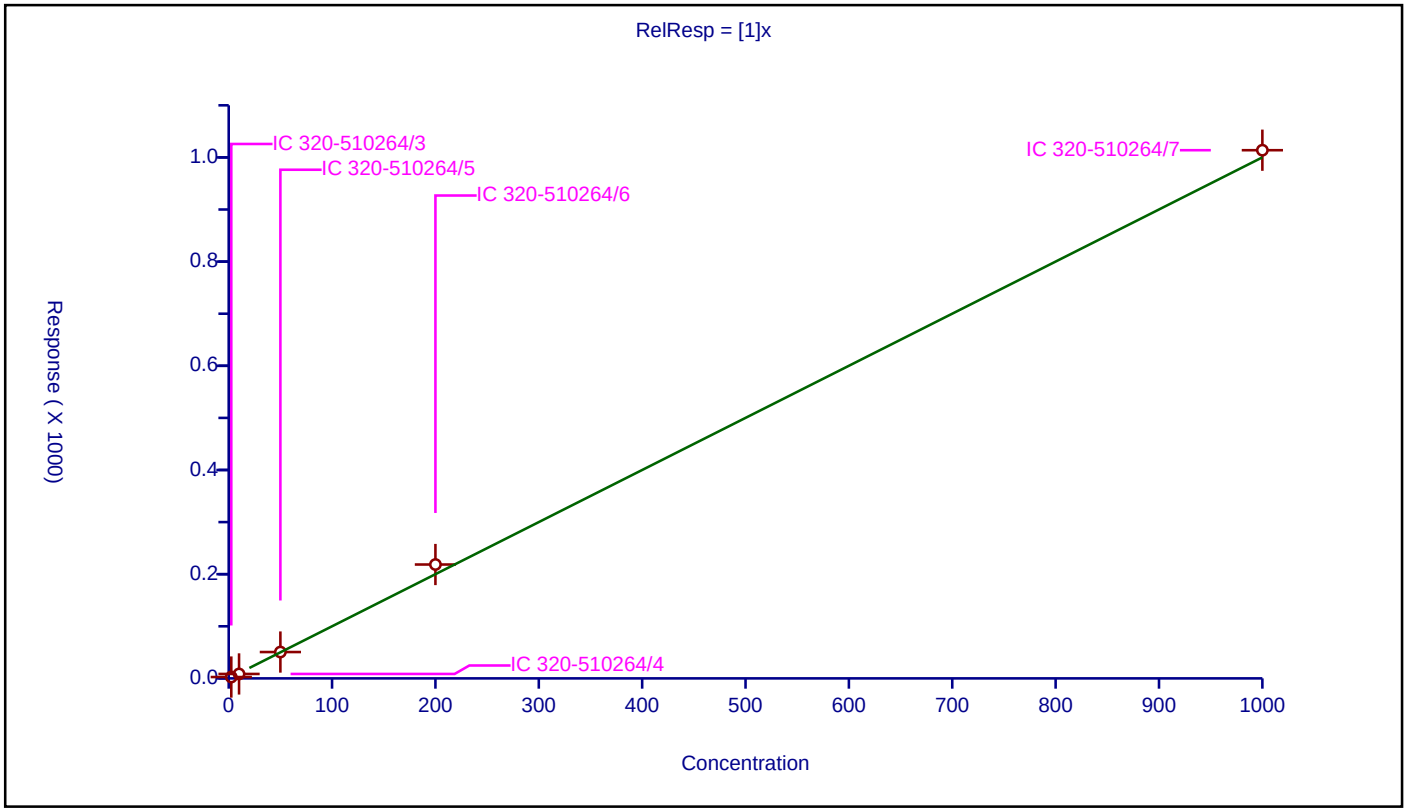

791524

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.126

Error Coefficients

Standard Error:	402000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.871987	100.0	73262388.0	1.148795	Y
2	IC 320-510264/4	10.0	9.63718	100.0	68089005.0	0.963718	Y
3	IC 320-510264/5	50.0	57.730945	100.0	70677463.0	1.154619	Y
4	IC 320-510264/6	200.0	239.311904	100.0	70459920.0	1.19656	Y
5	IC 320-510264/7	1000.0	1166.370477	100.0	67363664.0	1.16637	Y

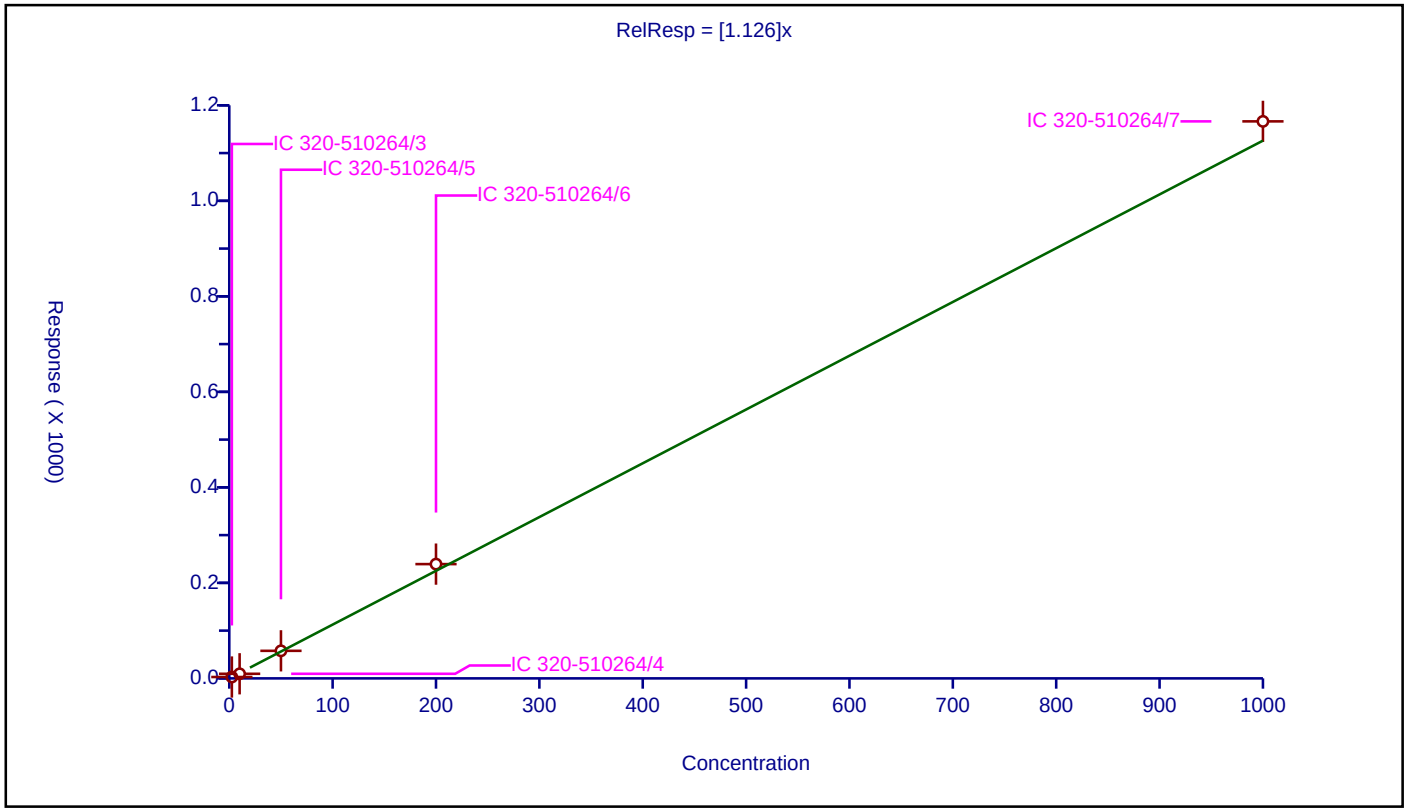

791525

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.248

Error Coefficients

Standard Error:	289000000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.174189	100.0	47363504.0	1.269675	Y
2	IC 320-510264/4	10.0	10.27817	100.0	44877133.0	1.027817	Y
3	IC 320-510264/5	50.0	67.654413	100.0	44039927.0	1.353088	Y
4	IC 320-510264/6	200.0	277.257762	100.0	44144841.0	1.386289	Y
5	IC 320-510264/7	1000.0	1202.675657	100.0	46886171.0	1.202676	Y

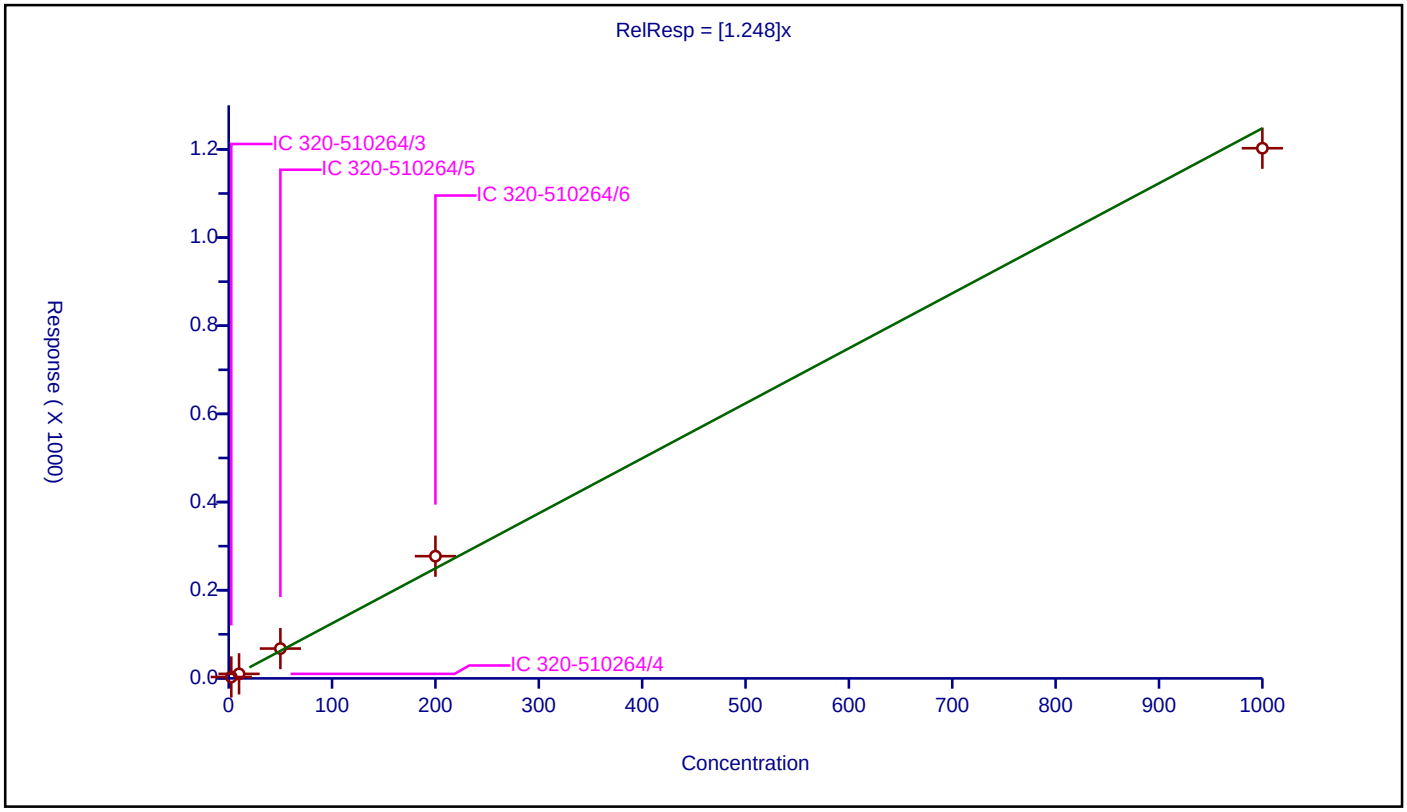

791526

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.166

Error Coefficients

Standard Error:	362000000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.933201	100.0	62528954.0	1.17328	Y
2	IC 320-510264/4	10.0	10.136374	100.0	58828058.0	1.013637	Y
3	IC 320-510264/5	50.0	59.48769	100.0	60389284.0	1.189754	Y
4	IC 320-510264/6	200.0	249.571201	100.0	59636084.0	1.247856	Y
5	IC 320-510264/7	1000.0	1207.229164	100.0	58669892.0	1.207229	Y

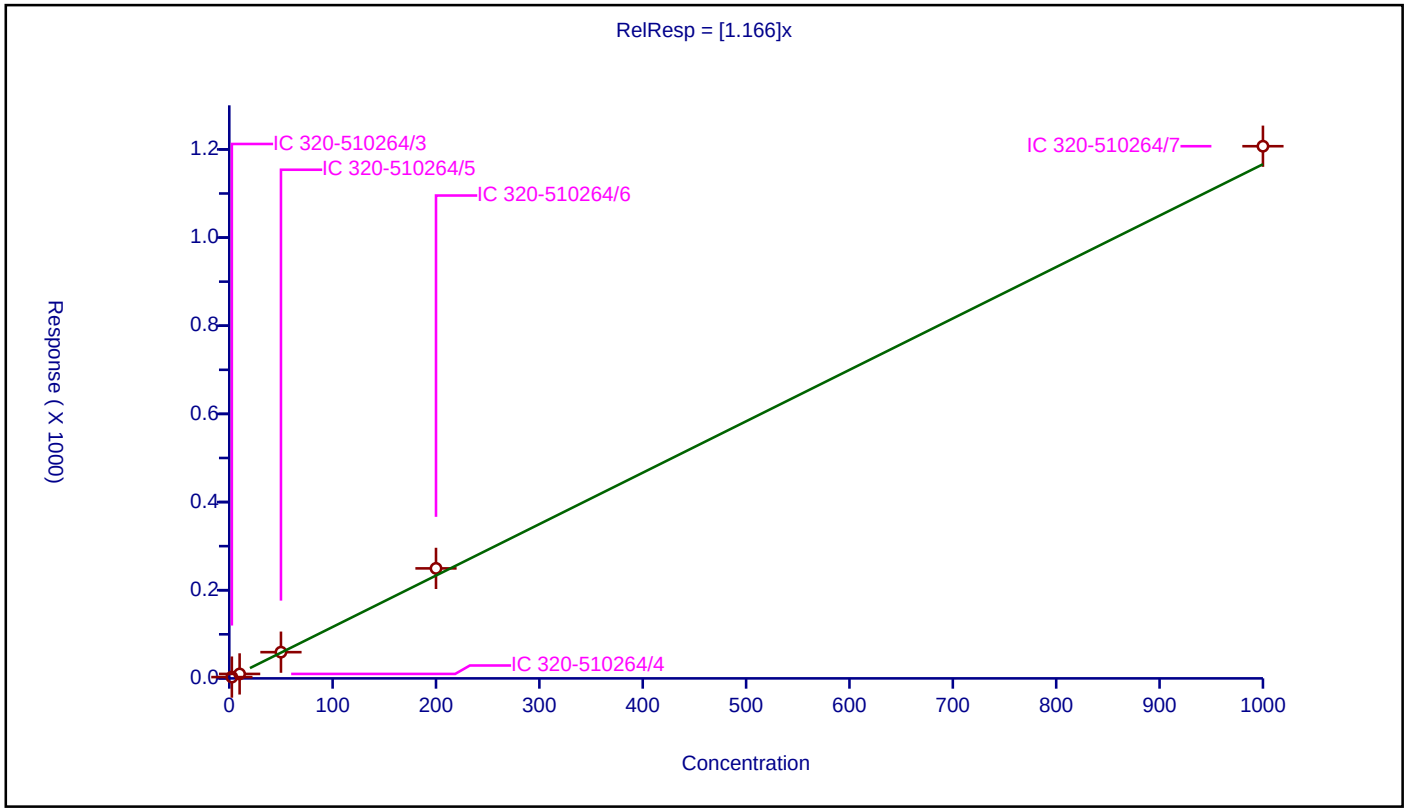

791527

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.048

Error Coefficients

Standard Error:	256000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.644408	100.0	49643581.0	1.057763	Y
2	IC 320-510264/4	10.0	9.031283	100.0	46721712.0	0.903128	Y
3	IC 320-510264/5	50.0	53.401309	100.0	47124414.0	1.068026	Y
4	IC 320-510264/6	200.0	226.195317	100.0	46524396.0	1.130977	Y
5	IC 320-510264/7	1000.0	1082.258061	100.0	46251010.0	1.082258	Y

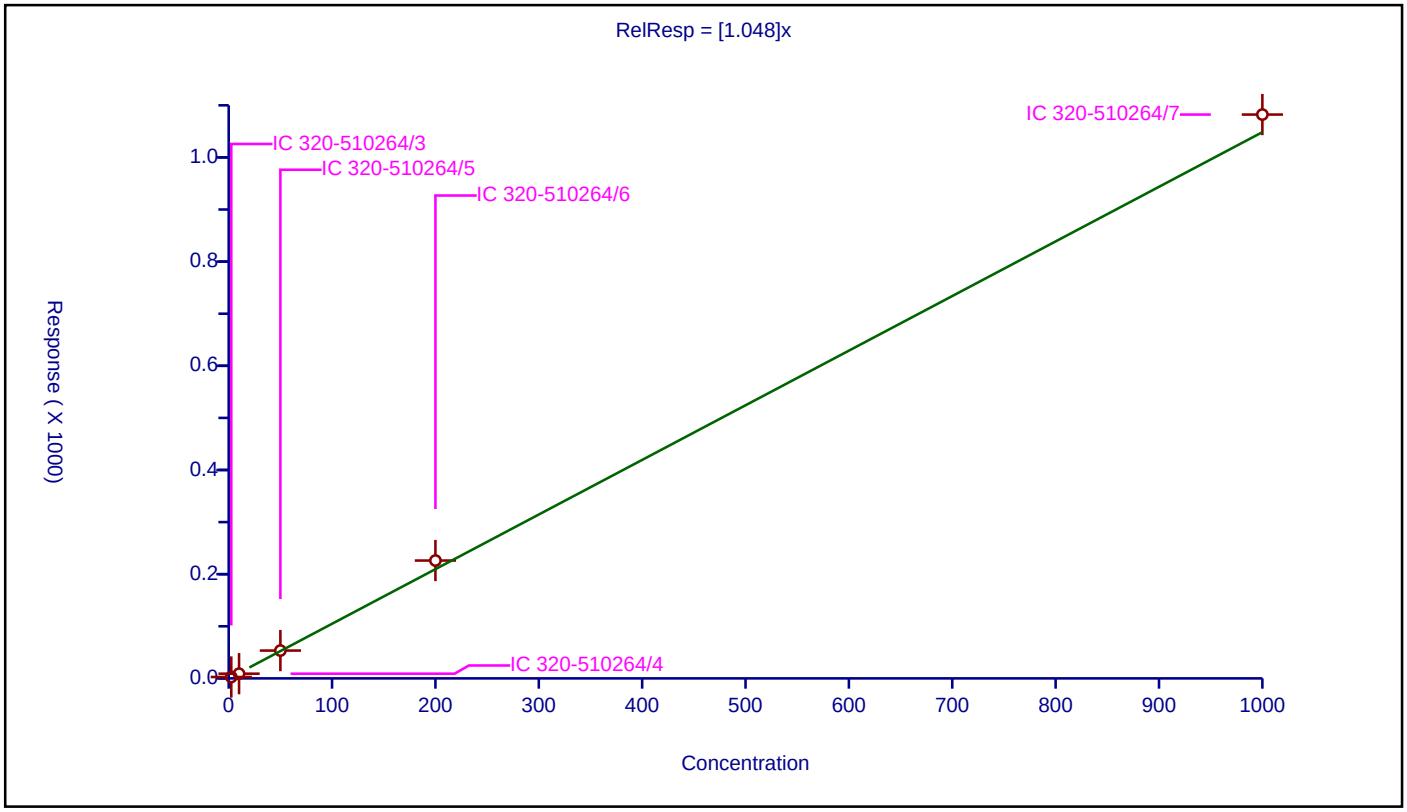

791528

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	408000000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.684664	100.0	78674290.0	1.073865	Y
2	IC 320-510264/4	10.0	9.128293	100.0	72525655.0	0.912829	Y
3	IC 320-510264/5	50.0	54.457439	100.0	76368219.0	1.089149	Y
4	IC 320-510264/6	200.0	227.4085	100.0	75205597.0	1.137042	Y
5	IC 320-510264/7	1000.0	1092.787556	100.0	72829681.0	1.092788	Y

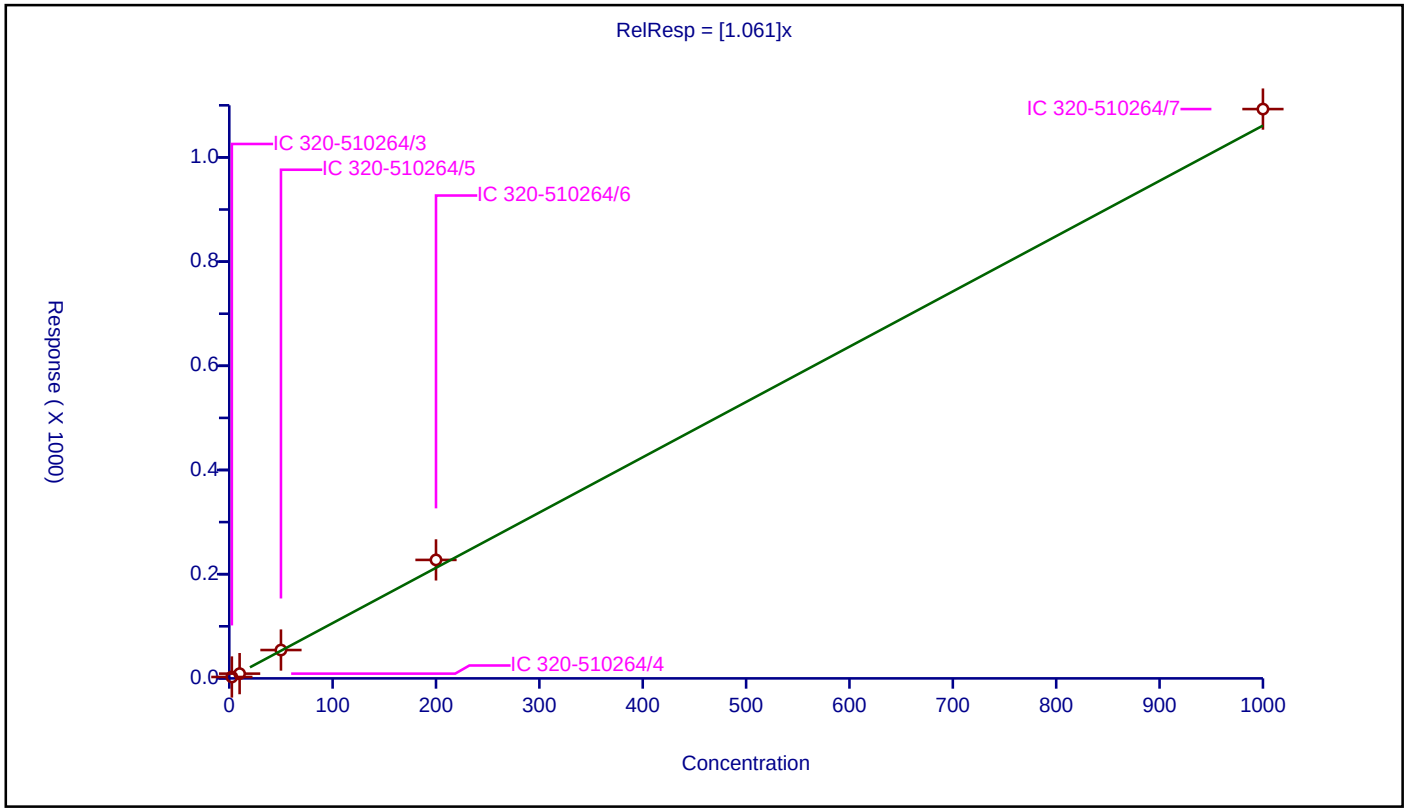

791529

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	391000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.05566	100.0	68885161.0	1.222264	Y
2	IC 320-510264/4	10.0	9.86292	100.0	64406928.0	0.986292	Y
3	IC 320-510264/5	50.0	59.290251	100.0	67028498.0	1.185805	Y
4	IC 320-510264/6	200.0	248.302486	100.0	66145684.0	1.241512	Y
5	IC 320-510264/7	1000.0	1201.822353	100.0	63471184.0	1.201822	Y

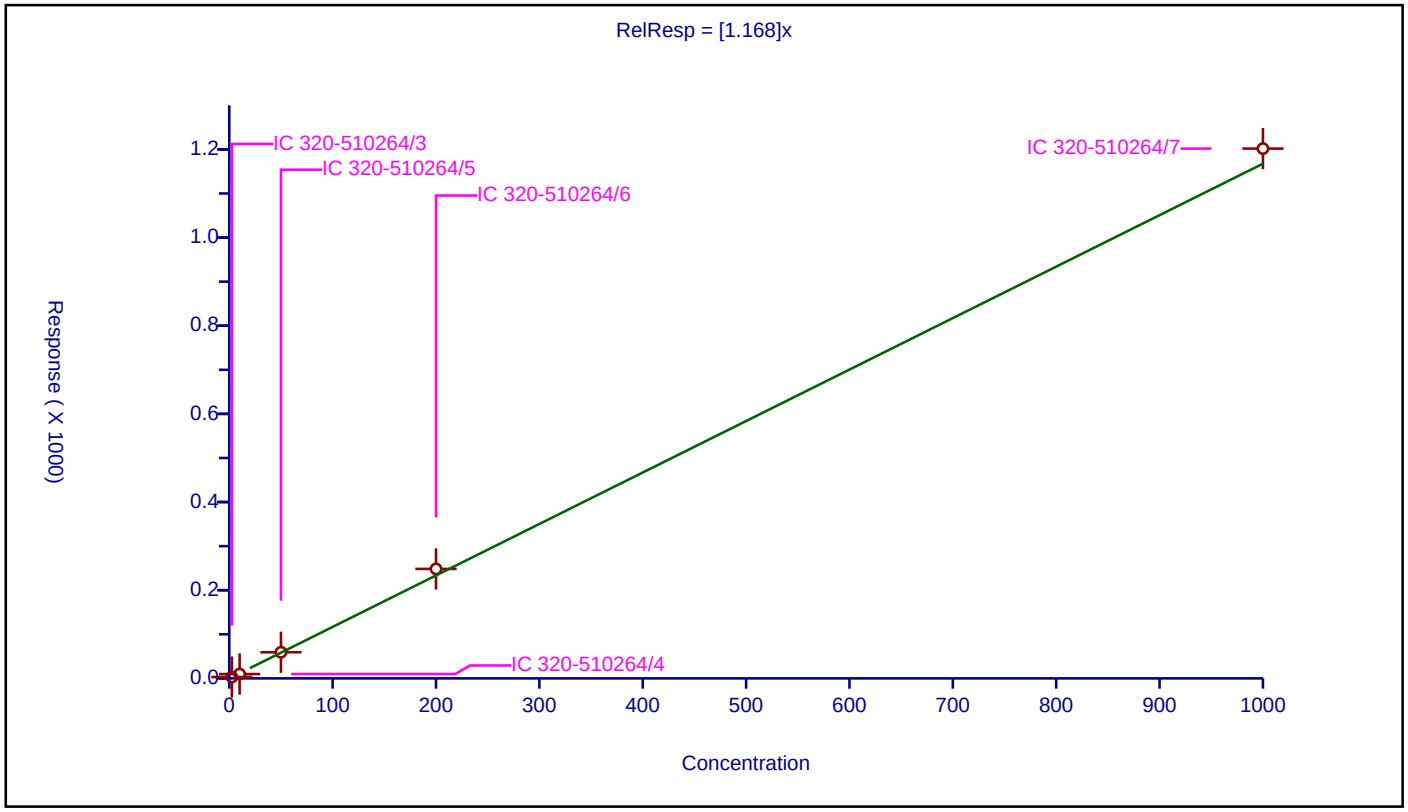

791530

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.018

Error Coefficients

Standard Error:	401000000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.601965	100.0	80591659.0	1.040786	Y
2	IC 320-510264/4	10.0	8.609629	100.0	74944110.0	0.860963	Y
3	IC 320-510264/5	50.0	52.328396	100.0	78214582.0	1.046568	Y
4	IC 320-510264/6	200.0	221.640486	100.0	75259591.0	1.108202	Y
5	IC 320-510264/7	1000.0	1035.570916	100.0	75649463.0	1.035571	Y

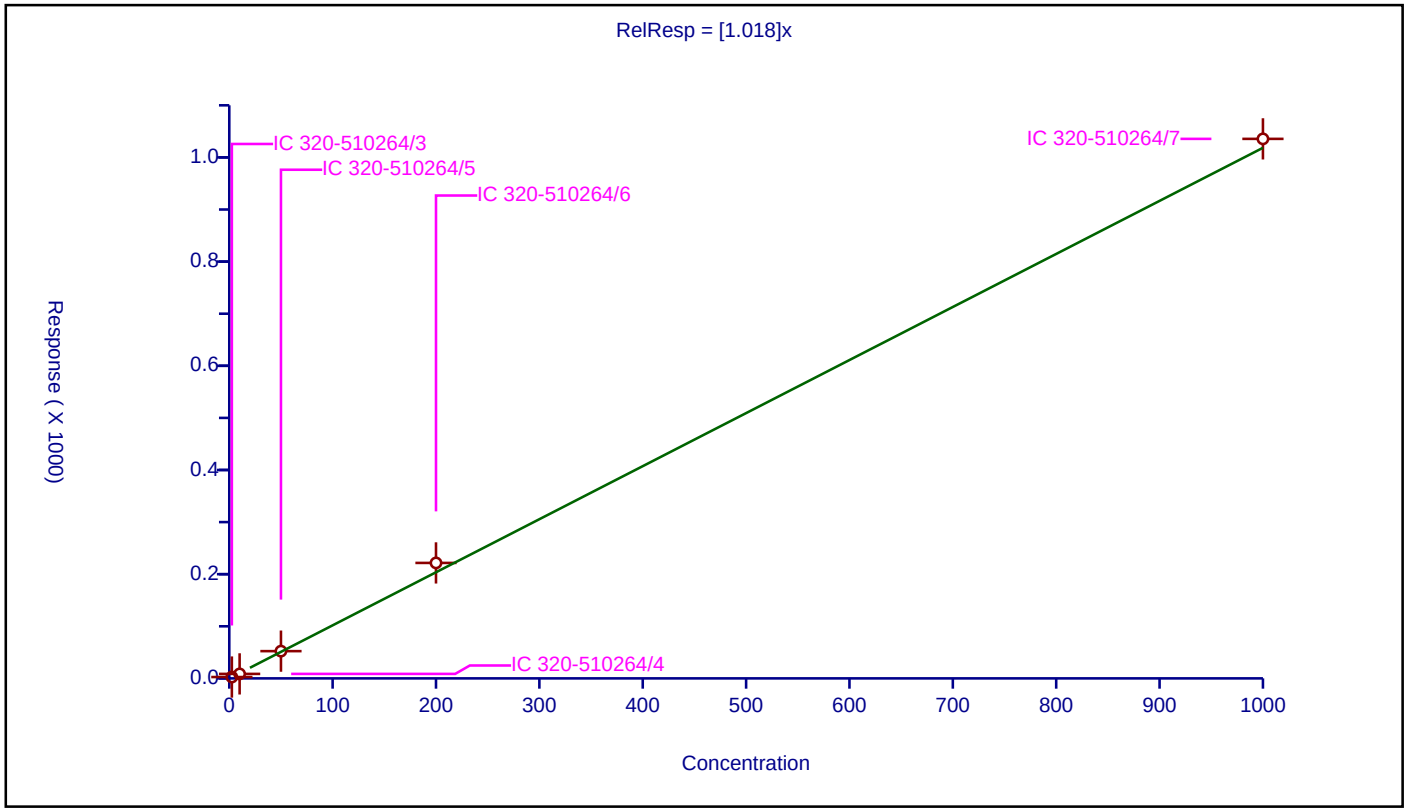

791531

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.254

Error Coefficients

Standard Error:	71900000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.62875	100.0	59957723.0	1.257499	Y
2	IC 320-510264/4	2.0	2.19411	100.0	53975587.0	1.097055	Y
3	IC 320-510264/5	10.0	12.651014	100.0	56155483.0	1.265101	Y
4	IC 320-510264/6	40.0	53.737487	100.0	55471422.0	1.343437	Y
5	IC 320-510264/7	200.0	261.501191	100.0	53698206.0	1.307506	Y

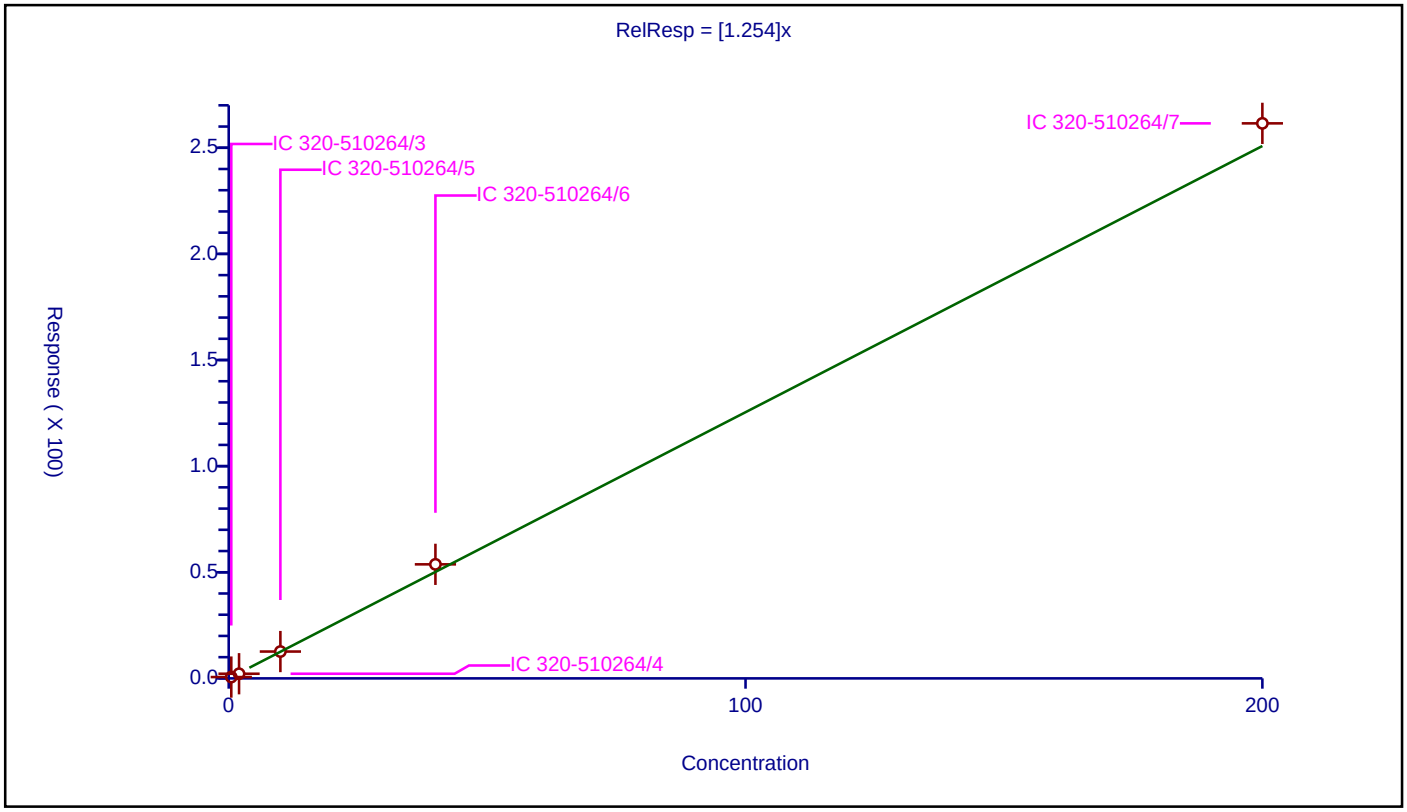

791532

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.024

Error Coefficients

Standard Error:	105000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.514358	100.0	108384725.0	1.028715	Y
2	IC 320-510264/4	2.0	1.739696	100.0	98246522.0	0.869848	Y
3	IC 320-510264/5	10.0	10.458407	100.0	101724636.0	1.045841	Y
4	IC 320-510264/6	40.0	44.37733	100.0	100332269.0	1.109433	Y
5	IC 320-510264/7	200.0	213.143097	100.0	95980421.0	1.065715	Y

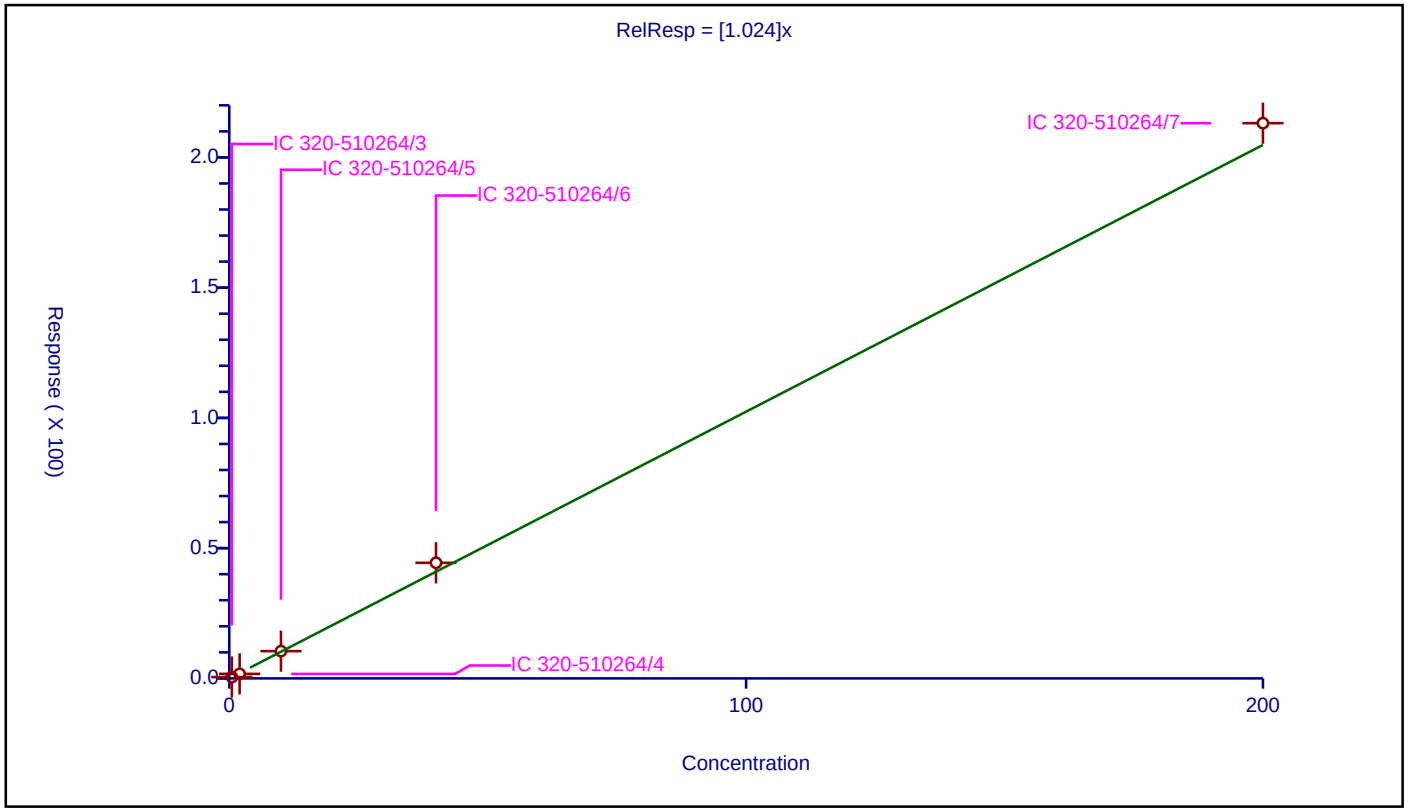

791533

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	72100000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.485229	100.0	65685883.0	0.970458	Y
2	IC 320-510264/4	2.0	1.95888	100.0	62853211.0	0.97944	Y
3	IC 320-510264/5	10.0	11.718119	100.0	62635225.0	1.171812	Y
4	IC 320-510264/6	40.0	47.503291	100.0	62046988.0	1.187582	Y
5	IC 320-510264/7	200.0	245.287862	100.0	57464333.0	1.226439	Y

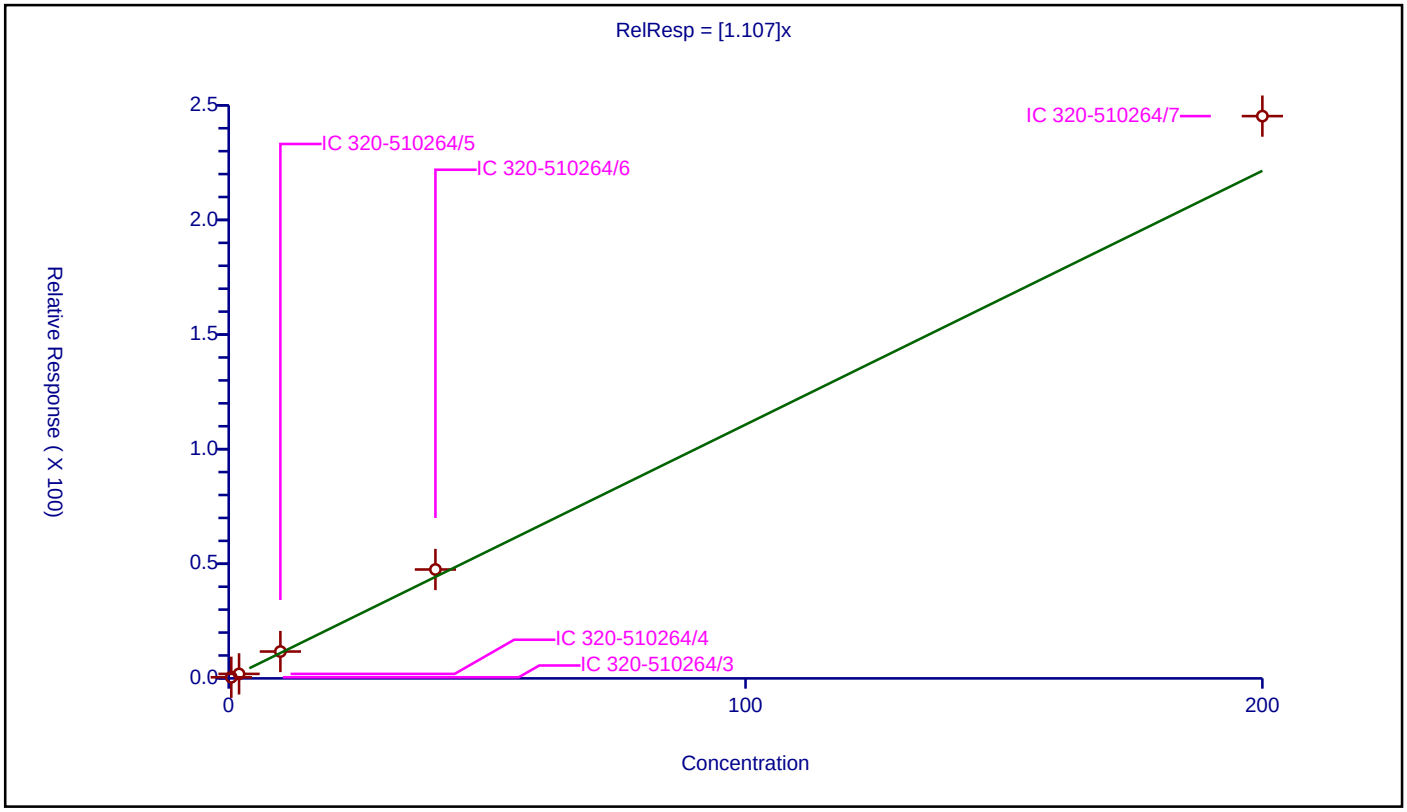

791534

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	325000000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	5.504666	200.0	57018462.0	1.100933	Y
2	IC 320-510264/4	20.0	19.269459	200.0	52034518.0	0.963473	Y
3	IC 320-510264/5	100.0	116.51708	200.0	54338243.0	1.165171	Y
4	IC 320-510264/6	400.0	473.162285	200.0	57303880.0	1.182906	Y
5	IC 320-510264/7	2000.0	2245.176522	200.0	56623863.0	1.122588	Y

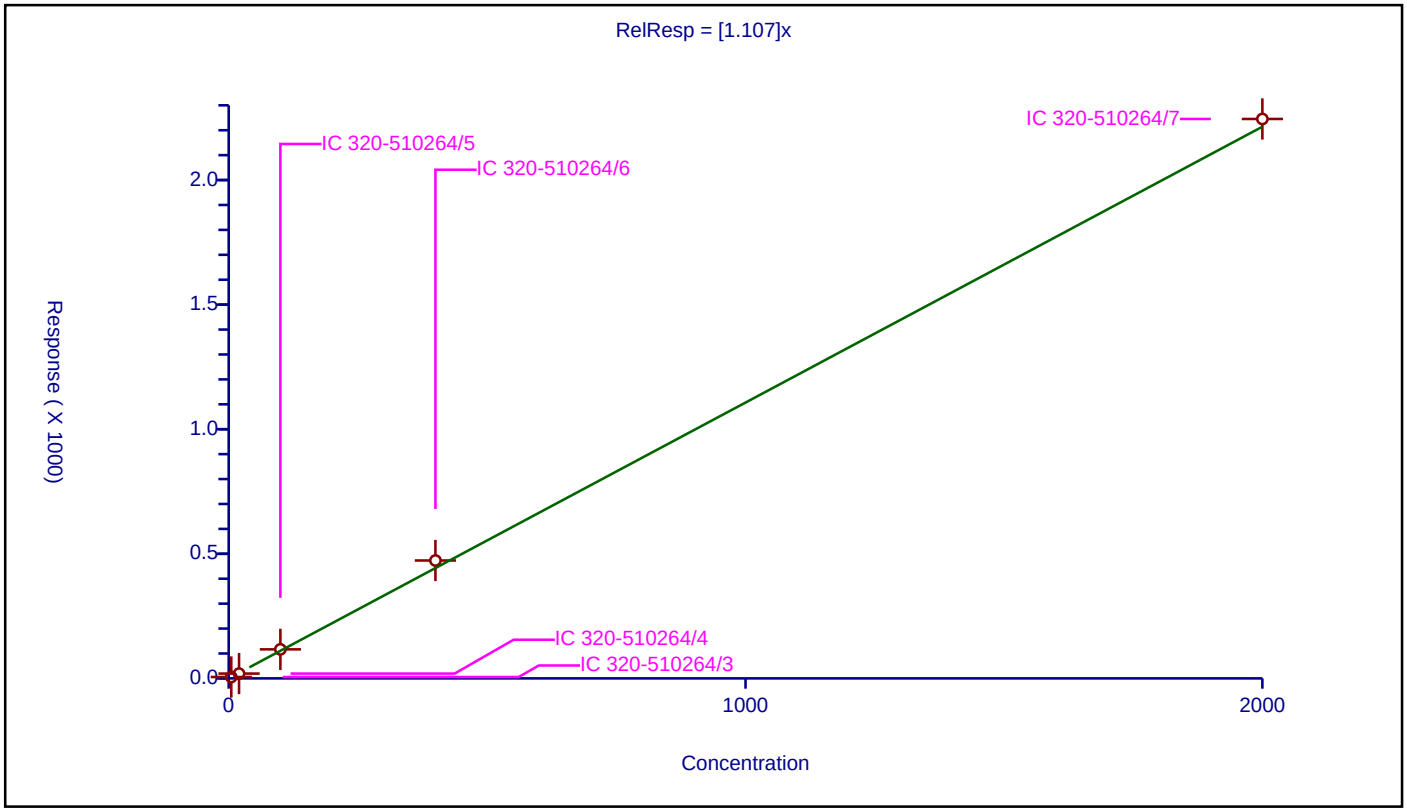

791535

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.438

Error Coefficients

Standard Error:	438000000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	6.931702	200.0	57018462.0	1.38634	Y
2	IC 320-510264/4	20.0	23.824451	200.0	52034518.0	1.191223	Y
3	IC 320-510264/5	100.0	151.448408	200.0	54338243.0	1.514484	Y
4	IC 320-510264/6	400.0	634.327267	200.0	57303880.0	1.585818	Y
5	IC 320-510264/7	2000.0	3025.883229	200.0	56623863.0	1.512942	Y

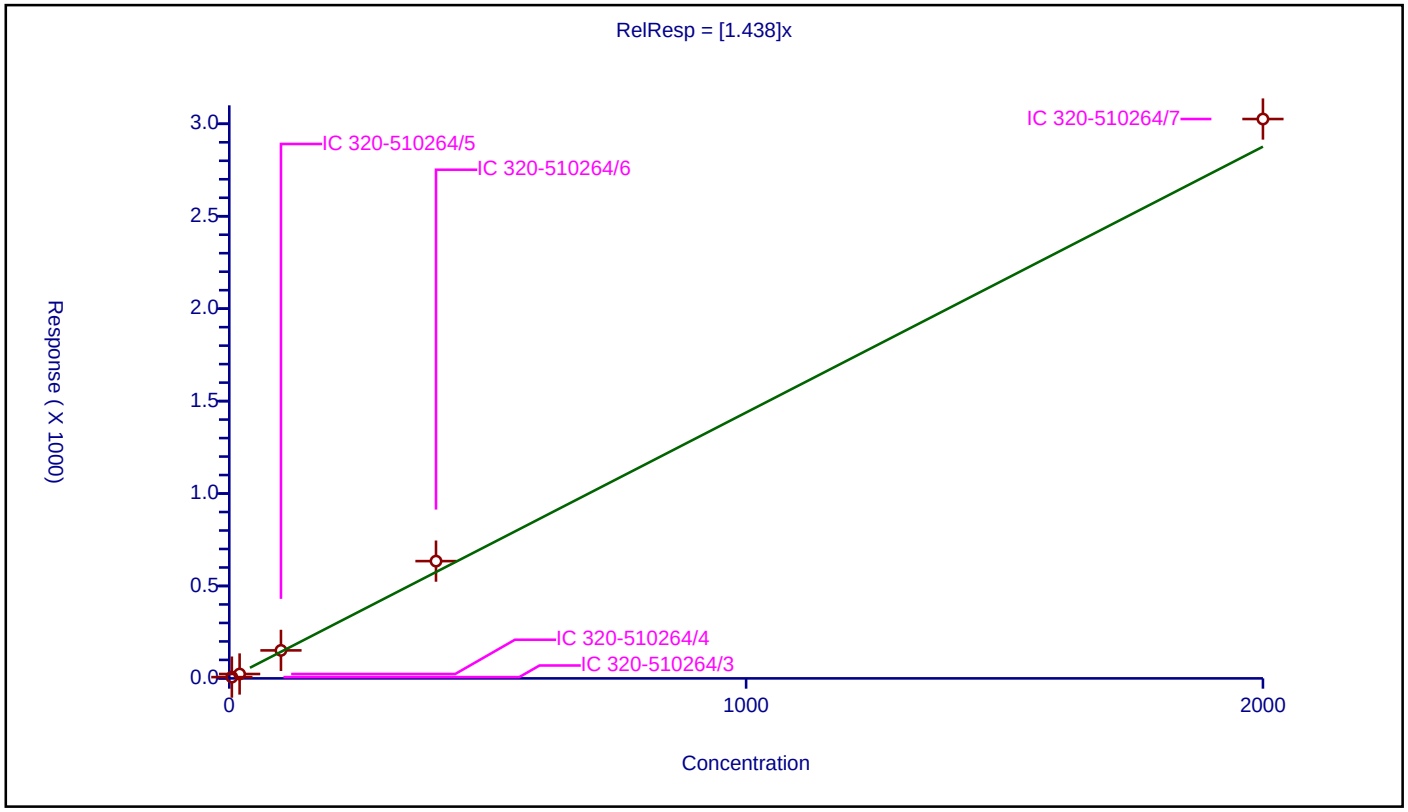

791536

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

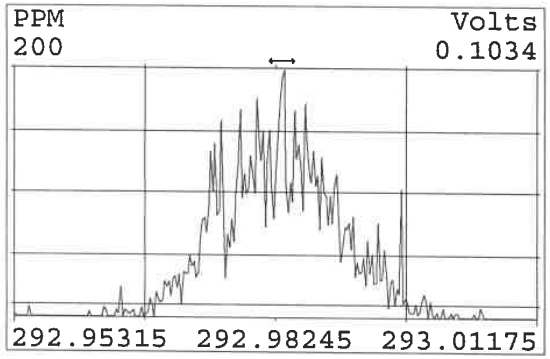

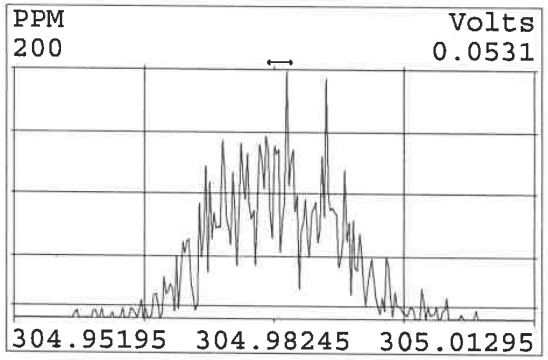

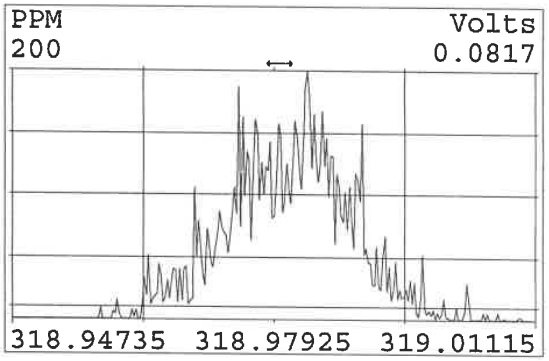

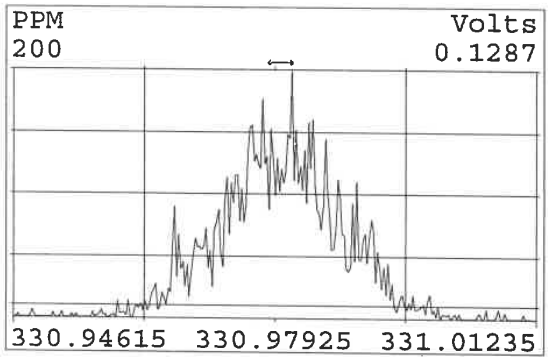

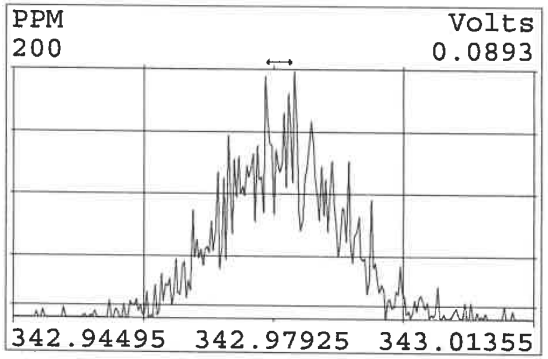

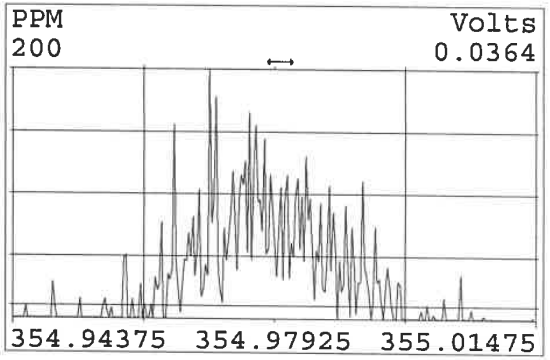

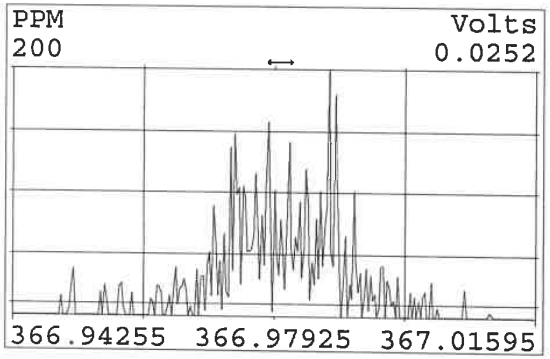

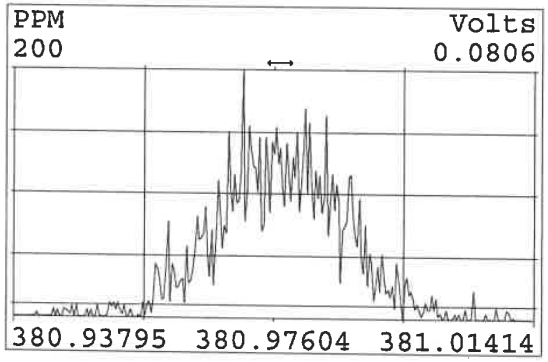

791540

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

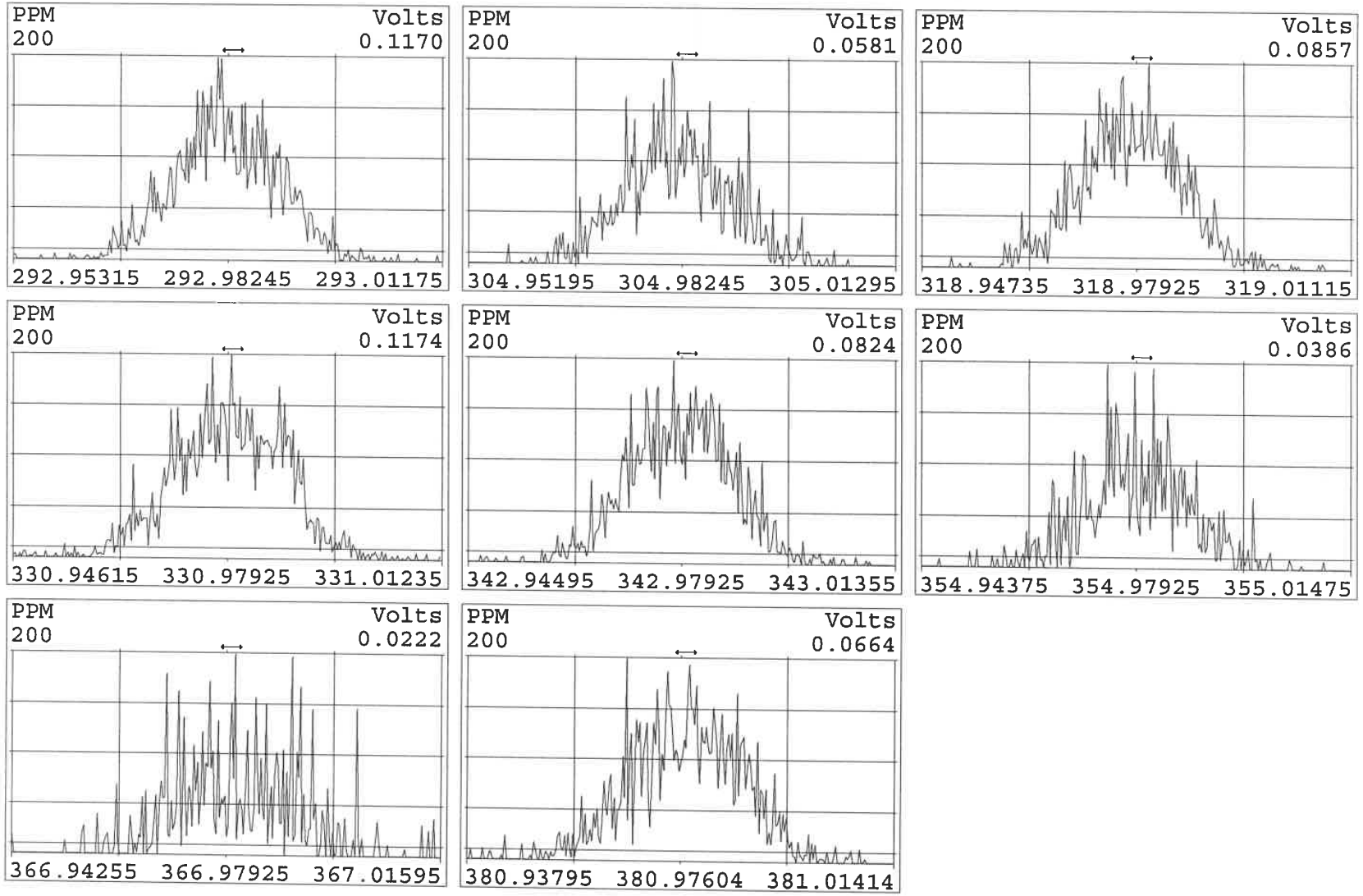

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

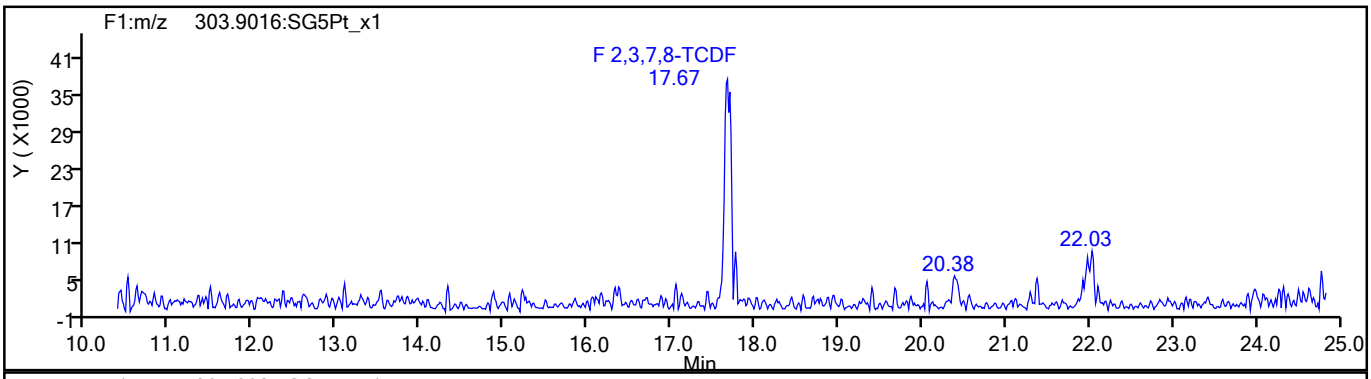

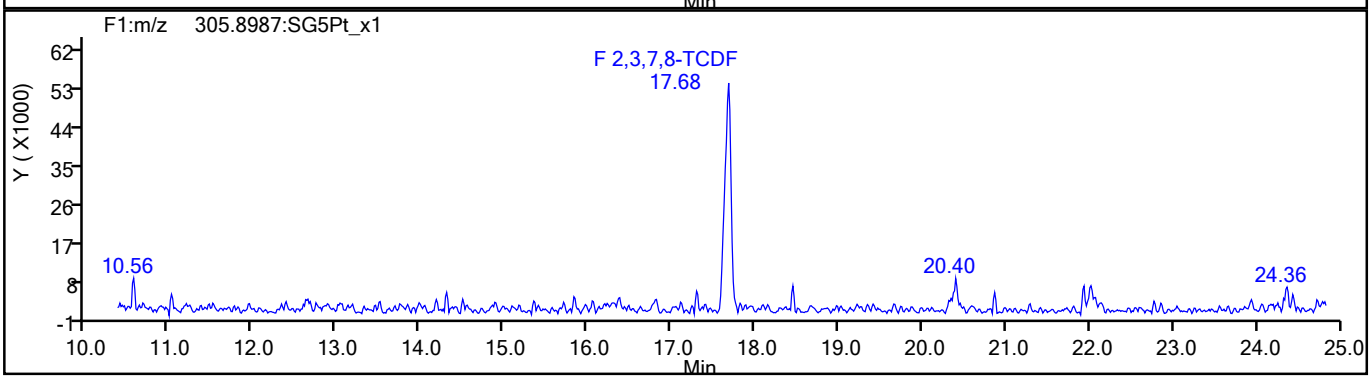

TCDF Standards

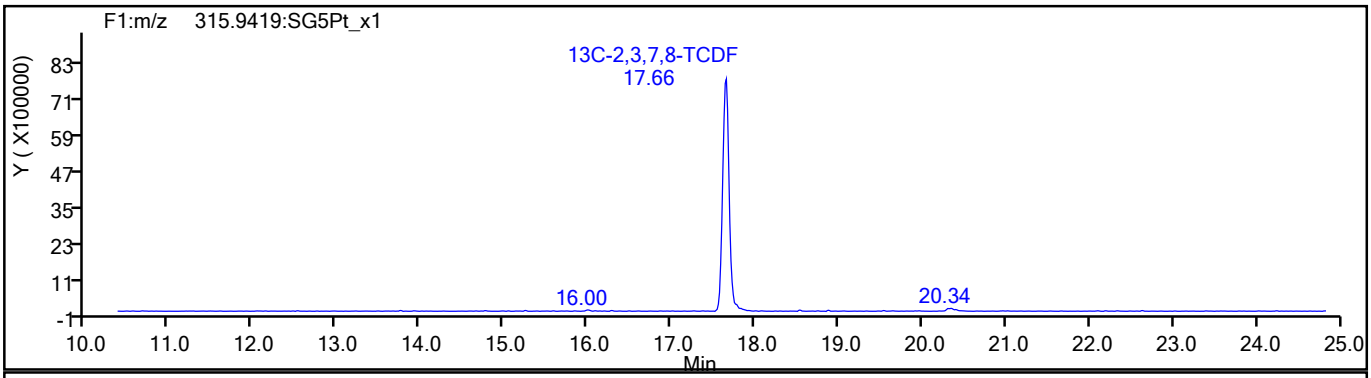

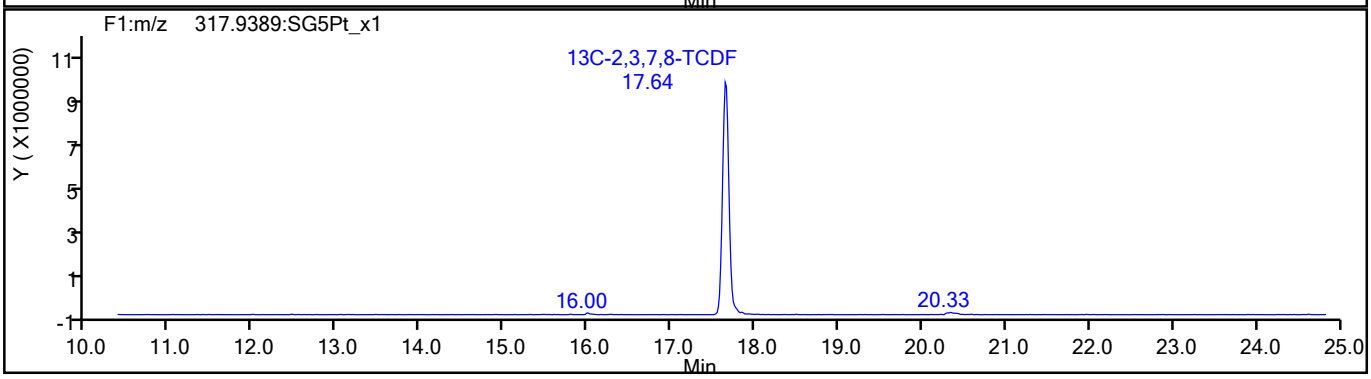

791544

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

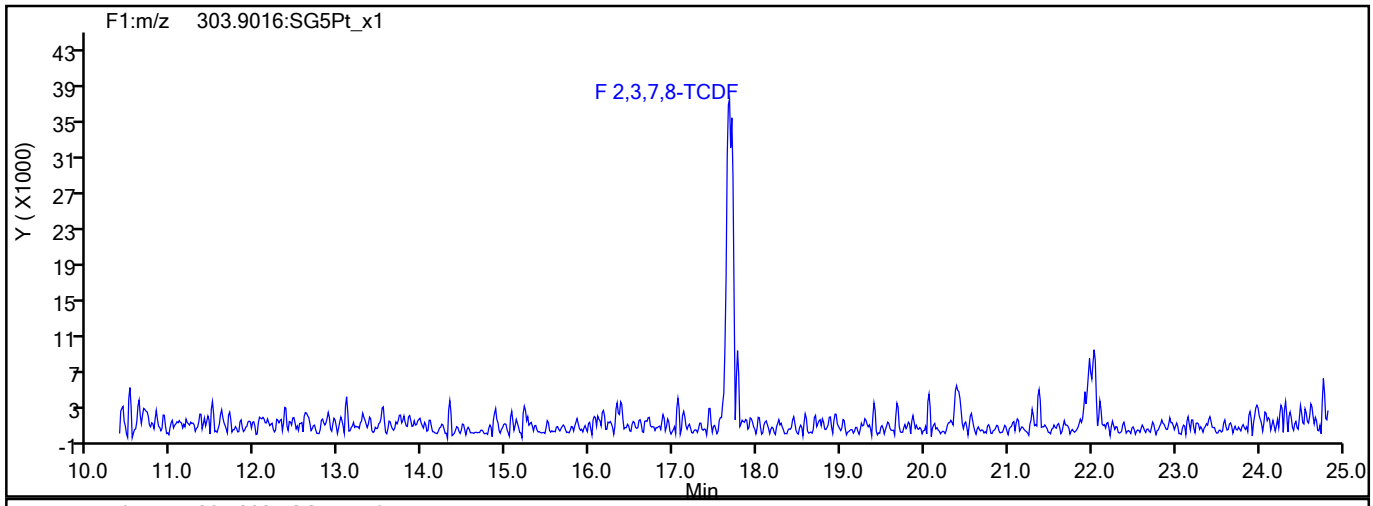

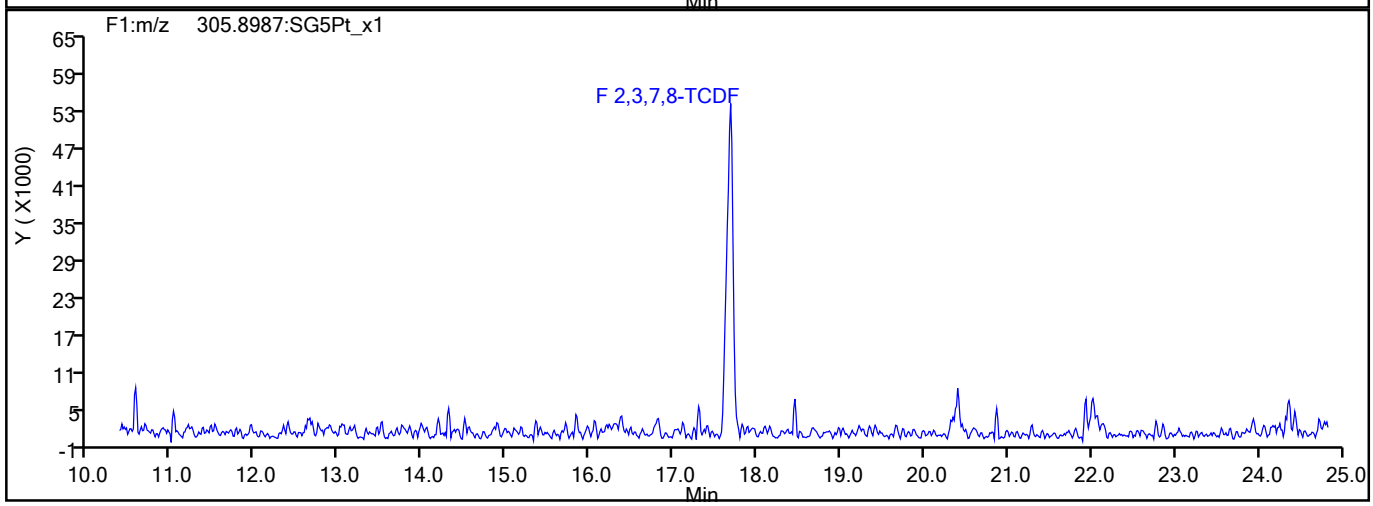

TCDF Interference Mass

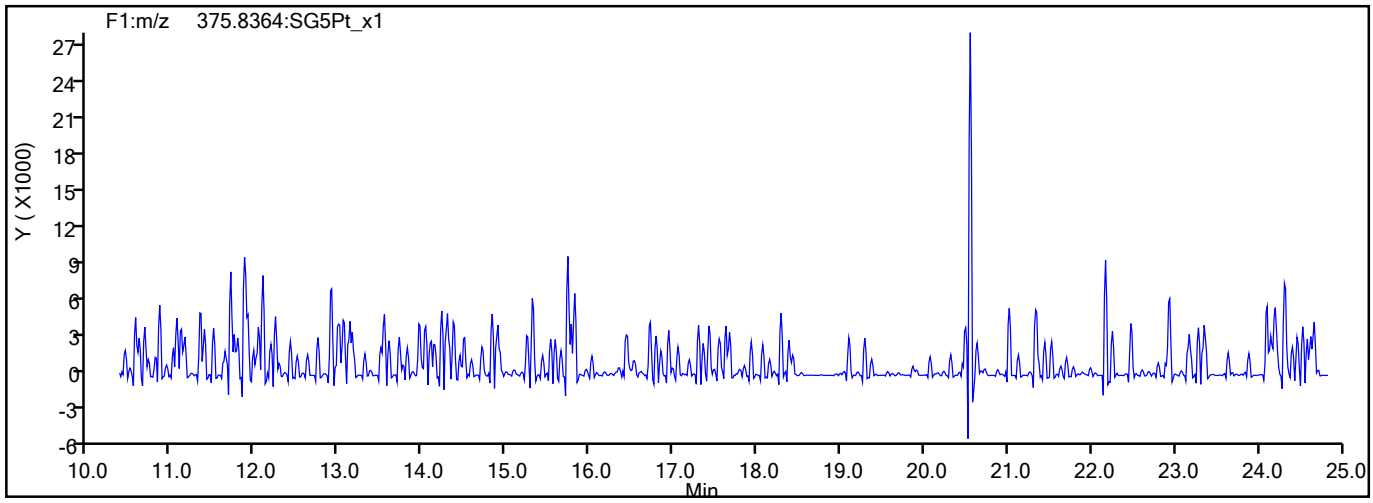

791545

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

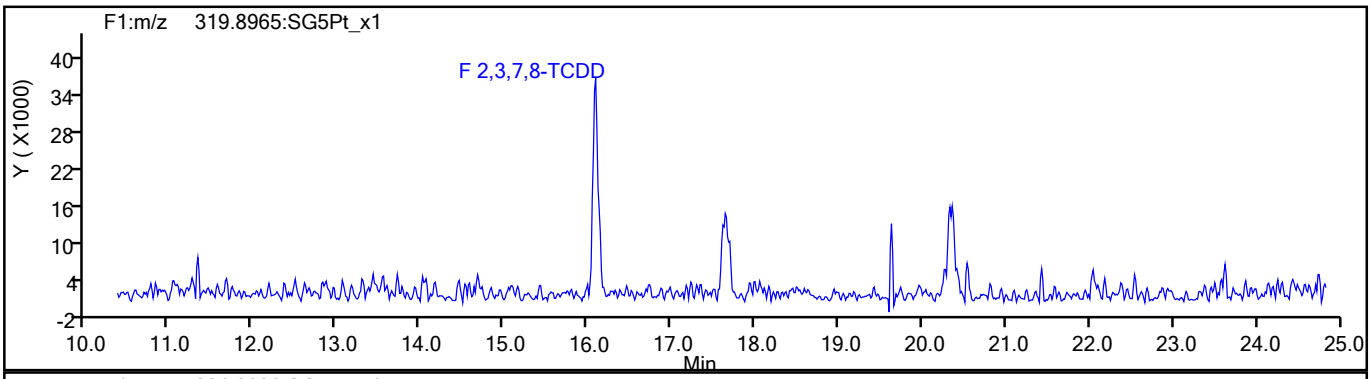

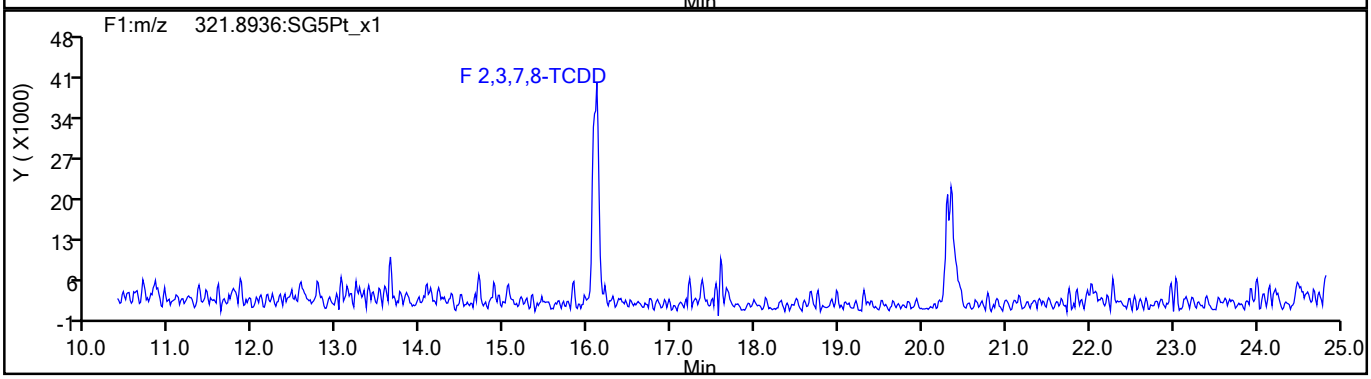

TCDD Standards

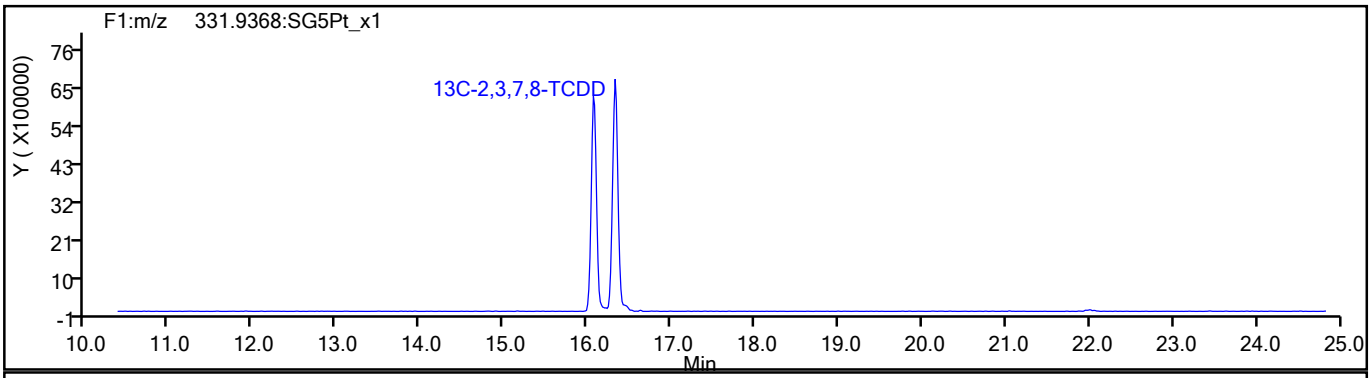

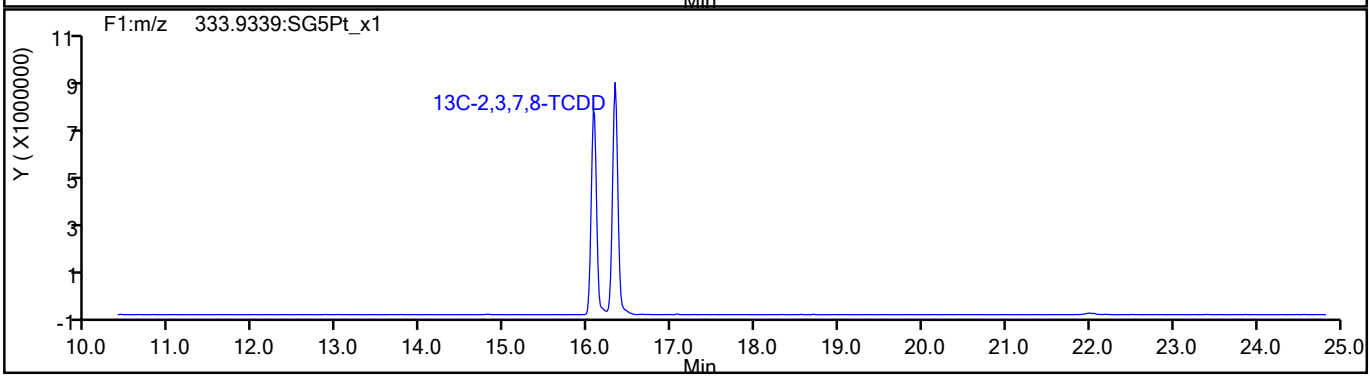

791546

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

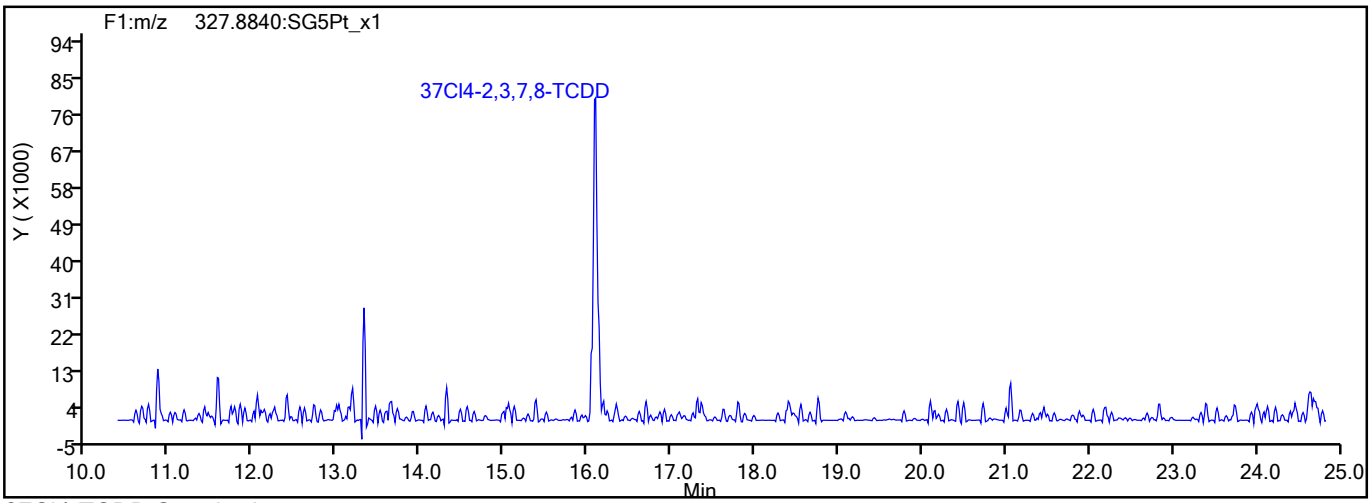

37Cl4-TCDD Standards

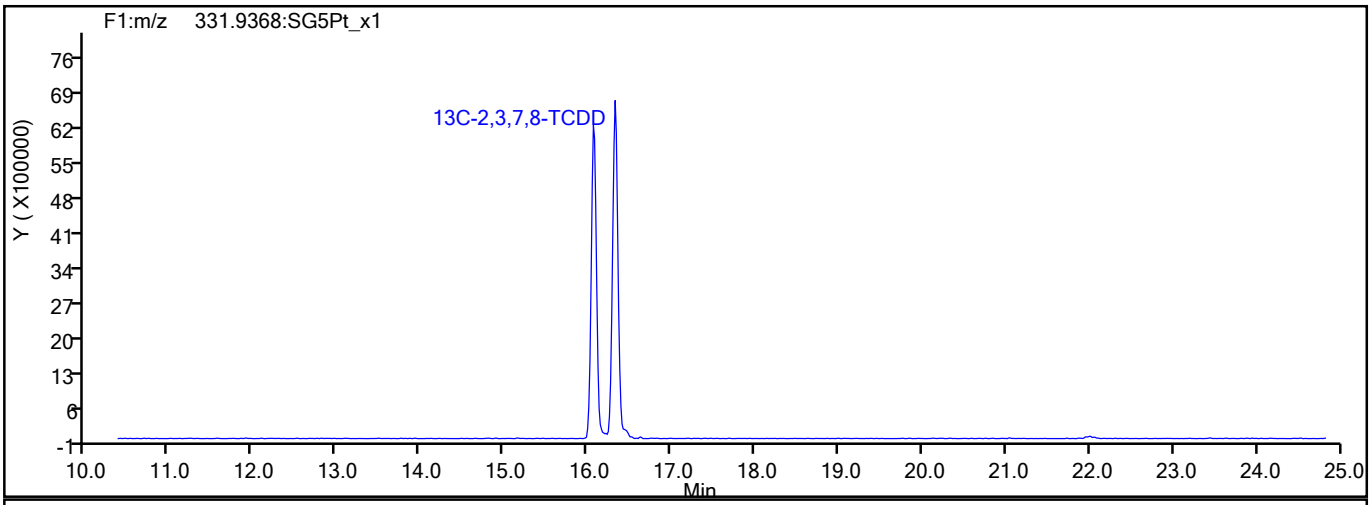

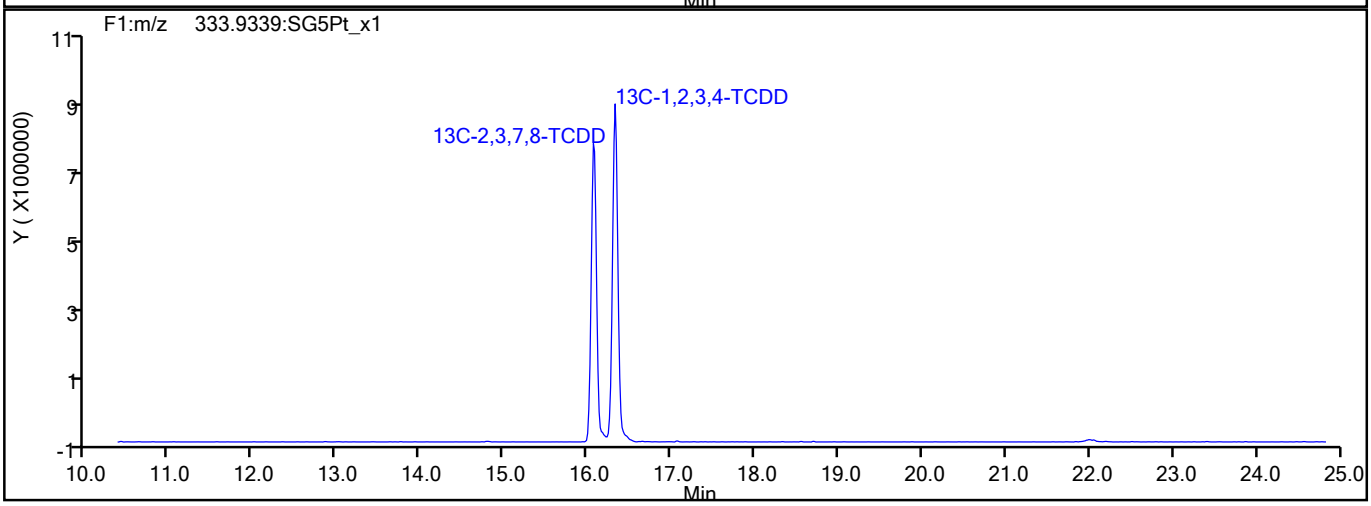

791547

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

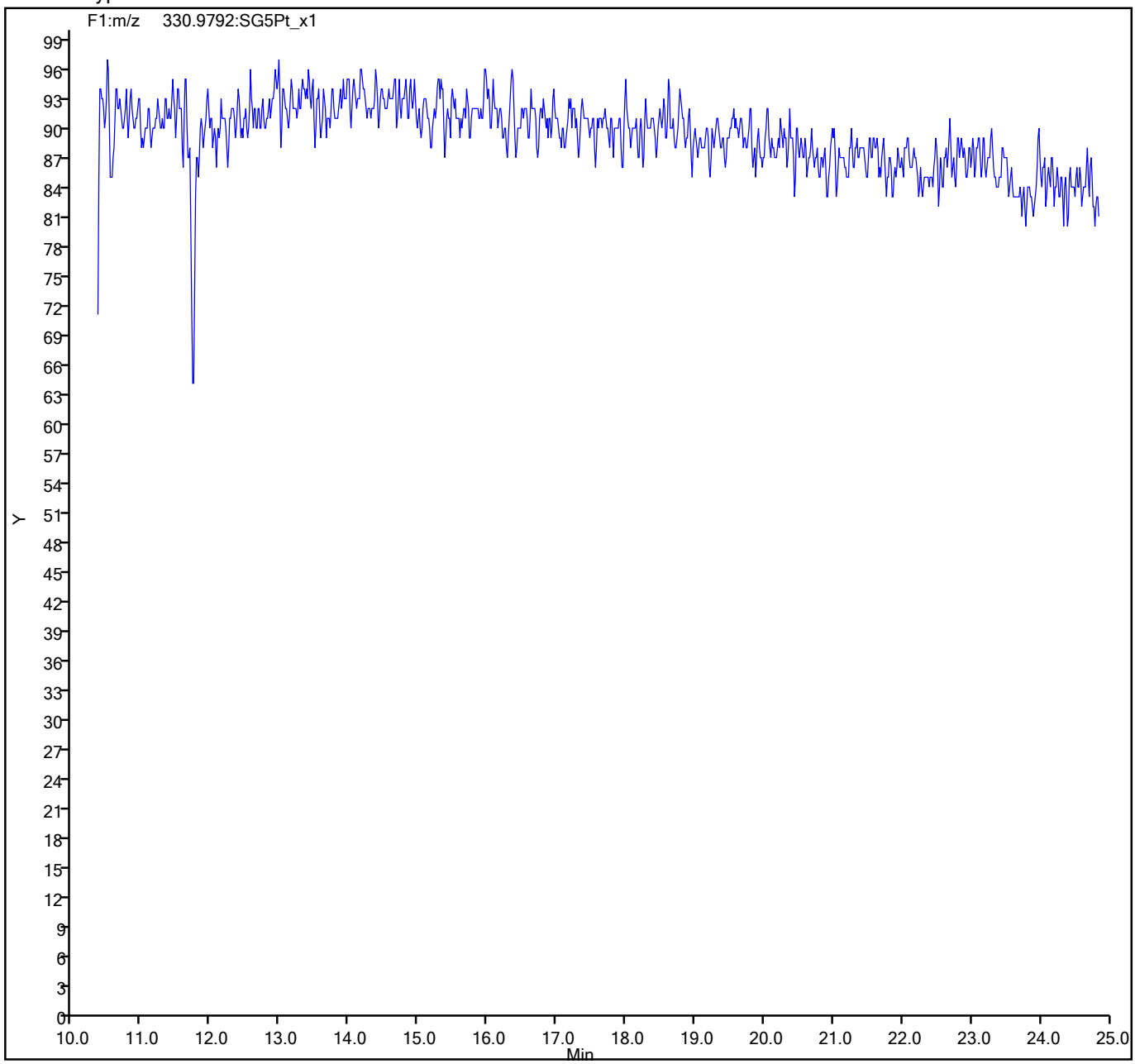

791548

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags
Review Flags
M - Manually Integrated

Reagents:
HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

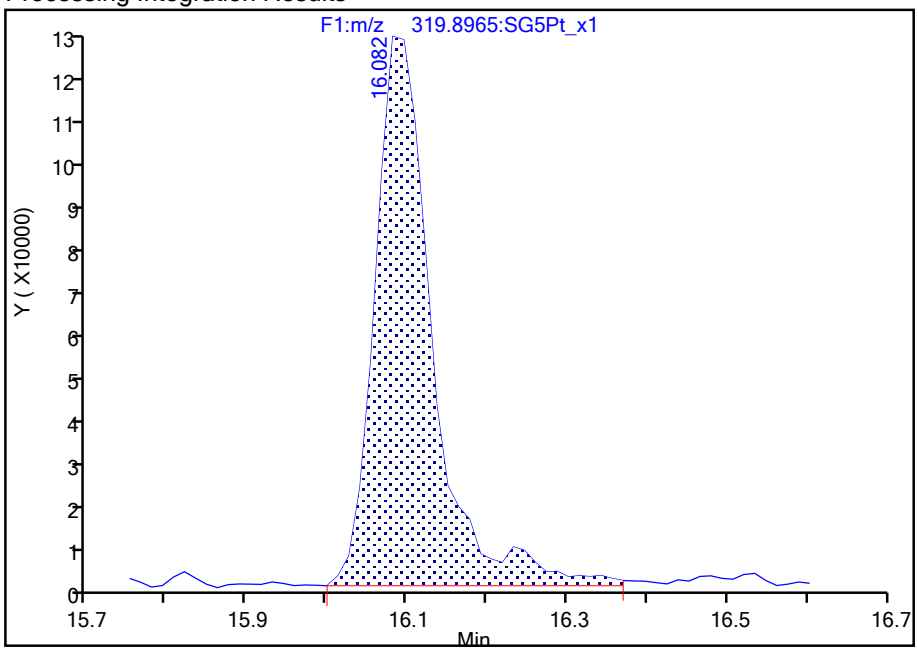

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

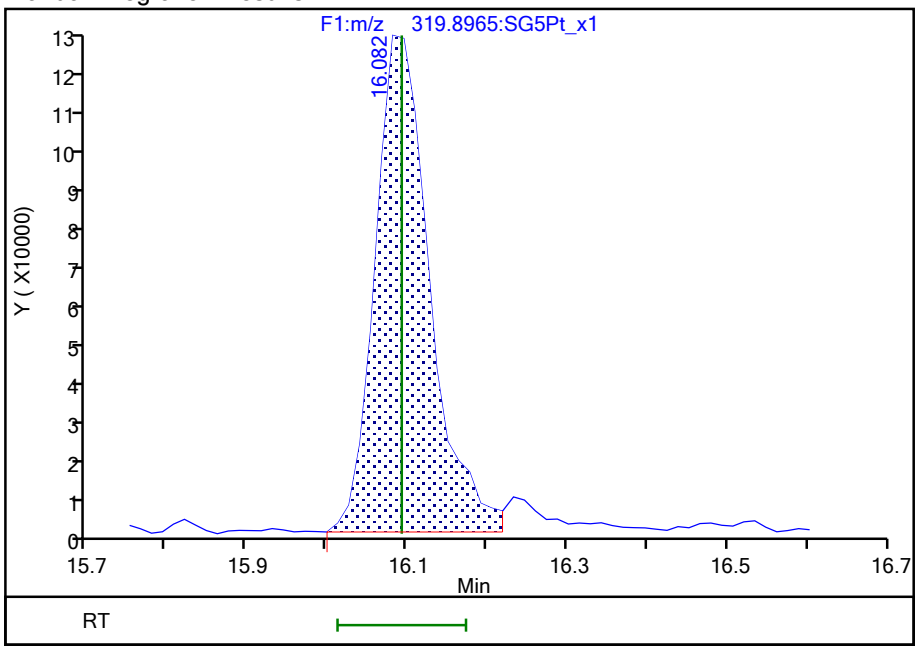

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

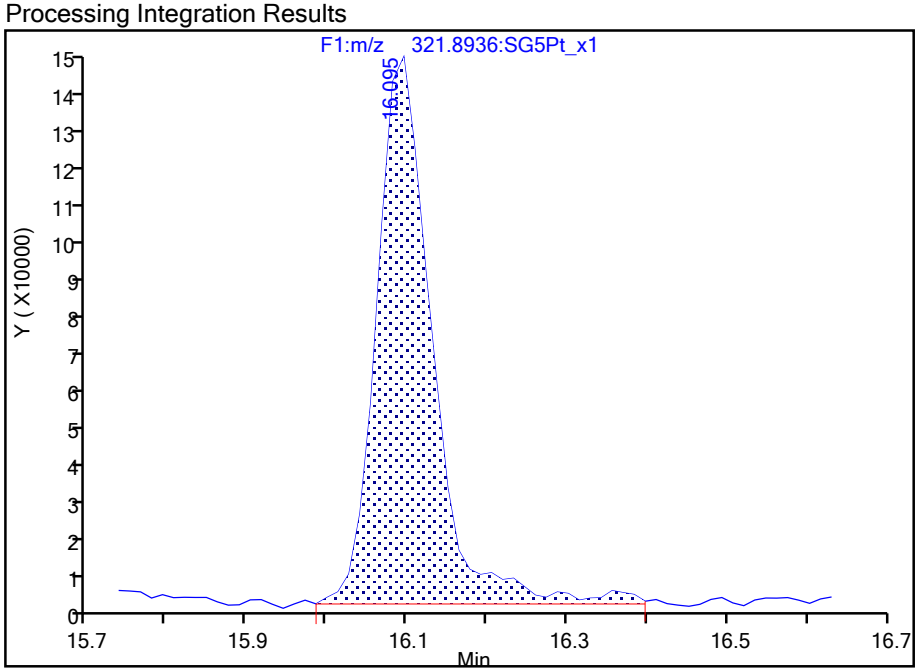

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

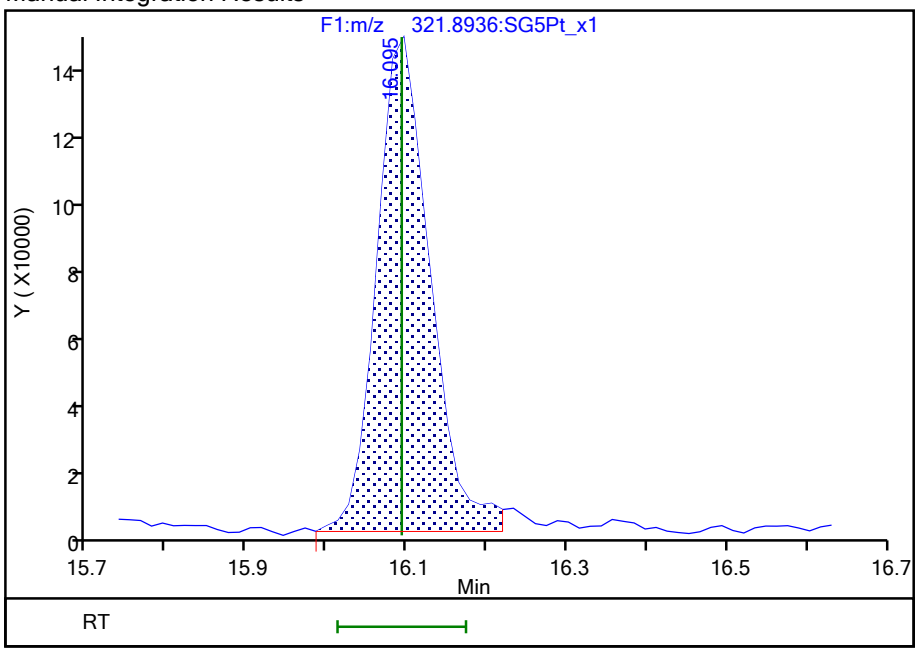

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

791552

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

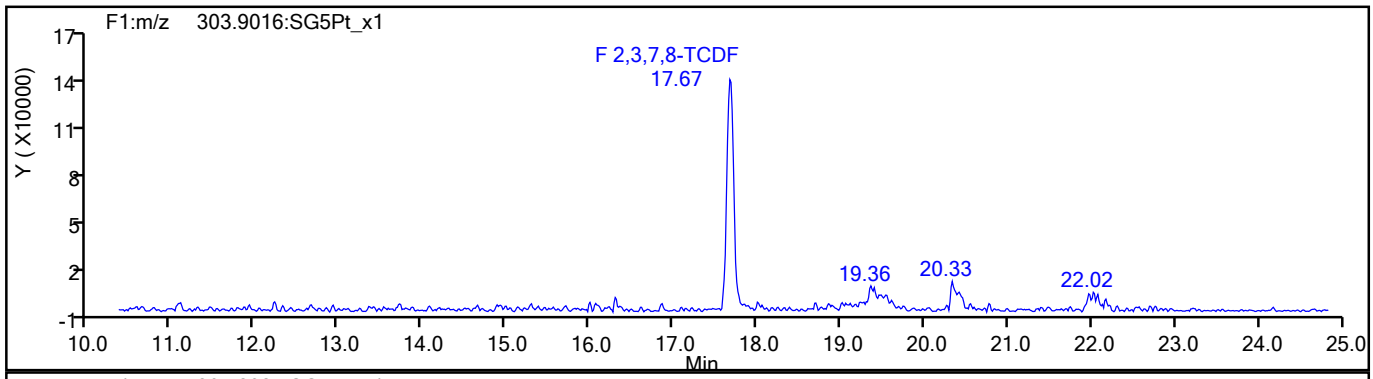

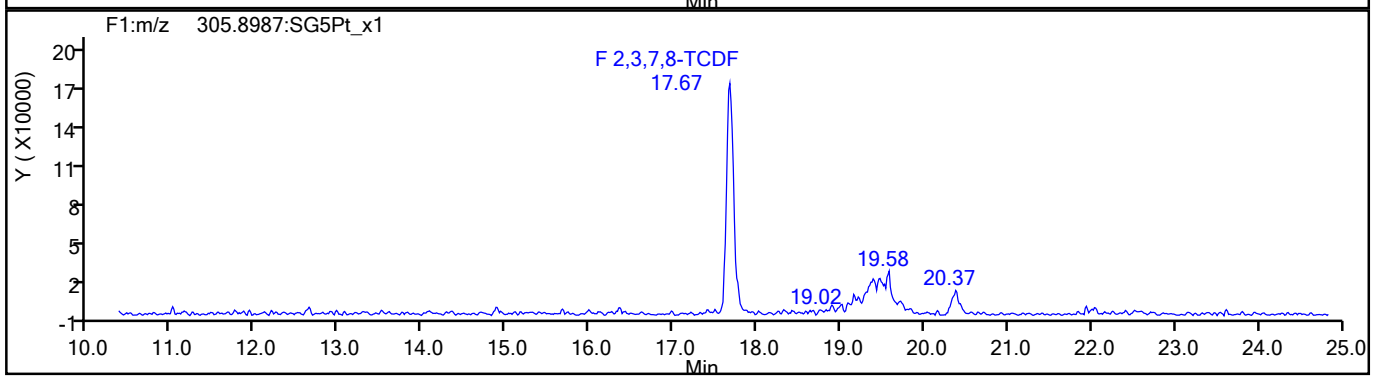

TCDF Standards

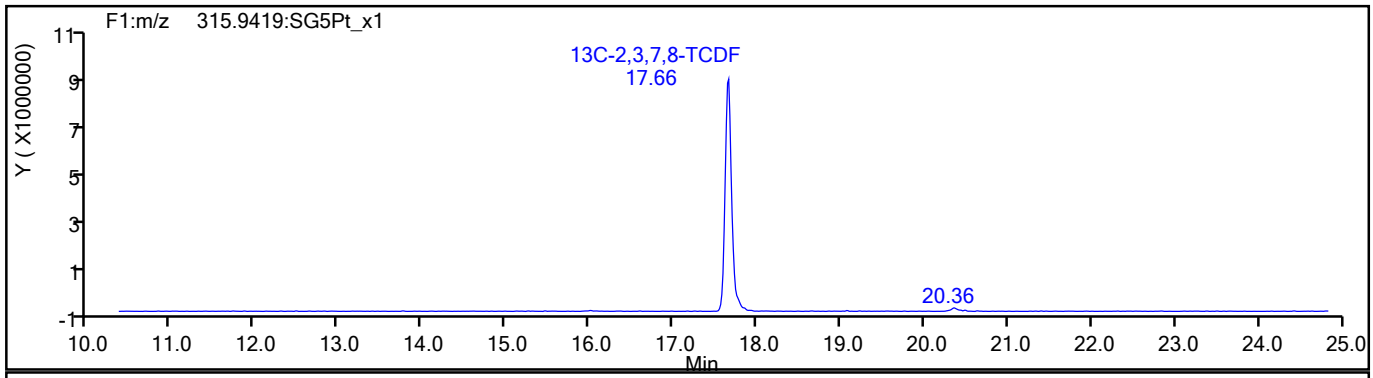

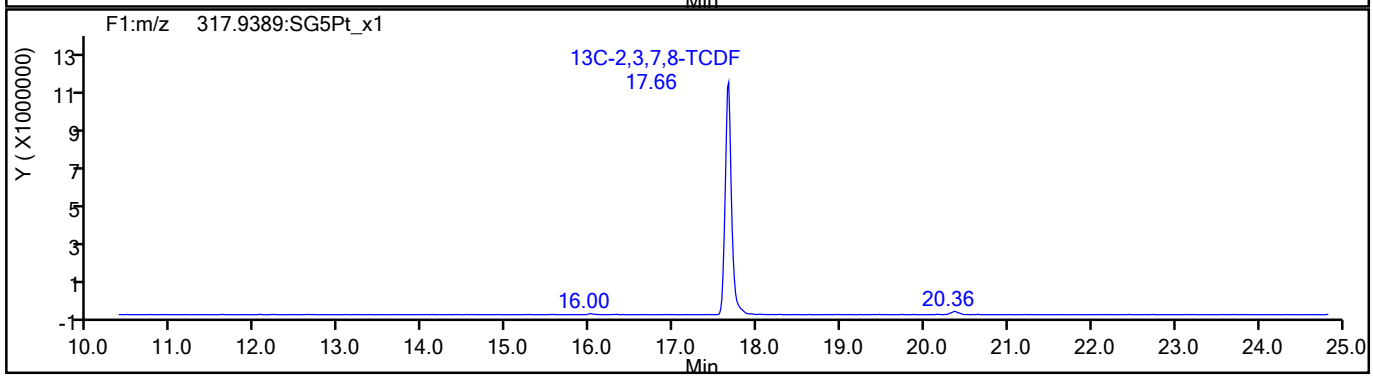

791553

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

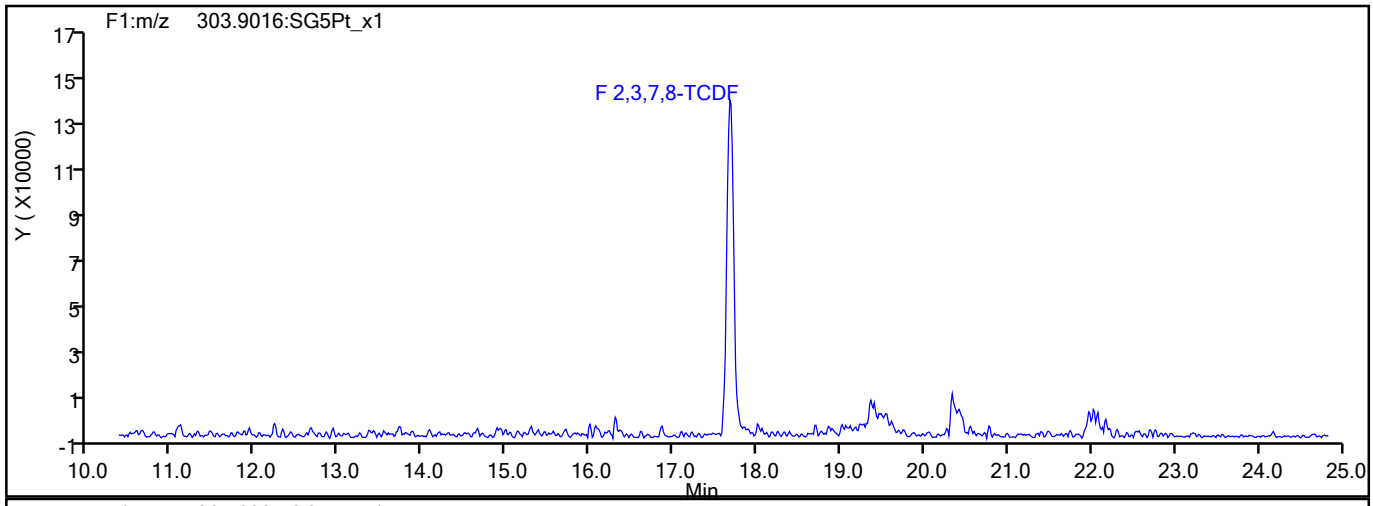

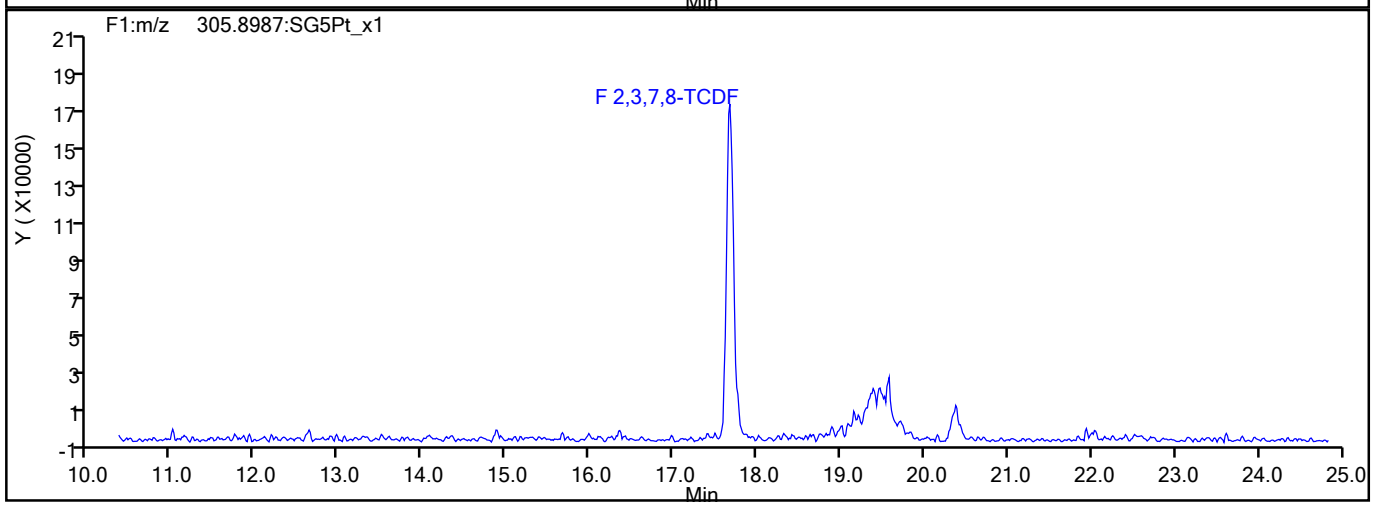

TCDF Interference Mass

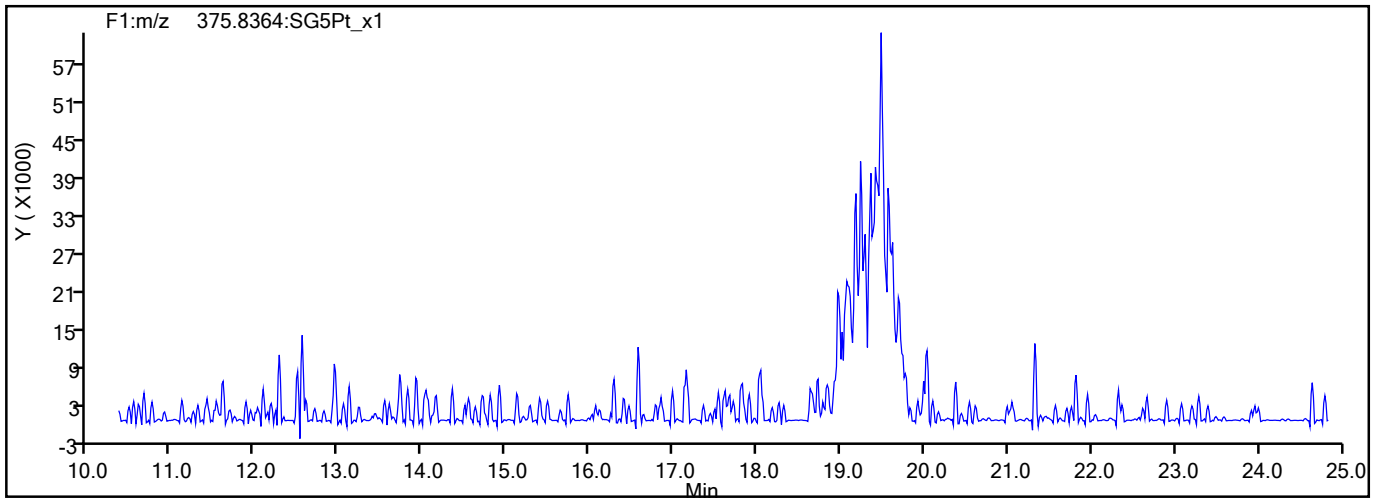

791554

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

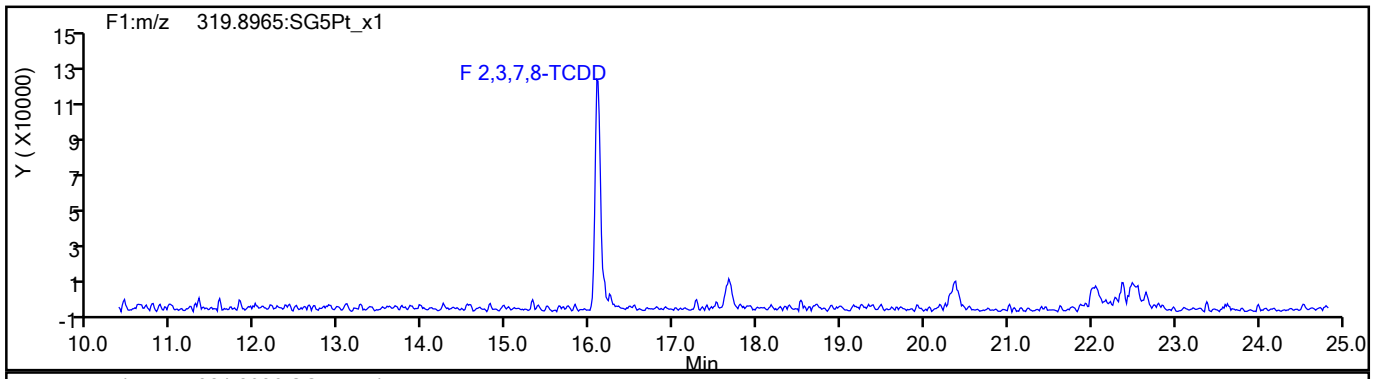

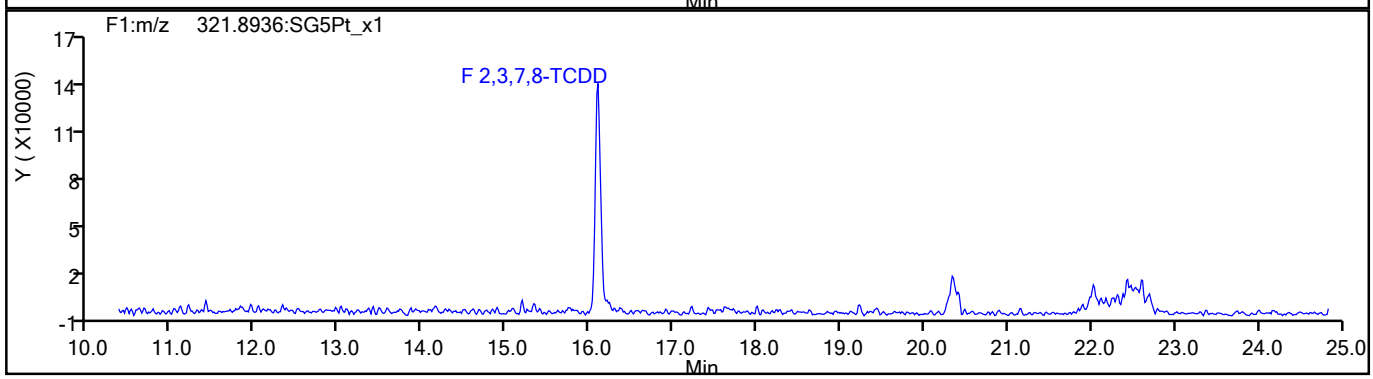

TCDD Standards

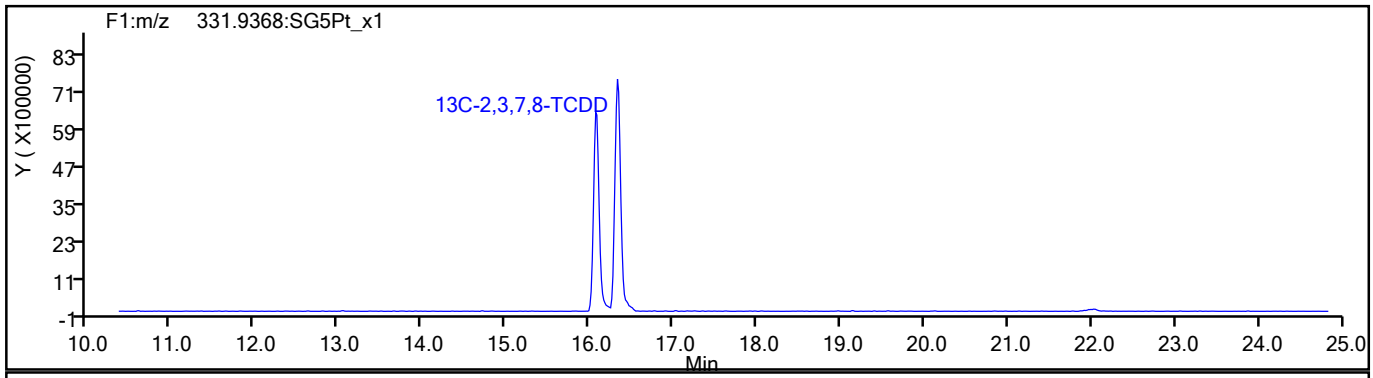

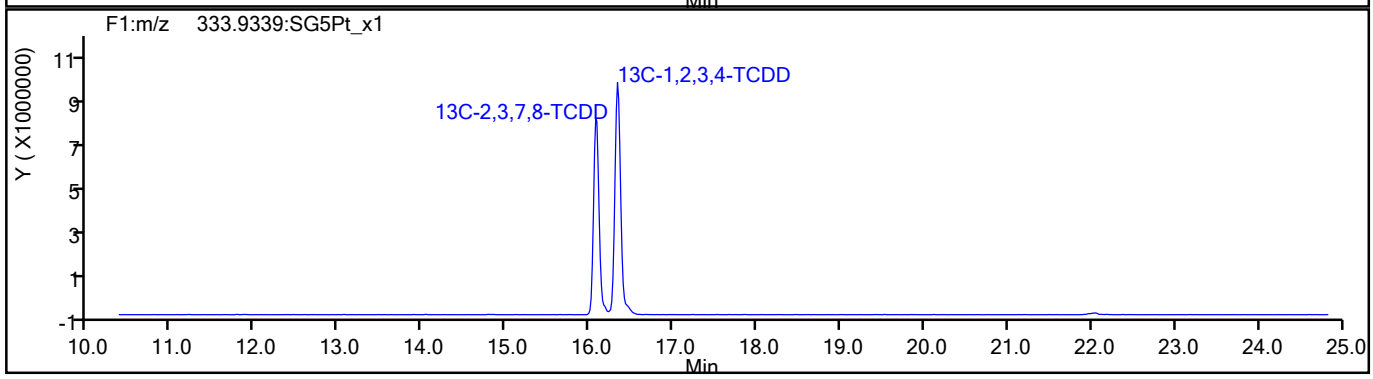

791555

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

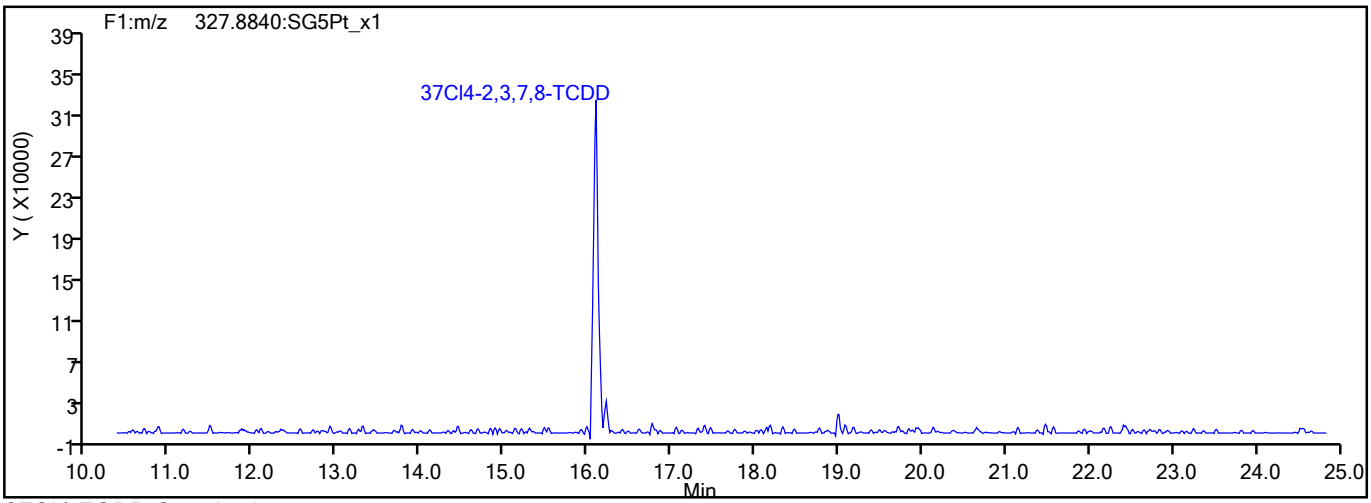

37Cl4-TCDD Standards

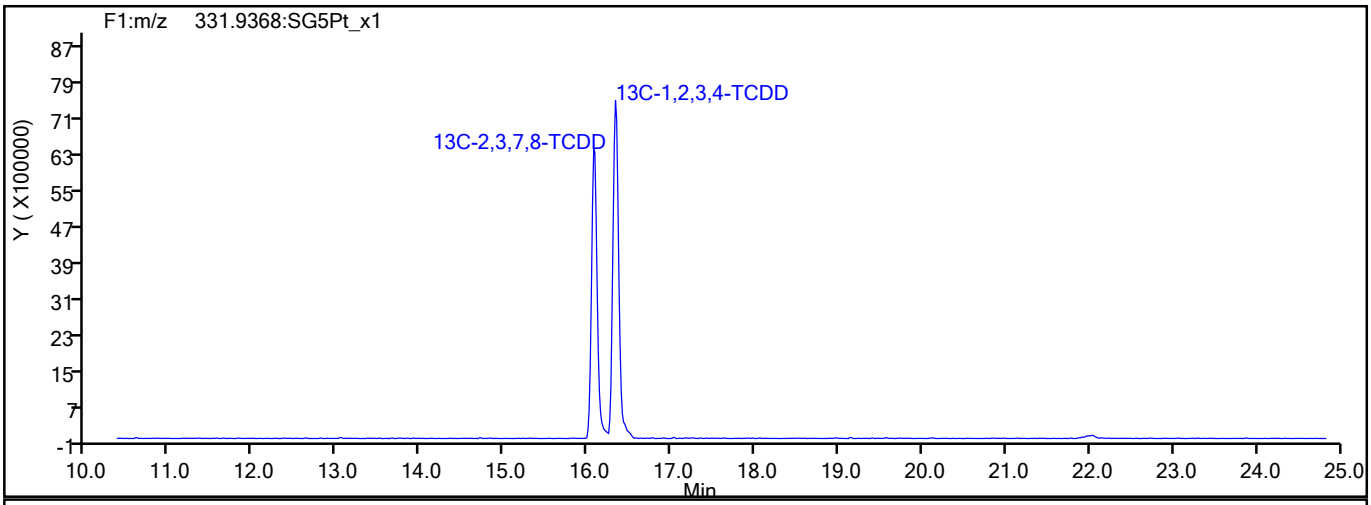

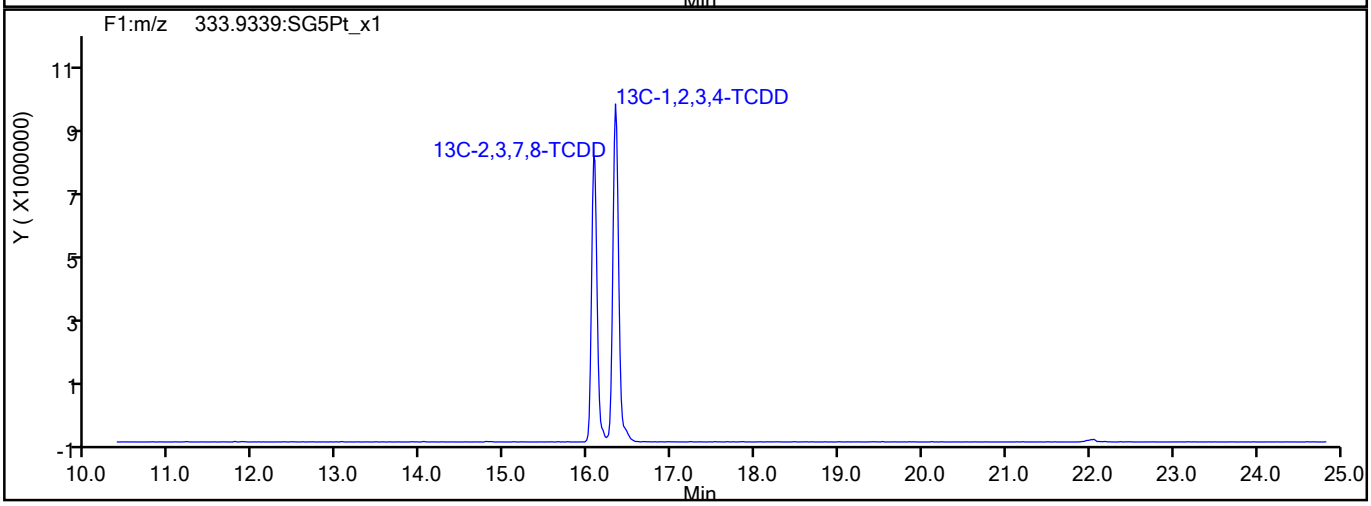

791556

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

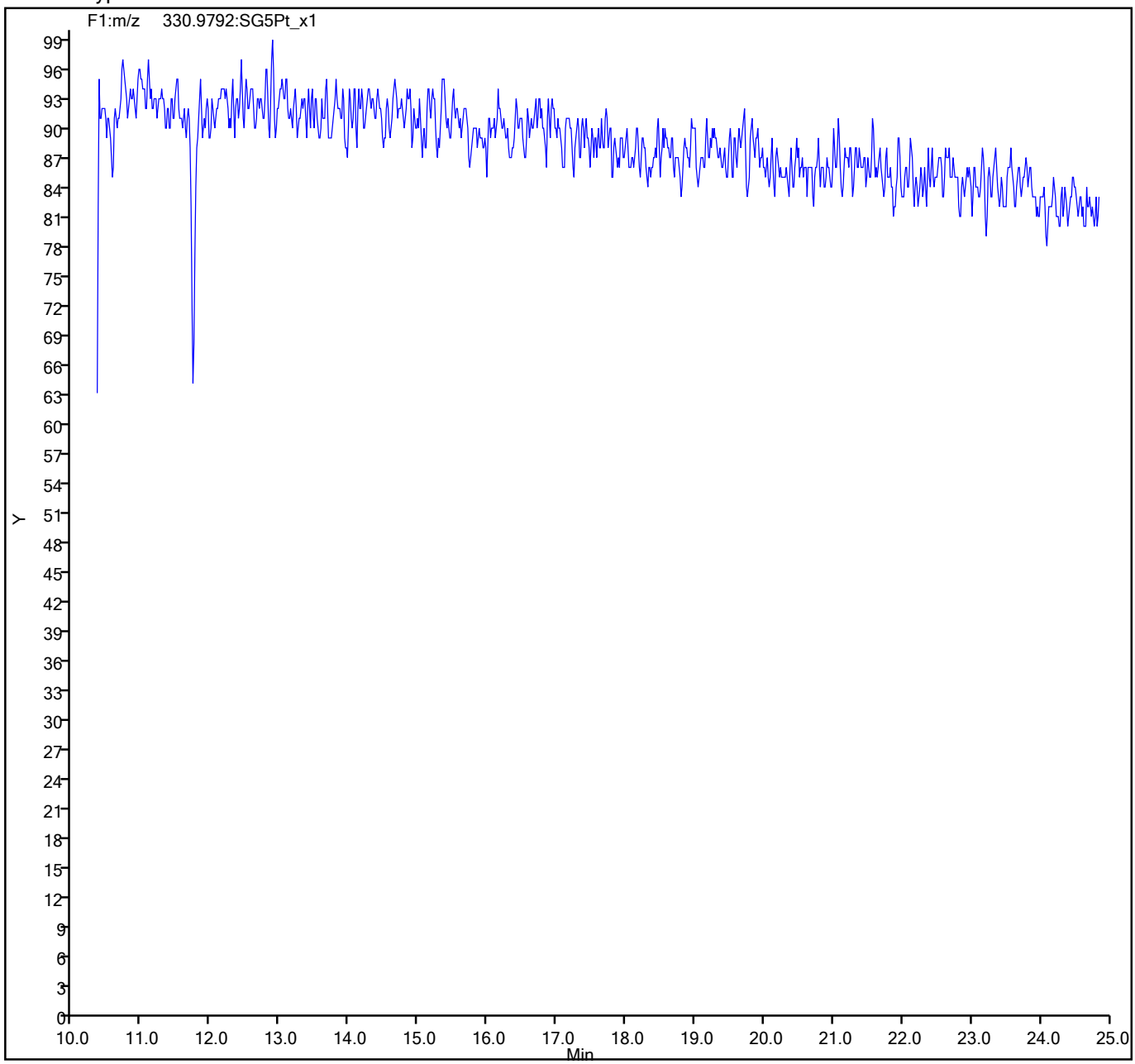

791557

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

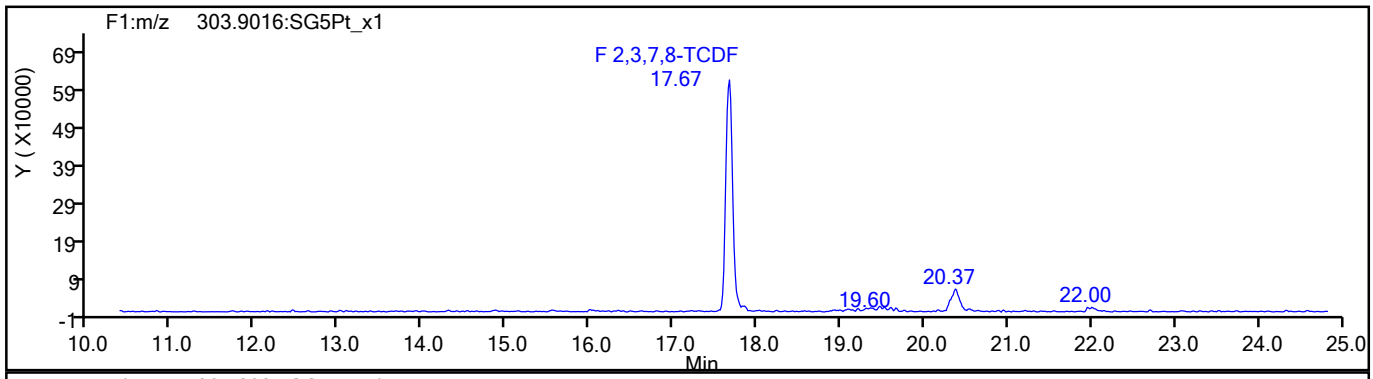

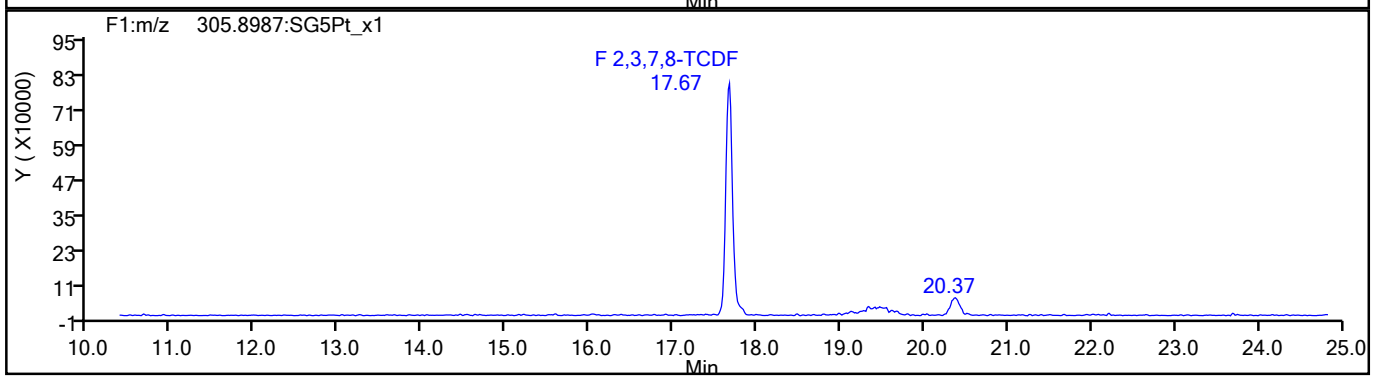

TCDF Standards

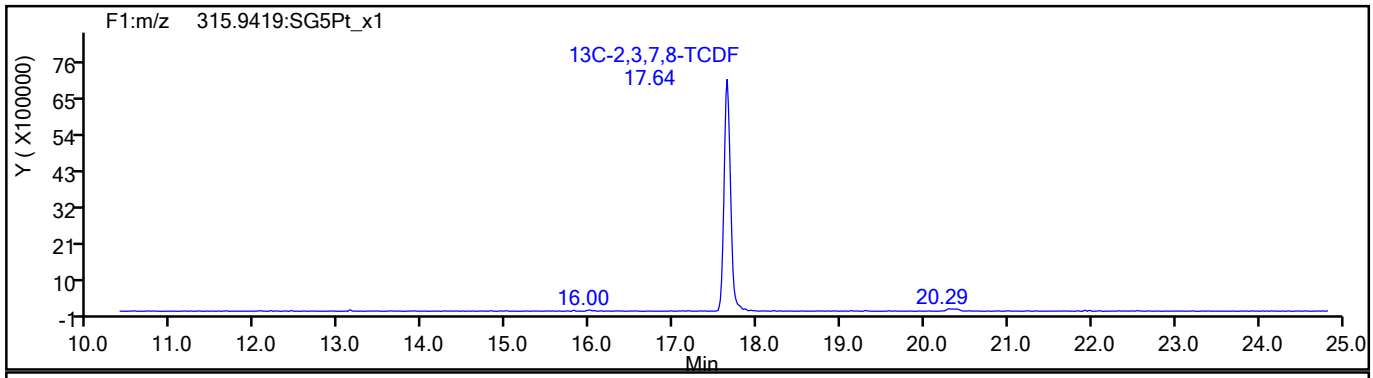

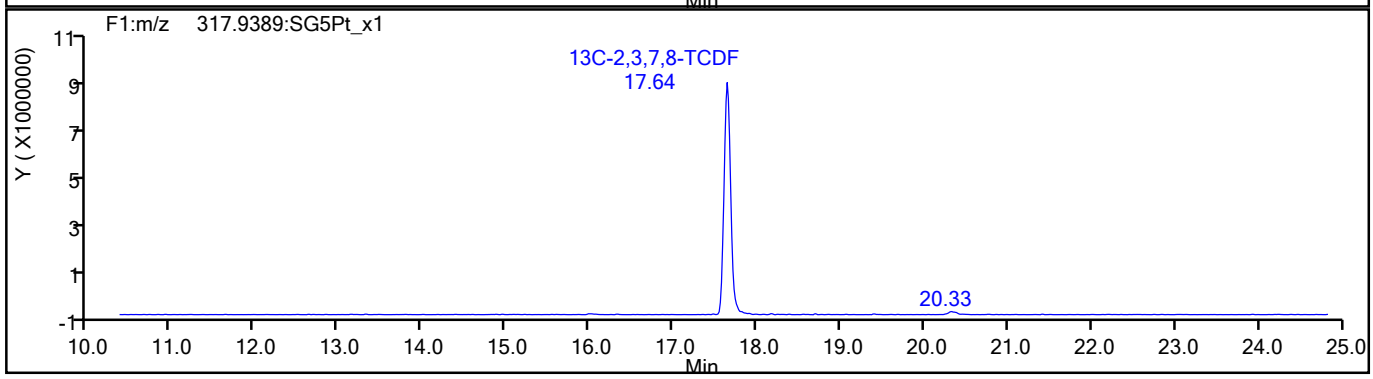

791560

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

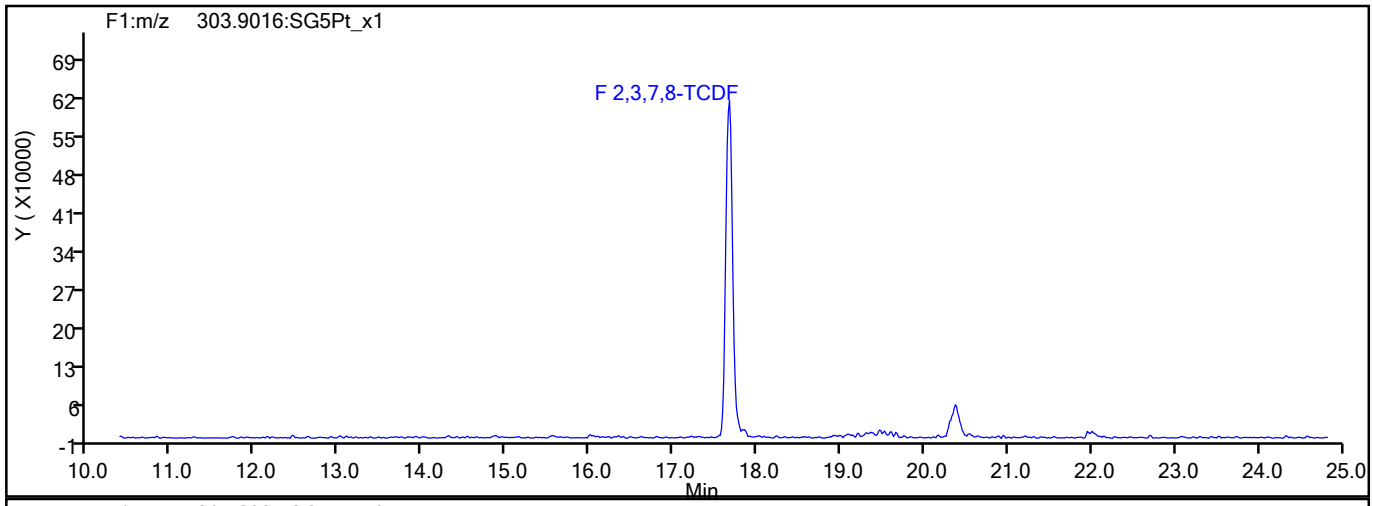

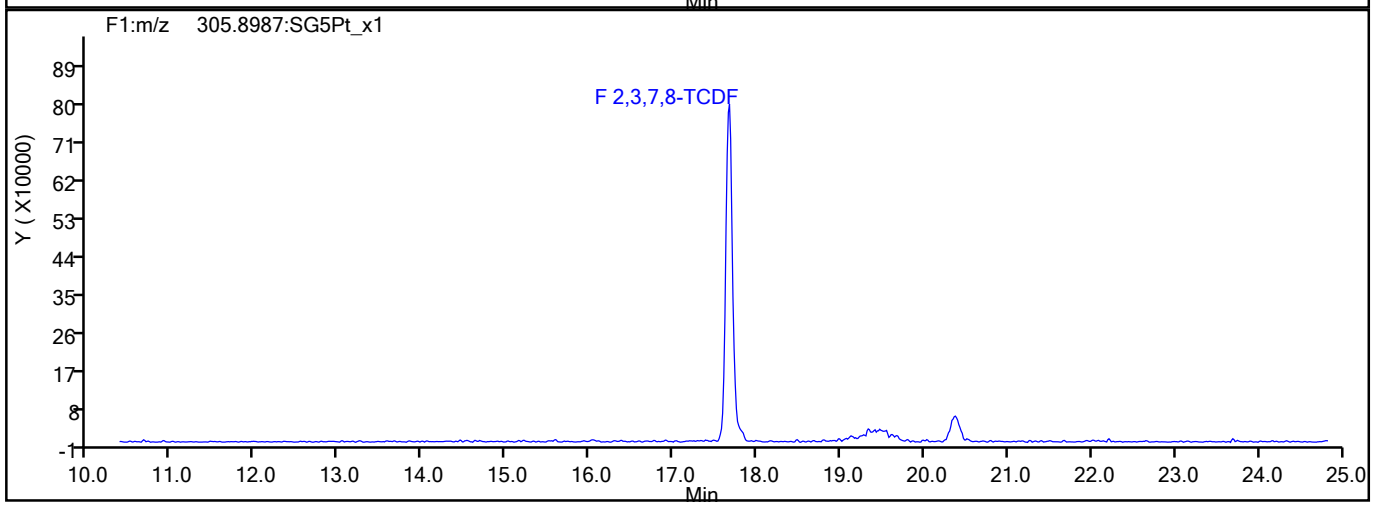

TCDF Interference Mass

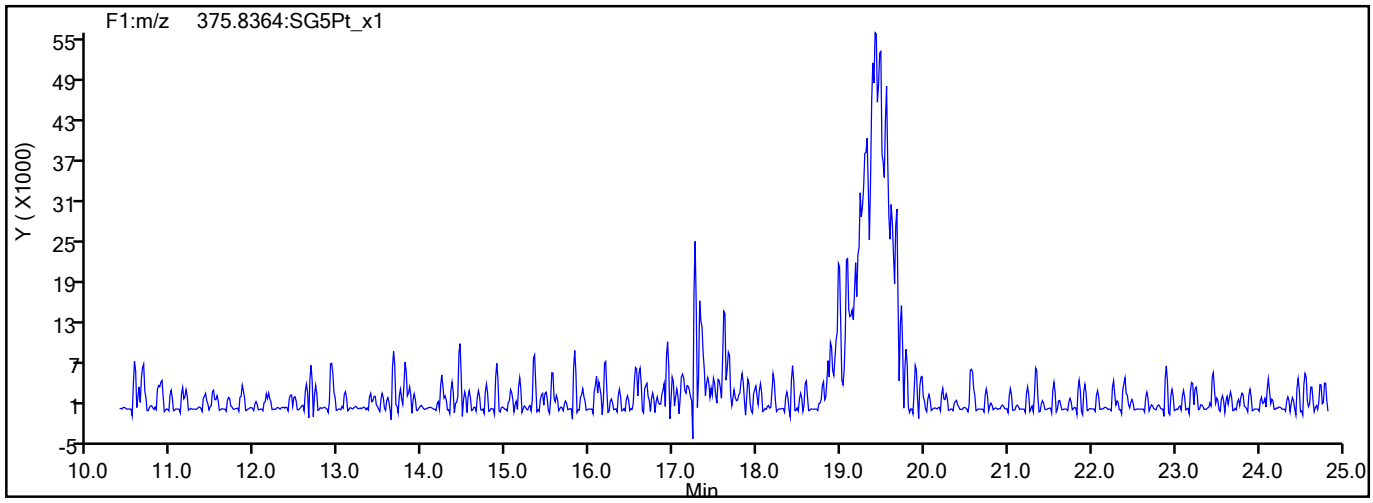

791561

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

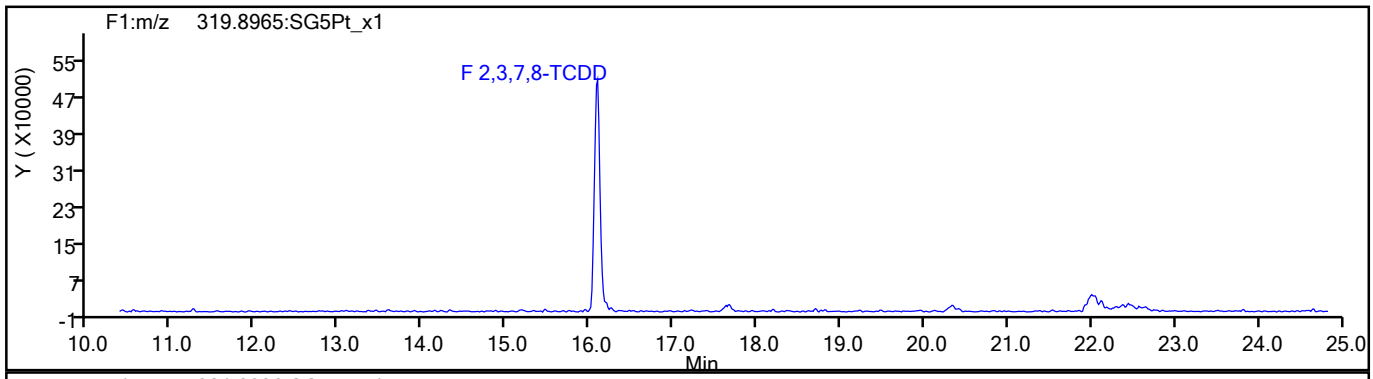

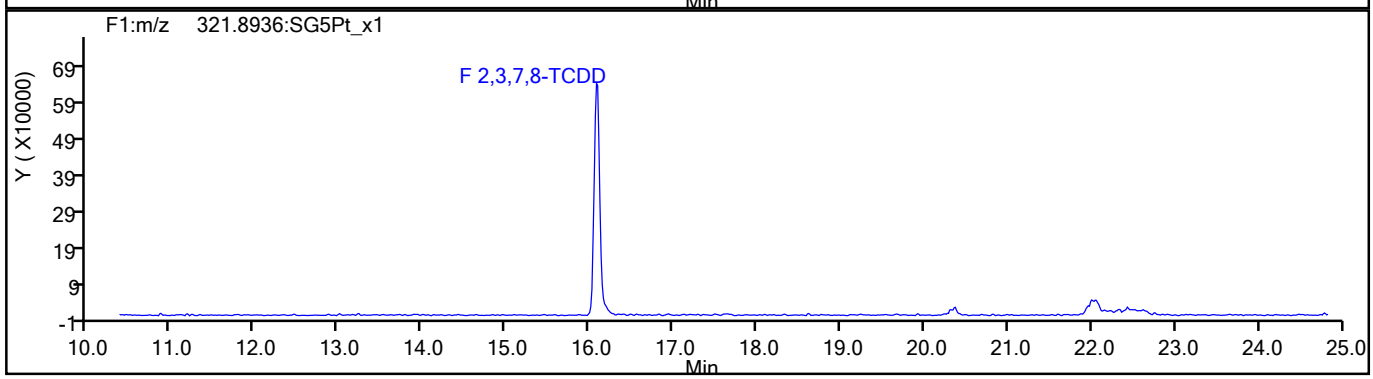

TCDD Standards

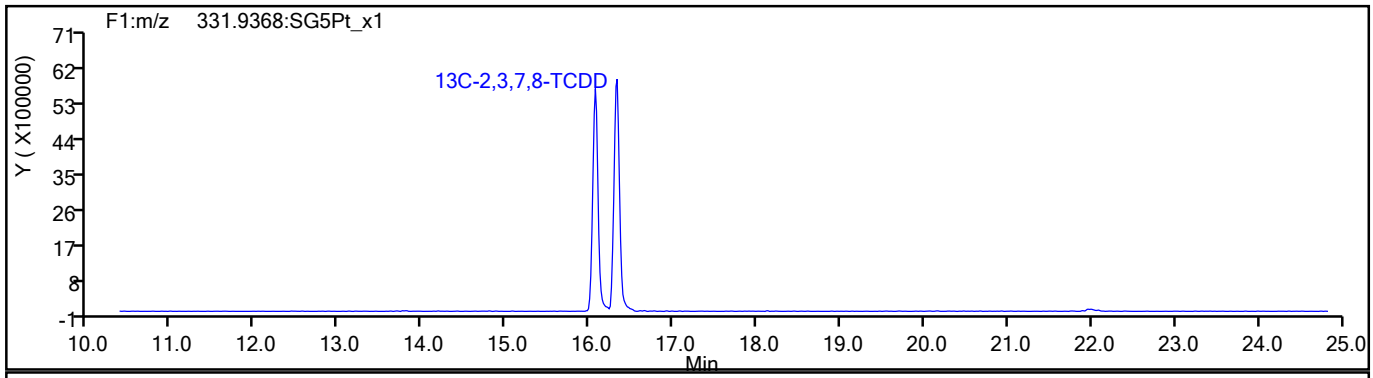

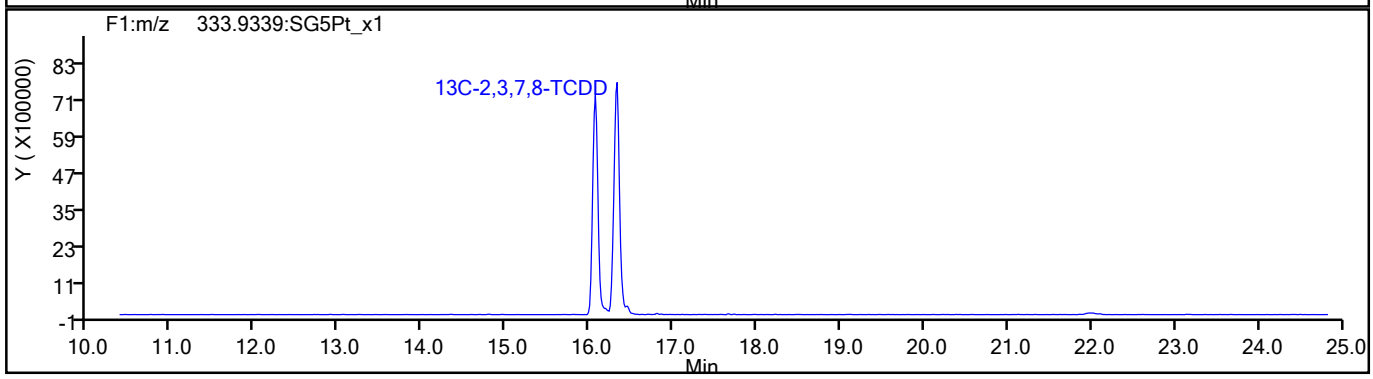

791562

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

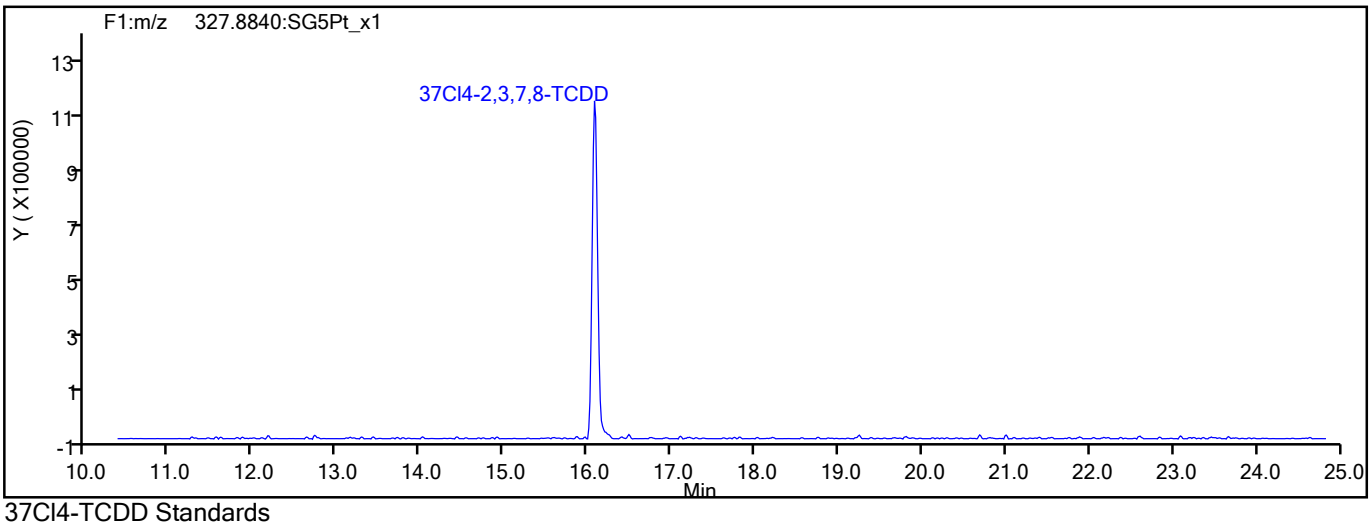

37Cl4-TCDD Standards

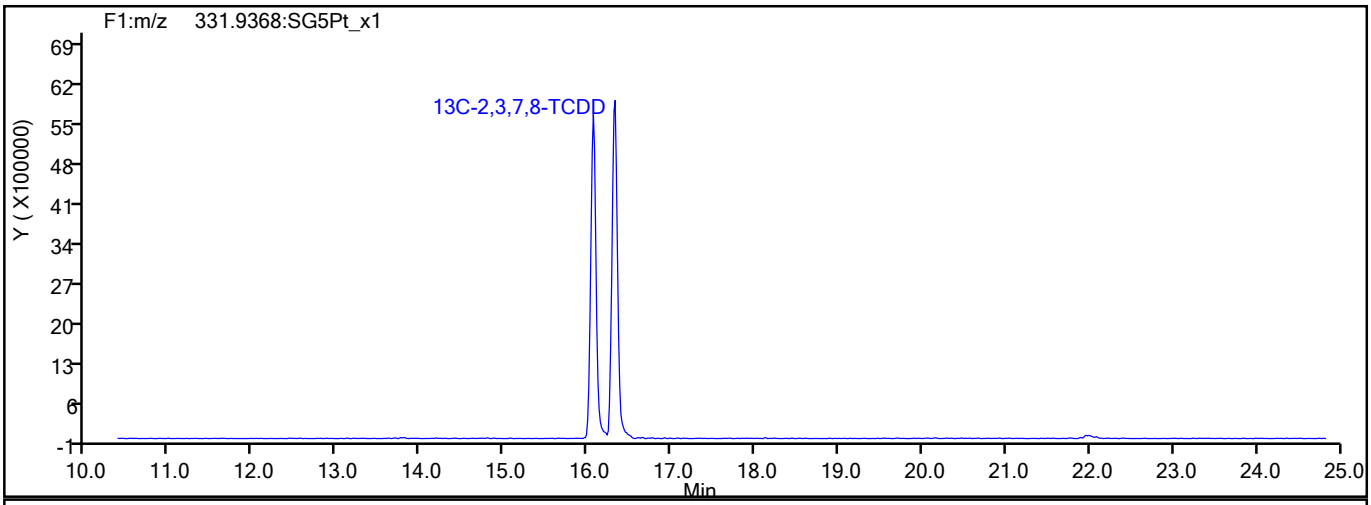

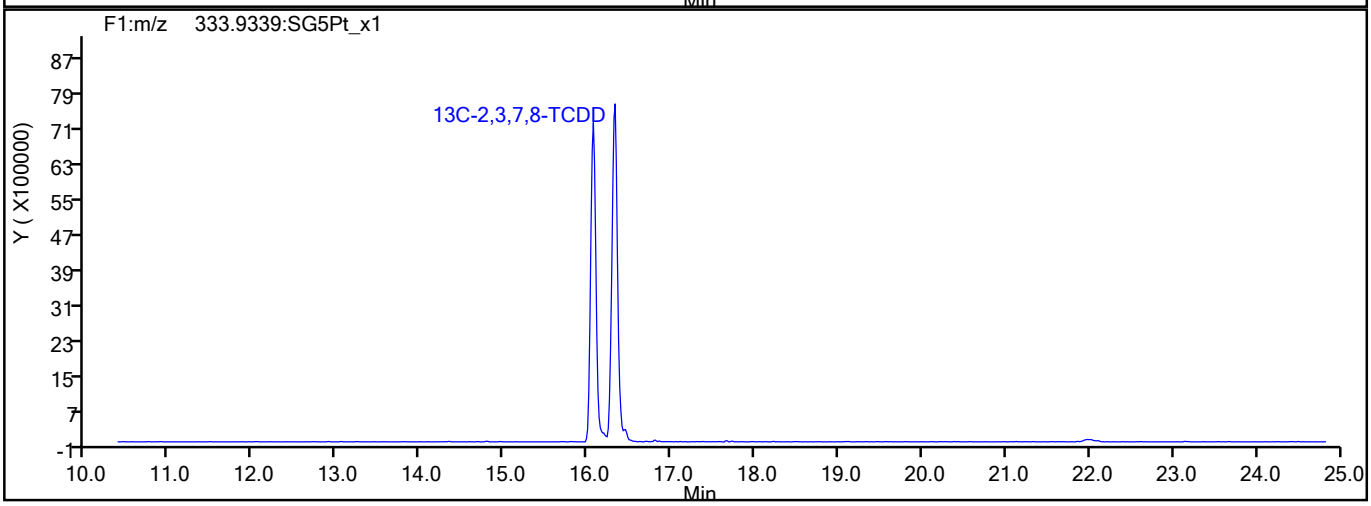

791563

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

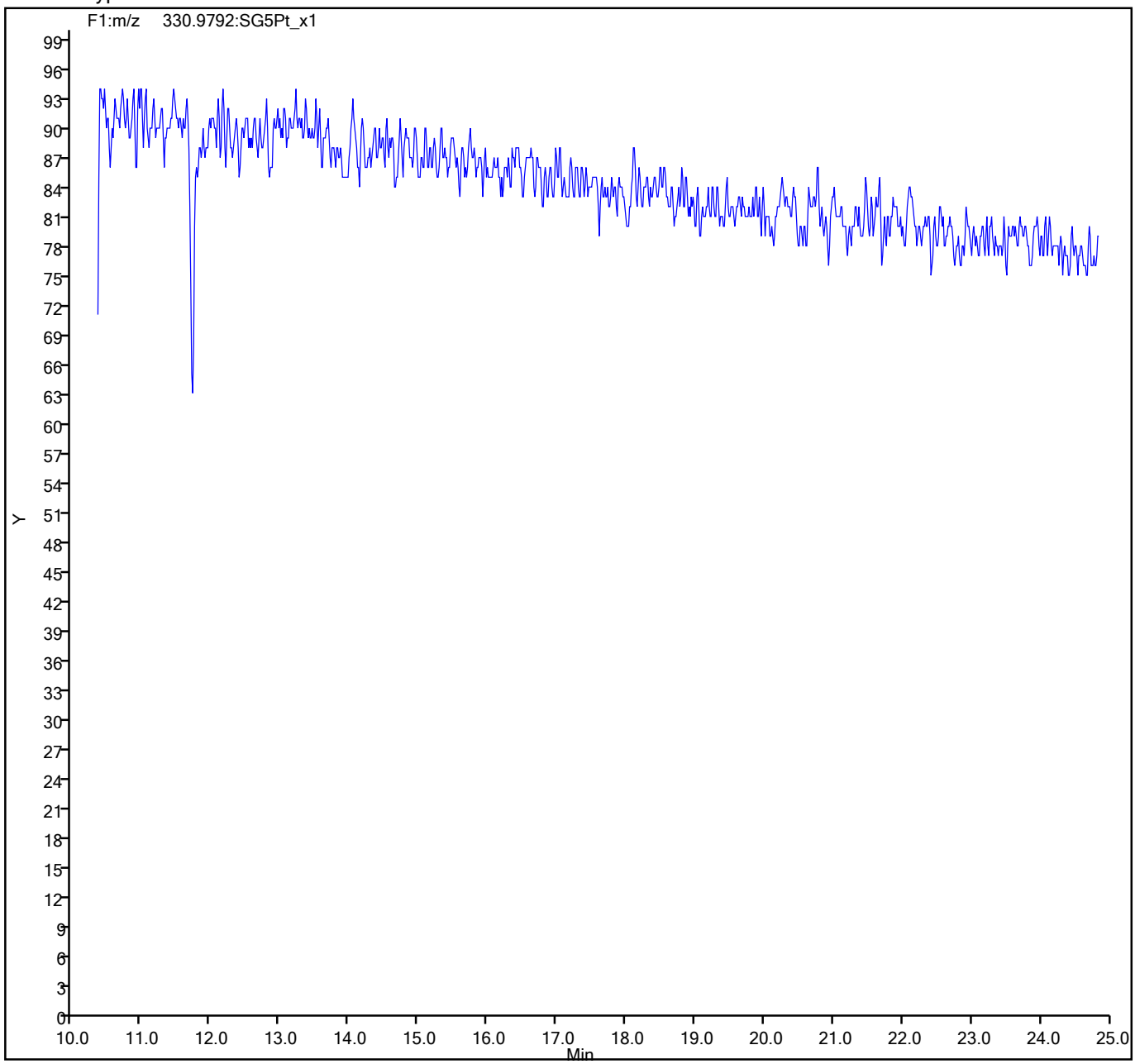

791564

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

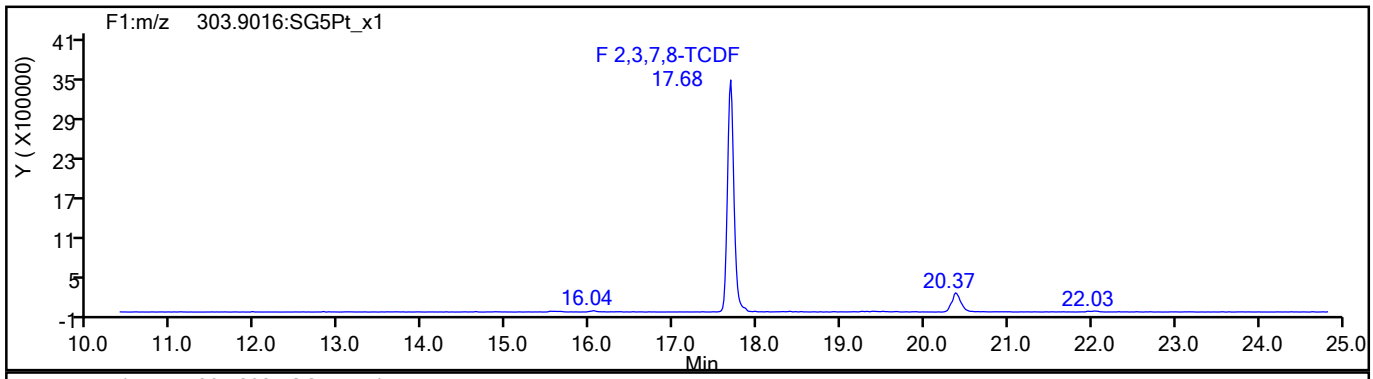

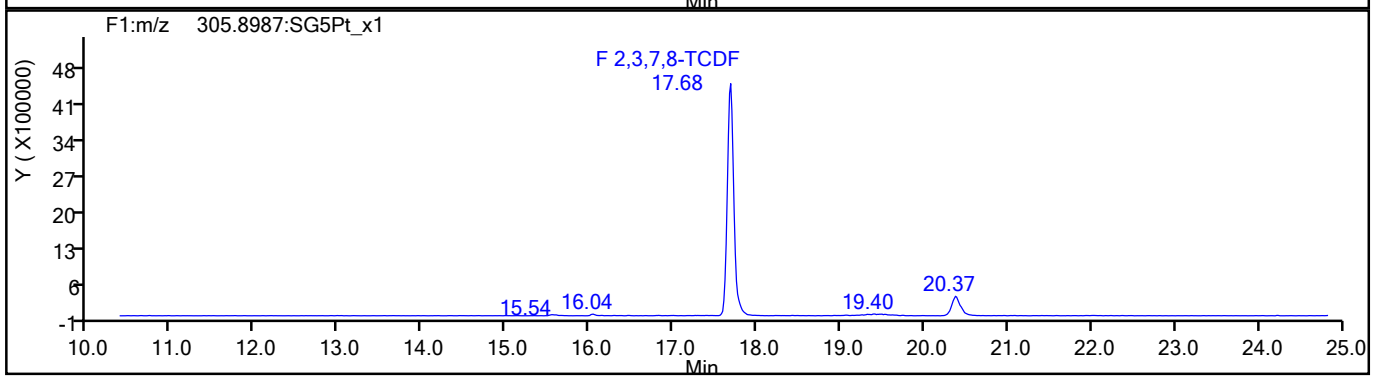

TCDF Standards

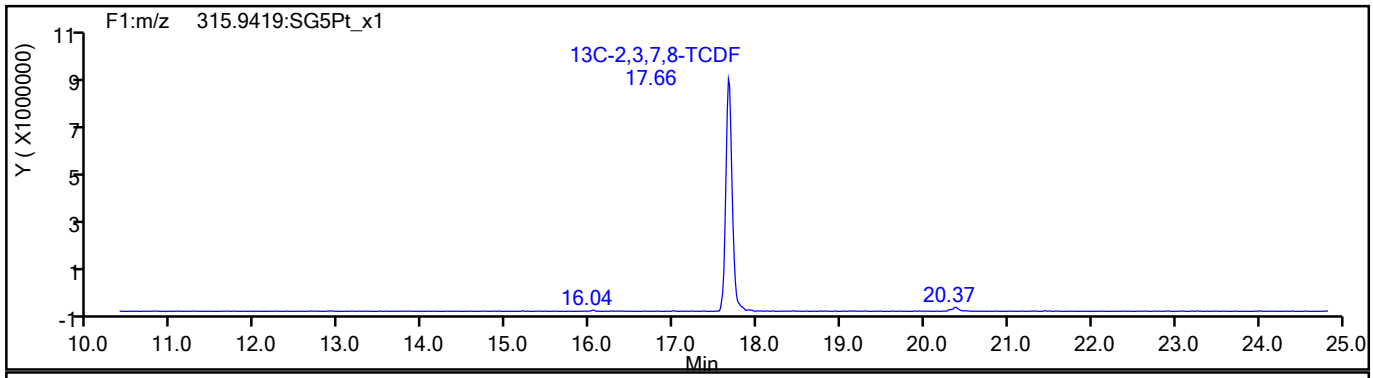

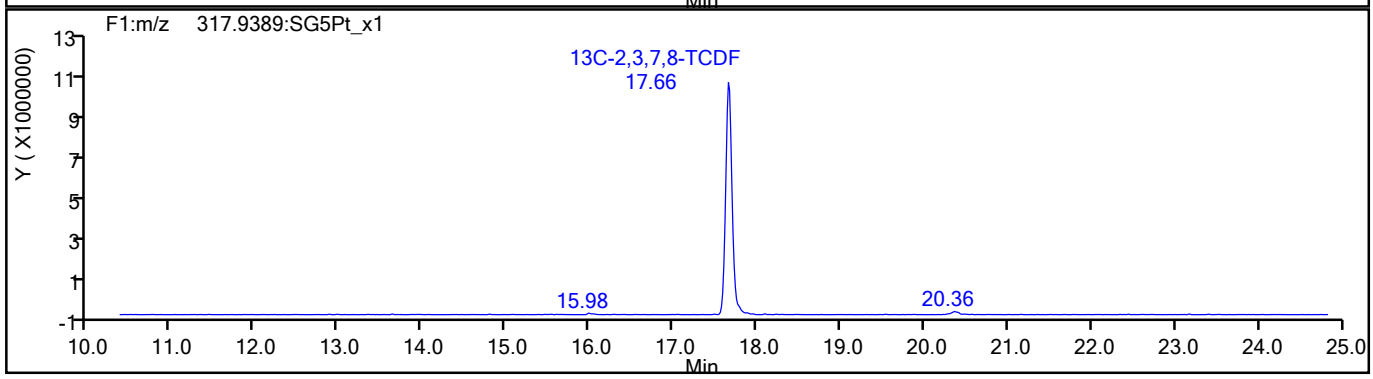

791567

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

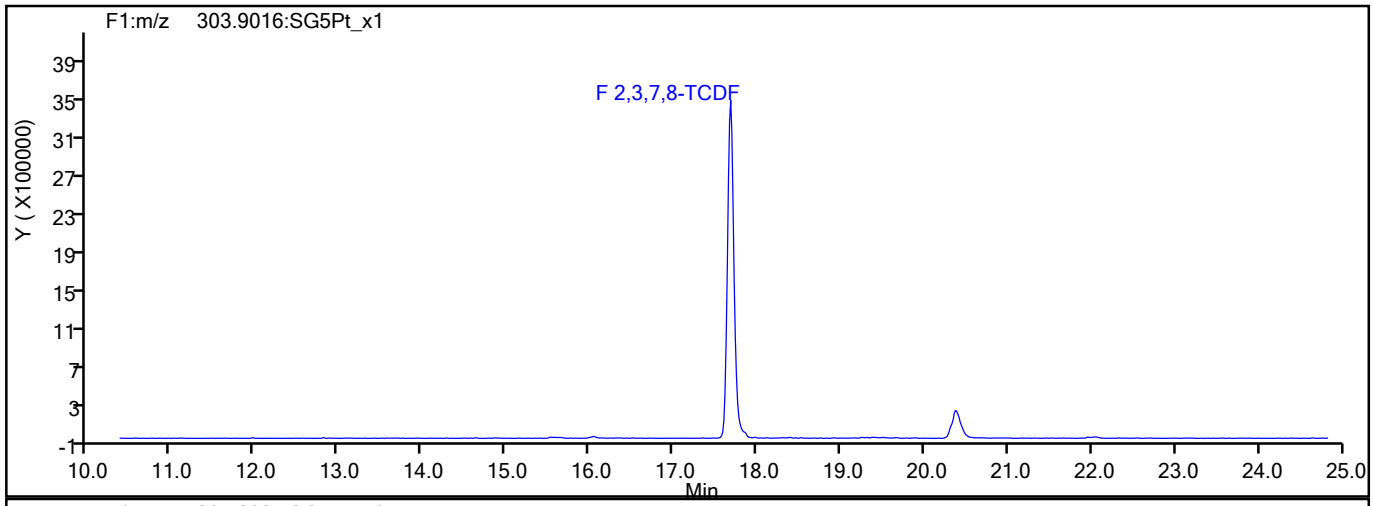

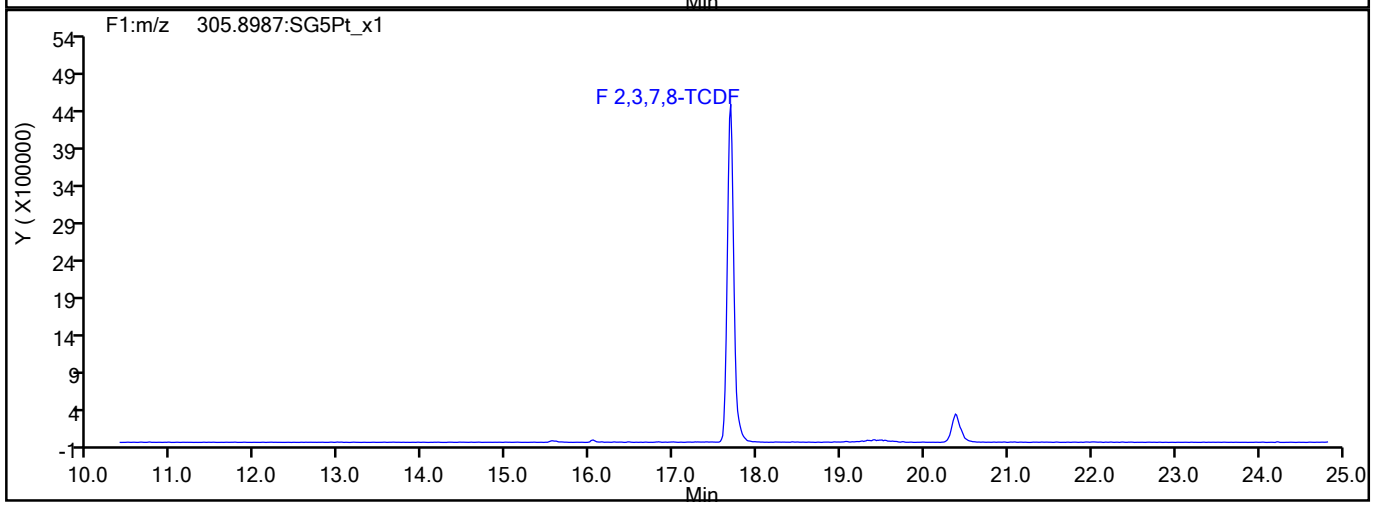

TCDF Interference Mass

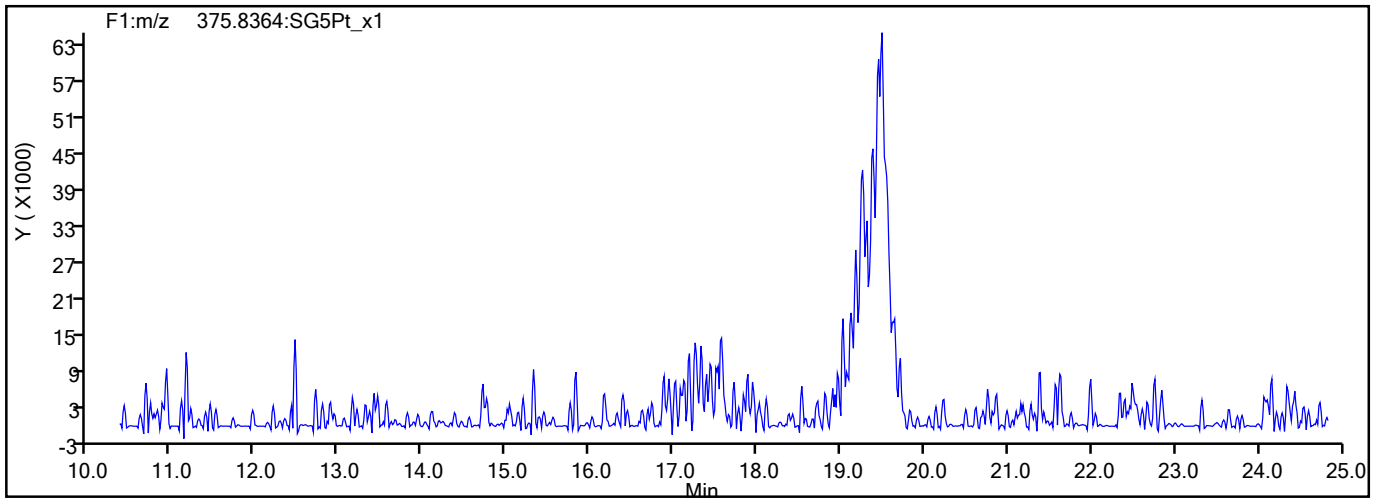

791568

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

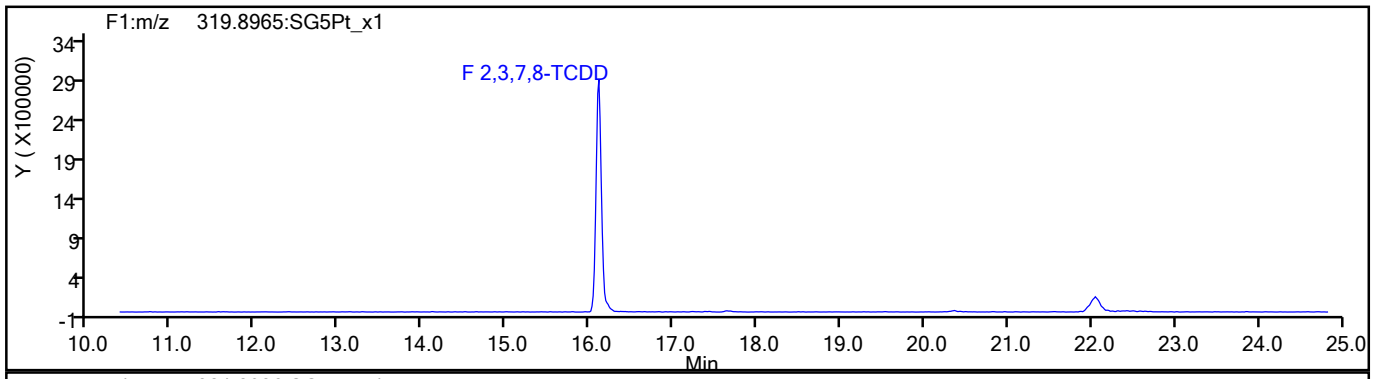

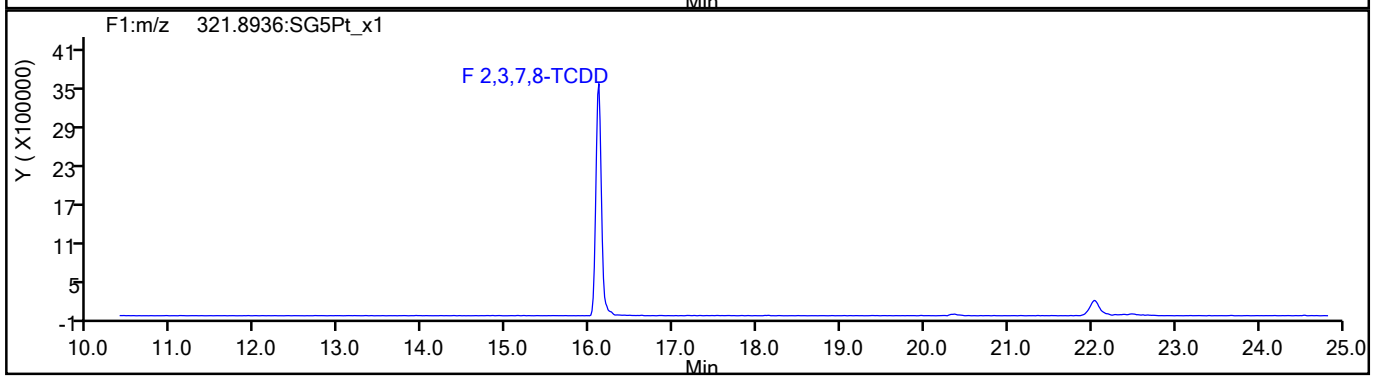

TCDD Standards

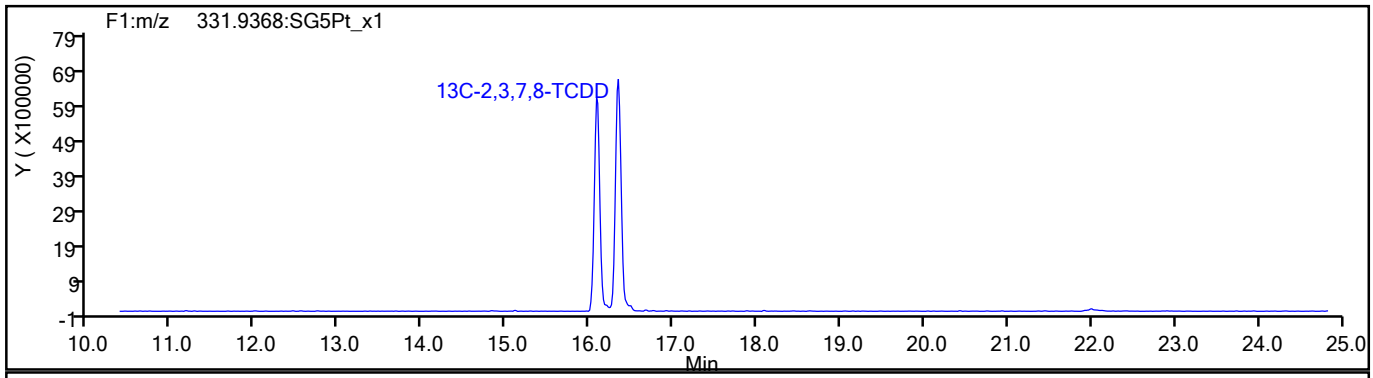

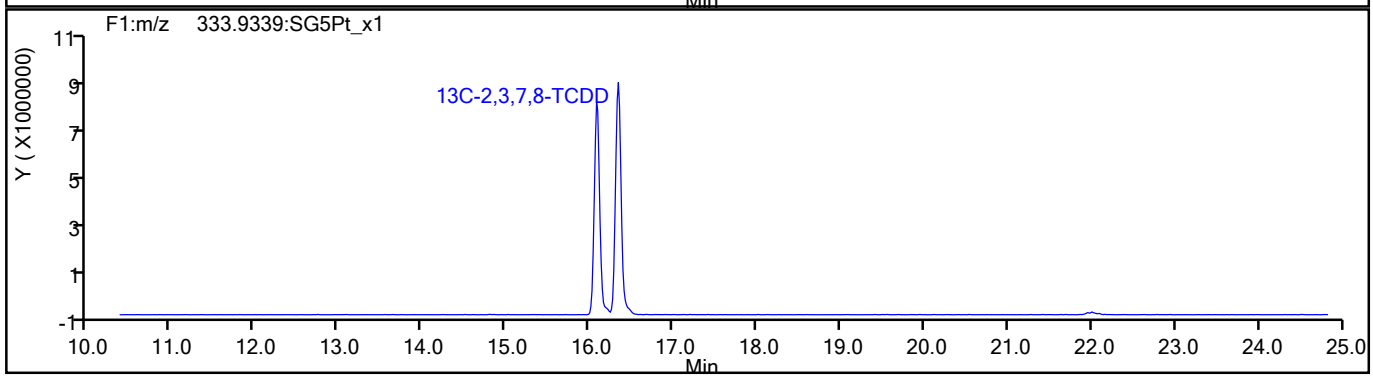

791569

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

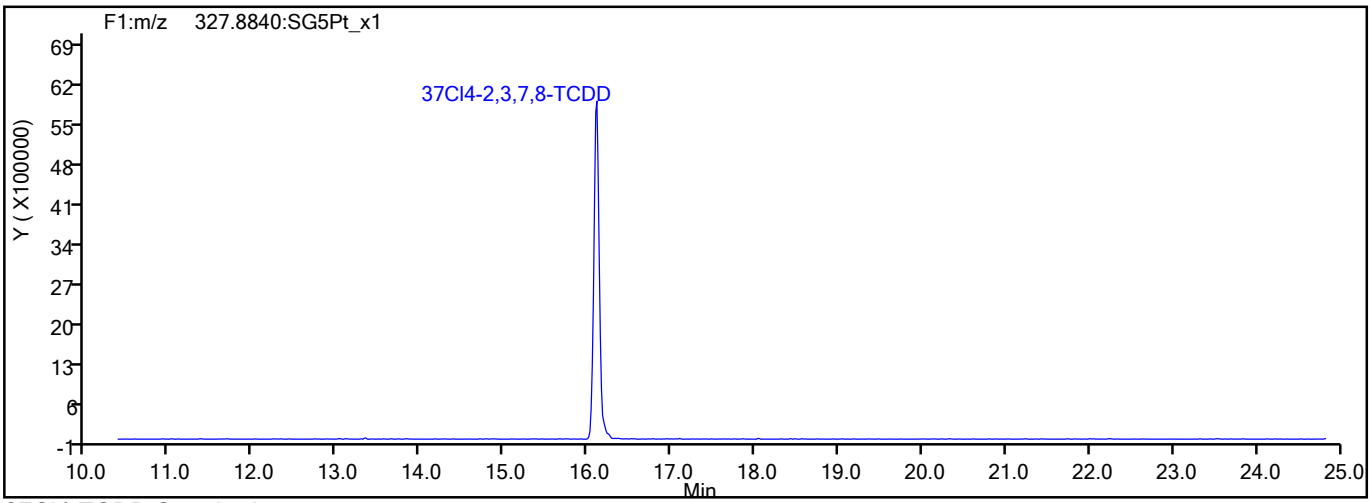

37Cl4-TCDD Standards

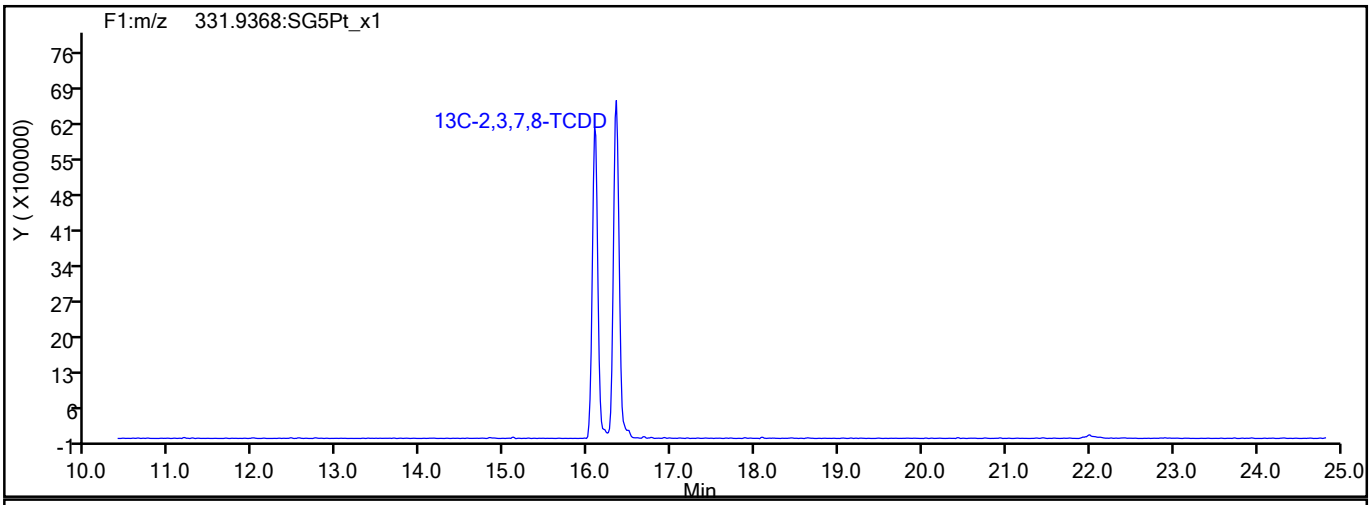

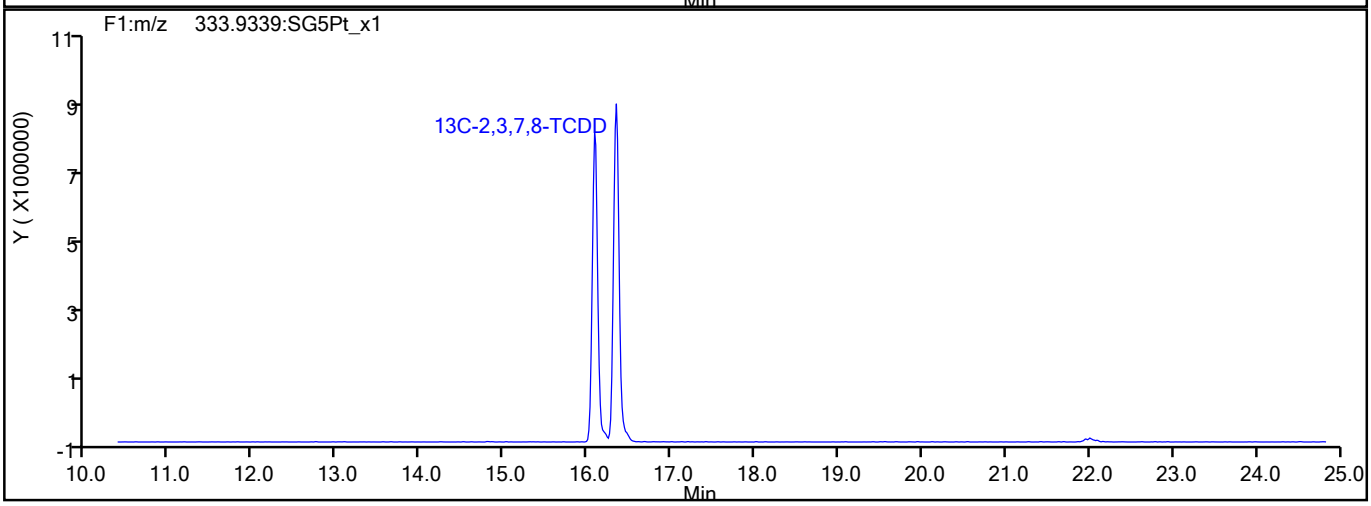

791570

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

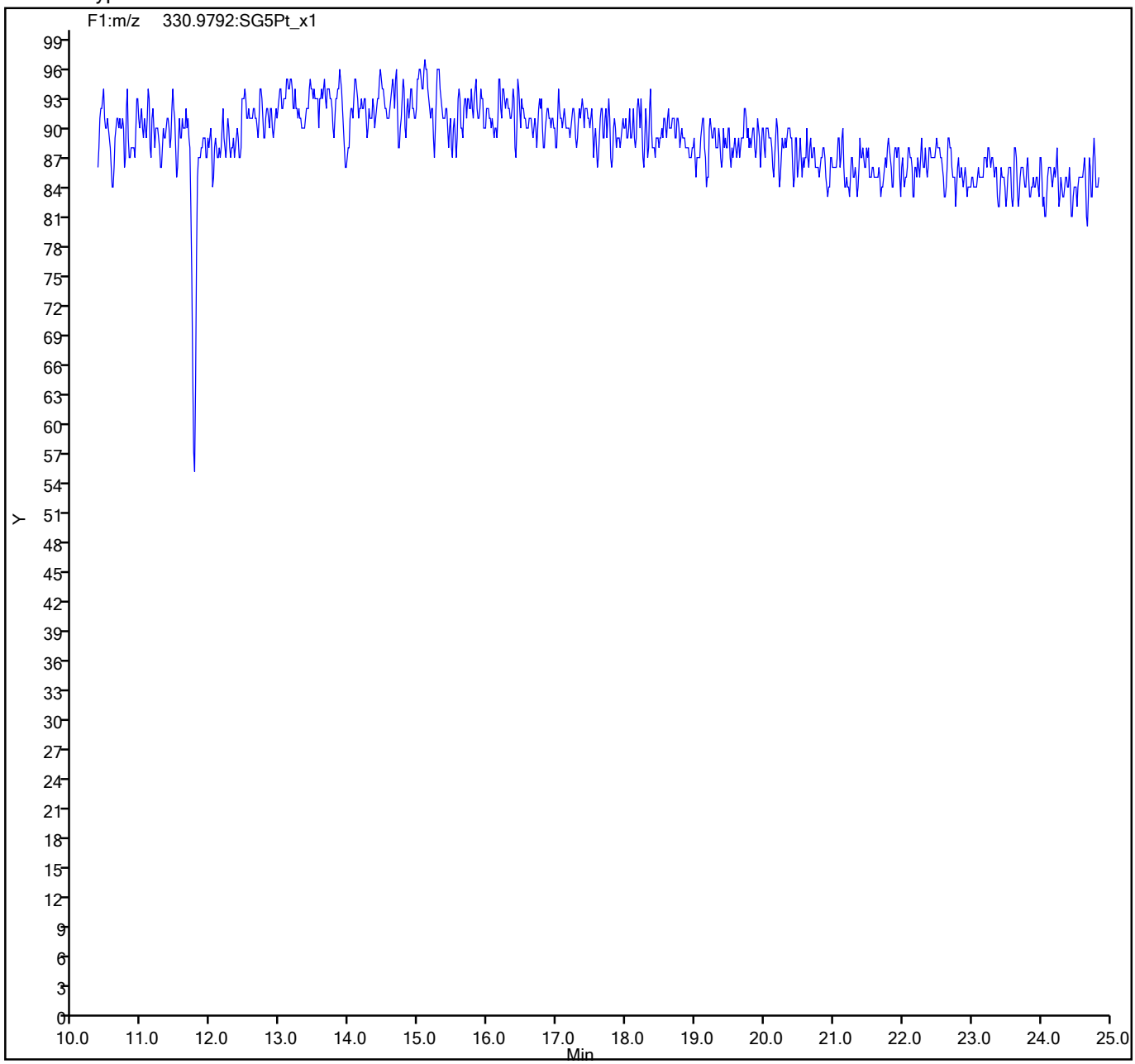

791571

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

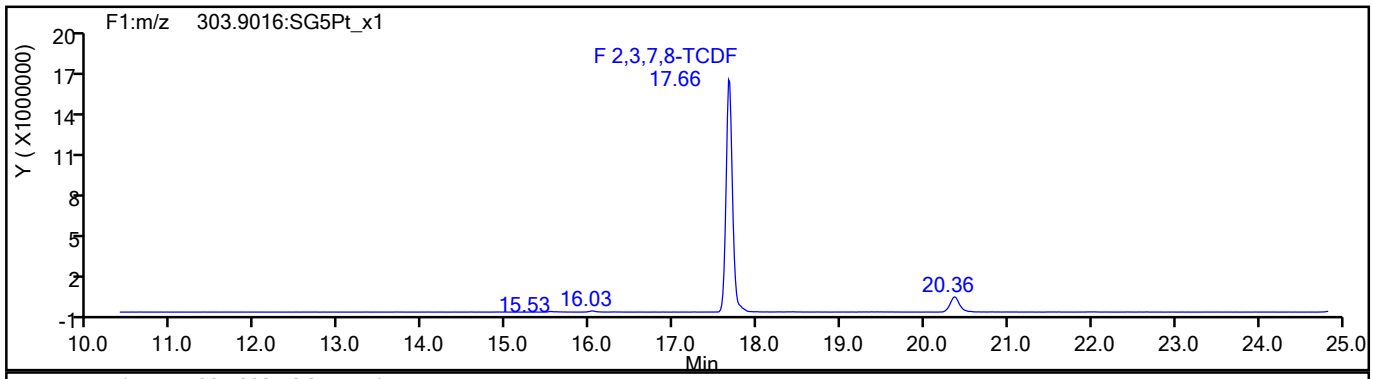

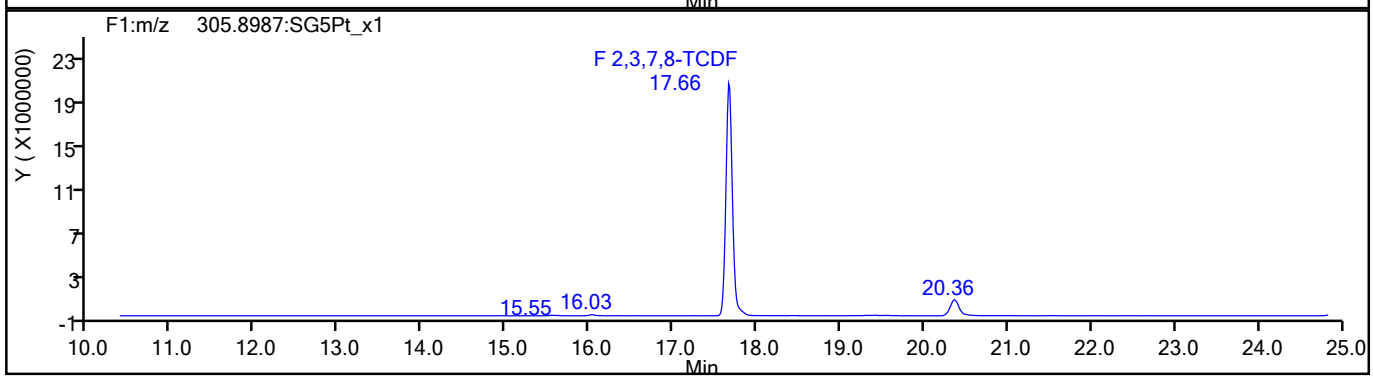

TCDF Standards

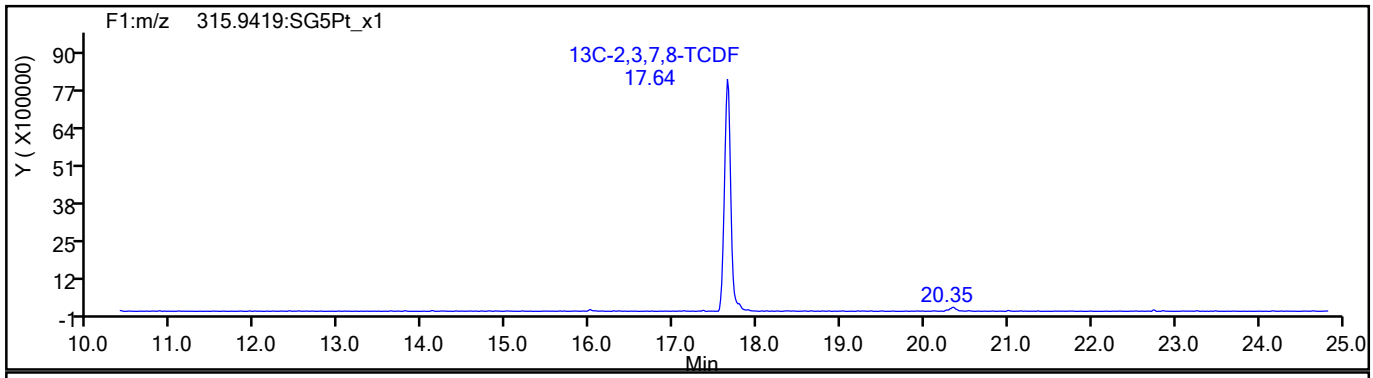

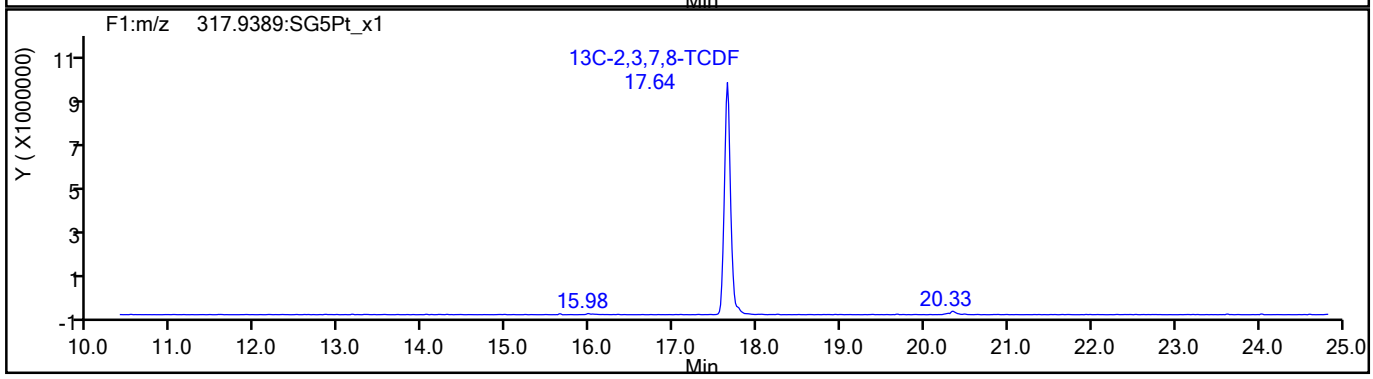

791574

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

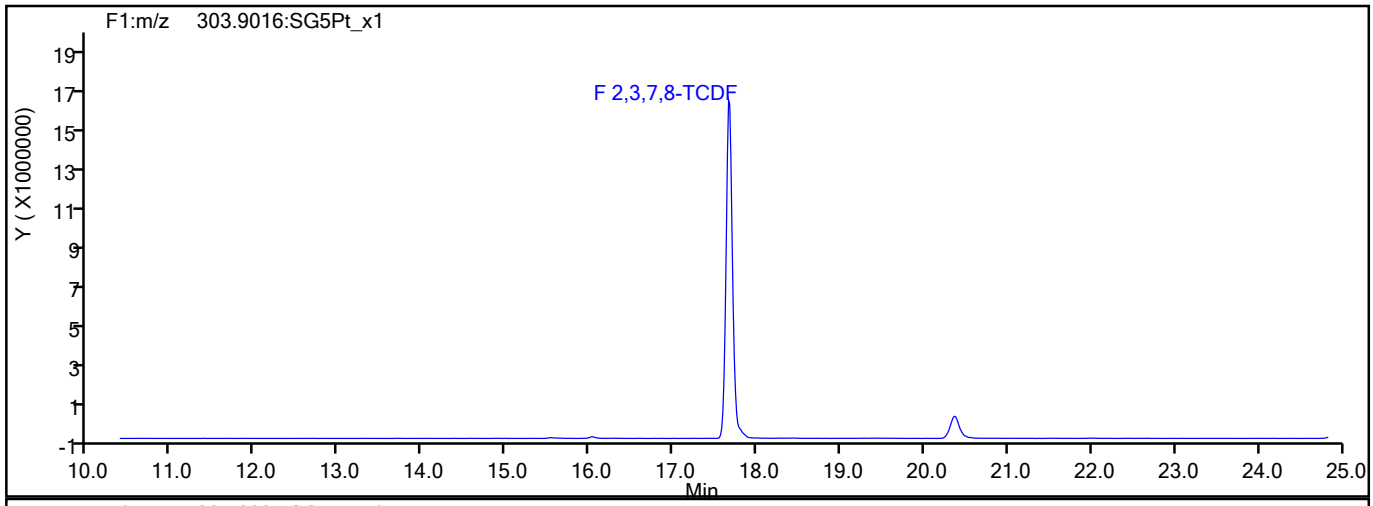

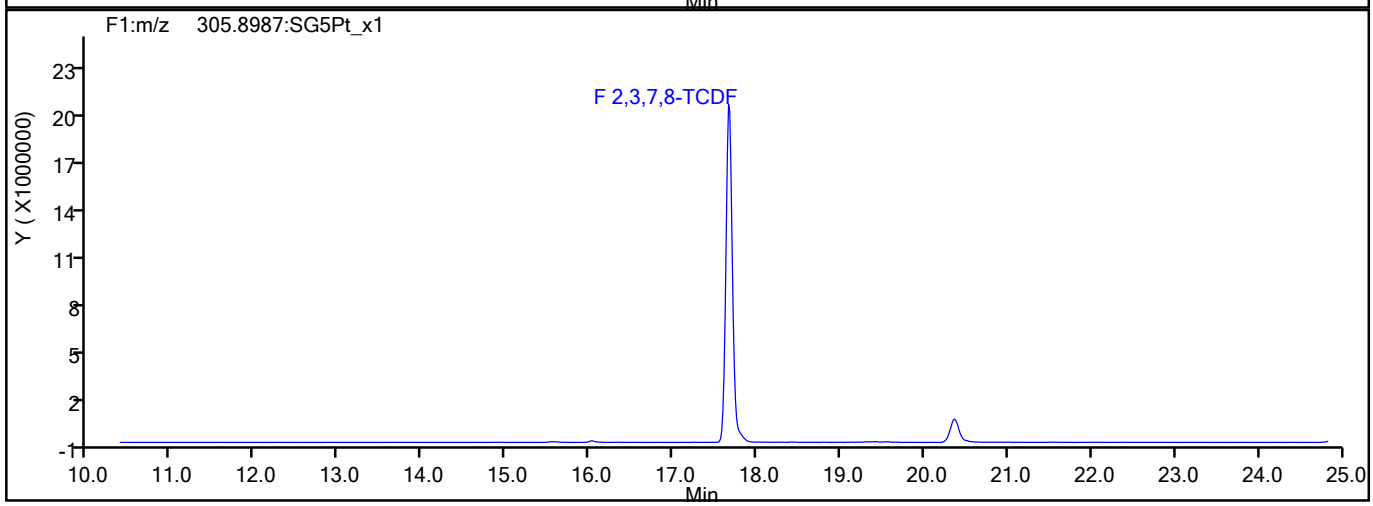

TCDF Interference Mass

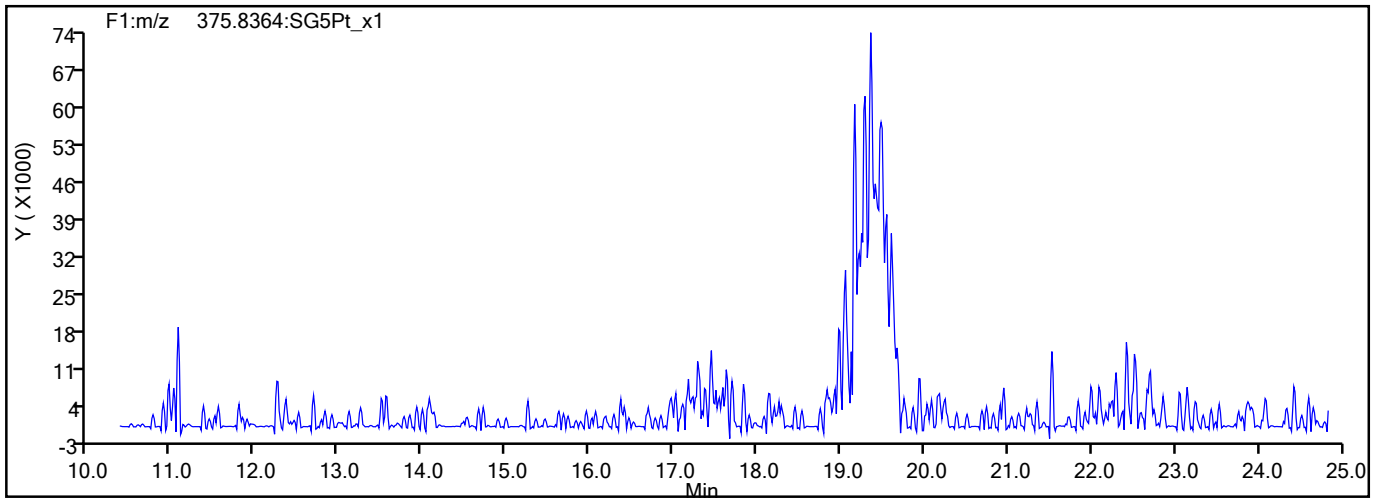

791575

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

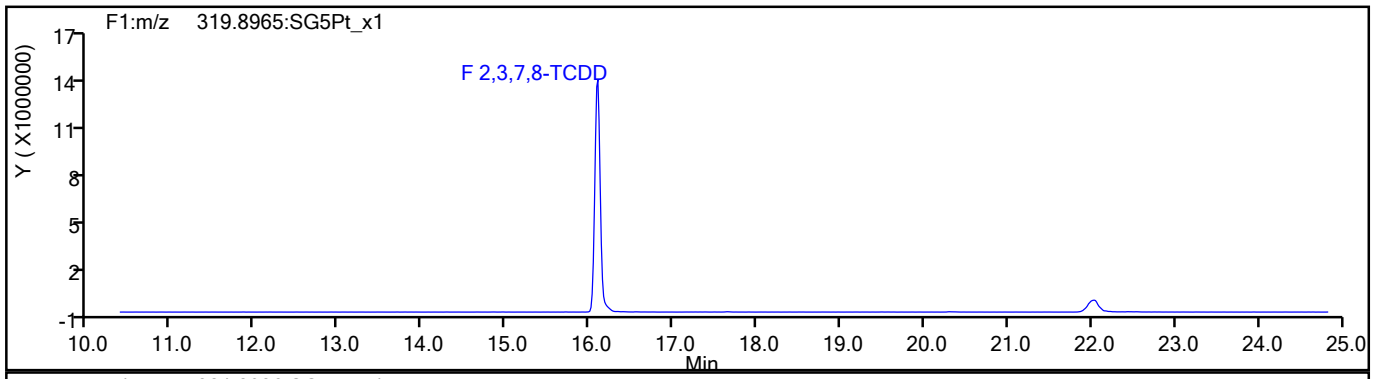

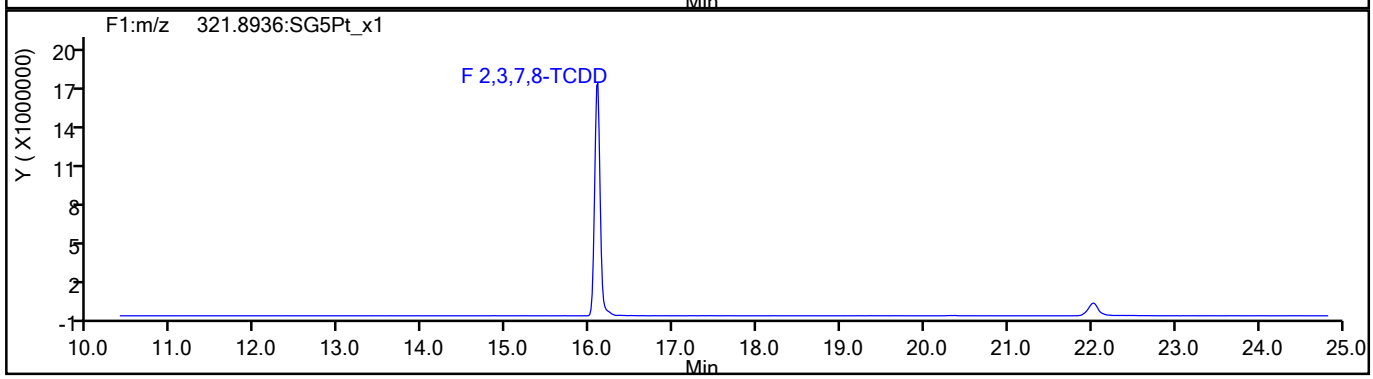

TCDD Standards

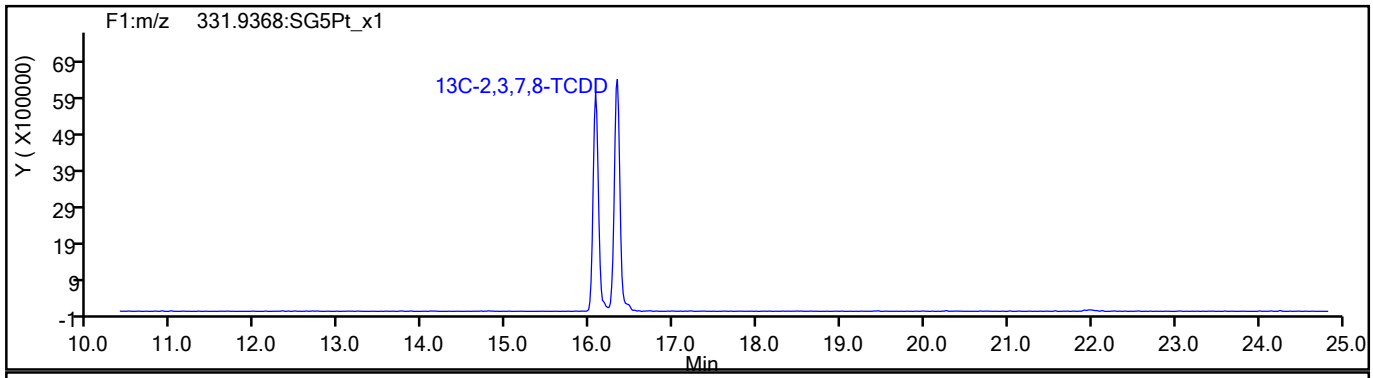

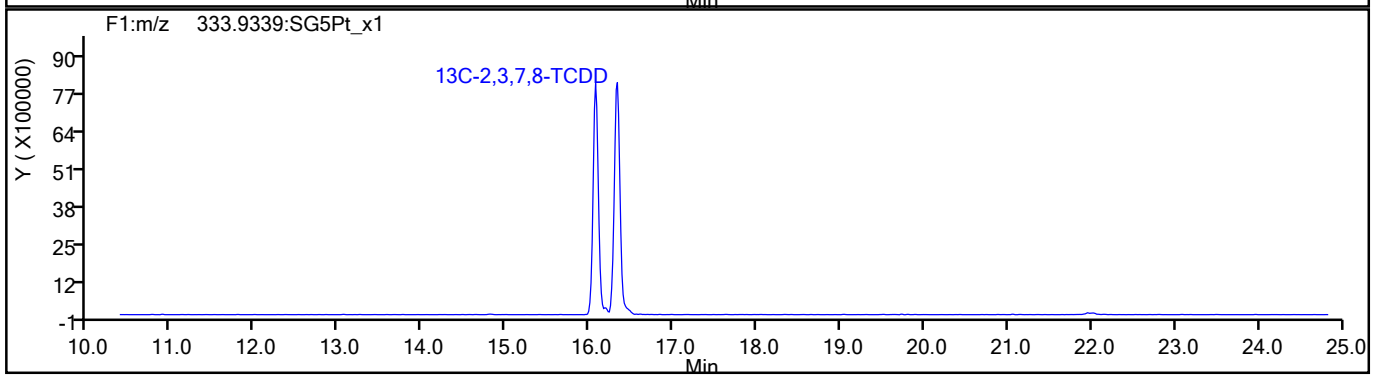

791576

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

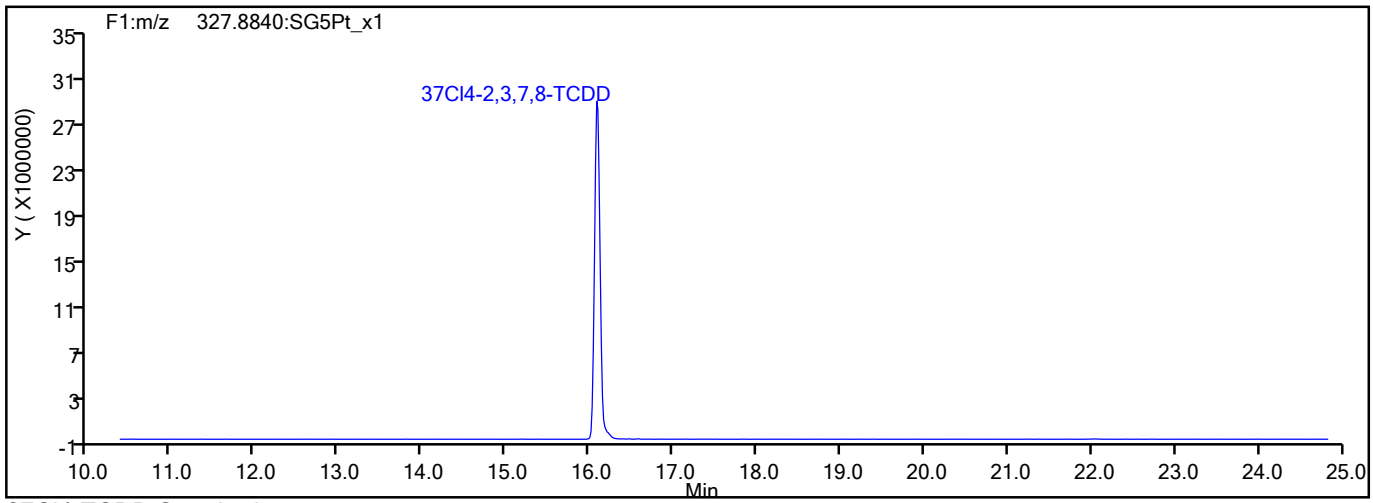

37Cl4-TCDD Standards

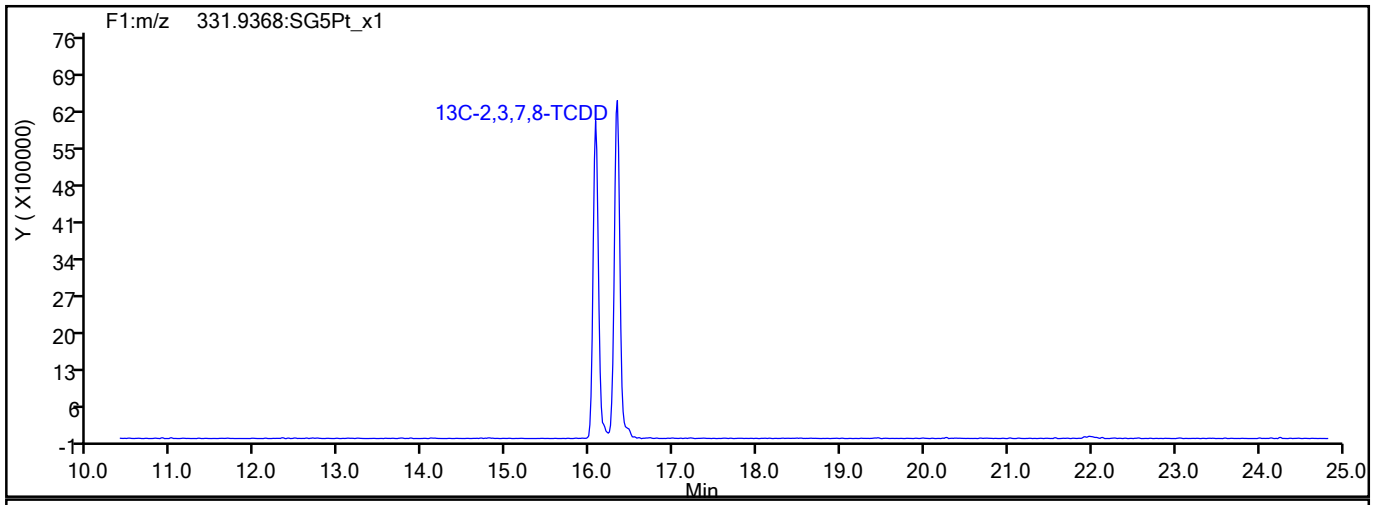

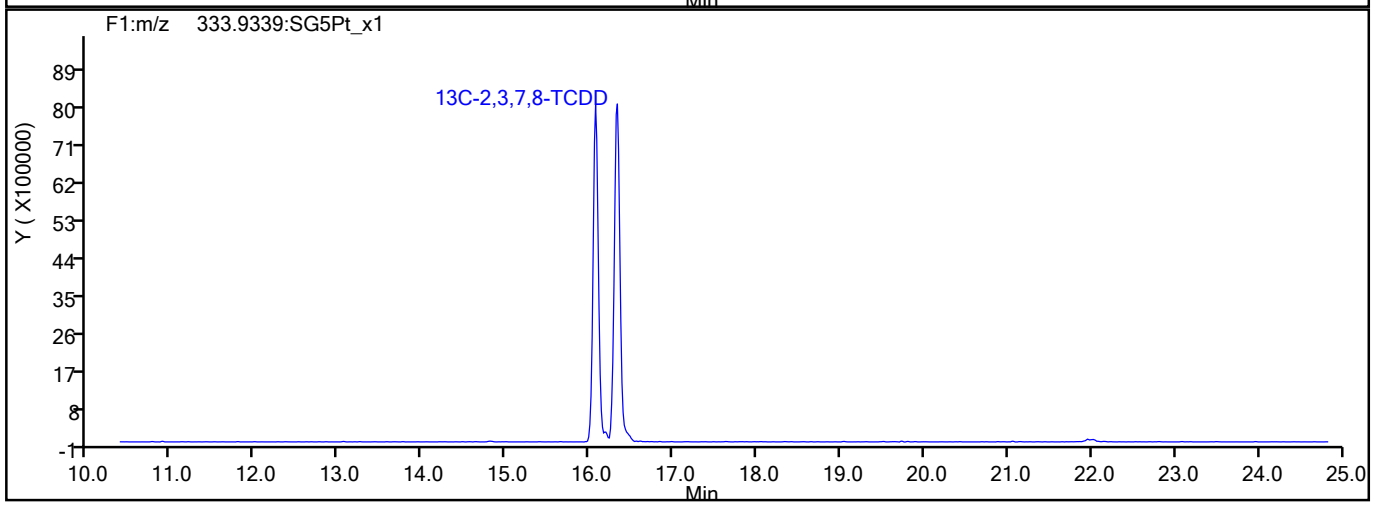

791577

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

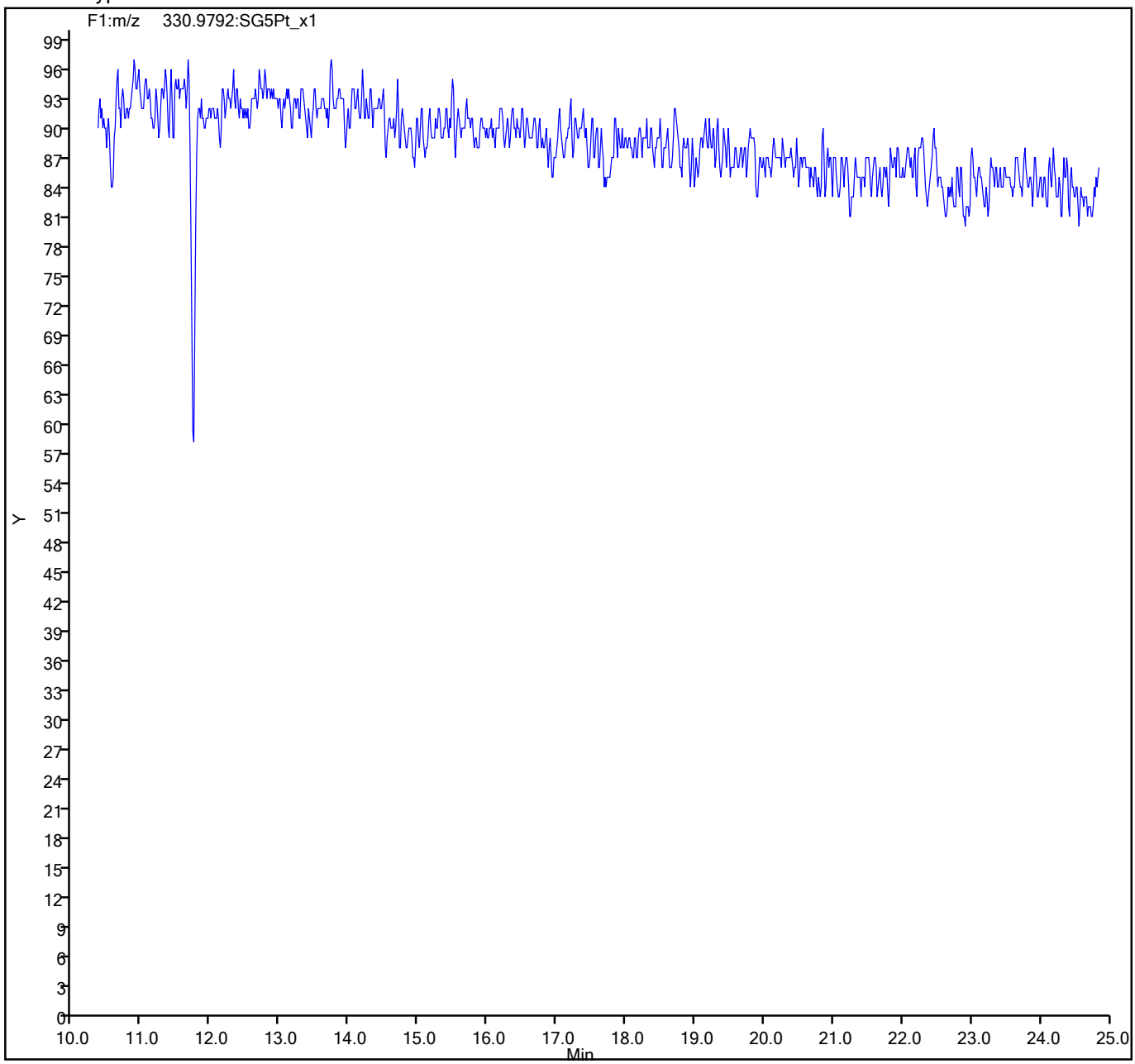

791578

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

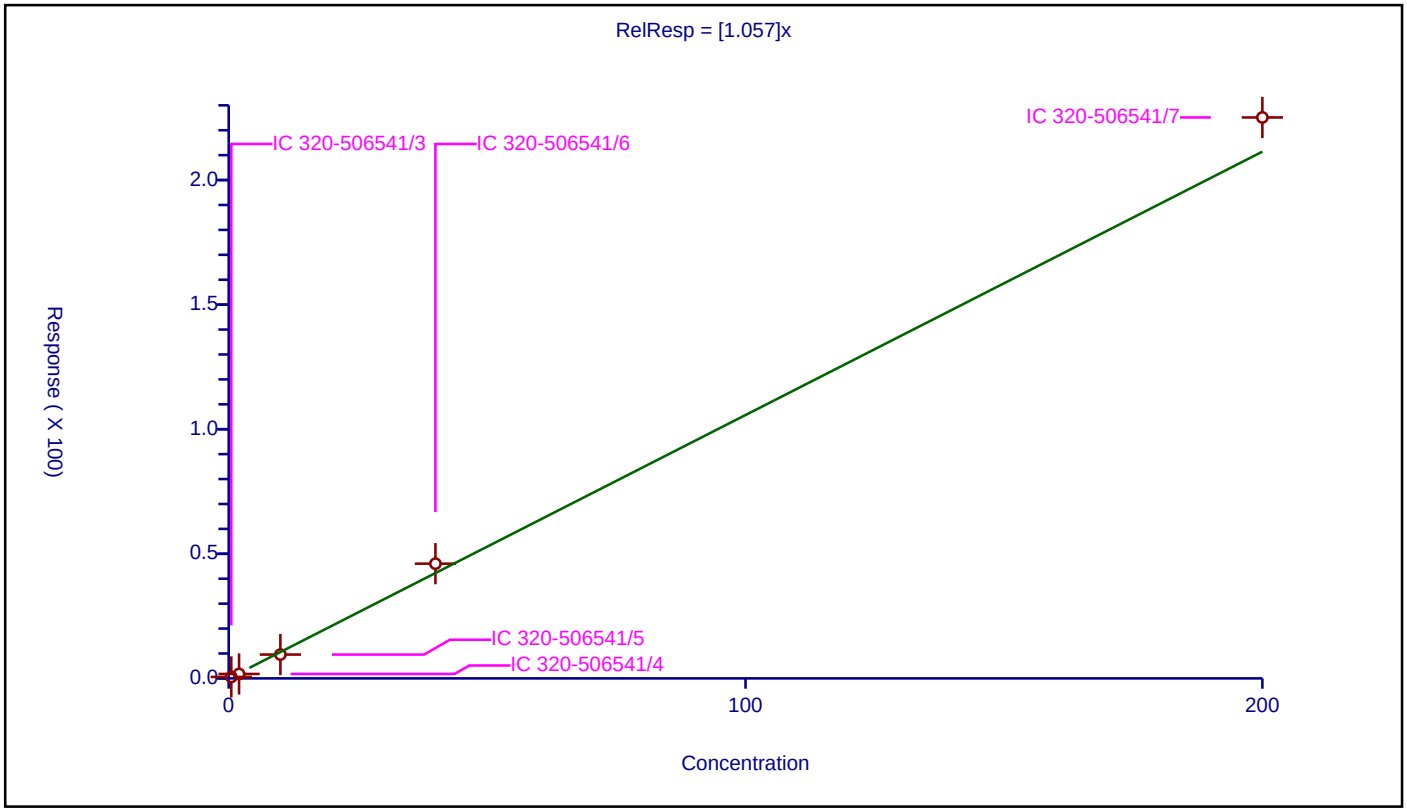

791579

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

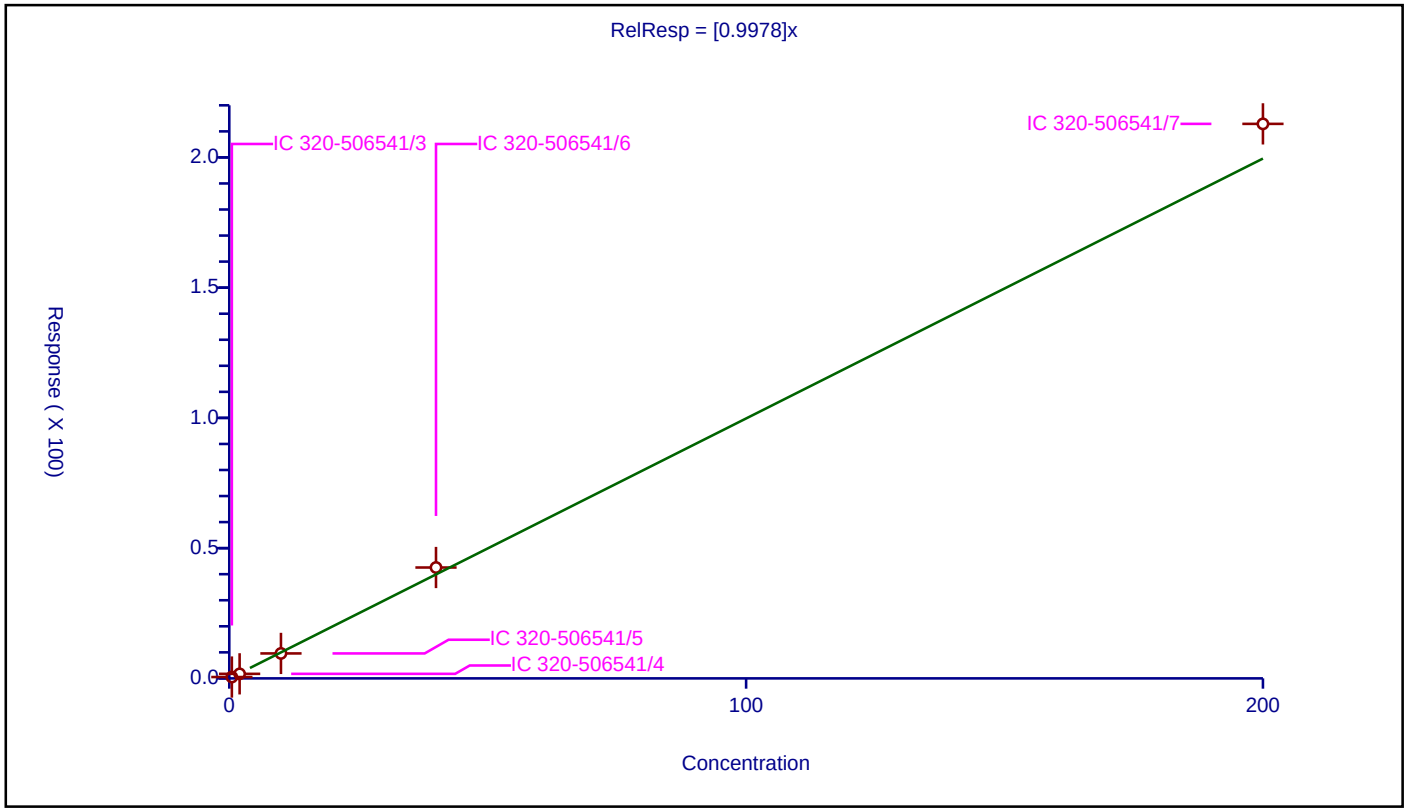

791580

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

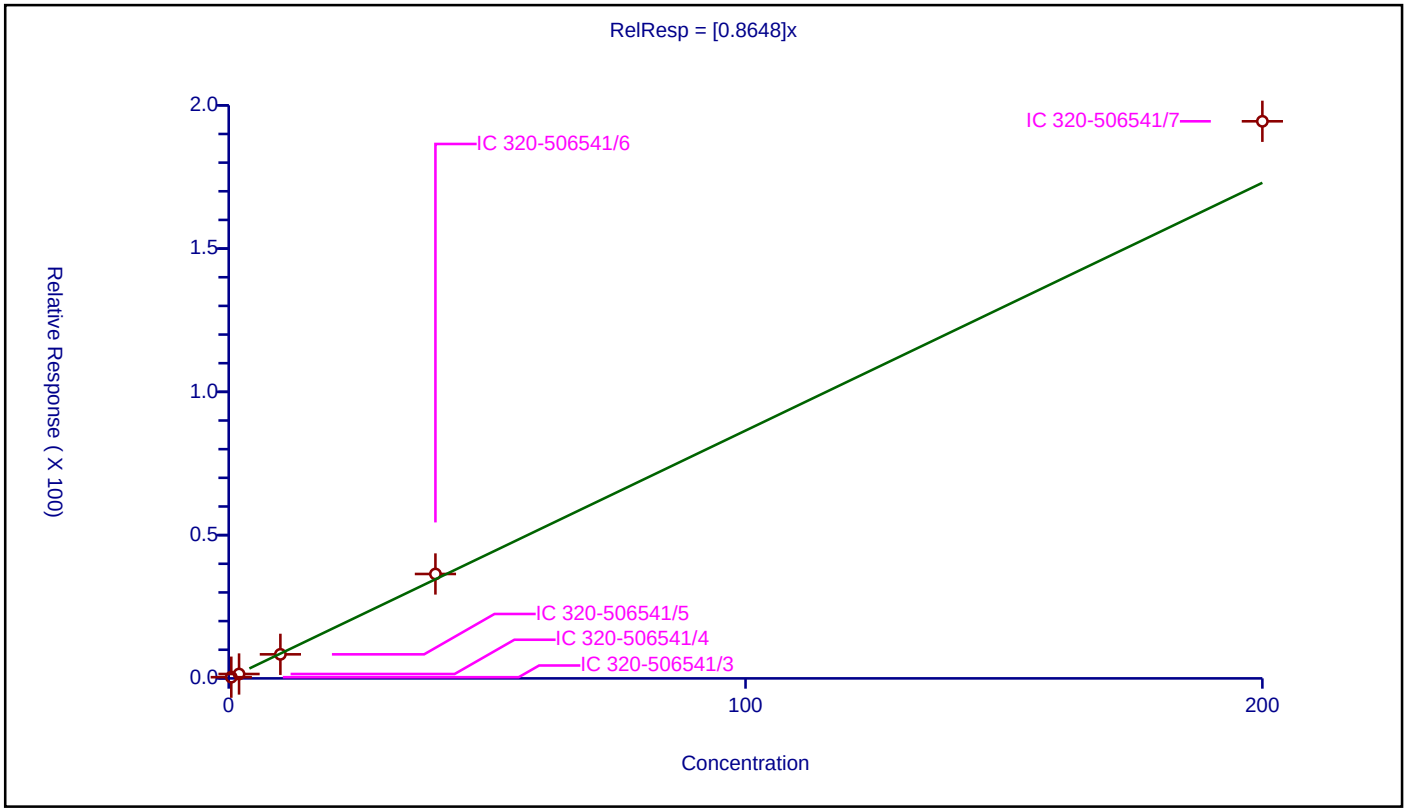

791581

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

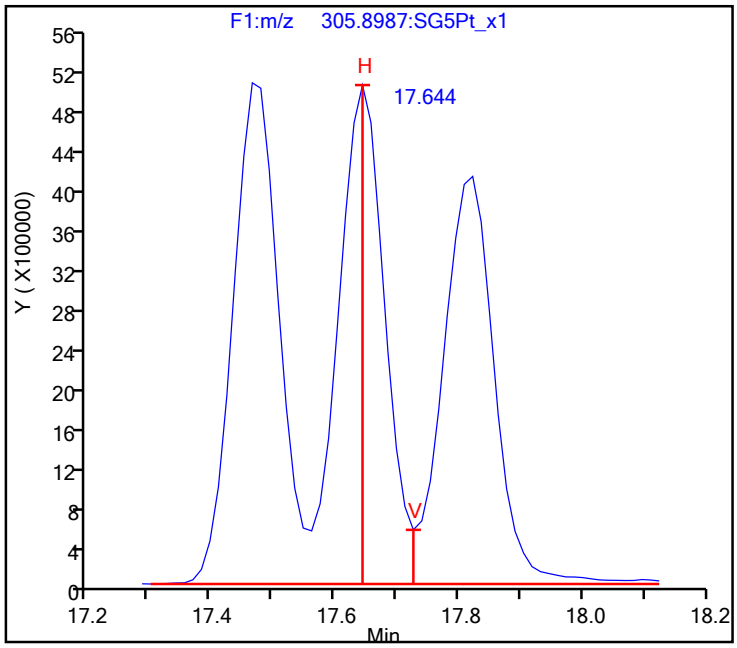

791583

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID (1): WDM 320-510264/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 07/26/2021 09:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.34	18

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d				
Injection Date:	26-Jul-2021 09:21:58	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 725696
H (Peak Height) = 4136533

%R = 18 <= 25
Passed

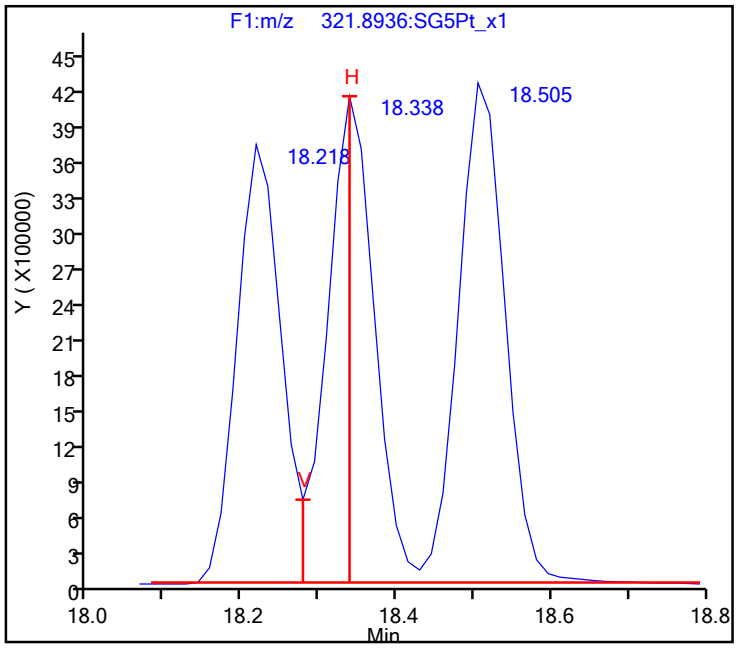

791585

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID (1): WDM 320-519953/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 09:38

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	17.81	17

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d

Injection Date: 25-Aug-2021 09:38:15 Instrument ID: 10D5

Lims ID: WDM

Client ID:

Operator ID: SMA ALS Bottle#: 1 Worklist Smp#: 1

Injection Vol: 2.0 ul Column: DB-5 (0.32 mm)

Method: Dioxin_10D5 Limit Group: HR - 1613B - ICAL

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 977605

H (Peak Height) = 5811153

%R = 17 <= 25

Passed

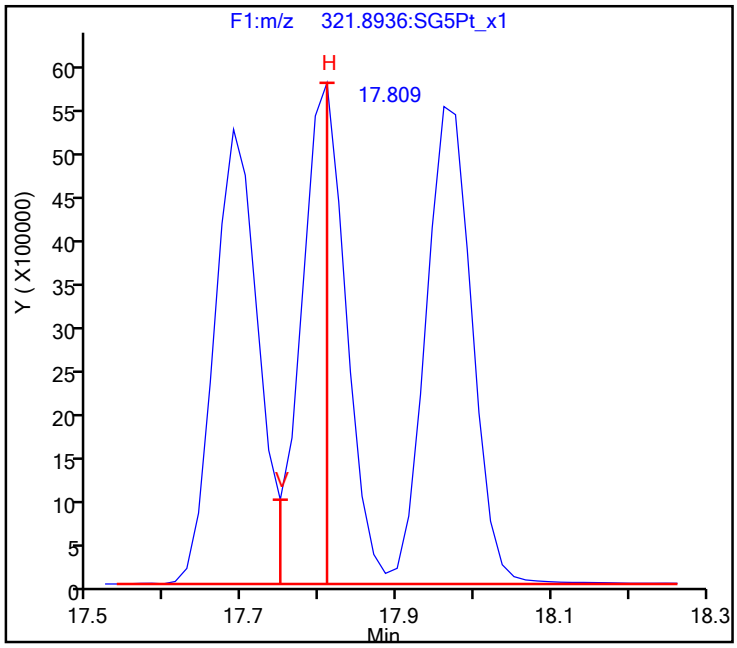

791587

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID (1): WDM 320-519955/2 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 21:35

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	17.79	17

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d				
Injection Date:	25-Aug-2021 21:35:49	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	2
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1298157
H (Peak Height) = 7642383

%R = 17 <= 25
Passed

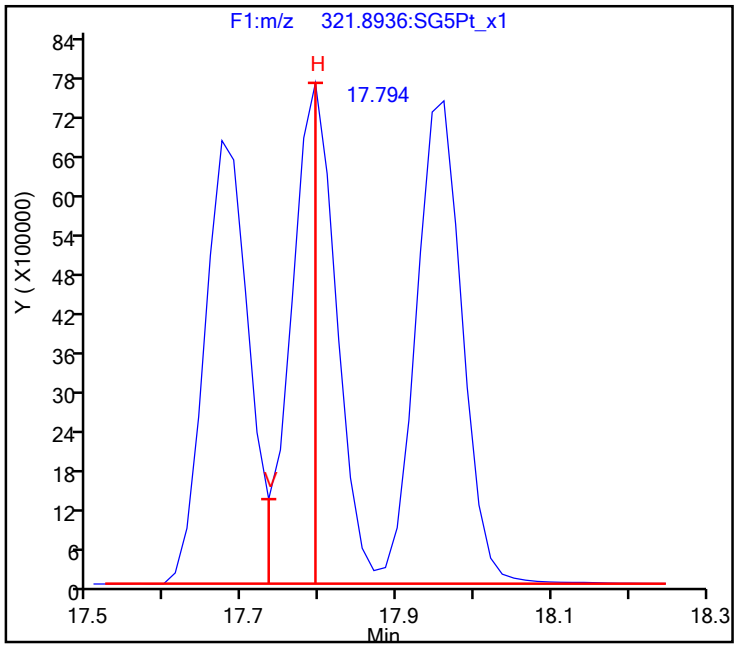

791589

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID (1): WDM 320-520325/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/26/2021 18:40

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	17.78	19

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d				
Injection Date:	26-Aug-2021 18:40:59	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	2	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1396089
H (Peak Height) = 7204079

%R = 19 <= 25
Passed

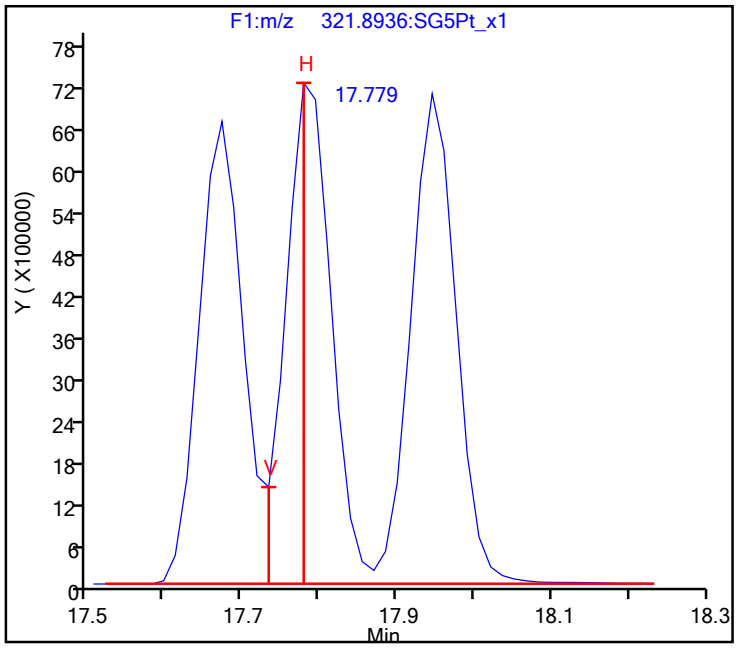

791591

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID (1): CPS 320-520456/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/27/2021 15:38

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	12

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d				
Injection Date:	27-Aug-2021 15:38:16	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 527494
H (Peak Height) = 4488549

%R = 12 <= 25
Passed

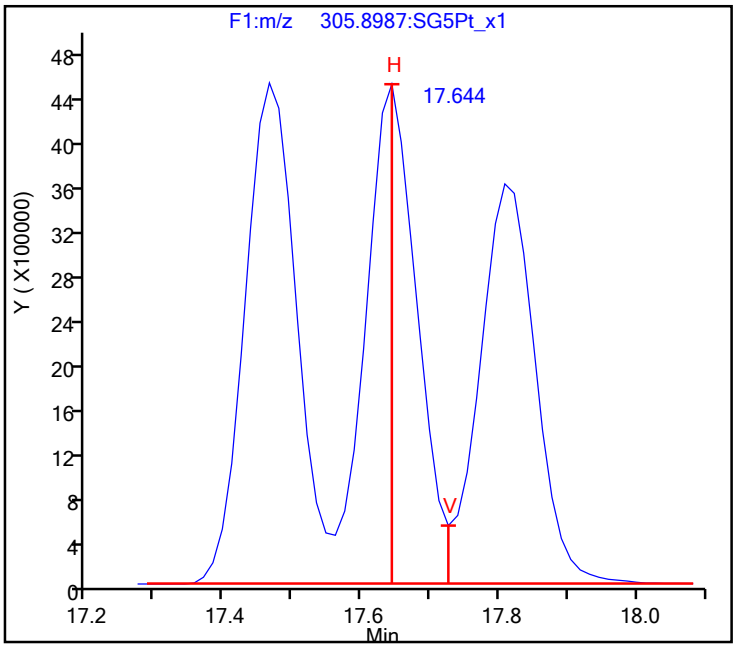

791593

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID (1): CPS 320-520997/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/31/2021 13:13

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	10

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d				
Injection Date:	31-Aug-2021 13:13:23	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 264074
H (Peak Height) = 2622042

%R = 10 <= 25
Passed

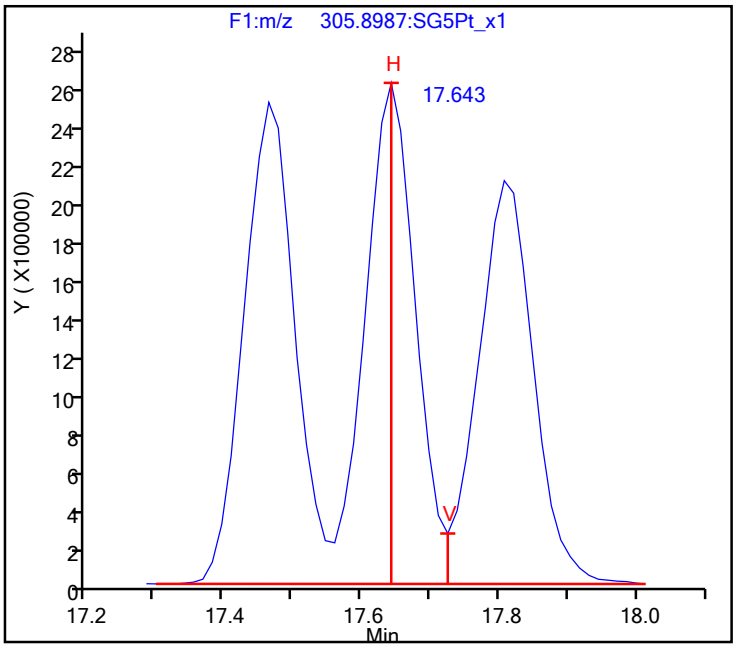

791595

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID (1): CPS 320-521760/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 09/01/2021 09:30

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.66	13

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_001.d				
Injection Date:	01-Sep-2021 09:30:26	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 186449
H (Peak Height) = 1459199

%R = 13 <= 25
Passed

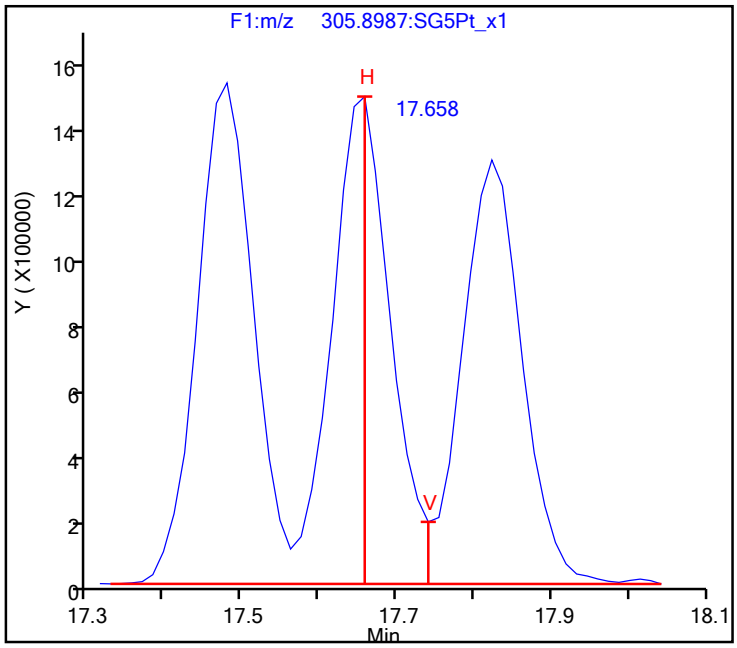

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID: ICV 320-510264/9 Calibration Date: 07/26/2021 15:31

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 26JL2110D5_9.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.105		43.2	40.0	108	70-130
2,3,7,8-TCDD	AveID	1.254	1.380		44.0	40.0	110	70-130
1,2,3,7,8-PeCDF	AveID	1.061	1.081		204	200	102	70-130
2,3,4,7,8-PeCDF	AveID	1.018	1.151		226	200	113	70-130
1,2,3,7,8-PeCDD	AveID	1.048	1.044		199	200	100	70-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.128		208	200	104	70-130
1,2,3,6,7,8-HxCDF	AveID	1.126	1.227		218	200	109	70-130
2,3,4,6,7,8-HxCDF	AveID	1.168	1.283		220	200	110	70-130
1,2,3,4,7,8-HxCDD	AveID	1.064	1.151		216	200	108	70-130
1,2,3,6,7,8-HxCDD	AveID	1.000	1.082		216	200	108	70-130
1,2,3,7,8,9-HxCDD	AveID	1.133	1.182		209	200	104	70-130
1,2,3,7,8,9-HxCDF	AveID	1.166	1.200		206	200	103	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.576		219	200	109	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.167		213	200	107	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.373		209	200	104	70-130
OCDD	AveID	1.107	1.211		438	400	109	70-130
OCDF	AveID	1.438	1.574		438	400	109	70-130
13C-2,3,7,8-TCDF	Ave	1.625	1.611		99.2	100	99	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9123		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.236		102	100	102	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.300		105	100	105	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7764		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.089		101	100	101	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.093		96.9	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.036		97.4	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7216		98.4	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8697		98.8	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9447		97.6	100	98	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7492		96.9	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6354		98.2	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7065		101	100	101	77-129
13C-OCDD	Ave	0.4472	0.4464		200	200	100	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.177		42.5	40.0	106	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	55225241	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.598	88976883	0.79	1.6249	99.2	99.2	0.1479	0.1479	99.15	
2,3,7,8-TCDF	17.613	39324874	0.78	1.0239	43.2	43.2	0.0666	0.0666	108	
A Non-2,3,7,8-sub-TCDF	17.311	524958	0.77	1.0239	0.6411	0.5762	0.0666	0.3057		RQ
S Total TCDF					43.8	43.7	0.0666	0.0666		RQ
D 13C-2,3,7,8-TCDD	18.323	50383801	0.80	0.8993	101.4	101.4	0.1314	0.1314	101	
2,3,7,8-TCDD	18.338	27801852	0.78	1.2541	44.0	44.0	0.0443	0.0443	110	
$ 37Cl4-2,3,7,8-TCDD	18.338	26006351		1.1071	42.5	42.5	0.0388	0.0388	106	
A Non-2,3,7,8-sub-TCDD	17.772	551726	0.77	1.2541	0.8732	0.8732	0.0443	0.8732		
S Total TCDD					44.9	44.9	0.0443	0.0443		
D 13C-1,2,3,7,8-PeCDF	22.749	68252478	1.57	1.2101	102.1	102.1	0.2097	0.2097	102	
1,2,3,7,8-PeCDF	22.762	147560573	1.57	1.0611	203.7	203.7	0.7454	0.7454	102	
D 13C-2,3,4,7,8-PeCDF	24.126	71797373	1.60	1.2395	104.9	104.9	0.2047	0.2047	105	
2,3,4,7,8-PeCDF	24.153	165293469	1.59	1.0184	226.1	226.1	0.7930	0.7930	113	
A F1 PeCDFs	20.244						0.0162	0.0162		
A Non-2,3,7,8-sub-PeCDF	23.473	3443801	1.55	1.0398	4.730	4.730	0.7686	4.730		
S Total PeCDF					434.5	434.5	0.7692	0.7692		
D 13C-1,2,3,7,8-PeCDD	24.862	42878117	1.62	0.7612	102.0	102.0	0.1090	0.1090	102	
1,2,3,7,8-PeCDD	24.889	89555111	1.58	1.0484	199.2	199.2	0.2271	0.2271	99.61	
A Non-2,3,7,8-sub-PeCDD	23.744						0.2271	0.2271		
S Total PeCDD					199.2	199.2	0.2271	0.2271		
D 13C-1,2,3,4,7,8-HxCDF	30.836	62488487	0.52	1.0837	100.5	100.5	0.4386	0.4386	101	
1,2,3,4,7,8-HxCDF	30.849	141029922	1.22	1.0851	208.0	208.0	1.073	1.073	104	
D 13C-1,2,3,6,7,8-HxCDF	30.995	62719524	0.52	1.1279	96.9	96.9	0.4214	0.4214	96.91	
1,2,3,6,7,8-HxCDF	31.008	153925065	1.22	1.1260	218.0	218.0	1.035	1.035	109	
D 13C-2,3,4,6,7,8-HxCDF	31.754	59440166	0.52	1.0637	97.4	97.4	0.4468	0.4468	97.39	
2,3,4,6,7,8-HxCDF	31.767	152499923	1.22	1.1675	219.7	219.7	0.8510	0.8510	110	
D 13C-1,2,3,7,8,9-HxCDF	32.513	54205090	0.51	0.9676	97.6	97.6	0.4912	0.4912	97.64	
1,2,3,7,8,9-HxCDF	32.526	130040433	1.23	1.1664	205.7	205.7	0.8755	0.8755	103	

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
A Non-2,3,7,8-sub-HxCDF	30.542						0.9509	0.9509		
S Total HxCDF					851.4	851.4	0.9587	0.9587		
* 13C-1,2,3,7,8,9-HxCDD	32.340	57376962	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	41405543	1.26	0.7334	98.4	98.4	0.3599	0.3599	98.39	
1,2,3,4,7,8-HxCDD	31.940	95311816	1.31	1.0640	216.3	216.3	0.7396	0.7396	108	
D 13C-1,2,3,6,7,8-HxCDD	32.020	49899921	1.25	0.8802	98.8	98.8	0.2999	0.2999	98.81	
1,2,3,6,7,8-HxCDD	32.034	107959577	1.21	1.0001	216.3	216.3	0.7456	0.7456	108	
1,2,3,7,8,9-HxCDD	32.340	107964188	1.26	1.1325	208.8	208.8	0.6762	0.6762	104	
A Non-2,3,7,8-sub-HxCDD	31.215						0.7187	0.7187		
S Total HxCDD					641.5	641.5	0.7205	0.7205		
1,2,3,4,6,7,8-HpCDF	33.912	135529943	1.05	1.4413	218.8	218.8	2.088	2.088	109	
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	42985413	0.44	0.7730	96.9	96.9	0.9749	0.9749	96.91	
D 13C-1,2,3,4,7,8,9-HpCDF	35.006	40537577	0.44	0.7008	100.8	100.8	1.075	1.075	101	
1,2,3,4,7,8,9-HpCDF	35.018	111348980	1.06	1.3174	208.5	208.5	2.580	2.580	104	
A Non-2,3,7,8-sub-HpCDF	34.458						2.314	2.314		
S Total HpCDF					427.3	427.3	2.334	2.334		
D 13C-1,2,3,4,6,7,8-HpCDD	34.702	36455330	1.02	0.6472	98.2	98.2	0.5132	0.5132	98.17	
1,2,3,4,6,7,8-HpCDD	34.714	85115851	1.05	1.0943	213.4	213.4	1.044	1.044	107	
A Non-2,3,7,8-sub-HpCDD	33.504						1.044	1.044		
S Total HpCDD					213.4	213.4	1.044	1.044		
D 13C-OCDD	37.082	51228940	0.89	0.4472	199.7	199.7	0.2232	0.2232	99.84	
OCDF	37.189	161294219	0.91	1.4382	437.9	437.9	0.4409	0.4409	109	
OCDD	37.094	124067491	0.90	1.1070	437.5	437.5	0.5859	0.5859	109	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.127	18.142	-1		24811260	6334063	3297	8242	1921		
333.9339	18.127	18.142	-1		30413981	7612051	3296	8240	2309	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	0.971	39276583	9941961	7868	19670	1264		
317.9389	17.598	17.598	0	0.971	49700300	12596795	5536	13840	2275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.613	17.628	-1	1.001	17265923	4373947	2358	5895	1855		
305.8987	17.613	17.628	-1	1.001	22058951	5573170	3788	9470	1471	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.933	17.311	-23	0.962	161517	37808	2358	5895	16		
	Empc Correction				121157	34090	2358	5895	14		
305.8987	16.933	17.311	-23	0.962	157347	44274	3788	9470	12	1.03(0.65-0.89)	
303.9016	17.235	17.311	-5	0.979	125955	28258	2358	5895	12		
	Empc Correction				107214	28155	2358	5895	12		
305.8987	17.220	17.311	-5	0.979	139240	36566	3788	9470	10	0.90(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.011	22418240	5434734	3297	8242	1648		
333.9339	18.323	18.323	0	1.011	27965561	6697610	3296	8240	2032	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.338	0	1.001	12170563	2933733	1303	3257	2252		
321.8936	18.338	18.338	0	1.001	15631289	3775919	1394	3485	2709	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.012	26006351	6295077	2398	5995	2625		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											
319.8965	18.233	17.772	28	0.995	239239	60004	1303	3257	46		
321.8936	18.233	17.772	28	0.995	312487	80578	1394	3485	58	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.749	0	1.255	41668599	7333690	8485	21212	864		
353.8970	22.749	22.749	0	1.255	26583879	4652625	5670	14175	821	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.762	22.776	-1	1.001	90206138	15696498	23147	57867	678		
341.8567	22.762	22.776	-1	1.001	57354435	10012296	14777	36942	678	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.126	0	1.331	44217600	7271382	8485	21212	857		
353.8970	24.126	24.126	0	1.331	27579773	4468756	5670	14175	788	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.153	0	1.001	101392394	16526277	23147	57867	714		
341.8567	24.153	24.153	0	1.001	63901075	10428415	14777	36942	706	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.244						338	845			
341.8567	20.244						462	1155			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.308	23.473	-10	1.025	2092429	352488	23147	57867	15		
341.8567	23.308	23.473	-10	1.025	1351372	223195	14777	36942	15	1.55(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.862	0	1.372	26514155	4045355	2631	6577	1538		
369.8919	24.862	24.862	0	1.372	16363962	2537743	2000	5000	1269	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.889	0	1.001	54803563	8416527	3860	9650	2180		
357.8516	24.889	24.889	0	1.001	34751548	5423049	2410	6025	2250	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.744						3860	9650			
357.8516	23.744						2410	6025			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.836	30.835	0	0.953	21423741	4602993	10138	25345	454		
385.8610	30.836	30.835	0	0.953	41064746	8805011	18904	47260	466	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.862	-1	1.000	77446041	17056861	34028	85070	501		
375.8178	30.849	30.862	-1	1.000	63583881	14029731	28421	71052	494	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.008	-1	0.958	21527343	4645676	10138	25345	458		
385.8610	30.995	31.008	-1	0.958	41192181	8744916	18904	47260	463	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.008	31.021	-1	1.000	84458486	18178004	34028	85070	534		
375.8178	31.008	31.021	-1	1.000	69466579	15063201	28421	71052	530	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.754	0	0.982	20418672	5425134	10138	25345	535		
385.8610	31.754	31.754	0	0.982	39021494	10287607	18904	47260	544	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.767	0	1.000	83657687	22340712	34028	85070	657		
375.8178	31.767	31.767	0	1.000	68842236	18269489	28421	71052	643	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.513	32.526	-1	1.005	18351639	5227320	10138	25345	516		
385.8610	32.513	32.526	-1	1.005	35853451	10061715	18904	47260	532	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.539	-1	1.000	71665418	20282625	34028	85070	596		
375.8178	32.526	32.539	-1	1.000	58375015	16239209	28421	71052	571	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.542						34028	85070			
375.8178	30.542						28421	71052			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.340	32.339	0		32156760	8544429	8352	20880	1023		
403.8529	32.326	32.339	-1		25220202	6731682	7778	19445	865	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.927	0	0.987	23052563	6987052	8352	20880	837		
403.8529	31.927	31.927	0	0.987	18352980	5468630	7778	19445	703	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.940	0	1.000	54057818	15589077	22398	55995	696		
391.8127	31.940	31.940	0	1.000	41253998	12285721	16811	42027	731	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.020	32.033	-1	0.990	27736555	7273068	8352	20880	871		
403.8529	32.020	32.033	-1	0.990	22163366	5871752	7778	19445	755	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.034	32.047	-1	1.000	59116629	16185483	22398	55995	723		
391.8127	32.034	32.047	-1	1.000	48842948	13061351	16811	42027	777	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.340	32.353	-1	1.013	60106510	15800454	22398	55995	705		
391.8127	32.340	32.353	-1	1.013	47857678	12979231	16811	42027	772	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	31.215						22398	55995			
391.8127	31.215						16811	42027			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.912	33.911	0	1.000	69518297	21985720	82461	206152	267		
409.7789	33.912	33.911	0	1.000	66011646	21358881	78734	196835	271	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.912	0	1.049	13138473	4149229	14216	35540	292		
419.8220	33.900	33.912	-1	1.048	29846940	9243997	31835	79587	290	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.006	35.005	0	1.082	12375038	3705586	14216	35540	261		
419.8220	35.006	35.005	0	1.082	28162539	8151296	31835	79587	256	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.018	35.005	1	1.000	57298984	16523888	82461	206152	200		
409.7789	35.006	35.005	0	1.000	54049996	15559126	78734	196835	198	1.06(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						82461	206152			
409.7789	34.458						78734	196835			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.702	34.714	-1	1.073	18400619	5331850	10315	25787	517		
437.8140	34.702	34.714	-1	1.073	18054711	5313047	9982	24955	532	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.714	0	1.000	43603241	12970820	24860	62150	522		
425.7737	34.714	34.714	0	1.000	41512610	12528364	23796	59490	526	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						24860	62150			
425.7737	33.504						23796	59490			
13C-OCDD											
469.7779	37.082	37.093	-1	1.147	24118371	6015882	2552	6380	2357		
471.7750	37.082	37.093	-1	1.147	27110569	6692443	3547	8867	1887	0.89(0.76-1.02)	
OCDF											
441.7428	37.189	37.201	-1	1.003	76746145	20468133	7616	19040	2688		
443.7399	37.189	37.201	-1	1.003	84548074	22394214	8501	21252	2634	0.91(0.76-1.02)	
OCDD											
457.7377	37.094	37.105	-1	1.000	58682484	14688537	7599	18997	1933		
459.7348	37.094	37.105	-1	1.000	65385007	16510536	8885	22212	1858	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	88976883	22538756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	88976883	22538756

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.933	161517	37808	157347	44274	0.3500	1.03	RQ
16.933	121157	34090	157347	44274	0.3057		Empc Correction
17.235	125955	28258	139240	36566	0.2911	0.90	RnQ
17.235	107214	28155	139240	36566	0.2705		Empc Correction
Signal Totals:							
	228371	62245	296587	80840			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	584059	146906				0.97	RQ
	524958	143085					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6411 = (584059 * 100.000) / (88976883 * 1.024)
Empc Amount: 0.5762 = (524958 * 100.000) / (88976883 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50383801	12132344

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50383801	12132344

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.233	239239	60004	312487	80578	0.8732	0.77	
Signal Totals:							
	239239	60004	312487	80578			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	551726	140582				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8732 = (551726 * 100.000) / (50383801 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68252478	11986315
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71797373	11740138

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70024925	11863226

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
23.308	2092429	352488	1351372	223195	4.73	1.55	
Signal Totals:							
	2092429	352488	1351372	223195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3443801	575683				1.55	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.730 = (3443801 * 100.000) / (70024925 * 1.040)

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

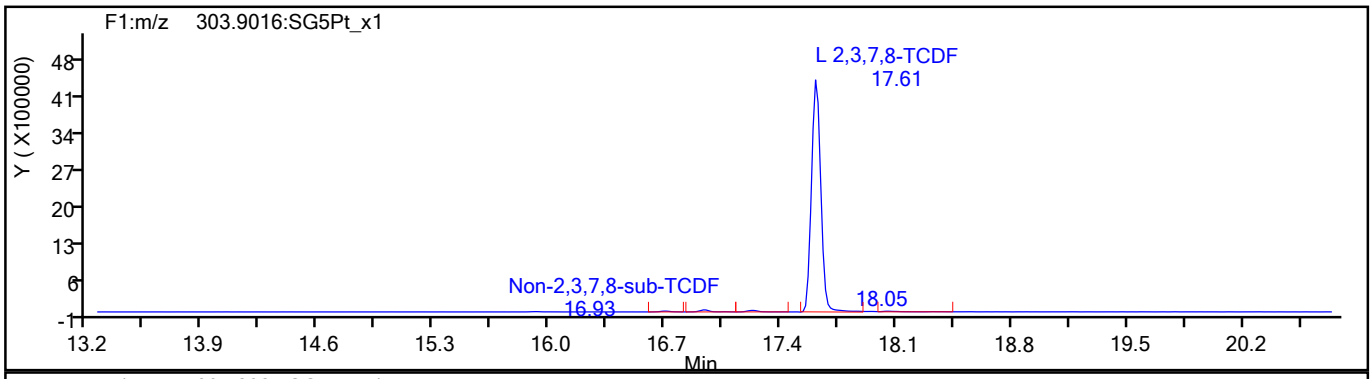

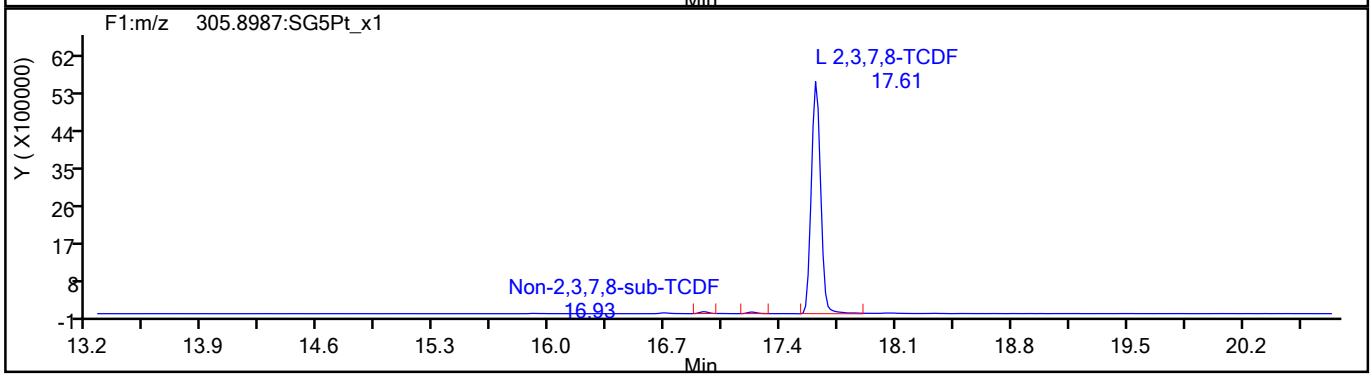

TCDF Standards

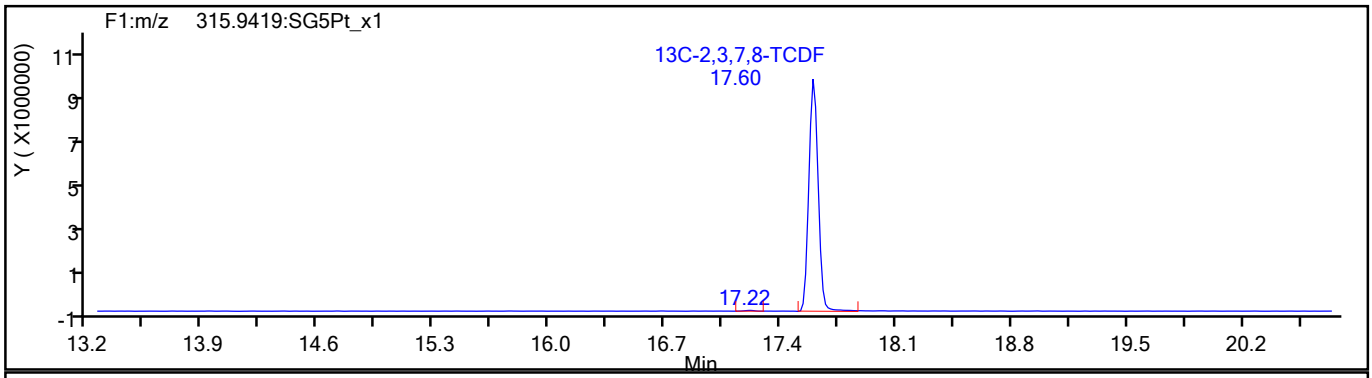

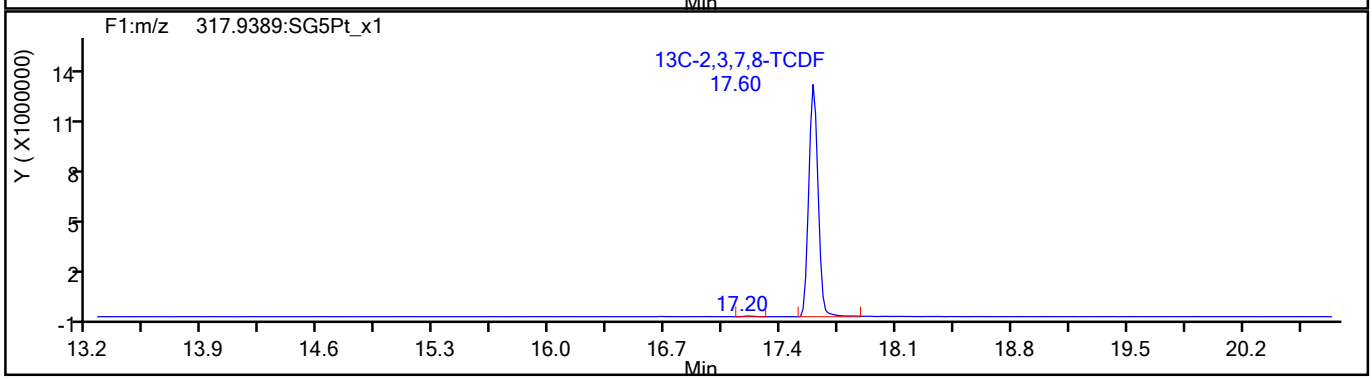

791608

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

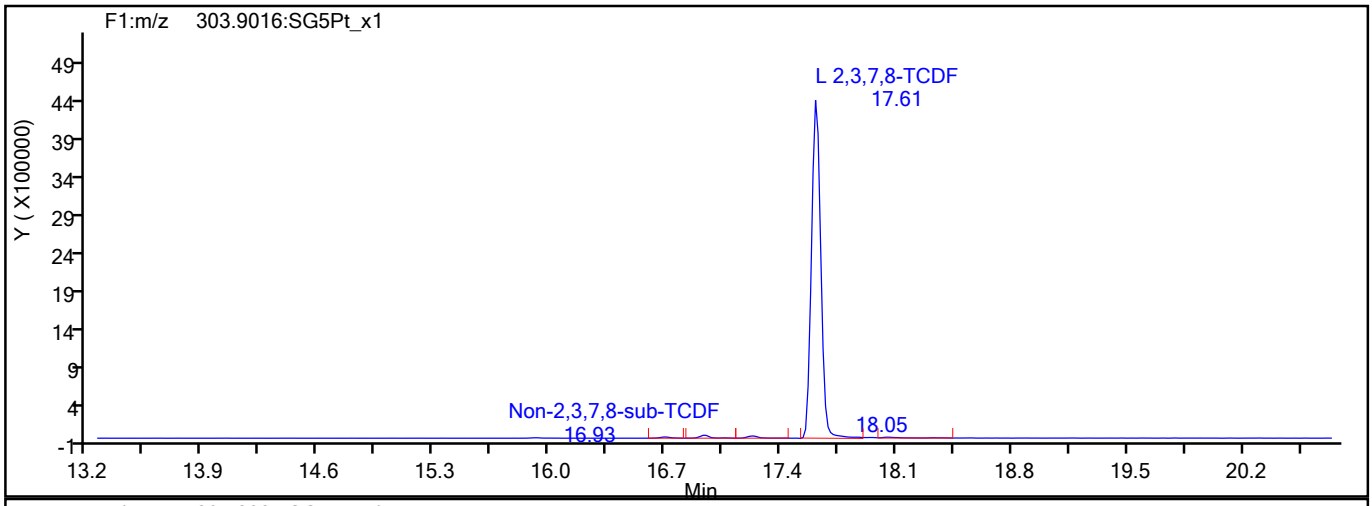

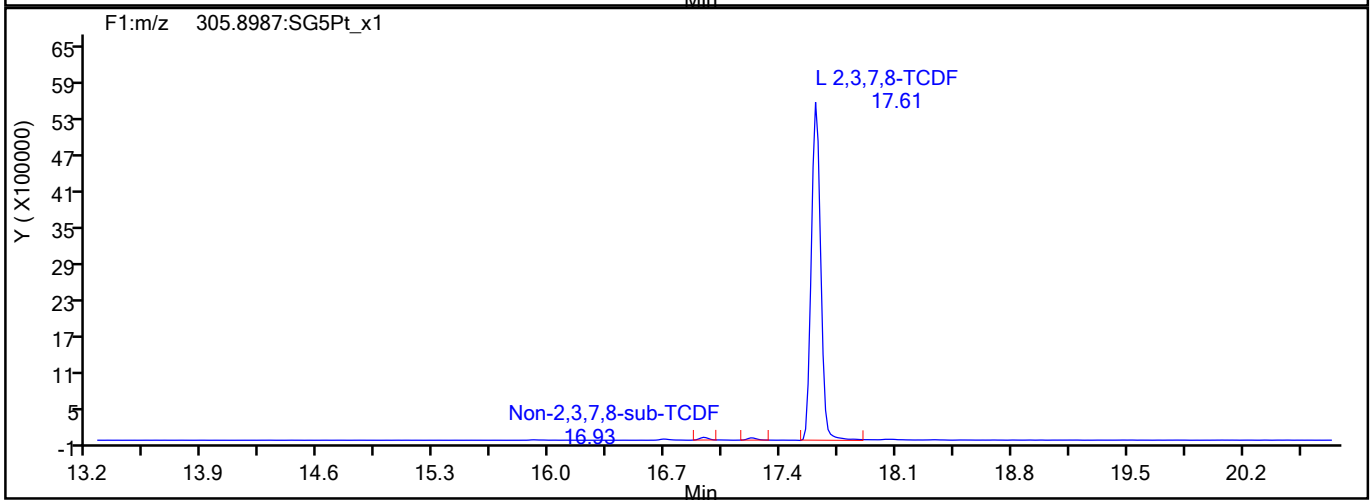

TCDF Interference Mass

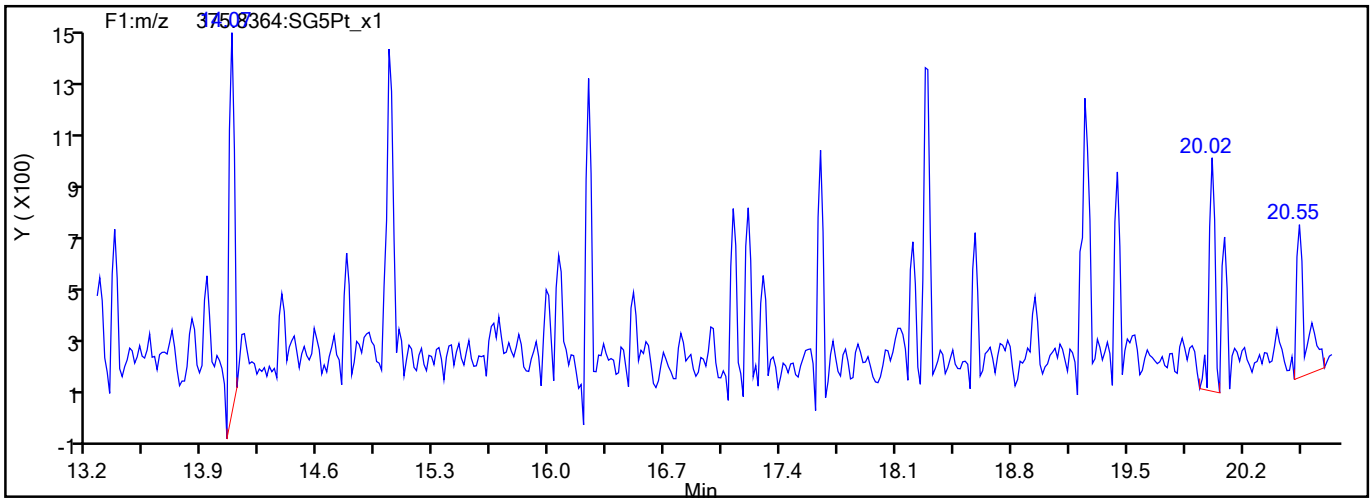

791609

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

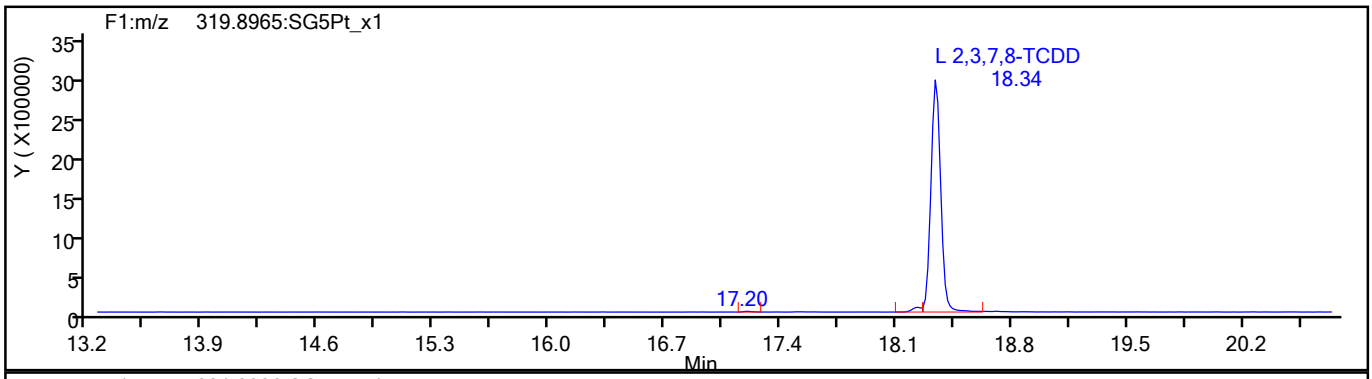

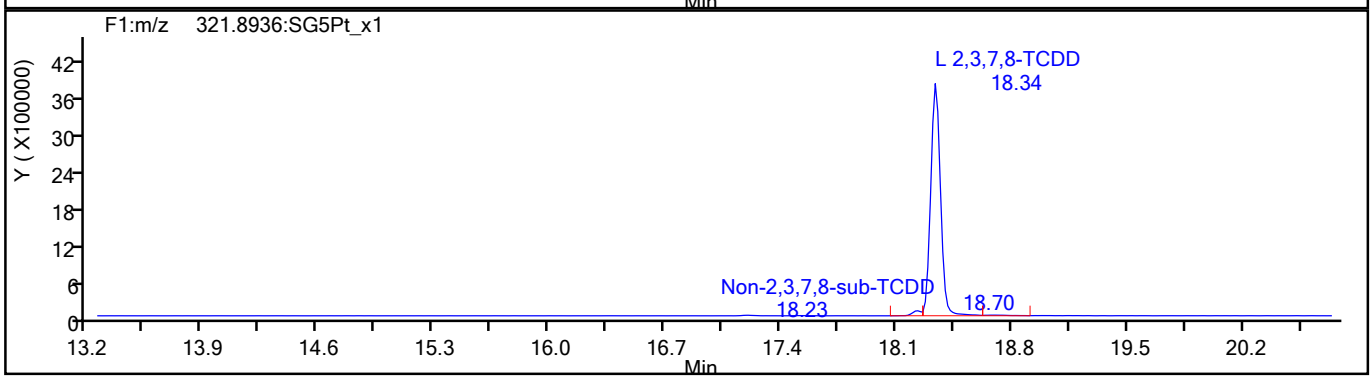

TCDD Standards

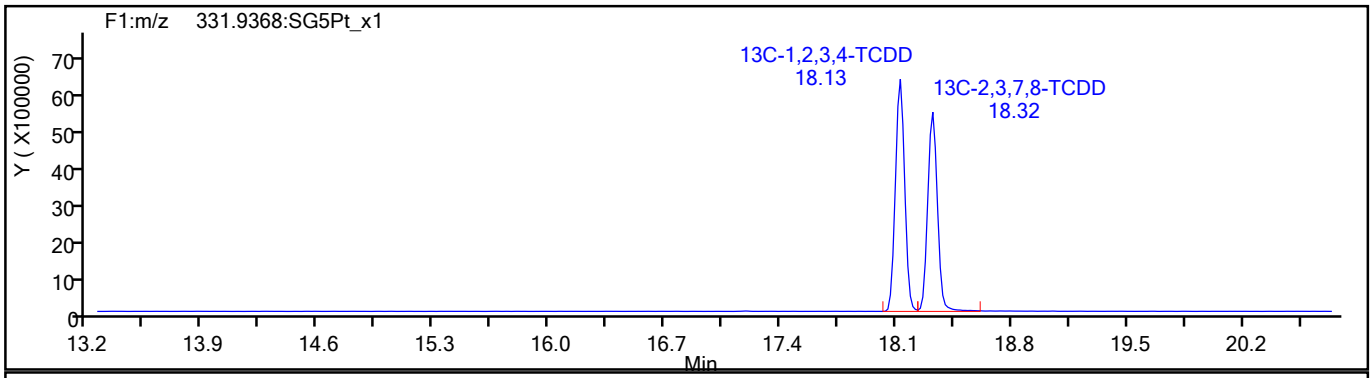

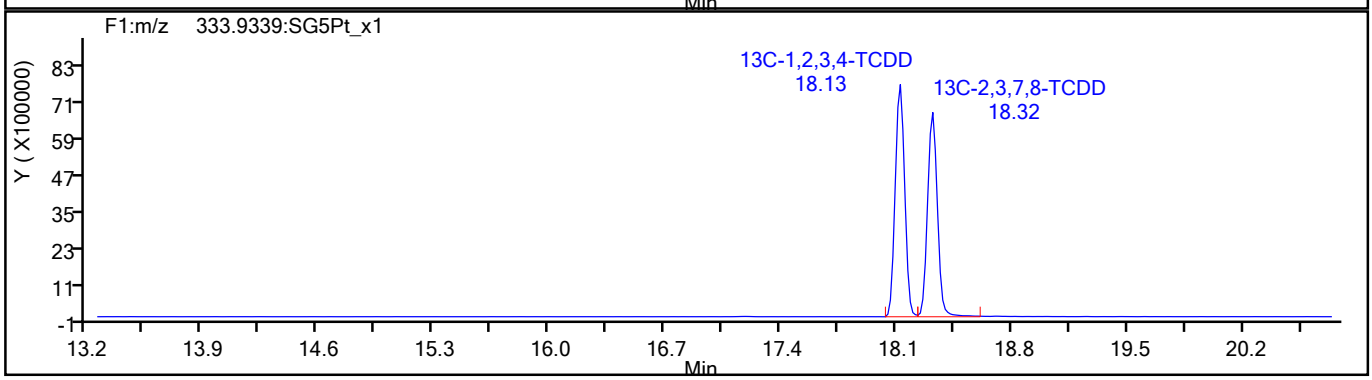

791610

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

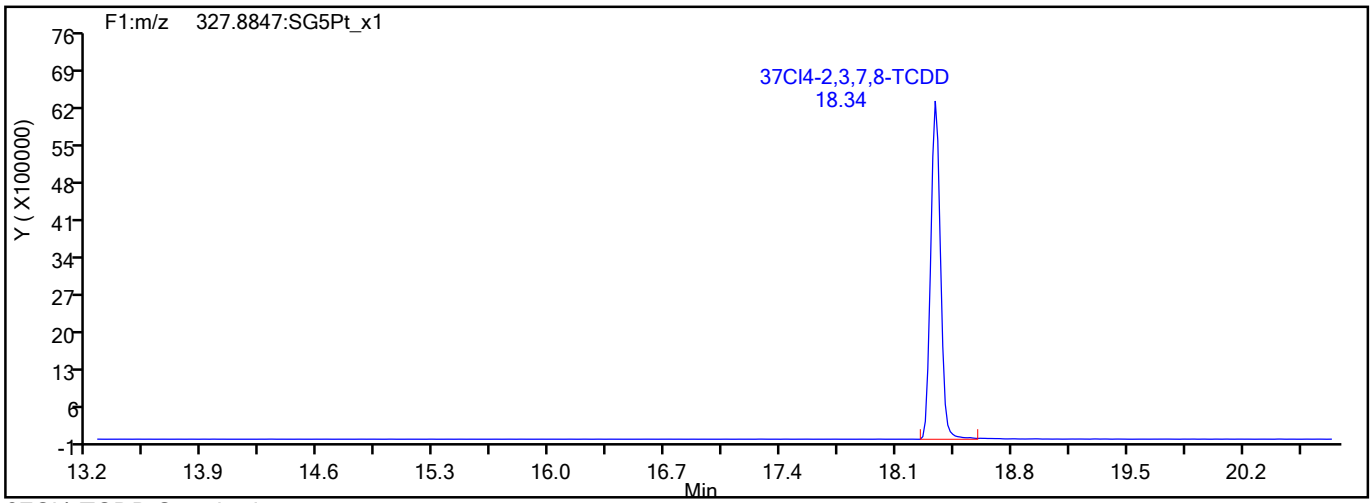

37Cl4-TCDD Standards

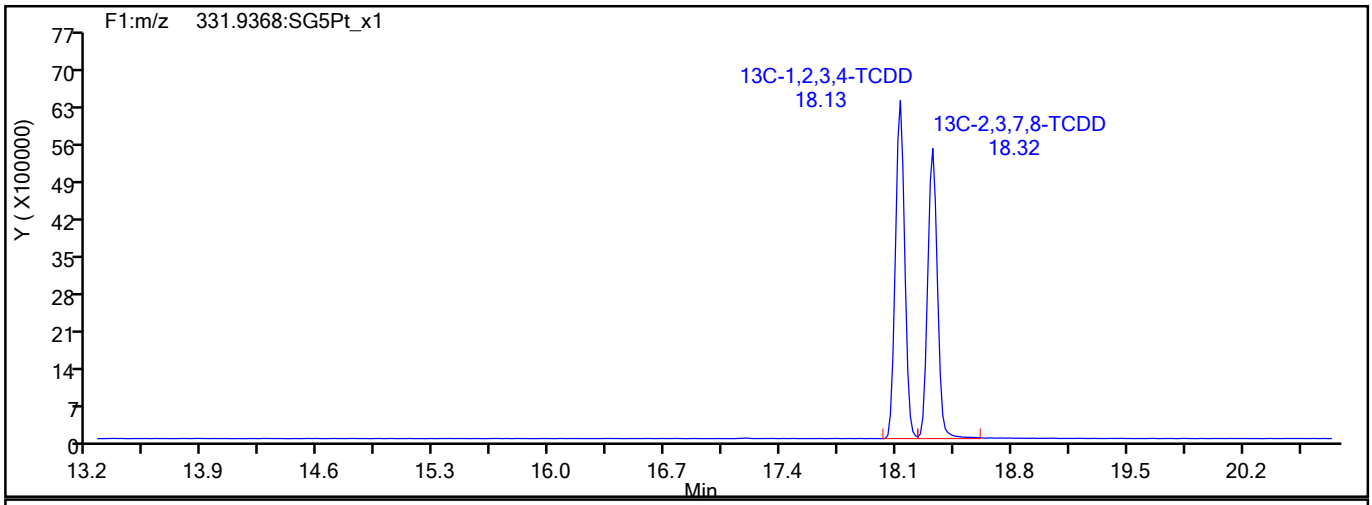

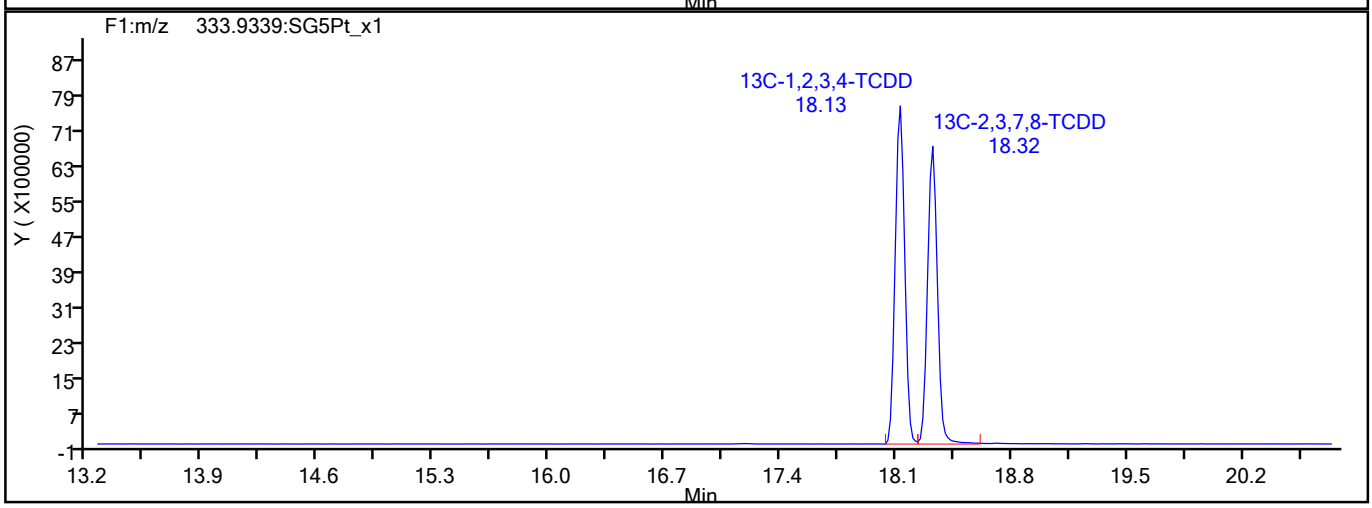

791611

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

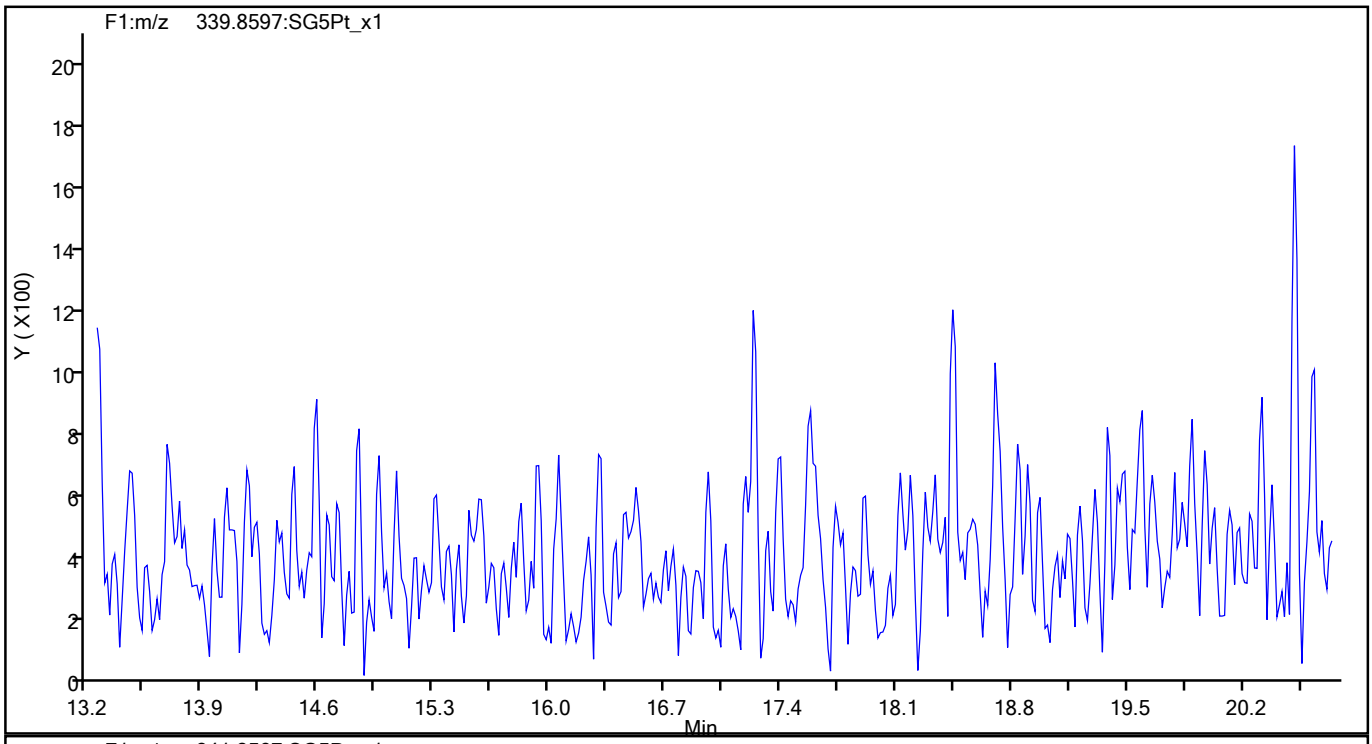

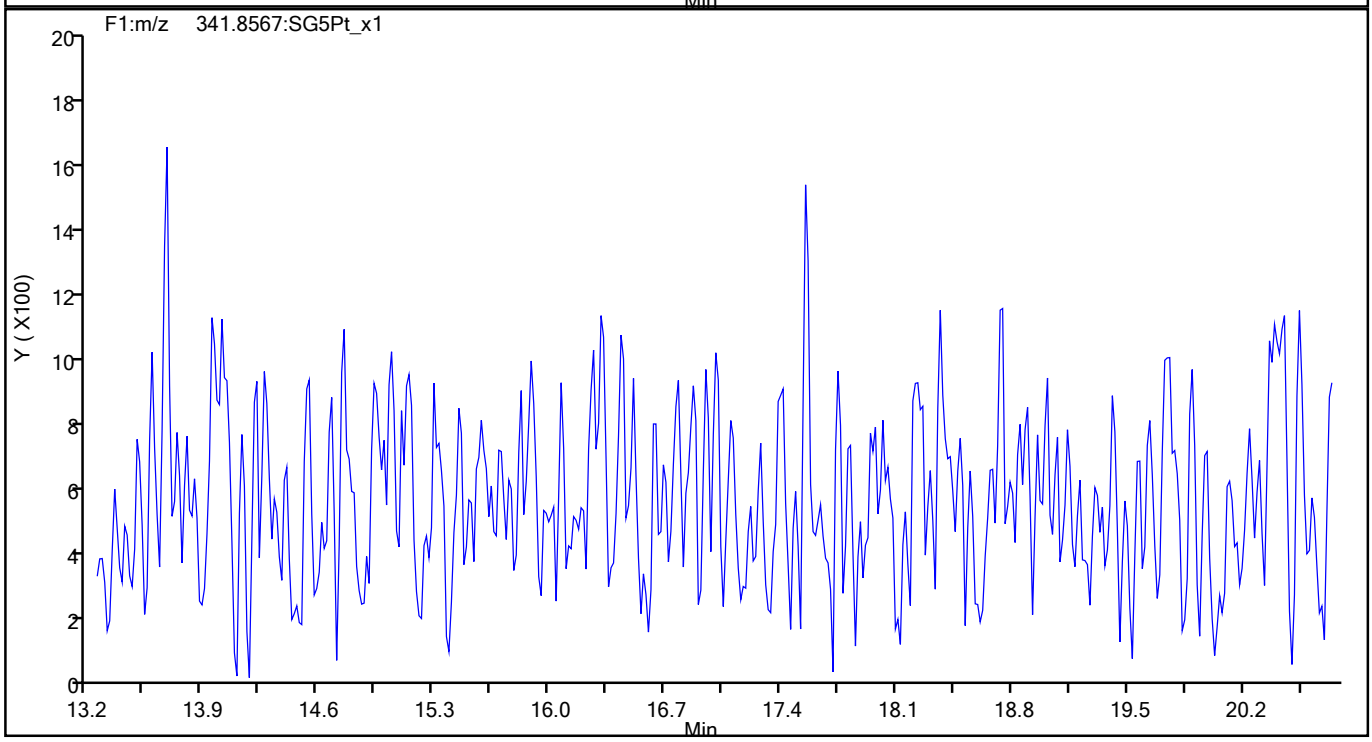

791612

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

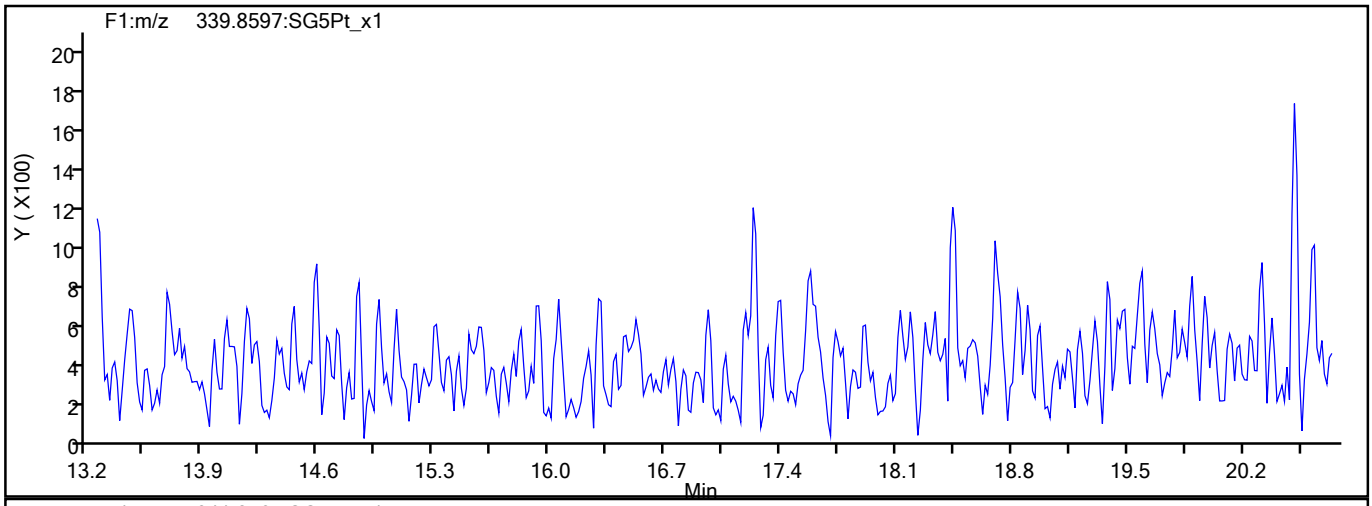

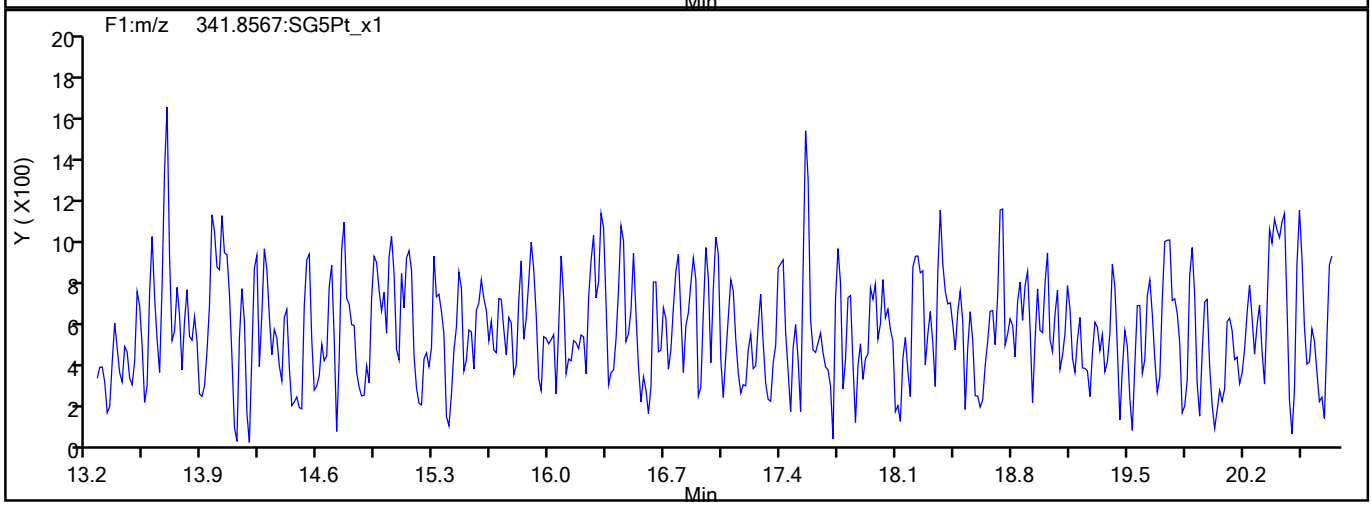

F1 PeCDFs Interference Mass

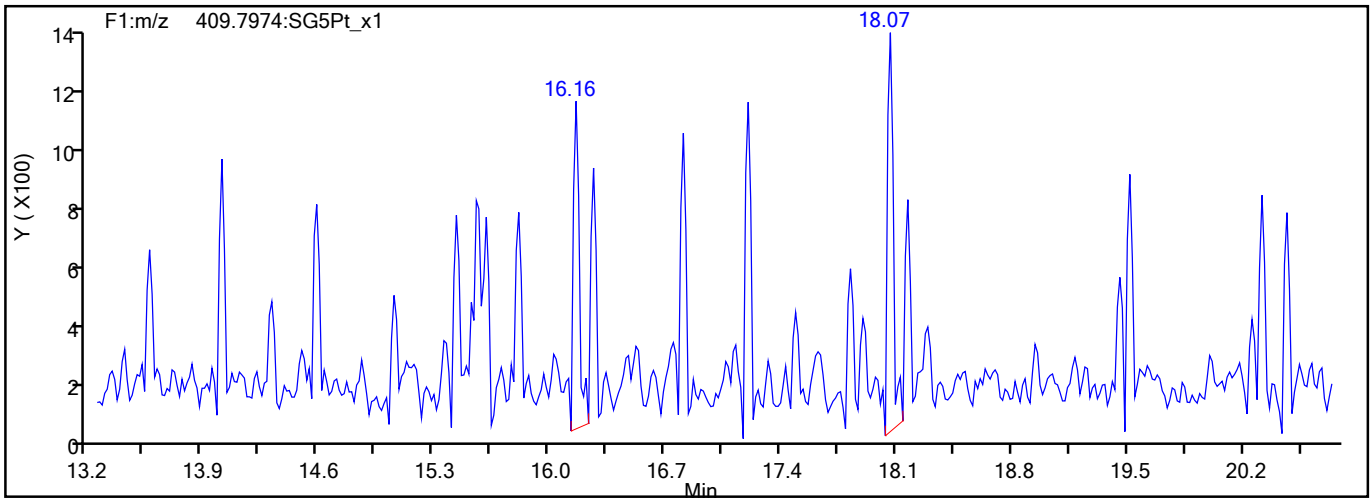

791613

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

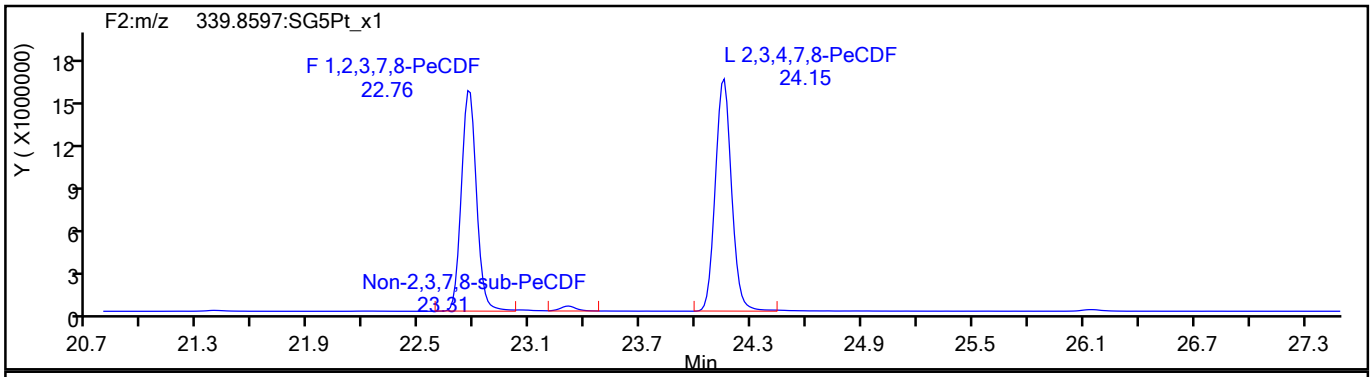

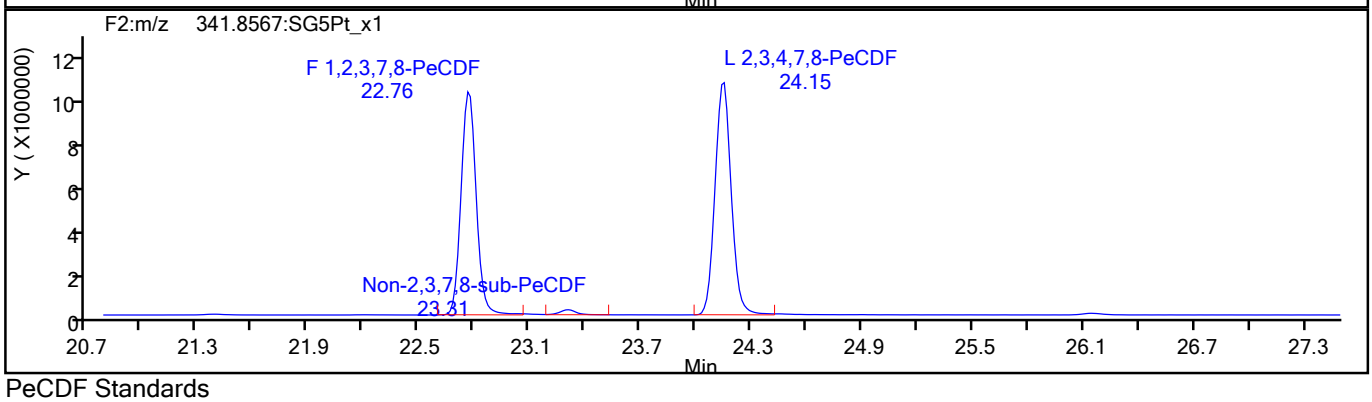

PeCDF Standards

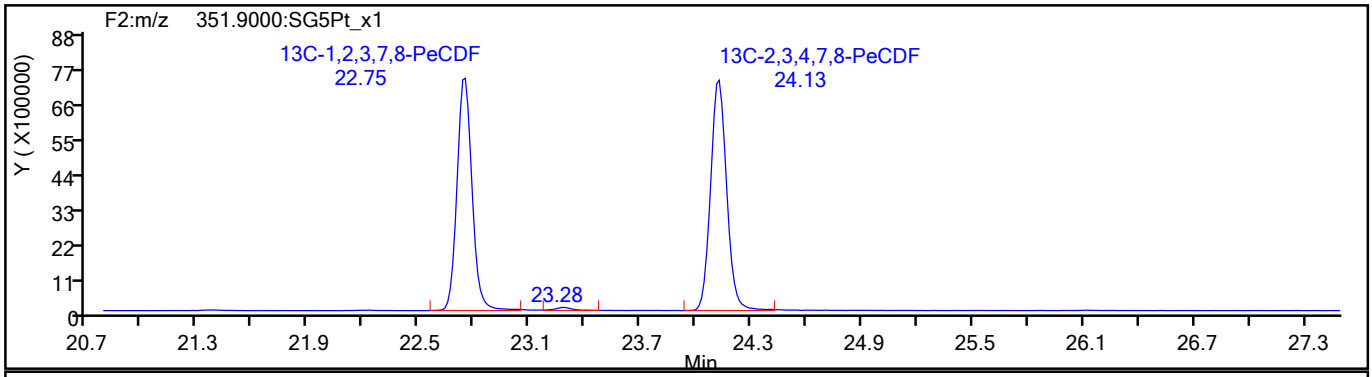

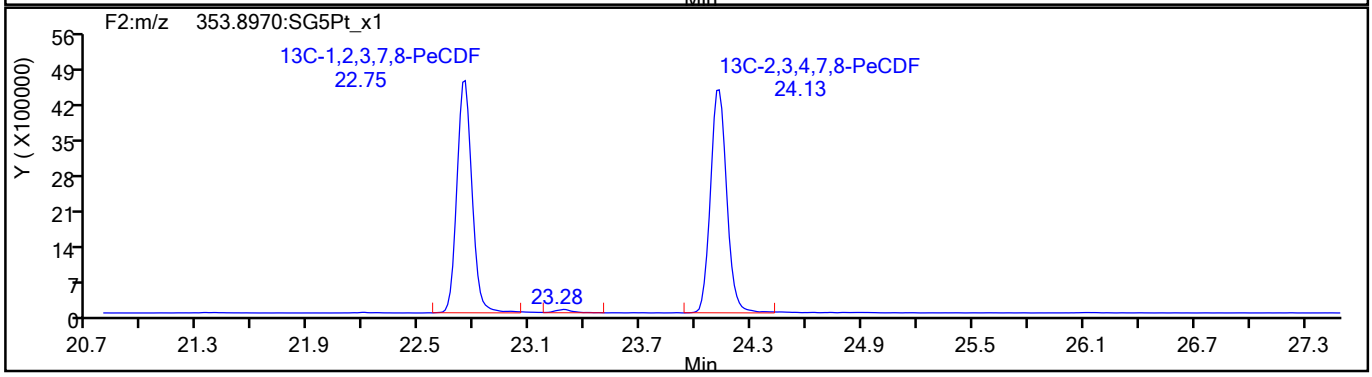

791614

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

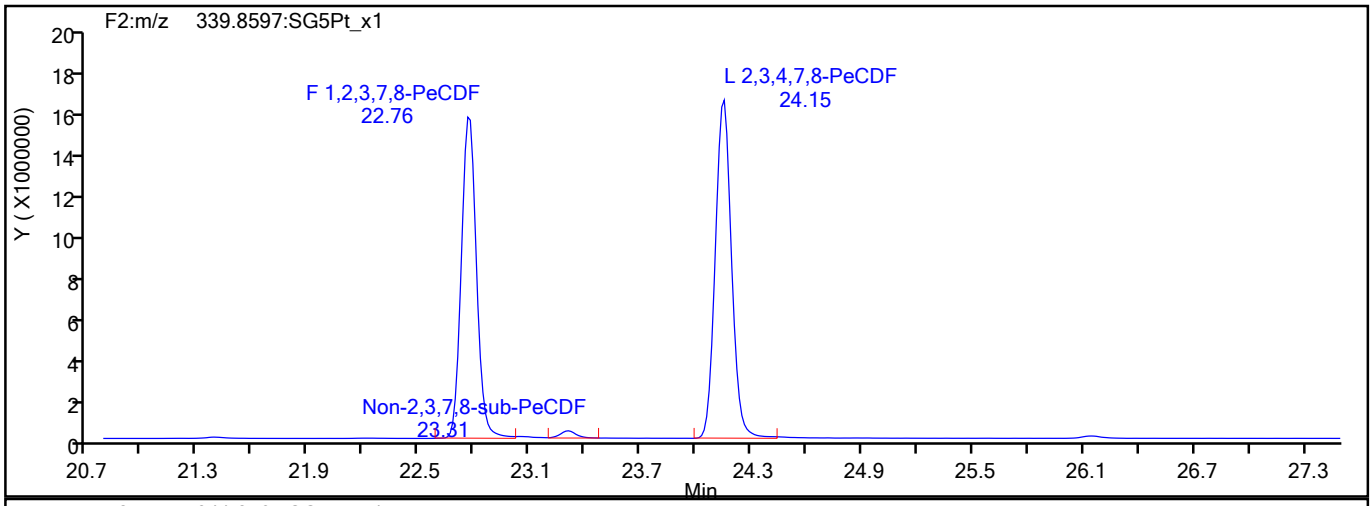

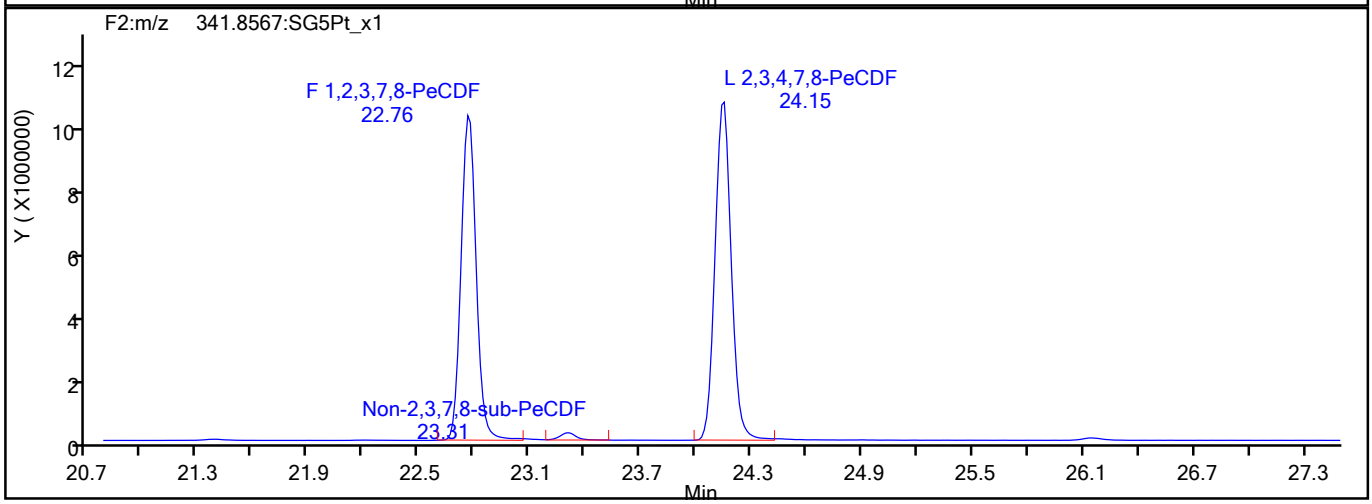

PeCDF Interference Mass

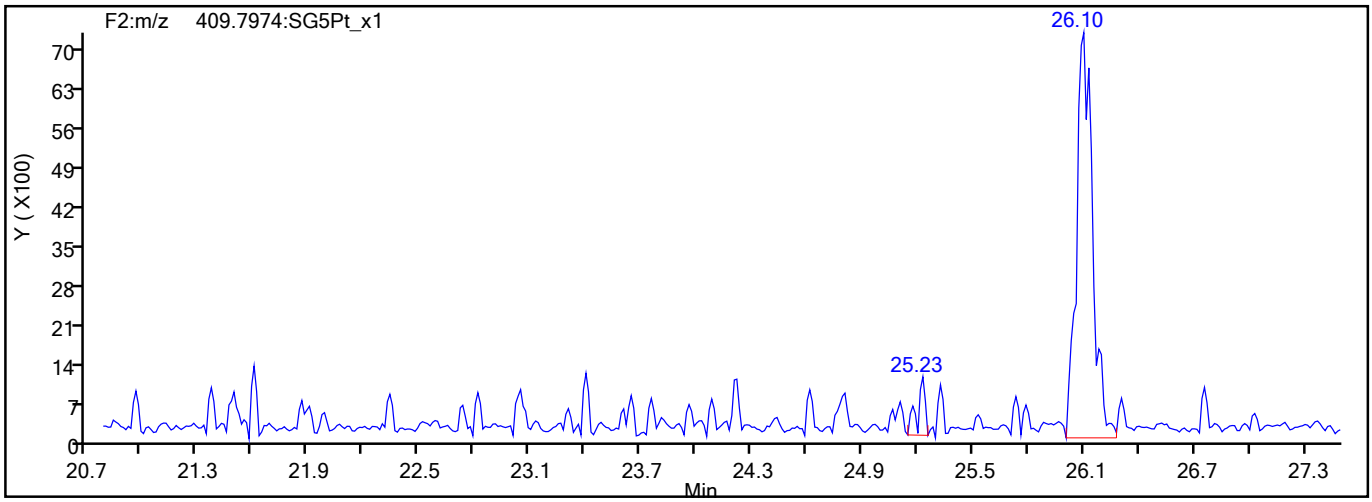

791615

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

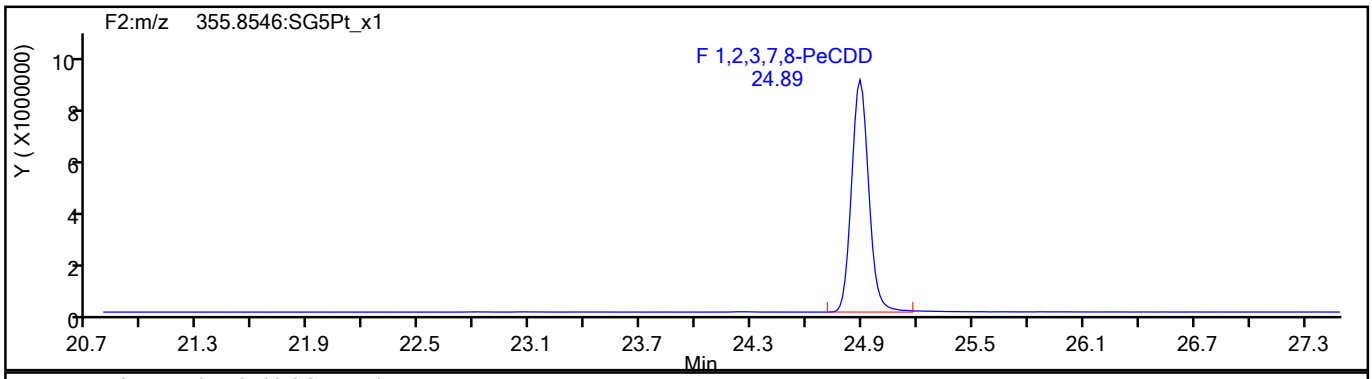

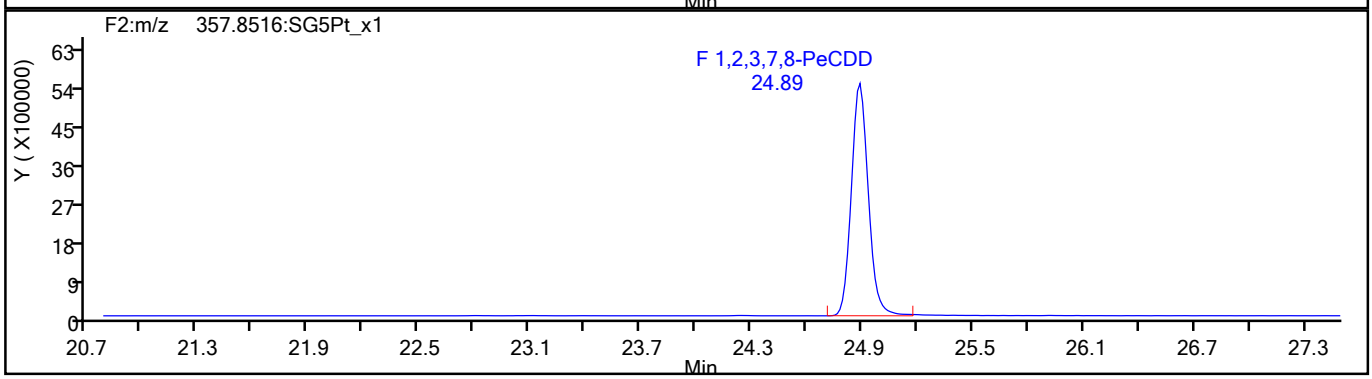

PeCDD Standards

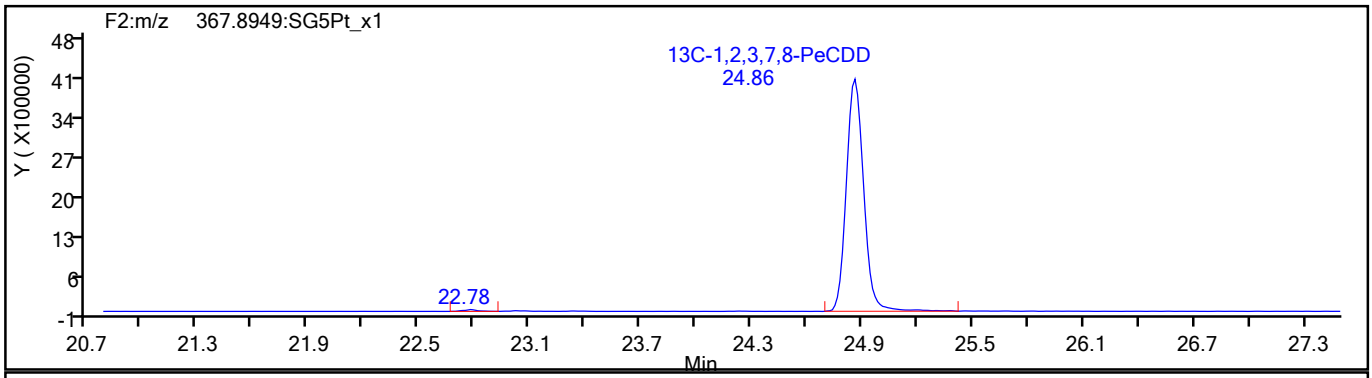

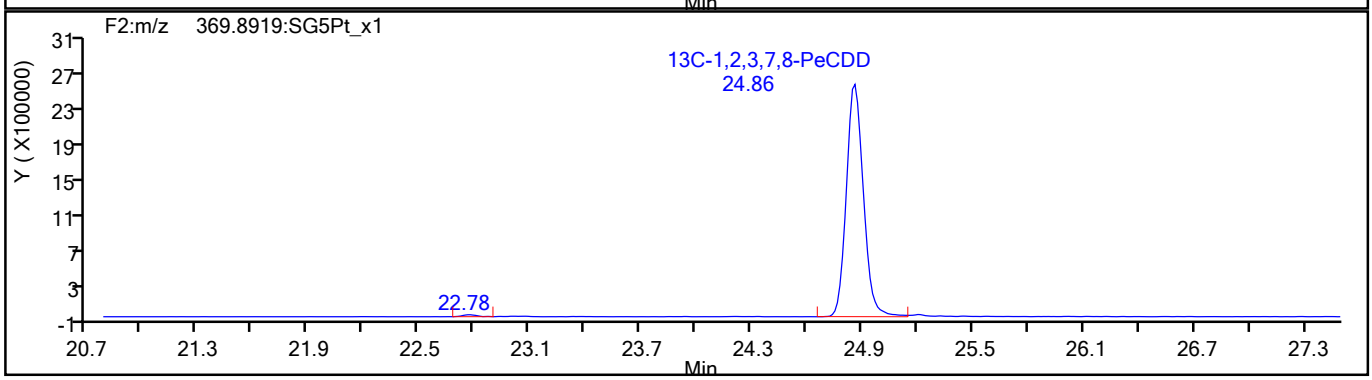

791616

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

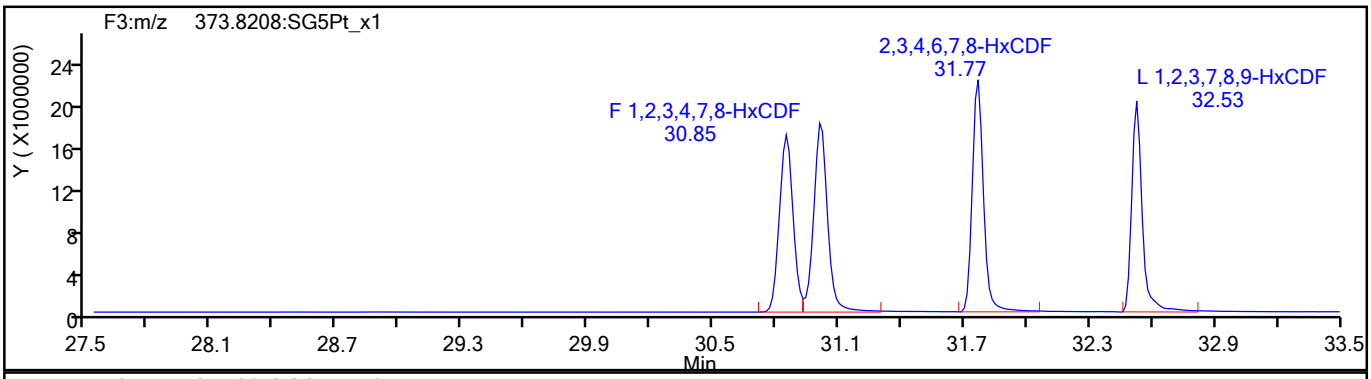

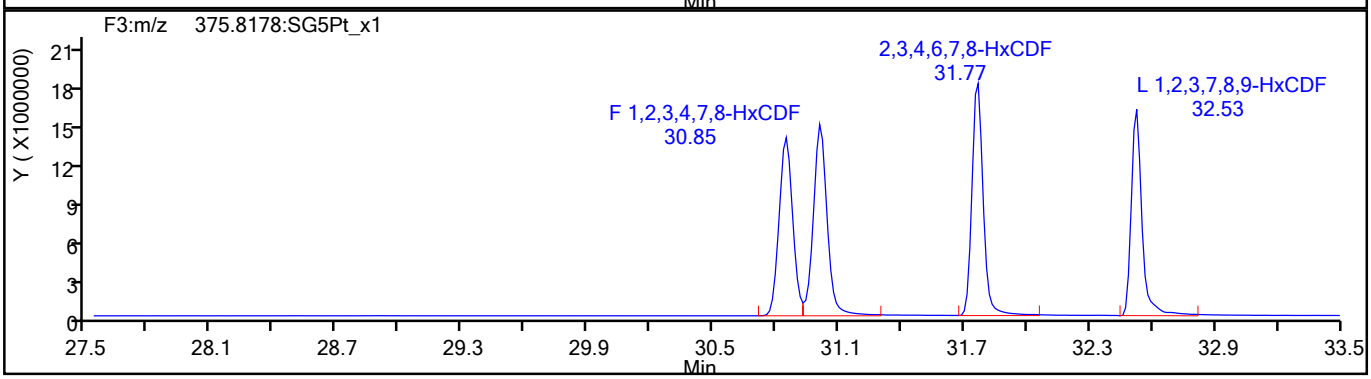

HxCDF Standards

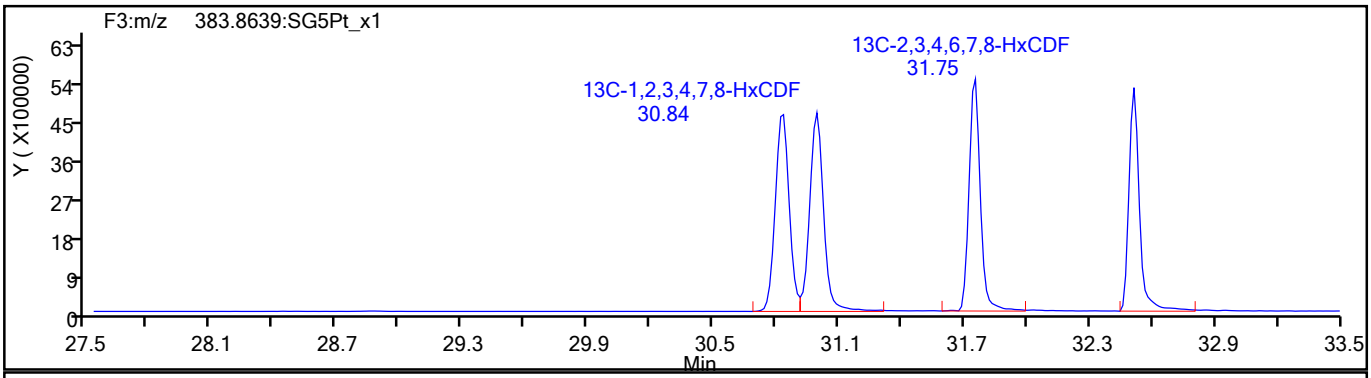

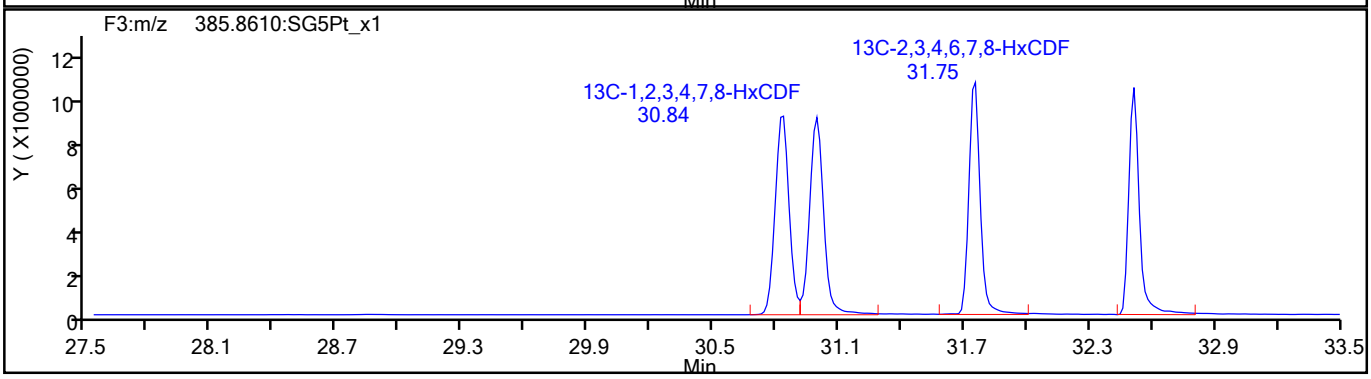

791617

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

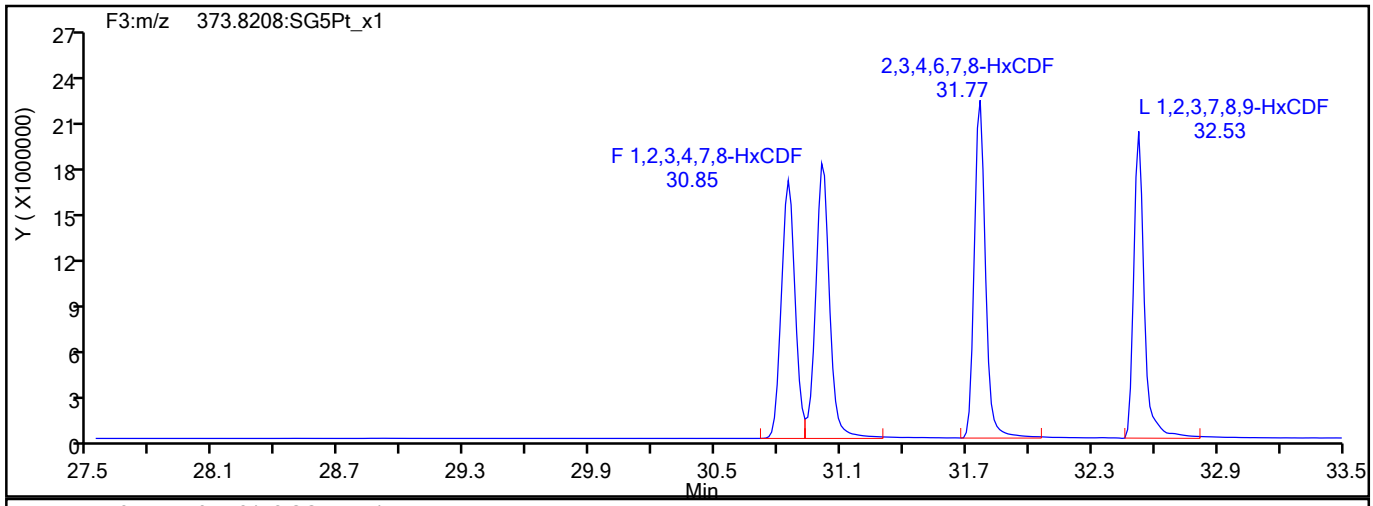

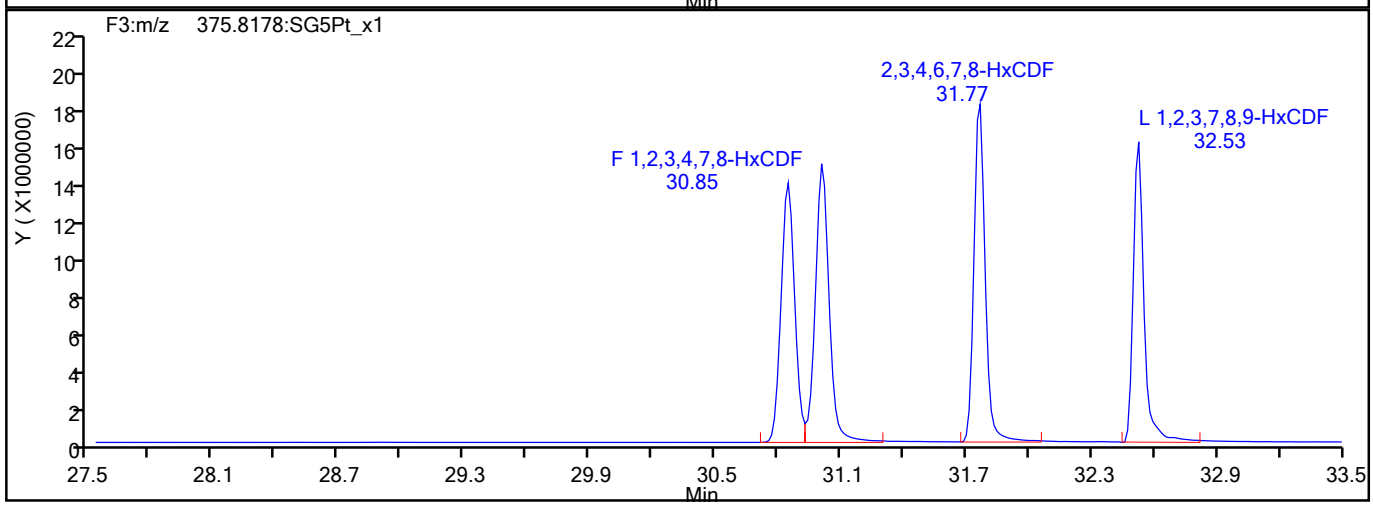

HxCDF Interference Mass

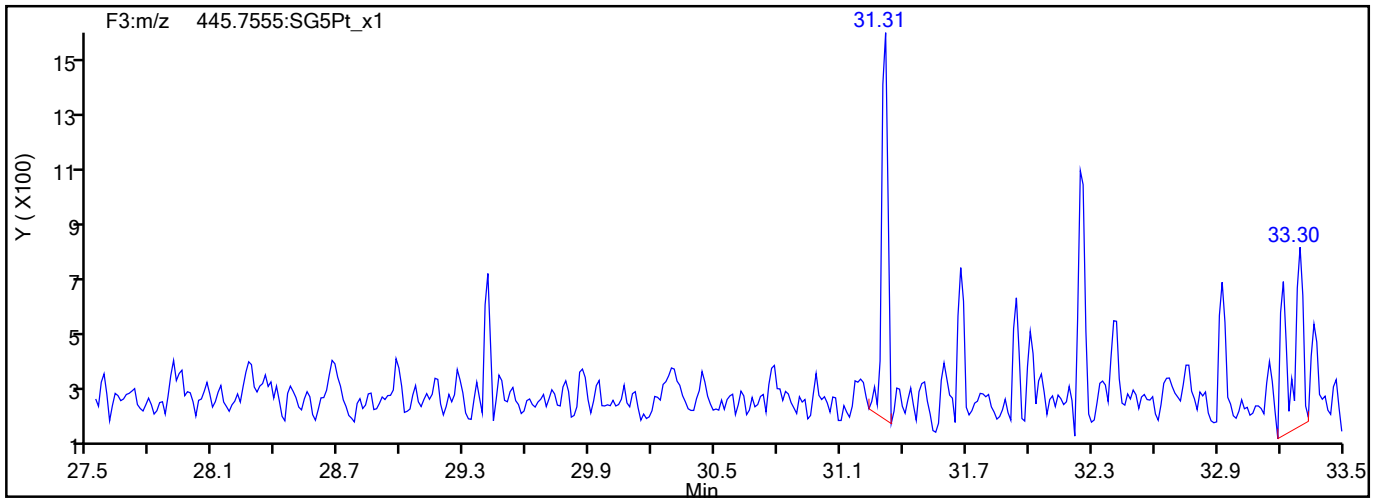

791618

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

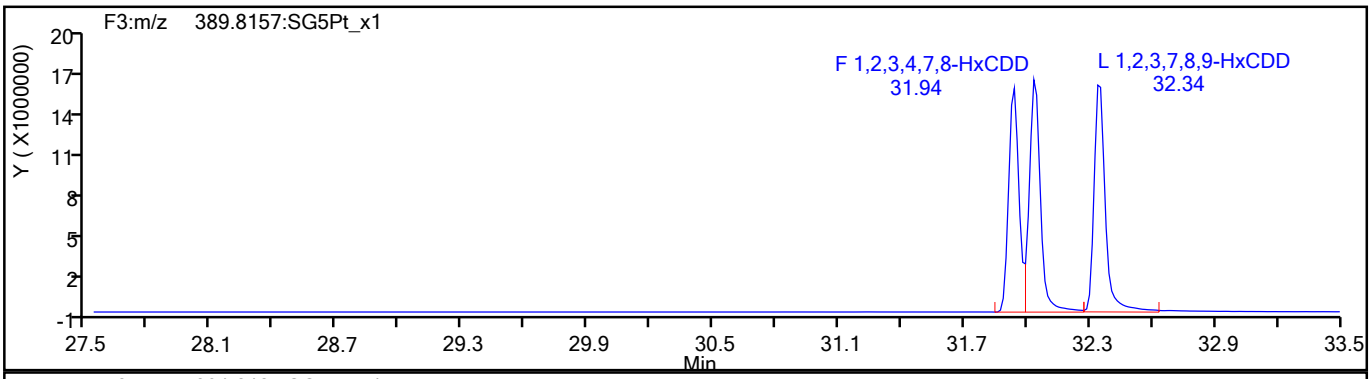

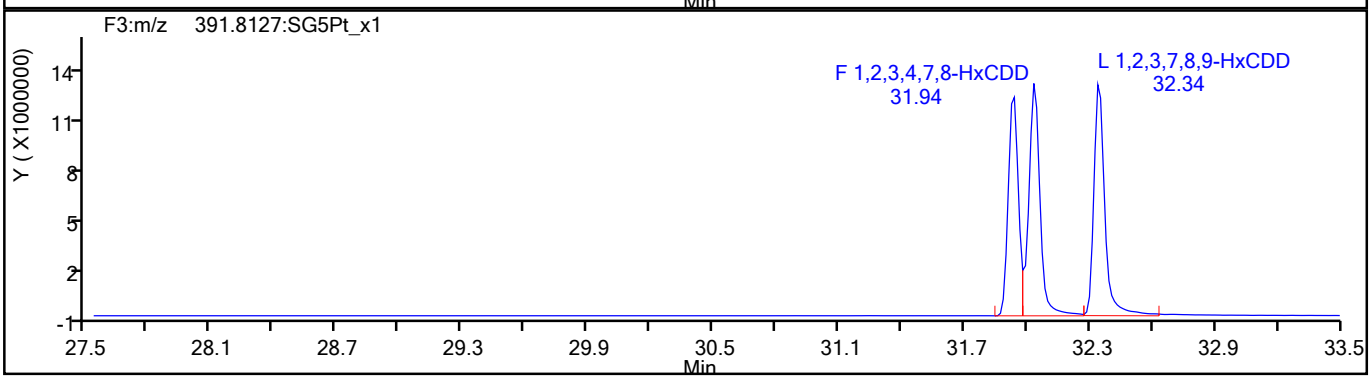

HxCDD Standards

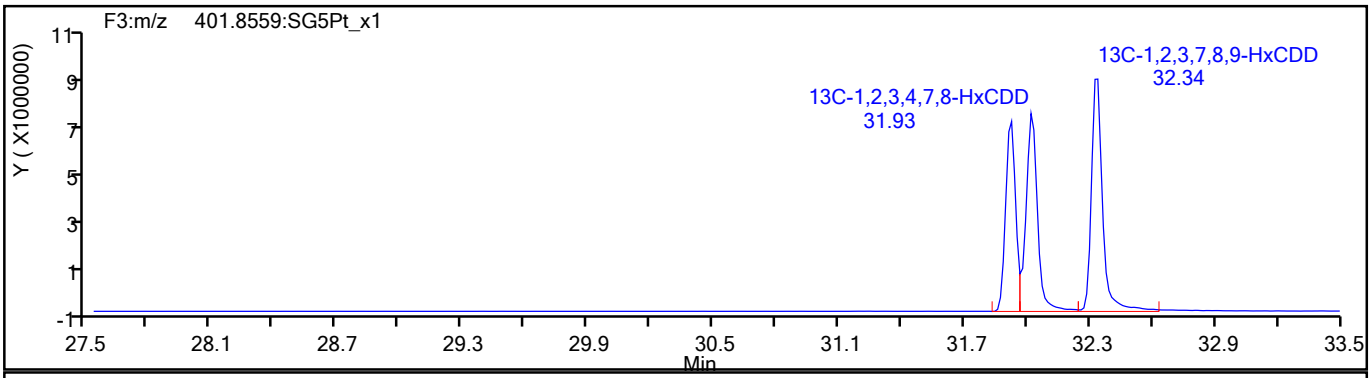

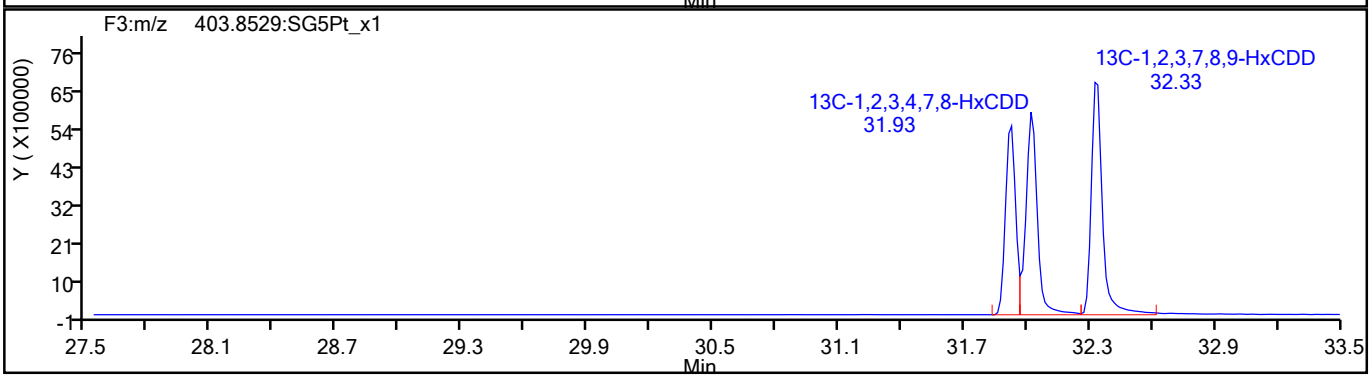

791619

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

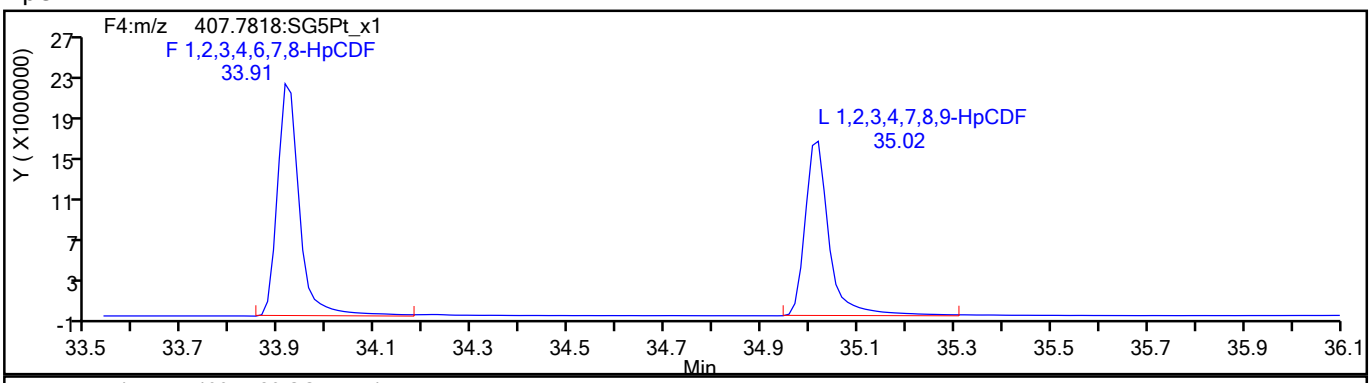

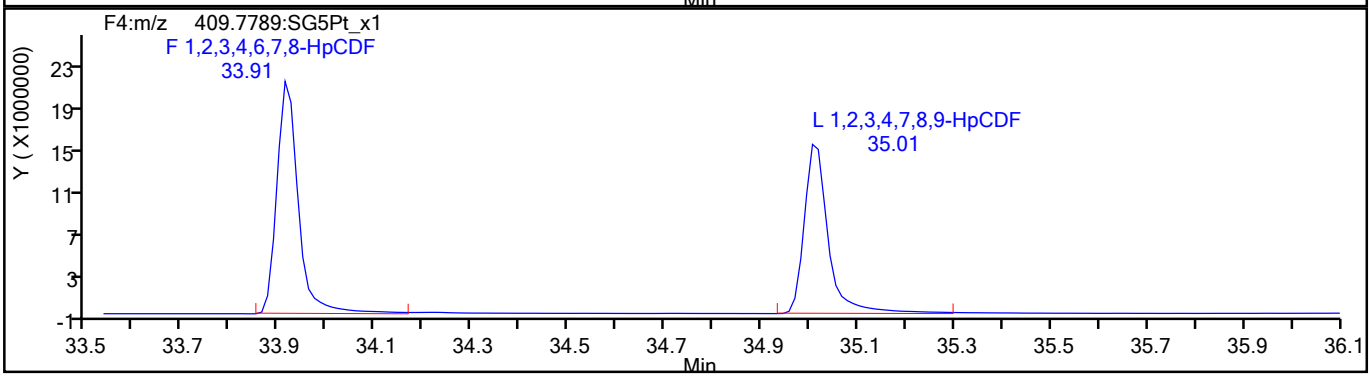

HpCDF Standards

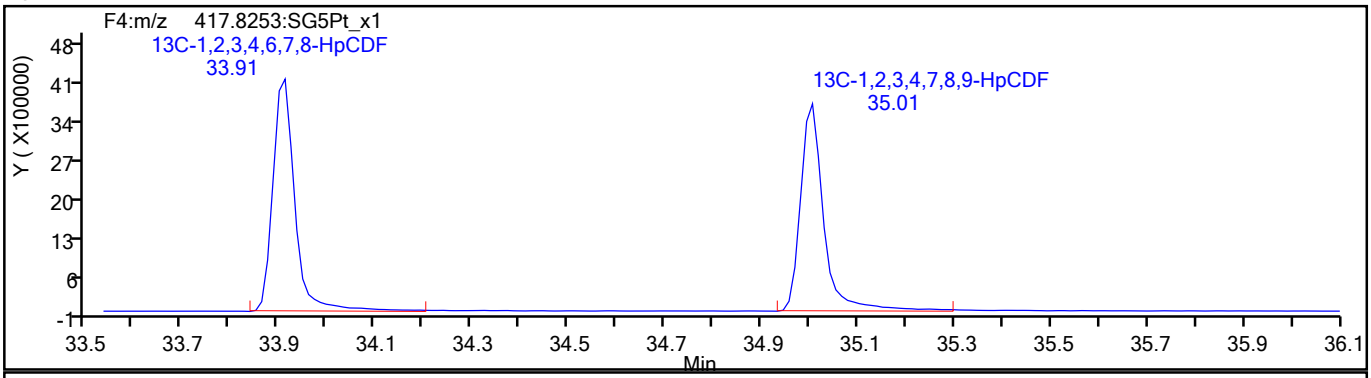

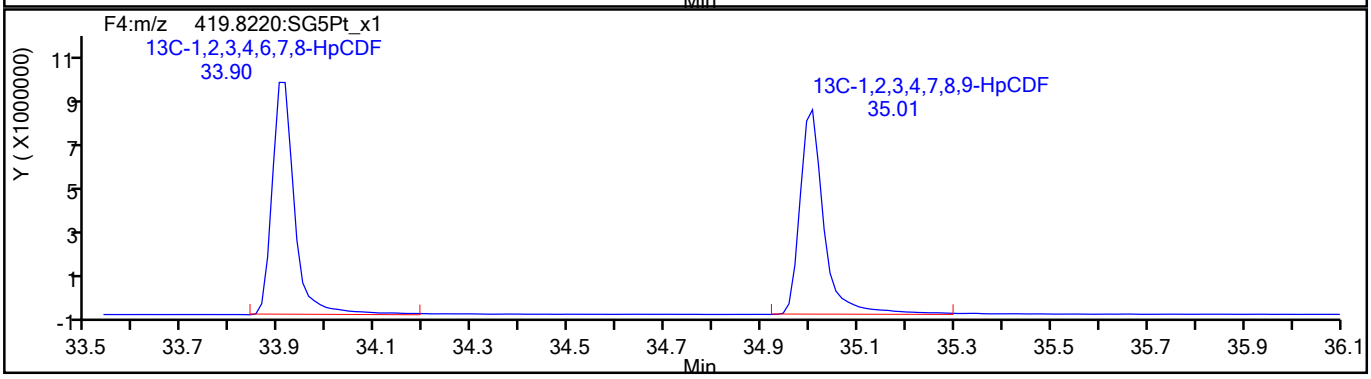

791620

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

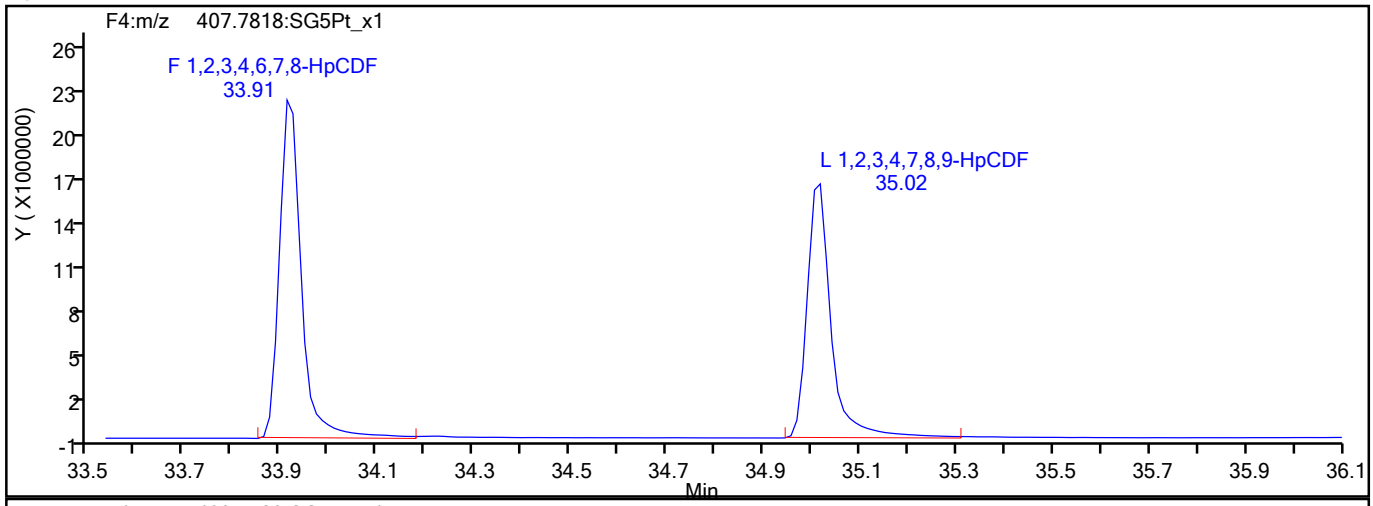

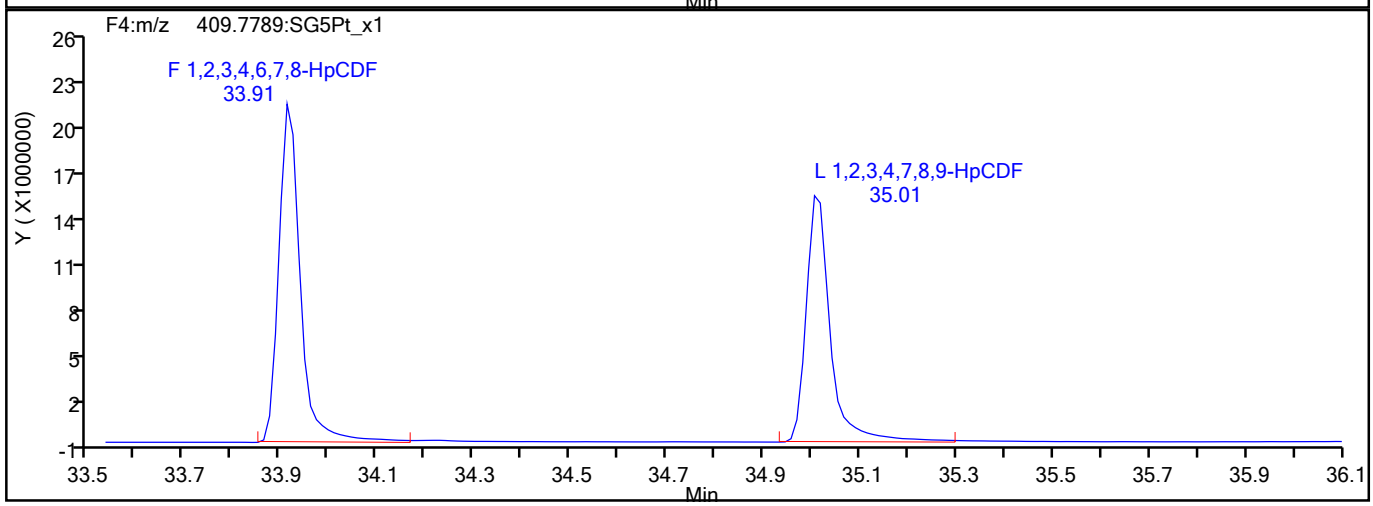

HpCDF Interference Mass

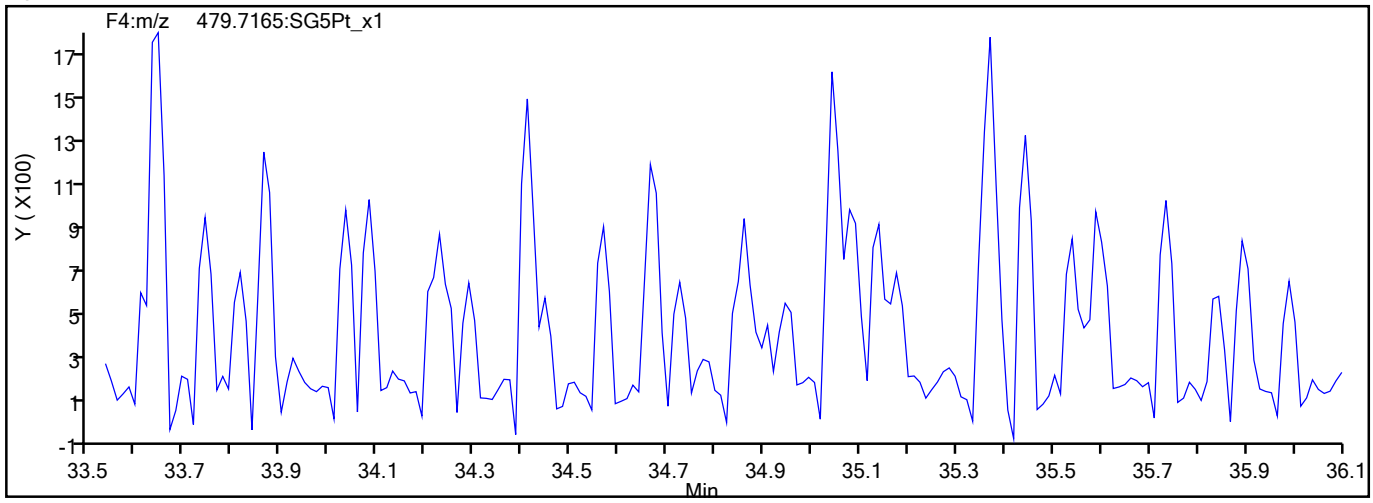

791621

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

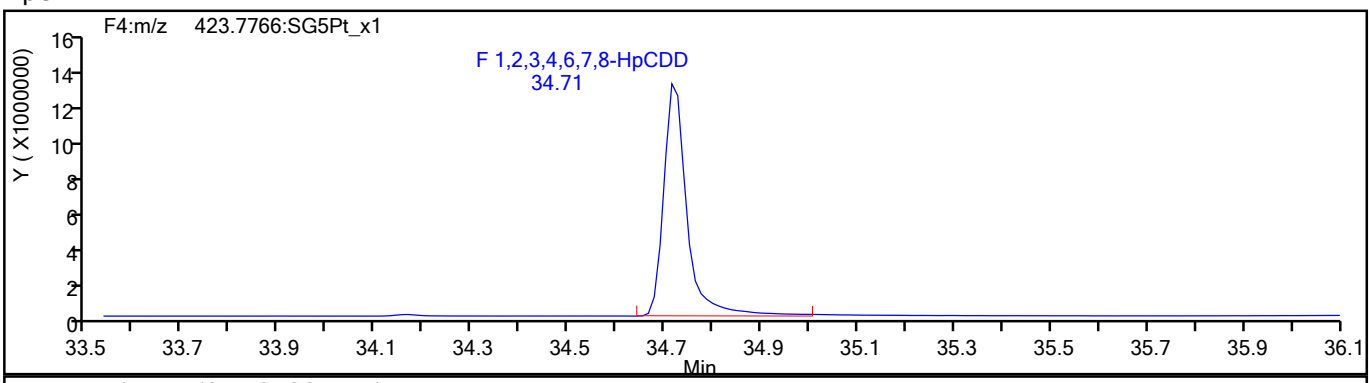

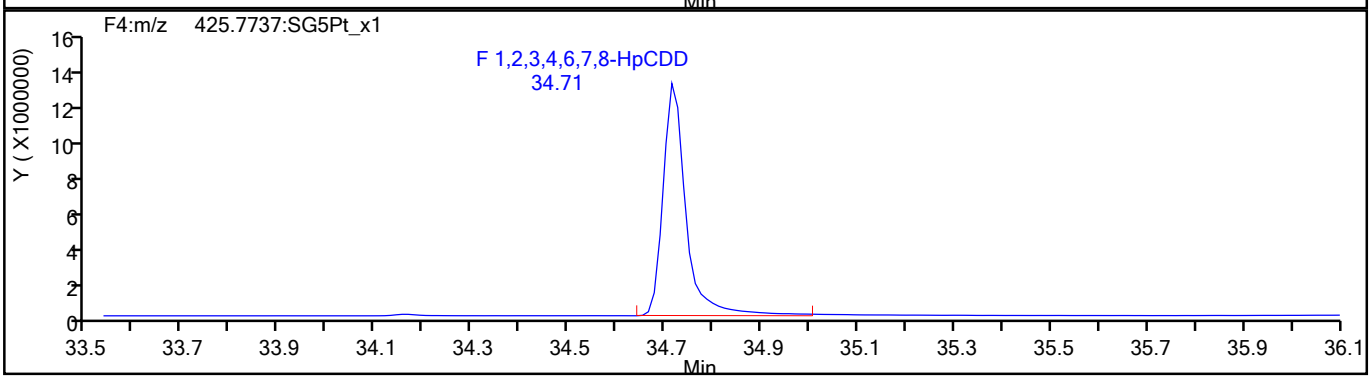

HpCDD Standards

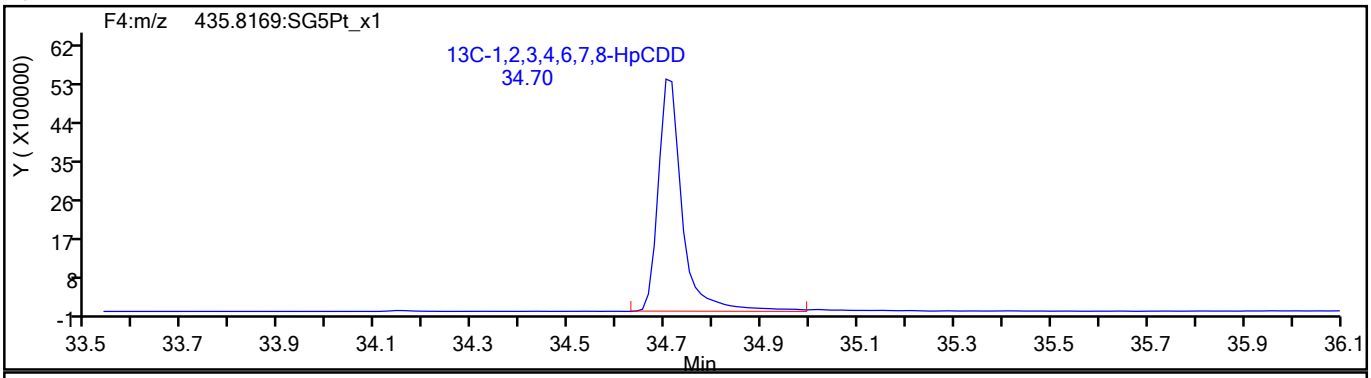

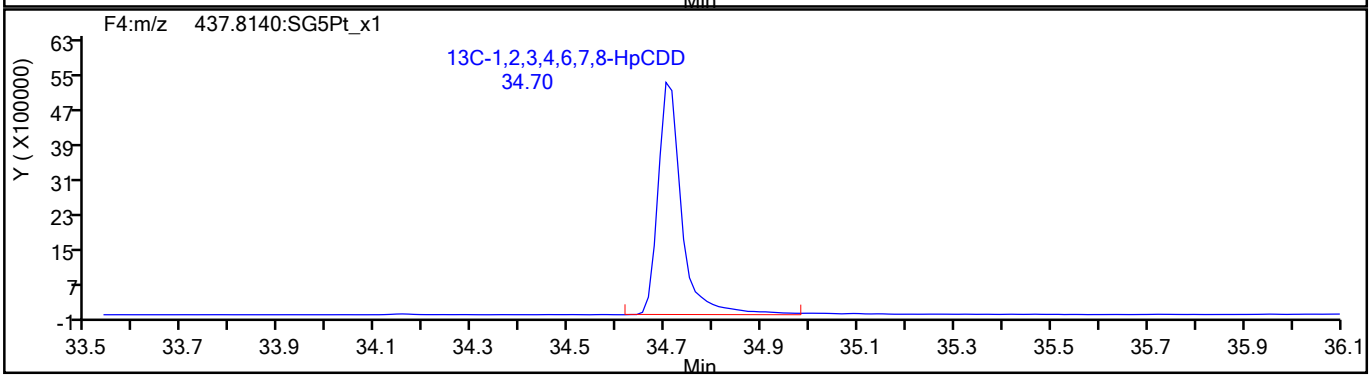

791622

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

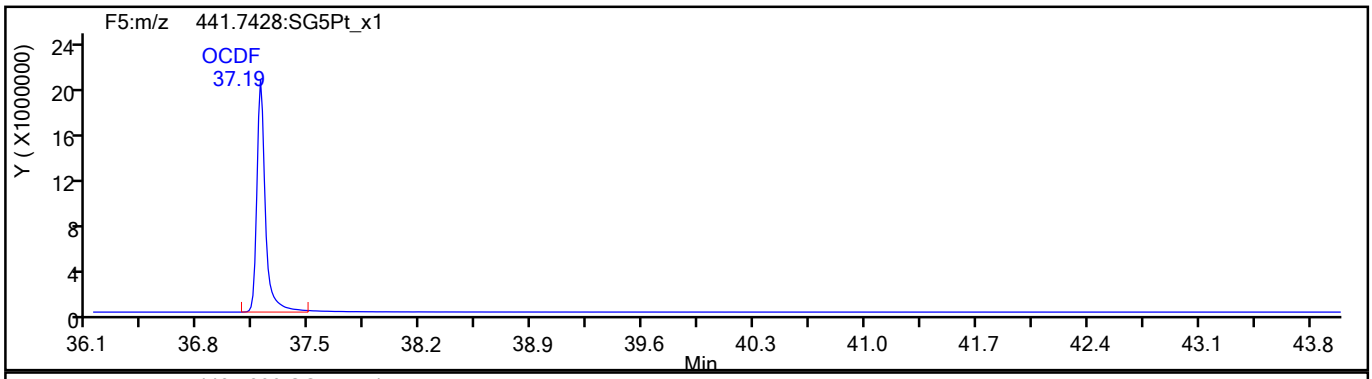

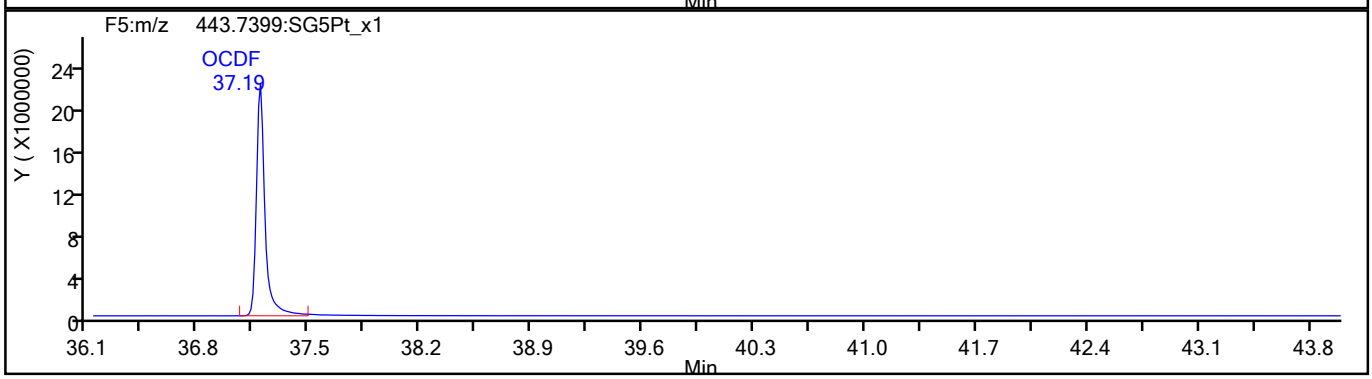

OCDF Standards

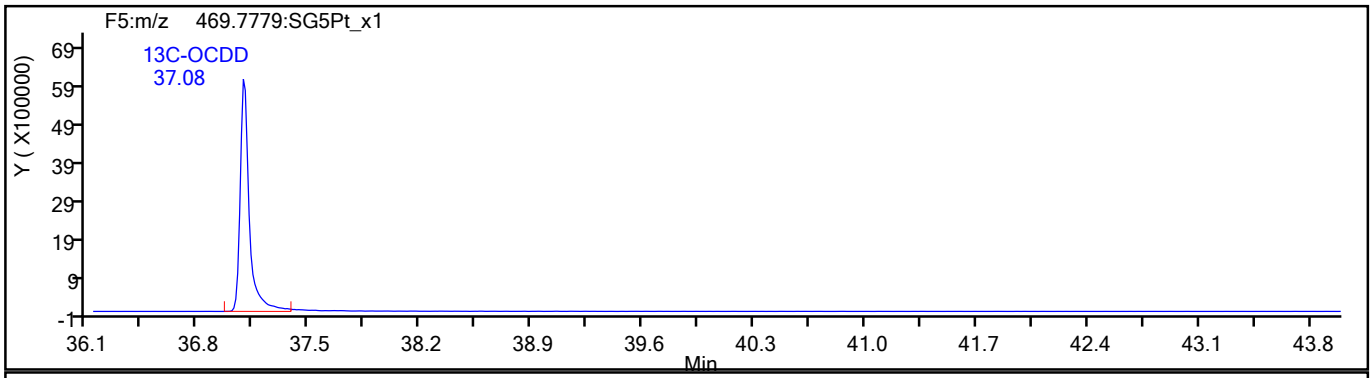

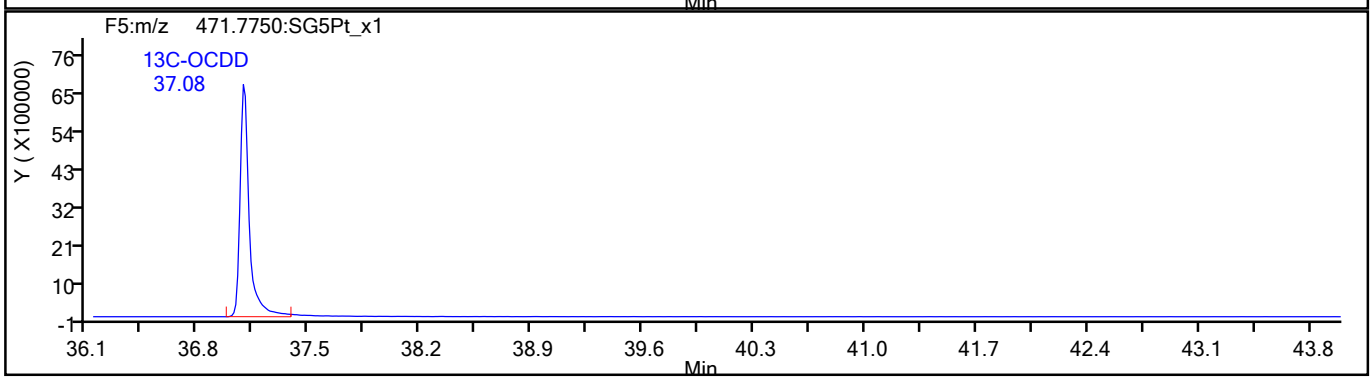

791623

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

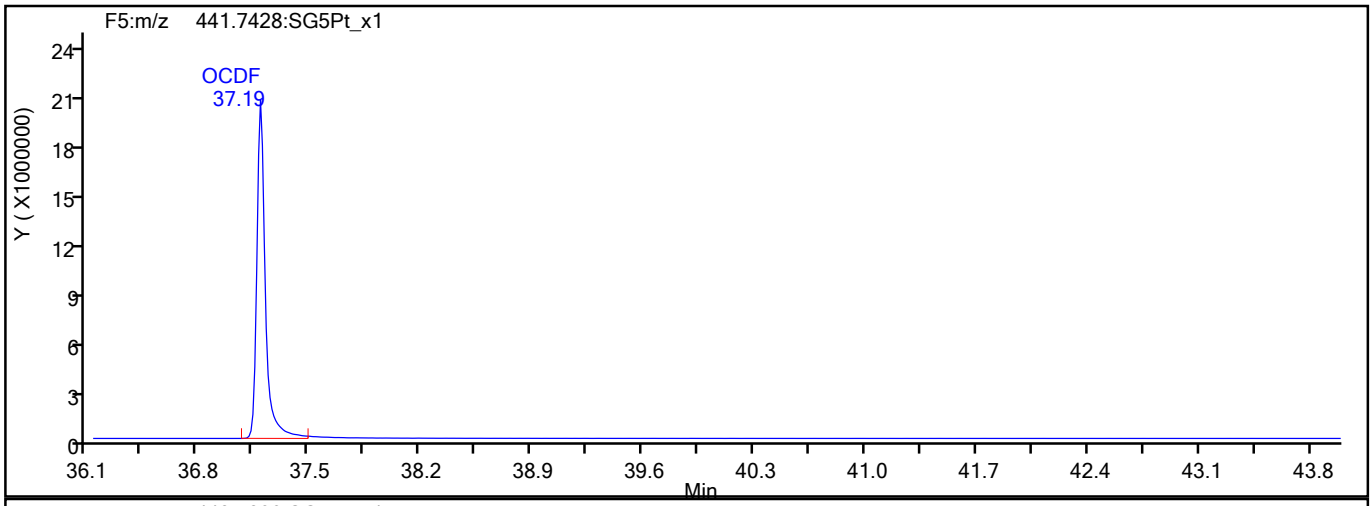

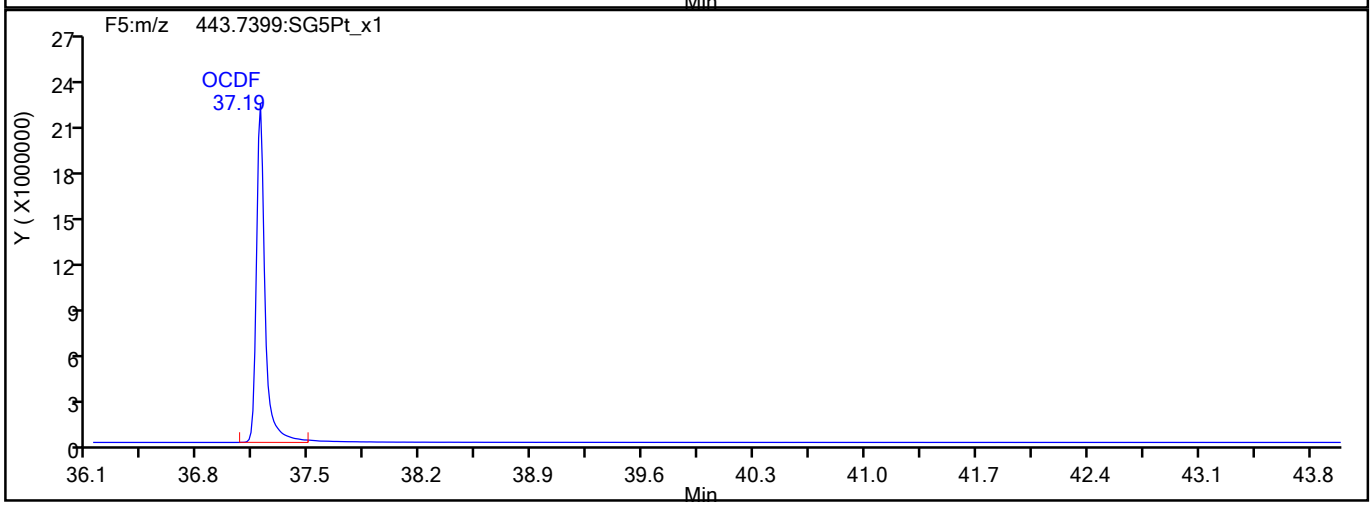

OCDF Interference Mass

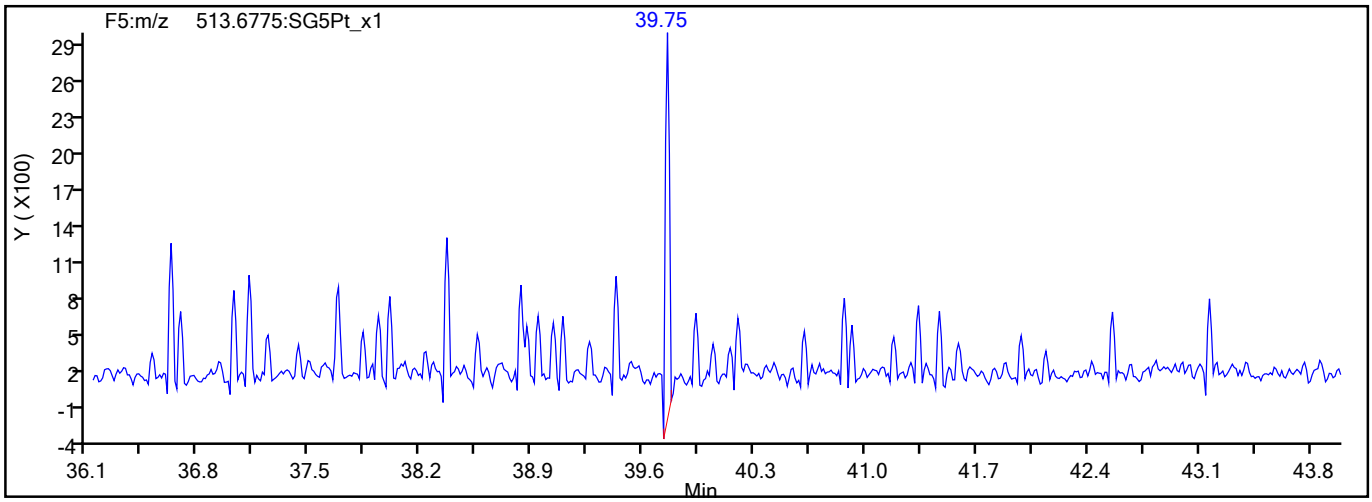

791624

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

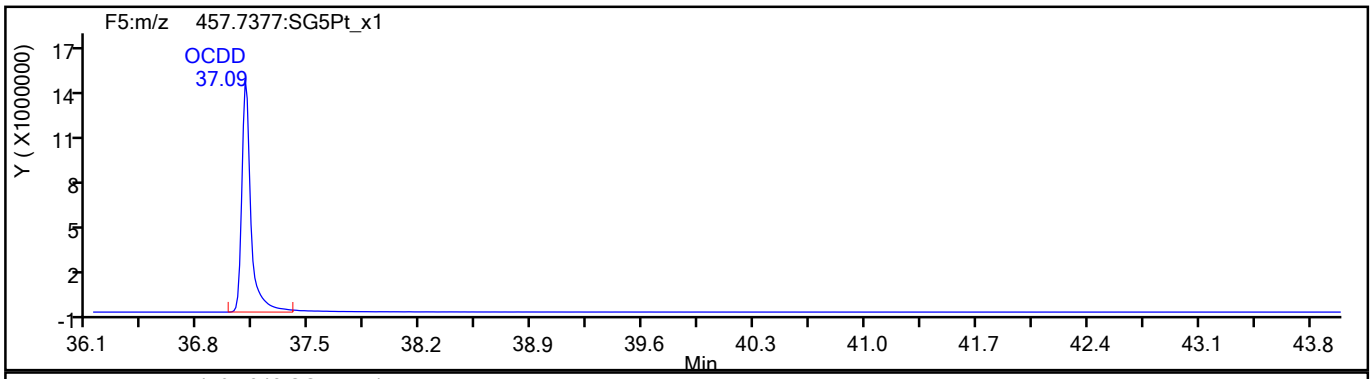

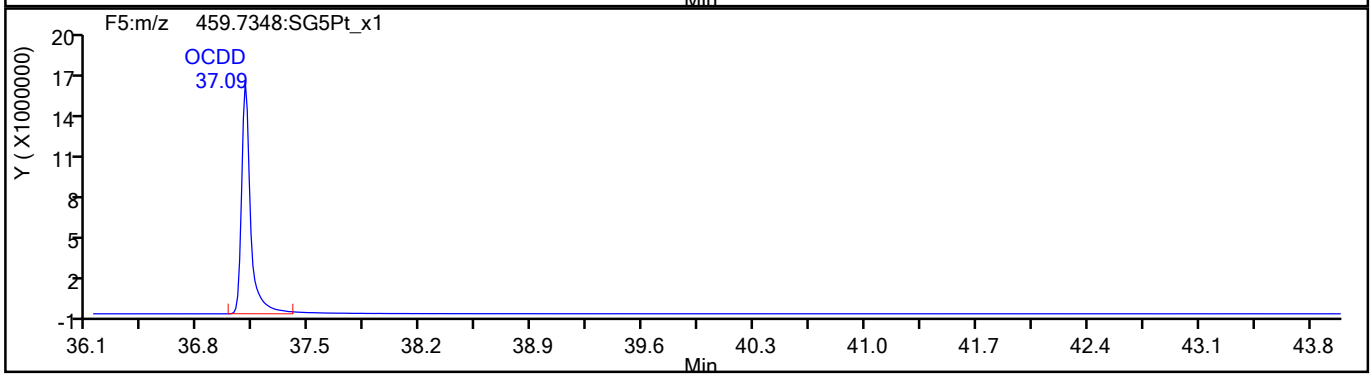

OCDD Standards

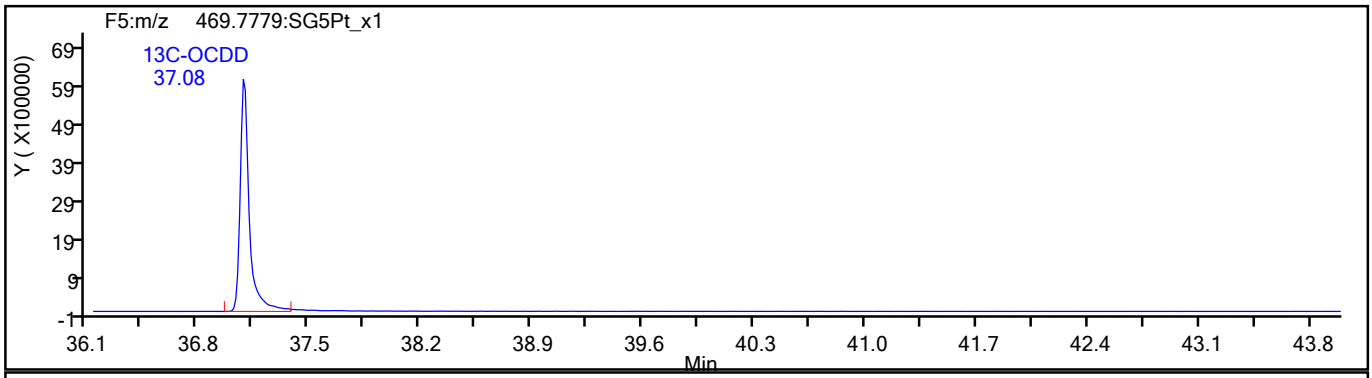

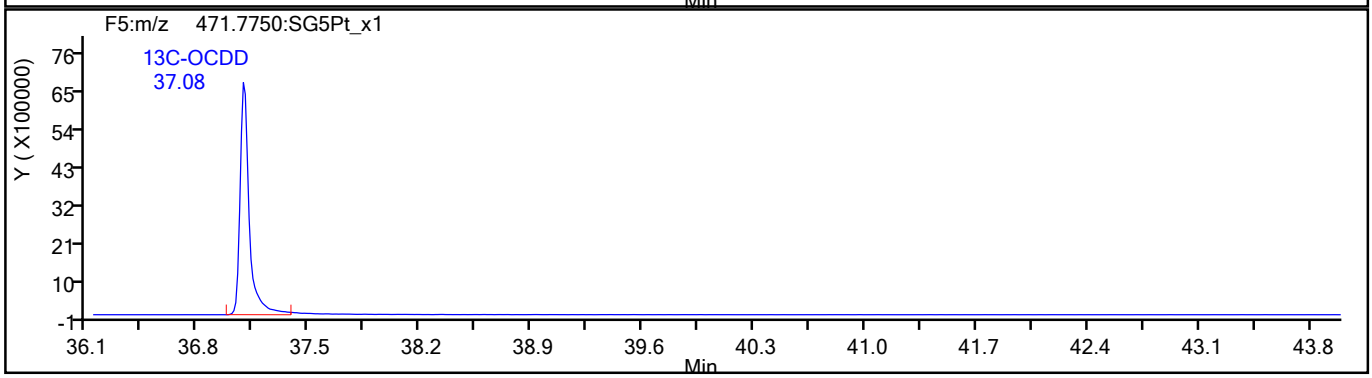

791625

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

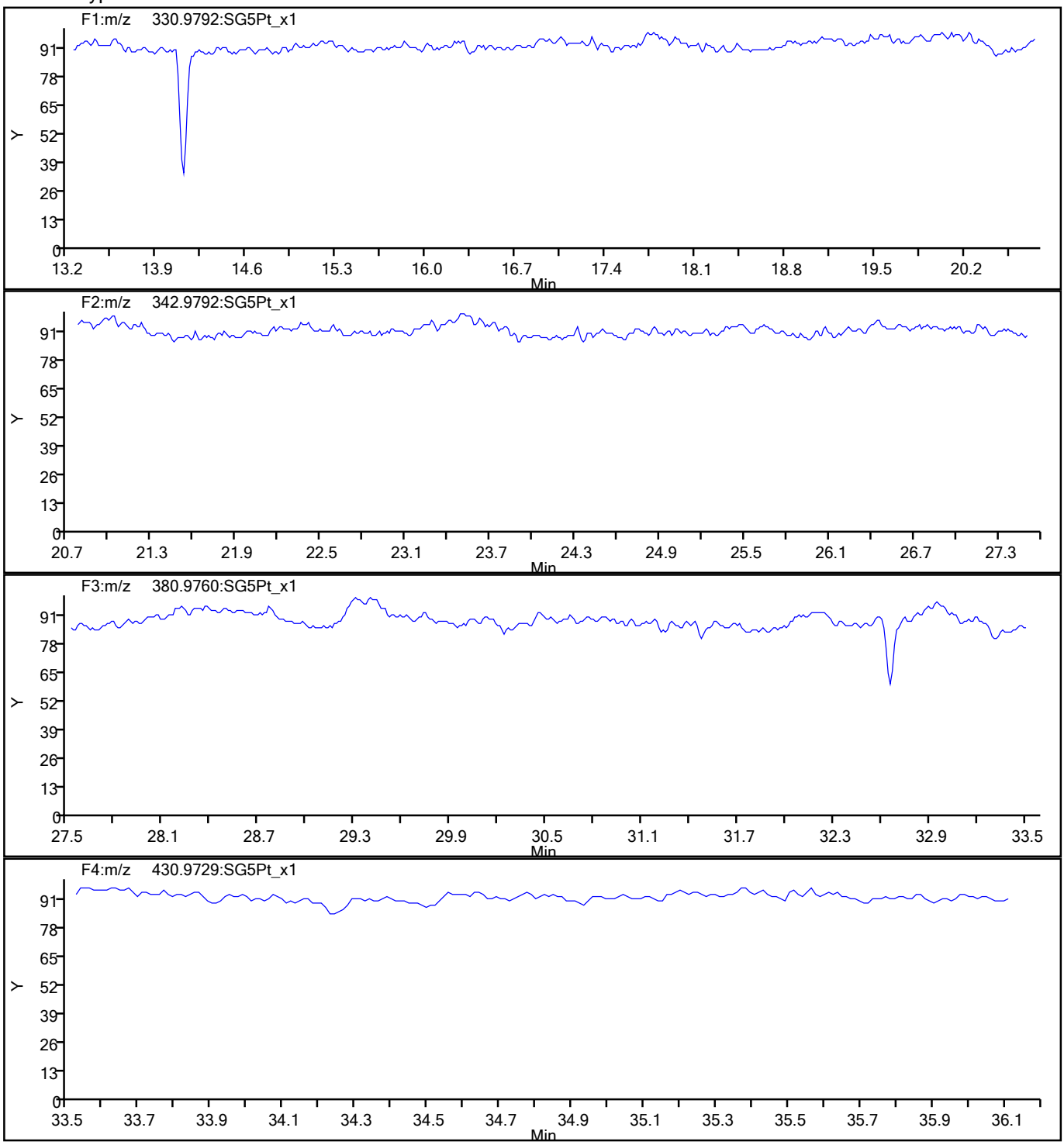

791626

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

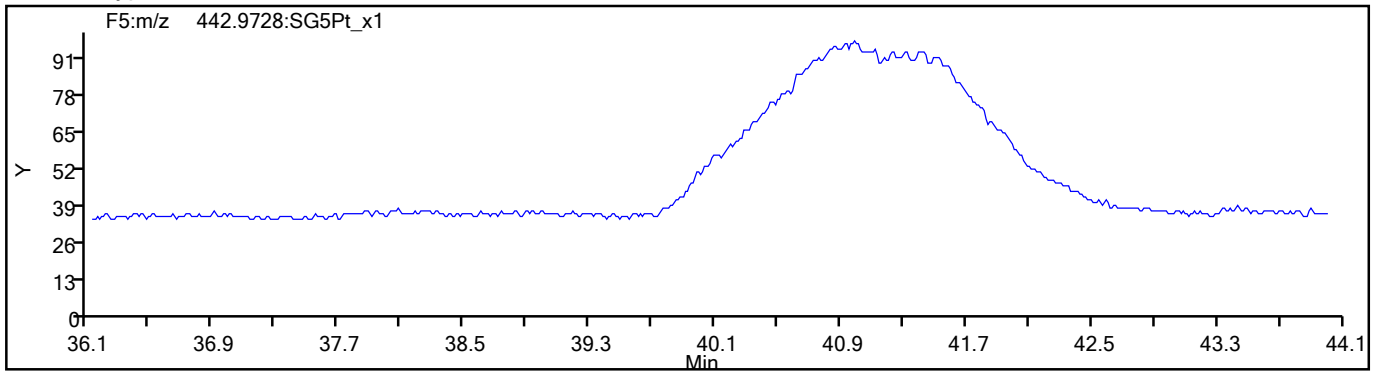

791627

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID: CCV 320-519953/2 Calibration Date: 08/25/2021 10:23

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 25AU2110D5_2.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.033		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.264		10.1	10.0	101	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.071		50.5	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.030		50.6	50.0	101	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.040		49.6	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.065		49.1	50.0	98	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.133		50.3	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.164		49.9	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.081		50.8	50.0	102	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.035		51.7	50.0	103	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.162		51.3	50.0	103	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.174		50.3	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.492		51.8	50.0	104	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.112		50.8	50.0	102	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.336		50.7	50.0	101	86-116
OCDD	AveID	1.107	1.127		102	100	102	79-126
OCDF	AveID	1.438	1.437		99.9	100	100	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.567		96.5	100	96	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9108		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.224		101	100	101	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.259		102	100	102	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8158		107	100	107	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.143		105	100	105	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.110		98.4	100	98	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.054		99.1	100	99	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7889		108	100	108	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8458		96.1	100	96	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9641		99.6	100	100	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7122		92.1	100	92	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6224		96.2	100	96	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6382		91.1	100	91	77-129
13C-OCDD	Ave	0.4472	0.4538		203	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.183		10.7	10.0	107	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\25AU2110D5.SPL
Last Modified: Thursday, August 26, 2021 09:49:48 Pacific Daylight Time
Printed: Thursday, August 26, 2021 09:49:53 Pacific Daylight Time

Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	25AU2110D5_1	WDM HRDXNCP_00044	WDM 082521B	Tray01:1	Dioxin		SMA
2	25AU2110D5_2	CS-4 HRDXNL4_00099	CCV 082521	Tray01:2	Dioxin		SMA
3	25AU2110D5_3	MB 320-515492/1-A	MB 320-515492/1-A	Tray01:4	1613B/Solid	D270	SMA
4	25AU2110D5_4	LCS 320-515492/2-A	LCS 320-515492/2-A	Tray01:5	1613B/Solid	---	SMA
5	25AU2110D5_5	320-77214-A-1-A	320-77214-A-1-A	Tray01:6	1613B/Solid	---	SMA
6	25AU2110D5_6	320-77214-A-2-A	320-77214-A-2-A	Tray01:7	1613B/Solid		SMA
7	25AU2110D5_7	320-77214-A-2-B MS	320-77214-A-2-B MS	Tray01:8	1613B/Solid		SMA
8	25AU2110D5_8	320-77214-A-2-C MSD	320-77214-A-2-C MSD	Tray01:9	1613B/Solid	---	SMA
9	25AU2110D5_9	320-77214-A-3-A	320-77214-A-3-A	Tray01:10	1613B/Solid	---	SMA
10	25AU2110D5_10	320-77214-A-4-A	320-77214-A-4-A	Tray01:11	1613B/Solid		SMA
11	25AU2110D5_11	320-77214-A-5-A	320-77214-A-5-A	Tray01:15	1613B/Solid		SMA
12	25AU2110D5_12	320-77214-A-6-A	320-77214-A-6-A	Tray01:16	1613B/Solid		SMA
13	25AU2110D5_13	320-77214-A-7-A	320-77214-A-7-A	Tray01:17	1613B/Solid	---	SMA
14	25AU2110D5_14	SB Solvent Blank C-14	SB 082521	Tray01:3			SMA
15	25AU2110D5_15	CS-4 HRDXNL4_00099	CCV 082521A	Tray01:2	Dioxin		SMA
16	25AU2110D5_16	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
17	25AU2110D5_17	SB Solvent Blank C-14	SB 082521A	Tray01:3			SMA
18	25AU2110D5_18	320-77214-A-8-A	320-77214-A-8-A	Tray01:29	1613B/Solid	D270	SMA
19	25AU2110D5_19	320-77214-A-9-A	320-77214-A-9-A	Tray01:30	1613B/Solid		SMA
20	25AU2110D5_20	320-77214-A-13-A	320-77214-A-13-A	Tray01:31	1613B/Solid		SMA
21	25AU2110D5_21	320-77292-A-1-A	320-77292-A-1-A	Tray01:32	1613B/Solid		SMA
22	25AU2110D5_22	320-77292-A-2-A	320-77292-A-2-A	Tray01:33	1613B/Solid		SMA
23	25AU2110D5_23	320-77292-A-2-B MS	320-77292-A-2-B MS	Tray01:34	1613B/Solid		SMA
24	25AU2110D5_24	320-77292-A-2-C MSD	320-77292-A-2-C MSD	Tray01:35	1613B/Solid		SMA
25	25AU2110D5_25	320-77292-A-3-A	320-77292-A-3-A	Tray01:36	1613B/Solid		SMA
26	25AU2110D5_26	320-77292-A-4-A	320-77292-A-4-A	Tray01:37	1613B/Solid		SMA
27	25AU2110D5_27	320-77292-A-5-A	320-77292-A-5-A	Tray01:38	1613B/Solid		SMA
28	25AU2110D5_28	SB Solvent Blank C-14	SB 082521B	Tray01:3			SMA
29	25AU2110D5_29	CS-4 HRDXNL4_00099	CCV 082521B	Tray01:2	Dioxin		SMA
30	25AU2110D5_30	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
31	25AU2110D5_31	SB Solvent Blank C-14	SB 082521C	Tray01:3			SMA
32	25AU2110D5_32	320-77292-A-6-A	320-77292-A-6-A	Tray01:43	1613B/Solid	D270	SMA
33	25AU2110D5_33	320-77292-A-7-A	320-77292-A-7-A	Tray01:44	1613B/Solid		SMA
34	25AU2110D5_34	320-77292-A-8-A	320-77292-A-8-A	Tray01:45	1613B/Solid		SMA
35	25AU2110D5_35	320-77292-A-9-A	320-77292-A-9-A	Tray01:46	1613B/Solid		SMA
36	25AU2110D5_36	320-77292-A-13-A	320-77292-A-13-A	Tray01:47	1613B/Solid		SMA
37	25AU2110D5_37	400-206693-C-22-A	400-206693-C-22-A	Tray01:48	1613B/Solid		SMA
38	25AU2110D5_38	400-206693-C-36-A	400-206693-C-36-A	Tray01:49	1613B/Solid		SMA
39	25AU2110D5_39	400-206693-C-37-A	400-206693-C-37-A	Tray01:50	1613B/Solid		SMA
40	25AU2110D5_40	400-206693-C-38-A	400-206693-C-38-A	Tray01:51	1613B/Solid		SMA
41	25AU2110D5_41	400-206693-C-39-A	400-206693-C-39-A	Tray01:52	1613B/Solid		SMA
42	25AU2110D5_42	SB Solvent Blank C-14	SB 082521D	Tray01:3			SMA
43	25AU2110D5_43	CS-4 HRDXNL4_00099	CCV 082521C	Tray01:2	Dioxin		SMA
44	25AU2110D5_44	WDM HRDXNCP_00044	WDM 082521C	Tray01:1	Dioxin	---	SMA
45	25AU2110D5_45	SB Solvent Blank C-14	SB 082521E	Tray01:3			SMA

LOGFILE CHECKED
DB 8/26/21

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
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---	---	C:\CHROM

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Wednesday, August 25, 2021 09:34:25 Pacific Daylight Time

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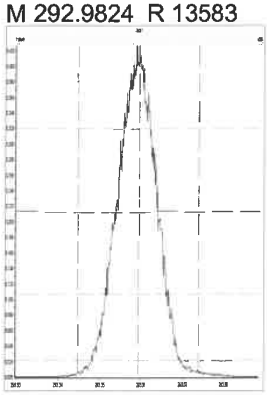

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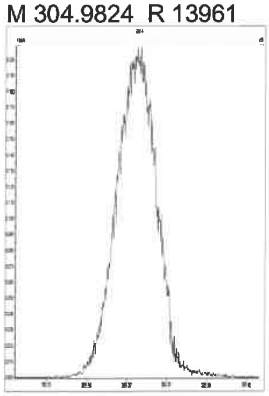

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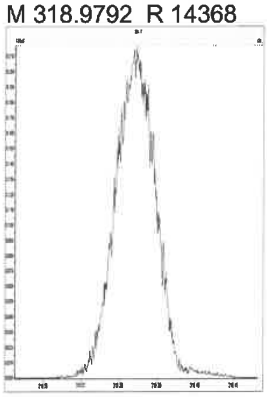

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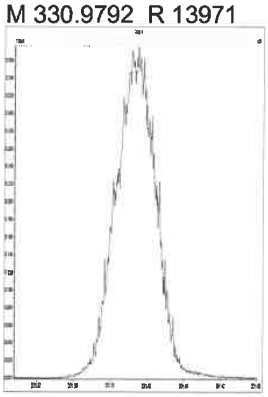

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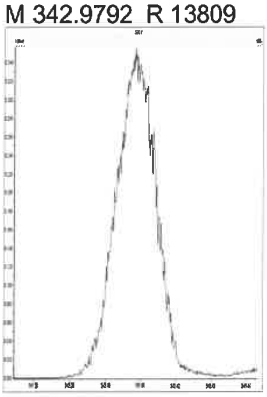

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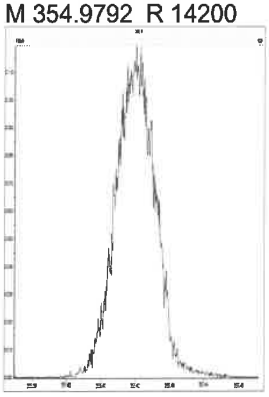

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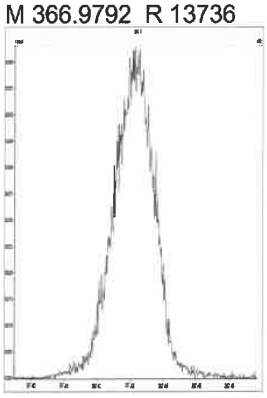

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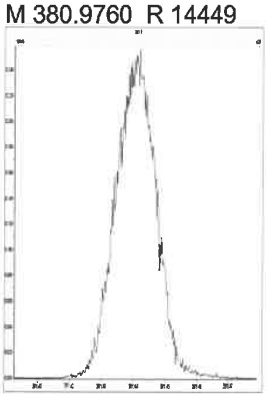

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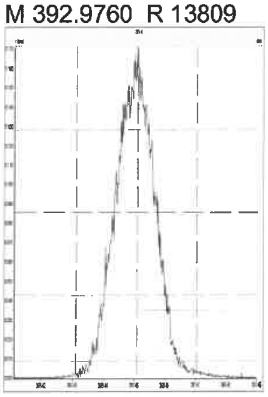

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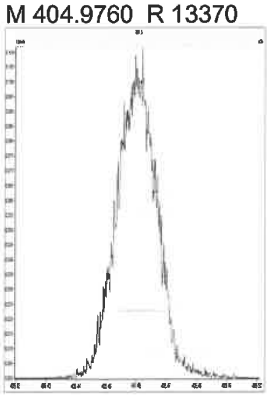

M 416.9760 R 13735

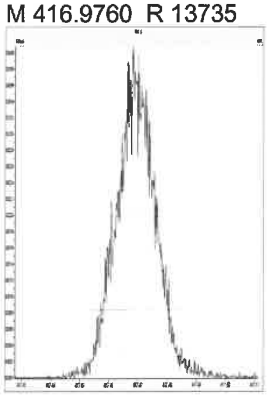

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Wednesday, August 25, 2021 09:35:09 Pacific Daylight Time

M 318.9792 R 14045

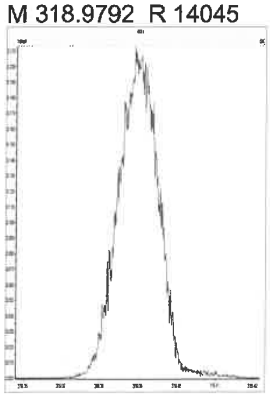

M 330.9792 R 14284

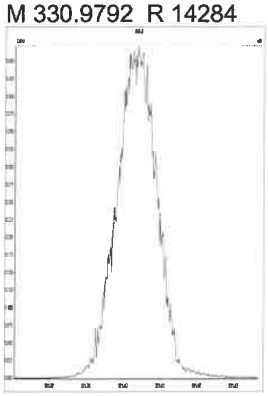

M 342.9792 R 13733

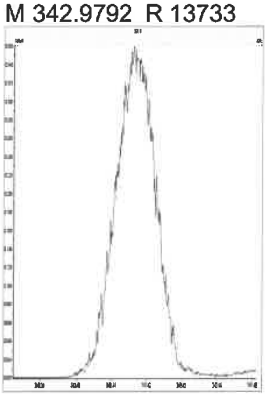

M 354.9792 R 14200

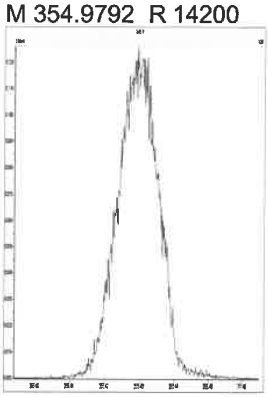

M 366.9792 R 14124

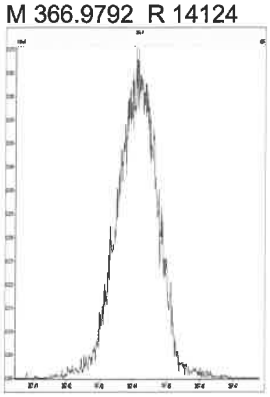

M 380.9760 R 13586

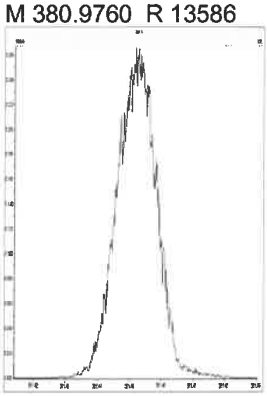

M 392.9760 R 14127

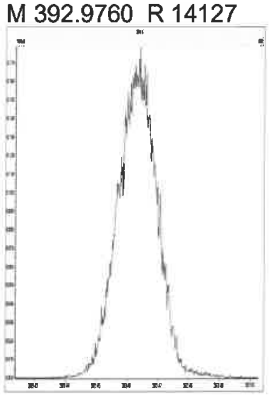

M 404.9760 R 13442

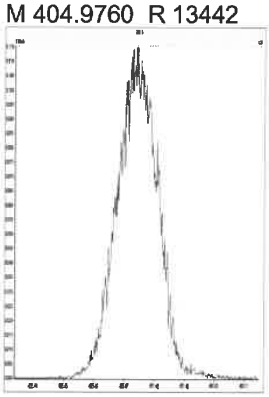

M 416.9760 R 13736

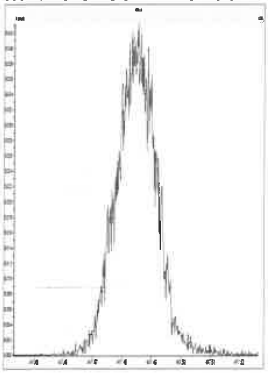

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

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M 366.9792 R 14622

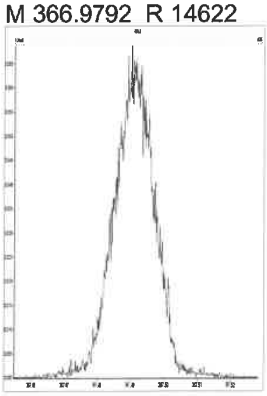

M 380.9760 R 13813

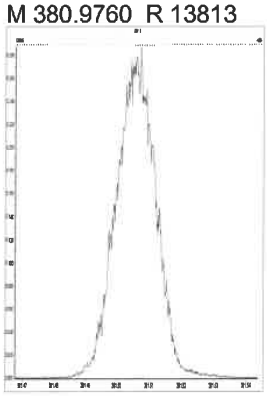

M 392.9760 R 13736

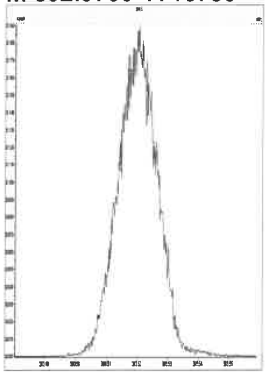

M 404.9760 R 14284

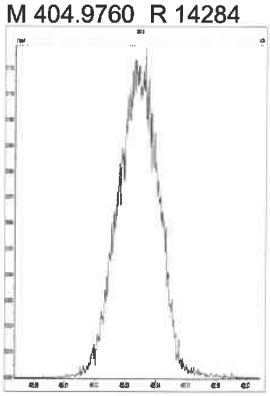

M 416.9760 R 13738

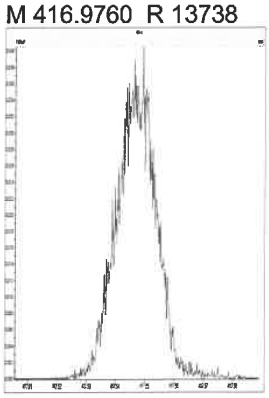

M 430.9728 R 13808

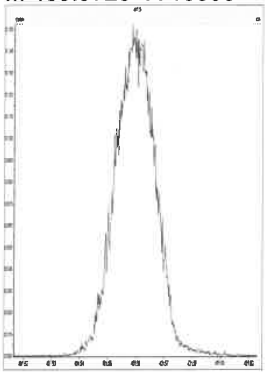

M 442.9728 R 14367

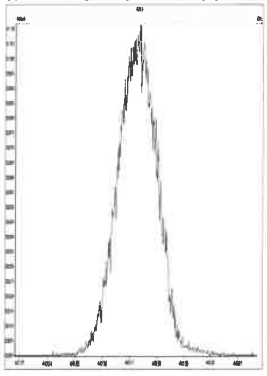

M 454.9728 R 13965

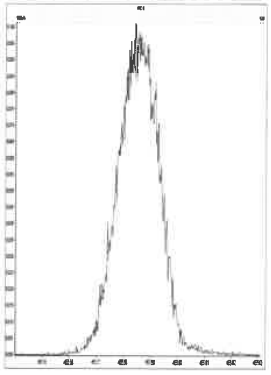

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

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M 380.9760 R 14448

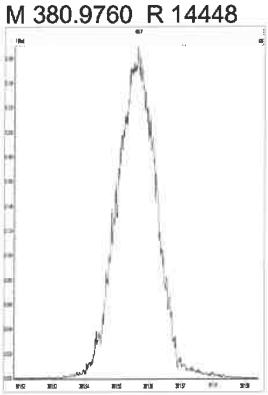

M 392.9760 R 14206

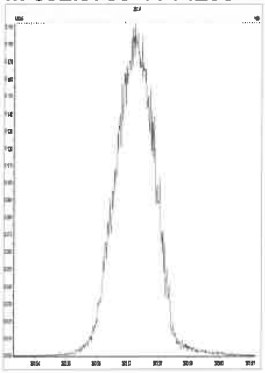

M 404.9760 R 13736

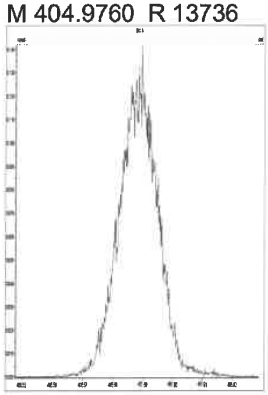

M 416.9760 R 14449

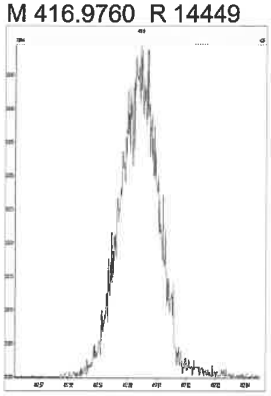

M 430.9728 R 13815

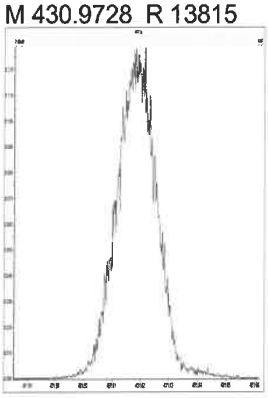

M 442.9728 R 14126

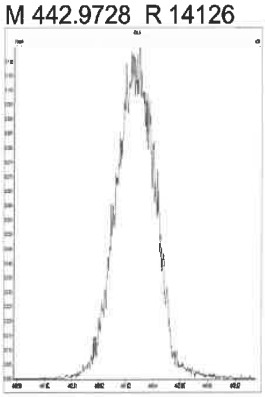

M 454.9728 R 13812

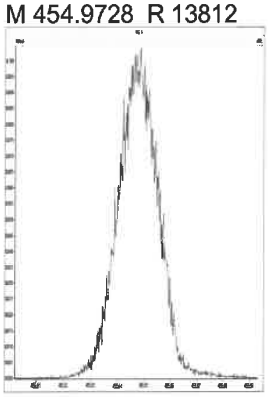

M 466.9728 R 13735

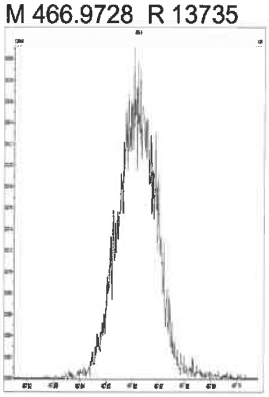

M 480.9696 R 13659

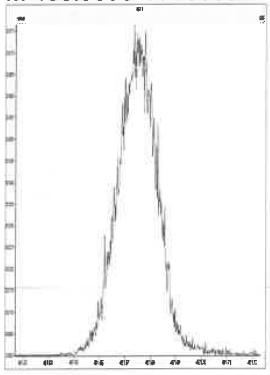

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

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M 380.9760 R 13815

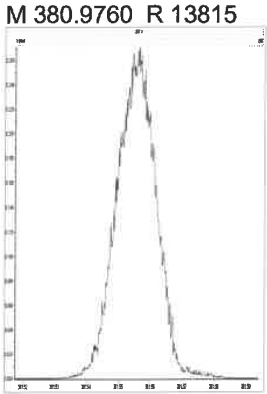

M 392.9760 R 13962

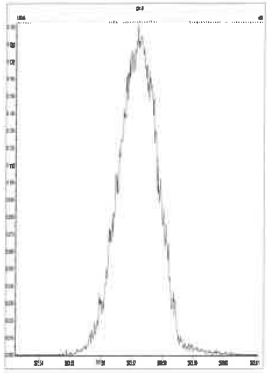

M 404.9760 R 13889

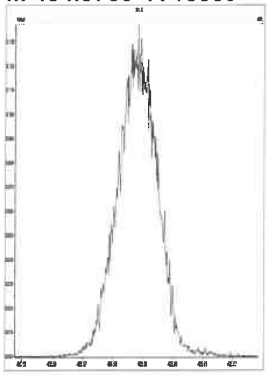

M 416.9760 R 14123

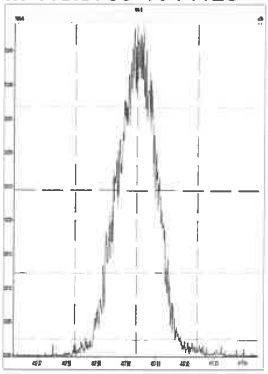

M 430.9728 R 14371

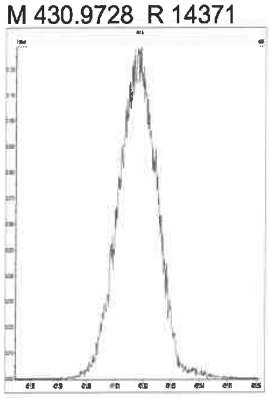

M 442.9728 R 14282

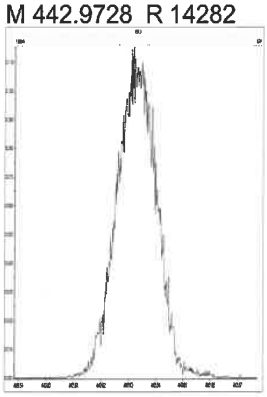

M 454.9728 R 13736

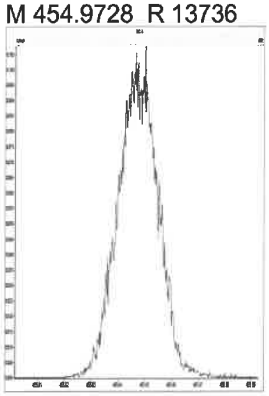

M 466.9728 R 14880

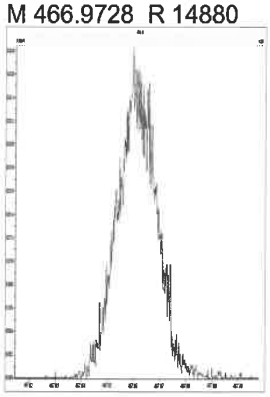

M 480.9696 R 14449

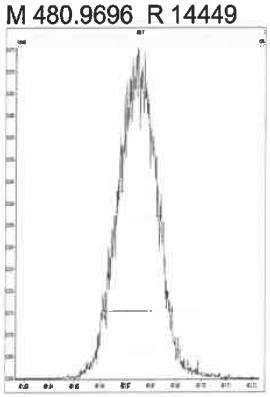

M 492.9696 R 13964

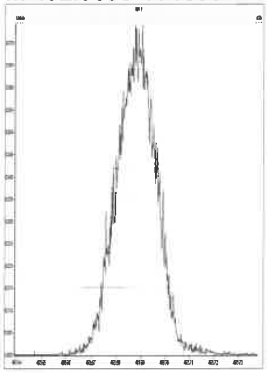

M 504.9696 R 13889

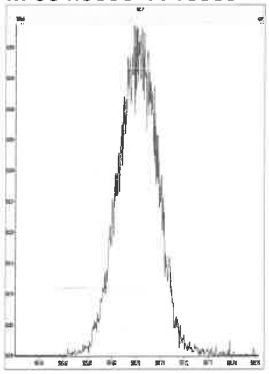

M 516.9697 R 13961

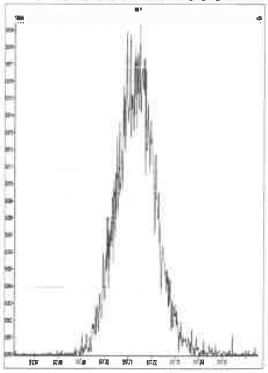

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M 292.9824 R 11469

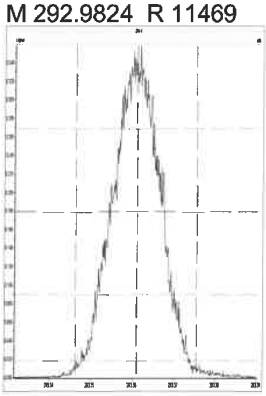

M 304.9824 R 11968

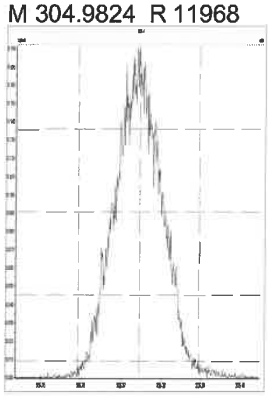

M 318.9792 R 12138

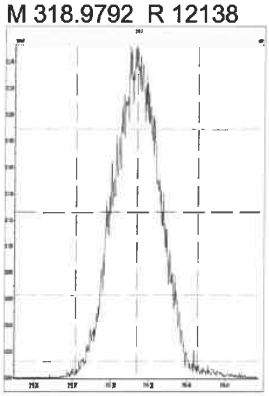

M 330.9792 R 11737

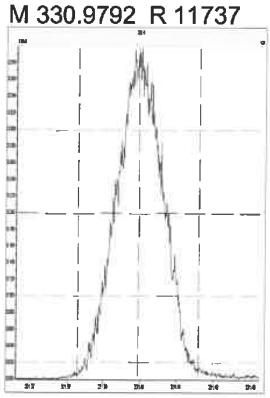

M 342.9792 R 11337

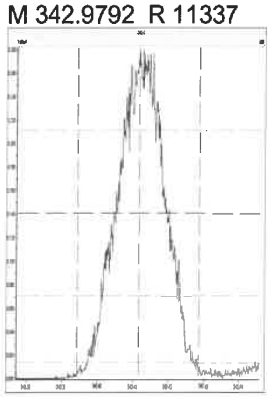

M 354.9792 R 12005

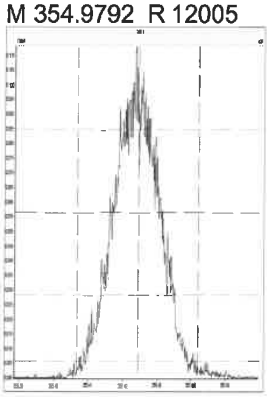

M 366.9792 R 12154

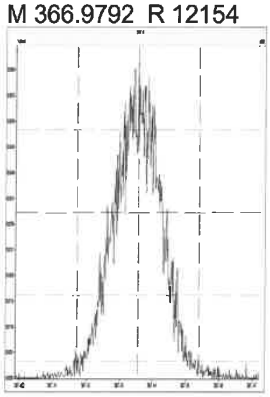

M 380.9760 R 11236

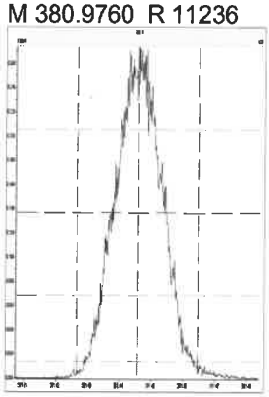

M 392.9760 R 11765

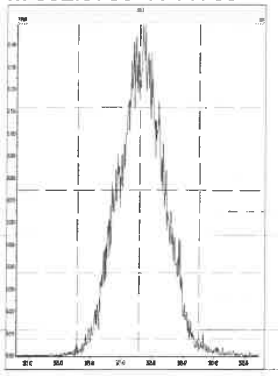

M 404.9760 R 12452

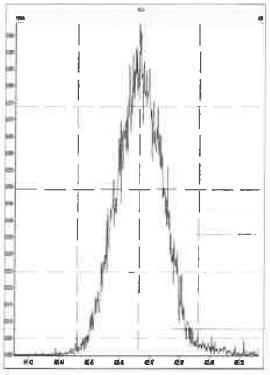

M 416.9760 R 12315

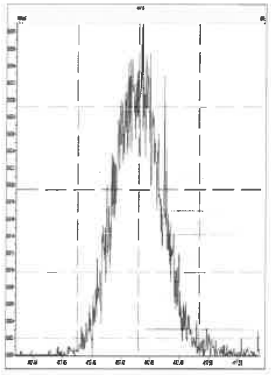

M 318.9792 R 11793

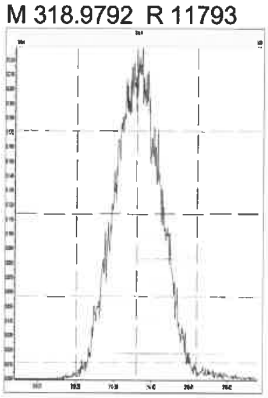

M 330.9792 R 11683

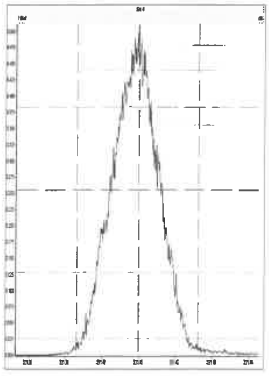

M 342.9792 R 11655

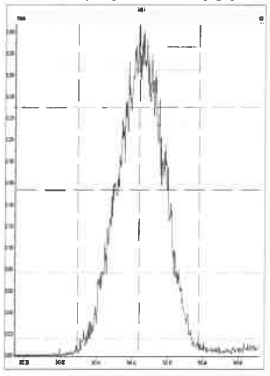

M 354.9792 R 11737

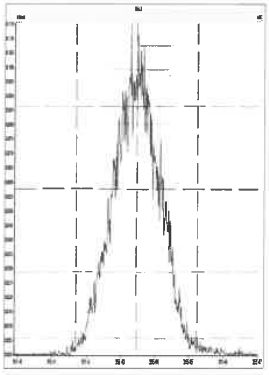

M 366.9792 R 12953

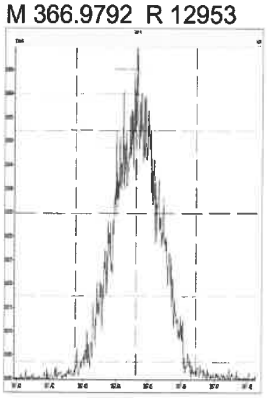

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M 380.9760 R 11709

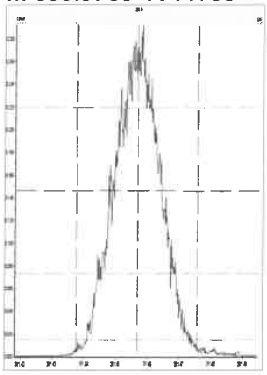

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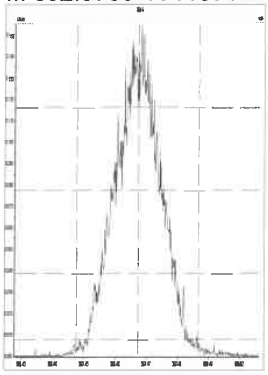

M 404.9760 R 12122

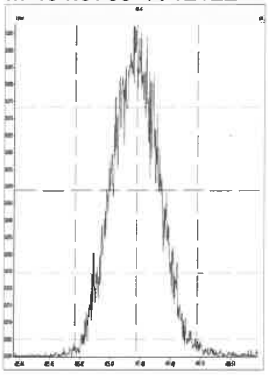

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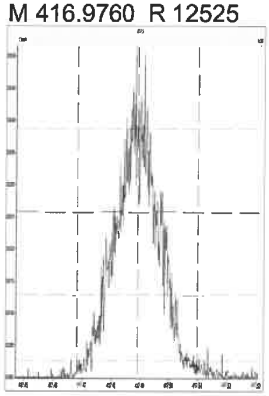

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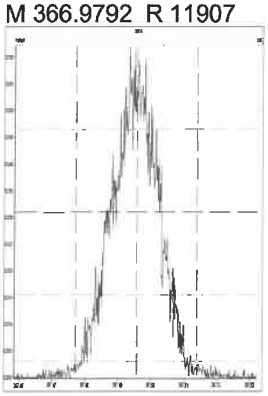

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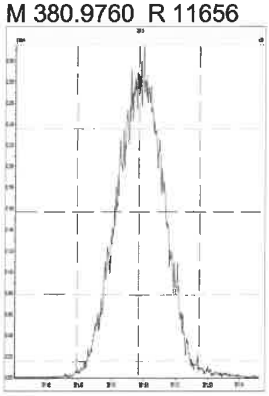

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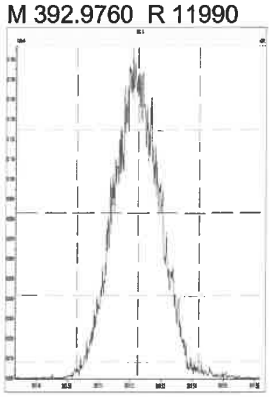

M 404.9760 R 11933

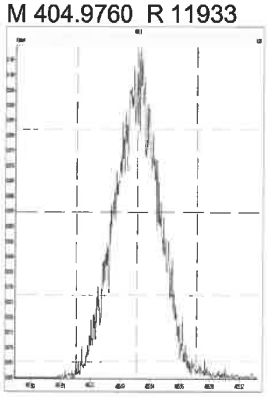

M 416.9760 R 12567

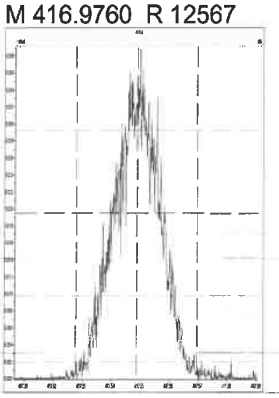

M 430.9728 R 11765

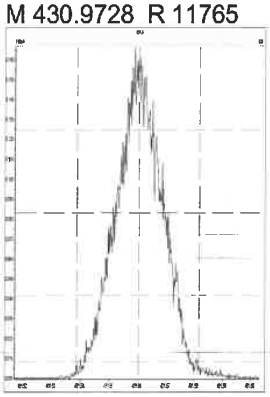

M 442.9728 R 12165

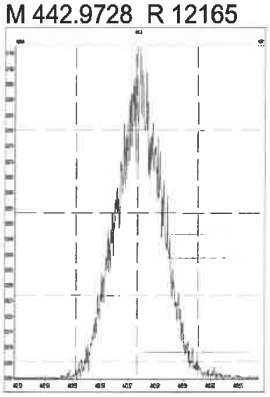

M 454.9728 R 11971

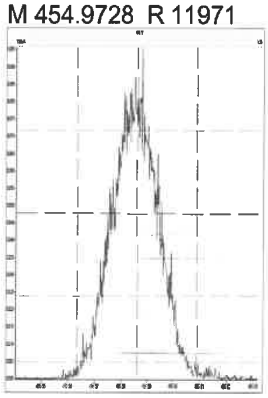

M 380.9760 R 11772

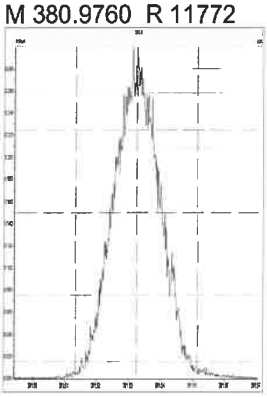

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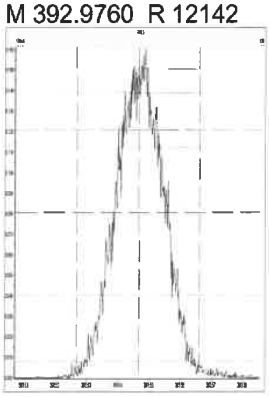

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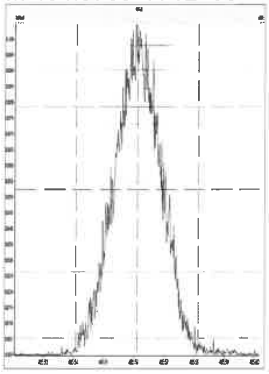

M 416.9760 R 12470

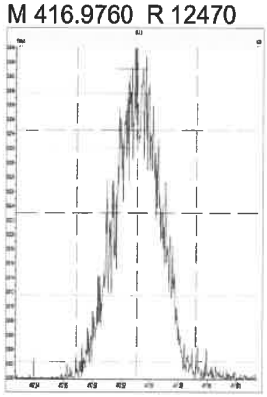

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M 430.9728_R 11682

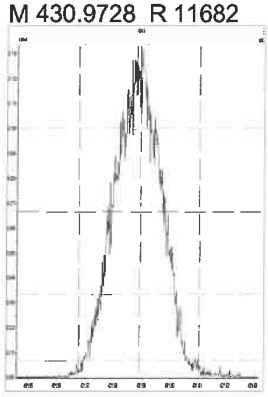

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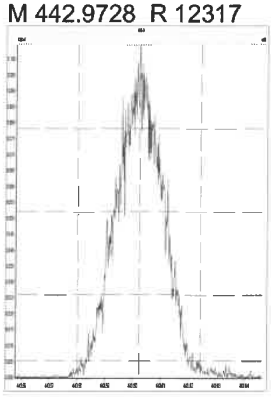

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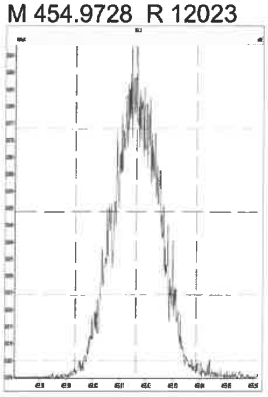

M 466.9728_R 12574

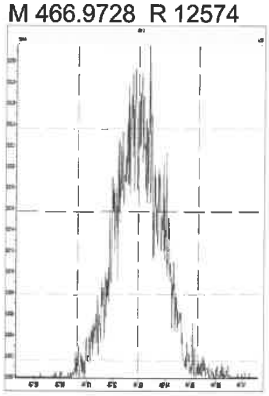

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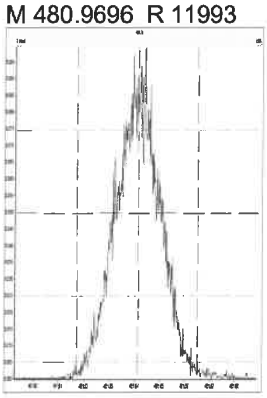

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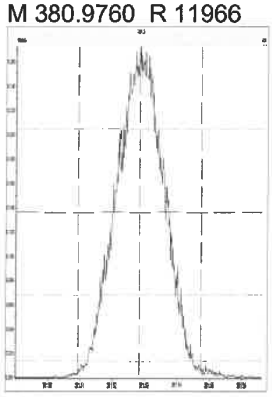

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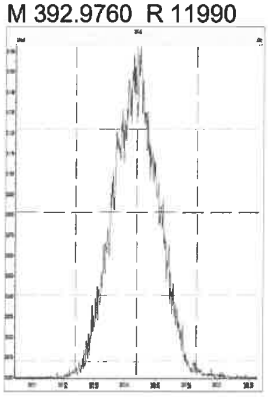

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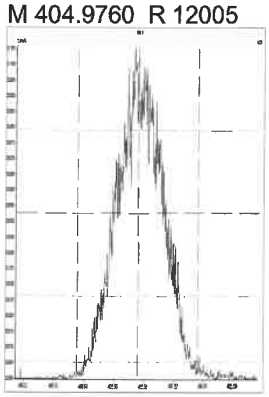

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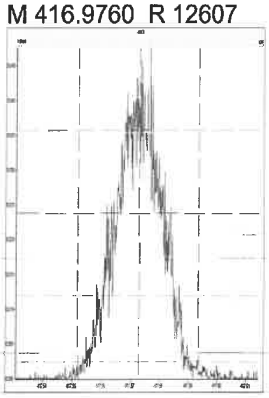

M 430.9728_R 11852

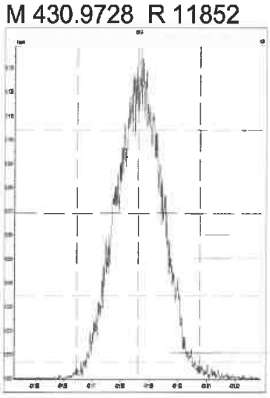

M 442.9728_R 12468

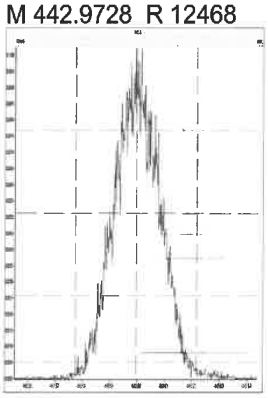

M 454.9728_R 11711

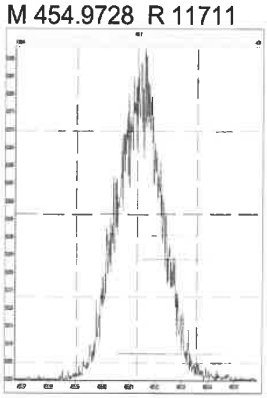

M 466.9728_R 12782

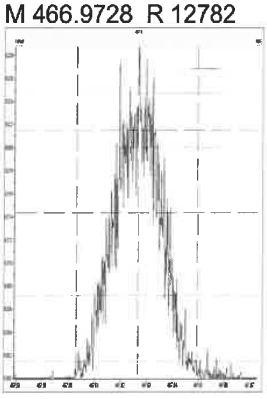

M 480.9696_R 12019

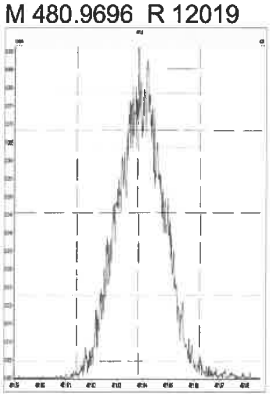

M 492.9696_R 12345

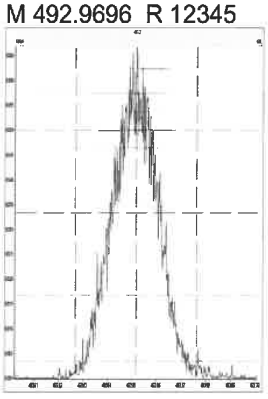

M 504.9696_R 11934

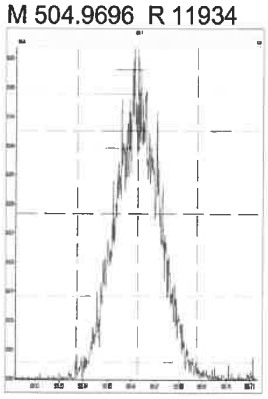

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M 516.9697 R 12181

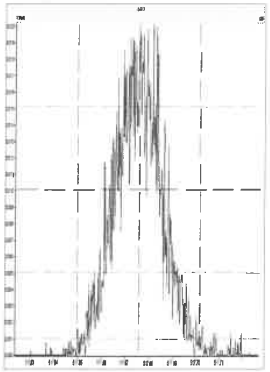

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 10:23:18 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521 CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:07:33 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 09:53:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	95426706	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	149558042	0.77	1.6249	96.5	96.5	0.1278	0.1278	96.45	
2,3,7,8-TCDF	17.114	15442033	0.76	1.0239	10.1	10.1	0.0119	0.0119	101	
A Non-2,3,7,8-sub-TCDF	17.076						0.0119	0.0119		n
S Total TCDF					10.1	10.1	0.0119	0.0119		
D 13C-2,3,7,8-TCDD	17.794	86917847	0.80	0.8993	101.3	101.3	0.1056	0.1056	101	
2,3,7,8-TCDD	17.809	10985356	0.77	1.2541	10.1	10.1	0.0146	0.0146	101	
$ 37Cl4-2,3,7,8-TCDD	17.809	11292579		1.1071	10.7	10.7	0.0131	0.0131	107	
A Non-2,3,7,8-sub-TCDD	17.537						0.0146	0.0146		
S Total TCDD					10.1	10.1	0.0146	0.0146		
D 13C-1,2,3,7,8-PeCDF	22.020	116756186	1.57	1.2101	101.1	101.1	0.1265	0.1265	101	
1,2,3,7,8-PeCDF	22.047	62539011	1.59	1.0611	50.5	50.5	0.0855	0.0855	101	
D 13C-2,3,4,7,8-PeCDF	23.343	120116302	1.55	1.2395	101.6	101.6	0.1235	0.1235	102	
2,3,4,7,8-PeCDF	23.370	61838250	1.60	1.0184	50.6	50.6	0.0923	0.0923	101	
A F1 PeCDFs	19.851						0.009352	0.009352		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0888	0.0888		n
S Total PeCDF					101.0	101.0	0.0889	0.0889		
D 13C-1,2,3,7,8-PeCDD	24.052	77848987	1.59	0.7612	107.2	107.2	0.0785	0.0785	107	
1,2,3,7,8-PeCDD	24.079	40474436	1.58	1.0484	49.6	49.6	0.0357	0.0357	99.18	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0357	0.0357		
S Total PeCDD					49.6	49.6	0.0357	0.0357		
D 13C-1,2,3,4,7,8-HxCDF	30.186	99336191	0.53	1.0837	105.5	105.5	0.1987	0.1987	105	
1,2,3,4,7,8-HxCDF	30.213	52900636	1.23	1.0851	49.1	49.1	0.1545	0.1545	98.15	
D 13C-1,2,3,6,7,8-HxCDF	30.399	96483405	0.51	1.1279	98.4	98.4	0.1909	0.1909	98.42	
1,2,3,6,7,8-HxCDF	30.412	54659951	1.21	1.1260	50.3	50.3	0.1450	0.1450	101	
D 13C-2,3,4,6,7,8-HxCDF	31.291	91593699	0.52	1.0637	99.1	99.1	0.2024	0.2024	99.07	
2,3,4,6,7,8-HxCDF	31.317	53318614	1.22	1.1675	49.9	49.9	0.1090	0.1090	99.72	
D 13C-1,2,3,7,8,9-HxCDF	32.143	83790666	0.51	0.9676	99.6	99.6	0.2225	0.2225	99.64	
1,2,3,7,8,9-HxCDF	32.156	49172613	1.22	1.1664	50.3	50.3	0.1004	0.1004	101	
A Non-2,3,7,8-sub-HxCDF	30.338						0.1236	0.1236		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					199.6	199.6	0.1272	0.1272		
* 13C-1,2,3,7,8,9-HxCDD	31.956	86914319	1.20	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.504	68569558	1.23	0.7334	107.6	107.6	0.1931	0.1931	108	
1,2,3,4,7,8-HxCDD	31.517	37045049	1.27	1.0640	50.8	50.8	0.1077	0.1077	102	
D 13C-1,2,3,6,7,8-HxCDD	31.610	73508450	1.21	0.8802	96.1	96.1	0.1609	0.1609	96.09	
1,2,3,6,7,8-HxCDD	31.624	38037775	1.27	1.0001	51.7	51.7	0.1038	0.1038	103	
1,2,3,7,8,9-HxCDD	31.969	41264327	1.28	1.1325	51.3	51.3	0.0962	0.0962	103	
A Non-2,3,7,8-sub-HxCDD	30.525						0.1023	0.1023		
S Total HxCDD					153.8	153.8	0.1026	0.1026		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	61903063	0.45	0.7730	92.1	92.1	0.7607	0.7607	92.14	
1,2,3,4,6,7,8-HpCDF	33.615	46189366	1.04	1.4413	51.8	51.8	0.3832	0.3832	104	
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	55466008	0.44	0.7008	91.1	91.1	0.8391	0.8391	91.06	
1,2,3,4,7,8,9-HpCDF	34.685	37045047	1.05	1.3174	50.7	50.7	0.5046	0.5046	101	
A Non-2,3,7,8-sub-HpCDF	34.150						0.4374	0.4374		
S Total HpCDF					102.5	102.5	0.4439	0.4439		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	54097651	1.03	0.6472	96.2	96.2	0.3643	0.3643	96.17	
1,2,3,4,6,7,8-HpCDD	34.405	30069728	1.04	1.0943	50.8	50.8	0.1121	0.1121	102	
A Non-2,3,7,8-sub-HpCDD	34.223						0.1121	0.1121		
S Total HpCDD					50.8	50.8	0.1121	0.1121		
D 13C-OCDD	36.701	78890798	0.88	0.4472	203.0	203.0	0.1367	0.1367	101	
OCDF	36.797	56664152	0.90	1.4382	99.9	99.9	0.0518	0.0518	99.89	
OCDD	36.713	44448060	0.90	1.1070	101.8	101.8	0.0691	0.0691	102	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 10:23:18 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521 CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:07:33 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 09:53:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		42636469	10783942	4601	11502	2344		
333.9339	17.598	17.598	0		52790237	13523329	4632	11580	2920	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	0.972	64979120	17289325	11211	28027	1542		
317.9389	17.099	17.099	0	0.972	84578922	22501260	8979	22447	2506	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	6673154	1784472	819	2047	2179		
305.8987	17.114	17.114	0	1.001	8768879	2378418	1117	2792	2129	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.751	17.076	-19	0.980	28277	7073	819	2047	9		
305.8987	16.736	17.076	-20	0.979	33568	9535	1117	2792	9	0.84(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.011	38757049	9780640	4601	11502	2126		
333.9339	17.794	17.794	0	1.011	48160798	12185649	4632	11580	2631	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	4796214	1216842	916	2290	1328		
321.8936	17.809	17.809	0	1.001	6189142	1616489	696	1740	2323	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	11292579	2874252	1415	3537	2031		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.537						916	2290			
321.8936	17.537						696	1740			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	71302934	13323114	9020	22550	1477		
353.8970	22.020	22.020	0	1.251	45453252	8492167	5867	14667	1447	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.047	22.047	0	1.001	38375584	7269250	4572	11430	1590		
341.8567	22.047	22.047	0	1.001	24163427	4582774	3346	8365	1370	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.326	73058694	12781407	9020	22550	1417		
353.8970	23.343	23.343	0	1.326	47057608	8285675	5867	14667	1412	1.55(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370	23.370	0	1.001	38046727	6684330	4572	11430	1462		
341.8567	23.370	23.370	0	1.001	23791523	4200844	3346	8365	1255	1.60(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						225	562			
341.8567	19.851						609	1522			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.566	23.067	-30	1.025	288822	45293	4572	11430	10		
341.8567	22.566	23.067	-30	1.025	210196	29709	3346	8365	9	1.37(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.367	47825839	7773639	3395	8487	2290		
369.8919	24.052	24.052	0	1.367	30023148	4919671	2412	6030	2040	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079	24.079	0	1.001	24767137	4107038	1194	2985	3440		
357.8516	24.079	24.079	0	1.001	15707299	2563400	707	1767	3626	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1194	2985			
357.8516	23.696						707	1767			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.186	30.186	0	0.945	34233266	6021161	7305	18262	824		
385.8610	30.186	30.186	0	0.945	65102925	11323547	13504	33760	839	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.213	30.213	0	1.001	29168092	5093723	6383	15957	798		
375.8178	30.213	30.213	0	1.001	23732544	4088073	5250	13125	779	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	32782818	6104406	7305	18262	836		
385.8610	30.399	30.399	0	0.951	63700587	11709167	13504	33760	867	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.000	29925349	5641728	6383	15957	884		
375.8178	30.412	30.412	0	1.000	24734602	4662932	5250	13125	888	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.979	31290006	7903080	7305	18262	1082		
385.8610	31.291	31.291	0	0.979	60303693	14959211	13504	33760	1108	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317	31.317	0	1.001	29303955	7574478	6383	15957	1187		
375.8178	31.317	31.317	0	1.001	24014659	6161019	5250	13125	1174	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.143	0	1.006	28350597	8369834	7305	18262	1146		
385.8610	32.143	32.143	0	1.006	55440069	16459604	13504	33760	1219	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.156	32.156	0	1.000	26995736	8080479	6383	15957	1266		
375.8178	32.156	32.156	0	1.000	22176877	6632348	5250	13125	1263	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.338						6383	15957			
375.8178	30.338						5250	13125			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		47393034	13105507	8114	20285	1615		
403.8529	31.956	31.956	0		39521285	11057140	5572	13930	1984	1.20(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.504	31.504	0	0.986	37757708	10075244	8114	20285	1242		
403.8529	31.504	31.504	0	0.986	30811850	8262027	5572	13930	1483	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.517	31.517	0	1.000	20757104	5832636	4864	12160	1199		
391.8127	31.517	31.517	0	1.000	16287945	4484323	3543	8857	1266	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	40252330	11084473	8114	20285	1366		
403.8529	31.610	31.610	0	0.989	33256120	9155930	5572	13930	1643	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.624	31.624	0	1.000	21259538	5857482	4864	12160	1204		
391.8127	31.624	31.624	0	1.000	16778237	4665965	3543	8857	1317	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.969	31.969	0	1.015	23177969	6599118	4864	12160	1357		
391.8127	31.969	31.969	0	1.015	18086358	5109007	3543	8857	1442	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.525						4864	12160			
391.8127	30.525						3543	8857			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	19122193	7025458	16900	42250	416		
419.8220	33.603	33.603	0	1.052	42780870	15997374	39934	99835	401	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.615	0	1.000	23554347	8851066	24046	60115	368		
409.7789	33.615	33.615	0	1.000	22635019	8606504	26821	67052	321	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.672	0	1.085	16855088	5868781	16900	42250	347		
419.8220	34.672	34.672	0	1.085	38610920	13260503	39934	99835	332	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685	34.685	0	1.000	18976375	6679062	24046	60115	278		
409.7789	34.685	34.685	0	1.000	18068672	6337781	26821	67052	236	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						24046	60115			
409.7789	34.150						26821	67052			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	27397468	9930820	12548	31370	791		
437.8140	34.393	34.393	0	1.076	26700183	9787811	10240	25600	956	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	15298599	5518182	5713	14282	966		
425.7737	34.405	34.405	0	1.000	14771129	5248913	3965	9912	1324	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						5713	14282			
425.7737	34.223						3965	9912			
13C-OCDD											
469.7779	36.701	36.701	0	1.148	36914421	11312043	2832	7080	3994		
471.7750	36.701	36.701	0	1.148	41976377	12923885	3077	7692	4200	0.88(0.76-1.02)	
OCDF											
441.7428	36.797	36.797	0	1.003	26790568	8306782	1686	4215	4927		
443.7399	36.797	36.797	0	1.003	29873584	9434250	1922	4805	4909	0.90(0.76-1.02)	
OCDD											
457.7377	36.713	36.713	0	1.000	21012564	6604645	1431	3577	4615		
459.7348	36.713	36.713	0	1.000	23435496	7392070	2276	5690	3248	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

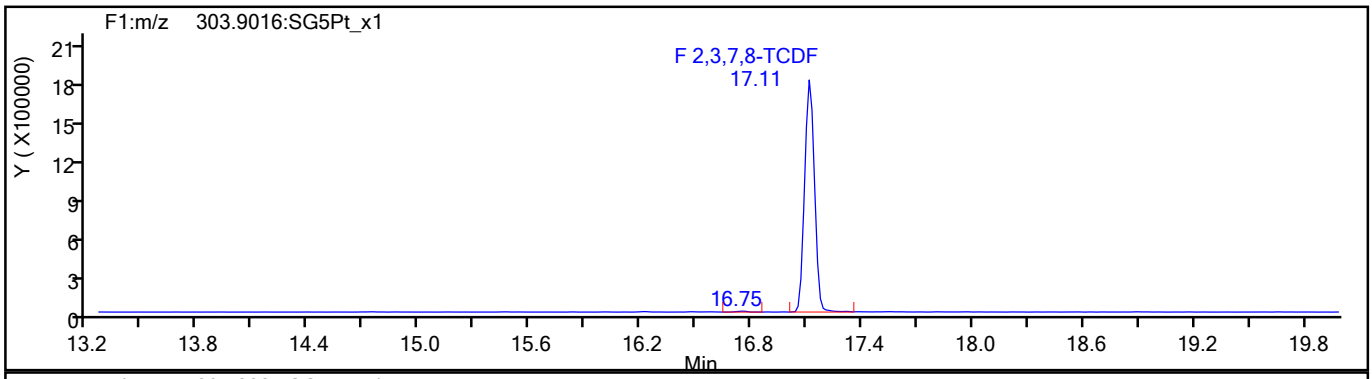

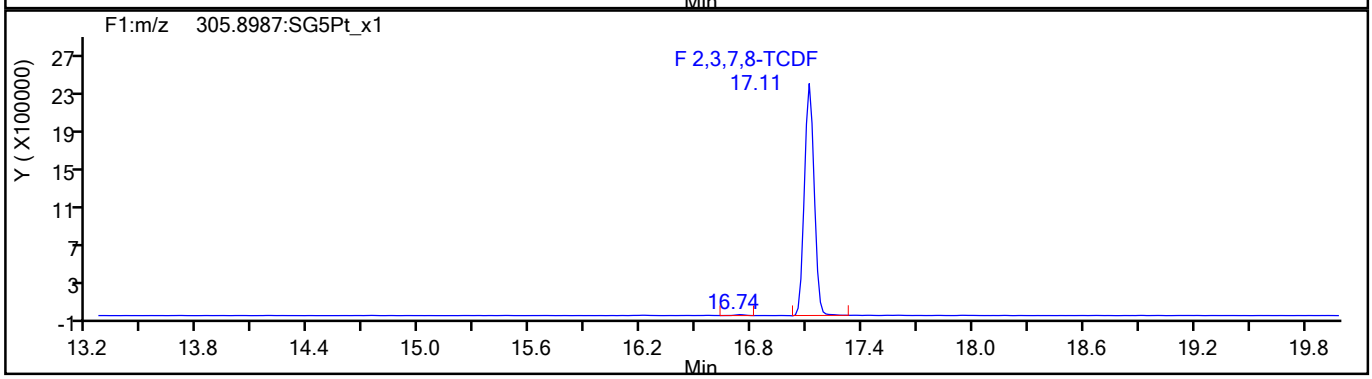

TCDF Standards

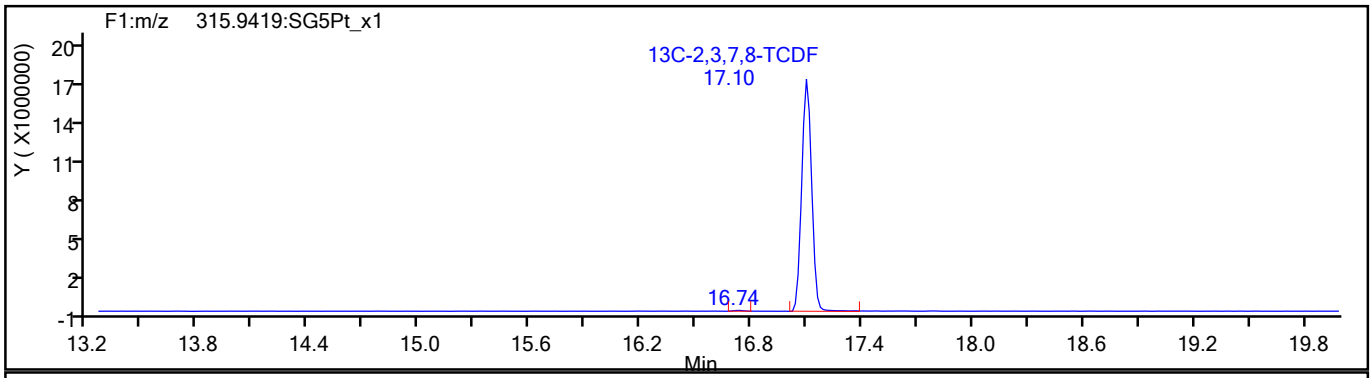

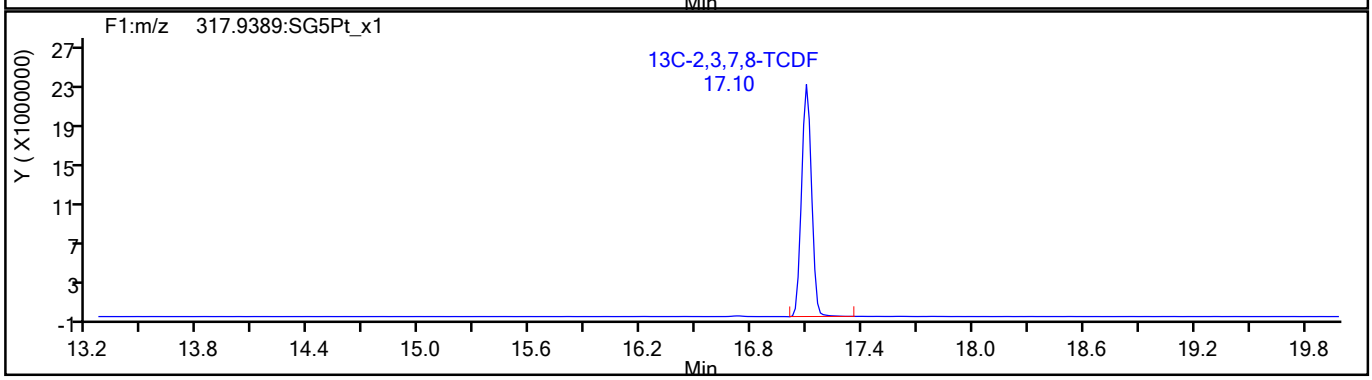

791647

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

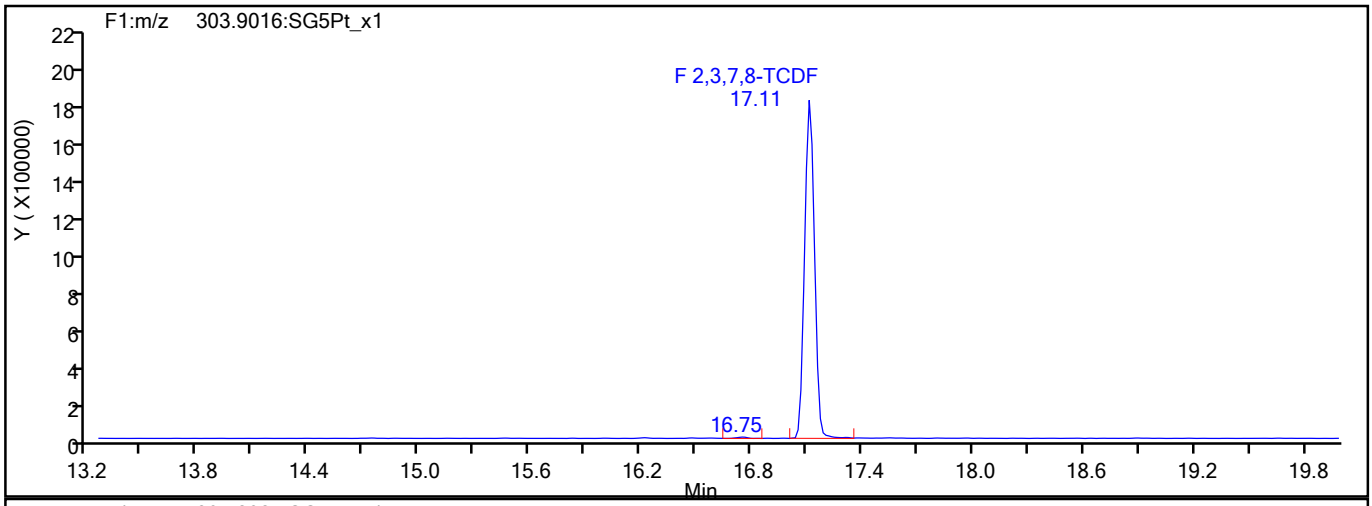

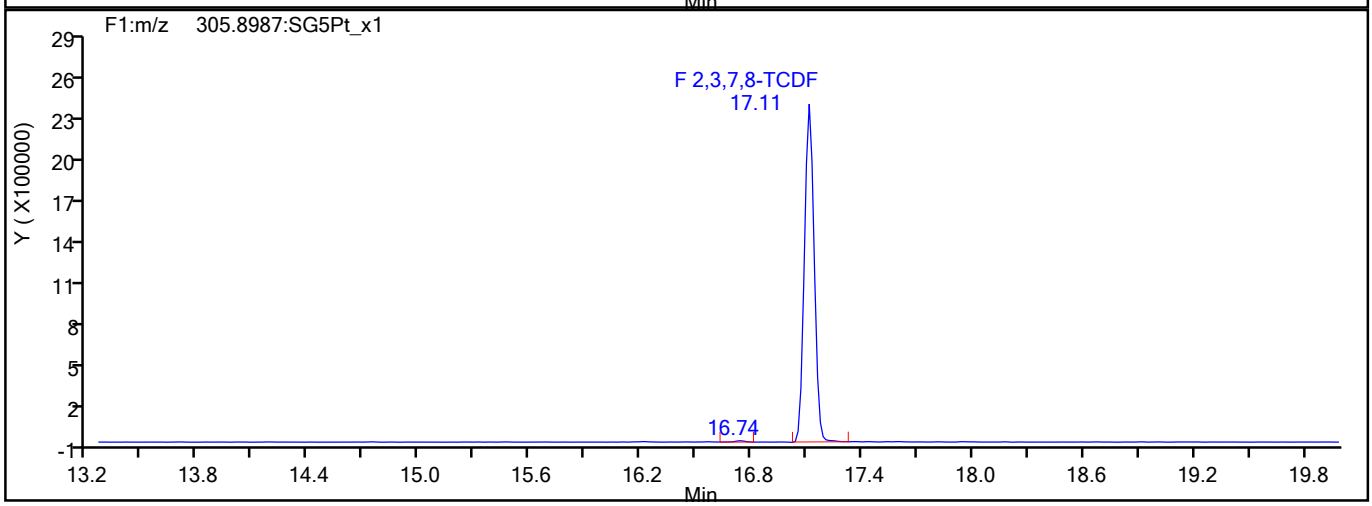

TCDF Interference Mass

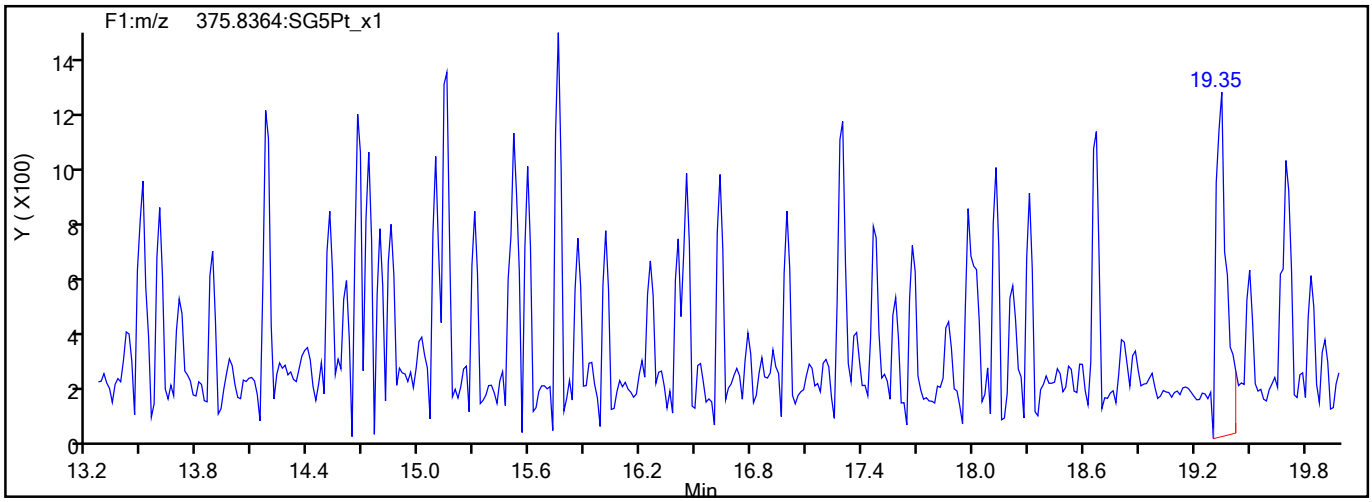

791648

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

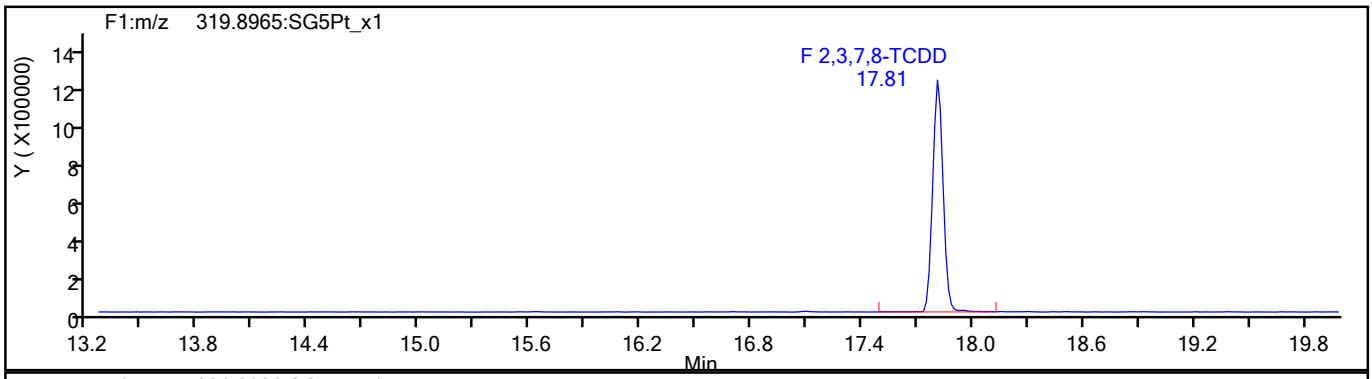

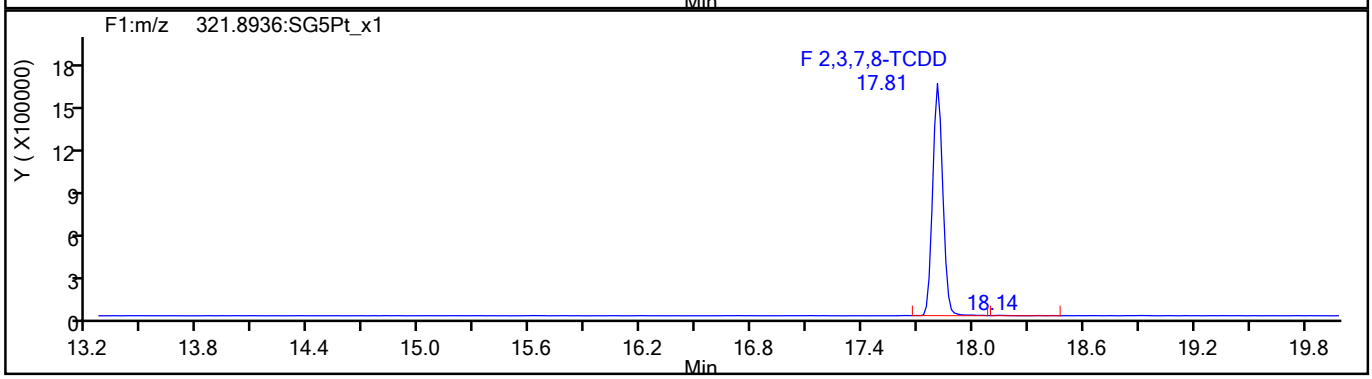

TCDD Standards

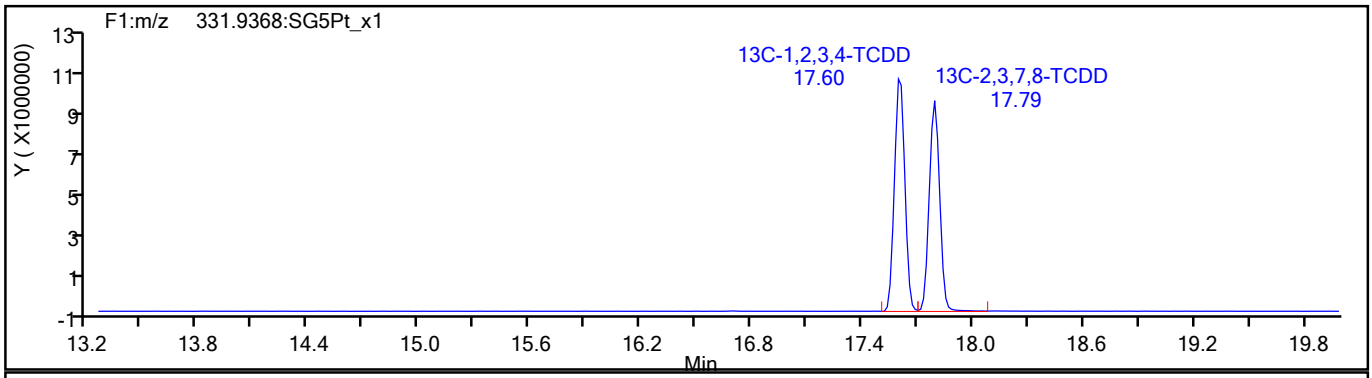

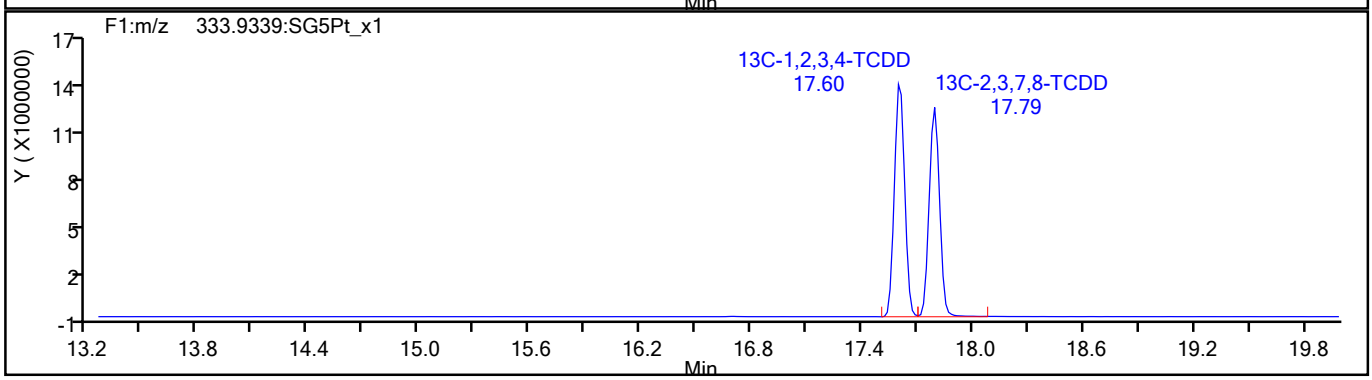

791649

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

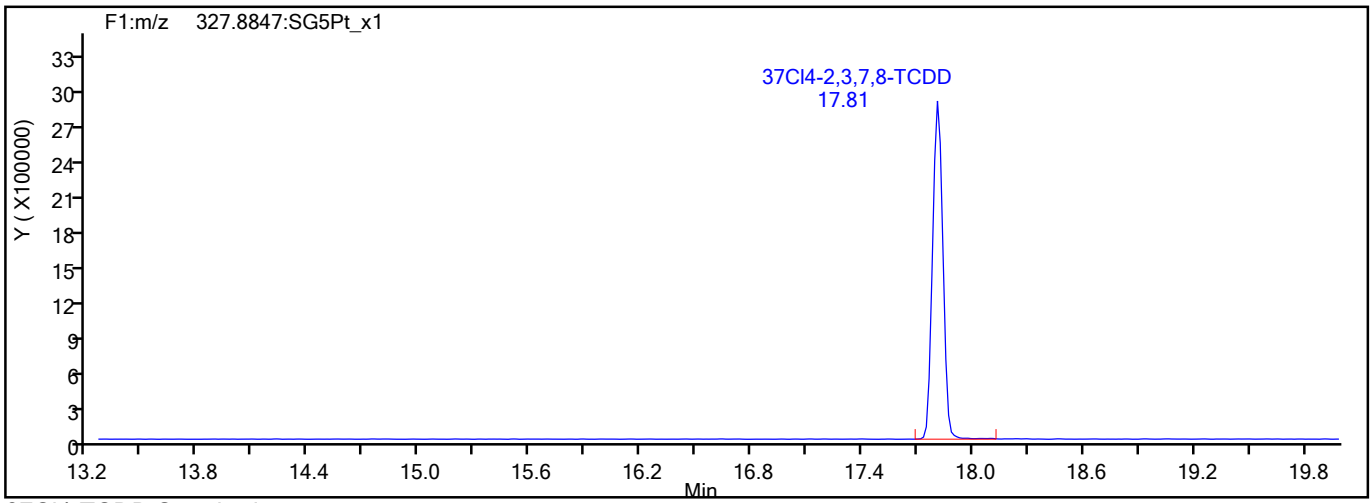

37Cl4-TCDD Standards

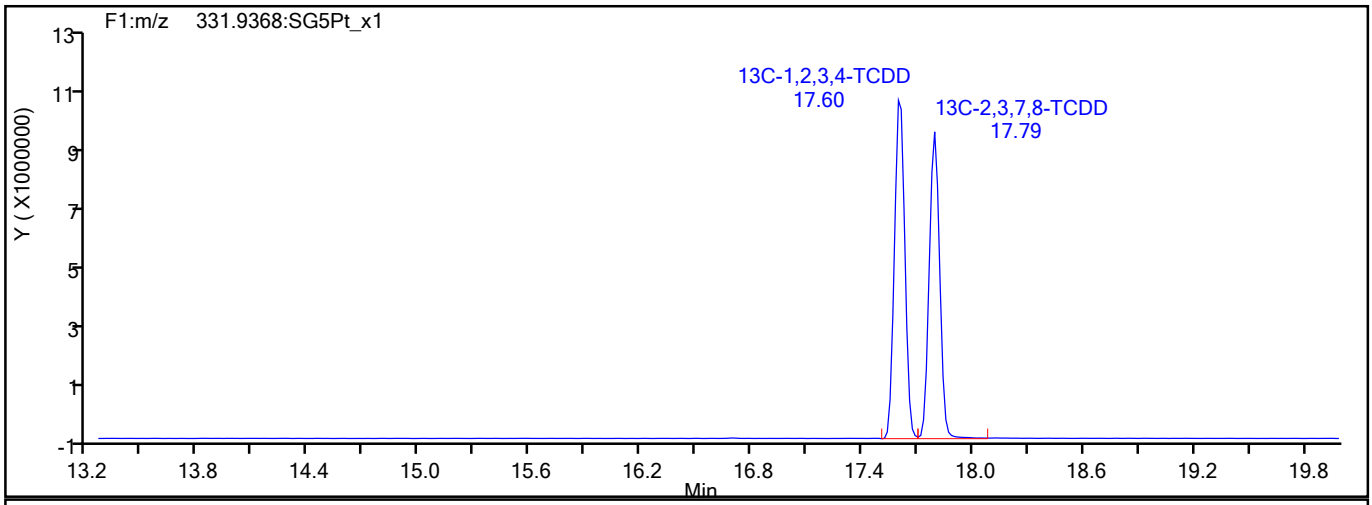

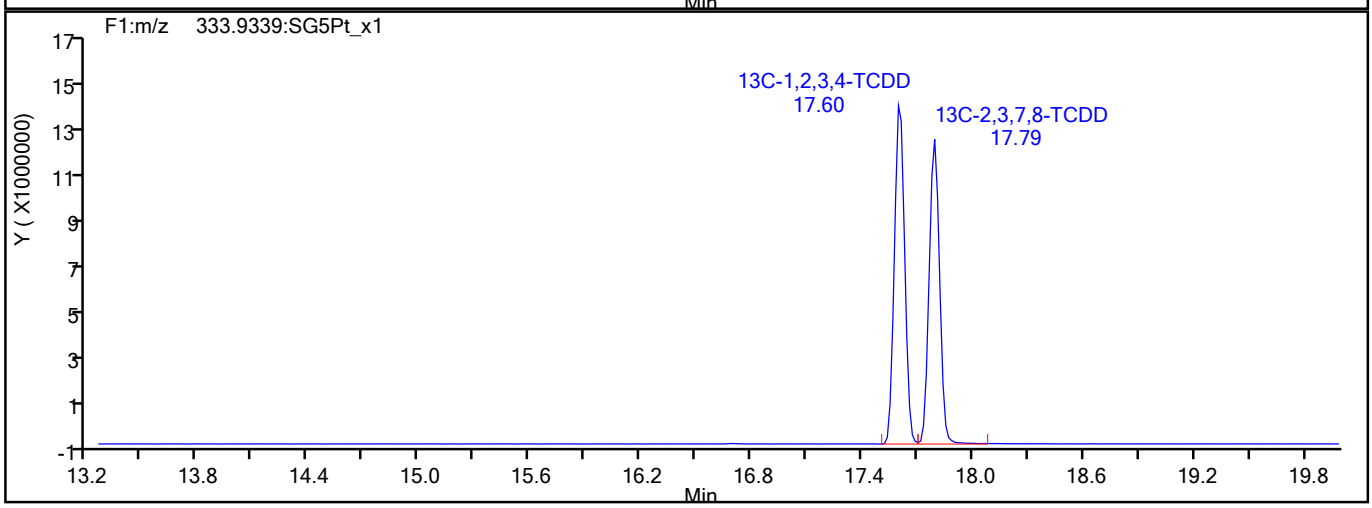

791650

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

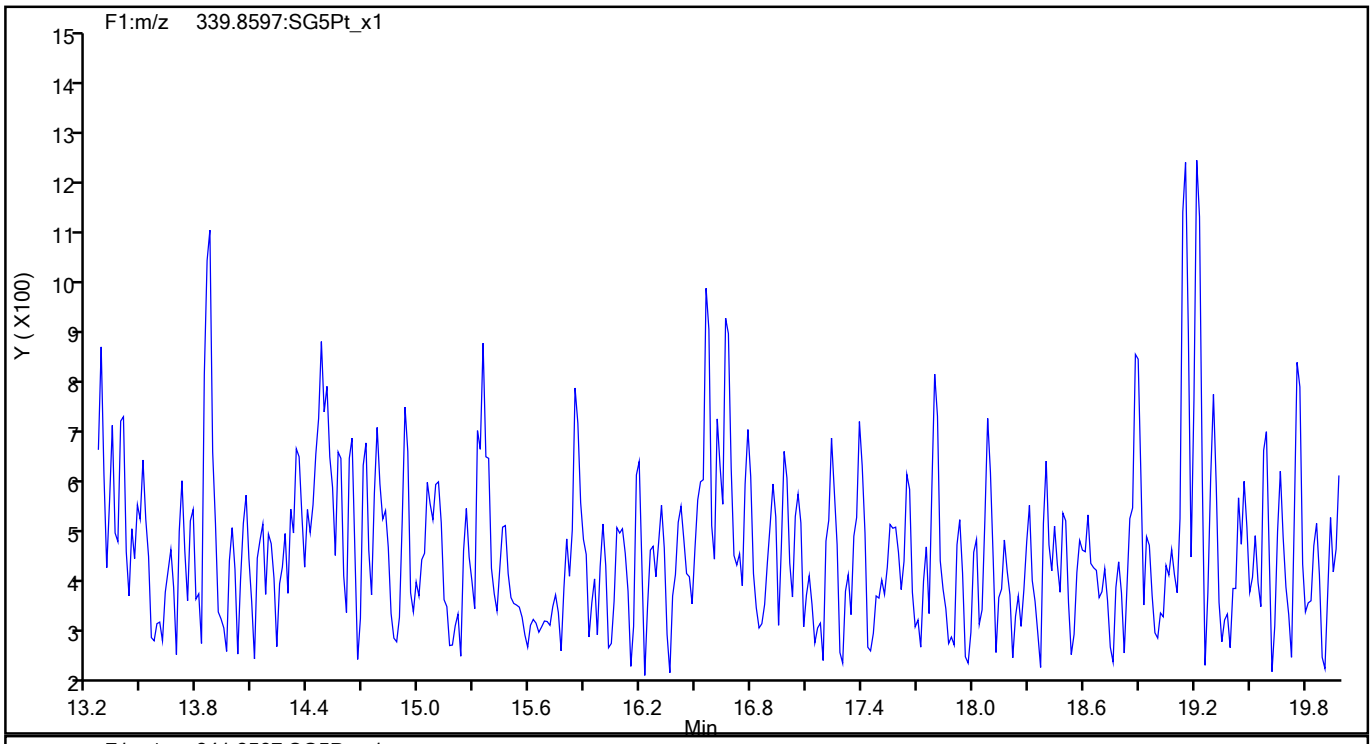

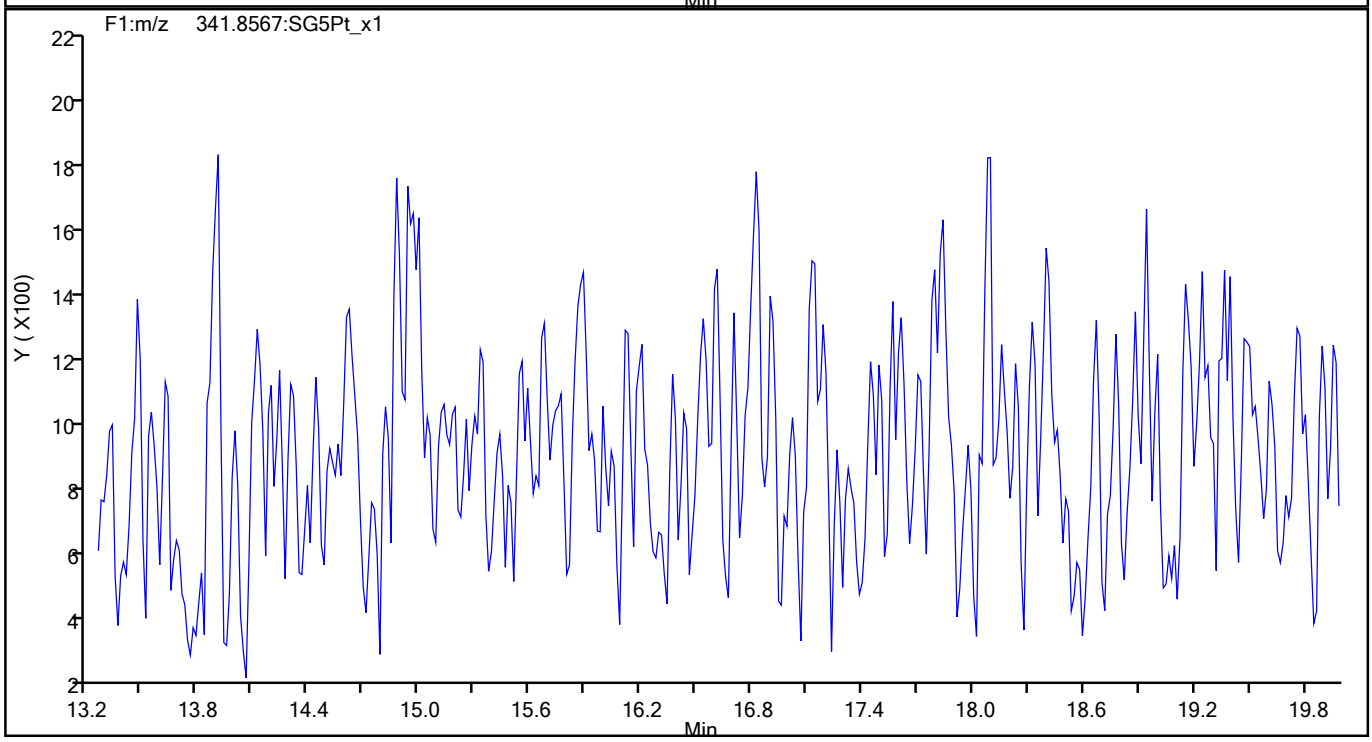

791651

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

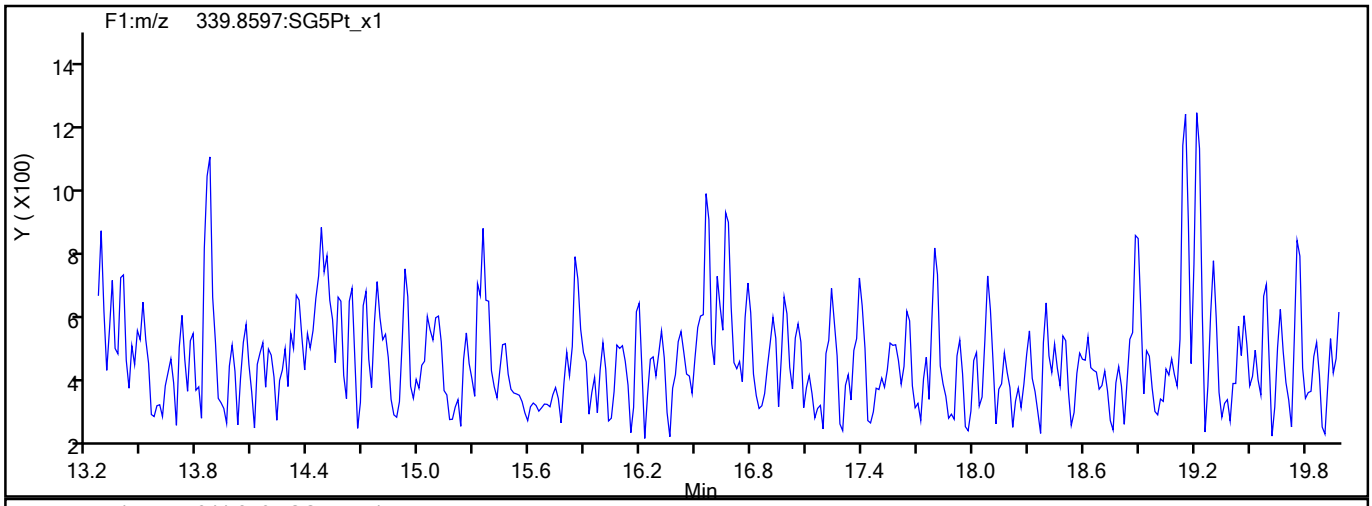

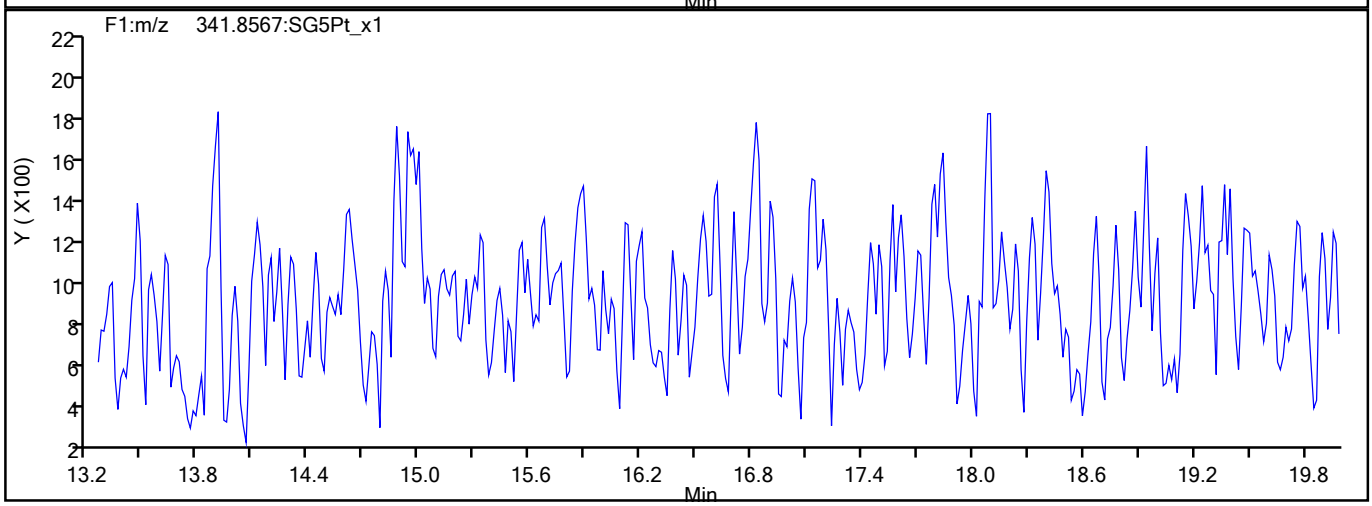

F1 PeCDFs Interference Mass

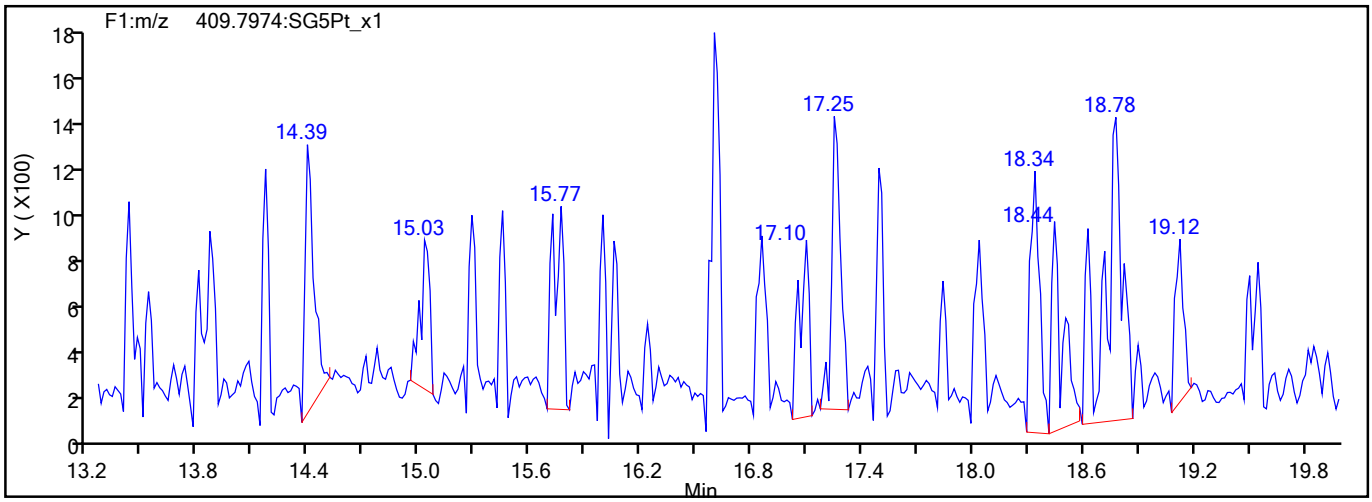

791652

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

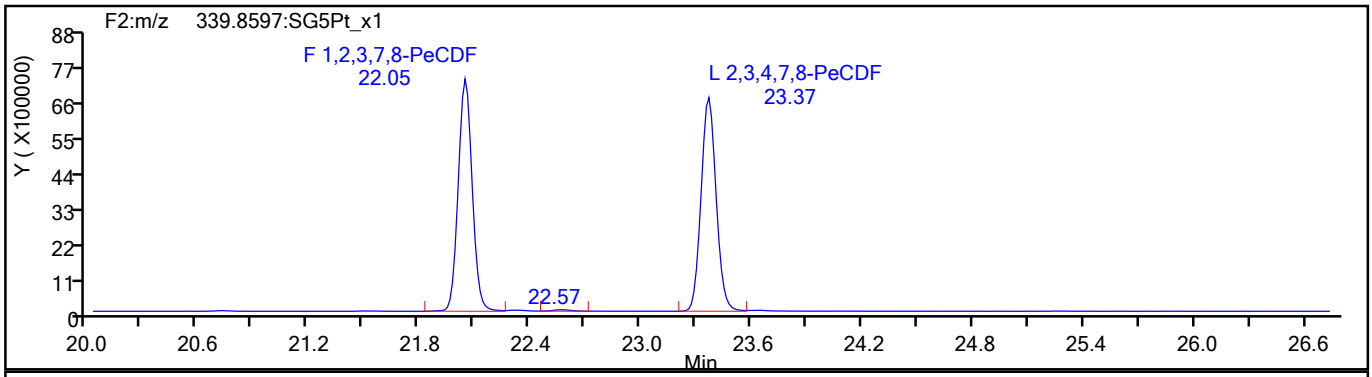

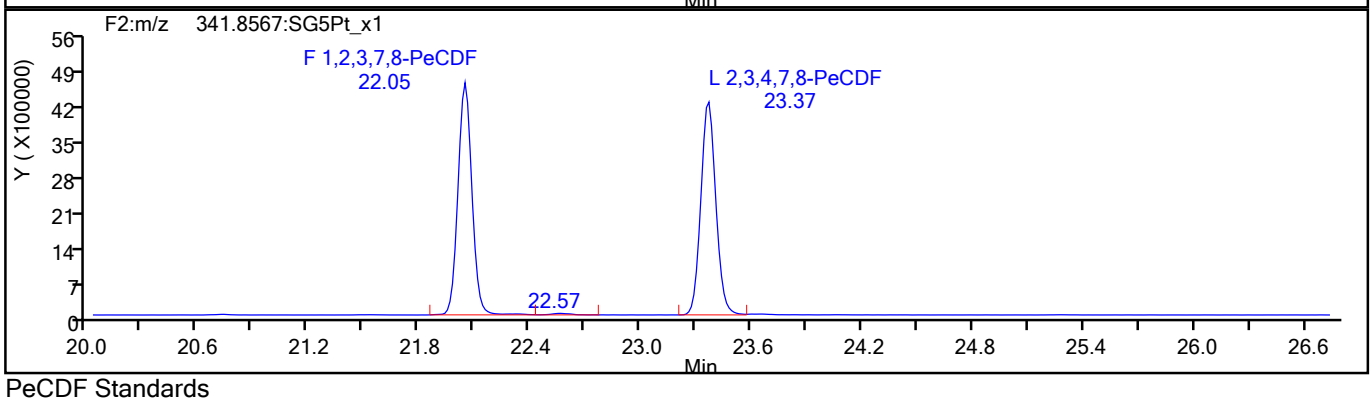

PeCDF Standards

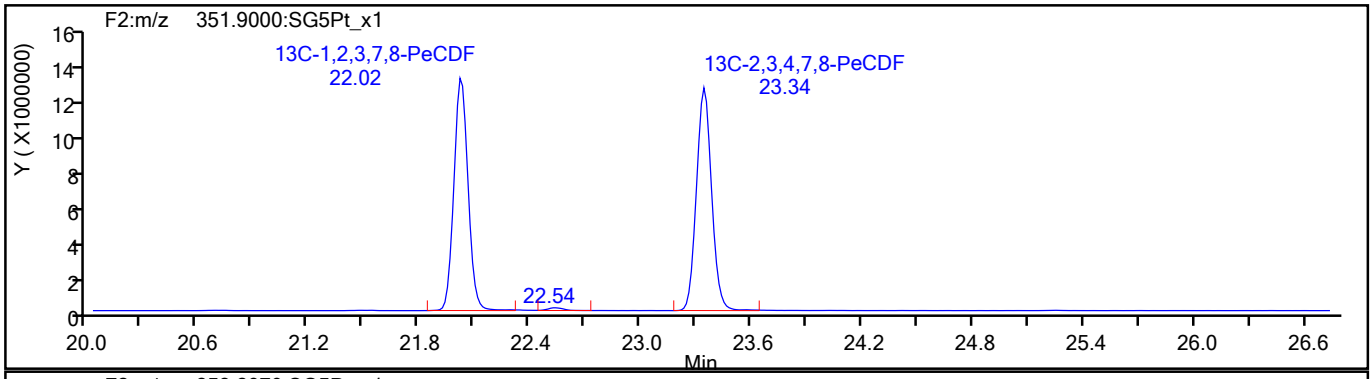

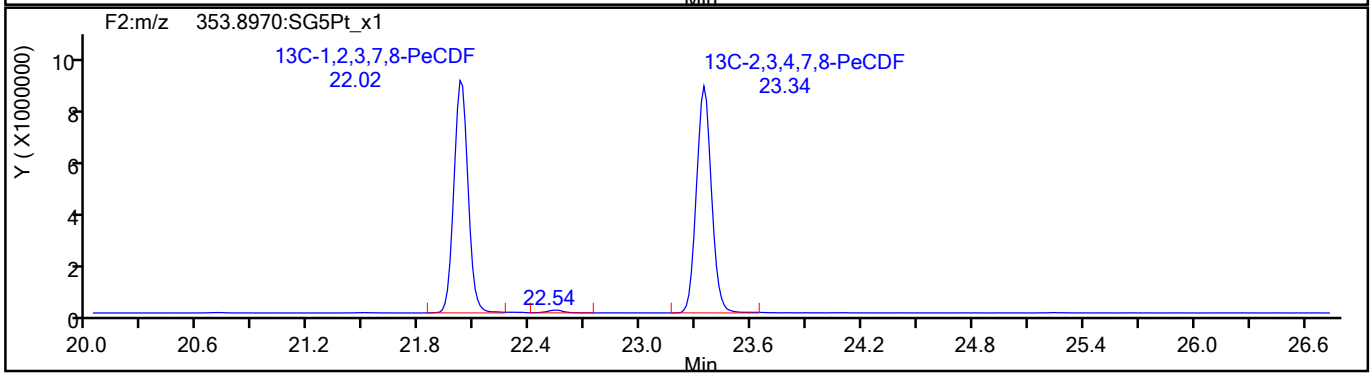

791653

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

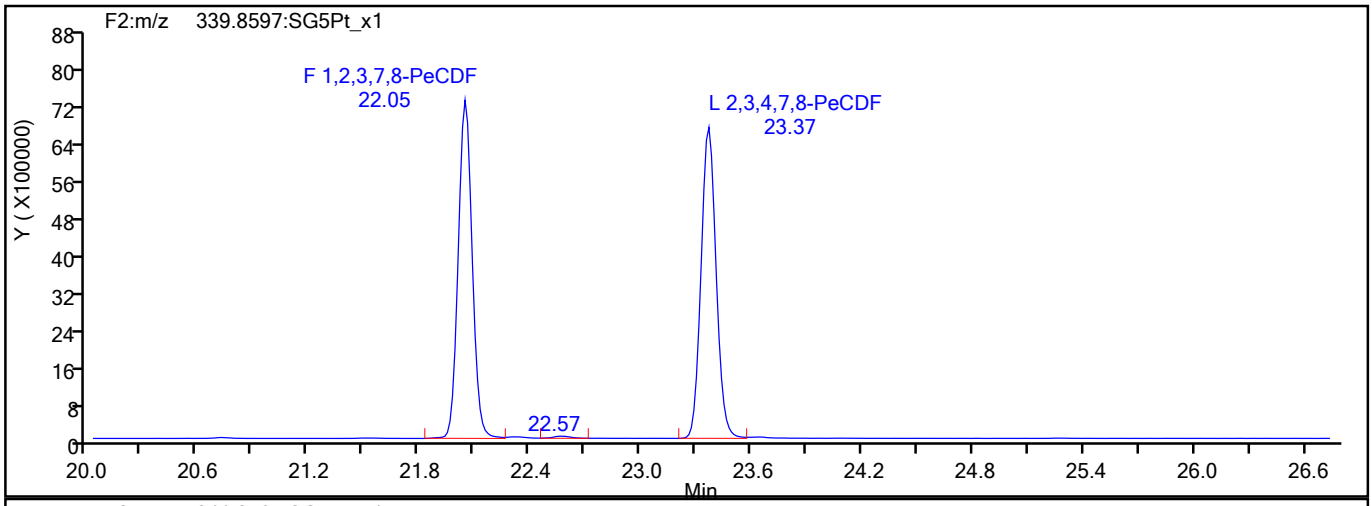

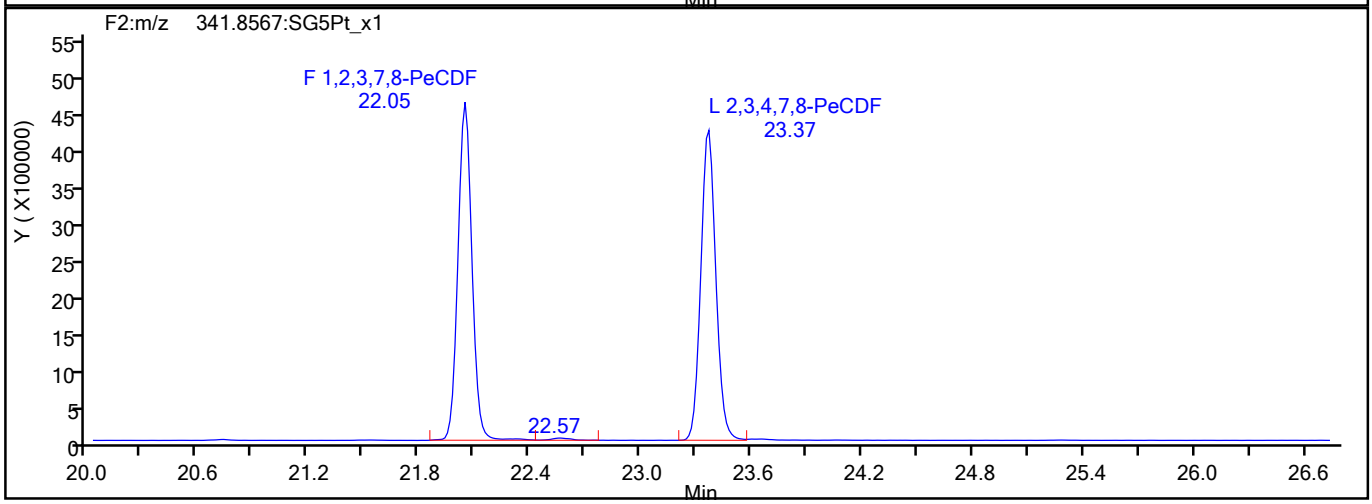

PeCDF Interference Mass

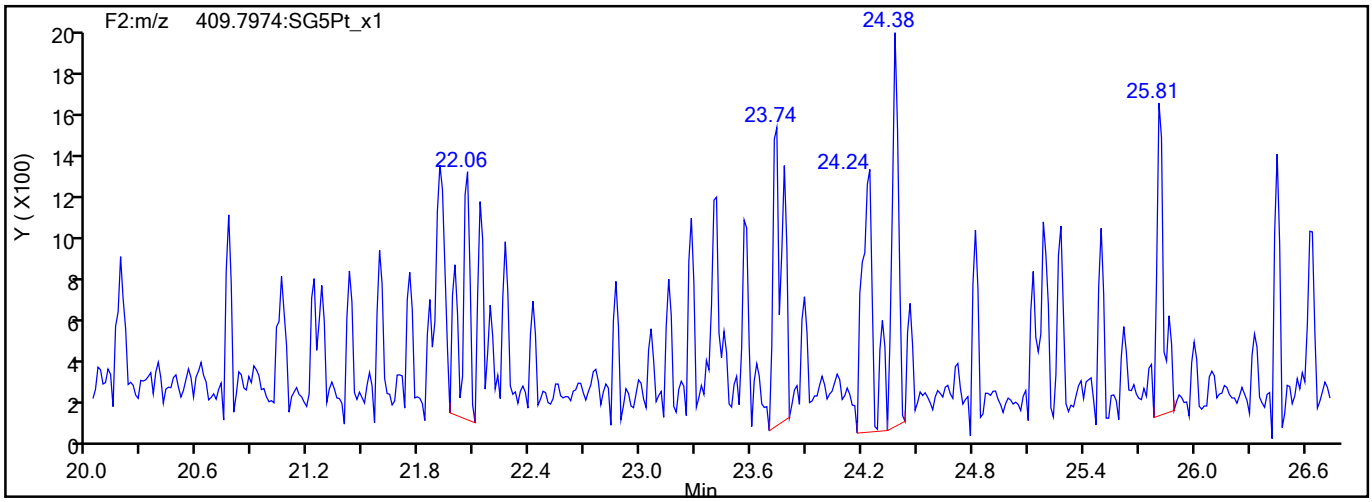

791654

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDD

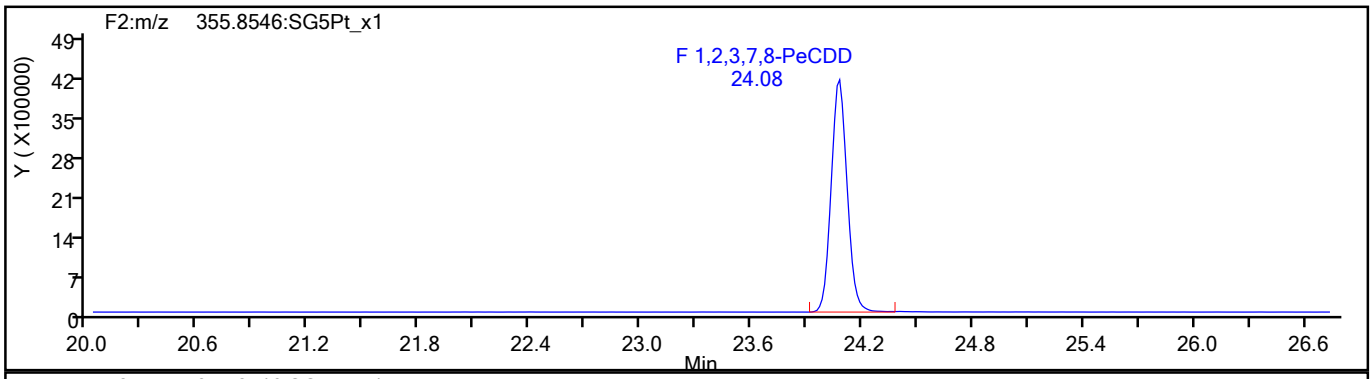

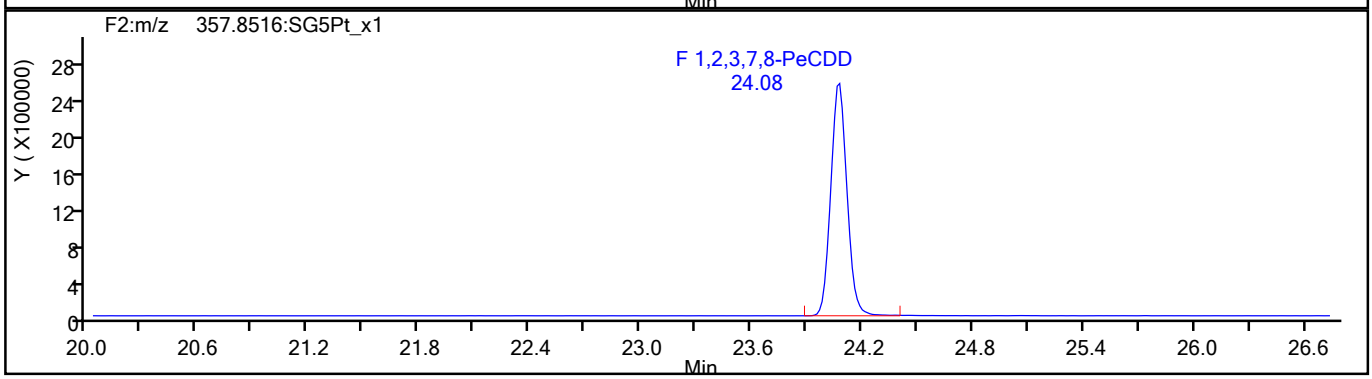

PeCDD Standards

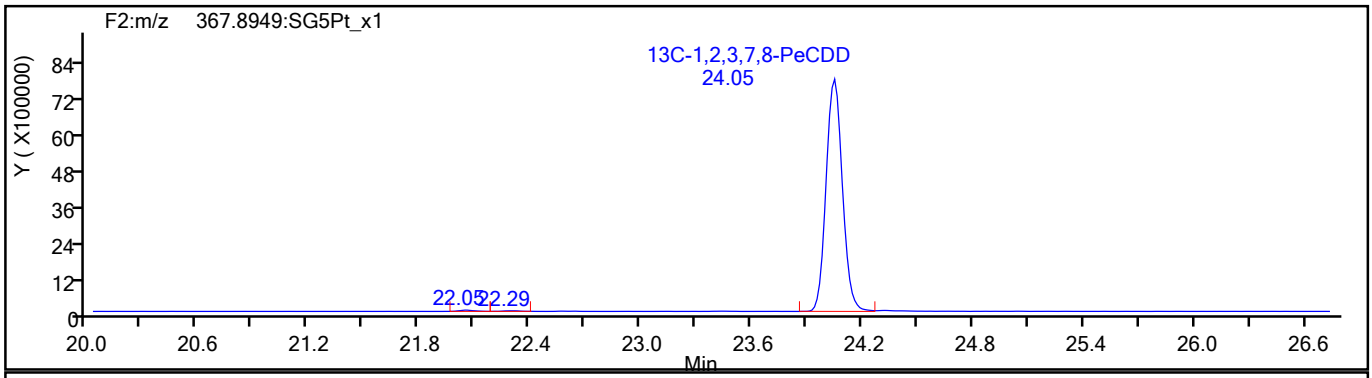

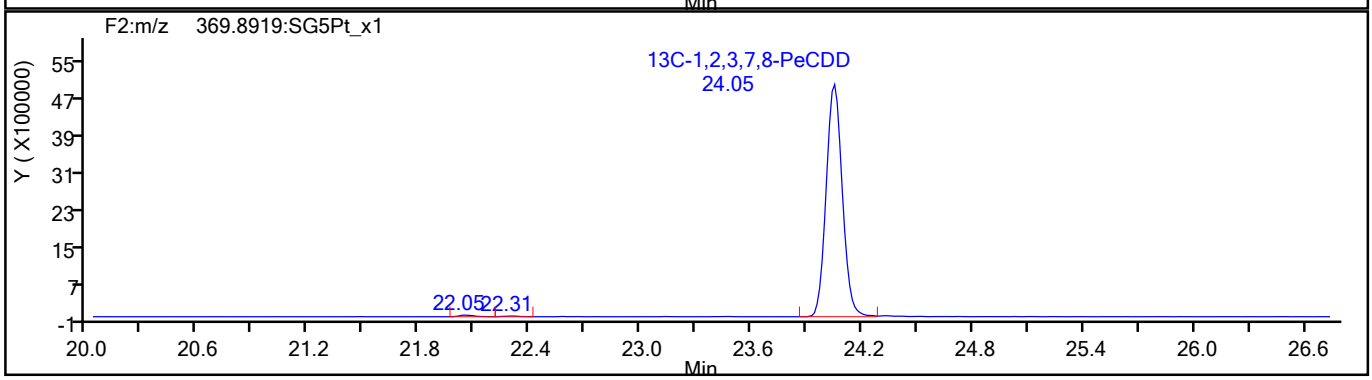

791655

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

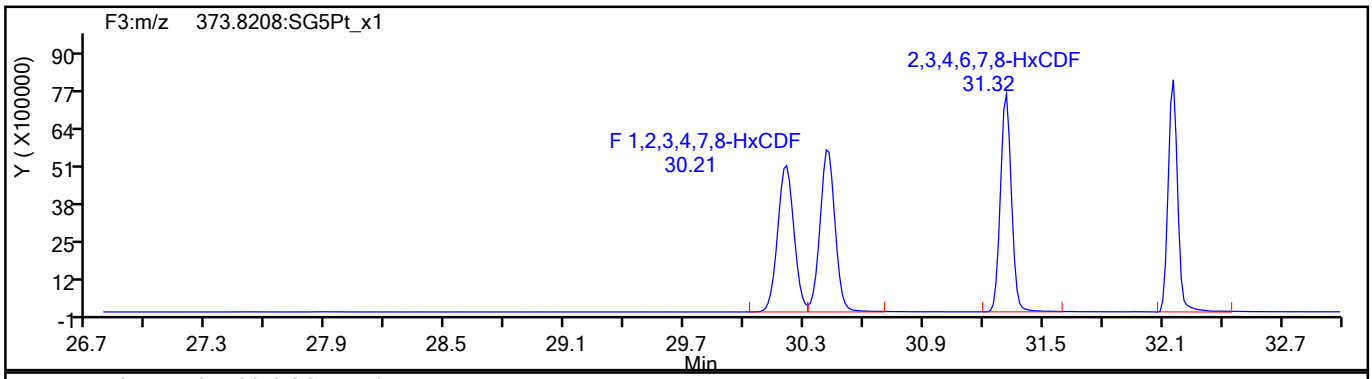

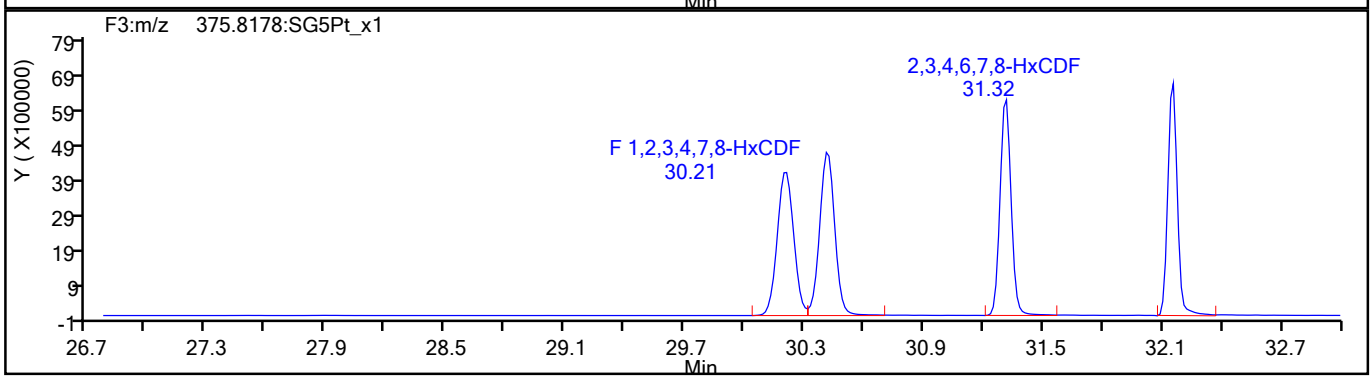

HxCDF Standards

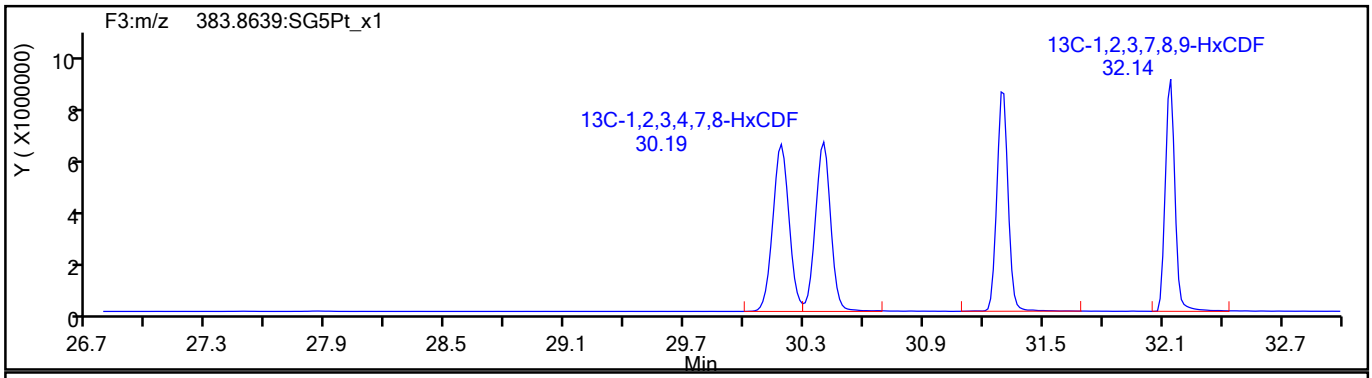

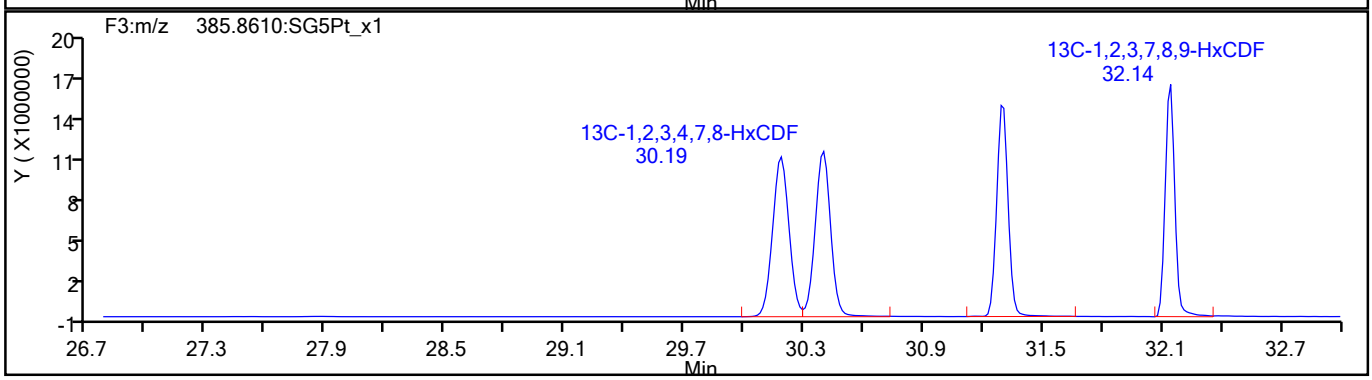

791656

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

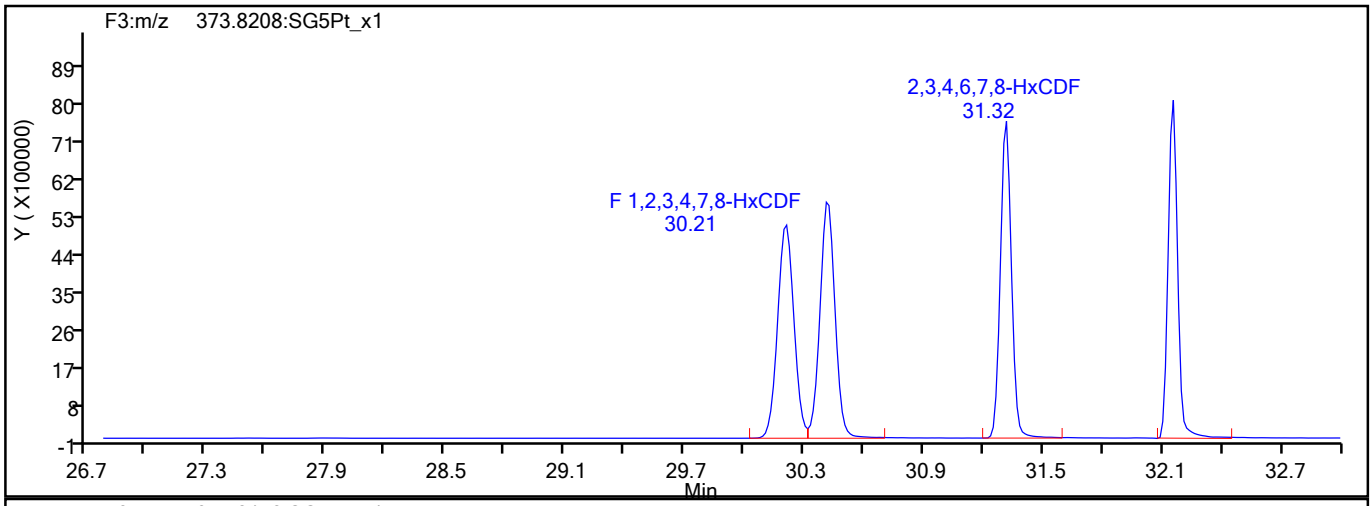

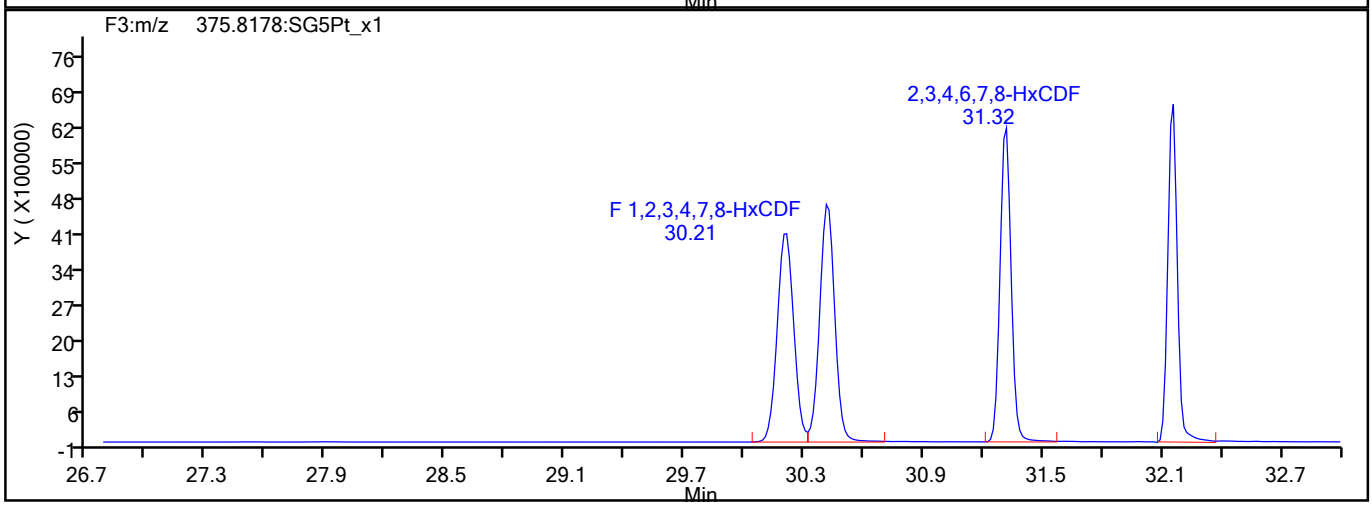

HxCDF Interference Mass

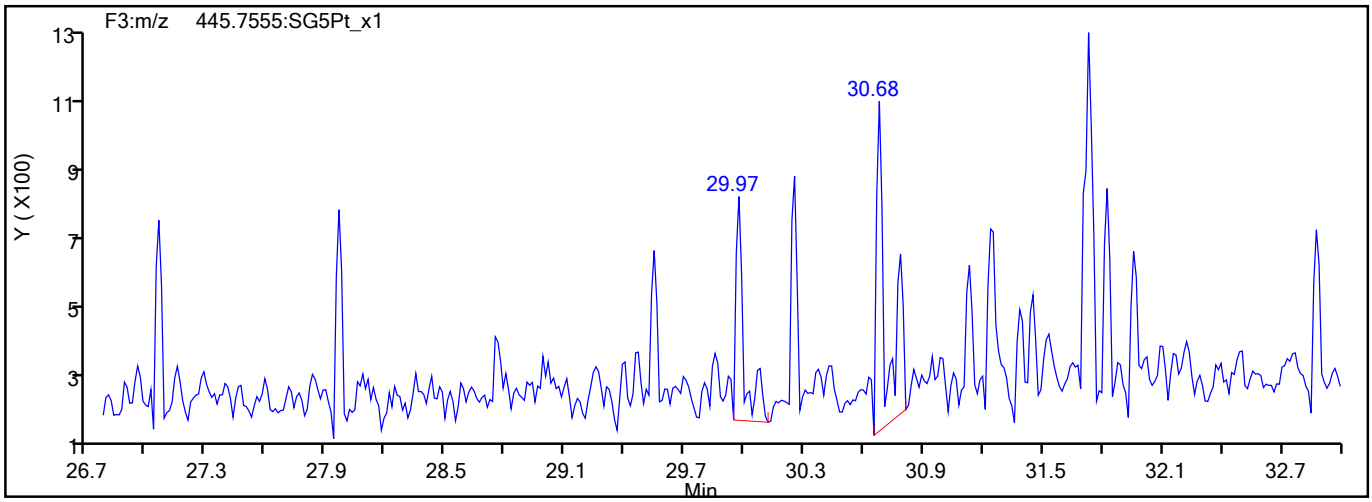

791657

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

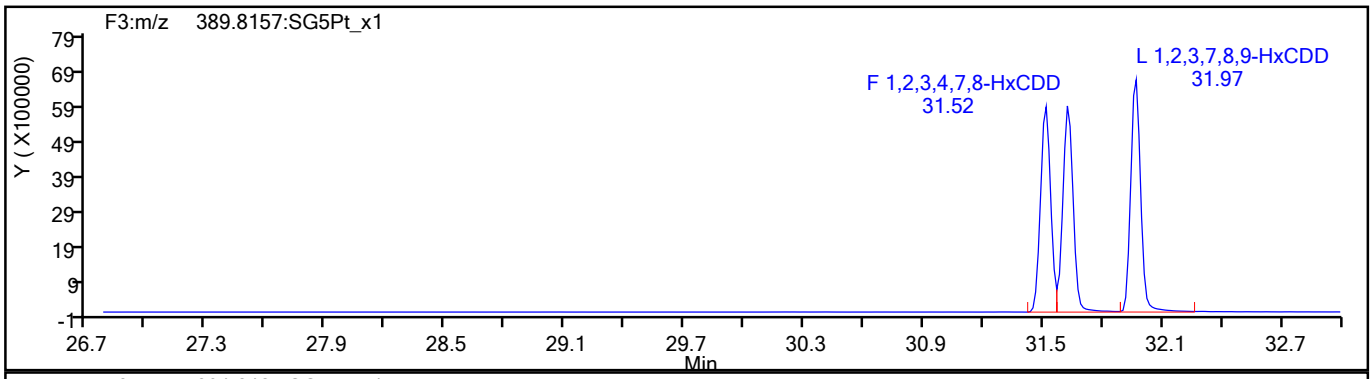

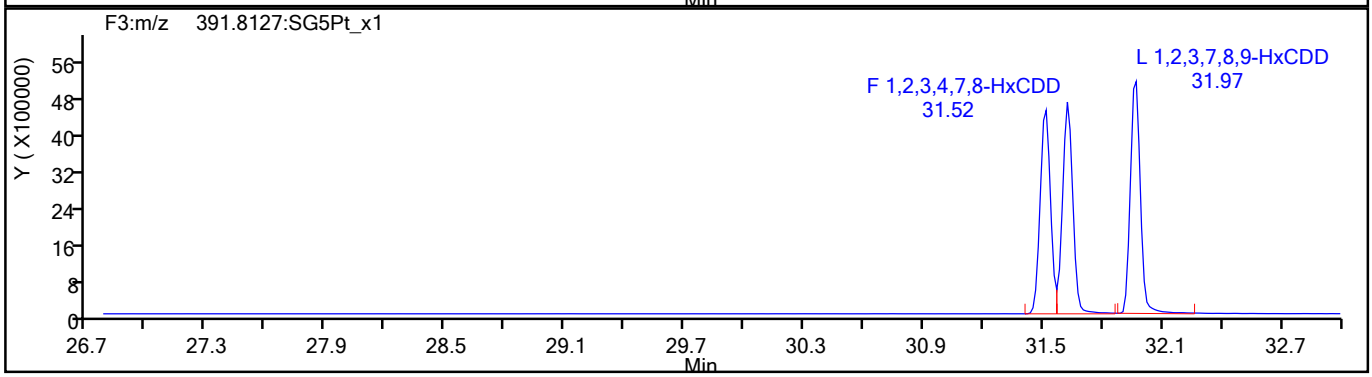

HxCDD Standards

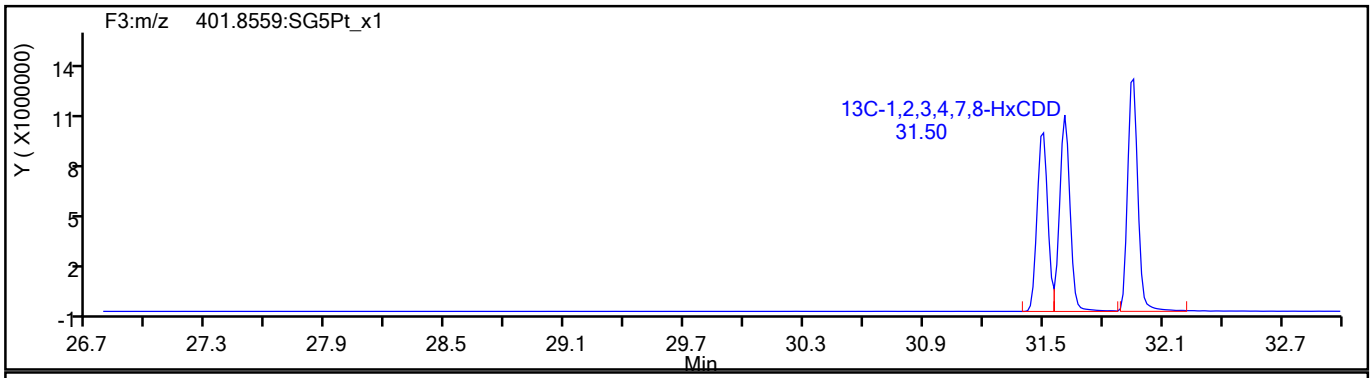

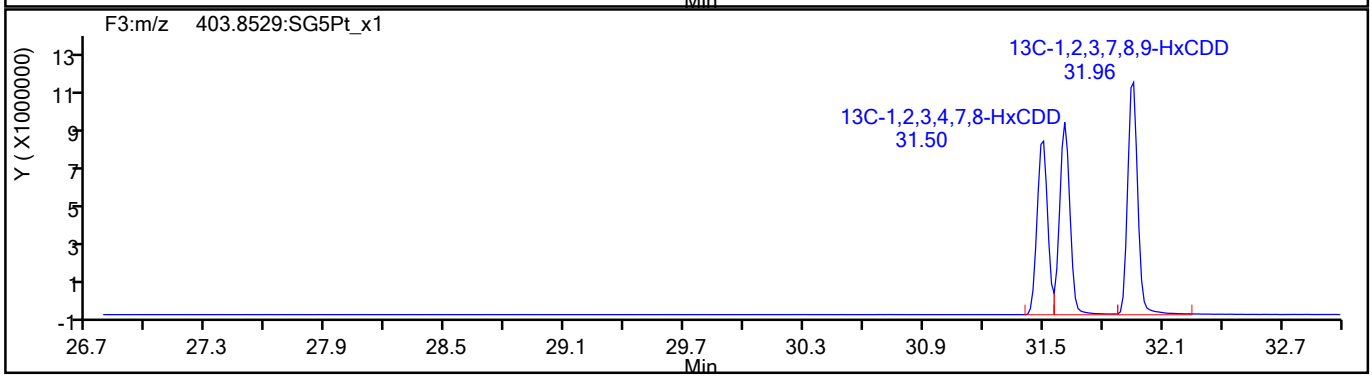

791658

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

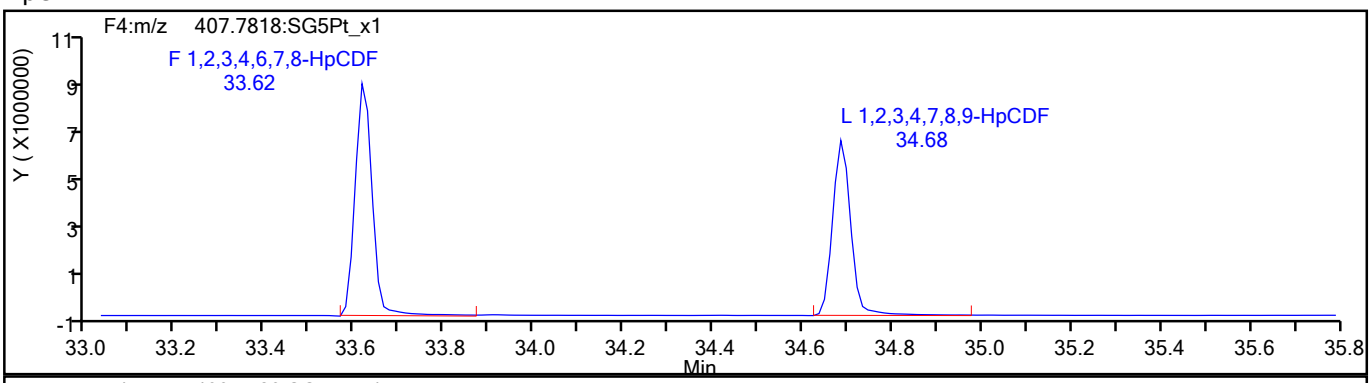

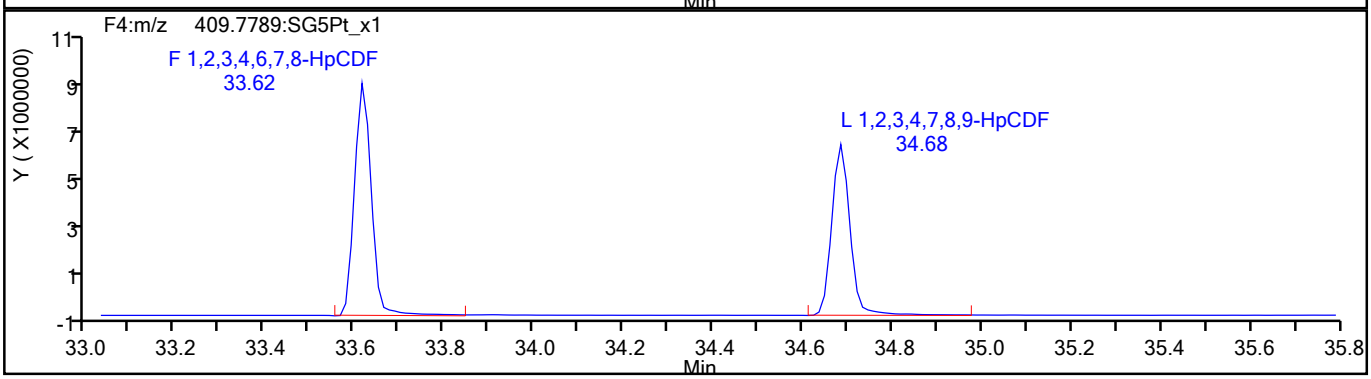

HpCDF Standards

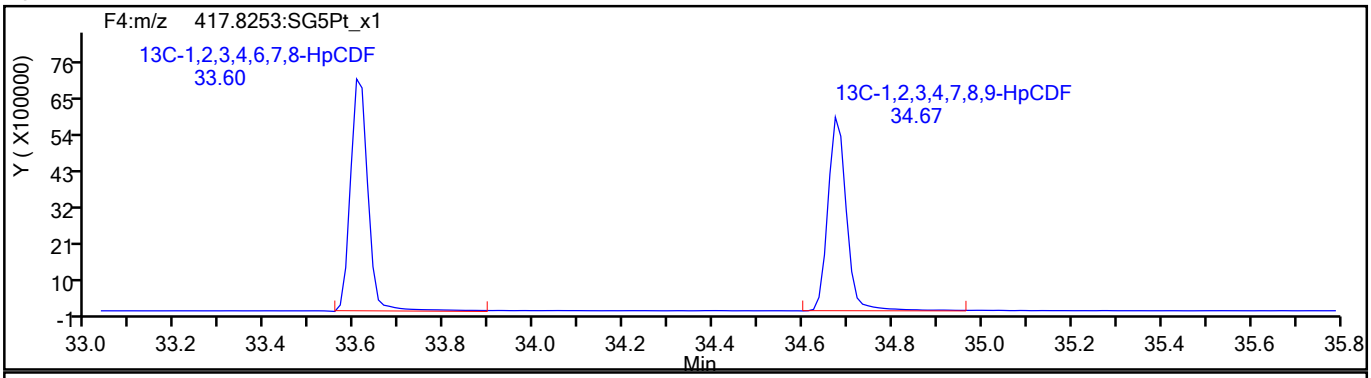

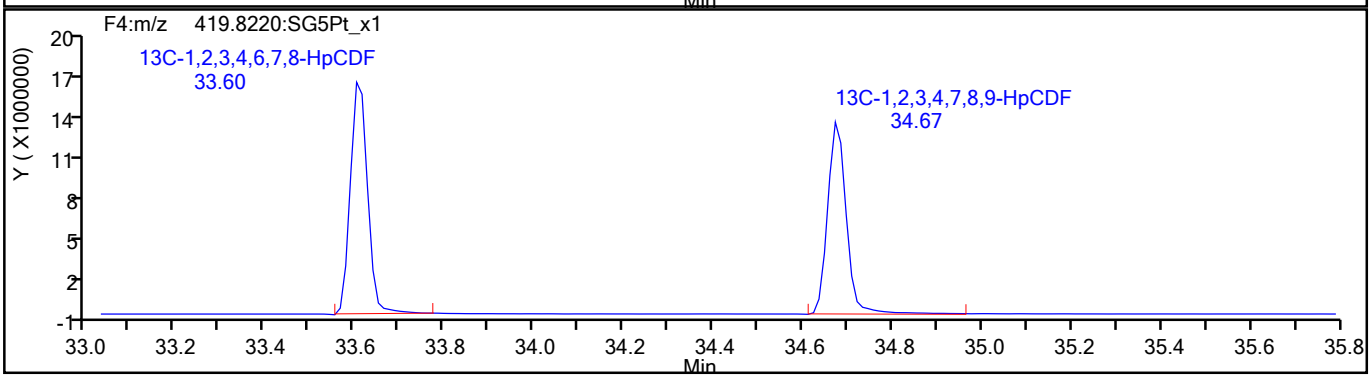

791659

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

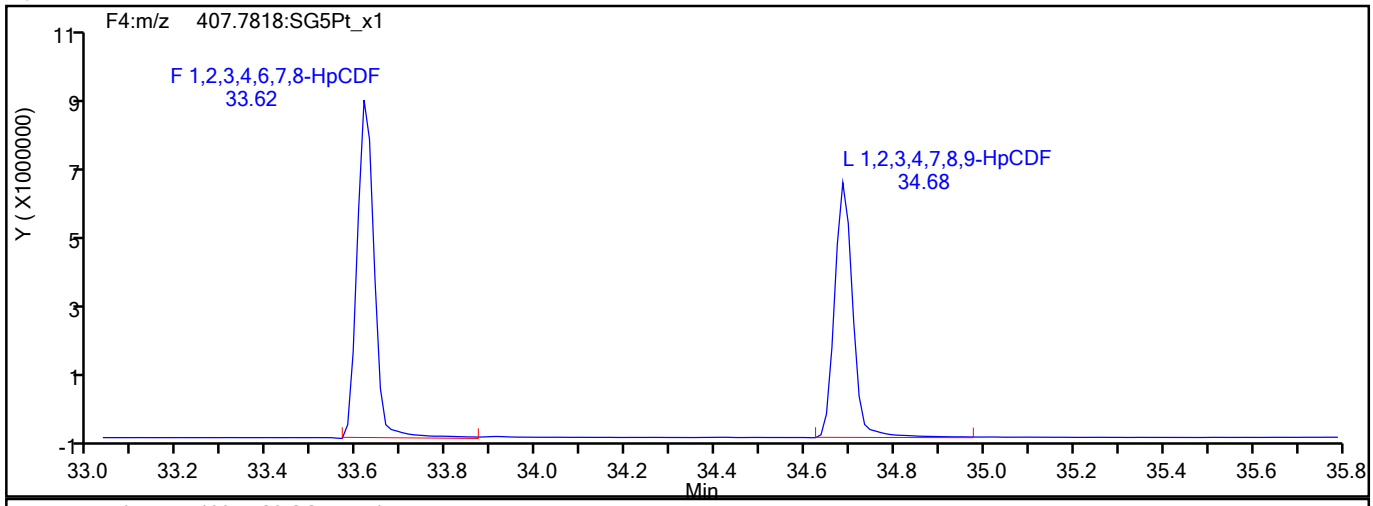

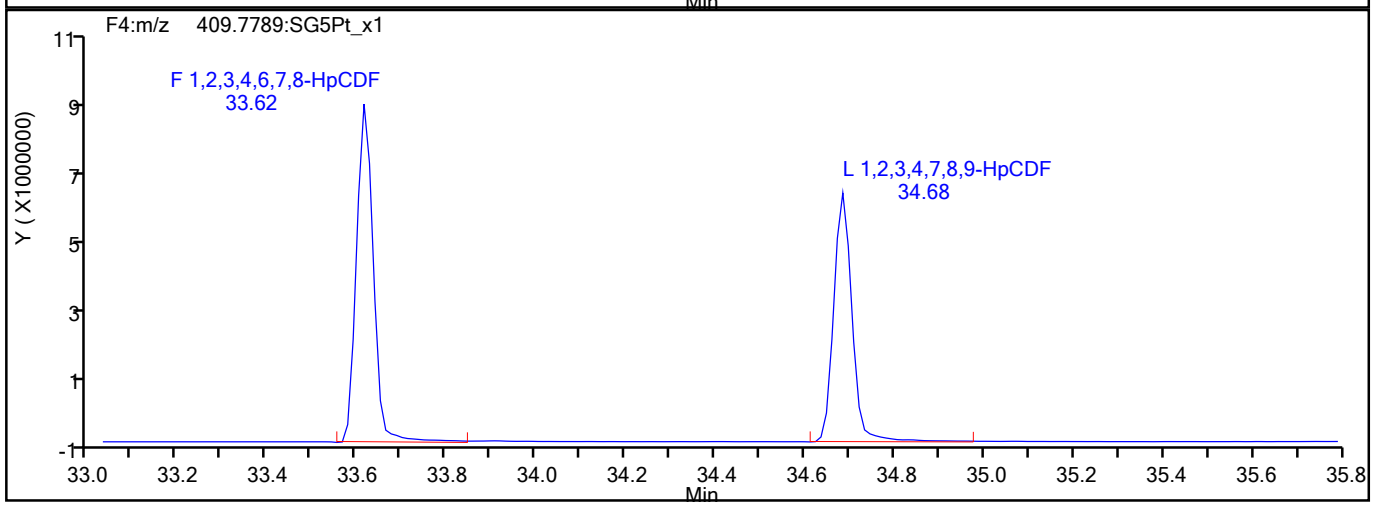

HpCDF Interference Mass

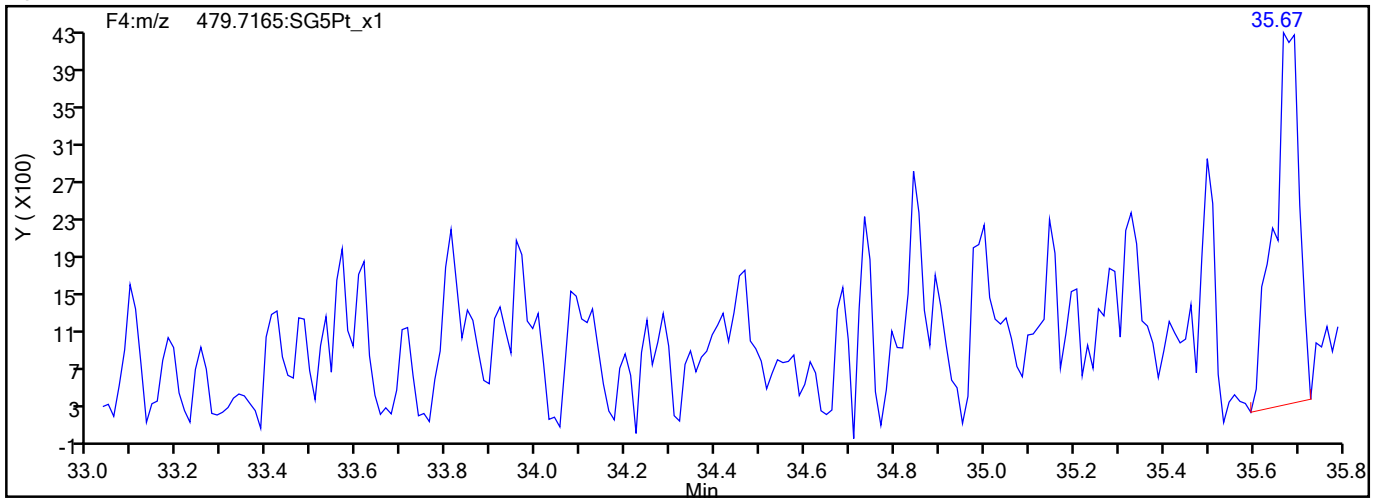

791660

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

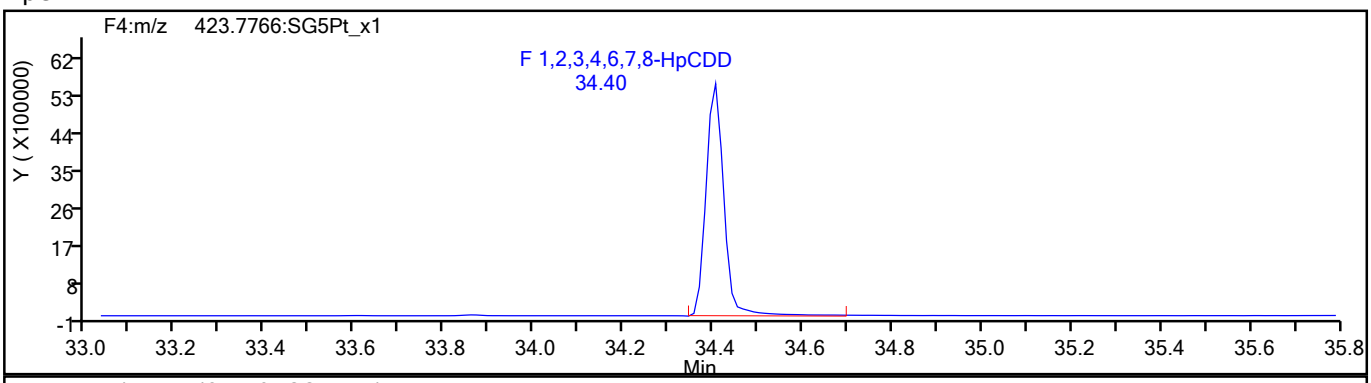

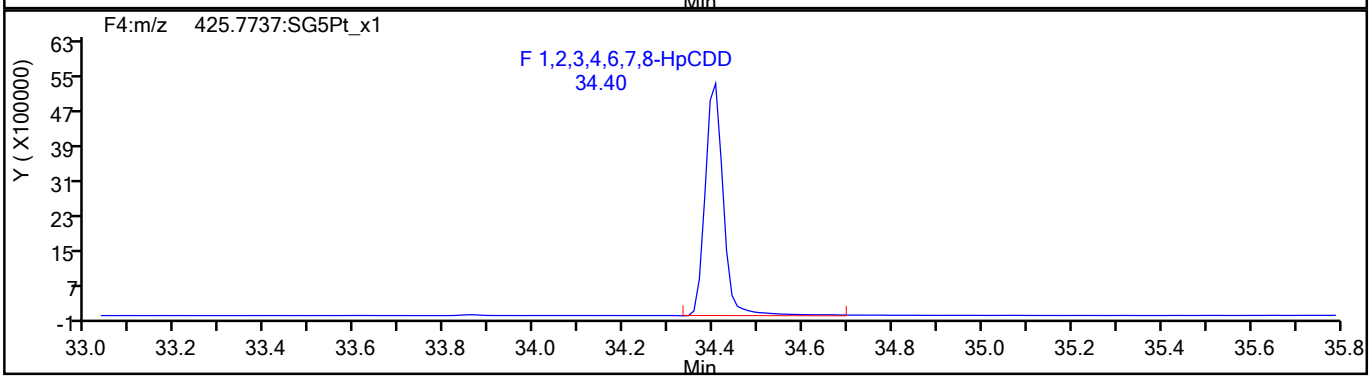

HpCDD Standards

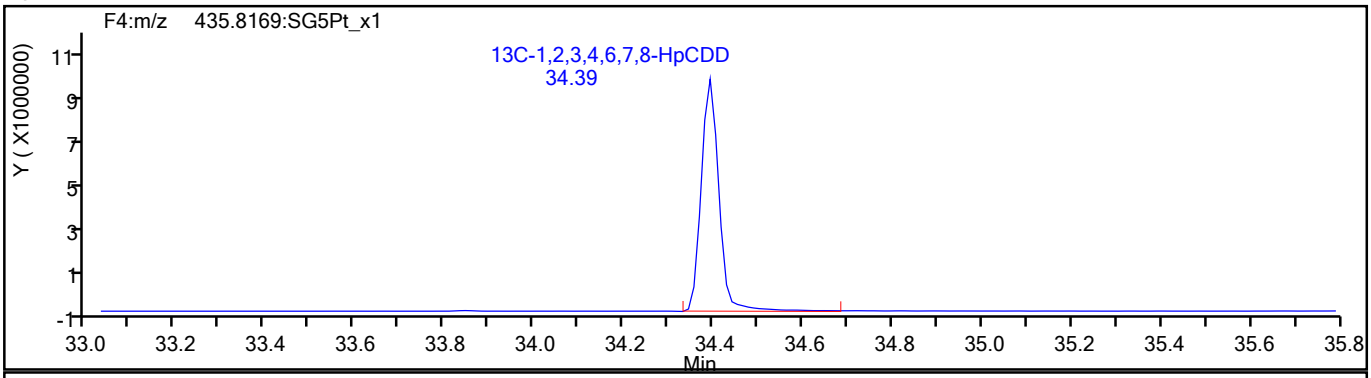

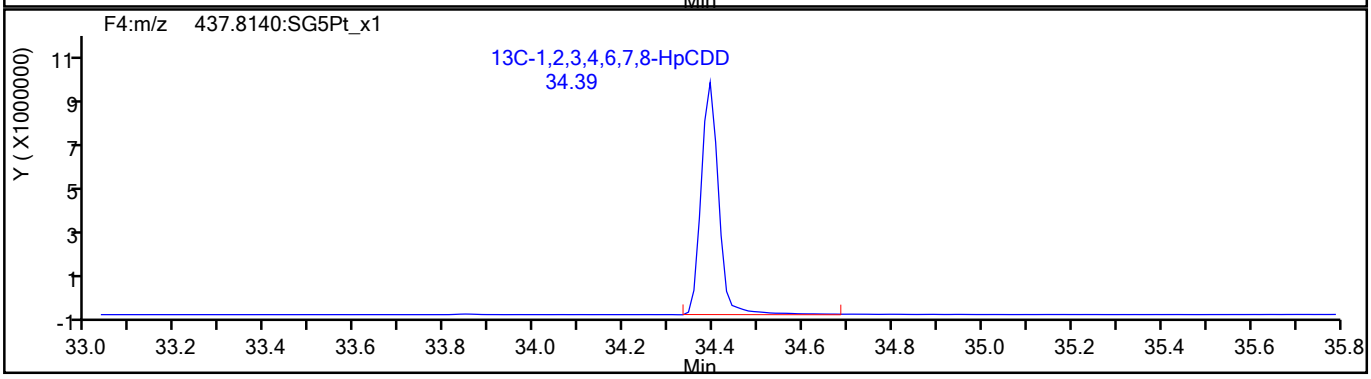

791661

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

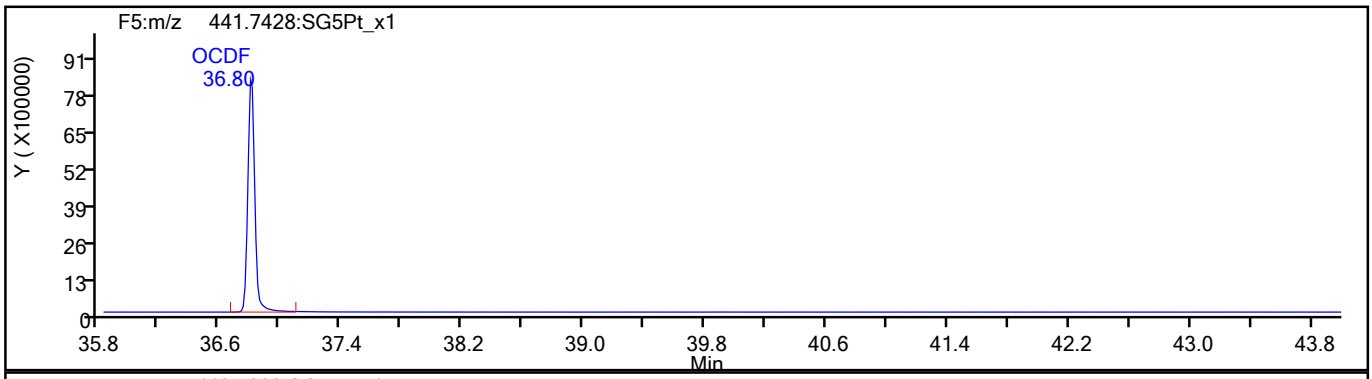

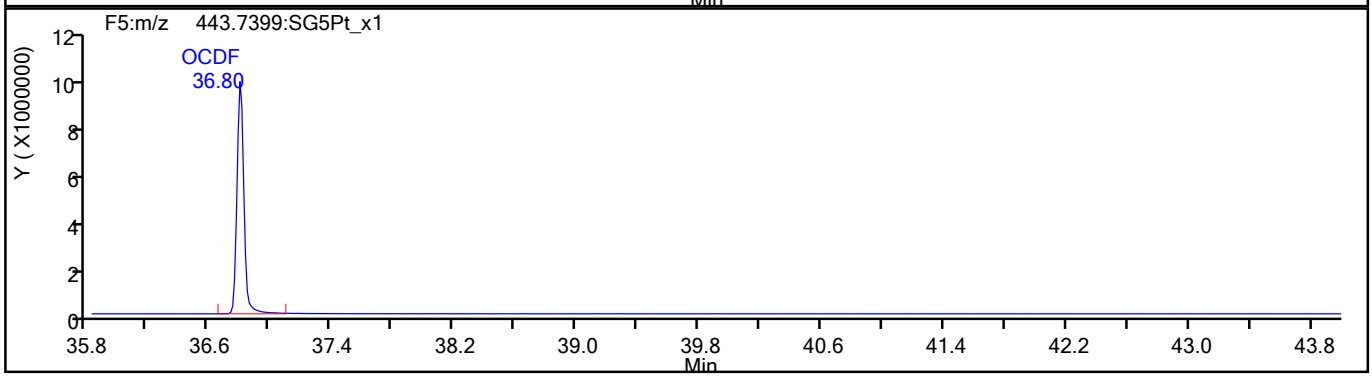

OCDF Standards

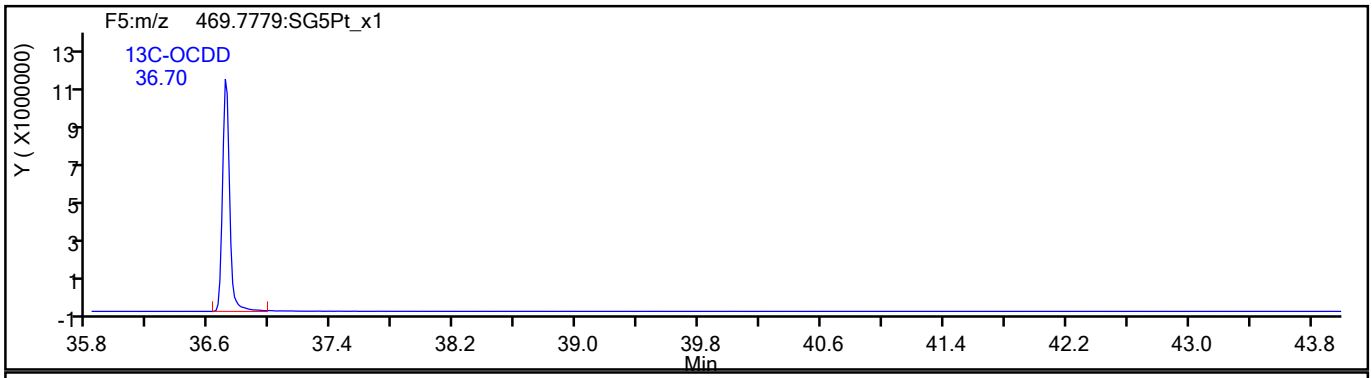

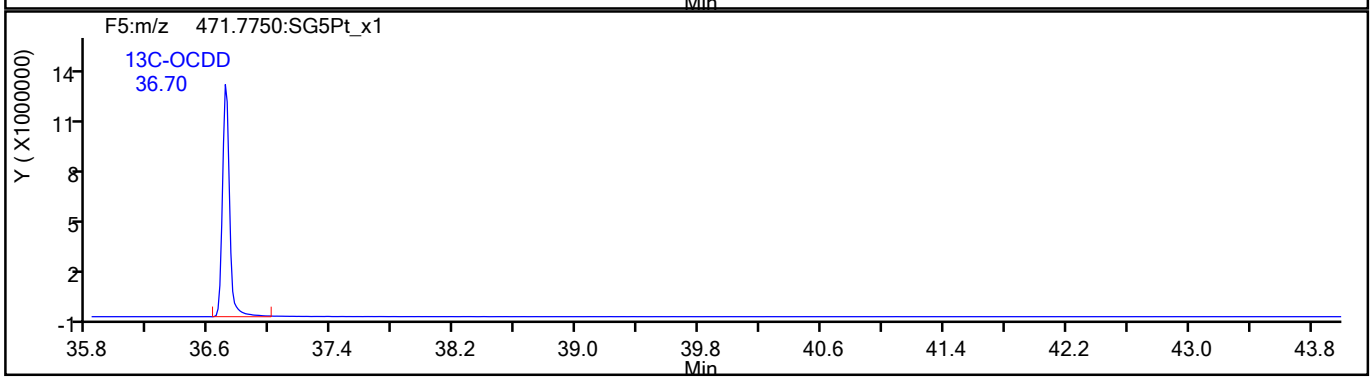

791662

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

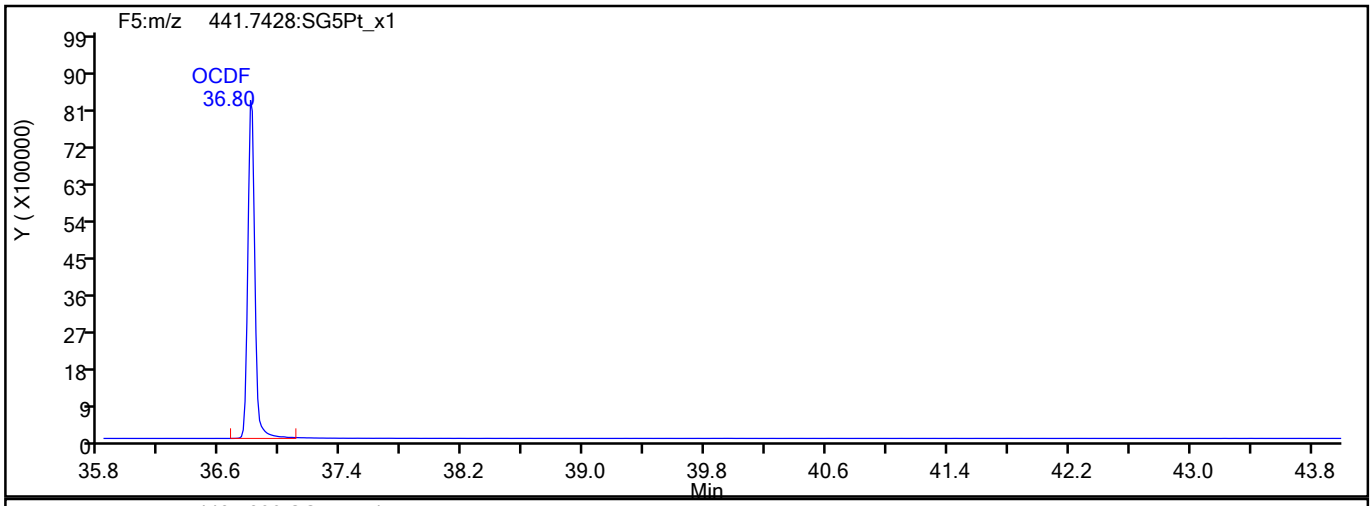

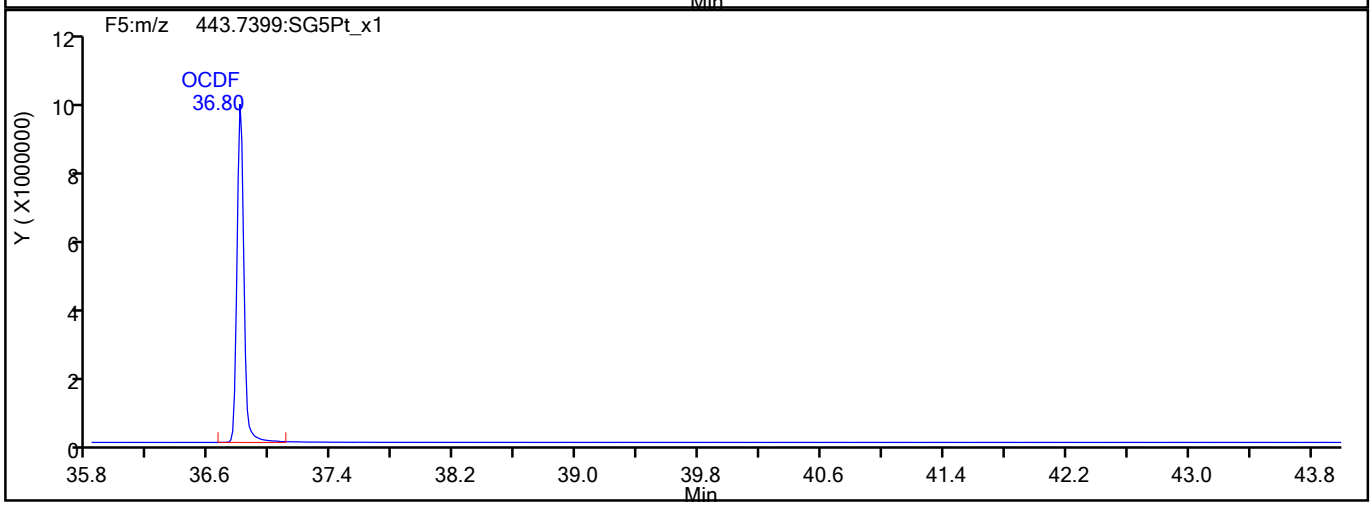

OCDF Interference Mass

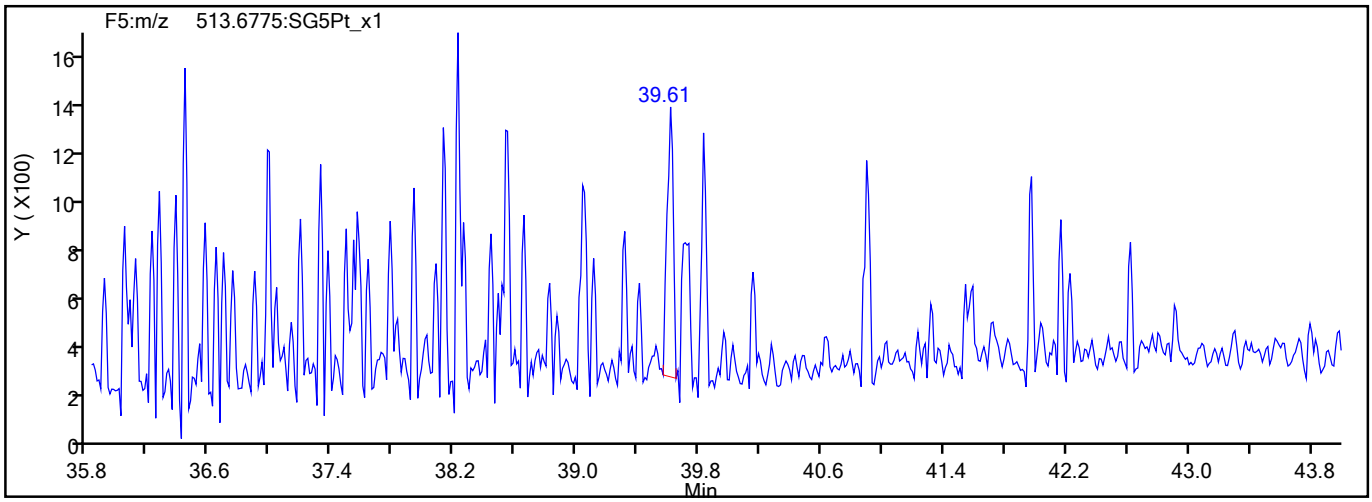

791663

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

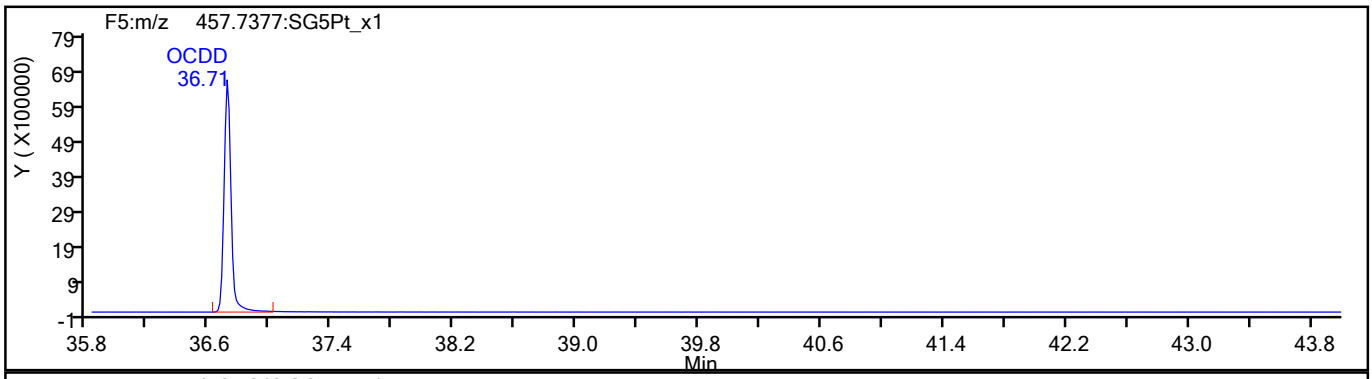

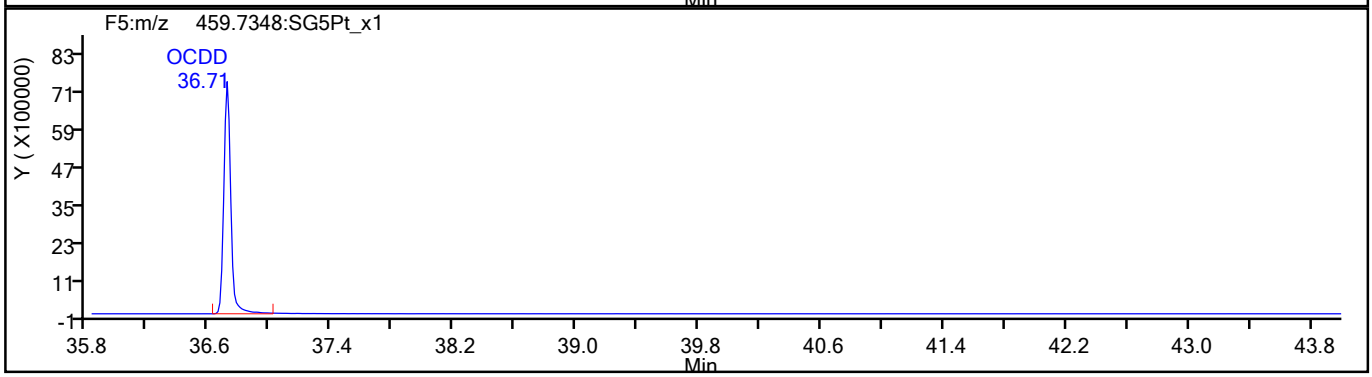

OCDD Standards

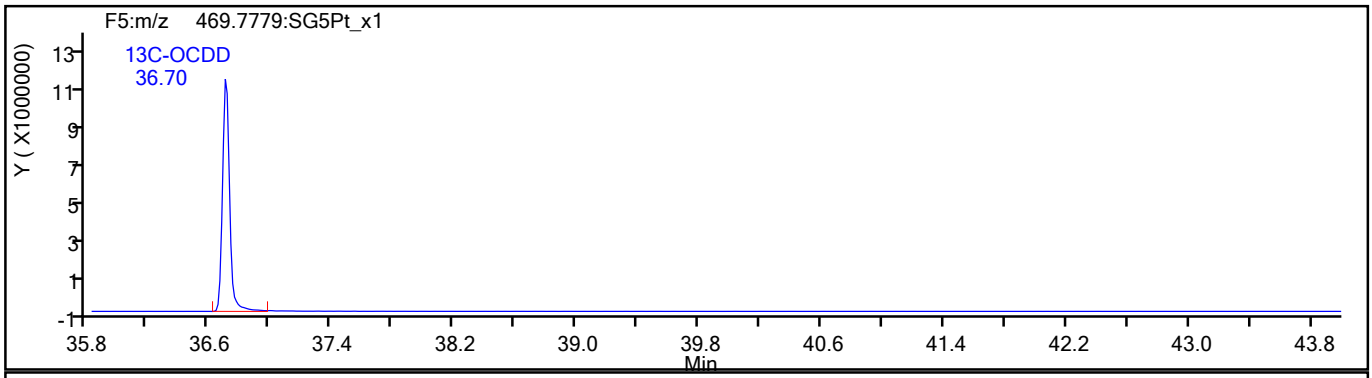

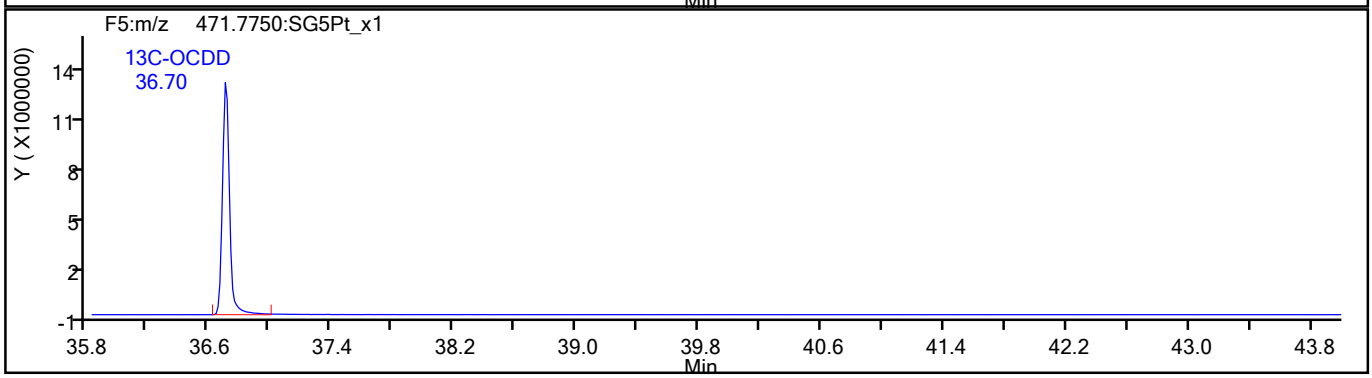

791664

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

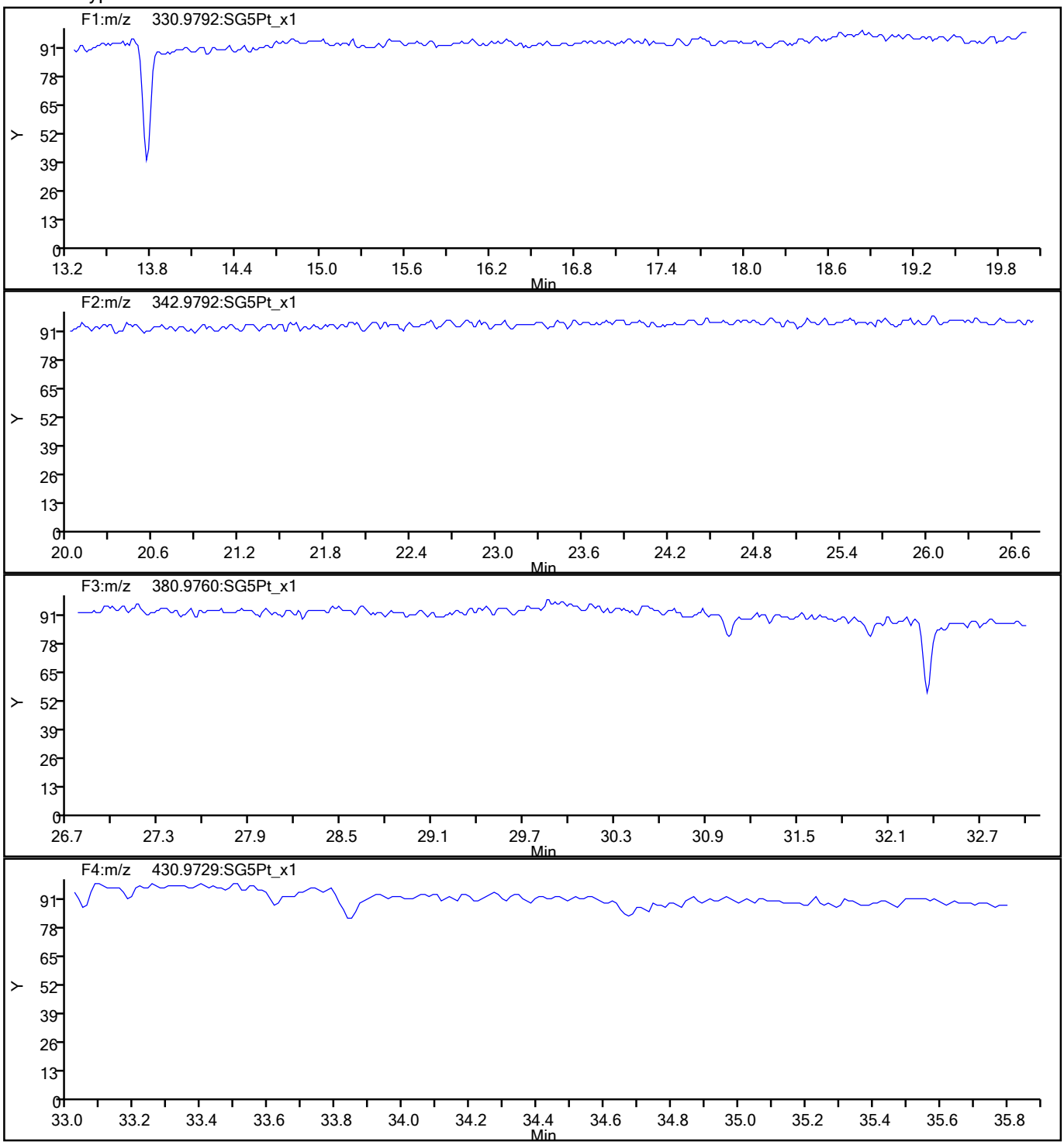

791665

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

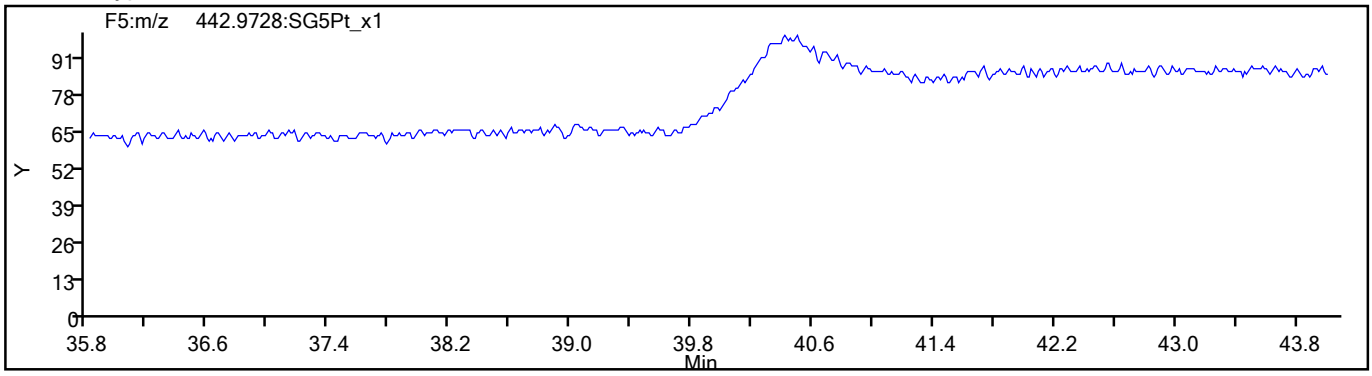

791666

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID: CCV 320-519955/1 Calibration Date: 08/25/2021 20:40

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 25AU2110D5_15.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.028		10.0	10.0	100	84-120
2,3,7,8-TCDD	AveID	1.254	1.237		9.86	10.0	99	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.078		50.8	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.036		50.9	50.0	102	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.041		49.7	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.080		49.8	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.141		50.7	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.170		50.1	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.093		51.3	50.0	103	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.048		52.4	50.0	105	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.192		52.6	50.0	105	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.175		50.4	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.481		51.4	50.0	103	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.077		49.2	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.344		51.0	50.0	102	86-116
OCDD	AveID	1.107	1.116		101	100	101	79-126
OCDF	AveID	1.438	1.422		98.9	100	99	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.569		96.6	100	97	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9113		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.218		101	100	101	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.234		99.6	100	100	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8056		106	100	106	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.122		104	100	104	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.094		97.0	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.035		97.3	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7668		105	100	105	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8242		93.6	100	94	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9731		101	100	101	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7189		93.0	100	93	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6450		99.6	100	100	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6363		90.8	100	91	77-129
13C-OCDD	Ave	0.4472	0.4804		215	200	107	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.184		10.7	10.0	107	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\25AU2110D5.SPL
Last Modified: Thursday, August 26, 2021 09:49:48 Pacific Daylight Time
Printed: Thursday, August 26, 2021 09:49:53 Pacific Daylight Time

Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	25AU2110D5_1	WDM HRDXNCP_00044	WDM 082521B	Tray01:1	Dioxin		SMA
2	25AU2110D5_2	CS-4 HRDXNL4_00099	CCV 082521	Tray01:2	Dioxin		SMA
3	25AU2110D5_3	MB 320-515492/1-A	MB 320-515492/1-A	Tray01:4	1613B/Solid	D270	SMA
4	25AU2110D5_4	LCS 320-515492/2-A	LCS 320-515492/2-A	Tray01:5	1613B/Solid	---	SMA
5	25AU2110D5_5	320-77214-A-1-A	320-77214-A-1-A	Tray01:6	1613B/Solid	---	SMA
6	25AU2110D5_6	320-77214-A-2-A	320-77214-A-2-A	Tray01:7	1613B/Solid		SMA
7	25AU2110D5_7	320-77214-A-2-B MS	320-77214-A-2-B MS	Tray01:8	1613B/Solid		SMA
8	25AU2110D5_8	320-77214-A-2-C MSD	320-77214-A-2-C MSD	Tray01:9	1613B/Solid	---	SMA
9	25AU2110D5_9	320-77214-A-3-A	320-77214-A-3-A	Tray01:10	1613B/Solid	---	SMA
10	25AU2110D5_10	320-77214-A-4-A	320-77214-A-4-A	Tray01:11	1613B/Solid		SMA
11	25AU2110D5_11	320-77214-A-5-A	320-77214-A-5-A	Tray01:15	1613B/Solid		SMA
12	25AU2110D5_12	320-77214-A-6-A	320-77214-A-6-A	Tray01:16	1613B/Solid		SMA
13	25AU2110D5_13	320-77214-A-7-A	320-77214-A-7-A	Tray01:17	1613B/Solid	---	SMA
14	25AU2110D5_14	SB Solvent Blank C-14	SB 082521	Tray01:3			SMA
15	25AU2110D5_15	CS-4 HRDXNL4_00099	CCV 082521A	Tray01:2	Dioxin		SMA
16	25AU2110D5_16	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
17	25AU2110D5_17	SB Solvent Blank C-14	SB 082521A	Tray01:3			SMA
18	25AU2110D5_18	320-77214-A-8-A	320-77214-A-8-A	Tray01:29	1613B/Solid	D270	SMA
19	25AU2110D5_19	320-77214-A-9-A	320-77214-A-9-A	Tray01:30	1613B/Solid		SMA
20	25AU2110D5_20	320-77214-A-13-A	320-77214-A-13-A	Tray01:31	1613B/Solid		SMA
21	25AU2110D5_21	320-77292-A-1-A	320-77292-A-1-A	Tray01:32	1613B/Solid		SMA
22	25AU2110D5_22	320-77292-A-2-A	320-77292-A-2-A	Tray01:33	1613B/Solid		SMA
23	25AU2110D5_23	320-77292-A-2-B MS	320-77292-A-2-B MS	Tray01:34	1613B/Solid		SMA
24	25AU2110D5_24	320-77292-A-2-C MSD	320-77292-A-2-C MSD	Tray01:35	1613B/Solid		SMA
25	25AU2110D5_25	320-77292-A-3-A	320-77292-A-3-A	Tray01:36	1613B/Solid		SMA
26	25AU2110D5_26	320-77292-A-4-A	320-77292-A-4-A	Tray01:37	1613B/Solid		SMA
27	25AU2110D5_27	320-77292-A-5-A	320-77292-A-5-A	Tray01:38	1613B/Solid		SMA
28	25AU2110D5_28	SB Solvent Blank C-14	SB 082521B	Tray01:3			SMA
29	25AU2110D5_29	CS-4 HRDXNL4_00099	CCV 082521B	Tray01:2	Dioxin		SMA
30	25AU2110D5_30	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
31	25AU2110D5_31	SB Solvent Blank C-14	SB 082521C	Tray01:3			SMA
32	25AU2110D5_32	320-77292-A-6-A	320-77292-A-6-A	Tray01:43	1613B/Solid	D270	SMA
33	25AU2110D5_33	320-77292-A-7-A	320-77292-A-7-A	Tray01:44	1613B/Solid		SMA
34	25AU2110D5_34	320-77292-A-8-A	320-77292-A-8-A	Tray01:45	1613B/Solid		SMA
35	25AU2110D5_35	320-77292-A-9-A	320-77292-A-9-A	Tray01:46	1613B/Solid		SMA
36	25AU2110D5_36	320-77292-A-13-A	320-77292-A-13-A	Tray01:47	1613B/Solid		SMA
37	25AU2110D5_37	400-206693-C-22-A	400-206693-C-22-A	Tray01:48	1613B/Solid		SMA
38	25AU2110D5_38	400-206693-C-36-A	400-206693-C-36-A	Tray01:49	1613B/Solid		SMA
39	25AU2110D5_39	400-206693-C-37-A	400-206693-C-37-A	Tray01:50	1613B/Solid		SMA
40	25AU2110D5_40	400-206693-C-38-A	400-206693-C-38-A	Tray01:51	1613B/Solid		SMA
41	25AU2110D5_41	400-206693-C-39-A	400-206693-C-39-A	Tray01:52	1613B/Solid		SMA
42	25AU2110D5_42	SB Solvent Blank C-14	SB 082521D	Tray01:3			SMA
43	25AU2110D5_43	CS-4 HRDXNL4_00099	CCV 082521C	Tray01:2	Dioxin		SMA
44	25AU2110D5_44	WDM HRDXNCP_00044	WDM 082521C	Tray01:1	Dioxin	---	SMA
45	25AU2110D5_45	SB Solvent Blank C-14	SB 082521E	Tray01:3			SMA

LOGFILE CHECKED
DB 8/26/21

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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M 292.9824_R 11547

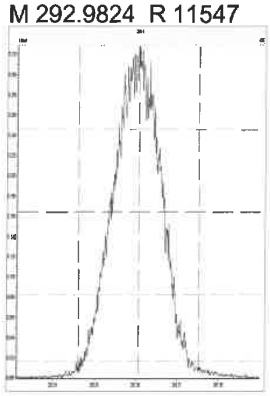

M 304.9824_R 11798

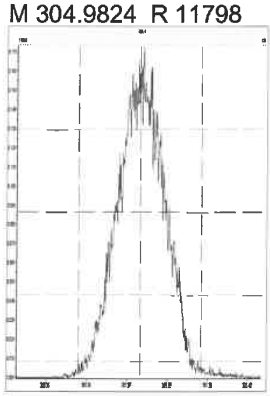

M 318.9792_R 11792

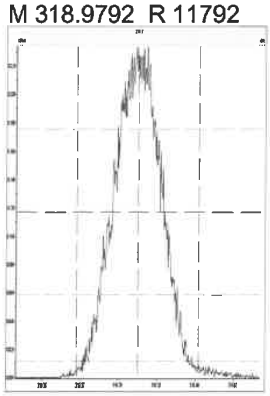

M 330.9792_R 11497

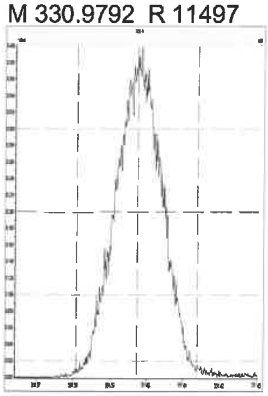

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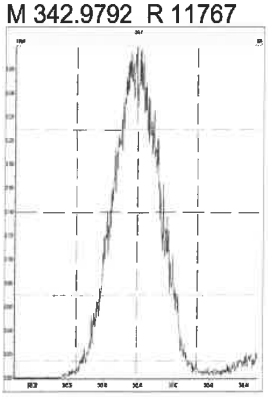

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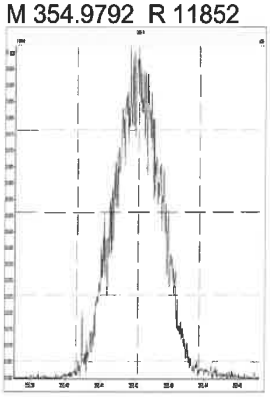

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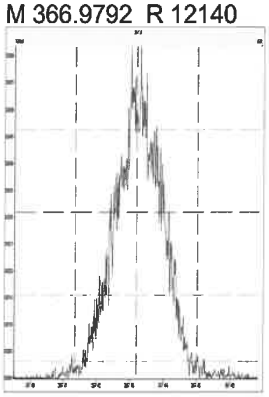

M 380.9760_R 11995

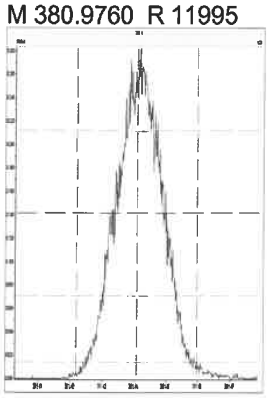

M 392.9760_R 11657

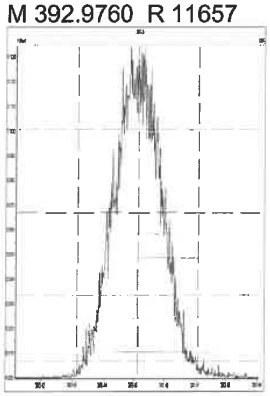

M 404.9760_R 11934

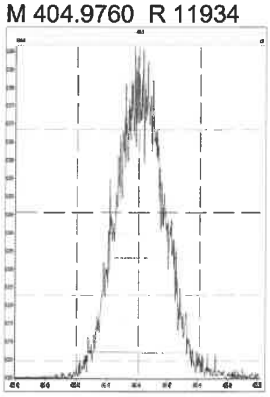

M 416.9760_R 12724

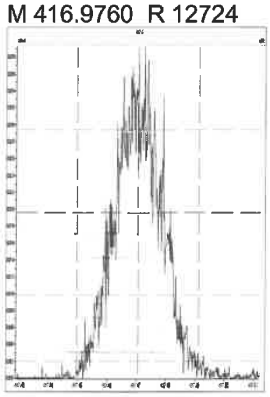

M 318.9792_R 12048

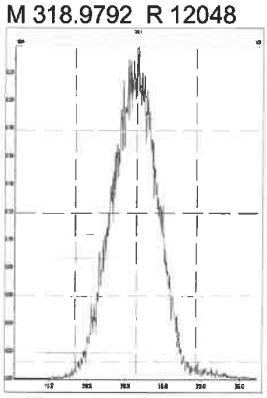

M 330.9792_R 11709

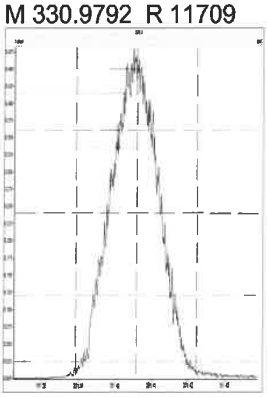

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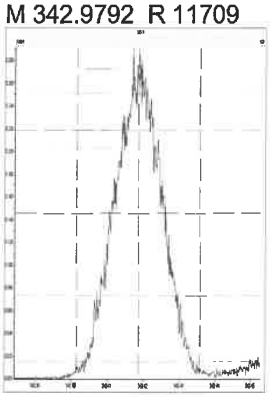

M 354.9792_R 12107

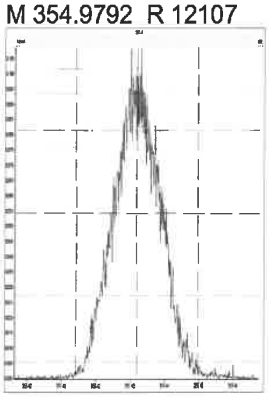

M 366.9792_R 12315

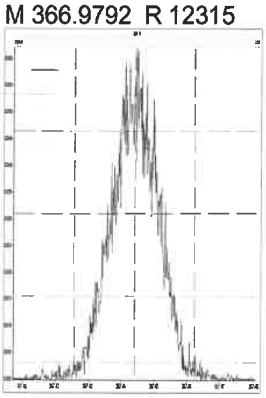

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M 380.9760 R 11848

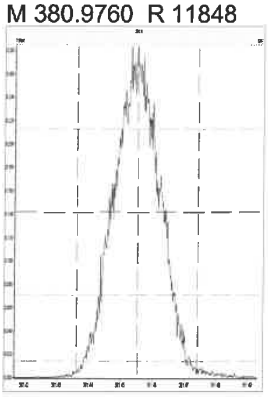

M 392.9760 R 11536

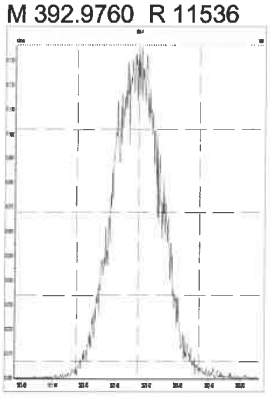

M 404.9760 R 12029

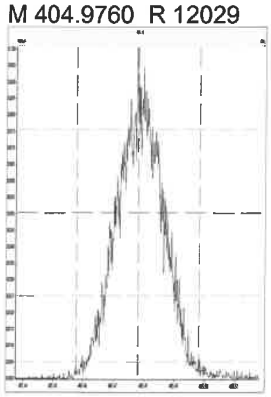

M 416.9760 R 12452

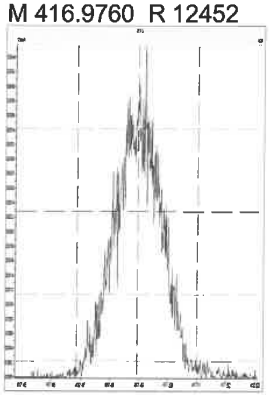

M 366.9792 R 11494

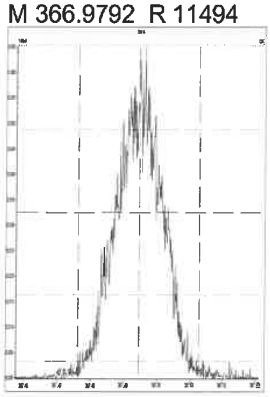

M 380.9760 R 11848

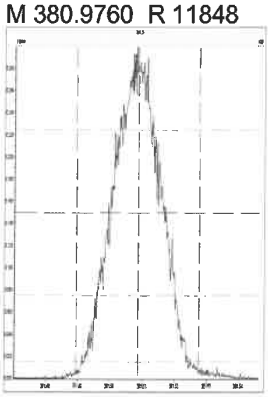

M 392.9760 R 12081

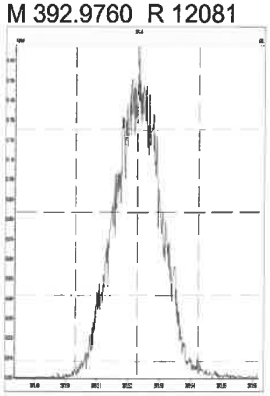

M 404.9760 R 11950

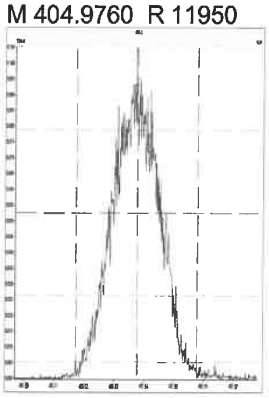

M 416.9760 R 13340

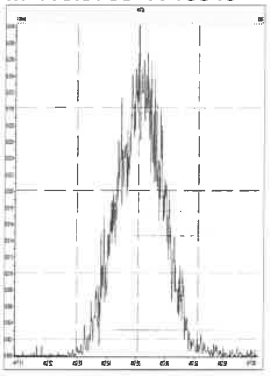

M 430.9728 R 11684

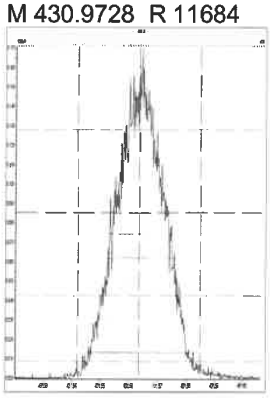

M 442.9728 R 12170

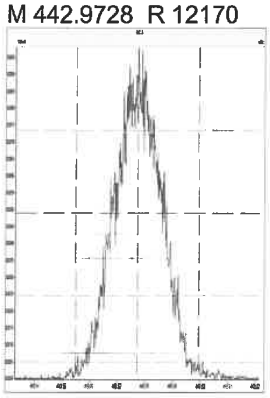

M 454.9728 R 11848

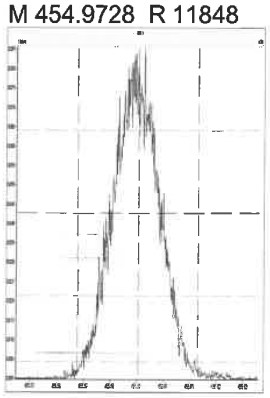

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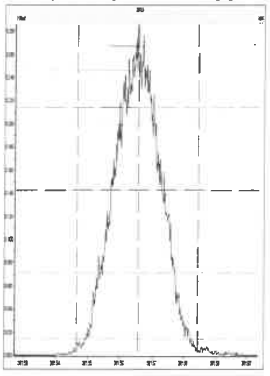

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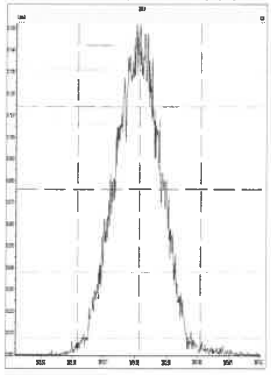

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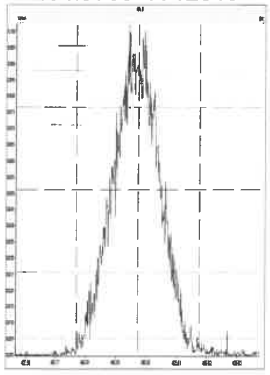

M 416.9760 R 12408

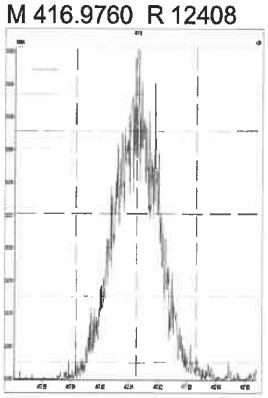

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M 430.9728 R 11876

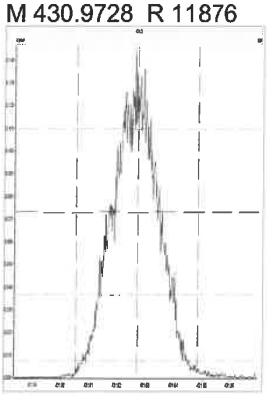

M 442.9728 R 12138

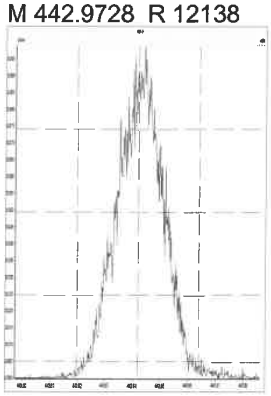

M 454.9728 R 12077

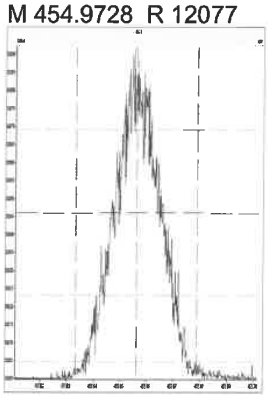

M 466.9728 R 12820

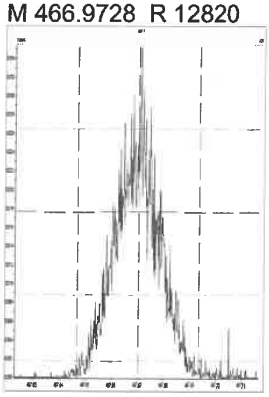

M 480.9696 R 12084

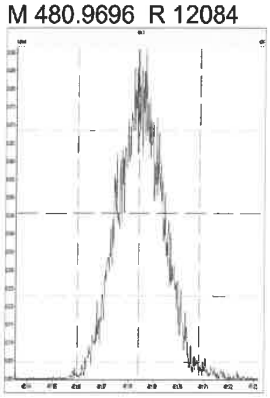

M 380.9760 R 11848

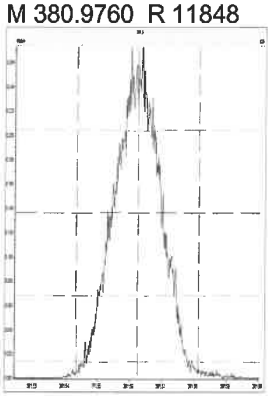

M 392.9760 R 11793

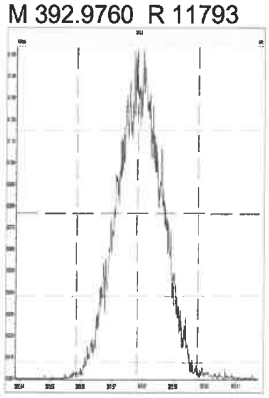

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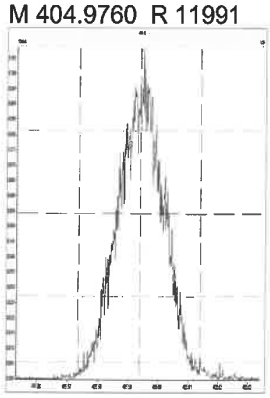

M 416.9760 R 12051

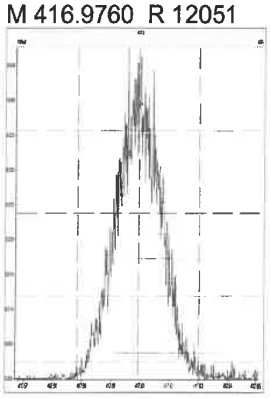

M 430.9728 R 12237

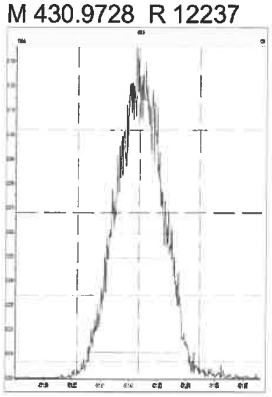

M 442.9728 R 12233

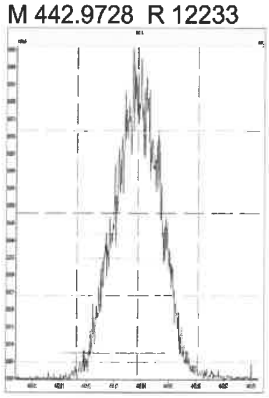

M 454.9728 R 12600

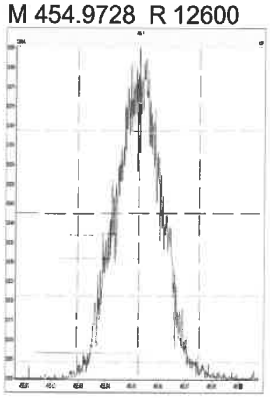

M 466.9728 R 12611

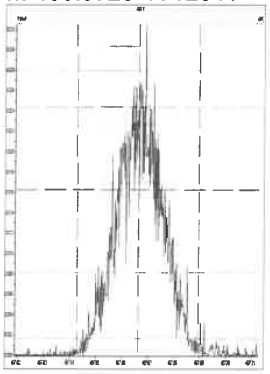

M 480.9696 R 12290

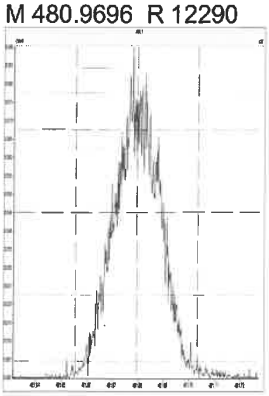

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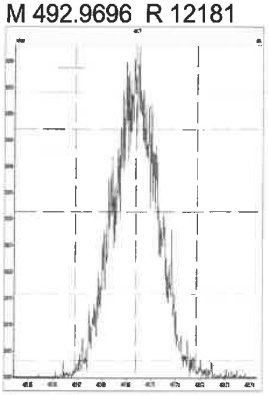

M 504.9696 R 12241

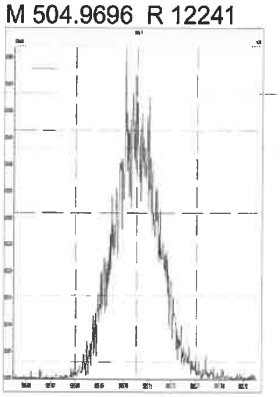

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M 516.9697_R 13409

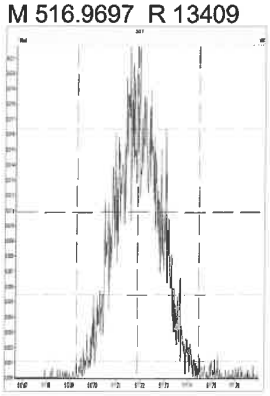

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M 292.9824 R 11393

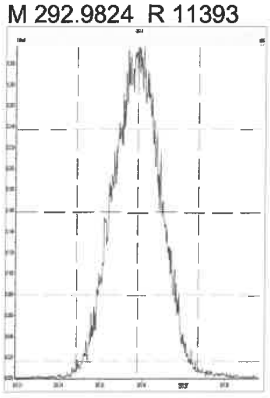

M 304.9824 R 11740

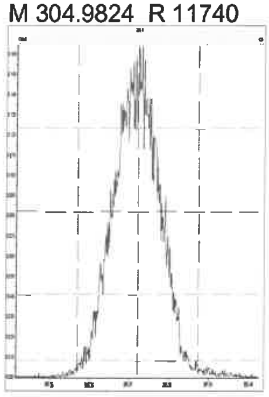

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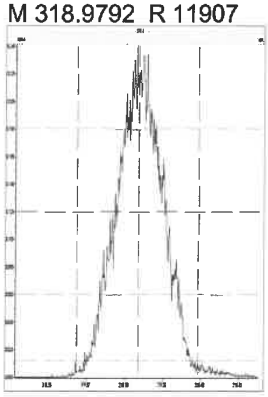

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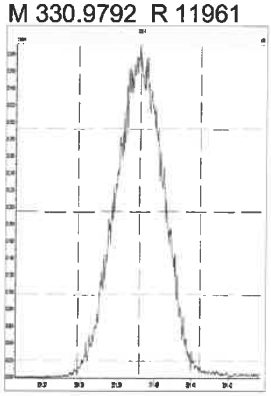

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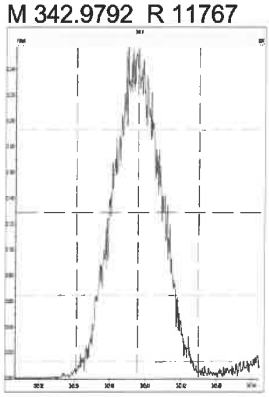

M 354.9792 R 11848

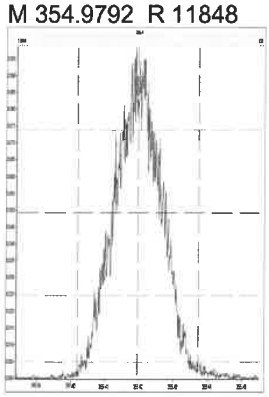

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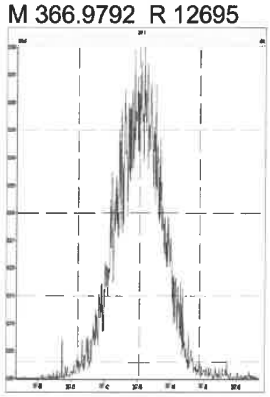

M 380.9760 R 11711

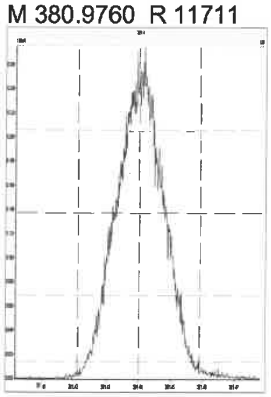

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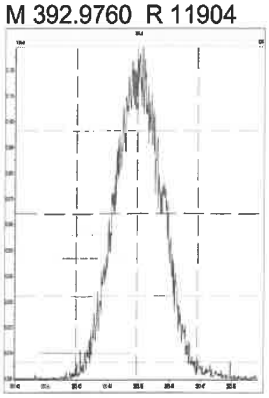

M 404.9760 R 12225

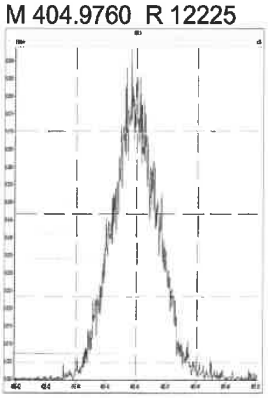

M 416.9760 R 12965

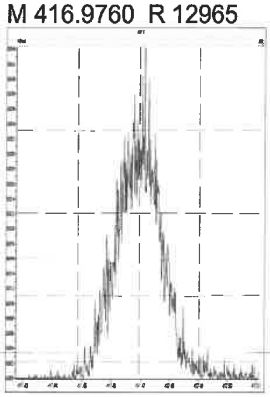

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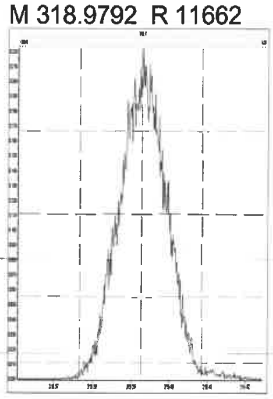

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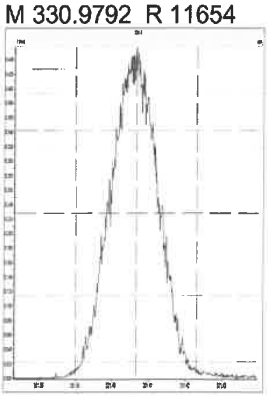

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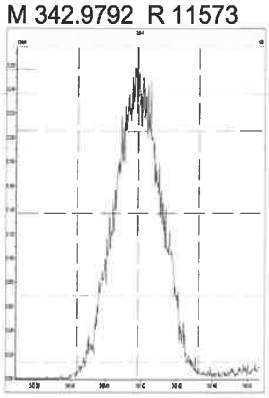

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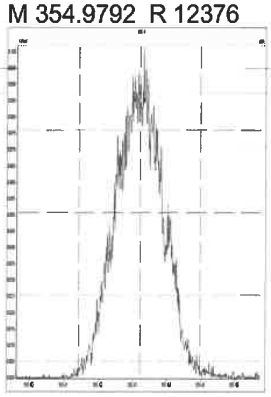

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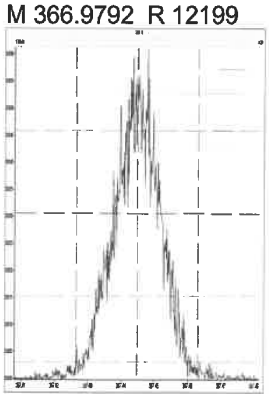

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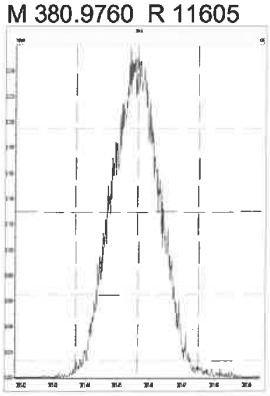

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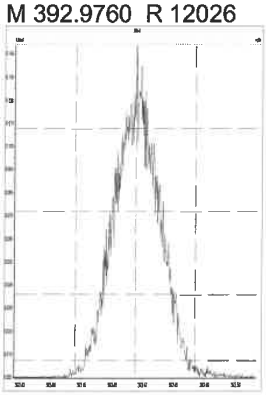

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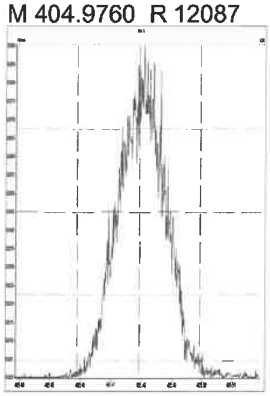

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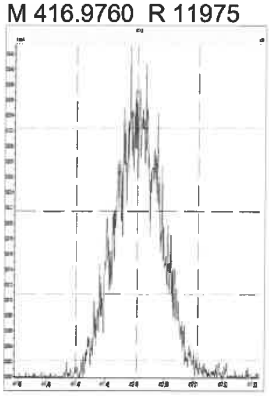

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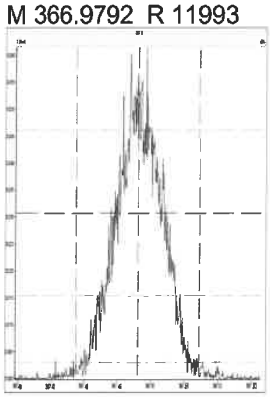

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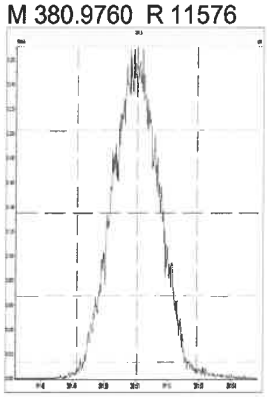

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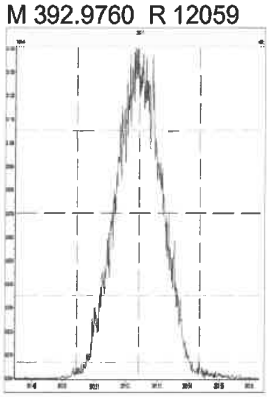

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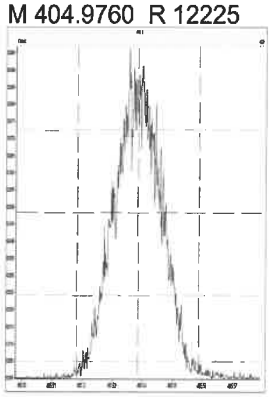

M 416.9760 R 12667

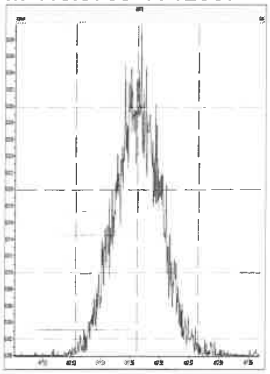

M 430.9728 R 11737

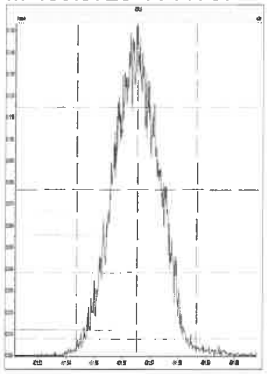

M 442.9728 R 11934

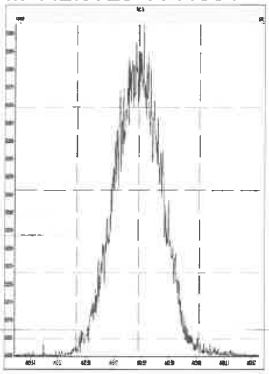

M 454.9728 R 11548

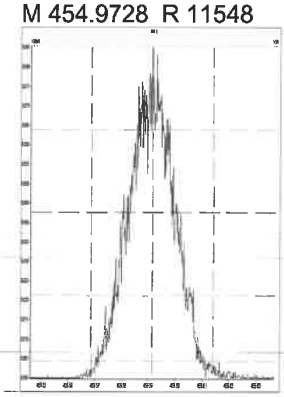

M 380.9760 R 11963

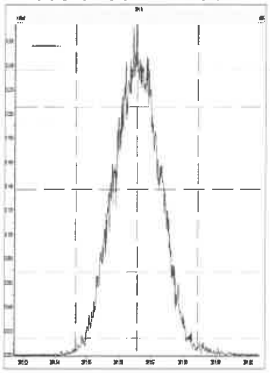

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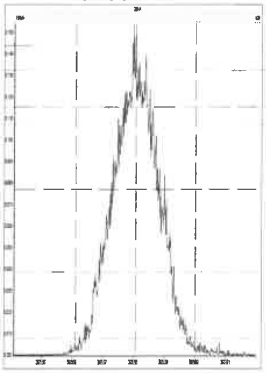

M 404.9760 R 11820

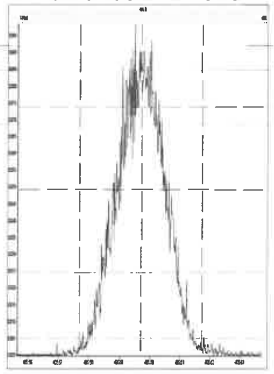

M 416.9760 R 12854

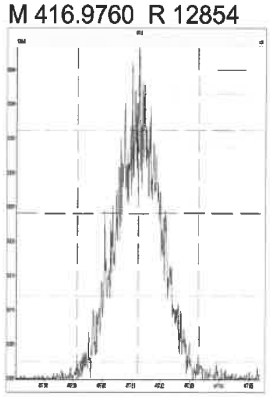

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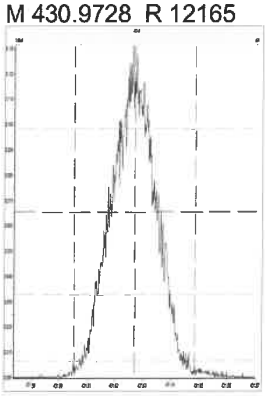

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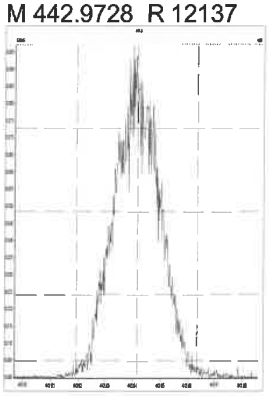

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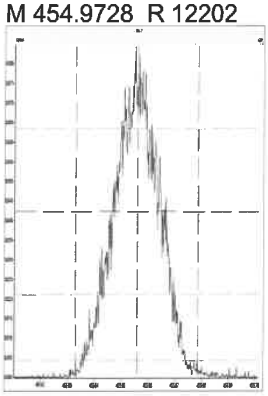

M 466.9728 R 12407

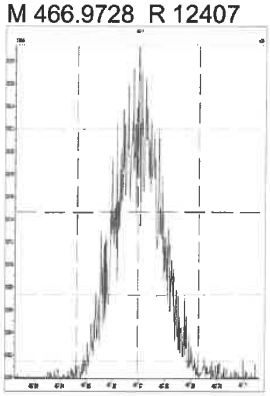

M 480.9696 R 11794

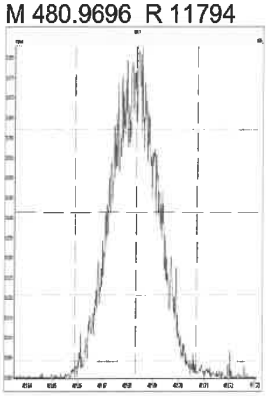

M 380.9760 R 11764

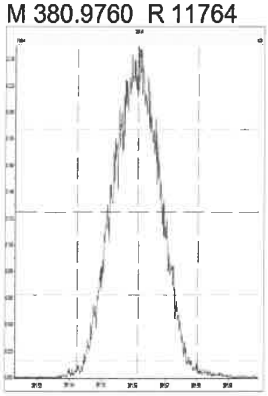

M 392.9760 R 11904

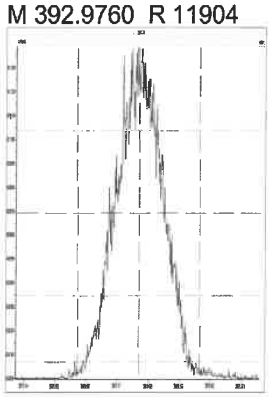

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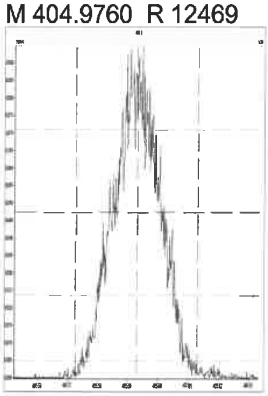

M 416.9760 R 12565

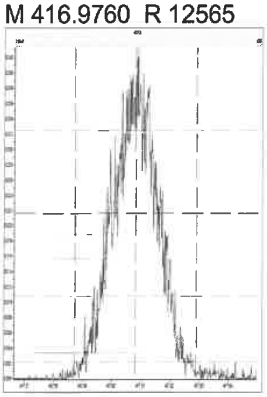

M 430.9728 R 11936

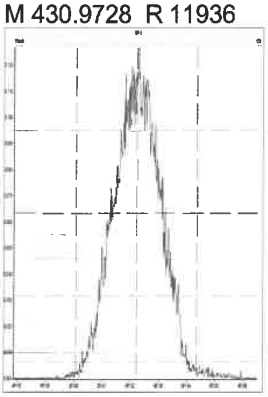

M 442.9728 R 12142

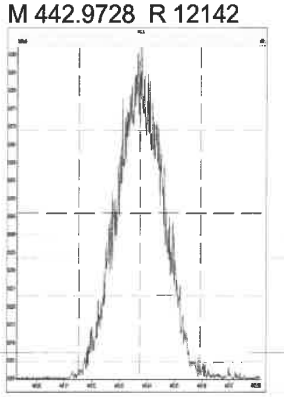

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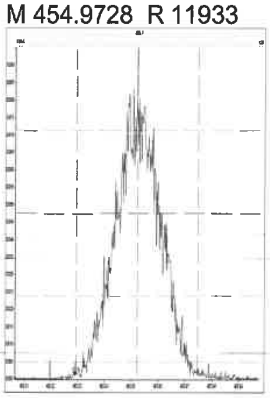

M 466.9728 R 12695

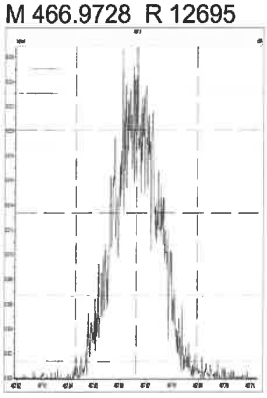

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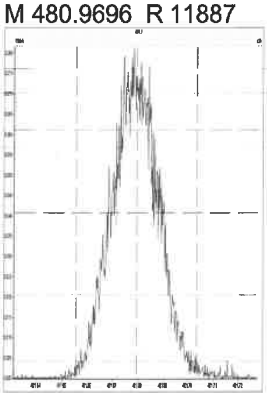

M 492.9696 R 12347

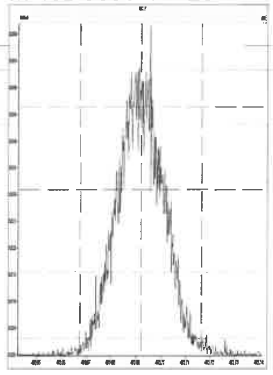

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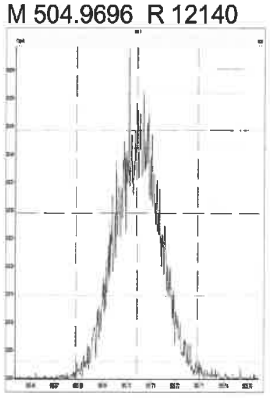

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M 516.9697_R 13782

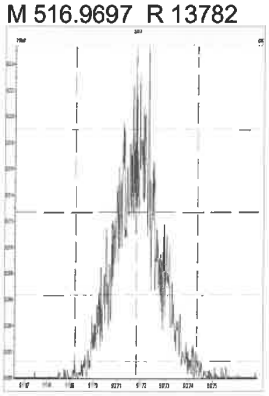

Printed: Thursday, August 26, 2021 06:45:41 Pacific Daylight Time

M 292.9824 R 12084

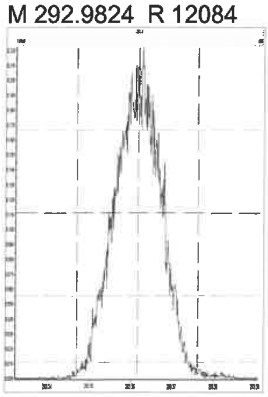

M 304.9824 R 11905

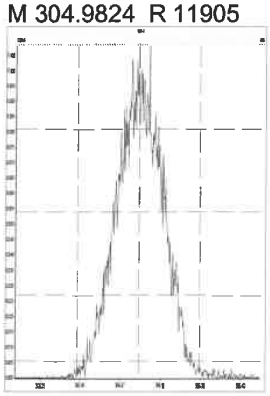

M 318.9792 R 12048

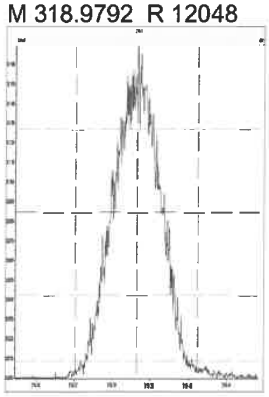

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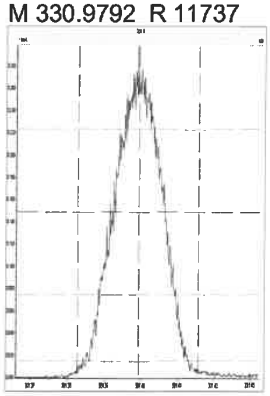

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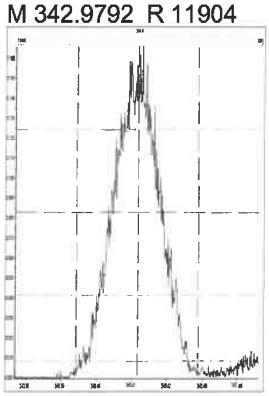

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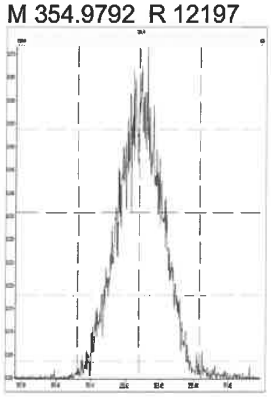

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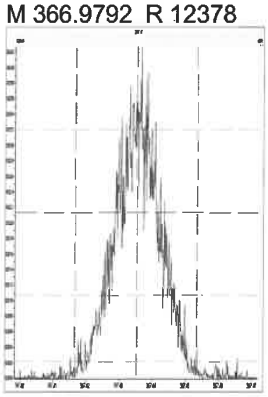

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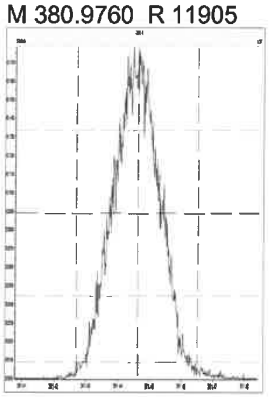

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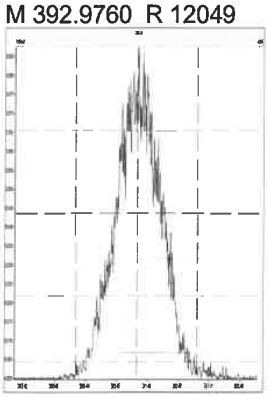

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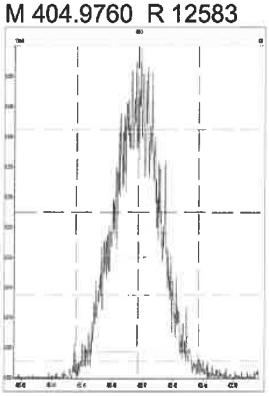

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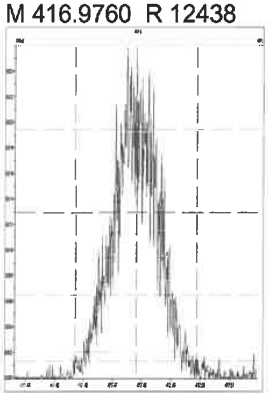

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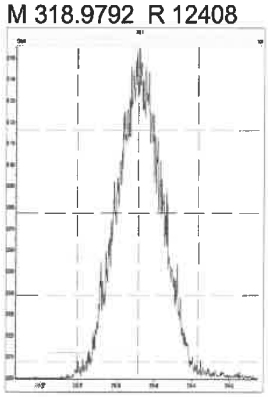

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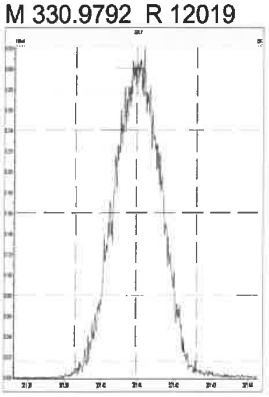

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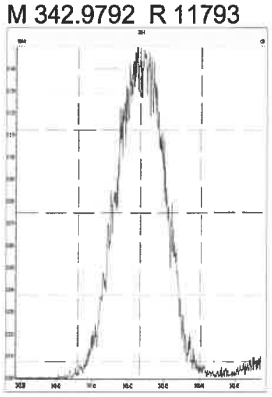

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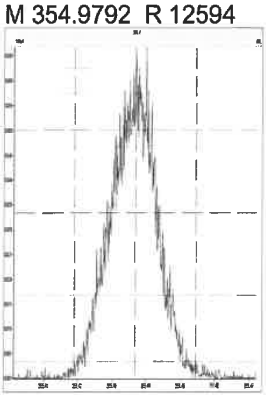

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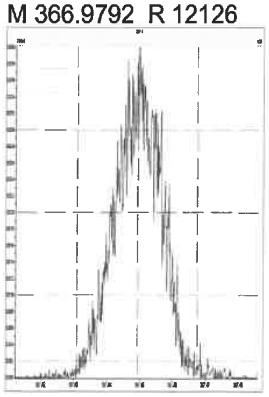

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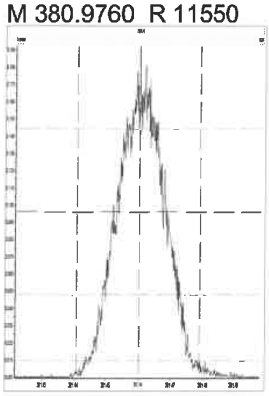

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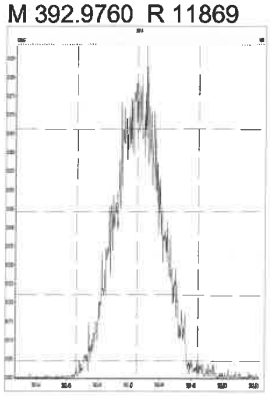

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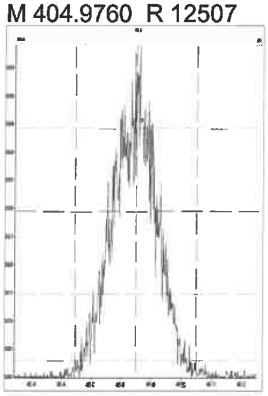

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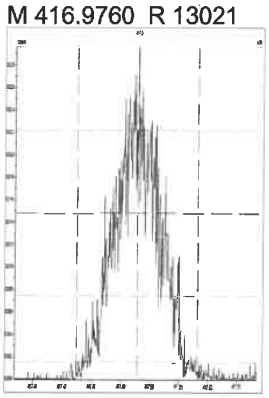

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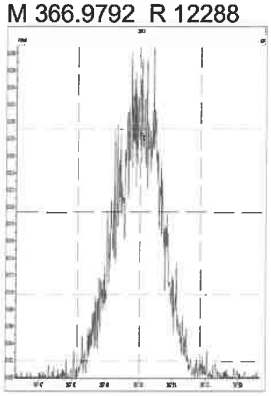

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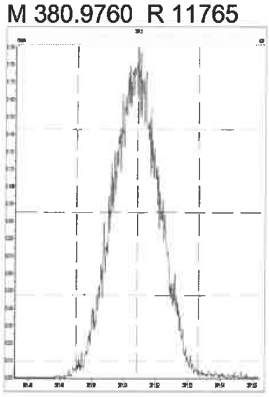

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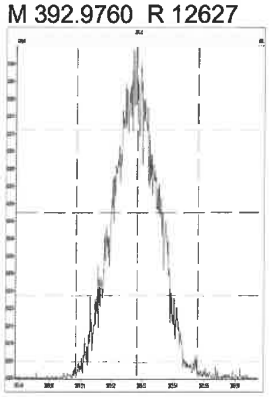

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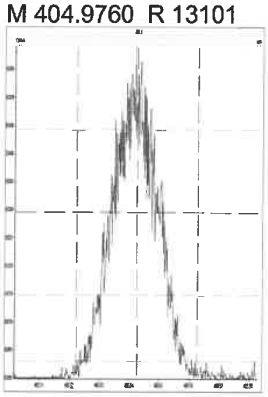

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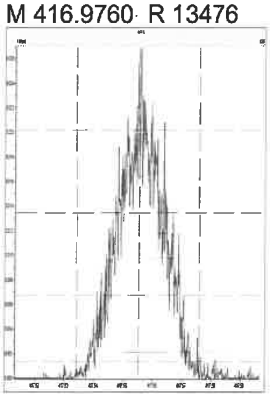

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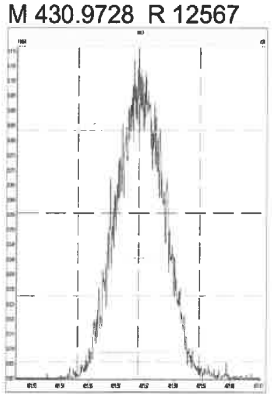

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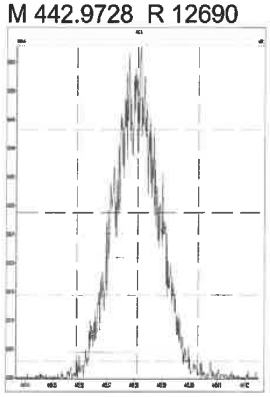

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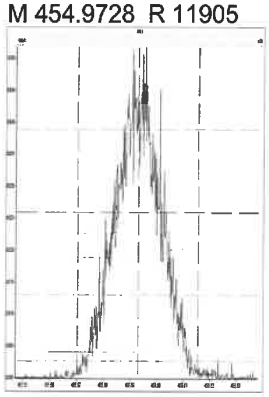

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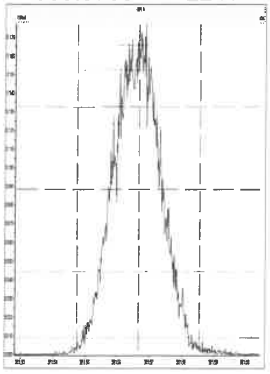

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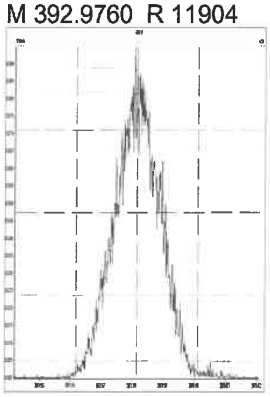

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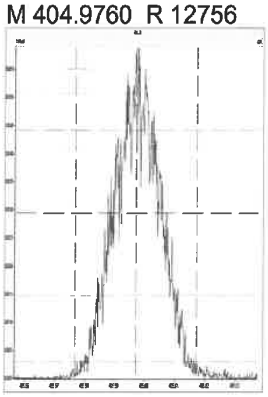

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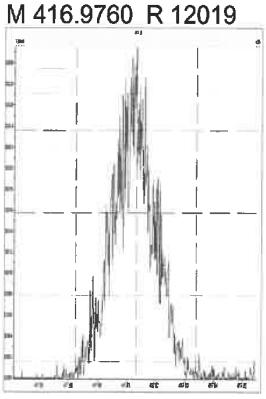

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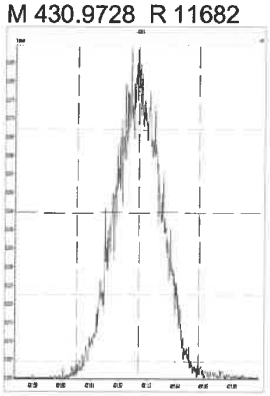

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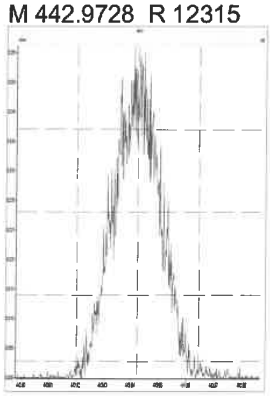

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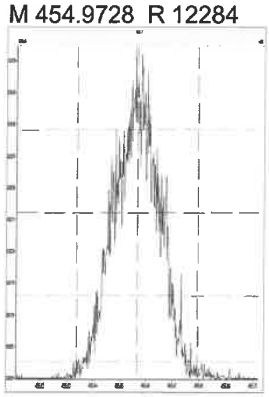

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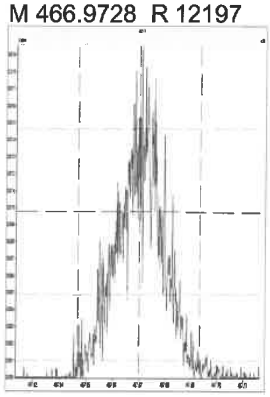

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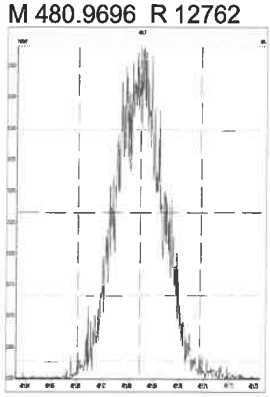

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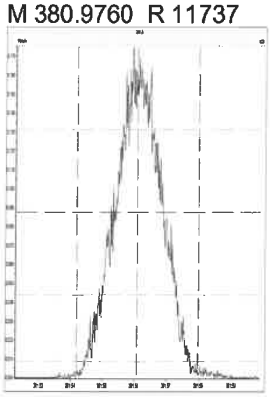

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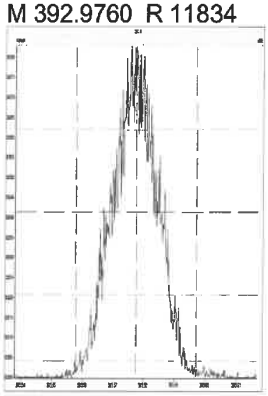

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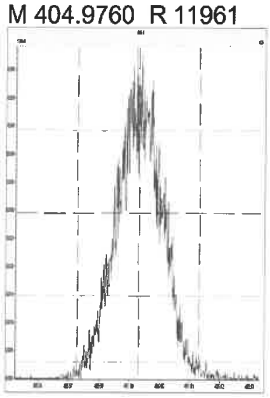

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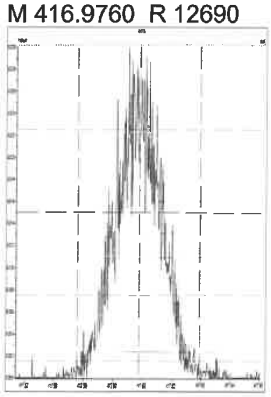

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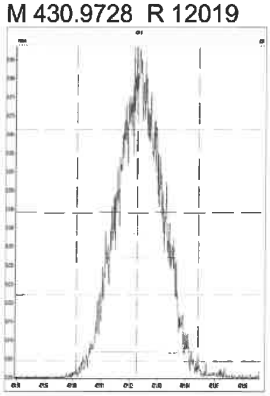

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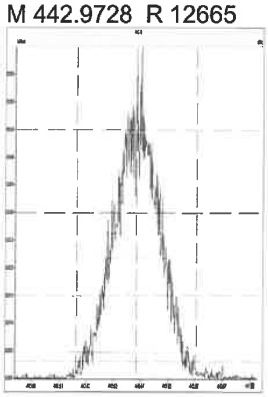

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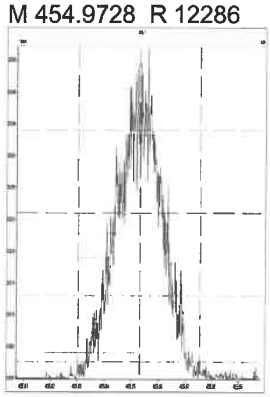

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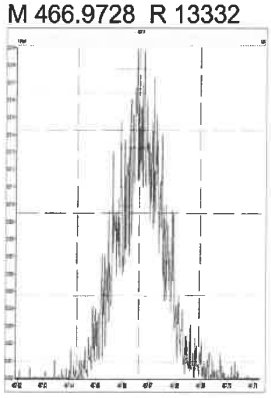

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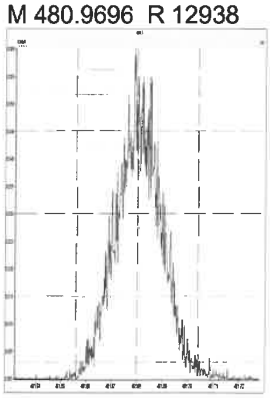

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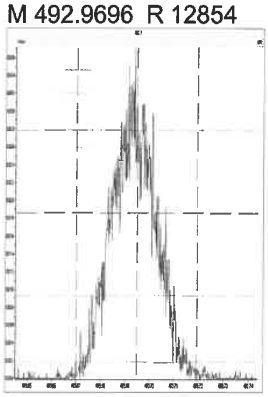

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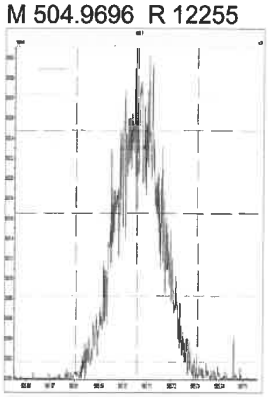

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M 516.9697 R 14214

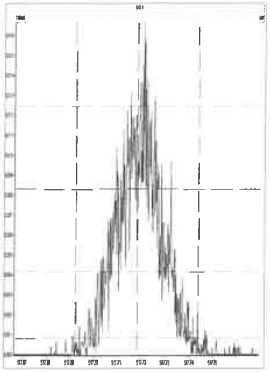

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

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Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 20:40:41 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521A CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:47:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 10:34:44

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	114162124	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	179170031	0.77	1.6249	96.6	96.6	0.1661	0.1661	96.59	
2,3,7,8-TCDF	17.114	18424700	0.76	1.0239	10.0	10.0	0.0163	0.0163	100	
A Non-2,3,7,8-sub-TCDF	17.076						0.0163	0.0163		Rn
S Total TCDF					10.0	10.0	0.0163	0.0163		
D 13C-2,3,7,8-TCDD	17.794	104038414	0.79	0.8993	101.3	101.3	0.1008	0.1008	101	
2,3,7,8-TCDD	17.809	12869222	0.79	1.2541	9.863	9.863	0.0130	0.0130	98.63	
$ 37Cl4-2,3,7,8-TCDD	17.809	13512459		1.1071	10.7	10.7	0.0128	0.0128	107	
A Non-2,3,7,8-sub-TCDD	17.530						0.0130	0.0130		
S Total TCDD					9.863	9.863	0.0130	0.0130		
D 13C-1,2,3,7,8-PeCDF	22.020	139045231	1.55	1.2101	100.7	100.7	0.1276	0.1276	101	
1,2,3,7,8-PeCDF	22.047	74923542	1.58	1.0611	50.8	50.8	0.0907	0.0907	102	
D 13C-2,3,4,7,8-PeCDF	23.343	140922707	1.54	1.2395	99.6	99.6	0.1246	0.1246	99.59	
2,3,4,7,8-PeCDF	23.370	73012473	1.57	1.0184	50.9	50.9	0.1016	0.1016	102	
A F1 PeCDFs	19.851						0.009195	0.009195		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0959	0.0959		n
S Total PeCDF					101.7	101.7	0.0962	0.0962		
D 13C-1,2,3,7,8-PeCDD	24.052	91963618	1.60	0.7612	105.8	105.8	0.0778	0.0778	106	
1,2,3,7,8-PeCDD	24.079	47886998	1.59	1.0484	49.7	49.7	0.0368	0.0368	99.33	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0368	0.0368		
S Total PeCDD					49.7	49.7	0.0368	0.0368		
D 13C-1,2,3,4,7,8-HxCDF	30.186	119996593	0.52	1.0837	103.5	103.5	0.2311	0.2311	104	
1,2,3,4,7,8-HxCDF	30.212	64814583	1.21	1.0851	49.8	49.8	0.1720	0.1720	99.55	
D 13C-1,2,3,6,7,8-HxCDF	30.399	117007399	0.53	1.1279	97.0	97.0	0.2220	0.2220	96.99	
1,2,3,6,7,8-HxCDF	30.412	66745854	1.21	1.1260	50.7	50.7	0.1618	0.1618	101	
D 13C-2,3,4,6,7,8-HxCDF	31.291	110727855	0.53	1.0637	97.3	97.3	0.2354	0.2354	97.32	
2,3,4,6,7,8-HxCDF	31.317	64797217	1.22	1.1675	50.1	50.1	0.1207	0.1207	100	
D 13C-1,2,3,7,8,9-HxCDF	32.142	104082078	0.52	0.9676	100.6	100.6	0.2588	0.2588	101	
1,2,3,7,8,9-HxCDF	32.156	61173374	1.21	1.1664	50.4	50.4	0.1129	0.1129	101	
A Non-2,3,7,8-sub-HxCDF	30.331						0.1379	0.1379		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					201.0	201.0	0.1419	0.1419		
* 13C-1,2,3,7,8,9-HxCDD	31.956	106956569	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.503	82011748	1.25	0.7334	104.5	104.5	0.2299	0.2299	105	
1,2,3,4,7,8-HxCDD	31.517	44803827	1.27	1.0640	51.3	51.3	0.1165	0.1165	103	
D 13C-1,2,3,6,7,8-HxCDD	31.610	88158641	1.23	0.8802	93.6	93.6	0.1915	0.1915	93.65	
1,2,3,6,7,8-HxCDD	31.623	46192612	1.26	1.0001	52.4	52.4	0.1143	0.1143	105	
1,2,3,7,8,9-HxCDD	31.969	50727870	1.26	1.1325	52.6	52.6	0.1050	0.1050	105	
A Non-2,3,7,8-sub-HxCDD	30.519						0.1116	0.1116		
S Total HxCDD					156.4	156.4	0.1119	0.1119		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	76892142	0.44	0.7730	93.0	93.0	0.9442	0.9442	93.00	
1,2,3,4,6,7,8-HpCDF	33.615	56931307	1.04	1.4413	51.4	51.4	0.3136	0.3136	103	
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	68051725	0.45	0.7008	90.8	90.8	1.041	1.041	90.79	
1,2,3,4,7,8,9-HpCDF	34.684	45731591	1.04	1.3174	51.0	51.0	0.4110	0.4110	102	
A Non-2,3,7,8-sub-HpCDF	34.138						0.3572	0.3572		
S Total HpCDF					102.4	102.4	0.3623	0.3623		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	68981955	1.03	0.6472	99.6	99.6	0.5318	0.5318	99.65	
1,2,3,4,6,7,8-HpCDD	34.405	37129661	1.05	1.0943	49.2	49.2	0.2136	0.2136	98.37	
A Non-2,3,7,8-sub-HpCDD	34.223						0.2136	0.2136		
S Total HpCDD					49.2	49.2	0.2136	0.2136		
D 13C-OCDD	36.701	102754035	0.88	0.4472	214.8	214.8	0.1820	0.1820	107	
OCDF	36.797	73073478	0.90	1.4382	98.9	98.9	0.0580	0.0580	98.90	
OCDD	36.713	57319561	0.89	1.1070	100.8	100.8	0.0889	0.0889	101	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 20:40:41 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521A CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:47:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 10:34:44

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		50863464	13175107	4799	11997	2745		
333.9339	17.598	17.598	0		63298660	16424626	5937	14842	2766	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	0.972	78087026	20629866	12788	31970	1613		
317.9389	17.099	17.099	0	0.972	101083005	26486866	19167	47917	1382	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	7965523	2111252	1622	4055	1302		
305.8987	17.114	17.114	0	1.001	10459177	2754776	1531	3827	1799	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.736	17.069	-20	0.979	32665	8844	1622	4055	5		
305.8987	16.736	17.069	-20	0.979	57871	15057	1531	3827	10	0.56(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.011	45918108	11183544	4799	11997	2330		
333.9339	17.794	17.794	0	1.011	58120306	14151695	5937	14842	2384	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	5674510	1471774	848	2120	1736		
321.8936	17.809	17.809	0	1.001	7194712	1842625	803	2007	2295	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	13512459	3426543	1675	4187	2046		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.530						848	2120			
321.8936	17.530						803	2007			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	84597034	15895976	10902	27255	1458		
353.8970	22.020	22.020	0	1.251	54448197	10109172	7383	18457	1369	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.047	22.047	0	1.001	45912931	8636444	5920	14800	1459		
341.8567	22.047	22.047	0	1.001	29010611	5460850	4095	10237	1334	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.326	85516036	14699684	10902	27255	1348		
353.8970	23.343	23.343	0	1.326	55406671	9501142	7383	18457	1287	1.54(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370	23.370	0	1.001	44637834	7805502	5920	14800	1318		
341.8567	23.370	23.370	0	1.001	28374639	4948946	4095	10237	1209	1.57(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						257	642			
341.8567	19.851						703	1757			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.565	23.067	-30	1.025	339228	53393	5920	14800	9		
341.8567	22.579	23.067	-29	1.025	227009	34407	4095	10237	8	1.49(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.367	56560329	9299645	4456	11140	2087		
369.8919	24.052	24.052	0	1.367	35403289	5807455	2554	6385	2274	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079	24.079	0	1.001	29373234	4749938	1435	3587	3310		
357.8516	24.079	24.079	0	1.001	18513764	3004789	895	2237	3357	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1435	3587			
357.8516	23.696						895	2237			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.186	30.186	0	0.945	41066942	7264634	10299	25747	705		
385.8610	30.186	30.186	0	0.945	78929651	13693087	18963	47407	722	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.212	30.212	0	1.001	35478856	6175709	8558	21395	722		
375.8178	30.199	30.212	-1	1.000	29335727	5099983	7084	17710	720	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	40285825	7410201	10299	25747	720		
385.8610	30.399	30.399	0	0.951	76721574	14049318	18963	47407	741	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.000	36612207	6905037	8558	21395	807		
375.8178	30.412	30.412	0	1.000	30133647	5689393	7084	17710	803	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.979	38142735	9507771	10299	25747	923		
385.8610	31.291	31.291	0	0.979	72585120	18240793	18963	47407	962	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317	31.317	0	1.001	35582042	8886351	8558	21395	1038		
375.8178	31.317	31.317	0	1.001	29215175	7234440	7084	17710	1021	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.142	32.142	0	1.006	35430450	10130665	10299	25747	984		
385.8610	32.142	32.142	0	1.006	68651628	19563080	18963	47407	1032	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.156	32.156	0	1.000	33506085	9715818	8558	21395	1135		
375.8178	32.156	32.156	0	1.000	27667289	7970936	7084	17710	1125	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.331						8558	21395			
375.8178	30.331						7084	17710			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		59252149	16215250	11953	29882	1357		
403.8529	31.956	31.956	0		47704420	13000000	7749	19372	1678	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.503	31.503	0	0.986	45517975	12210716	11953	29882	1022		
403.8529	31.503	31.503	0	0.986	36493773	9612147	7749	19372	1240	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.517	31.517	0	1.000	25058438	7024579	6198	15495	1133		
391.8127	31.517	31.517	0	1.000	19745389	5425696	4626	11565	1173	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	48572591	12959093	11953	29882	1084		
403.8529	31.610	31.610	0	0.989	39586050	10720245	7749	19372	1383	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.623	31.623	0	1.000	25734187	7002716	6198	15495	1130		
391.8127	31.623	31.623	0	1.000	20458425	5628580	4626	11565	1217	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.969	31.969	0	1.015	28234466	7888248	6198	15495	1273		
391.8127	31.969	31.969	0	1.015	22493404	6176601	4626	11565	1335	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.519						6198	15495			
391.8127	30.519						4626	11565			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	23396914	8543068	25720	64300	332		
419.8220	33.603	33.603	0	1.052	53495228	19371914	59576	148940	325	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.615	0	1.000	29017911	10689336	31624	79060	338		
409.7789	33.615	33.615	0	1.000	27913396	10346614	18846	47115	549	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.672	0	1.085	21016576	7228327	25720	64300	281		
419.8220	34.672	34.672	0	1.085	47035149	16074631	59576	148940	270	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.684	34.684	0	1.000	23341165	7997286	31624	79060	253		
409.7789	34.684	34.684	0	1.000	22390426	7671807	18846	47115	407	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						31624	79060			
409.7789	34.138						18846	47115			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	35078619	12246728	21462	53655	571		
437.8140	34.393	34.393	0	1.076	33903336	11866878	18762	46905	632	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	18991502	6650843	11799	29497	564		
425.7737	34.405	34.405	0	1.000	18138159	6220787	10748	26870	579	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						11799	29497			
425.7737	34.223						10748	26870			
13C-OCDD											
469.7779	36.701	36.701	0	1.148	48147302	14377153	4707	11767	3054		
471.7750	36.701	36.701	0	1.148	54606733	16330577	4802	12005	3401	0.88(0.76-1.02)	
OCDF											
441.7428	36.797	36.797	0	1.003	34657650	10433120	2456	6140	4248		
443.7399	36.797	36.797	0	1.003	38415828	11689295	2668	6670	4381	0.90(0.76-1.02)	
OCDD											
457.7377	36.713	36.713	0	1.000	26999141	8235432	2787	6967	2955		
459.7348	36.713	36.713	0	1.000	30320420	9177910	3259	8147	2816	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

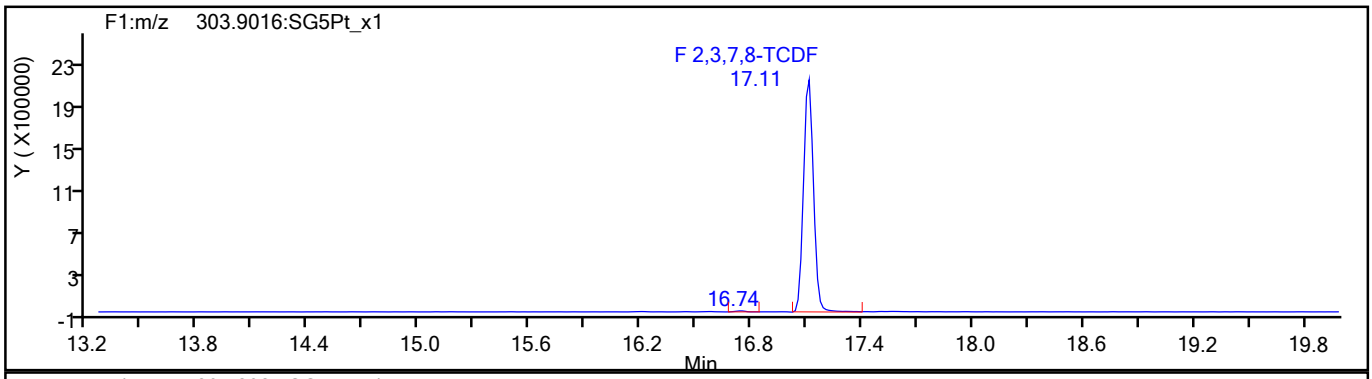

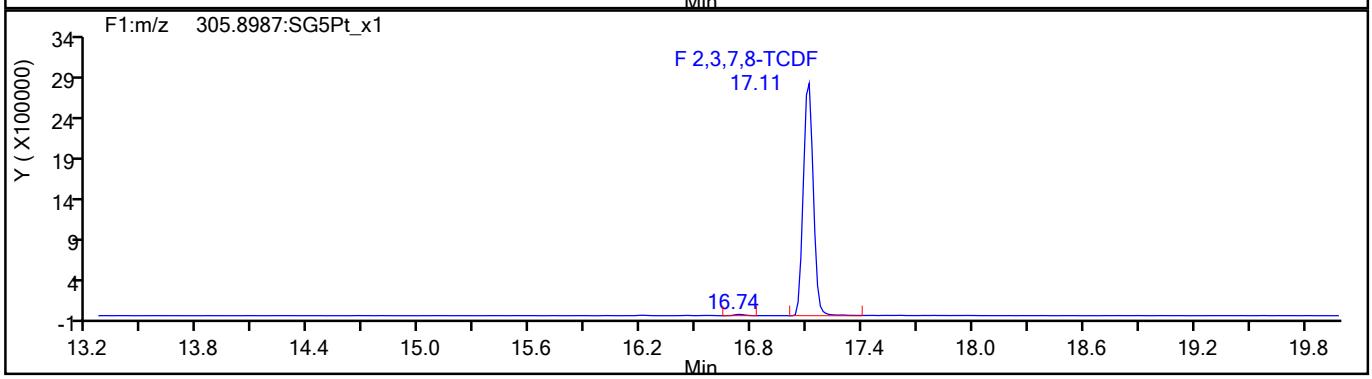

TCDF Standards

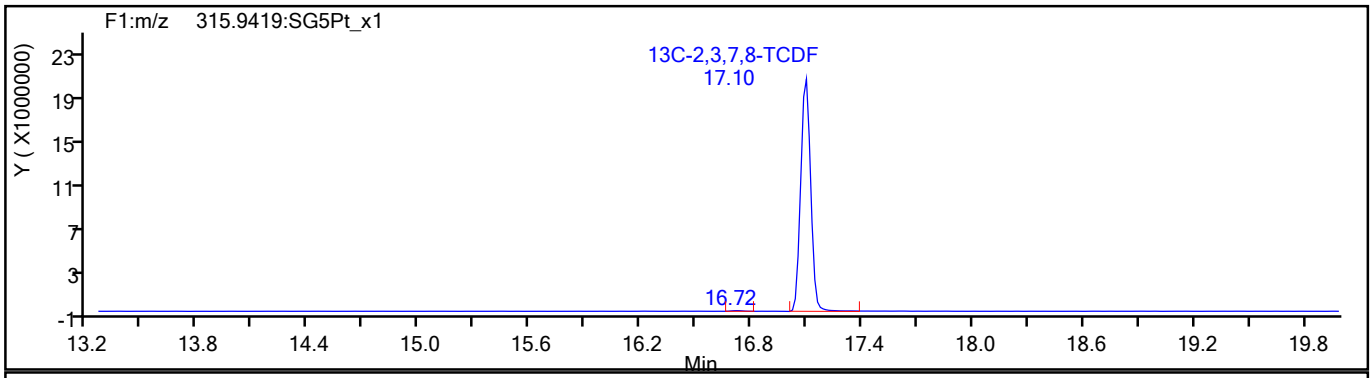

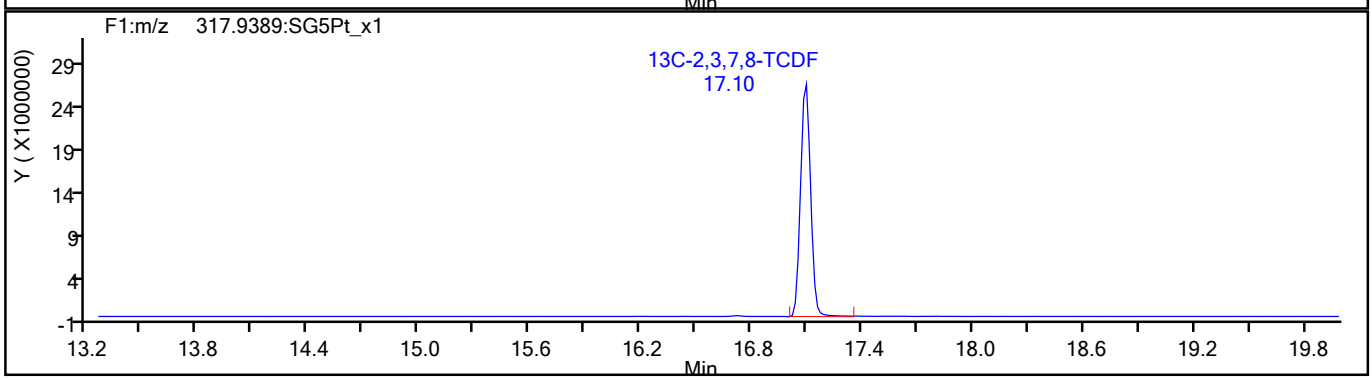

791689

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

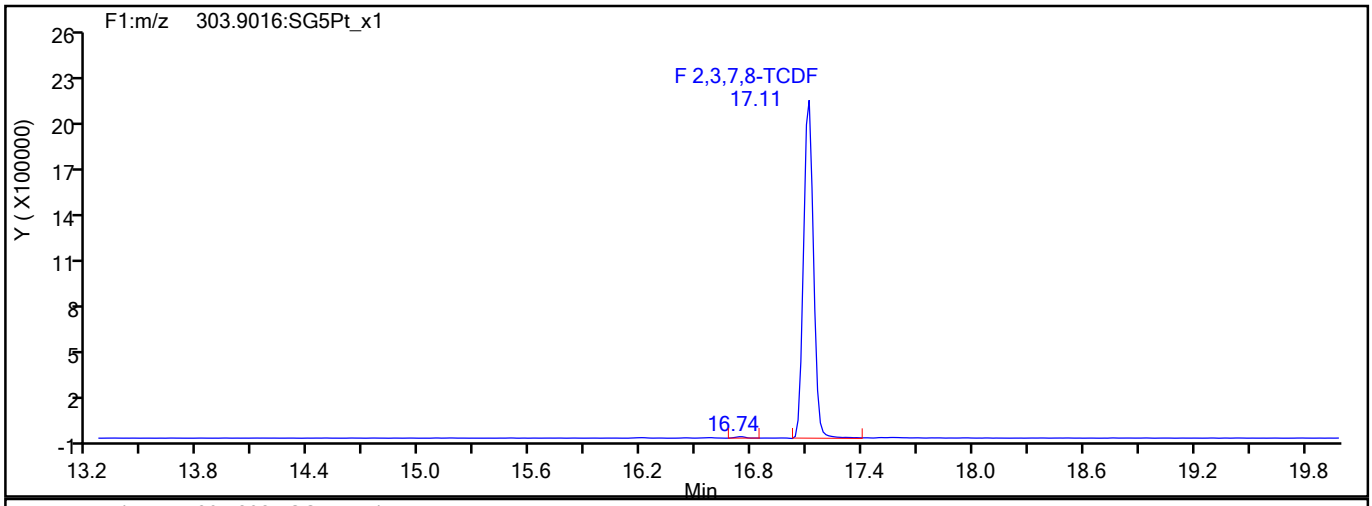

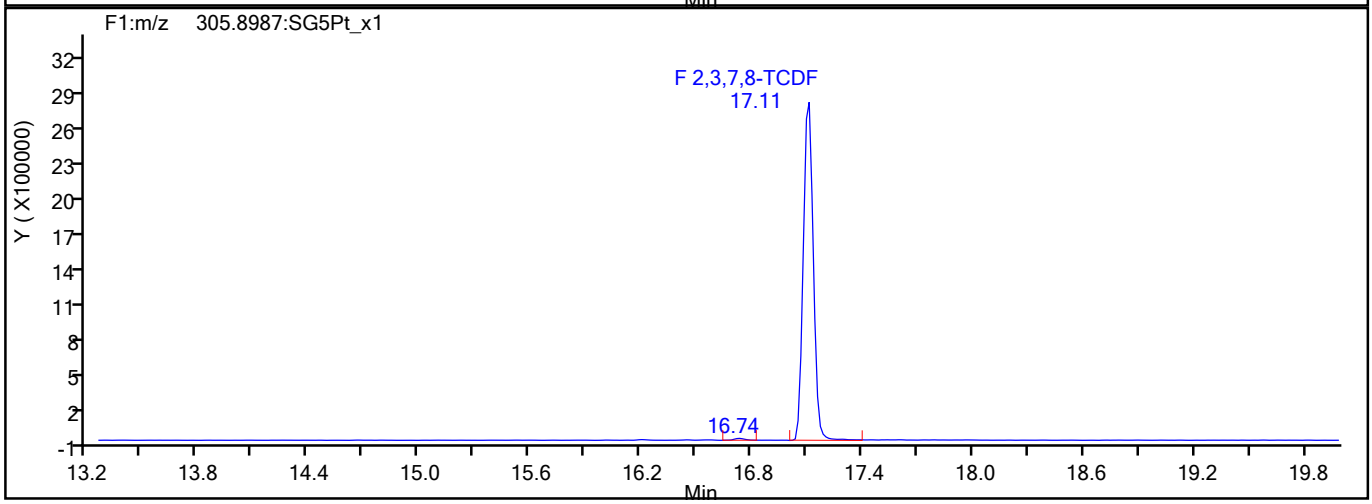

TCDF Interference Mass

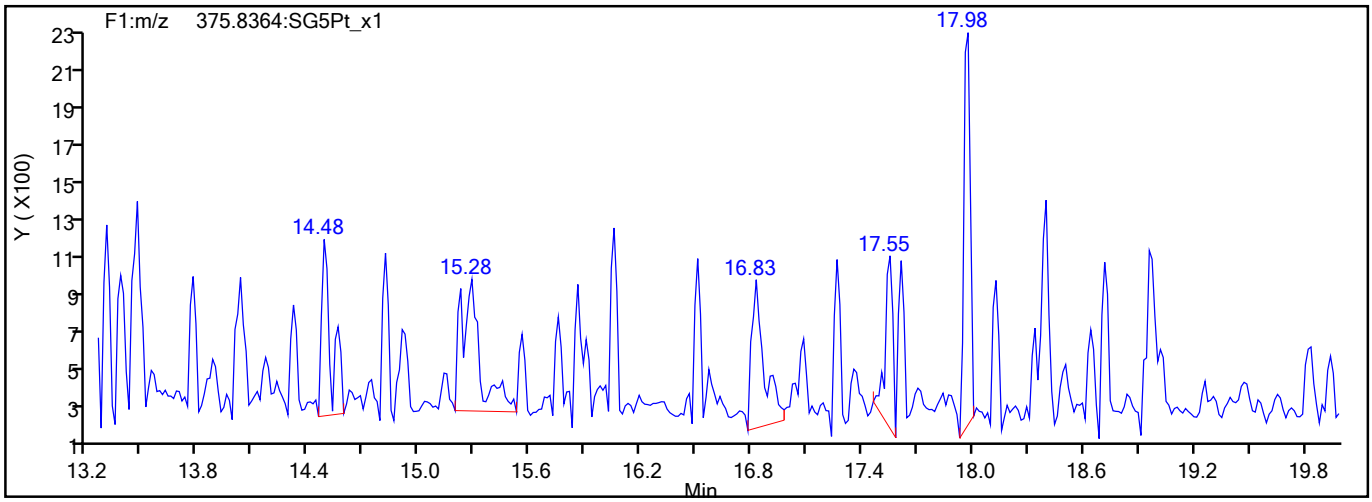

791690

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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TCDD

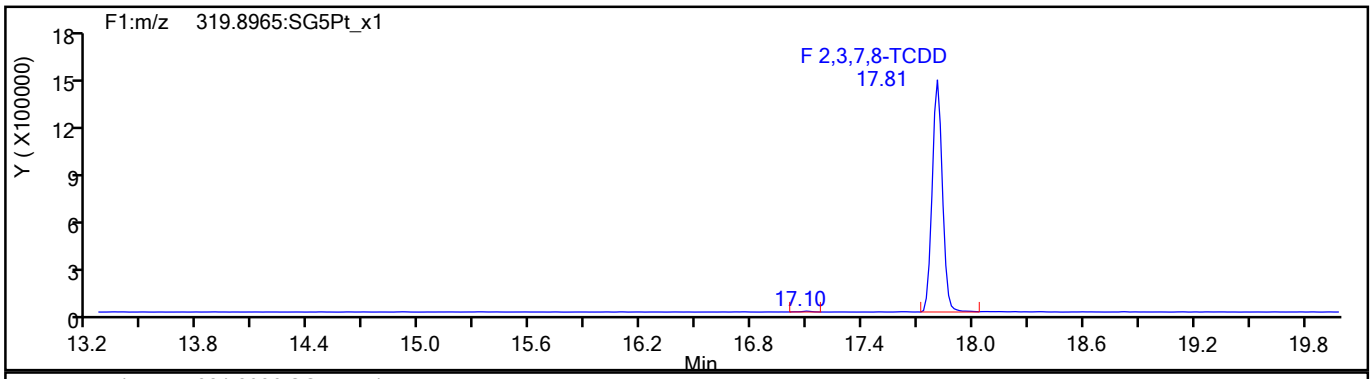

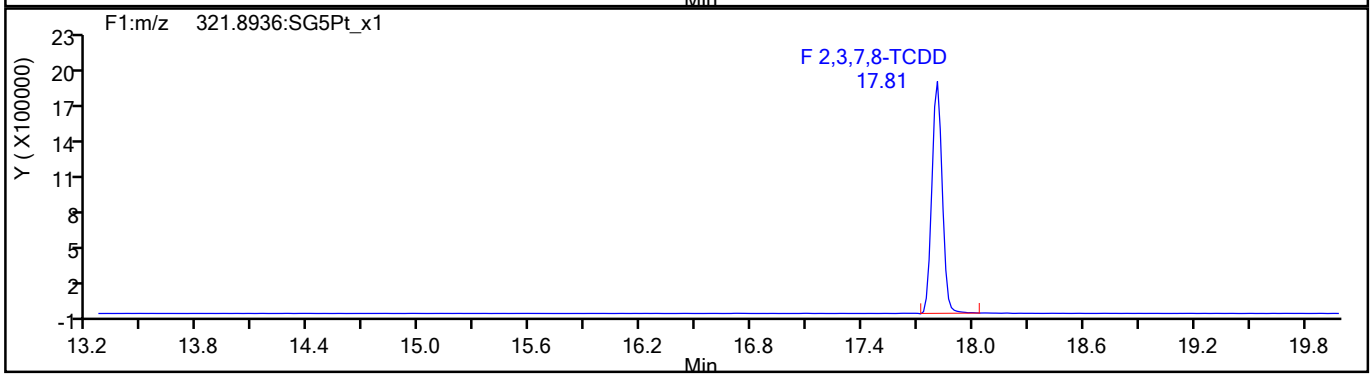

TCDD Standards

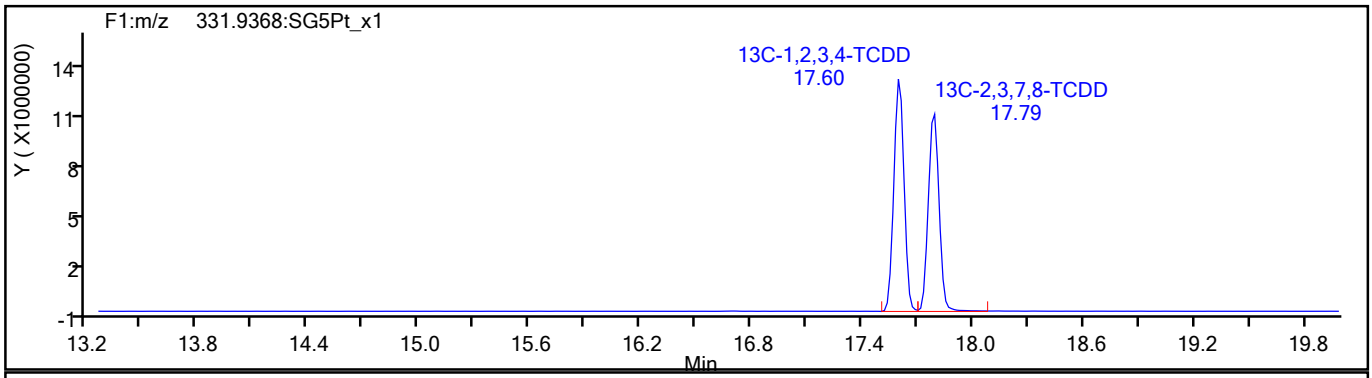

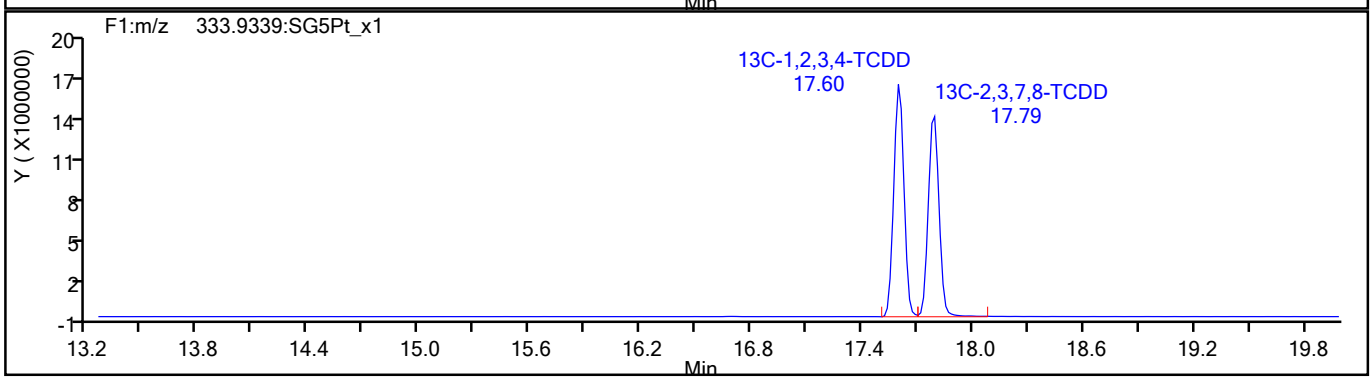

791691

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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37Cl4-TCDD

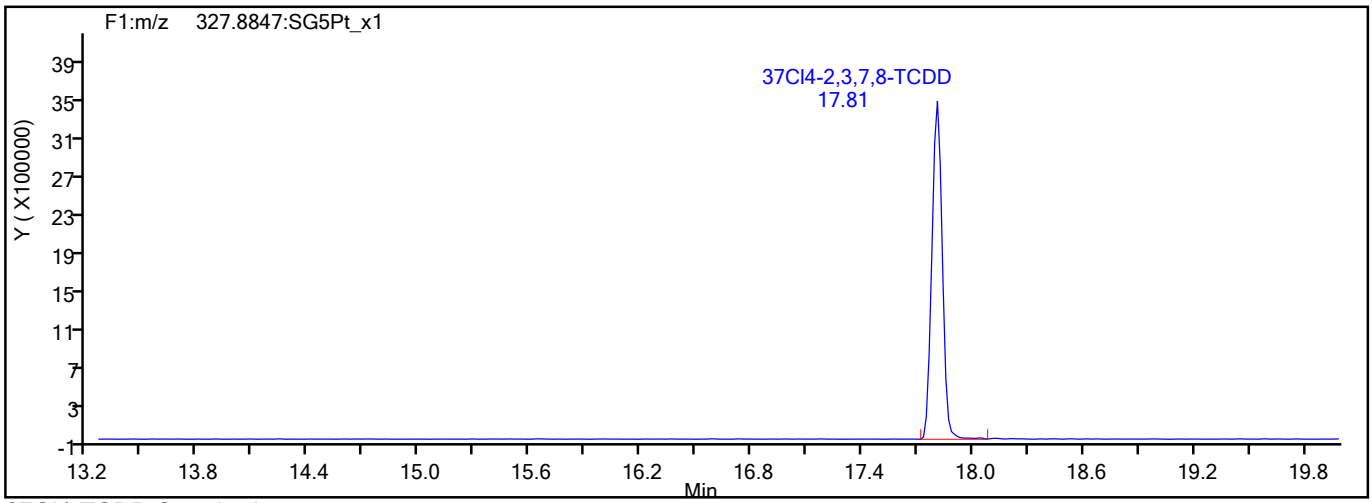

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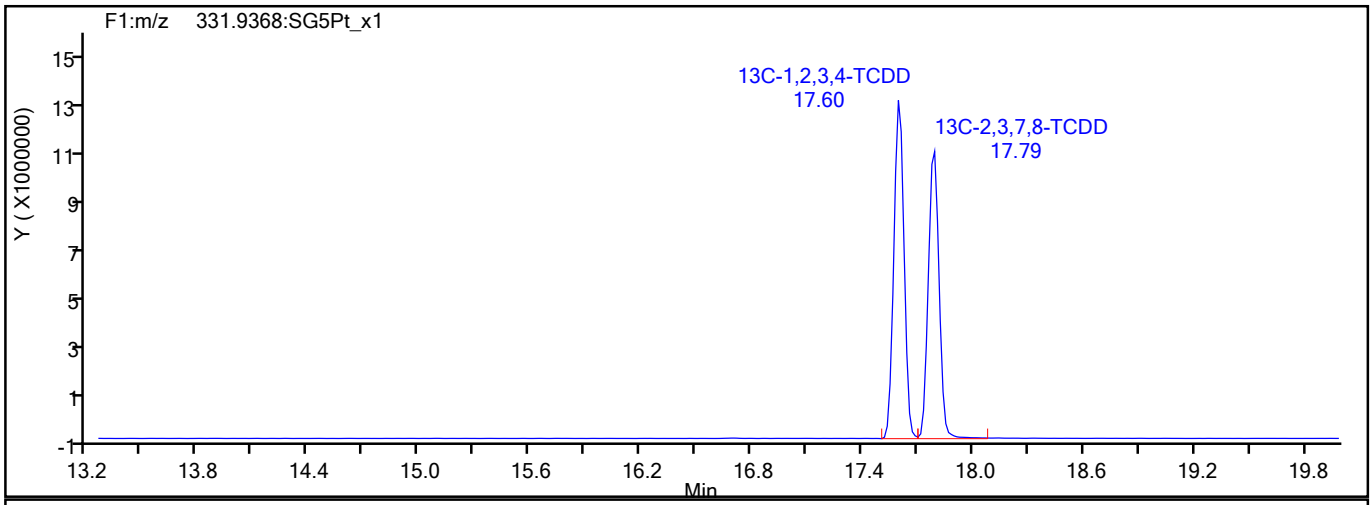

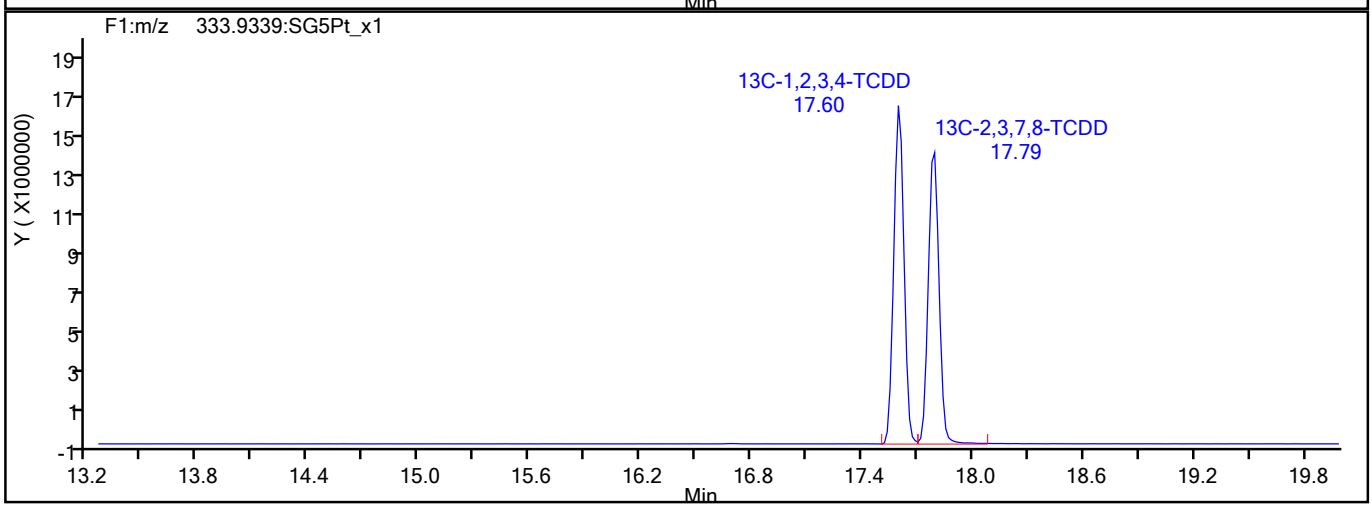

791692

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

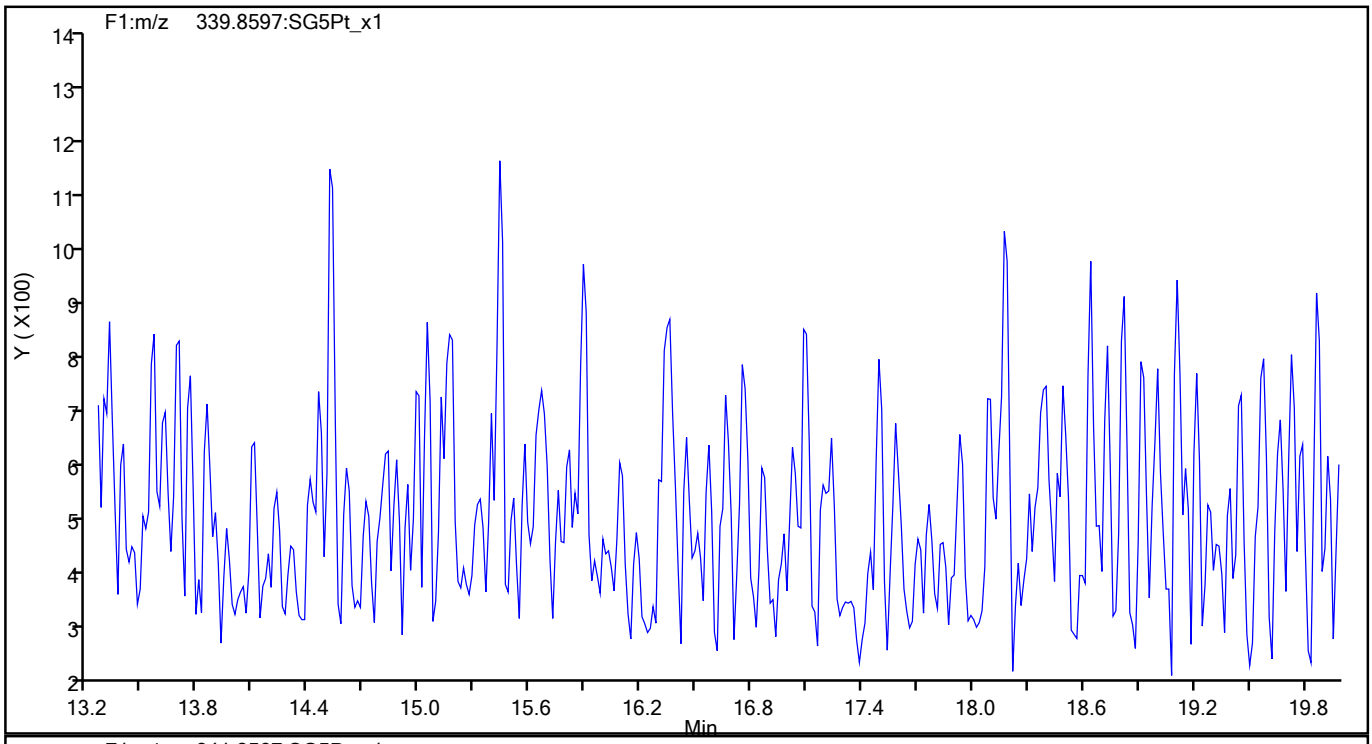

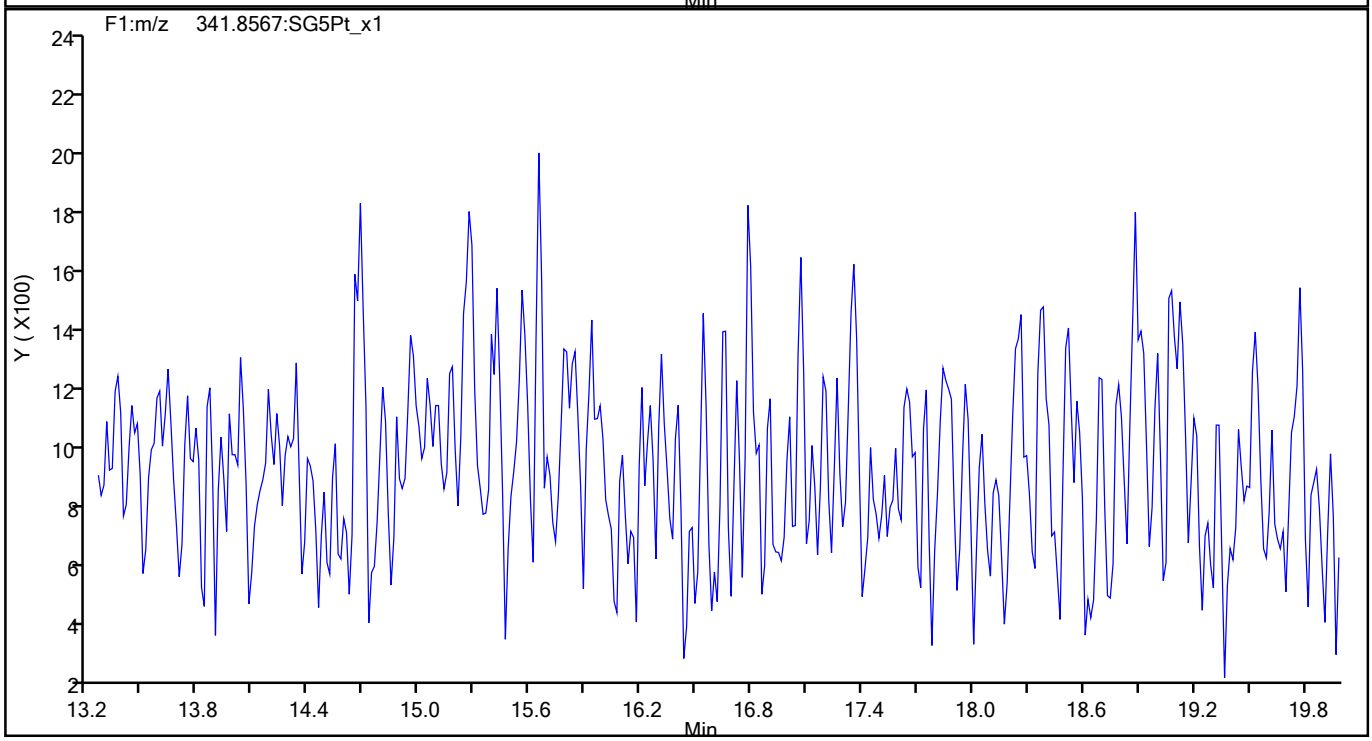

791693

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

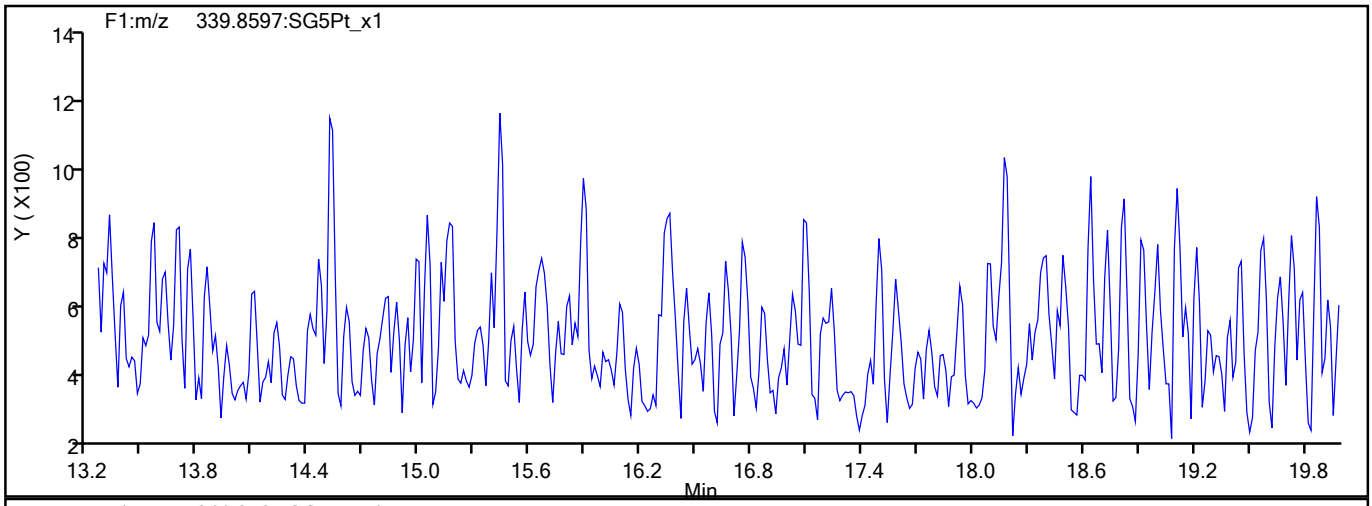

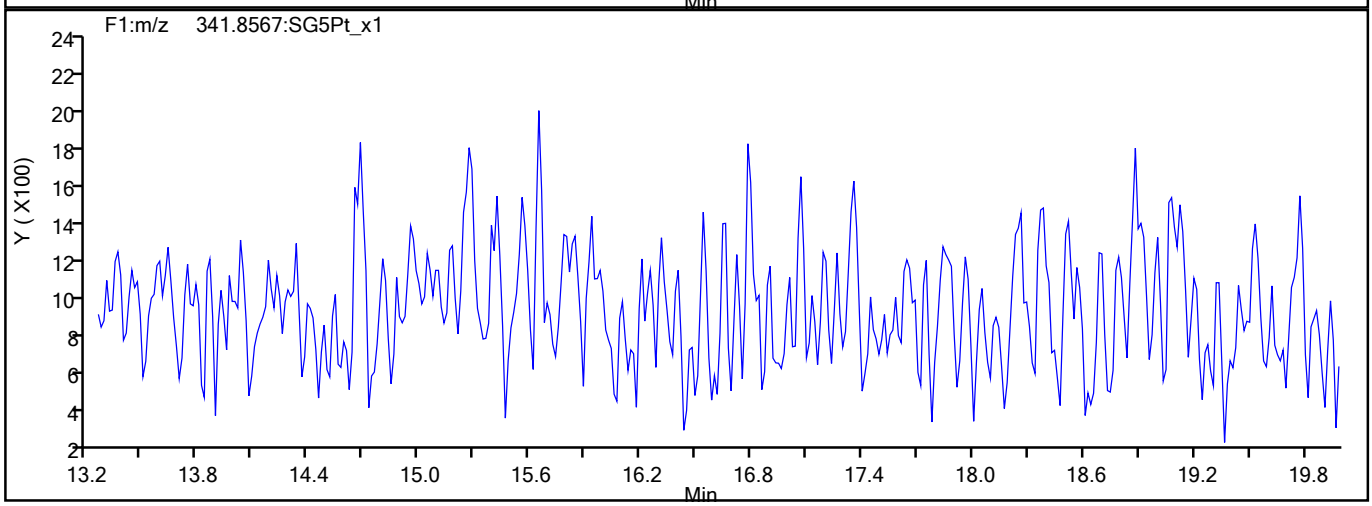

F1 PeCDFs Interference Mass

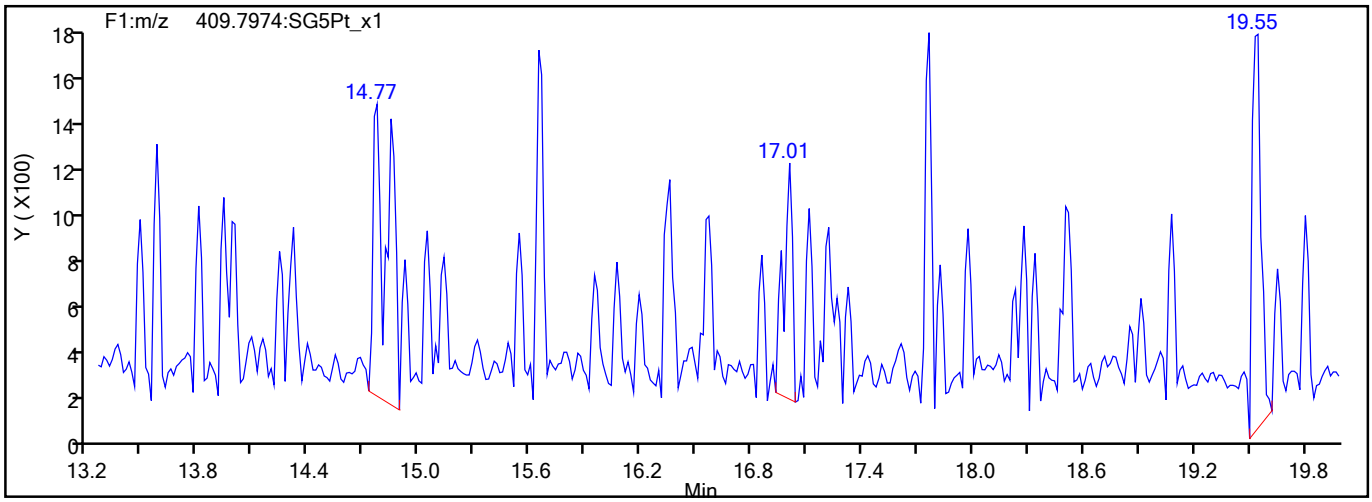

791694

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

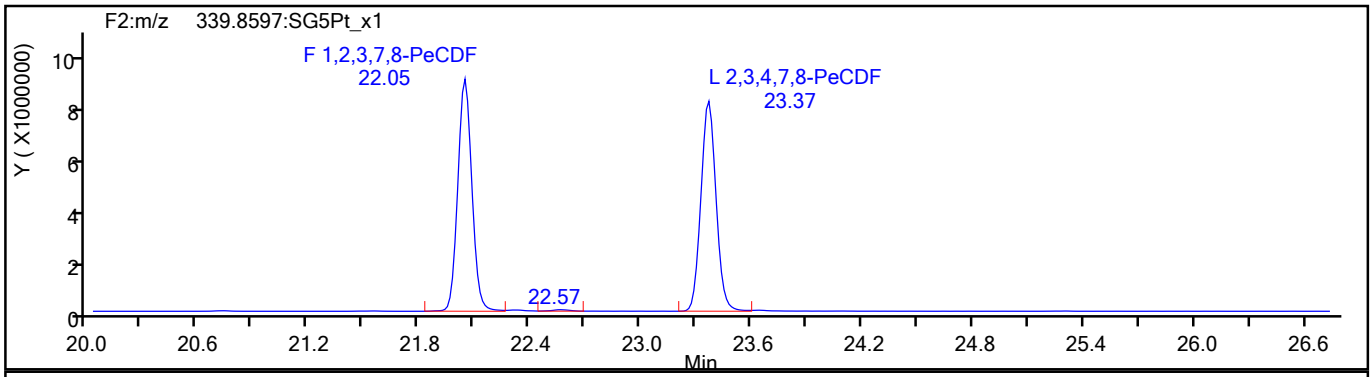

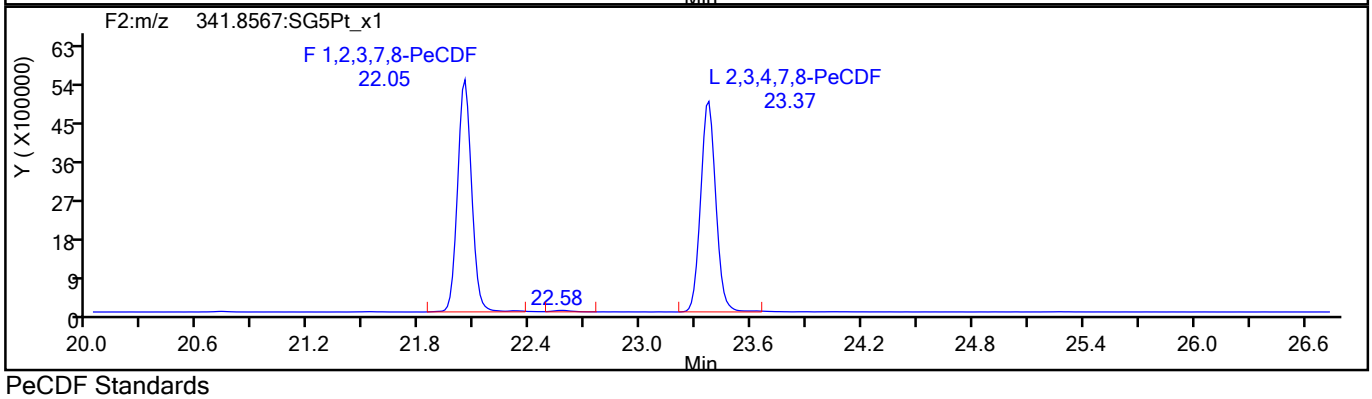

PeCDF Standards

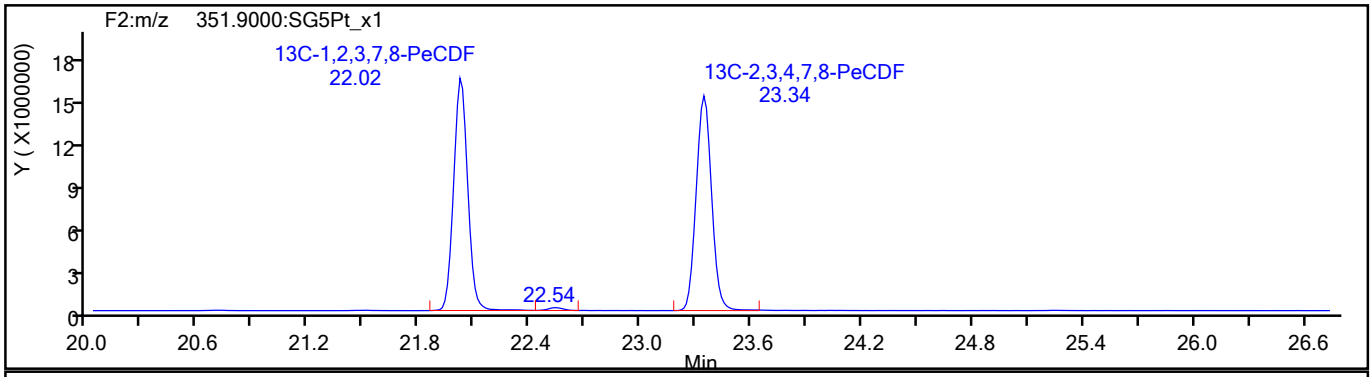

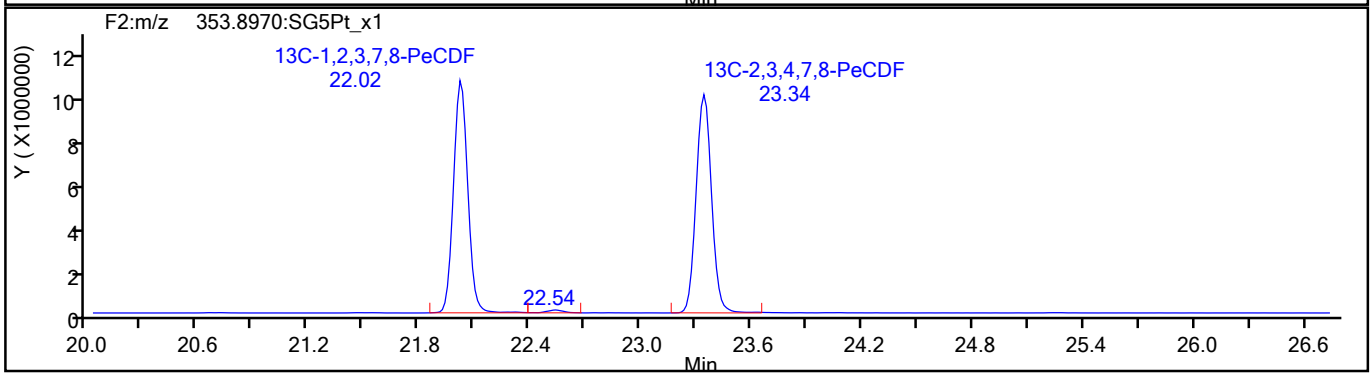

791695

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

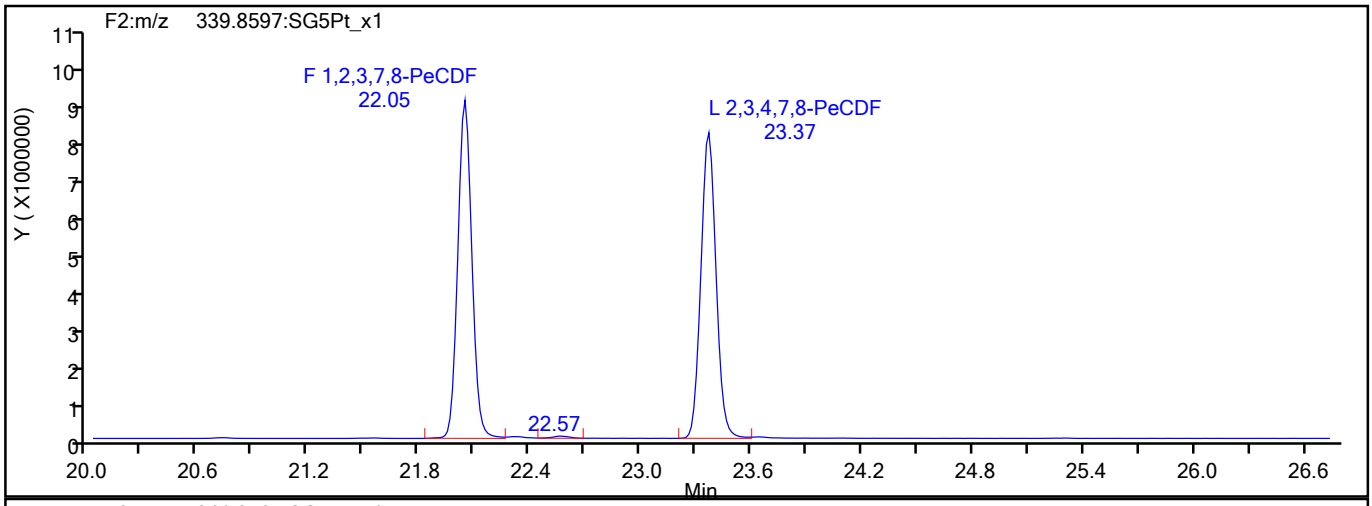

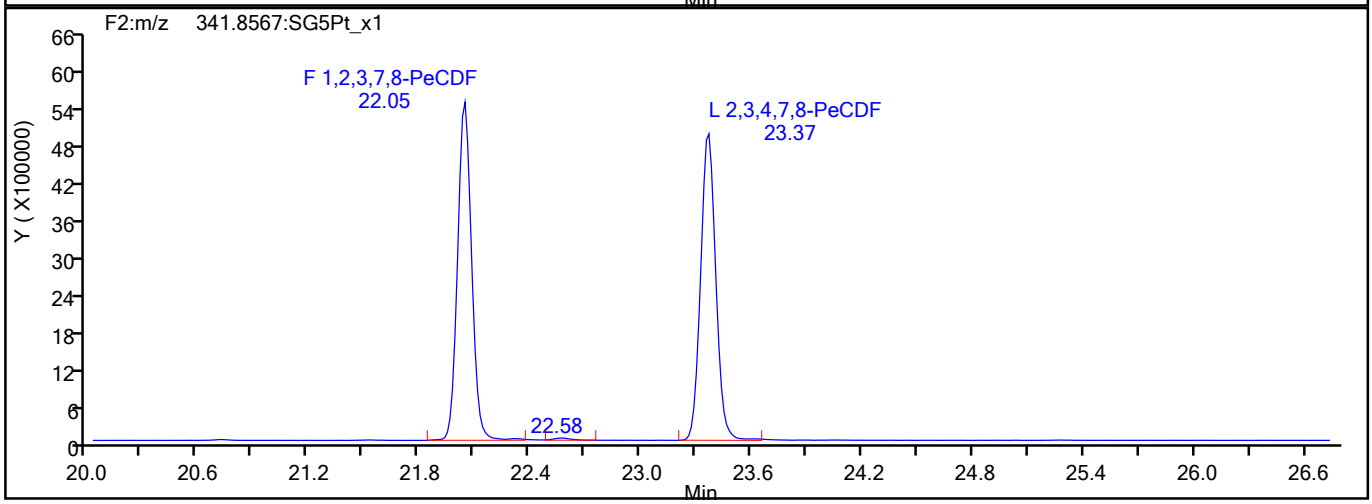

PeCDF Interference Mass

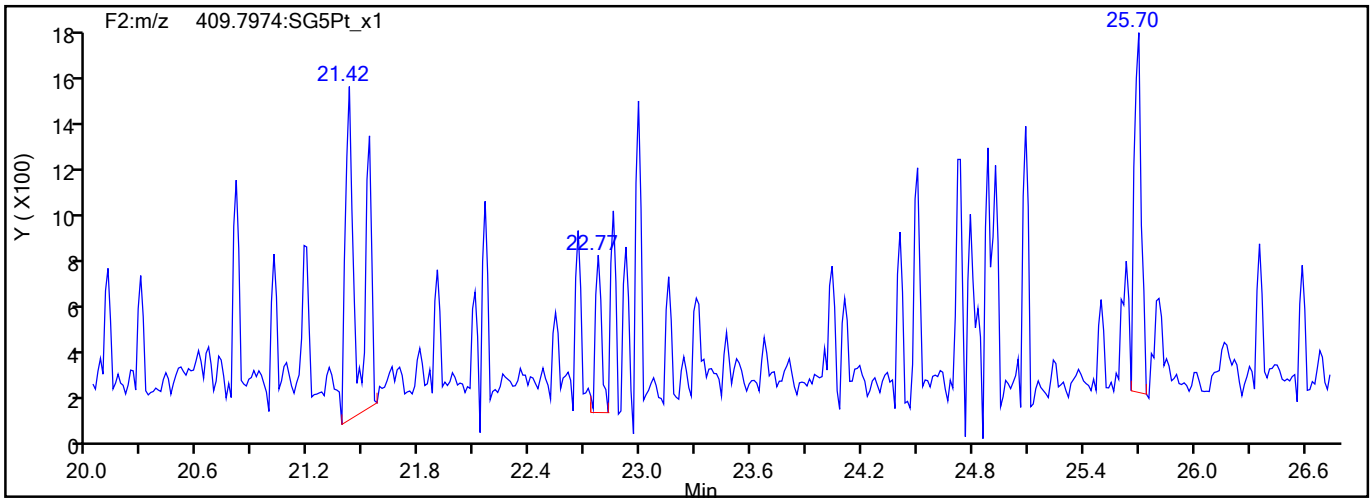

791696

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Eurofins TestAmerica, Sacramento

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PeCDD

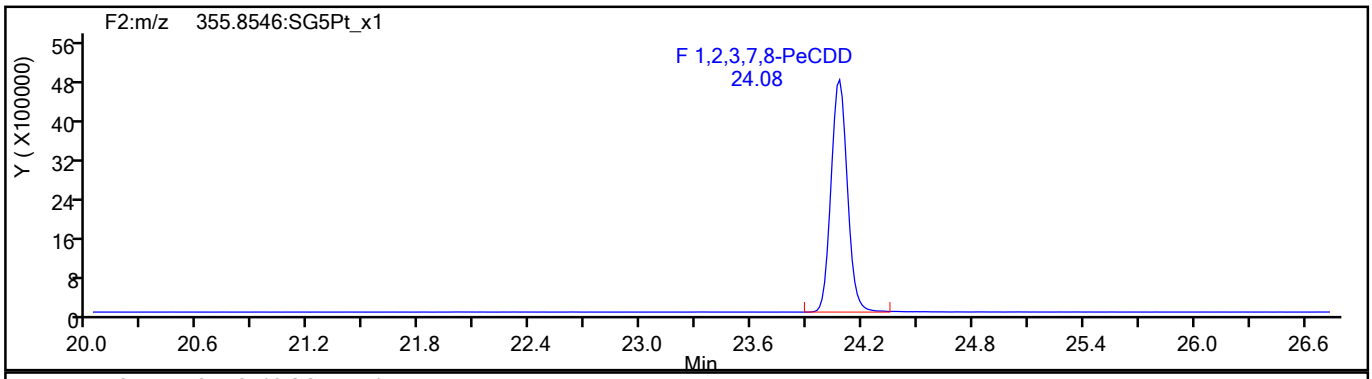

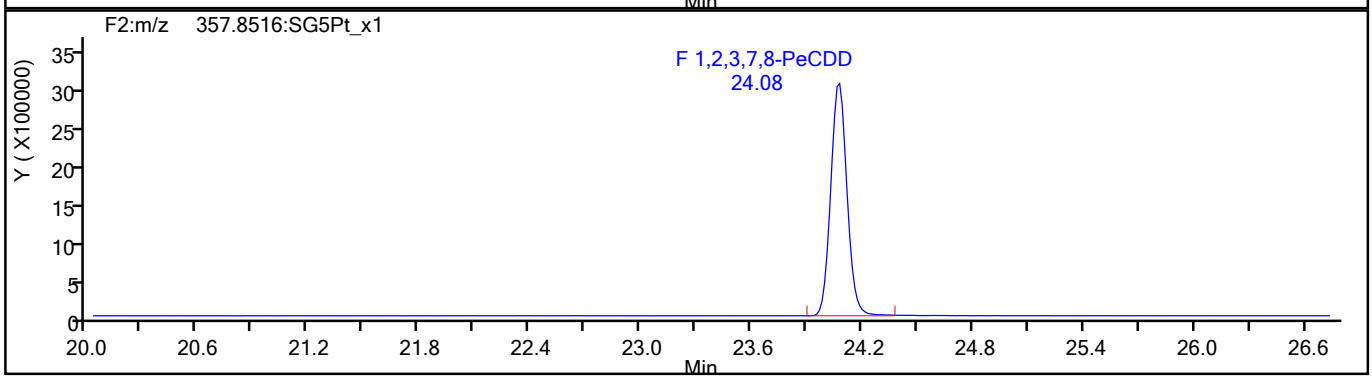

PeCDD Standards

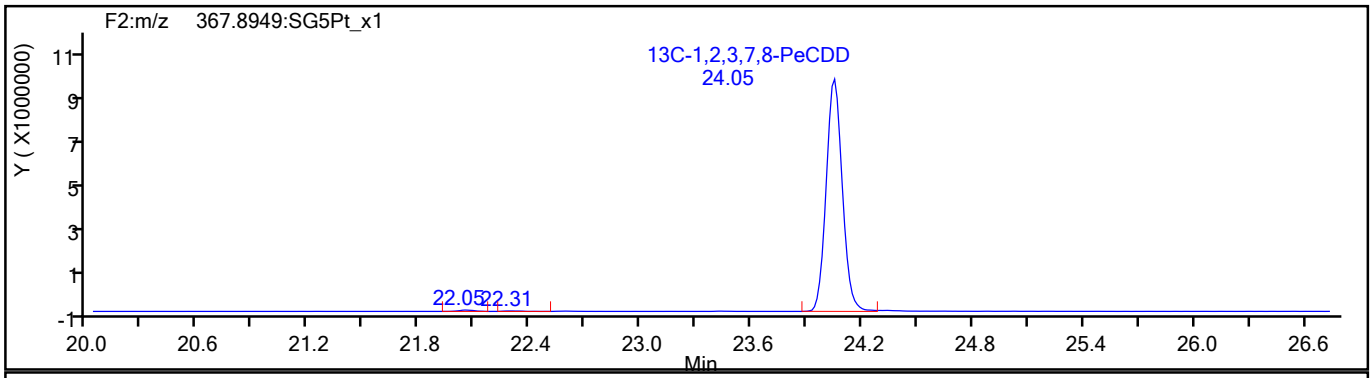

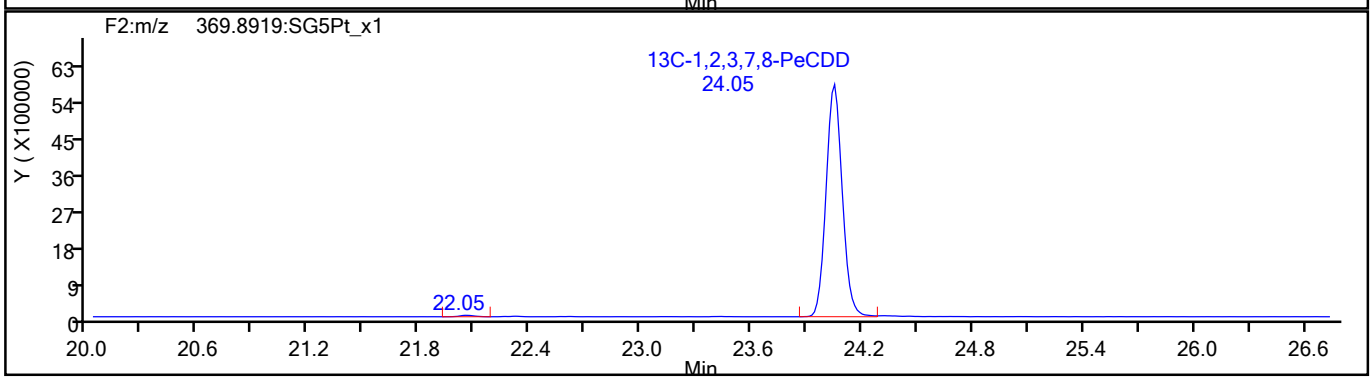

791697

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

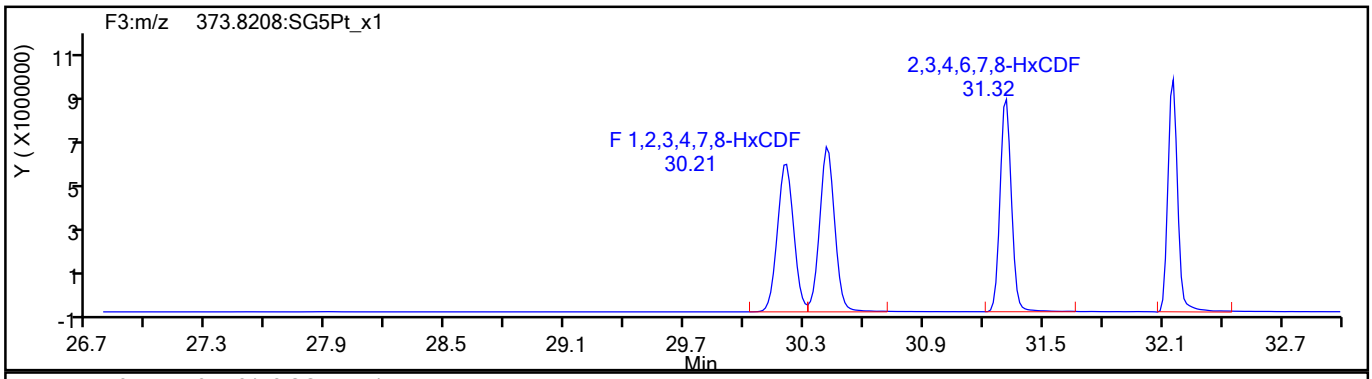

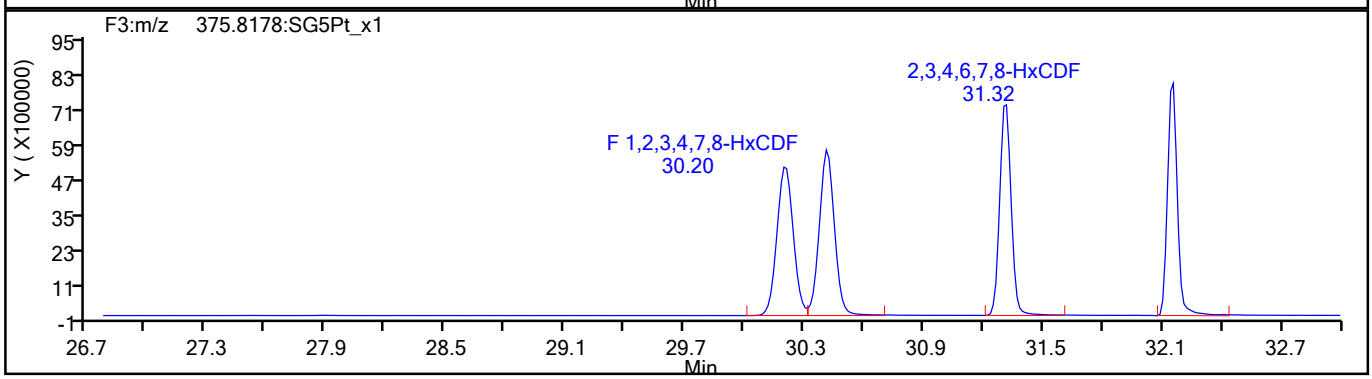

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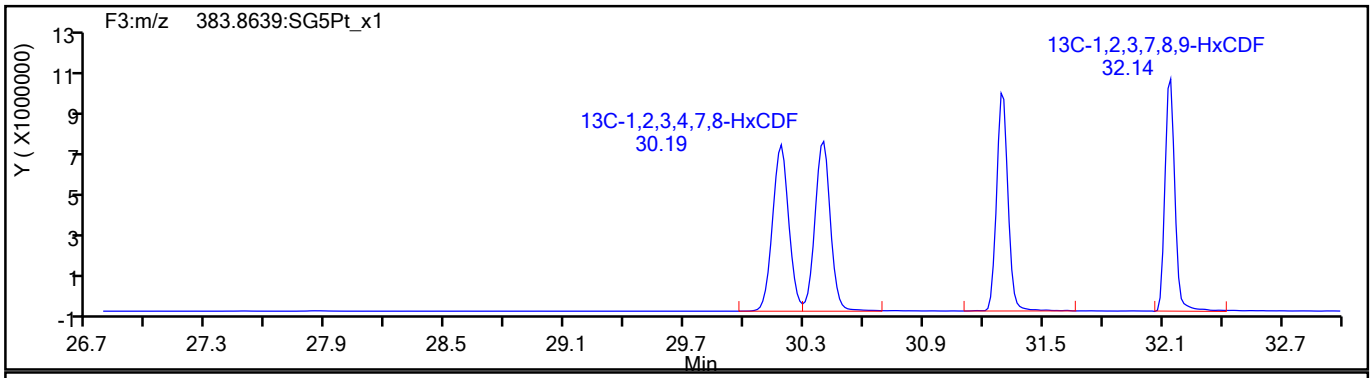

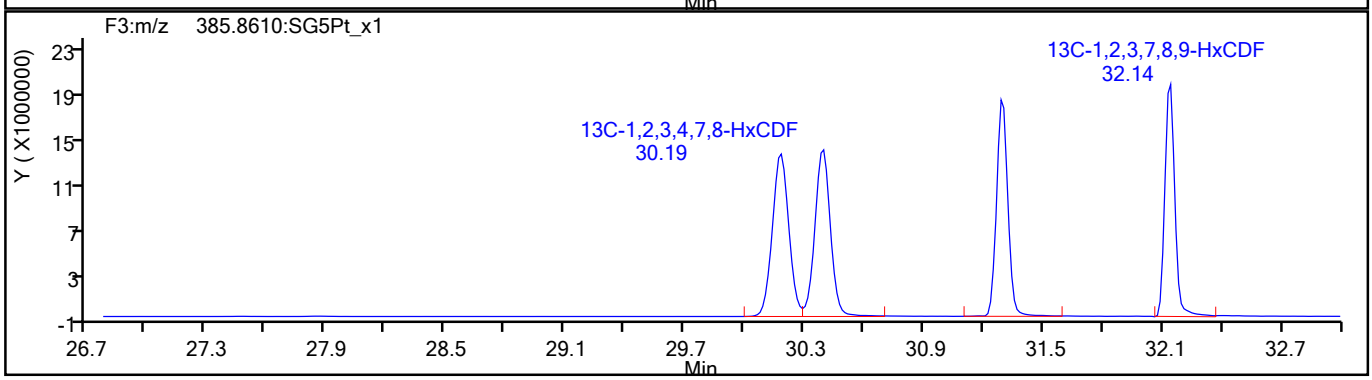

791698

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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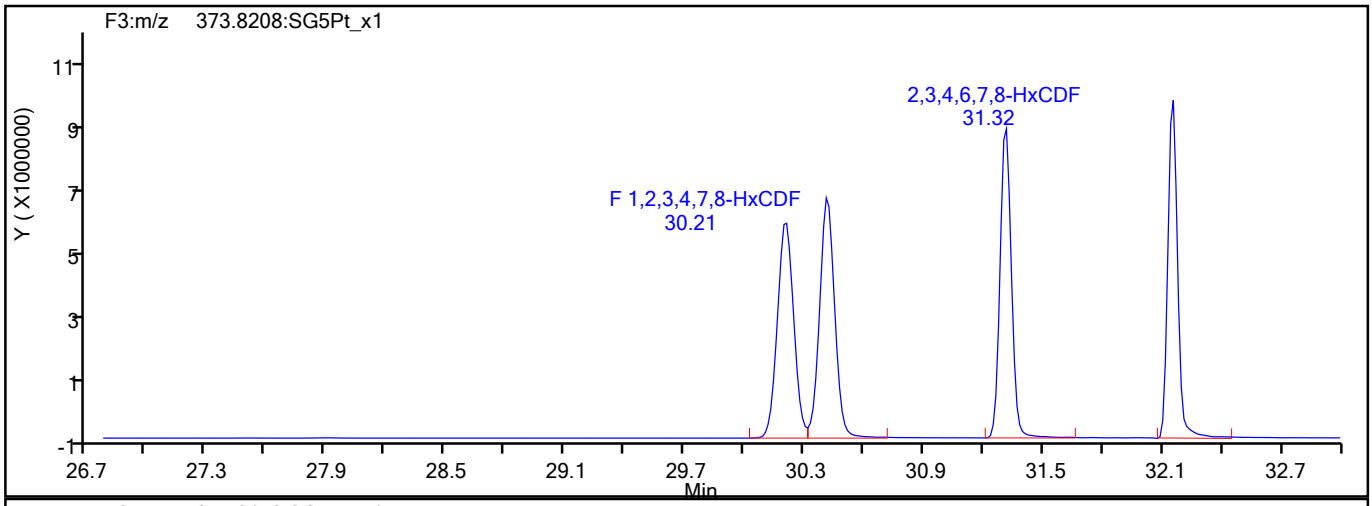

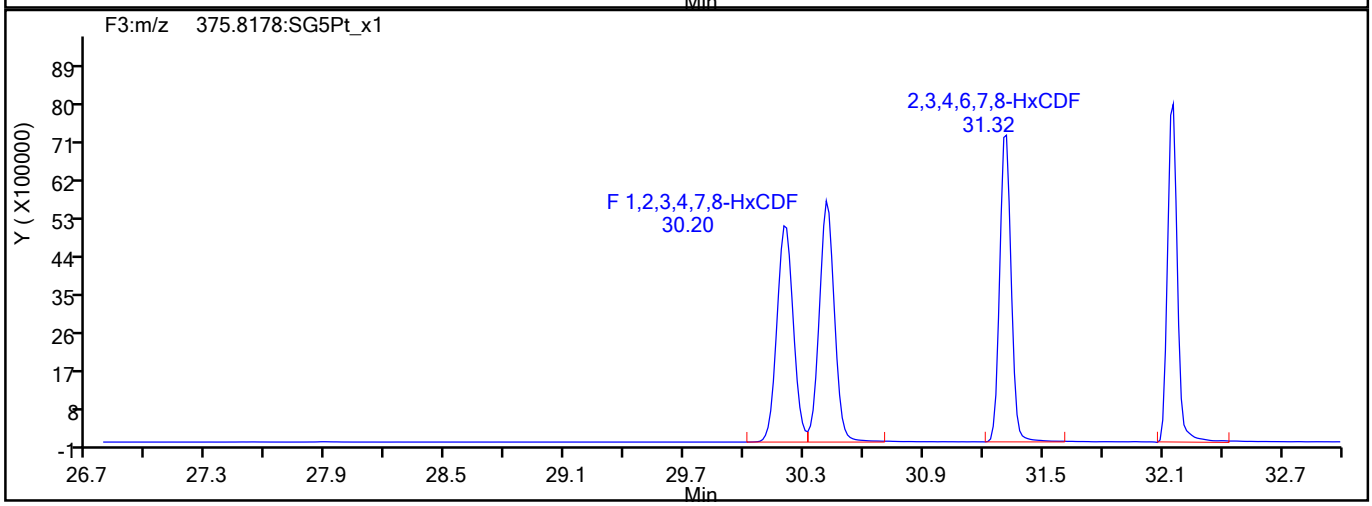

HxCDF Interference Mass

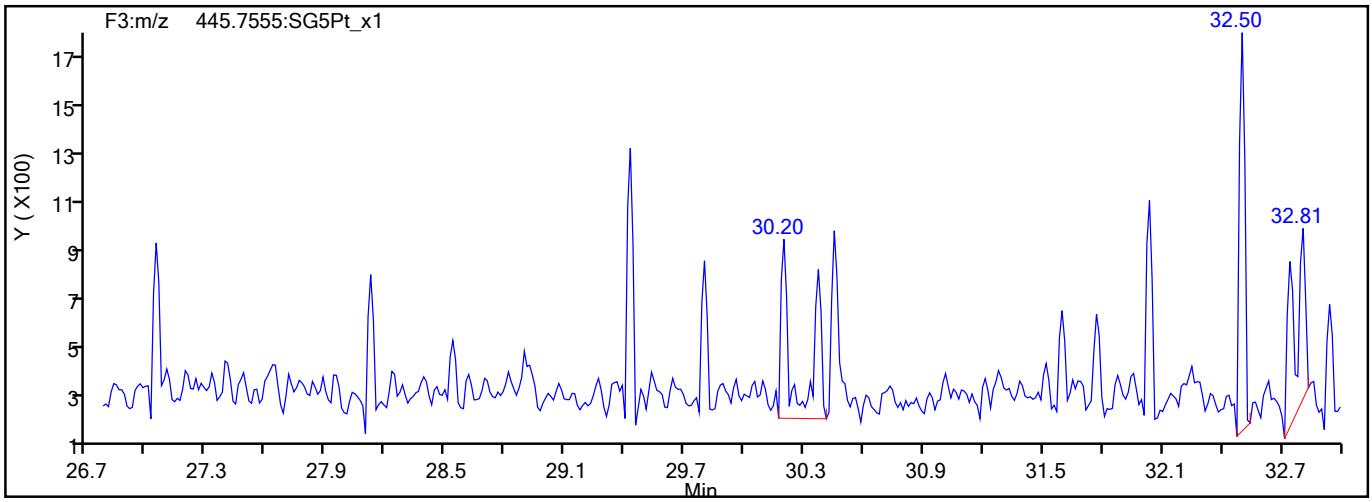

791699

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

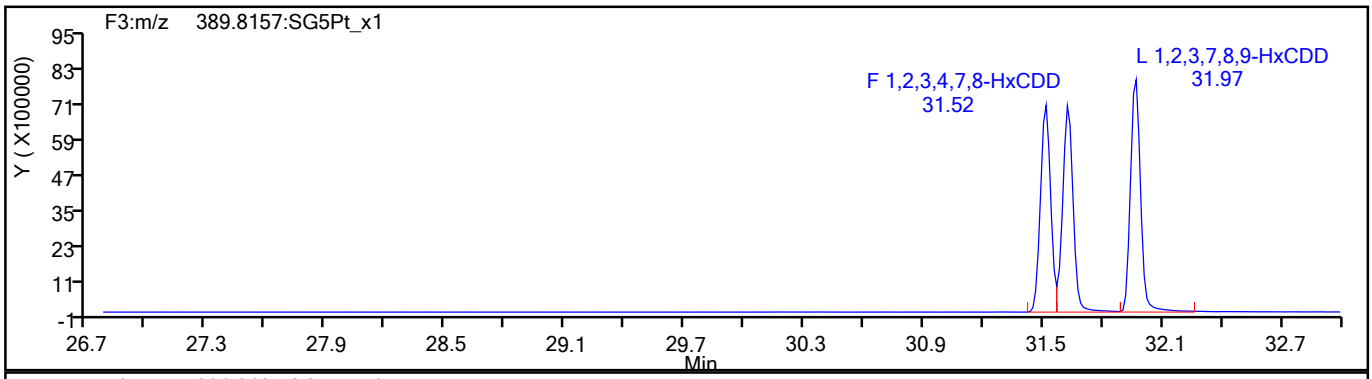

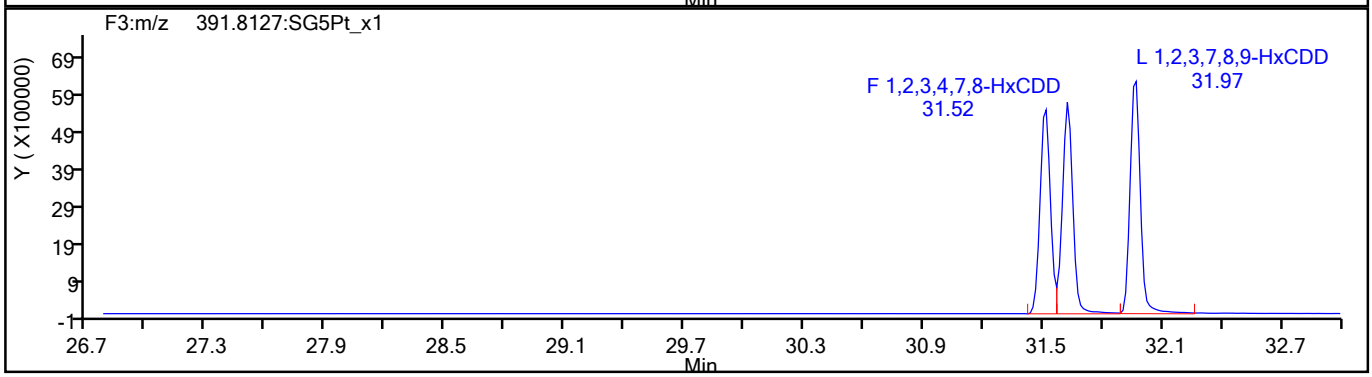

HxCDD Standards

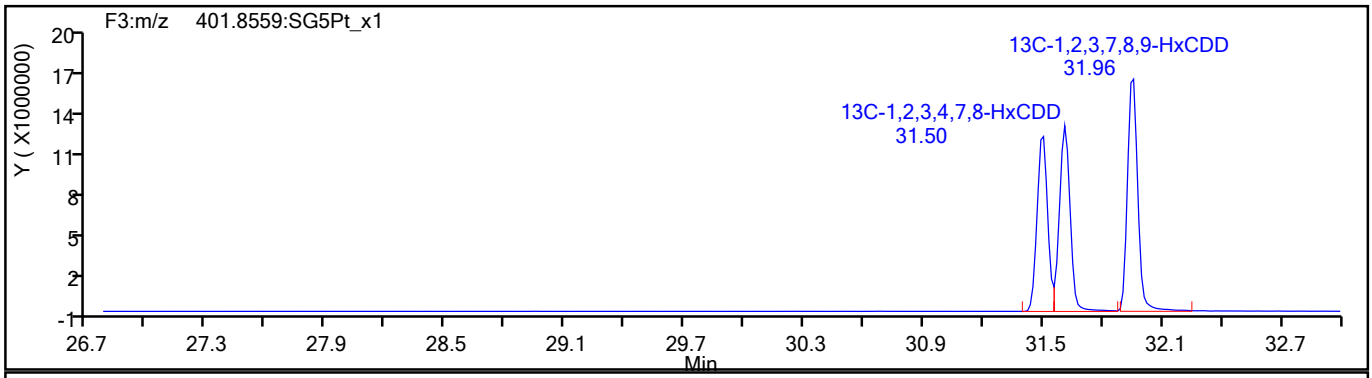

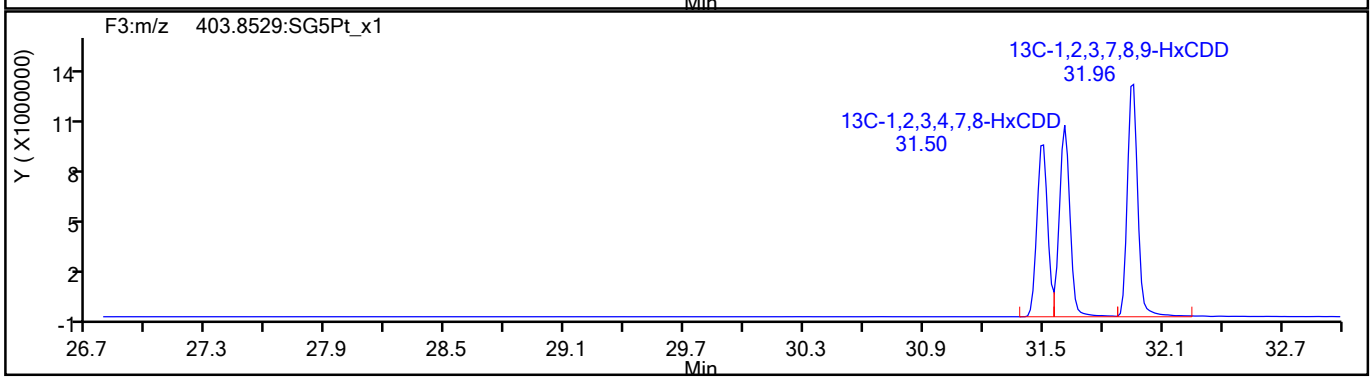

791700

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

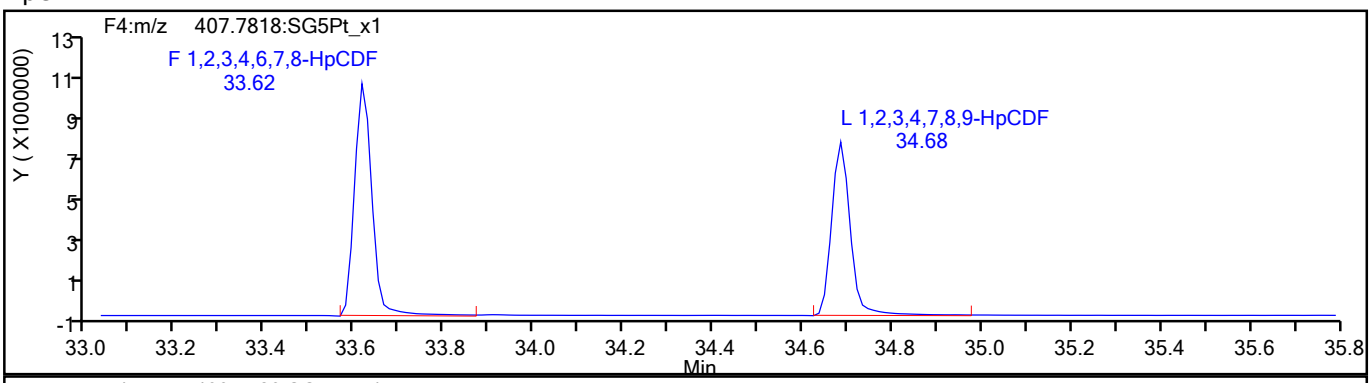

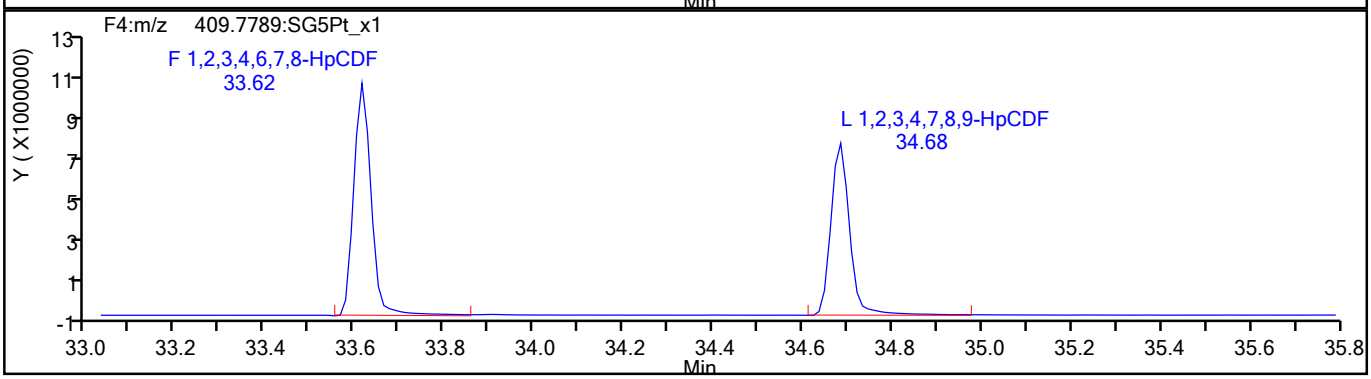

HpCDF Standards

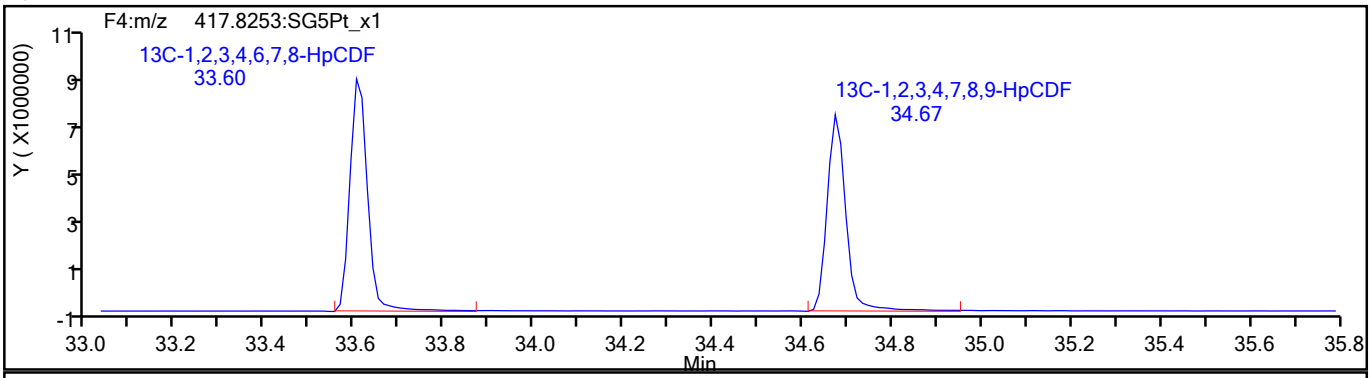

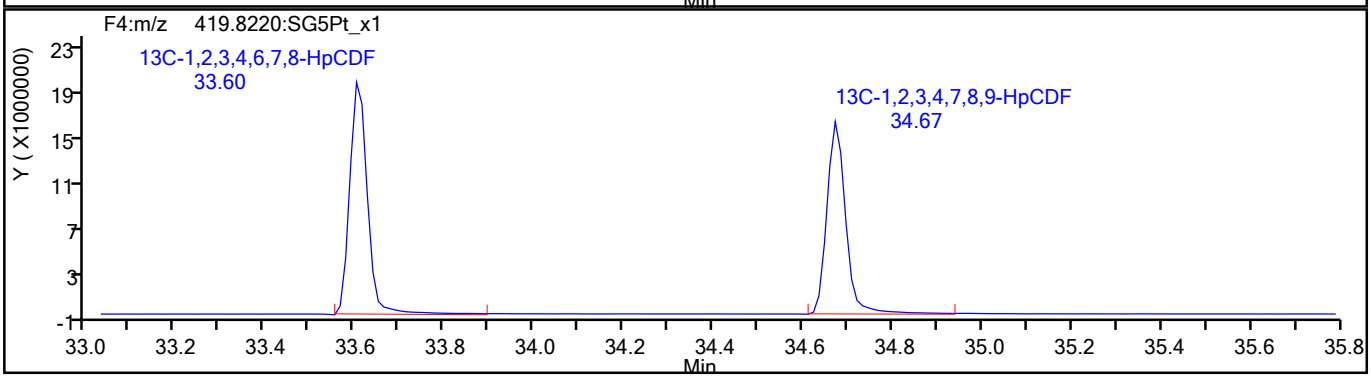

791701

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

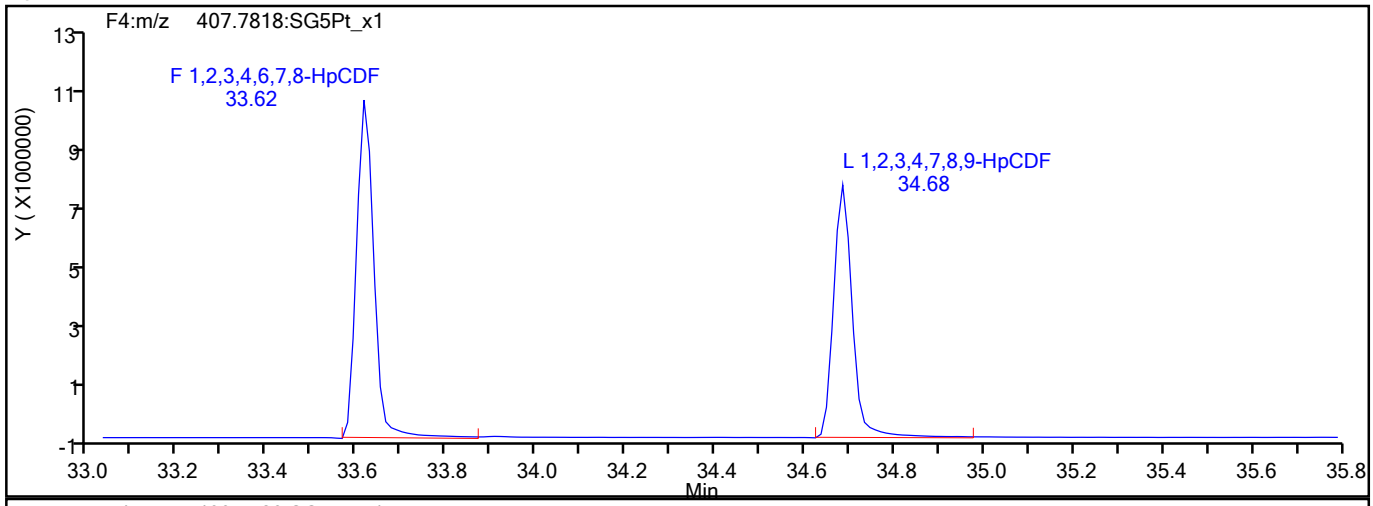

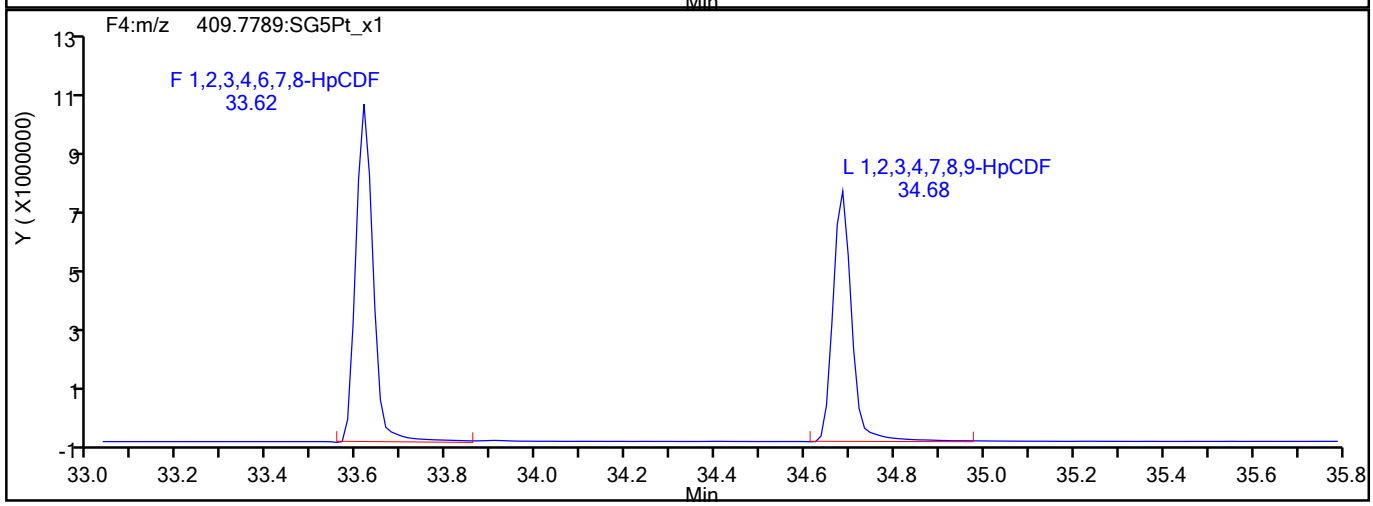

HpCDF Interference Mass

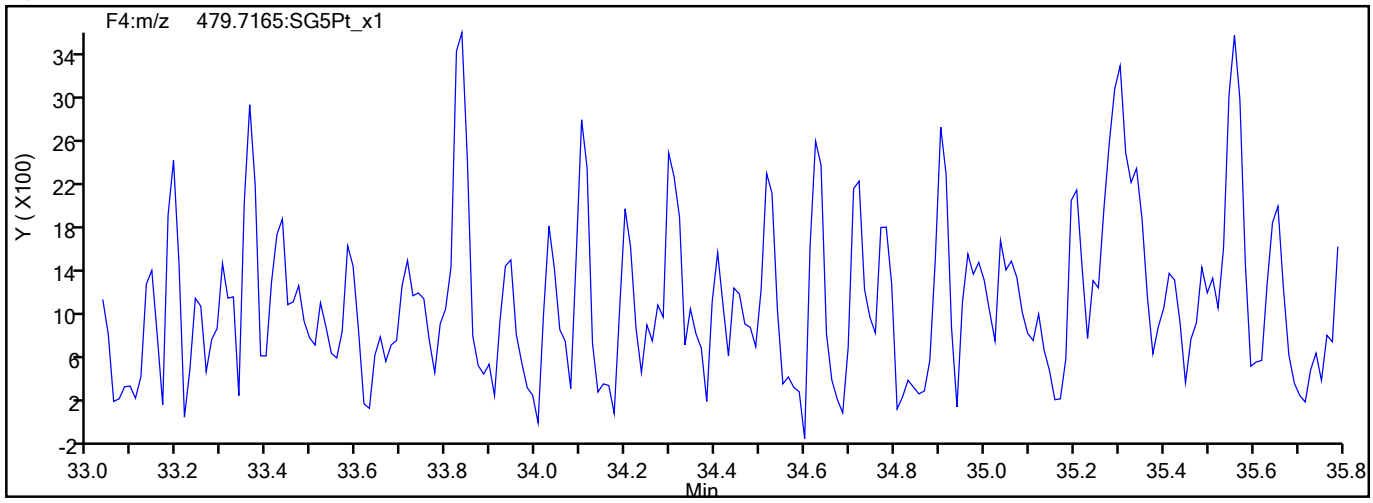

791702

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

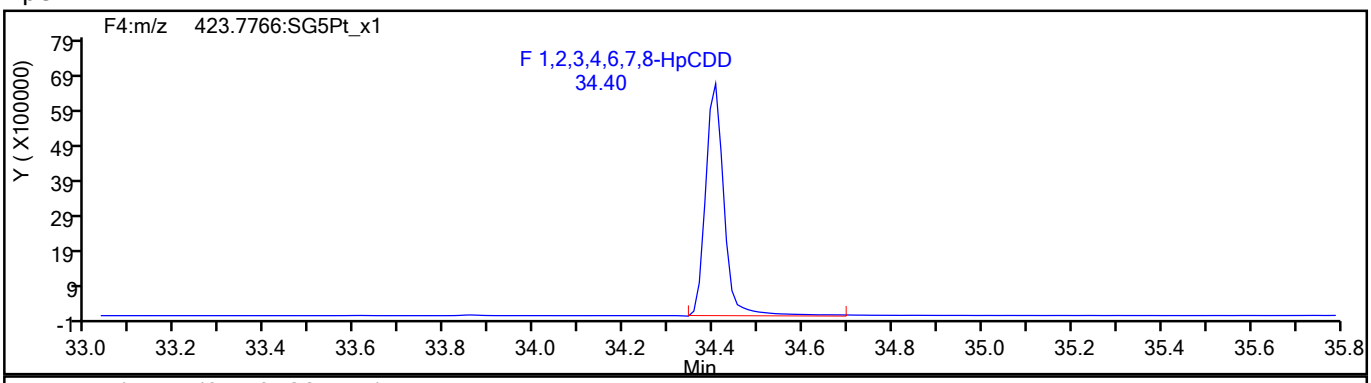

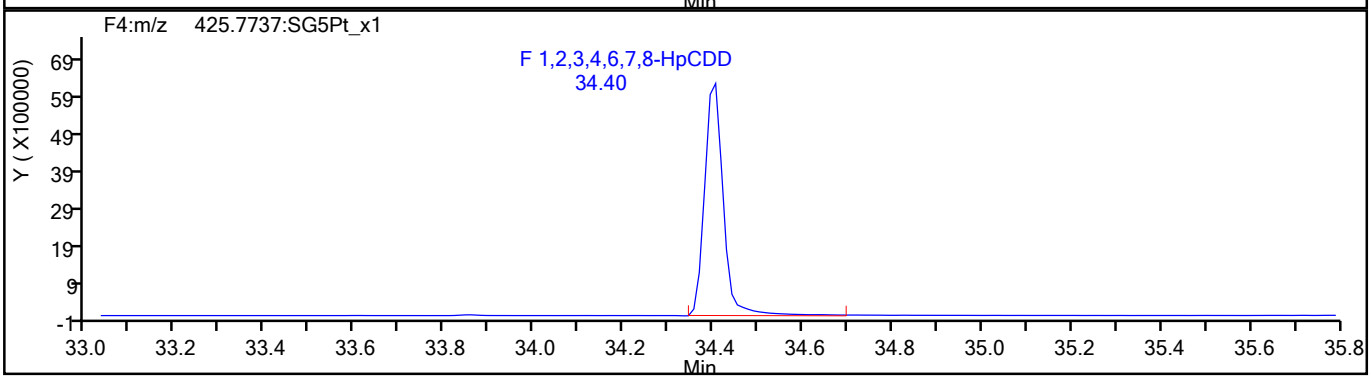

HpCDD Standards

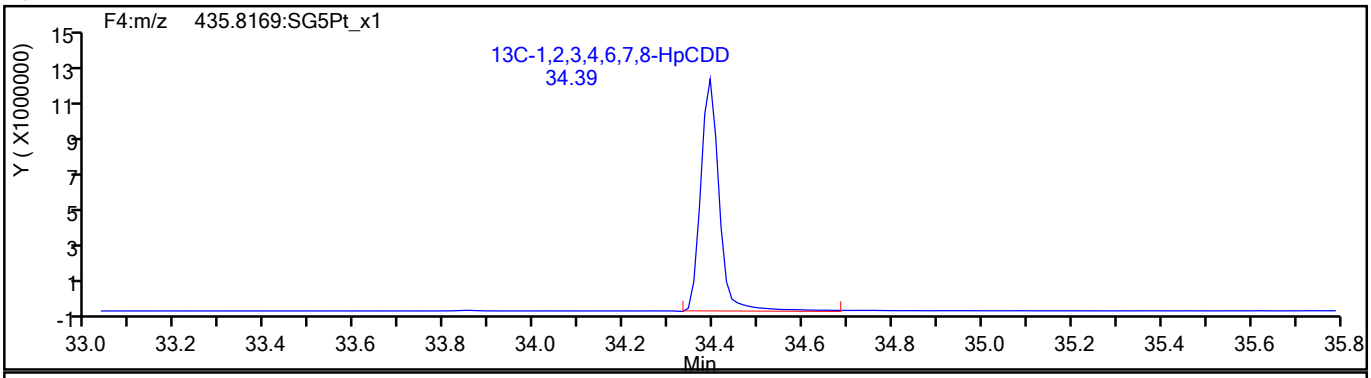

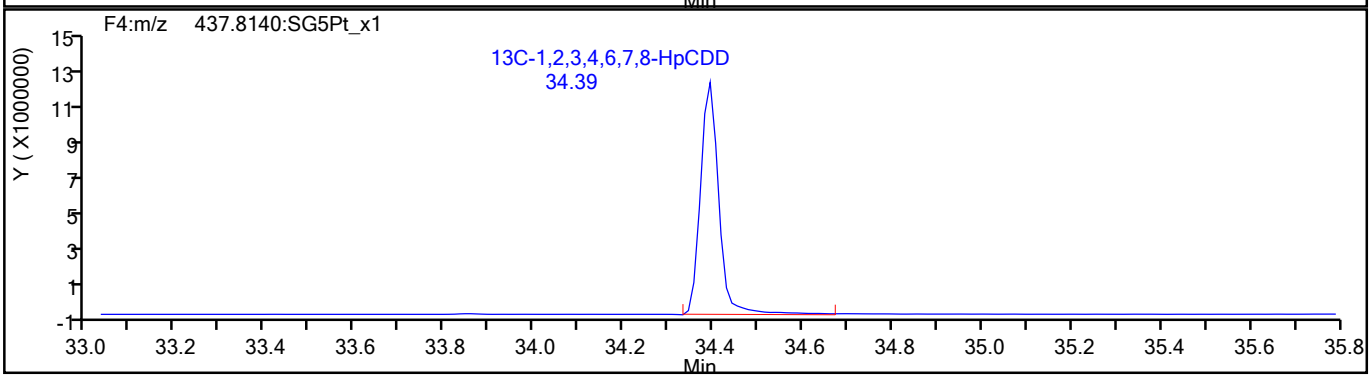

791703

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

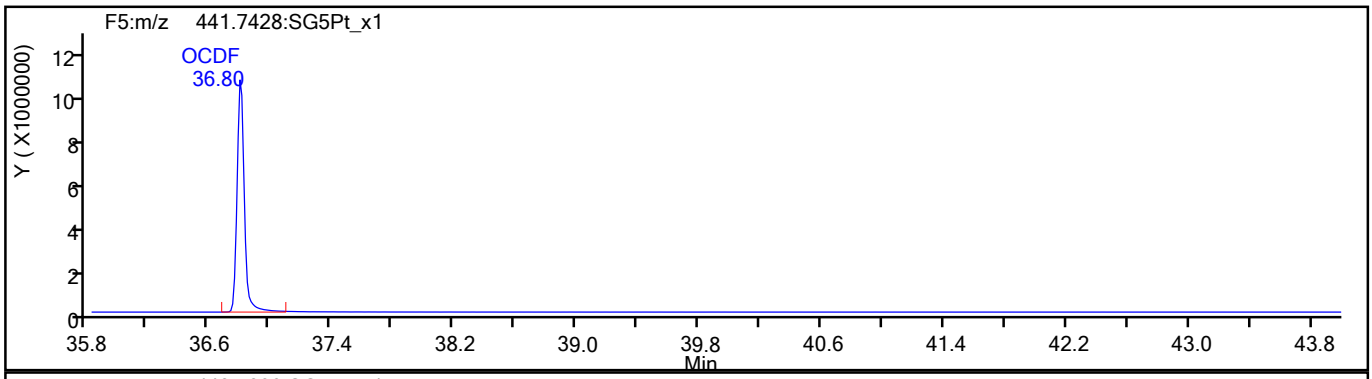

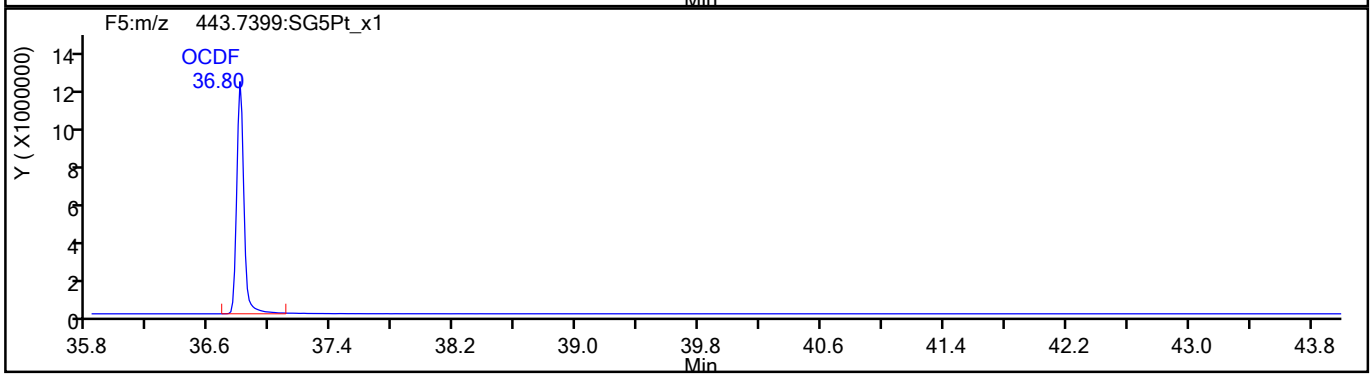

OCDF Standards

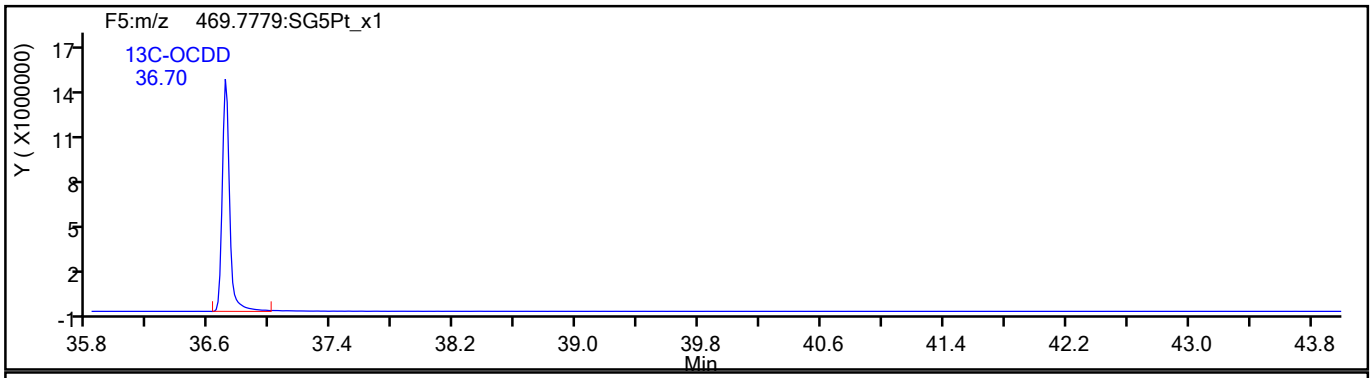

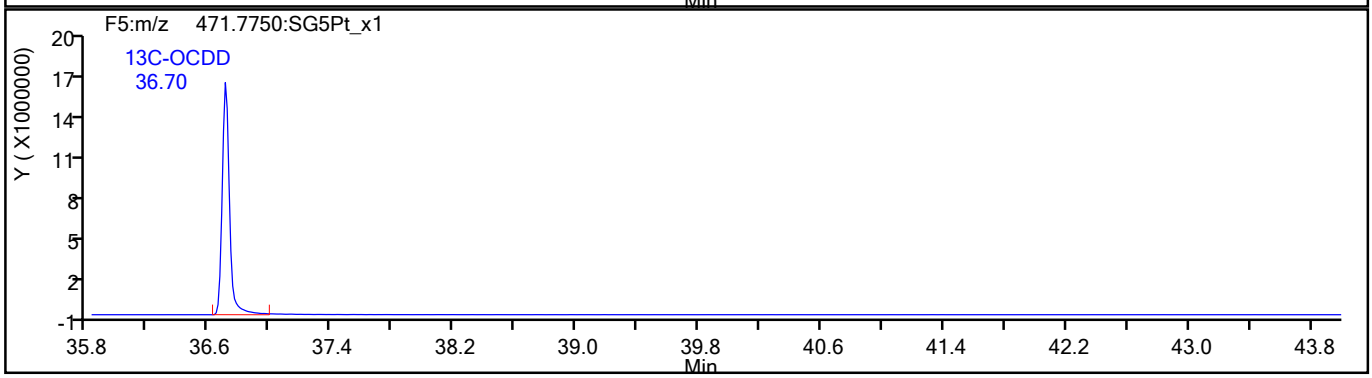

791704

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

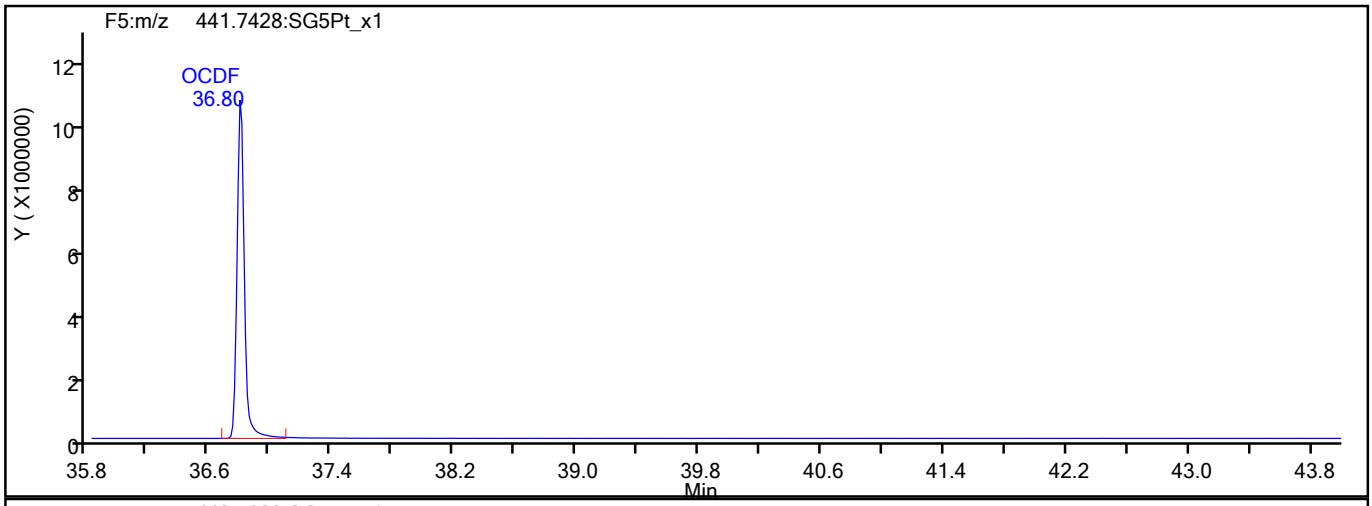

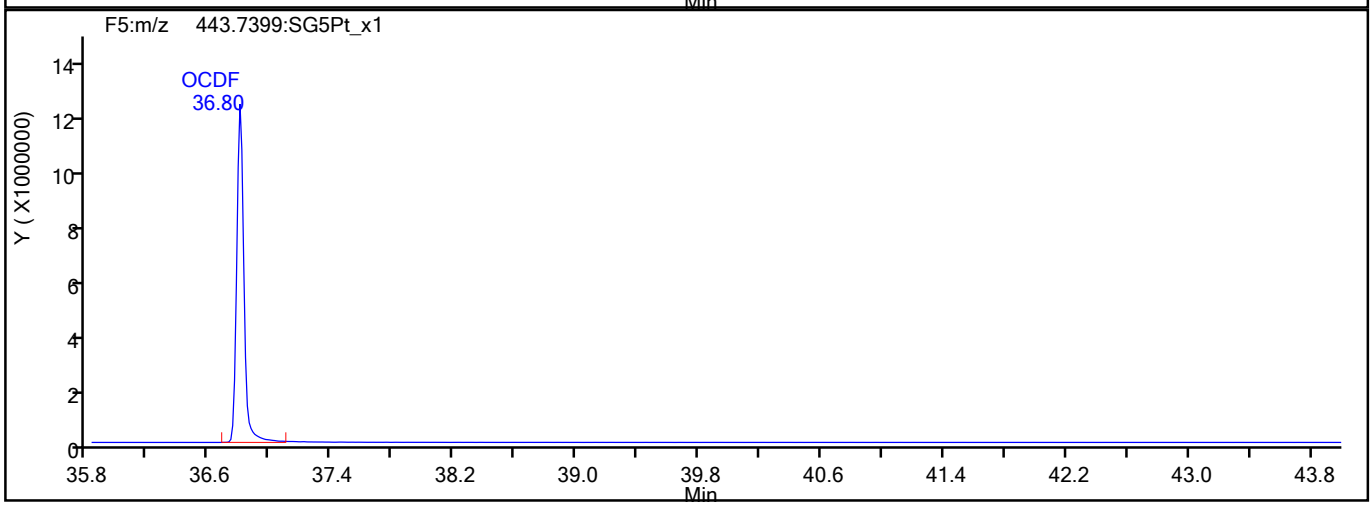

OCDF Interference Mass

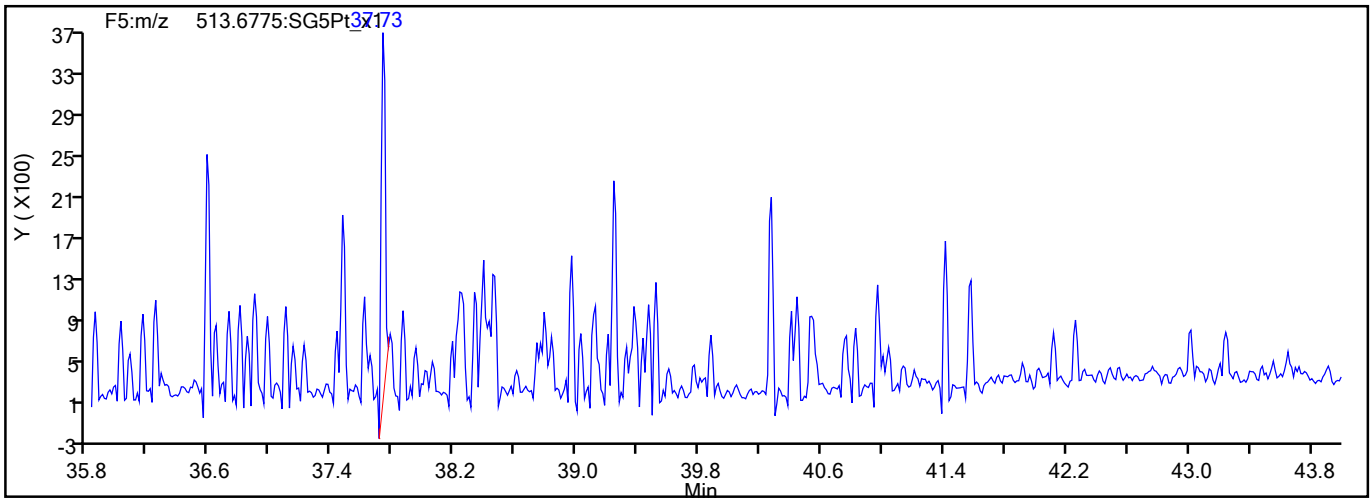

791705

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

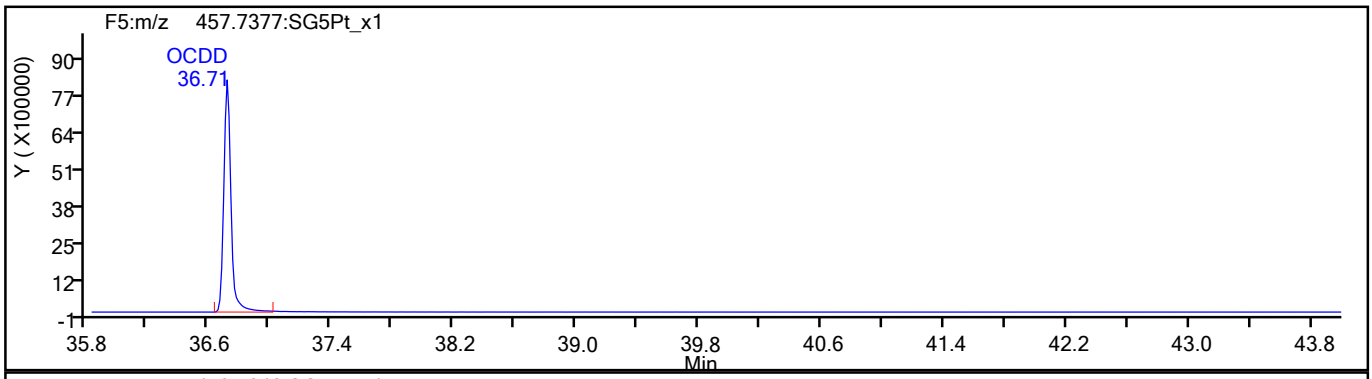

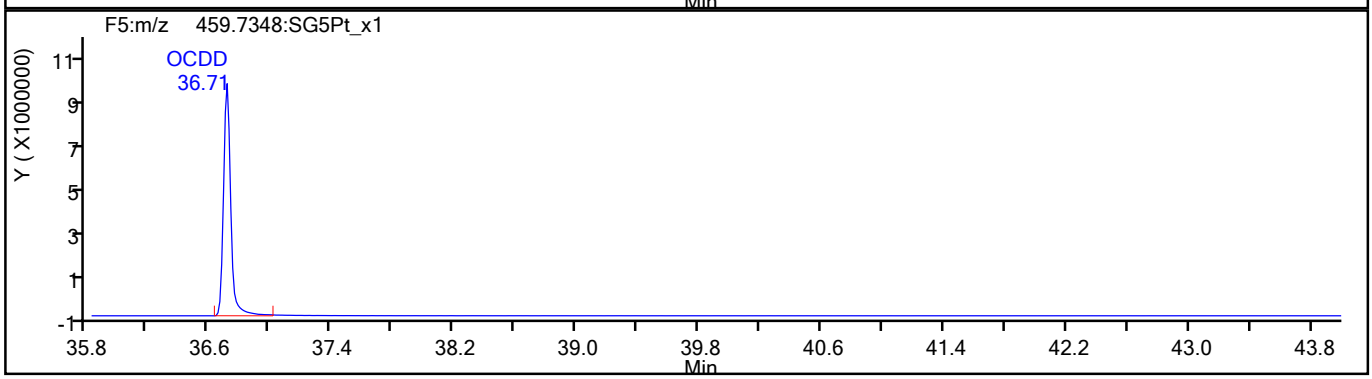

OCDD Standards

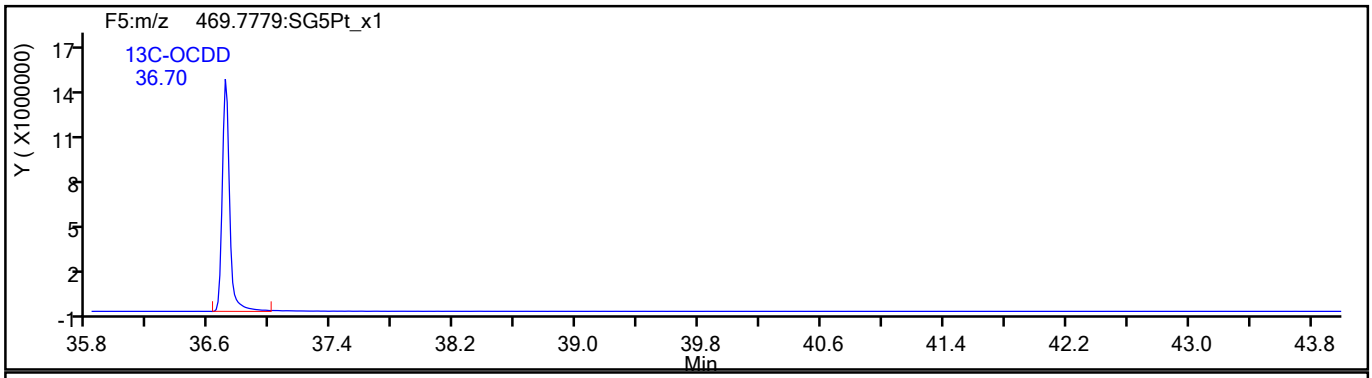

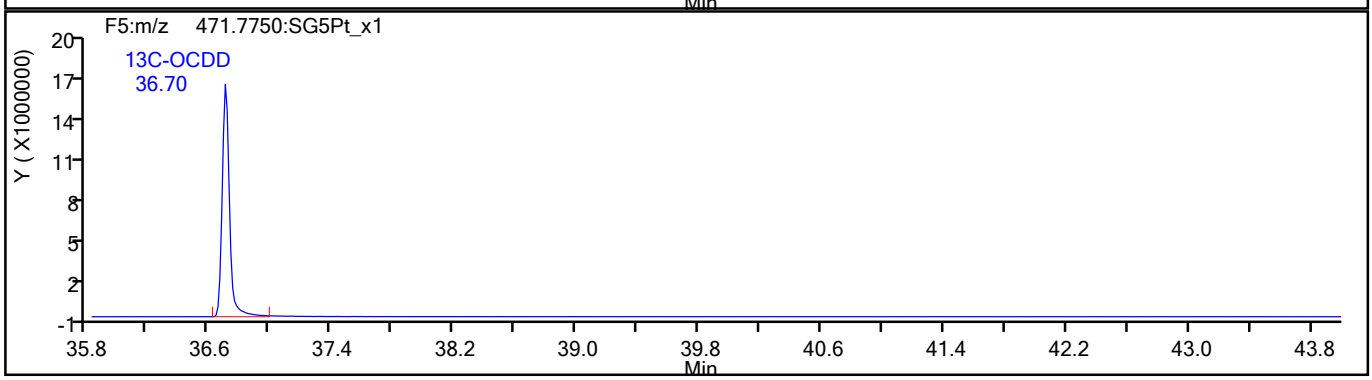

791706

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

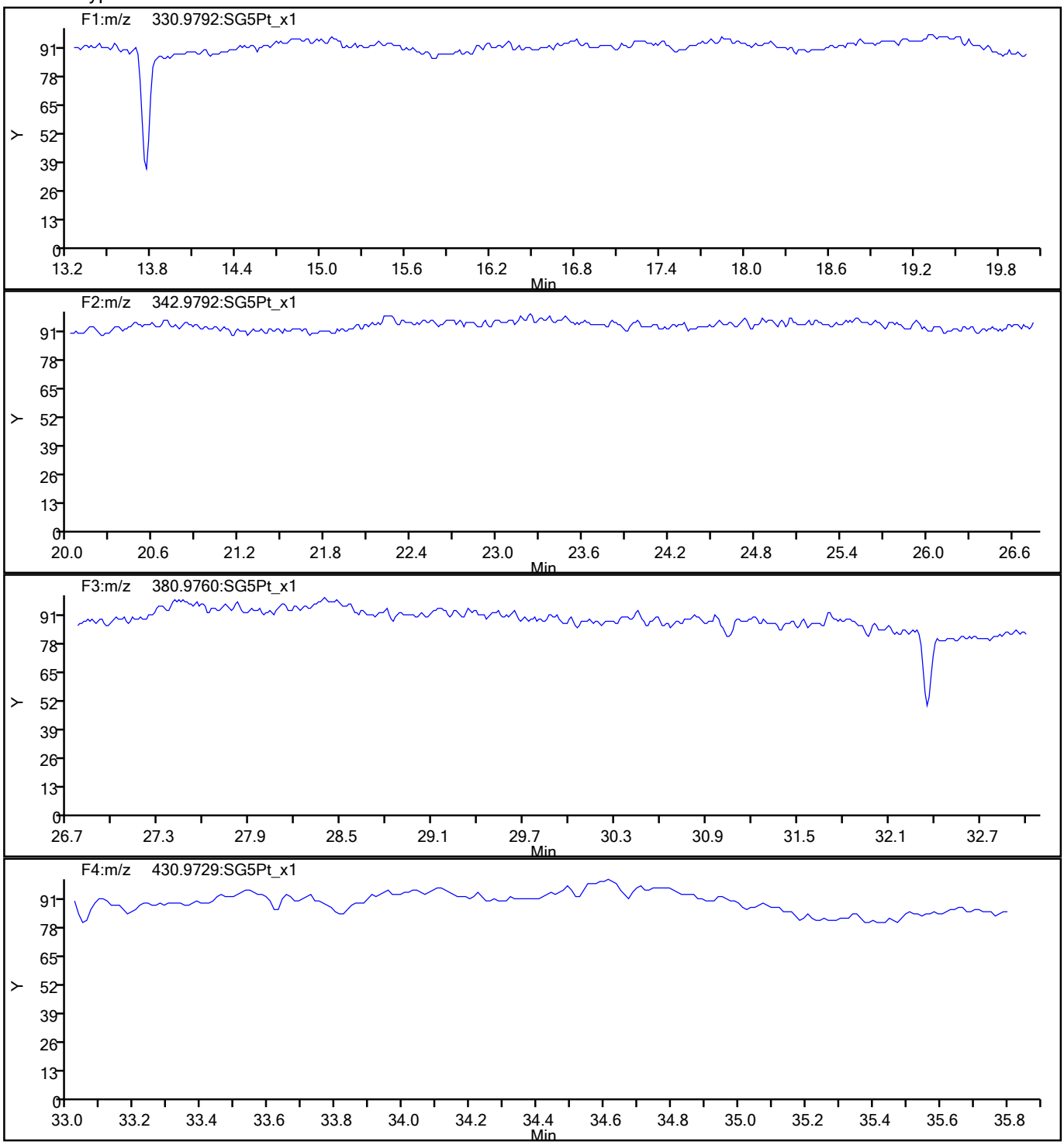

791707

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

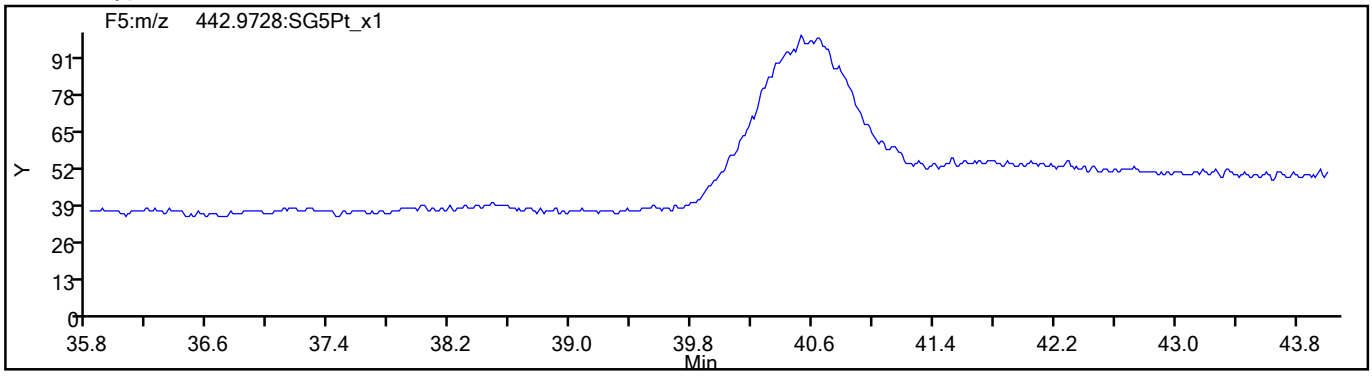

791708

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID: CCV 320-520325/2 Calibration Date: 08/26/2021 19:36

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 25AU2110D5_44.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.030		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.221		9.74	10.0	97	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.068		50.3	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.032		50.6	50.0	101	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.051		50.1	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.077		49.6	50.0	99	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.155		51.3	50.0	103	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.164		49.8	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.085		51.0	50.0	102	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.036		51.8	50.0	104	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.178		52.0	50.0	104	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.173		50.3	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.437		49.9	50.0	100	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.076		49.2	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.340		50.9	50.0	102	86-116
OCDD	AveID	1.107	1.121		101	100	101	79-126
OCDF	AveID	1.438	1.426		99.1	100	99	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.528		94.1	100	94	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9184		102	100	102	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.201		99.3	100	99	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.215		98.0	100	98	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7820		103	100	103	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.130		104	100	104	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.088		96.5	100	96	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.050		98.8	100	99	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7722		105	100	105	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8393		95.4	100	95	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9812		101	100	101	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7276		94.1	100	94	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6560		101	100	101	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6476		92.4	100	92	77-129
13C-OCDD	Ave	0.4472	0.4603		206	200	103	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.135		10.2	10.0	102	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\25AU2110D5.SPL
Last Modified: Friday, August 27, 2021 09:50:14 Pacific Daylight Time
Printed: Friday, August 27, 2021 09:50:50 Pacific Daylight Time

Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #
1	25AU2110D5_1	WDM HRDXNCP_00044	WDM 082521B	Tray01:1	Dioxin	
2	25AU2110D5_2	CS-4 HRDXNL4_00099	CCV 082521	Tray01:2	Dioxin	
3	25AU2110D5_3	MB 320-515492/1-A	MB 320-515492/1-A	Tray01:4	1613B/Solid	D270
4	25AU2110D5_4	LCS 320-515492/2-A	LCS 320-515492/2-A	Tray01:5	1613B/Solid	---
5	25AU2110D5_5	320-77214-A-1-A	320-77214-A-1-A	Tray01:6	1613B/Solid	---
6	25AU2110D5_6	320-77214-A-2-A	320-77214-A-2-A	Tray01:7	1613B/Solid	
7	25AU2110D5_7	320-77214-A-2-B MS	320-77214-A-2-B MS	Tray01:8	1613B/Solid	
8	25AU2110D5_8	320-77214-A-2-C MSD	320-77214-A-2-C MSD	Tray01:9	1613B/Solid	---
9	25AU2110D5_9	320-77214-A-3-A	320-77214-A-3-A	Tray01:10	1613B/Solid	---
10	25AU2110D5_10	320-77214-A-4-A	320-77214-A-4-A	Tray01:11	1613B/Solid	
11	25AU2110D5_11	320-77214-A-5-A	320-77214-A-5-A	Tray01:15	1613B/Solid	
12	25AU2110D5_12	320-77214-A-6-A	320-77214-A-6-A	Tray01:16	1613B/Solid	
13	25AU2110D5_13	320-77214-A-7-A	320-77214-A-7-A	Tray01:17	1613B/Solid	---
14	25AU2110D5_14	SB Solvent Blank C-14	SB 082521	Tray01:3		
15	25AU2110D5_15	CS-4 HRDXNL4_00099	CCV 082521A	Tray01:2	Dioxin	
16	25AU2110D5_16	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---
17	25AU2110D5_17	SB Solvent Blank C-14	SB 082521A	Tray01:3		
18	25AU2110D5_18	320-77214-A-8-A	320-77214-A-8-A	Tray01:29	1613B/Solid	D270
19	25AU2110D5_19	320-77214-A-9-A	320-77214-A-9-A	Tray01:30	1613B/Solid	
20	25AU2110D5_20	320-77214-A-13-A	320-77214-A-13-A	Tray01:31	1613B/Solid	
21	25AU2110D5_21	320-77292-A-1-A	320-77292-A-1-A	Tray01:32	1613B/Solid	
22	25AU2110D5_22	320-77292-A-2-A	320-77292-A-2-A	Tray01:33	1613B/Solid	
23	25AU2110D5_23	320-77292-A-2-B MS	320-77292-A-2-B MS	Tray01:34	1613B/Solid	
24	25AU2110D5_24	320-77292-A-2-C MSD	320-77292-A-2-C MSD	Tray01:35	1613B/Solid	
25	25AU2110D5_25	320-77292-A-3-A	320-77292-A-3-A	Tray01:36	1613B/Solid	
26	25AU2110D5_26	320-77292-A-4-A	320-77292-A-4-A	Tray01:37	1613B/Solid	
27	25AU2110D5_27	320-77292-A-5-A	320-77292-A-5-A	Tray01:38	1613B/Solid	
28	25AU2110D5_28	SB Solvent Blank C-14	SB 082521B	Tray01:3		
29	25AU2110D5_29	CS-4 HRDXNL4_00099	CCV 082521B	Tray01:2	Dioxin	
30	25AU2110D5_30	WDM HRDXNCP_00044	WDM 082521B	Tray01:1	Dioxin	---
31	25AU2110D5_31	SB Solvent Blank C-14	SB 082521C	Tray01:3		
32	25AU2110D5_32	320-77292-A-6-A	320-77292-A-6-A	Tray01:43	1613B/Solid	D270
33	25AU2110D5_33	320-77292-A-7-A	320-77292-A-7-A	Tray01:44	1613B/Solid	
34	25AU2110D5_34	320-77292-A-8-A	320-77292-A-8-A	Tray01:45	1613B/Solid	
35	25AU2110D5_35	320-77292-A-9-A	320-77292-A-9-A	Tray01:46	1613B/Solid	
36	25AU2110D5_36	320-77292-A-13-A	320-77292-A-13-A	Tray01:47	1613B/Solid	
37	25AU2110D5_37	400-206693-C-22-A	400-206693-C-22-A	Tray01:48	1613B/Solid	
38	25AU2110D5_38	400-206693-C-36-A	400-206693-C-36-A	Tray01:49	1613B/Solid	
39	25AU2110D5_39	400-206693-C-37-A	400-206693-C-37-A	Tray01:50	1613B/Solid	
40	25AU2110D5_40	400-206693-C-38-A	400-206693-C-38-A	Tray01:51	1613B/Solid	
41	25AU2110D5_41	400-206693-C-39-A	400-206693-C-39-A	Tray01:52	1613B/Solid	
42	25AU2110D5_42	SB Solvent Blank C-14	SB 082521D	Tray01:3		
43	25AU2110D5_43	WDM HRDXNCP_00044	WDM 082521C	Tray01:2	Dioxin	---
44	25AU2110D5_44	CS-4 HRDXNL4_00099	CCV 082521C	Tray01:1	Dioxin	
45	25AU2110D5_45	SB Solvent Blank C-14	SB 082521E	Tray01:3		
46	25AU2110D5_46	320-76887-a-1-a X10	320-76887-a-1-a X10	Tray01:57	1613B/Solid	D266
47	25AU2110D5_47	320-77214-a-1-a X10	320-77214-a-1-a X10	Tray01:58	1613B/Solid	D270
48	25AU2110D5_48	280-150979-b-1-f msd X10	280-150979-b-1-f msd X10	Tray01:59	8290A_D5/Solid	D265
49	25AU2110D5_49	280-150979-b-1-e ms X10	280-150979-b-1-e ms X10	Tray01:60	8290A_D5/Solid	
50	25AU2110D5_50	280-150979-b-1-d X10	280-150979-b-1-d X10	Tray01:61	8290A_D5/Solid	
51	25AU2110D5_51	400-206690-c-16-a X20	400-206690-c-16-a X20	Tray01:62	1613B/Solid	D262
52	25AU2110D5_52	580-104878-a-4-a	580-104878-a-4-a	Tray01:63	8290A_D5/Solid	D262
53	25AU2110D5_53	580-104878-a-8-a	580-104878-a-8-a	Tray01:64	8290A_D5/Solid	---
54	25AU2110D5_54	SB Solvent Blank C-14	SB 082521F	Tray01:3		
55	25AU2110D5_55	CS-4 HRDXNL4_00099	CCV 082521D	Tray01:1	Dioxin	
56	25AU2110D5_56	WDM HRDXNCP_00044	WDM 082521D	Tray01:2	Dioxin	---
57	25AU2110D5_57	CS-4 HRDXNL4_00099	CCV 082521E	Tray01:1	Dioxin	
58	25AU2110D5_58	mb 320-512856/1-a	mb 320-512856/1-a	Tray01:71	8290A_D5/Solid	D262

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #
59	25AU2110D5_59	lcs 320-512856/2-a	lcs 320-512856/2-a	Tray01:72	8290A_D5/Solid	
60	25AU2110D5_60	580-104878-c-1-a	580-104878-c-1-a	Tray01:73	8290A_D5/Solid	
61	25AU2110D5_61	580-104878-c-1-b ms	580-104878-c-1-b ms	Tray01:74	8290A_D5/Solid	
62	25AU2110D5_62	580-104878-c-1-c msd	580-104878-c-1-c msd	Tray01:75	8290A_D5/Solid	
63	25AU2110D5_63	580-104878-c-16-a	580-104878-c-16-a	Tray01:76	8290A_D5/Solid	
64	25AU2110D5_64	580-104878-c-17-a	580-104878-c-17-a	Tray01:77	8290A_D5/Solid	
65	25AU2110D5_65	580-104878-c-18-a	580-104878-c-18-a	Tray01:78	8290A_D5/Solid	
66	25AU2110D5_66	580-104878-c-19-a	580-104878-c-19-a	Tray01:79	8290A_D5/Solid	
67	25AU2110D5_67	580-104878-c-20-a	580-104878-c-20-a	Tray01:80	8290A_D5/Solid	
68	25AU2110D5_68	SB Solvent Blank C-14	SB 082521G	Tray01:3		
69	25AU2110D5_69	CS-4 HRDXNL4_00099	CCV 082521F	Tray01:1	Dioxin	

Log fil checked
08/27/21 SMA

User	Sample Size	Units	MS File	Inlet File	Inject Volume	Process
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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SMA	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
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SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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SMA	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
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DB	1.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover

Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
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---	---	C:\CHROM
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---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM

User	Sample Size	Units	MS File	Inlet File	Inject Volume	Process
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DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
DB	10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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DB	1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck

Process Options	Action On Error	s5
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---

Printed: Thursday, August 26, 2021 18:40:52 Pacific Daylight Time

M 292.9824 R 11038

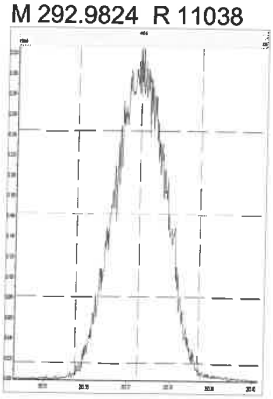

M 304.9824 R 11062

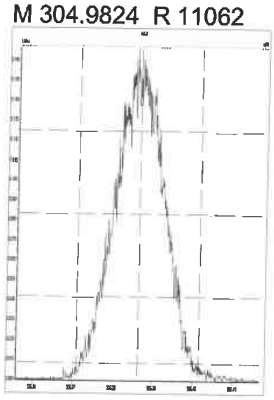

M 318.9792 R 11186

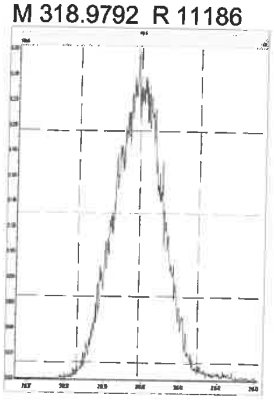

M 330.9792 R 10869

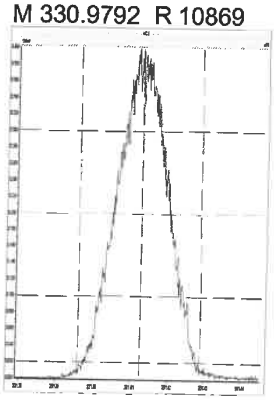

M 342.9792 R 11364

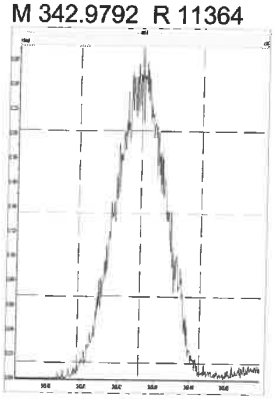

M 354.9792 R 11601

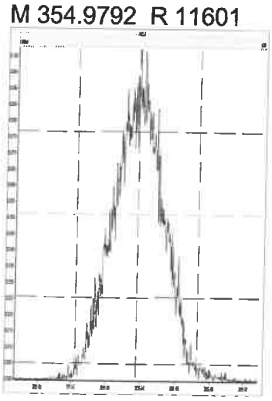

M 366.9792 R 11522

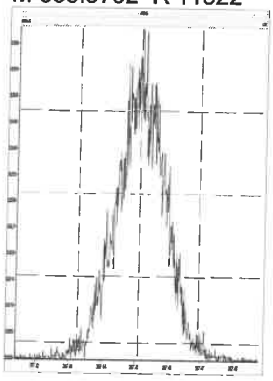

M 380.9760 R 10846

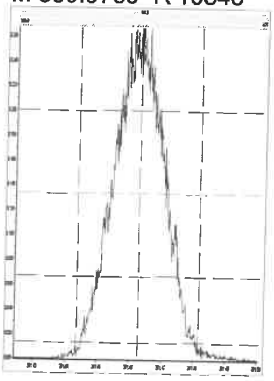

M 392.9760 R 11315

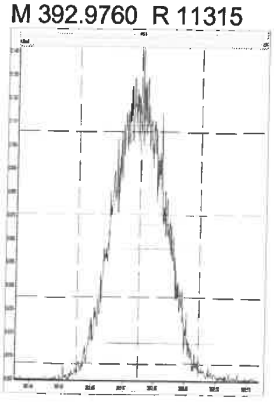

M 404.9760 R 10988

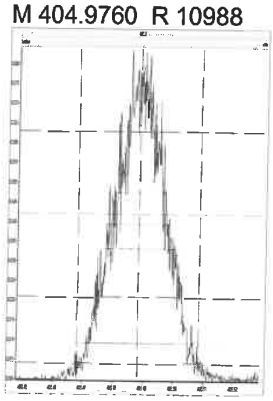

M 416.9760 R 11554

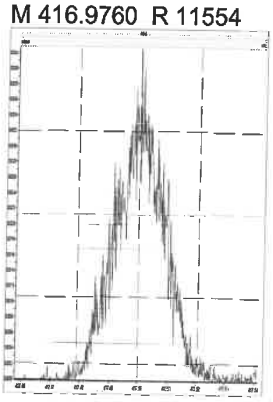

M 318.9792 R 11235

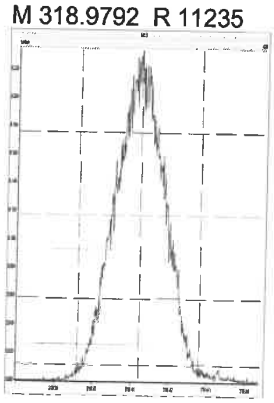

M 330.9792 R 11160

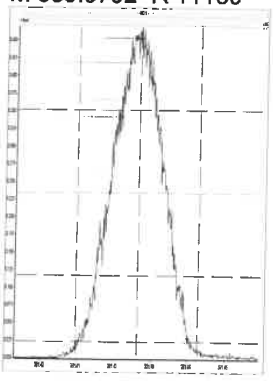

M 342.9792 R 11186

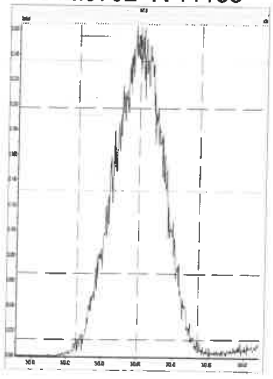

M 354.9792 R 11605

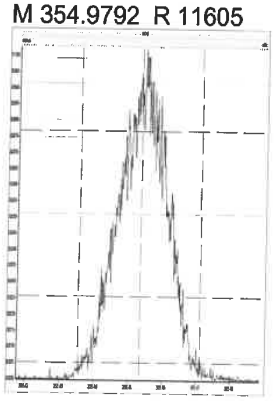

M 366.9792 R 11547

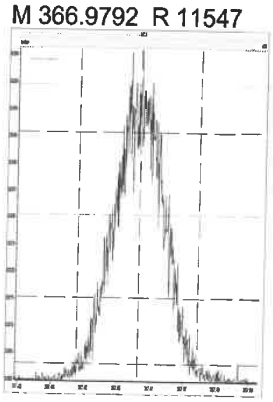

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M 380.9760 R 11444

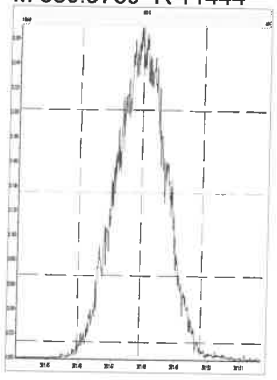

M 392.9760 R 11446

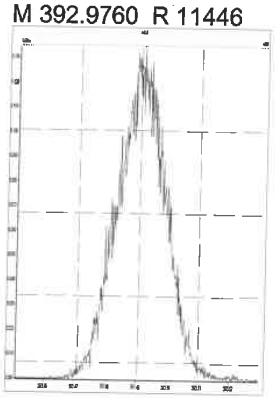

M 404.9760 R 11848

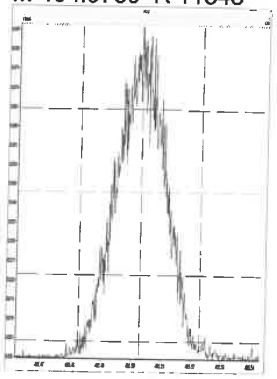

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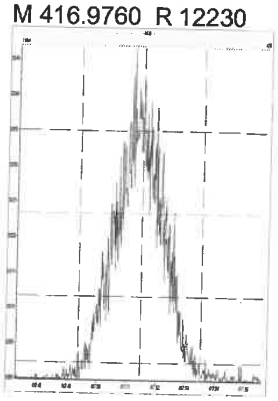

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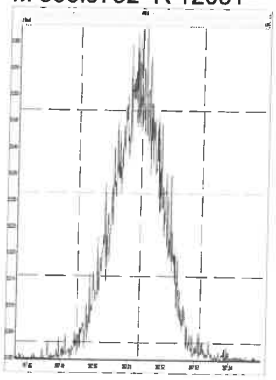

M 380.9760 R 11137

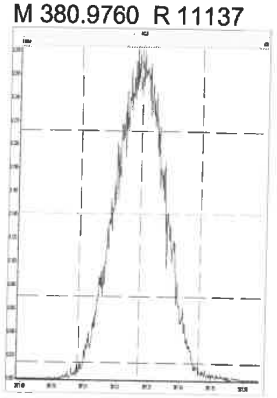

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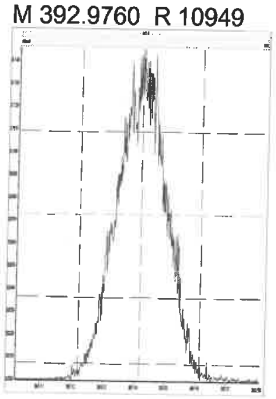

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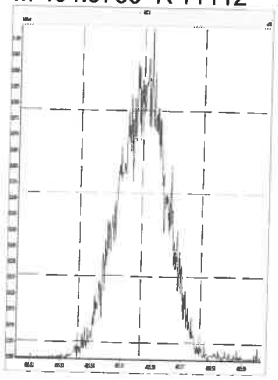

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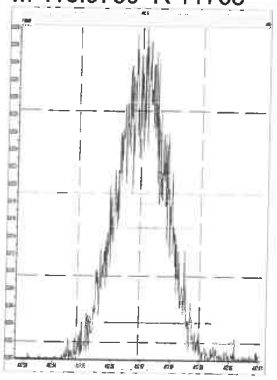

M 430.9728 R 11037

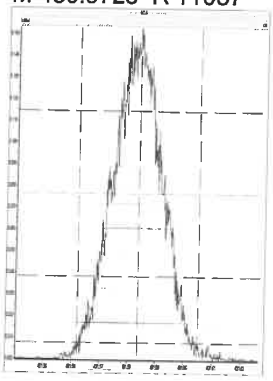

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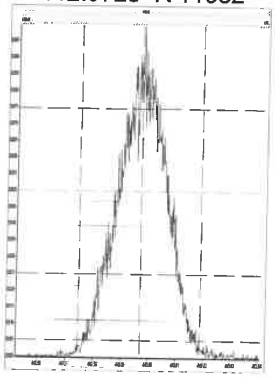

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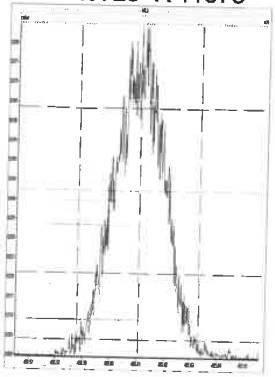

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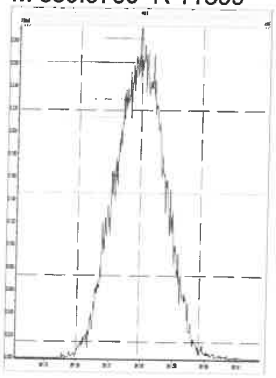

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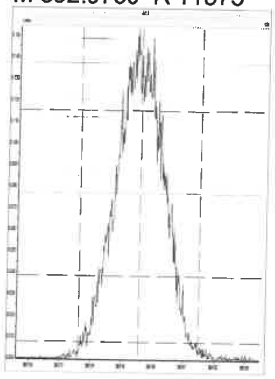

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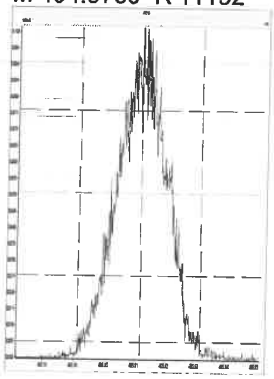

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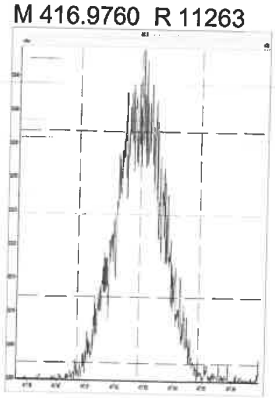

M 430.9728 R 11337

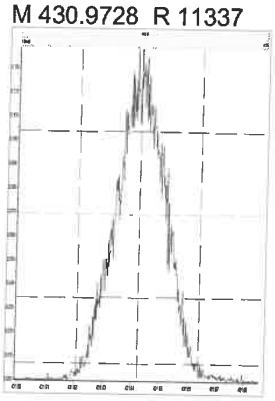

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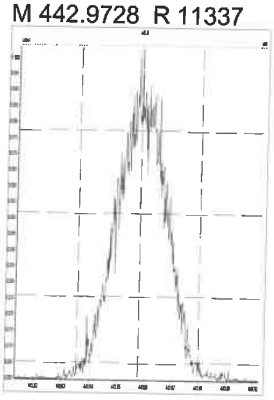

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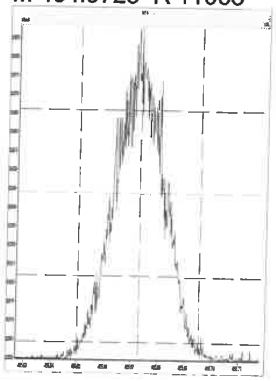

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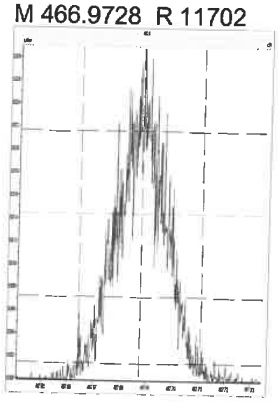

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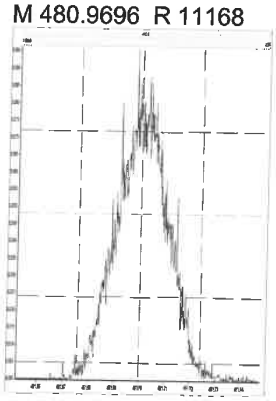

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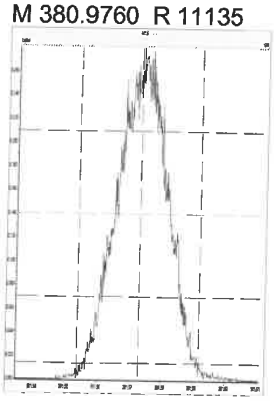

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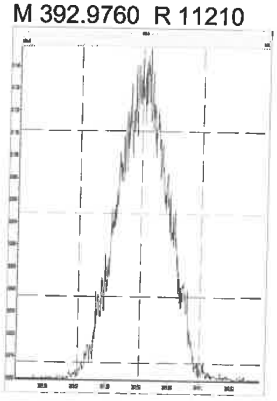

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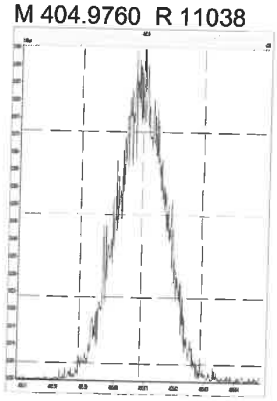

M 416.9760 R 12237

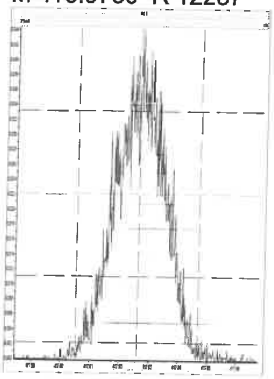

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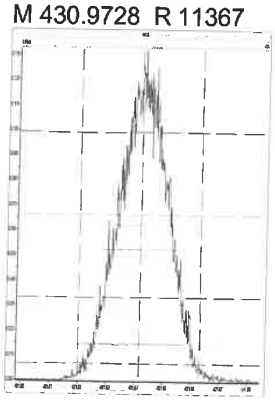

M 442.9728 R 11504

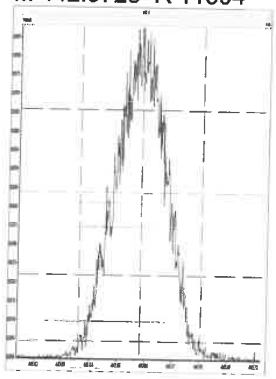

M 454.9728 R 11499

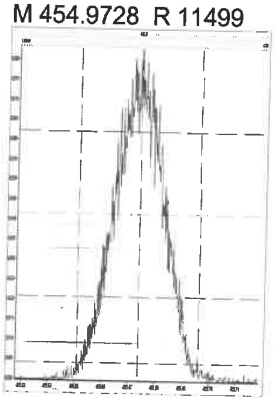

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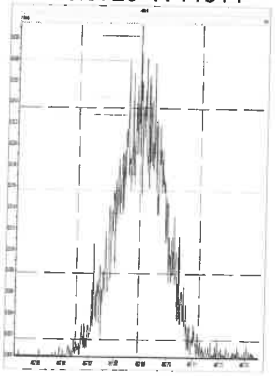

M 480.9696 R 11478

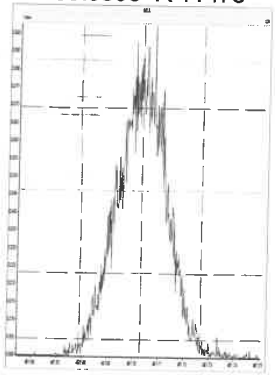

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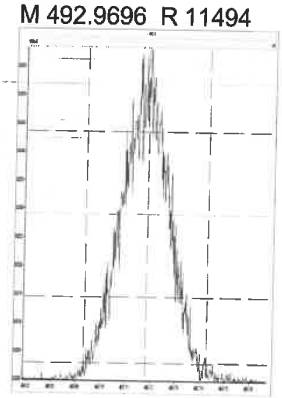

M 504.9696 R 11469

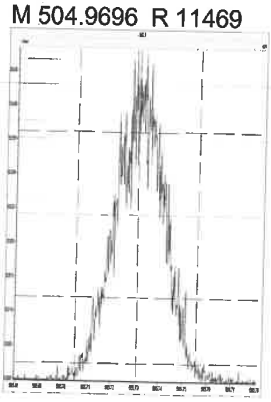

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M 516.9697 R 12372

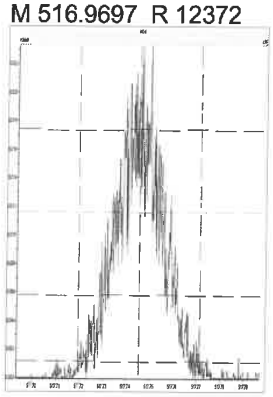

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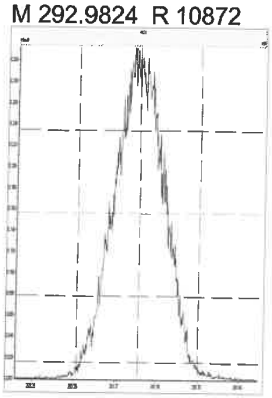

M 304.9824 R 11264

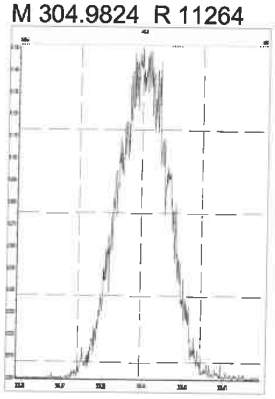

M 318.9792 R 11235

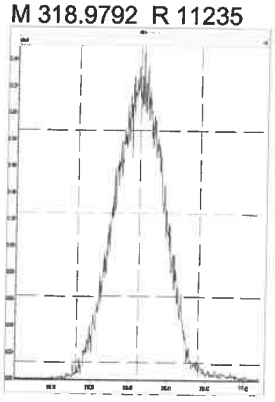

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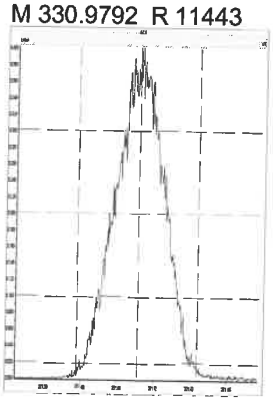

M 342.9792 R 10964

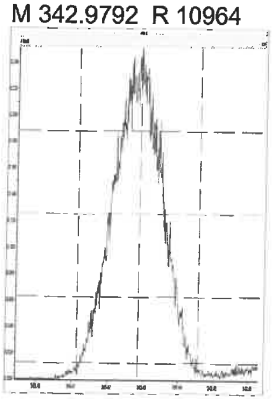

M 354.9792 R 11520

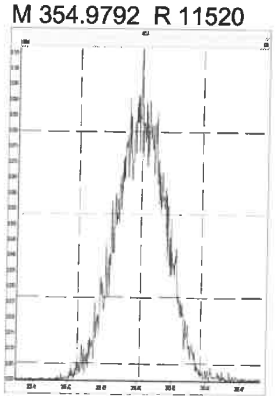

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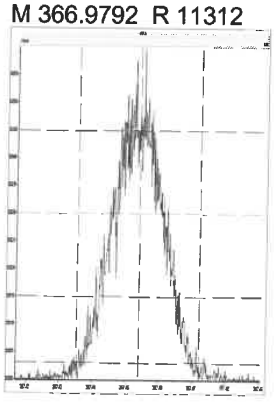

M 380.9760 R 11101

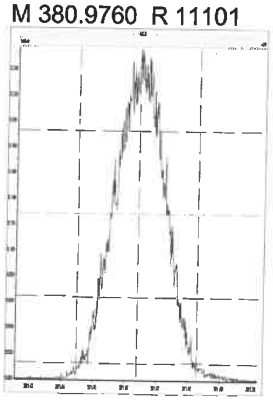

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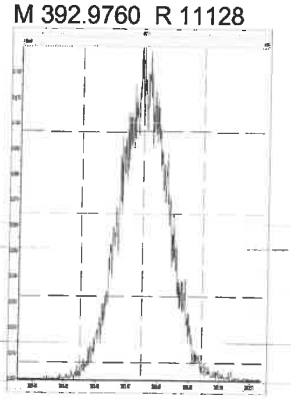

M 404.9760 R 11233

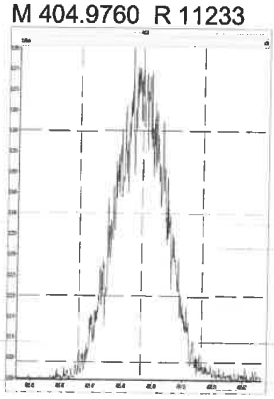

M 416.9760 R 12019

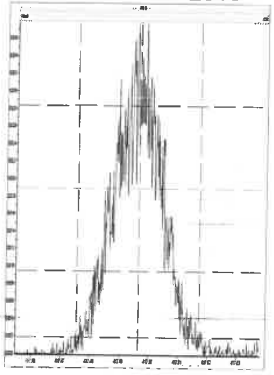

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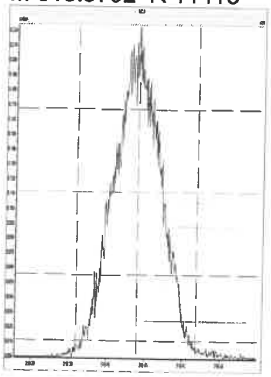

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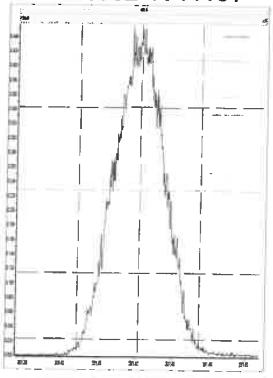

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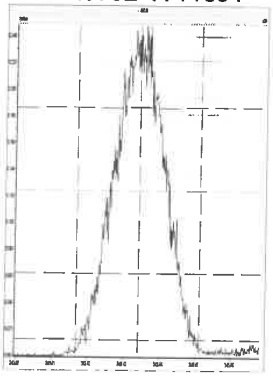

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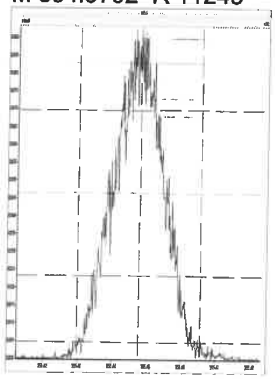

M 366.9792 R 11933

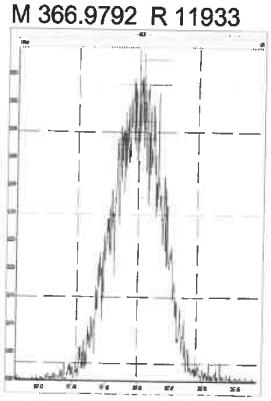

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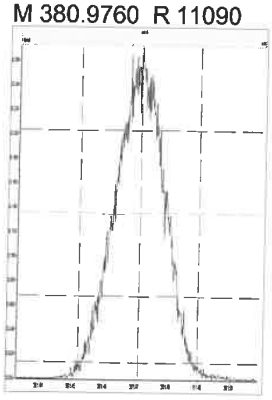

M 392.9760 R 11448

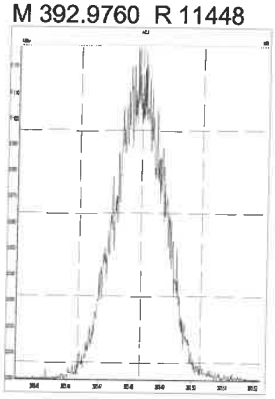

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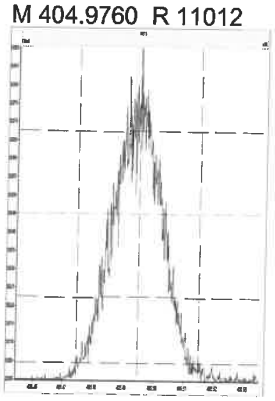

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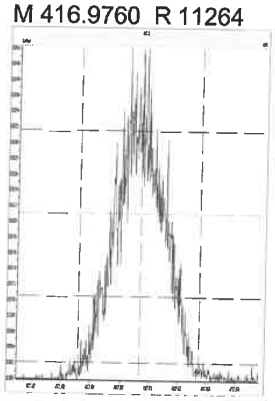

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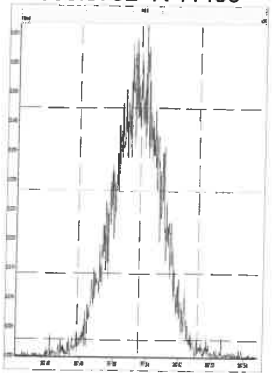

M 380.9760 R 11110

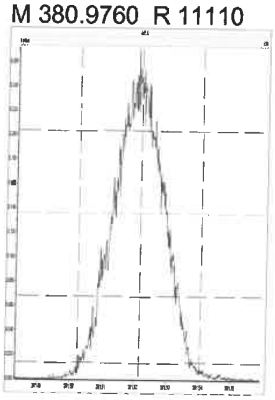

M 392.9760 R 12077

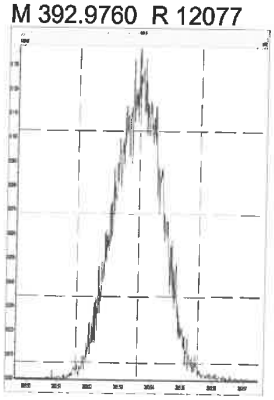

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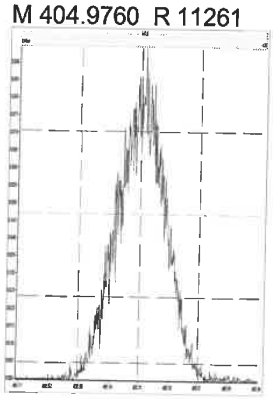

M 416.9760 R 12146

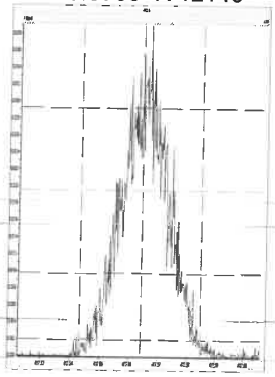

M 430.9728 R 11654

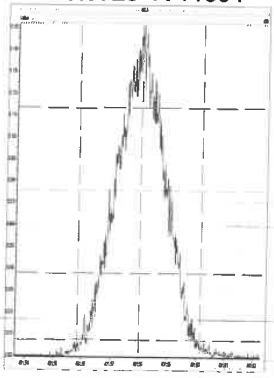

M 442.9728 R 12021

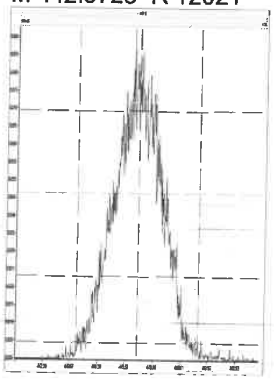

M 454.9728 R 11520

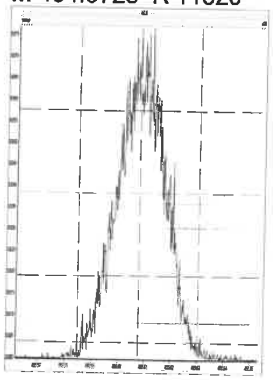

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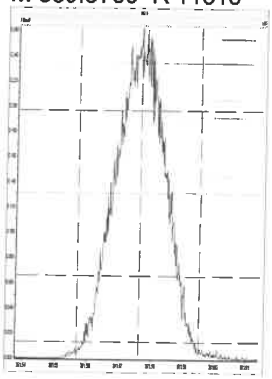

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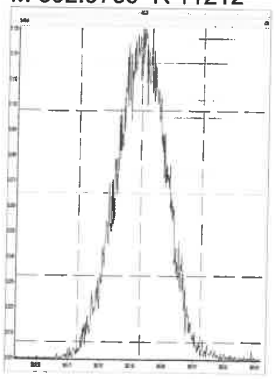

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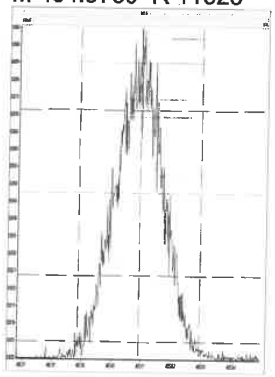

M 416.9760 R 11991

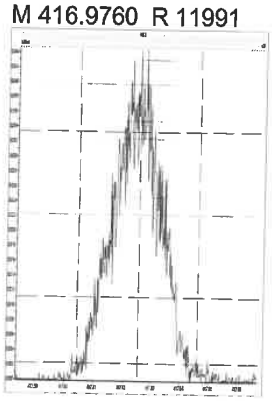

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M 430.9728 R 11178

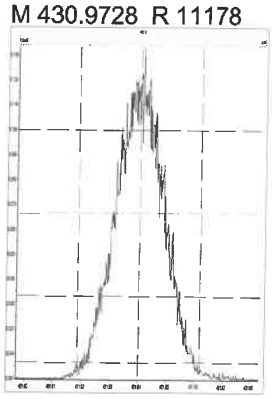

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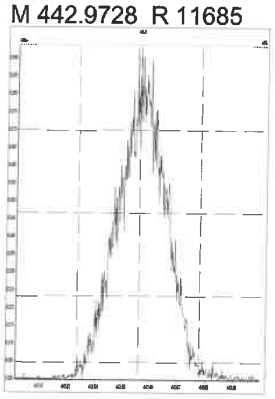

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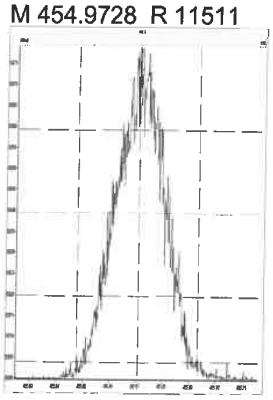

M 466.9728 R 12434

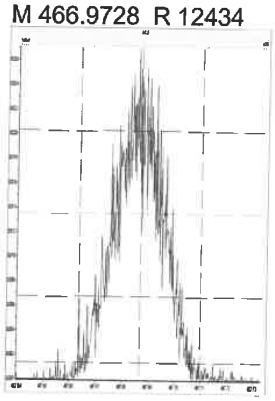

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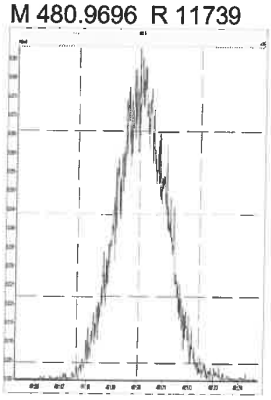

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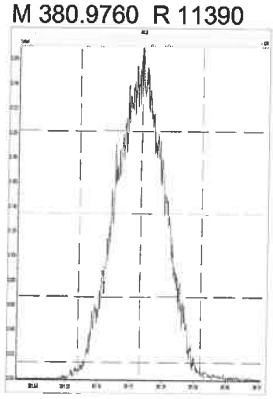

M 392.9760 R 11338

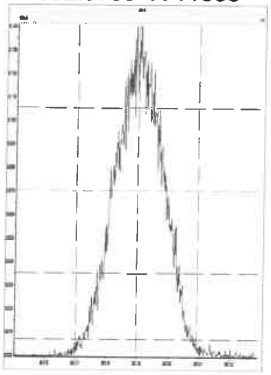

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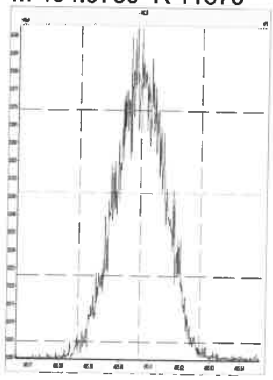

M 416.9760 R 12111

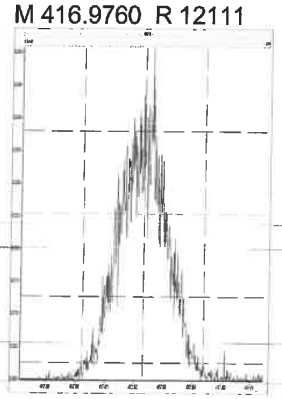

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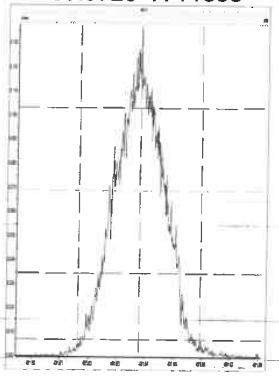

M 442.9728 R 11338

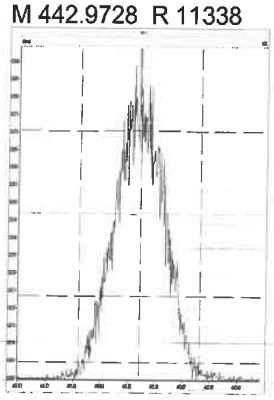

M 454.9728 R 11793

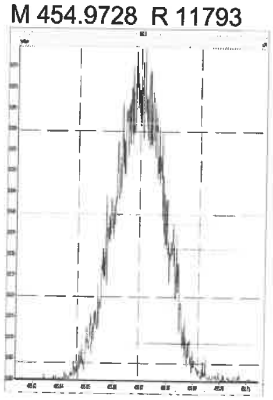

M 466.9728 R 11876

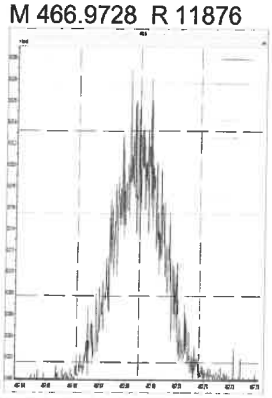

M 480.9696 R 11633

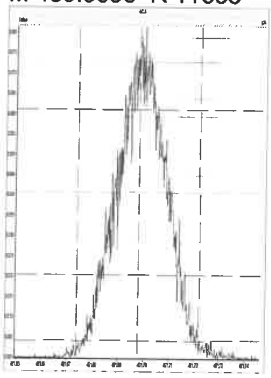

M 492.9696 R 11499

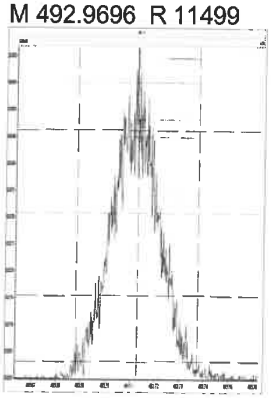

M 504.9696 R 11682

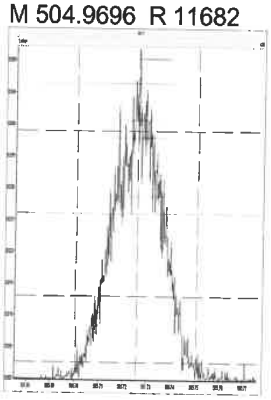

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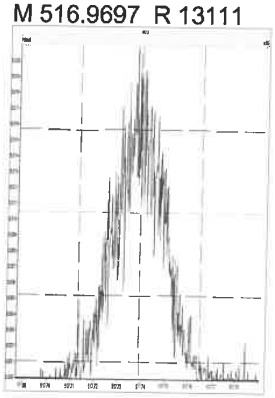

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M 292.9824 R 11441

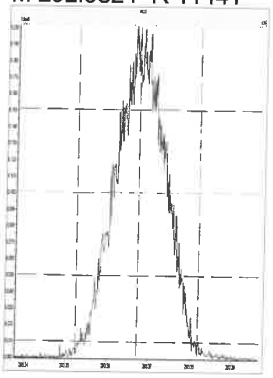

M 304.9824 R 11342

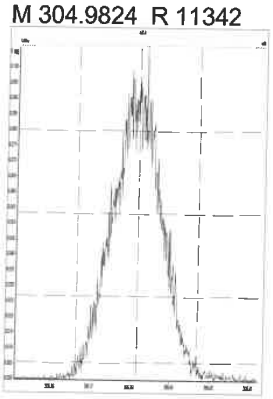

M 318.9792 R 11338

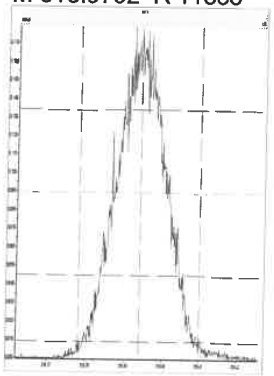

M 330.9792 R 11000

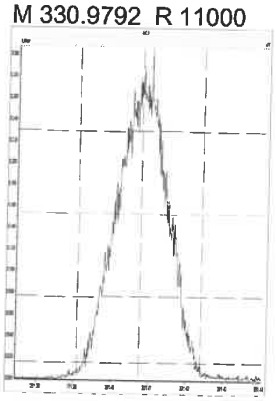

M 342.9792 R 11628

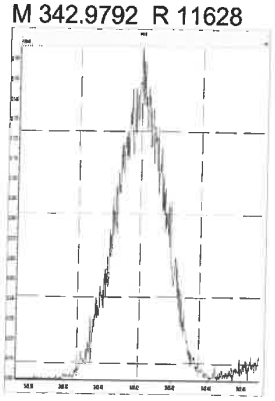

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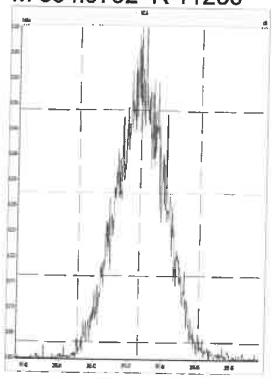

M 366.9792 R 11600

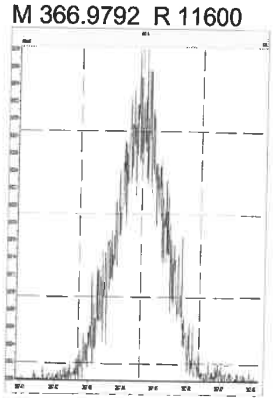

M 380.9760 R 10775

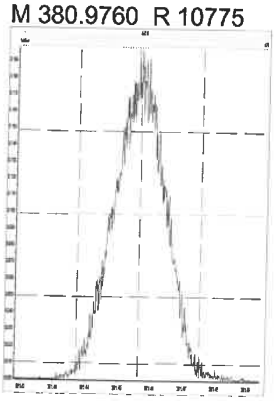

M 392.9760 R 11237

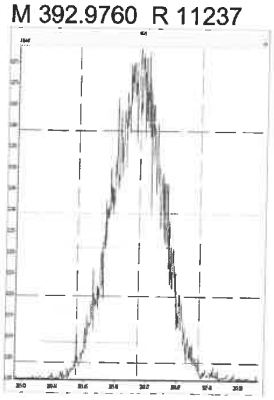

M 404.9760 R 11887

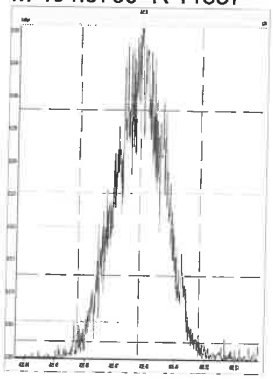

M 416.9760 R 12063

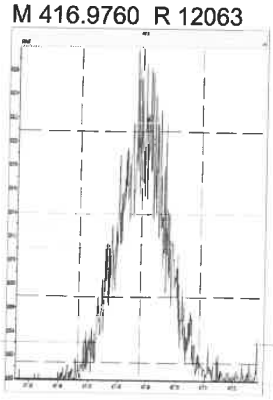

M 318.9792 R 11684

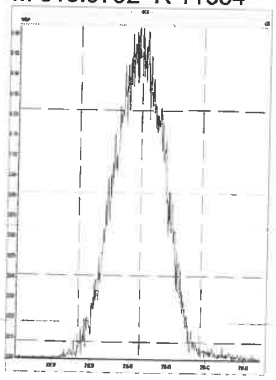

M 330.9792 R 11390

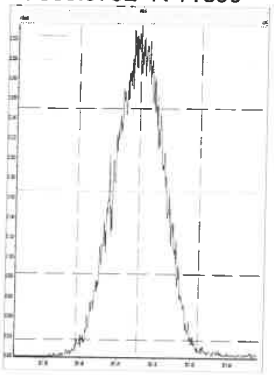

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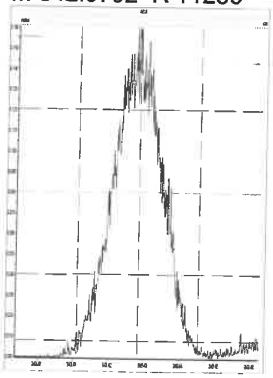

M 354.9792 R 11982

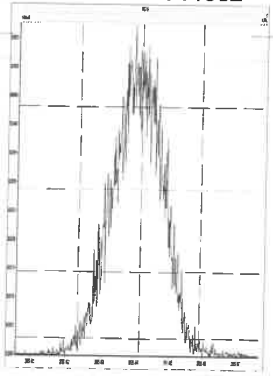

M 366.9792 R 11932

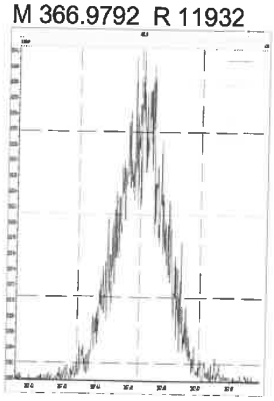

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M 380.9760 R 10822

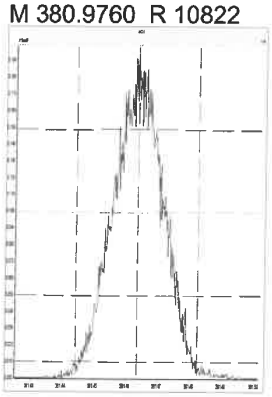

M 392.9760 R 10943

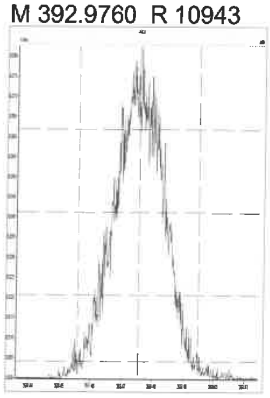

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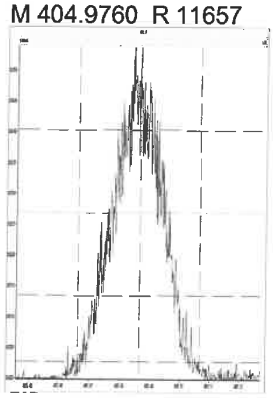

M 416.9760 R 12562

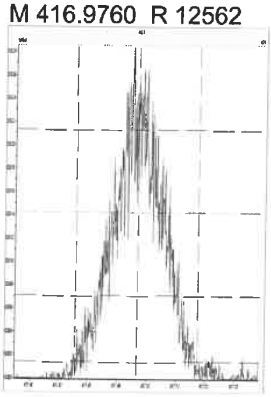

M 366.9792 R 11669

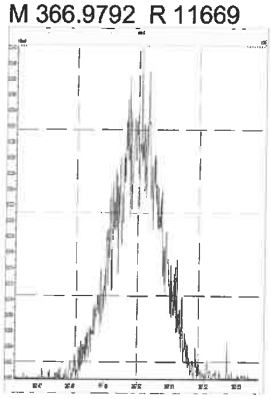

M 380.9760 R 11016

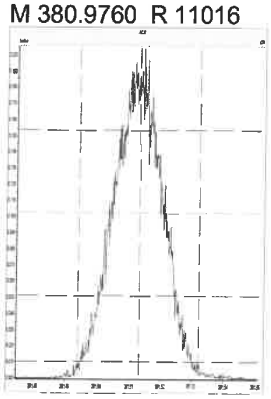

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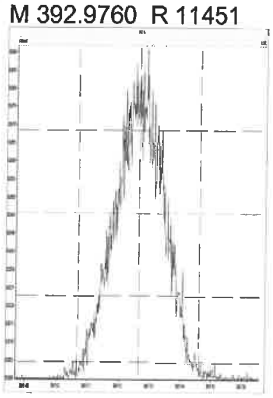

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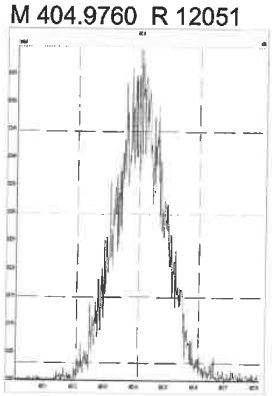

M 416.9760 R 12048

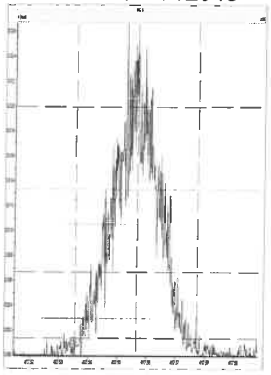

M 430.9728 R 11295

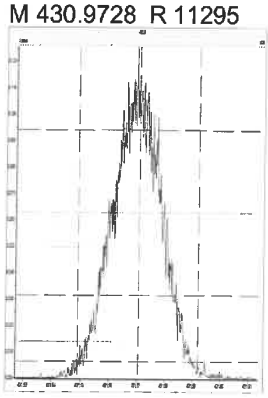

M 442.9728 R 11857

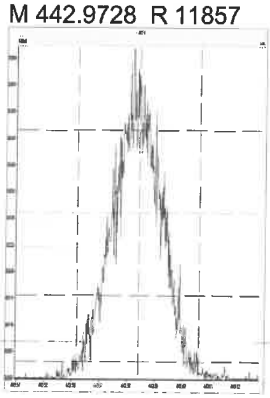

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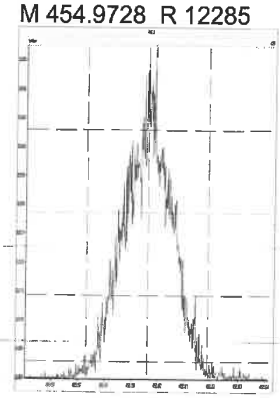

M 380.9760 R 11110

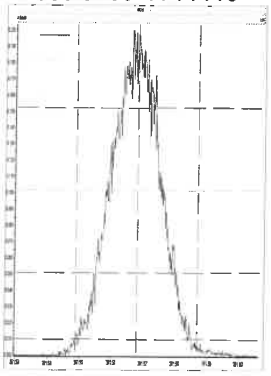

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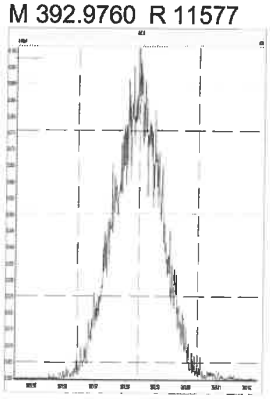

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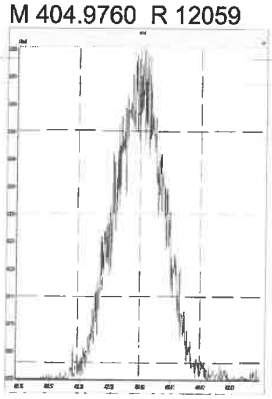

M 416.9760 R 11737

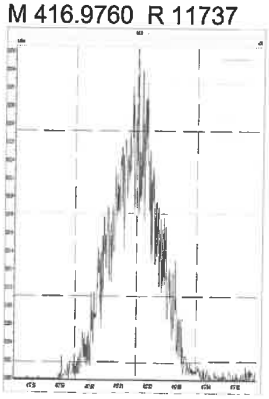

M 430.9728 R 11043

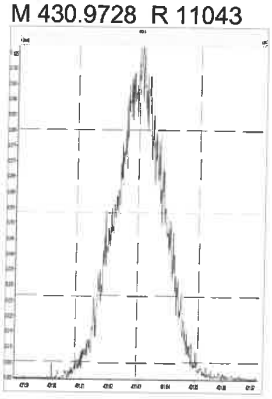

M 442.9728 R 10988

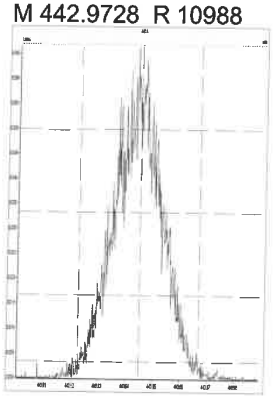

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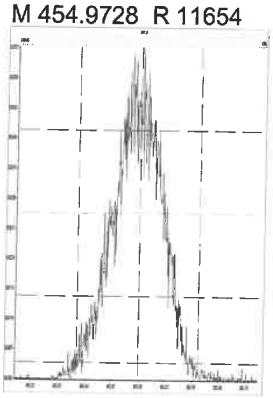

M 466.9728 R 12705

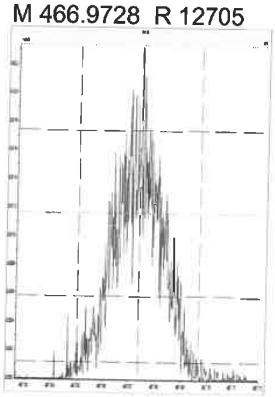

M 480.9696 R 10454

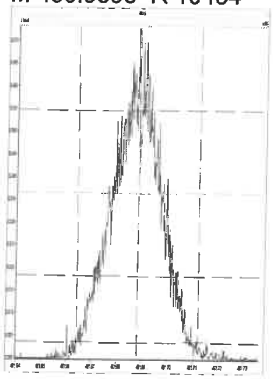

M 380.9760 R 11493

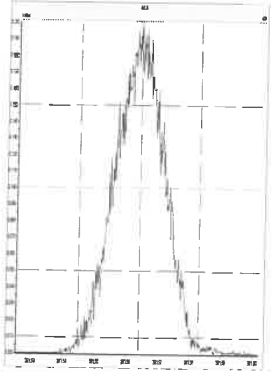

M 392.9760 R 11446

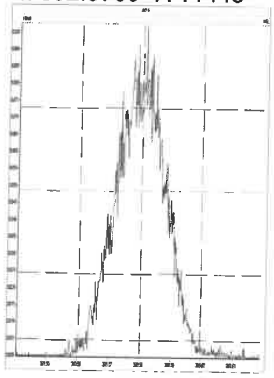

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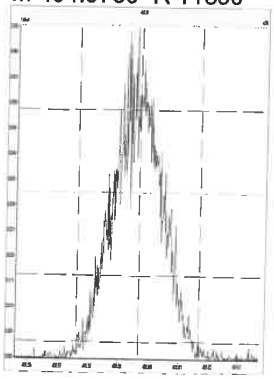

M 416.9760 R 12490

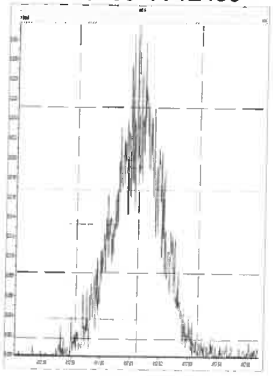

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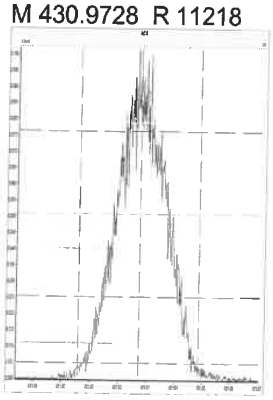

M 442.9728 R 11739

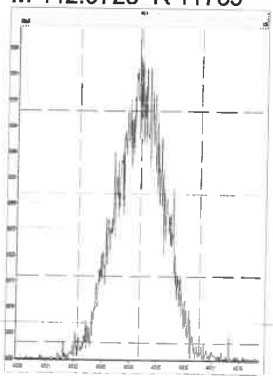

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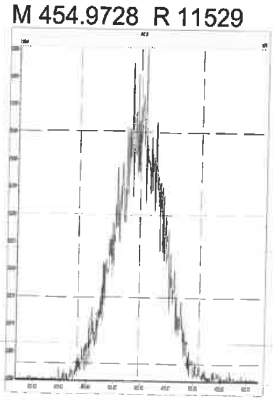

M 466.9728 R 11793

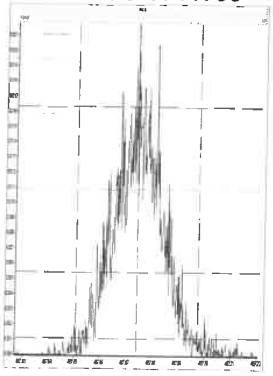

M 480.9696 R 10964

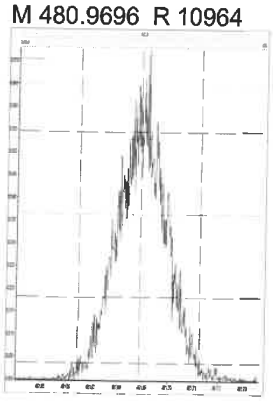

M 492.9696 R 12048

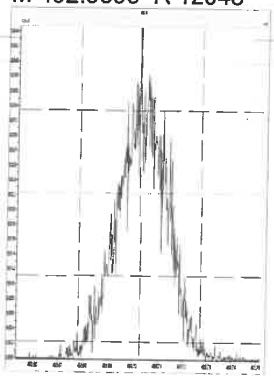

M 504.9696 R 11934

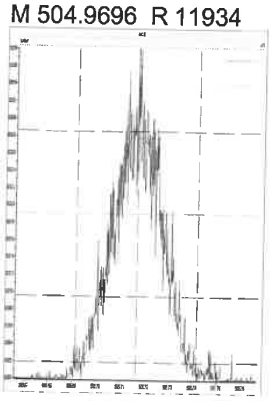

M 516.9697 R 11893

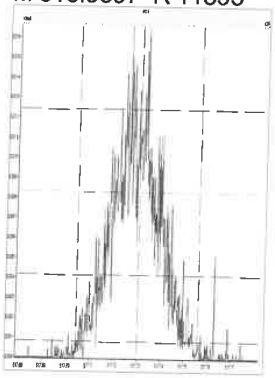

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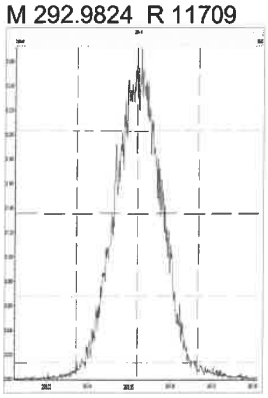

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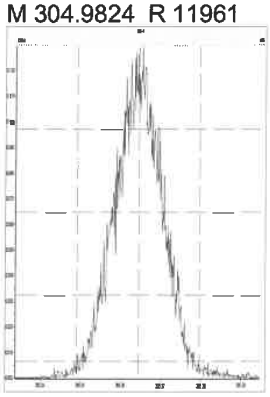

M 318.9792 R 11655

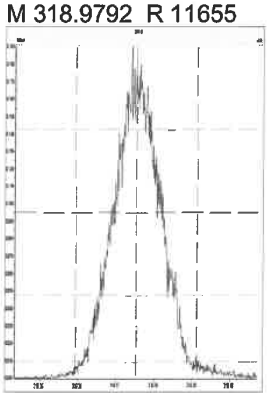

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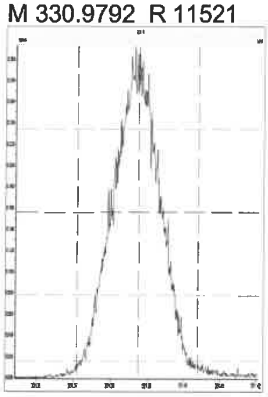

M 342.9792 R 11293

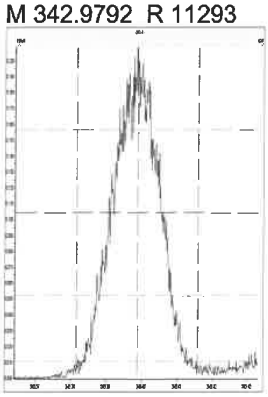

M 354.9792 R 11365

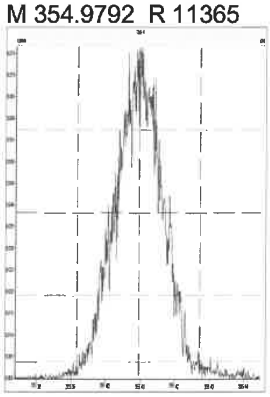

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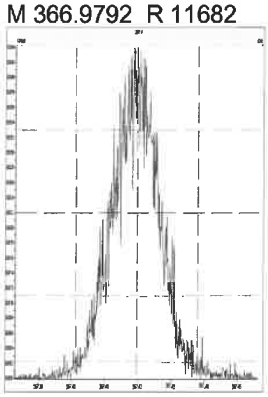

M 380.9760 R 11135

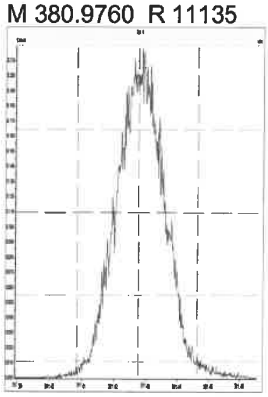

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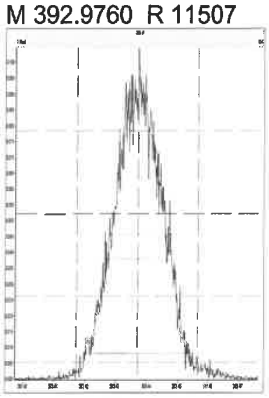

M 404.9760 R 11878

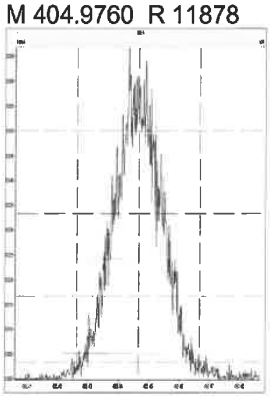

M 416.9760 R 12755

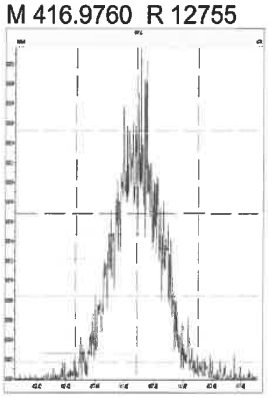

M 318.9792 R 11643

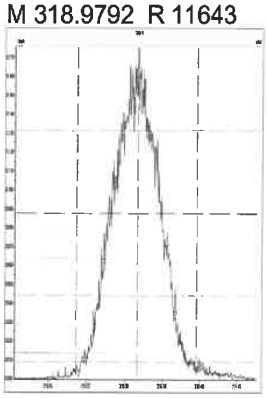

M 330.9792 R 11709

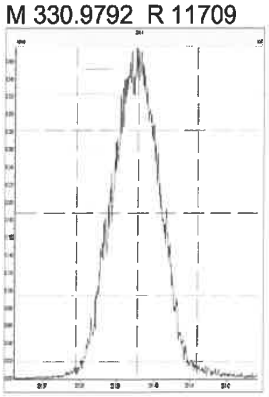

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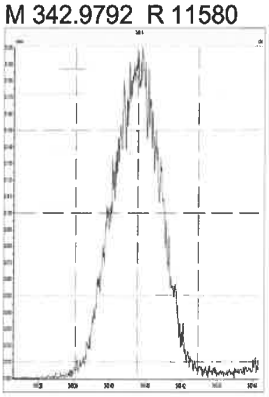

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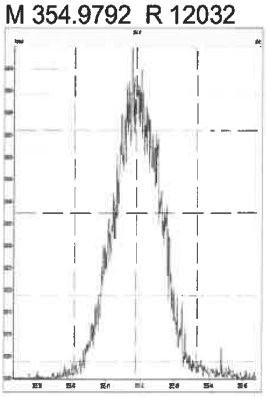

M 366.9792 R 12228

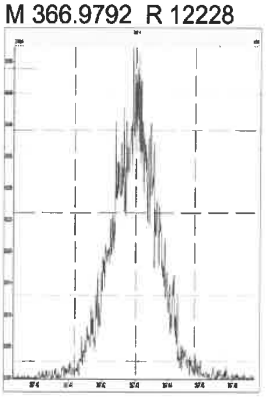

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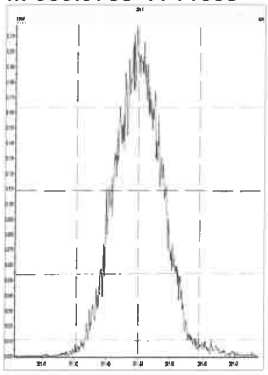

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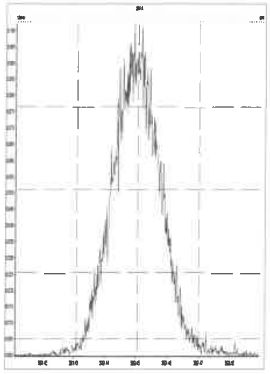

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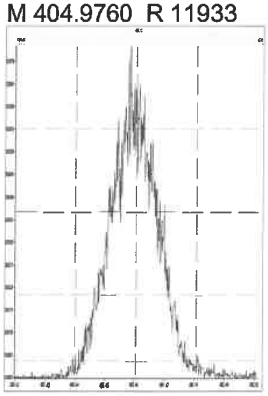

M 416.9760 R 13026

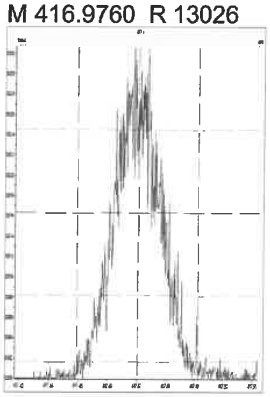

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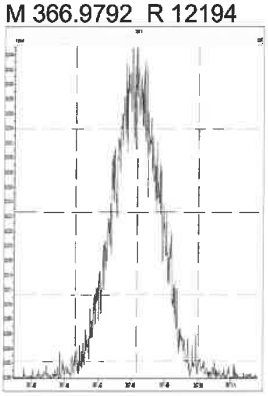

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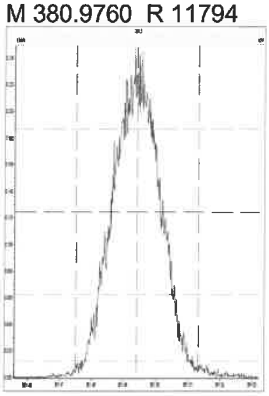

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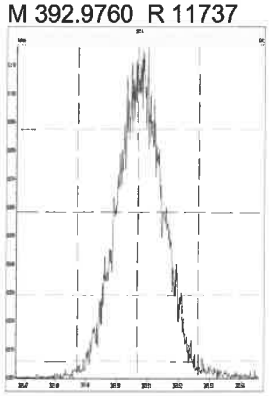

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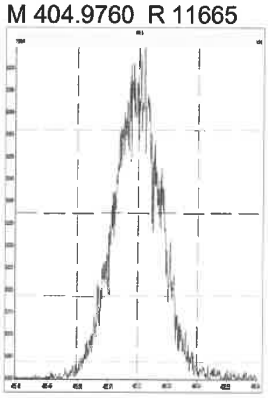

M 416.9760 R 12755

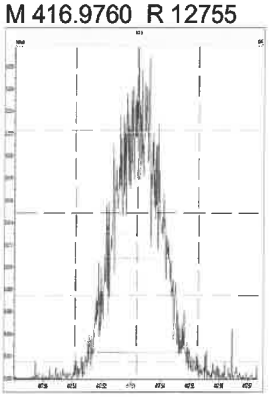

M 430.9728 R 11694

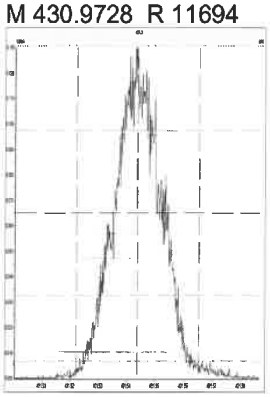

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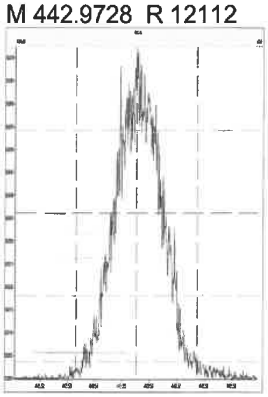

M 454.9728 R 11876

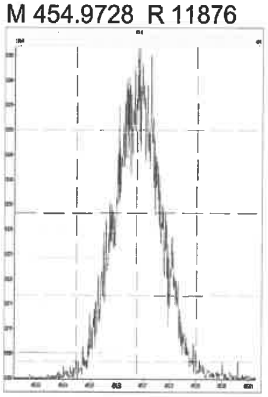

M 380.9760 R 11737

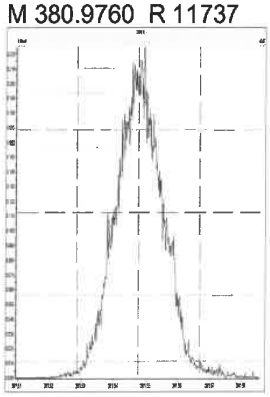

M 392.9760 R 11966

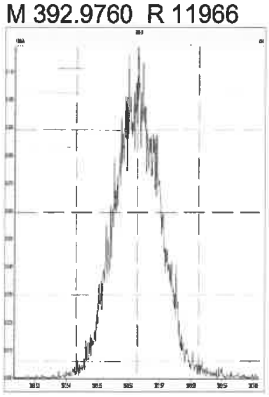

M 404.9760 R 12412

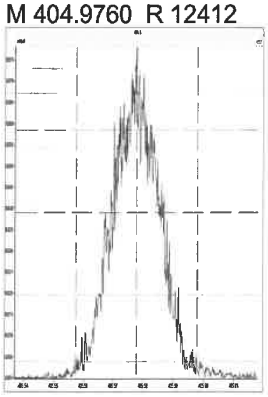

M 416.9760 R 12376

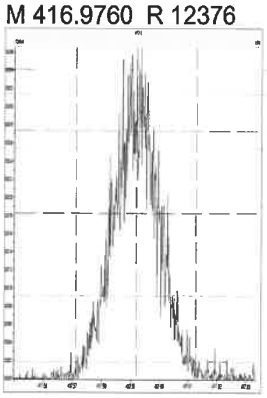

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M 430.9728 R 12136

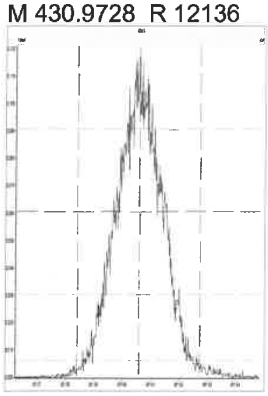

M 442.9728 R 11991

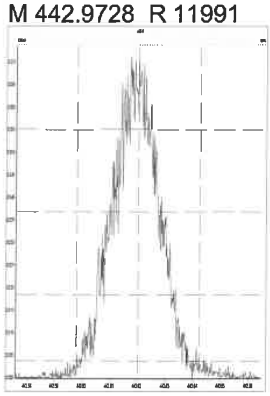

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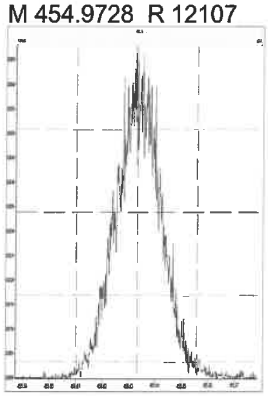

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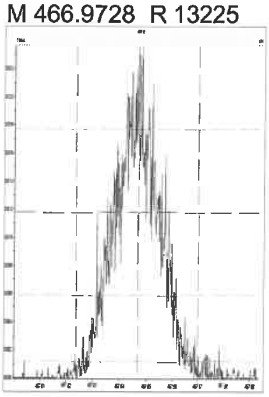

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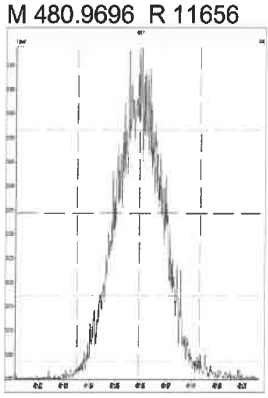

M 380.9760 R 11881

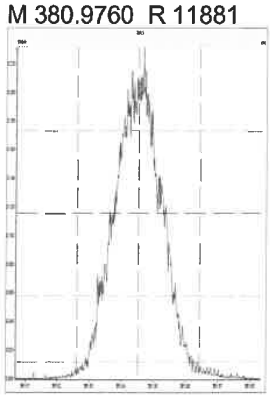

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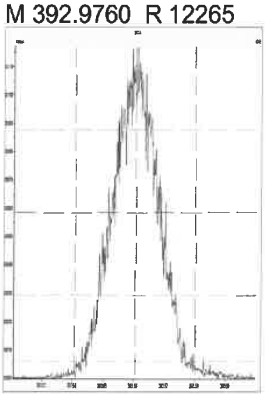

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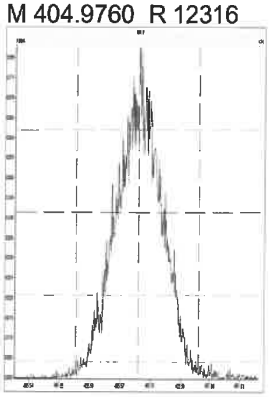

M 416.9760 R 13023

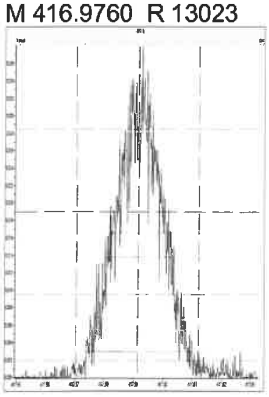

M 430.9728 R 11767

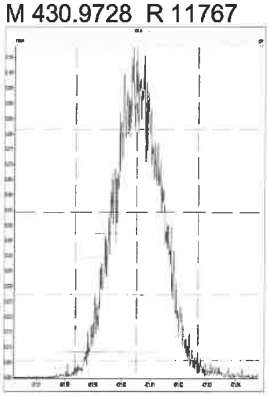

M 442.9728 R 12136

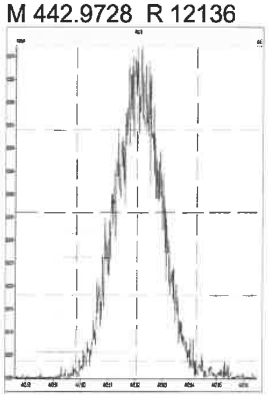

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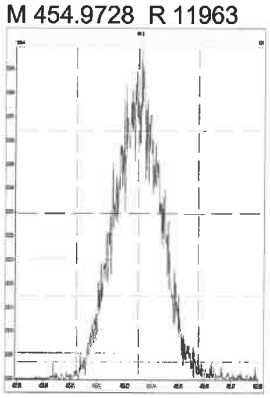

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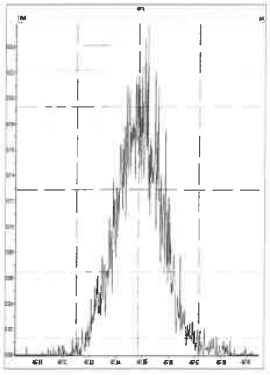

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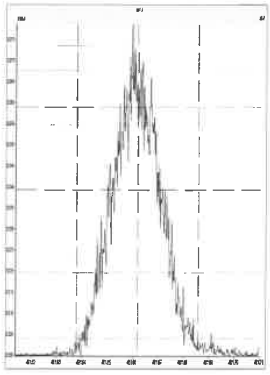

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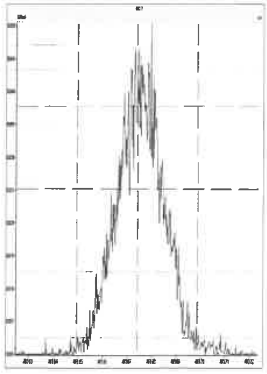

M 504.9696 R 12257

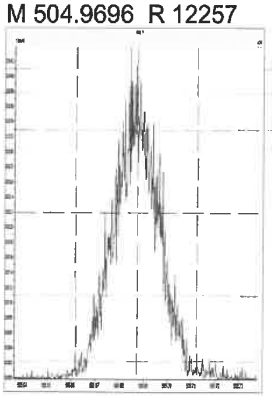

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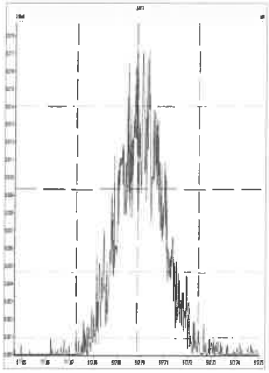

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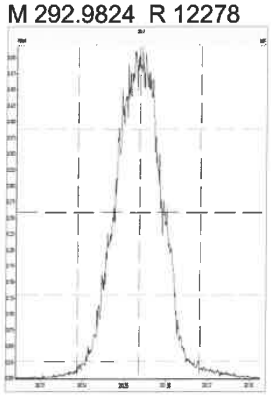

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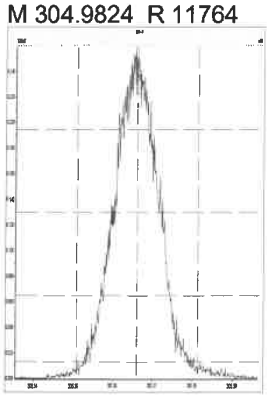

M 318.9792 R 12255

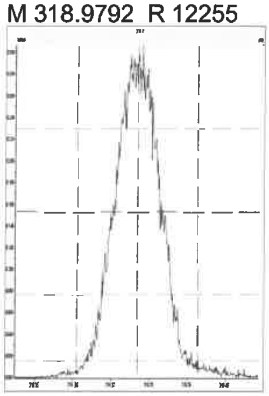

M 330.9792 R 11962

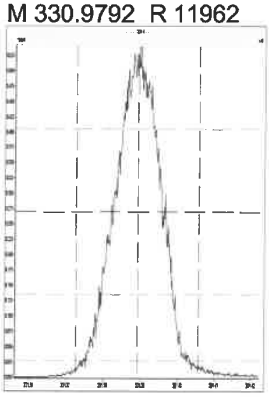

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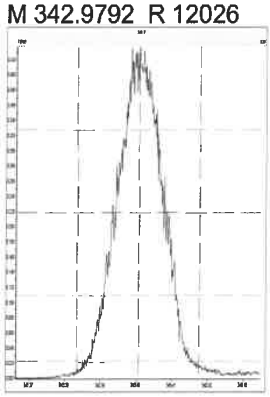

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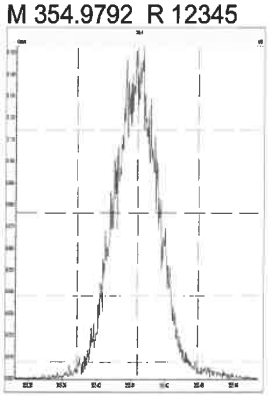

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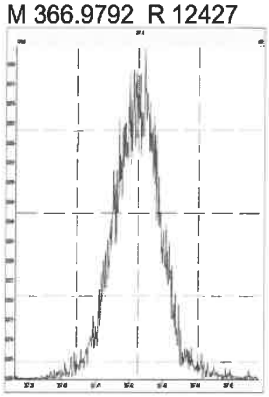

M 380.9760 R 11798

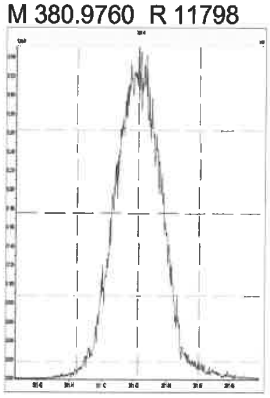

M 392.9760 R 11657

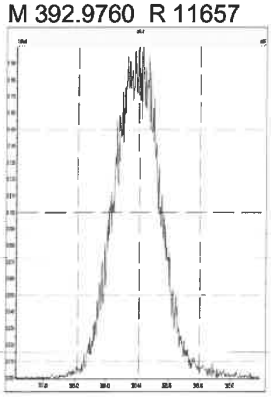

M 404.9760 R 11904

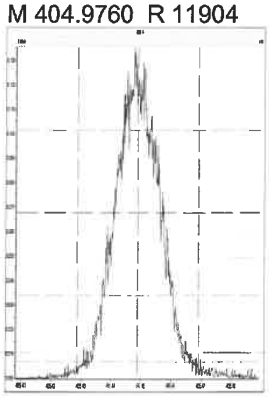

M 416.9760 R 12504

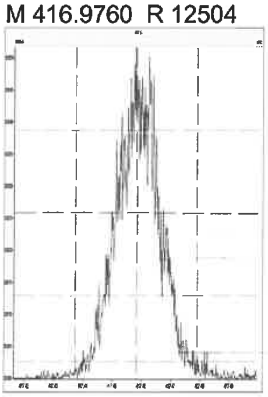

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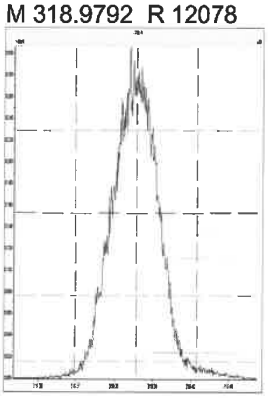

M 330.9792 R 12032

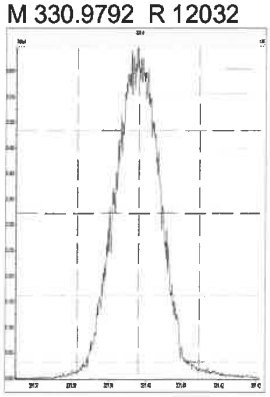

M 342.9792 R 11963

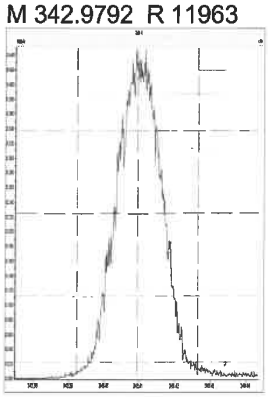

M 354.9792 R 12378

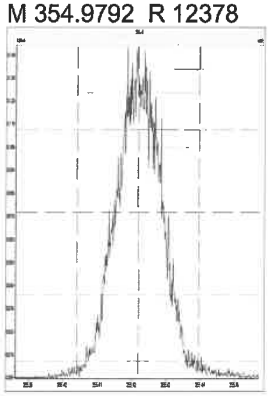

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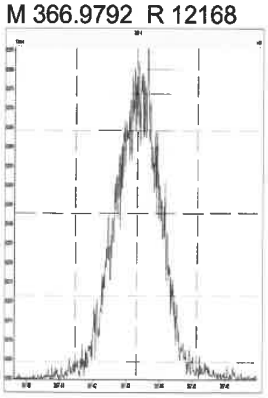

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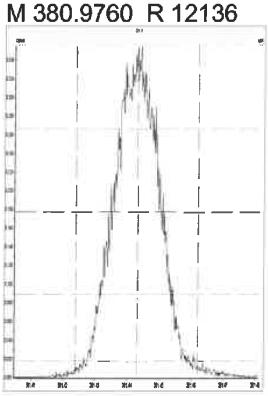

M 392.9760 R 11962

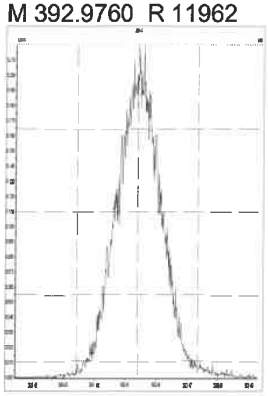

M 404.9760 R 12438

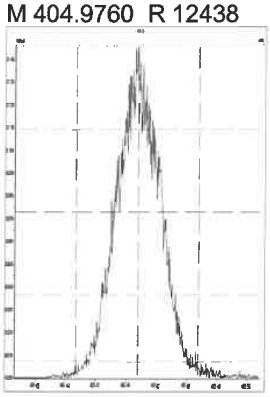

M 416.9760 R 12728

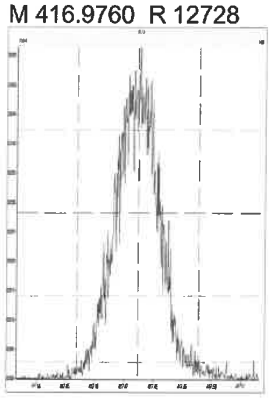

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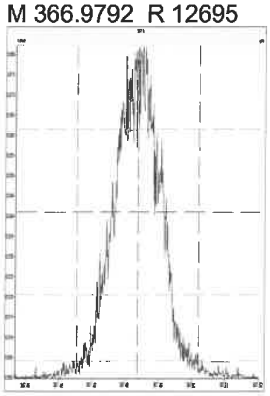

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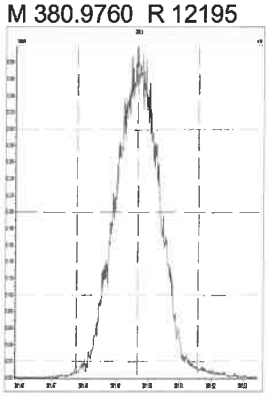

M 392.9760 R 12376

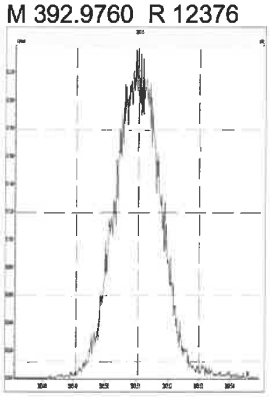

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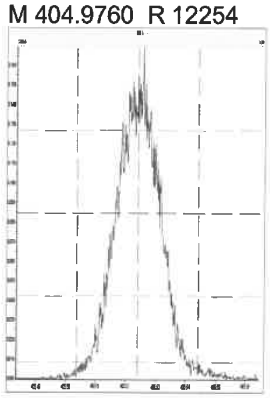

M 416.9760 R 13228

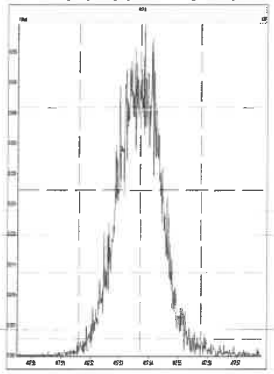

M 430.9728 R 12442

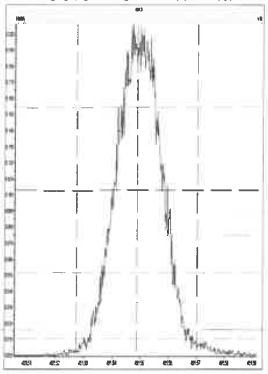

M 442.9728 R 12114

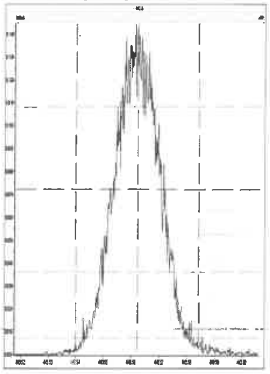

M 454.9728 R 12106

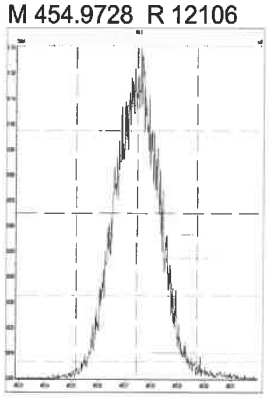

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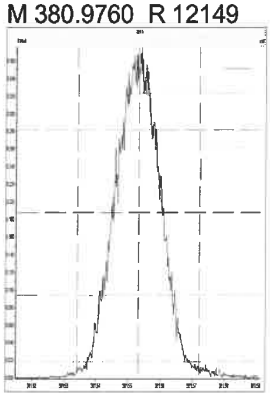

M 392.9760 R 12284

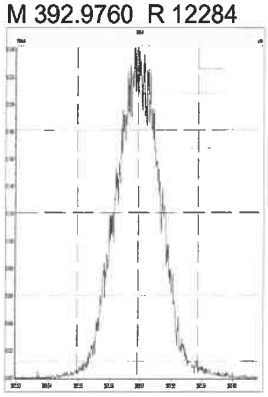

M 404.9760 R 12690

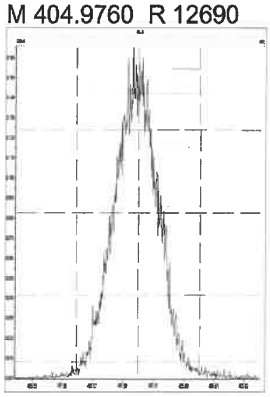

M 416.9760 R 12933

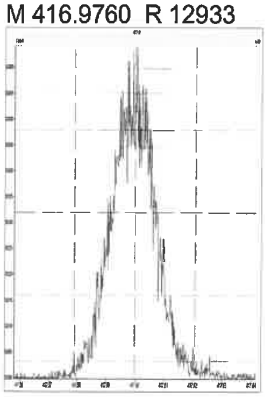

Printed: Friday, August 27, 2021 15:55:23 Pacific Daylight Time

M 430.9728 R 12535

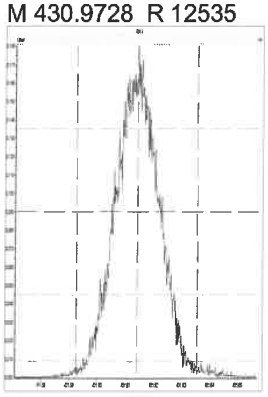

M 442.9728 R 12237

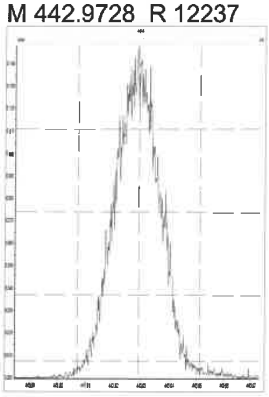

M 454.9728 R 12376

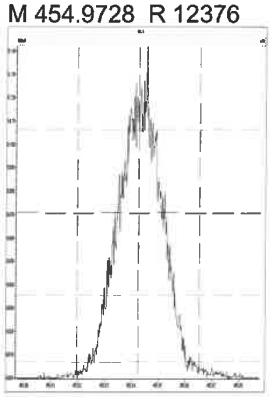

M 466.9728 R 12997

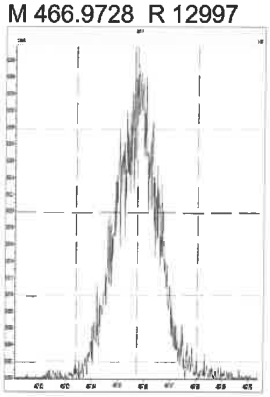

M 480.9696 R 12317

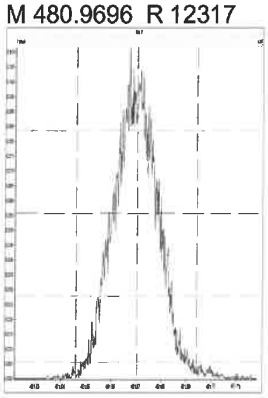

M 380.9760 R 12437

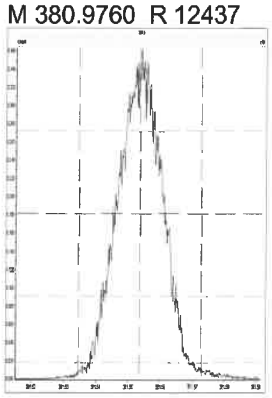

M 392.9760 R 12626

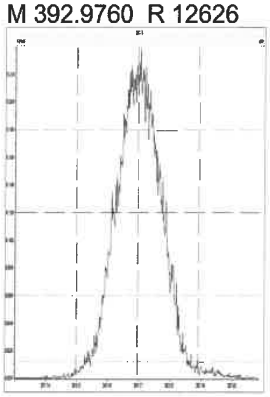

M 404.9760 R 13194

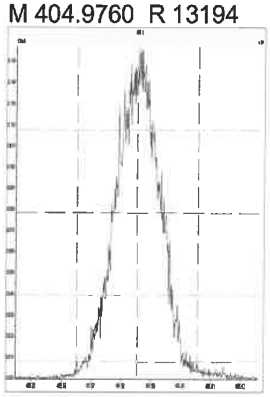

M 416.9760 R 12934

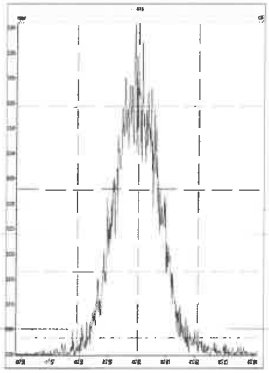

M 430.9728 R 12322

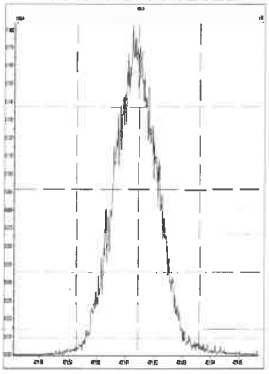

M 442.9728 R 12698

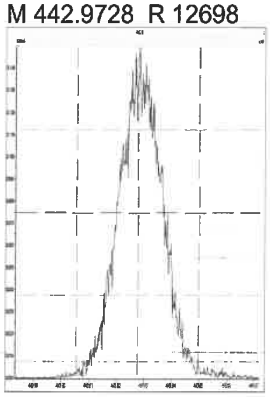

M 454.9728 R 12286

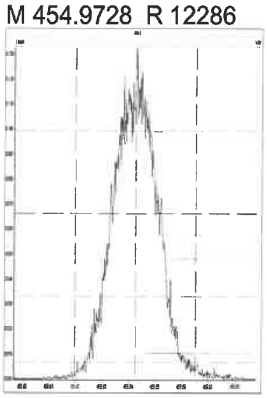

M 466.9728 R 12958

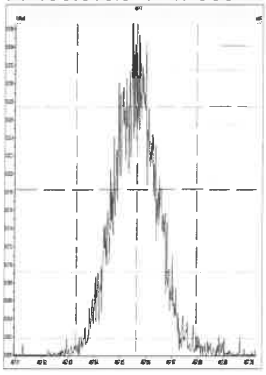

M 480.9696 R 12724

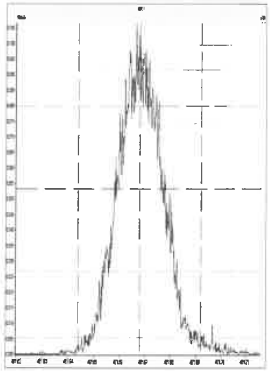

M 492.9696 R 12887

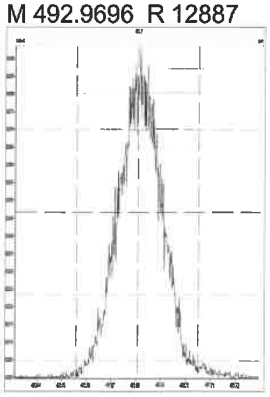

M 504.9696 R 12626

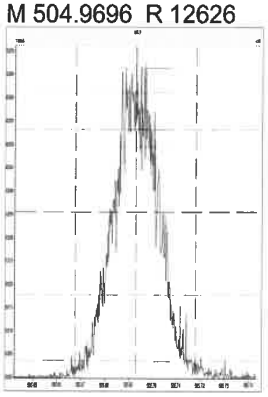

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M 516.9697_R 12919

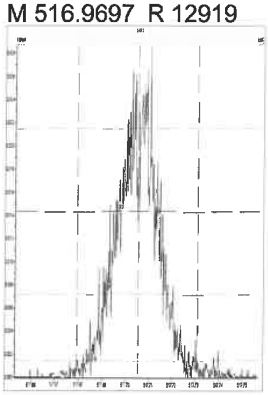

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Aug-2021 19:36:02 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521C CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 11:27:51 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1632

First Level Reviewer: arghestanis Date: 27-Aug-2021 10:00:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.583	105953794	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.084	161922532	0.76	1.6249	94.1	94.1	0.1510	0.1510	94.05	
2,3,7,8-TCDF	17.099	16672197	0.75	1.0239	10.1	10.1	0.0171	0.0171	101	
A Non-2,3,7,8-sub-TCDF	17.069						0.0171	0.0171		Rn
S Total TCDF					10.1	10.1	0.0171	0.0171		
D 13C-2,3,7,8-TCDD	17.779	97310808	0.79	0.8993	102.1	102.1	0.1041	0.1041	102	
2,3,7,8-TCDD	17.794	11885018	0.79	1.2541	9.739	9.739	0.0126	0.0126	97.39	
$ 37Cl4-2,3,7,8-TCDD	17.794	12021800		1.1071	10.2	10.2	0.0135	0.0135	102	
A Non-2,3,7,8-sub-TCDD	17.522						0.0126	0.0126		
S Total TCDD					9.739	9.739	0.0126	0.0126		
D 13C-1,2,3,7,8-PeCDF	22.006	127280083	1.55	1.2101	99.3	99.3	0.1371	0.1371	99.27	
1,2,3,7,8-PeCDF	22.034	67991083	1.60	1.0611	50.3	50.3	0.0991	0.0991	101	
D 13C-2,3,4,7,8-PeCDF	23.329	128701498	1.56	1.2395	98.0	98.0	0.1339	0.1339	98.00	
2,3,4,7,8-PeCDF	23.356	66385917	1.58	1.0184	50.6	50.6	0.1120	0.1120	101	
A F1 PeCDFs	19.851						0.008150	0.008150		
A Non-2,3,7,8-sub-PeCDF	23.067						0.1053	0.1053		n
S Total PeCDF					101.0	101.0	0.1056	0.1056		
D 13C-1,2,3,7,8-PeCDD	24.038	82857251	1.60	0.7612	102.7	102.7	0.0801	0.0801	103	
1,2,3,7,8-PeCDD	24.066	43551060	1.59	1.0484	50.1	50.1	0.0429	0.0429	100	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0429	0.0429		
S Total PeCDD					50.1	50.1	0.0429	0.0429		
D 13C-1,2,3,4,7,8-HxCDF	30.159	108459410	0.53	1.0837	104.3	104.3	0.2926	0.2926	104	
1,2,3,4,7,8-HxCDF	30.186	58389489	1.23	1.0851	49.6	49.6	0.2105	0.2105	99.22	
D 13C-1,2,3,6,7,8-HxCDF	30.385	104424805	0.52	1.1279	96.5	96.5	0.2811	0.2811	96.49	
1,2,3,6,7,8-HxCDF	30.399	60323234	1.22	1.1260	51.3	51.3	0.1957	0.1957	103	
D 13C-2,3,4,6,7,8-HxCDF	31.277	100795071	0.52	1.0637	98.8	98.8	0.2981	0.2981	98.75	
2,3,4,6,7,8-HxCDF	31.304	58639911	1.21	1.1675	49.8	49.8	0.1449	0.1449	99.66	
D 13C-1,2,3,7,8,9-HxCDF	32.129	94149369	0.51	0.9676	101.4	101.4	0.3277	0.3277	101	
1,2,3,7,8,9-HxCDF	32.143	55240241	1.23	1.1664	50.3	50.3	0.1304	0.1304	101	
A Non-2,3,7,8-sub-HxCDF	30.324						0.1645	0.1645		

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					201.0	201.0	0.1704	0.1704		
* 13C-1,2,3,7,8,9-HxCDD	31.943	95953411	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.490	74092808	1.24	0.7334	105.3	105.3	0.2038	0.2038	105	
1,2,3,4,7,8-HxCDD	31.503	40195999	1.26	1.0640	51.0	51.0	0.1215	0.1215	102	
D 13C-1,2,3,6,7,8-HxCDD	31.597	80537394	1.22	0.8802	95.4	95.4	0.1698	0.1698	95.36	
1,2,3,6,7,8-HxCDD	31.610	41713249	1.26	1.0001	51.8	51.8	0.1178	0.1178	104	
1,2,3,7,8,9-HxCDD	31.956	45521047	1.25	1.1325	52.0	52.0	0.1089	0.1089	104	
A Non-2,3,7,8-sub-HxCDD	30.525						0.1157	0.1157		
S Total HxCDD					154.8	154.8	0.1161	0.1161		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	69814195	0.45	0.7730	94.1	94.1	0.7349	0.7349	94.12	
1,2,3,4,6,7,8-HpCDF	33.603	50165096	1.03	1.4413	49.9	49.9	0.3743	0.3743	99.71	
D 13C-1,2,3,4,7,8,9-HpCDF	34.660	62136683	0.44	0.7008	92.4	92.4	0.8106	0.8106	92.40	
1,2,3,4,7,8,9-HpCDF	34.672	41632663	1.03	1.3174	50.9	50.9	0.5213	0.5213	102	
A Non-2,3,7,8-sub-HpCDF	34.138						0.4381	0.4381		
S Total HpCDF					100.7	100.7	0.4478	0.4478		
D 13C-1,2,3,4,6,7,8-HpCDD	34.381	62948723	1.03	0.6472	101.4	101.4	0.9008	0.9008	101	
1,2,3,4,6,7,8-HpCDD	34.393	33871992	1.04	1.0943	49.2	49.2	0.1710	0.1710	98.34	
A Non-2,3,7,8-sub-HpCDD	34.223						0.1710	0.1710		
S Total HpCDD					49.2	49.2	0.1710	0.1710		
D 13C-OCDD	36.689	88340640	0.89	0.4472	205.9	205.9	0.2250	0.2250	103	
OCDF	36.797	62973623	0.90	1.4382	99.1	99.1	0.0650	0.0650	99.13	
OCDD	36.701	49532317	0.90	1.1070	101.3	101.3	0.1006	0.1006	101	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Aug-2021 19:36:02 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521C CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 11:27:51 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1632

First Level Reviewer: arghestanis Date: 27-Aug-2021 10:00:57

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.583	17.583	0		47093976	12003528	4918	12295	2441		
333.9339	17.583	17.583	0		58859818	15096649	5231	13077	2886	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.084	17.084	0	0.972	70179249	18039614	11118	27795	1623		
317.9389	17.084	17.084	0	0.972	91743283	23532305	15482	38705	1520	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.099	17.099	0	1.001	7160205	1894055	1159	2897	1634		
305.8987	17.099	17.099	0	1.001	9511992	2448546	1745	4362	1403	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.721	17.069	-21	0.979	35419	9642	1159	2897	8		
305.8987	16.721	17.069	-21	0.979	38032	10177	1745	4362	6	0.93(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.779	17.779	0	1.011	42945657	10484951	4918	12295	2132		
333.9339	17.779	17.779	0	1.011	54365151	13383071	5231	13077	2558	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.794	17.794	0	1.001	5237975	1308375	871	2177	1502		
321.8936	17.794	17.794	0	1.001	6647043	1657658	642	1605	2582	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.794	17.794	0	1.012	12021800	3017947	1623	4057	1859		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.522						871	2177			
321.8936	17.522						642	1605			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.006	22.006	0	1.252	77430586	14329439	10706	26765	1338		
353.8970	22.006	22.006	0	1.252	49849497	9280173	7283	18207	1274	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.034	22.034	0	1.001	41822853	7776886	5688	14220	1367		
341.8567	22.034	22.034	0	1.001	26168230	4820346	4241	10602	1137	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.329	23.329	0	1.327	78357845	13287729	10706	26765	1241		
353.8970	23.329	23.329	0	1.327	50343653	8465261	7283	18207	1162	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.356	23.356	0	1.001	40607005	6918146	5688	14220	1216		
341.8567	23.356	23.356	0	1.001	25778912	4378480	4241	10602	1032	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						243	607			
341.8567	19.851						526	1315			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.552	23.067	-31	1.025	345975	49579	5688	14220	9		
341.8567	22.552	23.067	-31	1.025	227798	32160	4241	10602	8	1.52(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.038	24.038	0	1.367	51047692	8161671	4023	10057	2029		
369.8919	24.038	24.038	0	1.367	31809559	5155830	2585	6462	1995	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.066	24.066	0	1.001	26715499	4289207	1492	3730	2875		
357.8516	24.066	24.066	0	1.001	16835561	2721962	902	2255	3018	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1492	3730			
357.8516	23.696						902	2255			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.159	30.159	0	0.944	37353645	6337962	13845	34612	458		
385.8610	30.159	30.159	0	0.944	71105765	12002234	20460	51150	587	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.186	30.186	0	1.001	32211627	5498407	9820	24550	560		
375.8178	30.186	30.186	0	1.001	26177862	4529585	6937	17342	653	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.385	30.385	0	0.951	35857922	6574033	13845	34612	475		
385.8610	30.385	30.385	0	0.951	68566883	12438568	20460	51150	608	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.399	30.399	0	1.000	33104568	6281481	9820	24550	640		
375.8178	30.399	30.399	0	1.000	27218666	5144446	6937	17342	742	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.277	31.277	0	0.979	34581877	8479548	13845	34612	612		
385.8610	31.277	31.277	0	0.979	66213194	16286750	20460	51150	796	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.304	31.304	0	1.001	32135014	8251764	9820	24550	840		
375.8178	31.304	31.304	0	1.001	26504897	6767828	6937	17342	976	1.21(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.129	0	1.006	31972159	9419457	13845	34612	680		
385.8610	32.129	32.129	0	1.006	62177210	18124535	20460	51150	886	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.143	32.143	0	1.000	30463147	9131484	9820	24550	930		
375.8178	32.143	32.143	0	1.000	24777094	7320637	6937	17342	1055	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.324						9820	24550			
375.8178	30.324						6937	17342			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.943	0		52862585	14988399	9228	23070	1624		
403.8529	31.943	31.943	0		43090826	12058130	6942	17355	1737	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.490	31.490	0	0.986	41059142	11200497	9228	23070	1214		
403.8529	31.490	31.490	0	0.986	33033666	8967833	6942	17355	1292	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.503	31.503	0	1.000	22398962	6274398	5777	14442	1086		
391.8127	31.503	31.503	0	1.000	17797037	4949230	4653	11632	1064	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.597	31.597	0	0.989	44259384	12134446	9228	23070	1315		
403.8529	31.597	31.597	0	0.989	36278010	9999964	6942	17355	1441	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.610	31.610	0	1.000	23246945	6270250	5777	14442	1085		
391.8127	31.610	31.610	0	1.000	18466304	5033242	4653	11632	1082	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.956	31.956	0	1.015	25334303	7278069	5777	14442	1260		
391.8127	31.956	31.956	0	1.015	20186744	5662354	4653	11632	1217	1.25(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.525						5777	14442			
391.8127	30.525						4653	11632			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	21672655	8005321	19380	48450	413		
419.8220	33.603	33.603	0	1.052	48141540	18032402	42080	105200	429	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603	33.603	0	1.000	25472450	9363530	26879	67197	348		
409.7789	33.603	33.603	0	1.000	24692646	9367640	29306	73265	320	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.660	34.660	0	1.085	19040672	6281229	19380	48450	324		
419.8220	34.660	34.660	0	1.085	43096011	14173529	42080	105200	337	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.672	34.672	0	1.000	21137032	7133505	26879	67197	265		
409.7789	34.672	34.672	0	1.000	20495631	7013527	29306	73265	239	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						26879	67197			
409.7789	34.138						29306	73265			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.381	34.381	0	1.076	31906205	11180097	28286	70715	395		
437.8140	34.381	34.381	0	1.076	31042518	10890643	34791	86977	313	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	17268555	6199948	7813	19532	794		
425.7737	34.393	34.393	0	1.000	16603437	5944803	8706	21765	683	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						7813	19532			
425.7737	34.223						8706	21765			
13C-OCDD											
469.7779	36.689	36.689	0	1.149	41489582	12138434	5158	12895	2353		
471.7750	36.689	36.689	0	1.149	46851058	13864494	5728	14320	2420	0.89(0.76-1.02)	
OCDF											
441.7428	36.797	36.797	0	1.003	29842521	8999498	2299	5747	3915		
443.7399	36.785	36.797	-1	1.003	33131102	9980657	2563	6407	3894	0.90(0.76-1.02)	
OCDD											
457.7377	36.701	36.701	0	1.000	23479005	7110725	2345	5862	3032		
459.7348	36.701	36.701	0	1.000	26053312	7949439	3447	8617	2306	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

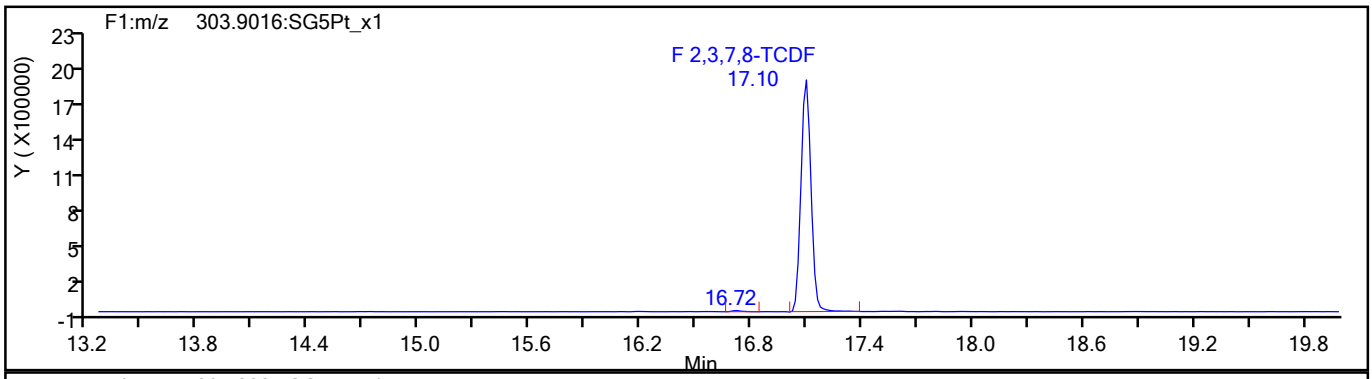

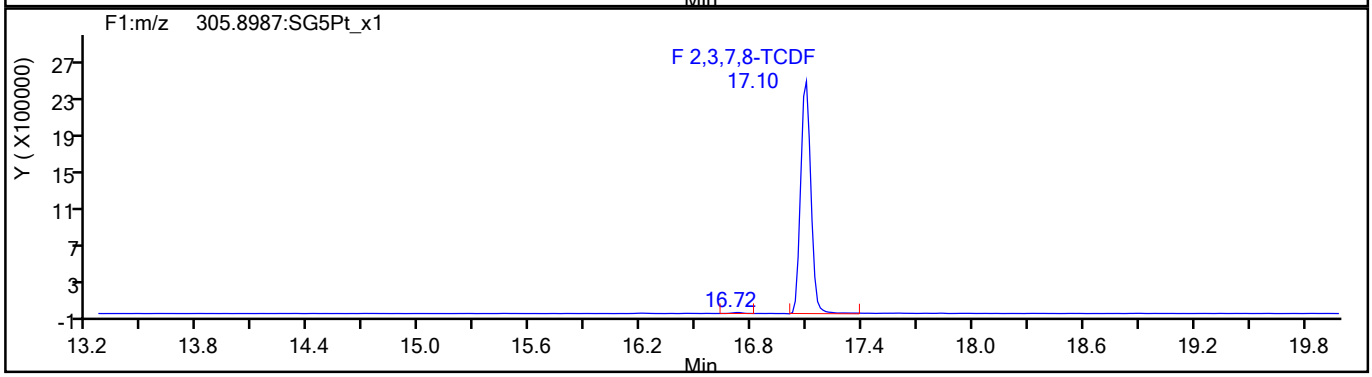

TCDF Standards

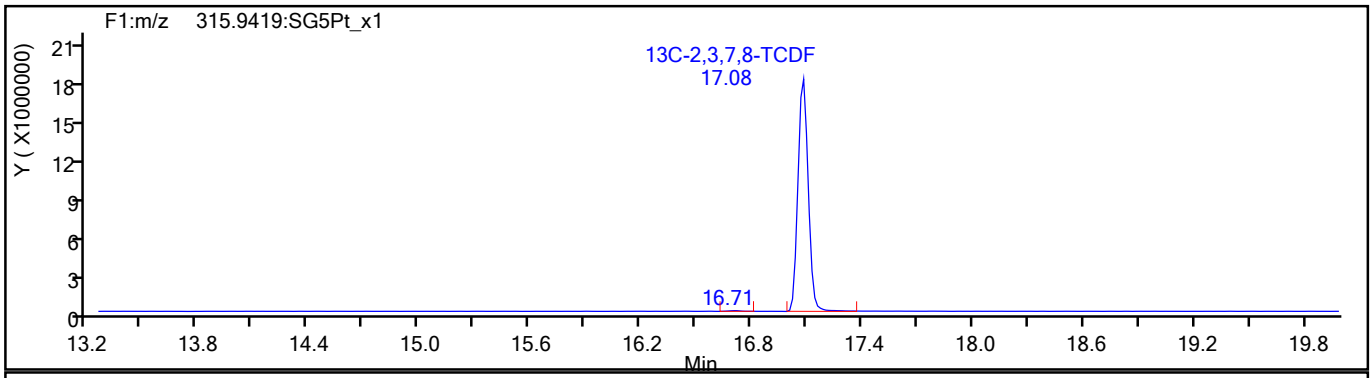

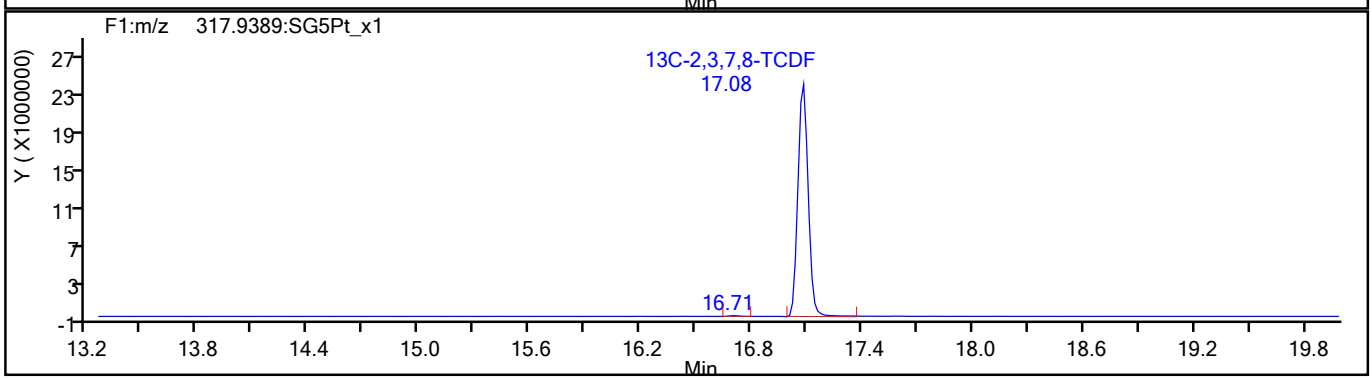

791742

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

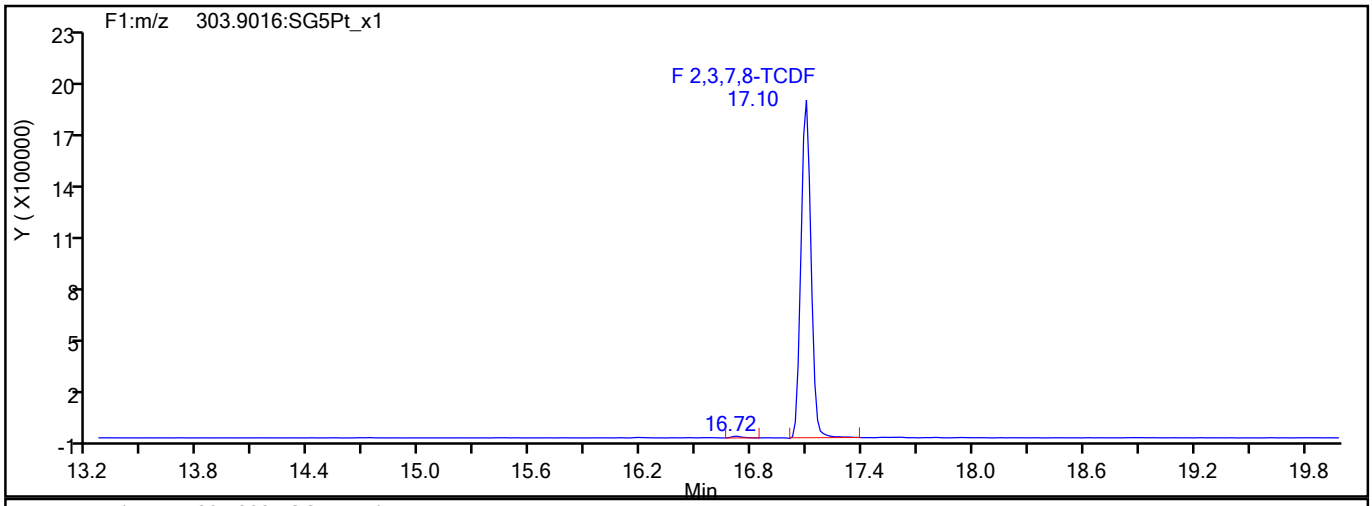

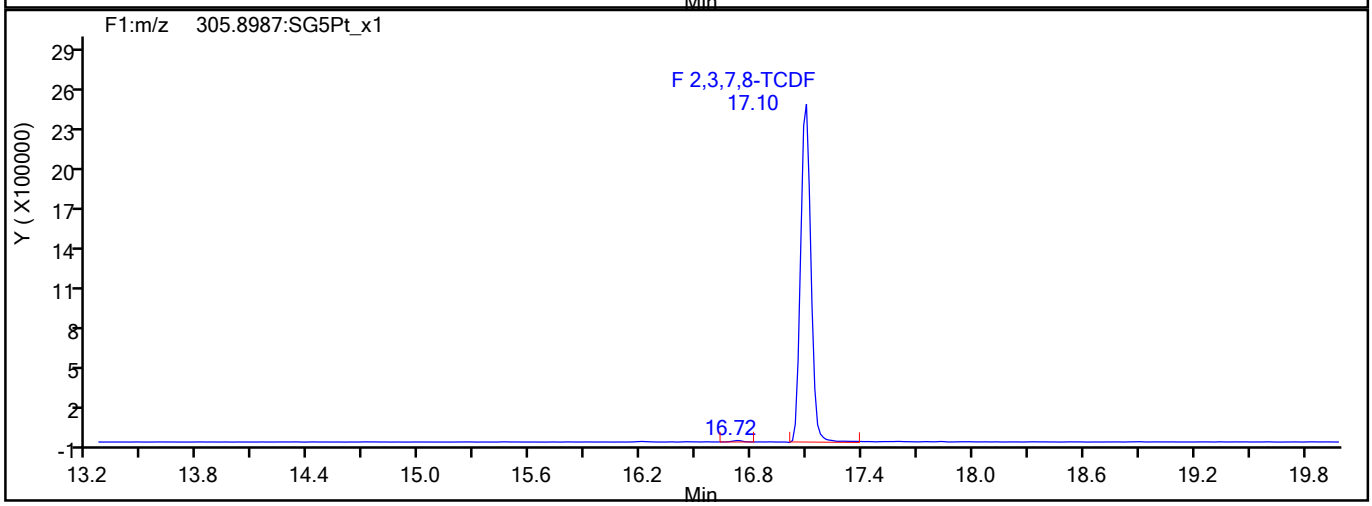

TCDF Interference Mass

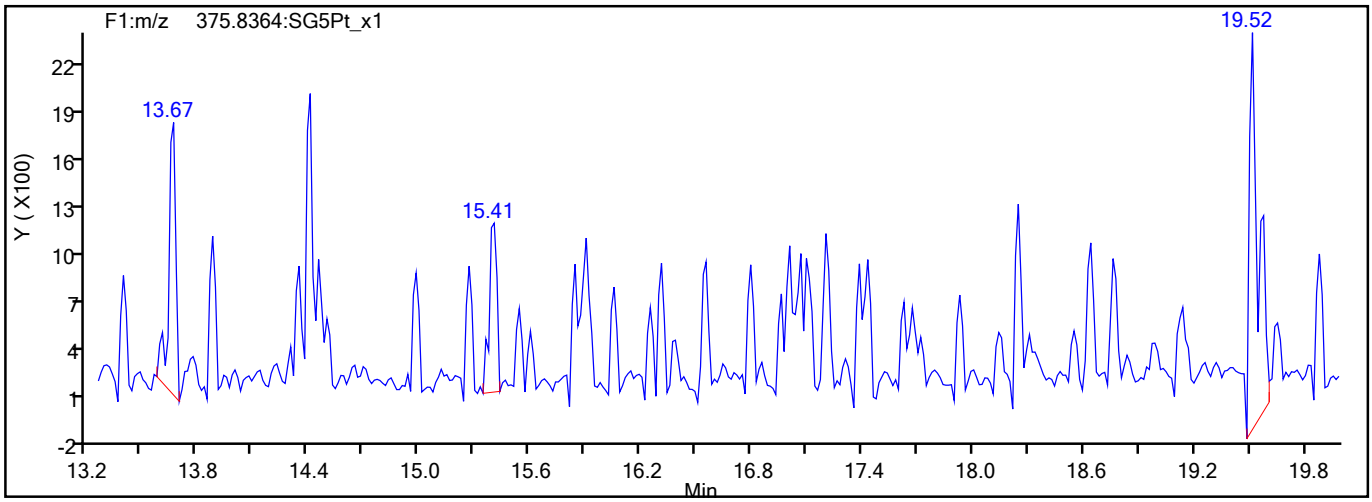

791743

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

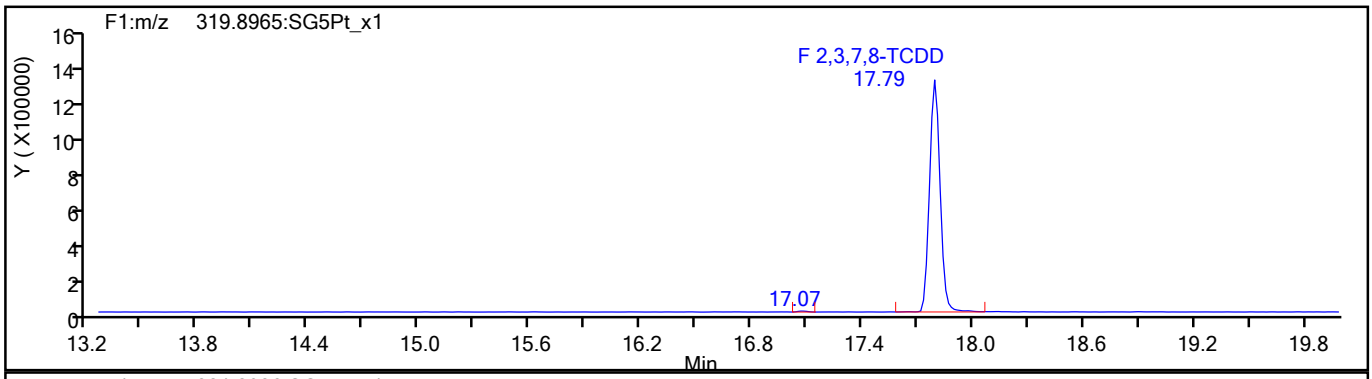

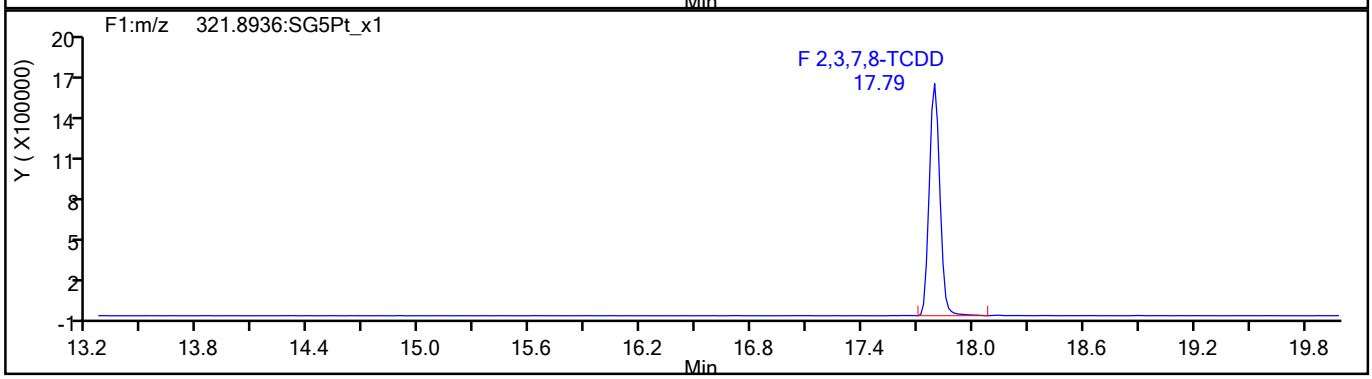

TCDD Standards

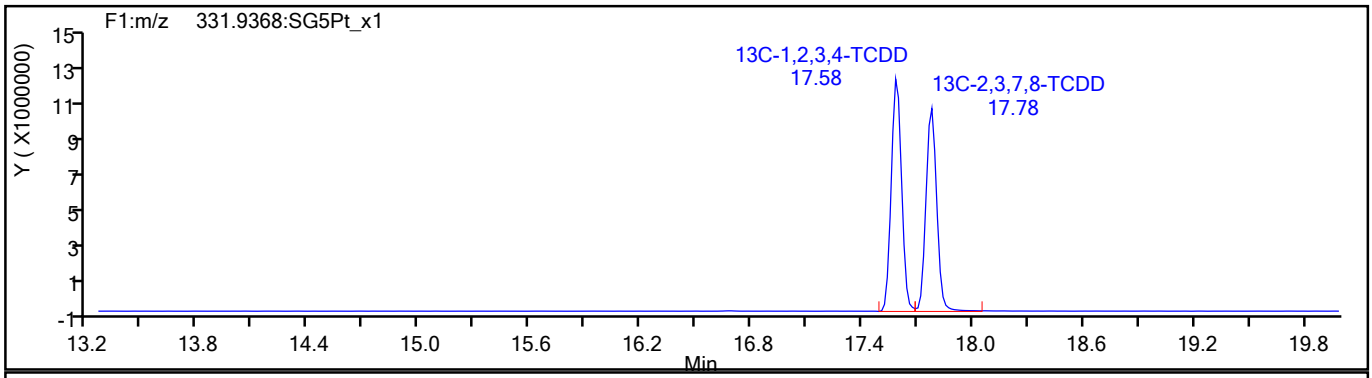

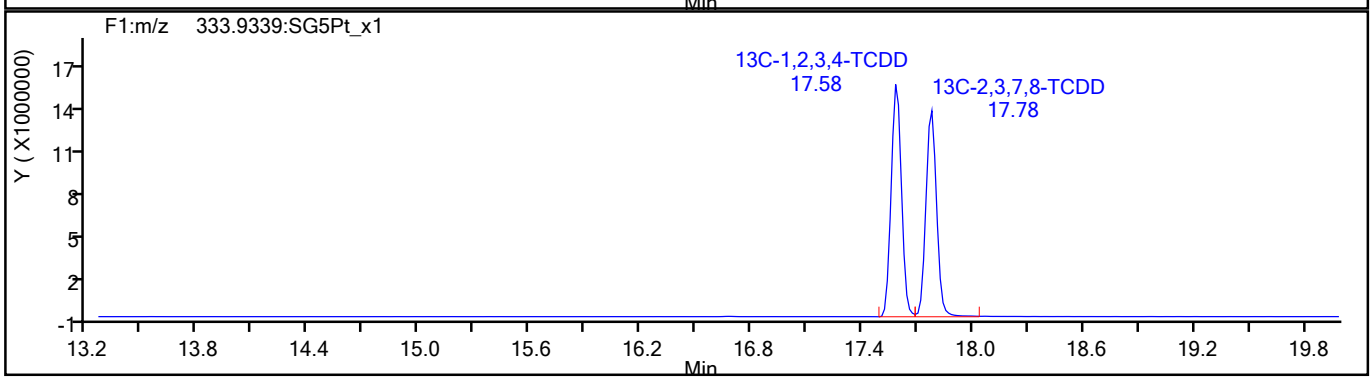

791744

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

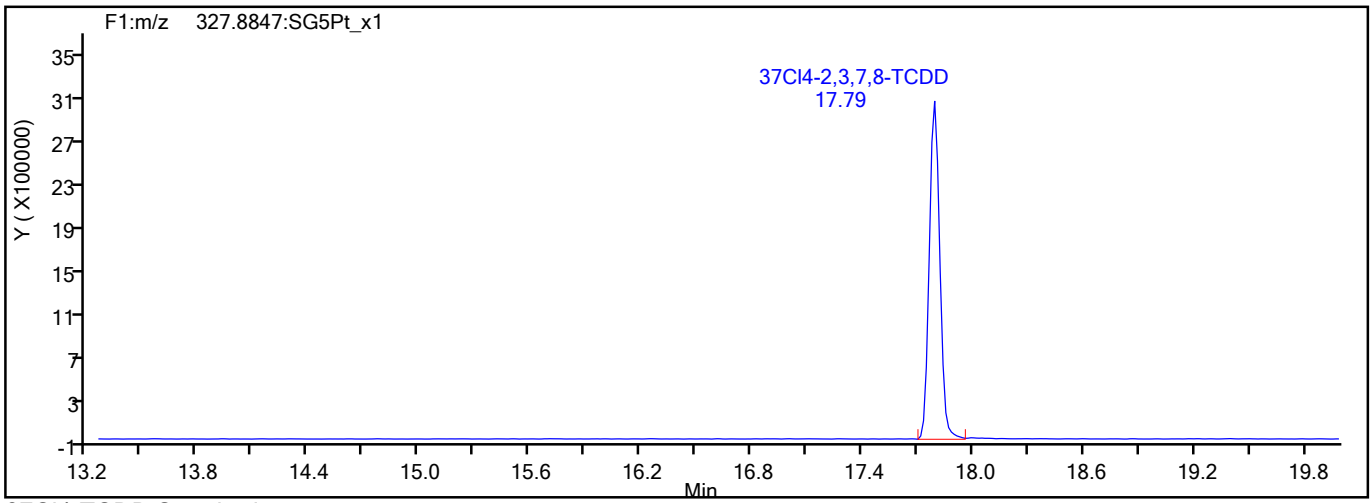

37Cl4-TCDD Standards

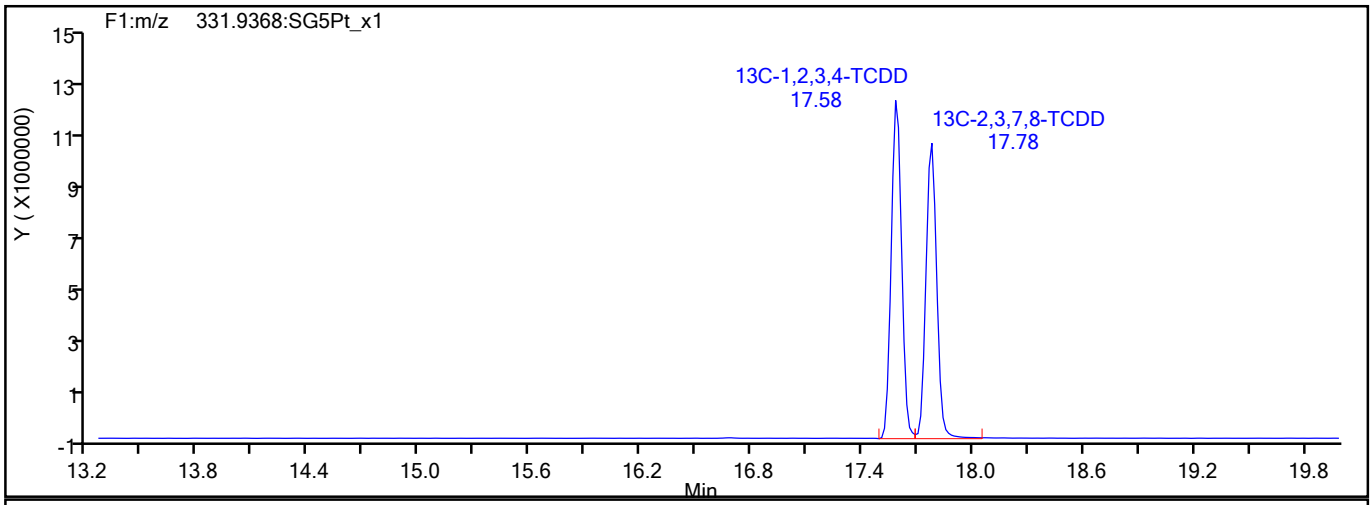

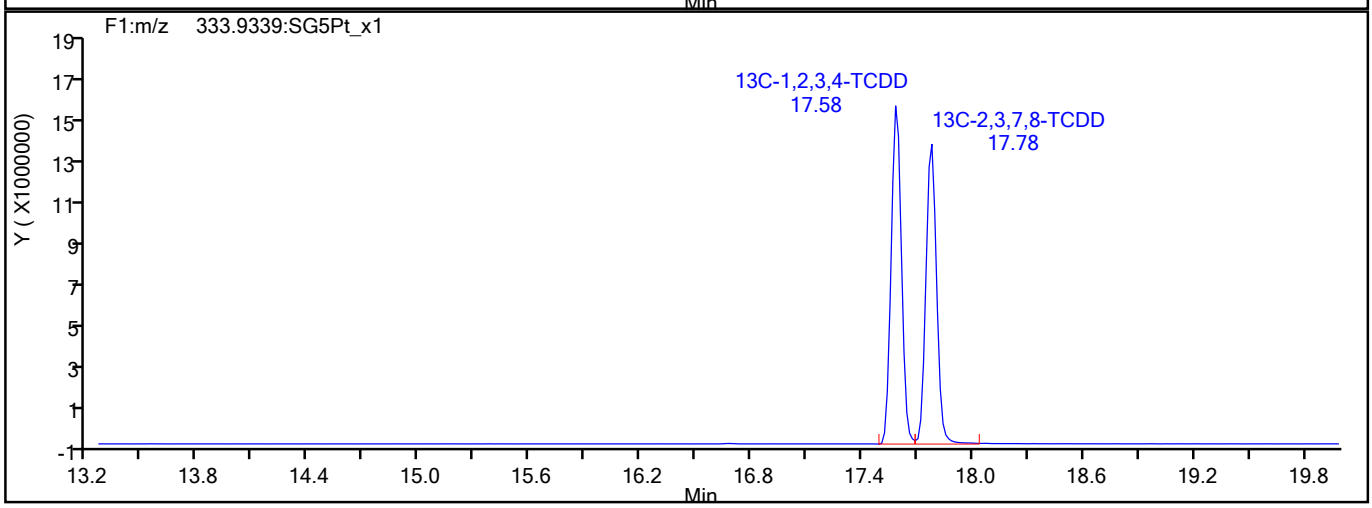

791745

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

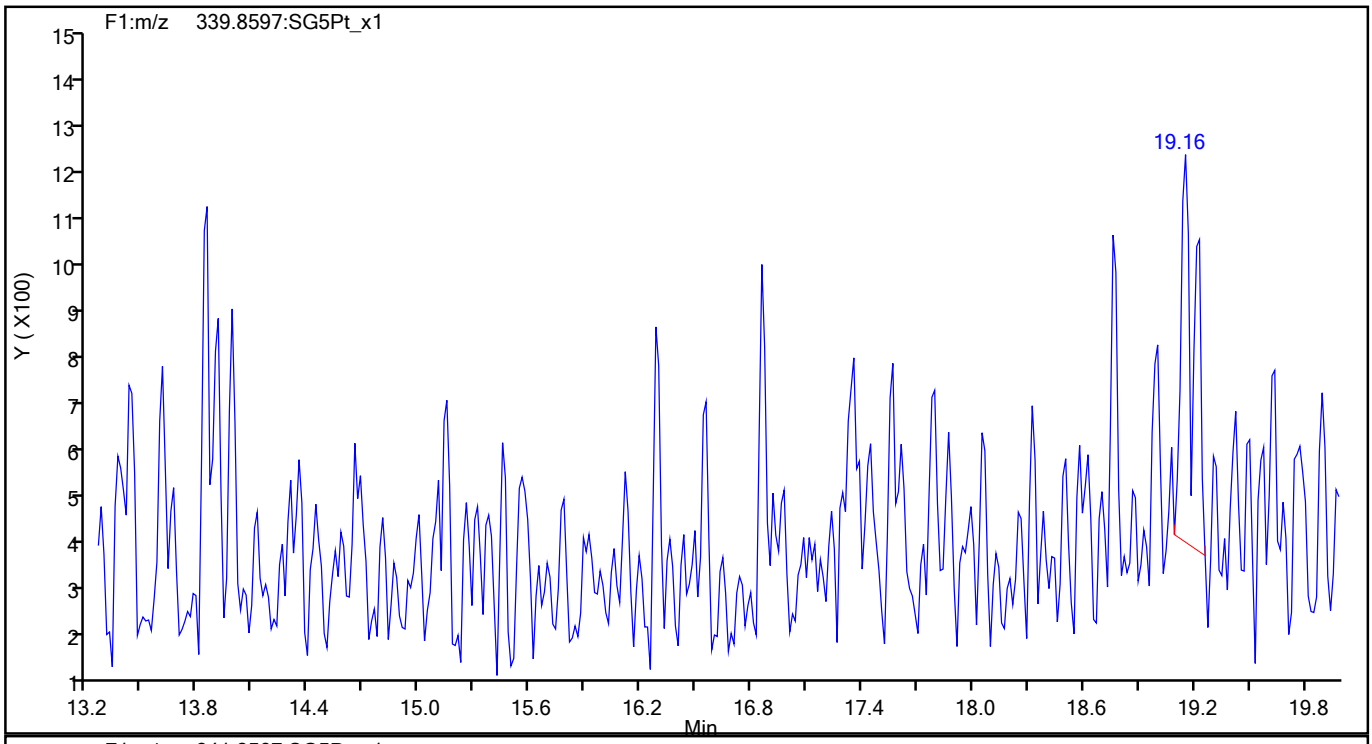

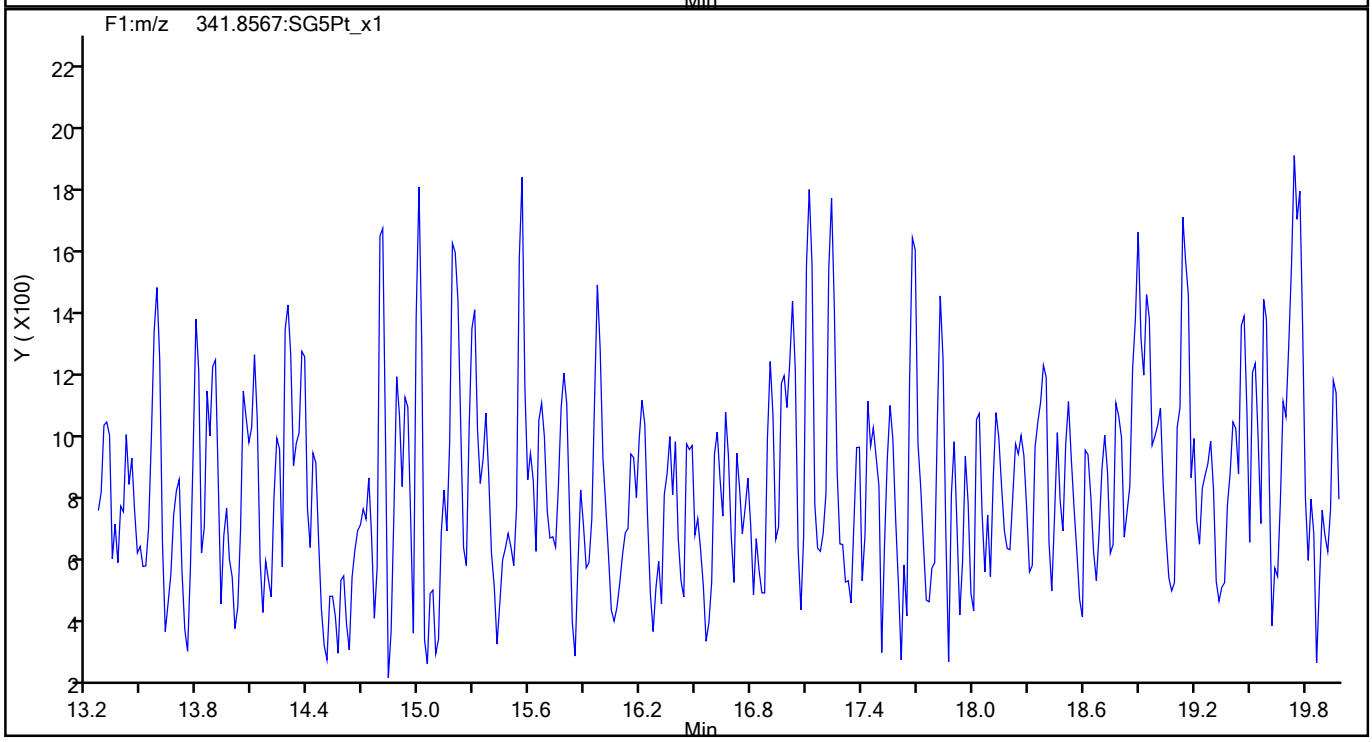

791746

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

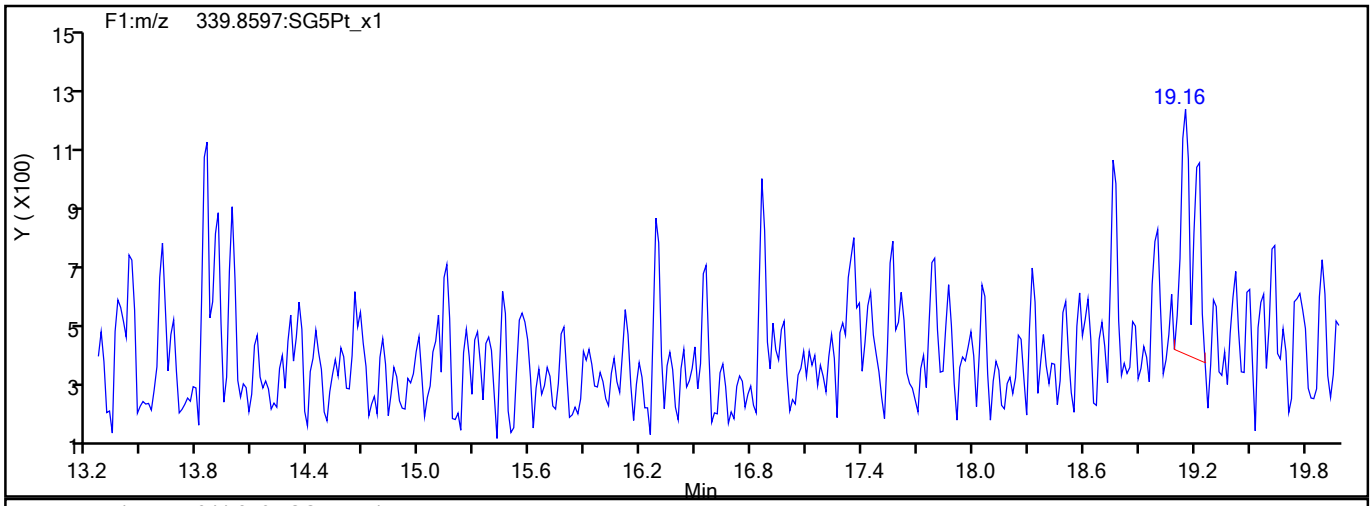

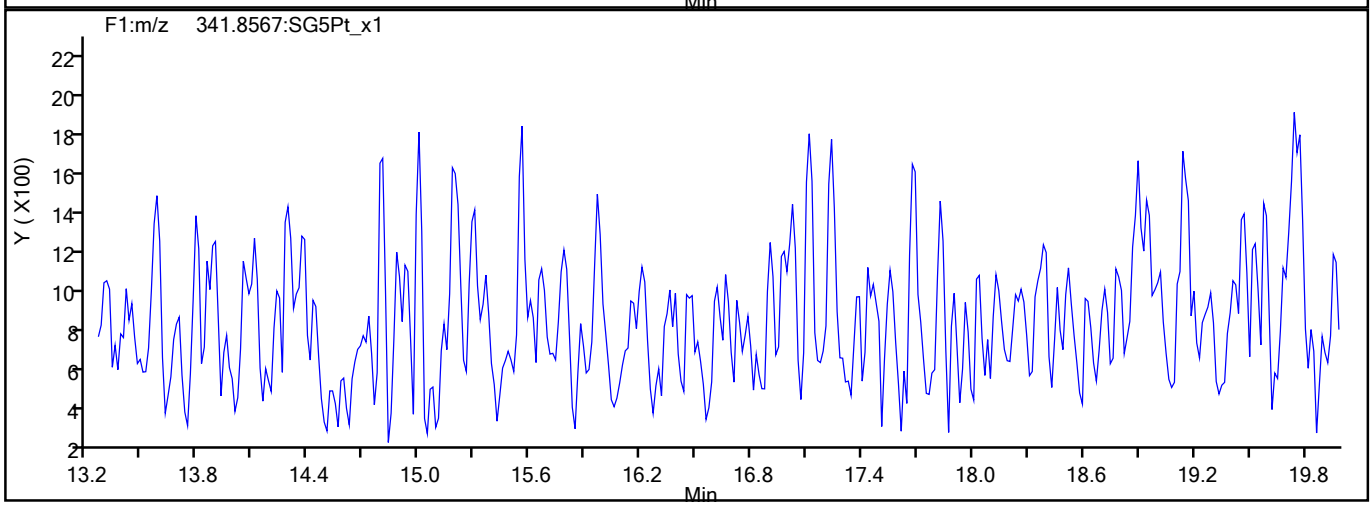

F1 PeCDFs Interference Mass

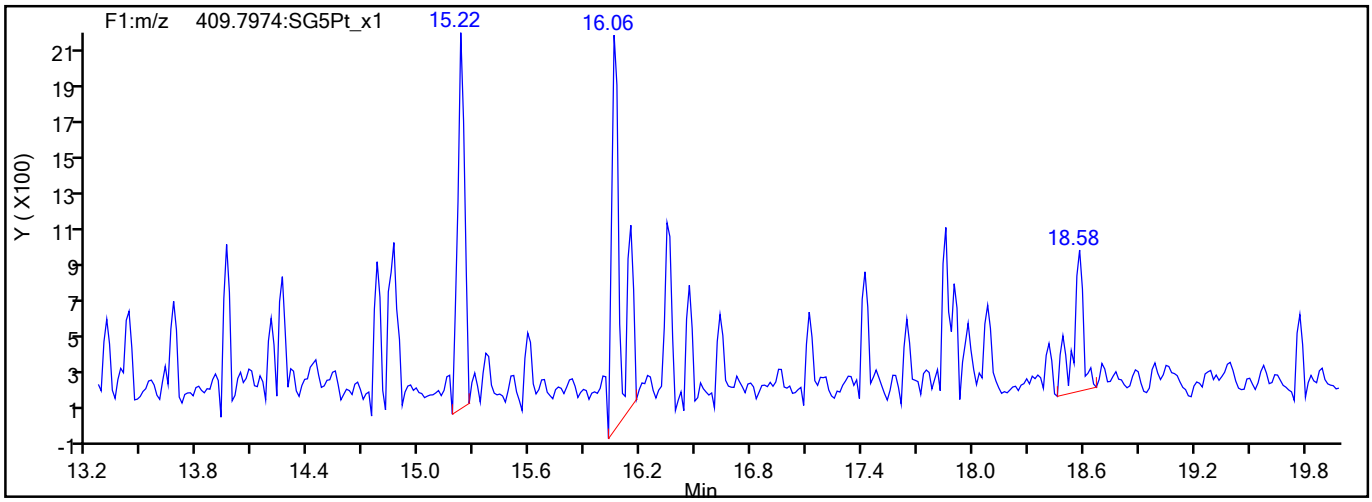

791747

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

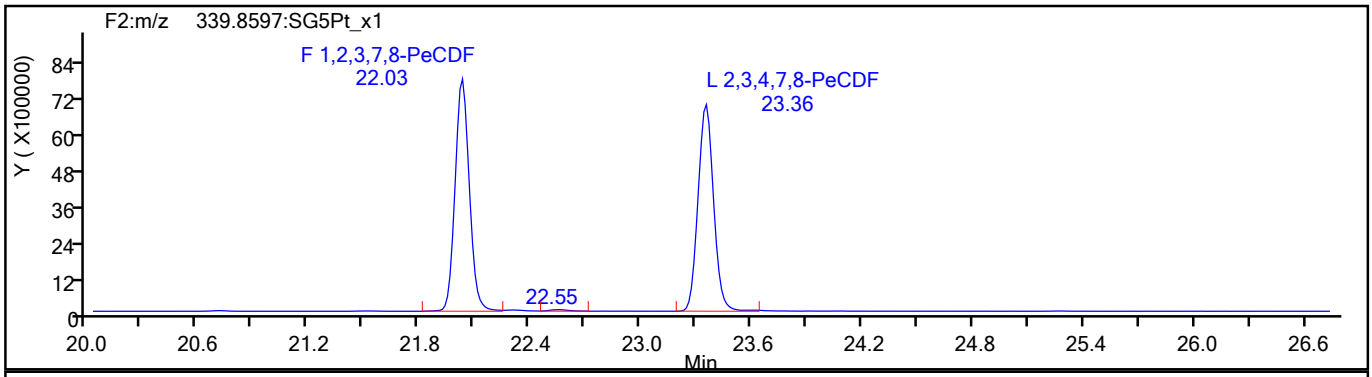

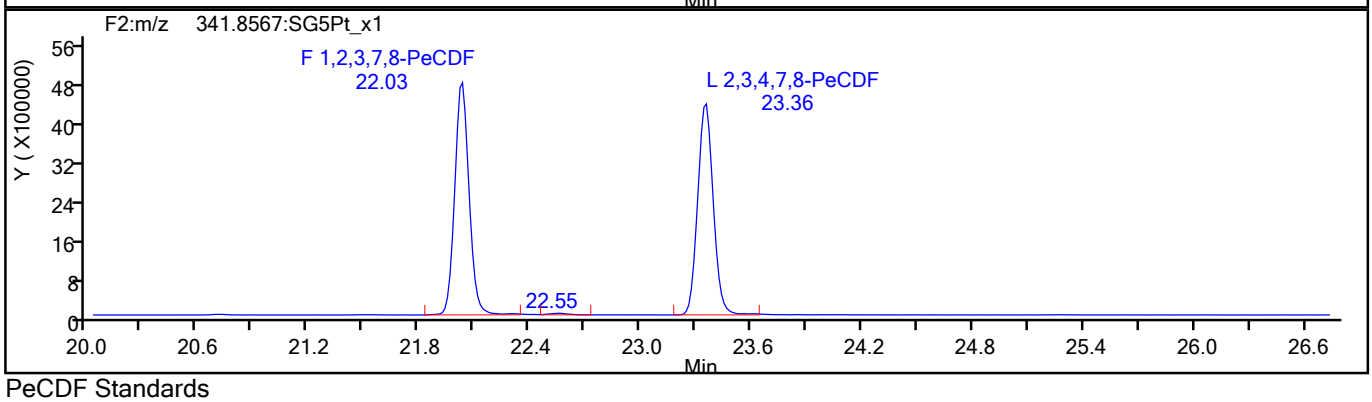

PeCDF Standards

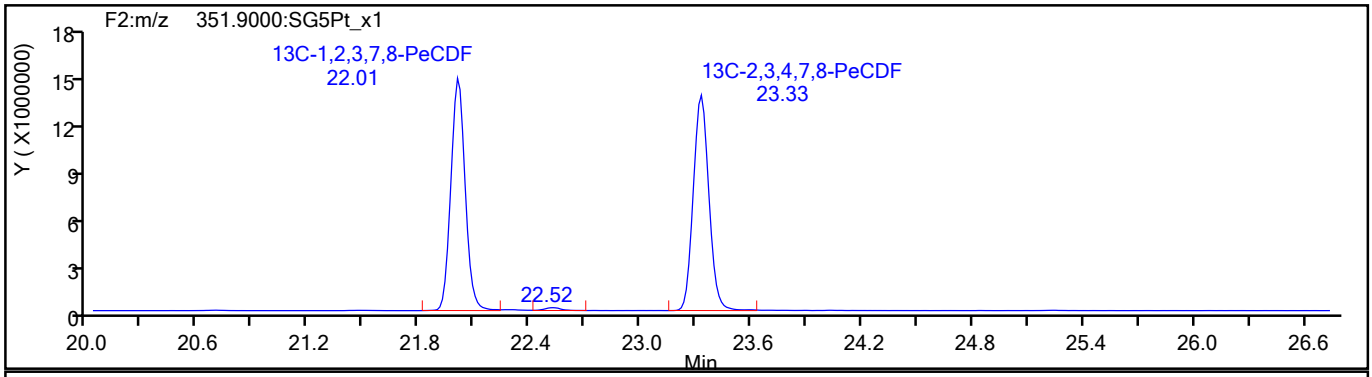

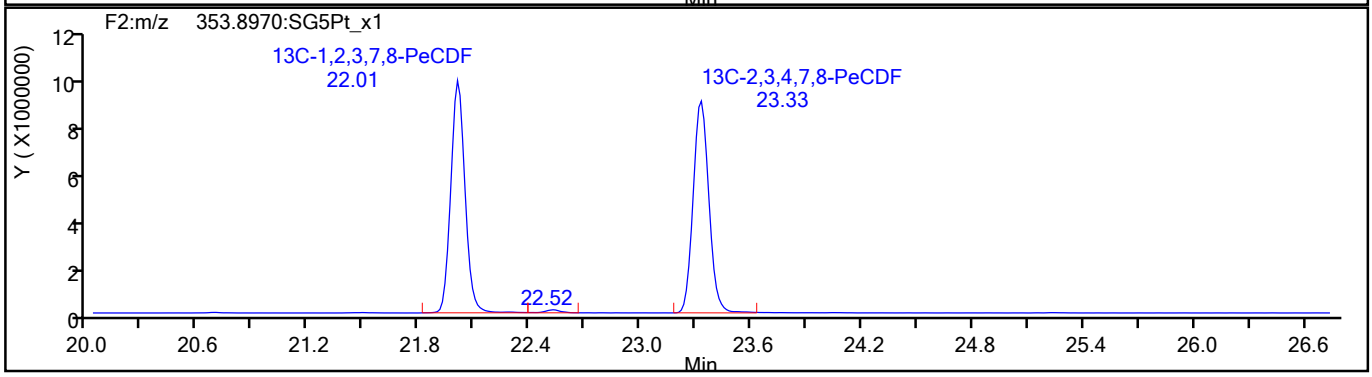

791748

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

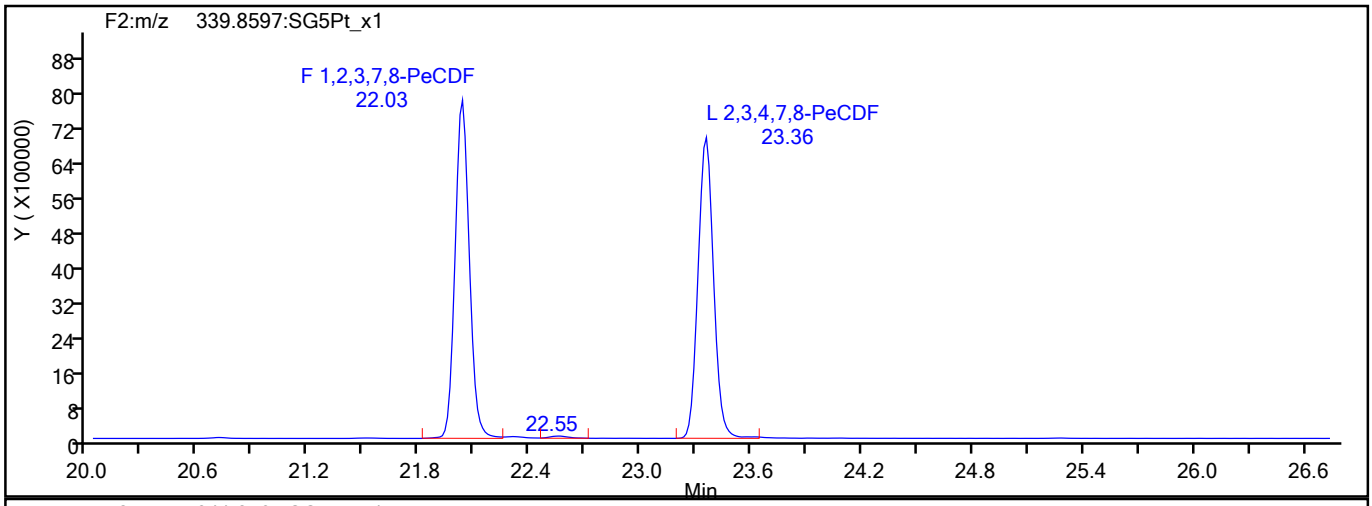

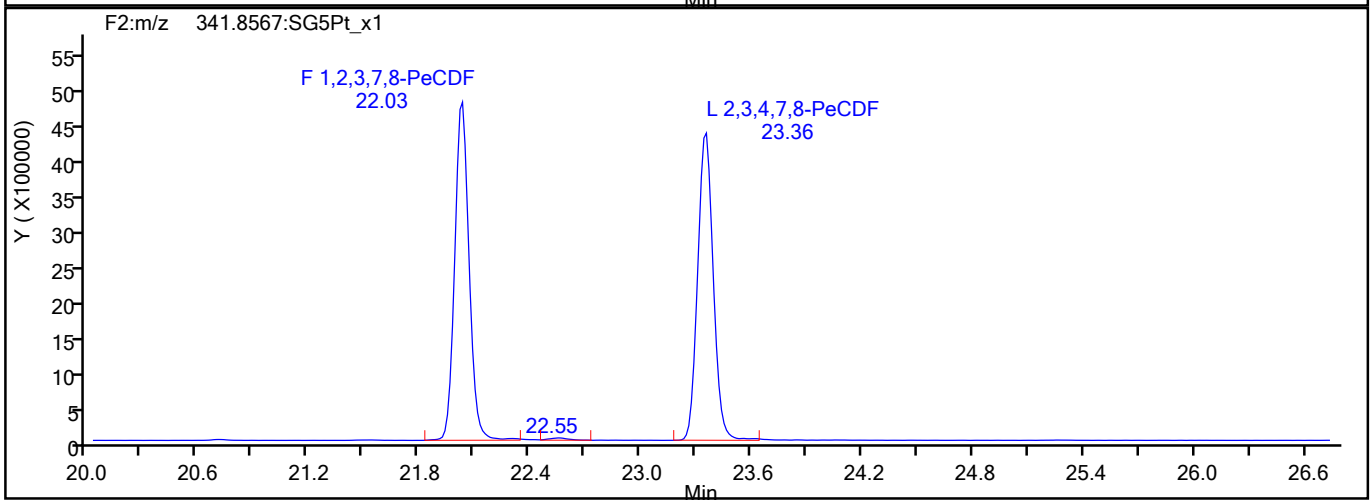

PeCDF Interference Mass

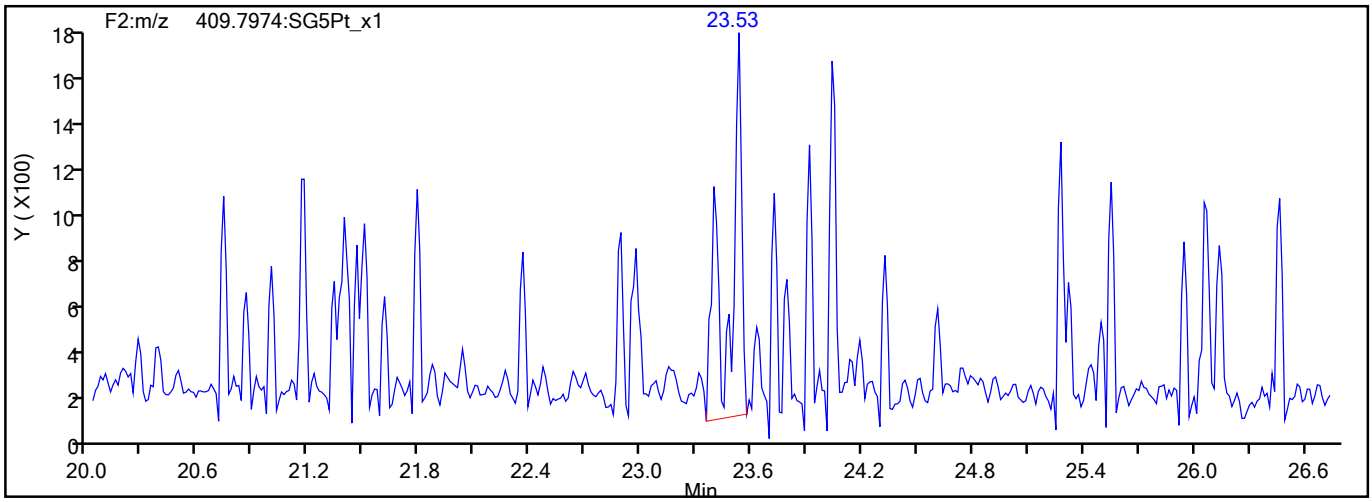

791749

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

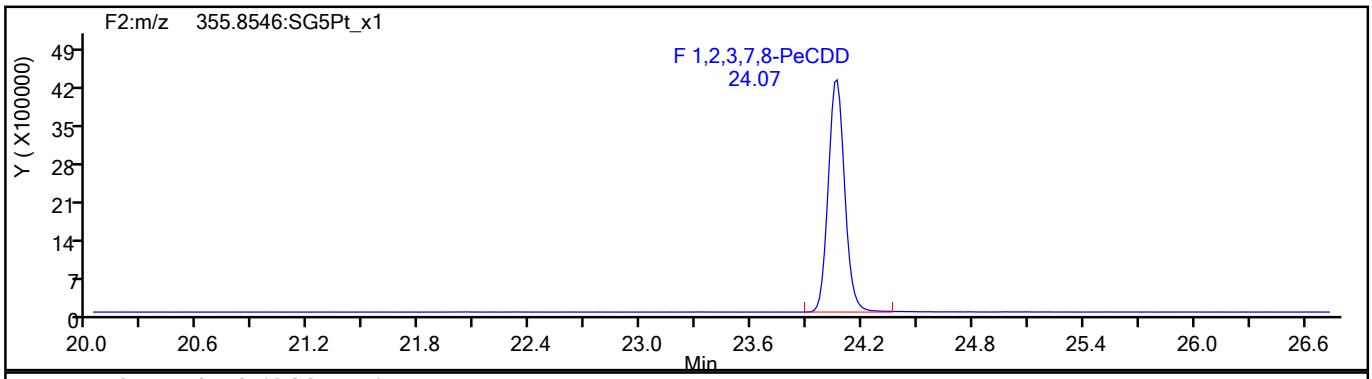

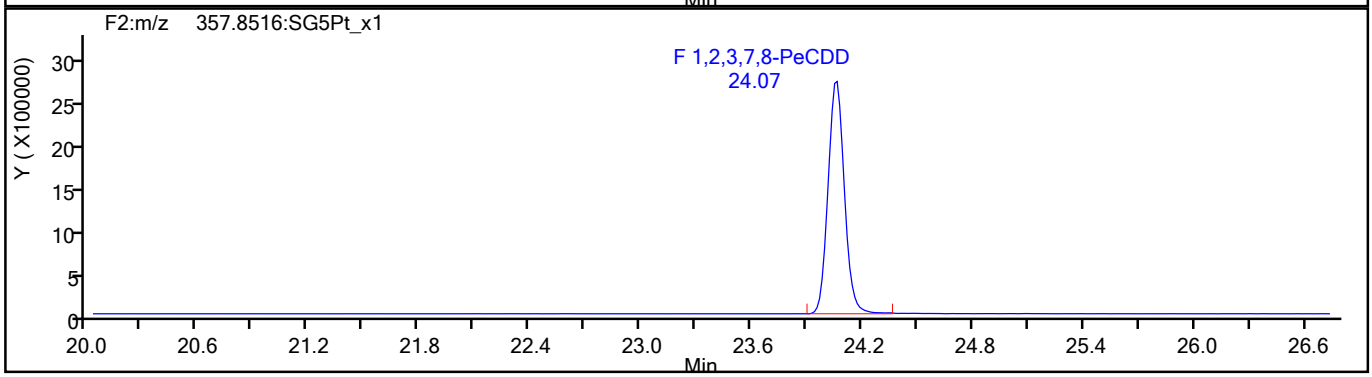

PeCDD Standards

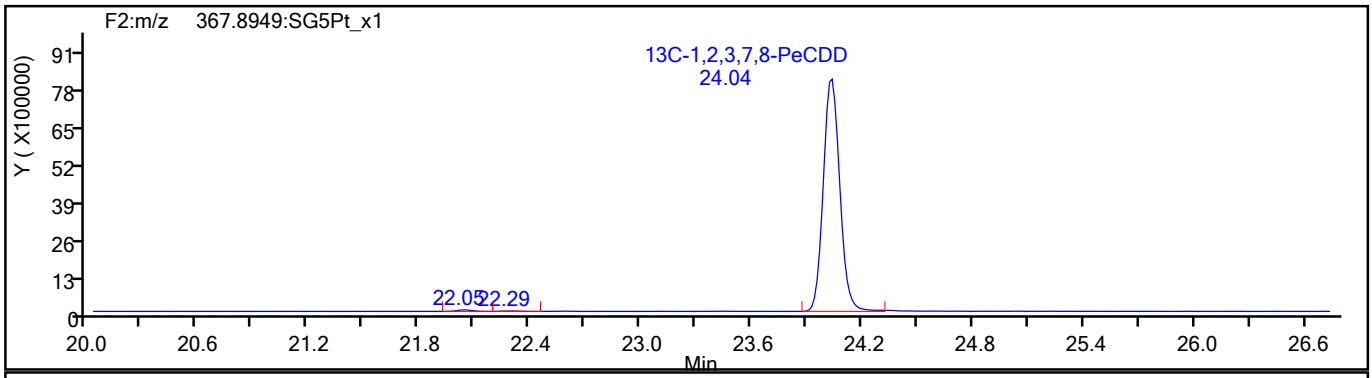

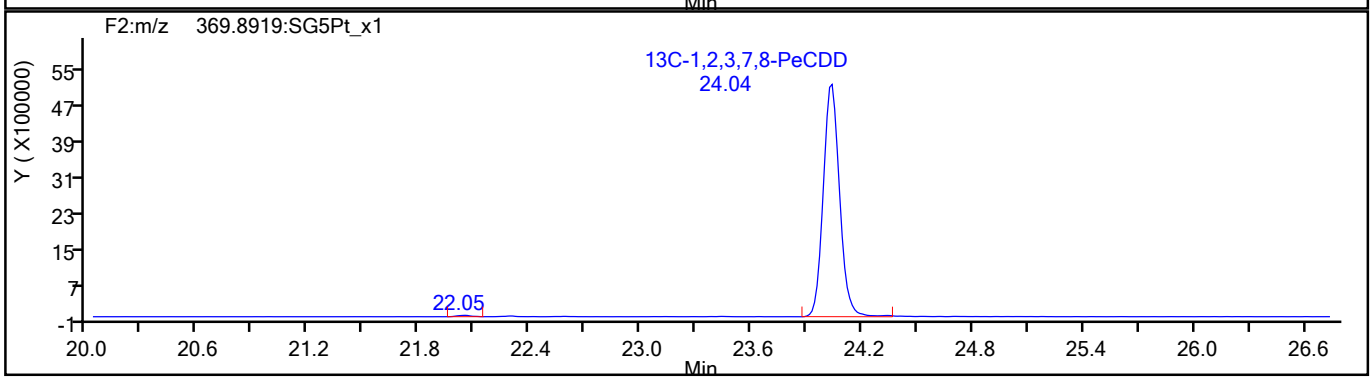

791750

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

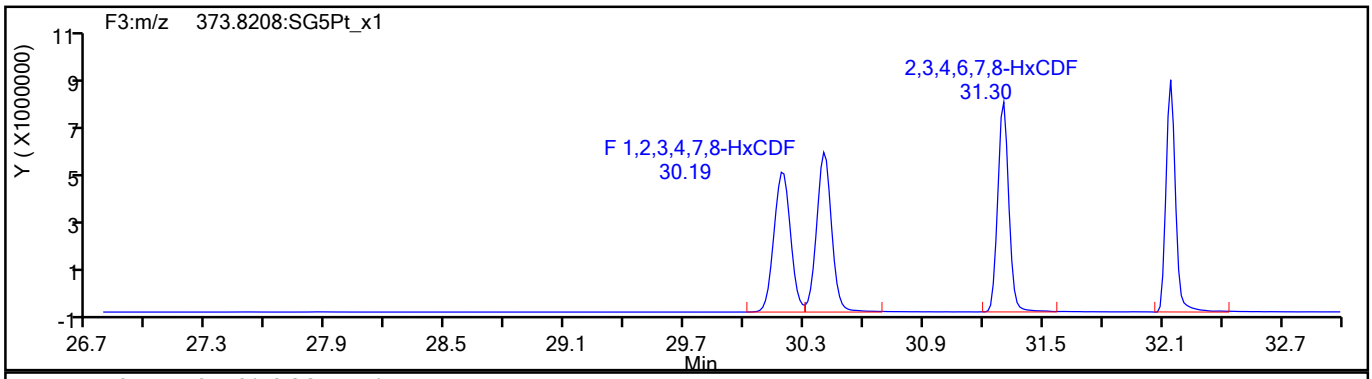

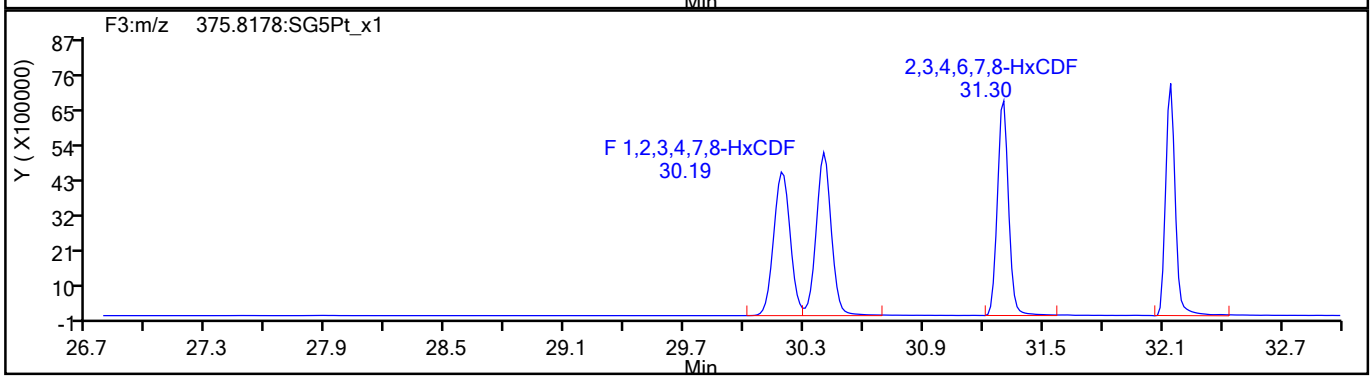

HxCDF Standards

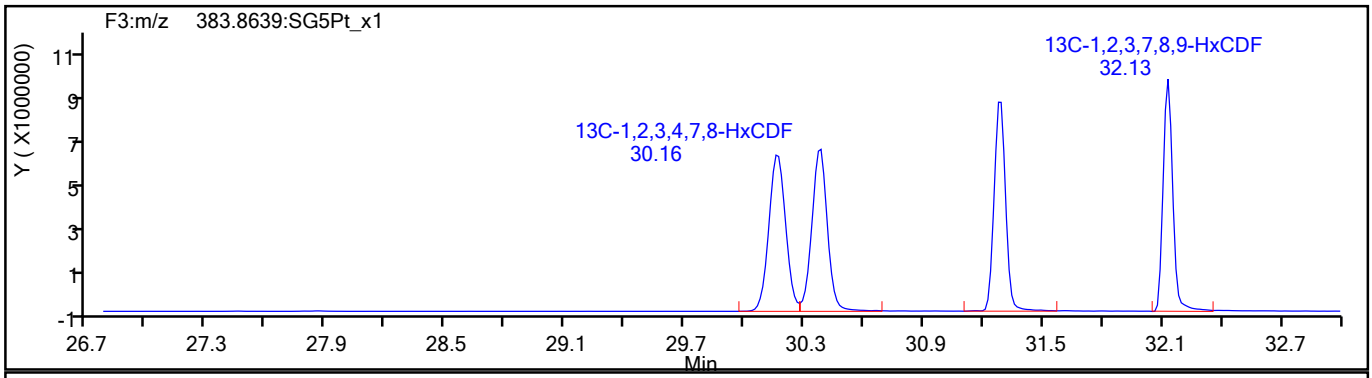

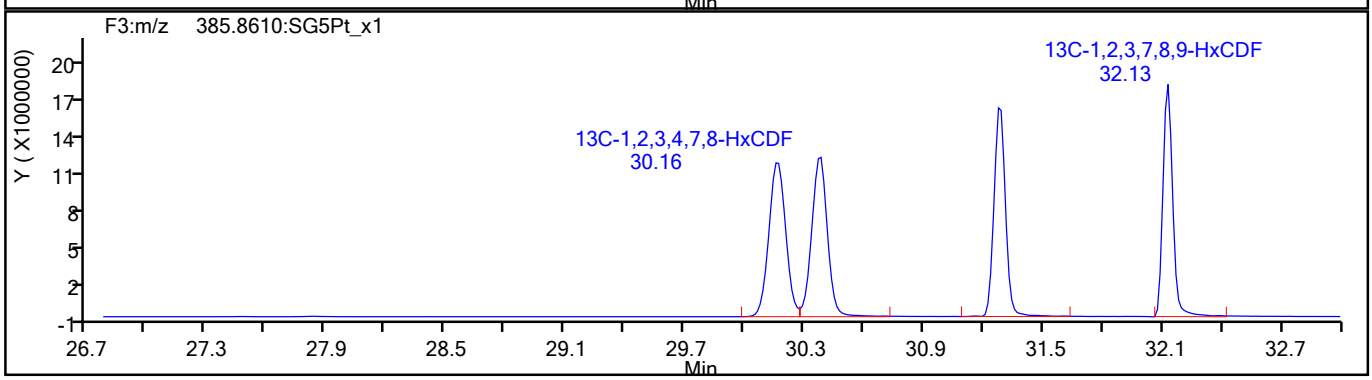

791751

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

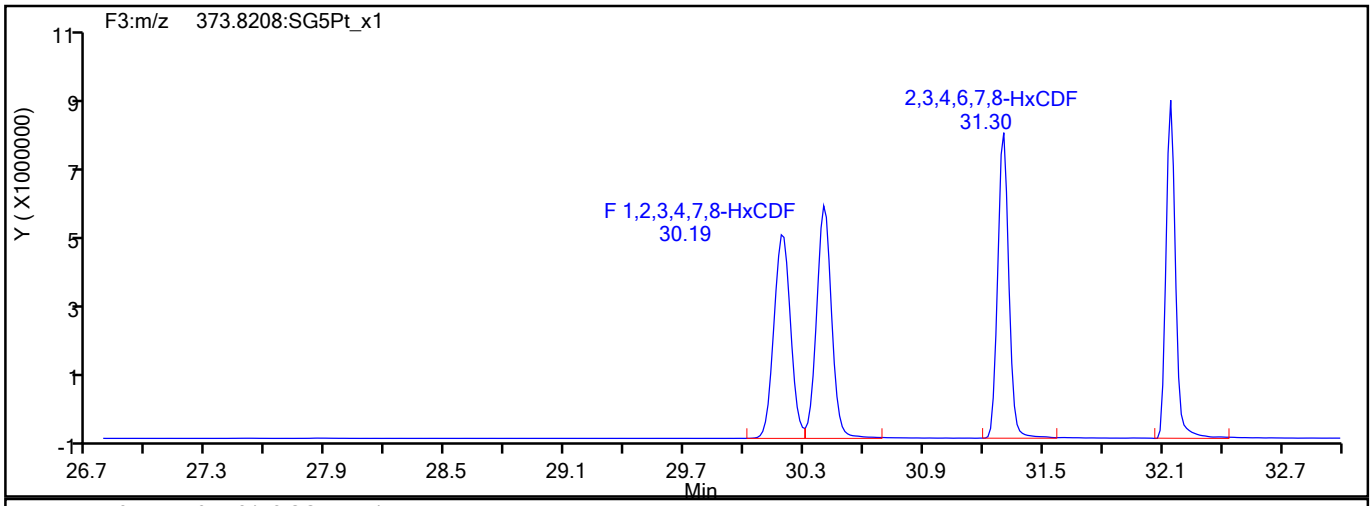

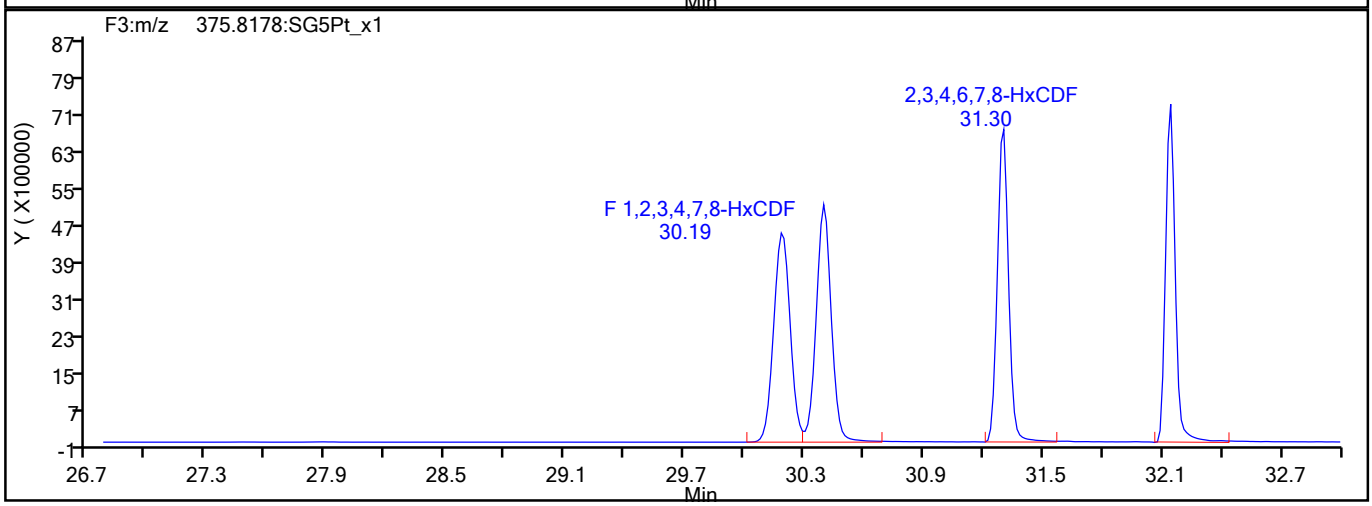

HxCDF Interference Mass

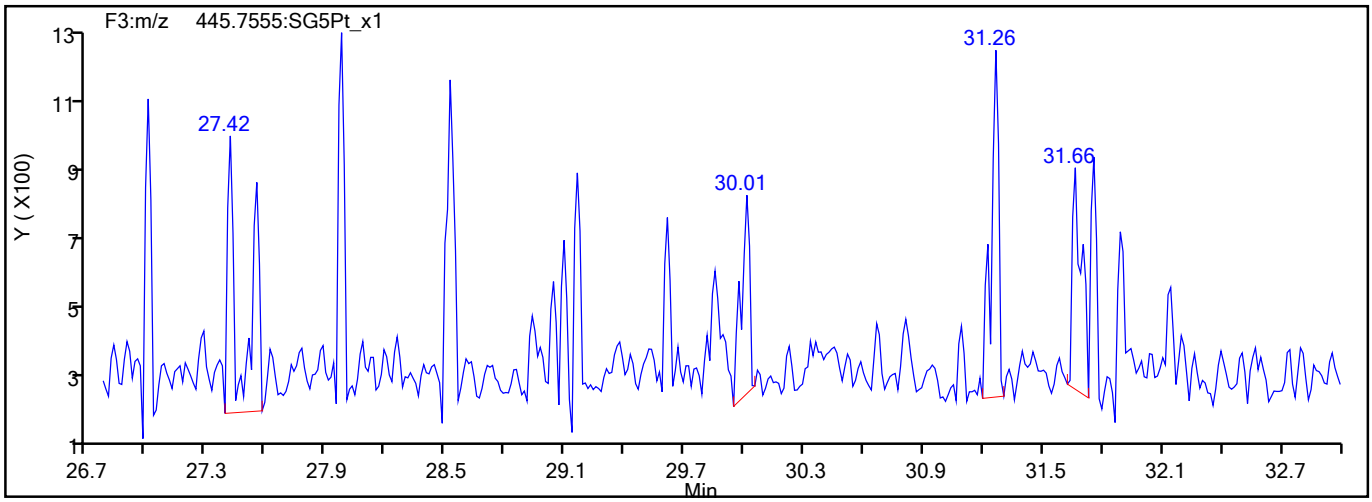

791752

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

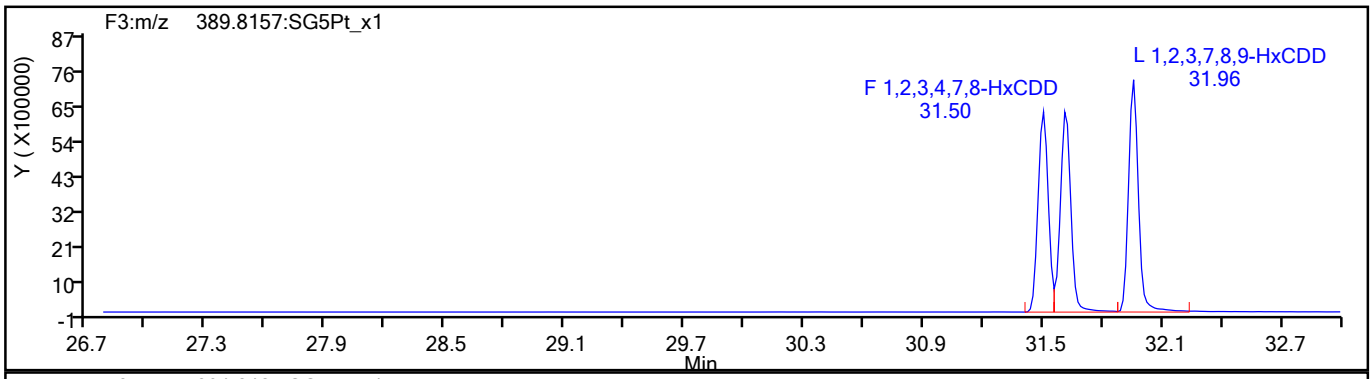

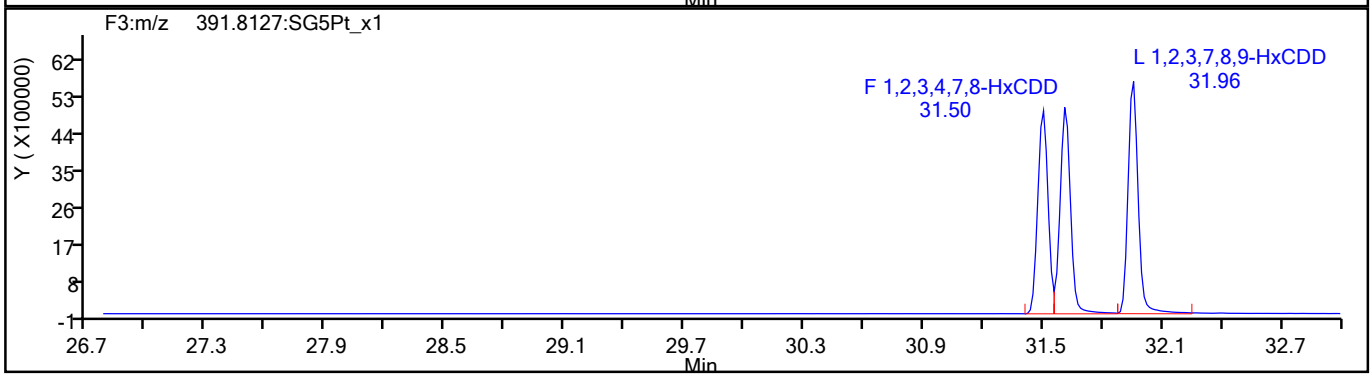

HxCDD Standards

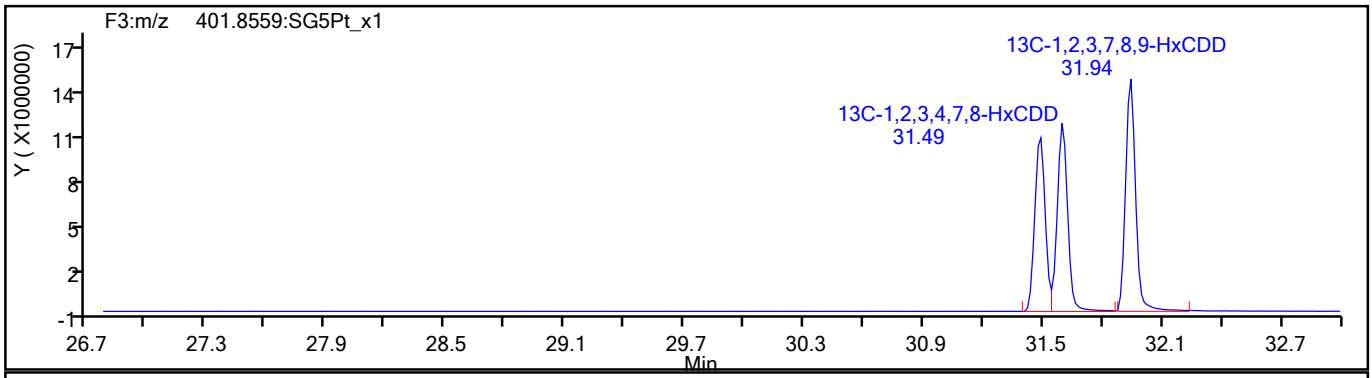

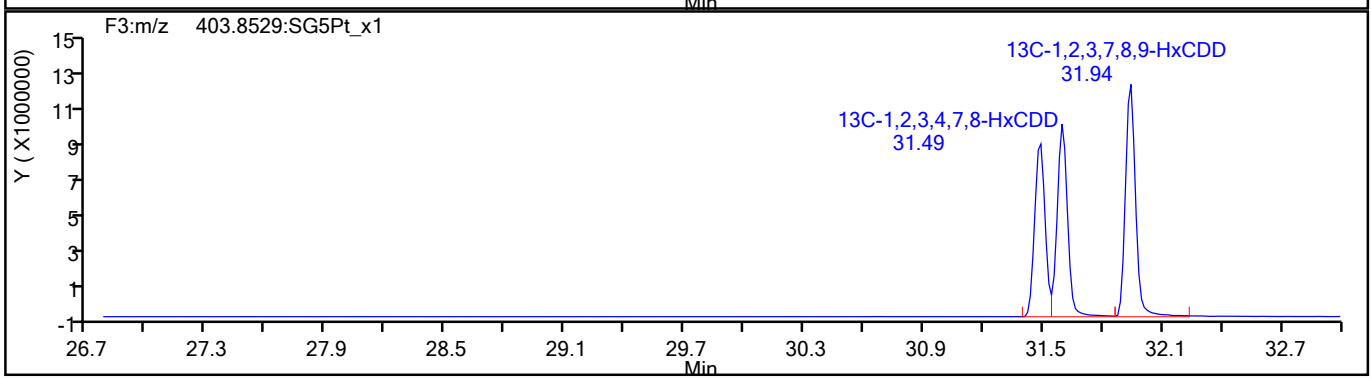

791753

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

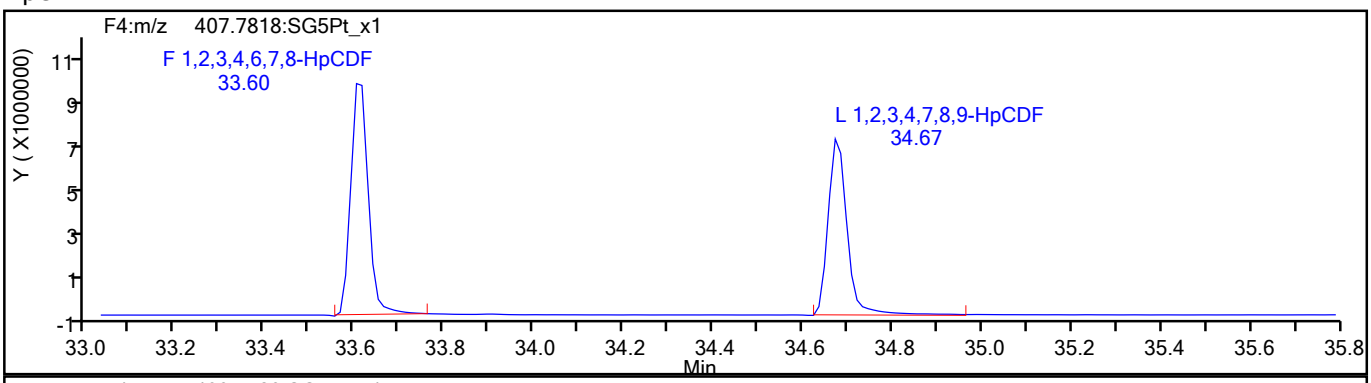

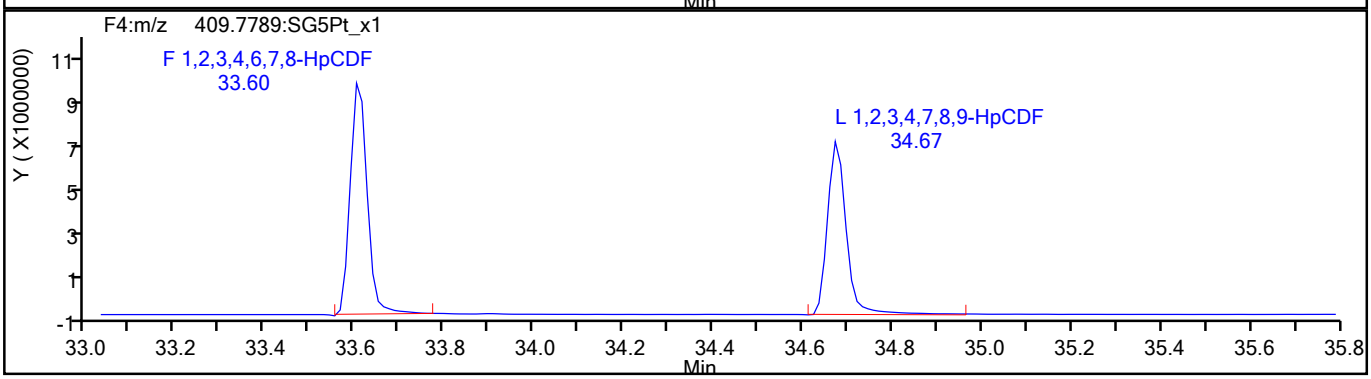

HpCDF Standards

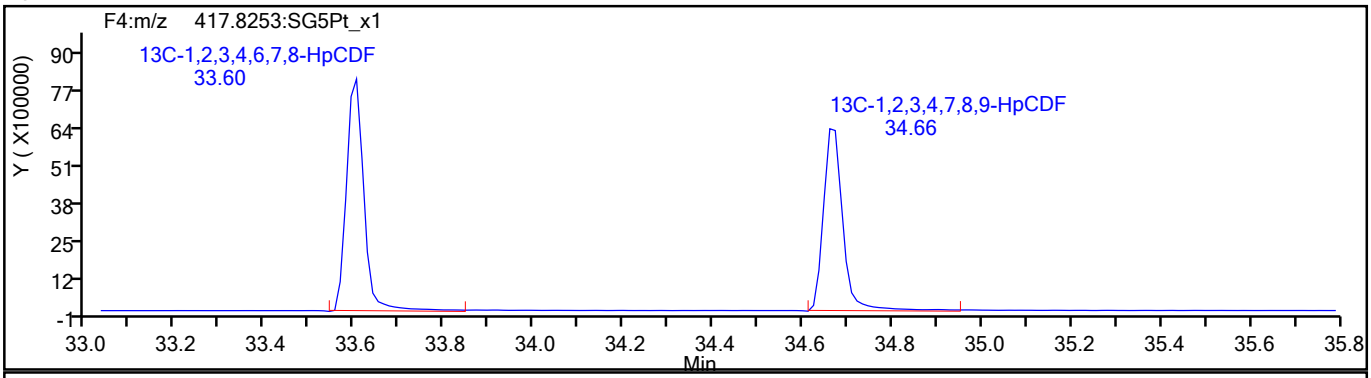

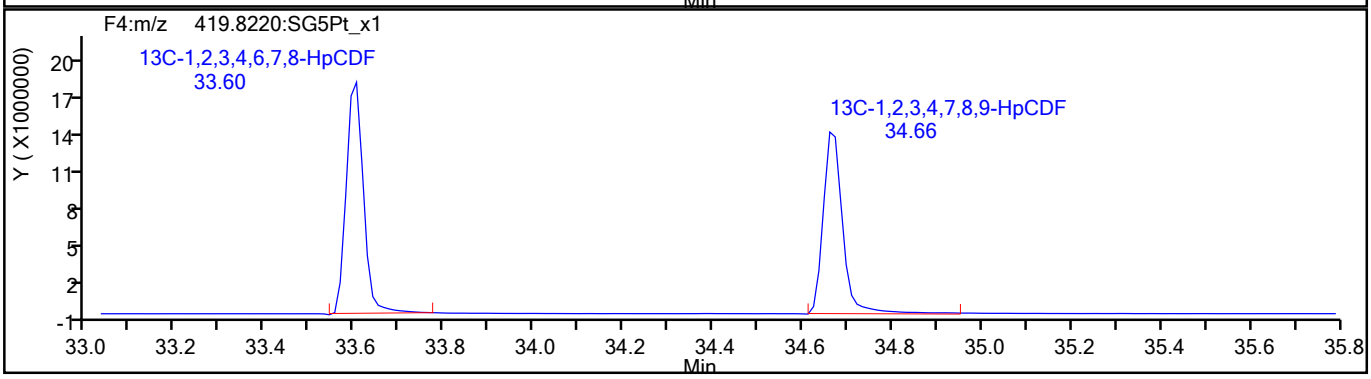

791754

Report Date: 27-Aug-2021 11:27:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

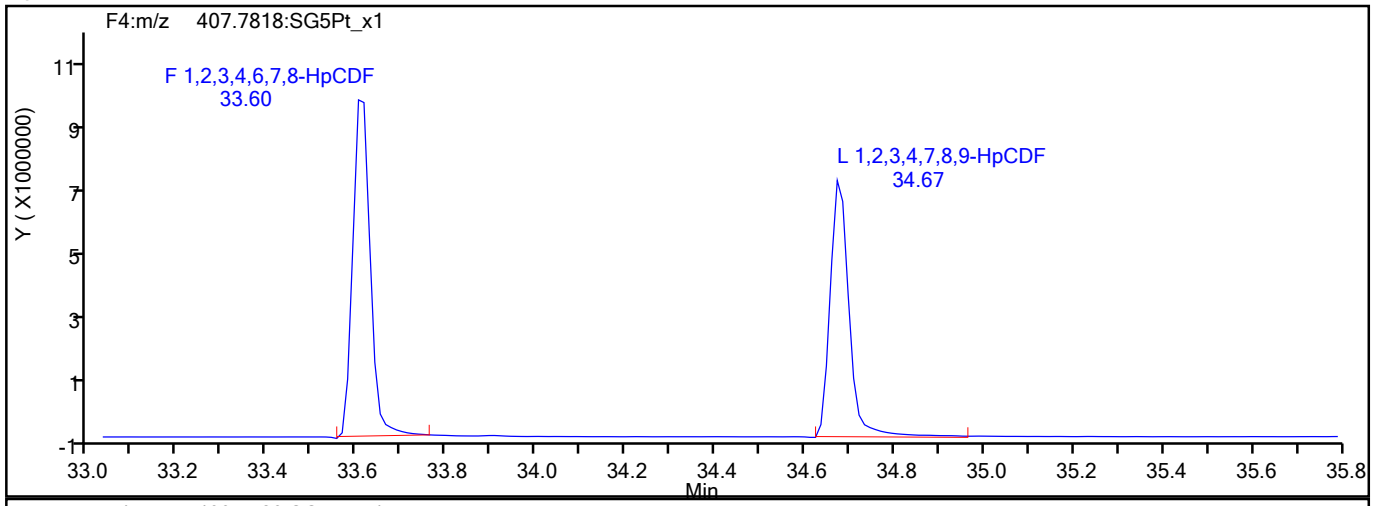

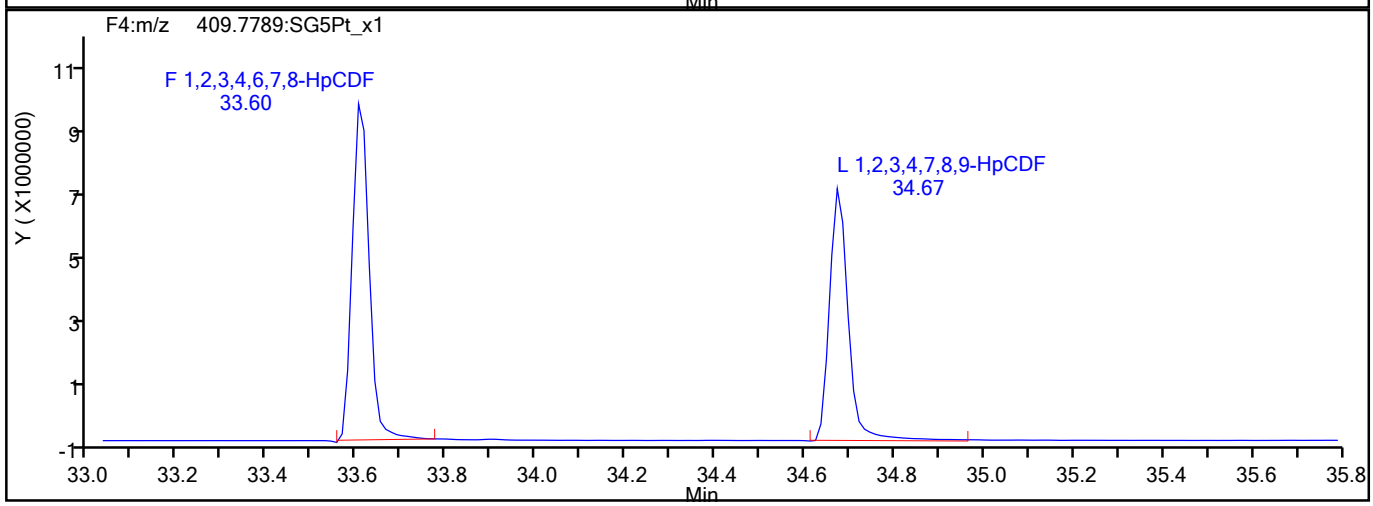

HpCDF Interference Mass

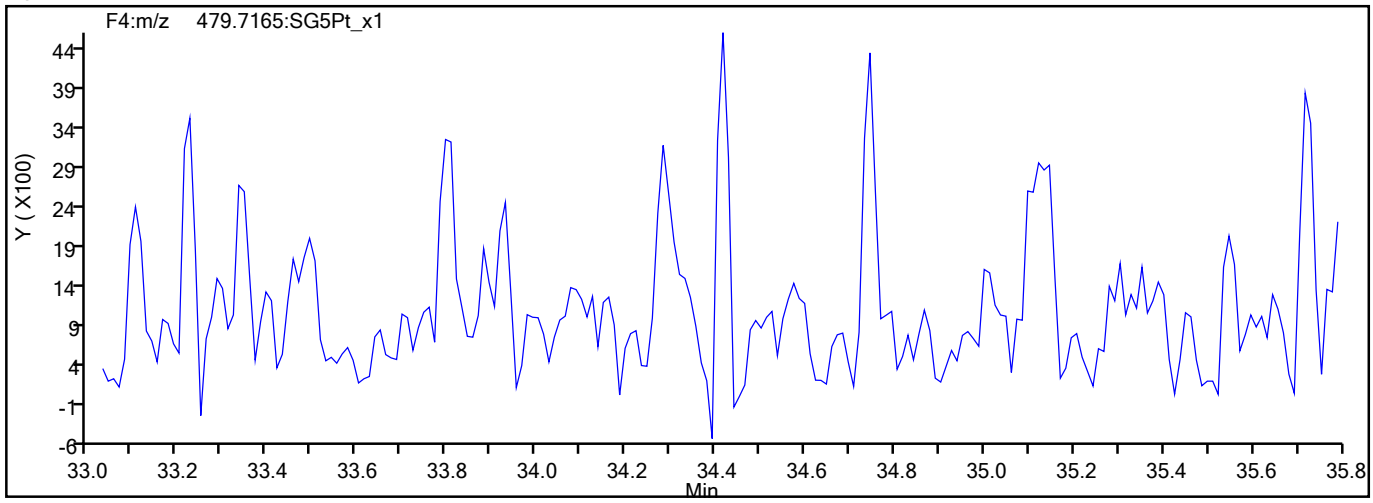

791755

Report Date: 27-Aug-2021 11:27:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

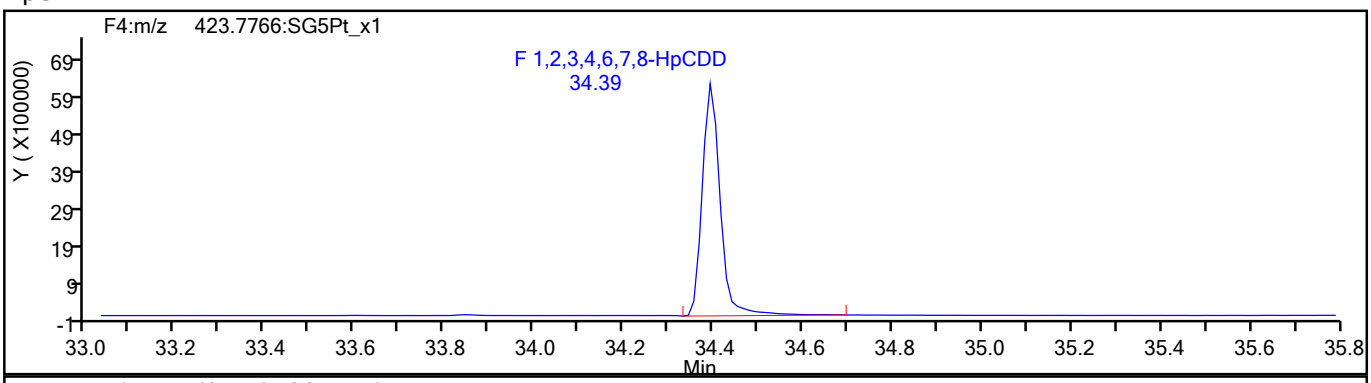

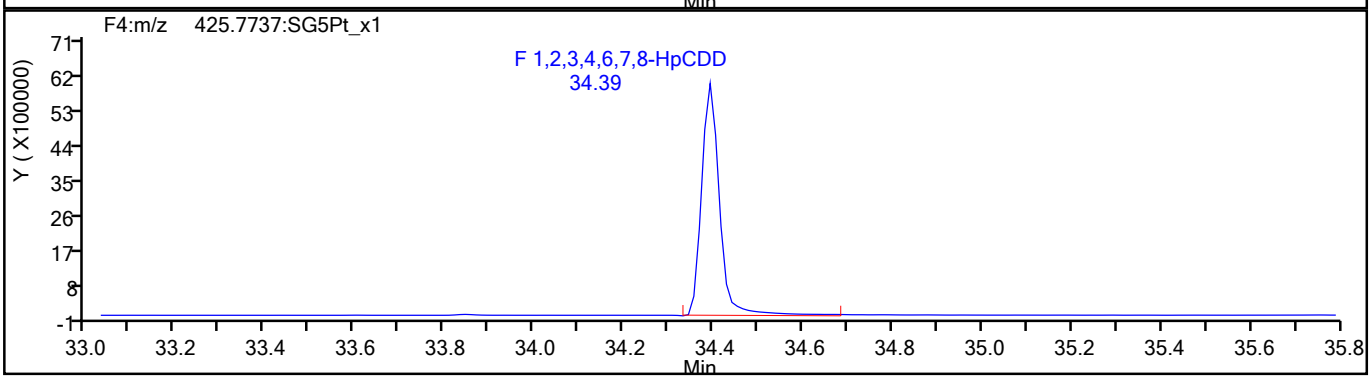

HpCDD Standards

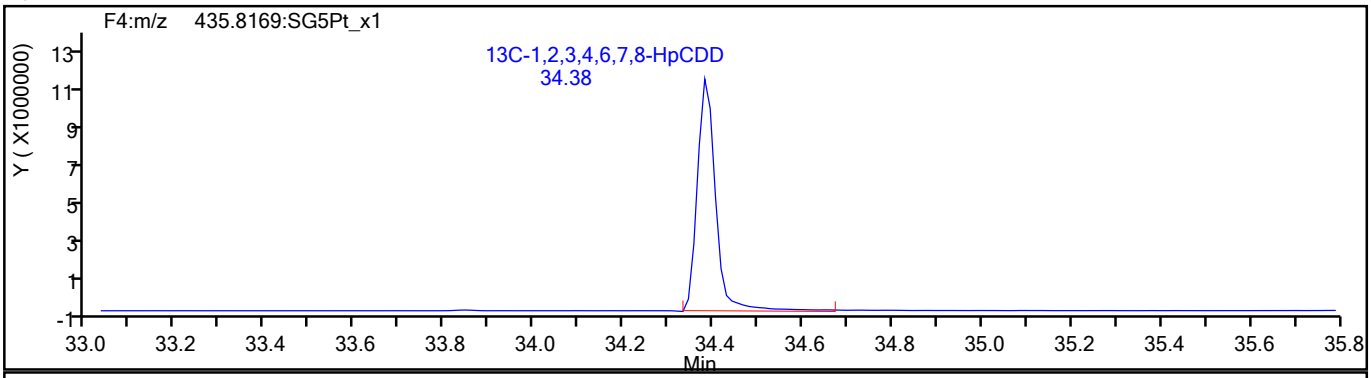

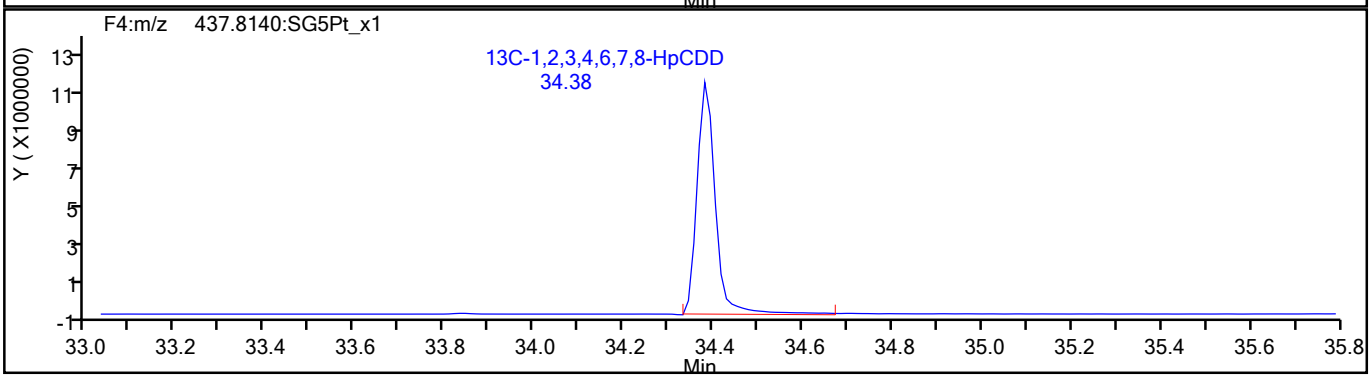

791756

Report Date: 27-Aug-2021 11:27:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

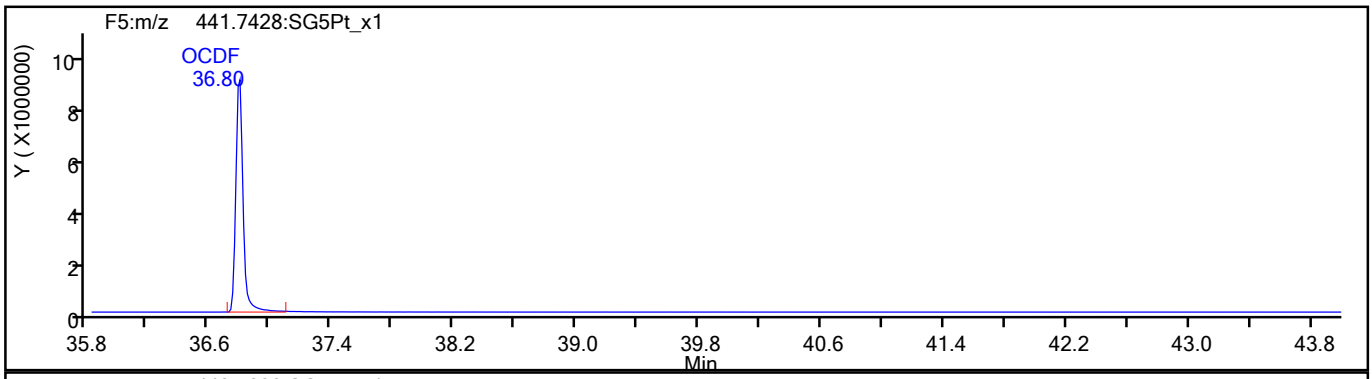

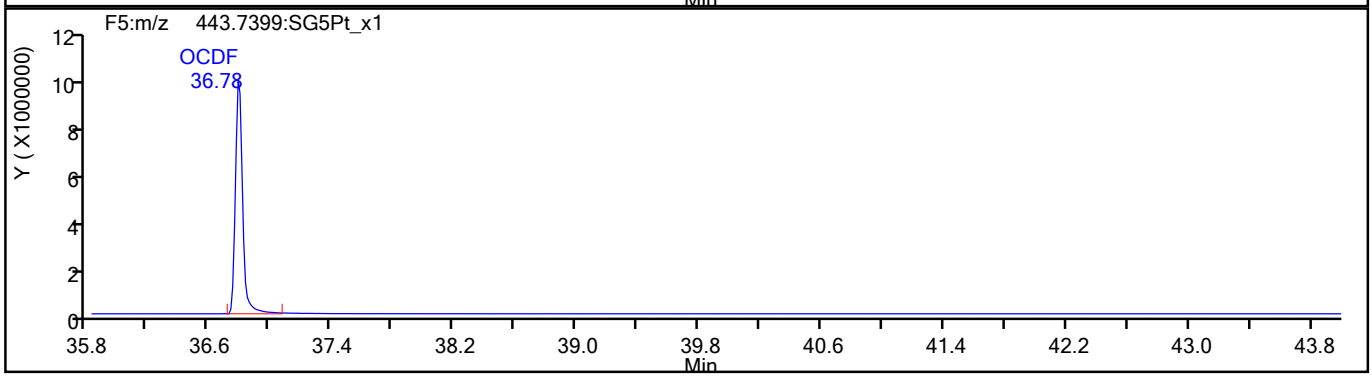

OCDF Standards

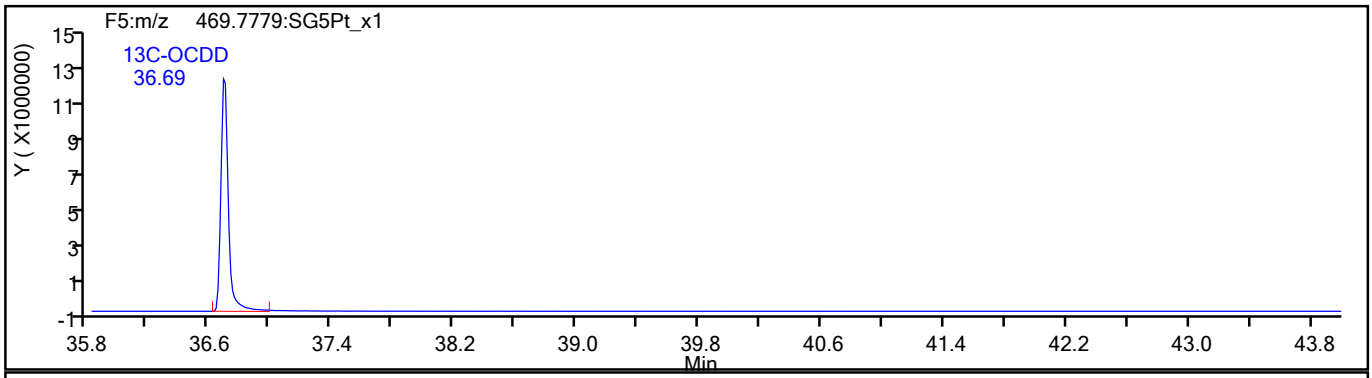

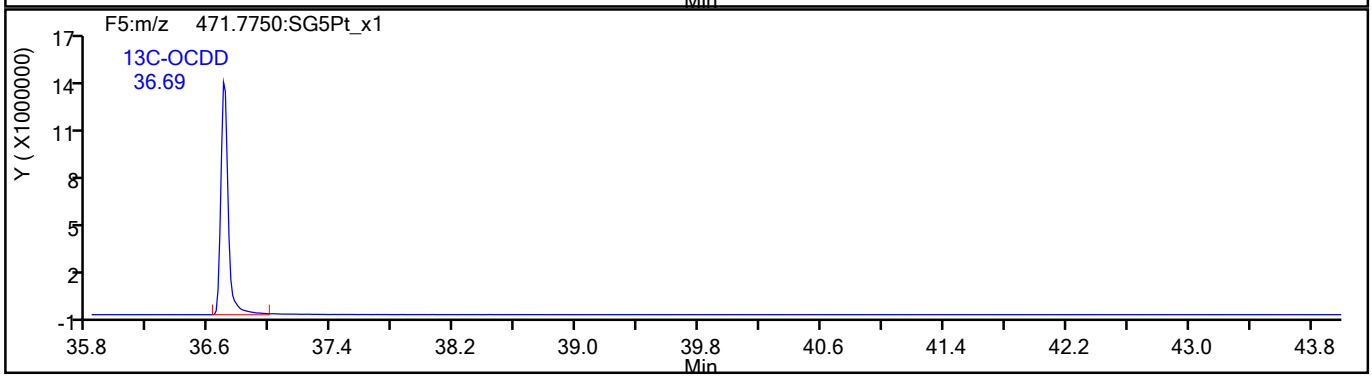

791757

Report Date: 27-Aug-2021 11:27:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

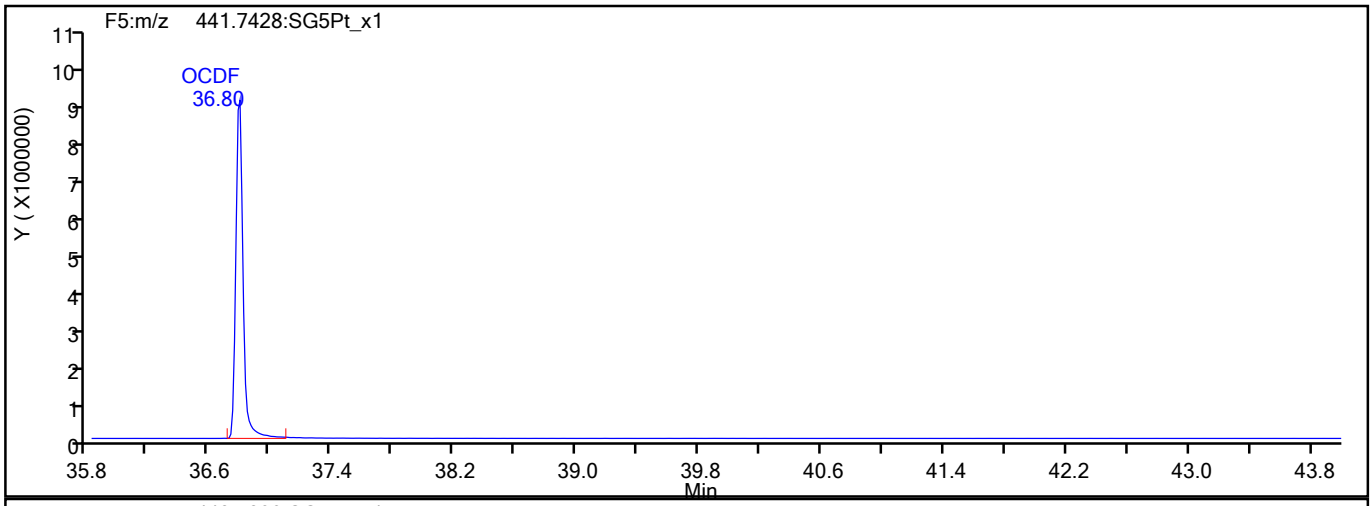

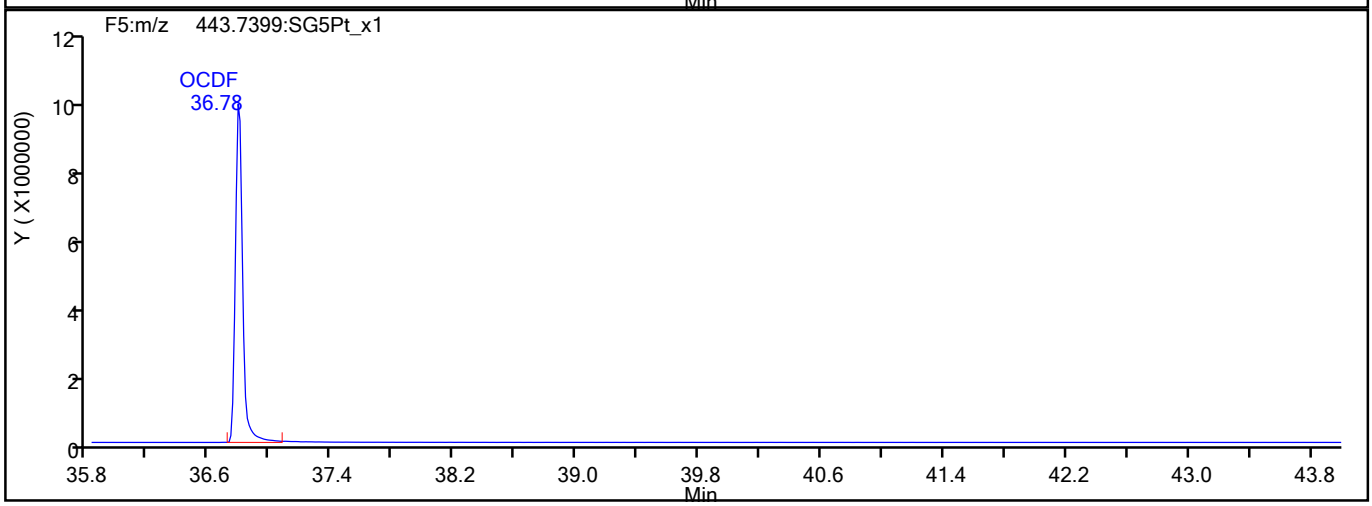

OCDF Interference Mass

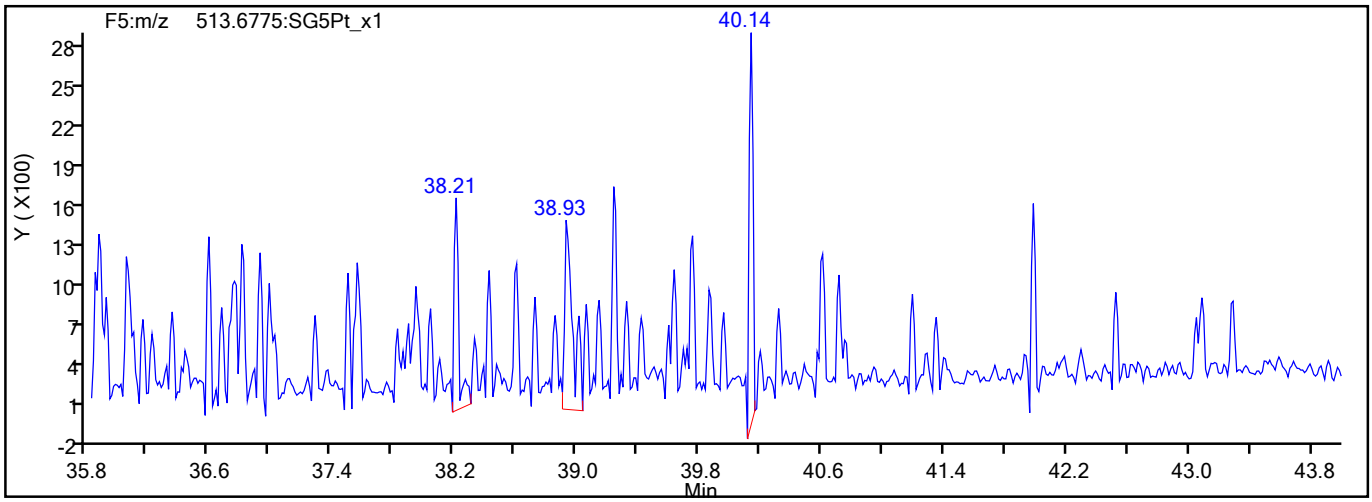

791758

Report Date: 27-Aug-2021 11:27:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

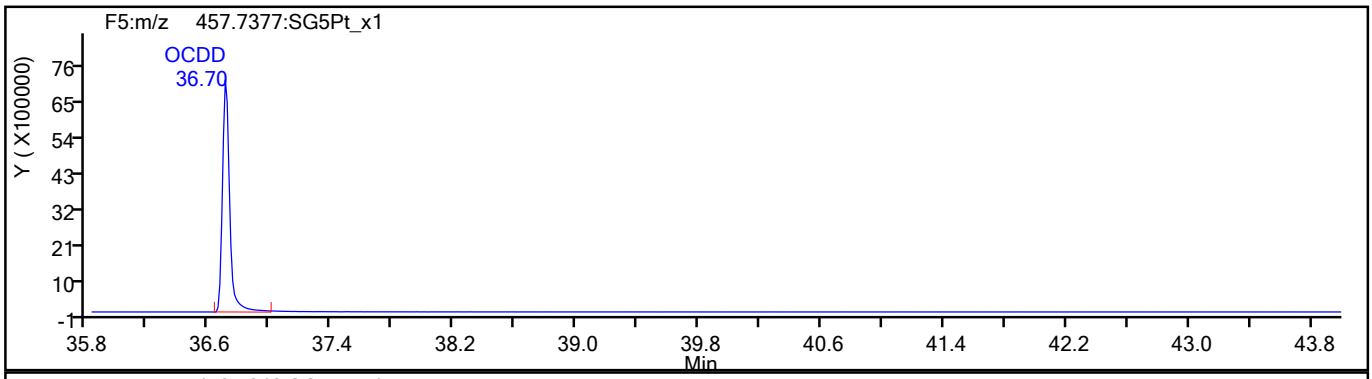

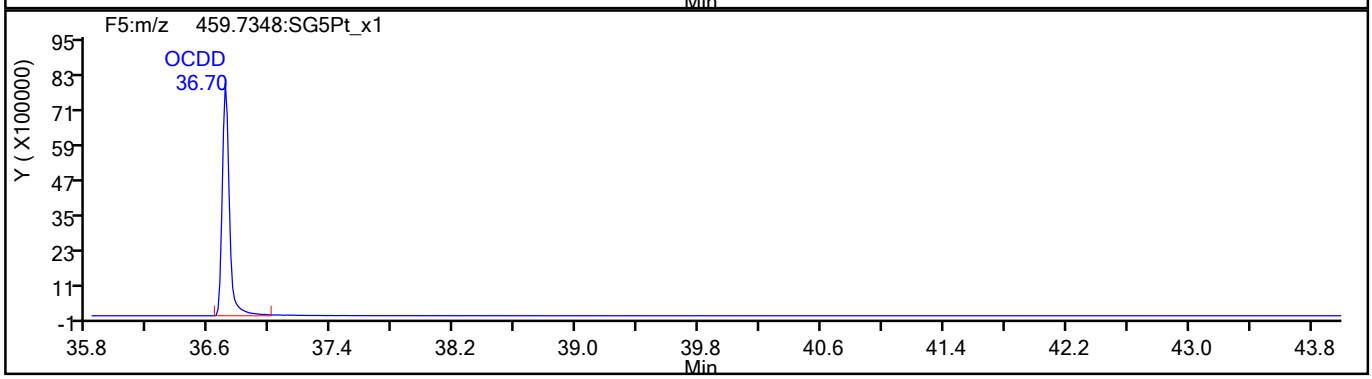

OCDD Standards

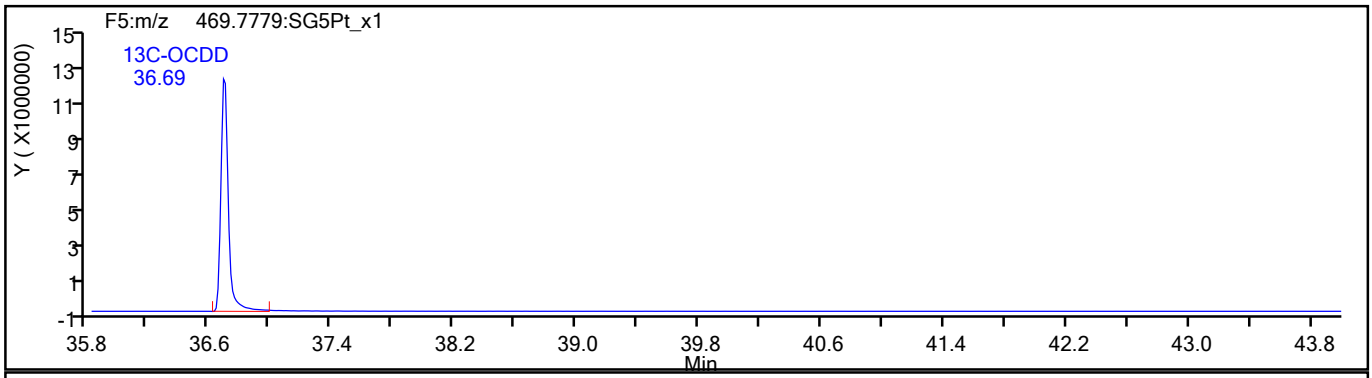

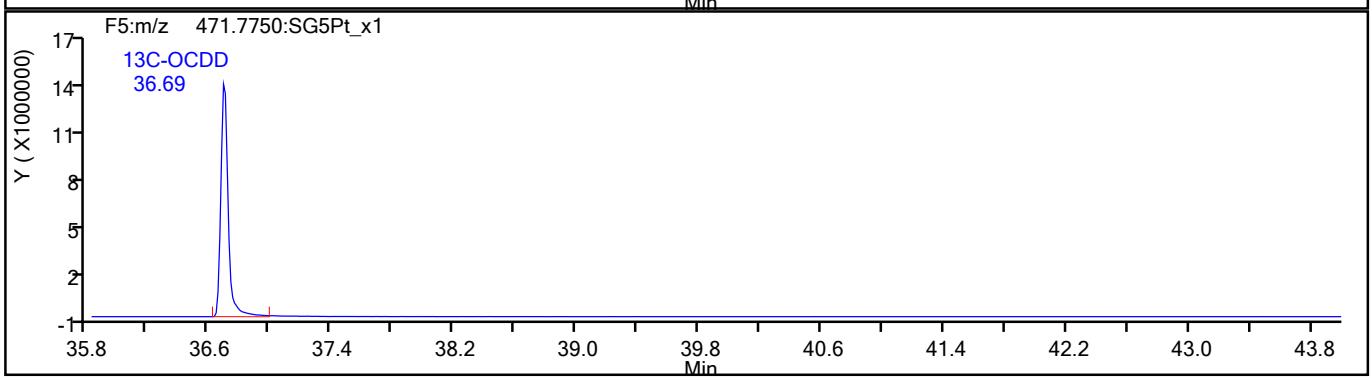

791759

Report Date: 27-Aug-2021 11:27:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

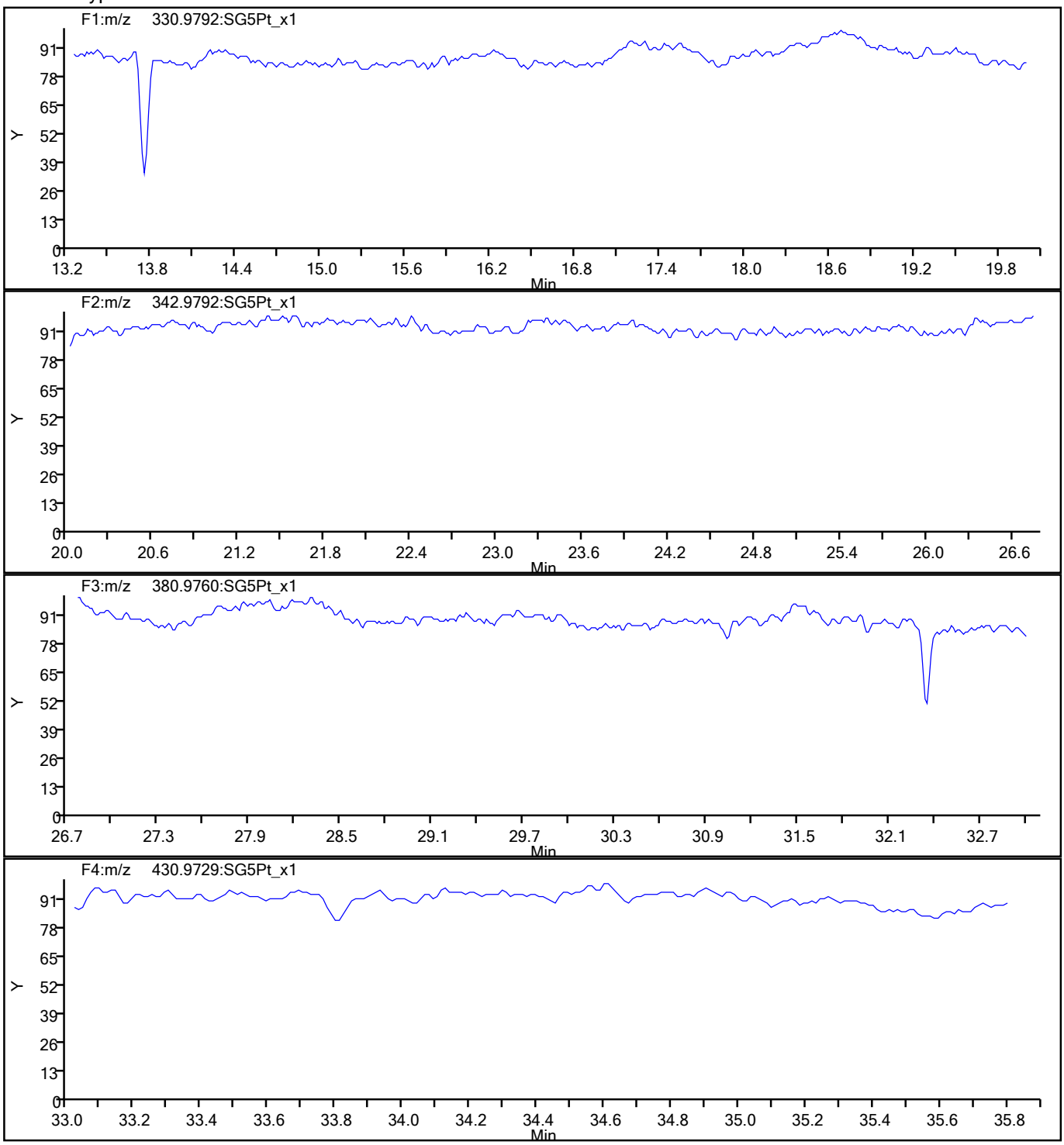

791760

Report Date: 27-Aug-2021 11:27:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_44.d		
Injection Date:	26-Aug-2021 19:36:02	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

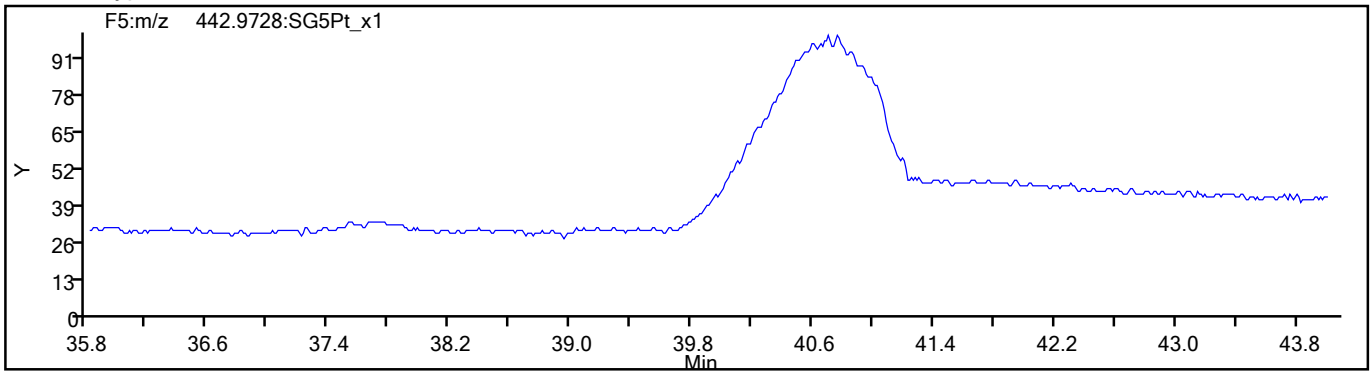

791761

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

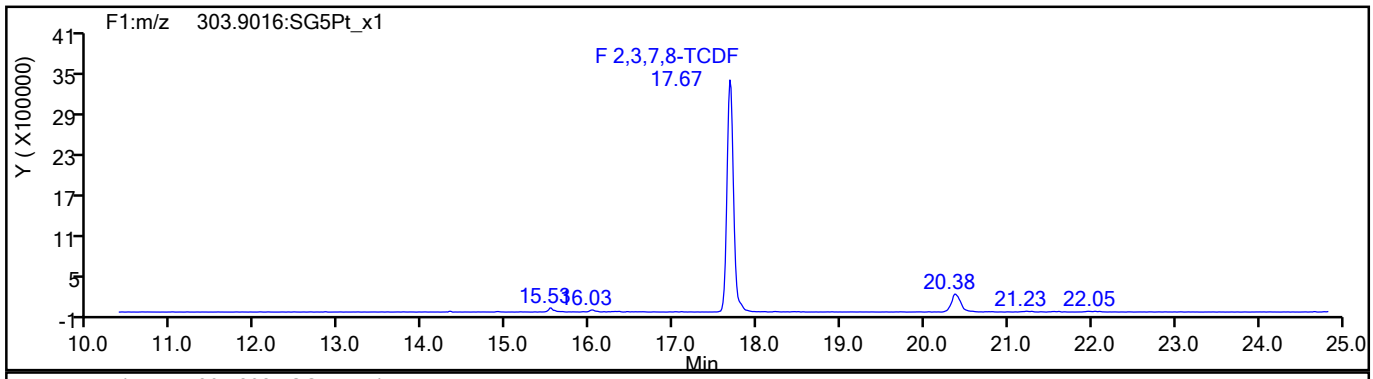

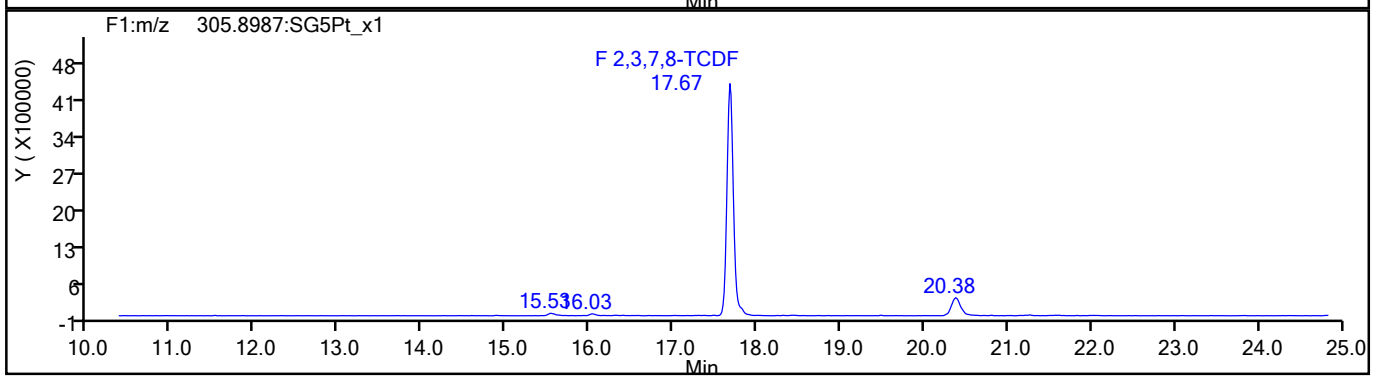

TCDF Standards

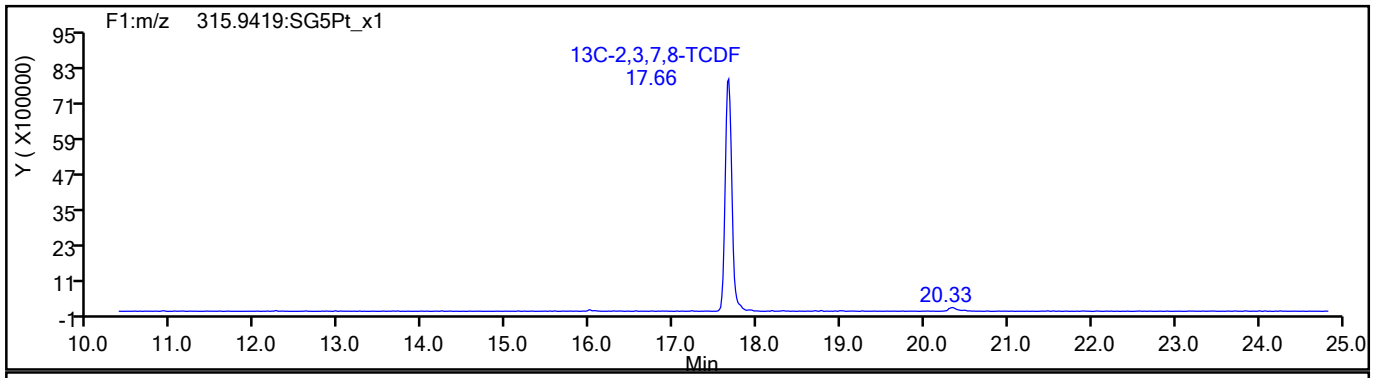

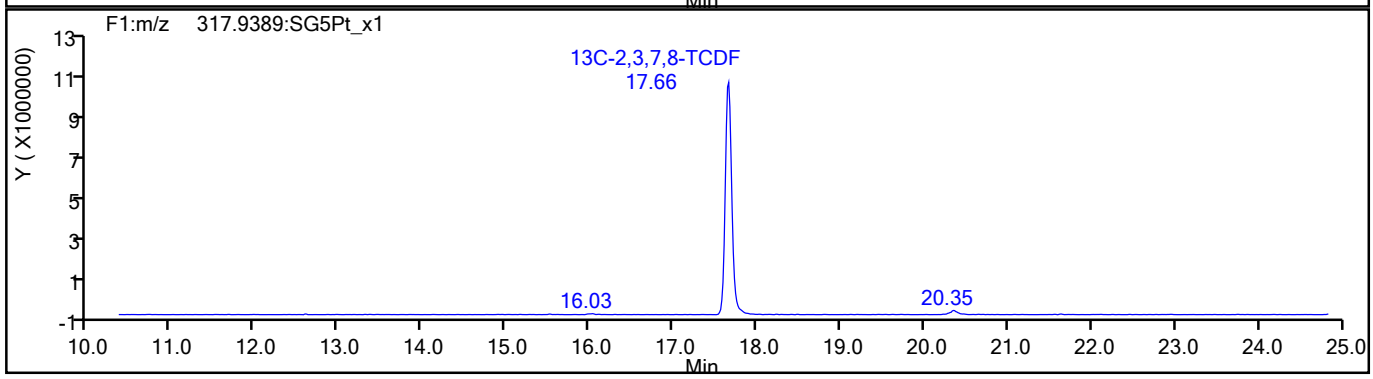

791765

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

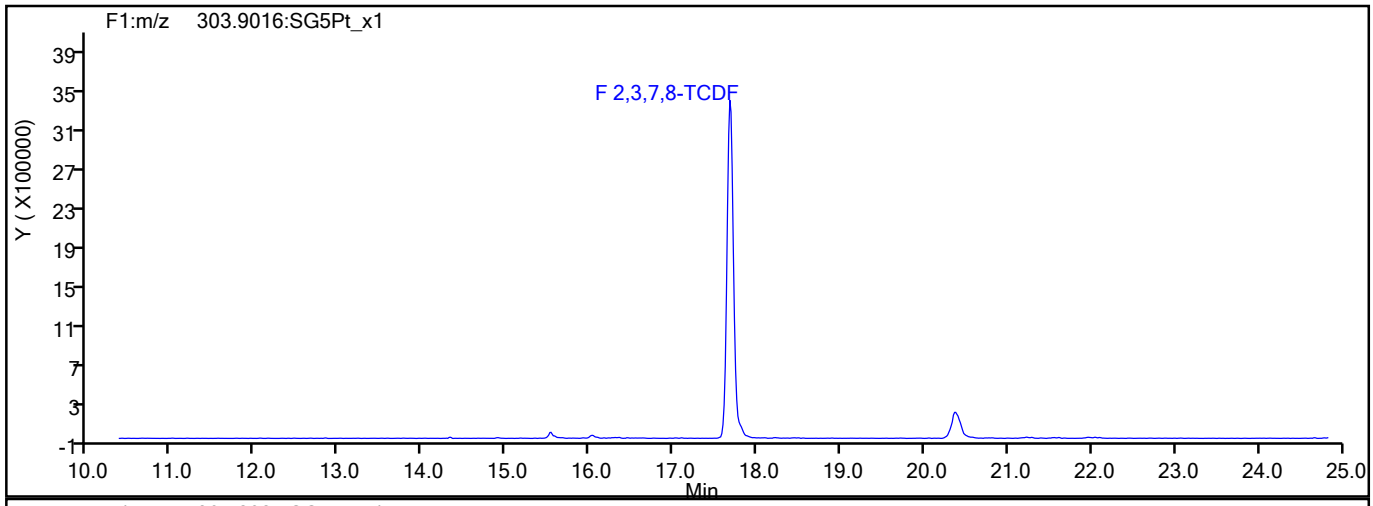

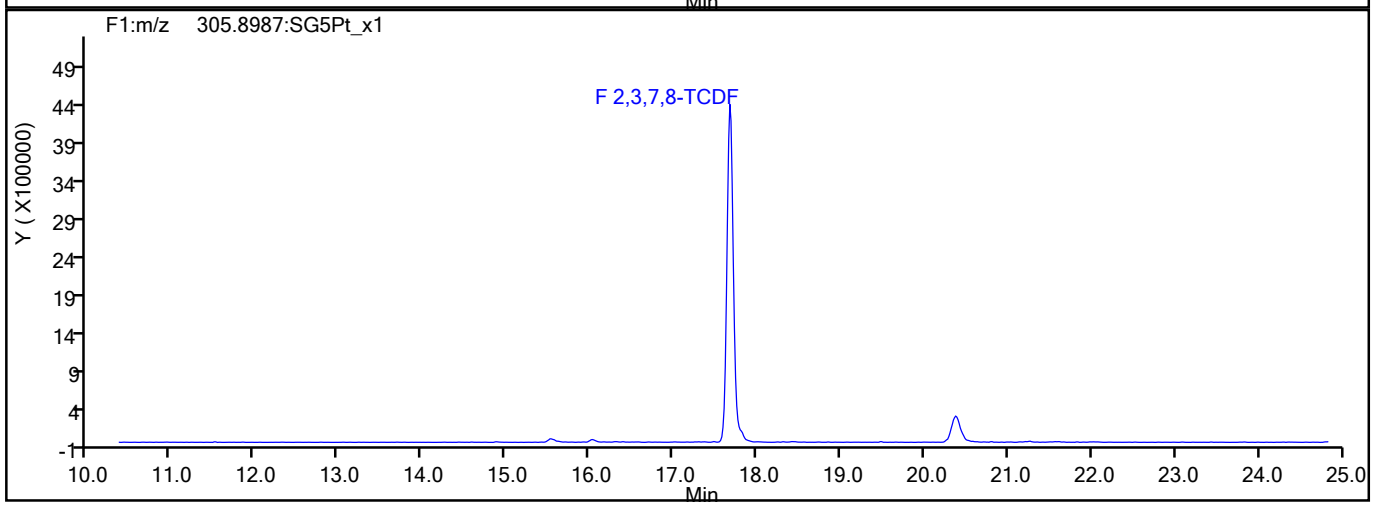

TCDF Interference Mass

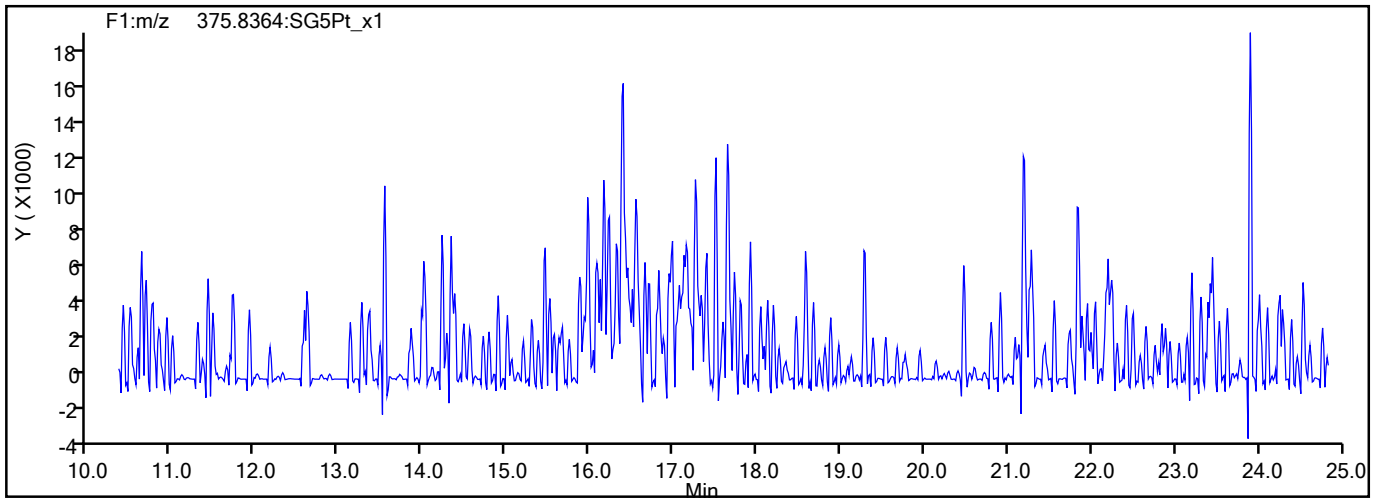

791766

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

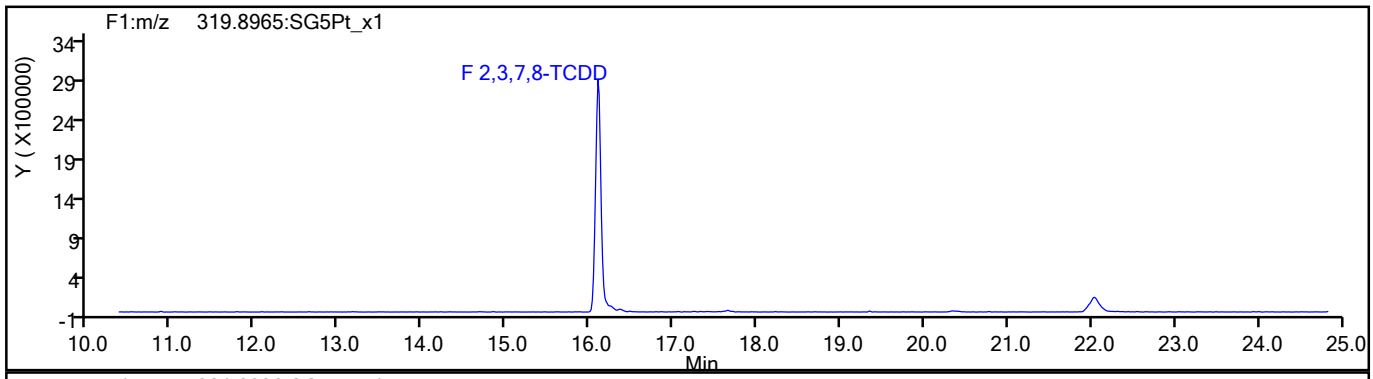

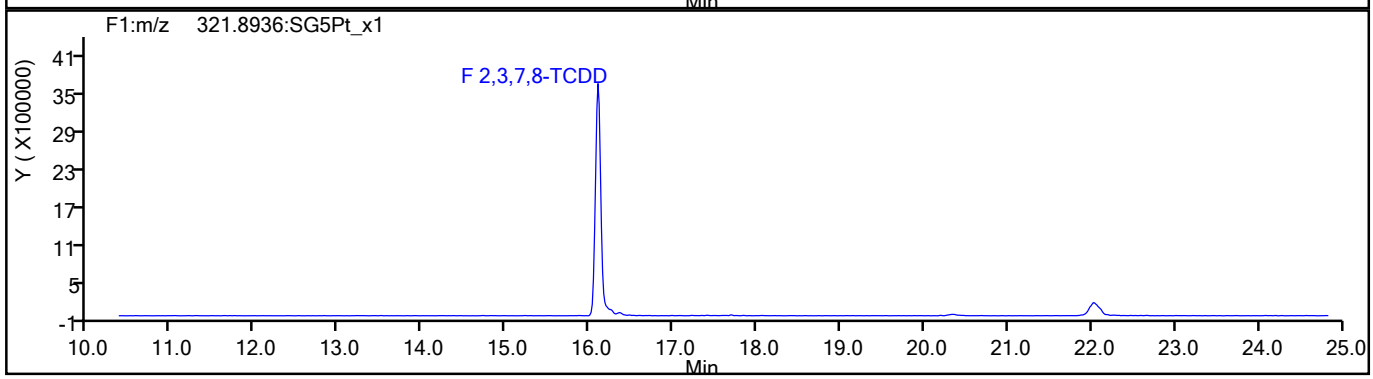

TCDD Standards

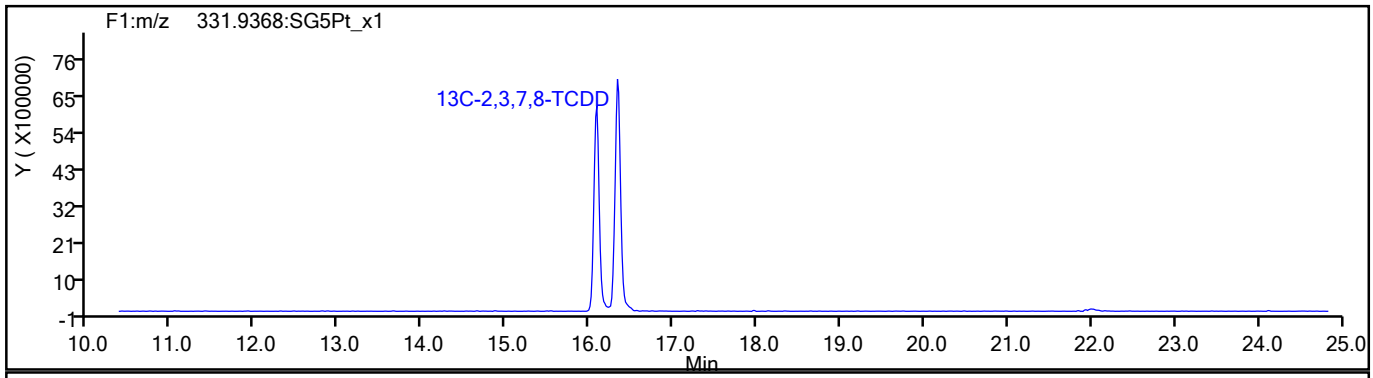

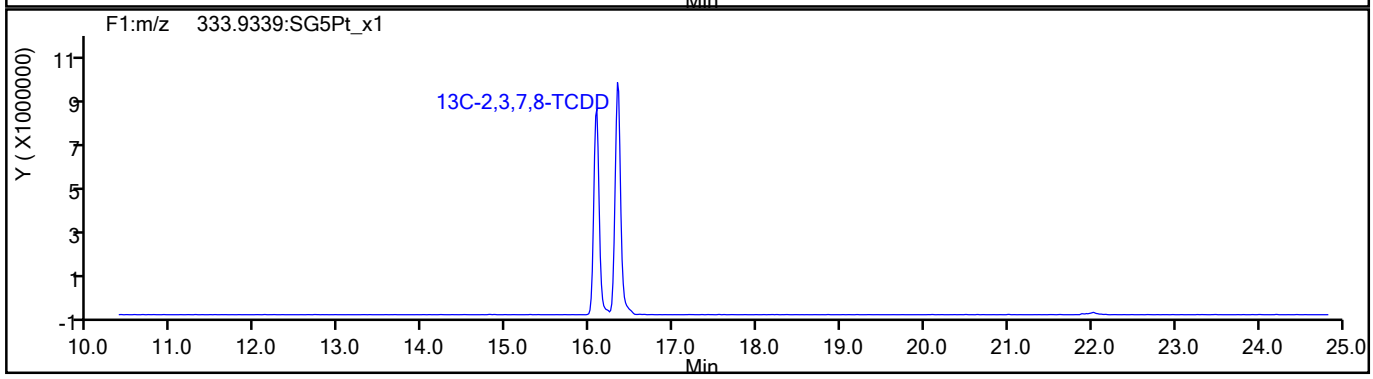

791767

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

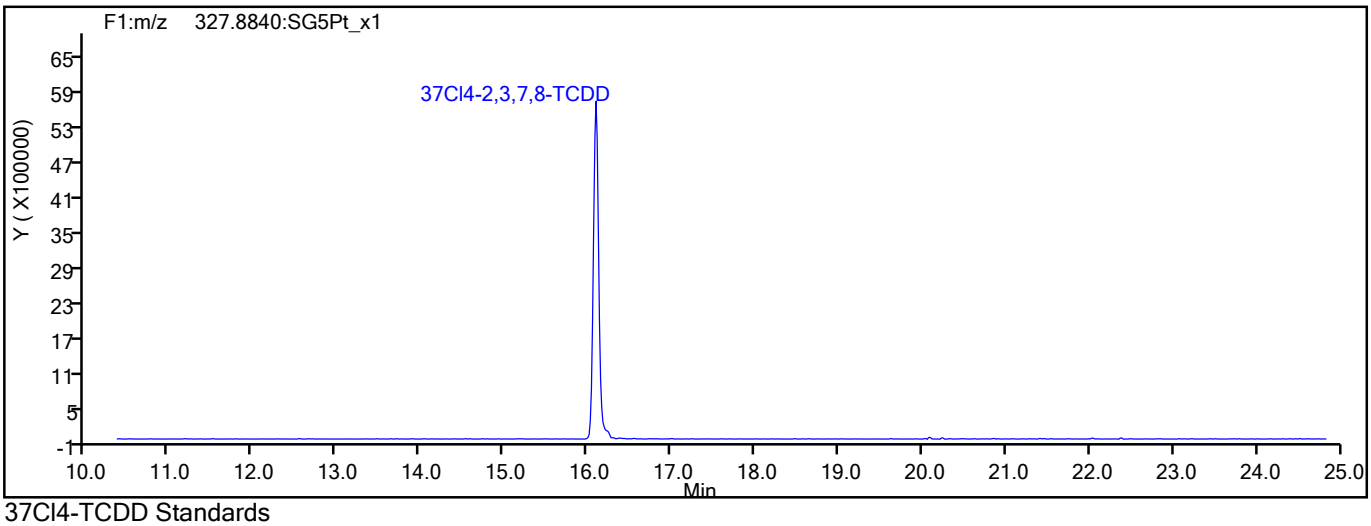

37Cl4-TCDD Standards

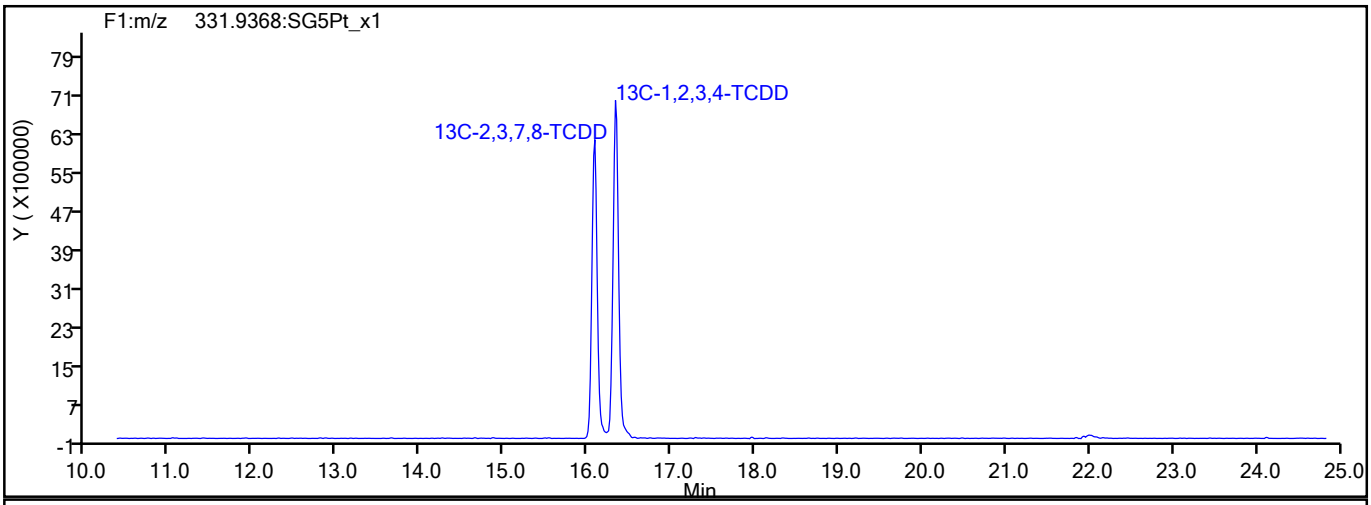

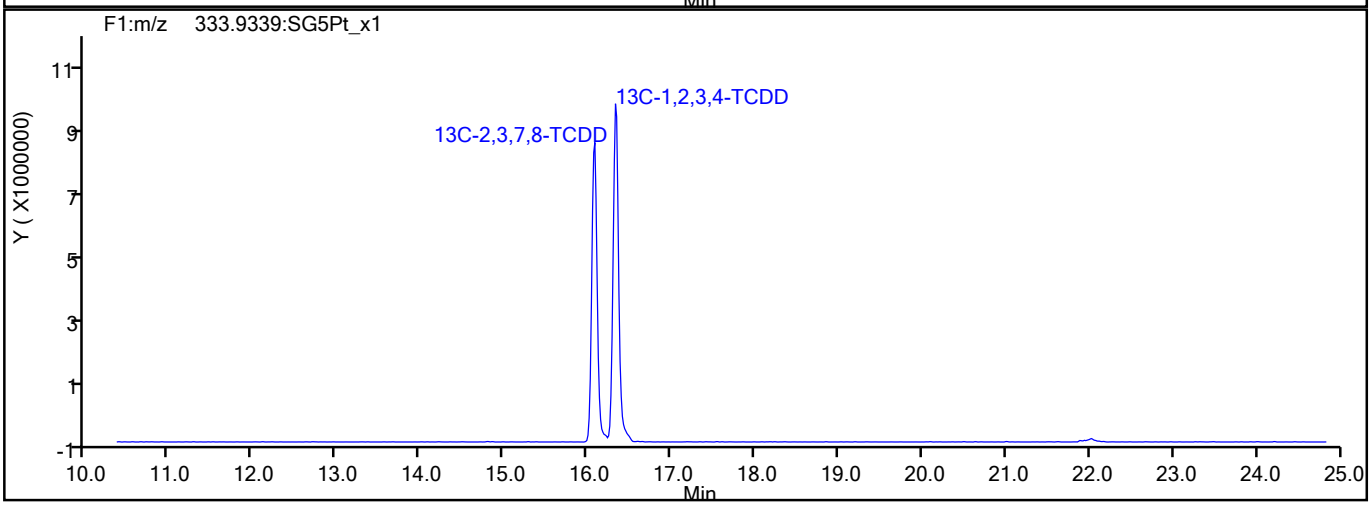

791768

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

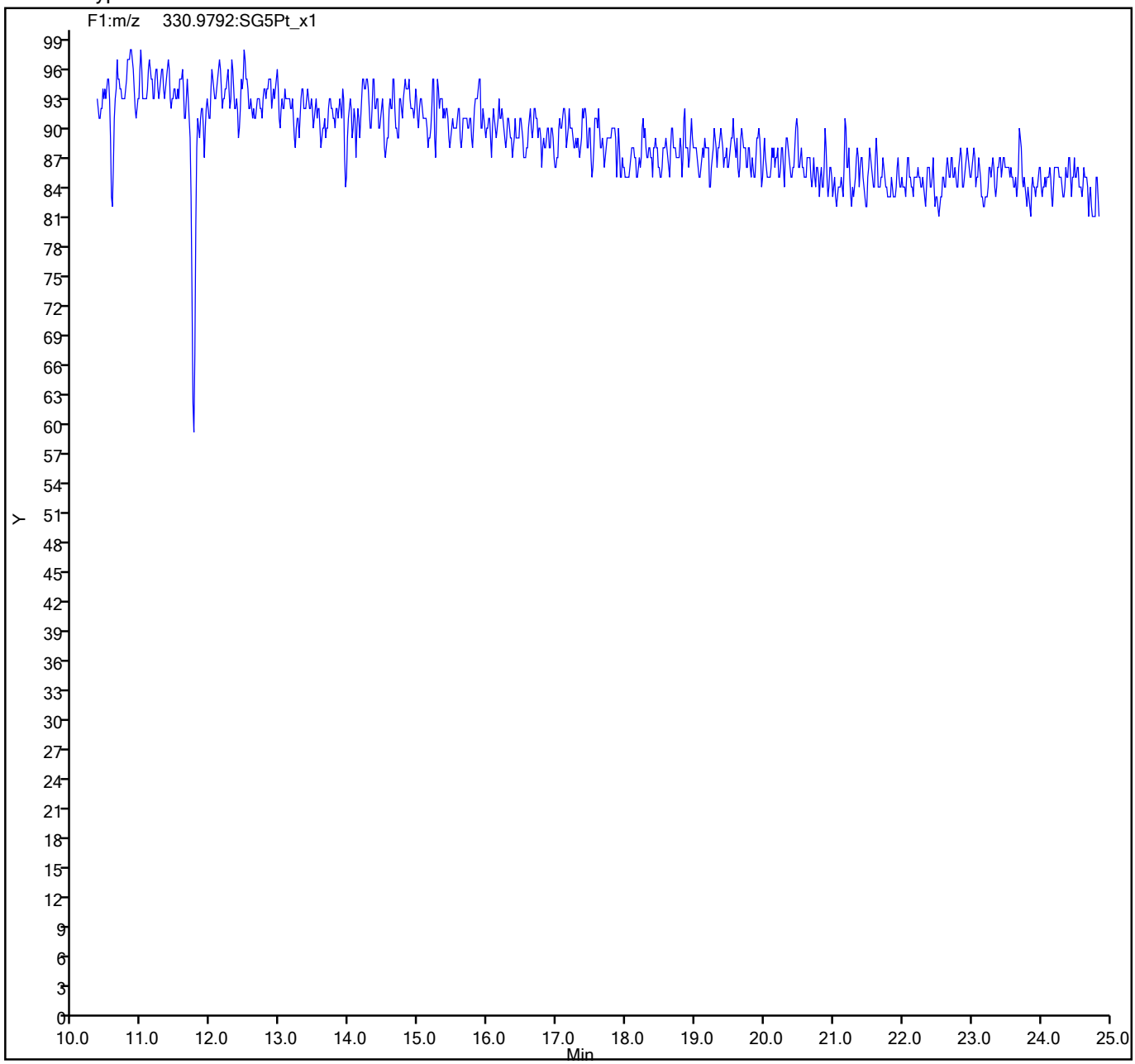

791769

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID: CCV 320-520456/2 Calibration Date: 08/27/2021 16:16

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 27AU21A11D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.015		9.60	10.0	96	78-129
2,3,7,8-TCDF	AveID	0.998	0.9289		9.31	10.0	93	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9723		111	100	111	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.539		116	100	116	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9437		10.9	10.0	109	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
27AU21A11D2	1	CPS 082721	CPS HRDXNCP_00044				1.00000	
27AU21A11D2	2	CCV 082721	CCV CS-4 HRDXNL4_00100				1.00000	
27AU21A11D2	3	SB 082721	Solvent Blank C-14				1.00000	
27AU21A11D2	4	320-513879	320-76901-A-3-A	20	1613B/Solid	D267	10.00000	g
27AU21A11D2	5	320-513879	320-76901-A-4-A	20	1613B/Solid		10.00000	g
27AU21A11D2	6	320-513879	320-76901-A-7-A	20	1613B/Solid		10.00000	g
27AU21A11D2	7	320-513879	320-76901-A-8-A	20	1613B/Solid		10.00000	g
27AU21A11D2	8	320-513879	320-76901-A-9-A	20	1613B/Solid		10.00000	g
27AU21A11D2	9	320-515492	320-77214-A-9-A	20	1613B/Solid	D270	10.00000	g
27AU21A11D2	10	320-515492	320-77214-A-13-A	20	1613B/Solid		10.00000	g
27AU21A11D2	11	320-515492	320-77214-A-6-A	20	1613B/Solid		10.00000	g
27AU21A11D2	12	320-515492	320-77214-A-8-A	20	1613B/Solid		10.00000	g
27AU21A11D2	13	320-515492	320-77214-A-4-A	20	1613B/Solid		10.00000	g
27AU21A11D2	14	320-515492	320-77214-A-7-A	20	1613B/Solid		10.00000	g
27AU21A11D2	15	320-515492	320-77214-A-5-A	20	1613B/Solid		10.00000	g
27AU21A11D2	16	320-515492	320-77214-A-3-A	20	1613B/Solid		10.00000	g
27AU21A11D2	17	320-513879	320-76901-A-5-A	20	1613B/Solid	D267	10.00000	g
27AU21A11D2	18	320-513879	320-76901-A-1-A	20	1613B/Solid		10.00000	g
27AU21A11D2	19						1.00000	
27AU21A11D2	20						1.00000	
27AU21A11D2	21						1.00000	
27AU21A11D2	22						1.00000	
27AU21A11D2	23		DB 08-28-21				1.00000	
27AU21A11D2	24						1.00000	

Logfile ✓ id
8/30/21
KSS

Peak Locate Examination:27-AUG-2021:15:37 File:27AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

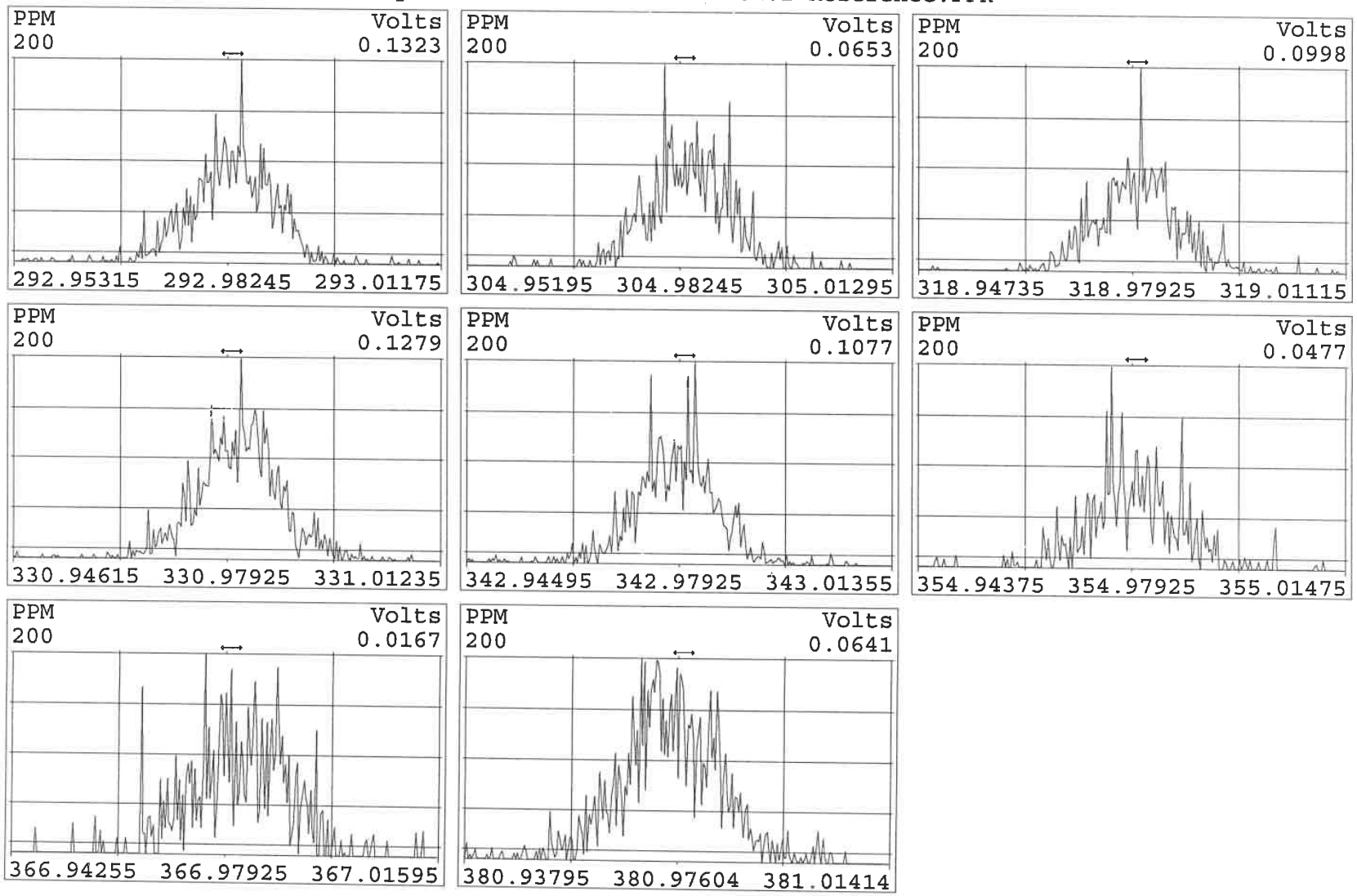

Peak Locate Examination:30-AUG-2021:09:20 File:30AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

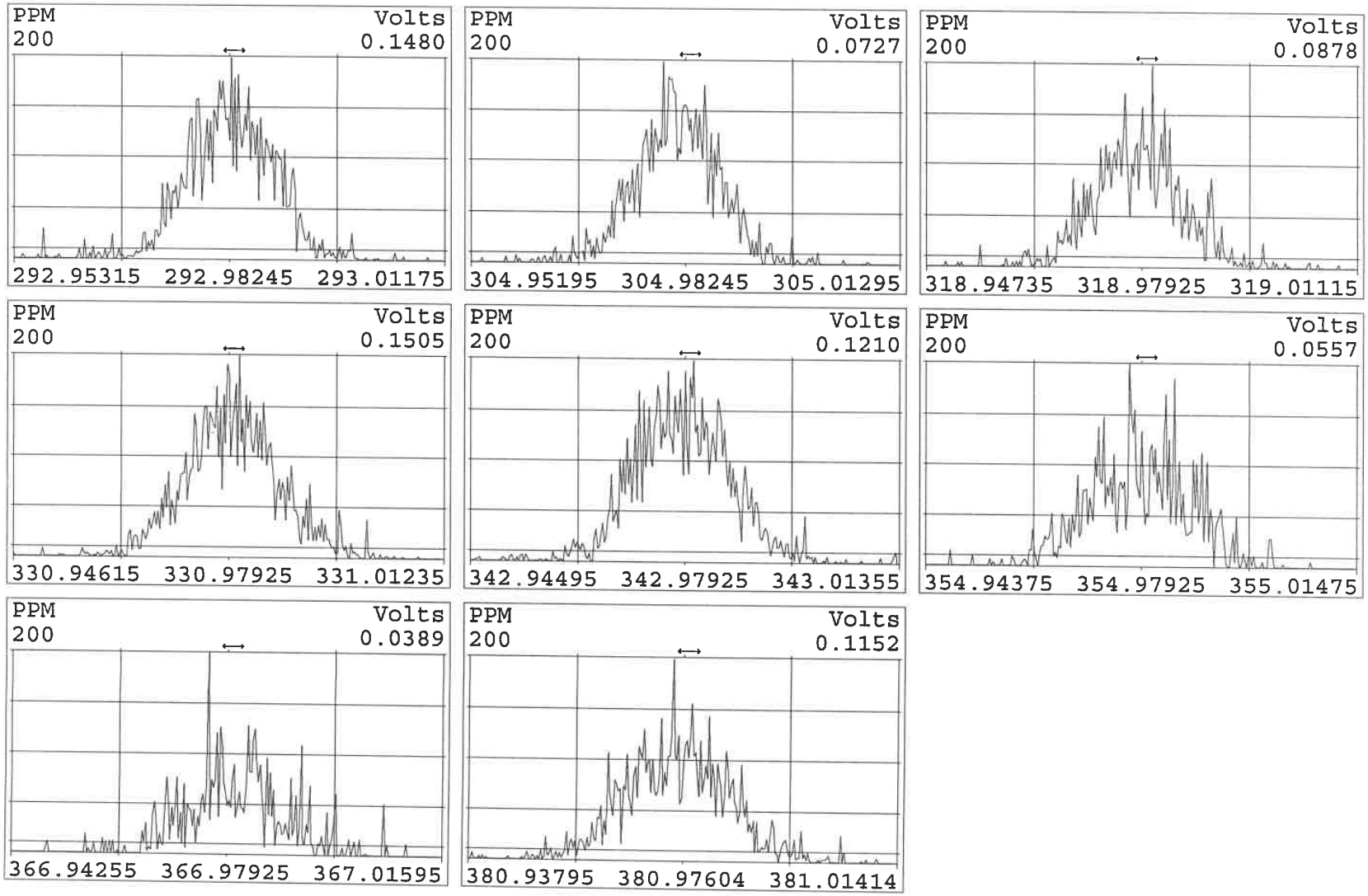

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 16:16:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:56

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.300	59556751	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.616	91683910	0.79	1.3327	115.5	115.5	0.2031	0.2031	116	
2,3,7,8-TCDF	17.644	8516074	0.75	0.9978	9.309	9.309	0.0439	0.0439	93.09	
D 13C-2,3,7,8-TCDD	16.066	57904157	0.76	0.8749	111.1	111.1	0.2489	0.2489	111	
2,3,7,8-TCDD	16.080	5876060	0.77	1.0570	9.601	9.601	0.0419	0.0419	96.01	
$ 37Cl4-2,3,7,8-TCDD	16.080	5620446		0.8648	10.9	10.9	0.0372	0.0372	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 16:16:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:56

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.300	16.300	0		26013127	5710640	6230	15575	917		
333.9339	16.300	16.300	0		33543624	7492944	5271	13177	1422	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.616	17.616	0	1.081	40596412	7743193	6996	17490	1107		
317.9389	17.616	17.616	0	1.081	51087498	9604898	7298	18245	1316	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.644	0	1.002	3658590	684488	1314	3285	521		
305.8987	17.644	17.644	0	1.002	4857484	875548	1725	4312	508	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	0.986	24957849	5501958	6230	15575	883		
333.9339	16.066	16.066	0	0.986	32946308	7425811	5271	13177	1409	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.080	16.080	0	1.001	2562809	565022	1197	2992	472		
321.8936	16.080	16.080	0	1.001	3313251	720270	1091	2727	660	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.080	0	0.987	5620446	1244371	1700	4250	732		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

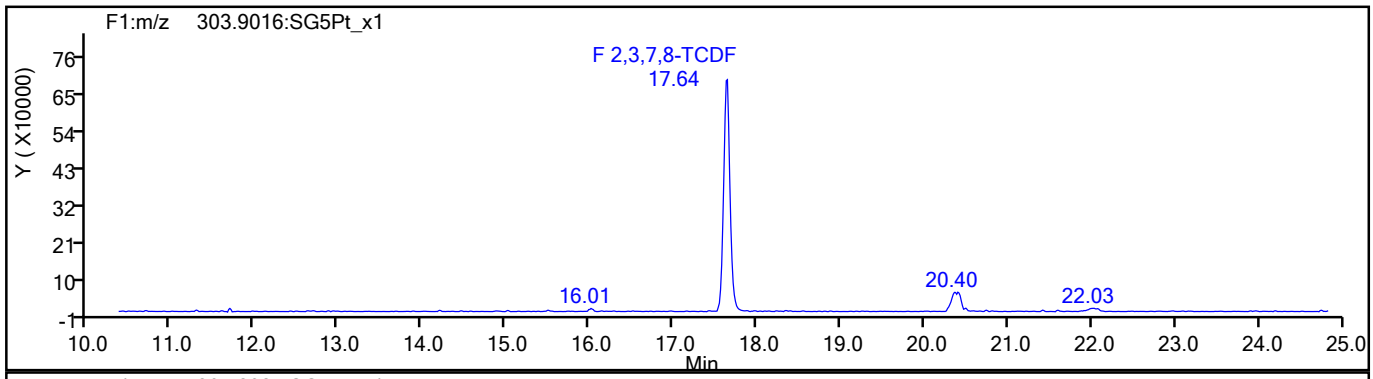

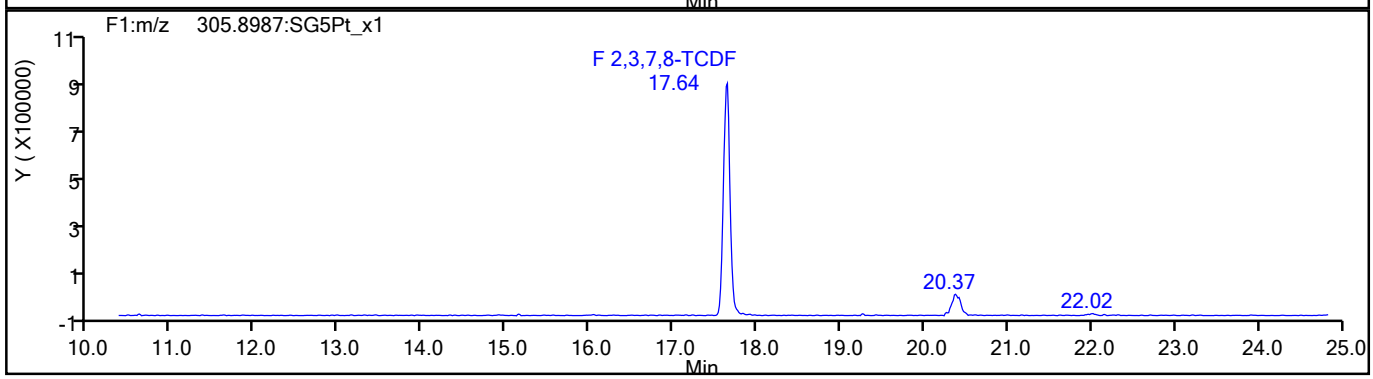

TCDF Standards

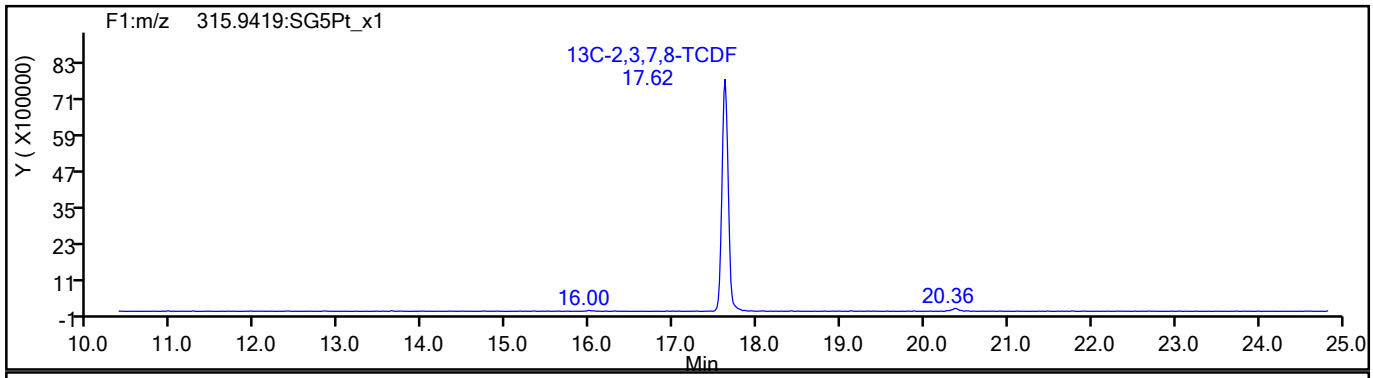

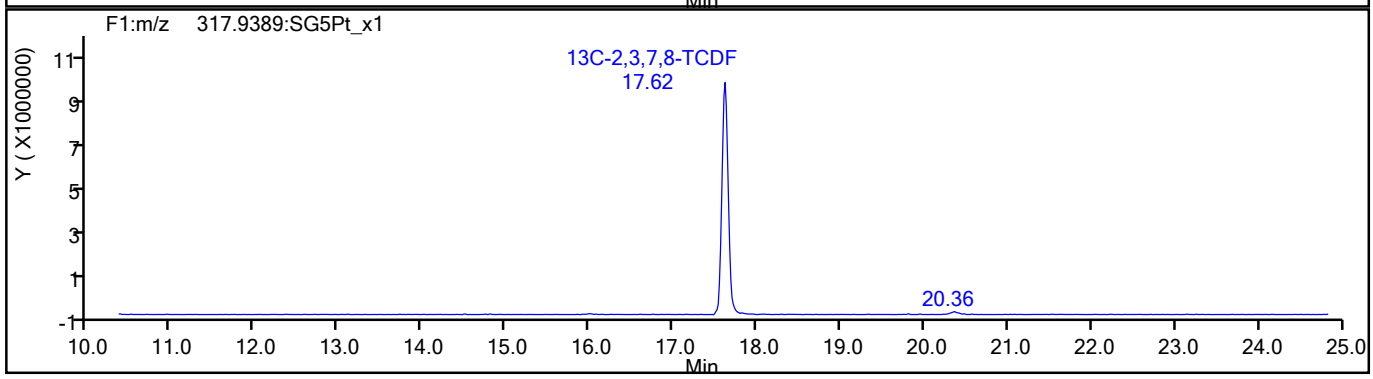

791776

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

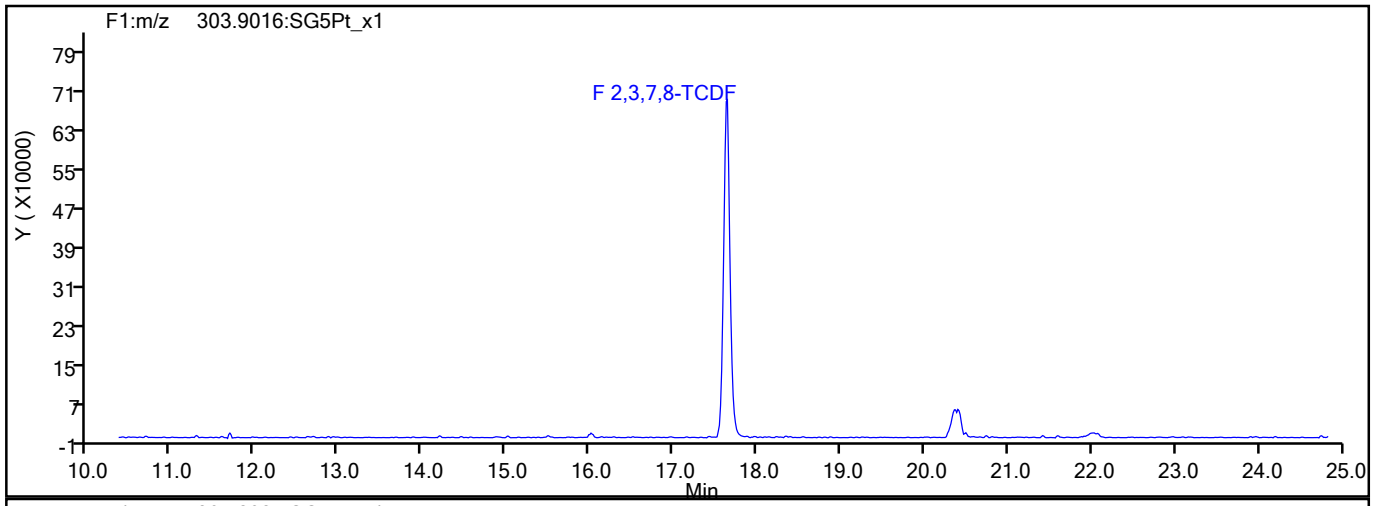

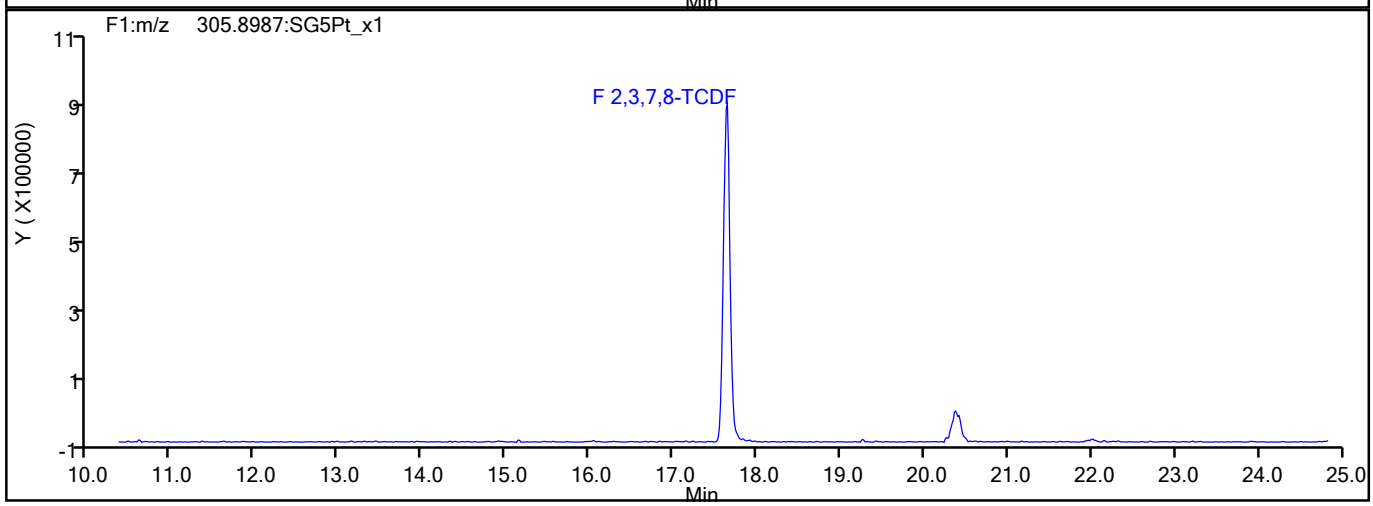

TCDF Interference Mass

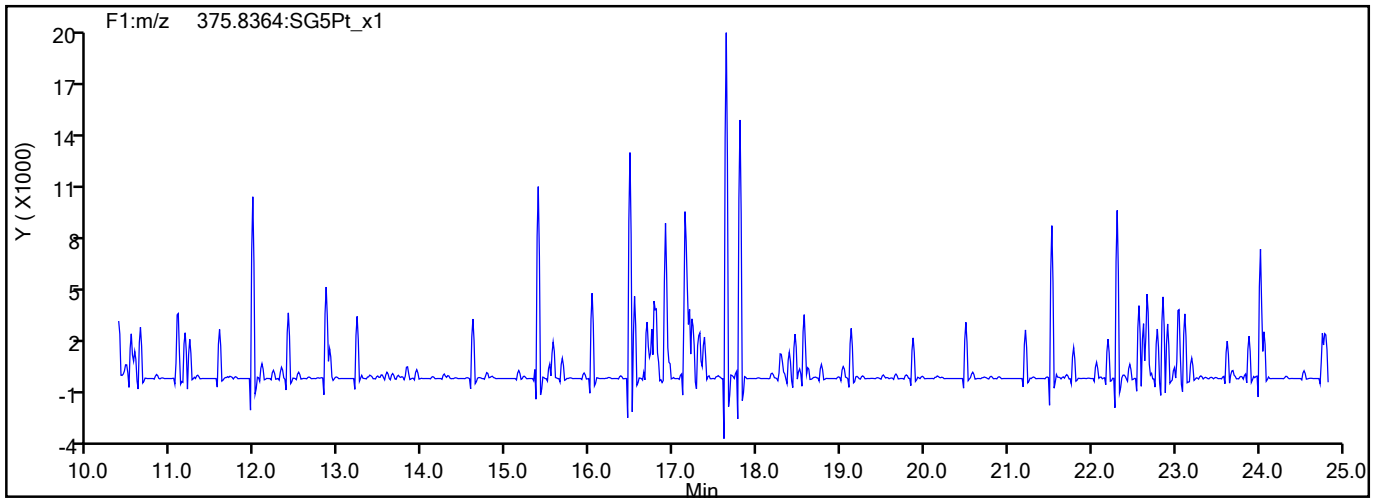

791777

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

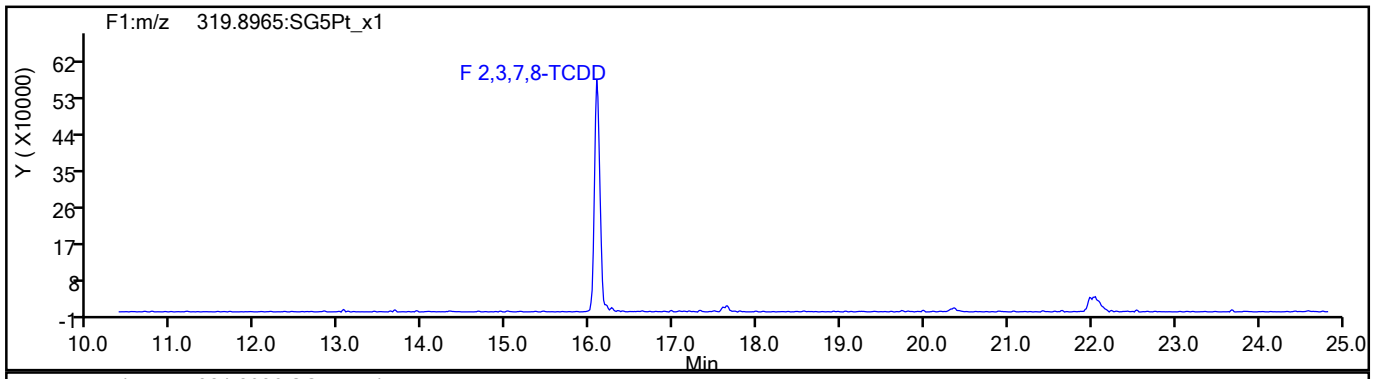

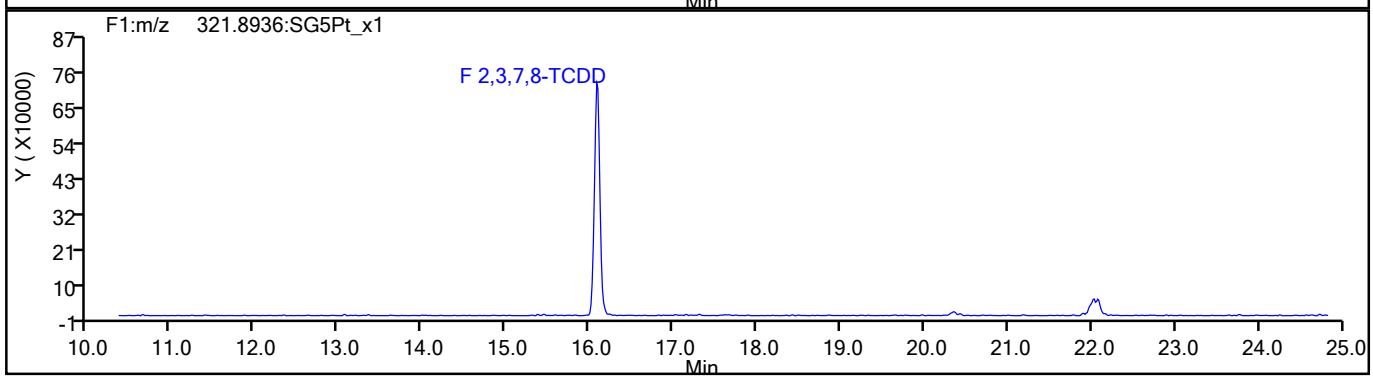

TCDD Standards

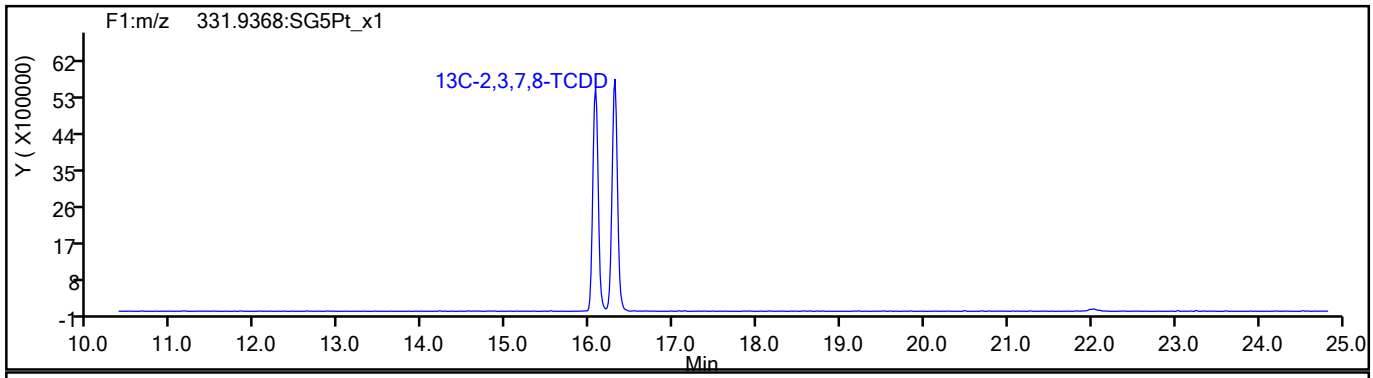

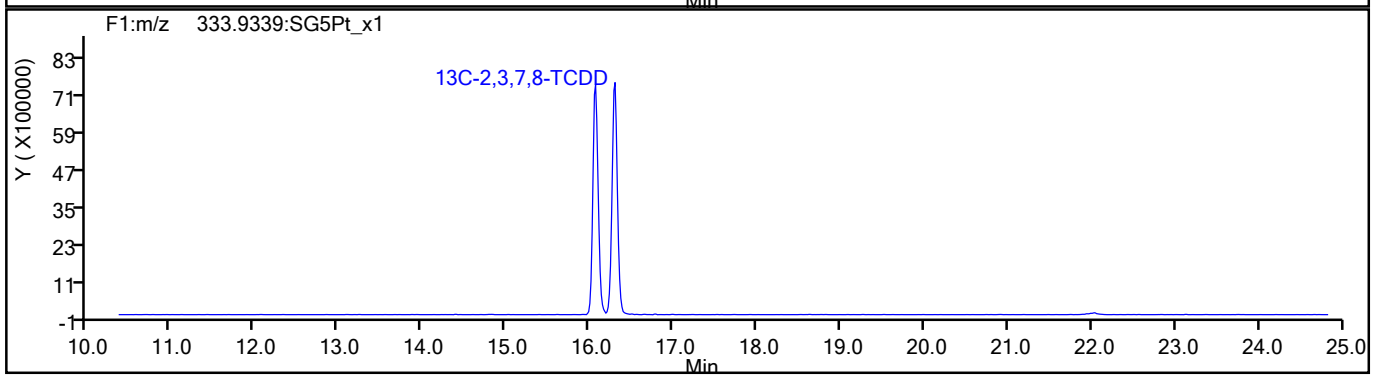

791778

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

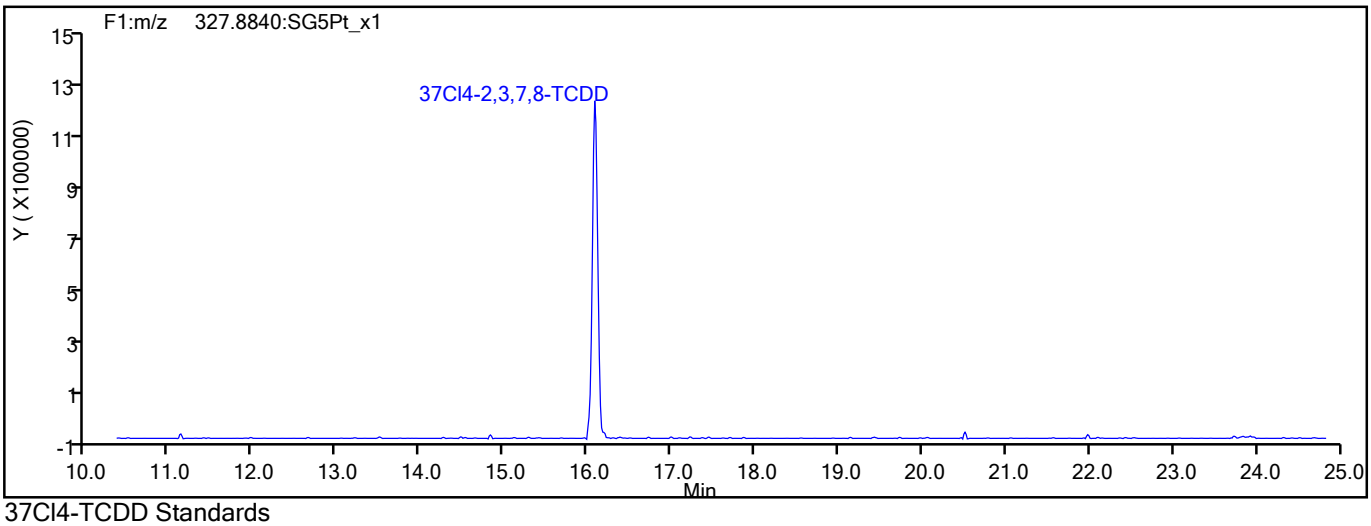

37Cl4-TCDD Standards

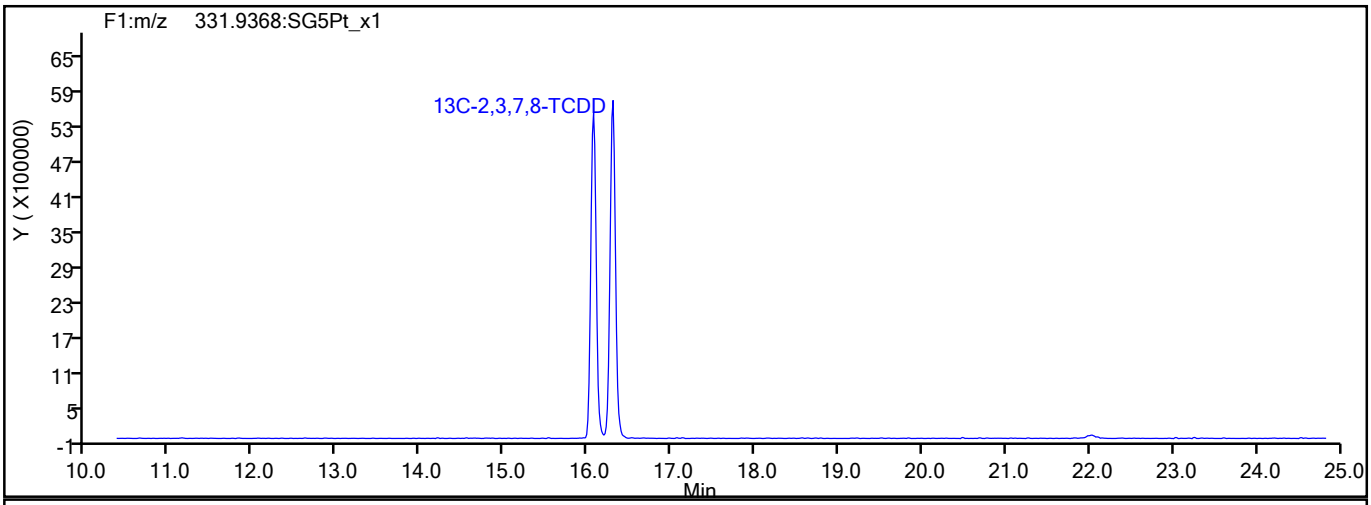

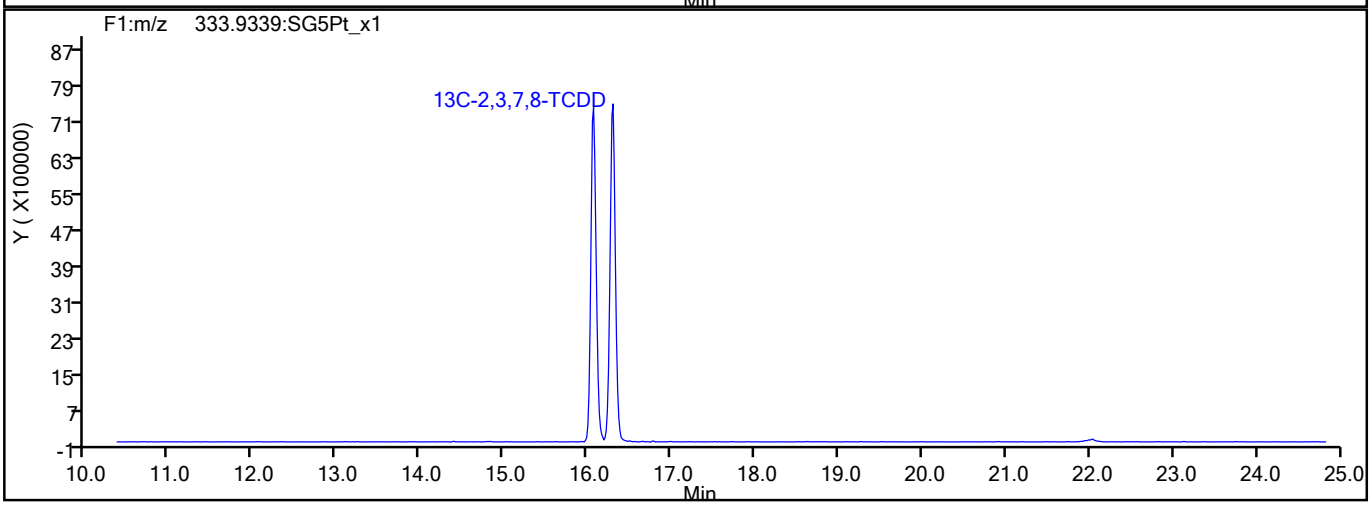

791779

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

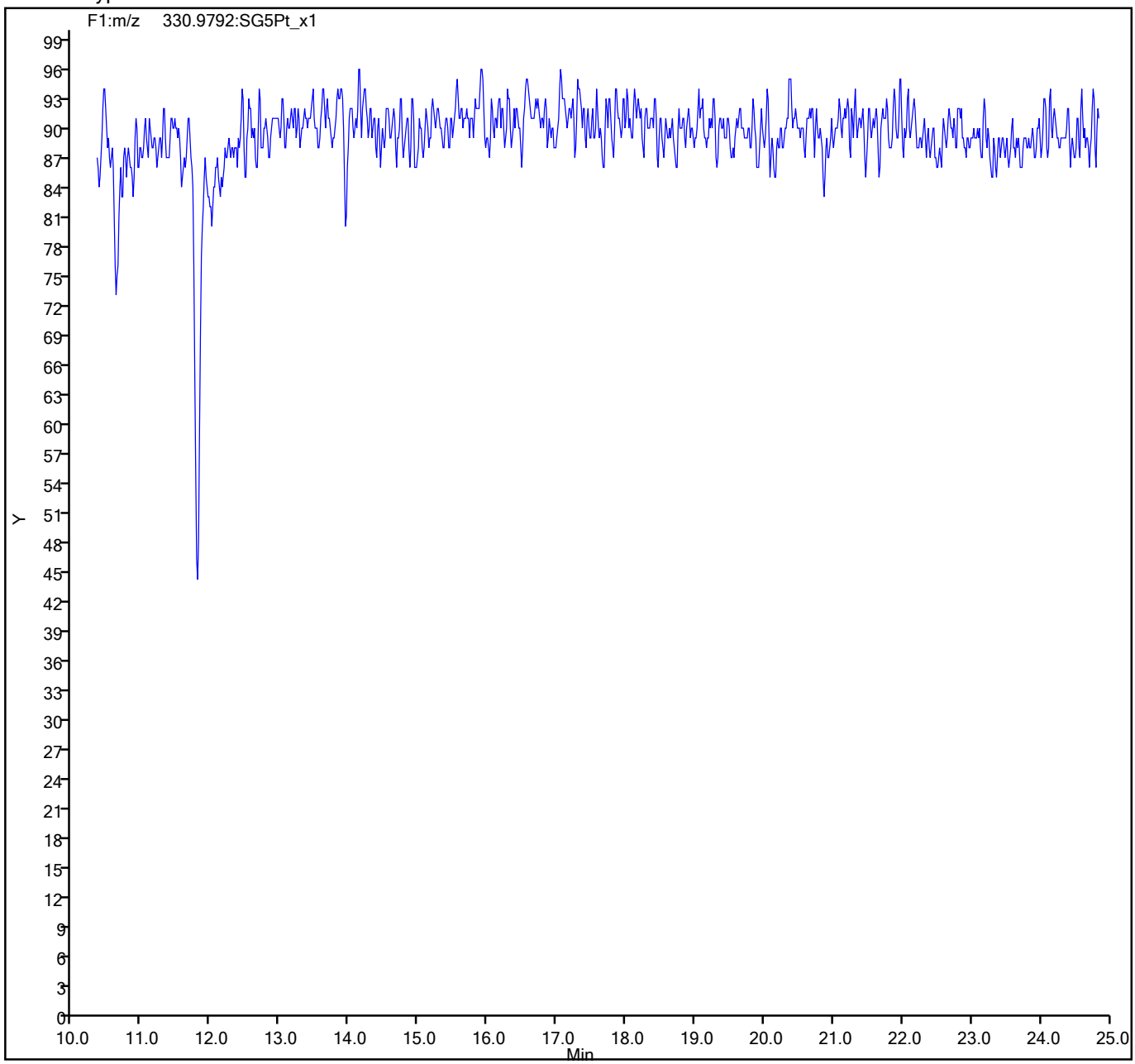

791780

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID: CCV 320-520997/2 Calibration Date: 08/31/2021 13:51

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 31AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	0.9829		9.30	10.0	93	78-129
2,3,7,8-TCDF	AveID	0.998	0.9159		9.18	10.0	92	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9120		104	100	104	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.391		104	100	104	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9746		11.3	10.0	113	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
31AU2111D2	1	CPS 083121	CPS HRDXNCP_00044				1.00000	
31AU2111D2	2	CCV 083121	CCV CS-4 HRDXNL4_00100				1.00000	
31AU2111D2	3	SB 083121	Solvent Blank C-14				1.00000	
31AU2111D2	4	320-514809	400-206693-C-19-A	20	1613B/Solid	D268	10.00000	g
31AU2111D2	5	320-514809	400-206693-C-20-A	20	1613B/Solid		10.00000	g
31AU2111D2	6	320-514809	400-206693-C-36-A	20	1613B/Solid		10.00000	g
31AU2111D2	7	320-514809	400-206693-C-39-A	20	1613B/Solid		10.00000	g
31AU2111D2	8	320-515138	400-206693-C-42-A	20	1613B/Solid	D267	10.00000	g
31AU2111D2	9	320-515492	320-77292-A-1-A	20	1613B/Solid	D270	10.00000	g
31AU2111D2	10	320-515492	320-77292-A-2-A	20	1613B/Solid		10.00000	g
31AU2111D2	11	320-515492	320-77292-A-2-B MS	20	1613B/Solid		10.00000	g
31AU2111D2	12	320-515492	320-77292-A-2-C MSD	20	1613B/Solid		10.00000	g
31AU2111D2	13	320-515492	320-77292-A-3-A	20	1613B/Solid		10.00000	g
31AU2111D2	14	320-515492	320-77292-A-4-A	20	1613B/Solid		10.00000	g
31AU2111D2	15	320-515492	320-77214-A-2-A	20	1613B/Solid		10.00000	g
31AU2111D2	16	320-515492	320-77214-A-2-B MS	20	1613B/Solid		10.00000	g
31AU2111D2	17	320-515492	320-77214-A-2-C MSD	20	1613B/Solid		10.00000	g
31AU2111D2	18	320-515492	320-76901-A-1-A X10	20	1613B/Solid	D267	10.00000	g
31AU2111D2	19						1.00000	
31AU2111D2	20						1.00000	
31AU2111D2	21						1.00000	
31AU2111D2	22		DB 08-31-21				1.00000	
31AU2111D2	23						1.00000	

LOGFILE CHECKED
DB 9/1/21

Peak Locate Examination:31-AUG-2021:13:11 File:31AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

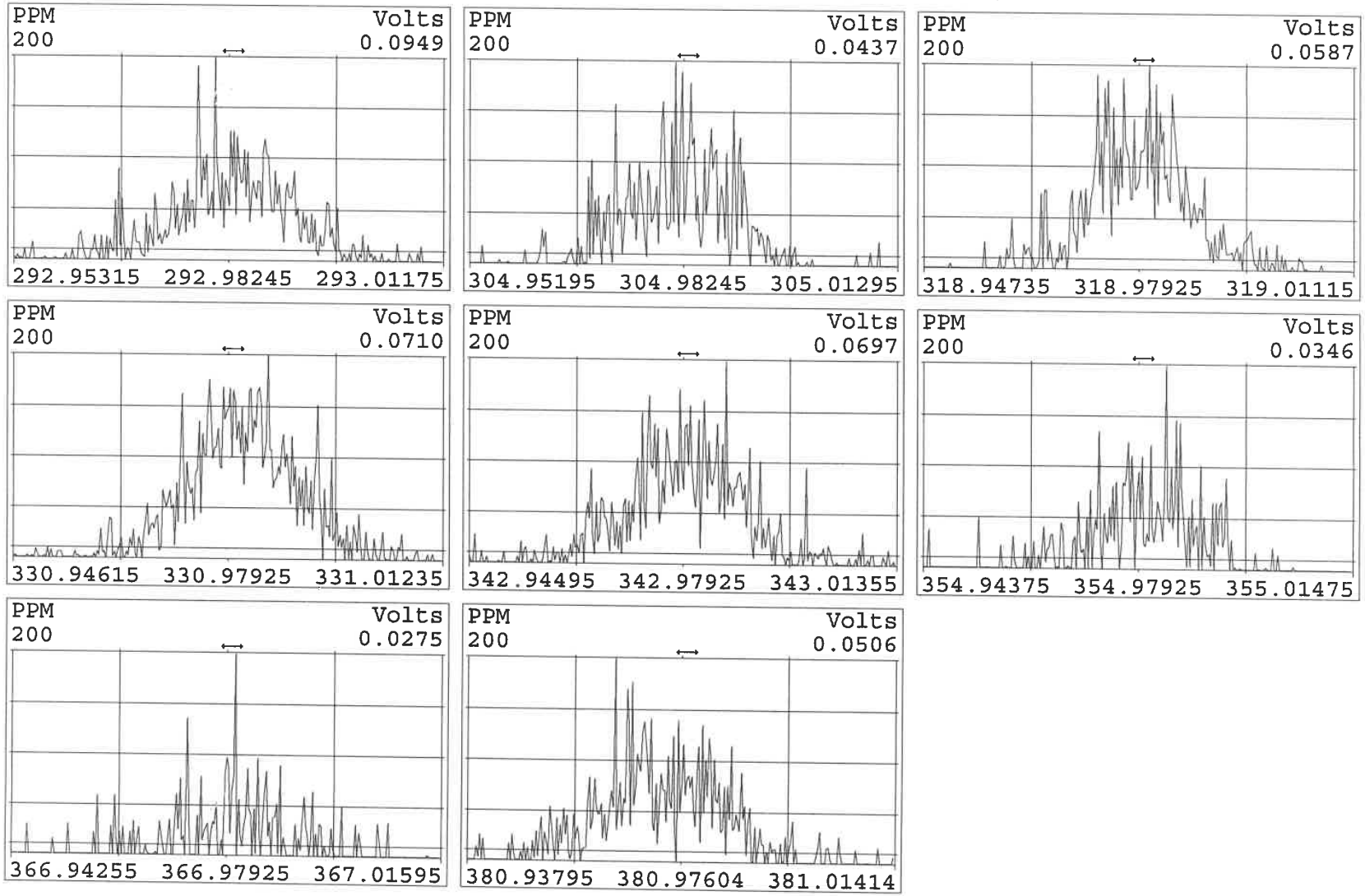

Peak Locate Examination: 1-SEP-2021:01:07 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

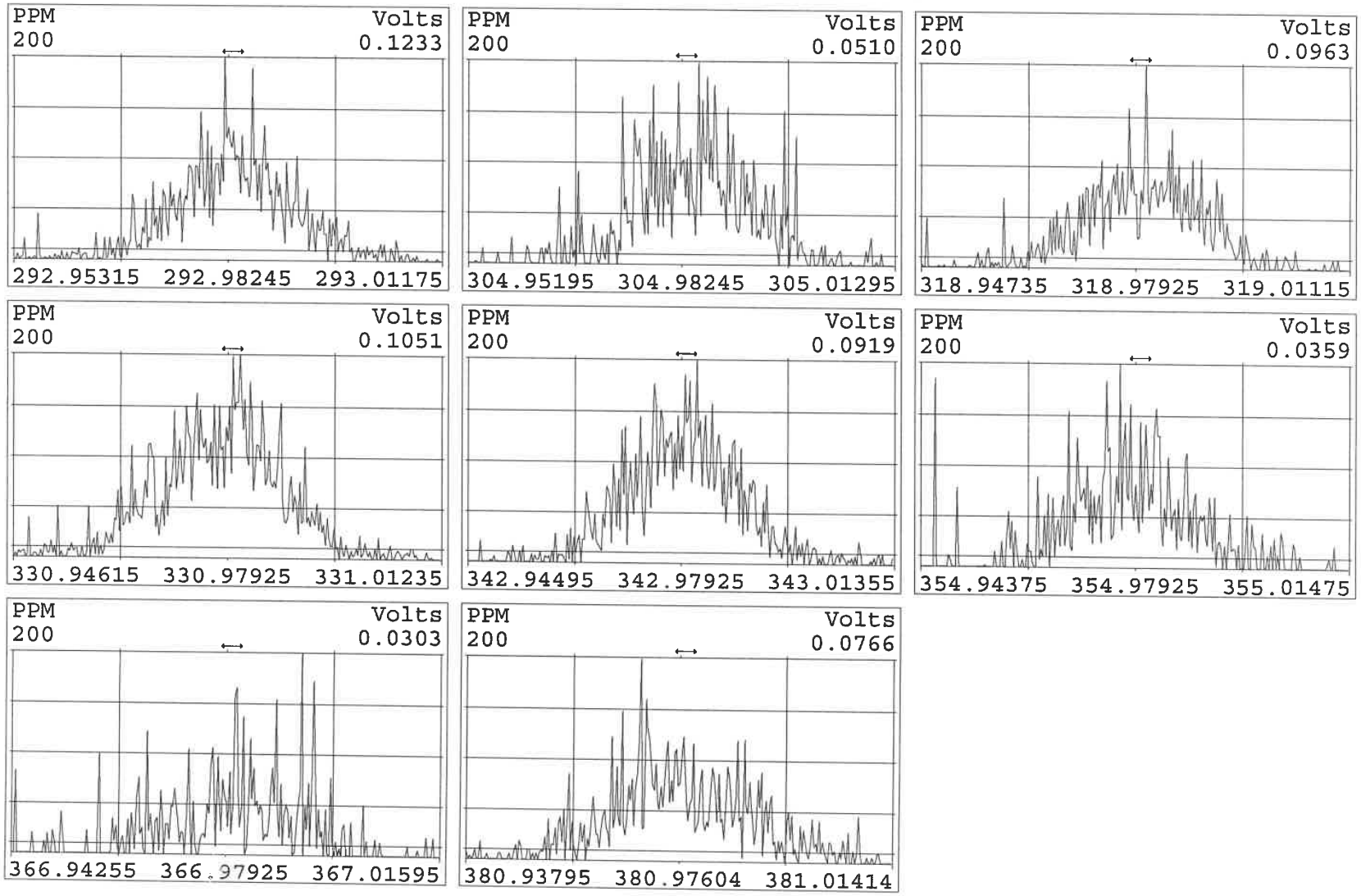

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 31-Aug-2021 13:51:44 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:32:30

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.275	36409593	0.80	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.605	50660828	0.76	1.3327	104.4	104.4	0.4579	0.4579	104	
2,3,7,8-TCDF	17.619	4640207	0.78	0.9978	9.179	9.179	0.1321	0.1321	91.79	
D 13C-2,3,7,8-TCDD	16.055	33207325	0.74	0.8749	104.2	104.2	0.6983	0.6983	104	
2,3,7,8-TCDD	16.069	3263875	0.86	1.0570	9.299	9.299	0.1532	0.1532	92.99	
$ 37Cl4-2,3,7,8-TCDD	16.069	3548395		0.8648	11.3	11.3	0.1017	0.1017	113	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 31-Aug-2021 13:51:44 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:32:30

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.275	16.275	0		16219970	3519442	11993	29982	293		
333.9339	16.275	16.275	0		20189623	4540712	7706	19265	589	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.605	17.605	0	1.082	21896549	4215589	10001	25002	422		
317.9389	17.605	17.605	0	1.082	28764279	5472152	9674	24185	566	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.619	17.619	0	1.001	2040587	388832	1840	4600	211		
305.8987	17.619	17.619	0	1.001	2599620	526255	3269	8172	161	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.055	16.055	0	0.987	14138429	3126695	11993	29982	261		
333.9339	16.055	16.055	0	0.987	19068896	4455590	7706	19265	578	0.74(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.069	16.069	0	1.001	1505976	324568	2564	6410	127		
321.8936	16.069	16.069	0	1.001	1757899	372701	2349	5872	159	0.86(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.069	16.069	0	0.987	3548395	729773	2835	7087	257		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

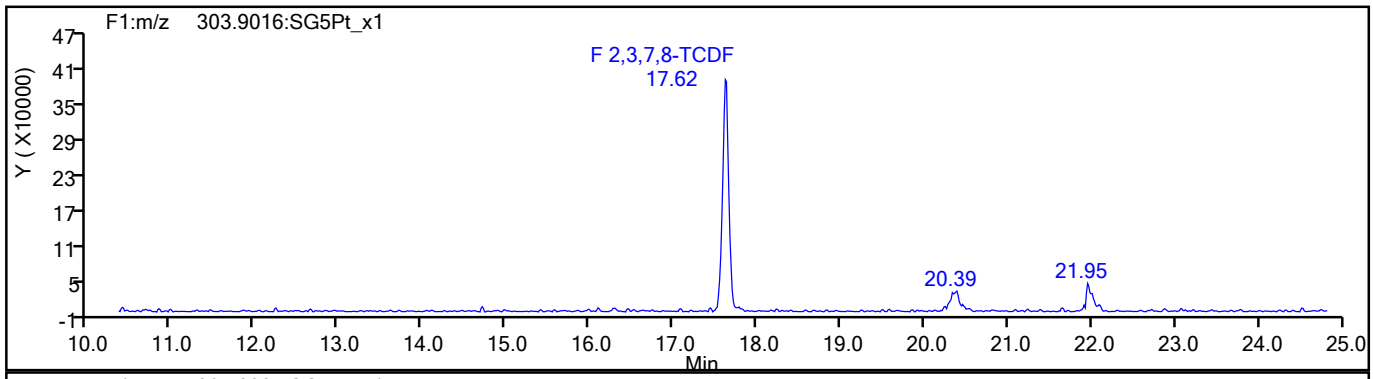

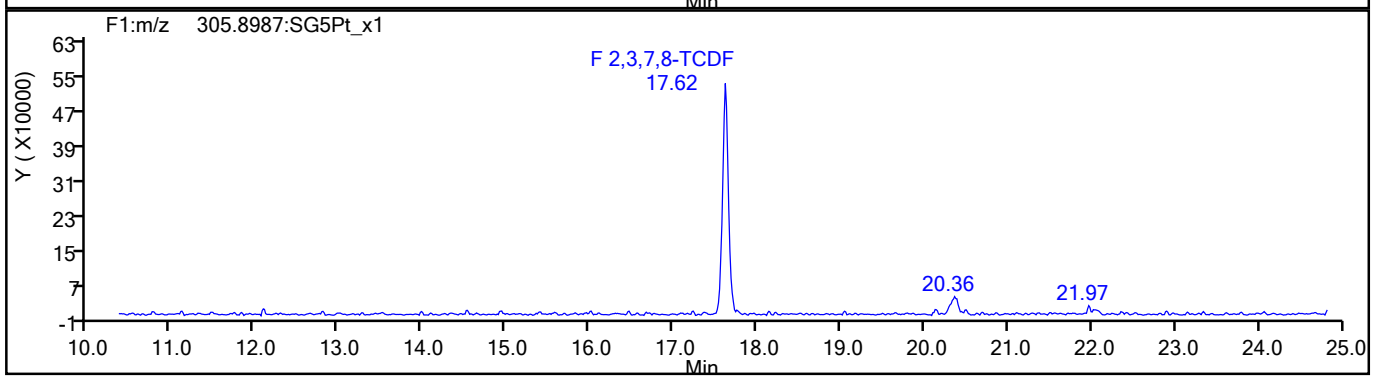

TCDF Standards

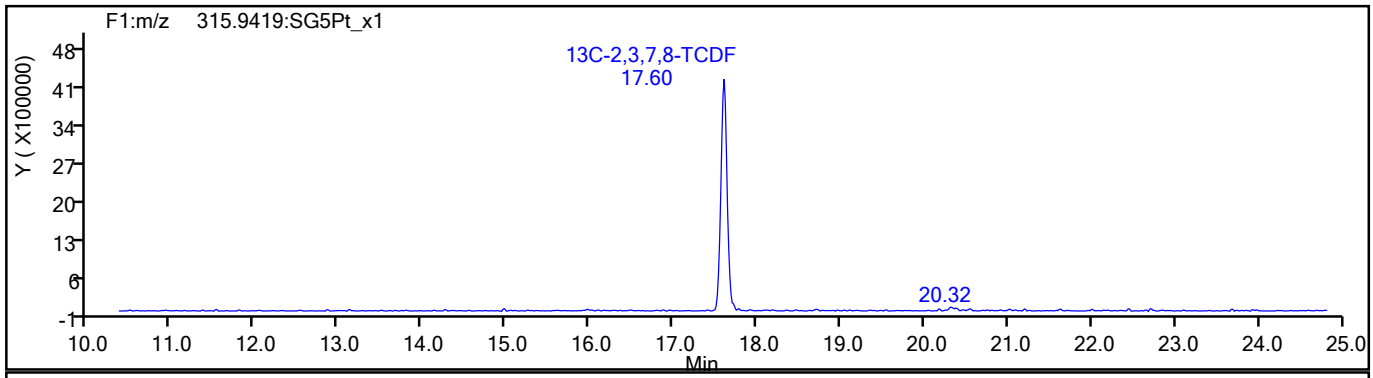

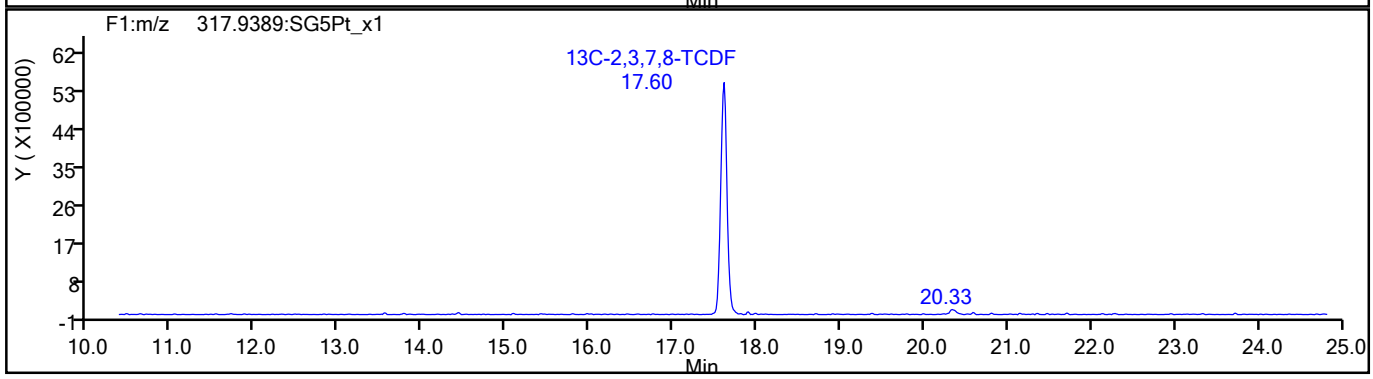

791787

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

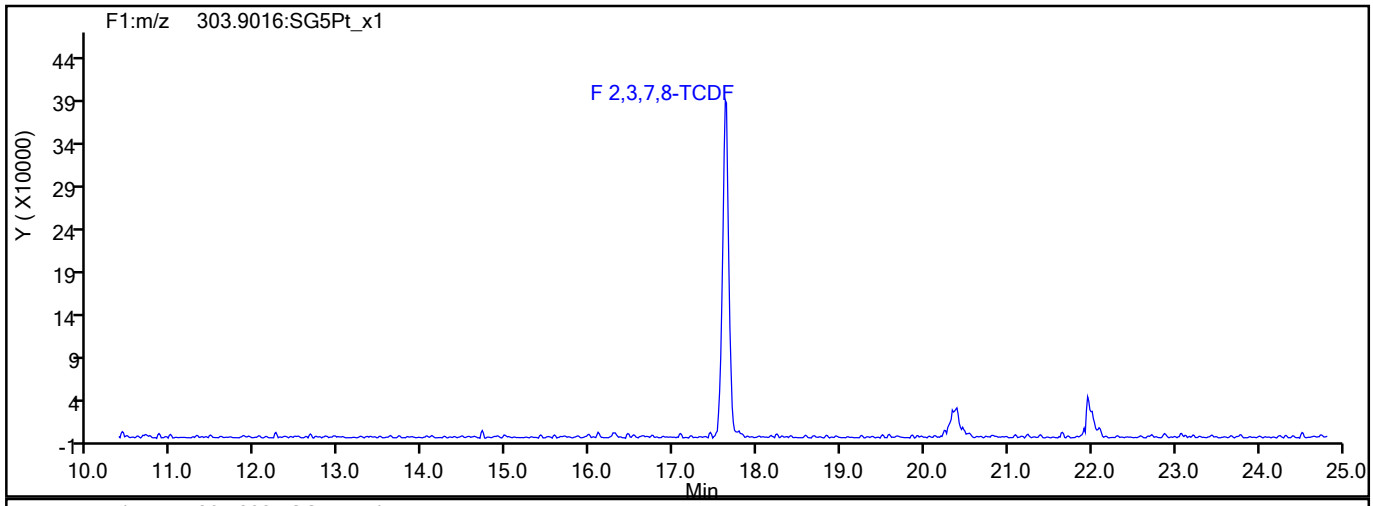

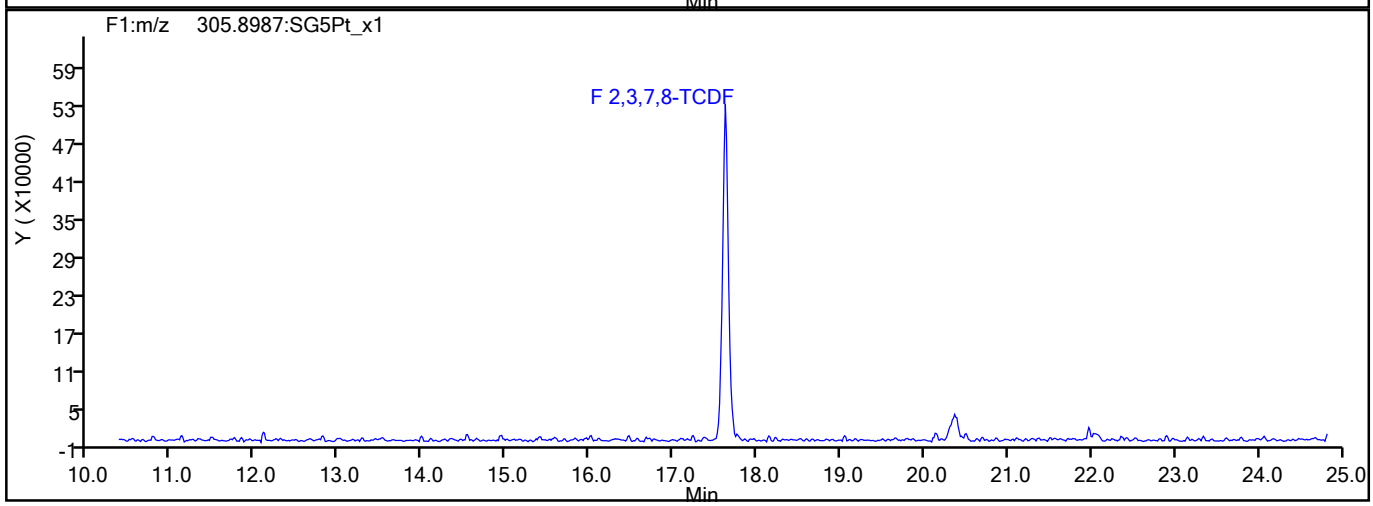

TCDF Interference Mass

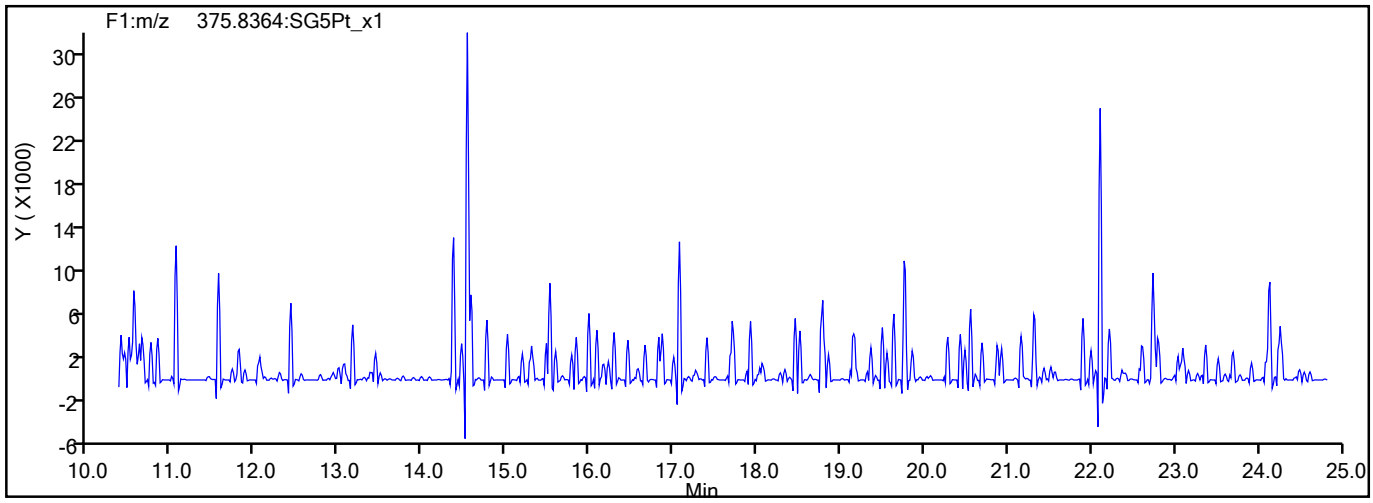

791788

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

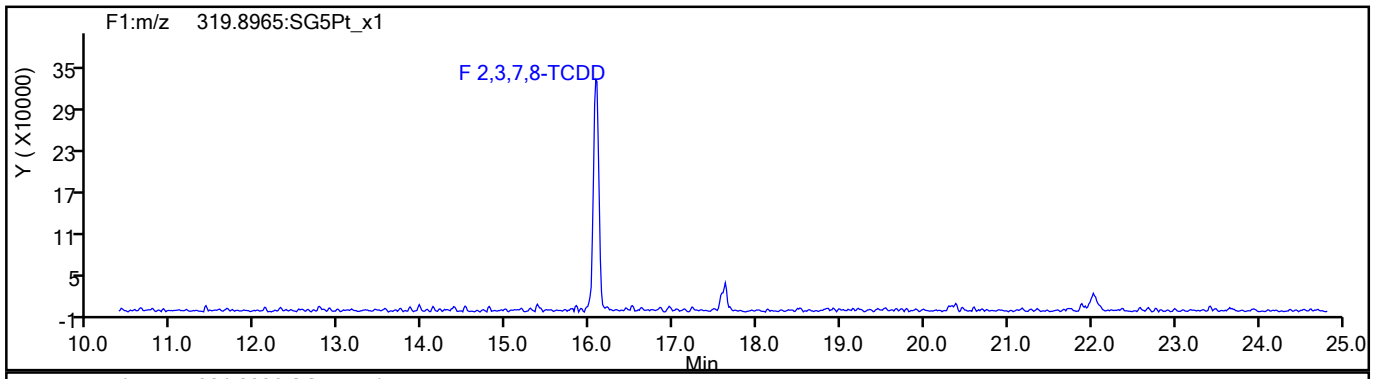

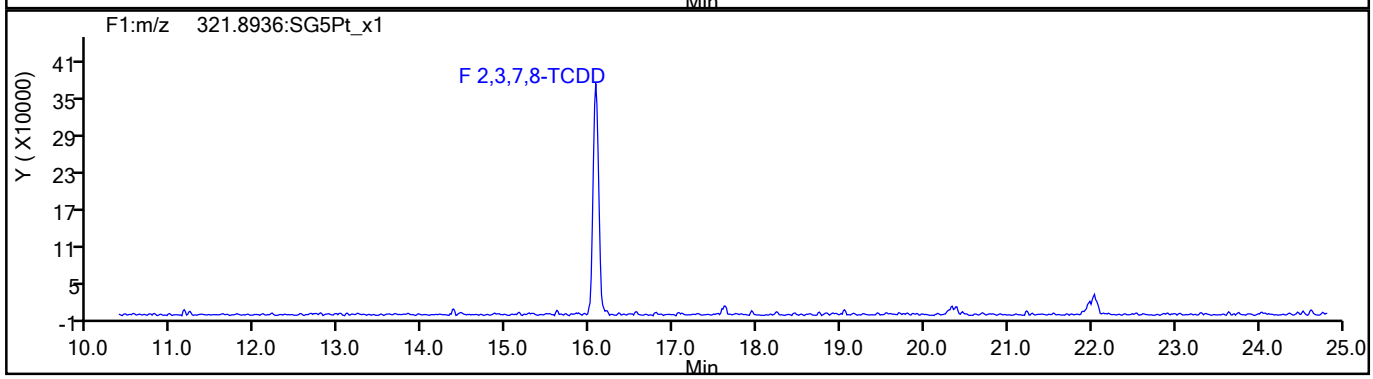

TCDD Standards

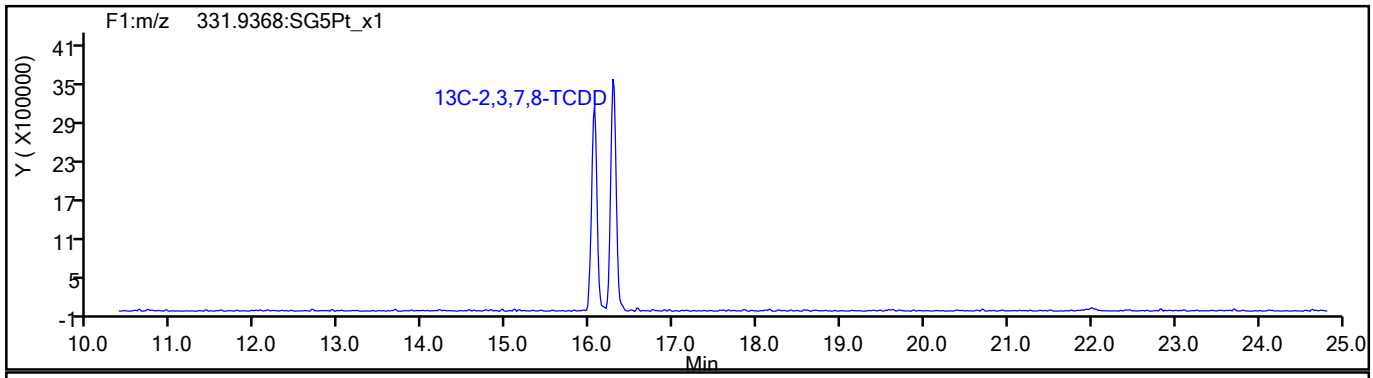

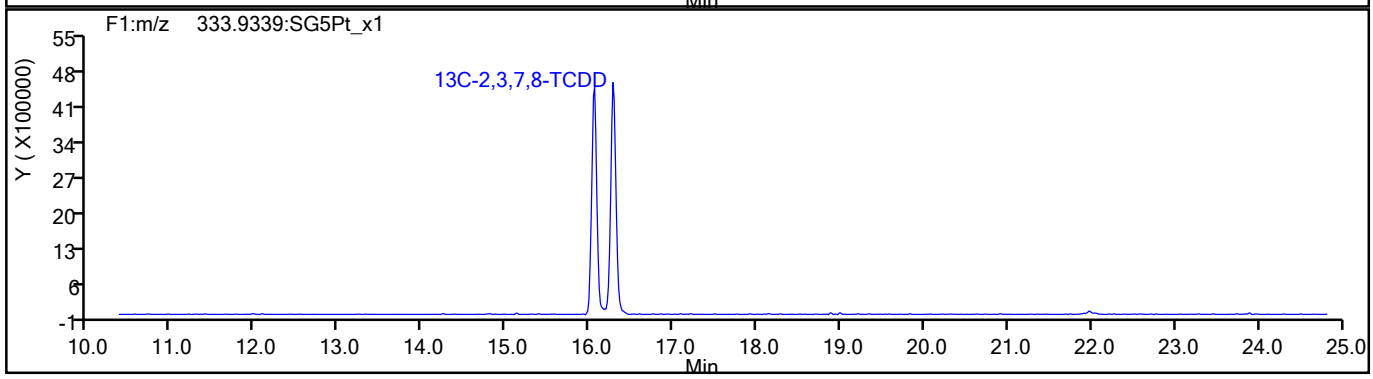

791789

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

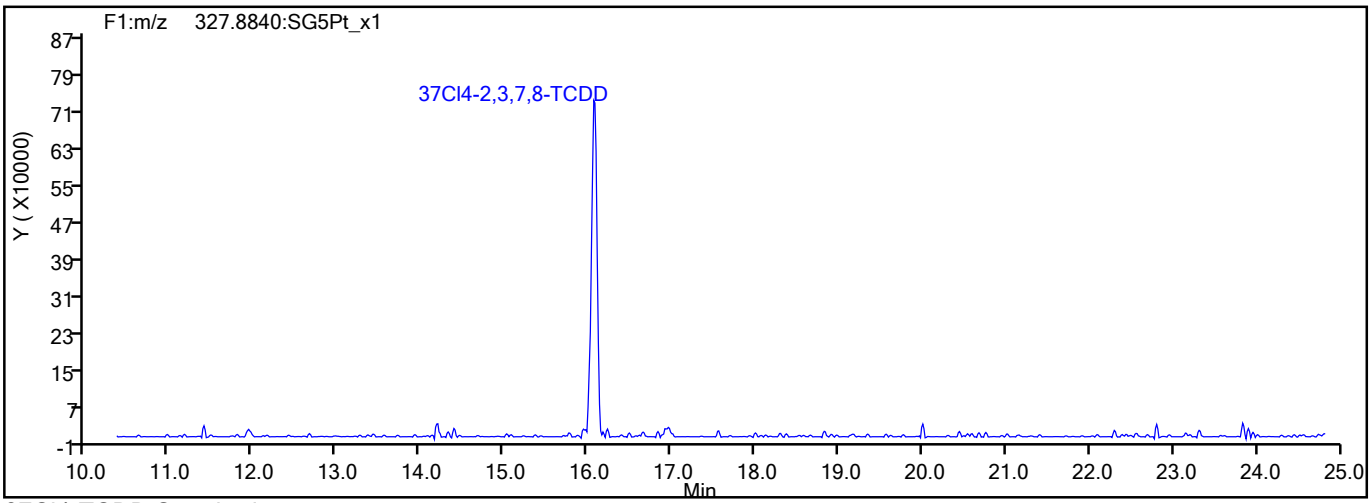

37Cl4-TCDD Standards

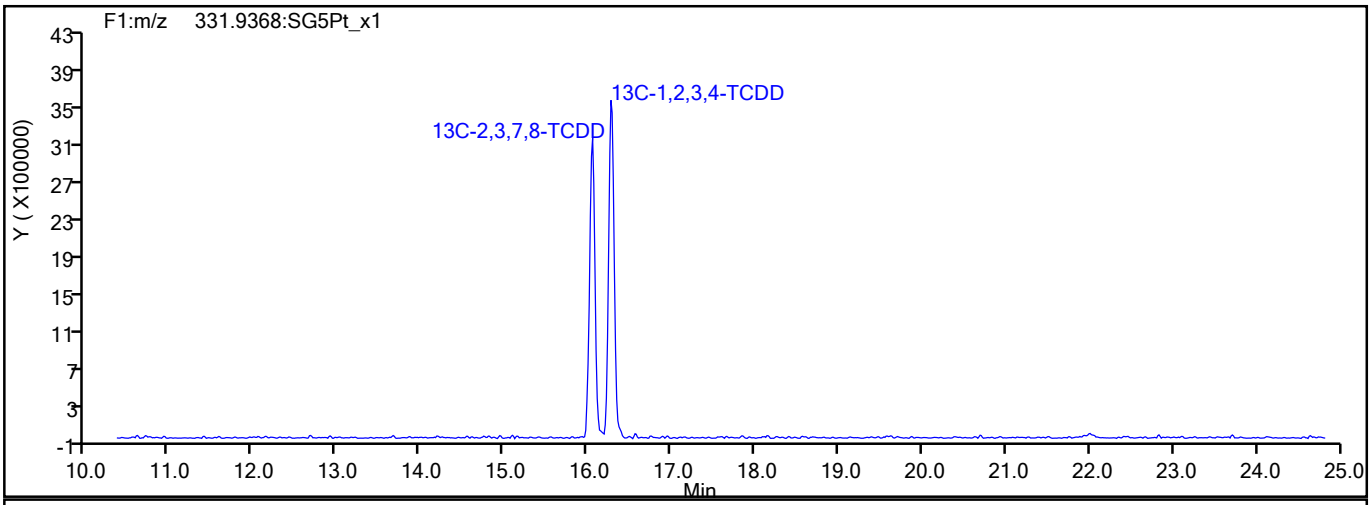

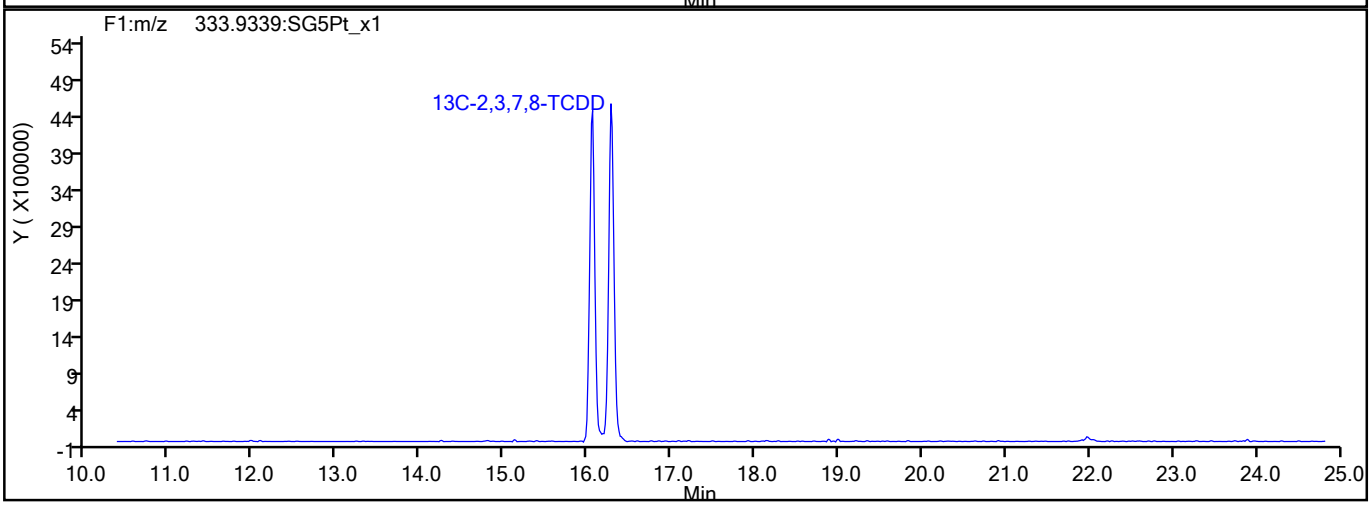

791790

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

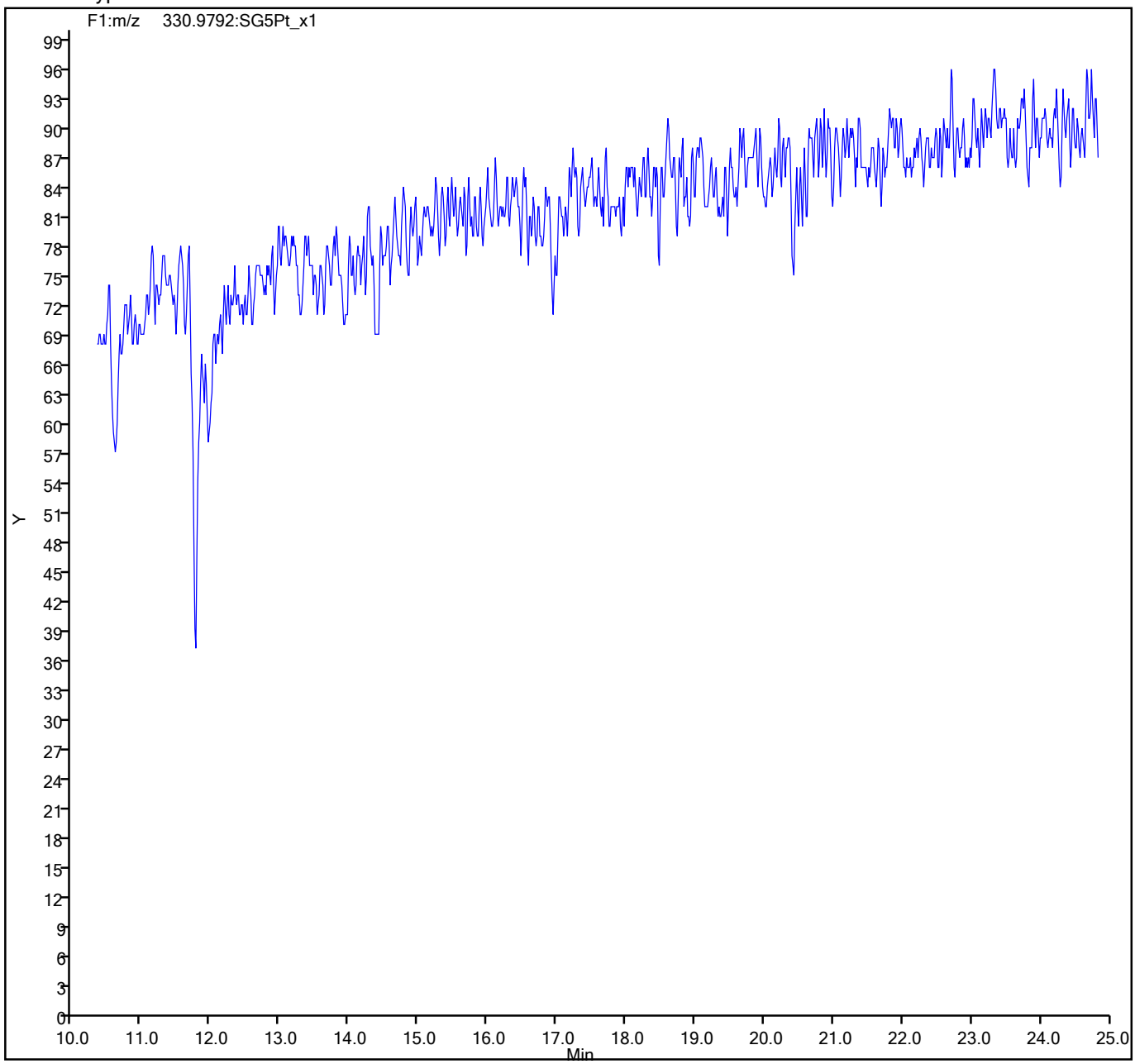

791791

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Lab Sample ID: CCV 320-521760/2 Calibration Date: 09/01/2021 10:08

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 01SE2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.004		9.49	10.0	95	78-129
2,3,7,8-TCDF	AveID	0.998	0.9794		9.82	10.0	98	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9401		107	100	107	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.391		104	100	104	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9382		10.8	10.0	108	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
01SE2111D2	1	CPS 090121	CPS HRDXNCP_00044				1.00000	
01SE2111D2	2	CCV 090121	CCV CS-4 HRDXNL4_00100				1.00000	
01SE2111D2	3	SB 090121	Solvent Blank C-14				1.00000	
01SE2111D2	4	320-515851	320-77315-A-1-A	20	1613B/Solid	D271	10.00000	g
01SE2111D2	5	320-515851	320-77315-A-7-A	20	1613B/Solid		10.00000	g
01SE2111D2	6	320-515851	320-77315-A-8-A	20	1613B/Solid		10.00000	g
01SE2111D2	7	320-515851	320-77421-A-7-A	20	1613B/Solid		10.00000	g
01SE2111D2	8	320-515851	320-77421-A-13-A	20	1613B/Solid		10.00000	g
01SE2111D2	9	320-515492	320-77214-A-1-A X10	20	1613B/Solid	D270	10.00000	g
01SE2111D2	10						1.00000	
01SE2111D2	11						1.00000	
01SE2111D2	12						1.00000	
01SE2111D2	13		DB 09-01-21				1.00000	
01SE2111D2	14						1.00000	

LOGFILE CHECKED
DB 9/1/21

Peak Locate Examination: 1-SEP-2021:09:25 File:01SE2111D2
Experiment:DB225RES Function:1 Reference:PFK

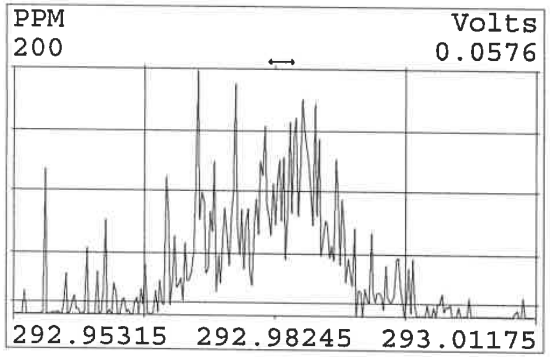

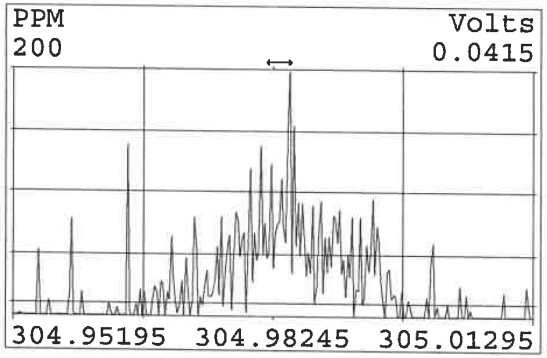

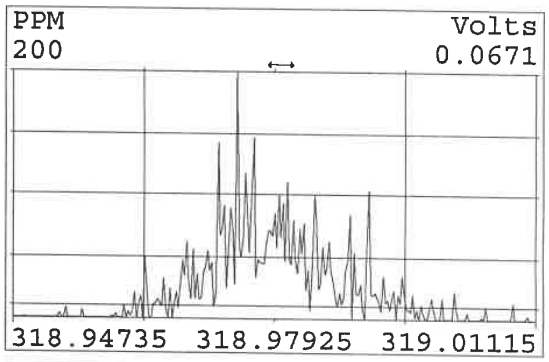

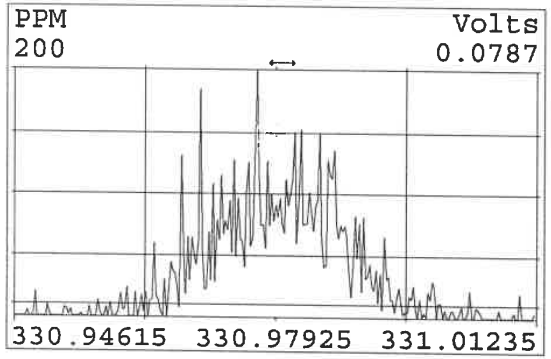

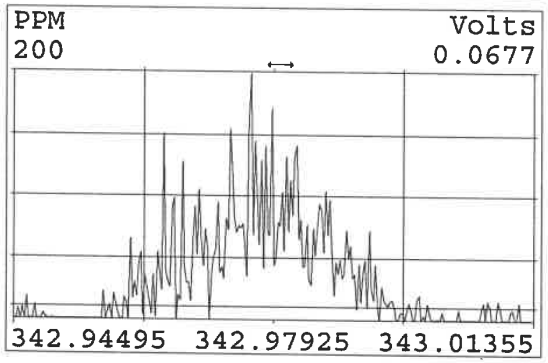

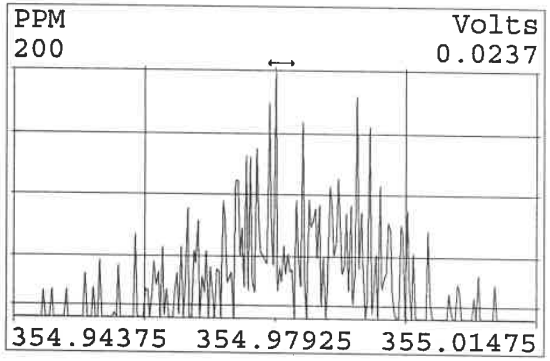

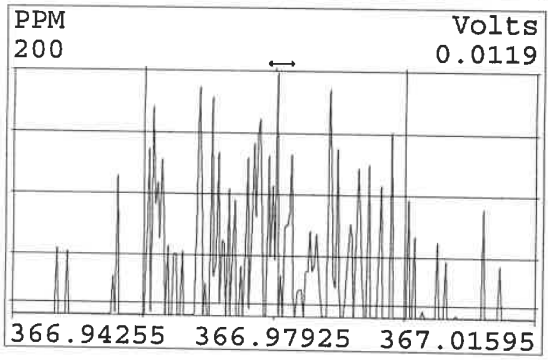

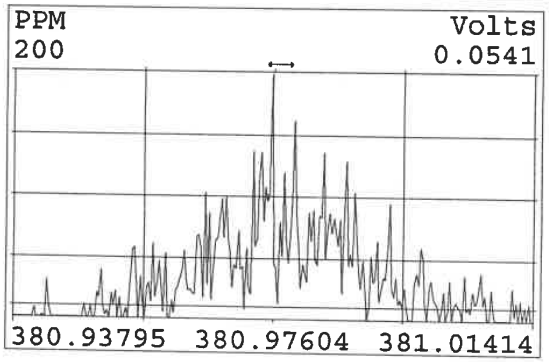

791794

Peak Locate Examination: 1-SEP-2021:15:15 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

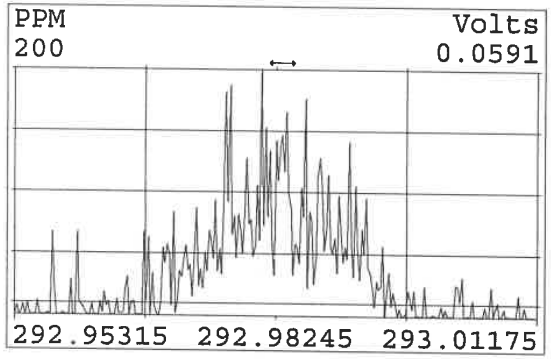

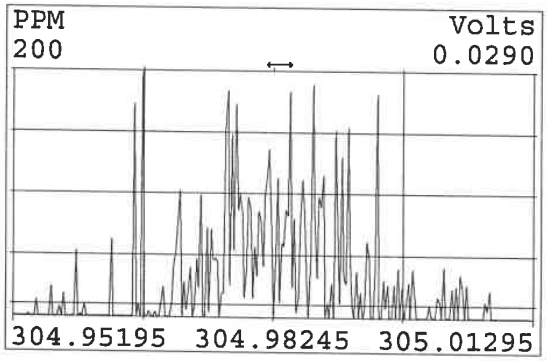

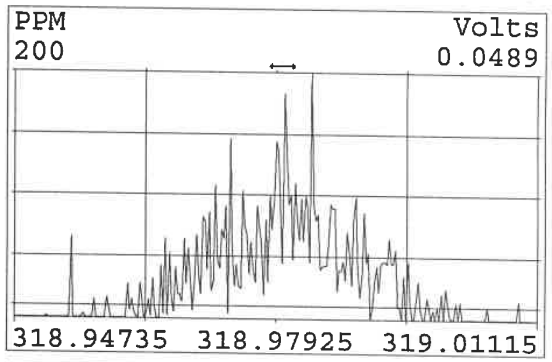

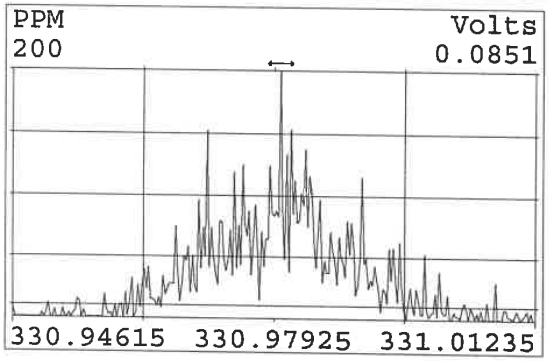

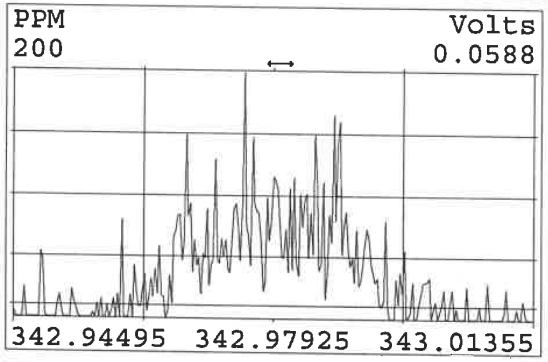

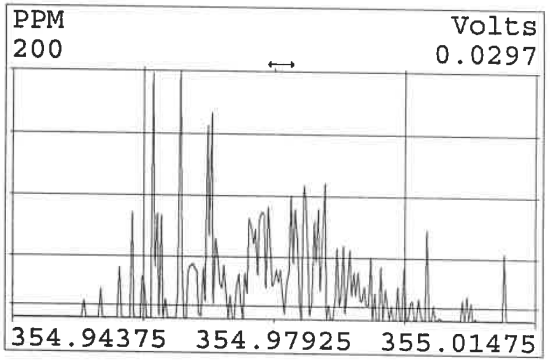

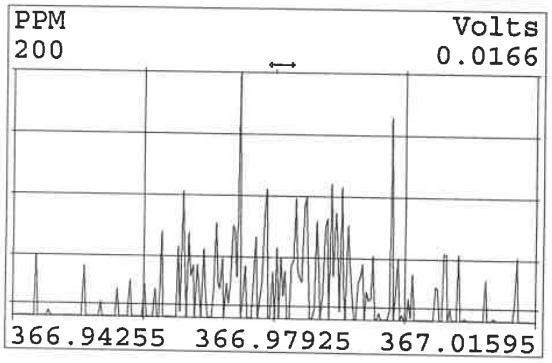

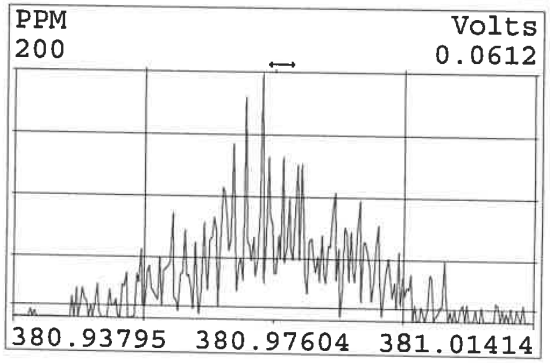

791795

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 01-Sep-2021 10:08:43 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 15:43:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 15:34:14

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.299	19731988	0.73	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.616	27440781	0.81	1.3327	104.4	104.4	0.4420	0.4420	104	
2,3,7,8-TCDF	17.630	2687592	0.77	0.9978	9.816	9.816	0.1099	0.1099	98.16	
D 13C-2,3,7,8-TCDD	16.066	18550478	0.75	0.8749	107.5	107.5	0.8252	0.8252	107	
$ 37Cl4-2,3,7,8-TCDD	16.080	1851158		0.8648	10.8	10.8	0.1245	0.1245	108	
2,3,7,8-TCDD	16.094	1861701	0.86	1.0570	9.495	9.495	0.1682	0.1682	94.95	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 01-Sep-2021 10:08:43 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 15:43:10 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 15:34:14

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.299	16.299	0		8337597	1885717	7389	18472	255		
333.9339	16.299	16.299	0		11394391	2447513	5125	12812	478	0.73(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.616	17.616	0	1.081	12283052	2385531	3950	9875	604		
317.9389	17.616	17.616	0	1.081	15157729	2962478	6261	15652	473	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.630	17.630	0	1.001	1166800	238248	861	2152	277		
305.8987	17.630	17.630	0	1.001	1520792	275887	1484	3710	186	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	0.986	7932809	1949817	7389	18472	264		
333.9339	16.066	16.066	0	0.986	10617669	2494924	5125	12812	487	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.080	0	0.987	1851158	371099	1866	4665	199		
2,3,7,8-TCDD											
319.8965	16.094	16.094	0	1.002	859820	188584	1479	3697	128		
321.8936	16.094	16.094	0	1.002	1001881	231345	1681	4202	138	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 01-Sep-2021 15:43:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_002.d		
Injection Date:	01-Sep-2021 10:08:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521760	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

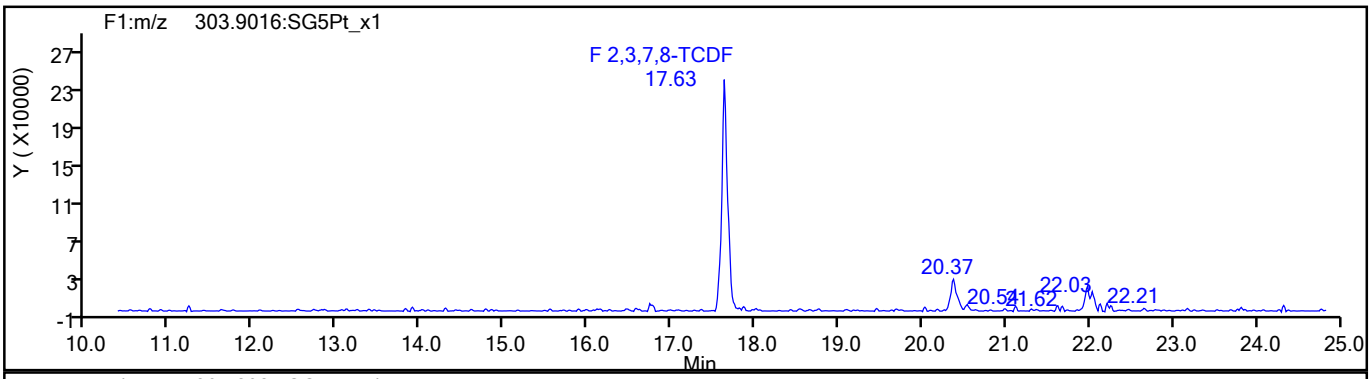

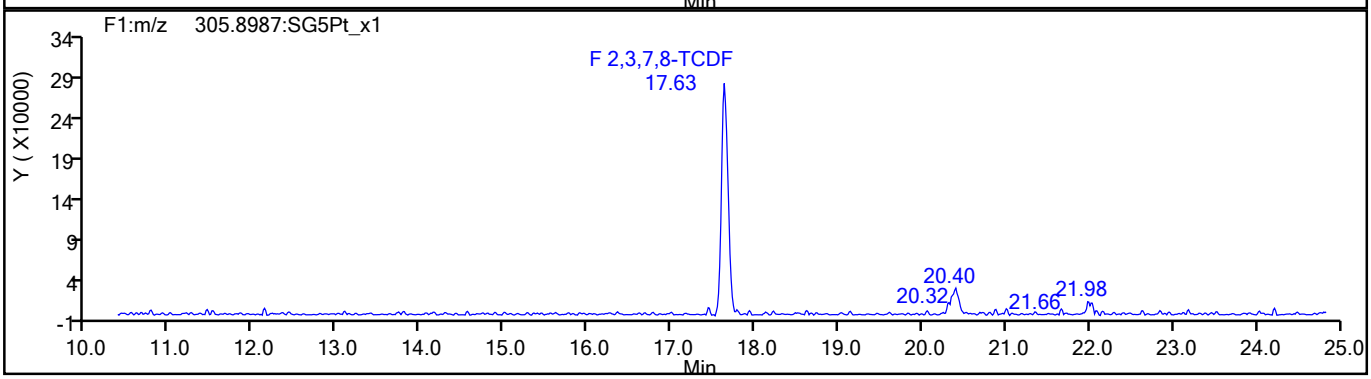

TCDF Standards

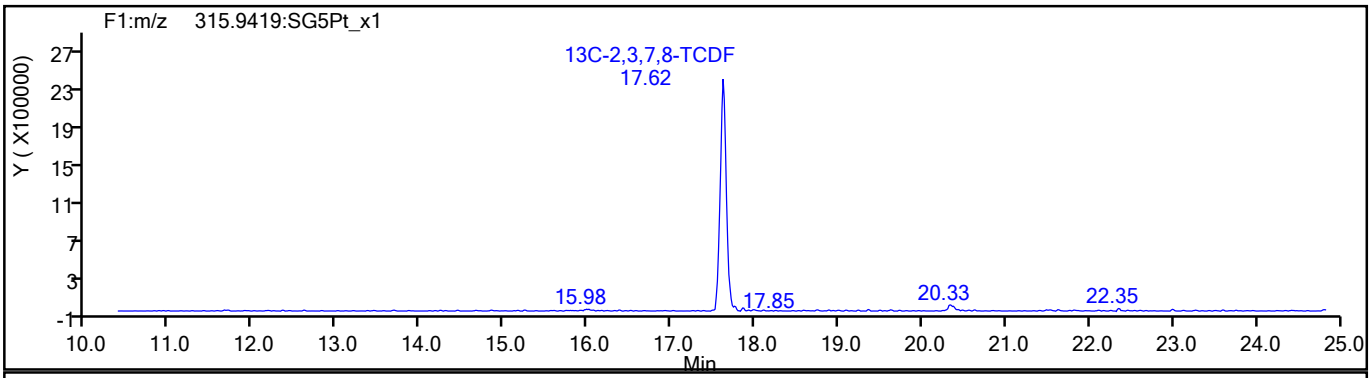

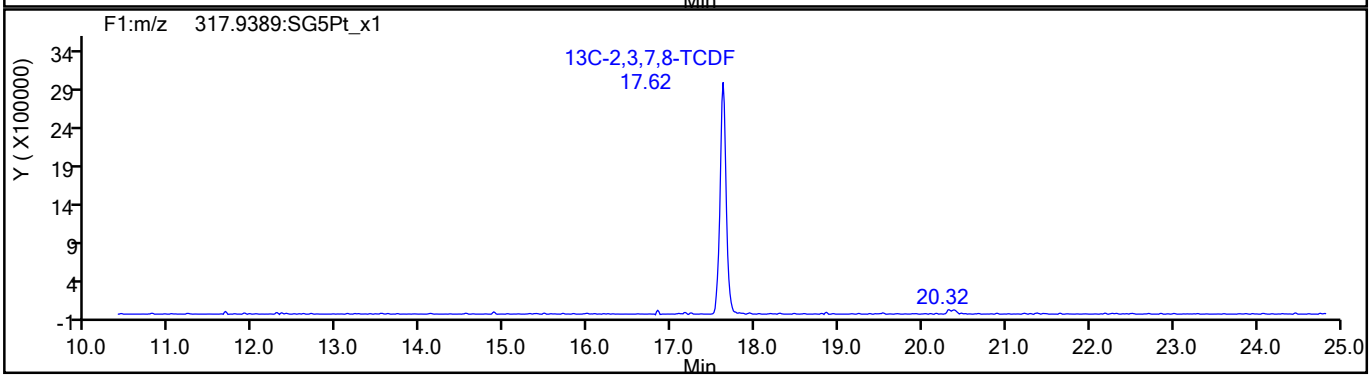

791798

Report Date: 01-Sep-2021 15:43:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_002.d		
Injection Date:	01-Sep-2021 10:08:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521760	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

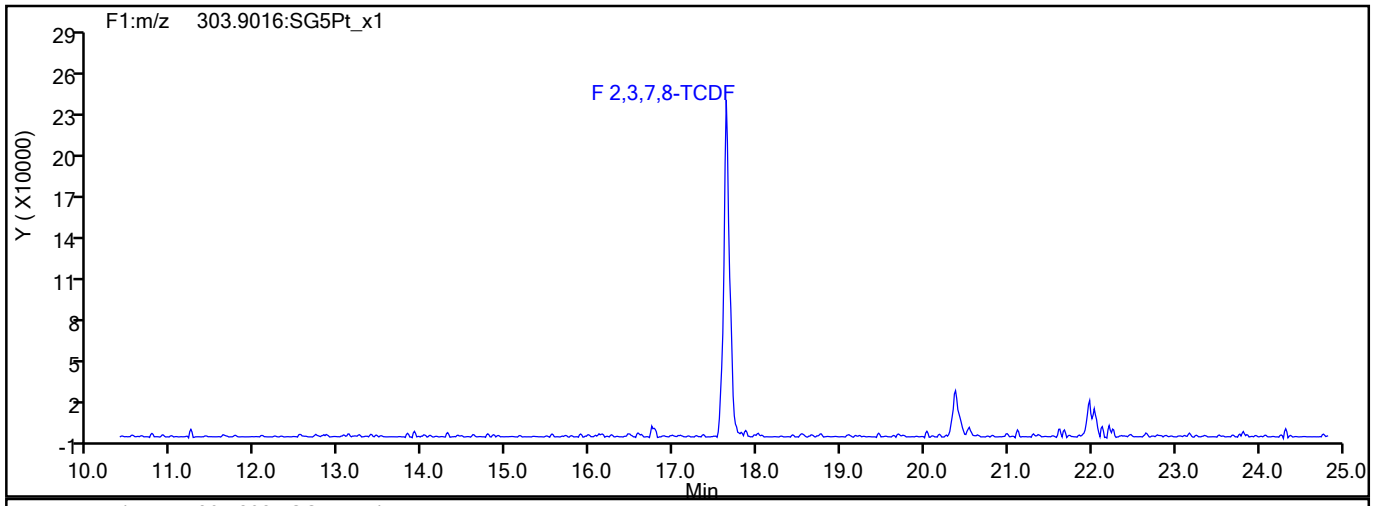

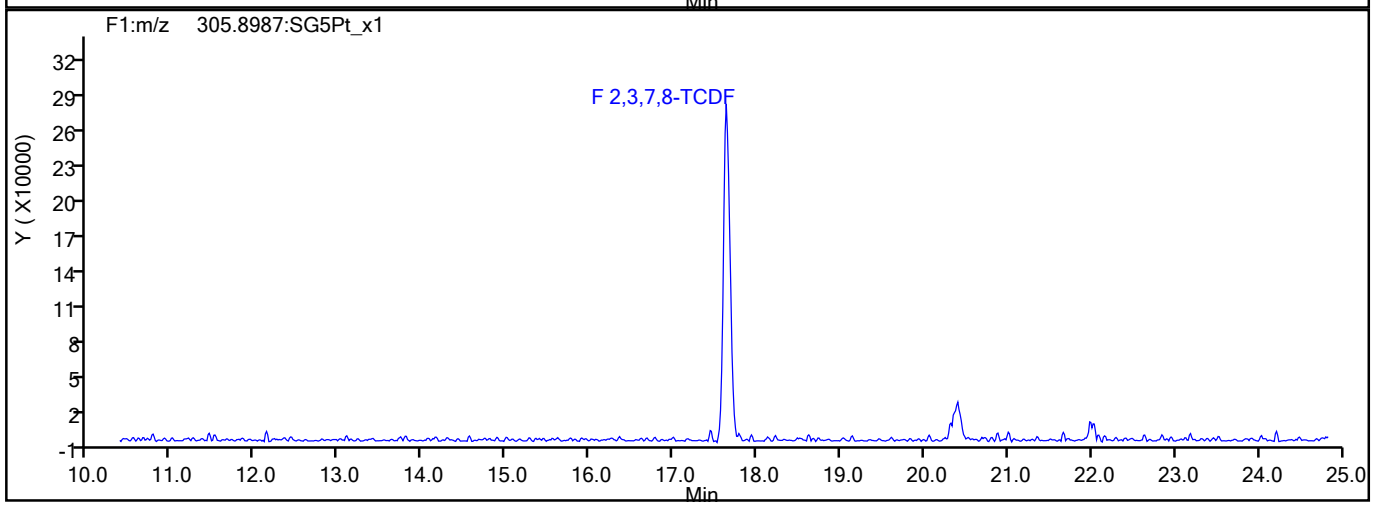

TCDF Interference Mass

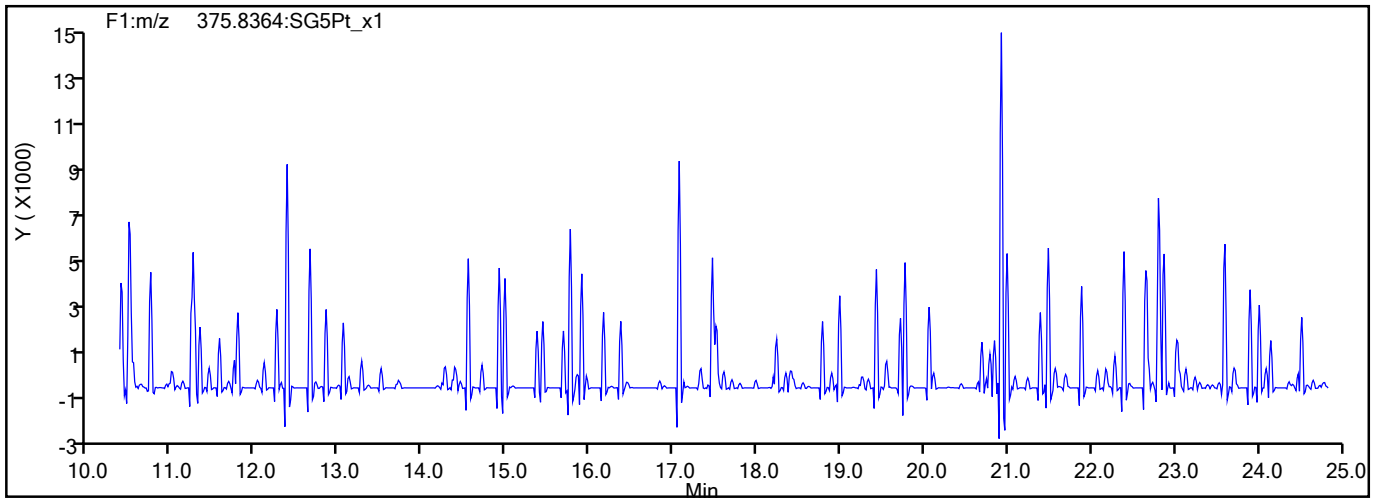

791799

Report Date: 01-Sep-2021 15:43:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_002.d		
Injection Date:	01-Sep-2021 10:08:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521760	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

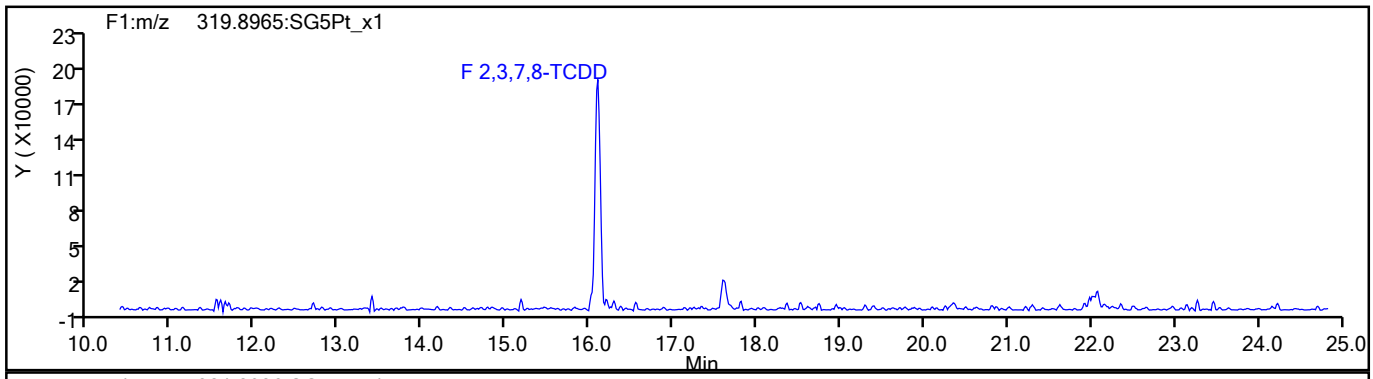

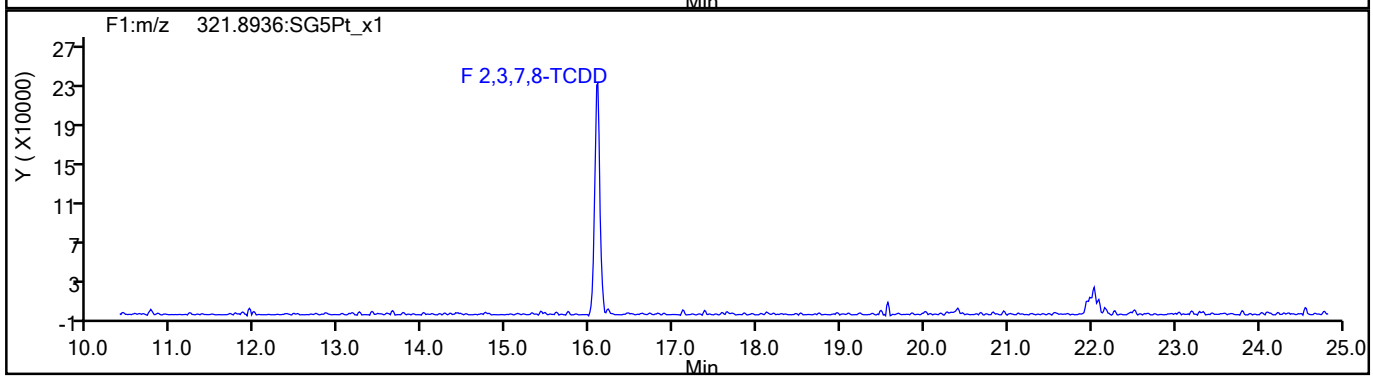

TCDD Standards

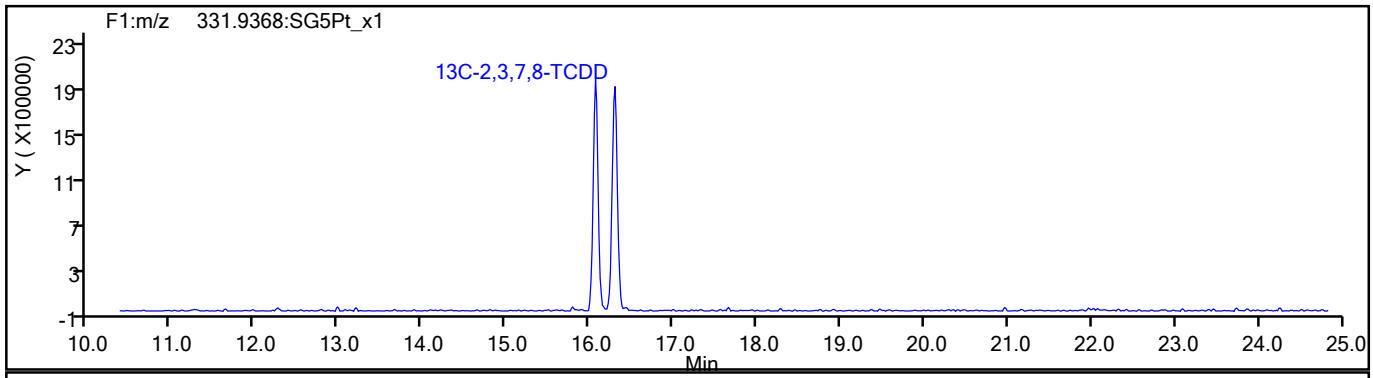

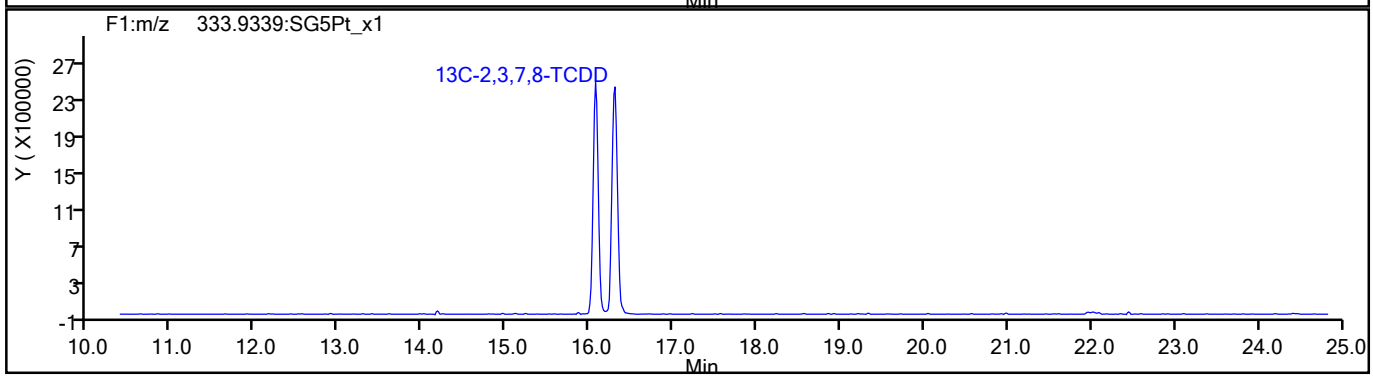

791800

Report Date: 01-Sep-2021 15:43:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_002.d		
Injection Date:	01-Sep-2021 10:08:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521760	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

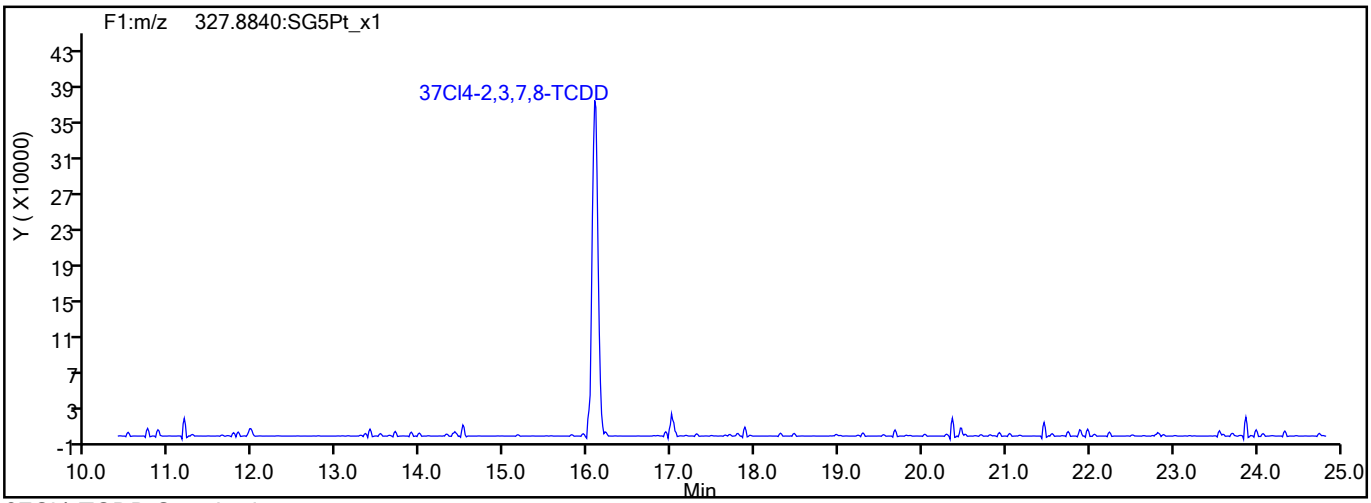

37Cl4-TCDD Standards

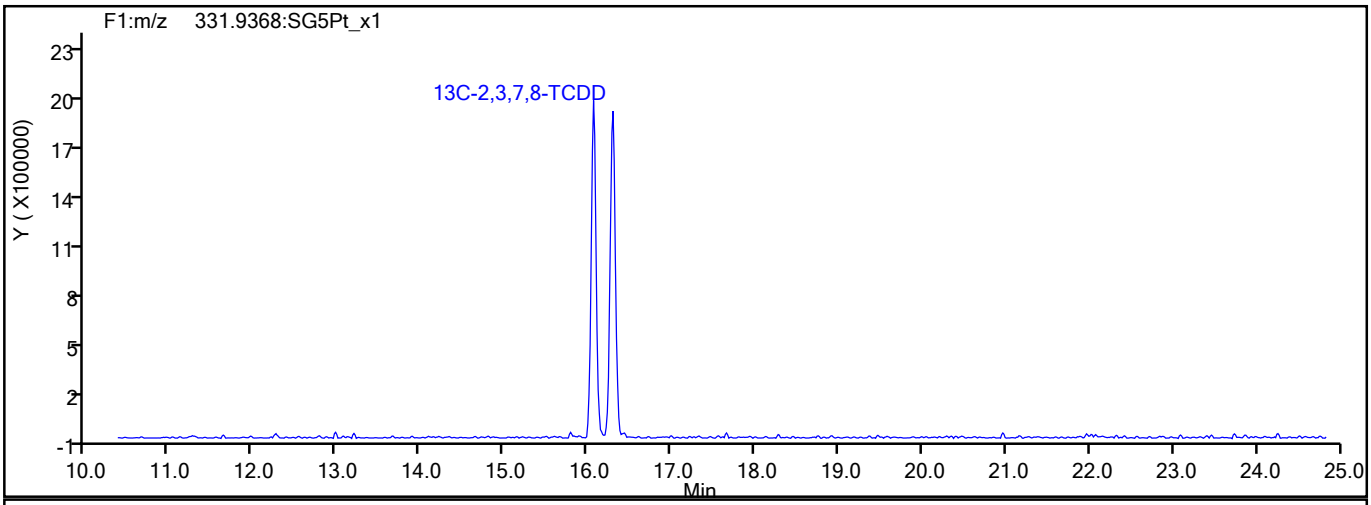

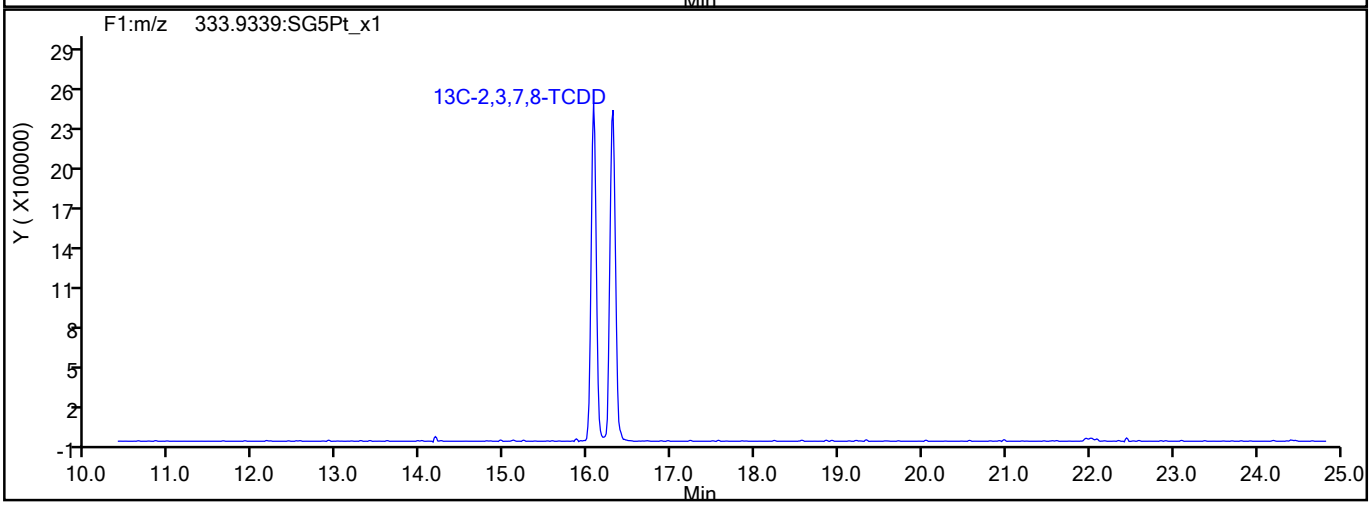

791801

Report Date: 01-Sep-2021 15:43:10 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_002.d		
Injection Date:	01-Sep-2021 10:08:43	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521760	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

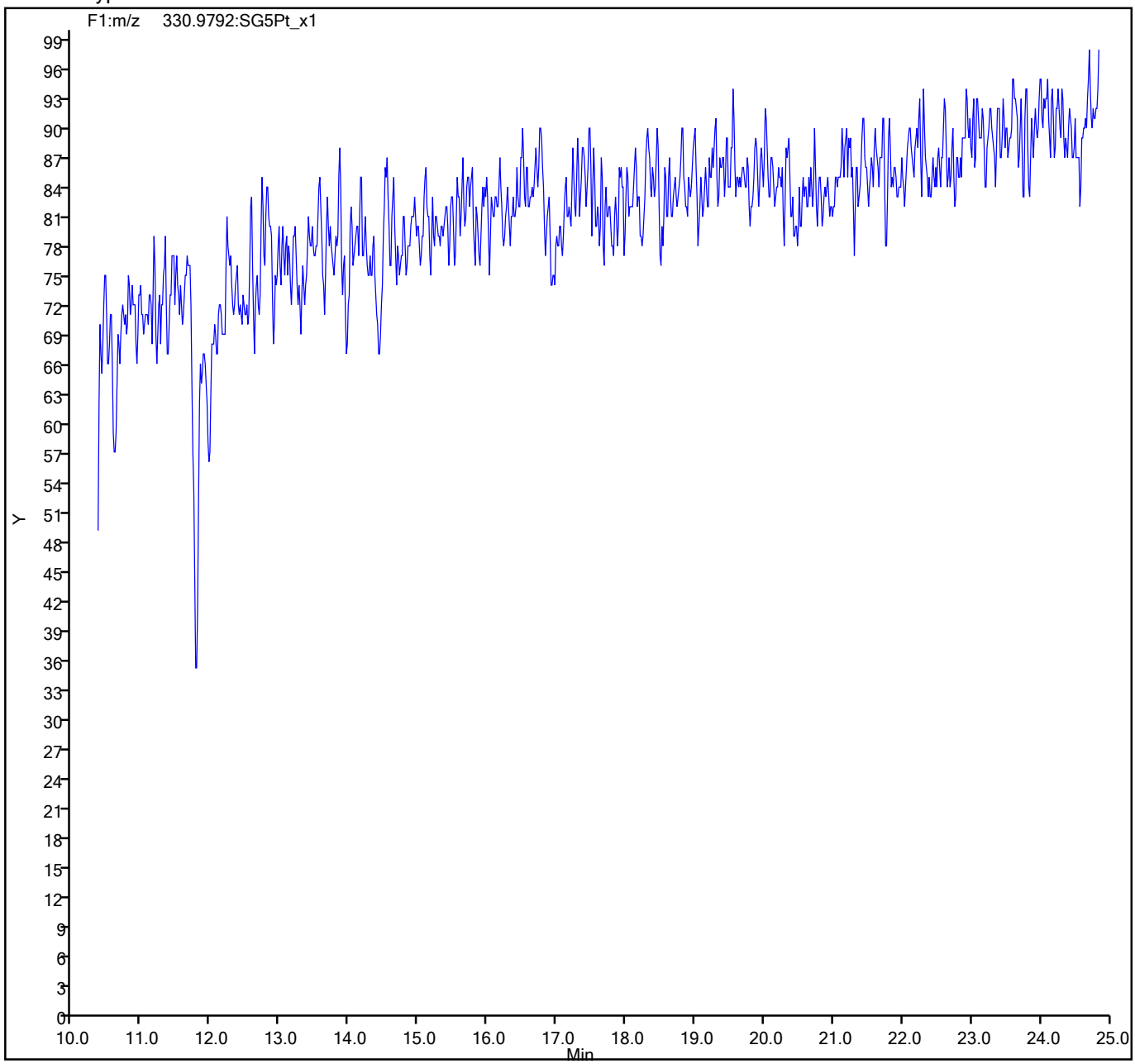

791802

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.598	43192451	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.628	95812265	0.77	1.0239	86.7	86.7	0.4368	0.4368		
A Non-2,3,7,8-sub-TCDF	17.311	141340622	0.77	1.0239	127.8	127.8	0.4368	50.4		
S Total TCDF					214.5	214.5	0.4368	0.4368		
D 13C-2,3,7,8-TCDD	18.323	22643725	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.338	31002300	0.78	1.2541	43.7	43.7	0.2199	0.2199		
A Non-2,3,7,8-sub-TCDD	17.772	120319254	0.78	1.2541	169.5	169.5	0.2199	46.0		
S Total TCDD					213.1	213.1	0.2199	0.2199		
A F1 PeCDFs	20.244	36548211	1.59	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.473	28699153	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.744	44367204	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.542	988216341	1.23	0.0000						
A Non-2,3,7,8-sub-HxCDF	30.542	1016402527	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	31.215	43254937	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.911	28490431	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	35.005	21744380	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.458						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.714	17168827	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.133	55744963	0.78							a
1,3,6,8-TCDD	16.071	32157911	0.78							a
2,3,4,7-TCDF	17.628	95812265	0.77							a
1,2,3,7-TCDD	18.218	26254918	0.77							a
1,2,3,9-TCDF	18.505	41465019	0.77							a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,9-TCDD	18.505	32677146	0.79							a
1,2,8,9-TCDD	19.472	12707183								a
1,2,8,9-TCDF	19.488	41982512	0.76							a
1,3,4,6,8-PeCDF	19.760	36548211	1.59							a
1,2,4,7,9-PeCDD	21.576	23369968	1.58							a
1,2,3,8,9-PeCDD	25.912	20997236	1.59							a
1,2,3,8,9-PeCDF	26.144	28026312	1.61							a
1,2,3,4,6,8-HxCDF	28.479	29886017	1.22							a
1,2,4,6,7,9-HxCDD	30.023	21768457	1.27							a
1,2,3,4,6,7-HxCDD	32.299	21486480	1.24							a
1,2,3,4,8,9-HxCDF	32.605	28186186	1.23							a
1,2,3,4,6,7,9-HpCDD	34.154						0.0	0.0		U

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	1.000	18796968	4666881	8168	20420	571		
317.9389	17.598	17.598	0	1.000	24395483	6066397	3473	8682	1747	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.002	41629702	9682578	19585	48962	494		
305.8987	17.628	17.631	0	1.002	54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.133	17.311	-130	0.860	24509538	7569037	19585	48962	386		
305.8987	15.133	17.311	-130	0.860	31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
303.9016	18.505	17.311	72	1.052	18061189	4195885	19585	48962	214		
305.8987	18.505	17.311	72	1.052	23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
303.9016	19.488	17.311	130	1.107	18098944	4035450	19585	48962	206		
305.8987	19.488	17.311	130	1.107	23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
303.9016	19.775	17.311	148	1.124	944774	152570	19585	48962	8		
305.8987	19.775	17.311	148	1.124	1203354	204203	28414	71035	7	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.000	10063481	2396990	3086	7715	777		
333.9339	18.323	18.323	0	1.000	12580244	3018588	1527	3817	1977	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.357	-1	1.001	13597515	3193209	6116	15290	522		
321.8936	18.338	18.357	-1	1.001	17404785	4135946	8817	22042	469	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	16.071	17.772	-102	0.877	14103074	4061475	6116	15290	664		
321.8936	16.071	17.772	-102	0.877	18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
319.8965	18.218	17.772	27	0.994	11446127	2829889	6116	15290	463		
321.8936	18.218	17.772	27	0.994	14808791	3726958	8817	22042	423	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	18.505	17.772	44	1.010	14439496	3301963	6116	15290	540		
321.8936	18.505	17.772	44	1.010	18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
319.8965	19.472	17.772	102	1.063	12707183	2751784	6116	15290	450		
321.8936	19.472	17.772	102	1.063	16522096	3661962	8817	22042	415	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.760	20.244	-29	1.000	22414023	4920048	649	1622	7581		
341.8567	19.760	20.244	-29	1.000	14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.344	23.473	-127	1.000	84191	14080	2633	6582	5		
341.8567	21.344	23.473	-127	1.000	53909	7615	1950	4875	4	1.56(1.32-1.78)	
339.8597	22.176	23.473	-78	1.000	88076	13805	2633	6582	5		
341.8567	22.190	23.473	-77	1.000	48170	9635	1950	4875	5	1.83(1.32-1.78)	
339.8597	22.749	23.473	-43	1.000	168309	20506	2633	6582	8		
341.8567	22.762	23.473	-43	1.000	82177	12827	1950	4875	7	2.05(1.32-1.78)	
339.8597	23.321	23.473	-9	1.000	142716	22963	2633	6582	9		
341.8567	23.321	23.473	-9	1.000	79356	11480	1950	4875	6	1.80(1.32-1.78)	
339.8597	26.144	23.473	160	1.000	17301746	2425915	2633	6582	921		
341.8567	26.144	23.473	160	1.000	10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.576	23.744	-130	1.000	14314296	2552271	2414	6035	1057		
357.8516	21.576	23.744	-130	1.000	9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
355.8546	25.912	23.744	130	1.000	12881489	1801570	2414	6035	746		
357.8516	25.912	23.744	130	1.000	8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	32.605	30.542	124	1.000	15534015	4607321	4603	11507	1001		
375.8178	32.605	30.542	124	1.000	12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.023	31.215	-71	1.000	12175655	1922535	6506	16265	296		
391.8127	30.023	31.215	-71	1.000	9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
389.8157	32.299	31.215	65	1.000	11903453	3254284	6506	16265	500		
391.8127	32.299	31.215	65	1.000	9583027	2649988	5715	14287	464	1.24(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.911	33.926	-1	1.000	14581587	4505694	20273	50682	222		
409.7789	33.911	33.926	-1	1.000	13908844	4348275	17441	43602	249	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.005	35.020	-1	1.000	11106344	3153936	20273	50682	156		
409.7789	35.005	35.020	-1	1.000	10638036	3040493	17441	43602	174	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						20273	50682			
409.7789	34.458						17441	43602			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.726	-1	1.000	8809155	2526480	13831	34577	183		
425.7737	34.714	34.726	-1	1.000	8359672	2427581	13744	34360	177	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						13831	34577			
425.7737	33.504						13744	34360			
1,3,6,8-TCDF											a
303.9016	15.133	15.133	0		24509538	7569037	19585	48962	386		a
305.8987	15.133	15.133	0		31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
1,3,6,8-TCDD											a
319.8965	16.071	16.071	0		14103074	4061475	6116	15290	664		a
321.8936	16.071	16.071	0		18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
2,3,4,7-TCDF											a
303.9016	17.628	17.628	0		41629702	9682578	19585	48962	494		a
305.8987	17.628	17.628	0		54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
1,2,3,7-TCDD											a
319.8965	18.218	18.218	0		11446127	2829889	6116	15290	463		a
321.8936	18.218	18.218	0		14808791	3726958	8817	22042	423	0.77(0.65-0.89)	
1,2,3,9-TCDF											a
303.9016	18.505	18.505	0		18061189	4195885	19585	48962	214		a
305.8987	18.505	18.505	0		23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
1,2,3,9-TCDD											a
319.8965	18.505	18.505	0		14439496	3301963	6116	15290	540		a
321.8936	18.505	18.505	0		18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
1,2,8,9-TCDD											a
319.8965	19.472	19.472	0		12707183	2751784	6116	15290	450		a
1,2,8,9-TCDF											a
303.9016	19.488	19.488	0		18098944	4035450	19585	48962	206		a
305.8987	19.488	19.488	0		23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
1,3,4,6,8-PeCDF											a
339.8597	19.760	19.760	0		22414023	4920048	649	1622	7581		a
341.8567	19.760	19.760	0		14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	21.576	21.576	0		14314296	2552271	2414	6035	1057		a
357.8516	21.576	21.576	0		9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											a
355.8546	25.912	25.912	0		12881489	1801570	2414	6035	746		a
357.8516	25.912	25.912	0		8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	26.144	26.144	0		17301746	2425915	2633	6582	921		a
341.8567	26.144	26.144	0		10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											a
373.8208	28.479	28.479	0		16406487	2121744	4603	11507	461		a
375.8178	28.479	28.479	0		13479530	1752621	3729	9322	470	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											a
389.8157	30.023	30.023	0		12175655	1922535	6506	16265	296		a
391.8127	30.023	30.023	0		9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											a
389.8157	32.299	32.299	0		11903453	3254284	6506	16265	500		a
391.8127	32.299	32.299	0		9583027	2649988	5715	14287	464	1.24(1.05-1.43)	

Report Date: 27-Jul-2021 15:09:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,8,9-HxCDF											a
373.8208	32.605	32.605	0		15534015	4607321	4603	11507	1001		a
375.8178	32.605	32.605	0		12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.154						13831	34577			
425.7737	34.154						13744	34360			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	43192451	10733278

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	43192451	10733278

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.133	24509538	7569037	31235425	9722736	50.4	0.78	
18.505	18061189	4195885	23403830	5509968	37.5	0.77	
19.488	18098944	4035450	23883568	5304928	38.0	0.76	
19.775	944774	152570	1203354	204203	1.94	0.79	
Signal Totals:	61614445	15952942	79726177	20741835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141340622	36694777				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 127.837 = (141340622 * 40.000) / (43192451 * 1.024)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	22643725	5415578

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	22643725	5415578

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.071	14103074	4061475	18054837	5166402	45.3	0.78	
18.218	11446127	2829889	14808791	3726958	37.0	0.77	
18.505	14439496	3301963	18237650	4248308	46.0	0.79	
19.472	12707183	2751784	16522096	3661962	41.2	0.77	
Signal Totals:							
	52695880	12945111	67623374	16803630			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	120319254	29748741				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 169.476 = (120319254 * 40.000) / (22643725 * 1.254)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

F1 PeCDFs, RT: 20.244

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.760	22414023	4920048	14134188	3116108		1.59	
Signal Totals:							
	22414023	4920048	14134188	3116108			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	36548211	8036156				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (36548211 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.344	84191	14080	53909	7615		1.56	
22.176	88076	13805	48170	9635		1.83	R
22.749	168309	20506	82177	12827		2.05	R
23.321	142716	22963	79356	11480		1.80	R
26.144	17301746	2425915	10724566	1530575		1.61	
Signal Totals:							
	17785038	2497269	10988178	1572132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28773216	4069401				1.62	RQ
	28699153	4064735					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (28773216 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (28699153 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.744

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.576	14314296	2552271	9055672	1599456		1.58	
25.912	12881489	1801570	8115747	1169053		1.59	
Signal Totals:							
	27195785	4353841	17171419	2768509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	44367204	7122350				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (44367204 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.542

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
32.605	15534015	4607321	12652171	3734547		1.23	
Signal Totals:							
	15534015	4607321	12652171	3734547			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	988216341	287497877				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (988216341 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 31.215

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.023	12175655	1922535	9592802	1497827		1.27	
32.299	11903453	3254284	9583027	2649988		1.24	
Signal Totals:							
	24079108	5176819	19175829	4147815			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43254937	9324634				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43254937 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

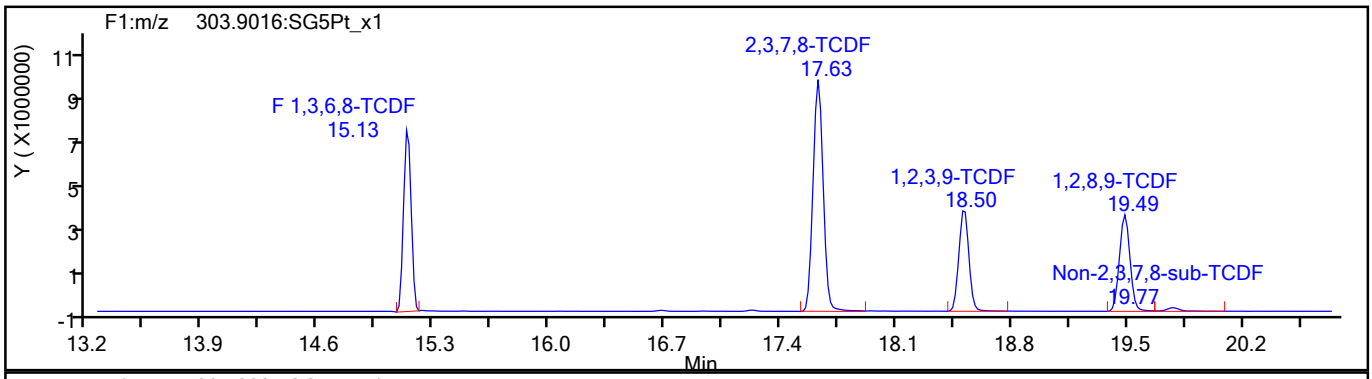

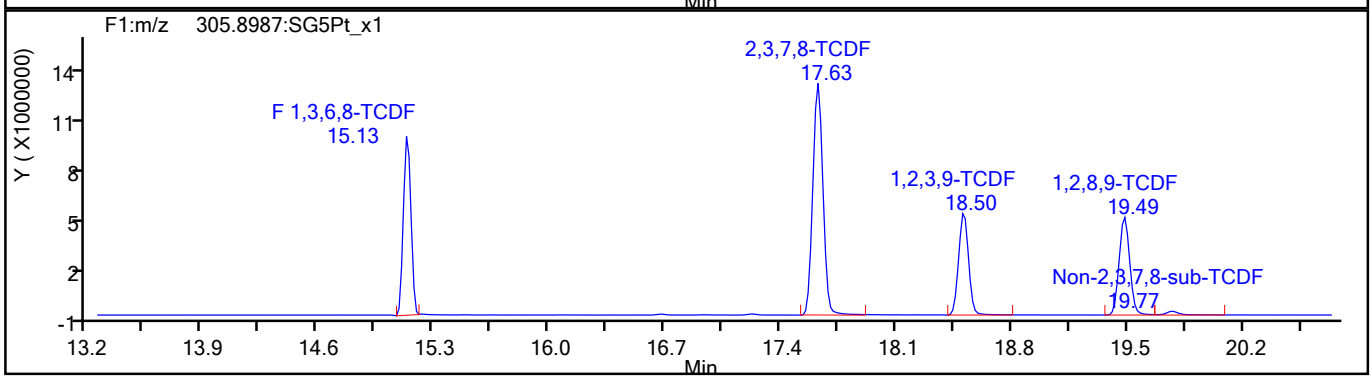

TCDF Standards

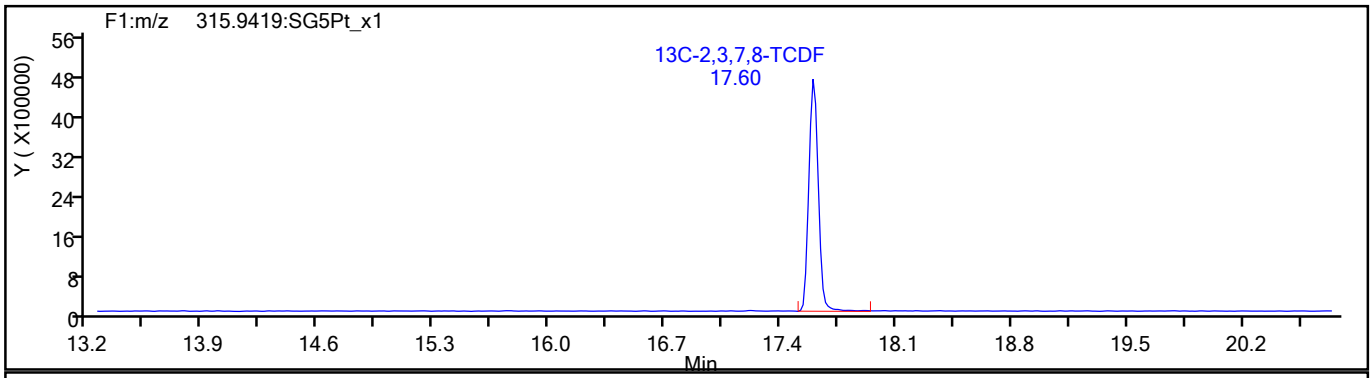

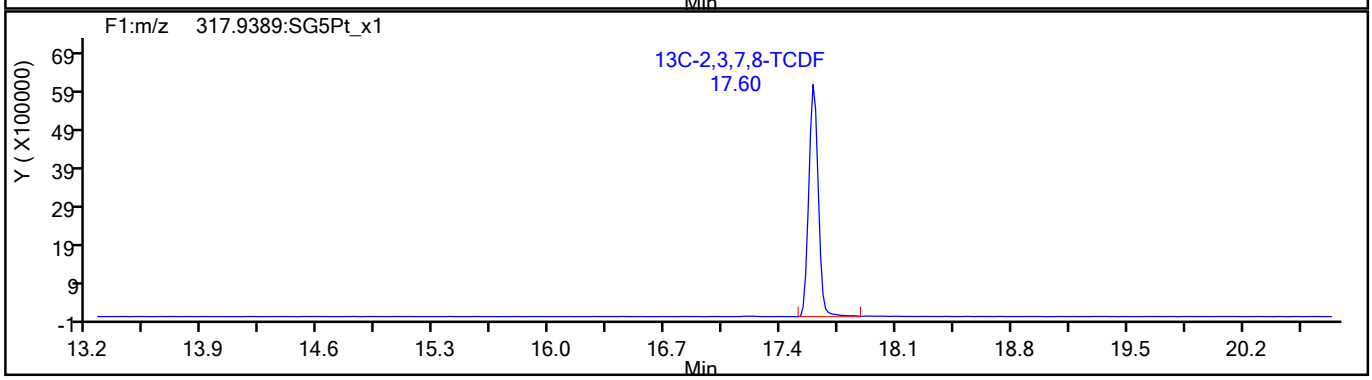

791817

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

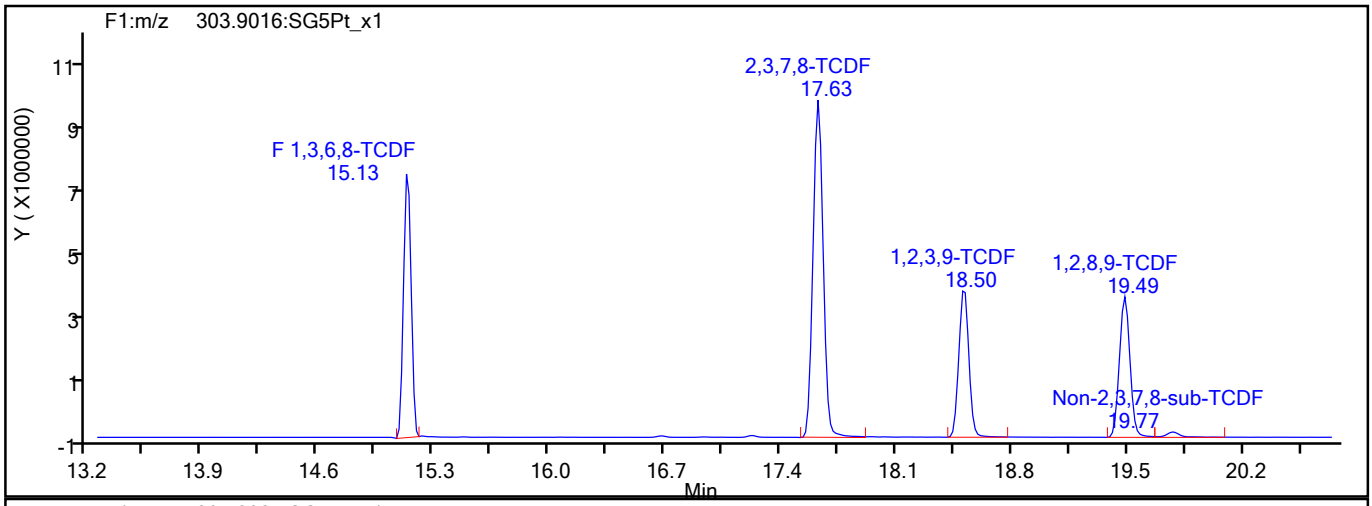

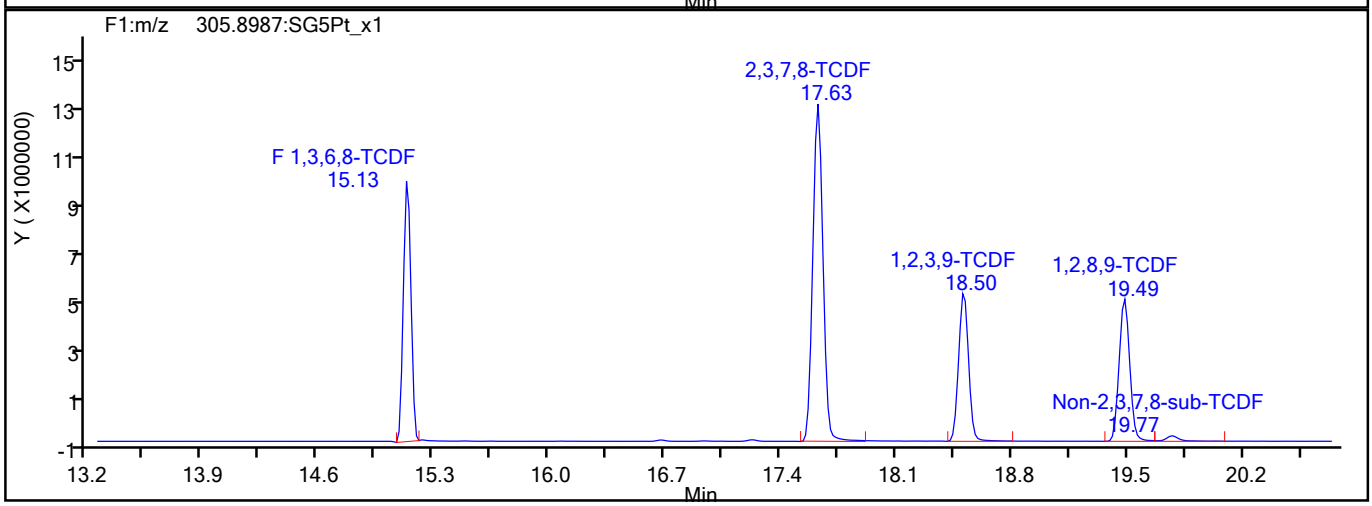

TCDF Interference Mass

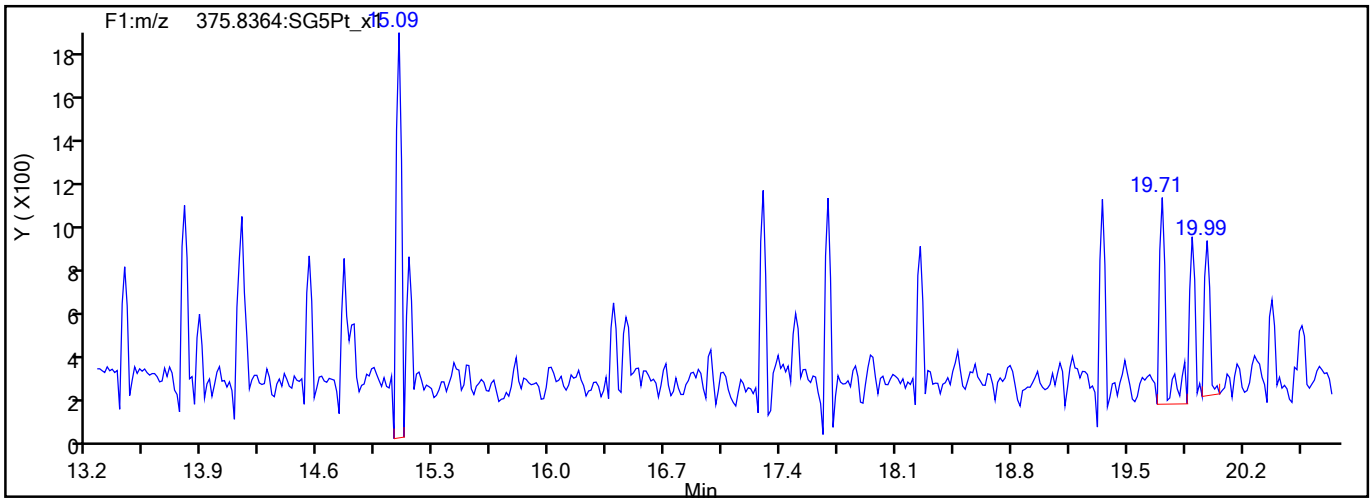

791818

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

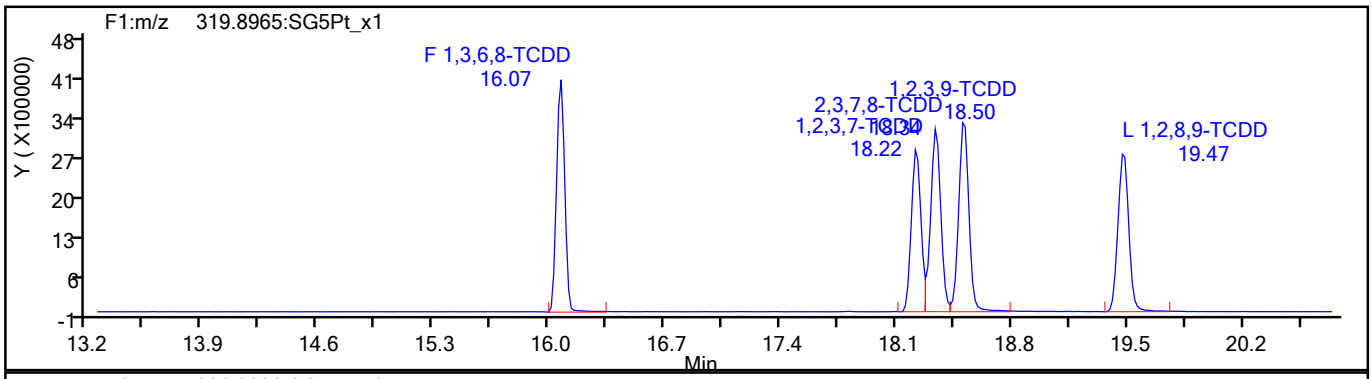

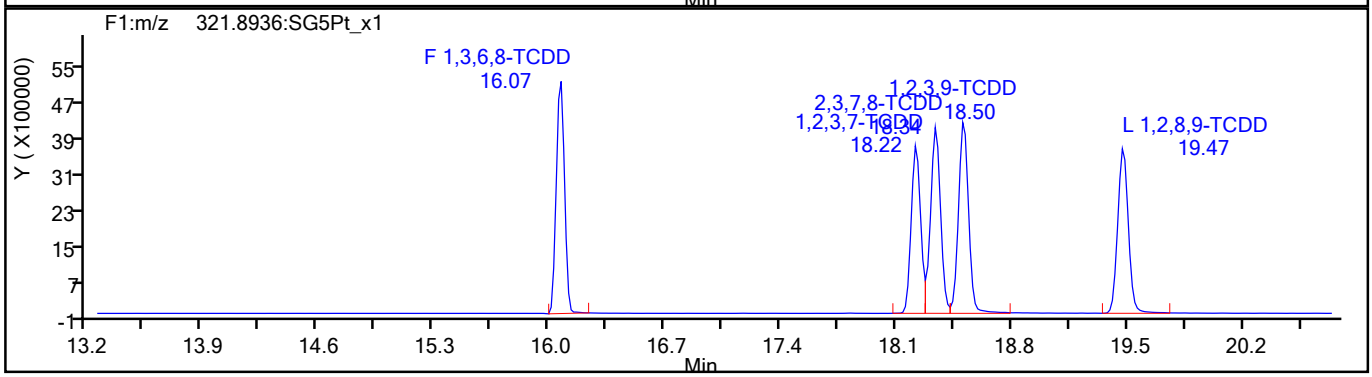

TCDD Standards

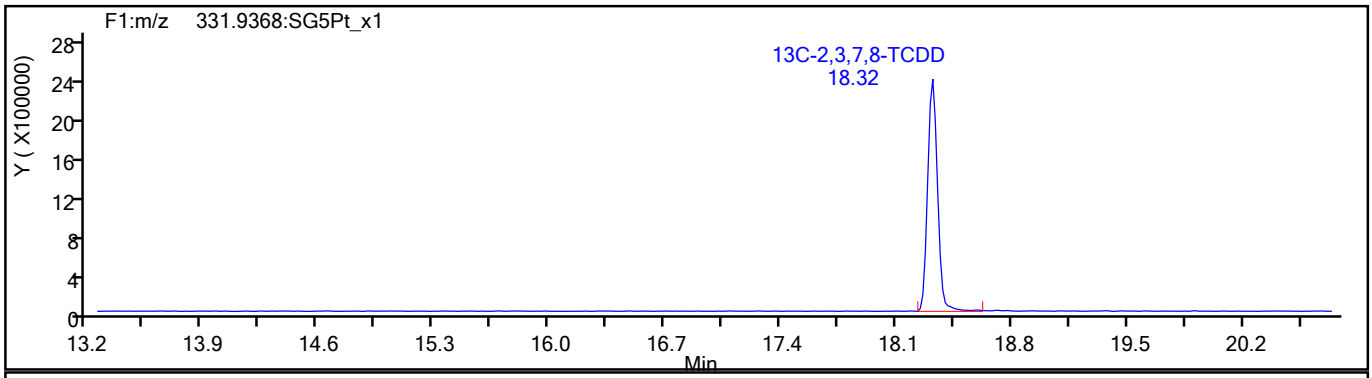

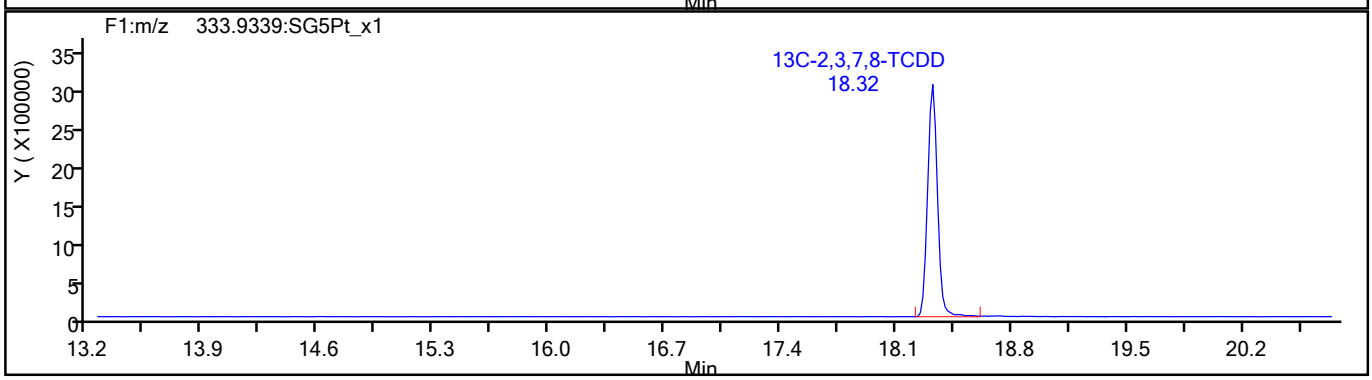

791819

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

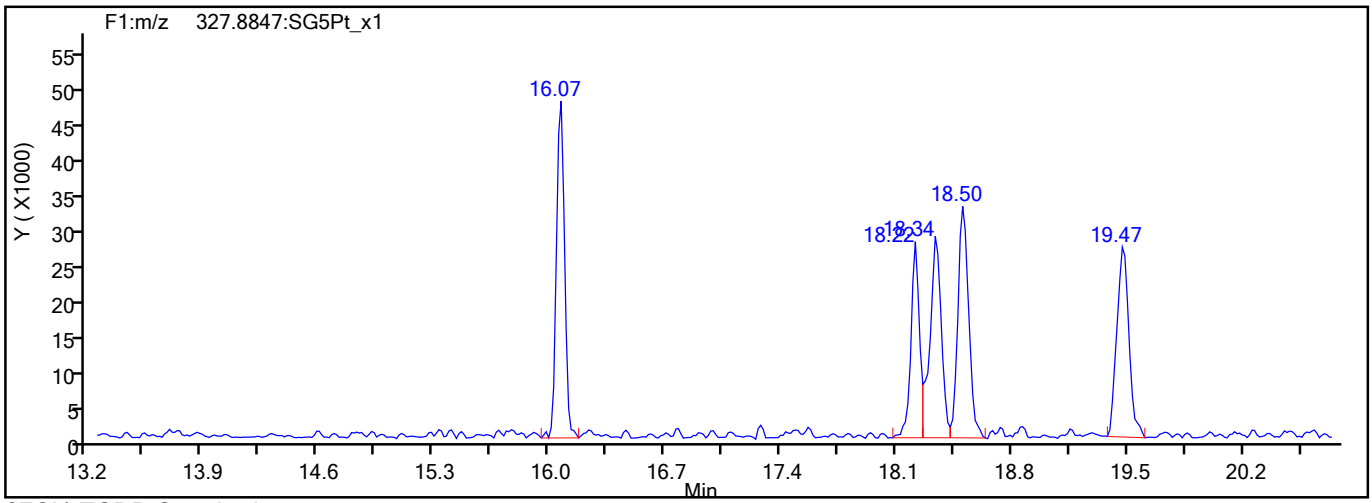

37Cl4-TCDD Standards

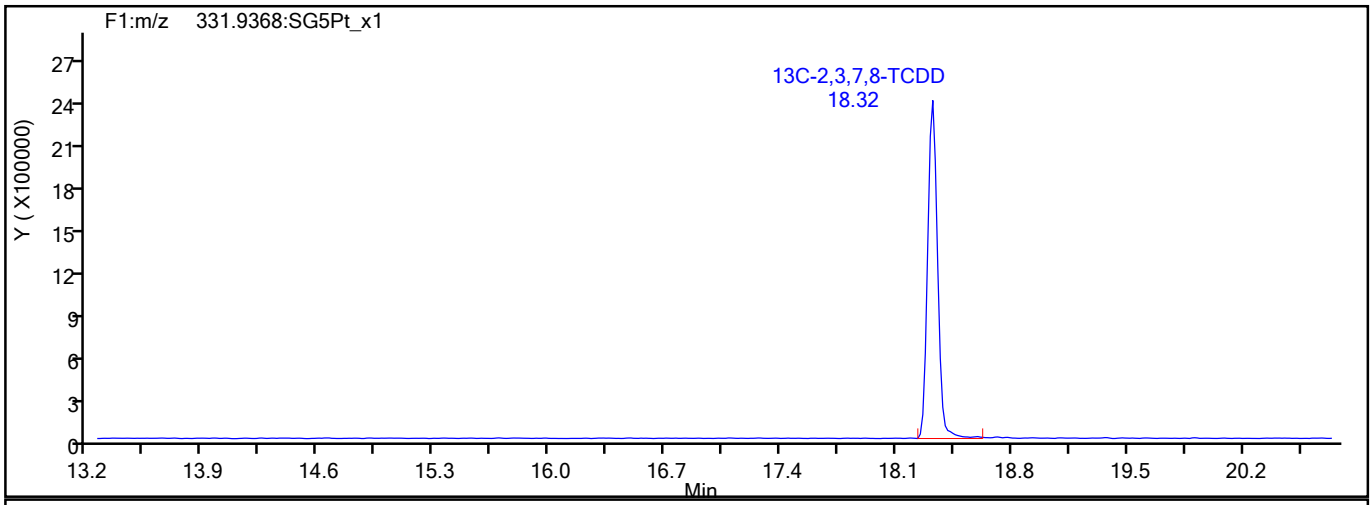

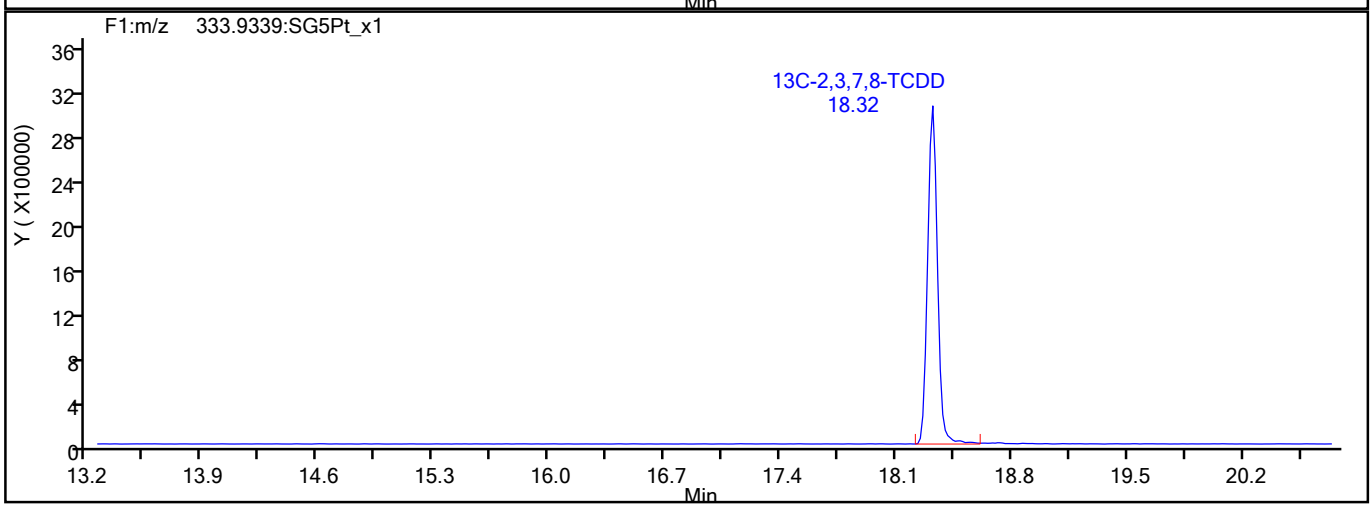

791820

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

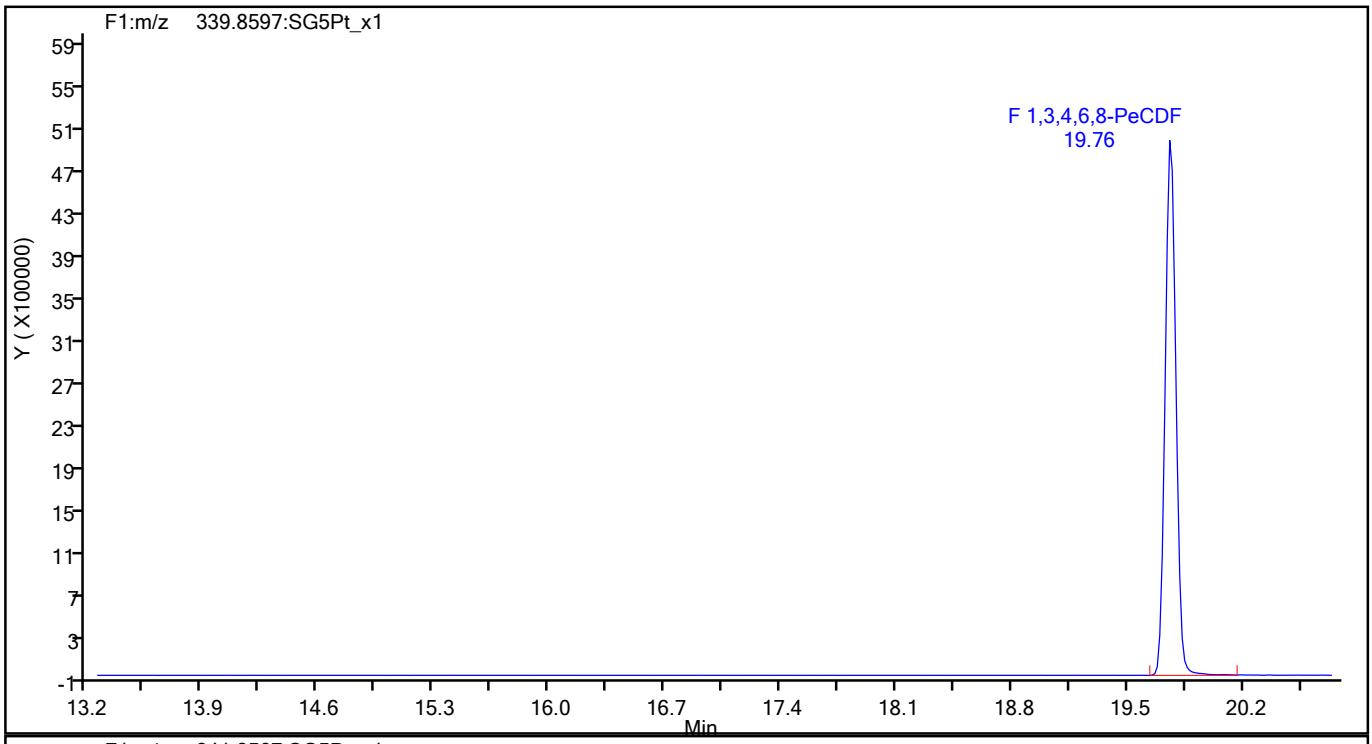

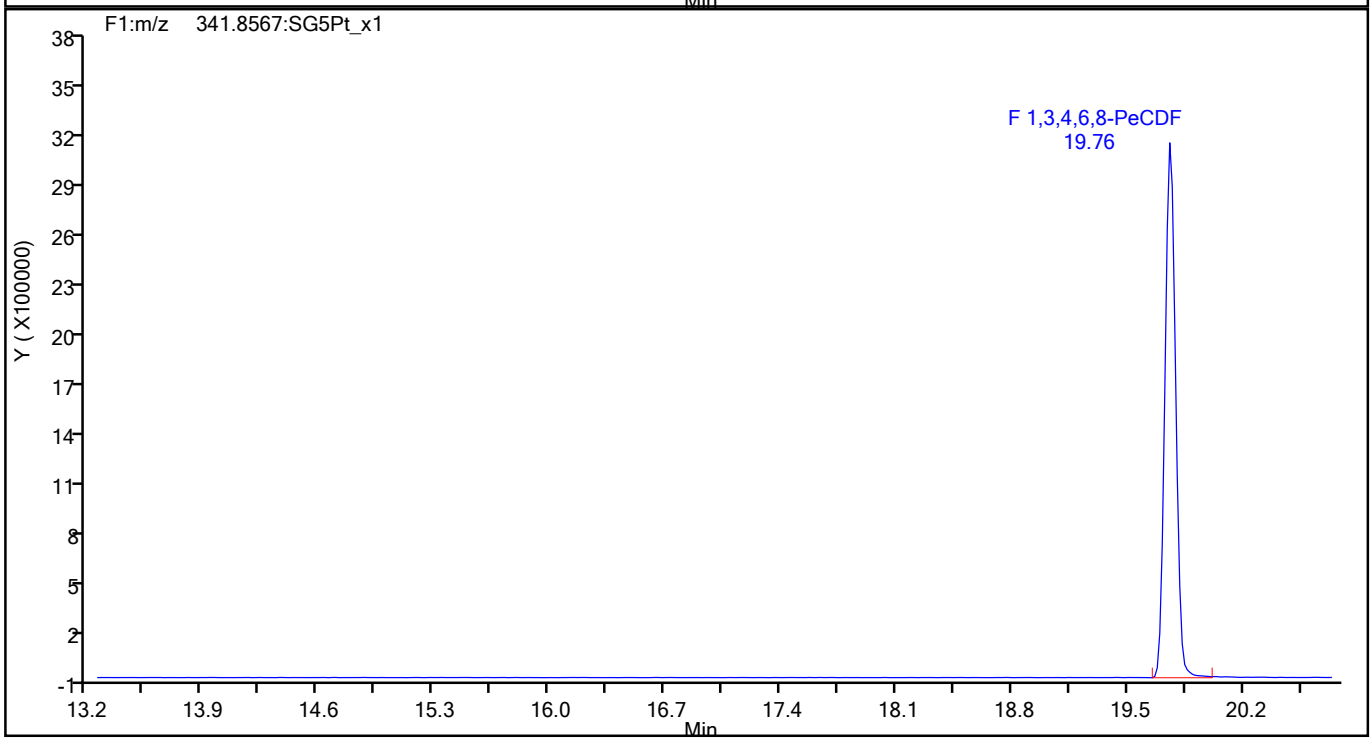

791821

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

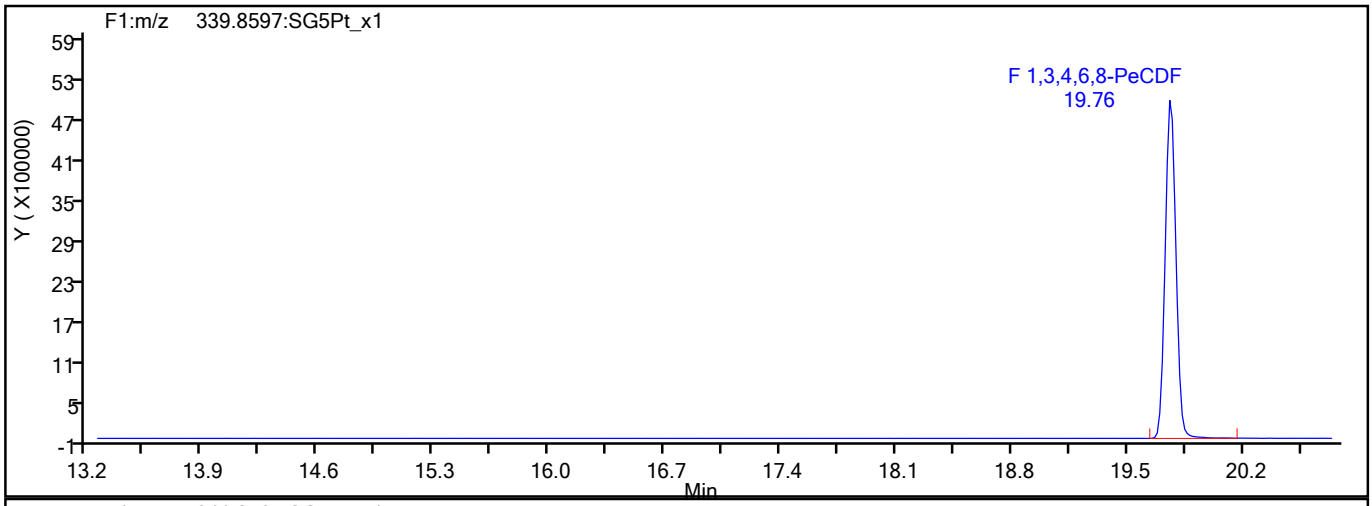

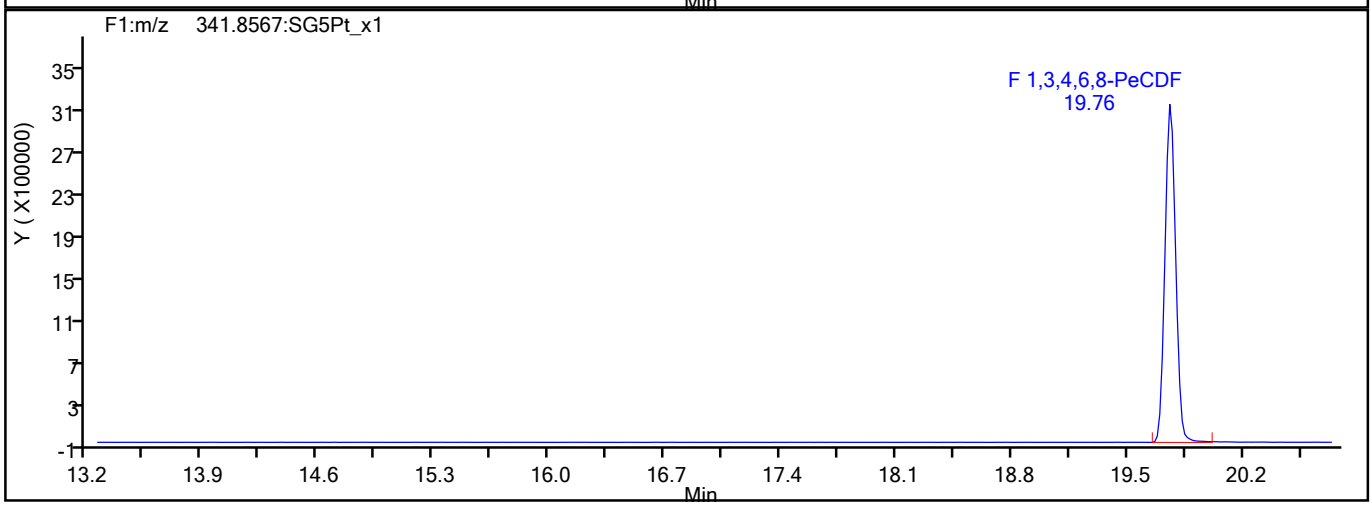

F1 PeCDFs Interference Mass

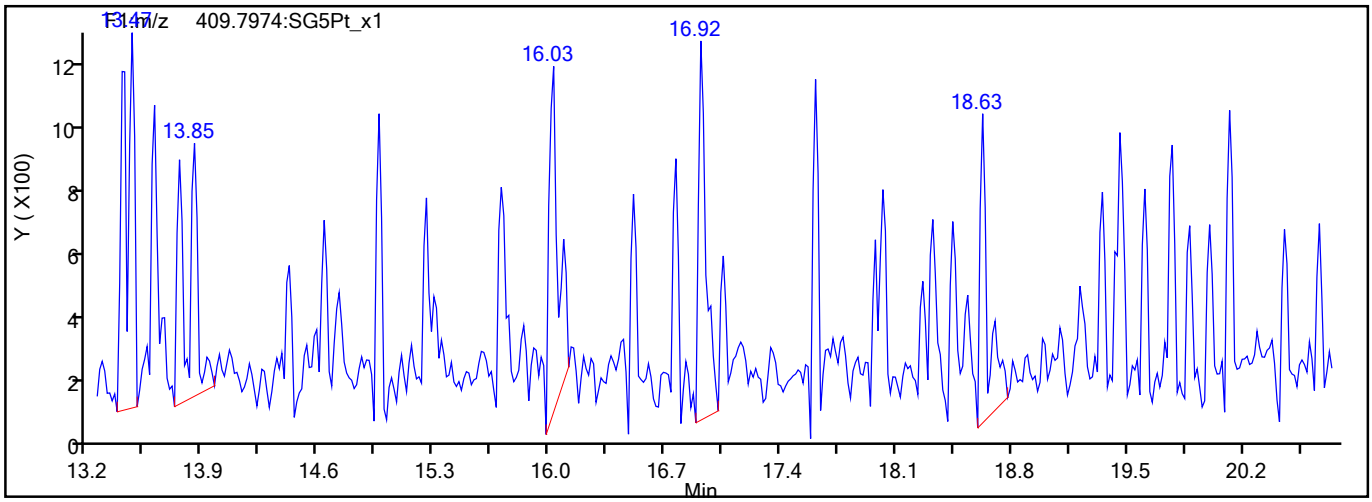

791822

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

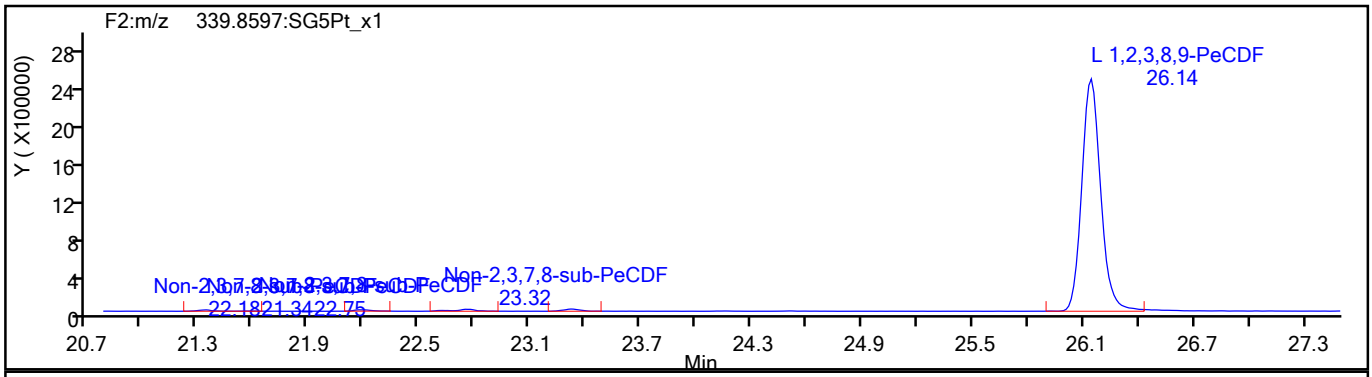

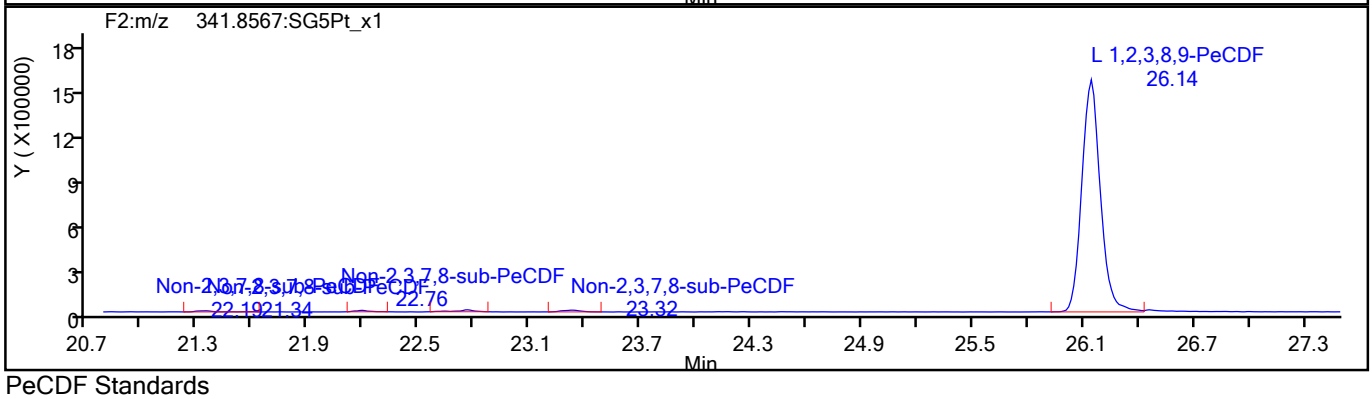

PeCDF Standards

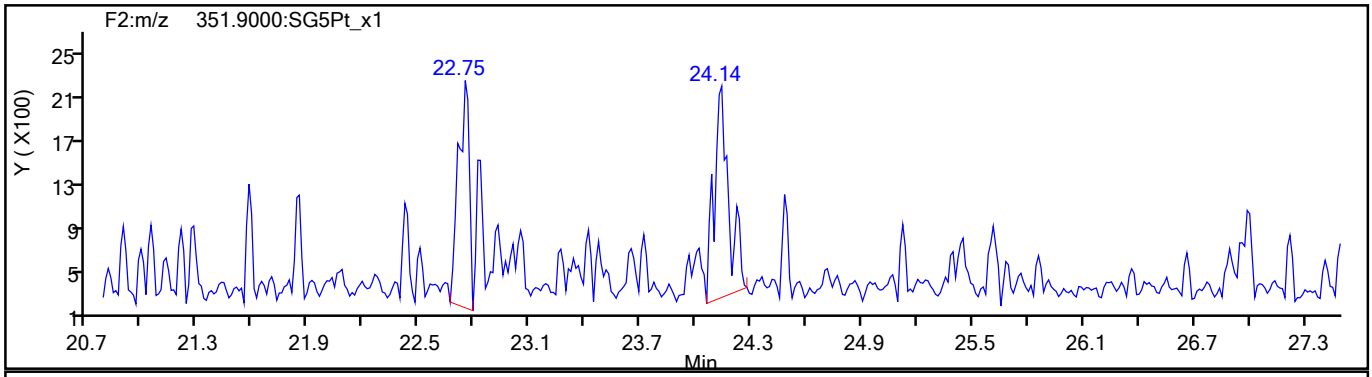

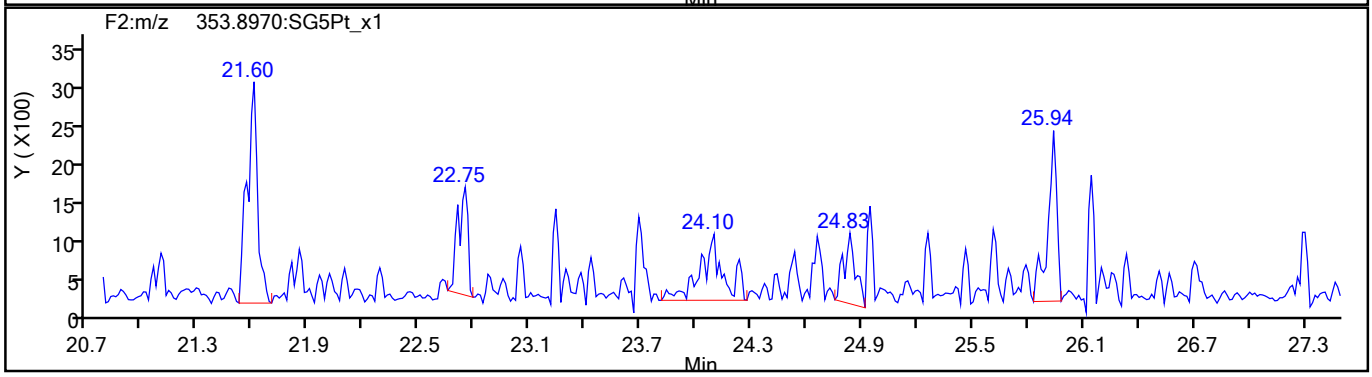

791823

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

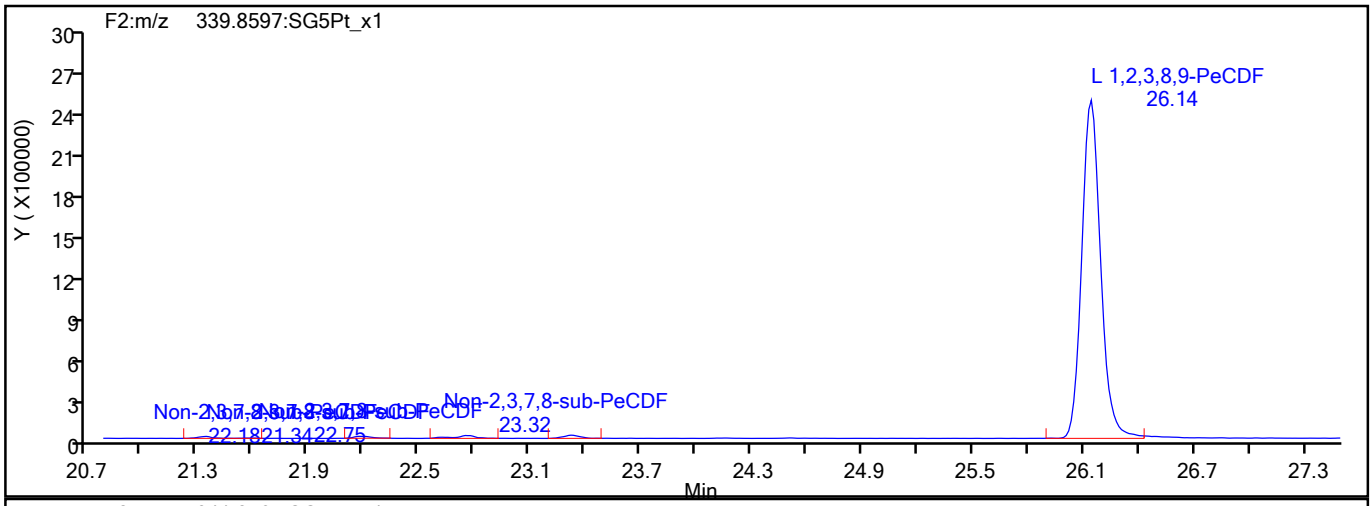

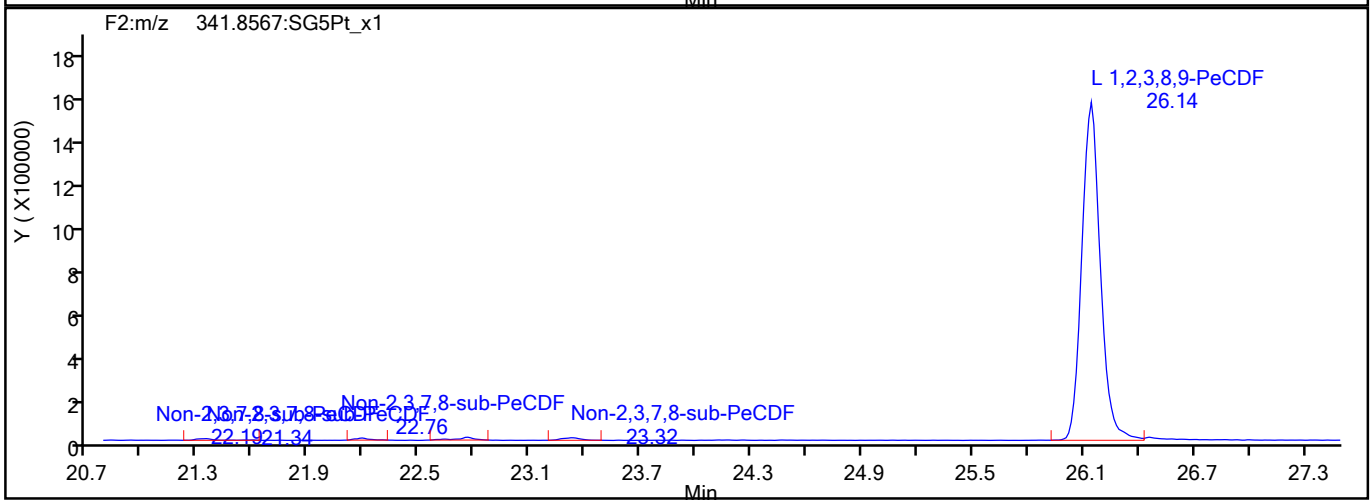

PeCDF Interference Mass

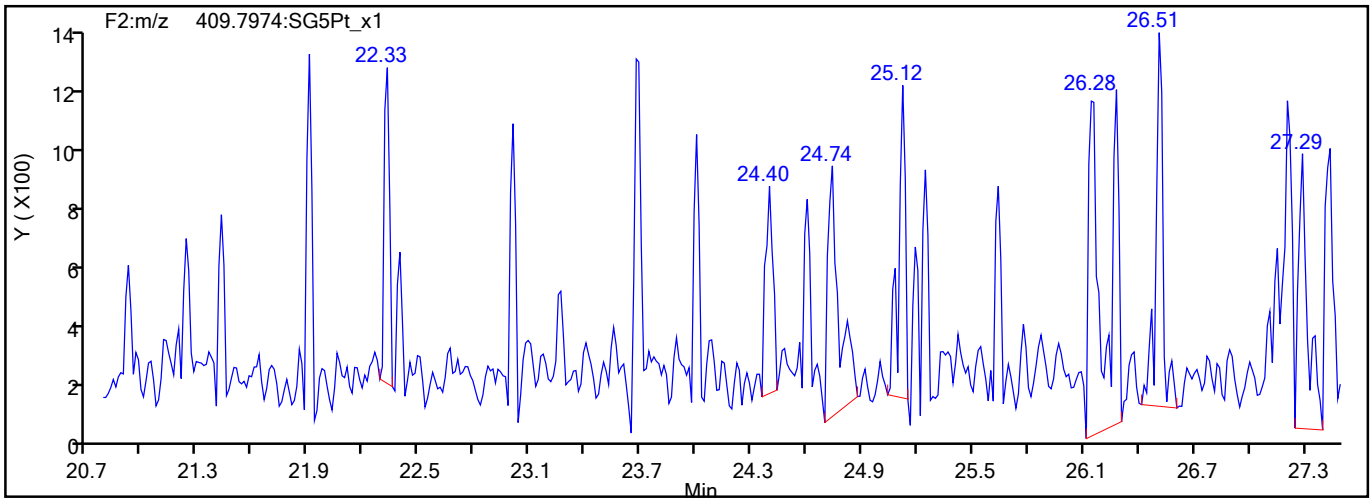

791824

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

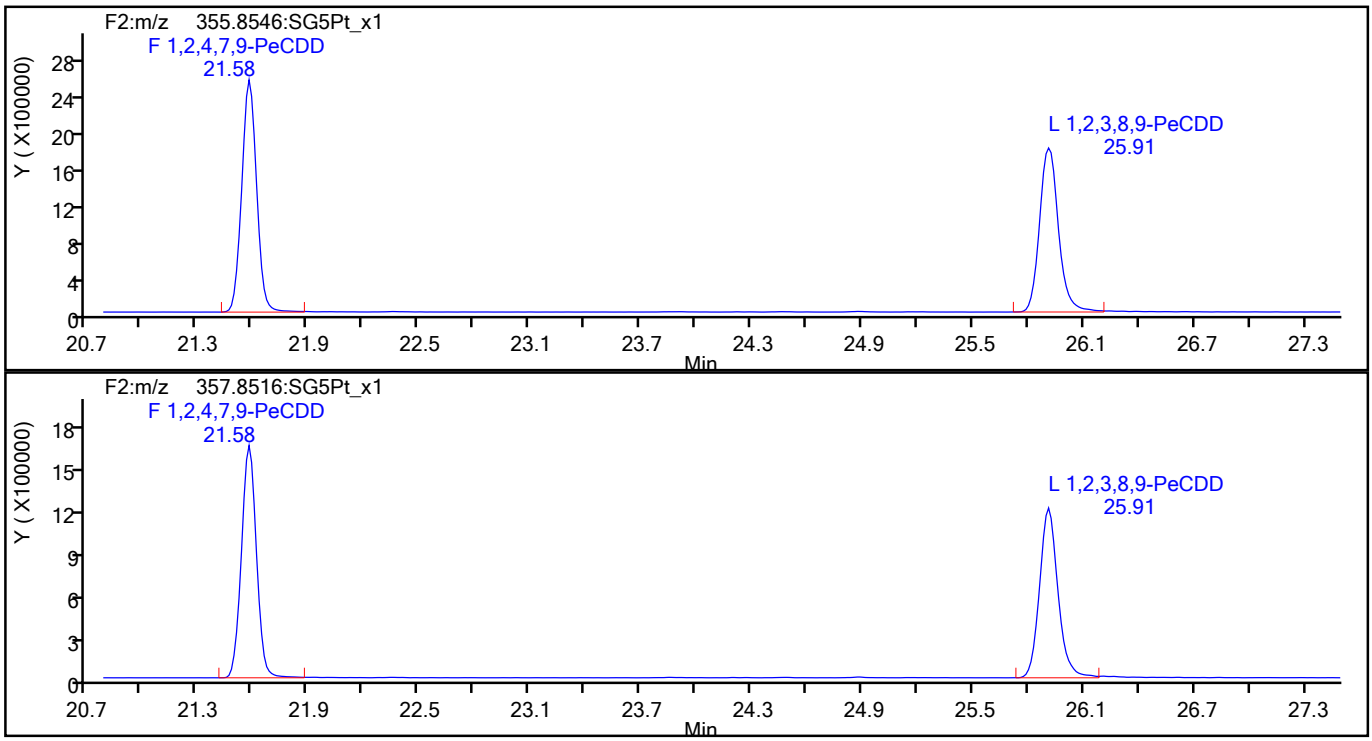

PeCDD Standards

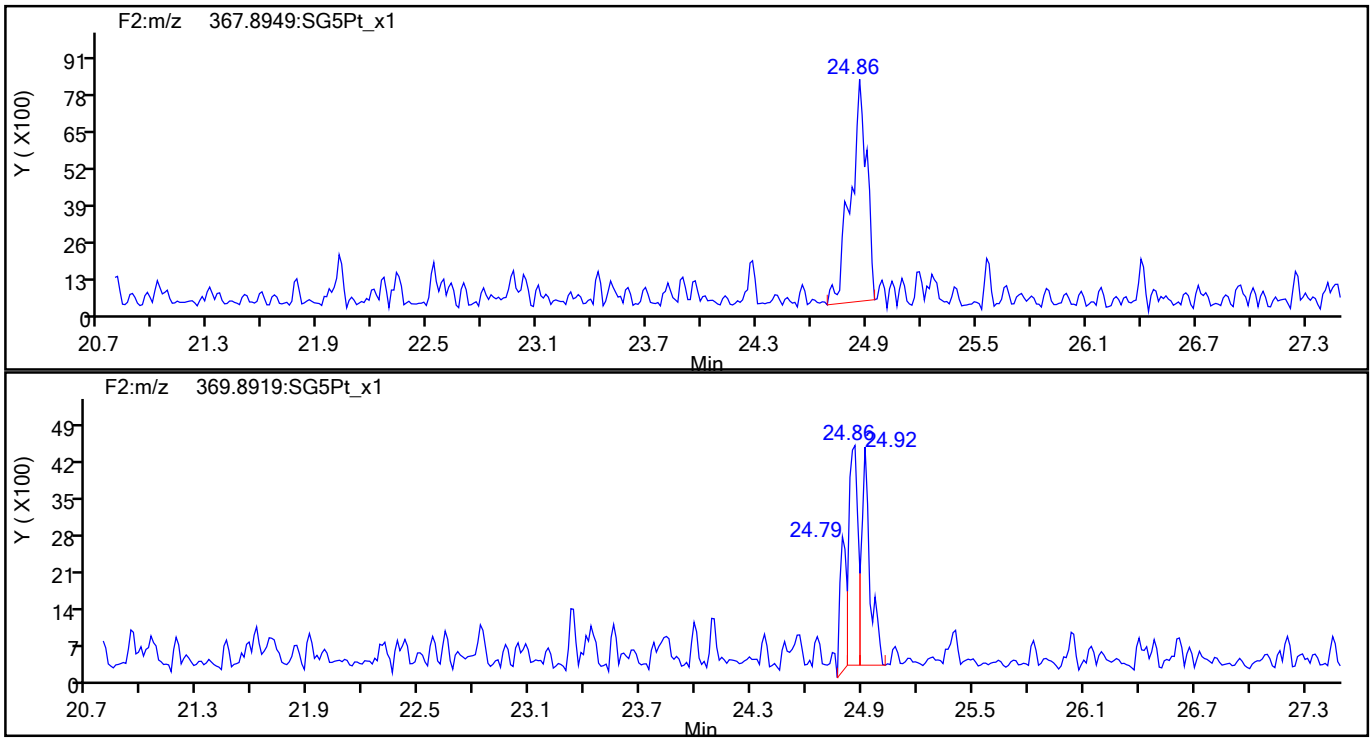

791825

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

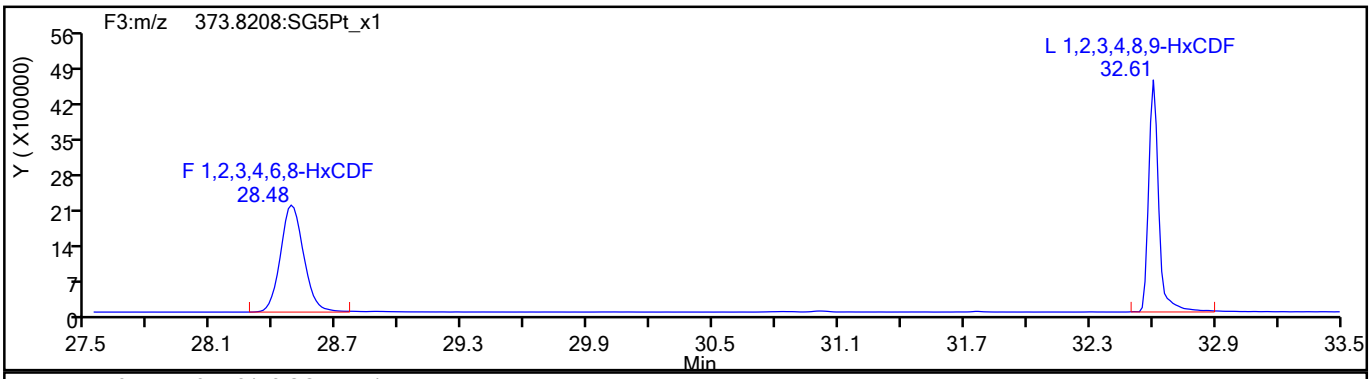

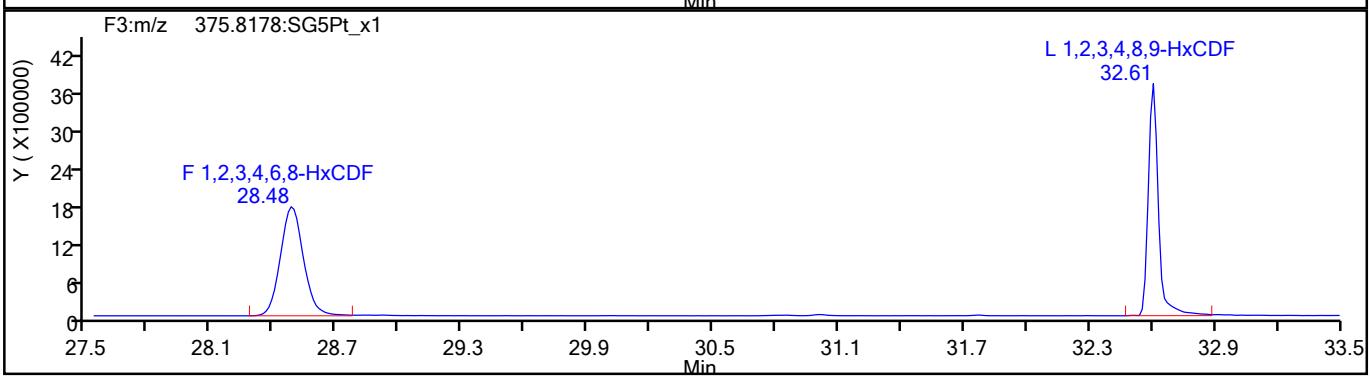

HxCDF Standards

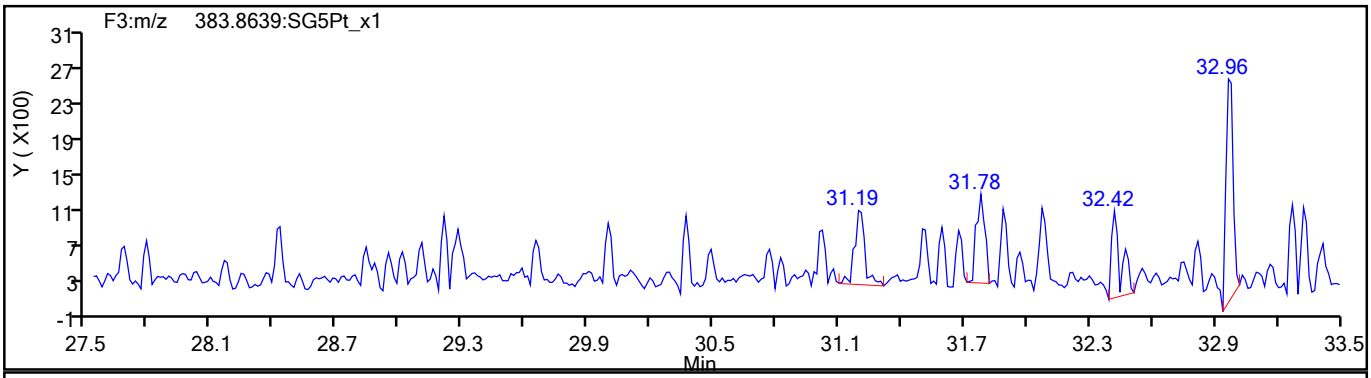

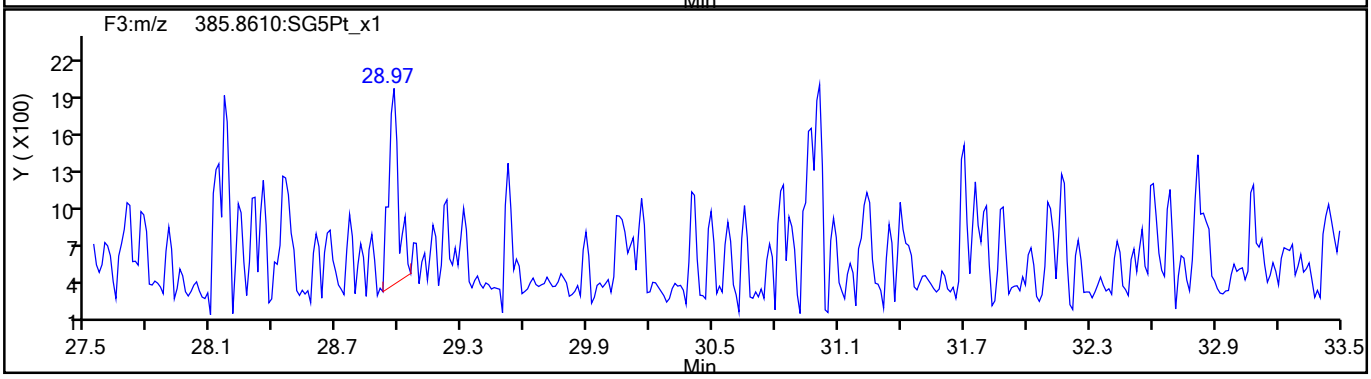

791826

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

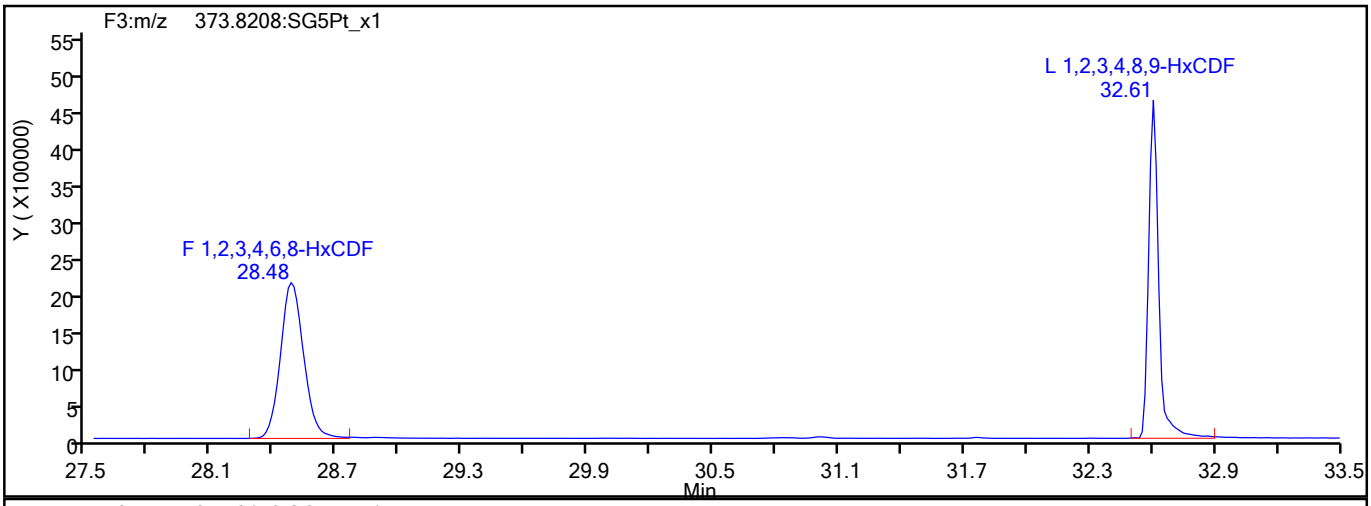

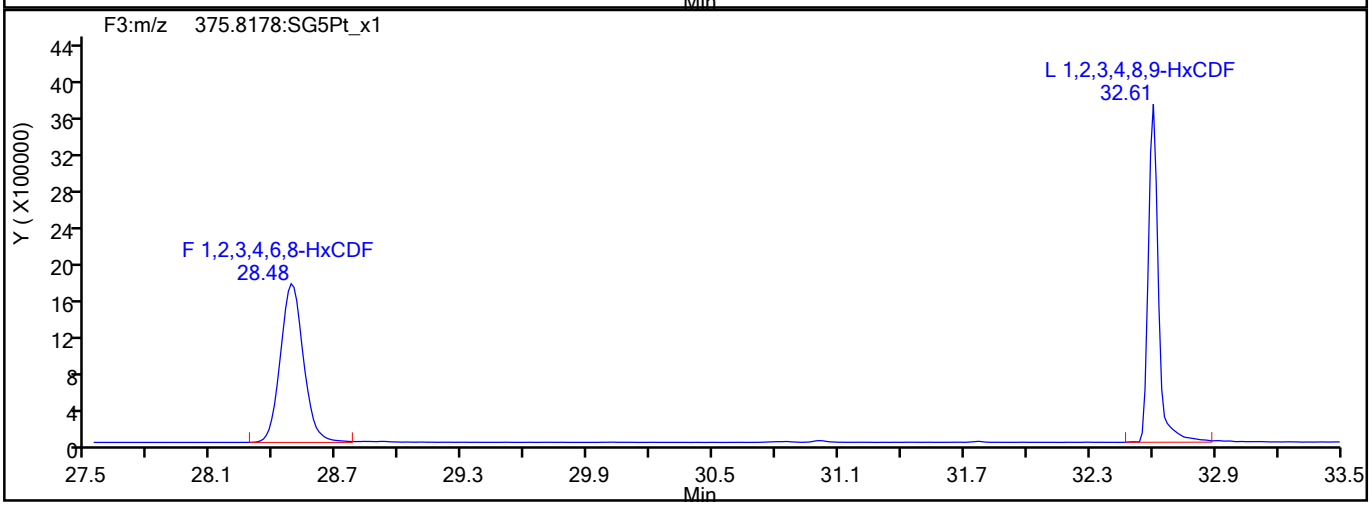

HxCDF Interference Mass

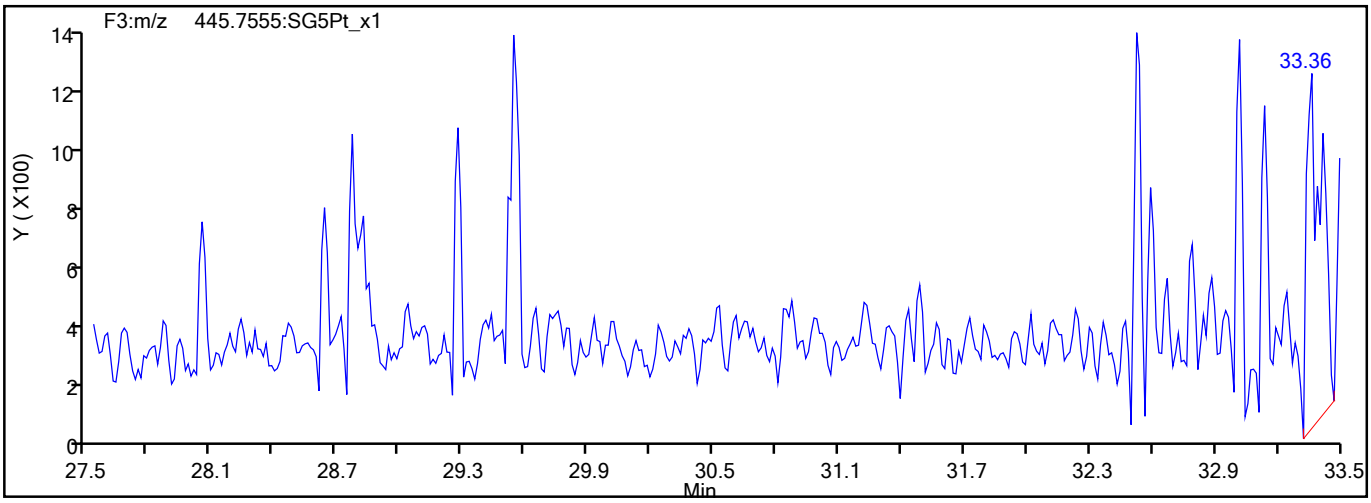

791827

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

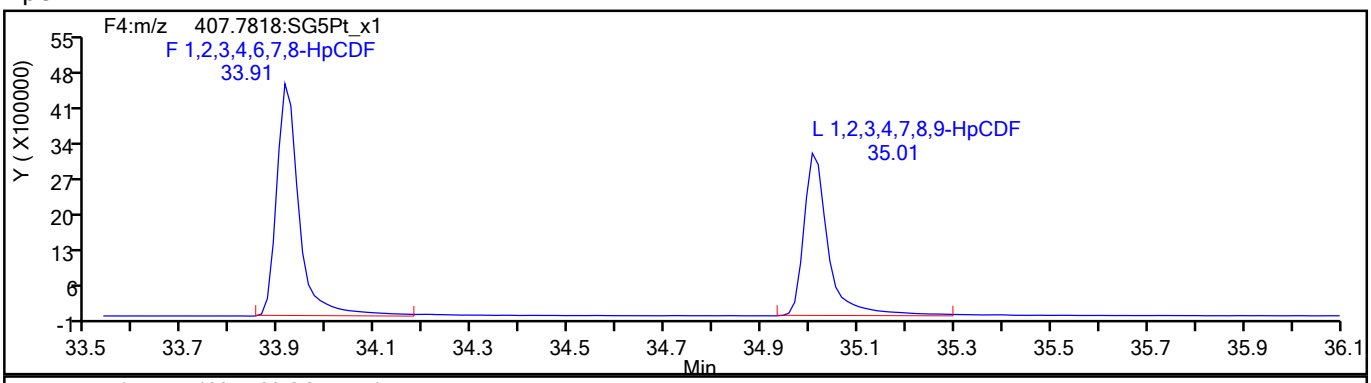

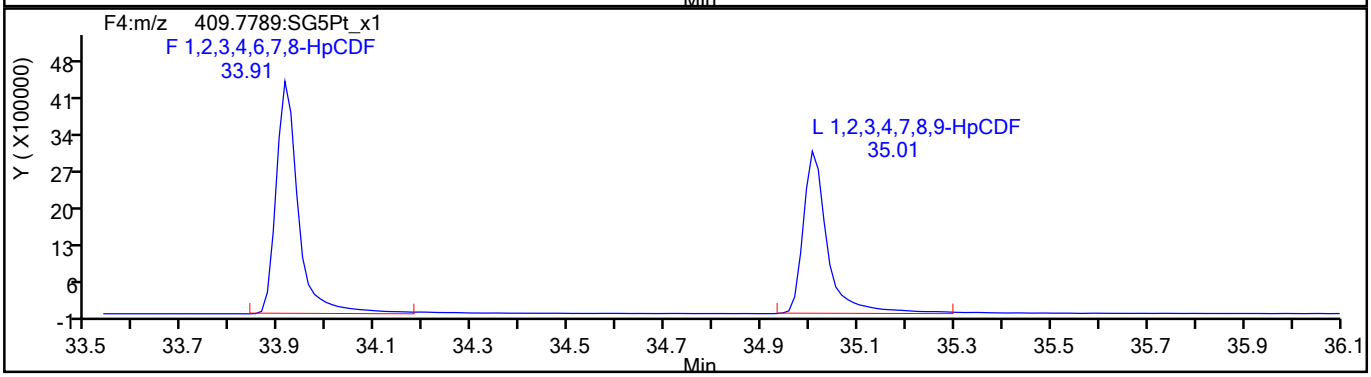

HpCDF Standards

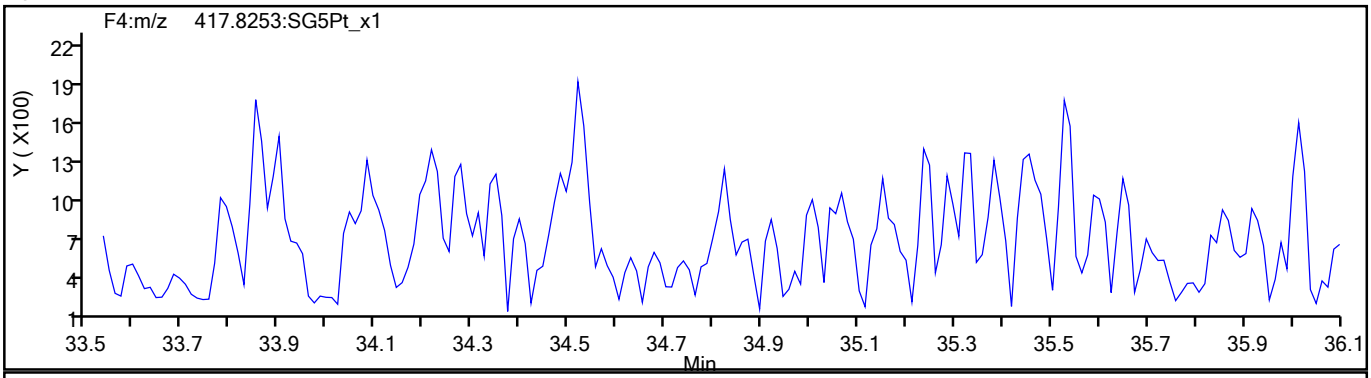

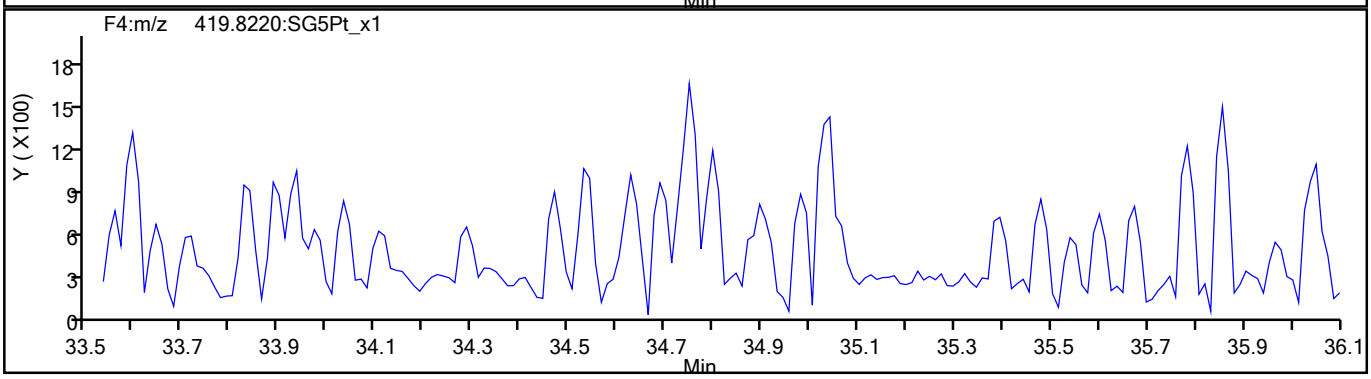

791828

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

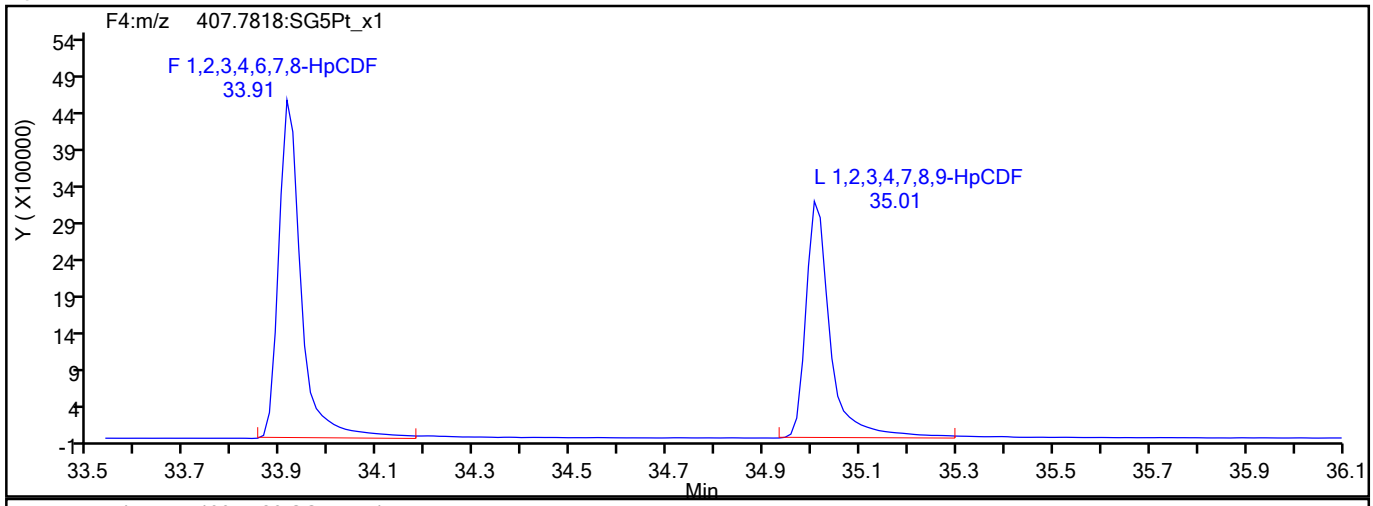

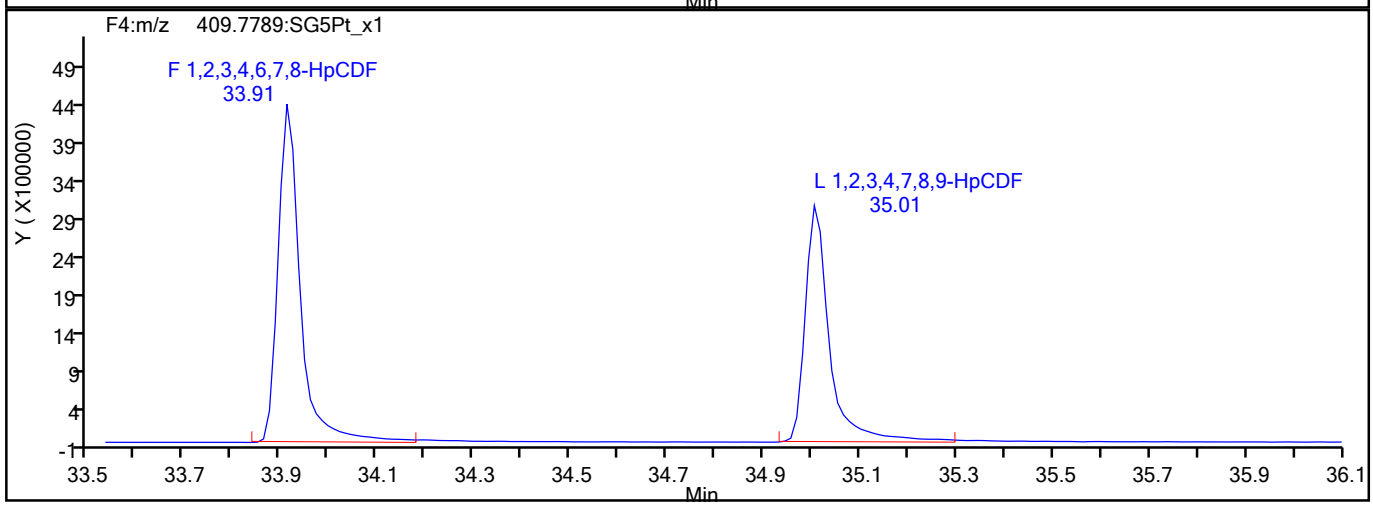

HpCDF Interference Mass

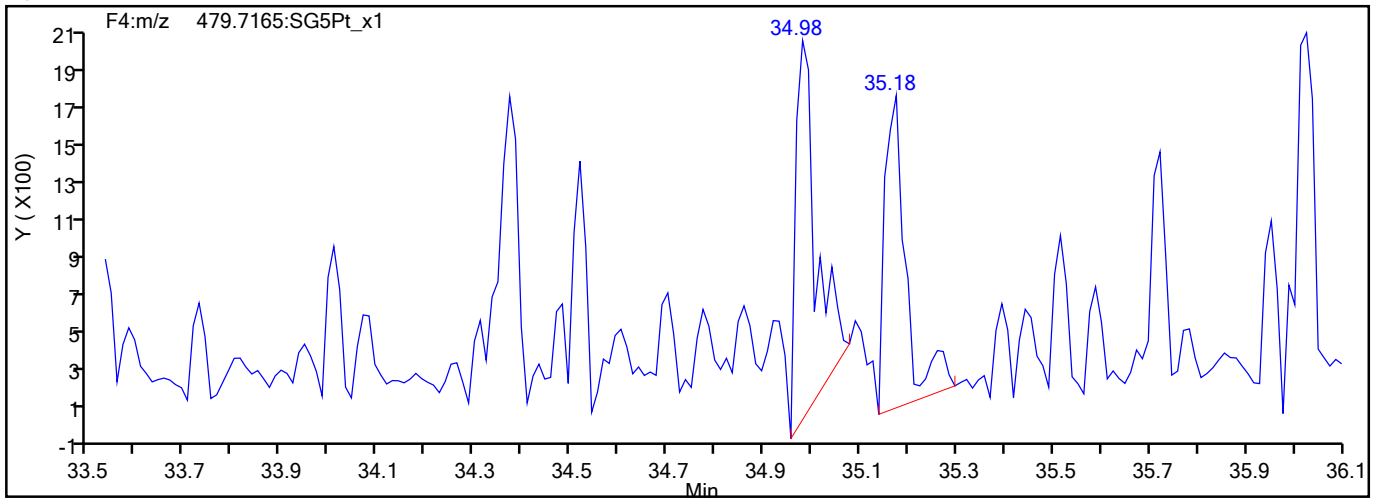

791829

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

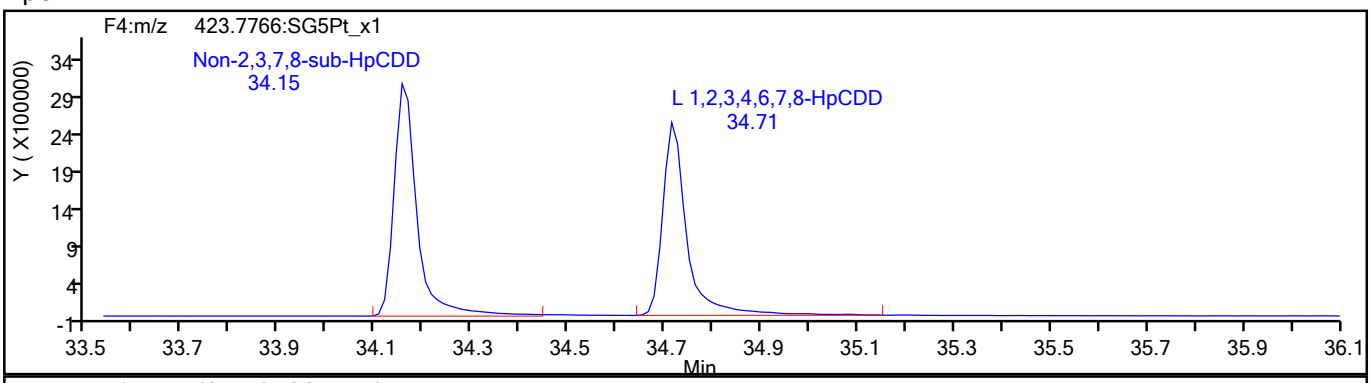

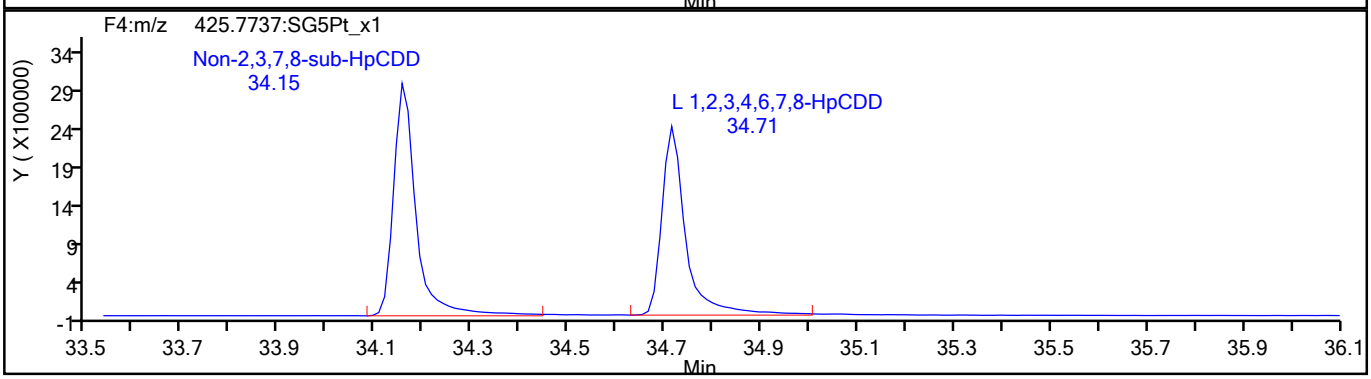

HpCDD Standards

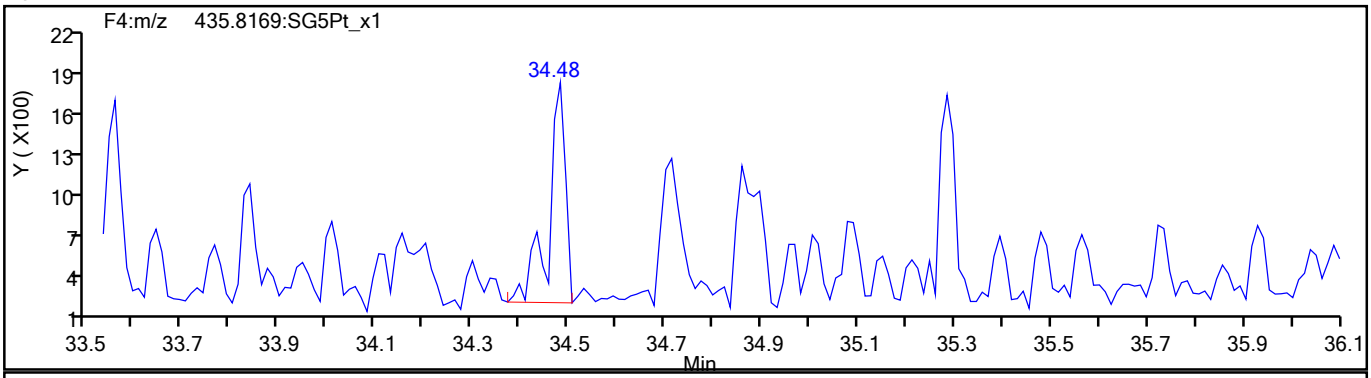

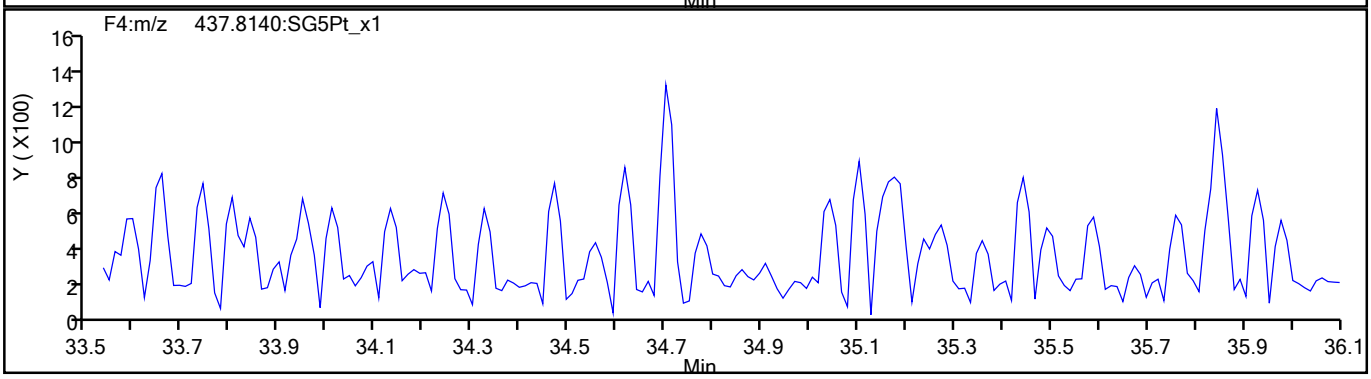

791830

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

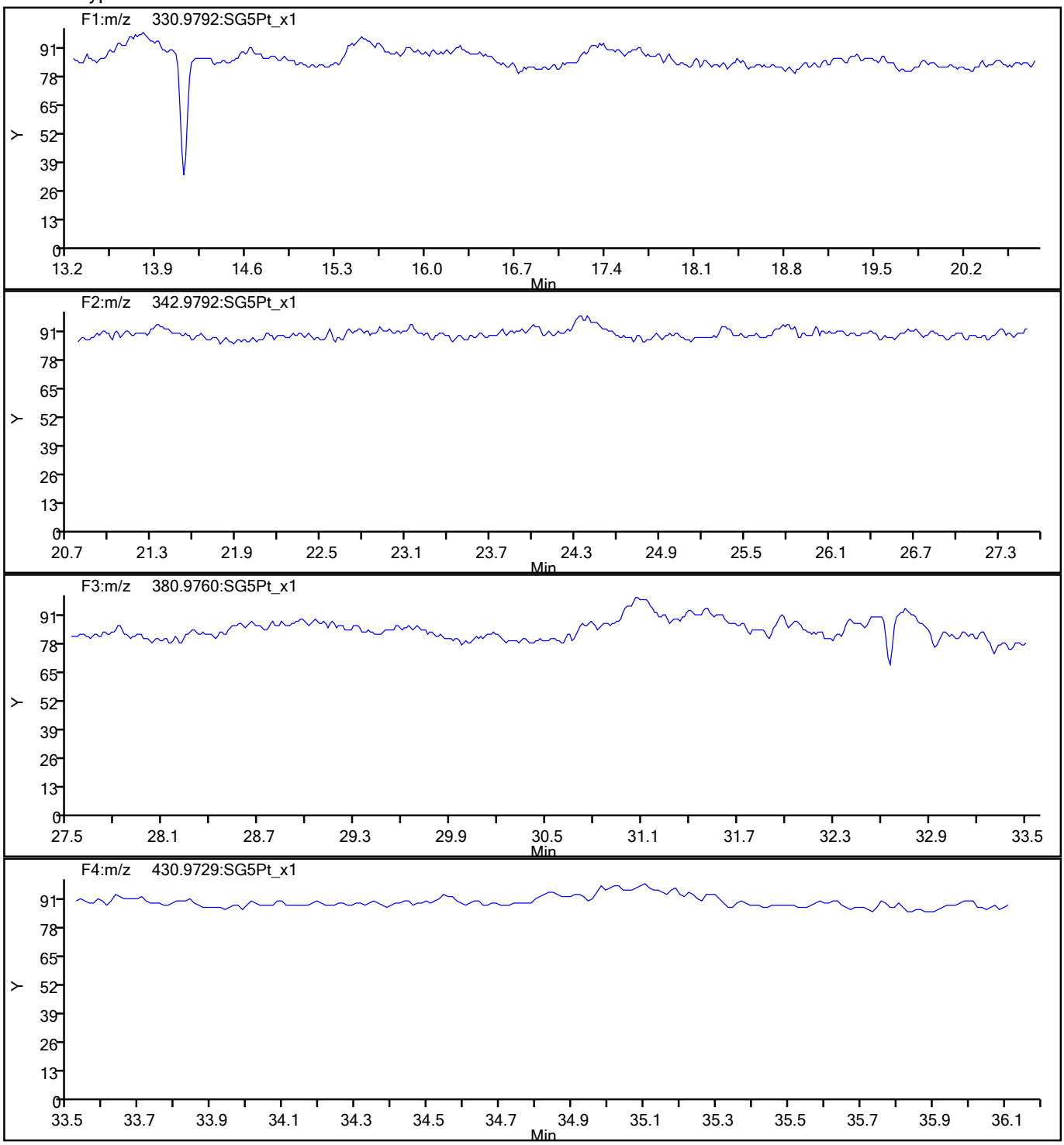

791831

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

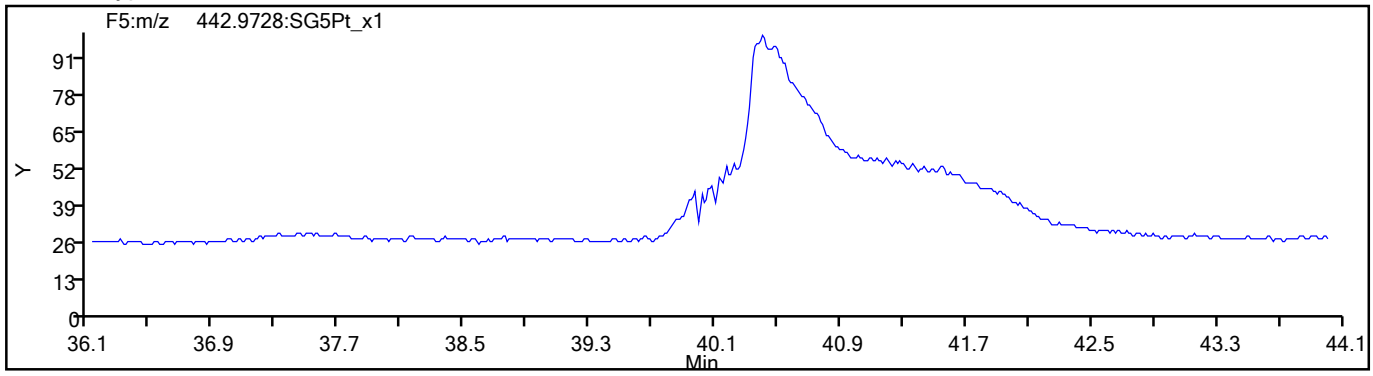

791832

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 25-Aug-2021 09:38:15 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521 WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:07:31 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 09:52:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.099	56999943	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.114	121813715	0.77	1.0239	83.5	83.5	0.4017	0.4017		
A Non-2,3,7,8-sub-TCDF	17.076	102998627	0.76	1.0239	70.6	70.6	0.4017	35.9		
S Total TCDF					154.1	154.1	0.4017	0.4017		
D 13C-2,3,7,8-TCDD	17.794	30493136	0.80	0.8993					0.00	
2,3,7,8-TCDD	17.809	41147298	0.79	1.2541	43.0	43.0	0.2473	0.2473		
A Non-2,3,7,8-sub-TCDD	17.537	115649881	0.78	1.2541	121.0	121.0	0.2473	43.6		
S Total TCDD					164.0	164.0	0.2473	0.2473		
A F1 PeCDFs	19.851	48902269	1.56	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.067	41048828	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.696	62925921	1.59	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.338	39643438	1.24	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.525	29683302	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.615	33959149	1.04	1.4413						
1,2,3,4,7,8,9-HpCDF	34.685	27411005	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.150						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.405	21912703	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.223						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.725	69566921	0.76							
1,3,6,8-TCDD	15.632	41513030	0.79							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.172						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.916	29394237	1.28							
1,2,3,4,8,9-HxCDF	32.249	35970266	1.23							
1,2,3,4,6,7,9-HpCDD	33.858	24693234	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 25-Aug-2021 09:38:15 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521 WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:07:31 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 09:52:09

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	1.000	24801764	6462524	8874	22185	728		
317.9389	17.099	17.099	0	1.000	32198179	8393715	2966	7415	2830	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	52987478	12648552	25565	63912	495		
305.8987	17.114	17.114	0	1.001	68826237	16701152	35540	88850	470	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.961	17.076	53	1.050	22725406	5605407	25565	63912	219		
305.8987	17.961	17.076	53	1.050	29653618	7394635	35540	88850	208	0.77(0.65-0.89)	
303.9016	18.898	17.076	109	1.105	21740344	5423885	25565	63912	212		
305.8987	18.898	17.076	109	1.105	28879259	7337257	35540	88850	206	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.000	13507639	3316471	3805	9512	872		
333.9339	17.779	17.794	-1	1.000	16985497	4194973	1666	4165	2518	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	18197690	4594417	9728	24320	472		
321.8936	17.809	17.809	0	1.001	22949608	5811153	13572	33930	428	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.688	17.537	9	0.994	15882832	4027250	9728	24320	414		
321.8936	17.688	17.537	9	0.994	20635820	5271227	13572	33930	388	0.77(0.65-0.89)	
319.8965	17.961	17.537	25	1.009	18541382	4424461	9728	24320	455		
321.8936	17.961	17.537	25	1.009	23123978	5536133	13572	33930	408	0.80(0.65-0.89)	
319.8965	18.898	17.537	81	1.062	16399748	3990548	9728	24320	410		
321.8936	18.898	17.537	81	1.062	21066121	5048394	13572	33930	372	0.78(0.65-0.89)	
A F1 PeCDFs											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	19.170	19.851	-41	1.000	29822641	6875070	703	1757	9780		
341.8567	19.170	19.851	-41	1.000	19079628	4407459	787	1967	5600	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.670	23.067	-144	1.000	63648	12949	2558	6395	5		
341.8567	20.656	23.067	-144	1.000	51100	8959	1912	4780	5	1.25(1.32-1.78)	
339.8597	21.502	23.067	-94	1.000	82054	15477	2558	6395	6		
341.8567	21.475	23.067	-95	1.000	54055	10866	1912	4780	6	1.52(1.32-1.78)	
339.8597	22.034	23.067	-62	1.000	164889	28723	2558	6395	11		
341.8567	22.047	23.067	-61	1.000	126764	17242	1912	4780	9	1.30(1.32-1.78)	
339.8597	22.593	23.067	-28	1.000	115456	21902	2558	6395	9		
341.8567	22.593	23.067	-28	1.000	73199	13388	1912	4780	7	1.58(1.32-1.78)	
339.8597	25.265	23.067	132	1.000	24768733	3816175	2558	6395	1492		
341.8567	25.265	23.067	132	1.000	15579351	2357781	1912	4780	1233	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	20.915	23.696	-167	1.000	19723040	3659182	1691	4227	2164		
357.8516	20.915	23.696	-167	1.000	12468740	2303816	1095	2737	2104	1.58(1.32-1.78)	
355.8546	25.047	23.696	81	1.000	18872463	2910605	1691	4227	1721		
357.8516	25.047	23.696	81	1.000	11861678	1823378	1095	2737	1665	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.497	30.338	-170	1.000	21929812	3061580	2814	7035	1088		
375.8178	27.497	30.338	-170	1.000	17713626	2458642	2374	5935	1036	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.055	30.525	-88	1.000	16402622	2093195	3527	8817	593		
391.8127	29.041	30.525	-89	1.000	12994498	1666525	3229	8072	516	1.26(1.05-1.43)	
389.8157	30.692	30.525	10	1.000	167749	33291	3527	8817	9		
391.8127	30.692	30.525	10	1.000	118433	25865	3229	8072	8	1.42(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.615	0	1.000	17272270	6330880	18063	45157	350		
409.7789	33.615	33.615	0	1.000	16686879	6288813	17997	44992	349	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685	34.685	0	1.000	13991806	4967325	18063	45157	275		
409.7789	34.685	34.685	0	1.000	13419199	4804516	17997	44992	267	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						18063	45157			
409.7789	34.150						17997	44992			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	11171874	4042998	7125	17812	567		
425.7737	34.405	34.405	0	1.000	10740829	3846884	7315	18287	526	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						7125	17812			
425.7737	34.223						7315	18287			
1,3,6,8-TCDF											
303.9016	14.725	14.725	0		29981572	9719502	25565	63912	380		
305.8987	14.725	14.725	0		39585349	12860810	35540	88850	362	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,3,6,8-TCDD											
319.8965	15.632	15.632	0		18262945	5320953	9728	24320	547		
321.8936	15.617	15.632	-1		23250085	6693712	13572	33930	493	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.537						25565	63912			
305.8987	17.537						35540	88850			
1,2,3,7-TCDD											
319.8965	18.172						9728	24320			
321.8936	18.172						13572	33930			
1,2,3,9-TCDD											
319.8965	18.414						9728	24320			
321.8936	18.414						13572	33930			
1,2,3,9-TCDF											
303.9016	18.414						25565	63912			
305.8987	18.414						35540	88850			
1,2,8,9-TCDD											
319.8965	19.382						9728	24320			
1,2,8,9-TCDF											
303.9016	19.427						25565	63912			
305.8987	19.427						35540	88850			
1,3,4,6,8-PeCDF											
339.8597	19.669						703	1757			
341.8567	19.669						787	1967			
1,2,4,7,9-PeCDD											
355.8546	21.480						1691	4227			
357.8516	21.480						1095	2737			
1,2,3,8,9-PeCDD											
355.8546	25.790						1691	4227			
357.8516	25.790						1095	2737			
1,2,3,8,9-PeCDF											
339.8597	26.021						2558	6395			
341.8567	26.021						1912	4780			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						2814	7035			
375.8178	28.333						2374	5935			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						3527	8817			
391.8127	29.890						3229	8072			
1,2,3,4,6,7-HxCDD											
389.8157	31.916	31.916	0		16480209	4865015	3527	8817	1379		
391.8127	31.916	31.916	0		12914028	3813170	3229	8072	1181	1.28(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.249	32.249	0		19818636	6110382	2814	7035	2171		
375.8178	32.236	32.249	-1		16151630	5000661	2374	5935	2106	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.858	33.858	0		12582438	4717571	7125	17812	662		
425.7737	33.858	33.858	0		12110796	4483963	7315	18287	613	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	56999943	14856239

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	56999943	14856239

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.961	22725406	5605407	29653618	7394635	35.9	0.77	
18.898	21740344	5423885	28879259	7337257	34.7	0.75	
Signal Totals:							
	44465750	11029292	58532877	14731892			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	102998627	25761184				0.76	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 70.592 = (102998627 * 40.000) / (56999943 * 1.024)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	30493136	7511444

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	30493136	7511444

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.688	15882832	4027250	20635820	5271227	38.2	0.77	
17.961	18541382	4424461	23123978	5536133	43.6	0.80	
18.898	16399748	3990548	21066121	5048394	39.2	0.78	
Signal Totals:							
	50823962	12442259	64825919	15855754			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	115649881	28298013				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 120.966 = (115649881 * 40.000) / (30493136 * 1.254)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.170	29822641	6875070	19079628	4407459		1.56	
Signal Totals:							
	29822641	6875070	19079628	4407459			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	48902269	11282529				1.56	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (48902269 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.670	63648	12949	51100	8959		1.25	R
21.502	82054	15477	54055	10866		1.52	
22.034	164889	28723	126764	17242		1.30	R
22.593	115456	21902	73199	13388		1.58	
25.265	24768733	3816175	15579351	2357781		1.59	
Signal Totals:							
	25194780	3895226	15884469	2408236			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	41079249	6303462				1.59	RQ
	41048828	6304145					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (41079249 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (41048828 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.915	19723040	3659182	12468740	2303816		1.58	
25.047	18872463	2910605	11861678	1823378		1.59	
Signal Totals:							
	38595503	6569787	24330418	4127194			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	62925921	10696981				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (62925921 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.497	21929812	3061580	17713626	2458642		1.24	
Signal Totals:							
	21929812	3061580	17713626	2458642			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	39643438	5520222				1.24	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (39643438 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.055	16402622	2093195	12994498	1666525		1.26	
30.692	167749	33291	118433	25865		1.42	
Signal Totals:							
	16570371	2126486	13112931	1692390			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	29683302	3818876				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (29683302 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

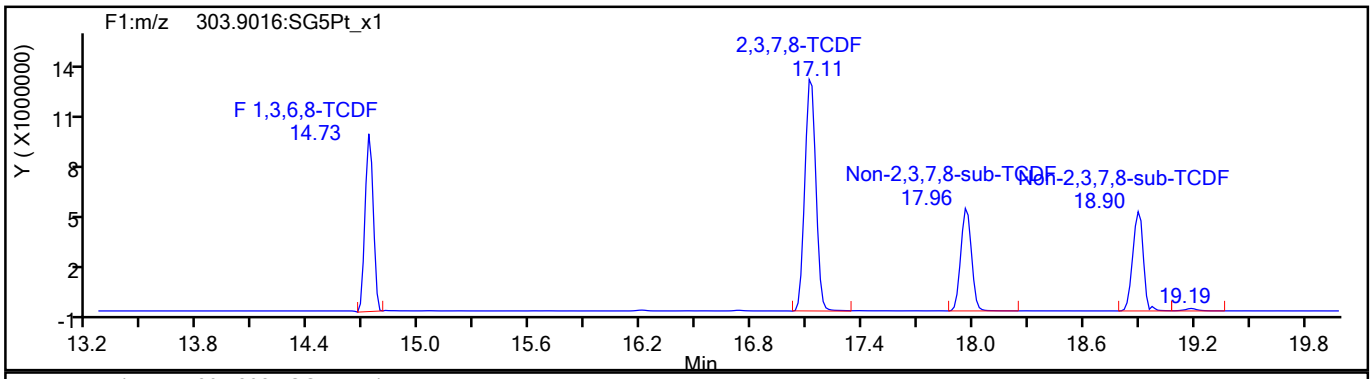

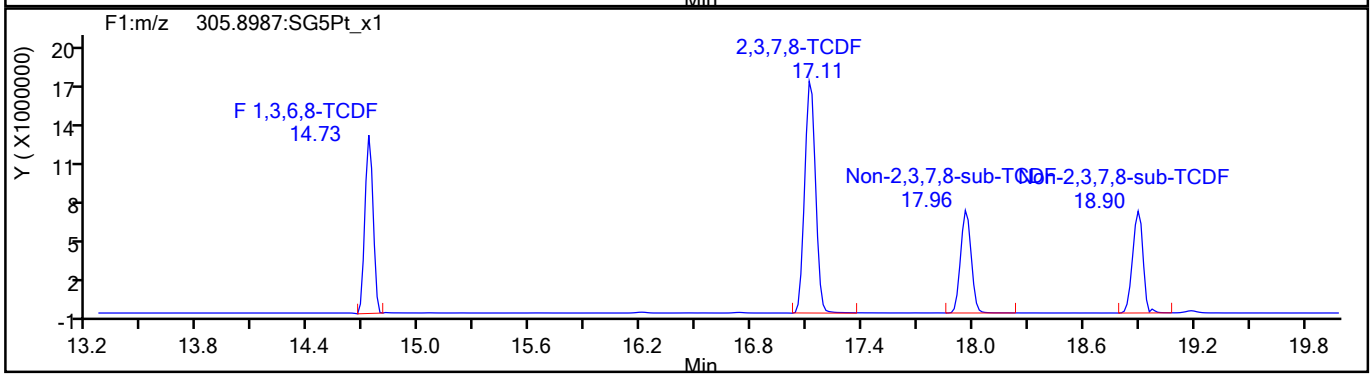

TCDF Standards

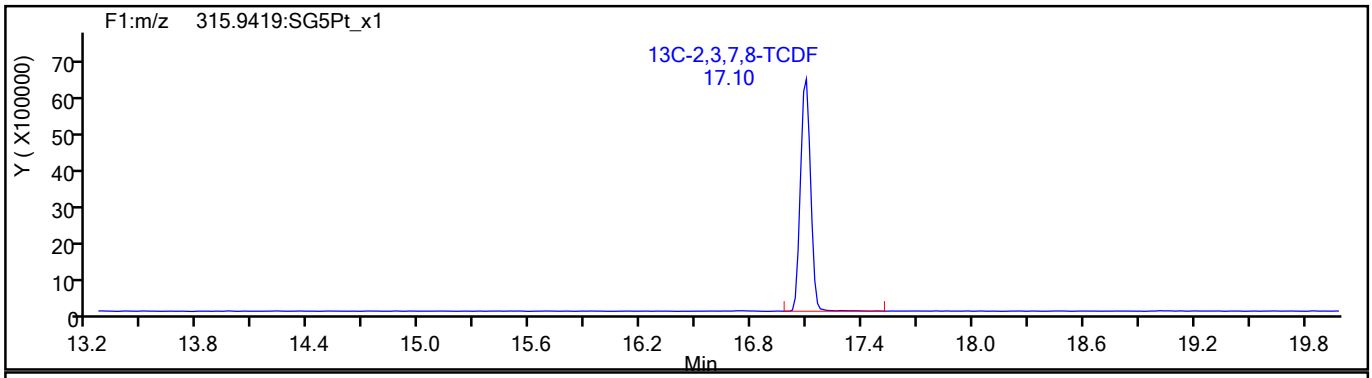

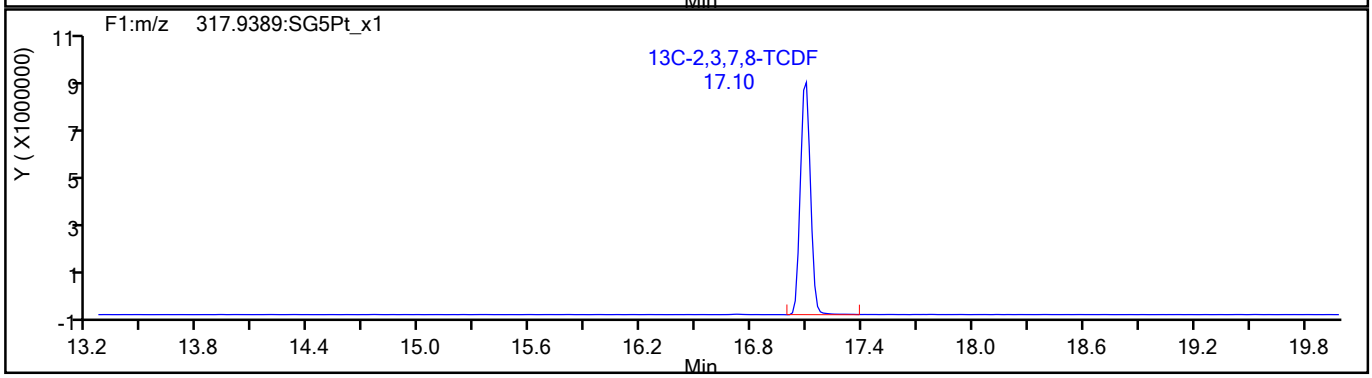

791846

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

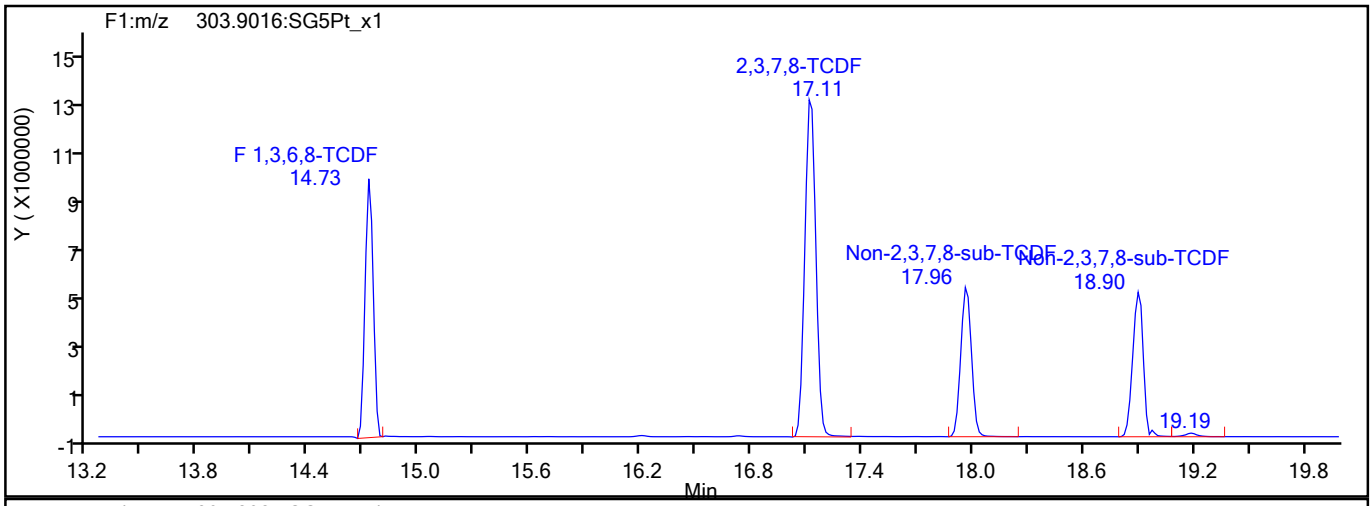

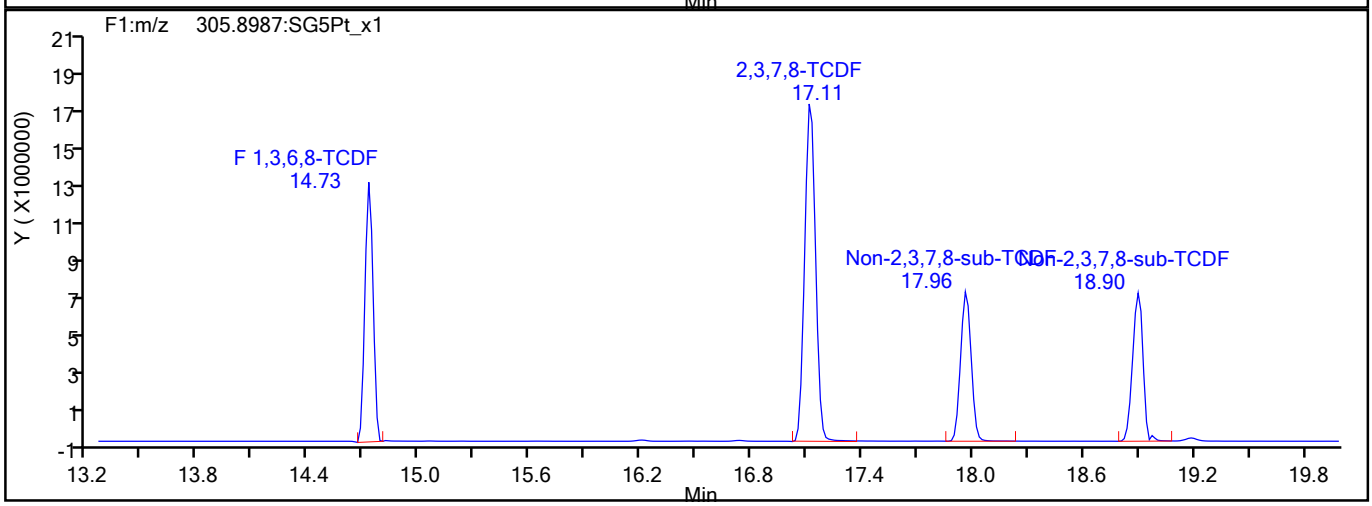

TCDF Interference Mass

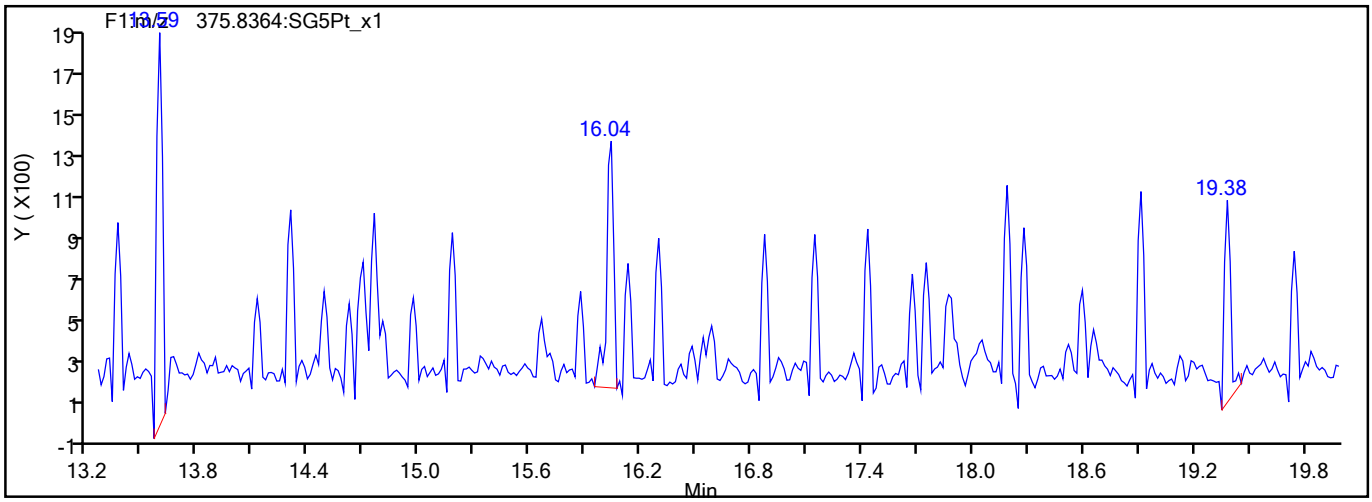

791847

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

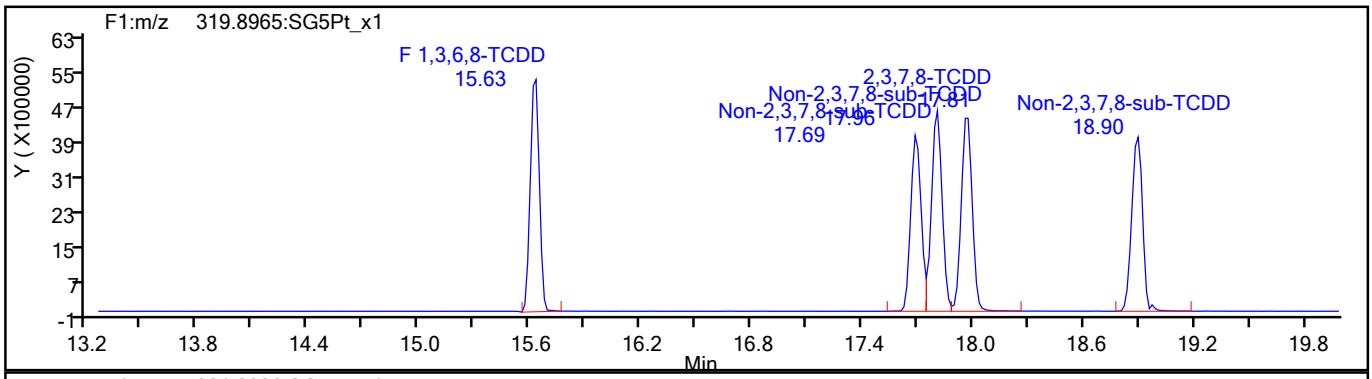

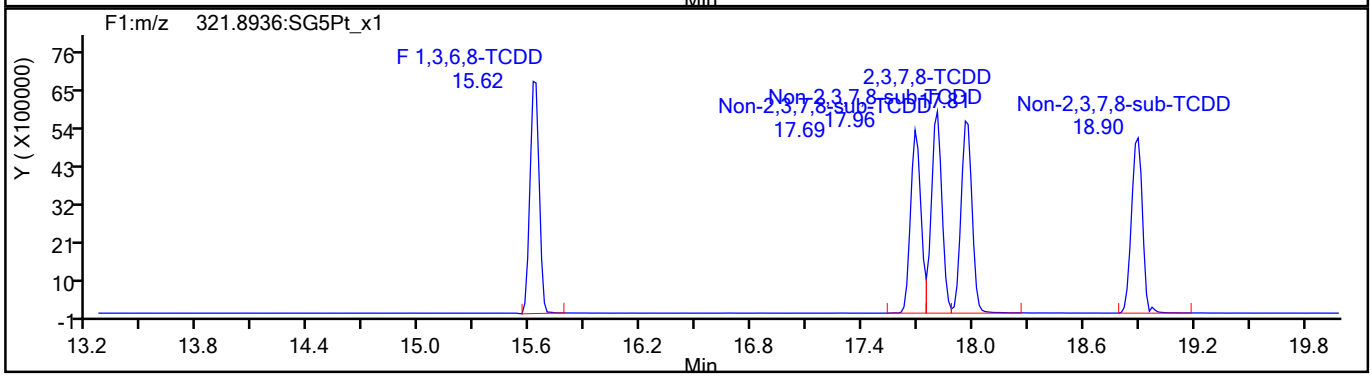

TCDD Standards

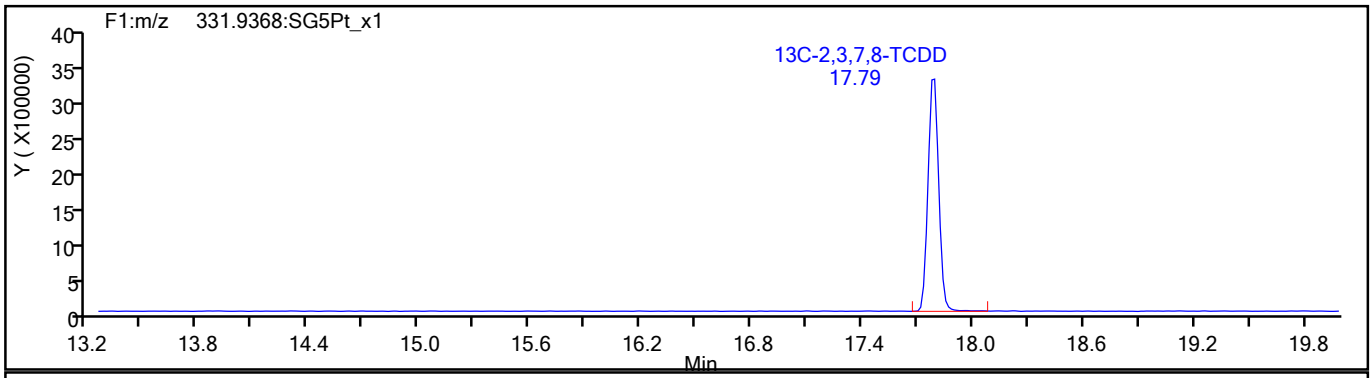

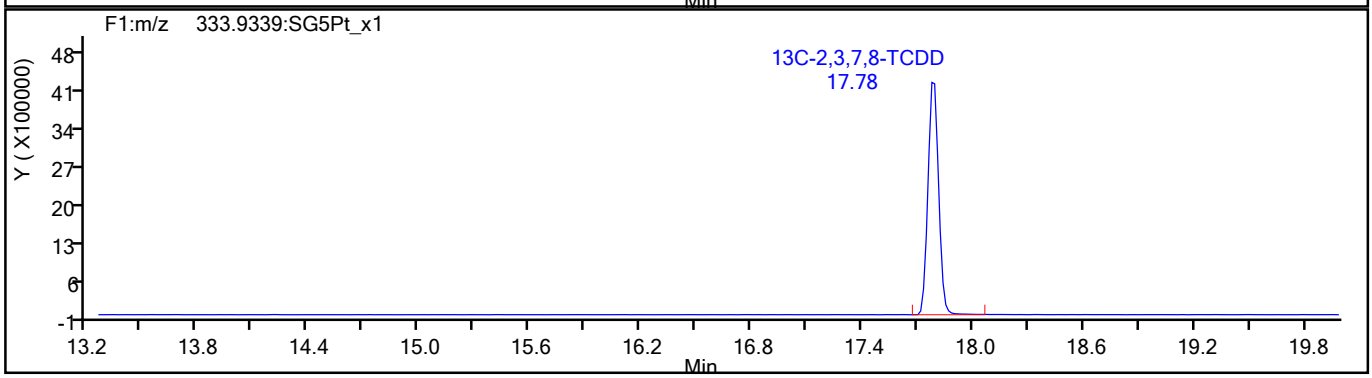

791848

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

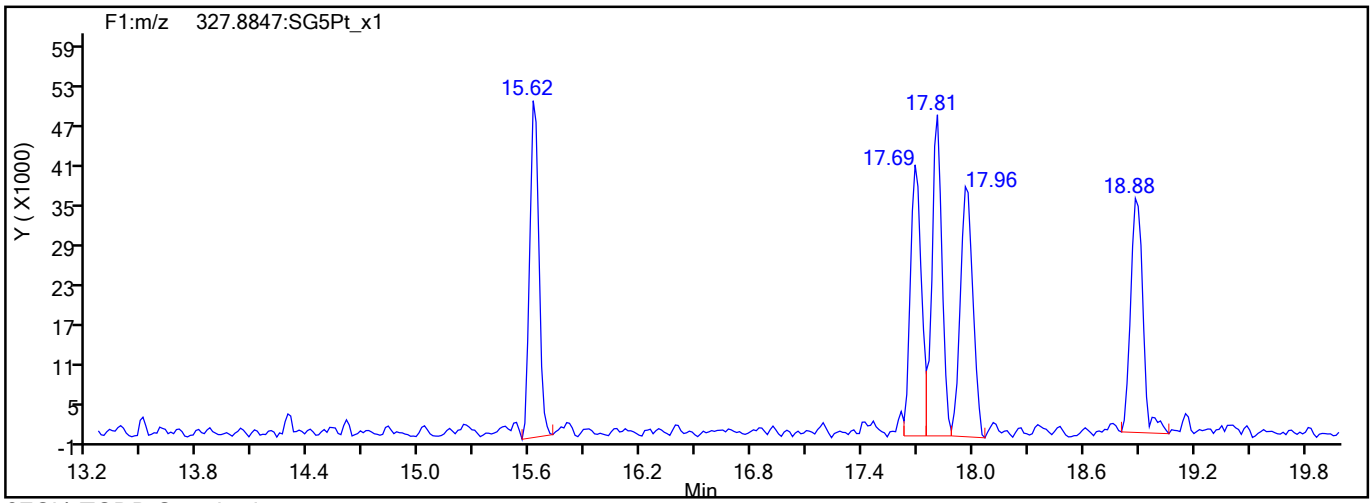

37Cl4-TCDD Standards

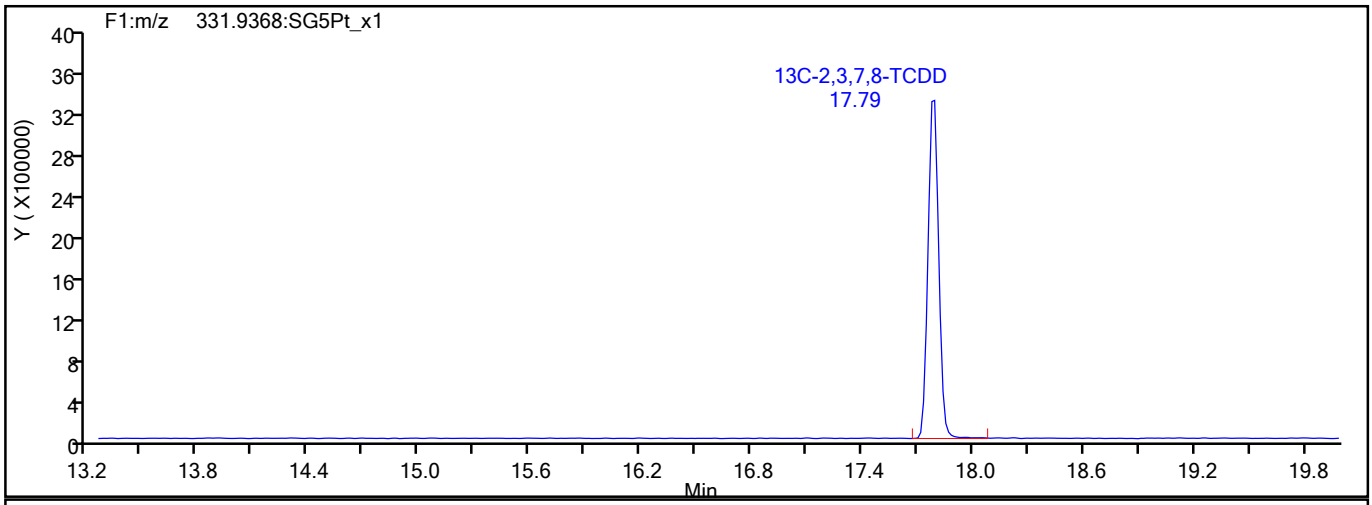

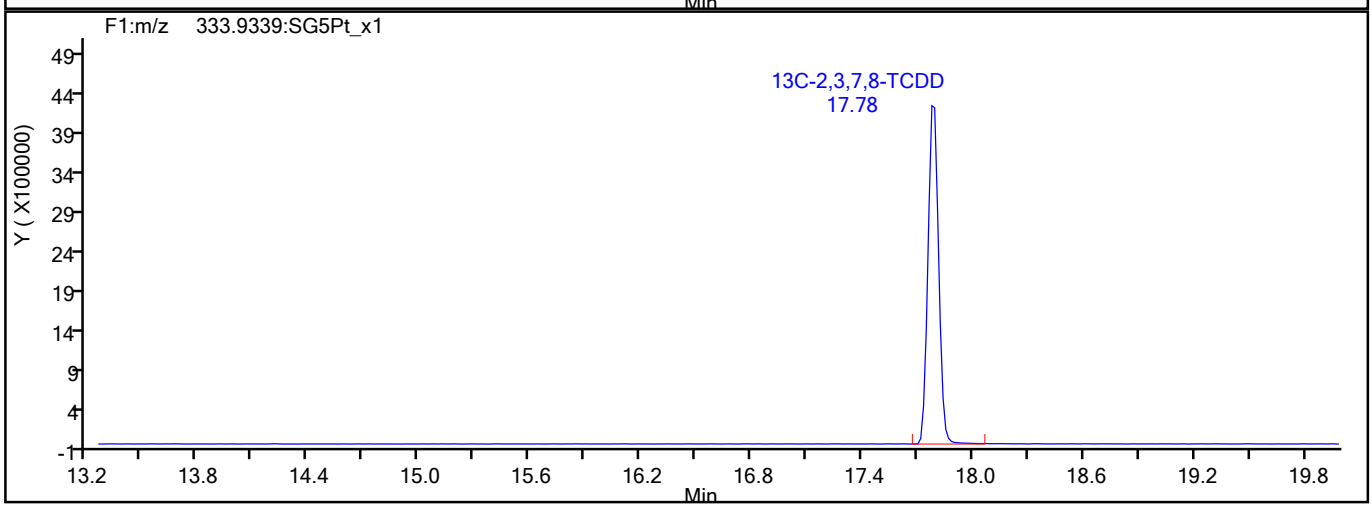

791849

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

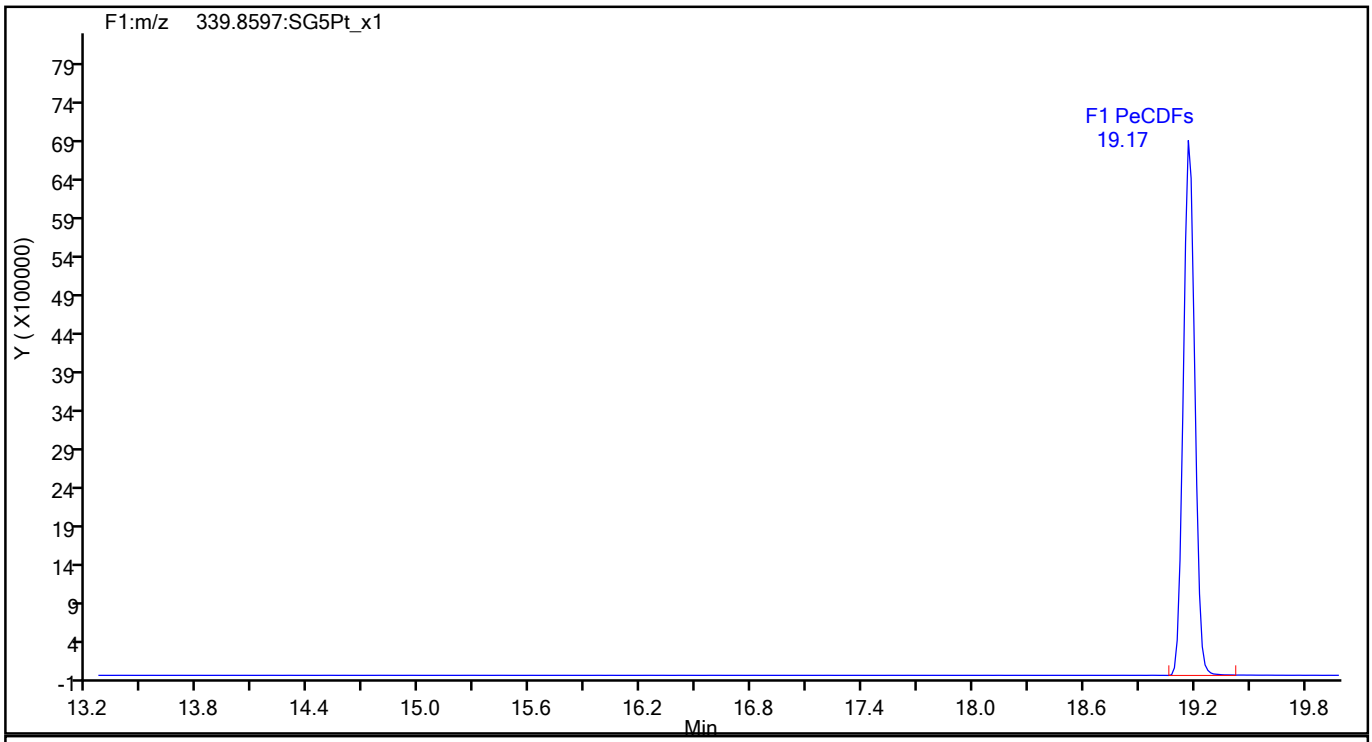

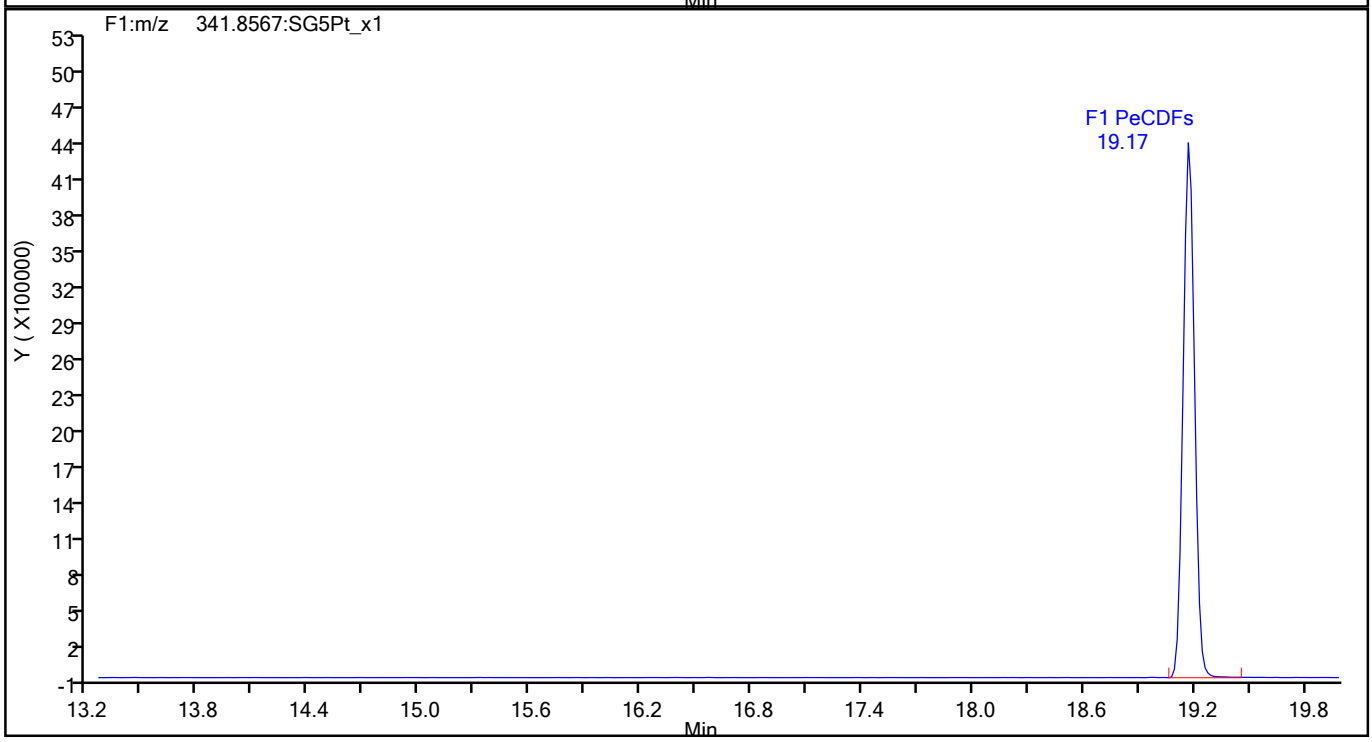

791850

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

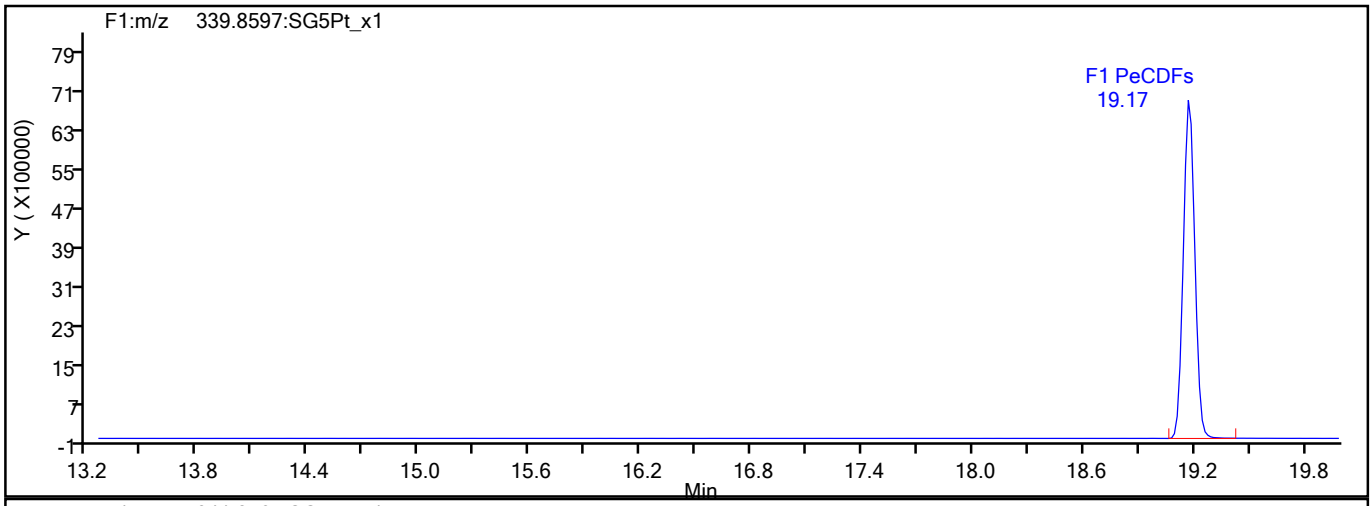

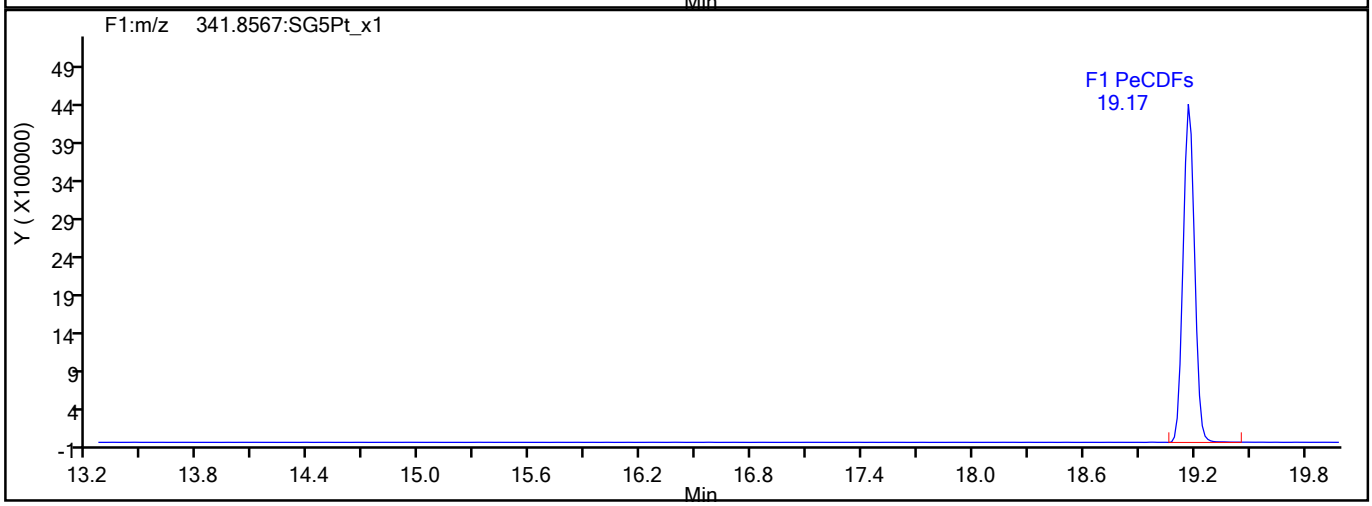

F1 PeCDFs Interference Mass

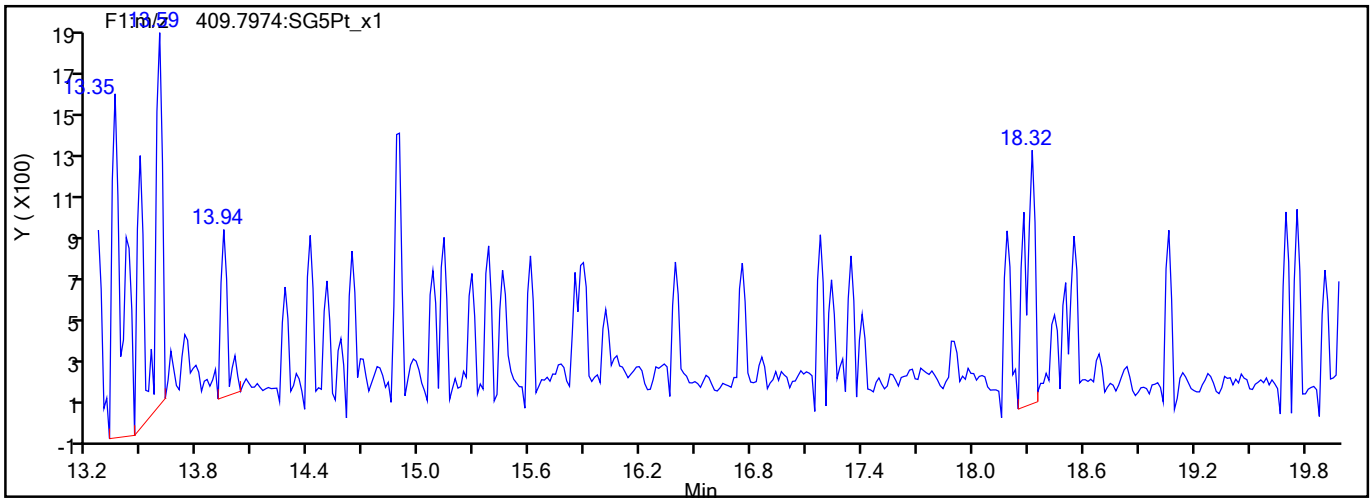

791851

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

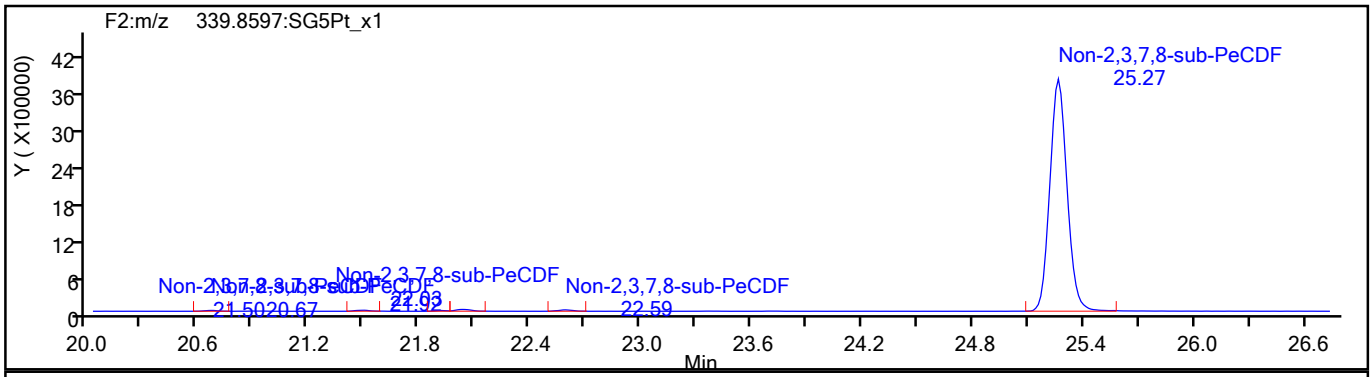

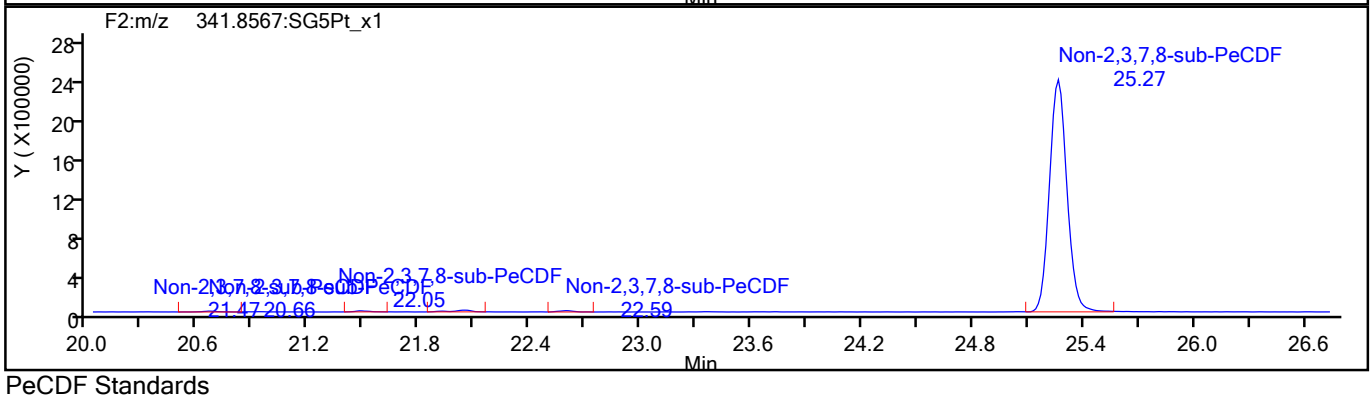

PeCDF Standards

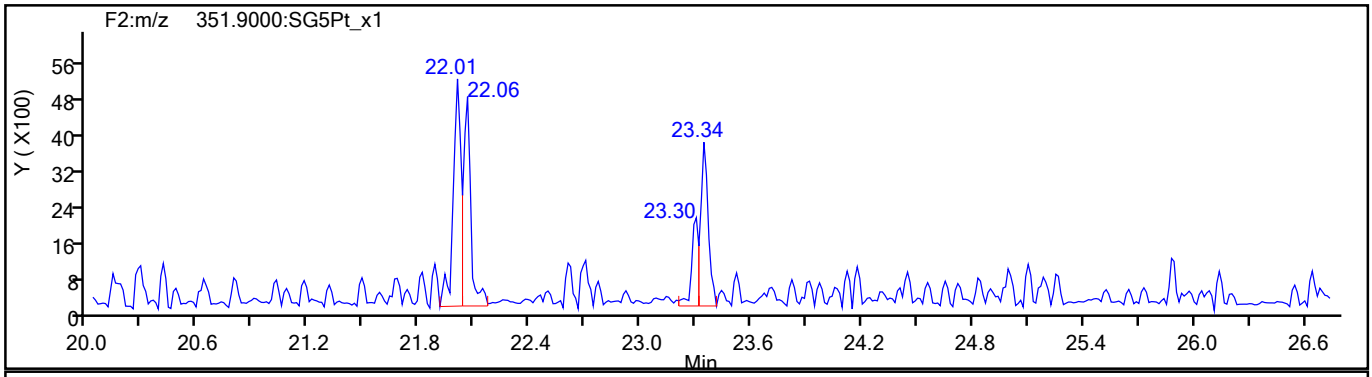

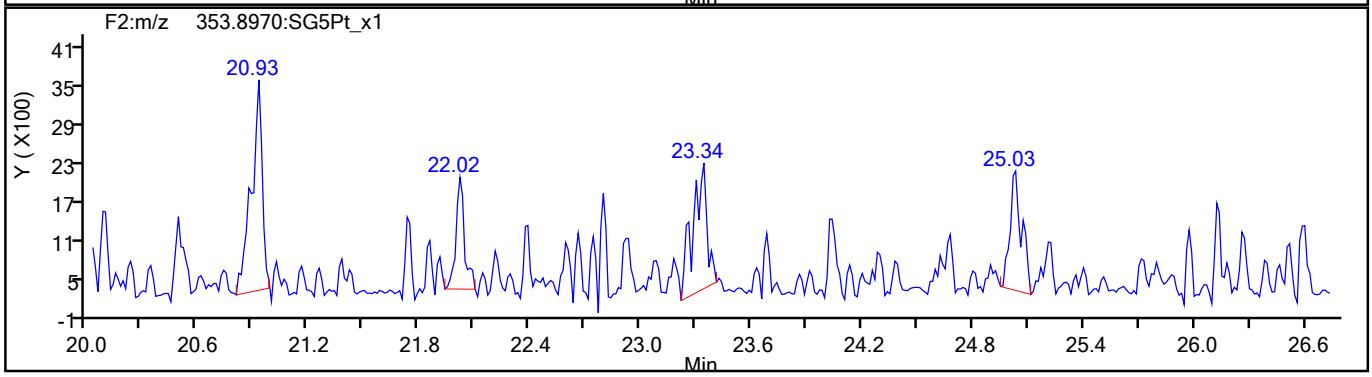

791852

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

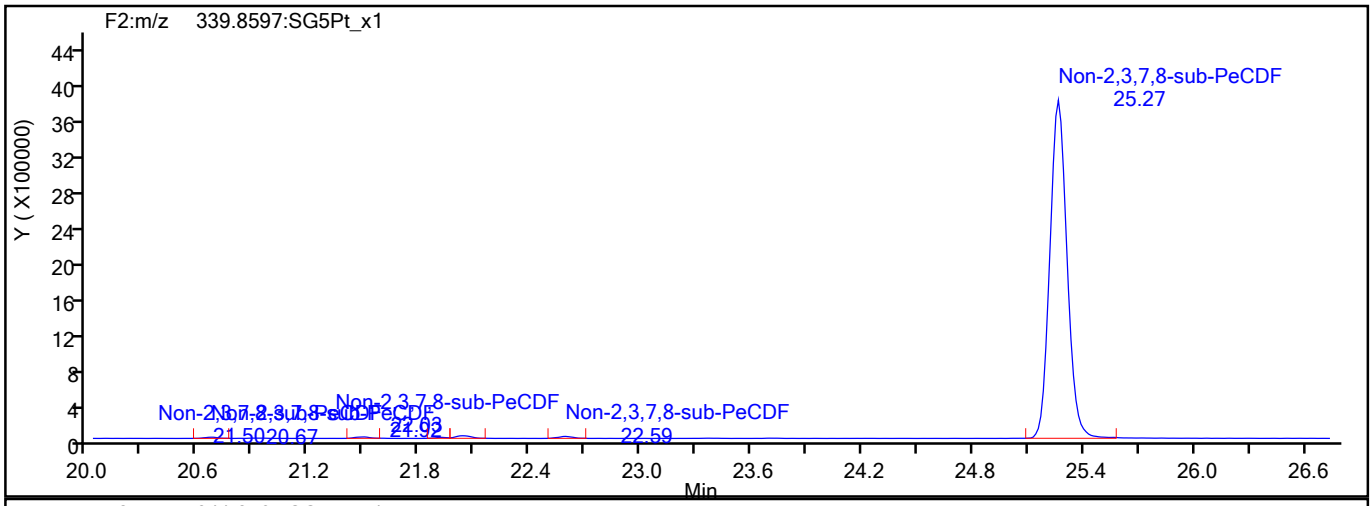

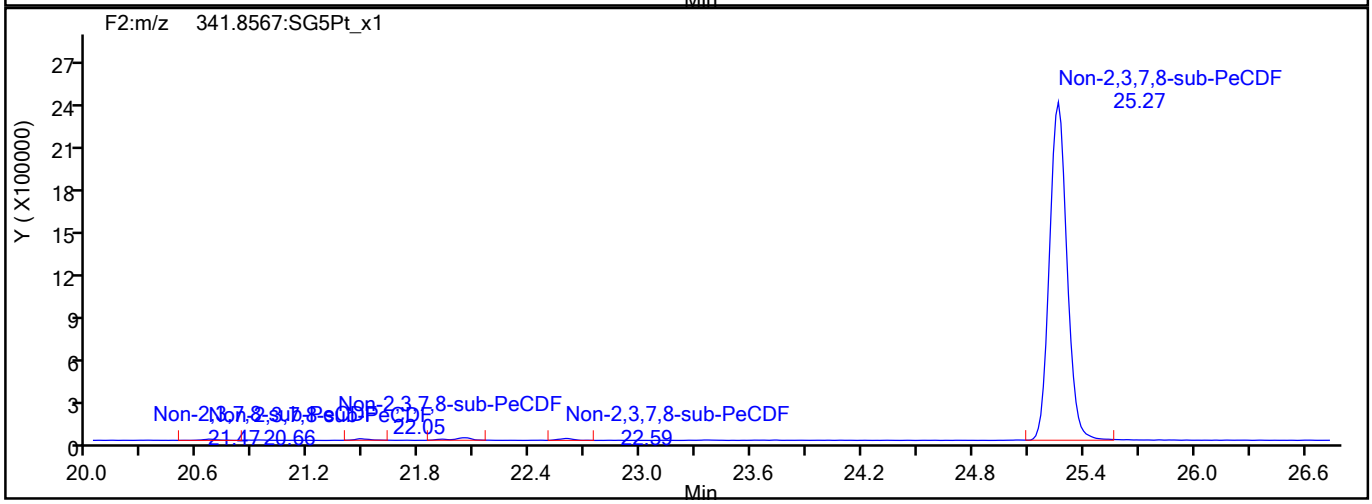

PeCDF Interference Mass

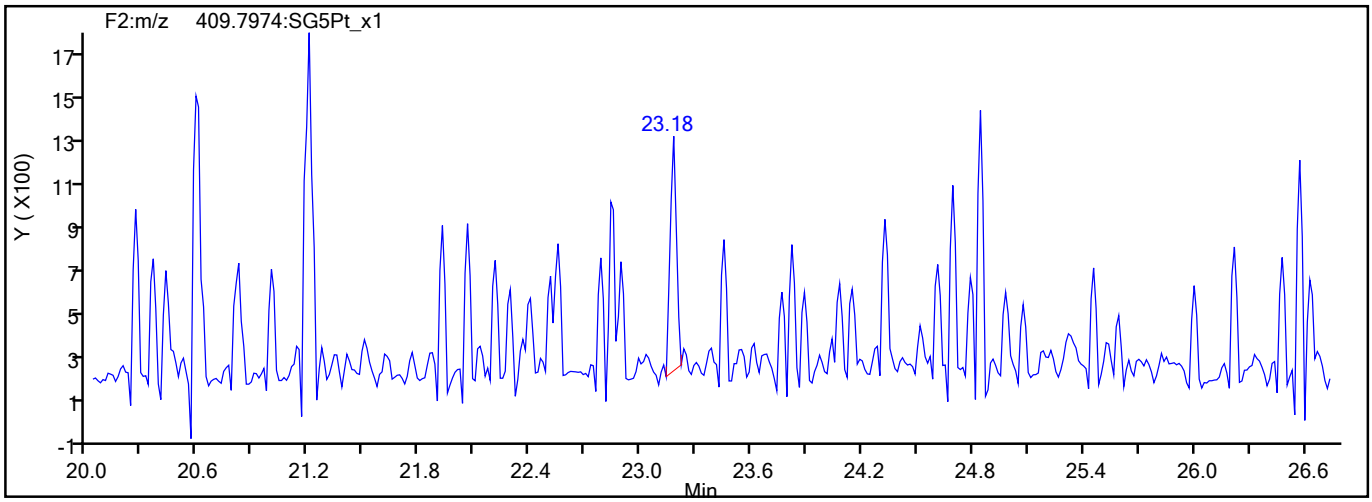

791853

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

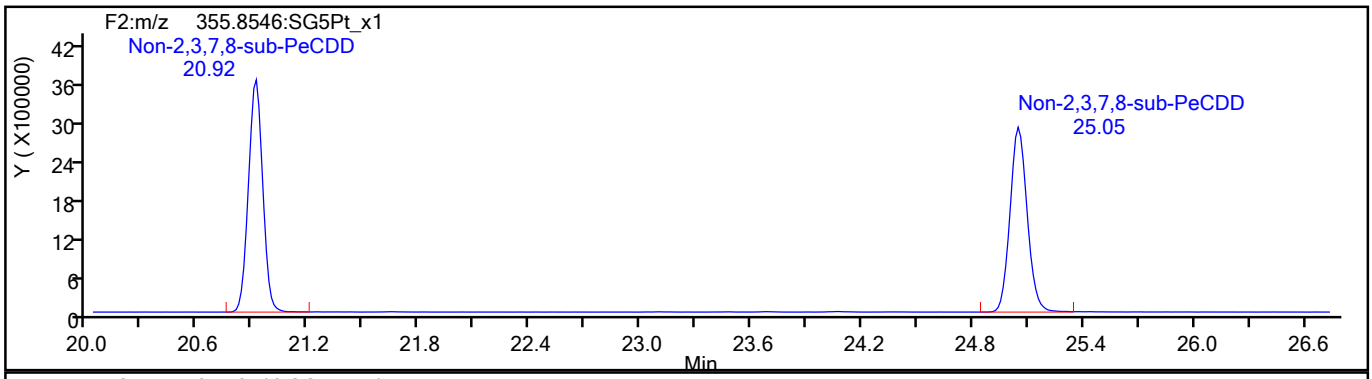

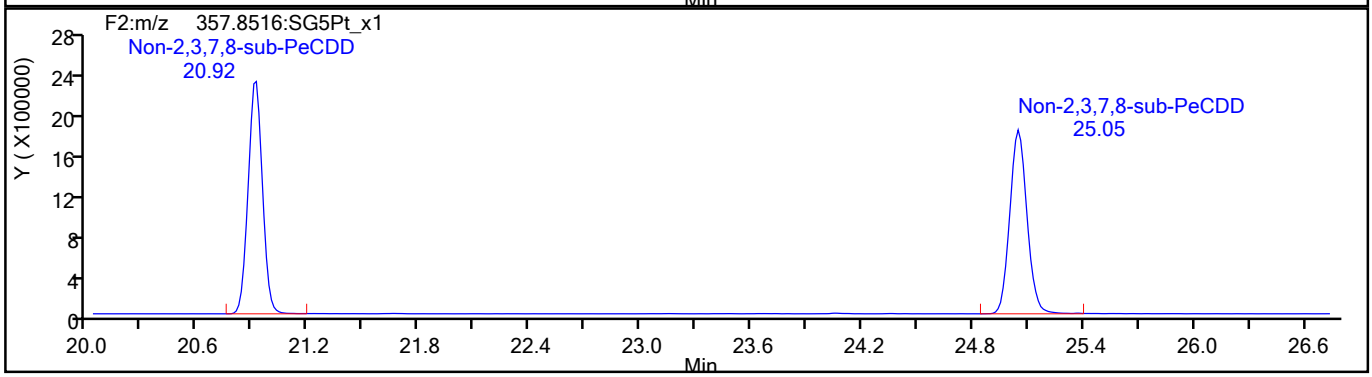

PeCDD Standards

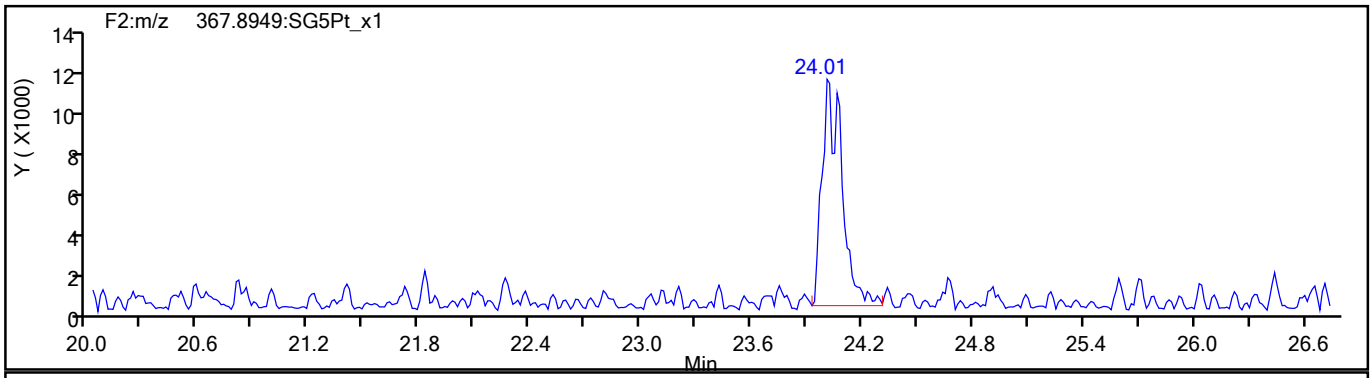

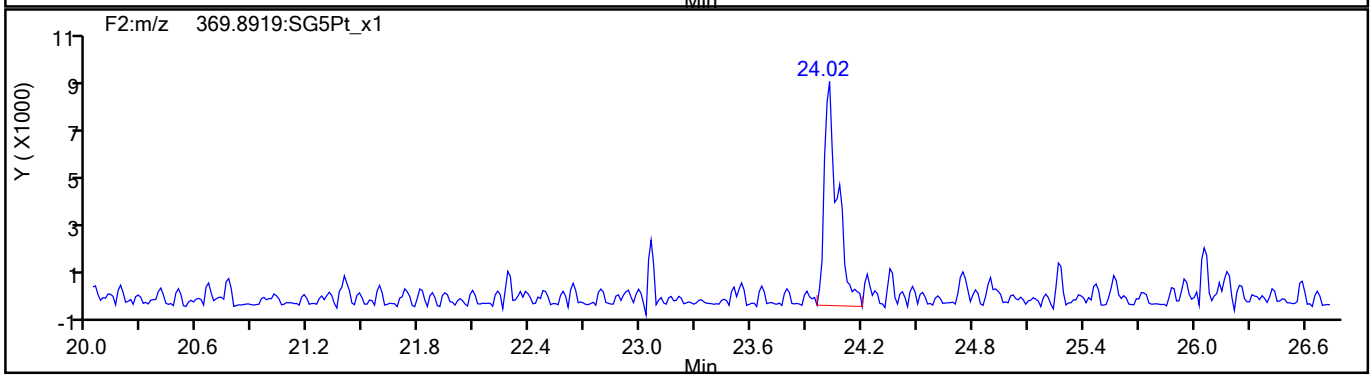

791854

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

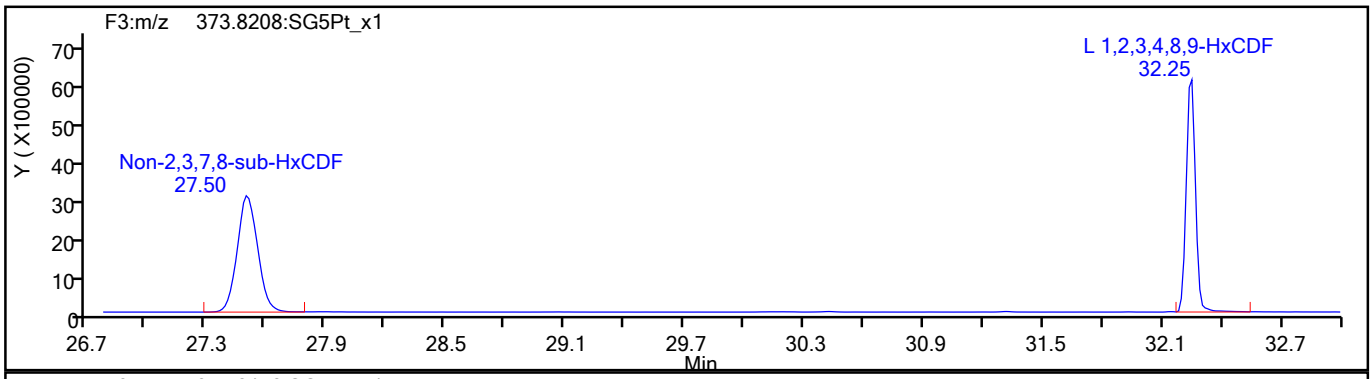

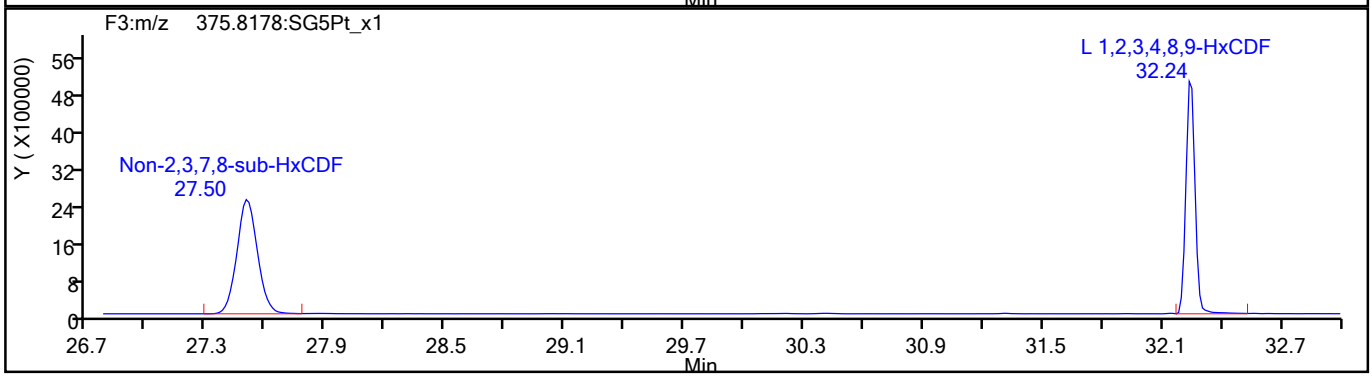

HxCDF Standards

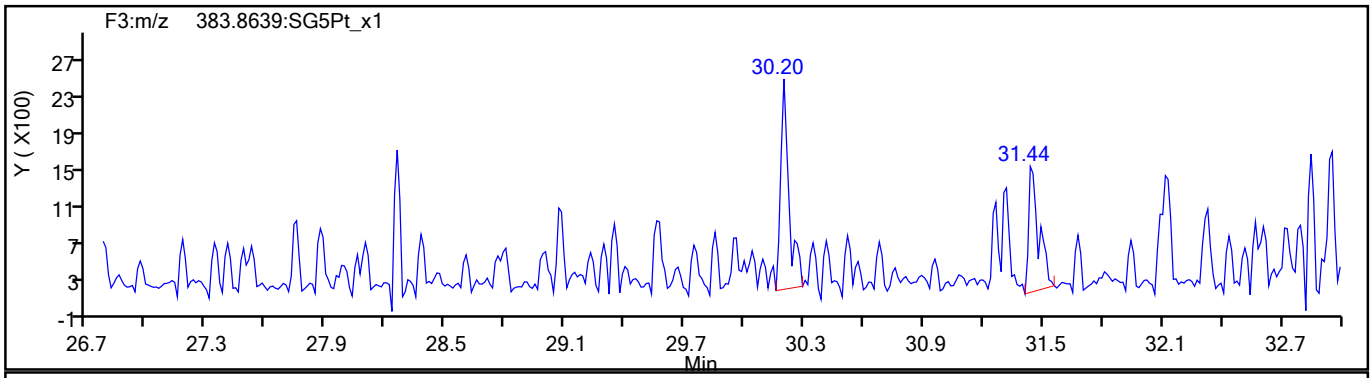

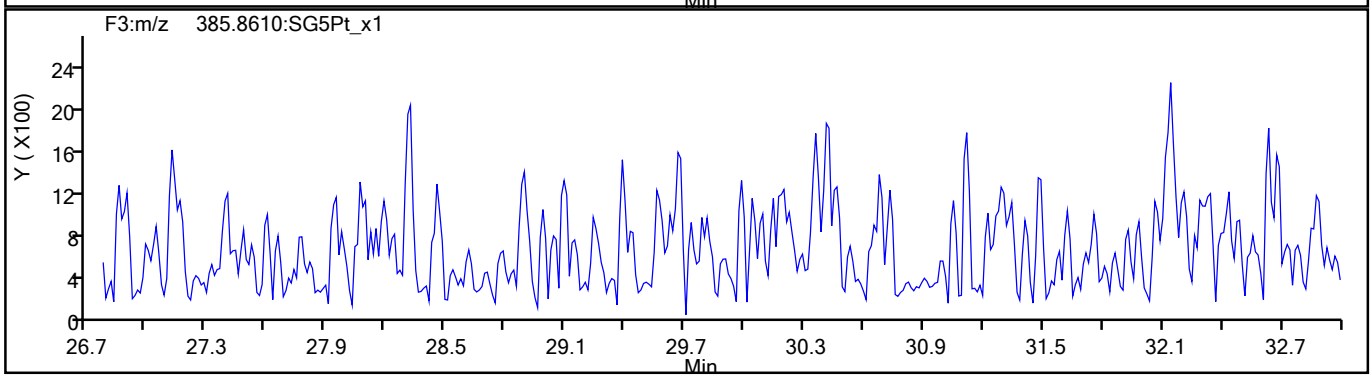

791855

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

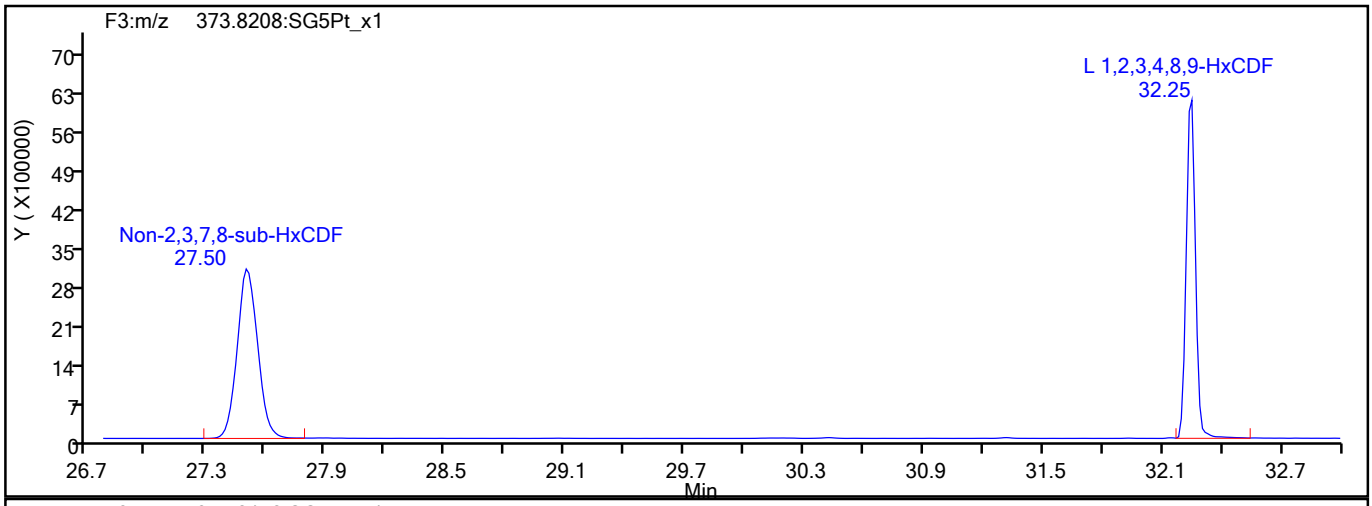

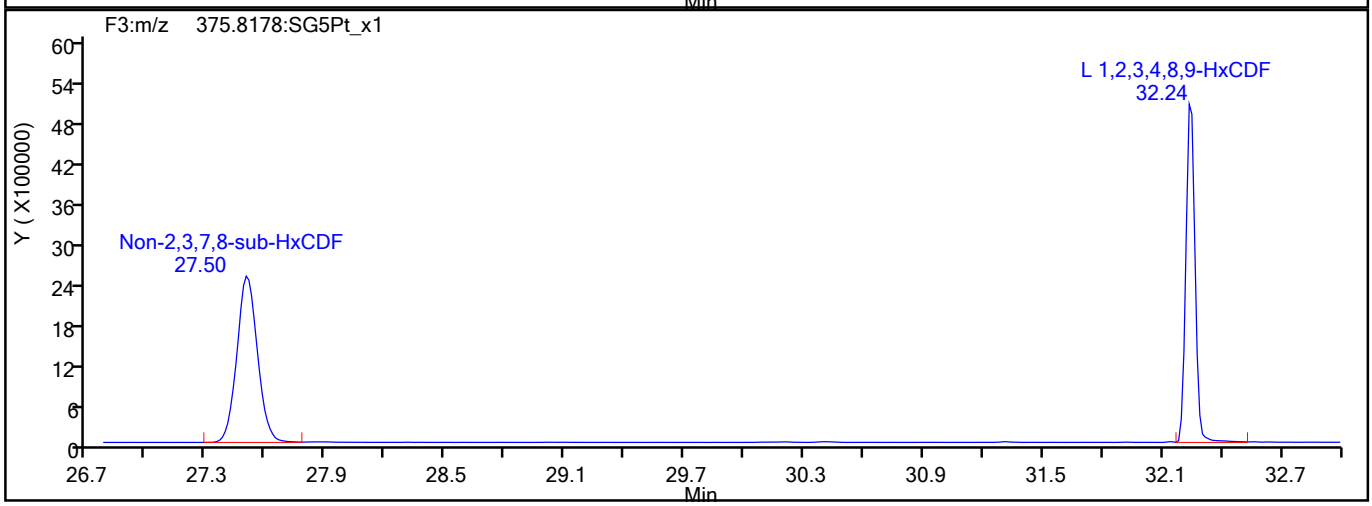

HxCDF Interference Mass

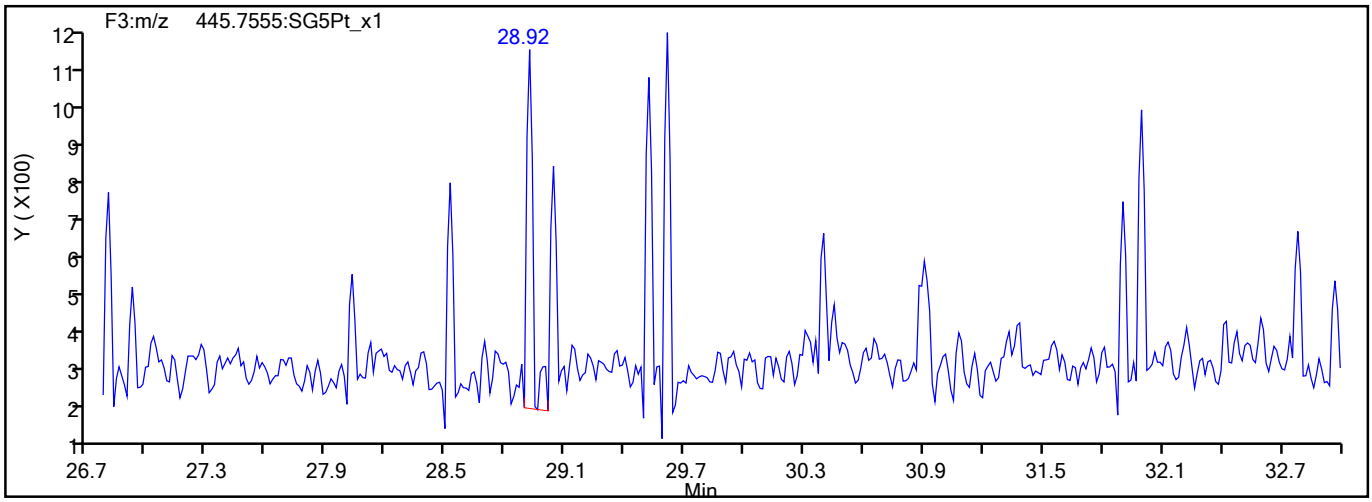

791856

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

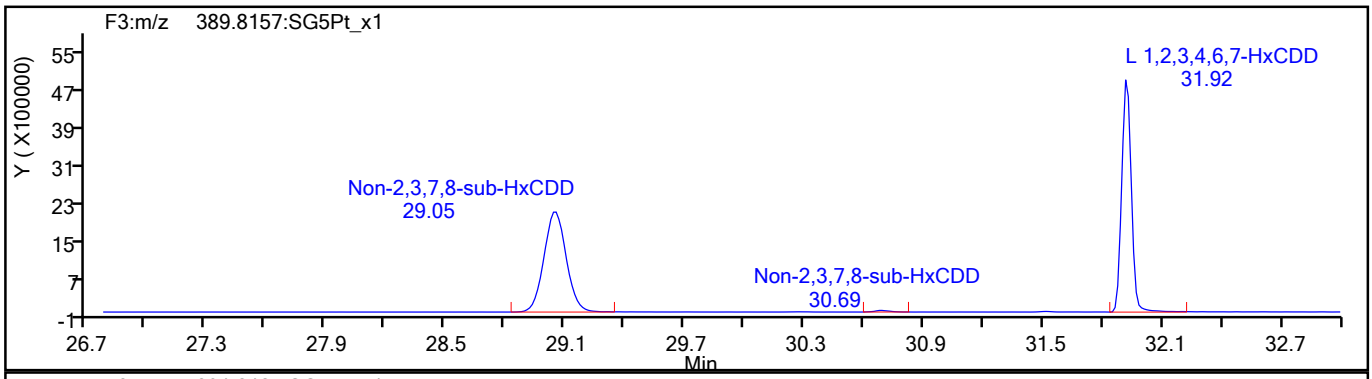

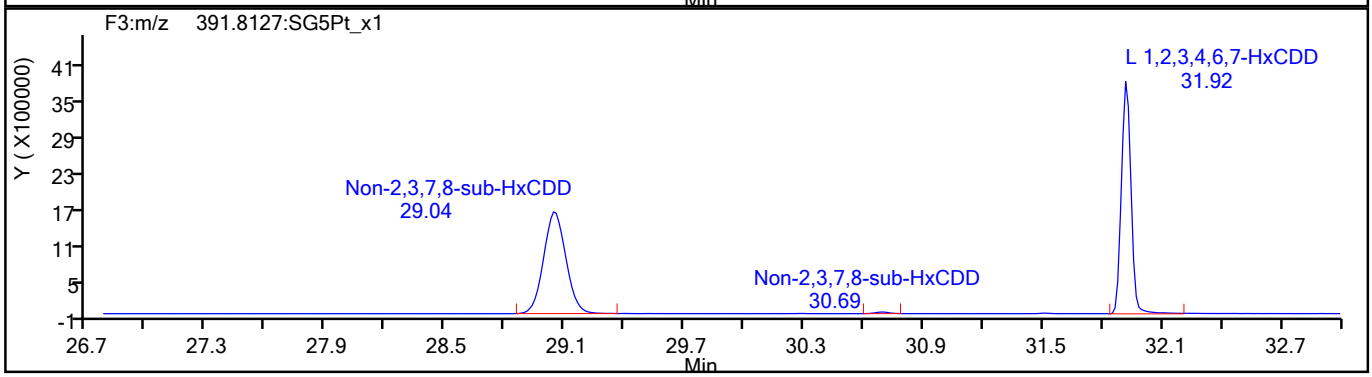

HxCDD Standards

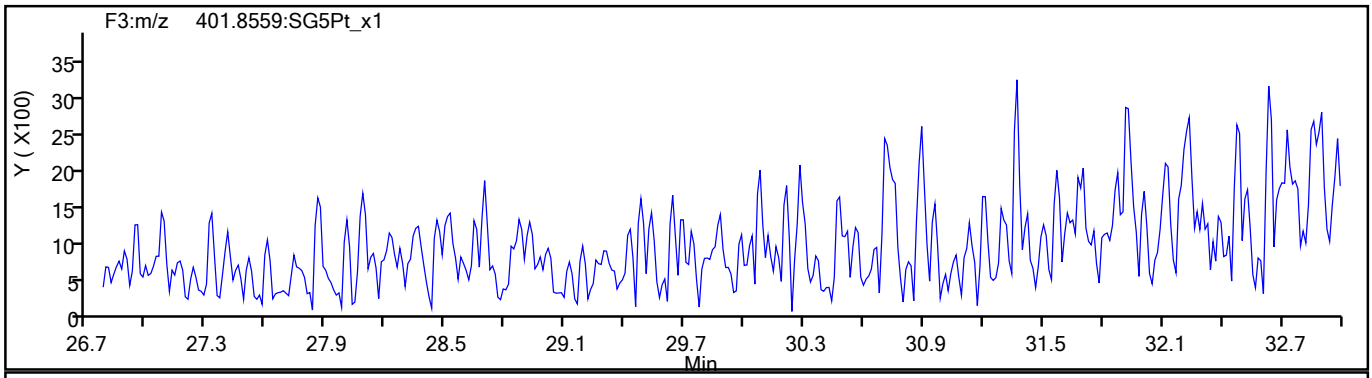

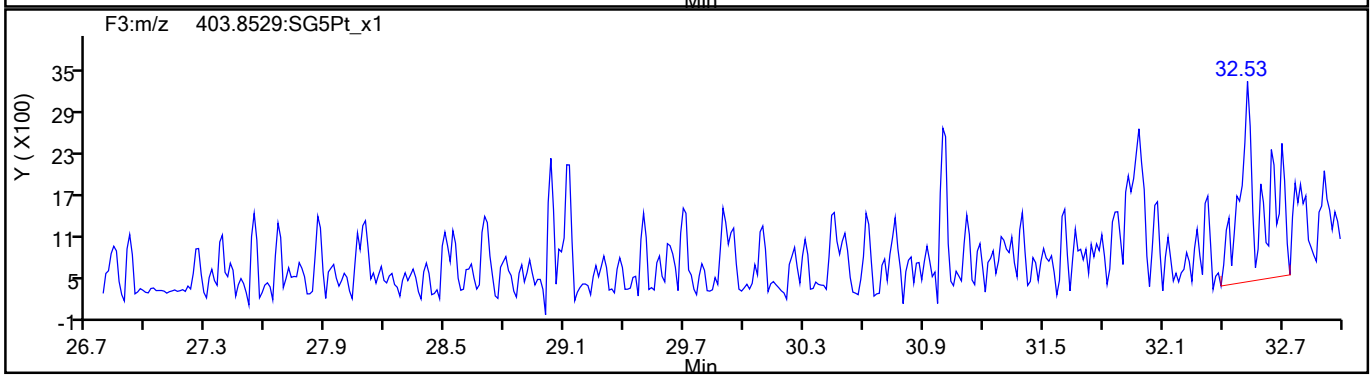

791857

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

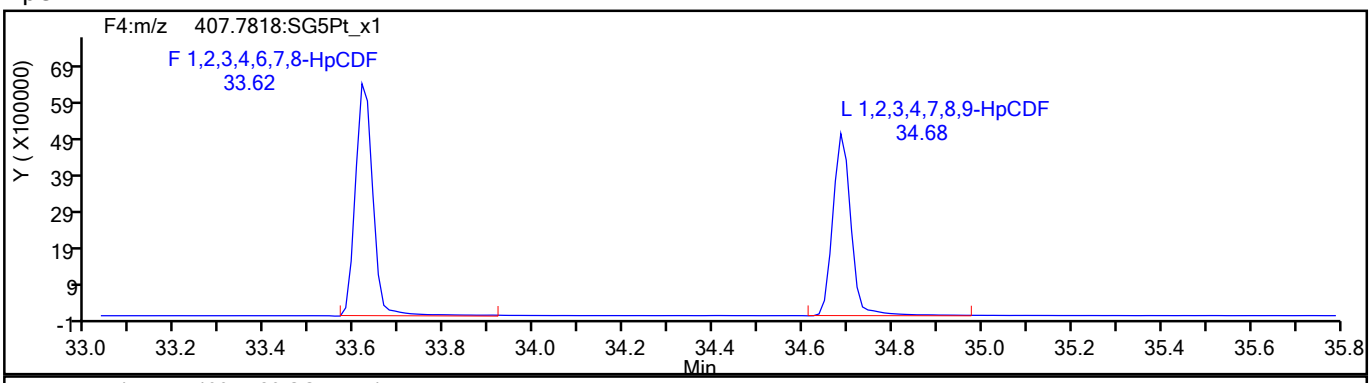

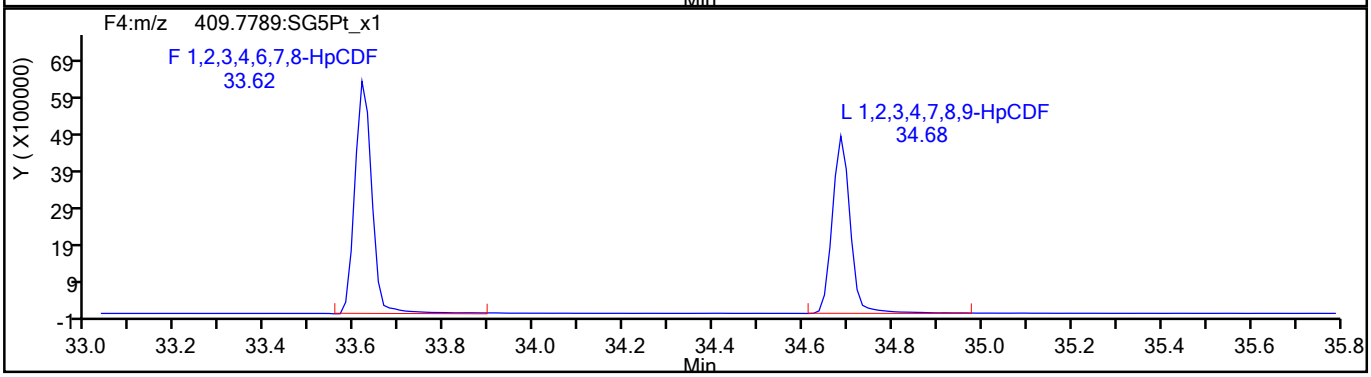

HpCDF Standards

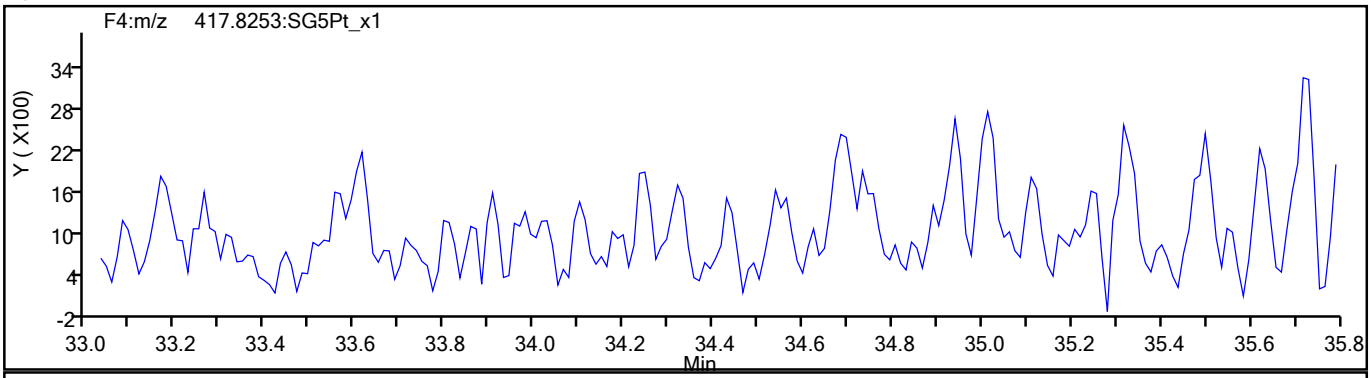

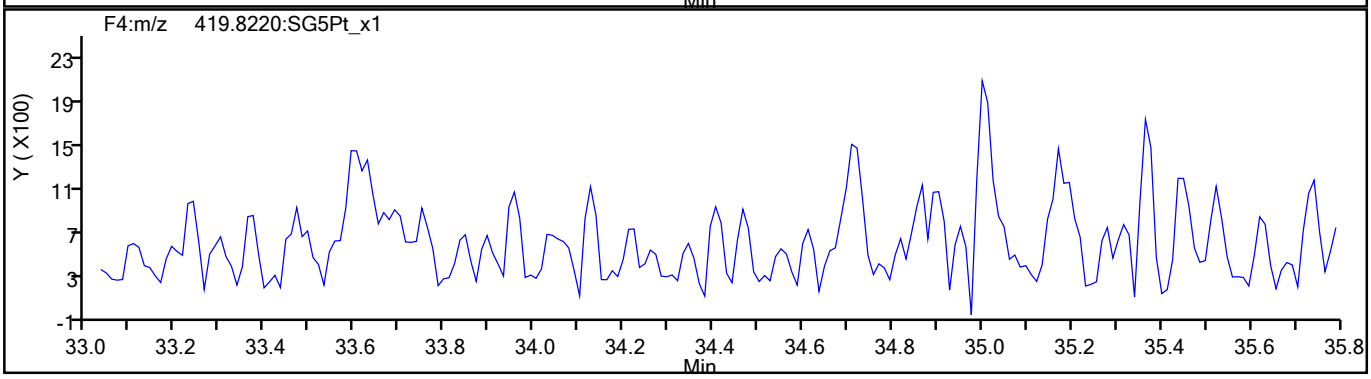

791858

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

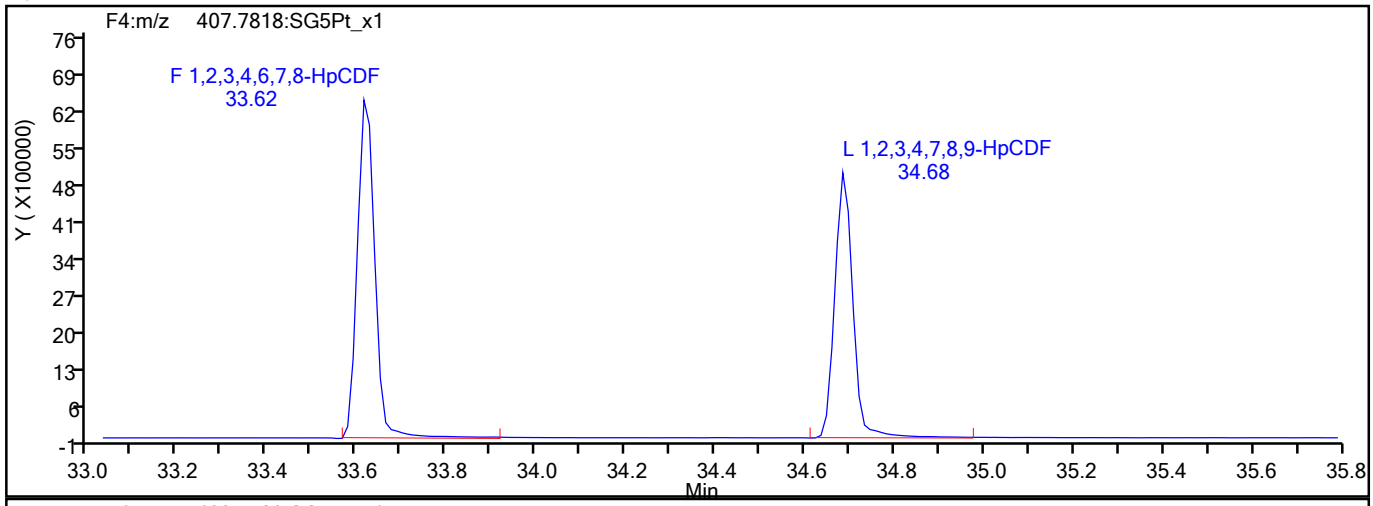

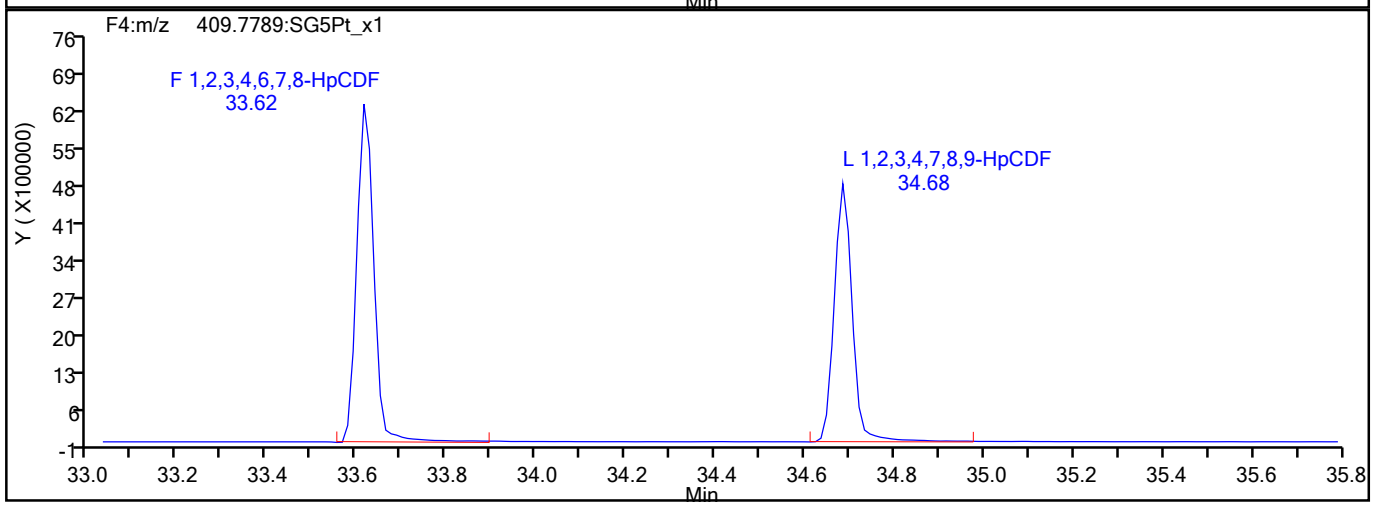

HpCDF Interference Mass

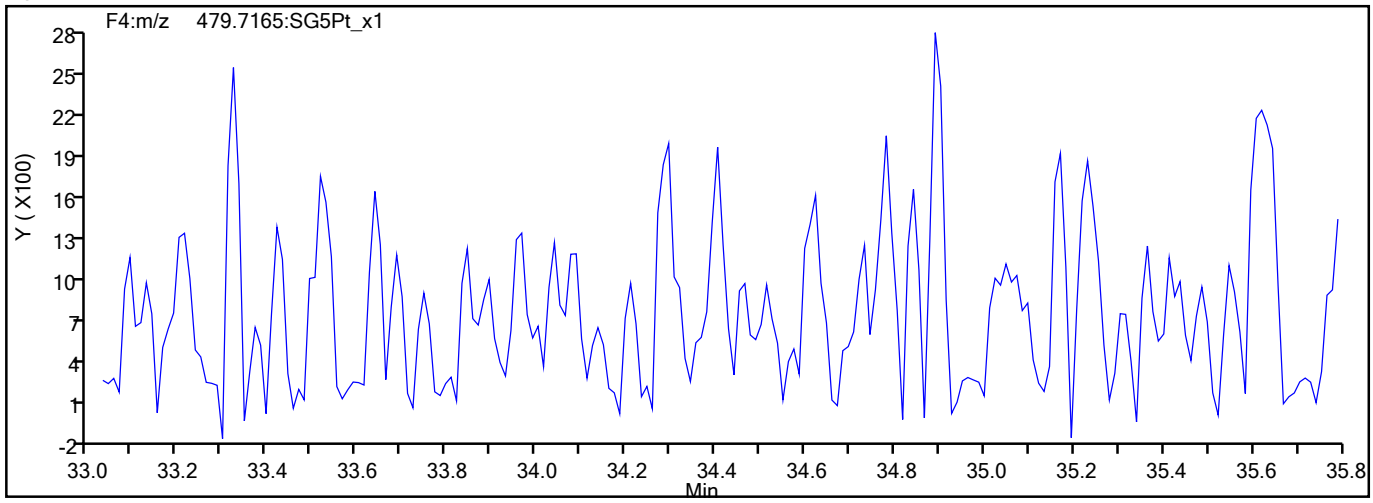

791859

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

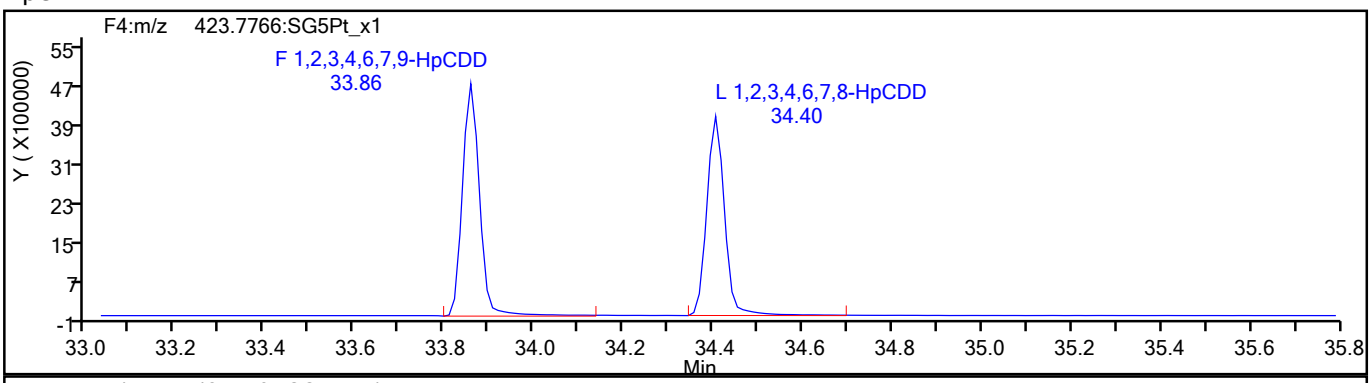

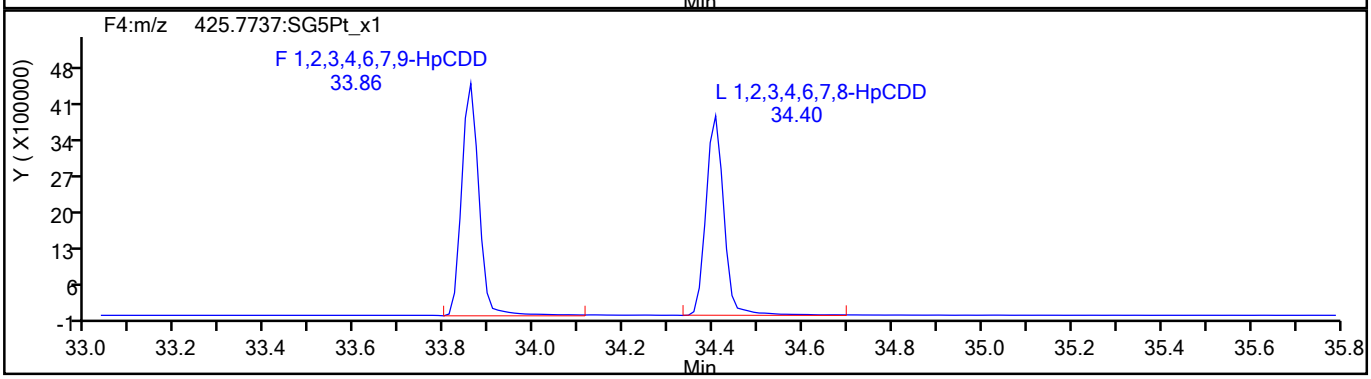

HpCDD Standards

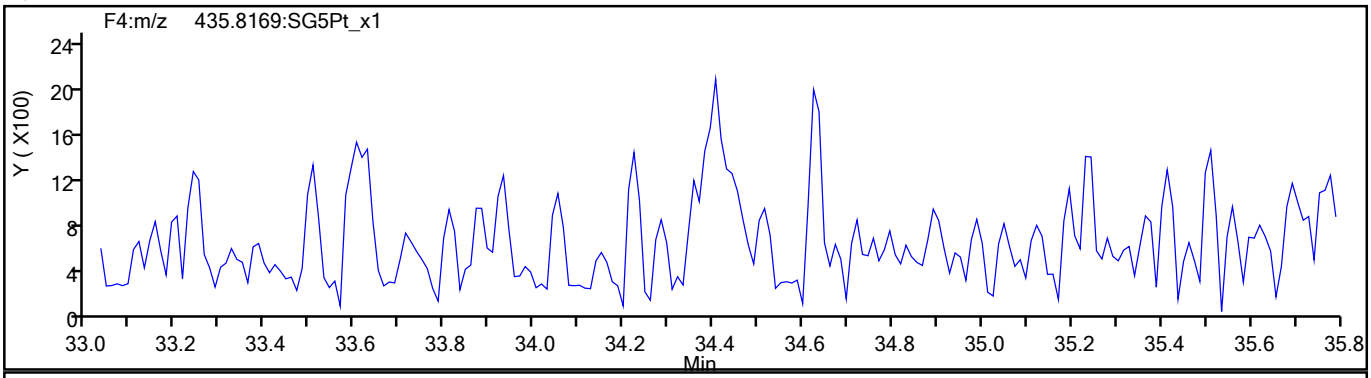

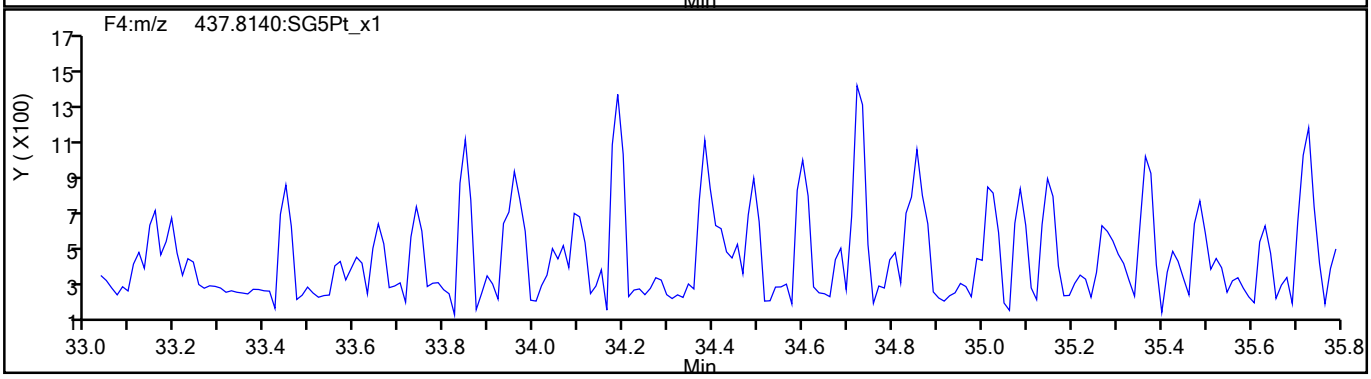

791860

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

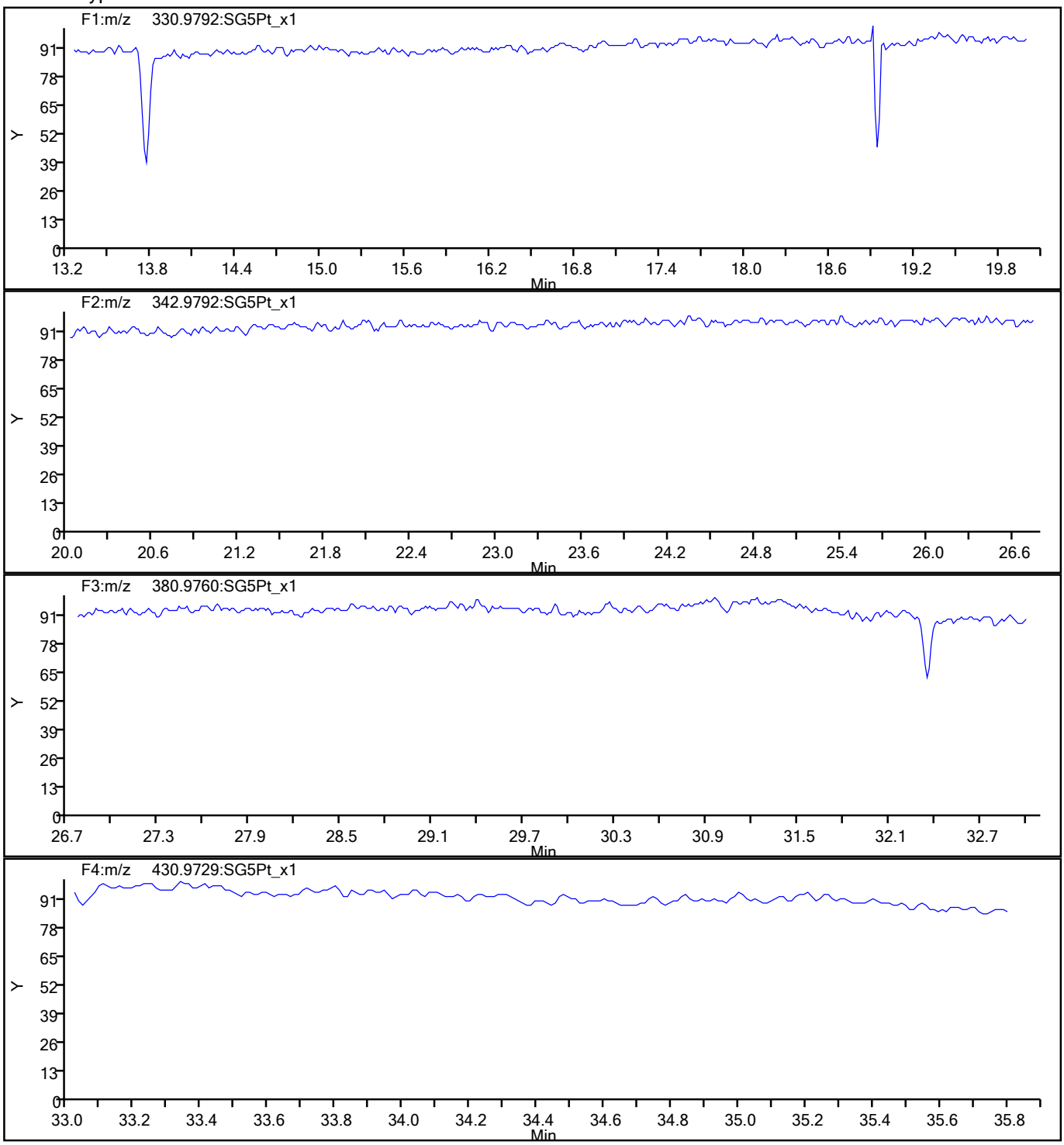

791861

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

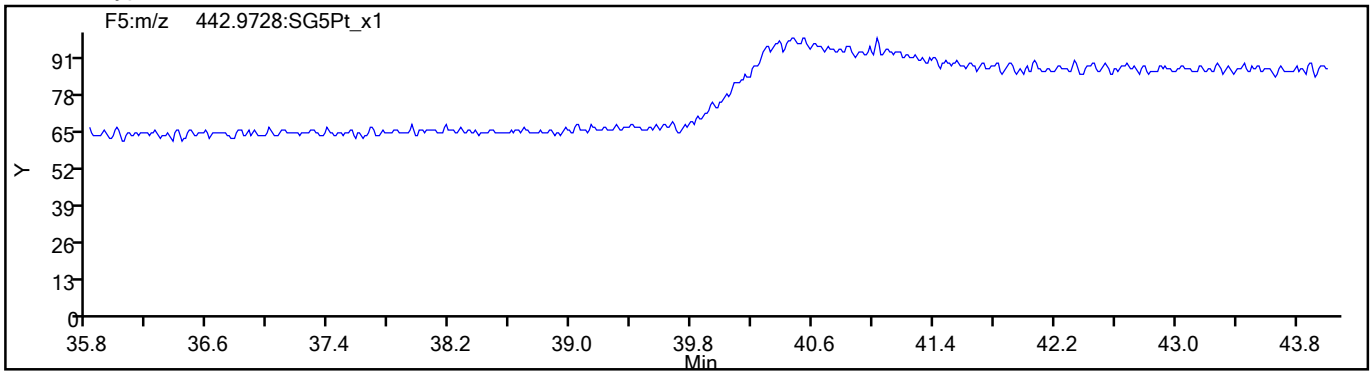

791862

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 25-Aug-2021 21:35:49 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521A WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:47:04 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 10:35:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.084	74388120	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.099	159997258	0.76	1.0239	84.0	84.0	0.3627	0.3627		
A Non-2,3,7,8-sub-TCDF	17.069	140883117	0.77	1.0239	74.0	74.0	0.3627	37.6		
S Total TCDF					158.0	158.0	0.3627	0.3627		
D 13C-2,3,7,8-TCDD	17.779	40521919	0.78	0.8993					0.00	
2,3,7,8-TCDD	17.794	54572596	0.78	1.2541	43.0	43.0	0.2594	0.2594		
A Non-2,3,7,8-sub-TCDD	17.530	153892625	0.78	1.2541	121.1	121.1	0.2594	43.5		
S Total TCDD					164.1	164.1	0.2594	0.2594		
A F1 PeCDFs	19.851	65266147	1.58	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.067	54189309	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.696	82705634	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.331	53586347	1.22	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.519	39695684	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.603	43294157	1.04	1.4413						
1,2,3,4,7,8,9-HpCDF	34.673	36211070	1.05	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.138						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.393	28640279	1.03	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.223						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.710	89743358	0.77							
1,3,6,8-TCDD	15.617	54255255	0.78							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.172						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.917	38883880	1.26							
1,2,3,4,8,9-HxCDF	32.236	47807565	1.22							
1,2,3,4,6,7,9-HpCDD	33.846	31570188	1.03							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 25-Aug-2021 21:35:49 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521A WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:47:04 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 10:35:11

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.084	17.084	0	1.000	32323167	8621543	6628	16570	1301		
317.9389	17.084	17.084	0	1.000	42064953	11085793	5116	12790	2167	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.099	17.099	0	1.001	69319978	16365691	28593	71482	572		
305.8987	17.099	17.099	0	1.001	90677280	21385185	44592	111480	480	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.945	17.069	53	1.050	30052123	7209328	28593	71482	252		
305.8987	17.945	17.069	53	1.050	39165578	9496018	44592	111480	213	0.77(0.65-0.89)	
303.9016	18.883	17.069	109	1.105	31094339	7154782	28593	71482	250		
305.8987	18.883	17.069	109	1.105	40571077	9344405	44592	111480	210	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.779	17.779	0	1.000	17742401	4421826	3384	8460	1307		
333.9339	17.779	17.779	0	1.000	22779518	5620867	2334	5835	2408	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.794	17.794	0	1.001	23998282	5996302	12780	31950	469		
321.8936	17.794	17.794	0	1.001	30574314	7642168	19893	49732	384	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.673	17.530	9	0.994	20564539	5151481	12780	31950	403		
321.8936	17.673	17.530	9	0.994	26572656	6761809	19893	49732	340	0.77(0.65-0.89)	
319.8965	17.961	17.530	26	1.010	24367217	5909696	12780	31950	462		
321.8936	17.961	17.530	26	1.010	30884604	7367861	19893	49732	370	0.79(0.65-0.89)	
319.8965	18.883	17.530	81	1.062	22563336	5247375	12780	31950	411		
321.8936	18.883	17.530	81	1.062	28940273	6736130	19893	49732	339	0.78(0.65-0.89)	
A F1 PeCDFs											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	19.155	19.851	-42	1.000	39966213	8908855	665	1662	13397		
341.8567	19.155	19.851	-42	1.000	25299934	5733839	983	2457	5833	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.656	23.067	-144	1.000	97574	17131	3361	8402	5		
341.8567	20.656	23.067	-144	1.000	54775	11836	2646	6615	4	1.78(1.32-1.78)	
339.8597	21.475	23.067	-95	1.000	127261	24792	3361	8402	7		
341.8567	21.475	23.067	-95	1.000	58432	13401	2646	6615	5	2.18(1.32-1.78)	
339.8597	22.034	23.067	-62	1.000	241269	41075	3361	8402	12		
341.8567	22.034	23.067	-62	1.000	188461	25346	2646	6615	10	1.28(1.32-1.78)	
339.8597	22.579	23.067	-29	1.000	168384	27442	3361	8402	8		
341.8567	22.566	23.067	-30	1.000	97299	18101	2646	6615	7	1.73(1.32-1.78)	
339.8597	25.252	23.067	131	1.000	32805798	5042919	3361	8402	1500		
341.8567	25.252	23.067	131	1.000	20419552	3191833	2646	6615	1206	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	20.902	23.696	-167	1.000	26002082	4742565	2517	6292	1884		
357.8516	20.902	23.696	-167	1.000	16527788	3016560	1584	3960	1904	1.57(1.32-1.78)	
355.8546	25.034	23.696	80	1.000	24642898	3723681	2517	6292	1479		
357.8516	25.034	23.696	80	1.000	15532866	2363453	1584	3960	1492	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.497	30.331	-170	1.000	29496594	4050629	4076	10190	994		
375.8178	27.484	30.331	-170	1.000	24089753	3299313	3201	8002	1031	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.042	30.519	-88	1.000	21909983	2755605	7443	18607	370		
391.8127	29.028	30.519	-89	1.000	17417167	2167101	5856	14640	370	1.26(1.05-1.43)	
389.8157	30.678	30.519	10	1.000	199387	39528	7443	18607	5		
391.8127	30.692	30.519	10	1.000	169147	31524	5856	14640	5	1.18(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603	33.603	0	1.000	22072838	8057659	19102	47755	422		
409.7789	33.603	33.603	0	1.000	21221319	8000430	19548	48870	409	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673	34.673	0	1.000	18558826	6373334	19102	47755	334		
409.7789	34.673	34.673	0	1.000	17652244	6113772	19548	48870	313	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						19102	47755			
409.7789	34.138						19548	48870			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	14534486	5108509	16615	41537	307		
425.7737	34.393	34.393	0	1.000	14105793	5035439	20282	50705	248	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						16615	41537			
425.7737	34.223						20282	50705			
1,3,6,8-TCDF											
303.9016	14.710	14.710	0		39075114	12523325	28593	71482	438		
305.8987	14.710	14.710	0		50668244	16274864	44592	111480	365	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,3,6,8-TCDD											
319.8965	15.617	15.617	0		23811446	6916572	12780	31950	541		
321.8936	15.617	15.617	0		30443809	8702675	19893	49732	437	0.78(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.537						28593	71482			
305.8987	17.537						44592	111480			
1,2,3,7-TCDD											
319.8965	18.172						12780	31950			
321.8936	18.172						19893	49732			
1,2,3,9-TCDD											
319.8965	18.414						12780	31950			
321.8936	18.414						19893	49732			
1,2,3,9-TCDF											
303.9016	18.414						28593	71482			
305.8987	18.414						44592	111480			
1,2,8,9-TCDD											
319.8965	19.382						12780	31950			
1,2,8,9-TCDF											
303.9016	19.427						28593	71482			
305.8987	19.427						44592	111480			
1,3,4,6,8-PeCDF											
339.8597	19.669						665	1662			
341.8567	19.669						983	2457			
1,2,4,7,9-PeCDD											
355.8546	21.480						2517	6292			
357.8516	21.480						1584	3960			
1,2,3,8,9-PeCDD											
355.8546	25.790						2517	6292			
357.8516	25.790						1584	3960			
1,2,3,8,9-PeCDF											
339.8597	26.021						3361	8402			
341.8567	26.021						2646	6615			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						4076	10190			
375.8178	28.333						3201	8002			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						7443	18607			
391.8127	29.890						5856	14640			
1,2,3,4,6,7-HxCDD											
389.8157	31.917	31.917	0		21657242	6174171	7443	18607	830		
391.8127	31.903	31.917	-1		17226638	4945369	5856	14640	844	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.236	32.236	0		26293189	8356423	4076	10190	2050		
375.8178	32.236	32.236	0		21514376	6764058	3201	8002	2113	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.846	33.846	0		16052996	5838798	16615	41537	351		
425.7737	33.846	33.846	0		15517192	5735924	20282	50705	283	1.03(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	74388120	19707336

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	74388120	19707336

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.945	30052123	7209328	39165578	9496018	36.4	0.77	
18.883	31094339	7154782	40571077	9344405	37.6	0.77	
Signal Totals:							
	61146462	14364110	79736655	18840423			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	140883117	33204533				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 73.987 = (140883117 * 40.000) / (74388120 * 1.024)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	40521919	10042693

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	40521919	10042693

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.673	20564539	5151481	26572656	6761809	37.1	0.77	
17.961	24367217	5909696	30884604	7367861	43.5	0.79	
18.883	22563336	5247375	28940273	6736130	40.5	0.78	
Signal Totals:							
	67495092	16308552	86397533	20865800			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	153892625	37174352				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 121.129 = (153892625 * 40.000) / (40521919 * 1.254)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.155	39966213	8908855	25299934	5733839		1.58	
Signal Totals:							
	39966213	8908855	25299934	5733839			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	65266147	14642694				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (65266147 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.656	97574	17131	54775	11836		1.78	
21.475	127261	24792	58432	13401		2.18	R
22.034	241269	41075	188461	25346		1.28	R
22.579	168384	27442	97299	18101		1.73	
25.252	32805798	5042919	20419552	3191833		1.61	
Signal Totals:							
	33440286	5153359	20818519	3260517			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	54258805	8413876				1.61	RQ
	54189309	8411009					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (54258805 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (54189309 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.902	26002082	4742565	16527788	3016560		1.57	
25.034	24642898	3723681	15532866	2363453		1.59	
Signal Totals:							
	50644980	8466246	32060654	5380013			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	82705634	13846259				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (82705634 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-HxCDF, RT: 30.331

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.497	29496594	4050629	24089753	3299313		1.22	
Signal Totals:							
	29496594	4050629	24089753	3299313			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	53586347	7349942				1.22	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (53586347 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.042	21909983	2755605	17417167	2167101		1.26	
30.678	199387	39528	169147	31524		1.18	
Signal Totals:							
	22109370	2795133	17586314	2198625			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	39695684	4993758				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (39695684 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

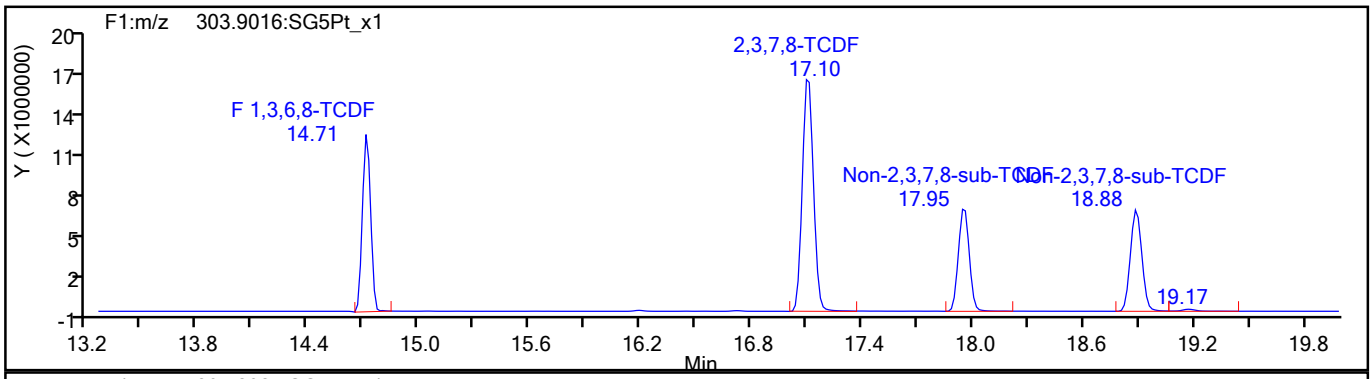

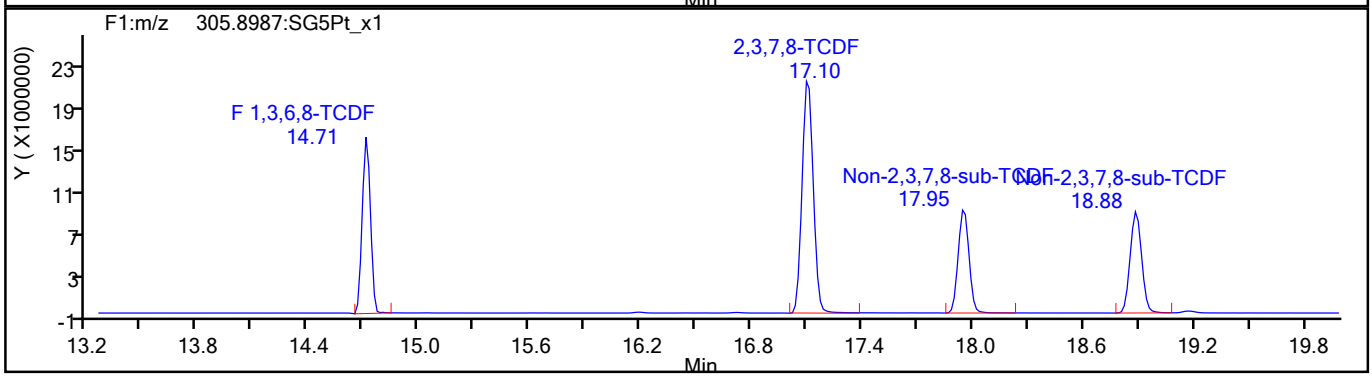

TCDF Standards

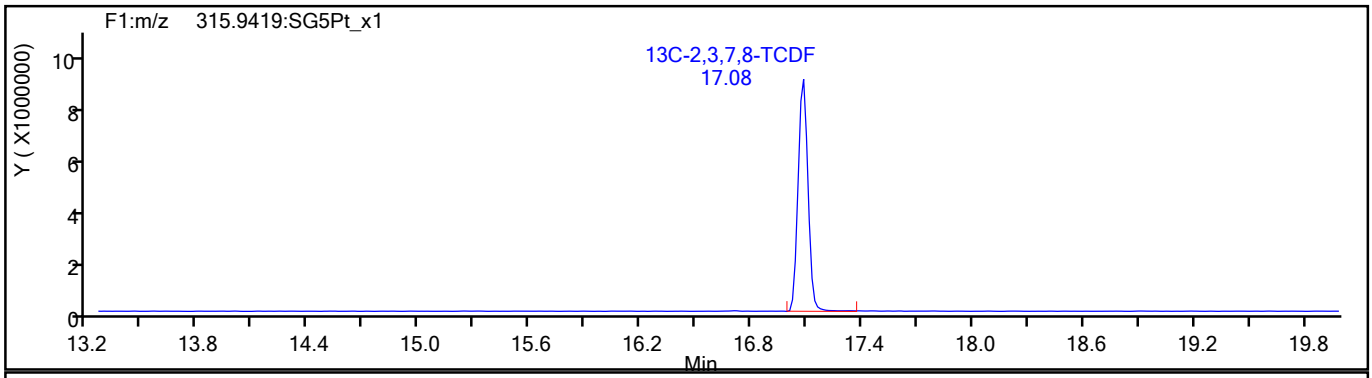

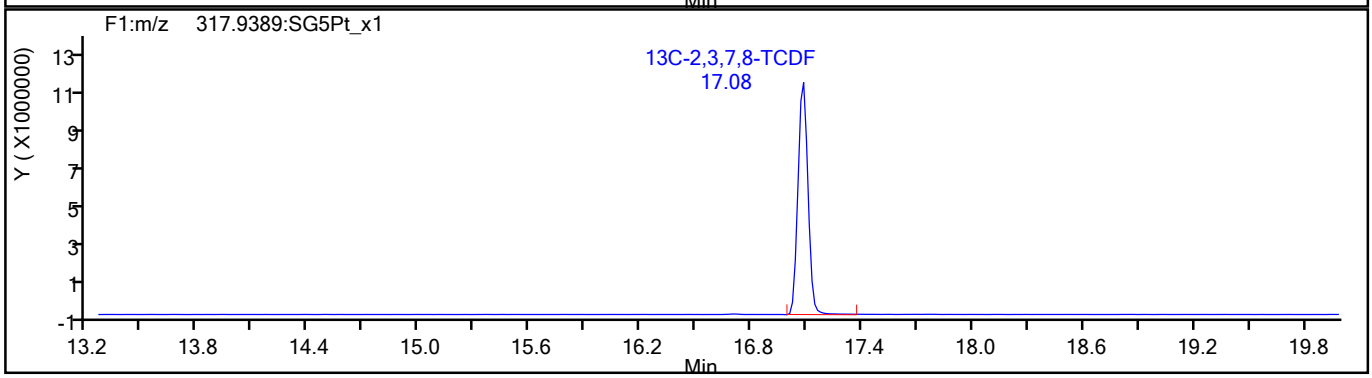

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Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

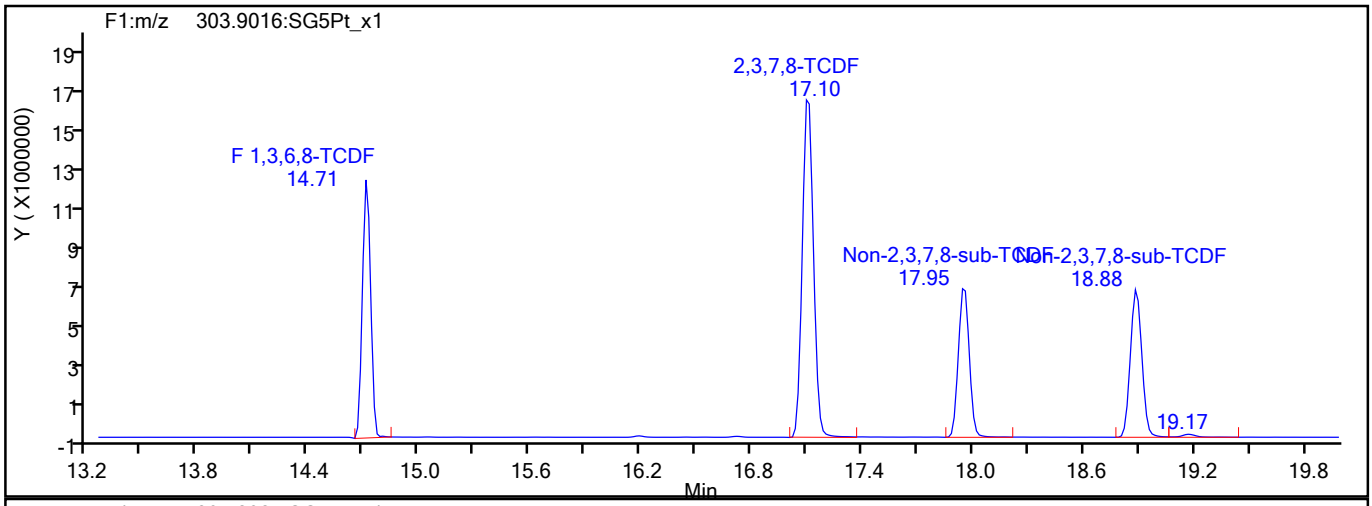

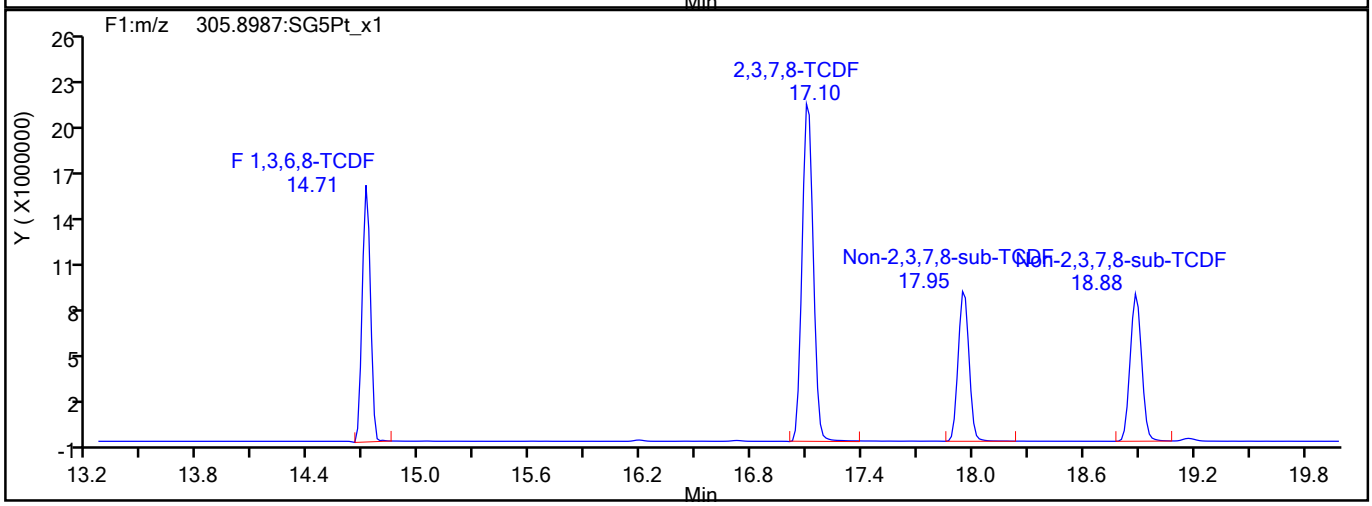

TCDF Interference Mass

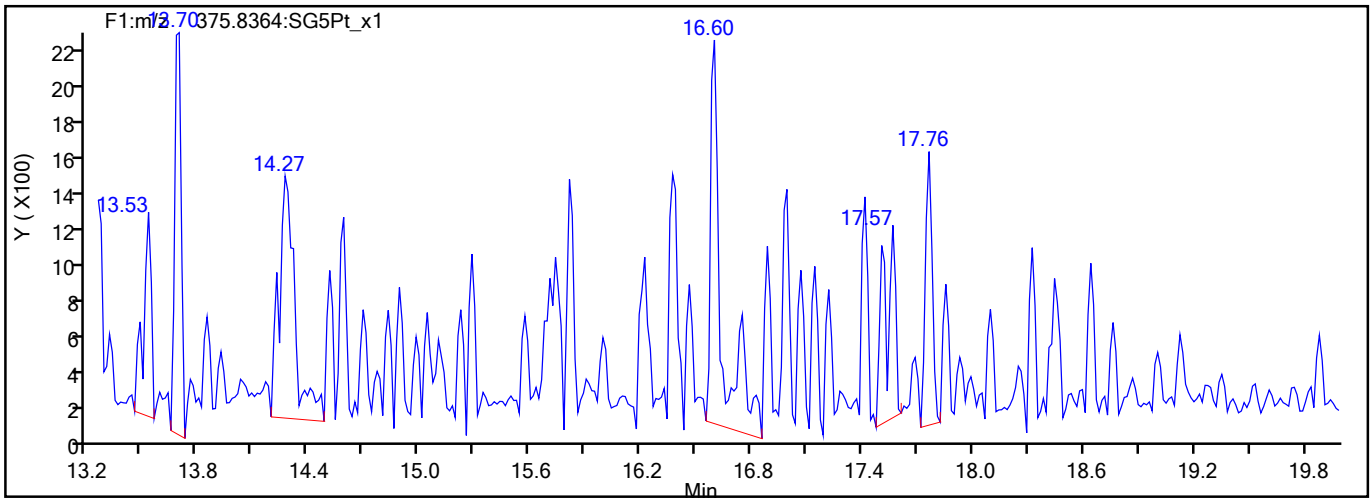

791877

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

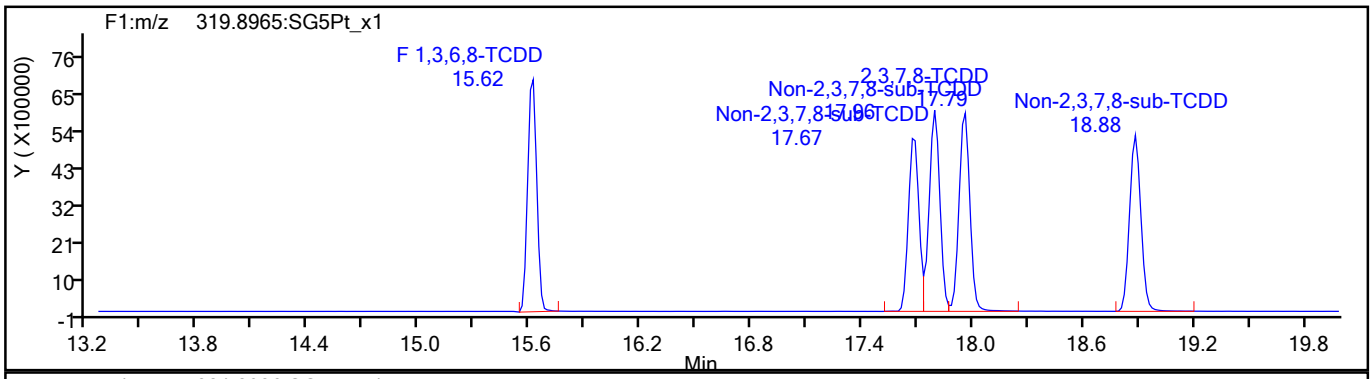

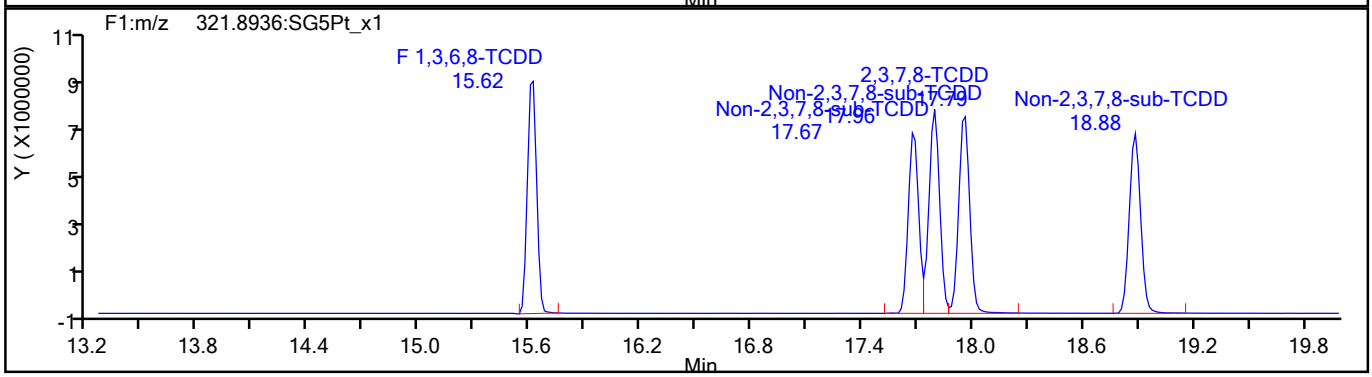

TCDD Standards

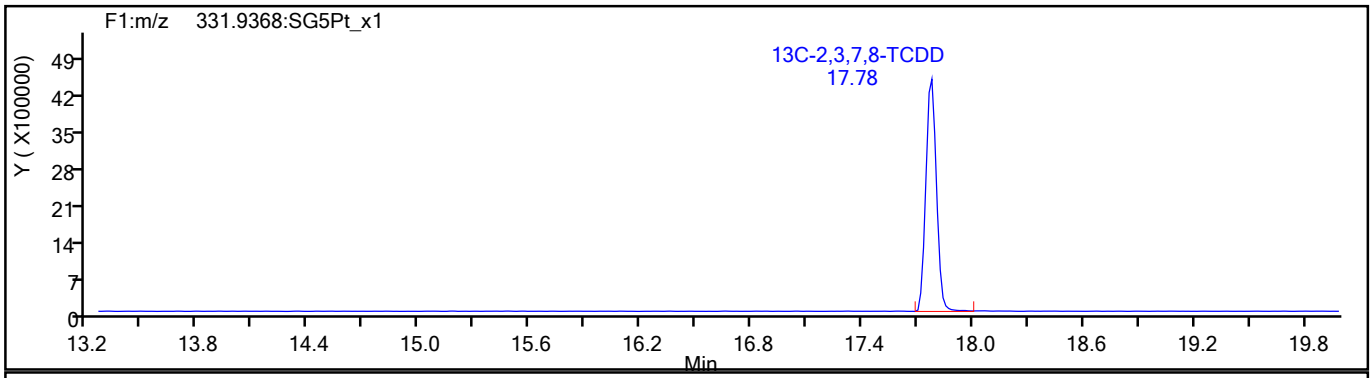

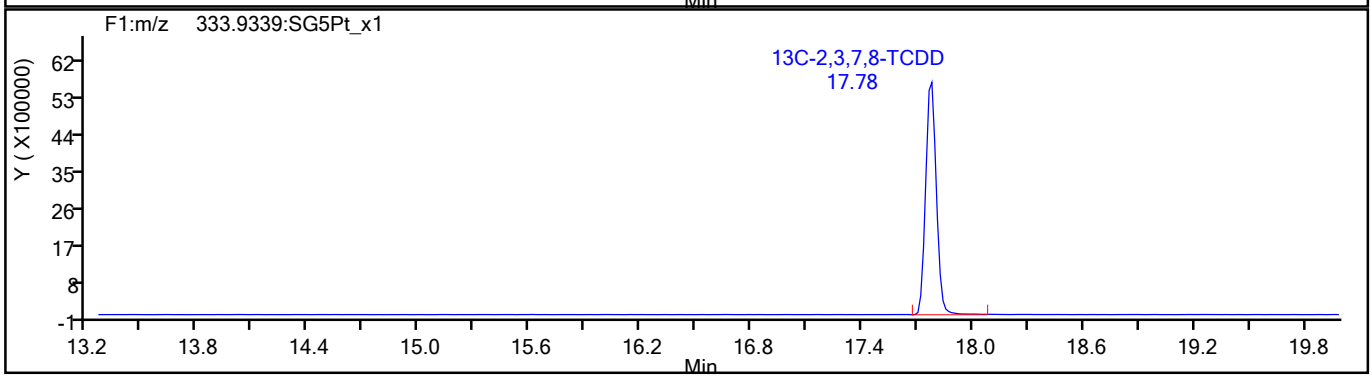

791878

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

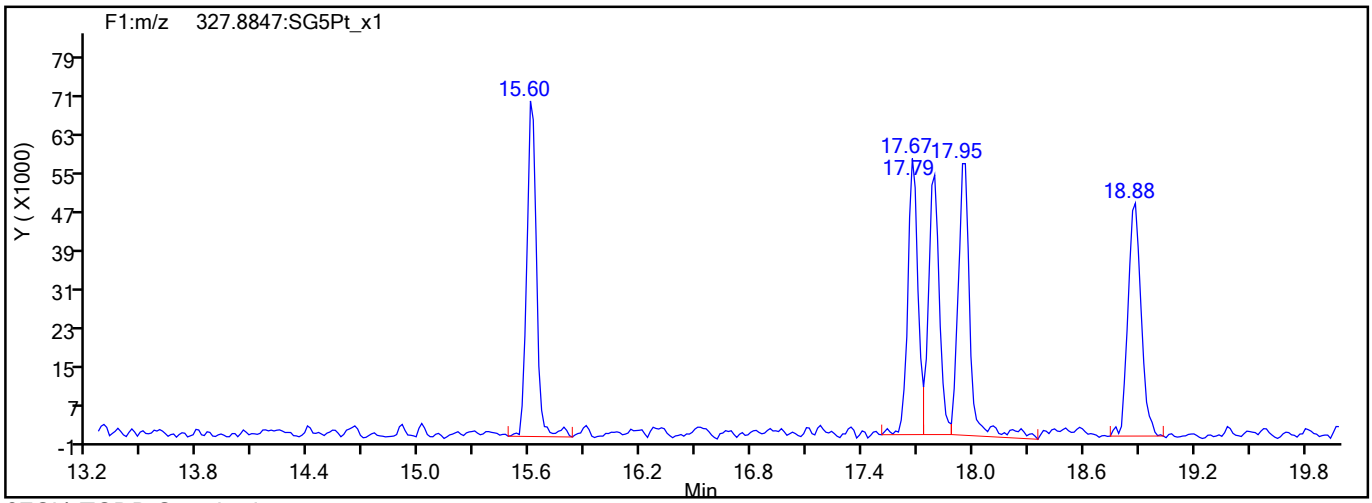

37Cl4-TCDD Standards

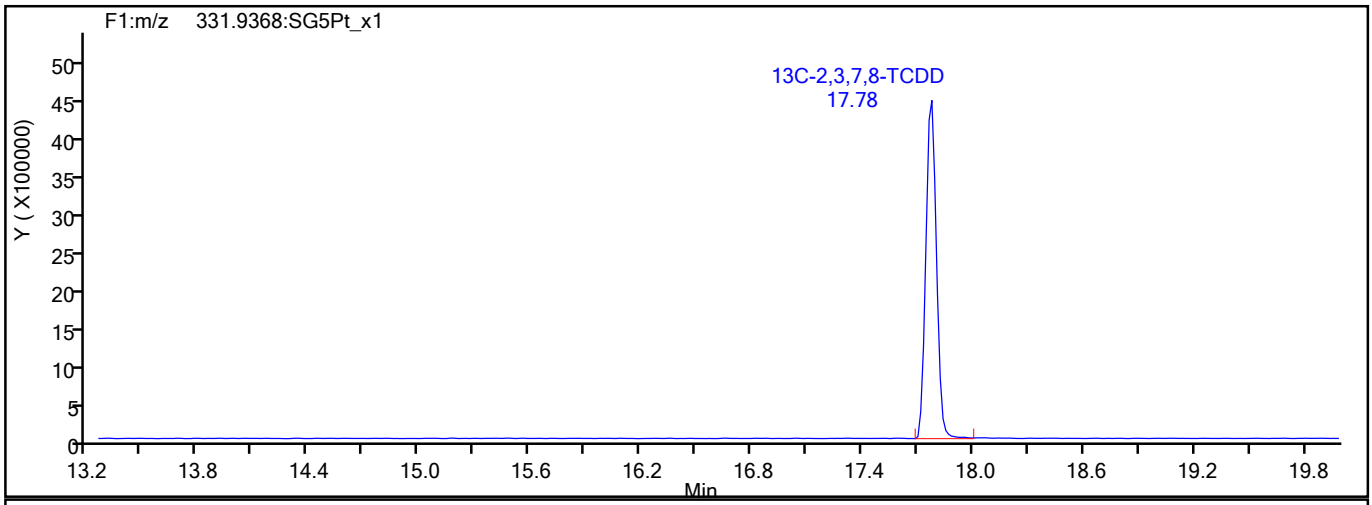

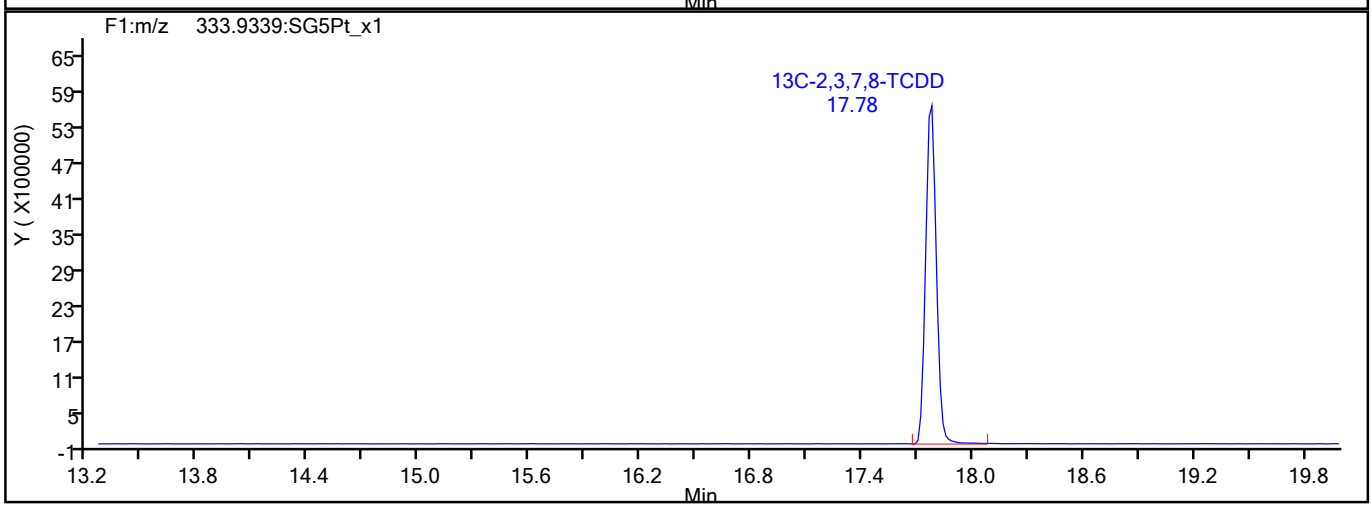

791879

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

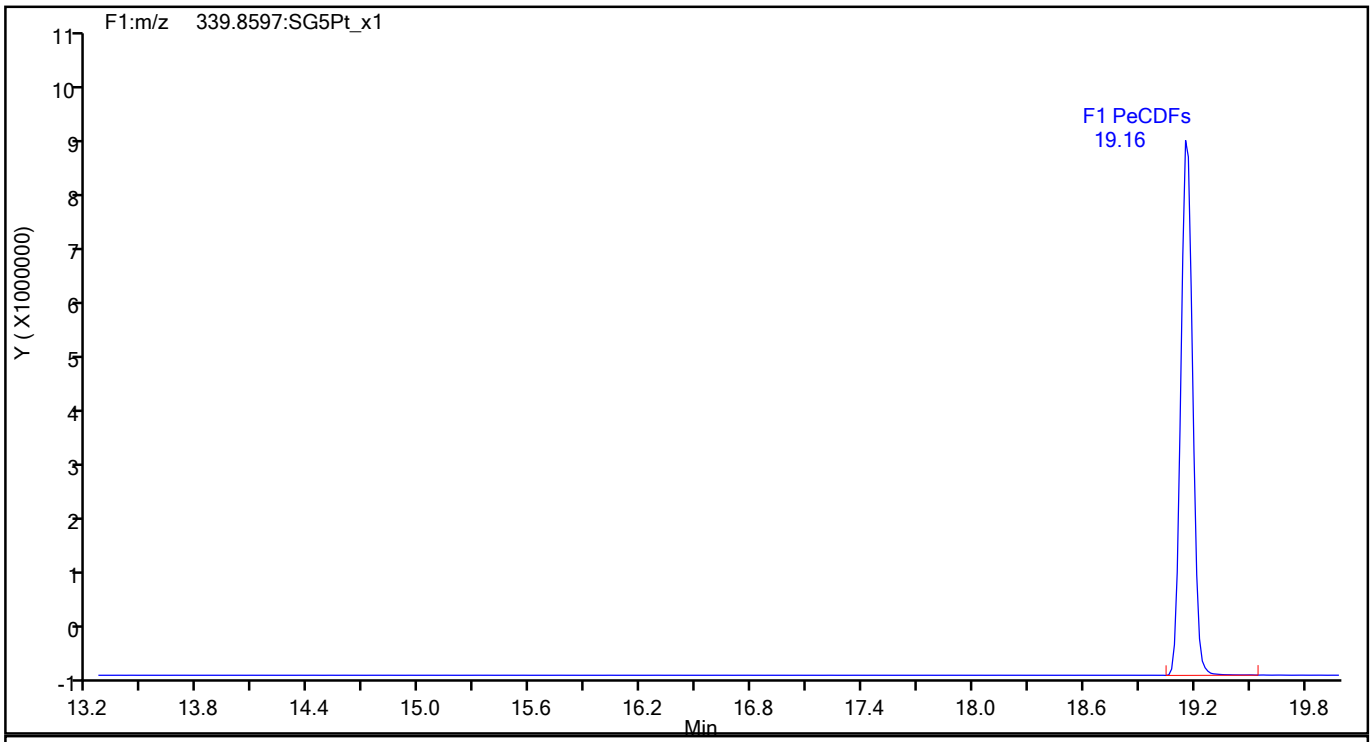

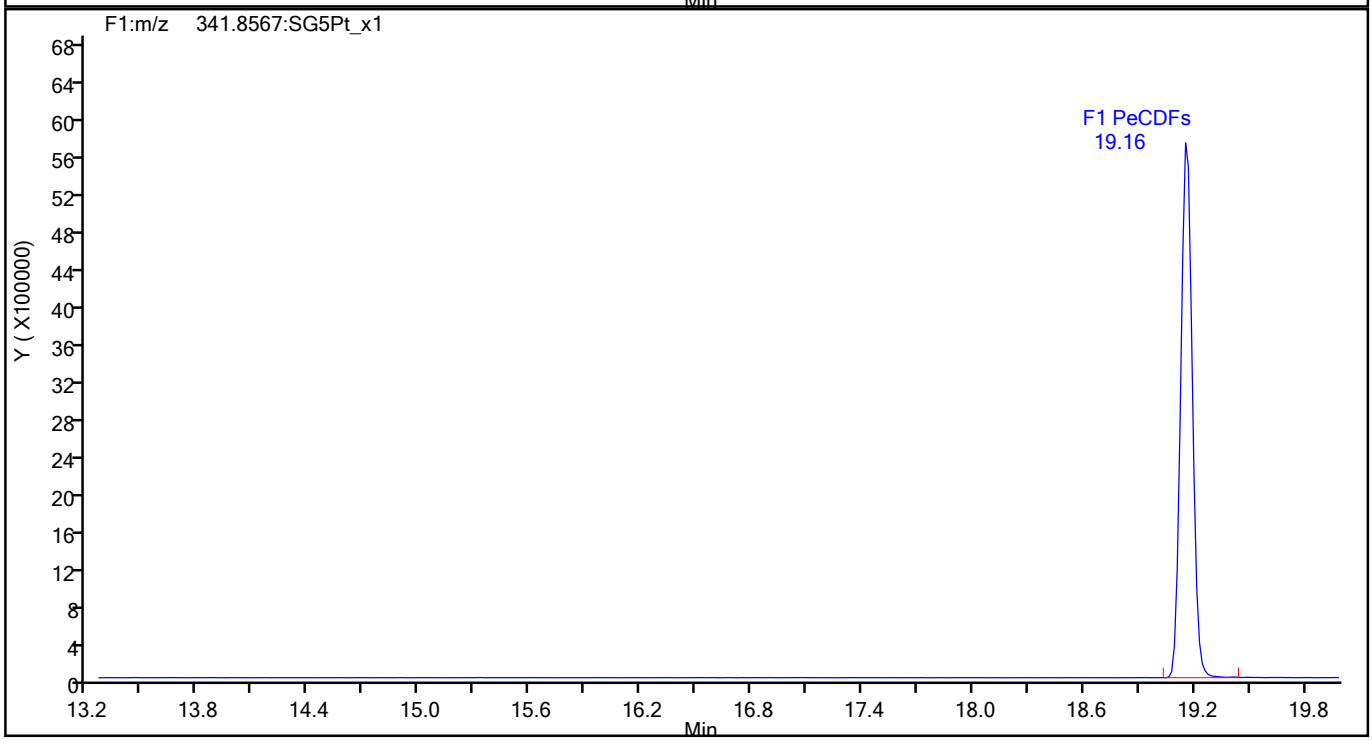

791880

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

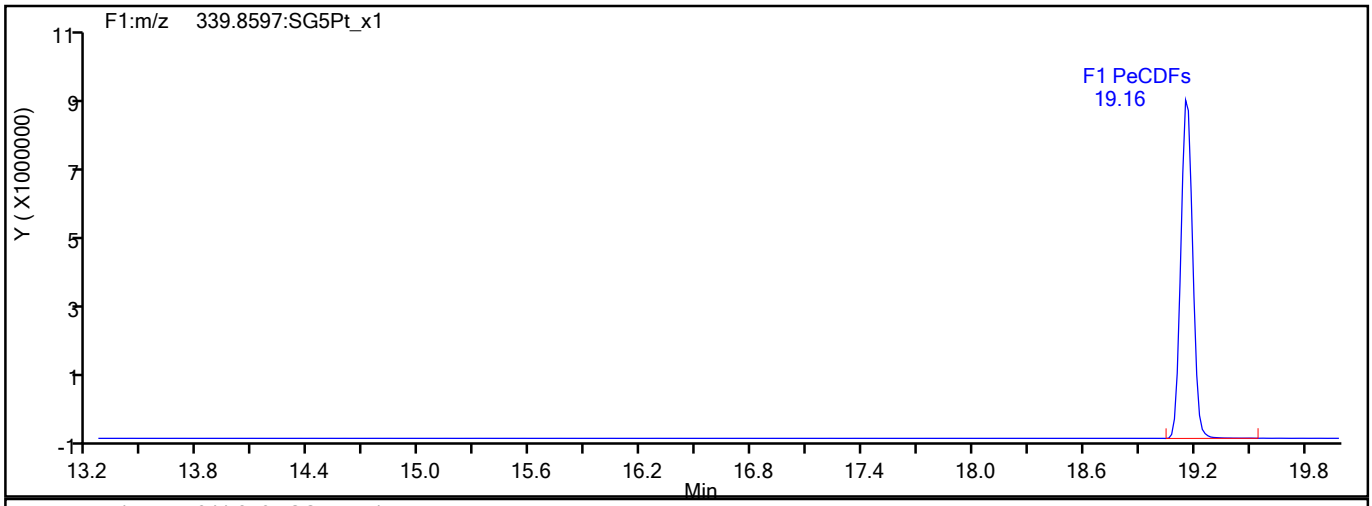

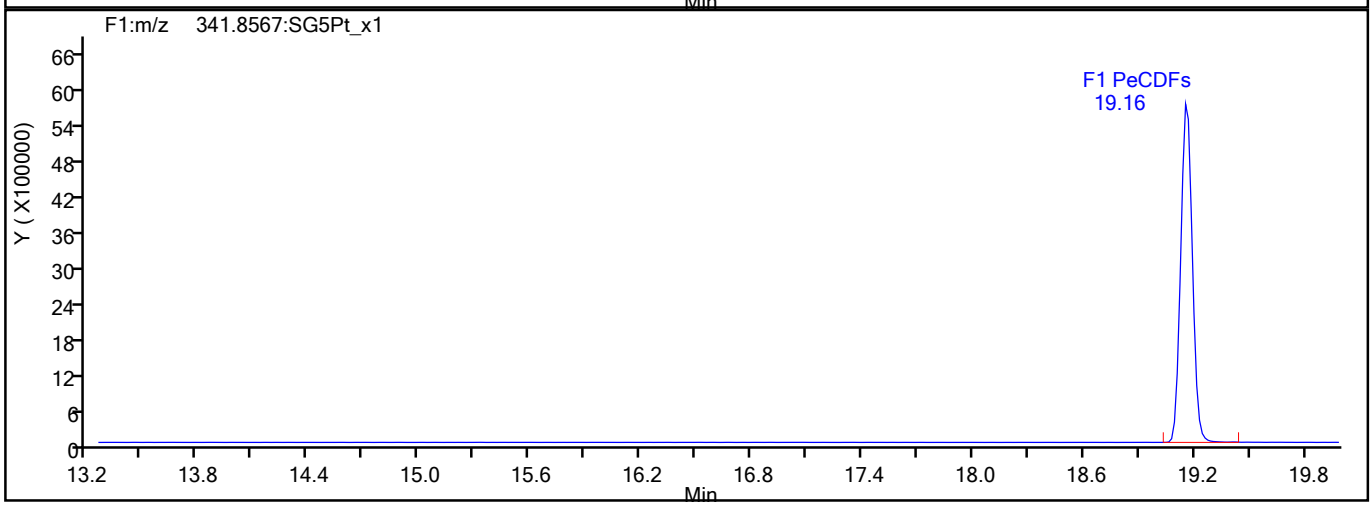

F1 PeCDFs Interference Mass

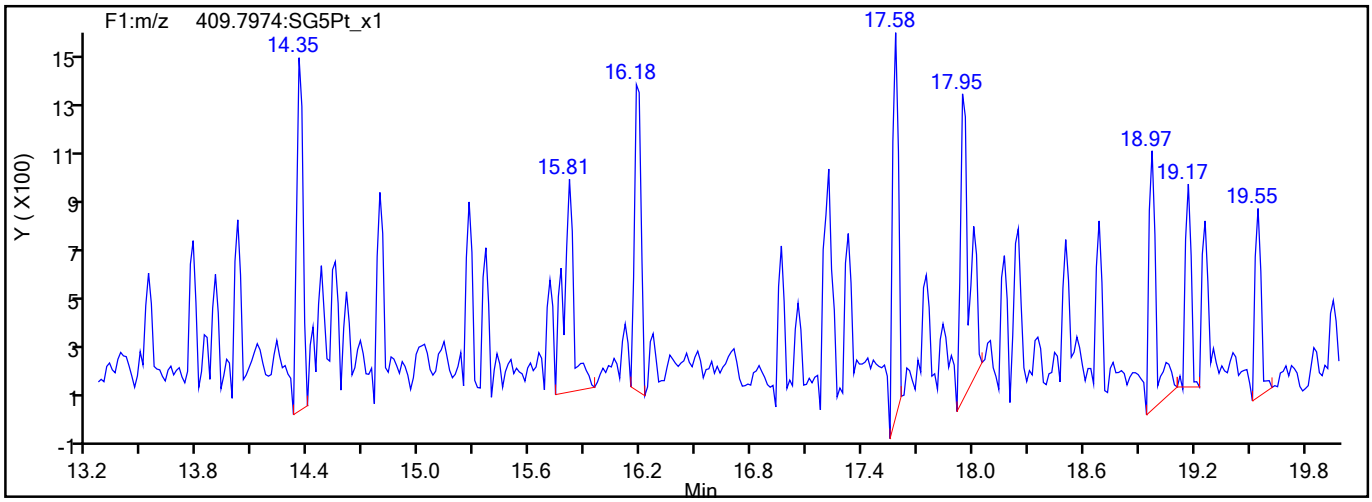

791881

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

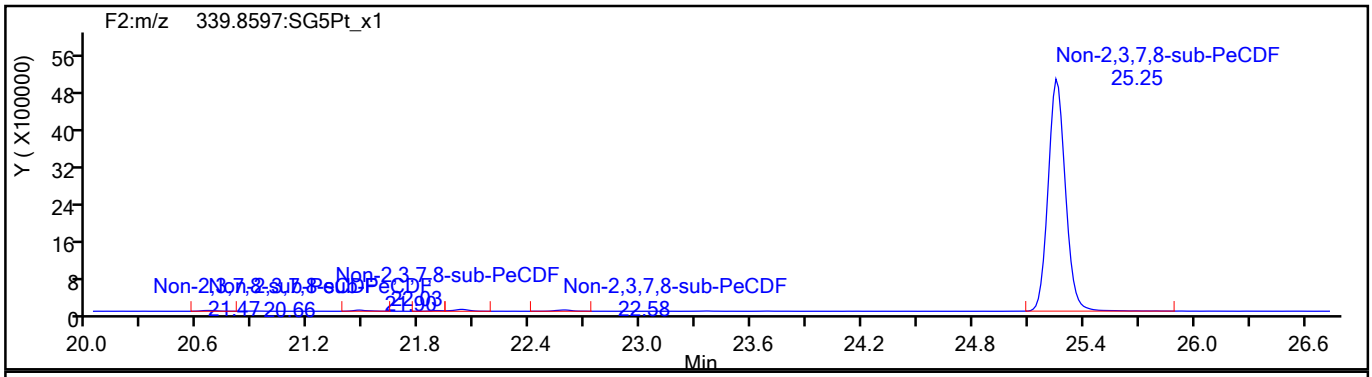

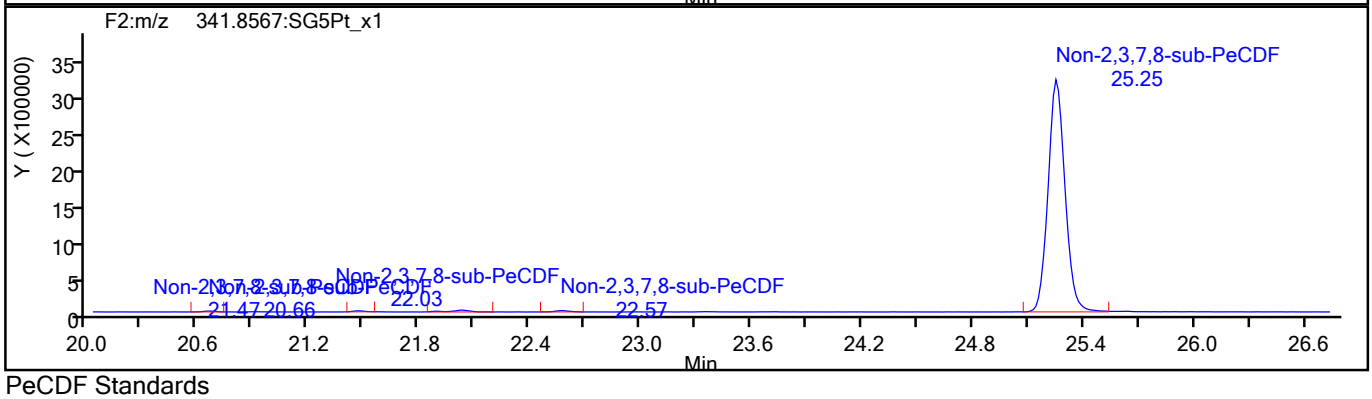

PeCDF Standards

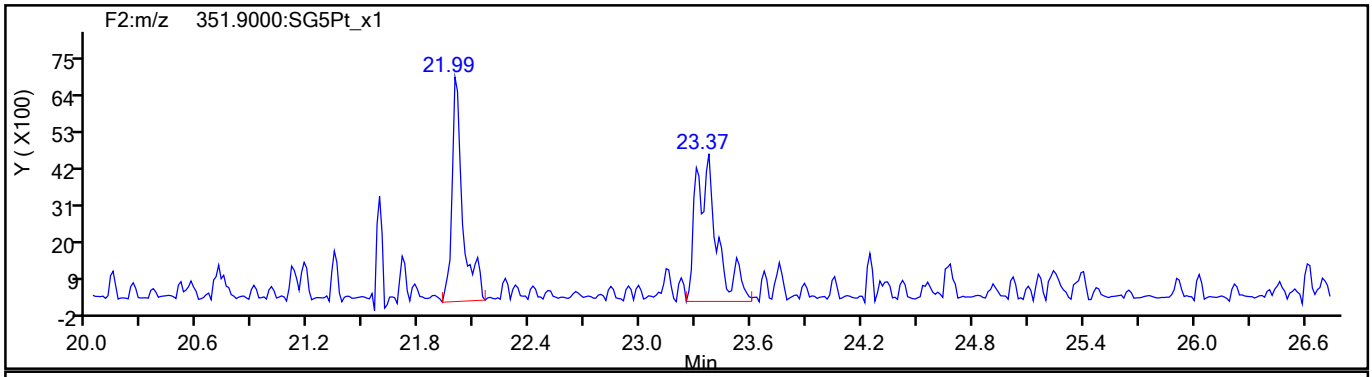

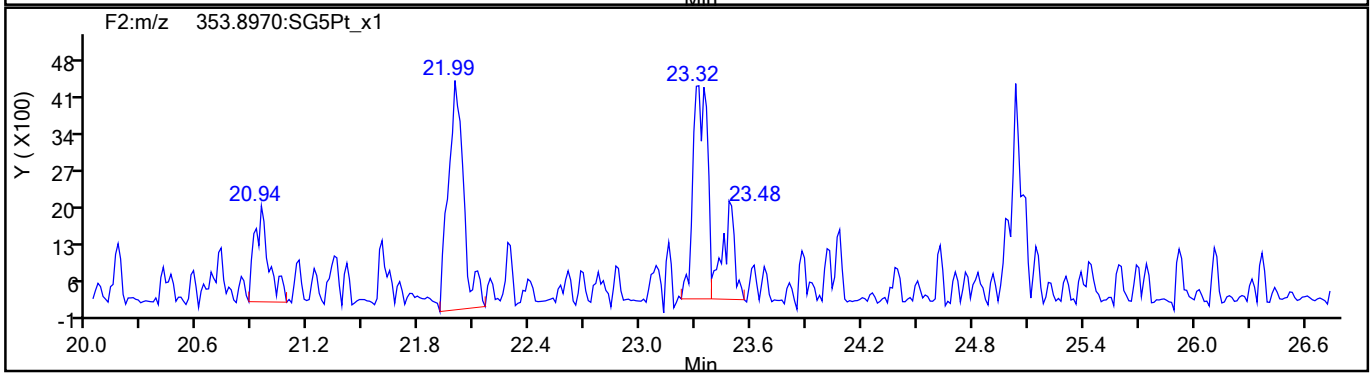

791882

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

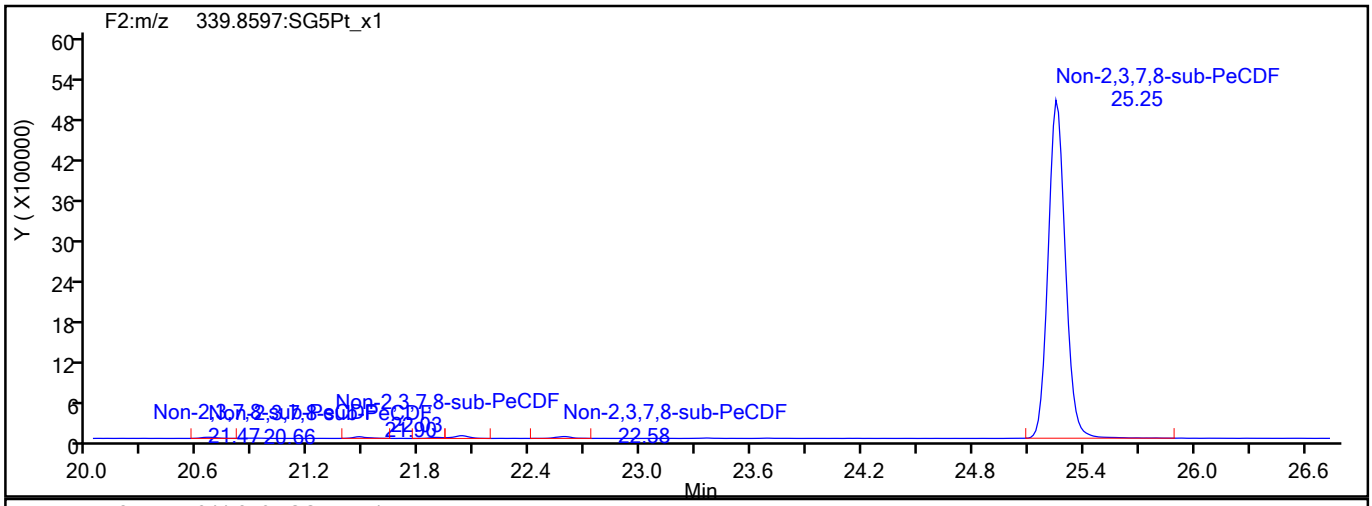

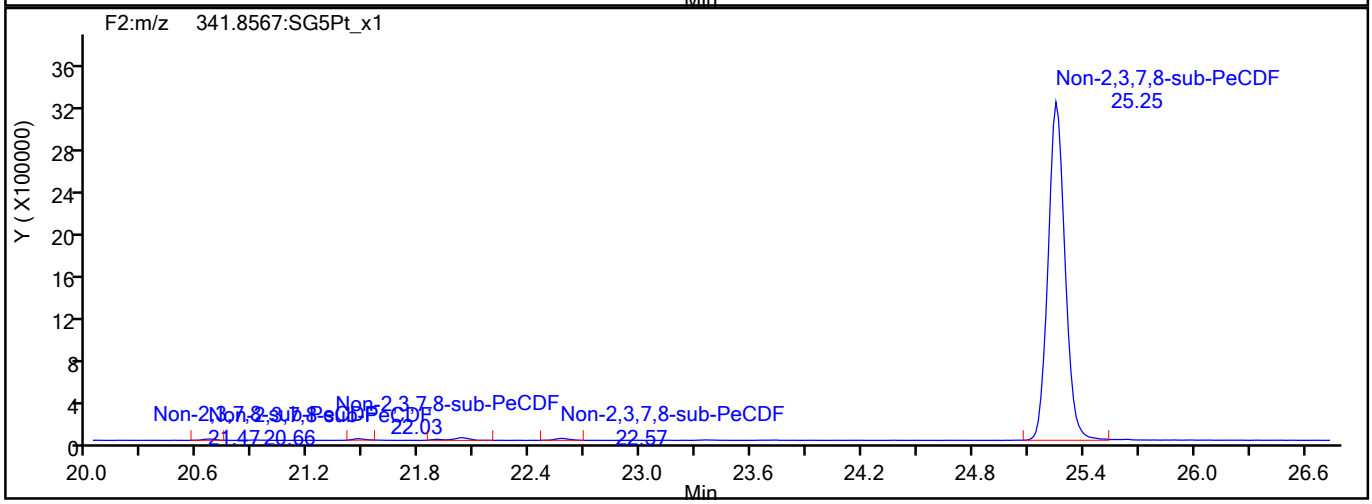

PeCDF Interference Mass

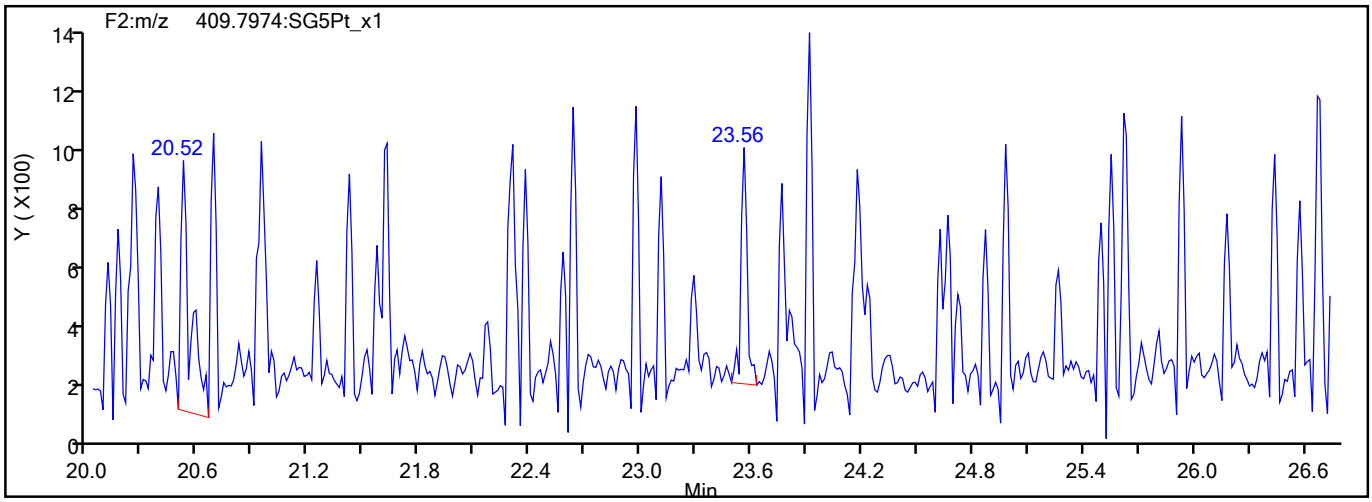

791883

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

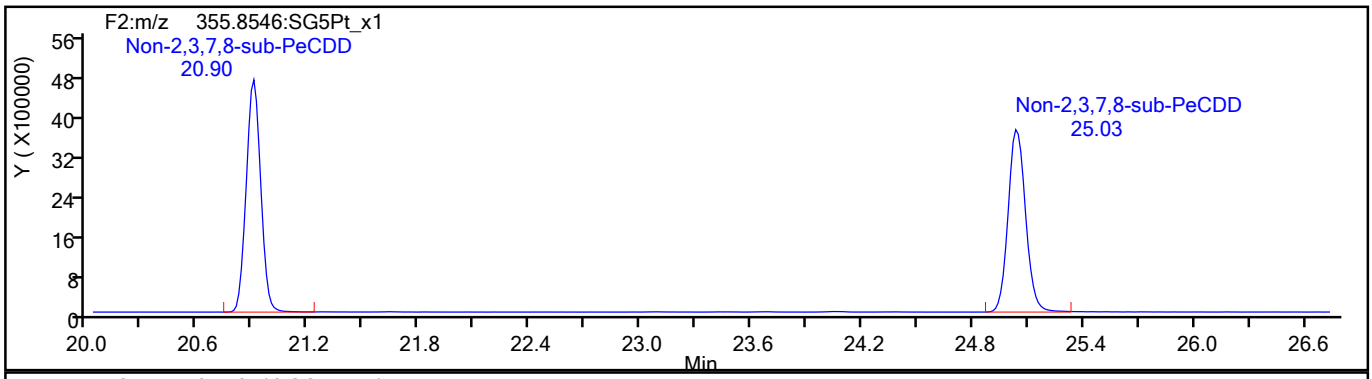

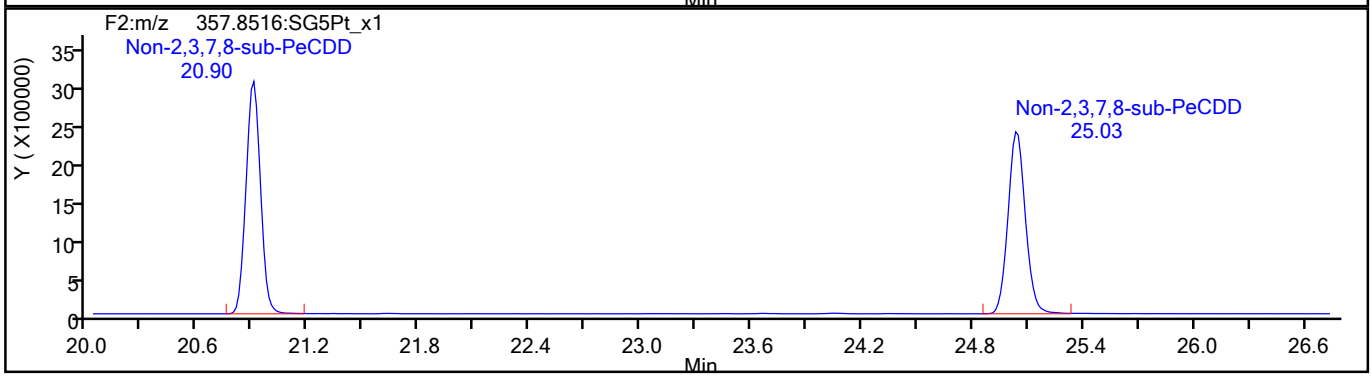

PeCDD Standards

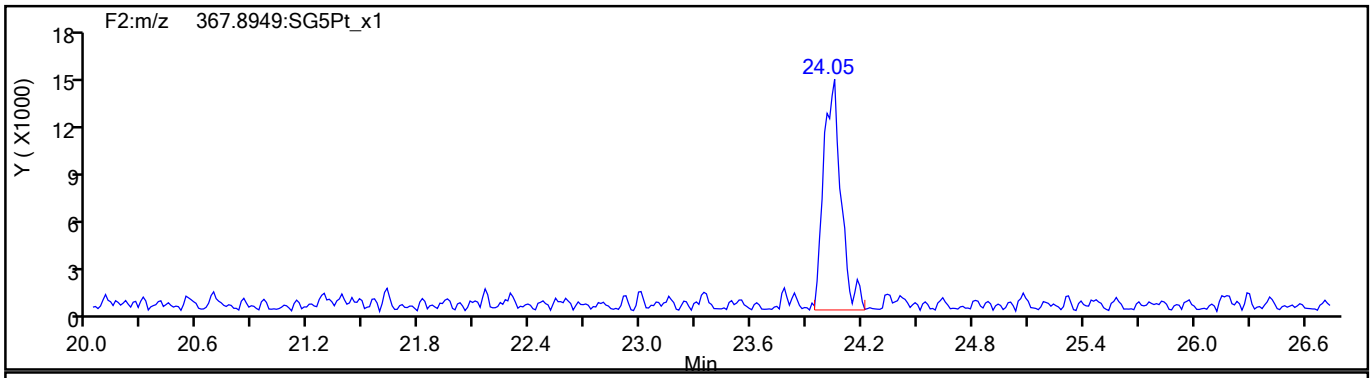

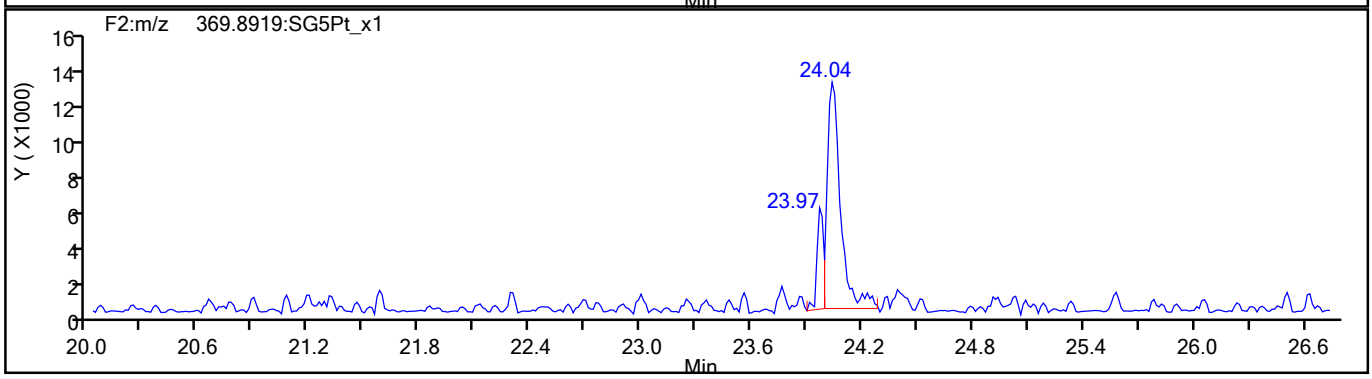

791884

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

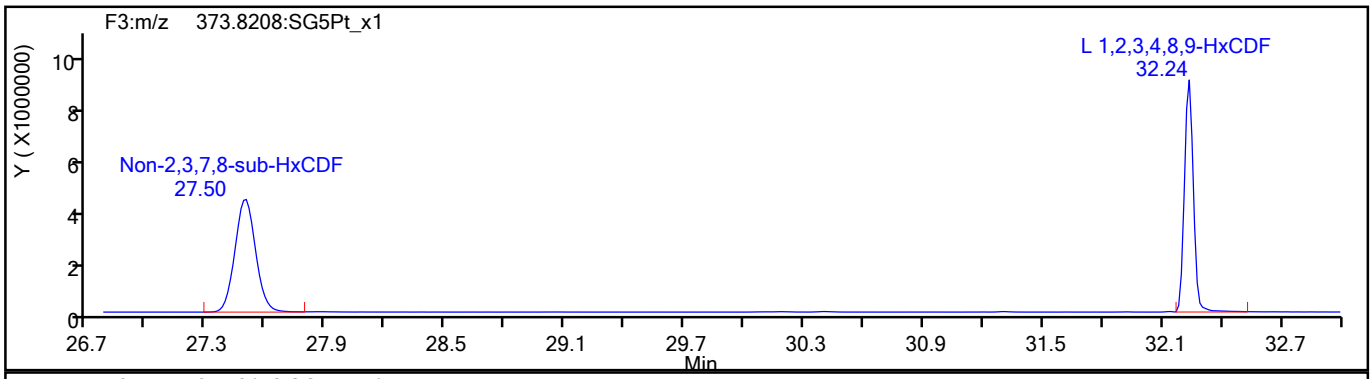

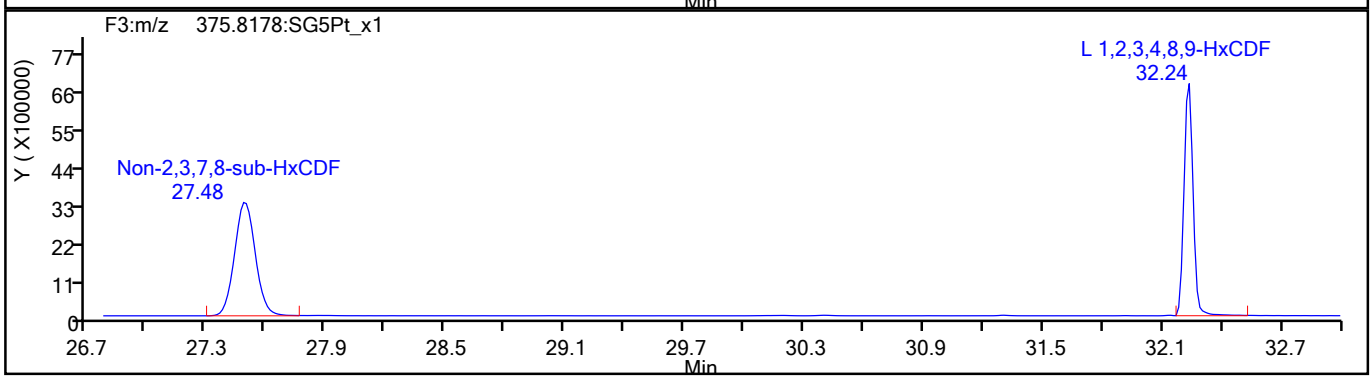

HxCDF Standards

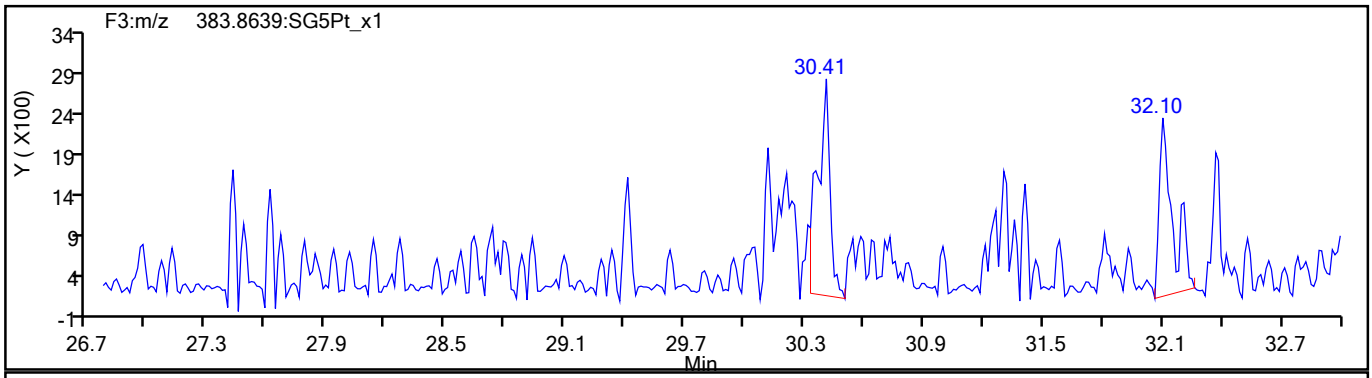

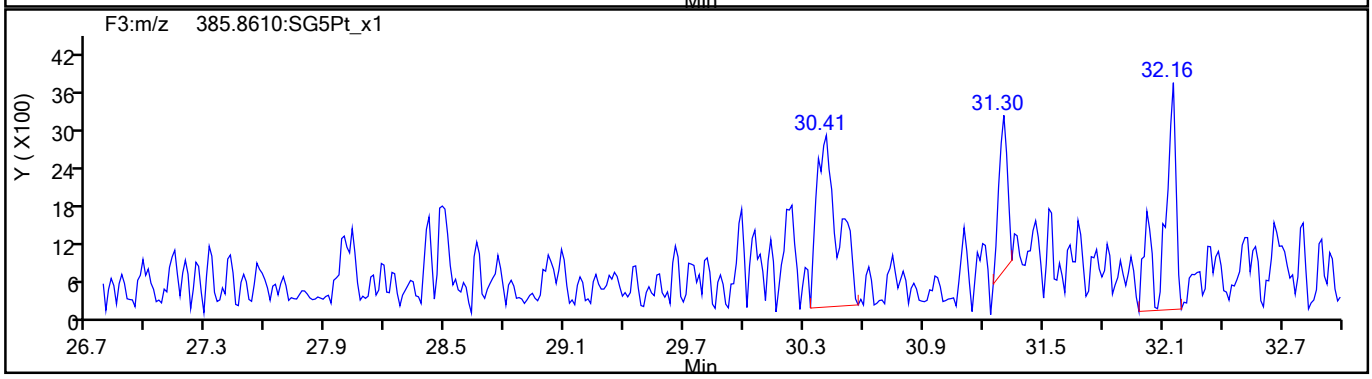

791885

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

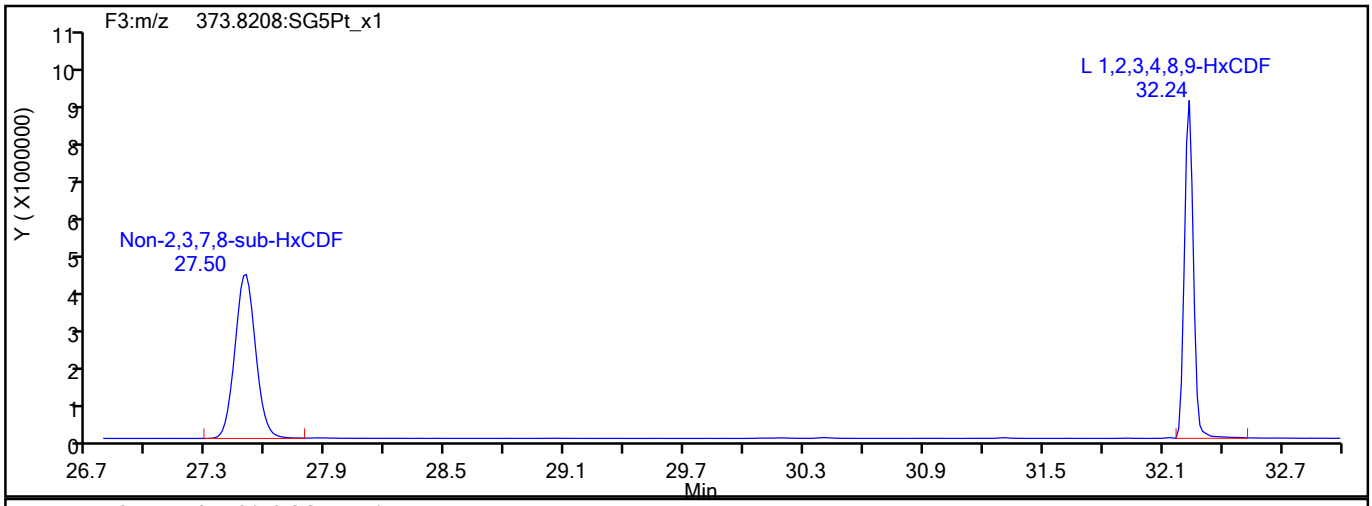

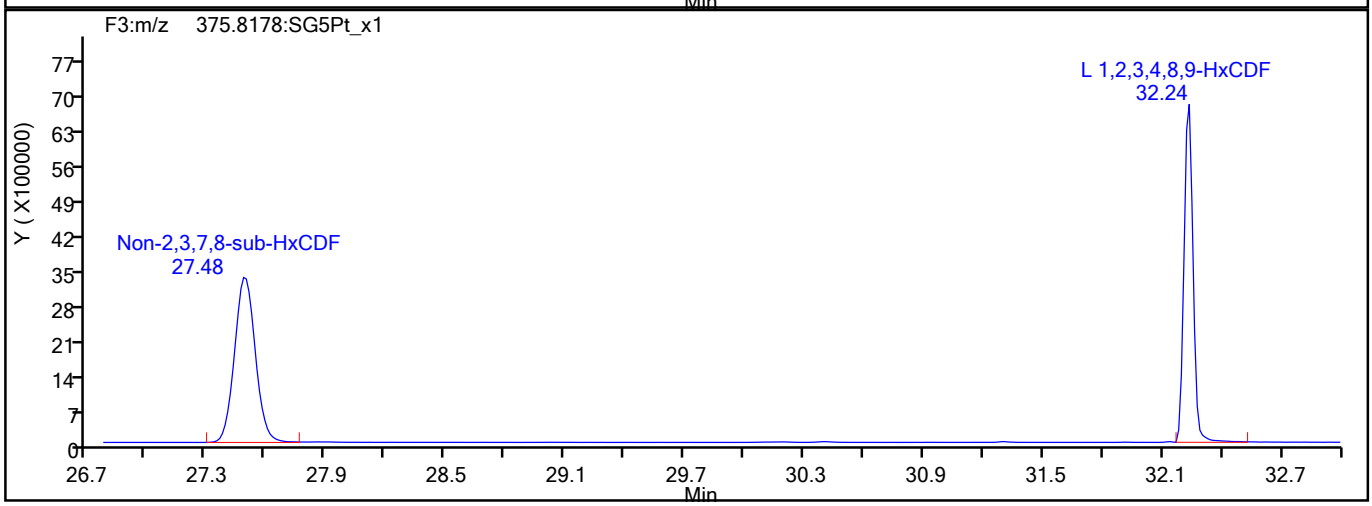

HxCDF Interference Mass

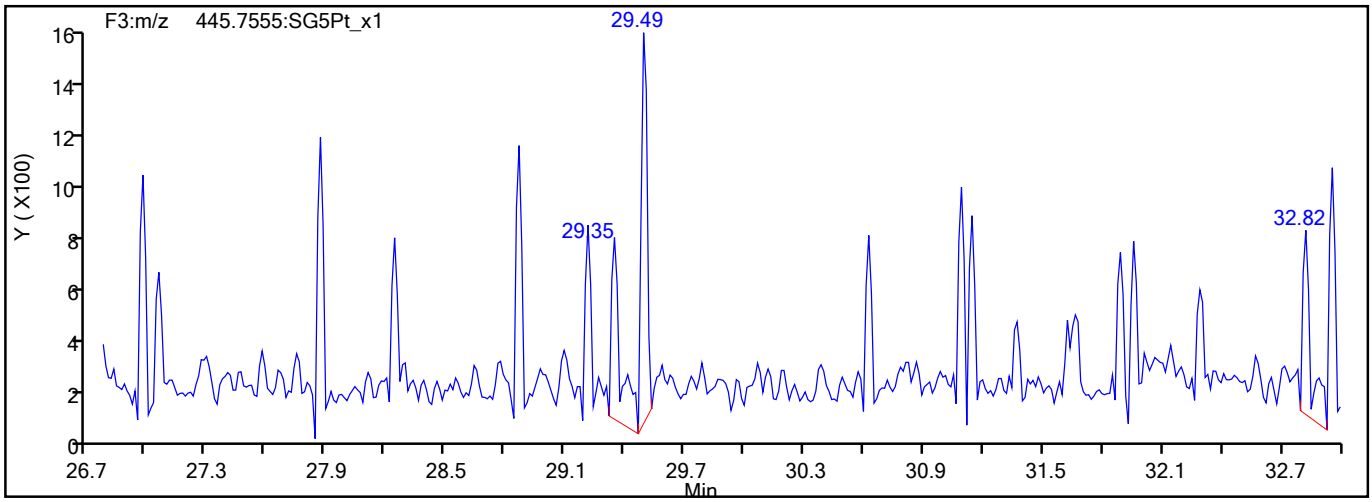

791886

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

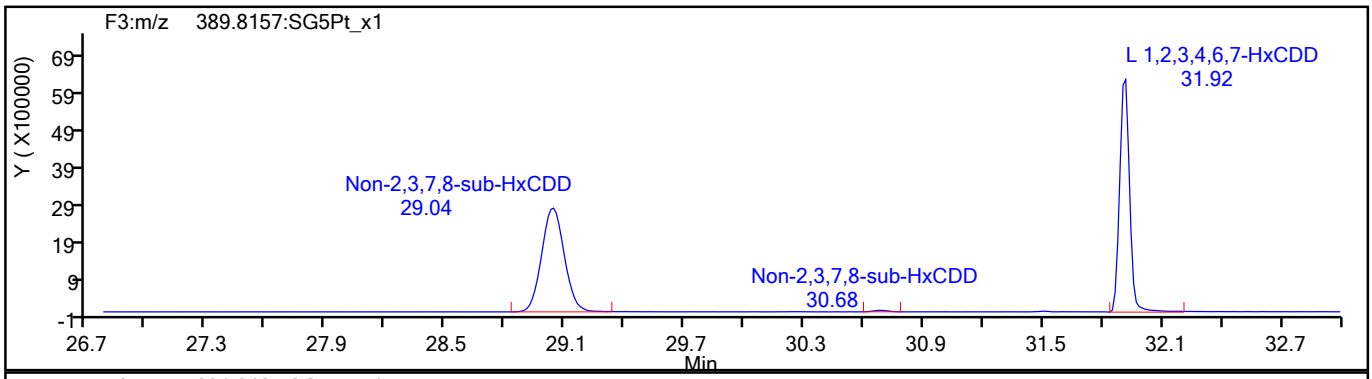

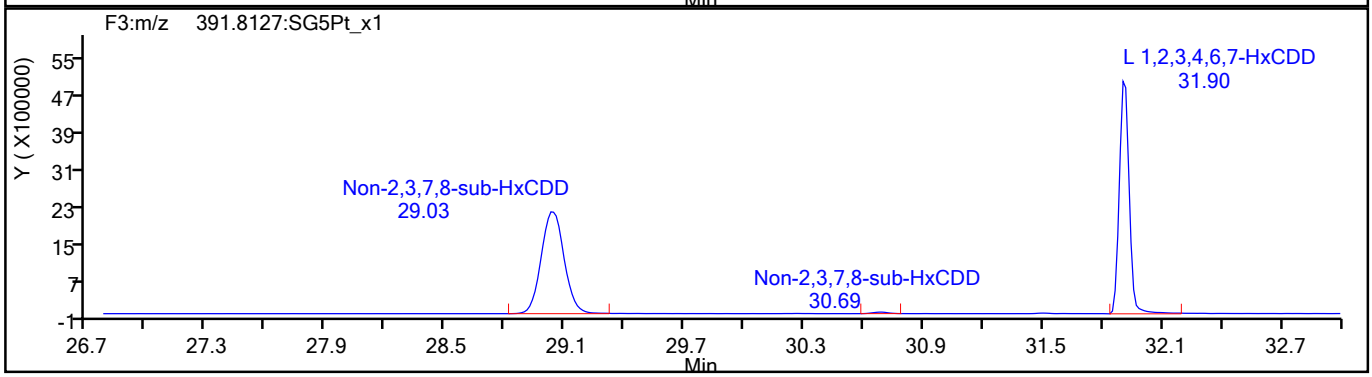

HxCDD Standards

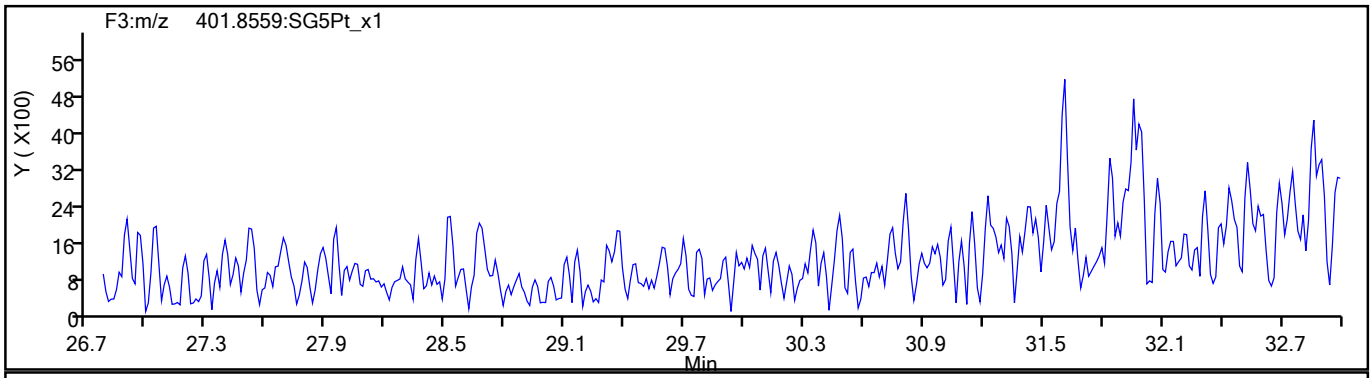

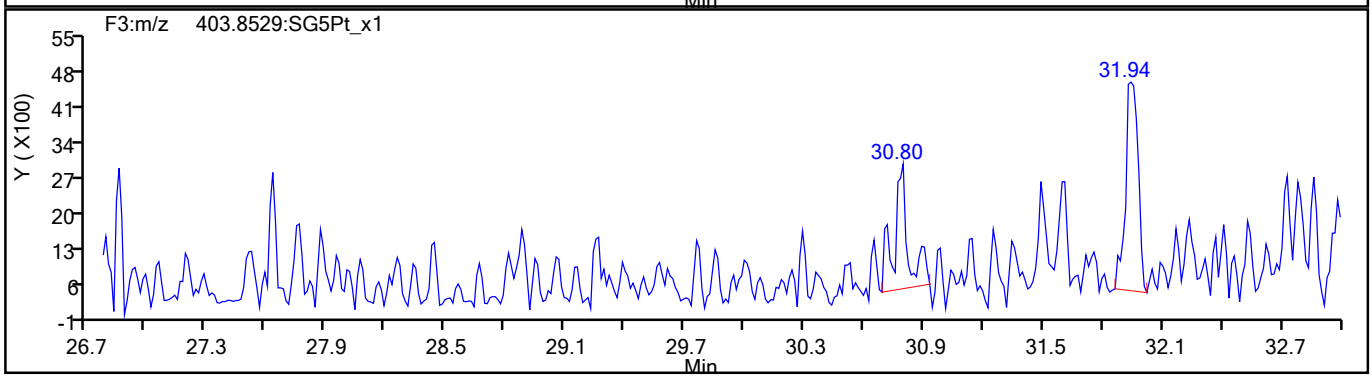

791887

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

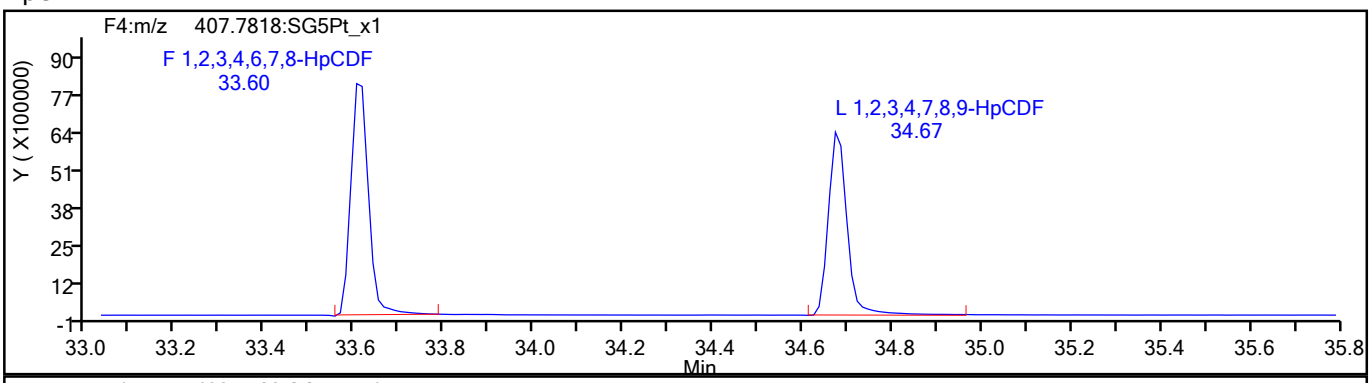

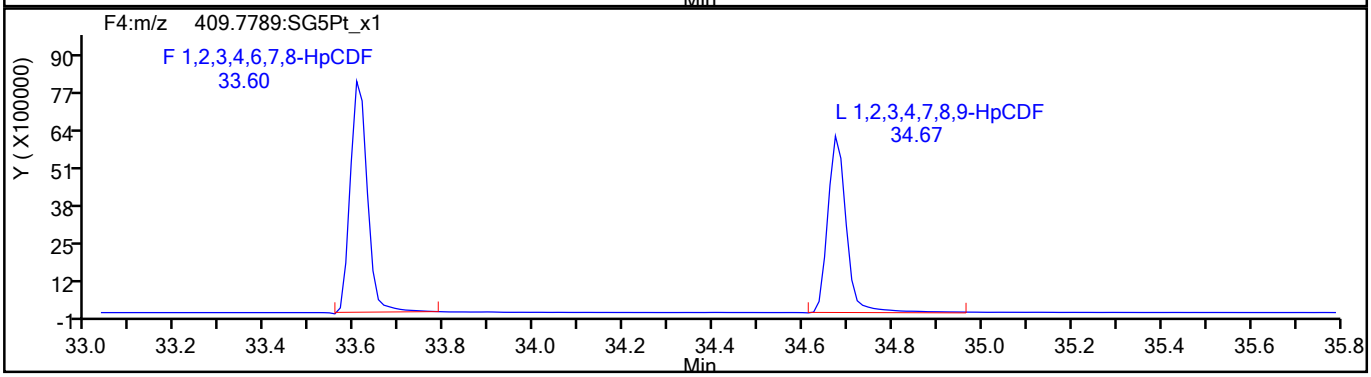

HpCDF Standards

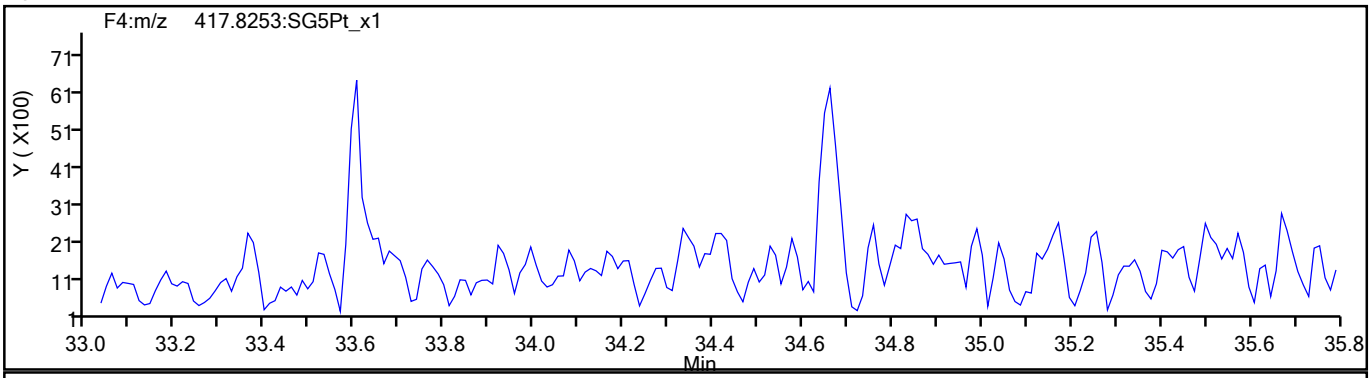

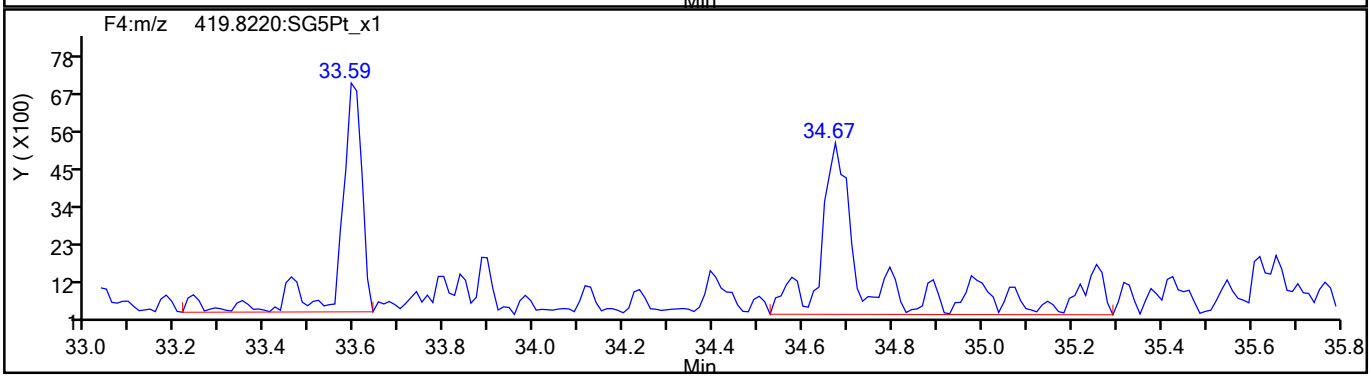

791888

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

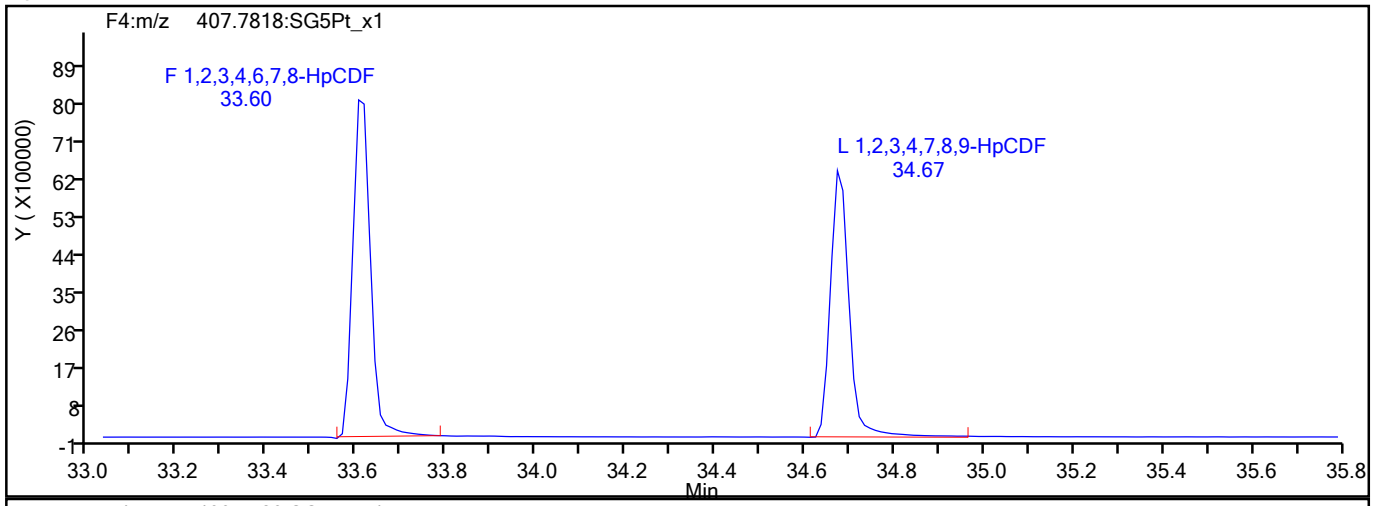

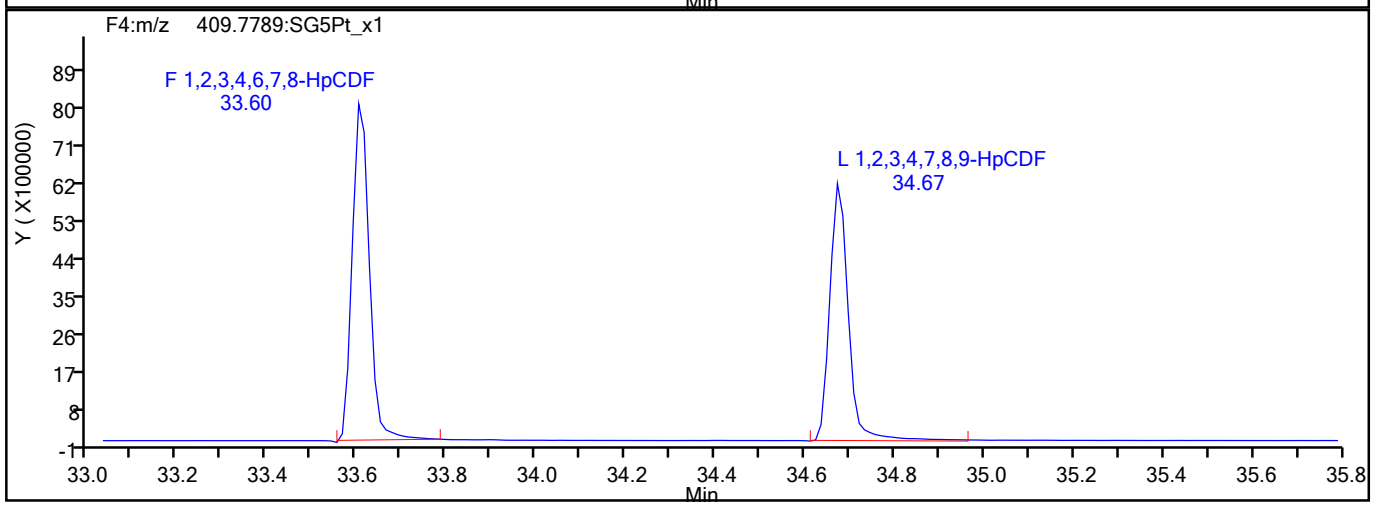

HpCDF Interference Mass

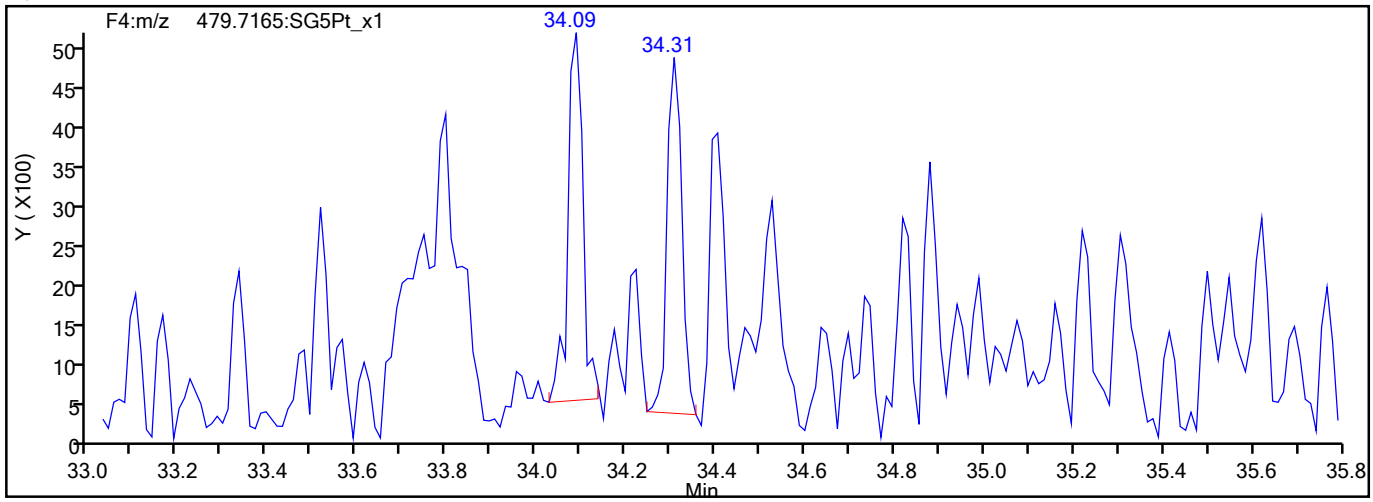

791889

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

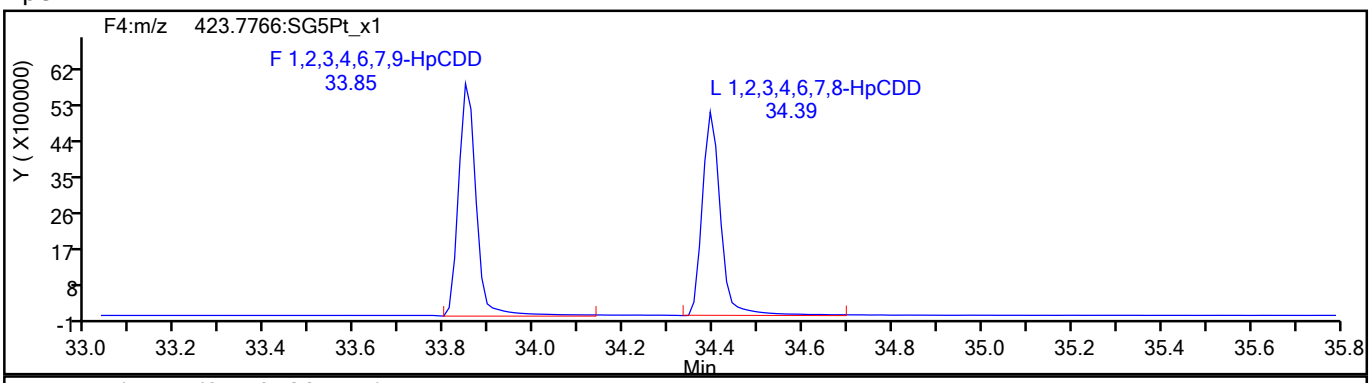

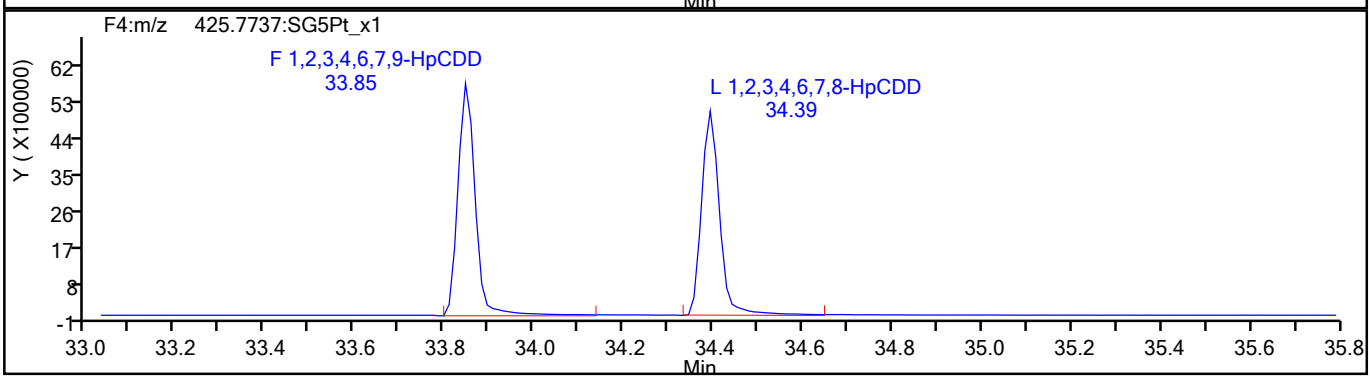

HpCDD Standards

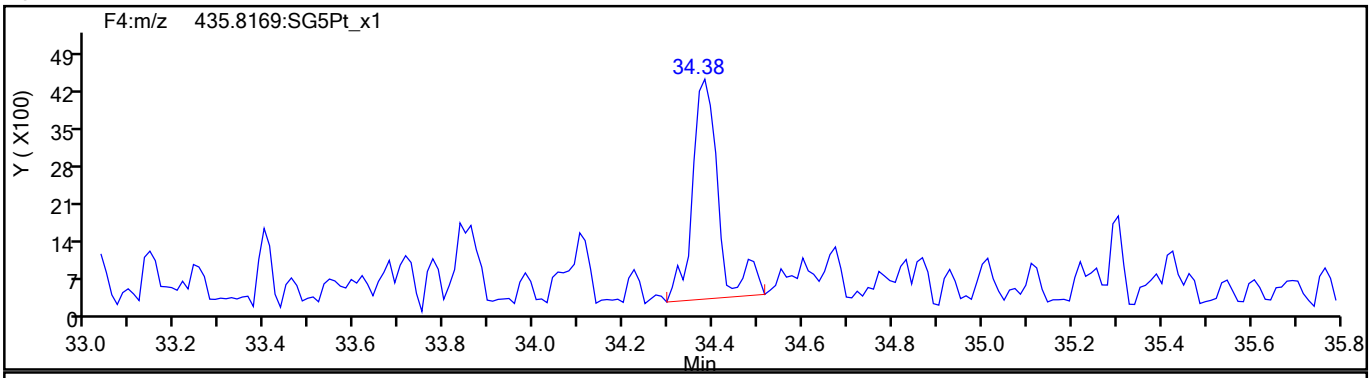

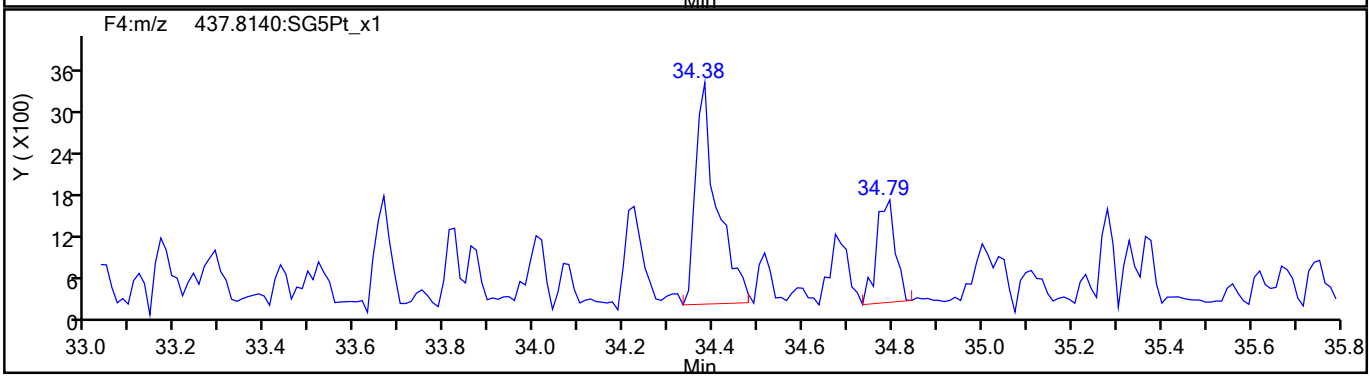

791890

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

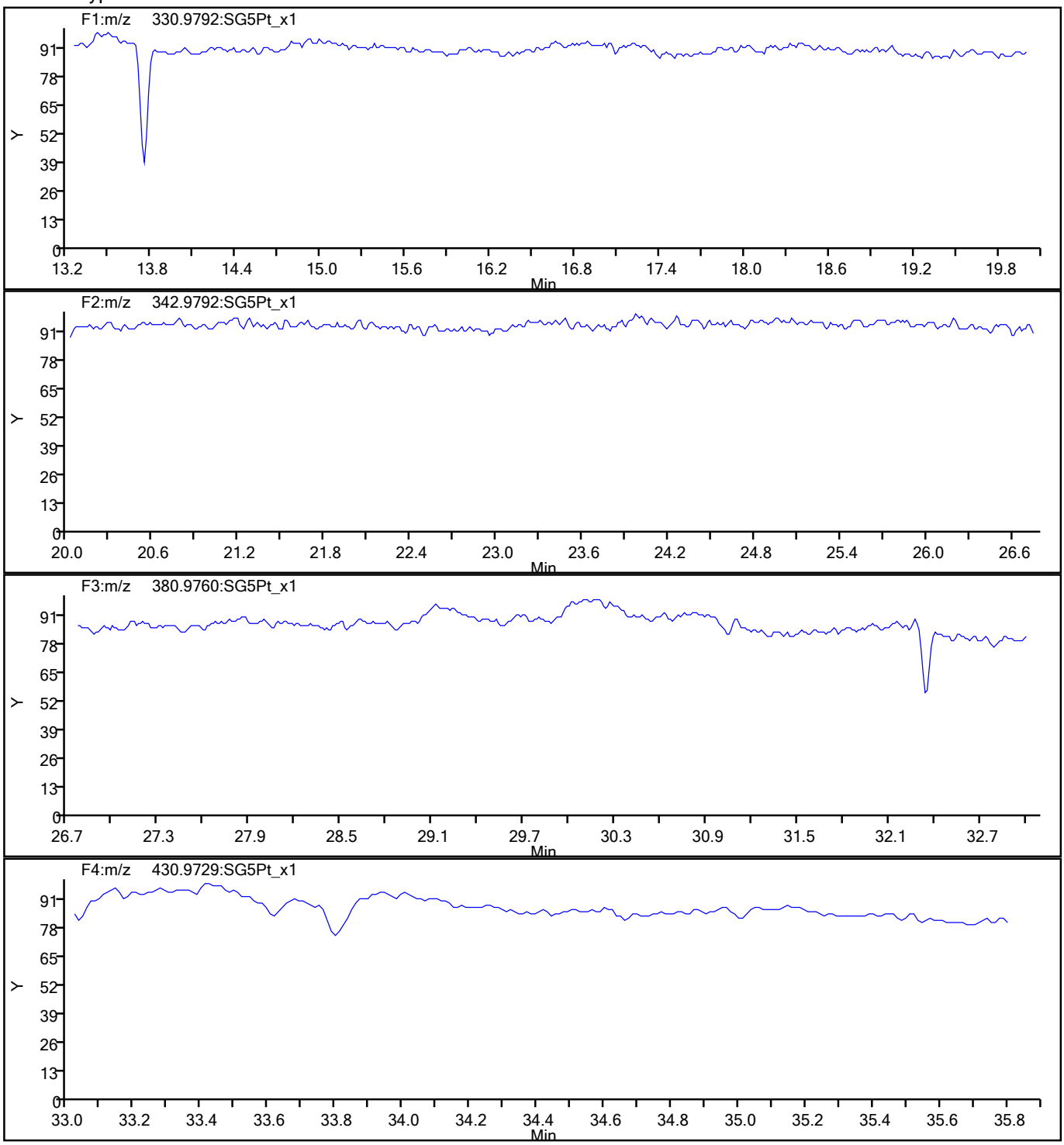

791891

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

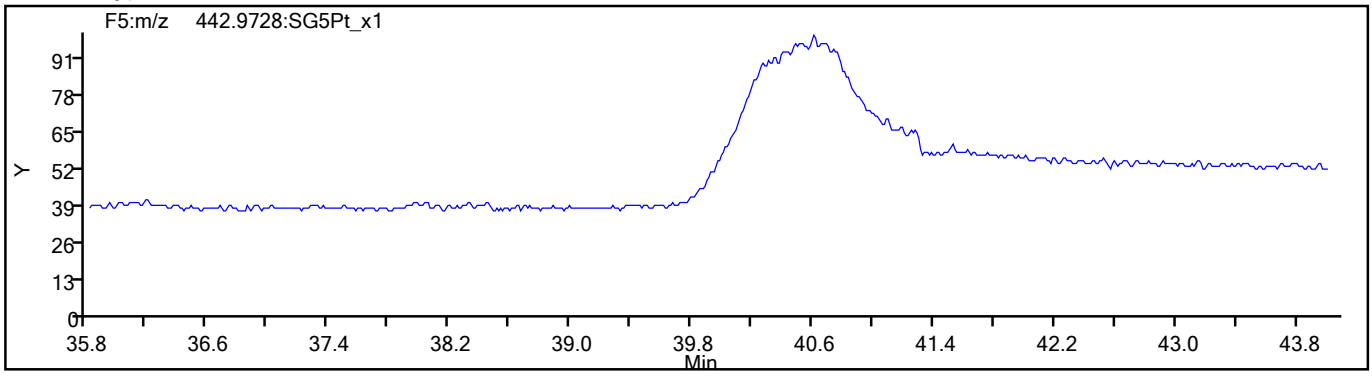

791892

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Aug-2021 18:40:59 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521C WDM HRDXNL4_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 11:27:42 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1632

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.069	72350297	0.76	1.6249					0.00	
2,3,7,8-TCDF	17.099	153737900	0.76	1.0239	83.0	83.0	0.2096	0.2096		
A Non-2,3,7,8-sub-TCDF	17.069	130886649	0.76	1.0239	70.7	70.7	0.2096	35.9		
S Total TCDF					153.7	153.7	0.2096	0.2096		
D 13C-2,3,7,8-TCDD	17.764	38963619	0.79	0.8993					0.00	
2,3,7,8-TCDD	17.779	51665692	0.78	1.2541	42.3	42.3	0.0988	0.0988		
A Non-2,3,7,8-sub-TCDD	17.522	145989555	0.78	1.2541	119.5	119.5	0.0988	42.3		
S Total TCDD					161.8	161.8	0.0988	0.0988		
A F1 PeCDFs	19.851	60632309	1.58	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.067	51940602	1.59	0.0000						
S Total PeCDF										
A Non-2,3,7,8-sub-PeCDD	23.696	78881710	1.59	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.324	51372864	1.22	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.525	38405919	1.25	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.603	43484013	1.08	1.4413						
1,2,3,4,7,8,9-HpCDF	34.673	35292410	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.138						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.393	28223837	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.223						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.710	84188153	0.77							
1,3,6,8-TCDD	15.602	51351192	0.77							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.172						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,8,9-TCDD	19.382						0.0	0.0		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.903	37794617	1.26							
1,2,3,4,8,9-HxCDF	32.222	46217980	1.21							
1,2,3,4,6,7,9-HpCDD	33.846	31189692	1.03							

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Aug-2021 18:40:59 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521C WDM HRDXNL4_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 11:27:42 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1632

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.069	17.069	0	1.000	31270524	8094861	8607	21517	940		
317.9389	17.069	17.069	0	1.000	41079773	10739436	3334	8335	3221	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.099	17.099	0	1.002	66326153	16052246	15672	39180	1024		
305.8987	17.099	17.099	0	1.002	87411747	21190251	24742	61855	856	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.945	17.069	53	1.051	27747324	6874359	15672	39180	439		
305.8987	17.945	17.069	53	1.051	36702955	9062354	24742	61855	366	0.76(0.65-0.89)	
303.9016	18.883	17.069	109	1.106	28938418	6609804	15672	39180	422		
305.8987	18.883	17.069	109	1.106	37497952	8552753	24742	61855	346	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.764	17.764	0	1.000	17150030	4342030	2891	7227	1502		
333.9339	17.764	17.764	0	1.000	21813589	5394736	2498	6245	2160	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.779	17.779	0	1.001	22672517	5541080	5561	13902	996		
321.8936	17.779	17.779	0	1.001	28993175	7203269	6500	16250	1108	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.673	17.522	9	0.995	20280357	5136758	5561	13902	924		
321.8936	17.673	17.522	9	0.995	26390295	6648354	6500	16250	1023	0.77(0.65-0.89)	
319.8965	17.945	17.522	25	1.010	22816290	5536599	5561	13902	996		
321.8936	17.945	17.522	25	1.010	28863746	7047627	6500	16250	1084	0.79(0.65-0.89)	
319.8965	18.868	17.522	81	1.062	20754534	4690631	5561	13902	843		
321.8936	18.868	17.522	81	1.062	26884333	6118398	6500	16250	941	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.155	19.851	-42	1.000	37092589	8430108	1207	3017	6984		
341.8567	19.155	19.851	-42	1.000	23539720	5349820	838	2095	6384	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											
339.8597	20.643	23.067	-145	1.000	97178	16873	3347	8367	5		
341.8567	20.629	23.067	-146	1.000	58976	10597	2452	6130	4	1.65(1.32-1.78)	
339.8597	21.461	23.067	-96	1.000	145864	25618	3347	8367	8		
341.8567	21.475	23.067	-95	1.000	83098	13706	2452	6130	6	1.76(1.32-1.78)	
339.8597	22.020	23.067	-63	1.000	268467	34914	3347	8367	10		
341.8567	22.020	23.067	-63	1.000	156056	21027	2452	6130	9	1.72(1.32-1.78)	
339.8597	22.565	23.067	-30	1.000	170142	28848	3347	8367	9		
341.8567	22.565	23.067	-30	1.000	115526	18480	2452	6130	8	1.47(1.32-1.78)	
339.8597	25.252	23.067	131	1.000	31240980	4689625	3347	8367	1401		
341.8567	25.238	23.067	130	1.000	19604315	2950104	2452	6130	1203	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	20.888	23.696	-168	1.000	24915043	4496753	2574	6435	1747		
357.8516	20.888	23.696	-168	1.000	15835289	2918053	1537	3842	1899	1.57(1.32-1.78)	
355.8546	25.034	23.696	80	1.000	23453474	3578237	2574	6435	1390		
357.8516	25.034	23.696	80	1.000	14677904	2265397	1537	3842	1474	1.60(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.484	30.324	-170	1.000	28182416	3871905	4048	10120	956		
375.8178	27.471	30.324	-171	1.000	23190448	3200646	3176	7940	1008	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.028	30.525	-90	1.000	21120815	2681333	5049	12622	531		
391.8127	29.015	30.525	-90	1.000	16889321	2115960	4760	11900	445	1.25(1.05-1.43)	
389.8157	30.678	30.525	9	1.000	226378	44409	5049	12622	9		
391.8127	30.678	30.525	9	1.000	169405	37770	4760	11900	8	1.34(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603	33.603	0	1.000	22542433	8469199	15784	39460	537		
409.7789	33.603	33.603	0	1.000	20941580	8091292	17493	43732	463	1.08(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673	34.673	0	1.000	18010609	6206747	15784	39460	393		
409.7789	34.673	34.673	0	1.000	17281801	5902249	17493	43732	337	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						15784	39460			
409.7789	34.138						17493	43732			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	14382763	4949987	11155	27887	444		
425.7737	34.381	34.393	-1	1.000	13841074	4624503	13136	32840	352	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						11155	27887			
425.7737	34.223						13136	32840			
1,3,6,8-TCDF											
303.9016	14.710	14.710	0		36533093	11442181	15672	39180	730		
305.8987	14.710	14.710	0		47655060	14776806	24742	61855	597	0.77(0.65-0.89)	
1,3,6,8-TCDD											
319.8965	15.602	15.602	0		22367084	6692183	5561	13902	1203		
321.8936	15.602	15.602	0		28984108	8655008	6500	16250	1332	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7-TCDF											
303.9016	17.537						15672	39180			
305.8987	17.537						24742	61855			
1,2,3,7-TCDD											
319.8965	18.172						5561	13902			
321.8936	18.172						6500	16250			
1,2,3,9-TCDD											
319.8965	18.414						5561	13902			
321.8936	18.414						6500	16250			
1,2,3,9-TCDF											
303.9016	18.414						15672	39180			
305.8987	18.414						24742	61855			
1,2,8,9-TCDD											
319.8965	19.382						5561	13902			
1,2,8,9-TCDF											
303.9016	19.427						15672	39180			
305.8987	19.427						24742	61855			
1,3,4,6,8-PeCDF											
339.8597	19.669						1207	3017			
341.8567	19.669						838	2095			
1,2,4,7,9-PeCDD											
355.8546	21.480						2574	6435			
357.8516	21.480						1537	3842			
1,2,3,8,9-PeCDD											
355.8546	25.790						2574	6435			
357.8516	25.790						1537	3842			
1,2,3,8,9-PeCDF											
339.8597	26.021						3347	8367			
341.8567	26.021						2452	6130			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						4048	10120			
375.8178	28.333						3176	7940			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						5049	12622			
391.8127	29.890						4760	11900			
1,2,3,4,6,7-HxCDD											
389.8157	31.903	31.903	0		21091642	6205497	5049	12622	1229		
391.8127	31.903	31.903	0		16702975	4921594	4760	11900	1034	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.222	32.222	0		25285260	7836177	4048	10120	1936		
375.8178	32.222	32.222	0		20932720	6563604	3176	7940	2067	1.21(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.846	33.846	0		15859070	5952247	11155	27887	534		
425.7737	33.846	33.846	0		15330622	5641430	13136	32840	429	1.03(0.88-1.20)	

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	72350297	18834297

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	72350297	18834297

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.945	27747324	6874359	36702955	9062354	34.8	0.76	
18.883	28938418	6609804	37497952	8552753	35.9	0.77	
Signal Totals:							
	56685742	13484163	74200907	17615107			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	130886649	31099270				0.76	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 70.673 = (130886649 * 40.000) / (72350297 * 1.024)

Report Date: 27-Aug-2021 11:27:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.522

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	38963619	9736766

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	38963619	9736766

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.673	20280357	5136758	26390295	6648354	38.2	0.77	
17.945	22816290	5536599	28863746	7047627	42.3	0.79	
18.868	20754534	4690631	26884333	6118398	39.0	0.77	
Signal Totals:							
	63851181	15363988	82138374	19814379			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	145989555	35178367				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 119.504 = (145989555 * 40.000) / (38963619 * 1.254)

Report Date: 27-Aug-2021 11:27:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.155	37092589	8430108	23539720	5349820		1.58	
Signal Totals:							
	37092589	8430108	23539720	5349820			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	60632309	13779928				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (60632309 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 11:27:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.643	97178	16873	58976	10597		1.65	
21.461	145864	25618	83098	13706		1.76	
22.020	268467	34914	156056	21027		1.72	
22.565	170142	28848	115526	18480		1.47	
25.252	31240980	4689625	19604315	2950104		1.59	
Signal Totals:							
	31922631	4795878	20017971	3013914			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	51940602	7809792				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (51940602 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.888	24915043	4496753	15835289	2918053		1.57	
25.034	23453474	3578237	14677904	2265397		1.60	
Signal Totals:							
	48368517	8074990	30513193	5183450			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	78881710	13258440				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (78881710 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.324

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.484	28182416	3871905	23190448	3200646		1.22	
Signal Totals:							
	28182416	3871905	23190448	3200646			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	51372864	7072551				1.22	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (51372864 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 18:40:59 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 520325 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.028	21120815	2681333	16889321	2115960		1.25	
30.678	226378	44409	169405	37770		1.34	
Signal Totals:							
	21347193	2725742	17058726	2153730			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	38405919	4879472				1.25	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (38405919 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

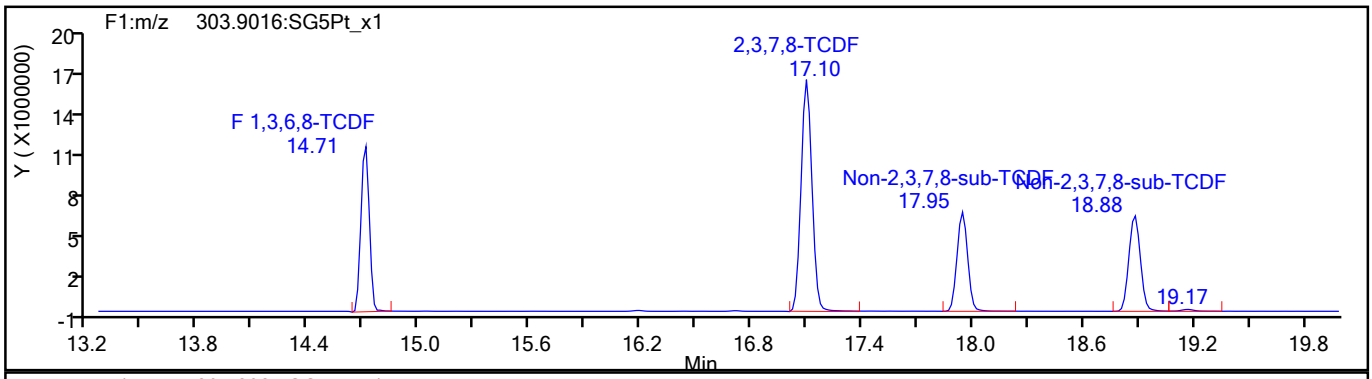

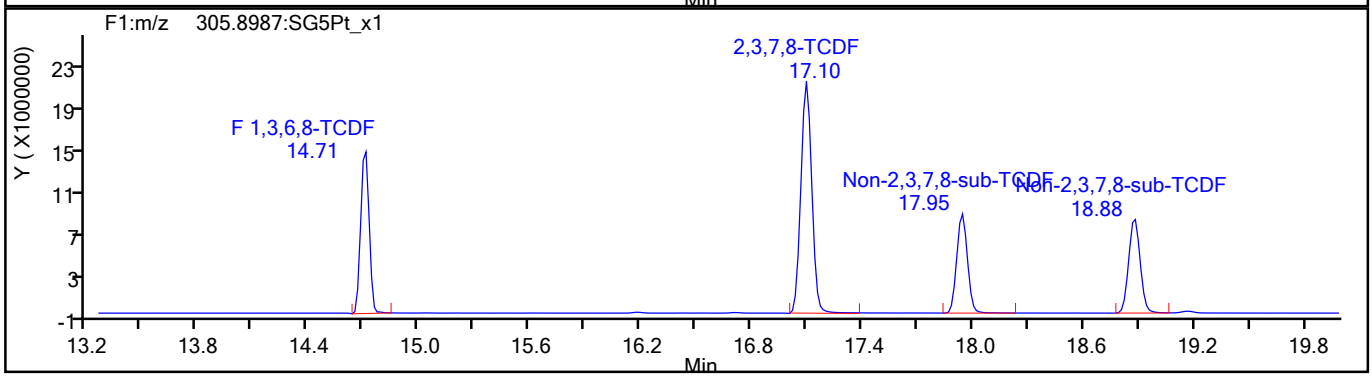

TCDF Standards

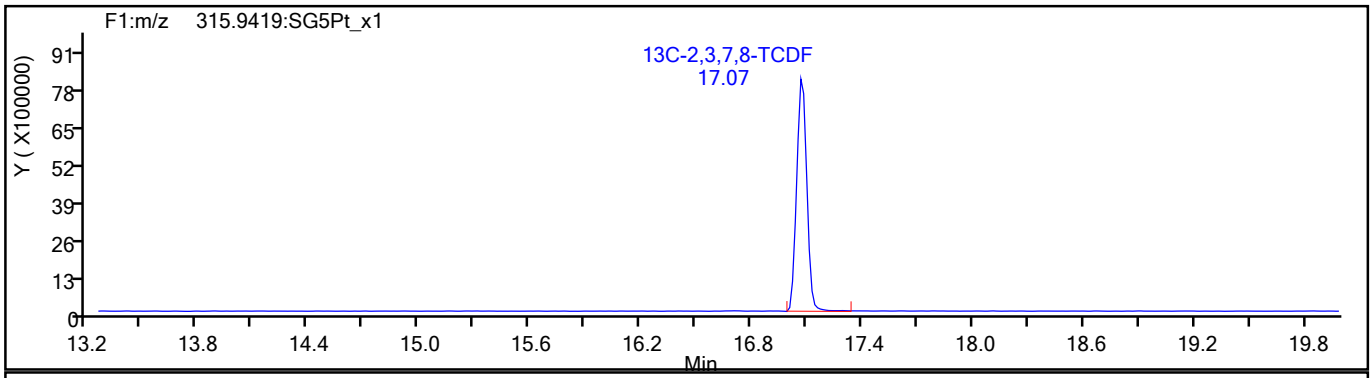

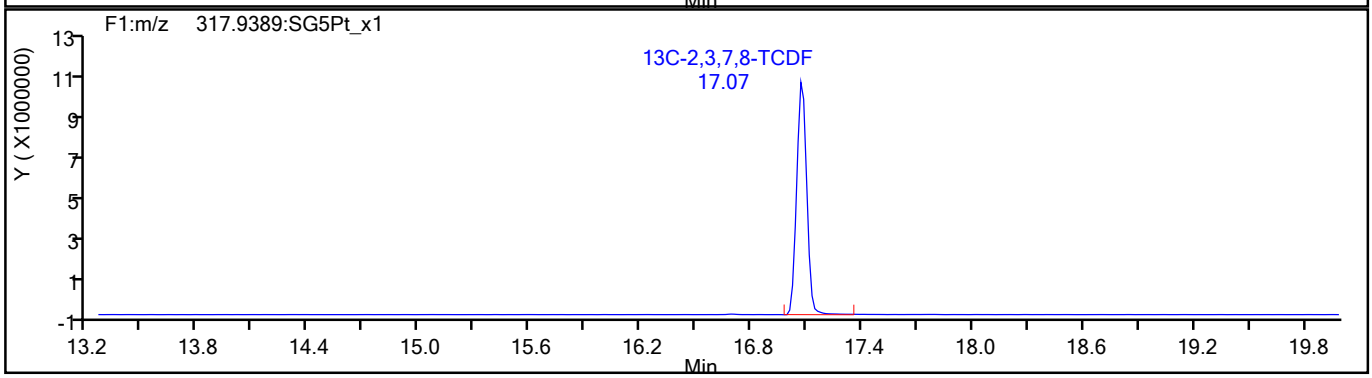

791905

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

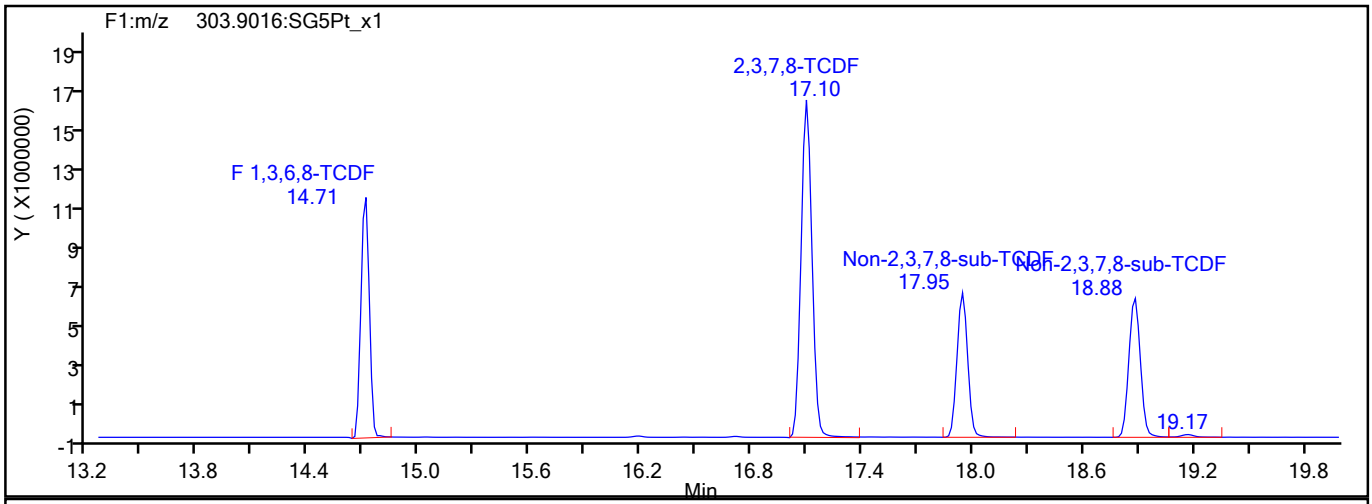

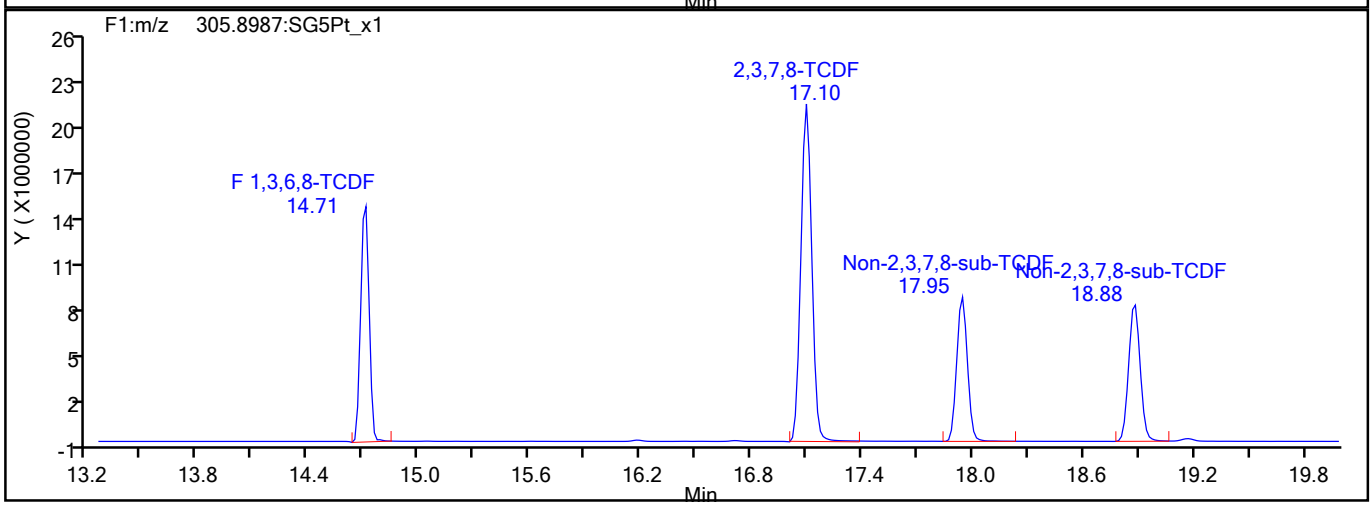

TCDF Interference Mass

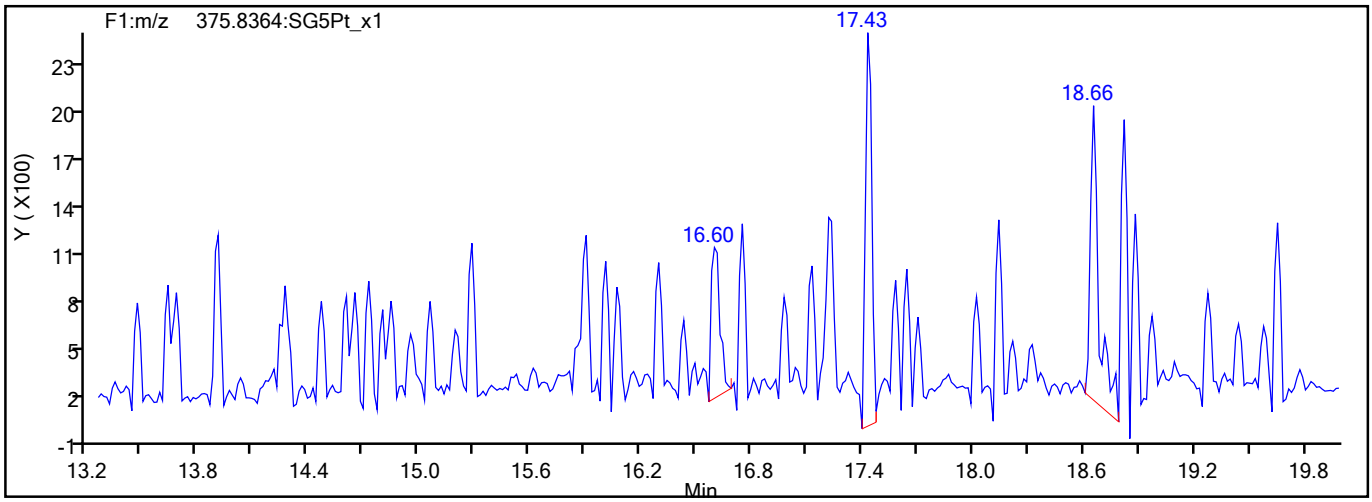

791906

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

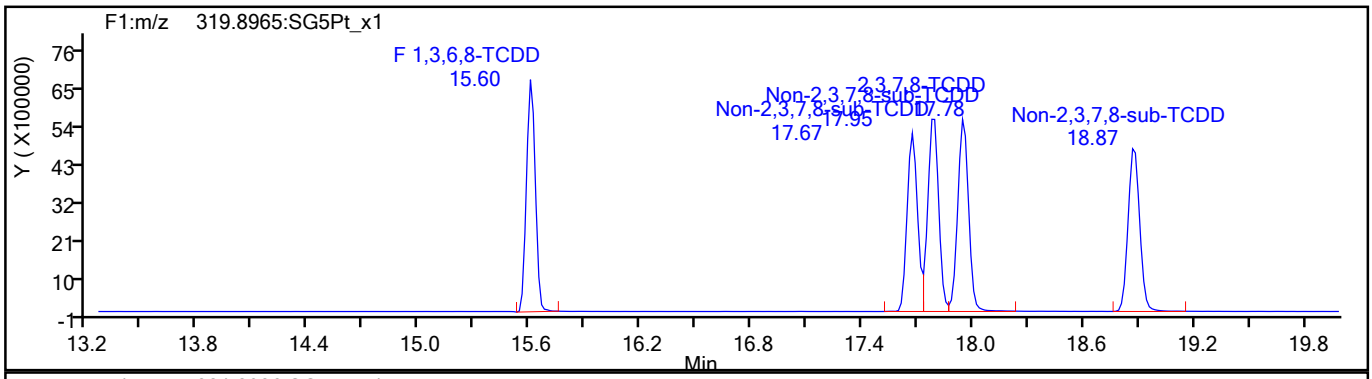

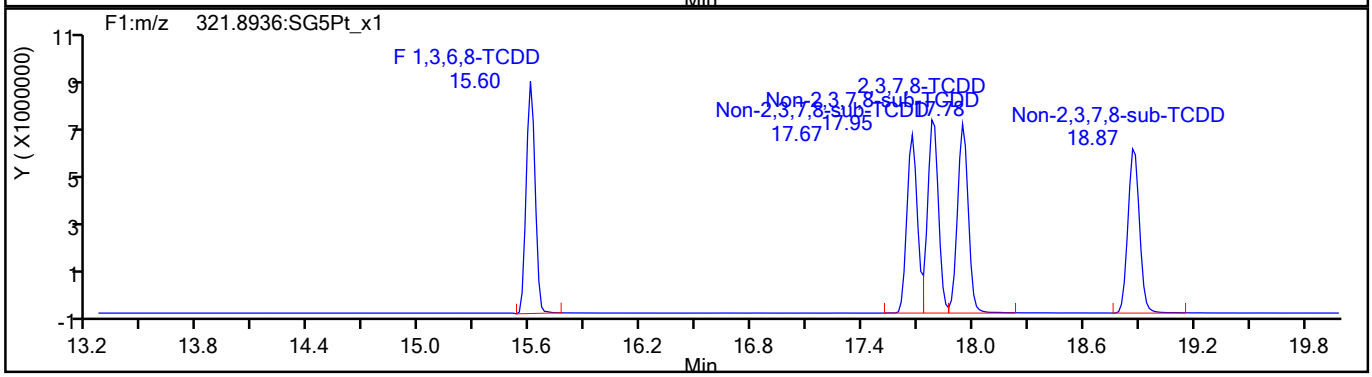

TCDD Standards

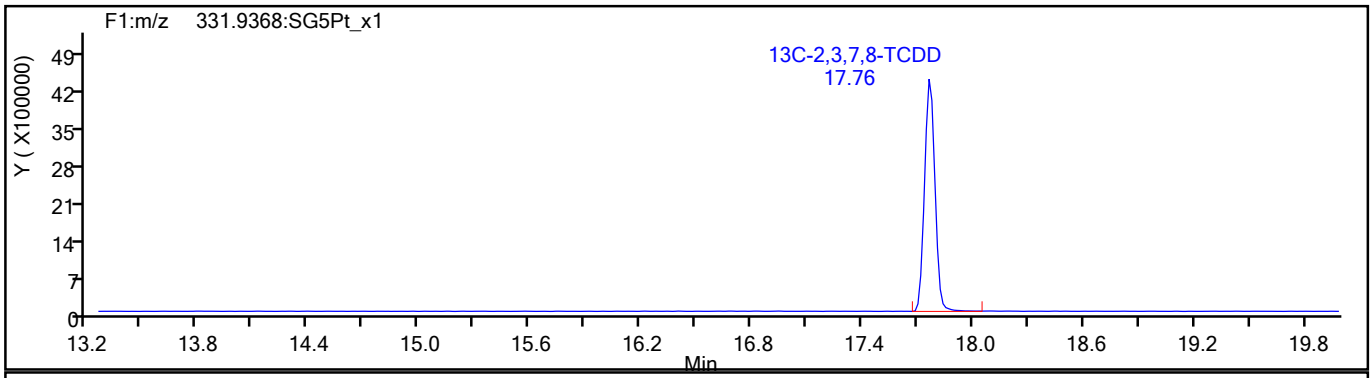

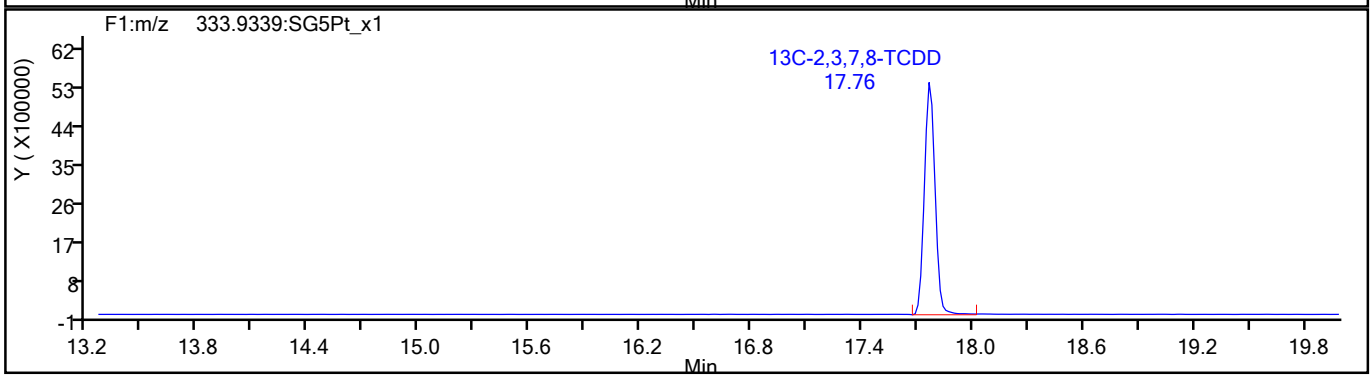

791907

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

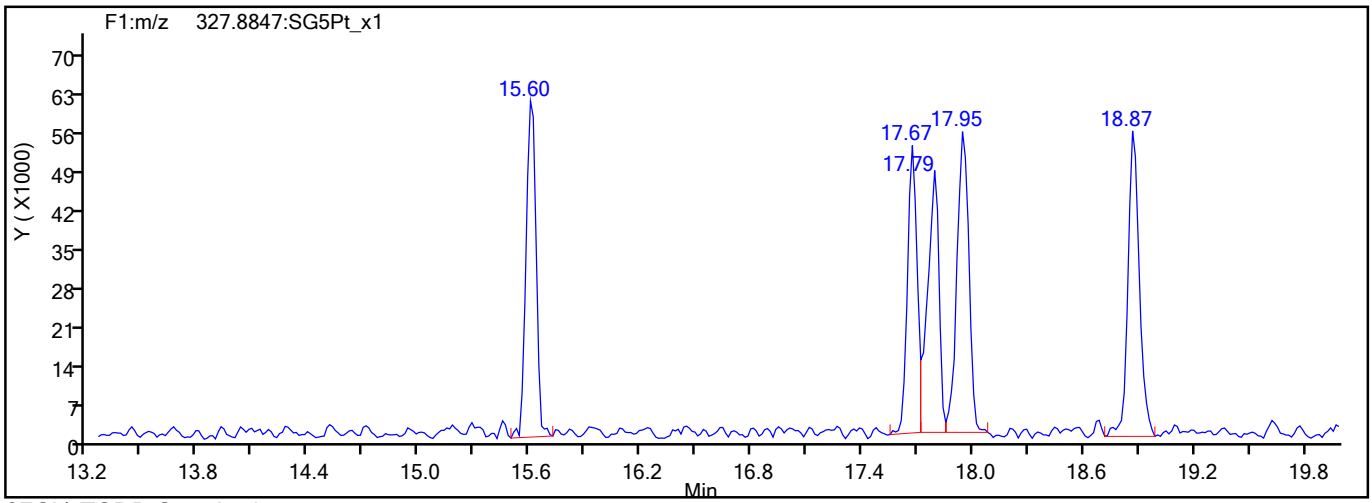

37Cl4-TCDD Standards

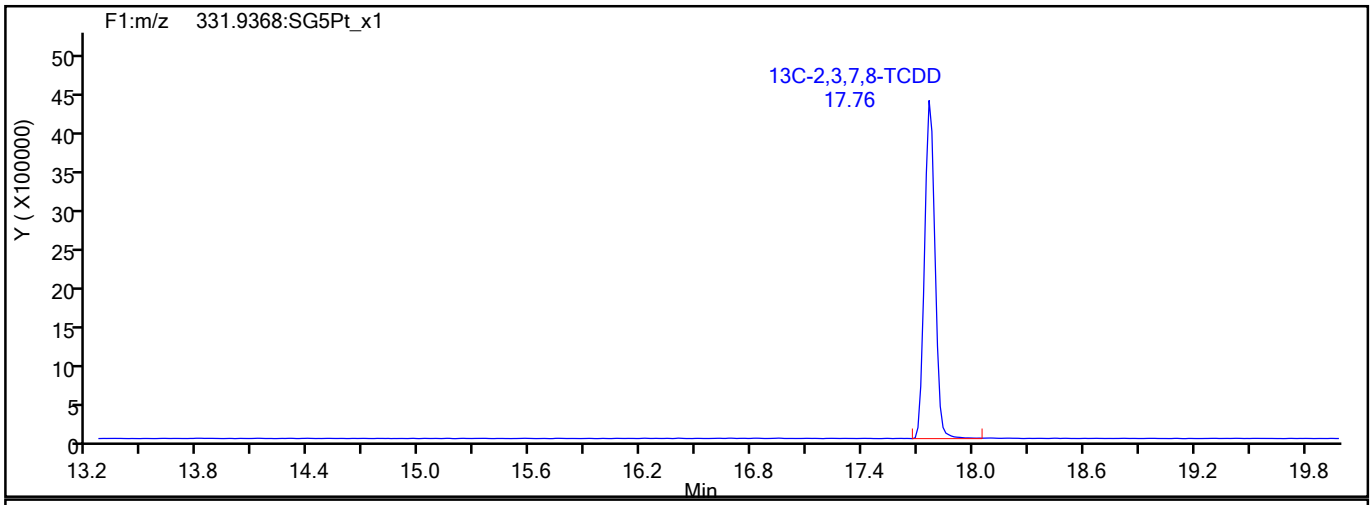

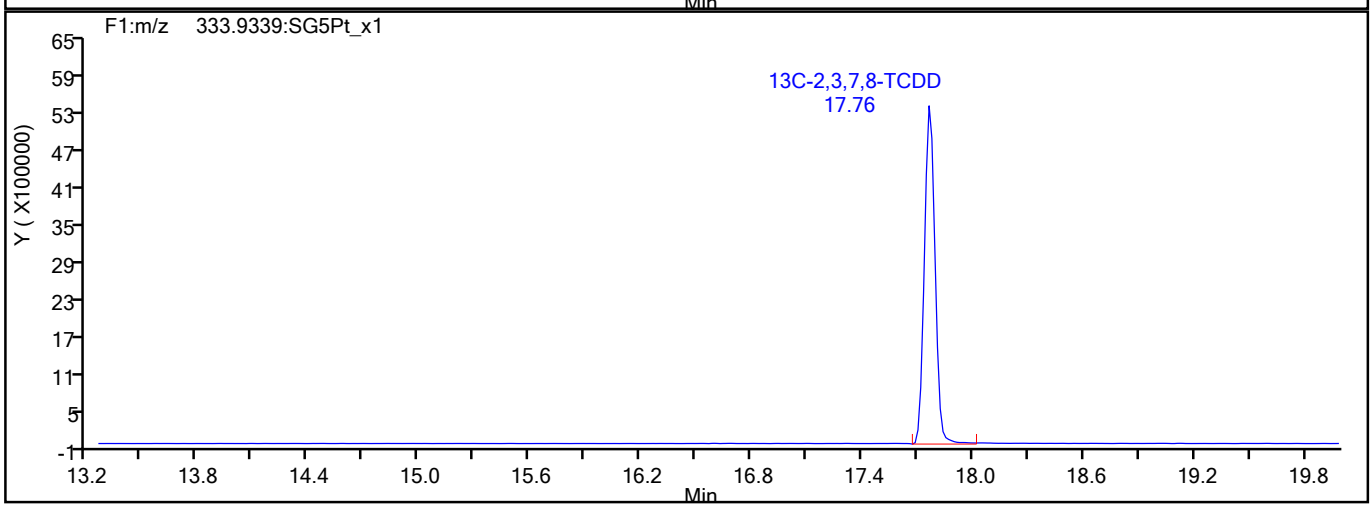

791908

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

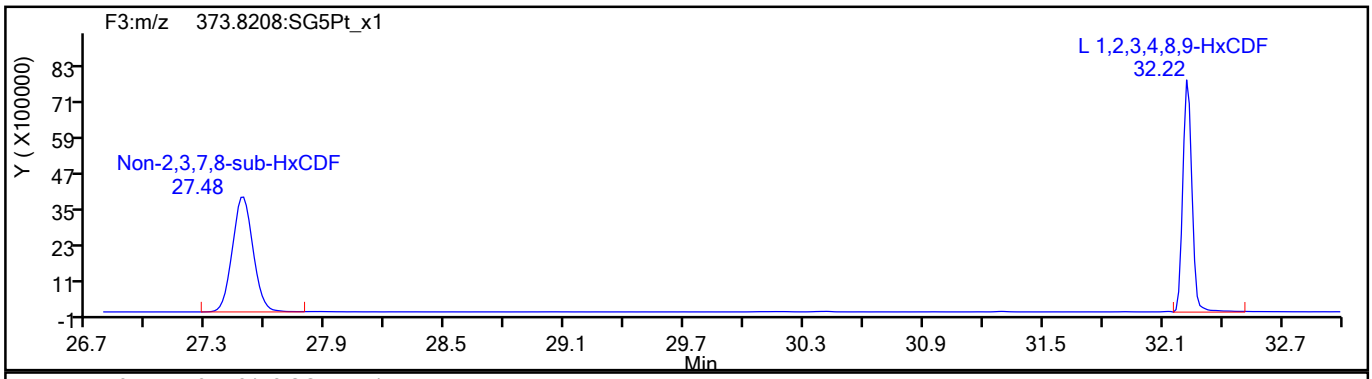

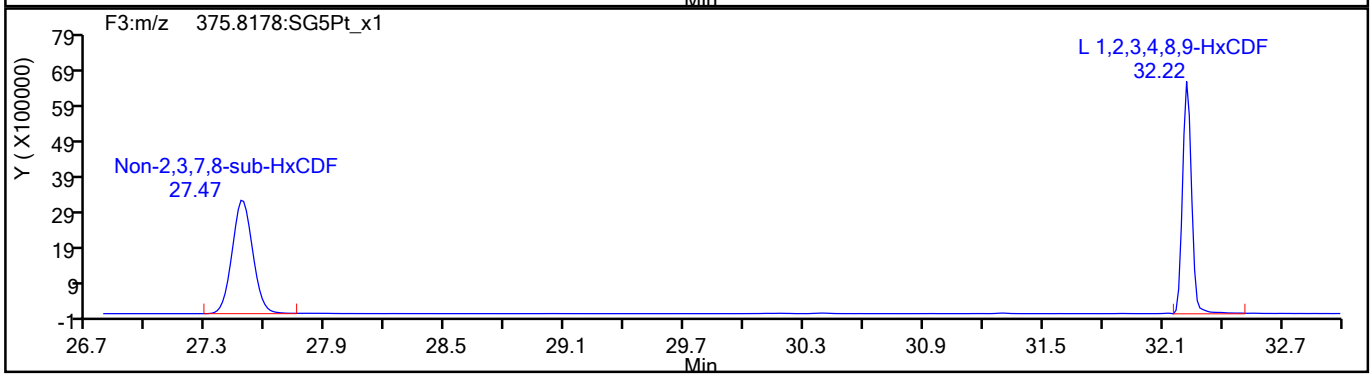

HxCDF Standards

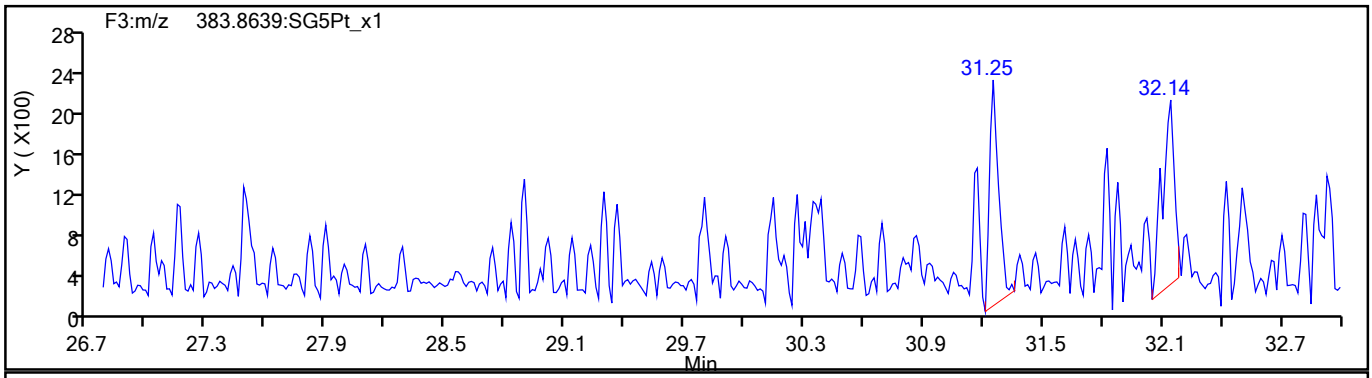

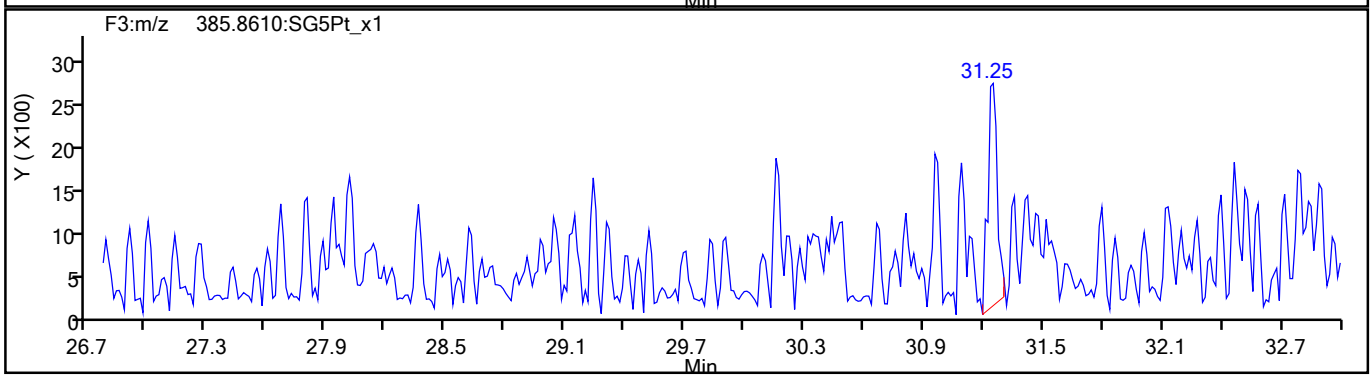

791909

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

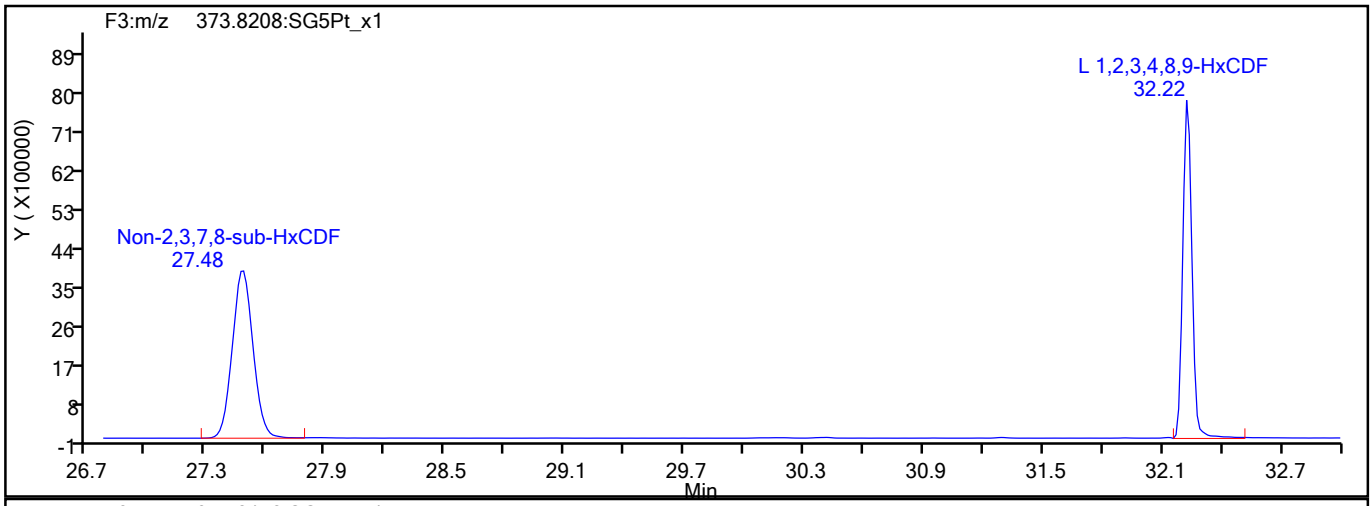

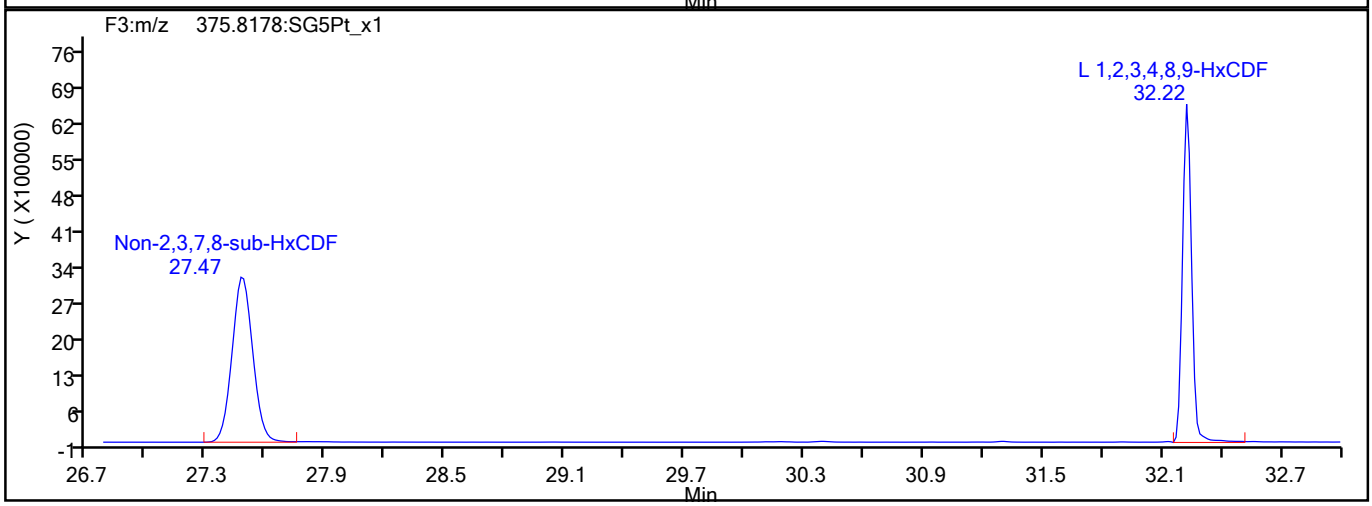

HxCDF Interference Mass

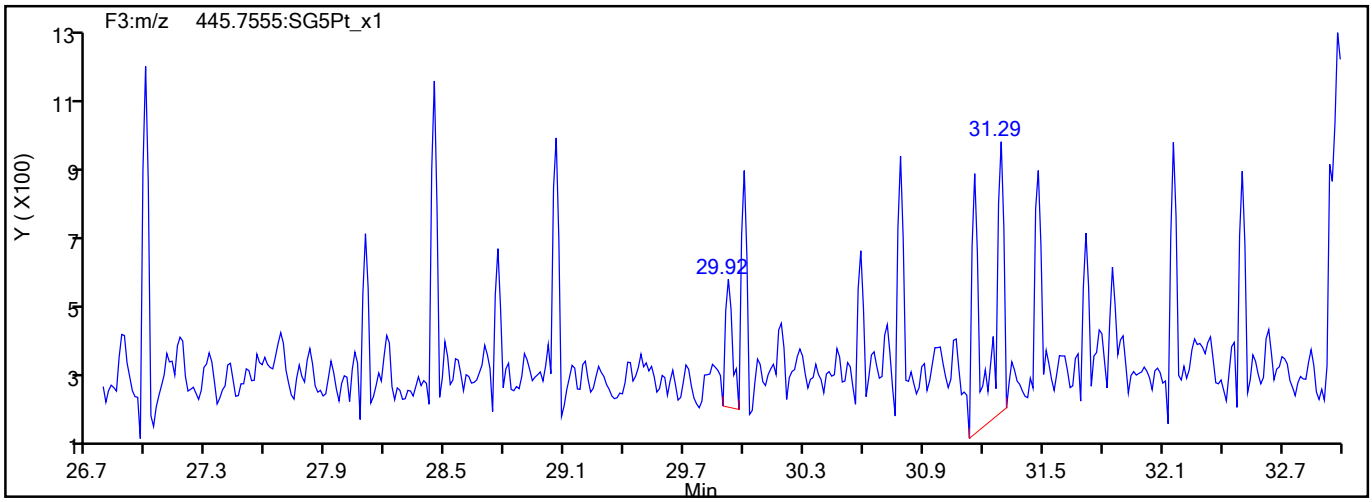

791910

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

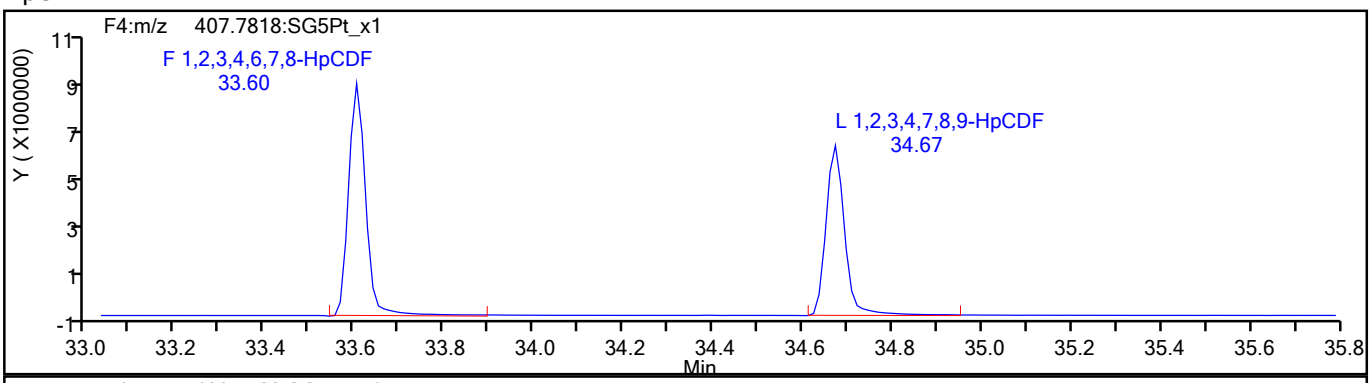

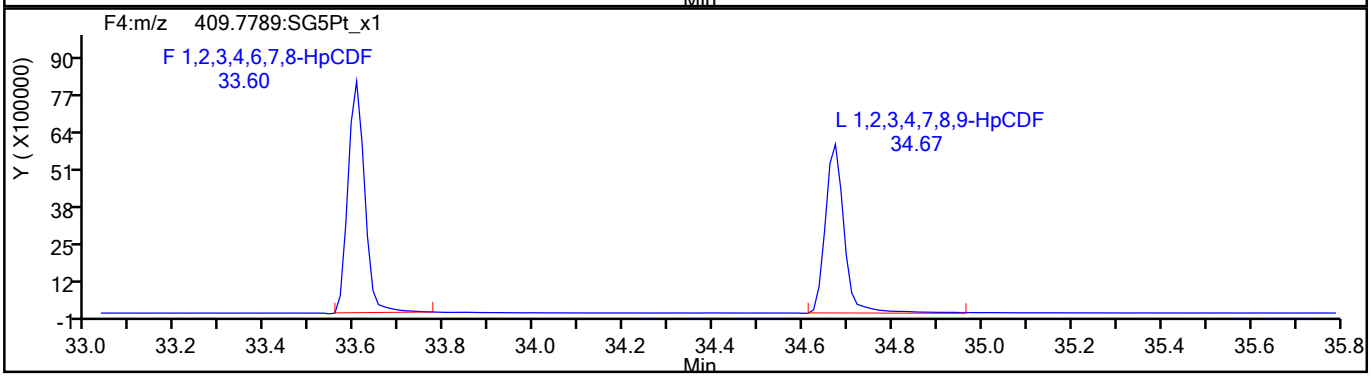

HpCDF Standards

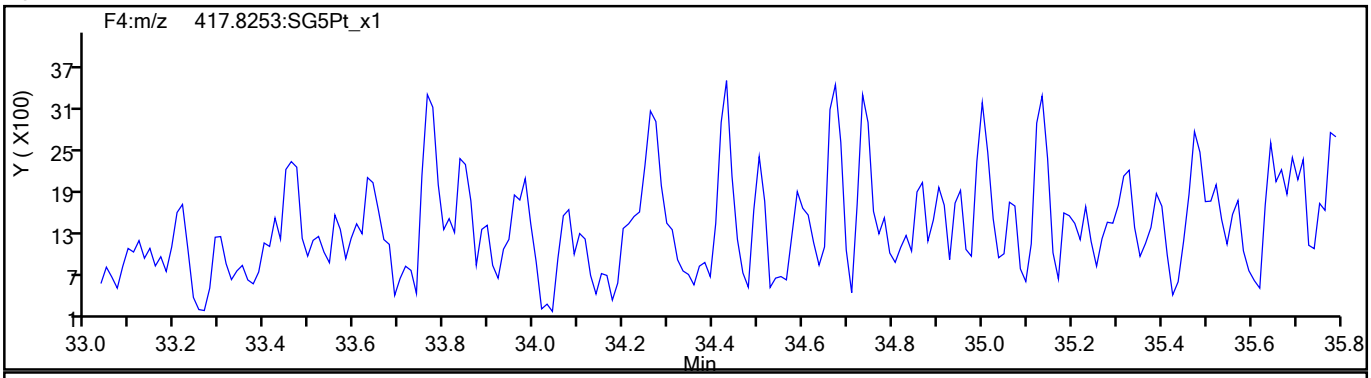

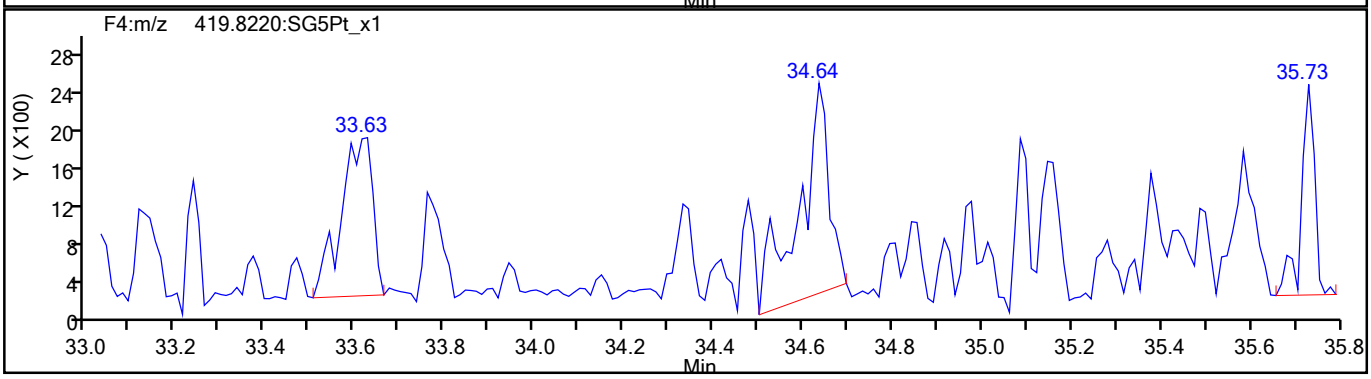

791911

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

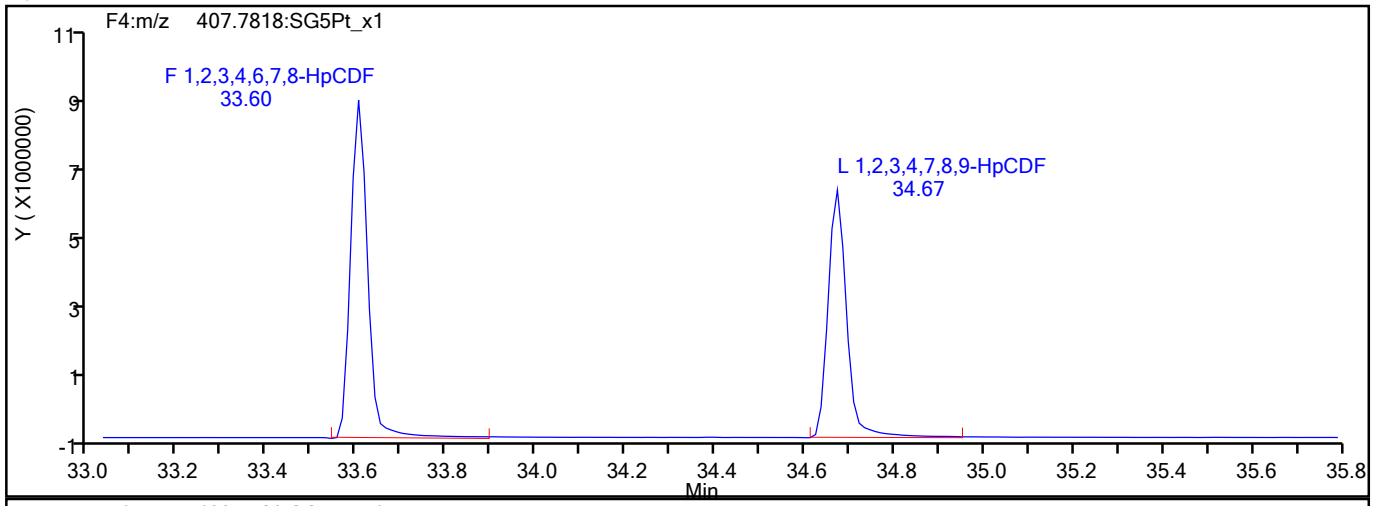

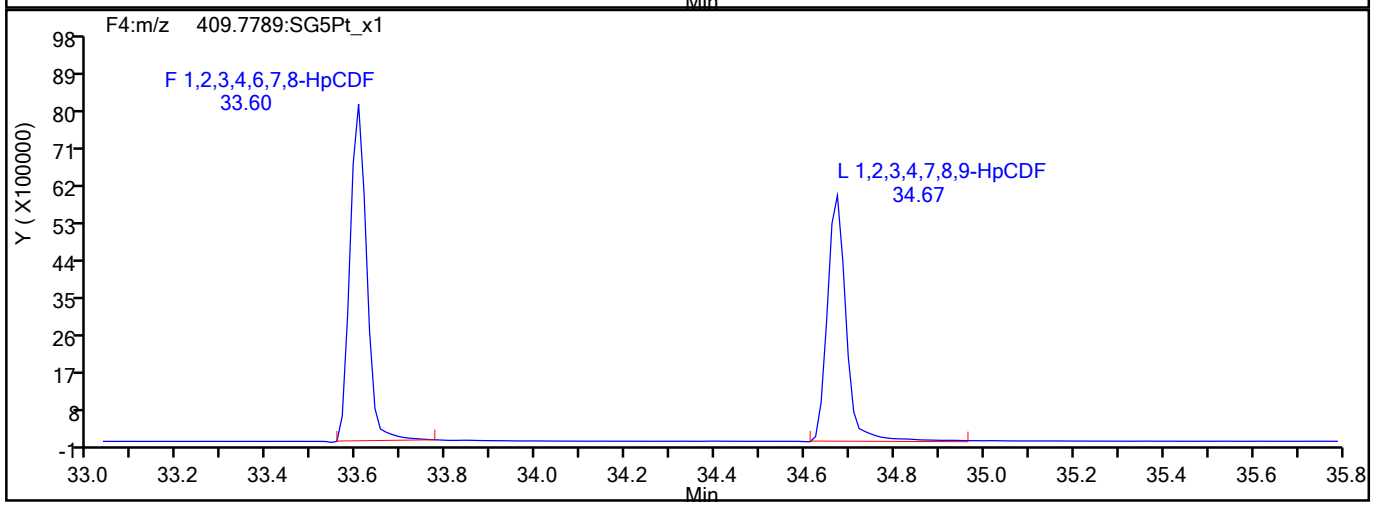

HpCDF Interference Mass

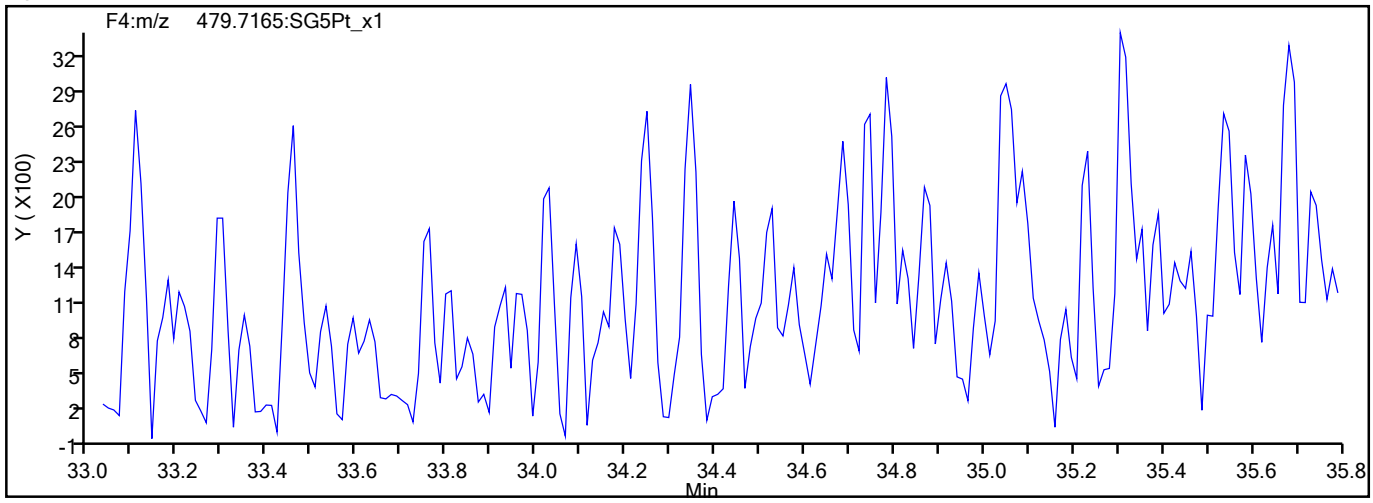

791912

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

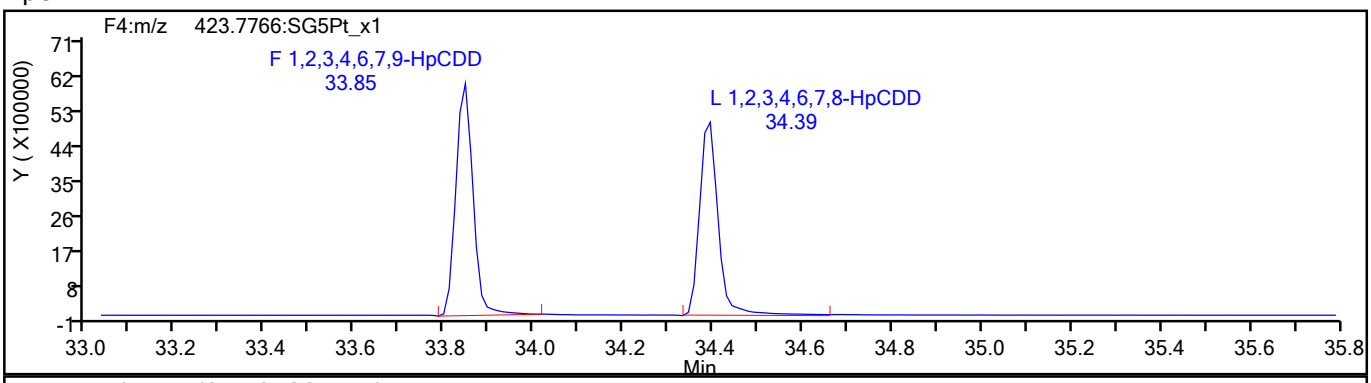

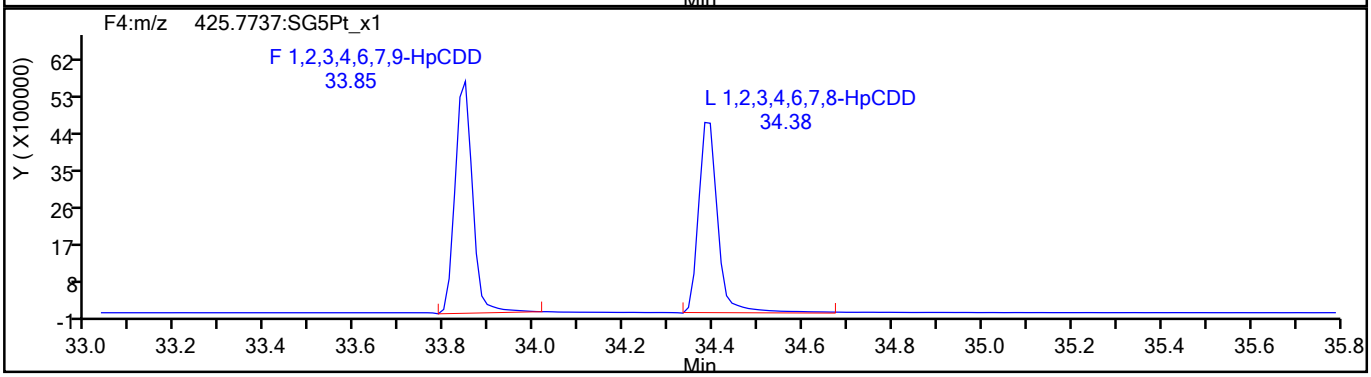

HpCDD Standards

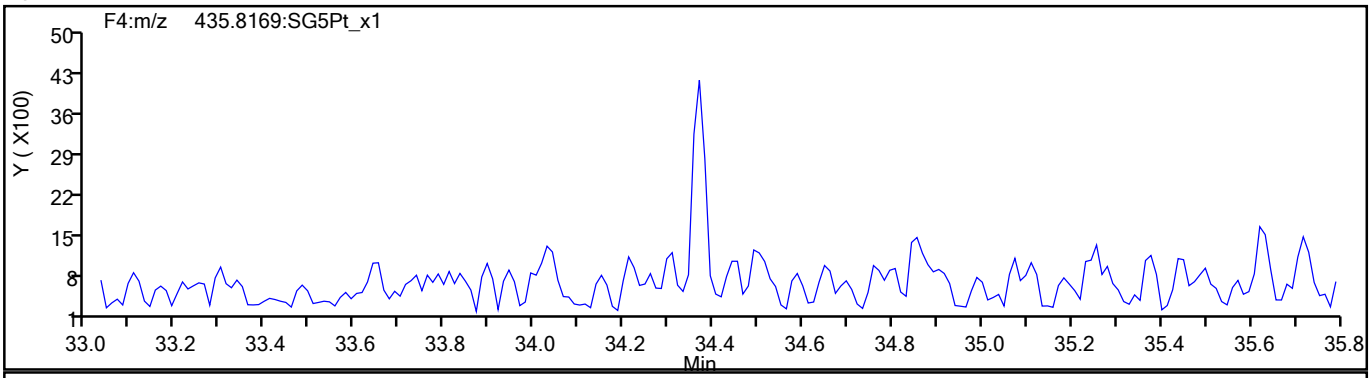

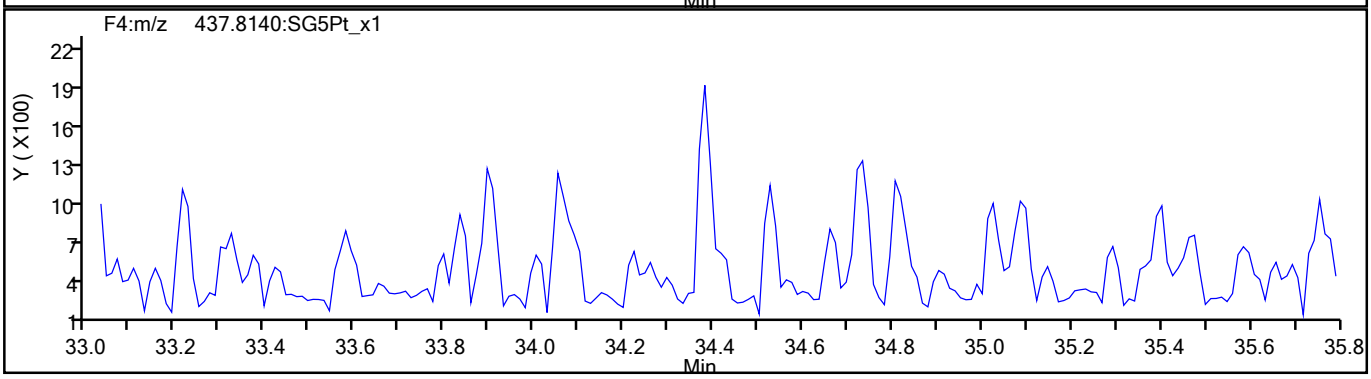

791913

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

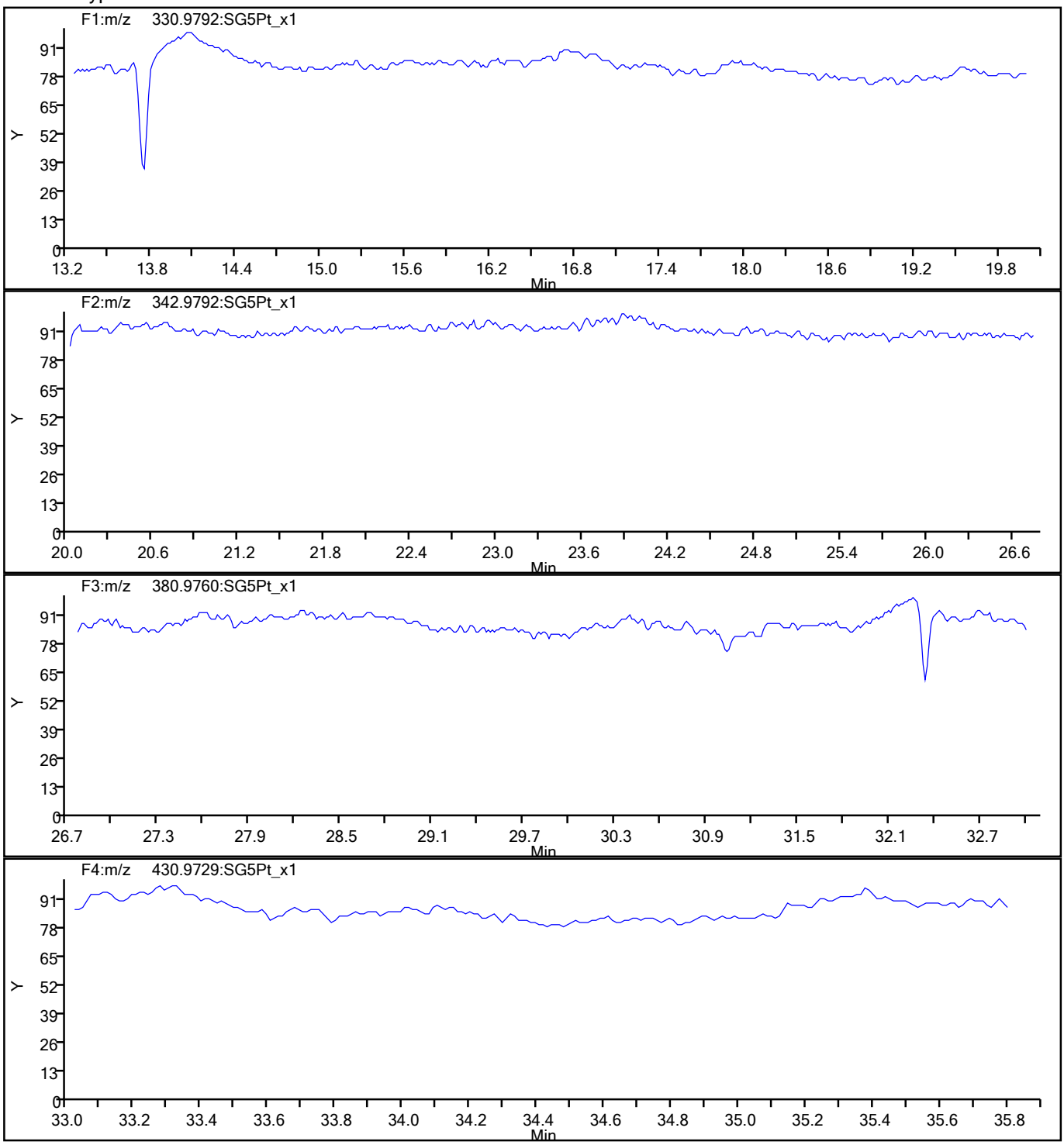

791914

Report Date: 27-Aug-2021 11:27:43 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210827-125840.b\25AU2110D5_43.d		
Injection Date:	26-Aug-2021 18:40:59	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520325	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

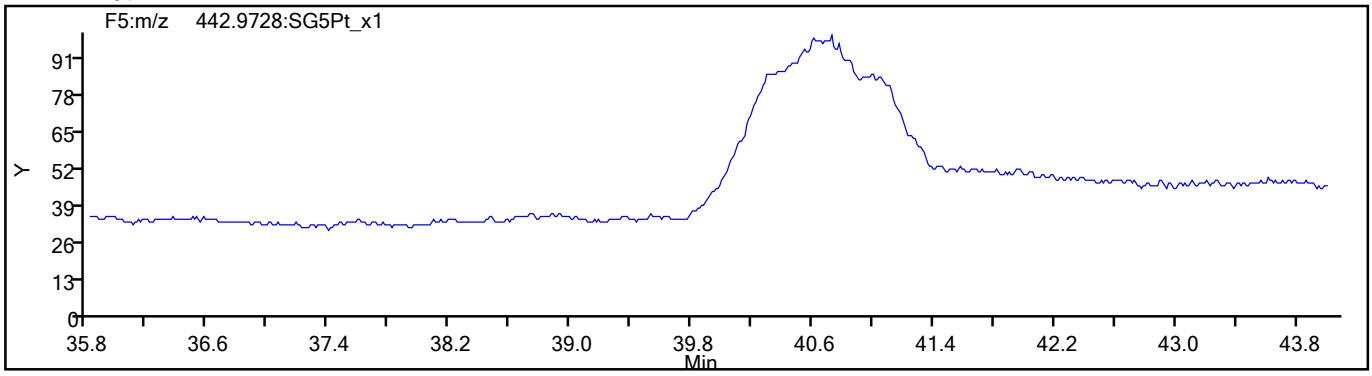

791915

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

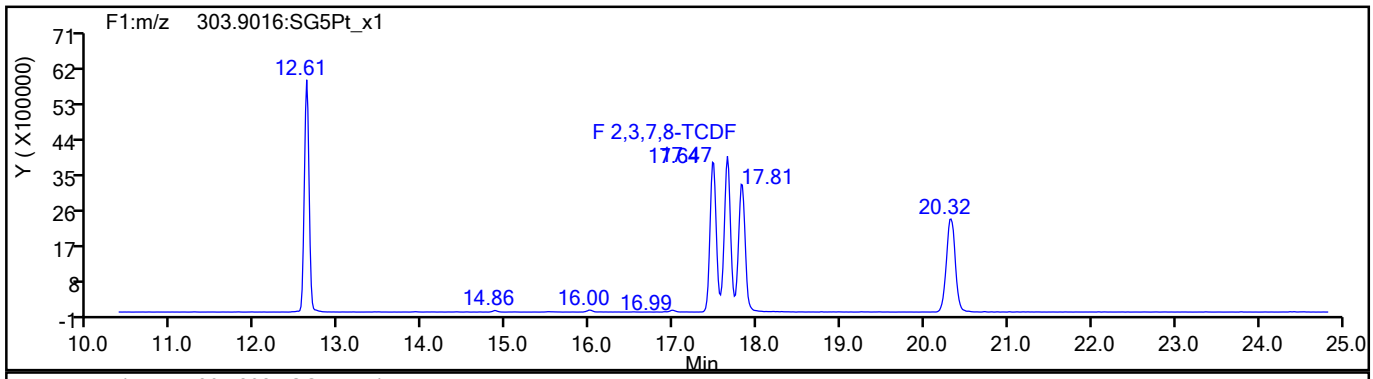

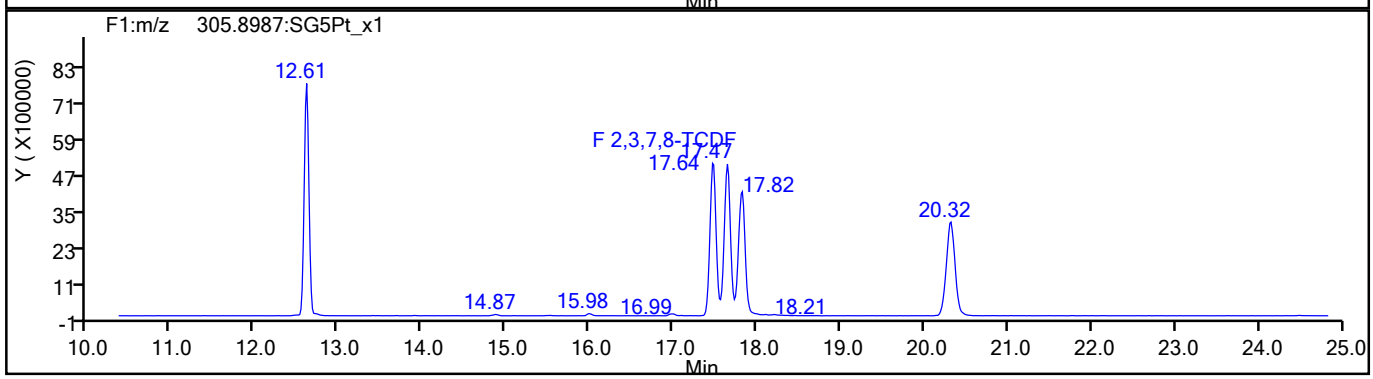

TCDF Standards

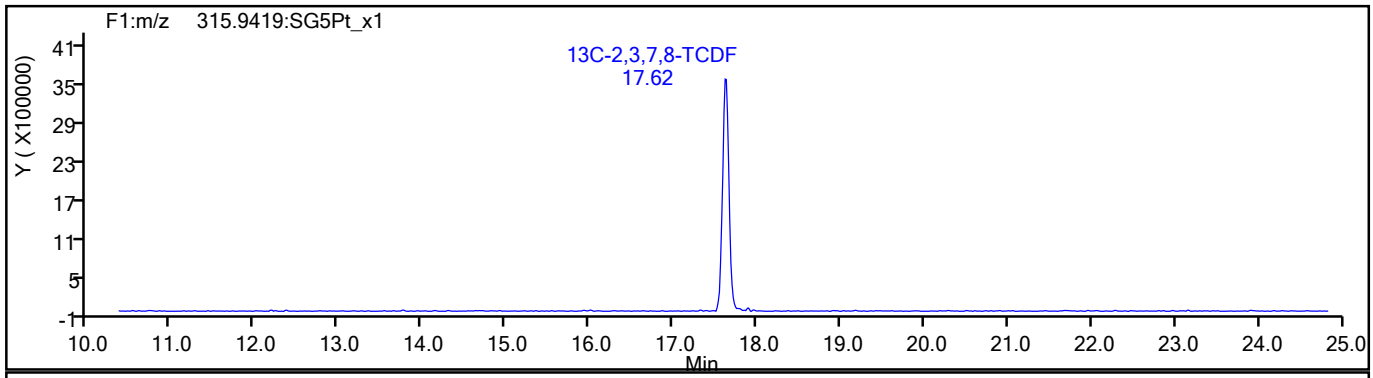

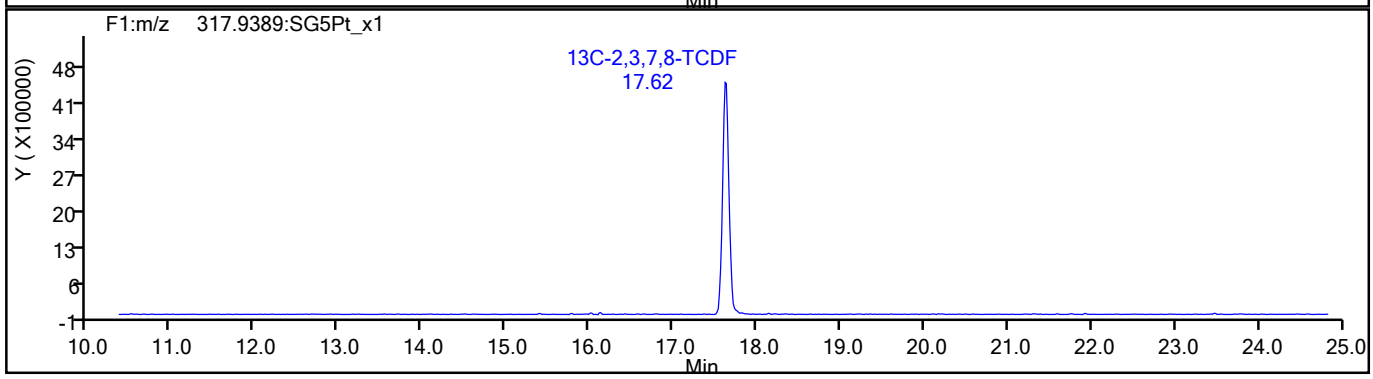

791918

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

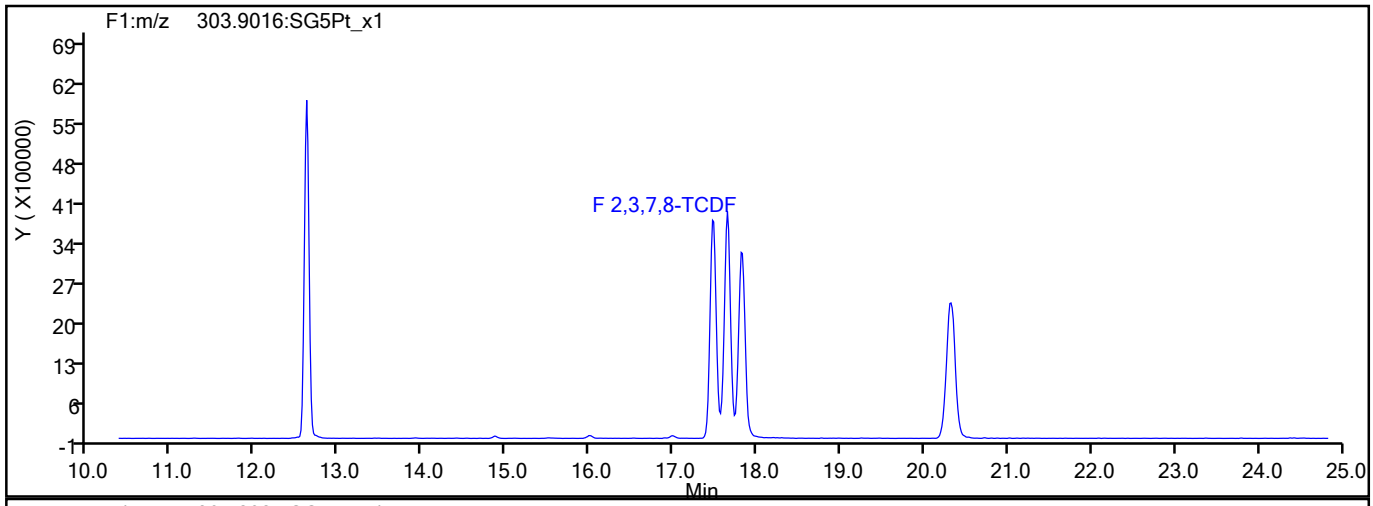

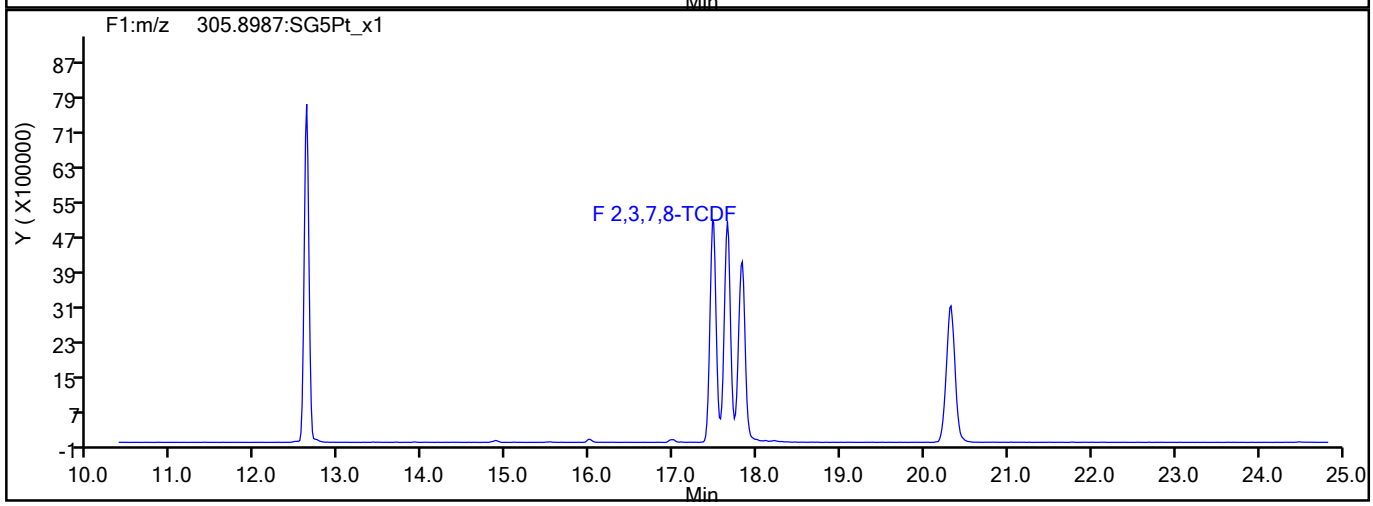

TCDF Interference Mass

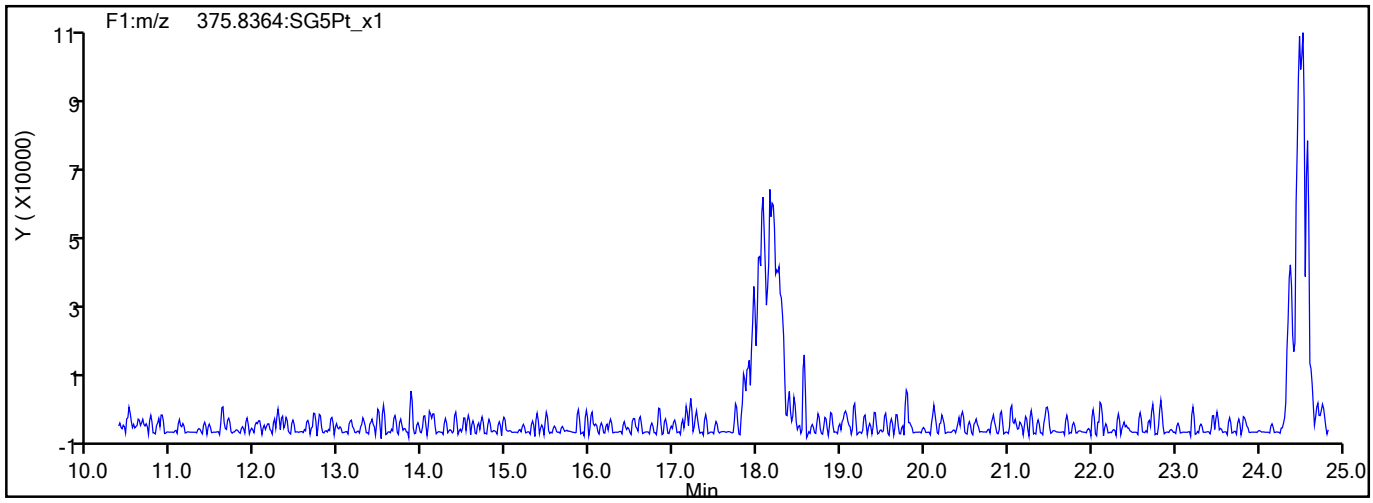

791919

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

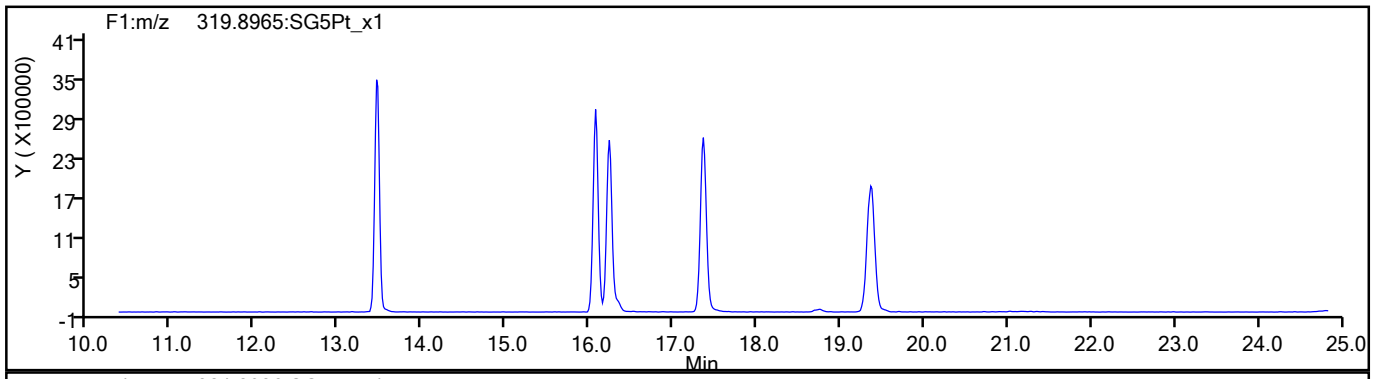

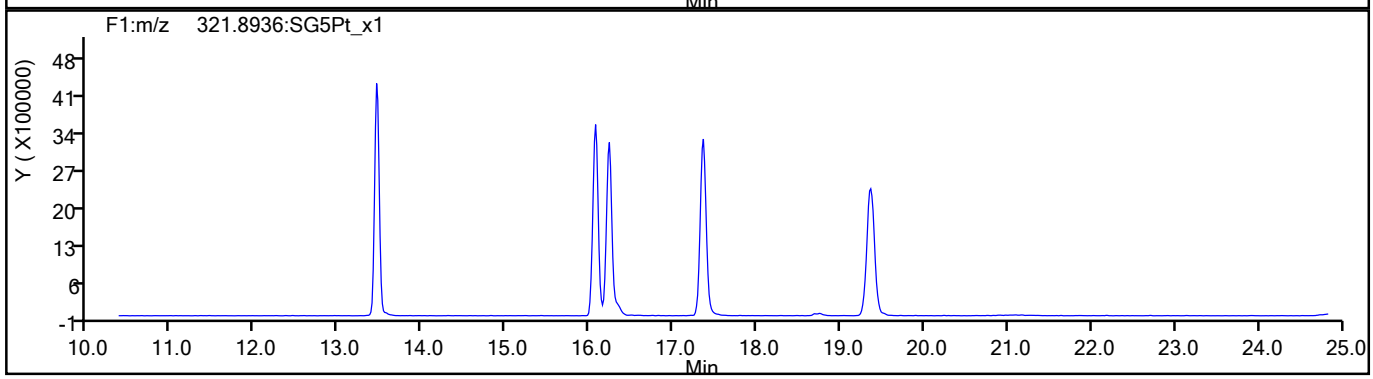

TCDD Standards

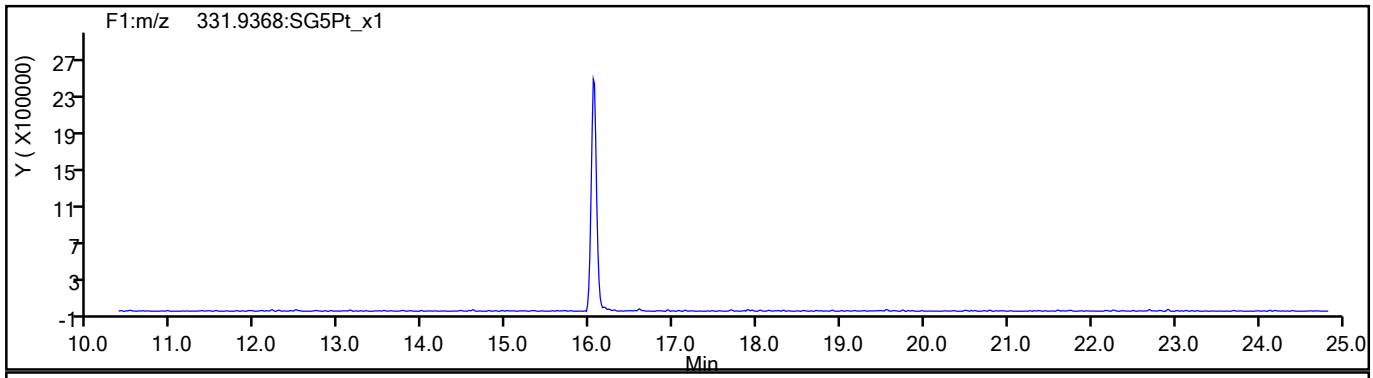

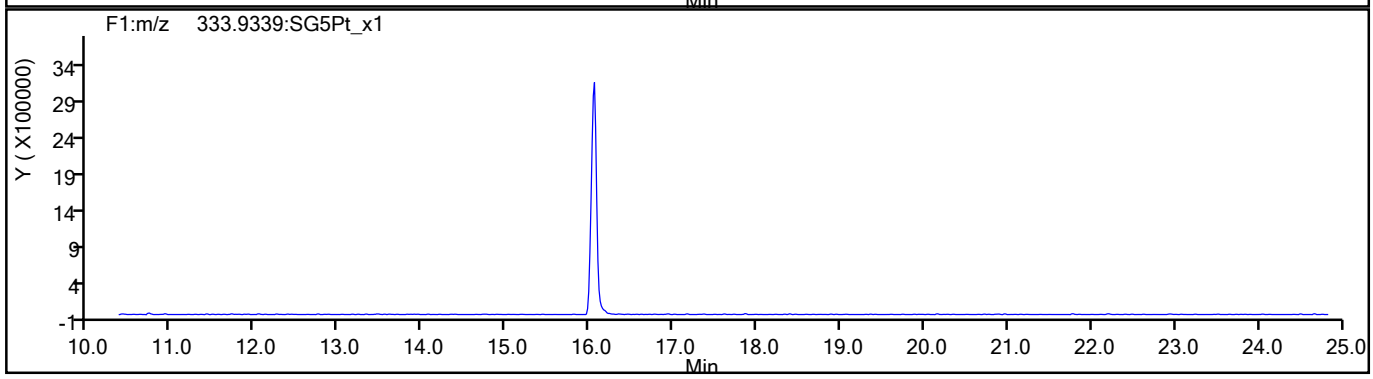

791920

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

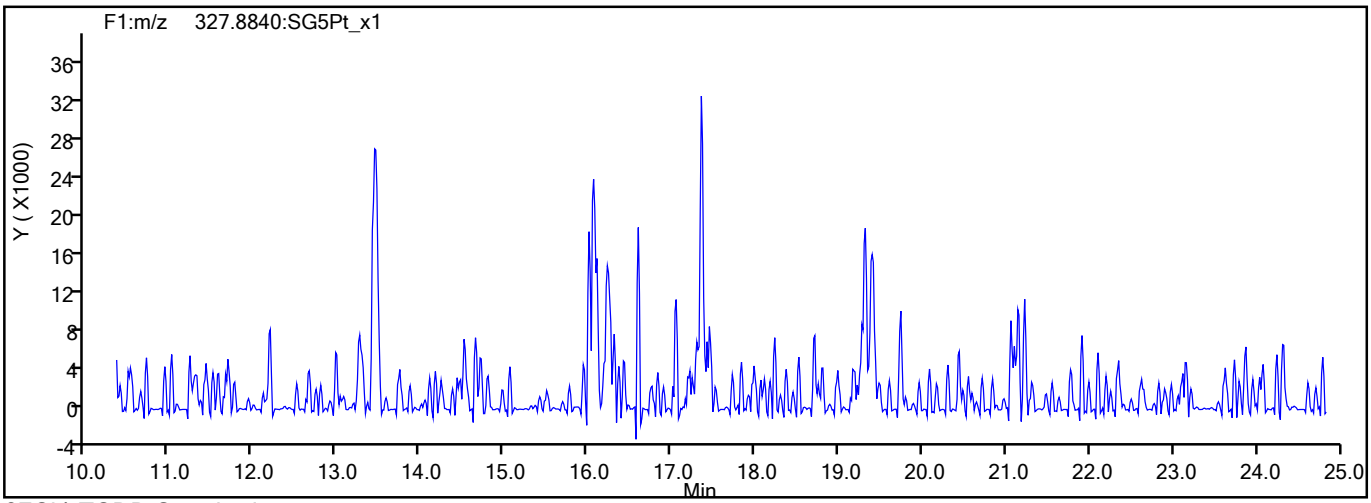

37Cl4-TCDD Standards

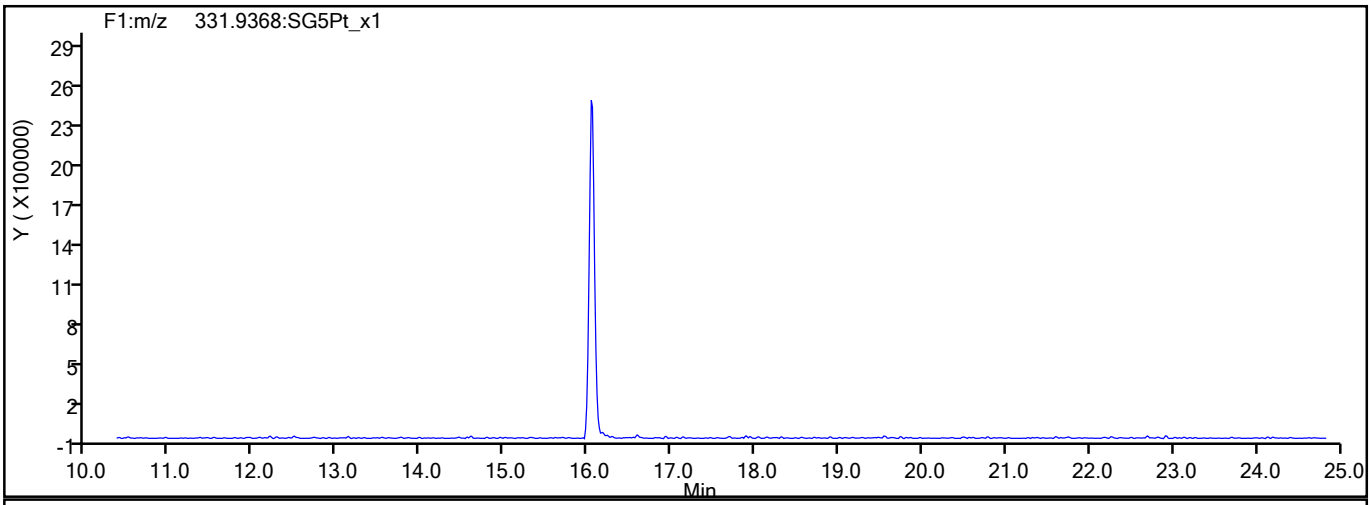

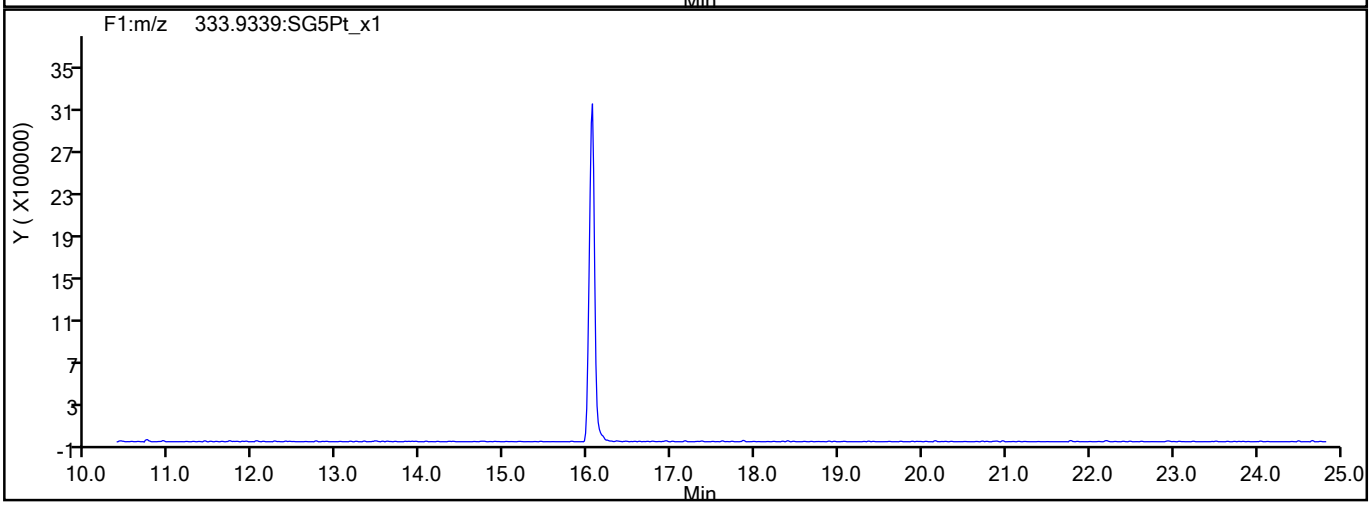

791921

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

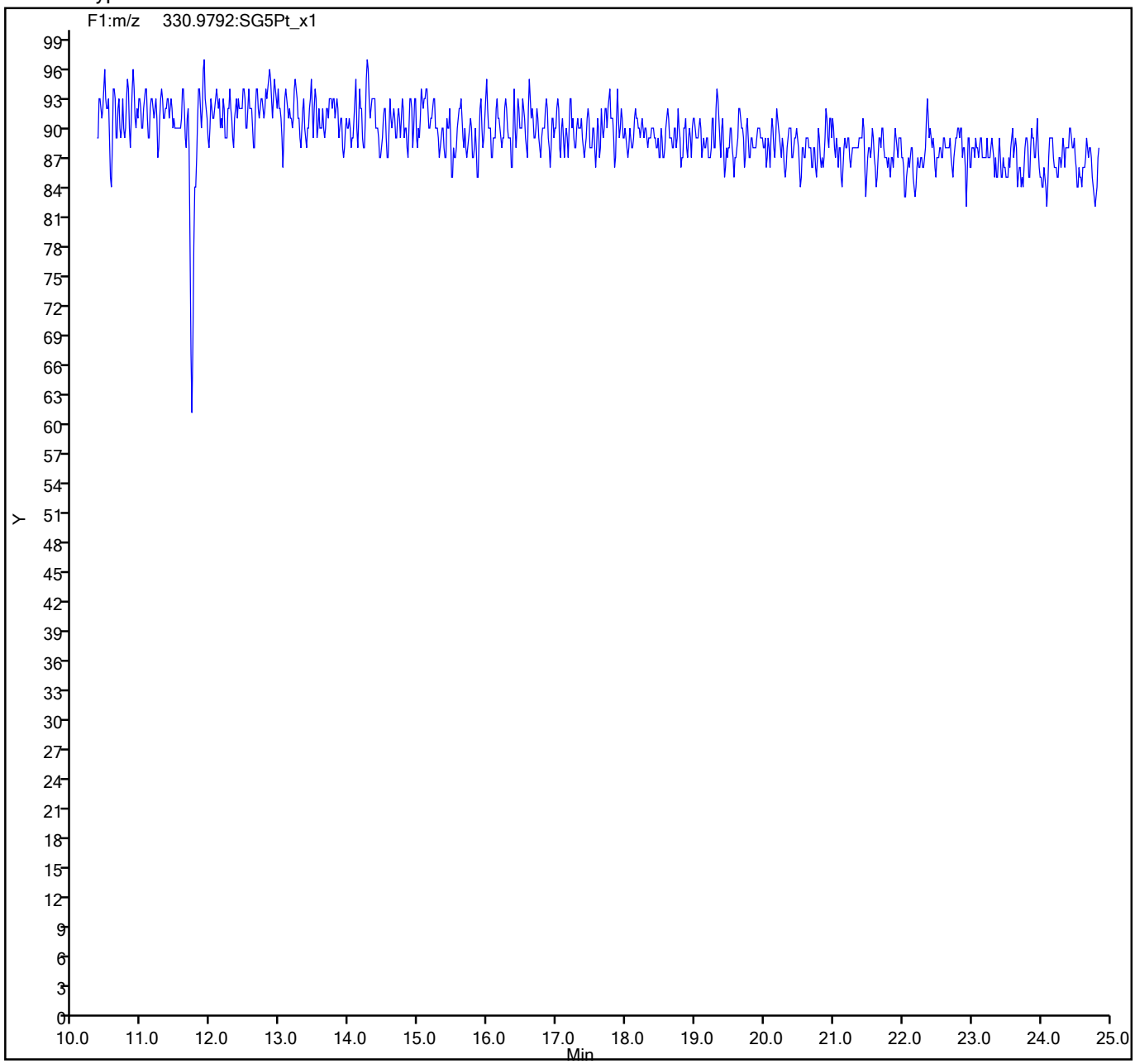

791922

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 15:38:16 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:34

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.630	38788235	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	40896159	0.78	0.9978	42.3	42.3	0.0758	0.0758		
D 13C-2,3,7,8-TCDD	16.066	22001037	0.78	0.8749					0.00	
2,3,7,8-TCDD	16.094	27039314	0.77	1.0570	46.5	46.5	0.0922	0.0922		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 15:38:16 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:34

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.630	17.630	0	1.000	17459073	3357288	5103	12757	658		
317.9389	17.630	17.630	0	1.000	21329162	3970010	4724	11810	840	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.644	0	1.001	17951435	3500124	2560	6400	1367		
305.8987	17.644	17.644	0	1.001	22944724	4488937	2979	7447	1507	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	1.000	9618318	2124266	3723	9307	571		
333.9339	16.066	16.066	0	1.000	12382719	2869762	3053	7632	940	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.094	16.094	0	1.002	11755596	2658333	2029	5072	1310		
321.8936	16.094	16.094	0	1.002	15283718	3448816	2838	7095	1215	0.77(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d		
Injection Date:	27-Aug-2021 15:38:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

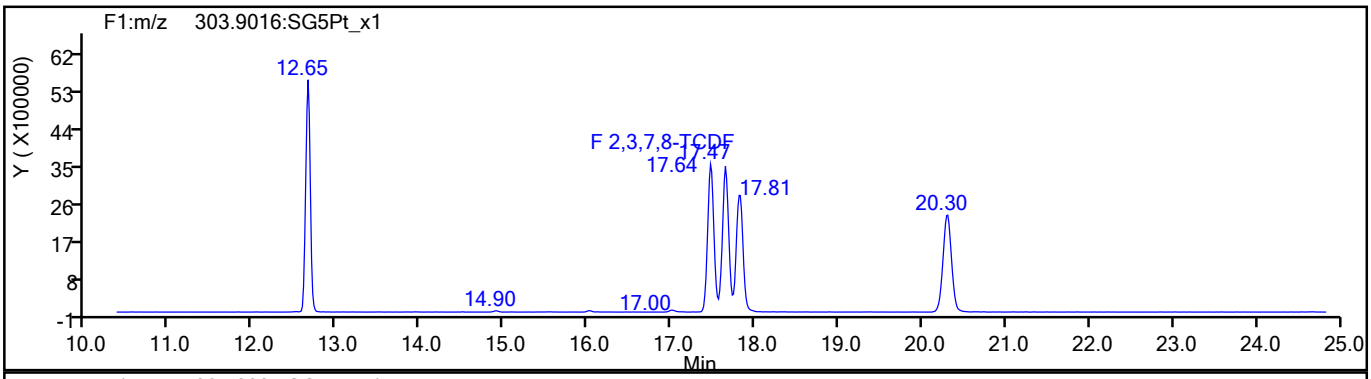

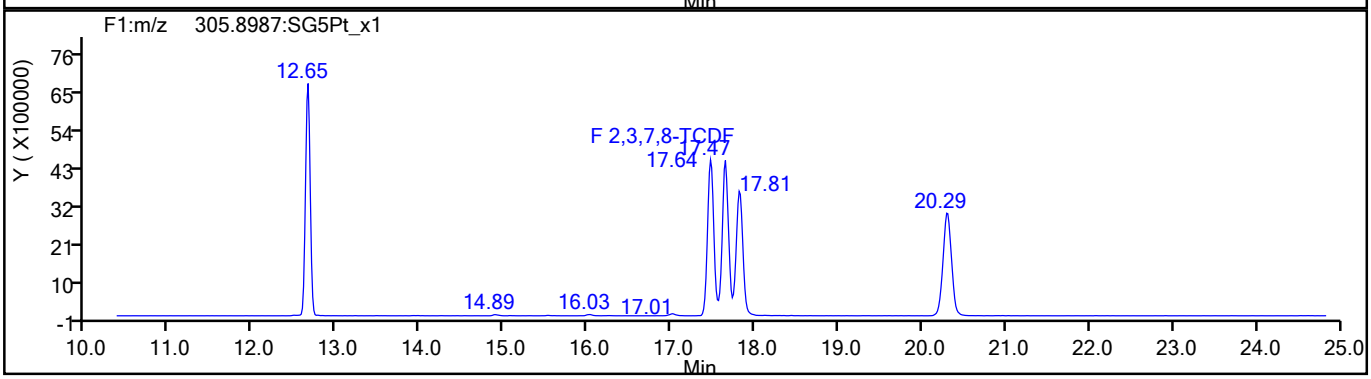

TCDF Standards

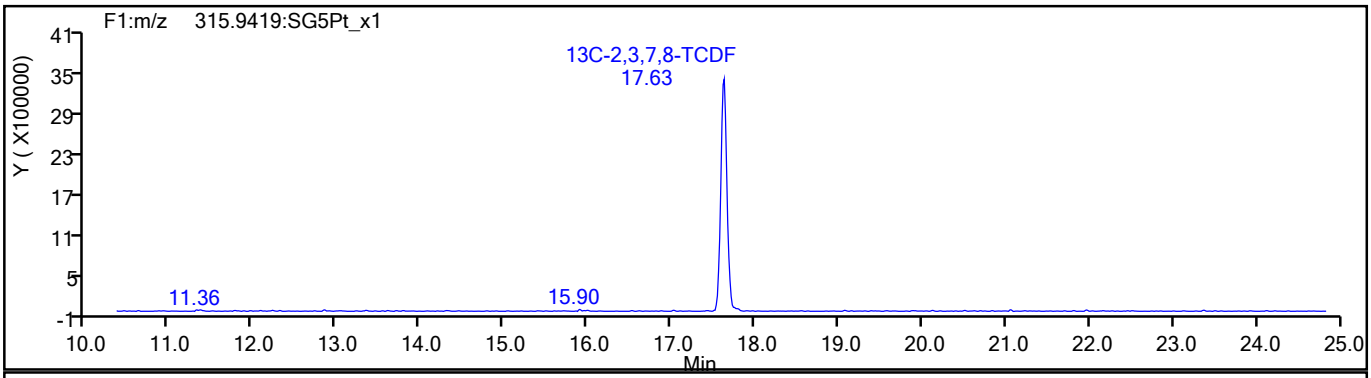

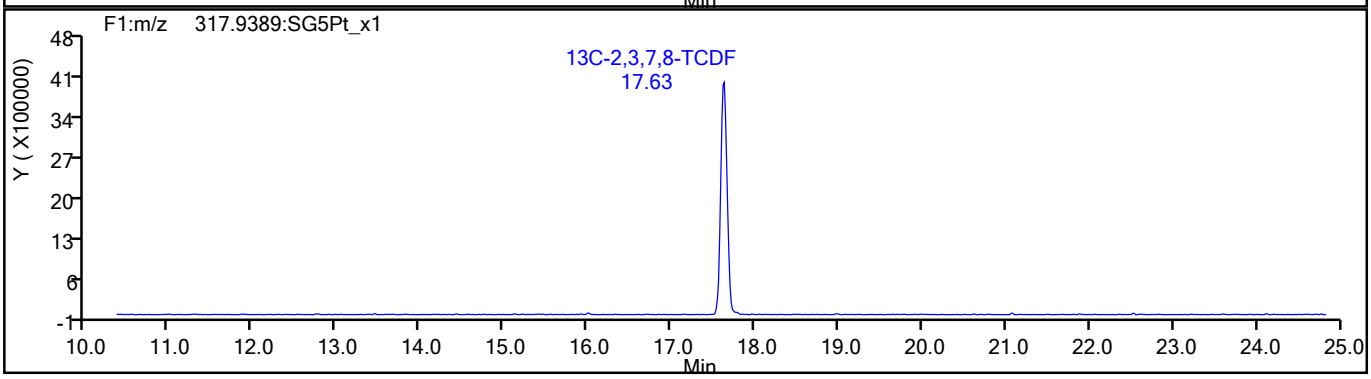

791925

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d		
Injection Date:	27-Aug-2021 15:38:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

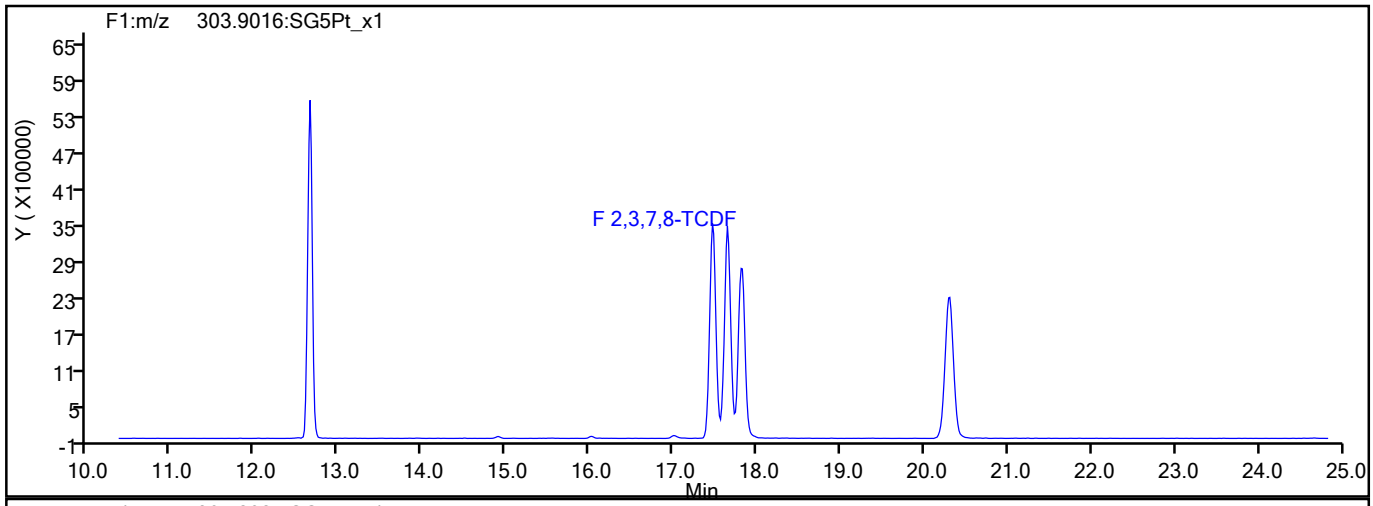

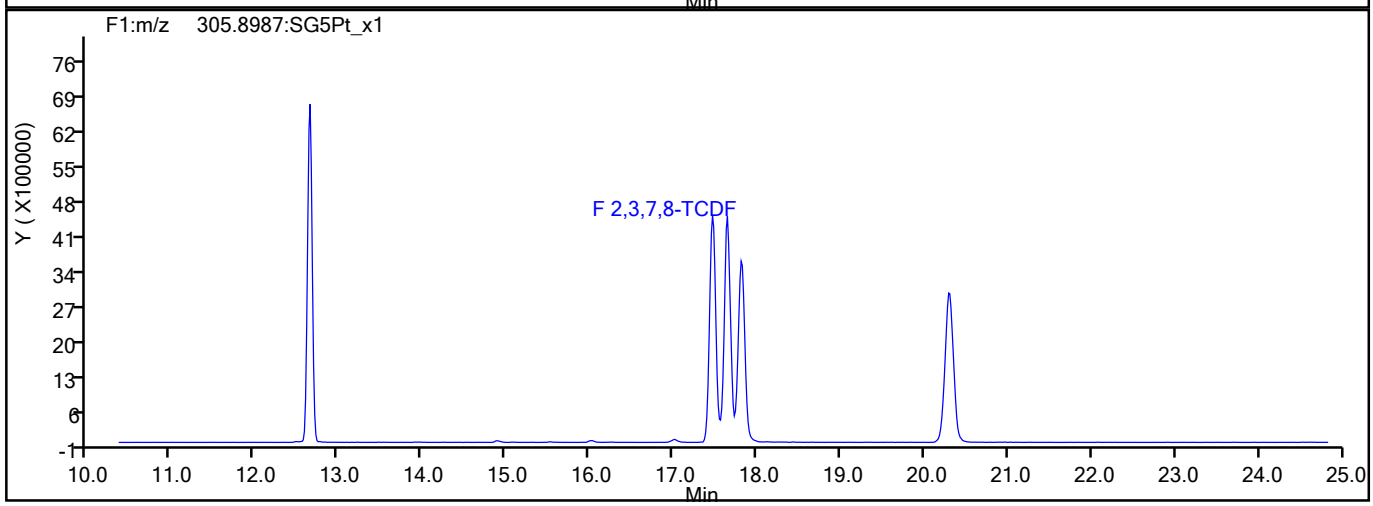

TCDF Interference Mass

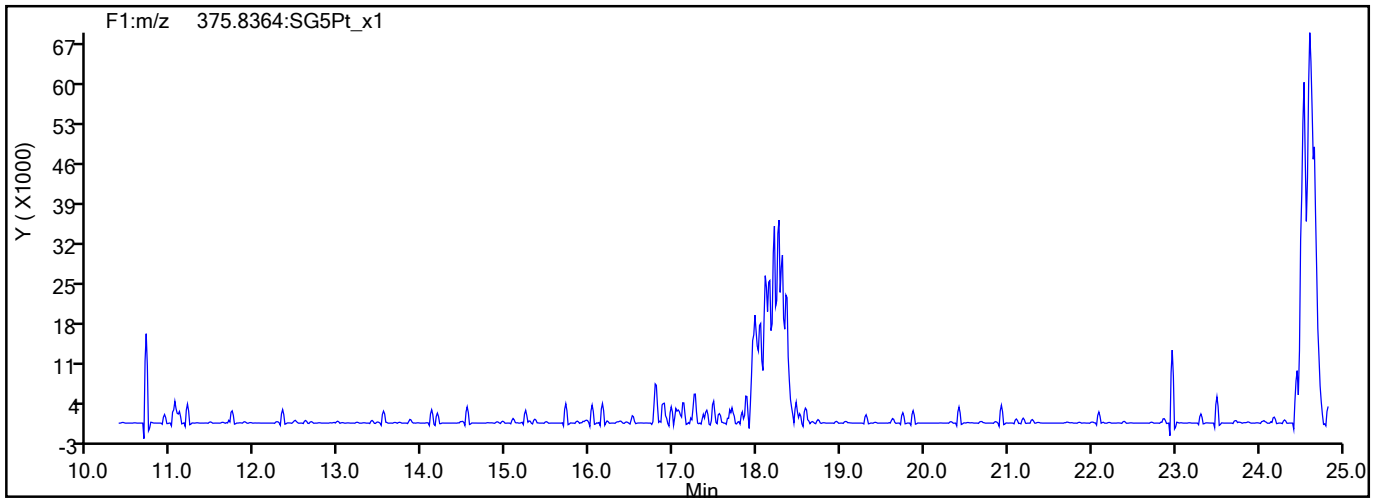

791926

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d		
Injection Date:	27-Aug-2021 15:38:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

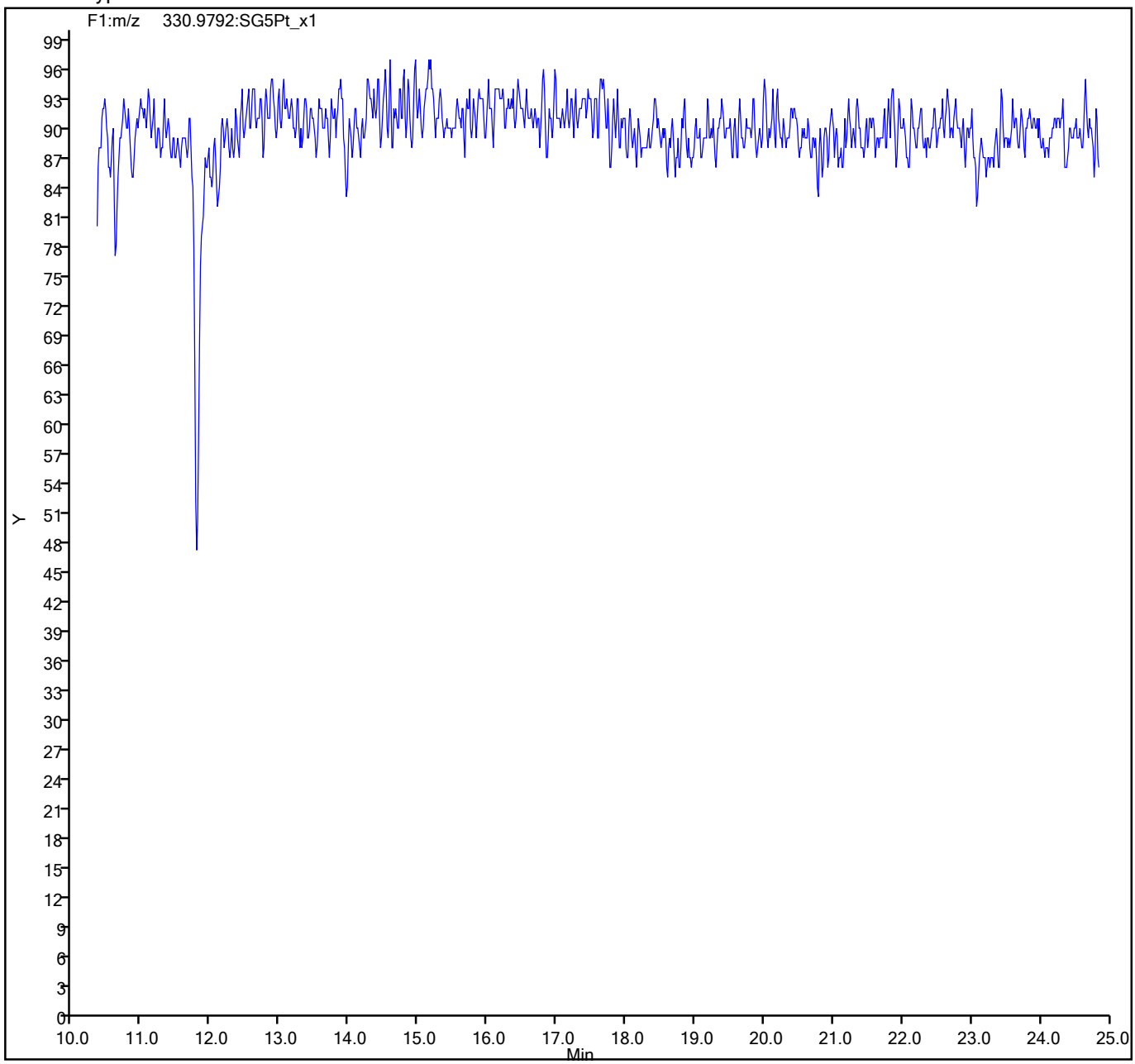

791927

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 31-Aug-2021 13:13:23 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:23:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.615	22417948	0.81	1.3327					0.00	
2,3,7,8-TCDF	17.643	23342457	0.77	0.9978	41.7	41.7	0.1627	0.1627		
D 13C-2,3,7,8-TCDD	16.066	12921619	0.78	0.8749					0.00	
2,3,7,8-TCDD	16.093	15061406	0.79	1.0570	44.1	44.1	0.1717	0.1717		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 31-Aug-2021 13:13:23 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:23:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.000	10066028	1874406	7328	18320	256		
317.9389	17.615	17.615	0	1.000	12351920	2267129	6374	15935	356	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.643	0	1.002	10180224	1970531	2750	6875	717		
305.8987	17.643	17.643	0	1.002	13162233	2621871	3972	9930	660	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	1.000	5662824	1377022	8352	20880	165		
333.9339	16.066	16.066	0	1.000	7258795	1574336	3193	7982	493	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.093	0	1.002	6664374	1524555	3063	7657	498		
321.8936	16.093	16.093	0	1.002	8397032	1845328	2293	5732	805	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d		
Injection Date:	31-Aug-2021 13:13:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

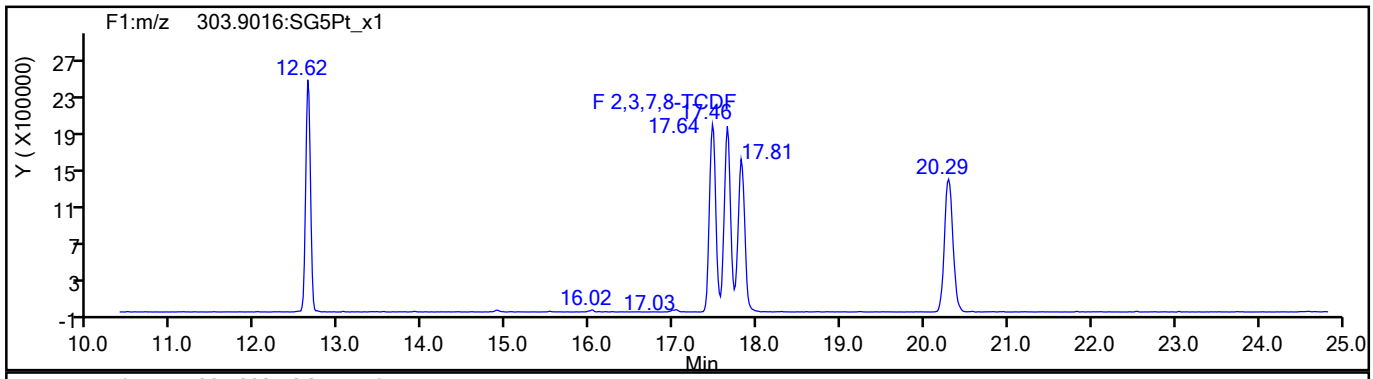

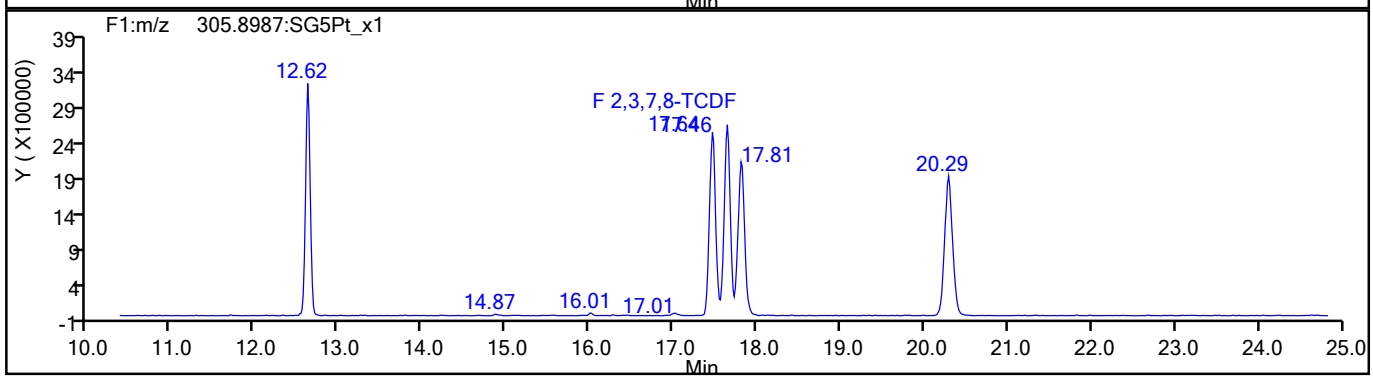

TCDF Standards

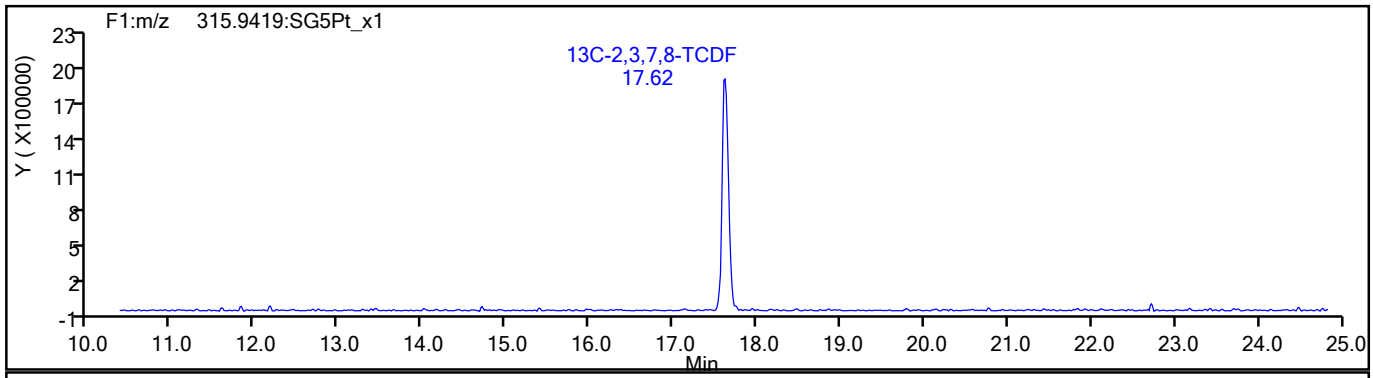

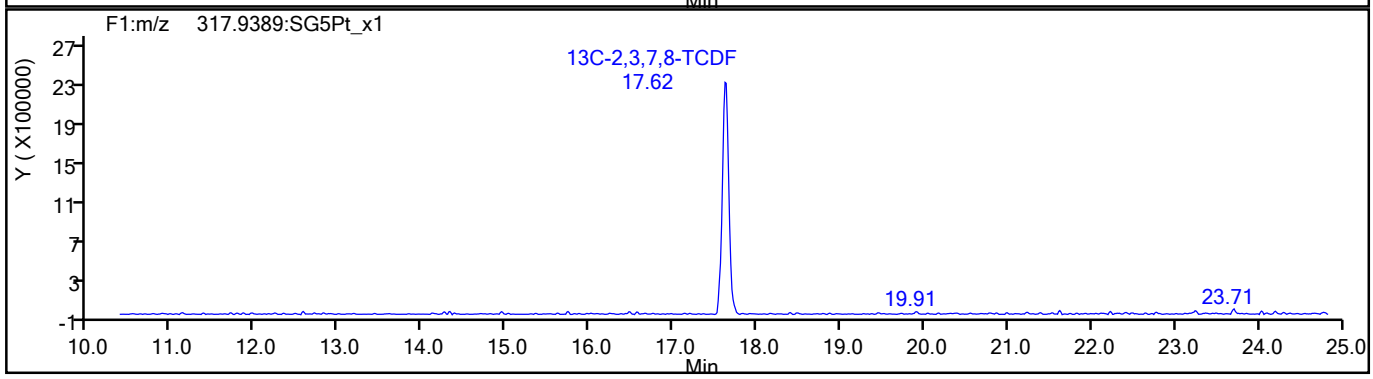

791930

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d		
Injection Date:	31-Aug-2021 13:13:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

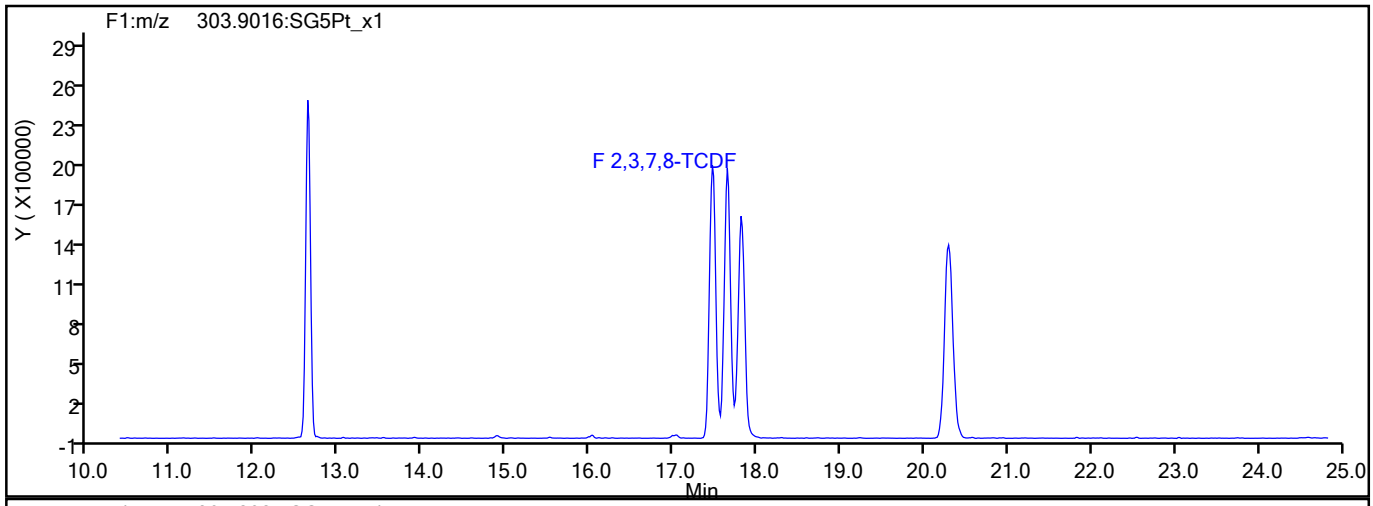

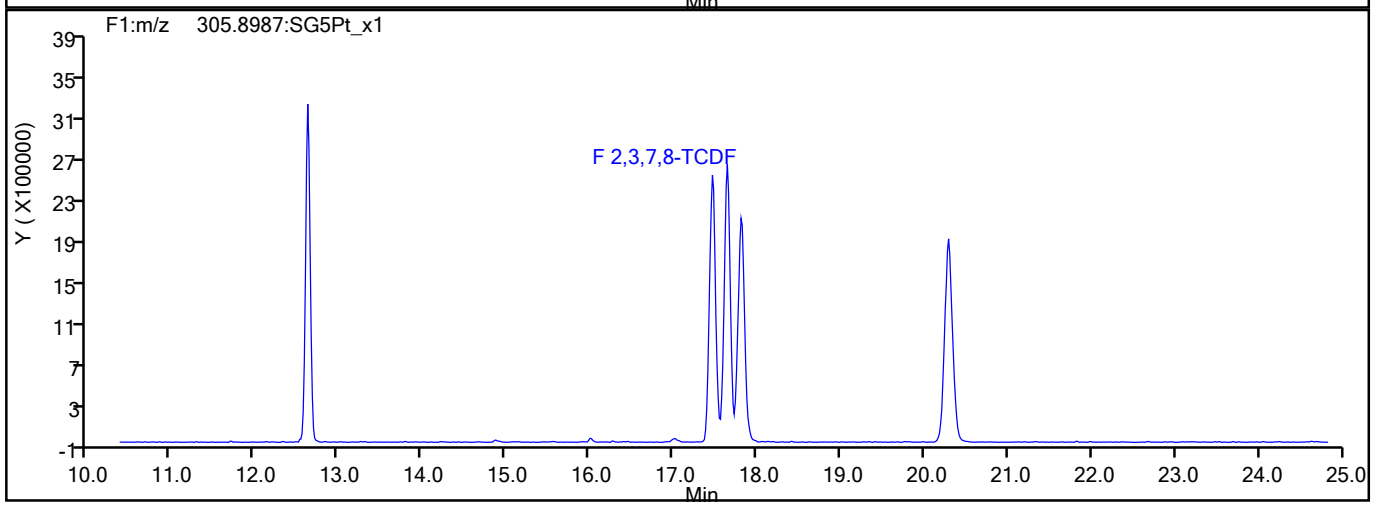

TCDF Interference Mass

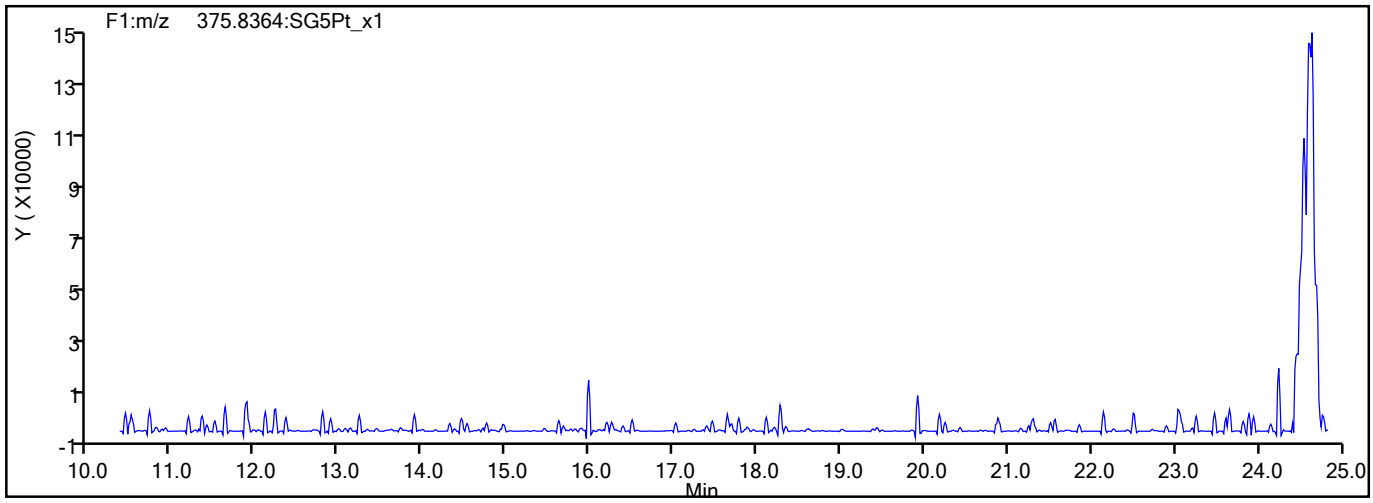

791931

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d		
Injection Date:	31-Aug-2021 13:13:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

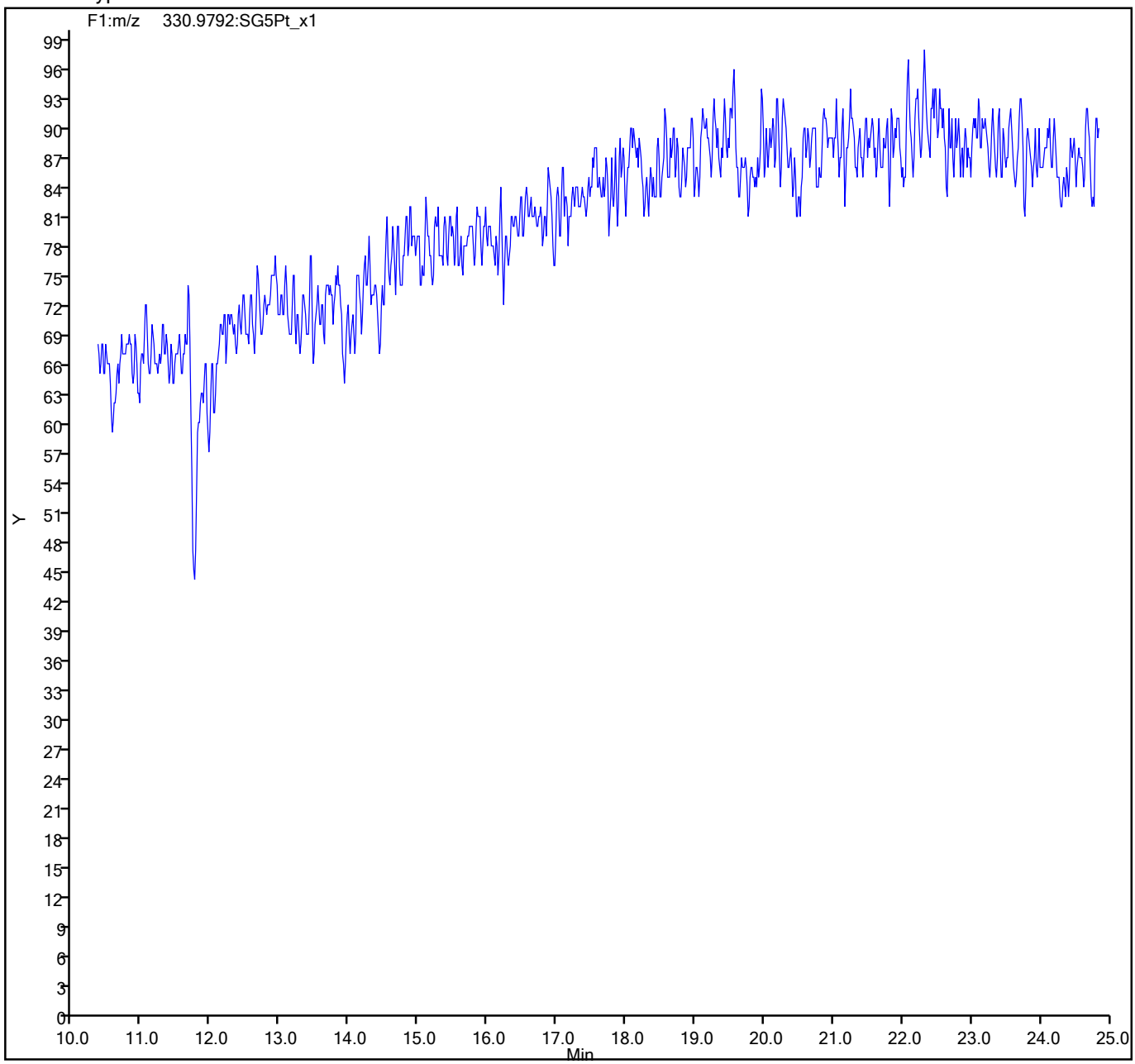

791932

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 01-Sep-2021 09:30:26 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 15:43:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 15:33:53

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.644	12838057	0.76	1.3327					0.00	
2,3,7,8-TCDF	17.658	13592294	0.77	0.9978	42.4	42.4	0.1951	0.1951		
2,3,7,8-TCDD	16.095	8867458	0.76	1.0570	39.7	39.7	0.3444	0.3444		
D 13C-2,3,7,8-TCDD	16.095	8455951	0.72	0.8749					0.00	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 01-Sep-2021 15:43:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 01-Sep-2021 09:30:26 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 15:43:09 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 15:33:53

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.644	17.644	0	1.000	5539796	983596	4361	10902	226		
317.9389	17.631	17.644	-1	1.000	7298261	1429198	3485	8712	410	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.658	0	1.001	5909806	1178837	2223	5557	530		
305.8987	17.658	17.658	0	1.001	7682488	1458685	2473	6182	590	0.77(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.095	16.095	0	1.000	3828509	843779	4018	10045	210		
321.8936	16.095	16.095	0	1.000	5038949	1120707	2446	6115	458	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.095	16.095	0	1.000	3543106	666567	6025	15062	111		
333.9339	16.081	16.095	-1	1.000	4912845	1109167	3350	8375	331	0.72(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 01-Sep-2021 15:43:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_001.d		
Injection Date:	01-Sep-2021 09:30:26	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521760	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

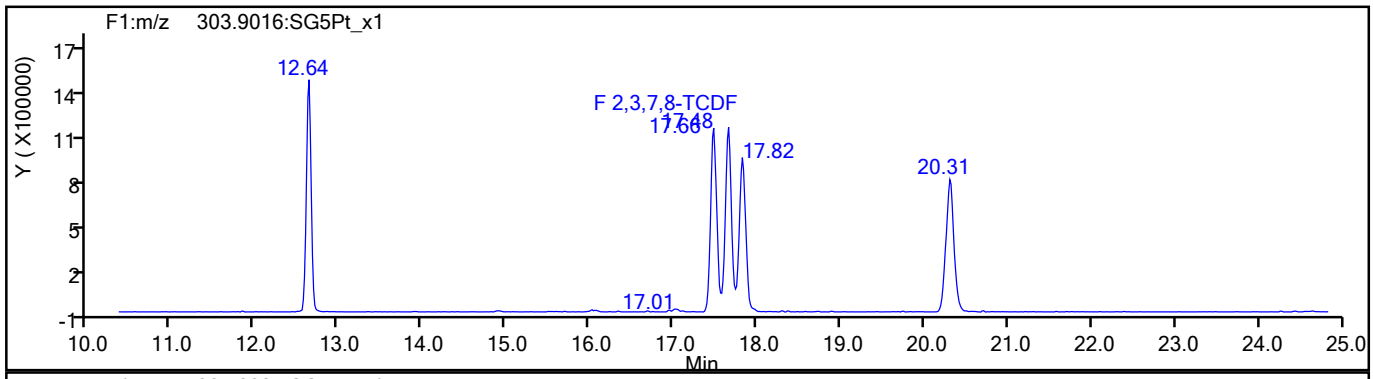

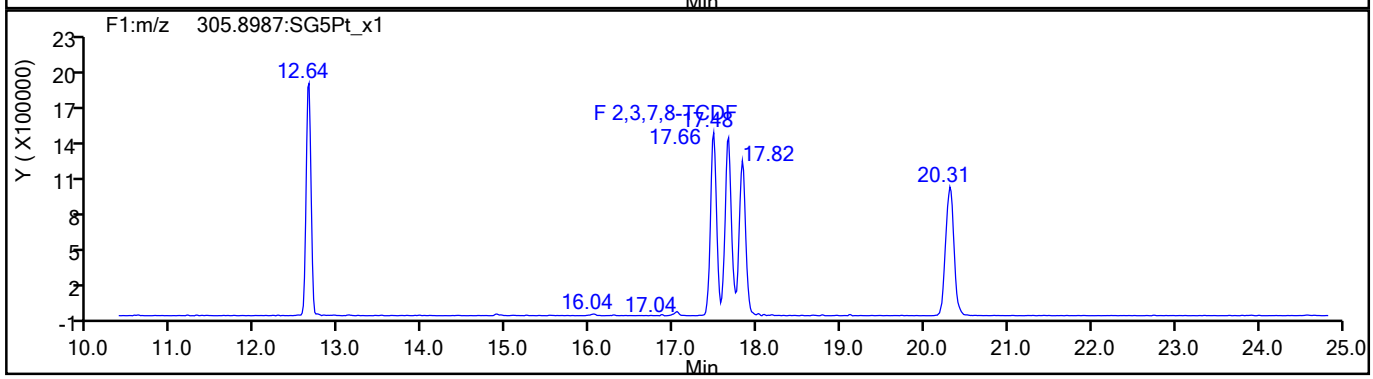

TCDF Standards

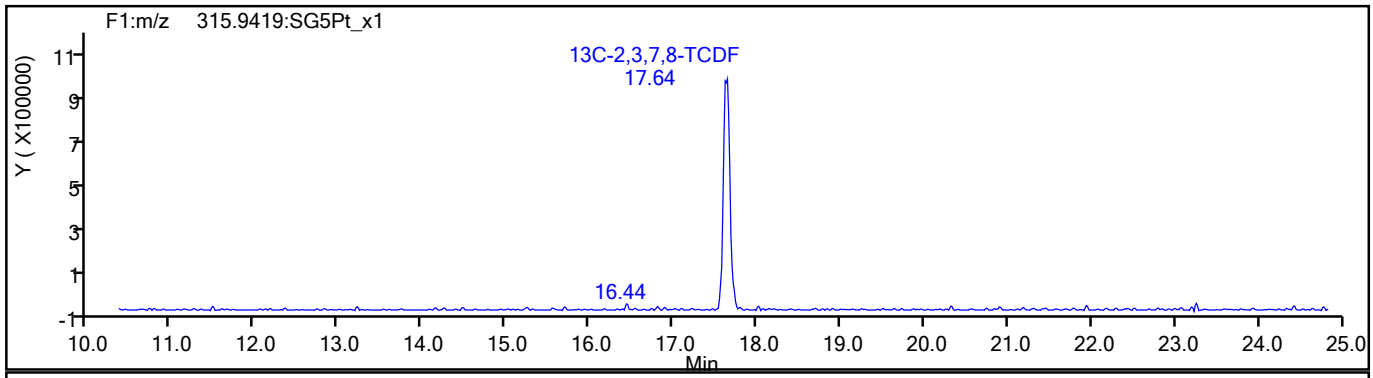

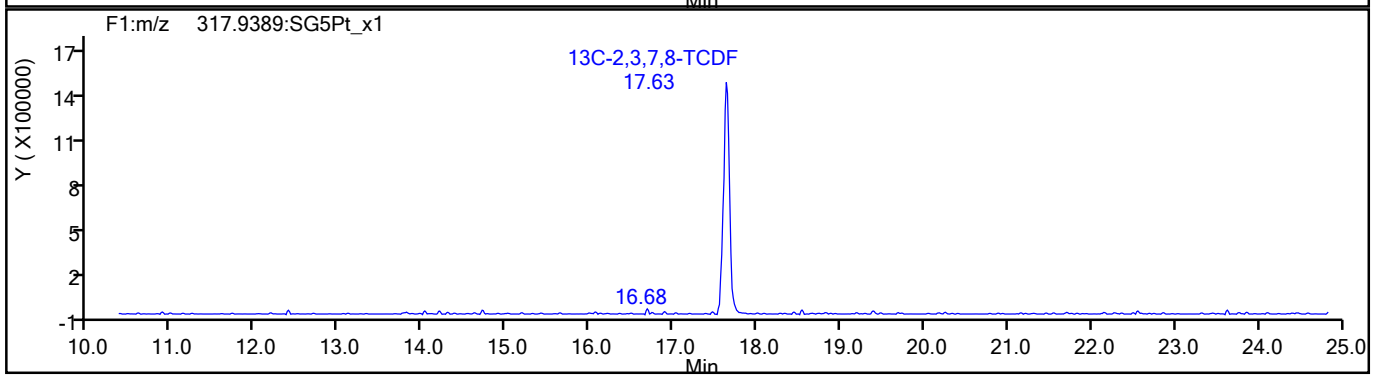

791935

Report Date: 01-Sep-2021 15:43:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_001.d		
Injection Date:	01-Sep-2021 09:30:26	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521760	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

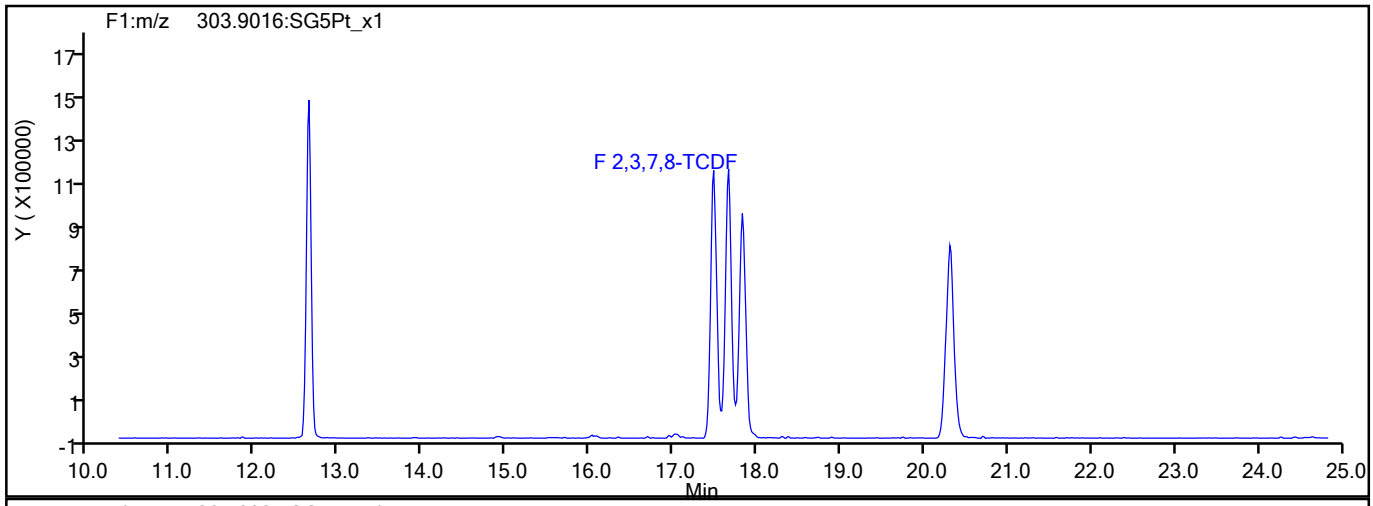

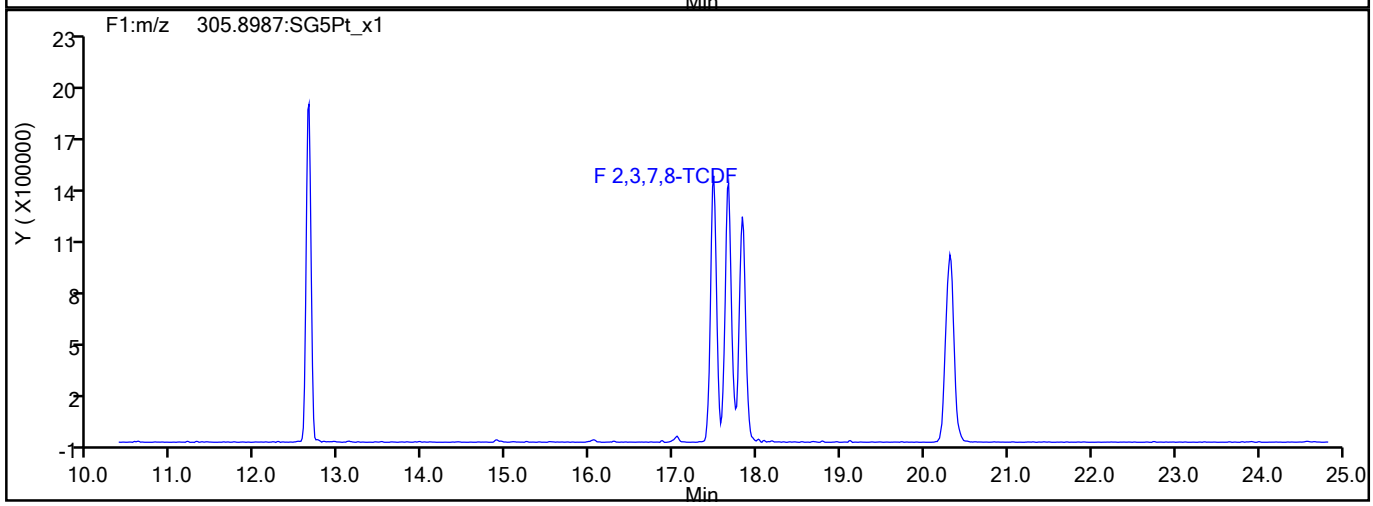

TCDF Interference Mass

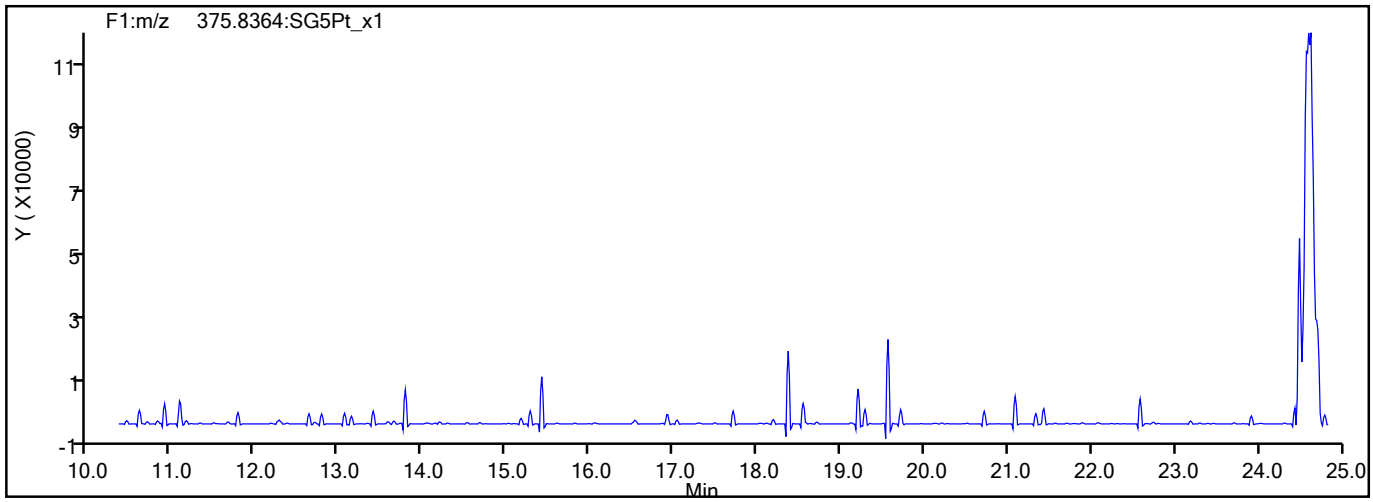

791936

Report Date: 01-Sep-2021 15:43:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_001.d		
Injection Date:	01-Sep-2021 09:30:26	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521760	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

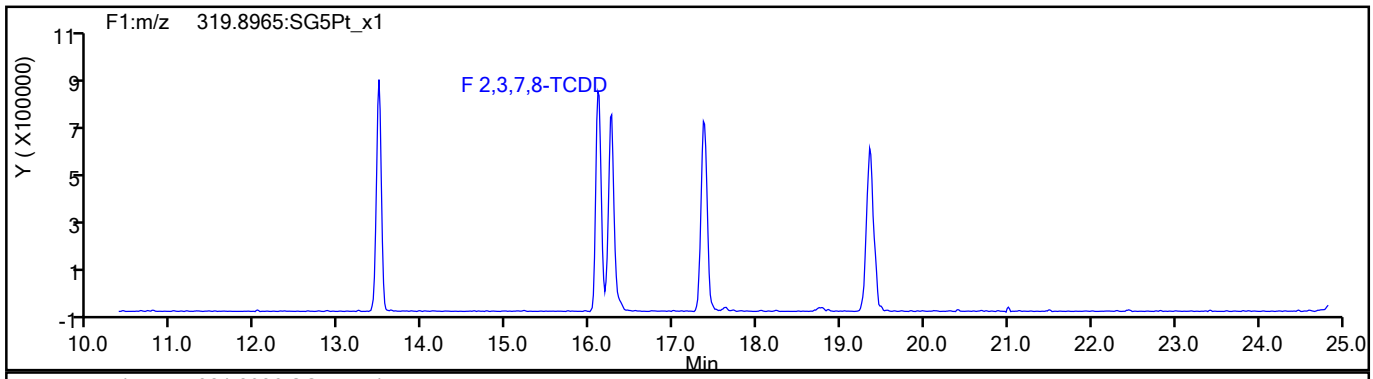

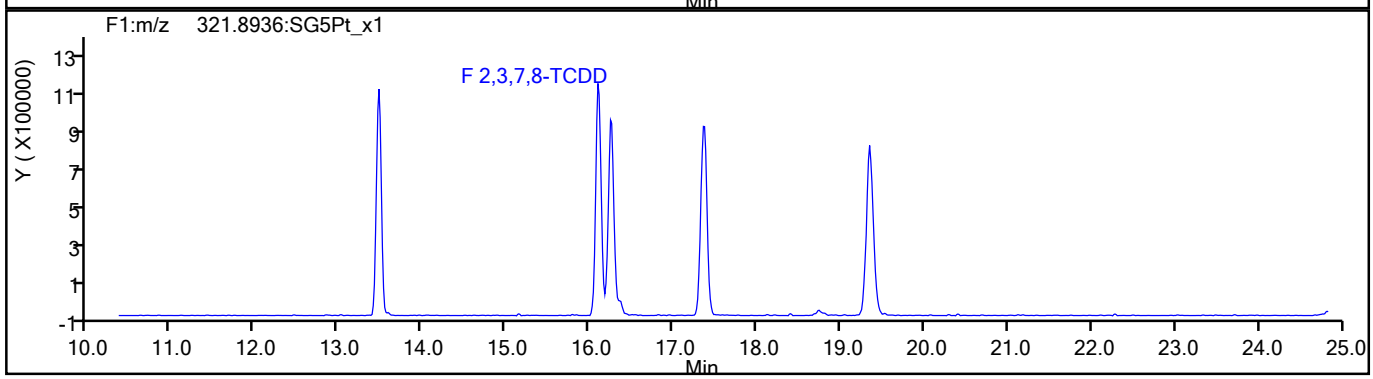

TCDD Standards

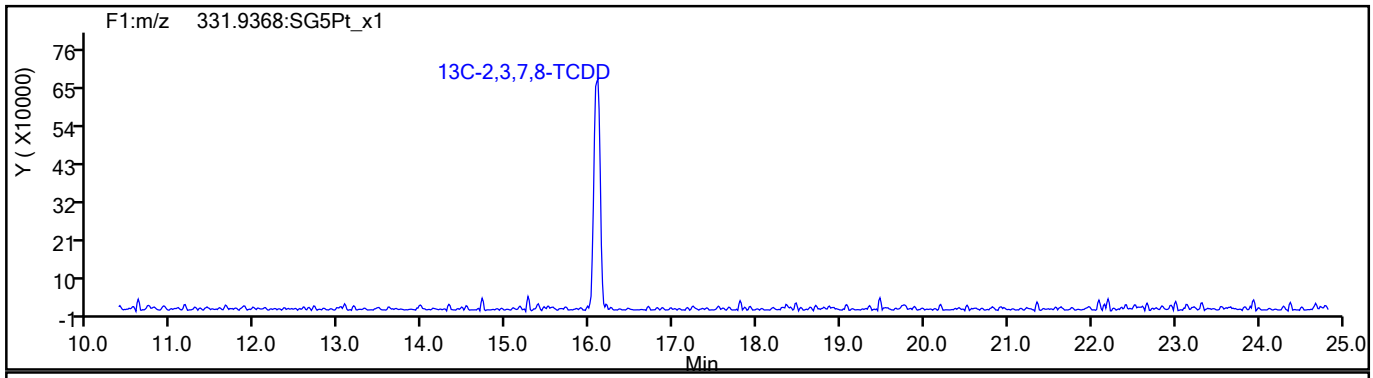

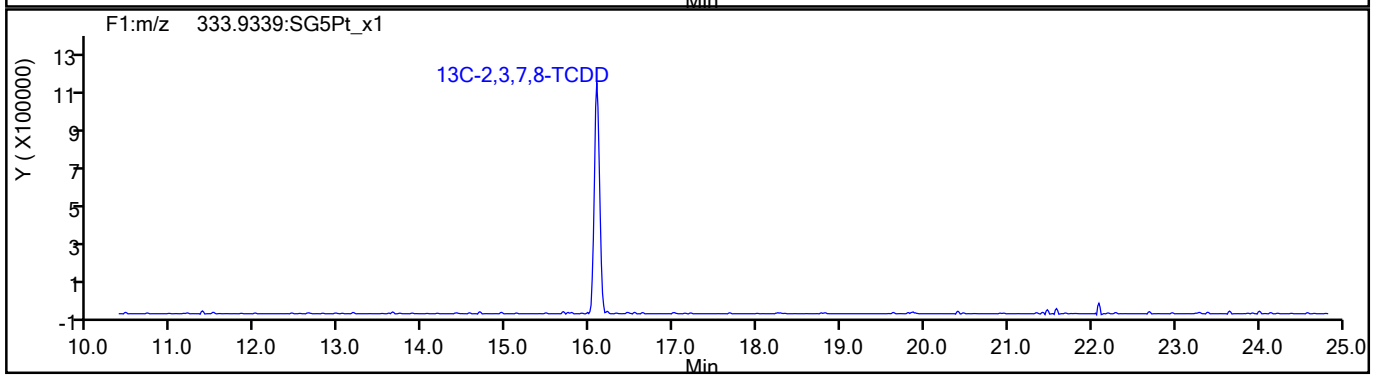

791937

Report Date: 01-Sep-2021 15:43:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_001.d		
Injection Date:	01-Sep-2021 09:30:26	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521760	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

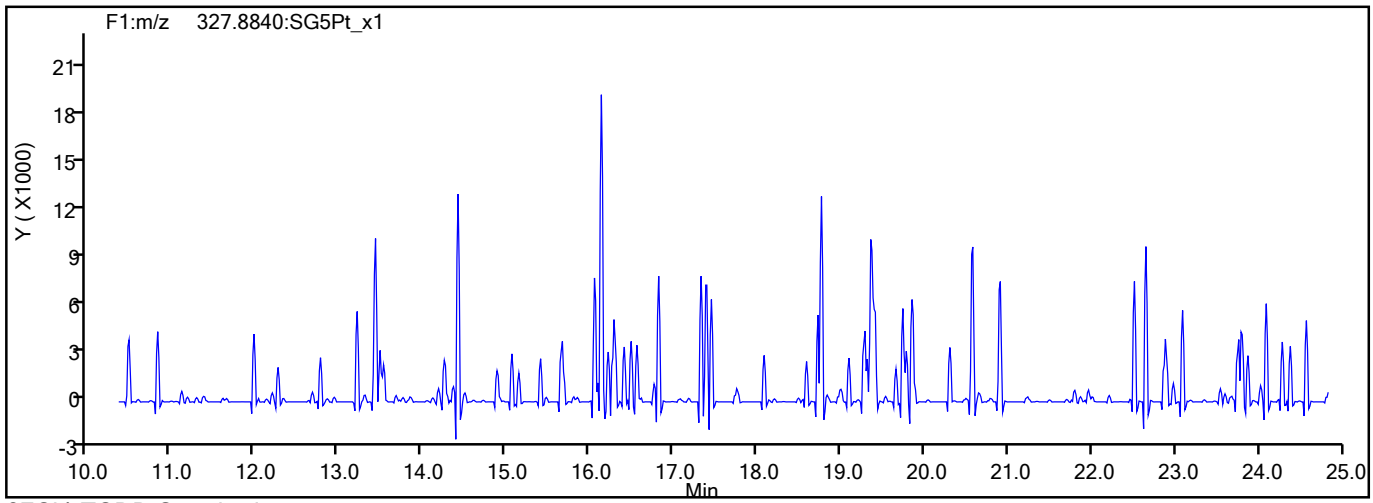

37Cl4-TCDD Standards

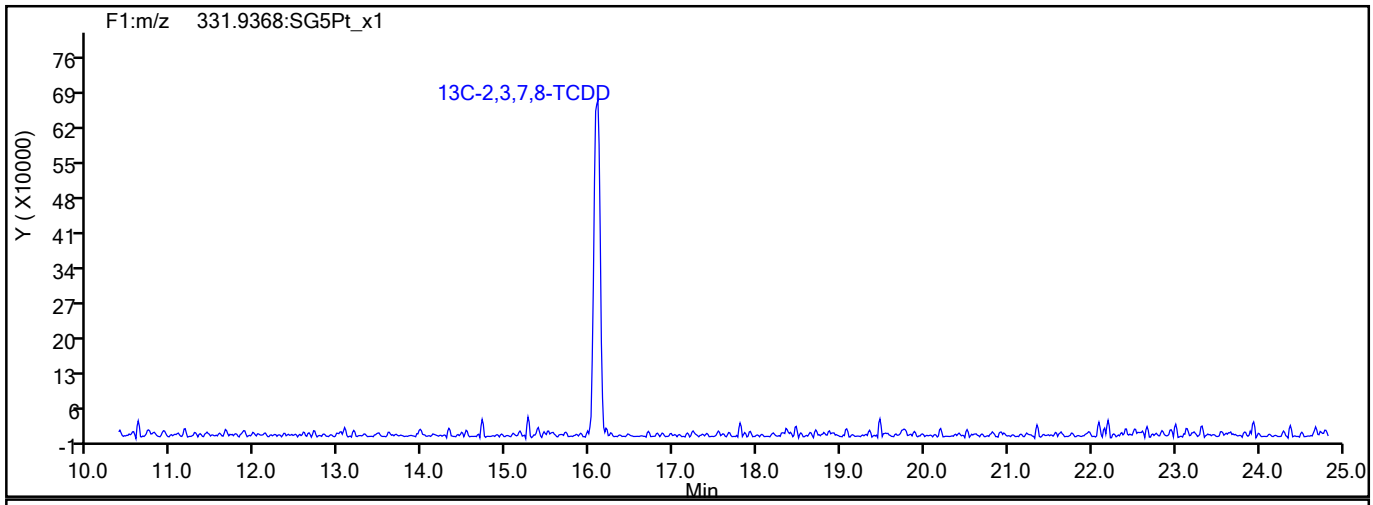

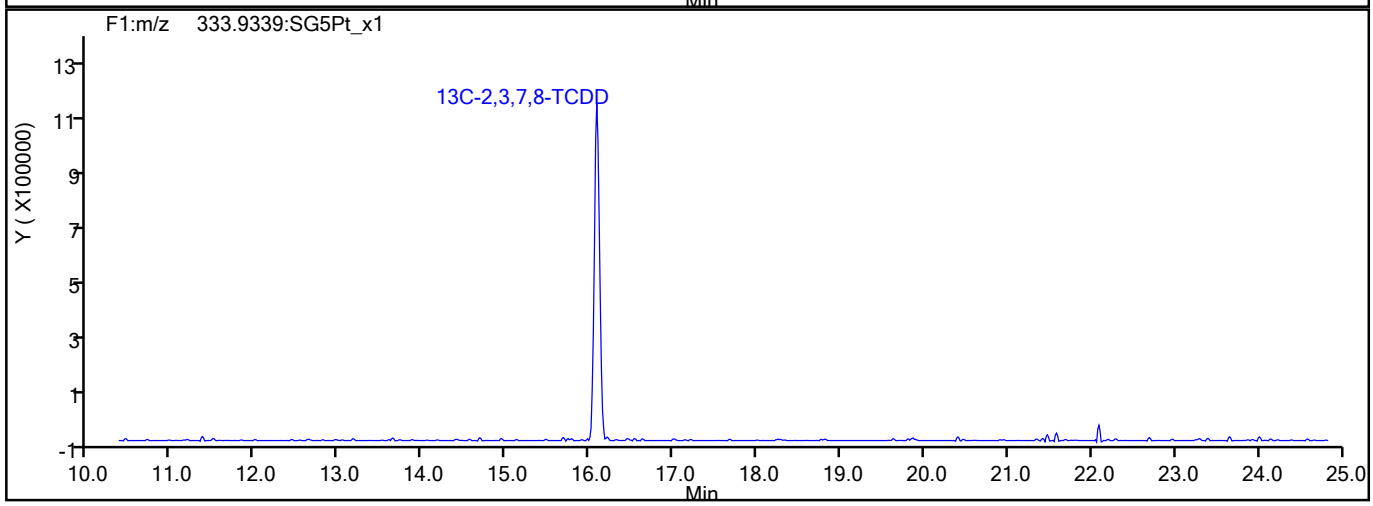

791938

Report Date: 01-Sep-2021 15:43:09 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210901-126186.b\01SE2111D2_001.d		
Injection Date:	01-Sep-2021 09:30:26	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	521760	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

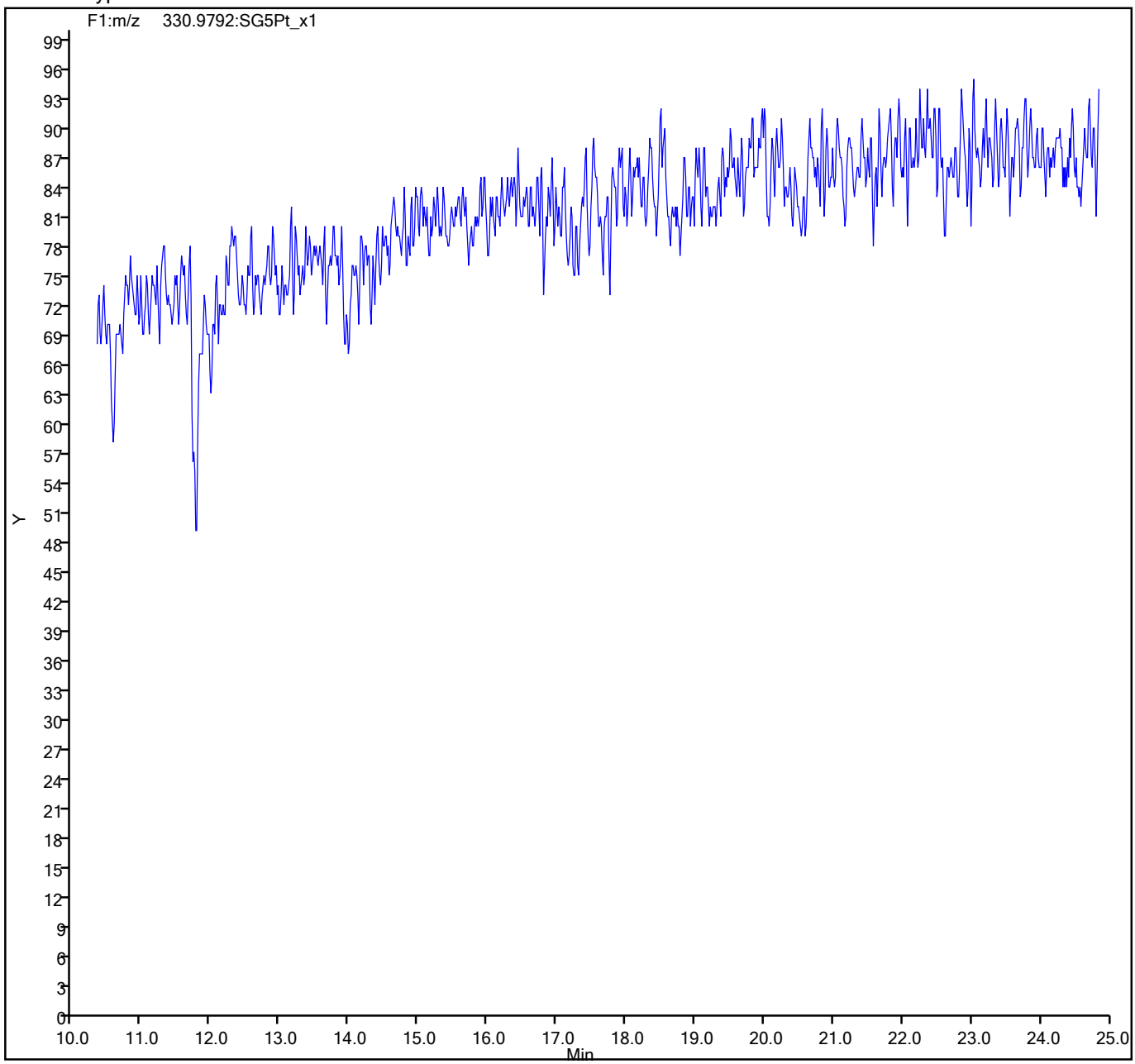

791939

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-515492/1-A
Matrix: Sediment
Lab File ID: 25AU2110D5_3.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10(g)
Date Analyzed: 08/25/2021 11:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.14
51207-31-9	2,3,7,8-TCDF	0.190	J	1.0	0.073
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.16
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.13
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.13
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.0	0.10
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.11
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.099
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.093
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.093
72918-21-9	1,2,3,7,8,9-HxCDF	ND		5.0	0.061
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.065
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.227	J	5.0	0.055
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		5.0	0.092
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.11
3268-87-9	OCDD	1.16	J	10	0.10
39001-02-0	OCDF	0.668	J	10	0.095
41903-57-5	Total TCDD	ND		1.0	0.14
30402-14-3	Total TCDF	0.190	J	1.0	0.073
36088-22-9	Total PeCDD	ND		5.0	0.16
30402-15-4	Total PeCDF	ND		5.0	0.13
34465-46-8	Total HxCDD	ND		5.0	0.11
55684-94-1	Total HxCDF	ND		5.0	0.093
37871-00-4	Total HpCDD	0.423	J	5.0	0.055
38998-75-3	Total HpCDF	ND		5.0	0.11

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-515492/1-A

Matrix: Sediment Lab File ID: 25AU2110D5_3.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/12/2021 05:19

Sample wt/vol: 10(g) Date Analyzed: 08/25/2021 11:20

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 519953 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		25-164
89059-46-1	13C-2,3,7,8-TCDF	52		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	57		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	54		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	59		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	49		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	58		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	49		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	52		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	51		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	51		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	49		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	54		26-138
114423-97-1	13C-OCDD	59		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	66		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d
Lims ID: MB 320-515492/1-A
Client ID:
Sample Type: MB
Inject. Date: 25-Aug-2021 11:20:44 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-515492/1-A MB 320-515492/1-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:26:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:54:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.567	29883312	0.79	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.053	25142269	0.74	1.6249	51.8	51.8	0.2140	0.2140	51.78	
2,3,7,8-TCDF	17.069	24444	0.77	1.0239	0.1217	0.0950	0.0366	0.0366		RQM
A Non-2,3,7,8-sub-TCDF	17.076						0.0366	0.0366		
S Total TCDF					0.1217	0.0950	0.0366	0.0366		RQ
D 13C-2,3,7,8-TCDD	17.764	14568724	0.79	0.8993	54.2	54.2	0.2072	0.2072	54.21	
2,3,7,8-TCDD	17.809						0.0716	0.0716		
$ 37Cl4-2,3,7,8-TCDD	17.779	8751472		1.1071	26.5	26.5	0.0605	0.0605	66.13	
A Non-2,3,7,8-sub-TCDD	17.537						0.0716	0.0716		
S Total TCDD							0.0716	0.0716		
D 13C-1,2,3,7,8-PeCDF	22.020	19603570	1.55	1.2101	54.2	54.2	0.1045	0.1045	54.21	
1,2,3,7,8-PeCDF	22.047						0.0636	0.0636		
D 13C-2,3,4,7,8-PeCDF	23.343	22023538	1.60	1.2395	59.5	59.5	0.1020	0.1020	59.46	
2,3,4,7,8-PeCDF	23.370						0.0633	0.0633		
A F1 PeCDFs	19.851						0.0570	0.0570		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0634	0.0634		
S Total PeCDF							0.0636	0.0636		
D 13C-1,2,3,7,8-PeCDD	24.052	12936475	1.63	0.7612	56.9	56.9	0.0766	0.0766	56.87	
1,2,3,7,8-PeCDD	24.079						0.0794	0.0794		
A Non-2,3,7,8-sub-PeCDD	23.696						0.0794	0.0794		
S Total PeCDD							0.0794	0.0794		
D 13C-1,2,3,4,7,8-HxCDF	30.199	18899674	0.52	1.0837	57.6	57.6	0.1758	0.1758	57.61	
1,2,3,4,7,8-HxCDF	30.213						0.0464	0.0464		
D 13C-1,2,3,6,7,8-HxCDF	30.399	16749571	0.52	1.1279	49.1	49.1	0.1689	0.1689	49.06	
1,2,3,6,7,8-HxCDF	30.412						0.0464	0.0464		
D 13C-2,3,4,6,7,8-HxCDF	31.304	16549499	0.51	1.0637	51.4	51.4	0.1791	0.1791	51.39	
2,3,4,6,7,8-HxCDF	31.317						0.0324	0.0324		
D 13C-1,2,3,7,8,9-HxCDF	32.143	15217541	0.51	0.9676	52.0	52.0	0.1969	0.1969	51.95	
1,2,3,7,8,9-HxCDF	32.156						0.0307	0.0307		
A Non-2,3,7,8-sub-HxCDF	30.338						0.0377	0.0377		
S Total HxCDF							0.0464	0.0464		

Report Date: 27-Aug-2021 09:26:56 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	31.956	30271630	1.27	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.504	12800681	1.23	0.7334	57.7	57.7	0.1950	0.1950	57.66	
1,2,3,4,7,8-HxCDD	31.517						0.0524	0.0524		RQU
D 13C-1,2,3,6,7,8-HxCDD	31.610	12948793	1.21	0.8802	48.6	48.6	0.1625	0.1625	48.60	
1,2,3,6,7,8-HxCDD	31.517						0.0567	0.0567		RQU
1,2,3,7,8,9-HxCDD	31.969						0.0497	0.0497		
A Non-2,3,7,8-sub-HxCDD	30.525						0.0528	0.0528		U
S Total HxCDD							0.0567	0.0567		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	11519496	0.45	0.7730	49.2	49.2	0.5788	0.5788	49.23	
1,2,3,4,6,7,8-HpCDF	33.615						0.0461	0.0461		
D 13C-1,2,3,4,7,8,9-HpCDF	34.673	11506086	0.42	0.7008	54.2	54.2	0.6384	0.6384	54.24	
1,2,3,4,7,8,9-HpCDF	34.685						0.0535	0.0535		
A Non-2,3,7,8-sub-HpCDF	34.150						0.0496	0.0496		
S Total HpCDF							0.0535	0.0535		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	9959429	1.00	0.6472	50.8	50.8	0.4600	0.4600	50.83	
1,2,3,4,6,7,8-HpCDD	34.405	12349	1.04	1.0943	0.1466	0.1133	0.0273	0.0273		RQM
A Non-2,3,7,8-sub-HpCDD	34.223	10693	1.04	1.0943	0.1265	0.0981	0.0273	0.0981		RQM
S Total HpCDD					0.2731	0.2114	0.0273	0.0273		RQ
D 13C-OCDD	36.701	15843349	0.88	0.4472	117.0	117.0	0.3238	0.3238	58.52	
OCDF	36.797	38074	0.89	1.4382	0.3727	0.3342	0.0475	0.0475		RQM
OCDD	36.713	50874	0.92	1.1070	0.5801	0.5801	0.0513	0.0513		M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d
Lims ID: MB 320-515492/1-A
Client ID:
Sample Type: MB
Inject. Date: 25-Aug-2021 11:20:44 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-515492/1-A MB 320-515492/1-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:26:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:54:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.567	17.598	-2		13169191	3437394	4069	10172	845		a
333.9339	17.567	17.598	-2		16714121	4346740	1734	4335	2507	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.053	17.099	-3	0.971	10706570	2704495	7372	18430	367		
317.9389	17.053	17.099	-3	0.971	14435699	3713861	3456	8640	1075	0.74(0.65-0.89)	
2,3,7,8-TCDF											RQM
303.9016	17.069	17.114	-3	1.001	10634	2780	339	847	8		M
305.8987	17.084	17.114	-2	1.002	20697	4646	623	1557	7	0.51(0.65-0.89)	
	Empc Correction				13810	3610	623	1557	6		
A Non-2,3,7,8-sub-TCDF											
303.9016	17.076						339	847			
305.8987	17.076						623	1557			
13C-2,3,7,8-TCDD											
331.9368	17.764	17.794	-2	1.011	6436642	1562061	4069	10172	384		
333.9339	17.764	17.794	-2	1.011	8132082	1966432	1734	4335	1134	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809						836	2090			
321.8936	17.809						432	1080			
37Cl4-2,3,7,8-TCDD											
327.8847	17.779	17.809	-2	1.012	8751472	2145464	2087	5217	1028		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.537						836	2090			
321.8936	17.537						432	1080			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.253	11929209	2253060	2205	5512	1022		
353.8970	22.020	22.020	0	1.253	7674361	1454588	1732	4330	840	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.047						237	592			
341.8567	22.047						764	1910			
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.329	13547656	2391698	2205	5512	1085		
353.8970	23.343	23.343	0	1.329	8475882	1486861	1732	4330	858	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370						237	592			
341.8567	23.370						764	1910			
A F1 PeCDFs											
339.8597	19.851						232	580			
341.8567	19.851						668	1670			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.067						237	592			
341.8567	23.067						764	1910			
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.369	8022940	1343012	1068	2670	1258		
369.8919	24.052	24.052	0	1.369	4913535	794351	748	1870	1062	1.63(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079						515	1287			
357.8516	24.079						197	492			
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						515	1287			
357.8516	23.696						197	492			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.199	30.186	1	0.945	6465926	1148968	3389	8472	339		
385.8610	30.186	30.186	0	0.945	12433748	2208690	3402	8505	649	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.213						398	995			
375.8178	30.213						279	697			
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	5713520	1127867	3389	8472	333		
385.8610	30.399	30.399	0	0.951	11036051	2108760	3402	8505	620	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412						398	995			
375.8178	30.412						279	697			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.304	31.291	1	0.980	5558725	1512399	3389	8472	446		
385.8610	31.304	31.291	1	0.980	10990774	2954889	3402	8505	869	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317						398	995			
375.8178	31.317						279	697			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.143	0	1.006	5118427	1606580	3389	8472	474		
385.8610	32.143	32.143	0	1.006	10099114	3116314	3402	8505	916	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.156						398	995			
375.8178	32.156						279	697			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.338						398	995			
375.8178	30.338						279	697			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		16912518	4980246	2870	7175	1735		
403.8529	31.956	31.956	0		13359112	3929684	2226	5565	1765	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.504	31.504	0	0.986	7056039	2029906	2870	7175	707		
403.8529	31.504	31.504	0	0.986	5744642	1633767	2226	5565	734	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8157	31.517						432	1080			
391.8127	31.517						385	962			
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	7094657	1989733	2870	7175	693		
403.8529	31.610	31.610	0	0.989	5854136	1609259	2226	5565	723	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8157	31.624						432	1080			
391.8127	31.624						385	962			
1,2,3,7,8,9-HxCDD											
389.8157	31.969						432	1080			
391.8127	31.969						385	962			
A Non-2,3,7,8-sub-HxCDD											U
389.8157	30.525						432	1080			
391.8127	30.525						385	962			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	3578307	1319781	4391	10977	301		
419.8220	33.603	33.603	0	1.052	7941189	3120604	11555	28887	270	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615						901	2252			
409.7789	33.615						279	697			
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.673	34.672	0	1.085	3388005	1248206	4391	10977	284		
419.8220	34.673	34.672	0	1.085	8118081	2934164	11555	28887	254	0.42(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685						901	2252			
409.7789	34.685						279	697			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						901	2252			
409.7789	34.150						279	697			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	4968890	1847092	8092	20230	228		
437.8140	34.393	34.393	0	1.076	4990539	1826875	2519	6297	725	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											RQM
423.7766	34.405	34.405	0	1.000	6296	2257	263	657	9		M
425.7737	34.405	34.405	0	1.000	9677	3475	176	440	20	0.65(0.88-1.20)	M
	Empc Correction				6053	2170	176	440	12		
A Non-2,3,7,8-sub-HpCDD											RQM
423.7766	33.858	34.223	-22	0.984	8547	2277	263	657	9		M
	Empc Correction				5451	1860	263	657	7		
425.7737	33.858	34.223	-22	0.984	5242	1789	176	440	10	1.63(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.701	0	1.148	7431427	2403818	3595	8987	669		
471.7750	36.701	36.701	0	1.148	8411922	2748839	1565	3912	1756	0.88(0.76-1.02)	
OCDF											RQM
441.7428	36.797	36.797	0	1.003	22310	6605	281	702	24		M
	Empc Correction				17929	5201	281	702	19		
443.7399	36.797	36.797	0	1.003	20145	5844	423	1057	14	1.11(0.76-1.02)	
OCDD											M
457.7377	36.713	36.713	0	1.000	24319	7562	318	795	24		M
459.7348	36.713	36.713	0	1.000	26555	8005	267	667	30	0.92(0.76-1.02)	M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d
Lims ID: MB 320-515492/1-A
Client ID:
Inject. Date: 25-Aug-2021 11:20:44 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	12800681	3663673
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	12948793	3598992
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	12874737	3631332

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d
Lims ID: MB 320-515492/1-A
Client ID:
Inject. Date: 25-Aug-2021 11:20:44 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 3

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	9959429	3673967

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	9959429	3673967

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.858	8547	2277	5242	1789	0.1265	1.63	RQM
33.858	5451	1860	5242	1789	0.0981		Empc Correction
Signal Totals:							
	5451	1860	5242	1789			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13789	4066				1.63	RQM
	10693	3649					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1265 = (13789 * 100.000) / (9959429 * 1.094)
Empc Amount: 0.0981 = (10693 * 100.000) / (9959429 * 1.094)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.07
Area: 11266
Amount: 0.124160
Amount Units: pg/ul

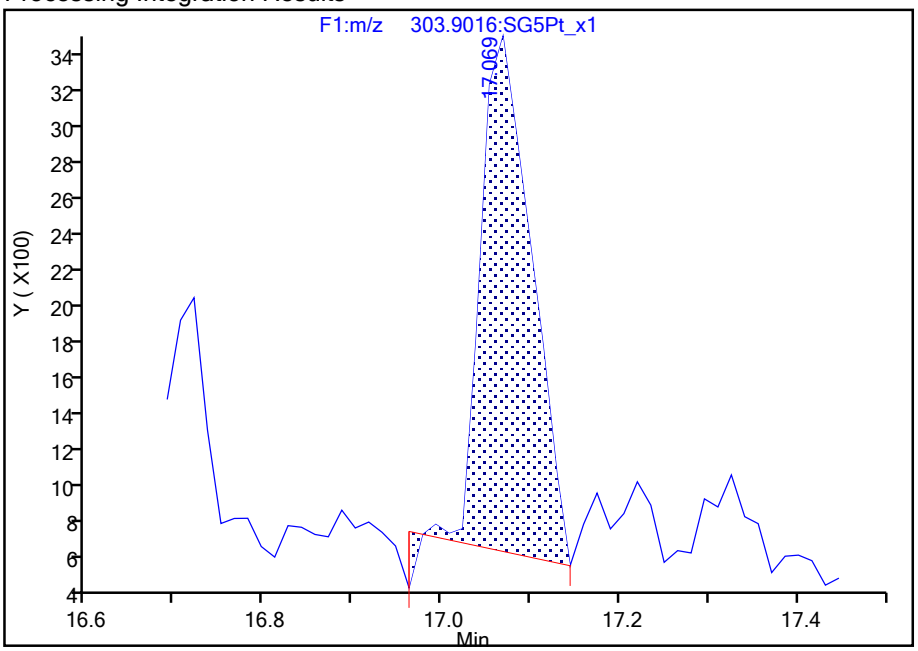

Manual Integration Results

RT: 17.07
Area: 10634
Amount: 0.121705
Amount Units: pg/ul

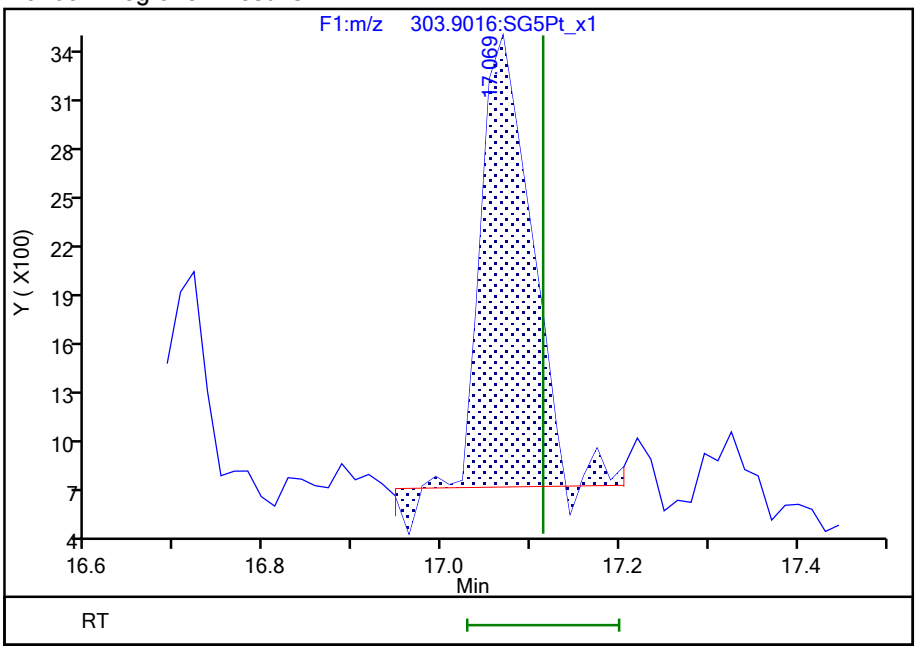

Reviewer: dadunj, 27-Aug-2021 09:25:06

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 34.41
Area: 9682
Amount: 0.189629
Amount Units: pg/ul

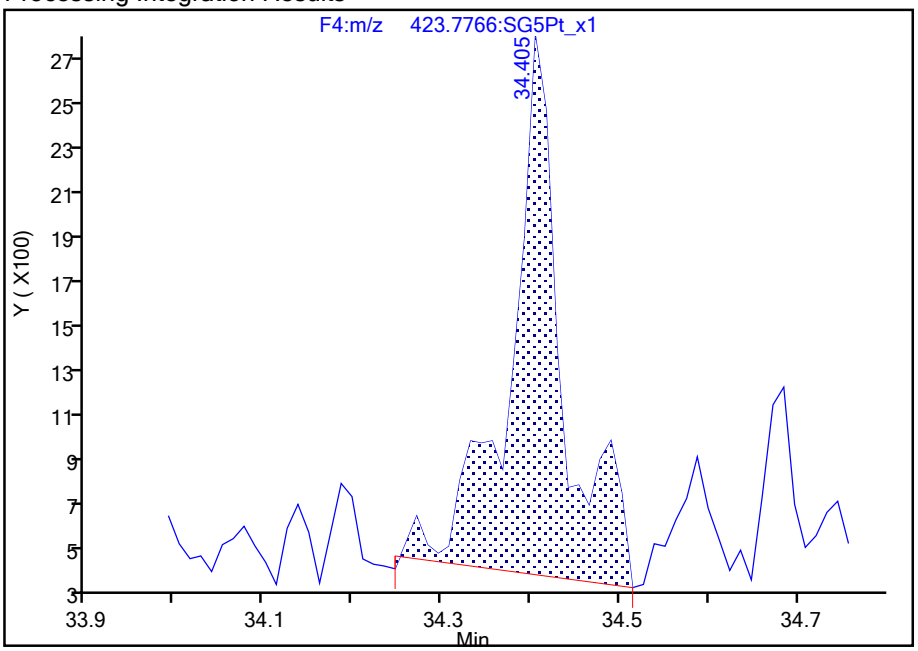

Manual Integration Results

RT: 34.41
Area: 6296
Amount: 0.146560
Amount Units: pg/ul

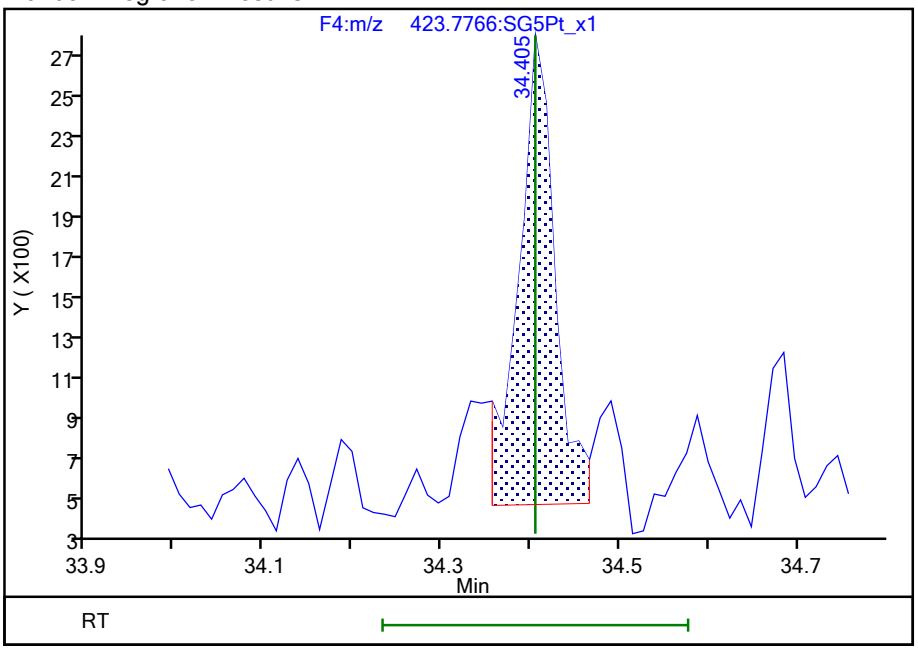

Reviewer: dadunj, 27-Aug-2021 09:25:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 34.41
Area: 10985
Amount: 0.189629
Amount Units: pg/ul

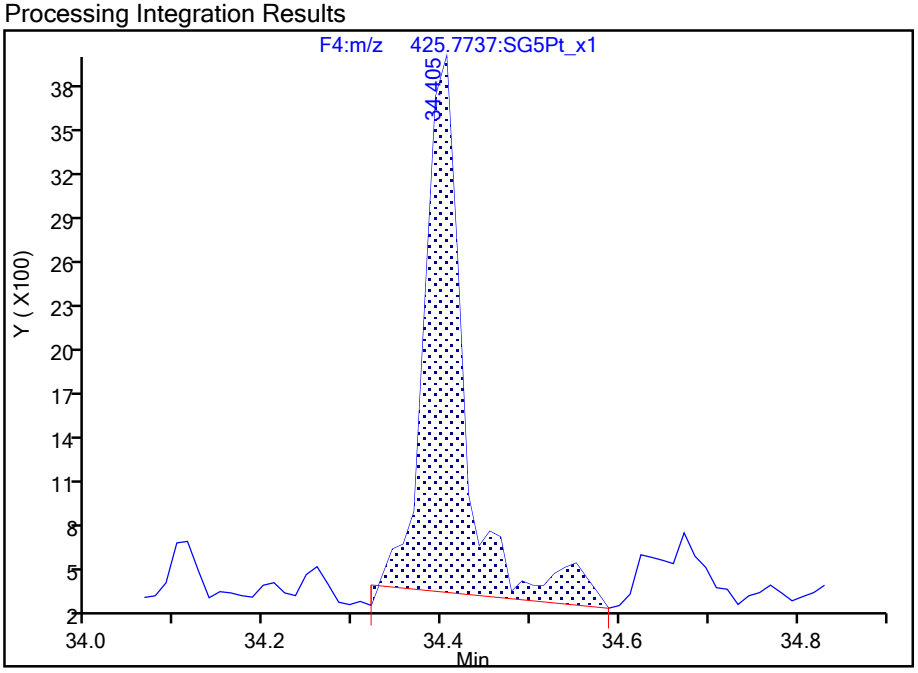

Manual Integration Results

RT: 34.41
Area: 9677
Amount: 0.146560
Amount Units: pg/ul

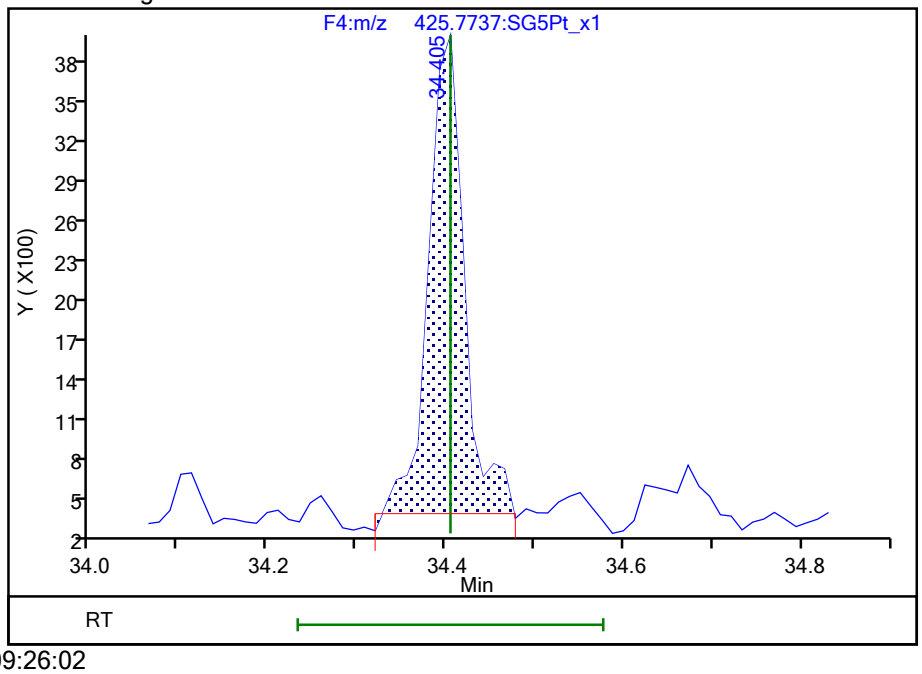

Reviewer: dadunj, 27-Aug-2021 09:26:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

791952

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 1, m/z: 423.7766, RT: (33.85- 34.60)

Signal: 1

Processing Integration Results

RT = 33.858 Area = 10488

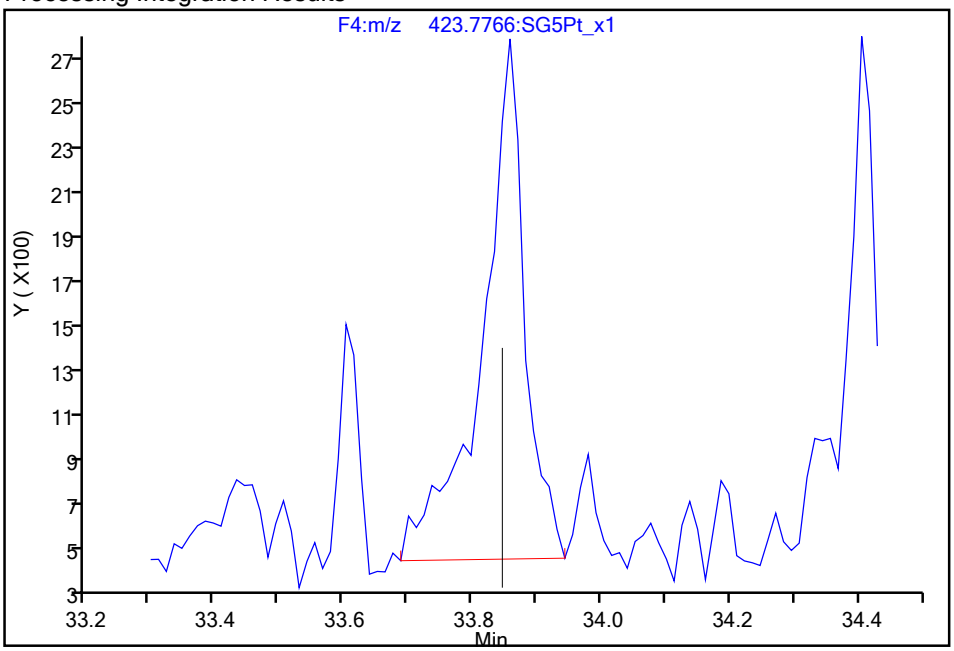

Manual Integration Results

RT = 33.858 Area = 8547 M

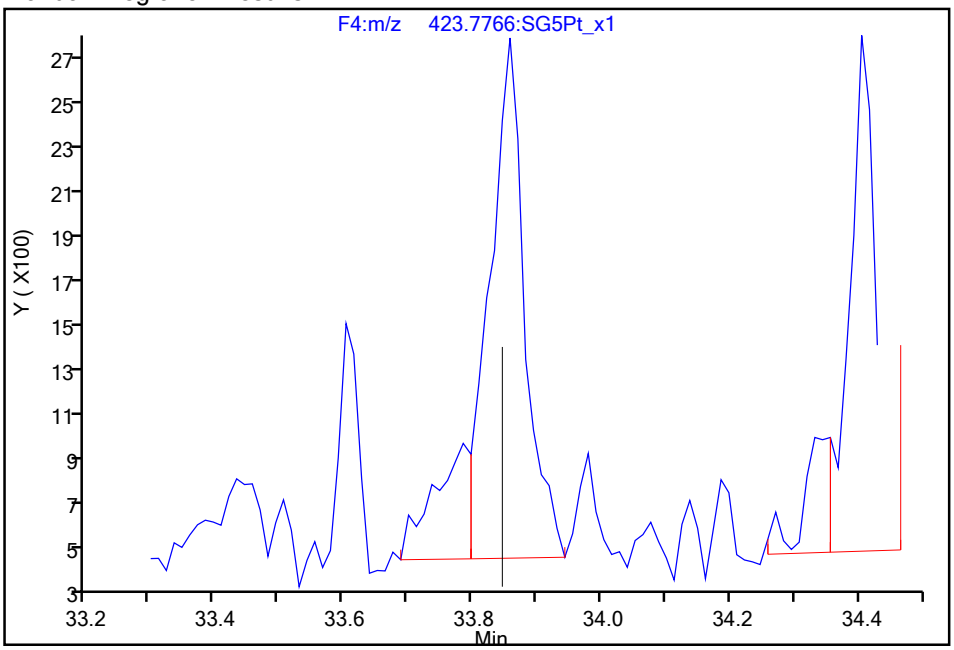

Reviewer: dadunj, 27-Aug-2021 09:26:05

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.80
Area: 23576
Amount: 0.383765
Amount Units: pg/ul

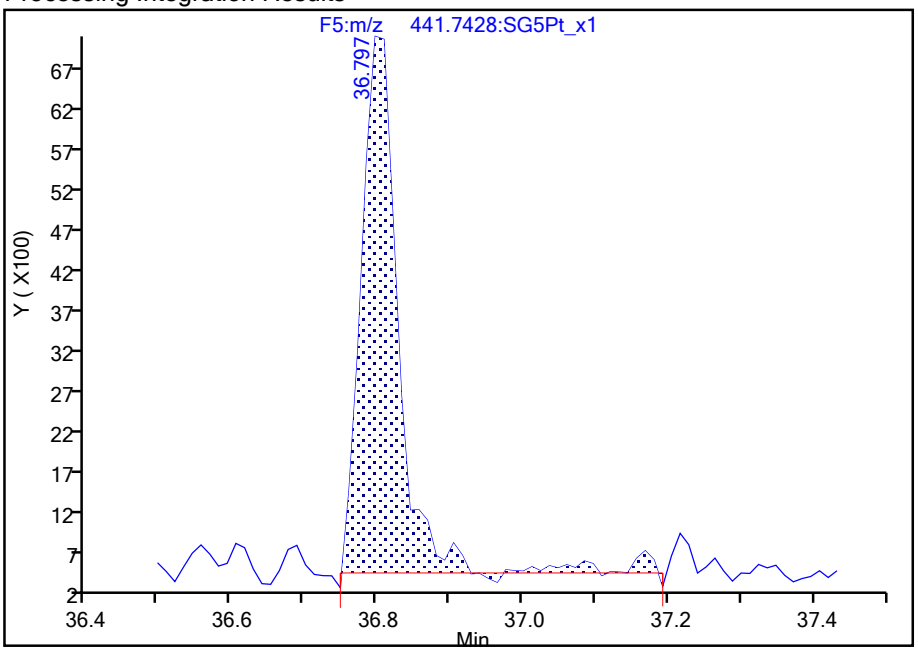

Manual Integration Results

RT: 36.80
Area: 22310
Amount: 0.372653
Amount Units: pg/ul

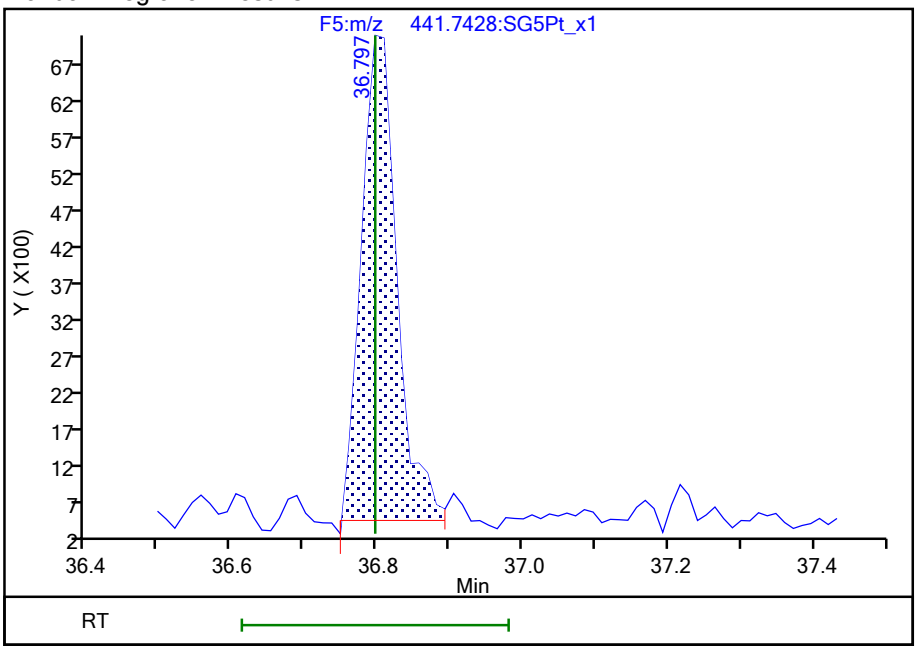

Reviewer: dadunj, 27-Aug-2021 09:26:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 36.71
Area: 27894
Amount: 0.631924
Amount Units: pg/ul

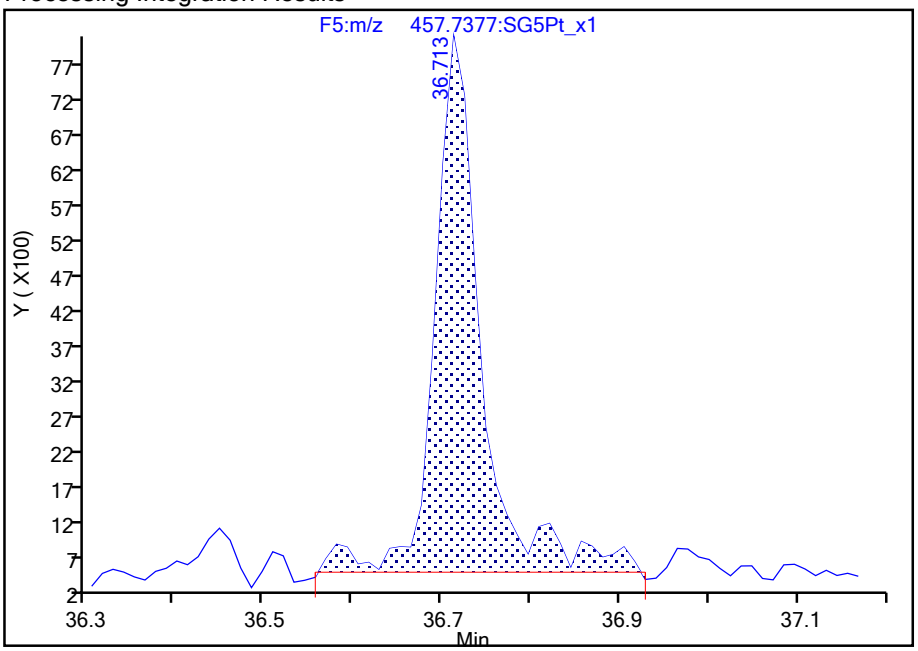

Manual Integration Results

RT: 36.71
Area: 24319
Amount: 0.580131
Amount Units: pg/ul

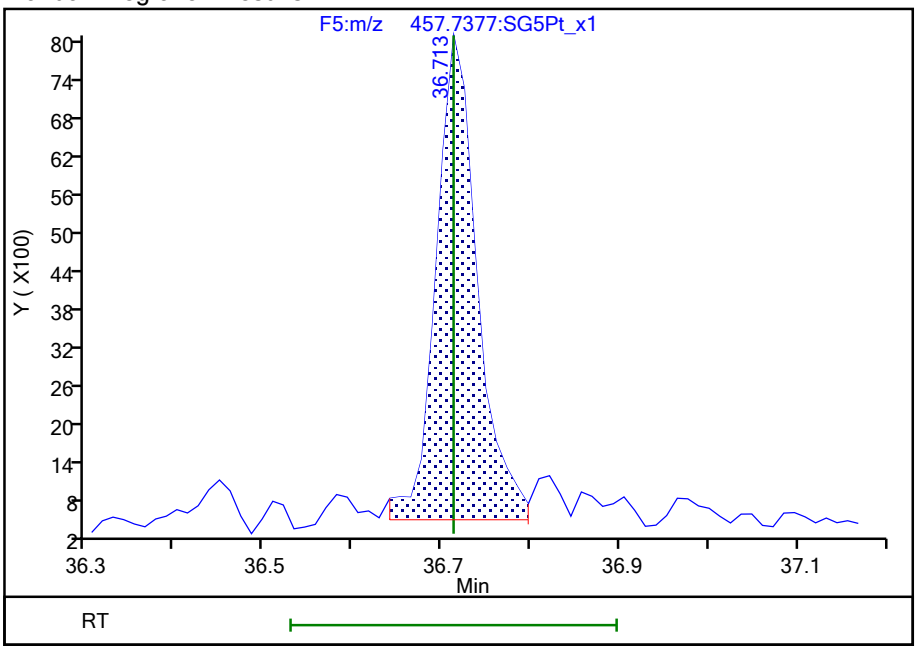

Reviewer: dadunj, 27-Aug-2021 09:26:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 2

Processing Integration Results

RT: 36.71
Area: 27522
Amount: 0.631924
Amount Units: pg/ul

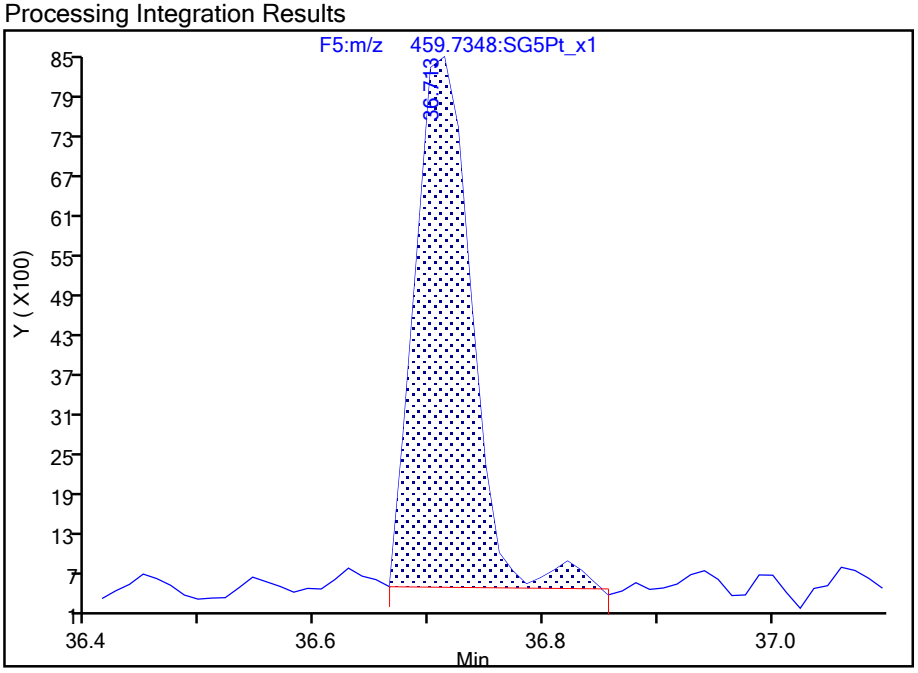

Manual Integration Results

RT: 36.71
Area: 26555
Amount: 0.580131
Amount Units: pg/ul

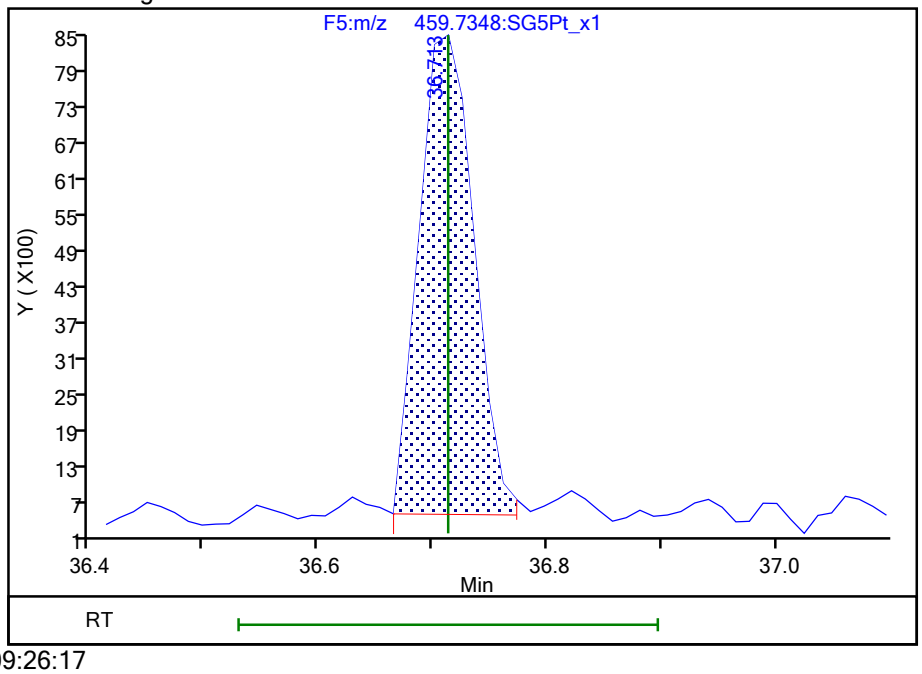

Reviewer: dadunj, 27-Aug-2021 09:26:17
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

791956

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

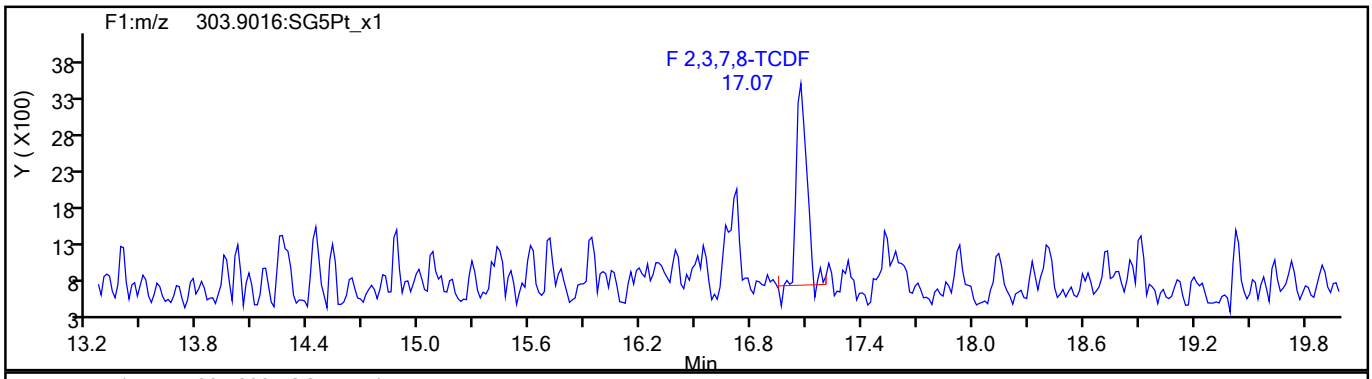

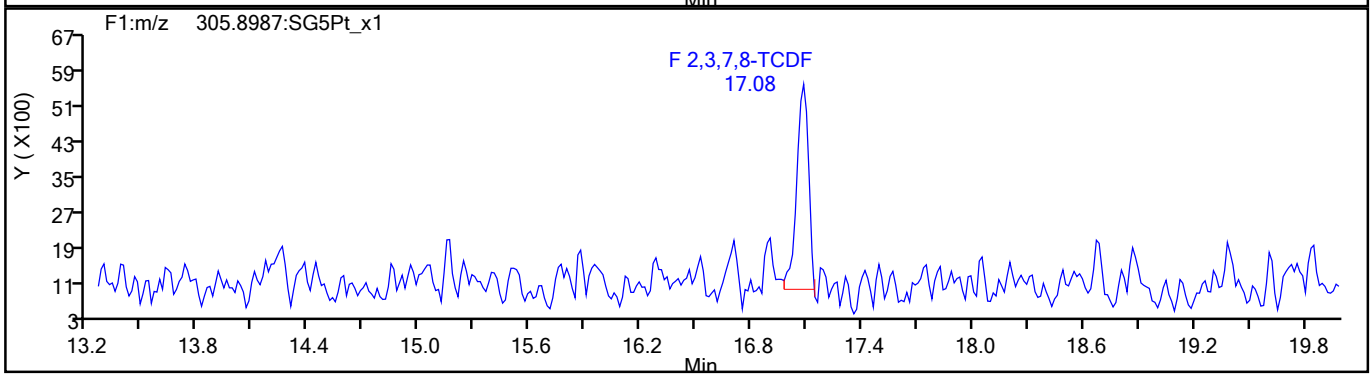

TCDF Standards

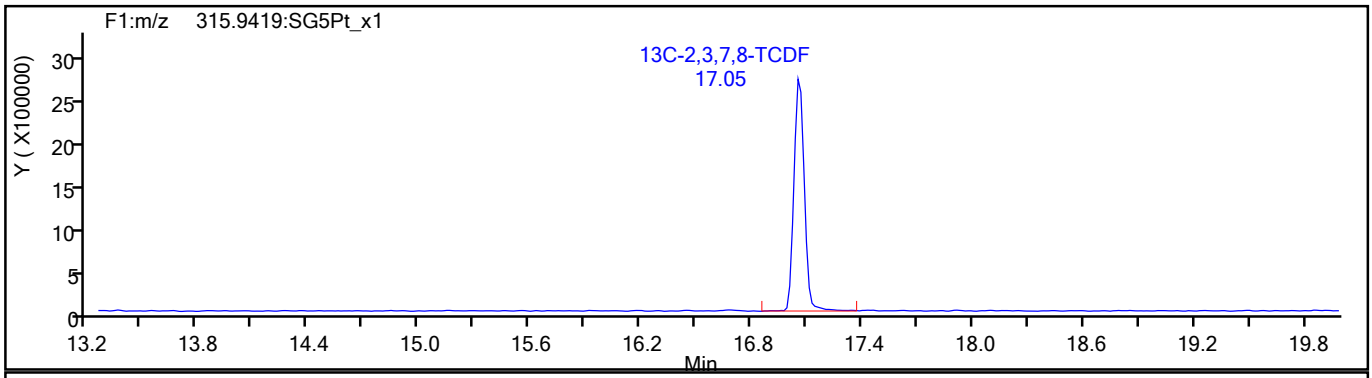

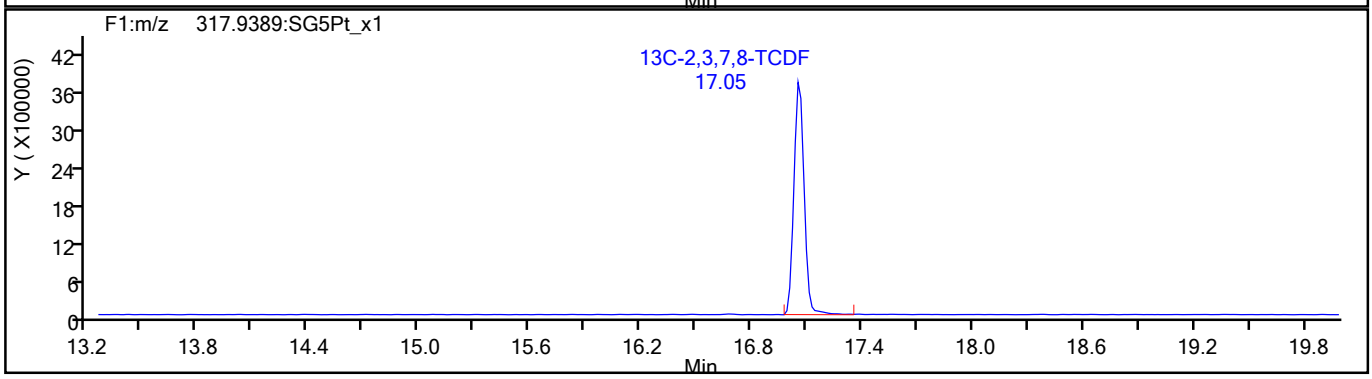

791957

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

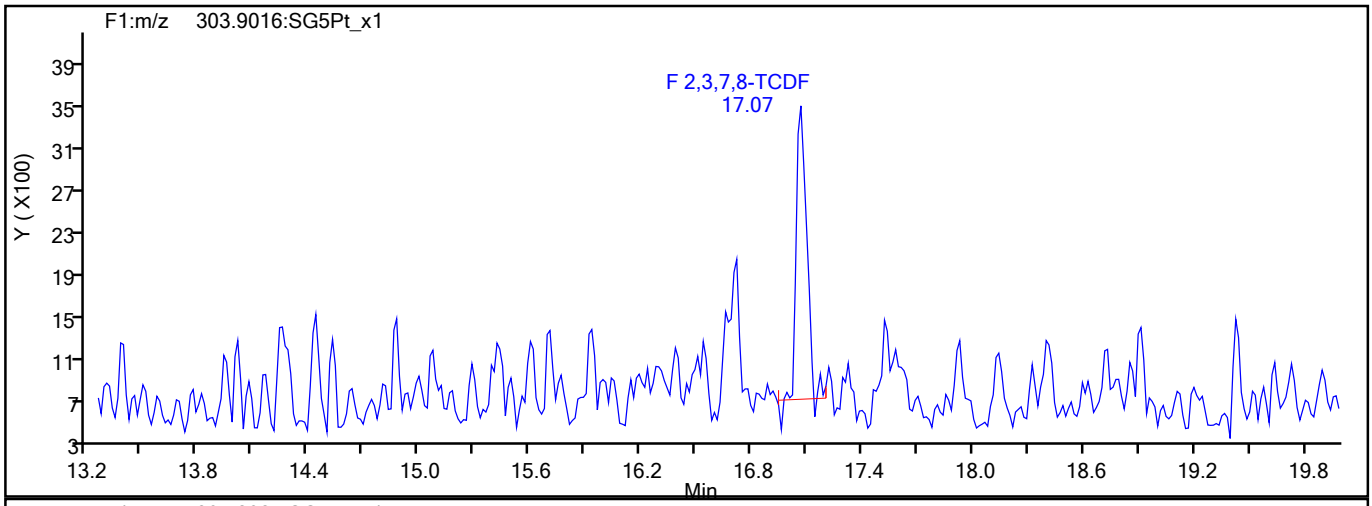

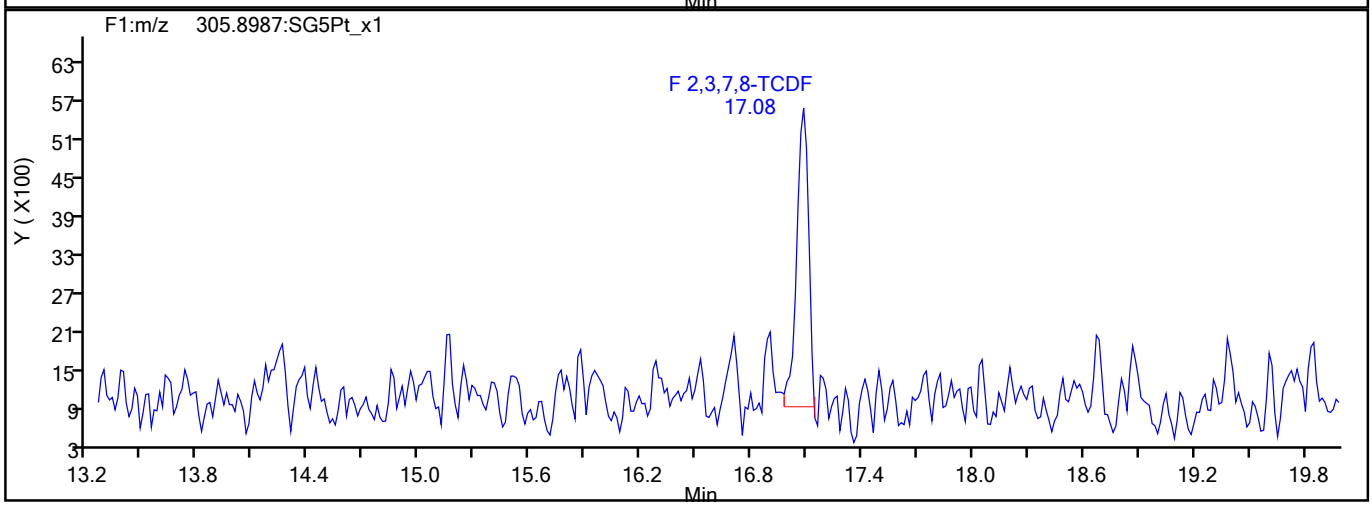

TCDF Interference Mass

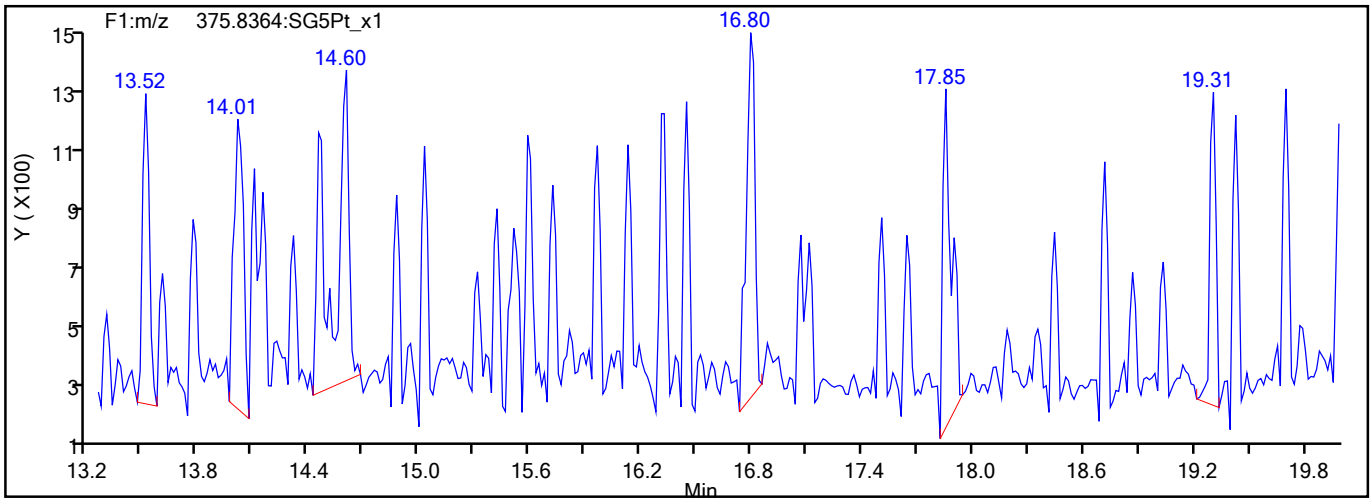

791958

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

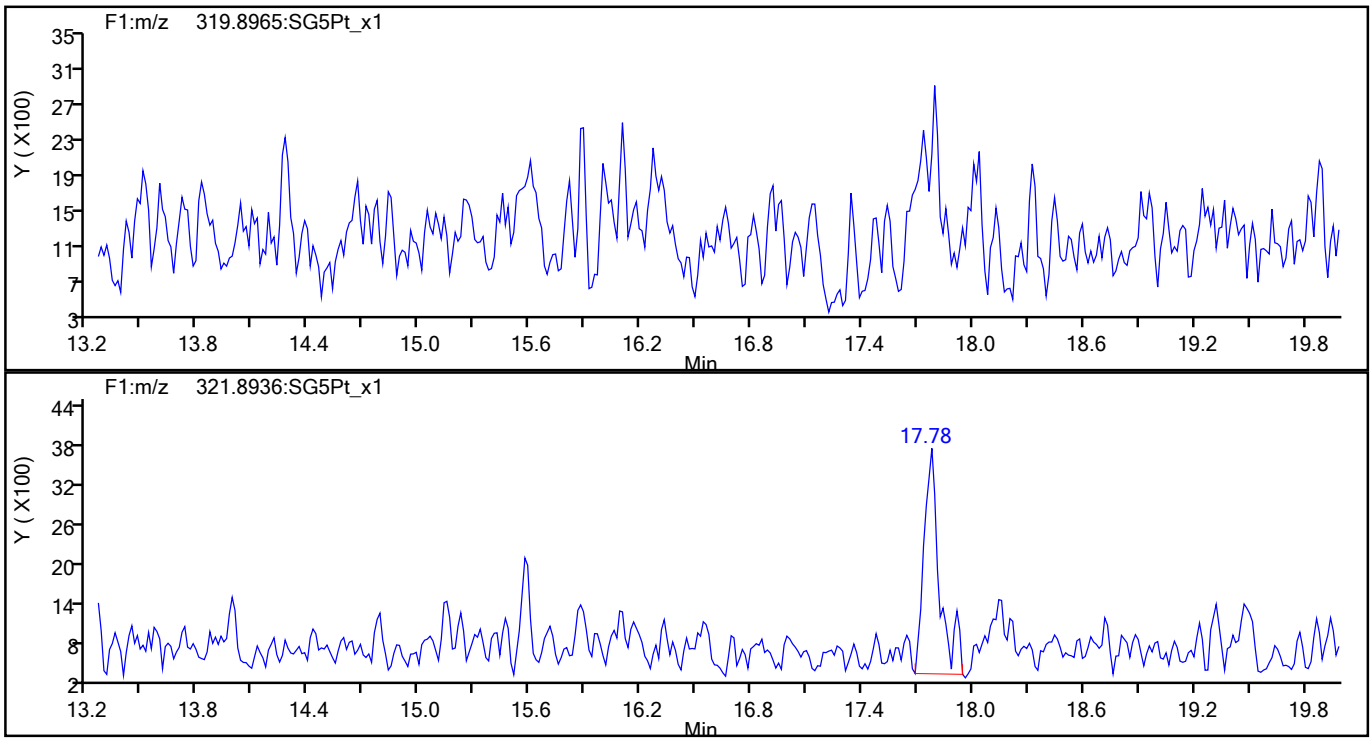

TCDD Standards

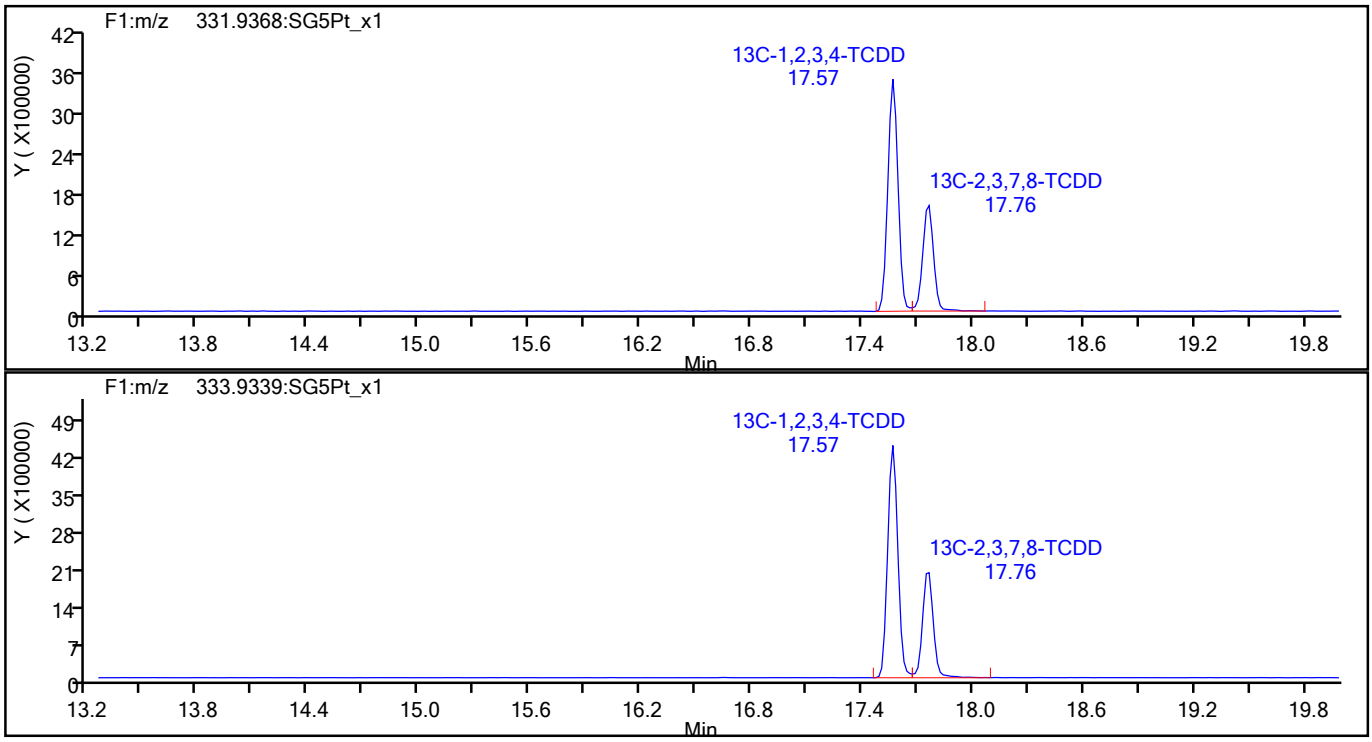

791959

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

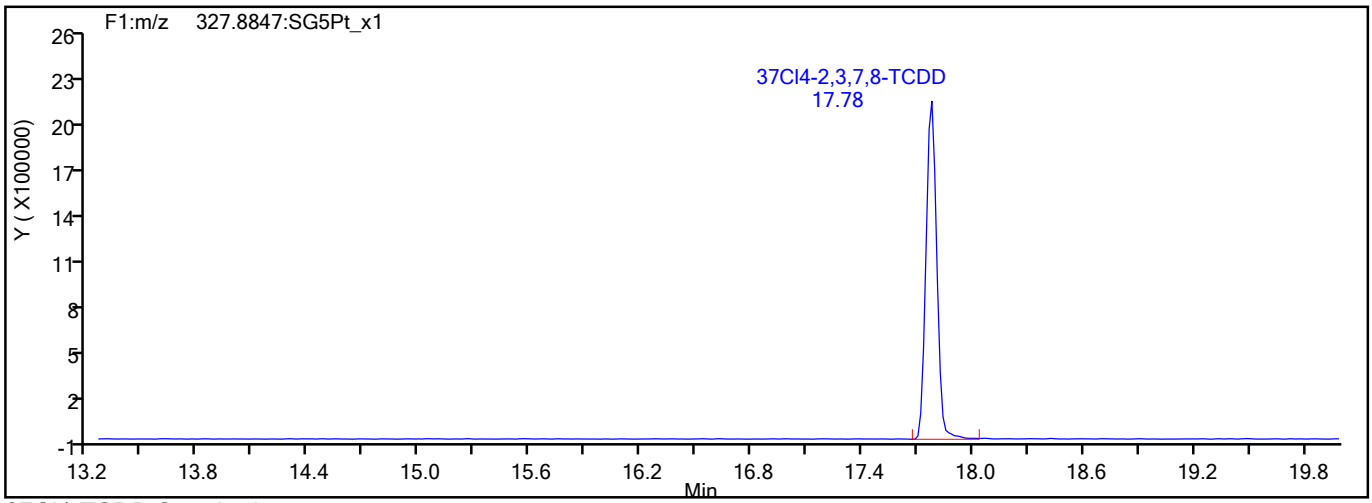

37Cl4-TCDD Standards

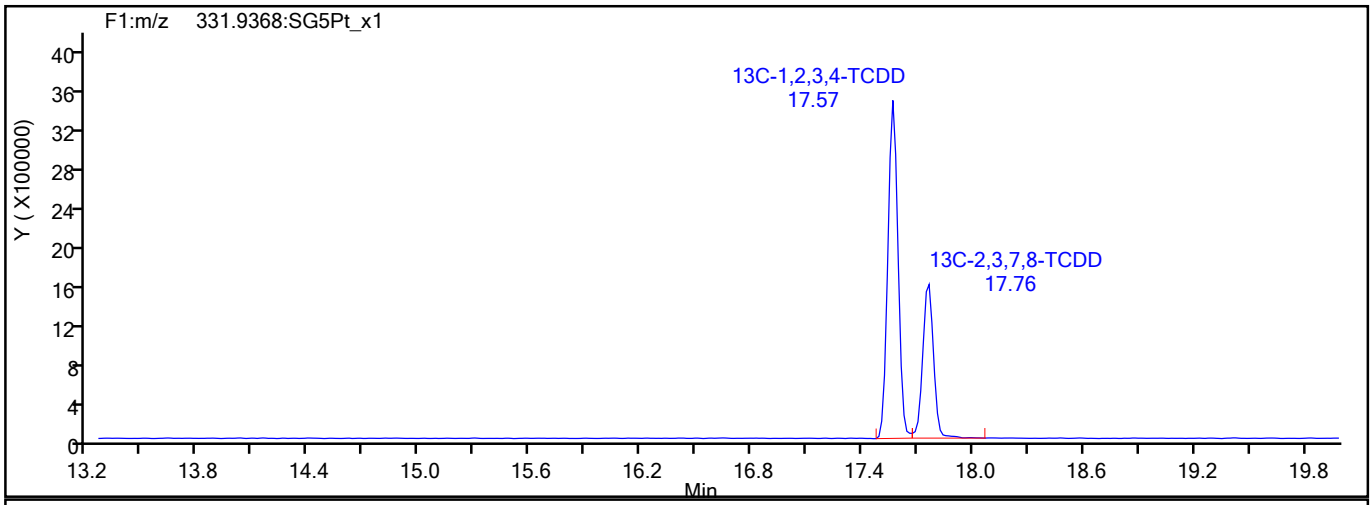

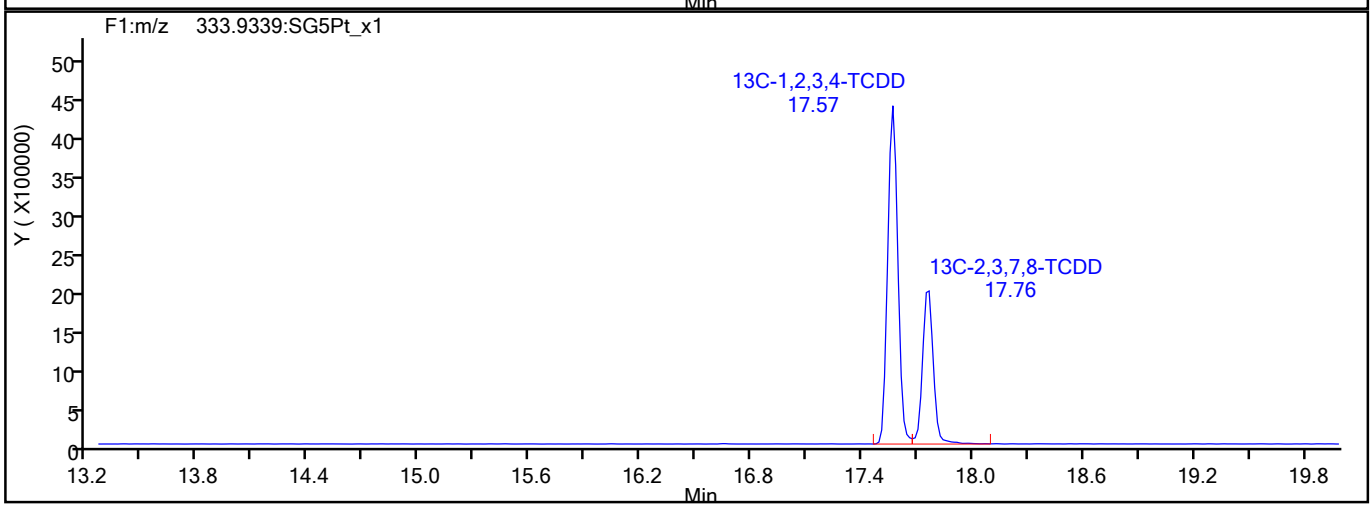

791960

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

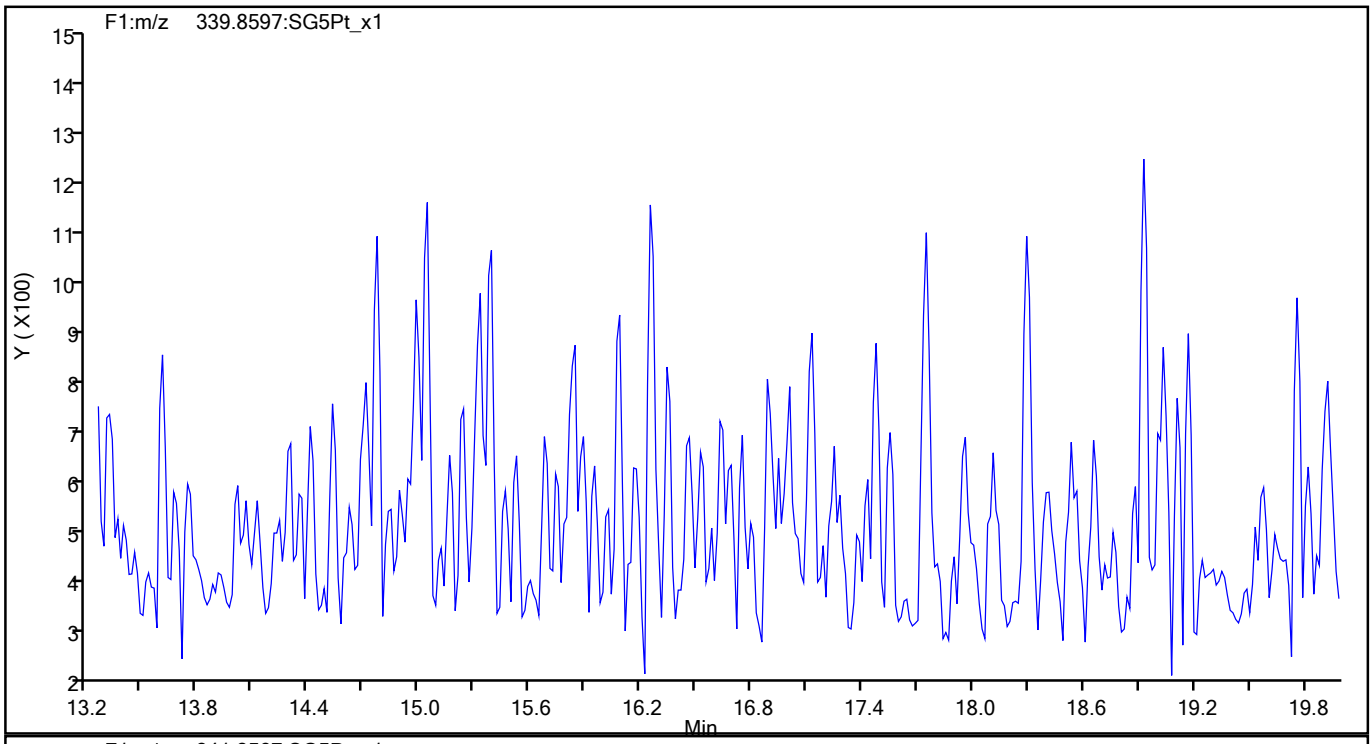

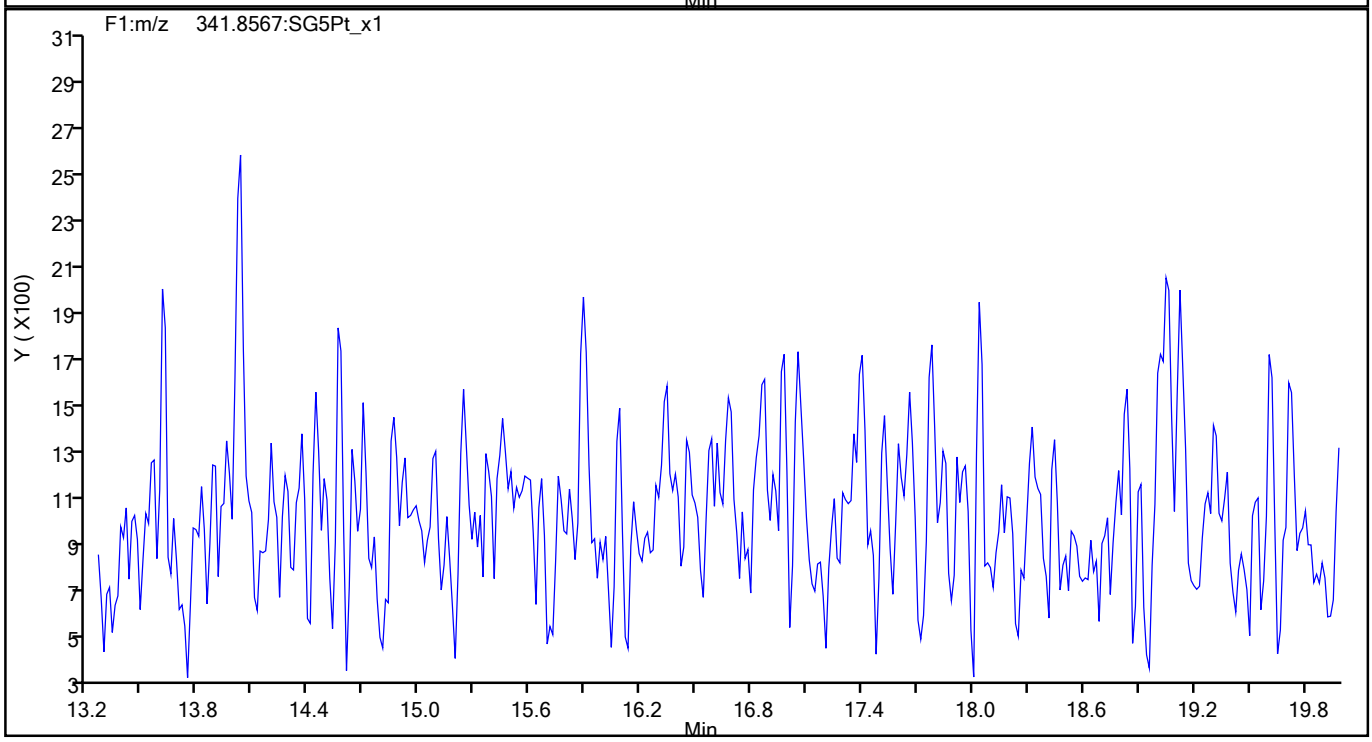

791961

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

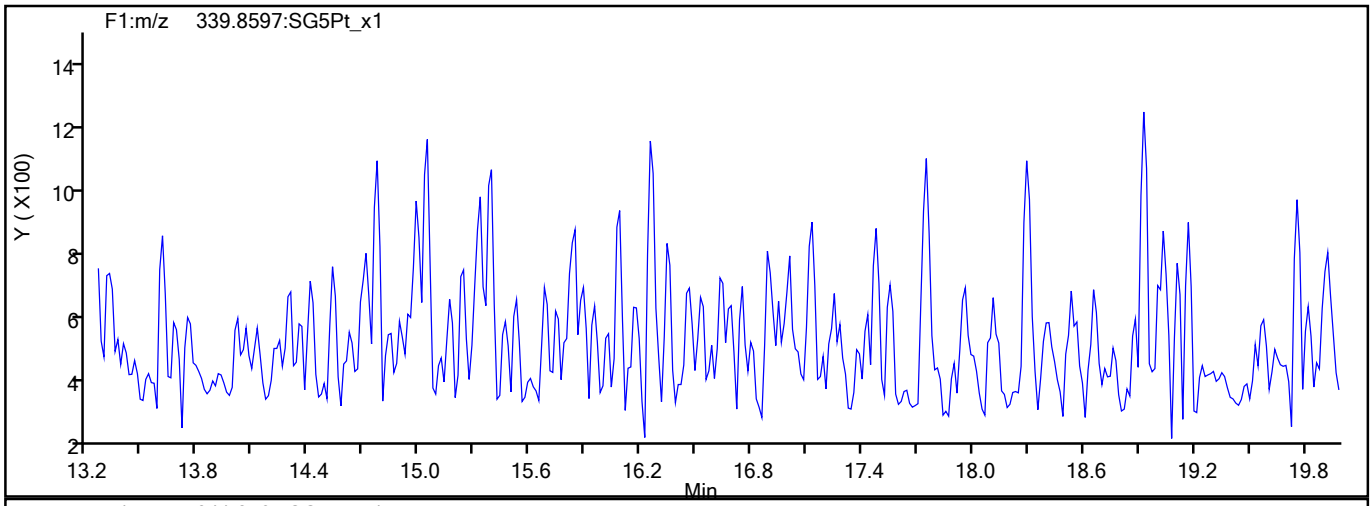

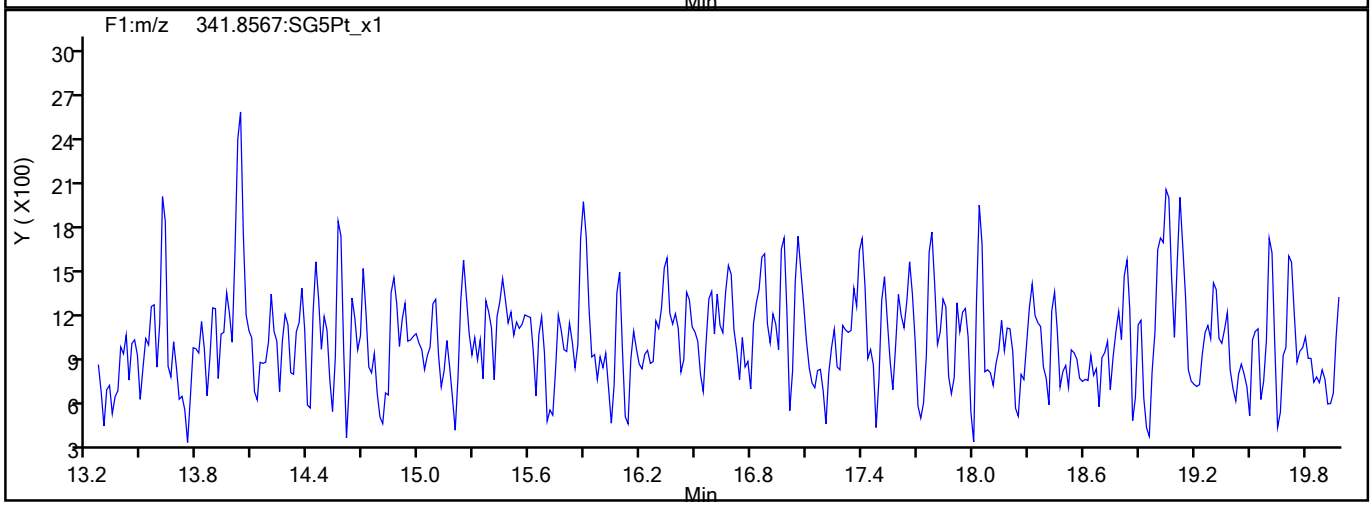

F1 PeCDFs Interference Mass

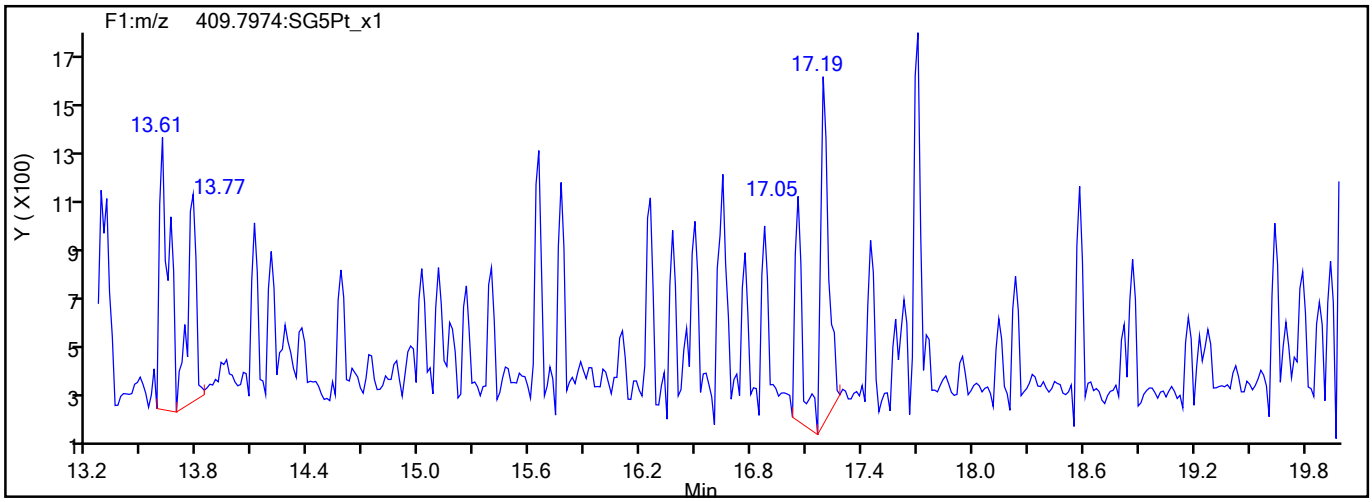

791962

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

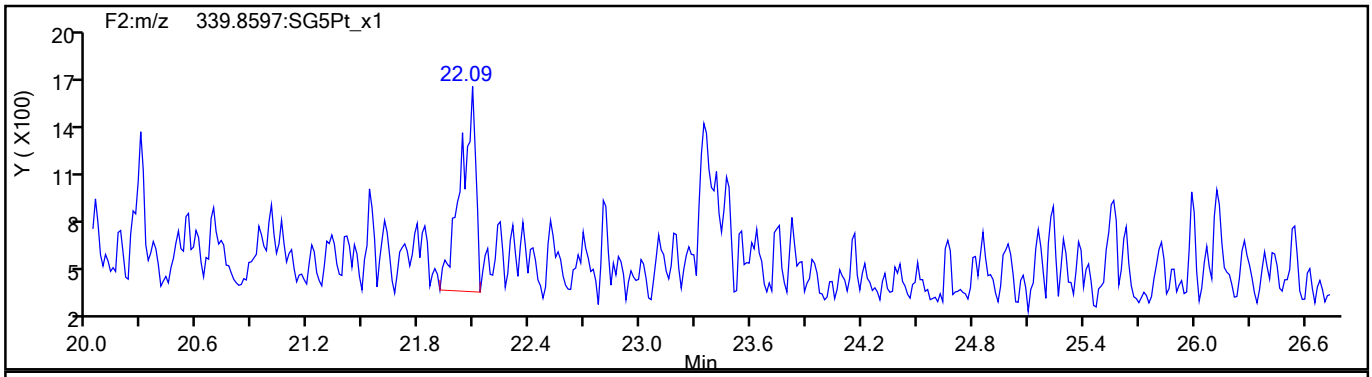

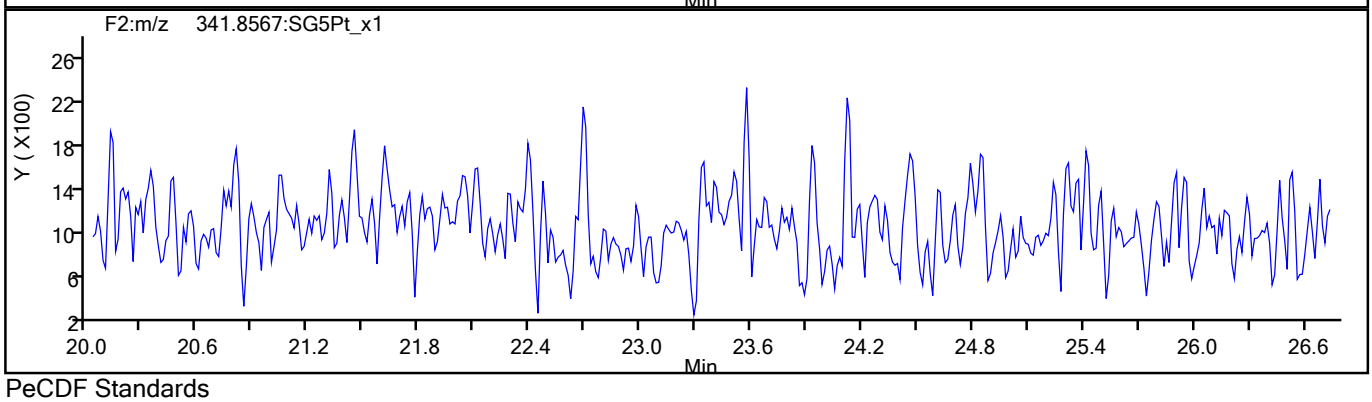

PeCDF Standards

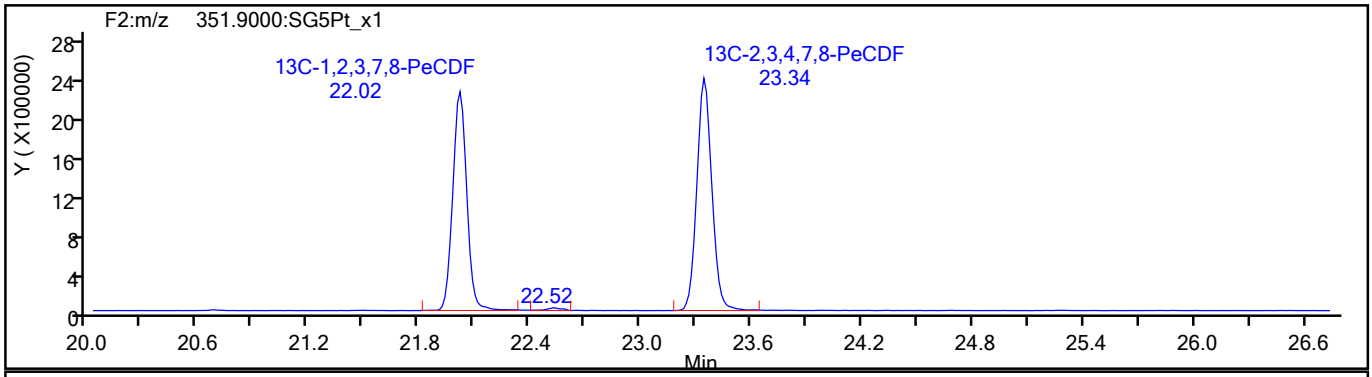

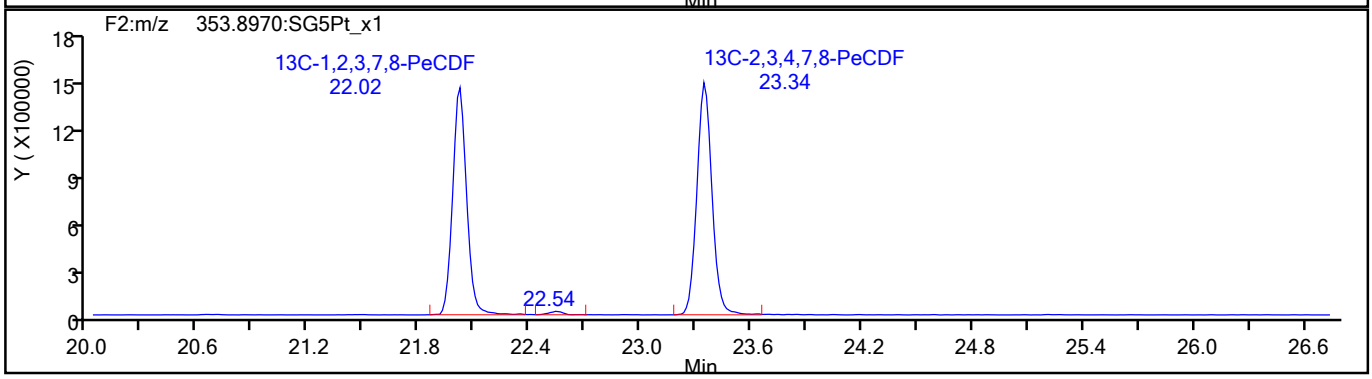

791963

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

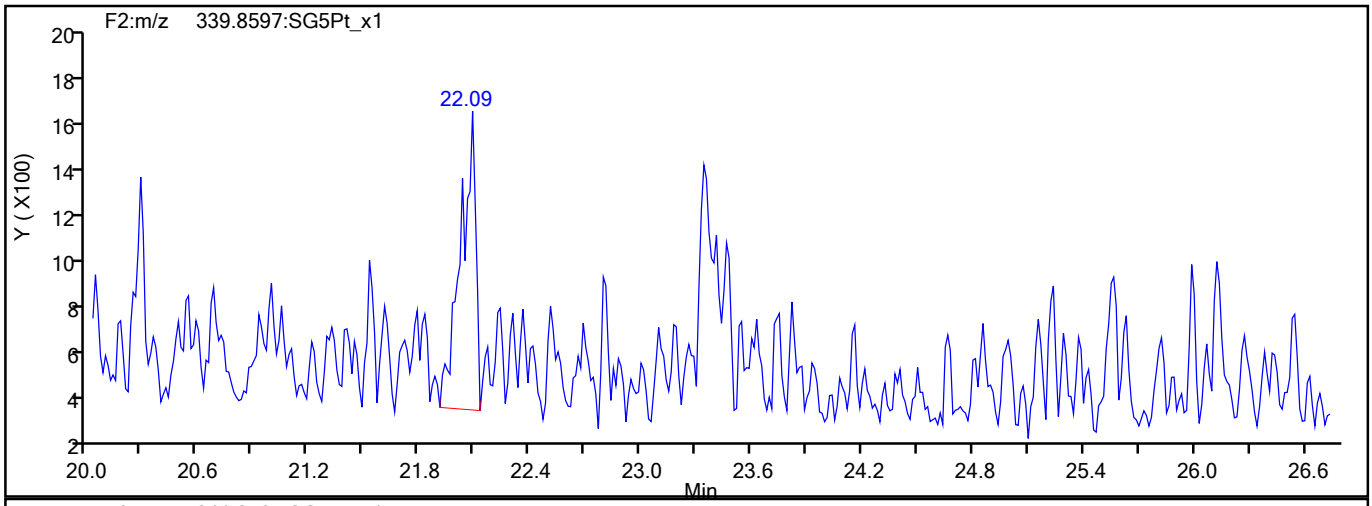

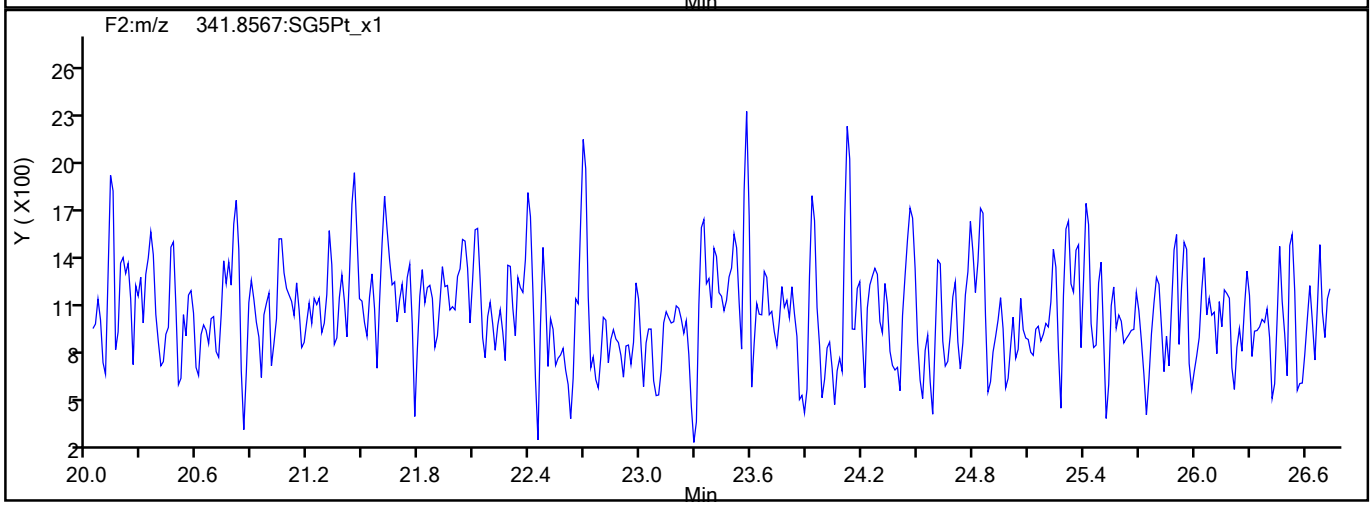

PeCDF Interference Mass

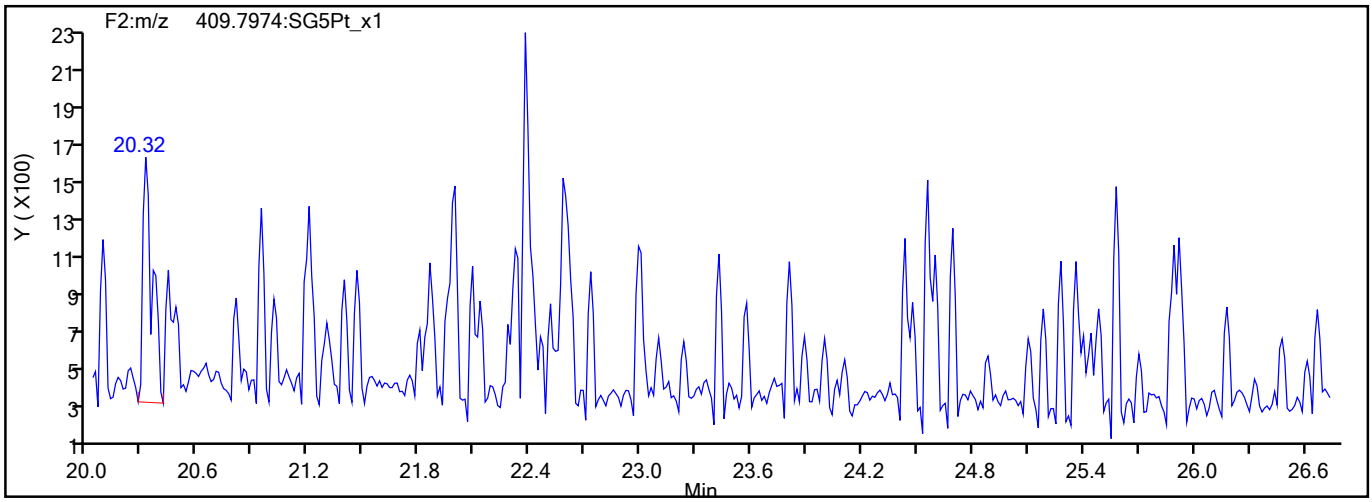

791964

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

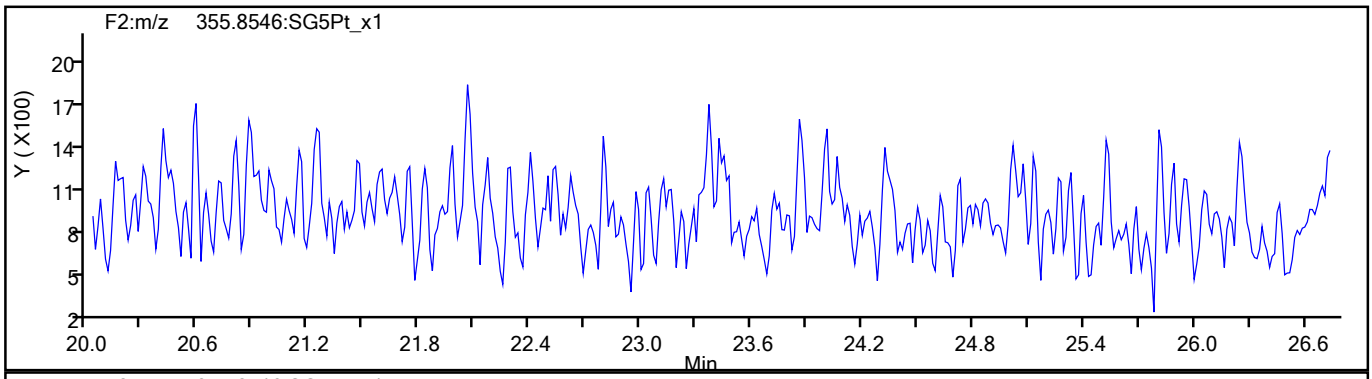

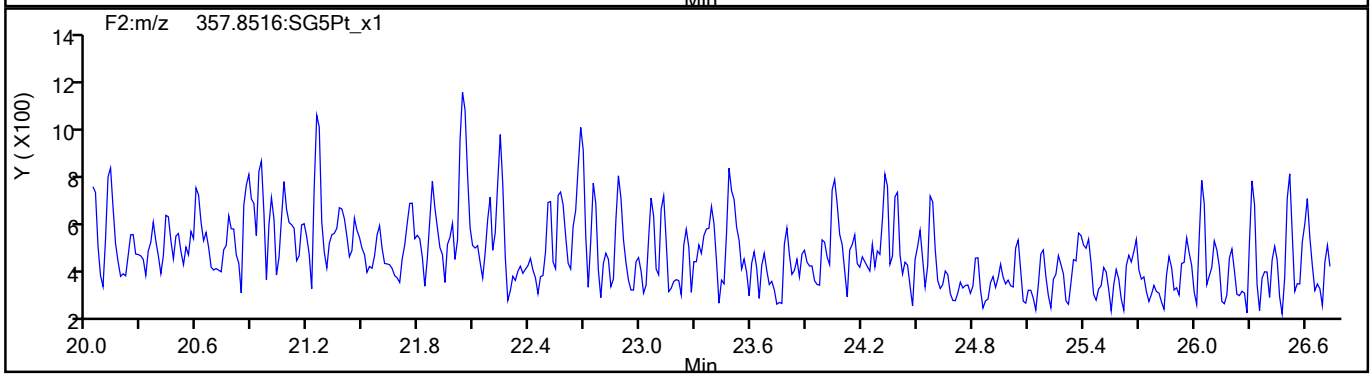

PeCDD Standards

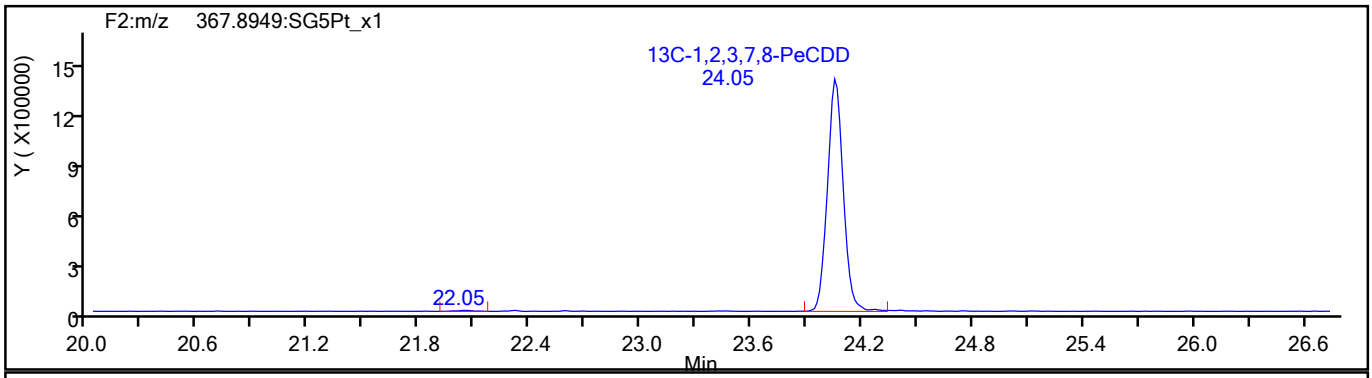

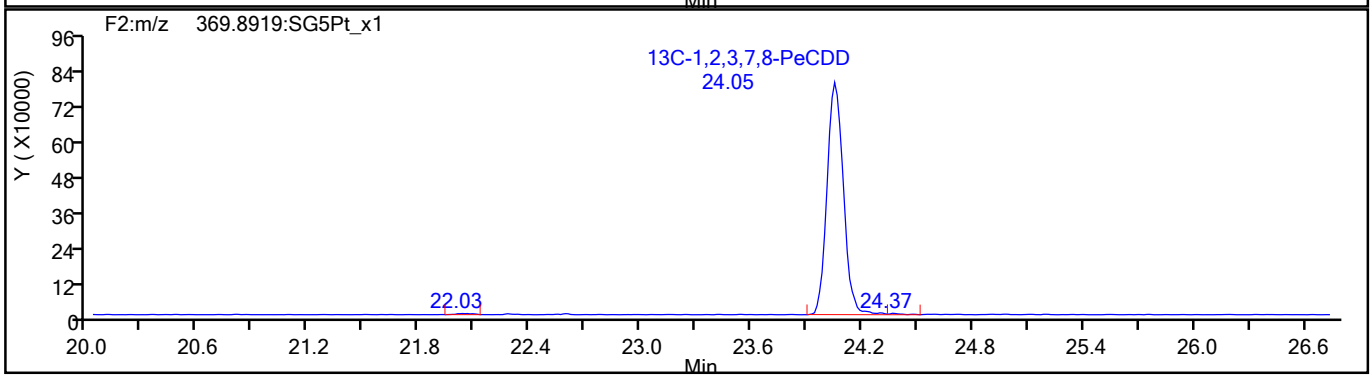

791965

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

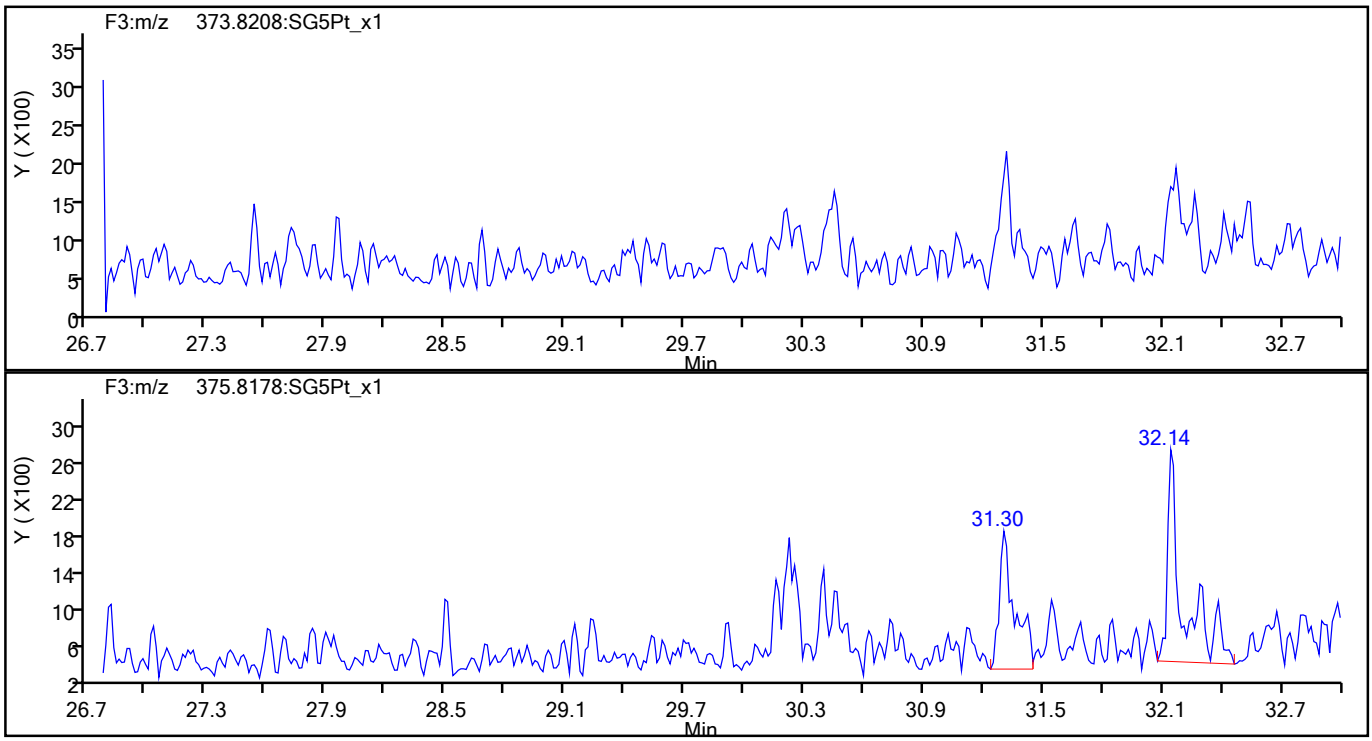

HxCDF Standards

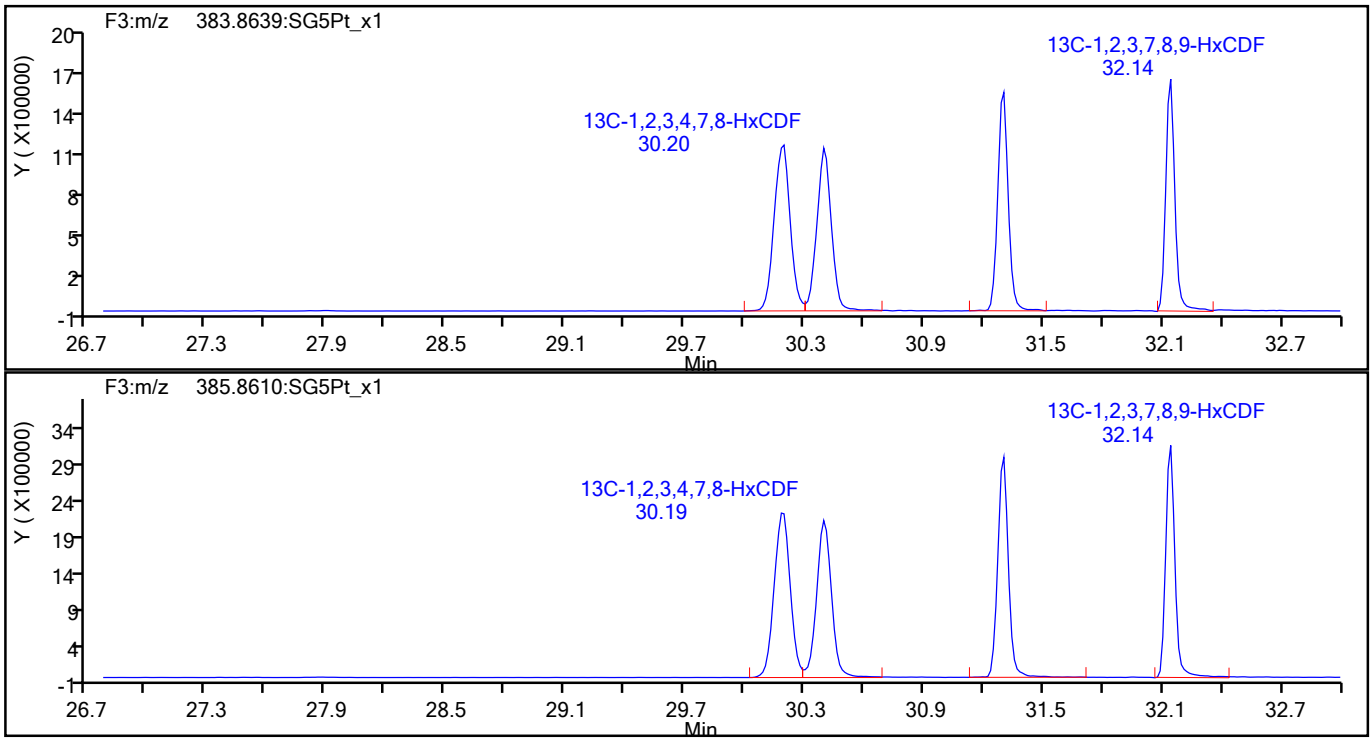

791966

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

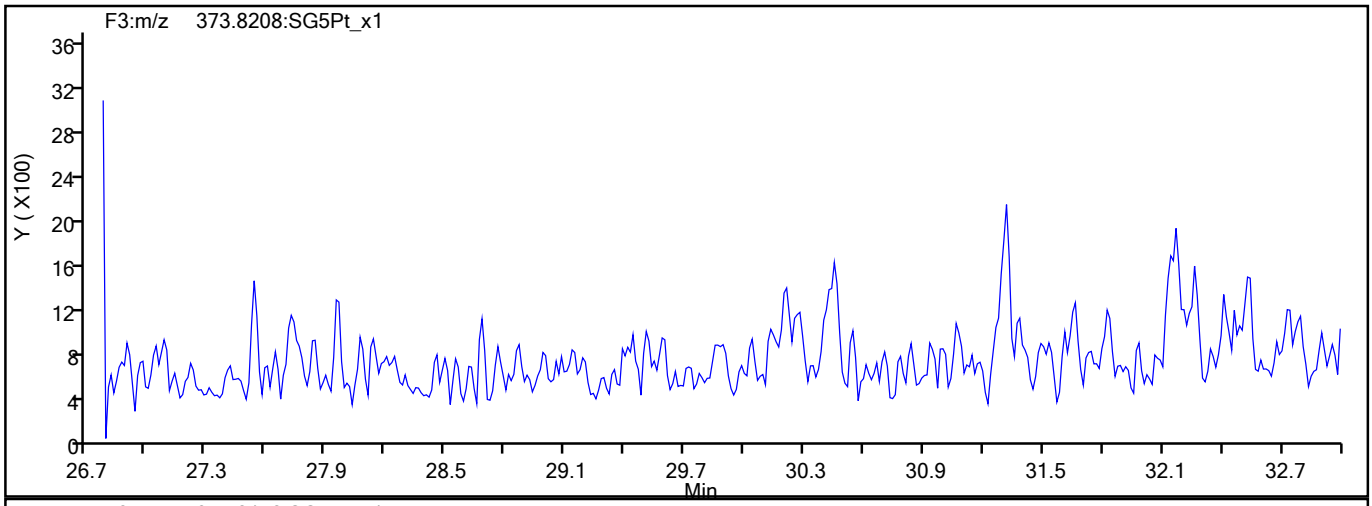

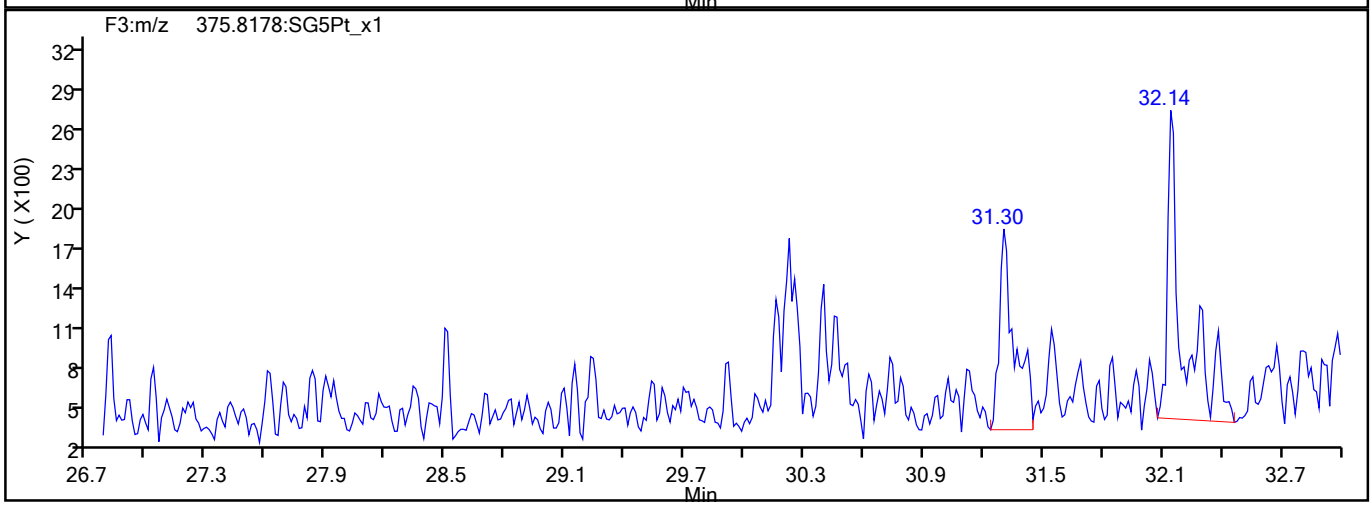

HxCDF Interference Mass

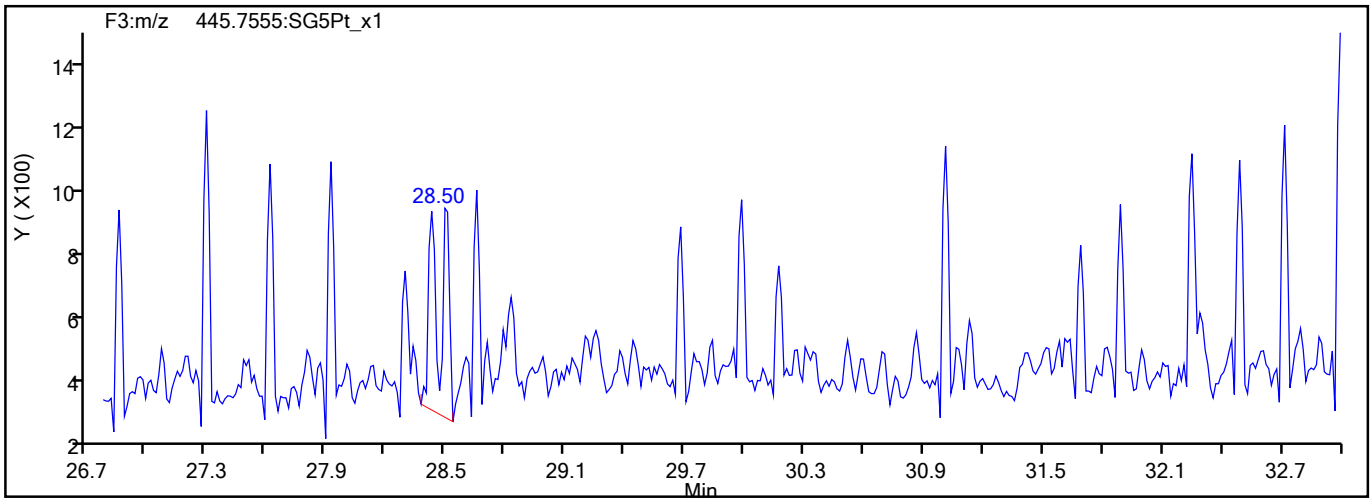

791967

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

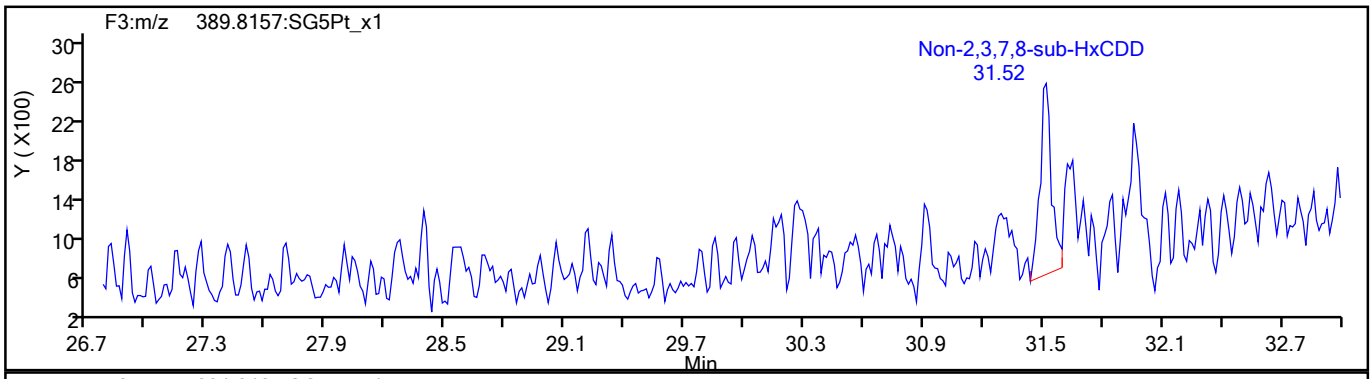

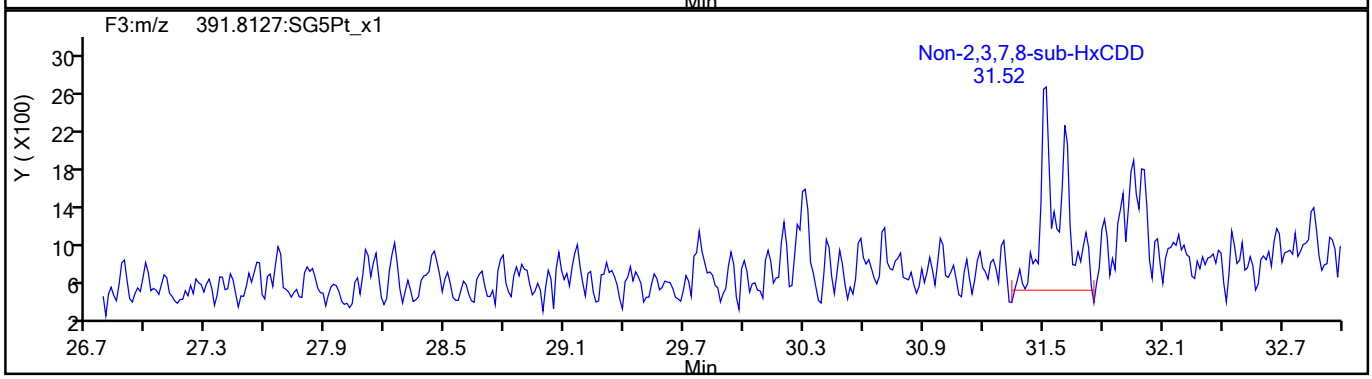

HxCDD Standards

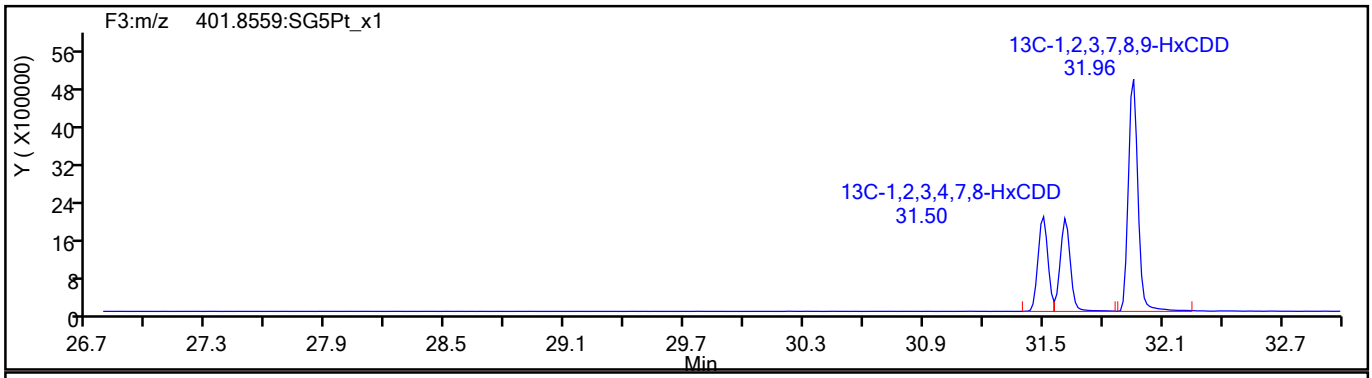

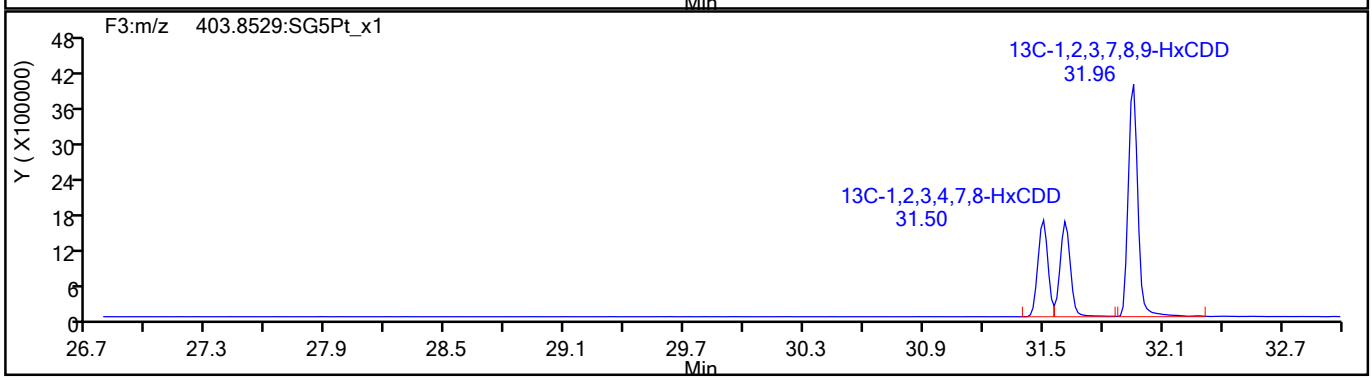

791968

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

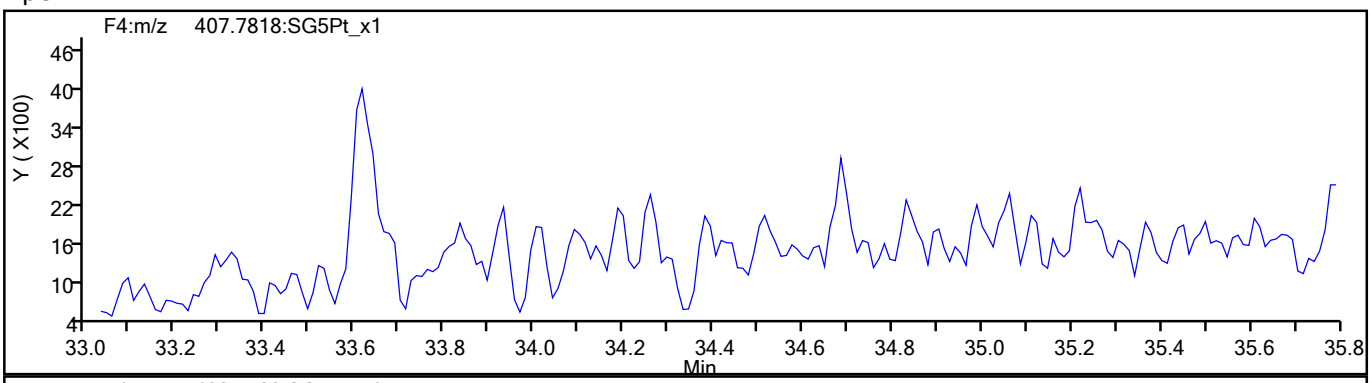

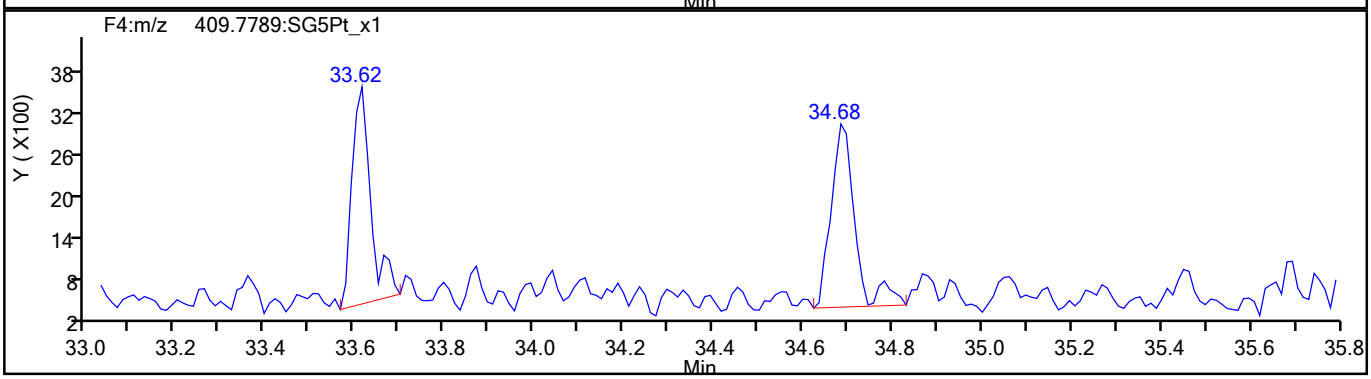

HpCDF Standards

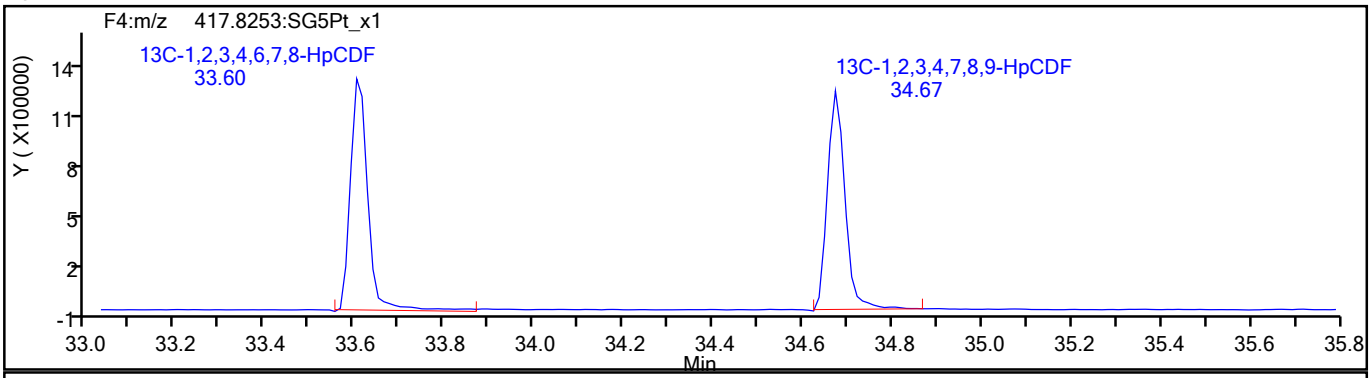

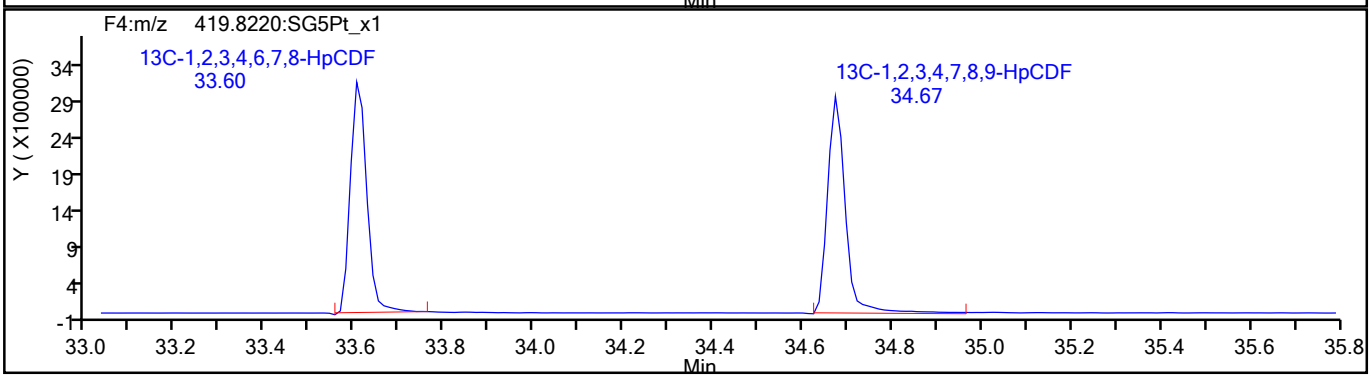

791969

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

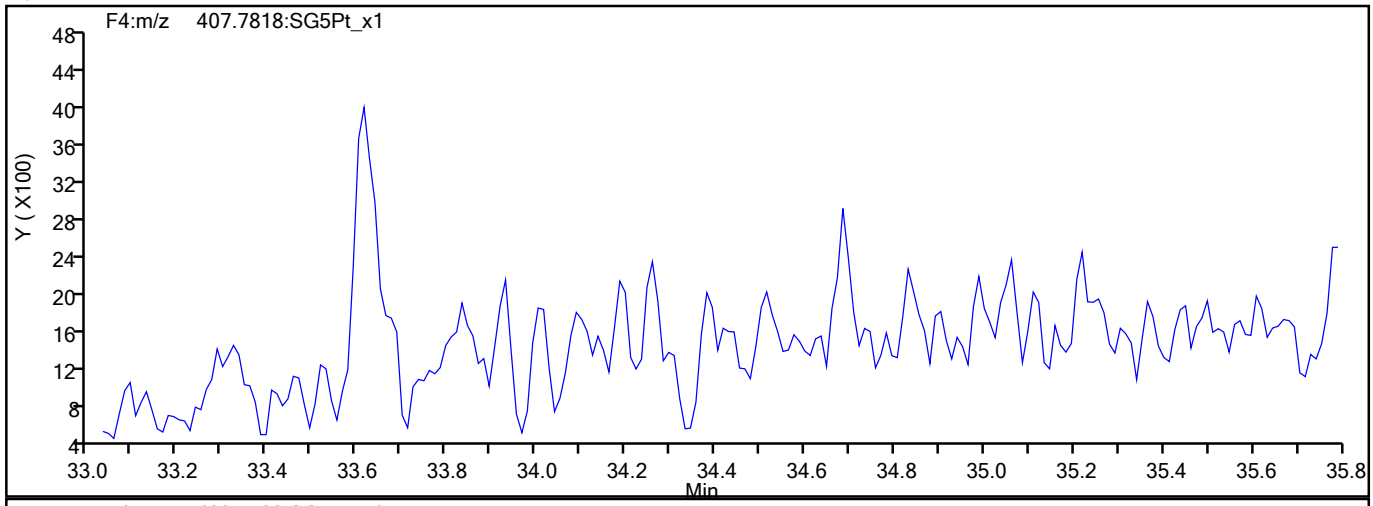

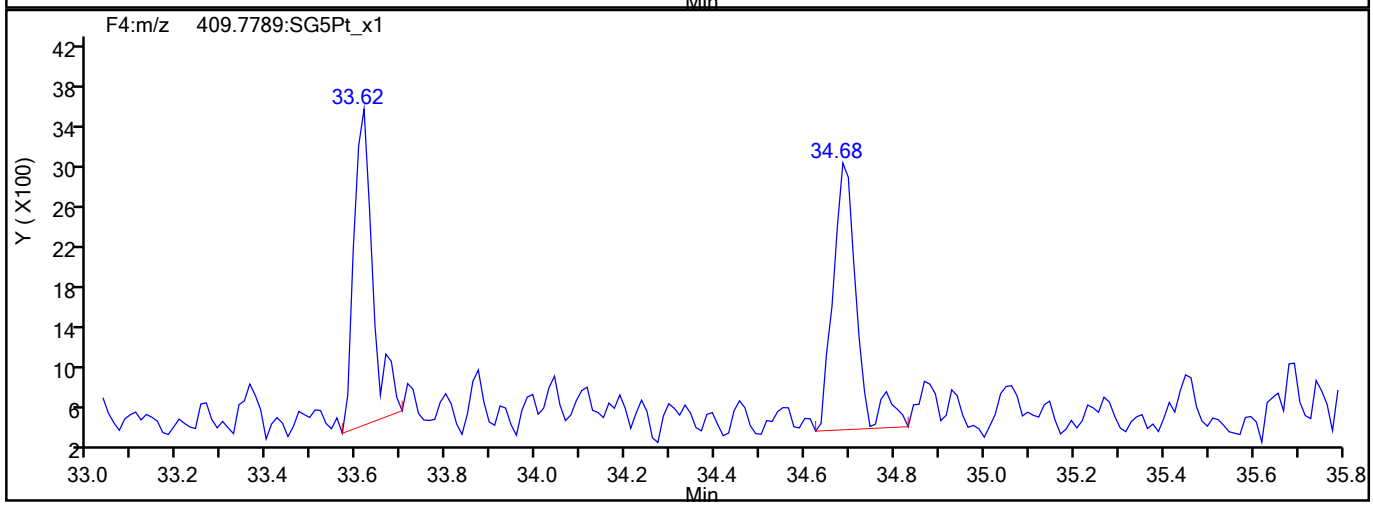

HpCDF Interference Mass

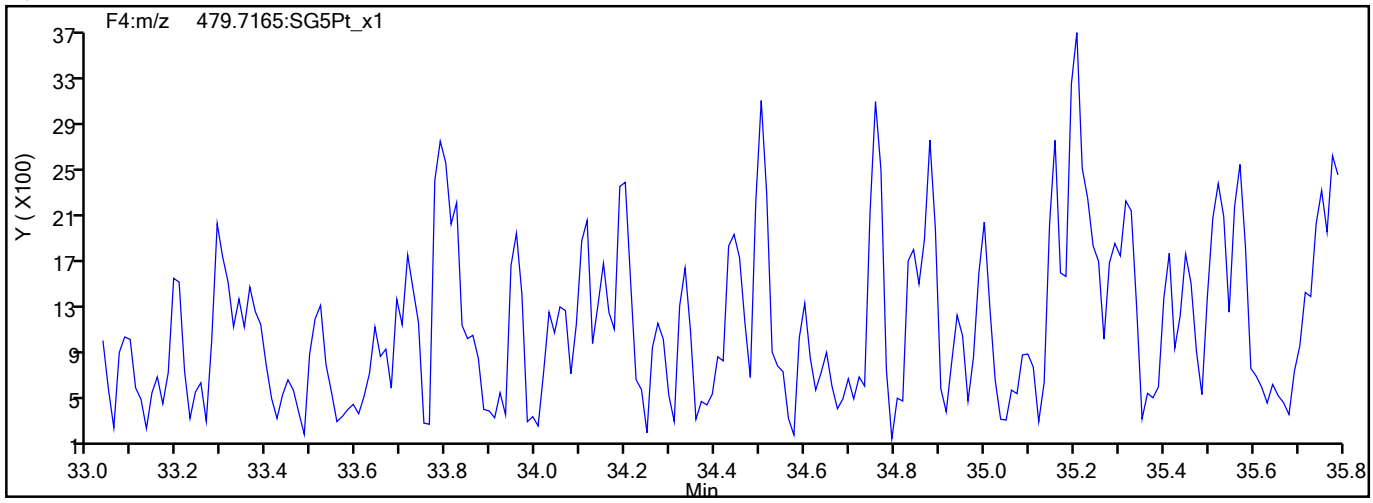

791970

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

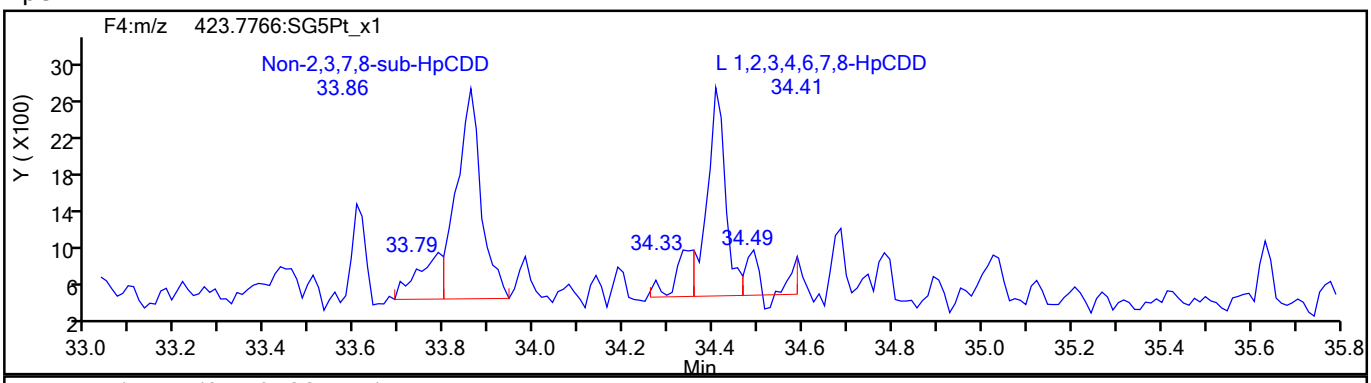

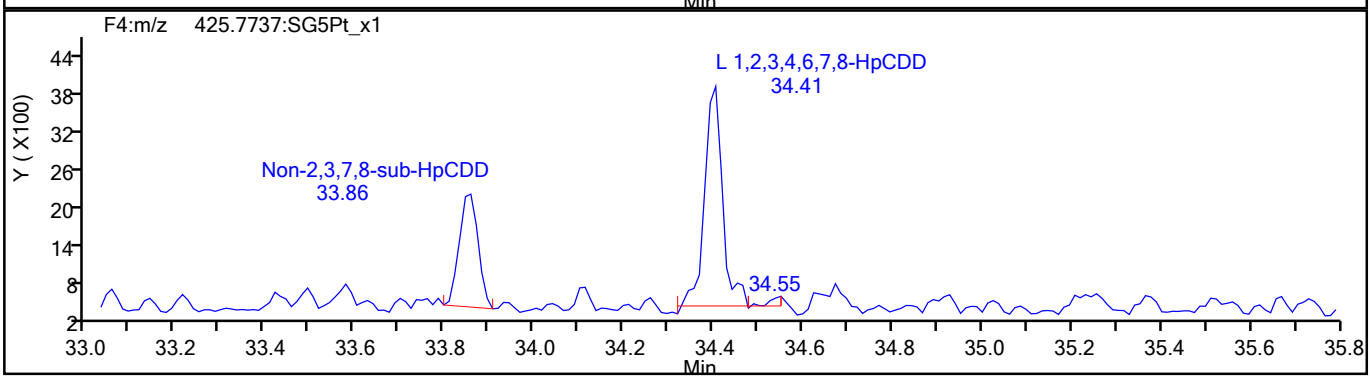

HpCDD Standards

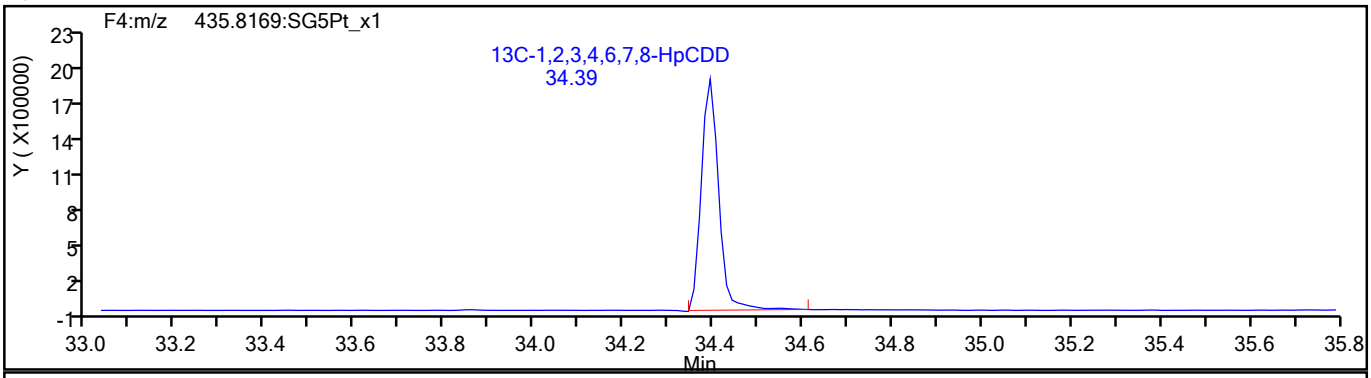

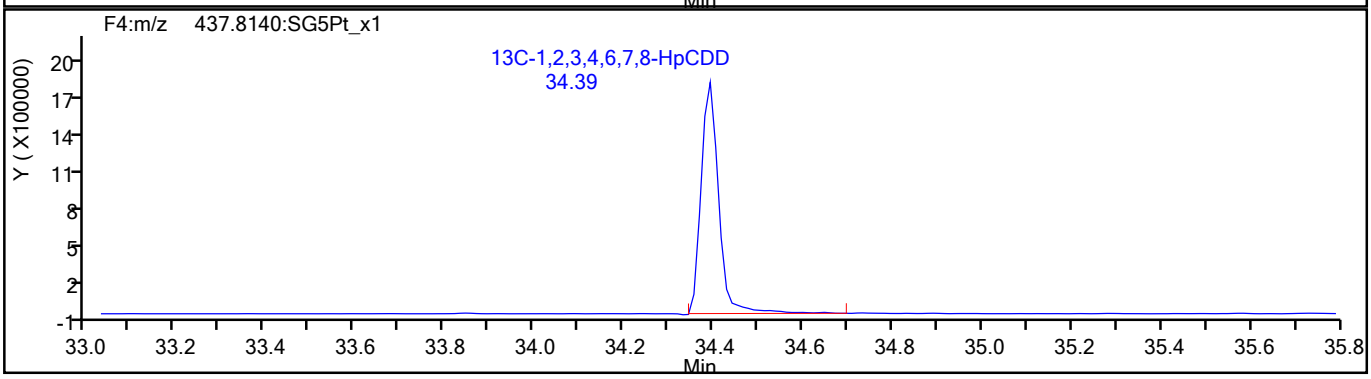

791971

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

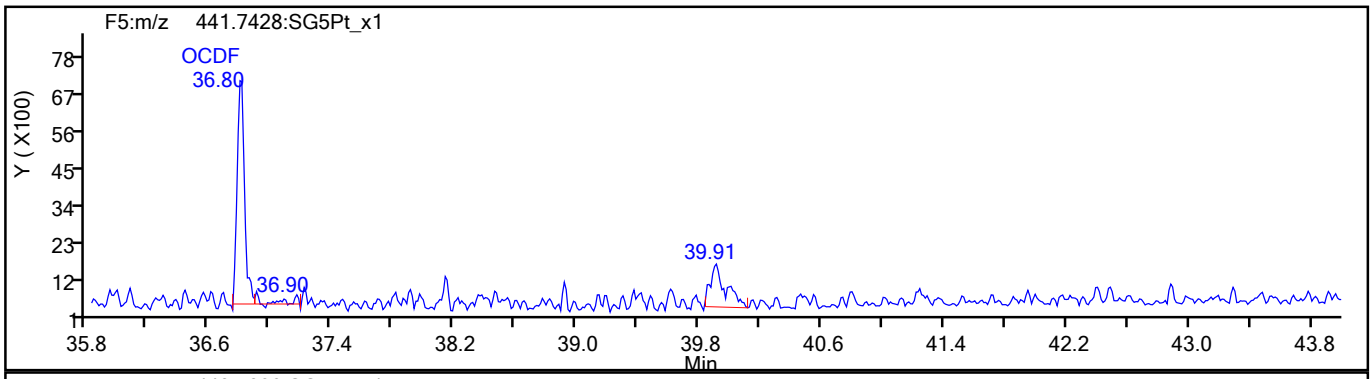

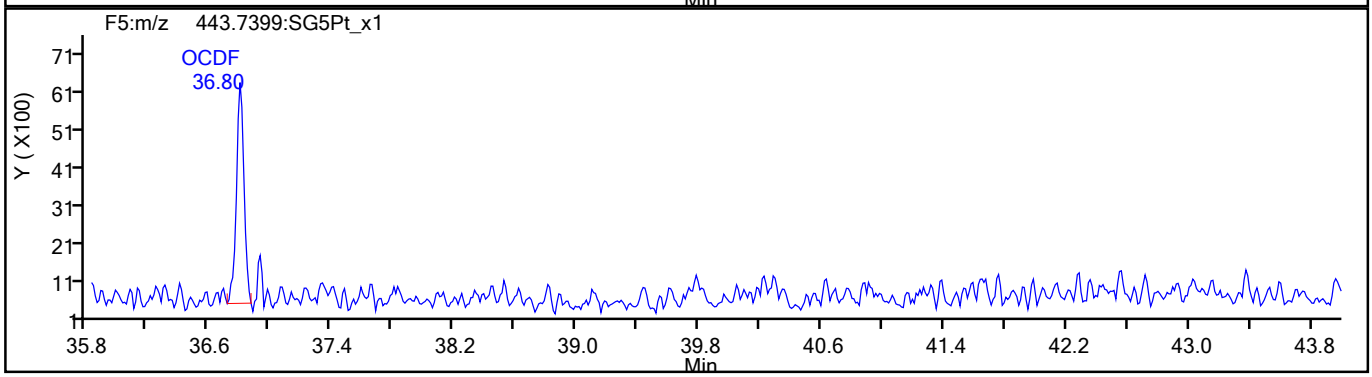

OCDF Standards

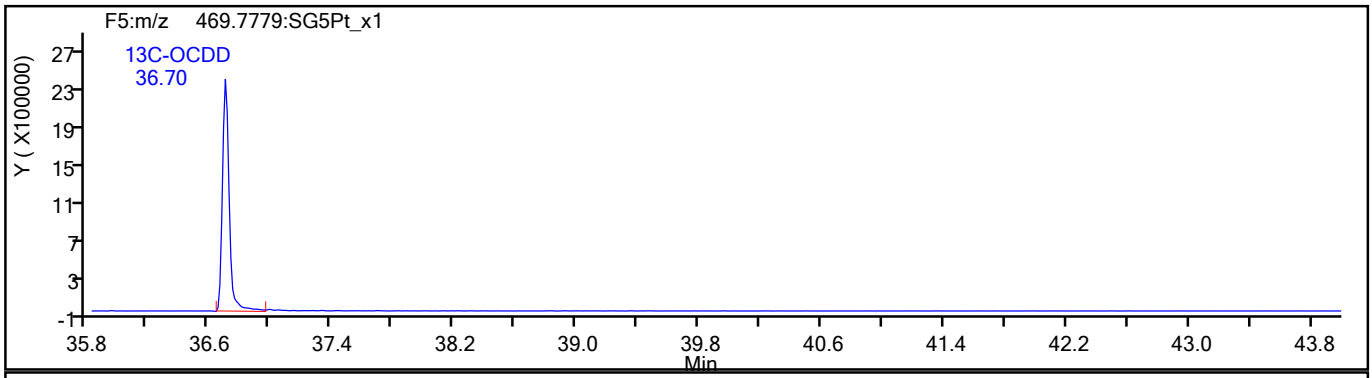

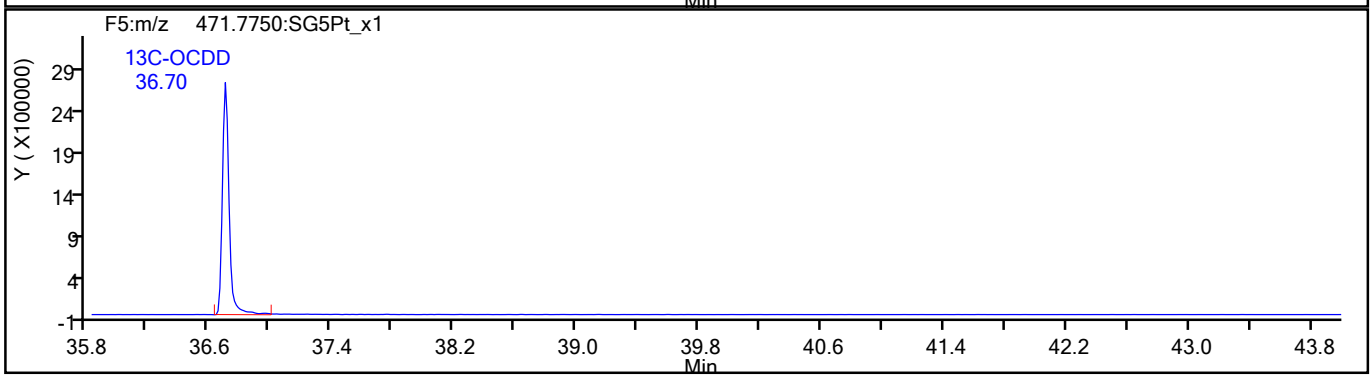

791972

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

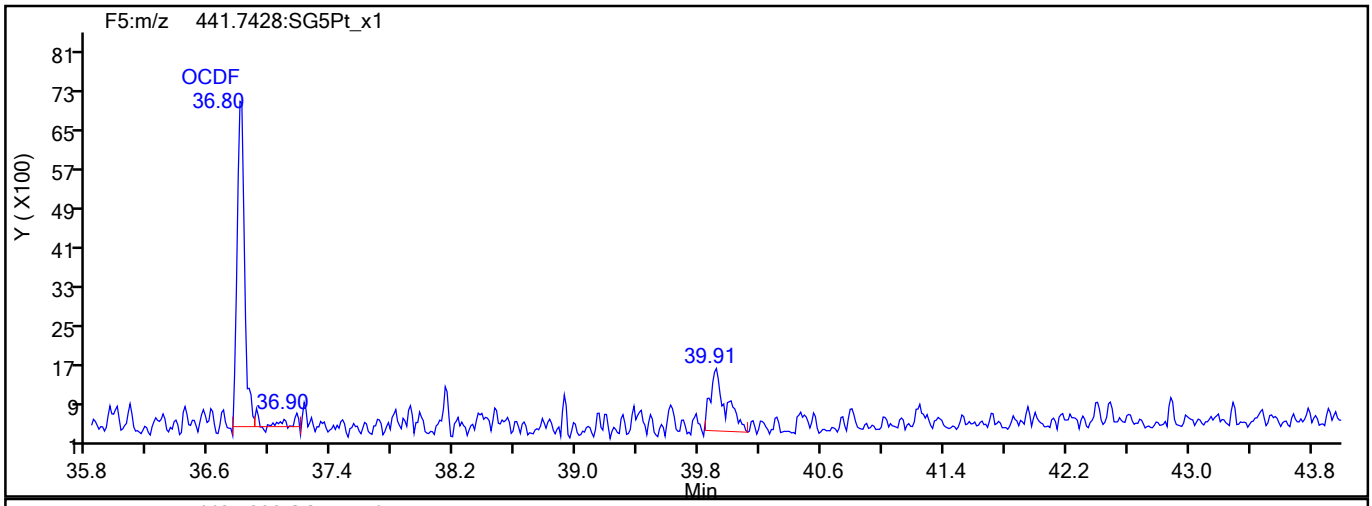

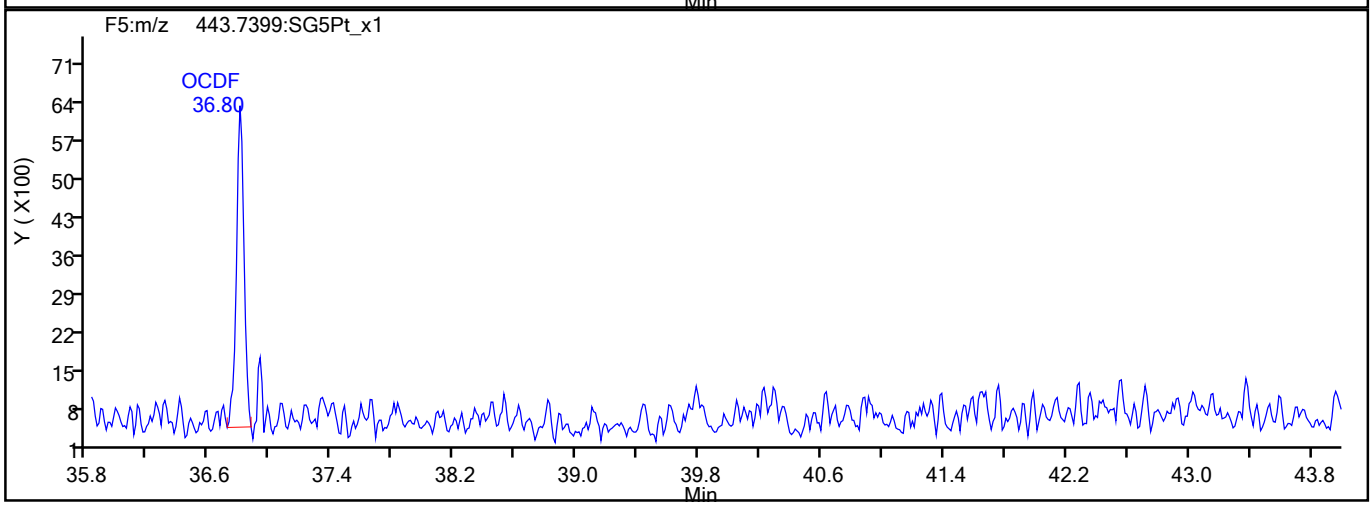

OCDF Interference Mass

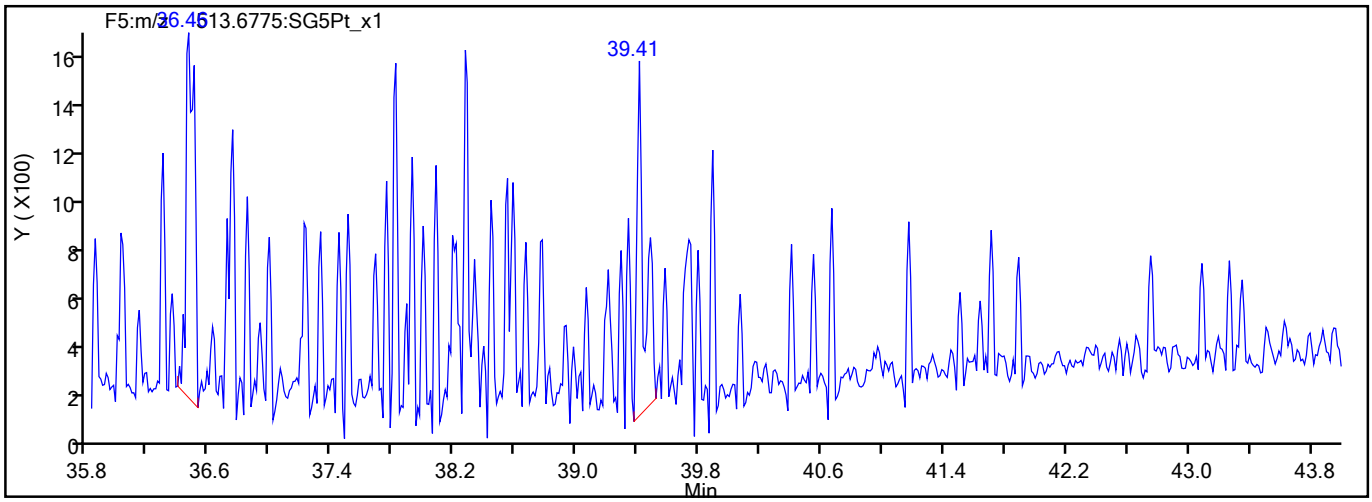

791973

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

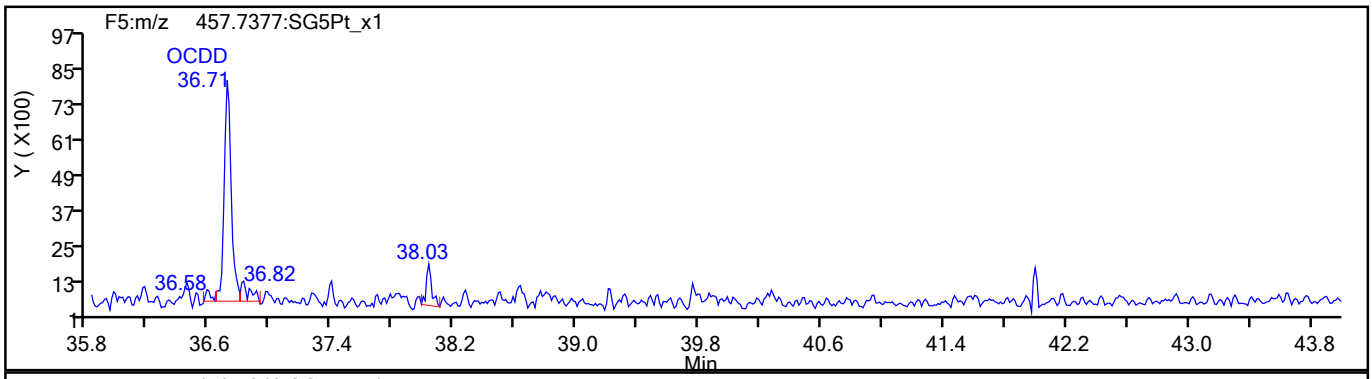

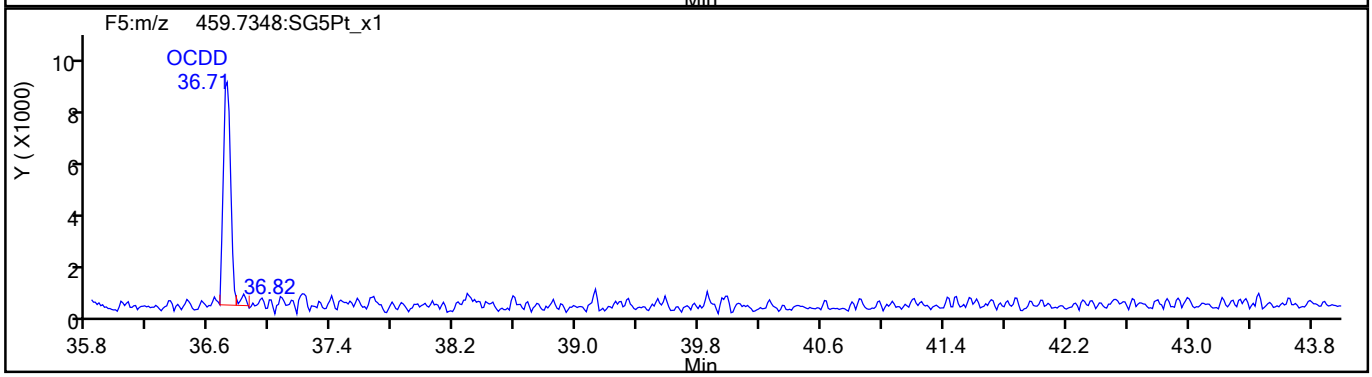

OCDD Standards

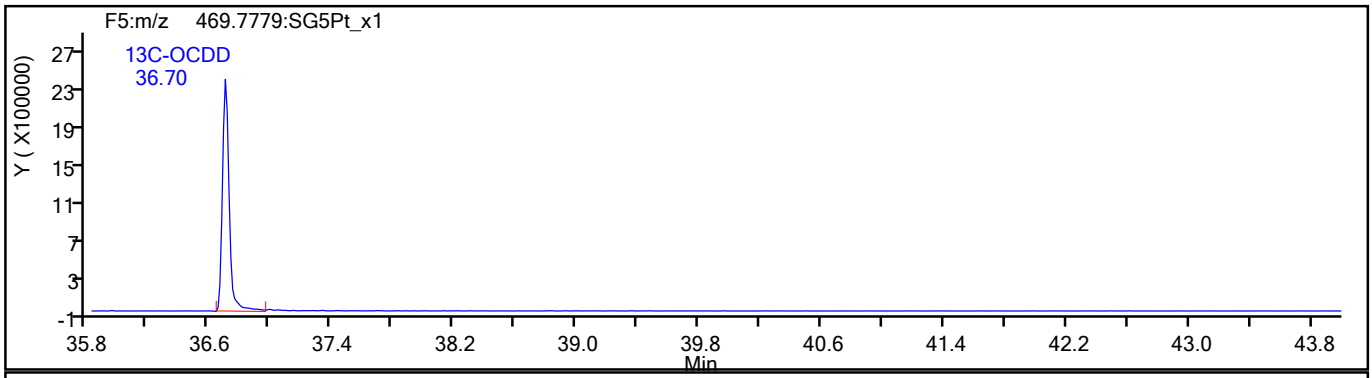

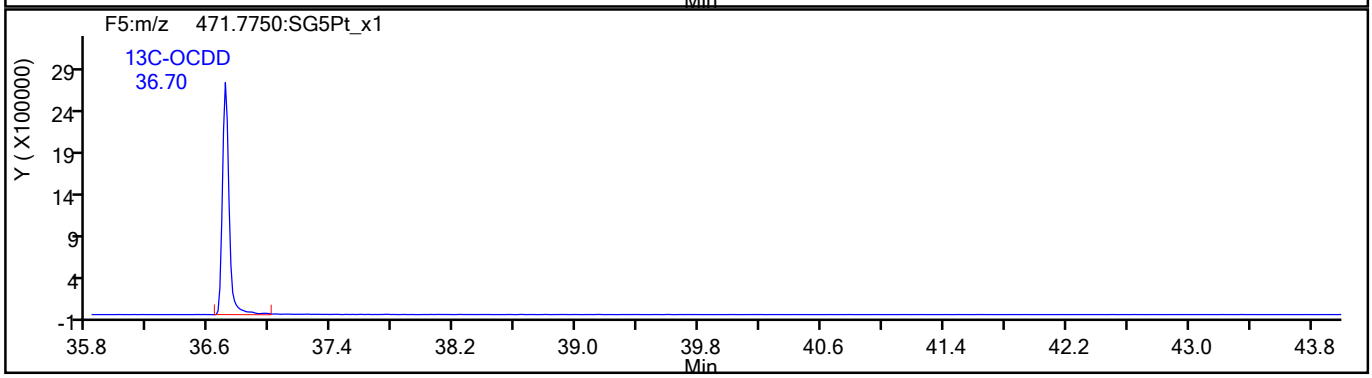

791974

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

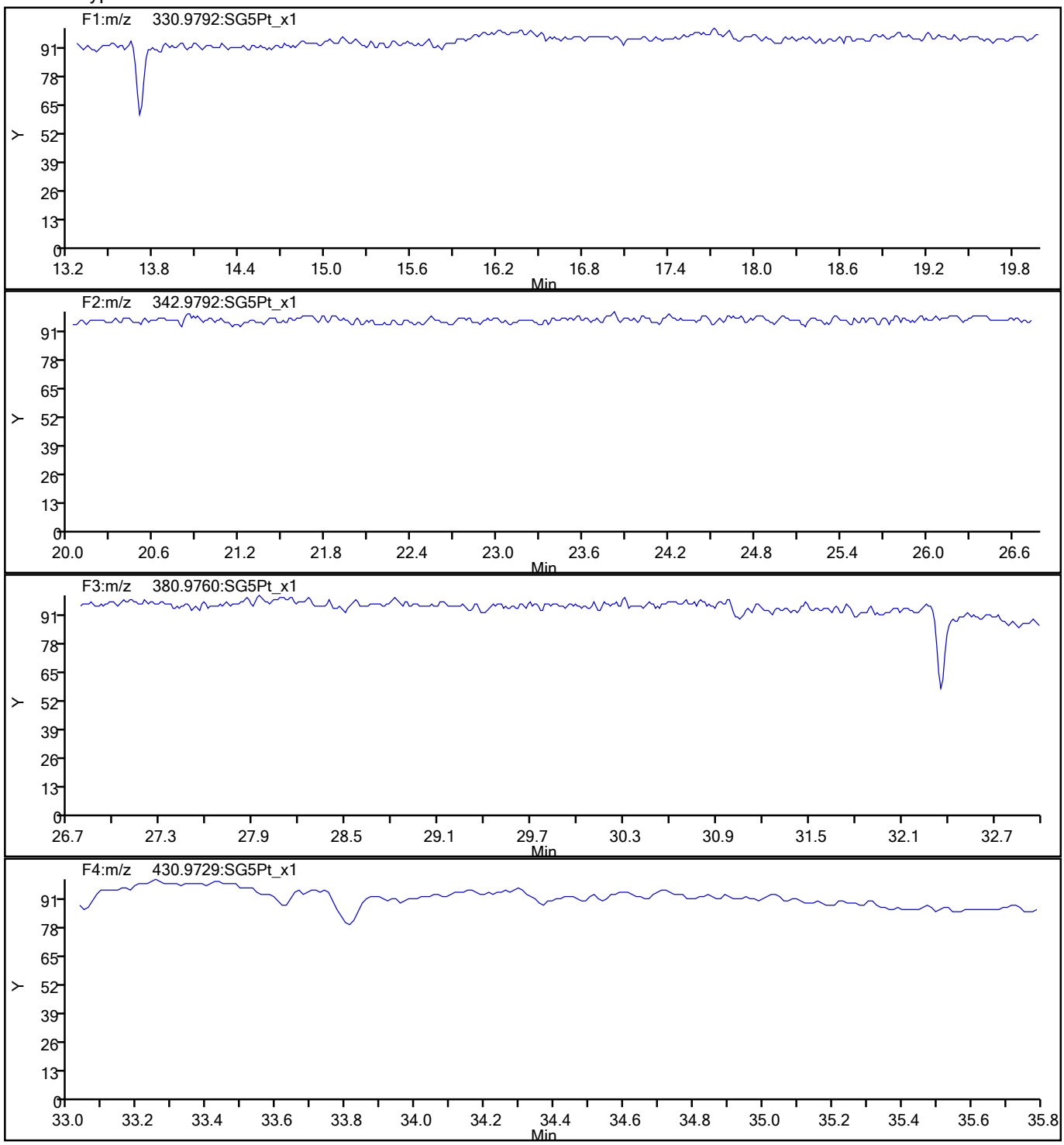

791975

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

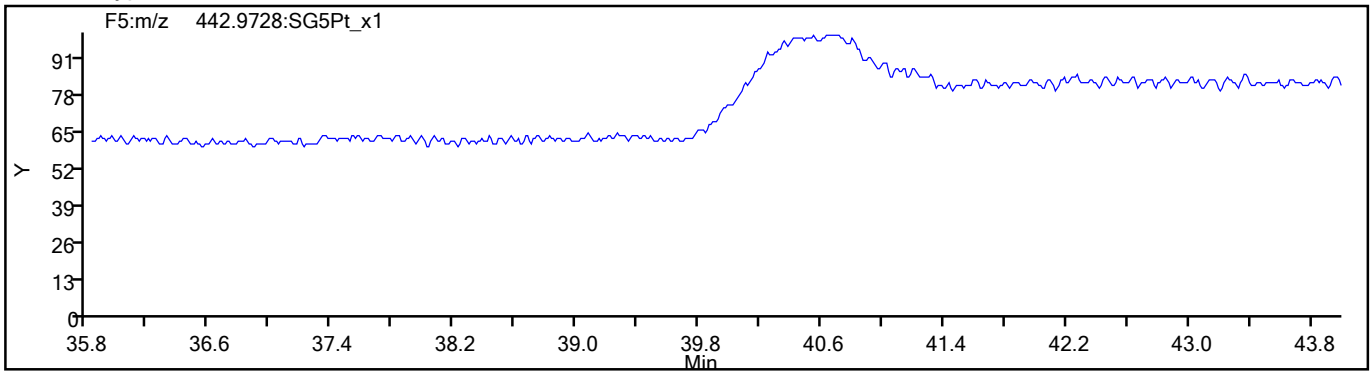

791976

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-515492/2-A

Matrix: Sediment Lab File ID: 25AU2110D5_4.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/12/2021 05:19

Sample wt/vol: 10(g) Date Analyzed: 08/25/2021 12:05

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 519953 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	21.3		1.0	0.056
51207-31-9	2,3,7,8-TCDF	21.7		1.0	0.044
40321-76-4	1,2,3,7,8-PeCDD	108		5.0	0.11
57117-41-6	1,2,3,7,8-PeCDF	111		5.0	0.23
57117-31-4	2,3,4,7,8-PeCDF	102		5.0	0.23
39227-28-6	1,2,3,4,7,8-HxCDD	101		5.0	0.23
57653-85-7	1,2,3,6,7,8-HxCDD	111		5.0	0.23
19408-74-3	1,2,3,7,8,9-HxCDD	107		5.0	0.21
70648-26-9	1,2,3,4,7,8-HxCDF	96.9		5.0	0.39
57117-44-9	1,2,3,6,7,8-HxCDF	108		5.0	0.39
72918-21-9	1,2,3,7,8,9-HxCDF	107		5.0	0.28
60851-34-5	2,3,4,6,7,8-HxCDF	107		5.0	0.29
35822-46-9	1,2,3,4,6,7,8-HpCDD	109		5.0	0.30
67562-39-4	1,2,3,4,6,7,8-HpCDF	108		5.0	0.66
55673-89-7	1,2,3,4,7,8,9-HpCDF	102		5.0	0.80
3268-87-9	OCDD	213		10	0.19
39001-02-0	OCDF	208		10	0.14
41903-57-5	Total TCDD	21.3		1.0	0.056
30402-14-3	Total TCDF	21.9		1.0	0.044
36088-22-9	Total PeCDD	108		5.0	0.11
30402-15-4	Total PeCDF	214		5.0	0.23
34465-46-8	Total HxCDD	319		5.0	0.22
55684-94-1	Total HxCDF	420		5.0	0.34
37871-00-4	Total HpCDD	109		5.0	0.30
38998-75-3	Total HpCDF	210		5.0	0.73

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-515492/2-A

Matrix: Sediment Lab File ID: 25AU2110D5_4.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/12/2021 05:19

Sample wt/vol: 10(g) Date Analyzed: 08/25/2021 12:05

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 519953 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	47		20-175
89059-46-1	13C-2,3,7,8-TCDF	46		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	50		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	47		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	50		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	54		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	47		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	54		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	47		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	47		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	47		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	46		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	44		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	48		20-186
114423-97-1	13C-OCDD	50		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	65		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d
Lims ID: LCS 320-515492/2-A
Client ID:
Sample Type: LCS
Inject. Date: 25-Aug-2021 12:05:46 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 320-515492/2-A LCS 320-515492/2-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:26:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:55:08

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.613	116313177	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	86197808	0.77	1.6249	45.6	45.6	0.0743	0.0743	45.61	
2,3,7,8-TCDF	17.114	9594315	0.75	1.0239	10.9	10.9	0.0219	0.0219	109	
A Non-2,3,7,8-sub-TCDF	17.076	85308	0.77	1.0239	0.0967	0.0967	0.0219	0.0967	0.00	
S Total TCDF					11.0	11.0	0.0219	0.0219		
D 13C-2,3,7,8-TCDD	17.794	49616225	0.83	0.8993	47.4	47.4	0.1397	0.1397	47.43	
2,3,7,8-TCDD	17.809	6619535	0.77	1.2541	10.6	10.6	0.0278	0.0278	106	
$ 37Cl4-2,3,7,8-TCDD	17.809	33457645		1.1071	26.0	26.0	0.0257	0.0257	64.95	
A Non-2,3,7,8-sub-TCDD	17.537						0.0278	0.0278		
S Total TCDD					10.6	10.6	0.0278	0.0278		
D 13C-1,2,3,7,8-PeCDF	22.020	65768959	1.56	1.2101	46.7	46.7	0.0712	0.0712	46.73	
1,2,3,7,8-PeCDF	22.047	38852552	1.60	1.0611	55.7	55.7	0.1140	0.1140	111	
D 13C-2,3,4,7,8-PeCDF	23.343	71589573	1.52	1.2395	49.7	49.7	0.0695	0.0695	49.66	
2,3,4,7,8-PeCDF	23.370	37165027	1.59	1.0184	51.0	51.0	0.1169	0.1169	102	
A F1 PeCDFs	19.851						0.0185	0.0185		
A Non-2,3,7,8-sub-PeCDF	23.067	333485	1.52	1.0398	0.4670	0.4670	0.1154	0.4670	0.00	
S Total PeCDF					107.1	107.1	0.1154	0.1154		
D 13C-1,2,3,7,8-PeCDD	24.052	44110503	1.61	0.7612	49.8	49.8	0.0406	0.0406	49.82	
1,2,3,7,8-PeCDD	24.065	25064557	1.59	1.0484	54.2	54.2	0.0538	0.0538	108	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0538	0.0538		
S Total PeCDD					54.2	54.2	0.0538	0.0538		
D 13C-1,2,3,4,7,8-HxCDF	30.186	61084713	0.52	1.0837	54.1	54.1	0.1138	0.1138	54.11	
1,2,3,4,7,8-HxCDF	30.213	32099272	1.23	1.0851	48.4	48.4	0.1968	0.1968	96.85	
D 13C-1,2,3,6,7,8-HxCDF	30.399	55461911	0.51	1.1279	47.2	47.2	0.1094	0.1094	47.20	
1,2,3,6,7,8-HxCDF	30.412	33799121	1.22	1.1260	54.1	54.1	0.1949	0.1949	108	
D 13C-2,3,4,6,7,8-HxCDF	31.304	52535805	0.52	1.0637	47.4	47.4	0.1160	0.1160	47.41	
2,3,4,6,7,8-HxCDF	31.317	32955345	1.21	1.1675	53.7	53.7	0.1438	0.1438	107	
D 13C-1,2,3,7,8,9-HxCDF	32.143	46916272	0.51	0.9676	46.5	46.5	0.1275	0.1275	46.54	
1,2,3,7,8,9-HxCDF	32.156	29343058	1.21	1.1664	53.6	53.6	0.1397	0.1397	107	
A Non-2,3,7,8-sub-HxCDF	30.338						0.1650	0.1650		
S Total HxCDF					209.9	209.9	0.1688	0.1688		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	31.956	104179892	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.504	41185024	1.24	0.7334	53.9	53.9	0.1381	0.1381	53.90	
1,2,3,4,7,8-HxCDD	31.517	22091720	1.26	1.0640	50.4	50.4	0.1134	0.1134	101	
D 13C-1,2,3,6,7,8-HxCDD	31.610	42762799	1.25	0.8802	46.6	46.6	0.1151	0.1151	46.63	
1,2,3,6,7,8-HxCDD	31.624	23759486	1.26	1.0001	55.6	55.6	0.1172	0.1172	111	
1,2,3,7,8,9-HxCDD	31.969	25524658	1.26	1.1325	53.7	53.7	0.1050	0.1050	107	
A Non-2,3,7,8-sub-HxCDD	30.525						0.1116	0.1116		
S Total HxCDD					159.7	159.7	0.1118	0.1118		
D 13C-1,2,3,4,6,7,8-HpCDF	33.615	35780816	0.44	0.7730	44.4	44.4	0.3441	0.3441	44.43	
1,2,3,4,6,7,8-HpCDF	33.627	27838664	1.03	1.4413	54.0	54.0	0.3289	0.3289	108	
D 13C-1,2,3,4,7,8,9-HpCDF	34.685	35355129	0.43	0.7008	48.4	48.4	0.3795	0.3795	48.42	
1,2,3,4,7,8,9-HpCDF	34.685	23749131	1.05	1.3174	51.0	51.0	0.3994	0.3994	102	
A Non-2,3,7,8-sub-HpCDF	34.150						0.3616	0.3616		
S Total HpCDF					105.0	105.0	0.3641	0.3641		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	30979860	1.02	0.6472	45.9	45.9	0.1517	0.1517	45.95	
1,2,3,4,6,7,8-HpCDD	34.405	18540489	1.03	1.0943	54.7	54.7	0.1513	0.1513	109	
A Non-2,3,7,8-sub-HpCDD	34.223						0.1513	0.1513		
S Total HpCDD					54.7	54.7	0.1513	0.1513		
D 13C-OCDD	36.713	46315484	0.87	0.4472	99.4	99.4	0.0930	0.0930	49.71	
OCDF	36.809	34674091	0.89	1.4382	104.1	104.1	0.0707	0.0707	104	
OCDD	36.725	27293037	0.88	1.1070	106.5	106.5	0.0930	0.0930	106	

QC Flag Legend

Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d
Lims ID: LCS 320-515492/2-A
Client ID:
Sample Type: LCS
Inject. Date: 25-Aug-2021 12:05:46 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 320-515492/2-A LCS 320-515492/2-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:26:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:55:08

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.613	17.598	1		51952593	13128111	5283	13207	2485		
333.9339	17.613	17.598	1		64360584	16217837	9463	23657	1714	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	0.971	37571271	9880013	9672	24180	1022		
317.9389	17.099	17.099	0	0.971	48626537	12763365	4509	11272	2831	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	4122780	1076758	820	2050	1313		
305.8987	17.114	17.114	0	1.001	5471535	1458060	1212	3030	1203	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.751	17.076	-19	0.980	37078	8304	820	2050	10		
305.8987	16.736	17.076	-20	0.979	48230	12096	1212	3030	10	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.010	22518242	5687480	5283	13207	1077		
333.9339	17.794	17.794	0	1.010	27097983	7000657	9463	23657	740	0.83(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	2886458	712795	1115	2787	639		
321.8936	17.809	17.809	0	1.001	3733077	938463	655	1637	1433	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.011	33457645	8366742	3340	8350	2505		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.537						1115	2787			
321.8936	17.537						655	1637			
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.250	40089574	7314475	5820	14550	1257		
353.8970	22.020	22.020	0	1.250	25679385	4781778	4293	10732	1114	1.56(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.047	22.047	0	1.001	23884079	4450061	3262	8155	1364		
341.8567	22.047	22.047	0	1.001	14968473	2768480	2592	6480	1068	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.325	43188266	7333077	5820	14550	1260		
353.8970	23.343	23.343	0	1.325	28401307	4963080	4293	10732	1156	1.52(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370	23.370	0	1.001	22835482	3904097	3262	8155	1197		
341.8567	23.370	23.370	0	1.001	14329545	2463879	2592	6480	951	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						235	587			
341.8567	19.851						705	1762			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.565	23.067	-30	1.025	201081	34731	3262	8155	11		
341.8567	22.565	23.067	-30	1.025	132404	24626	2592	6480	10	1.52(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.366	27199535	4476672	2209	5522	2027		
369.8919	24.038	24.052	-1	1.365	16910968	2752118	1416	3540	1944	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.065	24.079	-1	1.001	15388216	2502571	1032	2580	2425		
357.8516	24.065	24.079	-1	1.001	9676341	1584459	598	1495	2650	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1032	2580			
357.8516	23.696						598	1495			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.186	30.186	0	0.945	20835888	3641392	5034	12585	723		
385.8610	30.186	30.186	0	0.945	40248825	6876719	9729	24322	707	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.213	30.213	0	1.001	17675342	3113033	4542	11355	685		
375.8178	30.213	30.213	0	1.001	14423930	2508173	4441	11102	565	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	18802087	3486735	5034	12585	693		
385.8610	30.399	30.399	0	0.951	36659824	6743608	9729	24322	693	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.000	18560743	3371428	4542	11355	742		
375.8178	30.412	30.412	0	1.000	15238378	2764717	4441	11102	623	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.304	31.291	1	0.980	18048041	4638075	5034	12585	921		
385.8610	31.304	31.291	1	0.980	34487764	8737254	9729	24322	898	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317	31.317	0	1.000	18065921	4695769	4542	11355	1034		
375.8178	31.317	31.317	0	1.000	14889424	3909435	4441	11102	880	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.143	0	1.006	15937648	4722094	5034	12585	938		
385.8610	32.143	32.143	0	1.006	30978624	9059222	9729	24322	931	0.51(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.156	32.156	0	1.000	16092574	4793547	4542	11355	1055		
375.8178	32.156	32.156	0	1.000	13250484	3941488	4441	11102	888	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.338						4542	11355			
375.8178	30.338						4441	11102			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		57564291	16579593	6674	16685	2484		
403.8529	31.956	31.956	0		46615601	13338506	5450	13625	2447	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.504	31.504	0	0.986	22810219	6222605	6674	16685	932		
403.8529	31.504	31.504	0	0.986	18374805	5005106	5450	13625	918	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.517	31.517	0	1.000	12316199	3429883	3081	7702	1113		
391.8127	31.517	31.517	0	1.000	9775521	2705714	2336	5840	1158	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	23741411	6426043	6674	16685	963		
403.8529	31.610	31.610	0	0.989	19021388	5128311	5450	13625	941	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.624	31.624	0	1.000	13248494	3512524	3081	7702	1140		
391.8127	31.624	31.624	0	1.000	10510992	2838913	2336	5840	1215	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.969	31.969	0	1.015	14223147	4116493	3081	7702	1336		
391.8127	31.969	31.969	0	1.015	11301511	3232738	2336	5840	1384	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.525						3081	7702			
391.8127	30.525						2336	5840			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.615	33.603	1	1.052	10867374	4098467	10142	25355	404		
419.8220	33.615	33.603	1	1.052	24913442	9216265	21687	54217	425	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.627	33.615	1	1.000	14124100	5239793	11340	28350	462		
409.7789	33.627	33.615	1	1.000	13714564	4853678	13910	34775	349	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.685	34.672	1	1.085	10682190	3615183	10142	25355	356		
419.8220	34.685	34.672	1	1.085	24672939	8383490	21687	54217	387	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685	34.685	0	1.000	12150400	4061940	11340	28350	358		
409.7789	34.685	34.685	0	1.000	11598731	3961654	13910	34775	285	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						11340	28350			
409.7789	34.150						13910	34775			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	15638324	5390078	5306	13265	1016		
437.8140	34.393	34.393	0	1.076	15341536	5341169	6446	16115	829	1.02(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	9415719	3299547	3099	7747	1065		
425.7737	34.405	34.405	0	1.000	9124770	3261395	4007	10017	814	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						3099	7747			
425.7737	34.223						4007	10017			
13C-OCDD											
469.7779	36.713	36.701	1	1.149	21505619	6636959	2361	5902	2811		
471.7750	36.713	36.701	1	1.149	24809865	7568325	2617	6542	2892	0.87(0.76-1.02)	
OCDF											
441.7428	36.809	36.797	1	1.003	16328082	5119075	1355	3387	3778		
443.7399	36.809	36.797	1	1.003	18346009	5567496	1534	3835	3629	0.89(0.76-1.02)	
OCDD											
457.7377	36.725	36.713	1	1.000	12789551	3848755	1190	2975	3234		
459.7348	36.713	36.713	0	1.000	14503486	4417257	1735	4337	2546	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d
Lims ID: LCS 320-515492/2-A
Client ID:
Inject. Date: 25-Aug-2021 12:05:46 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	86197808	22643378

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	86197808	22643378

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.751	37078	8304	48230	12096	0.0967	0.77	
Signal Totals:							
	37078	8304	48230	12096			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	85308	20400				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0967 = (85308 * 100.000) / (86197808 * 1.024)

Report Date: 27-Aug-2021 09:27:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d
Lims ID: LCS 320-515492/2-A
Client ID:
Inject. Date: 25-Aug-2021 12:05:46 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 4

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	65768959	12096253
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71589573	12296157

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	68679266	12196205

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.565	201081	34731	132404	24626	0.4670	1.52	
Signal Totals:							
	201081	34731	132404	24626			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	333485	59357				1.52	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4670 = (333485 * 100.000) / (68679266 * 1.040)

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

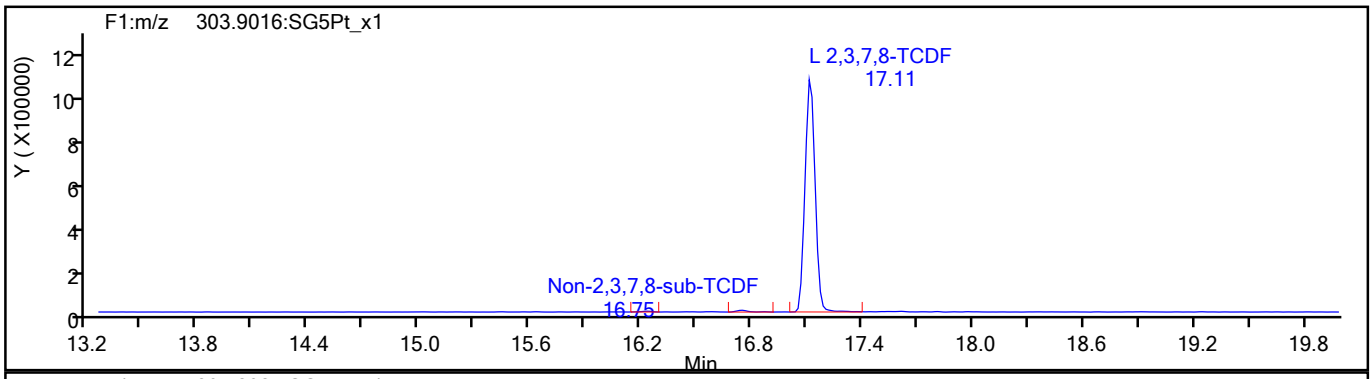

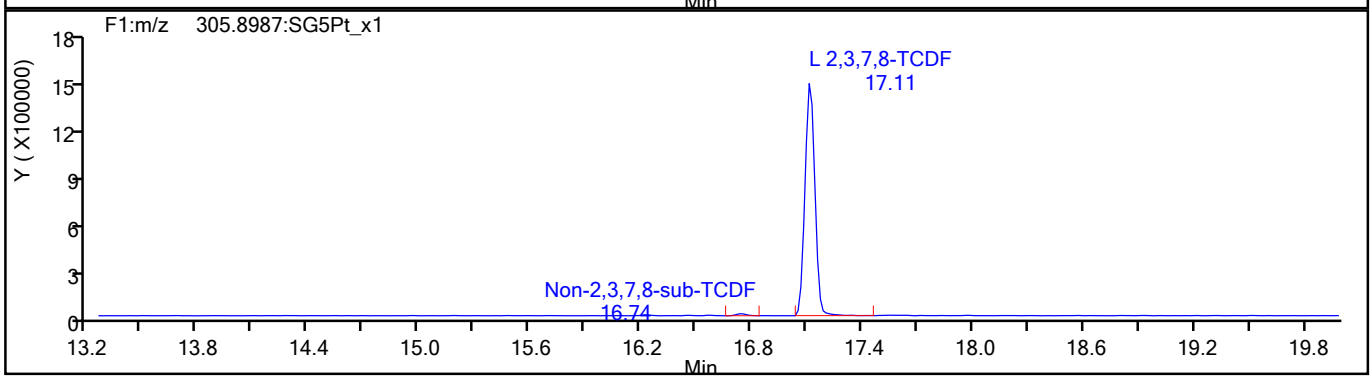

TCDF Standards

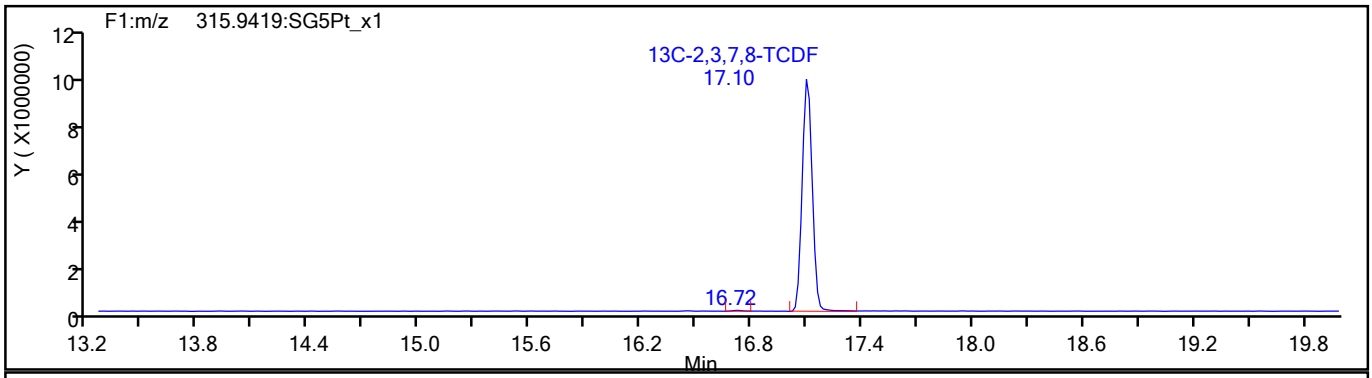

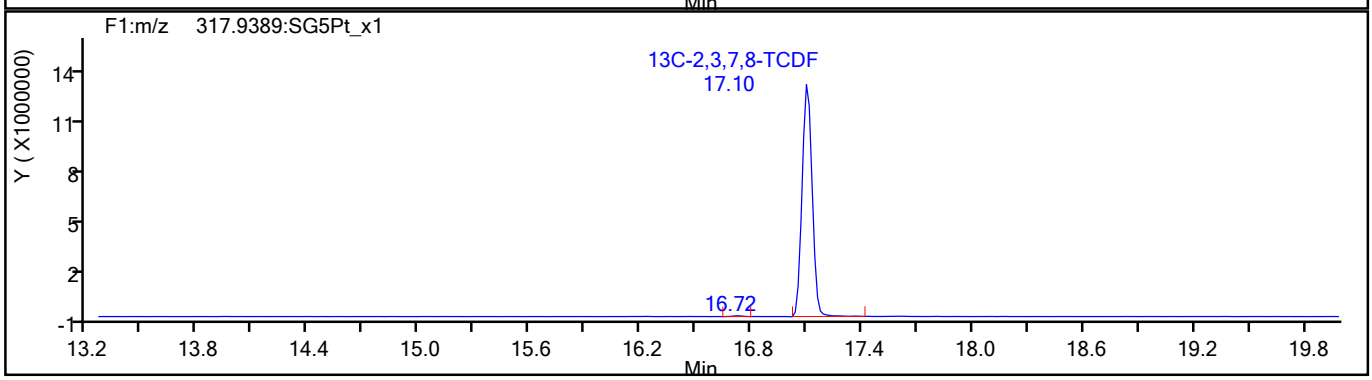

791987

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

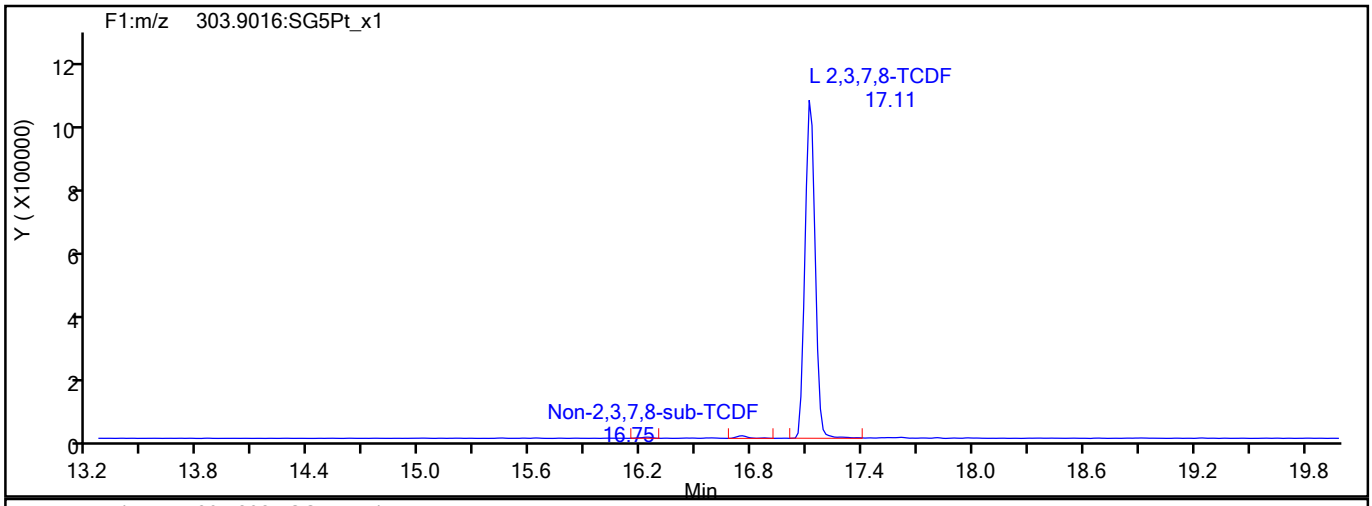

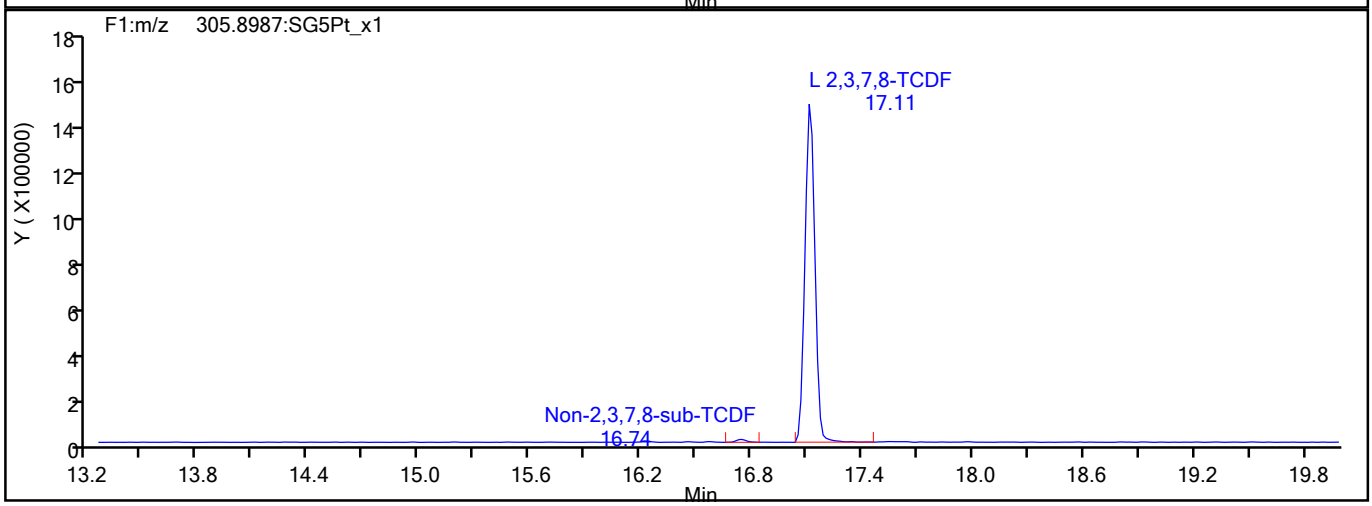

TCDF Interference Mass

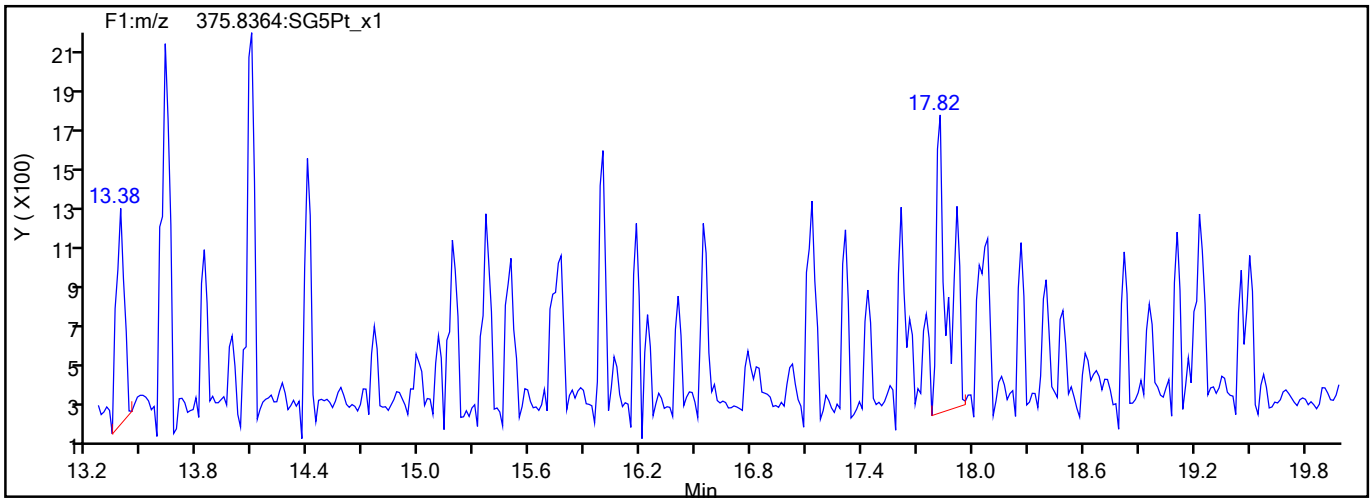

791988

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

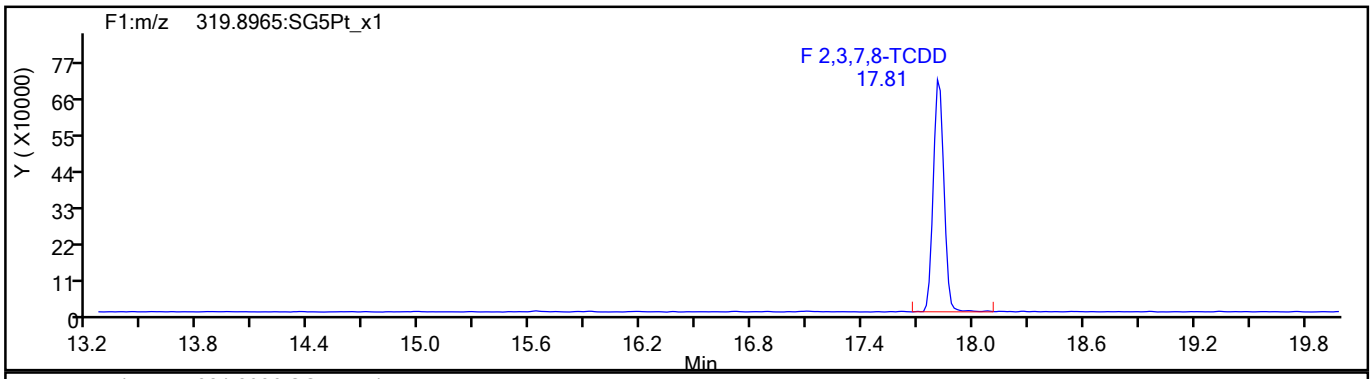

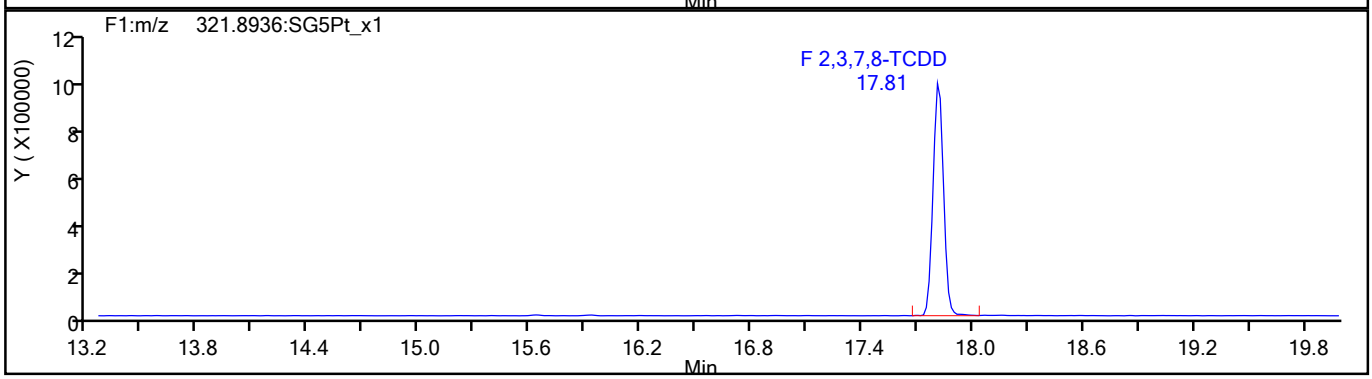

TCDD Standards

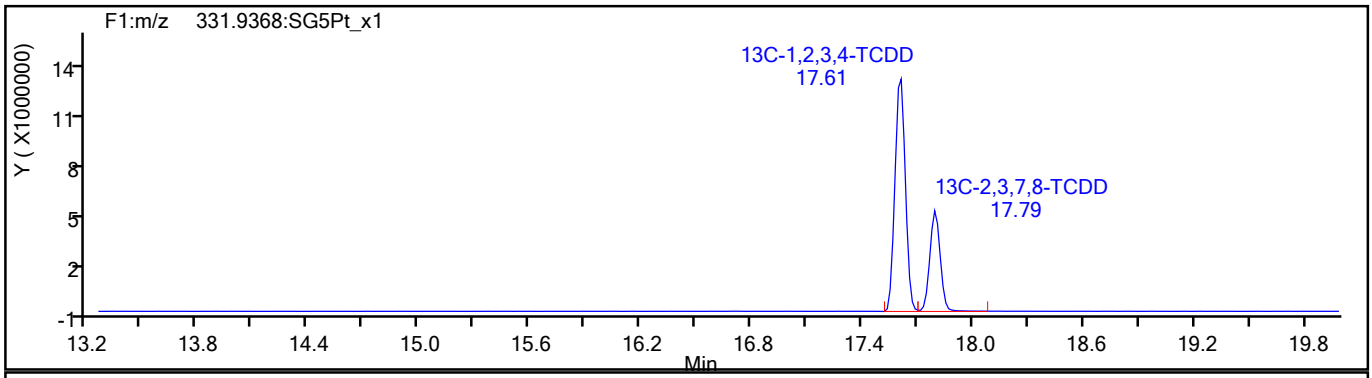

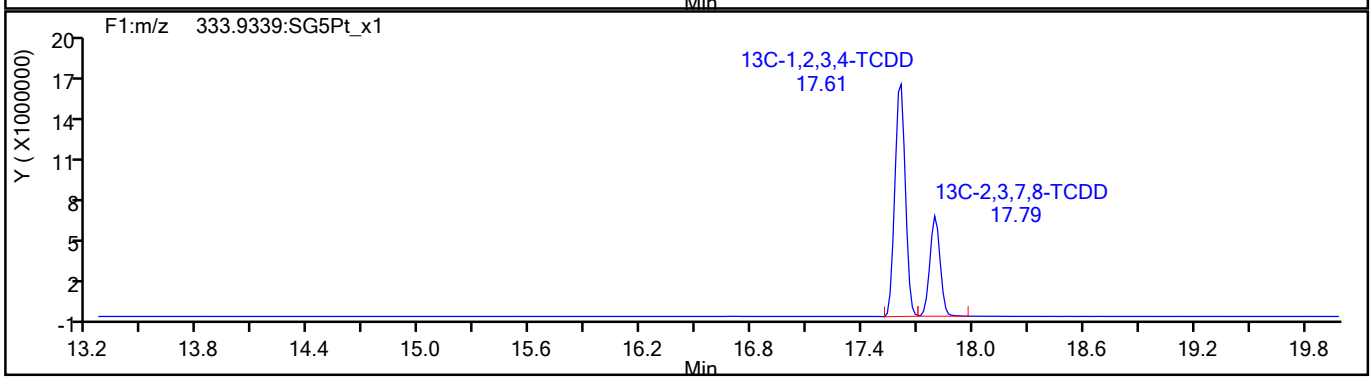

791989

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

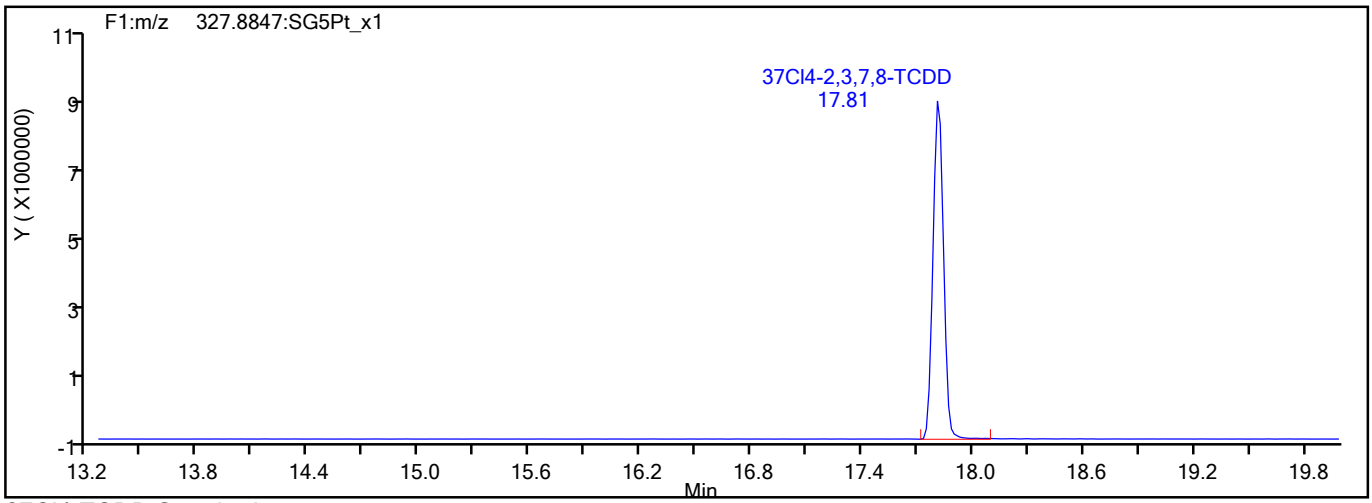

37Cl4-TCDD Standards

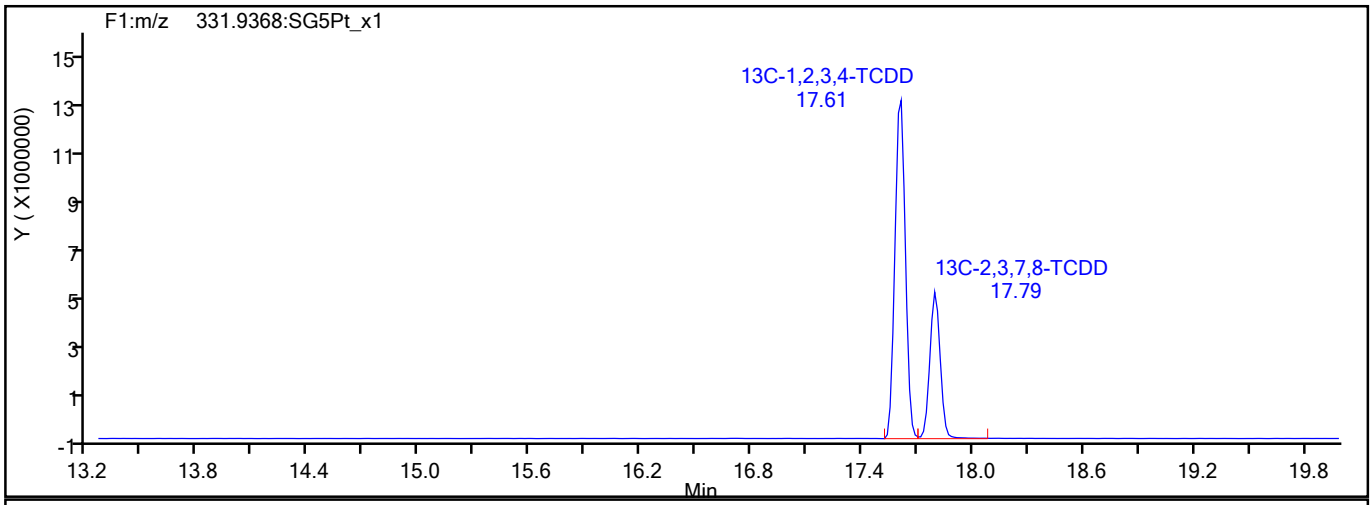

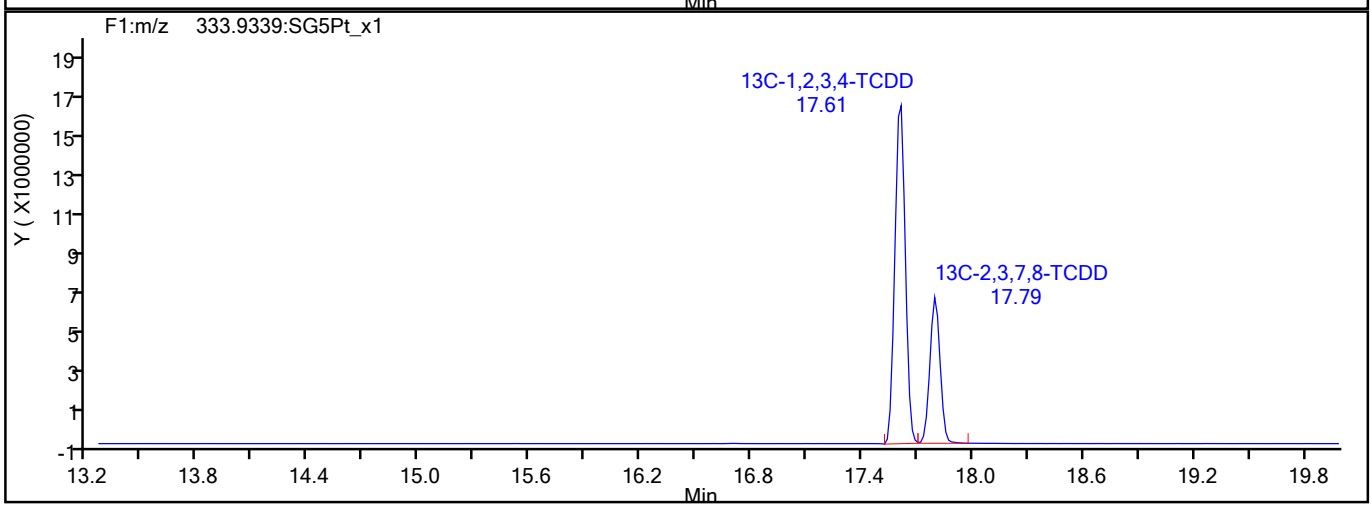

791990

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

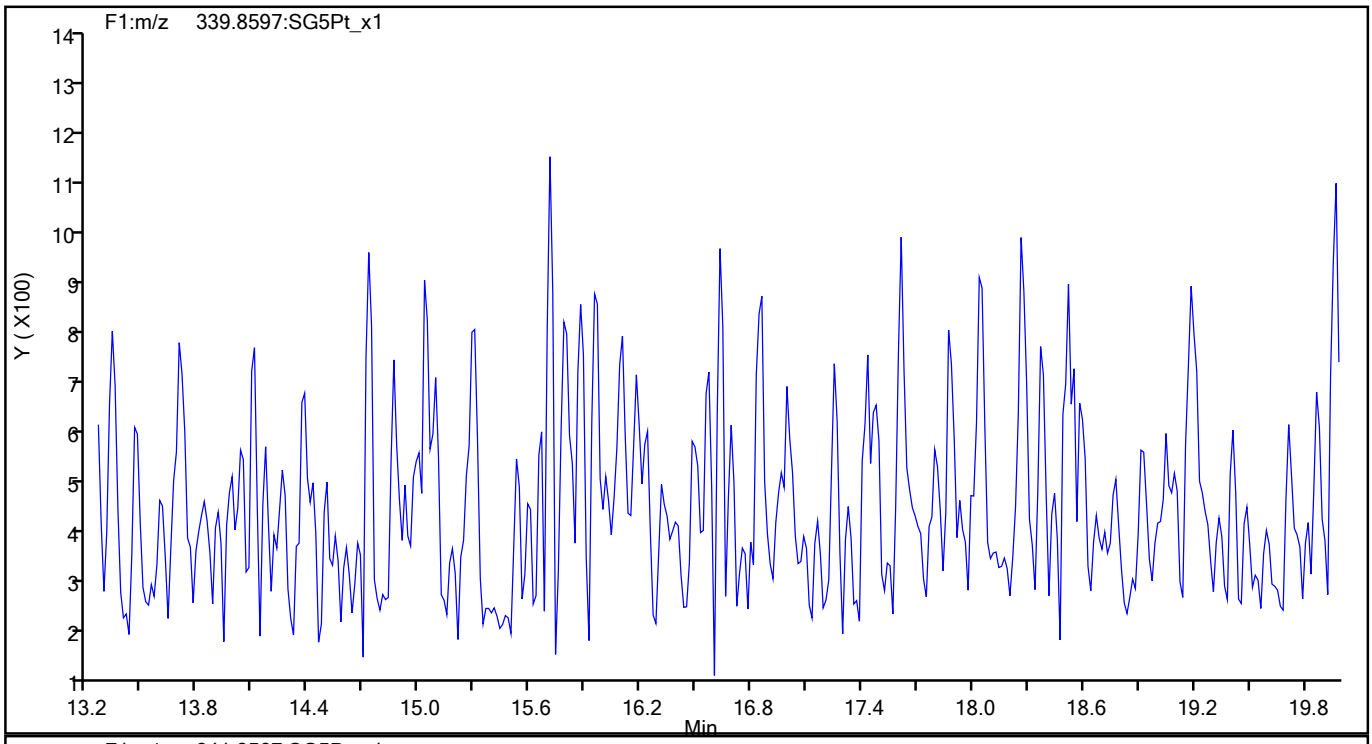

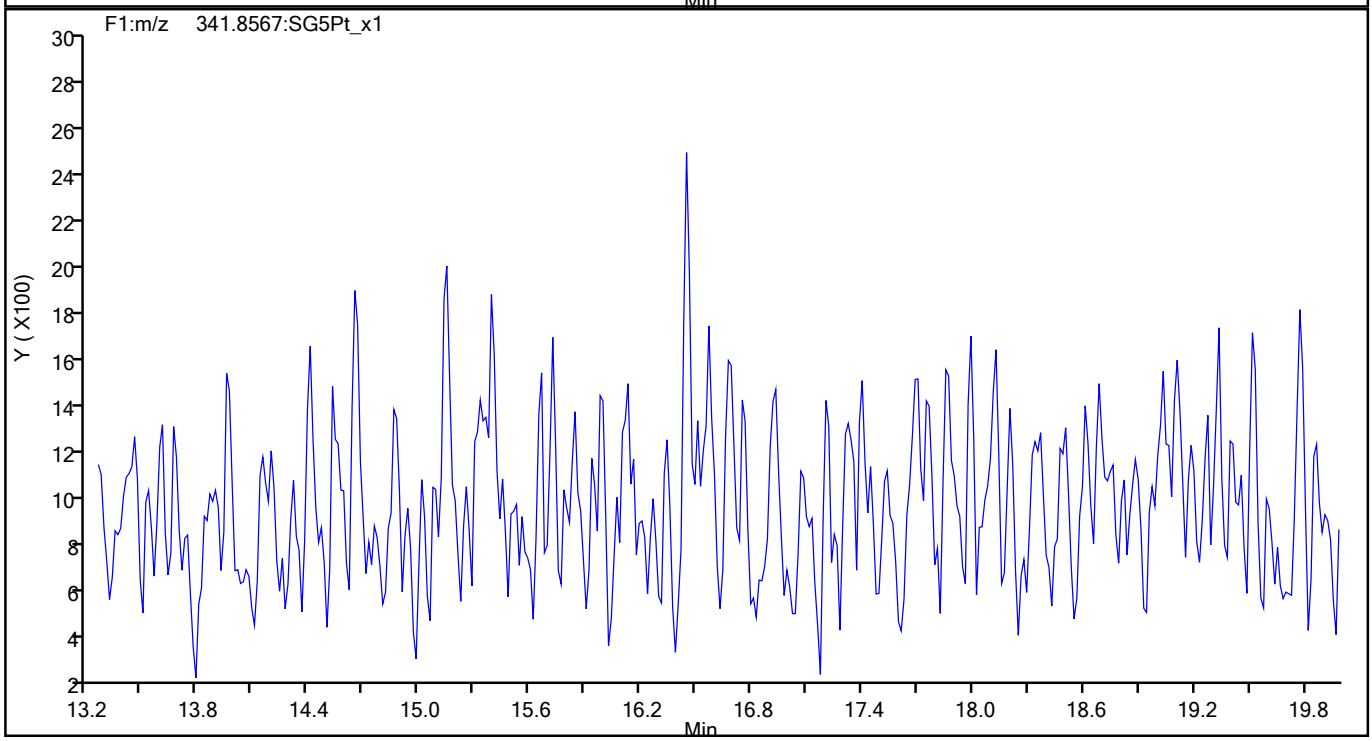

791991

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

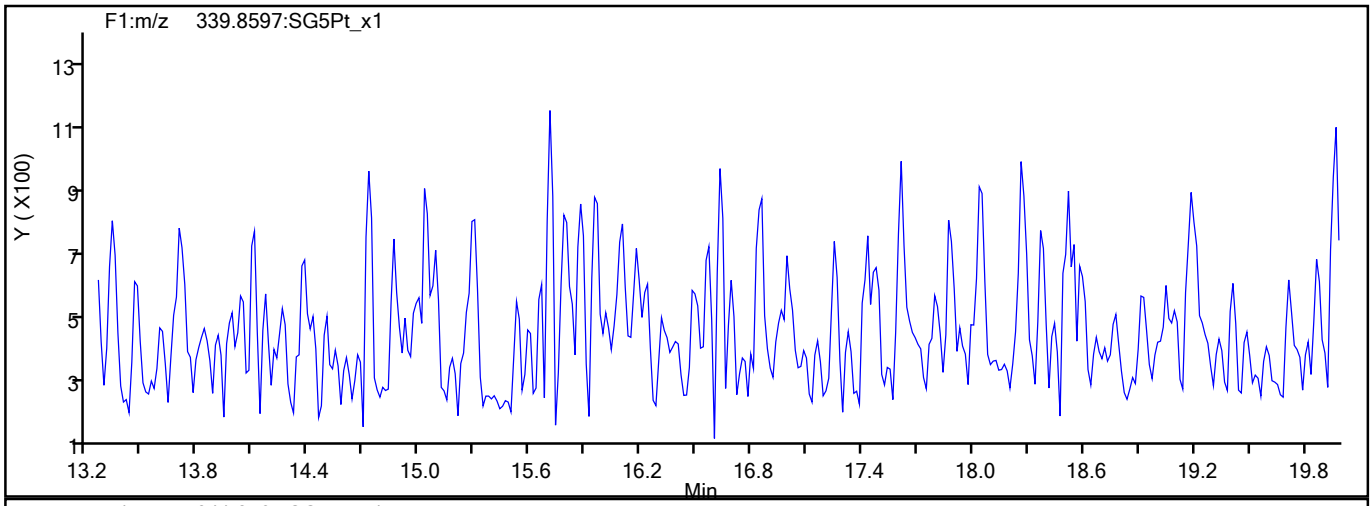

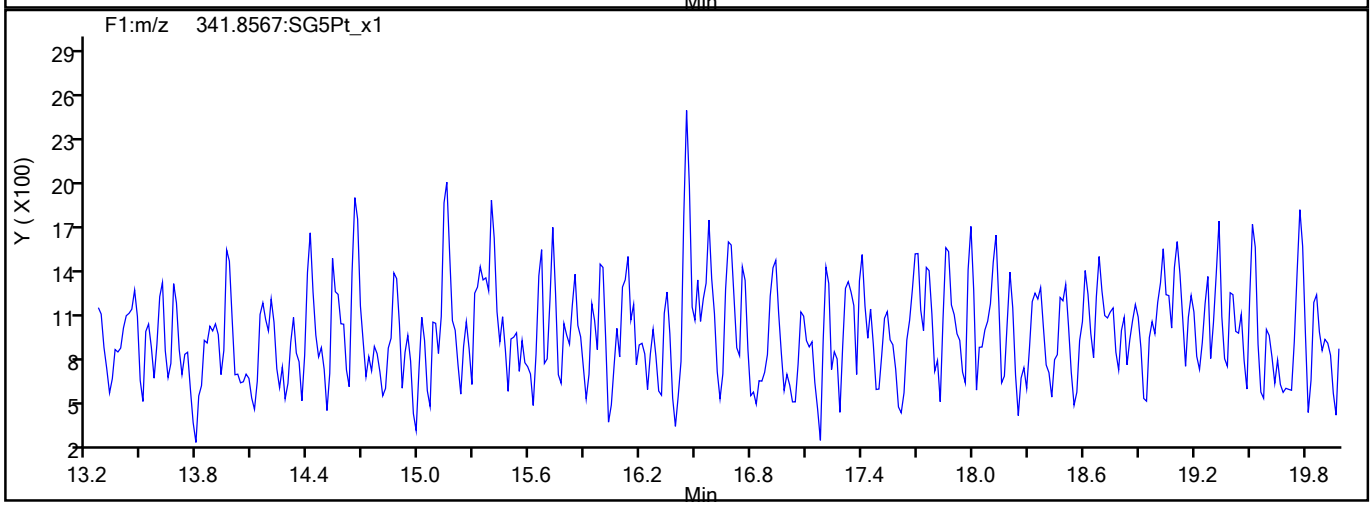

F1 PeCDFs Interference Mass

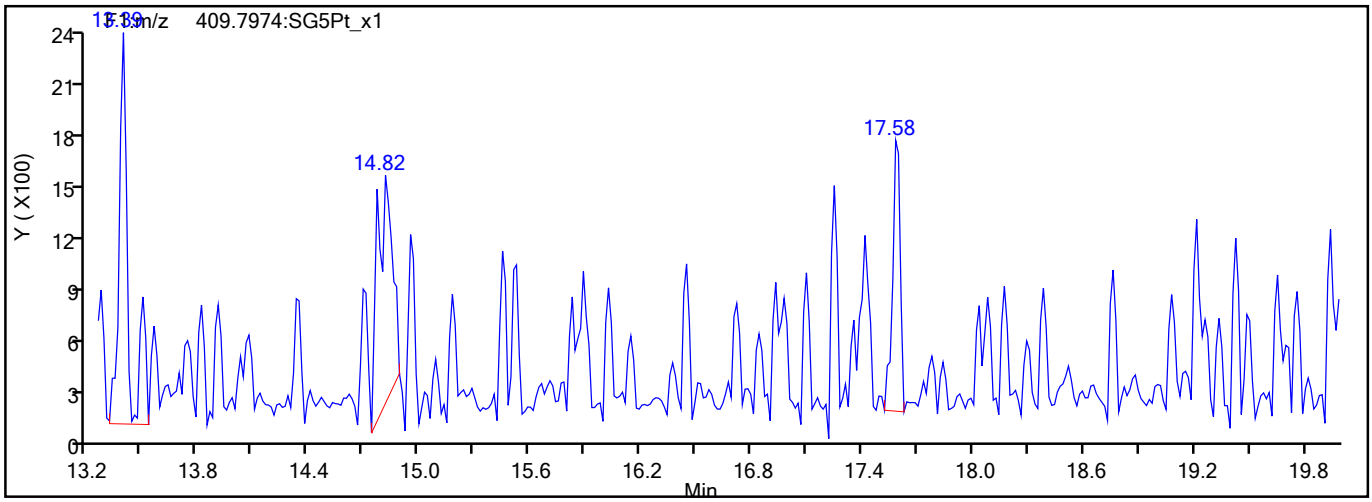

791992

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

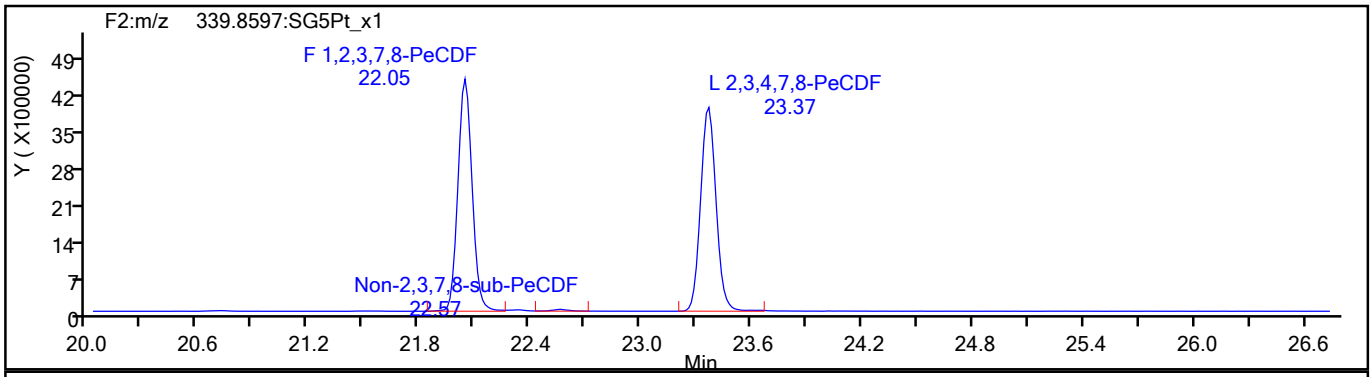

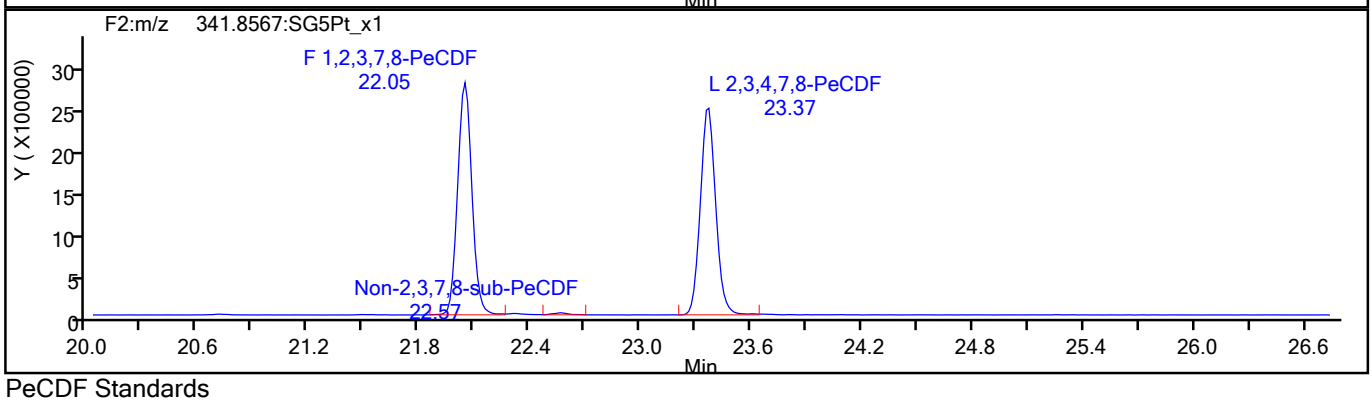

PeCDF Standards

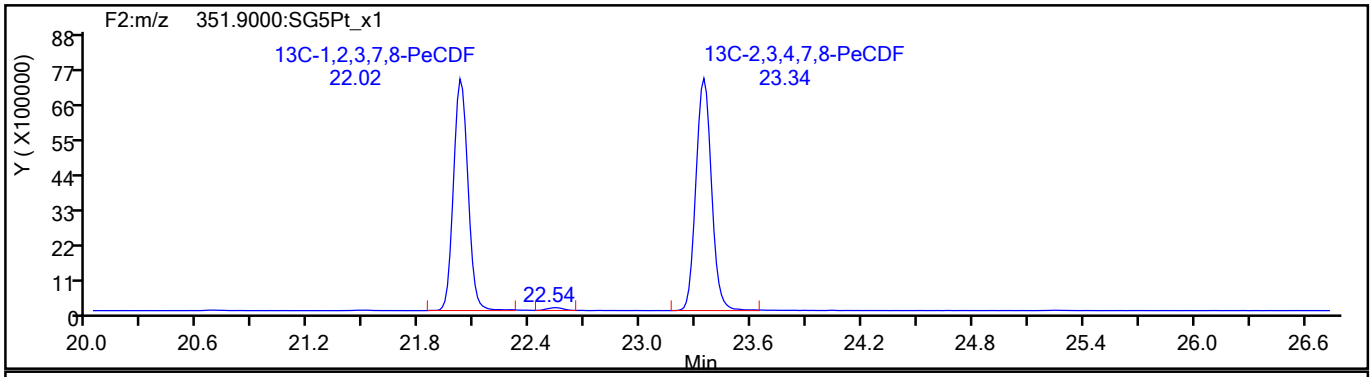

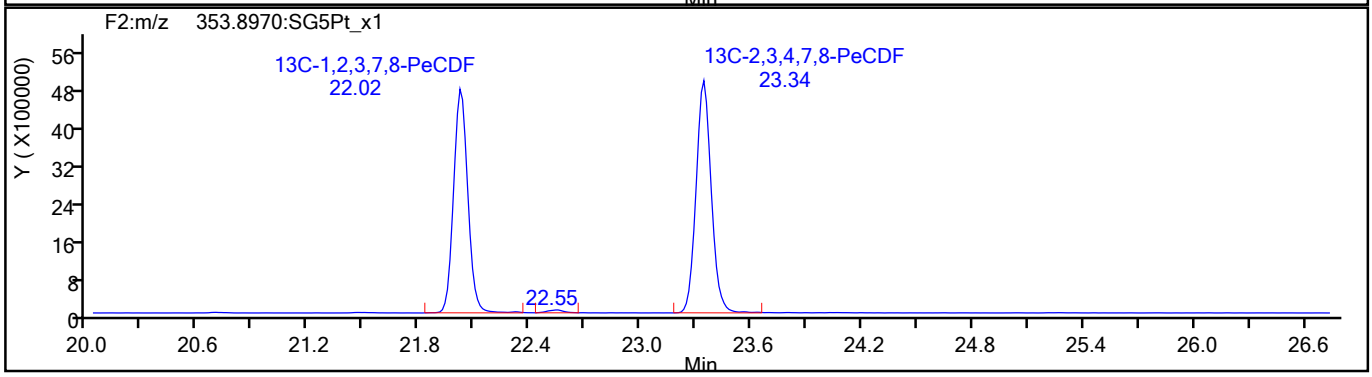

791993

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

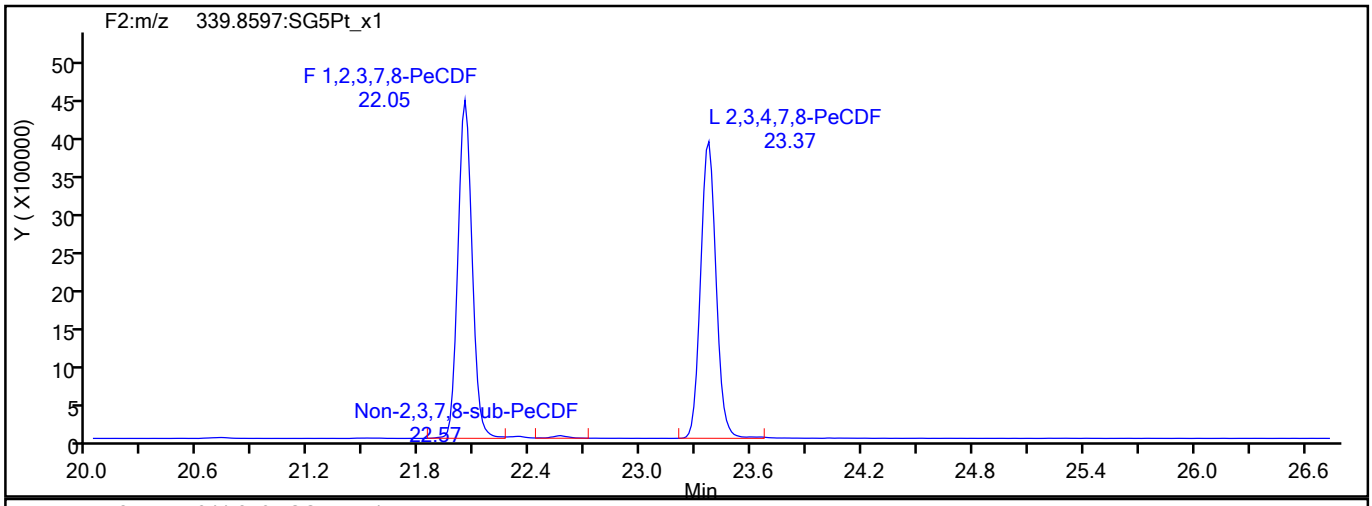

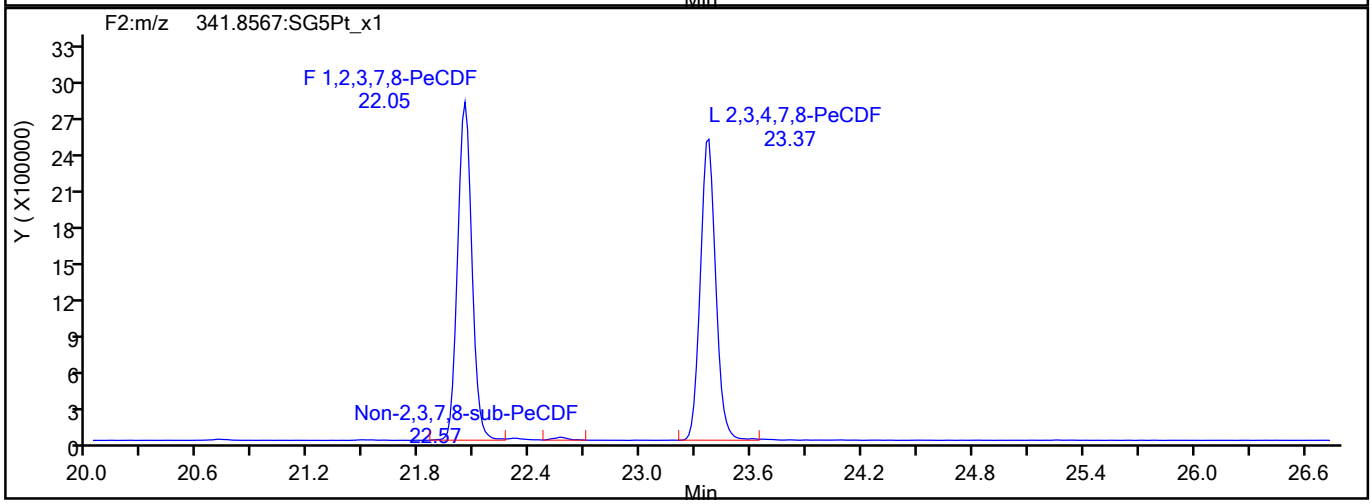

PeCDF Interference Mass

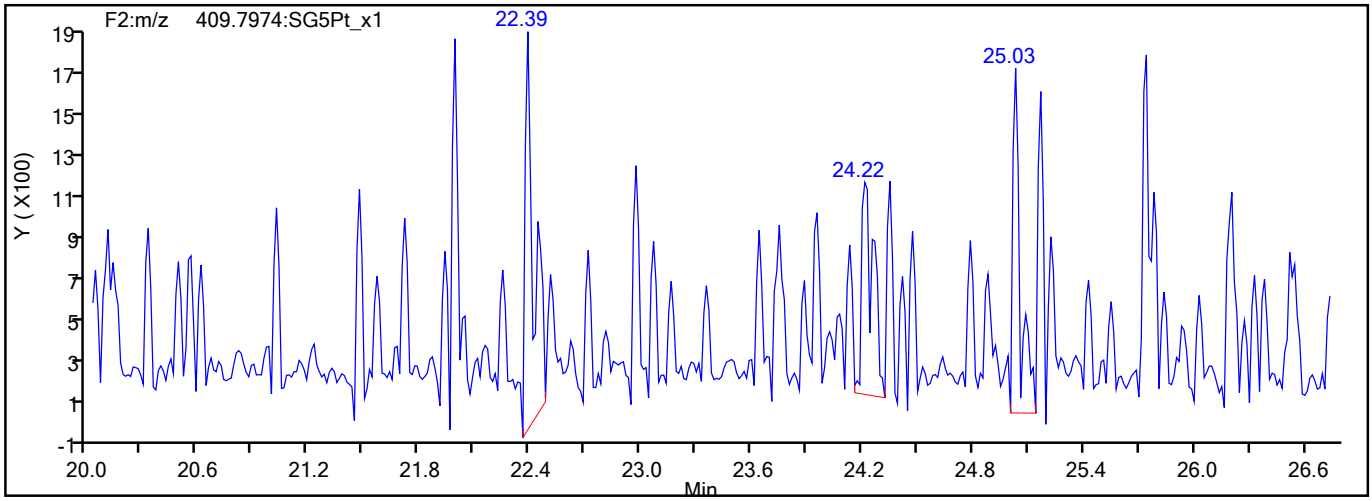

791994

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

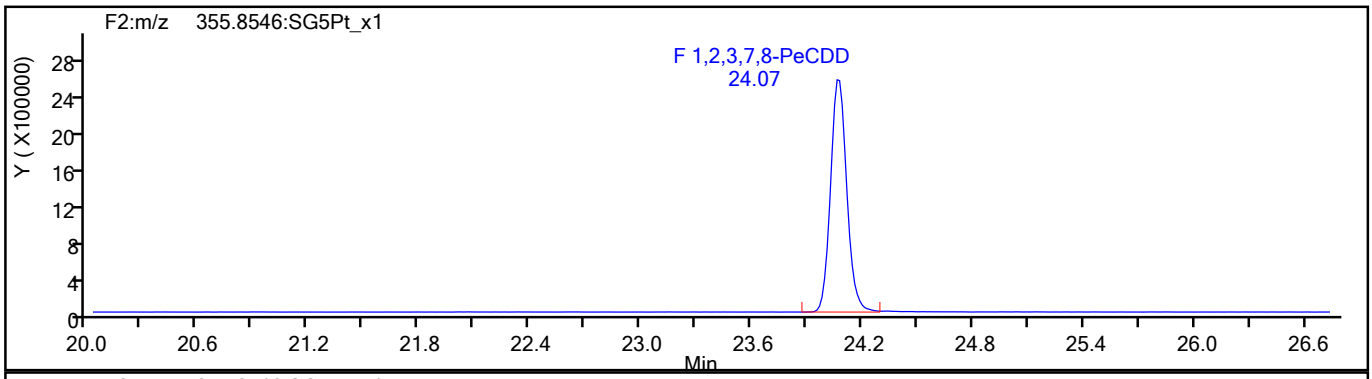

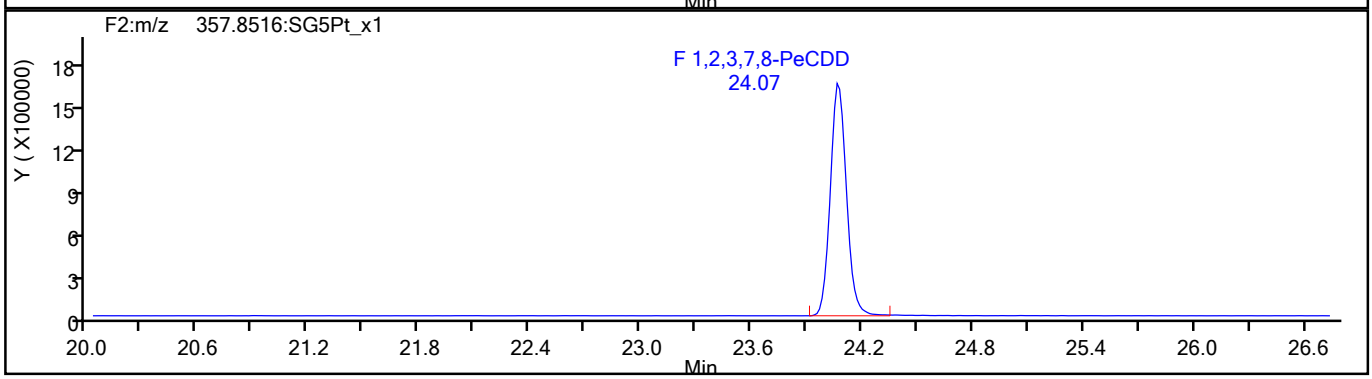

PeCDD Standards

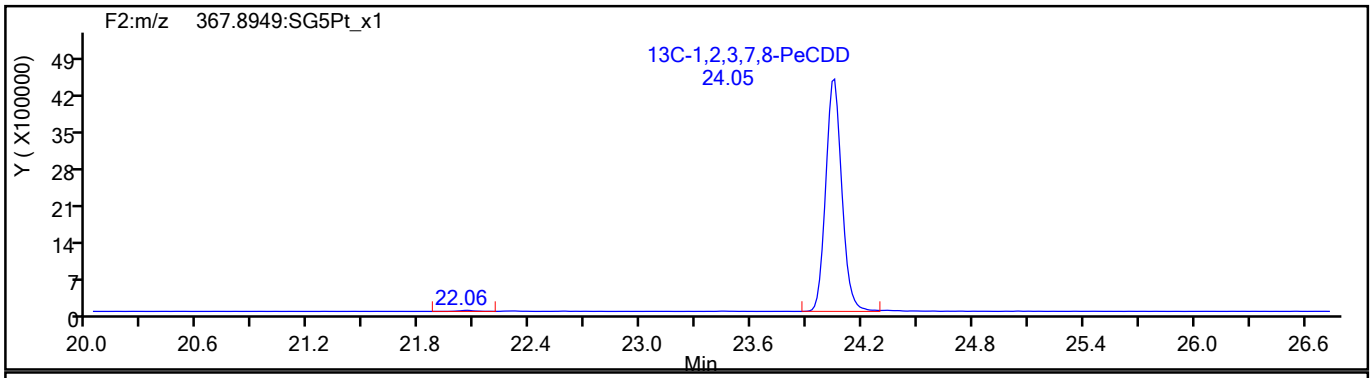

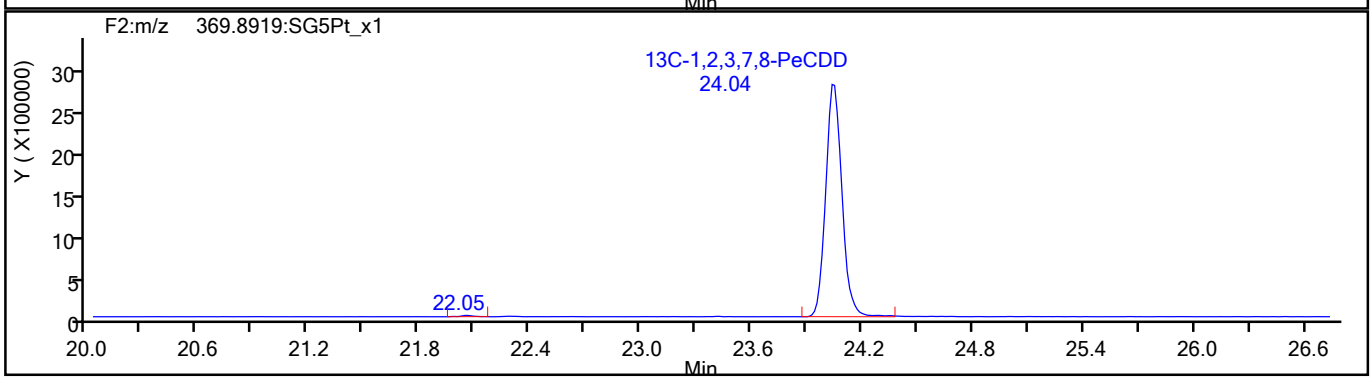

791995

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

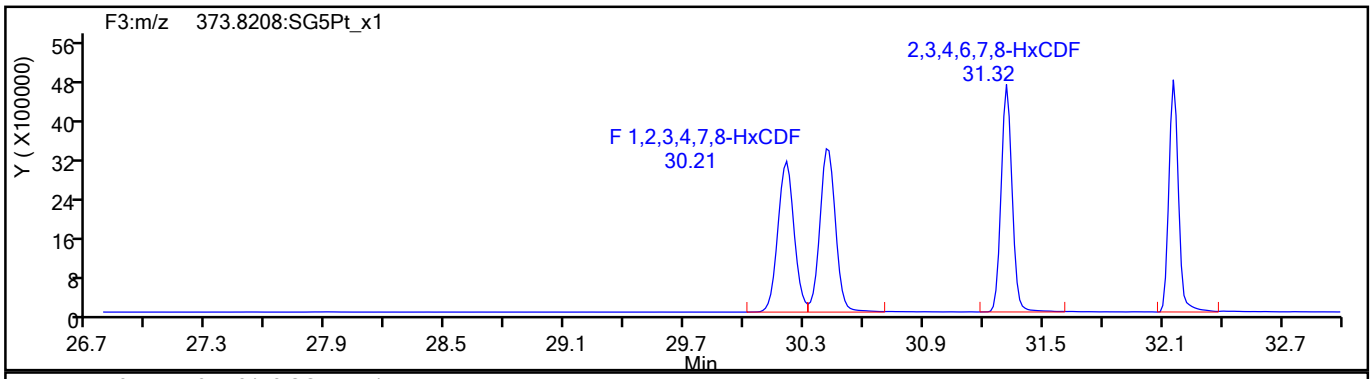

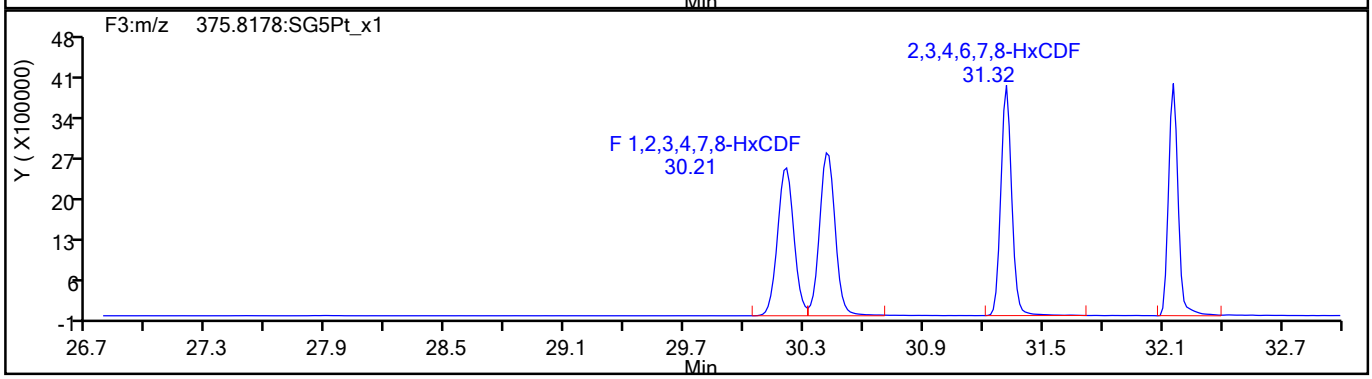

HxCDF Standards

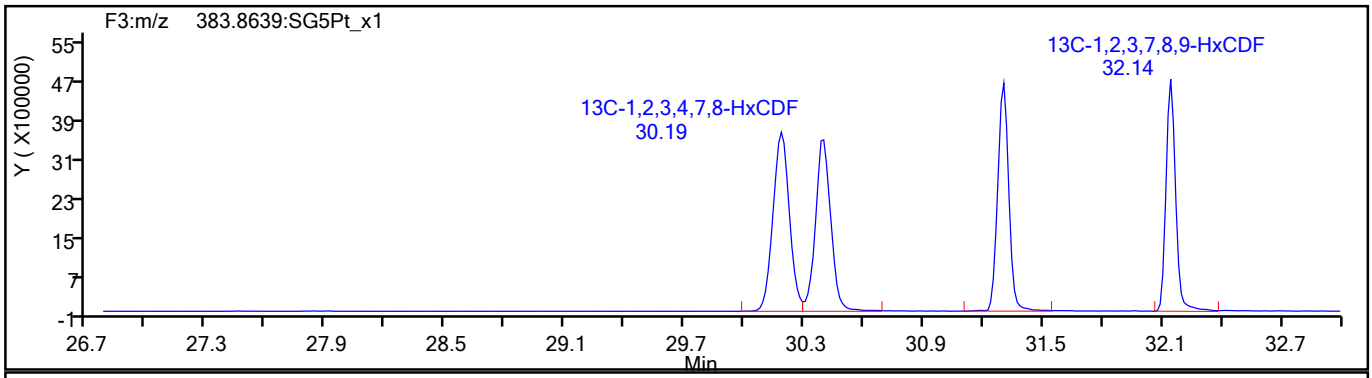

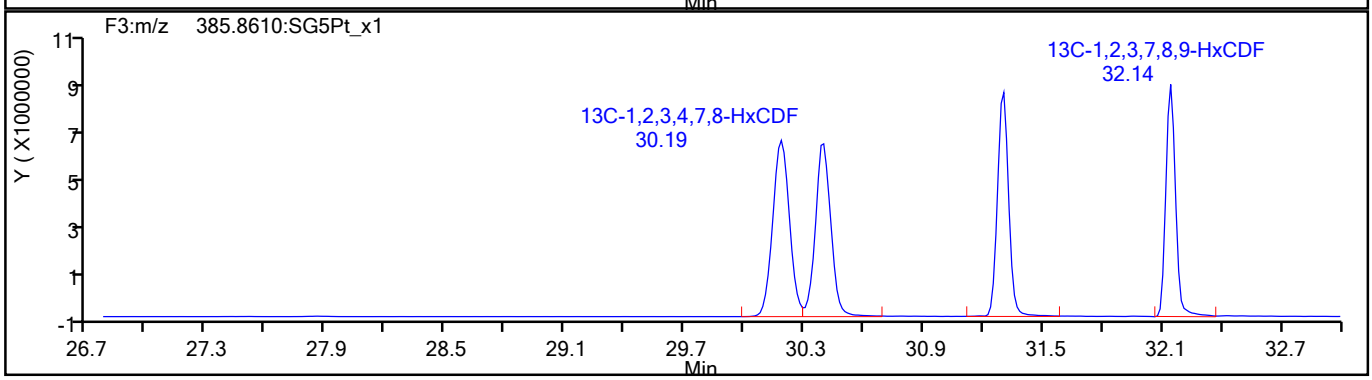

791996

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

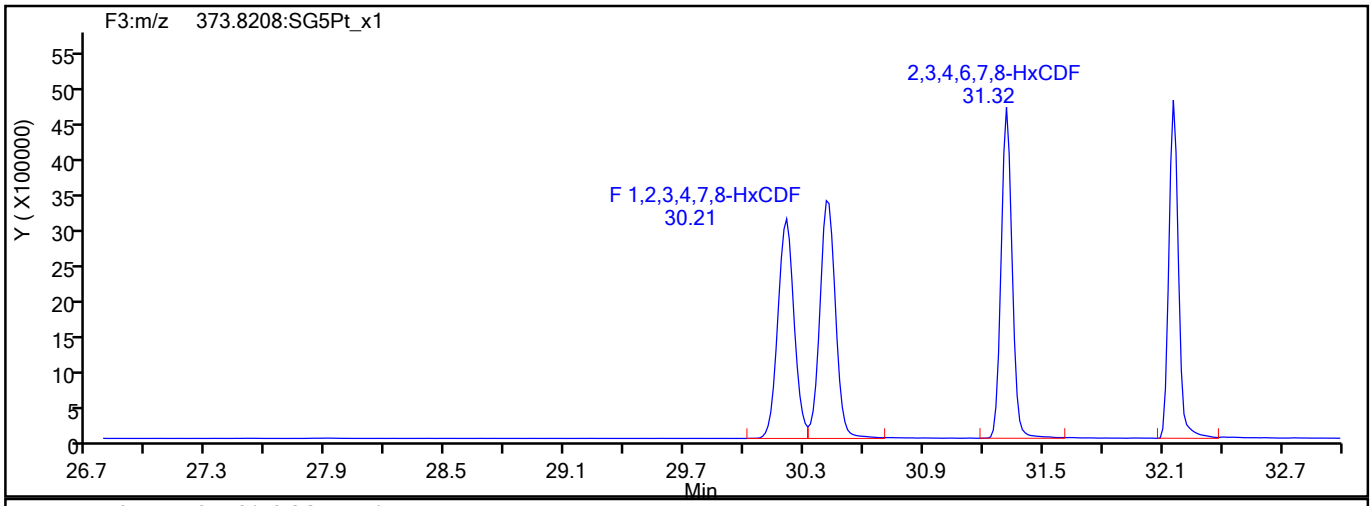

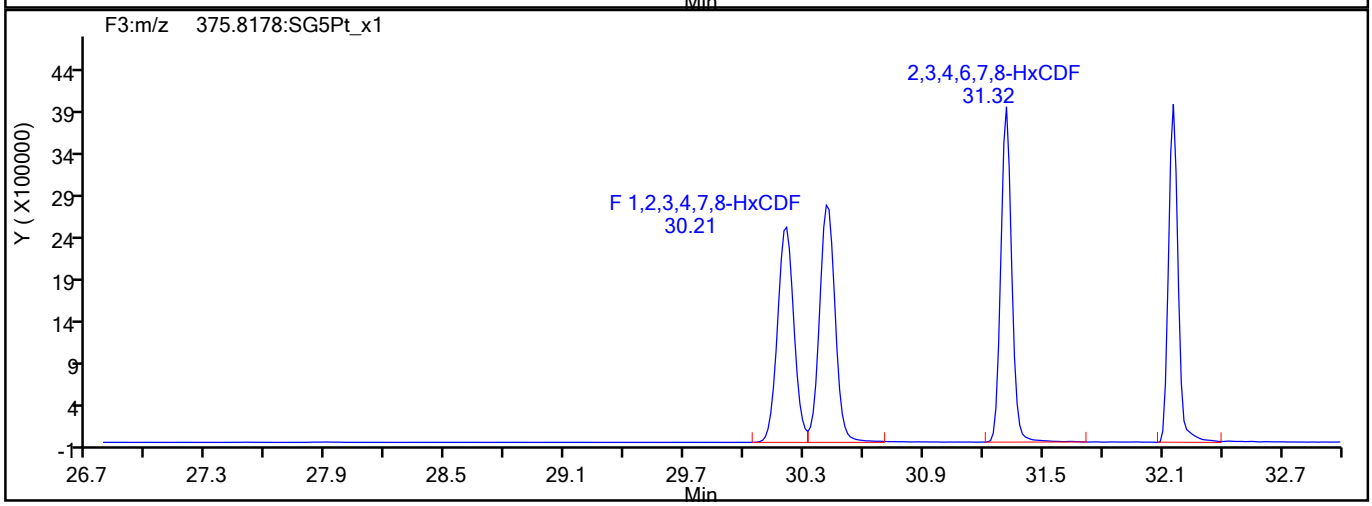

HxCDF Interference Mass

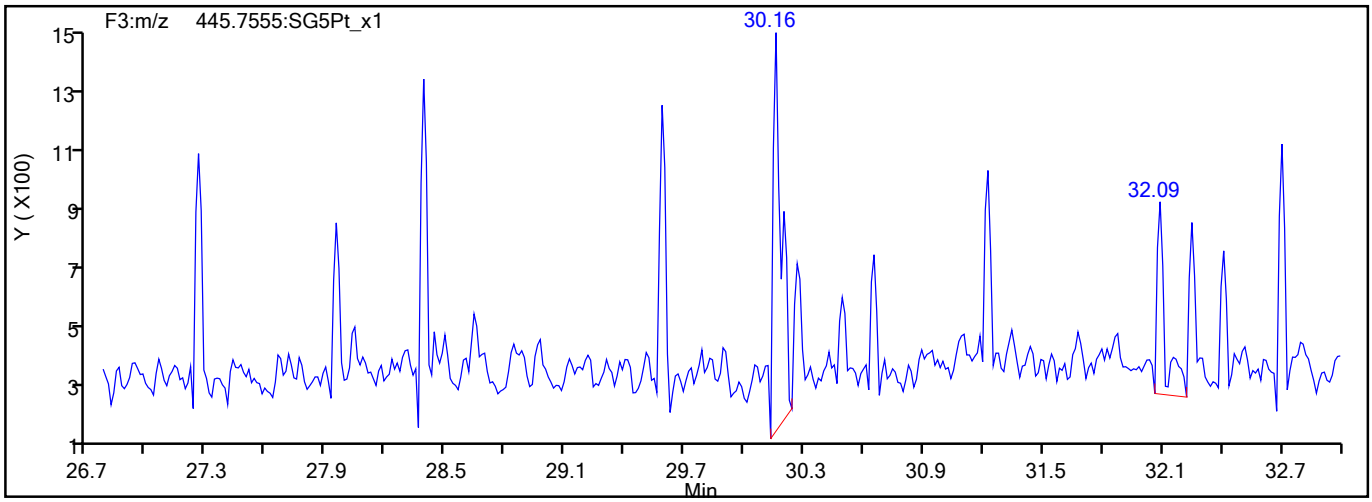

791997

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

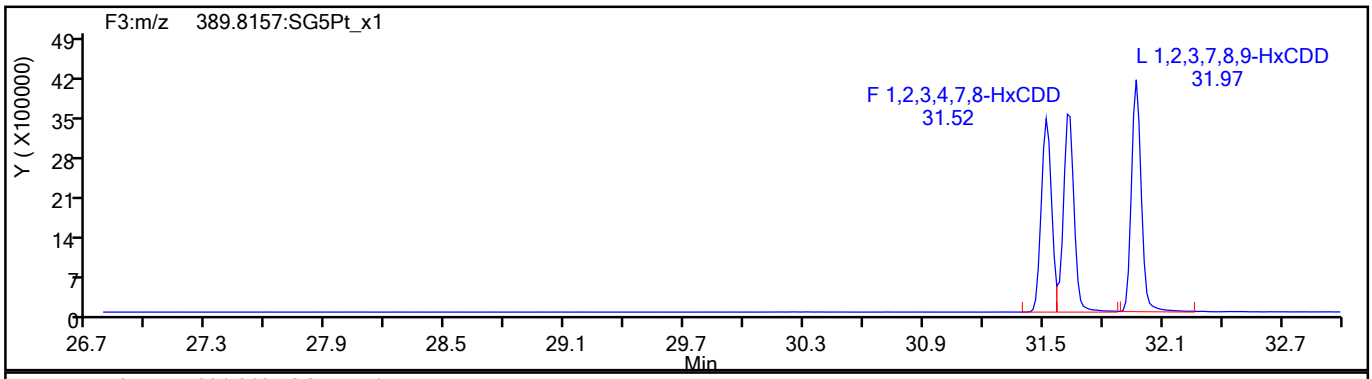

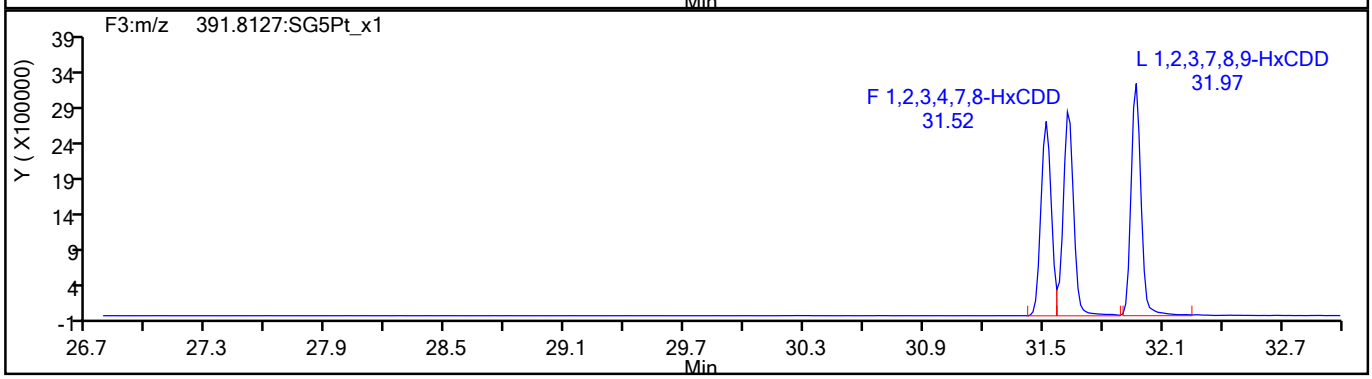

HxCDD Standards

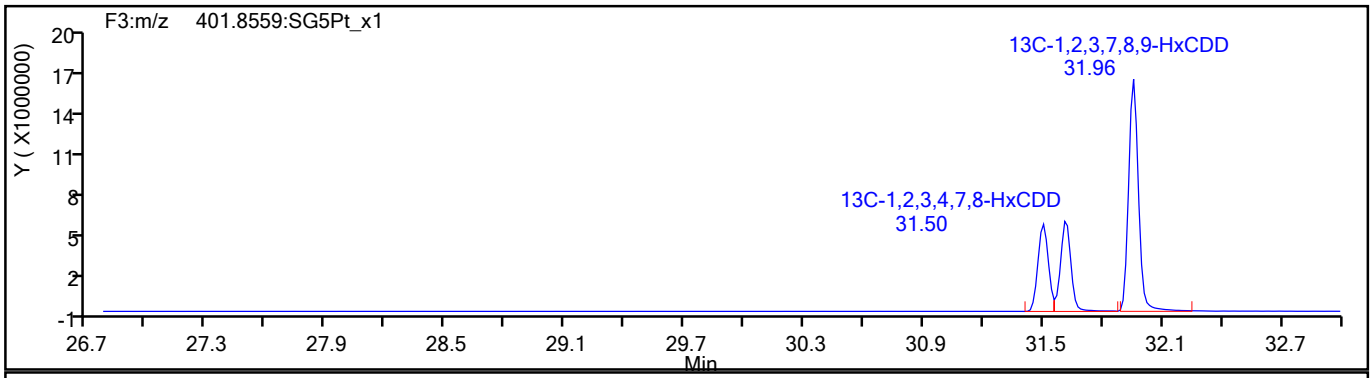

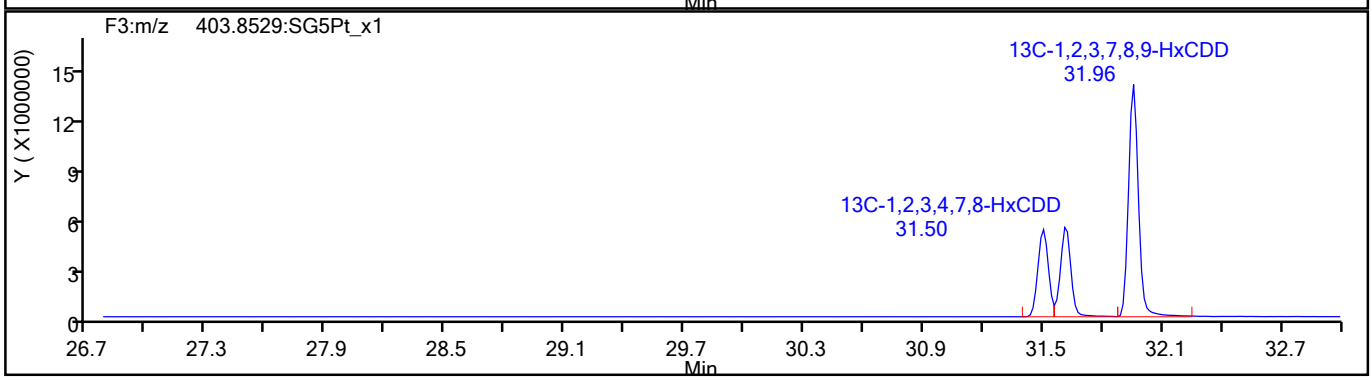

791998

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

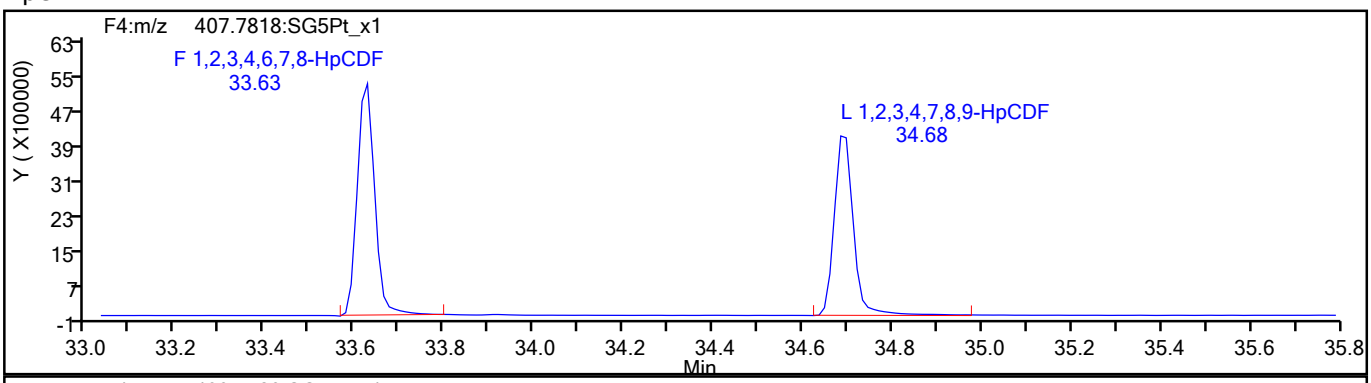

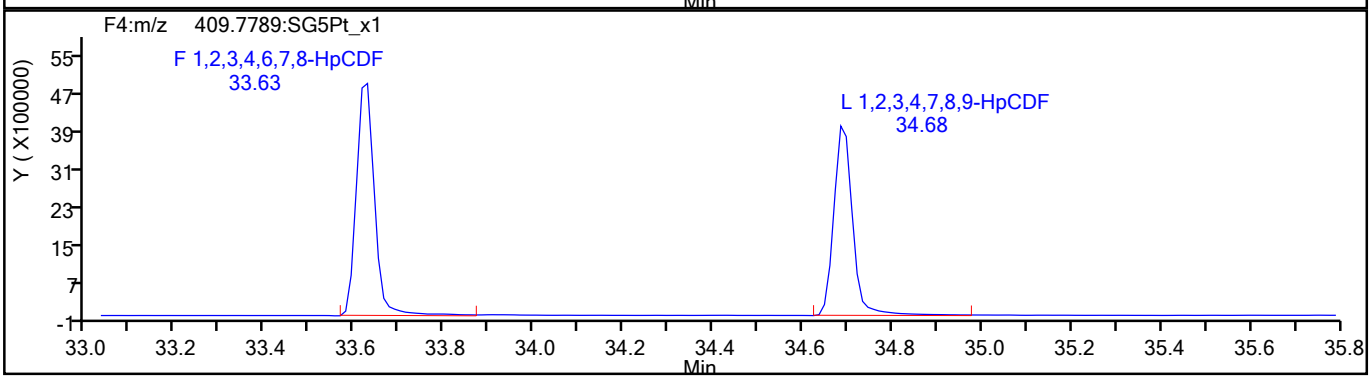

HpCDF Standards

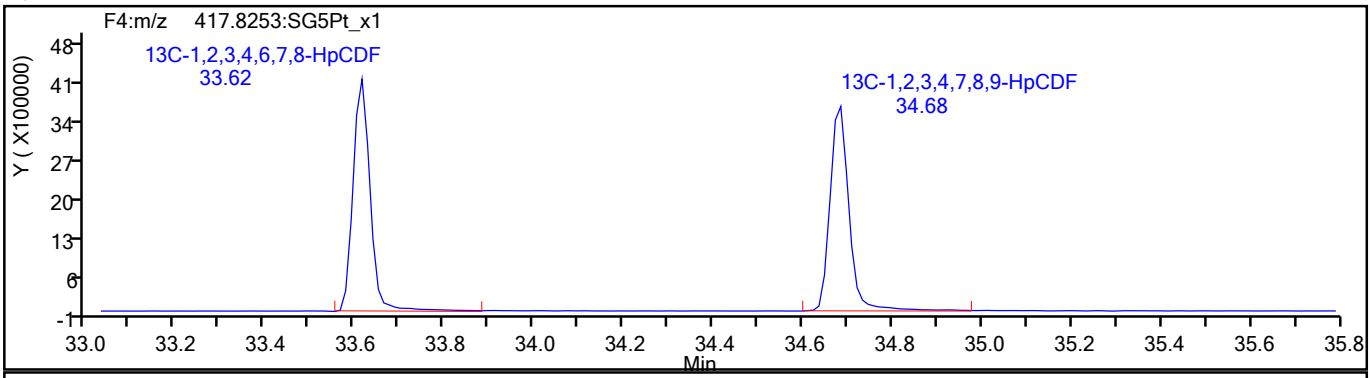

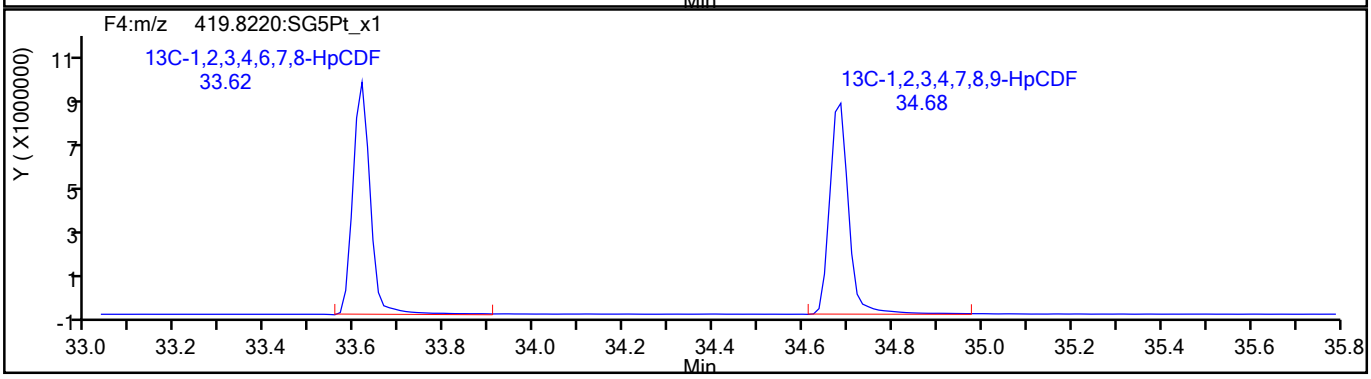

791999

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

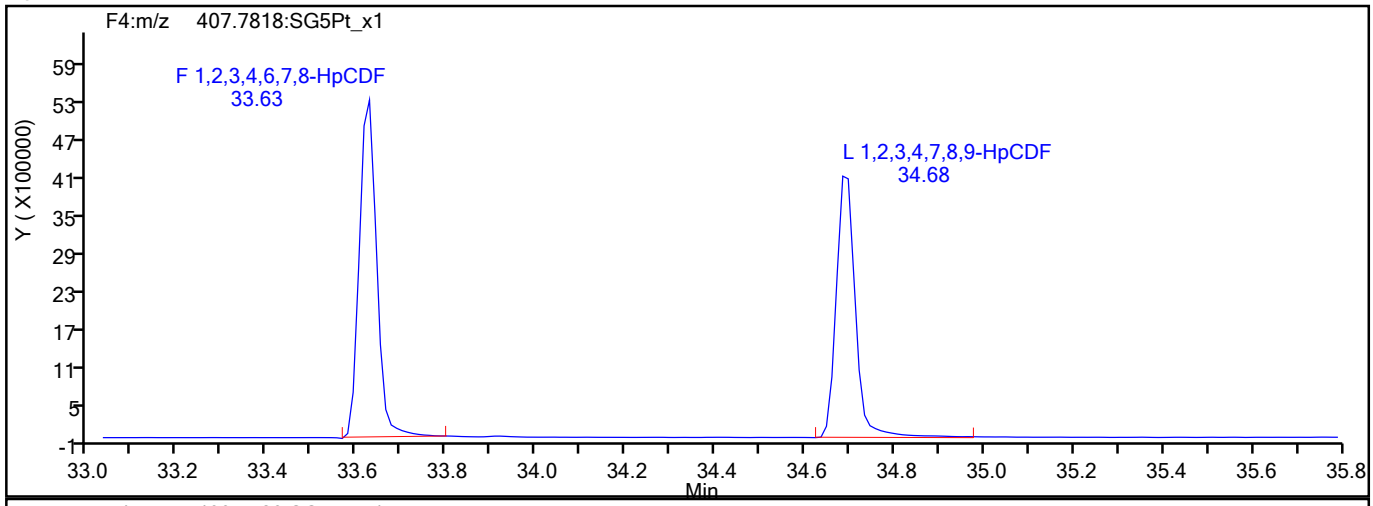

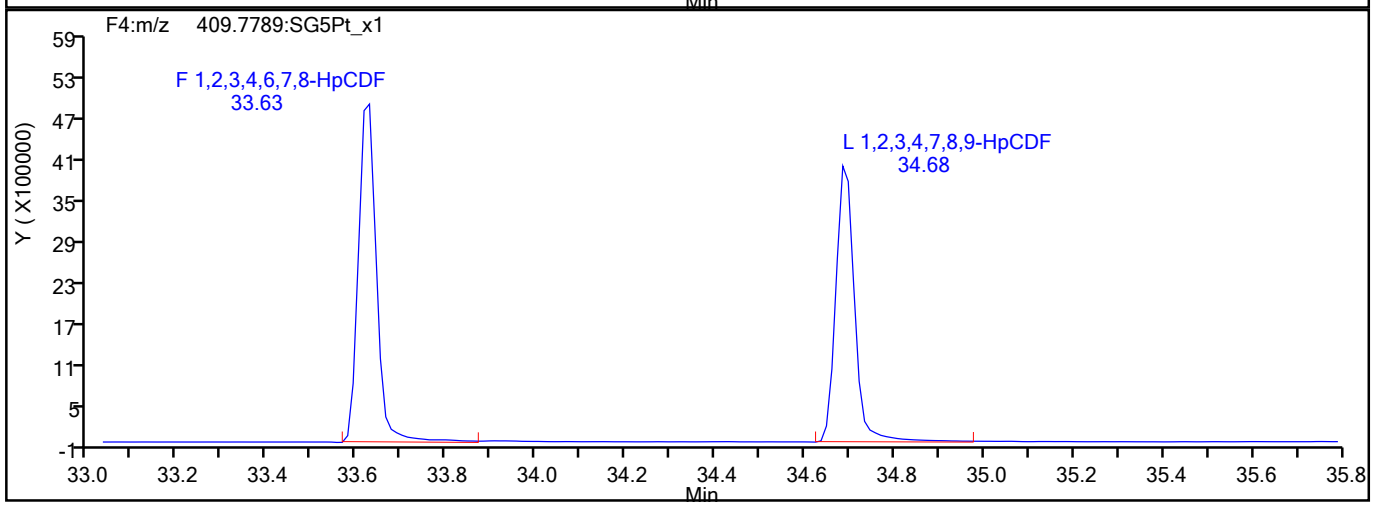

HpCDF Interference Mass

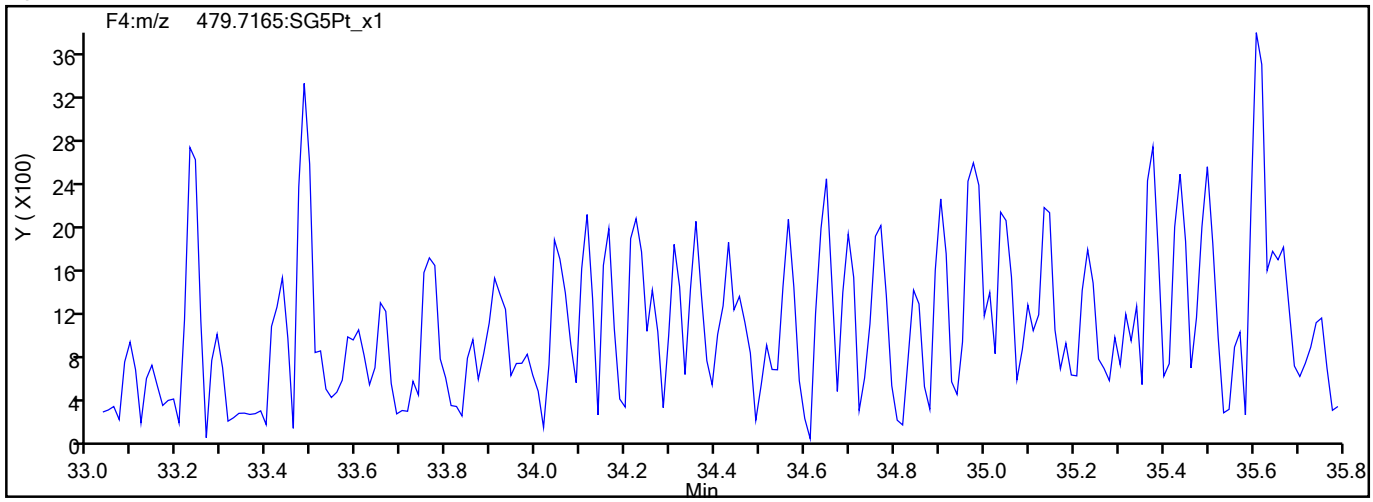

792000

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

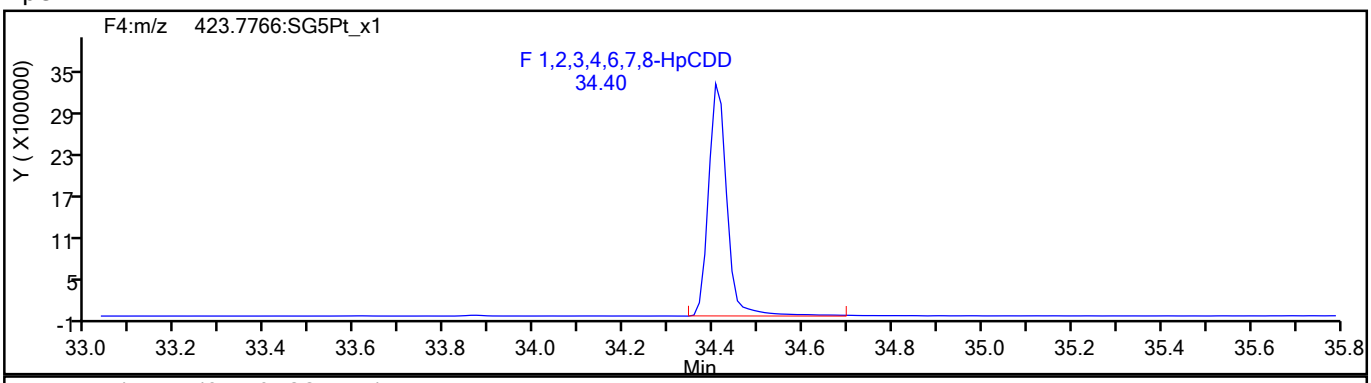

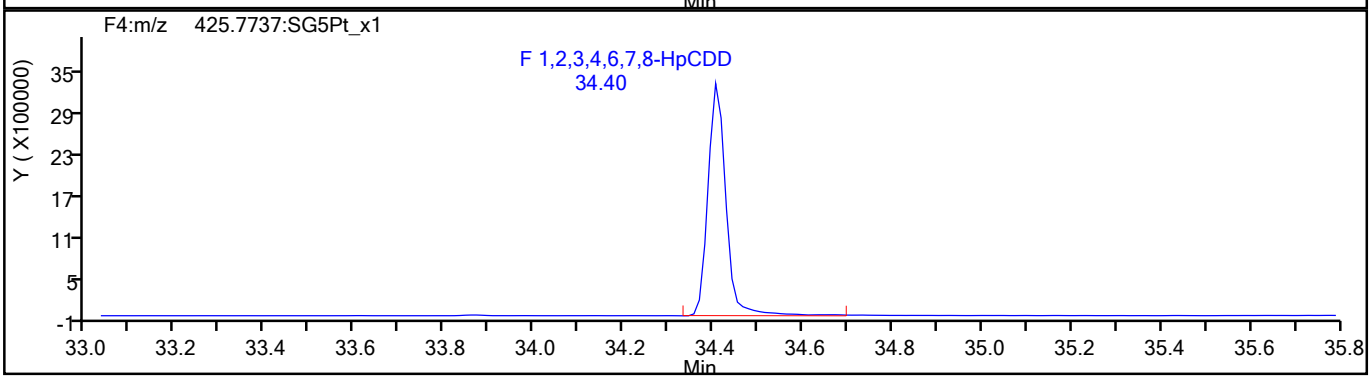

HpCDD Standards

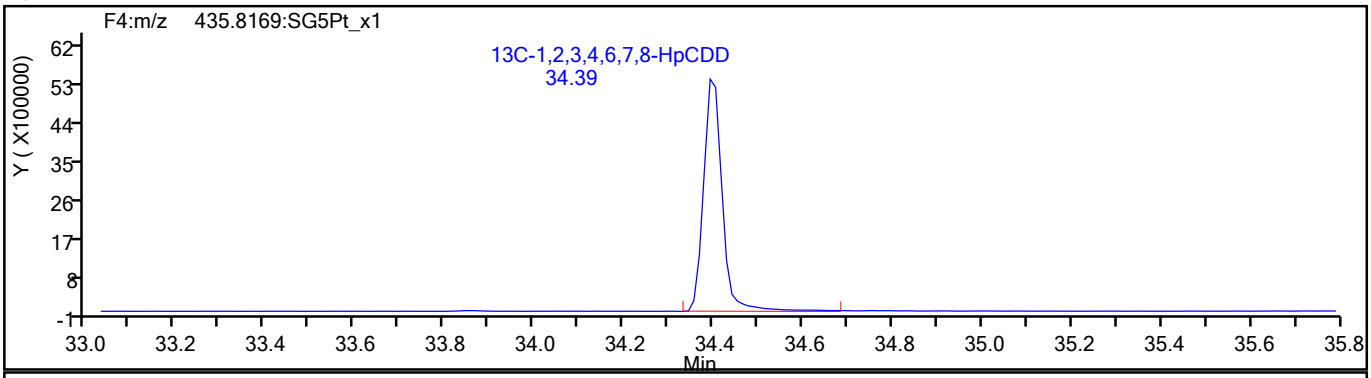

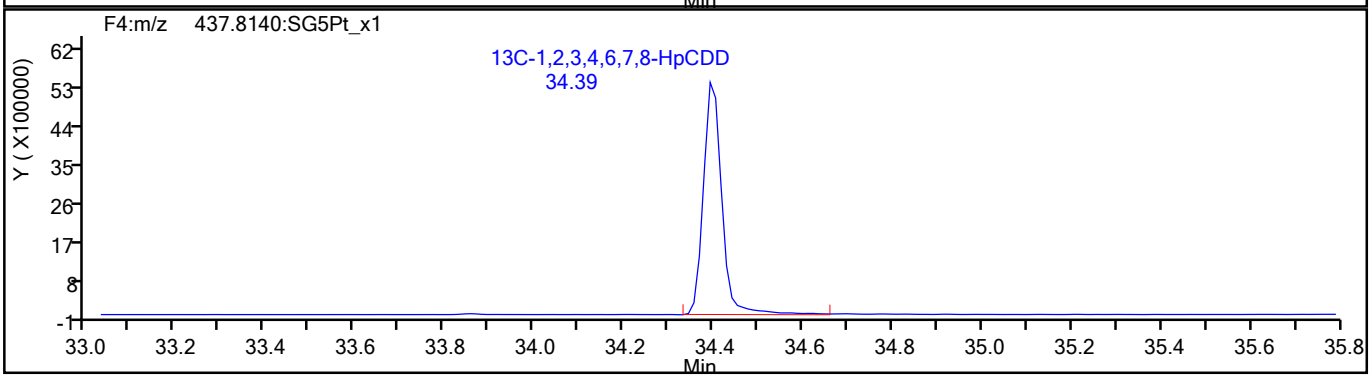

792001

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

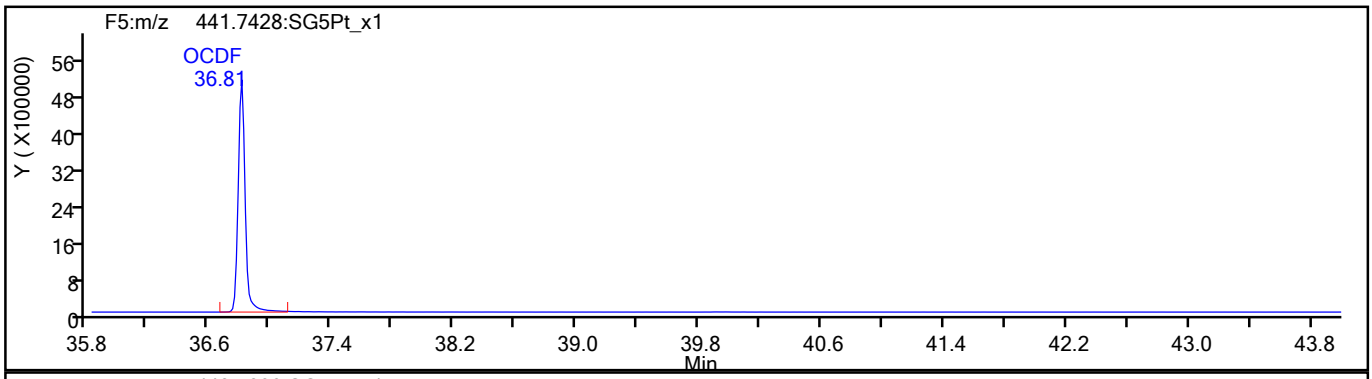

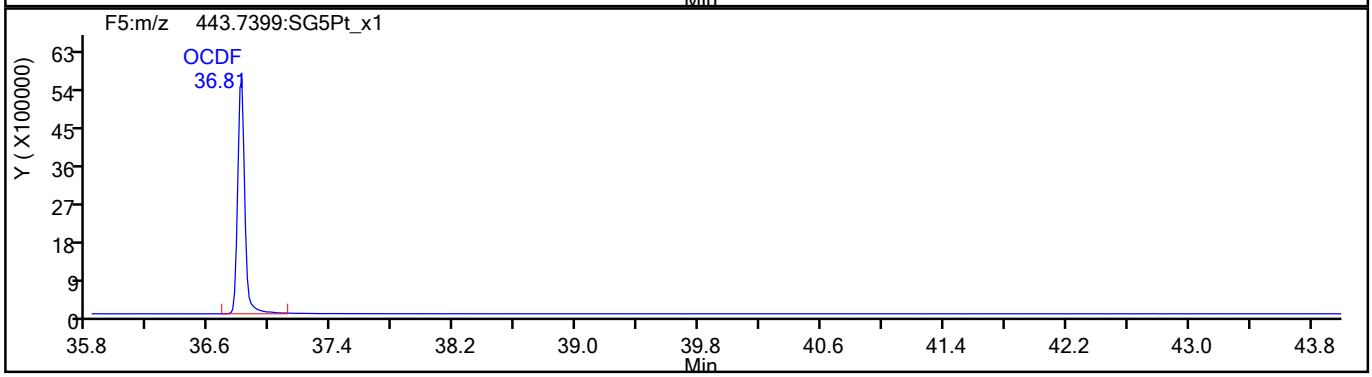

OCDF Standards

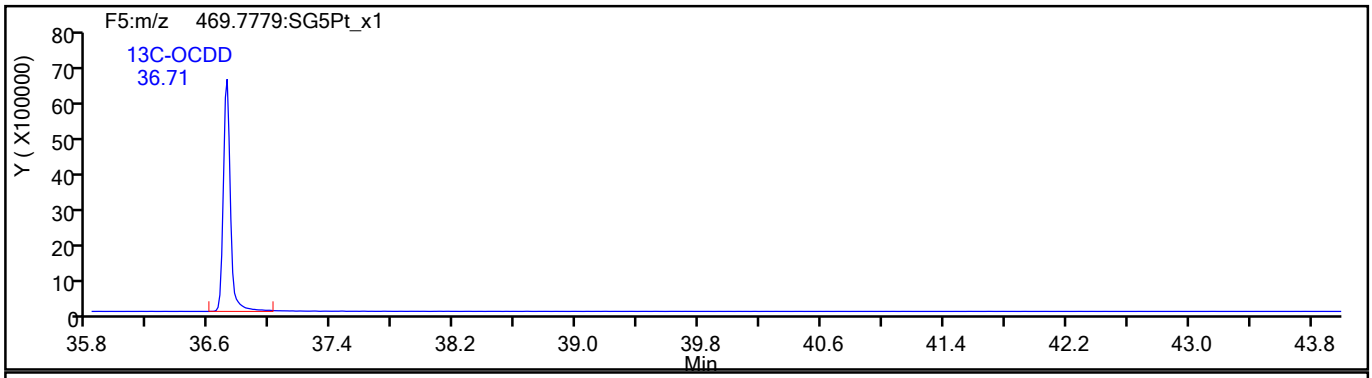

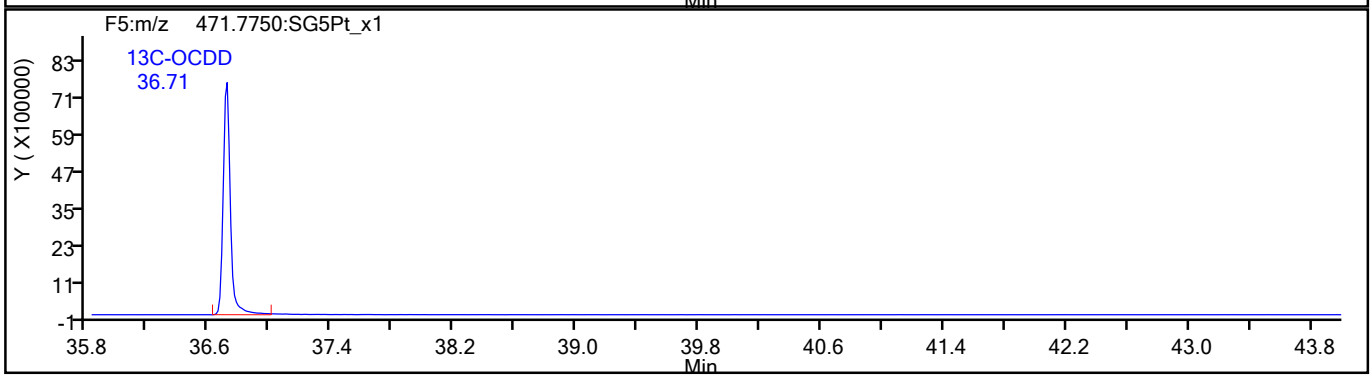

792002

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

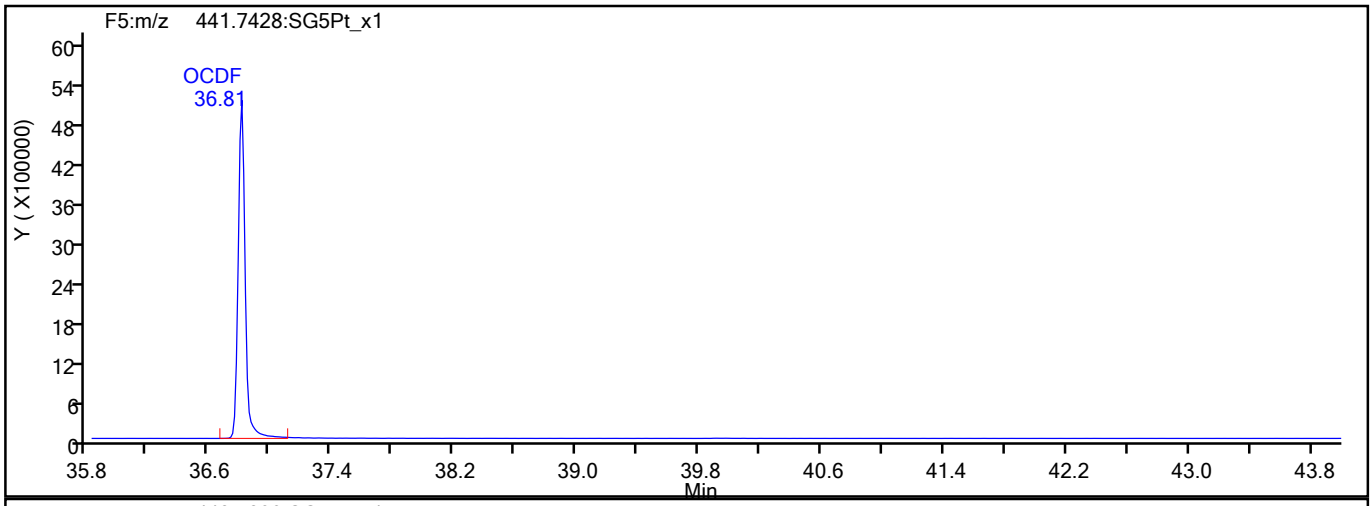

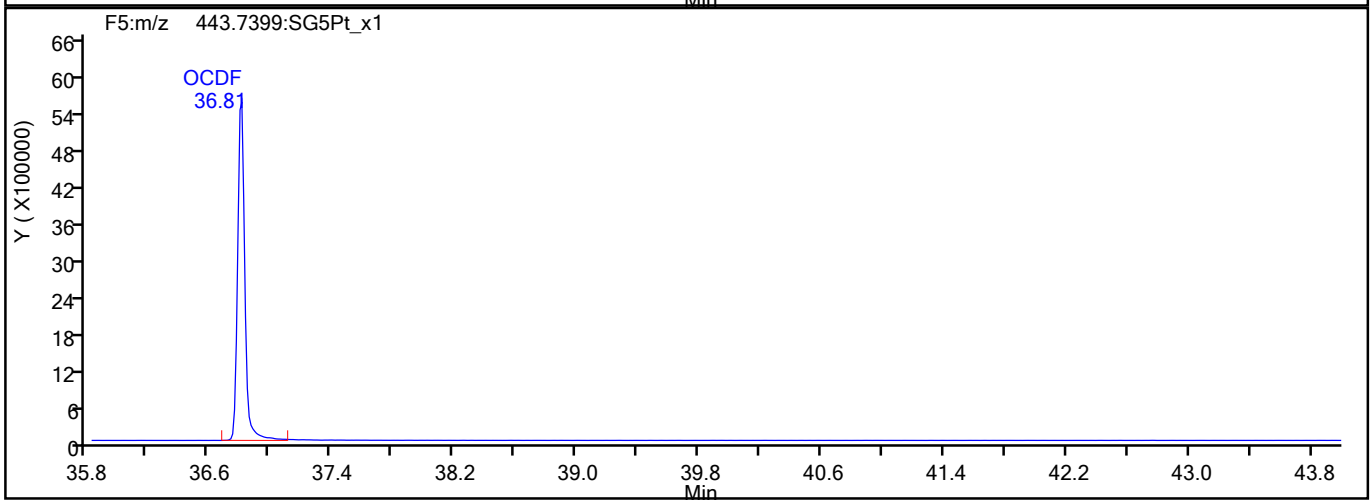

OCDF Interference Mass

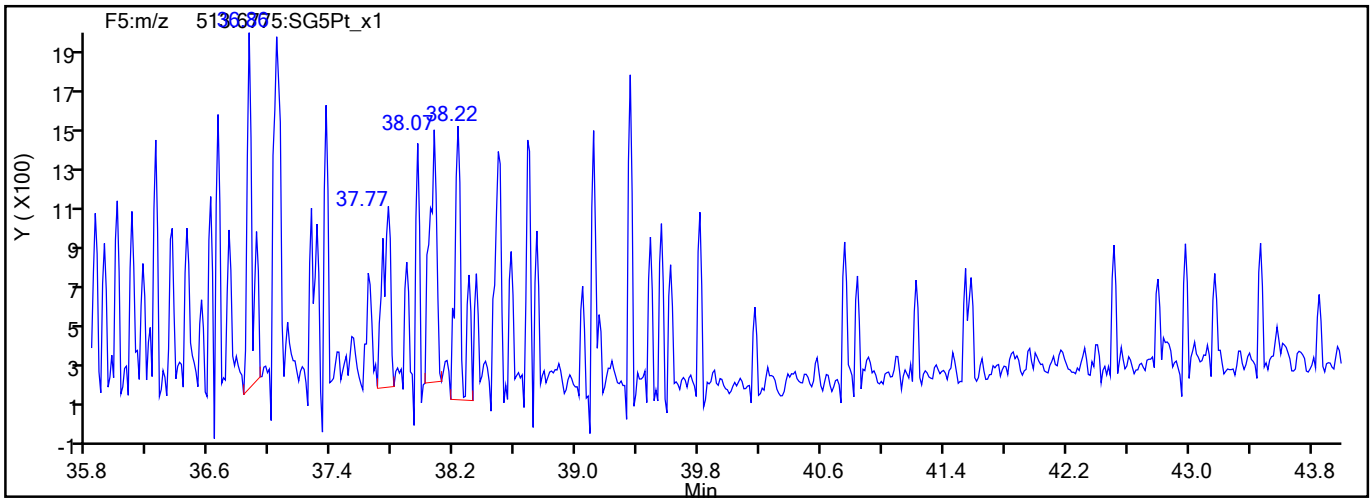

792003

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

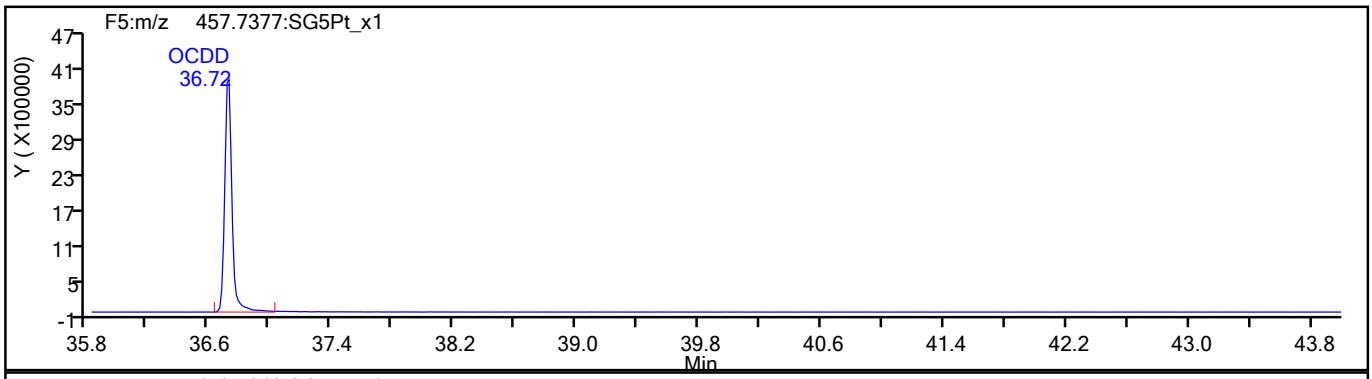

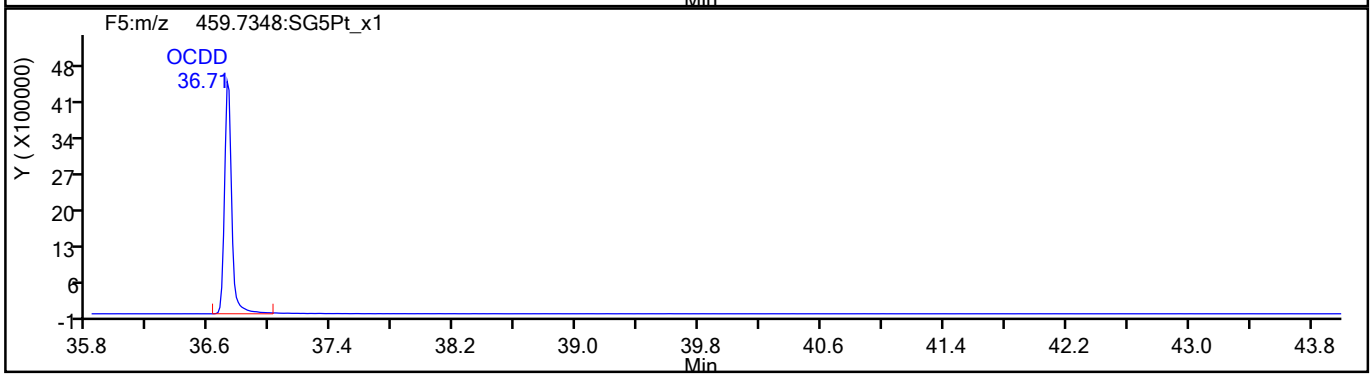

OCDD Standards

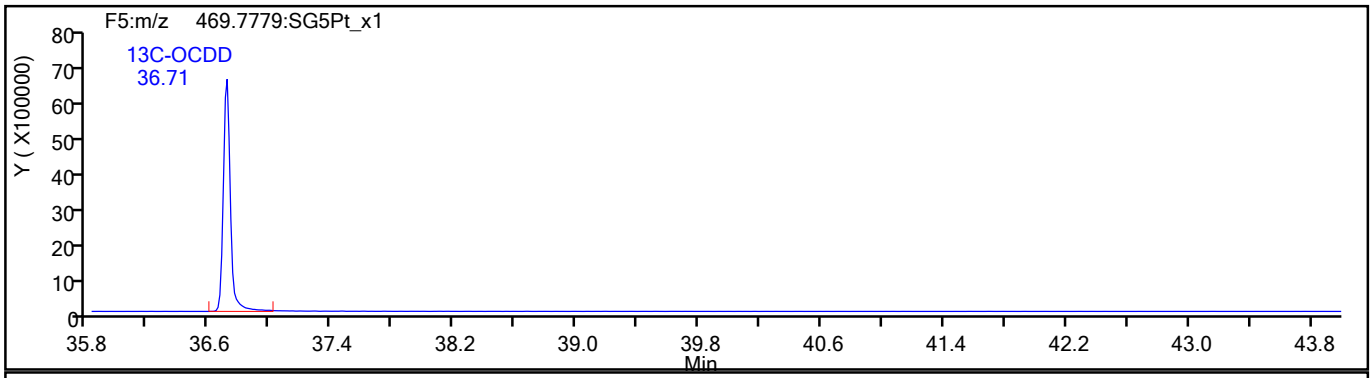

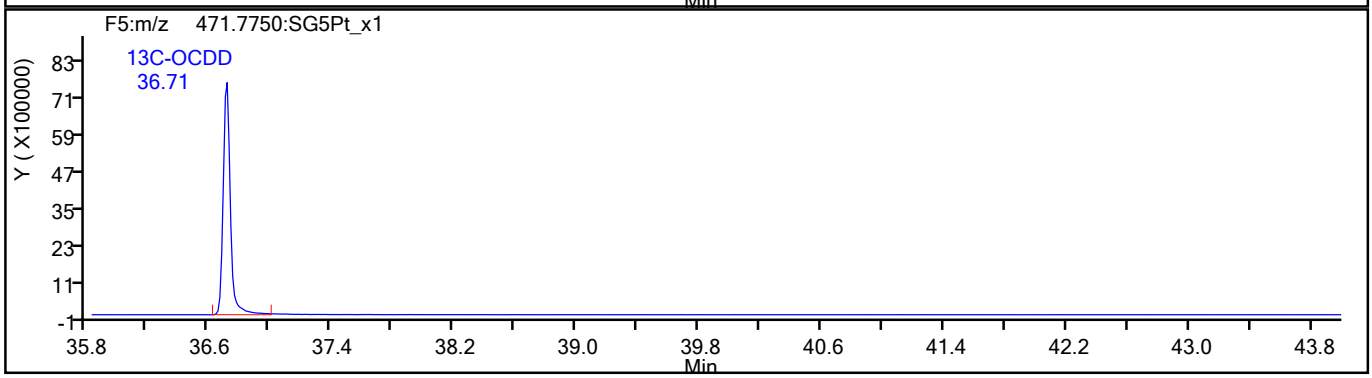

792004

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

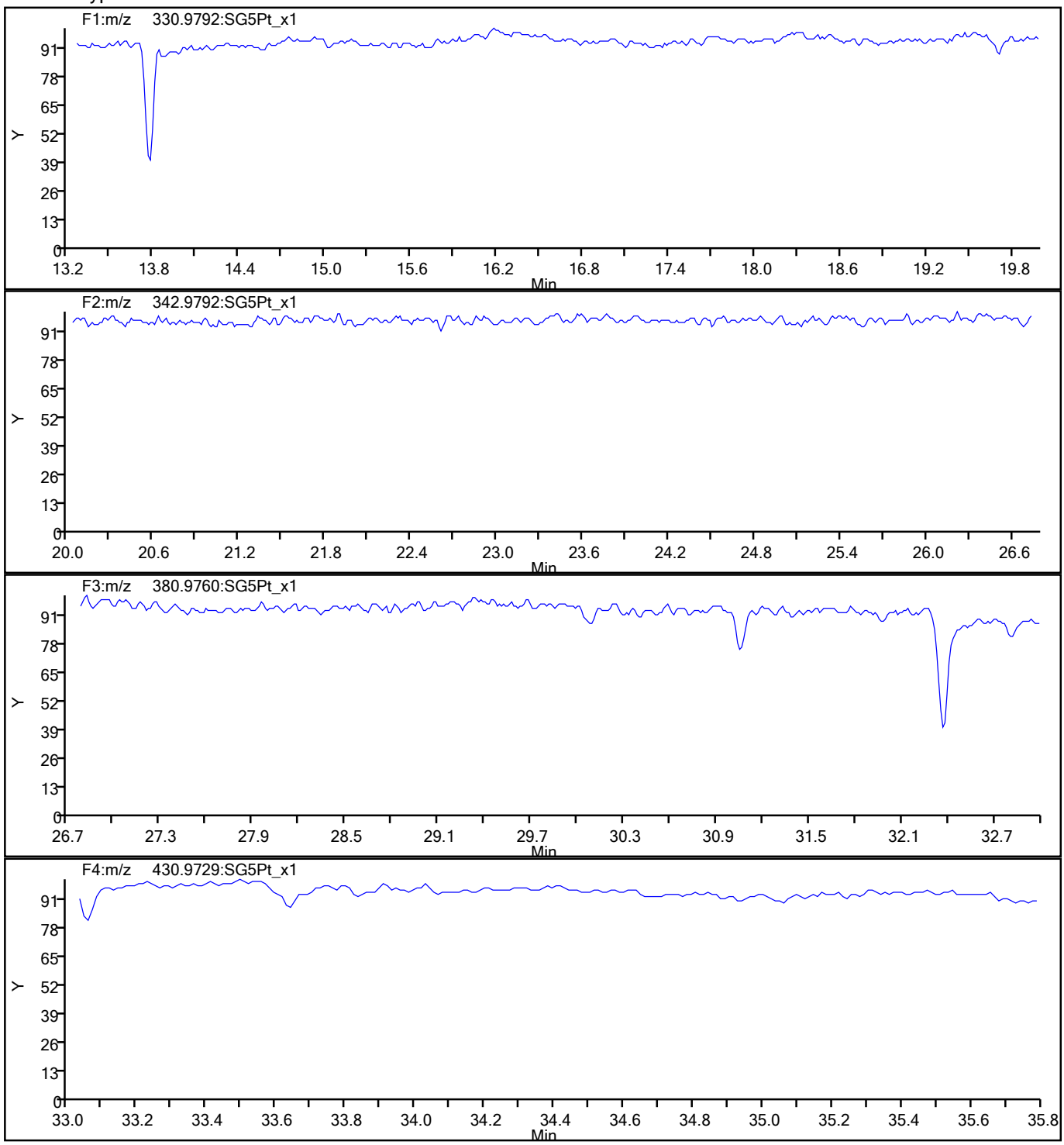

792005

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

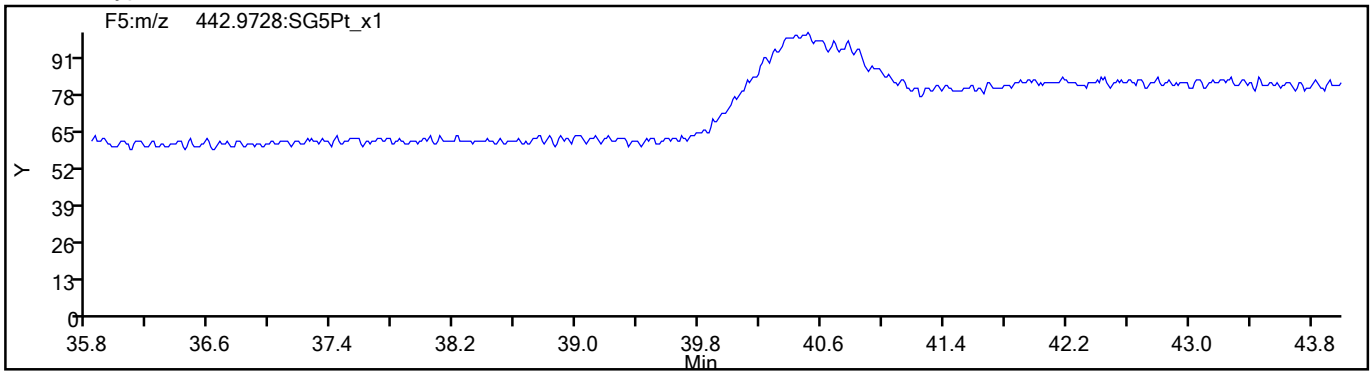

792006

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) MS
Lab Sample ID: 320-77214-2 MS
Matrix: Sediment
Lab File ID: 25AU2110D5_7.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.69(g)
Date Analyzed: 08/25/2021 14:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	3690		11	11
40321-76-4	1,2,3,7,8-PeCDD	178		6.8	0.57
57117-41-6	1,2,3,7,8-PeCDF	416		6.8	1.9
57117-31-4	2,3,4,7,8-PeCDF	305		6.8	1.8
39227-28-6	1,2,3,4,7,8-HxCDD	139		6.8	1.6
57653-85-7	1,2,3,6,7,8-HxCDD	156		6.8	1.6
19408-74-3	1,2,3,7,8,9-HxCDD	143		6.8	1.4
70648-26-9	1,2,3,4,7,8-HxCDF	454		6.8	2.3
57117-44-9	1,2,3,6,7,8-HxCDF	237		6.8	2.3
72918-21-9	1,2,3,7,8,9-HxCDF	147		6.8	1.7
60851-34-5	2,3,4,6,7,8-HxCDF	160		6.8	1.8
35822-46-9	1,2,3,4,6,7,8-HpCDD	211		6.8	1.2
67562-39-4	1,2,3,4,6,7,8-HpCDF	255		6.8	2.4
55673-89-7	1,2,3,4,7,8,9-HpCDF	172		6.8	2.5
3268-87-9	OCDD	1340		14	1.4
39001-02-0	OCDF	338		14	0.21
41903-57-5	Total TCDD	7390		11	11
30402-14-3	Total TCDF	17300		39	39
36088-22-9	Total PeCDD	180		6.8	0.57
30402-15-4	Total PeCDF	953		6.8	1.9
34465-46-8	Total HxCDD	460		6.8	1.5
55684-94-1	Total HxCDF	1040		6.8	2.0
37871-00-4	Total HpCDD	287		6.8	1.2
38998-75-3	Total HpCDF	472		6.8	2.5

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) MS
Lab Sample ID: 320-77214-2 MS
Matrix: Sediment
Lab File ID: 25AU2110D5_7.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.69(g)
Date Analyzed: 08/25/2021 14:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	40		25-164
89059-46-1	13C-2,3,7,8-TCDF	57		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	81		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	68		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	76		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	63		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	67		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	57		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	56		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	57		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	54		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	47		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	58		26-138
114423-97-1	13C-OCDD	59		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	63		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MS
Inject. Date: 25-Aug-2021 14:20:45 ALS Bottle#: 8 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-B MS 320-77214-A-2-B MS
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:46:41 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:58:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.688	88729057	0.81	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.174	81764368	0.78	1.6249	56.7	56.7	0.3401	0.3401	56.71	
2,3,7,8-TCDF	17.190	3148930068	0.79	1.0239	3761.3	3761.3	14.5	14.5	37613	Ea
A Non-2,3,7,8-sub-TCDF	17.076	2193021351	0.77	1.0239	2629.9	2619.5	14.5	1965.0	0.00	RQ
S Total TCDF					6391.2	6380.8	14.5	14.5		RQ
D 13C-2,3,7,8-TCDD	17.930	32161772	0.82	0.8993	40.3	40.3	0.3455	0.3455	40.31	a
2,3,7,8-TCDD	17.945	549002158	0.79	1.2541	1361.1	1361.1	3.912	3.912	13611	Ea
$ 37Cl4-2,3,7,8-TCDD	17.930	24863734		1.1071	25.3	25.3	0.1355	0.1355	63.28	
A Non-2,3,7,8-sub-TCDD	17.537	549002158	0.79	1.2541	1361.1	1361.1	3.912	1361.1	0.00	
S Total TCDD					2722.2	2722.2	3.912	3.912		
D 13C-1,2,3,7,8-PeCDF	22.156	73467188	1.58	1.2101	68.4	68.4	0.2114	0.2114	68.43	
1,2,3,7,8-PeCDF	22.170	119360085	1.59	1.0611	153.1	153.1	0.7119	0.7119	306	a
D 13C-2,3,4,7,8-PeCDF	23.465	83592541	1.56	1.2395	76.0	76.0	0.2064	0.2064	76.01	
2,3,4,7,8-PeCDF	23.479	95653872	1.58	1.0184	112.4	112.4	0.6529	0.6529	225	
A F1 PeCDFs	19.851	316165	1.46	1.0398	0.3872	0.3872	0.0234	0.3872	0.00	a
A Non-2,3,7,8-sub-PeCDF	23.067	69595665	1.59	1.0398	85.2	85.2	0.6803	31.8	0.00	a
S Total PeCDF					351.1	351.1	0.6824	0.6824		
D 13C-1,2,3,7,8-PeCDD	24.147	54461762	1.61	0.7612	80.6	80.6	0.1390	0.1390	80.63	
1,2,3,7,8-PeCDD	24.174	37354486	1.56	1.0484	65.4	65.4	0.2118	0.2118	131	
A Non-2,3,7,8-sub-PeCDD	23.696	570525	1.55	1.0484	1.329	0.999	0.2118	0.4066	0.00	RQ
S Total PeCDD					66.7	66.4	0.2118	0.2118		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.252	75980320	0.52	1.0837	66.8	66.8	0.1288	0.1288	66.76	
1,2,3,4,7,8-HxCDF	30.279	137934400	1.21	1.0851	167.3	167.3	0.8477	0.8477	335	
D 13C-1,2,3,6,7,8-HxCDF	30.452	67782938	0.52	1.1279	57.2	57.2	0.1237	0.1237	57.22	
1,2,3,6,7,8-HxCDF	30.479	66604500	1.22	1.1260	87.3	87.3	0.8429	0.8429	175	
D 13C-2,3,4,6,7,8-HxCDF	31.344	63906666	0.52	1.0637	57.2	57.2	0.1312	0.1312	57.20	
2,3,4,6,7,8-HxCDF	31.357	43882677	1.21	1.1675	58.8	58.8	0.6588	0.6588	118	
D 13C-1,2,3,7,8,9-HxCDF	32.169	56533895	0.52	0.9676	55.6	55.6	0.1442	0.1442	55.63	
1,2,3,7,8,9-HxCDF	32.182	35705325	1.22	1.1664	54.1	54.1	0.6276	0.6276	108	
A Non-2,3,7,8-sub-HxCDF	30.338	12179290	1.24	1.1363	16.2	16.2	0.7324	9.422	0.00	a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					383.8	383.8	0.7443	0.7443		
* 13C-1,2,3,7,8,9-HxCDD	31.983	105027168	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.544	48436730	1.26	0.7334	62.9	62.9	0.1562	0.1562	62.88	
1,2,3,4,7,8-HxCDD	31.557	26418700	1.27	1.0640	51.3	51.3	0.5760	0.5760	103	
D 13C-1,2,3,6,7,8-HxCDD	31.650	51384475	1.24	0.8802	55.6	55.6	0.1302	0.1302	55.59	
1,2,3,6,7,8-HxCDD	31.663	29562822	1.27	1.0001	57.5	57.5	0.5808	0.5808	115	
1,2,3,7,8,9-HxCDD	31.996	29837861	1.27	1.1325	52.8	52.8	0.5266	0.5266	106	
A Non-2,3,7,8-sub-HxCDD	30.525	4163333	1.20	1.0655	7.828	7.828	0.5597	4.679	0.00	
S Total HxCDD					169.4	169.4	0.5611	0.5611		
D 13C-1,2,3,4,6,7,8-HpCDF	33.627	37909050	0.45	0.7730	46.7	46.7	0.4652	0.4652	46.69	
1,2,3,4,6,7,8-HpCDF	33.639	51292114	1.06	1.4413	93.9	93.9	0.8908	0.8908	188	
D 13C-1,2,3,4,7,8,9-HpCDF	34.696	42348328	0.43	0.7008	57.5	57.5	0.5131	0.5131	57.54	
1,2,3,4,7,8,9-HpCDF	34.709	35367284	1.05	1.3174	63.4	63.4	0.9314	0.9314	127	
A Non-2,3,7,8-sub-HpCDF	34.150	9276695	1.06	1.3793	16.8	16.8	0.9097	16.8	0.00	a
S Total HpCDF					174.0	174.0	0.9111	0.9111		
D 13C-1,2,3,4,6,7,8-HpCDD	34.405	36723117	1.02	0.6472	54.0	54.0	0.2928	0.2928	54.02	
1,2,3,4,6,7,8-HpCDD	34.417	31198490	1.04	1.0943	77.6	77.6	0.4244	0.4244	155	
A Non-2,3,7,8-sub-HpCDD	34.223	11327977	1.08	1.0943	28.2	28.2	0.4244	28.2	0.00	a
S Total HpCDD					105.8	105.8	0.4244	0.4244		
D 13C-OCDD	36.725	55353217	0.88	0.4472	117.9	117.9	0.1505	0.1505	58.93	
OCDF	36.821	49640138	0.90	1.4382	124.7	124.7	0.0770	0.0770	125	
OCDD	36.725	150835326	0.89	1.1070	492.3	492.3	0.5021	0.5021	492	
1,3,6,8-TCDF	14.725						0.0	0.0		
1,3,6,8-TCDD	15.632						0.0	0.0		
2,3,4,7-TCDF	17.613	224858897	0.77							
1,2,3,7-TCDD	18.248	72144973	0.80							
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.996						0.0	0.0		U
1,2,3,4,8,9-HxCDF	32.182						0.0	0.0		U
1,2,3,4,6,7,9-HpCDD	33.882						0.0	0.0		U
1,2,3,4,6,7,9-HpCDF	33.639						0.0	0.0		U
1,2,3,8-TCDD	0.0						0.0	0.0		
1,3,7,9-TCDD	0.0						0.0	0.0		
1,2,3,4,7-PeCDD	0.0						0.0	0.0		
1,4,7,8-TCDD	0.0						0.0	0.0		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
U - Marked Undetected
a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MS
Inject. Date: 25-Aug-2021 14:20:45 ALS Bottle#: 8 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-B MS 320-77214-A-2-B MS
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:46:41 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:58:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.688	17.598	5		39831941	7349370	9144	22860	804		a
333.9339	17.688	17.598	5		48897116	9010637	11191	27977	805	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.174	17.099	5	0.971	35764505	9941427	18015	45037	552		
317.9389	17.174	17.099	5	0.971	45999863	12745305	18153	45382	702	0.78(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.190	17.114	5	1.001	1386145054	358605217	533871	1334677	672		a
305.8987	17.190	17.114	5	1.001	1762785014	454208683	810845	2027112	560	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	15.799	17.076	-77	0.920	17303785	5220278	533871	1334677	10		
305.8987	15.799	17.076	-77	0.920	31223632	6609744	810845	2027112	8	0.55(0.65-0.89)	
	Empc Correction				22472447	6779581	810845	2027112	8		
303.9016	16.071	17.076	-60	0.936	28582180	4988639	533871	1334677	9		
305.8987	16.071	17.076	-60	0.936	37070075	6418948	810845	2027112	8	0.77(0.65-0.89)	
303.9016	16.298	17.076	-47	0.949	33367666	8182580	533871	1334677	15		
305.8987	16.298	17.076	-47	0.949	43359301	10698161	810845	2027112	13	0.77(0.65-0.89)	
303.9016	16.539	17.076	-32	0.963	54625233	15649078	533871	1334677	29		
305.8987	16.539	17.076	-32	0.963	70558915	19946187	810845	2027112	25	0.77(0.65-0.89)	
303.9016	16.796	17.076	-17	0.978	720998477	180042323	533871	1334677	337		
305.8987	16.796	17.076	-17	0.978	924109638	232293964	810845	2027112	286	0.78(0.65-0.89)	
303.9016	19.004	17.076	115	1.107	105406316	24528214	533871	1334677	46		
305.8987	19.004	17.076	115	1.107	135167318	31627345	810845	2027112	39	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	17.930	17.794	8	1.014	14508469	3950461	9144	22860	432		a
333.9339	17.930	17.794	8	1.014	17653303	4813237	11191	27977	430	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											Ea
319.8965	17.945	17.809	8	1.001	241946674	67915309	89783	224457	756		a
321.8936	17.930	17.809	7	1.000	307055484	85468670	82202	205505	1040	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.930	17.809	7	1.014	24863734	7094774	9814	24535	723		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.945	17.537	24	1.001	241946674	67915309	89783	224457	756		
321.8936	17.930	17.537	24	1.000	307055484	85468670	82202	205505	1040	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.156	22.020	8	1.253	44979768	7921263	10042	25105	789		
353.8970	22.156	22.020	8	1.253	28487420	4952256	6702	16755	739	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.170	22.047	7	1.001	73287081	12306630	24432	61080	504		a
341.8567	22.170	22.047	7	1.001	46073004	7840102	14468	36170	542	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.465	23.343	7	1.327	50999877	8942120	10042	25105	890		
353.8970	23.452	23.343	7	1.326	32592664	5682628	6702	16755	848	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.479	23.370	7	1.001	58630417	10534738	24432	61080	431		
341.8567	23.479	23.370	7	1.001	37023455	6722790	14468	36170	465	1.58(1.32-1.78)	
A F1 PeCDFs											a
339.8597	19.306	19.851	-33	0.871	187636	40981	484	1210	85		a
341.8567	19.306	19.851	-33	0.871	128529	27214	854	2135	32	1.46(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											a
339.8597	20.833	23.067	-134	0.940	15971985	3275822	24432	61080	134		
341.8567	20.833	23.067	-134	0.940	9978601	2052580	14468	36170	142	1.60(1.32-1.78)	
339.8597	21.652	23.067	-85	0.977	1575504	204038	24432	61080	8		
341.8567	21.638	23.067	-86	0.977	1043307	137399	14468	36170	9	1.51(1.32-1.78)	
339.8597	22.047	23.067	-61	0.995	2508080	696506	24432	61080	29		a
341.8567	22.047	23.067	-61	0.995	1583830	433809	14468	36170	30	1.58(1.32-1.78)	
339.8597	22.456	23.067	-37	1.014	712274	156560	24432	61080	6		
341.8567	22.456	23.067	-37	1.014	451040	95991	14468	36170	7	1.58(1.32-1.78)	
339.8597	22.674	23.067	-24	1.023	11930423	2320173	24432	61080	95		
341.8567	22.674	23.067	-24	1.023	7501781	1480327	14468	36170	102	1.59(1.32-1.78)	
339.8597	23.820	23.067	45	1.075	7930485	1220712	24432	61080	50		
341.8567	23.806	23.067	44	1.074	4930709	760357	14468	36170	53	1.61(1.32-1.78)	
339.8597	25.361	23.067	137	1.145	2129018	327251	24432	61080	13		
341.8567	25.361	23.067	137	1.145	1348628	215280	14468	36170	15	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.147	24.052	6	1.365	33594133	5805622	4174	10435	1391		
369.8919	24.147	24.052	6	1.365	20867629	3565462	2750	6875	1297	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.174	24.079	6	1.001	22782965	3960085	5332	13330	743		
357.8516	24.174	24.079	6	1.001	14571521	2540182	2993	7482	849	1.56(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	22.429	23.696	-76	0.929	108049	23639	5332	13330	4		
357.8516	22.429	23.696	-76	0.929	64091	14144	2993	7482	5	1.69(1.32-1.78)	
355.8546	22.729	23.696	-58	0.941	123382	23677	5332	13330	4		
	Empc Correction				101025	20504	5332	13330	4		
357.8516	22.729	23.696	-58	0.941	65178	13229	2993	7482	4	1.89(1.32-1.78)	
355.8546	24.652	23.696	57	1.021	307325	34559	5332	13330	6		
	Empc Correction				141130	16701	5332	13330	3		
357.8516	24.652	23.696	57	1.021	91052	10775	2993	7482	4	3.38(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.252	30.186	4	0.946	25953816	4772612	6797	16992	702		
385.8610	30.252	30.186	4	0.946	50026504	9236554	10562	26405	875	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.279	30.213	4	1.001	75577579	14045172	28483	71207	493		
375.8178	30.279	30.213	4	1.001	62356821	11629150	23066	57665	504	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.452	30.399	3	0.952	23146673	4643962	6797	16992	683		
385.8610	30.452	30.399	3	0.952	44636265	8933522	10562	26405	846	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.479	30.412	4	1.001	36574713	7515369	28483	71207	264		
375.8178	30.479	30.412	4	1.001	30029787	6184140	23066	57665	268	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.344	31.291	3	0.980	21867679	5740576	6797	16992	845		
385.8610	31.344	31.291	3	0.980	42038987	11014565	10562	26405	1043	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.357	31.317	2	1.000	24042540	6528749	28483	71207	229		
375.8178	31.357	31.317	2	1.000	19840137	5431032	23066	57665	235	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.169	32.143	2	1.006	19324826	5981244	6797	16992	880		
385.8610	32.169	32.143	2	1.006	37209069	11624027	10562	26405	1101	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.182	32.156	2	1.000	19601507	6355644	28483	71207	223		
375.8178	32.182	32.156	2	1.000	16103818	5302985	23066	57665	230	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											a
373.8208	29.321	30.338	-61	0.969	1970254	267063	28483	71207	9		
375.8178	29.321	30.338	-61	0.969	1613628	234105	23066	57665	10	1.22(1.05-1.43)	
373.8208	31.237	30.338	54	1.033	835297	227750	28483	71207	8		
375.8178	31.237	30.338	54	1.033	688698	180129	23066	57665	8	1.21(1.05-1.43)	
373.8208	32.276	30.338	116	1.067	3929573	1213868	28483	71207	43		a
375.8178	32.276	30.338	116	1.067	3141840	959451	23066	57665	42	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.983	31.956	2		57840382	17119469	7749	19372	2209		
403.8529	31.983	31.956	2		47186786	13980111	6504	16260	2149	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.544	31.504	2	0.986	27032592	7628029	7749	19372	984		
403.8529	31.544	31.504	2	0.986	21404138	6077399	6504	16260	934	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDD											
389.8157	31.557	31.517	2	1.000	14792636	4391689	18548	46370	237		
391.8127	31.557	31.517	2	1.000	11626064	3423828	15051	37627	227	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.650	31.610	2	0.990	28464172	8015339	7749	19372	1034		
403.8529	31.650	31.610	2	0.990	22920303	6445918	6504	16260	991	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.663	31.624	2	1.000	16535559	4617526	18548	46370	249		
391.8127	31.663	31.624	2	1.000	13027263	3685259	15051	37627	245	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.996	31.969	2	1.014	16687697	4956392	18548	46370	267		
391.8127	31.996	31.969	2	1.014	13150164	3979692	15051	37627	264	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.161	30.525	-82	0.921	1344636	174352	18548	46370	9		
391.8127	29.161	30.525	-82	0.921	1144002	152461	15051	37627	10	1.18(1.05-1.43)	
389.8157	30.758	30.525	14	0.972	924001	186389	18548	46370	10		
391.8127	30.745	30.525	13	0.971	750694	155972	15051	37627	10	1.23(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.627	33.603	1	1.051	11710949	4484718	15832	39580	283		
419.8220	33.627	33.603	1	1.051	26198101	10144776	28900	72250	351	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.639	33.615	1	1.000	26442148	10013300	36219	90547	276		
409.7789	33.639	33.615	1	1.000	24849966	9397603	38909	97272	242	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.696	34.672	1	1.085	12758399	4687017	15832	39580	296		
419.8220	34.696	34.672	1	1.085	29589929	10619890	28900	72250	367	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.709	34.685	1	1.000	18083819	6320192	36219	90547	174		
409.7789	34.696	34.685	1	1.000	17283465	6194677	38909	97272	159	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											a
407.7818	33.931	34.150	-13	1.009	4764416	1854120	36219	90547	51		a
409.7789	33.931	34.150	-13	1.009	4512279	1771475	38909	97272	46	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.405	34.393	1	1.076	18498906	6459350	10222	25555	632		
437.8140	34.405	34.393	1	1.076	18224211	6308707	13356	33390	472	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.417	34.405	1	1.000	15882754	5583578	12090	30225	462		
425.7737	34.417	34.405	1	1.000	15315736	5520082	11631	29077	475	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.882	34.223	-20	0.985	5890939	2218626	12090	30225	184		a
425.7737	33.882	34.223	-20	0.985	5437038	2083544	11631	29077	179	1.08(0.88-1.20)	
13C-OCDD											
469.7779	36.725	36.701	1	1.148	25832321	8093289	4518	11295	1791		
471.7750	36.725	36.701	1	1.148	29520896	9238290	3855	9637	2396	0.88(0.76-1.02)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											
441.7428	36.821	36.797	1	1.003	23521254	7489274	1849	4622	4050		
443.7399	36.809	36.797	1	1.002	26118884	8022484	1992	4980	4027	0.90(0.76-1.02)	
OCDD											
457.7377	36.725	36.713	1	1.000	71201580	22134820	11738	29345	1886		
459.7348	36.725	36.713	1	1.000	79633746	25279838	7528	18820	3358	0.89(0.76-1.02)	
1,3,6,8-TCDF											
303.9016	14.725						533871	1334677			
305.8987	14.725						810845	2027112			
1,3,6,8-TCDD											
319.8965	15.632						89783	224457			
321.8936	15.632						82202	205505			
2,3,4,7-TCDF											
303.9016	17.613	17.537	5		98149183	25990579	533871	1334677	49		
305.8987	17.613	17.537	5		126709714	33476415	810845	2027112	41	0.77(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.248	18.172	5		32008003	7340108	89783	224457	82		
321.8936	18.233	18.172	4		40136970	9385223	82202	205505	114	0.80(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.414						89783	224457			
321.8936	18.414						82202	205505			
1,2,3,9-TCDF											
303.9016	18.414						533871	1334677			
305.8987	18.414						810845	2027112			
1,2,8,9-TCDD											
319.8965	19.382						89783	224457			
1,2,8,9-TCDF											
303.9016	19.427						533871	1334677			
305.8987	19.427						810845	2027112			
1,3,4,6,8-PeCDF											
339.8597	19.669						484	1210			
341.8567	19.669						854	2135			
1,2,4,7,9-PeCDD											
355.8546	21.480						5332	13330			
357.8516	21.480						2993	7482			
1,2,3,8,9-PeCDD											
355.8546	25.790						5332	13330			
357.8516	25.790						2993	7482			
1,2,3,8,9-PeCDF											
339.8597	26.021						24432	61080			
341.8567	26.021						14468	36170			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						28483	71207			
375.8178	28.333						23066	57665			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						18548	46370			
391.8127	29.890						15051	37627			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7-HxCDD											U
389.8157	31.916						18548	46370			
391.8127	31.916						15051	37627			
1,2,3,4,8,9-HxCDF											U
373.8208	32.249						28483	71207			
375.8178	32.249						23066	57665			
1,2,3,4,6,7,9-HpCDD											U
423.7766	33.858						12090	30225			
425.7737	33.858						11631	29077			
1,2,3,4,6,7,9-HpCDF											U
407.7818	33.916						36219	90547			
409.7789	33.916						38909	97272			
1,2,3,8-TCDD											
319.8965	0.0						89783	224457			
321.8936	0.0						82202	205505			
1,3,7,9-TCDD											
319.8965	0.0						89783	224457			
321.8936	0.0						82202	205505			
1,2,3,4,7-PeCDD											
355.8546	0.0						5332	13330			
357.8516	0.0						2993	7482			
1,4,7,8-TCDD											
319.8965	0.0						89783	224457			
321.8936	0.0						82202	205505			

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	81764368	22686732

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	81764368	22686732

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.799	17303785	5220278	31223632	6609744	58.0	0.55	RQ
15.799	17303785	5220278	22472447	6779581	47.5		Empc Correction
16.071	28582180	4988639	37070075	6418948	78.4	0.77	
16.298	33367666	8182580	43359301	10698161	91.6	0.77	
16.539	54625233	15649078	70558915	19946187	149.5	0.77	
16.796	720998477	180042323	924109638	232293964	1965.0	0.78	
19.004	105406316	24528214	135167318	31627345	287.4	0.78	
Signal Totals:							
	960283657	238611112	1232737694	307764186			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2201772536	546205461				0.77	RQ
	2193021351	546375298					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2629.9 = (2201772536 * 100.000) / (81764368 * 1.024)
Empc Amount: 2619.5 = (2193021351 * 100.000) / (81764368 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Lims ID:	320-77214-A-2-B MS		
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Inject. Date:	25-Aug-2021 14:20:45	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	7

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	32161772	8763698

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	32161772	8763698

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.945	241946674	67915309	307055484	85468670	1361.1	0.79	
Signal Totals:							
	241946674	67915309	307055484	85468670			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	549002158	153383979				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1361.1 = (549002158 * 100.000) / (32161772 * 1.254)

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	73467188	12873519
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	83592541	14624748

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	78529864	13749133

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.306	187636	40981	128529	27214	0.3872	1.46	a
Signal Totals:							
	187636	40981	128529	27214			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	316165	68195				1.46	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3872 = (316165 * 100.000) / (78529864 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	73467188	12873519
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	83592541	14624748

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	78529864	13749133

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.833	15971985	3275822	9978601	2052580	31.8	1.60	
21.652	1575504	204038	1043307	137399	3.21	1.51	
22.047	2508080	696506	1583830	433809	5.01	1.58	a
22.456	712274	156560	451040	95991	1.42	1.58	
22.674	11930423	2320173	7501781	1480327	23.8	1.59	
23.820	7930485	1220712	4930709	760357	15.8	1.61	
25.361	2129018	327251	1348628	215280	4.26	1.58	
Signal Totals:							
	42757769	8201062	26837896	5175743			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	69595665	13376805				1.59	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 85.233 = (69595665 * 100.000) / (78529864 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Lims ID:	320-77214-A-2-B MS		
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Inject. Date:	25-Aug-2021 14:20:45	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	7

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	54461762	9371084

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	54461762	9371084

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.429	108049	23639	64091	14144	0.3015	1.69	
22.729	123382	23677	65178	13229	0.3302	1.89	RQ
22.729	101025	20504	65178	13229	0.2911		Empc Correction
24.652	307325	34559	91052	10775	0.6977	3.38	RQ
24.652	141130	16701	91052	10775	0.4066		Empc Correction
Signal Totals:							
	350204	60844	220321	38148			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	759077	120023				2.45	RQ
	570525	98992					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.329 = (759077 * 100.000) / (54461762 * 1.048)

Empc Amount: 0.999 = (570525 * 100.000) / (54461762 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	75980320	14009166
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	67782938	13577484
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	63906666	16755141
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	56533895	17605271

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	66050954	15486765

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.321	1970254	267063	1613628	234105	4.78	1.22	
31.237	835297	227750	688698	180129	2.03	1.21	
32.276	3929573	1213868	3141840	959451	9.42	1.25	a
Signal Totals:							
	6735124	1708681	5444166	1373685			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12179290	3082366				1.24	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 16.228 = (12179290 * 100.000) / (66050954 * 1.136)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	48436730	13705428
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	51384475	14461257
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	49910602	14083342

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.161	1344636	174352	1144002	152461	4.68	1.18	
30.758	924001	186389	750694	155972	3.15	1.23	
Signal Totals:							
	2268637	360741	1894696	308433			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4163333	669174				1.20	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.828 = (4163333 * 100.000) / (49910602 * 1.066)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-HpCDF, RT: 34.150

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	37909050	14629494
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	42348328	15306907

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	40128689	14968200

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
33.931	4764416	1854120	4512279	1771475	16.8	1.06	a
Signal Totals:							
	4764416	1854120	4512279	1771475			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9276695	3625595				1.06	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 16.760 = (9276695 * 100.000) / (40128689 * 1.379)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	36723117	12768057

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	36723117	12768057

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.882	5890939	2218626	5437038	2083544	28.2	1.08	a
Signal Totals:							
	5890939	2218626	5437038	2083544			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11327977	4302170				1.08	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 28.189 = (11327977 * 100.000) / (36723117 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d				
Injection Date:	25-Aug-2021 14:20:45	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.04
Area: 16749148
Amount: 44.203239
Amount Units: pg/ul

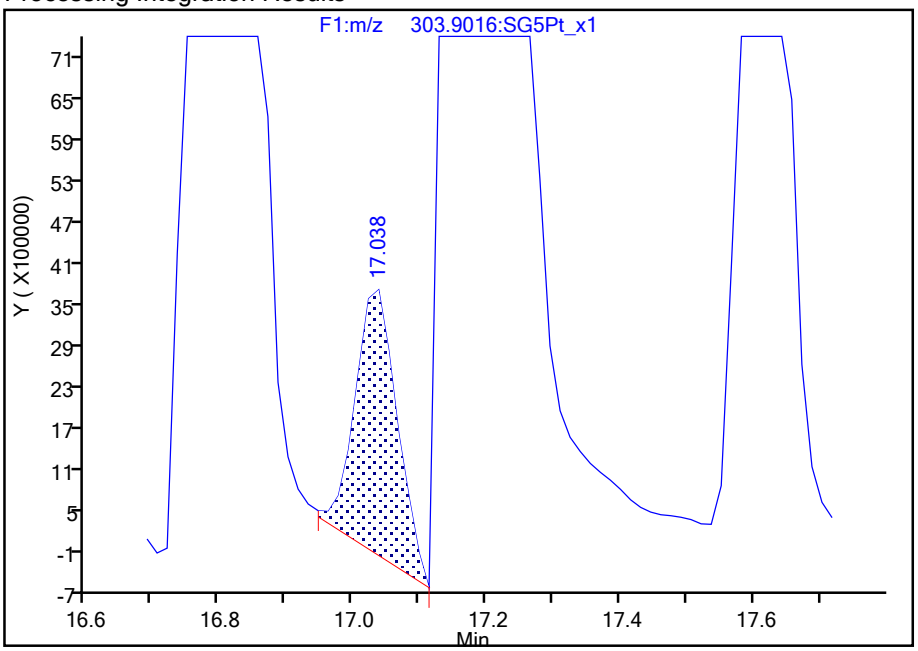

Manual Integration Results

RT: 17.19
Area: 1386145054
Amount: 3761.2910
Amount Units: pg/ul

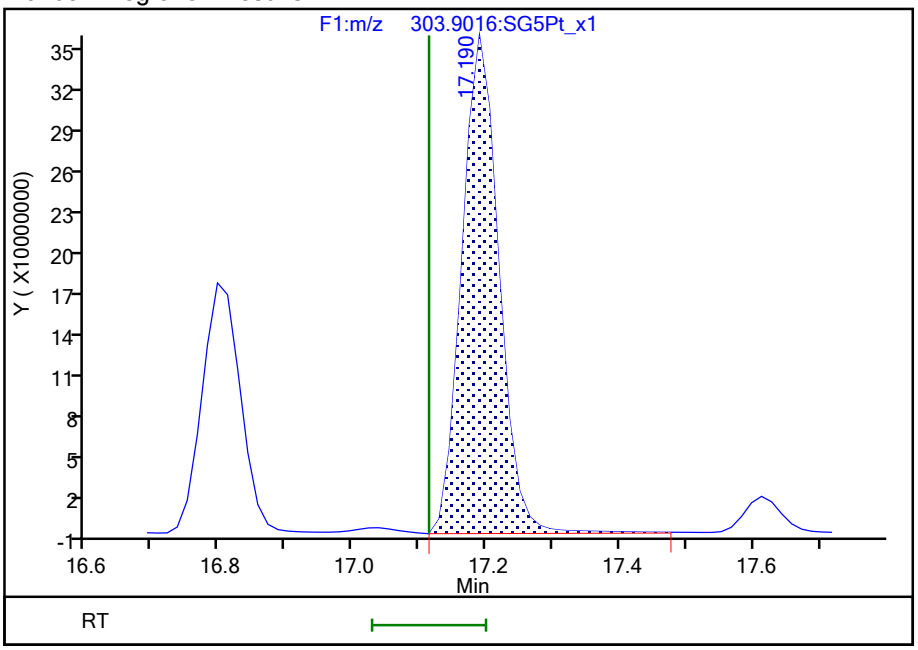

Reviewer: bennettd, 26-Aug-2021 10:01:49

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d				
Injection Date:	25-Aug-2021 14:20:45	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 17.69
Area: 39831941
Amount: 111.1955
Amount Units: pg/ul

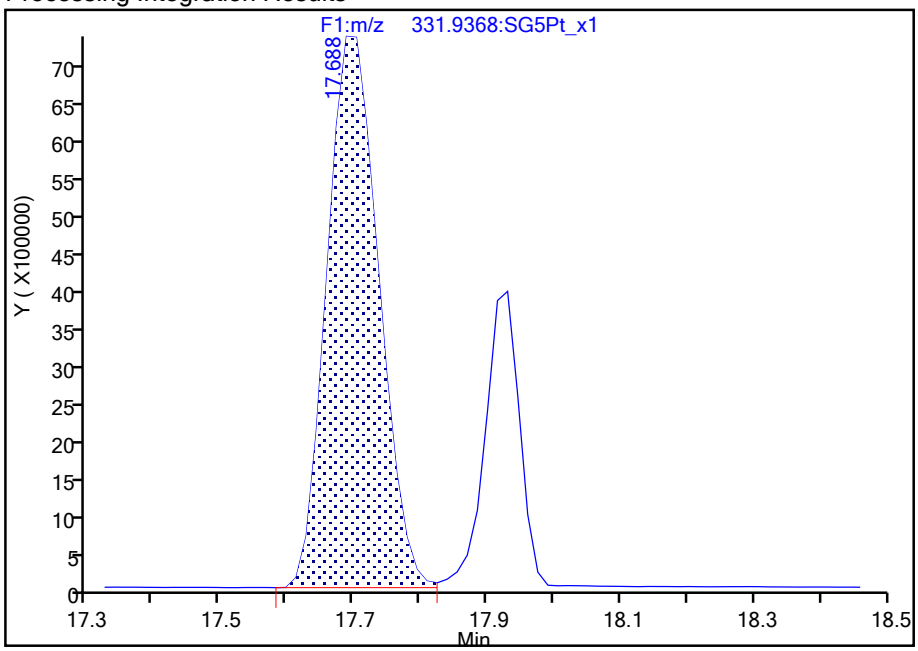

Manual Integration Results

RT: 17.93
Area: 14508469
Amount: 40.305237
Amount Units: pg/ul

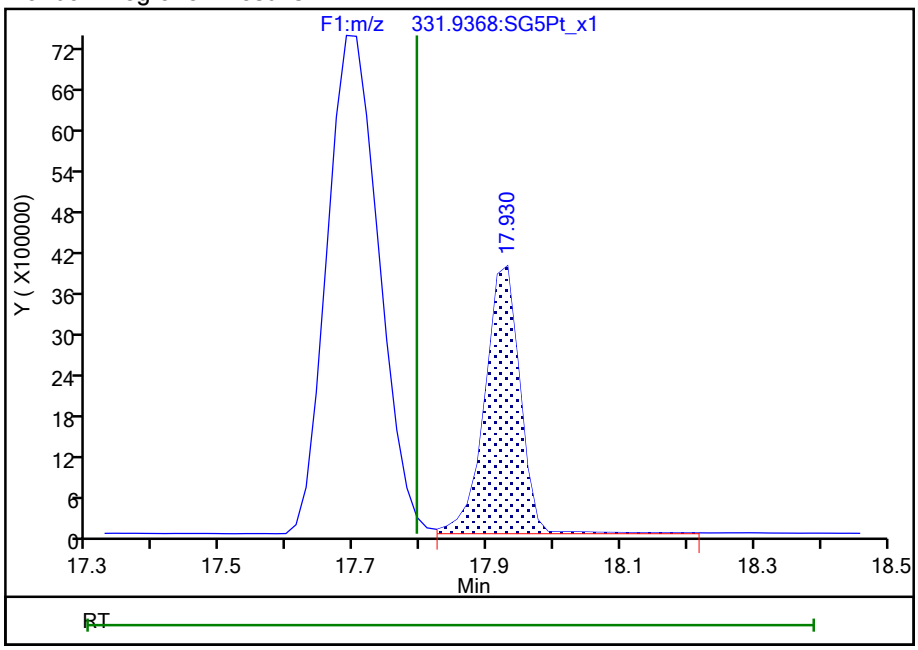

Reviewer: bennettd, 26-Aug-2021 09:58:05

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

792028

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d				
Injection Date:	25-Aug-2021 14:20:45	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.81

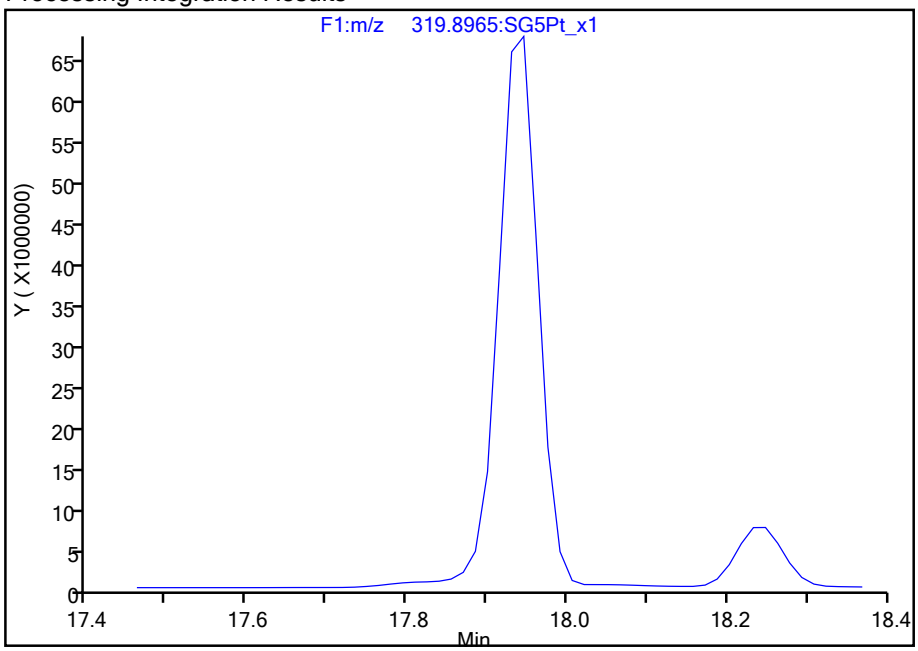

Manual Integration Results

RT: 17.95
Area: 241946674
Amount: 1361.1157
Amount Units: pg/ul

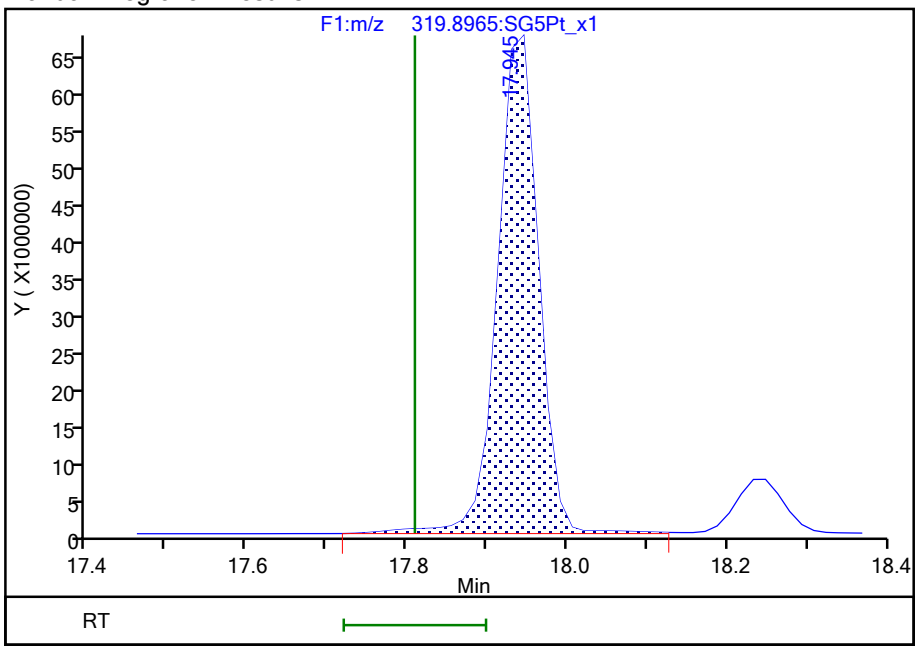

Reviewer: bennettd, 26-Aug-2021 10:02:10
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

792029

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d				
Injection Date:	25-Aug-2021 14:20:45	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.05
Area: 1583830
Amount: 5.248826
Amount Units: pg/ul

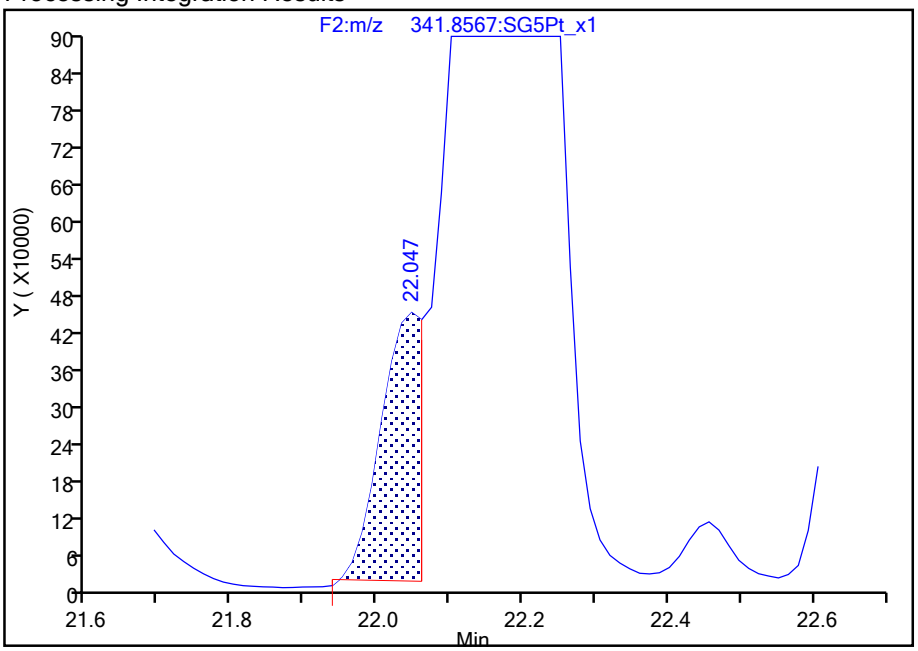

Manual Integration Results

RT: 22.17
Area: 46073004
Amount: 153.1070
Amount Units: pg/ul

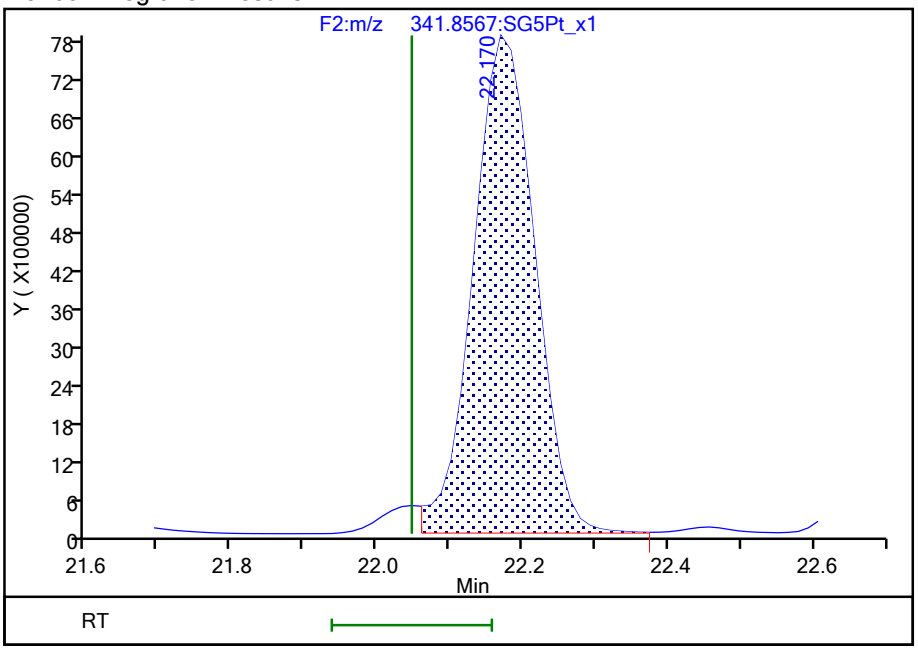

Reviewer: dadunj, 27-Aug-2021 09:44:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d				
Injection Date:	25-Aug-2021 14:20:45	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

RT: 22.05
Area: 4091910
Amount: 5.248826
Amount Units: pg/ul

Processing Integration Results

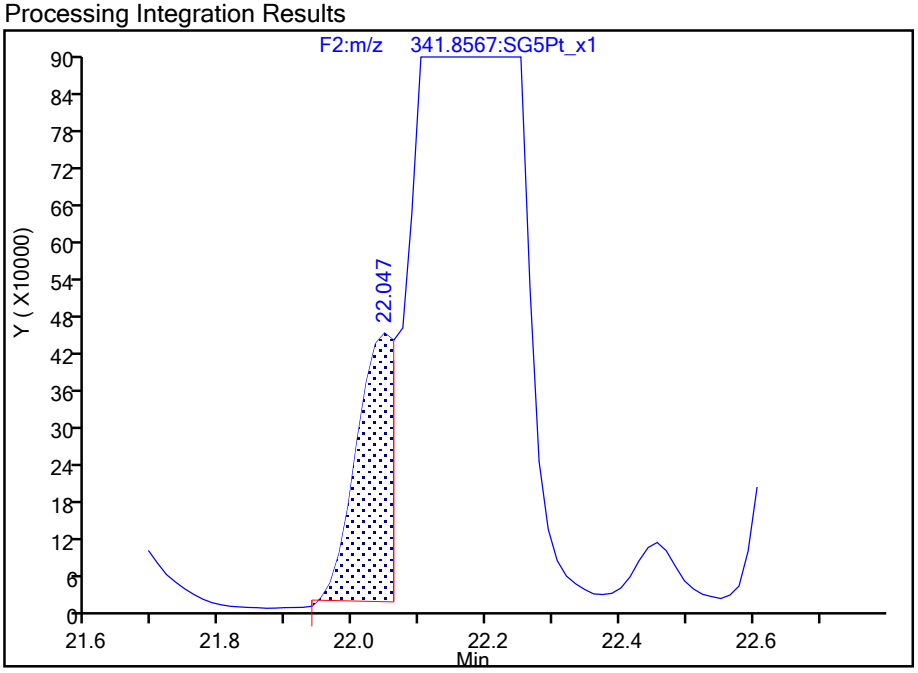

Manual Integration Results

RT: 22.17
Area: 119360085
Amount: 153.1070
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 09:44:04
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d				
Injection Date:	25-Aug-2021 14:20:45	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.05
Area: 2508080
Amount: 5.248826
Amount Units: pg/ul

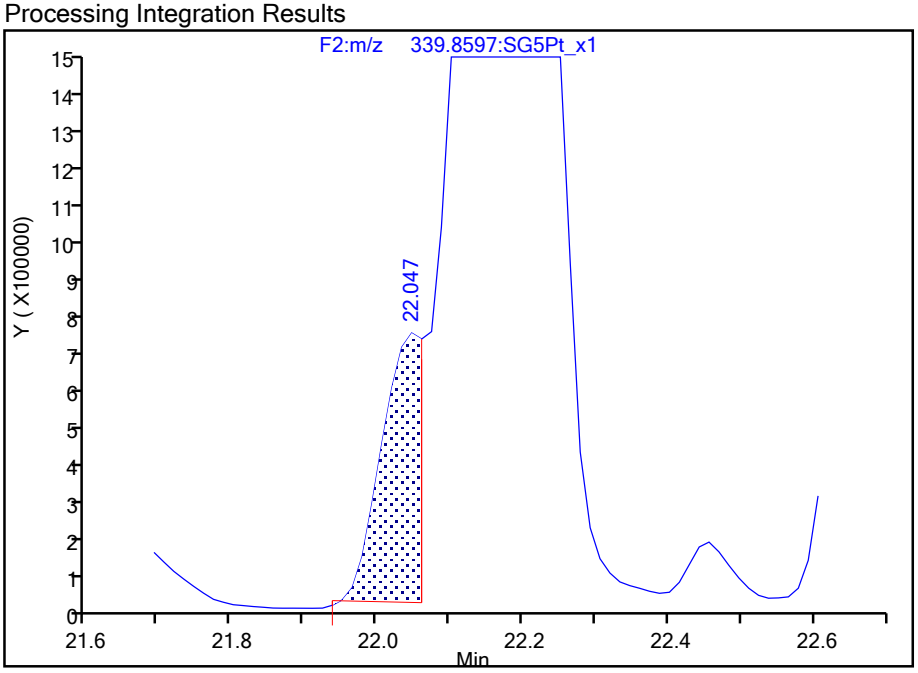

Manual Integration Results

RT: 22.17
Area: 73287081
Amount: 153.1070
Amount Units: pg/ul

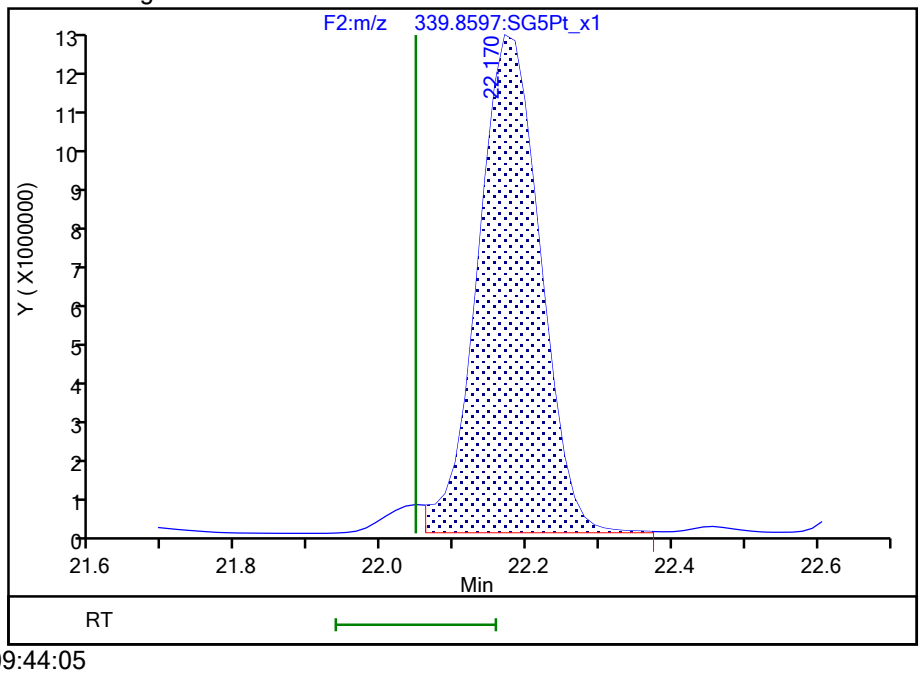

Reviewer: dadunj, 27-Aug-2021 09:44:05
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

792032

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

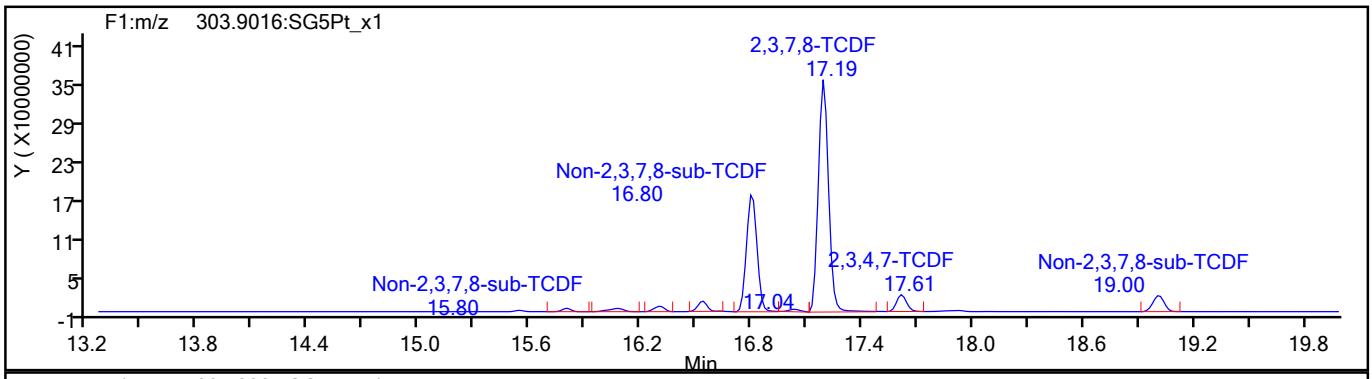

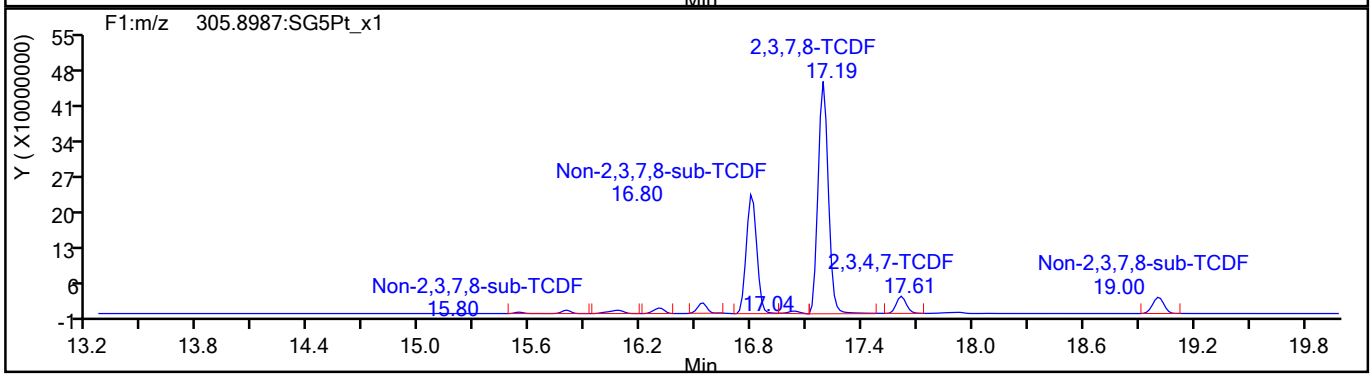

TCDF Standards

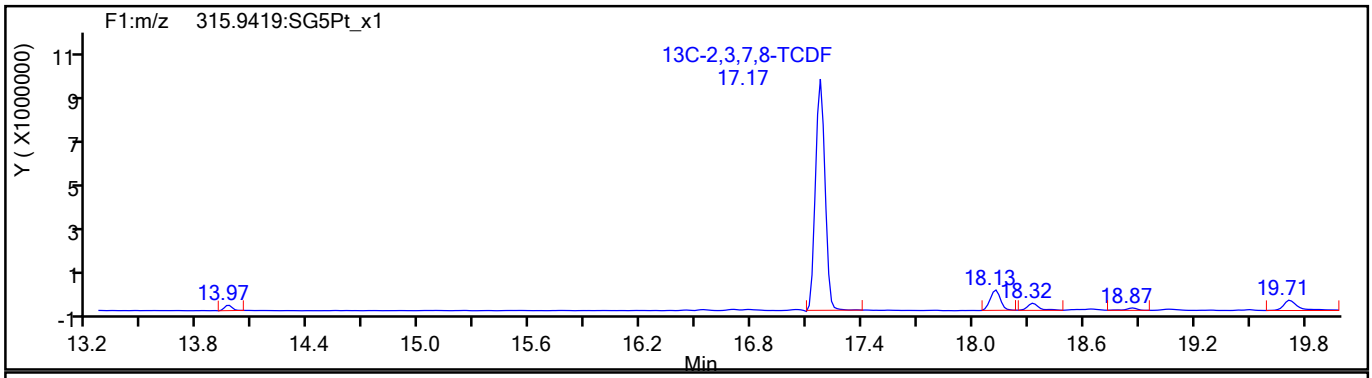

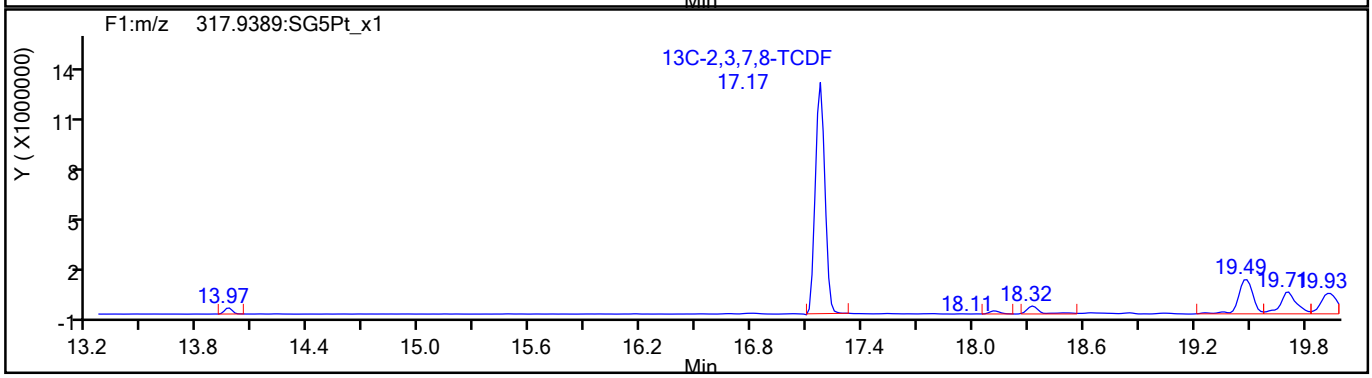

792033

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

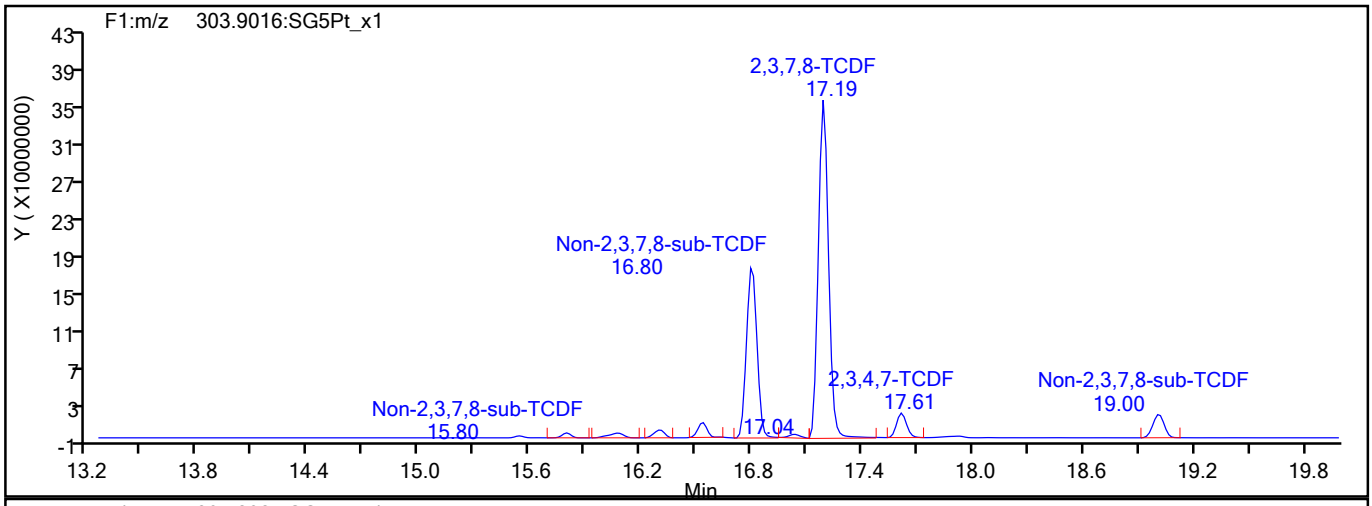

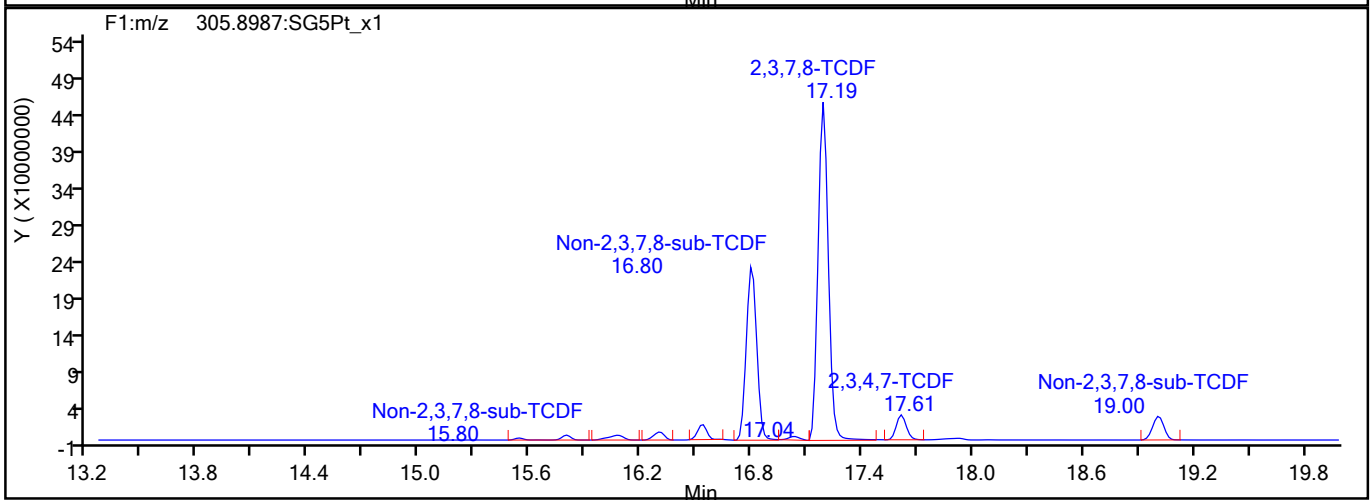

TCDF Interference Mass

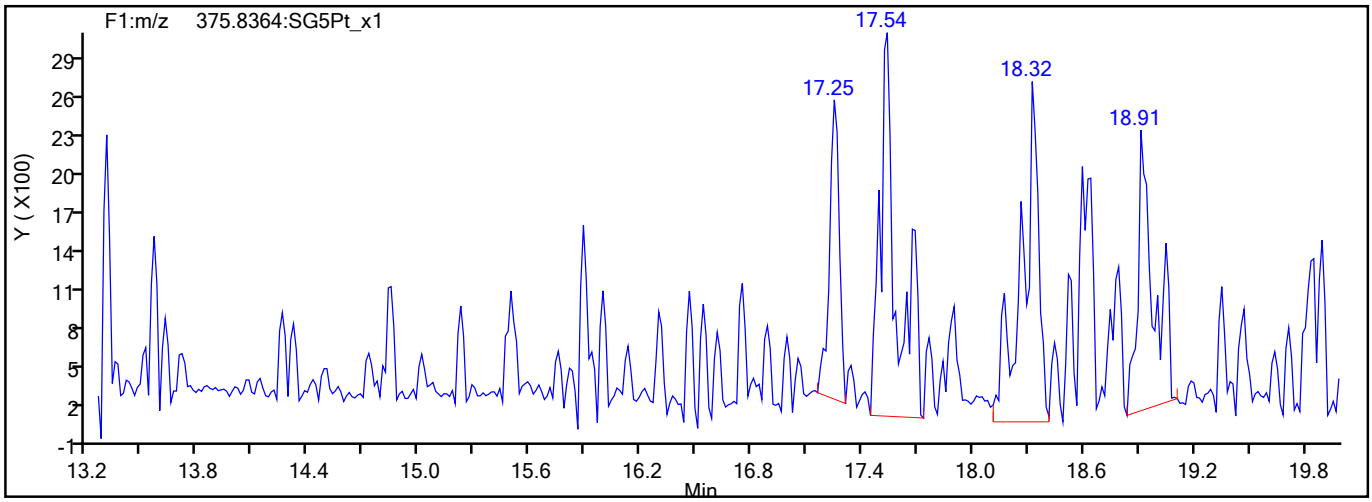

792034

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

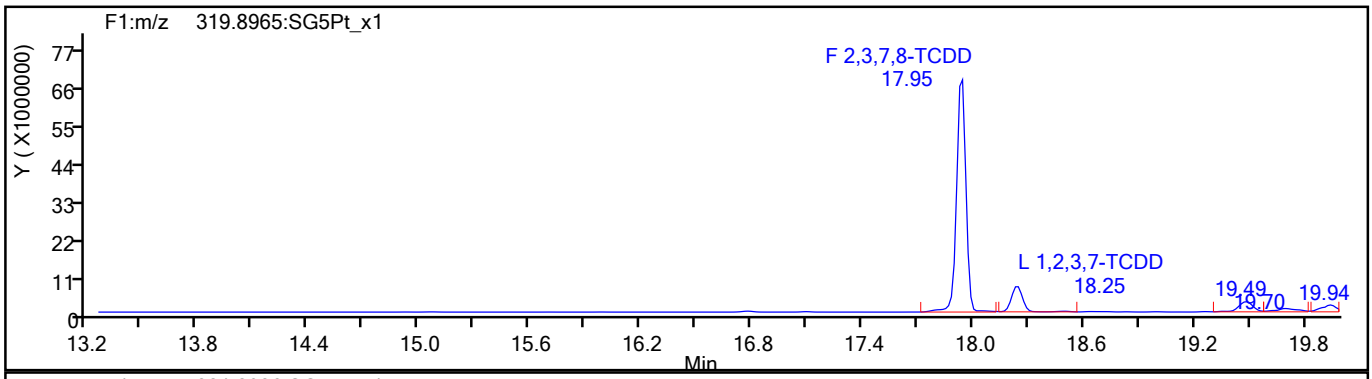

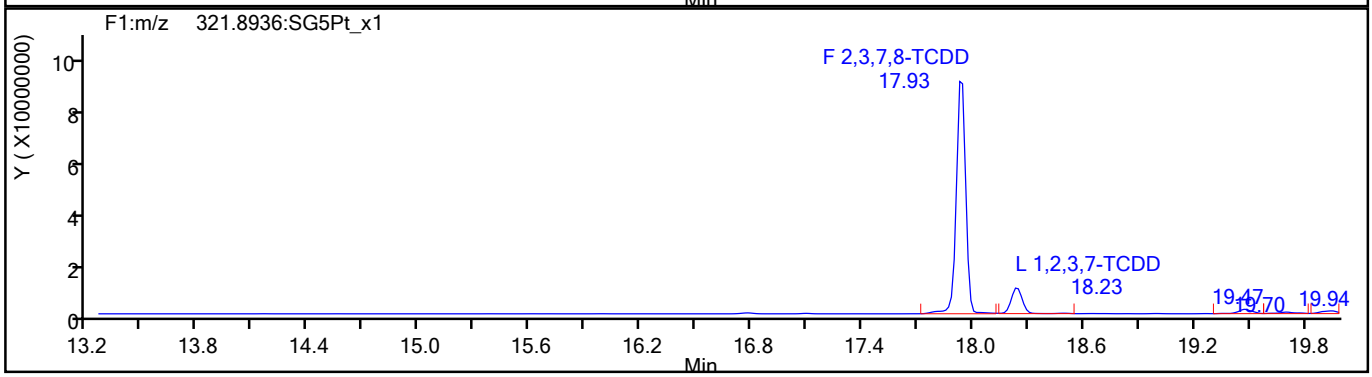

TCDD Standards

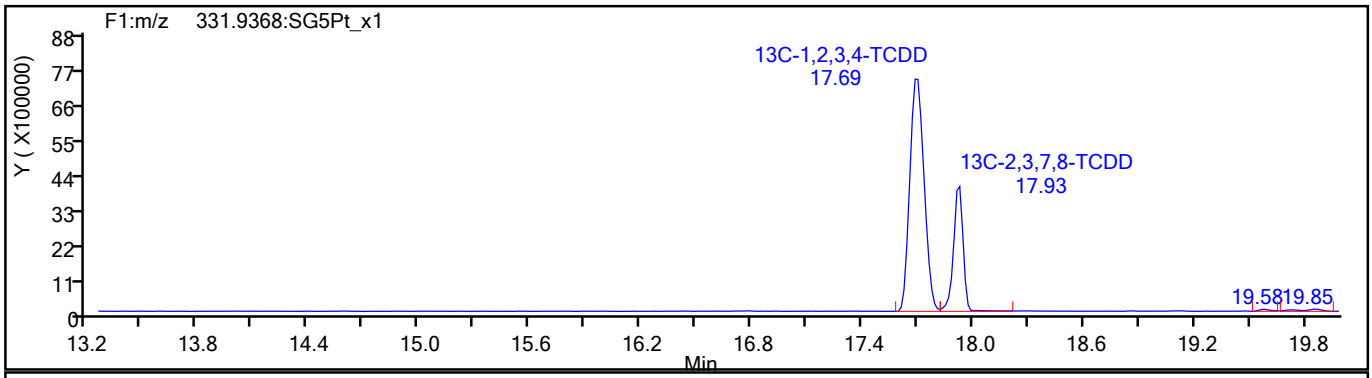

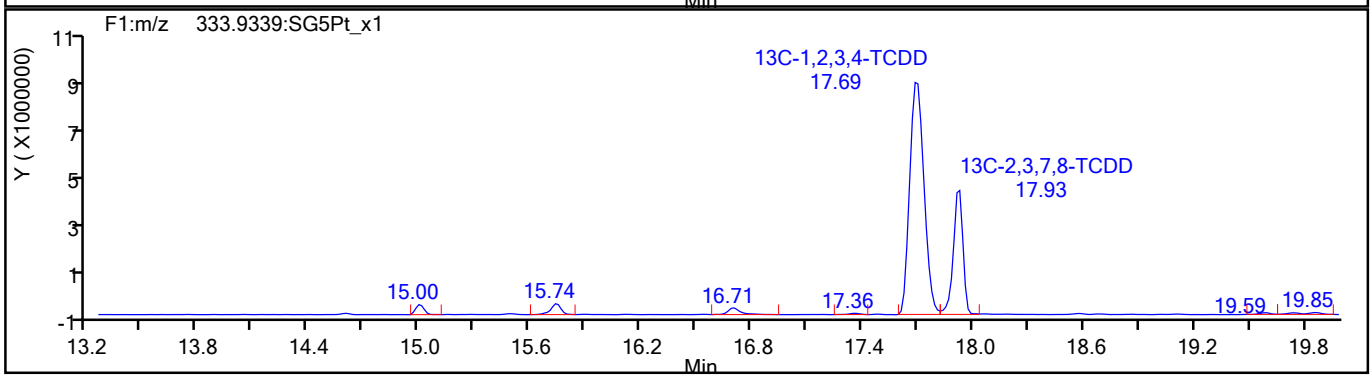

792035

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

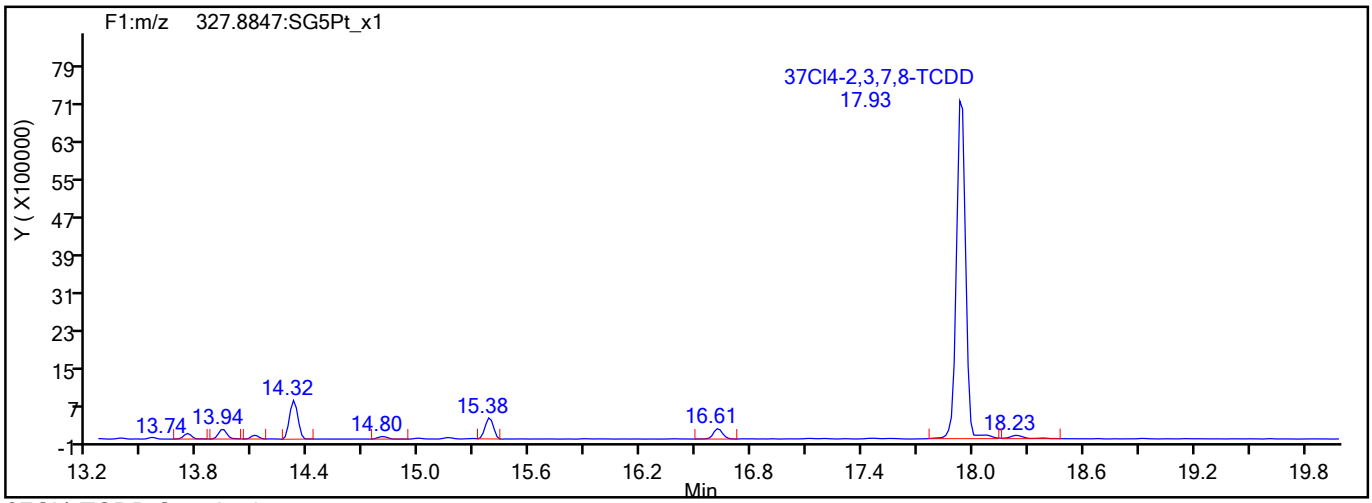

37Cl4-TCDD Standards

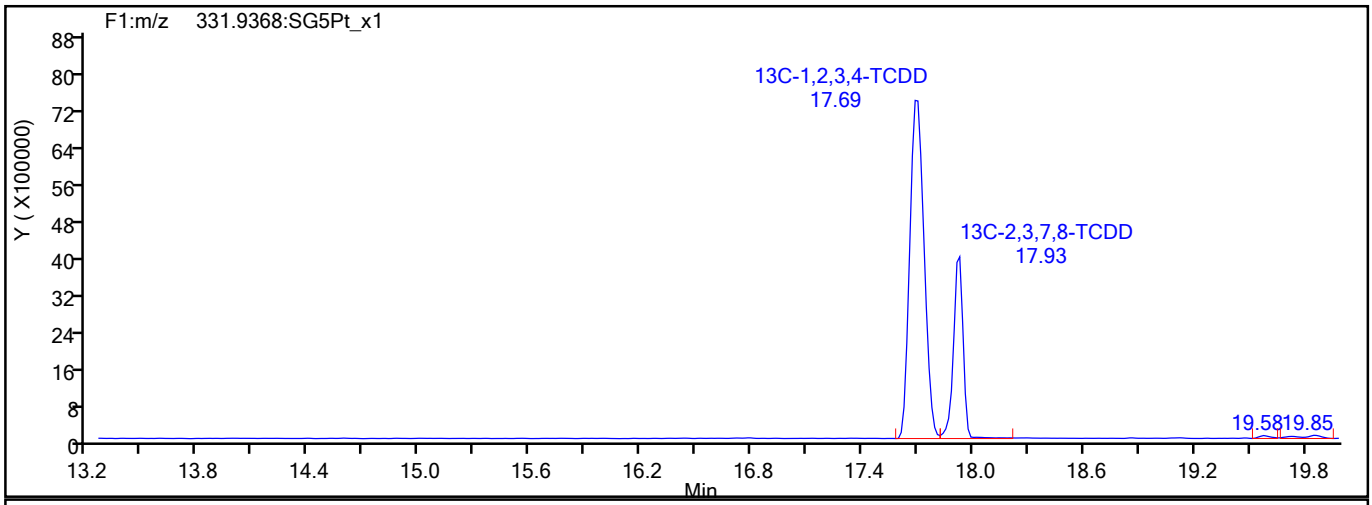

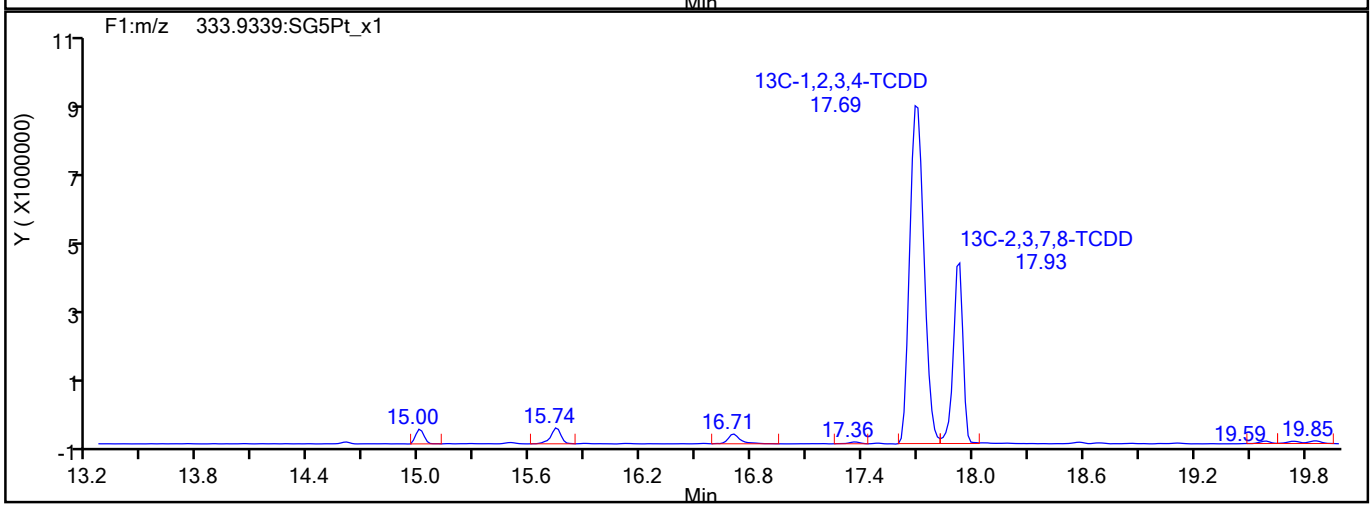

792036

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

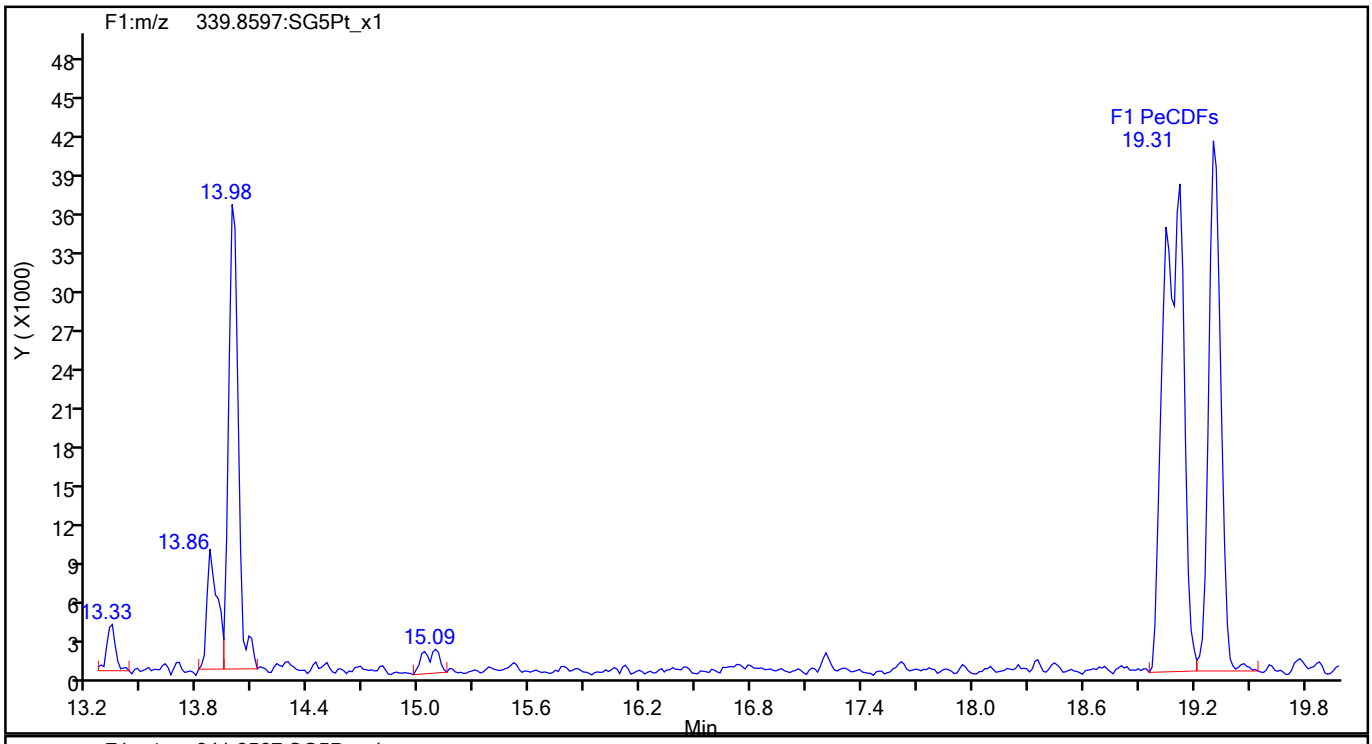

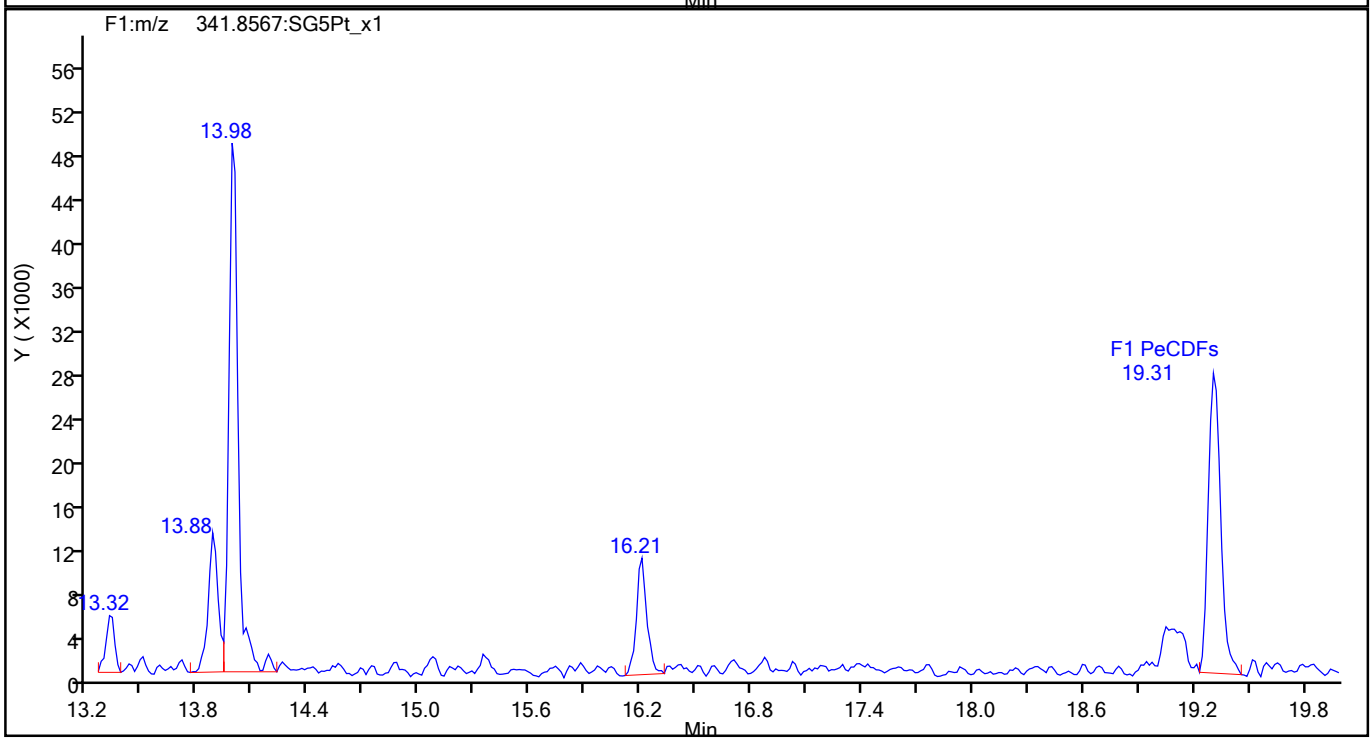

792037

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

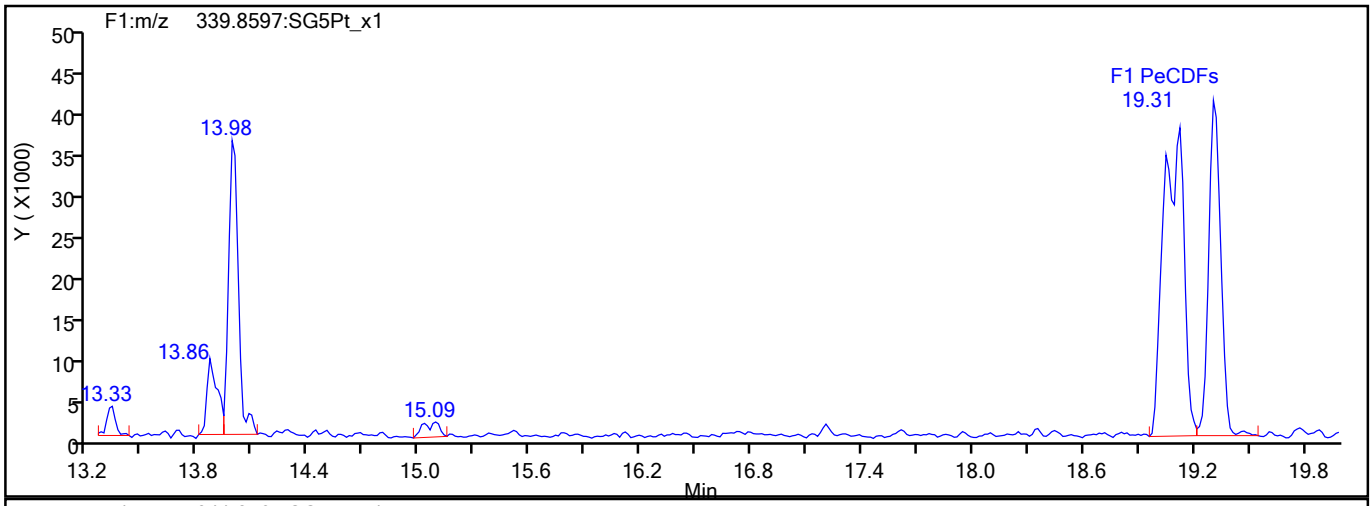

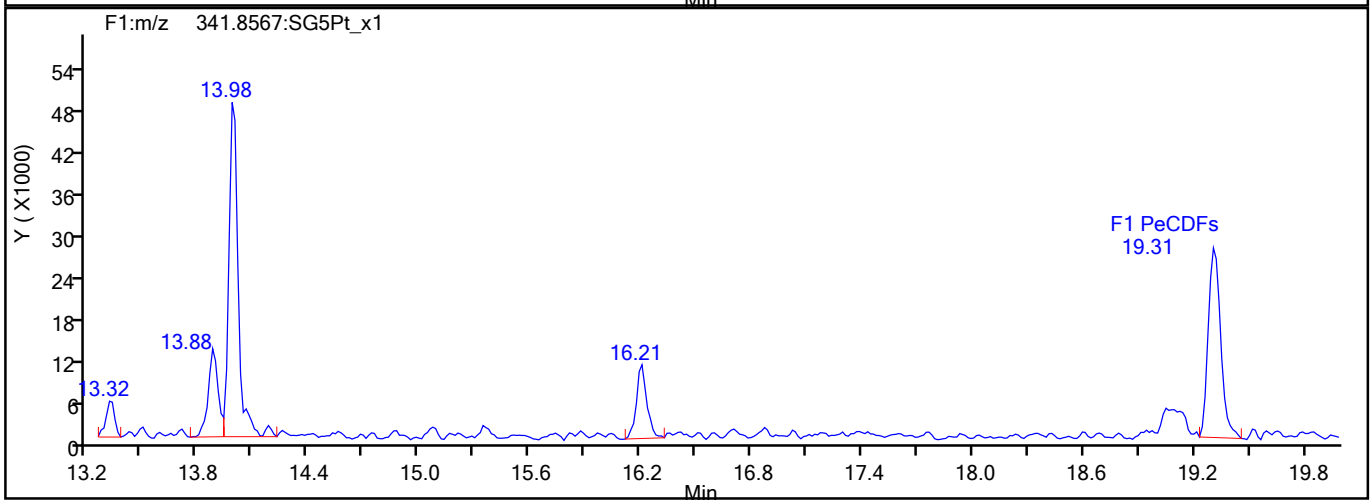

F1 PeCDFs Interference Mass

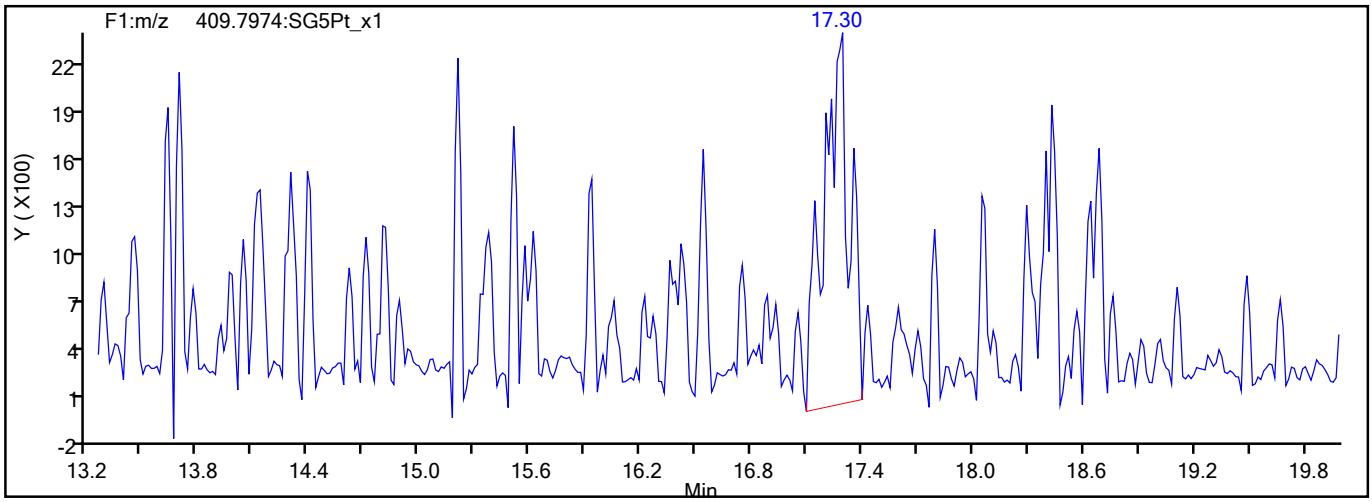

792038

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

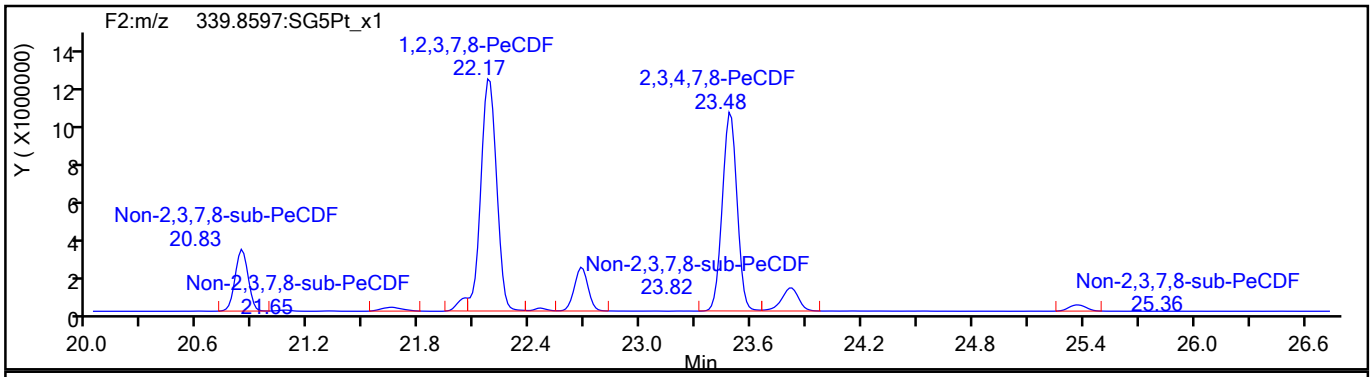

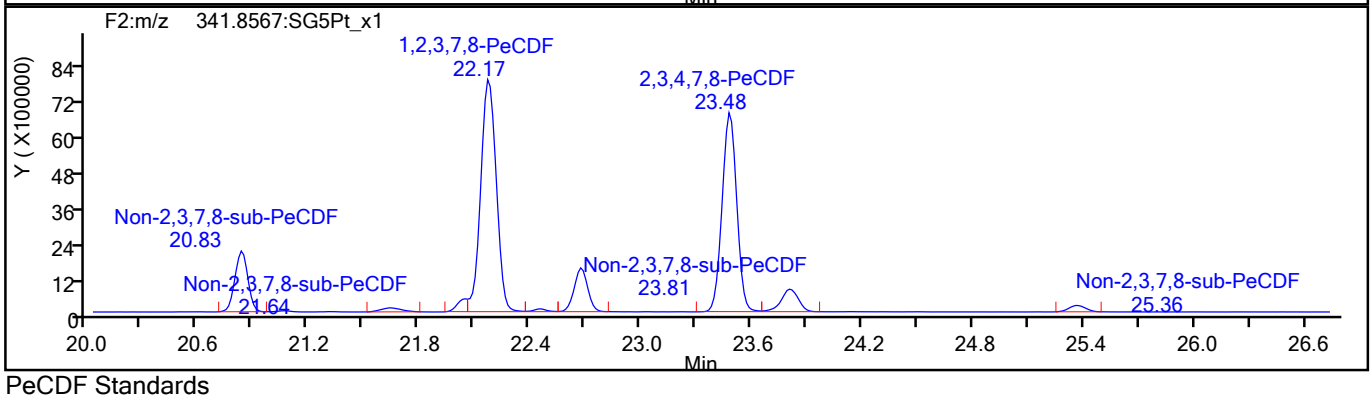

PeCDF Standards

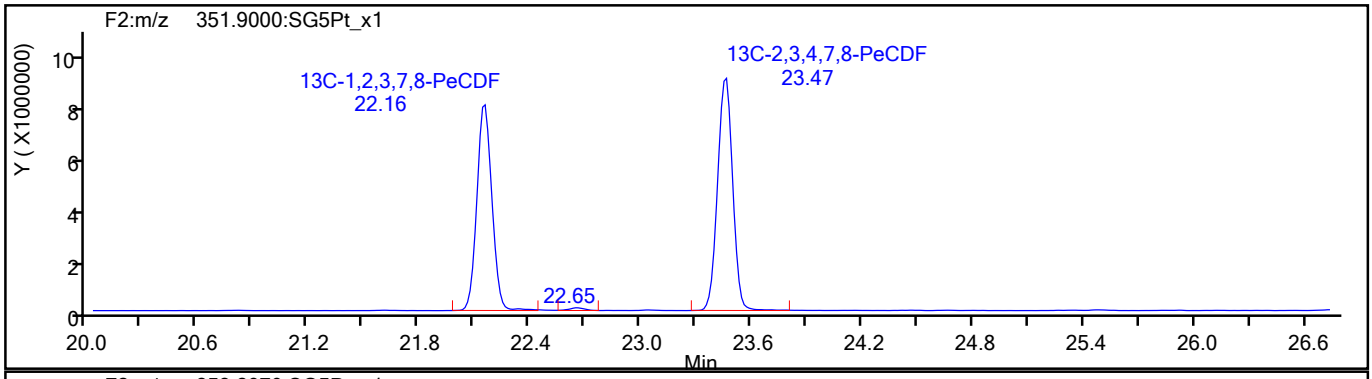

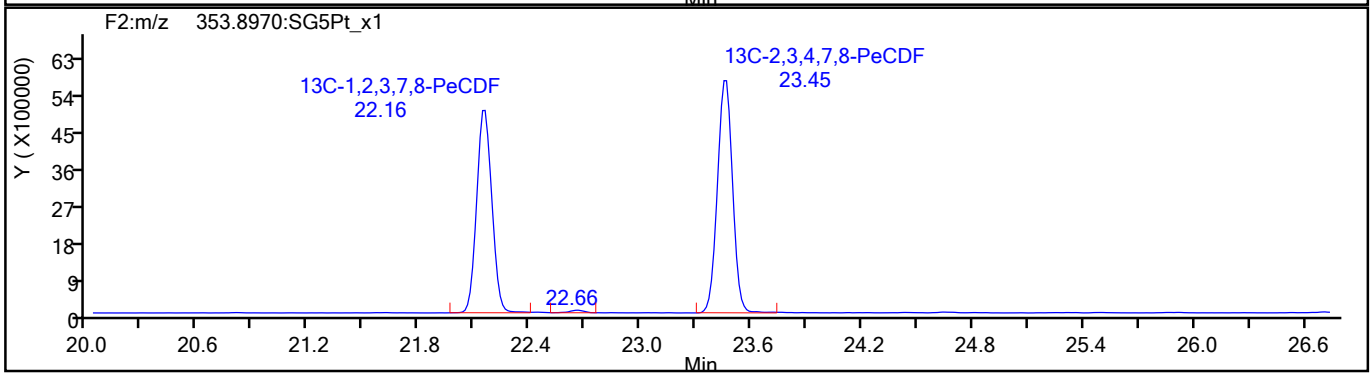

792039

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

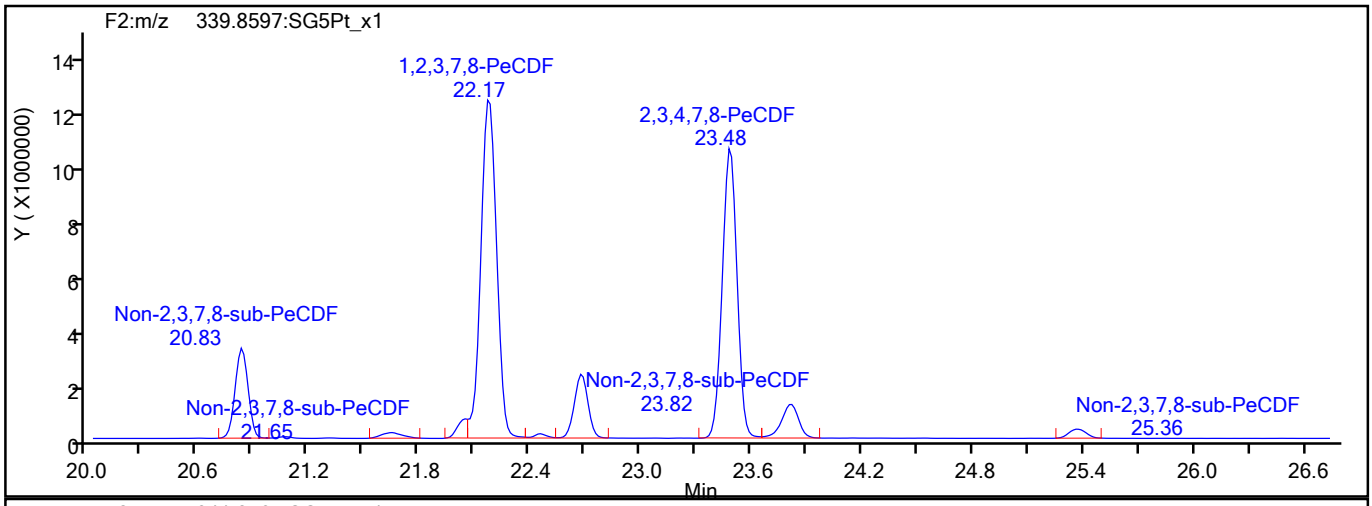

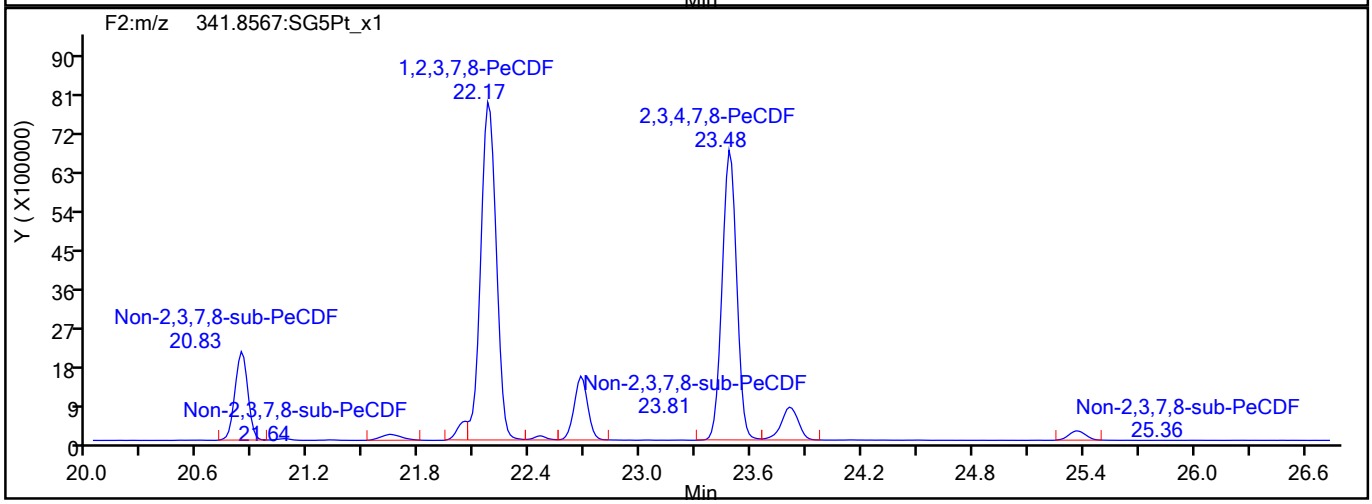

PeCDF Interference Mass

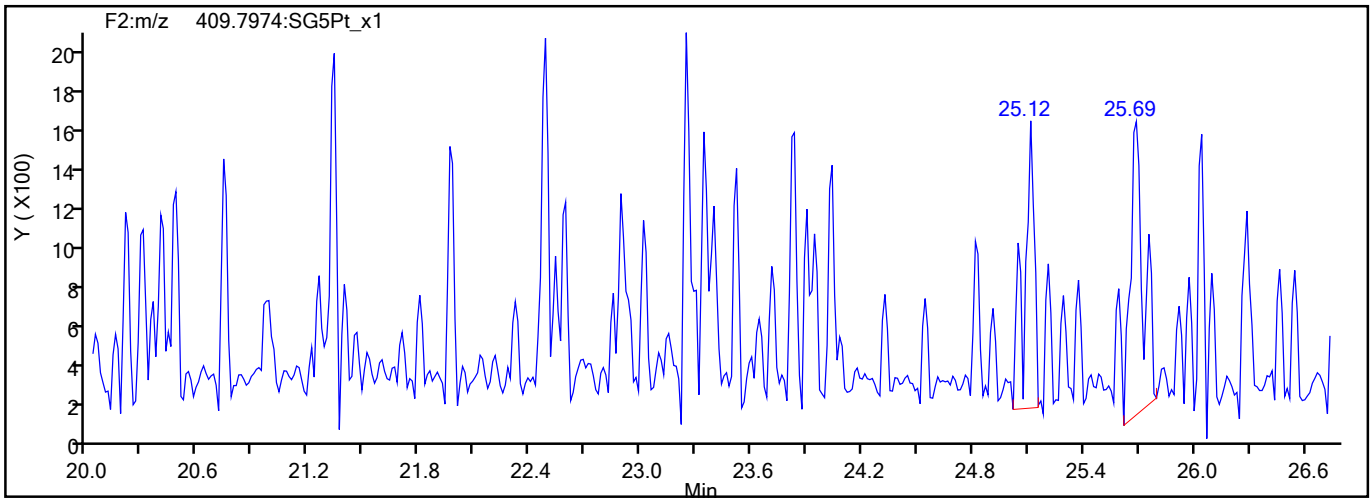

792040

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

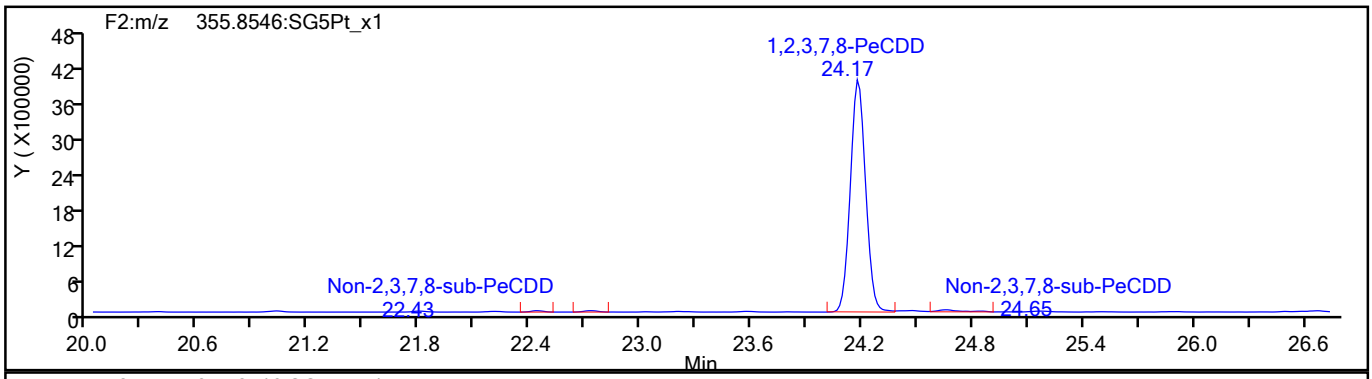

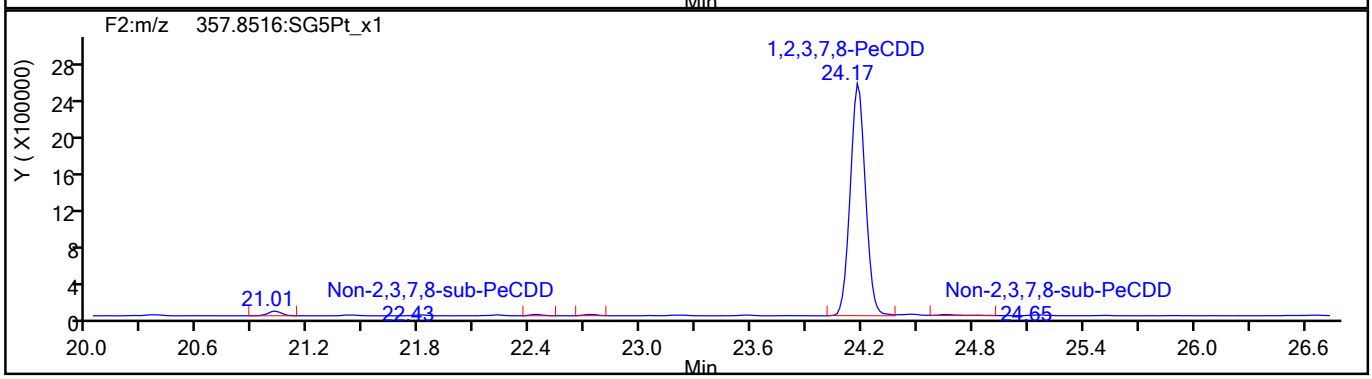

PeCDD Standards

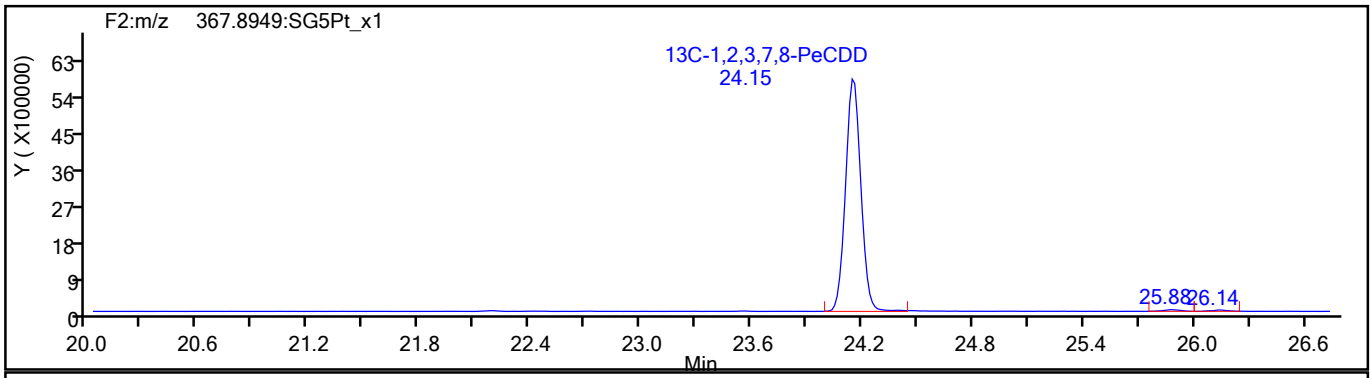

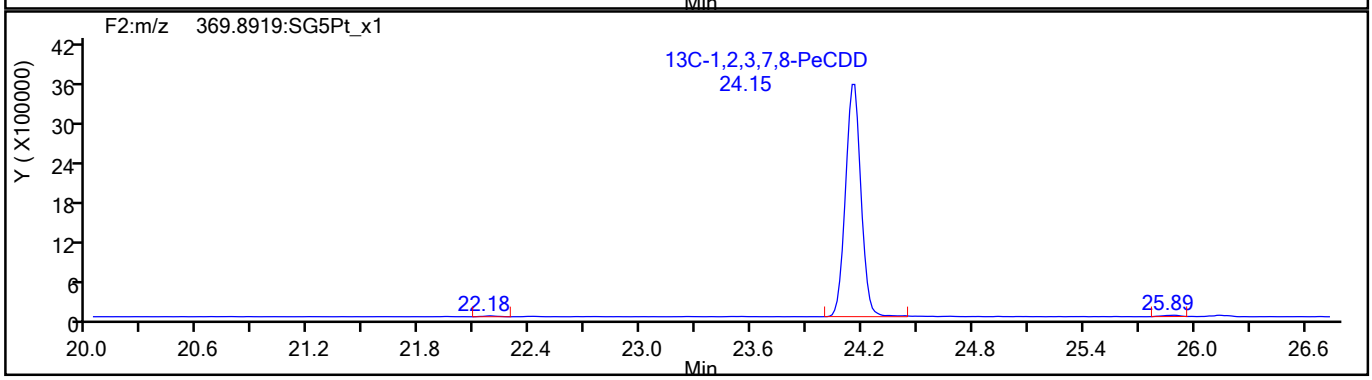

792041

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

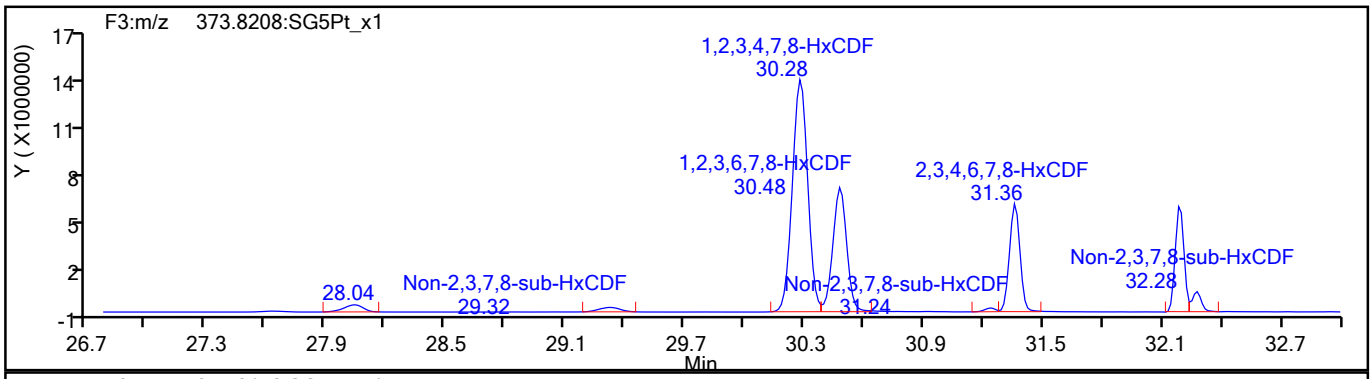

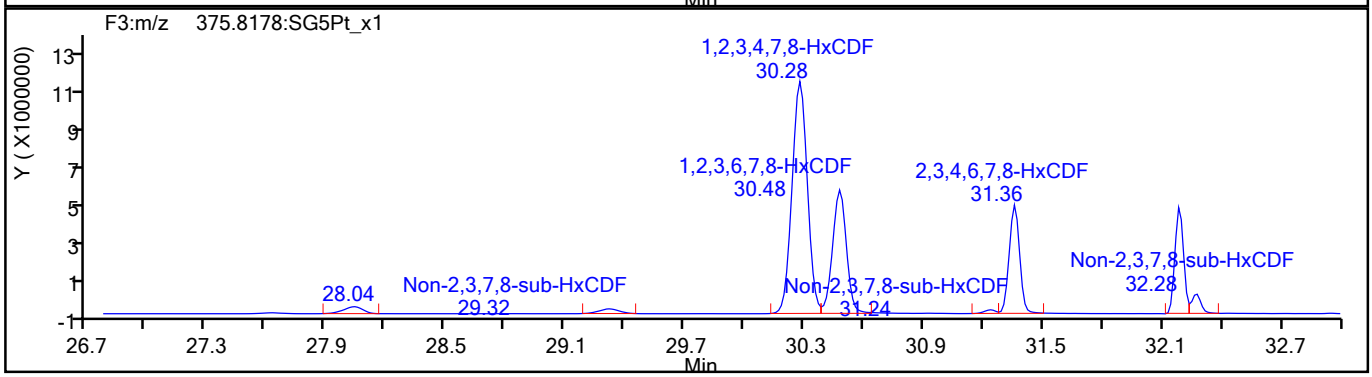

HxCDF Standards

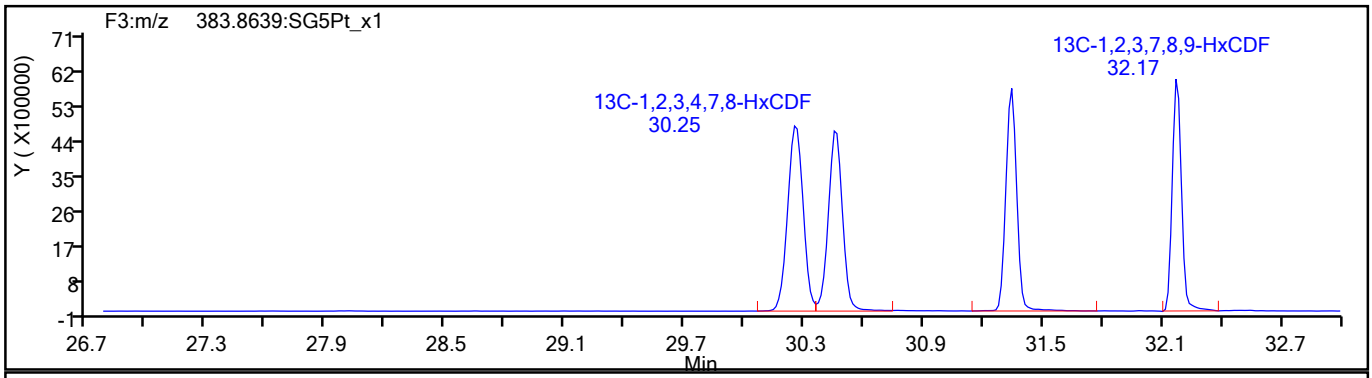

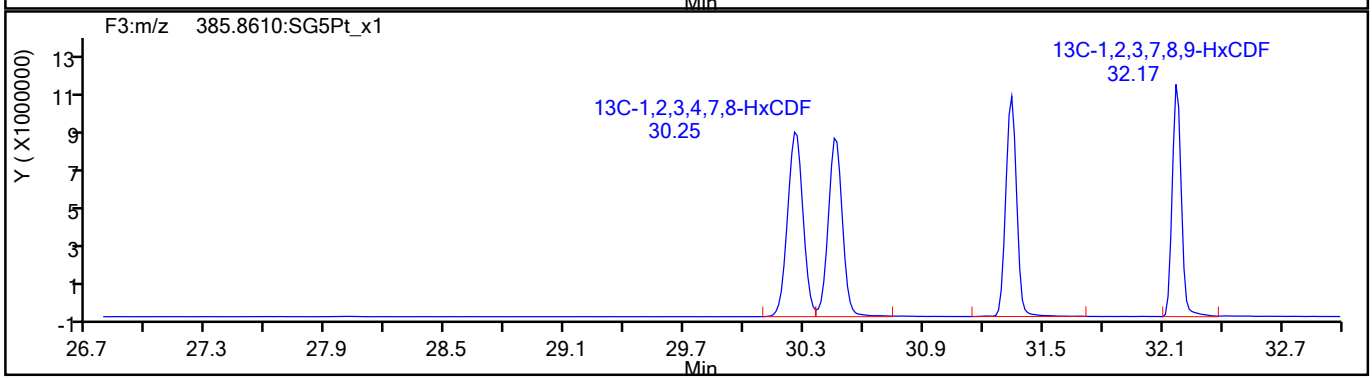

792042

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
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HxCDF

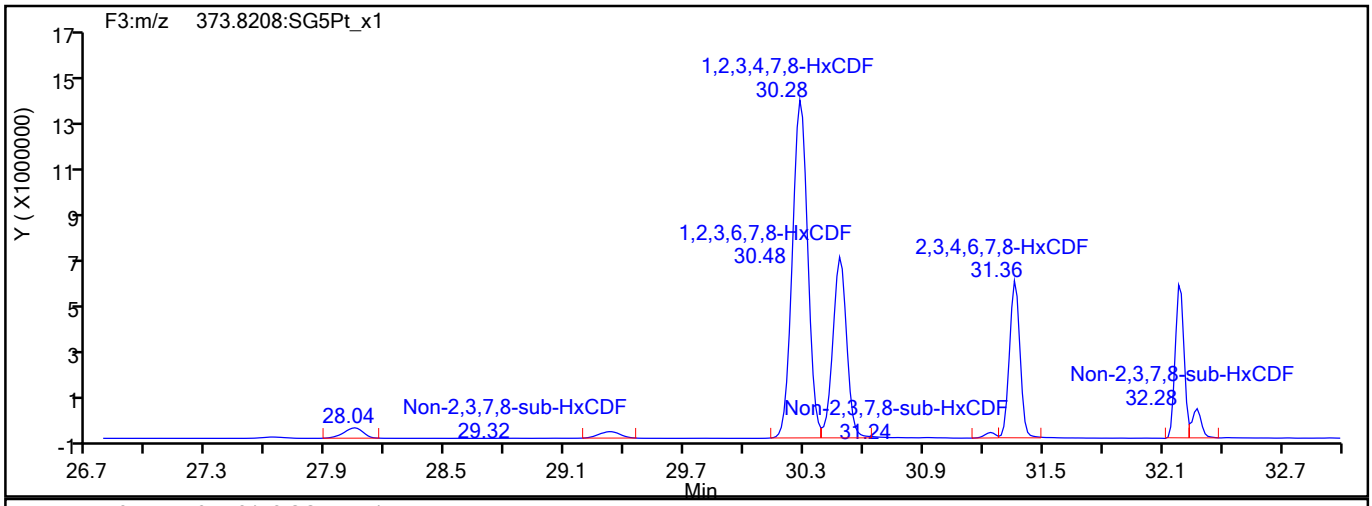

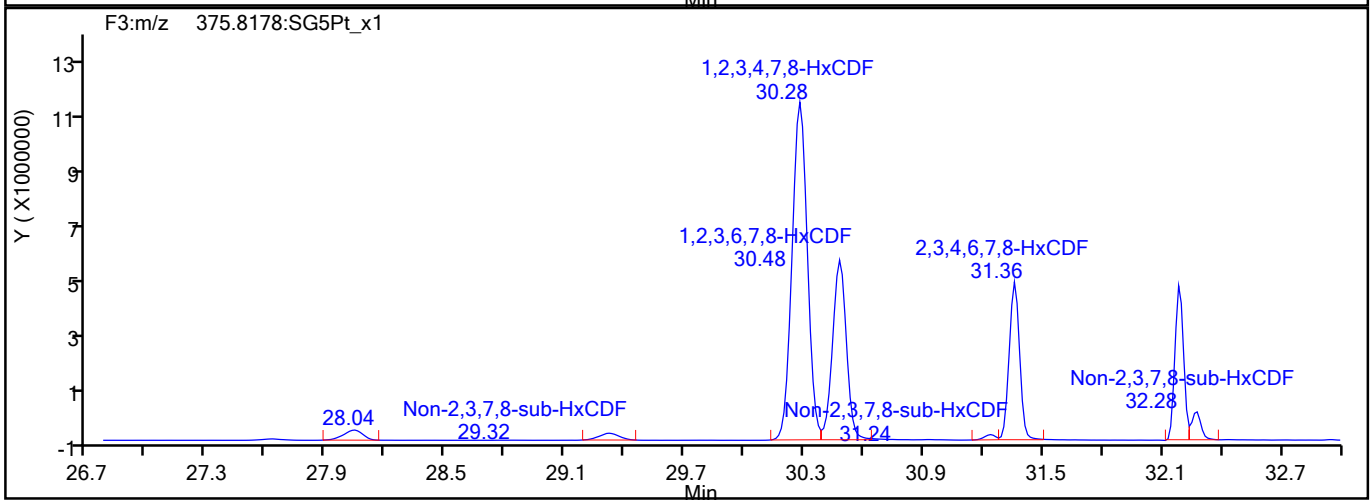

HxCDF Interference Mass

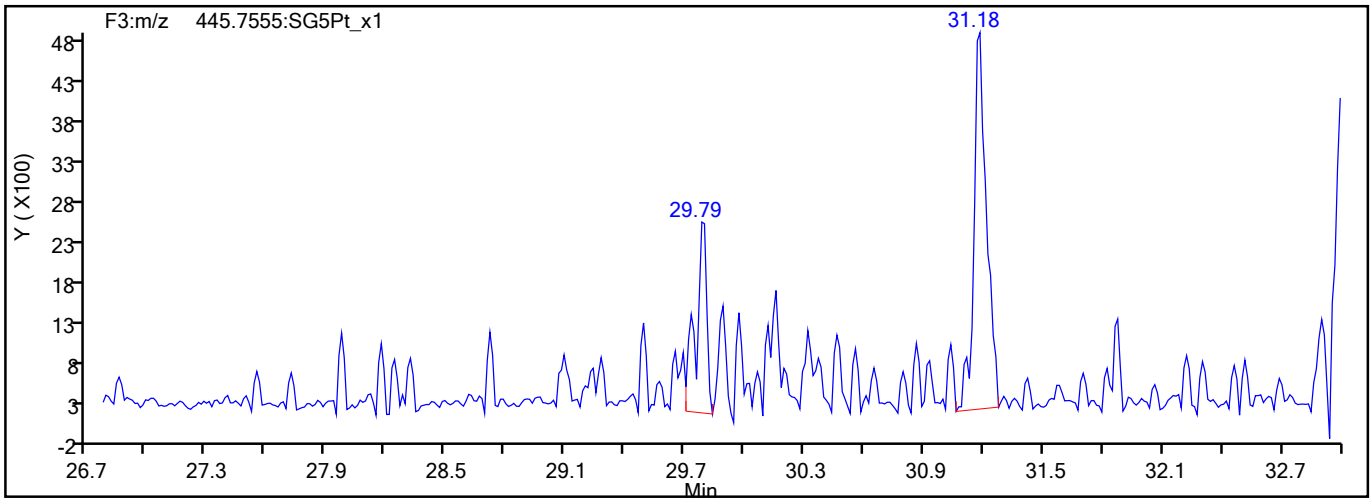

792043

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

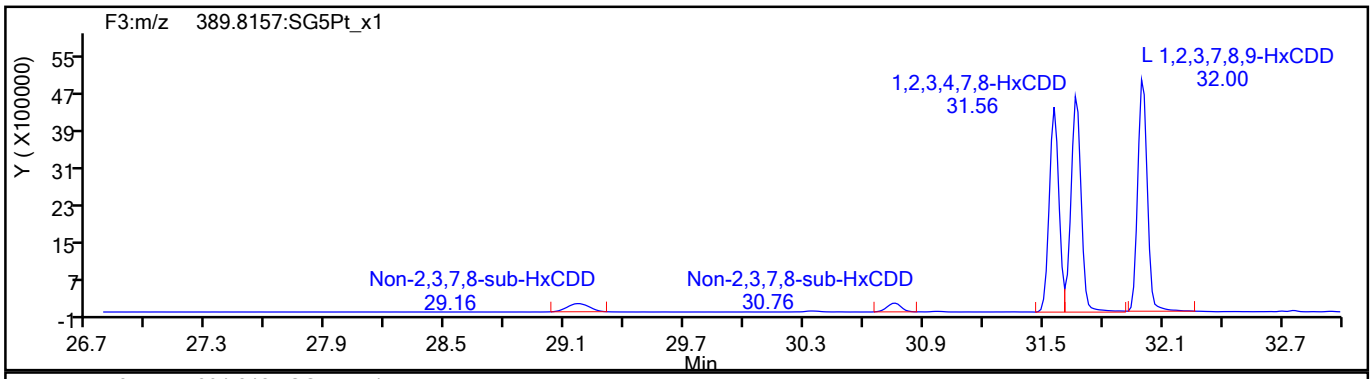

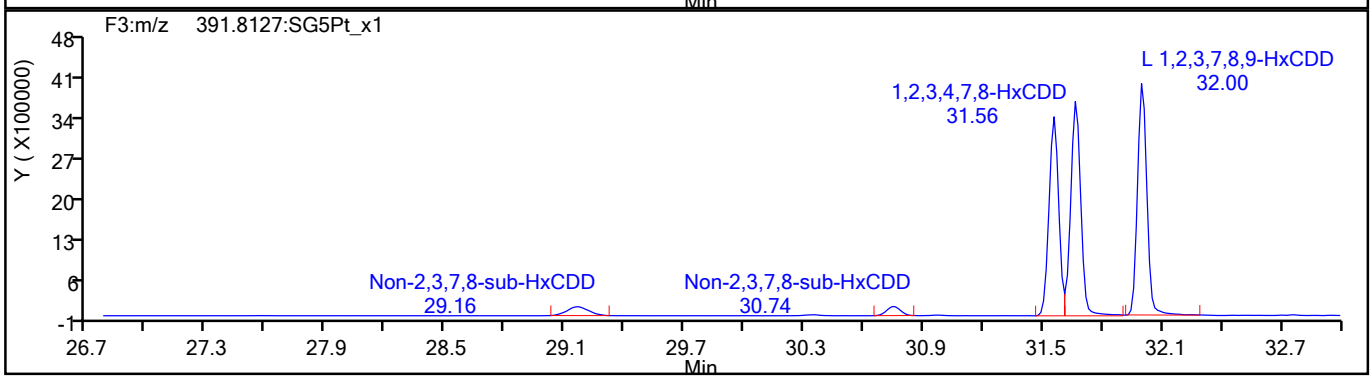

HxCDD Standards

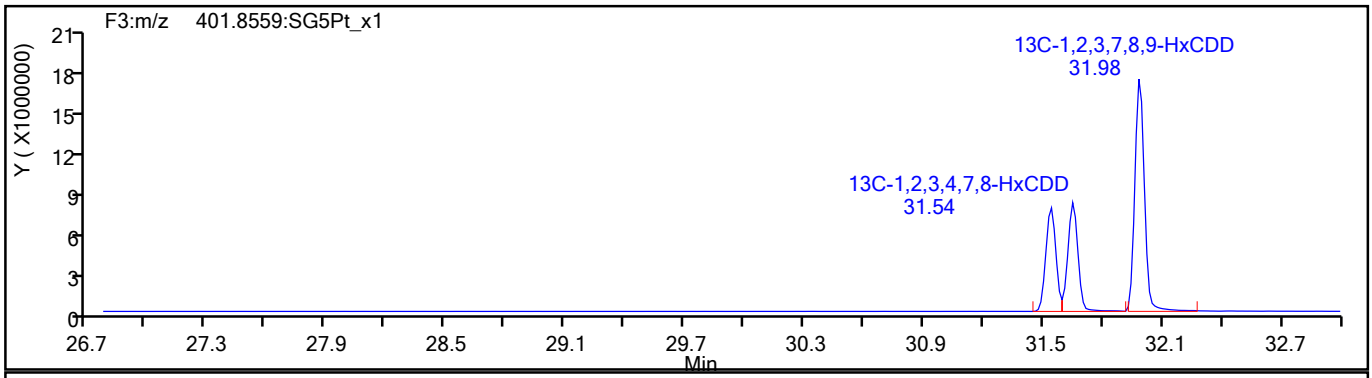

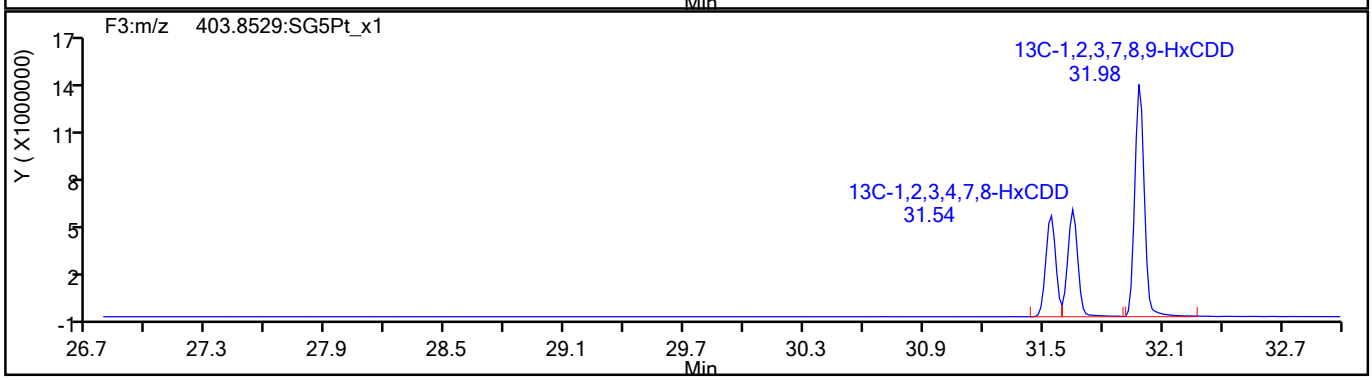

792044

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

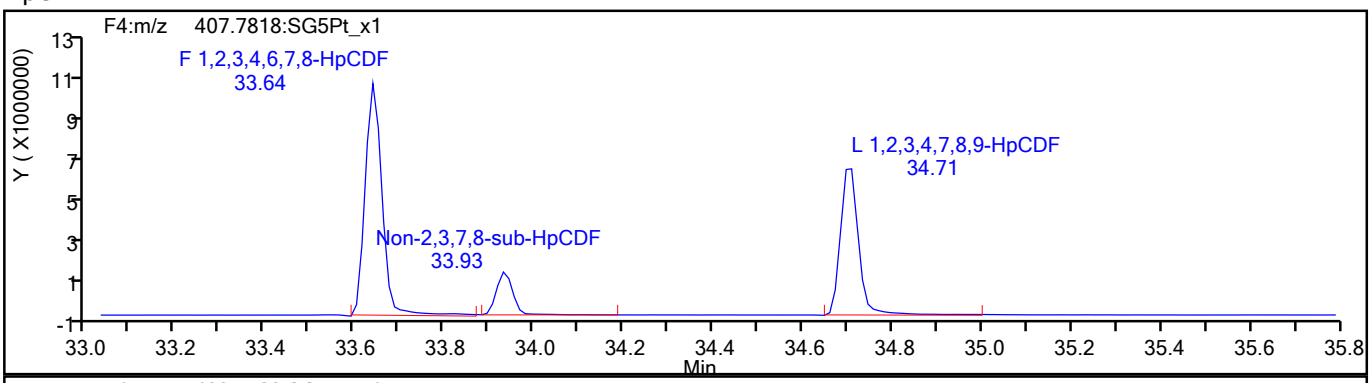

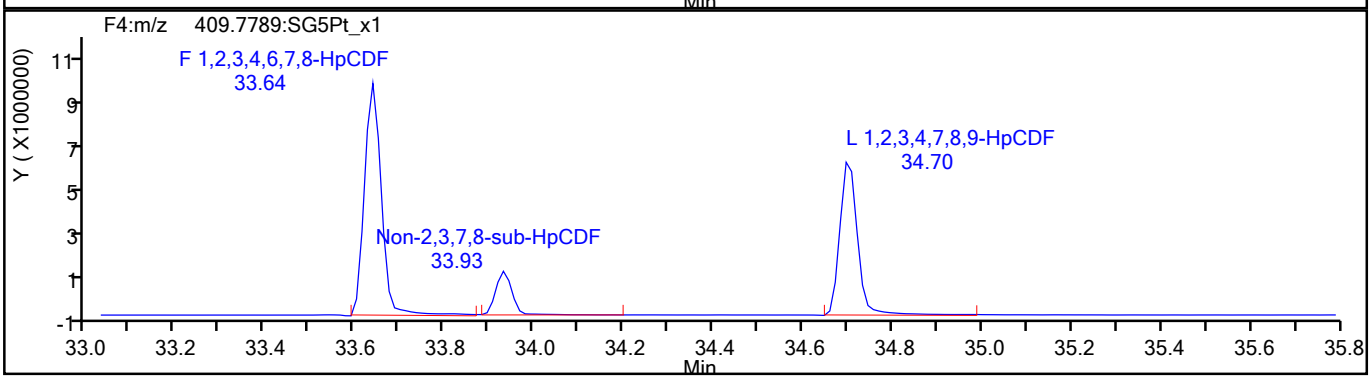

HpCDF Standards

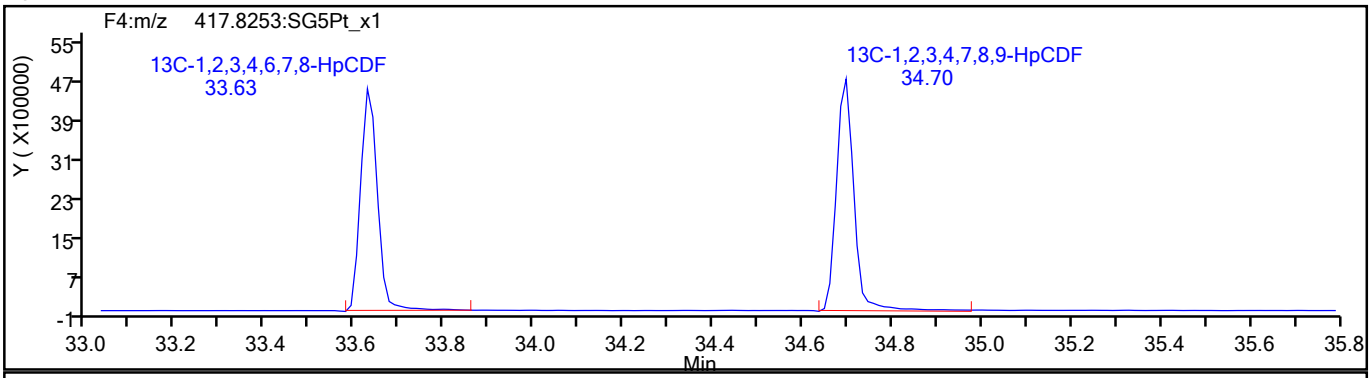

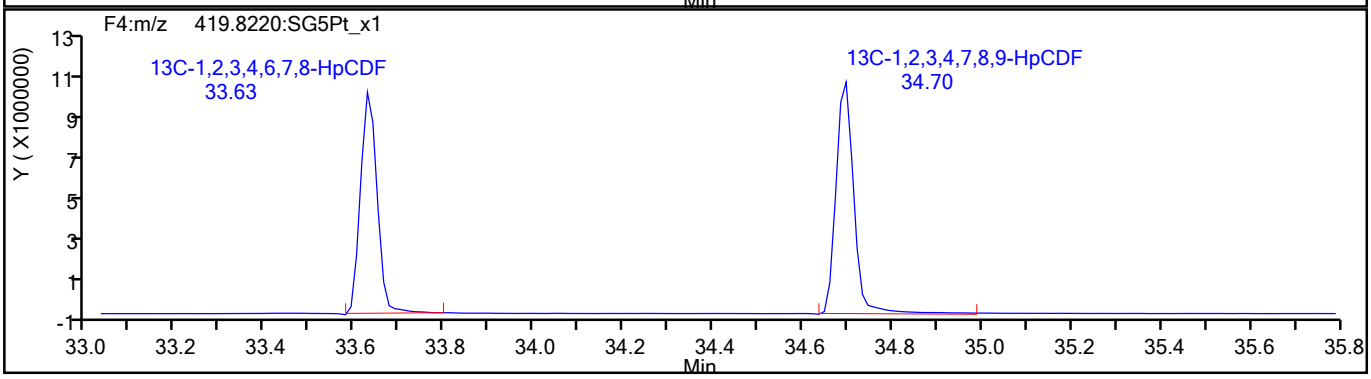

792045

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

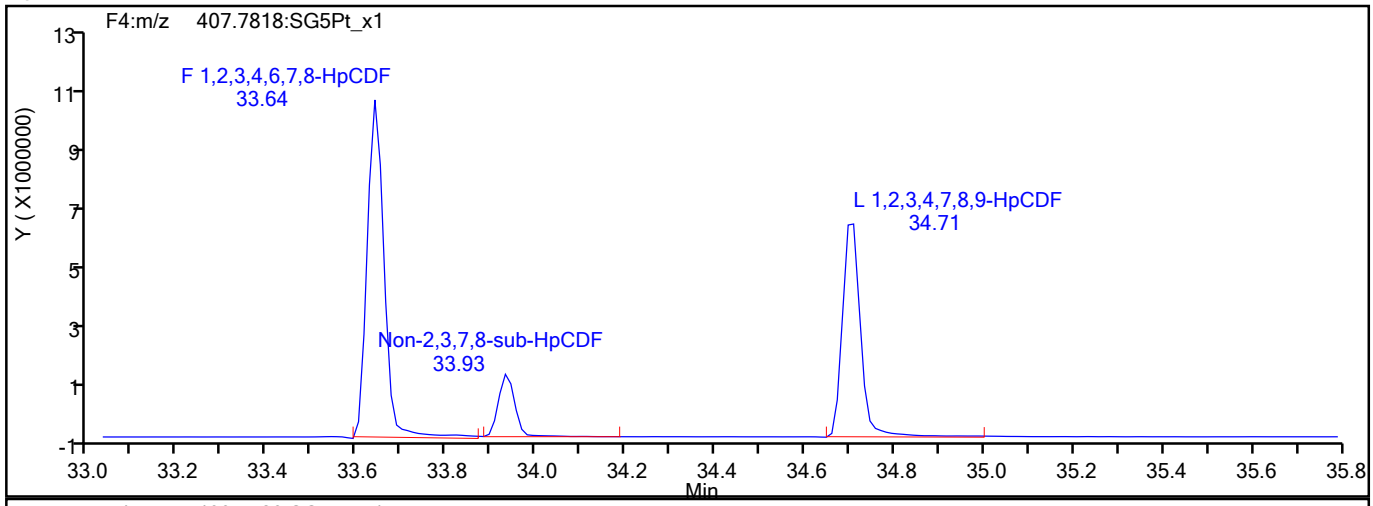

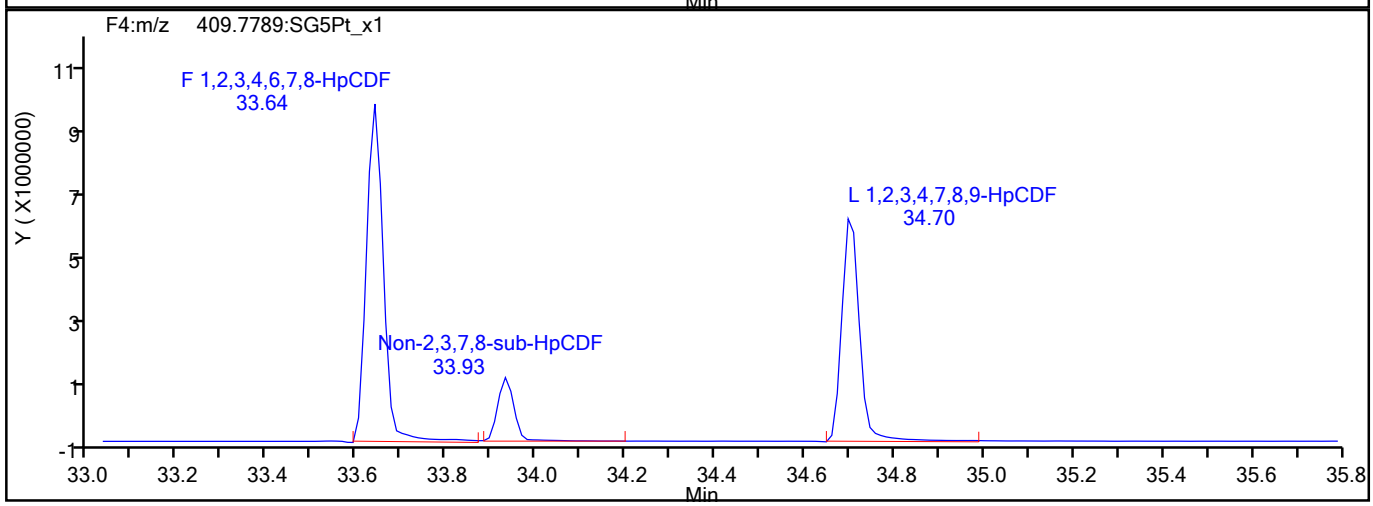

HpCDF Interference Mass

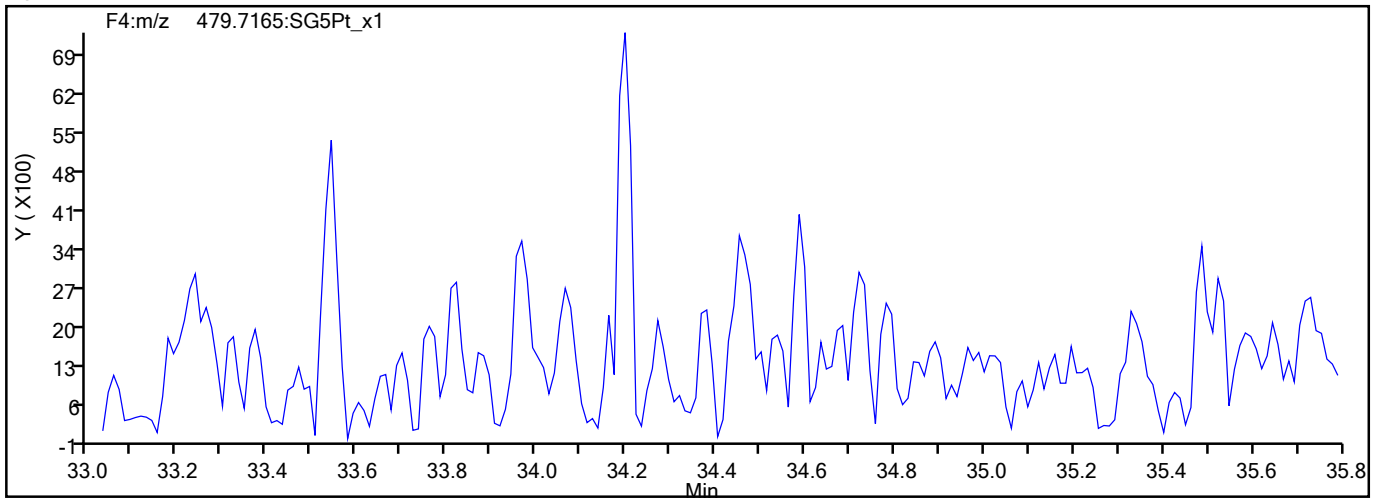

792046

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

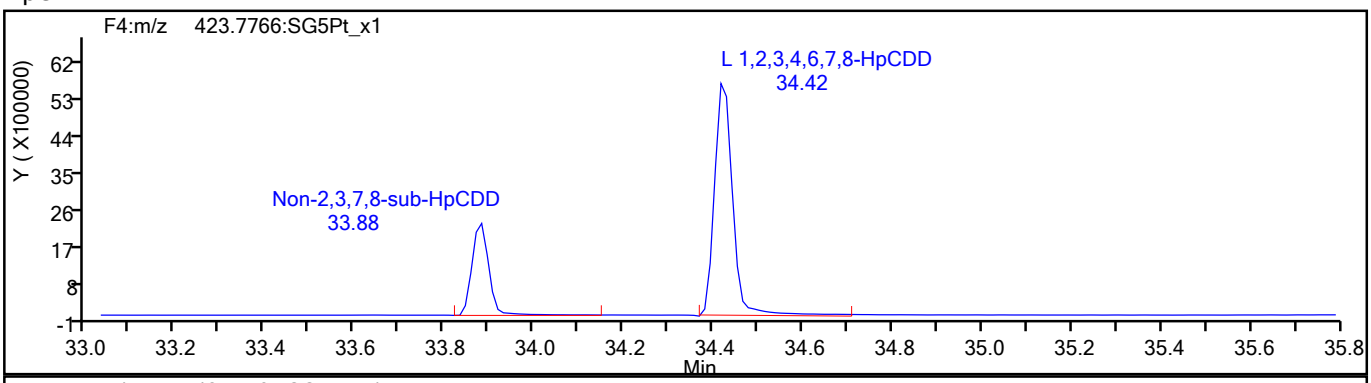

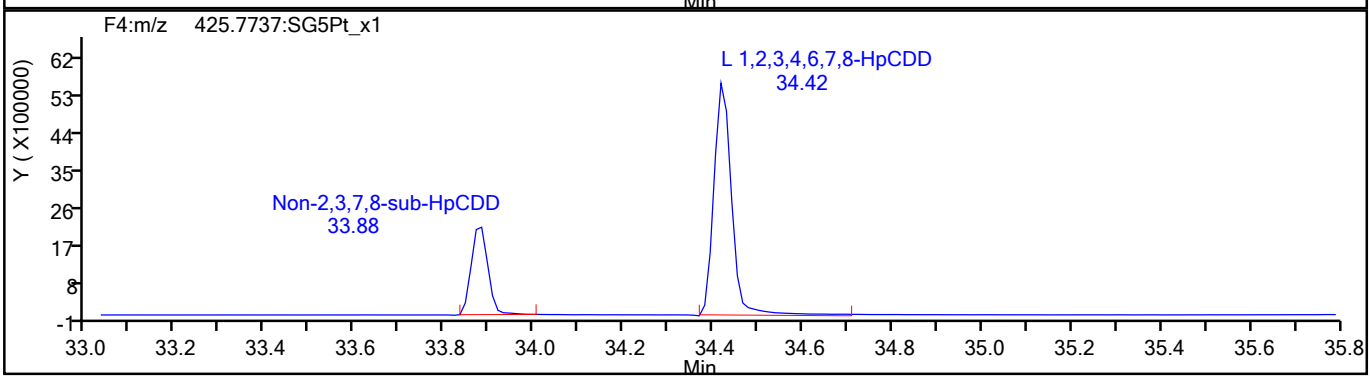

HpCDD Standards

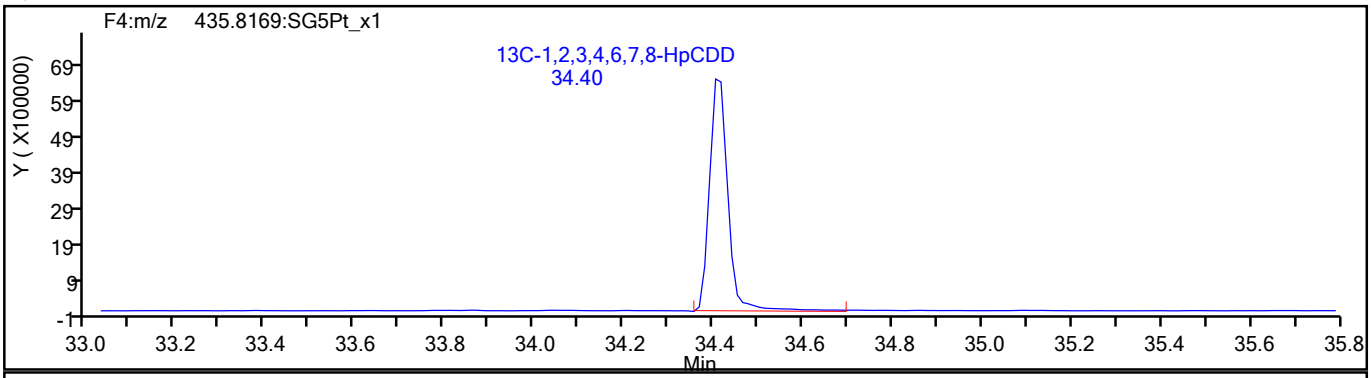

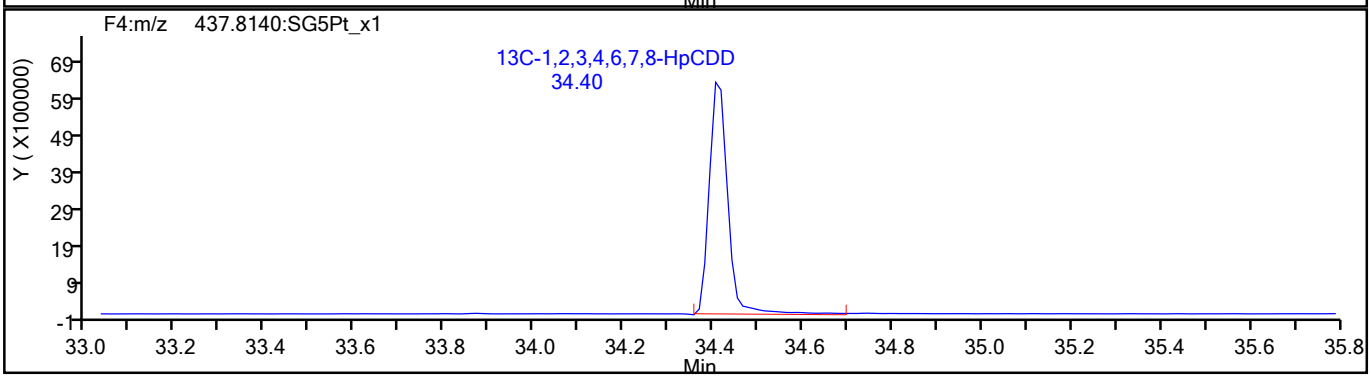

792047

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

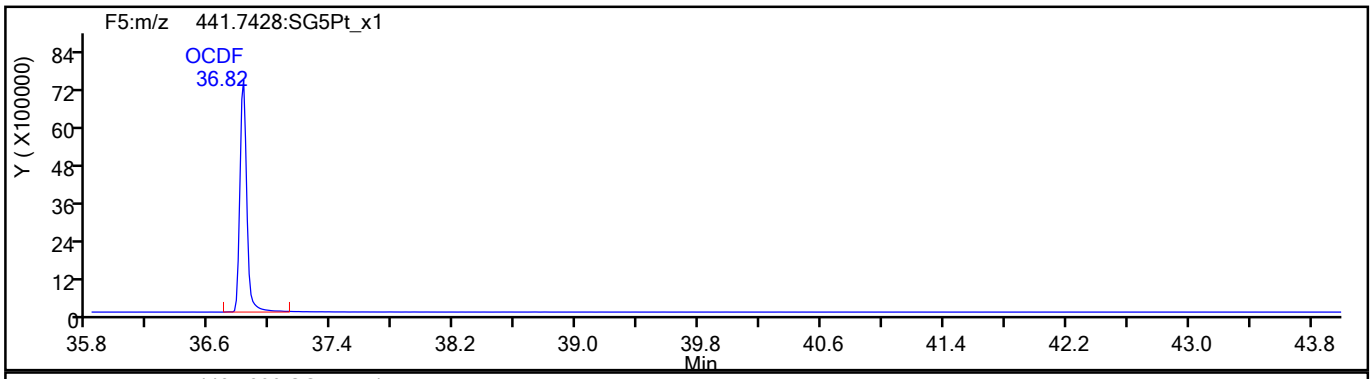

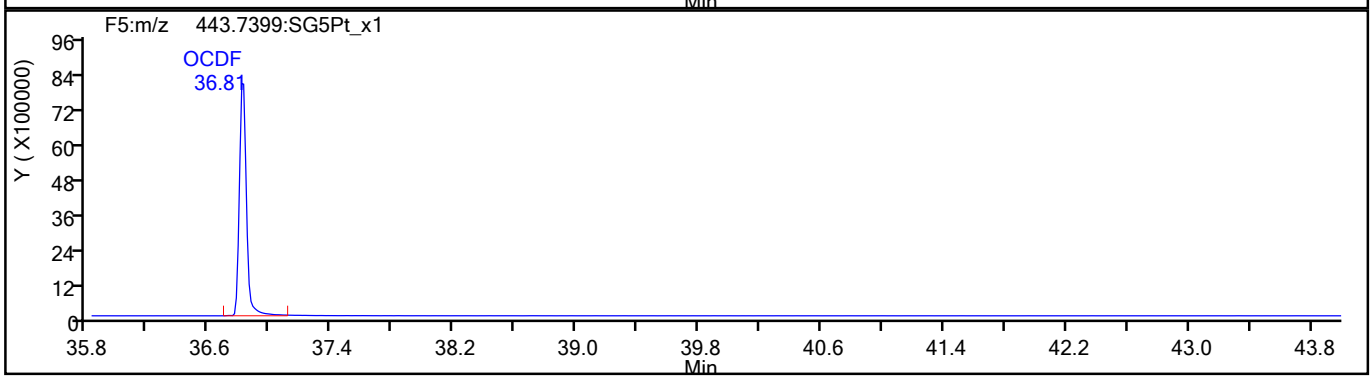

OCDF Standards

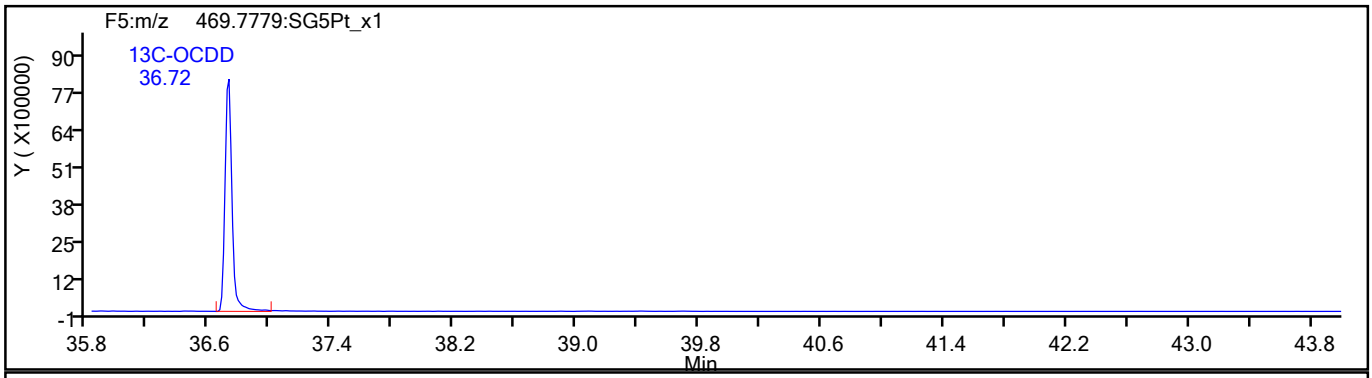

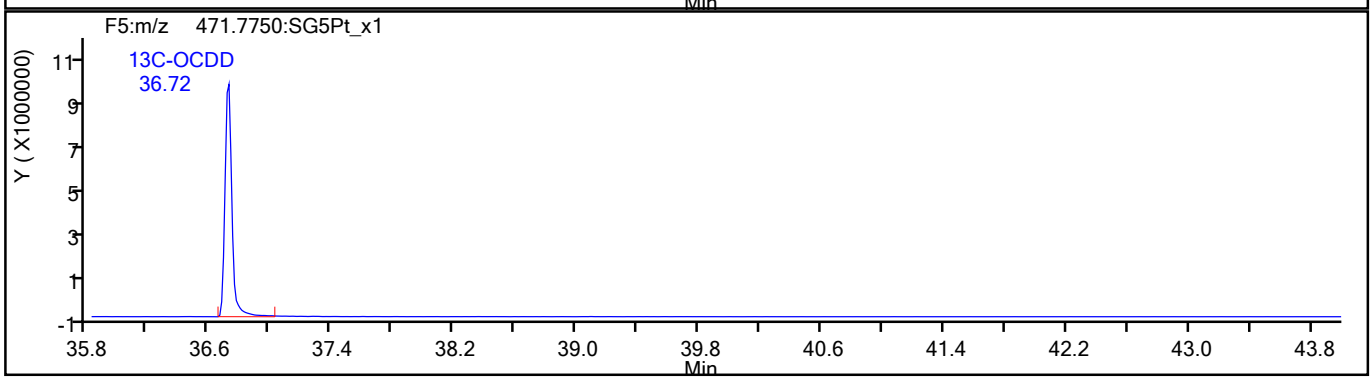

792048

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

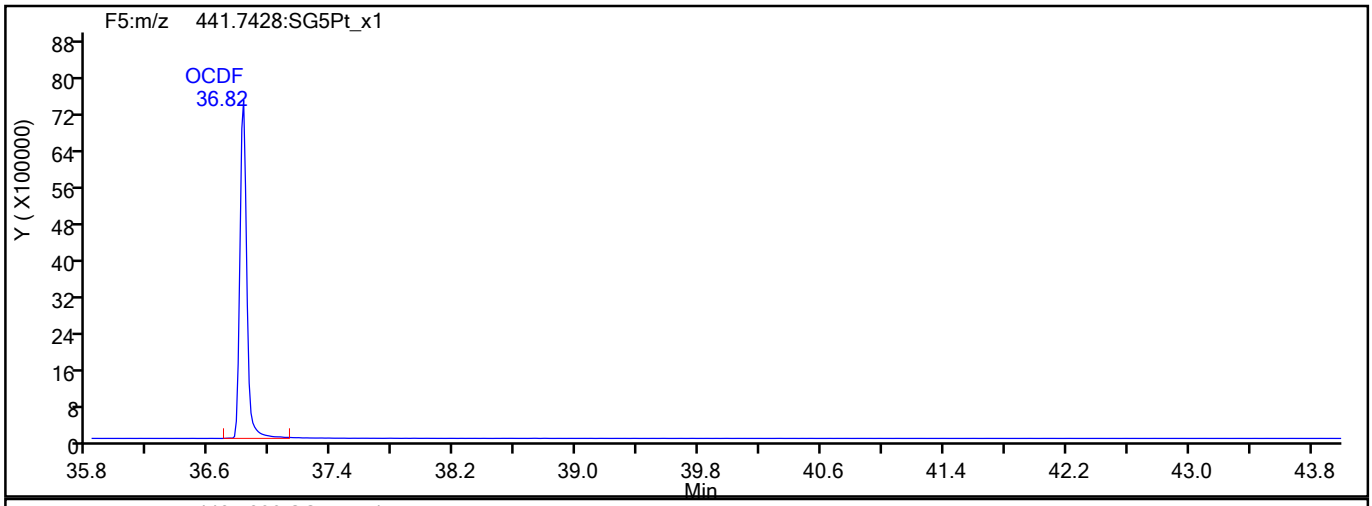

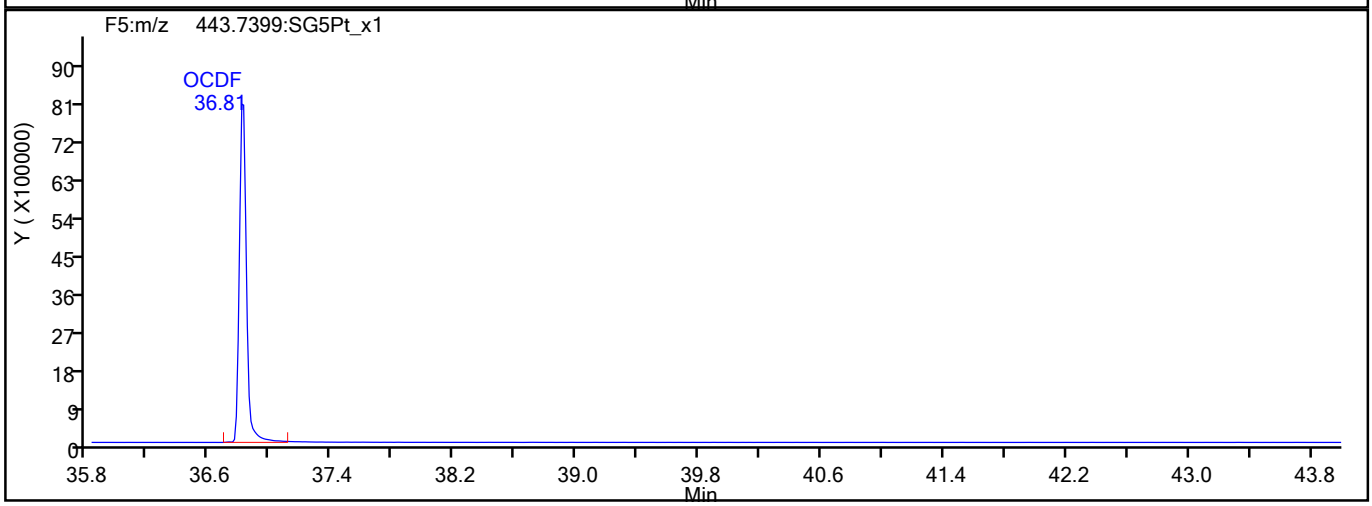

OCDF Interference Mass

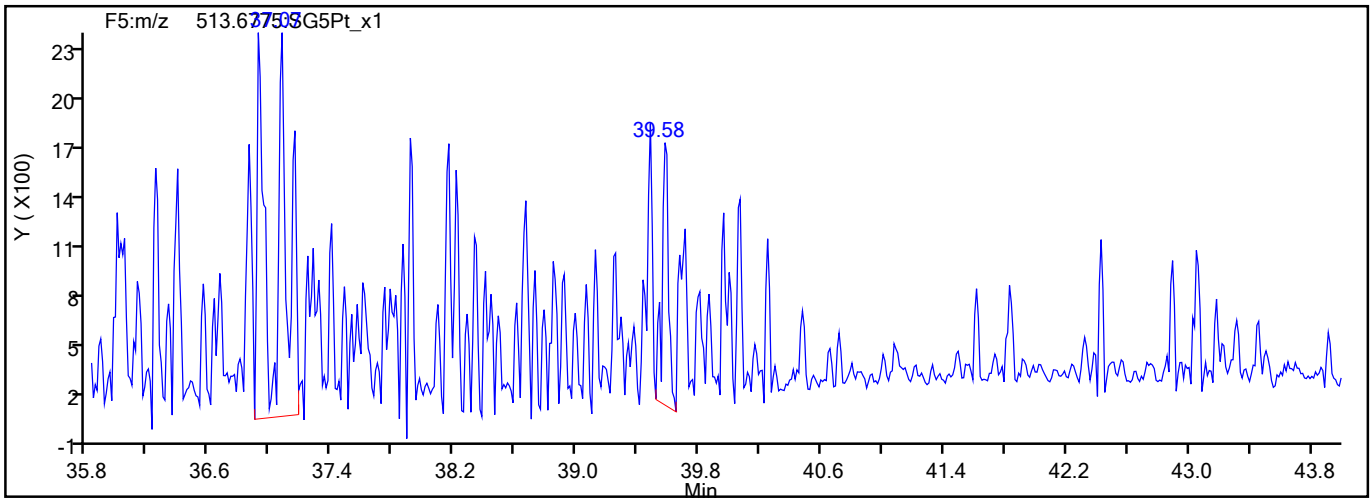

792049

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

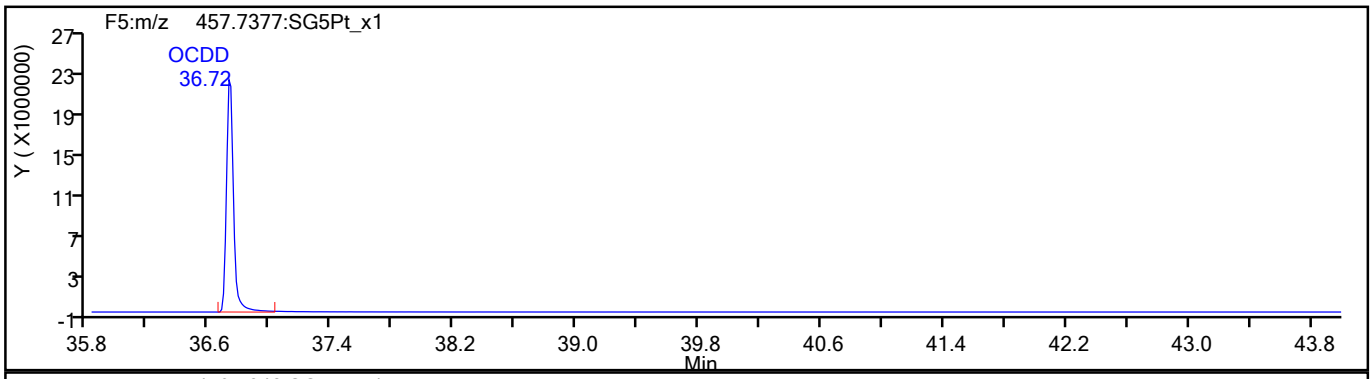

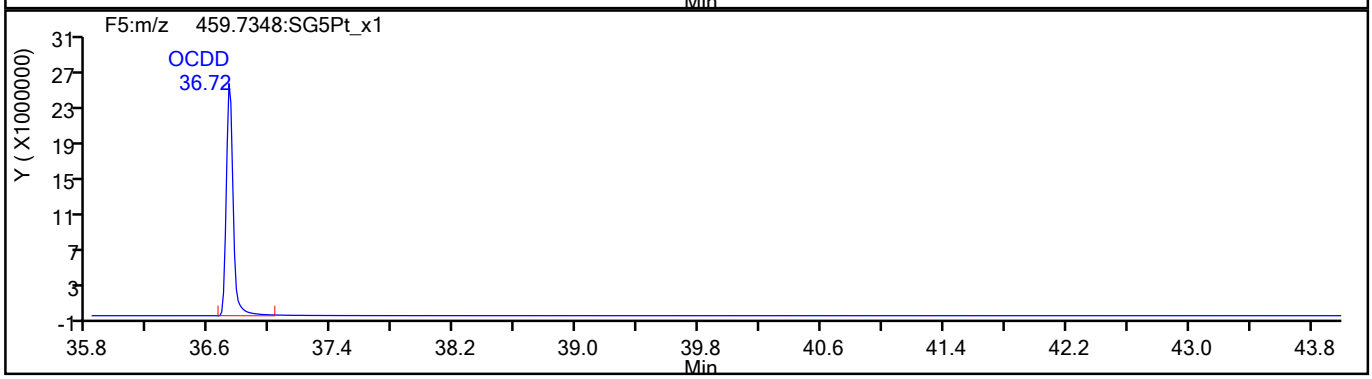

OCDD Standards

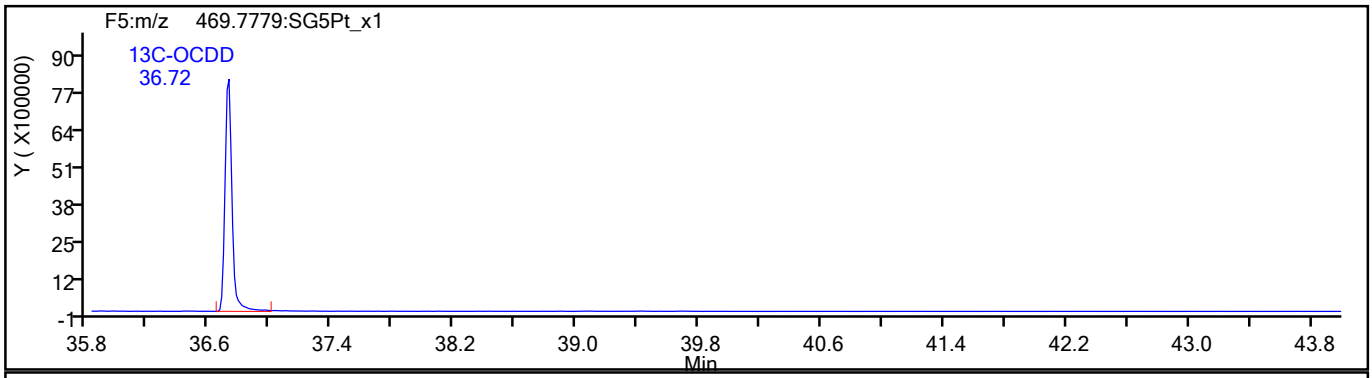

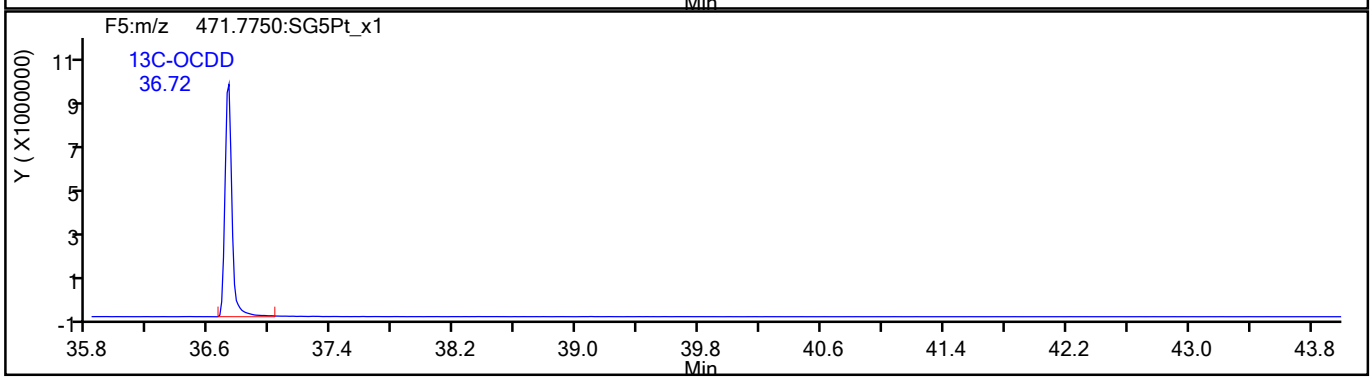

792050

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

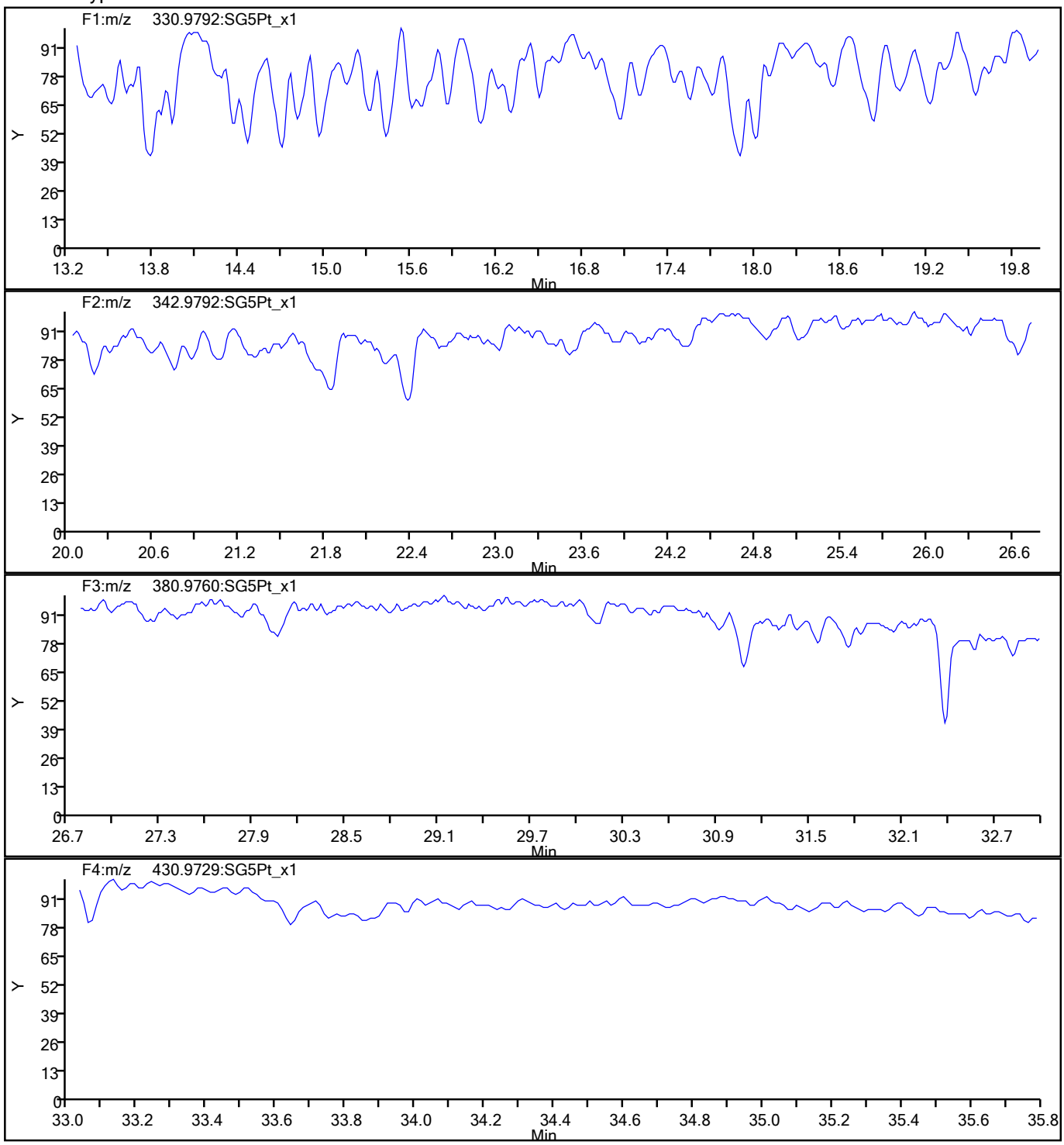

792051

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

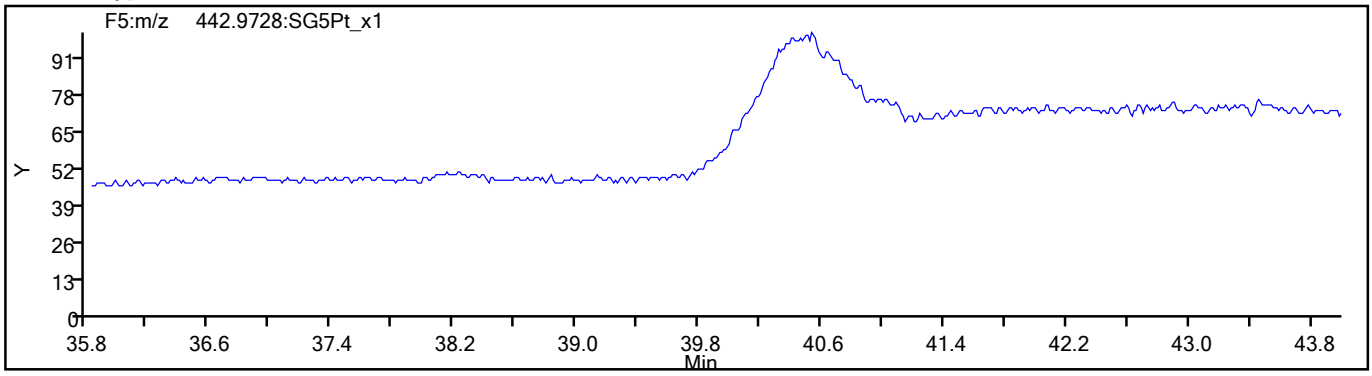

792052

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) MS RA
Lab Sample ID: 320-77214-2 MS RA
Matrix: Sediment
Lab File ID: 31AU2111D2_016.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.69(g)
Date Analyzed: 08/31/2021 22:48
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520997
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	9380		16	16

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	38		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	52		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MS
Inject. Date: 31-Aug-2021 22:48:56 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:48:43

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.342	39022101	0.86	7.2E+05	100.0	100.0				M
D 13C-2,3,7,8-TCDF	17.686	19589150	0.72	1.3327	37.7	37.7	5.546	5.546	37.67	M
2,3,7,8-TCDF	17.700	675220719	0.79	0.9978	3454.5	3454.5	5.907	5.907	34545	E
D 13C-2,3,7,8-TCDD	16.108	15558185	0.75	0.8749	45.6	45.6	27.4	27.4	45.57	
2,3,7,8-TCDD	16.122	171253773	0.78	1.0570	1041.4	1041.4	9.445	9.445	10414	E
$ 37Cl4-2,3,7,8-TCDD	16.122	6997155		0.8648	20.7	20.7	0.6452	0.6452	51.84	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MS
Inject. Date: 31-Aug-2021 22:48:56 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:48:43

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.342	16.275	4		18034197	3219300	352265	880662	9		M
333.9339	16.342	16.275	4		20987904	3753202	316601	791502	12	0.86(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.686	17.605	5	1.082	8171421	1590415	93796	234490	17		M
317.9389	17.686	17.605	5	1.082	11417729	1923285	112332	280830	17	0.72(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.700	17.619	5	1.001	297587700	50123101	44140	110350	1136		
305.8987	17.700	17.619	5	1.001	377633019	63453477	38702	96755	1640	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.108	16.055	3	0.986	6675414	1476966	352265	880662	4		
333.9339	16.108	16.055	3	0.986	8882771	1870618	316601	791502	6	0.75(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	16.122	16.069	3	1.001	75052609	16877630	76117	190292	222		
321.8936	16.122	16.069	3	1.001	96201164	21580656	57563	143907	375	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.122	16.069	3	0.987	6997155	1566289	15562	38905	101		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d				
Injection Date:	31-Aug-2021 22:48:56	Instrument ID:	11D2		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.69
Area: 7463105
Amount: 42.714972
Amount Units: pg/ul

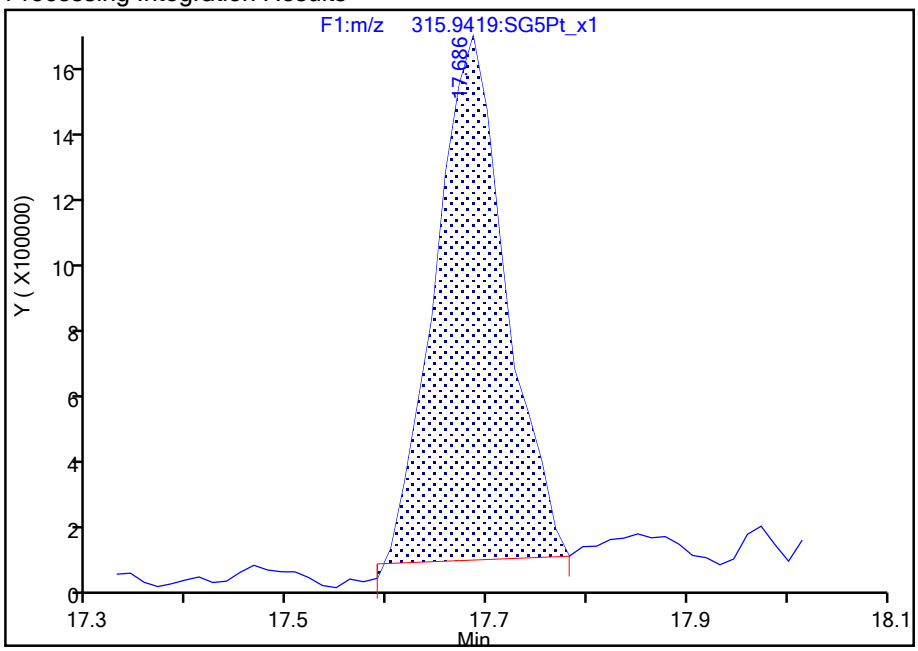

Manual Integration Results

RT: 17.69
Area: 8171421
Amount: 37.668394
Amount Units: pg/ul

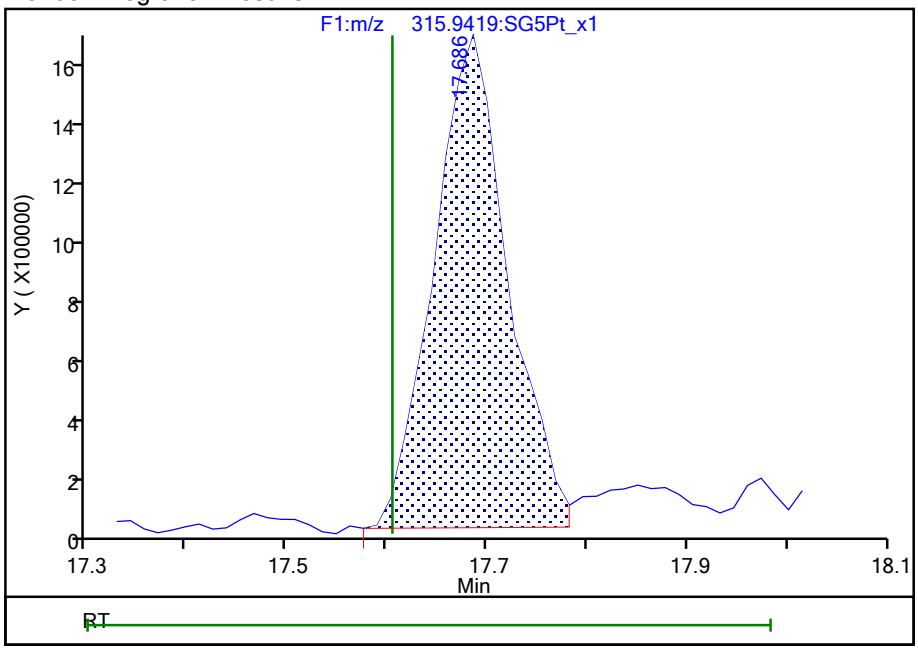

Reviewer: bennettd, 01-Sep-2021 09:48:31

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d				
Injection Date:	31-Aug-2021 22:48:56	Instrument ID:	11D2		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.69
Area: 14750478
Amount: 42.714972
Amount Units: pg/ul

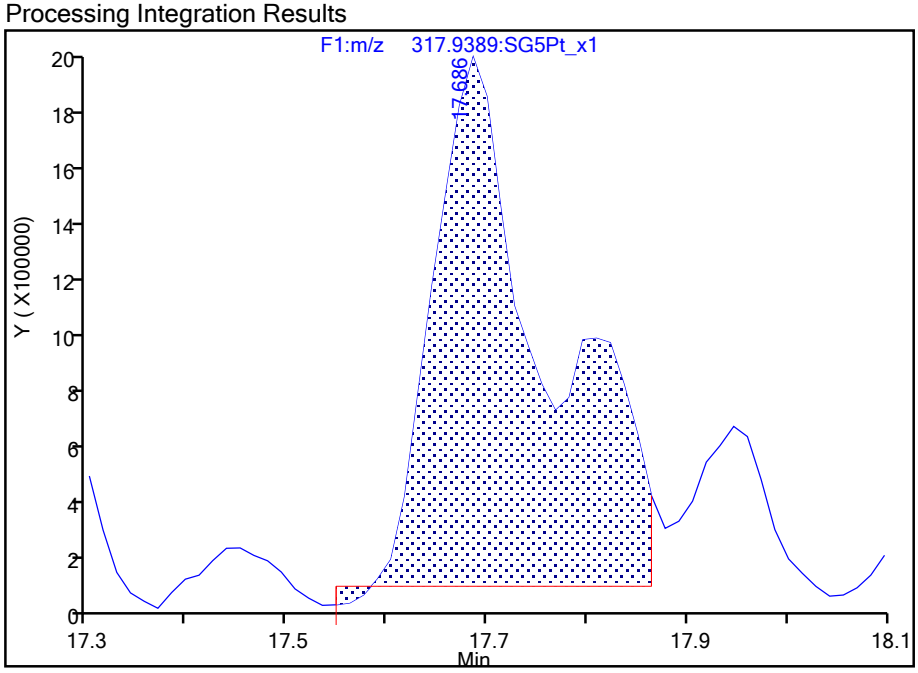

Manual Integration Results

RT: 17.69
Area: 11417729
Amount: 37.668394
Amount Units: pg/ul

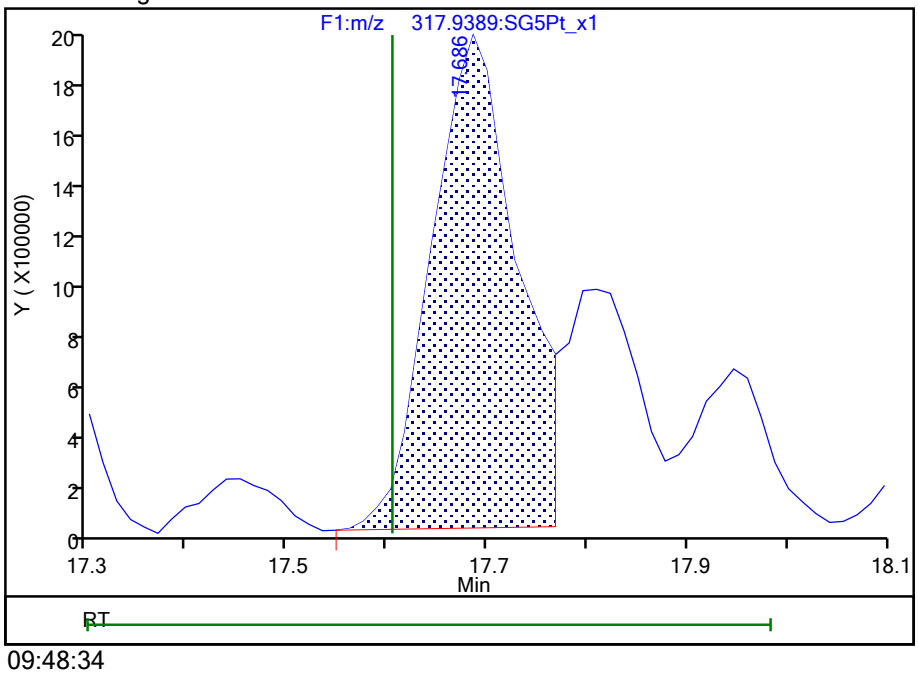

Reviewer: bennettd, 01-Sep-2021 09:48:34

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Report Date: 01-Sep-2021 09:57:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d		
Injection Date:	31-Aug-2021 22:48:56	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

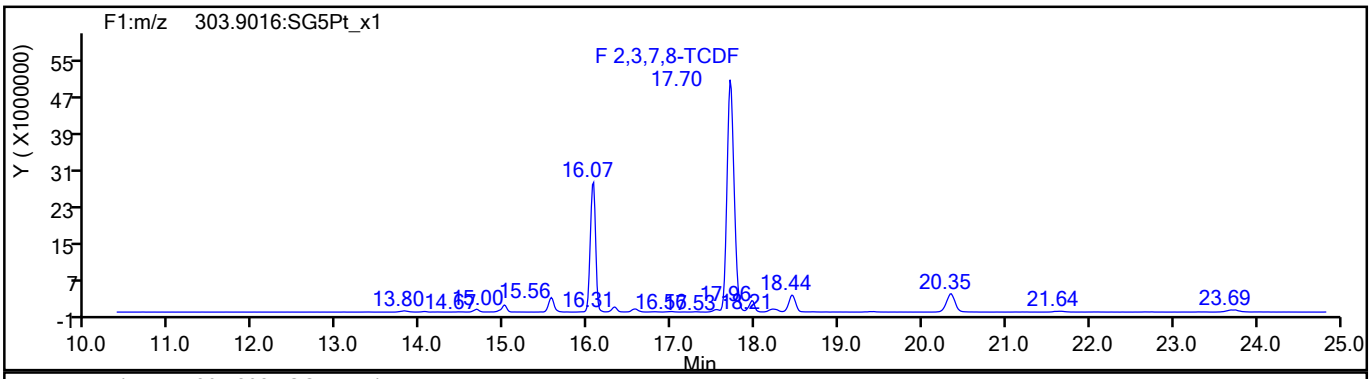

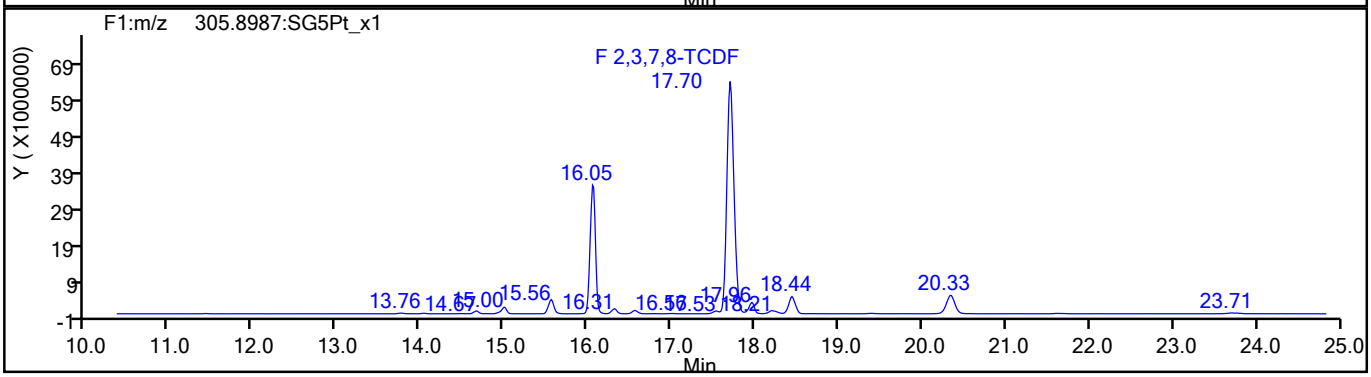

TCDF Standards

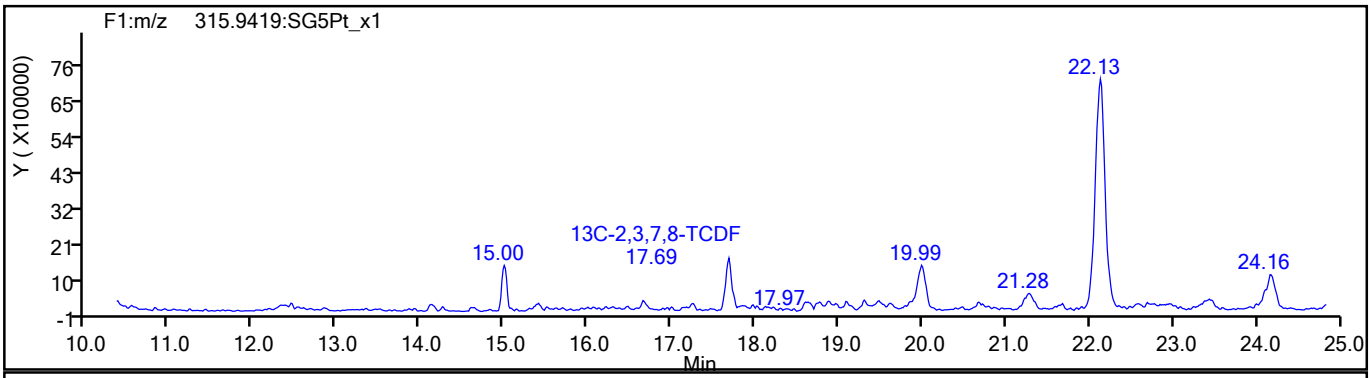

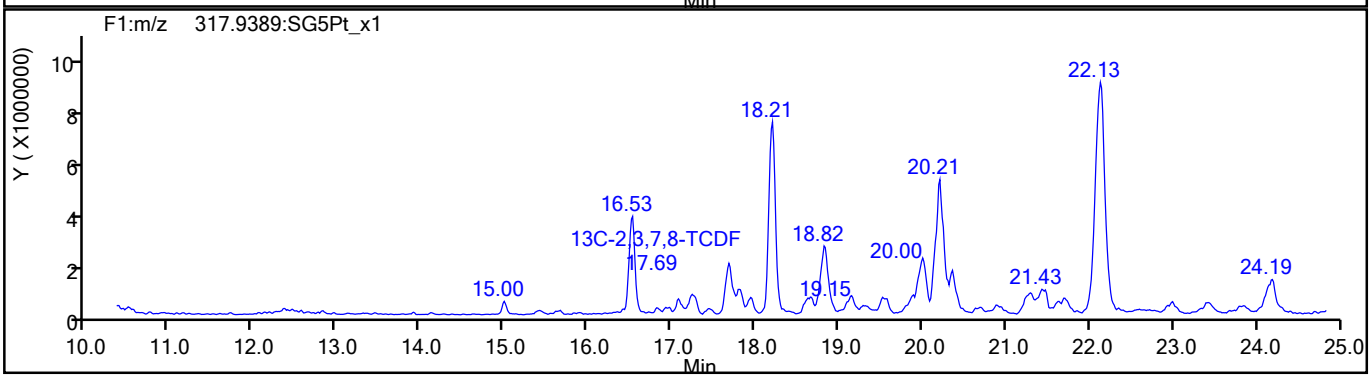

792058

Report Date: 01-Sep-2021 09:57:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d		
Injection Date:	31-Aug-2021 22:48:56	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

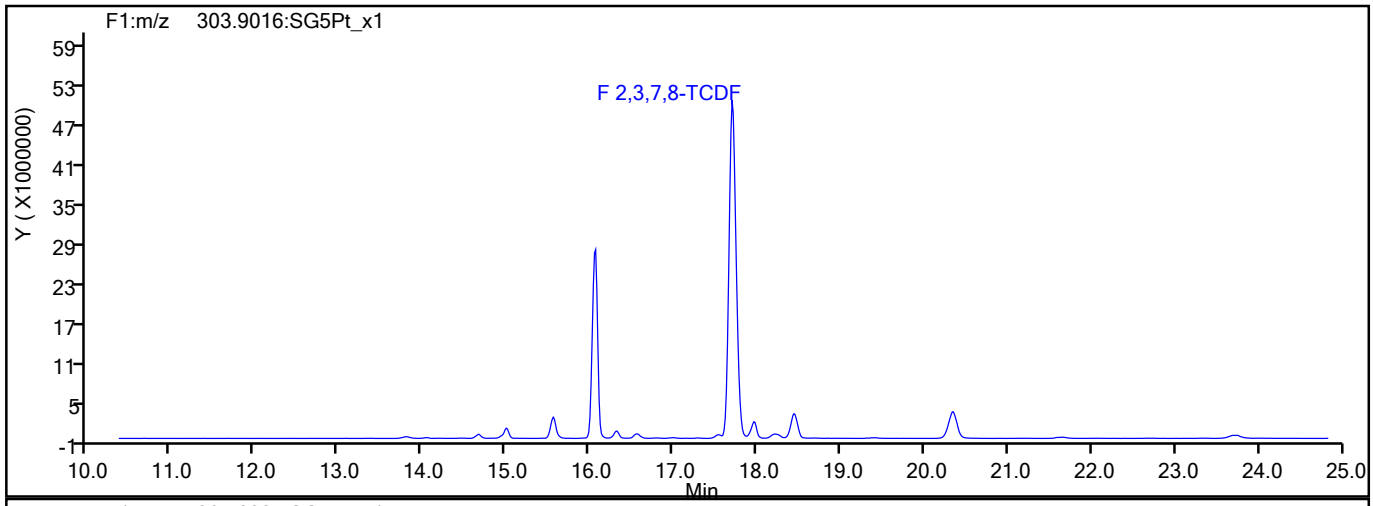

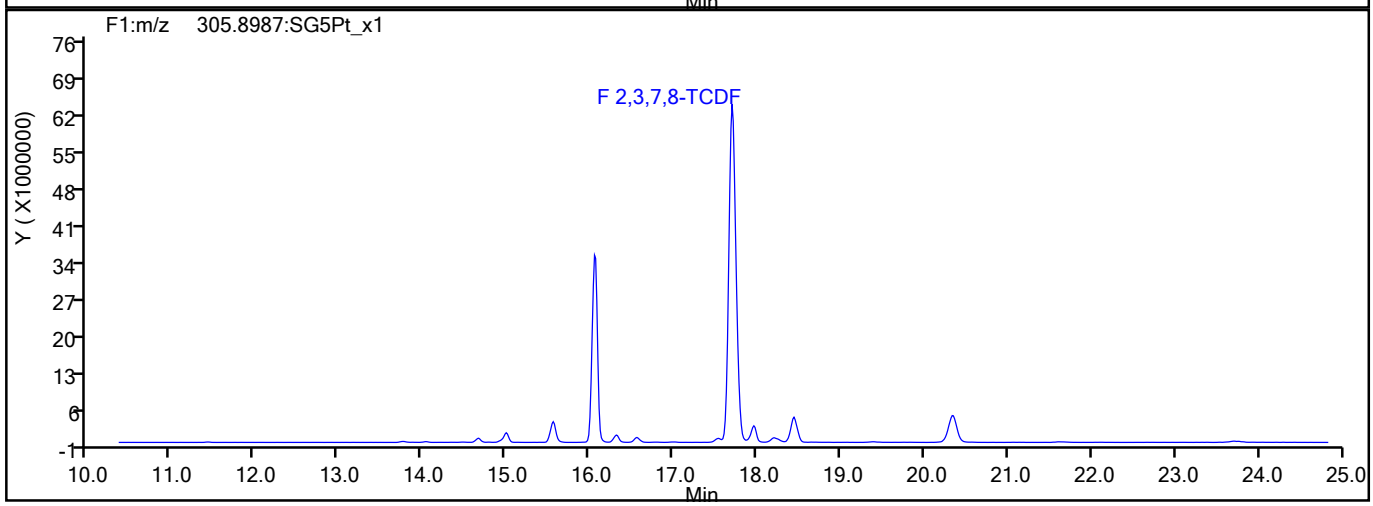

TCDF Interference Mass

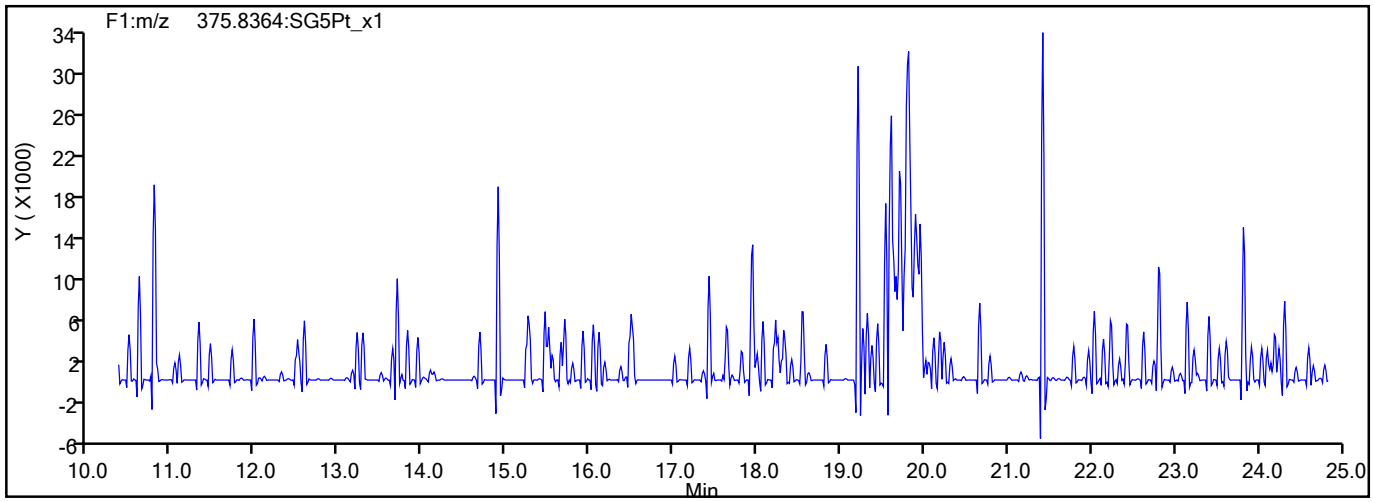

792059

Report Date: 01-Sep-2021 09:57:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d		
Injection Date:	31-Aug-2021 22:48:56	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

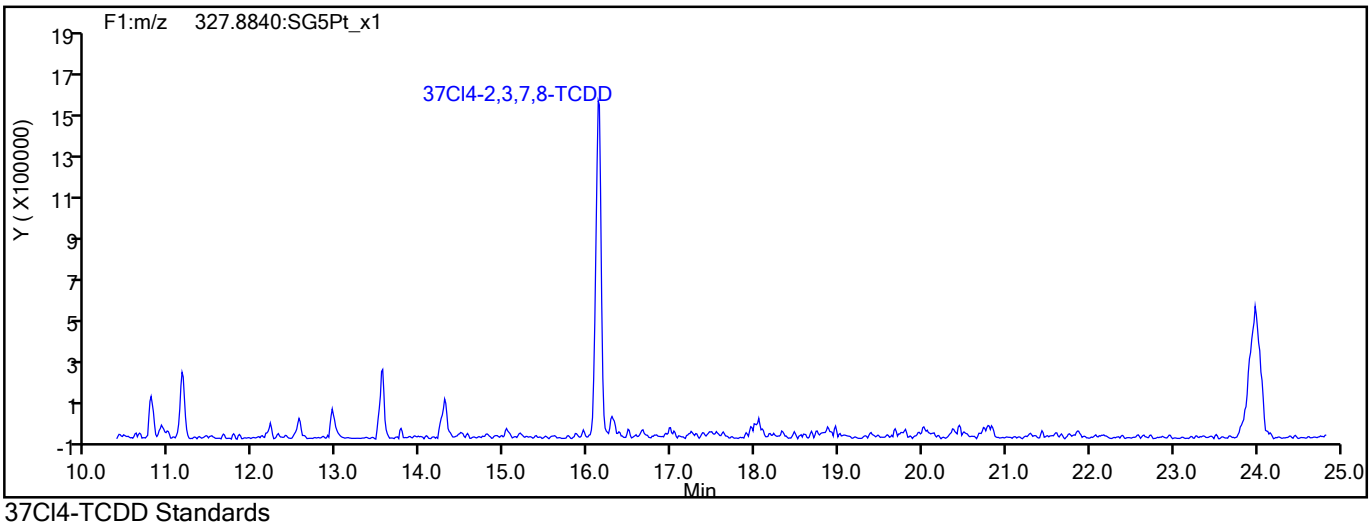

37Cl4-TCDD Standards

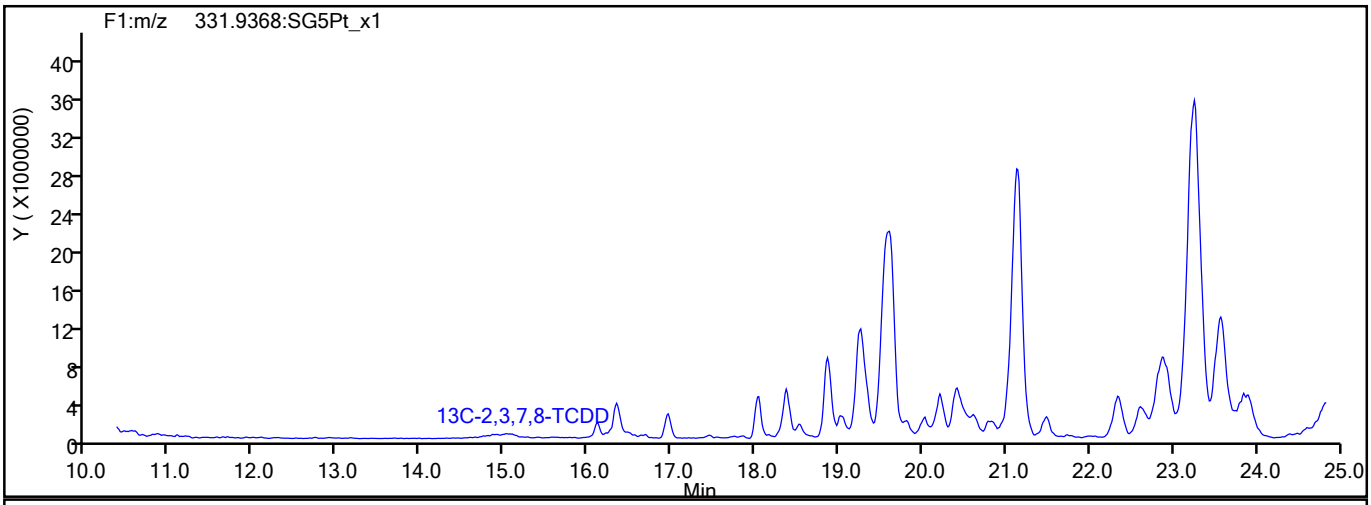

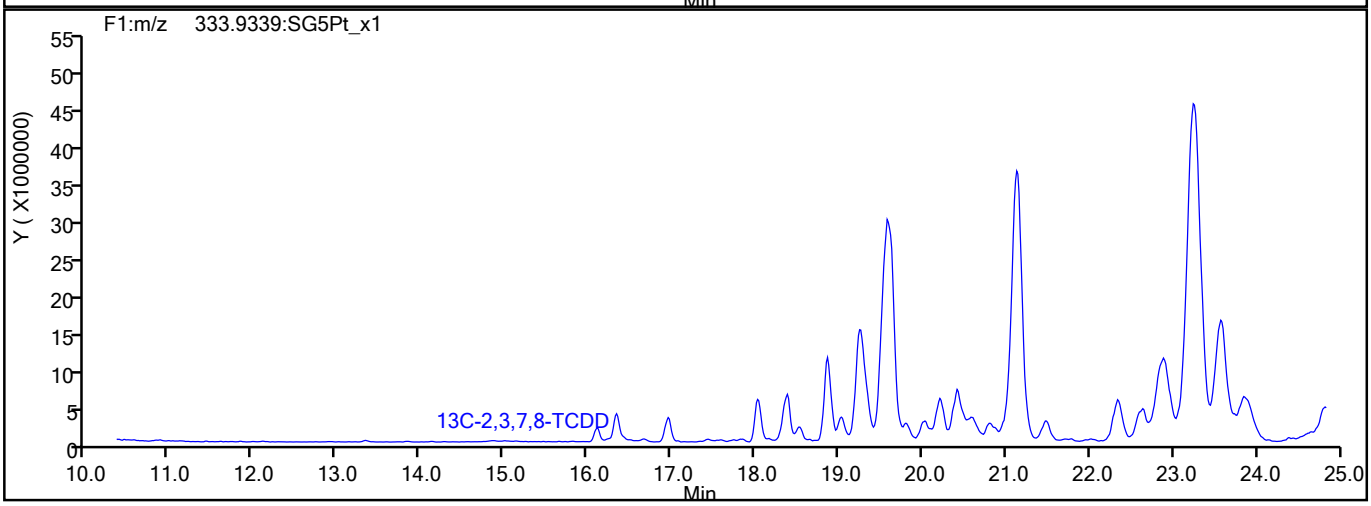

792060

Report Date: 01-Sep-2021 09:57:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d		
Injection Date:	31-Aug-2021 22:48:56	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

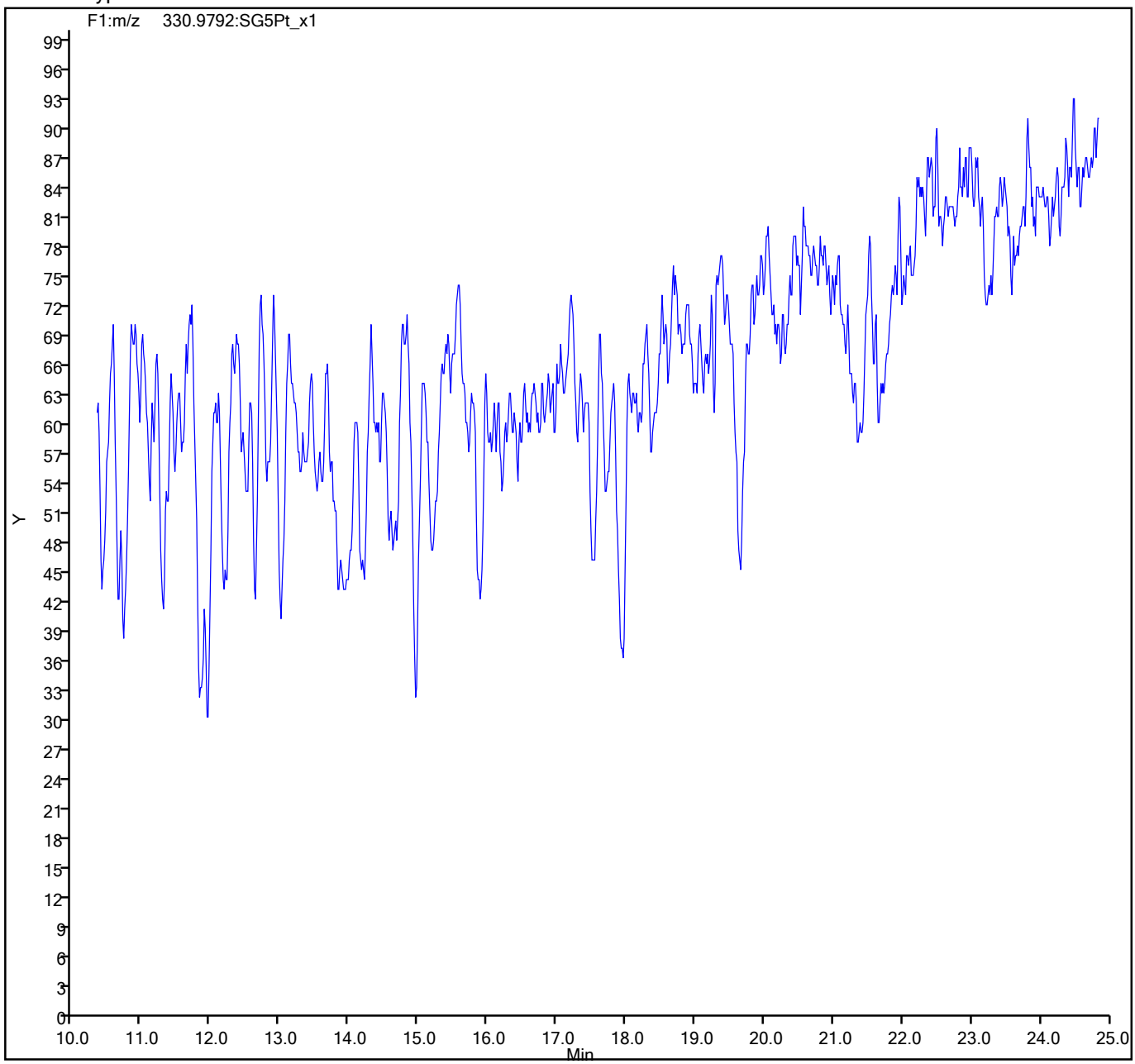

792061

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) MSD
Lab Sample ID: 320-77214-2 MSD
Matrix: Sediment
Lab File ID: 25AU2110D5_8.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.05(g)
Date Analyzed: 08/25/2021 15:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2400		6.5	6.5
40321-76-4	1,2,3,7,8-PeCDD	161		6.5	0.49
57117-41-6	1,2,3,7,8-PeCDF	389		6.5	1.5
57117-31-4	2,3,4,7,8-PeCDF	266		6.5	1.4
39227-28-6	1,2,3,4,7,8-HxCDD	137		6.5	1.4
57653-85-7	1,2,3,6,7,8-HxCDD	141		6.5	1.5
19408-74-3	1,2,3,7,8,9-HxCDD	137		6.5	1.3
70648-26-9	1,2,3,4,7,8-HxCDF	432		6.5	2.2
57117-44-9	1,2,3,6,7,8-HxCDF	223		6.5	2.2
72918-21-9	1,2,3,7,8,9-HxCDF	144		6.5	1.5
60851-34-5	2,3,4,6,7,8-HxCDF	151		6.5	1.6
35822-46-9	1,2,3,4,6,7,8-HpCDD	198		6.5	0.73
67562-39-4	1,2,3,4,6,7,8-HpCDF	230		6.5	0.81
55673-89-7	1,2,3,4,7,8,9-HpCDF	162		6.5	0.85
3268-87-9	OCDD	1350		13	0.85
39001-02-0	OCDF	323		13	0.18
41903-57-5	Total TCDD	4810		6.5	6.5
30402-14-3	Total TCDF	11400		21	21
36088-22-9	Total PeCDD	162		6.5	0.49
30402-15-4	Total PeCDF	861		6.5	1.5
34465-46-8	Total HxCDD	434		6.5	1.4
55684-94-1	Total HxCDF	983		6.5	1.9
37871-00-4	Total HpCDD	268		6.5	0.73
38998-75-3	Total HpCDF	426		6.5	0.83

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) MSD
Lab Sample ID: 320-77214-2 MSD
Matrix: Sediment
Lab File ID: 25AU2110D5_8.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.05(g)
Date Analyzed: 08/25/2021 15:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	45		25-164
89059-46-1	13C-2,3,7,8-TCDF	60		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	83		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	73		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	80		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	65		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	59		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	69		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	59		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	59		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	60		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	57		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	51		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	61		26-138
114423-97-1	13C-OCDD	64		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	67		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MSD
Inject. Date: 25-Aug-2021 15:05:43 ALS Bottle#: 9 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-C MSD 320-77214-A-2-C MSD
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:50:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:00:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.673	96795268	0.82	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.159	94703845	0.78	1.6249	60.2	60.2	0.3227	0.3227	60.21	
2,3,7,8-TCDF	17.174	2341069376	0.78	1.0239	2414.3	2414.3	8.189	8.189	24143	E
A Non-2,3,7,8-sub-TCDF	17.076	1880041120	0.78	1.0239	1938.8	1938.8	8.189	1255.2	0.00	a
S Total TCDF					4353.1	4353.1	8.189	8.189		
D 13C-2,3,7,8-TCDD	17.885	39193029	0.83	0.8993	45.0	45.0	0.4009	0.4009	45.02	a
2,3,7,8-TCDD	17.900	451634282	0.79	1.2541	918.8	918.8	2.497	2.497	9188	Ea
$ 37Cl4-2,3,7,8-TCDD	17.900	28682080		1.1071	26.8	26.8	0.1292	0.1292	66.91	
A Non-2,3,7,8-sub-TCDD	17.537	451634282	0.79	1.2541	918.8	918.8	2.497	918.8	0.00	
S Total TCDD					1837.7	1837.7	2.497	2.497		
D 13C-1,2,3,7,8-PeCDF	22.115	85511666	1.56	1.2101	73.0	73.0	0.1850	0.1850	73.01	
1,2,3,7,8-PeCDF	22.129	134829737	1.57	1.0611	148.6	148.6	0.5786	0.5786	297	a
D 13C-2,3,4,7,8-PeCDF	23.411	96027381	1.57	1.2395	80.0	80.0	0.1806	0.1806	80.04	
2,3,4,7,8-PeCDF	23.438	99553016	1.58	1.0184	101.8	101.8	0.5366	0.5366	204	
A F1 PeCDFs	19.851	436768	1.68	1.0398	0.4628	0.4628	0.0179	0.4628	0.00	a
A Non-2,3,7,8-sub-PeCDF	23.067	73786753	1.55	1.0398	78.8	78.2	0.5562	32.1	0.00	RQa
S Total PeCDF					329.6	329.0	0.5576	0.5576		RQ
D 13C-1,2,3,7,8-PeCDD	24.120	61400023	1.62	0.7612	83.3	83.3	0.1165	0.1165	83.33	
1,2,3,7,8-PeCDD	24.133	39555109	1.58	1.0484	61.4	61.4	0.1860	0.1860	123	
A Non-2,3,7,8-sub-PeCDD	23.696	202442	1.44	1.0484	0.3145	0.3145	0.1860	0.3145	0.00	
S Total PeCDD					61.8	61.8	0.1860	0.1860		
D 13C-1,2,3,4,7,8-HxCDF	30.226	87278648	0.52	1.0837	69.0	69.0	0.1664	0.1664	68.99	
1,2,3,4,7,8-HxCDF	30.253	156345106	1.21	1.0851	165.1	165.1	0.8254	0.8254	330	
D 13C-1,2,3,6,7,8-HxCDF	30.439	78146968	0.52	1.1279	59.4	59.4	0.1599	0.1599	59.35	
1,2,3,6,7,8-HxCDF	30.452	74864770	1.22	1.1260	85.1	85.1	0.8276	0.8276	170	
D 13C-2,3,4,6,7,8-HxCDF	31.317	73926520	0.52	1.0637	59.5	59.5	0.1695	0.1695	59.53	
2,3,4,6,7,8-HxCDF	31.344	49724598	1.22	1.1675	57.6	57.6	0.6256	0.6256	115	
D 13C-1,2,3,7,8,9-HxCDF	32.156	66246037	0.52	0.9676	58.7	58.7	0.1864	0.1864	58.65	
1,2,3,7,8,9-HxCDF	32.169	42396666	1.22	1.1664	54.9	54.9	0.5900	0.5900	110	
A Non-2,3,7,8-sub-HxCDF	30.338	11336616	1.28	1.1363	13.1	13.1	0.7024	9.137	0.00	a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					375.7	375.7	0.7171	0.7171		
* 13C-1,2,3,7,8,9-HxCDD	31.970	116736468	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.517	55509484	1.22	0.7334	64.8	64.8	0.1320	0.1320	64.83	
1,2,3,4,7,8-HxCDD	31.544	30902251	1.24	1.0640	52.3	52.3	0.5490	0.5490	105	
D 13C-1,2,3,6,7,8-HxCDD	31.637	61118563	1.22	0.8802	59.5	59.5	0.1100	0.1100	59.48	
1,2,3,6,7,8-HxCDD	31.650	32928209	1.24	1.0001	53.9	53.9	0.5622	0.5622	108	
1,2,3,7,8,9-HxCDD	31.983	34632983	1.27	1.1325	52.4	52.4	0.5059	0.5059	105	
A Non-2,3,7,8-sub-HxCDD	30.525	4450511	1.23	1.0655	7.163	7.163	0.5377	4.424	0.00	
S Total HxCDD					165.8	165.8	0.5390	0.5390		
D 13C-1,2,3,4,6,7,8-HpCDF	33.616	45823922	0.44	0.7730	50.8	50.8	0.5108	0.5108	50.78	
1,2,3,4,6,7,8-HpCDF	33.628	58034466	1.06	1.4413	87.9	87.9	0.3094	0.3094	176	
D 13C-1,2,3,4,7,8,9-HpCDF	34.685	49952879	0.44	0.7008	61.1	61.1	0.5635	0.5635	61.06	
1,2,3,4,7,8,9-HpCDF	34.697	40680598	1.05	1.3174	61.8	61.8	0.3265	0.3265	124	
A Non-2,3,7,8-sub-HpCDF	34.150	8758501	1.05	1.3793	13.3	13.3	0.3175	13.3	0.00	a
S Total HpCDF					162.9	162.9	0.3179	0.3179		
D 13C-1,2,3,4,6,7,8-HpCDD	34.405	43091817	1.03	0.6472	57.0	57.0	0.2198	0.2198	57.03	
1,2,3,4,6,7,8-HpCDD	34.405	35679974	1.05	1.0943	75.7	75.7	0.2796	0.2796	151	
A Non-2,3,7,8-sub-HpCDD	34.223	12671127	1.03	1.0943	26.9	26.9	0.2796	26.9	0.00	a
S Total HpCDD					102.5	102.5	0.2796	0.2796		
D 13C-OCDD	36.713	66659390	0.89	0.4472	127.7	127.7	0.0958	0.0958	63.85	
OCDF	36.809	59251293	0.90	1.4382	123.6	123.6	0.0698	0.0698	124	
OCDD	36.725	189851860	0.90	1.1070	514.6	514.6	0.3233	0.3233	515	
1,3,6,8-TCDF	14.725						0.0	0.0		
1,3,6,8-TCDD	15.632						0.0	0.0		
2,3,4,7-TCDF	17.598	167690424	0.77							
1,2,3,7-TCDD	18.218	51897405	0.76							
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,8,9-TCDD	19.442	12981912								
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.983						0.0	0.0		U
1,2,3,4,8,9-HxCDF	32.169						0.0	0.0		U
1,2,3,4,6,7,9-HpCDD	33.871						0.0	0.0		U
1,2,3,4,6,7,9-HpCDF	33.628						0.0	0.0		U
1,2,3,8-TCDD	0.0						0.0	0.0		
1,3,7,9-TCDD	0.0						0.0	0.0		
1,2,3,4,7-PeCDD	0.0						0.0	0.0		
1,4,7,8-TCDD	0.0						0.0	0.0		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

U - Marked Undetected

a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MSD
Inject. Date: 25-Aug-2021 15:05:43 ALS Bottle#: 9 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-C MSD 320-77214-A-2-C MSD
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:50:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:00:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.673	17.598	5		43584703	8906251	11759	29397	757		a
333.9339	17.673	17.598	5		53210565	10890990	16793	41982	649	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.159	17.099	4	0.971	41531554	11075442	17678	44195	627		
317.9389	17.144	17.099	3	0.970	53172291	14045444	23846	59615	589	0.78(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.174	17.114	4	1.001	1024965718	262877772	368233	920582	714		
305.8987	17.174	17.114	4	1.001	1316103658	333066393	474329	1185822	702	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	15.526	17.076	-93	0.905	6168774	1863608	368233	920582	5		
305.8987	15.526	17.076	-93	0.905	8069636	2427619	474329	1185822	5	0.76(0.65-0.89)	
303.9016	15.783	17.076	-77	0.920	20289753	5911103	368233	920582	16		
305.8987	15.783	17.076	-77	0.920	26362507	7593481	474329	1185822	16	0.77(0.65-0.89)	
303.9016	16.056	17.076	-61	0.936	28248942	5103417	368233	920582	14		
305.8987	16.056	17.076	-61	0.936	36870558	6580407	474329	1185822	14	0.77(0.65-0.89)	
303.9016	16.282	17.076	-48	0.949	27726659	7252843	368233	920582	20		
305.8987	16.282	17.076	-48	0.949	35929656	9377718	474329	1185822	20	0.77(0.65-0.89)	
303.9016	16.509	17.076	-34	0.962	40505682	11278426	368233	920582	31		
305.8987	16.509	17.076	-34	0.962	51527987	14678953	474329	1185822	31	0.79(0.65-0.89)	
303.9016	16.781	17.076	-18	0.978	532881627	138676184	368233	920582	377		
305.8987	16.781	17.076	-18	0.978	684279700	178189280	474329	1185822	376	0.78(0.65-0.89)	
303.9016	17.008	17.076	-4	0.991	14011545	3417721	368233	920582	9		
305.8987	17.008	17.076	-4	0.991	18192265	4479407	474329	1185822	9	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.598	17.076	31	1.026	72973619	19003754	368233	920582	52		a
305.8987	17.598	17.076	31	1.026	94716805	24481096	474329	1185822	52	0.77(0.65-0.89)	
303.9016	18.974	17.076	114	1.106	79212732	18627694	368233	920582	51		
305.8987	18.974	17.076	114	1.106	102072673	24066311	474329	1185822	51	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	17.885	17.794	5	1.012	17807065	5101488	11759	29397	434		a
333.9339	17.885	17.794	5	1.012	21385964	6223444	16793	41982	371	0.83(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	17.900	17.809	5	1.001	199613269	58150870	75162	187905	774		a
321.8936	17.900	17.809	5	1.001	252021013	74431554	66715	166787	1116	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.900	17.809	5	1.013	28682080	8461599	11328	28320	747		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.900	17.537	22	1.001	199613269	58150870	75162	187905	774		
321.8936	17.900	17.537	22	1.001	252021013	74431554	66715	166787	1116	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.115	22.020	6	1.251	52158009	9371967	10552	26380	888		
353.8970	22.115	22.020	6	1.251	33353657	5983241	7172	17930	834	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.129	22.047	5	1.001	82440470	14371518	22822	57055	630		a
341.8567	22.129	22.047	5	1.001	52389267	9070298	14889	37222	609	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.411	23.343	4	1.325	58657845	10536240	10552	26380	999		
353.8970	23.411	23.343	4	1.325	37369536	6715018	7172	17930	936	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.438	23.370	4	1.001	60968424	10921673	22822	57055	479		
341.8567	23.438	23.370	4	1.001	38584592	6980464	14889	37222	469	1.58(1.32-1.78)	
A F1 PeCDFs											a
339.8597	19.276	19.851	-34	0.872	273792	65996	475	1187	139		a
341.8567	19.276	19.851	-34	0.872	162976	41008	738	1845	56	1.68(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQa
339.8597	20.806	23.067	-135	0.941	18637161	3809817	22822	57055	167		
341.8567	20.806	23.067	-135	0.941	11635752	2344008	14889	37222	157	1.60(1.32-1.78)	
339.8597	21.625	23.067	-86	0.978	1354963	170830	22822	57055	7		
341.8567	21.597	23.067	-88	0.977	856504	111646	14889	37222	7	1.58(1.32-1.78)	
339.8597	22.006	23.067	-64	0.995	3004091	719798	22822	57055	32		a
	Empc Correction				2431616	705141	22822	57055	31		
341.8567	22.006	23.067	-64	0.995	1568785	454930	14889	37222	31	1.91(1.32-1.78)	
339.8597	22.647	23.067	-25	1.024	13171766	2417307	22822	57055	106		
341.8567	22.633	23.067	-26	1.023	8193293	1488416	14889	37222	100	1.61(1.32-1.78)	
339.8597	23.779	23.067	43	1.075	7815279	1214895	22822	57055	53		
341.8567	23.765	23.067	42	1.075	4873889	759419	14889	37222	51	1.60(1.32-1.78)	
339.8597	25.334	23.067	136	1.146	2010942	310864	22822	57055	14		
341.8567	25.334	23.067	136	1.146	1236803	197605	14889	37222	13	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.120	24.052	4	1.365	37996037	6477341	3776	9440	1715		
369.8919	24.120	24.052	4	1.365	23403986	3996641	3244	8110	1232	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.133	24.079	3	1.001	24201636	4099118	4826	12065	849		
357.8516	24.133	24.079	3	1.001	15353473	2634943	3344	8360	788	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	22.688	23.696	-60	0.941	119580	24826	4826	12065	5		
357.8516	22.688	23.696	-60	0.941	82862	15887	3344	8360	5	1.44(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.226	30.186	2	0.945	29854350	5398888	8309	20772	650		
385.8610	30.226	30.186	2	0.945	57424298	10273828	16586	41465	619	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.253	30.213	2	1.001	85751272	15107261	30863	77157	489		
375.8178	30.253	30.213	2	1.001	70593834	12381385	25284	63210	490	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.439	30.399	2	0.952	26709526	5123232	8309	20772	617		
385.8610	30.439	30.399	2	0.952	51437442	9940309	16586	41465	599	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.452	30.412	2	1.000	41173664	8171456	30863	77157	265		
375.8178	30.452	30.412	2	1.000	33691106	6810972	25284	63210	269	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.317	31.291	2	0.980	25427279	6629070	8309	20772	798		
385.8610	31.317	31.291	2	0.980	48499241	12588562	16586	41465	759	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.344	31.317	2	1.001	27352642	7126812	30863	77157	231		
375.8178	31.331	31.317	1	1.000	22371956	5781804	25284	63210	229	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.156	32.143	1	1.006	22707519	7049445	8309	20772	848		
385.8610	32.156	32.143	1	1.006	43538518	13346825	16586	41465	805	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.169	32.156	1	1.000	23339985	7630047	30863	77157	247		
375.8178	32.169	32.156	1	1.000	19056681	6187851	25284	63210	245	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											a
373.8208	29.281	30.338	-63	0.969	1901988	274589	30863	77157	9		
375.8178	29.281	30.338	-63	0.969	1502498	214994	25284	63210	9	1.27(1.05-1.43)	
373.8208	32.263	30.338	115	1.067	4462633	1349053	30863	77157	44		a
375.8178	32.249	30.338	114	1.067	3469497	1071962	25284	63210	42	1.29(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.970	31.956	1		64684220	19101459	7278	18195	2625		
403.8529	31.970	31.956	1		52052248	15406758	6085	15212	2532	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.517	31.504	1	0.986	30512911	8456519	7278	18195	1162		
403.8529	31.517	31.504	1	0.986	24996573	7028797	6085	15212	1155	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDD											
389.8157	31.544	31.517	2	1.001	17128331	4740408	20081	50202	236		
391.8127	31.531	31.517	1	1.000	13773920	3797467	16099	40247	236	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.637	31.610	2	0.990	33636119	8776975	7278	18195	1206		
403.8529	31.637	31.610	2	0.990	27482444	7308983	6085	15212	1201	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.650	31.624	2	1.000	18226836	5219508	20081	50202	260		
391.8127	31.650	31.624	2	1.000	14701373	4158769	16099	40247	258	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.983	31.969	1	1.015	19355722	5782341	20081	50202	288		
391.8127	31.983	31.969	1	1.015	15277261	4590954	16099	40247	285	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.121	30.525	-84	0.920	1520018	216404	20081	50202	11		
391.8127	29.121	30.525	-84	0.920	1228992	162658	16099	40247	10	1.24(1.05-1.43)	
389.8157	30.732	30.525	12	0.971	938956	192092	20081	50202	10		
391.8127	30.732	30.525	12	0.971	762545	152167	16099	40247	9	1.23(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.616	33.603	1	1.051	14012674	5251702	16852	42130	312		
419.8220	33.616	33.603	1	1.051	31811248	11946807	37656	94140	317	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.628	33.615	1	1.000	29860982	11161940	15661	39152	713		
409.7789	33.628	33.615	1	1.000	28173484	10502848	15020	37550	699	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.685	34.672	1	1.085	15341073	5505214	16852	42130	327		
419.8220	34.685	34.672	1	1.085	34611806	12329823	37656	94140	327	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.697	34.685	1	1.000	20854887	7296941	15661	39152	466		
409.7789	34.685	34.685	0	1.000	19825711	6873015	15020	37550	458	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											a
407.7818	33.919	34.150	-14	1.009	4482878	1731317	15661	39152	111		a
409.7789	33.919	34.150	-14	1.009	4275623	1640753	15020	37550	109	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.405	34.393	1	1.076	21904261	7412194	13352	33380	555		
437.8140	34.393	34.393	0	1.076	21187556	7220674	6281	15702	1150	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	18249707	6300048	9492	23730	664		
425.7737	34.405	34.405	0	1.000	17430267	6201339	8414	21035	737	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.871	34.223	-21	0.984	6432758	2485038	9492	23730	262		a
425.7737	33.871	34.223	-21	0.984	6238369	2349792	8414	21035	279	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.713	36.701	1	1.148	31353239	9741671	2944	7360	3309		
471.7750	36.713	36.701	1	1.148	35306151	10857314	2969	7422	3657	0.89(0.76-1.02)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											
441.7428	36.809	36.797	1	1.003	28100229	8920244	1992	4980	4478		
443.7399	36.809	36.797	1	1.003	31151064	9694033	2144	5360	4521	0.90(0.76-1.02)	
OCDD											
457.7377	36.725	36.713	1	1.000	89905193	27370724	6750	16875	4055		
459.7348	36.713	36.713	0	1.000	99946667	29960418	7994	19985	3748	0.90(0.76-1.02)	
1,3,6,8-TCDF											
303.9016	14.725						368233	920582			
305.8987	14.725						474329	1185822			
1,3,6,8-TCDD											
319.8965	15.632						75162	187905			
321.8936	15.632						66715	166787			
2,3,4,7-TCDF											
303.9016	17.598	17.537	4		72973619	19003754	368233	920582	52		
305.8987	17.598	17.537	4		94716805	24481096	474329	1185822	52	0.77(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.218	18.172	3		22457127	5546509	75162	187905	74		
321.8936	18.218	18.172	3		29440278	6993365	66715	166787	105	0.76(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.414						75162	187905			
321.8936	18.414						66715	166787			
1,2,3,9-TCDF											
303.9016	18.414						368233	920582			
305.8987	18.414						474329	1185822			
1,2,8,9-TCDD											
319.8965	19.442	19.382	4		12981912	2400434	75162	187905	32		
1,2,8,9-TCDF											
303.9016	19.427						368233	920582			
305.8987	19.427						474329	1185822			
1,3,4,6,8-PeCDF											
339.8597	19.669						475	1187			
341.8567	19.669						738	1845			
1,2,4,7,9-PeCDD											
355.8546	21.480						4826	12065			
357.8516	21.480						3344	8360			
1,2,3,8,9-PeCDD											
355.8546	25.790						4826	12065			
357.8516	25.790						3344	8360			
1,2,3,8,9-PeCDF											
339.8597	26.021						22822	57055			
341.8567	26.021						14889	37222			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						30863	77157			
375.8178	28.333						25284	63210			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						20081	50202			
391.8127	29.890						16099	40247			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7-HxCDD											U
389.8157	31.916						20081	50202			
391.8127	31.916						16099	40247			
1,2,3,4,8,9-HxCDF											U
373.8208	32.249						30863	77157			
375.8178	32.249						25284	63210			
1,2,3,4,6,7,9-HpCDD											U
423.7766	33.858						9492	23730			
425.7737	33.858						8414	21035			
1,2,3,4,6,7,9-HpCDF											U
407.7818	33.916						15661	39152			
409.7789	33.916						15020	37550			
1,2,3,8-TCDD											
319.8965	0.0						75162	187905			
321.8936	0.0						66715	166787			
1,3,7,9-TCDD											
319.8965	0.0						75162	187905			
321.8936	0.0						66715	166787			
1,2,3,4,7-PeCDD											
355.8546	0.0						4826	12065			
357.8516	0.0						3344	8360			
1,4,7,8-TCDD											
319.8965	0.0						75162	187905			
321.8936	0.0						66715	166787			

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	94703845	25120886

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	94703845	25120886

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.526	6168774	1863608	8069636	2427619	14.7	0.76	
15.783	20289753	5911103	26362507	7593481	48.1	0.77	
16.056	28248942	5103417	36870558	6580407	67.2	0.77	
16.282	27726659	7252843	35929656	9377718	65.6	0.77	
16.509	40505682	11278426	51527987	14678953	94.9	0.79	
16.781	532881627	138676184	684279700	178189280	1255.2	0.78	
17.008	14011545	3417721	18192265	4479407	33.2	0.77	
17.598	72973619	19003754	94716805	24481096	172.9	0.77	a
18.974	79212732	18627694	102072673	24066311	187.0	0.78	
Signal Totals:							
	822019333	211134750	1058021787	271874272			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1880041120	483009022				0.78	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1938.8 = (1880041120 * 100.000) / (94703845 * 1.024)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	39193029	11324932

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	39193029	11324932

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.900	199613269	58150870	252021013	74431554	918.8	0.79	
Signal Totals:							
	199613269	58150870	252021013	74431554			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	451634282	132582424				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 918.838 = (451634282 * 100.000) / (39193029 * 1.254)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	85511666	15355208
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	96027381	17251258

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	90769523	16303233

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.276	273792	65996	162976	41008	0.4628	1.68	a
Signal Totals:							
	273792	65996	162976	41008			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	436768	107004				1.68	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4628 = (436768 * 100.000) / (90769523 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	85511666	15355208
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	96027381	17251258

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	90769523	16303233

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.806	18637161	3809817	11635752	2344008	32.1	1.60	
21.625	1354963	170830	856504	111646	2.34	1.58	
22.006	3004091	719798	1568785	454930	4.85	1.91	RQa
22.006	2431616	705141	1568785	454930	4.24		Empc Correction
22.647	13171766	2417307	8193293	1488416	22.6	1.61	
23.779	7815279	1214895	4873889	759419	13.4	1.60	
25.334	2010942	310864	1236803	197605	3.44	1.63	
Signal Totals:							
	45421727	8628854	28365026	5356024			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	74359228	13999535				1.62	RQa
	73786753	13984878					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 78.787 = (74359228 * 100.000) / (90769523 * 1.040)
Empc Amount: 78.180 = (73786753 * 100.000) / (90769523 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Lims ID:	320-77214-A-2-C MSD		
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Inject. Date:	25-Aug-2021 15:05:43	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	61400023	10473982

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	61400023	10473982

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.688	119580	24826	82862	15887	0.3145	1.44	
Signal Totals:							
	119580	24826	82862	15887			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	202442	40713				1.44	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.3145 = (202442 * 100.000) / (61400023 * 1.048)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	87278648	15672716
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	78146968	15063541
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	73926520	19217632
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	66246037	20396270

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	76399543	17587539

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.281	1901988	274589	1502498	214994	3.92	1.27	
32.263	4462633	1349053	3469497	1071962	9.14	1.29	a
Signal Totals:							
	6364621	1623642	4971995	1286956			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11336616	2910598				1.28	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 13.059 = (11336616 * 100.000) / (76399543 * 1.136)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	55509484	15485316
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	61118563	16085958
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	58314023	15785637

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.121	1520018	216404	1228992	162658	4.42	1.24	
30.732	938956	192092	762545	152167	2.74	1.23	
Signal Totals:							
	2458974	408496	1991537	314825			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4450511	723321				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.163 = (4450511 * 100.000) / (58314023 * 1.066)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDF, RT: 34.150

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	45823922	17198509
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	49952879	17835037

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	47888400	17516773

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
33.919	4482878	1731317	4275623	1640753	13.3	1.05	a
Signal Totals:	4482878	1731317	4275623	1640753			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8758501	3372070				1.05	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 13.260 = (8758501 * 100.000) / (47888400 * 1.379)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	43091817	14632868

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	43091817	14632868

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.871	6432758	2485038	6238369	2349792	26.9	1.03	a
Signal Totals:							
	6432758	2485038	6238369	2349792			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12671127	4834830				1.03	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 26.871 = (12671127 * 100.000) / (43091817 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d				
Injection Date:	25-Aug-2021 15:05:43	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 17.67
Area: 43584703
Amount: 111.1955
Amount Units: pg/ul

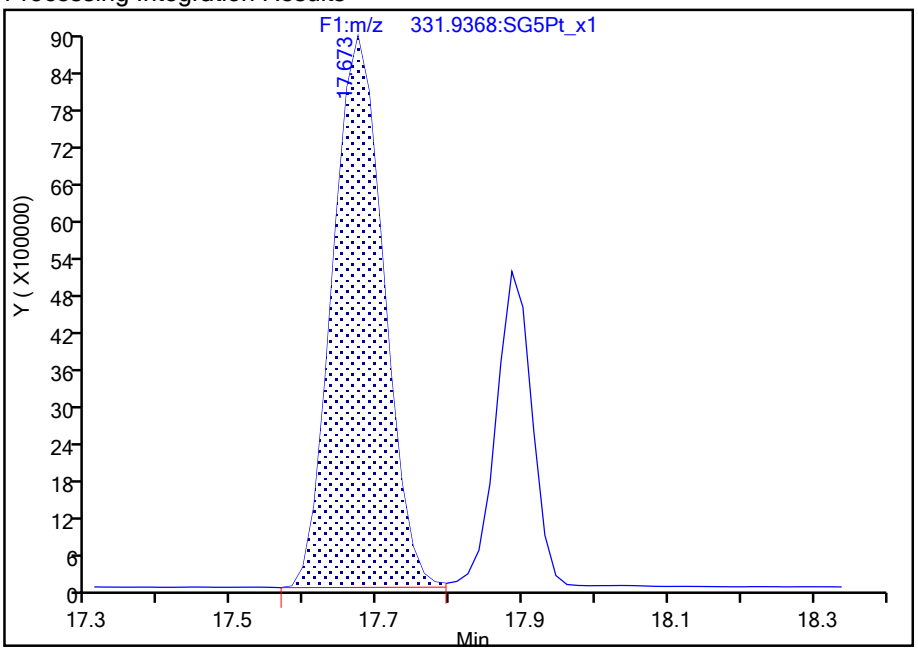

Manual Integration Results

RT: 17.89
Area: 17807065
Amount: 45.023793
Amount Units: pg/ul

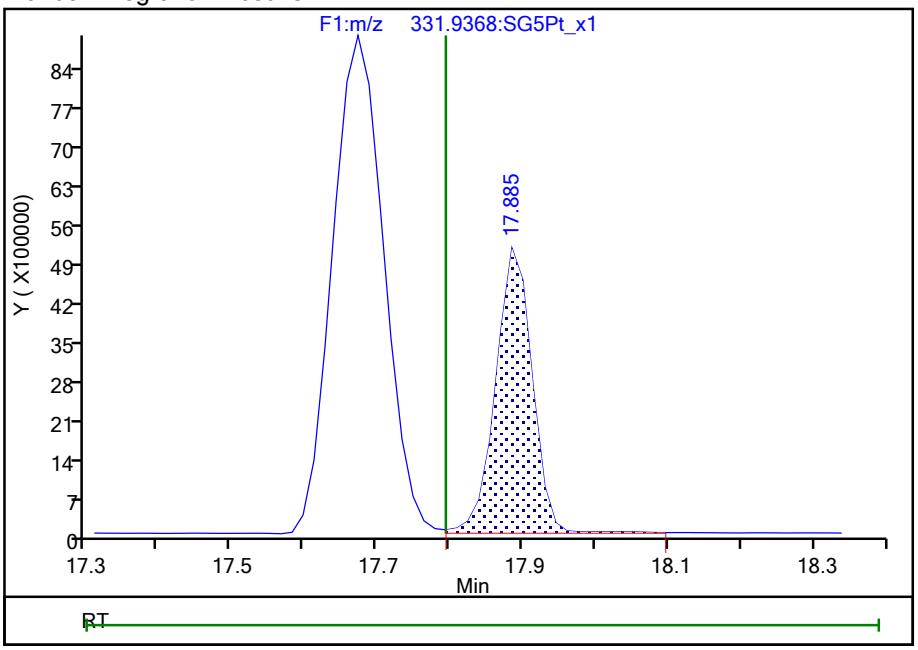

Reviewer: bennettd, 26-Aug-2021 09:59:35

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

792083

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d				
Injection Date:	25-Aug-2021 15:05:43	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 17.79
Area: 2024791
Amount: 9.591997
Amount Units: pg/ul

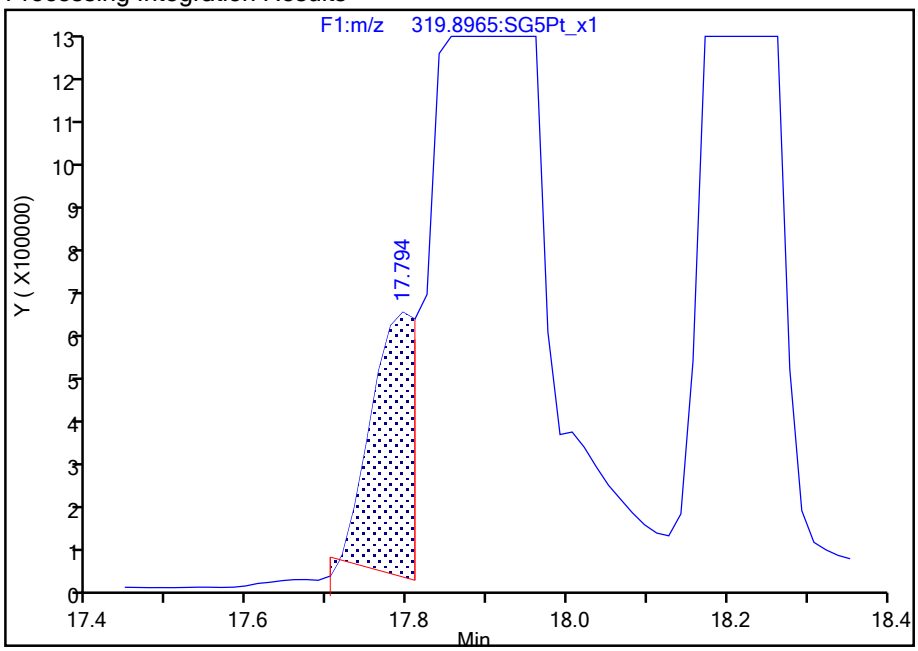

Manual Integration Results

RT: 17.90
Area: 199613269
Amount: 918.8382
Amount Units: pg/ul

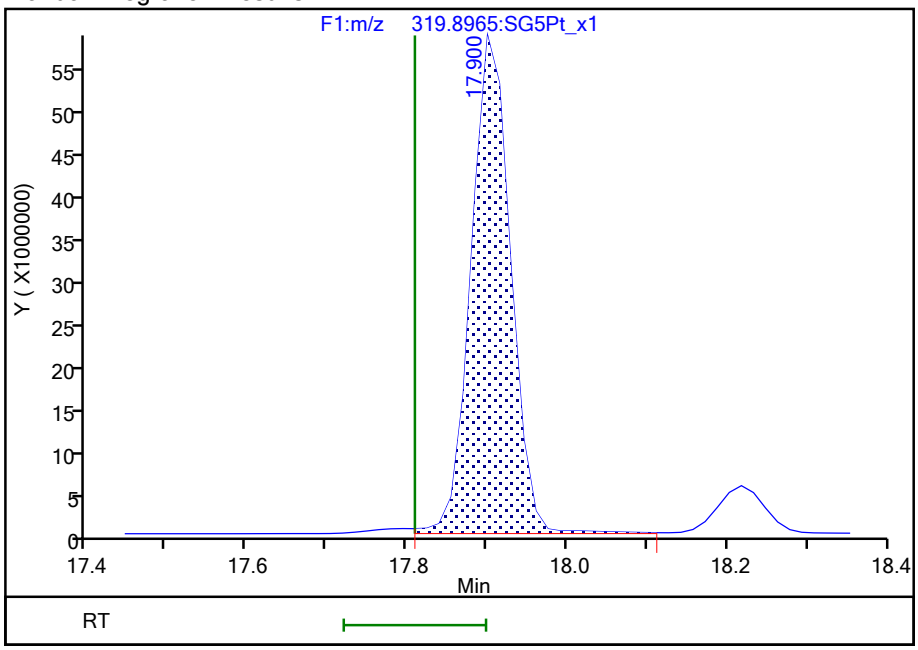

Reviewer: bennettd, 26-Aug-2021 10:02:50

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

792084

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d				
Injection Date:	25-Aug-2021 15:05:43	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.01
Area: 1568785
Amount: 5.039571
Amount Units: pg/ul

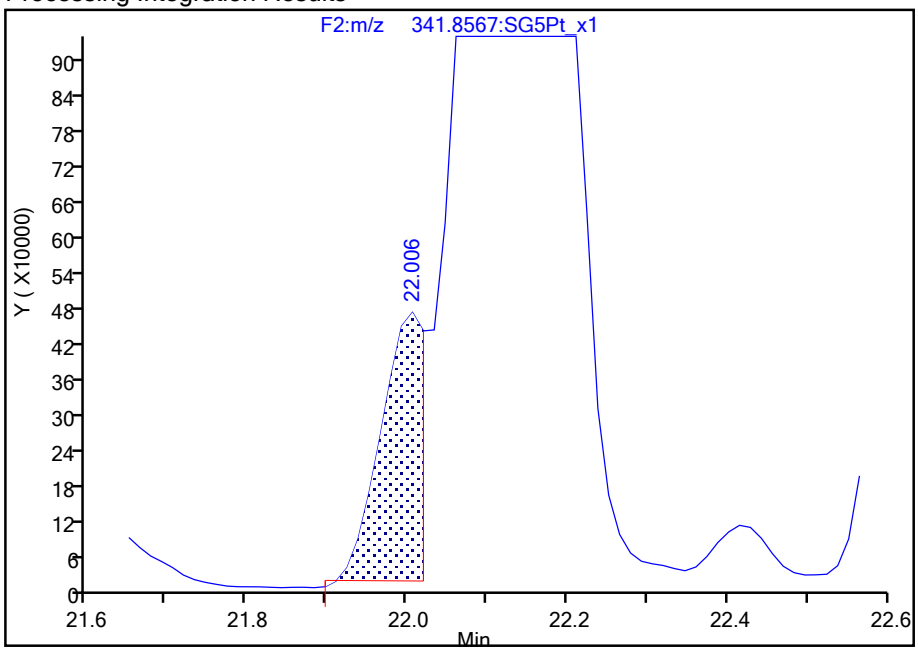

Manual Integration Results

RT: 22.13
Area: 52389267
Amount: 148.5901
Amount Units: pg/ul

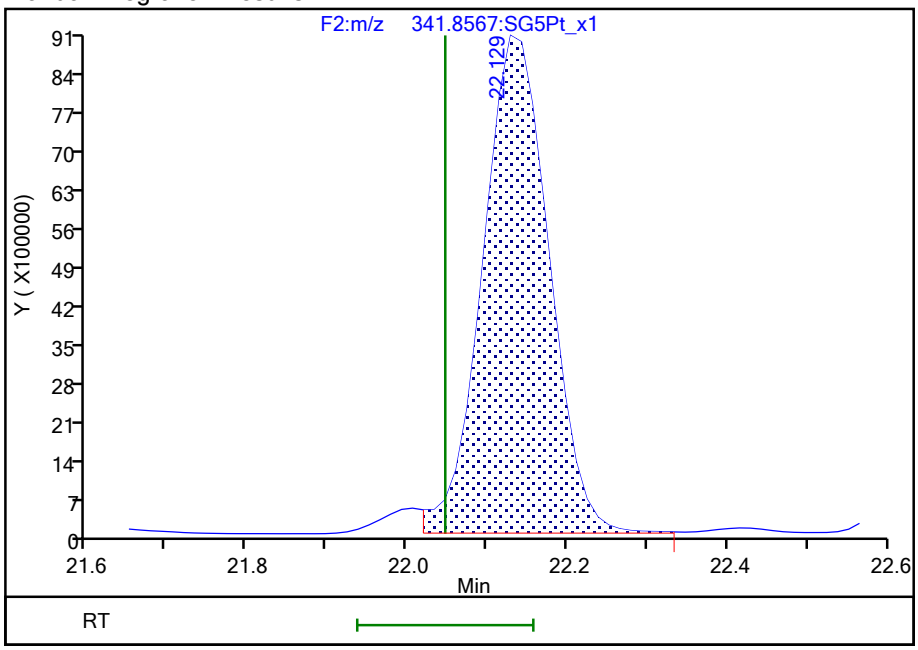

Reviewer: dadunj, 27-Aug-2021 09:47:16

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

792085

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d				
Injection Date:	25-Aug-2021 15:05:43	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

RT: 22.01
Area: 4572876
Amount: 5.039571
Amount Units: pg/ul

Processing Integration Results

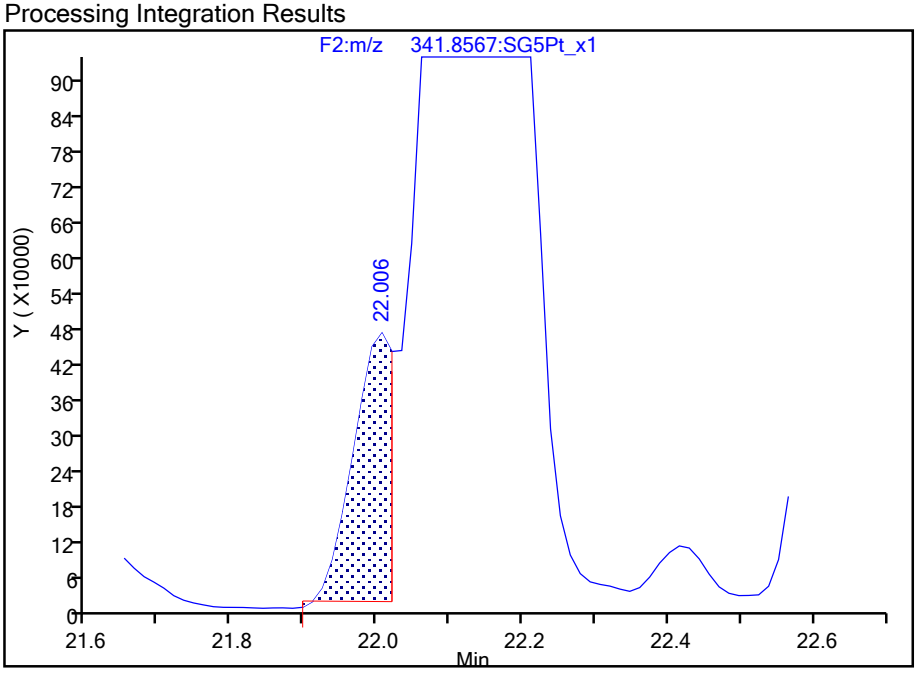

Manual Integration Results

RT: 22.13
Area: 134829737
Amount: 148.5901
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 09:47:16
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

792086

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d				
Injection Date:	25-Aug-2021 15:05:43	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.01
Area: 3004091
Amount: 5.039571
Amount Units: pg/ul

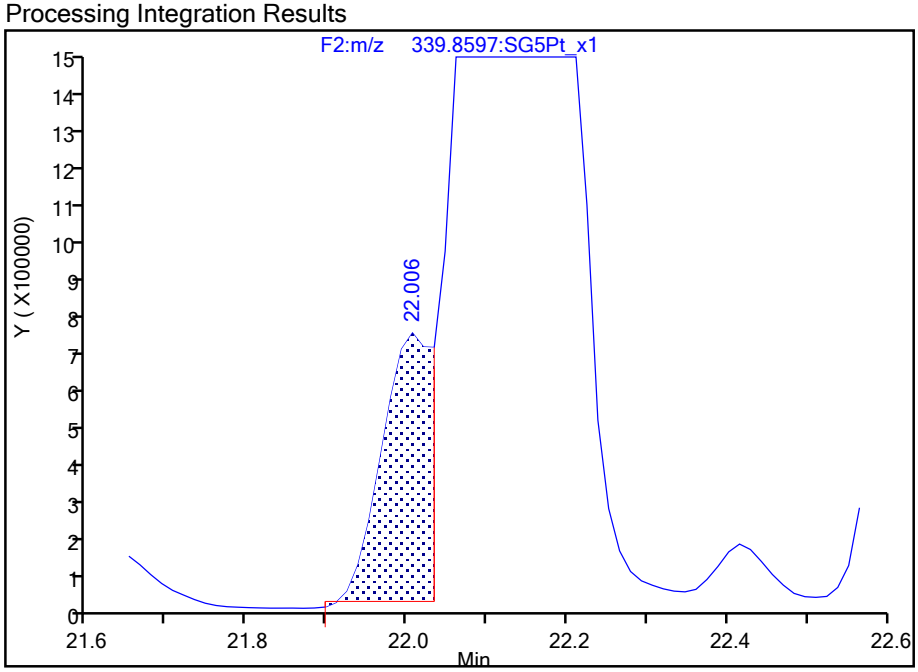

Manual Integration Results

RT: 22.13
Area: 82440470
Amount: 148.5901
Amount Units: pg/ul

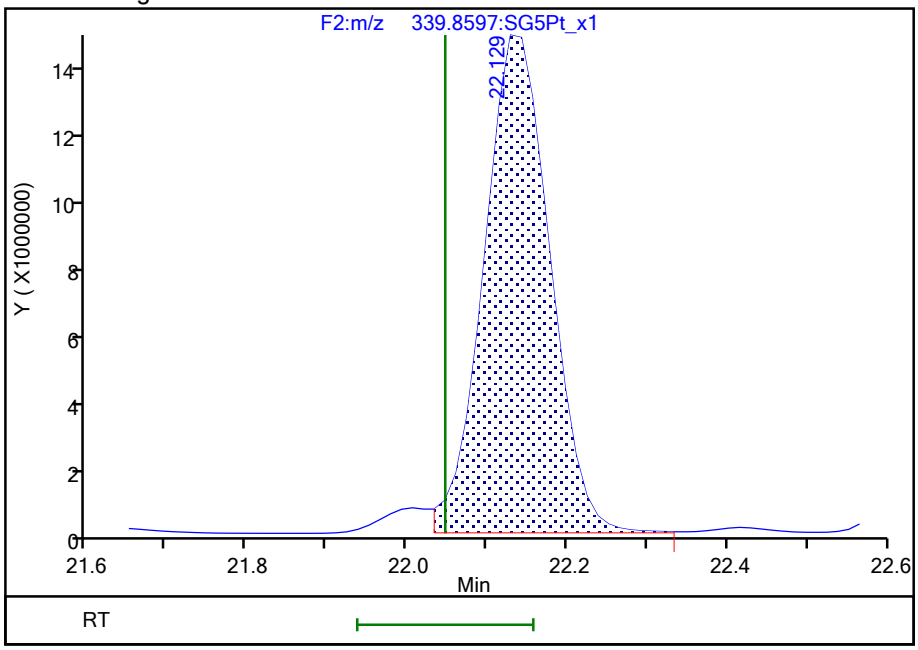

Reviewer: dadunj, 27-Aug-2021 09:47:17

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

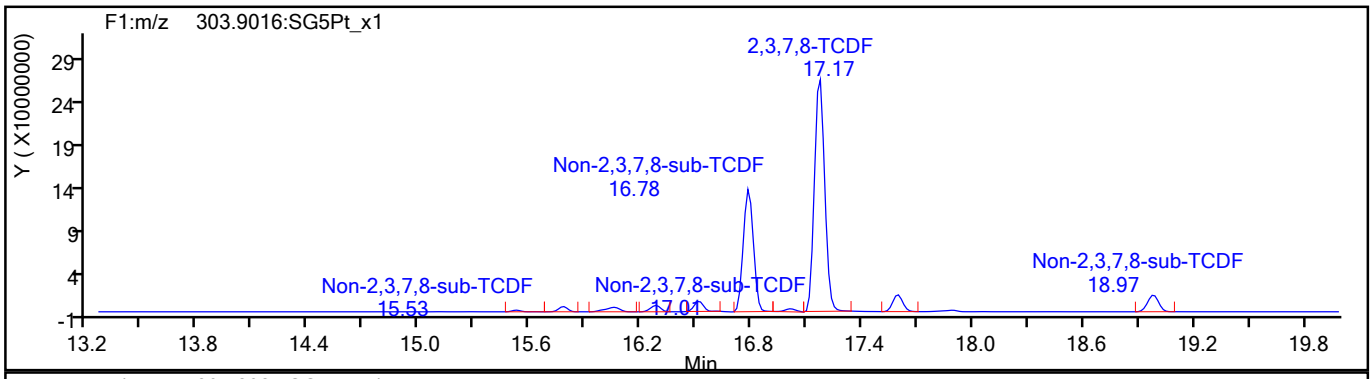

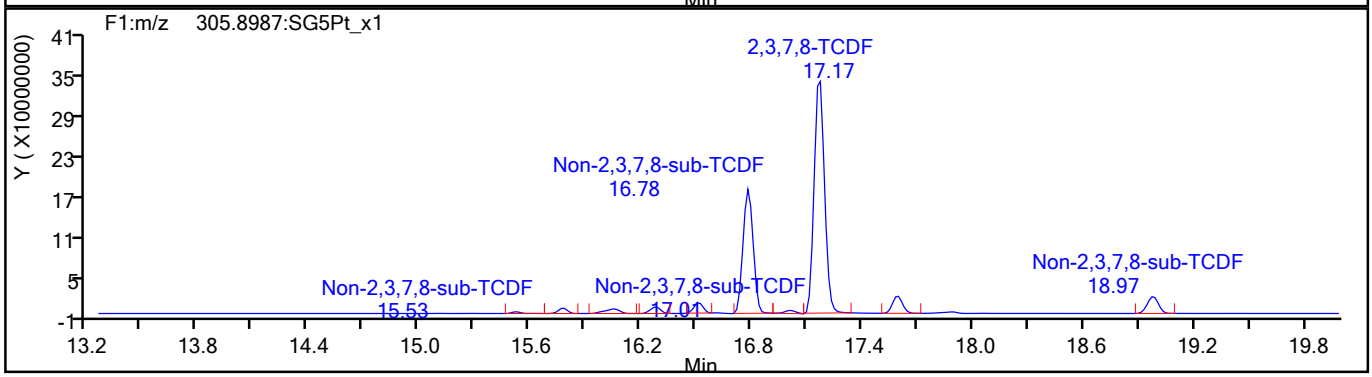

TCDF Standards

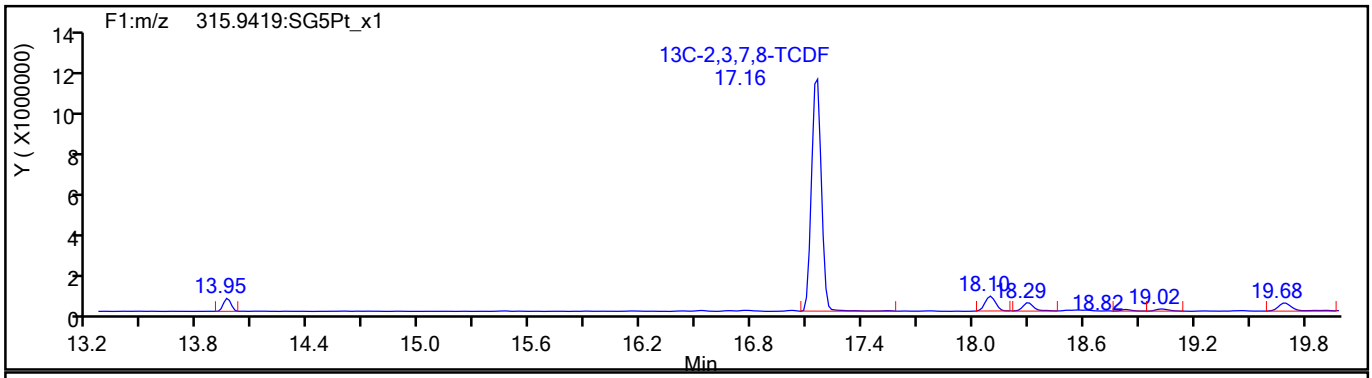

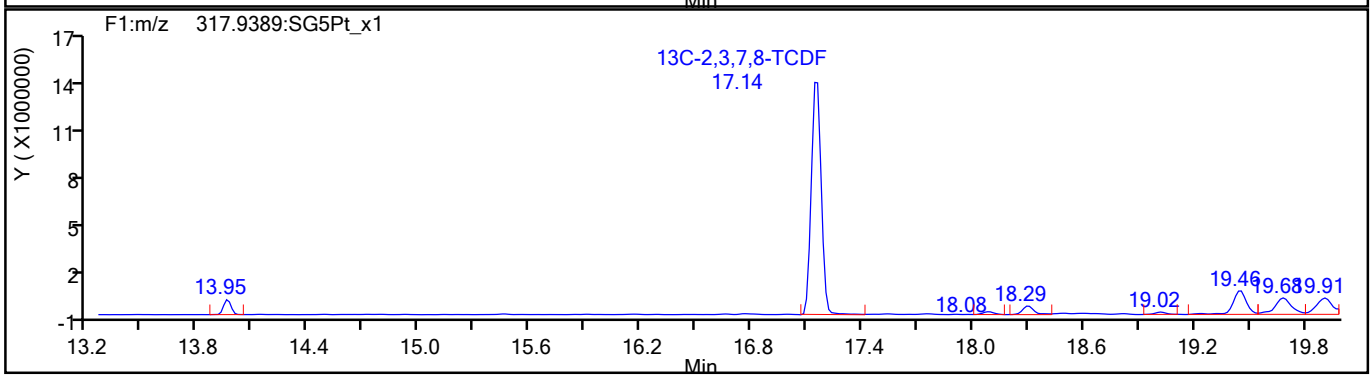

792088

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

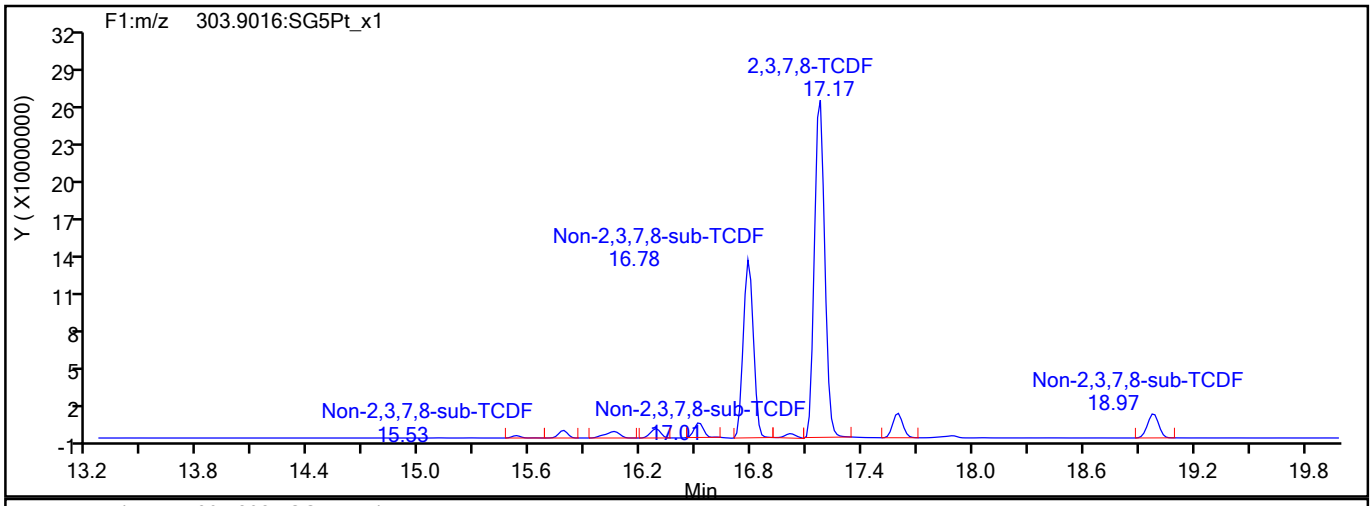

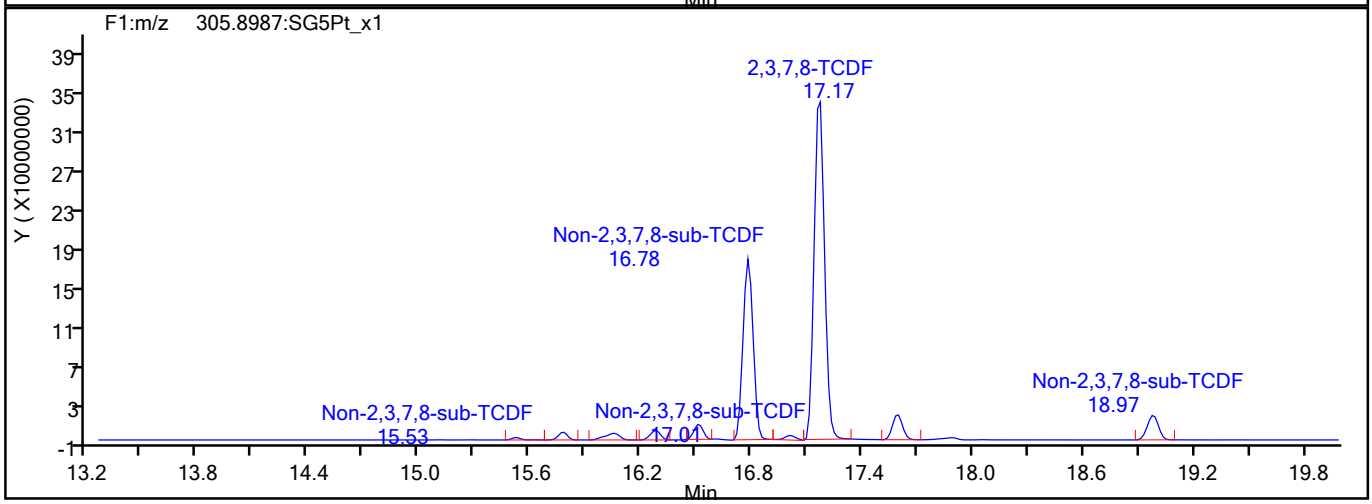

TCDF Interference Mass

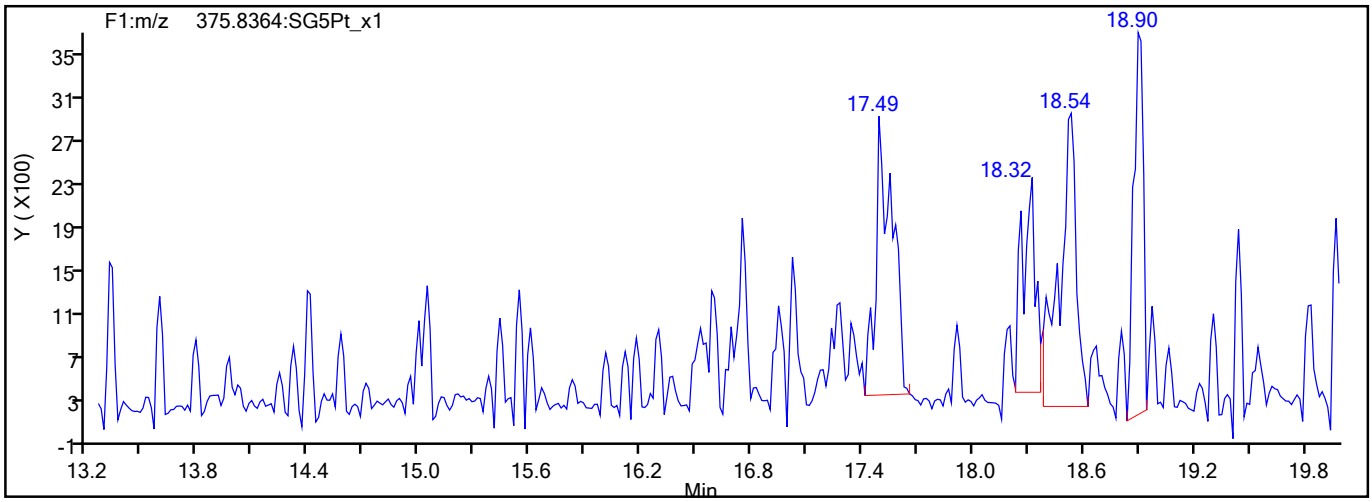

792089

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

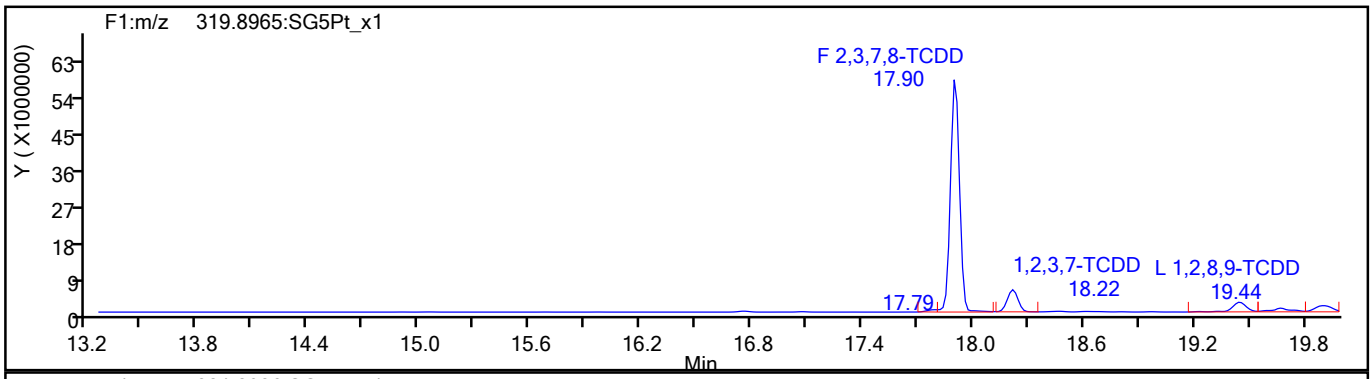

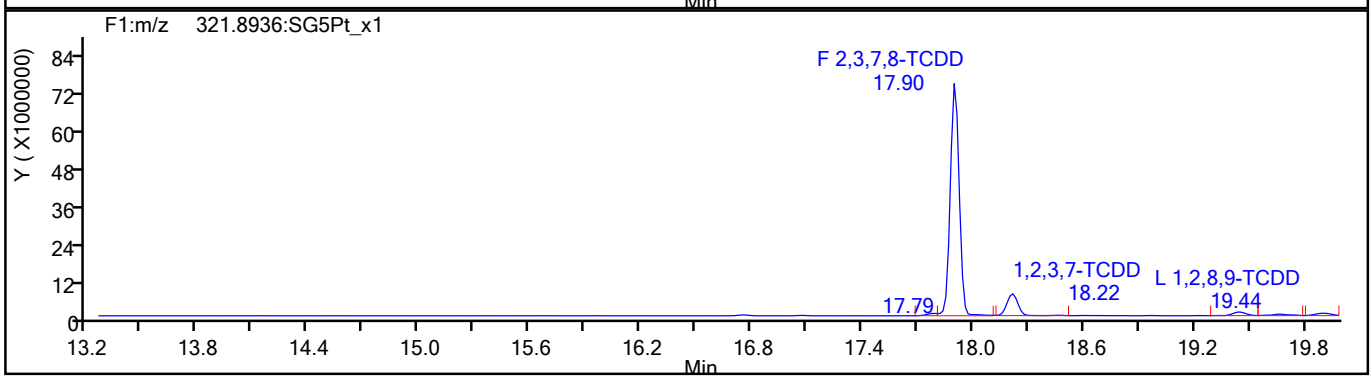

TCDD Standards

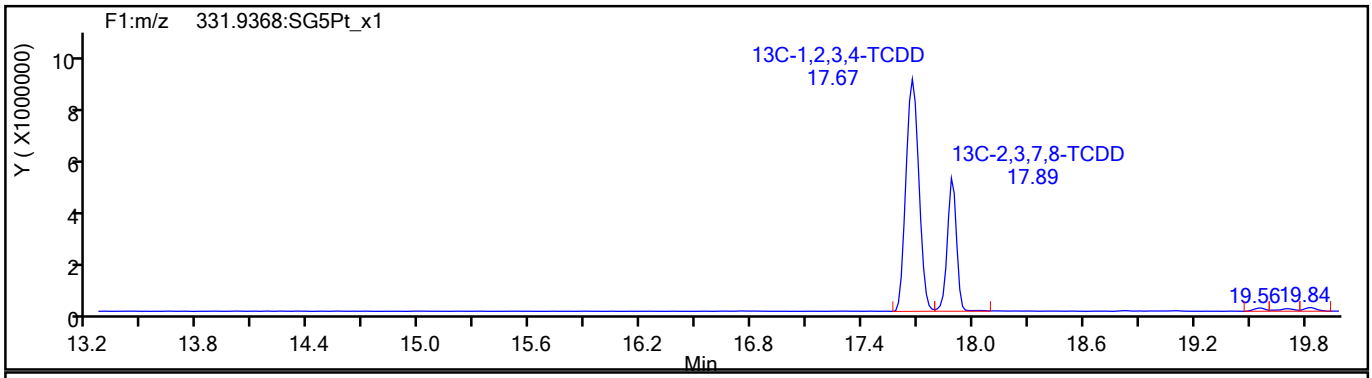

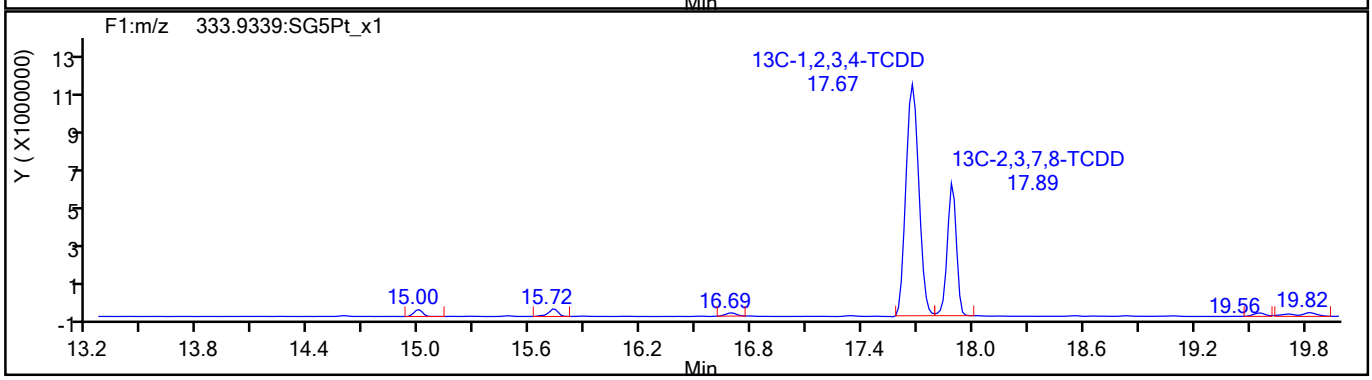

792090

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

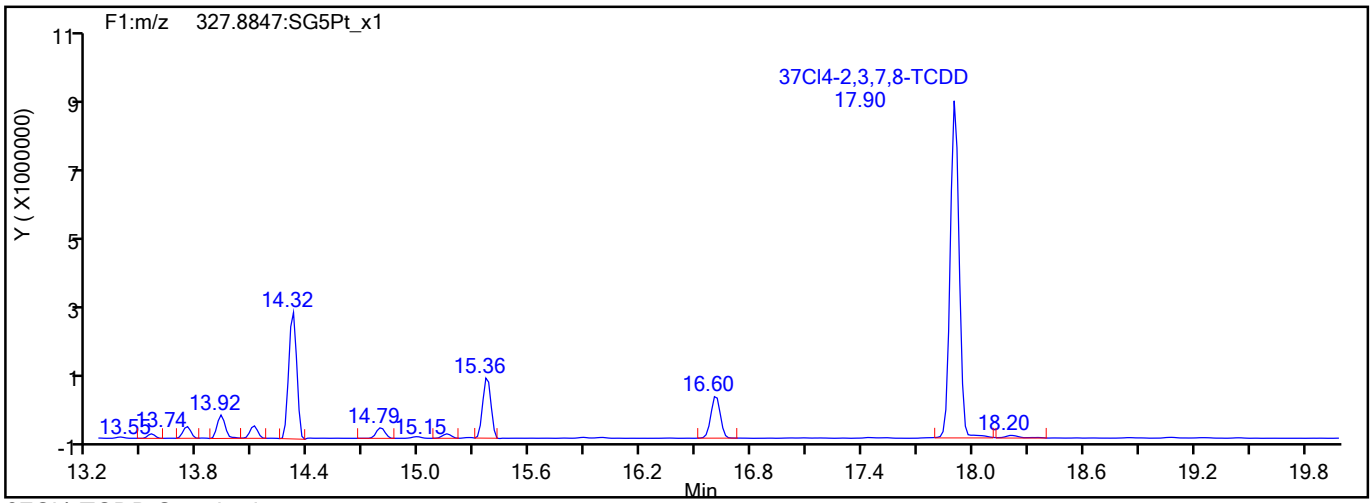

37Cl4-TCDD Standards

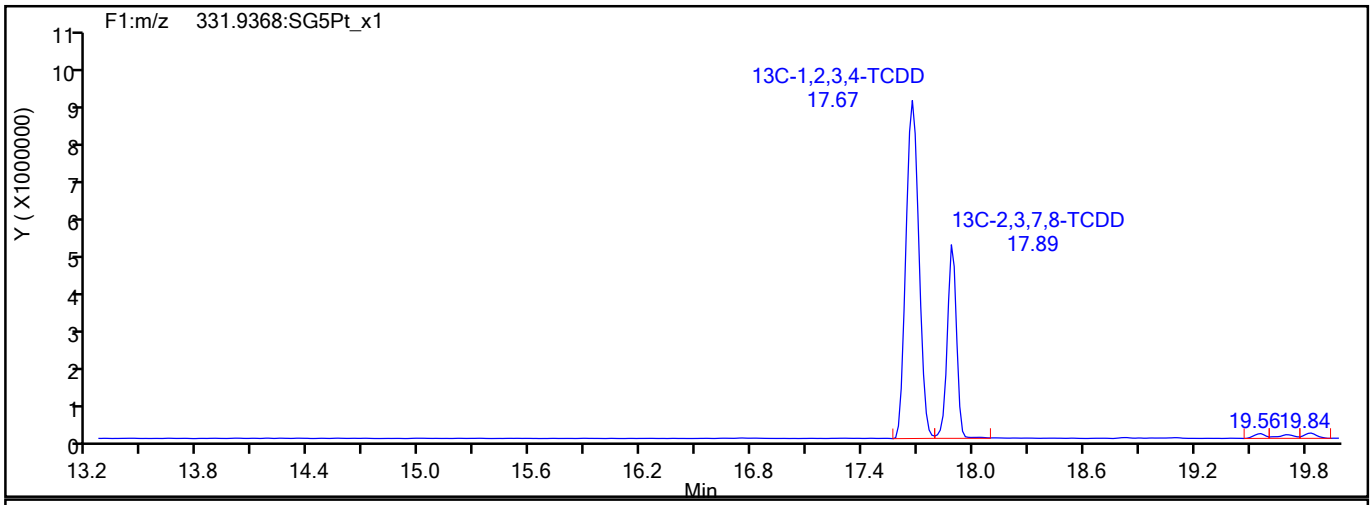

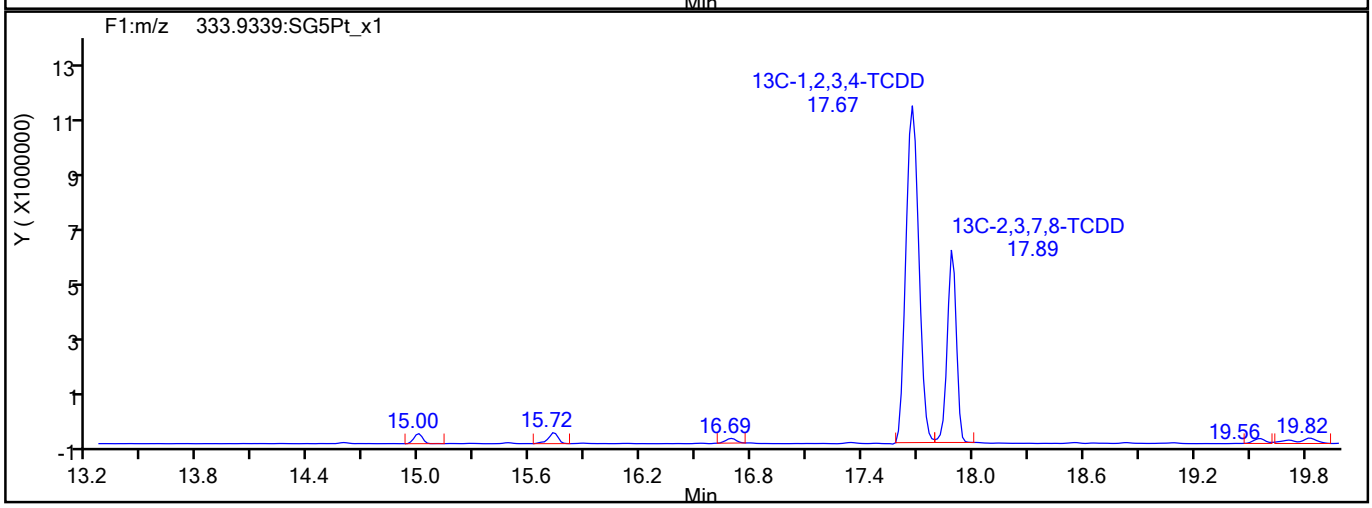

792091

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

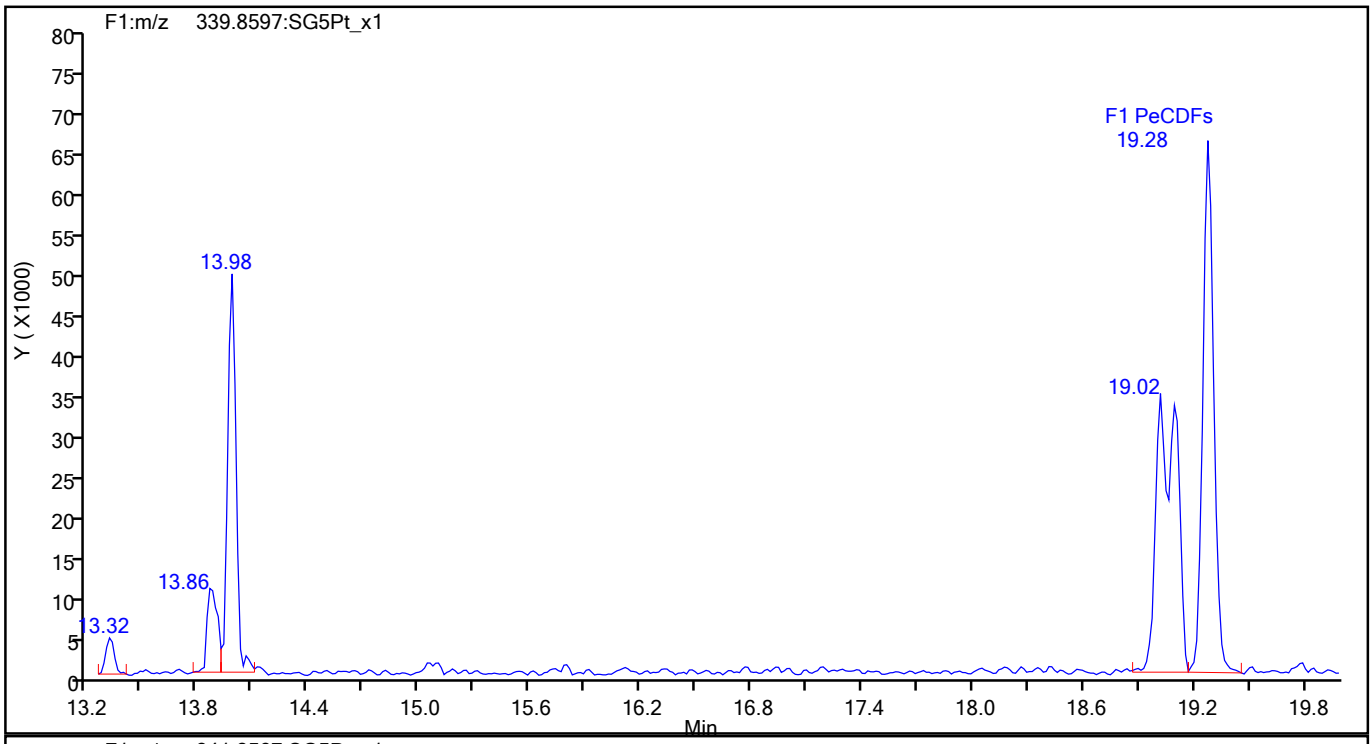

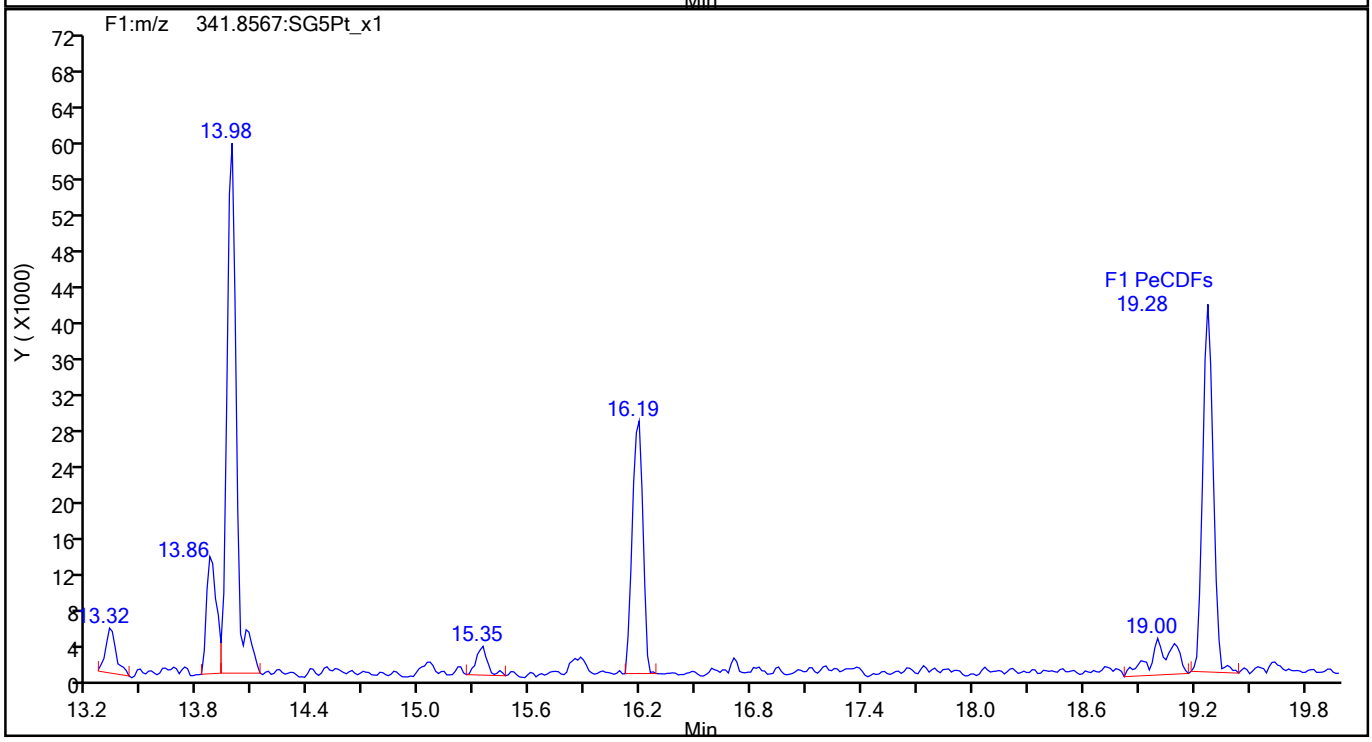

792092

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

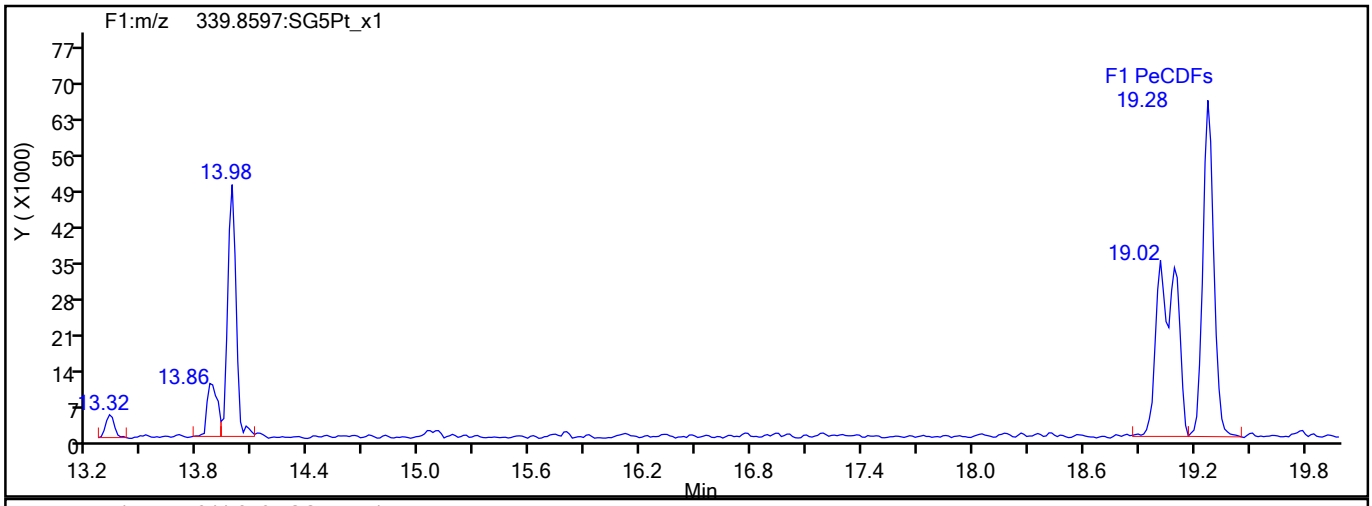

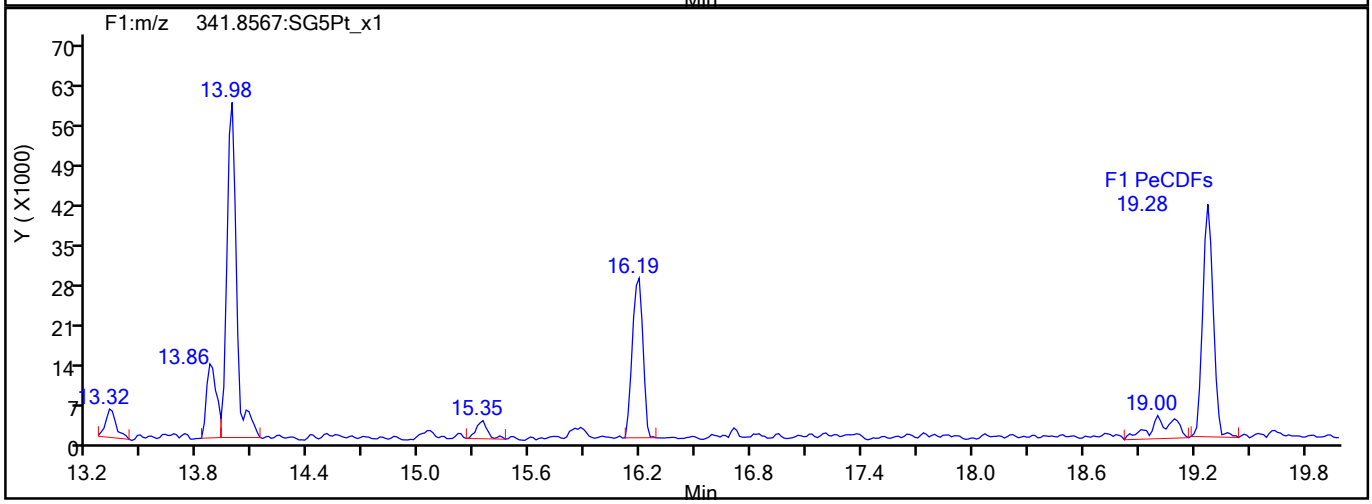

F1 PeCDFs Interference Mass

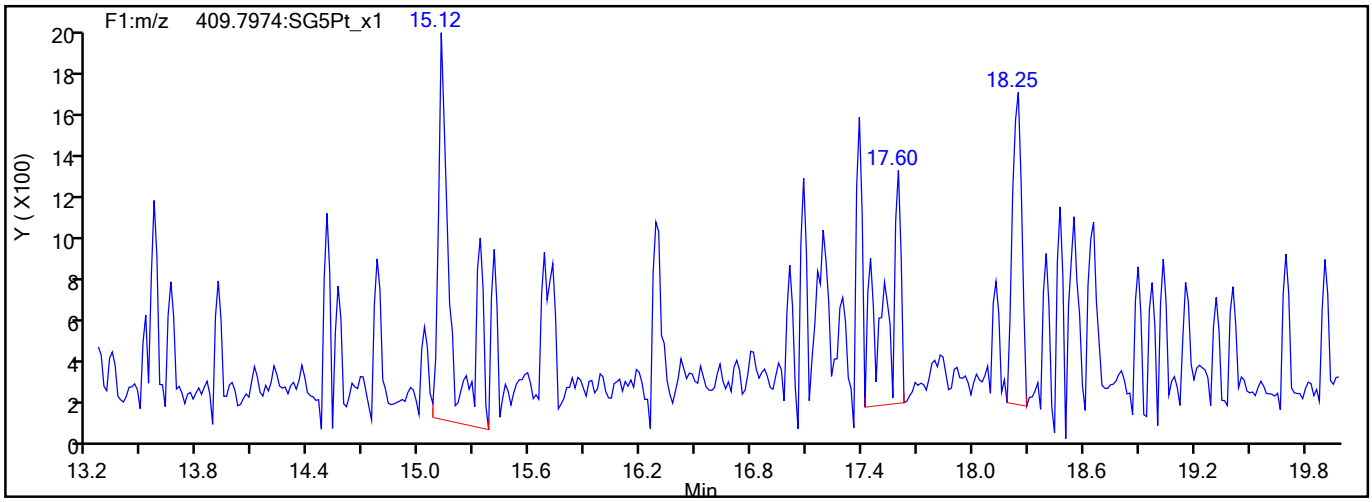

792093

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
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PeCDF

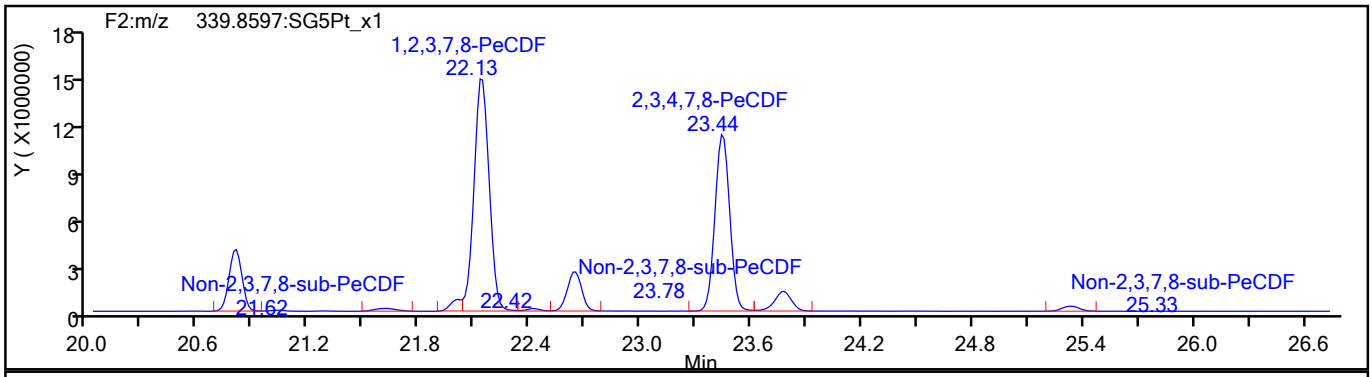

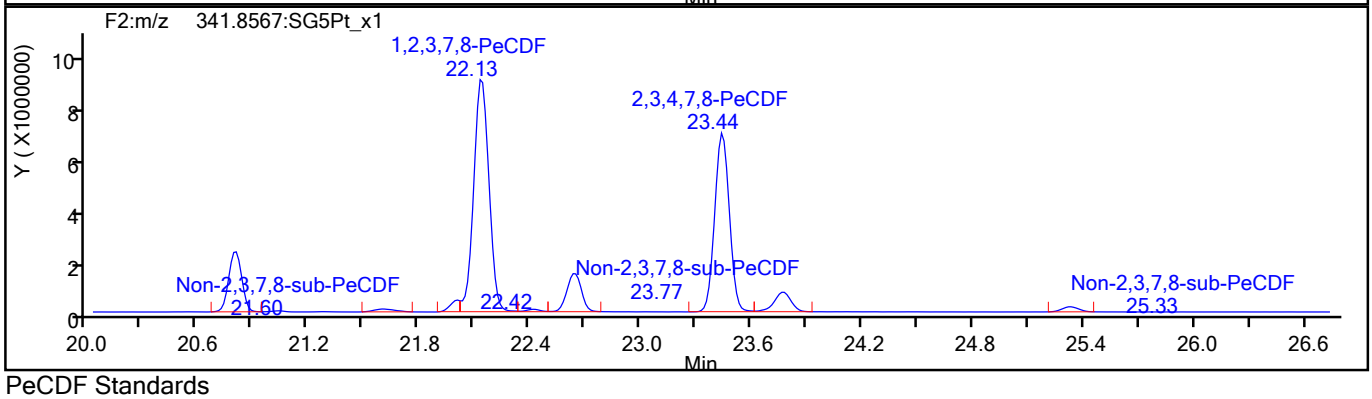

PeCDF Standards

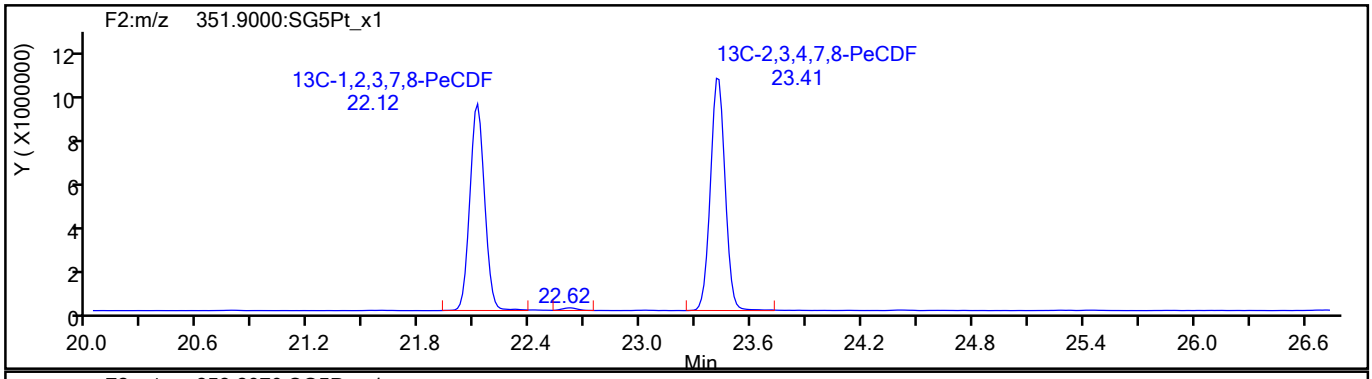

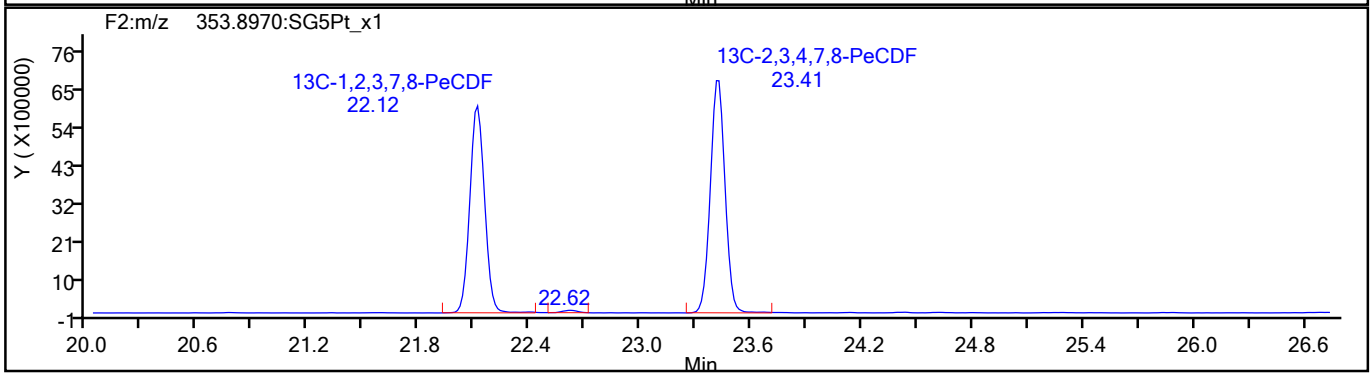

792094

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
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PeCDF

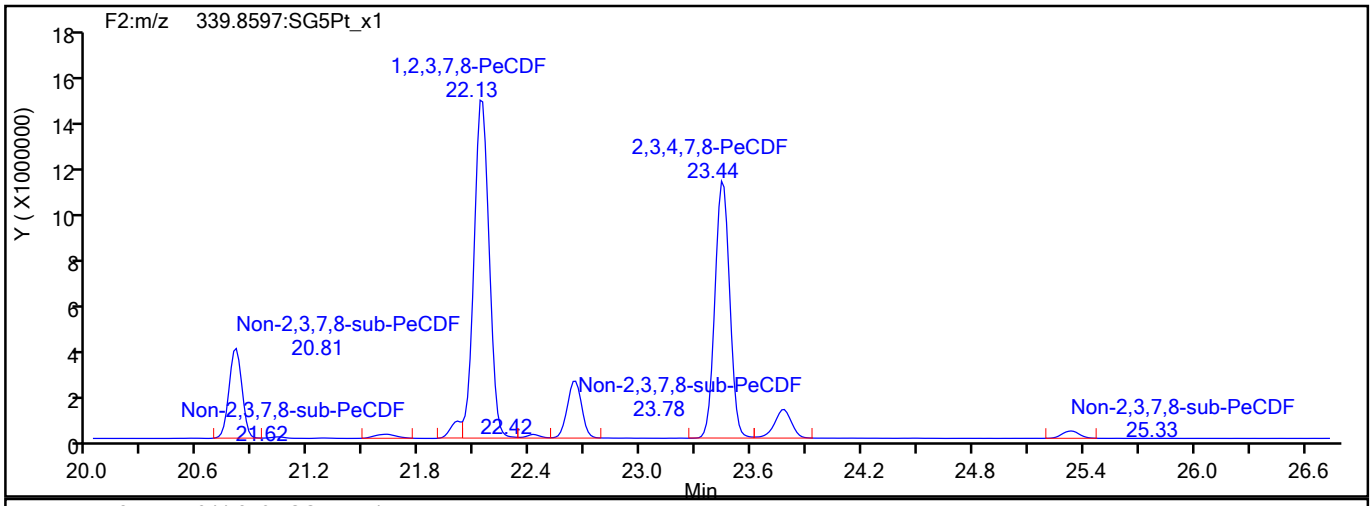

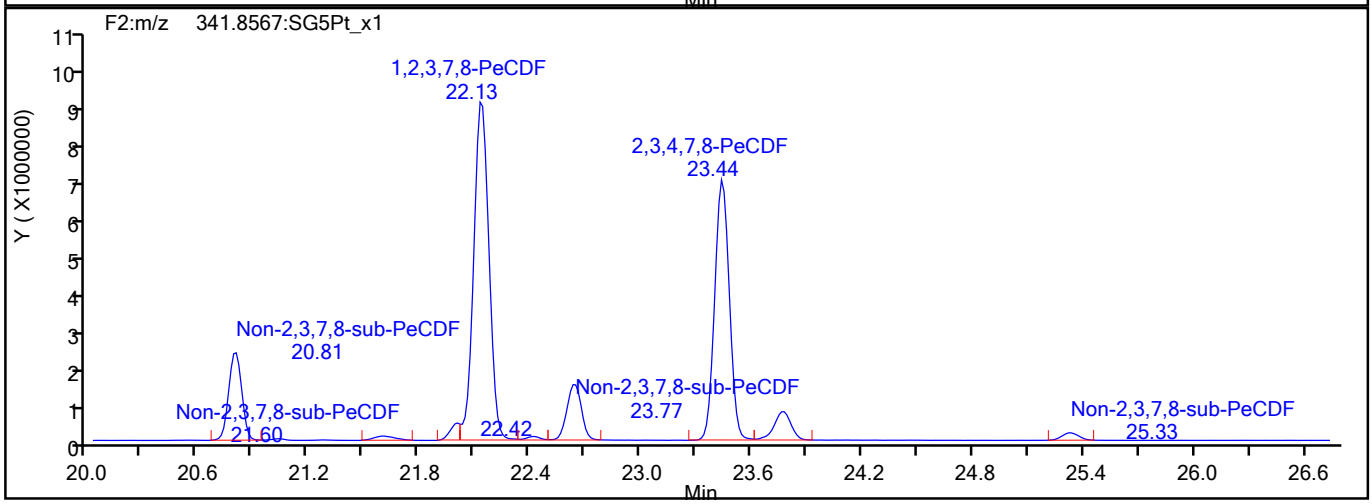

PeCDF Interference Mass

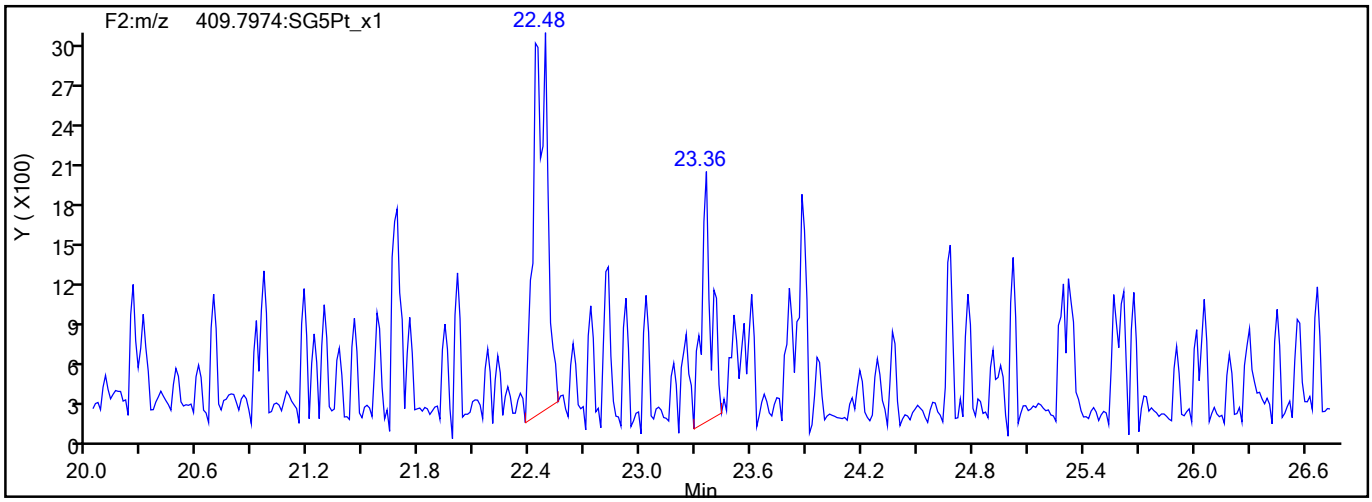

792095

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

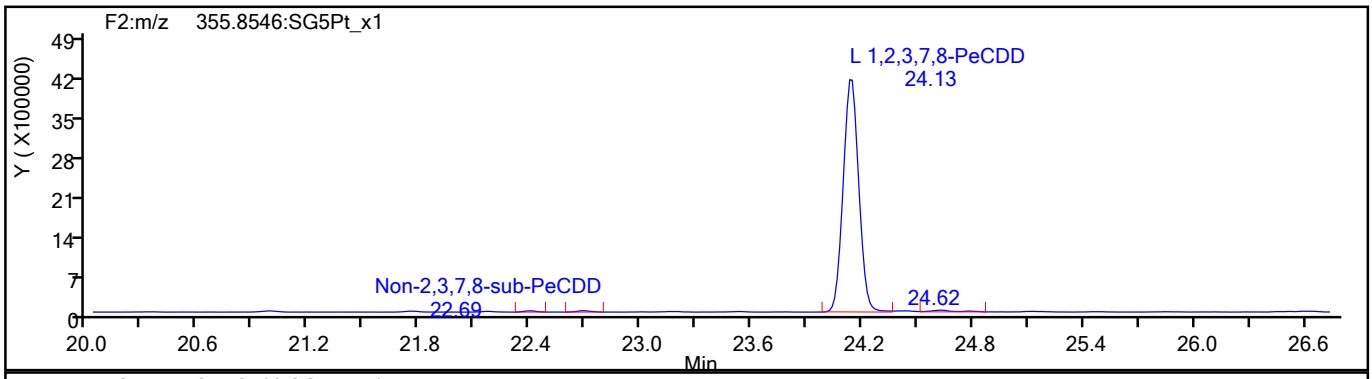

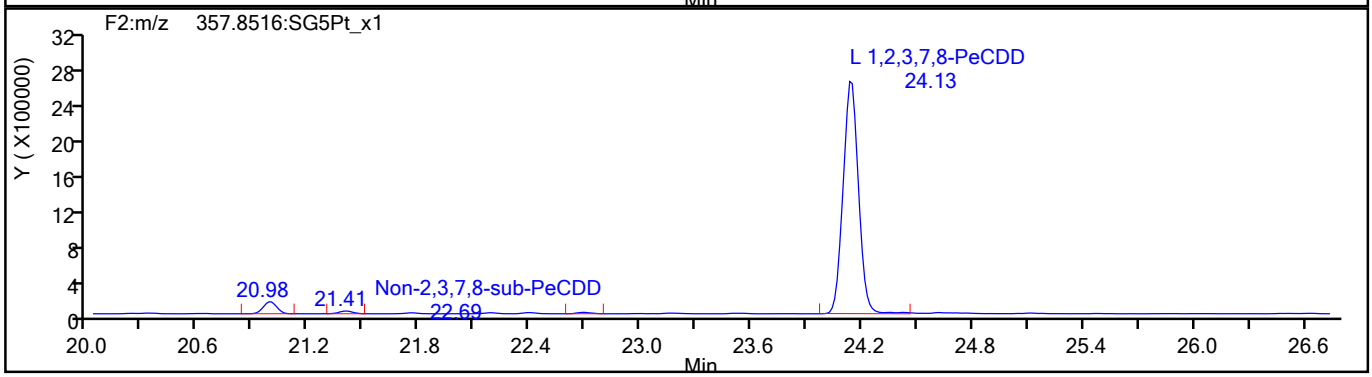

PeCDD Standards

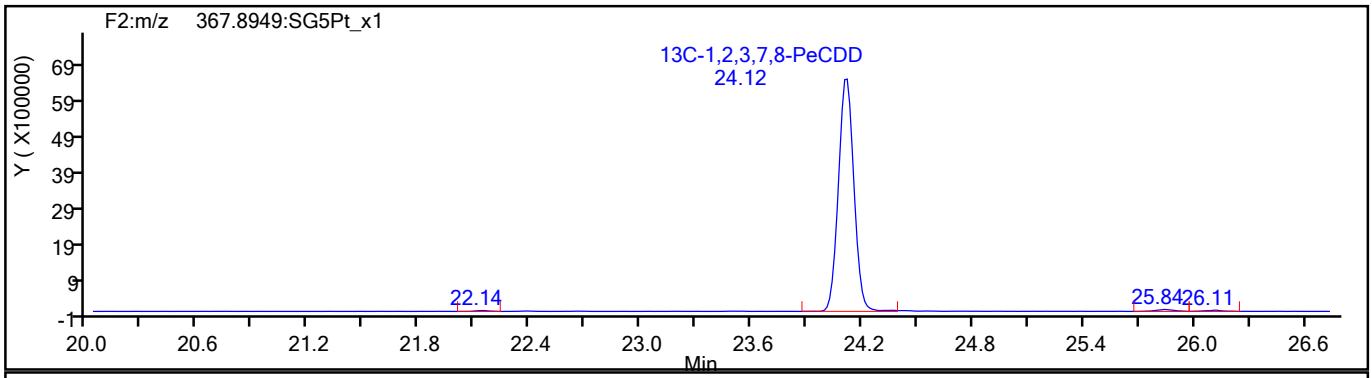

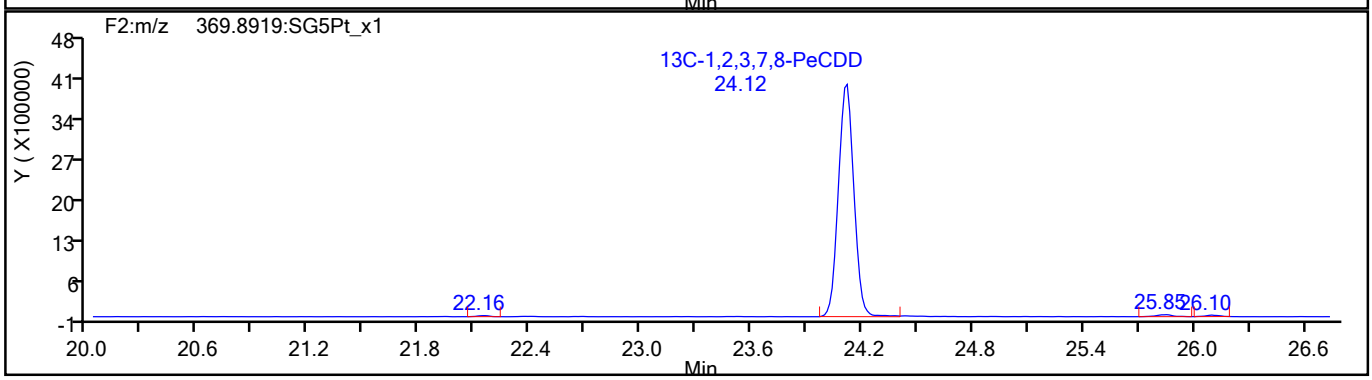

792096

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

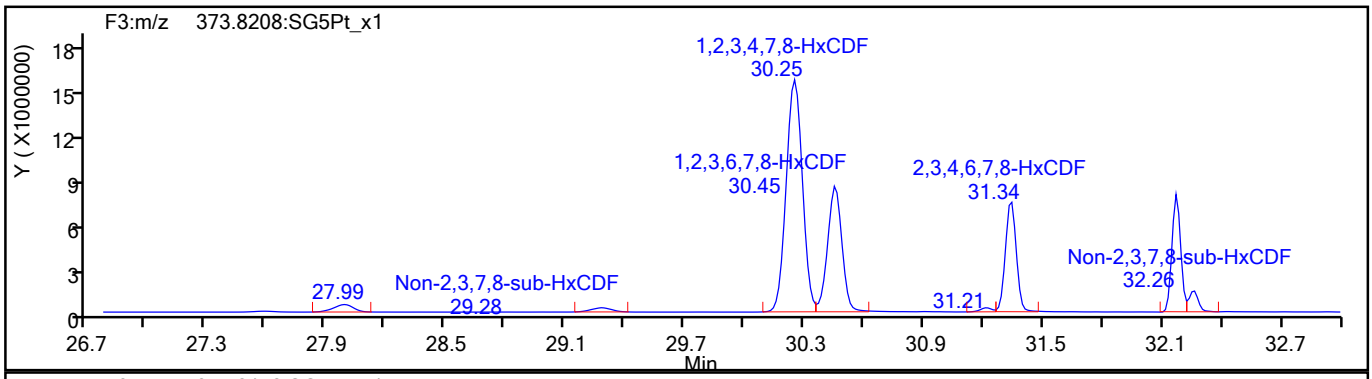

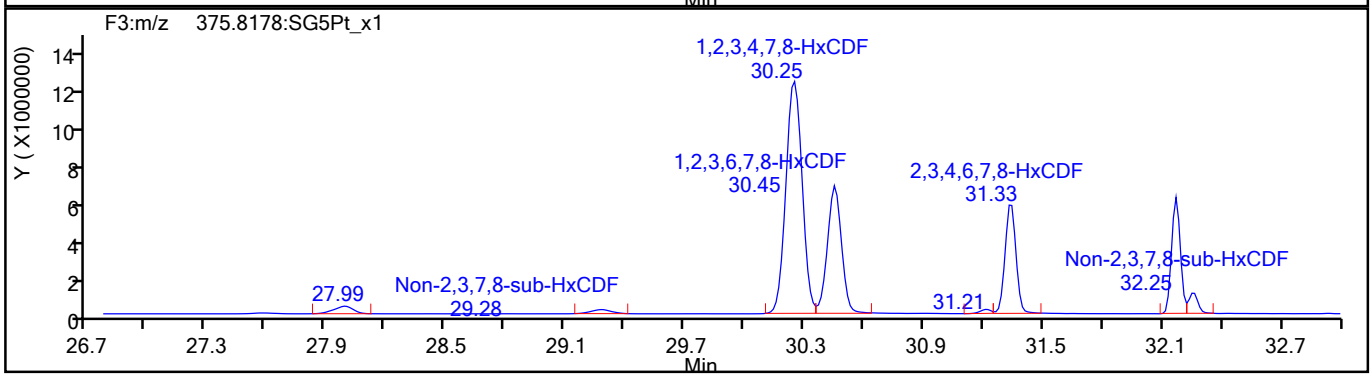

HxCDF Standards

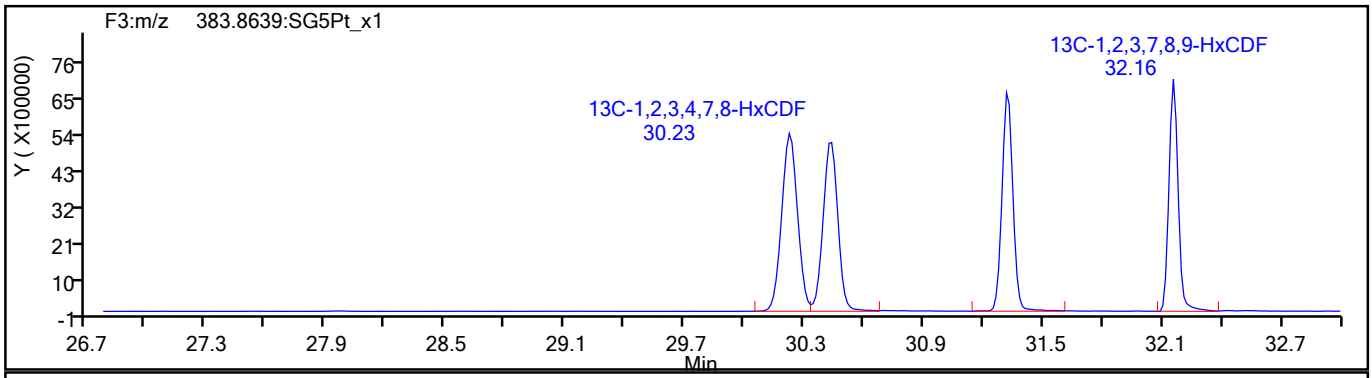

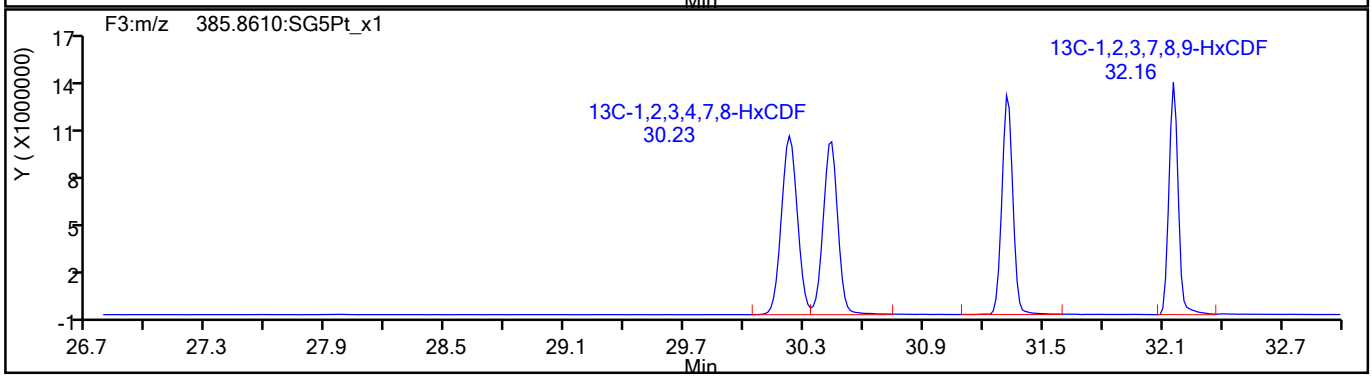

792097

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

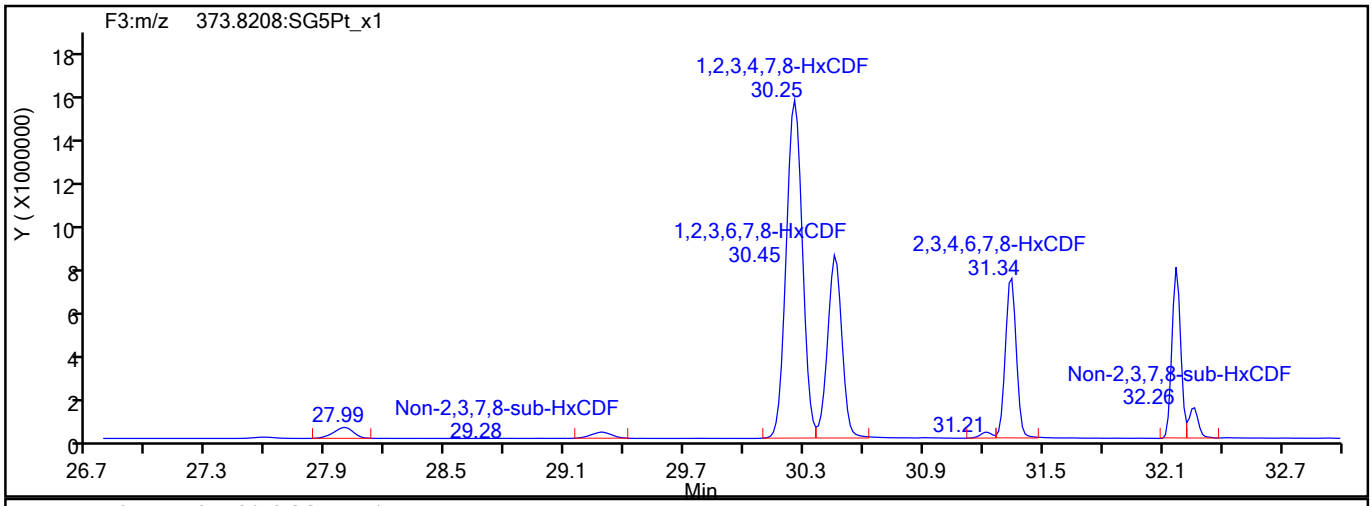

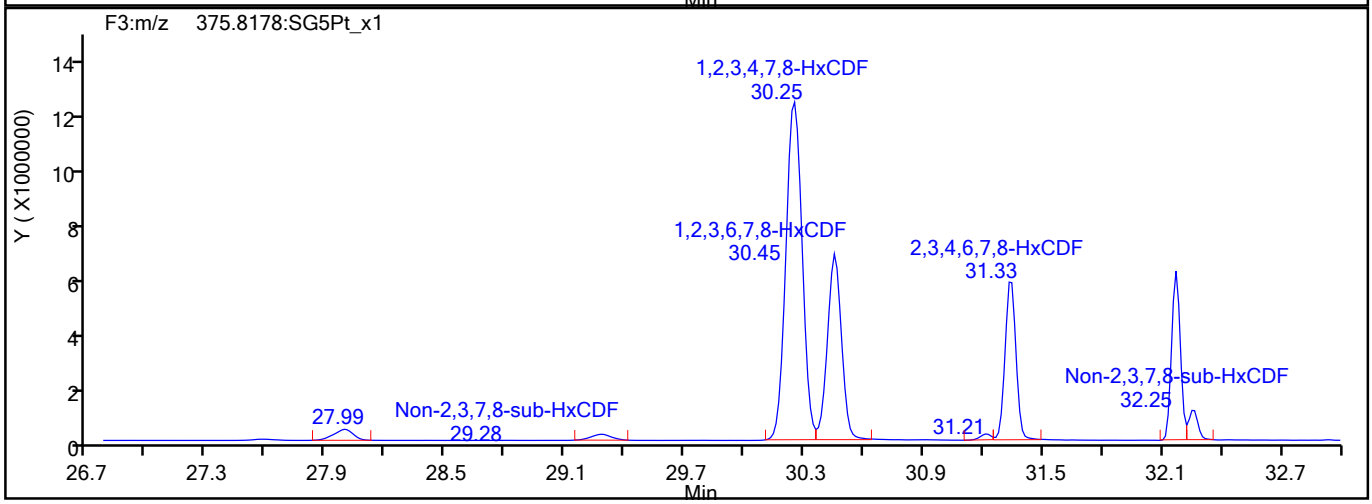

HxCDF Interference Mass

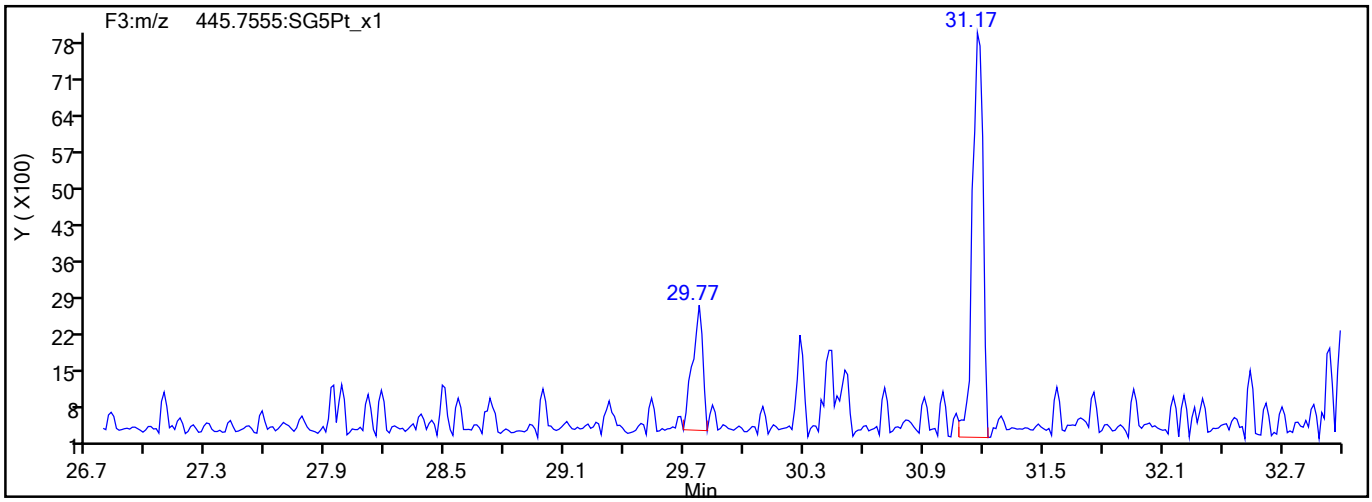

792098

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

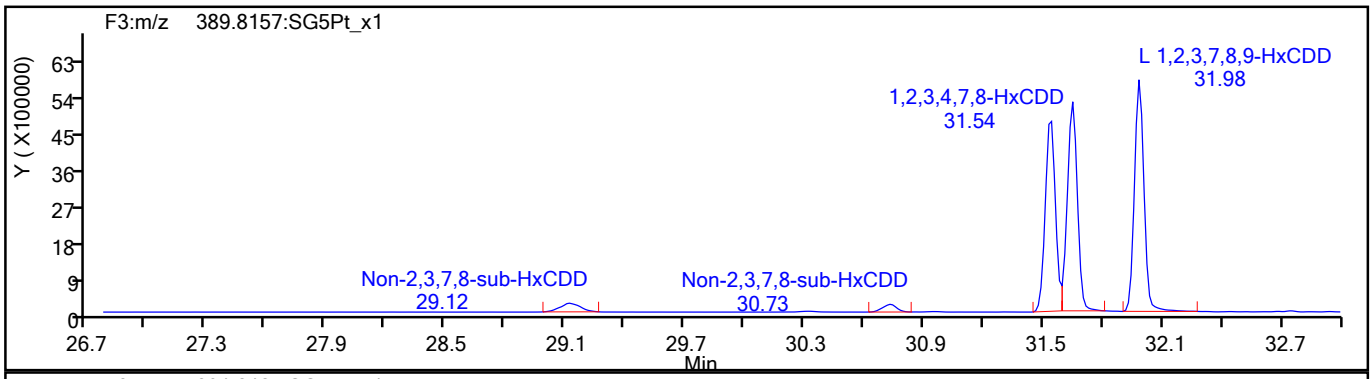

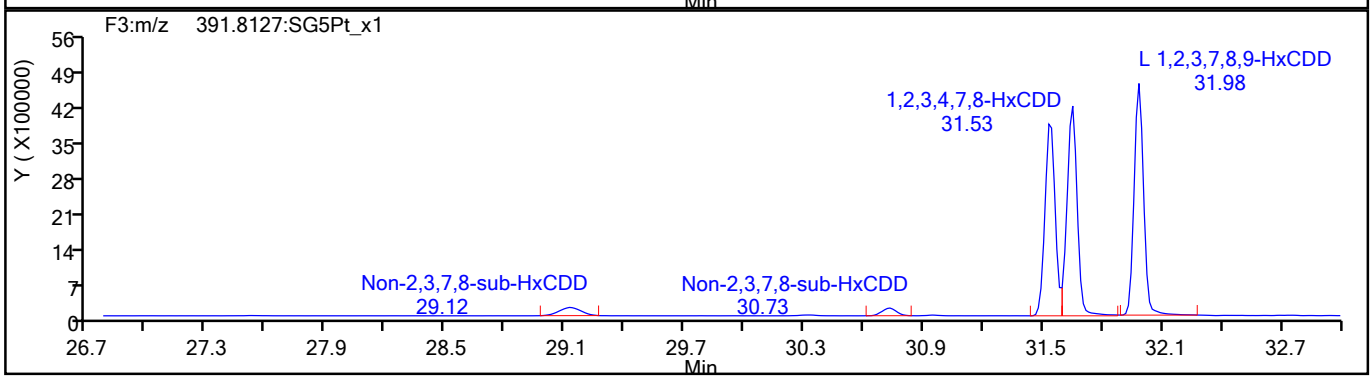

HxCDD Standards

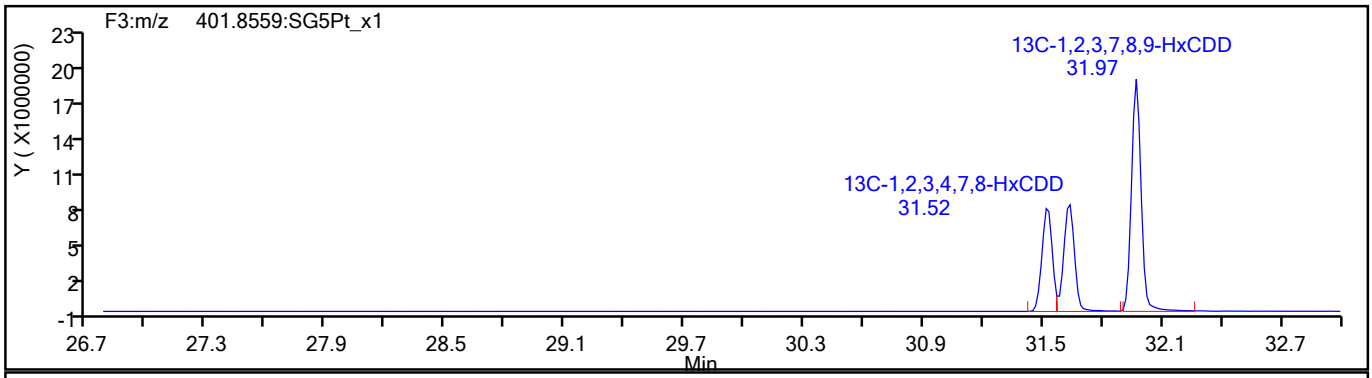

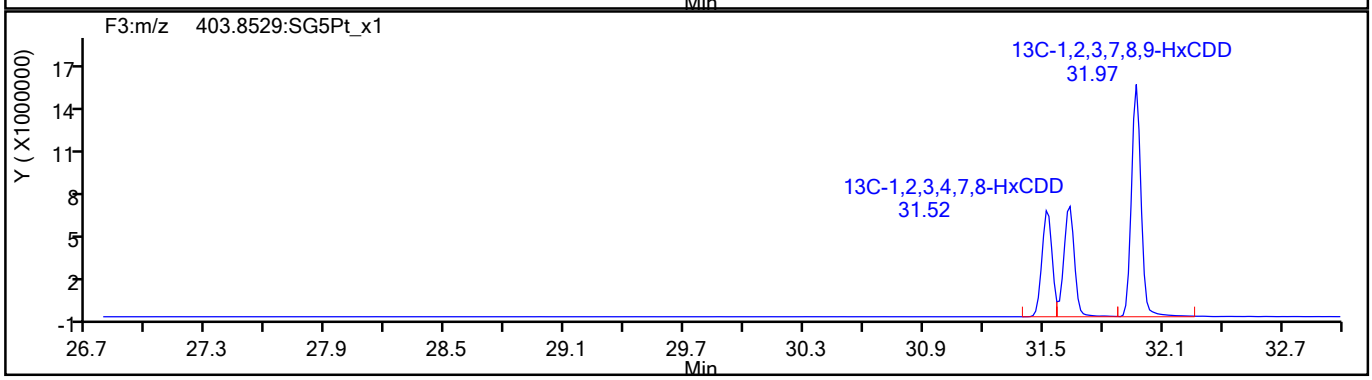

792099

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

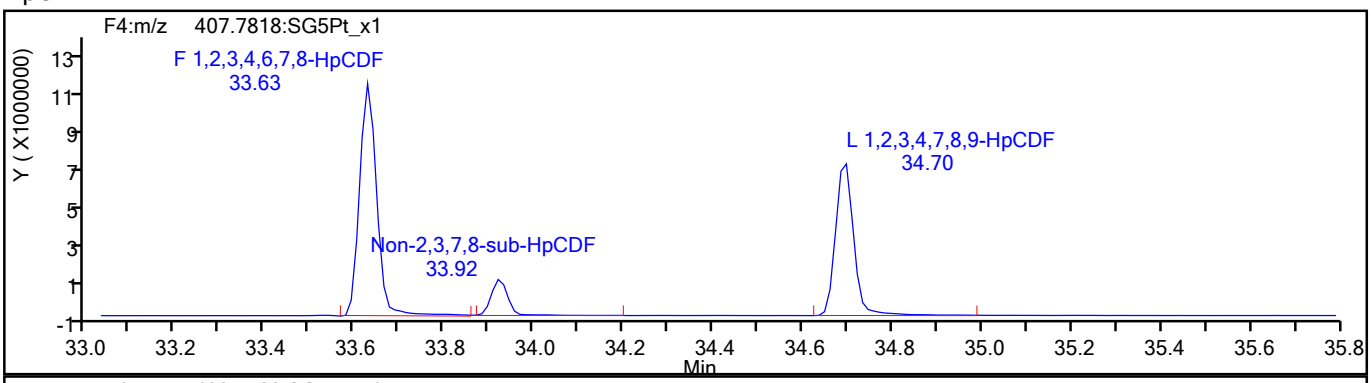

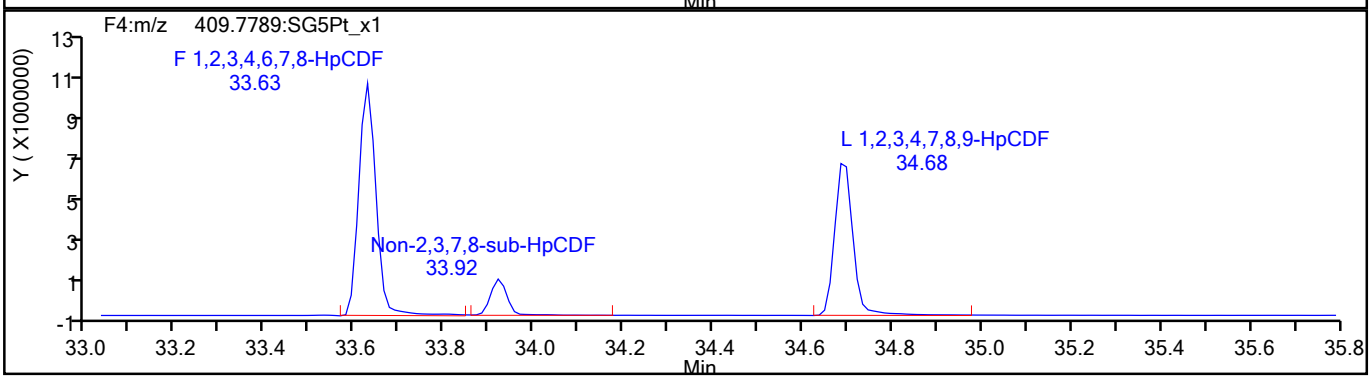

HpCDF Standards

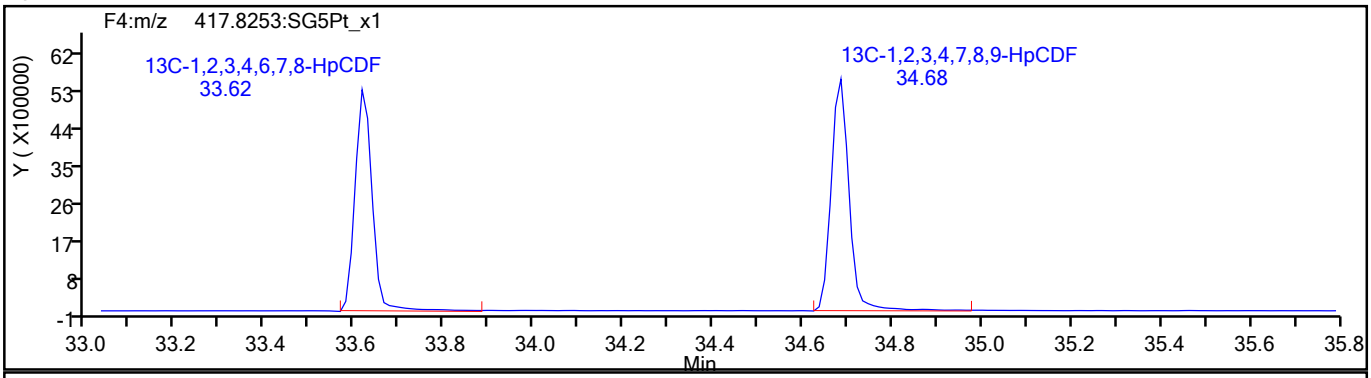

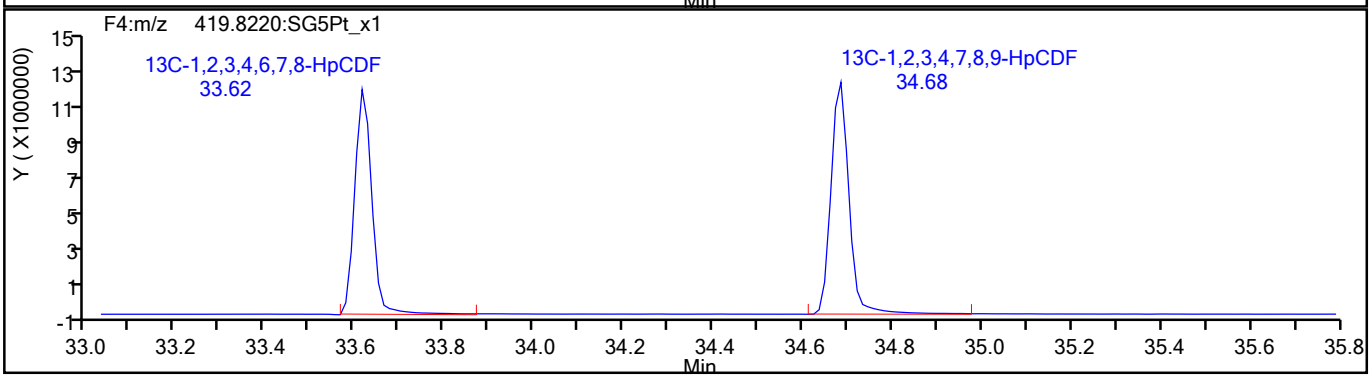

792100

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

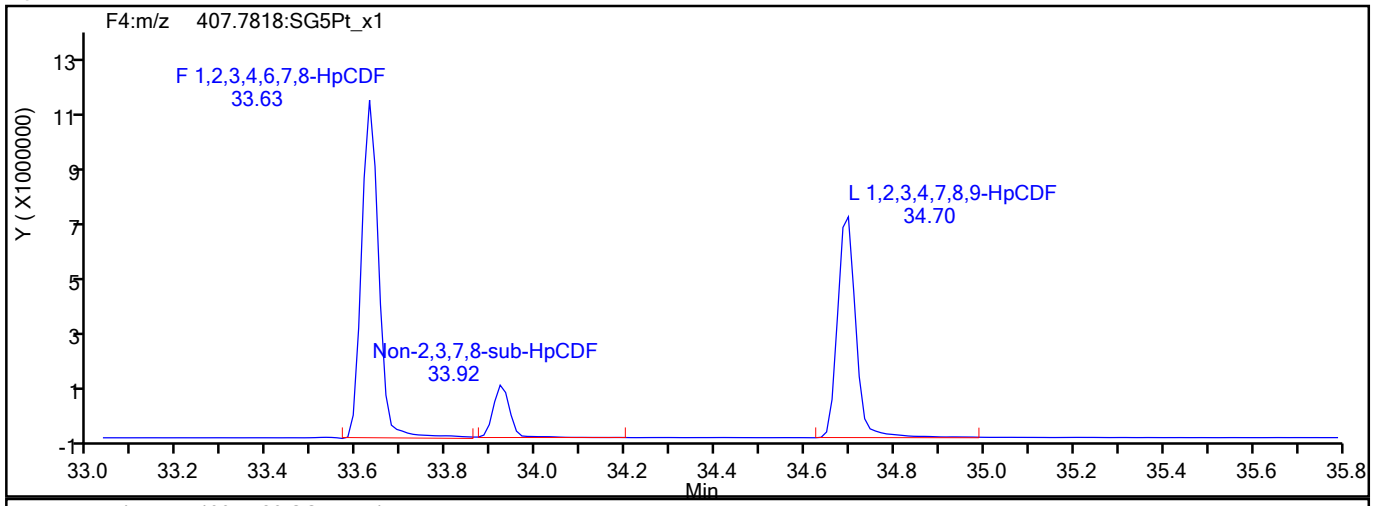

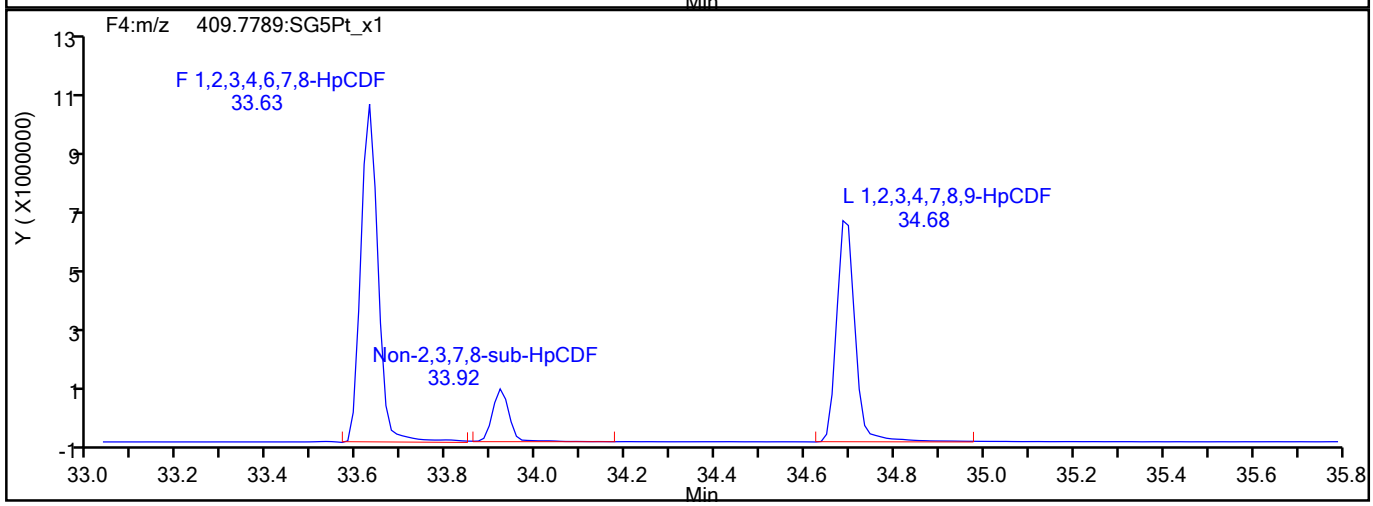

HpCDF Interference Mass

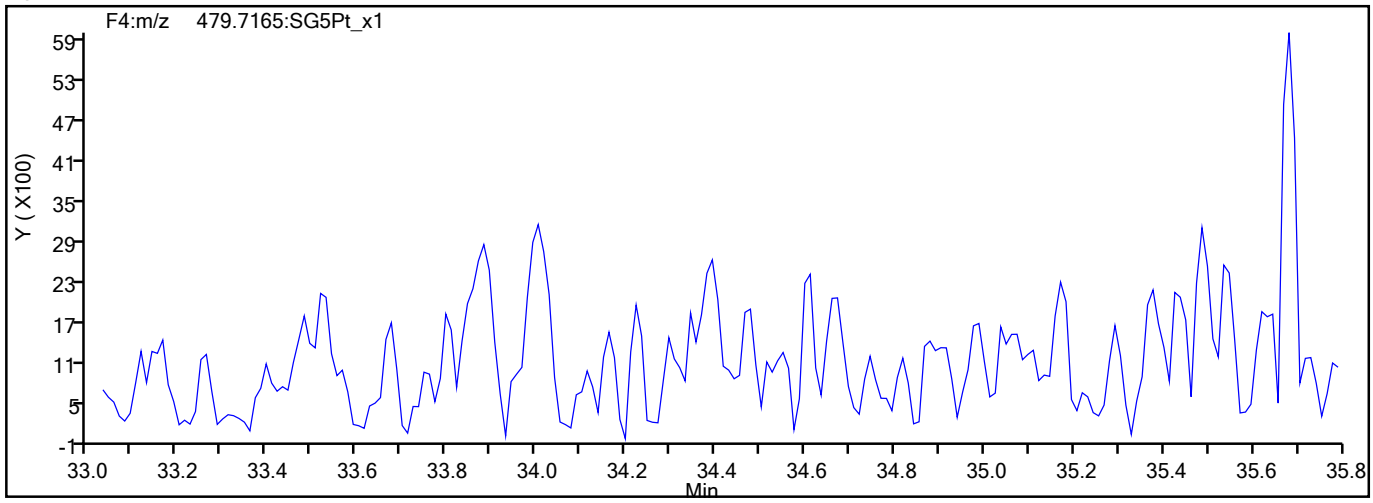

792101

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

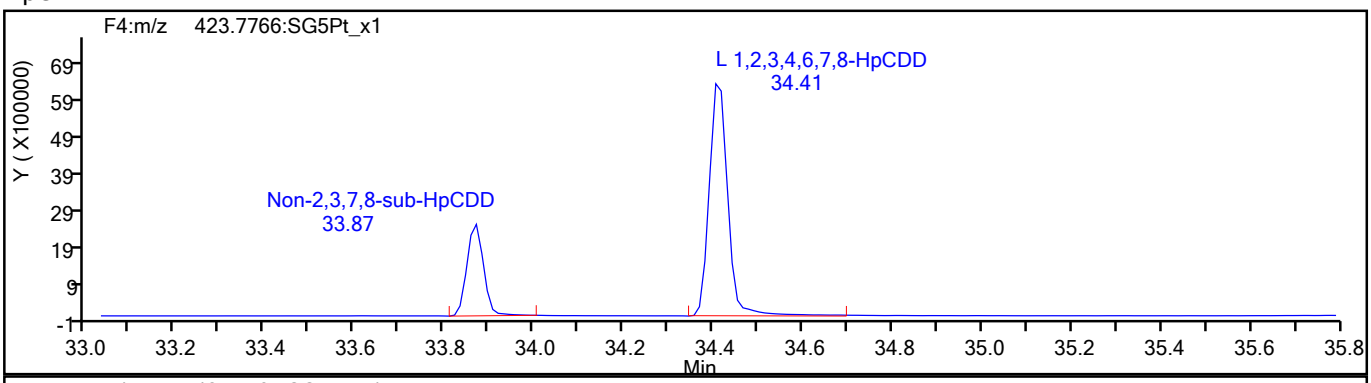

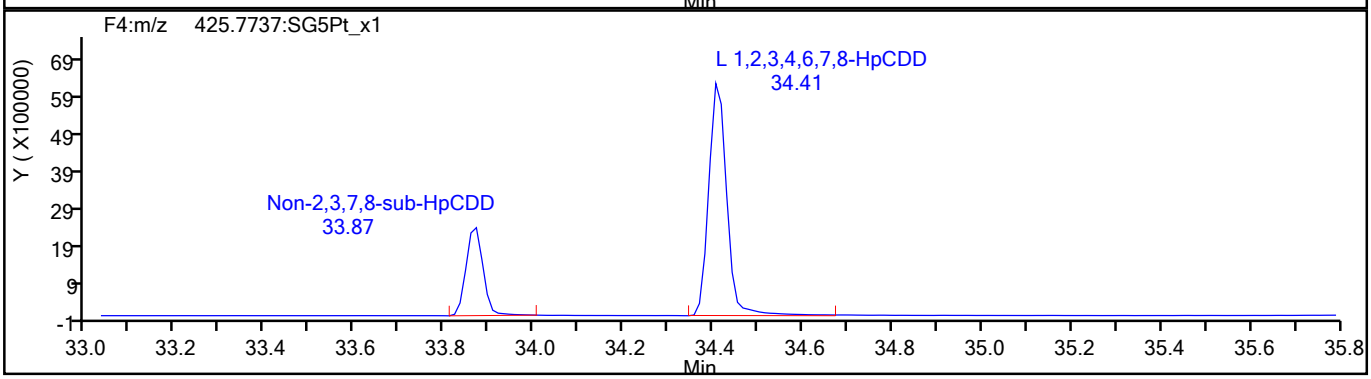

HpCDD Standards

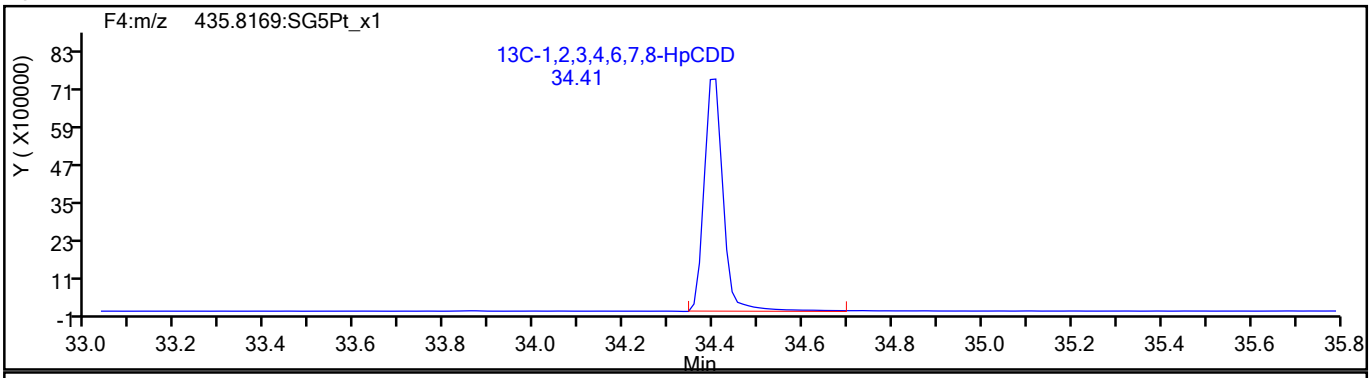

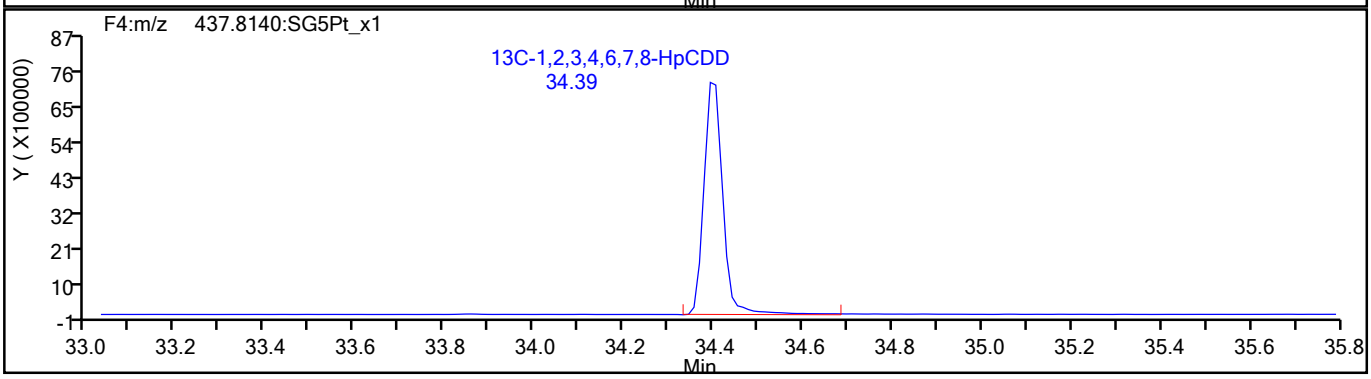

792102

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

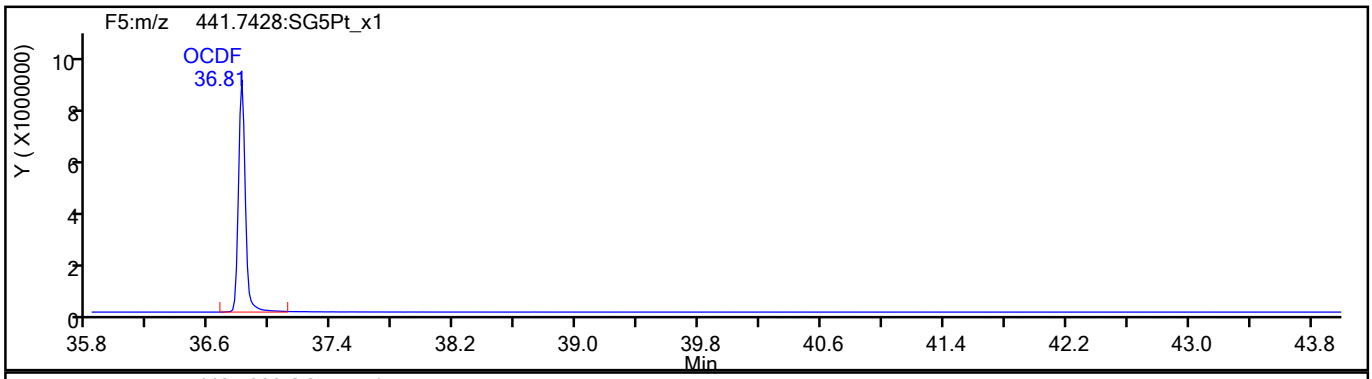

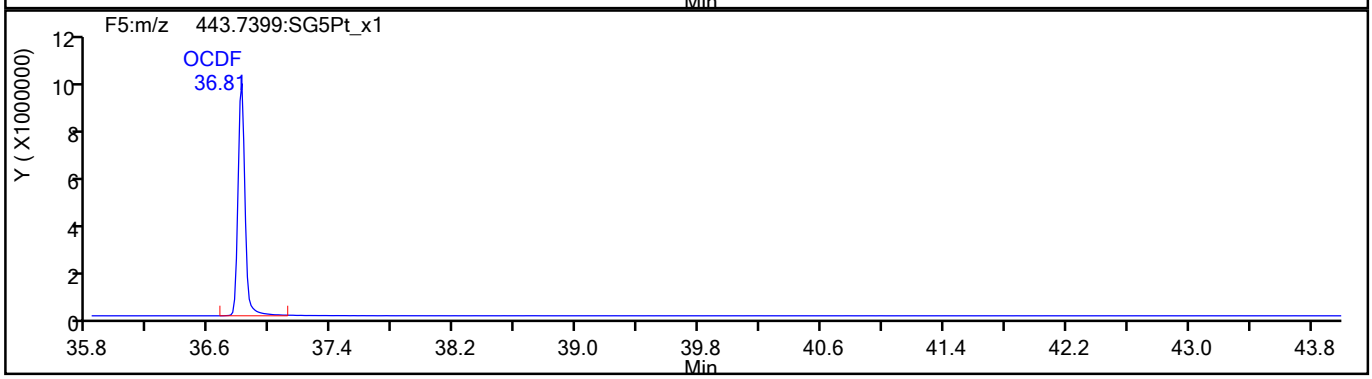

OCDF Standards

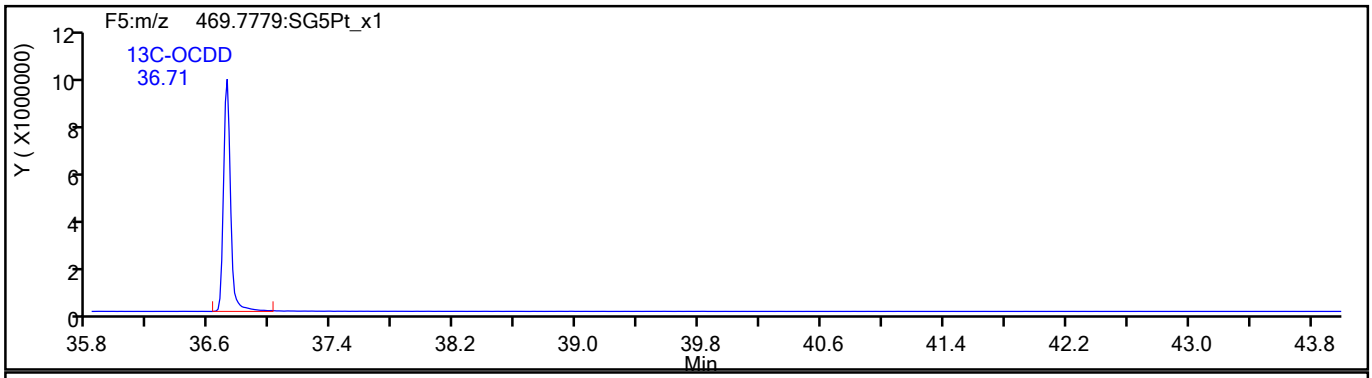

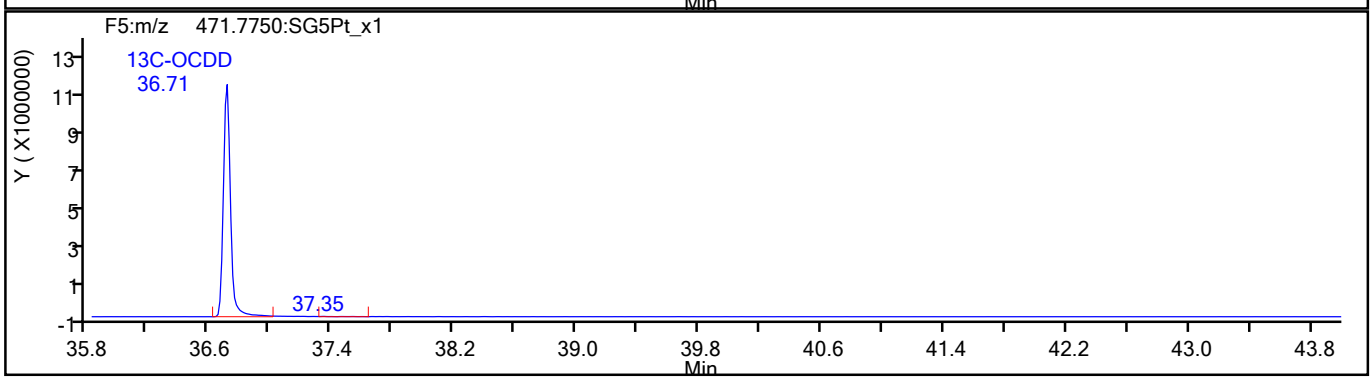

792103

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

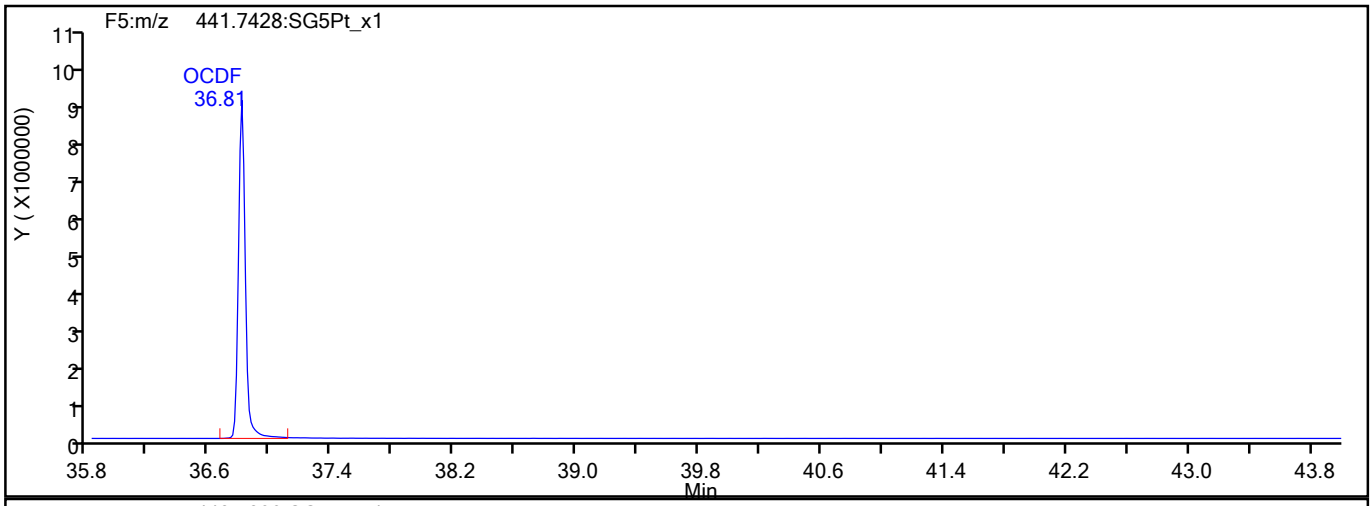

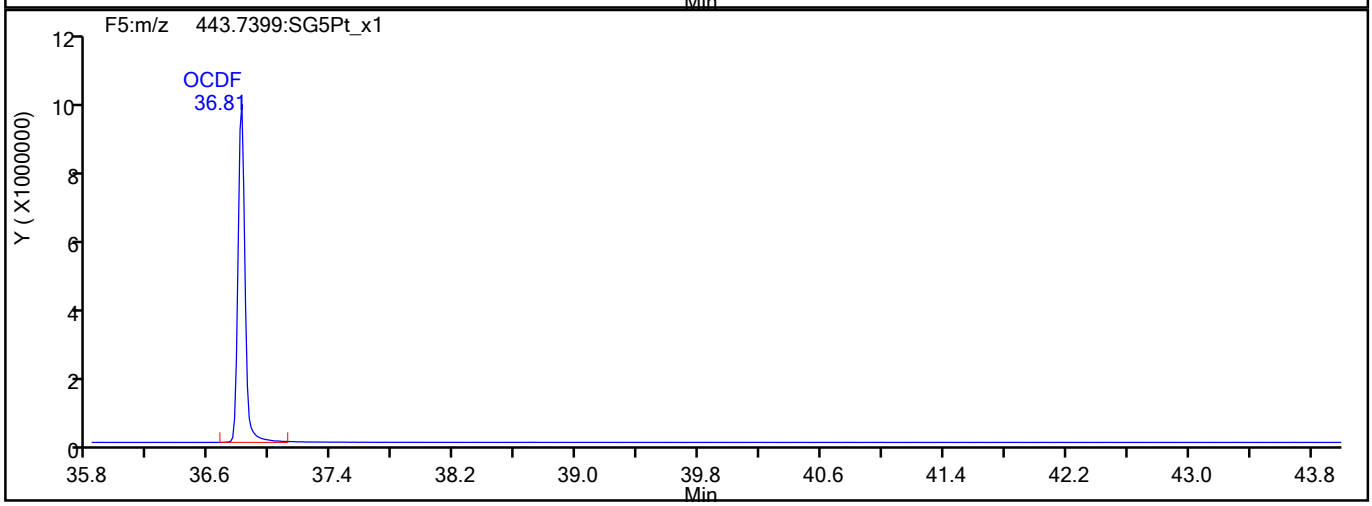

OCDF Interference Mass

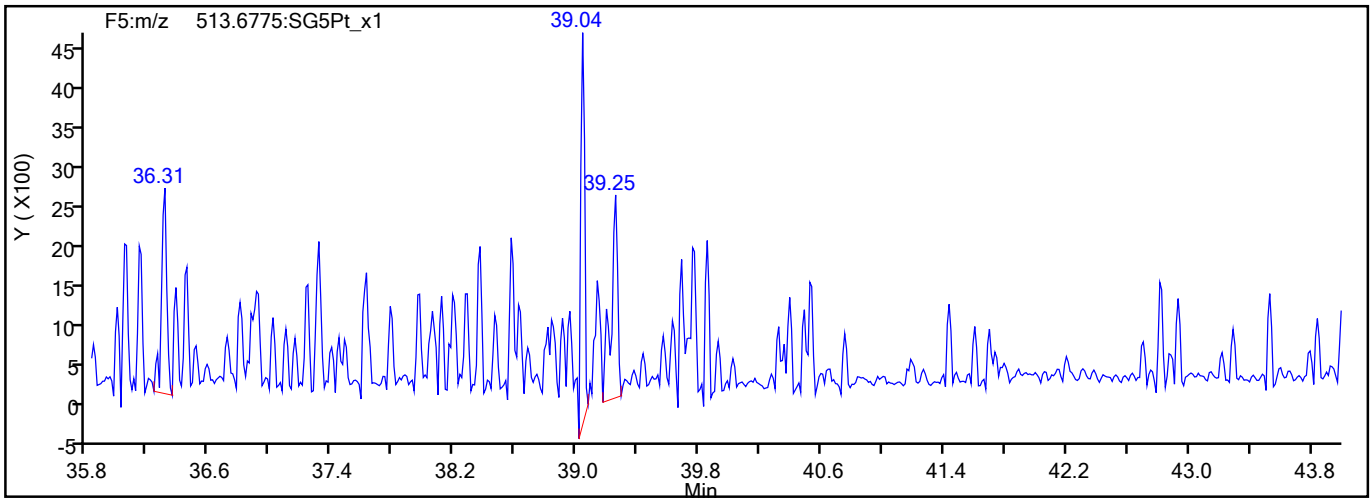

792104

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

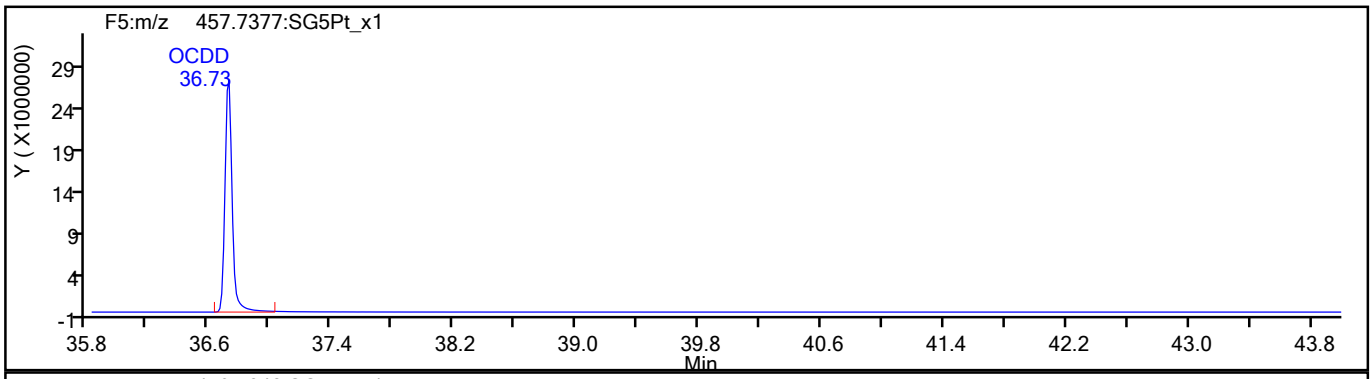

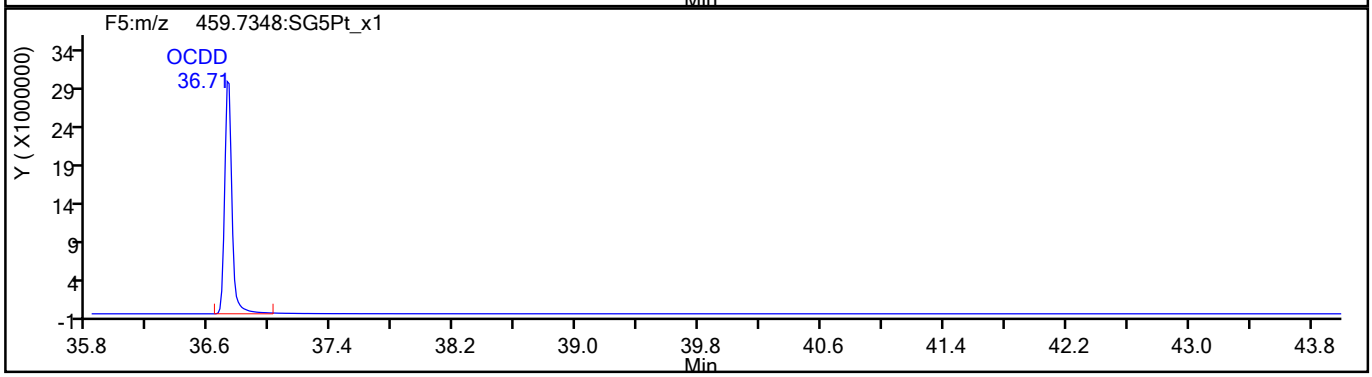

OCDD Standards

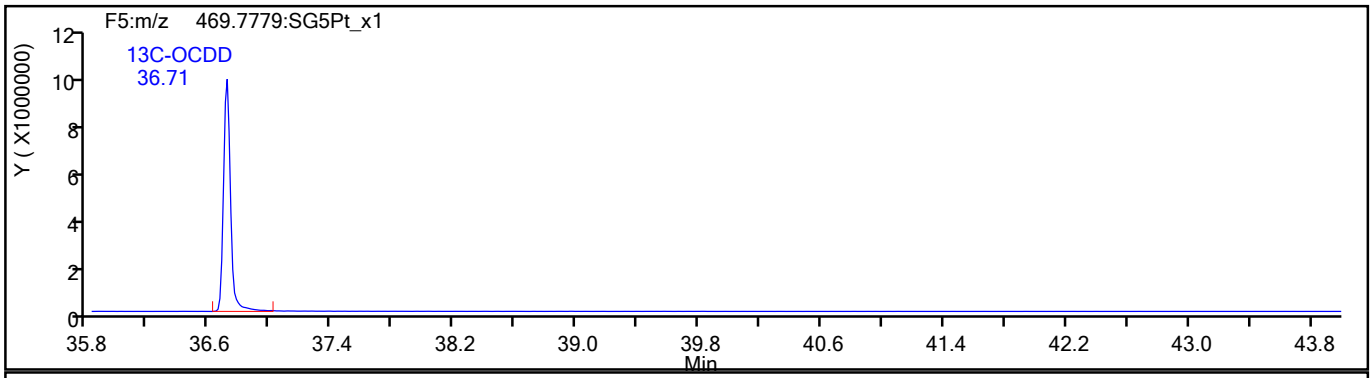

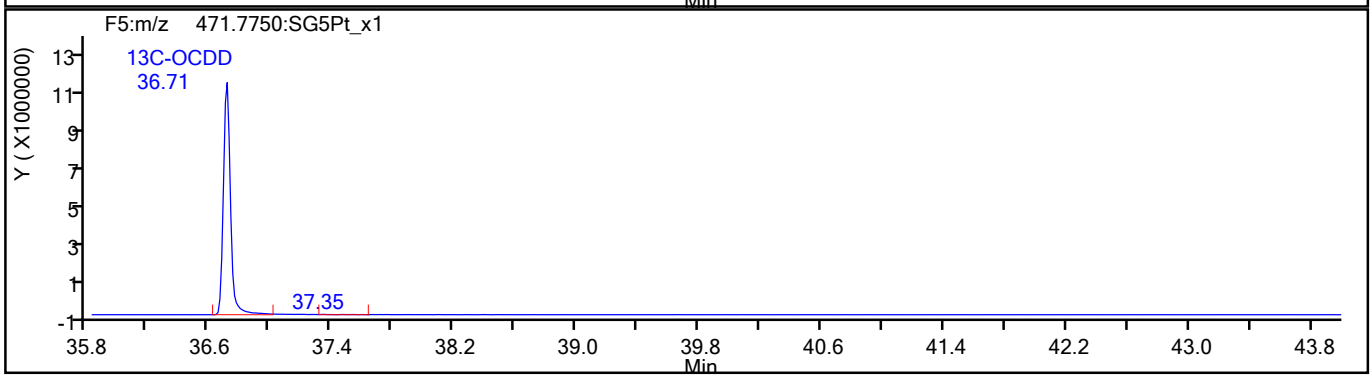

792105

Report Date: 27-Aug-2021 09:50:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

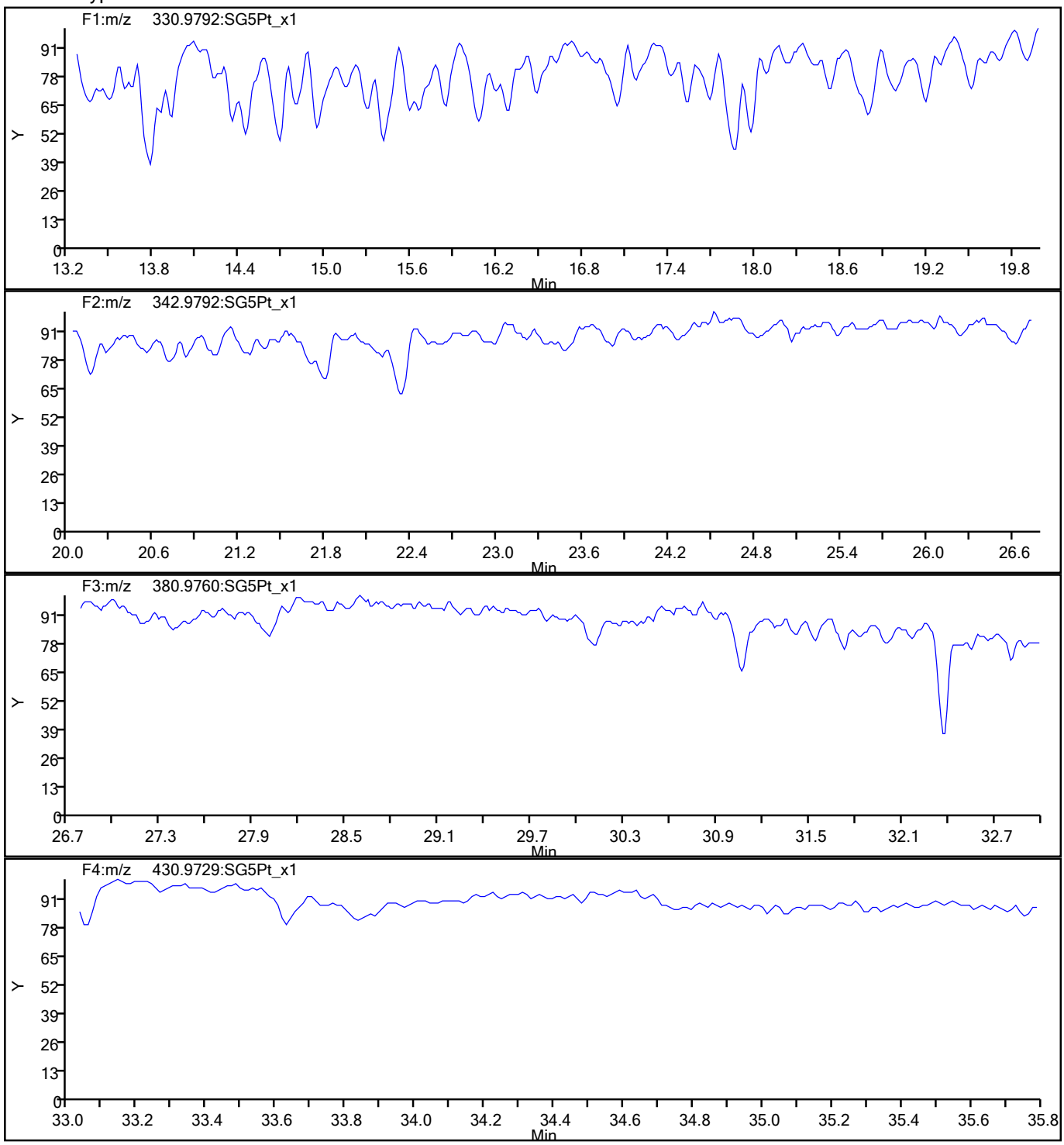

792106

Report Date: 27-Aug-2021 09:50:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

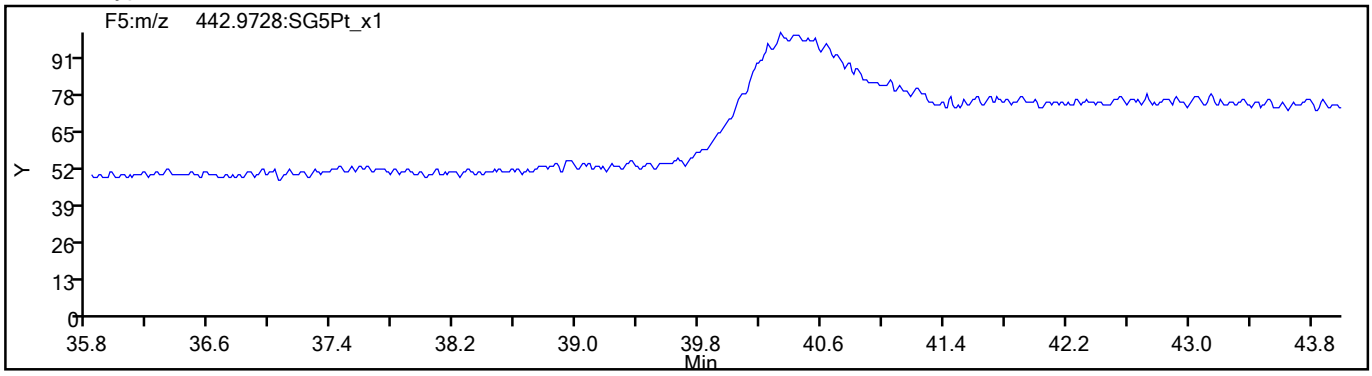

792107

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-1
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (2-4) MSD RA
Lab Sample ID: 320-77214-2 MSD RA
Matrix: Sediment
Lab File ID: 31AU2111D2_017.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:15
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.05(g)
Date Analyzed: 08/31/2021 23:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520997
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	5870		9.8	9.8

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	45		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	53		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MSD
Inject. Date: 31-Aug-2021 23:27:20 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:50:55

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.319	36437842	0.88	7.2E+05	100.0	100.0				M
D 13C-2,3,7,8-TCDF	17.649	21862093	0.66	1.3327	45.0	45.0	4.661	4.661	45.02	M
2,3,7,8-TCDF	17.677	489266495	0.79	0.9978	2242.9	2242.9	3.739	3.739	22429	E
D 13C-2,3,7,8-TCDD	16.085	15153205	0.80	0.8749	47.5	47.5	21.8	21.8	47.53	M
2,3,7,8-TCDD	16.099	120268237	0.79	1.0570	750.9	750.9	8.013	8.013	7509	E
$ 37Cl4-2,3,7,8-TCDD	16.099	6720433		0.8648	21.3	21.3	0.6450	0.6450	53.32	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MSD
Inject. Date: 31-Aug-2021 23:27:20 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:50:55

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.319	16.275	3		17101541	3320537	273530	683825	12		M
333.9339	16.319	16.275	3		19336301	3698320	261863	654657	14	0.88(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.649	17.605	3	1.082	8723927	1585035	76521	191302	21		M
317.9389	17.663	17.605	3	1.082	13138166	2251649	97868	244670	23	0.66(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.677	17.619	3	1.002	215698480	39220847	29786	74465	1317		
305.8987	17.677	17.619	3	1.002	273568015	48709743	27467	68667	1773	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											M
331.9368	16.085	16.055	2	0.986	6725589	1510386	273530	683825	6		M
333.9339	16.085	16.055	2	0.986	8427616	1799187	261863	654657	7	0.80(0.65-0.89)	M
2,3,7,8-TCDD											E
319.8965	16.099	16.069	2	1.001	52897754	12122378	64934	162335	187		
321.8936	16.099	16.069	2	1.001	67370483	15435729	47193	117982	327	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.099	16.069	2	0.987	6720433	1540535	15661	39152	98		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d				
Injection Date:	31-Aug-2021 23:27:20	Instrument ID:	11D2		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.65
Area: 10135570
Amount: 57.251088
Amount Units: pg/ul

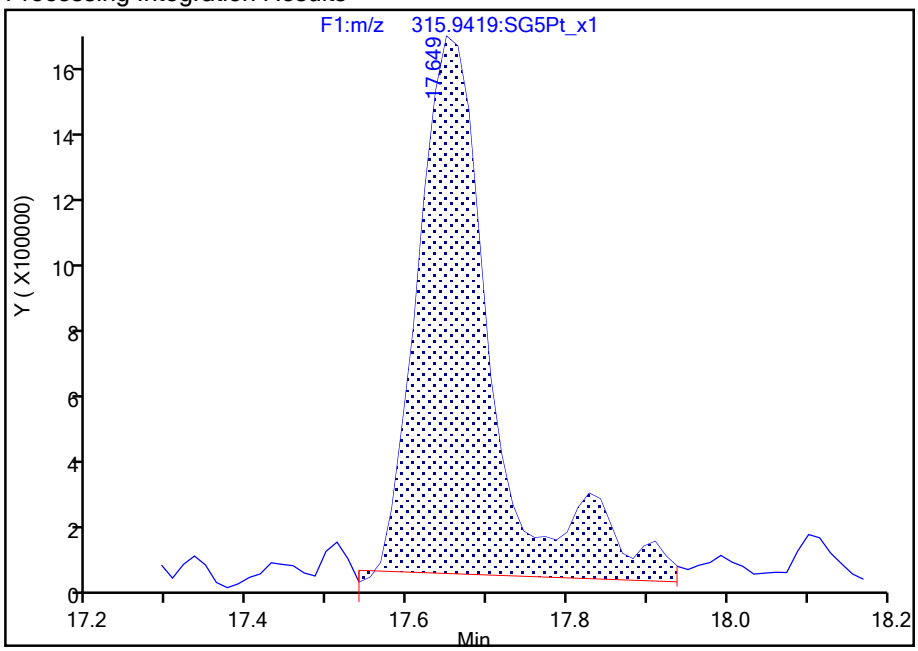

Manual Integration Results

RT: 17.65
Area: 8723927
Amount: 45.020597
Amount Units: pg/ul

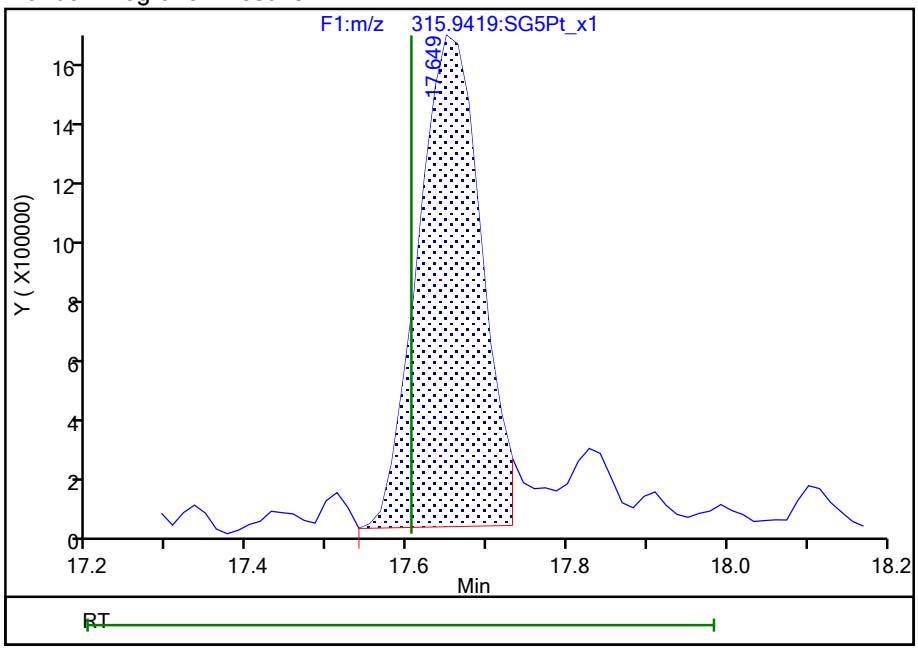

Reviewer: bennettd, 01-Sep-2021 09:50:39

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d				
Injection Date:	31-Aug-2021 23:27:20	Instrument ID:	11D2		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.66
Area: 17665674
Amount: 57.251088
Amount Units: pg/ul

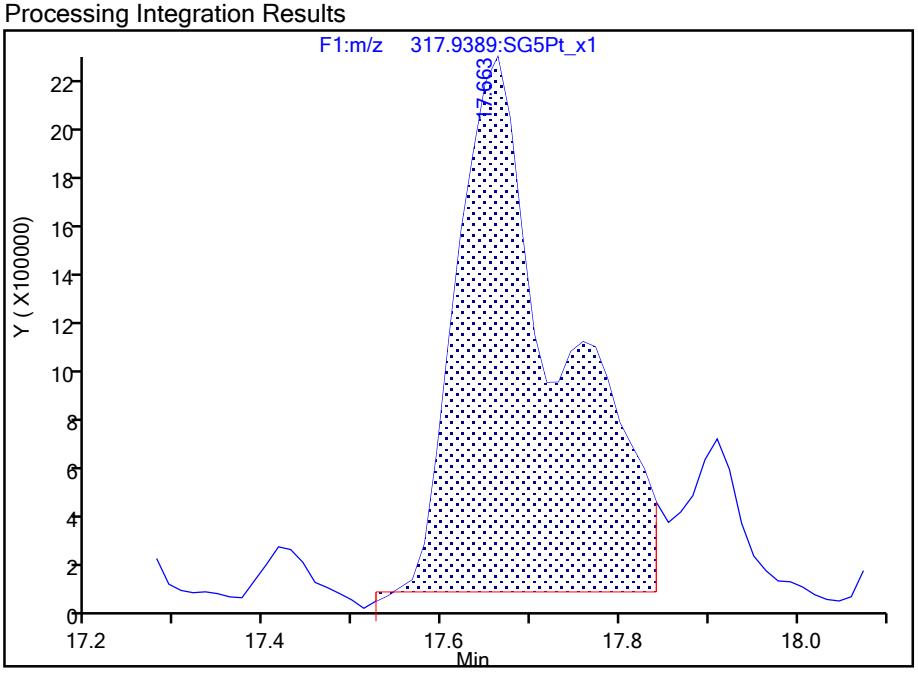

Manual Integration Results

RT: 17.66
Area: 13138166
Amount: 45.020597
Amount Units: pg/ul

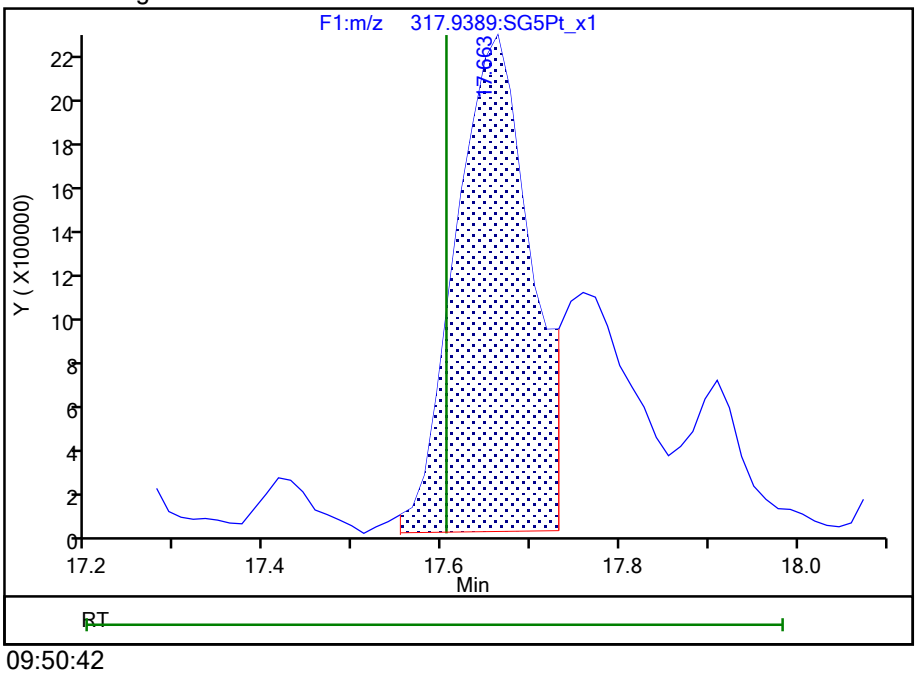

Reviewer: bennettd, 01-Sep-2021 09:50:42

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

792112

Report Date: 01-Sep-2021 09:57:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d		
Injection Date:	31-Aug-2021 23:27:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

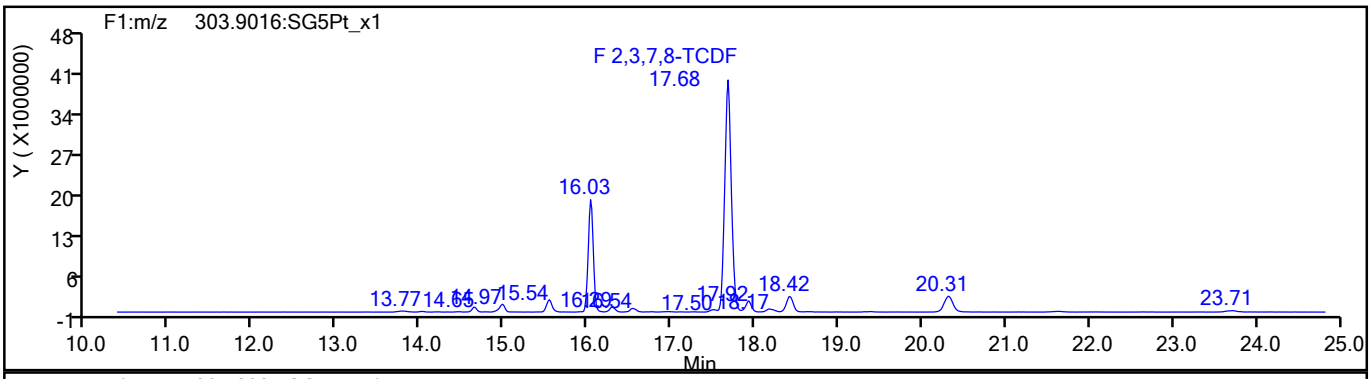

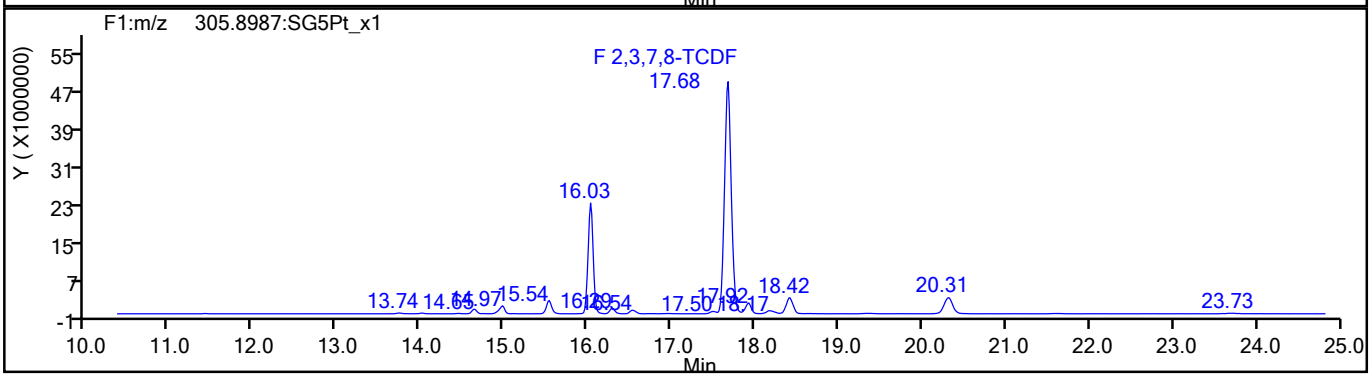

TCDF Standards

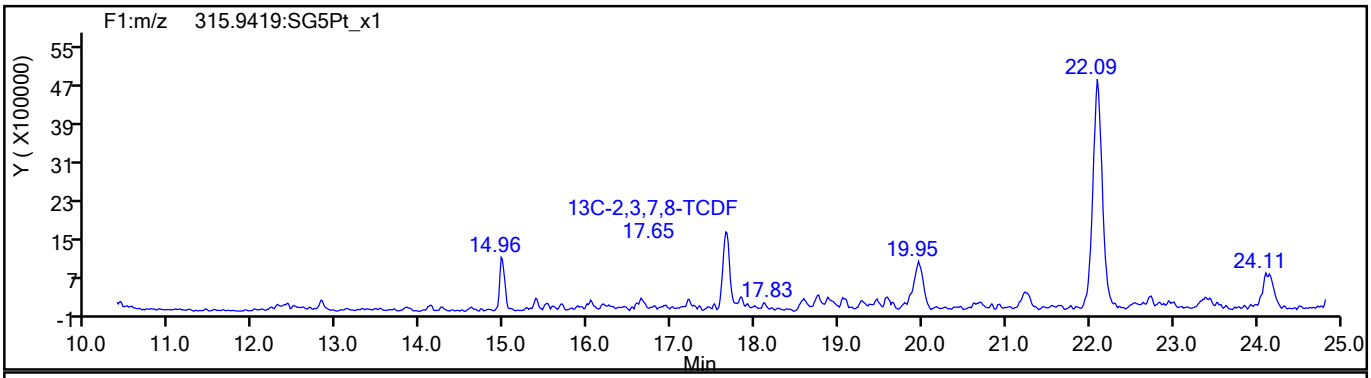

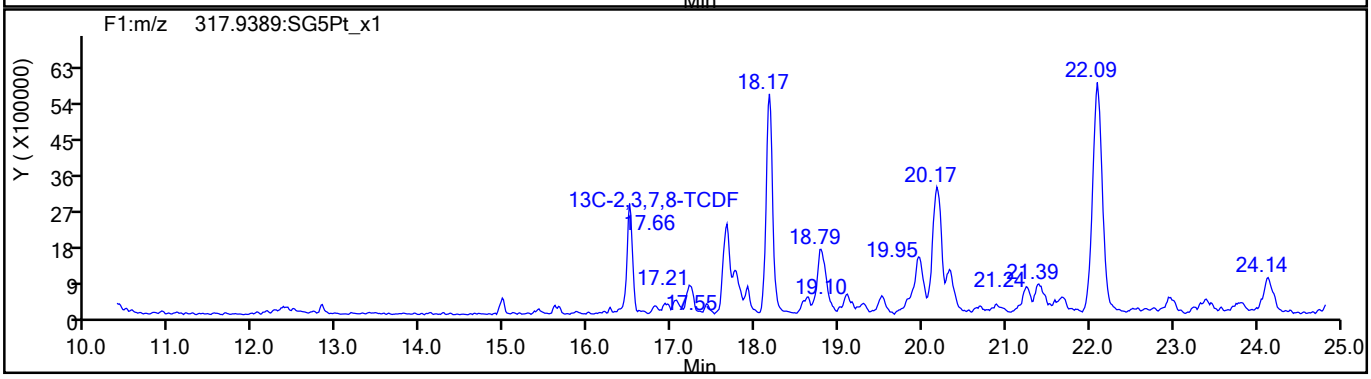

792113

Report Date: 01-Sep-2021 09:57:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d		
Injection Date:	31-Aug-2021 23:27:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

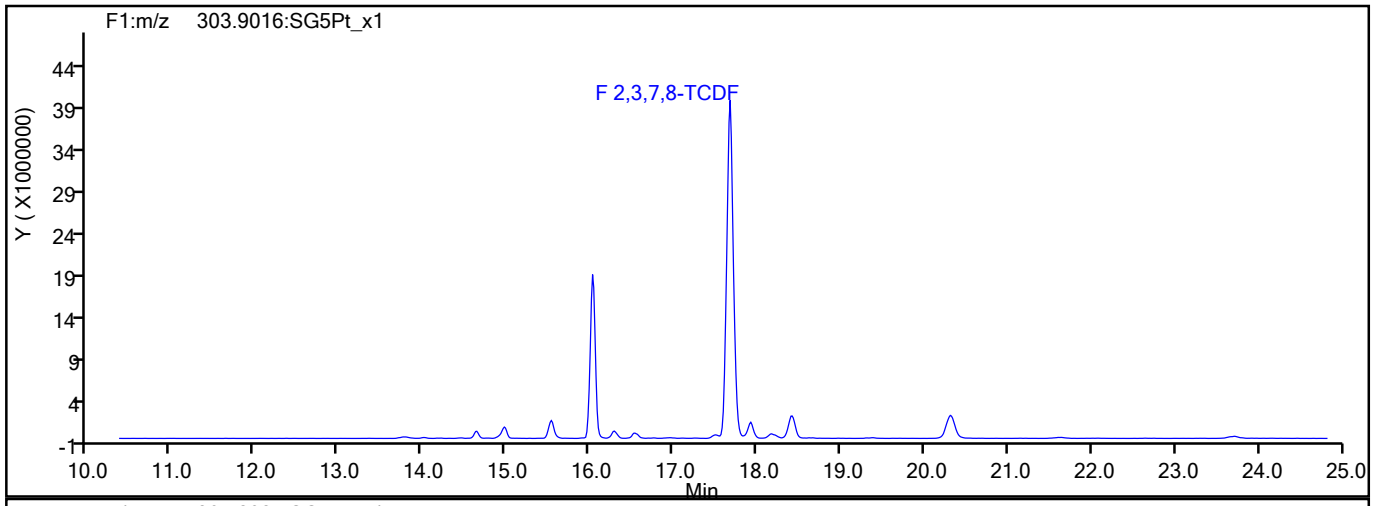

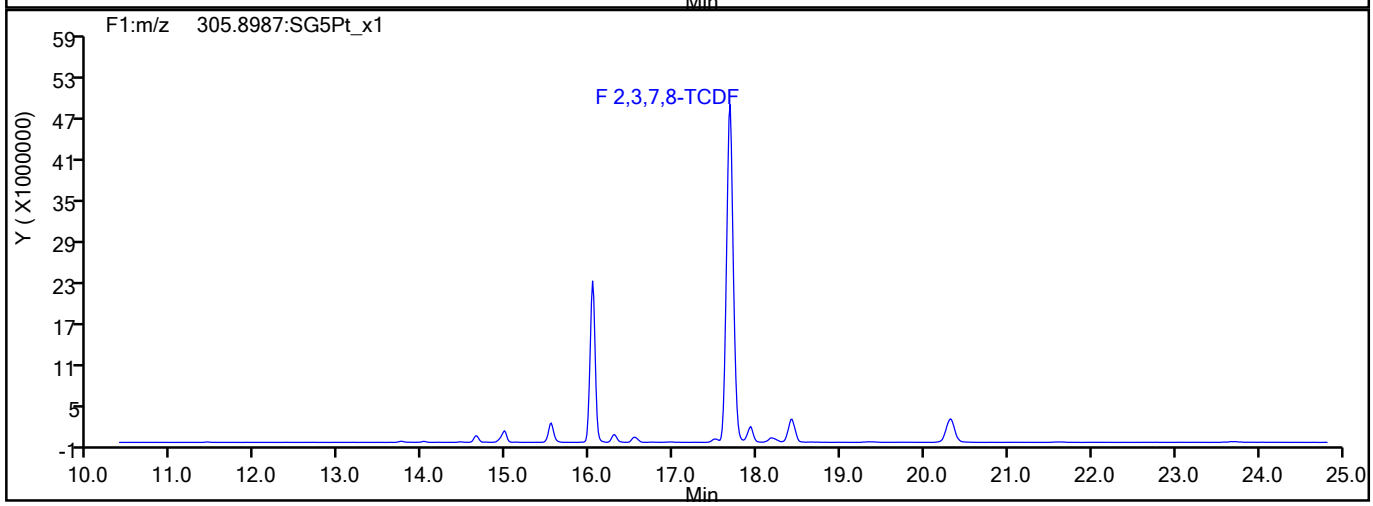

TCDF Interference Mass

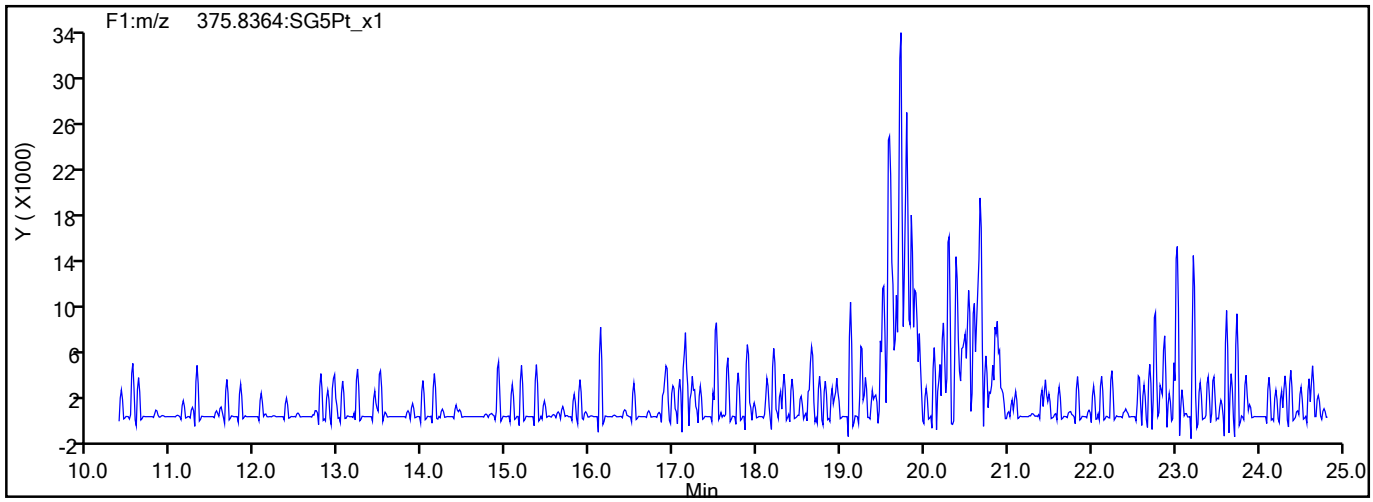

792114

Report Date: 01-Sep-2021 09:57:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d		
Injection Date:	31-Aug-2021 23:27:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

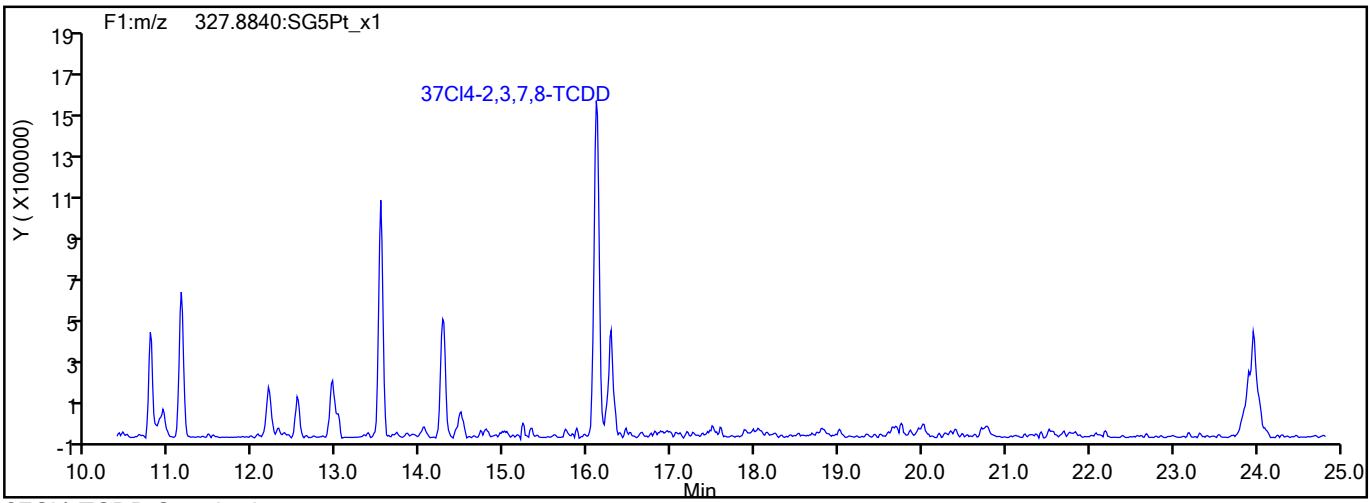

37Cl4-TCDD Standards

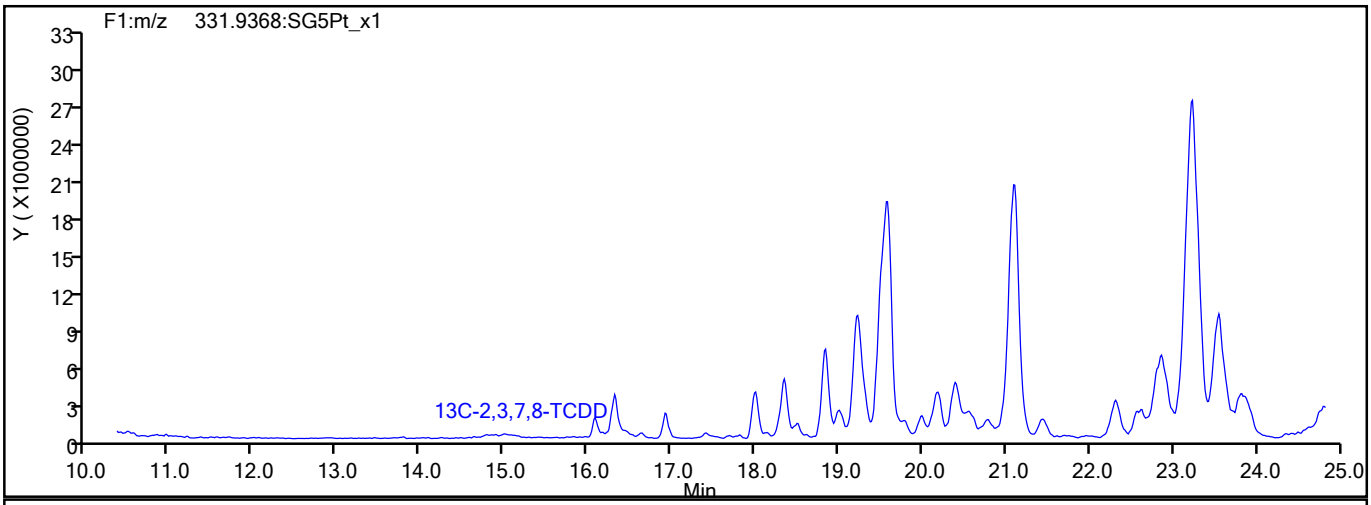

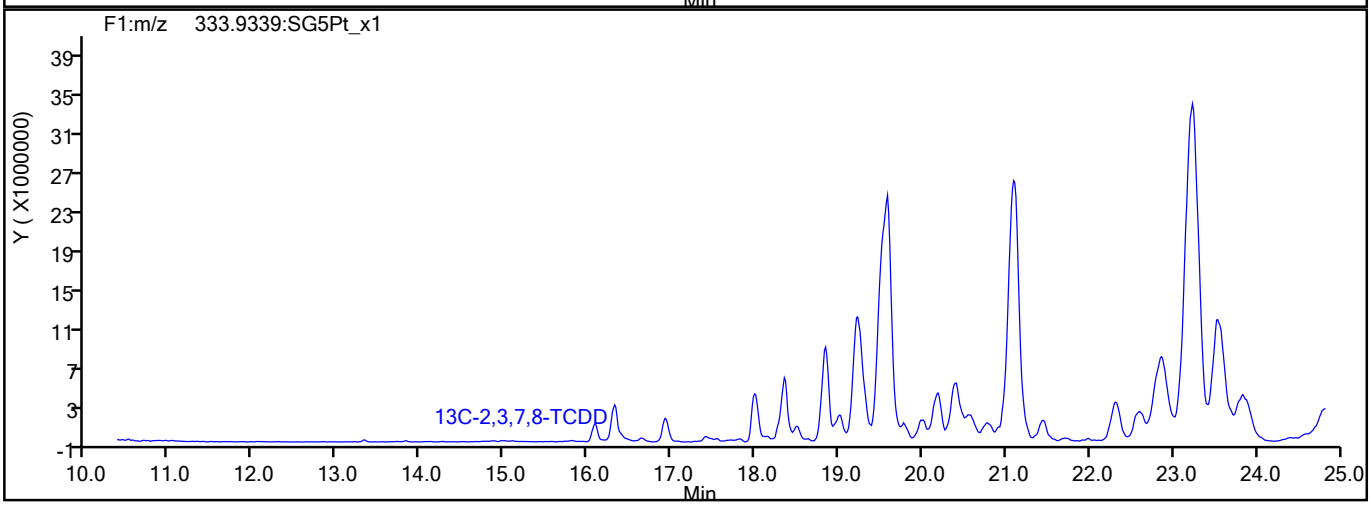

792115

Report Date: 01-Sep-2021 09:57:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d		
Injection Date:	31-Aug-2021 23:27:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

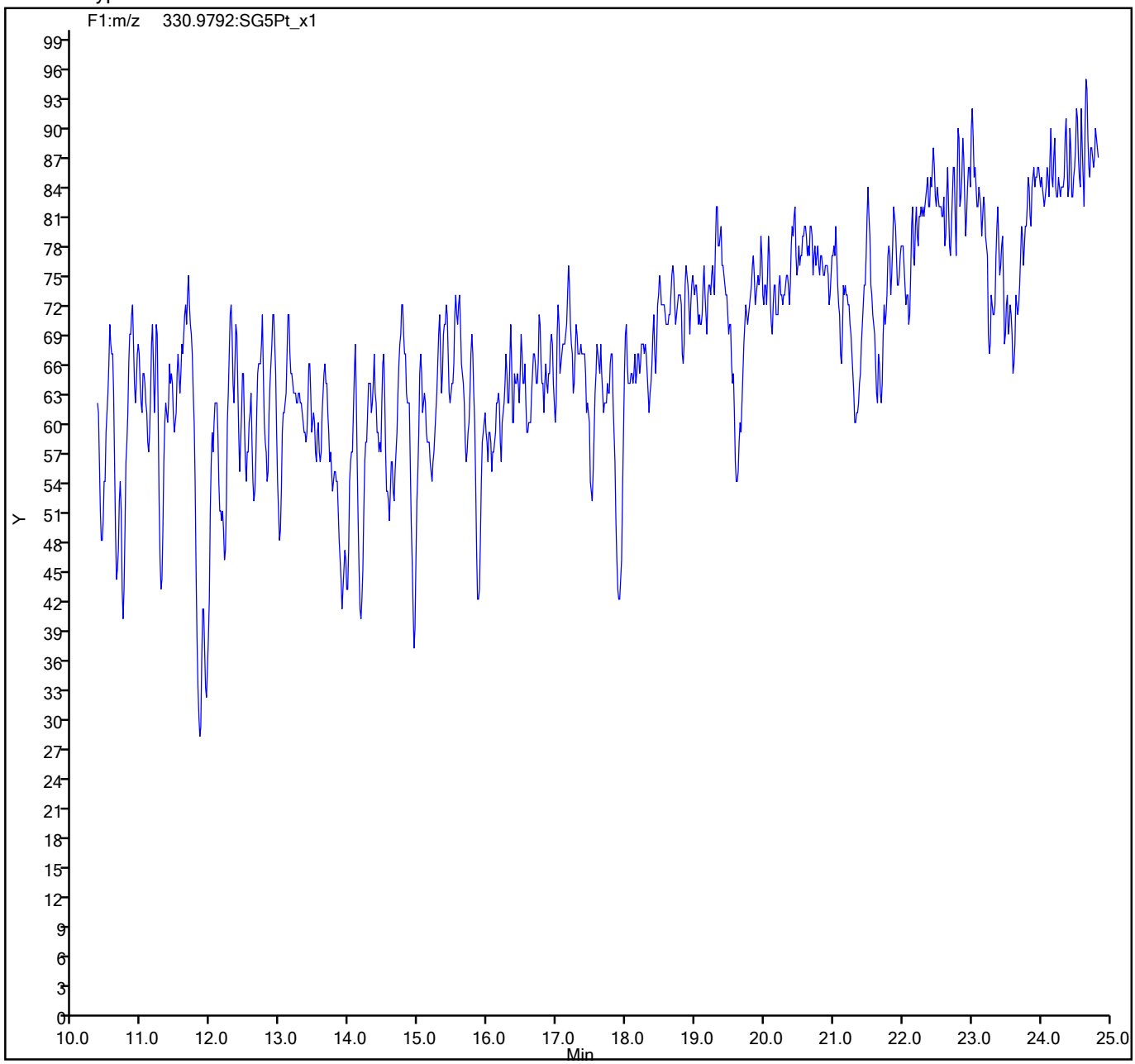

792116

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Instrument ID: 10D5 Start Date: 07/26/2021 09:21

Analysis Batch Number: 510264 End Date: 07/26/2021 15:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-510264/1		07/26/2021 09:21	1	26JL2110D5_1.d	DB-5 0.32(mm)
IC 320-510264/3		07/26/2021 10:51	1	26JL2110D5_3.d	DB-5 0.32(mm)
IC 320-510264/4		07/26/2021 11:36	1	26JL2110D5_4.d	DB-5 0.32(mm)
IC 320-510264/5		07/26/2021 12:21	1	26JL2110D5_5.d	DB-5 0.32(mm)
IC 320-510264/6		07/26/2021 13:06	1	26JL2110D5_6.d	DB-5 0.32(mm)
IC 320-510264/7		07/26/2021 13:51	1	26JL2110D5_7.d	DB-5 0.32(mm)
ICV 320-510264/9		07/26/2021 15:31	1	26JL2110D5_9.d	DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/25/2021 09:38

Analysis Batch Number: 519953 End Date: 08/25/2021 18:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-519953/1		08/25/2021 09:38	1	25AU2110D5_1.d	DB-5 0.32(mm)
CCV 320-519953/2		08/25/2021 10:23	1	25AU2110D5_2.d	DB-5 0.32(mm)
MB 320-515492/1-A		08/25/2021 11:20	1	25AU2110D5_3.d	DB-5 0.32(mm)
LCS 320-515492/2-A		08/25/2021 12:05	1	25AU2110D5_4.d	DB-5 0.32(mm)
320-77214-1	11215702-080221-BN-SJ SB090 (0-2)	08/25/2021 12:50	1	25AU2110D5_5.d	DB-5 0.32(mm)
320-77214-2	11215702-080221-BN-SJ SB090 (2-4)	08/25/2021 13:35	1	25AU2110D5_6.d	DB-5 0.32(mm)
320-77214-2 MS	11215702-080221-BN-SJ SB090 (2-4) MS	08/25/2021 14:20	1	25AU2110D5_7.d	DB-5 0.32(mm)
320-77214-2 MSD	11215702-080221-BN-SJ SB090 (2-4) MSD	08/25/2021 15:05	1	25AU2110D5_8.d	DB-5 0.32(mm)
320-77214-3	11215702-080221-BN-SJ SB090 (4-6)	08/25/2021 15:50	1	25AU2110D5_9.d	DB-5 0.32(mm)
320-77214-4	11215702-080221-BN-SJ SB090 (6-8)	08/25/2021 16:35	1	25AU2110D5_10.d	DB-5 0.32(mm)
320-77214-5	11215702-080221-BN-SJ SB090 (8-10)	08/25/2021 17:20	1	25AU2110D5_11.d	DB-5 0.32(mm)
320-77214-6	11215702-080221-BN-SJ SB090 (10-12)	08/25/2021 18:05	1	25AU2110D5_12.d	DB-5 0.32(mm)
320-77214-7	11215702-080221-BN-SJ SB090 (12-14)	08/25/2021 18:50	1	25AU2110D5_13.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/25/2021 20:40

Analysis Batch Number: 519955 End Date: 08/26/2021 05:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-519955/1		08/25/2021 20:40	1	25AU2110D5_15.d	DB-5 0.32(mm)
WDM 320-519955/2		08/25/2021 21:35	1	25AU2110D5_16.d	DB-5 0.32(mm)
320-77214-8	11215702-080221-BN-SJ SB090 (14-16)	08/25/2021 23:05	1	25AU2110D5_18.d	DB-5 0.32(mm)
ZZZZZ		08/25/2021 23:50	1		DB-5 0.32(mm)
320-77214-13	11215702-080221-BN-DU P-11	08/26/2021 00:35	1	25AU2110D5_20.d	DB-5 0.32(mm)
ZZZZZ		08/26/2021 01:20	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 02:05	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 02:50	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 03:35	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 04:20	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 05:05	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 05:50	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/26/2021 18:40

Analysis Batch Number: 520325 End Date: 08/27/2021 00:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-520325/1		08/26/2021 18:40	1	25AU2110D5_43.d	DB-5 0.32(mm)
CCV 320-520325/2		08/26/2021 19:36	1	25AU2110D5_44.d	DB-5 0.32(mm)
ZZZZZ		08/26/2021 20:21	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 21:06	10		DB-5 0.32(mm)
320-77214-1 DL	11215702-080221-BN-SJ SB090 (0-2) DL	08/26/2021 21:51	10	25AU2110D5_47.d	DB-5 0.32(mm)
ZZZZZ		08/27/2021 00:51	20		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/27/2021 15:38

Analysis Batch Number: 520456 End Date: 08/28/2021 02:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-520456/1		08/27/2021 15:38	1	27AU21A11D2_001.d	DB-225 0.32(mm)
CCV 320-520456/2		08/27/2021 16:16	1	27AU21A11D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/27/2021 17:33	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 18:11	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 18:50	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 19:28	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 20:06	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 20:45	1		DB-225 0.32(mm)
320-77214-13 RA	11215702-080221-BN-DUP-11 RA	08/27/2021 21:23	1	27AU21A11D2_010.d	DB-225 0.32(mm)
320-77214-6 RA	11215702-080221-BN-SJSB090 (10-12) RA	08/27/2021 22:01	1	27AU21A11D2_011.d	DB-225 0.32(mm)
320-77214-8 RA	11215702-080221-BN-SJSB090 (14-16) RA	08/27/2021 22:40	1	27AU21A11D2_012.d	DB-225 0.32(mm)
320-77214-4 RA	11215702-080221-BN-SJSB090 (6-8) RA	08/27/2021 23:18	1	27AU21A11D2_013.d	DB-225 0.32(mm)
320-77214-7 RA	11215702-080221-BN-SJSB090 (12-14) RA	08/27/2021 23:56	1	27AU21A11D2_014.d	DB-225 0.32(mm)
320-77214-5 RA	11215702-080221-BN-SJSB090 (8-10) RA	08/28/2021 00:35	1	27AU21A11D2_015.d	DB-225 0.32(mm)
320-77214-3 RA	11215702-080221-BN-SJSB090 (4-6) RA	08/28/2021 01:13	1	27AU21A11D2_016.d	DB-225 0.32(mm)
ZZZZZ		08/28/2021 01:52	1		DB-225 0.32(mm)
ZZZZZ		08/28/2021 02:30	1		DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/31/2021 13:13

Analysis Batch Number: 520997 End Date: 09/01/2021 00:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-520997/1		08/31/2021 13:13	1	31AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-520997/2		08/31/2021 13:51	1	31AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/31/2021 15:08	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 15:46	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 16:25	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 17:03	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 17:41	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 18:20	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 18:58	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 19:37	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 20:15	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 20:53	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 21:32	1		DB-225 0.32(mm)
320-77214-2 RA	11215702-080221-BN-SJ SB090 (2-4) RA	08/31/2021 22:10	1	31AU2111D2_015.d	DB-225 0.32(mm)
320-77214-2 MS RA	11215702-080221-BN-SJ SB090 (2-4) MS RA	08/31/2021 22:48	1	31AU2111D2_016.d	DB-225 0.32(mm)
320-77214-2 MSD RA	11215702-080221-BN-SJ SB090 (2-4) MSD RA	08/31/2021 23:27	1	31AU2111D2_017.d	DB-225 0.32(mm)
ZZZZZ		09/01/2021 00:05	10		DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Instrument ID: 11D2 Start Date: 09/01/2021 09:30

Analysis Batch Number: 521760 End Date: 09/01/2021 14:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-521760/1		09/01/2021 09:30	1	01SE2111D2_001.d	DB-225 0.32(mm)
CCV 320-521760/2		09/01/2021 10:08	1	01SE2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		09/01/2021 11:25	1		DB-225 0.32(mm)
ZZZZZ		09/01/2021 12:03	1		DB-225 0.32(mm)
ZZZZZ		09/01/2021 12:42	1		DB-225 0.32(mm)
ZZZZZ		09/01/2021 13:20	1		DB-225 0.32(mm)
ZZZZZ		09/01/2021 13:58	1		DB-225 0.32(mm)
320-77214-1 RADL	11215702-080221-BN-SJ SB090 (0-2) RADL	09/01/2021 14:37	10	01SE2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77214-1

SDG No.:

Batch Number: 515492 Batch Start Date: 08/12/21 05:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/24/21 07:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-515492/1		HRMS-Sox, 1613B		10 g	20.0 uL	G-1	78	1	1 mL
LCS 320-515492/2		HRMS-Sox, 1613B		10 g	20.0 uL	G-2	138	3	1 mL
320-77214-A-1	11215702-080221-BN-SJSB090 (0-2)	HRMS-Sox, 1613B	T	10.38 g	20.0 uL	G-3	139	1	1 mL
320-77214-A-2	11215702-080221-BN-SJSB090 (2-4)	HRMS-Sox, 1613B	T	10.27 g	20.0 uL	G-4	93	3	1 mL
320-77214-A-2 MS	11215702-080221-BN-SJSB090 (2-4)	HRMS-Sox, 1613B	T	9.69 g	20.0 uL	G-5	143	1	1 mL
320-77214-A-2 MSD	11215702-080221-BN-SJSB090 (2-4)	HRMS-Sox, 1613B	T	10.05 g	20.0 uL	G-6	144	3	1 mL
320-77214-A-3	11215702-080221-BN-SJSB090 (4-6)	HRMS-Sox, 1613B	T	10.12 g	20.0 uL	H-1	131	1	1 mL
320-77214-A-4	11215702-080221-BN-SJSB090 (6-8)	HRMS-Sox, 1613B	T	10.11 g	20.0 uL	H-2	108	3	1 mL
320-77214-A-5	11215702-080221-BN-SJSB090 (8-10)	HRMS-Sox, 1613B	T	10.15 g	20.0 uL	H-3	141	1	1 mL
320-77214-A-6	11215702-080221-BN-SJSB090 (10-12)	HRMS-Sox, 1613B	T	9.94 g	20.0 uL	H-4	142	3	1 mL
320-77214-A-7	11215702-080221-BN-SJSB090 (12-14)	HRMS-Sox, 1613B	T	10.05 g	20.0 uL	H-5	140	1	1 mL
320-77214-A-8	11215702-080221-BN-SJSB090 (14-16)	HRMS-Sox, 1613B	T	10.43 g	20.0 uL	H-6	132	3	1 mL
320-77214-A-13	11215702-080221-BN-DUP-11	HRMS-Sox, 1613B	T	10.10 g	20.0 uL	I-2	129	3	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-515492/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-515492/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-77214-A-1	11215702-080221-BN-SJSB090 (0-2)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77214-A-2	11215702-080221-BN-SJSB090 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77214-A-2 MS	11215702-080221-BN-SJSB090 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77214-1

SDG No.:

Batch Number: 515492 Batch Start Date: 08/12/21 05:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/24/21 07:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
320-77214-A-2 MSD	11215702-080221-BN-SJSB090 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-77214-A-3	11215702-080221-BN-SJSB090 (4-6)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77214-A-4	11215702-080221-BN-SJSB090 (6-8)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77214-A-5	11215702-080221-BN-SJSB090 (8-10)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77214-A-6	11215702-080221-BN-SJSB090 (10-12)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77214-A-7	11215702-080221-BN-SJSB090 (12-14)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77214-A-8	11215702-080221-BN-SJSB090 (14-16)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77214-A-13	11215702-080221-BN-DUP-11	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77214-1

SDG No.:

Batch Number: 515492 Batch Start Date: 08/12/21 05:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/24/21 07:00

Batch Notes	
20% DCM:Hexane ID	DH28_00194 mL
65% DCM:Hexane ID	DH6535_00548
Acid Silica Gel ID	SA5644_00735
Acid Alumina ID	Acid_Alumina_00019
Balance ID	QA-074
Hexane ID	Hexane_00290/289
IFB Clean Up	SKV 8/23/21
Na2SO4 ID	SodiumSulfate_00166
Analyst ID - IDA Reagent Drop	FC 8/12/21 HD05018 HRDXNIDA_00479 B-4/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	TGL 8/12/21
Analyst ID - IS Reagent Drop	TGL 08/24/21 DB15270 HRDXNSU_00137 B 1/4 20.0 uL
Analyst ID - IS Reagent Drop Witness	FC 08/24/21
Analyst ID - SU Reagent Drop	FC 8/19/21 HD05018 HRDXNSU_00255 B-5/5 1.0 mL
Analyst ID - SU Reagent Drop Witness	TGL 8/19/21
Analyst ID - TA Reagent Drop	FC 8/12/21 DB15270 HRDXNTA_00137 B-5/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	TGL 8/12/21
Silica Gel ID	SilicaGel_00375
Soxhlet/Soxtherm End	8/12/21 9:45
Soxhlet/Soxtherm Start	8/12/21 6:45
Storage Box ID	DXN -270
Toluene ID	Toluene_00112

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

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Sacramento
Dilution Report Form – HRMS Tests

Use this form for documenting dilutions. All dilutions are based on removing sample from the original extract, unless otherwise noted. The final volume for the dilutions listed is the sum of the solvent and the sample.

Attach the completed form to the original bench sheet, for archive with the lot data.

Table 1: How Dilutions Are Made

Dilution required	**Amount of Solvent (µL)** DXN Methods: 8290, 1613B, TO-9, EPA 23, EPA 0023A; Solvent (tetradecane C_{14}) PCB Methods: 1668A, 1668C; Solvent (dodecane C_{12})	Amount of sample (µl) to be added to solvent
2X	5.0	5.0
5X	8.0	2.0
10X	18.0	2.0
20X	38.0	2.0
25X	48.0	2.0
30X	58.0	2.0
40X	78.0	2.0
50X	98.0	2.0
100X	198.0	2.0

Sample Dilutions Made

Job Number	Sample ID	Dilution Made	Reagent (Solvent)/ IS ID*	Pipette/ Syringe ID	Analyst	Date
320-77214	A-1-A	10X	TETRADECANE_00015	10µl NA	DB	8/26/21
320-76887	A-1-A	10X	↓	10µl NA	DB	8/26/21
400-206690	C-16-A	20X	↓	10µl NA	DB	8/26/21
			DB 8/26/21			

Log solvents into TALS, use TALS Reagent ID here; if adding IS, also input TALS Reagent ID for IS.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-77214-1

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-080221-BN-SJSB090 (0-2)	320-77214-1
11215702-080221-BN-SJSB090 (2-4)	320-77214-2
11215702-080221-BN-SJSB090 (4-6)	320-77214-3
11215702-080221-BN-SJSB090 (6-8)	320-77214-4
11215702-080221-BN-SJSB090 (8-10)	320-77214-5
11215702-080221-BN-SJSB090 (10-12)	320-77214-6
11215702-080221-BN-SJSB090 (12-14)	320-77214-7
11215702-080221-BN-SJSB090 (14-16)	320-77214-8
11215702-080221-BN-DUP-11	320-77214-13

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-77214-1

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-77214-1

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 08/06/2021 14:43 End Date: 08/06/2021 14:43

Lab Sample Id	D/F	Type	Time	Analytes																							
				% Sol	Moist																						
ZZZZZZ			14:43																								
320-77194-B-1 DU	1	T	14:43	X	X																						
ZZZZZZ			14:43																								
ZZZZZZ			14:43																								
320-77214-1	1	T	14:43	X	X																						
320-77214-2	1	T	14:43	X	X																						
320-77214-3	1	T	14:43	X	X																						
320-77214-4	1	T	14:43	X	X																						
320-77214-5	1	T	14:43	X	X																						
320-77214-6	1	T	14:43	X	X																						
320-77214-7	1	T	14:43	X	X																						
320-77214-8	1	T	14:43	X	X																						
ZZZZZZ			14:43																								
320-77214-13	1	T	14:43	X	X																						

Prep Types:
T = Total/NA

FORM XIII-IN

792133

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77214-1

SDG No.:

Batch Number: 513947 Batch Start Date: 08/06/21 14:43 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/09/21 09:09

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-77194-B-1 DU		D 2216	T	2	1.01 g	7.33 g	6.28 g	16.6139240506329 %	83.3860759493671 %
320-77214-A-1	11215702-080221-BN-SJSB090 (0-2)	D 2216	T	5	2.02 g	7.72 g	4.85 g	50.3508771929825 %	49.6491228070175 %
320-77214-A-2	11215702-080221-BN-SJSB090 (2-4)	D 2216	T	6	1.01 g	8.15 g	6.44 g	23.9495798319328 %	76.0504201680672 %
320-77214-A-3	11215702-080221-BN-SJSB090 (4-6)	D 2216	T	7	1.00 g	8.38 g	6.18 g	29.810298102981 %	70.189701897019 %
320-77214-A-4	11215702-080221-BN-SJSB090 (6-8)	D 2216	T	8	1.01 g	12.69 g	9.08 g	30.9075342465753 %	69.0924657534247 %
320-77214-A-5	11215702-080221-BN-SJSB090 (8-10)	D 2216	T	9	1.00 g	8.35 g	6.70 g	22.4489795918367 %	77.5510204081633 %
320-77214-A-6	11215702-080221-BN-SJSB090 (10-12)	D 2216	T	10	1.00 g	7.98 g	5.39 g	37.1060171919771 %	62.8939828080229 %
320-77214-A-7	11215702-080221-BN-SJSB090 (12-14)	D 2216	T	11	1.00 g	9.30 g	7.10 g	26.5060240963855 %	73.4939759036145 %
320-77214-A-8	11215702-080221-BN-SJSB090 (14-16)	D 2216	T	12	1.01 g	8.33 g	6.01 g	31.6939890710383 %	68.3060109289617 %
320-77214-A-13	11215702-080221-BN-DUP-11	D 2216	T	14	1.02 g	6.85 g	5.52 g	22.8130360205832 %	77.1869639794168 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	08/09/2021 08:29
Date and Time Samples out of Desiccator	08/09/2021 09:09
Date samples were placed in the oven	08/06/2021
Oven Temp In	115 Degrees C
Time samples were place in the oven	14:43
Date samples were removed from oven	08/09/2021
Oven Temp Out	115 Degrees C
Time Samples were removed from oven	08:29
Oven ID	Soil Prep #2
Thermometer ID	151969607

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77214-1

SDG No.:

Batch Number: 513947 Batch Start Date: 08/06/21 14:43 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/09/21 09:09

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-77214-1

Batch: 513947
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-77194-B-1 DU

Analysis Date: Aug 06, 2021 14:43

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	16.6139240506329	%
Percent Solids	None	1	83.3860759493671	%

Lab Sample ID: 320-77214-A-1

Analysis Date: Aug 06, 2021 14:43

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	50.3508771929825	%
Percent Solids	None	1	49.6491228070175	%

Lab Sample ID: 320-77214-A-2

Analysis Date: Aug 06, 2021 14:43

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	23.9495798319328	%
Percent Solids	None	1	76.0504201680672	%

Lab Sample ID: 320-77214-A-3

Analysis Date: Aug 06, 2021 14:43

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	29.810298102981	%
Percent Solids	None	1	70.189701897019	%

Lab Sample ID: 320-77214-A-4

Analysis Date: Aug 06, 2021 14:43

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	30.9075342465753	%
Percent Solids	None	1	69.0924657534247	%

Lab Sample ID: 320-77214-A-5

Analysis Date: Aug 06, 2021 14:43

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	22.4489795918367	%
Percent Solids	None	1	77.5510204081633	%

Lab Sample ID: 320-77214-A-6

Analysis Date: Aug 06, 2021 14:43

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	37.1060171919771	%
Percent Solids	None	1	62.8939828080229	%

Lab Sample ID: 320-77214-A-7

Analysis Date: Aug 06, 2021 14:43

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	26.5060240963855	%
Percent Solids	None	1	73.4939759036145	%

Lab Sample ID: 320-77214-A-8

Analysis Date: Aug 06, 2021 14:43

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	31.6939890710383	%
Percent Solids	None	1	68.3060109289617	%

General Chemistry Raw Data Report

Job ID: 320-77214-1

Batch: 513947 (Continued)
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-77214-A-13

Analysis Date: Aug 06, 2021 14:43

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	22.8130360205832	%
Percent Solids	None	1	77.1869639794168	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P
1.00	1.00	200.00	200.00	8/1/2021	DM	WT-3	P
1.00	1.00	200.00	200.00	08/02/21	NM	WT-3	P
1.00	1.00	200.00	200.00	8/3/21	HC	WT-3	P
1.00	1.00	200.00	200.00	08/04/21	NM	WT-3	P
1.00	1.01	200.00	199.99	8/5/21	KB	WT-3	P
1.00	1.00	200.00	199.99	8/6/21	TG	WT-3	P
1.00	1.00	200.00	200.00	08/09/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams): (1) Reviewed TG 8/12/21

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

792140

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins

Client Information			
Client Contact: Janie Smith	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):
Company: GHD Services Inc.	Phone: 501-454-9966	E-Mail:	COC No:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:		Page: 1 of 2
City: Baton Rouge	TAT Requested (days): 15 business days		Job #:
State, Zip: LA, 70808			
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested		
Email: janie.smith@ghd.com	WO #:		
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702		
Site: San Jacinto Waste Pits	SSOW#: 11215702 - 2021-001		

Analysis Requested

320-77214 Chain of Custody

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-080221-BN-SJSB090 (0-2)	8-2-21	1310	G	S	N	N	X	X	X	1	
(2-4)		1315			N	Y	X	X	X	1	MS/MSD
(4-6)		1320			N	N	X	X	X	1	
(6-8)		1325			N	N	X	X	X	1	
(8-10)		1330			N	N	X	X	X	1	
(10-12)		1335			N	N	X	X	X	1	
(12-14)		1340			N	N	X	X	X	1	
(14-16)		1345			N	N	X	X	X	1	
(16-18)		1350			N	N	X	X	X	1	PRIORITY
(18-20)		1355			N	N	X	X	X	1	HOLD
(20-22)		1400			N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FedEx
Relinquished by: Breanna North	Date/Time: 8-3-21 1500	Company: GHD	Received by: [signature] Date/Time: 8-4-21 / 09:35 Company: ETASAC
Relinquished by:	Date/Time:	Company:	Received by: Date/Time: Company:
Relinquished by:	Date/Time:	Company:	Received by: Date/Time: Company:
Custody Seals Intact: Yes No	Custody Seal No.: 1519431		Cooler Temperature(s) °C and Other Remarks: 2.4

Ver: 01/16/2019

792141

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

eurofins

Chain of Custody Record

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:	COC No:
			Page: 2 of 2
Company: GHD Services Inc.			Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:		
City: Baton Rouge	TAT Requested (days): 15 business days		
State, Zip: LA, 70808			
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested		
Email: janie.smith@ghd.com	WO #:		
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702		
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001		

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-080221-BN-SJSB090(22-24)	8-2-21	1405	G	S	N	N	X	X	X	1	HOLD
11215702-080221-BN-DUP-11	8-2-21	—	G	S	N	N	X	X	X	1	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:		Method of Shipment: Fed Ex	
Relinquished by: Breanna North	Date/Time: 8-3-21 1500	Company: GHD	Received by: [signature]	Date/Time: 8-5-21/09:35	Company: ETASA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.: (51943)
Cooler Temperature(s) °C and Other Remarks: 2.4

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-77214-1

Login Number: 77214
List Number: 1
Creator: Gonzales, Justinn

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1519431
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Job Number: 320-77214-2

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
9/1/2021 2:12 PM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
09/01/2021

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 8/5/2021 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.4º C.

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: (CCV 320-519953/2), (LCS 320-515492/2-A), (MB 320-515492/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: 11215702-080221-BN-SJSB090 (16-18) (320-77214-9) and (CCV 320-519955/1). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: Some of the matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 320-515492 and analytical batch 320-519953 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 1613B: The ending resolution check did not print due to instrument error. A manual resolution check was performed more than 12 hours from the previous check without tuning the instrument indicating the Instrument maintained the greater than 10,000 resolution. All samples were analyzed within the 12 hour analytical clock requirement. There is no adverse impact on the data reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Job ID: 320-77214-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-080221-BN-SJSB090 (16-18) Lab Sample ID: 320-77214-9

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.87	J q	1.7	0.20	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.84	J	8.4	0.29	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.89	J	8.4	0.32	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.8	J	8.4	0.27	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.10	J q	8.4	0.090	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	31	B	8.4	0.63	pg/g	1	☼	1613B	Total/NA
OCDD	780	B	17	2.4	pg/g	1	☼	1613B	Total/NA
OCDF	0.88	J B	17	0.14	pg/g	1	☼	1613B	Total/NA
Total TCDD	4.5	q	1.7	0.20	pg/g	1	☼	1613B	Total/NA
Total TCDF	4.2	q B	1.7	0.17	pg/g	1	☼	1613B	Total/NA
Total PeCDD	4.3	J q	8.4	0.23	pg/g	1	☼	1613B	Total/NA
Total HxCDD	35		8.4	0.29	pg/g	1	☼	1613B	Total/NA
Total HpCDD	120	B	8.4	0.63	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	2.9	B	1.7	0.14	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-2

Client Sample ID: 11215702-080221-BN-SJSB090 (16-18)

Lab Sample ID: 320-77214-9
Date Collected: 08/02/21 13:50
Matrix: Sediment
Date Received: 08/05/21 09:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	37.5		0.1	0.1	%			08/06/21 14:43	1
Percent Solids	62.5		0.1	0.1	%			08/06/21 14:43	1

Client Sample ID: 11215702-080221-BN-SJSB090 (16-18)

Lab Sample ID: 320-77214-9
Date Collected: 08/02/21 13:50
Matrix: Sediment
Date Received: 08/05/21 09:35
Percent Solids: 62.5

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.87	J q	1.7	0.20	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
1,2,3,7,8-PeCDD	ND		8.4	0.23	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
1,2,3,7,8-PeCDF	ND		8.4	0.17	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
2,3,4,7,8-PeCDF	ND		8.4	0.17	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
1,2,3,4,7,8-HxCDD	0.84	J	8.4	0.29	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
1,2,3,6,7,8-HxCDD	0.89	J	8.4	0.32	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
1,2,3,7,8,9-HxCDD	2.8	J	8.4	0.27	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
1,2,3,4,7,8-HxCDF	ND		8.4	0.13	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
1,2,3,6,7,8-HxCDF	ND		8.4	0.14	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
1,2,3,7,8,9-HxCDF	0.10	J q	8.4	0.090	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
2,3,4,6,7,8-HxCDF	ND		8.4	0.096	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
1,2,3,4,6,7,8-HpCDD	31	B	8.4	0.63	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
1,2,3,4,6,7,8-HpCDF	ND		8.4	0.12	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
1,2,3,4,7,8,9-HpCDF	ND		8.4	0.14	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
OCDD	780	B	17	2.4	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
OCDF	0.88	J B	17	0.14	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
Total TCDD	4.5	q	1.7	0.20	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
Total TCDF	4.2	q B	1.7	0.17	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
Total PeCDD	4.3	J q	8.4	0.23	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
Total PeCDF	ND		8.4	0.19	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
Total HxCDD	35		8.4	0.29	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
Total HxCDF	ND		8.4	0.11	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
Total HpCDD	120	B	8.4	0.63	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1
Total HpCDF	ND		8.4	0.14	pg/g	☼	08/12/21 05:19	08/25/21 23:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*63*		*25 - 164*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-2,3,7,8-TCDF	*63*		*24 - 169*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-1,2,3,7,8-PeCDD	*63*		*25 - 181*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-1,2,3,7,8-PeCDF	*61*		*24 - 185*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-2,3,4,7,8-PeCDF	*69*		*21 - 178*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-1,2,3,4,7,8-HxCDD	*66*		*32 - 141*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-1,2,3,6,7,8-HxCDD	*56*		*28 - 130*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-1,2,3,4,7,8-HxCDF	*65*		*26 - 152*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-1,2,3,6,7,8-HxCDF	*55*		*26 - 123*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-1,2,3,7,8,9-HxCDF	*60*		*29 - 147*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-2,3,4,6,7,8-HxCDF	*58*		*28 - 136*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*60*		*23 - 140*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*53*		*28 - 143*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*64*		*26 - 138*	*08/12/21 05:19*	*08/25/21 23:50*	*1*
13C-OCDD	*62*		*17 - 157*	*08/12/21 05:19*	*08/25/21 23:50*	*1*

Client Sample ID: 11215702-080221-BN-SJSB090 (16-18) Lab Sample ID: 320-77214-9

Date Collected: 08/02/21 13:50 **Matrix: Sediment**
Date Received: 08/05/21 09:35 **Percent Solids: 62.5**

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*78*		*35 - 197*	*08/12/21 05:19*	*08/25/21 23:50*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**2.9**	**B**	1.7	0.14	pg/g	☼	08/12/21 05:19	08/27/21 20:45	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*67*		*24 - 169*	*08/12/21 05:19*	*08/27/21 20:45*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*82*		*35 - 197*	*08/12/21 05:19*	*08/27/21 20:45*	*1*

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-2

Client Sample ID: 11215702-080221-BN-SJSB090 (16-18) — Lab Sample ID: 320-77214-9

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**0.87**	**J q**	1.7	0.20	pg/g	1	**0.87**	1613B
1,2,3,7,8-PeCDD	ND		8.4	0.23	pg/g	1	0.12	1613B
1,2,3,7,8-PeCDF	ND		8.4	0.17	pg/g	0.03	0.0026	1613B
2,3,4,7,8-PeCDF	ND		8.4	0.17	pg/g	0.3	0.026	1613B
1,2,3,4,7,8-HxCDD	**0.84**	**J**	8.4	0.29	pg/g	0.1	**0.084**	1613B
1,2,3,6,7,8-HxCDD	**0.89**	**J**	8.4	0.32	pg/g	0.1	**0.089**	1613B
1,2,3,7,8,9-HxCDD	**2.8**	**J**	8.4	0.27	pg/g	0.1	**0.28**	1613B
1,2,3,4,7,8-HxCDF	ND		8.4	0.13	pg/g	0.1	0.0065	1613B
1,2,3,6,7,8-HxCDF	ND		8.4	0.14	pg/g	0.1	0.0070	1613B
1,2,3,7,8,9-HxCDF	**0.10**	**J q**	8.4	0.090	pg/g	0.1	**0.010**	1613B
2,3,4,6,7,8-HxCDF	ND		8.4	0.096	pg/g	0.1	0.0048	1613B
1,2,3,4,6,7,8-HpCDD	**31**	**B**	8.4	0.63	pg/g	0.01	**0.31**	1613B
1,2,3,4,6,7,8-HpCDF	ND		8.4	0.12	pg/g	0.01	0.00060	1613B
1,2,3,4,7,8,9-HpCDF	ND		8.4	0.14	pg/g	0.01	0.00070	1613B
OCDD	**780**	**B**	17	2.4	pg/g	0.0003	**0.23**	1613B
OCDF	**0.88**	**J B**	17	0.14	pg/g	0.0003	**0.00026**	1613B
2,3,7,8-TCDF - RA	**2.9**	**B**	1.7	0.14	pg/g	0.1	**0.29**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2.3	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-77214-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Job ID: 320-77214-2
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (35-197)							
320-77214-9	11215702-080221-BN-SJSB090	78							
320-77214-9 - RA	11215702-080221-BN-SJSB090 (16-18)	82							
320-77214-A-2-B MS	Matrix Spike	63							
320-77214-A-2-B MS - RA	Matrix Spike	52							
320-77214-A-2-C MSD	Matrix Spike Duplicate	67							
320-77214-A-2-C MSD - RA	Matrix Spike Duplicate	53							
MB 320-515492/1-A	Method Blank	66							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (31-191)							
LCS 320-515492/2-A	Lab Control Sample	65							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD	TCDF	PeCDD	PeCDF	PeCF	HxCDD	HxDD	HxCDF
Lab Sample ID	Client Sample ID	(25-164)	(24-169)	(25-181)	(24-185)	(21-178)	(32-141)	(28-130)	(26-152)
320-77214-9	11215702-080221-BN-SJSB090	63	63	63	61	69	66	56	65
320-77214-9 - RA	11215702-080221-BN-SJSB090 (16-18)		67						
320-77214-A-2-B MS	Matrix Spike	40	57	81	68	76	63	56	67
320-77214-A-2-B MS - RA	Matrix Spike		38						
320-77214-A-2-C MSD	Matrix Spike Duplicate	45	60	83	73	80	65	59	69
320-77214-A-2-C MSD - RA	Matrix Spike Duplicate		45						
MB 320-515492/1-A	Method Blank	54	52	57	54	59	58	49	58

		Percent Isotope Dilution Recovery (Acceptance Limits)						
		HxDF	HxCF	13CHxCF	HpCDD	HpCDF	HpCDF2	OCDD
Lab Sample ID	Client Sample ID	(26-123)	(29-147)	(28-136)	(23-140)	(28-143)	(26-138)	(17-157)
320-77214-9	11215702-080221-BN-SJSB090	55	60	58	60	53	64	62
320-77214-9 - RA	11215702-080221-BN-SJSB090 (16-18)							
320-77214-A-2-B MS	Matrix Spike	57	56	57	54	47	58	59
320-77214-A-2-B MS - RA	Matrix Spike							
320-77214-A-2-C MSD	Matrix Spike Duplicate	59	59	60	57	51	61	64
320-77214-A-2-C MSD - RA	Matrix Spike Duplicate							
MB 320-515492/1-A	Method Blank	49	52	51	51	49	54	59

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD	TCDF	PeCDD	PeCDF	PeCF	HxCDD	HxDD	HxCDF
Lab Sample ID	Client Sample ID	(20-175)	(22-152)	(21-227)	(21-192)	(13-328)	(21-193)	(25-163)	(19-202)
LCS 320-515492/2-A	Lab Control Sample	47	46	50	47	50	54	47	54

		Percent Isotope Dilution Recovery (Acceptance Limits)						
		HxDF	HxCF	13CHxCF	HpCDD	HpCDF	HpCDF2	OCDD
Lab Sample ID	Client Sample ID	(21-159)	(17-205)	(22-176)	(26-166)	(21-158)	(20-186)	(13-199)
LCS 320-515492/2-A	Lab Control Sample	47	47	47	46	44	48	50

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc.

Job ID: 320-77214-2

Project/Site: SJRWP Supplemental Design Investigation

TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-515492/1-A
Matrix: Sediment
Analysis Batch: 519953

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 515492

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.14	pg/g		08/12/21 05:19	08/25/21 11:20	1
2,3,7,8-TCDF	0.190	J q	1.0	0.073	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,7,8-PeCDD	ND		5.0	0.16	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,7,8-PeCDF	ND		5.0	0.13	pg/g		08/12/21 05:19	08/25/21 11:20	1
2,3,4,7,8-PeCDF	ND		5.0	0.13	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.10	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.11	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.099	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.093	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.093	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.061	pg/g		08/12/21 05:19	08/25/21 11:20	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.065	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,6,7,8-HpCDD	0.227	J q	5.0	0.055	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	0.092	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.11	pg/g		08/12/21 05:19	08/25/21 11:20	1
OCDD	1.16	J	10	0.10	pg/g		08/12/21 05:19	08/25/21 11:20	1
OCDF	0.668	J q	10	0.095	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total TCDD	ND		1.0	0.14	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total TCDF	0.190	J q	1.0	0.073	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total PeCDD	ND		5.0	0.16	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total PeCDF	ND		5.0	0.13	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total HxCDD	ND		5.0	0.11	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total HxCDF	ND		5.0	0.093	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total HpCDD	0.423	J q	5.0	0.055	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total HpCDF	ND		5.0	0.11	pg/g		08/12/21 05:19	08/25/21 11:20	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*54*		*25 - 164*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-2,3,7,8-TCDF	*52*		*24 - 169*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,7,8-PeCDD	*57*		*25 - 181*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,7,8-PeCDF	*54*		*24 - 185*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-2,3,4,7,8-PeCDF	*59*		*21 - 178*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,7,8-HxCDD	*58*		*32 - 141*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,6,7,8-HxCDD	*49*		*28 - 130*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,7,8-HxCDF	*58*		*26 - 152*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,6,7,8-HxCDF	*49*		*26 - 123*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,7,8,9-HxCDF	*52*		*29 - 147*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-2,3,4,6,7,8-HxCDF	*51*		*28 - 136*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*51*		*23 - 140*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*49*		*28 - 143*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*54*		*26 - 138*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-OCDD	*59*		*17 - 157*	*08/12/21 05:19*	*08/25/21 11:20*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*66*		*35 - 197*	*08/12/21 05:19*	*08/25/21 11:20*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-515492/2-A
Client Sample ID: Lab Control Sample
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 519953
Prep Batch: 515492

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	21.3		pg/g		106	67 - 158
2,3,7,8-TCDF	20.0	21.7		pg/g		109	75 - 158
1,2,3,7,8-PeCDD	100	108		pg/g		108	70 - 142
1,2,3,7,8-PeCDF	100	111		pg/g		111	80 - 134
2,3,4,7,8-PeCDF	100	102		pg/g		102	68 - 160
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	70 - 164
1,2,3,6,7,8-HxCDD	100	111		pg/g		111	76 - 134
1,2,3,7,8,9-HxCDD	100	107		pg/g		107	64 - 162
1,2,3,4,7,8-HxCDF	100	96.9		pg/g		97	72 - 134
1,2,3,6,7,8-HxCDF	100	108		pg/g		108	84 - 130
1,2,3,7,8,9-HxCDF	100	107		pg/g		107	78 - 130
2,3,4,6,7,8-HxCDF	100	107		pg/g		107	70 - 156
1,2,3,4,6,7,8-HpCDD	100	109		pg/g		109	70 - 140
1,2,3,4,6,7,8-HpCDF	100	108		pg/g		108	82 - 122
1,2,3,4,7,8,9-HpCDF	100	102		pg/g		102	78 - 138
OCDD	200	213		pg/g		106	78 - 144
OCDF	200	208		pg/g		104	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*47*		*20 - 175*
13C-2,3,7,8-TCDF	*46*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*50*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*47*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*50*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*54*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*47*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*54*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*47*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*47*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*47*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*46*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*44*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*48*		*20 - 186*
13C-OCDD	*50*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*65*		*31 - 191*

Lab Sample ID: 320-77214-A-2-B MS
Client Sample ID: Matrix Spike
Matrix: Sediment
Prep Type: Total/NA
Analysis Batch: 519953
Prep Batch: 515492

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	5100	E G	27.1	3690	E 4 G	pg/g	☼	-5063	67 - 158
1,2,3,7,8-PeCDD	35		136	178		pg/g	☼	105	70 - 142
1,2,3,7,8-PeCDF	410	F1	136	416	F1	pg/g	☼	5	80 - 134
2,3,4,7,8-PeCDF	230	F1	136	305	F1	pg/g	☼	52	68 - 160
1,2,3,4,7,8-HxCDD	0.84	J q	136	139		pg/g	☼	102	70 - 164

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-77214-A-2-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519953 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	4.0	J	136	156		pg/g	☼	112	76 - 134
1,2,3,7,8,9-HxCDD	2.4	J	136	143		pg/g	☼	104	64 - 162
1,2,3,4,7,8-HxCDF	1000		136	454	4	pg/g	☼	-425	72 - 134
1,2,3,6,7,8-HxCDF	240	F1	136	237	F1	pg/g	☼	-1	84 - 130
1,2,3,7,8,9-HxCDF	9.6		136	147		pg/g	☼	101	78 - 130
2,3,4,6,7,8-HxCDF	18		136	160		pg/g	☼	104	70 - 156
1,2,3,4,6,7,8-HpCDD	83	B	136	211		pg/g	☼	94	70 - 140
1,2,3,4,6,7,8-HpCDF	390	F1	136	255	F1	pg/g	☼	-96	82 - 122
1,2,3,4,7,8,9-HpCDF	130	F1	136	172	F1	pg/g	☼	34	78 - 138
OCDD	1600	B	271	1340	4	pg/g	☼	-79	78 - 144
OCDF	170	F1 B	271	338	F1	pg/g	☼	62	63 - 170

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*40*		*25 - 164*
13C-2,3,7,8-TCDF	*57*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*81*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*68*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*76*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*63*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*56*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*67*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*57*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*56*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*57*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*54*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*47*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*58*		*26 - 138*
13C-OCDD	*59*		*17 - 157*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*63*		*35 - 197*

Lab Sample ID: 320-77214-A-2-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519953 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	5100	E G	26.2	2400	E 4 G	pg/g	☼	-10179	67 - 158	42	50
1,2,3,7,8-PeCDD	35		131	161		pg/g	☼	96	70 - 142	10	50
1,2,3,7,8-PeCDF	410	F1	131	389	F1	pg/g	☼	-16	80 - 134	7	50
2,3,4,7,8-PeCDF	230	F1	131	266	F1	pg/g	☼	24	68 - 160	13	50
1,2,3,4,7,8-HxCDD	0.84	J q	131	137		pg/g	☼	104	70 - 164	2	50
1,2,3,6,7,8-HxCDD	4.0	J	131	141		pg/g	☼	105	76 - 134	10	50
1,2,3,7,8,9-HxCDD	2.4	J	131	137		pg/g	☼	103	64 - 162	4	50
1,2,3,4,7,8-HxCDF	1000		131	432	4	pg/g	☼	-457	72 - 134	5	50
1,2,3,6,7,8-HxCDF	240	F1	131	223	F1	pg/g	☼	-12	84 - 130	6	50
1,2,3,7,8,9-HxCDF	9.6		131	144		pg/g	☼	102	78 - 130	2	50
2,3,4,6,7,8-HxCDF	18		131	151		pg/g	☼	101	70 - 156	6	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-77214-A-2-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519953 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	83	B	131	198		pg/g	☼	88	70 - 140	6	50
1,2,3,4,6,7,8-HpCDF	390	F1	131	230	F1	pg/g	☼	-119	82 - 122	10	50
1,2,3,4,7,8,9-HpCDF	130	F1	131	162	F1	pg/g	☼	28	78 - 138	6	50
OCDD	1600	B	262	1350	4	pg/g	☼	-78	78 - 144	1	50
OCDF	170	F1 B	262	323	F1	pg/g	☼	58	63 - 170	5	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*45*		*25 - 164*
13C-2,3,7,8-TCDF	*60*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*83*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*73*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*80*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*65*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*59*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*69*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*59*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*59*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*60*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*57*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*51*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*61*		*26 - 138*
13C-OCDD	*64*		*17 - 157*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*67*		*35 - 197*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: 320-77214-A-2-B MS **Client Sample ID: Matrix Spike**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 520997 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDF - RA	12000	G E B	27.1	9380	G E 4	pg/g	☼	-9885	75 - 158		

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDF - RA	*38*		*24 - 169*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD - RA	*52*		*35 - 197*

Lab Sample ID: 320-77214-A-2-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 520997 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	12000	G E B	26.2	5870	G E 4	pg/g	☼	-2365	75 - 158	46	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA (Continued)

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDF - RA	45		24 - 169

Surrogate	MSD %Recovery	MSD Qualifier	Limits
37Cl4-2,3,7,8-TCDD - RA	53		35 - 197

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-77214-2
Project/Site: SJRWP Supplemental Design Investigation

Specialty Organics

Prep Batch: 515492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-9	11215702-080221-BN-SJSB090 (16-18)	Total/NA	Sediment	HRMS-Sox	
320-77214-9 - RA	11215702-080221-BN-SJSB090 (16-18)	Total/NA	Sediment	HRMS-Sox	
MB 320-515492/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-515492/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-77214-A-2-B MS	Matrix Spike	Total/NA	Sediment	HRMS-Sox	
320-77214-A-2-B MS - RA	Matrix Spike	Total/NA	Sediment	HRMS-Sox	
320-77214-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	HRMS-Sox	
320-77214-A-2-C MSD - RA	Matrix Spike Duplicate	Total/NA	Sediment	HRMS-Sox	

Analysis Batch: 519953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-515492/1-A	Method Blank	Total/NA	Sediment	1613B	515492
LCS 320-515492/2-A	Lab Control Sample	Total/NA	Sediment	1613B	515492
320-77214-A-2-B MS	Matrix Spike	Total/NA	Sediment	1613B	515492
320-77214-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Sediment	1613B	515492

Analysis Batch: 519955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-9	11215702-080221-BN-SJSB090 (16-18)	Total/NA	Sediment	1613B	515492

Analysis Batch: 520456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-9 - RA	11215702-080221-BN-SJSB090 (16-18)	Total/NA	Sediment	1613B	515492

Analysis Batch: 520997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-A-2-B MS - RA	Matrix Spike	Total/NA	Sediment	1613B	515492
320-77214-A-2-C MSD - RA	Matrix Spike Duplicate	Total/NA	Sediment	1613B	515492

General Chemistry

Analysis Batch: 513947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77214-9	11215702-080221-BN-SJSB090 (16-18)	Total/NA	Sediment	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Job ID: 320-77214-2
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-080221-BN-SJSB090 (16-18)
Lab Sample ID: 320-77214-9

Date Collected: 08/02/21 13:50
Matrix: Sediment
Date Received: 08/05/21 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	513947	08/06/21 14:43	TCS	TAL SAC

Client Sample ID: 11215702-080221-BN-SJSB090 (16-18)
Lab Sample ID: 320-77214-9

Date Collected: 08/02/21 13:50
Matrix: Sediment
Date Received: 08/05/21 09:35
Percent Solids: 62.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519955	08/25/21 23:50	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520456	08/27/21 20:45	DB	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-77214-2
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDD
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDF
1613B	HRMS-Sox	Sediment	OCDD
1613B	HRMS-Sox	Sediment	OCDF
1613B	HRMS-Sox	Sediment	Total HpCDD
1613B	HRMS-Sox	Sediment	Total HpCDF
1613B	HRMS-Sox	Sediment	Total HxCDD
1613B	HRMS-Sox	Sediment	Total HxCDF
1613B	HRMS-Sox	Sediment	Total PeCDD
1613B	HRMS-Sox	Sediment	Total PeCDF
1613B	HRMS-Sox	Sediment	Total TCDD
1613B	HRMS-Sox	Sediment	Total TCDF
D 2216		Sediment	Percent Moisture
D 2216		Sediment	Percent Solids
TEQ		Sediment	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-2

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77214-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-77214-9	11215702-080221-BN-SJSB090 (16-18)	Sediment	08/02/21 13:50	08/05/21 09:35

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: WDM 320-510264/1 Client Sample ID:

Date Analyzed: 07/26/21 09:21 Lab File ID: 26JL2110D5_1.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,6,8-TCDF	15.13	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,6,8-TCDD	16.07	Peak assignment corrected	arghestanis	07/26/21 12:21
2,3,4,7-TCDF	17.63	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,7-TCDD	18.22	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDD	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDF	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,8,9-TCDD	19.47	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,8,9-TCDF	19.49	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,4,6,8-PeCDF	19.76	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,4,7,9-PeCDD	21.58	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDD	25.91	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDF	26.14	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,8-HxCDF	28.48	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,4,6,7,9-HxCDD	30.02	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,7-HxCDD	32.30	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,3,4,8,9-HxCDF	32.61	Peak assignment corrected	arghestanis	07/26/21 12:23

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: IC 320-510264/3 Client Sample ID:

Date Analyzed: 07/26/21 10:51 Lab File ID: 26JL2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.35	Invalid Compound ID	stephensk	07/27/21 08:15

Lab Sample ID: IC 320-510264/4 Client Sample ID:

Date Analyzed: 07/26/21 11:36 Lab File ID: 26JL2110D5_4.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,4,7,8-PeCDF	24.13	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDF	30.84	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDD	31.93	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8,9-HpCDF	35.01	Peak assignment corrected	arghestanis	07/26/21 12:31

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519953

Lab Sample ID: MB 320-515492/1-A Client Sample ID:

Date Analyzed: 08/25/21 11:20 Lab File ID: 25AU2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/27/21 09:25
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/27/21 09:25
2,3,7,8-TCDF	17.07	Baseline	dadunj	08/27/21 09:25
1,2,3,4,6,7,8-HpCDD	34.41	Split Peak	dadunj	08/27/21 09:25
OCDD	36.71	Split Peak	dadunj	08/27/21 09:26
OCDF	36.80	Split Peak	dadunj	08/27/21 09:26

Lab Sample ID: 320-77214-A-2-B MS Client Sample ID:

Date Analyzed: 08/25/21 14:20 Lab File ID: 25AU2110D5_7.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.19	Peak assignment corrected	bennettd	08/26/21 10:01
13C-2,3,7,8-TCDD	17.93	Peak assignment corrected	bennettd	08/26/21 09:58
2,3,7,8-TCDD	17.95	Peak assignment corrected	bennettd	08/26/21 10:02
1,2,3,7,8-PeCDF	22.17	Invalid Compound ID	dadunj	08/27/21 09:44

Lab Sample ID: 320-77214-A-2-C MSD Client Sample ID:

Date Analyzed: 08/25/21 15:05 Lab File ID: 25AU2110D5_8.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDD	17.89	Peak assignment corrected	bennettd	08/26/21 09:59
2,3,7,8-TCDD	17.90	Peak assignment corrected	bennettd	08/26/21 10:02
1,2,3,7,8-PeCDF	22.13	Invalid Compound ID	dadunj	08/27/21 09:47

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-2

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519955

Lab Sample ID: 320-77214-9 Client Sample ID: 11215702-080221-BN-SJSB090 (16-18)

Date Analyzed: 08/25/21 23:50 Lab File ID: 25AU2110D5_19.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.08	Split Peak	dadunj	08/27/21 08:19
2,3,7,8-TCDD	17.78	Split Peak	dadunj	08/27/21 08:19
1,2,3,4,7,8-HxCDD	31.52	Split Peak	dadunj	08/27/21 08:20
1,2,3,6,7,8-HxCDD	31.64	Invalid Compound ID	dadunj	08/27/21 08:20
1,2,3,7,8,9-HxCDF	32.17	Split Peak	dadunj	08/27/21 08:20
OCDF	36.80	Split Peak	dadunj	08/27/21 08:21

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

1613B

792170

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 520456

Lab Sample ID: 320-77214-9 RA Client Sample ID: 11215702-080221-BN-SJSB090 (16-18) RA

Date Analyzed: 08/27/21 20:45 Lab File ID: 27AU21A11D2_009.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.66	Baseline	bennettd	08/30/21 09:42

1613B

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77214-2

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 520997

Lab Sample ID: 320-77214-A-2-B MS RA Client Sample ID:

Date Analyzed: 08/31/21 22:48 Lab File ID: 31AU2111D2_016.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.69	Poor chromatography	bennettd	09/01/21 09:48

Lab Sample ID: 320-77214-A-2-C MSD RA Client Sample ID:

Date Analyzed: 08/31/21 23:27 Lab File ID: 31AU2111D2_017.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,7,8-TCDF	17.65	Poor chromatography	bennettd	09/01/21 09:50

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25	CIL, Lot ER03111502			(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25		Wellington Labs, Lot 13PAR0418		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30		CIL, Lot ER09031903		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

792191

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

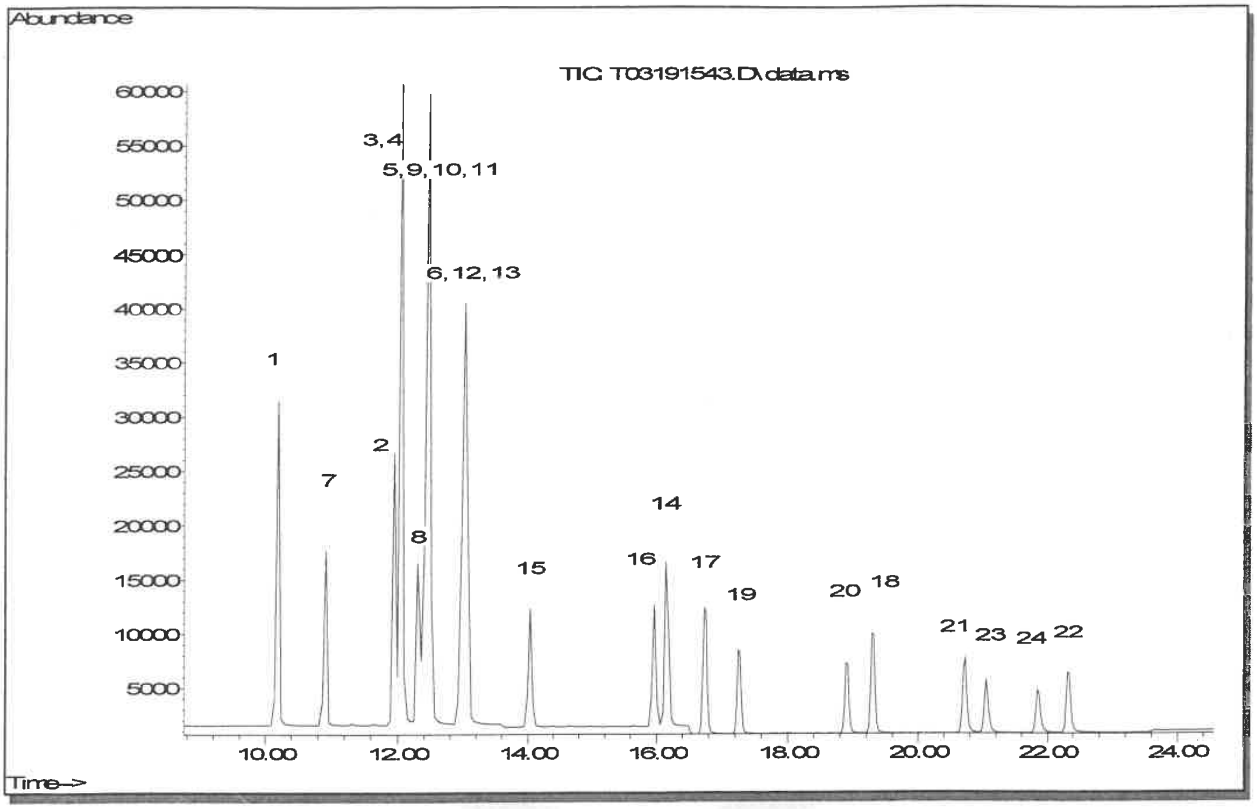

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

792198

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

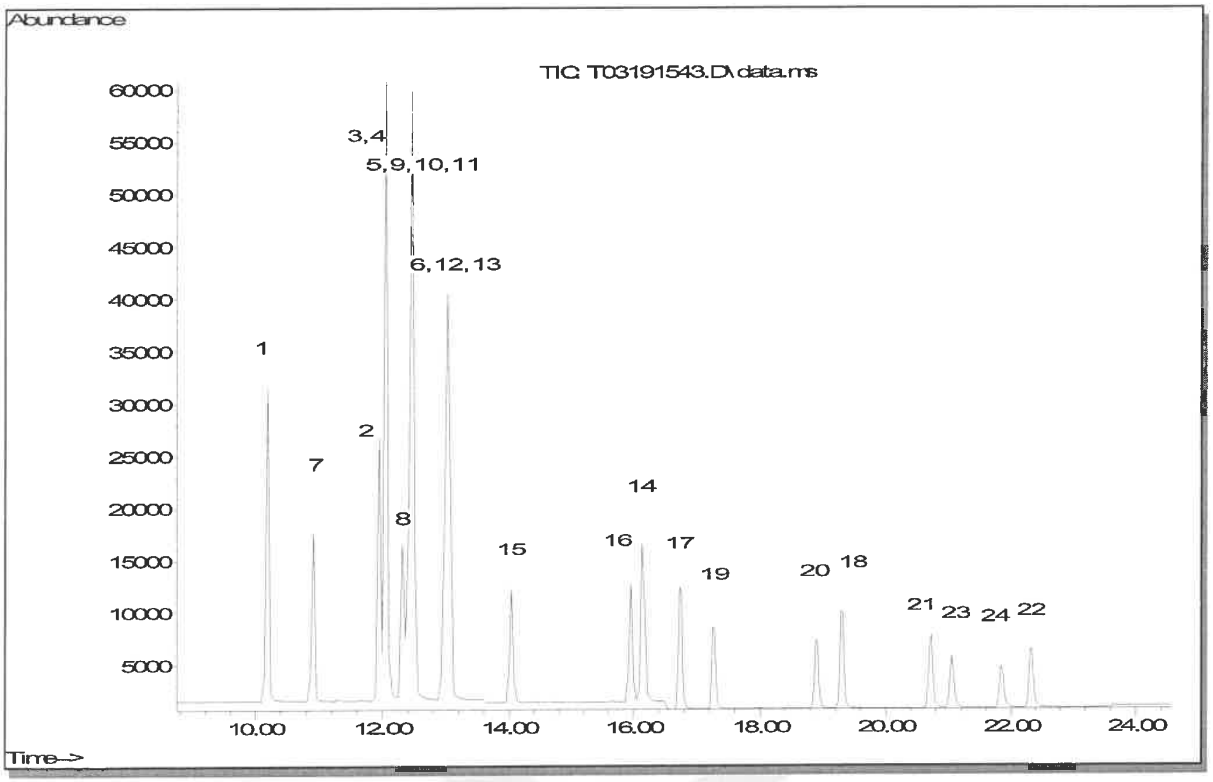

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r: 3/30/20

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

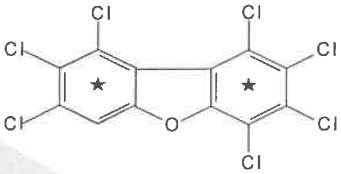

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

792205

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

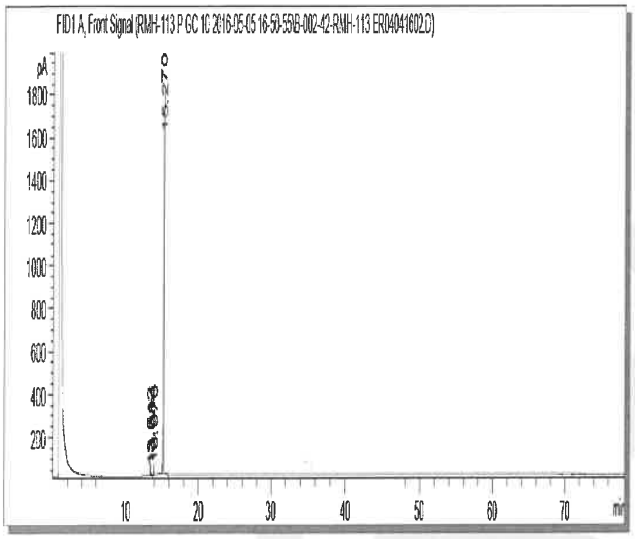

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

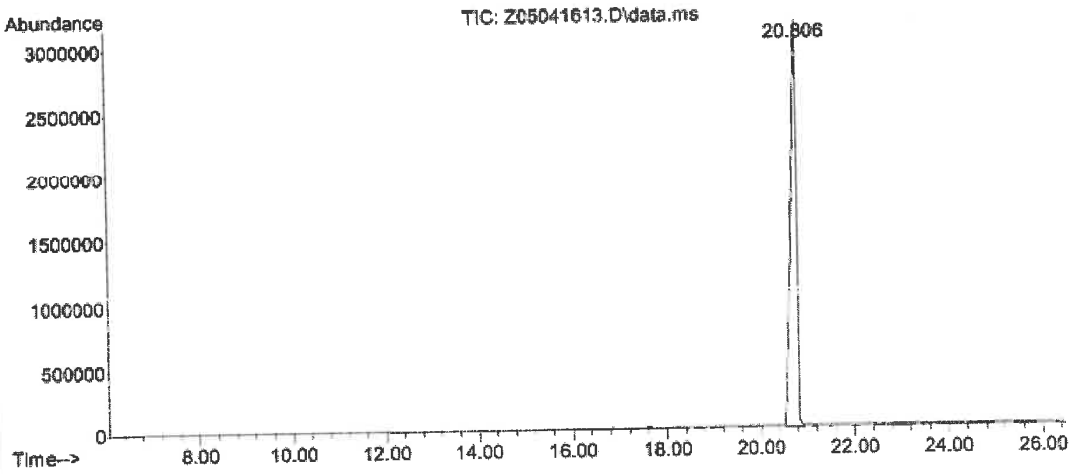

Mass Spectrum

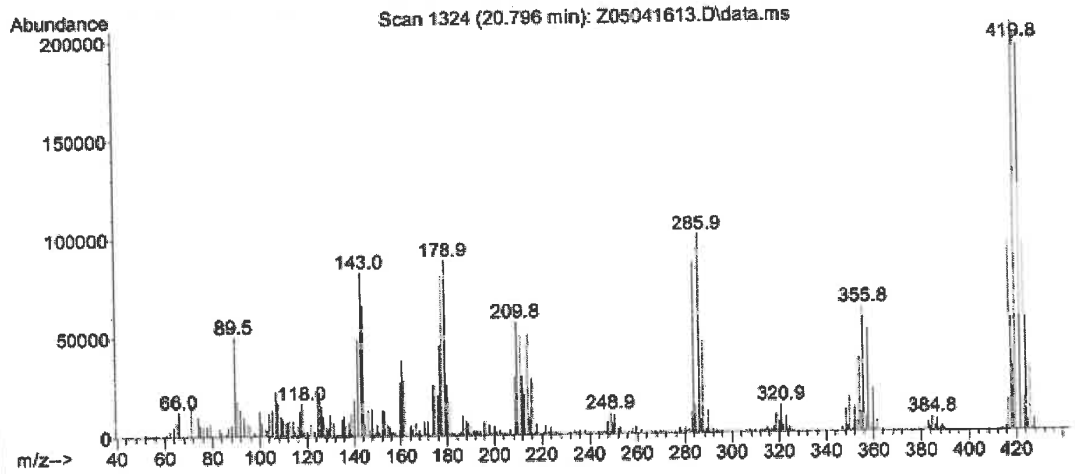

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 SAL

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CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

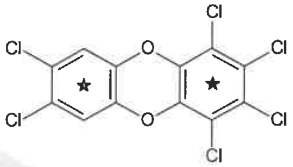

Catalog Number: ED-946
Solution Lot: ER04211601
Expiration Date: June 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

792212

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

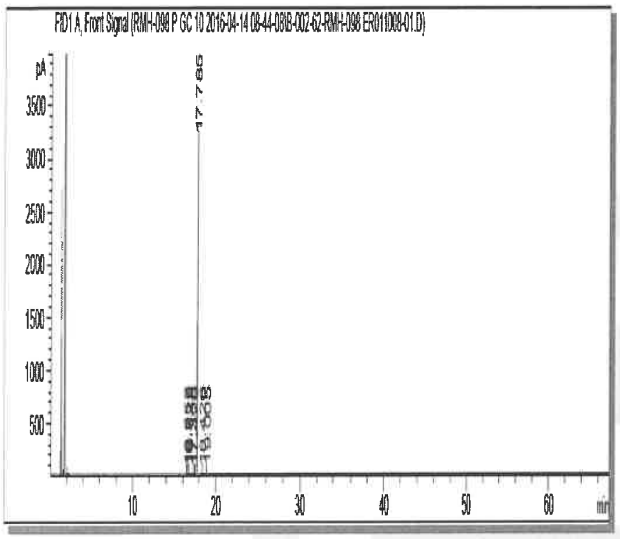

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 40°C to 300°C at 15°C/min hold 50 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Data File Name: RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument: GC#10
Sample Name: ER011008-01
Acquired: April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

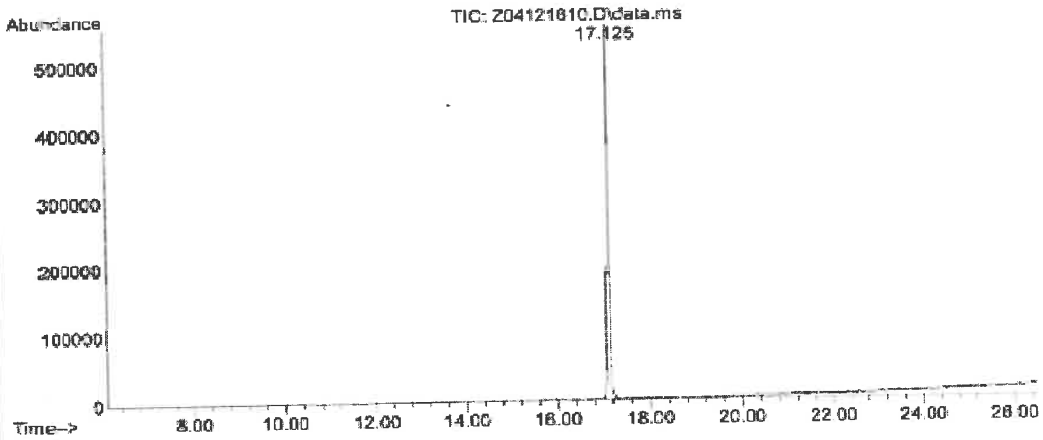

Mass Spectrum

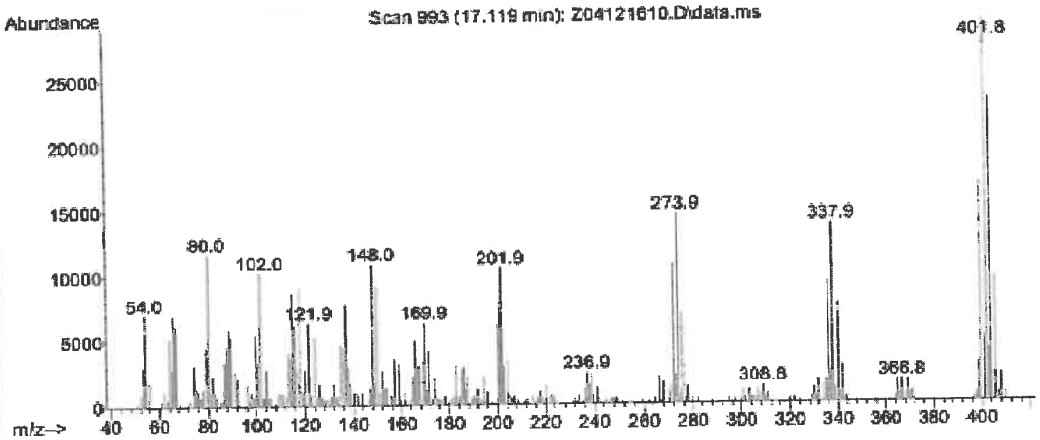

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

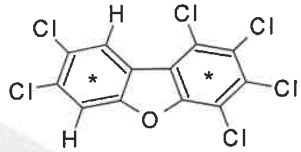

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

792217

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}Cl_6H_2O$
Compound Lot:	ER11281601	**CAS Number:**	114423-98-2
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

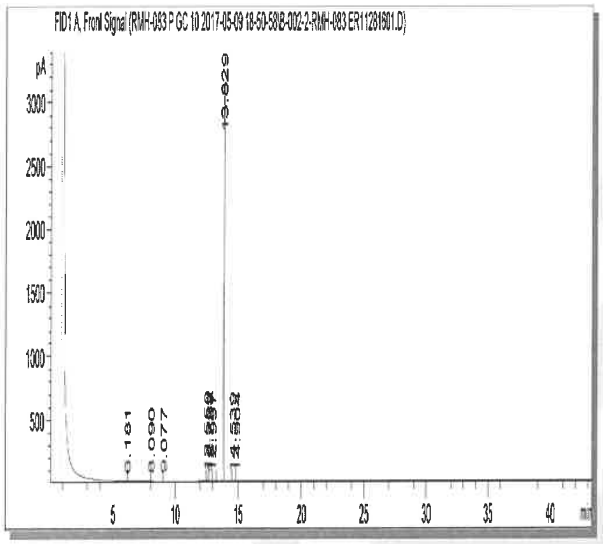

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

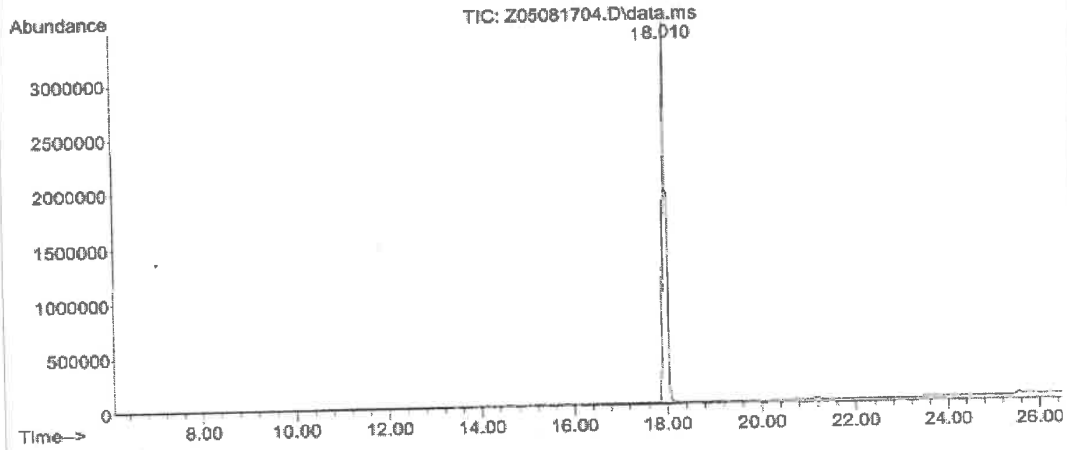

Mass Spectrum

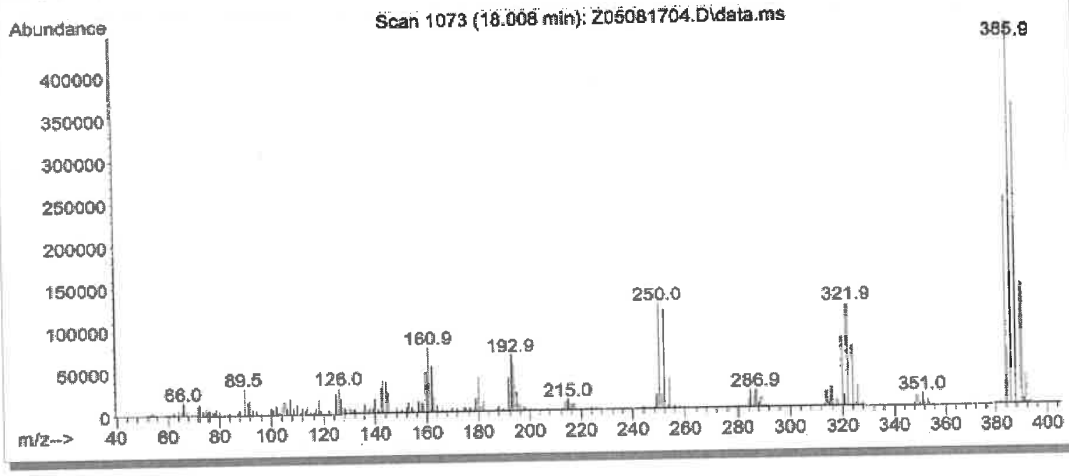

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

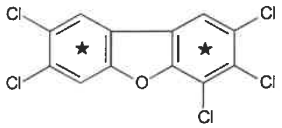

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

792222

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

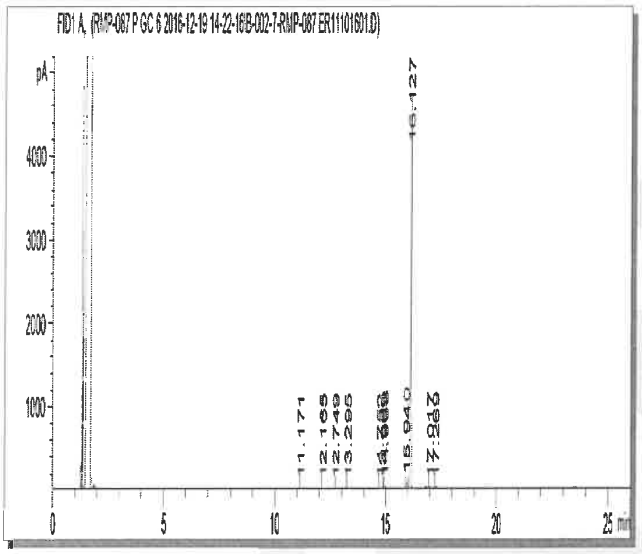

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

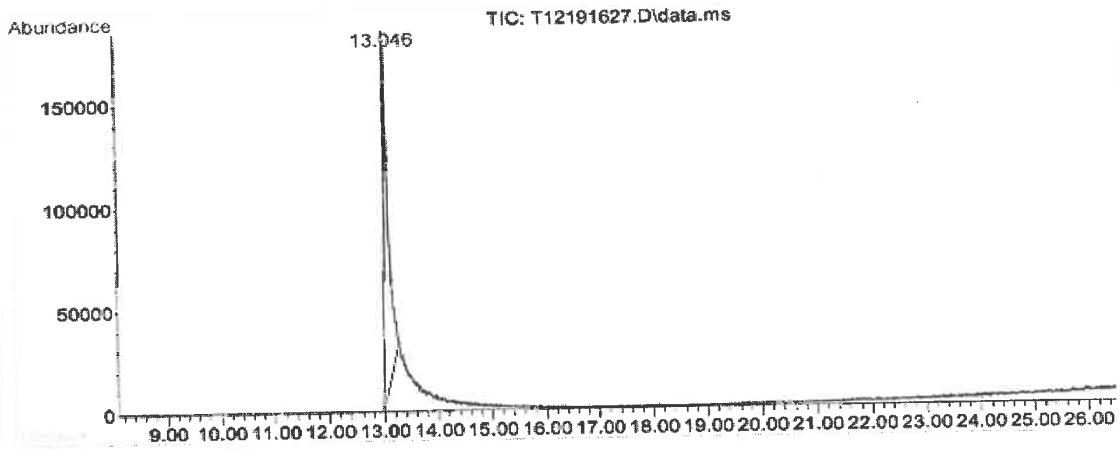

Mass Spectrum

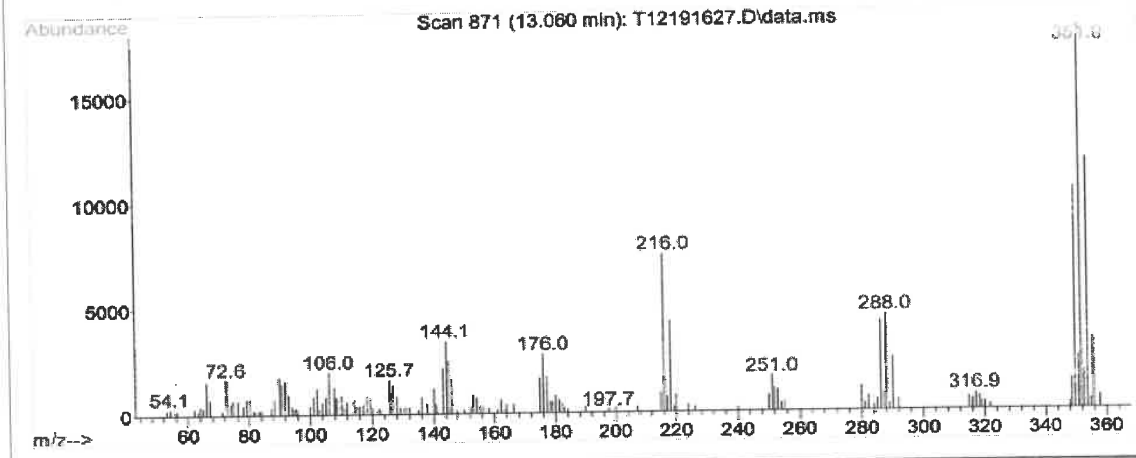

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

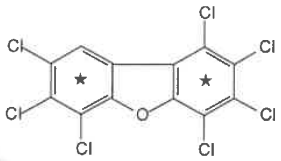

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

792227

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER020507-02

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-84-8
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

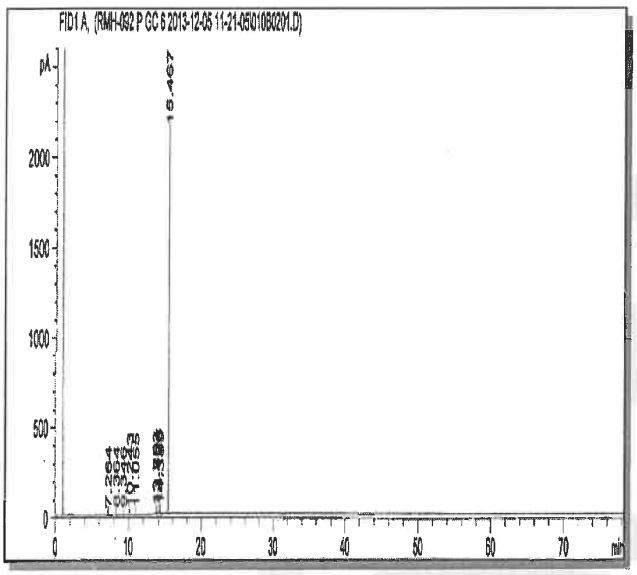

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Data File Name: RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument: GC#6
Sample Name: ER020507-02
Acquired: December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

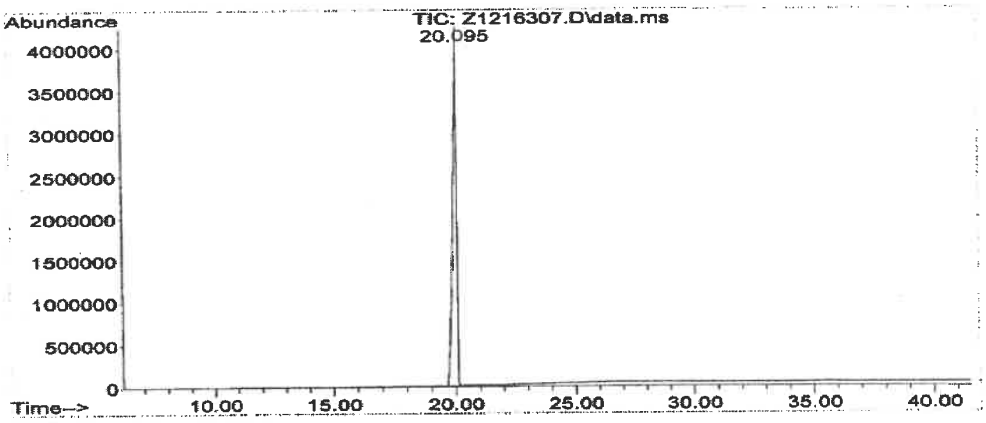

Mass Spectrum

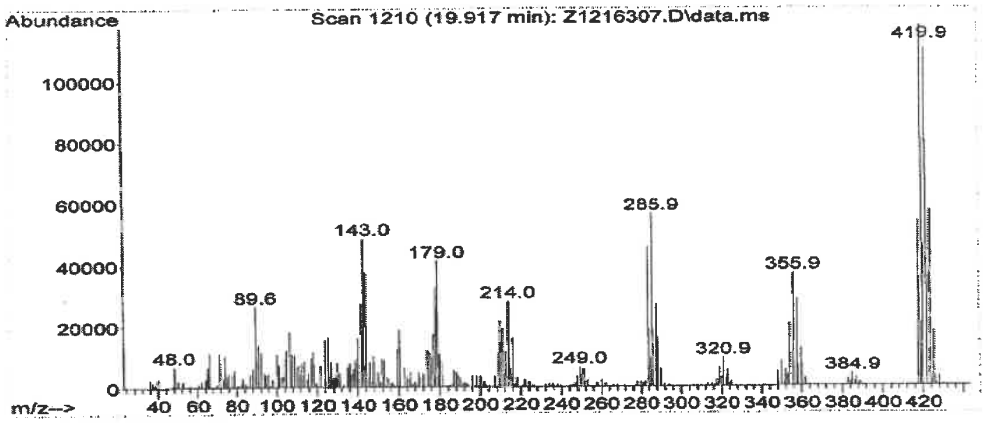

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

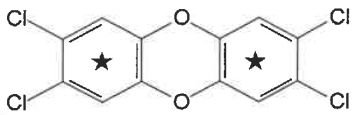

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

792234

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

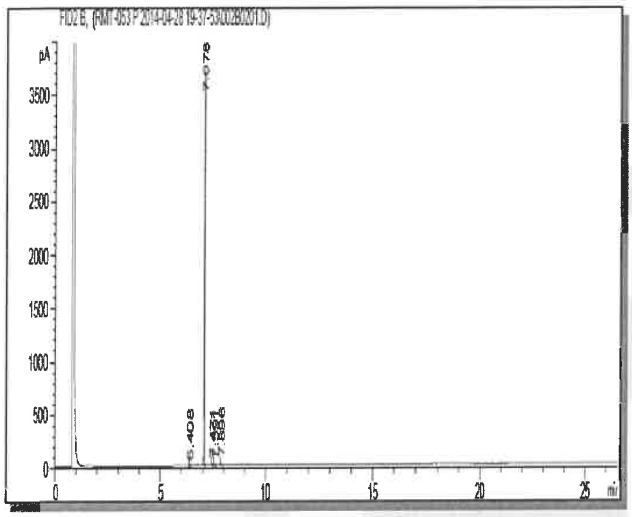

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

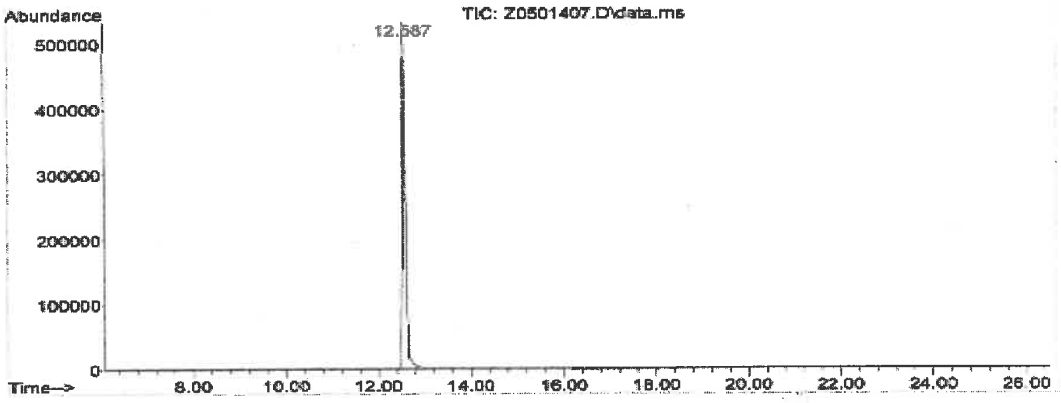

Mass Spectrum

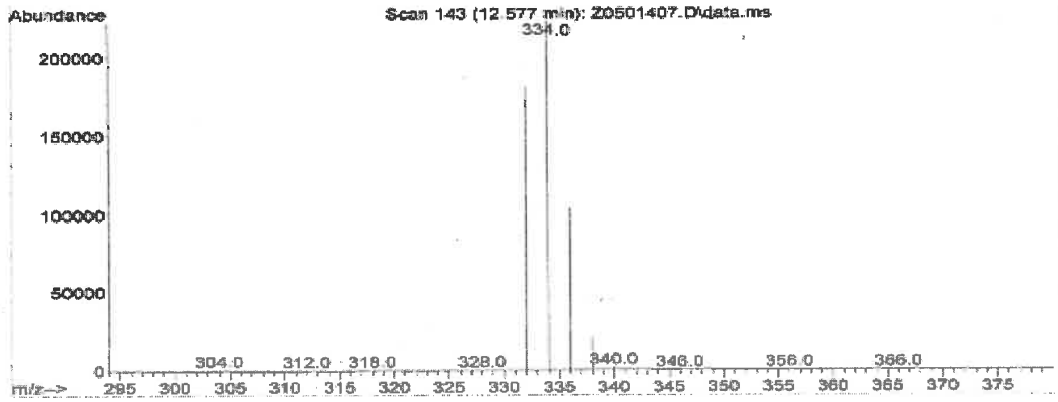

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

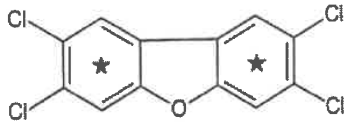

Catalog Number: EF-904
Solution Lot: ER09131601
Expiration Date: September 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

792239

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/FID

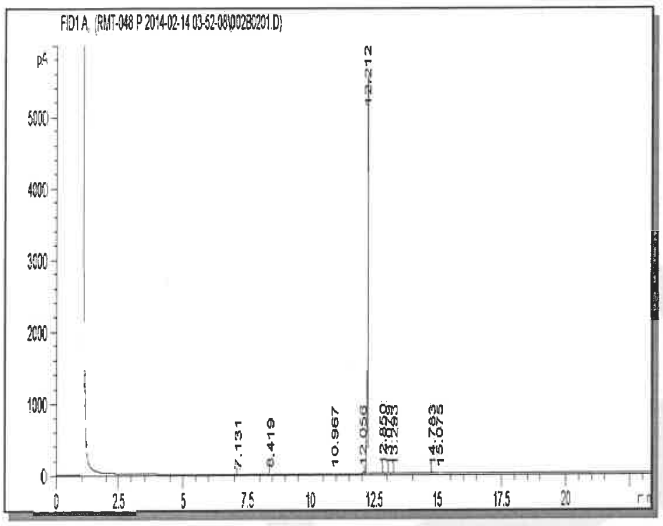

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

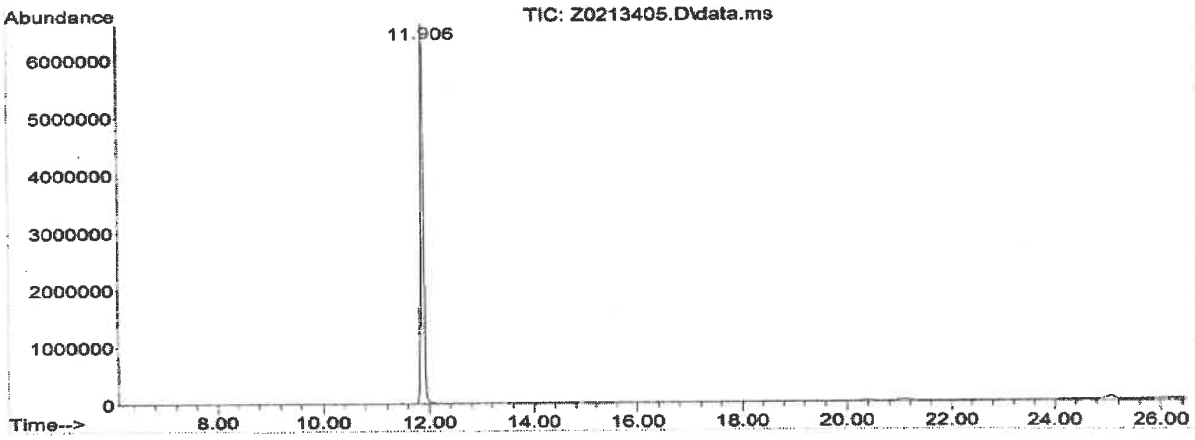

Mass Spectrum

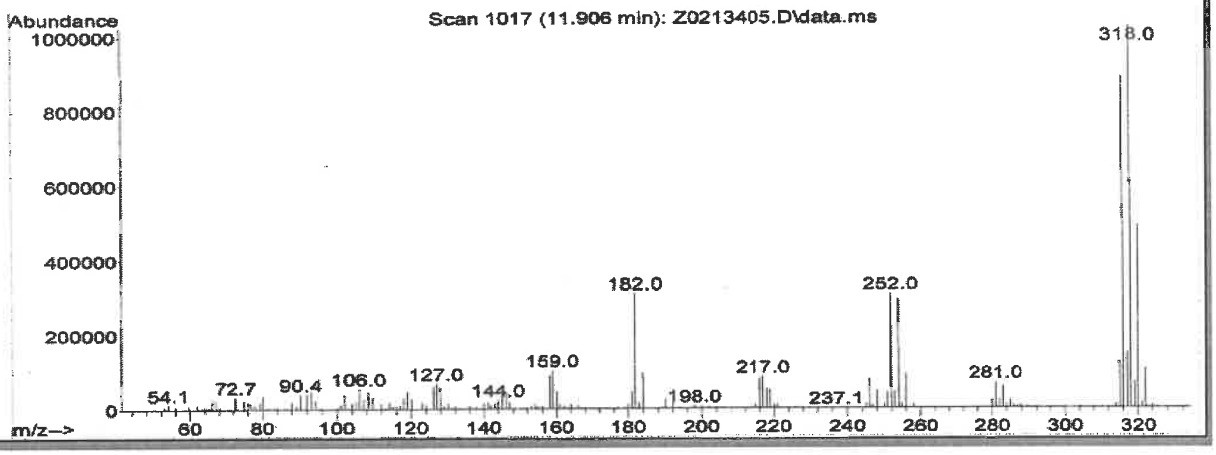

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

Reagent

HRDXNIDA_00443

Rec'd 10-19-20

Cerilliant® Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

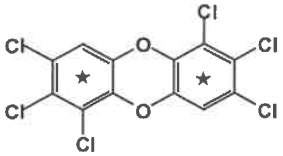

Catalog Number: ED-966
Solution Lot: ER03151801
Expiration Date: March 2028
Solvent: n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

792244

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

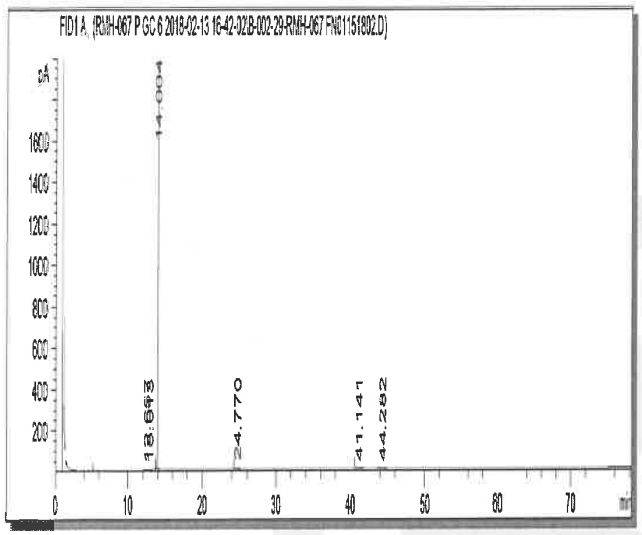

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: FN01151802
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Mar 05 10:17:33 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

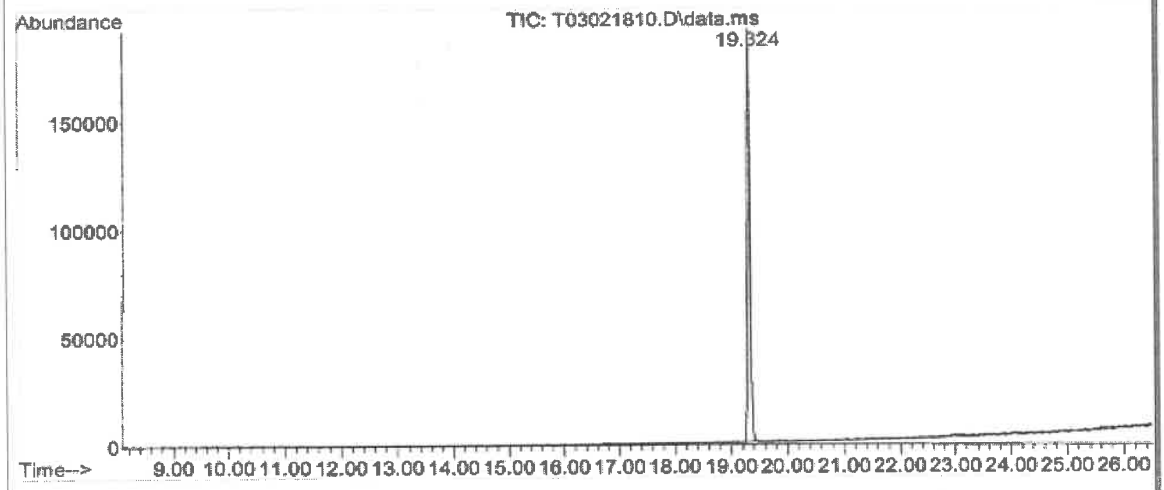

Mass Spectrum

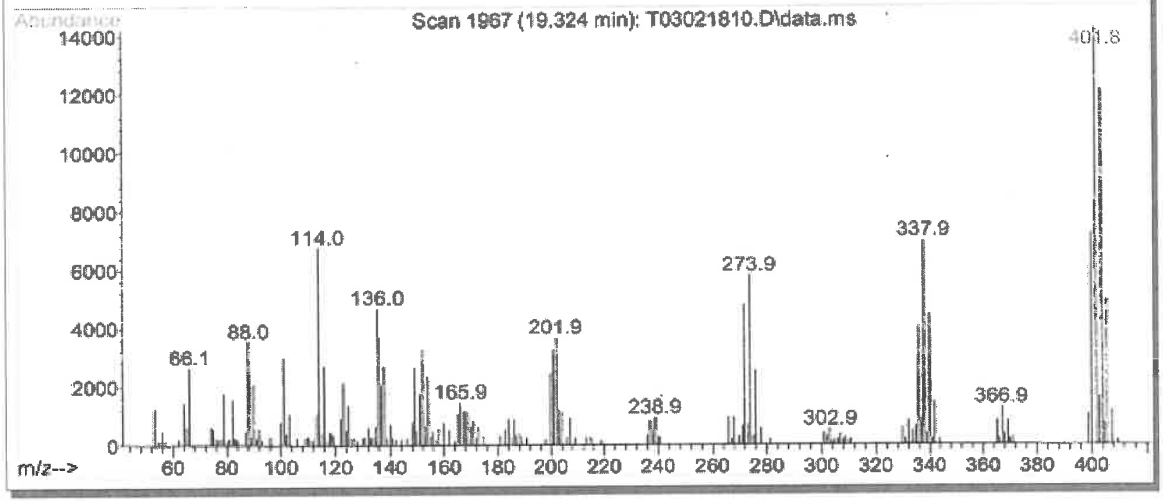

Reagent

HRDXNIDA_00457

r: 1/18/21 SW

Cerilliant® Analytical Reference Standards
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CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

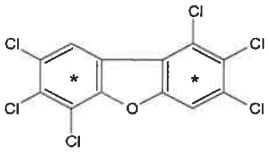

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

792249

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

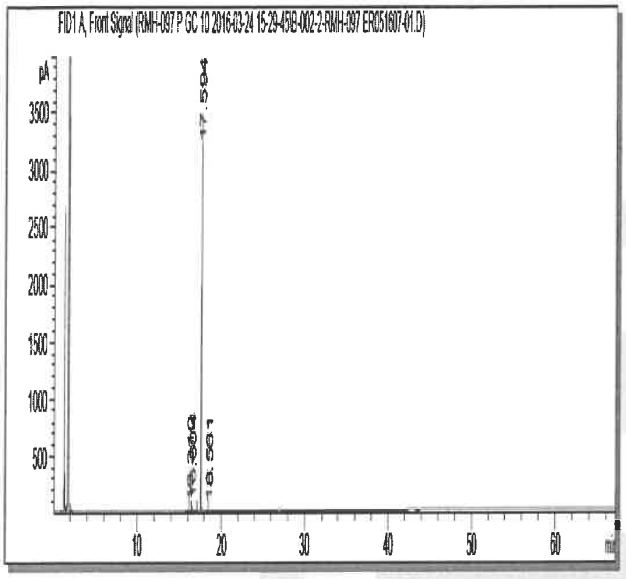

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

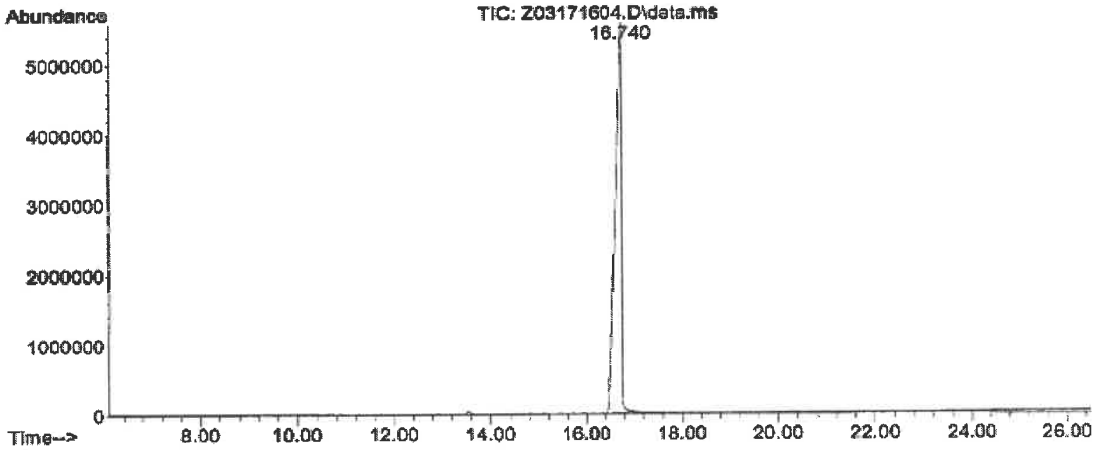

Mass Spectrum

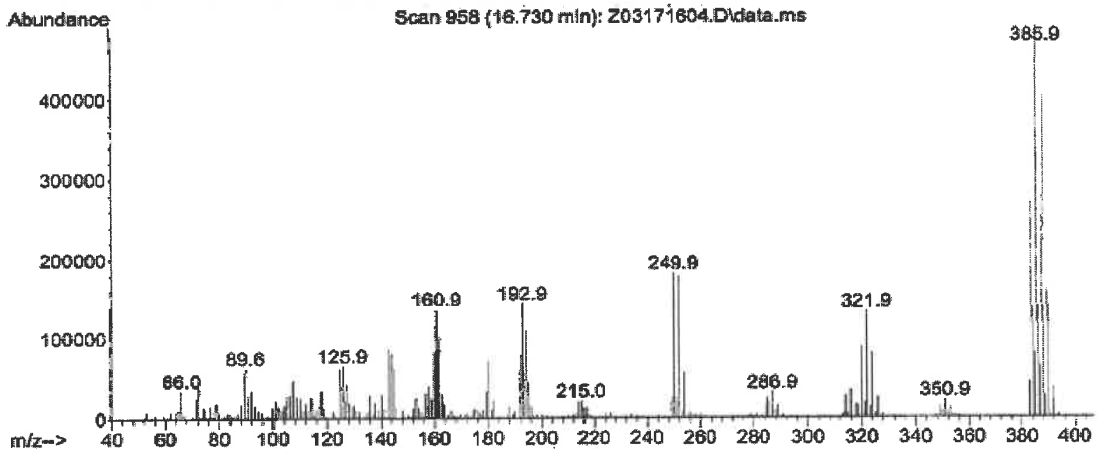

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
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CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

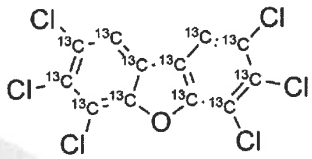

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

792256

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER09051801	**CAS Number:**	116843-05-1
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

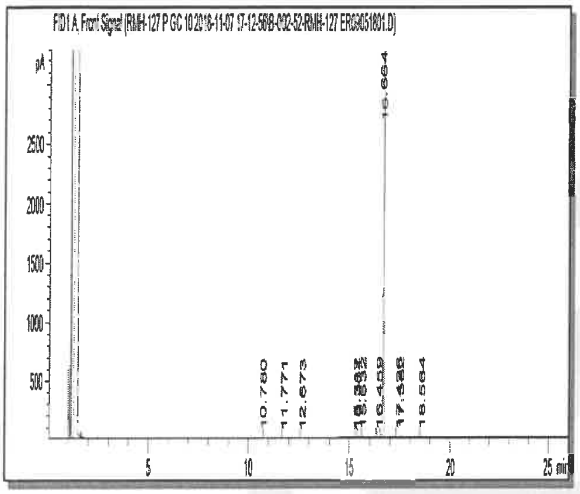

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

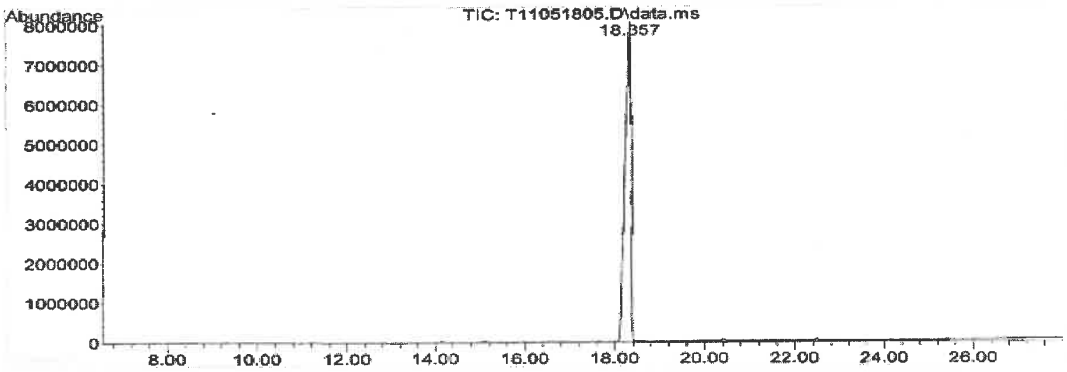

Mass Spectrum

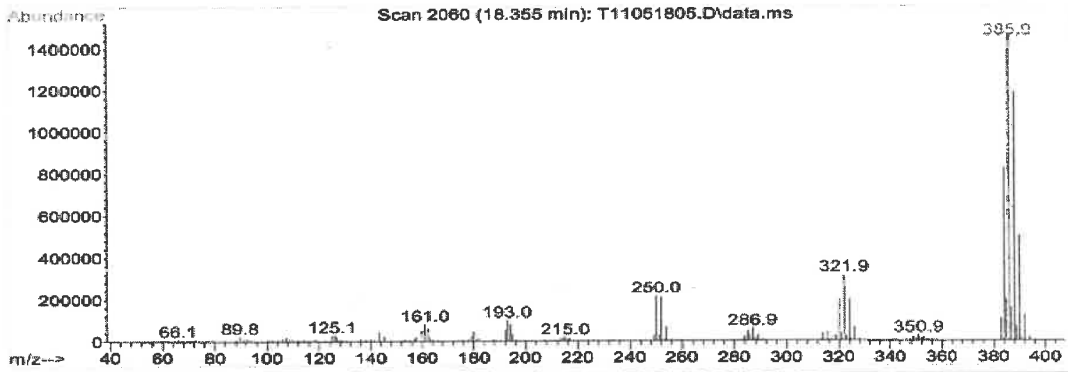

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

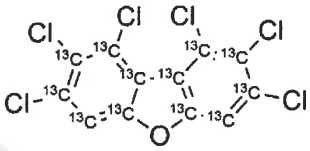

Catalog Number: EF-986
Solution Lot: ER01062016
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

792263

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

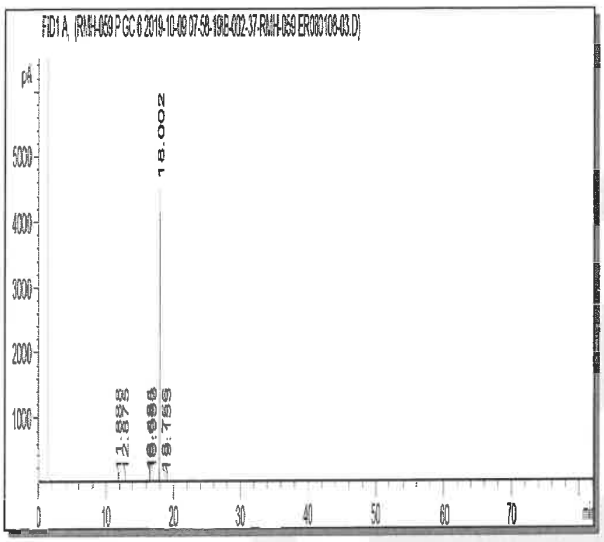

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

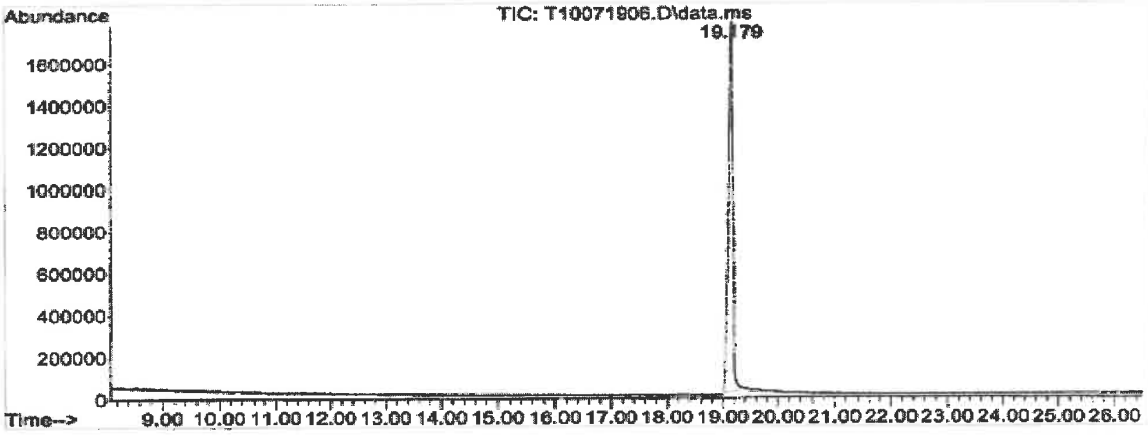

Mass Spectrum

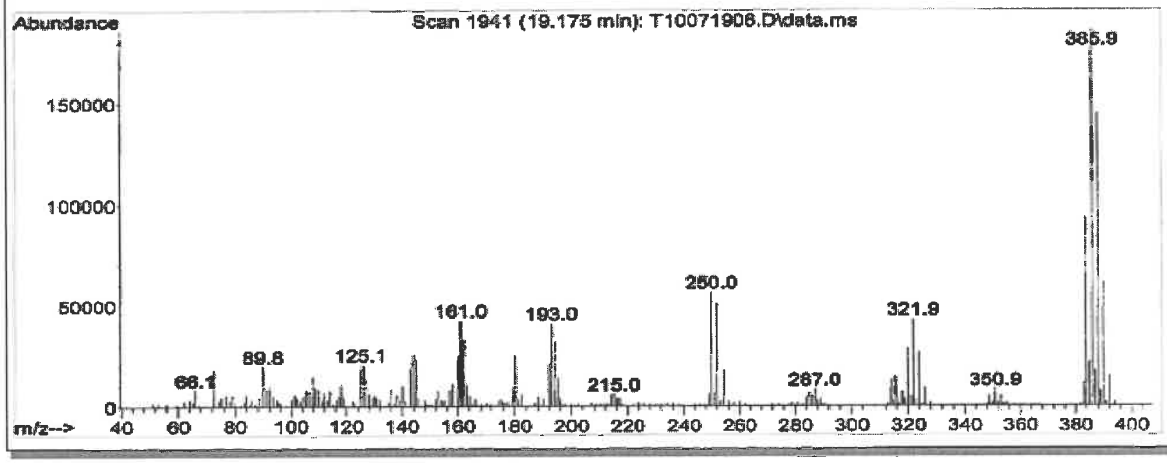

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant® Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

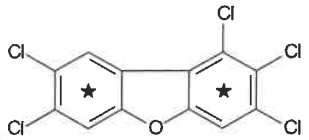

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

792270

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER090110-01

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 109719-77-9
Molecular Weight: 352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

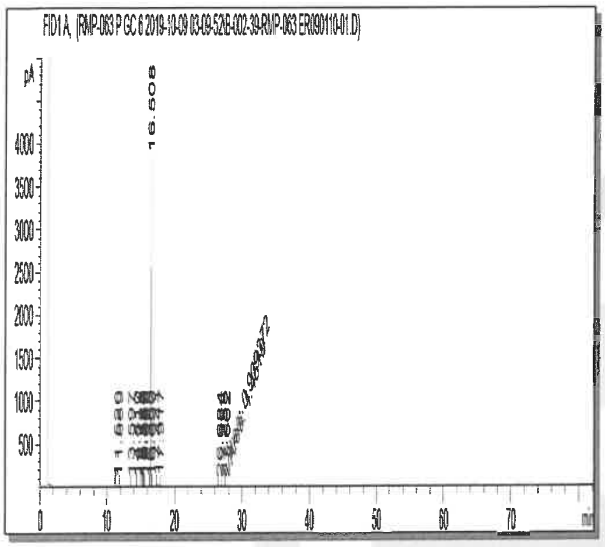

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER090110-01
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

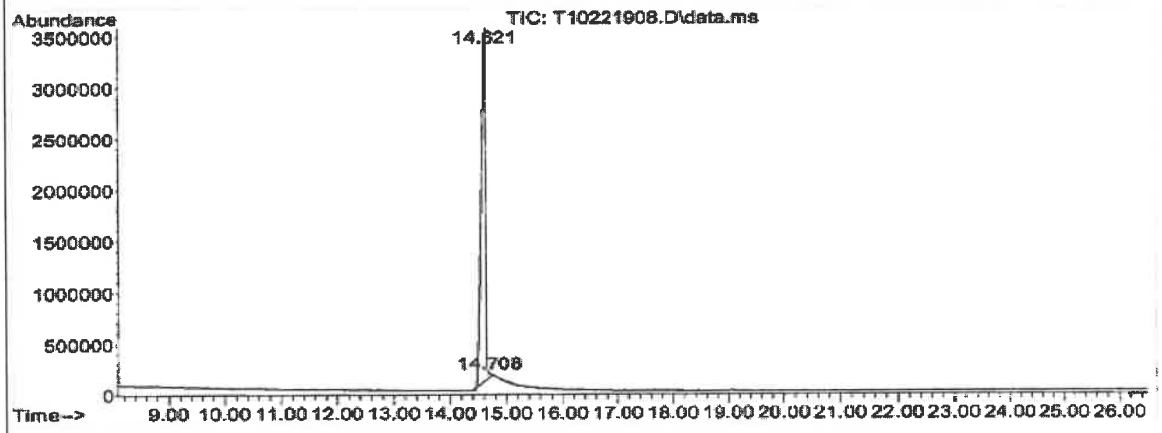

Mass Spectrum

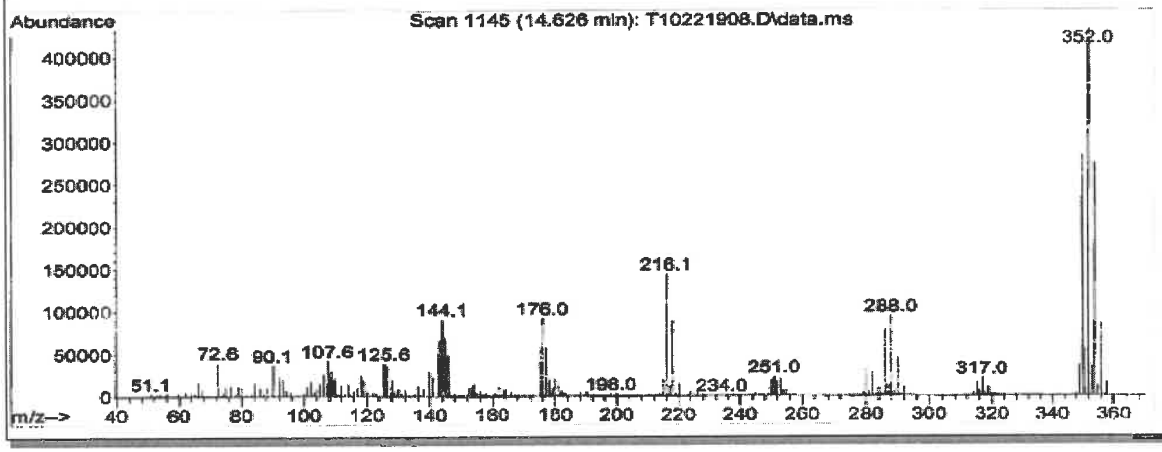

792273

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

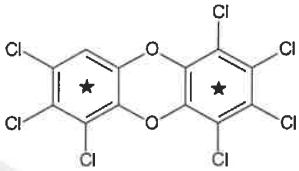

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

792277

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 0.999

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER100110-01

Chemical Formula: $^{13}C_{12}HCl_7O_2$
CAS Number: 109719-83-7
Molecular Weight: 437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

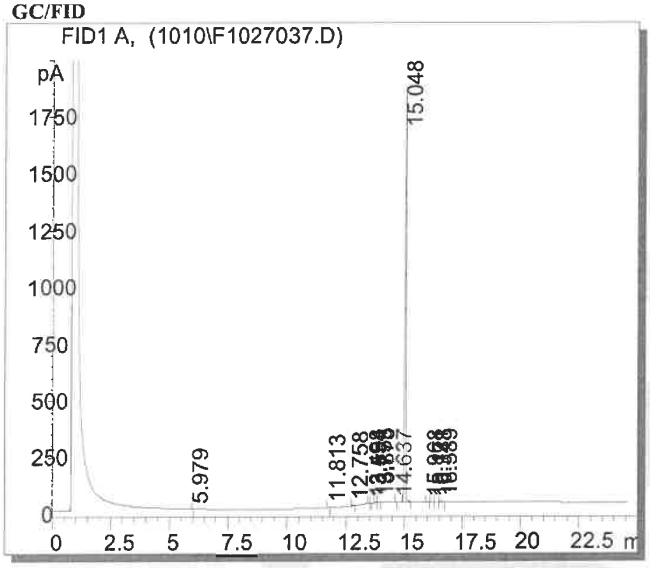

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

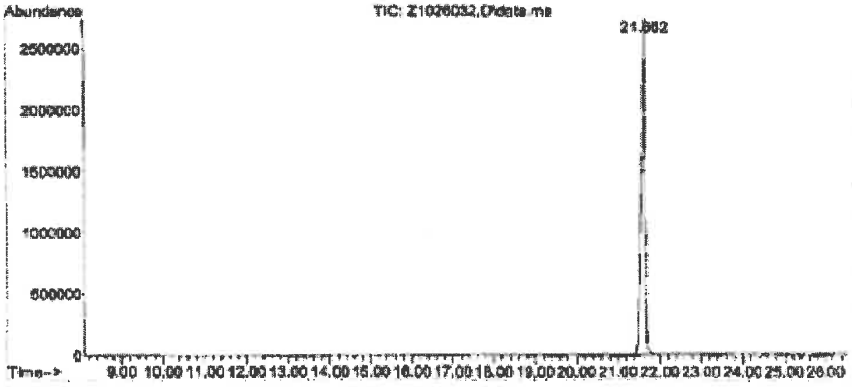

Mass Spectrum

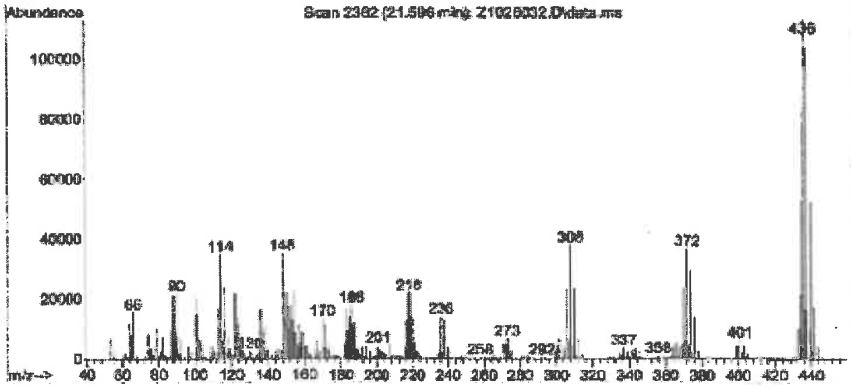

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

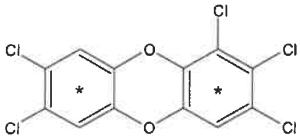

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

792282

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O_2$
Compound Lot:	ER06241403	**CAS Number:**	109719-79-1
		Molecular Weight:	368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

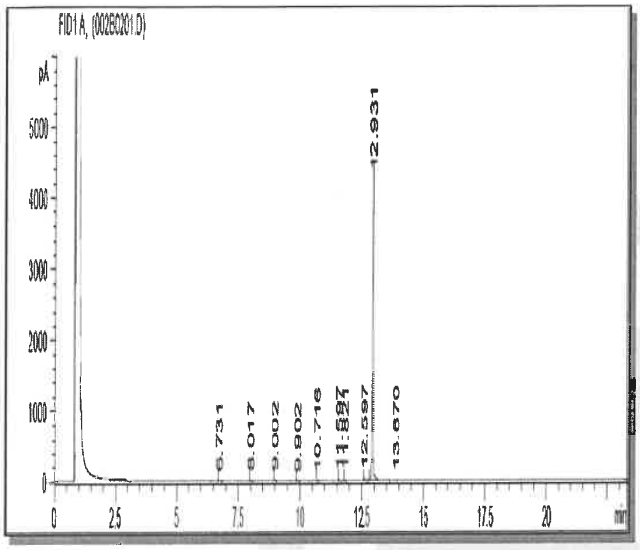

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

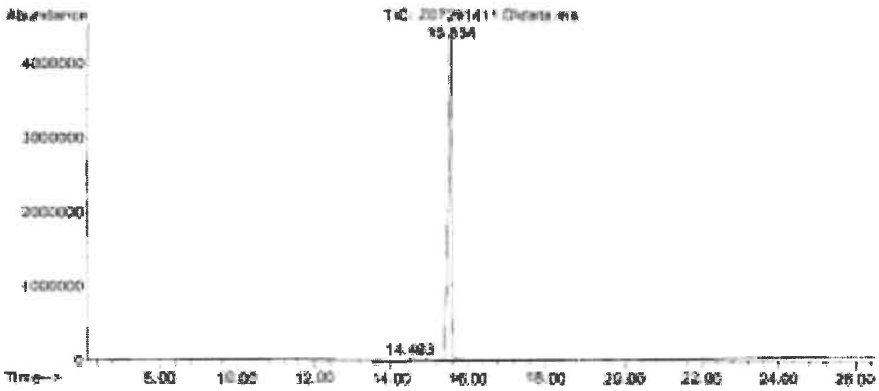

Mass Spectrum

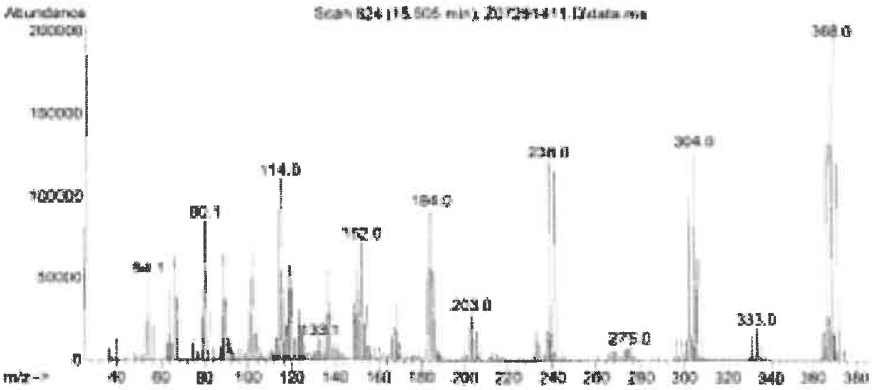

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

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Certificate of Analysis

ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

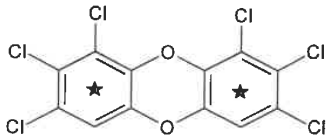

Catalog Number: ED-996
Solution Lot: ER08221601
Expiration Date: September 2026
Solvent: n-Nonane:Toluene (80:20)
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

792289

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

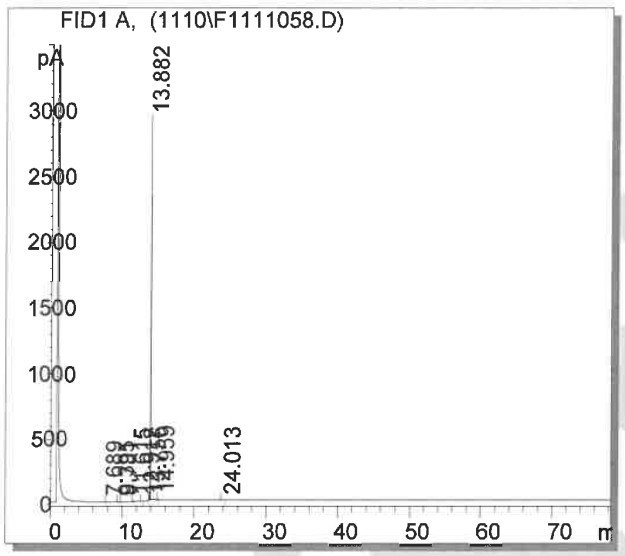

Column:	DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1110\F1111058.D
Instrument:	GC#6
Sample Name:	ER110510-01
Acquired:	November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

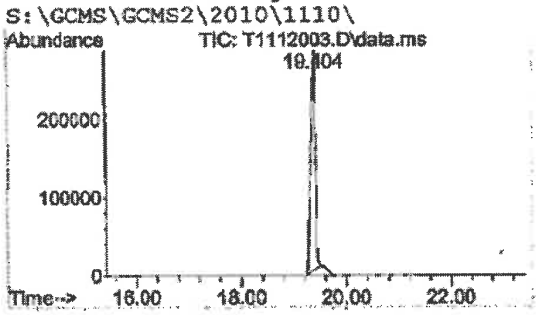

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

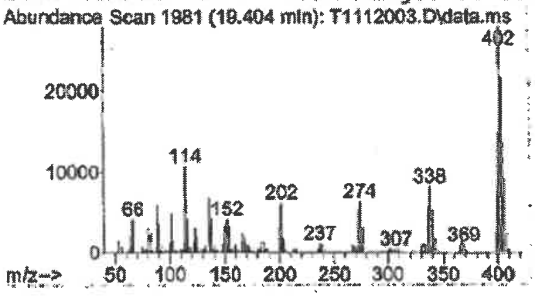

SIM Ion Chromatogram 1

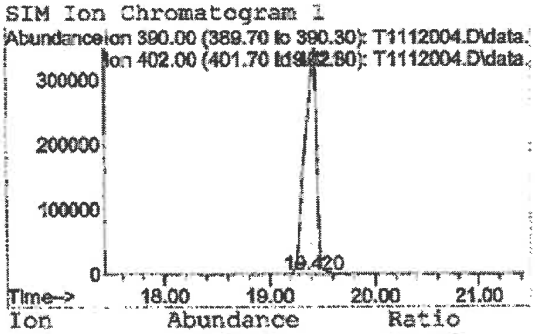

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

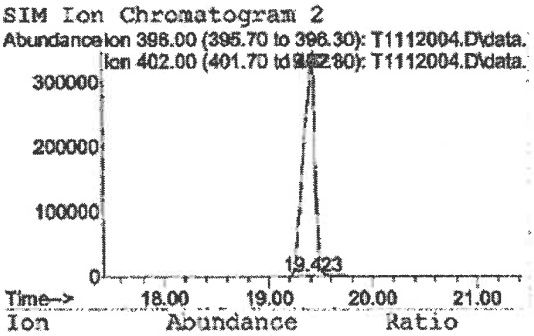

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

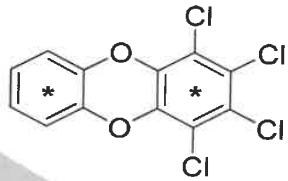

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 13194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

792296

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

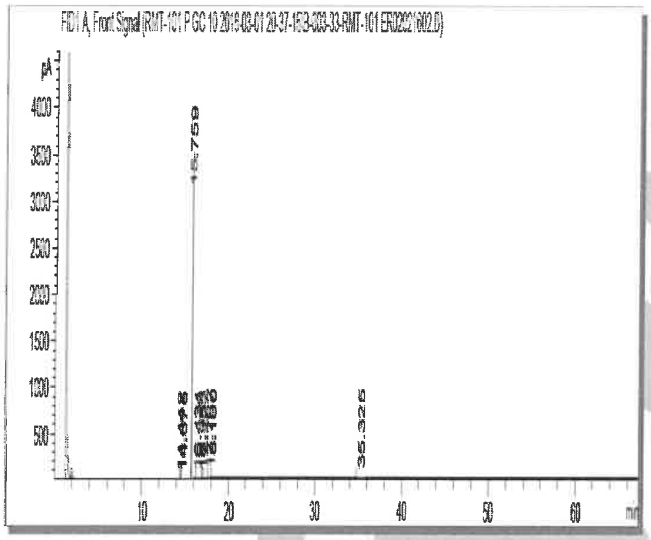

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

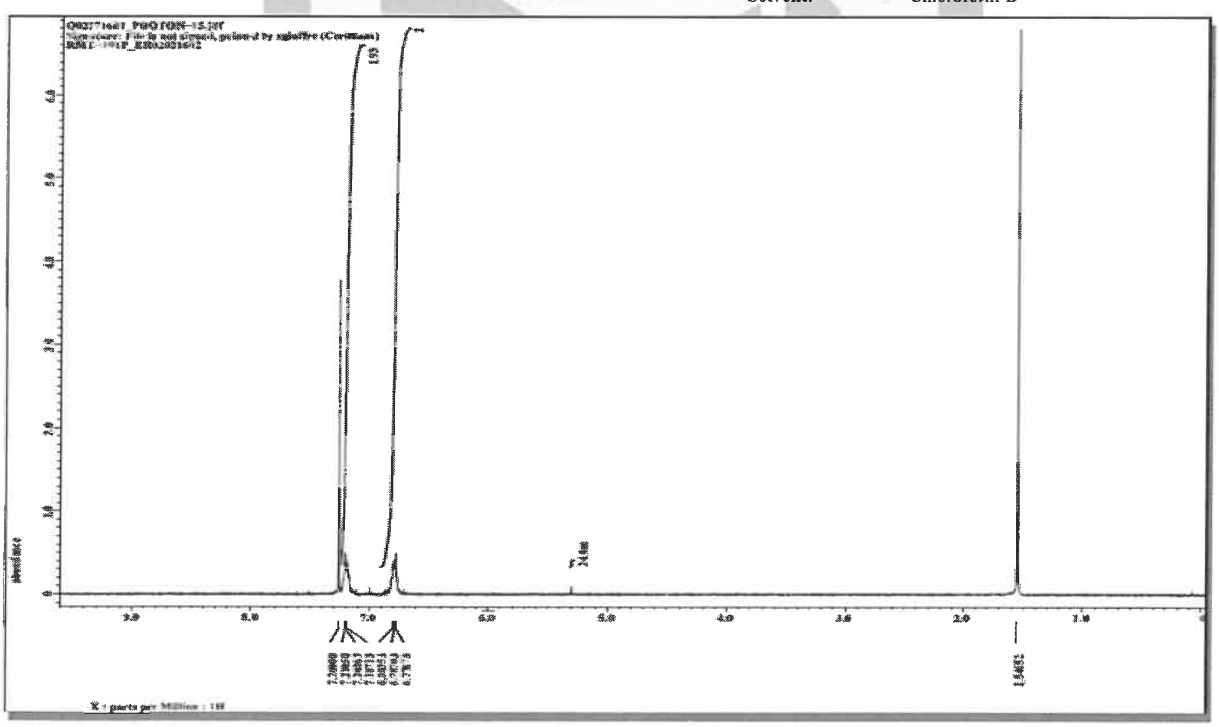

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER02021602
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Fri Feb 19 12:55:12 2016
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

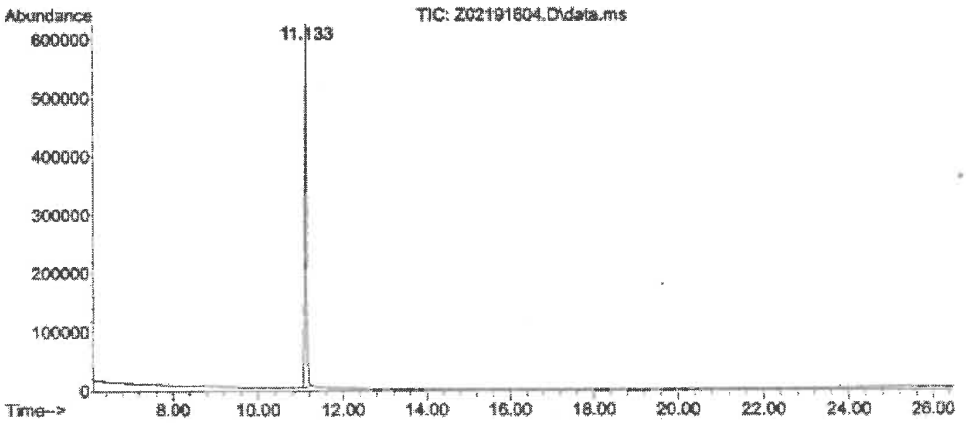

Mass Spectrum

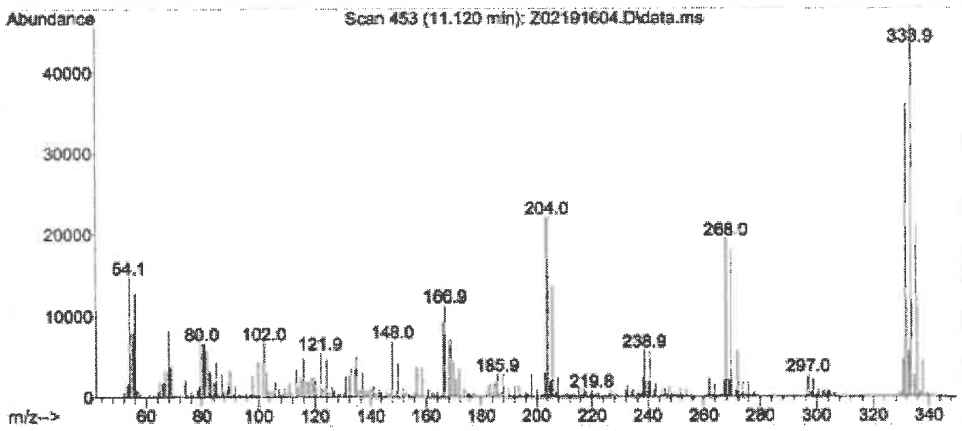

Reagent

HRDXNTA_00108

(2)

P: 4ba/19 SKJ

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

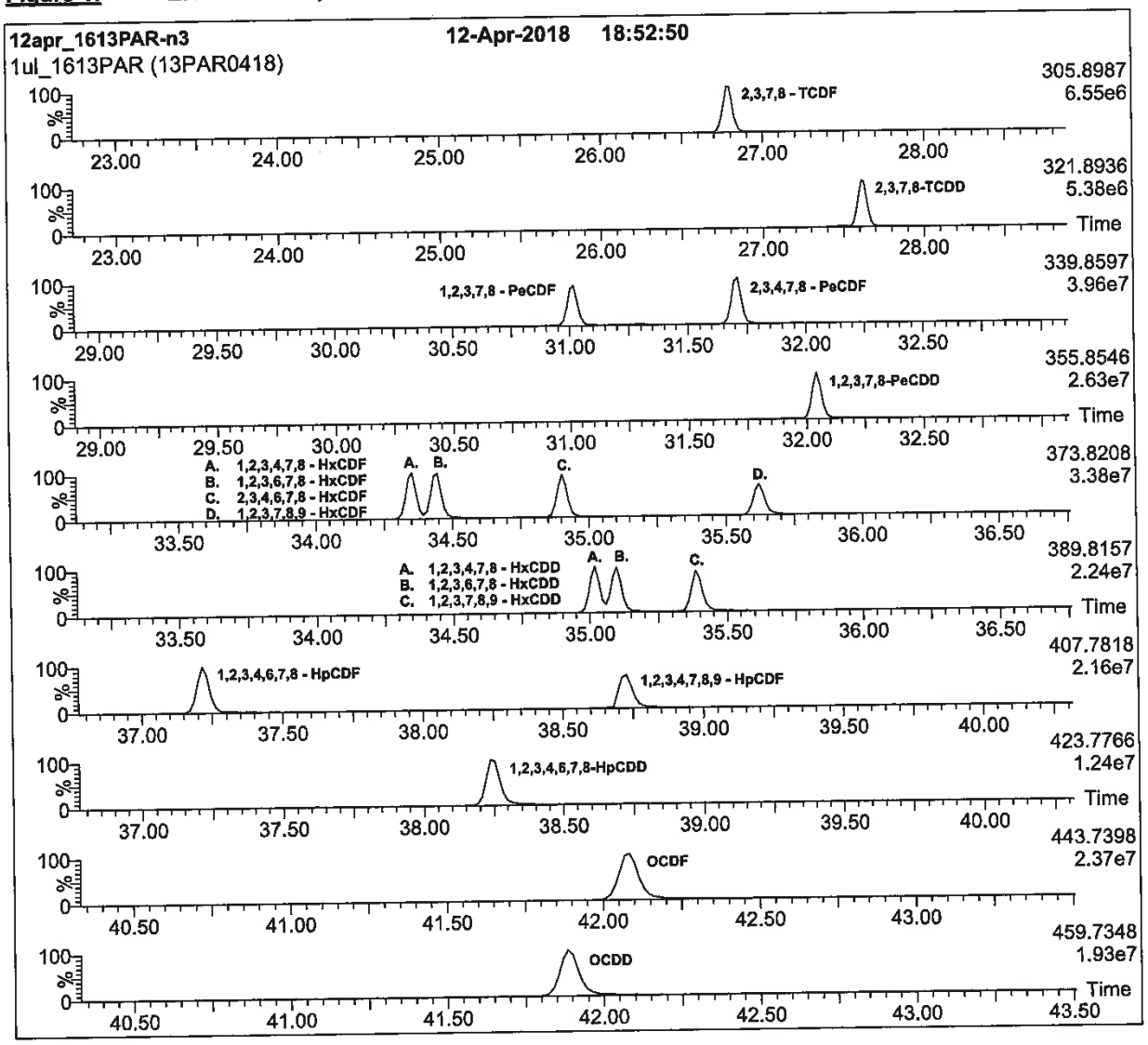

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

(3)

P: 4/3dic SKV

Cerilliant
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Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number: EDF-7999-10X
Solution Lot: ER02241602
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

792306

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/ECD
Column:	DB-5ms, 30 m x 0.25 mm ID, 0 25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min hold 3 min
Injector Temp:	Cool on-column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397 1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386 6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0 8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0 7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

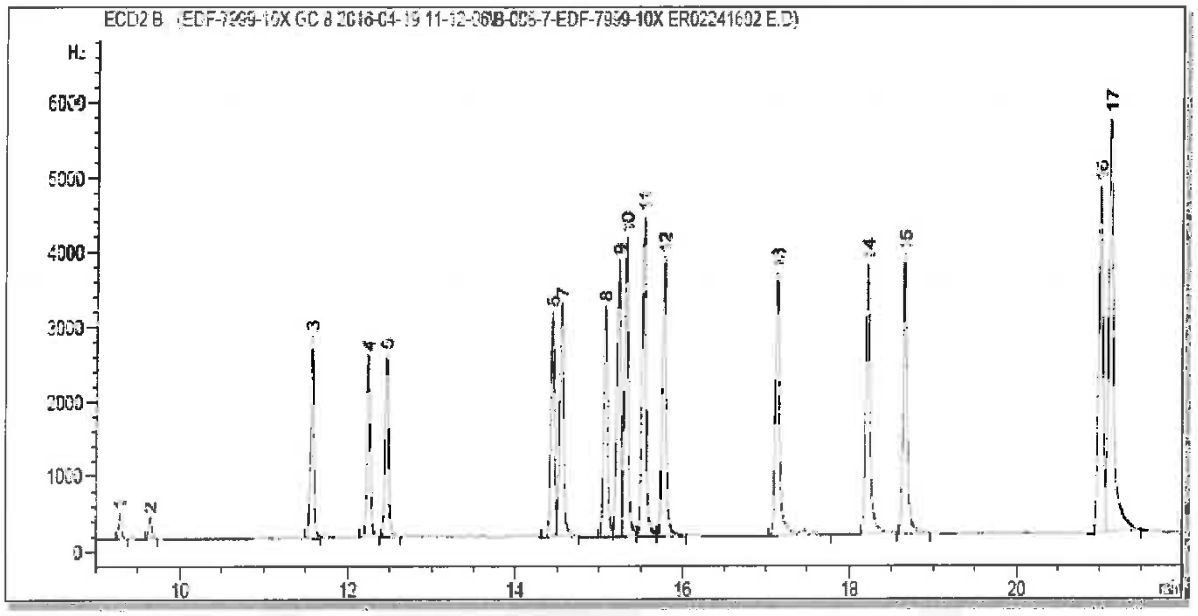

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

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Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Method 1613 PAR Stock Solution

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

792311

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

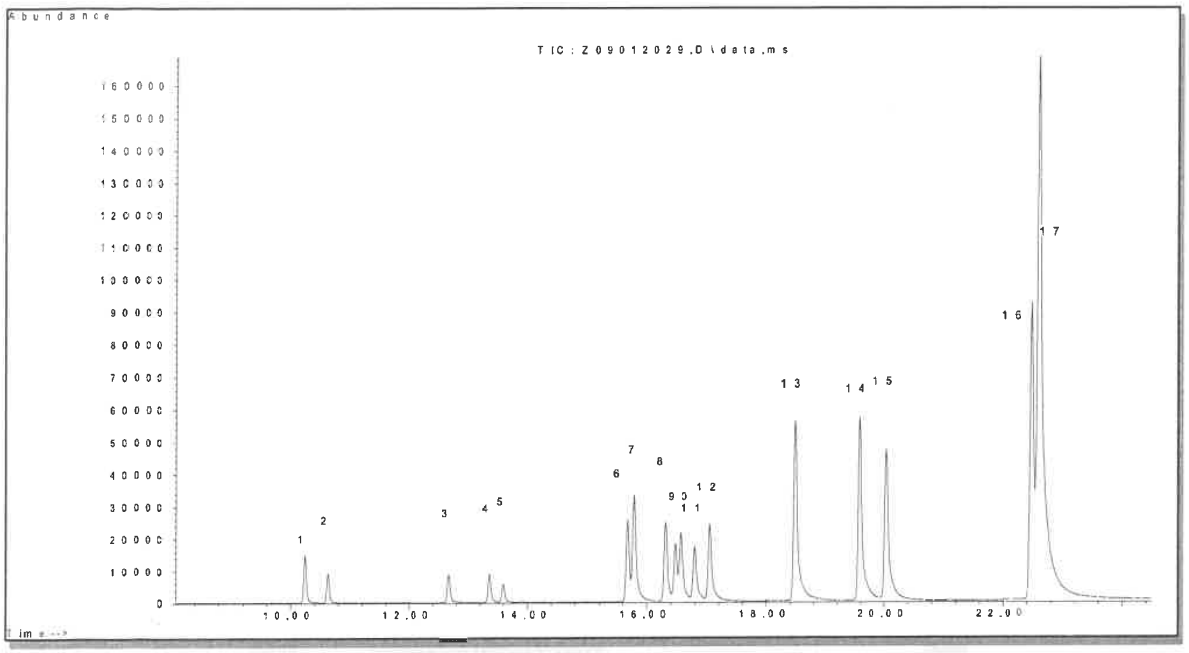

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-515492/2-A	46	47	65	47	50	50	54	47

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-515492/2-A	47	54	47	47	44	46	48	50

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-080221-BN -SJSB090 (16-18) RA	320-77214-9 RA	67	82
	320-77214-A-2-B MS RA	38	52
	320-77214-A-2-C MSD RA	45	53

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-080221-BN -SJSB090 (16-18)	320-77214-9	63	63	78	61	69	63	65	55
	MB 320-515492/1-A	52	54	66	54	59	57	58	49
	320-77214-A-2-B MS	57	40	63	68	76	81	67	57
	320-77214-A-2-C MSD	60	45	67	73	80	83	69	59

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-080221-BN -SJSB090 (16-18)	320-77214-9	58	66	56	60	53	60	64	62
	MB 320-515492/1-A	51	58	49	52	49	51	54	59
	320-77214-A-2-B MS	57	63	56	56	47	54	58	59
	320-77214-A-2-C MSD	60	65	59	59	51	57	61	64

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2110D5_4.d

Lab ID: LCS 320-515492/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	21.3	106	67-158	
2,3,7,8-TCDF	20.0	21.7	109	75-158	
1,2,3,7,8-PeCDD	100	108	108	70-142	
1,2,3,7,8-PeCDF	100	111	111	80-134	
2,3,4,7,8-PeCDF	100	102	102	68-160	
1,2,3,4,7,8-HxCDD	100	101	101	70-164	
1,2,3,6,7,8-HxCDD	100	111	111	76-134	
1,2,3,7,8,9-HxCDD	100	107	107	64-162	
1,2,3,4,7,8-HxCDF	100	96.9	97	72-134	
1,2,3,6,7,8-HxCDF	100	108	108	84-130	
1,2,3,7,8,9-HxCDF	100	107	107	78-130	
2,3,4,6,7,8-HxCDF	100	107	107	70-156	
1,2,3,4,6,7,8-HpCDD	100	109	109	70-140	
1,2,3,4,6,7,8-HpCDF	100	108	108	82-122	
1,2,3,4,7,8,9-HpCDF	100	102	102	78-138	
OCDD	200	213	106	78-144	
OCDF	200	208	104	63-170	
13C-2,3,7,8-TCDD	200	94.9	47	20-175	
13C-2,3,7,8-TCDF	200	91.2	46	22-152	
13C-1,2,3,7,8-PeCDD	200	99.6	50	21-227	
13C-1,2,3,7,8-PeCDF	200	93.5	47	21-192	
13C-2,3,4,7,8-PeCDF	200	99.3	50	13-328	
13C-1,2,3,4,7,8-HxCDD	200	108	54	21-193	
13C-1,2,3,6,7,8-HxCDD	200	93.3	47	25-163	
13C-1,2,3,4,7,8-HxCDF	200	108	54	19-202	
13C-1,2,3,6,7,8-HxCDF	200	94.4	47	21-159	
13C-1,2,3,7,8,9-HxCDF	200	93.1	47	17-205	
13C-2,3,4,6,7,8-HxCDF	200	94.8	47	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	91.9	46	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	88.9	44	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	96.8	48	20-186	
13C-OCDD	400	199	50	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2110D5_7.d

Lab ID: 320-77214-A-2-B MS Client ID:

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	27.1	5100	3690	-5063	67-158	E 4 G
1,2,3,7,8-PeCDD	136	35	178	105	70-142	
1,2,3,7,8-PeCDF	136	410	416	5	80-134	F1
2,3,4,7,8-PeCDF	136	230	305	52	68-160	F1
1,2,3,4,7,8-HxCDD	136	0.84 J	139	102	70-164	
1,2,3,6,7,8-HxCDD	136	4.0 J	156	112	76-134	
1,2,3,7,8,9-HxCDD	136	2.4 J	143	104	64-162	
1,2,3,4,7,8-HxCDF	136	1000	454	-425	72-134	4
1,2,3,6,7,8-HxCDF	136	240	237	-1	84-130	F1
1,2,3,7,8,9-HxCDF	136	9.6	147	101	78-130	
2,3,4,6,7,8-HxCDF	136	18	160	104	70-156	
1,2,3,4,6,7,8-HpCDD	136	83	211	94	70-140	
1,2,3,4,6,7,8-HpCDF	136	390	255	-96	82-122	F1
1,2,3,4,7,8,9-HpCDF	136	130	172	34	78-138	F1
OCDD	271	1600	1340	-79	78-144	4
OCDF	271	170	338	62	63-170	F1
13C-2,3,7,8-TCDD	271	96	109	40	25-164	
13C-2,3,7,8-TCDF	271	140	154	57	24-169	
13C-1,2,3,7,8-PeCDD	271	220	219	81	25-181	
13C-1,2,3,7,8-PeCDF	271	180	186	68	24-185	
13C-2,3,4,7,8-PeCDF	271	200	206	76	21-178	
13C-1,2,3,4,7,8-HxCDD	271	160	171	63	32-141	
13C-1,2,3,6,7,8-HxCDD	271	140	151	56	28-130	
13C-1,2,3,4,7,8-HxCDF	271	180	181	67	26-152	
13C-1,2,3,6,7,8-HxCDF	271	150	155	57	26-123	
13C-1,2,3,7,8,9-HxCDF	271	140	151	56	29-147	
13C-2,3,4,6,7,8-HxCDF	271	150	155	57	28-136	
13C-1,2,3,4,6,7,8-HpCDD	271	140	147	54	23-140	
13C-1,2,3,4,6,7,8-HpCDF	271	120	127	47	28-143	
13C-1,2,3,4,7,8,9-HpCDF	271	150	156	58	26-138	
13C-OCDD	543	310	320	59	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 31AU2111D2_016.d

Lab ID: 320-77214-A-2-B MS RA Client ID:

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	27.1	12000	9380	-9885	75-158	G E 4
13C-2,3,7,8-TCDF	271	130	102	38	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2110D5_8.d

Lab ID: 320-77214-A-2-C MSD Client ID:

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	26.2	2400	-10179	42	50	67-158	E 4 G
1,2,3,7,8-PeCDD	131	161	96	10	50	70-142	
1,2,3,7,8-PeCDF	131	389	-16	7	50	80-134	F1
2,3,4,7,8-PeCDF	131	266	24	13	50	68-160	F1
1,2,3,4,7,8-HxCDD	131	137	104	2	50	70-164	
1,2,3,6,7,8-HxCDD	131	141	105	10	50	76-134	
1,2,3,7,8,9-HxCDD	131	137	103	4	50	64-162	
1,2,3,4,7,8-HxCDF	131	432	-457	5	50	72-134	4
1,2,3,6,7,8-HxCDF	131	223	-12	6	50	84-130	F1
1,2,3,7,8,9-HxCDF	131	144	102	2	50	78-130	
2,3,4,6,7,8-HxCDF	131	151	101	6	50	70-156	
1,2,3,4,6,7,8-HpCDD	131	198	88	6	50	70-140	
1,2,3,4,6,7,8-HpCDF	131	230	-119	10	50	82-122	F1
1,2,3,4,7,8,9-HpCDF	131	162	28	6	50	78-138	F1
OCDD	262	1350	-78	1	50	78-144	4
OCDF	262	323	58	5	50	63-170	F1
13C-2,3,7,8-TCDD	262	118	45			25-164	
13C-2,3,7,8-TCDF	262	158	60			24-169	
13C-1,2,3,7,8-PeCDD	262	218	83			25-181	
13C-1,2,3,7,8-PeCDF	262	191	73			24-185	
13C-2,3,4,7,8-PeCDF	262	209	80			21-178	
13C-1,2,3,4,7,8-HxCDD	262	170	65			32-141	
13C-1,2,3,6,7,8-HxCDD	262	156	59			28-130	
13C-1,2,3,4,7,8-HxCDF	262	181	69			26-152	
13C-1,2,3,6,7,8-HxCDF	262	155	59			26-123	
13C-1,2,3,7,8,9-HxCDF	262	153	59			29-147	
13C-2,3,4,6,7,8-HxCDF	262	156	60			28-136	
13C-1,2,3,4,6,7,8-HpCDD	262	149	57			23-140	
13C-1,2,3,4,6,7,8-HpCDF	262	133	51			28-143	
13C-1,2,3,4,7,8,9-HpCDF	262	160	61			26-138	
13C-OCDD	523	334	64			17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 31AU2111D2_017.d

Lab ID: 320-77214-A-2-C MSD RA Client ID:

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDF	26.2	5870	-23652	46	50	75-158	G E 4
13C-2,3,7,8-TCDF	262	118	45			24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab File ID: 25AU2110D5_3.d Lab Sample ID: MB 320-515492/1-A

Matrix: Sediment Date Extracted: 08/12/2021 05:19

Instrument ID: 10D5 Date Analyzed: 08/25/2021 11:20

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-515492/2-A	25AU2110D5_4.d	08/25/2021 12:05
	320-77214-A-2-B MS	25AU2110D5_7.d	08/25/2021 14:20
	320-77214-A-2-C MSD	25AU2110D5_8.d	08/25/2021 15:05
11215702-080221-BN-SJSB090 (16-18)	320-77214-9	25AU2110D5_19.d	08/25/2021 23:50
11215702-080221-BN-SJSB090 (16-18) RA	320-77214-9 RA	27AU21A11D2_009.d	08/27/2021 20:45
	320-77214-A-2-B MS RA	31AU2111D2_016.d	08/31/2021 22:48
	320-77214-A-2-C MSD RA	31AU2111D2_017.d	08/31/2021 23:27

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-2
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (16-18)
Lab Sample ID: 320-77214-9
Matrix: Sediment
Lab File ID: 25AU2110D5_19.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:50
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.56(g)
Date Analyzed: 08/25/2021 23:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 37.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.87	J q	1.7	0.20
40321-76-4	1,2,3,7,8-PeCDD	ND		8.4	0.23
57117-41-6	1,2,3,7,8-PeCDF	ND		8.4	0.17
57117-31-4	2,3,4,7,8-PeCDF	ND		8.4	0.17
39227-28-6	1,2,3,4,7,8-HxCDD	0.84	J	8.4	0.29
57653-85-7	1,2,3,6,7,8-HxCDD	0.89	J	8.4	0.32
19408-74-3	1,2,3,7,8,9-HxCDD	2.8	J	8.4	0.27
70648-26-9	1,2,3,4,7,8-HxCDF	ND		8.4	0.13
57117-44-9	1,2,3,6,7,8-HxCDF	ND		8.4	0.14
72918-21-9	1,2,3,7,8,9-HxCDF	0.10	J q	8.4	0.090
60851-34-5	2,3,4,6,7,8-HxCDF	ND		8.4	0.096
35822-46-9	1,2,3,4,6,7,8-HpCDD	31	B	8.4	0.63
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		8.4	0.12
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		8.4	0.14
3268-87-9	OCDD	780	B	17	2.4
39001-02-0	OCDF	0.88	J B	17	0.14
41903-57-5	Total TCDD	4.5	q	1.7	0.20
30402-14-3	Total TCDF	4.2	q B	1.7	0.17
36088-22-9	Total PeCDD	4.3	J q	8.4	0.23
30402-15-4	Total PeCDF	ND		8.4	0.19
34465-46-8	Total HxCDD	35		8.4	0.29
55684-94-1	Total HxCDF	ND		8.4	0.11
37871-00-4	Total HpCDD	120	B	8.4	0.63
38998-75-3	Total HpCDF	ND		8.4	0.14

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-2
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (16-18)
Lab Sample ID: 320-77214-9
Matrix: Sediment
Lab File ID: 25AU2110D5_19.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:50
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.56(g)
Date Analyzed: 08/25/2021 23:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 37.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	63		25-164
89059-46-1	13C-2,3,7,8-TCDF	63		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	63		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	61		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	69		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	66		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	65		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	55		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	60		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	58		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	60		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	53		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	64		26-138
114423-97-1	13C-OCDD	62		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	78		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d
Lims ID: 320-77214-A-9-A
Client ID: 11215702-080221-BN-SJSB090 (16-18)
Sample Type: Client
Inject. Date: 25-Aug-2021 23:50:48 ALS Bottle#: 30 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-9-A 320-77214-A-9-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:21:41 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:38:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.567	26965146	0.80	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.069	27526654	0.78	1.6249	62.8	62.8	0.2569	0.2569	62.82	
2,3,7,8-TCDF	17.084	217481	0.70	1.0239	0.7716	0.7716	0.0506	0.0506		M
A Non-2,3,7,8-sub-TCDF	17.069	135767	0.77	1.0239	0.4993	0.4817	0.0506	0.3823		RQM
S Total TCDF					1.271	1.253	0.0506	0.0506		RQ
D 13C-2,3,7,8-TCDD	17.764	15322175	0.79	0.8993	63.2	63.2	0.2114	0.2114	63.18	
2,3,7,8-TCDD	17.779	50166	0.77	1.2541	0.3134	0.2611	0.0594	0.0594		RQM
$ 37Cl4-2,3,7,8-TCDD	17.779	9262295		1.1071	31.0	31.0	0.0584	0.0584	77.56	
A Non-2,3,7,8-sub-TCDD	17.530	207702	0.77	1.2541	1.101	1.081	0.0594	0.4185		RQ
S Total TCDD					1.415	1.342	0.0594	0.0594		RQ
D 13C-1,2,3,7,8-PeCDF	22.020	19958751	1.56	1.2101	61.2	61.2	0.1223	0.1223	61.17	
1,2,3,7,8-PeCDF	22.047						0.0518	0.0518		
D 13C-2,3,4,7,8-PeCDF	23.343	23058026	1.56	1.2395	69.0	69.0	0.1194	0.1194	68.99	
2,3,4,7,8-PeCDF	23.370						0.0504	0.0504		
A F1 PeCDFs	19.851						0.0573	0.0573		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0511	0.0511		
S Total PeCDF							0.0573	0.0573		
D 13C-1,2,3,7,8-PeCDD	24.052	13005823	1.61	0.7612	63.4	63.4	0.0845	0.0845	63.36	
1,2,3,7,8-PeCDD	24.079						0.0701	0.0701		
A Non-2,3,7,8-sub-PeCDD	23.696	175891	1.55	1.0484	1.307	1.290	0.0701	0.6277		RQ
S Total PeCDD					1.307	1.290	0.0701	0.0701		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.186	18299393	0.52	1.0837	64.8	64.8	0.2556	0.2556	64.75	
1,2,3,4,7,8-HxCDF	30.212						0.0401	0.0401		
D 13C-1,2,3,6,7,8-HxCDF	30.399	16153074	0.52	1.1279	54.9	54.9	0.2456	0.2456	54.92	
1,2,3,6,7,8-HxCDF	30.412						0.0404	0.0404		
D 13C-2,3,4,6,7,8-HxCDF	31.304	16129033	0.52	1.0637	58.1	58.1	0.2604	0.2604	58.14	
2,3,4,6,7,8-HxCDF	31.317						0.0285	0.0285		
D 13C-1,2,3,7,8,9-HxCDF	32.143	15065305	0.50	0.9676	59.7	59.7	0.2863	0.2863	59.71	
1,2,3,7,8,9-HxCDF	32.169	5376	1.24	1.1664	0.0418	0.0306	0.0268	0.0268		RQM
A Non-2,3,7,8-sub-HxCDF	30.331						0.0329	0.0329		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.0418	0.0306	0.0340	0.0340		RQ
* 13C-1,2,3,7,8,9-HxCDD	31.956	26077851	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.504	12560372	1.28	0.7334	65.7	65.7	0.2157	0.2157	65.67	
1,2,3,4,7,8-HxCDD	31.517	33379	1.25	1.0640	0.2498	0.2498	0.0857	0.0857		M
D 13C-1,2,3,6,7,8-HxCDD	31.610	12859830	1.24	0.8802	56.0	56.0	0.1797	0.1797	56.03	
1,2,3,6,7,8-HxCDD	31.637	34163	1.30	1.0001	0.2656	0.2656	0.0948	0.0948		Ma
1,2,3,7,8,9-HxCDD	31.956	118964	1.35	1.1325	0.8265	0.8265	0.0821	0.0821		
A Non-2,3,7,8-sub-HxCDD	30.519	1247493	1.27	1.0655	9.211	9.211	0.0872	6.839		
S Total HxCDD					10.6	10.6	0.0875	0.0875		
D 13C-1,2,3,4,6,7,8-HpCDF	33.616	10729620	0.43	0.7730	53.2	53.2	1.004	1.004	53.23	
1,2,3,4,6,7,8-HpCDF	33.603						0.0362	0.0362		
D 13C-1,2,3,4,7,8,9-HpCDF	34.685	11760041	0.42	0.7008	64.3	64.3	1.107	1.107	64.35	
1,2,3,4,7,8,9-HpCDF	34.673						0.0410	0.0410		
A Non-2,3,7,8-sub-HpCDF	34.138						0.0385	0.0385		
S Total HpCDF							0.0410	0.0410		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	10065696	1.01	0.6472	59.6	59.6	0.5185	0.5185	59.64	
1,2,3,4,6,7,8-HpCDD	34.405	1015295	0.99	1.0943	9.217	9.217	0.1867	0.1867		
A Non-2,3,7,8-sub-HpCDD	34.223	2773643	1.05	1.0943	25.2	25.2	0.1867	25.2		
S Total HpCDD					34.4	34.4	0.1867	0.1867		
D 13C-OCDD	36.701	14380154	0.88	0.4472	123.3	123.3	0.1997	0.1997	61.66	
OCDF	36.797	27281	0.87	1.4382	0.2638	0.2638	0.0431	0.0431		M
OCDD	36.713	18474530	0.89	1.1070	232.1	232.1	0.7016	0.7016		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

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Client ID: 11215702-080221-BN-SJSB090 (16-18)
Sample Type: Client
Inject. Date: 25-Aug-2021 23:50:48 ALS Bottle#: 30 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-9-A 320-77214-A-9-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
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Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:38:09

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.567	17.598	-2		11956990	3030569	3248	8120	933		a
333.9339	17.567	17.598	-2		15008156	3894072	2017	5042	1931	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.069	17.084	-1	0.972	12074367	3083192	8427	21067	366		
317.9389	17.069	17.084	-1	0.972	15452287	4003757	3137	7842	1276	0.78(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.084	17.099	-1	1.001	89914	21738	595	1487	37		
305.8987	17.084	17.099	-1	1.001	127567	29982	873	2182	34	0.70(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	15.179	17.069	-113	0.889	12188	3477	595	1487	6		
305.8987	15.179	17.069	-113	0.889	20799	5855	873	2182	7	0.59(0.65-0.89)	
	Empc Correction				15828	4515	873	2182	5		
303.9016	16.706	17.069	-22	0.979	45021	12184	595	1487	20		
305.8987	16.691	17.069	-23	0.978	62730	16821	873	2182	19	0.72(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	17.764	17.779	-1	1.011	6756580	1654493	3248	8120	509		
333.9339	17.764	17.779	-1	1.011	8565595	2104438	2017	5042	1043	0.79(0.65-0.89)	
2,3,7,8-TCDD											RQM
319.8965	17.779	17.794	-1	1.001	21824	7159	675	1687	11		M
321.8936	17.779	17.794	-1	1.001	38399	8806	445	1112	20	0.57(0.65-0.89)	M
	Empc Correction				28342	9297	445	1112	21		
37Cl4-2,3,7,8-TCDD											
327.8847	17.779	17.809	-2	1.012	9262295	2263172	1791	4477	1264		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	15.874	17.530	-99	0.894	11980	3712	675	1687	5		
321.8936	15.874	17.530	-99	0.894	14154	4281	445	1112	10	0.85(0.65-0.89)	
319.8965	16.660	17.530	-52	0.938	30052	8780	675	1687	13		
321.8936	16.645	17.530	-53	0.937	46150	9936	445	1112	22	0.65(0.65-0.89)	
319.8965	17.552	17.530	1	0.988	14770	3646	675	1687	5		
	Empc Correction				10852	2631	675	1687	4		
321.8936	17.552	17.530	1	0.988	14094	3417	445	1112	8	1.05(0.65-0.89)	
319.8965	17.673	17.530	9	0.995	35927	9950	675	1687	15		
321.8936	17.673	17.530	9	0.995	44493	12209	445	1112	27	0.81(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.253	12160880	2307512	2381	5952	969		
353.8970	22.020	22.020	0	1.253	7797871	1467815	1717	4292	855	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.047						248	620			
341.8567	22.047						583	1457			
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.329	14052696	2481257	2381	5952	1042		
353.8970	23.343	23.343	0	1.329	9005330	1568839	1717	4292	914	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370						248	620			
341.8567	23.370						583	1457			
A F1 PeCDFs											
339.8597	19.851						231	577			
341.8567	19.851						701	1752			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.067						248	620			
341.8567	23.067						583	1457			
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.369	8029419	1325580	1011	2527	1311		
369.8919	24.052	24.052	0	1.369	4976404	825942	770	1925	1073	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079						450	1125			
357.8516	24.079						183	457			
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.652	23.696	-122	0.900	52644	10376	450	1125	23		
357.8516	21.638	23.696	-123	0.900	32947	6162	183	457	34	1.60(1.32-1.78)	
355.8546	22.320	23.696	-82	0.928	11556	2282	450	1125	5		
357.8516	22.306	23.696	-83	0.927	7084	1359	183	457	7	1.63(1.32-1.78)	
355.8546	22.906	23.696	-47	0.952	7383	1719	450	1125	4		
357.8516	22.947	23.696	-45	0.954	7079	1288	183	457	7	1.04(1.32-1.78)	
	Empc Correction				4763	1109	183	457	6		
355.8546	23.125	23.696	-34	0.961	34738	5255	450	1125	12		
357.8516	23.097	23.696	-36	0.960	24776	4122	183	457	23	1.40(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.186	30.186	0	0.945	6251249	1109549	2013	5032	551		
385.8610	30.186	30.186	0	0.945	12048144	2164798	6618	16545	327	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.212						316	790			
375.8178	30.212						254	635			
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	5520056	1071907	2013	5032	532		
385.8610	30.399	30.399	0	0.951	10633018	2058053	6618	16545	311	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412						316	790			
375.8178	30.412						254	635			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.304	31.291	1	0.980	5531200	1470313	2013	5032	730		
385.8610	31.304	31.291	1	0.980	10597833	2804818	6618	16545	424	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317						316	790			
375.8178	31.317						254	635			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.142	0	1.006	5003247	1547947	2013	5032	769		
385.8610	32.143	32.142	0	1.006	10062058	3014533	6618	16545	456	0.50(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	32.169	32.156	1	1.001	4937	2138	316	790	7		M
	Empc Correction				2976	1287	316	790	4		
375.8178	32.156	32.156	0	1.000	2400	1038	254	635	4	2.06(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.331						316	790			
375.8178	30.331						254	635			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		14378103	4338268	2710	6775	1601		
403.8529	31.956	31.956	0		11699748	3451801	2219	5547	1556	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.504	31.503	0	0.986	7056231	2058578	2710	6775	760		
403.8529	31.504	31.503	0	0.986	5504141	1599938	2219	5547	721	1.28(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.517	31.517	0	1.000	18572	6062	794	1985	8		
391.8127	31.517	31.517	0	1.000	14807	4967	540	1350	9	1.25(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	7113061	1936990	2710	6775	715		
403.8529	31.610	31.610	0	0.989	5746769	1579032	2219	5547	712	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											Ma
389.8157	31.637	31.623	1	1.001	19321	5056	794	1985	6		M
391.8127	31.624	31.623	0	1.000	14842	3952	540	1350	7	1.30(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.956	31.969	-1	1.014	68445	13641	794	1985	17		
391.8127	31.956	31.969	-1	1.014	50519	11185	540	1350	21	1.35(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.055	30.519	-88	0.919	518281	64636	794	1985	81		
391.8127	29.068	30.519	-87	0.920	407884	53996	540	1350	100	1.27(1.05-1.43)	
389.8157	30.293	30.519	-14	0.958	20294	3816	794	1985	5		
391.8127	30.279	30.519	-14	0.958	14920	3128	540	1350	6	1.36(1.05-1.43)	
389.8157	30.705	30.519	11	0.971	159393	29722	794	1985	37		
391.8127	30.705	30.519	11	0.971	126721	24167	540	1350	45	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.616	33.603	1	1.052	3230131	1205337	6068	15170	199		
419.8220	33.616	33.603	1	1.052	7499489	2910632	18110	45275	161	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603						607	1517			
409.7789	33.603						253	632			
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.685	34.672	1	1.085	3467705	1168479	6068	15170	193		
419.8220	34.685	34.672	1	1.085	8292336	2813249	18110	45275	155	0.42(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673						607	1517			
409.7789	34.673						253	632			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						607	1517			
409.7789	34.138						253	632			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	5055576	1812100	5045	12612	359		
437.8140	34.393	34.393	0	1.076	5010120	1782798	5411	13527	329	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.393	1	1.000	505660	182942	1515	3787	121		
425.7737	34.405	34.393	1	1.000	509635	175814	1423	3557	124	0.99(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.859	34.223	-22	0.984	1417711	505111	1515	3787	333		
425.7737	33.859	34.223	-22	0.984	1355932	507606	1423	3557	357	1.05(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.701	0	1.148	6720604	2057373	1259	3147	1634		
471.7750	36.701	36.701	0	1.148	7659550	2399754	1524	3810	1575	0.88(0.76-1.02)	
OCDF											M
441.7428	36.797	36.797	0	1.003	12668	3804	231	577	16		M
443.7399	36.809	36.797	1	1.003	14613	3869	322	805	12	0.87(0.76-1.02)	M
OCDD											
457.7377	36.713	36.713	0	1.000	8711798	2716557	3269	8172	831		
459.7348	36.713	36.713	0	1.000	9762732	3063431	3655	9137	838	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d
Lims ID: 320-77214-A-9-A
Client ID: 11215702-080221-BN-SJSB090 (16-18)
Inject. Date: 25-Aug-2021 23:50:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 5

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	27526654	7086949

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	27526654	7086949

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.179	12188	3477	20799	5855	0.1170	0.59	RQ
15.179	12188	3477	15828	4515	0.0994		Empc Correction
16.706	45021	12184	62730	16821	0.3823	0.72	M
Signal Totals:							
	57209	15661	78558	21336			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	140738	38337				0.68	RQM
	135767	36997					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4993 = (140738 * 100.000) / (27526654 * 1.024)
Empc Amount: 0.4817 = (135767 * 100.000) / (27526654 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Lims ID:	320-77214-A-9-A		
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Inject. Date:	25-Aug-2021 23:50:48	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	5

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	15322175	3758931

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	15322175	3758931

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.874	11980	3712	14154	4281	0.1360	0.85	
16.660	30052	8780	46150	9936	0.3966	0.65	
17.552	14770	3646	14094	3417	0.1502	1.05	RQ
17.552	10852	2631	14094	3417	0.1298		Empc Correction
17.673	35927	9950	44493	12209	0.4185	0.81	
Signal Totals:							
	88811	25073	118891	29843			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	211620	55931				0.78	RQ
	207702	54916					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.101 = (211620 * 100.000) / (15322175 * 1.254)

Empc Amount: 1.081 = (207702 * 100.000) / (15322175 * 1.254)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Lims ID:	320-77214-A-9-A		
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Inject. Date:	25-Aug-2021 23:50:48	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	5

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	13005823	2151522

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	13005823	2151522

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.652	52644	10376	32947	6162	0.6277	1.60	
22.320	11556	2282	7084	1359	0.1367	1.63	
22.906	7383	1719	7079	1288	0.1061	1.04	RQ
22.906	7383	1719	4763	1109	0.0891		Empc Correction
23.125	34738	5255	24776	4122	0.4365	1.40	
Signal Totals:							
	106321	19632	69570	12752			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	178207	32563				1.48	RQ
	175891	32384					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.307 = (178207 * 100.000) / (13005823 * 1.048)

Empc Amount: 1.290 = (175891 * 100.000) / (13005823 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Lims ID:	320-77214-A-9-A		
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Inject. Date:	25-Aug-2021 23:50:48	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	5

Non-2,3,7,8-sub-HxCDF, RT: 30.331

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	18299393	3274347
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	16153074	3129960
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	16129033	4275131
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	15065305	4562480

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	16411701	3810479

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d
Lims ID: 320-77214-A-9-A
Client ID: 11215702-080221-BN-SJSB090 (16-18)
Inject. Date: 25-Aug-2021 23:50:48 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 5

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	12560372	3658516
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	12859830	3516022
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	12710101	3587269

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.055	518281	64636	407884	53996	6.84	1.27	
30.293	20294	3816	14920	3128	0.2600	1.36	
30.705	159393	29722	126721	24167	2.11	1.26	
Signal Totals:							
	697968	98174	549525	81291			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1247493	179465				1.27	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 9.211 = (1247493 * 100.000) / (12710101 * 1.066)

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Lims ID:	320-77214-A-9-A		
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Inject. Date:	25-Aug-2021 23:50:48	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	5

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	10065696	3594898

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	10065696	3594898

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.859	1417711	505111	1355932	507606	25.2	1.05	
Signal Totals:							
	1417711	505111	1355932	507606			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2773643	1012717				1.05	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 25.181 = (2773643 * 100.000) / (10065696 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d				
Injection Date:	25-Aug-2021 23:50:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:	SMA	ALS Bottle#:	30	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.08
Area: 132108
Amount: 0.787736
Amount Units: pg/ul

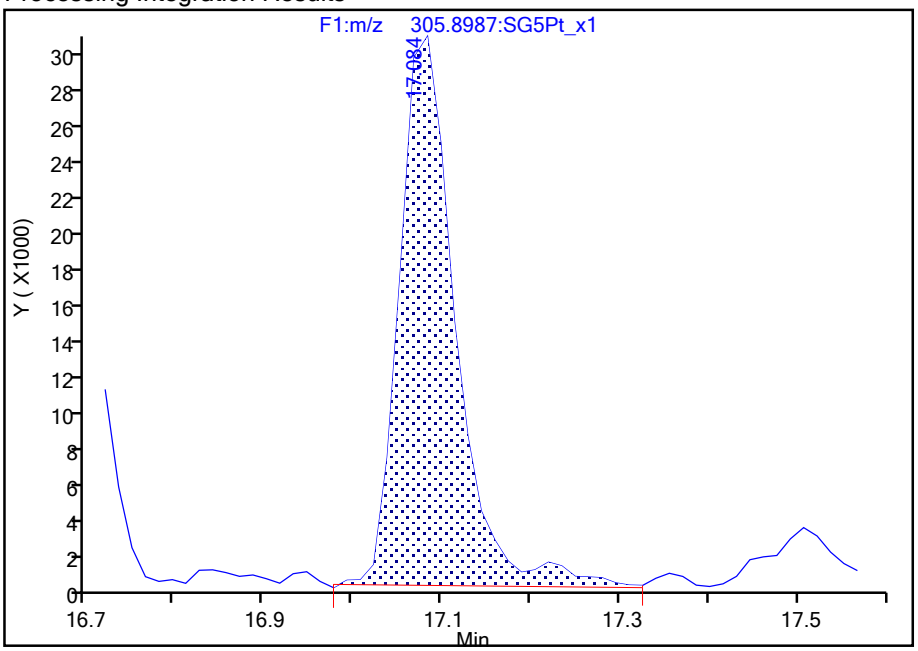

Manual Integration Results

RT: 17.08
Area: 127567
Amount: 0.771624
Amount Units: pg/ul

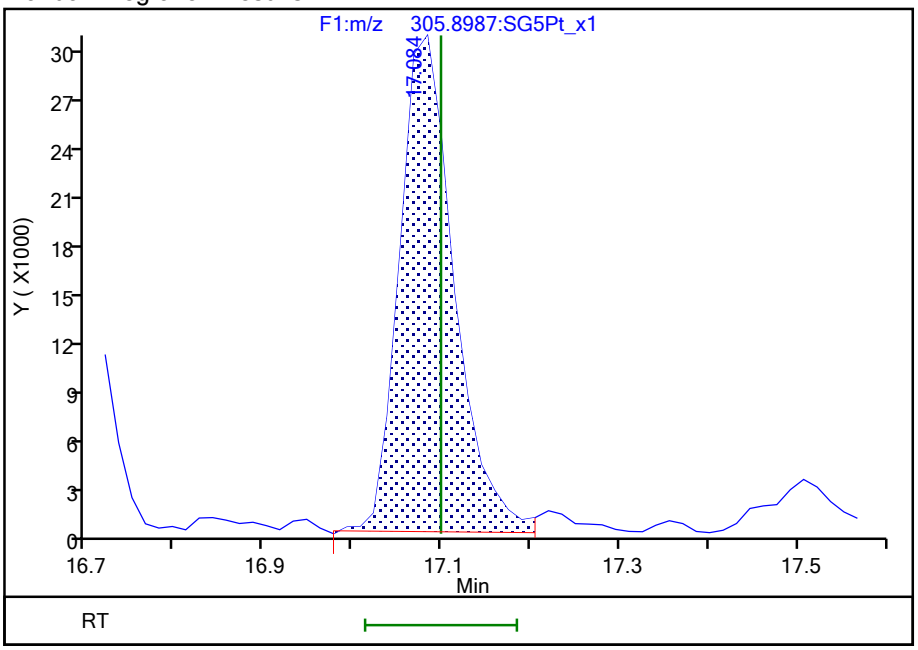

Reviewer: dadunj, 27-Aug-2021 08:19:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d				
Injection Date:	25-Aug-2021 23:50:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:	SMA	ALS Bottle#:	30	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.68- 19.46)

Signal: 2

Processing Integration Results

RT = 16.691 Area = 72412

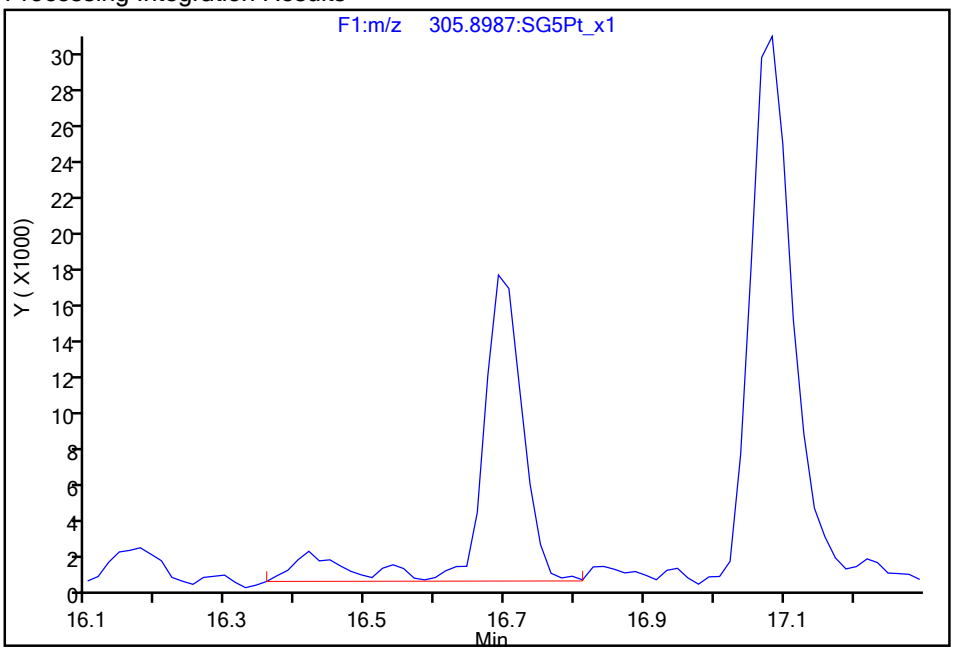

Manual Integration Results

RT = 16.691 Area = 62730 M

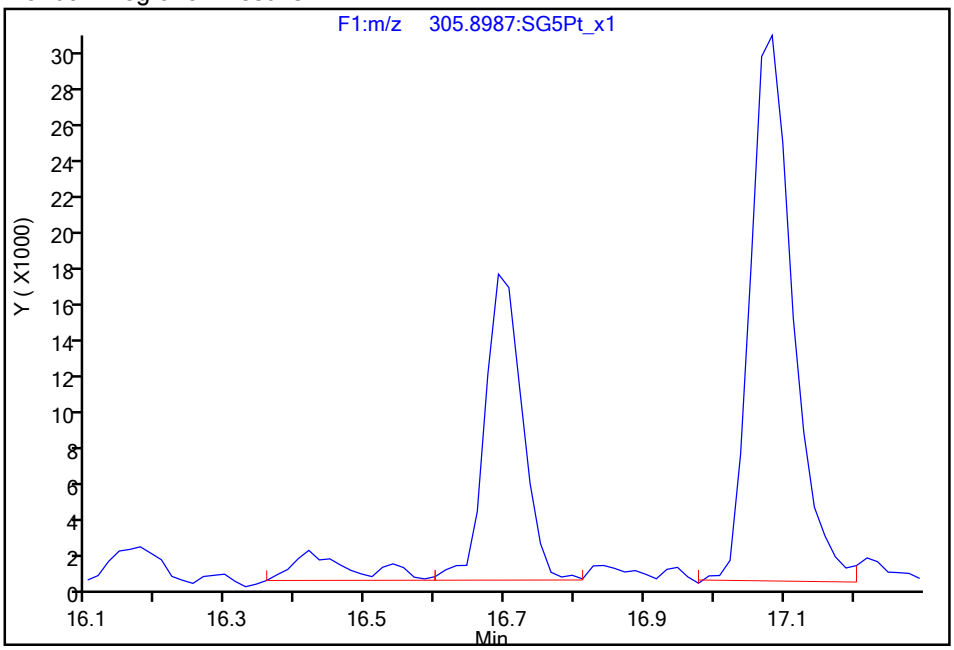

Reviewer: dadunj, 27-Aug-2021 08:19:24

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

792343

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d				
Injection Date:	25-Aug-2021 23:50:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:	SMA	ALS Bottle#:	30	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 17.78
Area: 22763
Amount: 0.321427
Amount Units: pg/ul

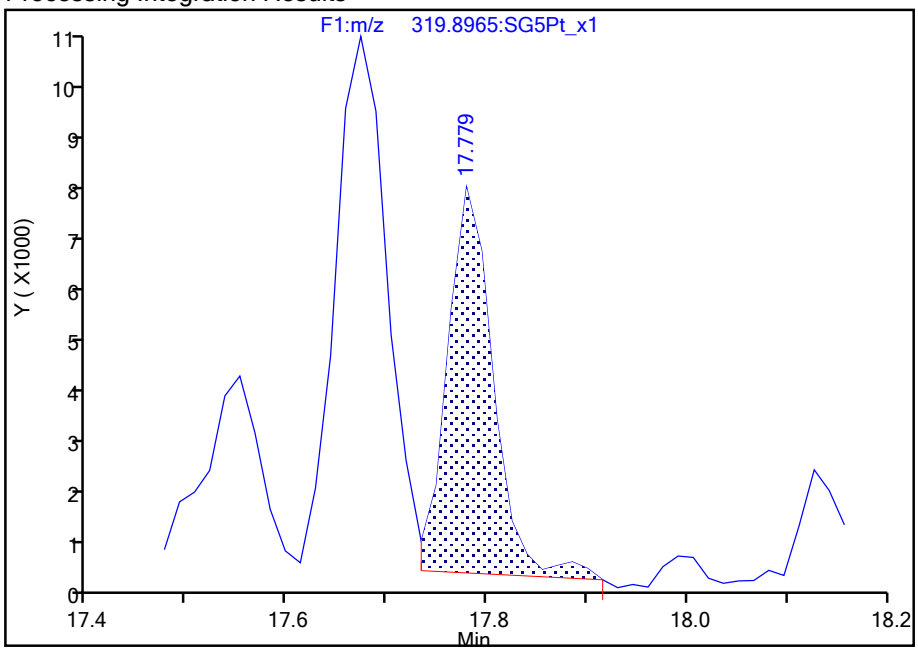

Manual Integration Results

RT: 17.78
Area: 21824
Amount: 0.313403
Amount Units: pg/ul

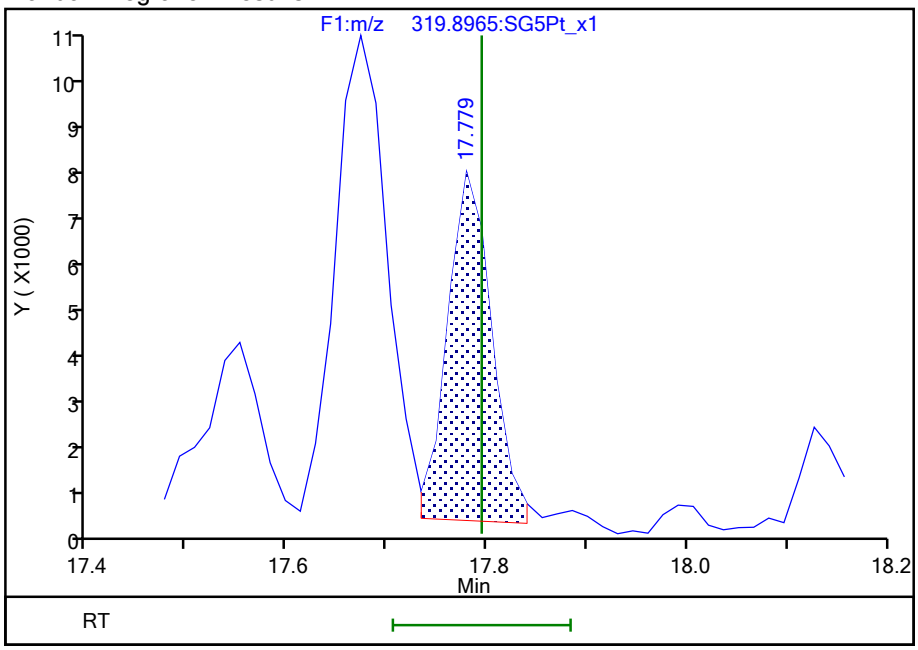

Reviewer: dadunj, 27-Aug-2021 08:19:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d				
Injection Date:	25-Aug-2021 23:50:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:	SMA	ALS Bottle#:	30	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 17.78
Area: 39002
Amount: 0.321427
Amount Units: pg/ul

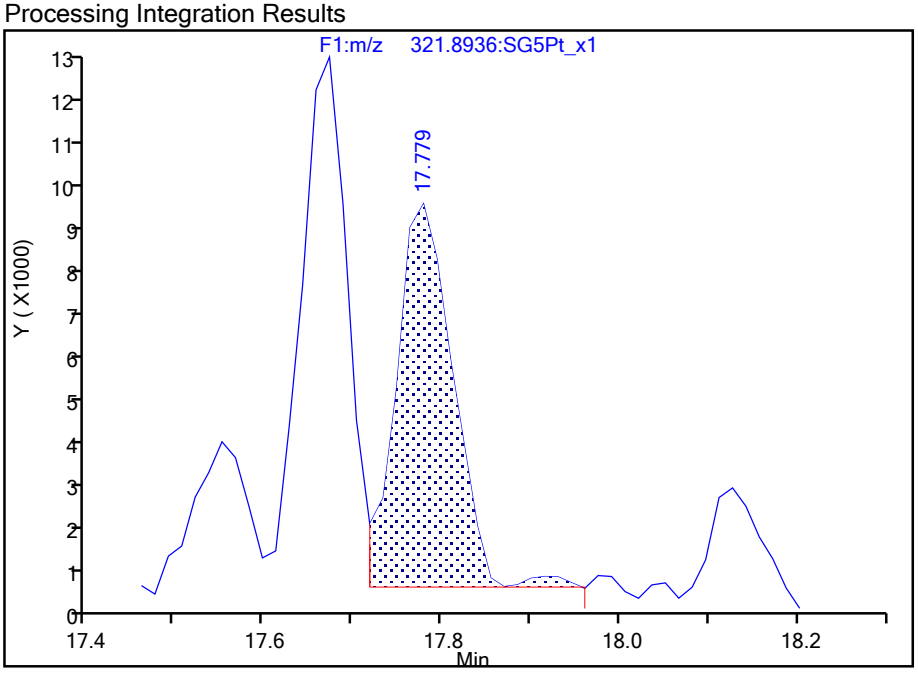

Manual Integration Results

RT: 17.78
Area: 38399
Amount: 0.313403
Amount Units: pg/ul

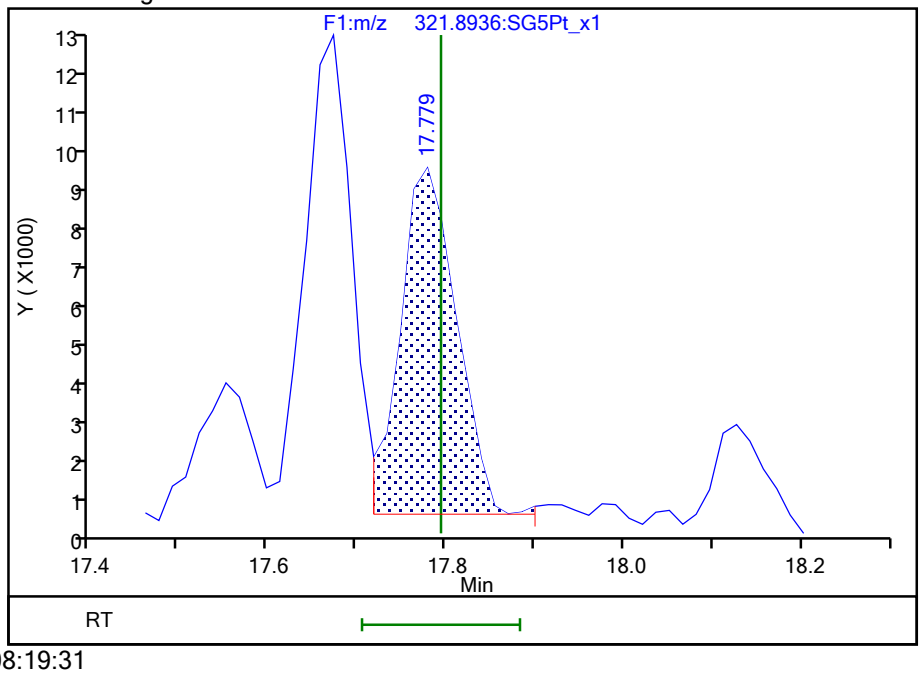

Reviewer: dadunj, 27-Aug-2021 08:19:31
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

792345

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d				
Injection Date:	25-Aug-2021 23:50:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:	SMA	ALS Bottle#:	30	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.16
Area: 4892
Amount: 0.061338
Amount Units: pg/ul

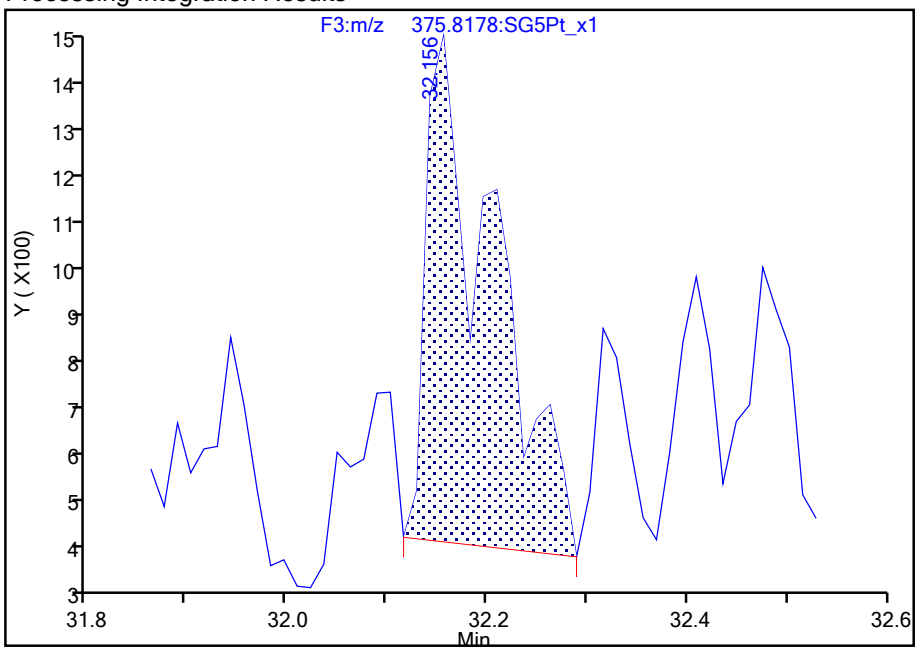

Manual Integration Results

RT: 32.16
Area: 2400
Amount: 0.041755
Amount Units: pg/ul

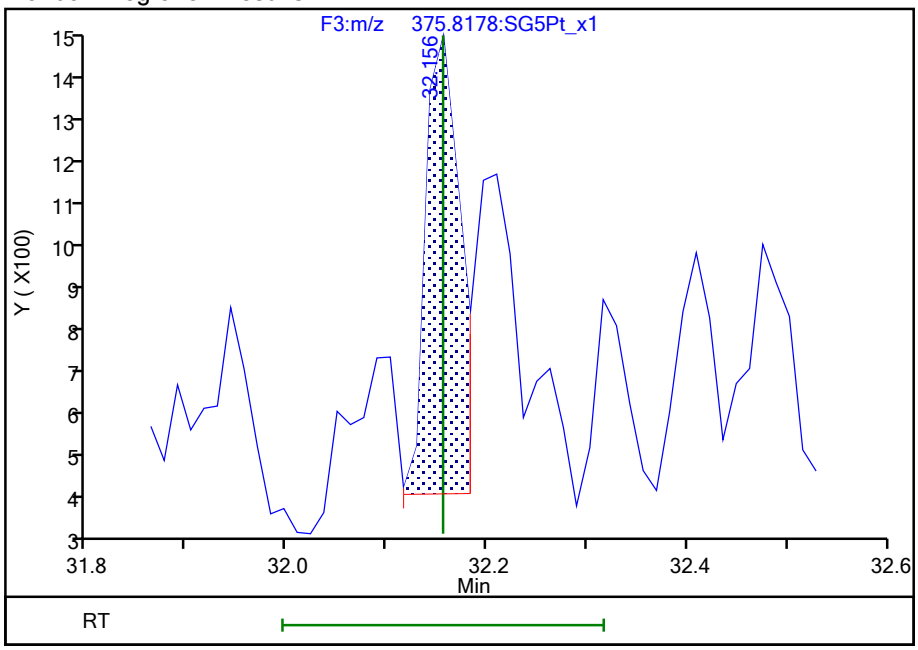

Reviewer: dadunj, 27-Aug-2021 08:20:14

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

792346

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d				
Injection Date:	25-Aug-2021 23:50:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:	SMA	ALS Bottle#:	30	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.17
Area: 5886
Amount: 0.061338
Amount Units: pg/ul

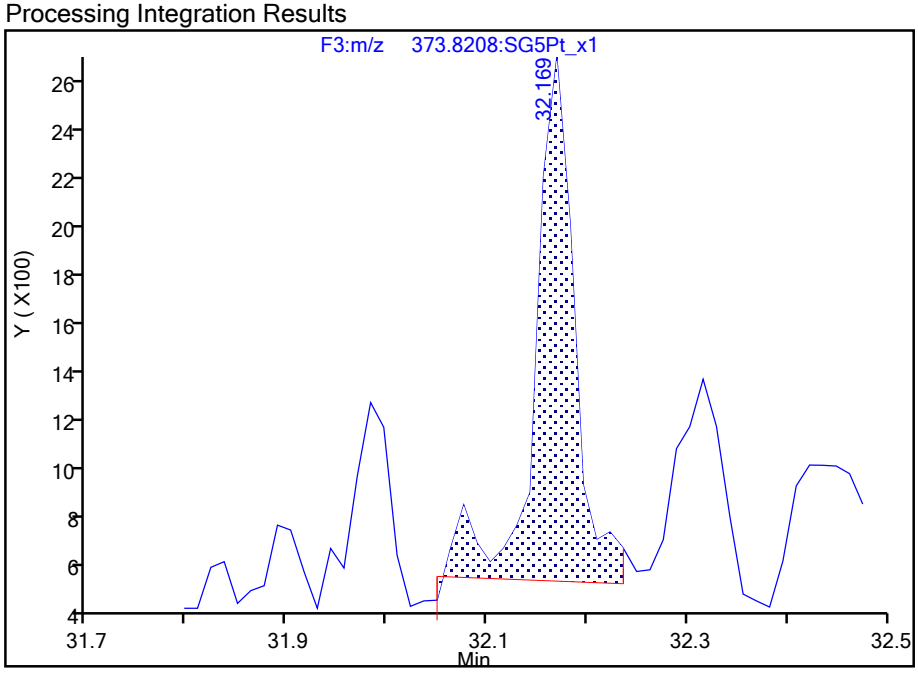

Manual Integration Results

RT: 32.17
Area: 4937
Amount: 0.041755
Amount Units: pg/ul

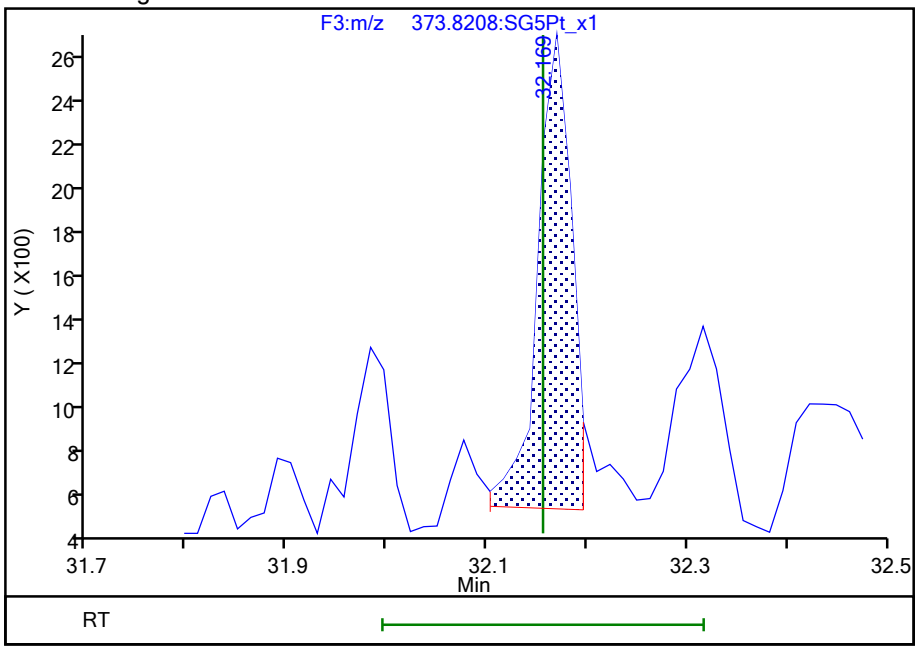

Reviewer: dadunj, 27-Aug-2021 08:20:17

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

792347

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d				
Injection Date:	25-Aug-2021 23:50:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:	SMA	ALS Bottle#:	30	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.52
Area: 29639
Amount: 0.360735
Amount Units: pg/ul

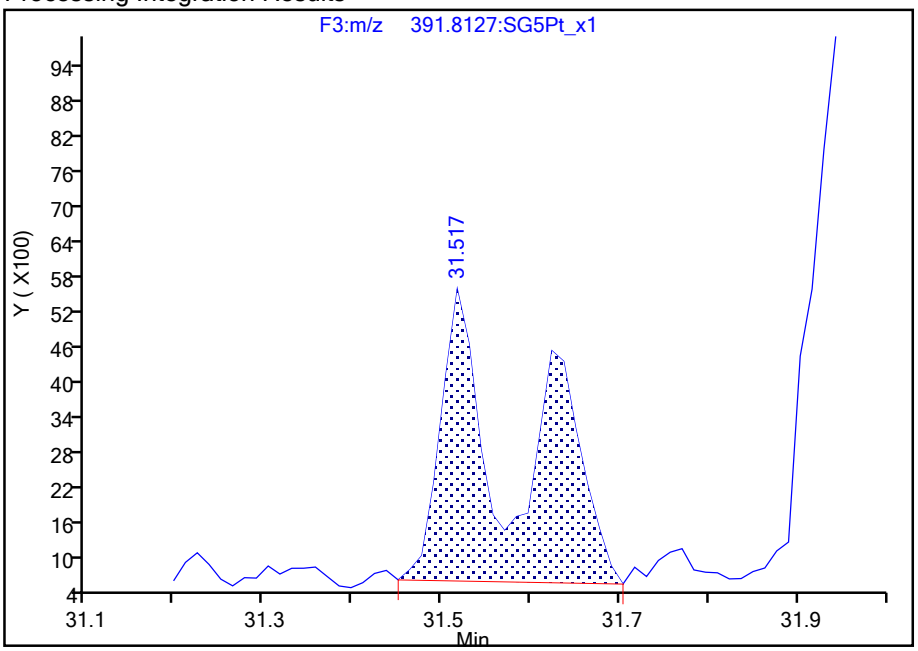

Manual Integration Results

RT: 31.52
Area: 14807
Amount: 0.249756
Amount Units: pg/ul

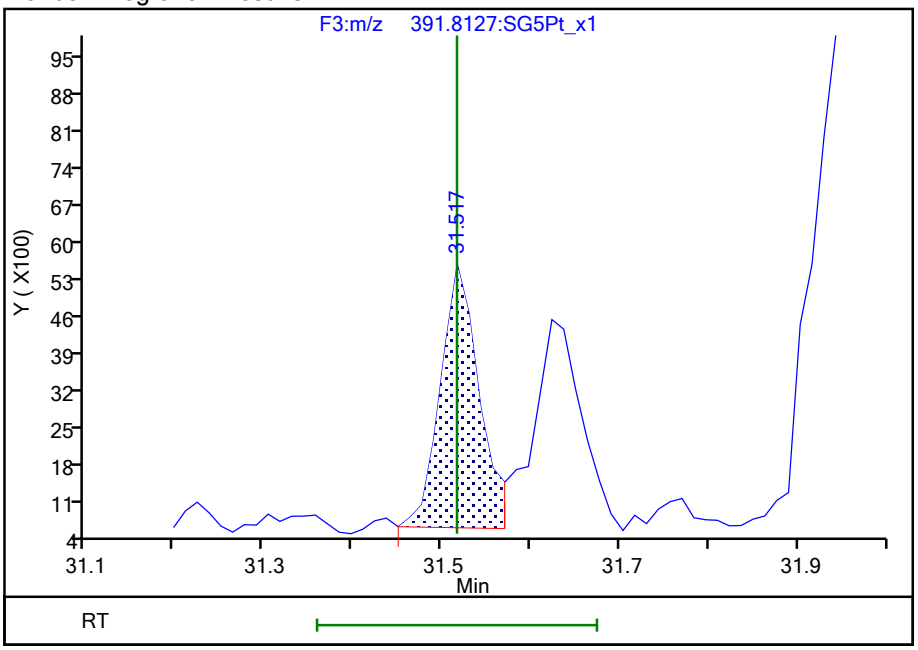

Reviewer: dadunj, 27-Aug-2021 08:20:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

792348

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d				
Injection Date:	25-Aug-2021 23:50:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:	SMA	ALS Bottle#:	30	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.52
Area: 29639
Amount: 0.374867
Amount Units: pg/ul

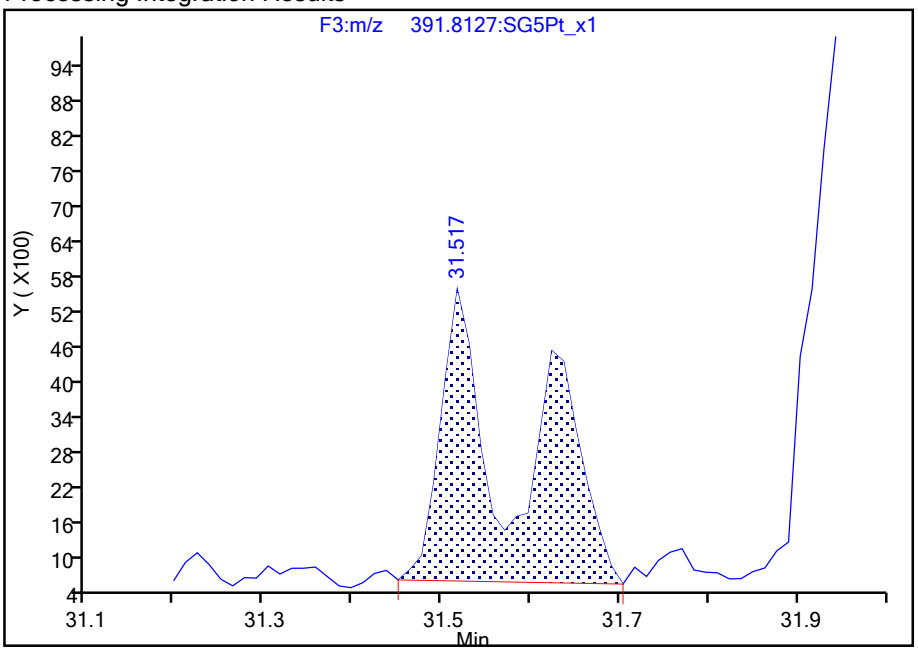

Manual Integration Results

RT: 31.62
Area: 14842
Amount: 0.265636
Amount Units: pg/ul

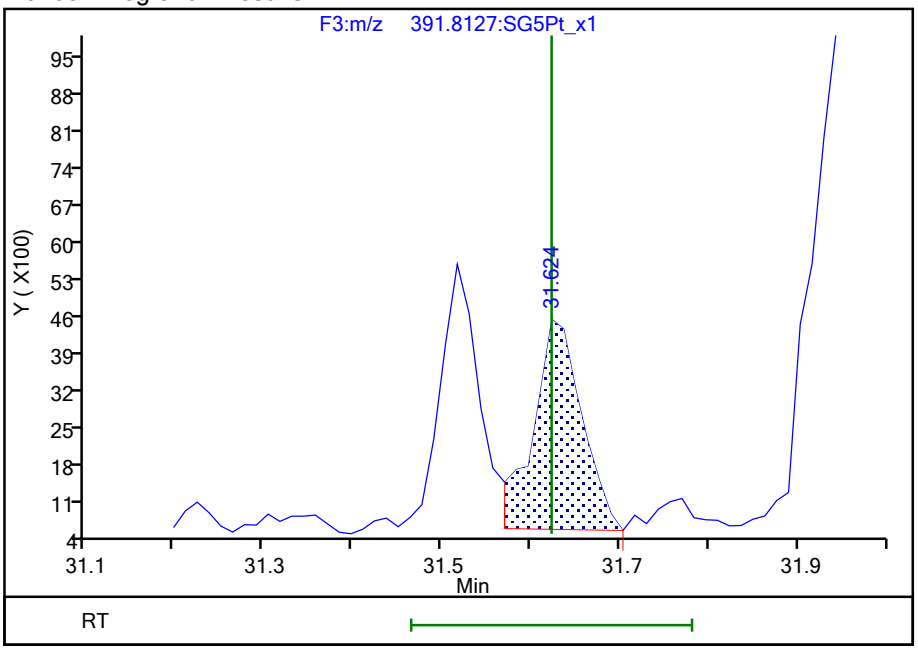

Reviewer: dadunj, 27-Aug-2021 08:20:31

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d				
Injection Date:	25-Aug-2021 23:50:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:	SMA	ALS Bottle#:	30	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 3

Processing Integration Results

RT: 31.52
Area: 48211
Amount: 0.374867
Amount Units: pg/ul

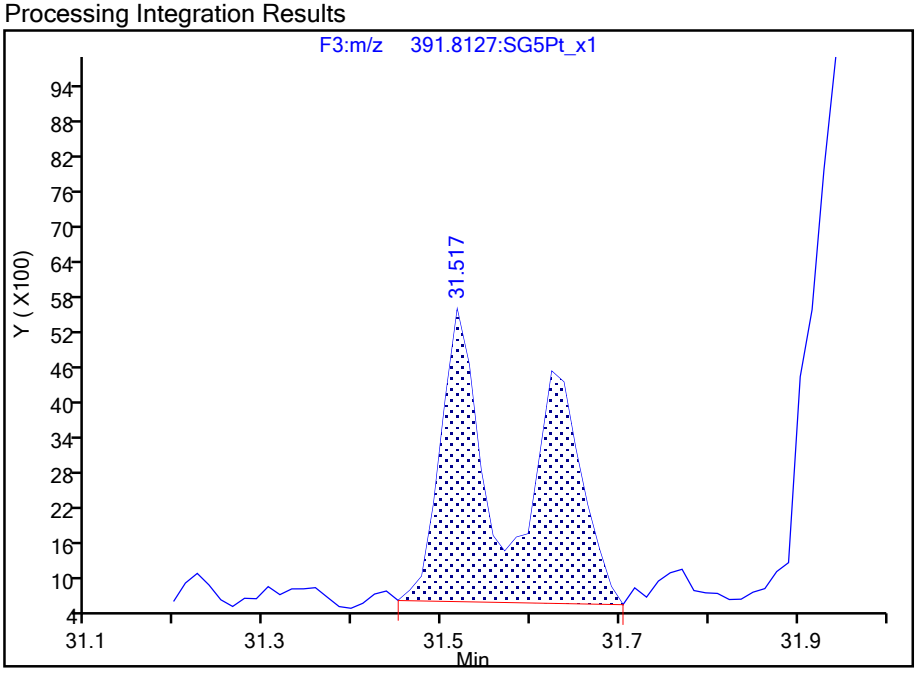

Manual Integration Results

RT: 31.64
Area: 34163
Amount: 0.265636
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 08:20:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d				
Injection Date:	25-Aug-2021 23:50:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:	SMA	ALS Bottle#:	30	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.52
Area: 18572
Amount: 0.374867
Amount Units: pg/ul

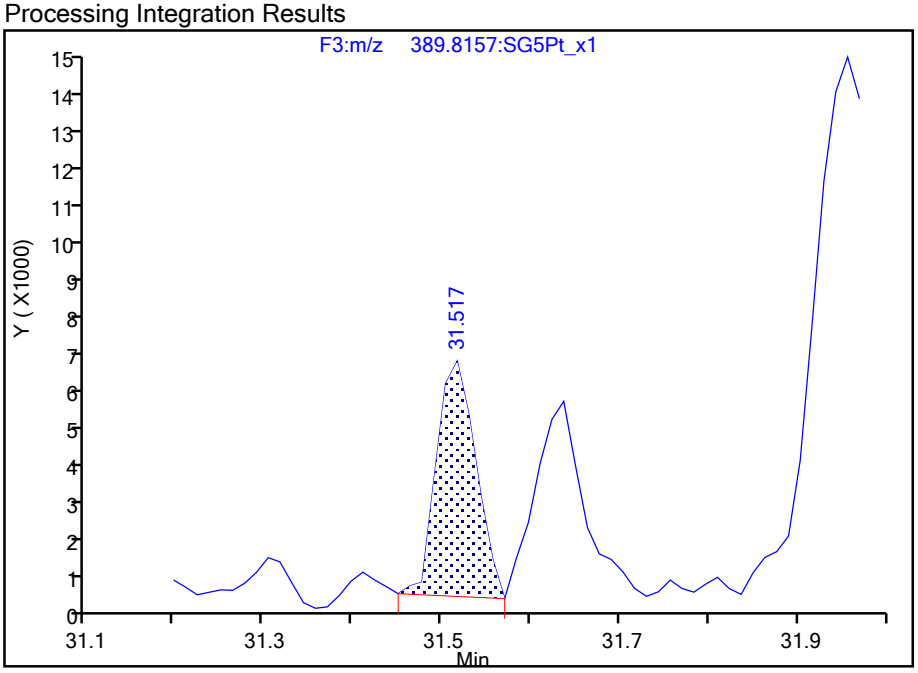

Manual Integration Results

RT: 31.64
Area: 19321
Amount: 0.265636
Amount Units: pg/ul

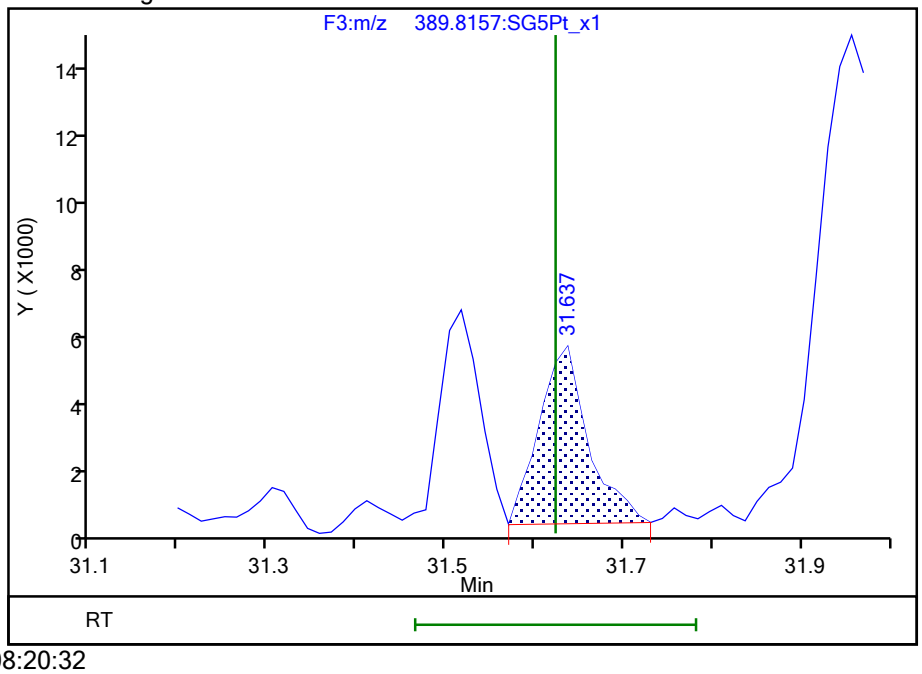

Reviewer: dadunj, 27-Aug-2021 08:20:32

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

792351

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d				
Injection Date:	25-Aug-2021 23:50:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:	SMA	ALS Bottle#:	30	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.81
Area: 23568
Amount: 0.429680
Amount Units: pg/ul

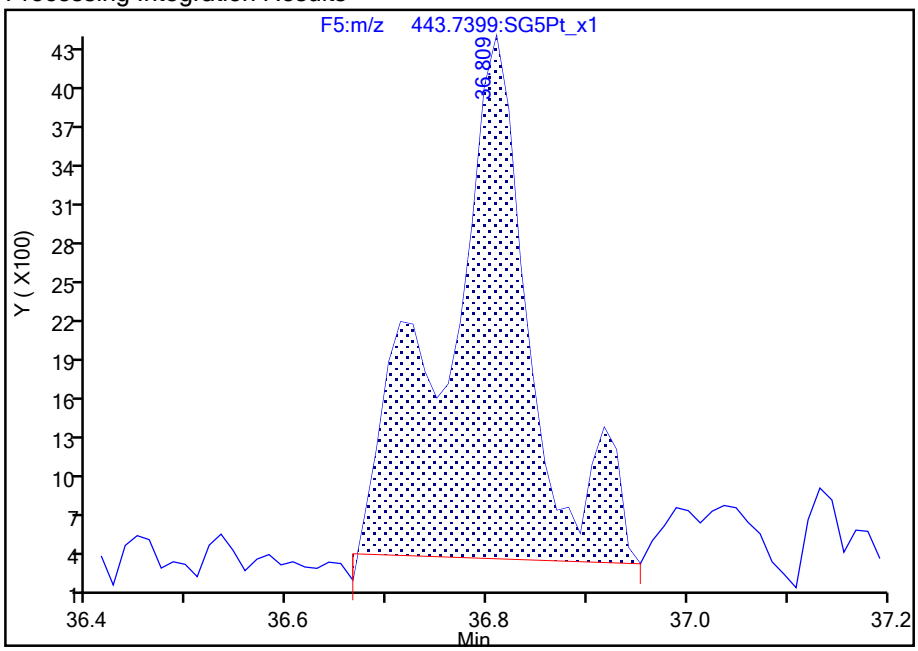

Manual Integration Results

RT: 36.81
Area: 14613
Amount: 0.263827
Amount Units: pg/ul

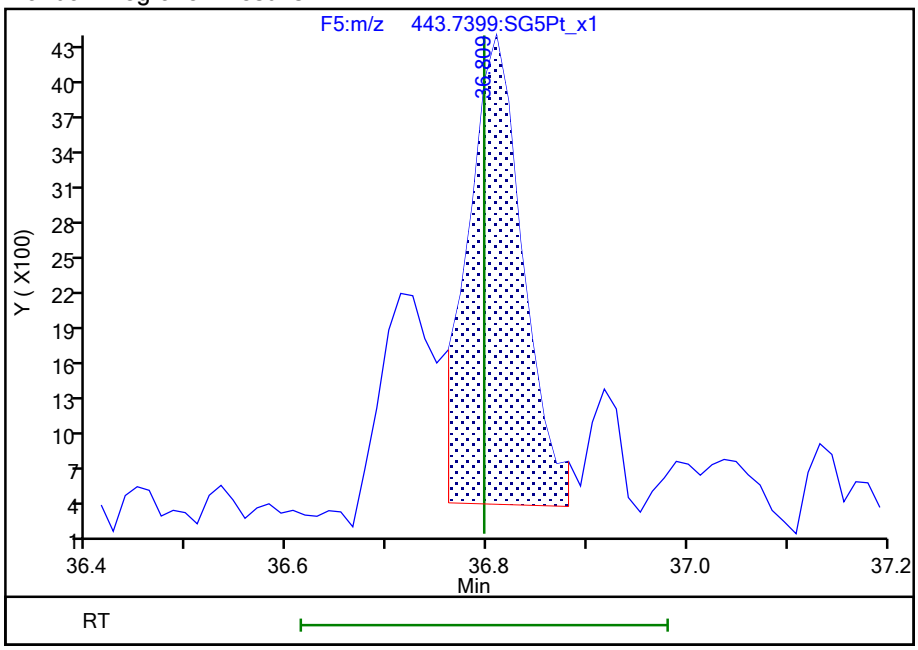

Reviewer: dadunj, 27-Aug-2021 08:21:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d				
Injection Date:	25-Aug-2021 23:50:48	Instrument ID:	10D5		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:	SMA	ALS Bottle#:	30	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.80
Area: 20863
Amount: 0.429680
Amount Units: pg/ul

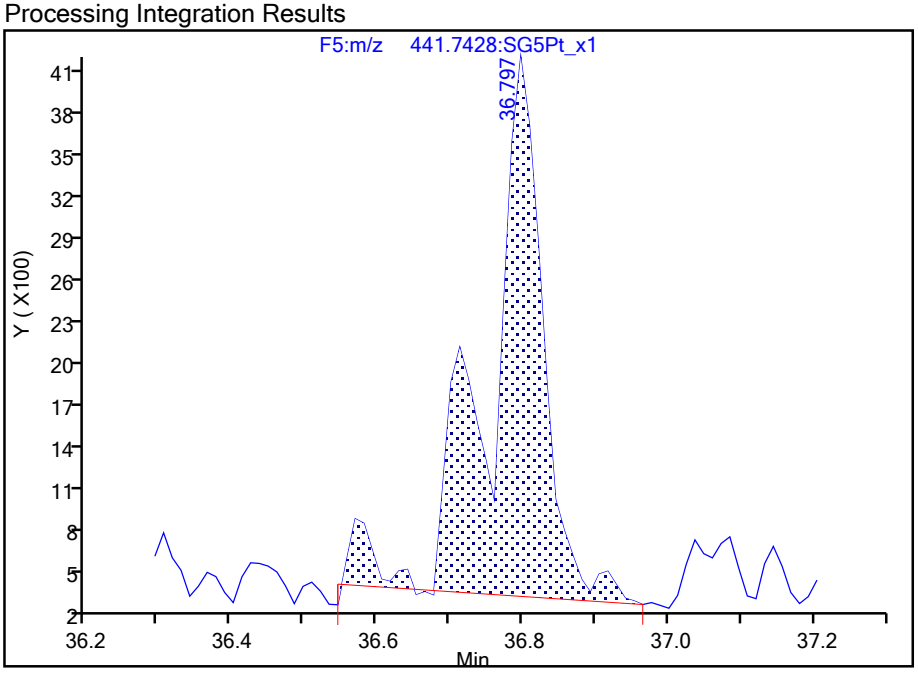

Manual Integration Results

RT: 36.80
Area: 12668
Amount: 0.263827
Amount Units: pg/ul

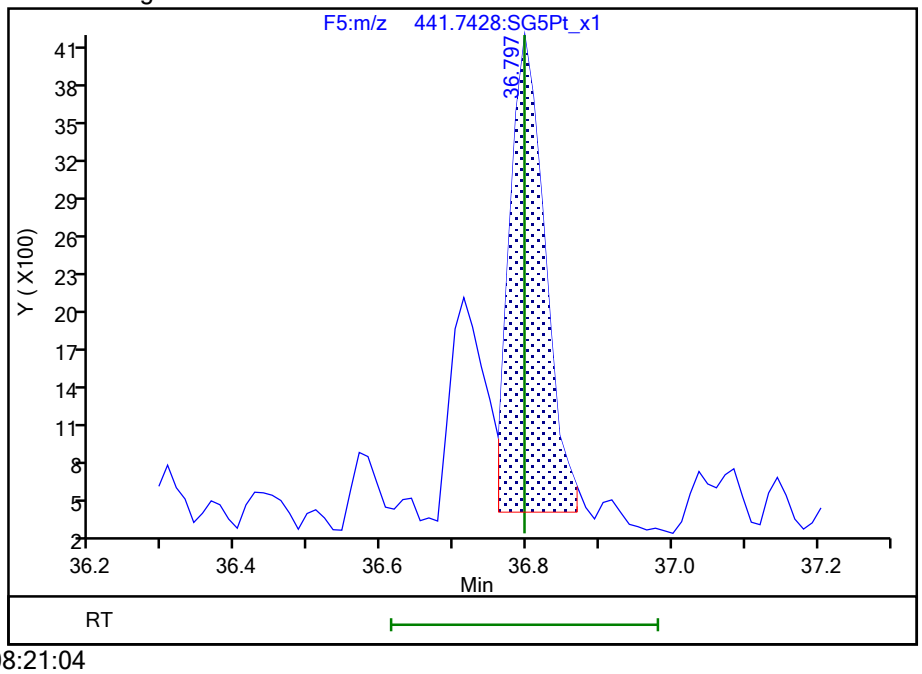

Reviewer: dadunj, 27-Aug-2021 08:21:04
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

792353

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

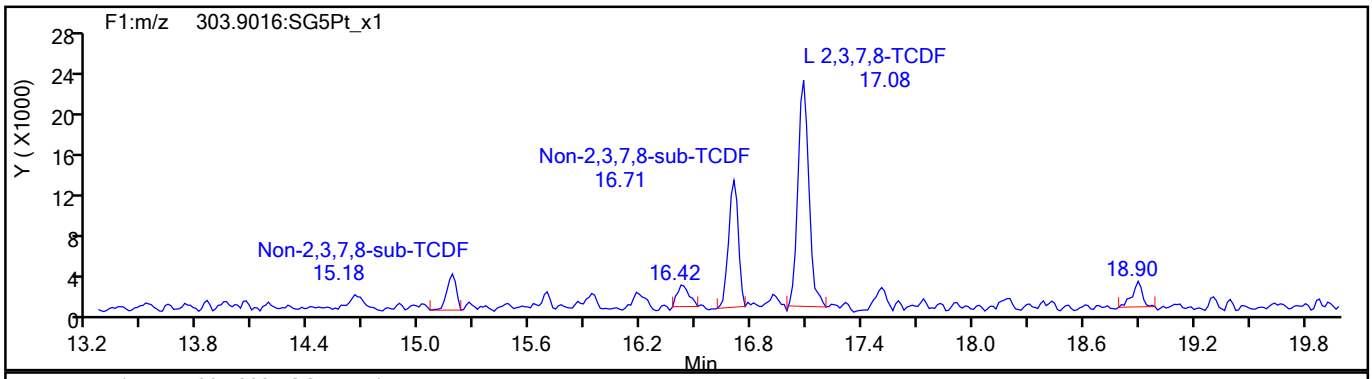

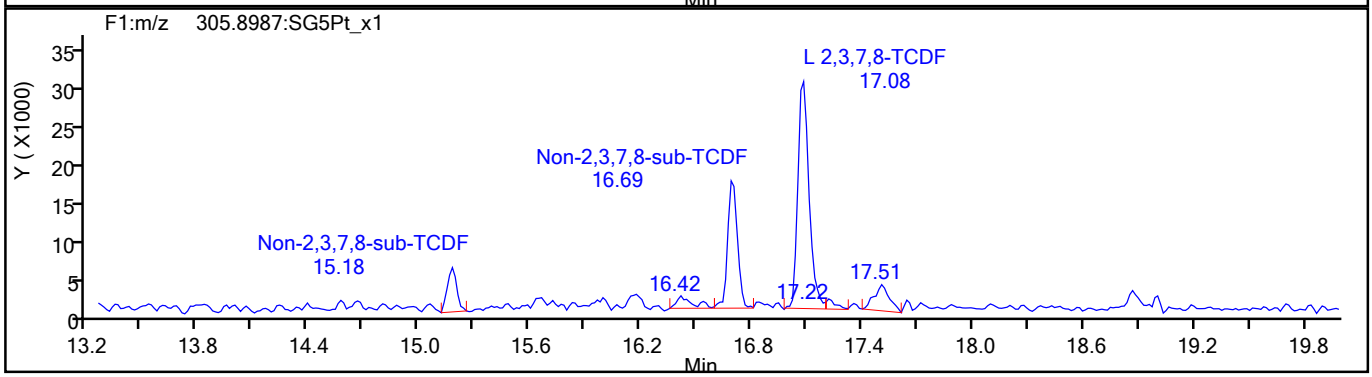

TCDF Standards

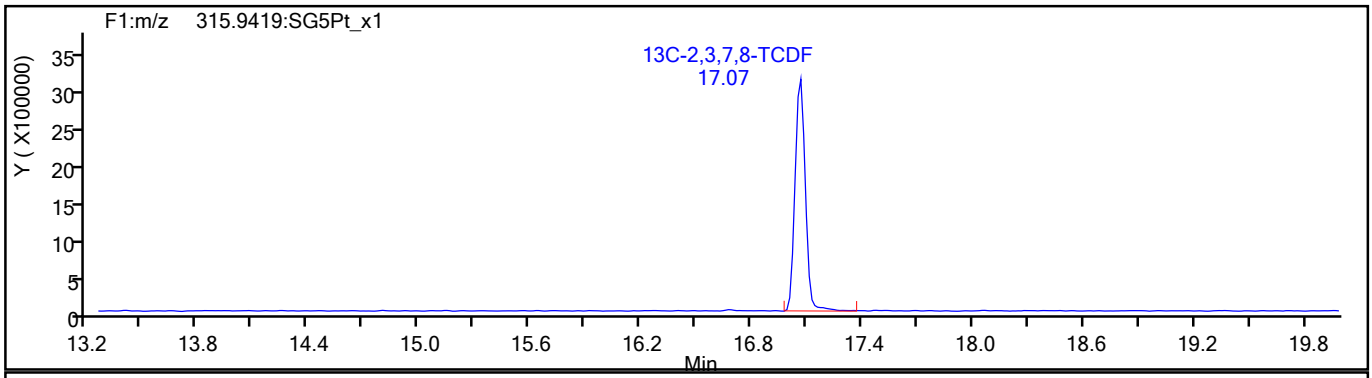

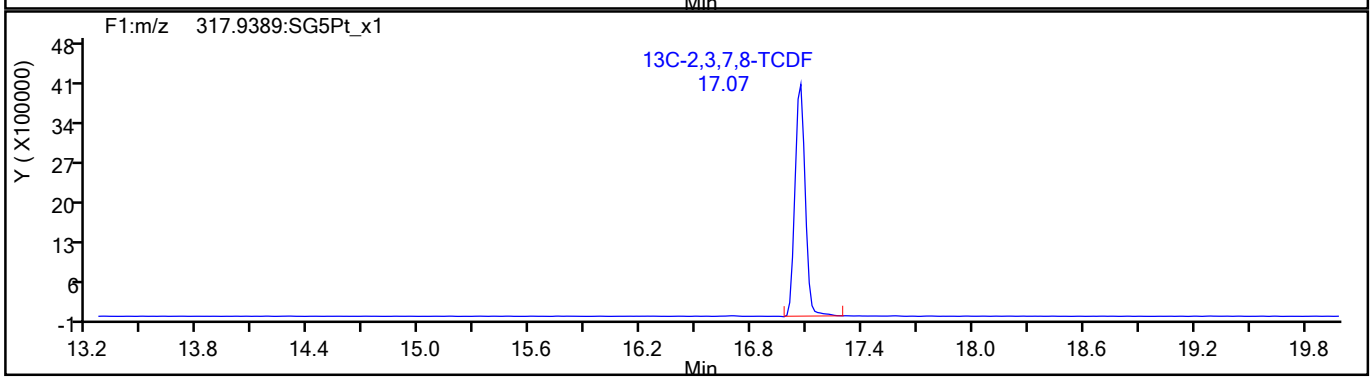

792354

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

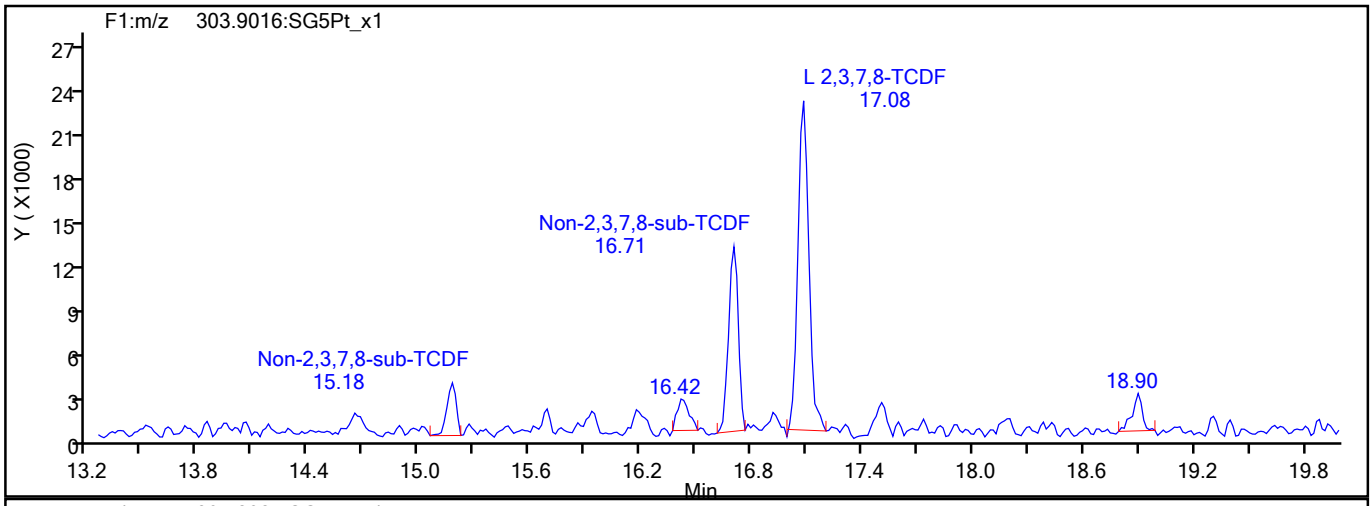

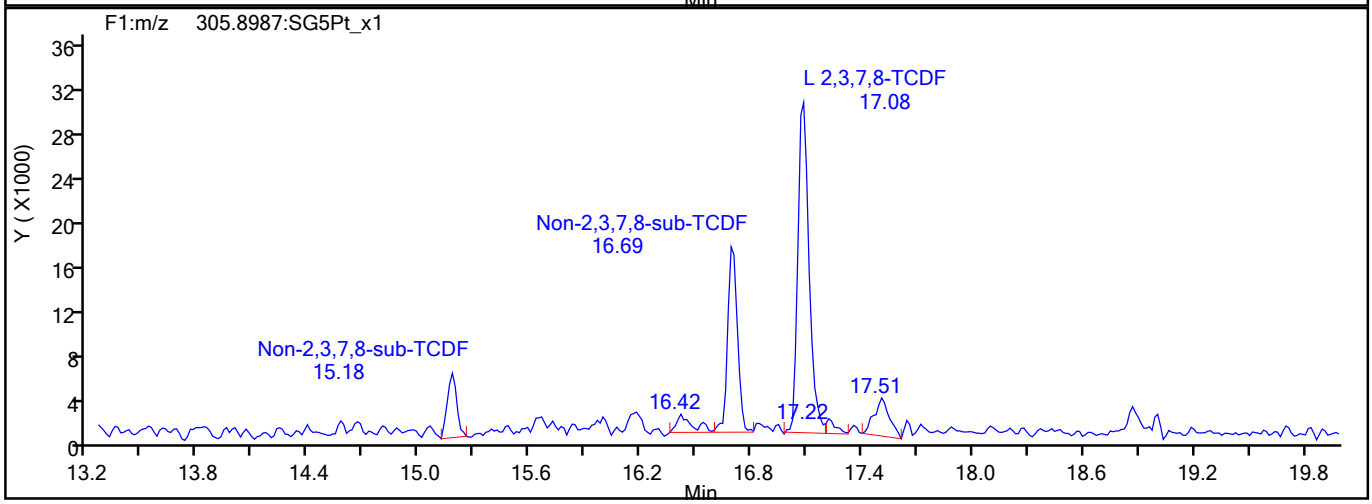

TCDF Interference Mass

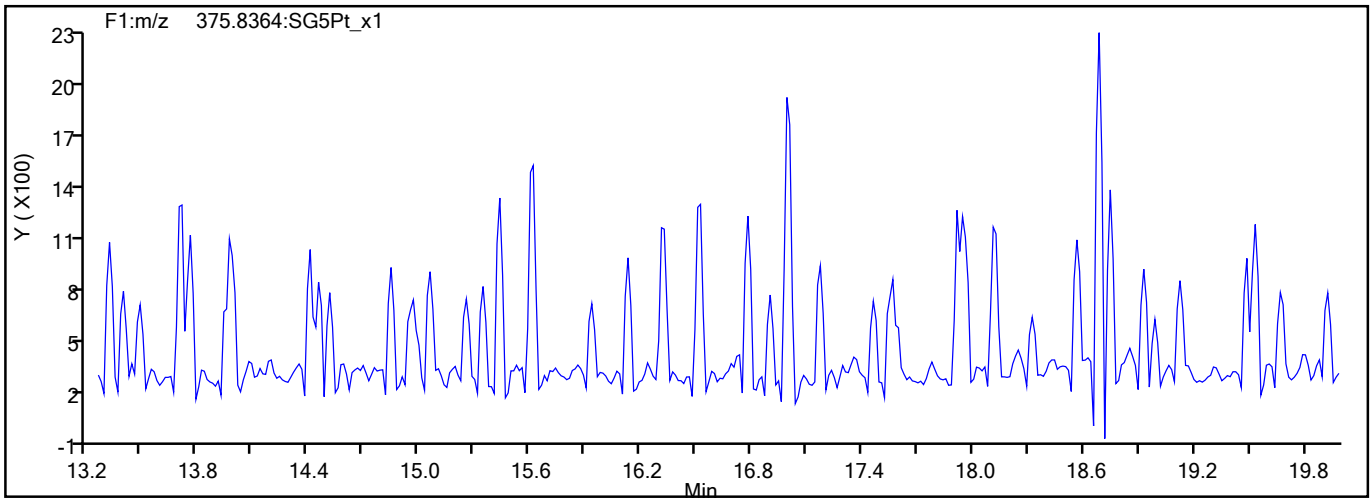

792355

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

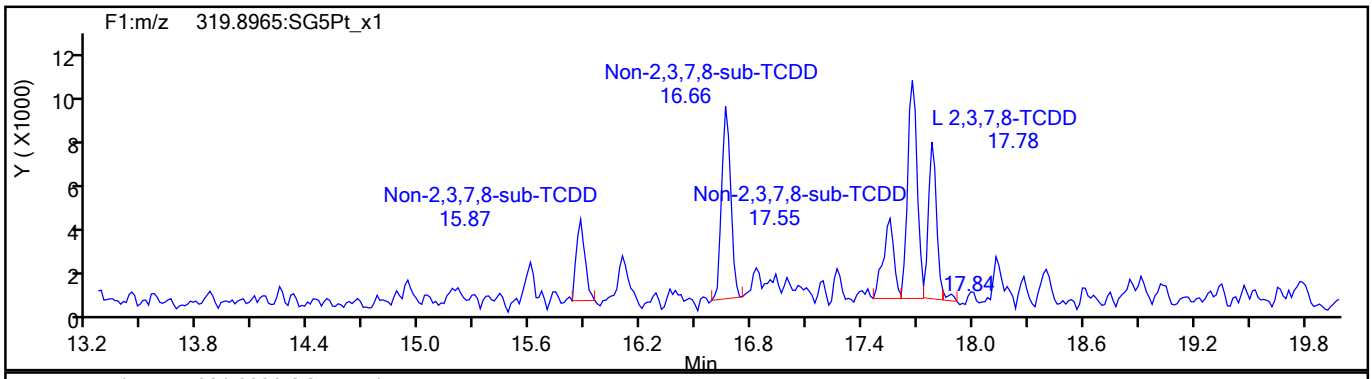

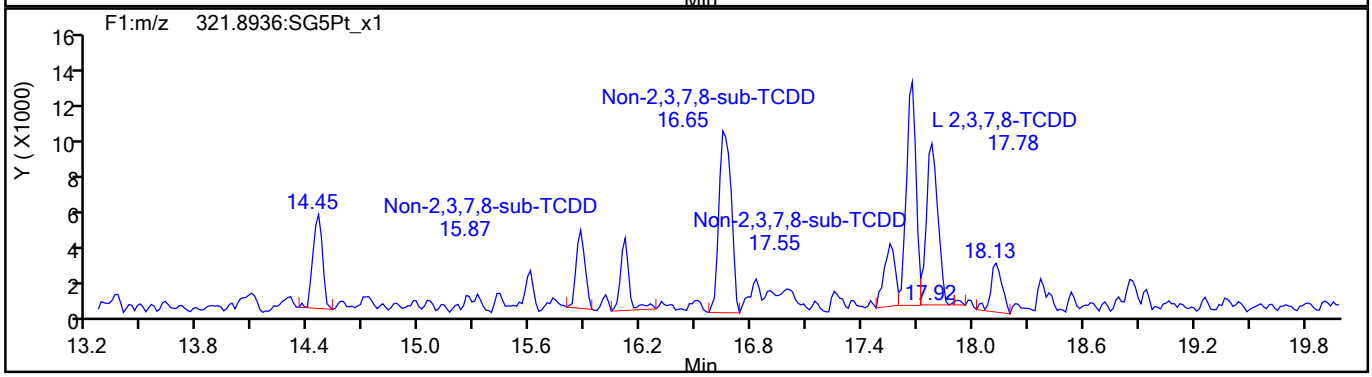

TCDD Standards

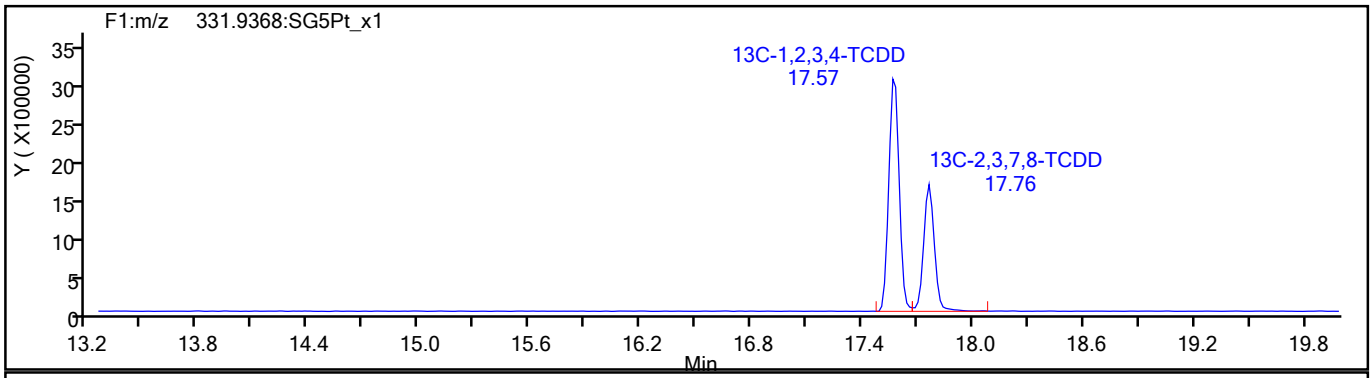

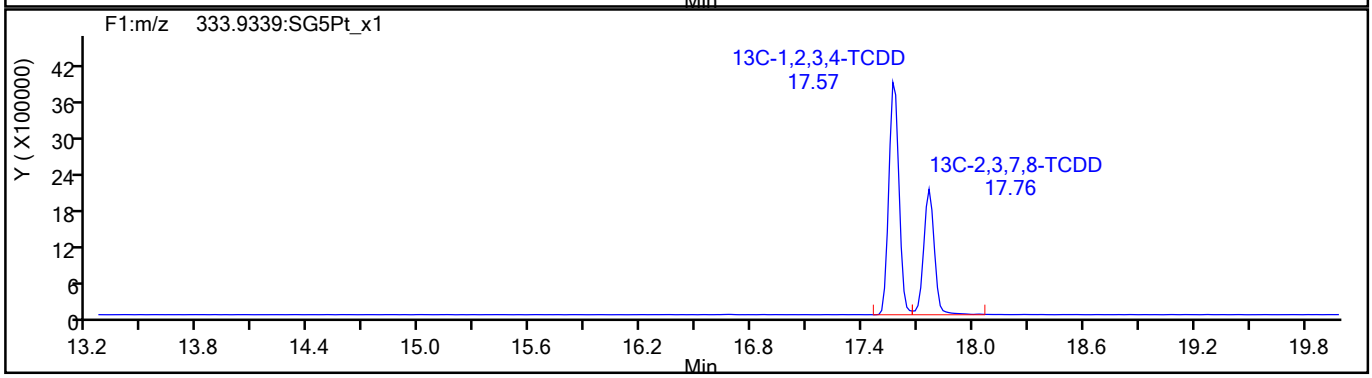

792356

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

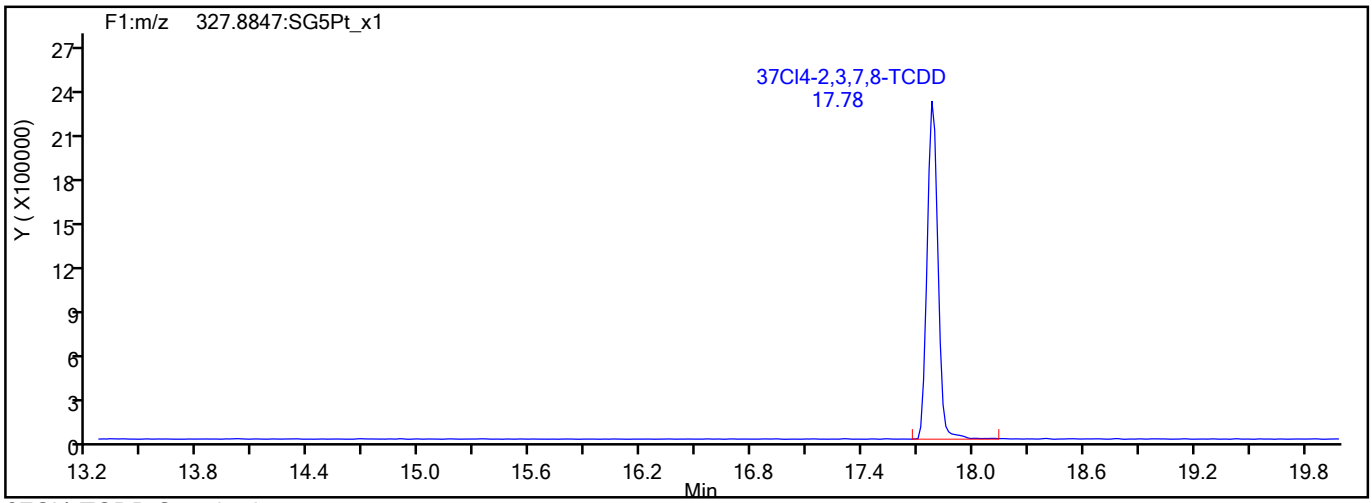

37Cl4-TCDD Standards

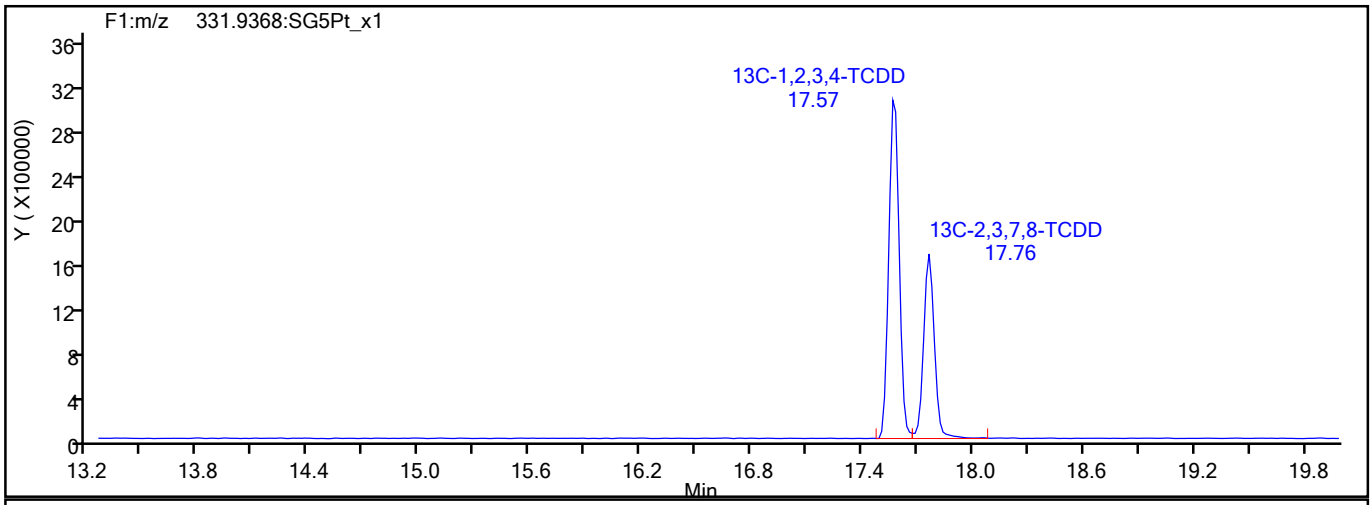

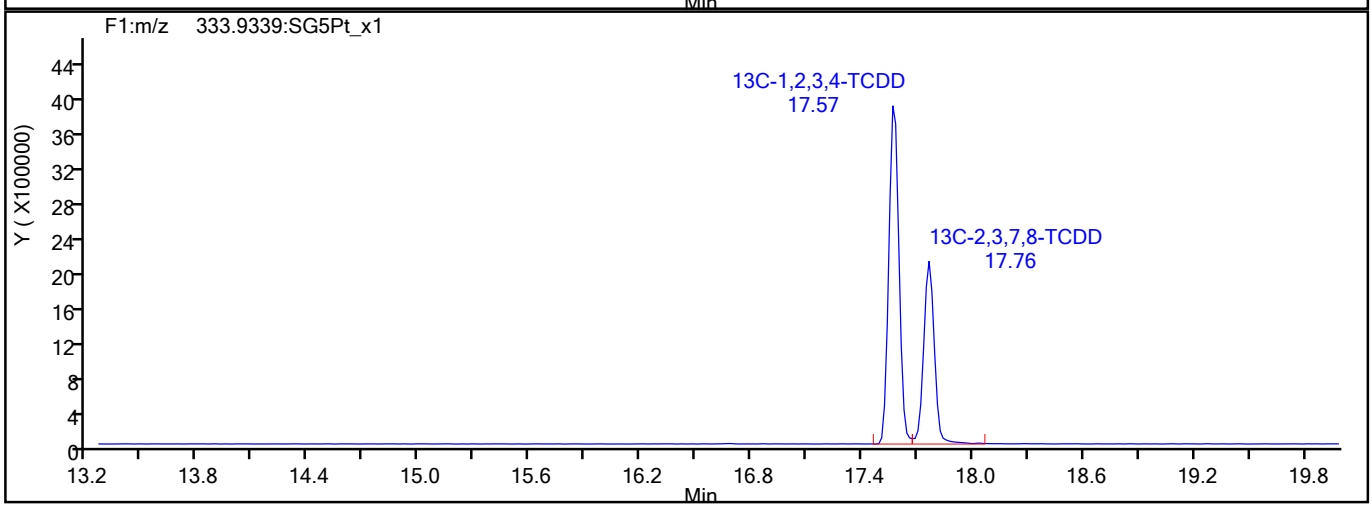

792357

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

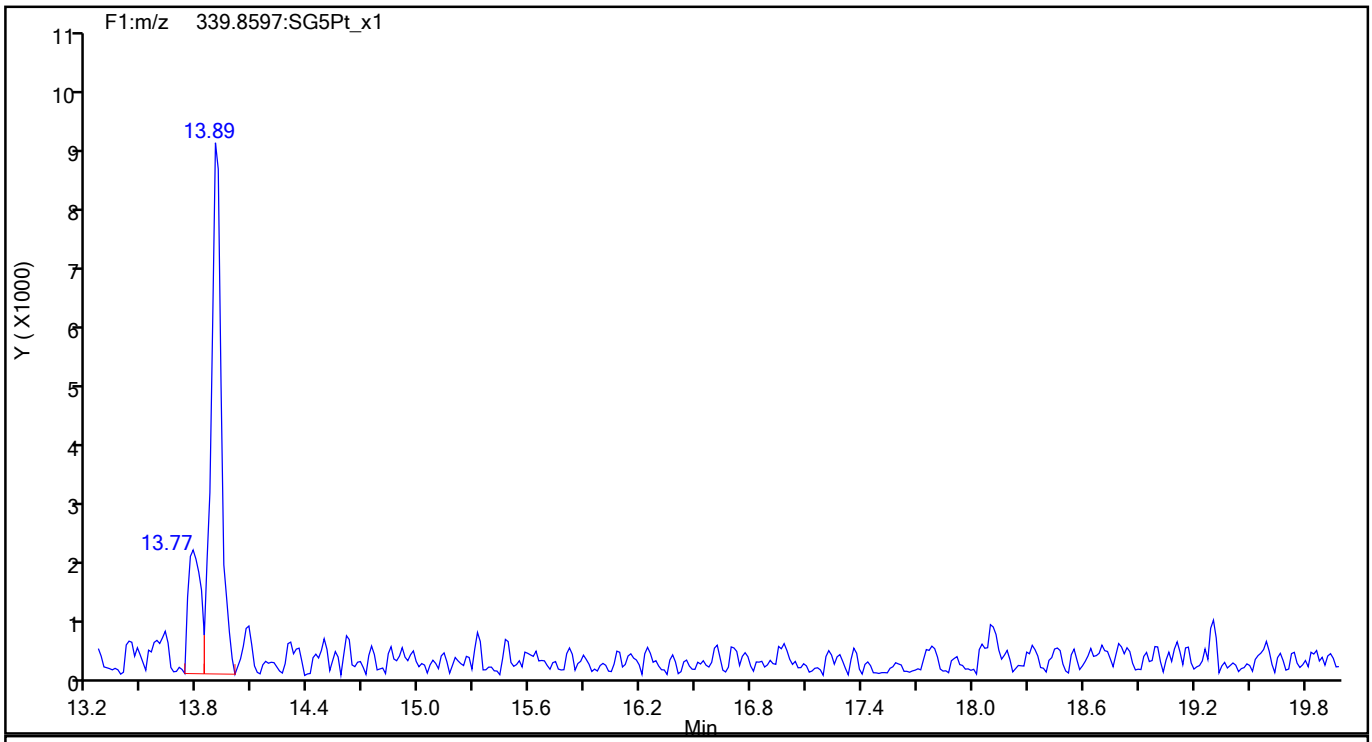

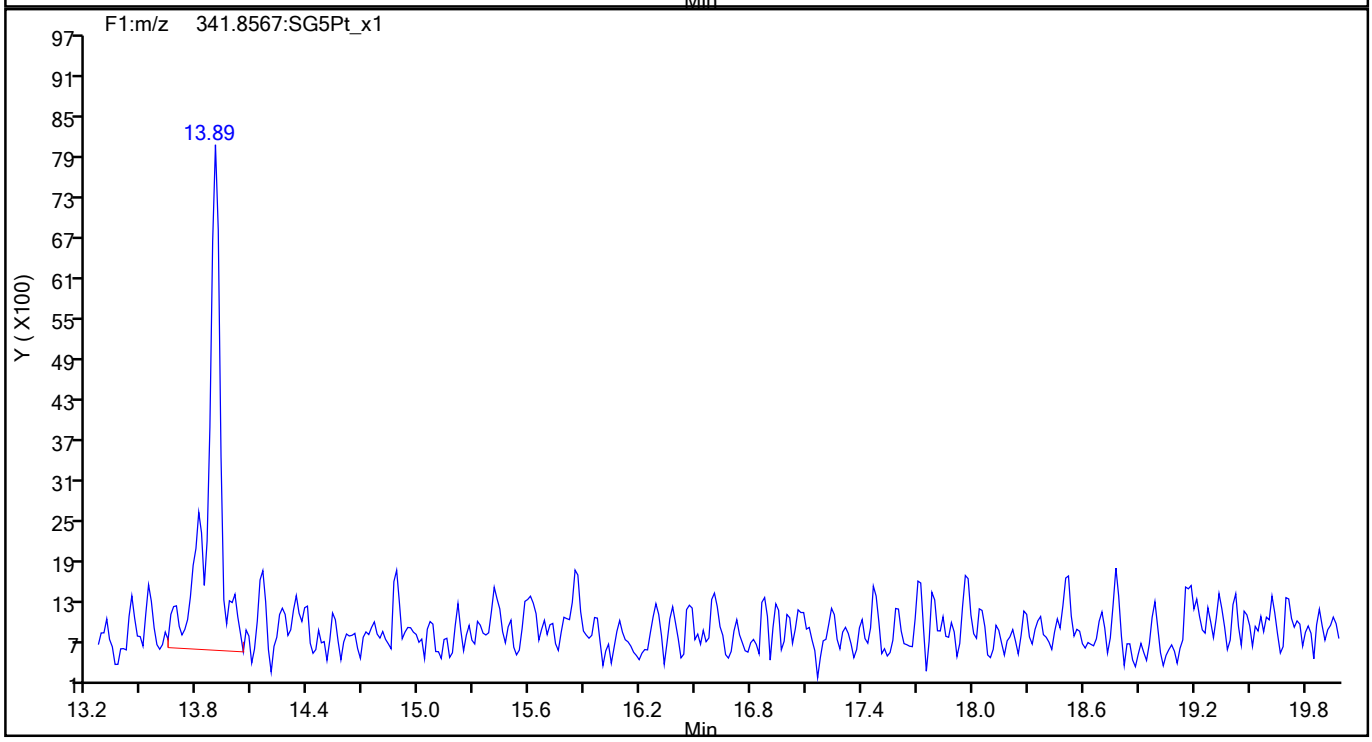

792358

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

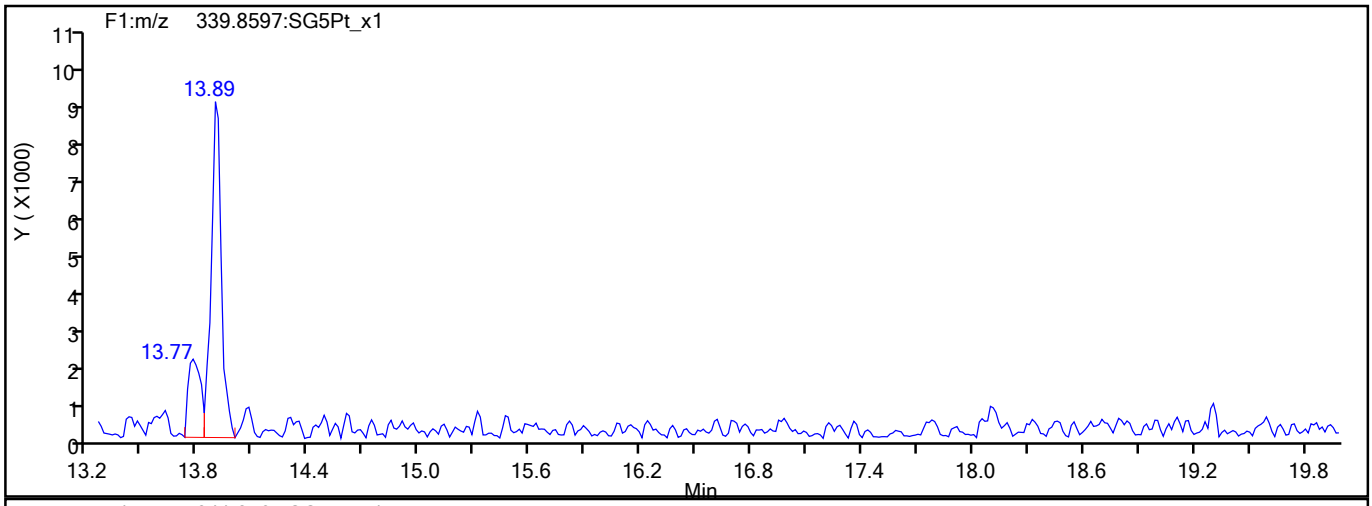

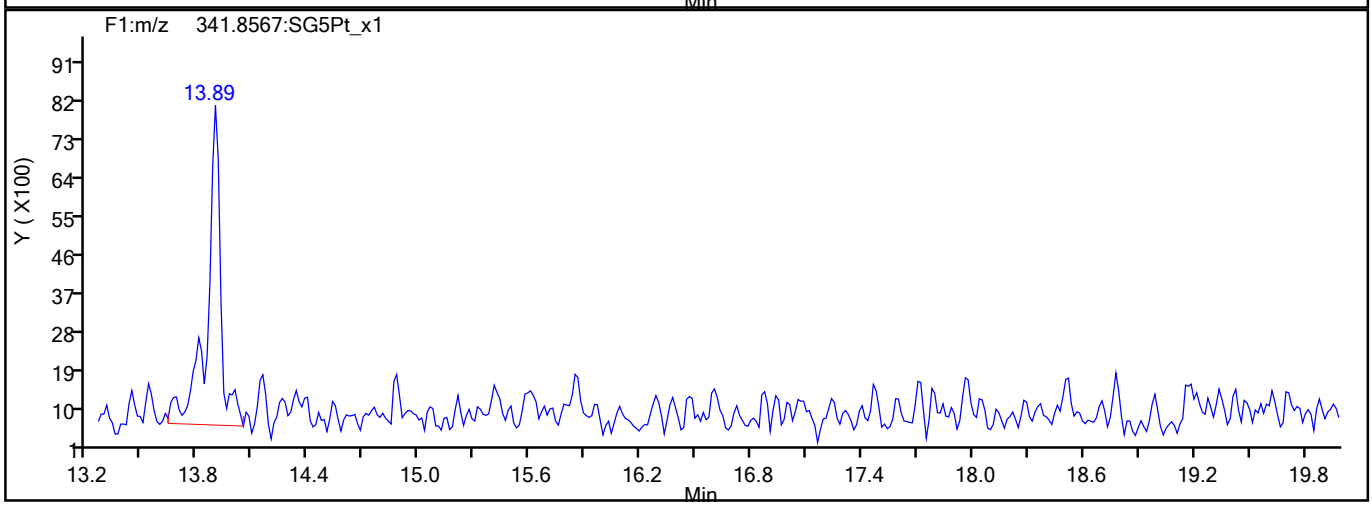

F1 PeCDFs Interference Mass

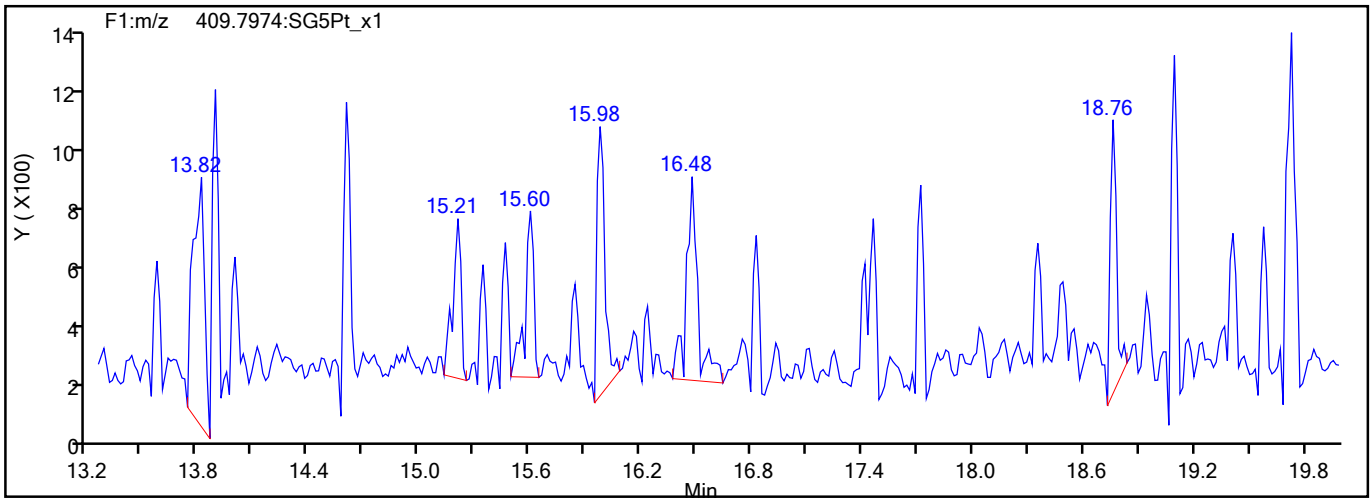

792359

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

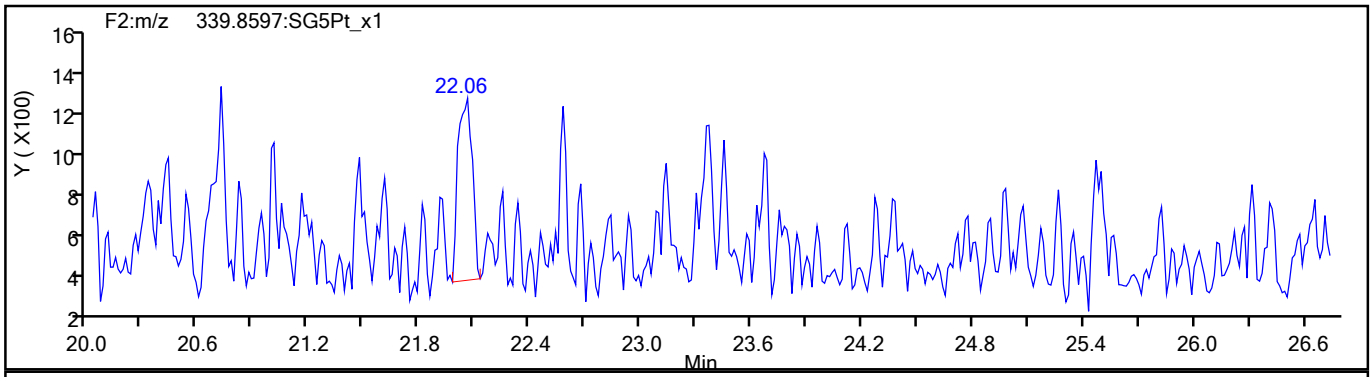

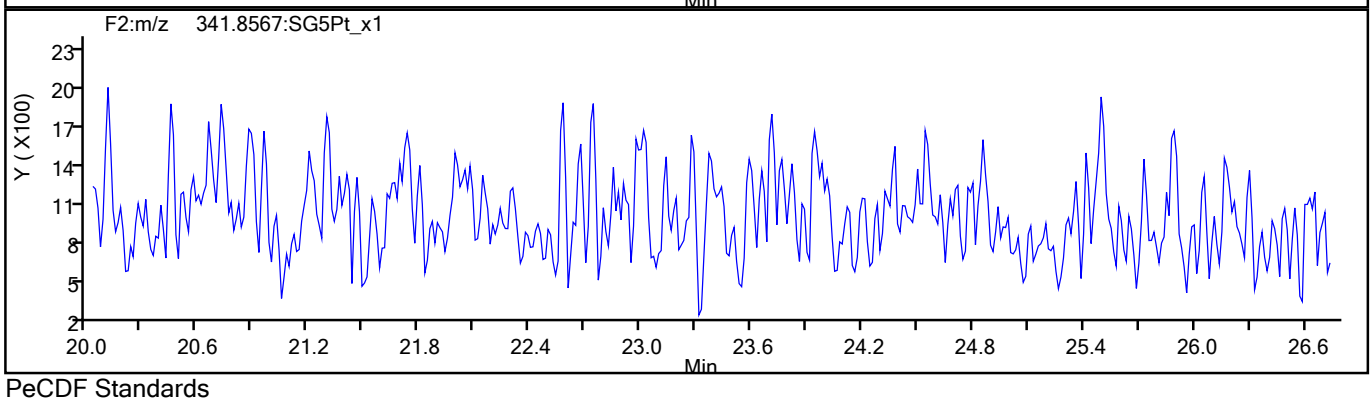

PeCDF Standards

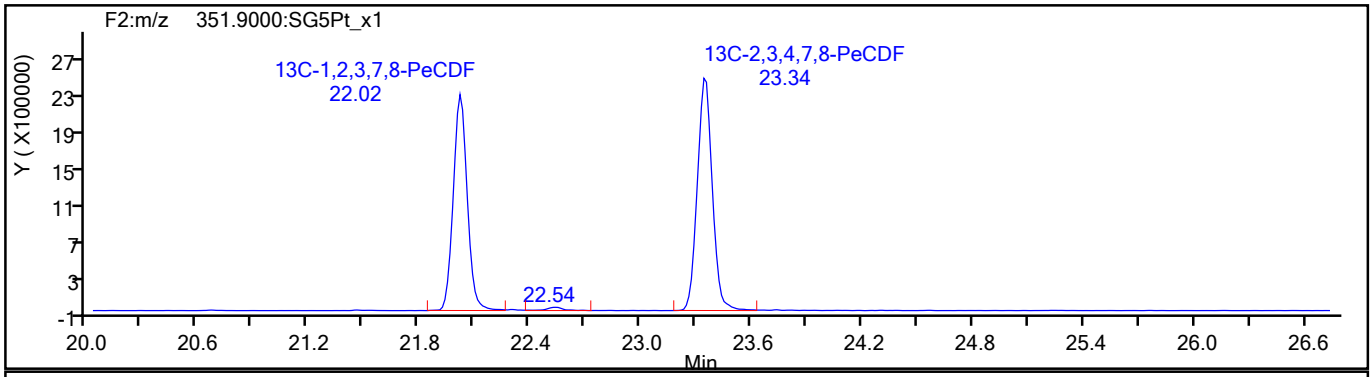

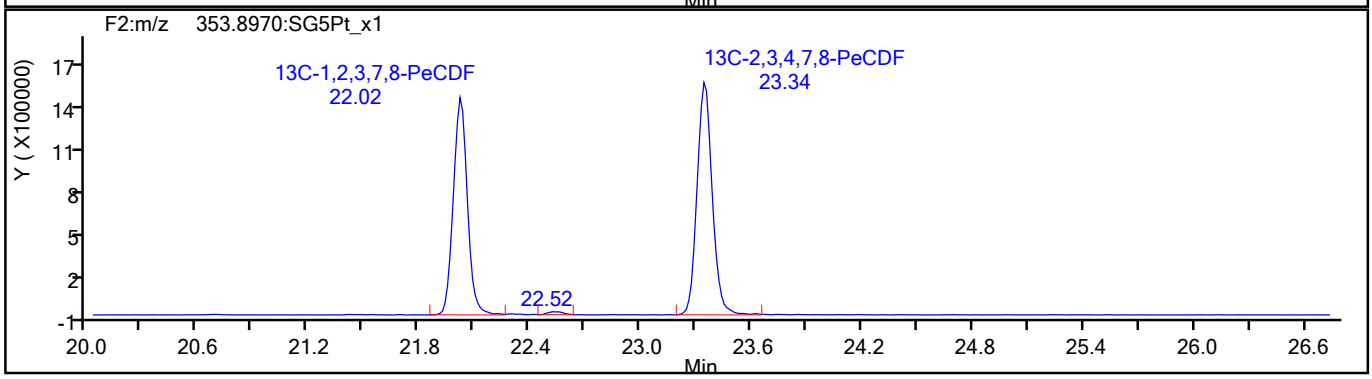

792360

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

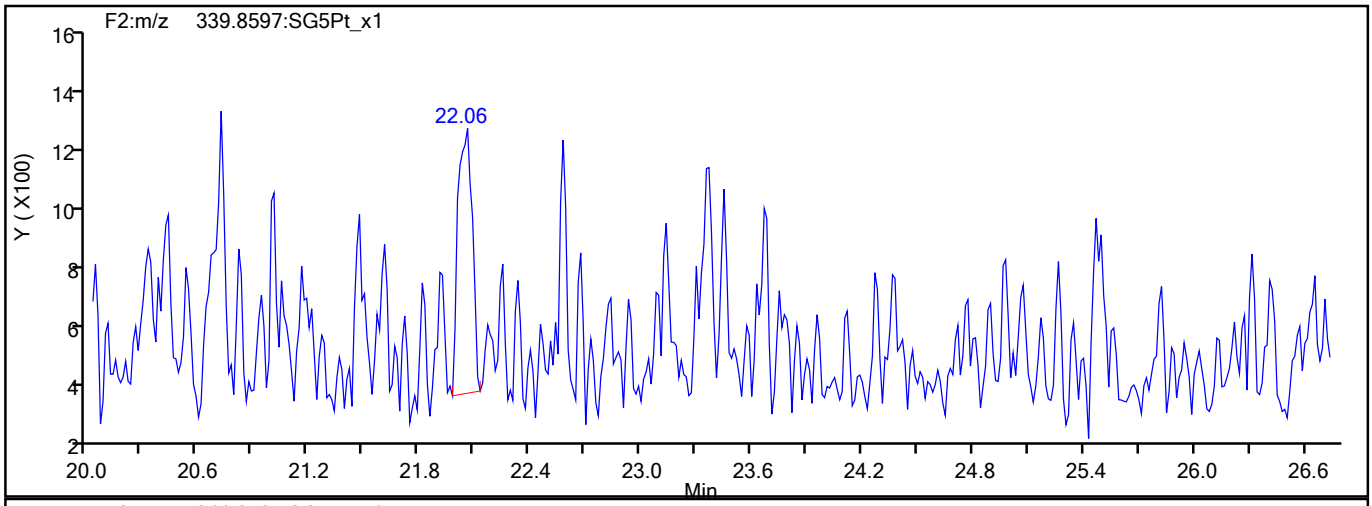

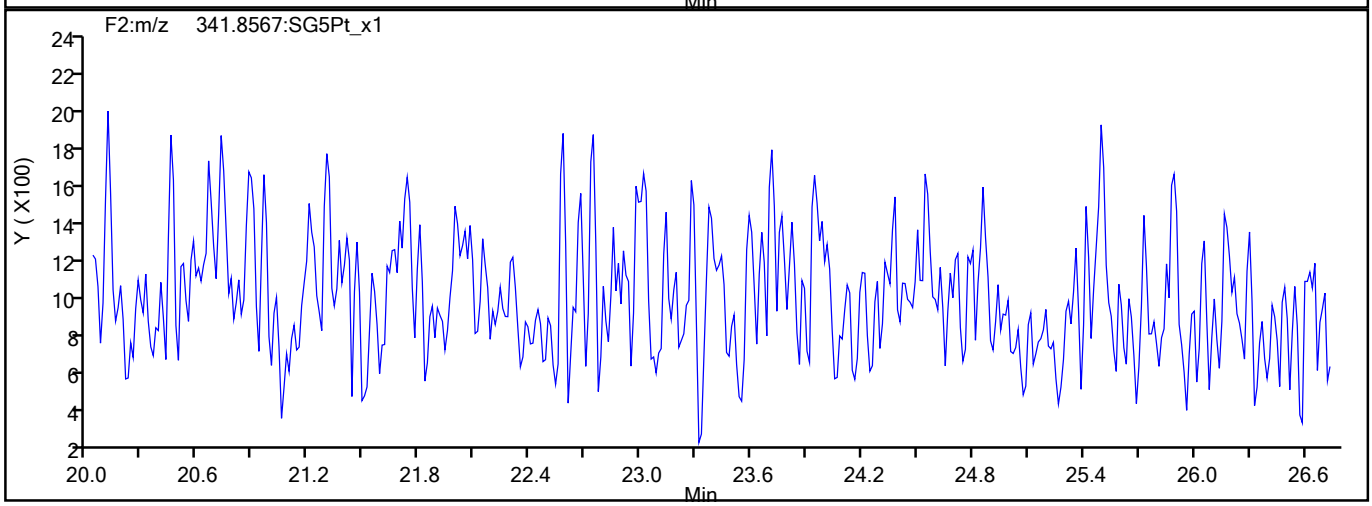

PeCDF Interference Mass

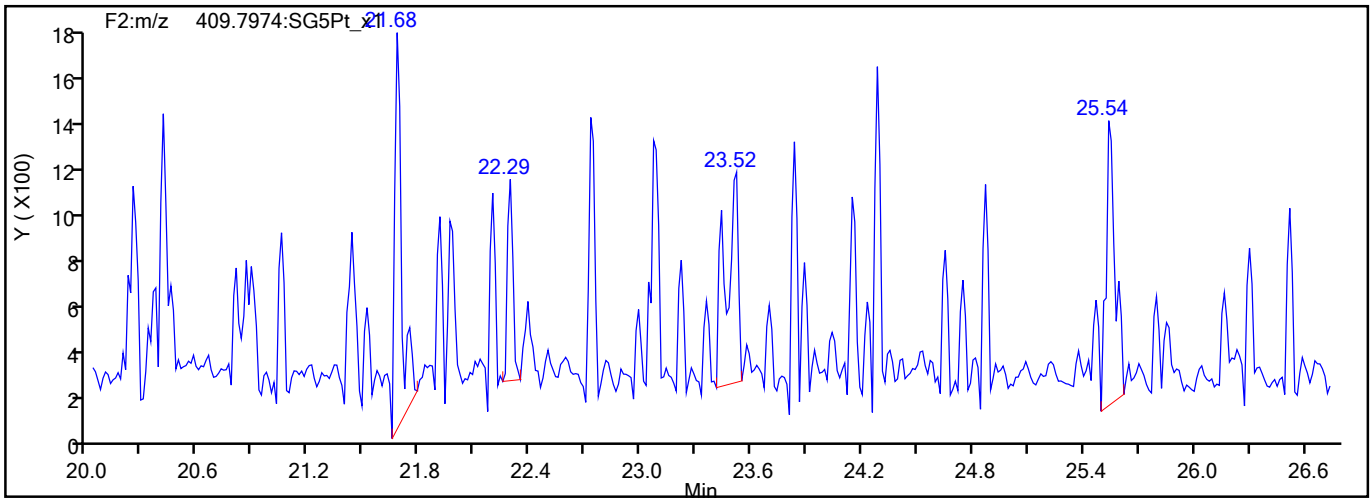

792361

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

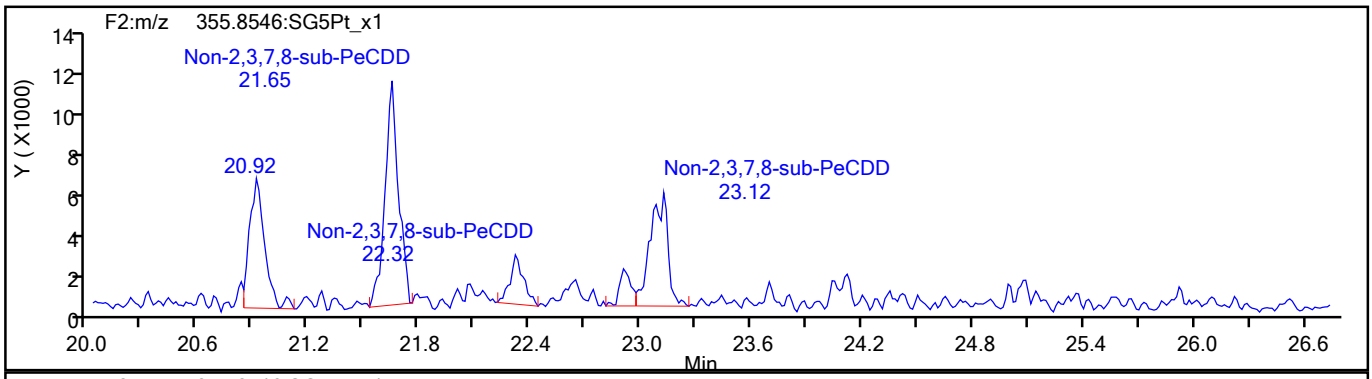

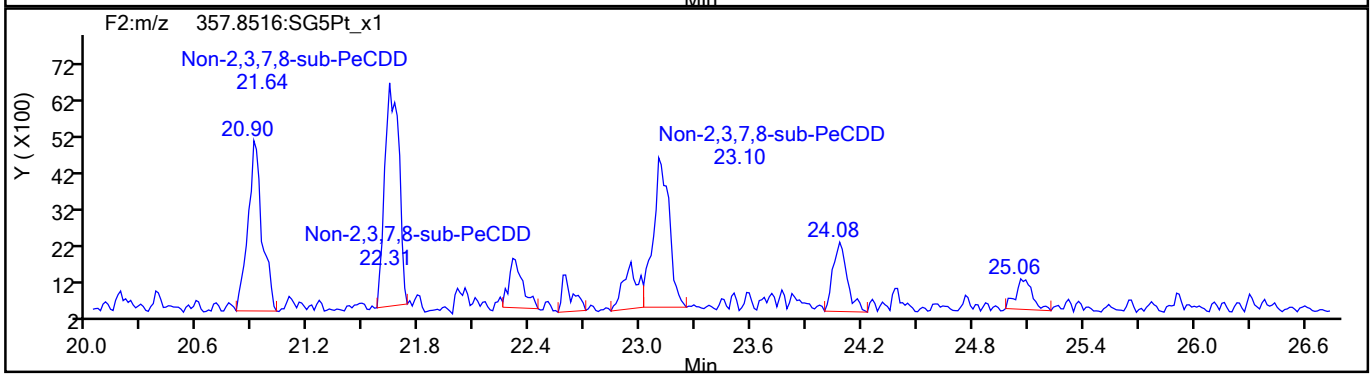

PeCDD Standards

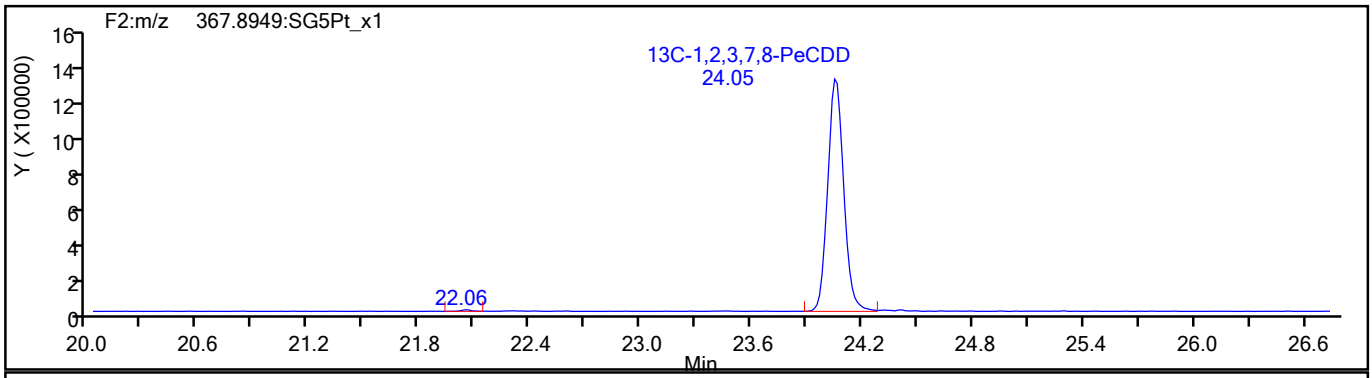

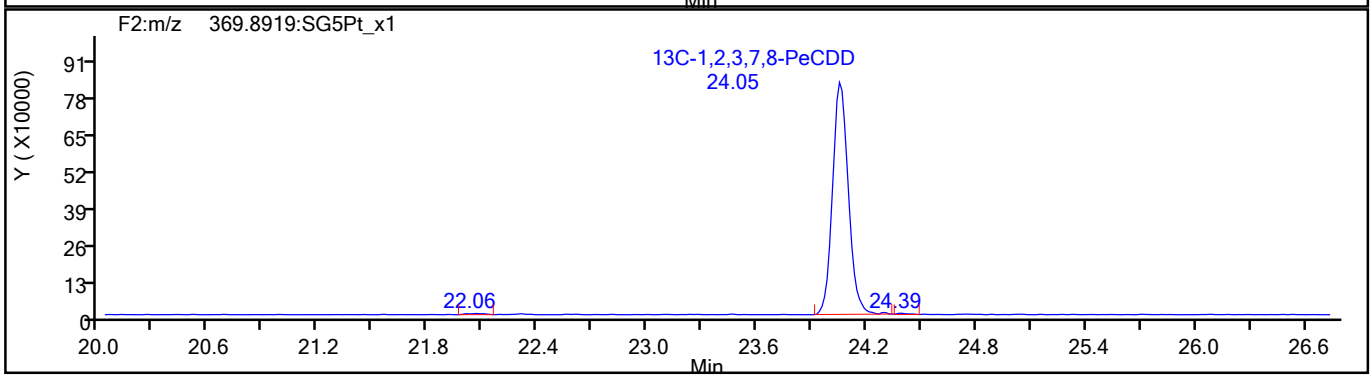

792362

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

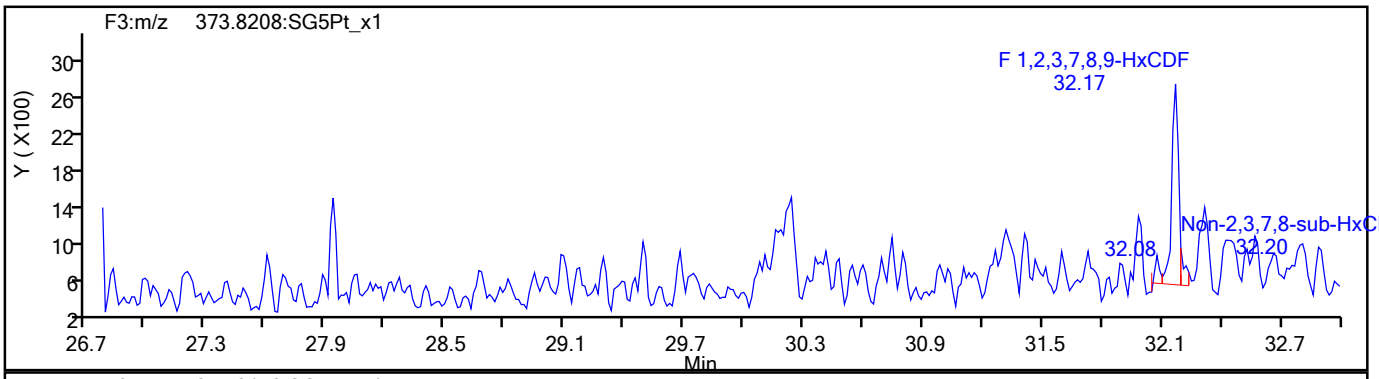

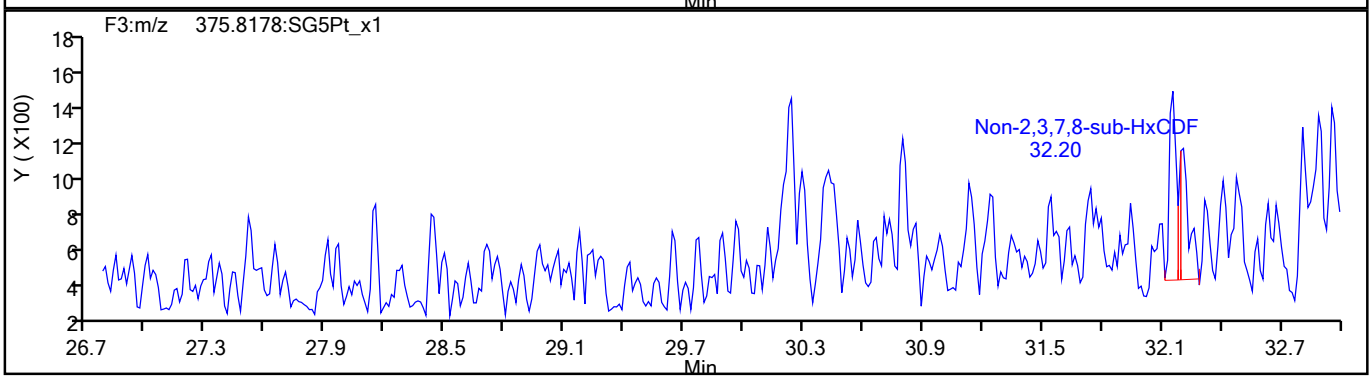

HxCDF Standards

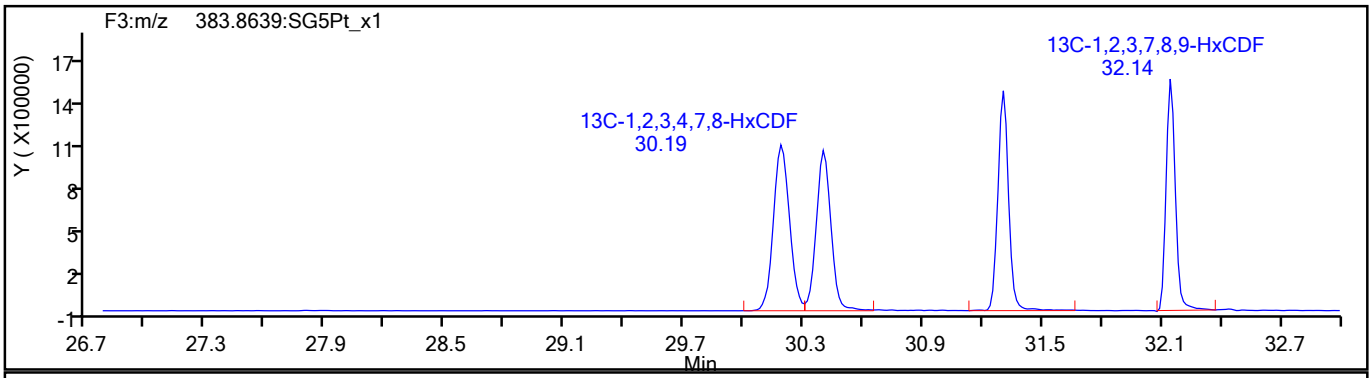

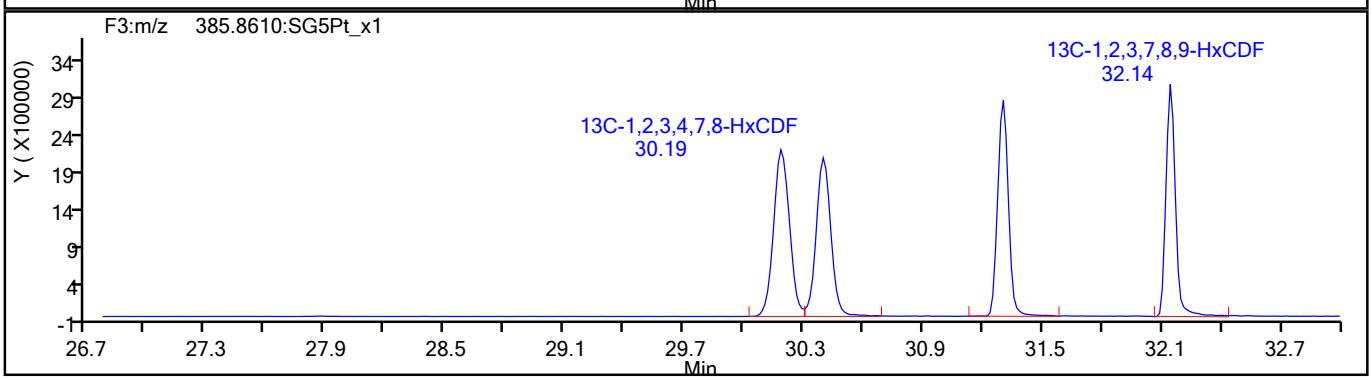

792363

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

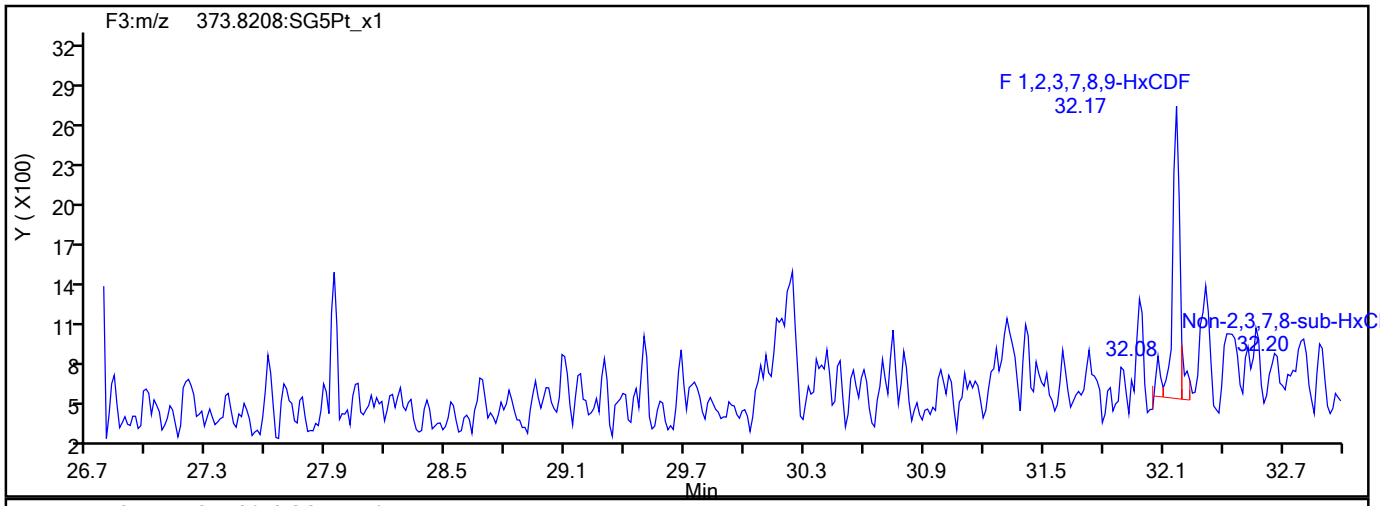

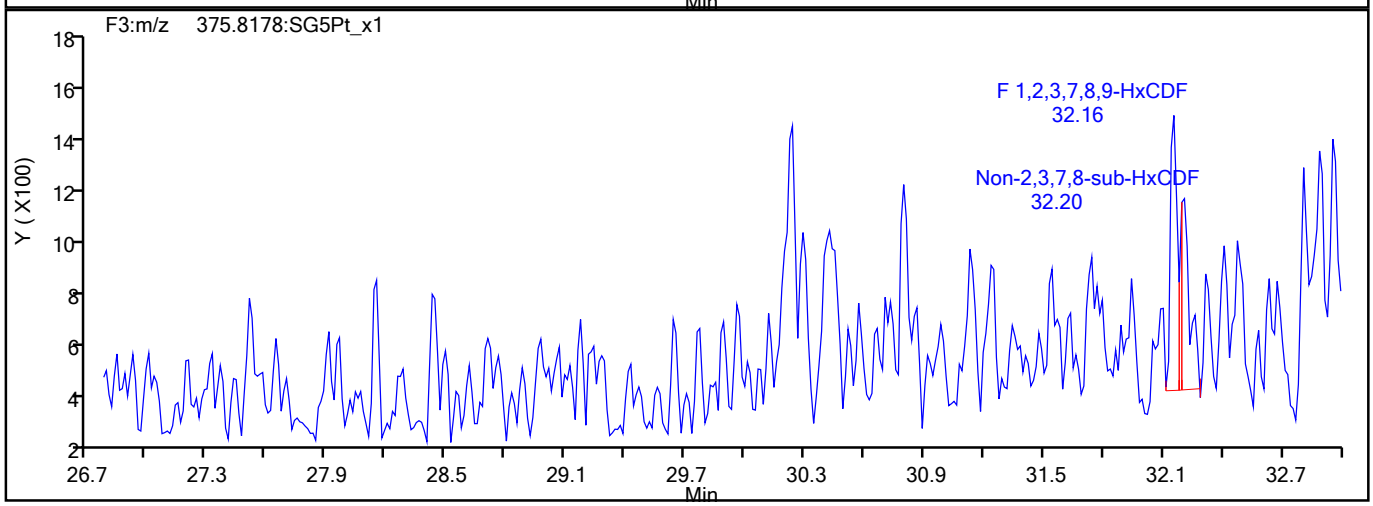

HxCDF Interference Mass

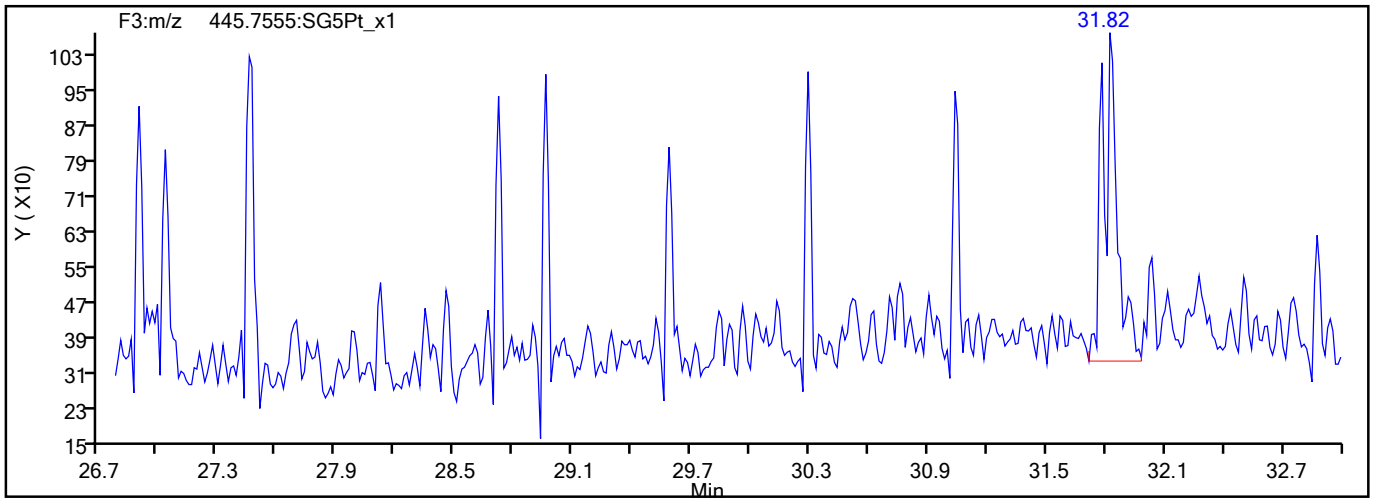

792364

Report Date: 27-Aug-2021 08:21:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

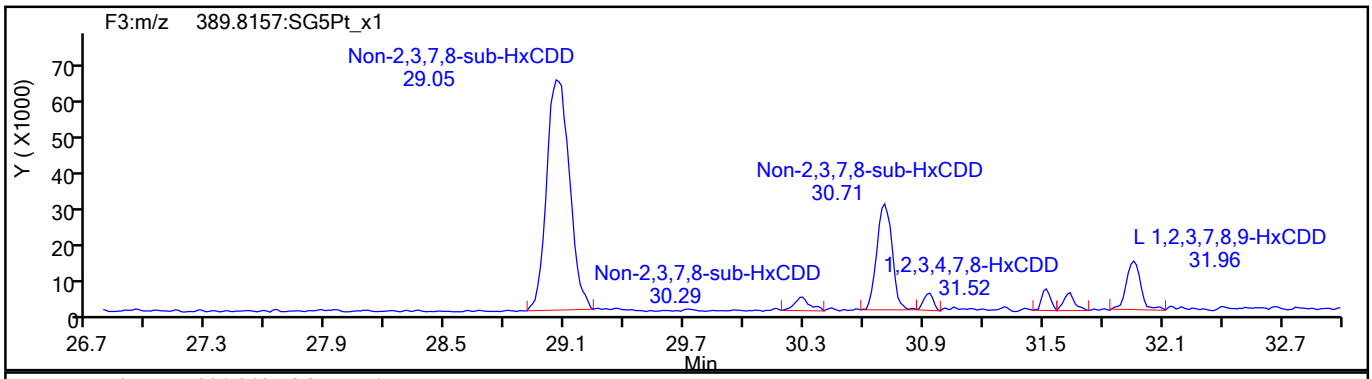

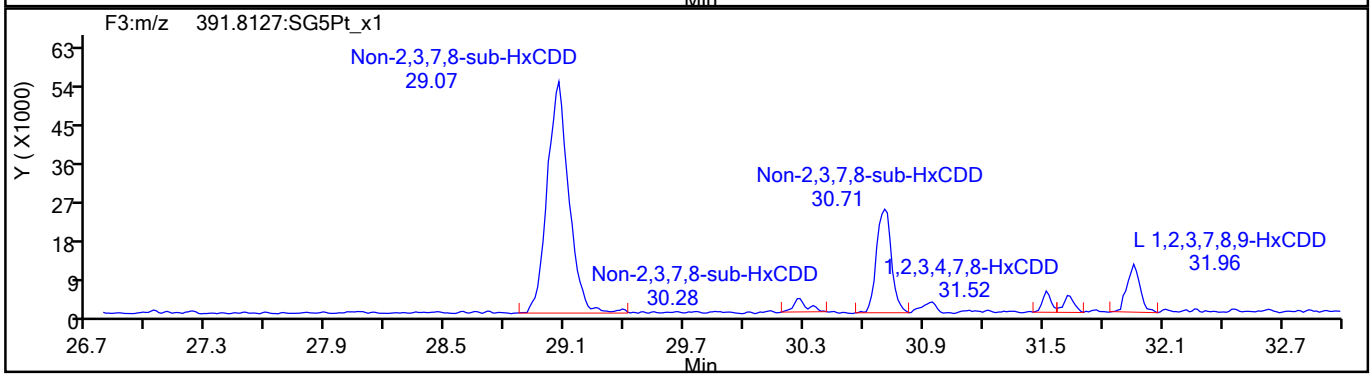

HxCDD Standards

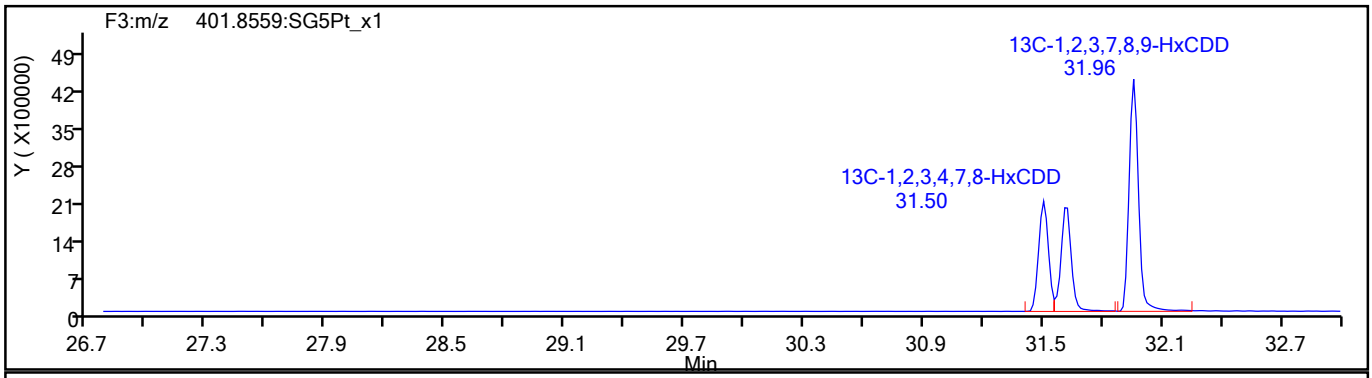

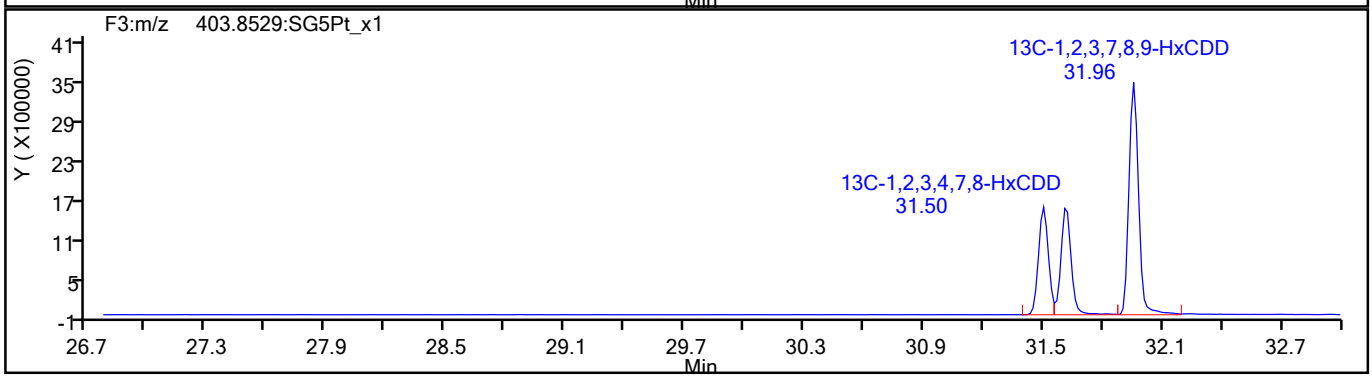

792365

Report Date: 27-Aug-2021 08:21:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

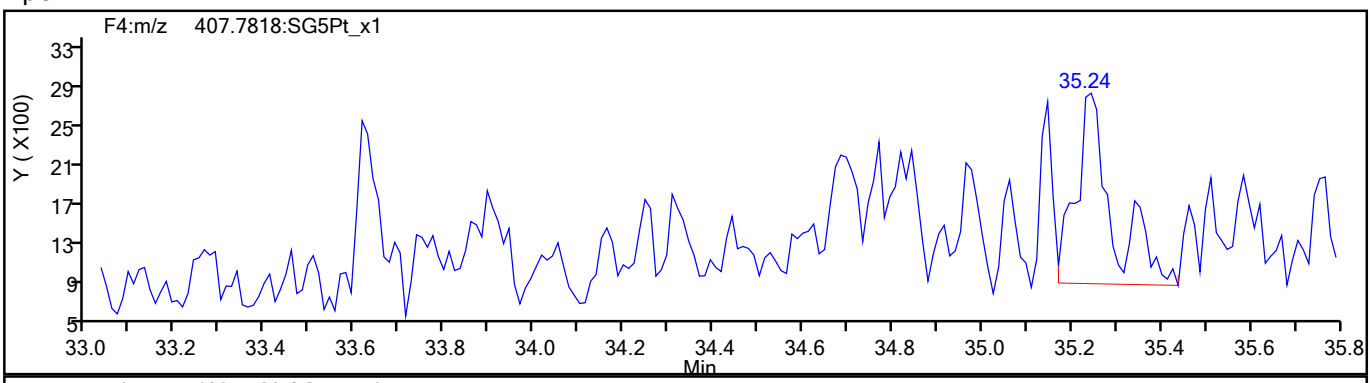

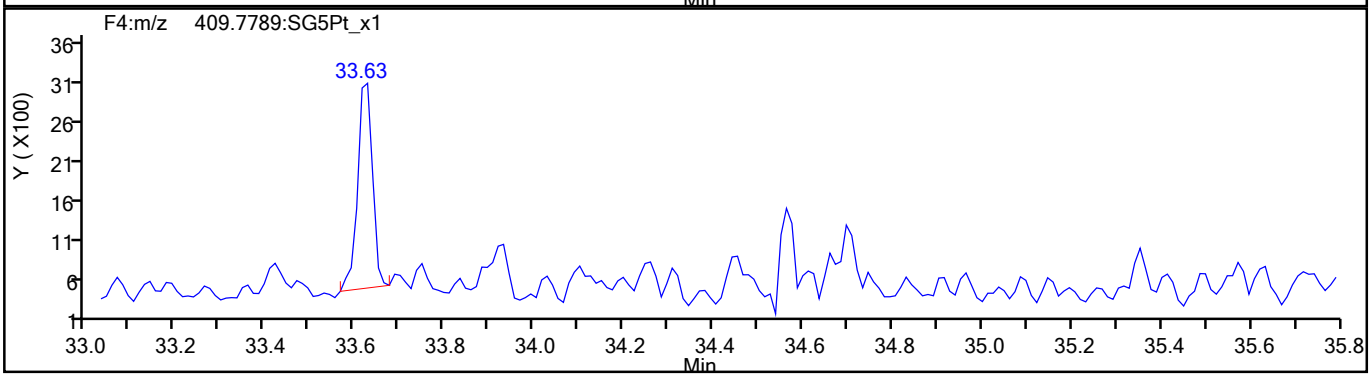

HpCDF Standards

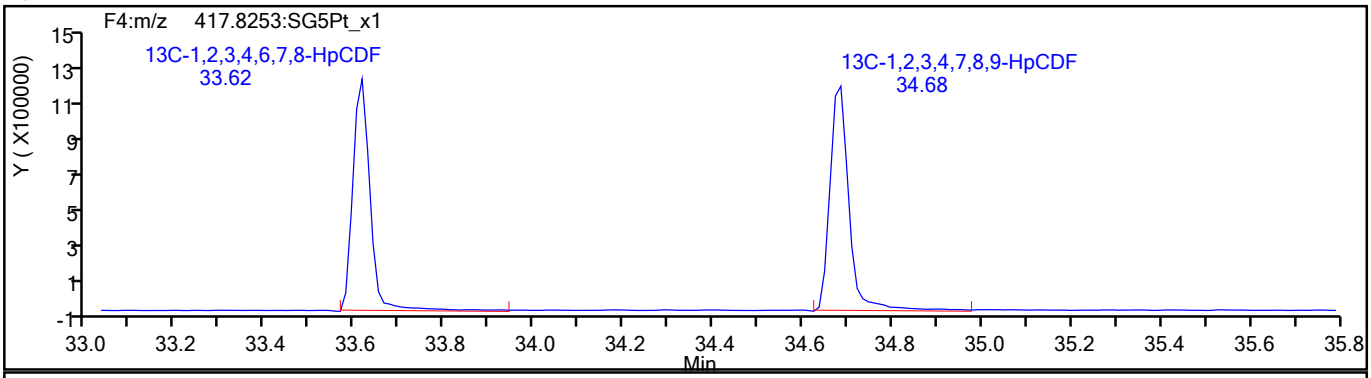

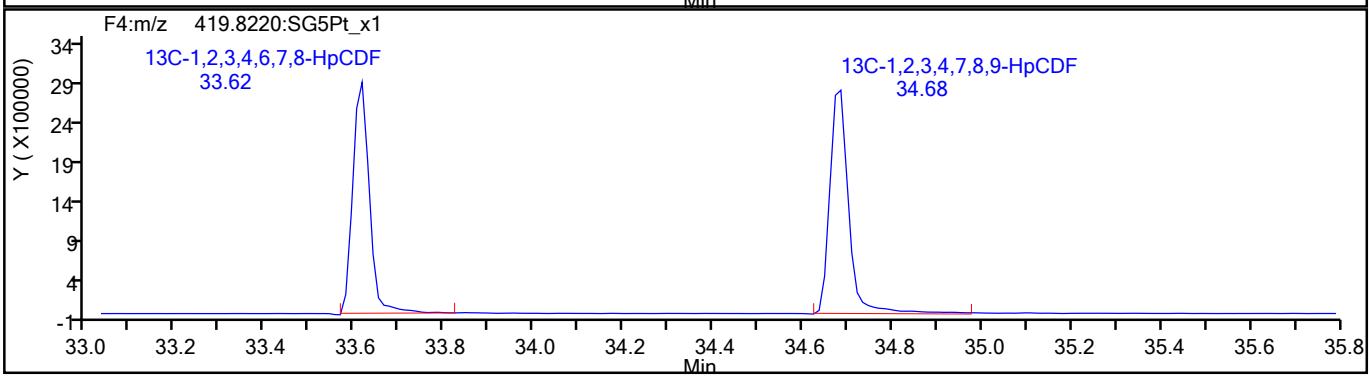

792366

Report Date: 27-Aug-2021 08:21:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

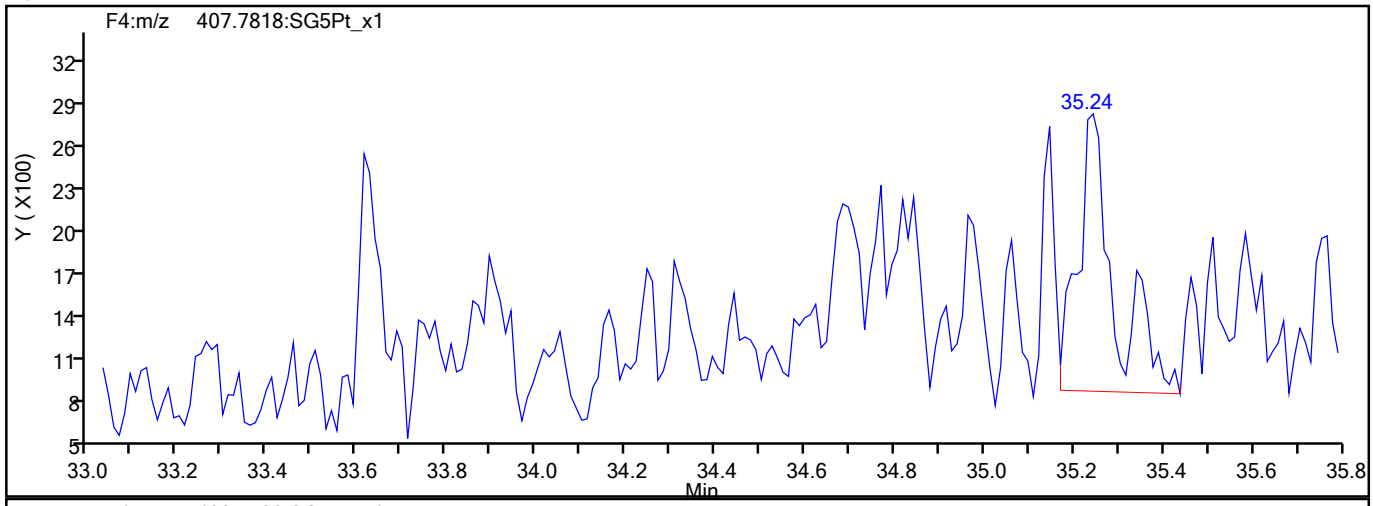

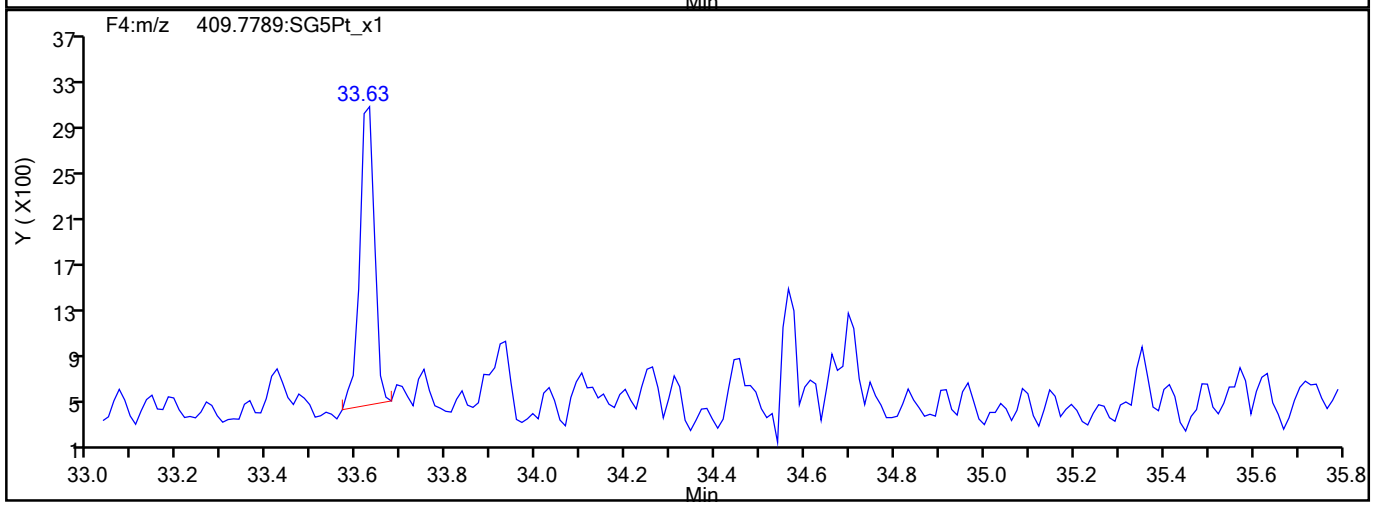

HpCDF Interference Mass

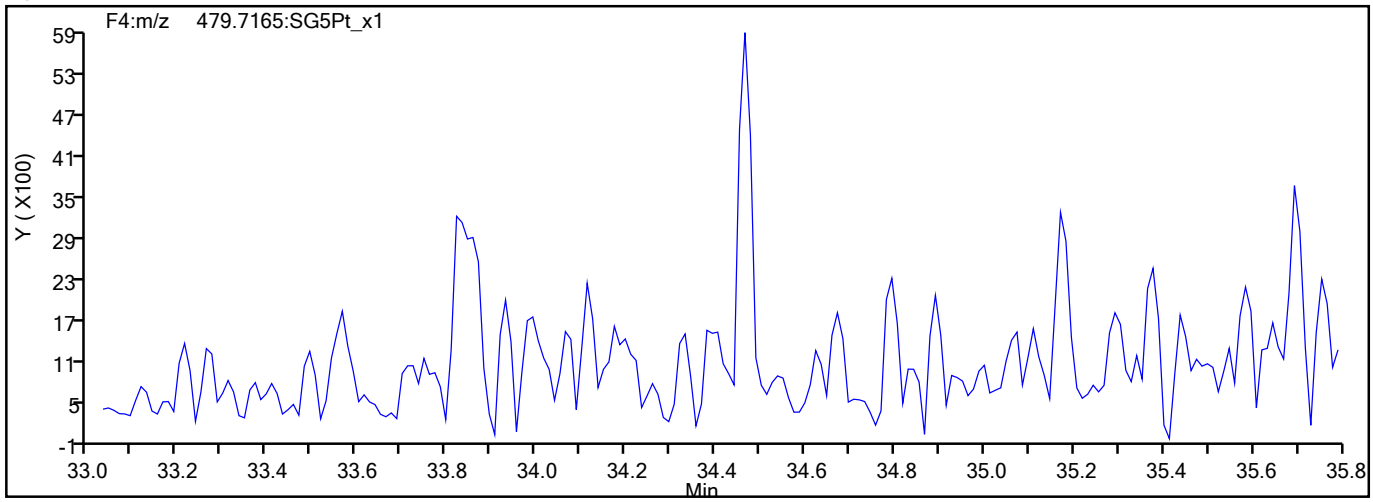

792367

Report Date: 27-Aug-2021 08:21:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

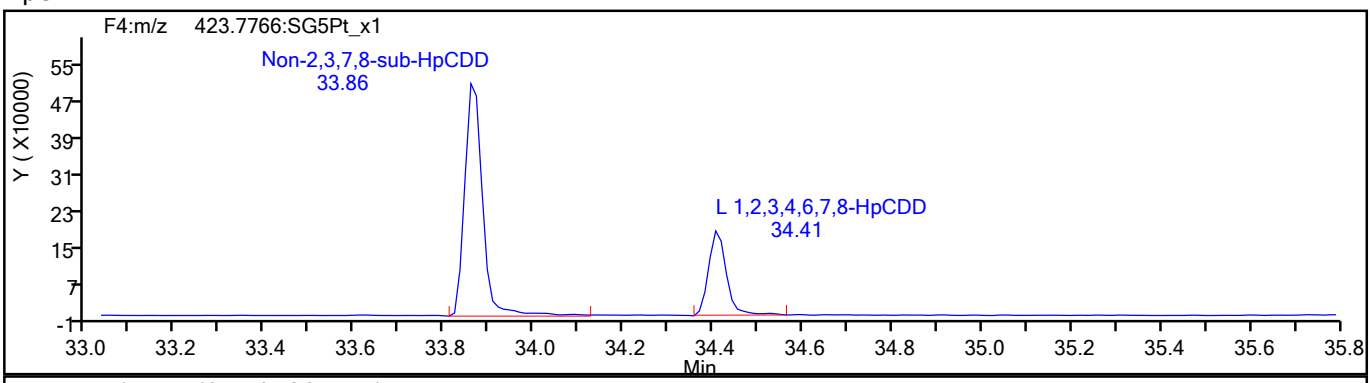

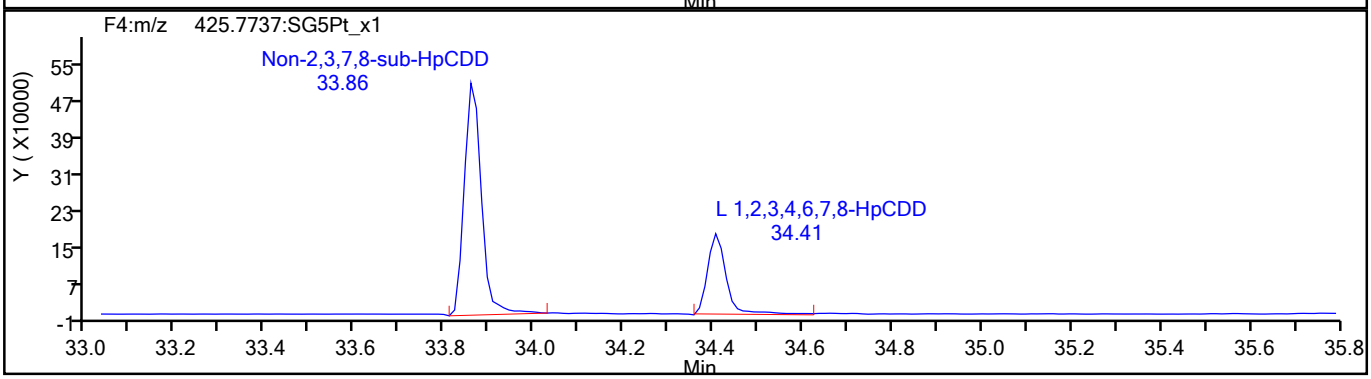

HpCDD Standards

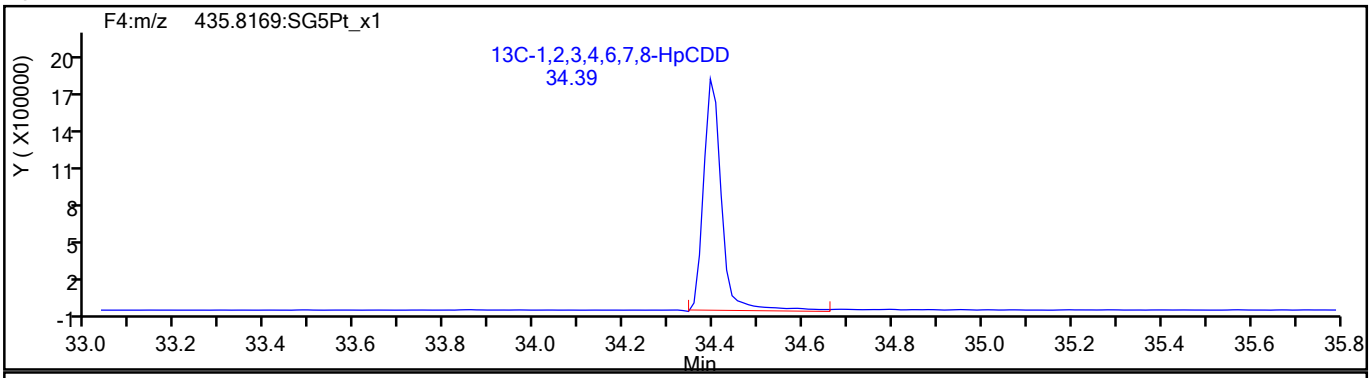

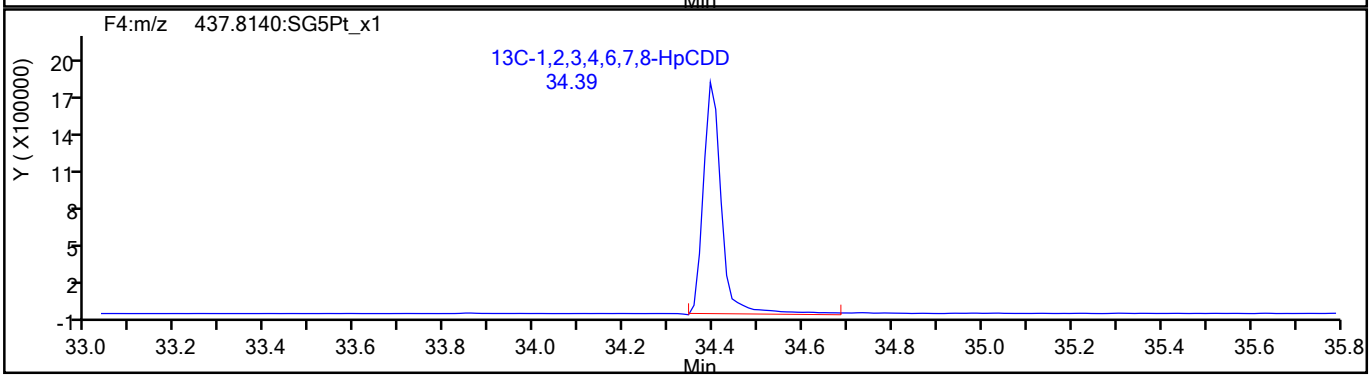

792368

Report Date: 27-Aug-2021 08:21:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

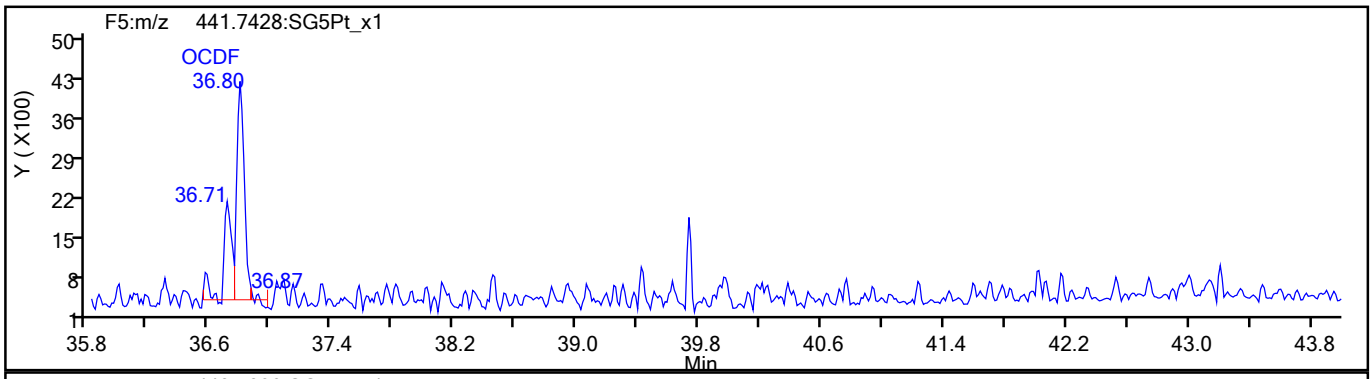

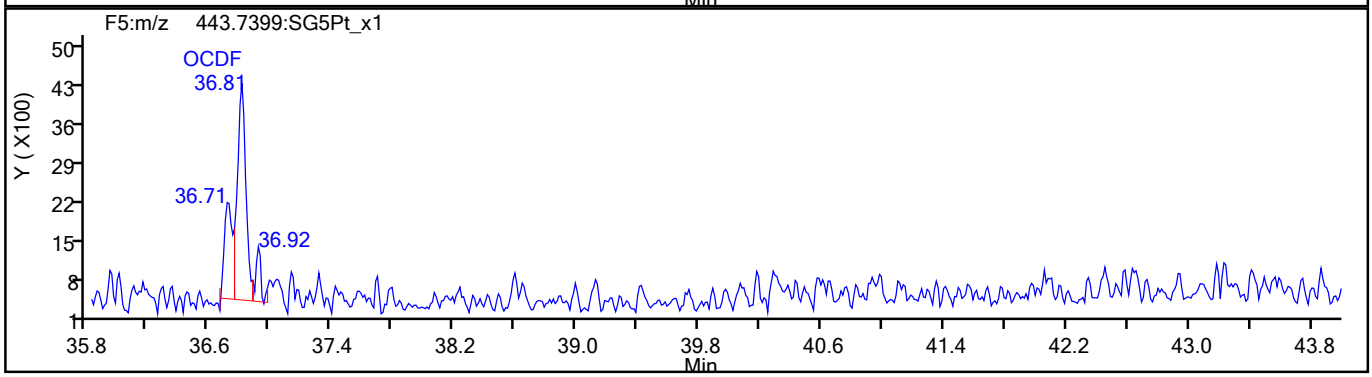

OCDF Standards

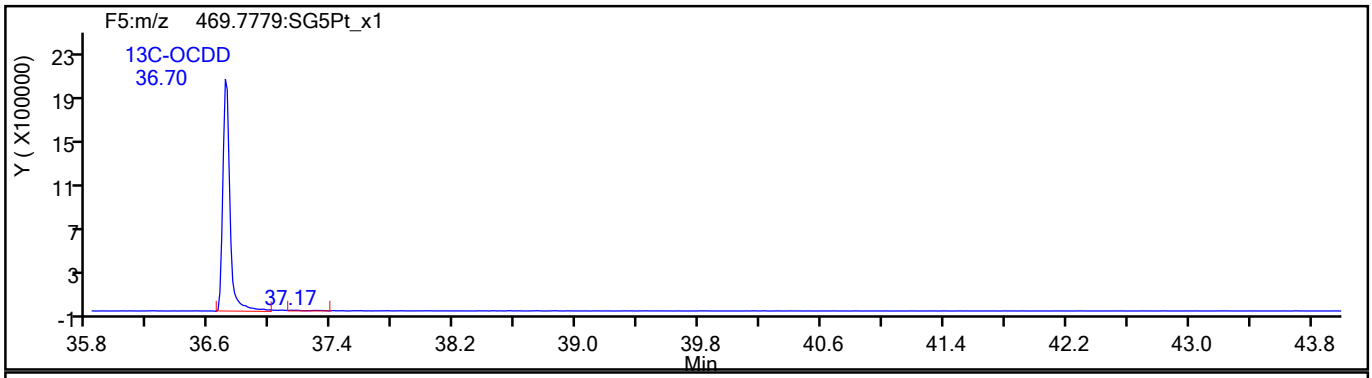

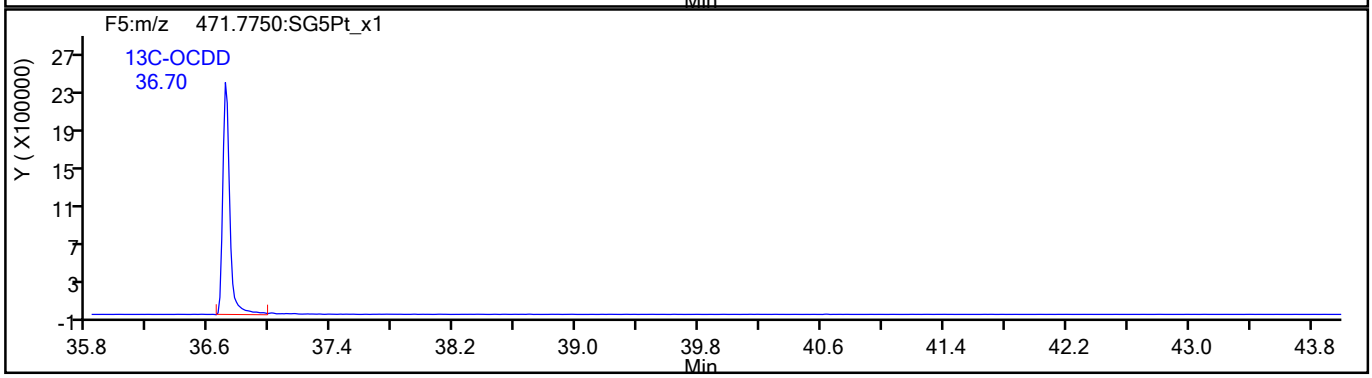

792369

Report Date: 27-Aug-2021 08:21:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

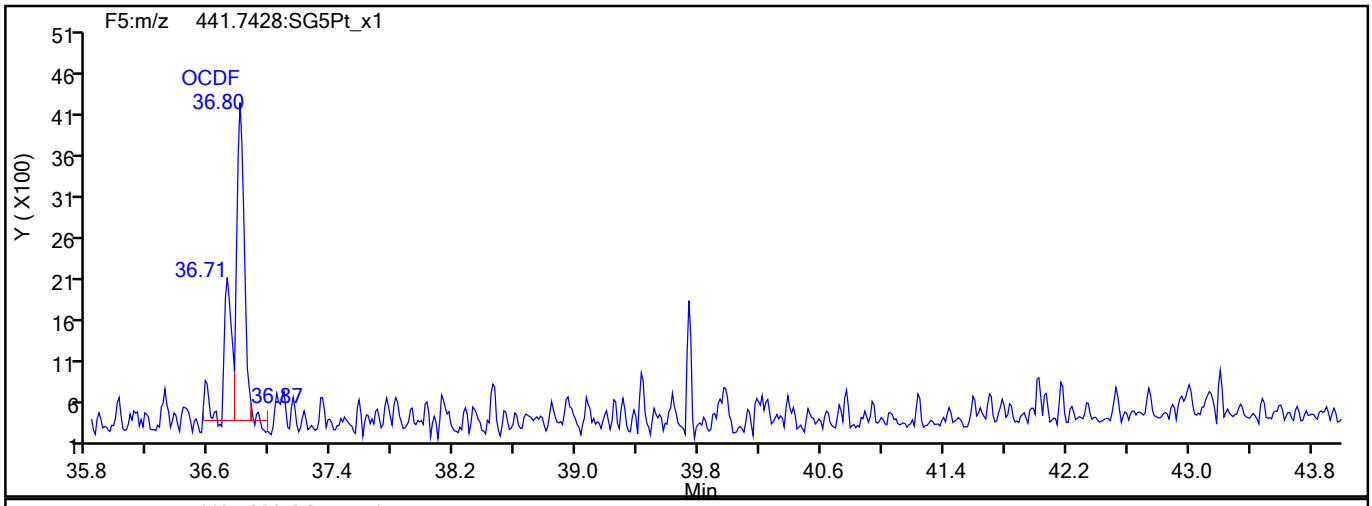

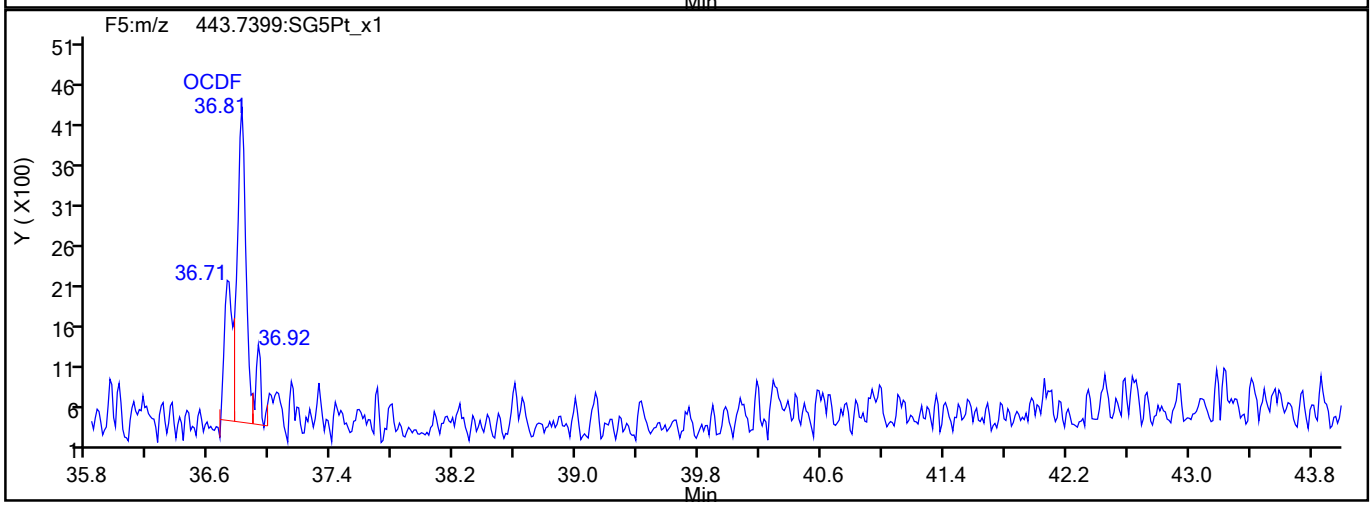

OCDF Interference Mass

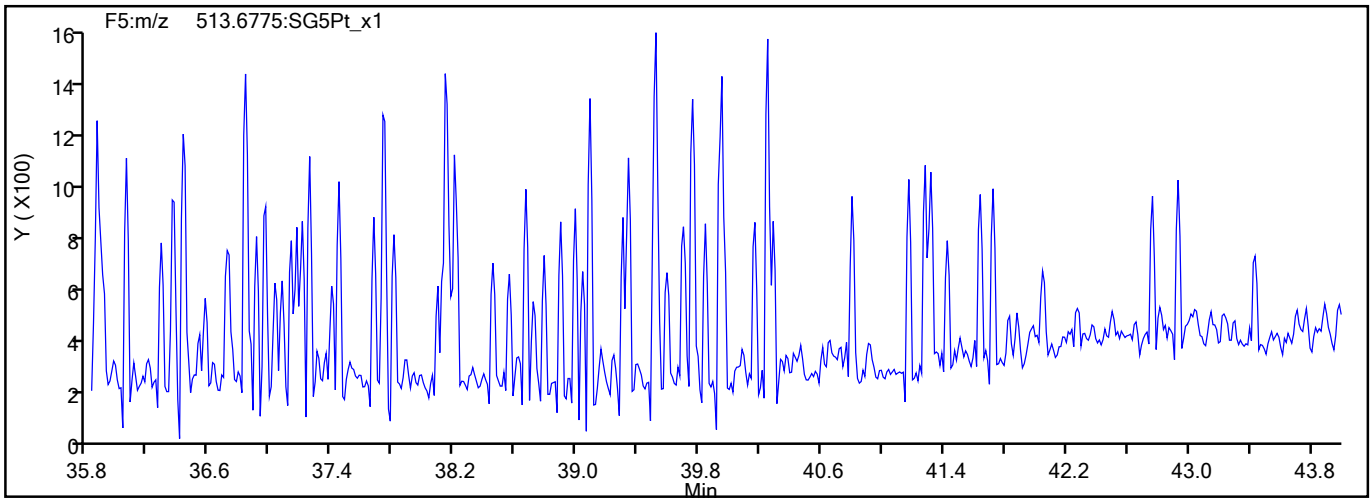

792370

Report Date: 27-Aug-2021 08:21:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

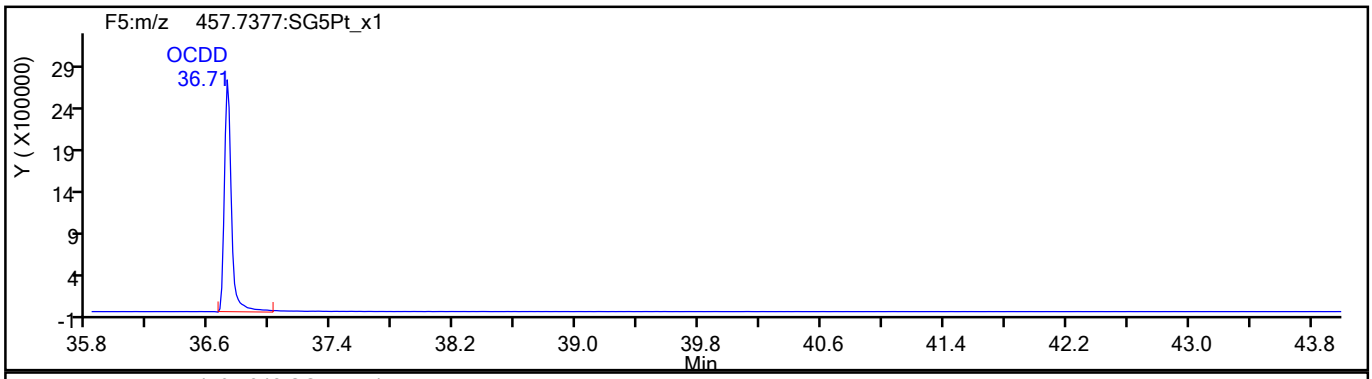

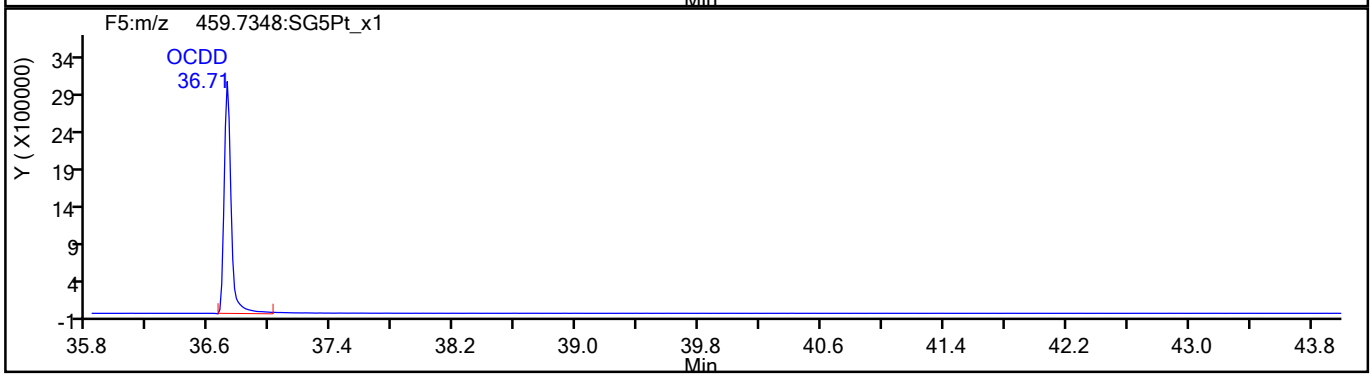

OCDD Standards

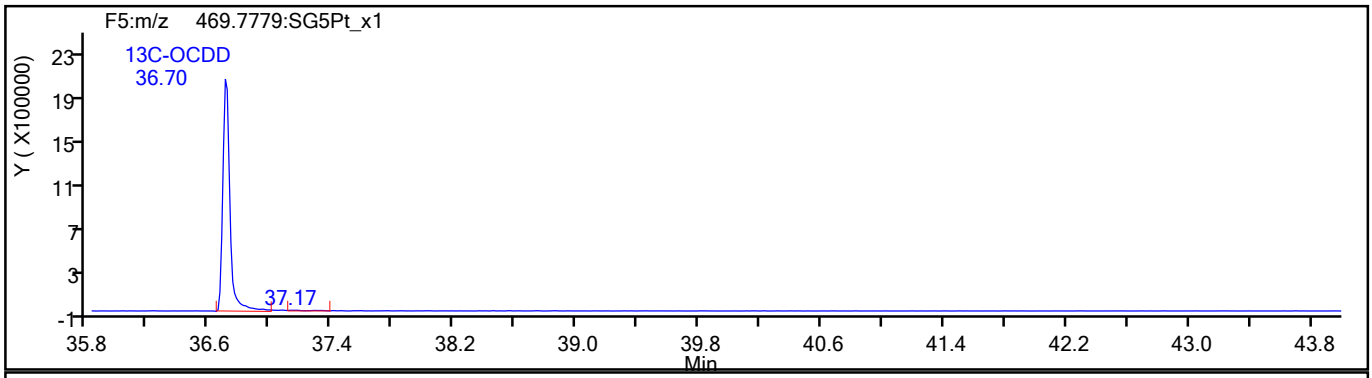

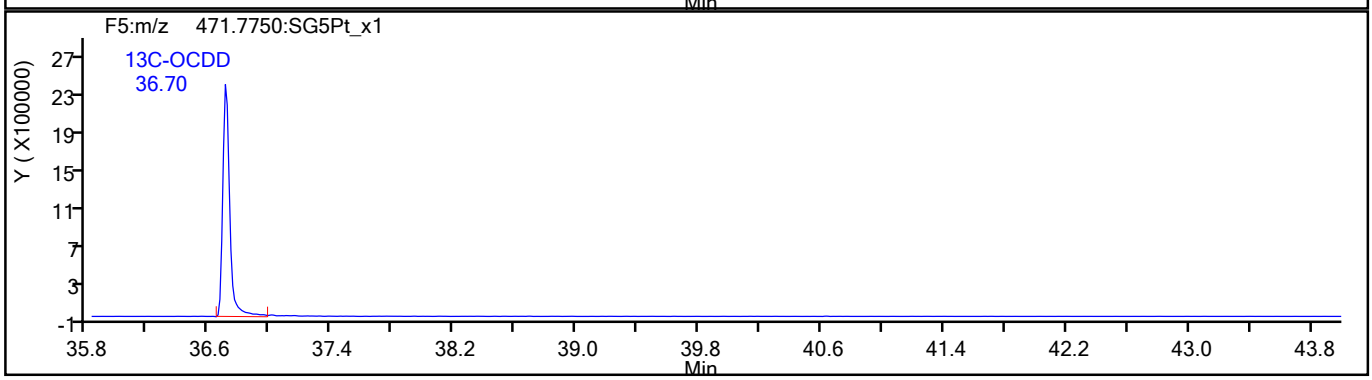

792371

Report Date: 27-Aug-2021 08:21:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

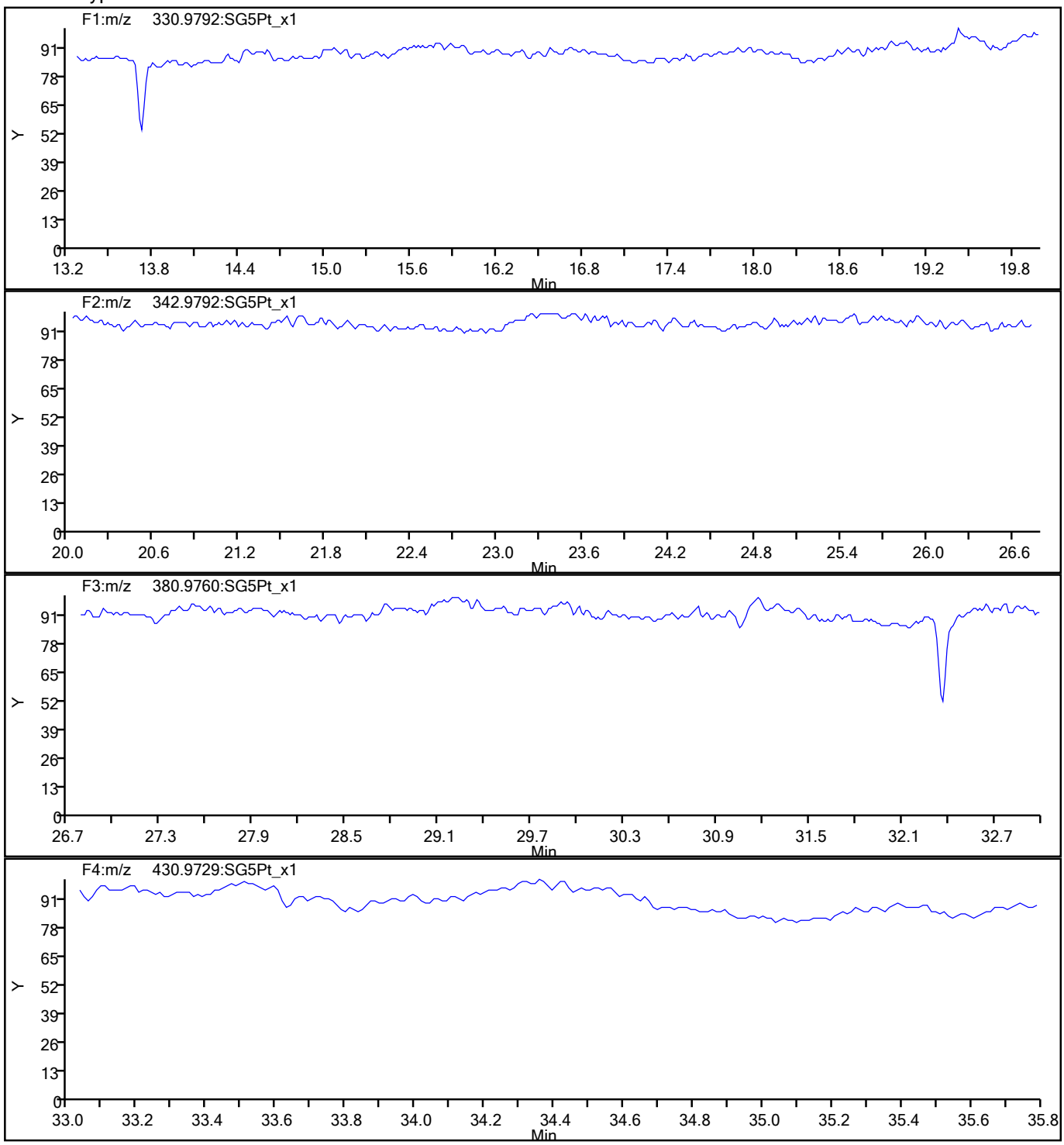

792372

Report Date: 27-Aug-2021 08:21:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_19.d		
Injection Date:	25-Aug-2021 23:50:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	519955	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

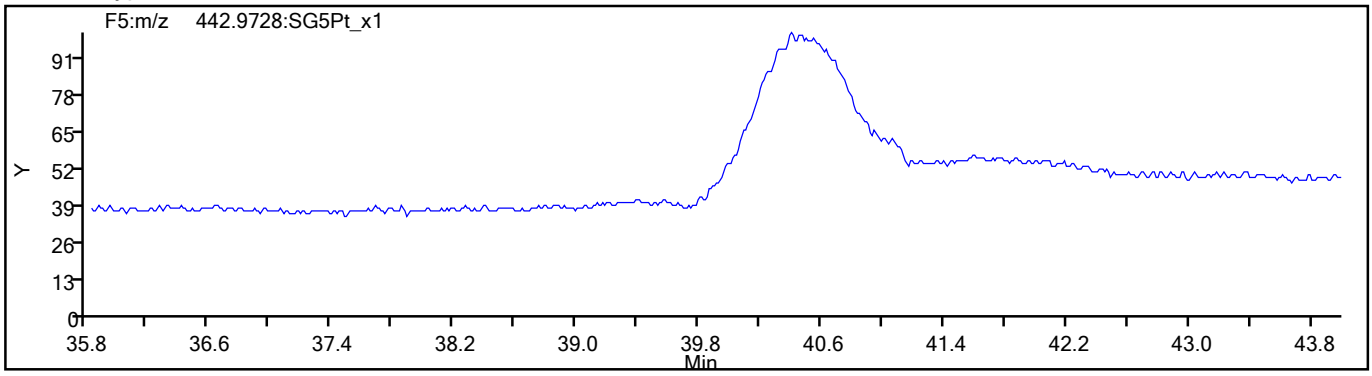

792373

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-2
SDG No.:
Client Sample ID: 11215702-080221-BN-SJSB090 (16-18) RA
Lab Sample ID: 320-77214-9 RA
Matrix: Sediment
Lab File ID: 27AU21A11D2_009.d
Analysis Method: 1613B
Date Collected: 08/02/2021 13:50
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.56(g)
Date Analyzed: 08/27/2021 20:45
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 37.5
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520456
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	2.9	B	1.7	0.14

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	67		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	82		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_009.d
Lims ID: 320-77214-A-9-A
Client ID: 11215702-080221-BN-SJSB090 (16-18)
Sample Type: Client
Inject. Date: 27-Aug-2021 20:45:07 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-9-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:43:29

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.298	66625462	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	59439026	0.76	1.3327	66.9	66.9	0.2324	0.2324	66.94	
2,3,7,8-TCDF	17.656	516910	0.88	0.9978	0.8716	0.8716	0.0430	0.0430		M
D 13C-2,3,7,8-TCDD	16.079	38208357	0.72	0.8749	65.5	65.5	0.2863	0.2863	65.55	
2,3,7,8-TCDD	16.093	117146	0.77	1.0570	0.3710	0.2901	0.0547	0.0547		RQ
$ 37Cl4-2,3,7,8-TCDD	16.093	18910743		0.8648	32.8	32.8	0.0943	0.0943	82.05	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_009.d
Lims ID: 320-77214-A-9-A
Client ID: 11215702-080221-BN-SJSB090 (16-18)
Sample Type: Client
Inject. Date: 27-Aug-2021 20:45:07 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-9-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:43:29

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.298	16.300	0		29447283	6553055	8453	21132	775		
333.9339	16.298	16.300	0		37178179	8137597	6266	15665	1299	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.616	0	1.081	25748065	4908961	8777	21942	559		
317.9389	17.629	17.616	1	1.082	33690961	6236417	9423	23557	662	0.76(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.656	17.644	1	1.002	242503	48970	873	2182	56		M
305.8987	17.656	17.644	1	1.002	274407	52849	1040	2600	51	0.88(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.079	16.066	1	0.987	16044551	3806913	8453	21132	450		
333.9339	16.079	16.066	1	0.987	22163806	5264096	6266	15665	840	0.72(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.093	16.080	1	1.001	50962	10375	962	2405	11		
321.8936	16.079	16.080	0	1.000	98878	23191	1134	2835	20	0.52(0.65-0.89)	
	Empc Correction				66184	13474	1134	2835	12		
37Cl4-2,3,7,8-TCDD											
327.8840	16.093	16.080	1	0.987	18910743	4396716	4794	11985	917		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_009.d				
Injection Date:	27-Aug-2021 20:45:07	Instrument ID:	11D2		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.66
Area: 252465
Amount: 0.847419
Amount Units: pg/ul

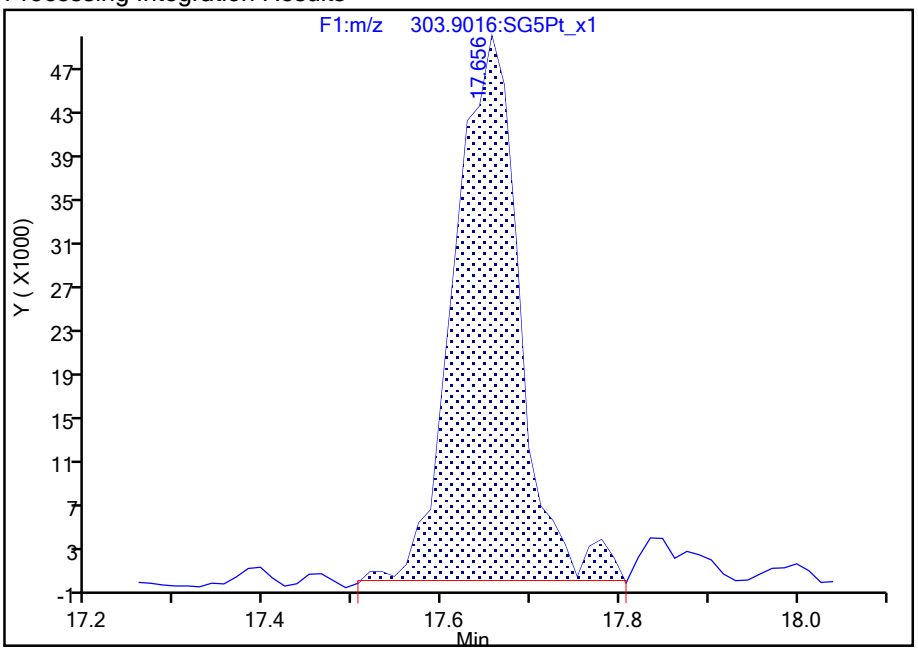

Manual Integration Results

RT: 17.66
Area: 242503
Amount: 0.871559
Amount Units: pg/ul

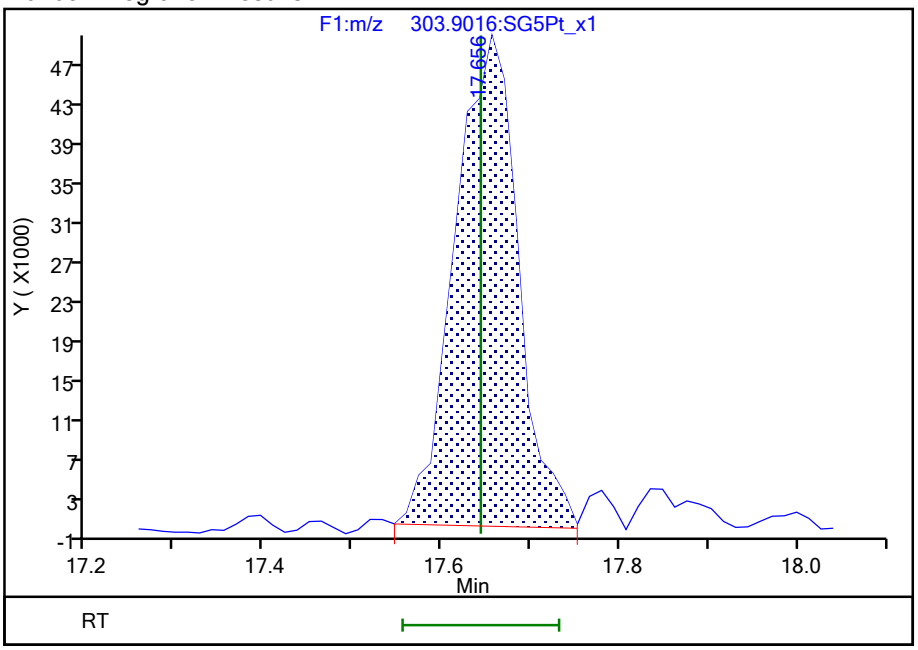

Reviewer: bennettd, 30-Aug-2021 09:42:36

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_009.d				
Injection Date:	27-Aug-2021 20:45:07	Instrument ID:	11D2		
Lims ID:	320-77214-A-9-A	Lab Sample ID:	320-77214-9		
Client ID:	11215702-080221-BN-SJSB090 (16-18)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.66
Area: 250128
Amount: 0.847419
Amount Units: pg/ul

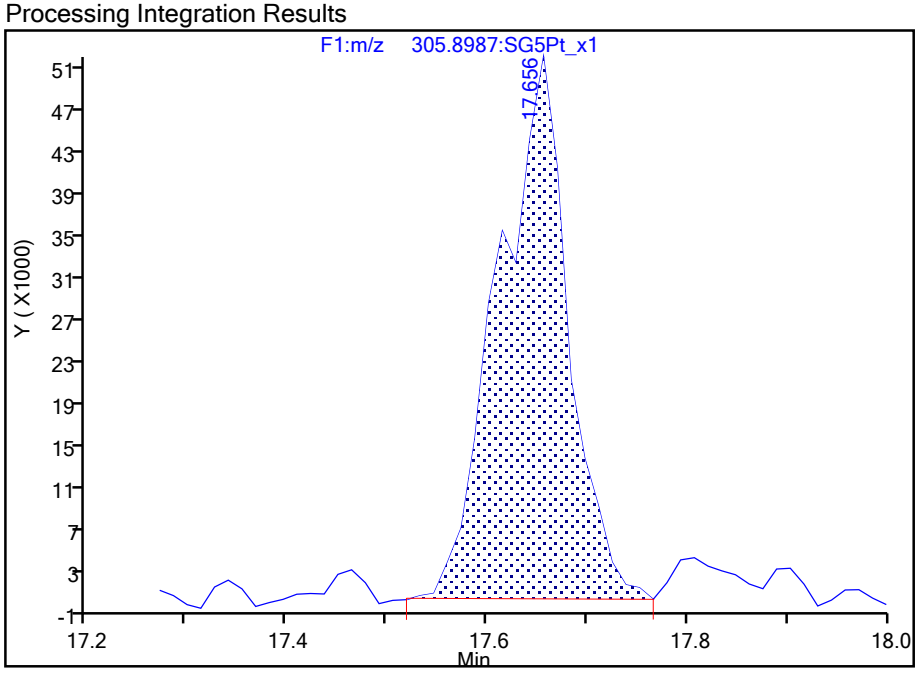

Manual Integration Results

RT: 17.66
Area: 274407
Amount: 0.871559
Amount Units: pg/ul

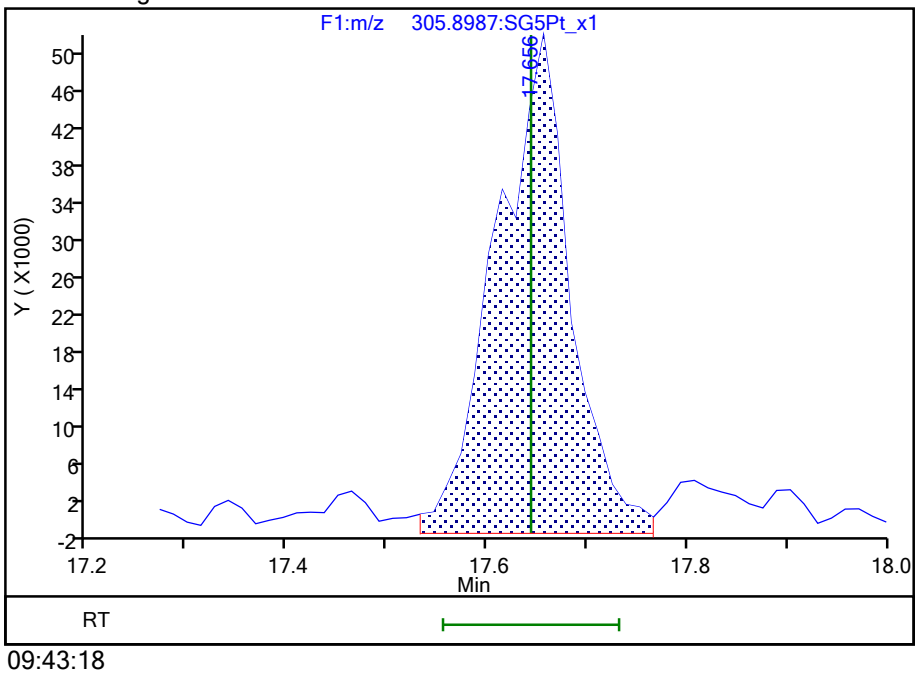

Reviewer: bennettd, 30-Aug-2021 09:43:18

Audit Action: Manually Integrated Audit Reason: Baseline

Report Date: 30-Aug-2021 09:51:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_009.d		
Injection Date:	27-Aug-2021 20:45:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	520456	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

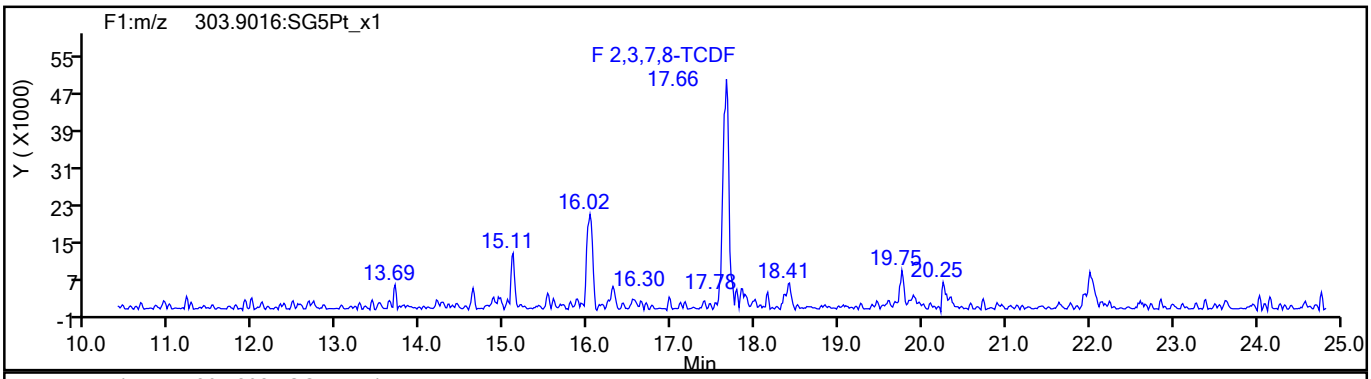

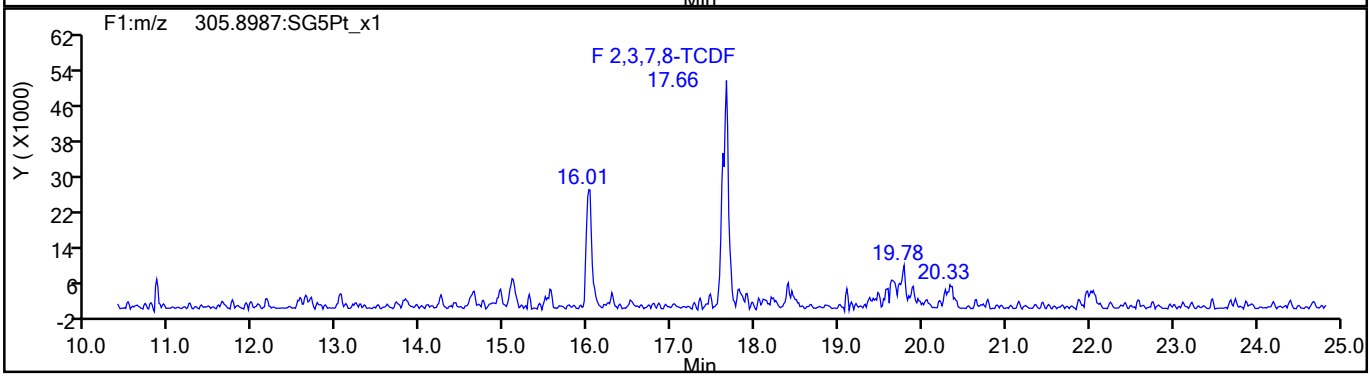

TCDF Standards

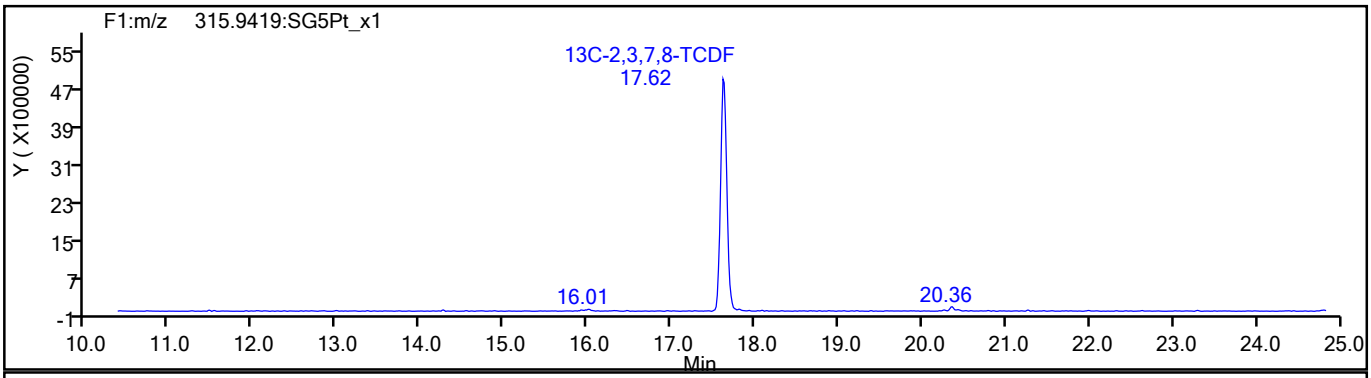

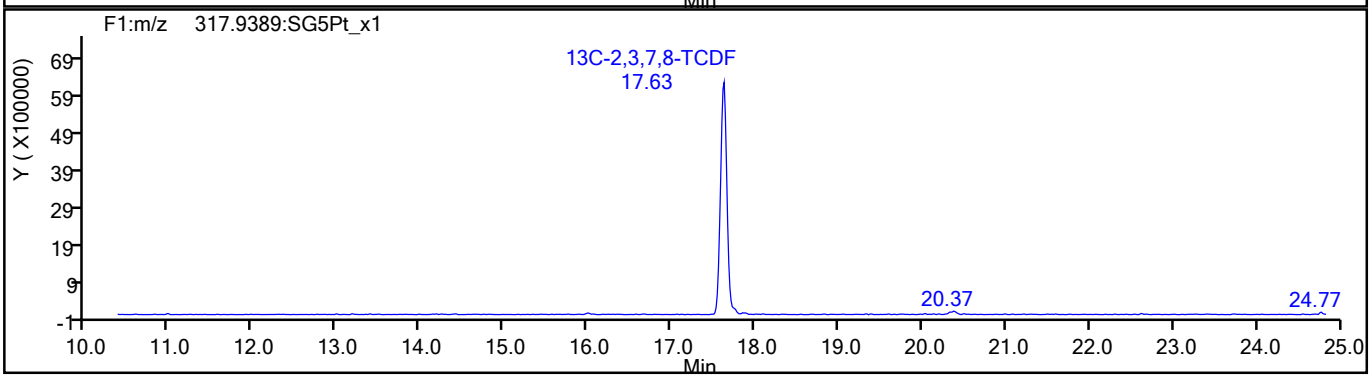

792379

Report Date: 30-Aug-2021 09:51:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_009.d		
Injection Date:	27-Aug-2021 20:45:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	520456	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

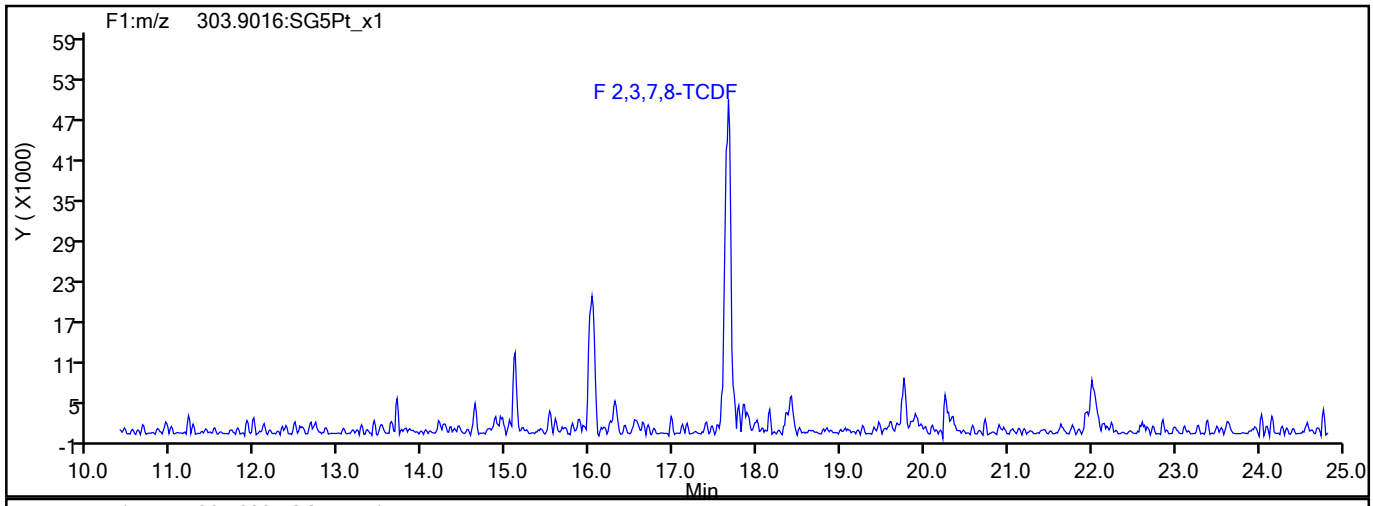

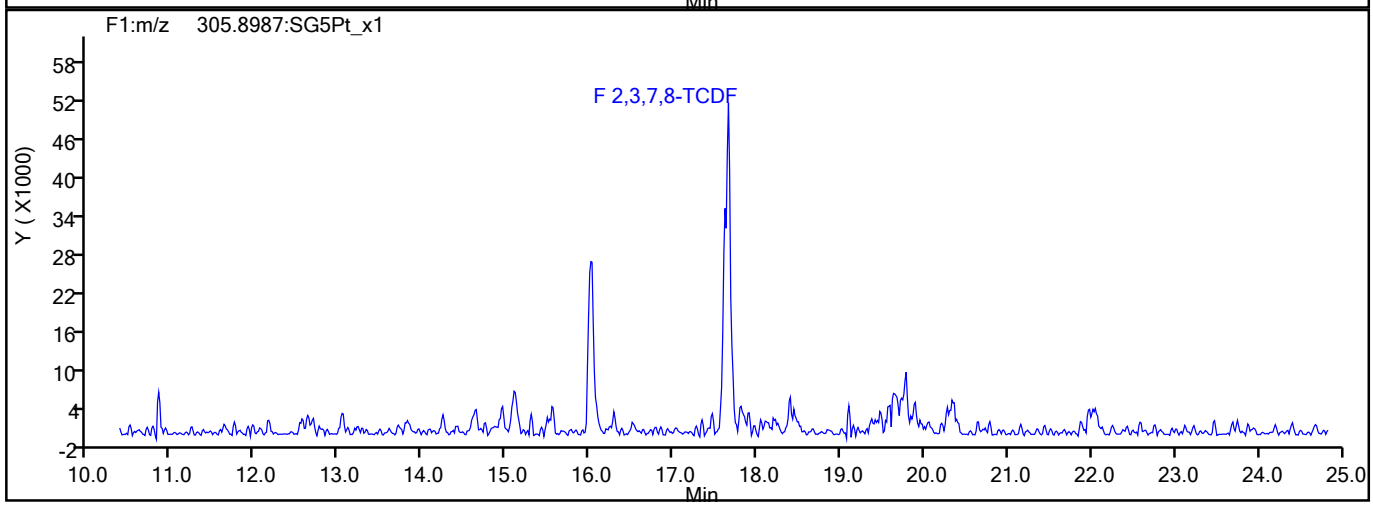

TCDF Interference Mass

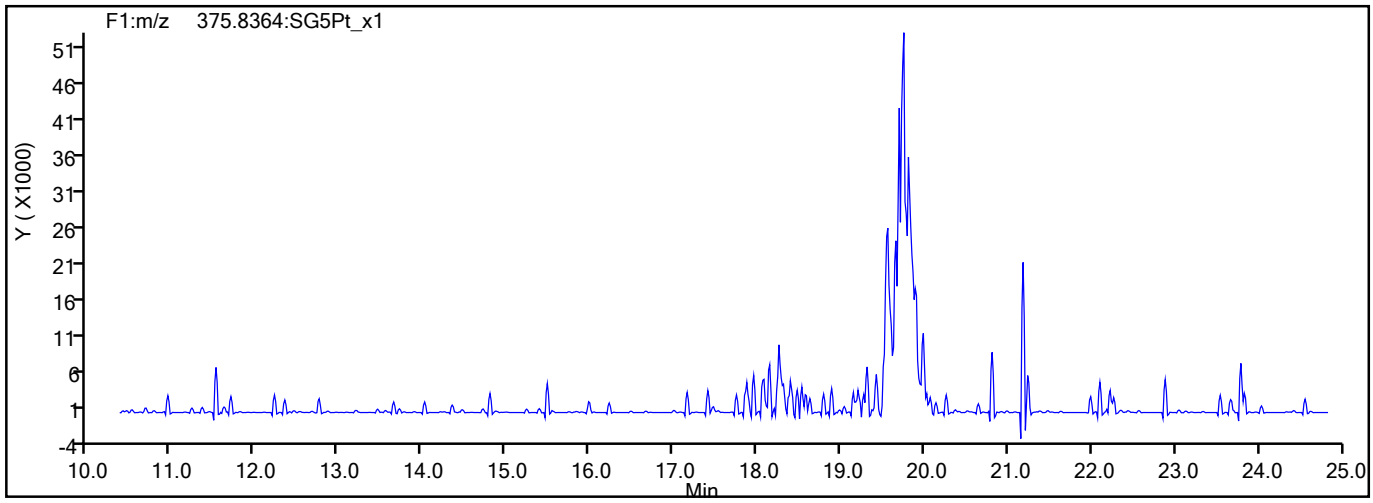

792380

Report Date: 30-Aug-2021 09:51:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_009.d		
Injection Date:	27-Aug-2021 20:45:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	520456	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

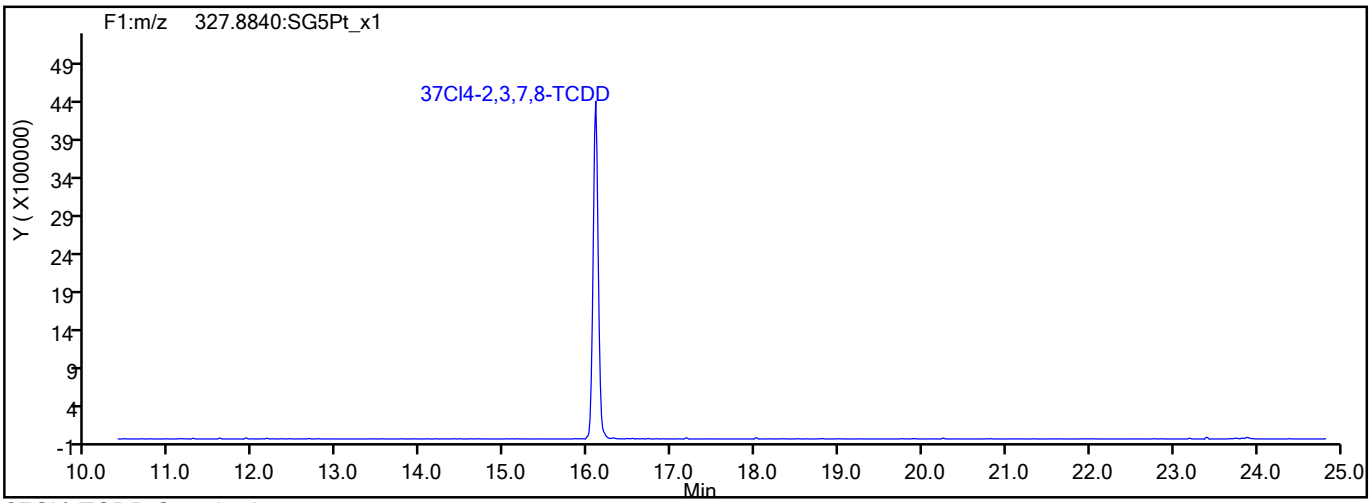

37Cl4-TCDD Standards

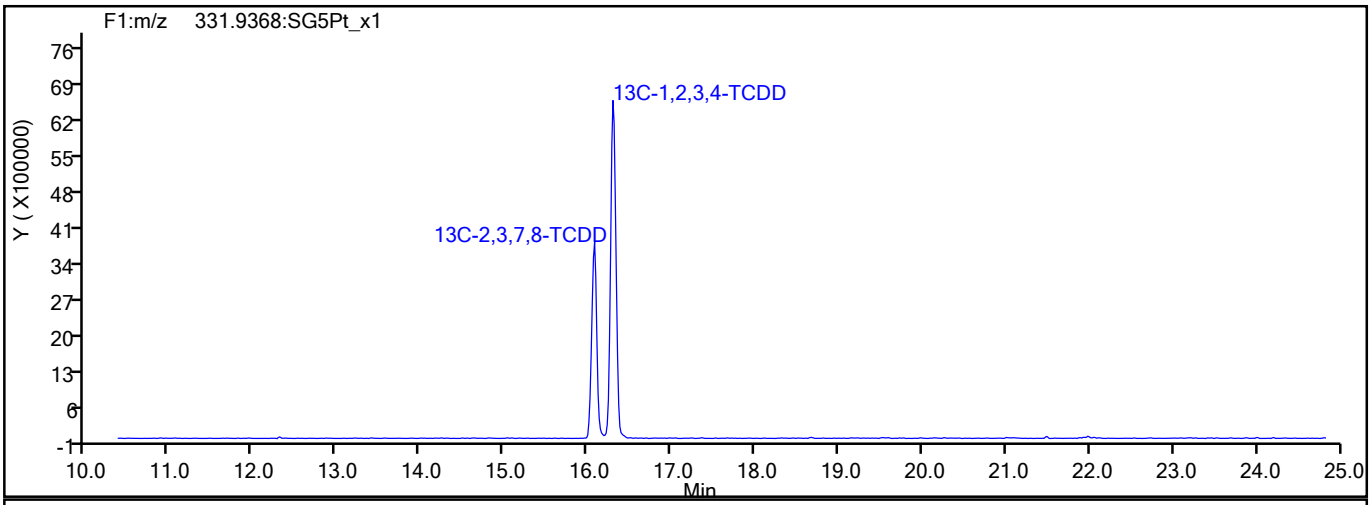

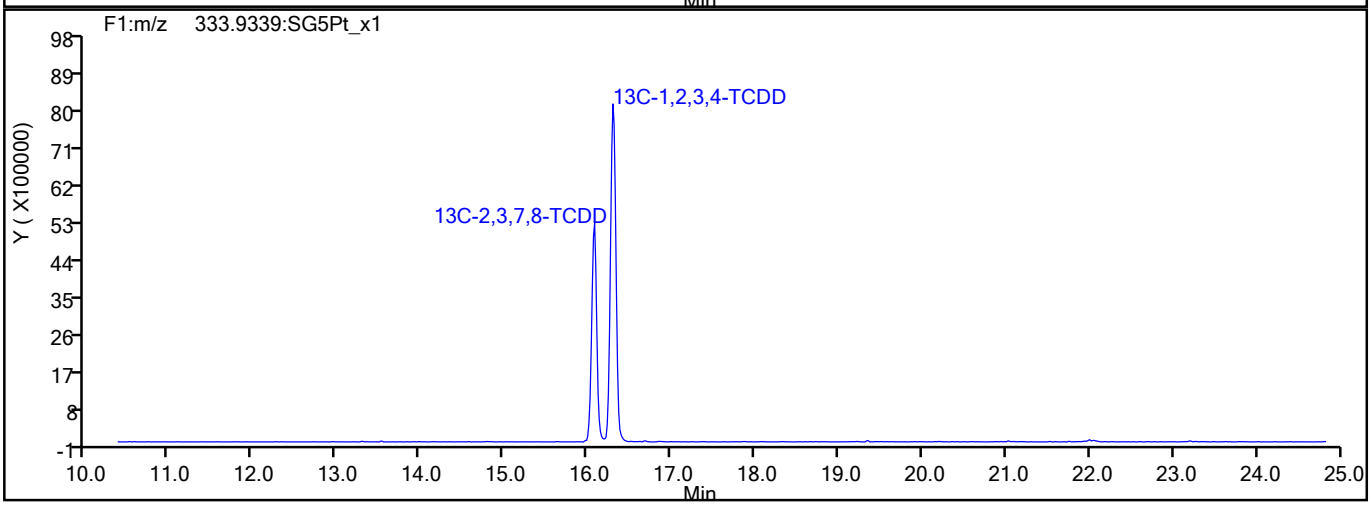

792381

Report Date: 30-Aug-2021 09:51:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_009.d		
Injection Date:	27-Aug-2021 20:45:07	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (16-18)		
Worklist#:	520456	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

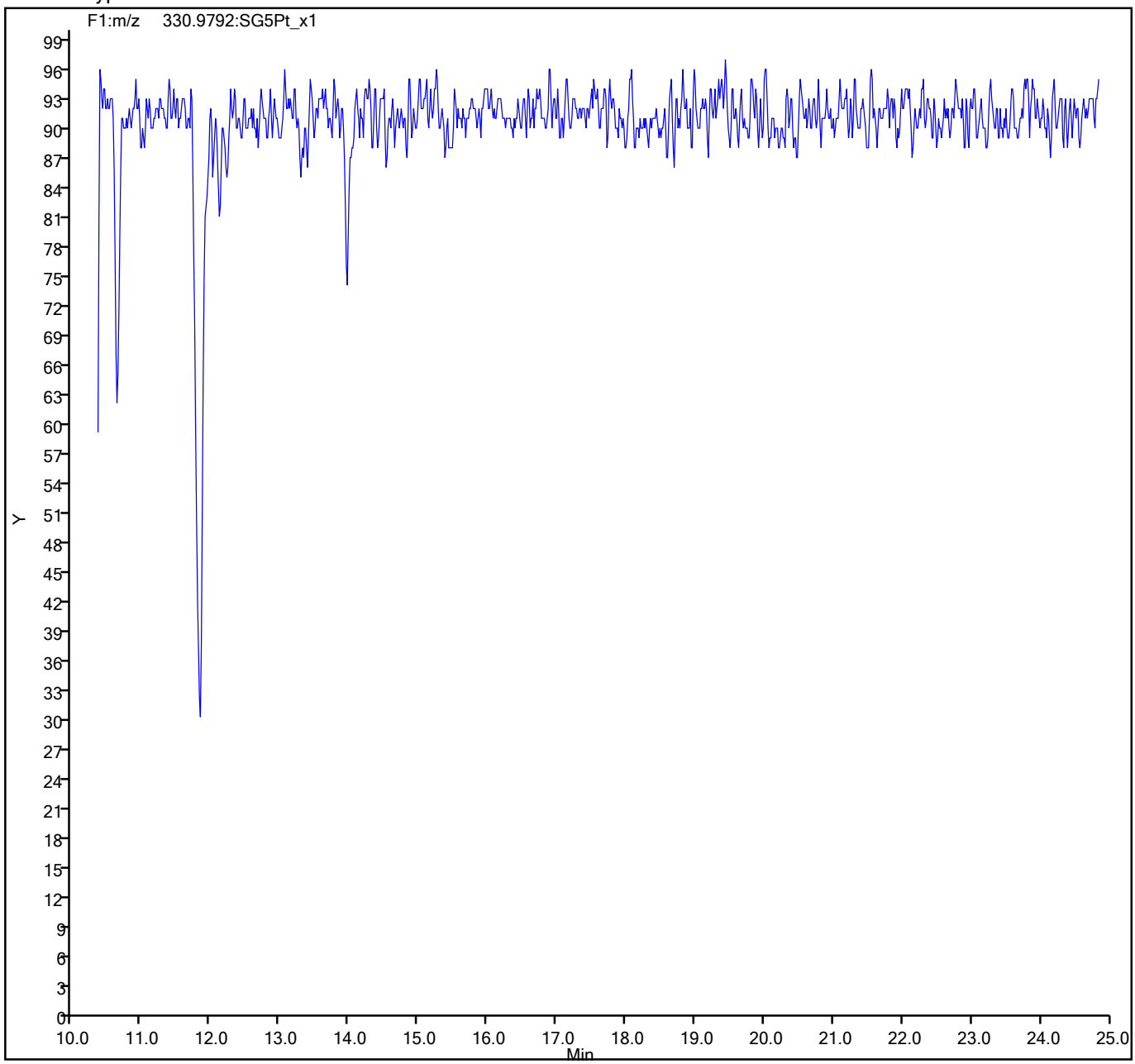

792382

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.0287	0.8698	1.0458	1.1094	1.0657	AveID		1.0239				8.9		20.0			
2,3,7,8-TCDD	1.2575	1.0971	1.2651	1.3434	1.3075	AveID		1.2541				7.5		20.0			
1,2,3,7,8-PeCDF	1.0739	0.9128	1.0891	1.1370	1.0928	AveID		1.0611				8.1		20.0			
2,3,4,7,8-PeCDF	1.0408	0.8610	1.0466	1.1082	1.0356	AveID		1.0184				9.1		20.0			
1,2,3,7,8-PeCDD	1.0578	0.9031	1.0680	1.1310	1.0823	AveID		1.0484				8.2		20.0			
1,2,3,4,7,8-HxCDF	1.1222	0.9192	1.1025	1.1936	1.0881	AveID		1.0851				9.3		20.0			
1,2,3,6,7,8-HxCDF	1.1488	0.9637	1.1546	1.1966	1.1664	AveID		1.1260				8.2		20.0			
2,3,4,6,7,8-HxCDF	1.2223	0.9863	1.1858	1.2415	1.2018	AveID		1.1675				8.9		20.0			
1,2,3,4,7,8-HxCDD	1.0979	0.8906	1.1304	1.1671	1.0341	AveID		1.0640				10.2		20.0			
1,2,3,6,7,8-HxCDD	1.0294	0.8529	1.0113	1.0930	1.0138	AveID		1.0001				8.9		20.0			
1,2,3,7,8,9-HxCDD	1.1551	0.9428	1.1999	1.2421	1.1227	AveID		1.1325				10.2		20.0			
1,2,3,7,8,9-HxCDF	1.1733	1.0136	1.1898	1.2479	1.2072	AveID		1.1664				7.7		20.0			
1,2,3,4,6,7,8-HpCDF	1.4474	1.2413	1.4986	1.5485	1.4706	AveID		1.4413				8.2		20.0			
1,2,3,4,6,7,8-HpCDD	1.1119	0.9539	1.1176	1.1675	1.1205	AveID		1.0943				7.5		20.0			
1,2,3,4,7,8,9-HpCDF	1.3136	1.1269	1.3622	1.4520	1.3321	AveID		1.3174				9.0		20.0			
OCDD	1.1009	0.9635	1.1652	1.1829	1.1226	AveID		1.1070				7.8		20.0			
OCDF	1.3863	1.1912	1.5145	1.5858	1.5129	AveID		1.4382				10.8		20.0			
13C-2,3,7,8-TCDF	1.6500	1.5631	1.6241	1.6170	1.6703	Ave		1.6249				2.5		35.0			
13C-2,3,7,8-TCDD	0.9128	0.8588	0.8965	0.8940	0.9345	Ave		0.8993				3.1		35.0			
13C-1,2,3,7,8-PeCDF	1.1977	1.1539	1.2193	1.2121	1.2674	Ave		1.2101				3.4		35.0			
13C-2,3,4,7,8-PeCDF	1.2269	1.1924	1.2487	1.2129	1.3165	Ave		1.2395				3.8		35.0			
13C-1,2,3,7,8-PeCDD	0.7558	0.7433	0.7524	0.7498	0.8049	Ave		0.7612				3.3		35.0			
13C-1,2,3,4,7,8-HxCDF	1.0875	1.1006	1.0706	1.0371	1.1225	Ave		1.0837				3.0		35.0			
13C-1,2,3,6,7,8-HxCDF	1.1466	1.1401	1.1115	1.1251	1.1163	Ave		1.1279				1.3		35.0			
13C-2,3,4,6,7,8-HxCDF	1.0781	1.0785	1.0541	1.0562	1.0518	Ave		1.0637				1.3		35.0			
13C-1,2,3,4,7,8-HxCDD	0.7413	0.7515	0.6926	0.7049	0.7769	Ave		0.7334				4.7		35.0			
13C-1,2,3,6,7,8-HxCDD	0.8884	0.8870	0.8694	0.8685	0.8876	Ave		0.8802				1.2		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9787	0.9851	0.9497	0.9522	0.9722	Ave		0.9676				1.6		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.8030	0.7818	0.7501	0.7625	0.7677	Ave		0.7730				2.6		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6554	0.6478	0.6343	0.6458	0.6528	Ave		0.6472				1.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6985	0.7093	0.6800	0.6816	0.7346	Ave		0.7008				3.2		35.0			
13C-OCDD	0.4462	0.4357	0.4273	0.4575	0.4691	Ave		0.4472				3.7		35.0			
37Cl4-2,3,7,8-TCDD	0.9705	0.9794	1.1718	1.1876	1.2264	Ave		1.1071				11.1					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	557485	1709191	10638776	44524782	204575642	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	376984	1184284	7104238	29808948	140421448	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	2112140	6620354	41588176	171023920	795873691	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	2096967	6452410	40928436	166805723	783403837	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	1312779	4219570	25165054	105236005	500555284	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	1949462	6041767	37525146	155057762	737075796	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	2104086	6561860	40802767	168618976	785709889	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	2104896	6352404	39741365	164241378	762810877	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	1300030	3996910	24891170	103044220	484857042	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	1460747	4517909	27953752	118900298	543061818	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	1503407	4612548	29794954	122394998	563888565	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	1834100	5963032	35924190	148834491	708280047	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	1856599	5795616	35740964	147892240	681312007	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	1164074	3690749	22538791	94435922	441437476	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	1465634	4773949	29450636	123968724	590555312	2.50	10.0	50.0	200	1000
OCDD		AveID	1569338	5013385	31656667	135570174	635652839	5.00	20.0	100	400	2000
OCDF		AveID	1976175	6198469	41147202	181747068	856685987	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	108384725	98246522	101724636	100332269	95980421	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	59957723	53975587	56155483	55471422	53698206	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	78674290	72525655	76368219	75205597	72829681	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	80591659	74944110	78214582	75259591	75649463	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	49643581	46721712	47124414	46524396	46251010	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	69484482	65726932	68075509	64951889	67741189	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	73262388	68089005	70677463	70459920	67363664	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	68885161	64406928	67028498	66145684	63471184	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	47363504	44877133	44039927	44144841	46886171	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	56759108	52974056	55284532	54392394	53564396	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	62528954	58828058	60389284	59636084	58669892	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	51308225	46691158	47697671	47752972	46328151	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	41876556	38689128	40333717	40442950	39395832	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	44628352	42362179	43238622	42687625	44333848	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	57018462	52034518	54338243	57303880	56623863	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	318727	1231219	7339670	29474361	140953034	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\26JL2110D5.SPL
Last Modified: Monday, July 26, 2021 16:58:03 Pacific Daylight Time
Printed: Tuesday, July 27, 2021 07:40:45 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	26JL2110D5_1	WDM HRDXNCP_00042	WDM 072621	Tray01:1	Dioxin		SMA
2	26JL2110D5_2	SB Solvent Blank C-14	SB 072621	Tray01:3			SMA
3	26JL2110D5_3	CS-2 HRDXNL2_00032	IC 072621	Tray01:4	Dioxin		SMA
4	26JL2110D5_4	CS-3 HRDXNL3_00029	IC 072621A	Tray01:5	Dioxin		SMA
5	26JL2110D5_5	CS-4 HRDXNL4_00099	IC 072621B	Tray01:2	Dioxin		SMA
6	26JL2110D5_6	CS-5 HRDXNL5_00032	IC 072621C	Tray01:6	Dioxin		SMA
7	26JL2110D5_7	CS-6 HRDXNL6_00028	IC 072621D	Tray01:7	Dioxin		SMA
8	26JL2110D5_8	SB Solvent Blank C-14	SB 072621A	Tray01:3			SMA
9	26JL2110D5_9	ICV HRDXNIC_00047	ICV 072621	Tray01:8	Dioxin		SMA
10	26JL2110D5_10	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS
11	26JL2110D5_11	WDM HRDXNCP_00042	WDM 031621C	Tray01:1	Dioxin		KSS
12	26JL2110D5_12	SB Solvent Blank C-14	SB 072621B	Tray01:3			KSS
13	26JL2110D5_13	mb 320-508015/1-a	mb 320-508015/1-a	Tray01:9	1613B/8290/Water	D255	KSS
14	26JL2110D5_14	lcs 320-508015/2-a	lcs 320-508015/2-a	Tray01:10	1613B/8290/Water		KSS
15	26JL2110D5_15	lcsd 320-508015/3-a	lcsd 320-508015/3-a	Tray01:11	1613B/8290/Water		KSS
16	26JL2110D5_16	320-76081-a-3-c	320-76081-a-3-c	Tray01:12	1613B/8290/Water		KSS
17	26JL2110D5_17	SB Solvent Blank C-14	SB 072621C	Tray01:3			KSS
18	26JL2110D5_18	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS

LOGFILE CHECKED
DB 7/27/21

792388

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:18:21 Pacific Daylight Time

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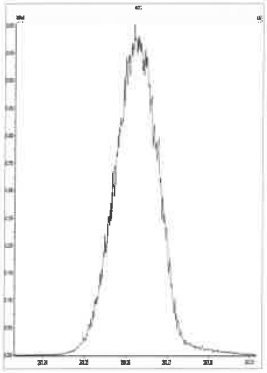

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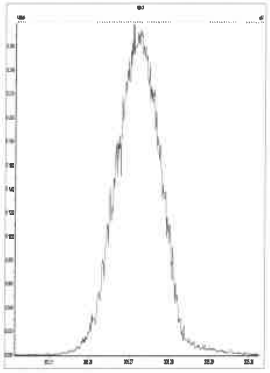

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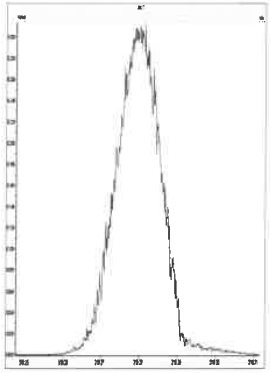

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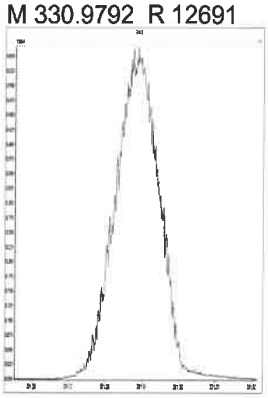

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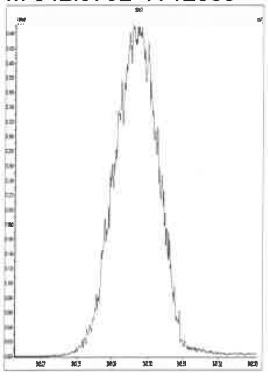

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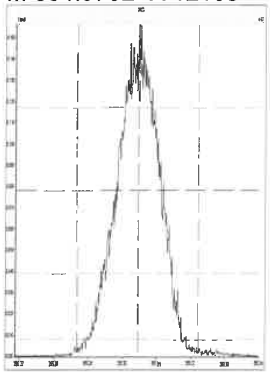

M 366.9792 R 13090

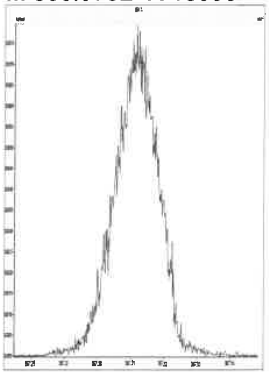

M 380.9760 R 12562

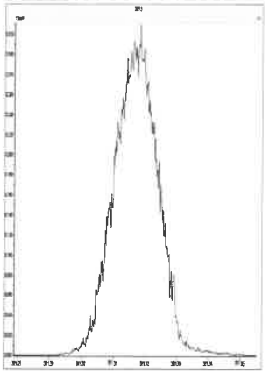

M 392.9760 R 12753

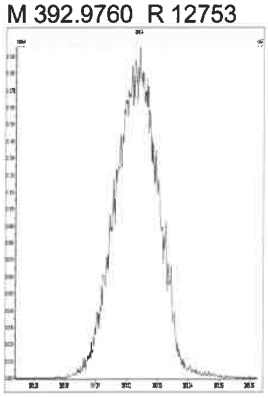

M 404.9760 R 12137

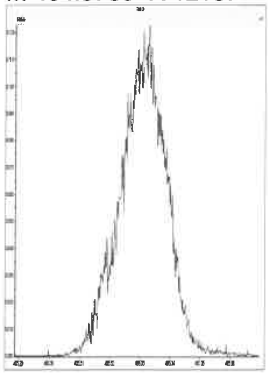

M 416.9760 R 12563

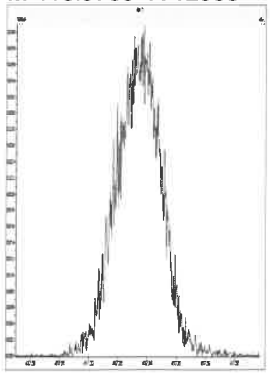

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:04 Pacific Daylight Time

M 318.9792 R 13300

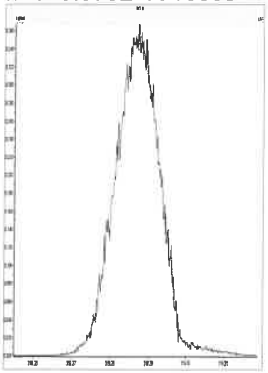

M 330.9792 R 12691

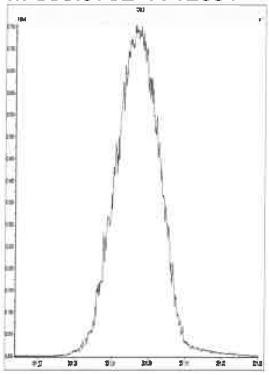

M 342.9792 R 12499

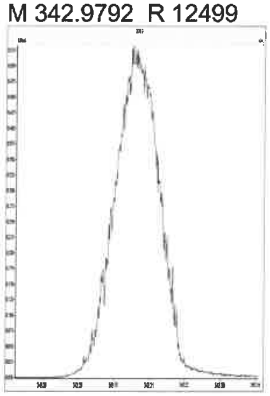

M 354.9792 R 12374

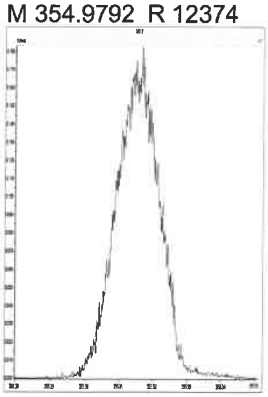

M 366.9792 R 12691

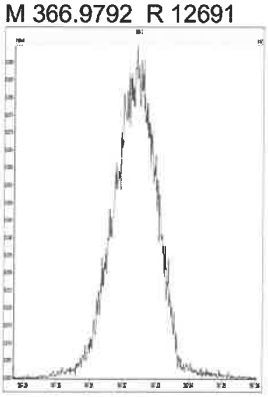

M 380.9760 R 12690

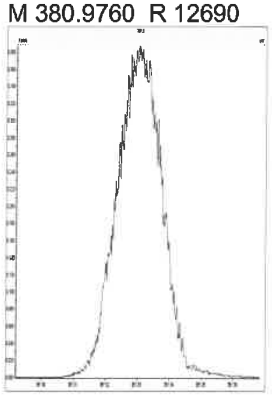

M 392.9760 R 12885

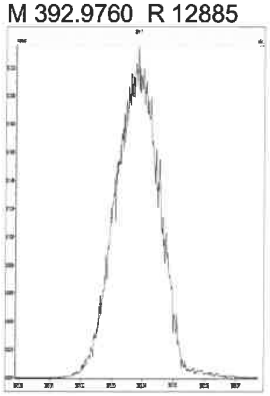

M 404.9760 R 12817

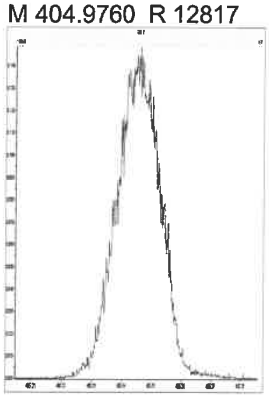

M 416.9760 R 12954

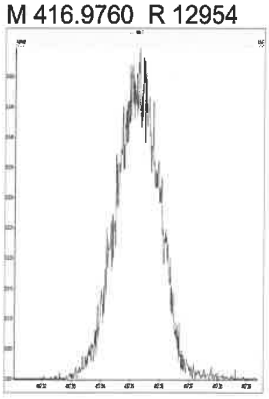

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

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M 366.9792 R 12440

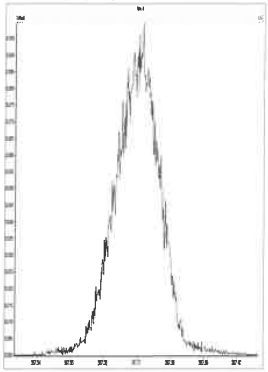

M 380.9760 R 12955

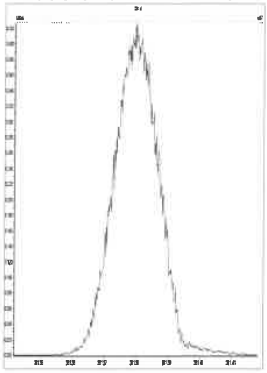

M 392.9760 R 12690

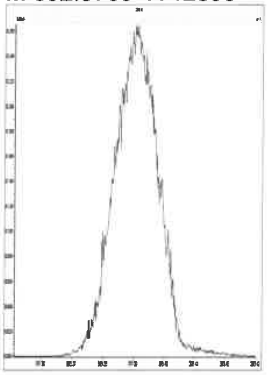

M 404.9760 R 12957

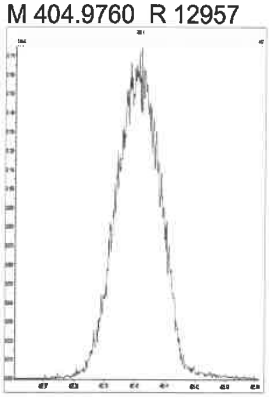

M 416.9760 R 13516

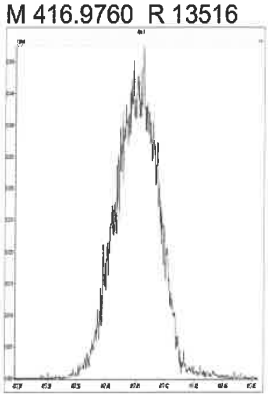

M 430.9728 R 12564

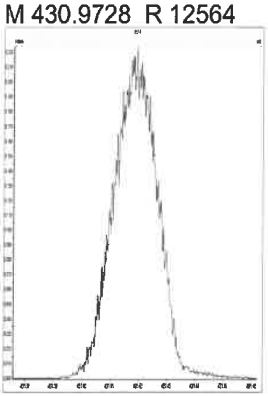

M 442.9728 R 12953

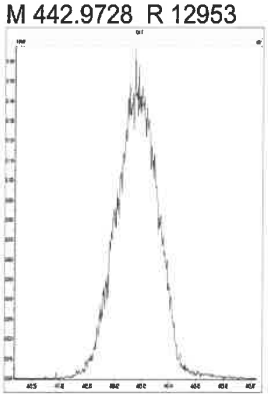

M 454.9728 R 13226

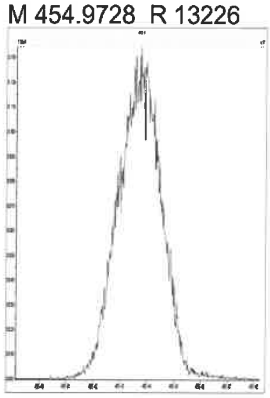

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

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M 380.9760 R 12885

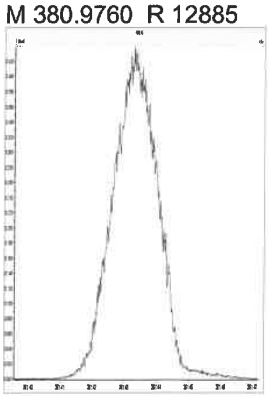

M 392.9760 R 12955

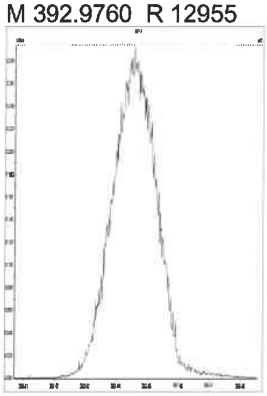

M 404.9760 R 12756

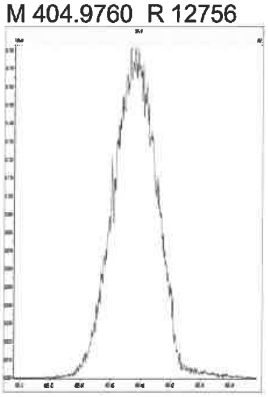

M 416.9760 R 13368

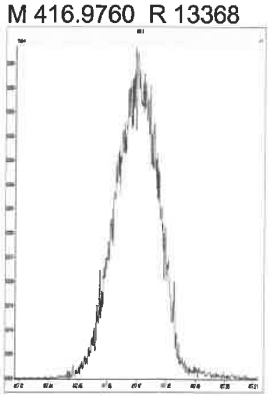

M 430.9728 R 12758

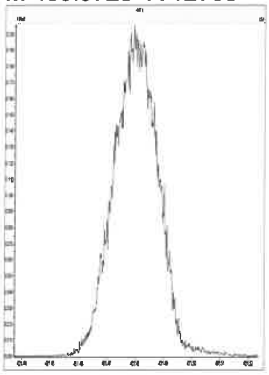

M 442.9728 R 13229

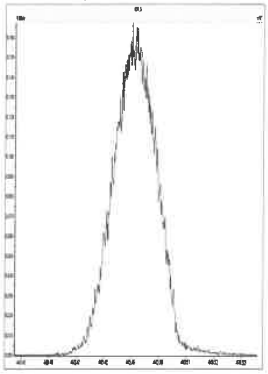

M 454.9728 R 13737

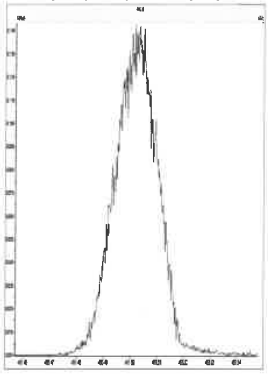

M 466.9728 R 12952

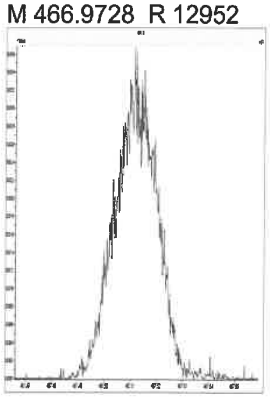

M 480.9696 R 12819

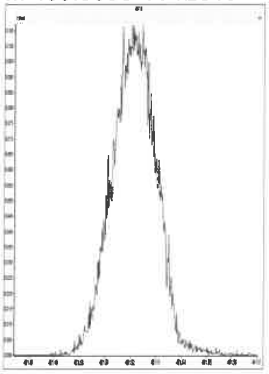

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

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M 380.9760 R 12630

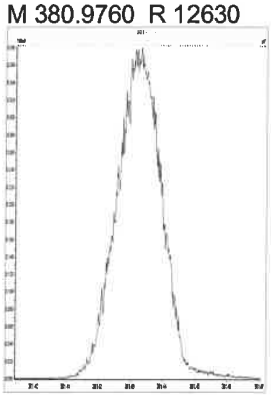

M 392.9760 R 12687

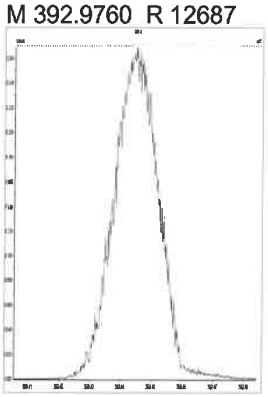

M 404.9760 R 13441

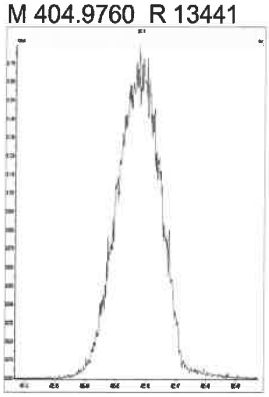

M 416.9760 R 12886

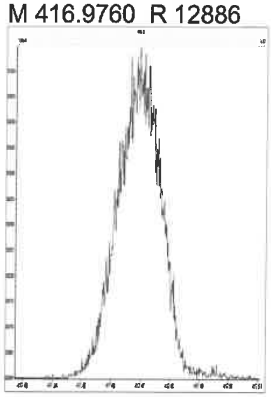

M 430.9728 R 12952

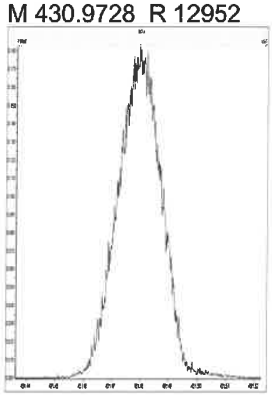

M 442.9728 R 12564

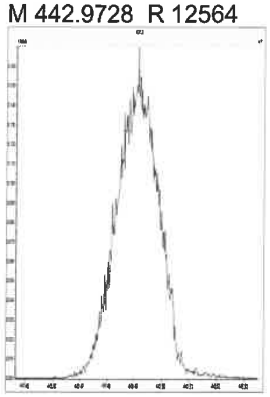

M 454.9728 R 13228

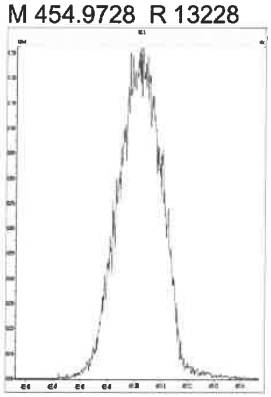

M 466.9728 R 12689

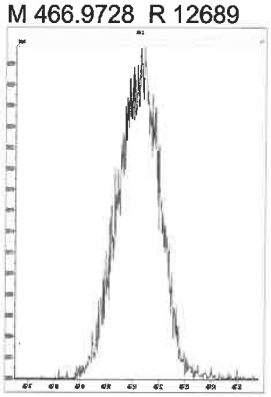

M 480.9696 R 13226

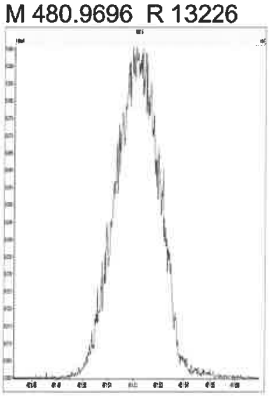

M 492.9696 R 13090

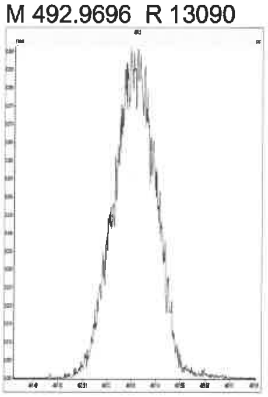

M 504.9696 R 13021

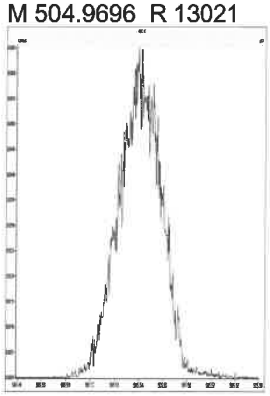

M 516.9697 R 13811

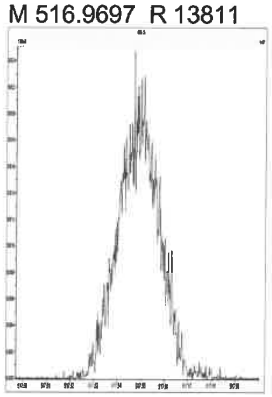

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M 292.9824 R 12322

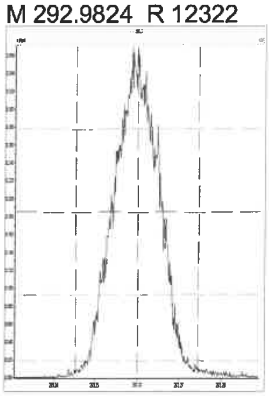

M 304.9824 R 12923

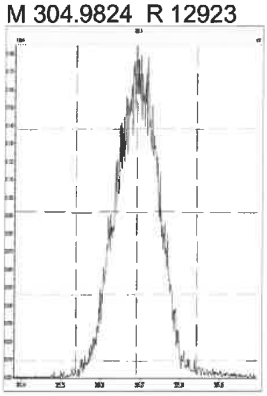

M 318.9792 R 12953

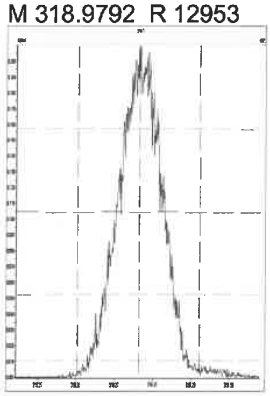

M 330.9792 R 12791

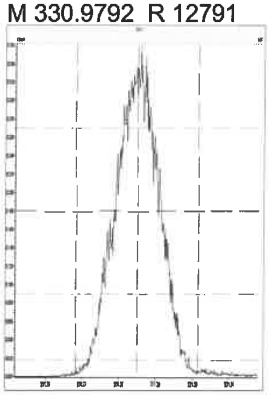

M 342.9792 R 12345

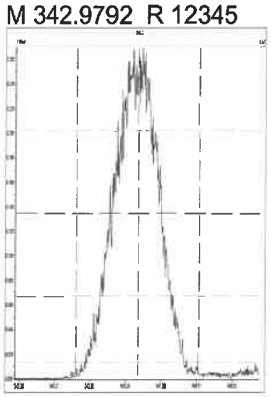

M 354.9792 R 13001

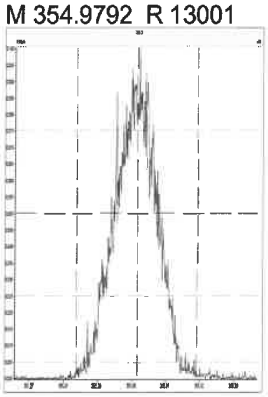

M 366.9792 R 13101

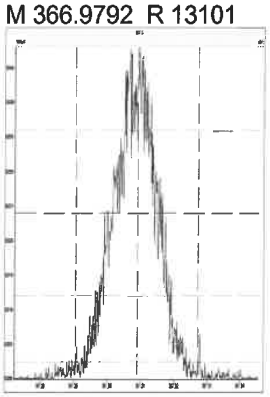

M 380.9760 R 13055

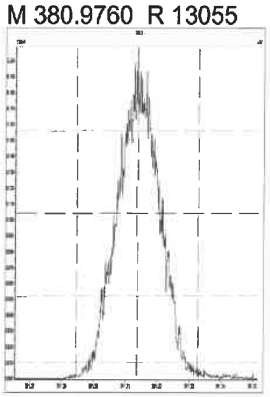

M 392.9760 R 13023

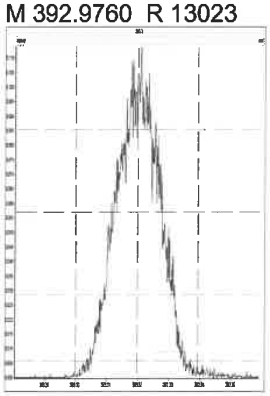

M 404.9760 R 13233

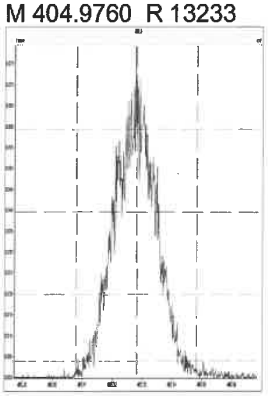

M 416.9760 R 14086

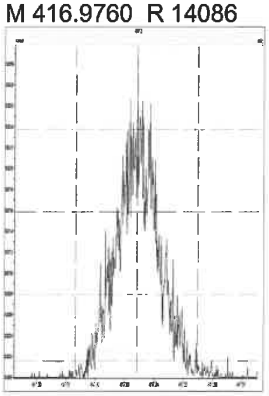

M 318.9792 R 12832

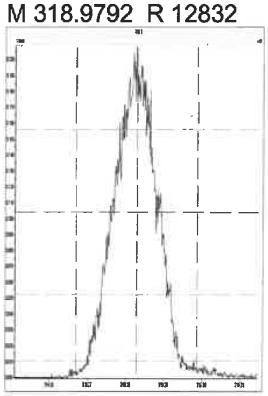

M 330.9792 R 12659

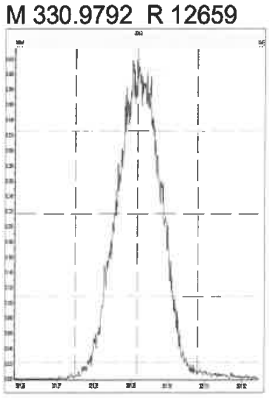

M 342.9792 R 12791

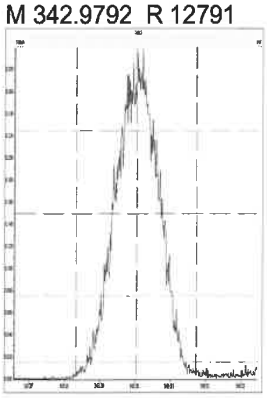

M 354.9792 R 13061

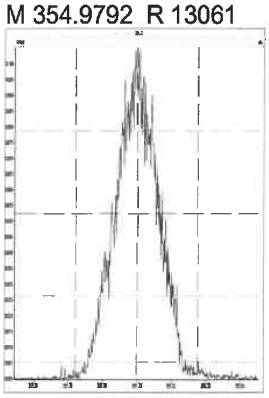

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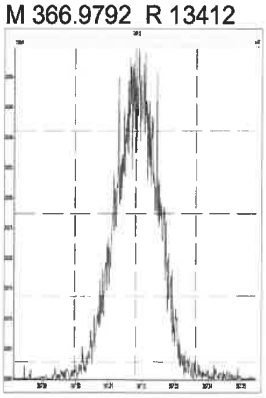

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M 380.9760 R 13021

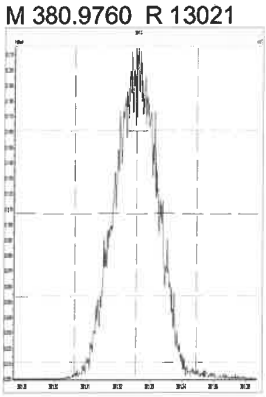

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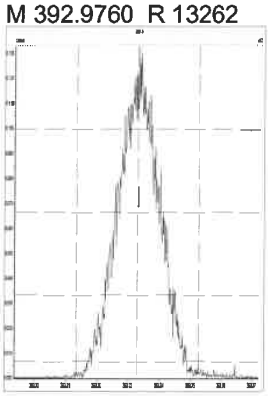

M 404.9760 R 13001

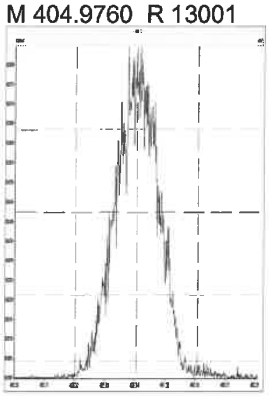

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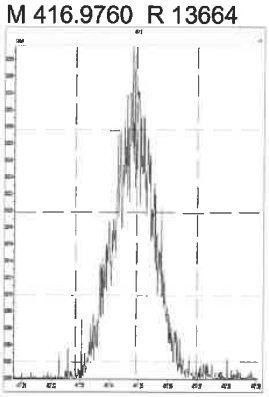

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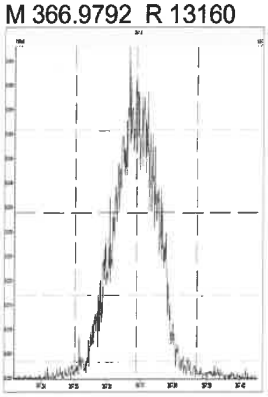

M 380.9760 R 12836

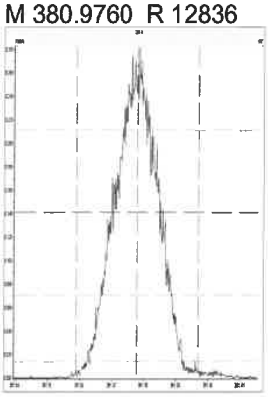

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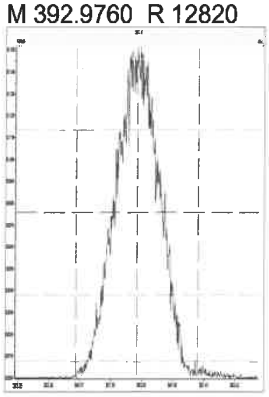

M 404.9760 R 13479

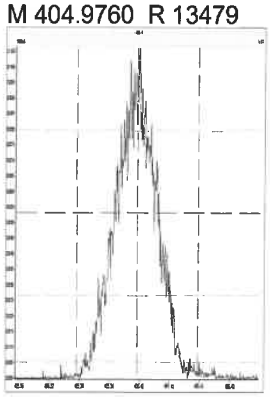

M 416.9760 R 14164

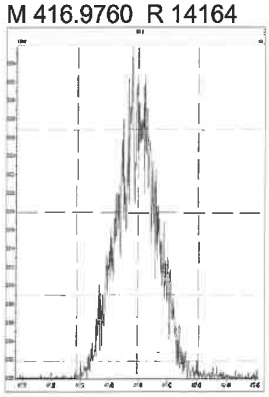

M 430.9728 R 13727

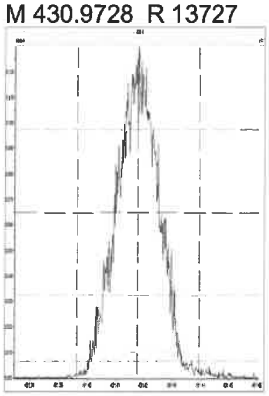

M 442.9728 R 13415

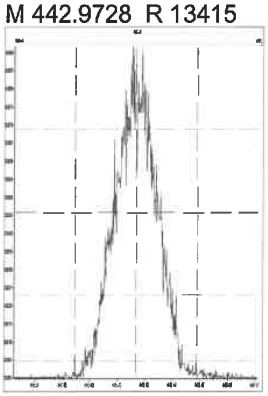

M 454.9728 R 13335

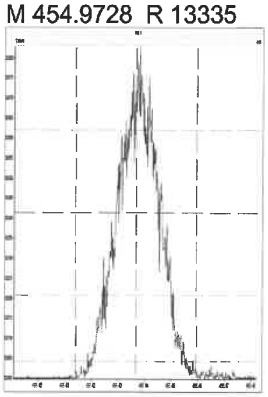

M 380.9760 R 13021

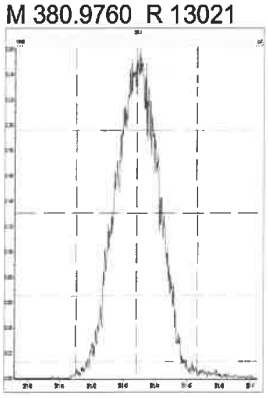

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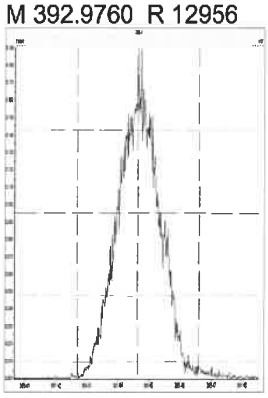

M 404.9760 R 13194

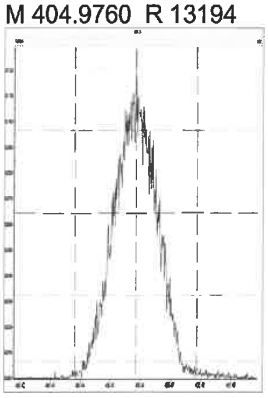

M 416.9760 R 13592

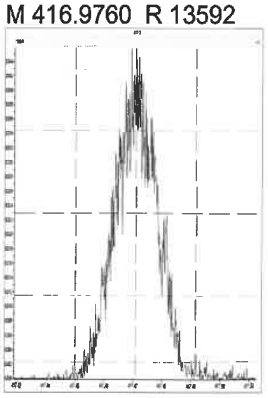

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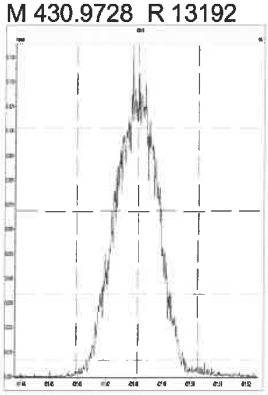

M 442.9728 R 13094

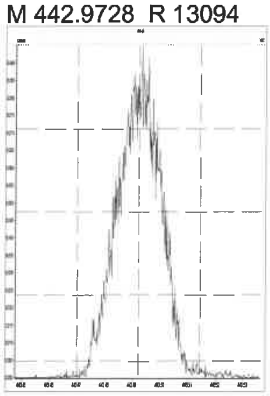

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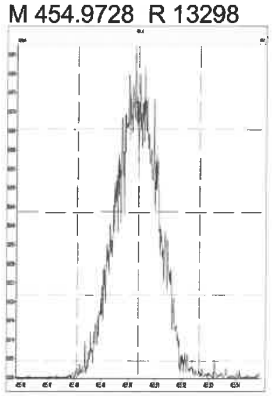

M 466.9728 R 15289

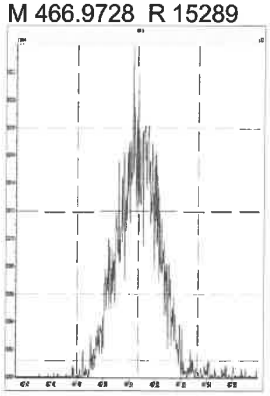

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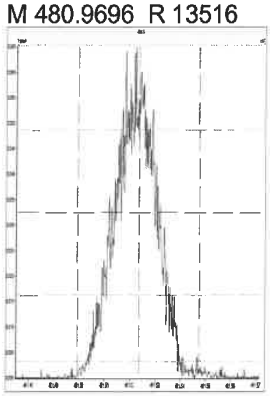

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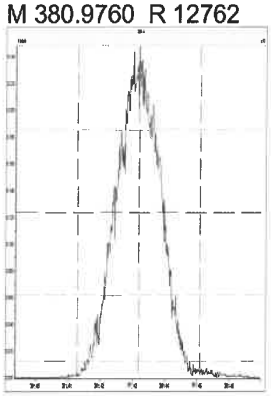

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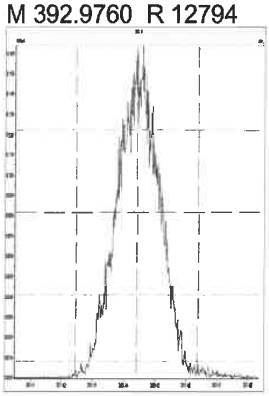

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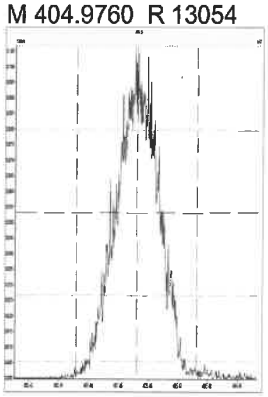

M 416.9760 R 13966

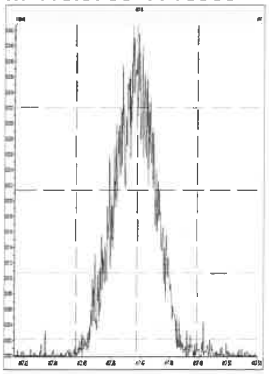

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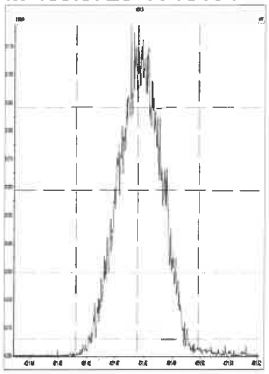

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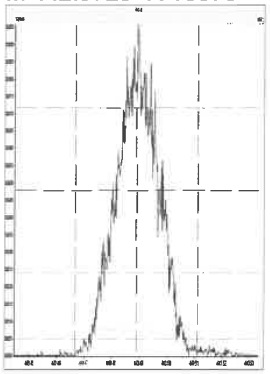

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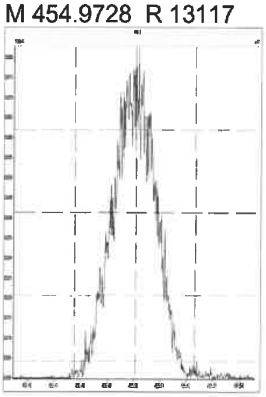

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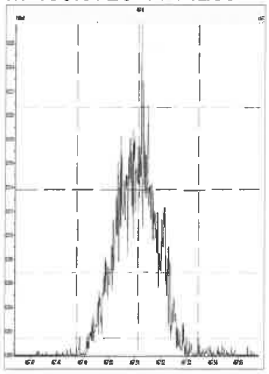

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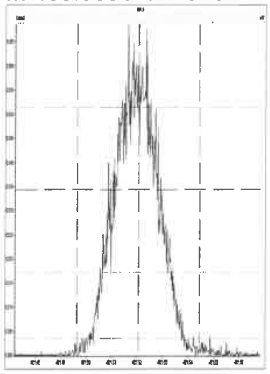

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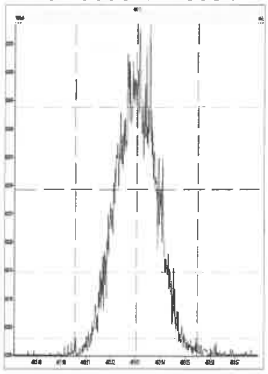

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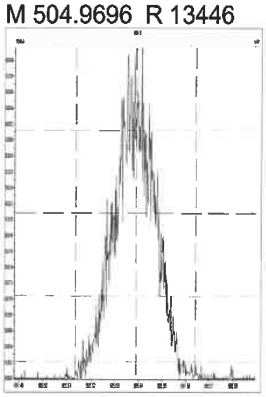

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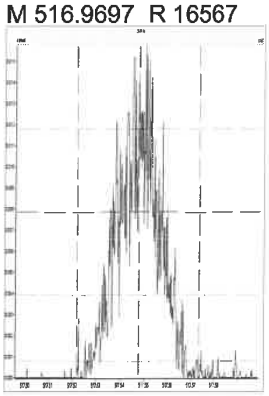

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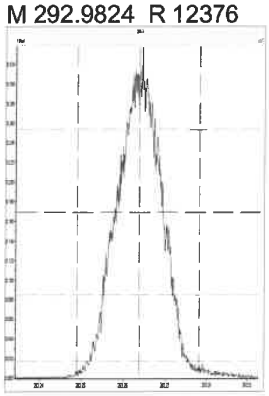

M 304.9824 R 12412

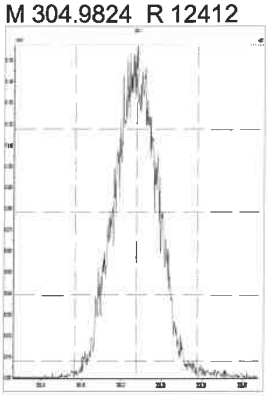

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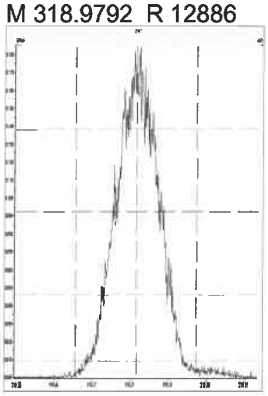

M 330.9792 R 12820

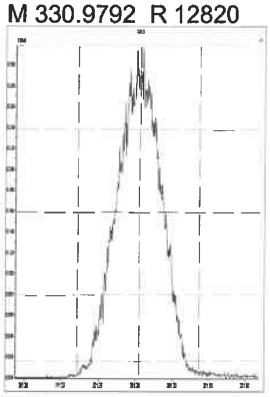

M 342.9792 R 12788

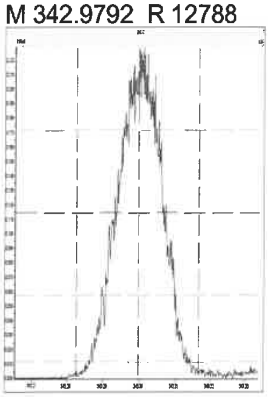

M 354.9792 R 12991

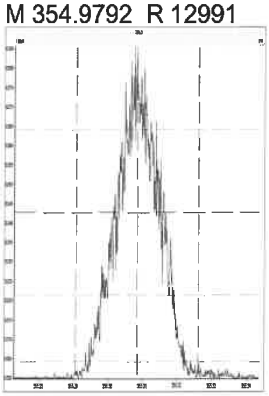

M 366.9792 R 13368

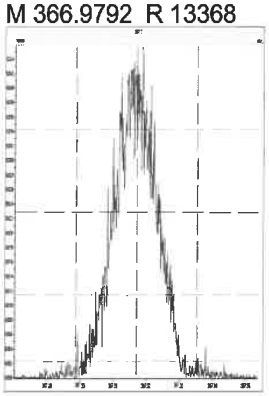

M 380.9760 R 12766

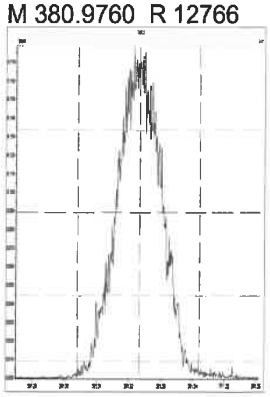

M 392.9760 R 13080

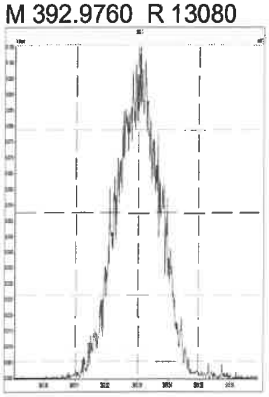

M 404.9760 R 13514

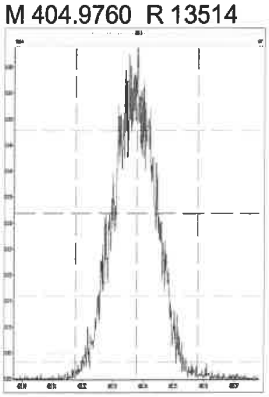

M 416.9760 R 14713

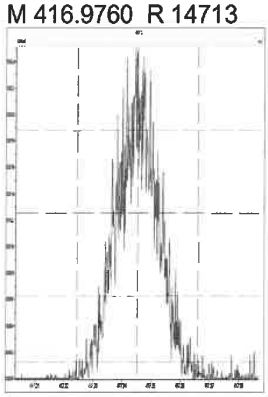

M 318.9792 R 12628

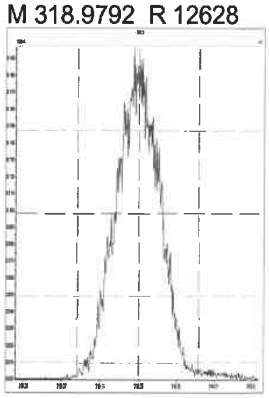

M 330.9792 R 12438

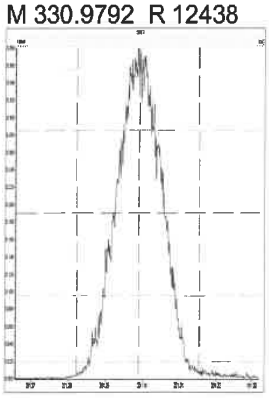

M 342.9792 R 12755

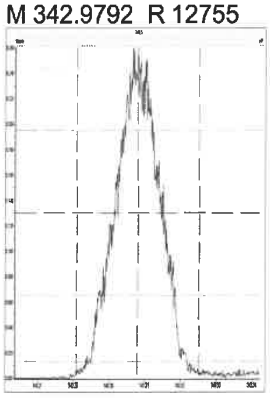

M 354.9792 R 12755

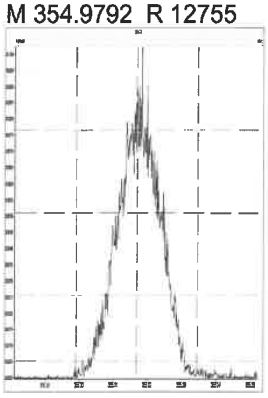

M 366.9792 R 13298

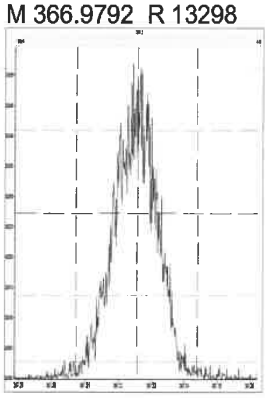

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M 380.9760 R 12791

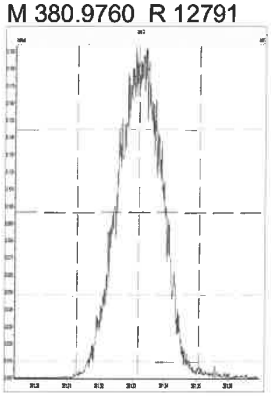

M 392.9760 R 13011

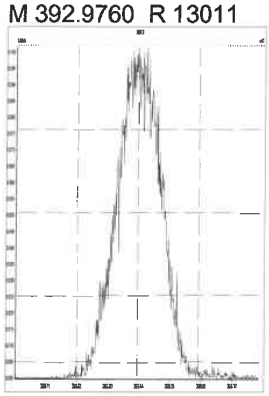

M 404.9760 R 13446

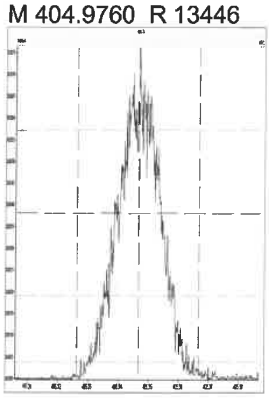

M 416.9760 R 13368

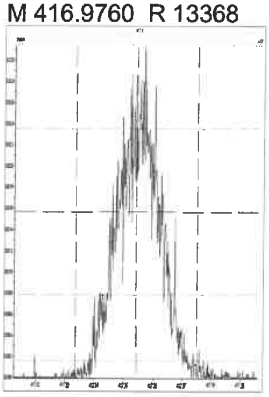

M 366.9792 R 12889

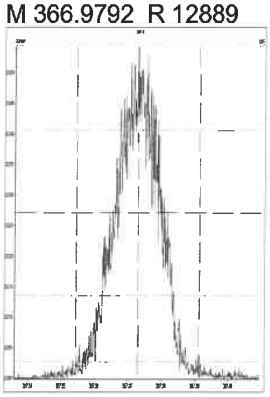

M 380.9760 R 12690

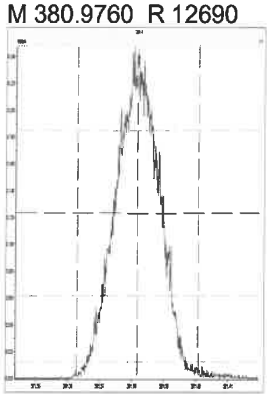

M 392.9760 R 13269

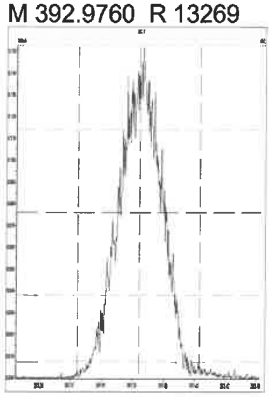

M 404.9760 R 13316

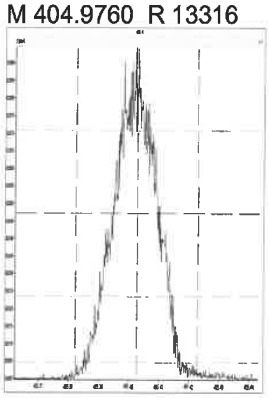

M 416.9760 R 13670

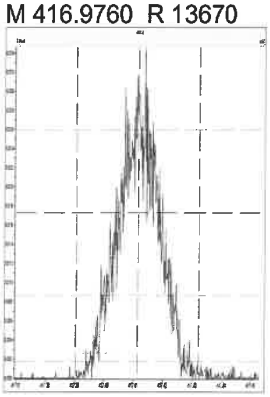

M 430.9728 R 13055

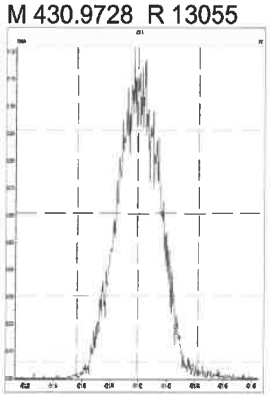

M 442.9728 R 13227

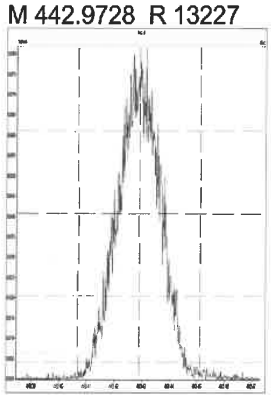

M 454.9728 R 13756

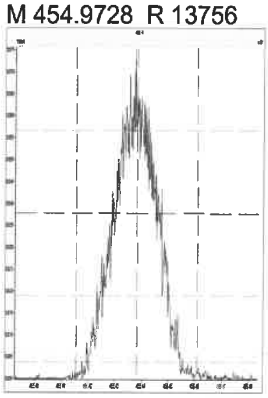

M 380.9760 R 12854

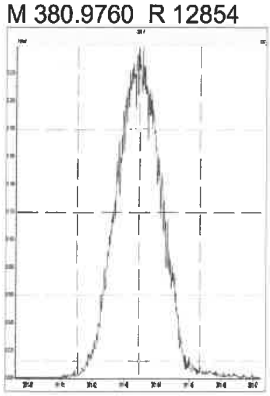

M 392.9760 R 12598

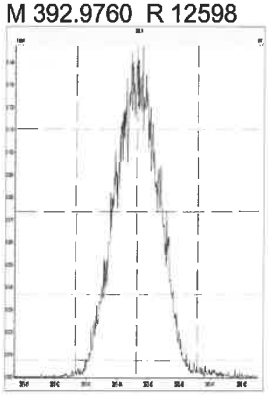

M 404.9760 R 12853

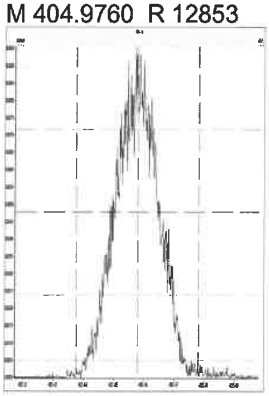

M 416.9760 R 13928

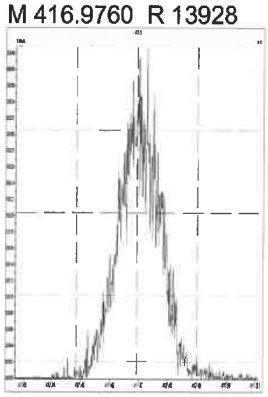

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M 430.9728 R 13266

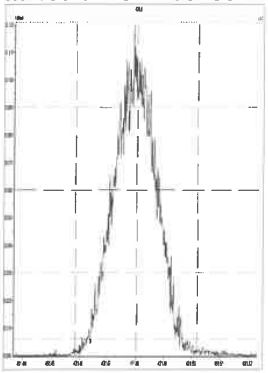

M 442.9728 R 13264

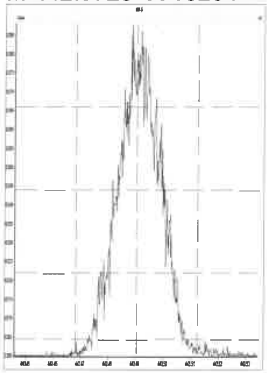

M 454.9728 R 13652

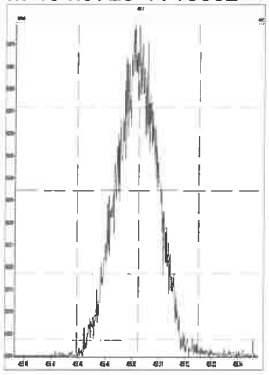

M 466.9728 R 14749

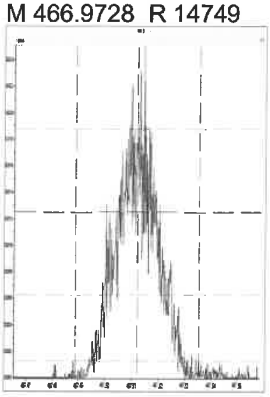

M 480.9696 R 13412

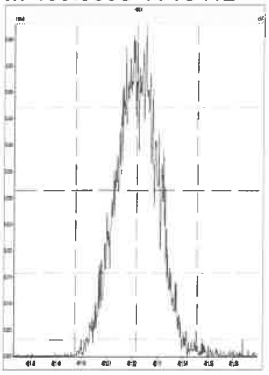

M 380.9760 R 12692

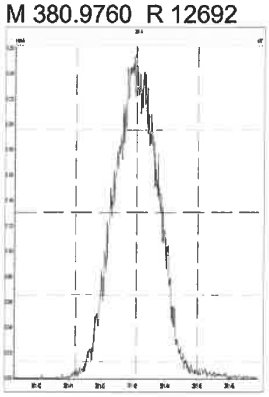

M 392.9760 R 13061

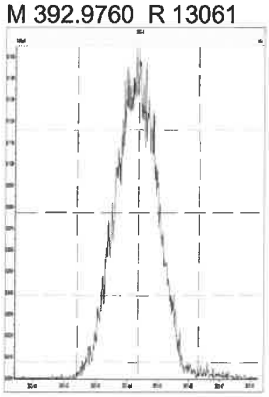

M 404.9760 R 12887

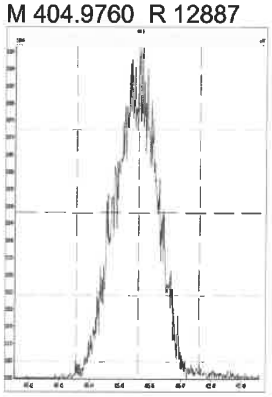

M 416.9760 R 13706

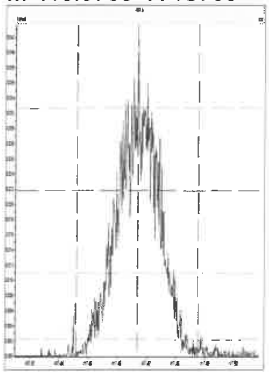

M 430.9728 R 12760

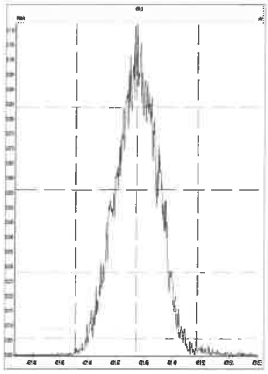

M 442.9728 R 13122

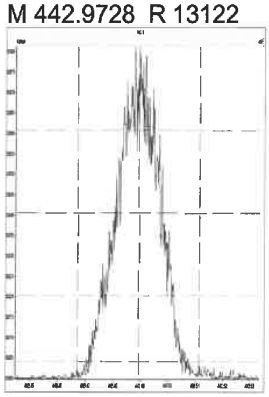

M 454.9728 R 13710

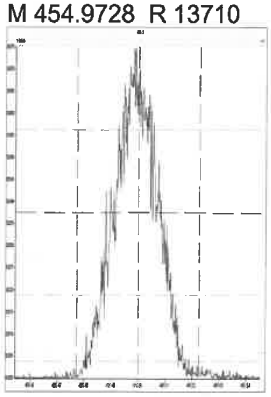

M 466.9728 R 14205

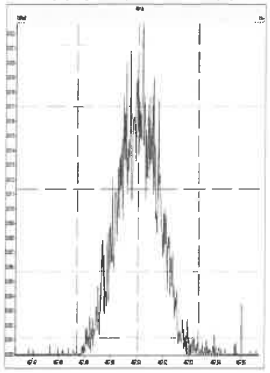

M 480.9696 R 13298

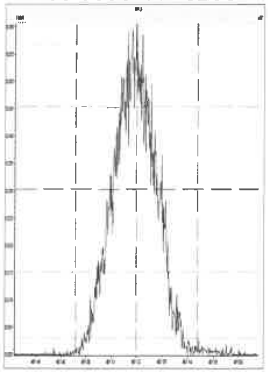

M 492.9696 R 12886

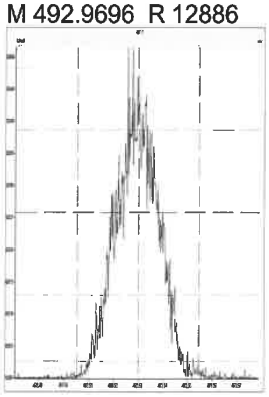

M 504.9696 R 13600

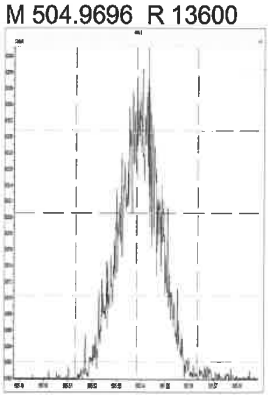

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M 516.9697 R 15872

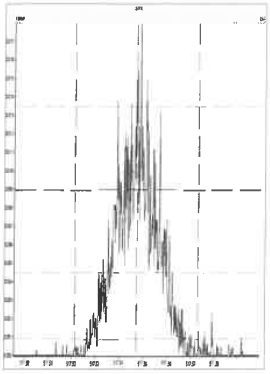

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	65685883	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	108384725	0.78	1.6249	101.5	101.5	0.1385	0.1385	102	
2,3,7,8-TCDF	17.628	557485	0.78	1.0239	0.5023	0.5023	0.009259	0.009259	100	
S Total TCDF					0.5023	0.5023	0.009259	0.009259		
D 13C-2,3,7,8-TCDD	18.338	59957723	0.80	0.8993	101.5	101.5	0.1222	0.1222	101	
$ 37Cl4-2,3,7,8-TCDD	18.338	318727		1.1071	0.4383	0.4383	0.006072	0.006072	87.65	
2,3,7,8-TCDD	18.354	376984	0.89	1.2541	0.5013	0.5013	0.0150	0.0150	100	M
S Total TCDD					0.5013	0.5013	0.0150	0.0150		
D 13C-1,2,3,7,8-PeCDF	22.749	78674290	1.60	1.2101	99.0	99.0	0.2282	0.2282	98.98	
1,2,3,7,8-PeCDF	22.776	2112140	1.63	1.0611	2.530	2.530	0.0220	0.0220	101	
D 13C-2,3,4,7,8-PeCDF	24.126	80591659	1.57	1.2395	99.0	99.0	0.2228	0.2228	98.99	
2,3,4,7,8-PeCDF	24.153	2096967	1.56	1.0184	2.555	2.555	0.0245	0.0245	102	
S Total PeCDF					5.085	5.085	0.0233	0.0233		
D 13C-1,2,3,7,8-PeCDD	24.862	49643581	1.62	0.7612	99.3	99.3	0.1197	0.1197	99.28	
1,2,3,7,8-PeCDD	24.889	1312779	1.42	1.0484	2.522	2.522	0.0218	0.0218	101	
S Total PeCDD					2.522	2.522	0.0218	0.0218		
D 13C-1,2,3,4,7,8-HxCDF	30.835	69484482	0.52	1.0837	100.4	100.4	0.5299	0.5299	100	
1,2,3,4,7,8-HxCDF	30.849	1949462	1.23	1.0851	2.586	2.586	0.0289	0.0289	103	
D 13C-1,2,3,6,7,8-HxCDF	30.995	73262388	0.52	1.1279	101.7	101.7	0.5091	0.5091	102	
1,2,3,6,7,8-HxCDF	31.022	2104086	1.18	1.1260	2.551	2.551	0.0273	0.0273	102	
D 13C-2,3,4,6,7,8-HxCDF	31.754	68885161	0.52	1.0637	101.4	101.4	0.5398	0.5398	101	
2,3,4,6,7,8-HxCDF	31.767	2104896	1.20	1.1675	2.617	2.617	0.0225	0.0225	105	
D 13C-1,2,3,7,8,9-HxCDF	32.512	62528954	0.51	0.9676	101.1	101.1	0.5935	0.5935	101	
1,2,3,7,8,9-HxCDF	32.526	1834100	1.21	1.1664	2.515	2.515	0.0244	0.0244	101	
S Total HxCDF					10.3	10.3	0.0258	0.0258		
* 13C-1,2,3,7,8,9-HxCDD	32.339	63892665	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	47363504	1.27	0.7334	101.1	101.1	0.5001	0.5001	101	
1,2,3,4,7,8-HxCDD	31.940	1300030	1.26	1.0640	2.580	2.580	0.0268	0.0268	103	
D 13C-1,2,3,6,7,8-HxCDD	32.033	56759108	1.25	0.8802	100.9	100.9	0.4167	0.4167	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	1460747	1.28	1.0001	2.573	2.573	0.0268	0.0268	103	
1,2,3,7,8,9-HxCDD	32.353	1503407	1.26	1.1325	2.550	2.550	0.0244	0.0244	102	
S Total HxCDD					7.703	7.703	0.0260	0.0260		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	51308225	0.44	0.7730	103.9	103.9	1.147	1.147	104	
1,2,3,4,6,7,8-HpCDF	33.924	1856599	1.05	1.4413	2.511	2.511	0.0321	0.0321	100	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44628352	0.44	0.7008	99.7	99.7	1.266	1.266	99.67	
1,2,3,4,7,8,9-HpCDF	35.017	1465634	1.06	1.3174	2.493	2.493	0.0442	0.0442	99.72	
S Total HpCDF					5.003	5.003	0.0381	0.0381		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	41876556	1.01	0.6472	101.3	101.3	0.6709	0.6709	101	
1,2,3,4,6,7,8-HpCDD	34.726	1164074	1.06	1.0943	2.540	2.540	0.0284	0.0284	102	
S Total HpCDD					2.540	2.540	0.0284	0.0284		
D 13C-OCDD	37.093	57018462	0.89	0.4472	199.6	199.6	0.2479	0.2479	99.79	
OCDF	37.201	1976175	0.91	1.4382	4.820	4.820	0.0196	0.0196	96.40	
OCDD	37.105	1569338	0.92	1.1070	4.973	4.973	0.0246	0.0246	99.45	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		29725607	7464659	4167	10417	1791		
333.9339	18.142	18.142	0		35960276	9003139	3074	7685	2929	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	47438761	11992473	9243	23107	1297		
317.9389	17.613	17.616	0	0.971	60945964	15328013	5578	13945	2748	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	244966	62557	418	1045	150		
305.8987	17.628	17.631	0	1.001	312519	74119	618	1545	120	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	26677109	6242710	4167	10417	1498		
333.9339	18.338	18.338	0	1.011	33280614	7789380	3074	7685	2534	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.011	318727	66577	443	1107	150		
2,3,7,8-TCDD											M
319.8965	18.354	18.357	0	1.001	177891	43427	698	1745	62		M
321.8936	18.354	18.357	0	1.001	199093	47894	356	890	135	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	48367116	8680931	10780	26950	805		
353.8970	22.749	22.754	0	1.254	30307174	5346402	7413	18532	721	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	1307686	232308	692	1730	336		
341.8567	22.762	22.779	-1	1.001	804454	137466	619	1547	222	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	49186157	7929286	10780	26950	736		
353.8970	24.126	24.129	0	1.330	31405502	5197836	7413	18532	701	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	1276283	202864	692	1730	293		
341.8567	24.153	24.156	0	1.001	820684	134634	619	1547	218	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	30684379	4744795	3870	9675	1226		
369.8919	24.862	24.865	0	1.370	18959202	2913489	2133	5332	1366	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	770345	123302	470	1175	262		
357.8516	24.889	24.892	0	1.001	542434	83964	231	577	363	1.42(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23885791	5080702	12413	31032	409		
385.8610	30.835	30.838	0	0.953	45598691	9653525	24179	60447	399	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.857	0	1.000	1073816	228005	1130	2825	202		
375.8178	30.849	30.857	0	1.000	875646	183719	720	1800	255	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	25163610	5186426	12413	31032	418		
385.8610	30.995	31.003	0	0.958	48098778	9847658	24179	60447	407	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.001	1138605	230252	1130	2825	204		
375.8178	31.008	31.022	-1	1.000	965481	194261	720	1800	270	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	23545536	6005512	12413	31032	484		
385.8610	31.754	31.756	0	0.982	45339625	11622590	24179	60447	481	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	1148495	290976	1130	2825	258		
375.8178	31.767	31.772	0	1.000	956401	245408	720	1800	341	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.512	32.523	-1	1.005	21115296	5525344	12413	31032	445		
385.8610	32.512	32.523	-1	1.005	41413658	10740911	24179	60447	444	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	1004237	260741	1130	2825	231		
375.8178	32.526	32.534	0	1.000	829863	215930	720	1800	300	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		35492157	8840472	14115	35287	626		
403.8529	32.339	32.342	0		28400508	7090007	9259	23147	766	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	26497467	7547113	14115	35287	535		
403.8529	31.927	31.929	0	0.987	20866037	5954906	9259	23147	643	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	725563	201392	885	2212	228		
391.8127	31.940	31.945	0	1.000	574467	160999	657	1642	245	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	31586686	7983088	14115	35287	566		
403.8529	32.033	32.033	0	0.991	25172422	6406461	9259	23147	692	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	819435	207367	885	2212	234		
391.8127	32.047	32.047	0	1.000	641312	163363	657	1642	249	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	837706	208716	885	2212	236		
391.8127	32.353	32.355	0	1.013	665701	168193	657	1642	256	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	15666898	4905580	16994	42485	289		
419.8220	33.912	33.914	0	1.049	35641327	11012481	39521	98802	279	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	949994	280926	1603	4007	175		
409.7789	33.924	33.926	0	1.000	906605	280503	1346	3365	208	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13532847	3927195	16994	42485	231		
419.8220	35.005	35.010	0	1.082	31095505	8744356	39521	98802	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	755406	231092	1603	4007	144		
409.7789	35.017	35.020	0	1.000	710228	201627	1346	3365	150	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	21029381	6108519	13979	34947	437		
437.8140	34.714	34.716	0	1.073	20847175	6052425	13690	34225	442	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	599401	178801	821	2052	218		
425.7737	34.726	34.726	0	1.000	564673	160703	693	1732	232	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26904388	6653832	3548	8870	1875		
471.7750	37.093	37.094	0	1.147	30114074	7334467	3515	8787	2087	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	941996	224700	300	750	749		
443.7399	37.189	37.199	-1	1.003	1034179	253612	487	1217	521	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	750544	177364	389	972	456		
459.7348	37.105	37.106	0	1.000	818794	206090	374	935	551	0.92(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.35
Area: 201476
Amount: 0.545465
Amount Units: pg/ul

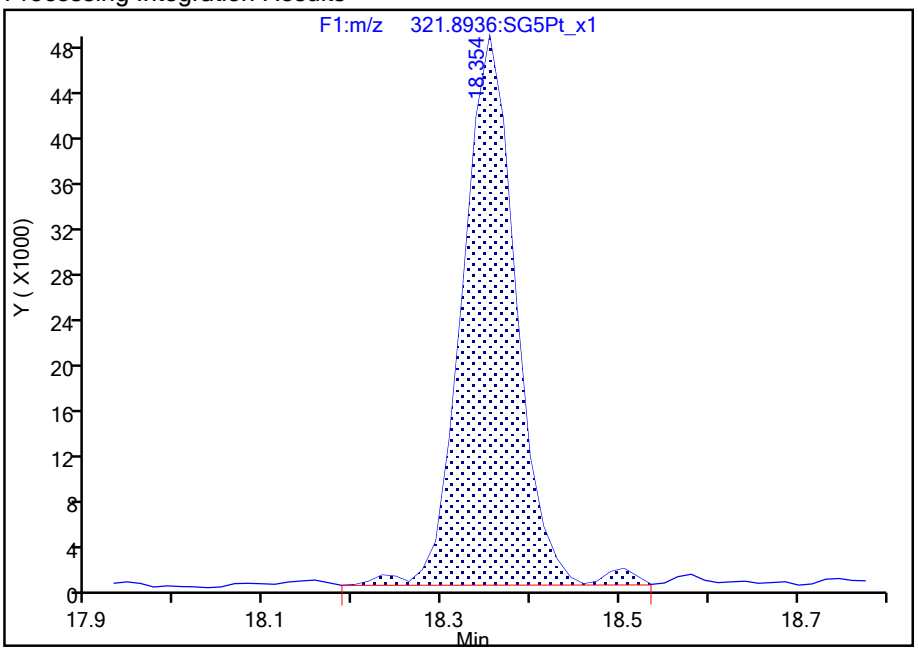

Manual Integration Results

RT: 18.35
Area: 199093
Amount: 0.501347
Amount Units: pg/ul

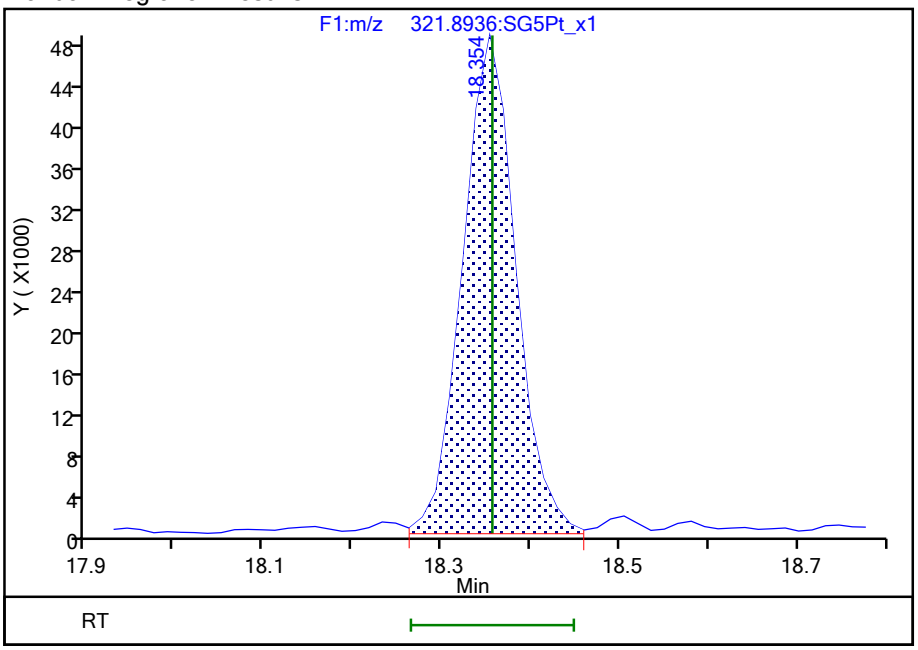

Reviewer: stephensk, 27-Jul-2021 08:15:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

792407

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

Processing Integration Results

RT: 18.35
Area: 394678
Amount: 0.545465
Amount Units: pg/ul

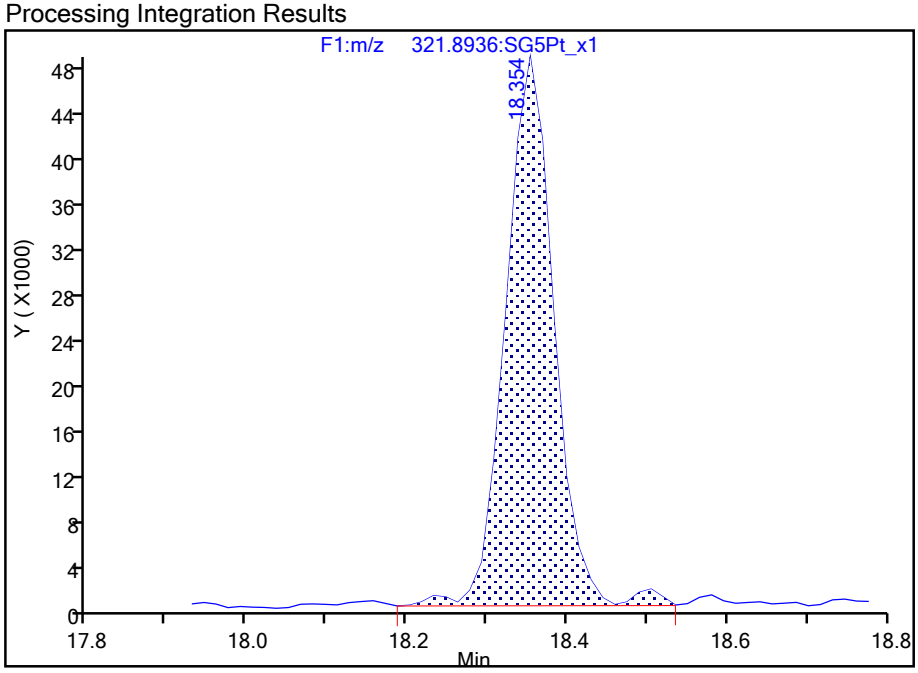

Manual Integration Results

RT: 18.35
Area: 376984
Amount: 0.501347
Amount Units: pg/ul
Reviewer: stephensk, 27-Jul-2021 08:15:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

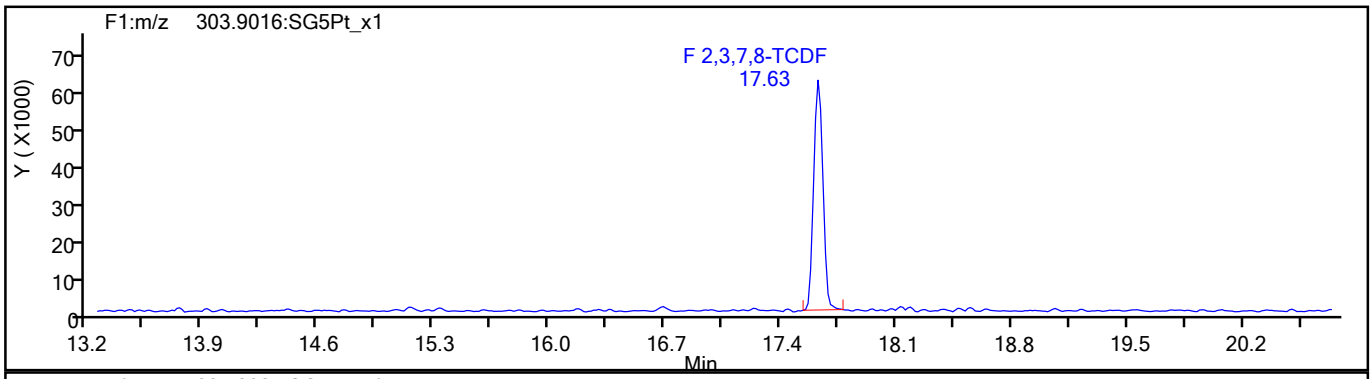

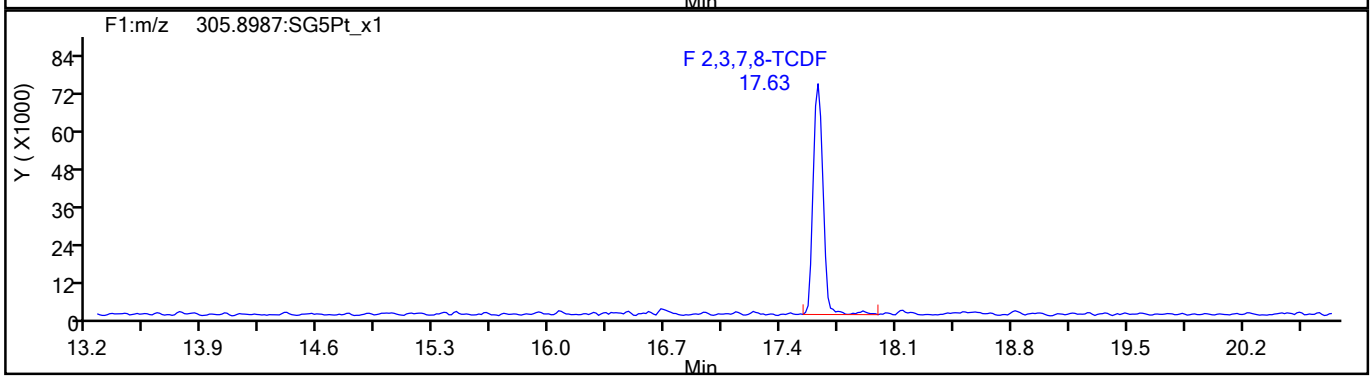

TCDF Standards

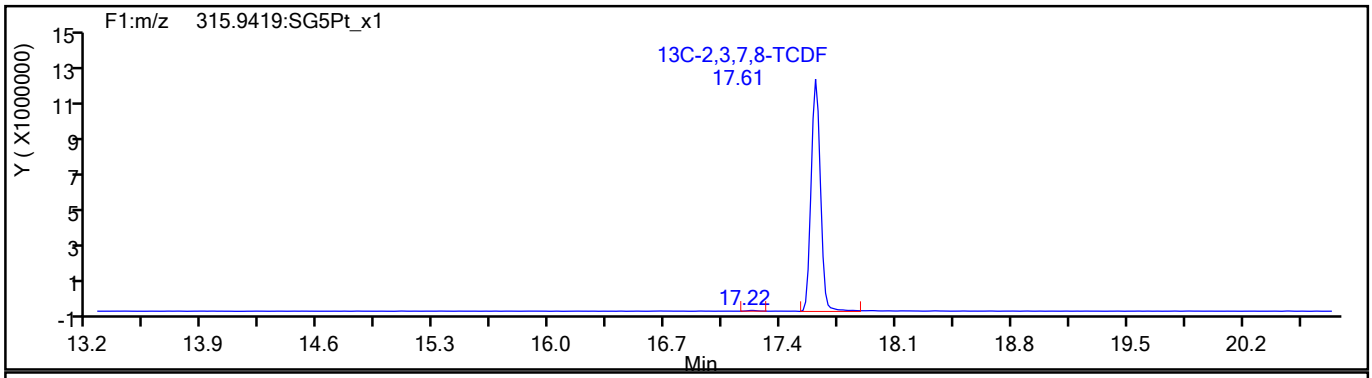

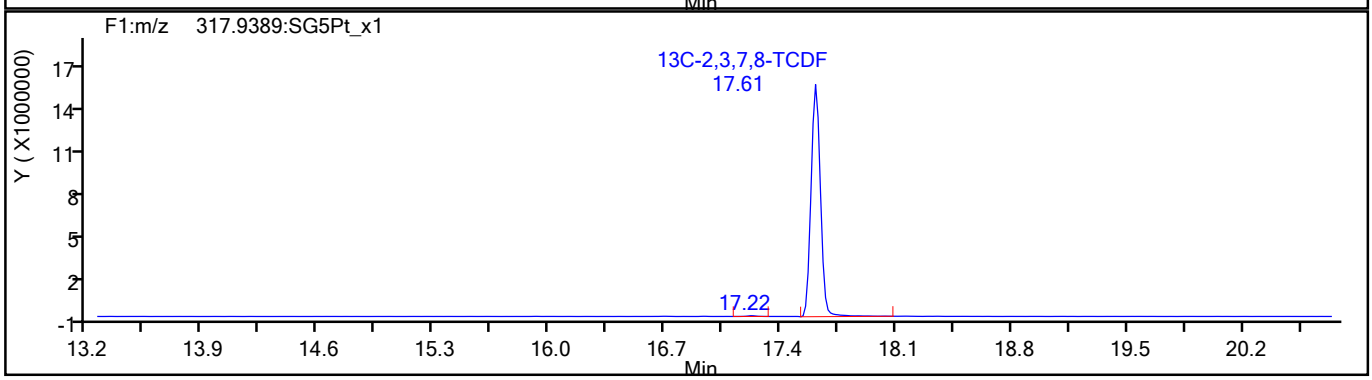

792409

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

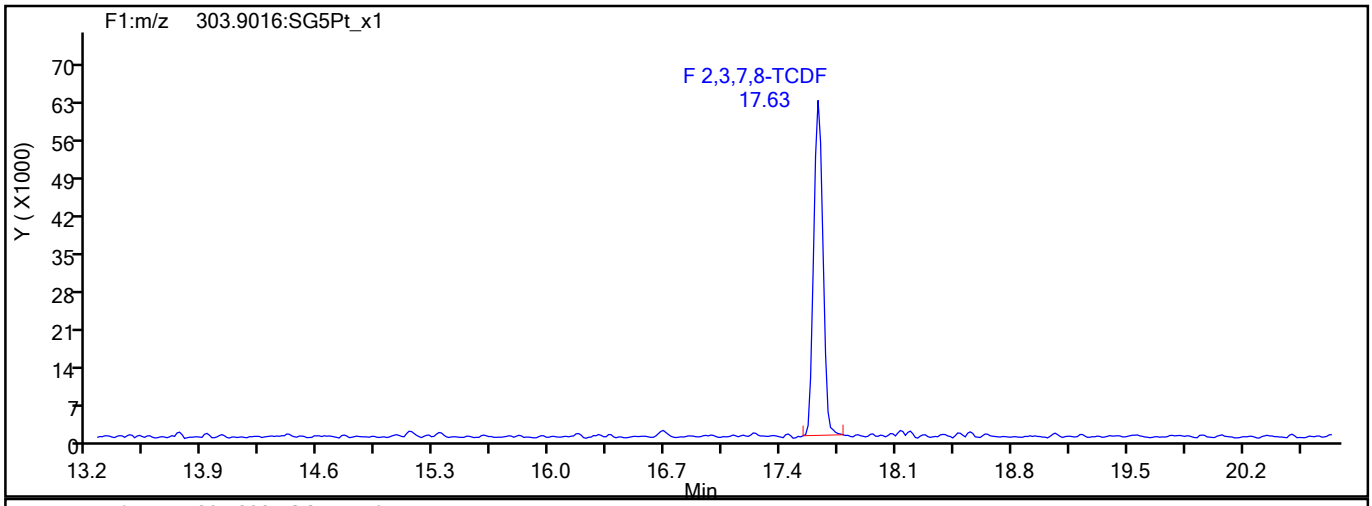

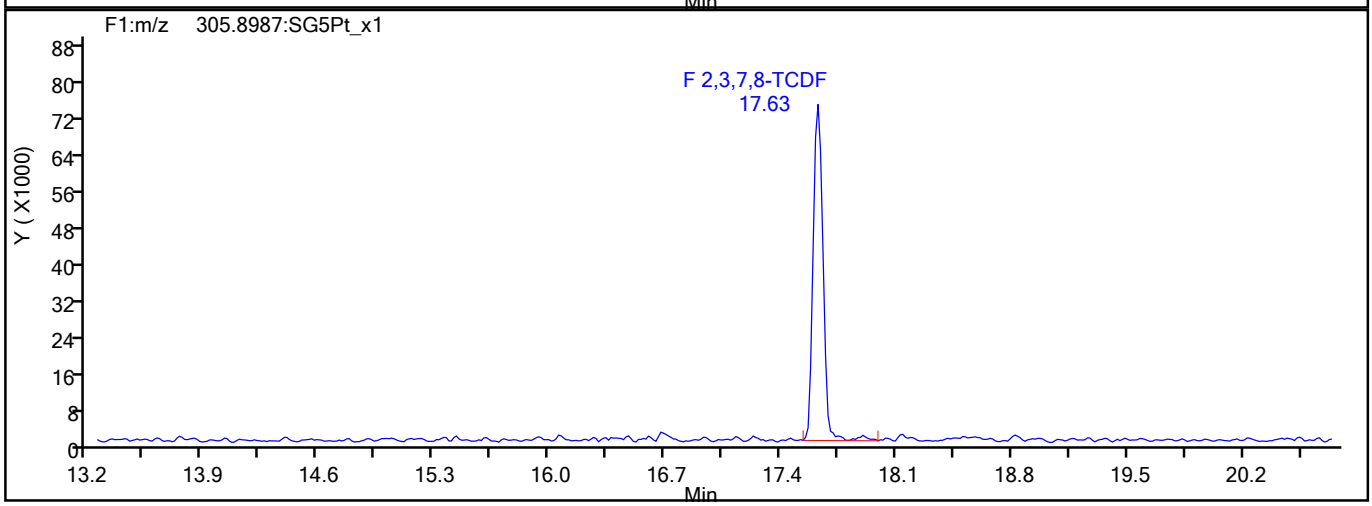

TCDF Interference Mass

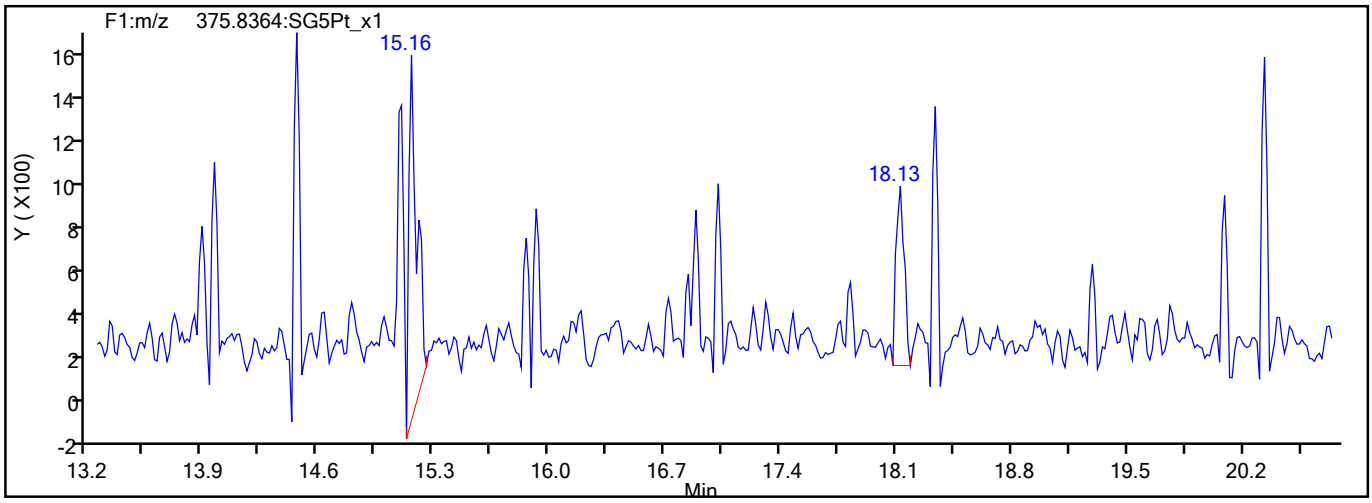

792410

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

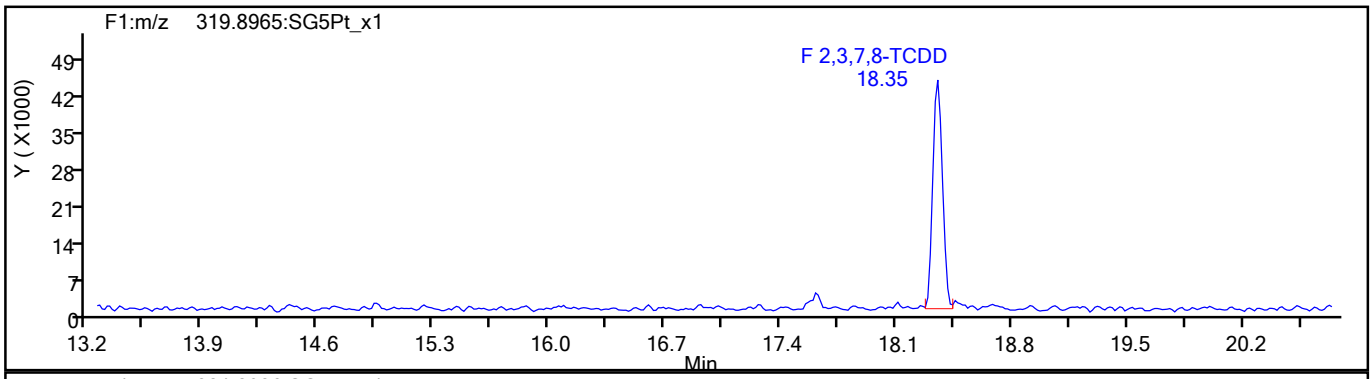

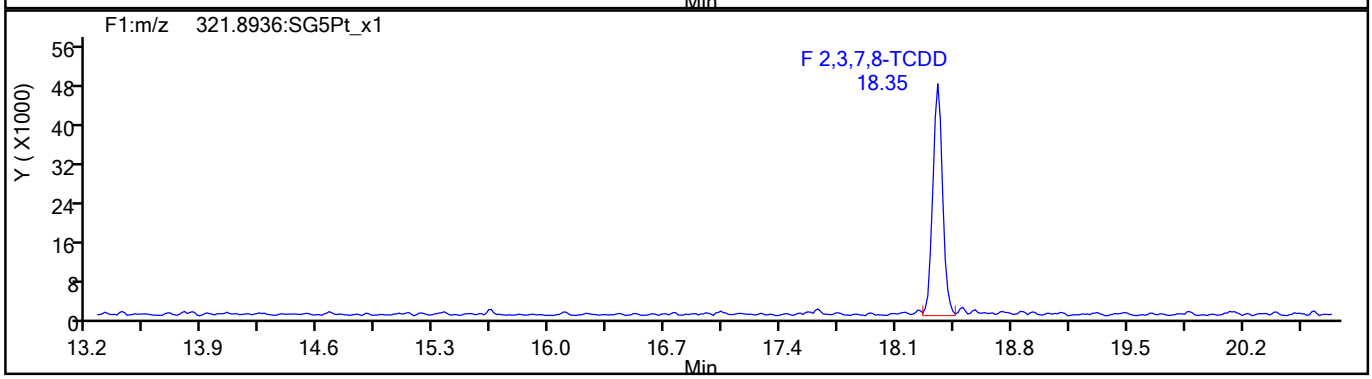

TCDD Standards

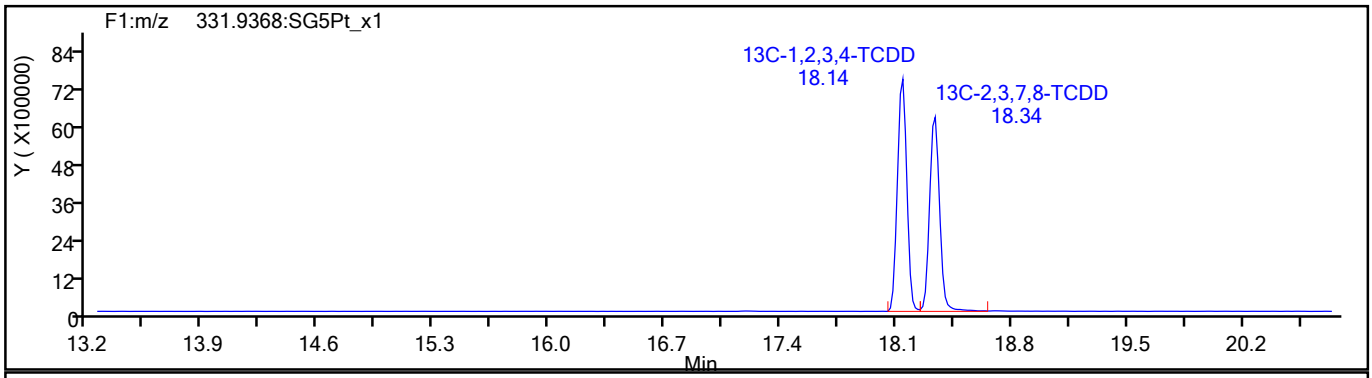

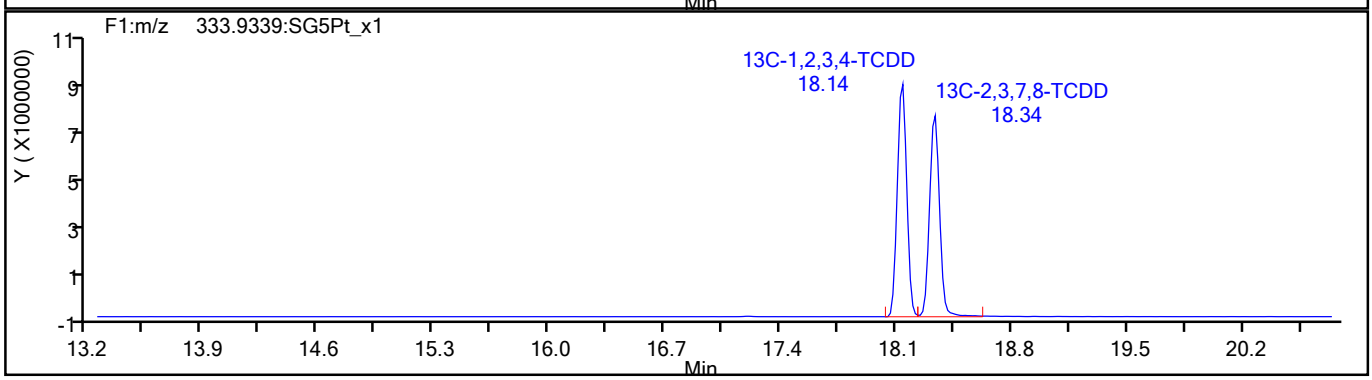

792411

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

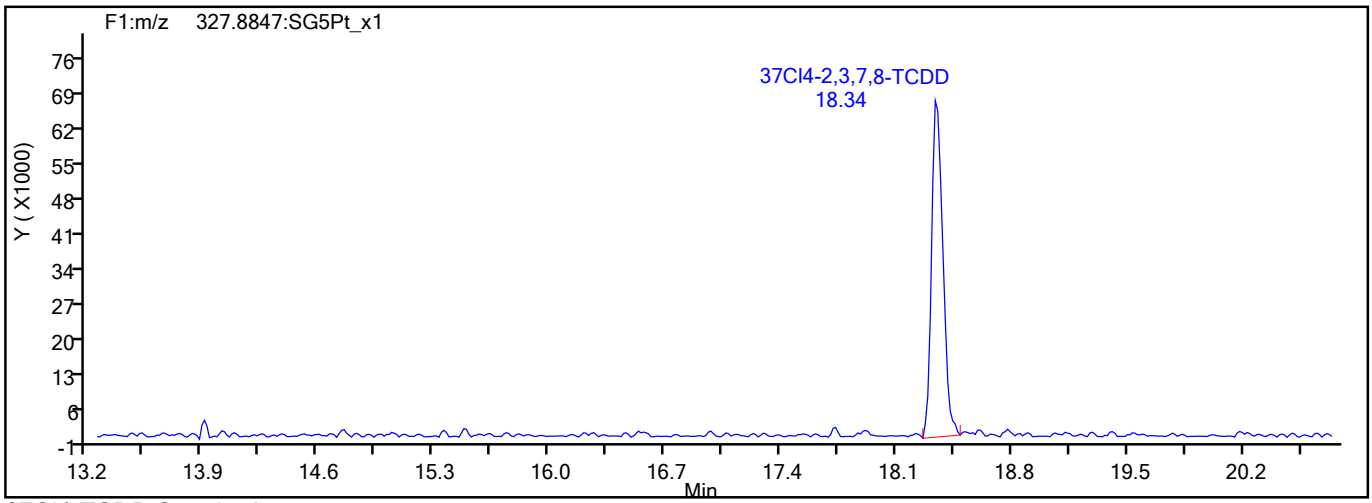

37Cl4-TCDD Standards

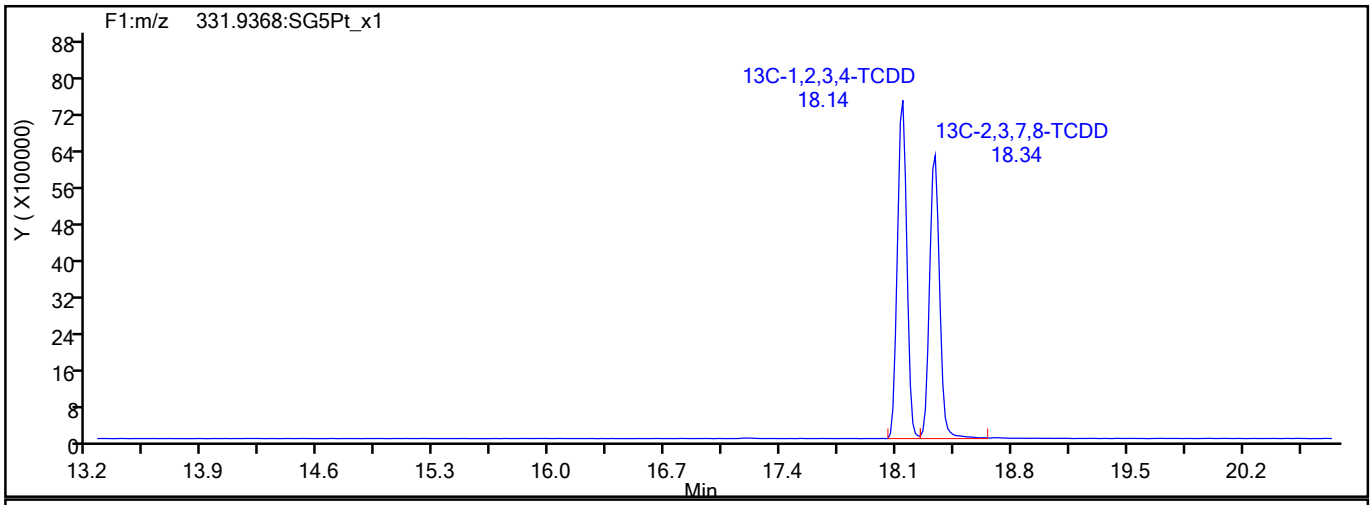

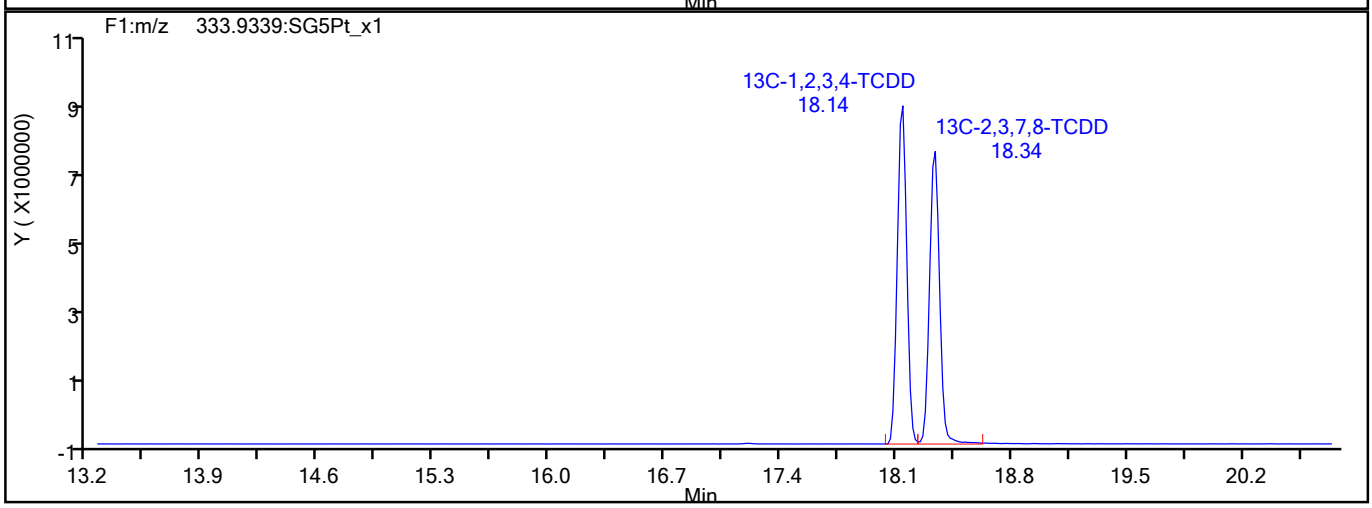

792412

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

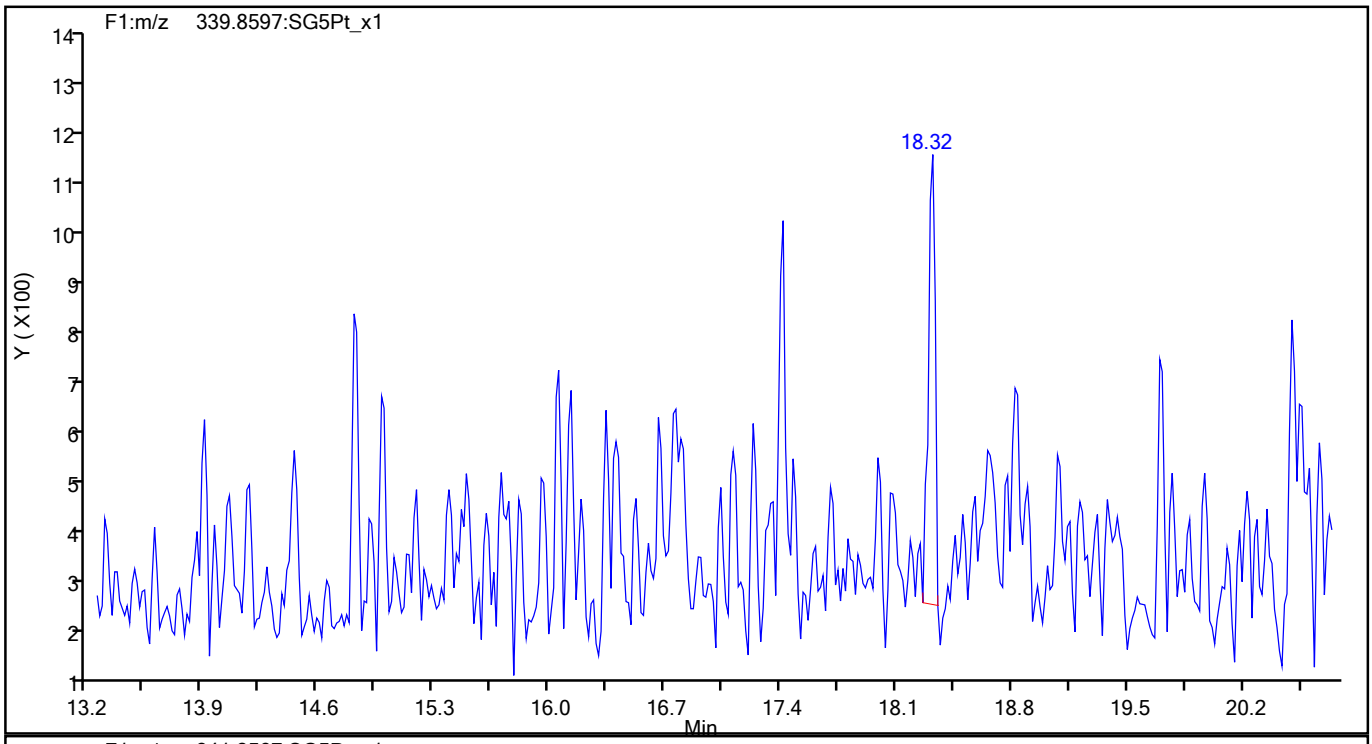

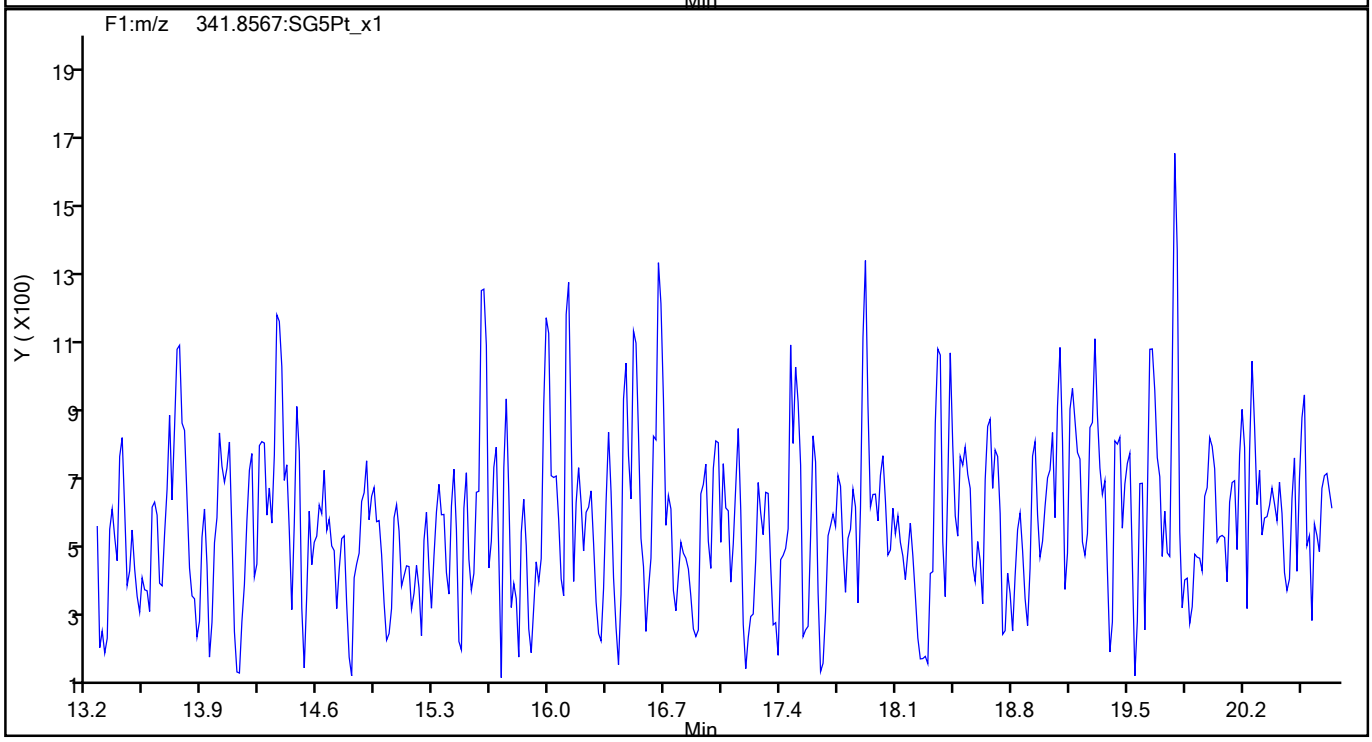

792413

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

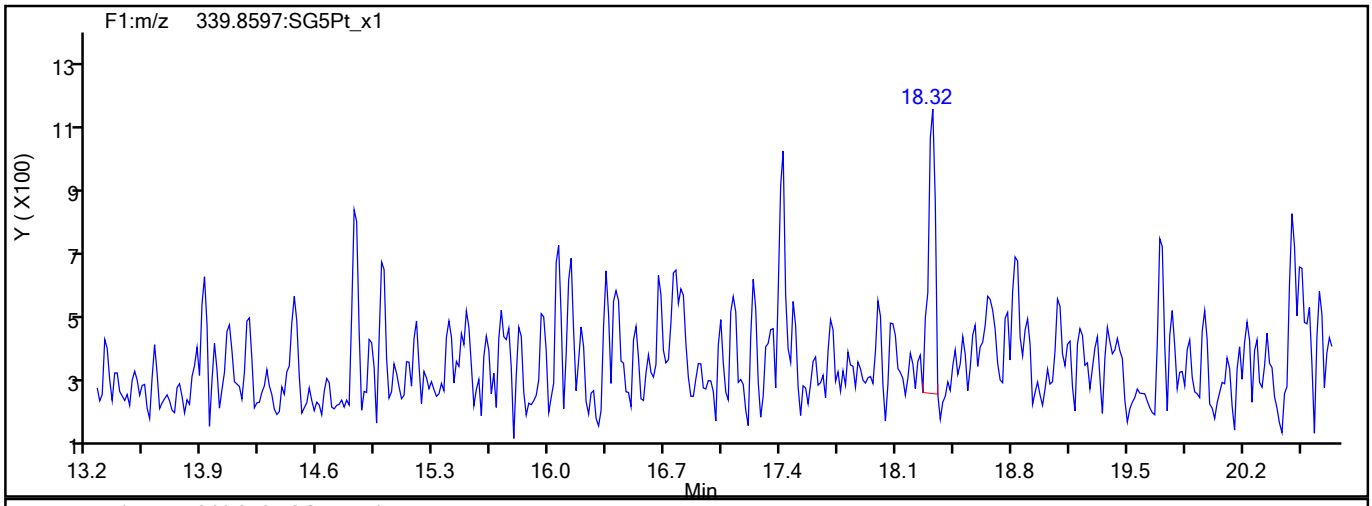

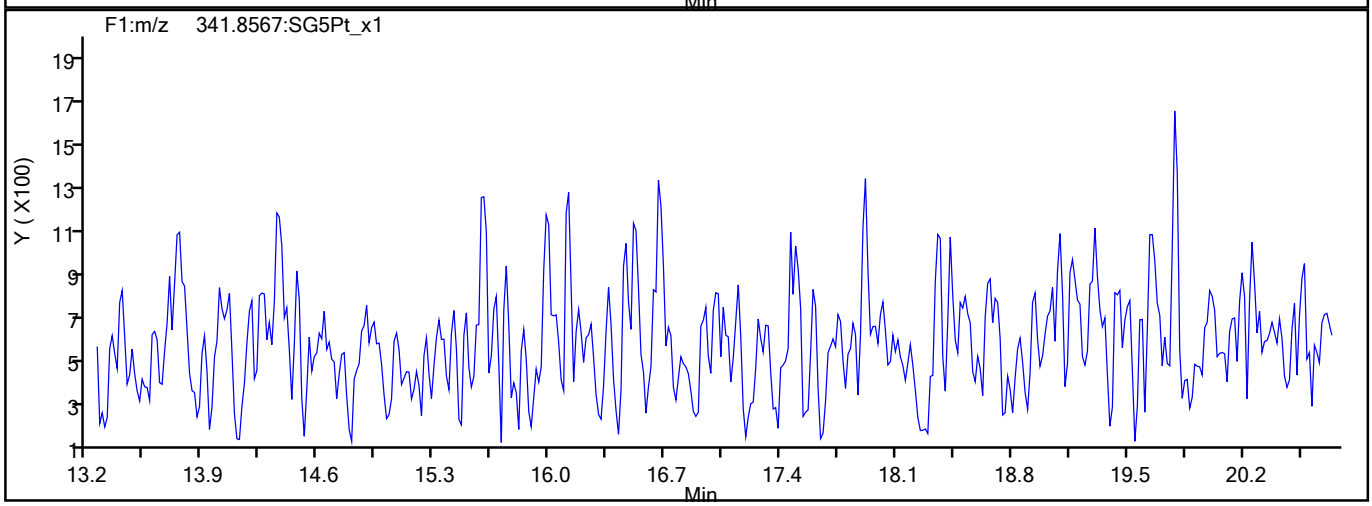

F1 PeCDFs Interference Mass

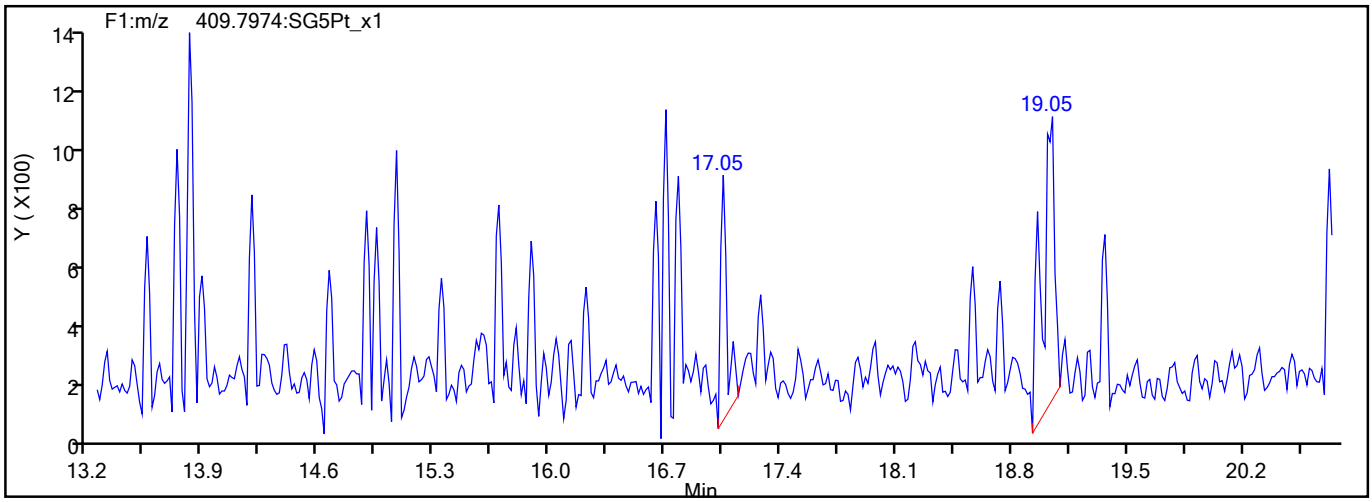

792414

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

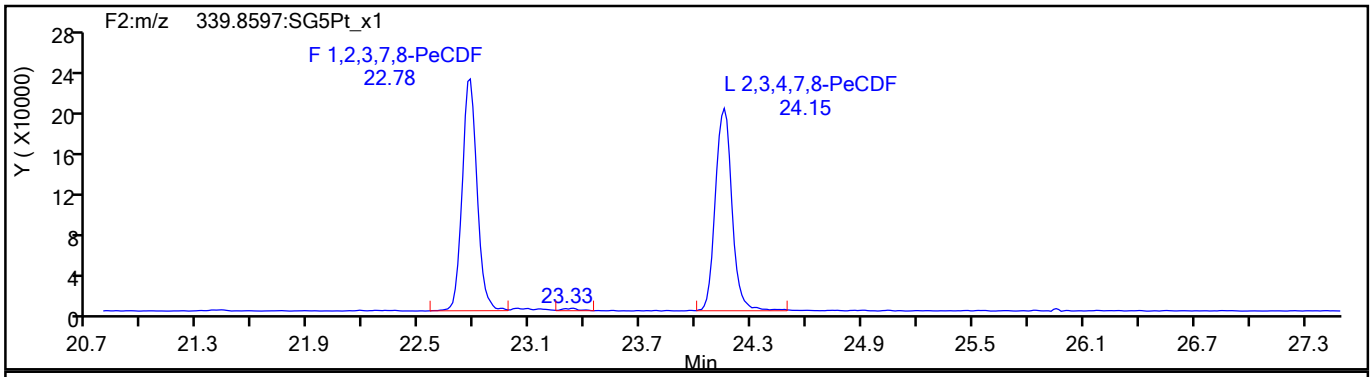

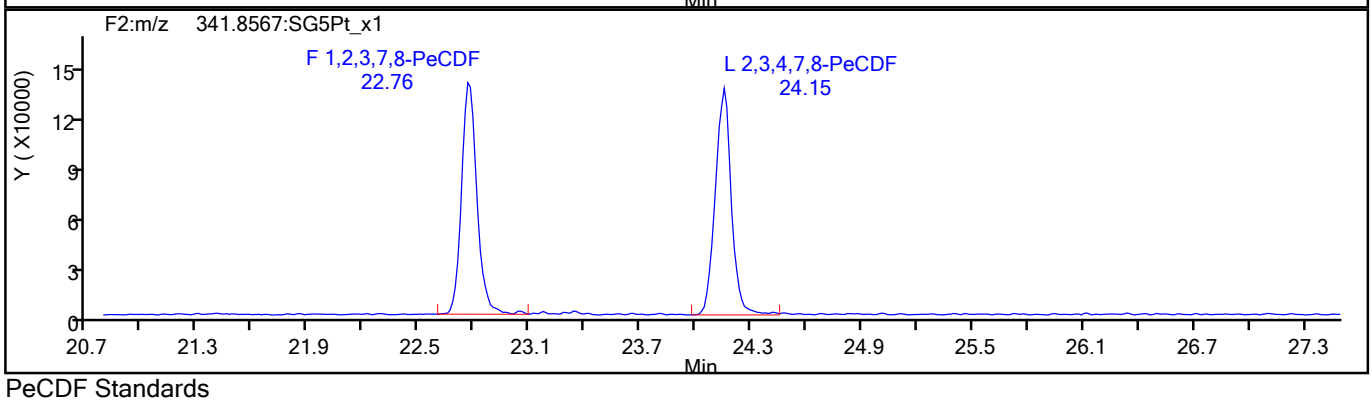

PeCDF Standards

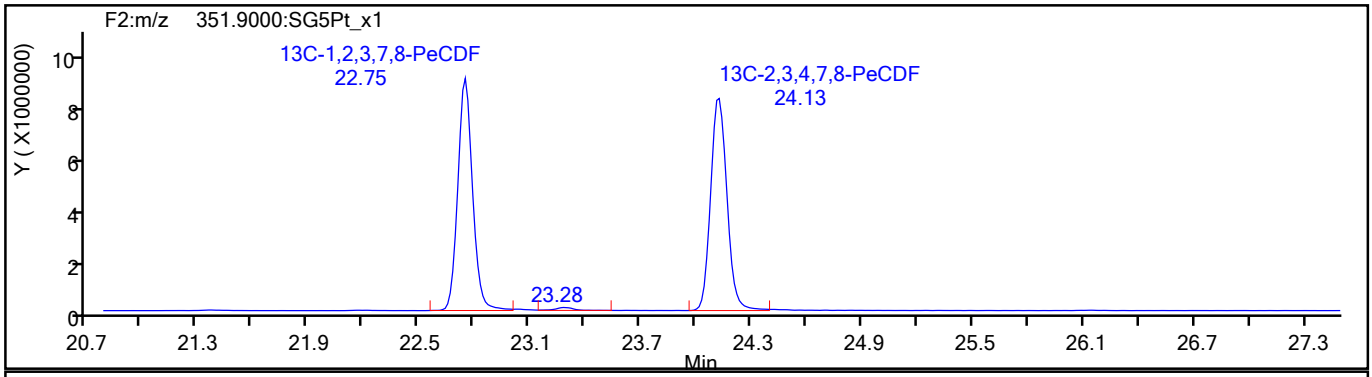

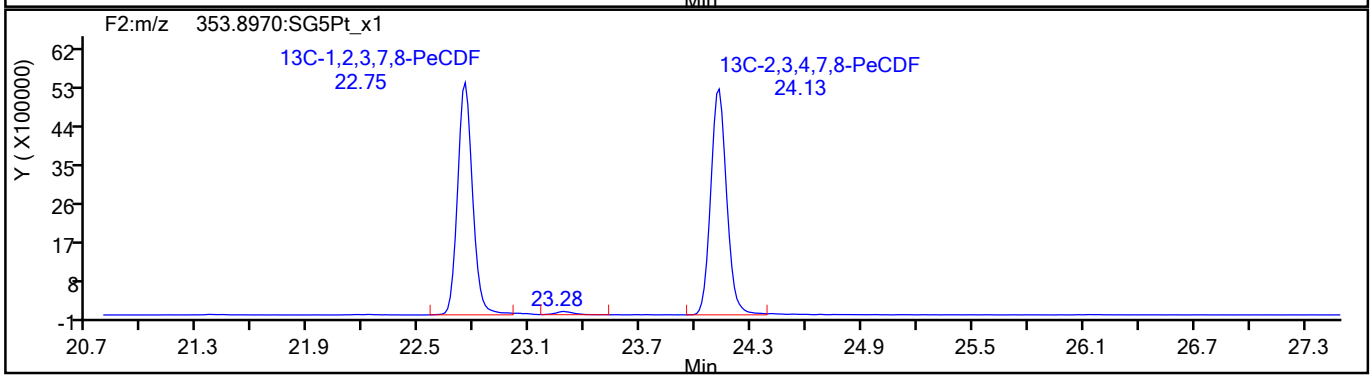

792415

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

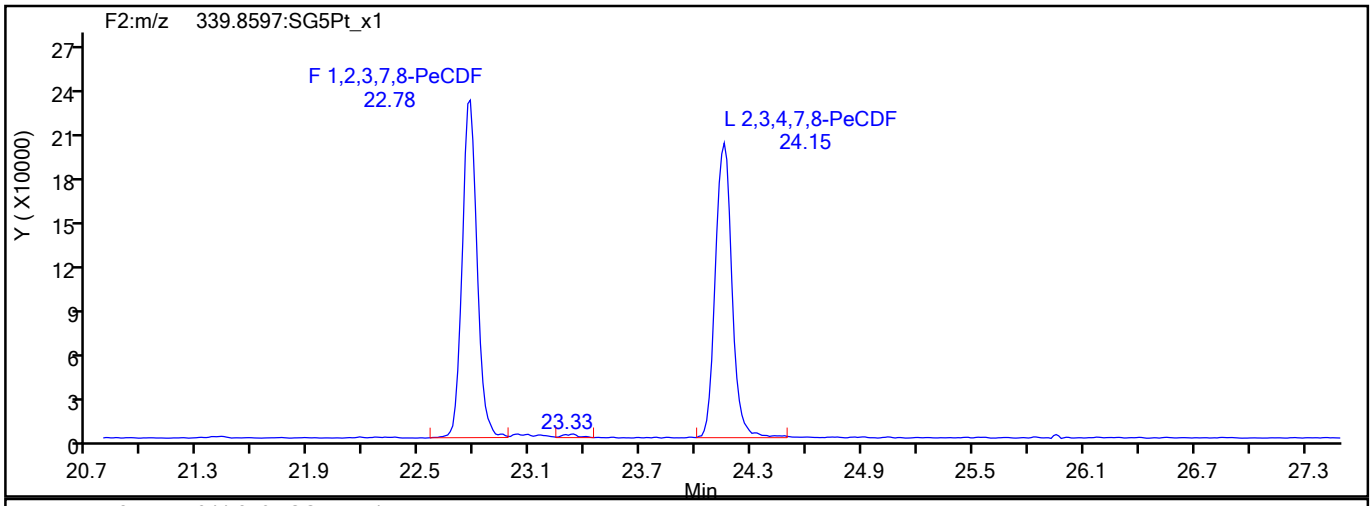

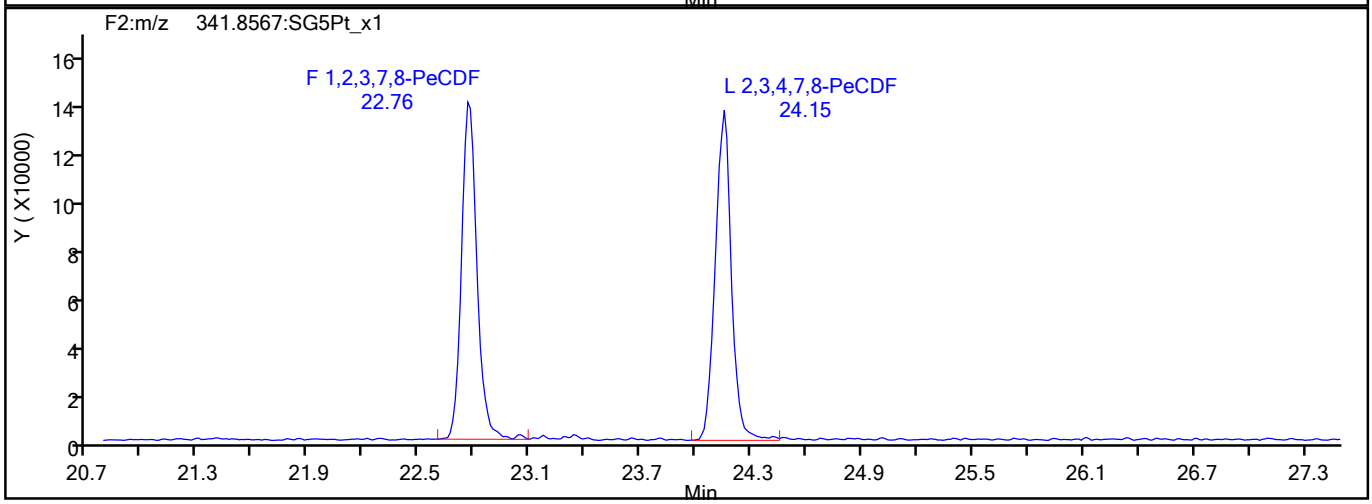

PeCDF Interference Mass

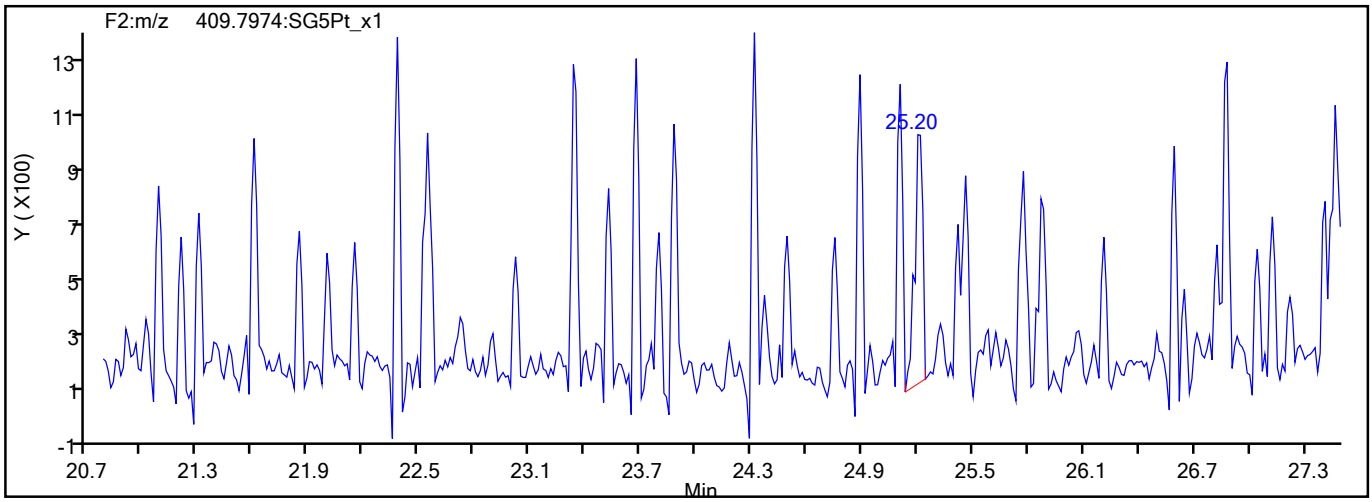

792416

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

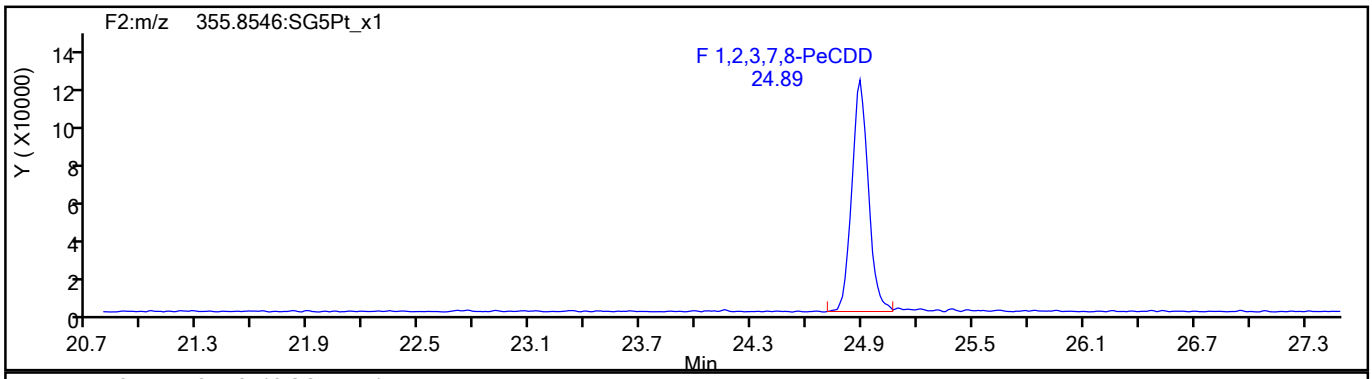

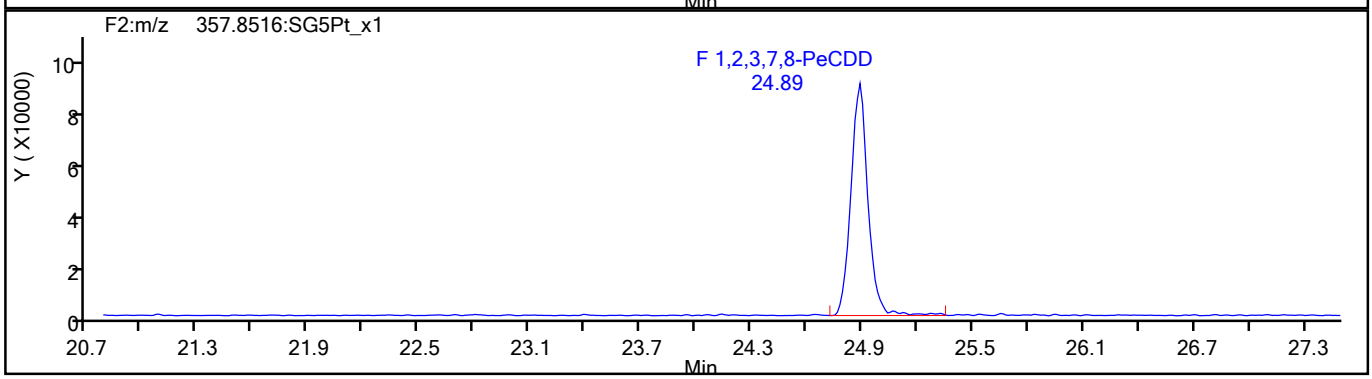

PeCDD Standards

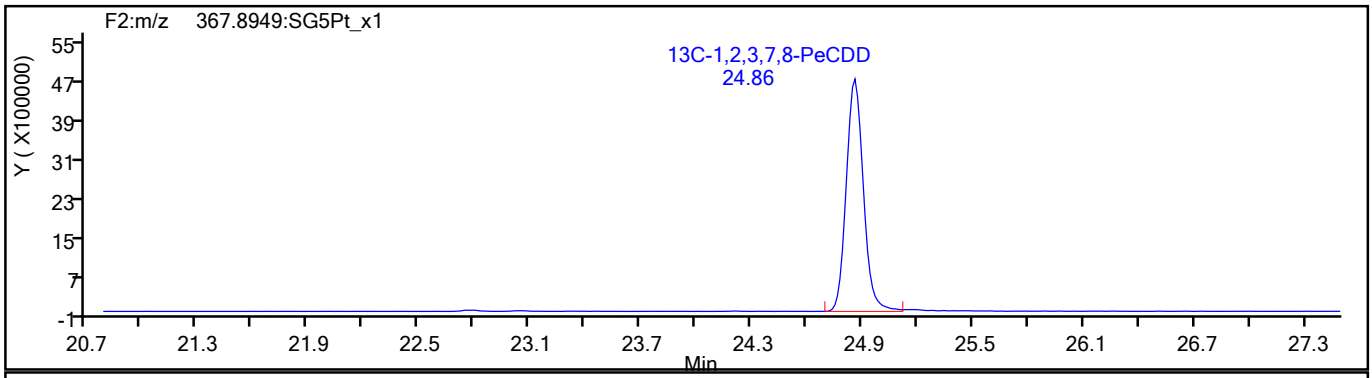

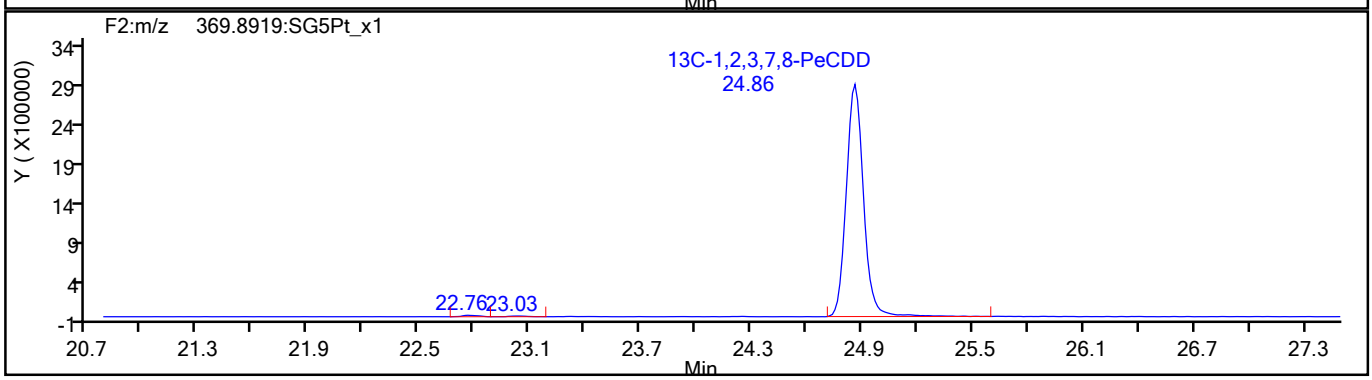

792417

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

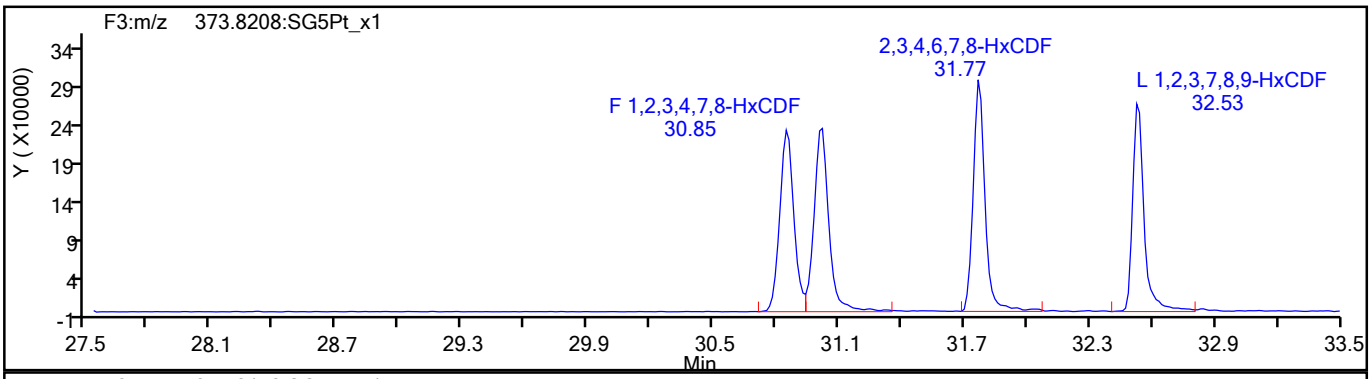

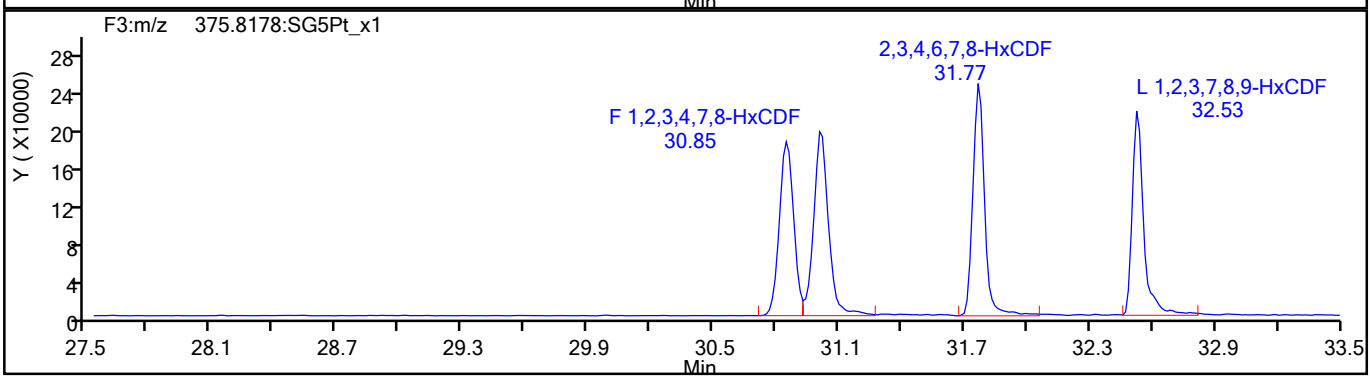

HxCDF Standards

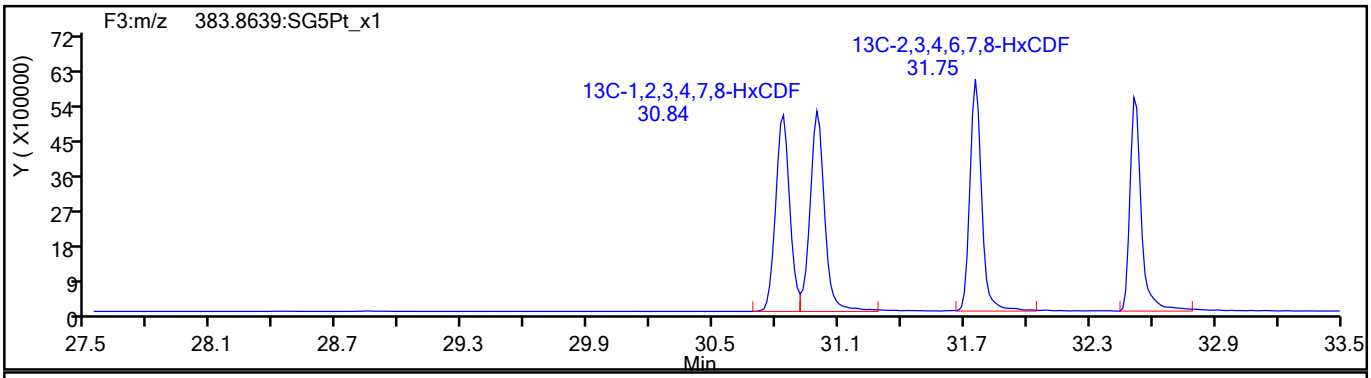

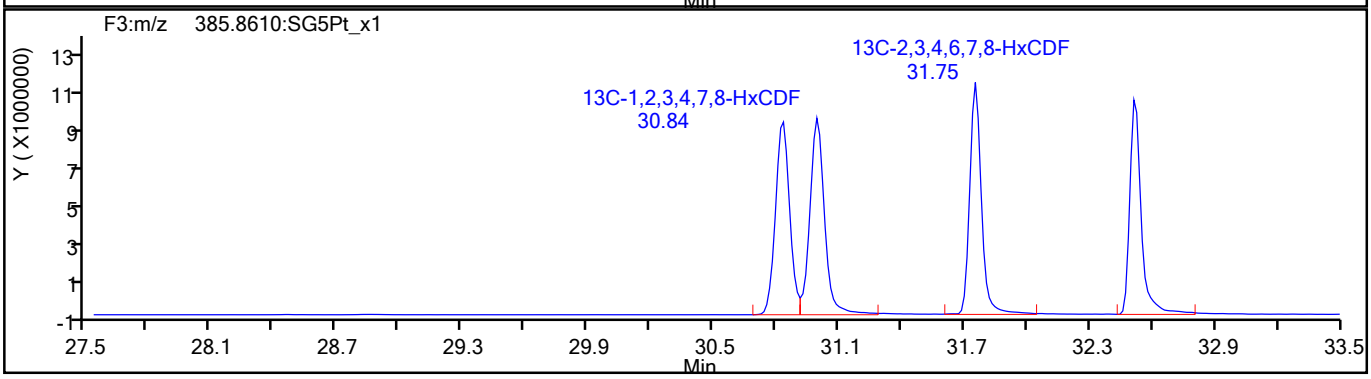

792418

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

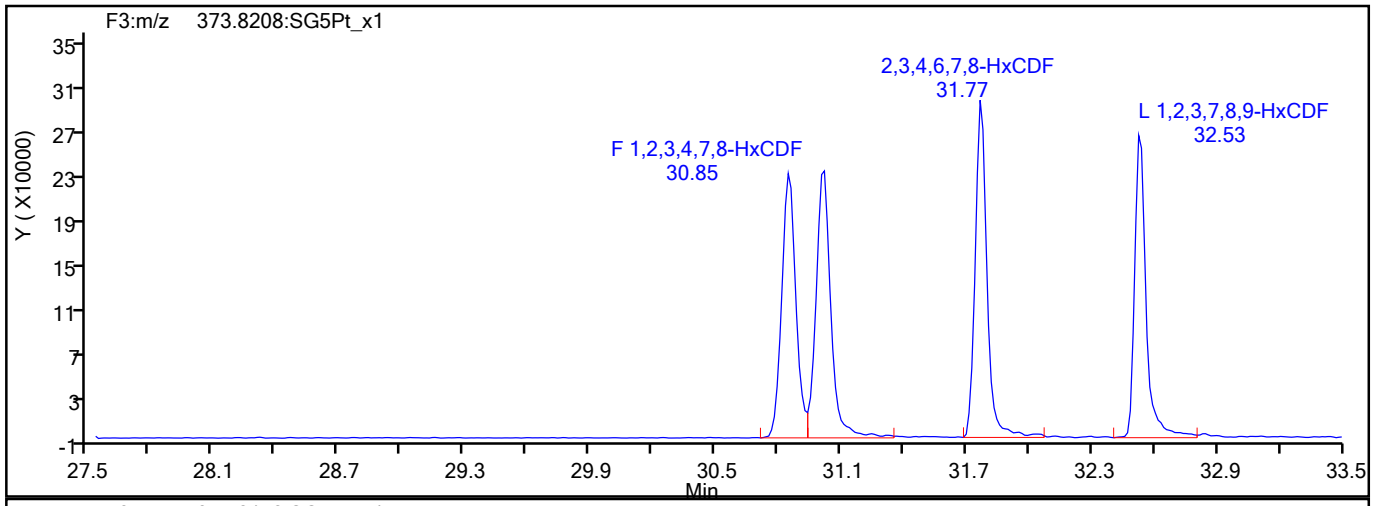

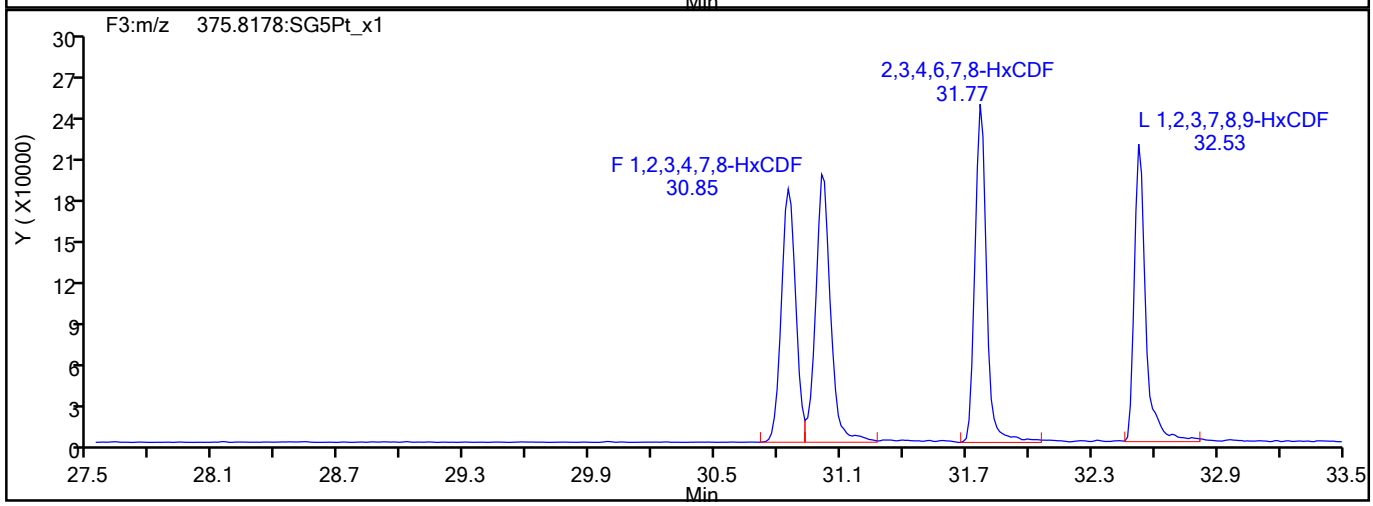

HxCDF Interference Mass

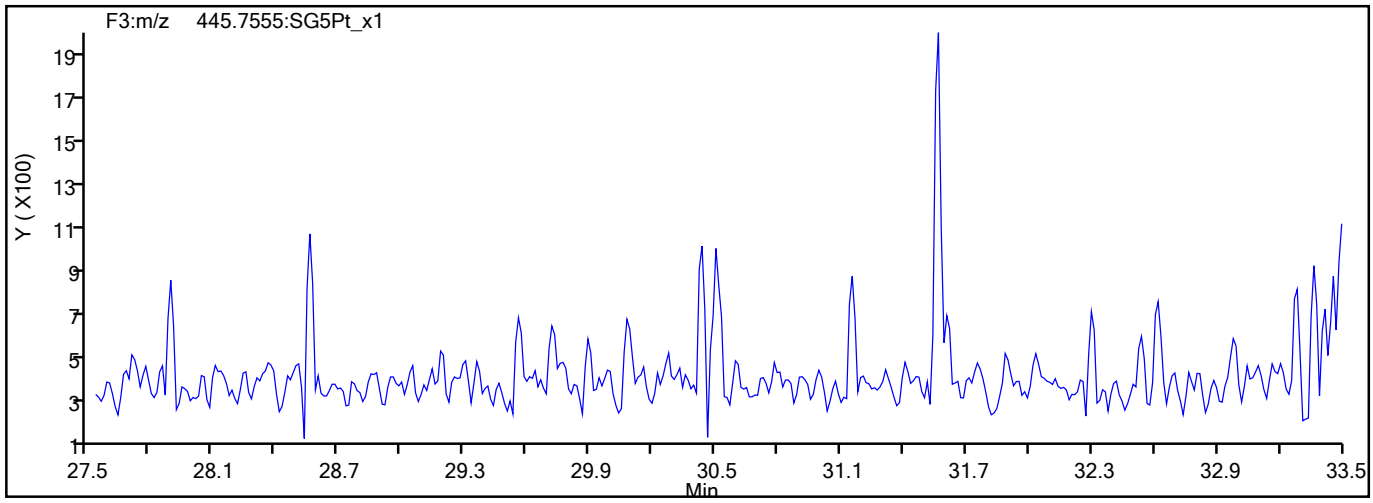

792419

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

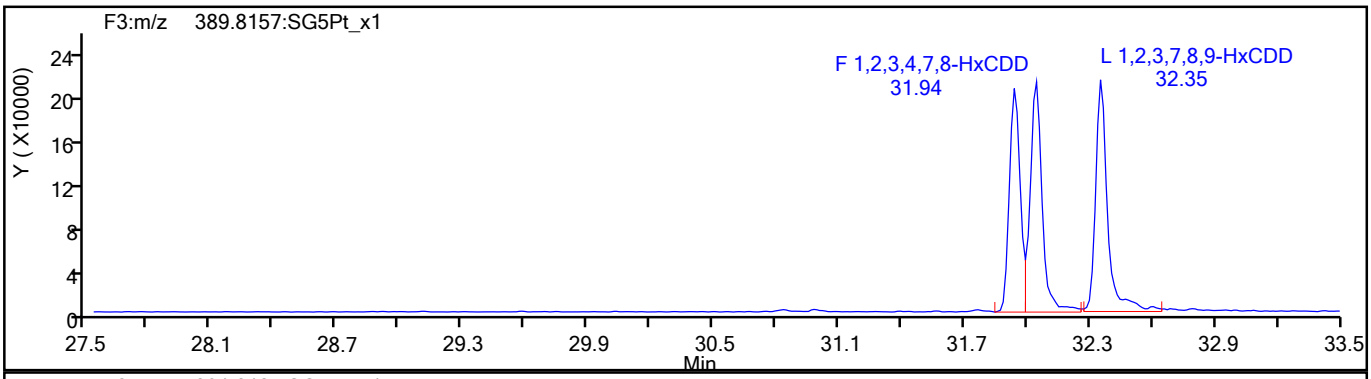

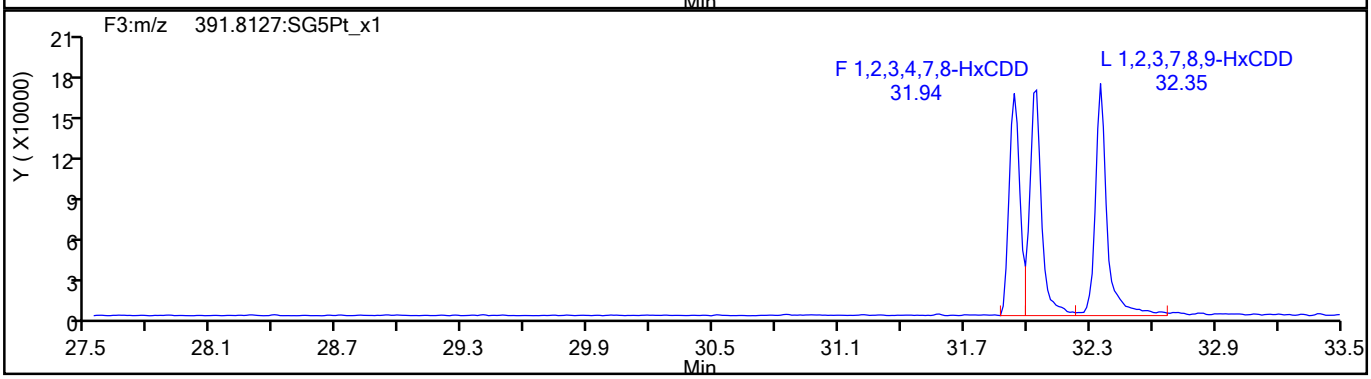

HxCDD Standards

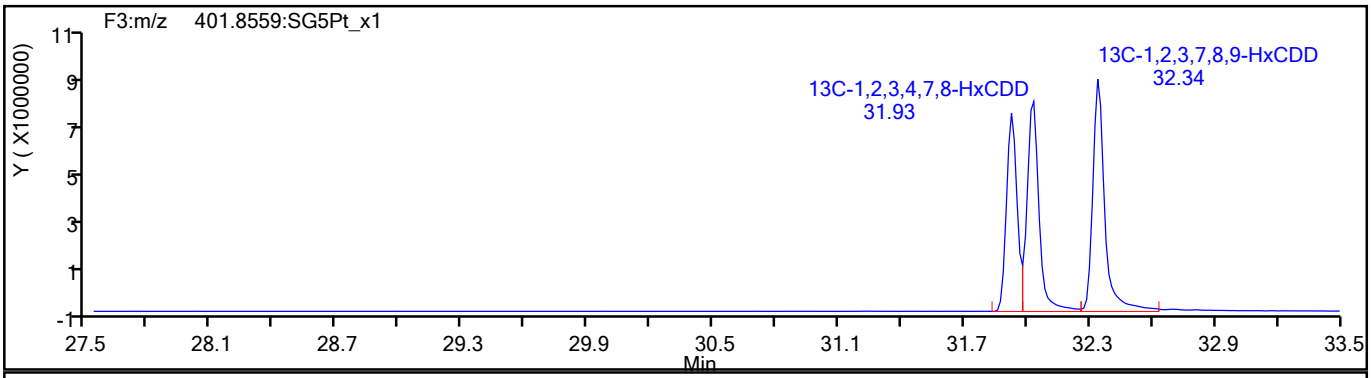

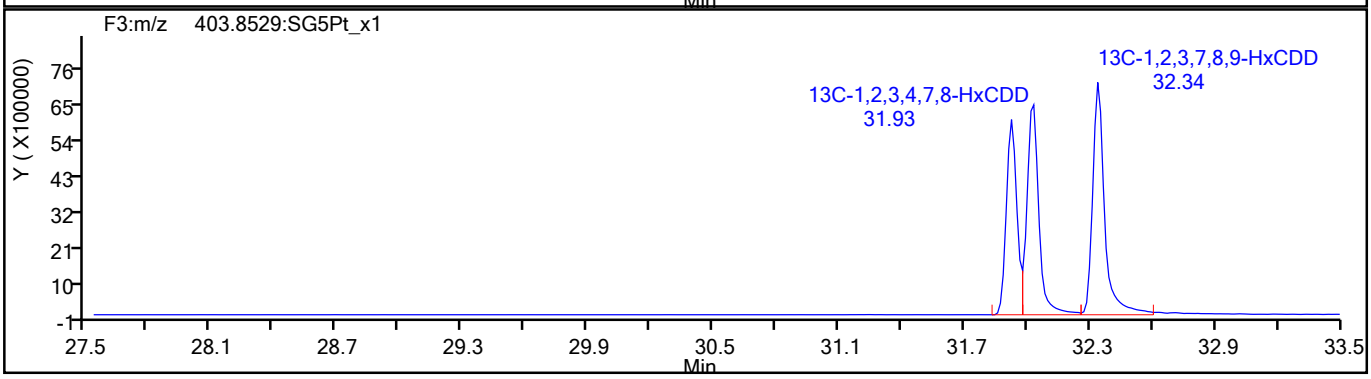

792420

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

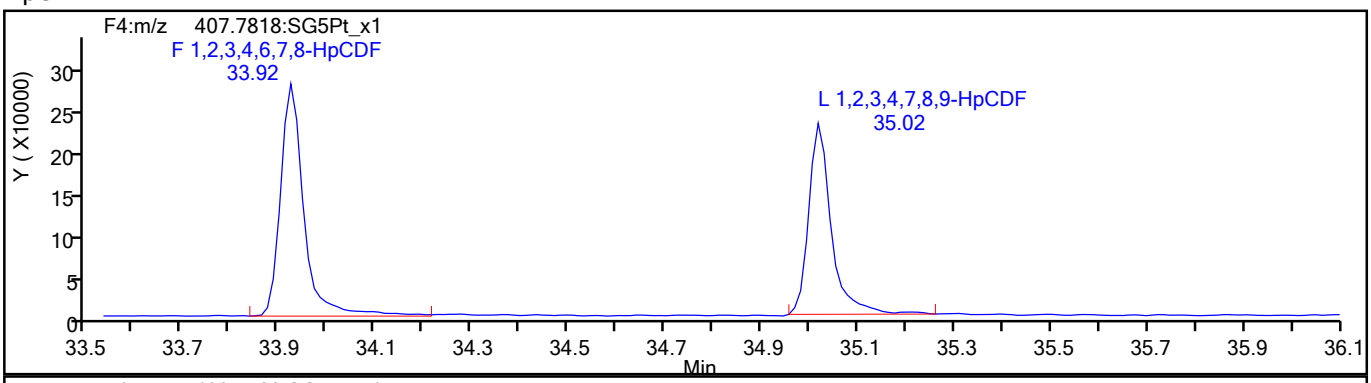

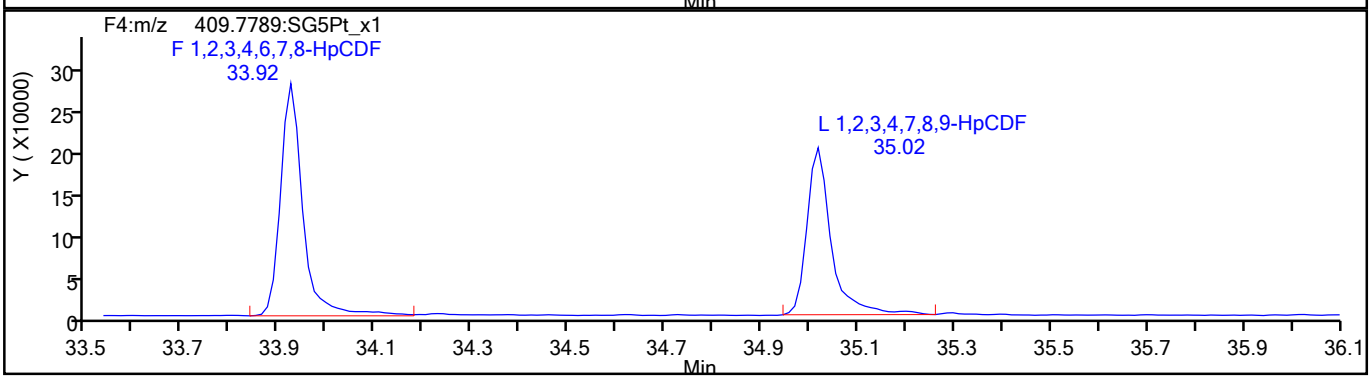

HpCDF Standards

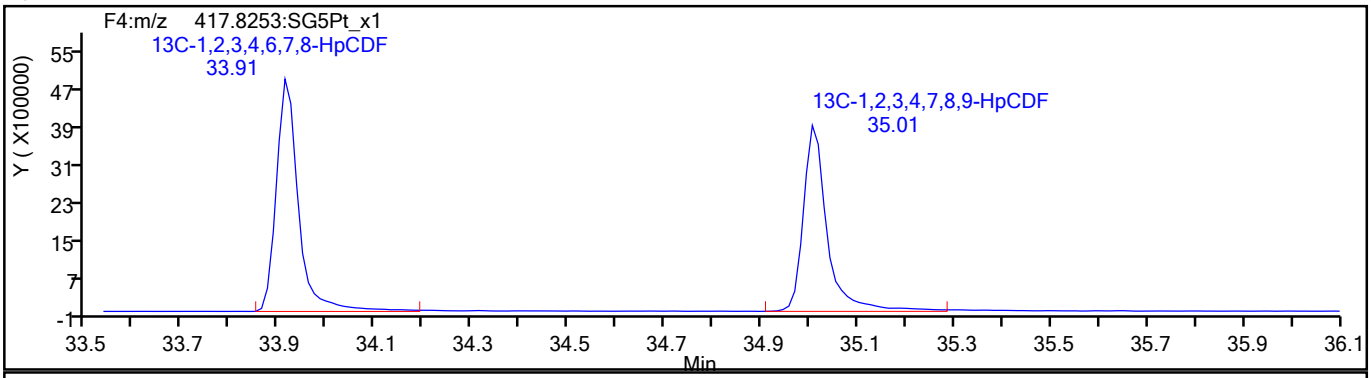

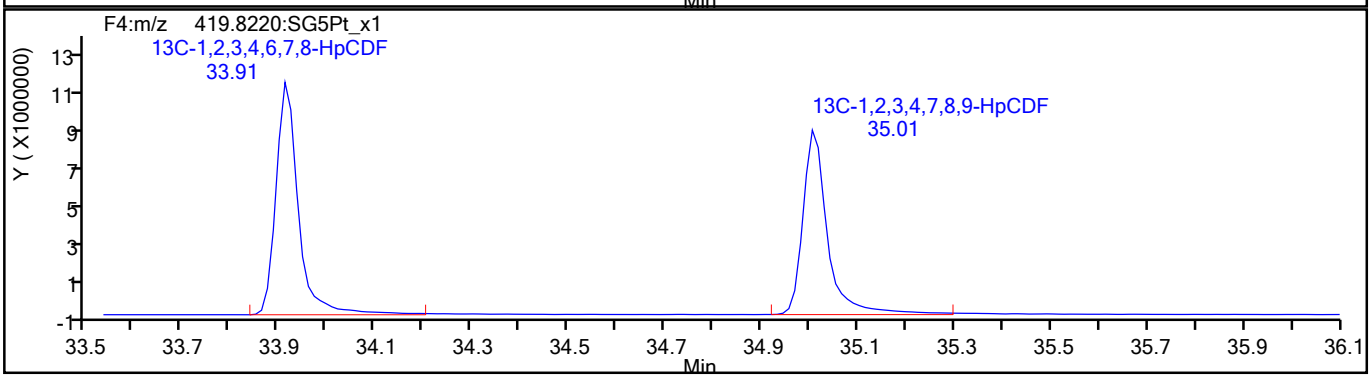

792421

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

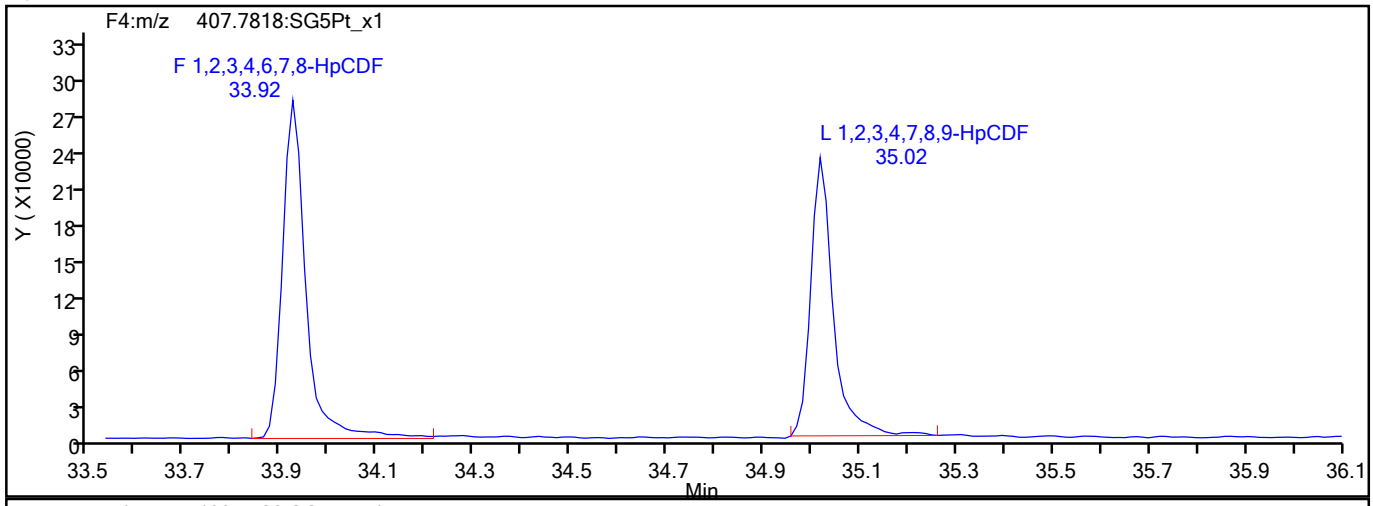

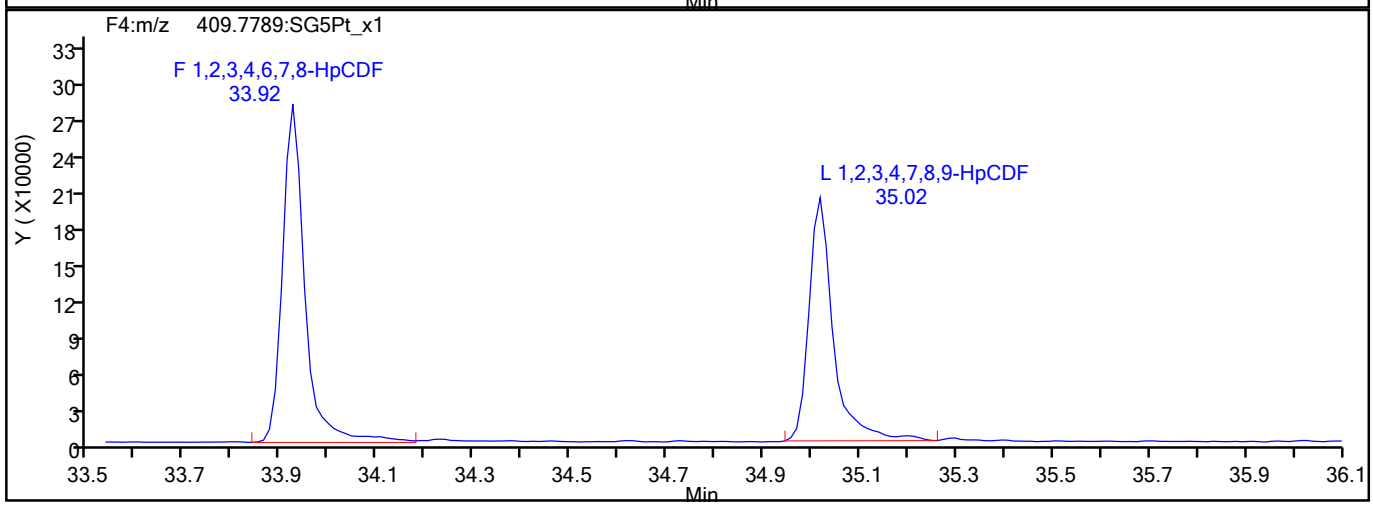

HpCDF Interference Mass

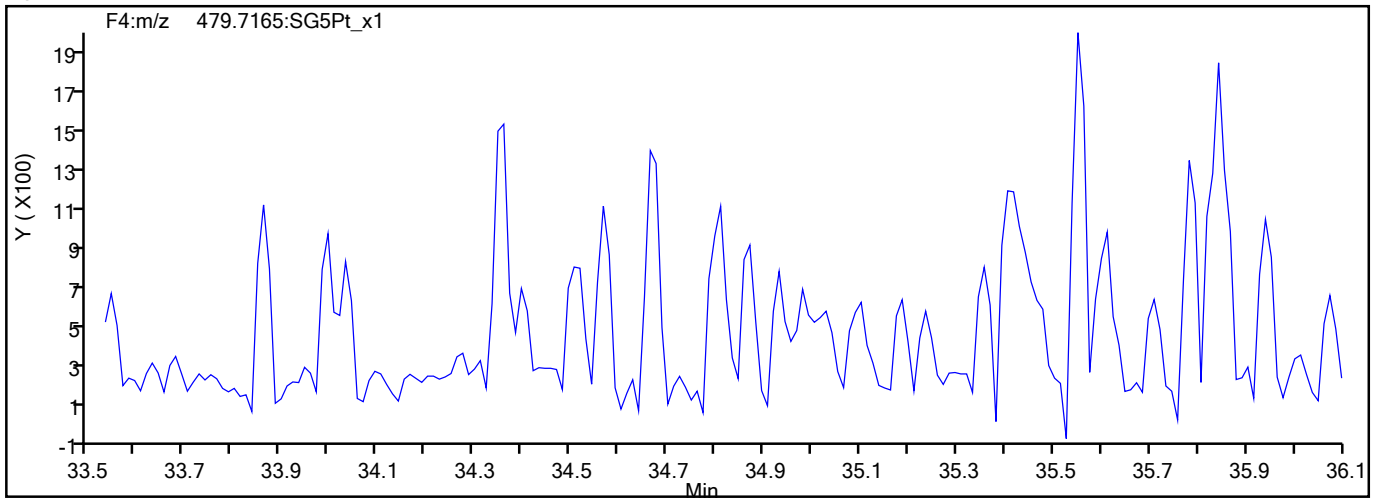

792422

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

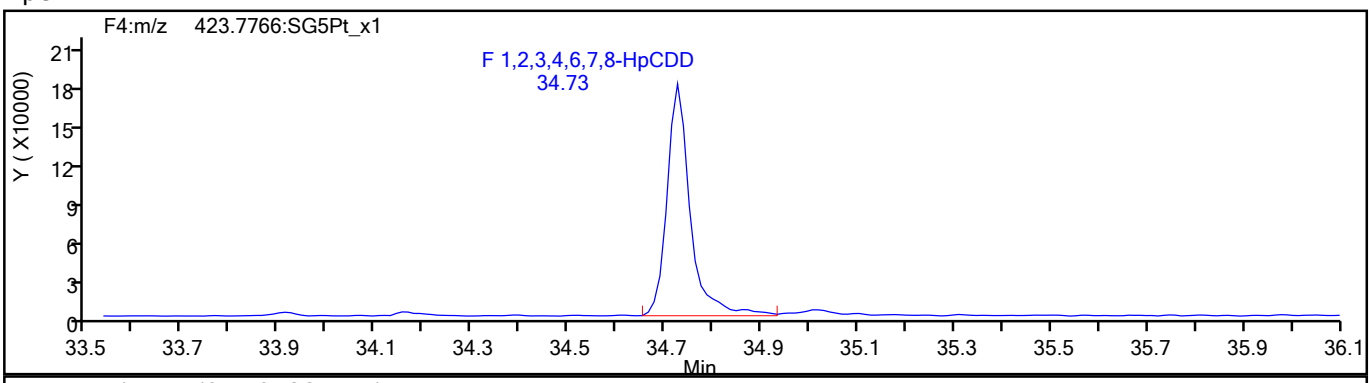

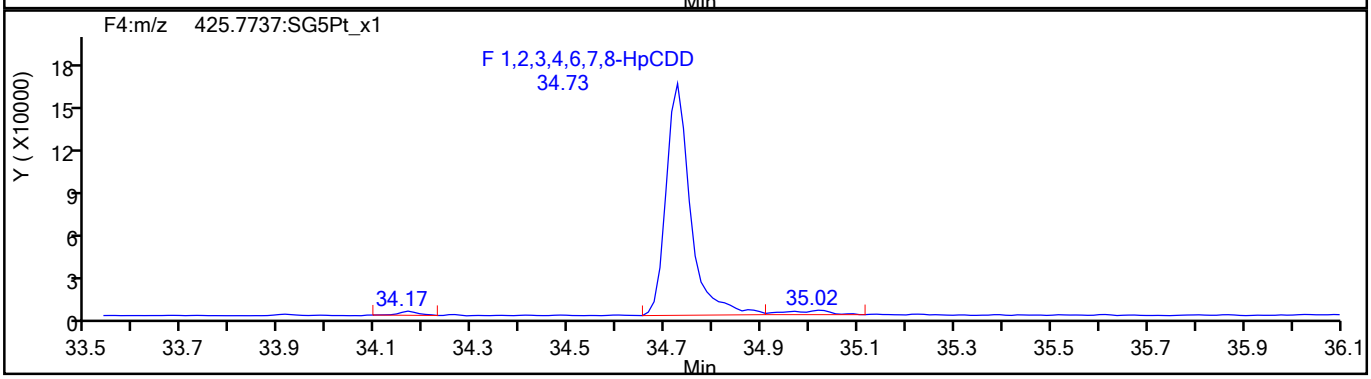

HpCDD Standards

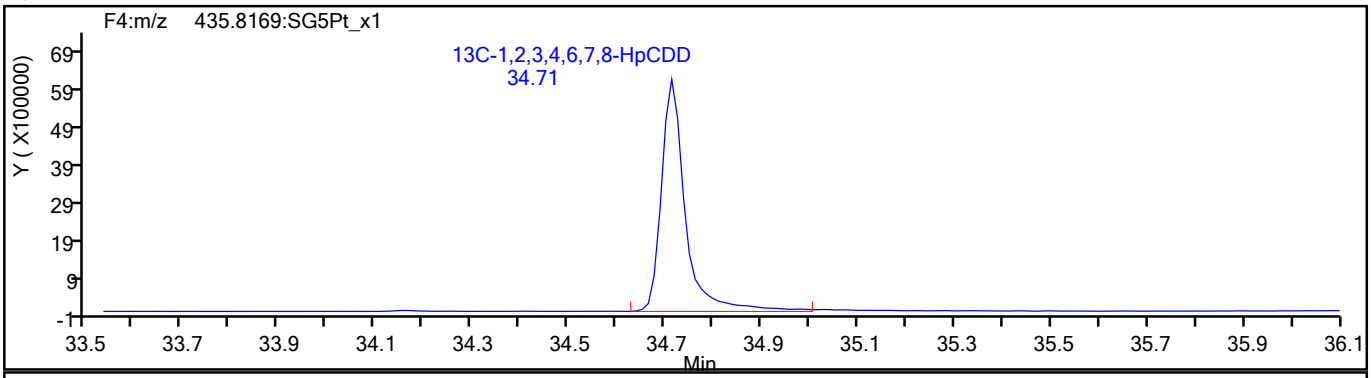

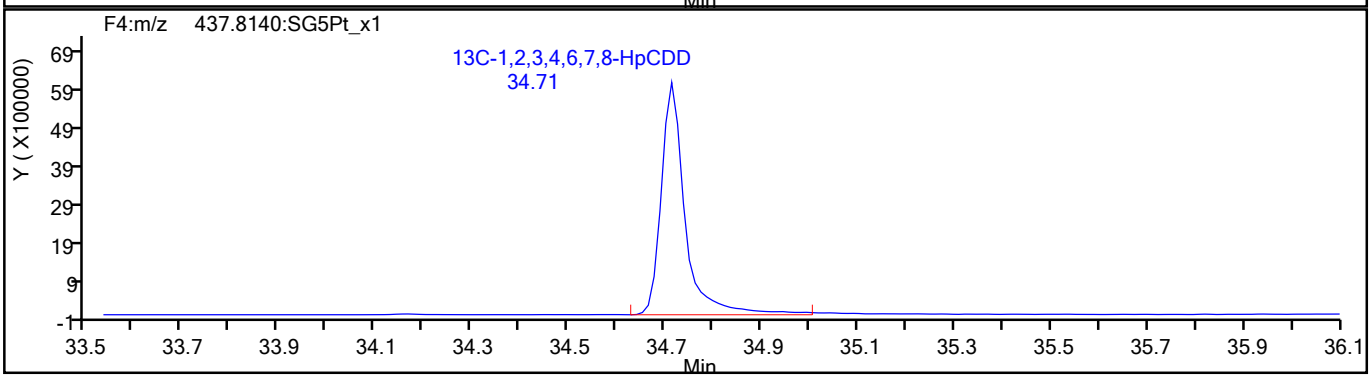

792423

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

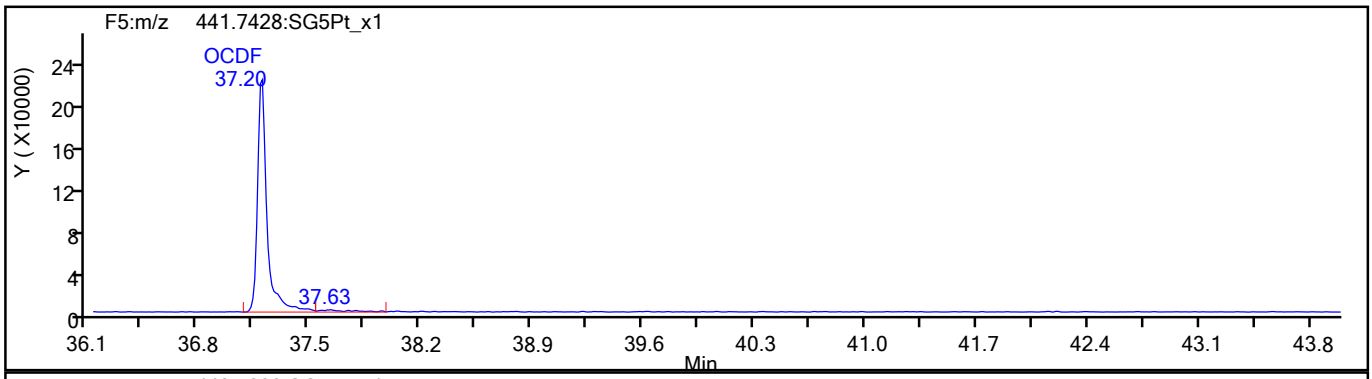

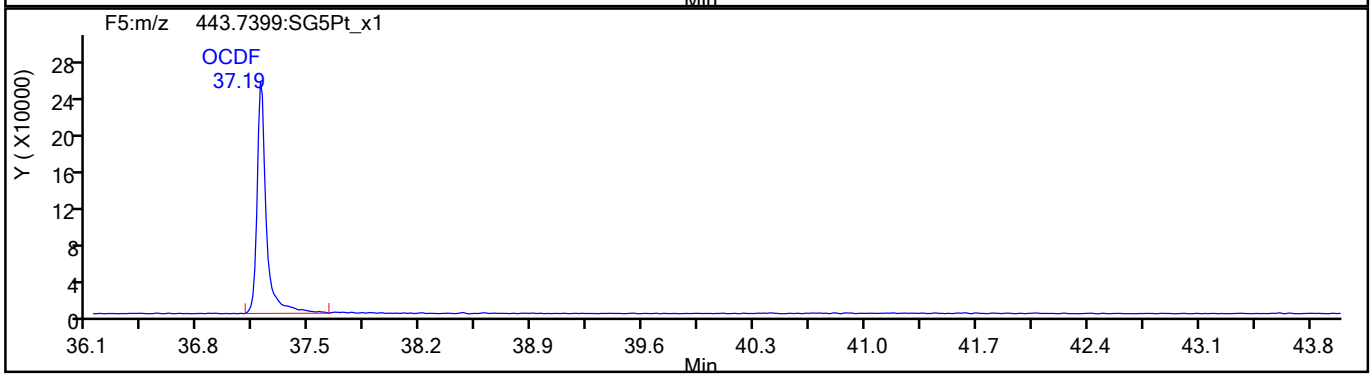

OCDF Standards

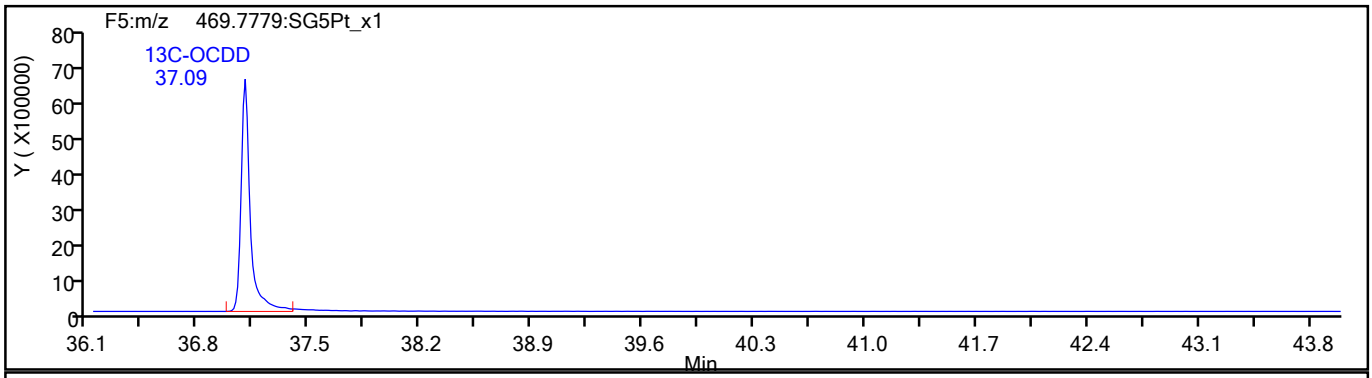

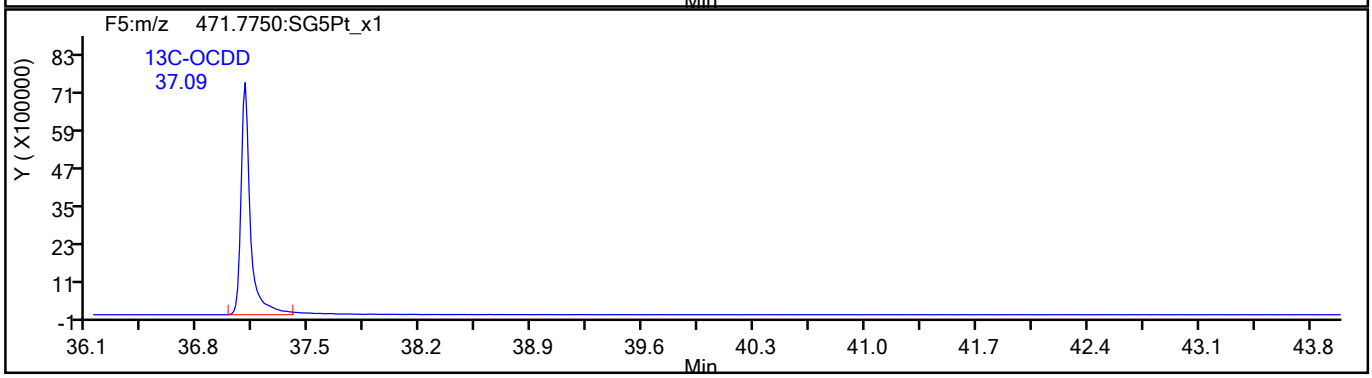

792424

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

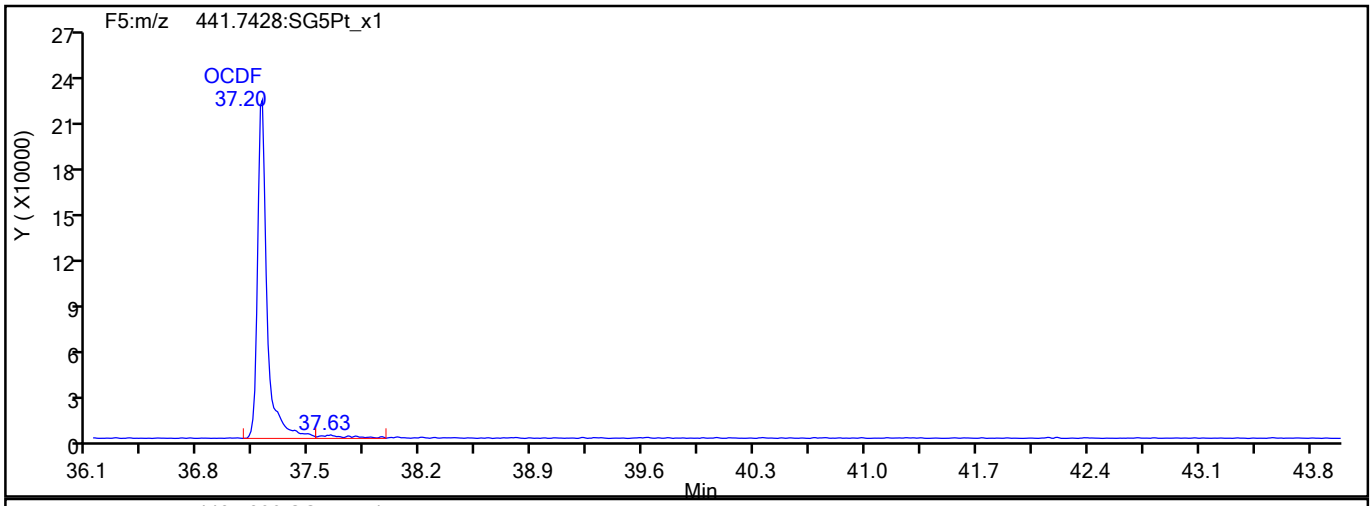

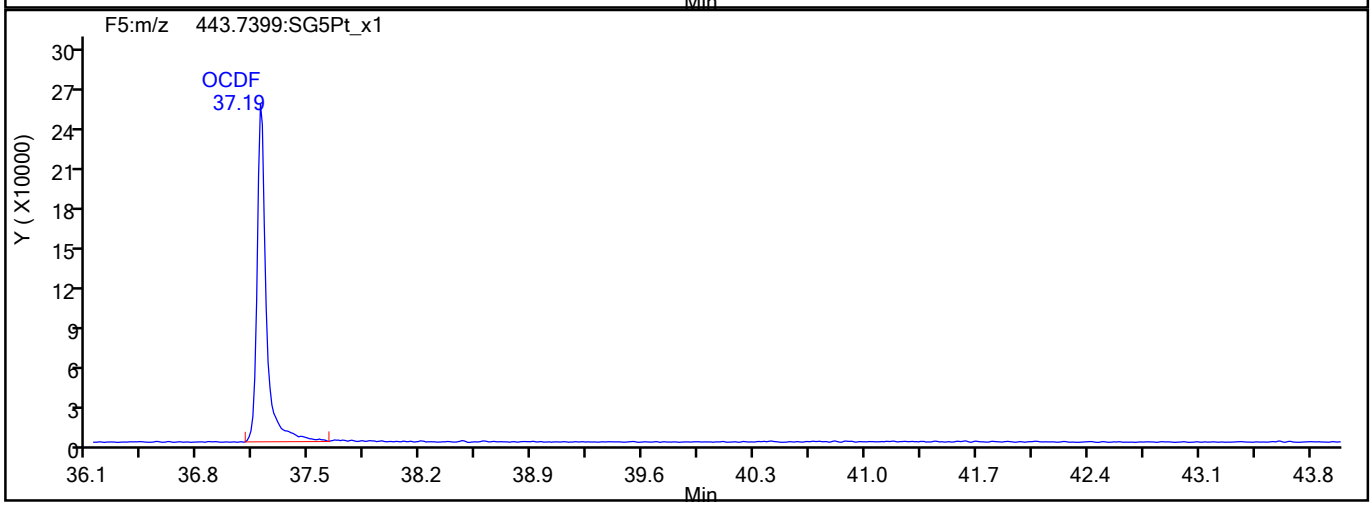

OCDF Interference Mass

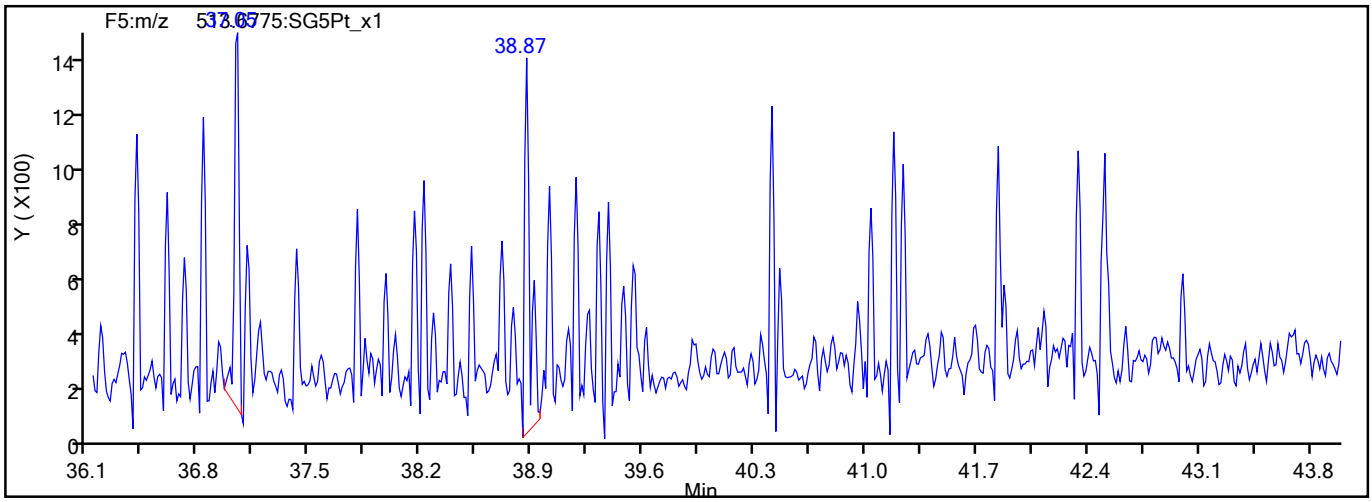

792425

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

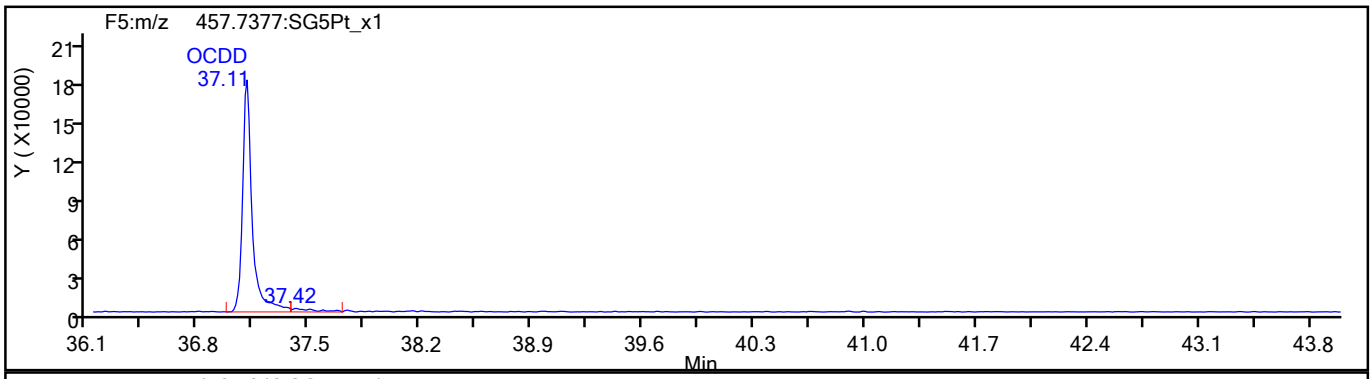

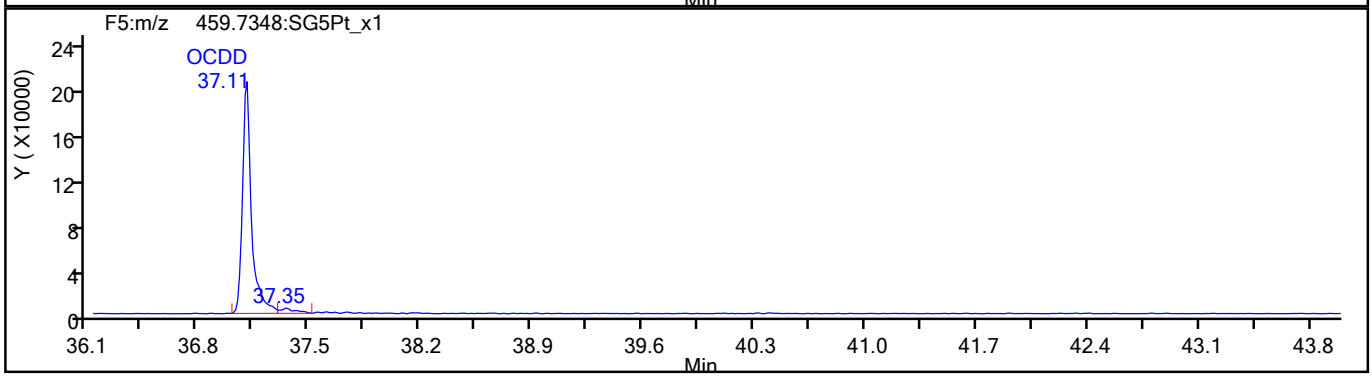

OCDD Standards

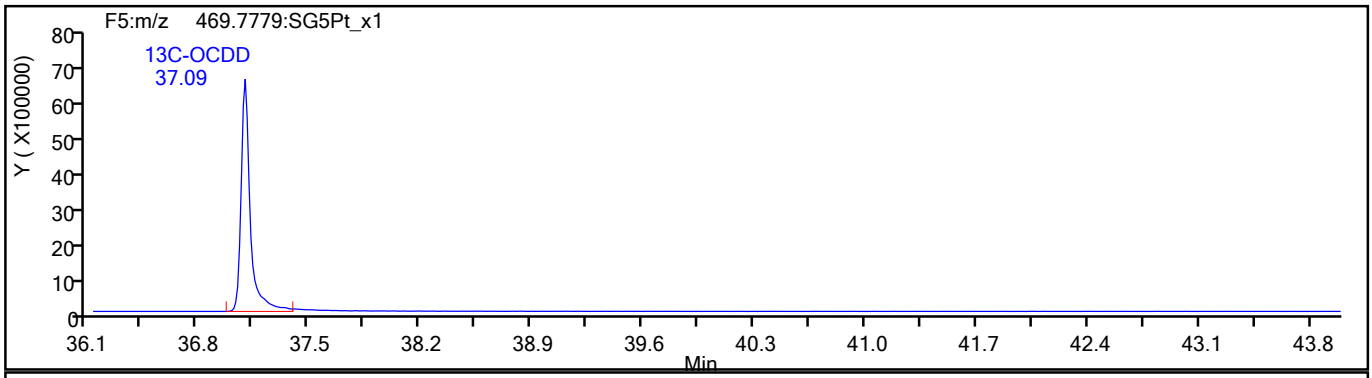

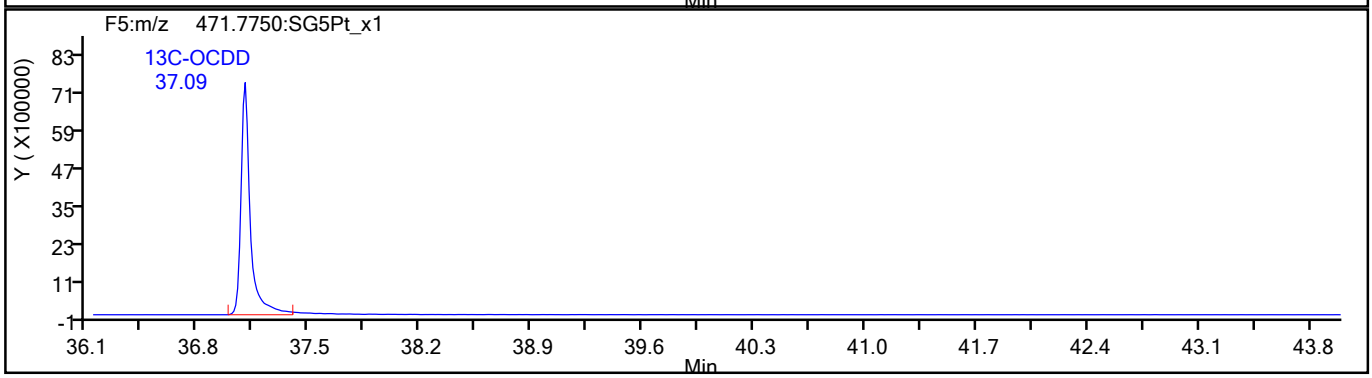

792426

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

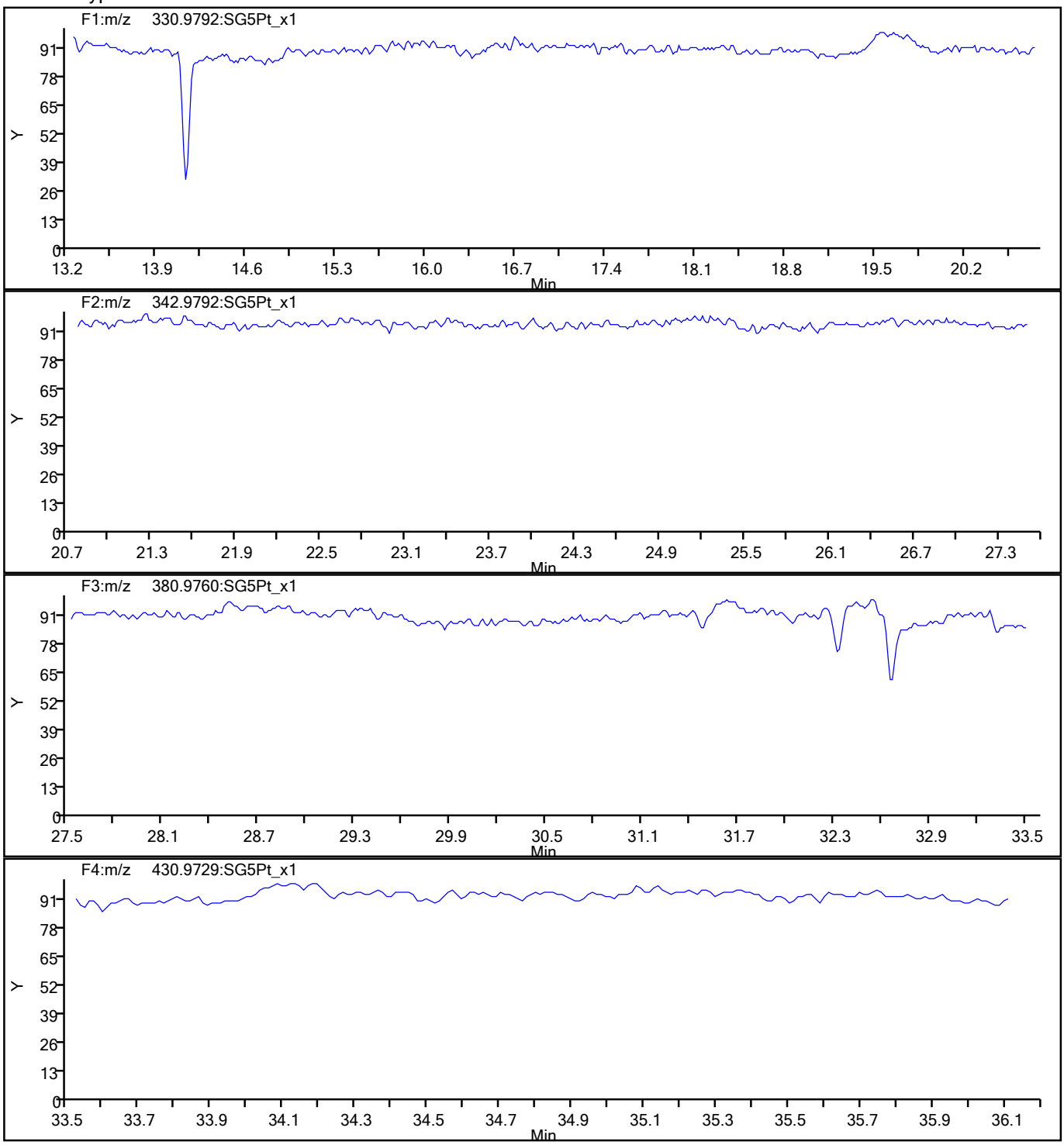

792427

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

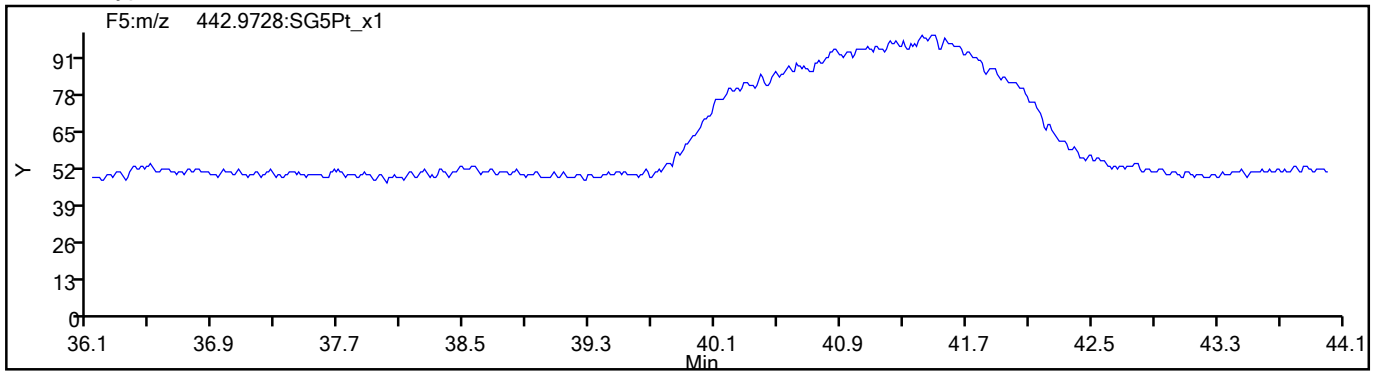

792428

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62853211	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	98246522	0.78	1.6249	96.2	96.2	0.1370	0.1370	96.20	
2,3,7,8-TCDF	17.628	1709191	0.74	1.0239	1.699	1.699	0.0115	0.0115	84.95	
S Total TCDF					1.699	1.699	0.0115	0.0115		
D 13C-2,3,7,8-TCDD	18.338	53975587	0.81	0.8993	95.5	95.5	0.1627	0.1627	95.49	
$ 37Cl4-2,3,7,8-TCDD	18.354	1231219		1.1071	1.769	1.769	0.009070	0.009070	88.47	
2,3,7,8-TCDD	18.354	1184284	0.77	1.2541	1.750	1.750	0.0187	0.0187	87.48	
S Total TCDD					1.750	1.750	0.0187	0.0187		
D 13C-1,2,3,7,8-PeCDF	22.749	72525655	1.59	1.2101	95.4	95.4	0.2163	0.2163	95.36	
1,2,3,7,8-PeCDF	22.776	6620354	1.62	1.0611	8.602	8.602	0.0369	0.0369	86.02	
D 13C-2,3,4,7,8-PeCDF	24.126	74944110	1.59	1.2395	96.2	96.2	0.2111	0.2111	96.20	a
2,3,4,7,8-PeCDF	24.153	6452410	1.61	1.0184	8.454	8.454	0.0398	0.0398	84.54	
S Total PeCDF					17.1	17.1	0.0383	0.0383		
D 13C-1,2,3,7,8-PeCDD	24.862	46721712	1.62	0.7612	97.7	97.7	0.1174	0.1174	97.65	
1,2,3,7,8-PeCDD	24.889	4219570	1.58	1.0484	8.614	8.614	0.0282	0.0282	86.14	
S Total PeCDD					8.614	8.614	0.0282	0.0282		
D 13C-1,2,3,4,7,8-HxCDF	30.835	65726932	0.51	1.0837	101.6	101.6	0.5284	0.5284	102	a
1,2,3,4,7,8-HxCDF	30.848	6041767	1.22	1.0851	8.471	8.471	0.0611	0.0611	84.71	
D 13C-1,2,3,6,7,8-HxCDF	30.995	68089005	0.53	1.1279	101.1	101.1	0.5077	0.5077	101	
1,2,3,6,7,8-HxCDF	31.021	6561860	1.24	1.1260	8.559	8.559	0.0596	0.0596	85.59	
D 13C-2,3,4,6,7,8-HxCDF	31.753	64406928	0.52	1.0637	101.4	101.4	0.5383	0.5383	101	
2,3,4,6,7,8-HxCDF	31.767	6352404	1.21	1.1675	8.448	8.448	0.0492	0.0492	84.48	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58828058	0.51	0.9676	101.8	101.8	0.5918	0.5918	102	
1,2,3,7,8,9-HxCDF	32.526	5963032	1.22	1.1664	8.691	8.691	0.0536	0.0536	86.91	
S Total HxCDF					34.2	34.2	0.0559	0.0559		
* 13C-1,2,3,7,8,9-HxCDD	32.339	59719891	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44877133	1.26	0.7334	102.5	102.5	0.4904	0.4904	102	a
1,2,3,4,7,8-HxCDD	31.940	3996910	1.25	1.0640	8.370	8.370	0.0541	0.0541	83.70	
D 13C-1,2,3,6,7,8-HxCDD	32.033	52974056	1.27	0.8802	100.8	100.8	0.4087	0.4087	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.046	4517909	1.28	1.0001	8.528	8.528	0.0541	0.0541	85.28	
1,2,3,7,8,9-HxCDD	32.353	4612548	1.27	1.1325	8.324	8.324	0.0492	0.0492	83.24	
S Total HxCDD					25.2	25.2	0.0525	0.0525		
D 13C-1,2,3,4,6,7,8-HpCDF	33.911	46691158	0.44	0.7730	101.1	101.1	1.219	1.219	101	
1,2,3,4,6,7,8-HpCDF	33.924	5795616	1.06	1.4413	8.612	8.612	0.0908	0.0908	86.12	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	42362179	0.44	0.7008	101.2	101.2	1.344	1.344	101	a
1,2,3,4,7,8,9-HpCDF	35.017	4773949	1.04	1.3174	8.554	8.554	0.1198	0.1198	85.54	
S Total HpCDF					17.2	17.2	0.1053	0.1053		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	38689128	1.01	0.6472	100.1	100.1	0.6644	0.6644	100	
1,2,3,4,6,7,8-HpCDD	34.725	3690749	1.06	1.0943	8.717	8.717	0.0588	0.0588	87.17	
S Total HpCDD					8.717	8.717	0.0588	0.0588		
D 13C-OCDD	37.093	52034518	0.88	0.4472	194.9	194.9	0.3057	0.3057	97.43	
OCDF	37.189	6198469	0.89	1.4382	16.6	16.6	0.0331	0.0331	82.83	
OCDD	37.105	5013385	0.90	1.1070	17.4	17.4	0.0477	0.0477	87.03	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28386456	7046087	6003	15007	1174		
333.9339	18.142	18.142	0		34466755	8558284	3128	7820	2736	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42972486	10763336	8679	21697	1240		
317.9389	17.613	17.616	0	0.971	55274036	13878642	5218	13045	2660	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	725190	178427	386	965	462		
305.8987	17.628	17.631	0	1.001	984001	248871	771	1927	323	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24153490	5697854	6003	15007	949		
333.9339	18.338	18.338	0	1.011	29822097	7031837	3128	7820	2248	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	1231219	295748	627	1567	472		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	516509	120344	727	1817	166		
321.8936	18.354	18.357	0	1.001	667775	162973	470	1175	347	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44514928	7853181	9659	24147	813		
353.8970	22.749	22.754	0	1.254	28010727	4960984	6675	16687	743	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	4089215	716349	1056	2640	678		
341.8567	22.776	22.779	0	1.001	2531139	446464	949	2372	470	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											a
351.9000	24.126	24.129	0	1.330	46033296	7621284	9659	24147	789		a
353.8970	24.126	24.129	0	1.330	28910814	4739818	6675	16687	710	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	3984657	653372	1056	2640	619		
341.8567	24.153	24.156	0	1.001	2467753	411895	949	2372	434	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28869986	4442492	3510	8775	1266		
369.8919	24.862	24.865	0	1.370	17851726	2719251	2068	5170	1315	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	2584600	398905	491	1227	812		
357.8516	24.889	24.892	0	1.001	1634970	246537	355	887	694	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											a
383.8639	30.835	30.838	0	0.953	22324815	4908430	11721	29302	419		a
385.8610	30.835	30.838	0	0.953	43402117	9487505	22146	55365	428	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.848	30.857	0	1.000	3322045	734549	2125	5312	346		
375.8178	30.848	30.857	0	1.000	2719722	584076	1696	4240	344	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	23443638	4852452	11721	29302	414		
385.8610	30.995	31.003	0	0.958	44645367	9390378	22146	55365	424	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.001	3628802	774738	2125	5312	365		
375.8178	31.021	31.022	0	1.001	2933058	621989	1696	4240	367	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.753	31.756	0	0.982	22116278	5724833	11721	29302	488		
385.8610	31.753	31.756	0	0.982	42290650	10891641	22146	55365	492	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	3476984	900887	2125	5312	424		
375.8178	31.767	31.772	0	1.000	2875420	748664	1696	4240	441	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	19952155	5224965	11721	29302	446		
385.8610	32.512	32.523	-1	1.005	38875903	10047992	22146	55365	454	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	3272570	870864	2125	5312	410		
375.8178	32.526	32.534	0	1.000	2690462	702575	1696	4240	414	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33208186	8207924	11753	29382	698		
403.8529	32.339	32.342	0		26511705	6578059	9521	23802	691	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	31.927	31.929	0	0.987	24991401	7247079	11753	29382	617		a
403.8529	31.927	31.929	0	0.987	19885732	5749736	9521	23802	604	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	2220855	634454	1798	4495	353		
391.8127	31.940	31.945	0	1.000	1776055	520388	1195	2987	435	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29637474	7731021	11753	29382	658		
403.8529	32.033	32.033	0	0.991	23336582	6105317	9521	23802	641	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.046	32.047	0	1.000	2539756	681391	1798	4495	379		
391.8127	32.046	32.047	0	1.000	1978153	525440	1195	2987	440	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	2578931	681238	1798	4495	379		
391.8127	32.353	32.355	0	1.013	2033617	530890	1195	2987	444	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.911	33.914	0	1.049	14324046	4548819	17096	42740	266		
419.8220	33.911	33.914	0	1.049	32367112	10373412	38619	96547	269	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	2984390	989226	3939	9847	251		
409.7789	33.924	33.926	0	1.000	2811226	912647	3871	9677	236	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											a
417.8253	35.005	35.010	0	1.082	12913204	3817815	17096	42740	223		a
419.8220	35.005	35.010	0	1.082	29448975	8551787	38619	96547	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	2430692	699814	3939	9847	178		
409.7789	35.017	35.020	0	1.000	2343257	686031	3871	9677	177	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19472945	5796031	12697	31742	456		
437.8140	34.714	34.716	0	1.073	19216183	5692167	12738	31845	447	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.725	34.726	0	1.000	1901971	557241	1605	4012	347		
425.7737	34.725	34.726	0	1.000	1788778	518346	1352	3380	383	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	24422535	6155132	2912	7280	2114		
471.7750	37.093	37.094	0	1.147	27611983	6845350	5172	12930	1324	0.88(0.76-1.02)	
OCDF											
441.7428	37.189	37.199	-1	1.003	2921445	715883	635	1587	1127		
443.7399	37.189	37.199	-1	1.003	3277024	845078	603	1507	1401	0.89(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	2373314	577341	633	1582	912		
459.7348	37.105	37.106	0	1.000	2640071	638330	739	1847	864	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.13

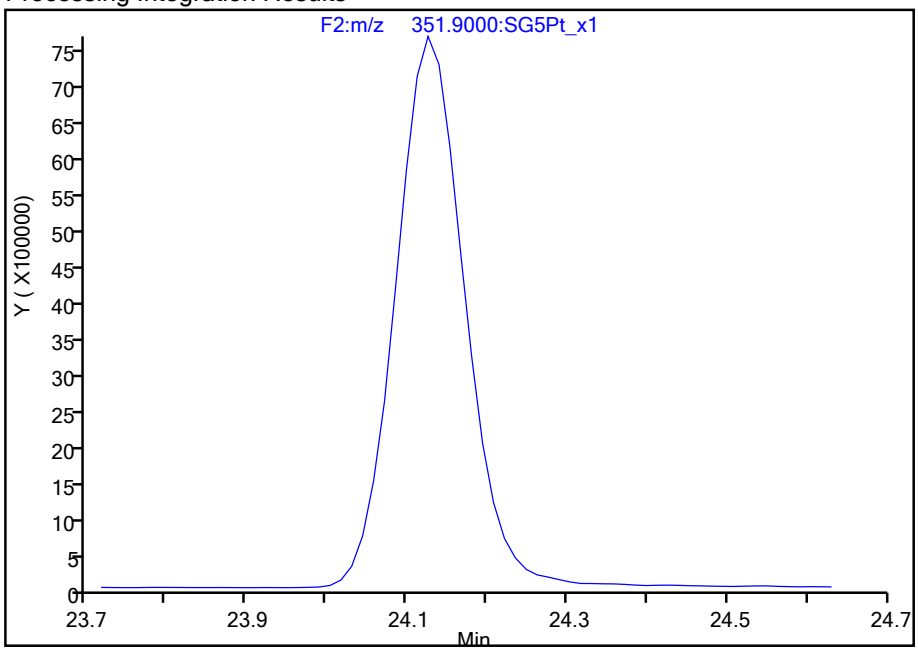

Manual Integration Results

RT: 24.13
Area: 46033296
Amount: 96.198549
Amount Units: pg/ul

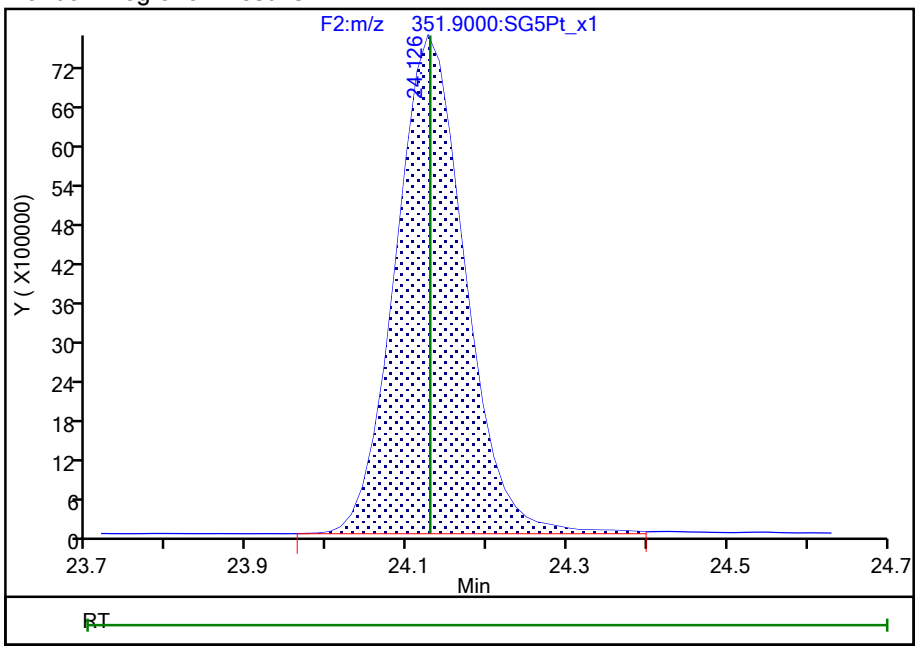

Reviewer: arghestanis, 26-Jul-2021 12:30:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

792434

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDF, CAS: 114423-98-2

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.84

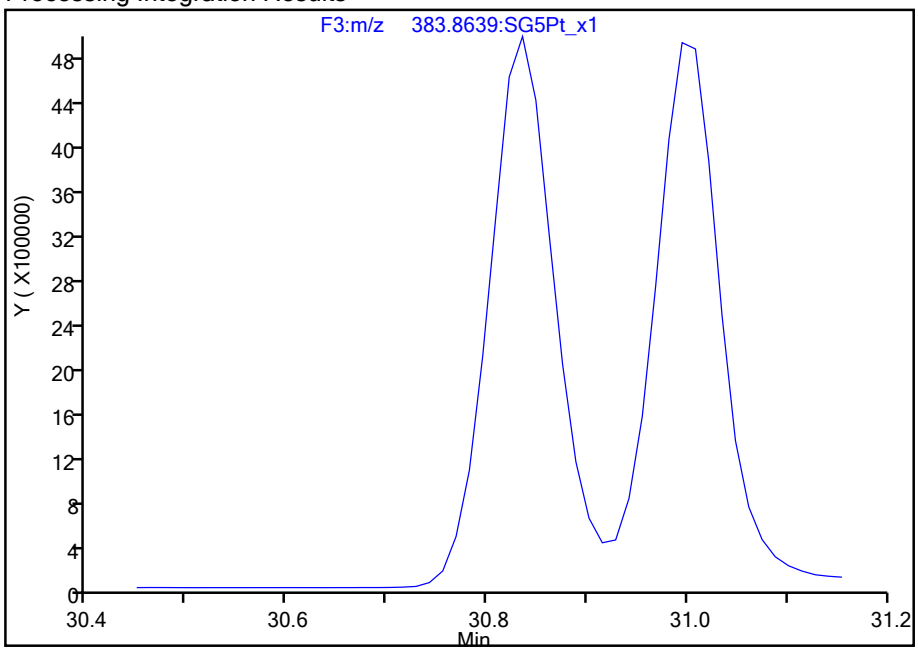

Manual Integration Results

RT: 30.84
Area: 22324815
Amount: 101.5622
Amount Units: pg/ul

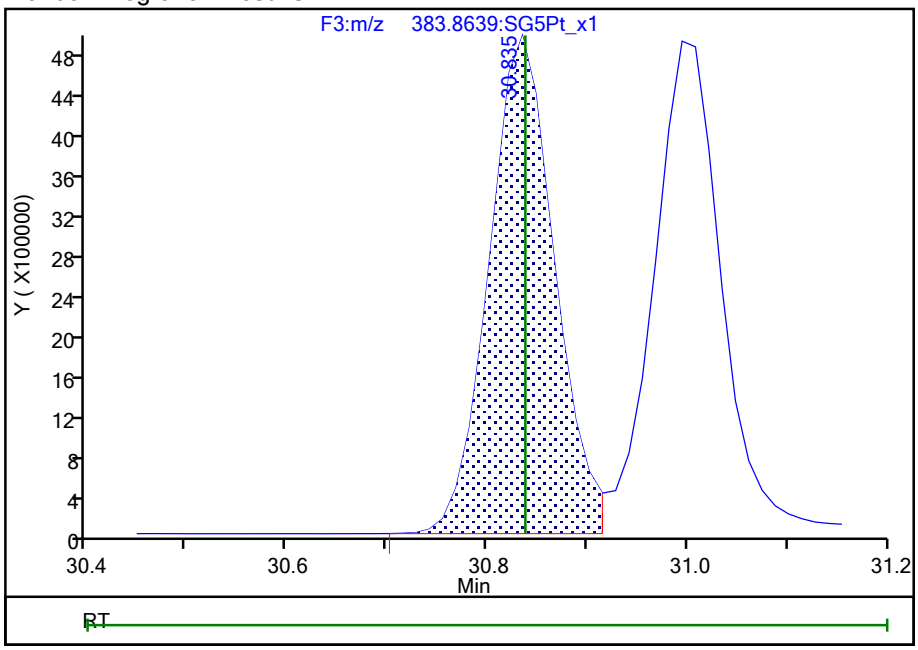

Reviewer: arghestanis, 26-Jul-2021 12:30:40
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

792435

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.93

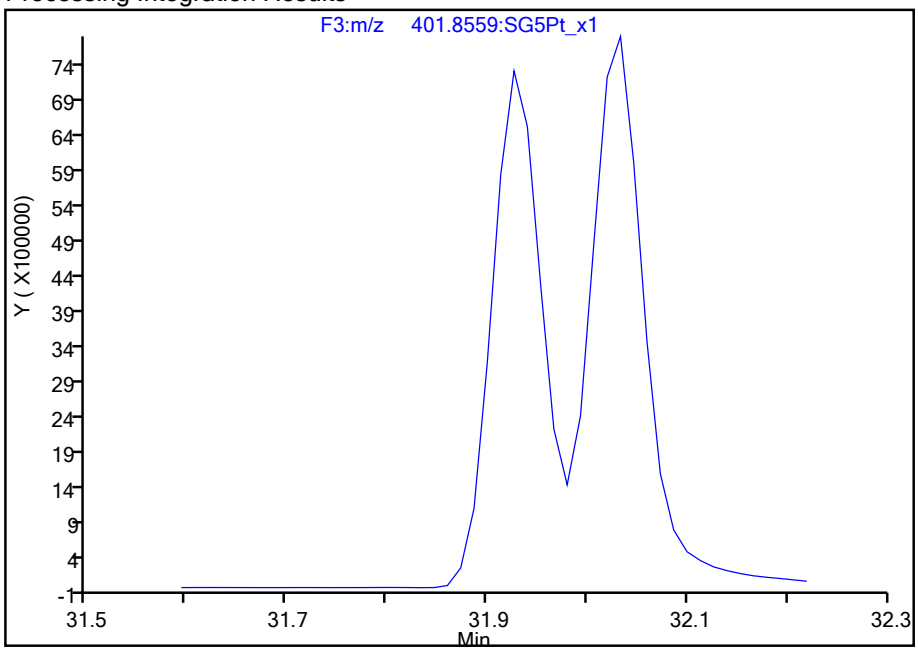

Manual Integration Results

RT: 31.93
Area: 24991401
Amount: 102.4585
Amount Units: pg/ul

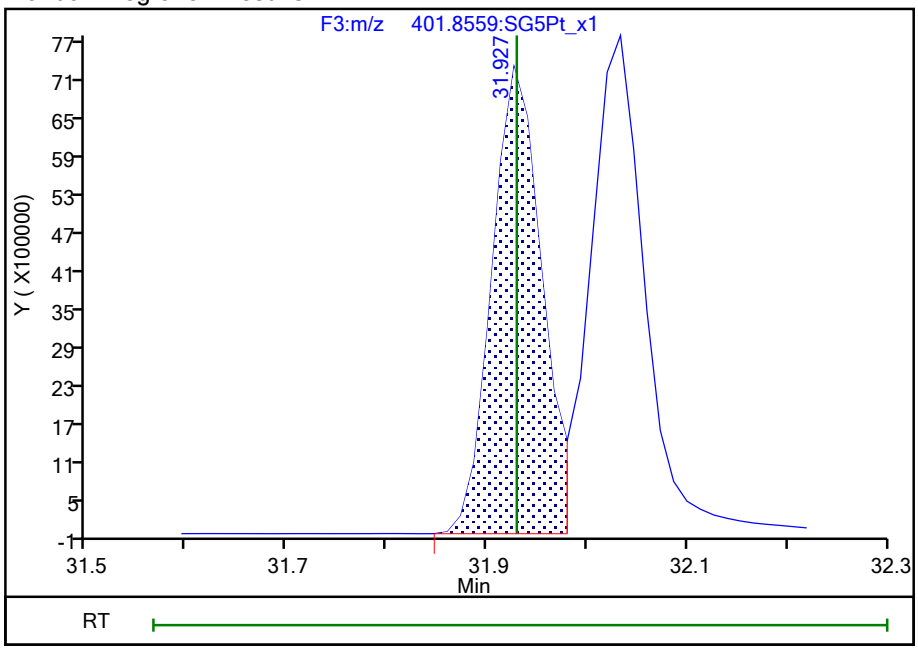

Reviewer: arghestanis, 26-Jul-2021 12:30:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

792436

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.01

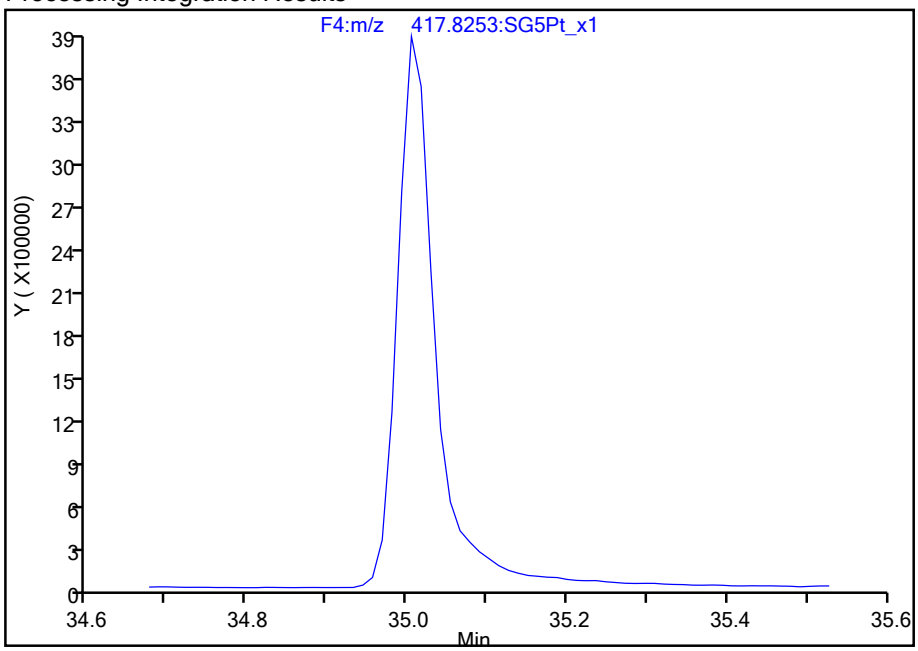

Manual Integration Results

RT: 35.01
Area: 12913204
Amount: 101.2180
Amount Units: pg/ul

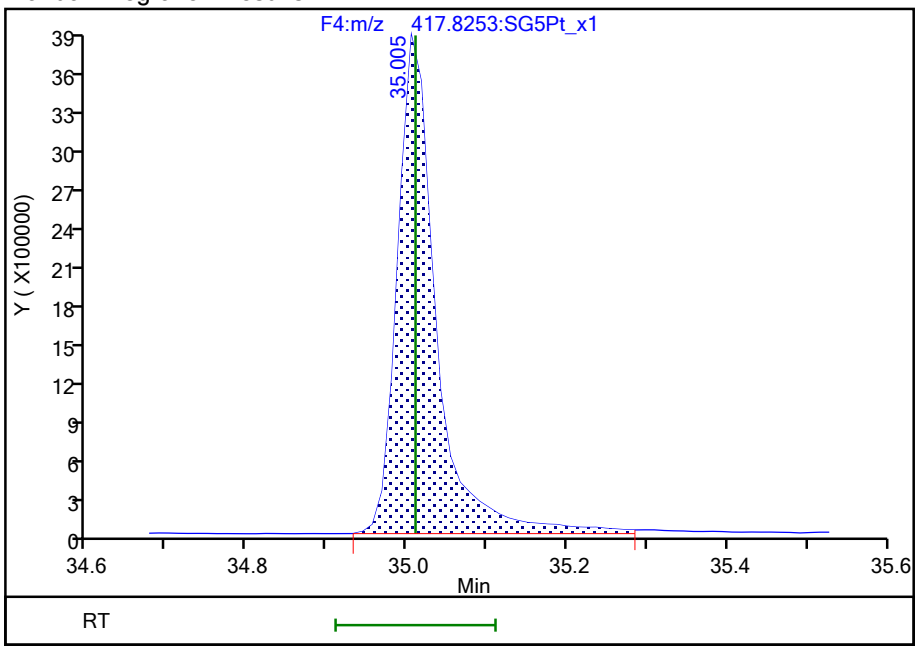

Reviewer: arghestanis, 26-Jul-2021 12:31:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

792437

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

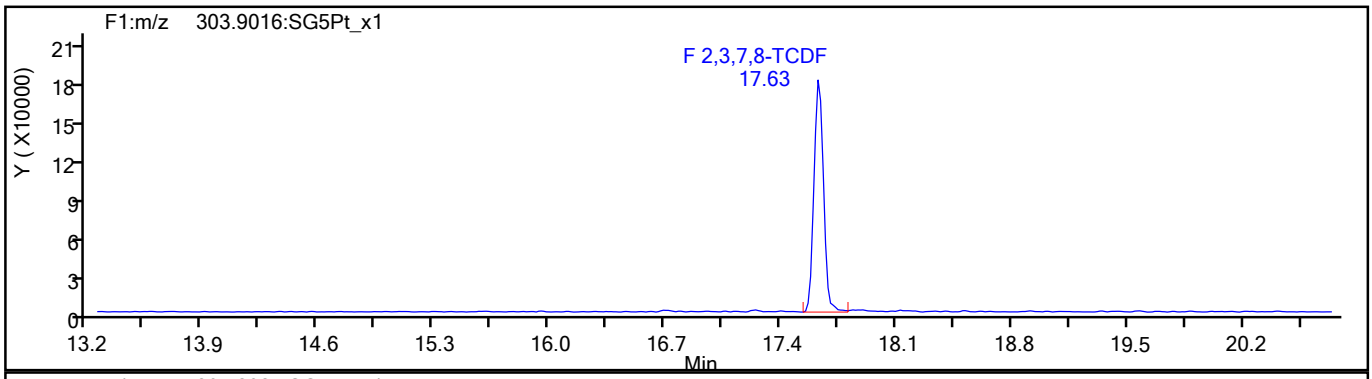

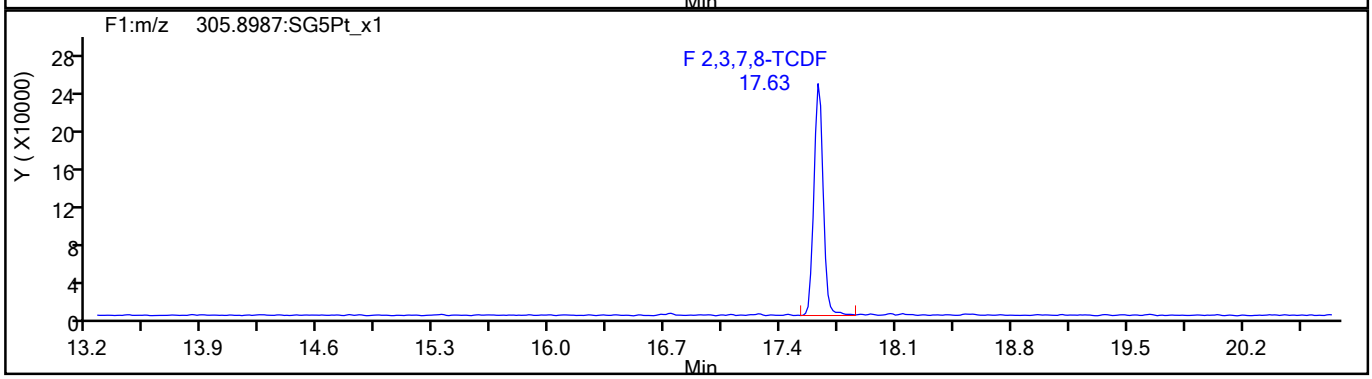

TCDF Standards

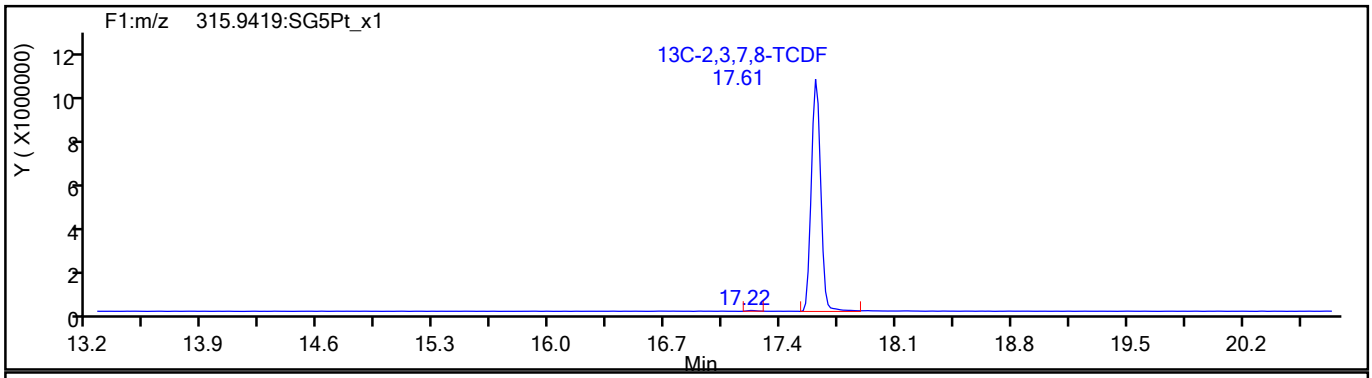

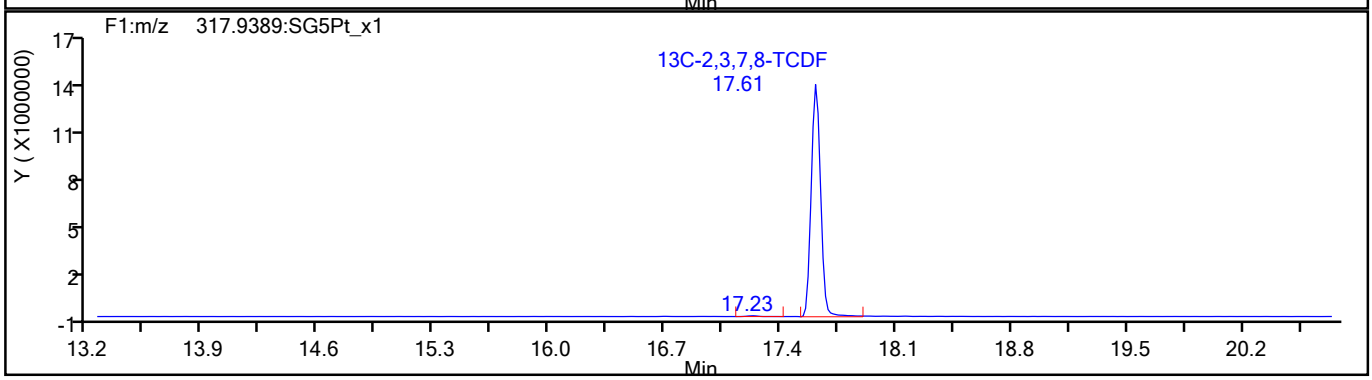

792438

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

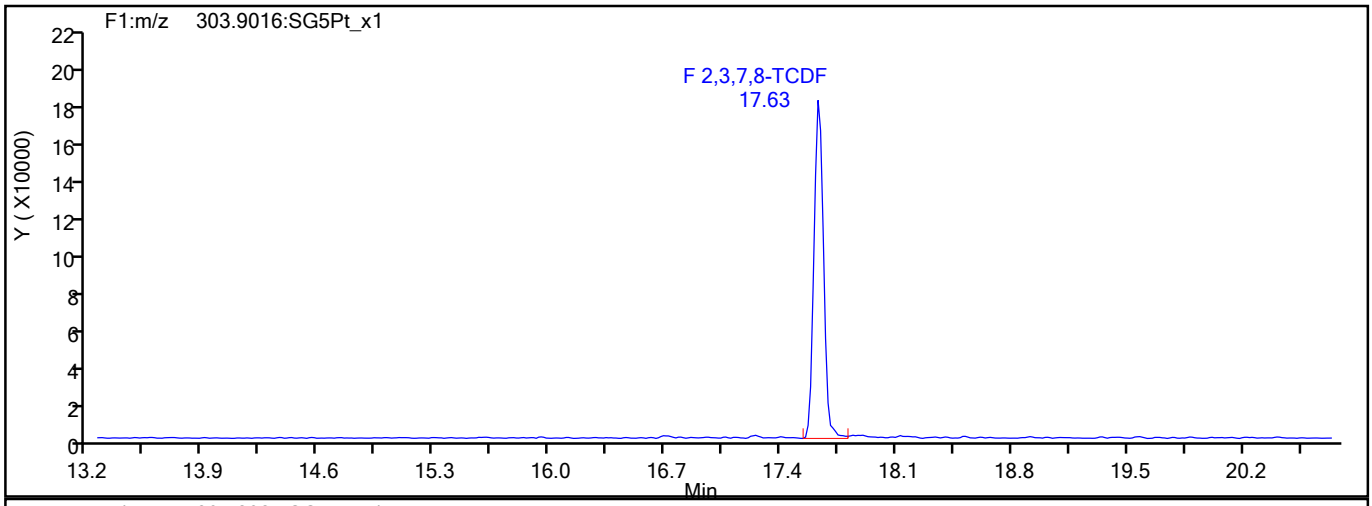

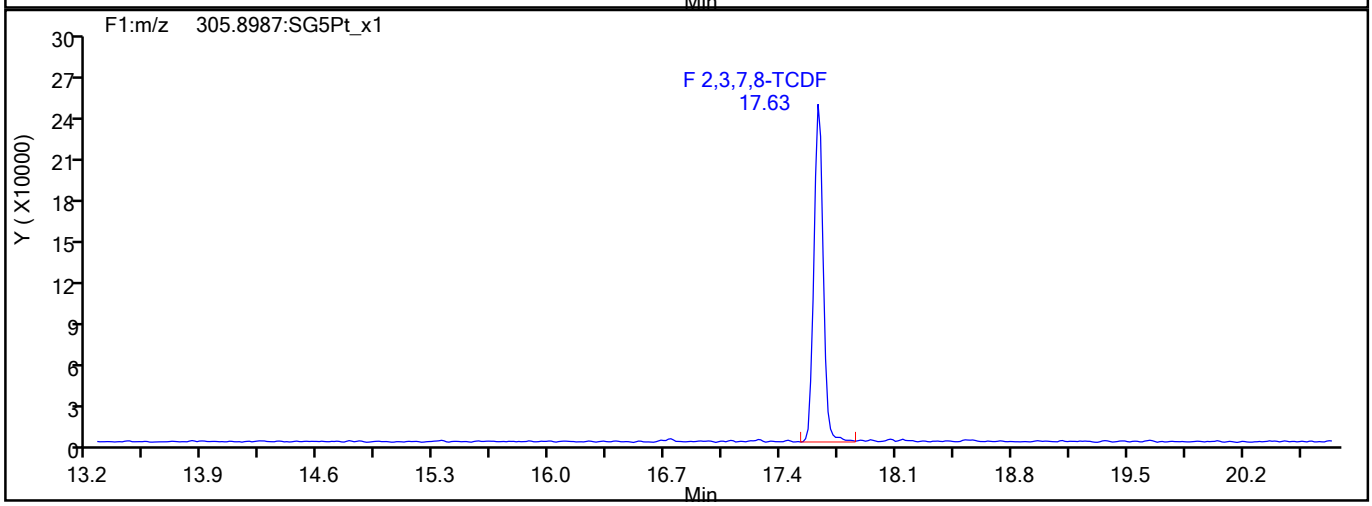

TCDF Interference Mass

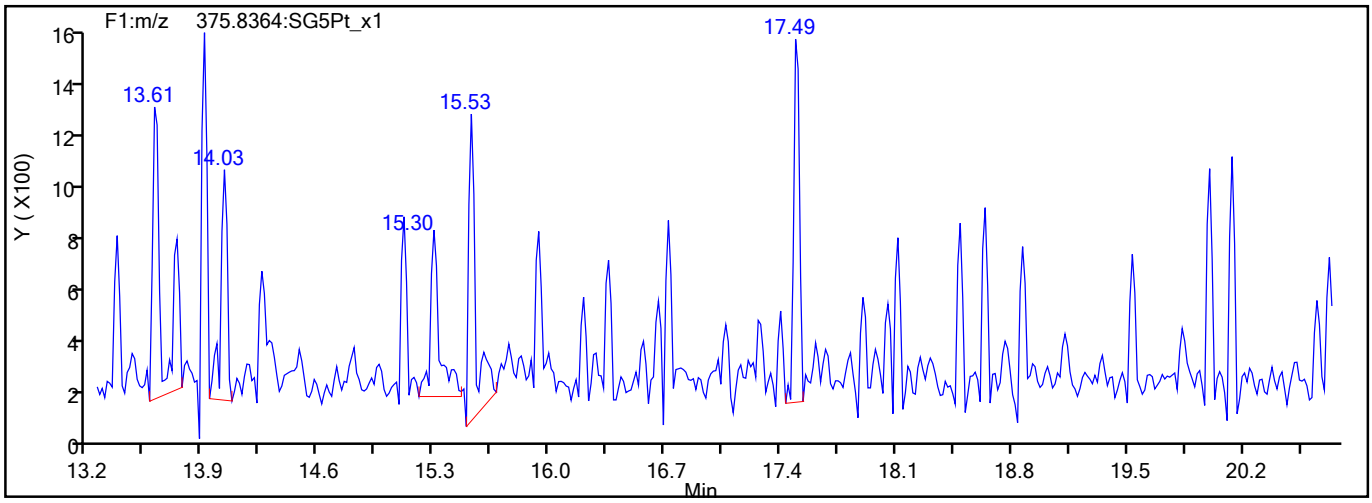

792439

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

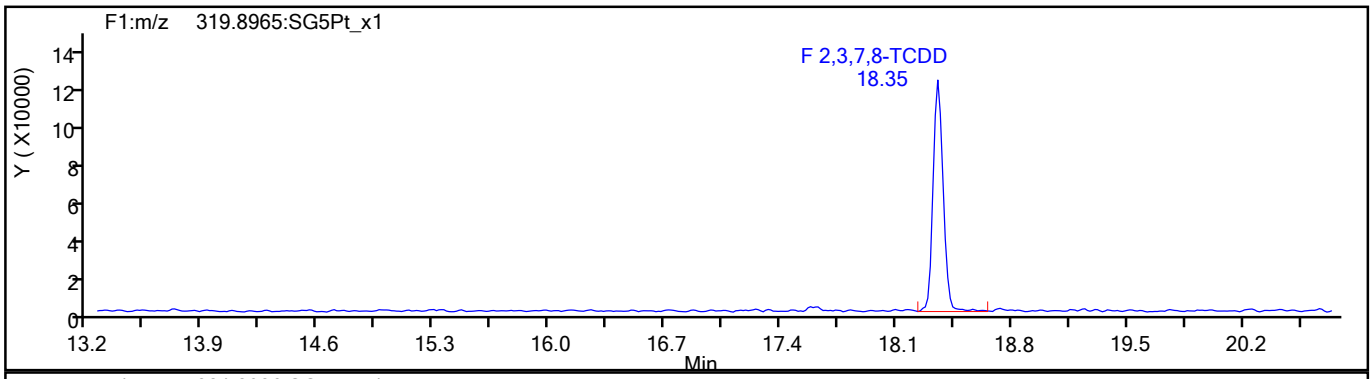

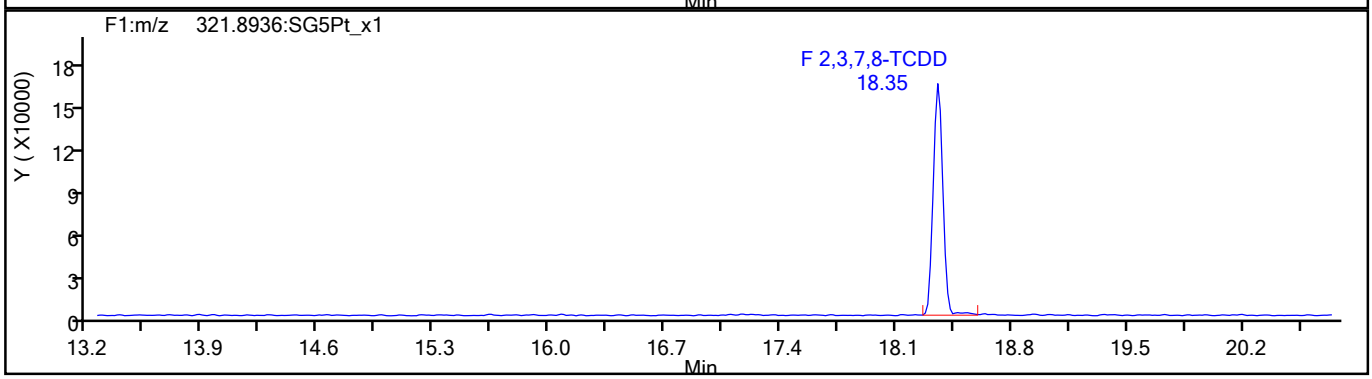

TCDD Standards

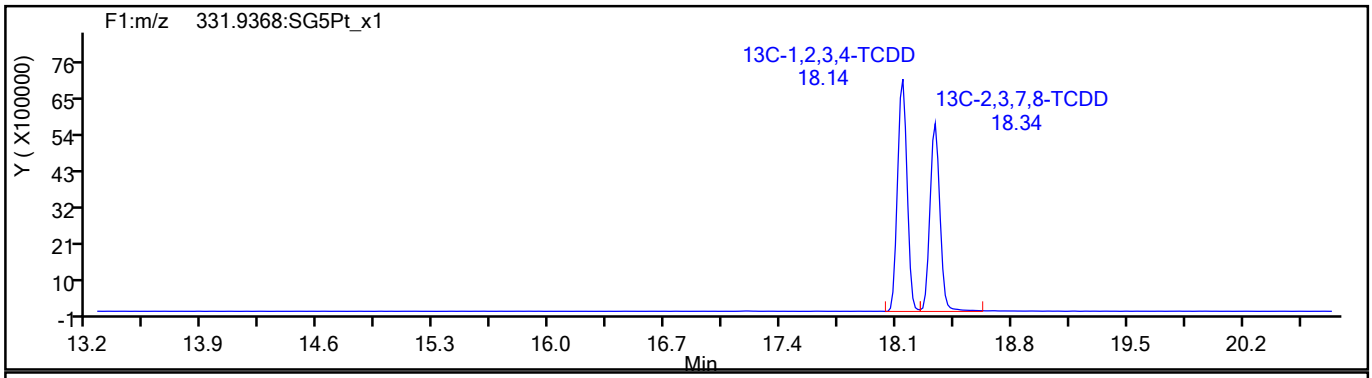

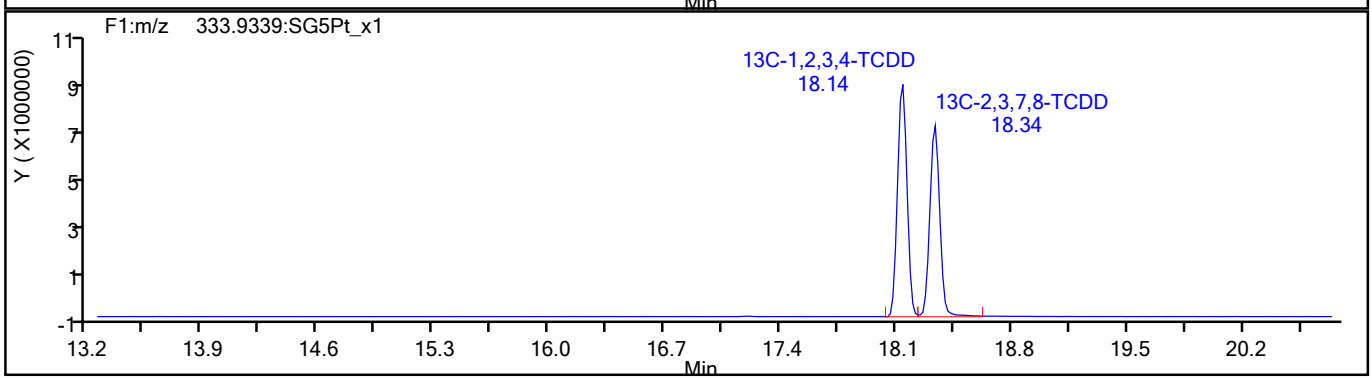

792440

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

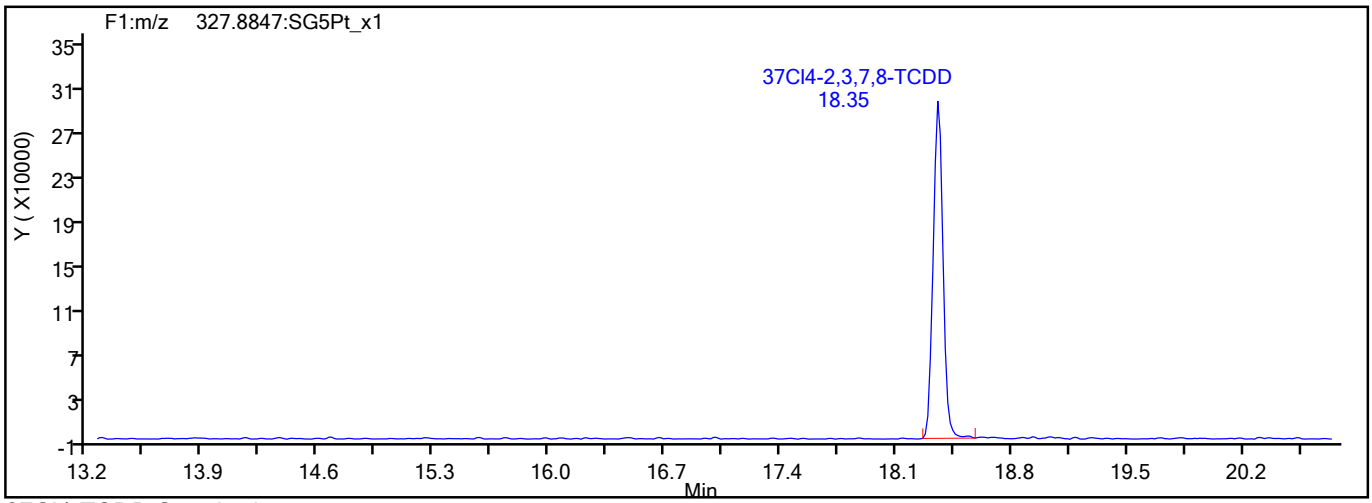

37Cl4-TCDD Standards

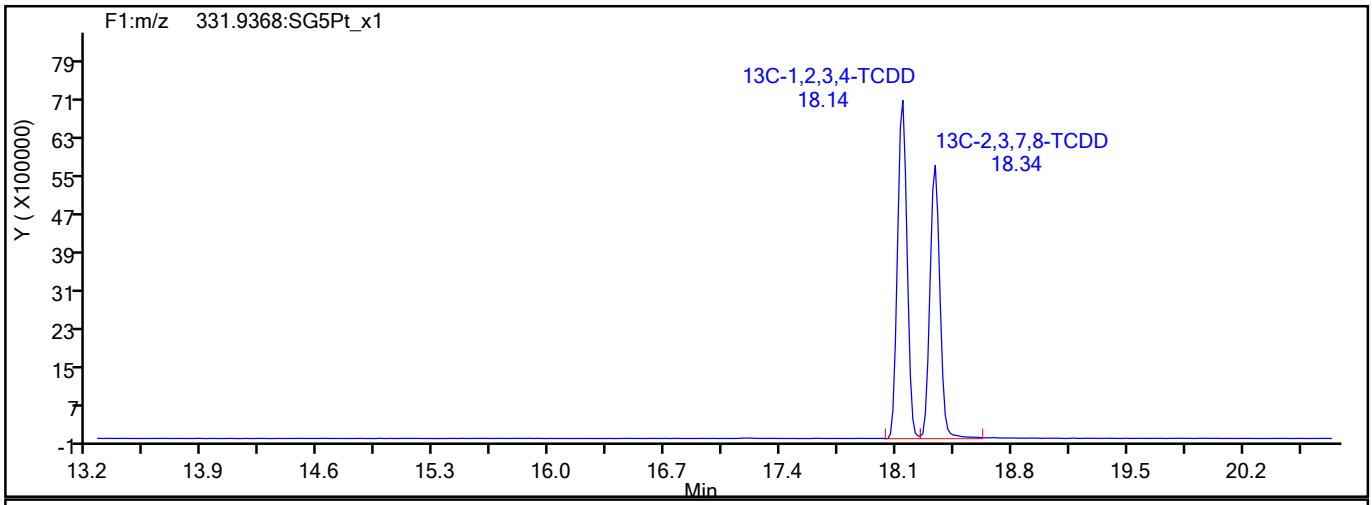

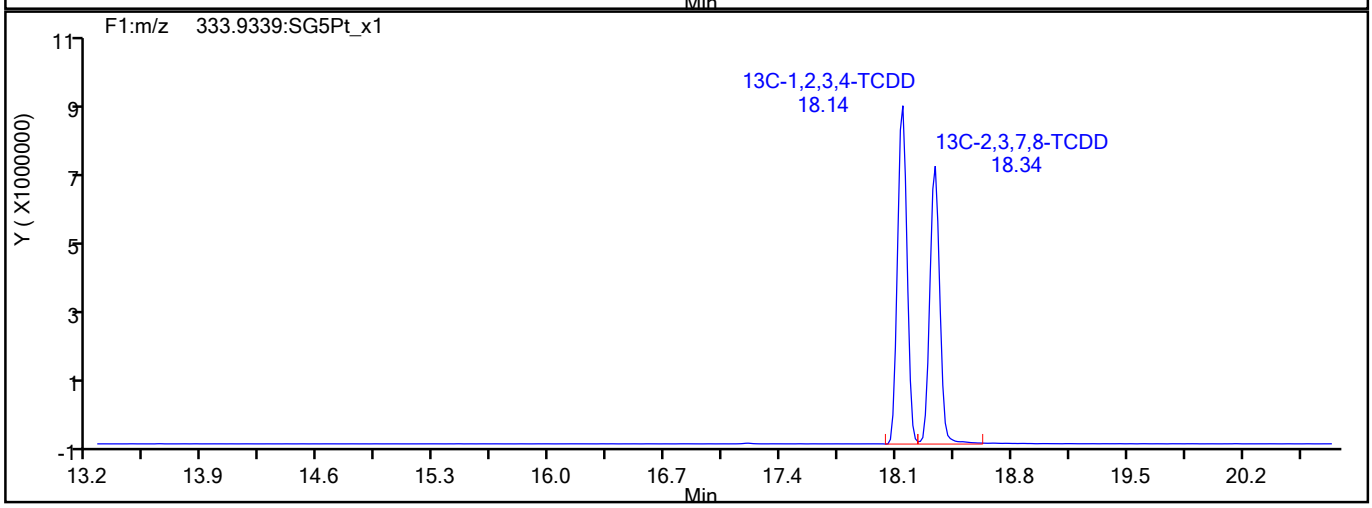

792441

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

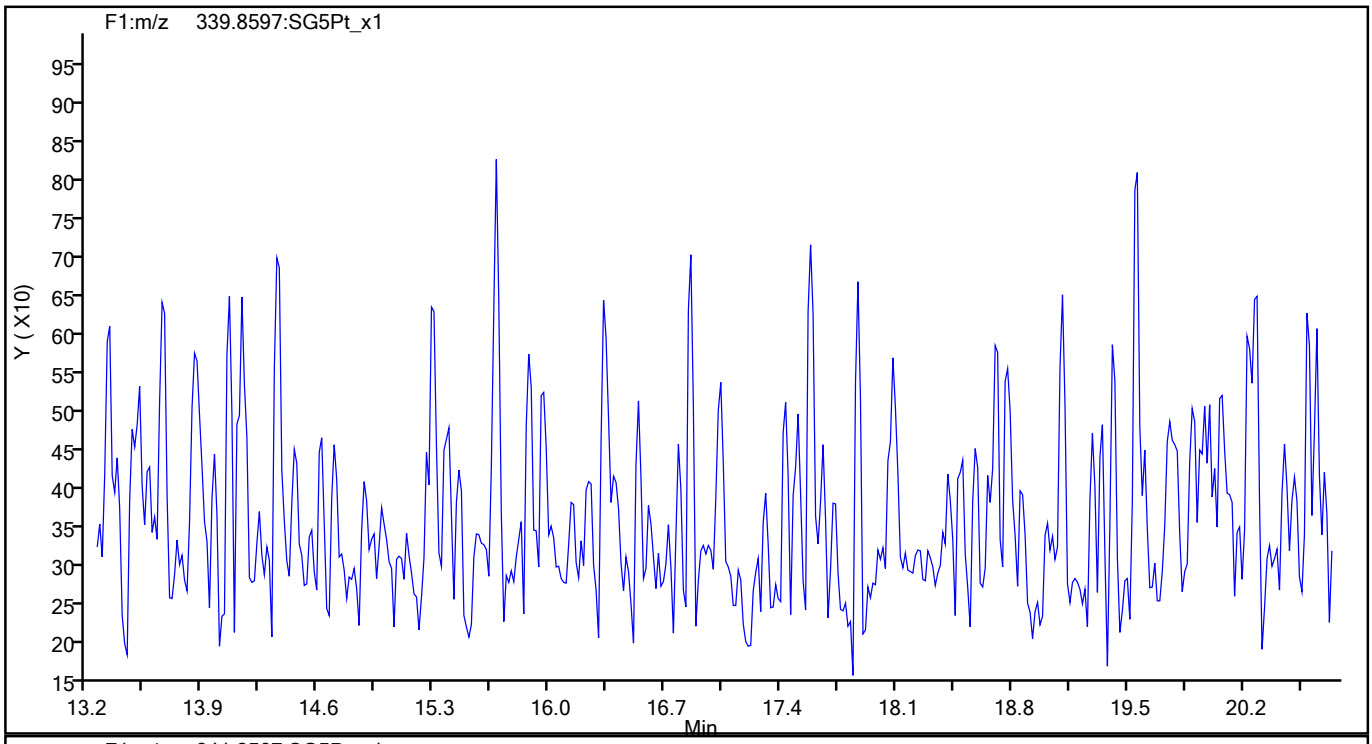

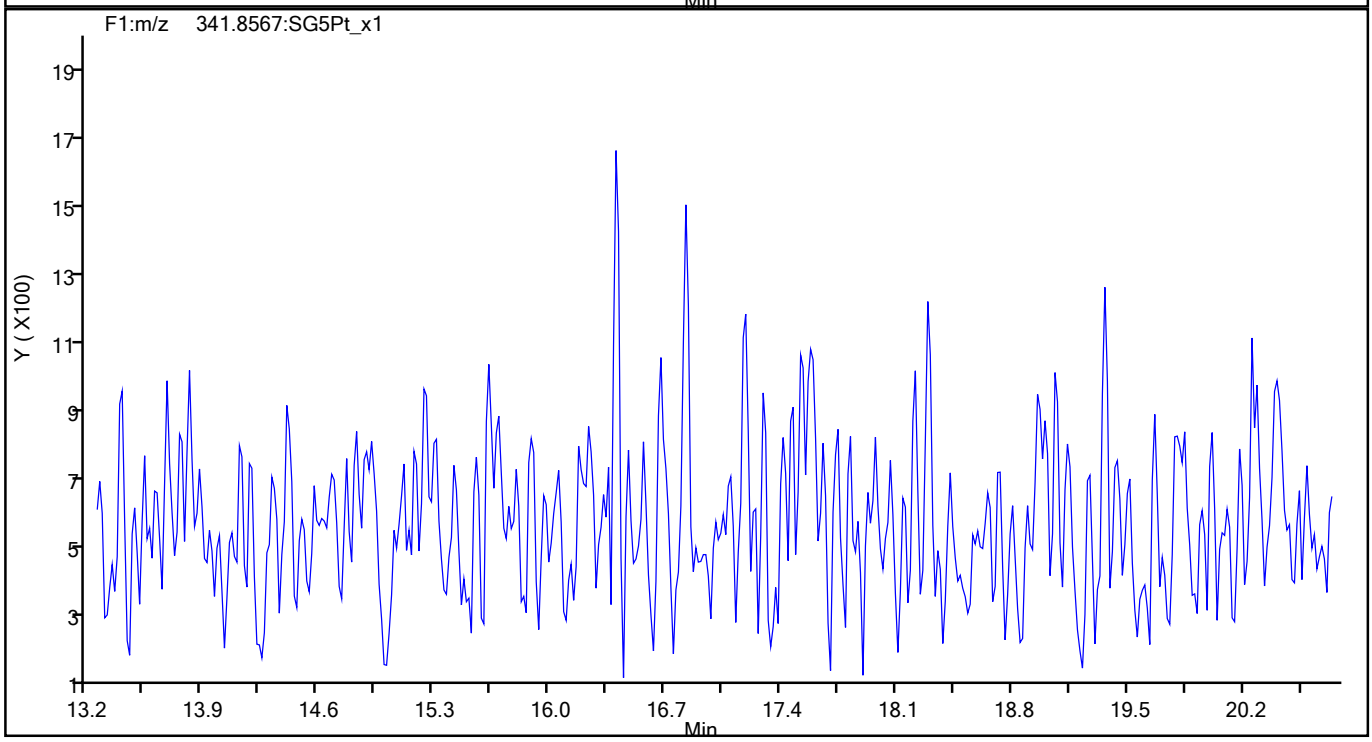

792442

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

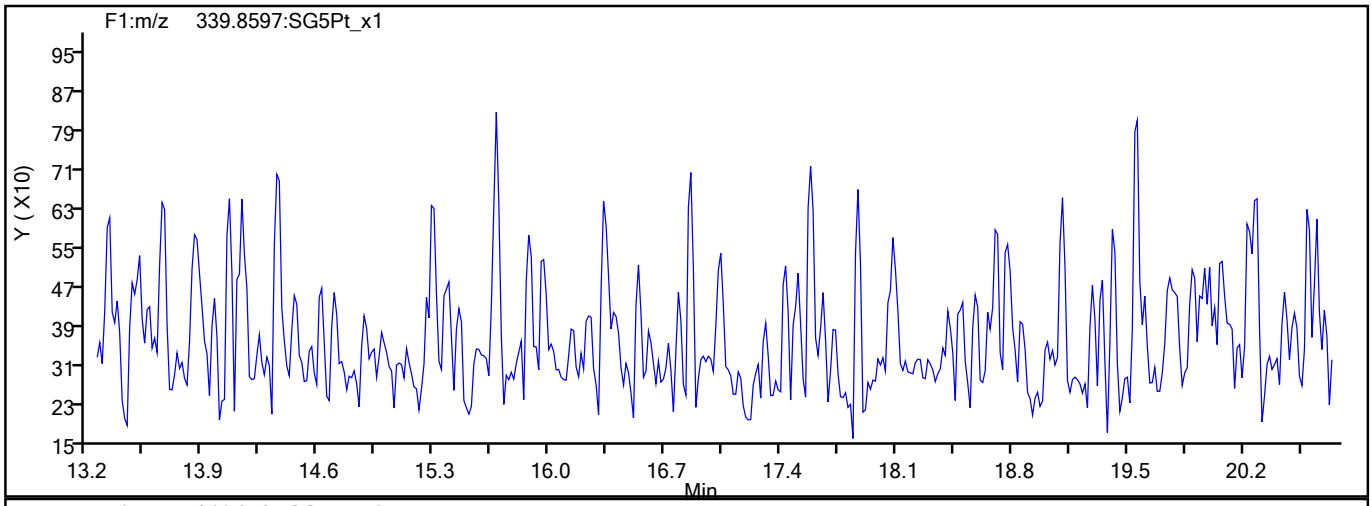

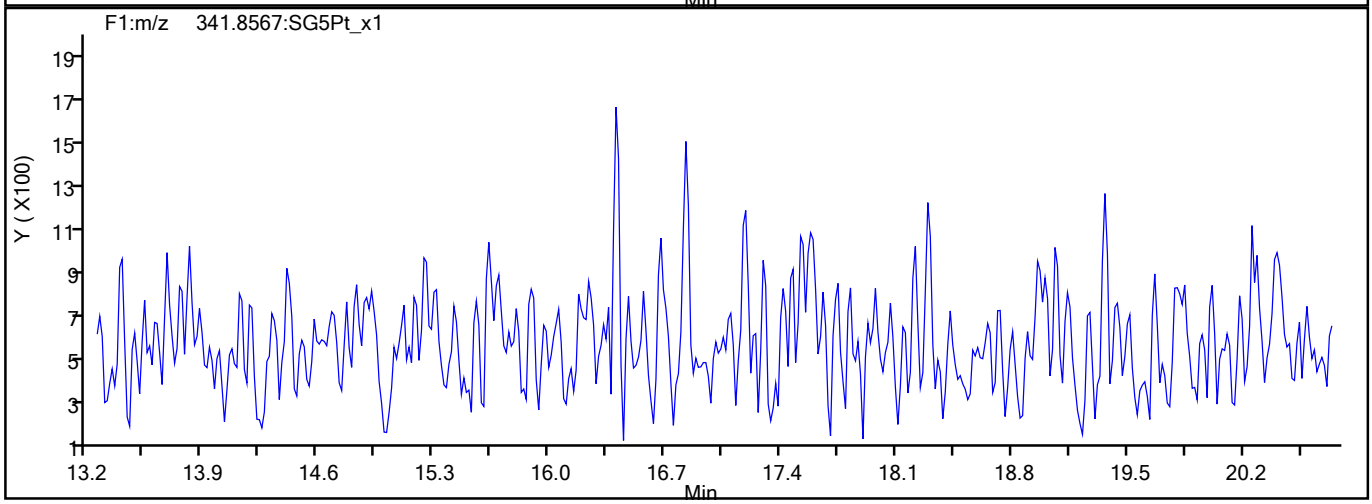

F1 PeCDFs Interference Mass

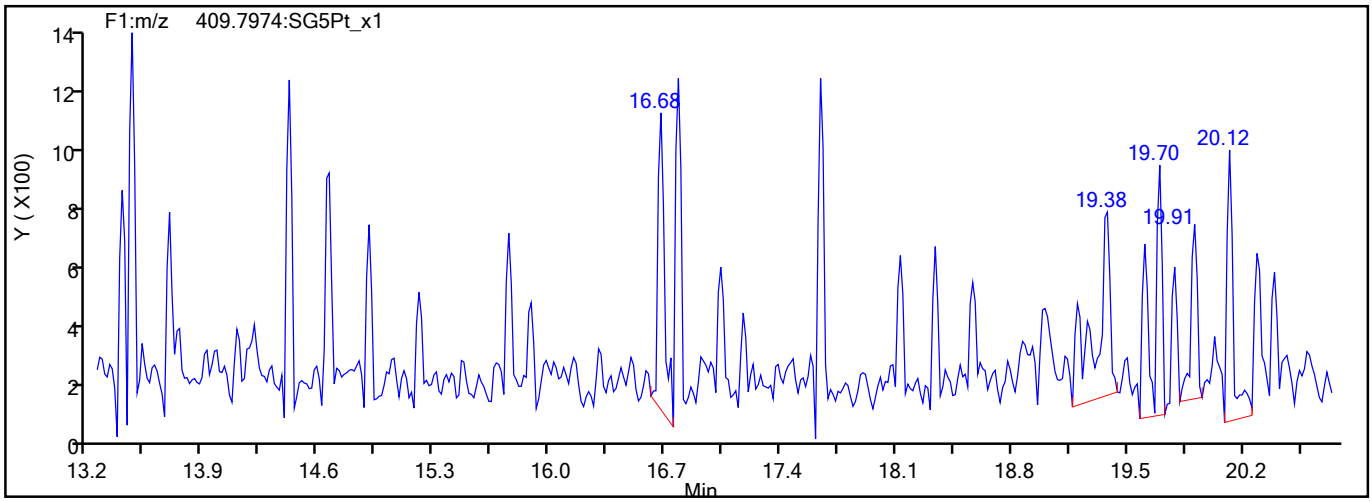

792443

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

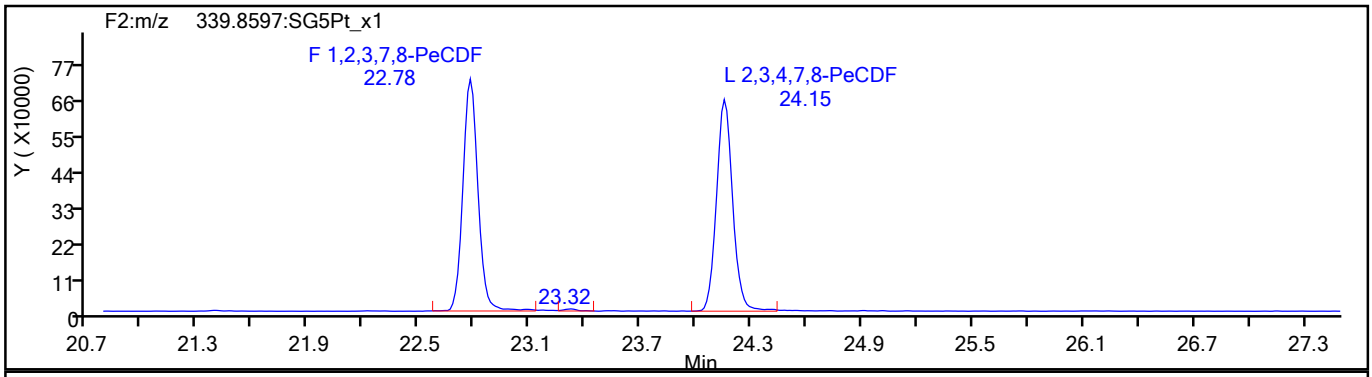

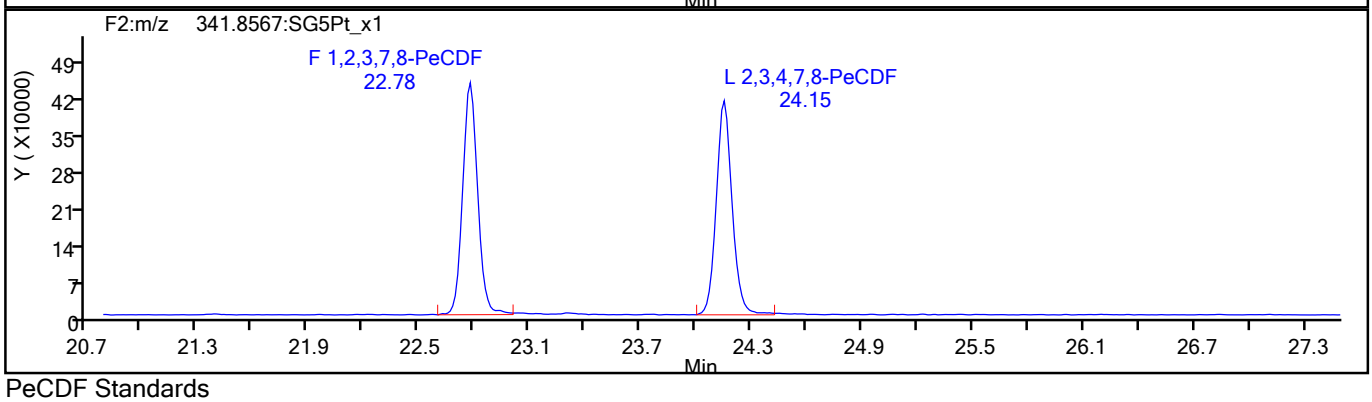

PeCDF Standards

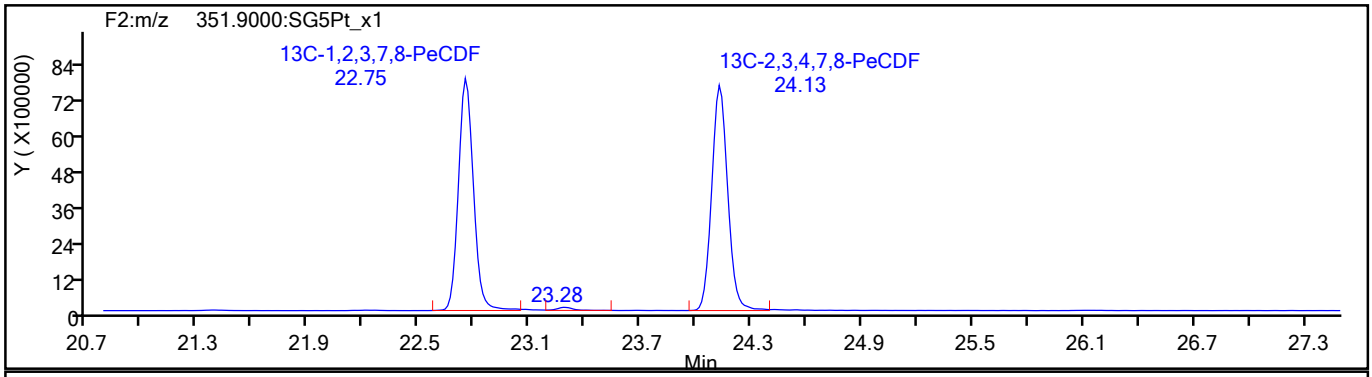

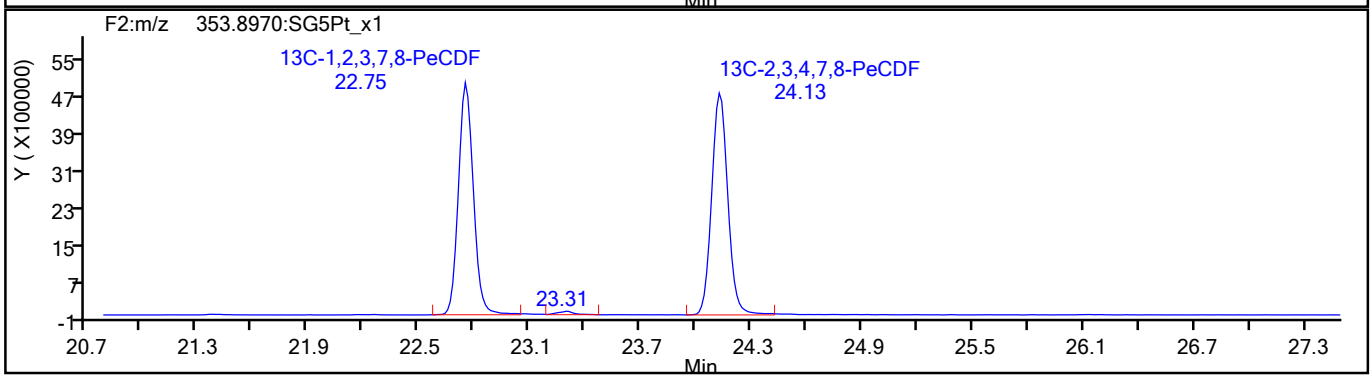

792444

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

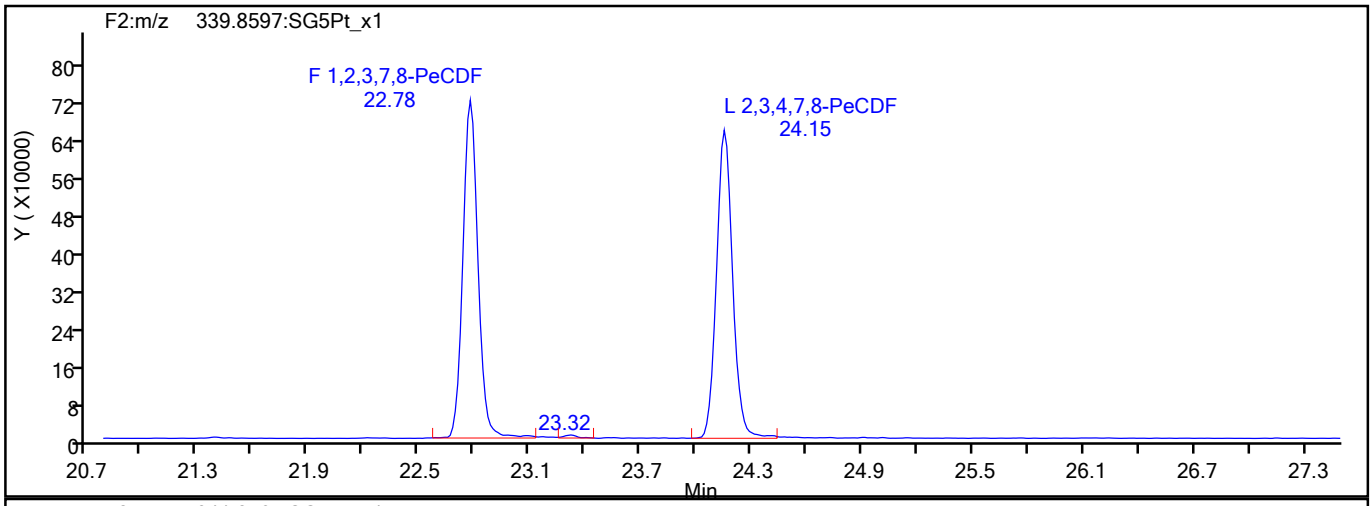

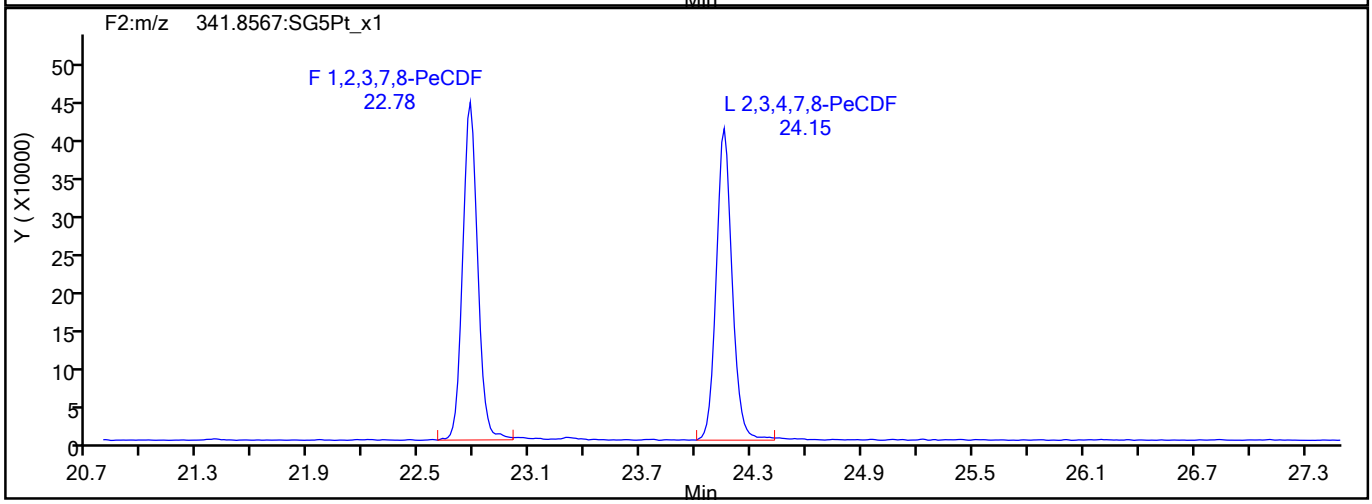

PeCDF Interference Mass

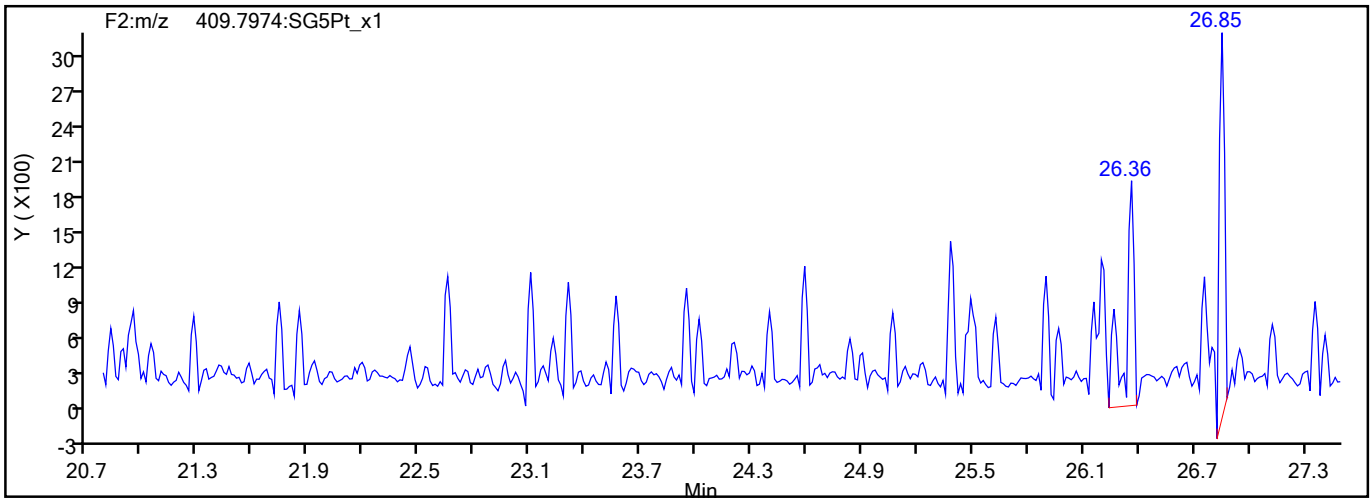

792445

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

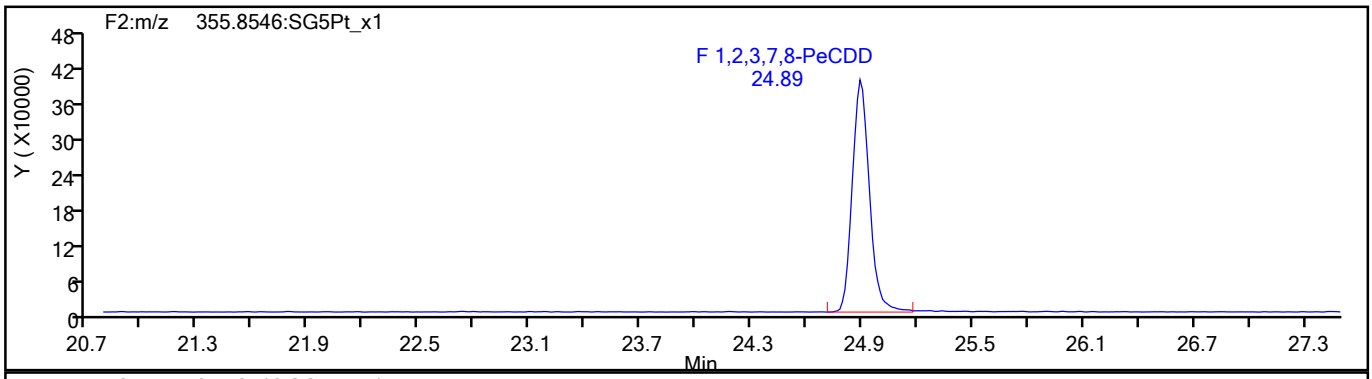

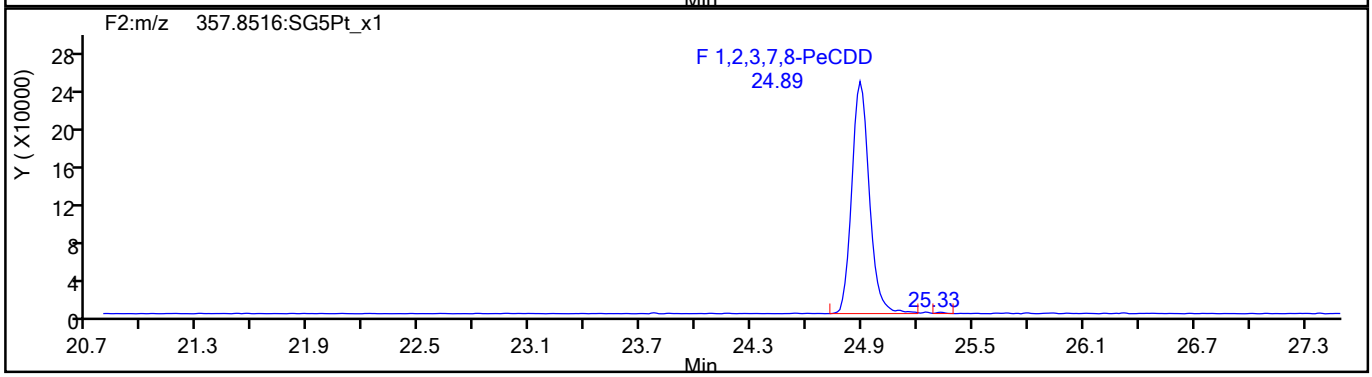

PeCDD Standards

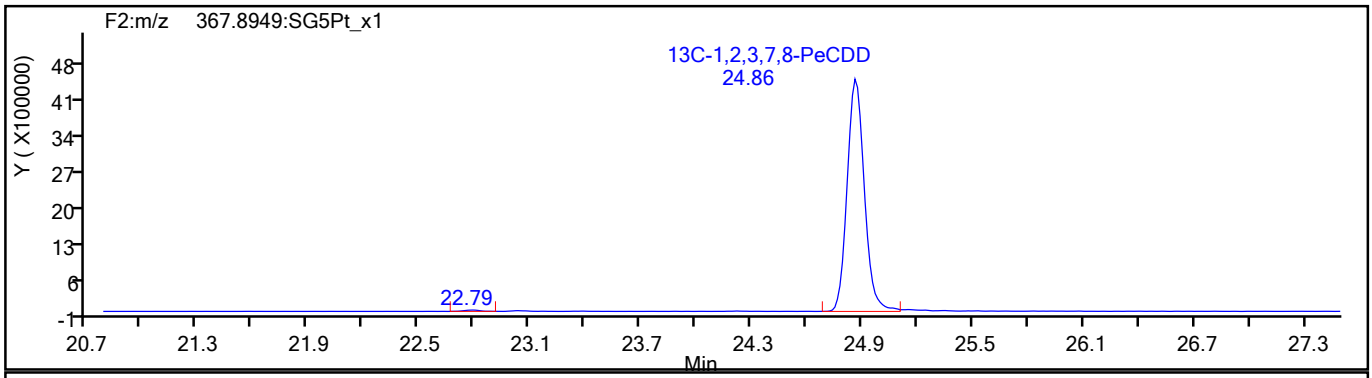

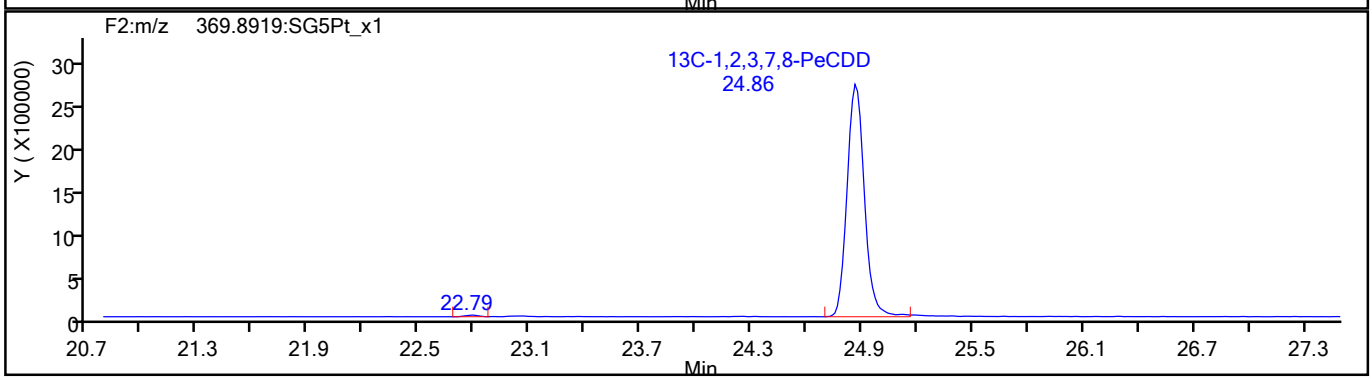

792446

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

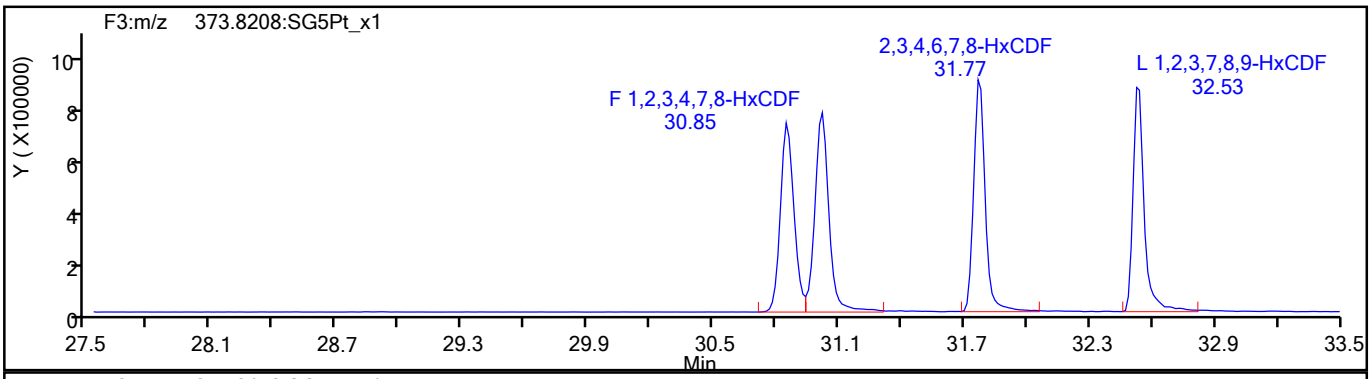

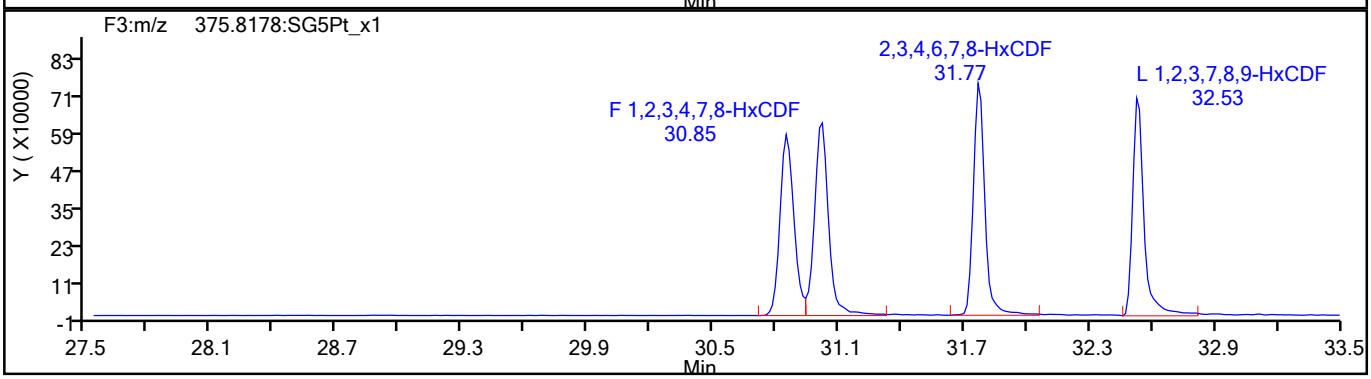

HxCDF Standards

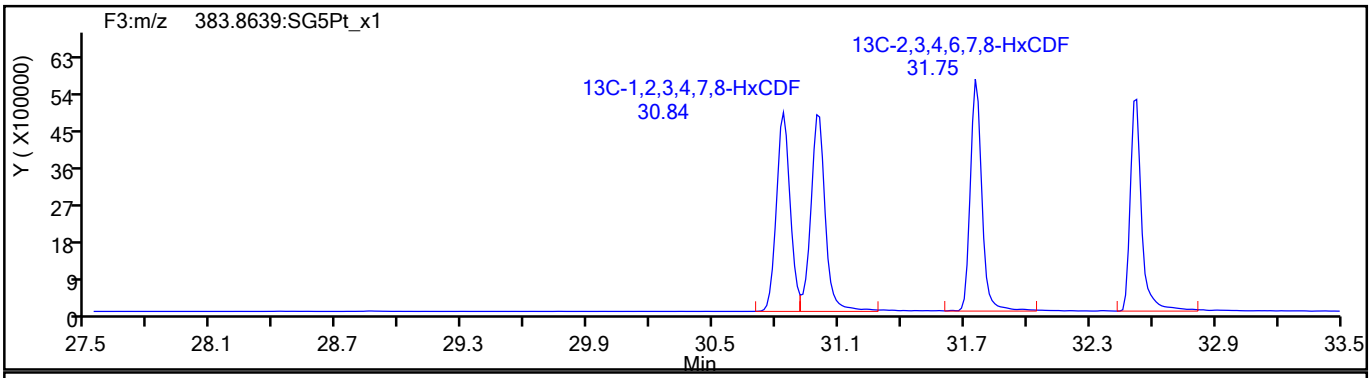

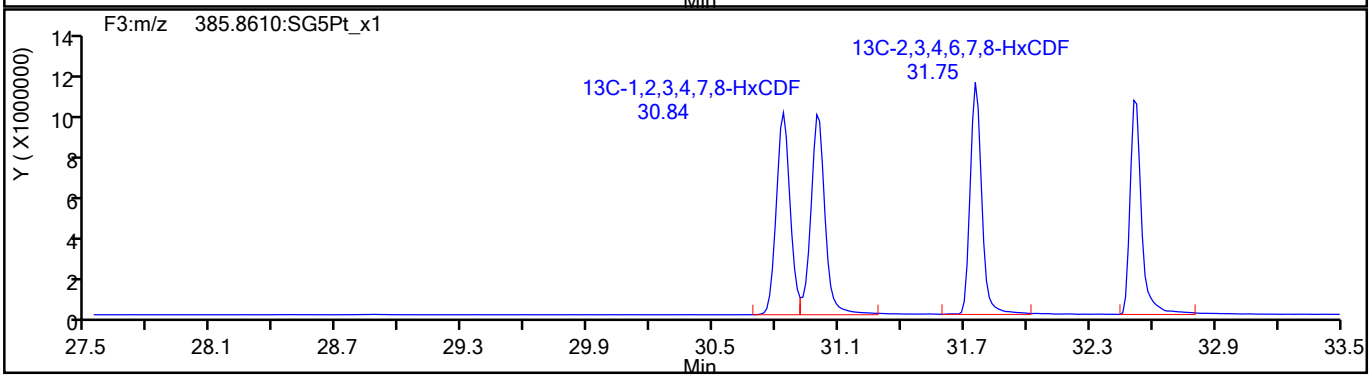

792447

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

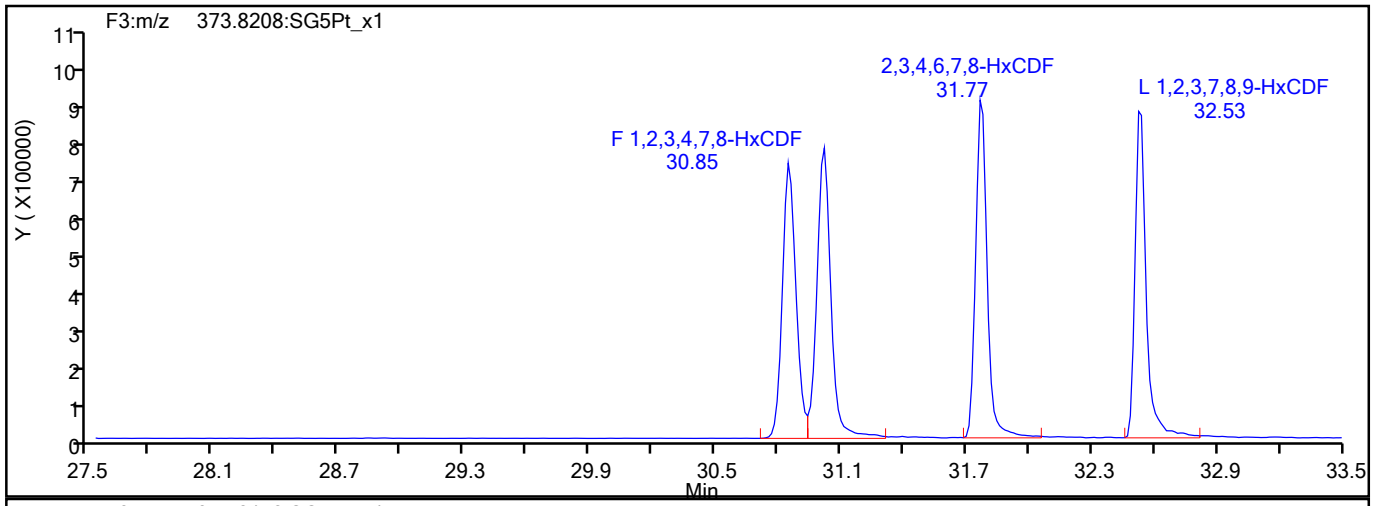

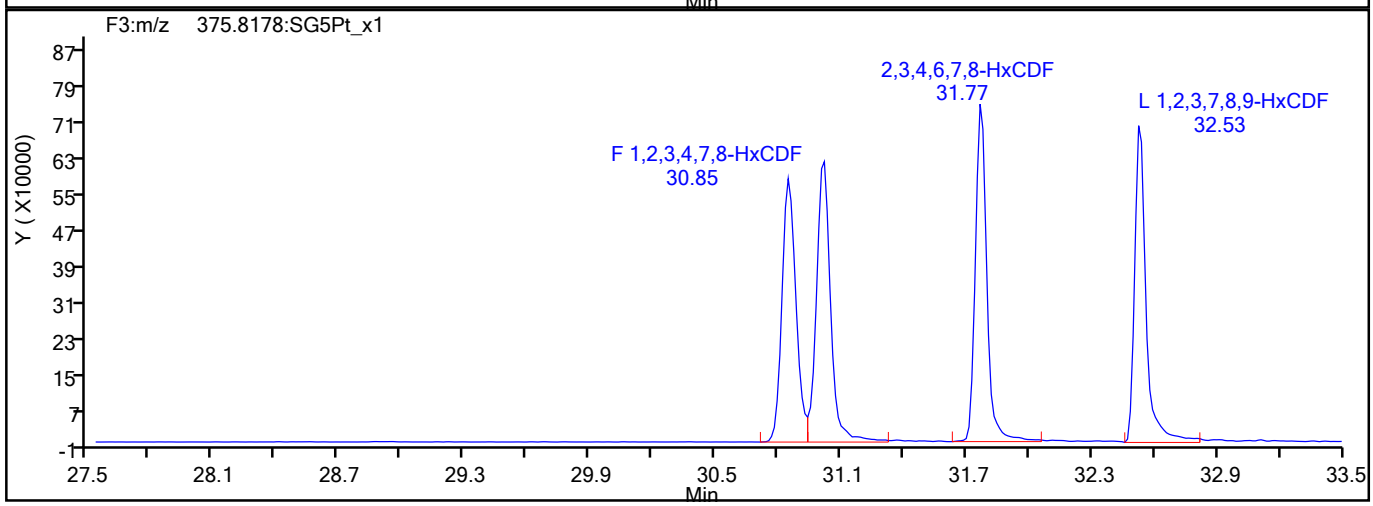

HxCDF Interference Mass

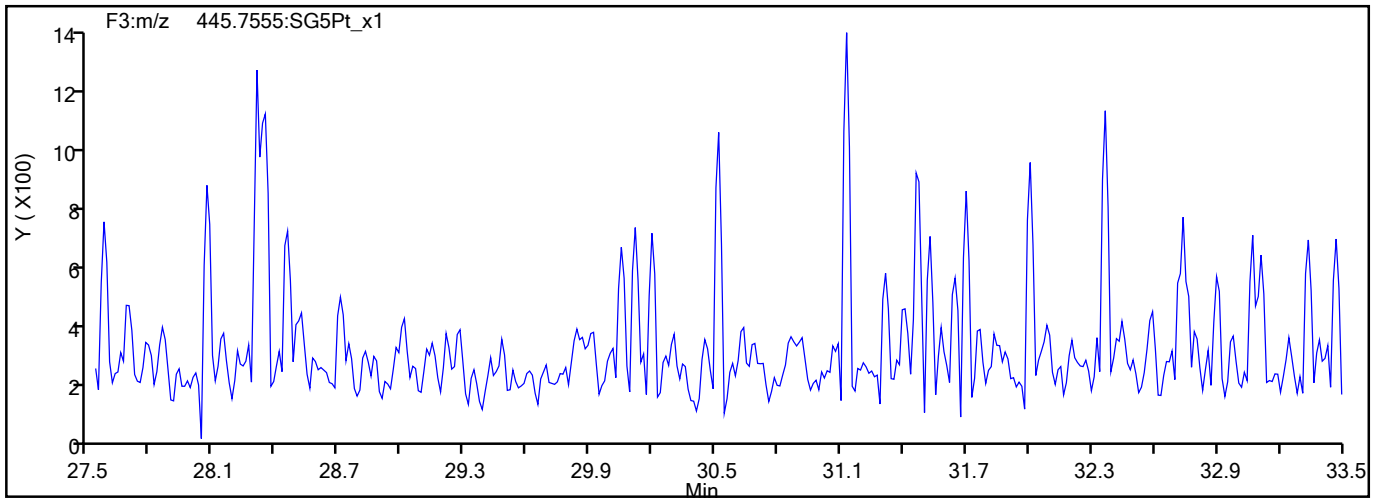

792448

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

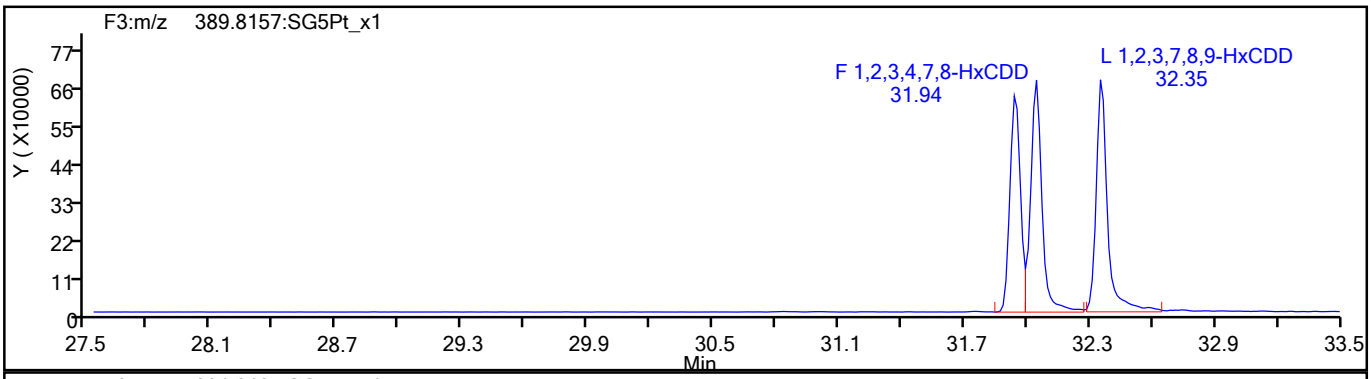

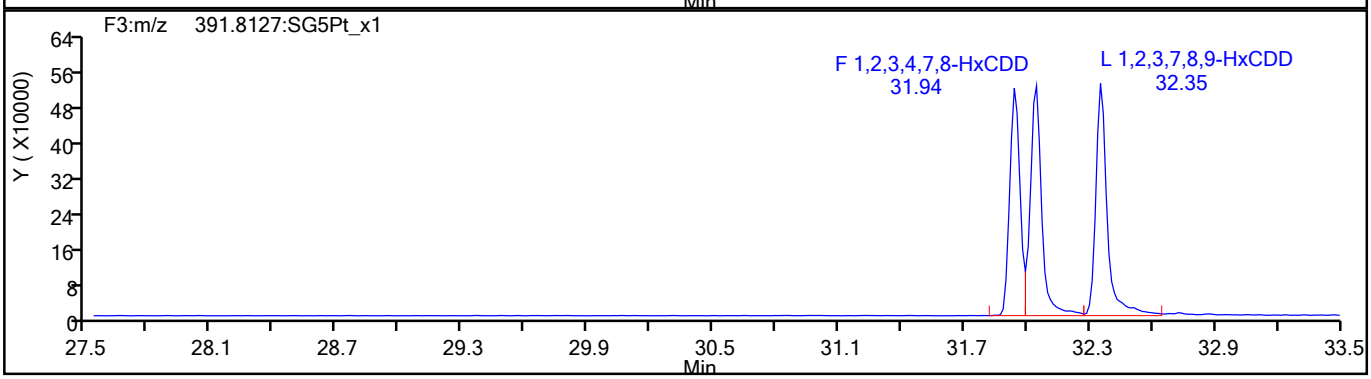

HxCDD Standards

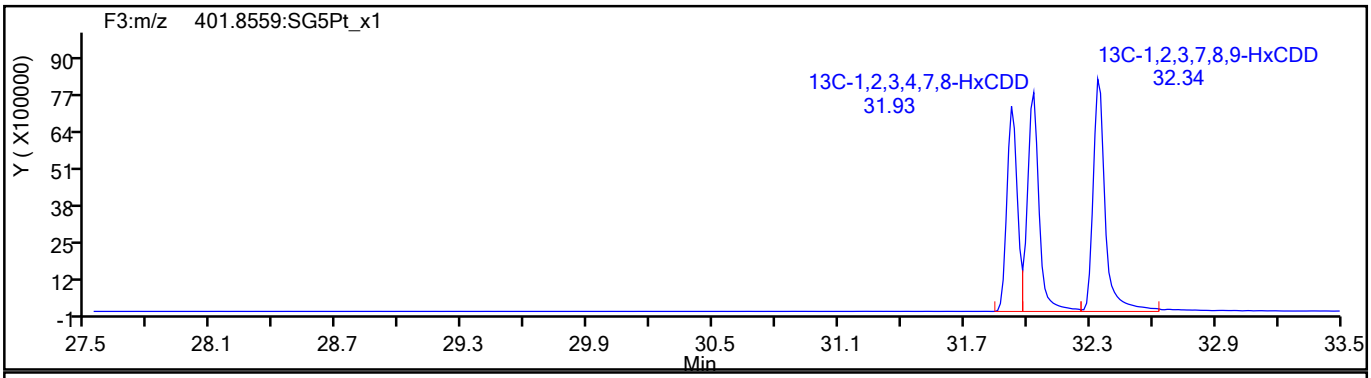

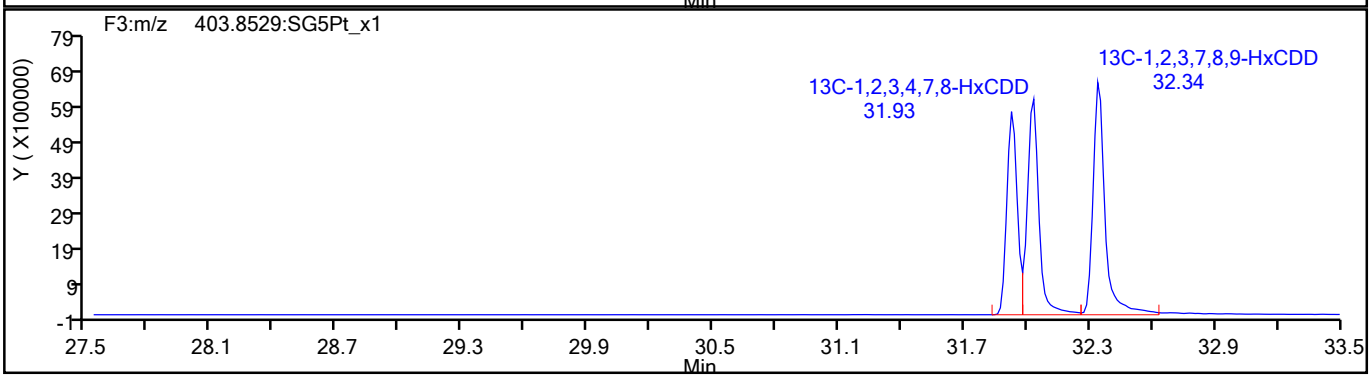

792449

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

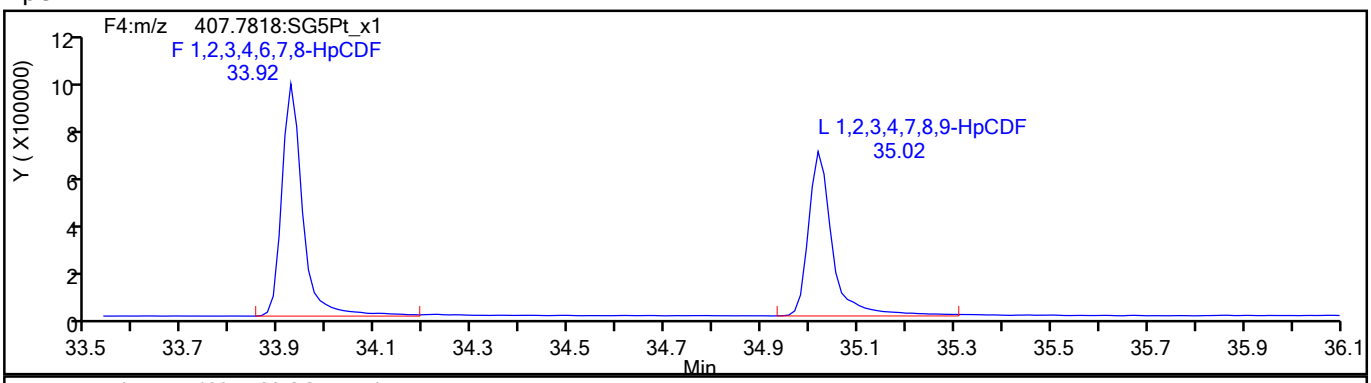

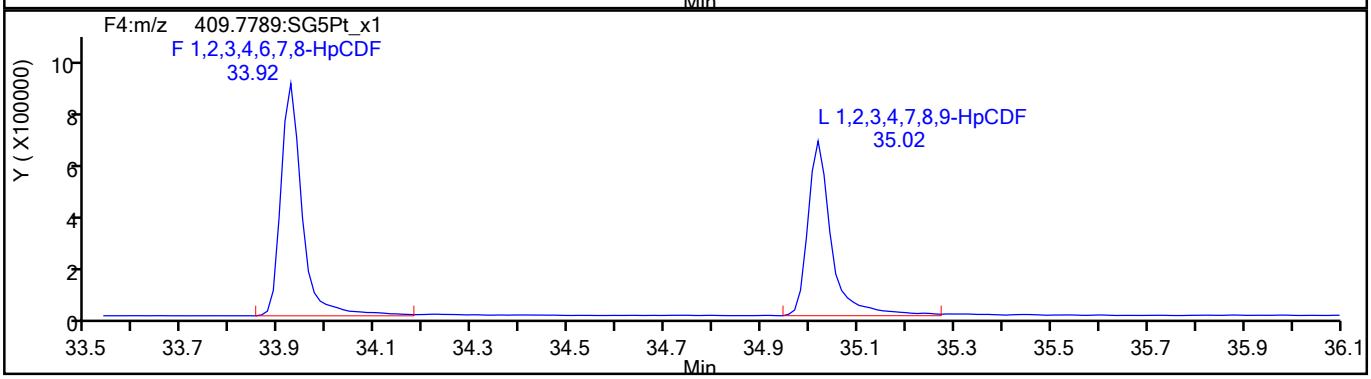

HpCDF Standards

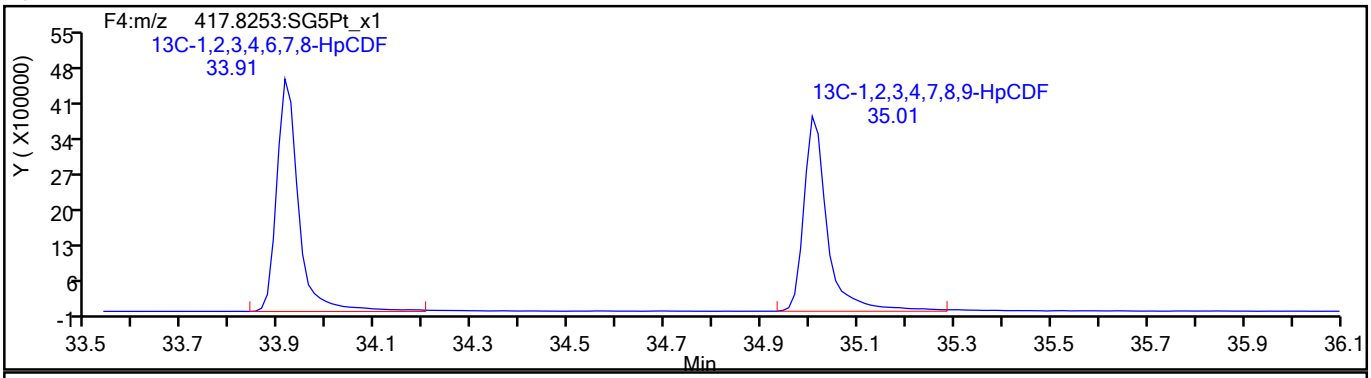

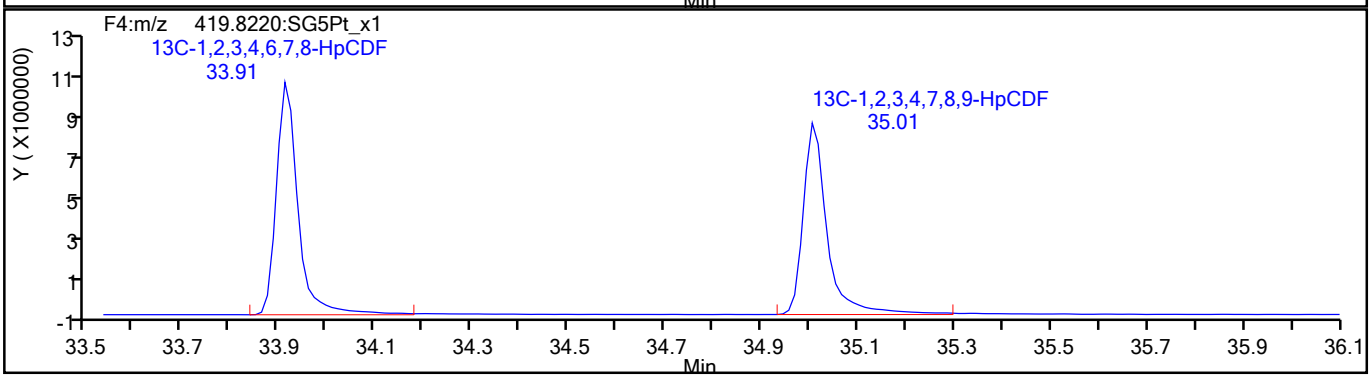

792450

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

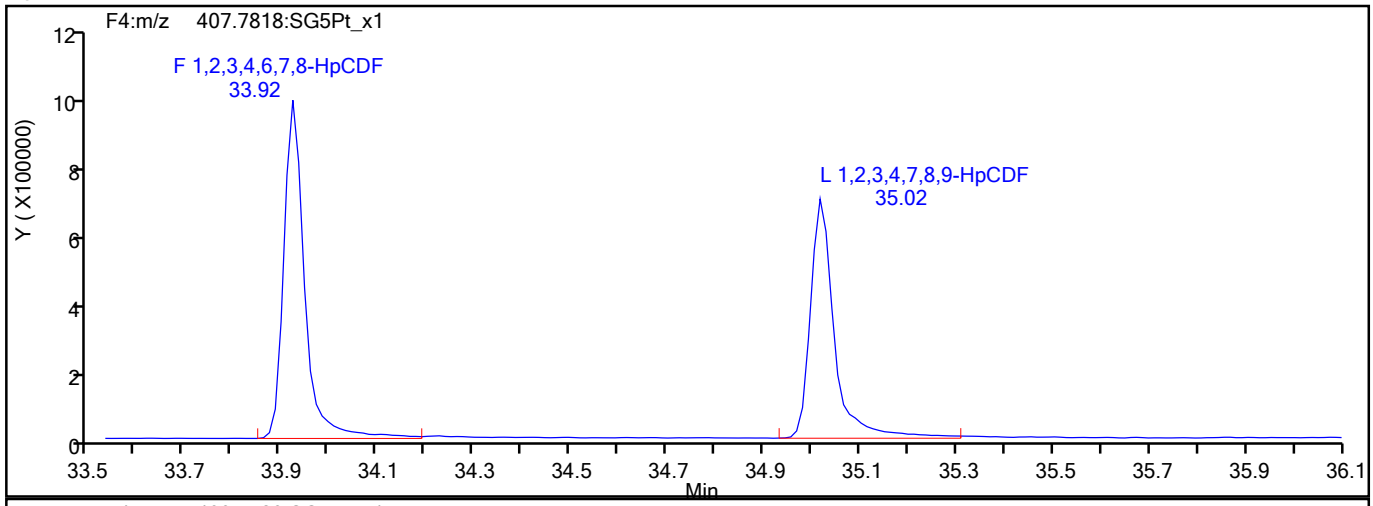

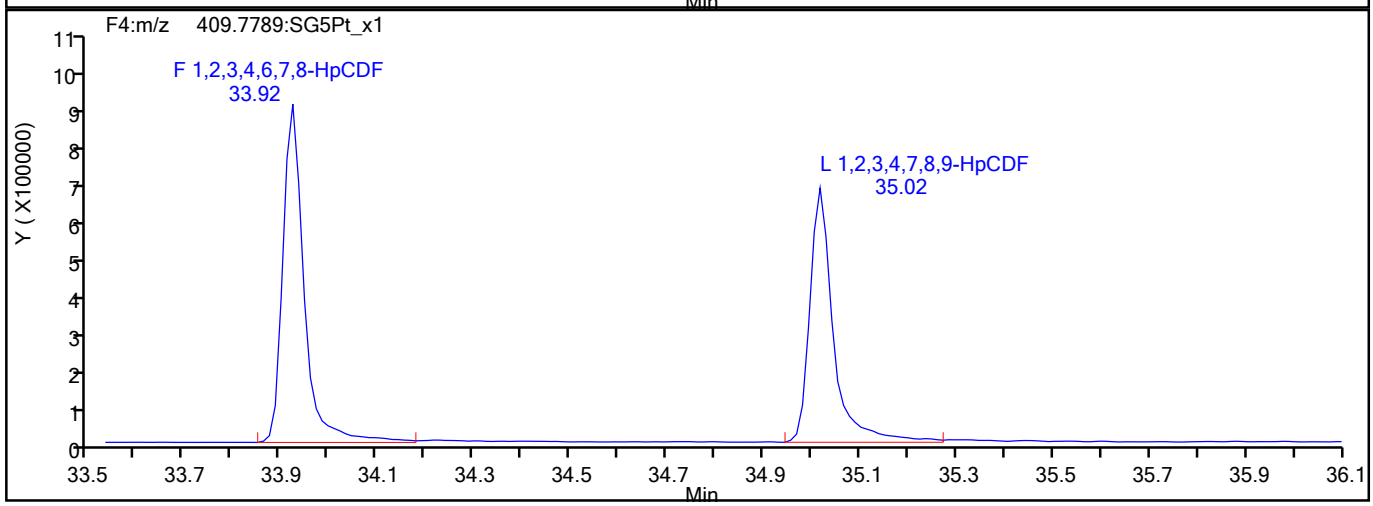

HpCDF Interference Mass

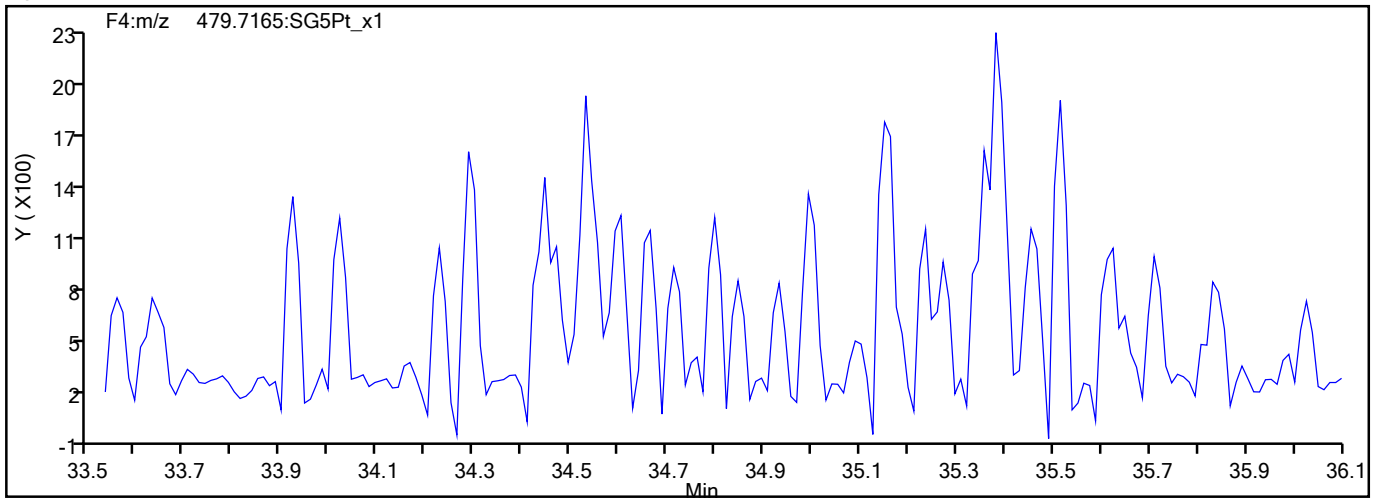

792451

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

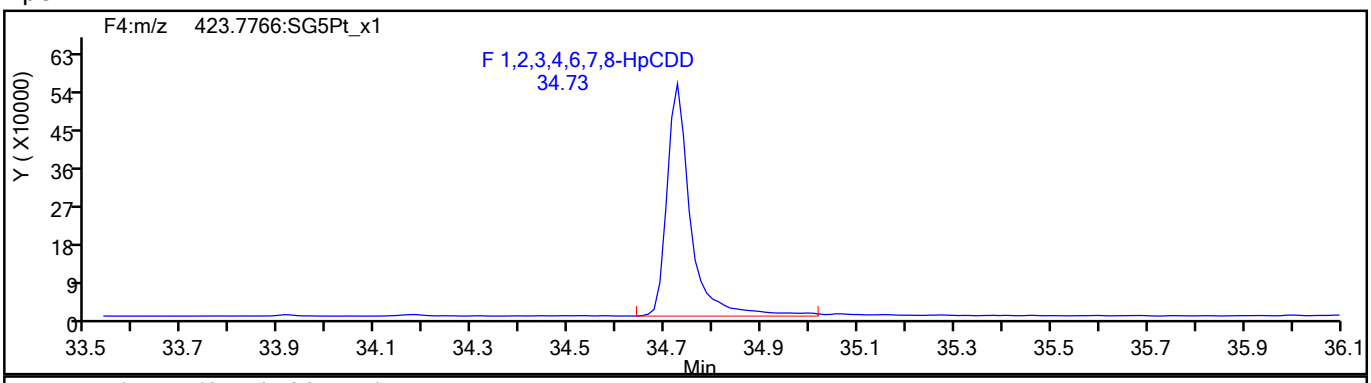

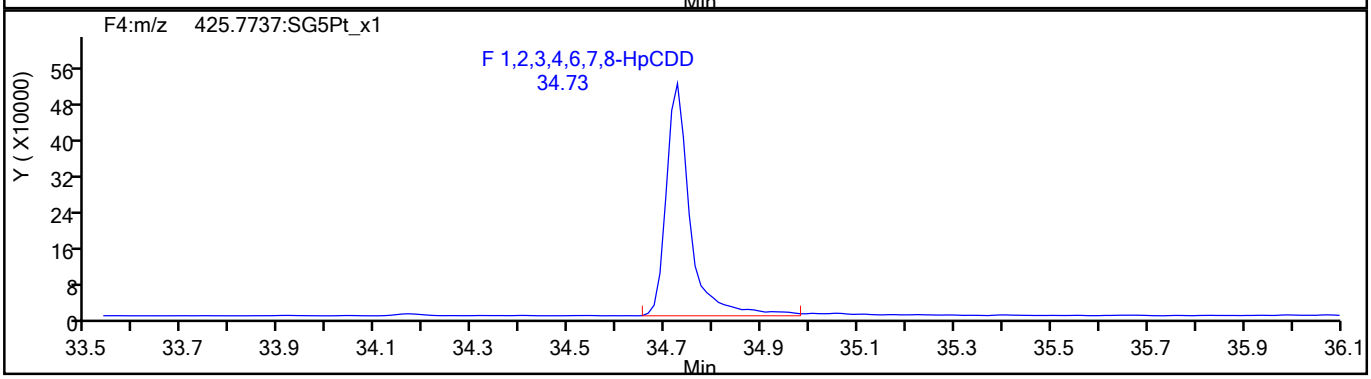

HpCDD Standards

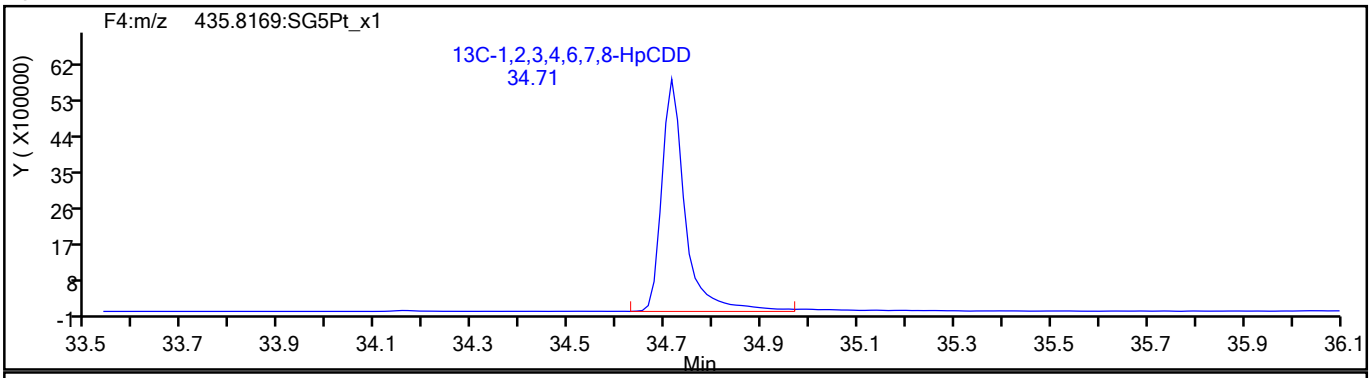

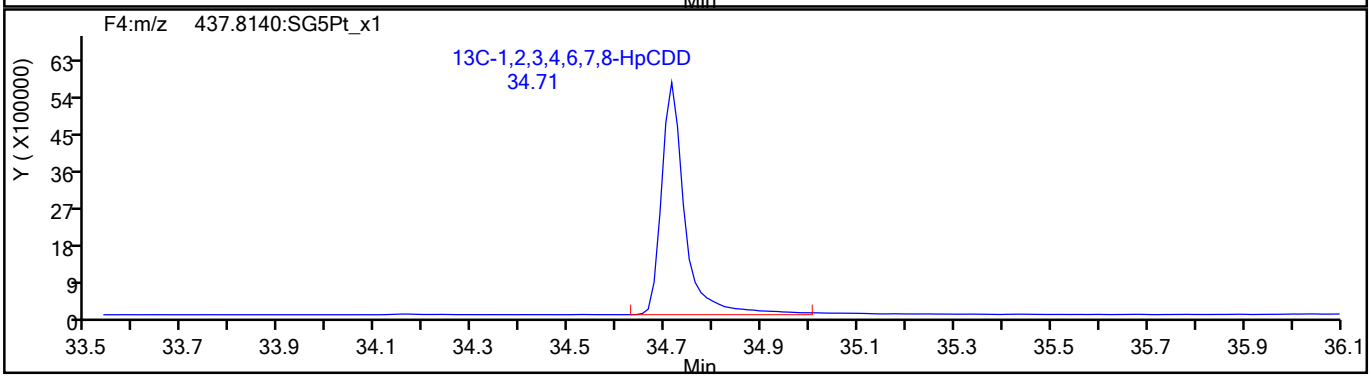

792452

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

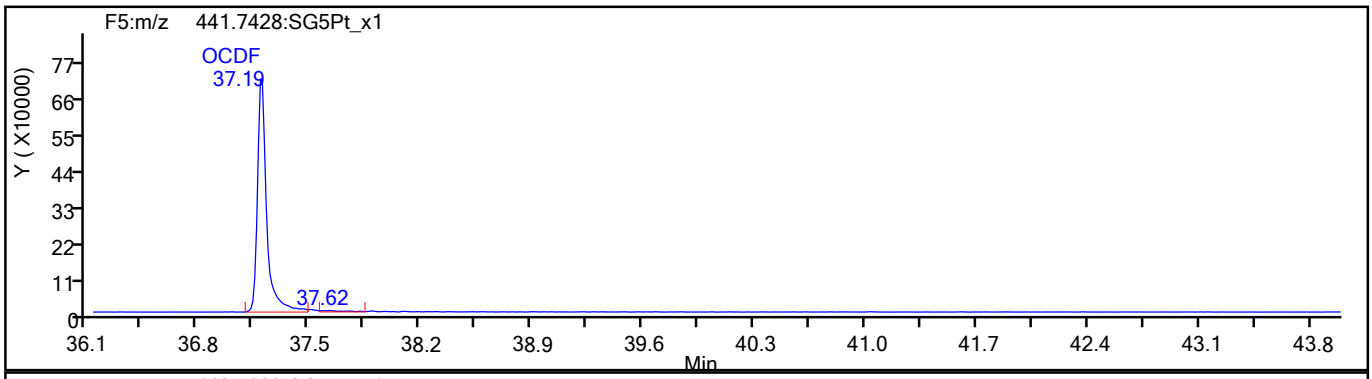

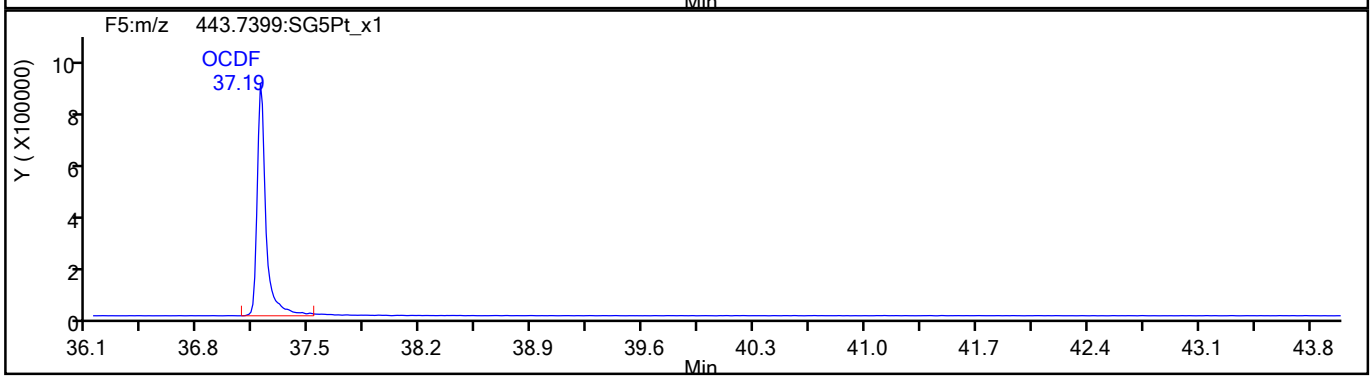

OCDF Standards

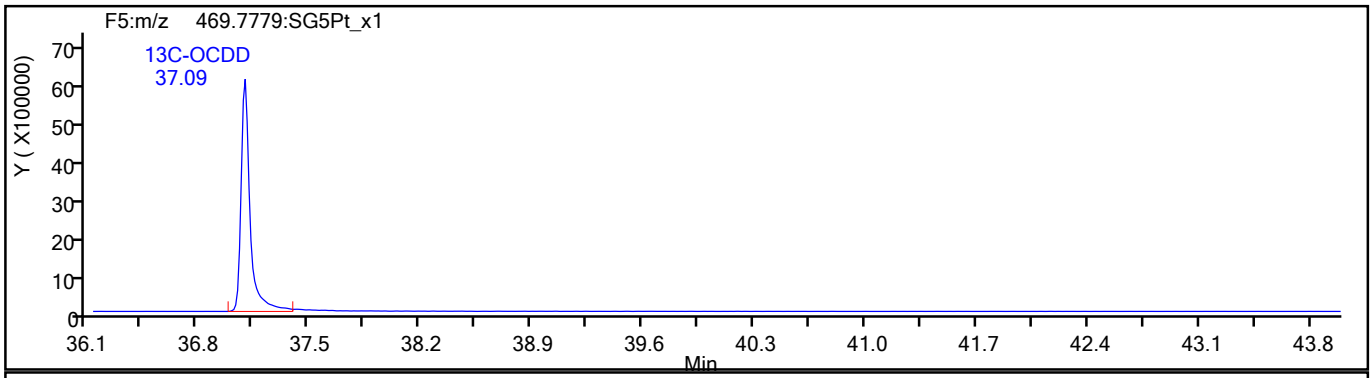

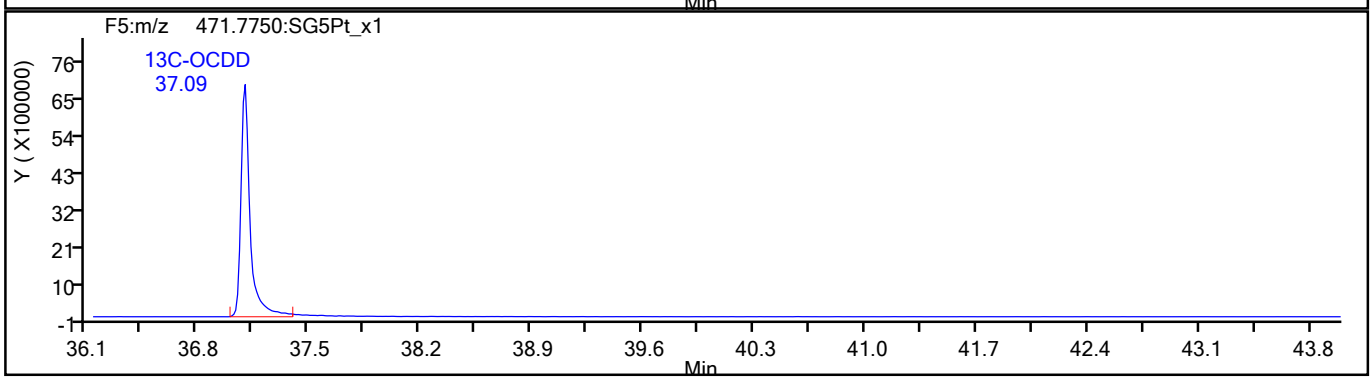

792453

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

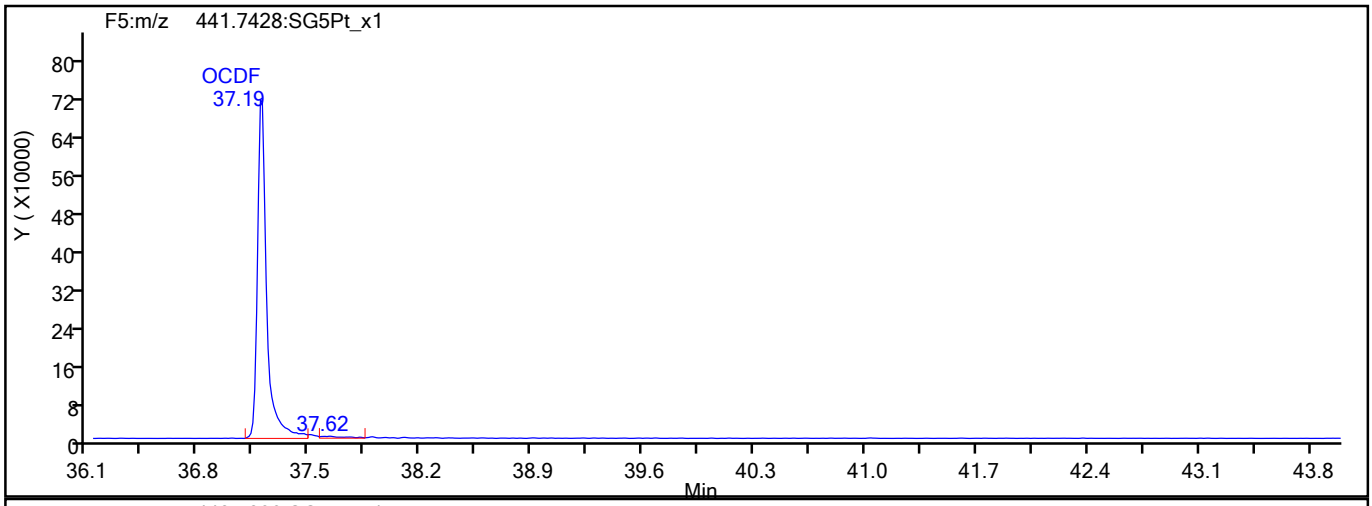

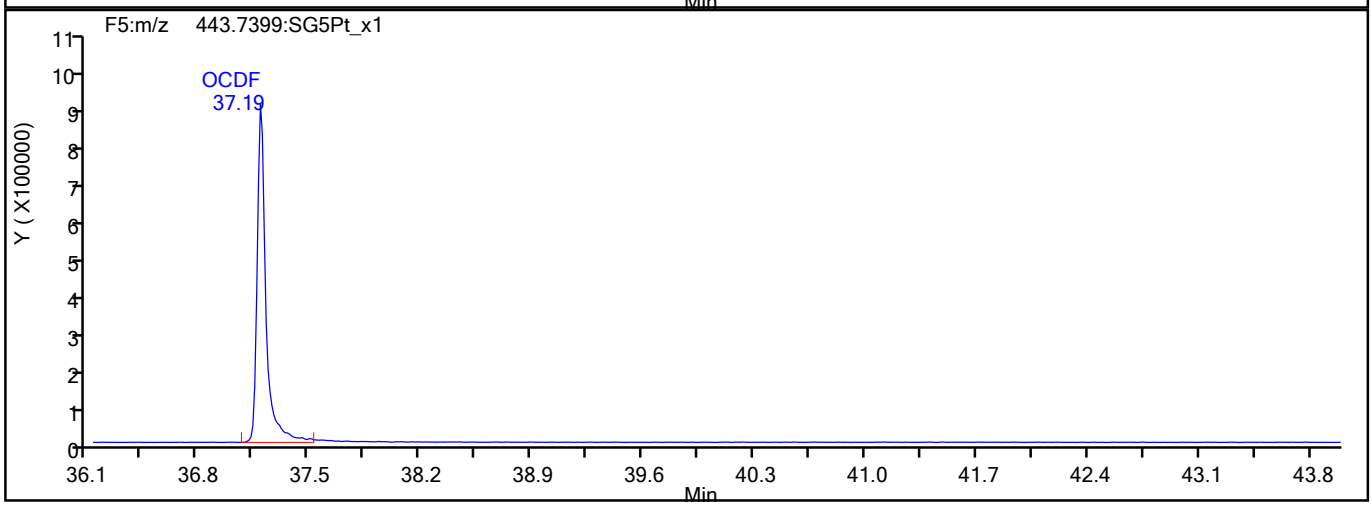

OCDF Interference Mass

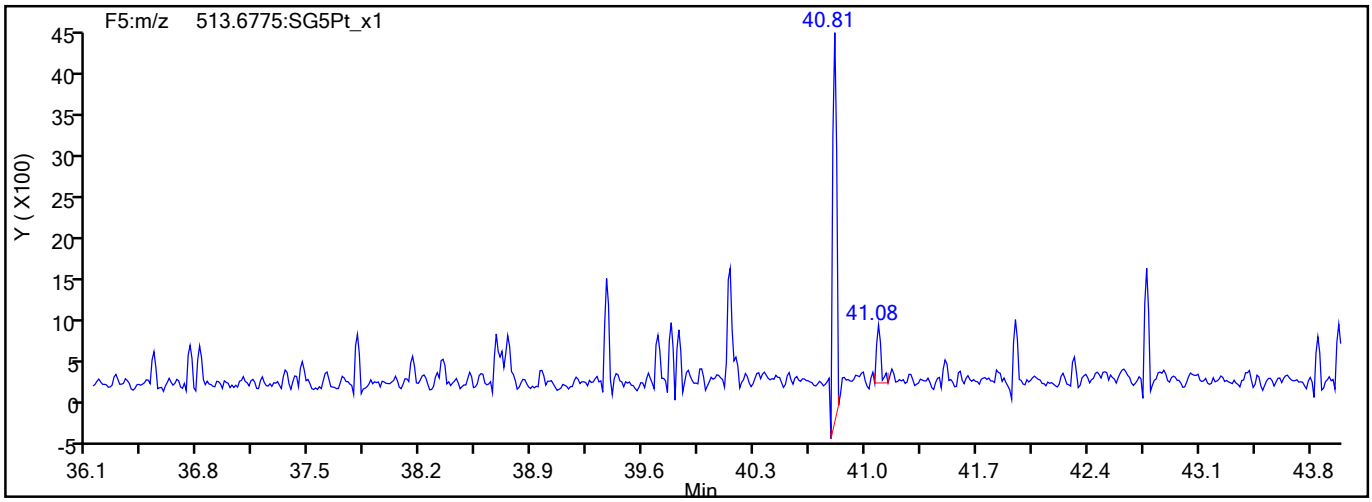

792454

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

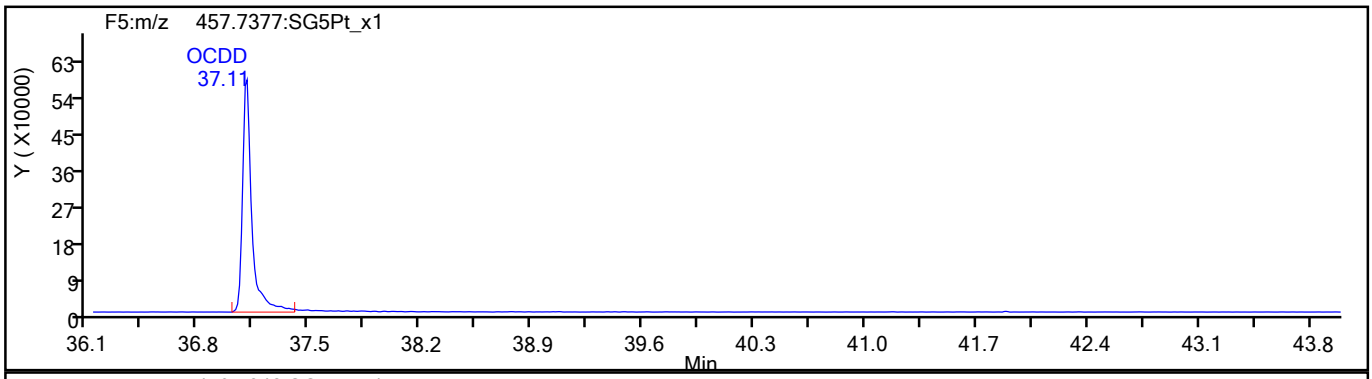

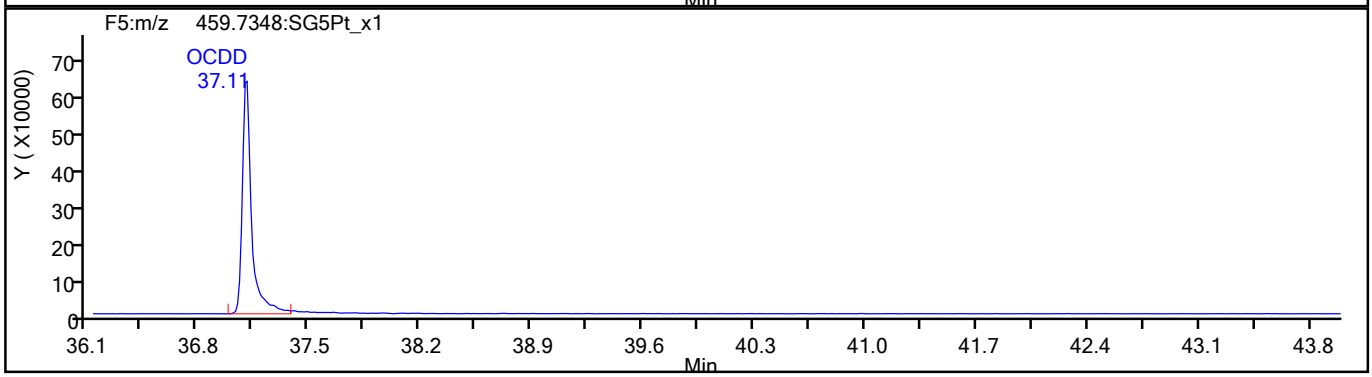

OCDD Standards

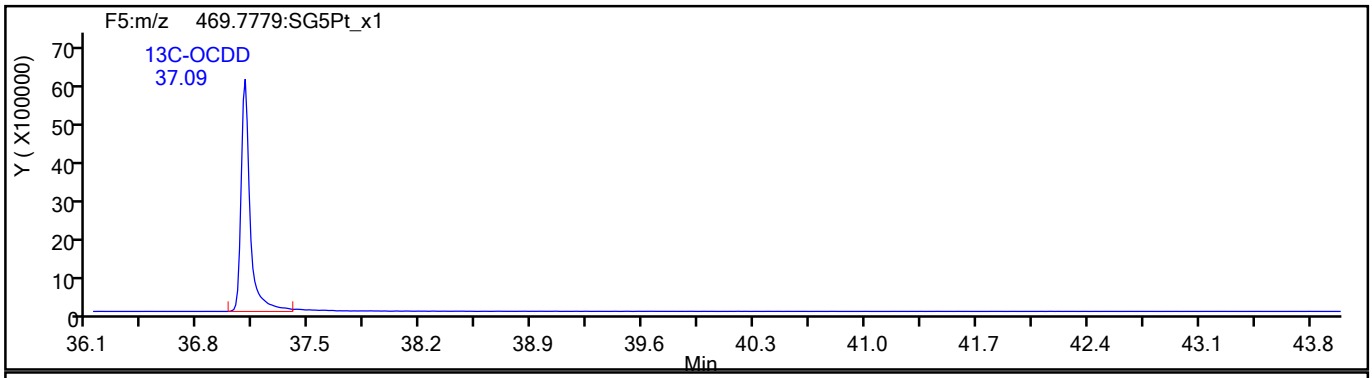

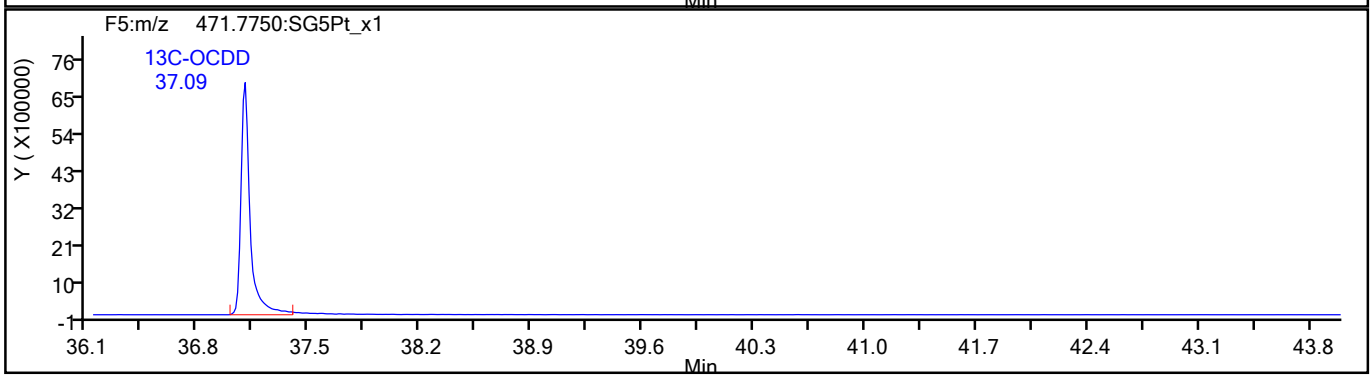

792455

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

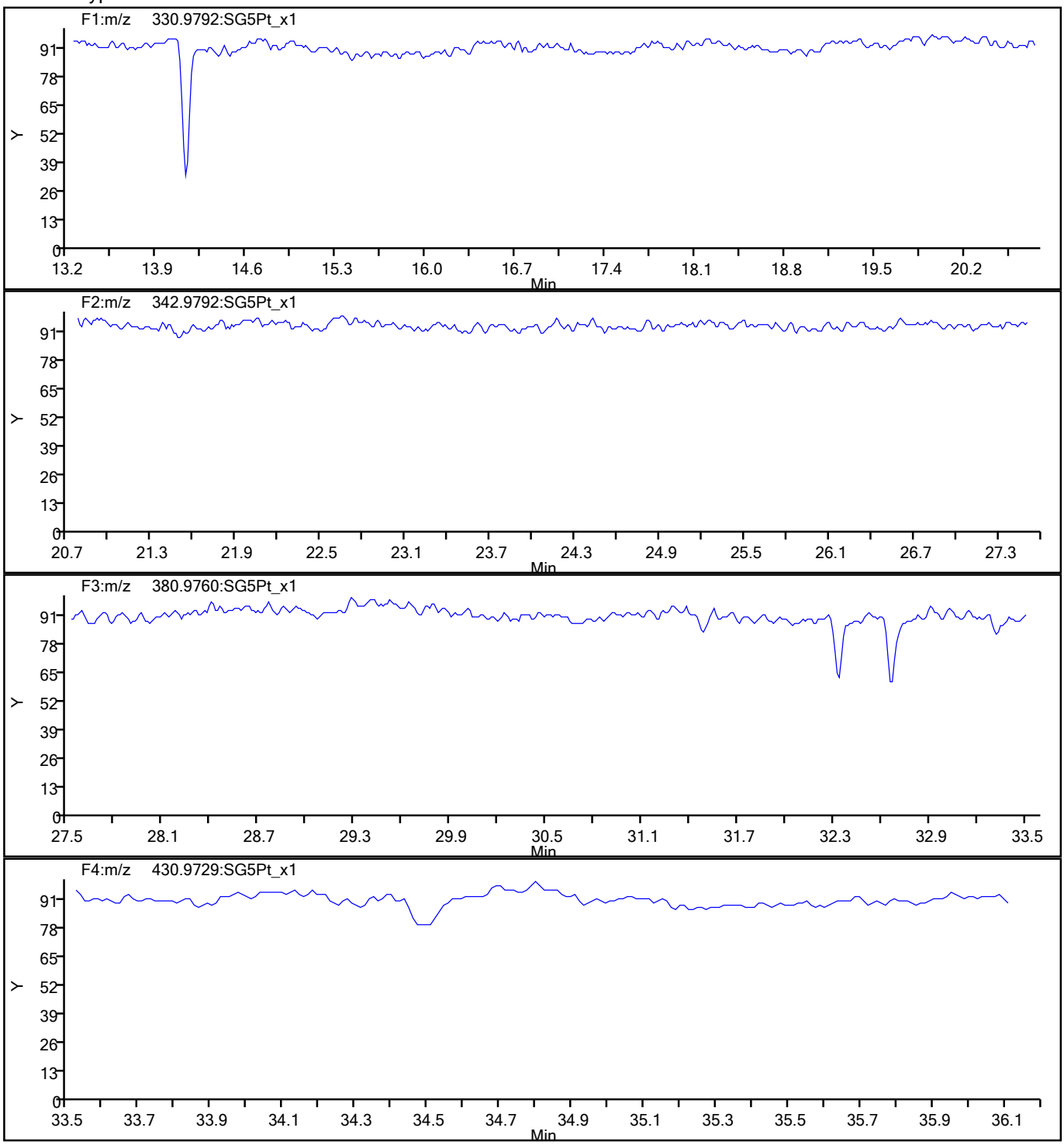

792456

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

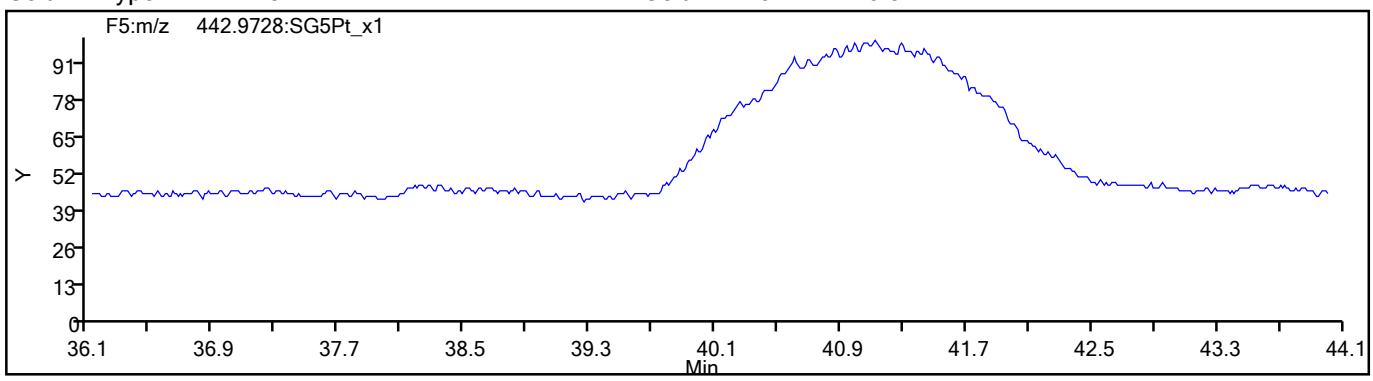

792457

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62635225	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	101724636	0.78	1.6249	99.9	99.9	0.2242	0.2242	99.95	
2,3,7,8-TCDF	17.643	10638776	0.78	1.0239	10.2	10.2	0.0283	0.0283	102	
S Total TCDF					10.2	10.2	0.0283	0.0283		
D 13C-2,3,7,8-TCDD	18.338	56155483	0.81	0.8993	99.7	99.7	0.1510	0.1510	99.69	
$ 37Cl4-2,3,7,8-TCDD	18.369	7339670		1.1071	10.6	10.6	0.0132	0.0132	106	
2,3,7,8-TCDD	18.369	7104238	0.76	1.2541	10.1	10.1	0.0224	0.0224	101	
S Total TCDD					10.1	10.1	0.0224	0.0224		
D 13C-1,2,3,7,8-PeCDF	22.762	76368219	1.58	1.2101	100.8	100.8	0.2109	0.2109	101	
1,2,3,7,8-PeCDF	22.789	41588176	1.62	1.0611	51.3	51.3	0.1508	0.1508	103	
D 13C-2,3,4,7,8-PeCDF	24.139	78214582	1.58	1.2395	100.7	100.7	0.2059	0.2059	101	
2,3,4,7,8-PeCDF	24.167	40928436	1.60	1.0184	51.4	51.4	0.1656	0.1656	103	
S Total PeCDF					102.7	102.7	0.1582	0.1582		
D 13C-1,2,3,7,8-PeCDD	24.876	47124414	1.60	0.7612	98.8	98.8	0.1214	0.1214	98.83	
1,2,3,7,8-PeCDD	24.903	25165054	1.62	1.0484	50.9	50.9	0.0669	0.0669	102	
S Total PeCDD					50.9	50.9	0.0669	0.0669		
D 13C-1,2,3,4,7,8-HxCDF	30.849	68075509	0.52	1.0837	98.8	98.8	0.4389	0.4389	98.79	
1,2,3,4,7,8-HxCDF	30.862	37525146	1.24	1.0851	50.8	50.8	0.2914	0.2914	102	
D 13C-1,2,3,6,7,8-HxCDF	31.009	70677463	0.52	1.1279	98.5	98.5	0.4217	0.4217	98.54	
1,2,3,6,7,8-HxCDF	31.022	40802767	1.21	1.1260	51.3	51.3	0.2729	0.2729	103	
D 13C-2,3,4,6,7,8-HxCDF	31.767	67028498	0.52	1.0637	99.1	99.1	0.4471	0.4471	99.10	
2,3,4,6,7,8-HxCDF	31.781	39741365	1.22	1.1675	50.8	50.8	0.2260	0.2260	102	
D 13C-1,2,3,7,8,9-HxCDF	32.526	60389284	0.52	0.9676	98.2	98.2	0.4916	0.4916	98.15	
1,2,3,7,8,9-HxCDF	32.540	35924190	1.21	1.1664	51.0	51.0	0.2363	0.2363	102	
S Total HxCDF					203.9	203.9	0.2566	0.2566		
* 13C-1,2,3,7,8,9-HxCDD	32.353	63588089	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.941	44039927	1.25	0.7334	94.4	94.4	0.3731	0.3731	94.43	
1,2,3,4,7,8-HxCDD	31.954	24891170	1.33	1.0640	53.1	53.1	0.1747	0.1747	106	
D 13C-1,2,3,6,7,8-HxCDD	32.034	55284532	1.26	0.8802	98.8	98.8	0.3109	0.3109	98.78	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	27953752	1.21	1.0001	50.6	50.6	0.1666	0.1666	101	
1,2,3,7,8,9-HxCDD	32.367	29794954	1.26	1.1325	53.0	53.0	0.1552	0.1552	106	
S Total HxCDD					156.7	156.7	0.1655	0.1655		
D 13C-1,2,3,4,6,7,8-HpCDF	33.924	47697671	0.44	0.7730	97.0	97.0	1.328	1.328	97.03	
1,2,3,4,6,7,8-HpCDF	33.937	35740964	1.05	1.4413	52.0	52.0	0.5190	0.5190	104	
D 13C-1,2,3,4,7,8,9-HpCDF	35.018	43238622	0.44	0.7008	97.0	97.0	1.465	1.465	97.03	
1,2,3,4,7,8,9-HpCDF	35.030	29450636	1.07	1.3174	51.7	51.7	0.6741	0.6741	103	
S Total HpCDF					103.7	103.7	0.5966	0.5966		
D 13C-1,2,3,4,6,7,8-HpCDD	34.726	40333717	1.03	0.6472	98.0	98.0	0.5563	0.5563	98.00	
1,2,3,4,6,7,8-HpCDD	34.726	22538791	1.03	1.0943	51.1	51.1	0.2539	0.2539	102	
S Total HpCDD					51.1	51.1	0.2539	0.2539		
D 13C-OCDD	37.094	54338243	0.87	0.4472	191.1	191.1	0.2612	0.2612	95.55	
OCDF	37.202	41147202	0.91	1.4382	105.3	105.3	0.1155	0.1155	105	
OCDD	37.106	31656667	0.89	1.1070	105.3	105.3	0.1572	0.1572	105	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28287778	7074314	3903	9757	1813		
333.9339	18.142	18.142	0		34347447	8672273	4653	11632	1864	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.616	1	0.972	44652675	10978931	8756	21890	1254		
317.9389	17.628	17.616	1	0.972	57071961	13787474	14192	35480	971	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.631	1	1.001	4665898	1145703	1759	4397	651		
305.8987	17.643	17.631	1	1.001	5972878	1458593	1111	2777	1313	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	25132336	5946858	3903	9757	1524		
333.9339	18.338	18.338	0	1.011	31023147	7337223	4653	11632	1577	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.369	18.354	1	1.012	7339670	1703834	921	2302	1850		
2,3,7,8-TCDD											
319.8965	18.369	18.357	1	1.002	3077636	720367	906	2265	795		
321.8936	18.369	18.357	1	1.002	4026602	947792	588	1470	1612	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46742521	8181774	9794	24485	835		
353.8970	22.762	22.754	0	1.255	29625698	5225925	6278	15695	832	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.789	22.779	1	1.001	25738852	4452039	5088	12720	875		
341.8567	22.789	22.779	1	1.001	15849324	2731041	3494	8735	782	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.139	24.129	1	1.331	47906018	7878060	9794	24485	804		
353.8970	24.139	24.129	1	1.331	30308564	4845446	6278	15695	772	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.167	24.156	1	1.001	25185293	4111601	5088	12720	808		
341.8567	24.167	24.156	1	1.001	15743143	2618923	3494	8735	750	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.876	24.865	1	1.371	29023498	4508866	3701	9252	1218		
369.8919	24.876	24.865	1	1.371	18100916	2812844	2121	5302	1326	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.903	24.892	1	1.001	15548746	2422000	1286	3215	1883		
357.8516	24.903	24.892	1	1.001	9616308	1489099	768	1920	1939	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.849	30.838	1	0.954	23323404	5008910	10853	27132	462		
385.8610	30.849	30.838	1	0.954	44752105	9511743	20971	52427	454	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.000	20753403	4584464	10058	25145	456		
375.8178	30.862	30.857	0	1.000	16771743	3729681	8311	20777	449	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.009	31.003	0	0.958	24213048	5206646	10853	27132	480		
385.8610	31.009	31.003	0	0.958	46464415	9739576	20971	52427	464	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	22352739	4771379	10058	25145	474		
375.8178	31.022	31.022	0	1.000	18450028	3943683	8311	20777	475	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.767	31.756	1	0.982	22835025	6015846	10853	27132	554		
385.8610	31.767	31.756	1	0.982	44193473	11391437	20971	52427	543	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.781	31.772	1	1.000	21800962	5788708	10058	25145	576		
375.8178	31.781	31.772	1	1.000	17940403	4765095	8311	20777	573	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.005	20681548	5801162	10853	27132	535		
385.8610	32.526	32.523	0	1.005	39707736	10862121	20971	52427	518	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.540	32.534	0	1.000	19691436	5514300	10058	25145	548		
375.8178	32.540	32.534	0	1.000	16232754	4594829	8311	20777	553	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.353	32.342	1		35642869	9349119	10403	26007	899		
403.8529	32.353	32.342	1		27945220	7378163	7908	19770	933	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.941	31.929	1	0.987	24473480	7240164	10403	26007	696		
403.8529	31.941	31.929	1	0.987	19566447	5775722	7908	19770	730	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.954	31.945	1	1.000	14220855	4121905	5566	13915	741		
391.8127	31.954	31.945	1	1.000	10670315	3199272	4114	10285	778	1.33(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.034	32.033	0	0.990	30876044	8117648	10403	26007	780		
403.8529	32.034	32.033	0	0.990	24408488	6404371	7908	19770	810	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	15327109	4211681	5566	13915	757		
391.8127	32.047	32.047	0	1.000	12626643	3343117	4114	10285	813	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.367	32.355	1	1.013	16583478	4368640	5566	13915	785		
391.8127	32.353	32.355	0	1.013	13211476	3519862	4114	10285	856	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.924	33.914	1	1.049	14460337	4683854	18083	45207	259		
419.8220	33.924	33.914	1	1.049	33237334	10568693	50629	126572	209	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.937	33.926	1	1.000	18301949	5790856	23497	58742	246		
409.7789	33.924	33.926	0	1.000	17439015	5585138	22139	55347	252	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.018	35.010	0	1.082	13111896	3936331	18083	45207	218		
419.8220	35.018	35.010	0	1.082	30126726	8910423	50629	126572	176	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.030	35.020	1	1.000	15206712	4448229	23497	58742	189		
409.7789	35.018	35.020	0	1.000	14243924	4117019	22139	55347	186	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.726	34.716	1	1.073	20474082	5927612	12552	31380	472		
437.8140	34.714	34.716	0	1.073	19859635	5735510	11540	28850	497	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	11412485	3410093	6511	16277	524		
425.7737	34.726	34.726	0	1.000	11126306	3358586	6451	16127	521	1.03(0.88-1.20)	
13C-OCDD											
469.7779	37.094	37.094	0	1.147	25234291	6398501	3020	7550	2119		
471.7750	37.094	37.094	0	1.147	29103952	7389026	4794	11985	1541	0.87(0.76-1.02)	
OCDF											
441.7428	37.202	37.199	0	1.003	19626693	5149784	2565	6412	2008		
443.7399	37.202	37.199	0	1.003	21520509	5563126	2015	5037	2761	0.91(0.76-1.02)	
OCDD											
457.7377	37.106	37.106	0	1.000	14916504	3846231	2276	5690	1690		
459.7348	37.106	37.106	0	1.000	16740163	4277323	2524	6310	1695	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

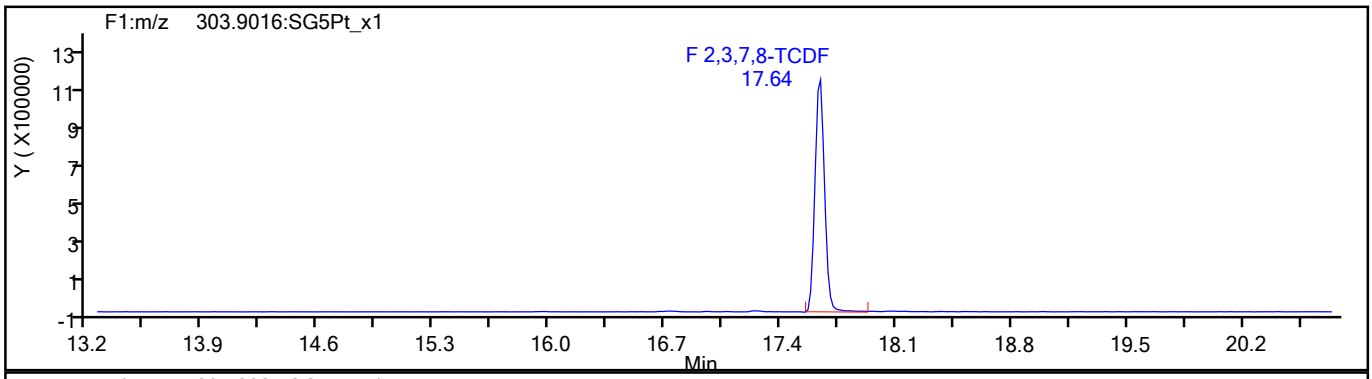

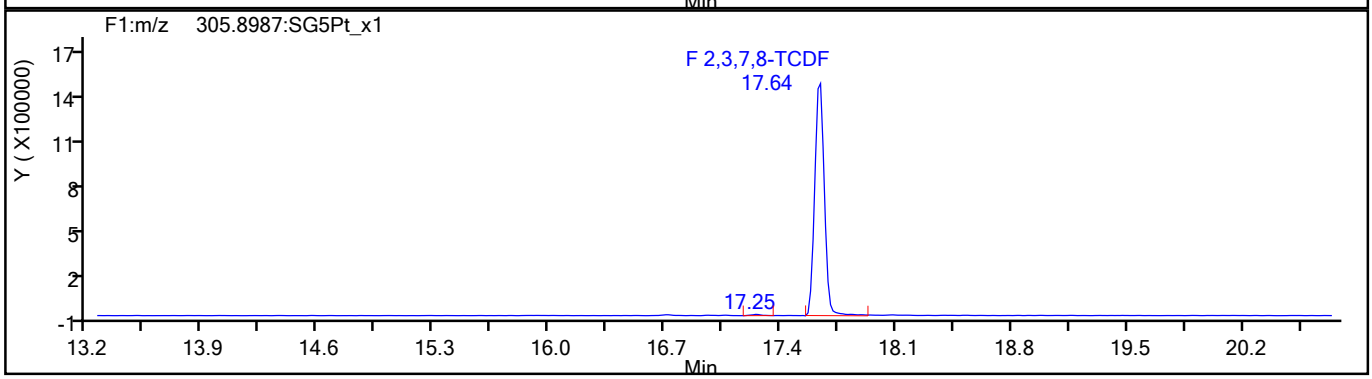

TCDF Standards

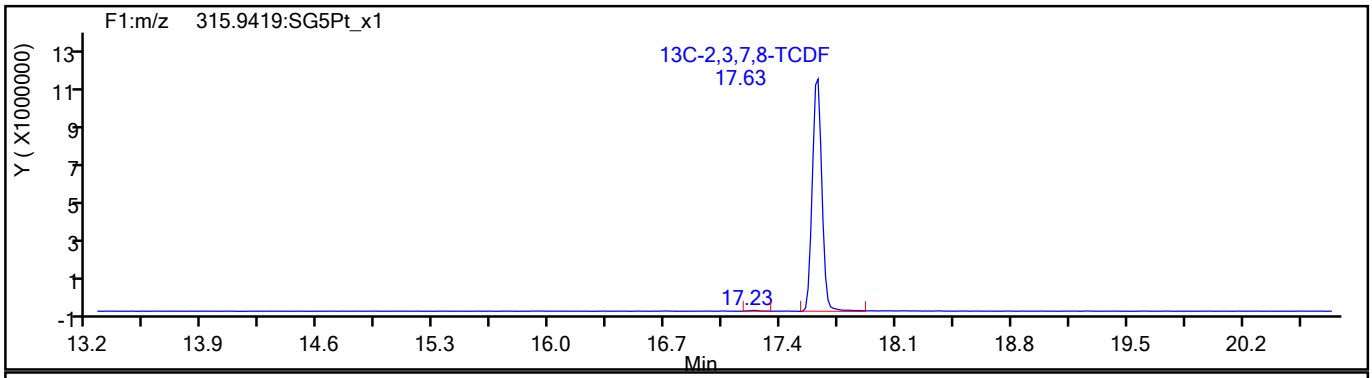

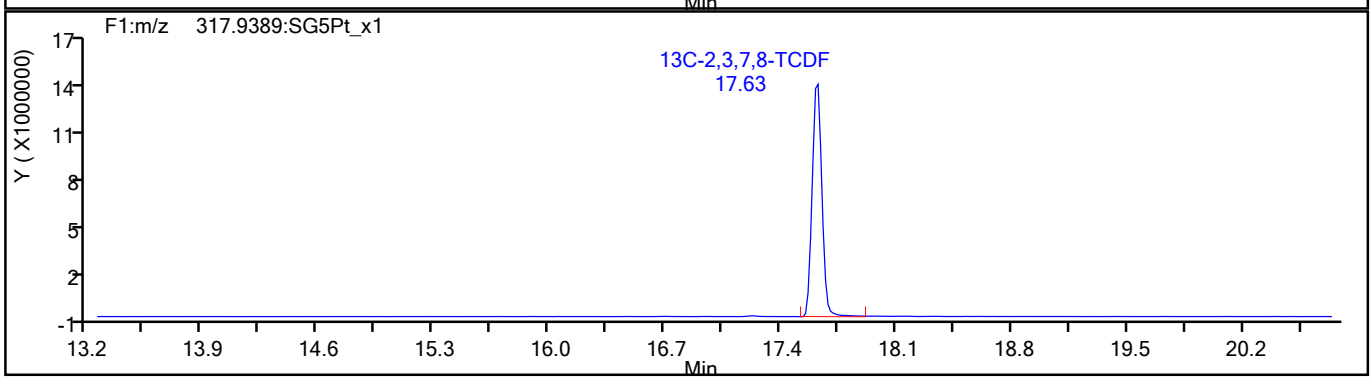

792463

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

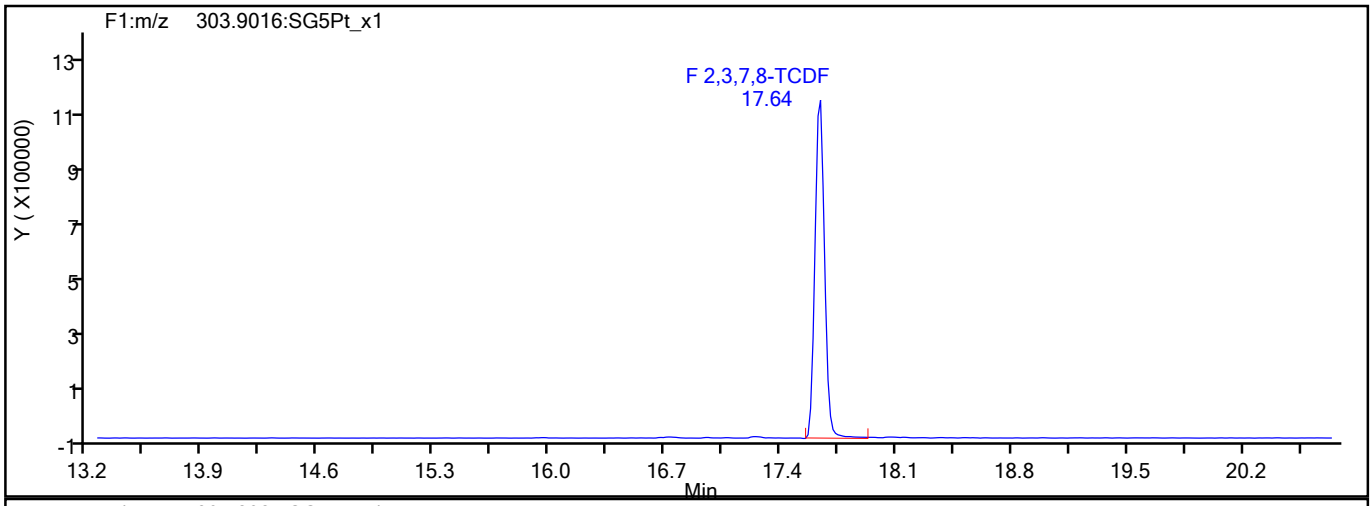

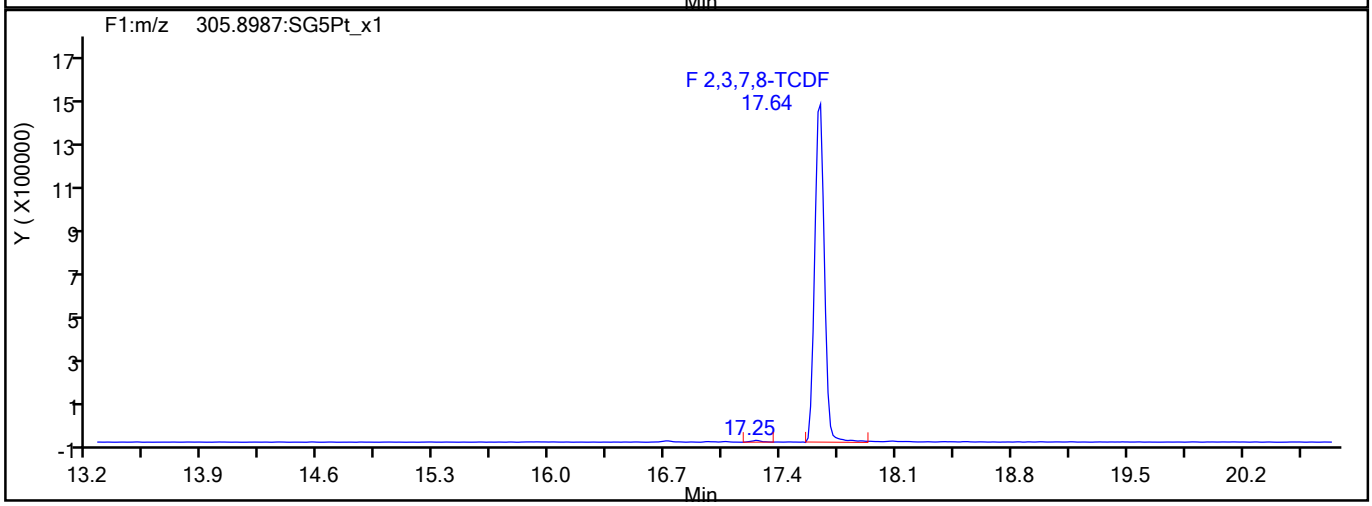

TCDF Interference Mass

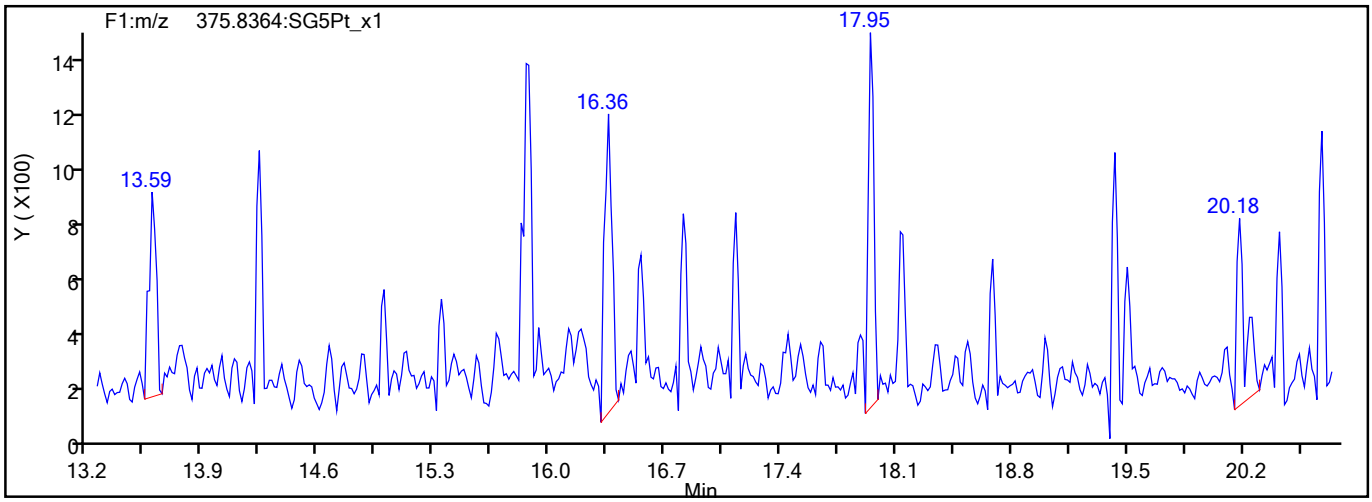

792464

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

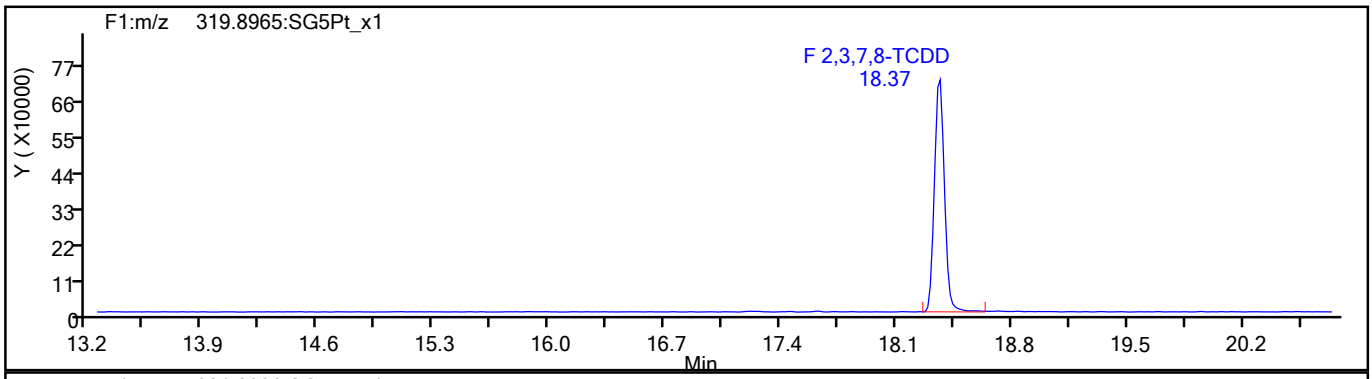

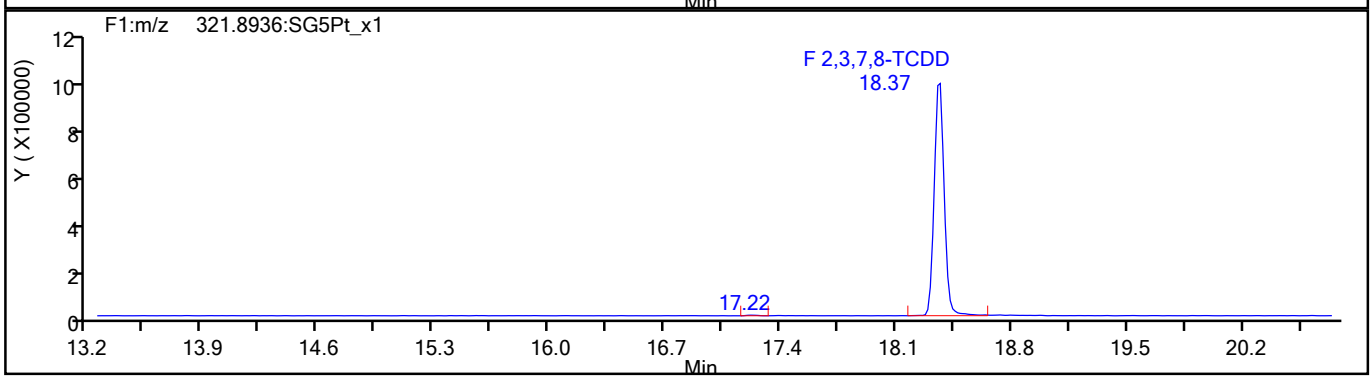

TCDD Standards

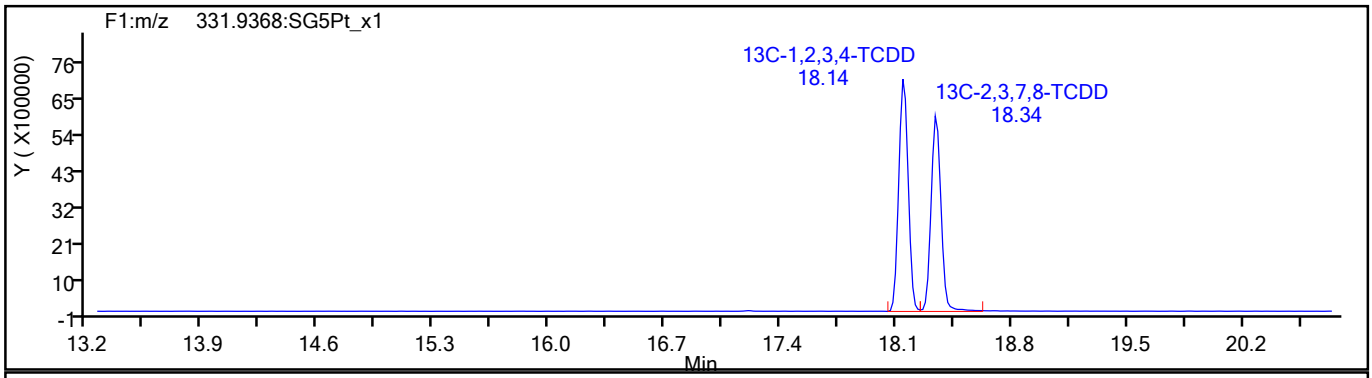

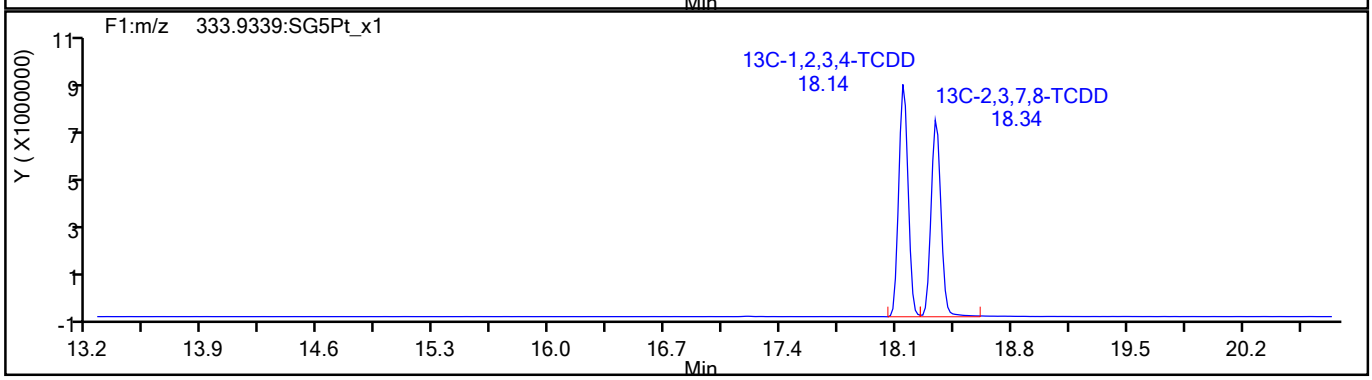

792465

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

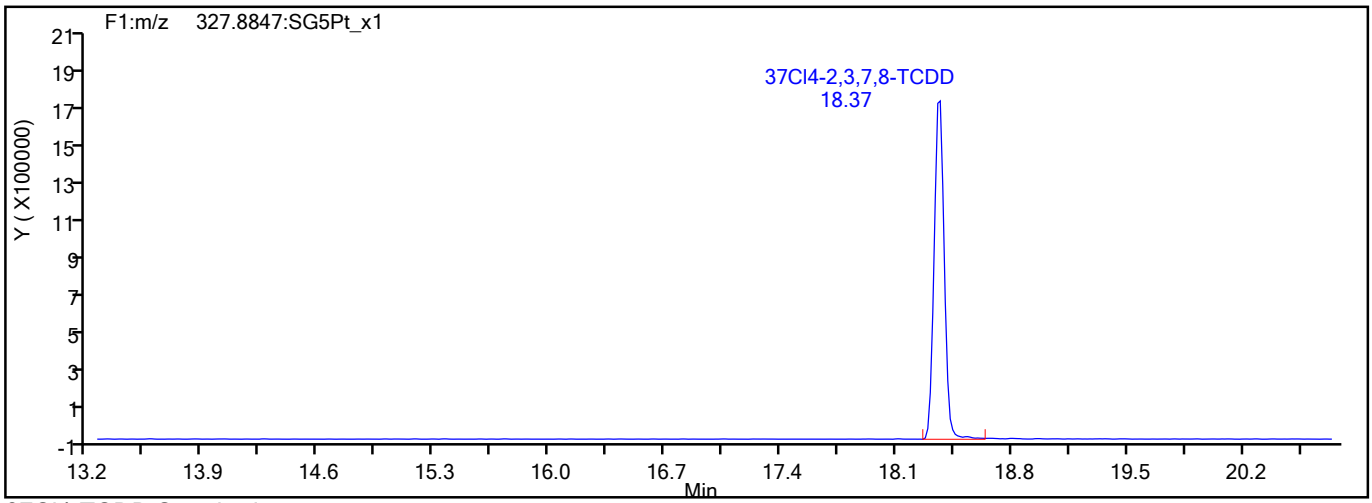

37Cl4-TCDD Standards

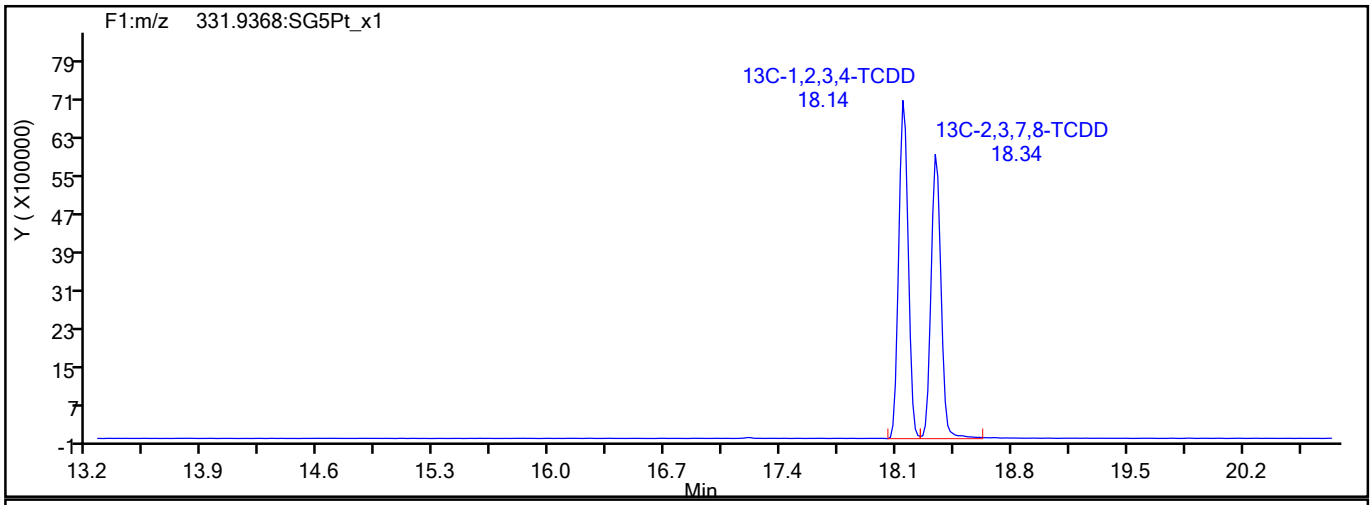

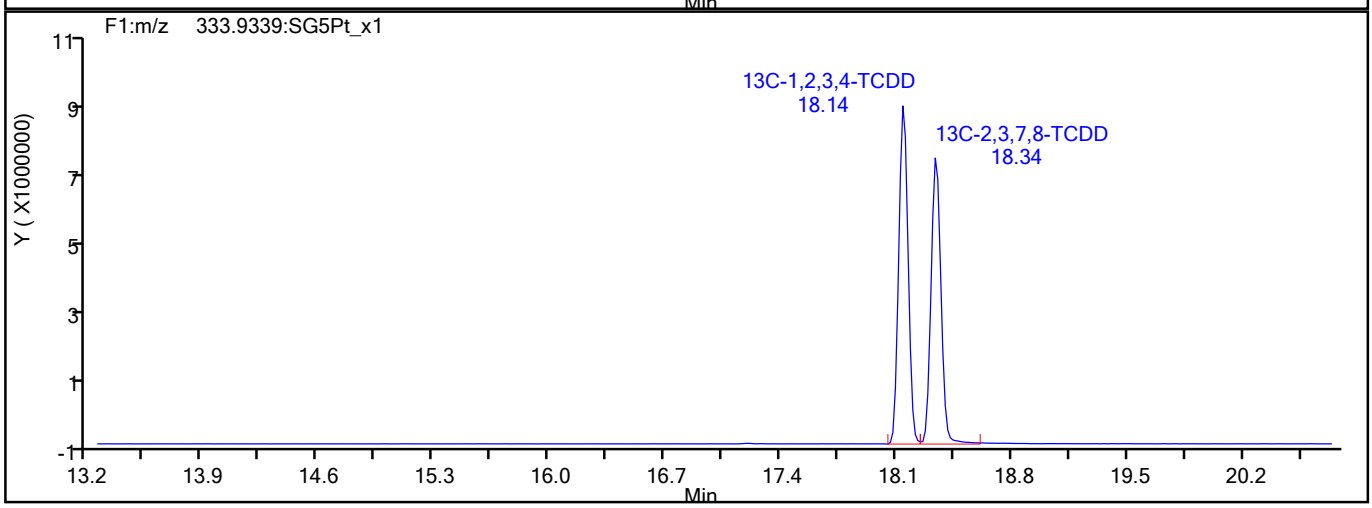

792466

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

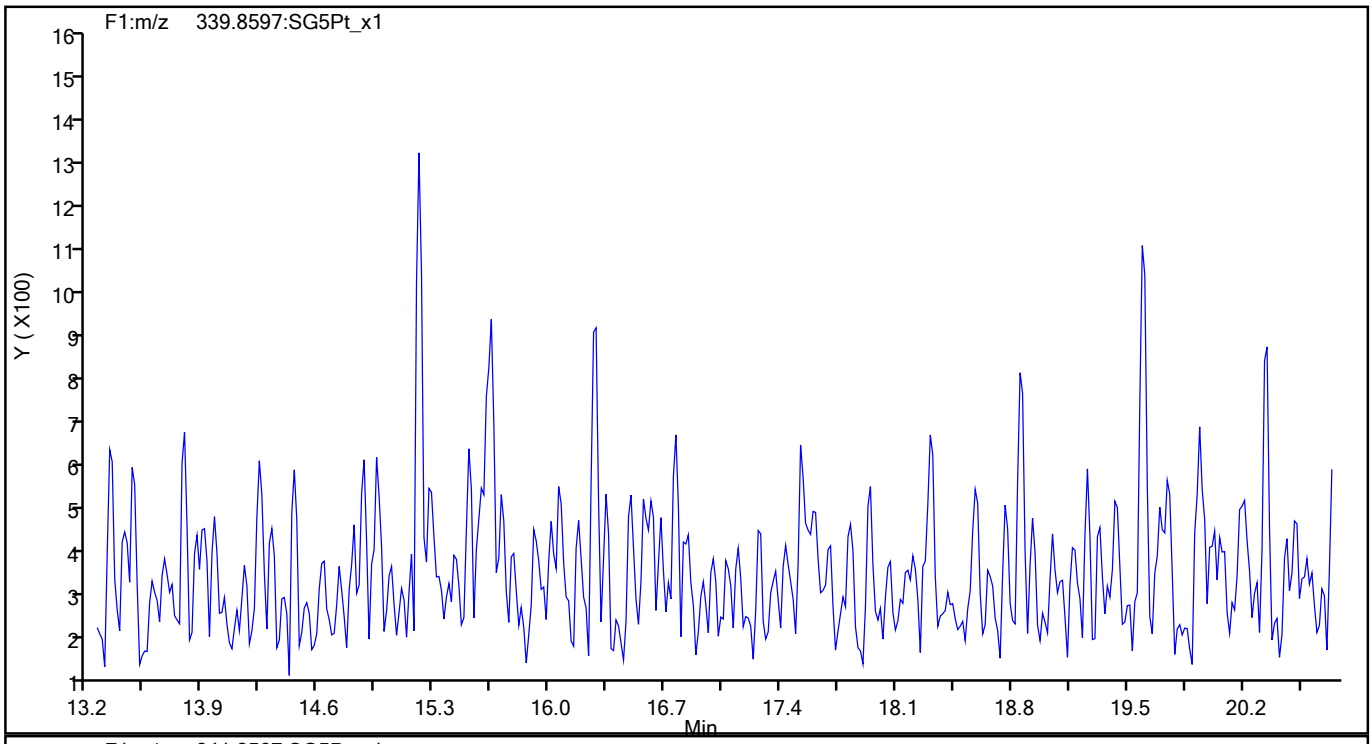

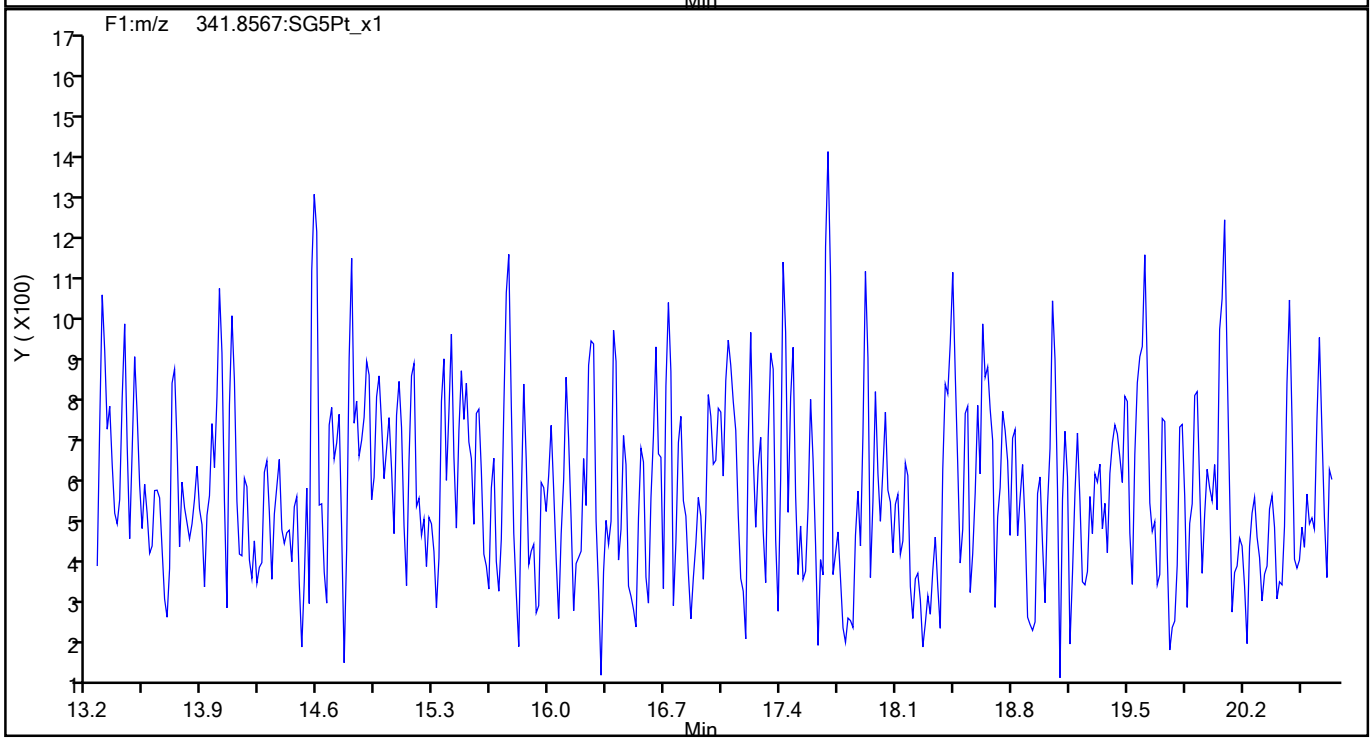

792467

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

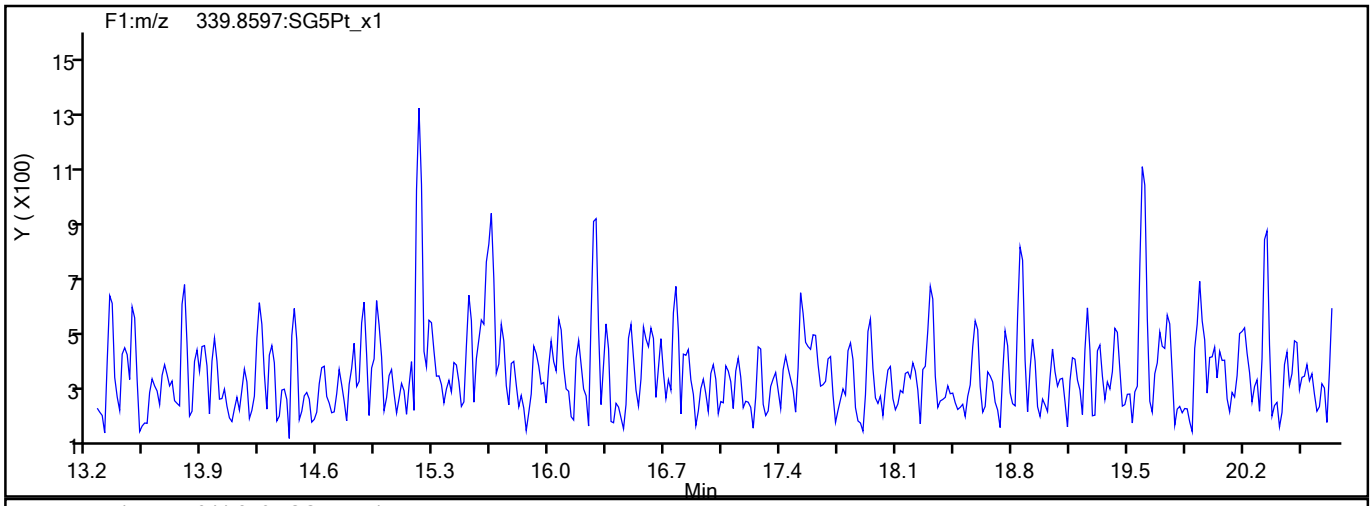

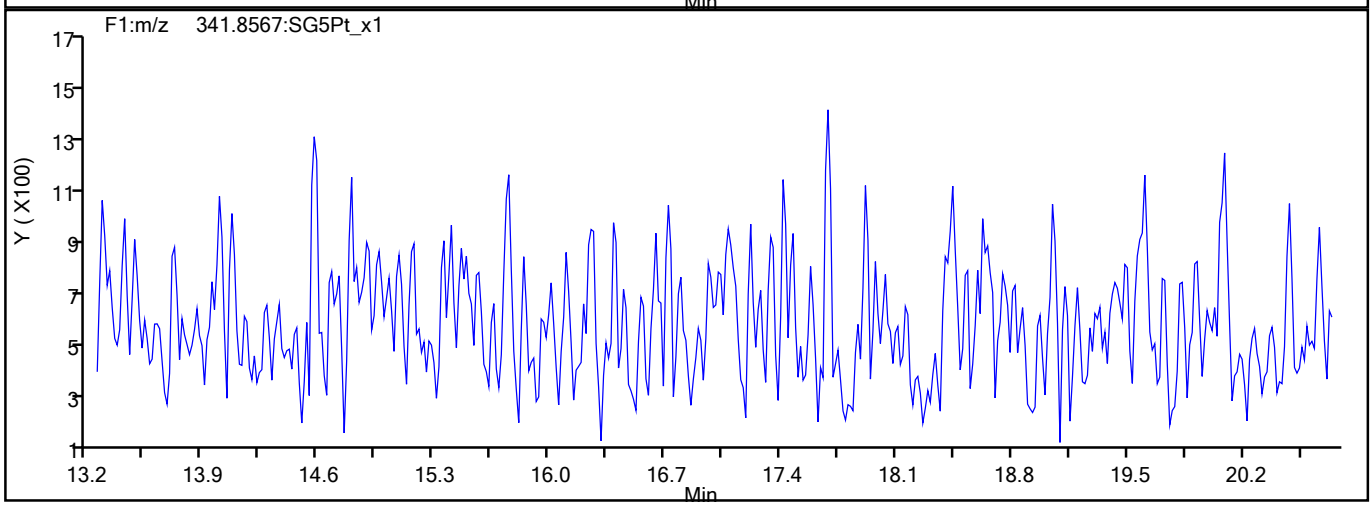

F1 PeCDFs Interference Mass

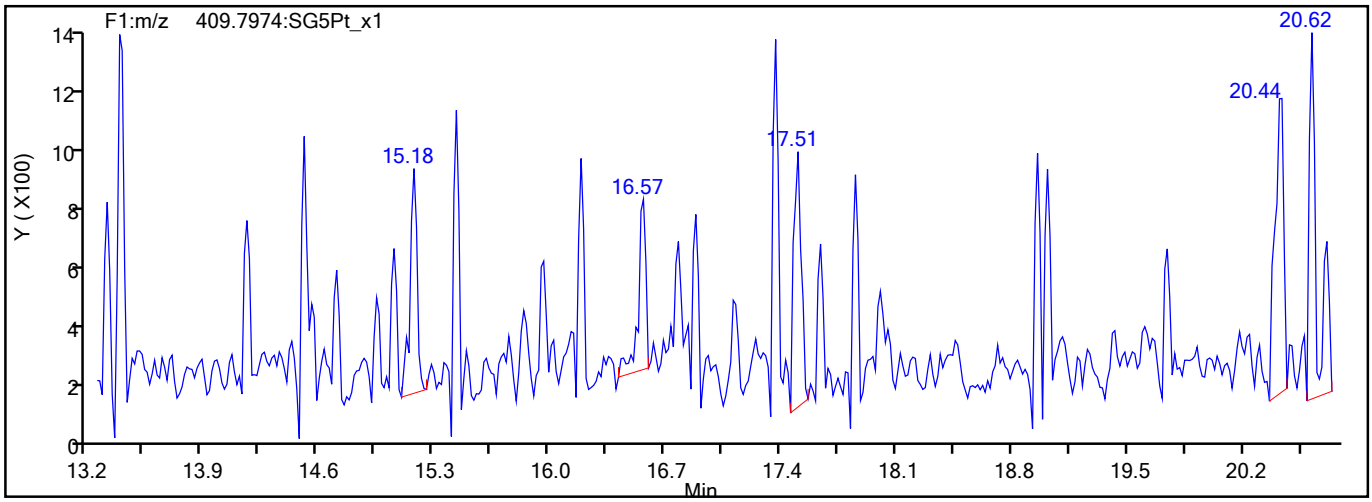

792468

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

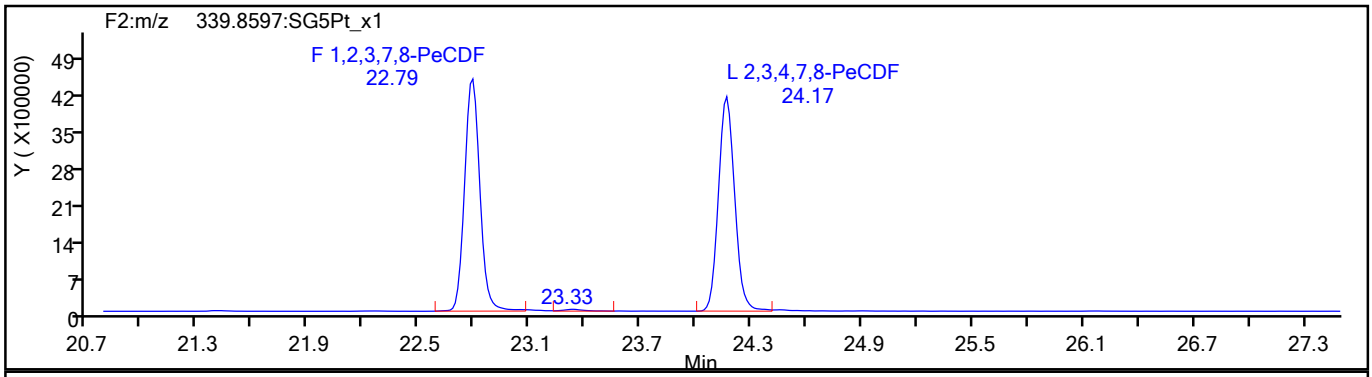

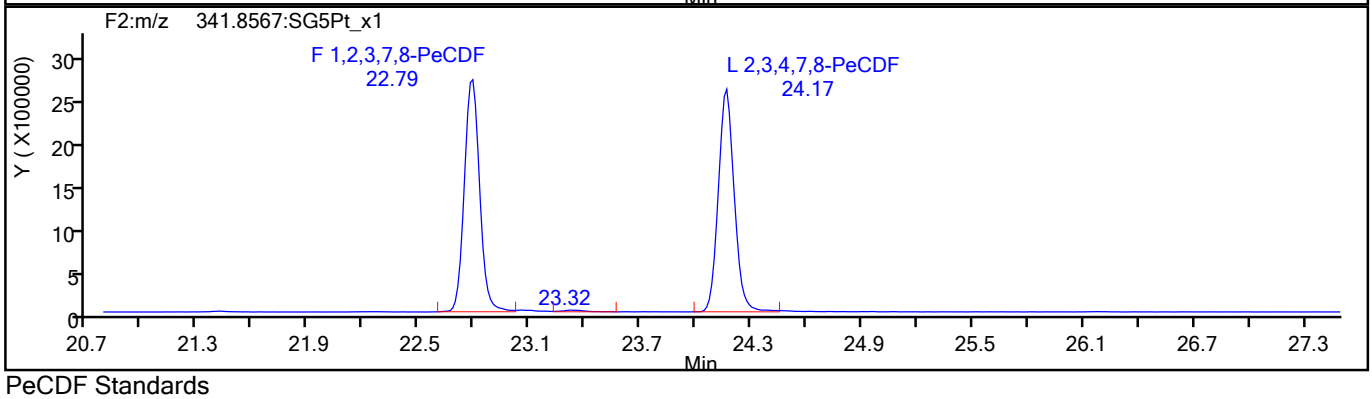

PeCDF Standards

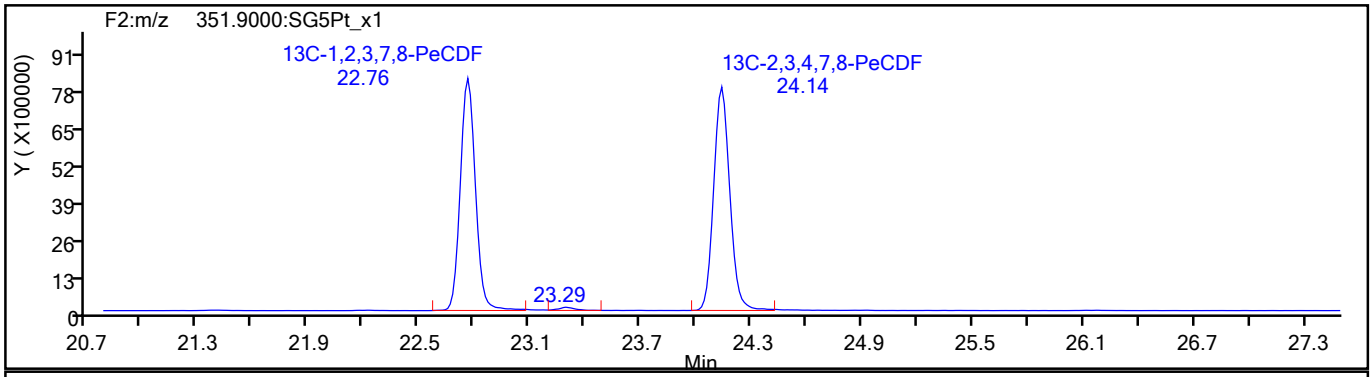

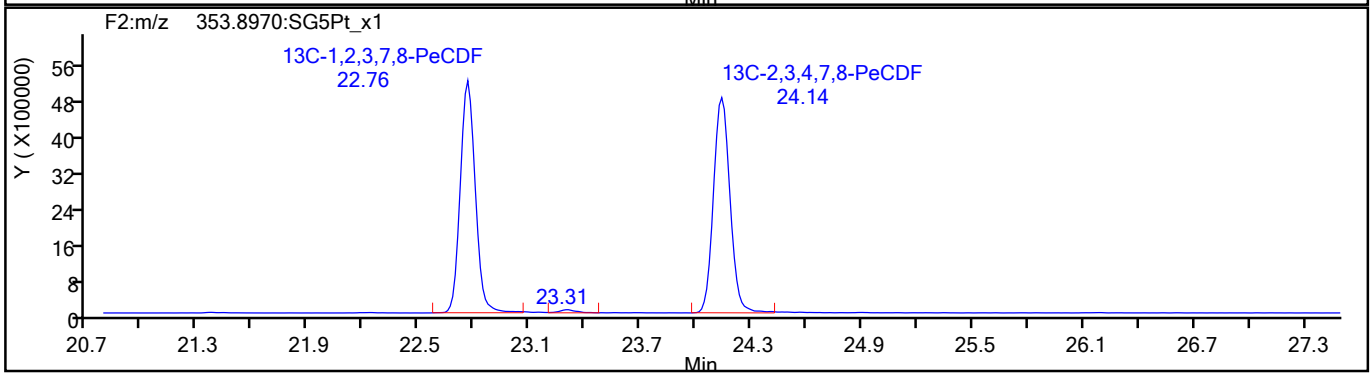

792469

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

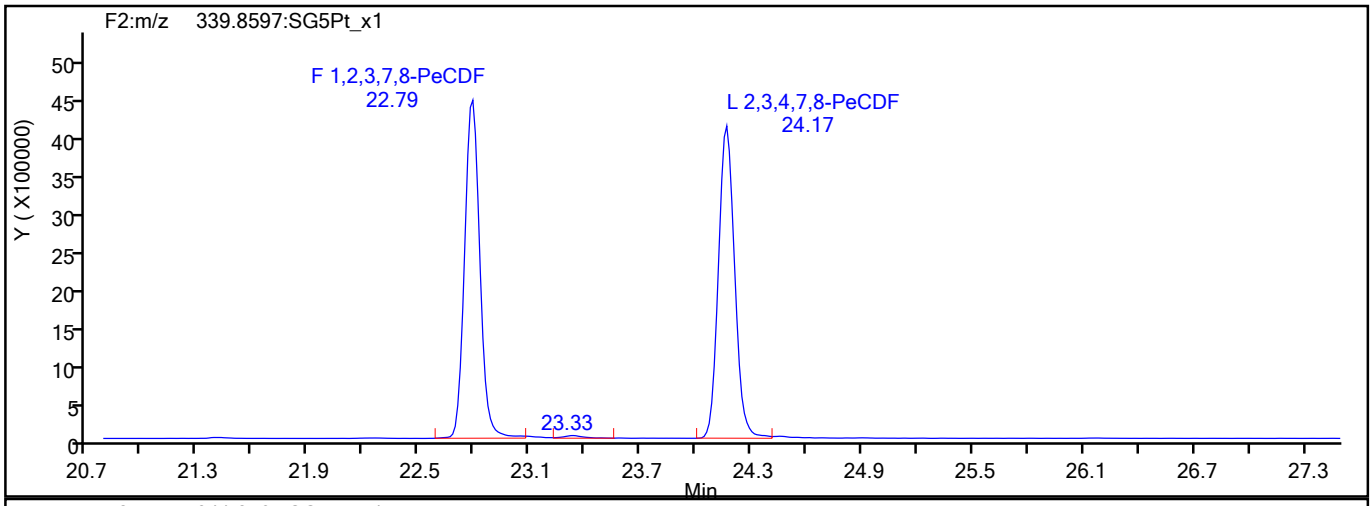

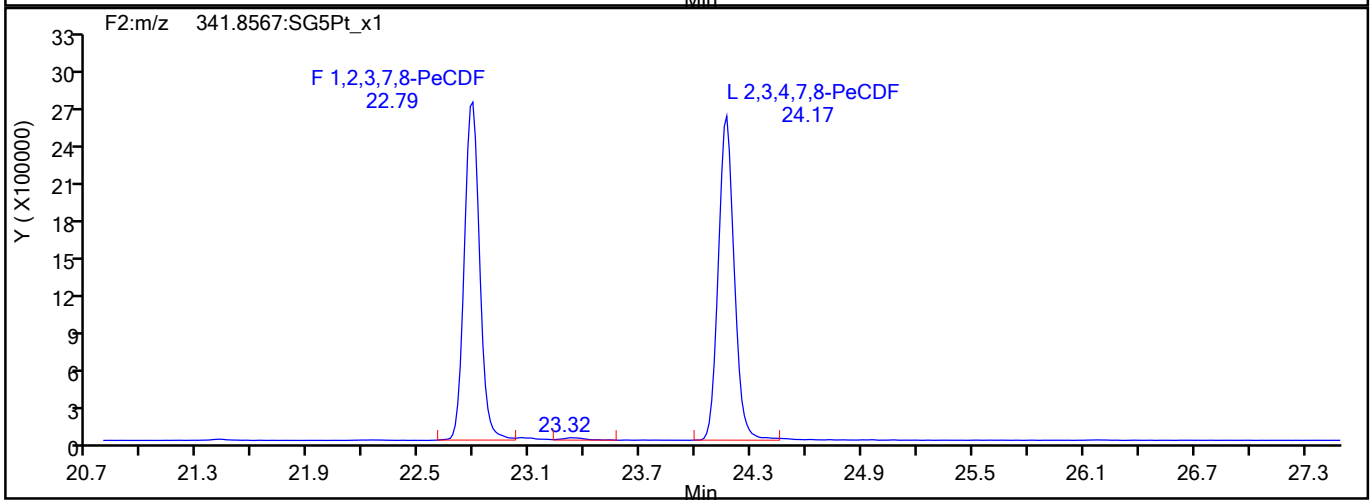

PeCDF Interference Mass

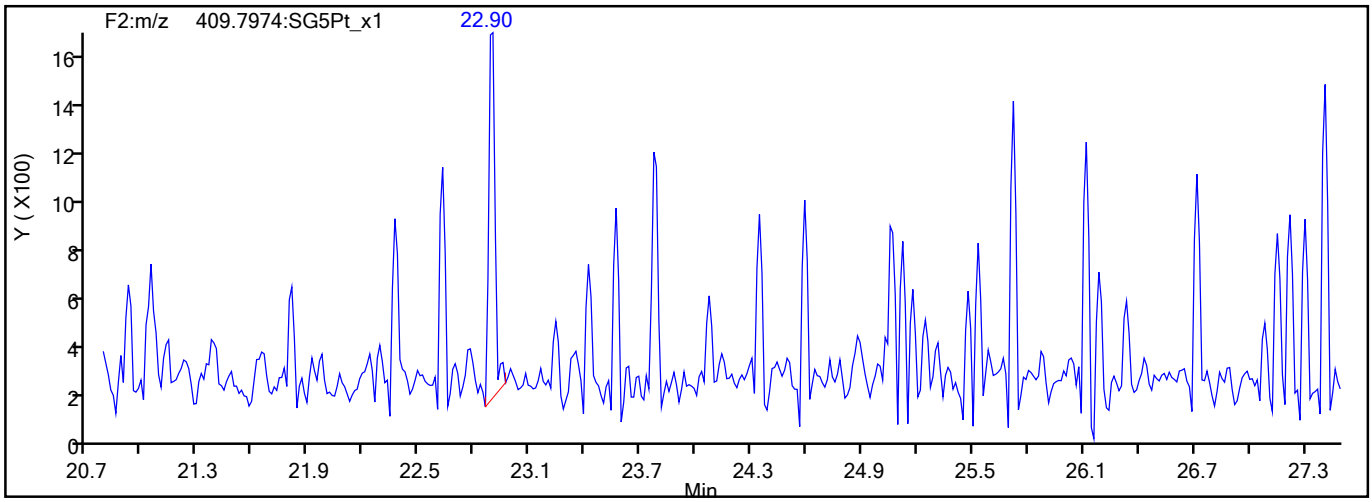

792470

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

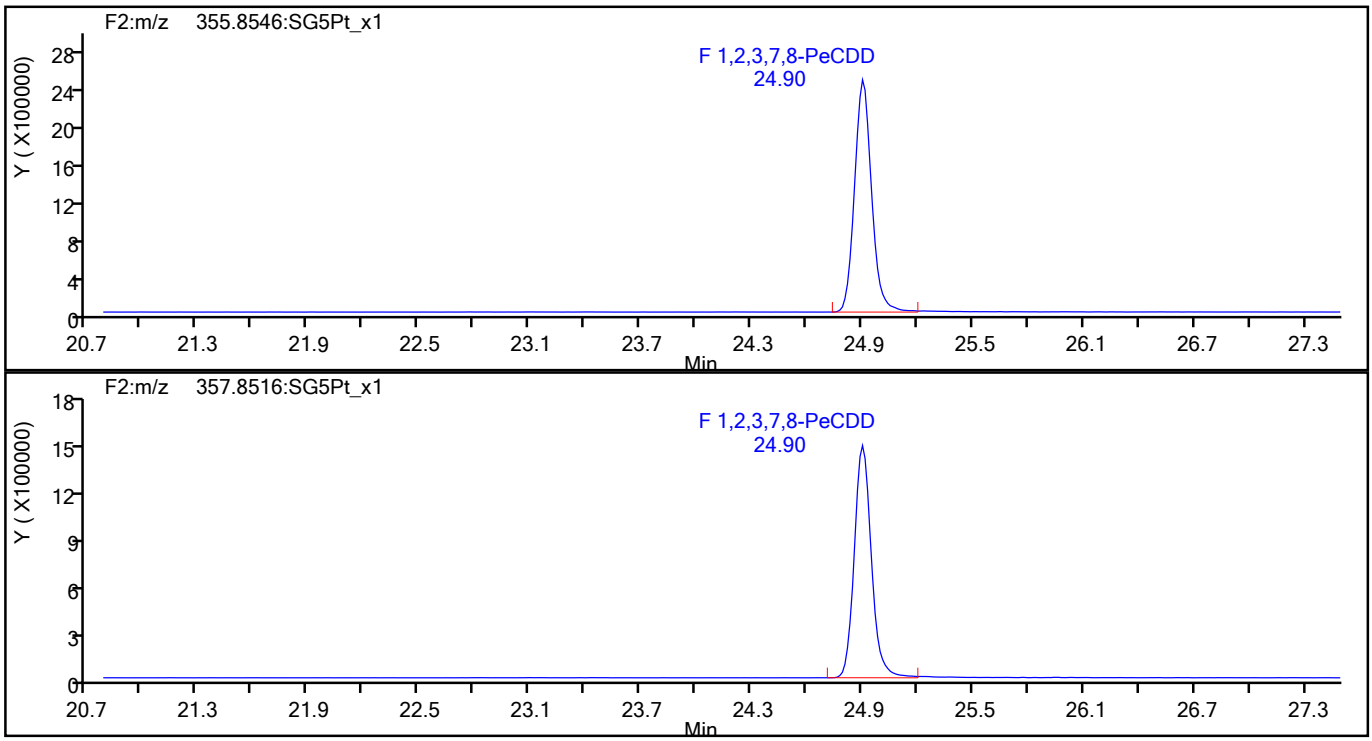

PeCDD Standards

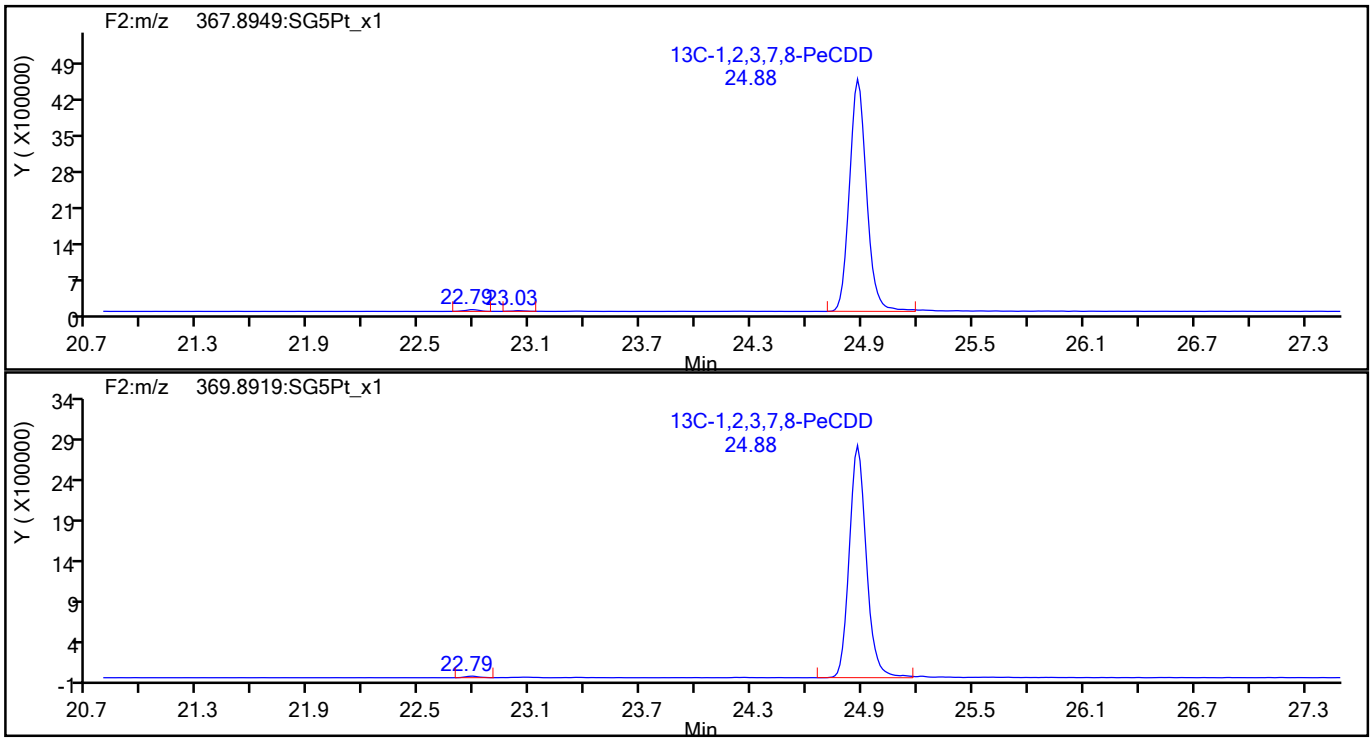

792471

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

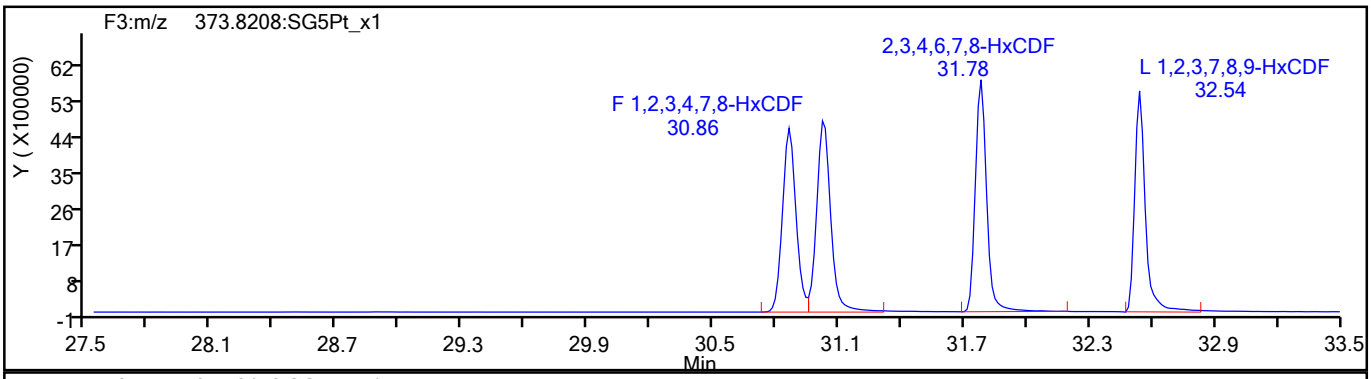

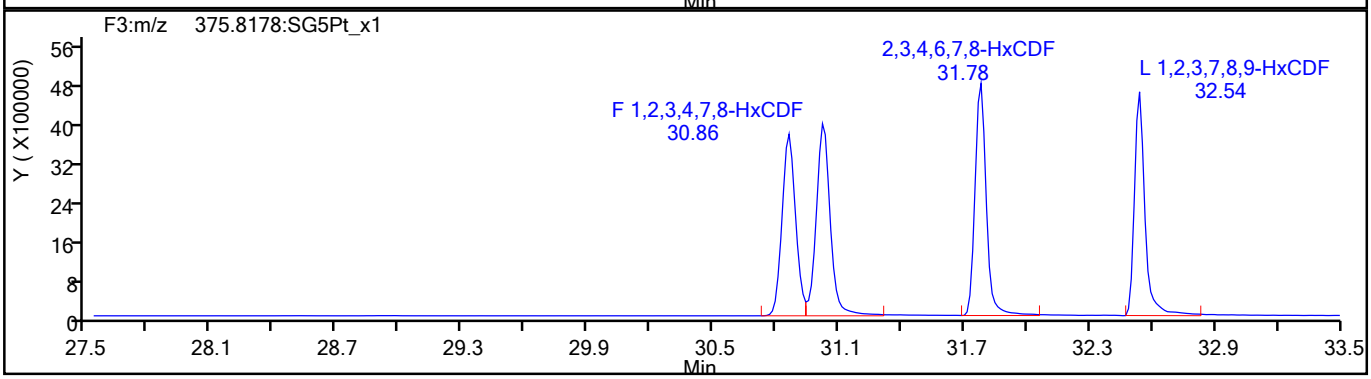

HxCDF Standards

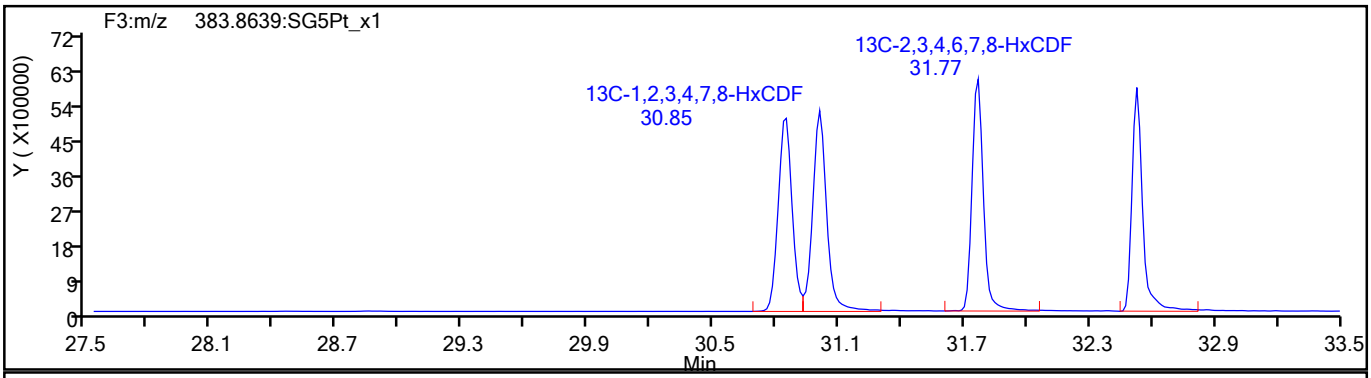

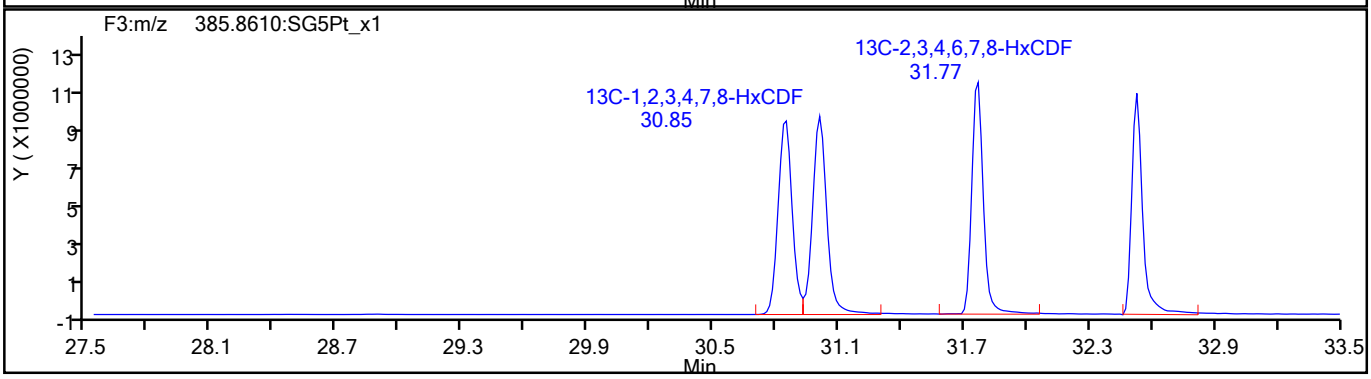

792472

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

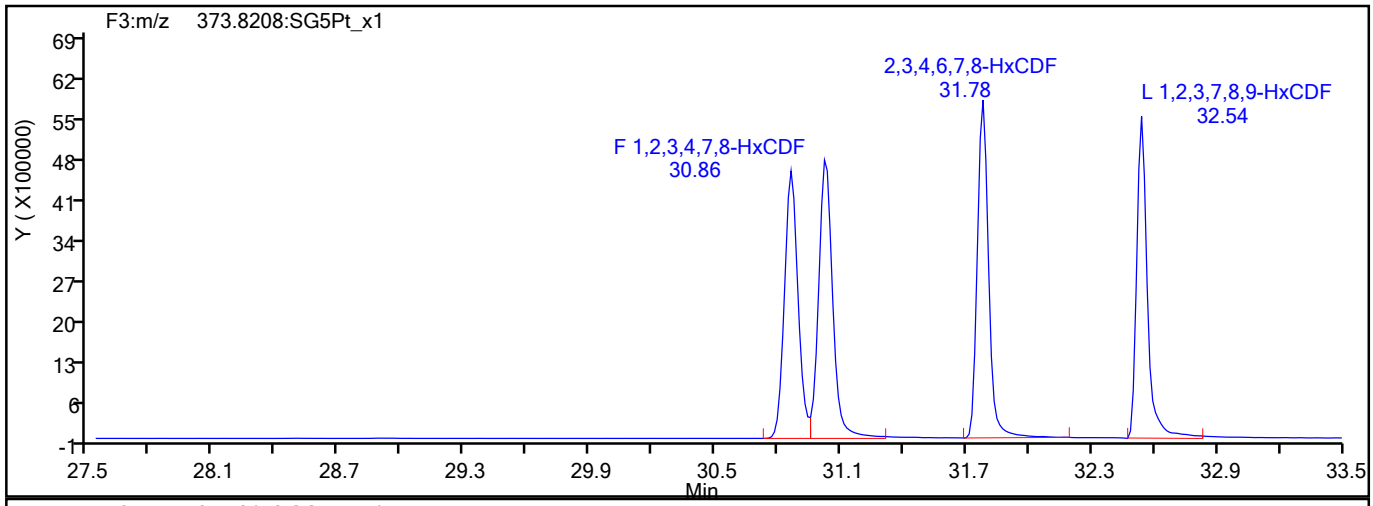

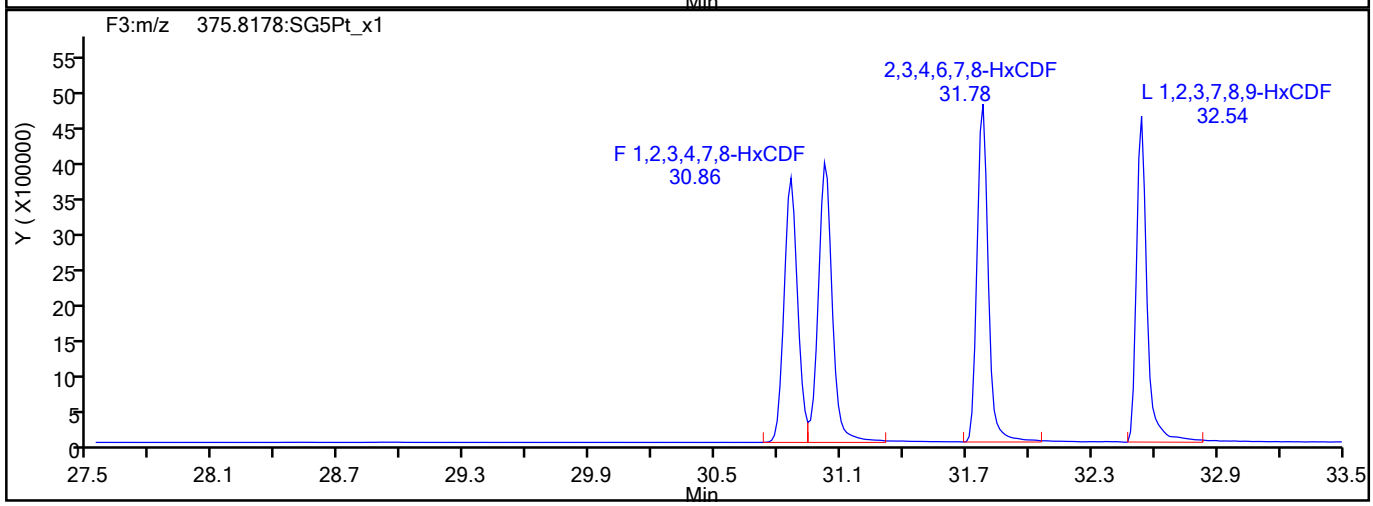

HxCDF Interference Mass

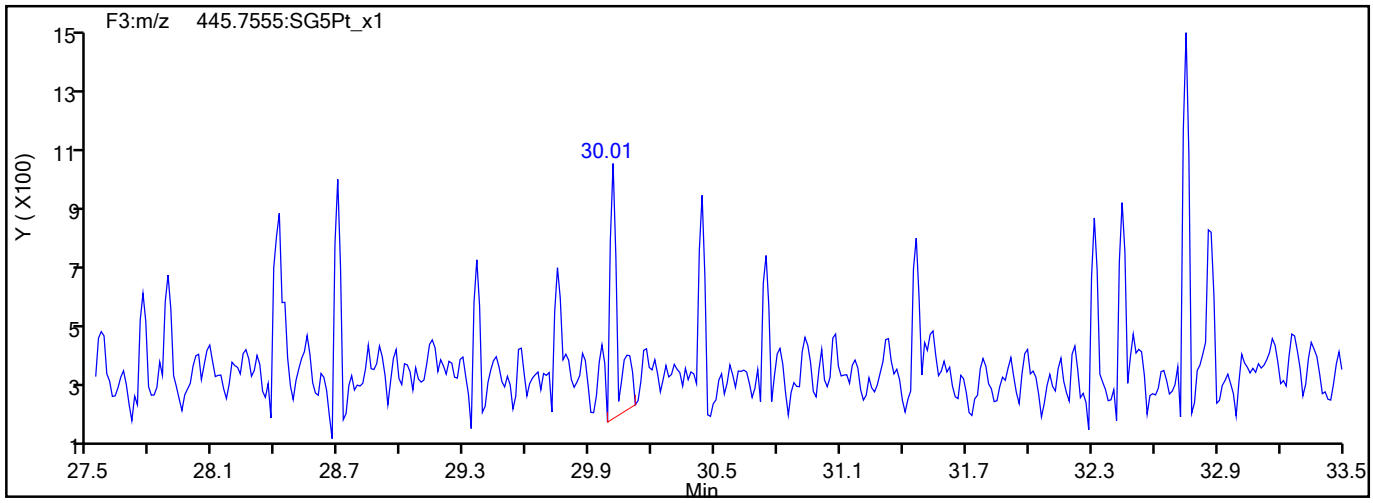

792473

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

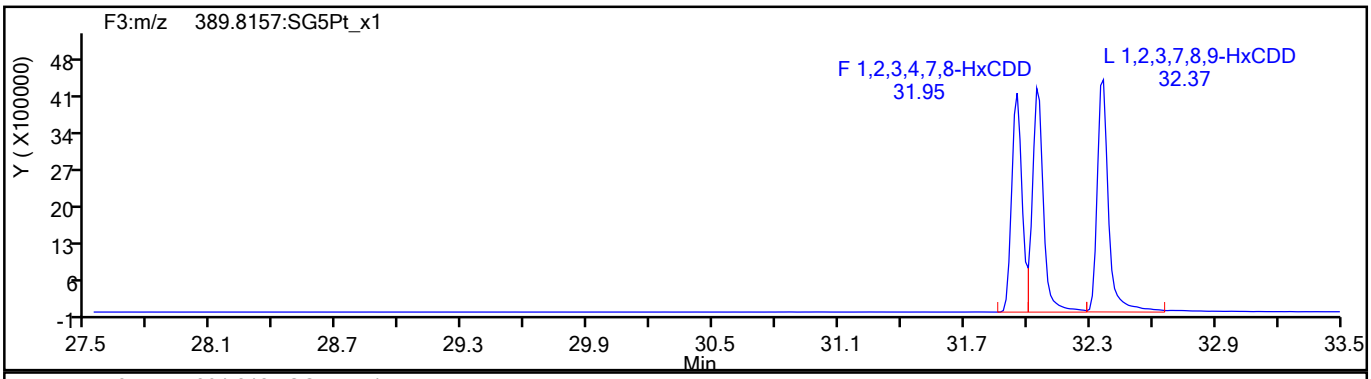

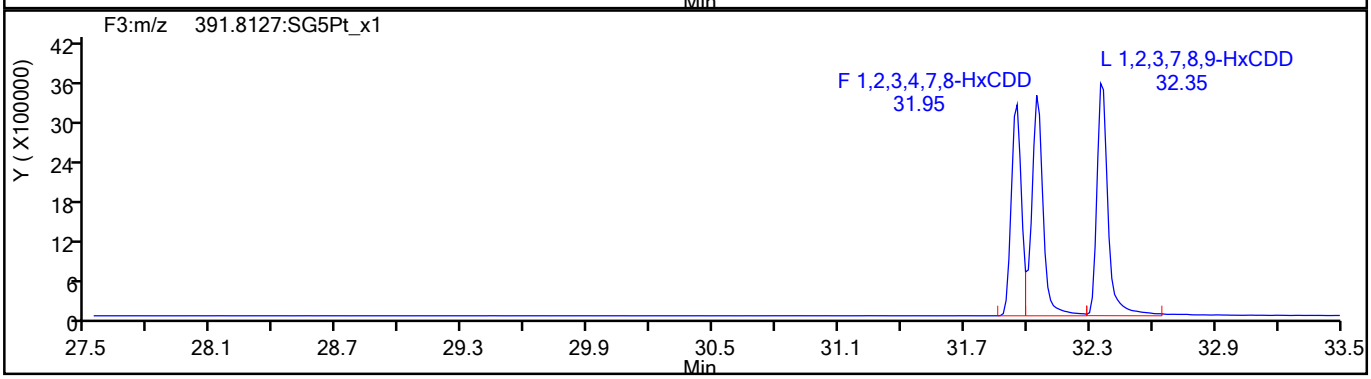

HxCDD Standards

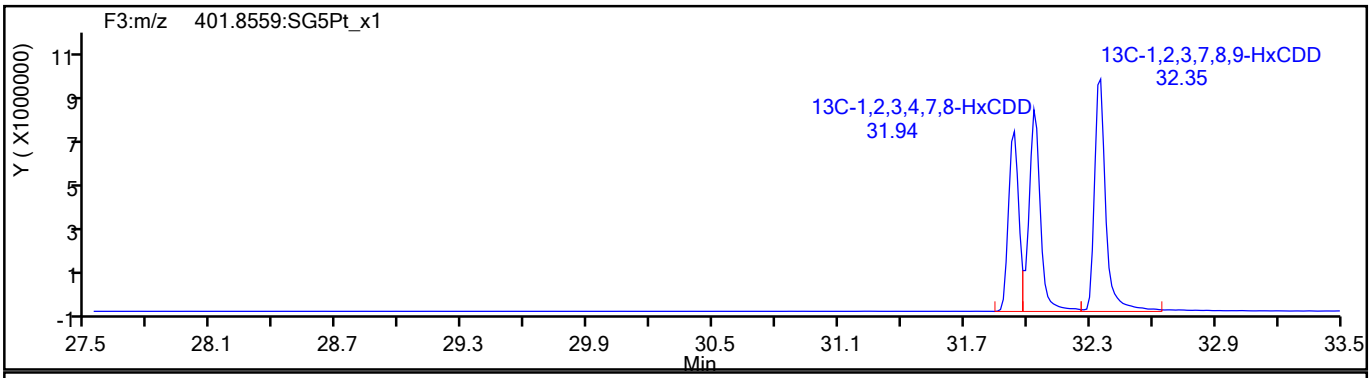

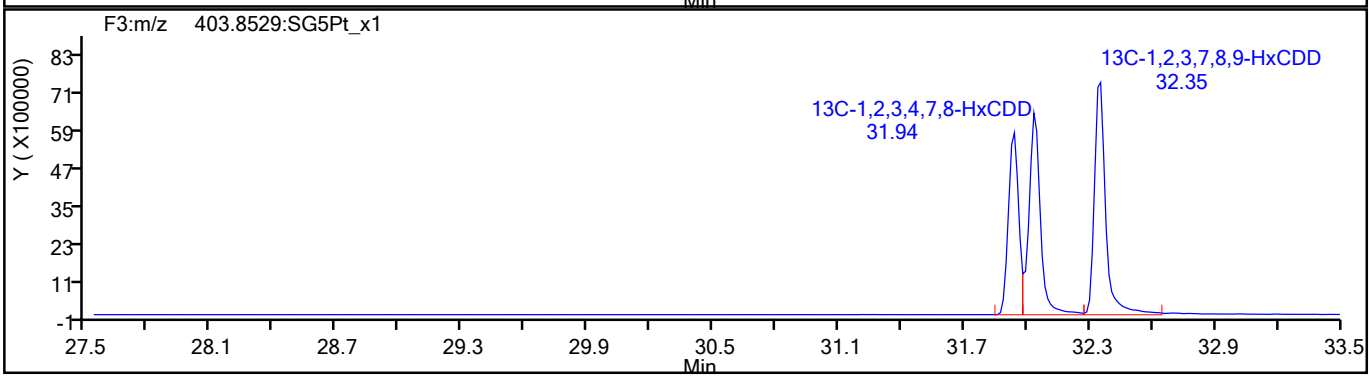

792474

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

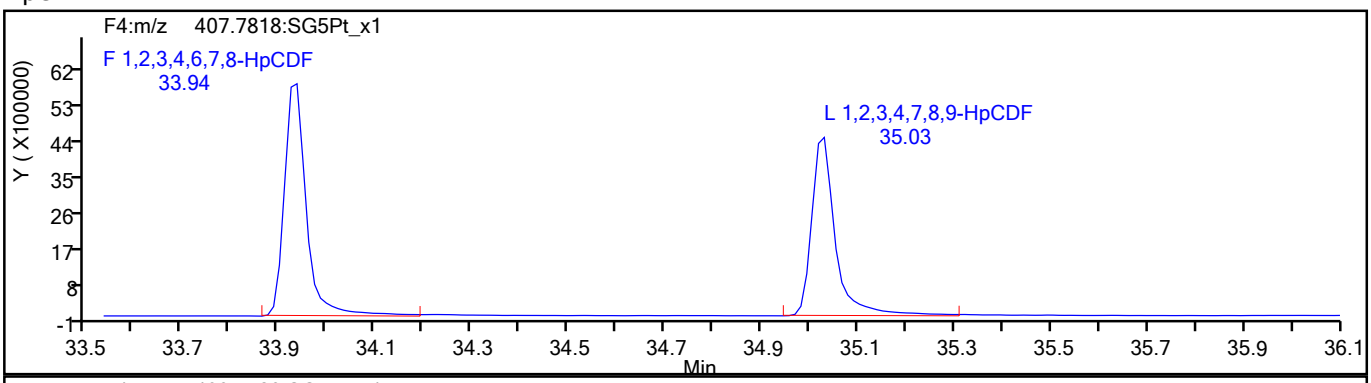

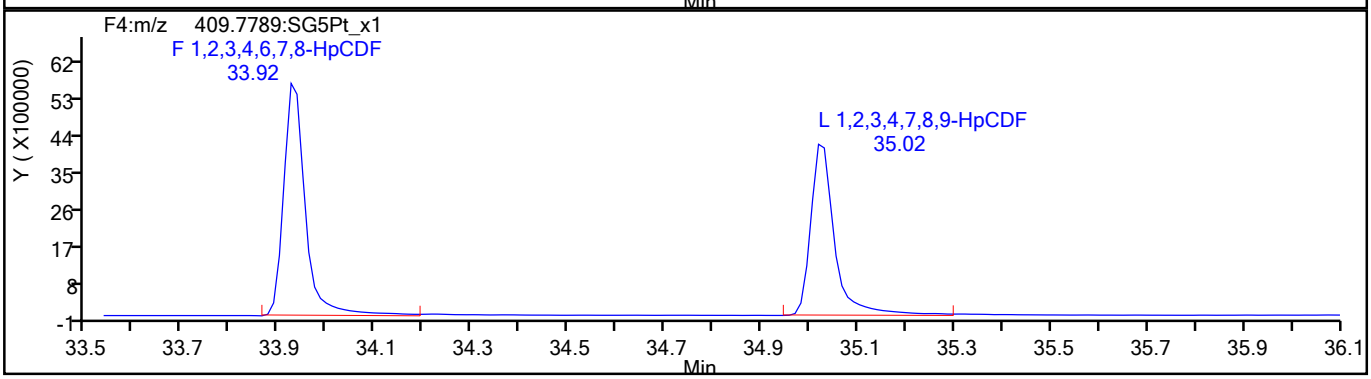

HpCDF Standards

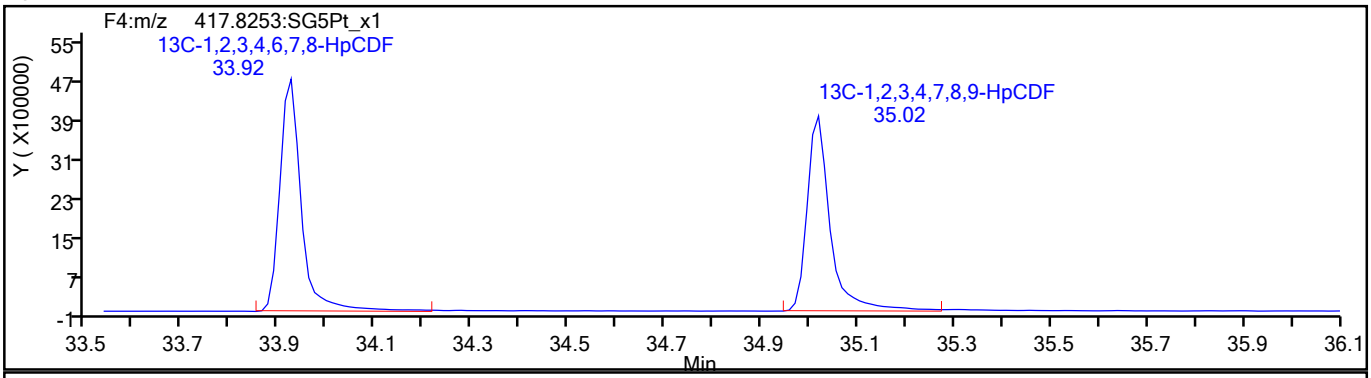

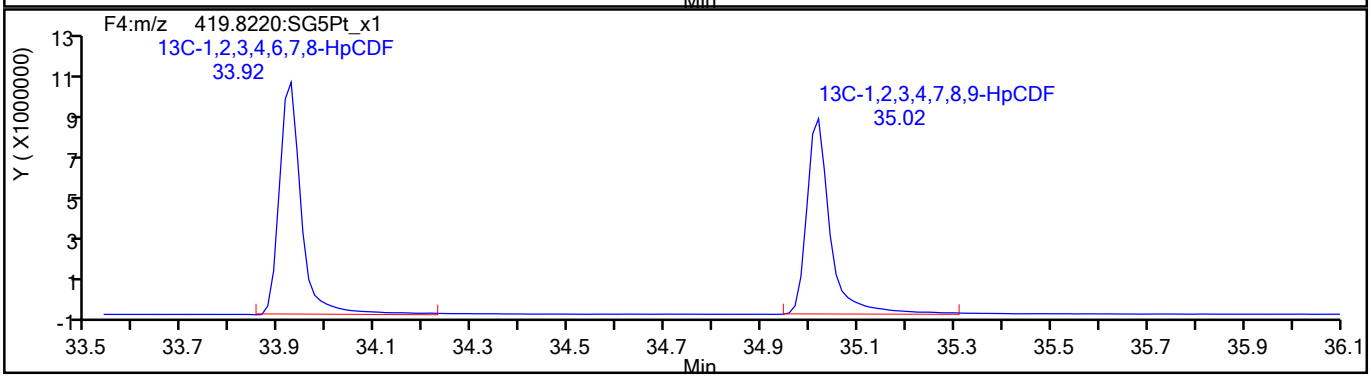

792475

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

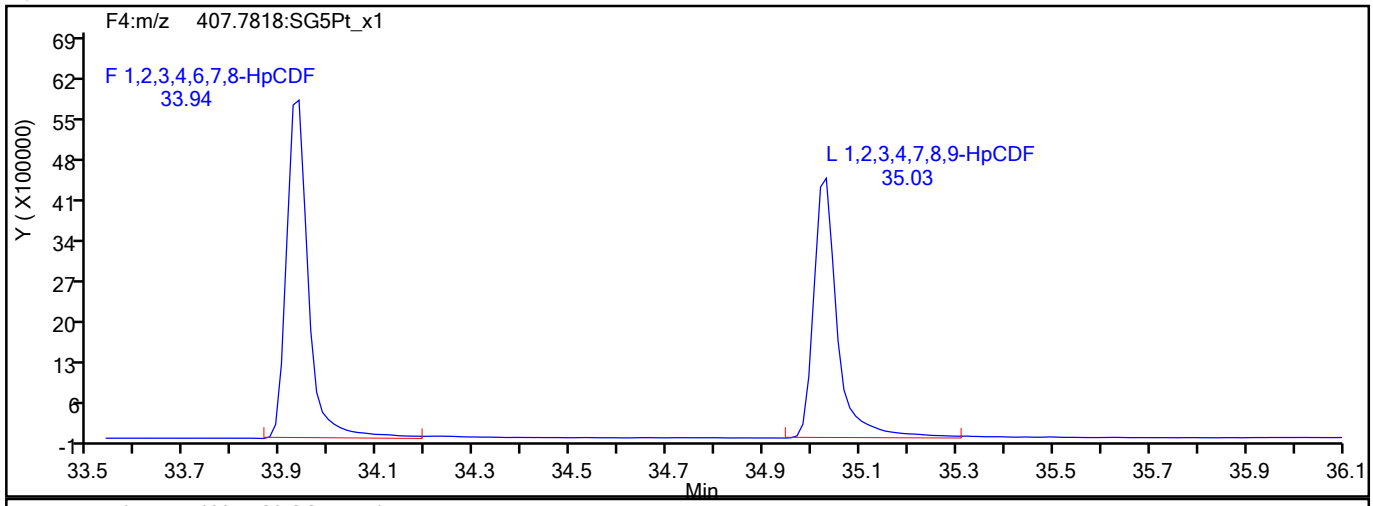

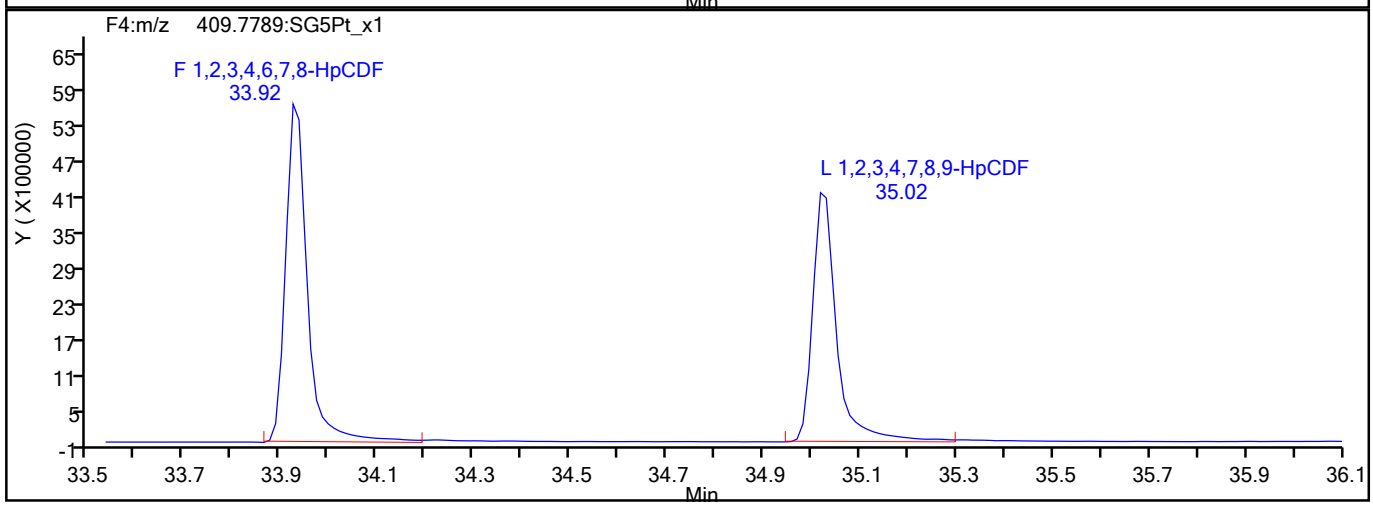

HpCDF Interference Mass

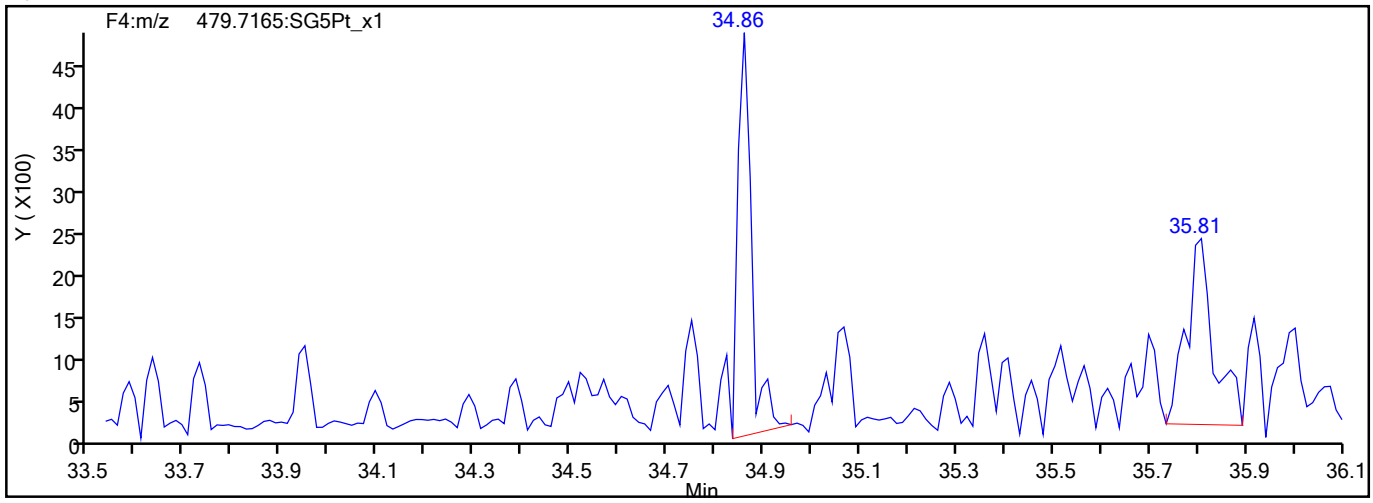

792476

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

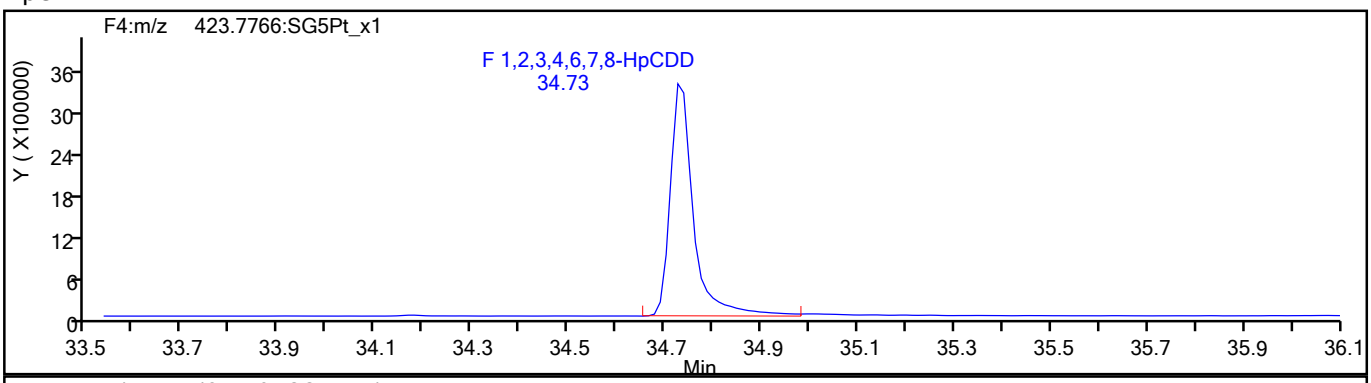

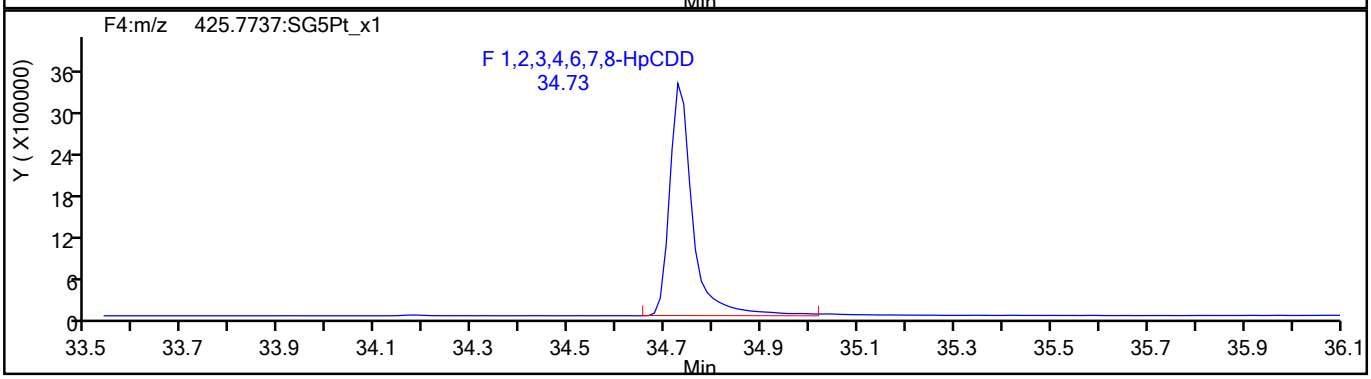

HpCDD Standards

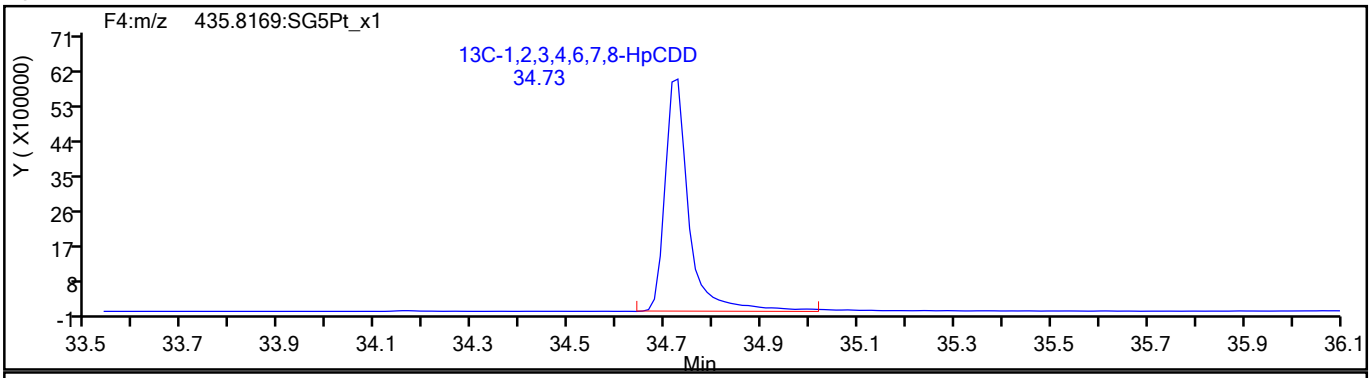

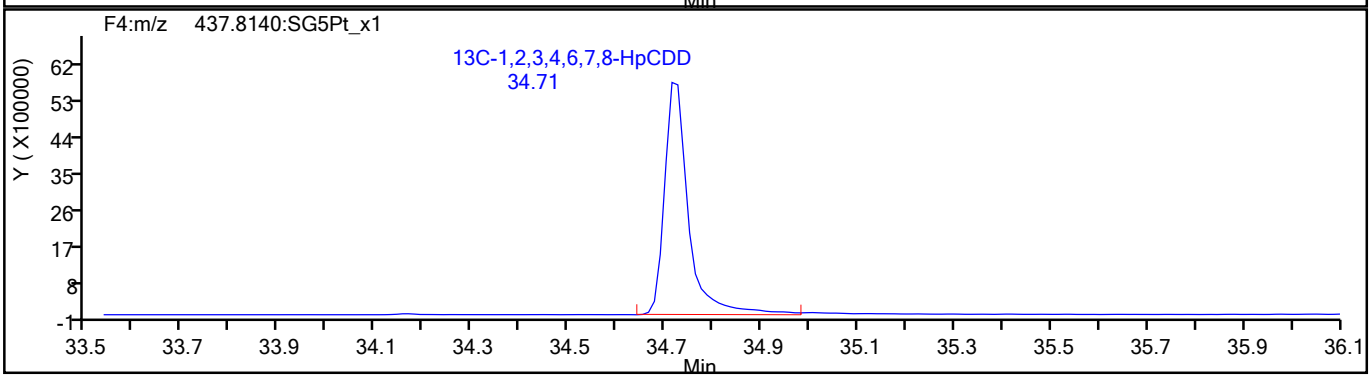

792477

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

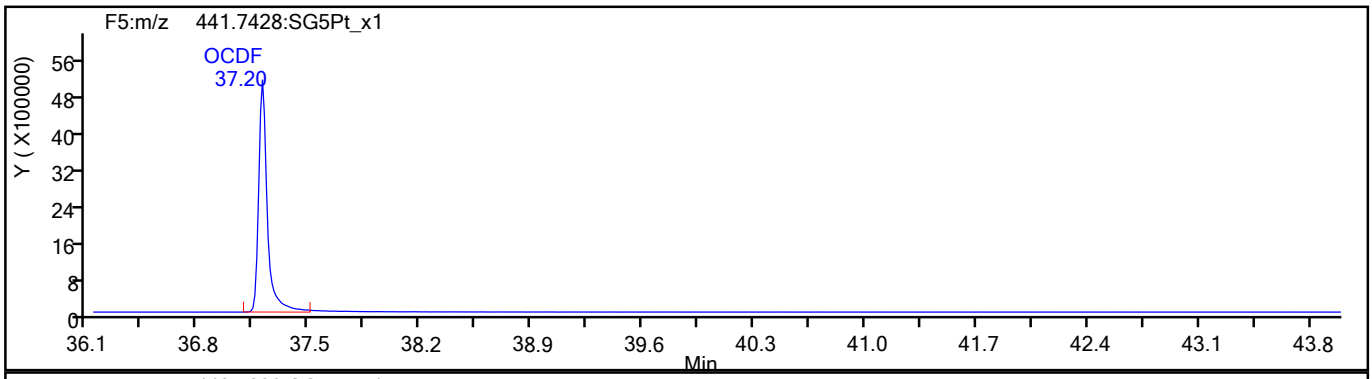

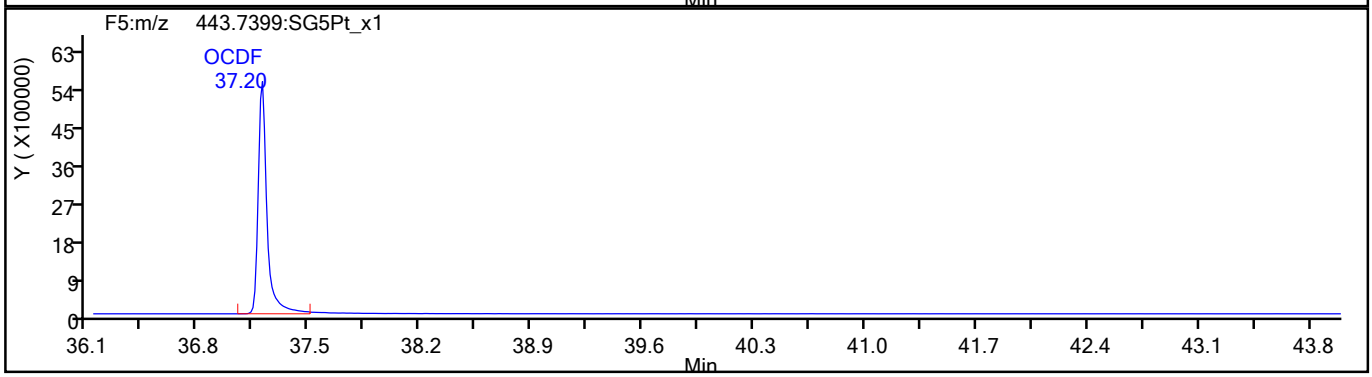

OCDF Standards

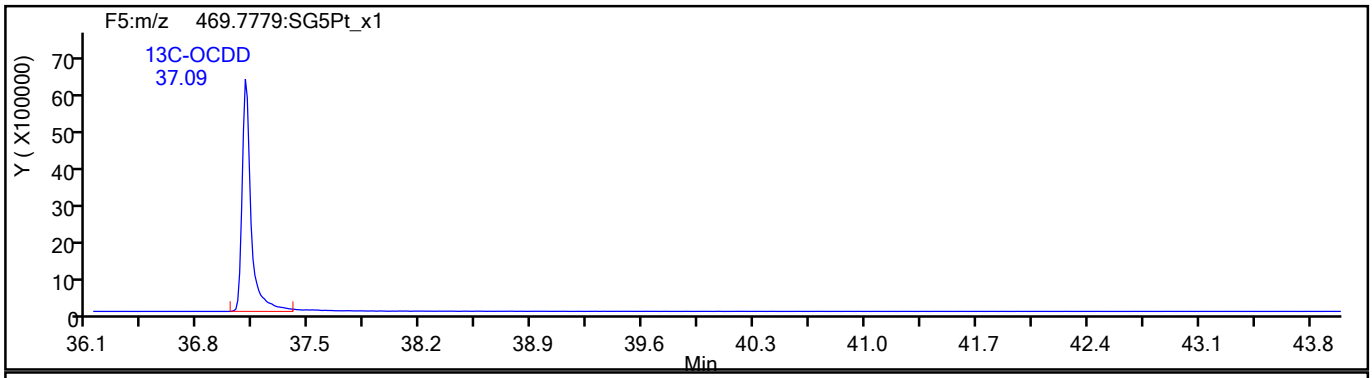

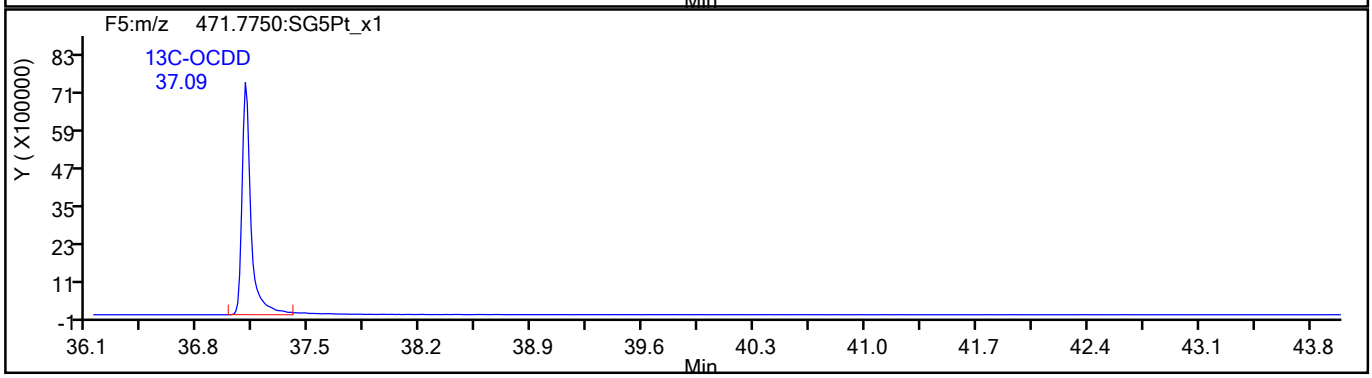

792478

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

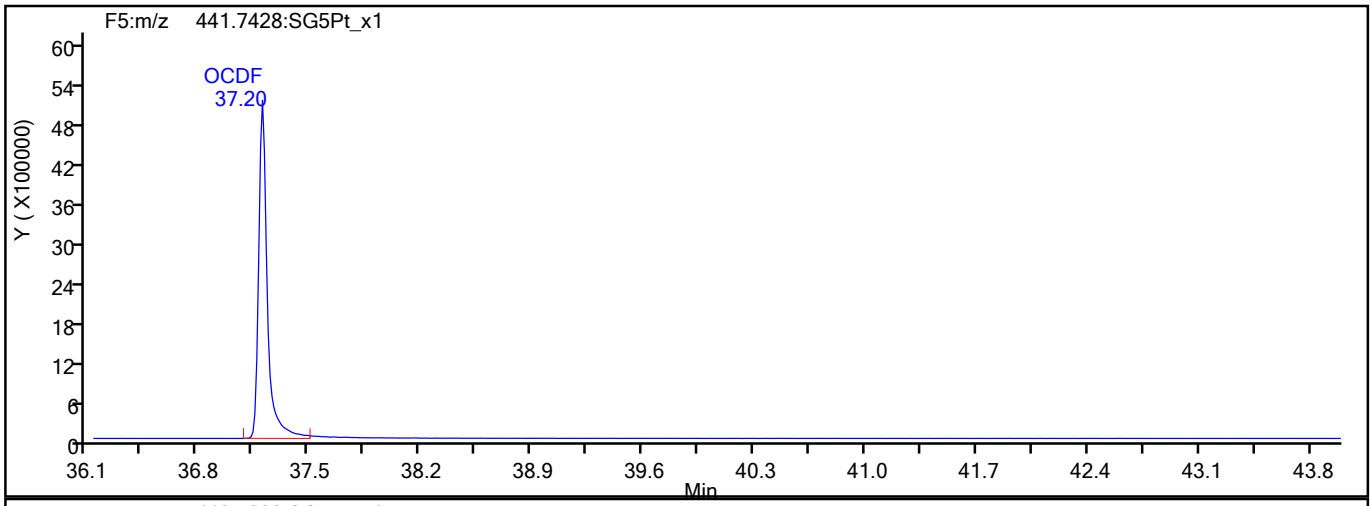

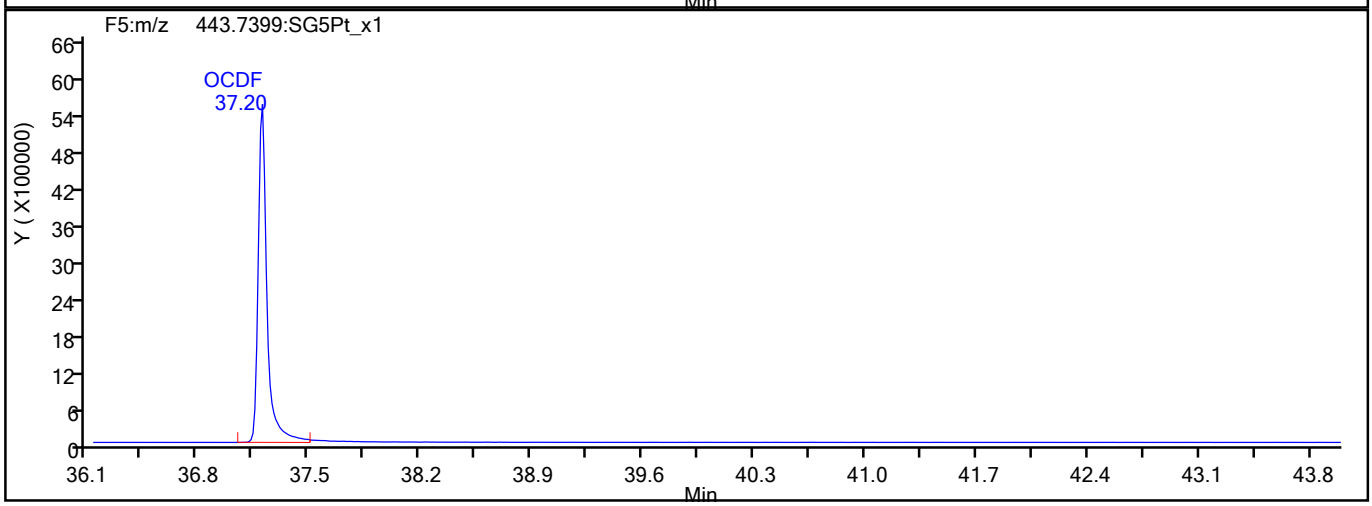

OCDF Interference Mass

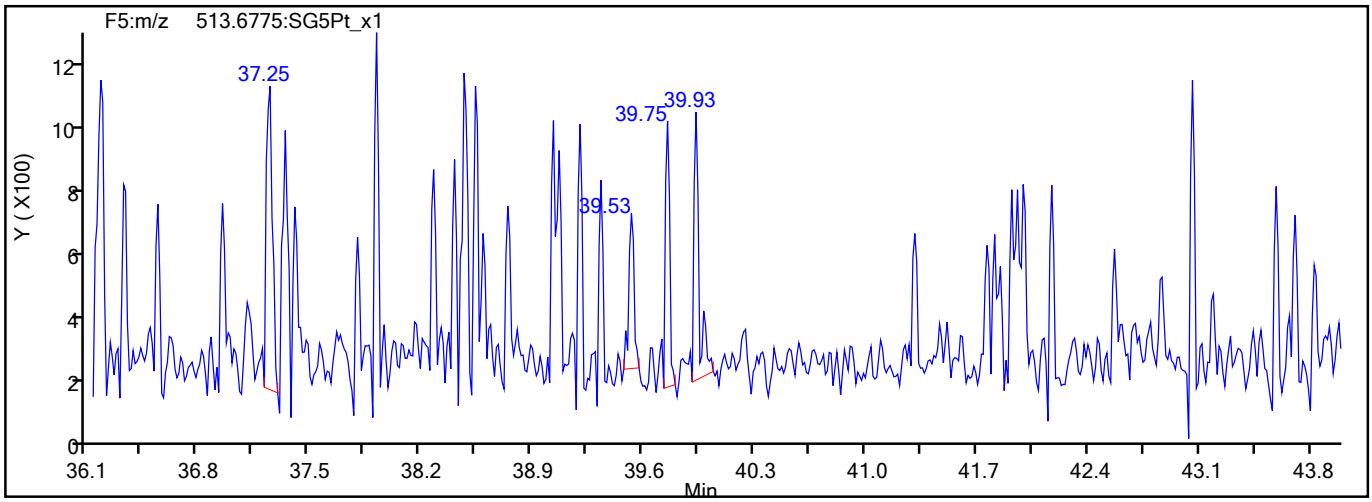

792479

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

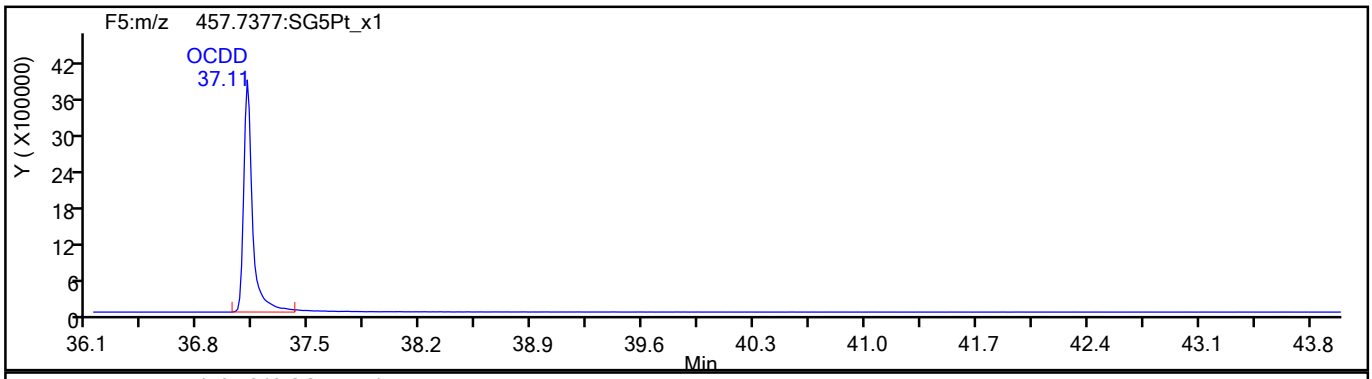

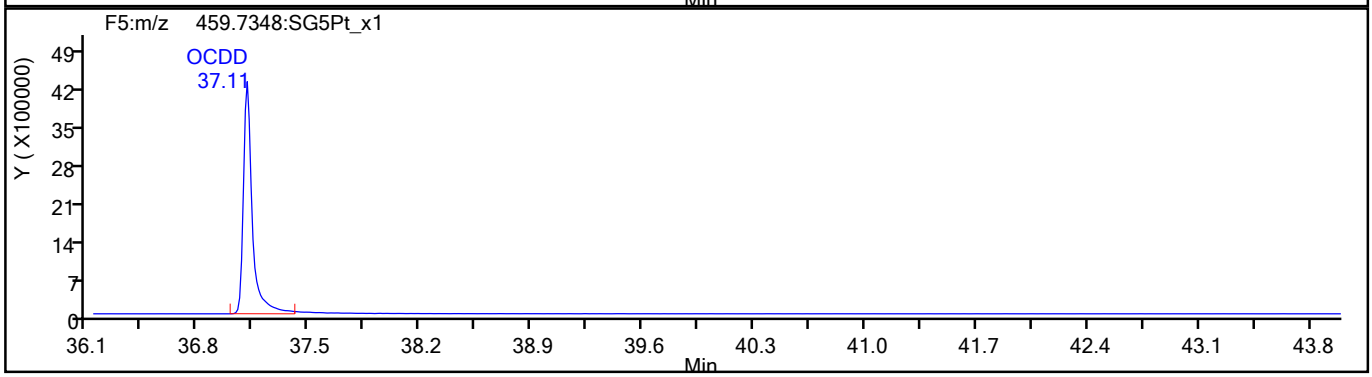

OCDD Standards

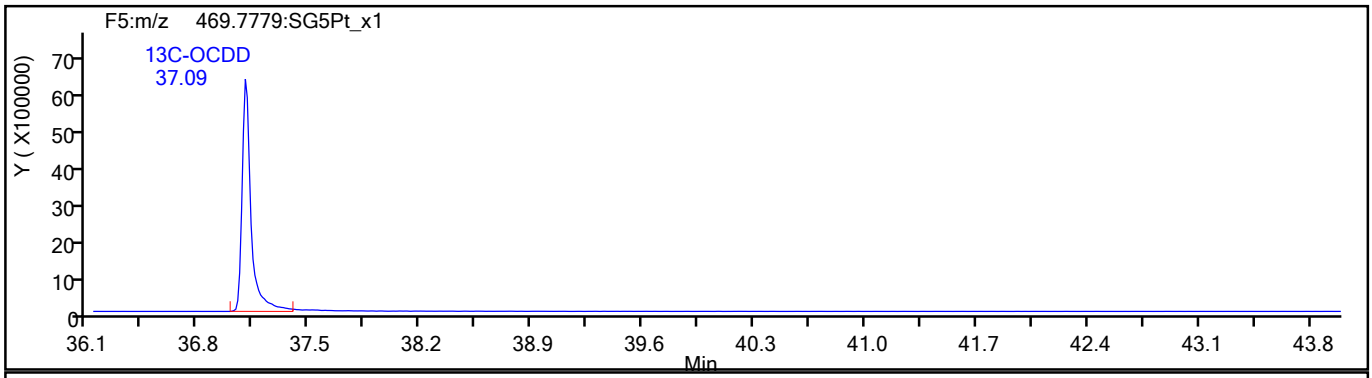

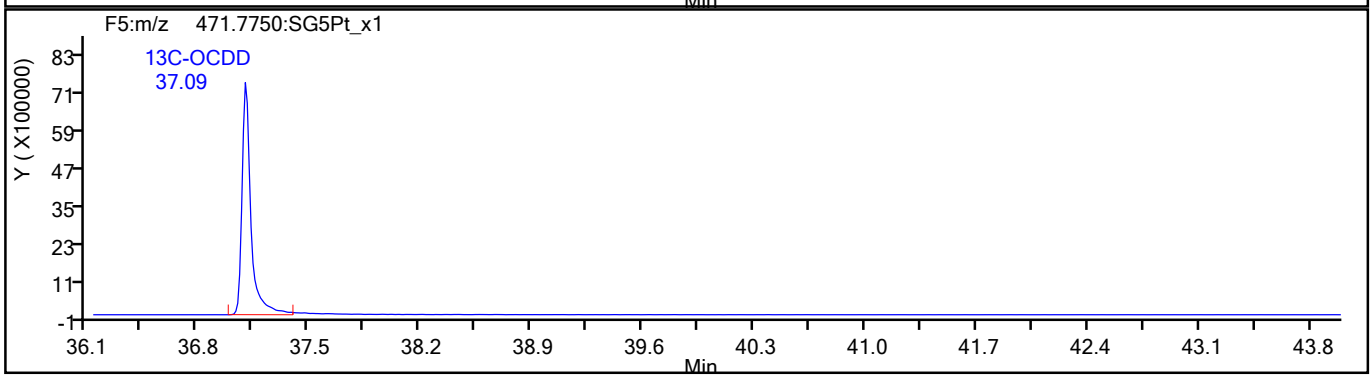

792480

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

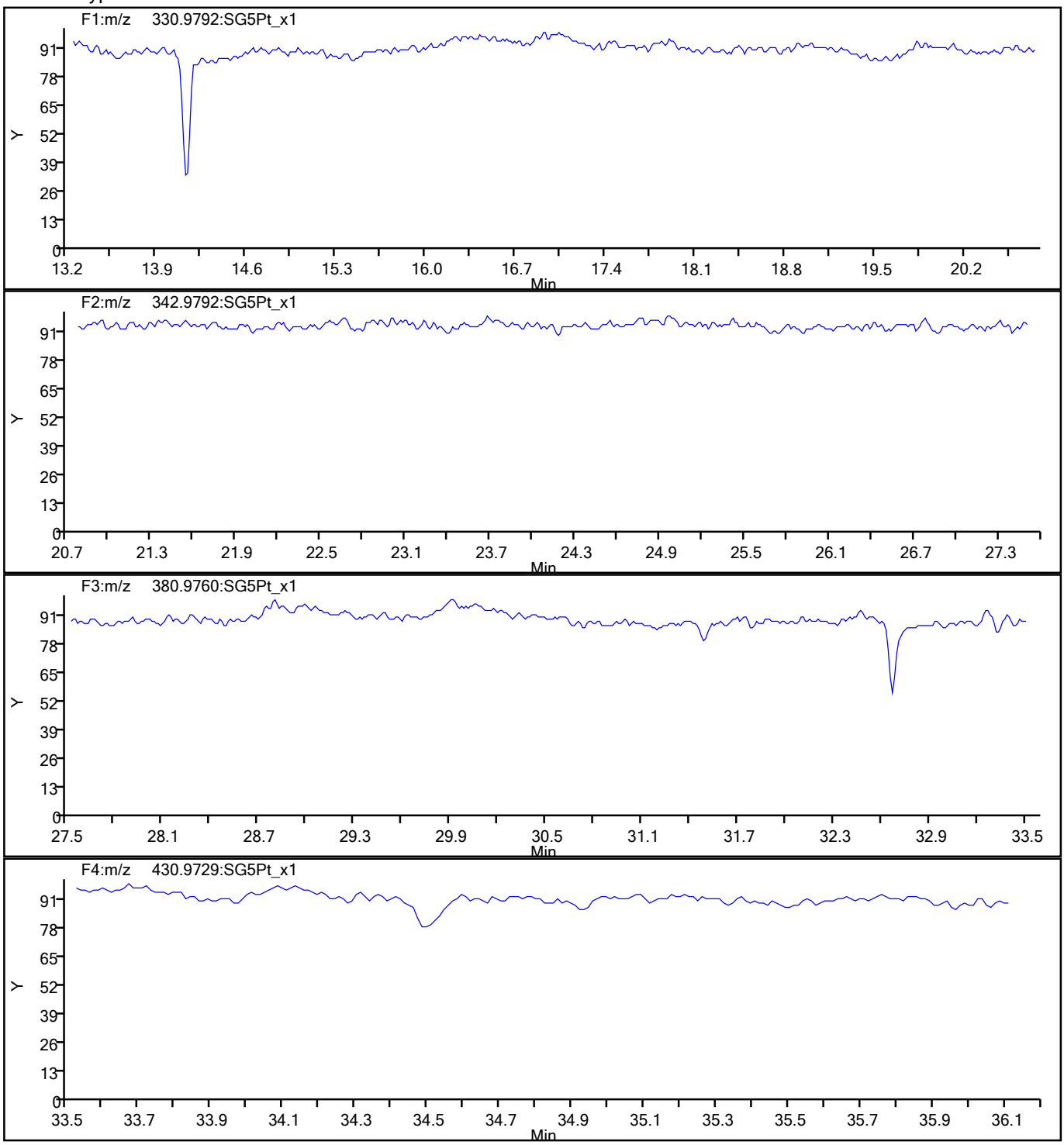

792481

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

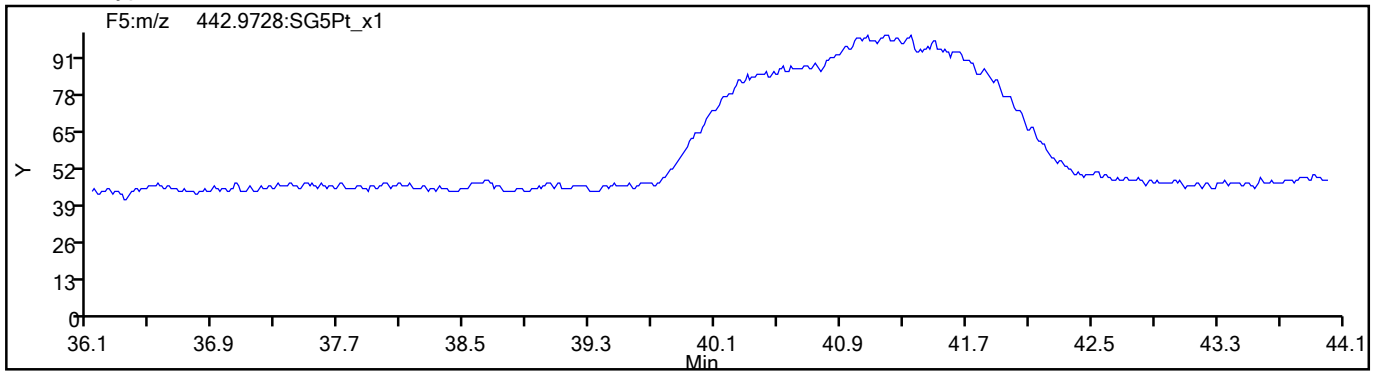

792482

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62046988	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	100332269	0.78	1.6249	99.5	99.5	0.1367	0.1367	99.52	
2,3,7,8-TCDF	17.628	44524782	0.76	1.0239	43.3	43.3	0.0503	0.0503	108	
S Total TCDF					43.3	43.3	0.0503	0.0503		
D 13C-2,3,7,8-TCDD	18.338	55471422	0.81	0.8993	99.4	99.4	0.1780	0.1780	99.41	
$ 37Cl4-2,3,7,8-TCDD	18.354	29474361		1.1071	42.9	42.9	0.0363	0.0363	107	
2,3,7,8-TCDD	18.354	29808948	0.78	1.2541	42.8	42.8	0.0471	0.0471	107	
S Total TCDD					42.8	42.8	0.0471	0.0471		
D 13C-1,2,3,7,8-PeCDF	22.762	75205597	1.60	1.2101	100.2	100.2	0.2087	0.2087	100	
1,2,3,7,8-PeCDF	22.776	171023920	1.60	1.0611	214.3	214.3	0.5904	0.5904	107	
D 13C-2,3,4,7,8-PeCDF	24.126	75259591	1.60	1.2395	97.9	97.9	0.2038	0.2038	97.86	
2,3,4,7,8-PeCDF	24.153	166805723	1.58	1.0184	217.6	217.6	0.6563	0.6563	109	
S Total PeCDF					431.9	431.9	0.6233	0.6233		
D 13C-1,2,3,7,8-PeCDD	24.862	46524396	1.64	0.7612	98.5	98.5	0.1093	0.1093	98.50	
1,2,3,7,8-PeCDD	24.889	105236005	1.57	1.0484	215.7	215.7	0.2317	0.2317	108	
S Total PeCDD					215.7	215.7	0.2317	0.2317		
D 13C-1,2,3,4,7,8-HxCDF	30.835	64951889	0.52	1.0837	95.7	95.7	0.4366	0.4366	95.70	
1,2,3,4,7,8-HxCDF	30.862	155057762	1.22	1.0851	220.0	220.0	1.165	1.165	110	
D 13C-1,2,3,6,7,8-HxCDF	31.008	70459920	0.52	1.1279	99.7	99.7	0.4194	0.4194	99.75	
1,2,3,6,7,8-HxCDF	31.022	168618976	1.23	1.1260	212.5	212.5	1.081	1.081	106	
D 13C-2,3,4,6,7,8-HxCDF	31.754	66145684	0.53	1.0637	99.3	99.3	0.4448	0.4448	99.29	
2,3,4,6,7,8-HxCDF	31.780	164241378	1.21	1.1675	212.7	212.7	0.8912	0.8912	106	
D 13C-1,2,3,7,8,9-HxCDF	32.526	59636084	0.52	0.9676	98.4	98.4	0.4890	0.4890	98.41	
1,2,3,7,8,9-HxCDF	32.539	148834491	1.23	1.1664	214.0	214.0	0.9364	0.9364	107	
S Total HxCDF					859.2	859.2	1.018	1.018		
* 13C-1,2,3,7,8,9-HxCDD	32.339	62627787	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44144841	1.25	0.7334	96.1	96.1	0.3745	0.3745	96.11	
1,2,3,4,7,8-HxCDD	31.953	103044220	1.27	1.0640	219.4	219.4	0.6488	0.6488	110	
D 13C-1,2,3,6,7,8-HxCDD	32.033	54392394	1.25	0.8802	98.7	98.7	0.3120	0.3120	98.67	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	118900298	1.28	1.0001	218.6	218.6	0.5965	0.5965	109	
1,2,3,7,8,9-HxCDD	32.353	122394998	1.26	1.1325	219.4	219.4	0.5651	0.5651	110	
S Total HxCDD					657.3	657.3	0.6034	0.6034		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	47752972	0.44	0.7730	98.6	98.6	1.001	1.001	98.64	
1,2,3,4,6,7,8-HpCDF	33.924	147892240	1.06	1.4413	214.9	214.9	2.024	2.024	107	
D 13C-1,2,3,4,7,8,9-HpCDF	35.017	42687625	0.44	0.7008	97.3	97.3	1.104	1.104	97.26	
1,2,3,4,7,8,9-HpCDF	35.017	123968724	1.06	1.3174	220.4	220.4	2.743	2.743	110	
S Total HpCDF					435.3	435.3	2.383	2.383		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	40442950	1.02	0.6472	99.8	99.8	0.5241	0.5241	99.77	
1,2,3,4,6,7,8-HpCDD	34.726	94435922	1.04	1.0943	213.4	213.4	0.9683	0.9683	107	
S Total HpCDD					213.4	213.4	0.9683	0.9683		
D 13C-OCDD	37.093	57303880	0.88	0.4472	204.6	204.6	0.2753	0.2753	102	
OCDF	37.201	181747068	0.91	1.4382	441.1	441.1	0.4159	0.4159	110	
OCDD	37.105	135570174	0.90	1.1070	427.4	427.4	0.4029	0.4029	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		27754917	7076779	4201	10502	1685		
333.9339	18.142	18.142	0		34292071	8691565	5896	14740	1474	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	43967601	10754823	8470	21175	1270		
317.9389	17.613	17.616	0	0.971	56364668	13840834	5538	13845	2499	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	19278962	4714580	2218	5545	2126		
305.8987	17.628	17.631	0	1.001	25245820	6261705	2854	7135	2194	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24807018	5848000	4201	10502	1392		
333.9339	18.338	18.338	0	1.011	30664404	7186127	5896	14740	1219	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	29474361	7040079	2537	6342	2775		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	13088265	3099418	1571	3927	1973		
321.8936	18.354	18.357	0	1.001	16720683	3961925	1508	3770	2627	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46265218	8069932	9479	23697	851		
353.8970	22.749	22.754	0	1.254	28940379	5072009	6452	16130	786	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	105236981	18677381	20013	50032	933		
341.8567	22.776	22.779	0	1.001	65786939	11693027	12919	32297	905	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46298187	7561650	9479	23697	798		
353.8970	24.126	24.129	0	1.330	28961404	4756017	6452	16130	737	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	102234081	17002363	20013	50032	850		
341.8567	24.153	24.156	0	1.001	64571642	10773383	12919	32297	834	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28884955	4397104	3175	7937	1385		
369.8919	24.862	24.865	0	1.370	17639441	2717935	2071	5177	1312	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	64347111	9837651	3945	9862	2494		
357.8516	24.889	24.892	0	1.001	40888894	6265054	2969	7422	2110	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	22237957	4900100	10775	26937	455		
385.8610	30.835	30.838	0	0.953	42713932	9213265	21190	52975	435	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	85201859	18424877	39257	98142	469		
375.8178	30.849	30.857	0	1.000	69855903	15011303	32096	80240	468	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	23996455	5001651	10775	26937	464		
385.8610	31.008	31.003	0	0.959	46463465	9659865	21190	52975	456	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	92842545	20075526	39257	98142	511		
375.8178	31.022	31.022	0	1.000	75776431	16178695	32096	80240	504	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	22792396	5861290	10775	26937	544		
385.8610	31.754	31.756	0	0.982	43353288	11282982	21190	52975	532	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.780	31.772	0	1.001	89865159	23412461	39257	98142	596		
375.8178	31.767	31.772	0	1.000	74376219	19191516	32096	80240	598	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20506438	5659225	10775	26937	525		
385.8610	32.526	32.523	0	1.006	39129646	10674002	21190	52975	504	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	82057134	22664755	39257	98142	577		
375.8178	32.539	32.534	0	1.000	66777357	17875439	32096	80240	557	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		34509982	9306847	9505	23762	979		
403.8529	32.339	32.342	0		28117805	7584182	9052	22630	838	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	24560847	6976899	9505	23762	734		
403.8529	31.927	31.929	0	0.987	19583994	5667072	9052	22630	626	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.953	31.945	0	1.001	57595942	16510469	19316	48290	855		
391.8127	31.940	31.945	0	1.000	45448278	13107381	15598	38995	840	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	30198617	8138784	9505	23762	856		
403.8529	32.033	32.033	0	0.991	24193777	6493948	9052	22630	717	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	66690137	17959920	19316	48290	930		
391.8127	32.047	32.047	0	1.000	52210161	14135061	15598	38995	906	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	68169382	18483699	19316	48290	957		
391.8127	32.353	32.355	0	1.013	54225616	14872863	15598	38995	954	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14610497	4589210	16388	40970	280		
419.8220	33.912	33.914	0	1.049	33142475	10497182	35883	89707	293	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	75936953	24520194	90693	226732	270		
409.7789	33.924	33.926	0	1.000	71955287	23549459	85368	213420	276	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.017	35.010	0	1.083	12971814	3739945	16388	40970	228		
419.8220	35.017	35.010	0	1.083	29715811	8442322	35883	89707	235	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	63647403	18553677	90693	226732	205		
409.7789	35.017	35.020	0	1.000	60321321	17850429	85368	213420	209	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	20381379	6053926	11567	28917	523		
437.8140	34.714	34.716	0	1.073	20061571	5957434	11351	28377	525	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	48165795	14539111	26079	65197	558		
425.7737	34.726	34.726	0	1.000	46270127	14041663	24831	62077	565	1.04(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26901378	6693523	3896	9740	1718		
471.7750	37.093	37.094	0	1.147	30402502	7661603	4420	11050	1733	0.88(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	86562223	22814939	9244	23110	2468		
443.7399	37.201	37.199	0	1.003	95184845	24785143	7929	19822	3126	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	64116469	16176091	6061	15152	2669		
459.7348	37.105	37.106	0	1.000	71453705	17977820	6746	16865	2665	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

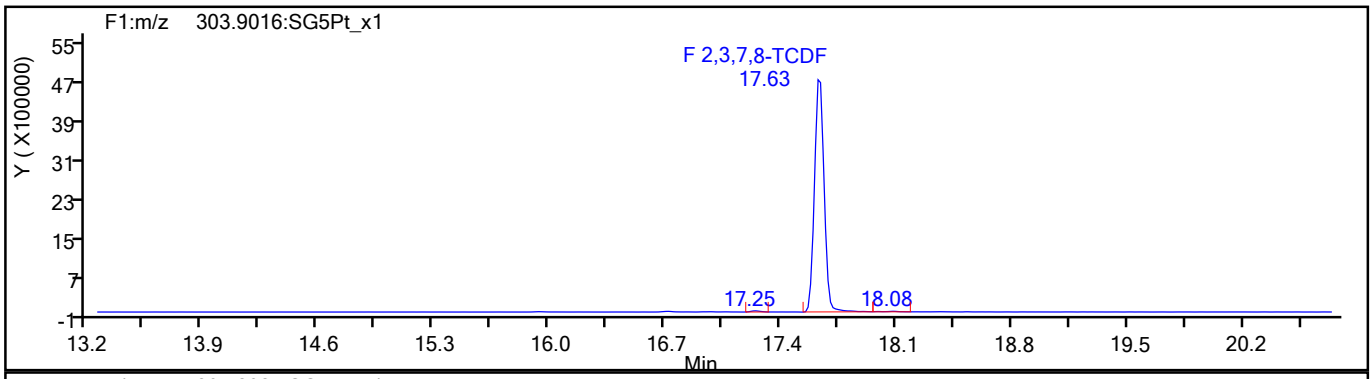

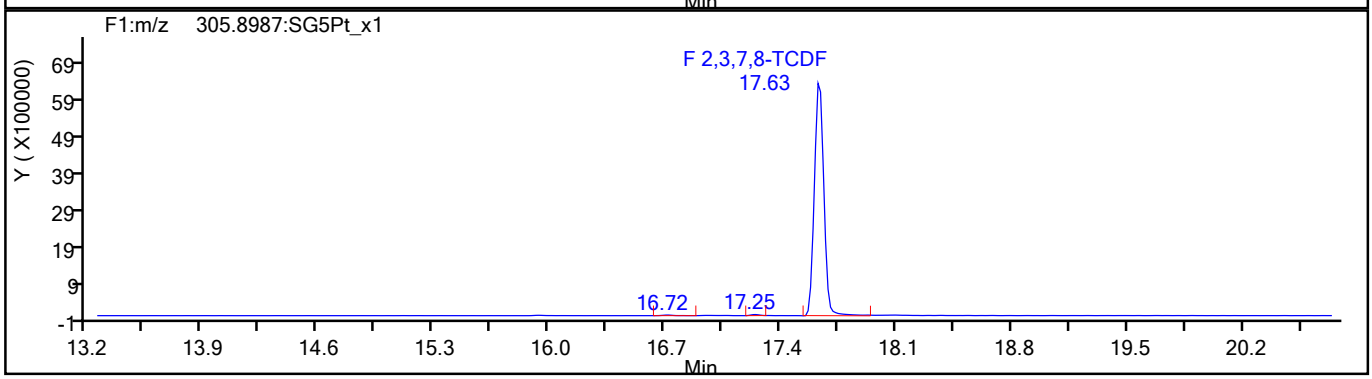

TCDF Standards

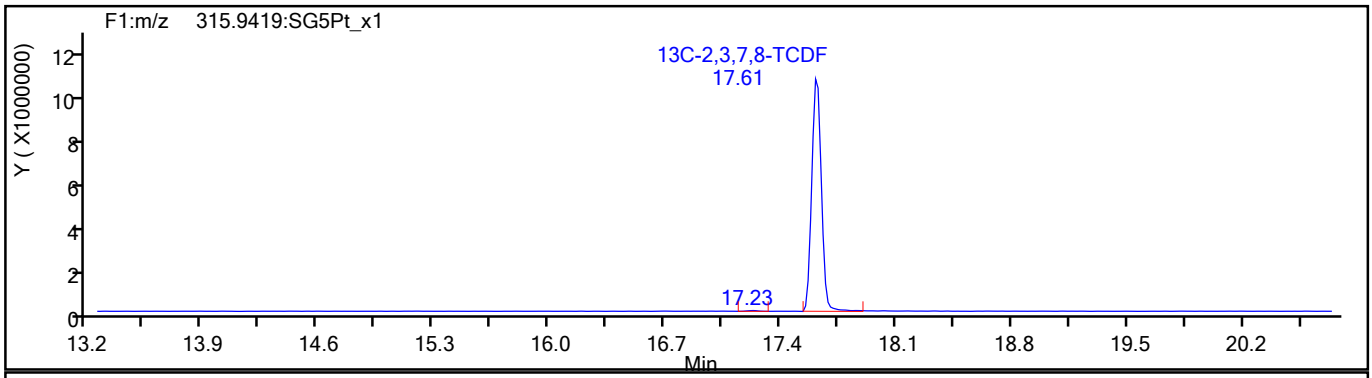

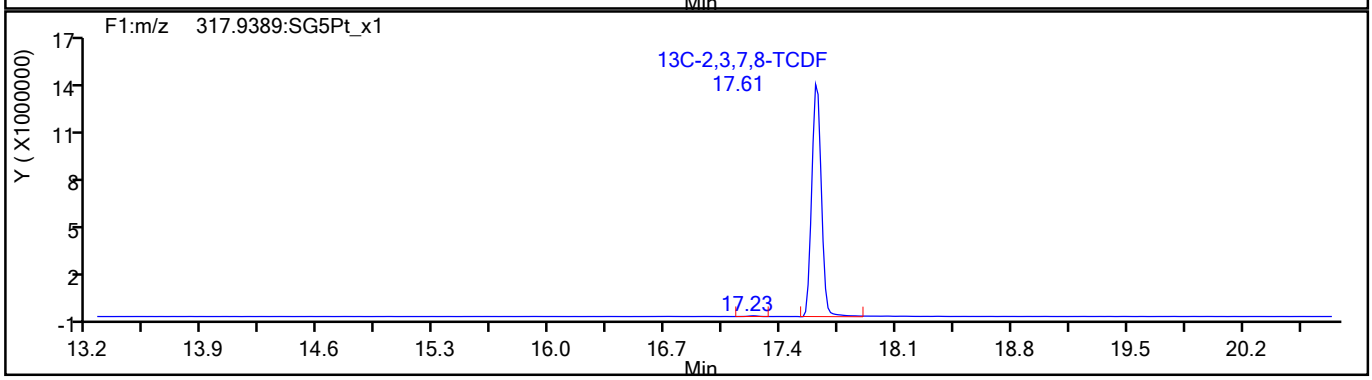

792488

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

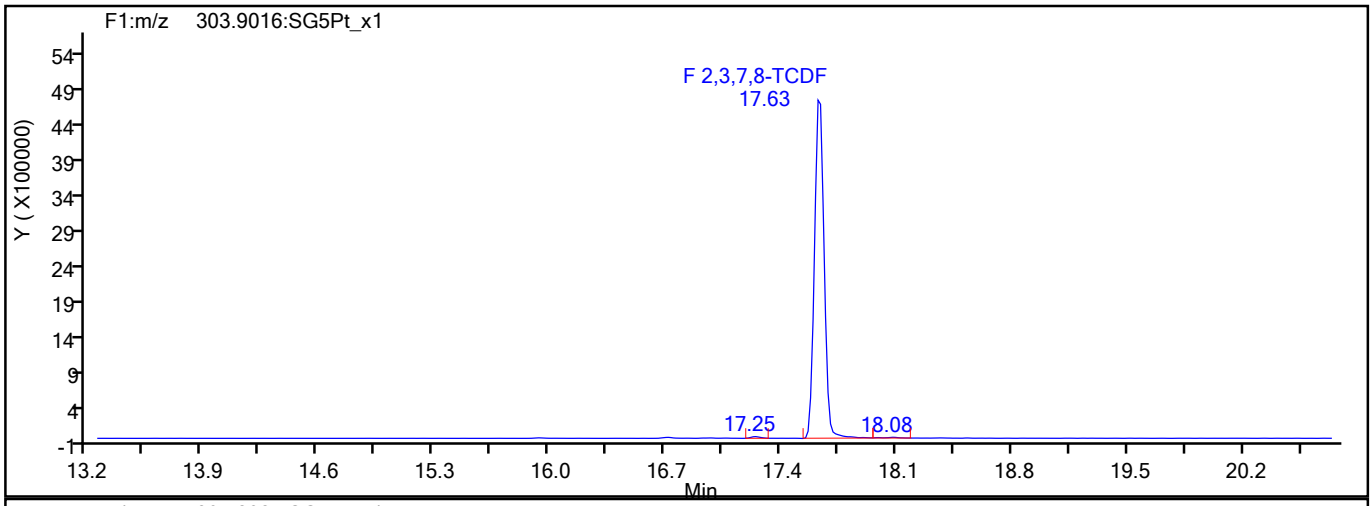

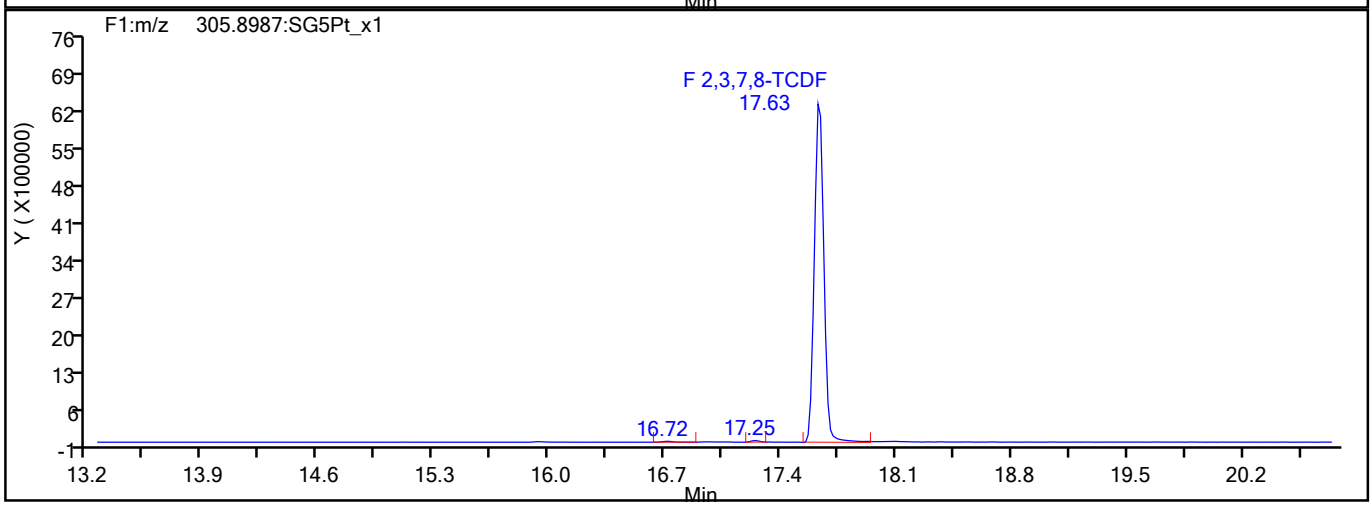

TCDF Interference Mass

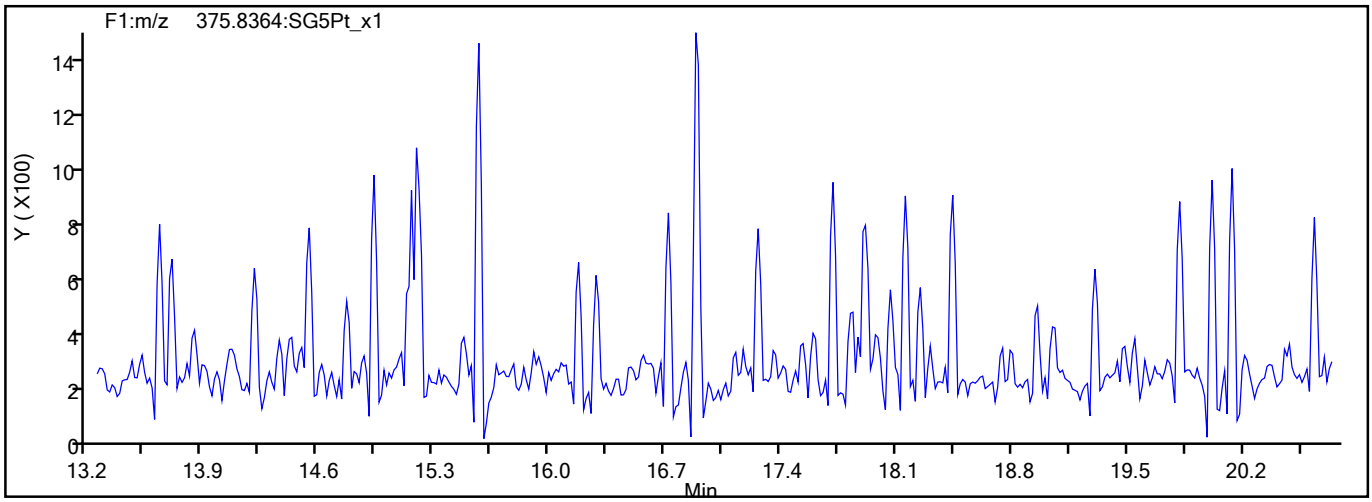

792489

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

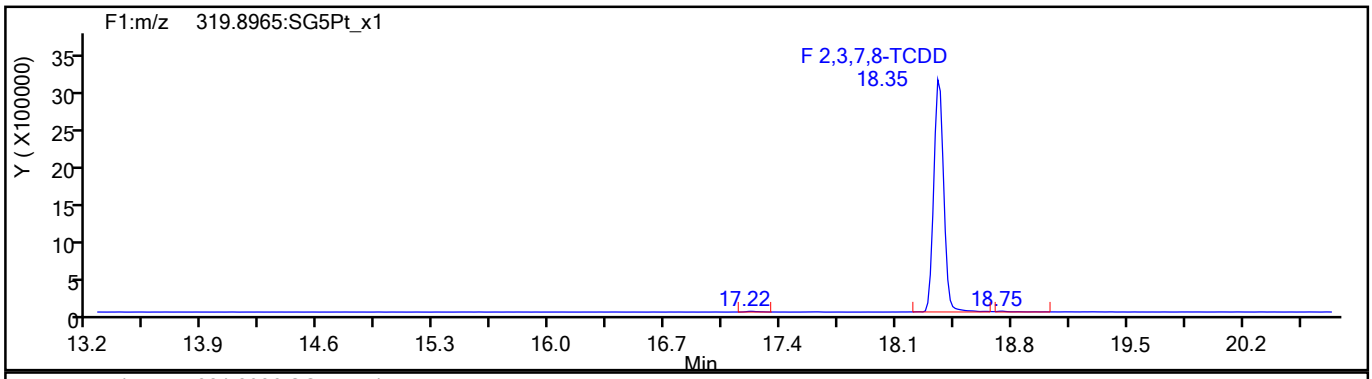

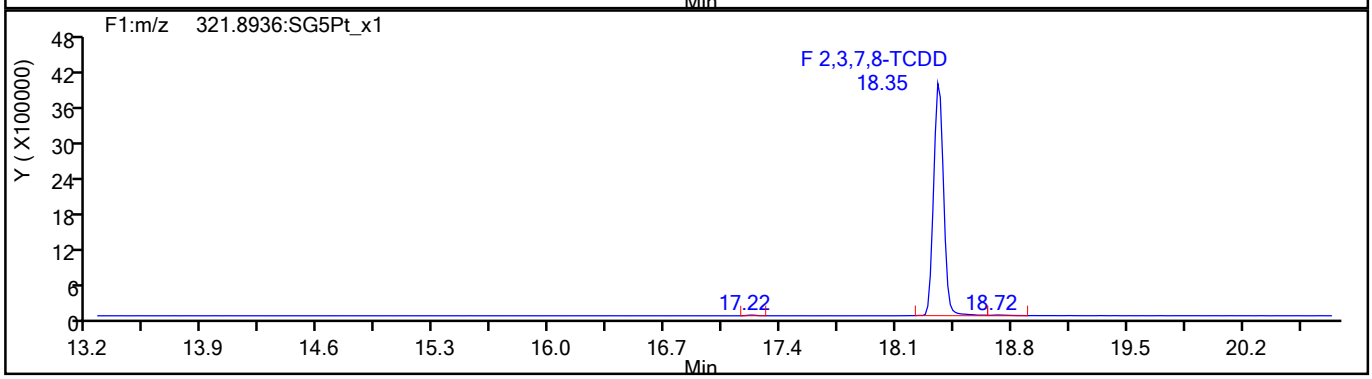

TCDD Standards

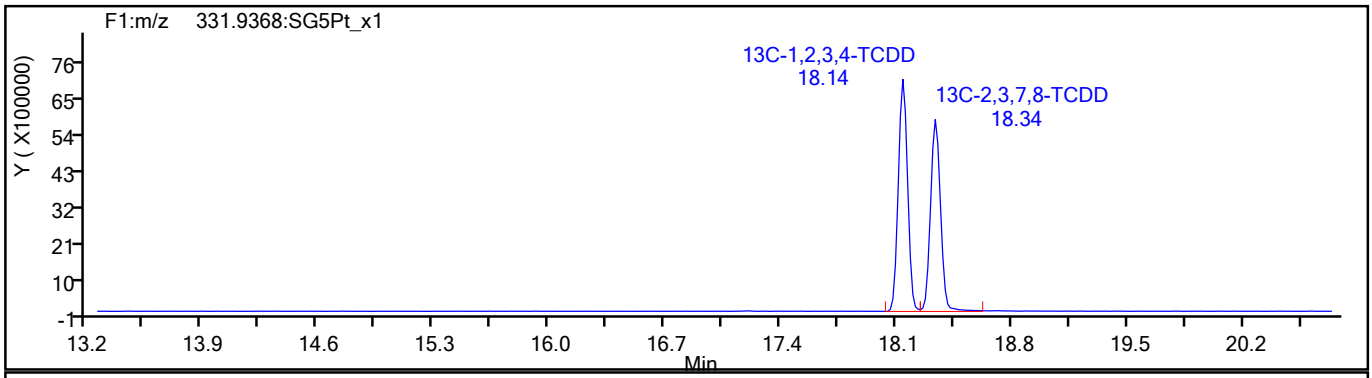

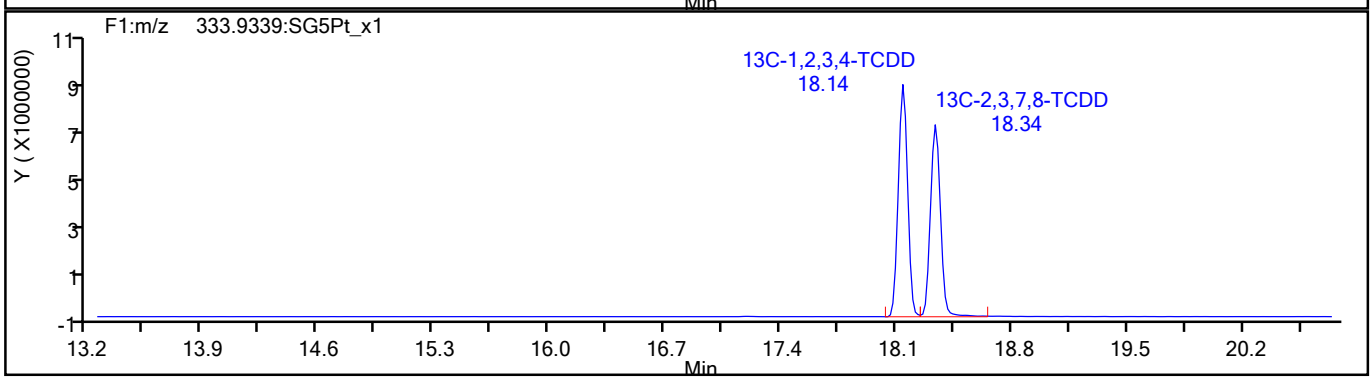

792490

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

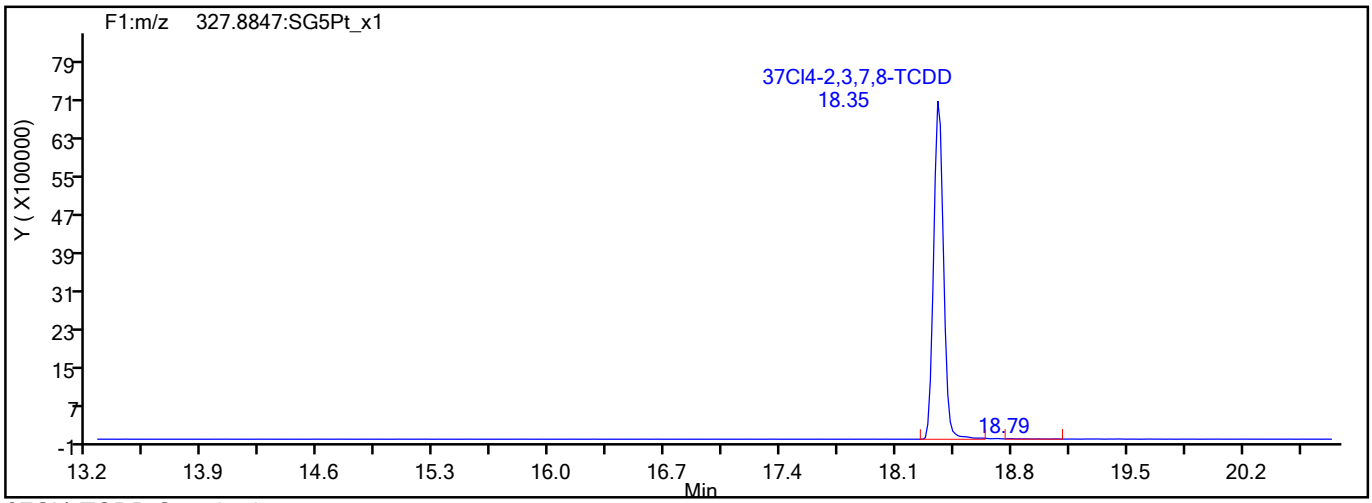

37Cl4-TCDD Standards

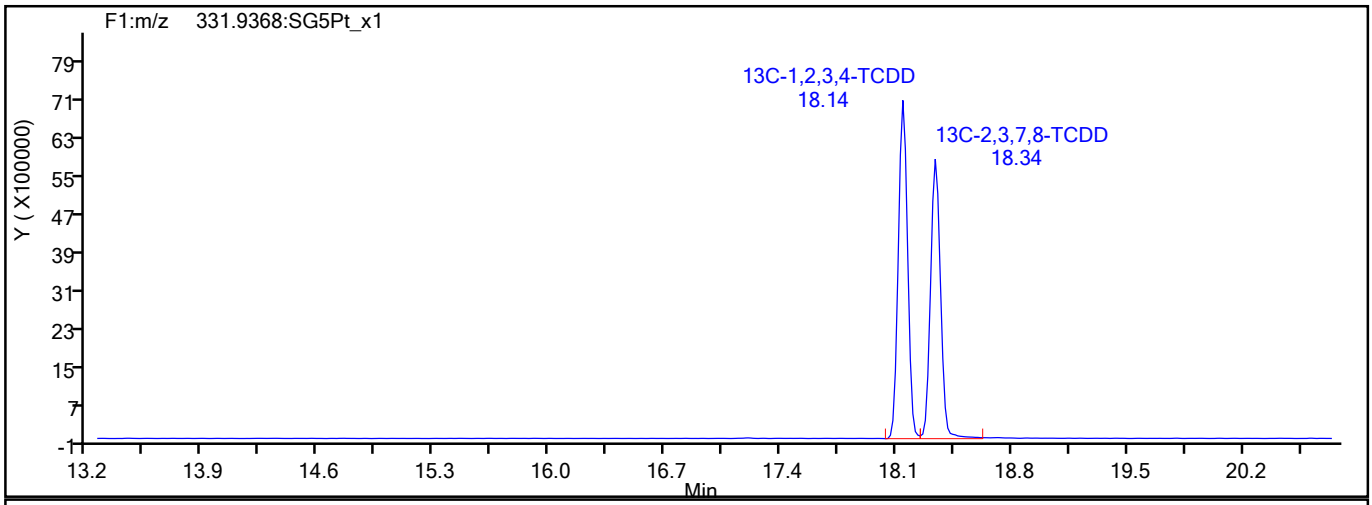

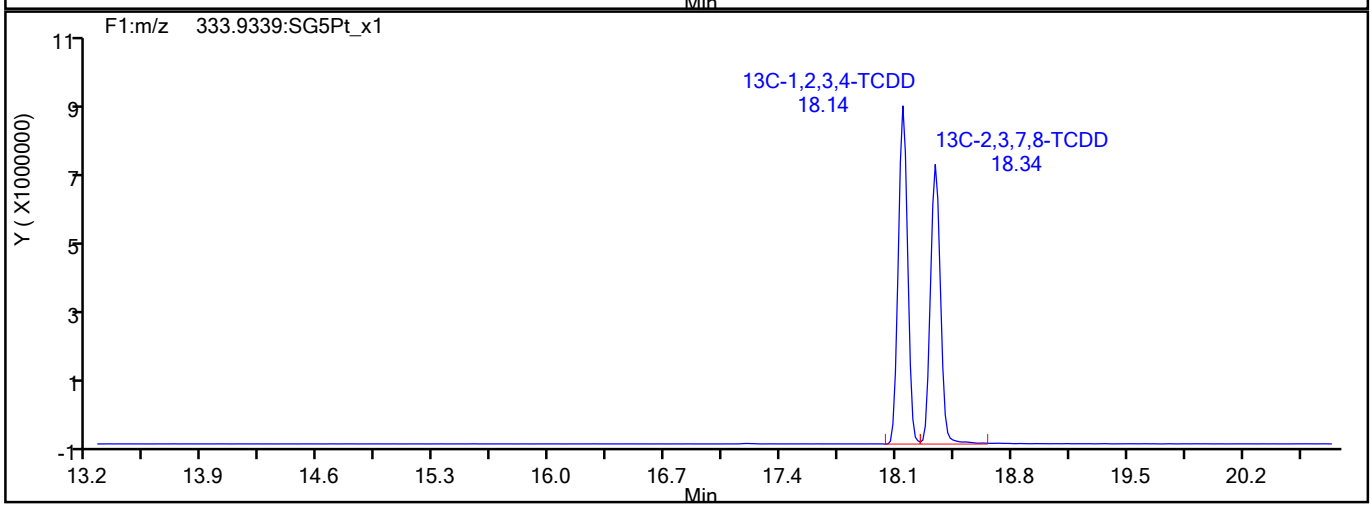

792491

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

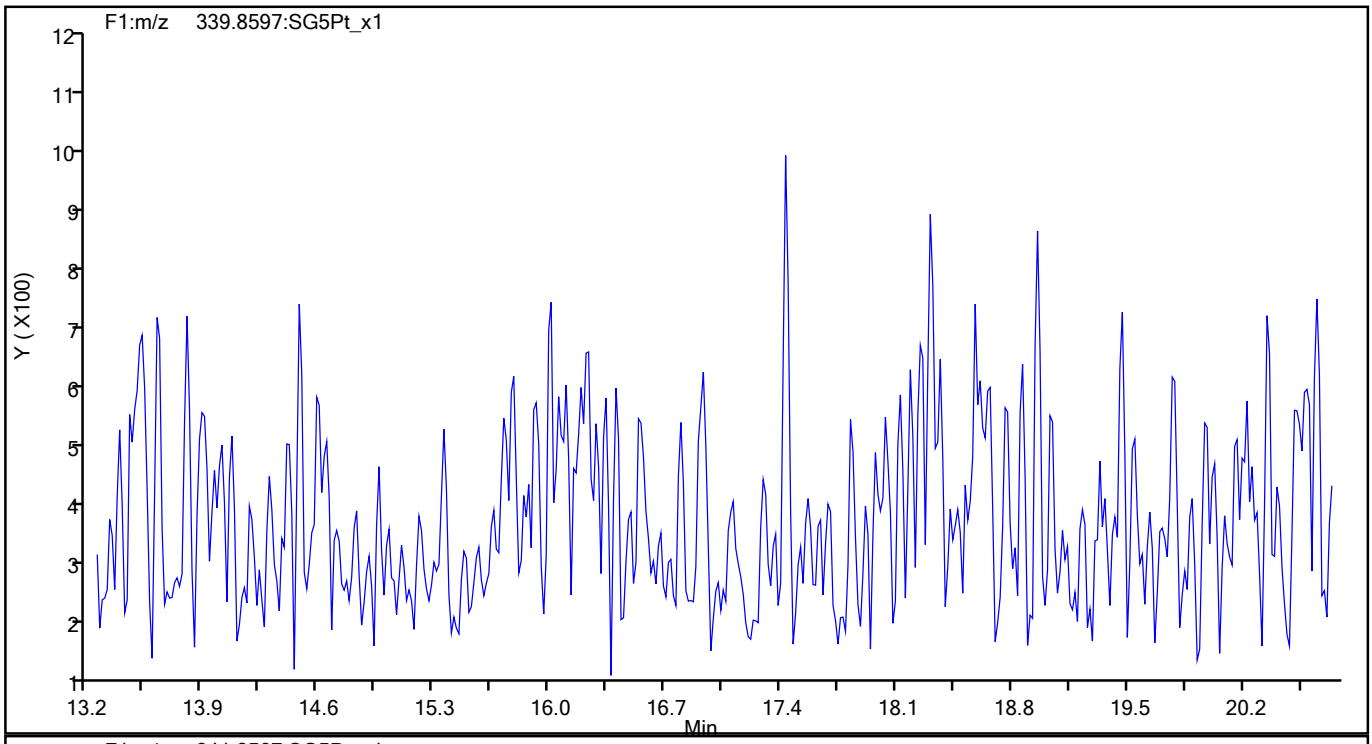

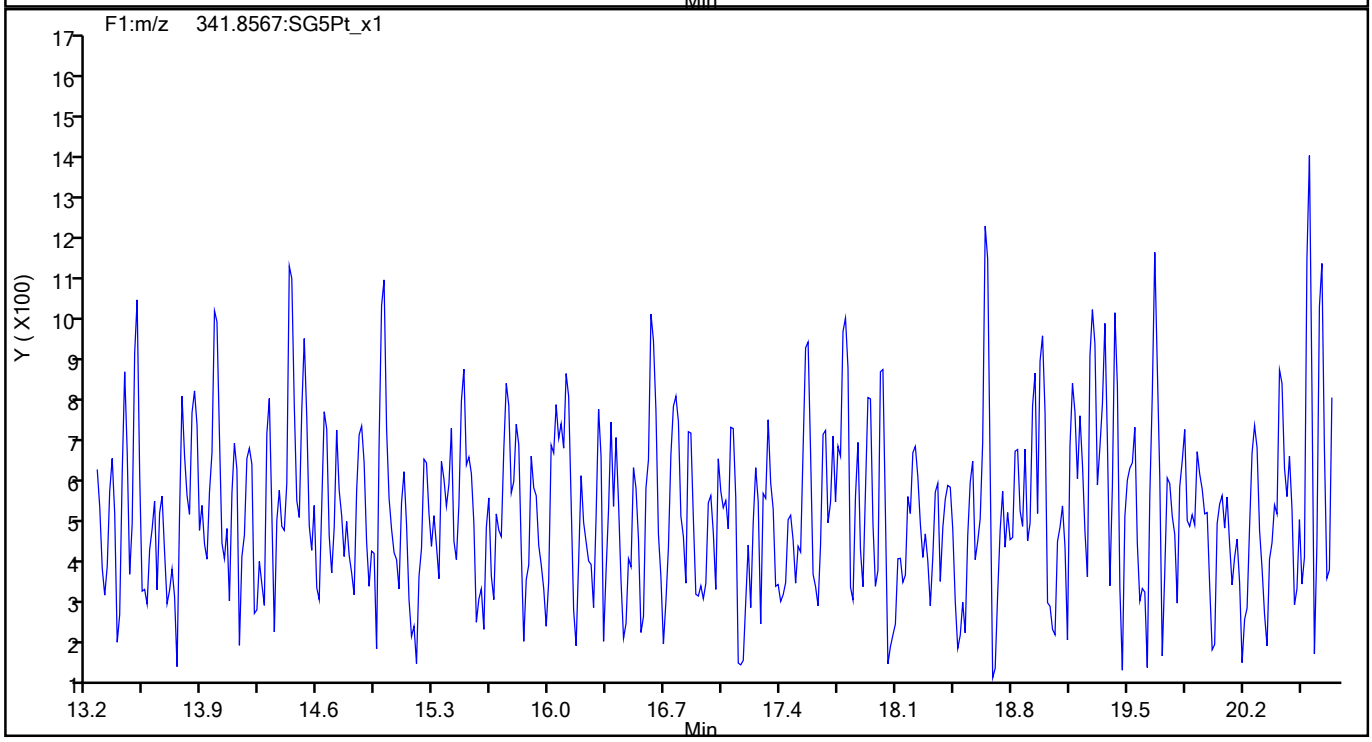

792492

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

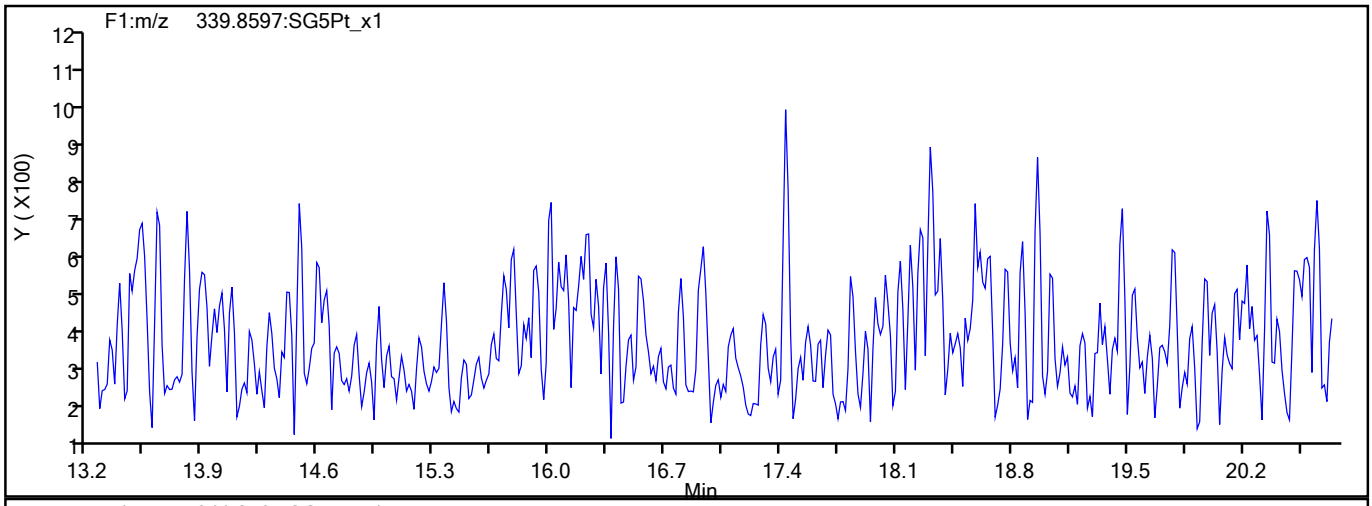

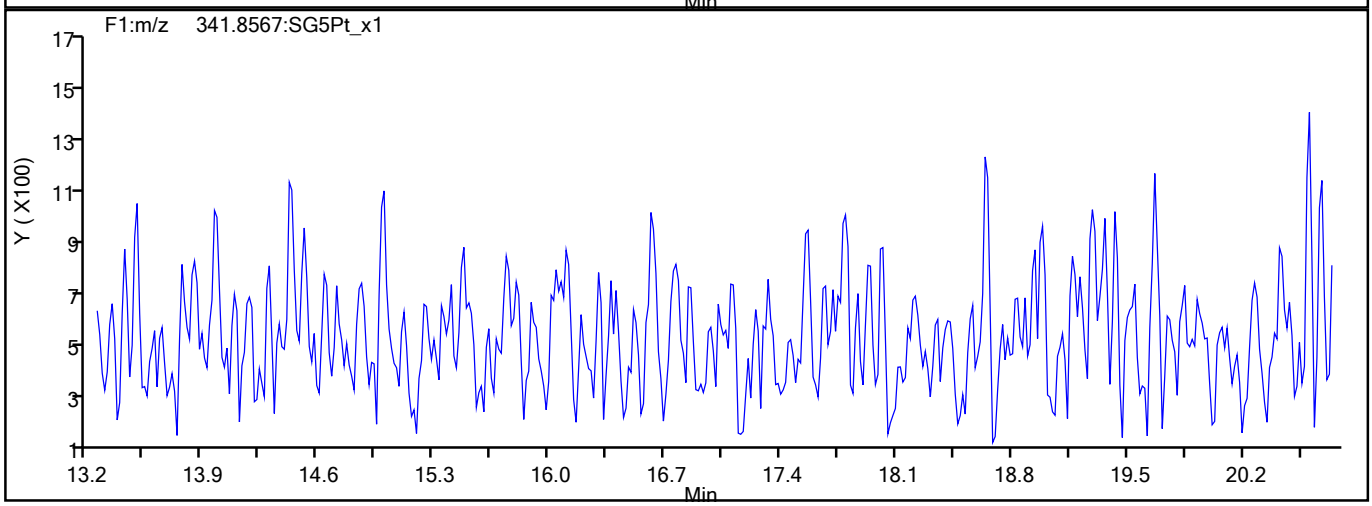

F1 PeCDFs Interference Mass

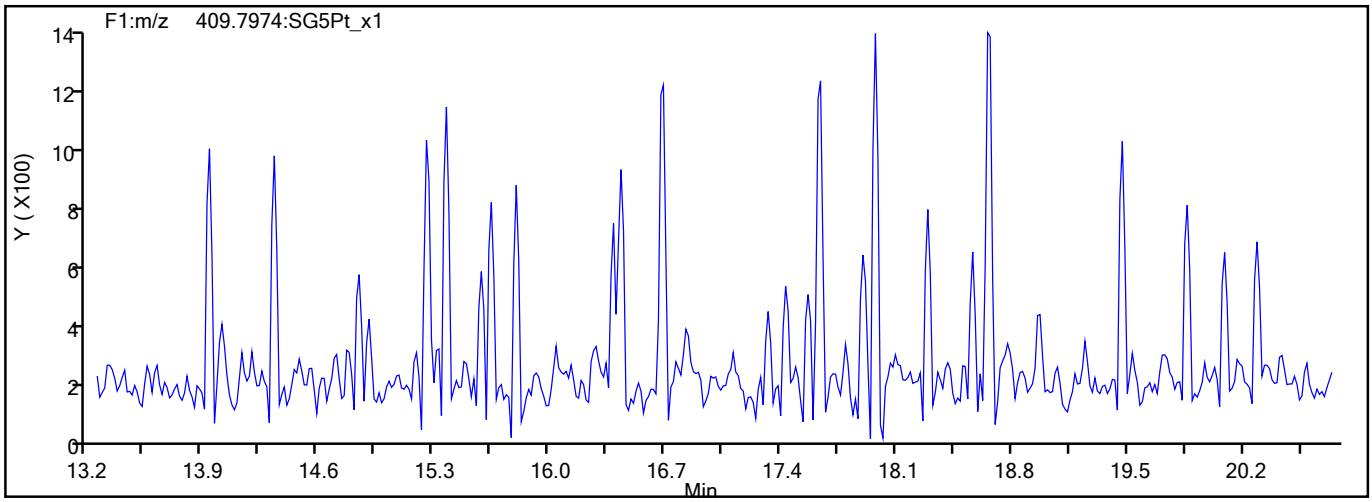

792493

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

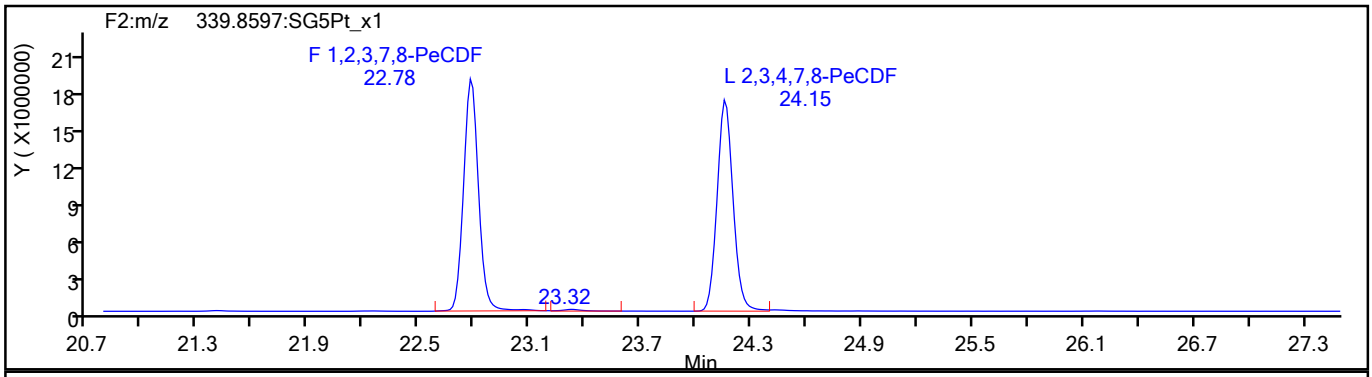

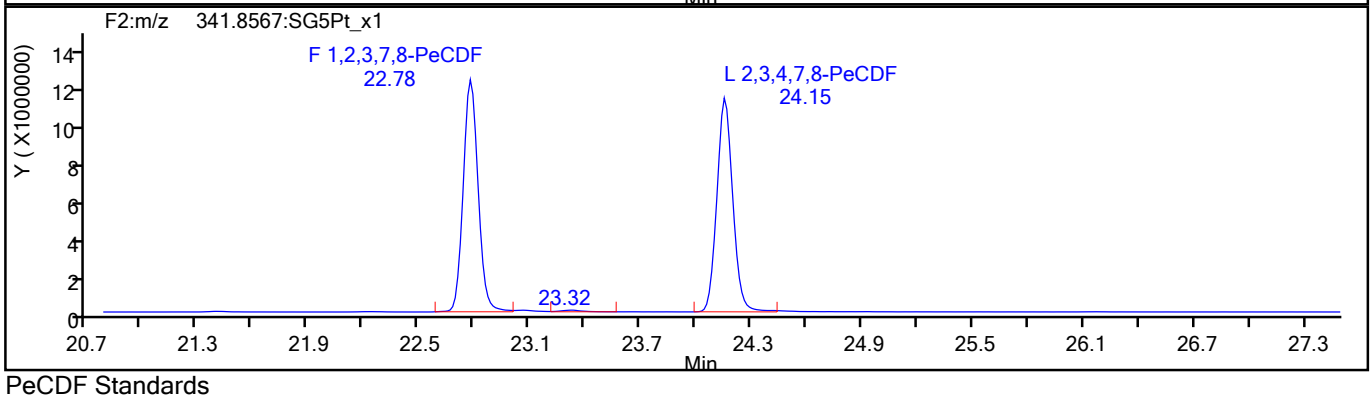

PeCDF Standards

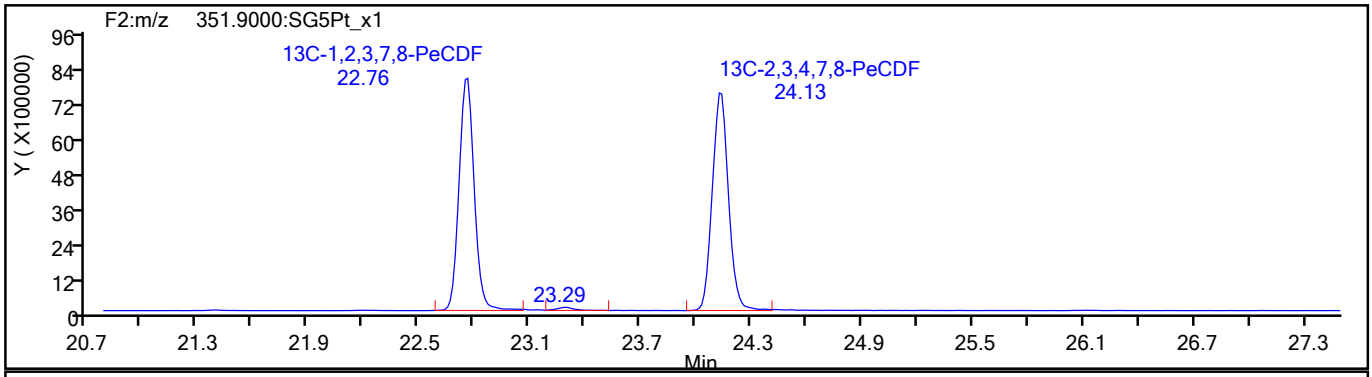

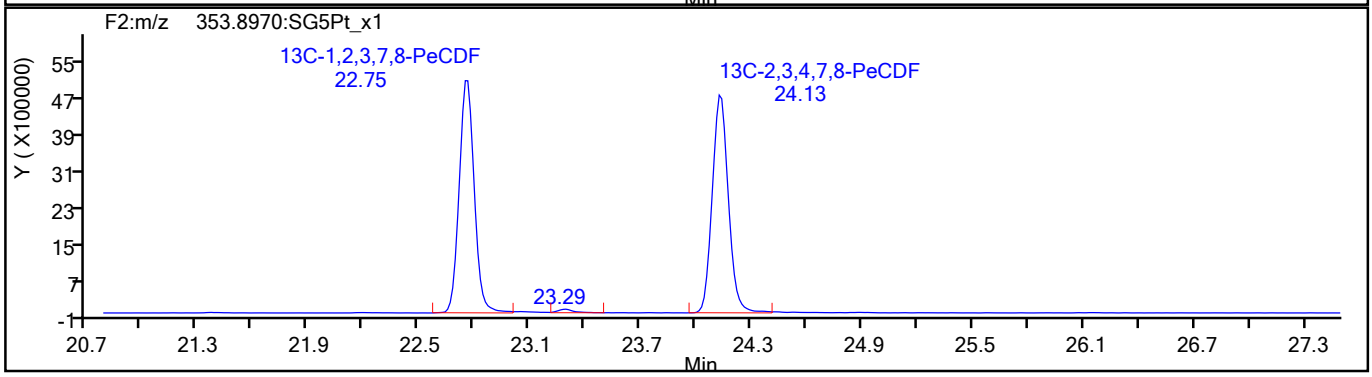

792494

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

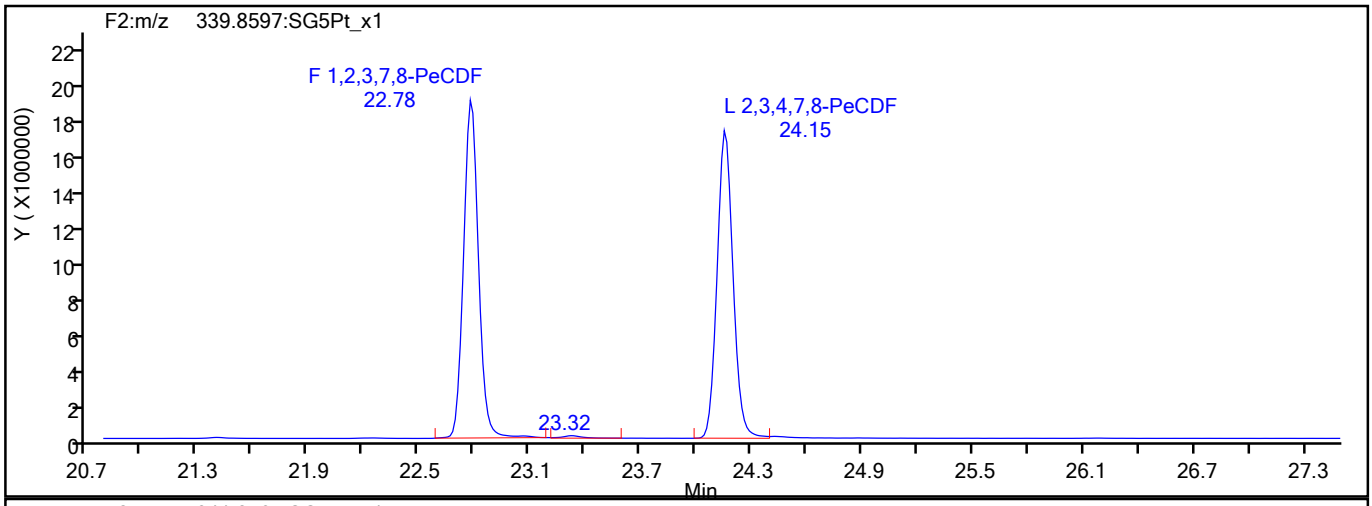

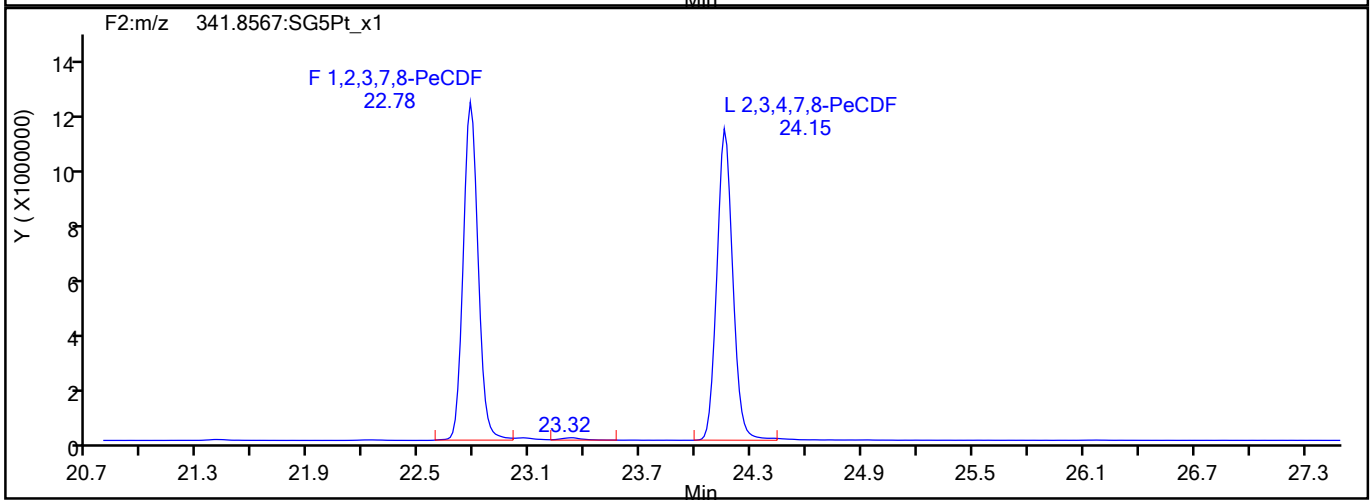

PeCDF Interference Mass

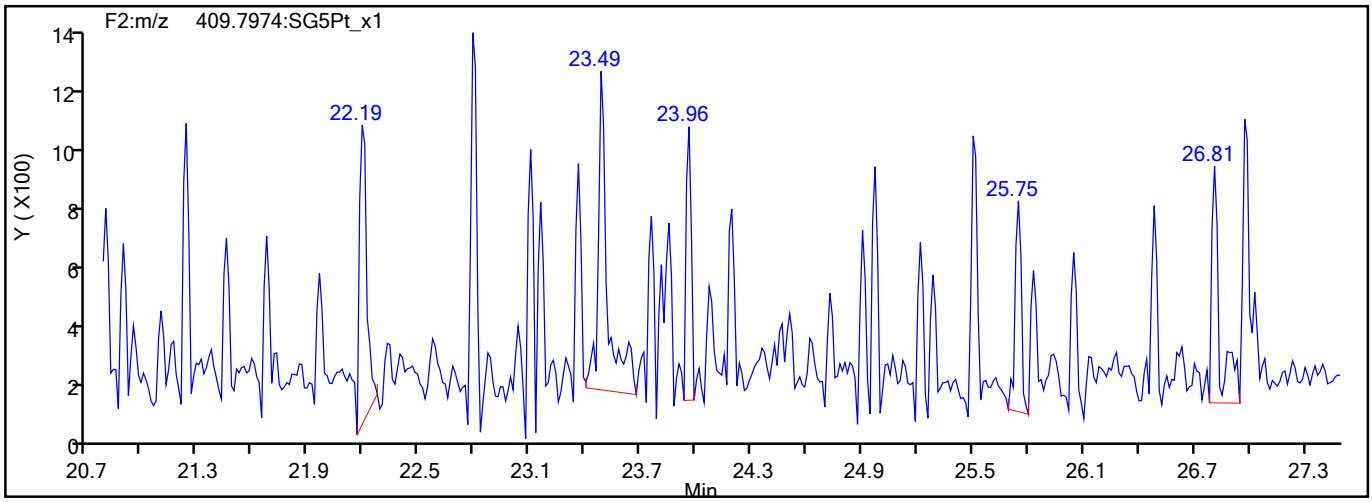

792495

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

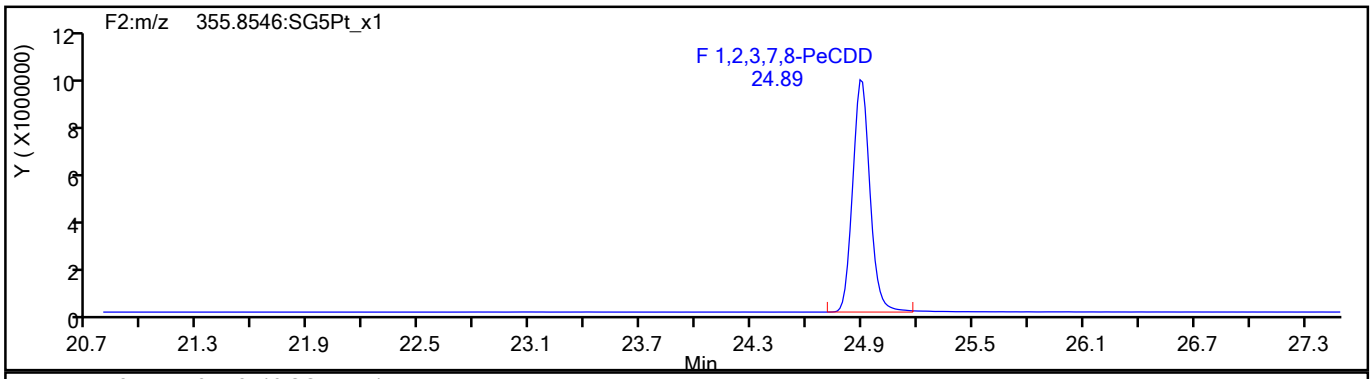

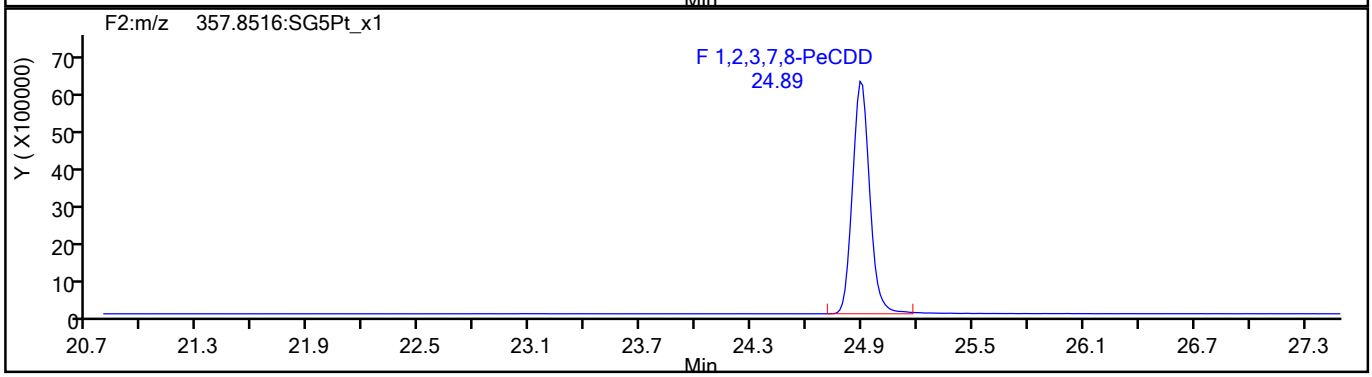

PeCDD Standards

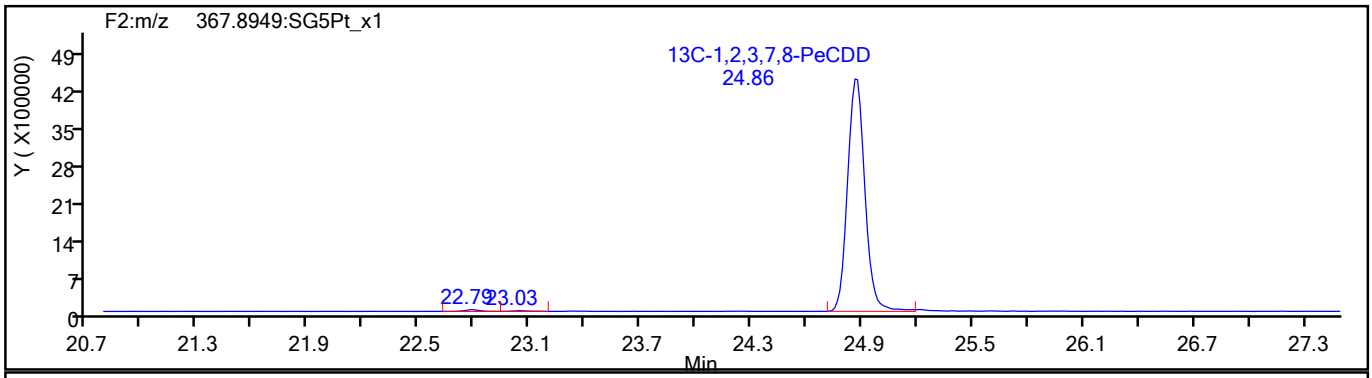

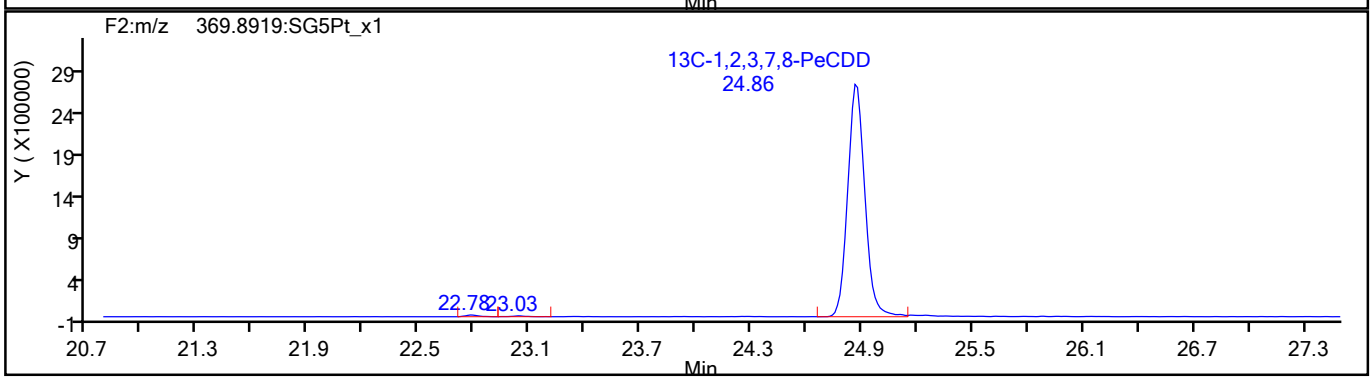

792496

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

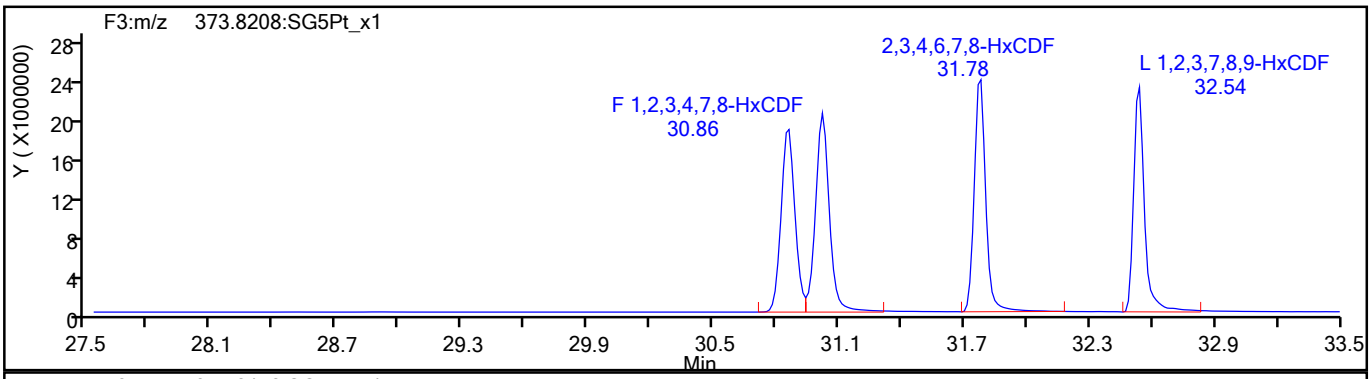

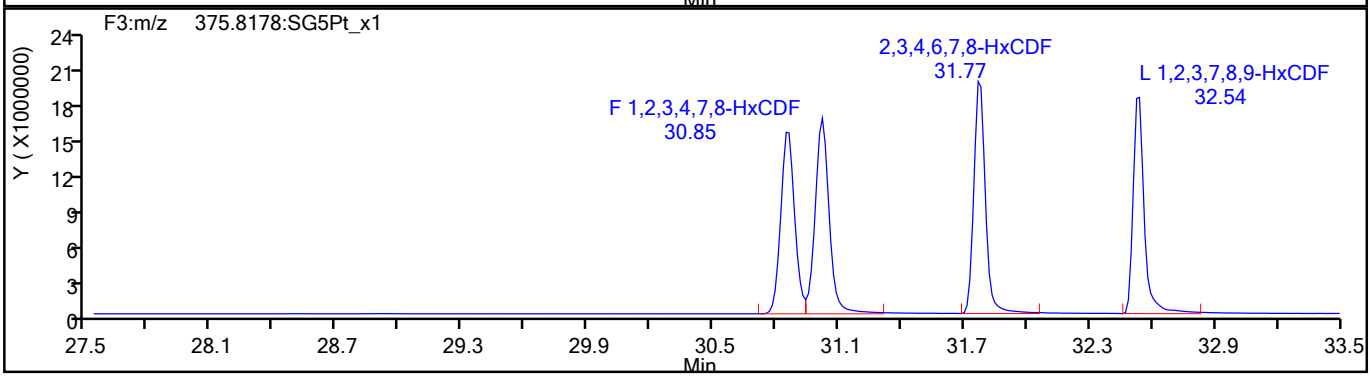

HxCDF Standards

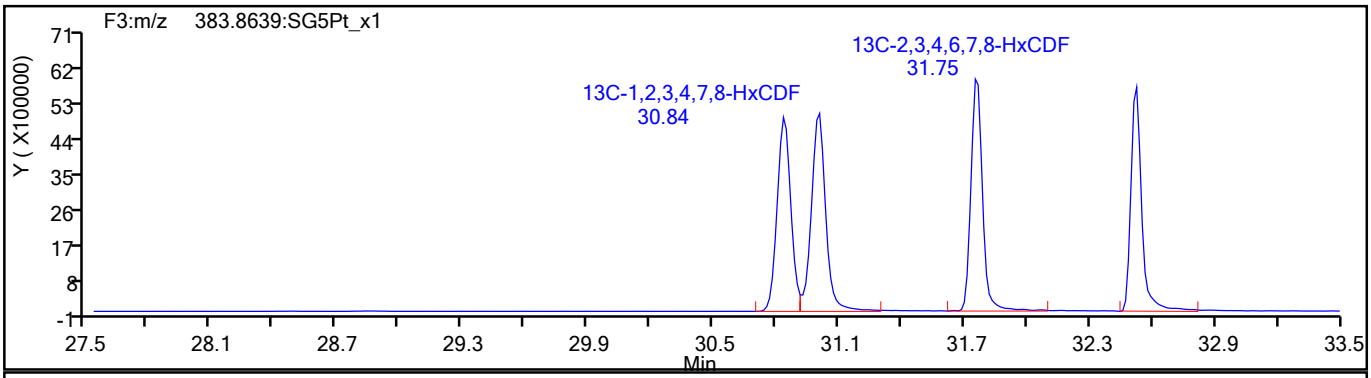

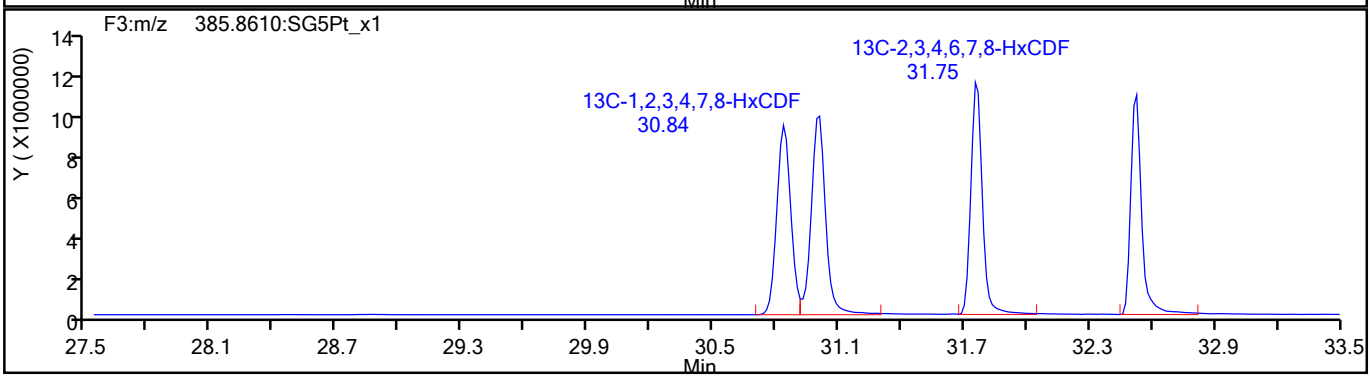

792497

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

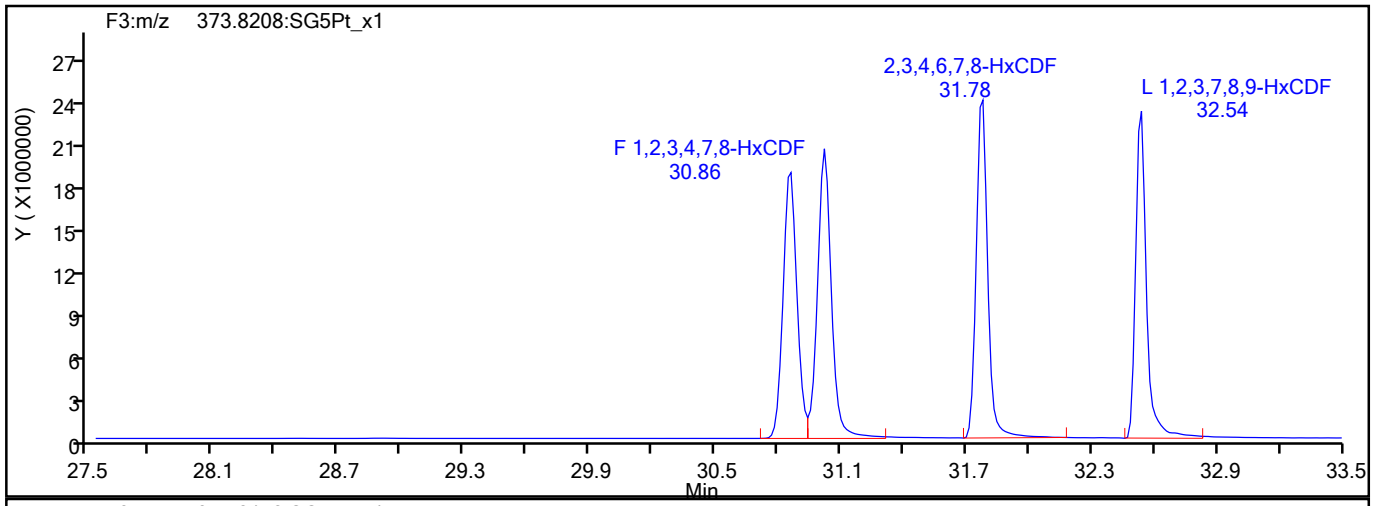

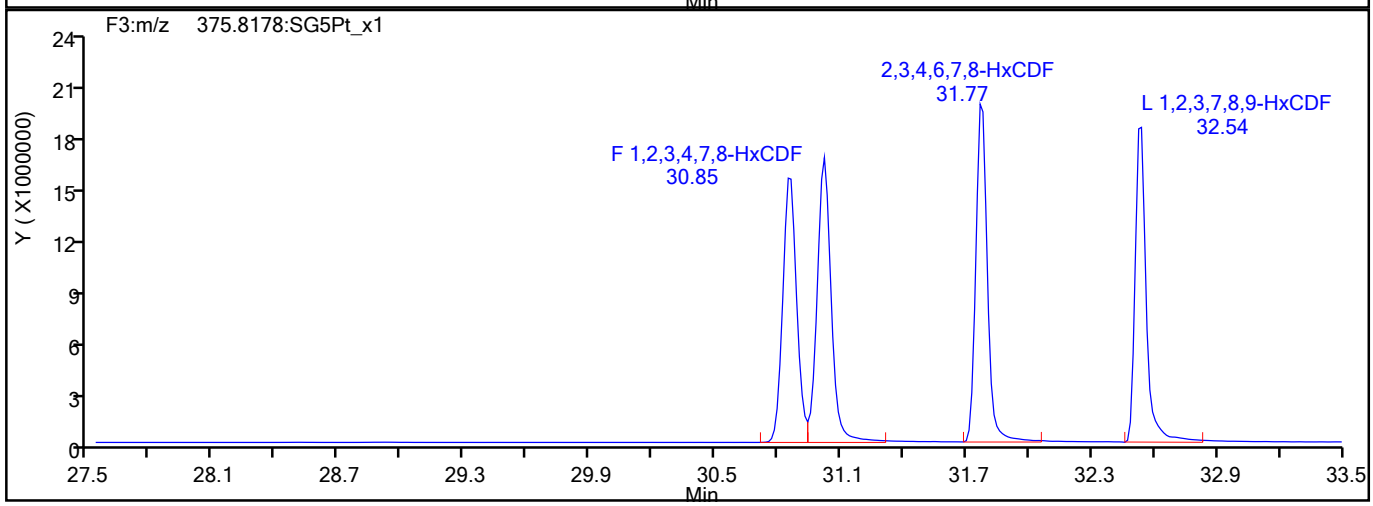

HxCDF Interference Mass

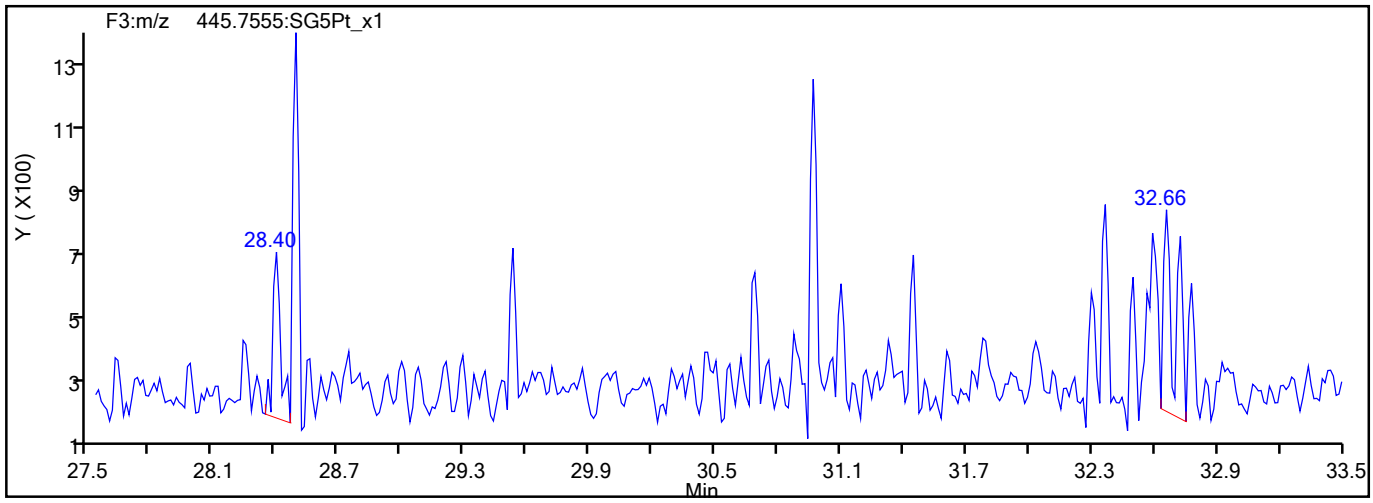

792498

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

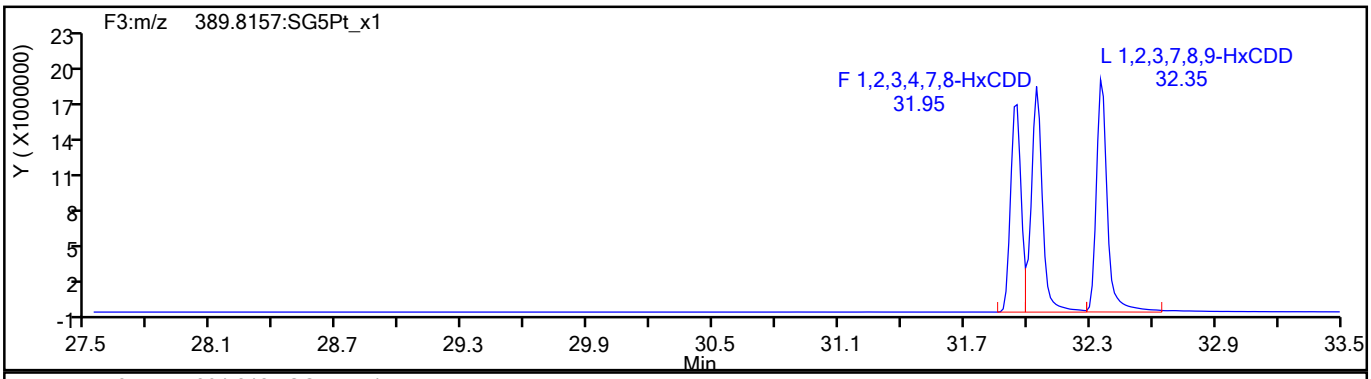

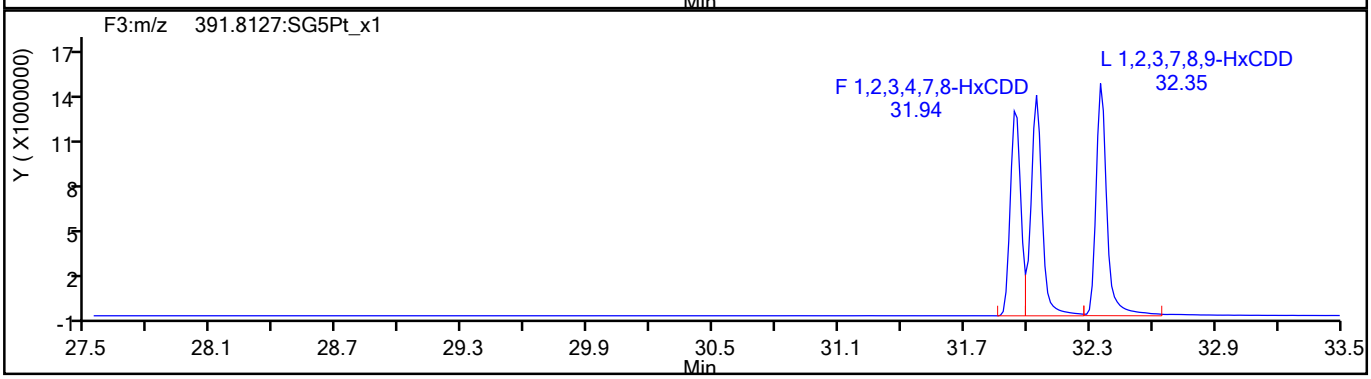

HxCDD Standards

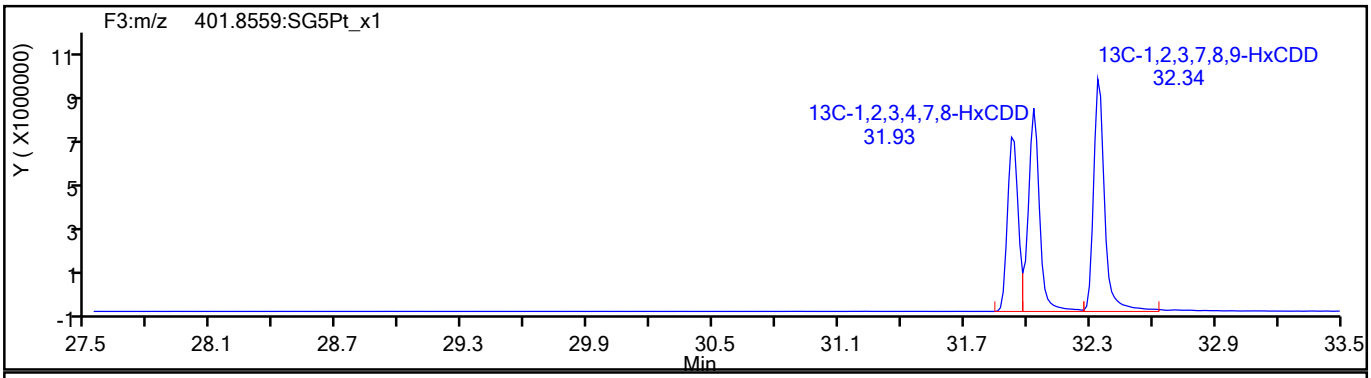

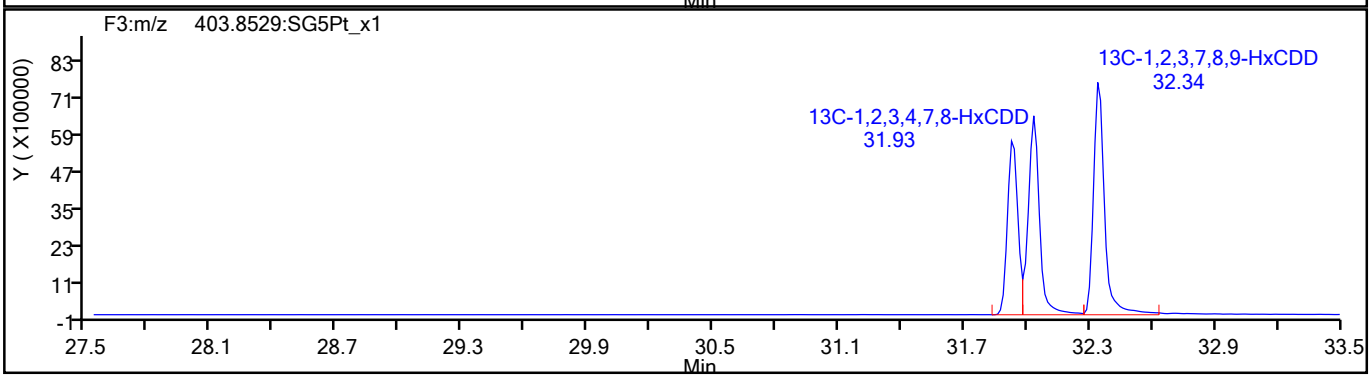

792499

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

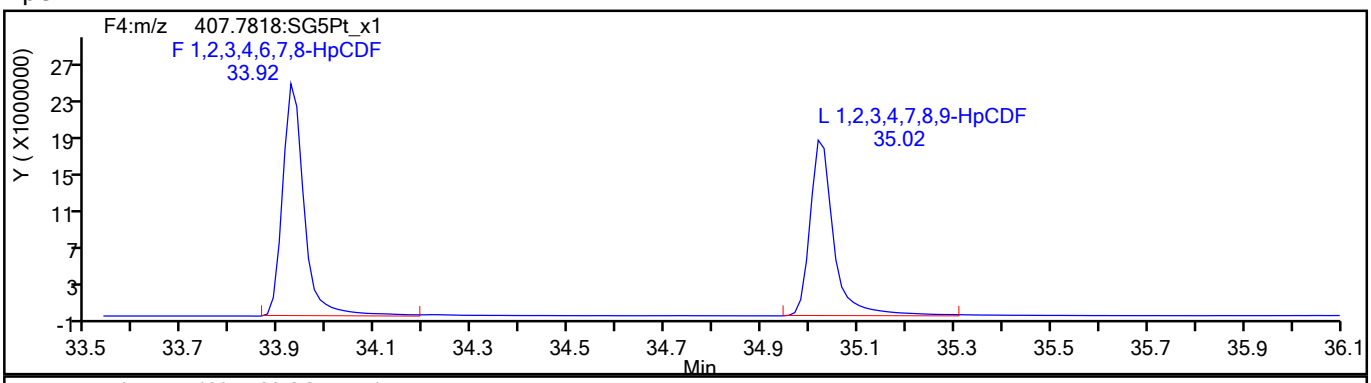

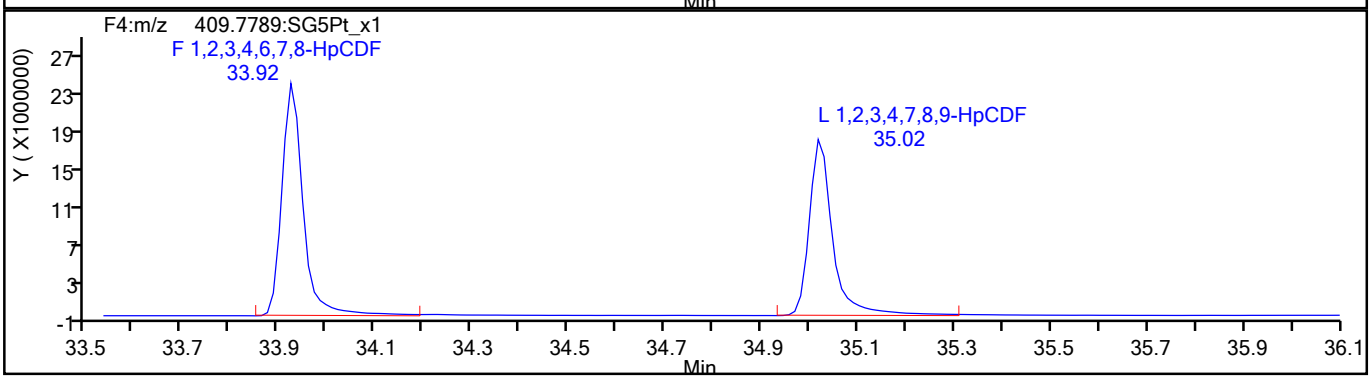

HpCDF Standards

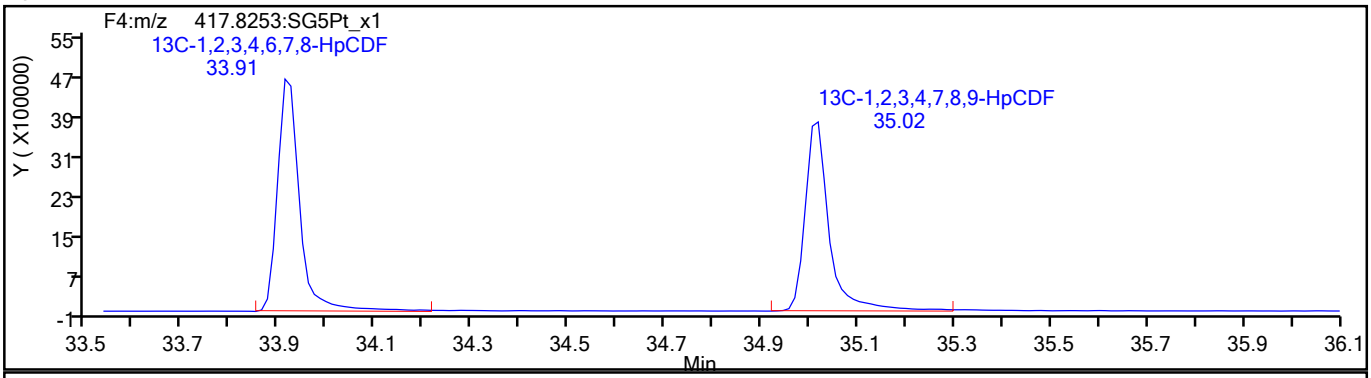

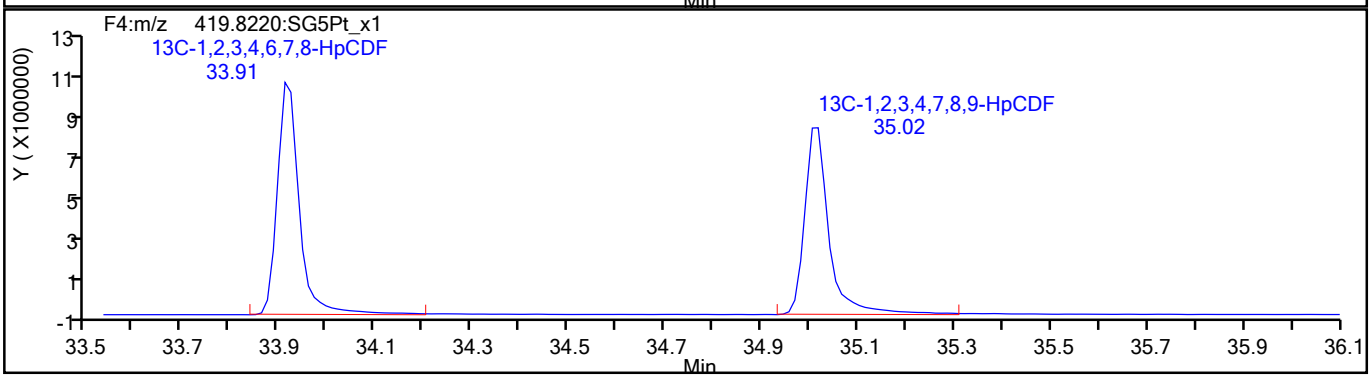

792500

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

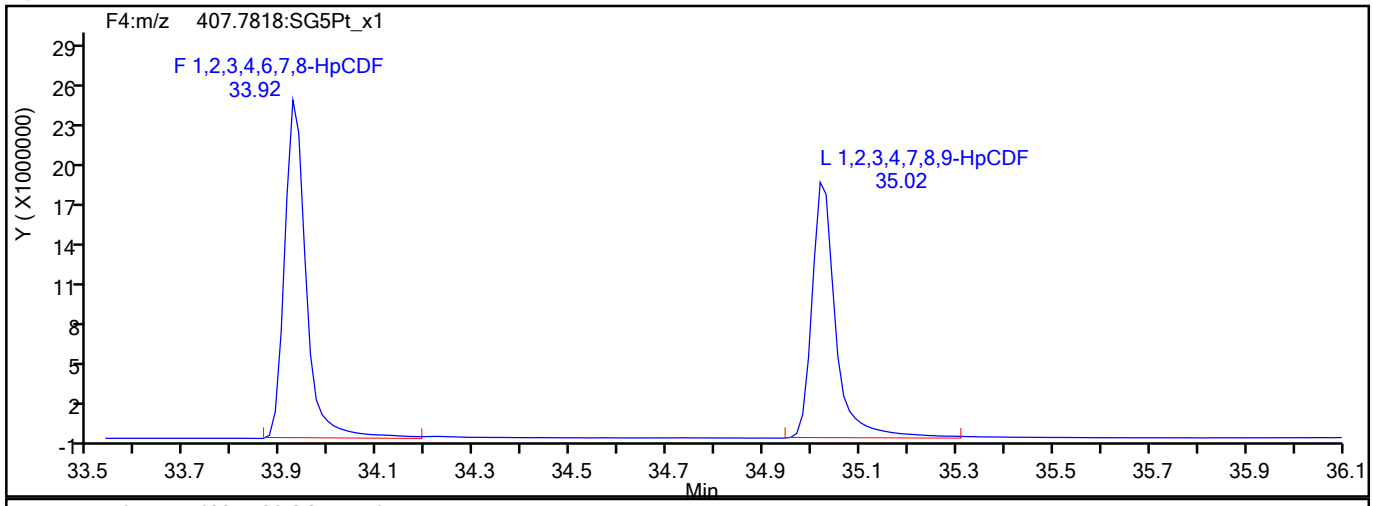

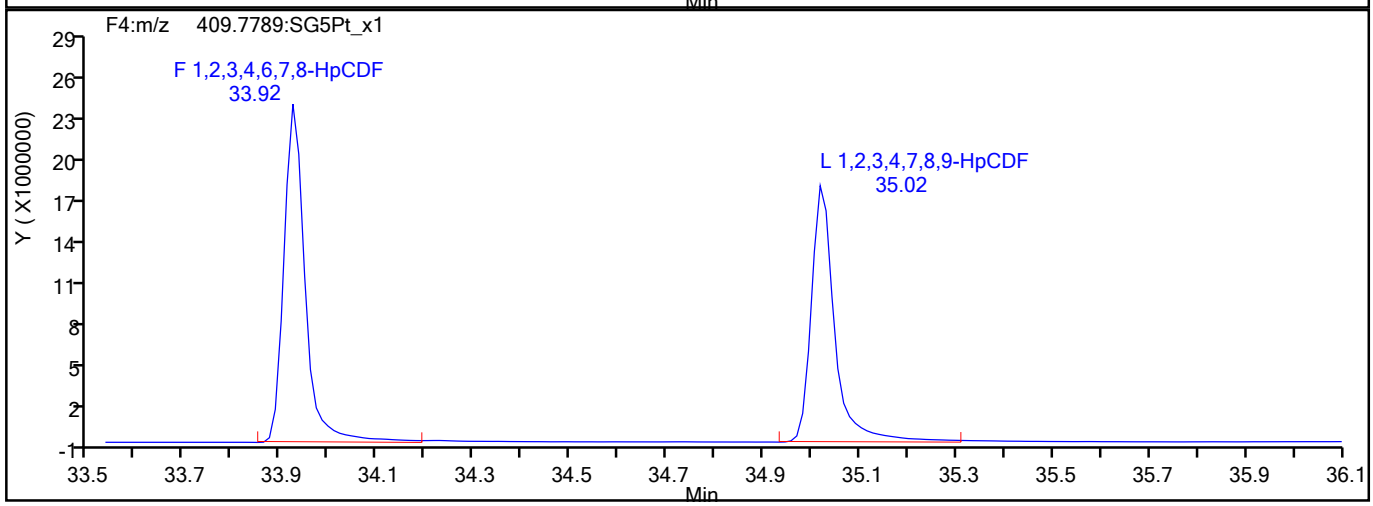

HpCDF Interference Mass

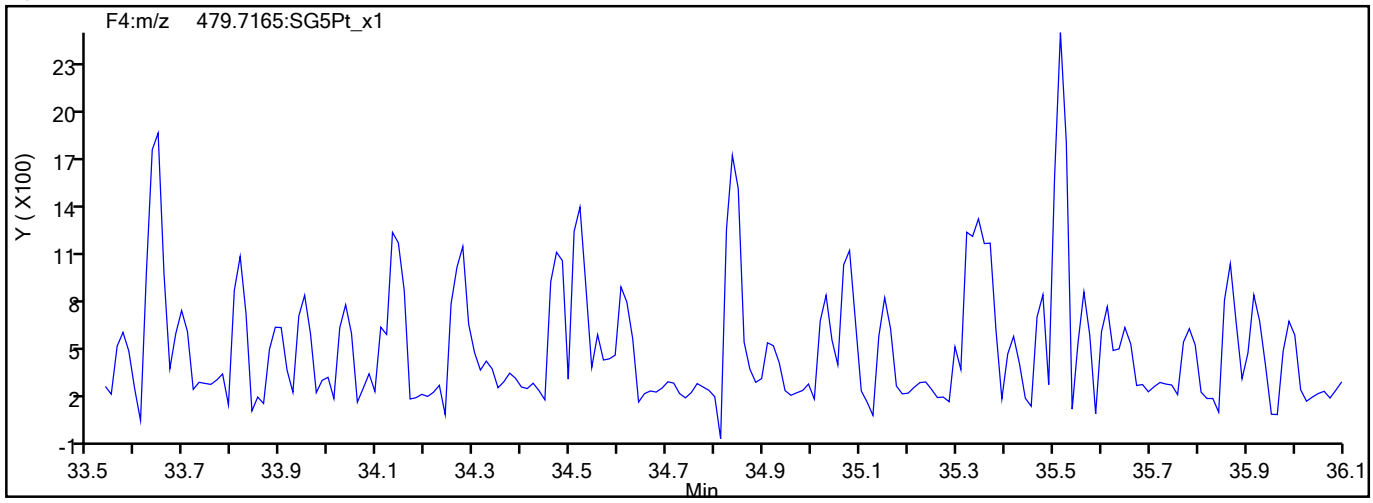

792501

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

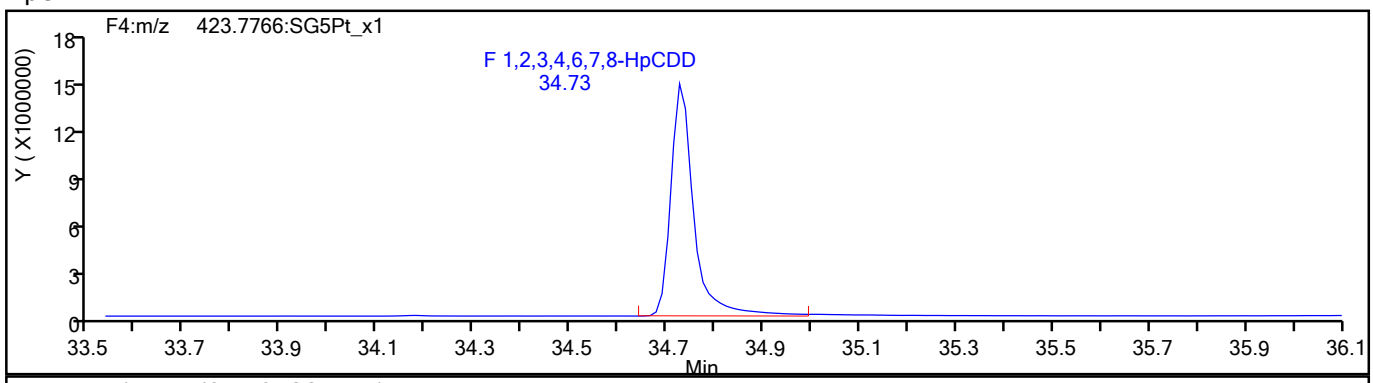

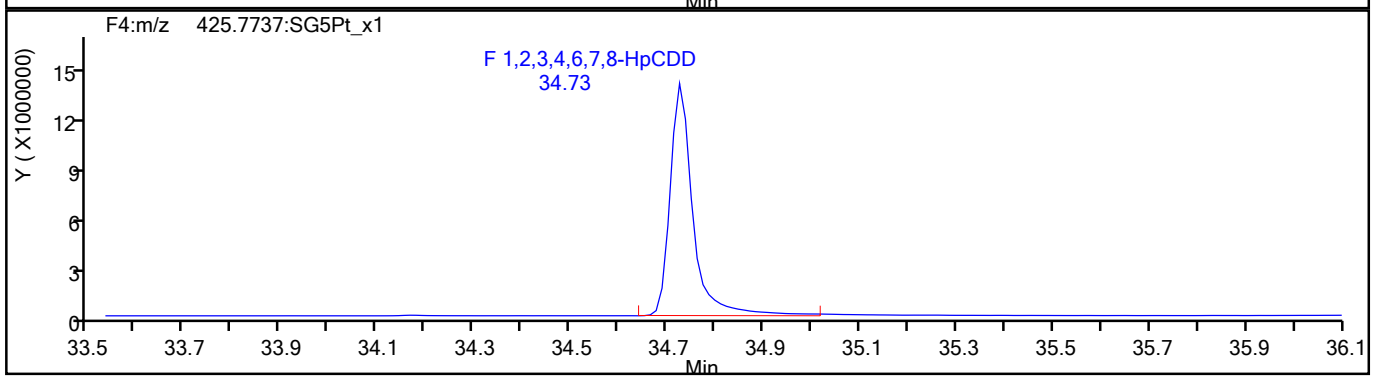

HpCDD Standards

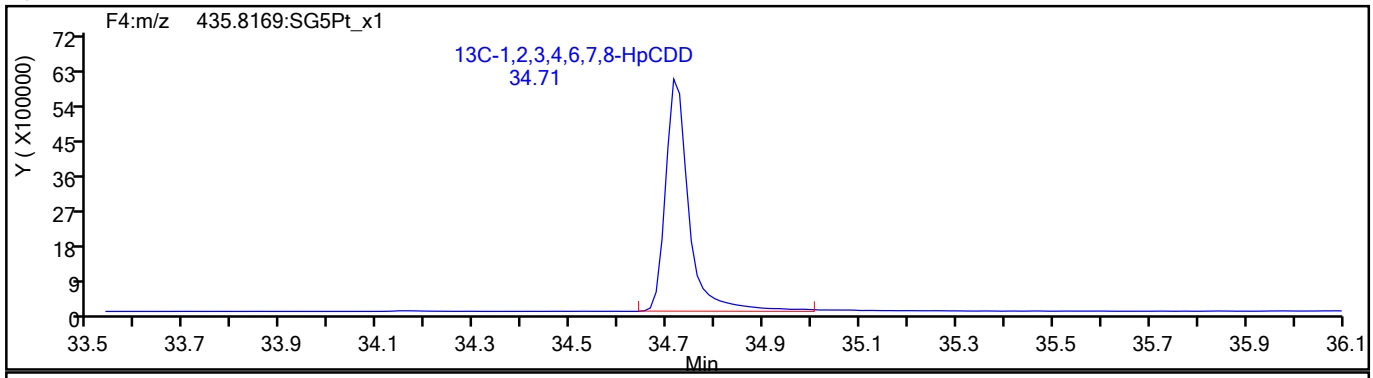

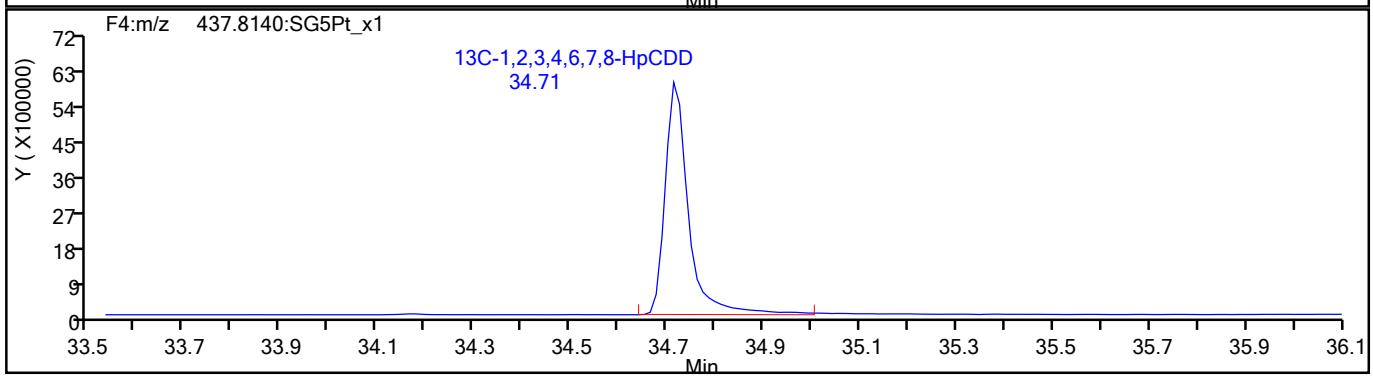

792502

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

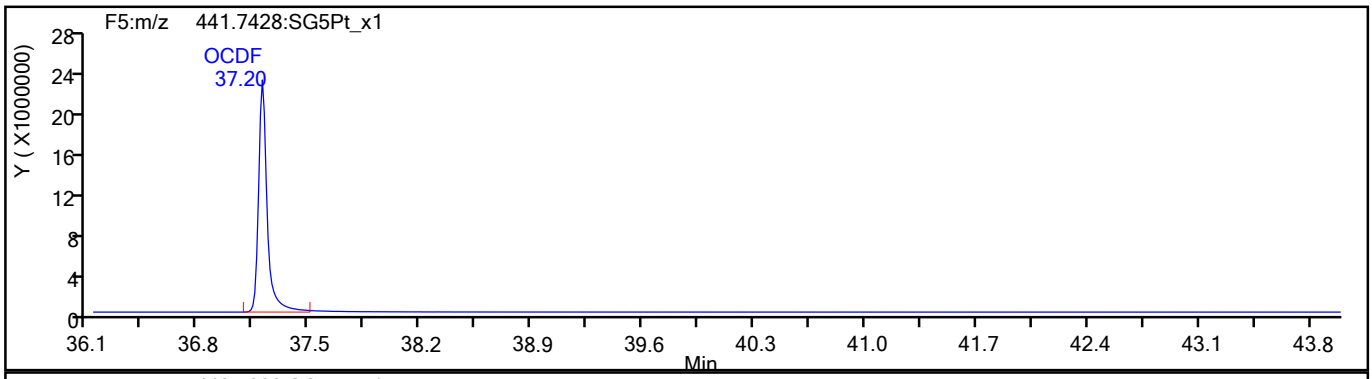

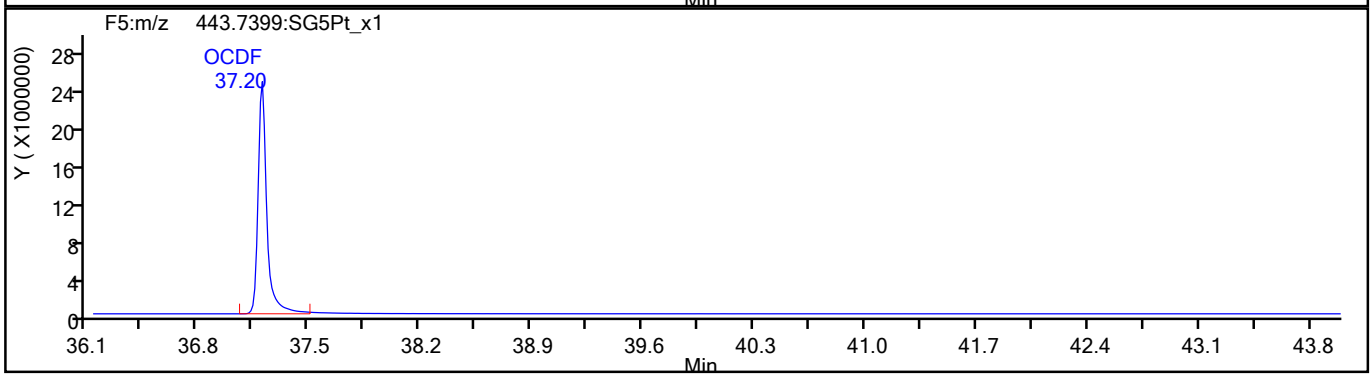

OCDF Standards

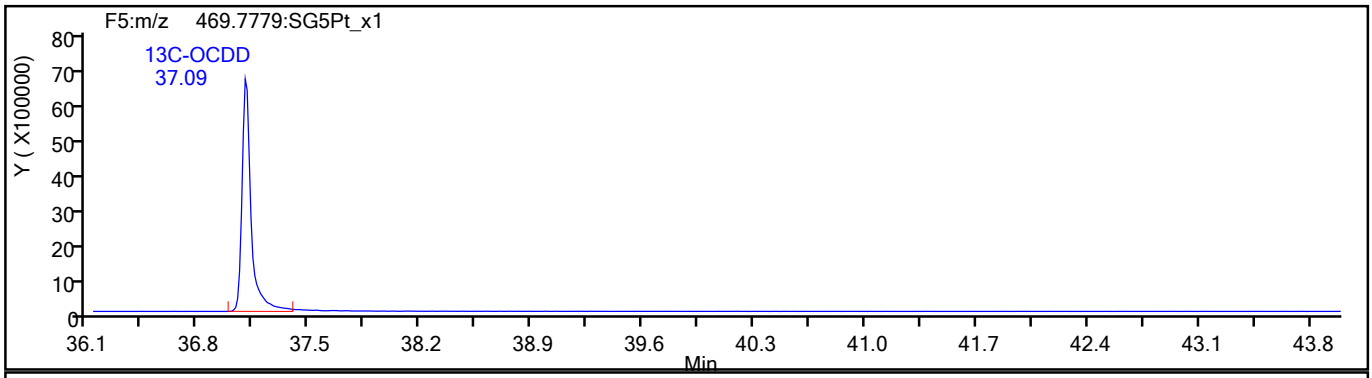

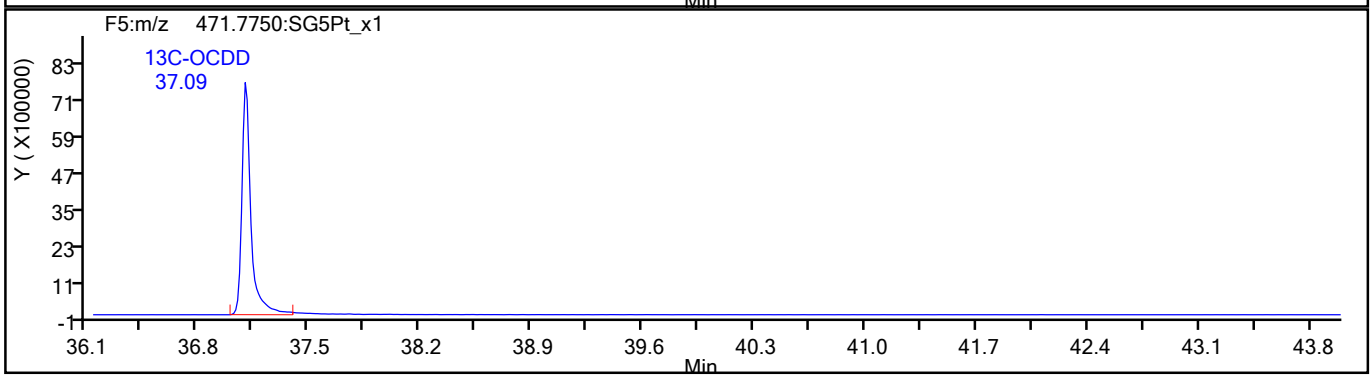

792503

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

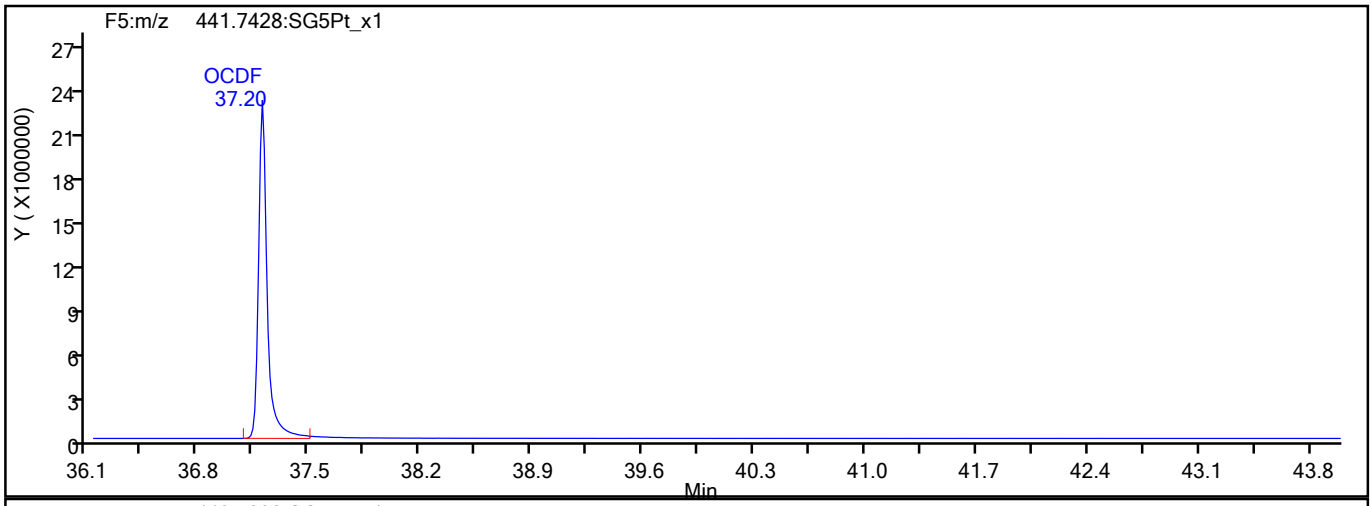

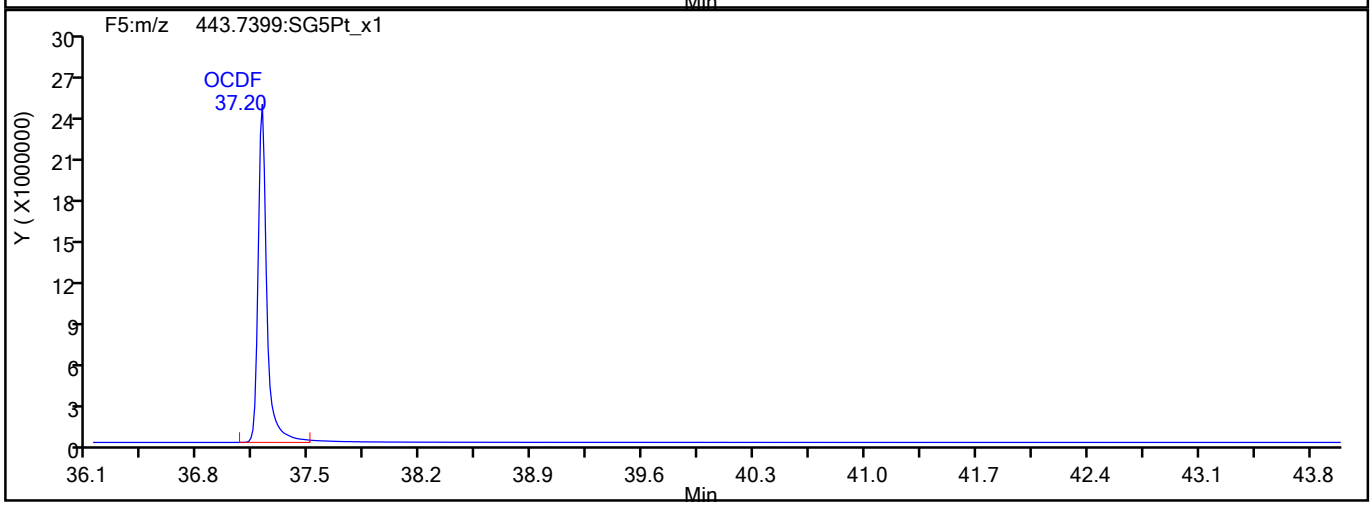

OCDF Interference Mass

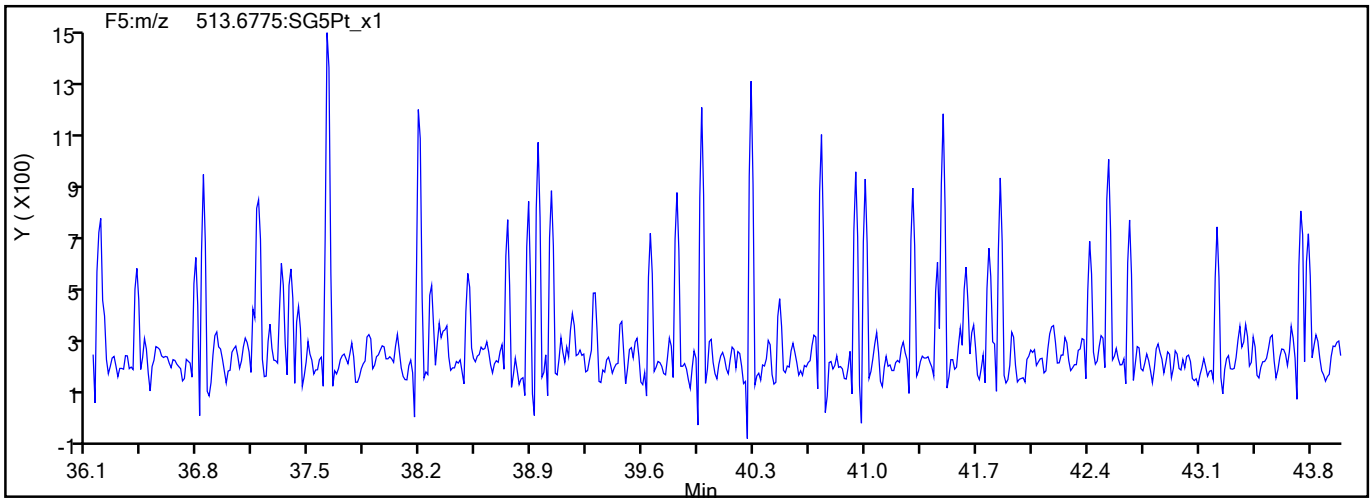

792504

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

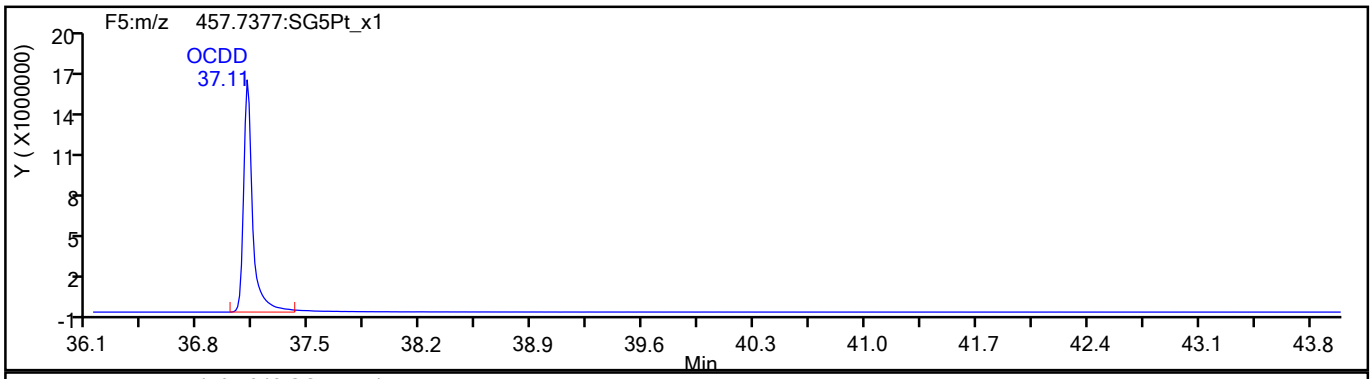

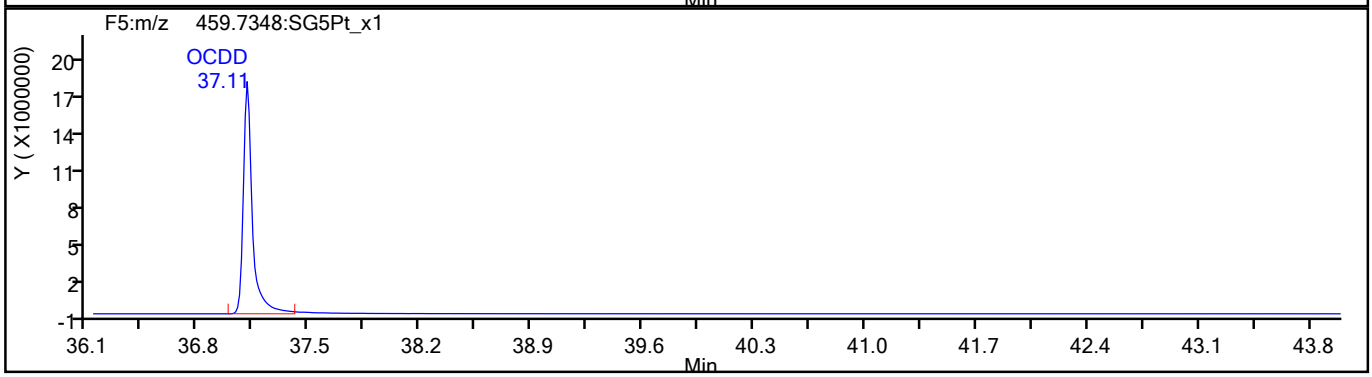

OCDD Standards

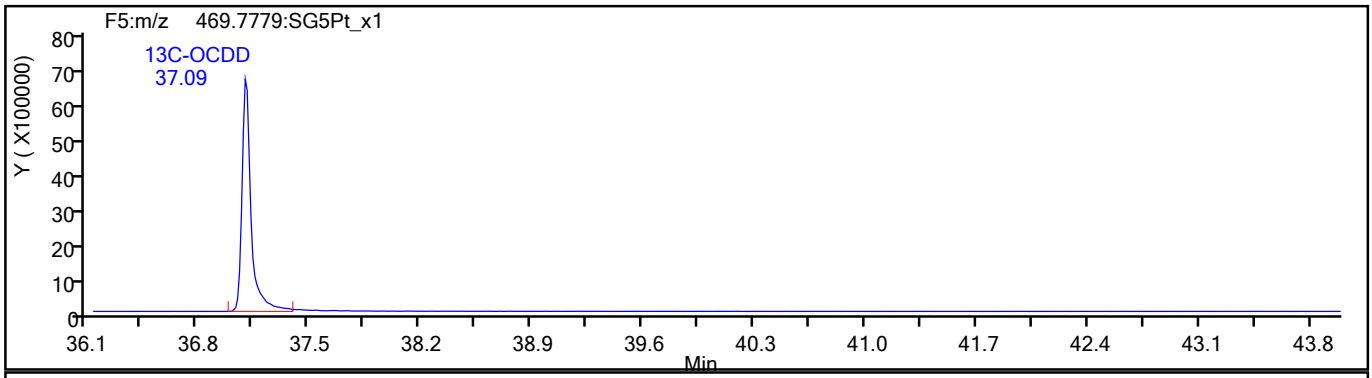

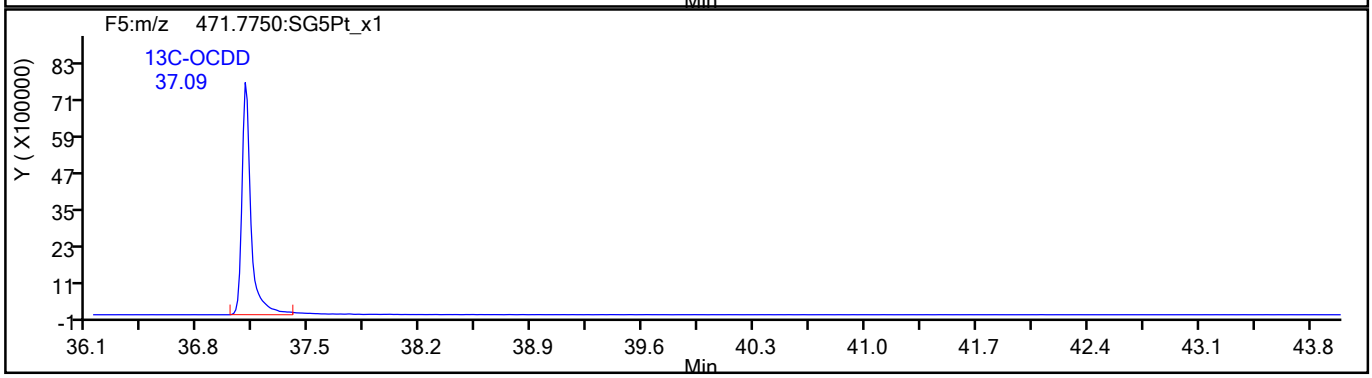

792505

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

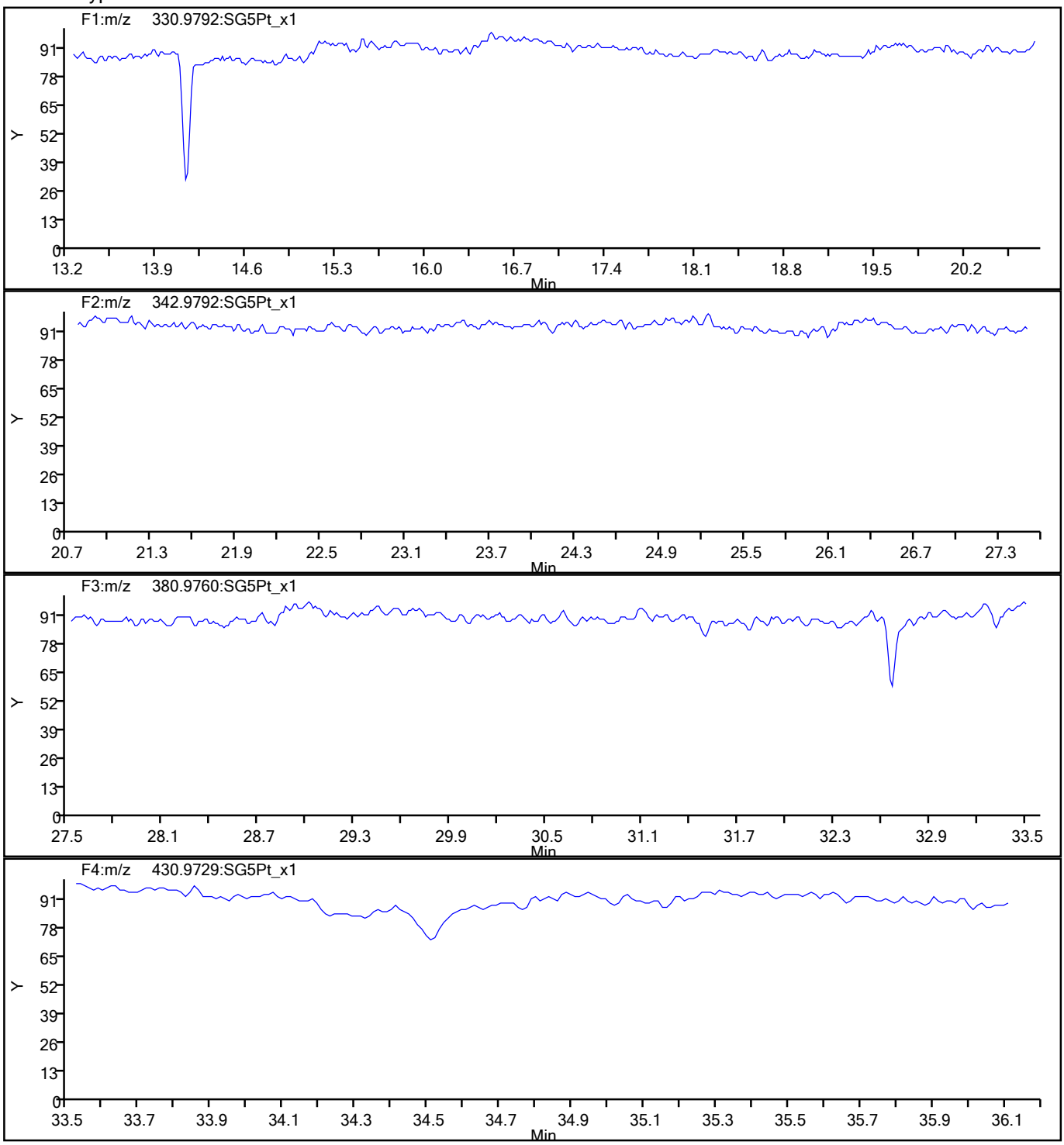

792506

Report Date: 27-Jul-2021 15:17:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

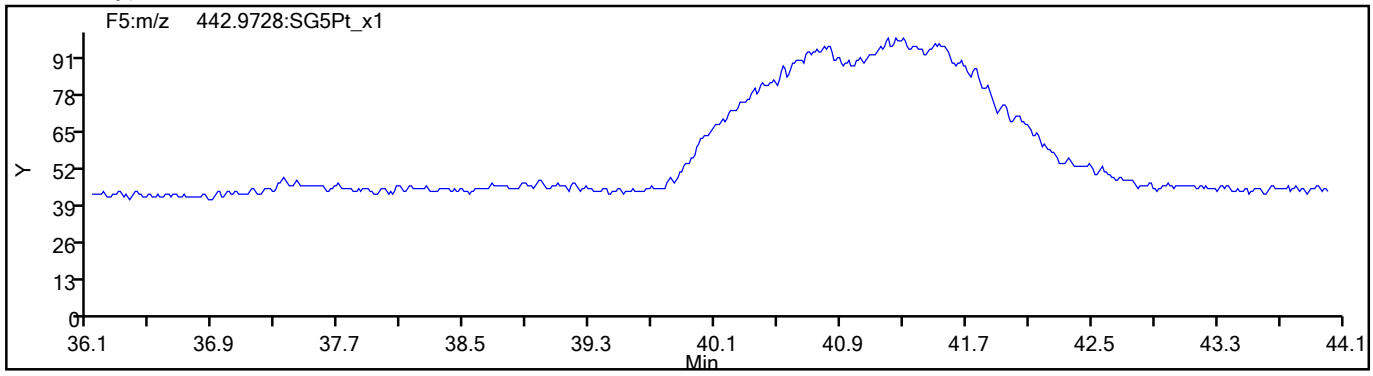

792507

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	57464333	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	95980421	0.79	1.6249	102.8	102.8	0.1660	0.1660	103	
2,3,7,8-TCDF	17.628	204575642	0.78	1.0239	208.2	208.2	0.2336	0.2336	104	
S Total TCDF					208.2	208.2	0.2336	0.2336		
D 13C-2,3,7,8-TCDD	18.338	53698206	0.83	0.8993	103.9	103.9	0.1396	0.1396	104	
$ 37Cl4-2,3,7,8-TCDD	18.354	140953034		1.1071	221.5	221.5	0.1318	0.1318	111	
2,3,7,8-TCDD	18.354	140421448	0.79	1.2541	208.5	208.5	0.1362	0.1362	104	
S Total TCDD					208.5	208.5	0.1362	0.1362		
D 13C-1,2,3,7,8-PeCDF	22.749	72829681	1.58	1.2101	104.7	104.7	0.2112	0.2112	105	
1,2,3,7,8-PeCDF	22.776	795873691	1.61	1.0611	1029.8	1029.8	2.482	2.482	103	
D 13C-2,3,4,7,8-PeCDF	24.126	75649463	1.61	1.2395	106.2	106.2	0.2062	0.2062	106	
2,3,4,7,8-PeCDF	24.153	783403837	1.59	1.0184	1016.8	1016.8	2.723	2.723	102	
S Total PeCDF					2046.7	2046.7	2.602	2.602		
D 13C-1,2,3,7,8-PeCDD	24.862	46251010	1.64	0.7612	105.7	105.7	0.1196	0.1196	106	
1,2,3,7,8-PeCDD	24.889	500555284	1.58	1.0484	1032.3	1032.3	0.8910	0.8910	103	
S Total PeCDD					1032.3	1032.3	0.8910	0.8910		
D 13C-1,2,3,4,7,8-HxCDF	30.835	67741189	0.53	1.0837	103.6	103.6	0.3784	0.3784	104	
1,2,3,4,7,8-HxCDF	30.862	737075796	1.21	1.0851	1002.7	1002.7	4.903	4.903	100	
D 13C-1,2,3,6,7,8-HxCDF	31.008	67363664	0.51	1.1279	99.0	99.0	0.3636	0.3636	98.97	
1,2,3,6,7,8-HxCDF	31.021	785709889	1.22	1.1260	1035.8	1035.8	4.873	4.873	104	
D 13C-2,3,4,6,7,8-HxCDF	31.754	63471184	0.52	1.0637	98.9	98.9	0.3855	0.3855	98.87	
2,3,4,6,7,8-HxCDF	31.767	762810877	1.21	1.1675	1029.4	1029.4	3.909	3.909	103	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58669892	0.52	0.9676	100.5	100.5	0.4238	0.4238	100	
1,2,3,7,8,9-HxCDF	32.539	708280047	1.22	1.1664	1035.0	1035.0	4.123	4.123	104	
S Total HxCDF					4103.0	4103.0	4.452	4.452		
* 13C-1,2,3,7,8,9-HxCDD	32.339	60348148	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	46886171	1.24	0.7334	105.9	105.9	0.3391	0.3391	106	
1,2,3,4,7,8-HxCDD	31.940	484857042	1.26	1.0640	971.9	971.9	2.786	2.786	97.19	
D 13C-1,2,3,6,7,8-HxCDD	32.033	53564396	1.27	0.8802	100.8	100.8	0.2826	0.2826	101	
1,2,3,6,7,8-HxCDD	32.047	543061818	1.27	1.0001	1013.8	1013.8	2.795	2.795	101	
1,2,3,7,8,9-HxCDD	32.353	563888565	1.26	1.1325	991.3	991.3	2.541	2.541	99.13	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDD					2977.0	2977.0	2.707	2.707		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	46328151	0.45	0.7730	99.3	99.3	0.9693	0.9693	99.31	
1,2,3,4,6,7,8-HpCDF	33.924	681312007	1.05	1.4413	1020.4	1020.4	8.187	8.187	102	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44333848	0.44	0.7008	104.8	104.8	1.069	1.069	105	
1,2,3,4,7,8,9-HpCDF	35.017	590555312	1.06	1.3174	1011.1	1011.1	10.5	10.5	101	
S Total HpCDF					2031.5	2031.5	9.356	9.356		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	39395832	1.02	0.6472	100.9	100.9	0.4739	0.4739	101	
1,2,3,4,6,7,8-HpCDD	34.726	441437476	1.05	1.0943	1024.0	1024.0	3.855	3.855	102	
S Total HpCDD					1024.0	1024.0	3.855	3.855		
D 13C-OCDD	37.093	56623863	0.89	0.4472	209.8	209.8	0.2327	0.2327	105	
OCDF	37.201	856685987	0.91	1.4382	2104.0	2104.0	1.905	1.905	105	
OCDD	37.105	635652839	0.90	1.1070	2028.1	2028.1	1.855	1.855	101	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		26125466	6597193	4577	11442	1441		
333.9339	18.142	18.142	0		31338867	7893522	2702	6755	2921	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42243137	10877420	7832	19580	1389		
317.9389	17.613	17.616	0	0.971	53737284	13863668	7802	19505	1777	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	89710432	22799700	10338	25845	2205		
305.8987	17.628	17.631	0	1.001	114865210	29189675	13335	33337	2189	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24360997	5757558	4577	11442	1258		
333.9339	18.338	18.338	0	1.011	29337209	6914283	2702	6755	2559	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	140953034	33738158	8459	21147	3988		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	62065087	14965631	3913	9782	3825		
321.8936	18.354	18.357	0	1.001	78356361	18744482	4747	11867	3949	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44649559	7939527	8573	21432	926		
353.8970	22.749	22.754	0	1.254	28180122	5062354	6242	15605	811	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	490871580	87021007	84135	210337	1034		
341.8567	22.776	22.779	0	1.001	305002111	54503599	52854	132135	1031	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46717935	7613965	8573	21432	888		
353.8970	24.126	24.129	0	1.330	28931528	4737188	6242	15605	759	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	480352978	79104825	84135	210337	940		
341.8567	24.153	24.156	0	1.001	303050859	50060127	52854	132135	947	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28720712	4433240	3087	7717	1436		
369.8919	24.862	24.865	0	1.370	17530298	2751802	2189	5472	1257	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	306292917	47311146	15348	38370	3083		
357.8516	24.889	24.892	0	1.001	194262367	30133208	11499	28747	2621	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23491874	5084915	9674	24185	526		
385.8610	30.835	30.838	0	0.953	44249315	9441190	17790	44475	531	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	404173144	87133654	170642	426605	511		
375.8178	30.848	30.857	0	1.000	332902652	71216591	138478	346195	514	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	22854682	4877346	9674	24185	504		
385.8610	31.008	31.003	0	0.959	44508982	9206926	17790	44475	518	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.000	431948071	93438031	170642	426605	548		
375.8178	31.021	31.022	0	1.000	353761818	76246532	138478	346195	551	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	21747421	5871662	9674	24185	607		
385.8610	31.754	31.756	0	0.982	41723763	11062051	17790	44475	622	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	417841952	110026703	170642	426605	645		
375.8178	31.767	31.772	0	1.000	344968925	92108448	138478	346195	665	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20172563	5575575	9674	24185	576		
385.8610	32.512	32.523	-1	1.005	38497329	10495423	17790	44475	590	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	388834443	107441652	170642	426605	630		
375.8178	32.526	32.534	0	1.000	319445604	89819128	138478	346195	649	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33485933	9289499	8951	22377	1038		
403.8529	32.339	32.342	0		26862215	7454274	7708	19270	967	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	25994948	7598983	8951	22377	849		
403.8529	31.927	31.929	0	0.987	20891223	6054958	7708	19270	786	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	270288224	77533273	86149	215372	900		
391.8127	31.940	31.945	0	1.000	214568818	61952830	75747	189367	818	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29946566	8106259	8951	22377	906		
403.8529	32.033	32.033	0	0.991	23617830	6373294	7708	19270	827	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	303387935	83103965	86149	215372	965		
391.8127	32.047	32.047	0	1.000	239673883	65565020	75747	189367	866	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	314172702	87971106	86149	215372	1021		
391.8127	32.353	32.355	0	1.013	249715863	70210414	75747	189367	927	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14282220	4787635	15981	39952	300		
419.8220	33.912	33.914	0	1.049	32045931	10687518	34202	85505	312	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	349397605	118035783	389676	974190	303		
409.7789	33.924	33.926	0	1.000	331914402	111658032	340706	851765	328	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13509696	4047534	15981	39952	253		
419.8220	35.005	35.010	0	1.082	30824152	9120201	34202	85505	267	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	303260617	91538482	389676	974190	235		
409.7789	35.017	35.020	0	1.000	287294695	87143866	340706	851765	256	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19890119	6131671	10444	26110	587		
437.8140	34.714	34.716	0	1.073	19505713	6051375	10100	25250	599	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	225857690	69087451	102453	256132	674		
425.7737	34.726	34.726	0	1.000	215579786	65898474	103127	257817	639	1.05(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26710485	6689918	2659	6647	2516		
471.7750	37.093	37.094	0	1.147	29913378	7452640	4311	10777	1729	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	409115360	108366645	37076	92690	2923		
443.7399	37.201	37.199	0	1.003	447570627	117808946	40434	101085	2914	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	300559615	76562352	27801	69502	2754		
459.7348	37.105	37.106	0	1.000	335093224	85854399	30277	75692	2836	0.90(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

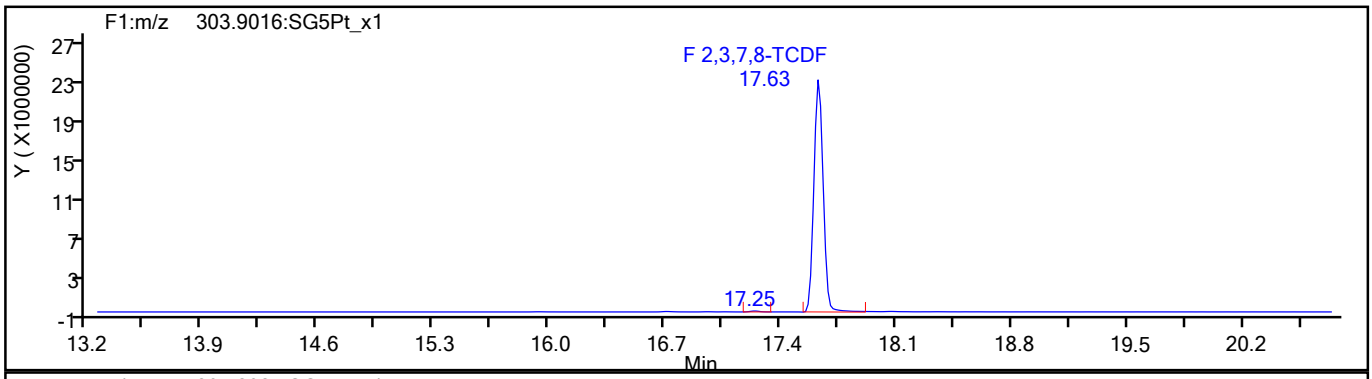

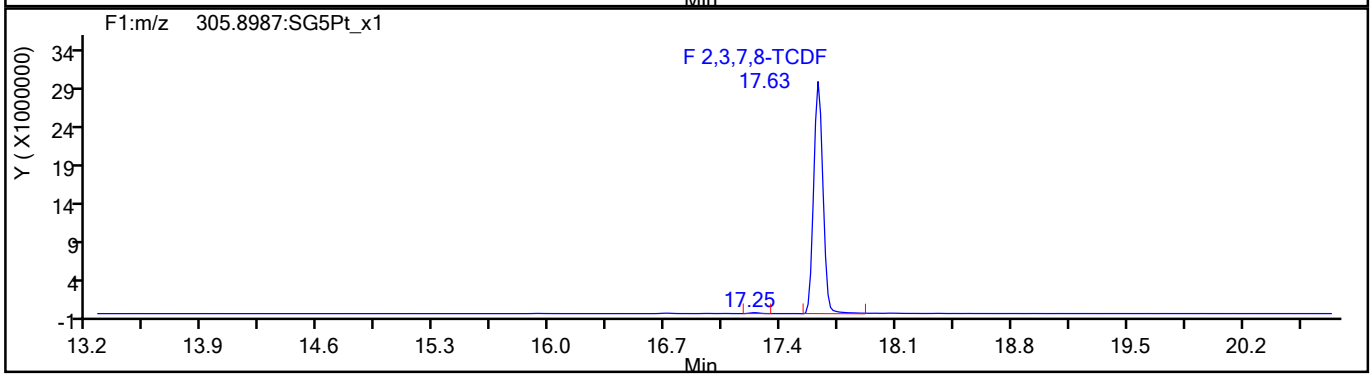

TCDF Standards

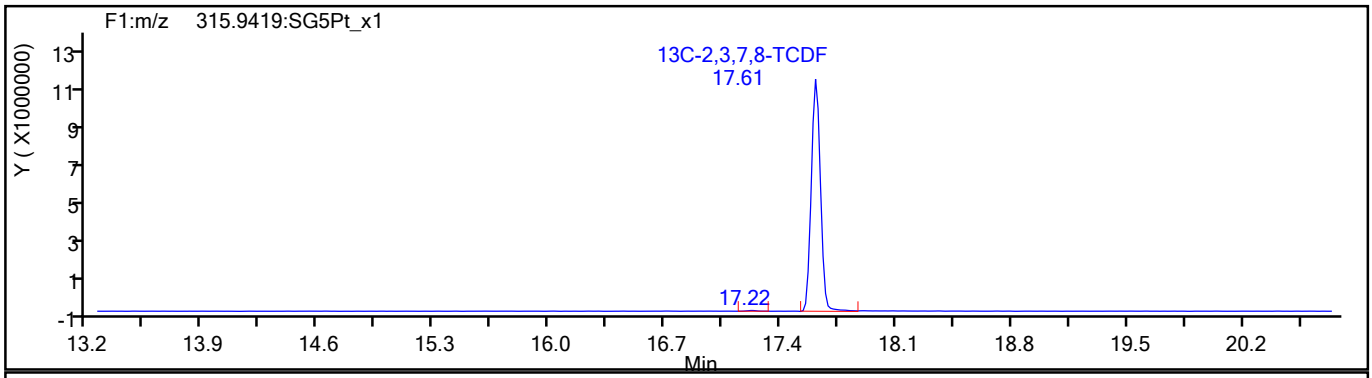

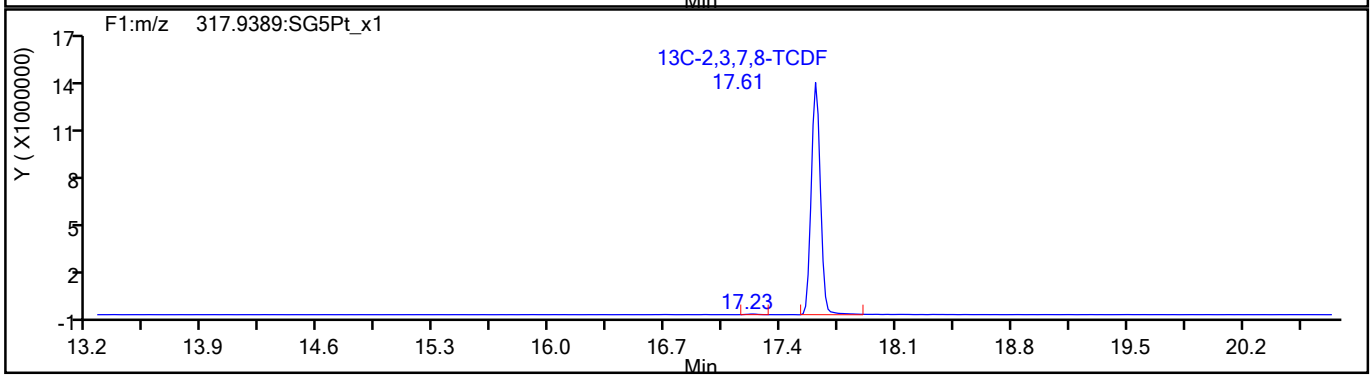

792513

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

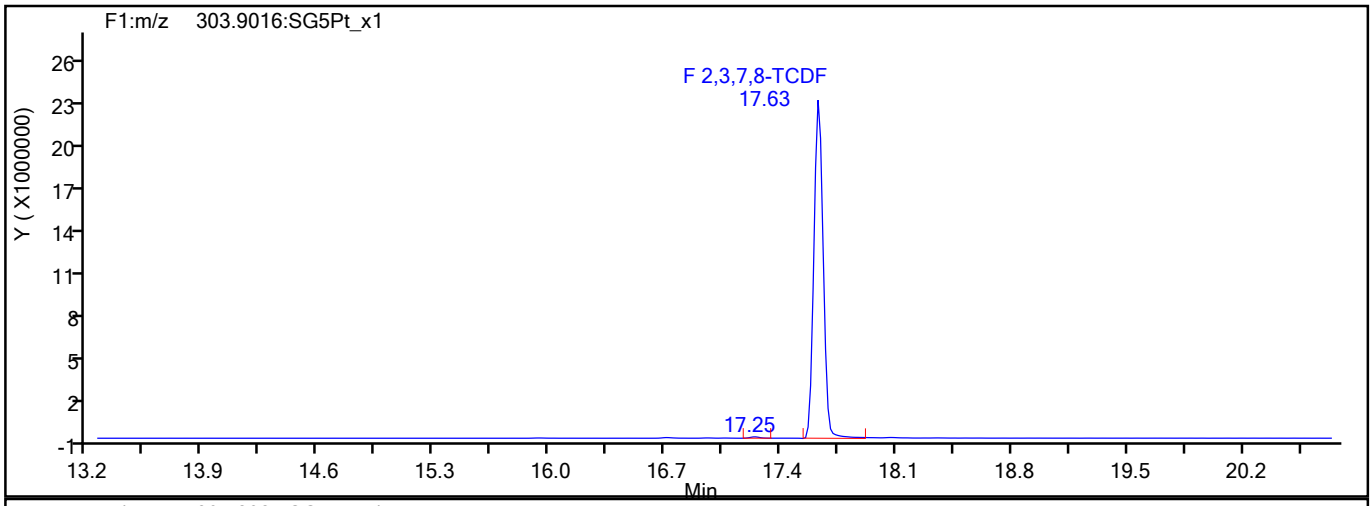

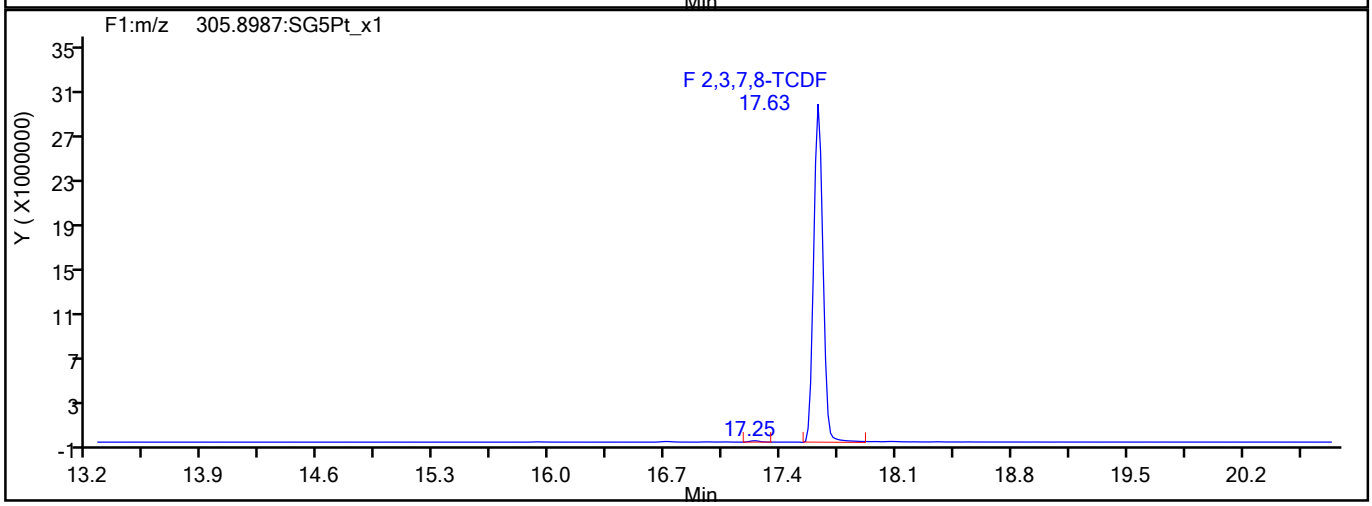

TCDF Interference Mass

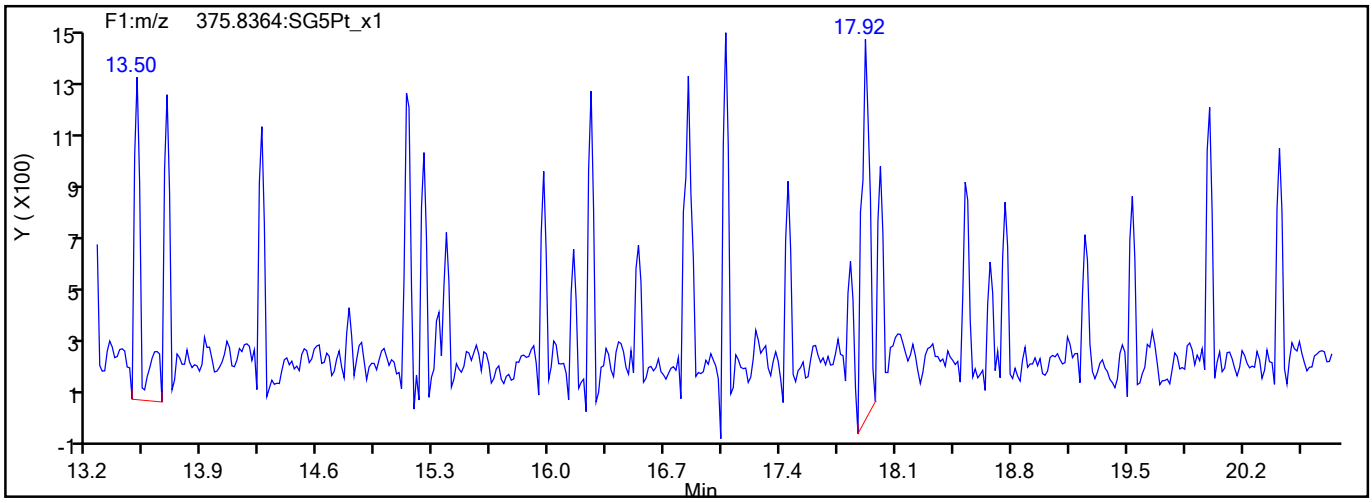

792514

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

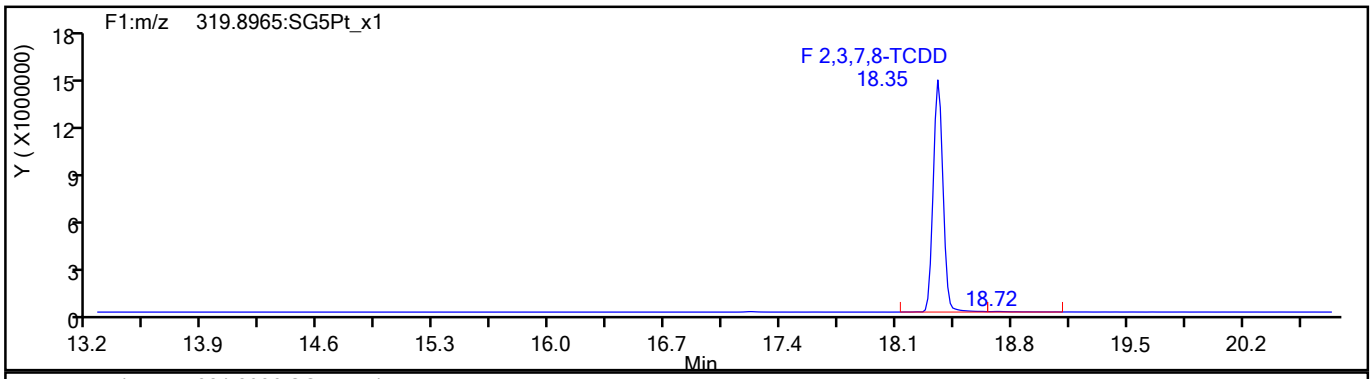

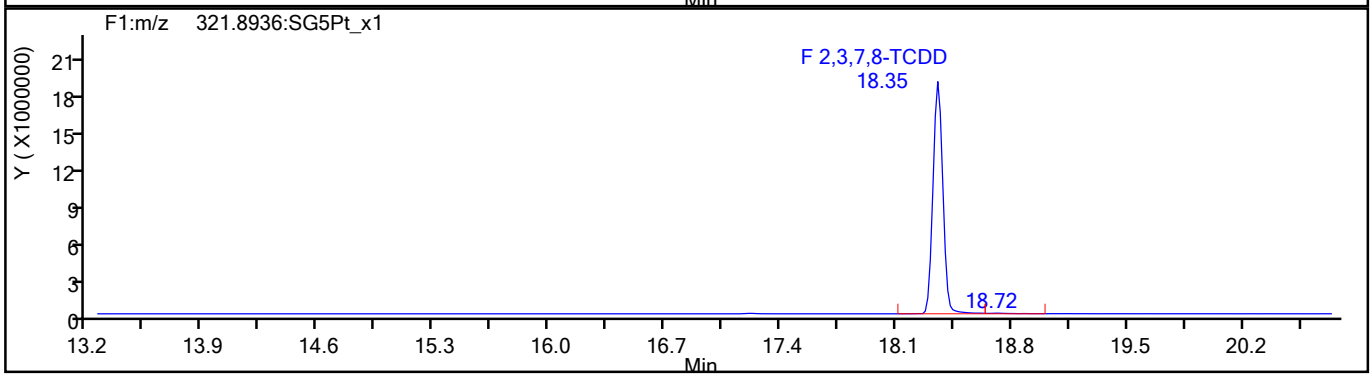

TCDD Standards

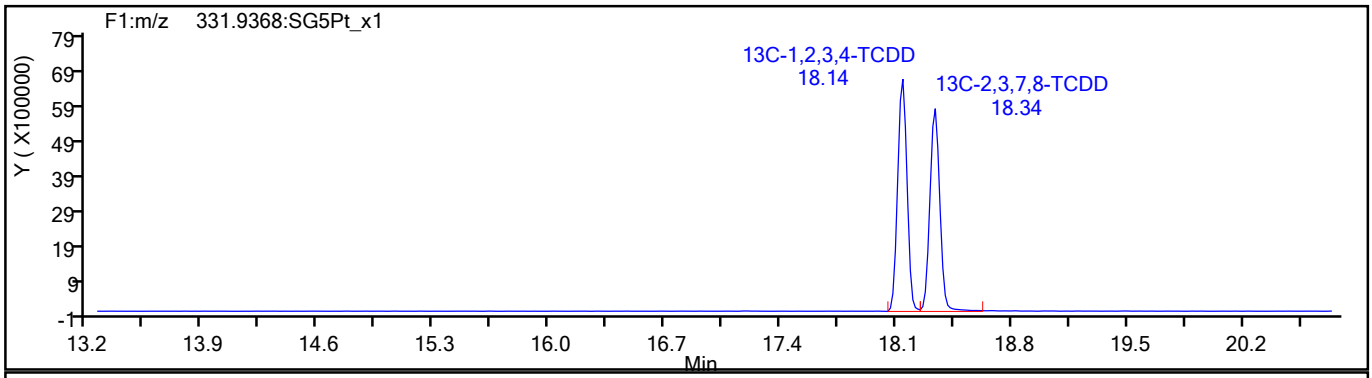

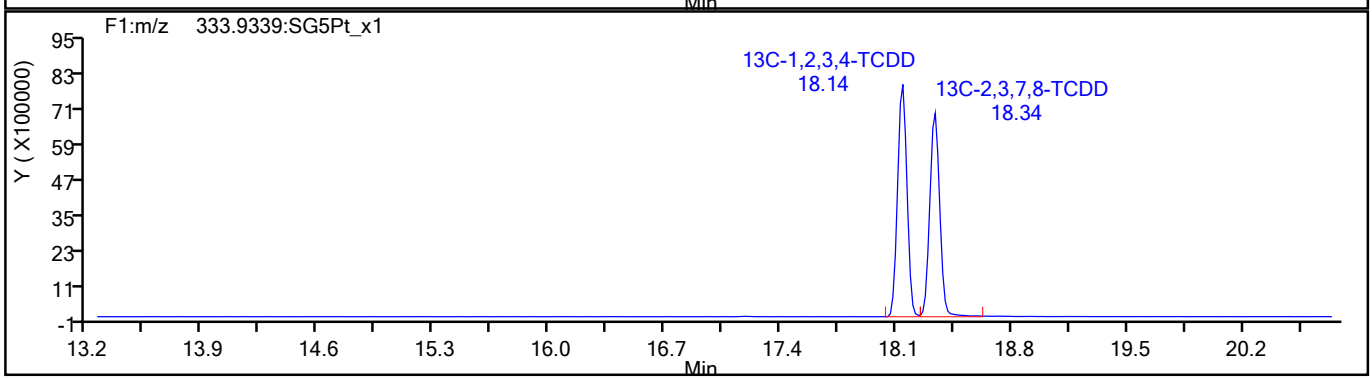

792515

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

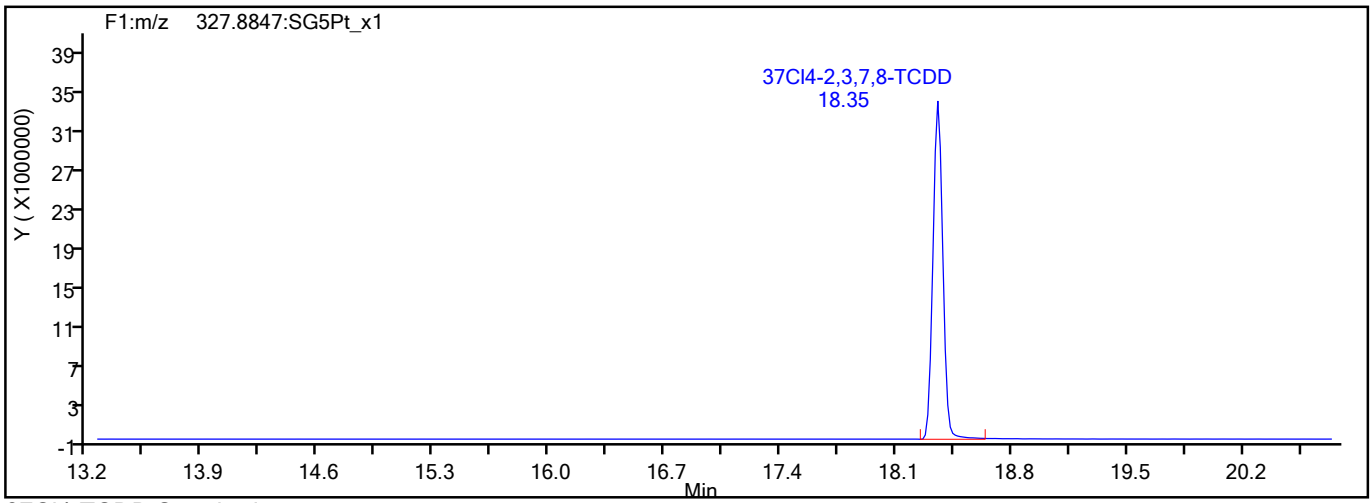

37Cl4-TCDD Standards

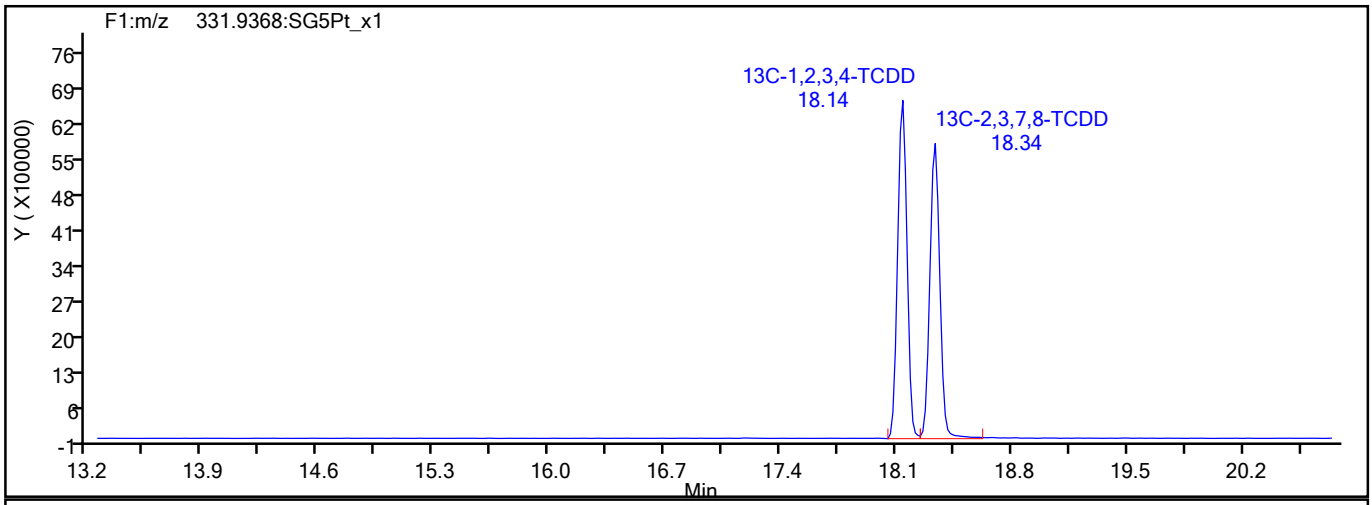

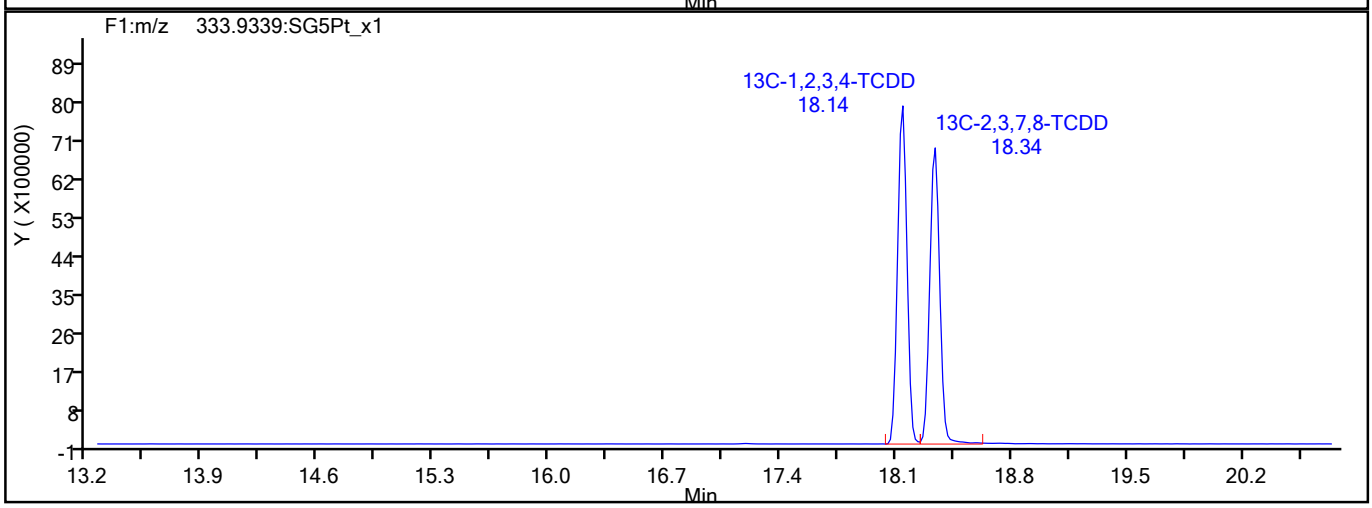

792516

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

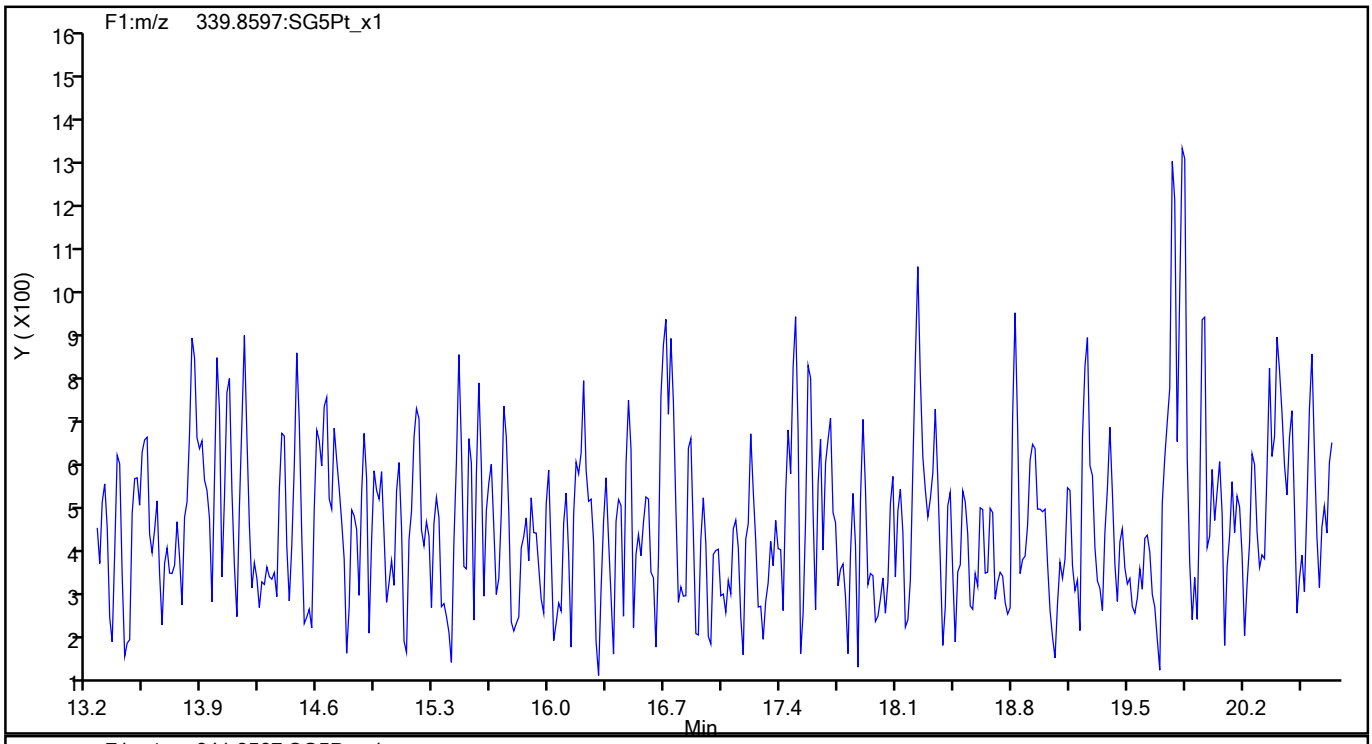

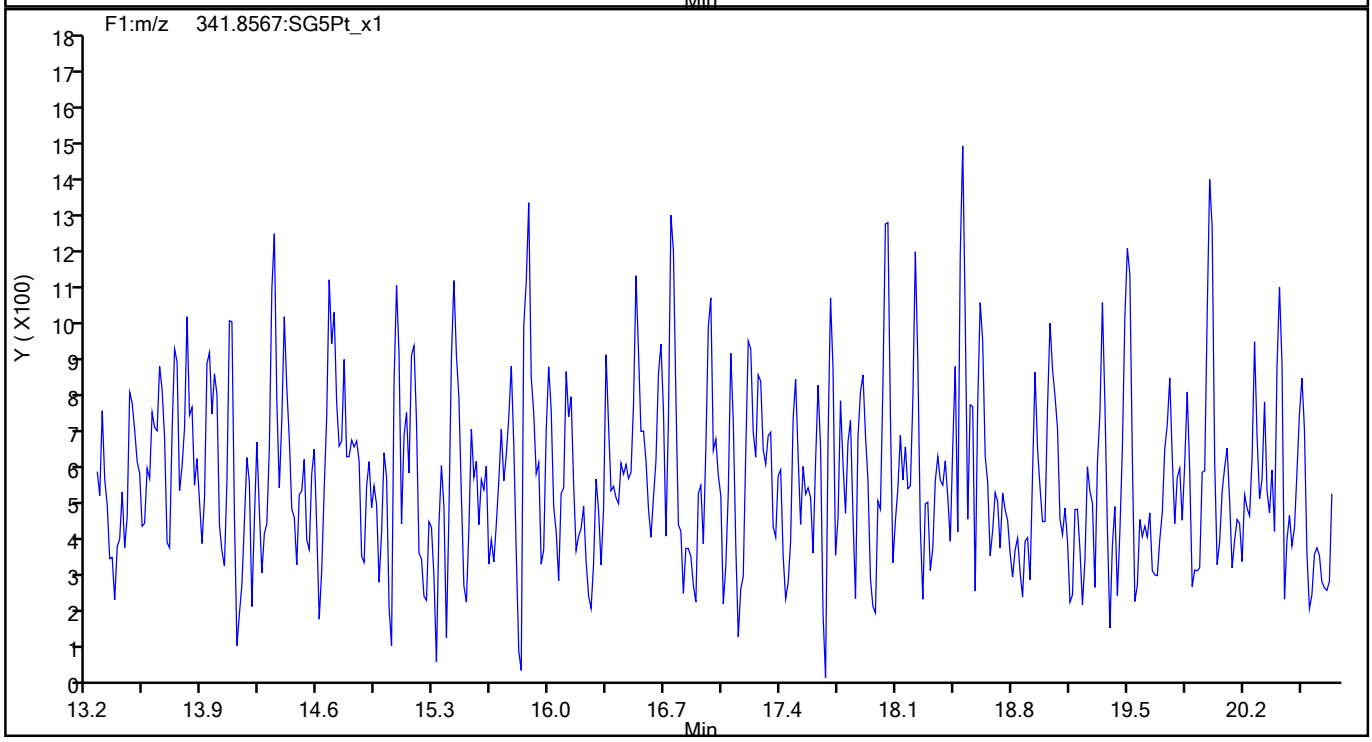

792517

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

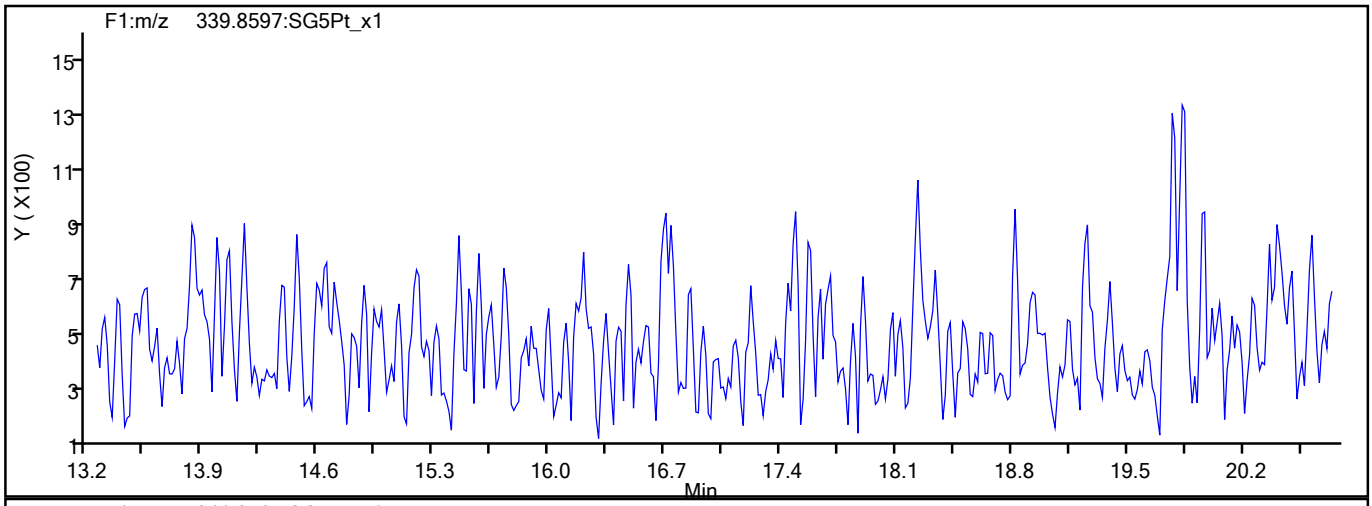

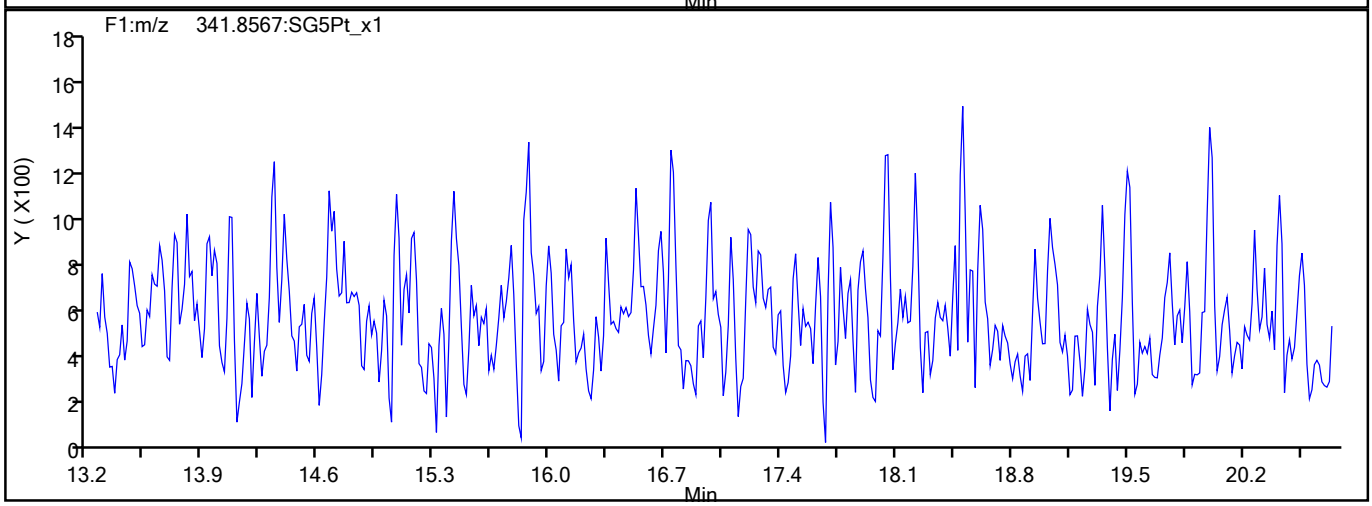

F1 PeCDFs Interference Mass

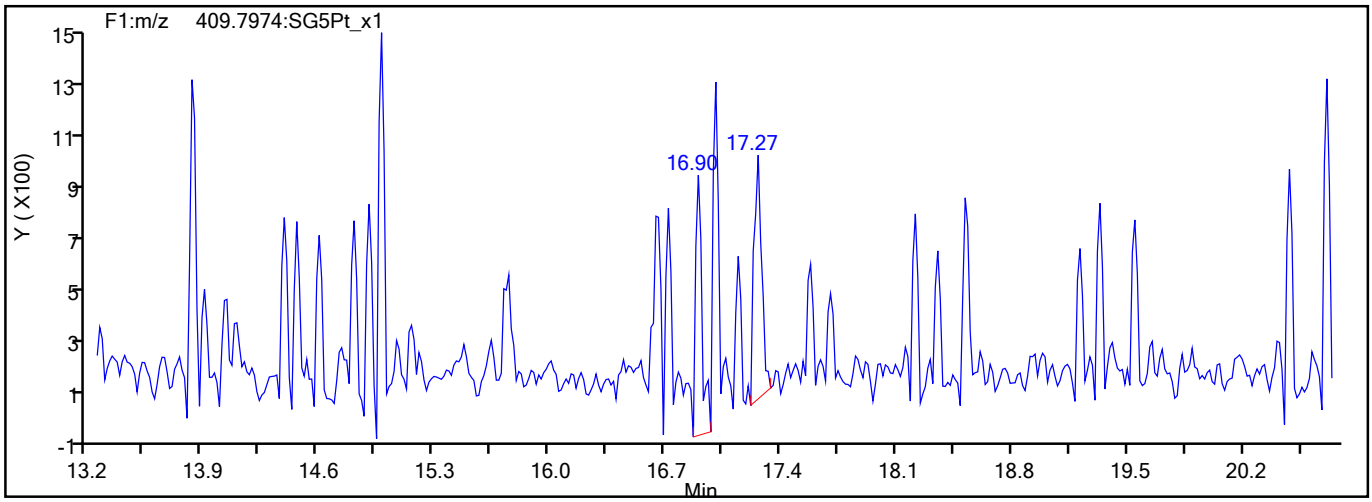

792518

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

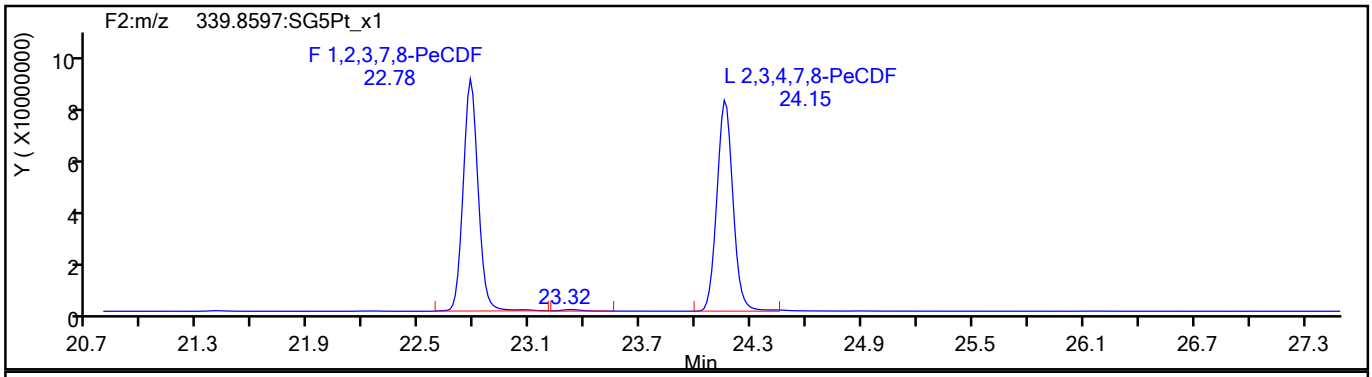

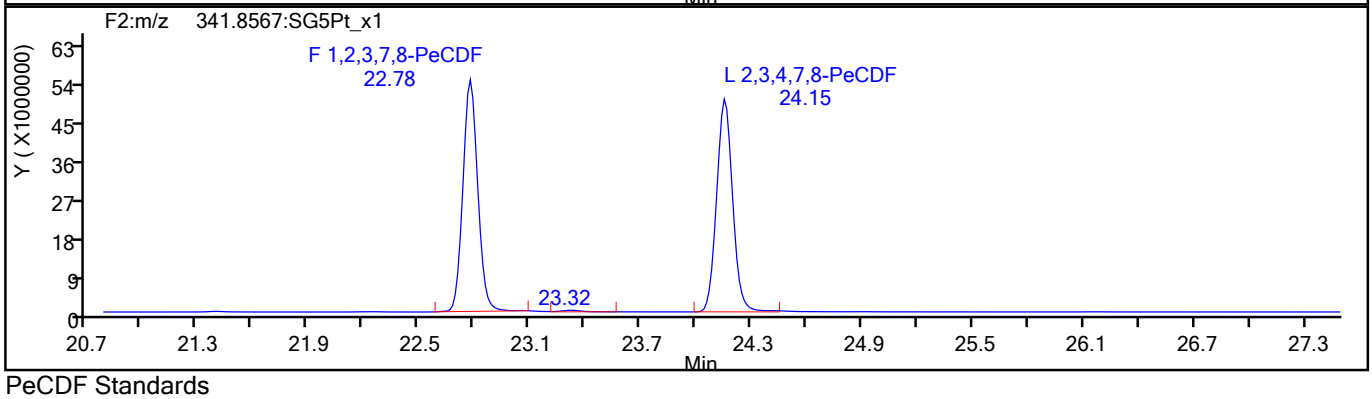

PeCDF Standards

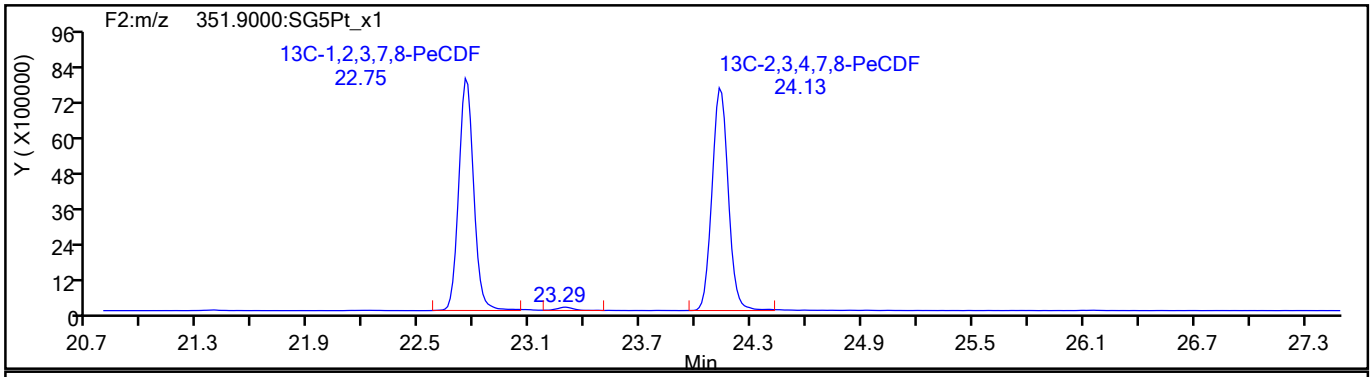

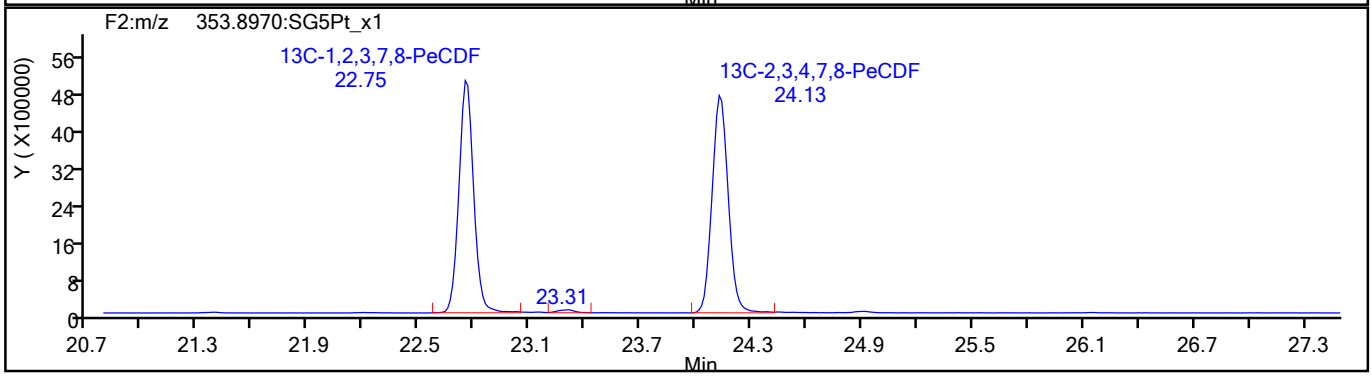

792519

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

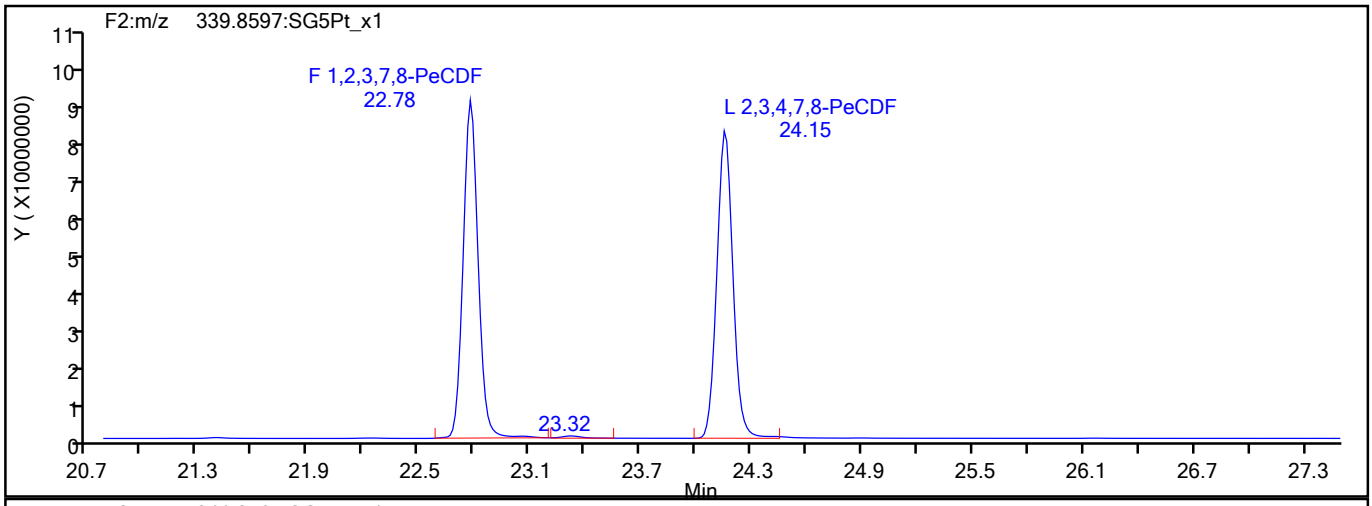

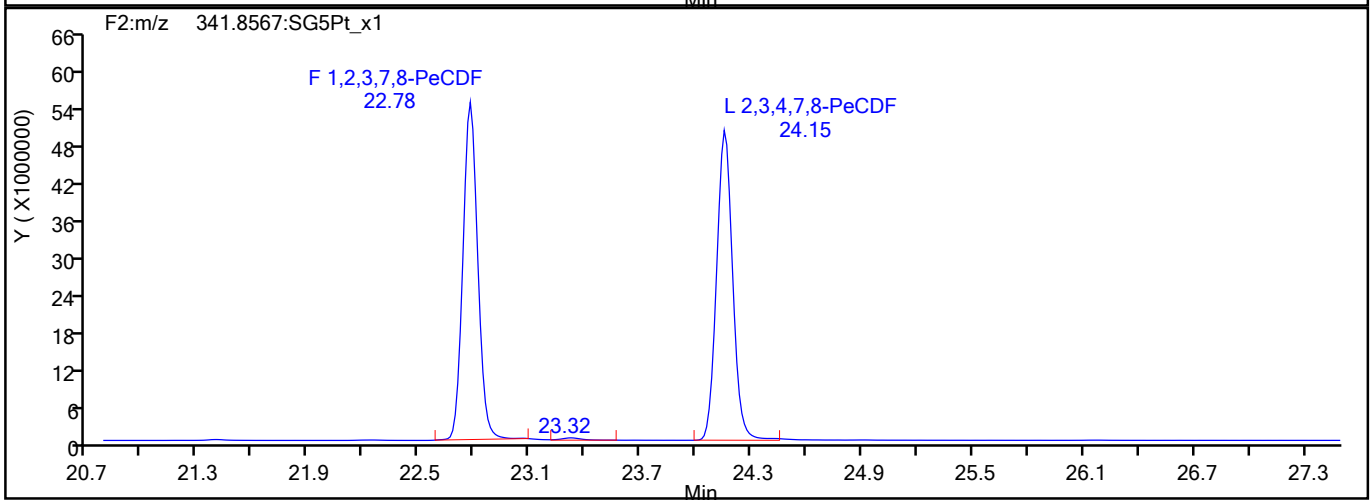

PeCDF Interference Mass

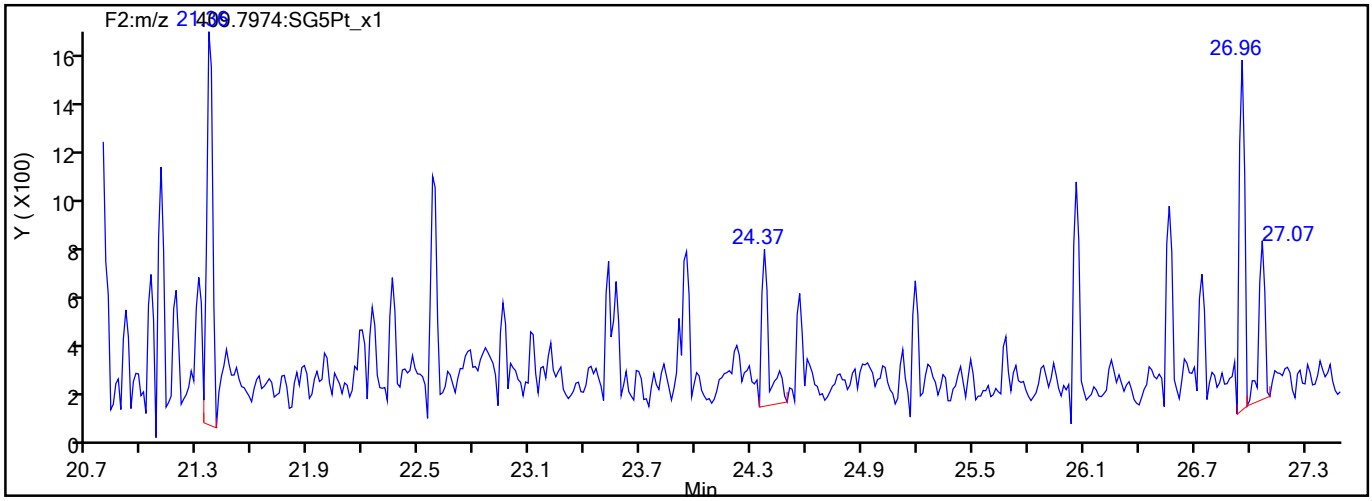

792520

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

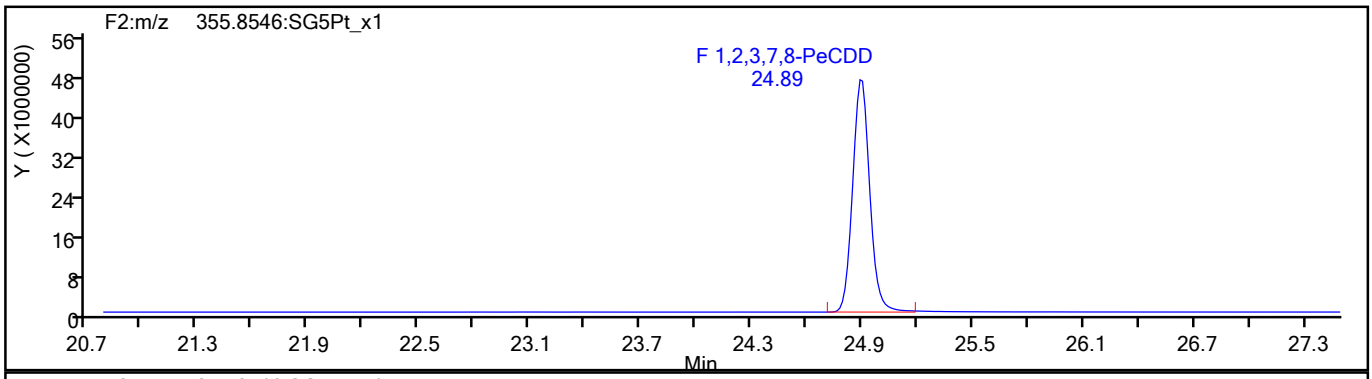

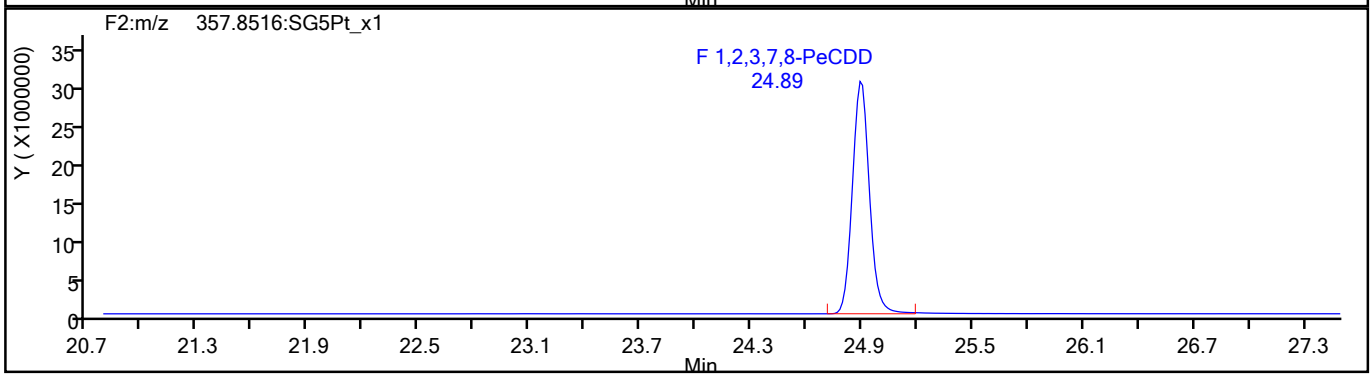

PeCDD Standards

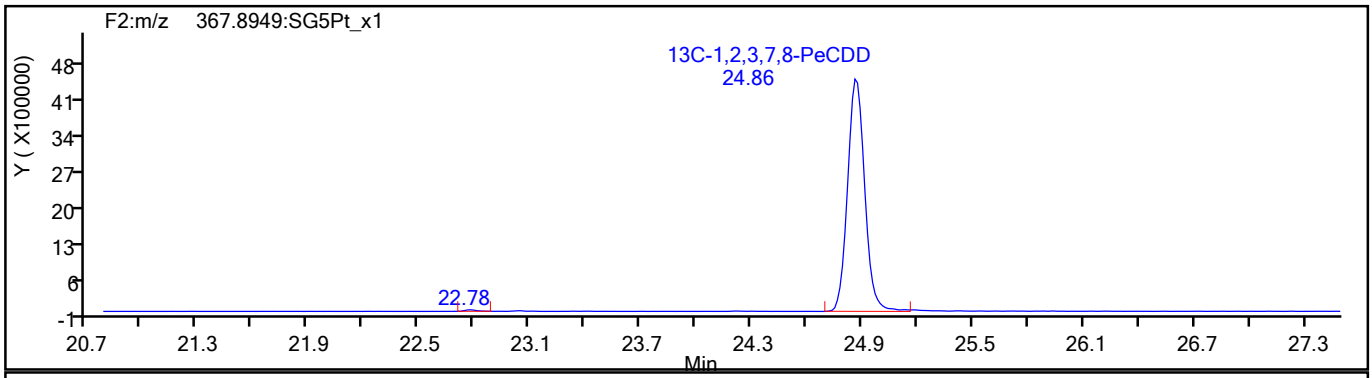

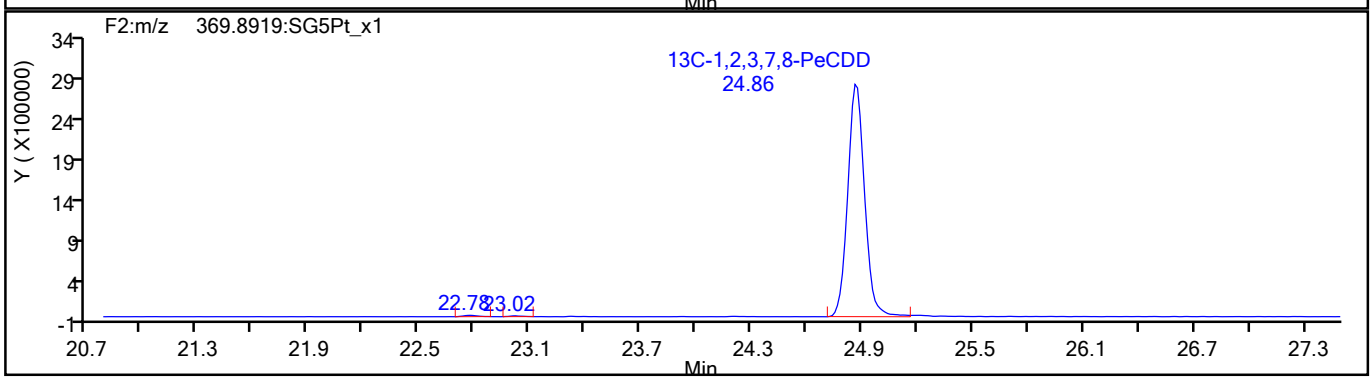

792521

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

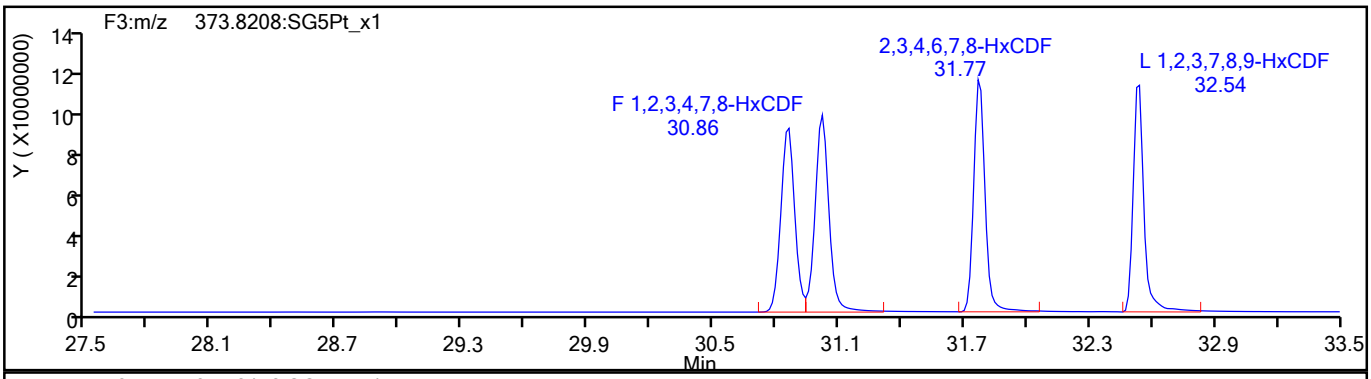

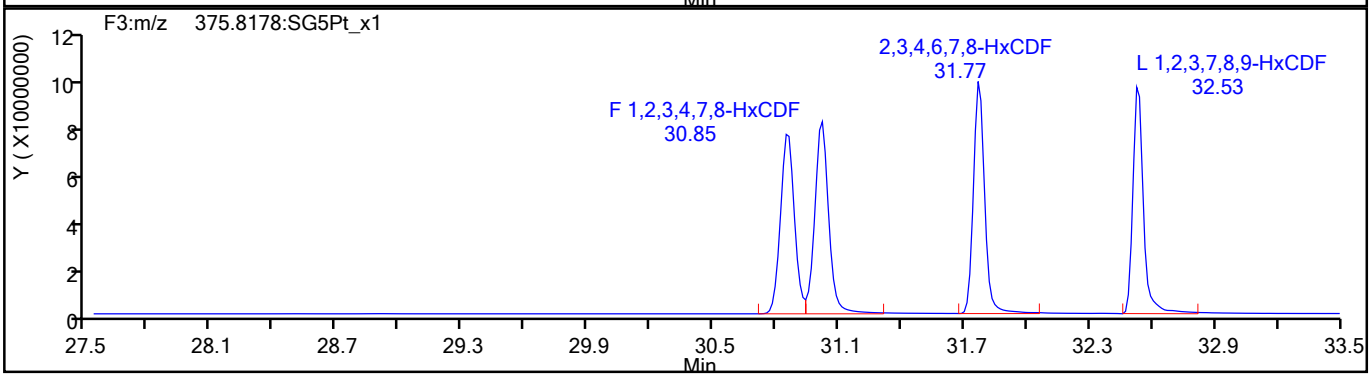

HxCDF Standards

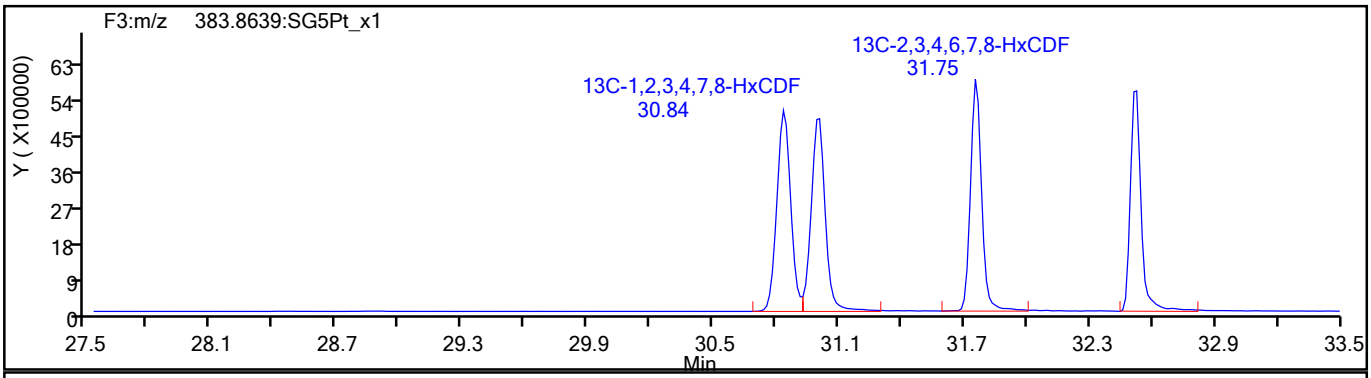

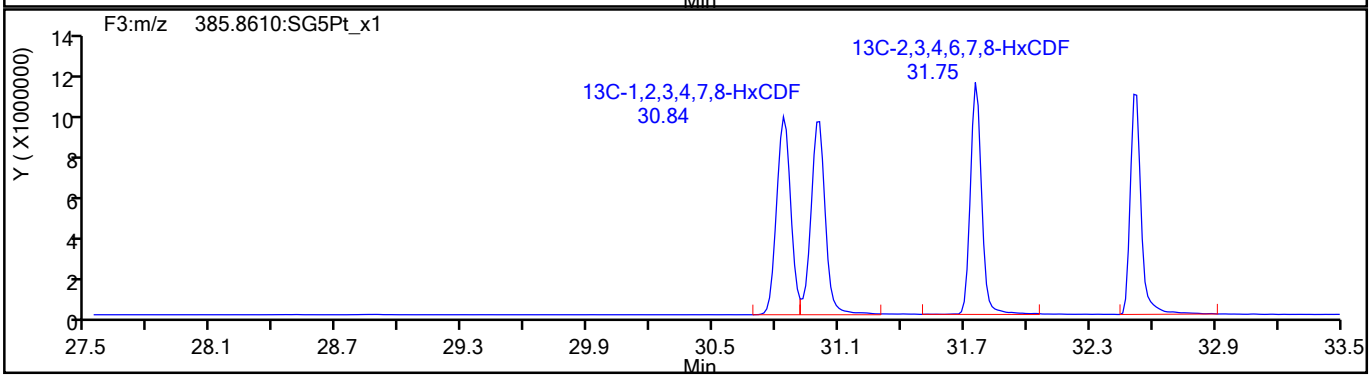

792522

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

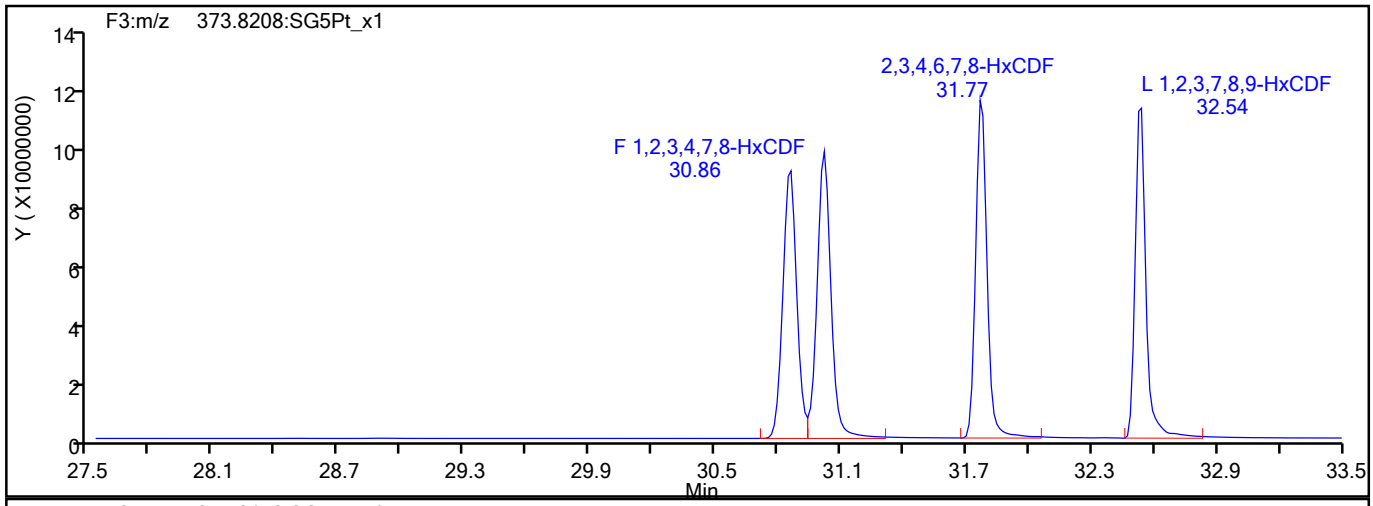

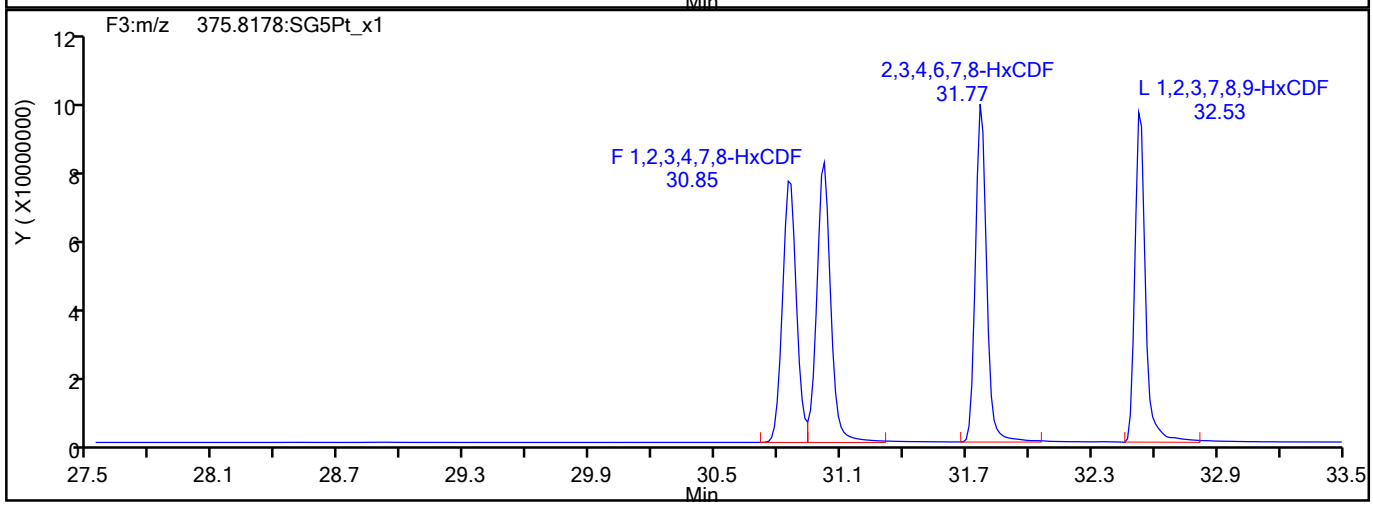

HxCDF Interference Mass

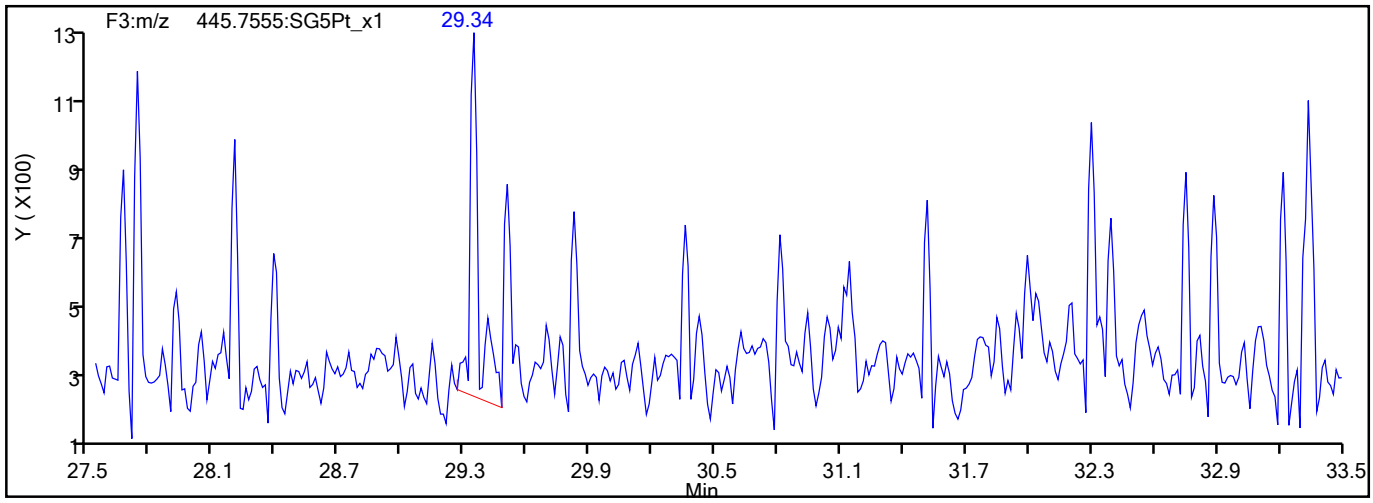

792523

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

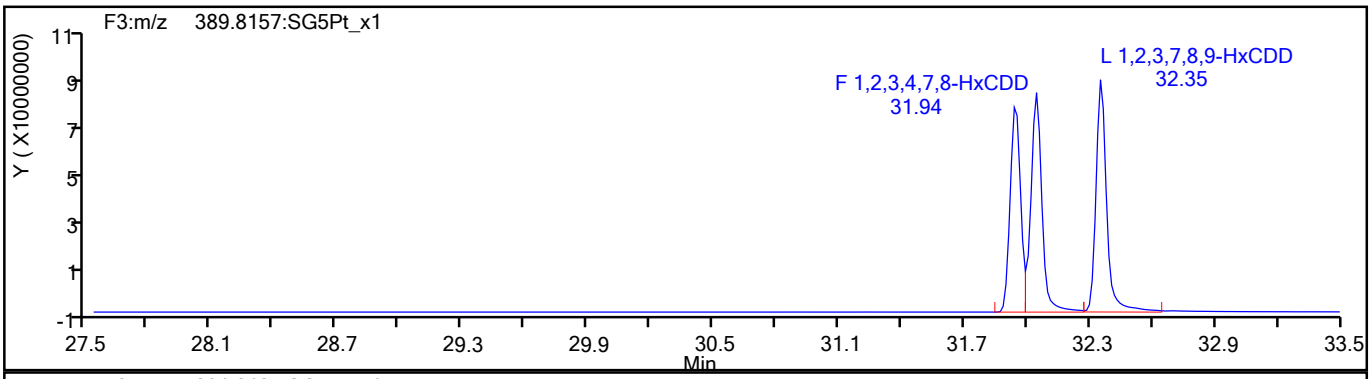

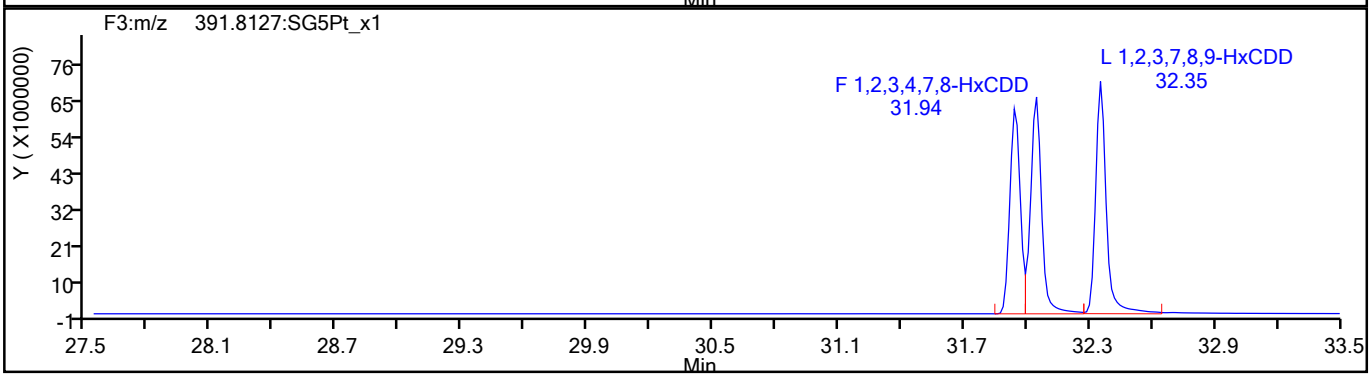

HxCDD Standards

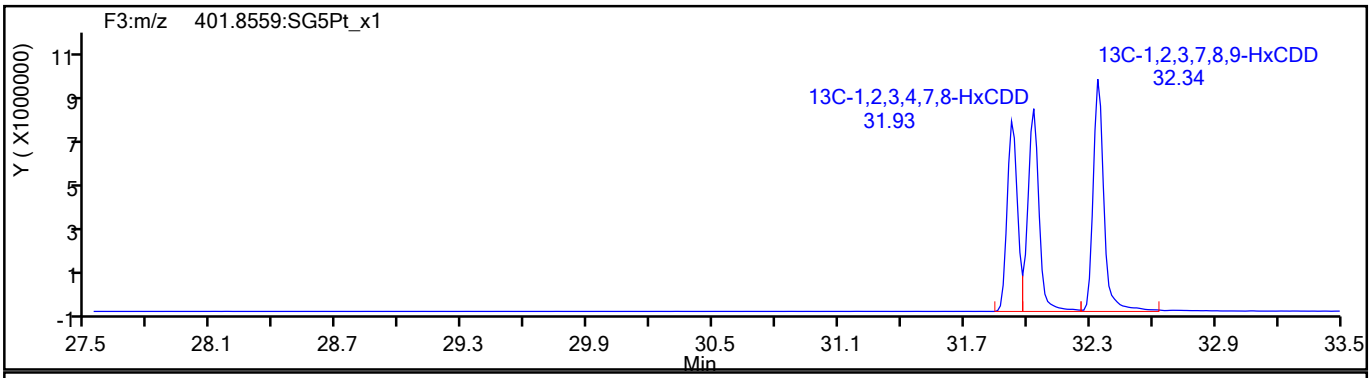

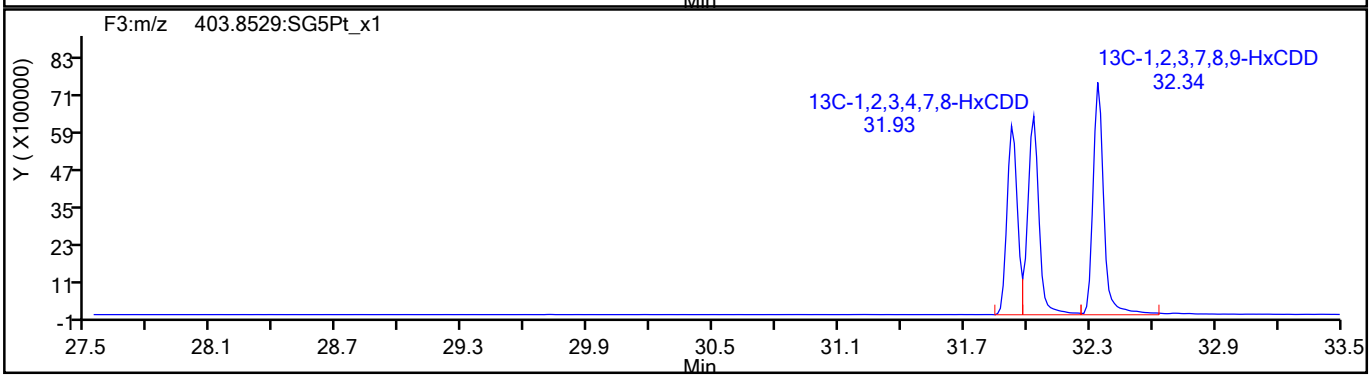

792524

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

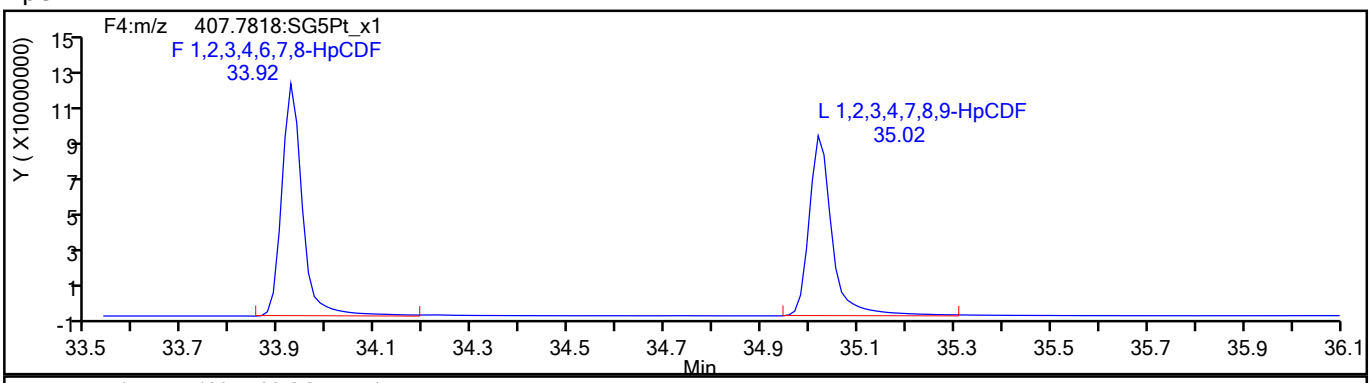

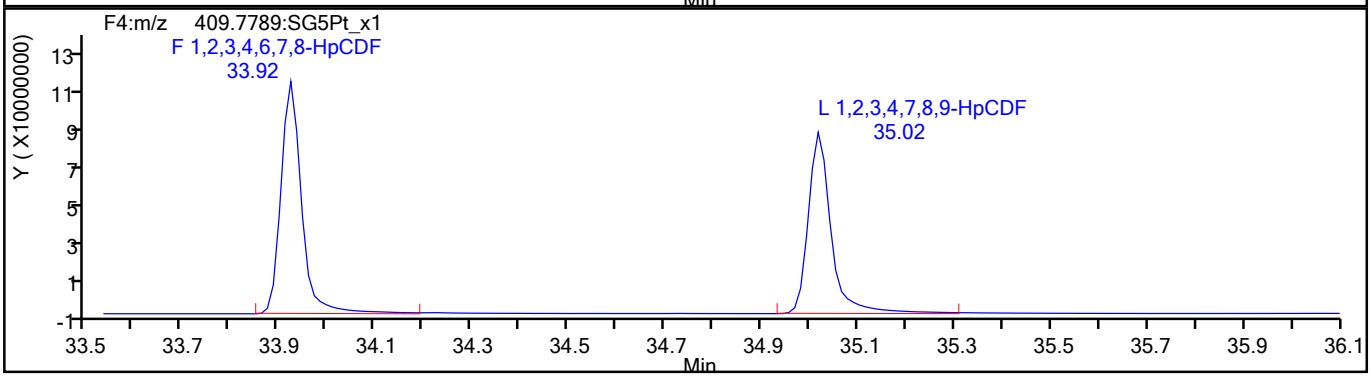

HpCDF Standards

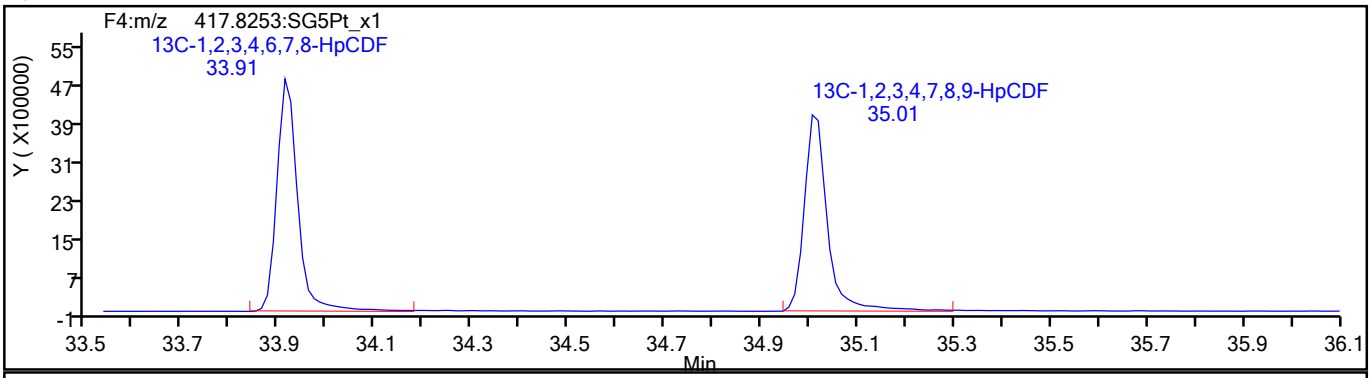

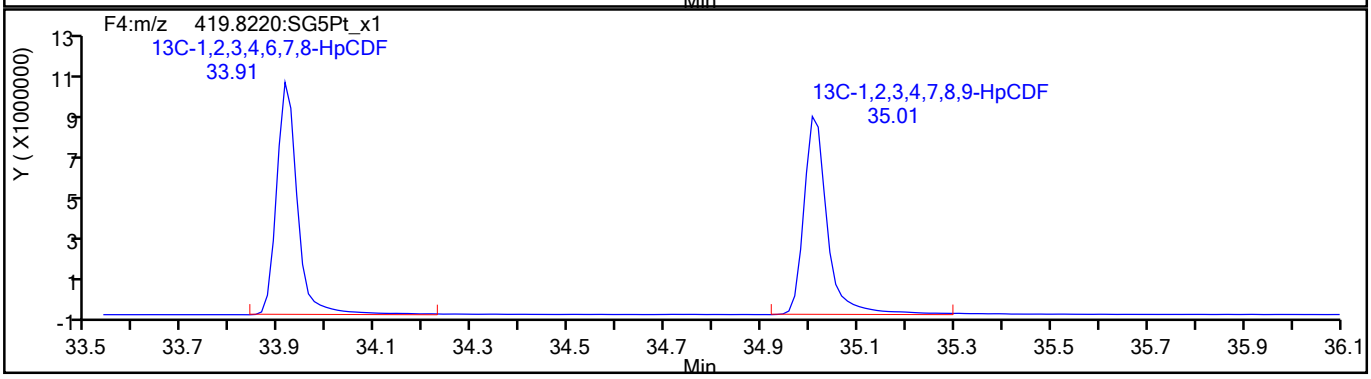

792525

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

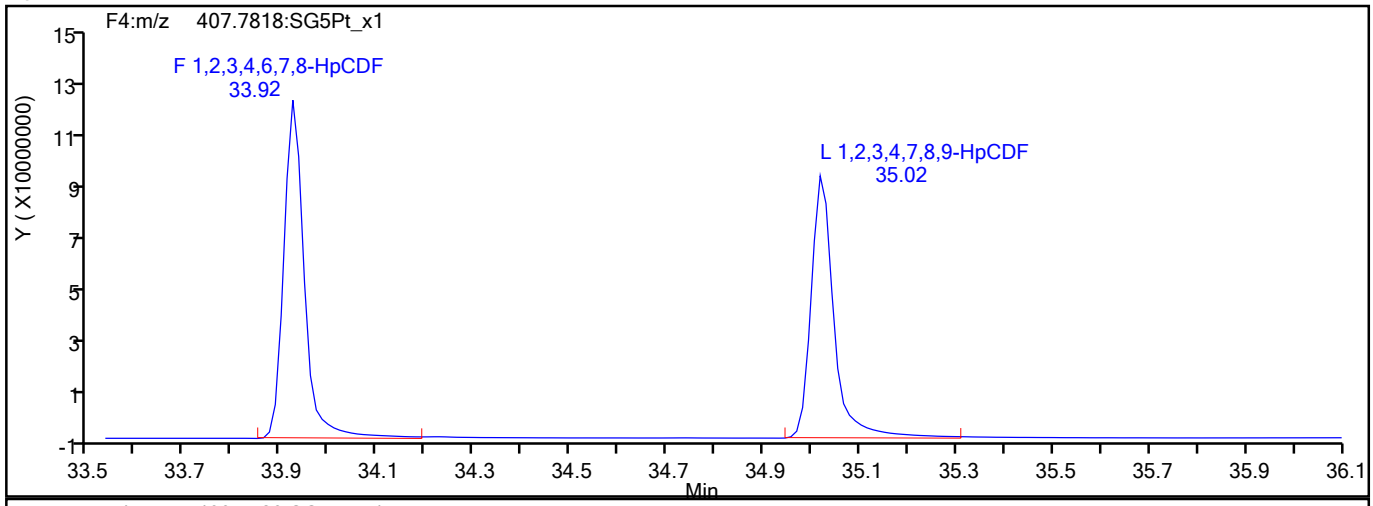

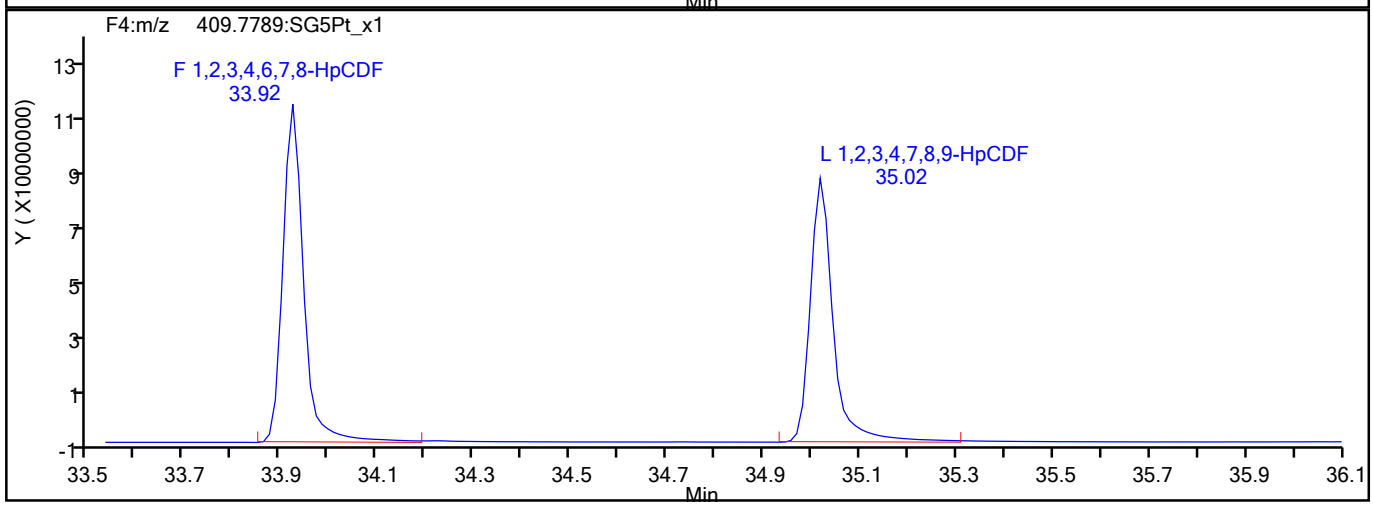

HpCDF Interference Mass

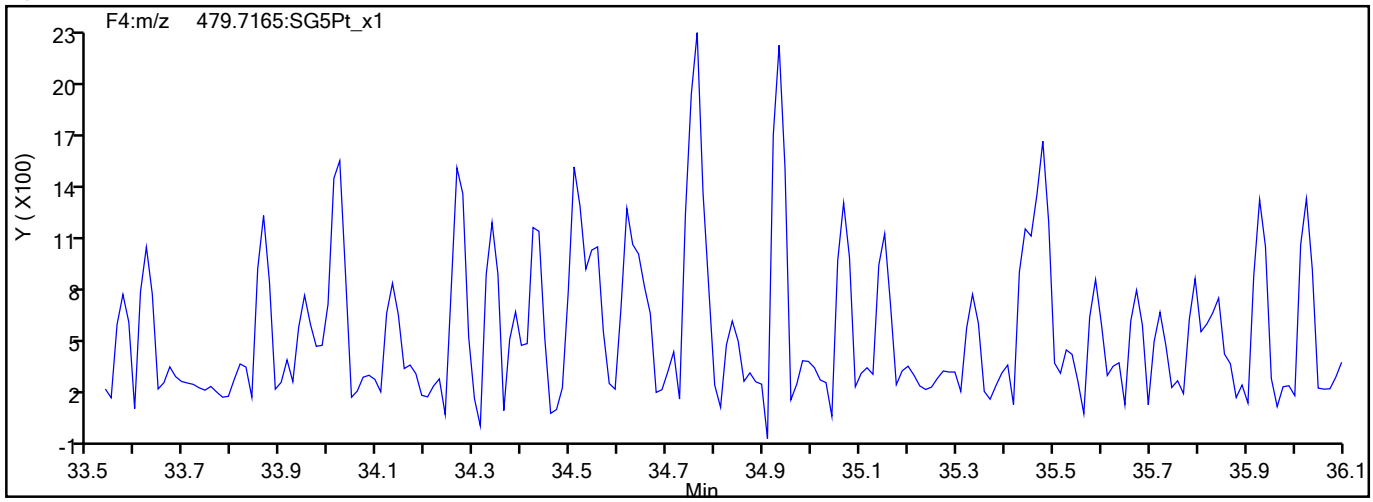

792526

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

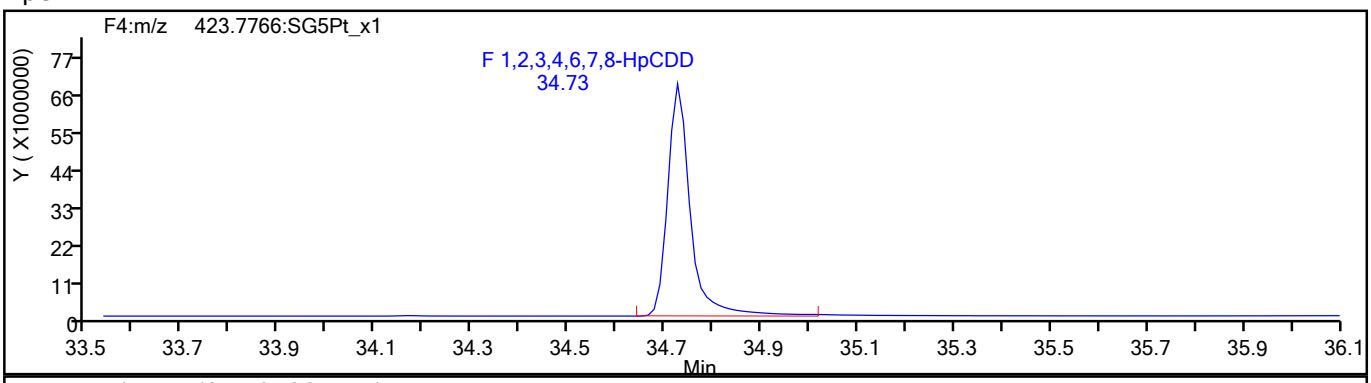

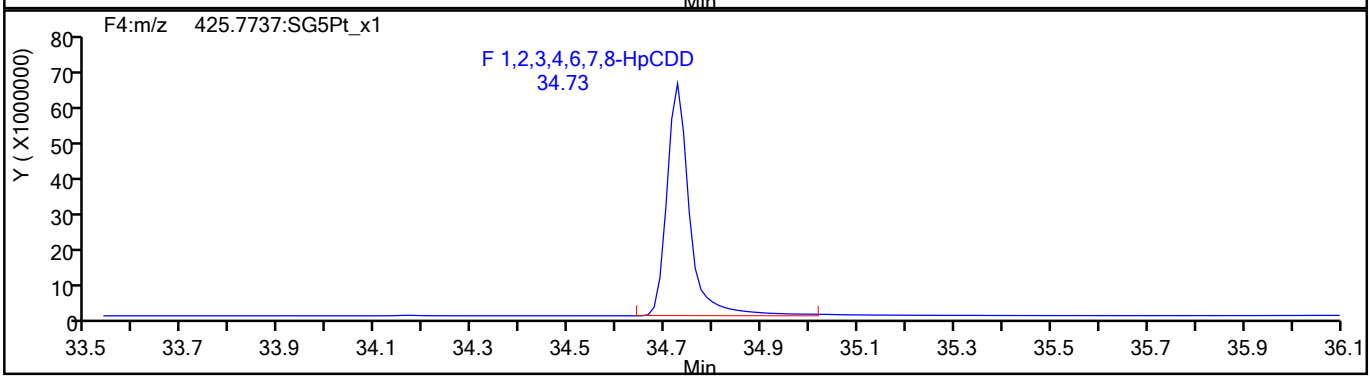

HpCDD Standards

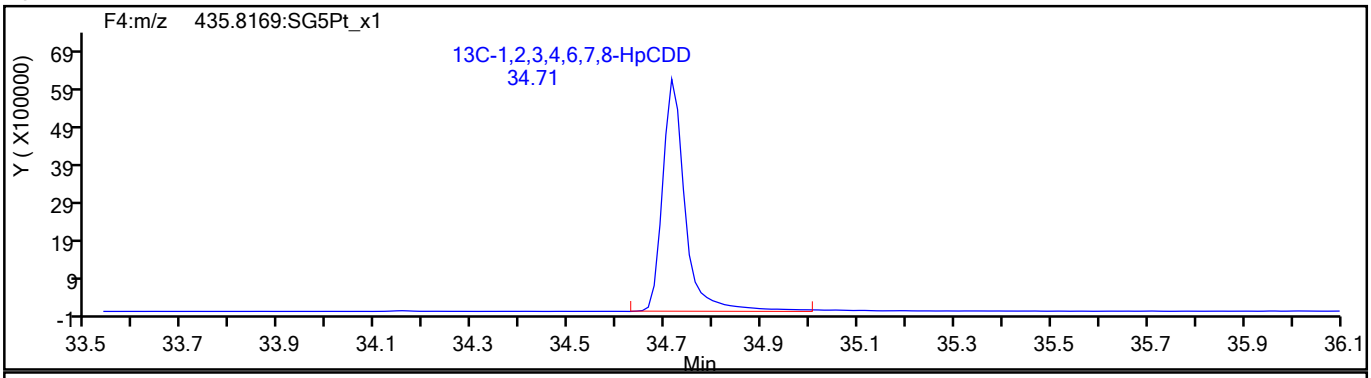

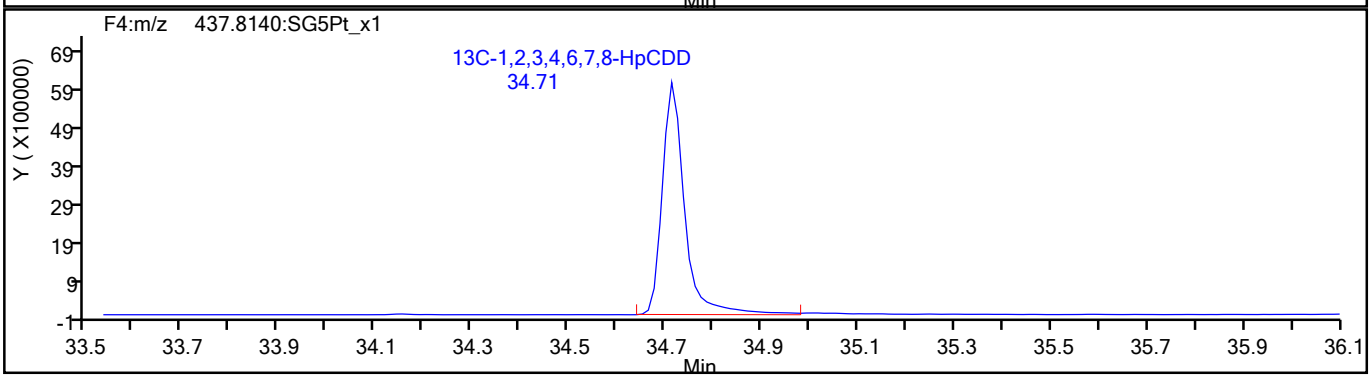

792527

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

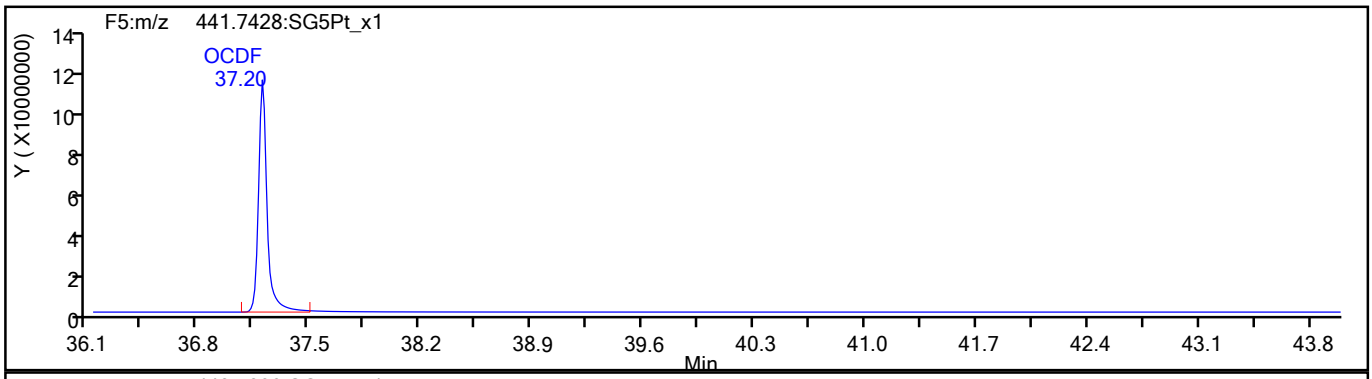

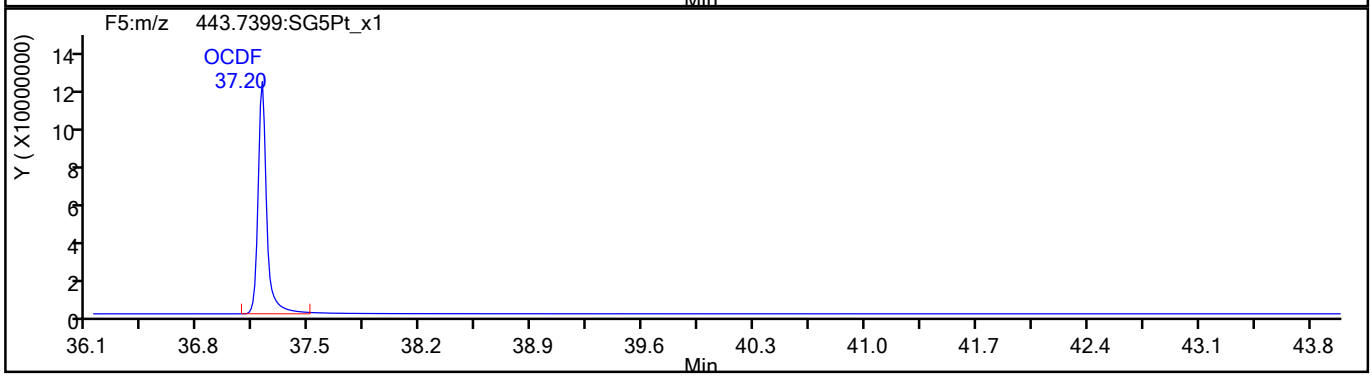

OCDF Standards

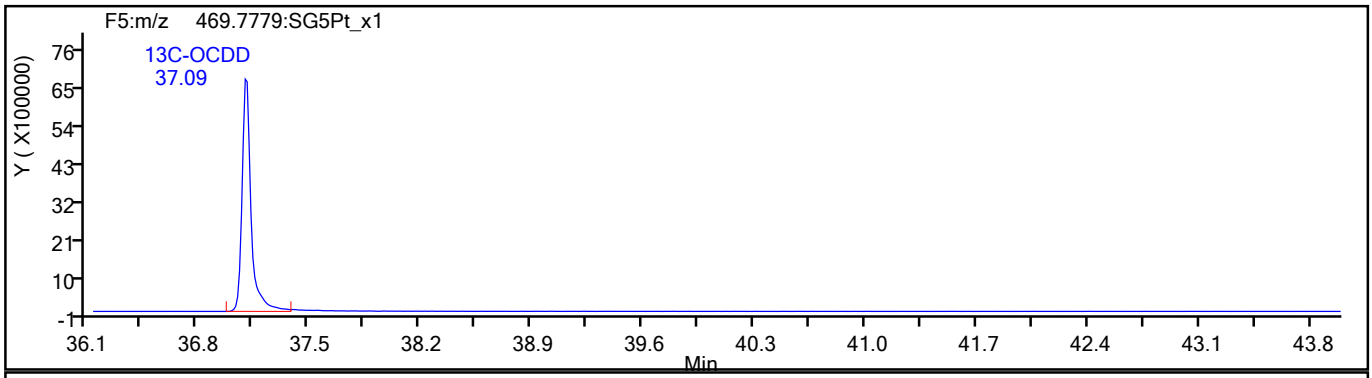

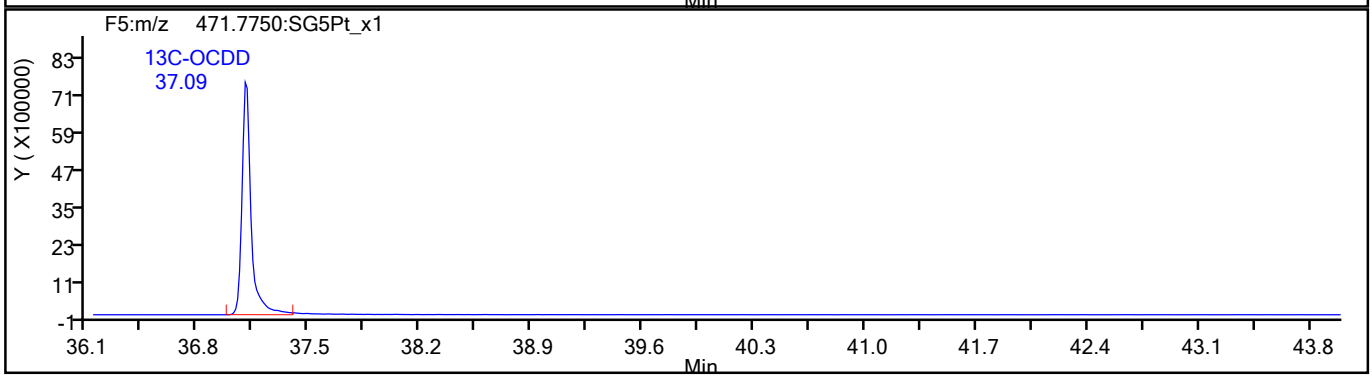

792528

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

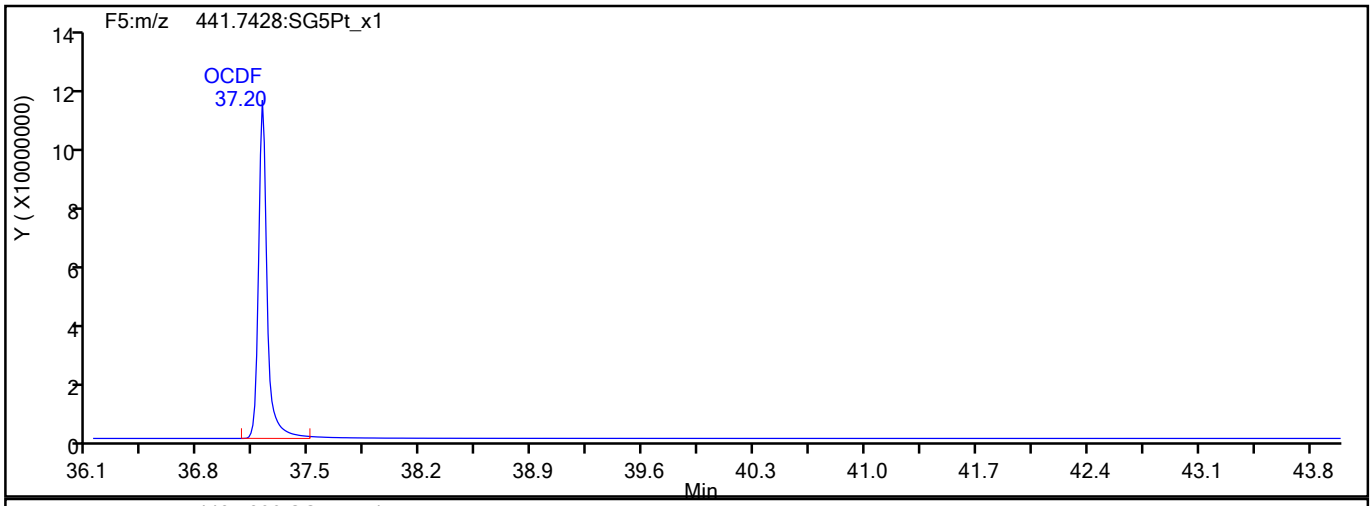

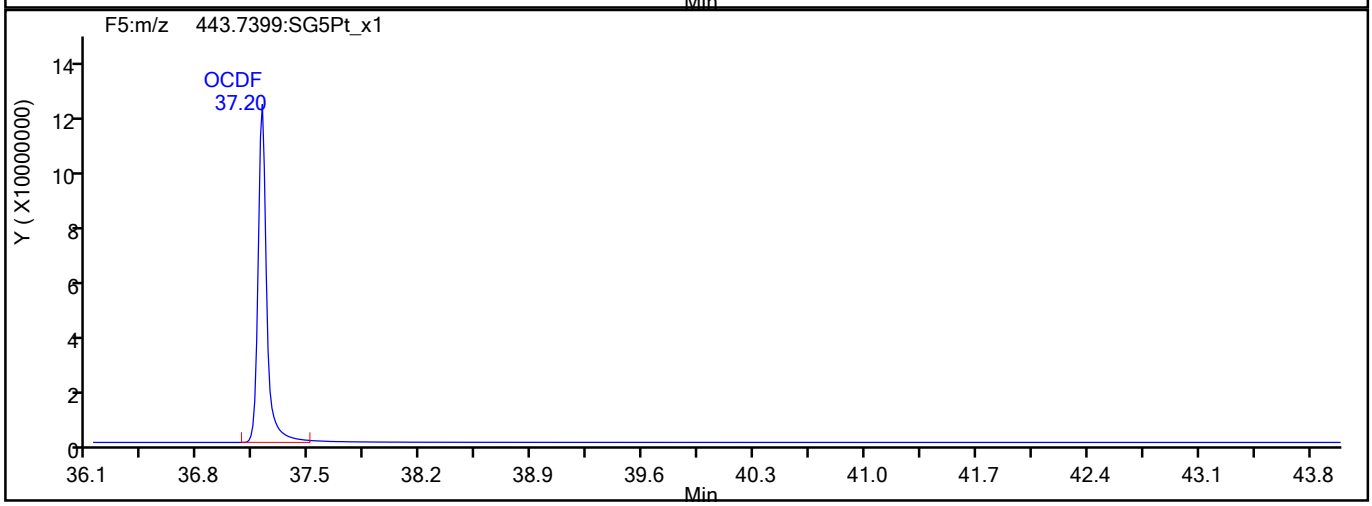

OCDF Interference Mass

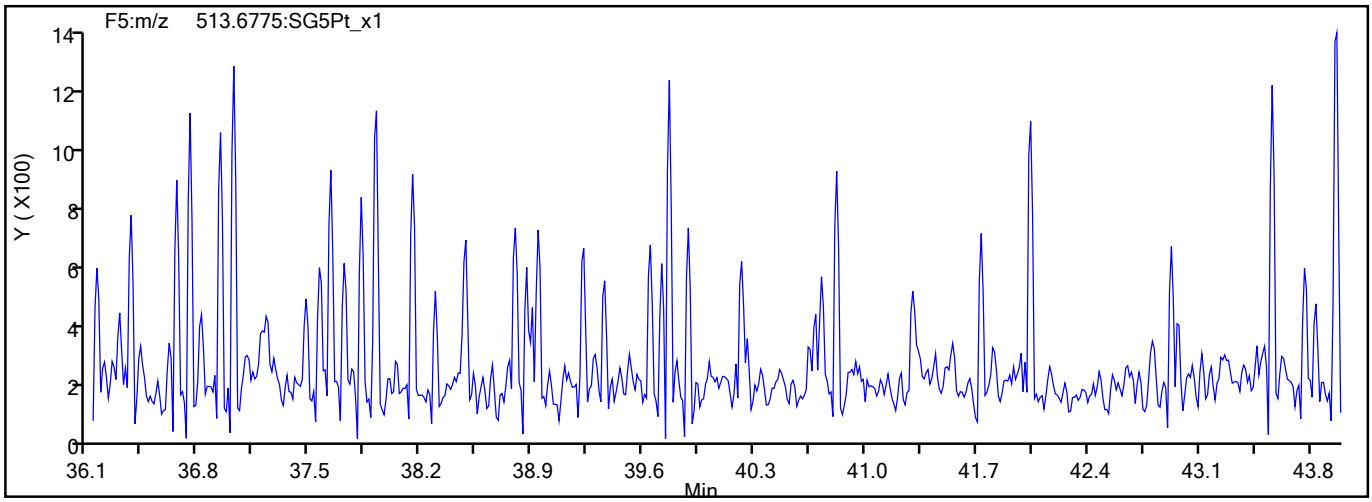

792529

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

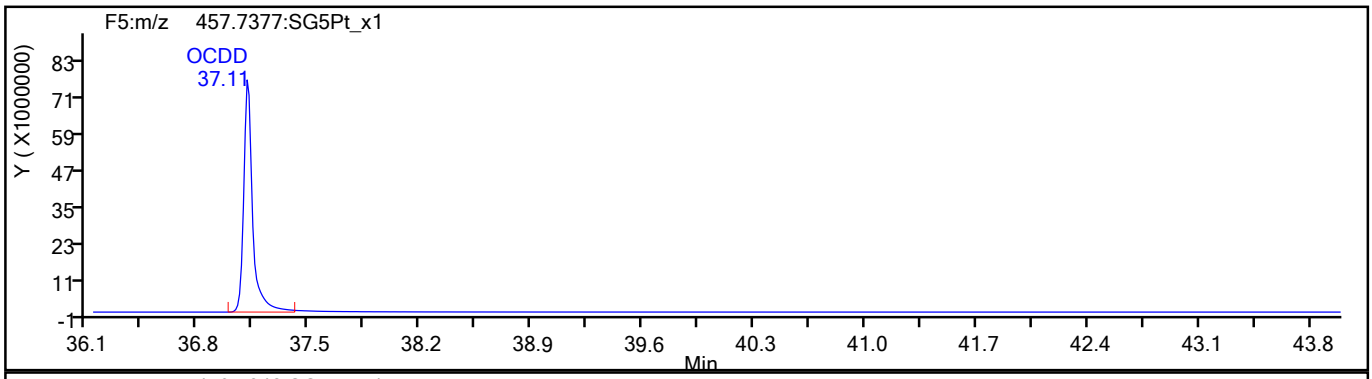

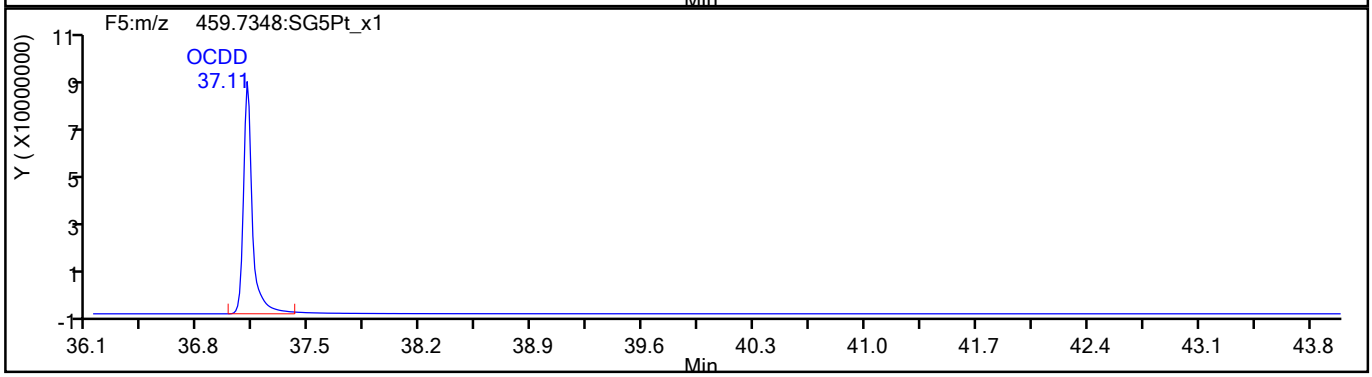

OCDD Standards

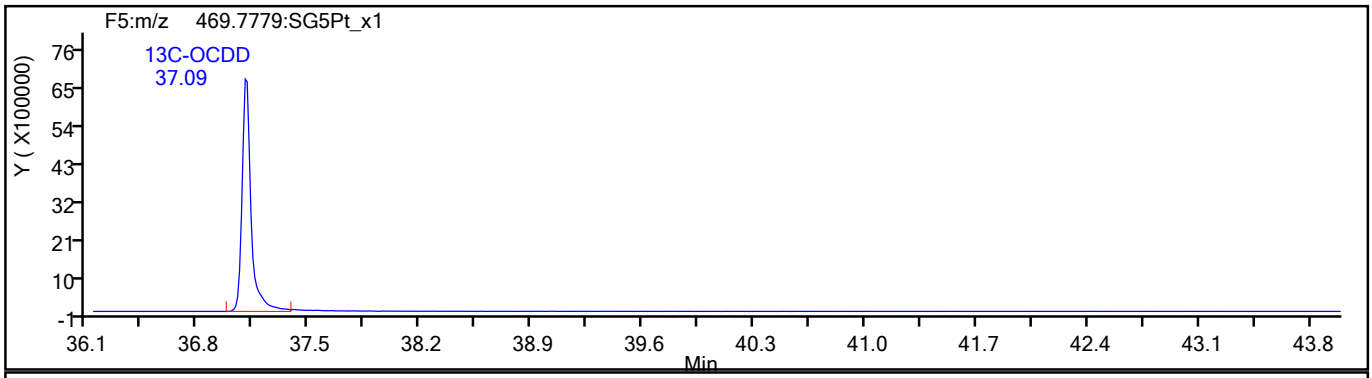

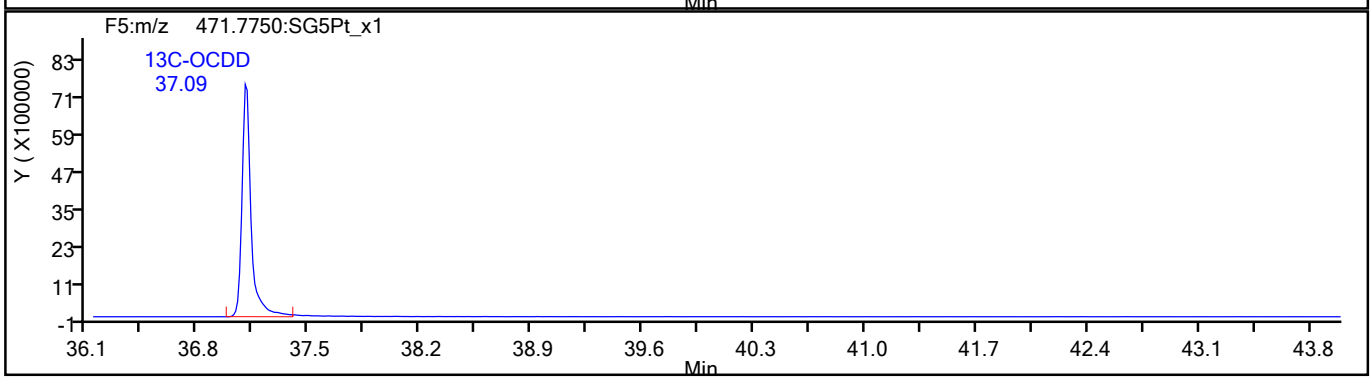

792530

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

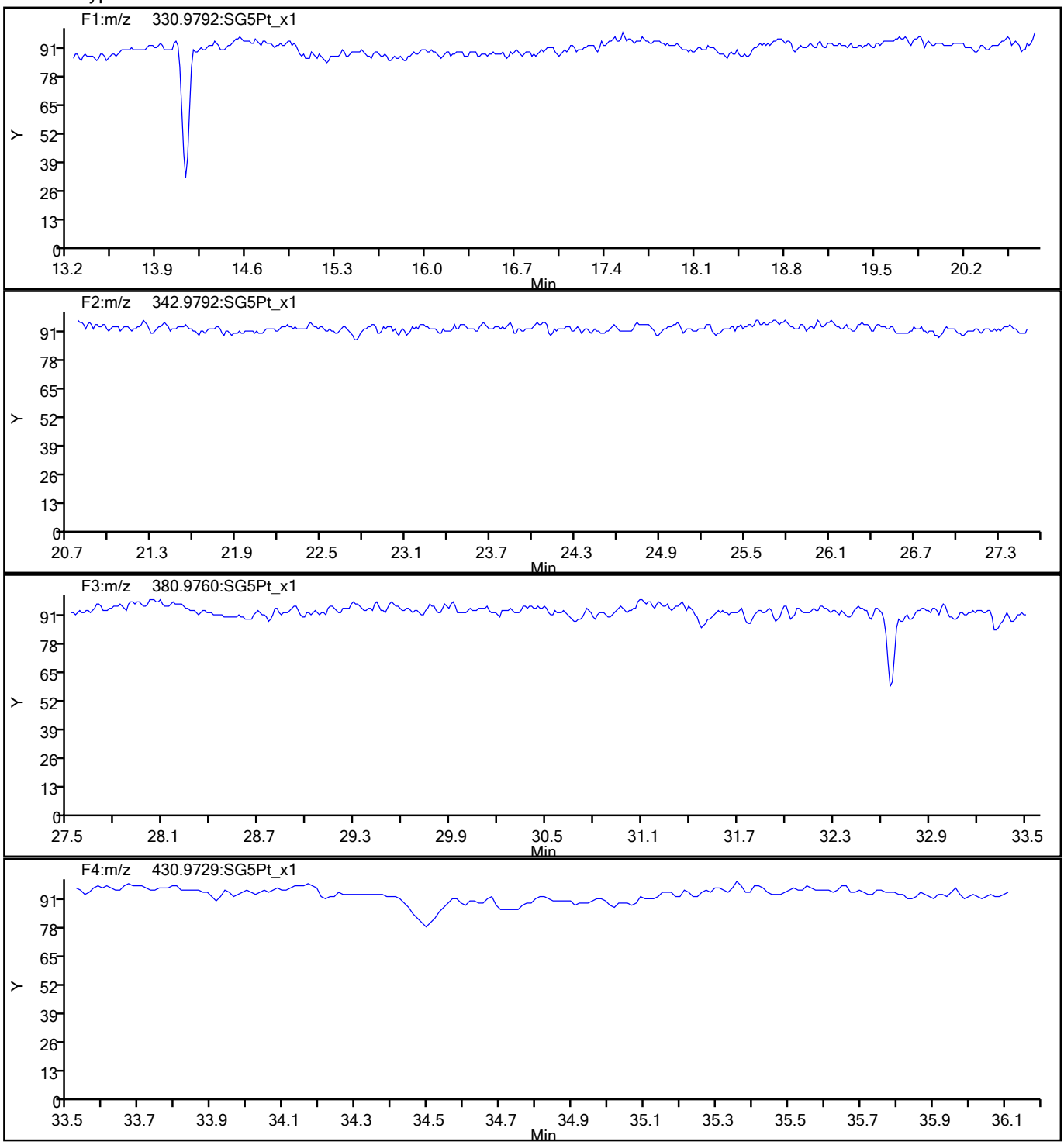

792531

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

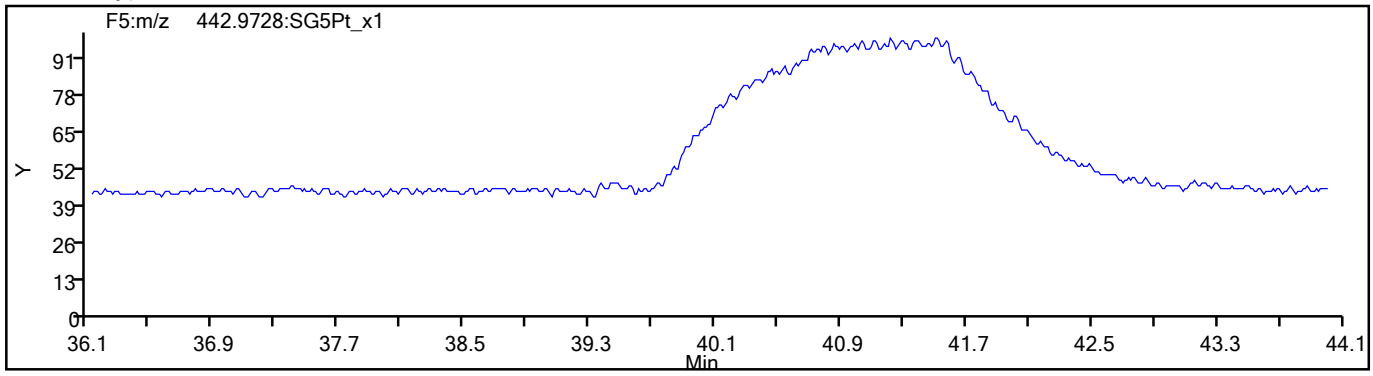

792532

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.094

Error Coefficients

Standard Error:	226000000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.779775	100.0	41876556.0	1.11191	Y
2	IC 320-510264/4	10.0	9.539499	100.0	38689128.0	0.95395	Y
3	IC 320-510264/5	50.0	55.880768	100.0	40333717.0	1.117615	Y
4	IC 320-510264/6	200.0	233.50404	100.0	40442950.0	1.16752	Y
5	IC 320-510264/7	1000.0	1120.518221	100.0	39395832.0	1.120518	Y

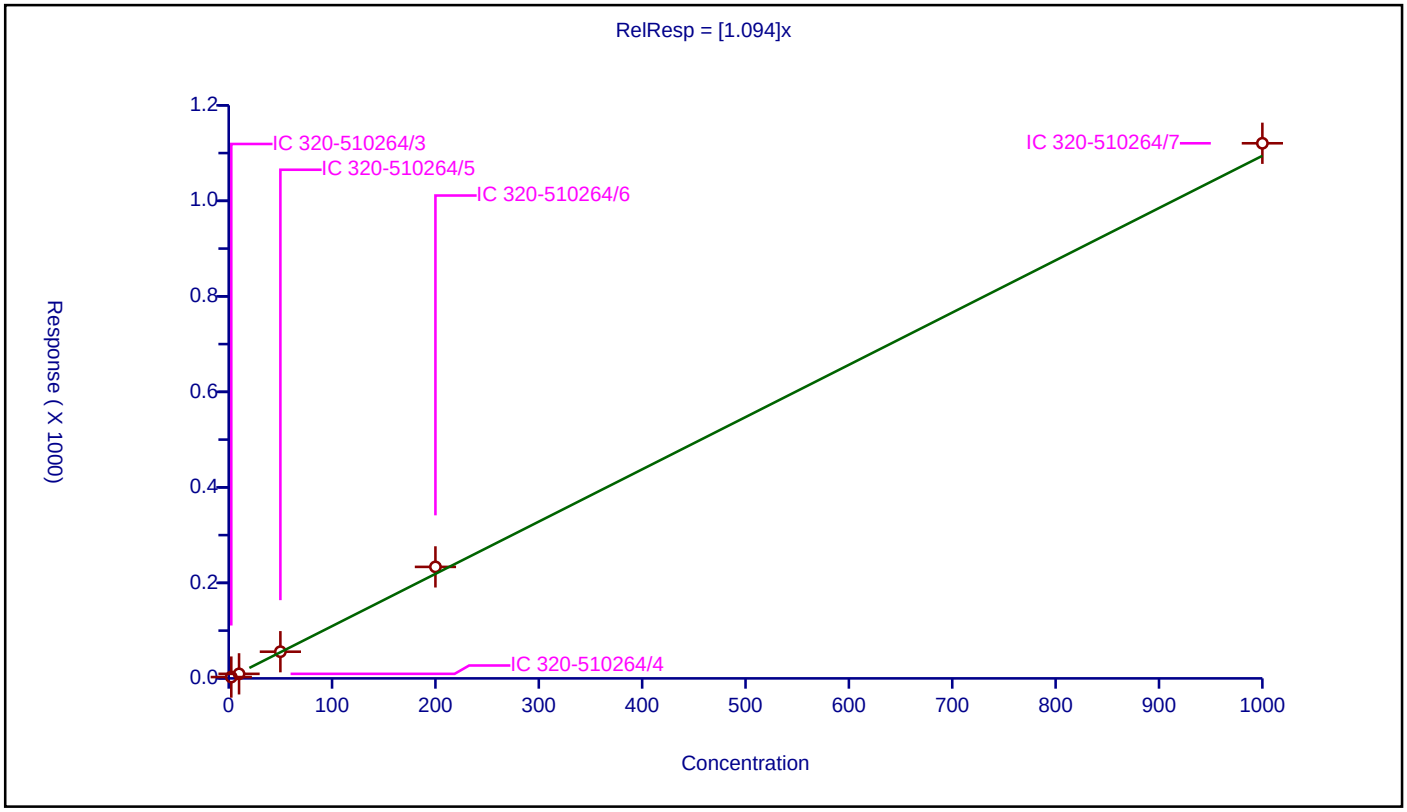

792533

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.441

Error Coefficients

Standard Error:	349000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.618521	100.0	51308225.0	1.447408	Y
2	IC 320-510264/4	10.0	12.412663	100.0	46691158.0	1.241266	Y
3	IC 320-510264/5	50.0	74.932304	100.0	47697671.0	1.498646	Y
4	IC 320-510264/6	200.0	309.702692	100.0	47752972.0	1.548513	Y
5	IC 320-510264/7	1000.0	1470.622057	100.0	46328151.0	1.470622	Y

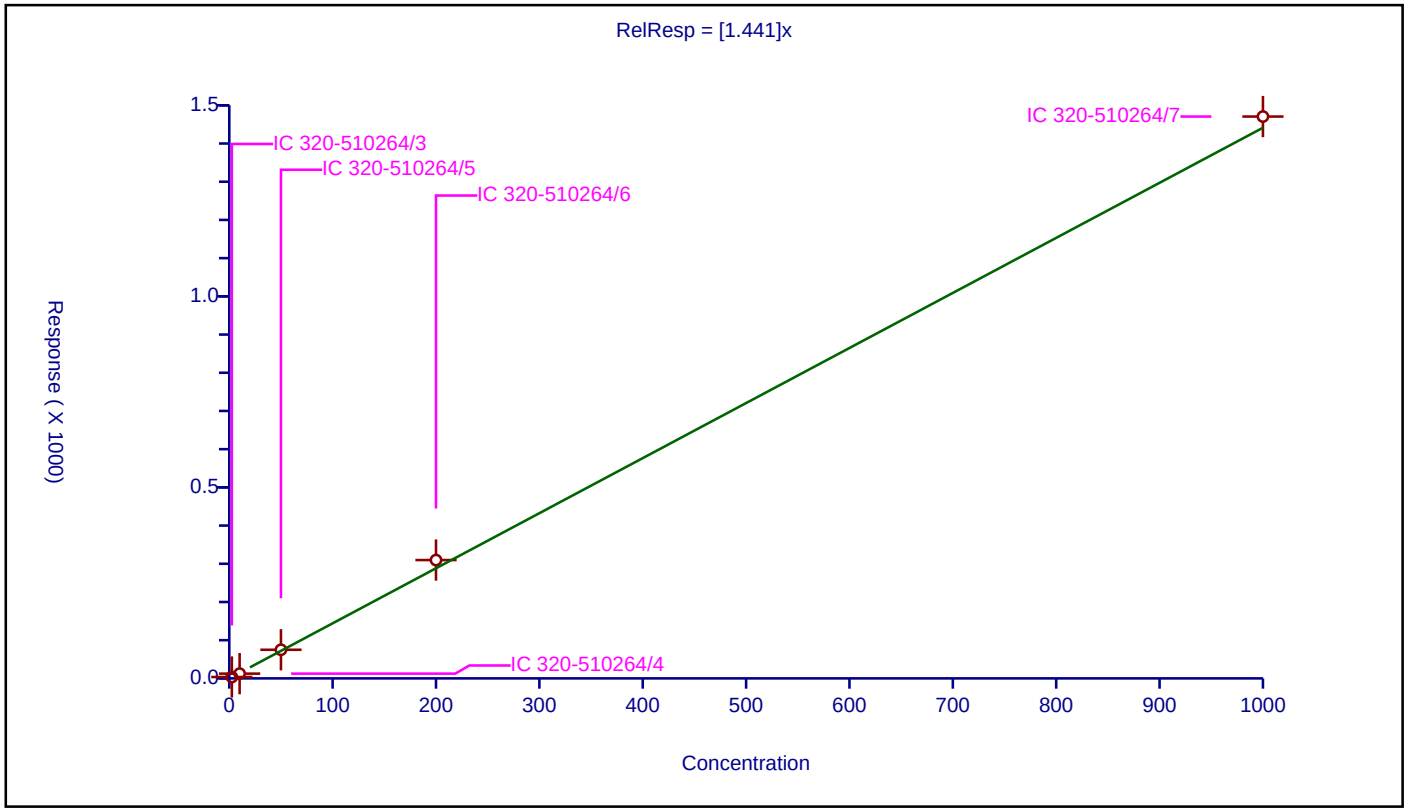

792534

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	302000000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.284087	100.0	44628352.0	1.313635	Y
2	IC 320-510264/4	10.0	11.269366	100.0	42362179.0	1.126937	Y
3	IC 320-510264/5	50.0	68.111875	100.0	43238622.0	1.362237	Y
4	IC 320-510264/6	200.0	290.409045	100.0	42687625.0	1.452045	Y
5	IC 320-510264/7	1000.0	1332.064187	100.0	44333848.0	1.332064	Y

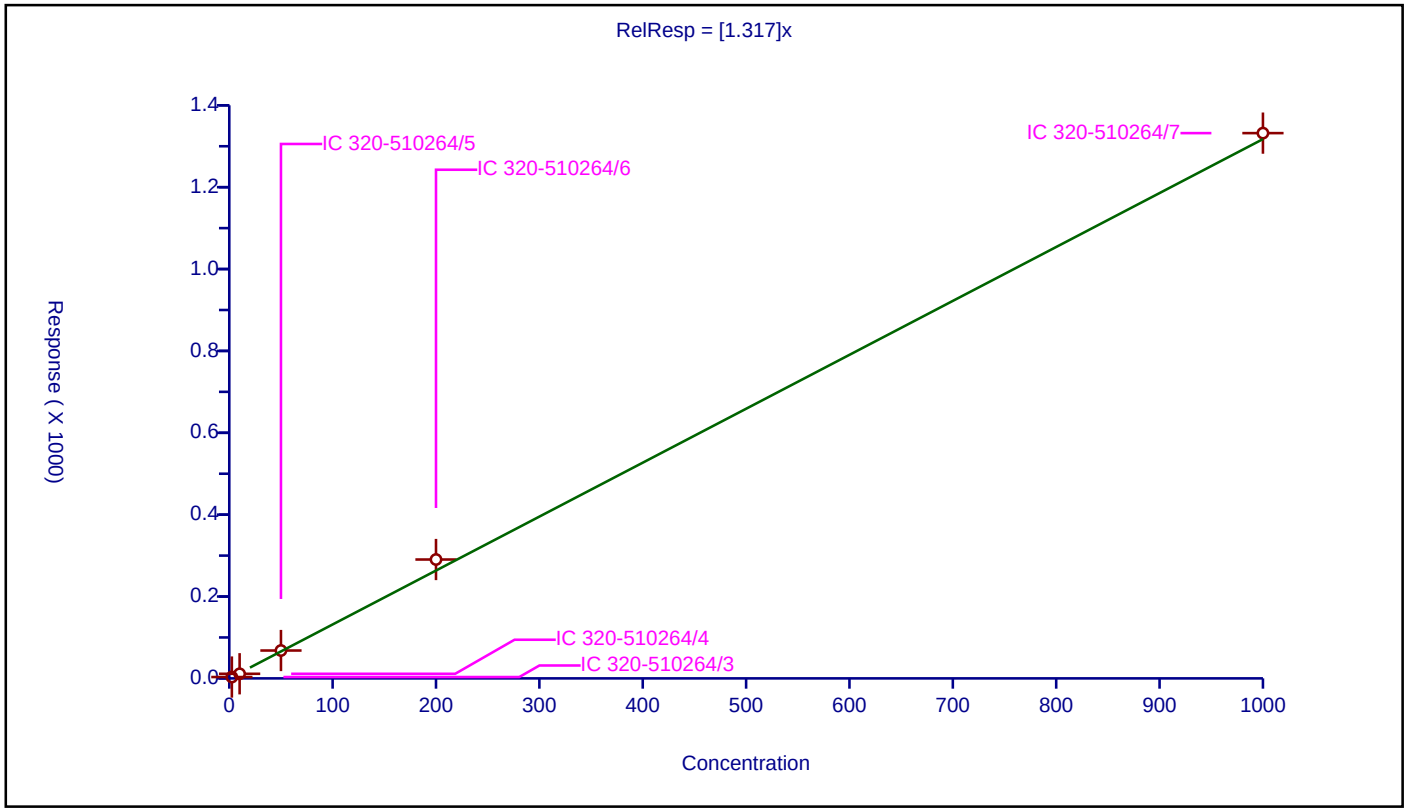

792535

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	248000000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.744793	100.0	47363504.0	1.097917	Y
2	IC 320-510264/4	10.0	8.90634	100.0	44877133.0	0.890634	Y
3	IC 320-510264/5	50.0	56.519553	100.0	44039927.0	1.130391	Y
4	IC 320-510264/6	200.0	233.423018	100.0	44144841.0	1.167115	Y
5	IC 320-510264/7	1000.0	1034.115245	100.0	46886171.0	1.034115	Y

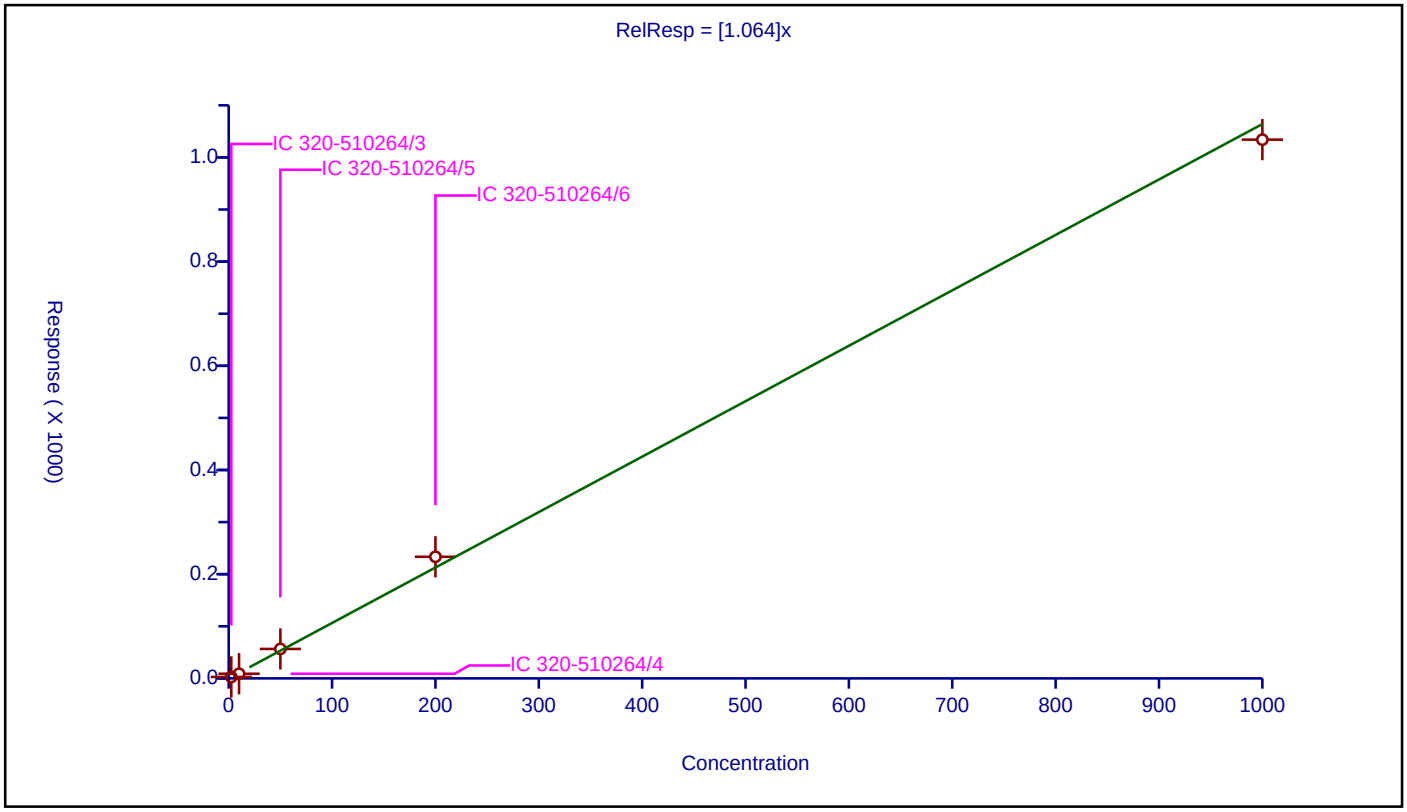

792536

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.085

Error Coefficients

Standard Error:	377000000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.805608	100.0	69484482.0	1.122243	Y
2	IC 320-510264/4	10.0	9.192224	100.0	65726932.0	0.919222	Y
3	IC 320-510264/5	50.0	55.122828	100.0	68075509.0	1.102457	Y
4	IC 320-510264/6	200.0	238.727102	100.0	64951889.0	1.193636	Y
5	IC 320-510264/7	1000.0	1088.07626	100.0	67741189.0	1.088076	Y

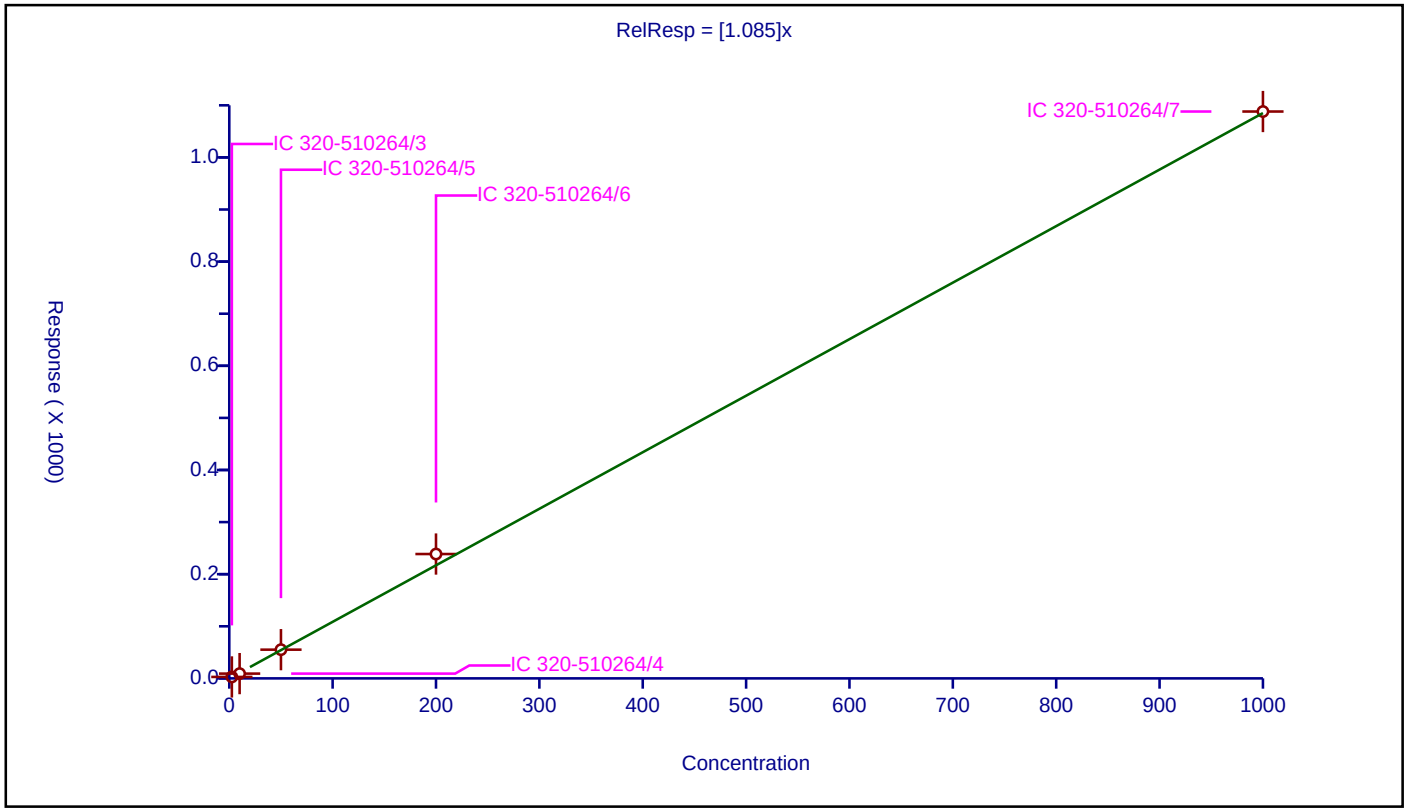

792537

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1

Error Coefficients

Standard Error:	278000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.57359	100.0	56759108.0	1.029436	Y
2	IC 320-510264/4	10.0	8.528531	100.0	52974056.0	0.852853	Y
3	IC 320-510264/5	50.0	50.563423	100.0	55284532.0	1.011268	Y
4	IC 320-510264/6	200.0	218.597288	100.0	54392394.0	1.092986	Y
5	IC 320-510264/7	1000.0	1013.848486	100.0	53564396.0	1.013848	Y

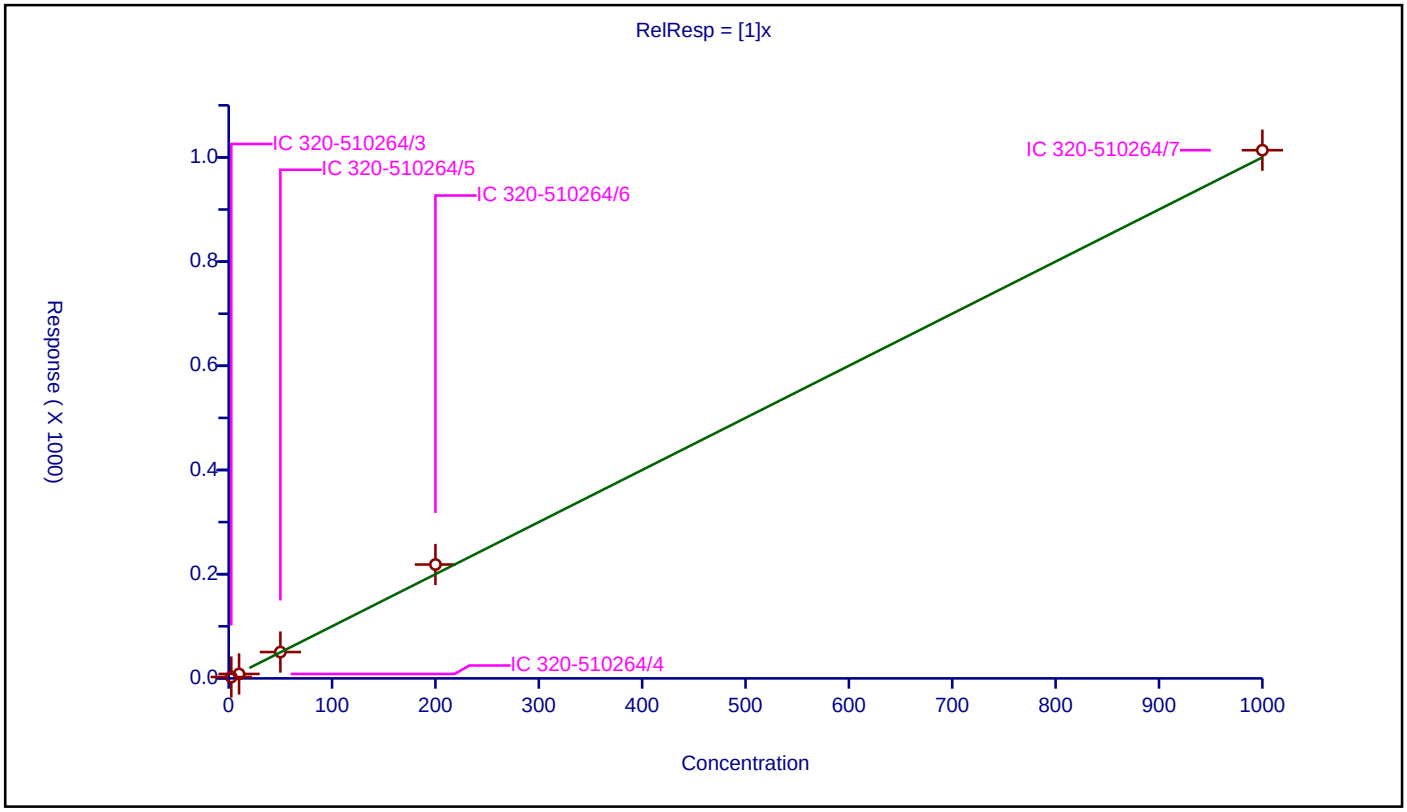

792538

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.126

Error Coefficients

Standard Error:	402000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.871987	100.0	73262388.0	1.148795	Y
2	IC 320-510264/4	10.0	9.63718	100.0	68089005.0	0.963718	Y
3	IC 320-510264/5	50.0	57.730945	100.0	70677463.0	1.154619	Y
4	IC 320-510264/6	200.0	239.311904	100.0	70459920.0	1.19656	Y
5	IC 320-510264/7	1000.0	1166.370477	100.0	67363664.0	1.16637	Y

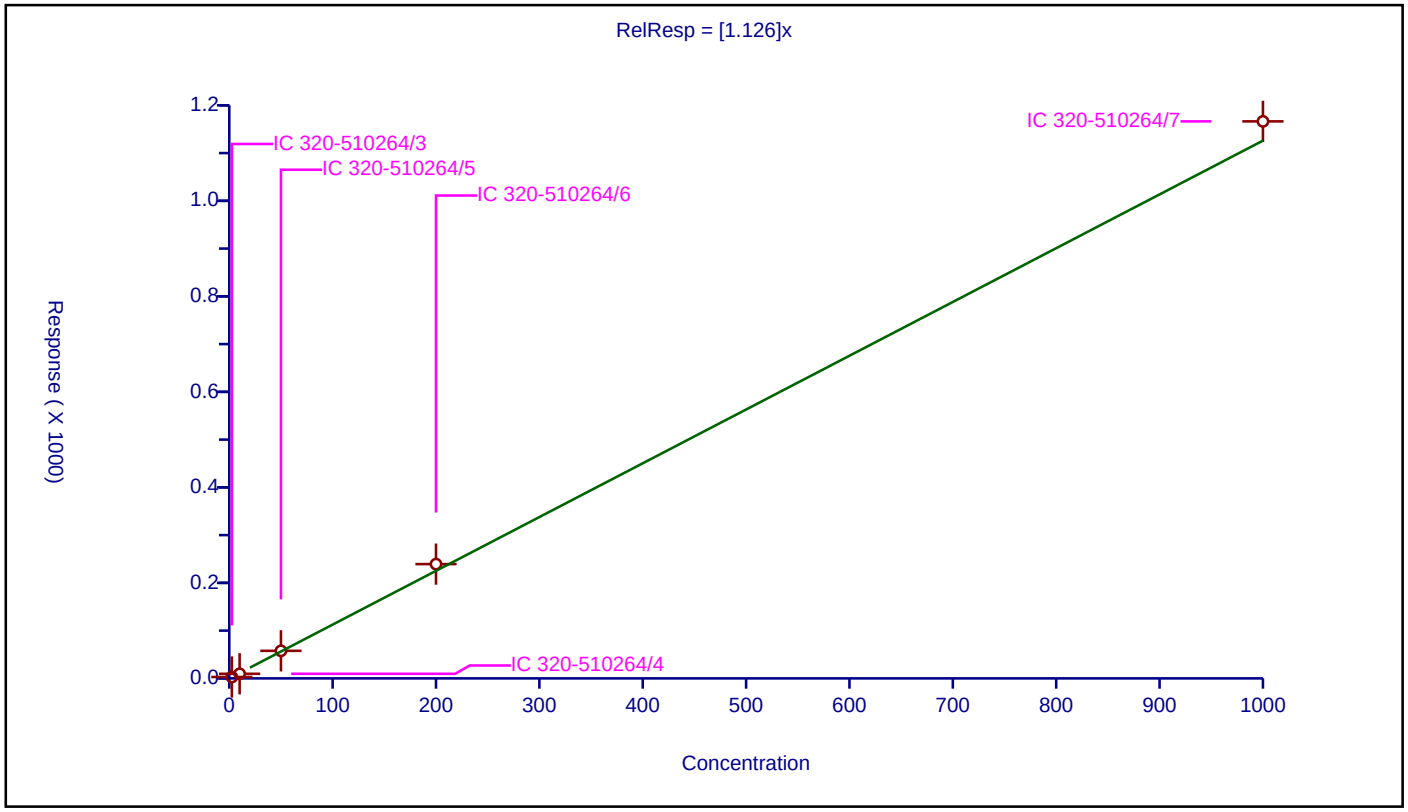

792539

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.248

Error Coefficients

Standard Error:	289000000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.174189	100.0	47363504.0	1.269675	Y
2	IC 320-510264/4	10.0	10.27817	100.0	44877133.0	1.027817	Y
3	IC 320-510264/5	50.0	67.654413	100.0	44039927.0	1.353088	Y
4	IC 320-510264/6	200.0	277.257762	100.0	44144841.0	1.386289	Y
5	IC 320-510264/7	1000.0	1202.675657	100.0	46886171.0	1.202676	Y

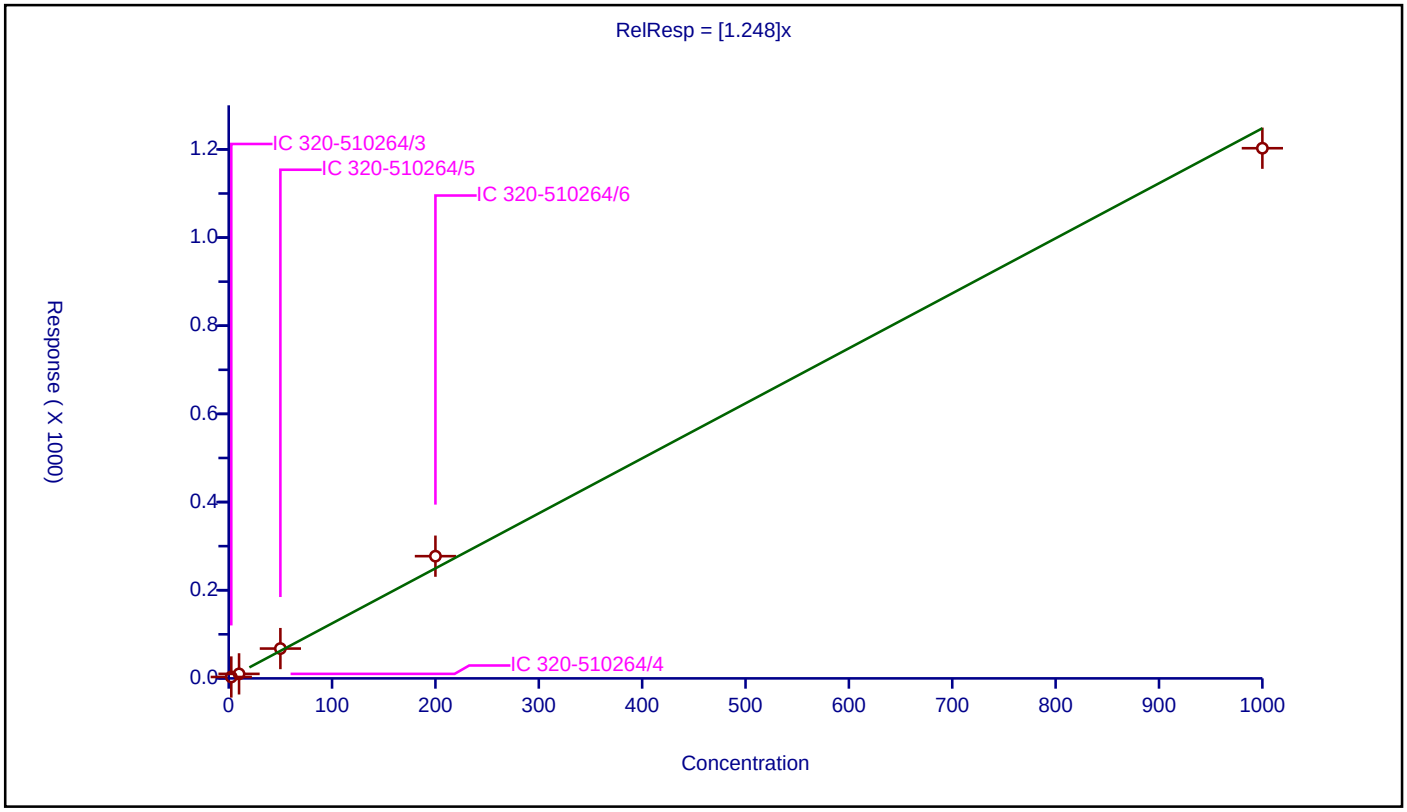

792540

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.166

Error Coefficients

Standard Error:	362000000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.933201	100.0	62528954.0	1.17328	Y
2	IC 320-510264/4	10.0	10.136374	100.0	58828058.0	1.013637	Y
3	IC 320-510264/5	50.0	59.48769	100.0	60389284.0	1.189754	Y
4	IC 320-510264/6	200.0	249.571201	100.0	59636084.0	1.247856	Y
5	IC 320-510264/7	1000.0	1207.229164	100.0	58669892.0	1.207229	Y

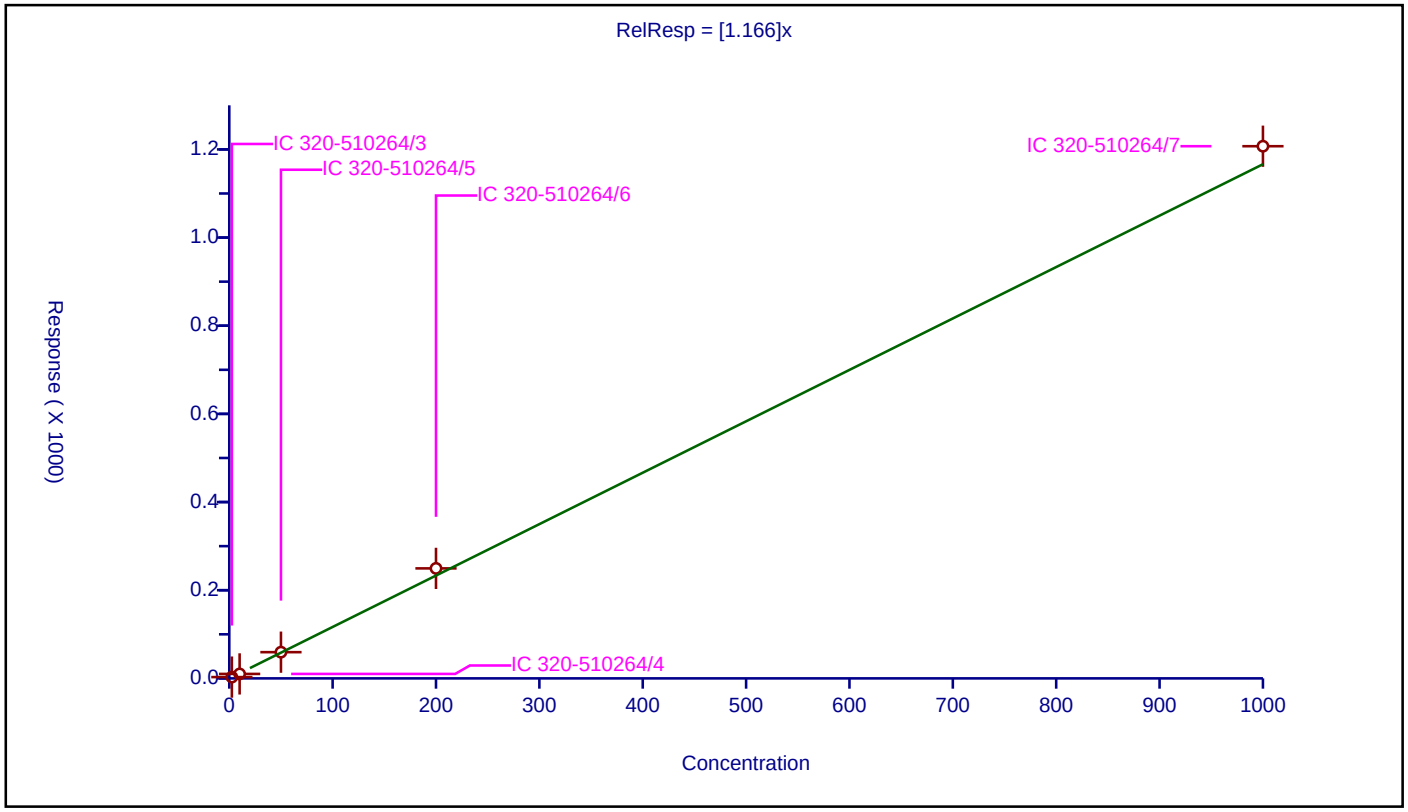

792541

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.048

Error Coefficients

Standard Error:	256000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.644408	100.0	49643581.0	1.057763	Y
2	IC 320-510264/4	10.0	9.031283	100.0	46721712.0	0.903128	Y
3	IC 320-510264/5	50.0	53.401309	100.0	47124414.0	1.068026	Y
4	IC 320-510264/6	200.0	226.195317	100.0	46524396.0	1.130977	Y
5	IC 320-510264/7	1000.0	1082.258061	100.0	46251010.0	1.082258	Y

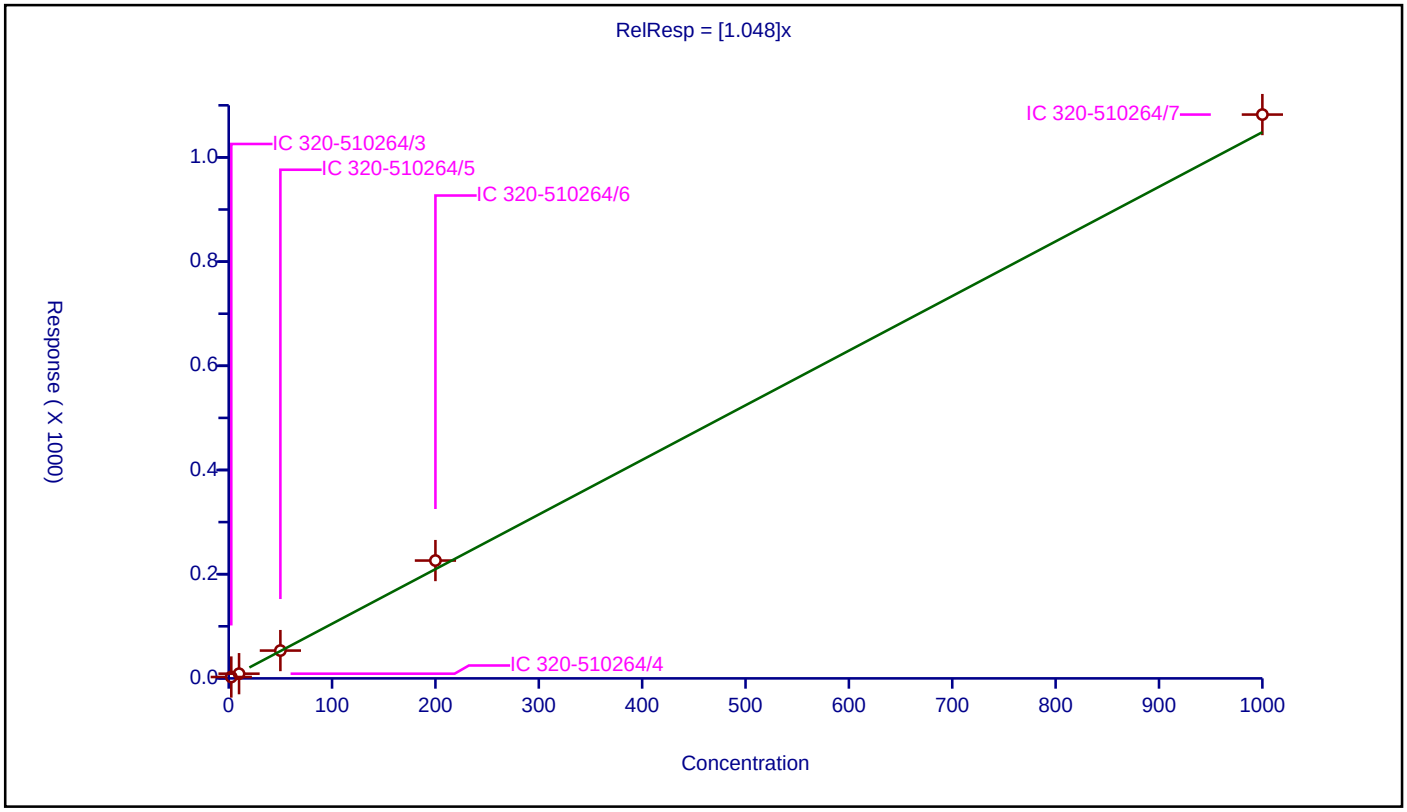

792542

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	408000000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.684664	100.0	78674290.0	1.073865	Y
2	IC 320-510264/4	10.0	9.128293	100.0	72525655.0	0.912829	Y
3	IC 320-510264/5	50.0	54.457439	100.0	76368219.0	1.089149	Y
4	IC 320-510264/6	200.0	227.4085	100.0	75205597.0	1.137042	Y
5	IC 320-510264/7	1000.0	1092.787556	100.0	72829681.0	1.092788	Y

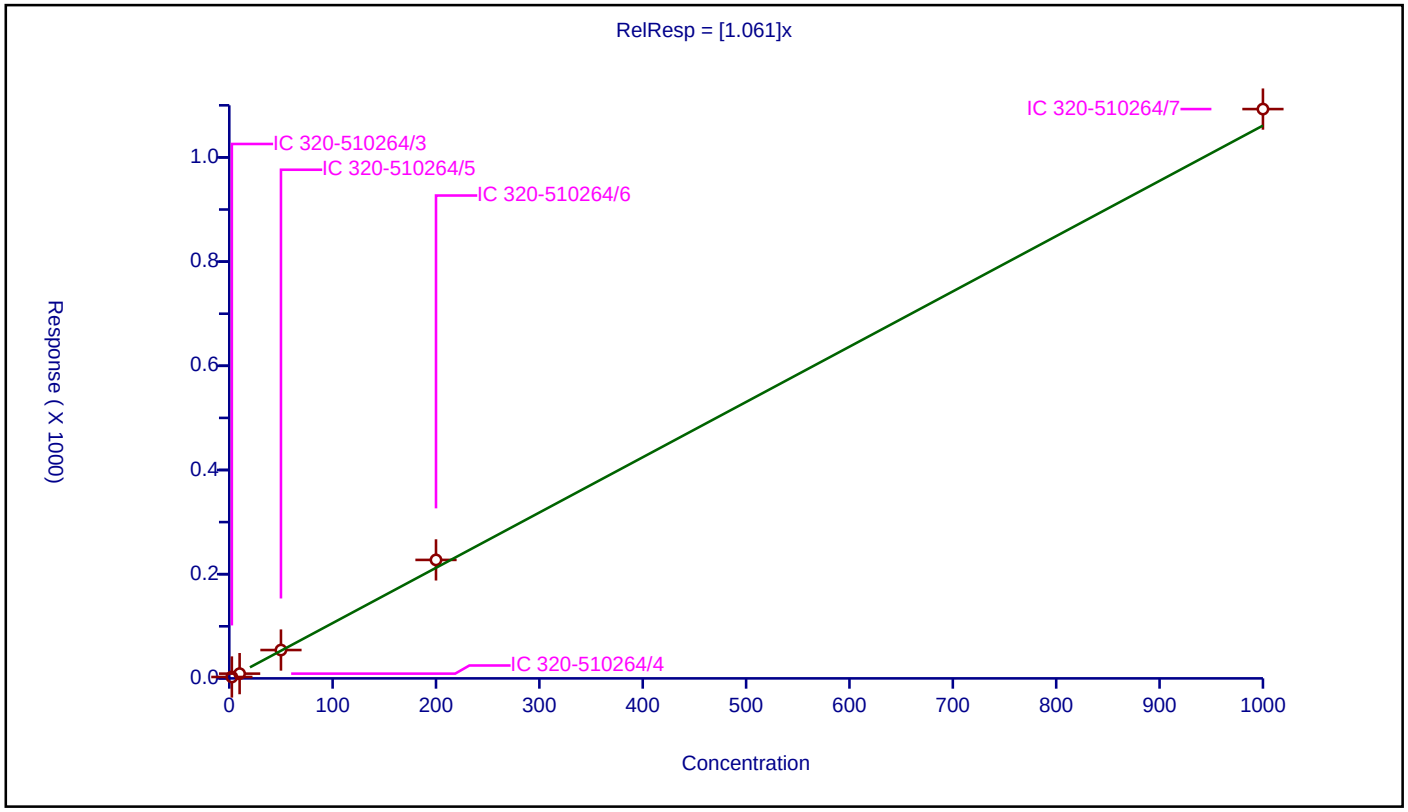

792543

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	391000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.05566	100.0	68885161.0	1.222264	Y
2	IC 320-510264/4	10.0	9.86292	100.0	64406928.0	0.986292	Y
3	IC 320-510264/5	50.0	59.290251	100.0	67028498.0	1.185805	Y
4	IC 320-510264/6	200.0	248.302486	100.0	66145684.0	1.241512	Y
5	IC 320-510264/7	1000.0	1201.822353	100.0	63471184.0	1.201822	Y

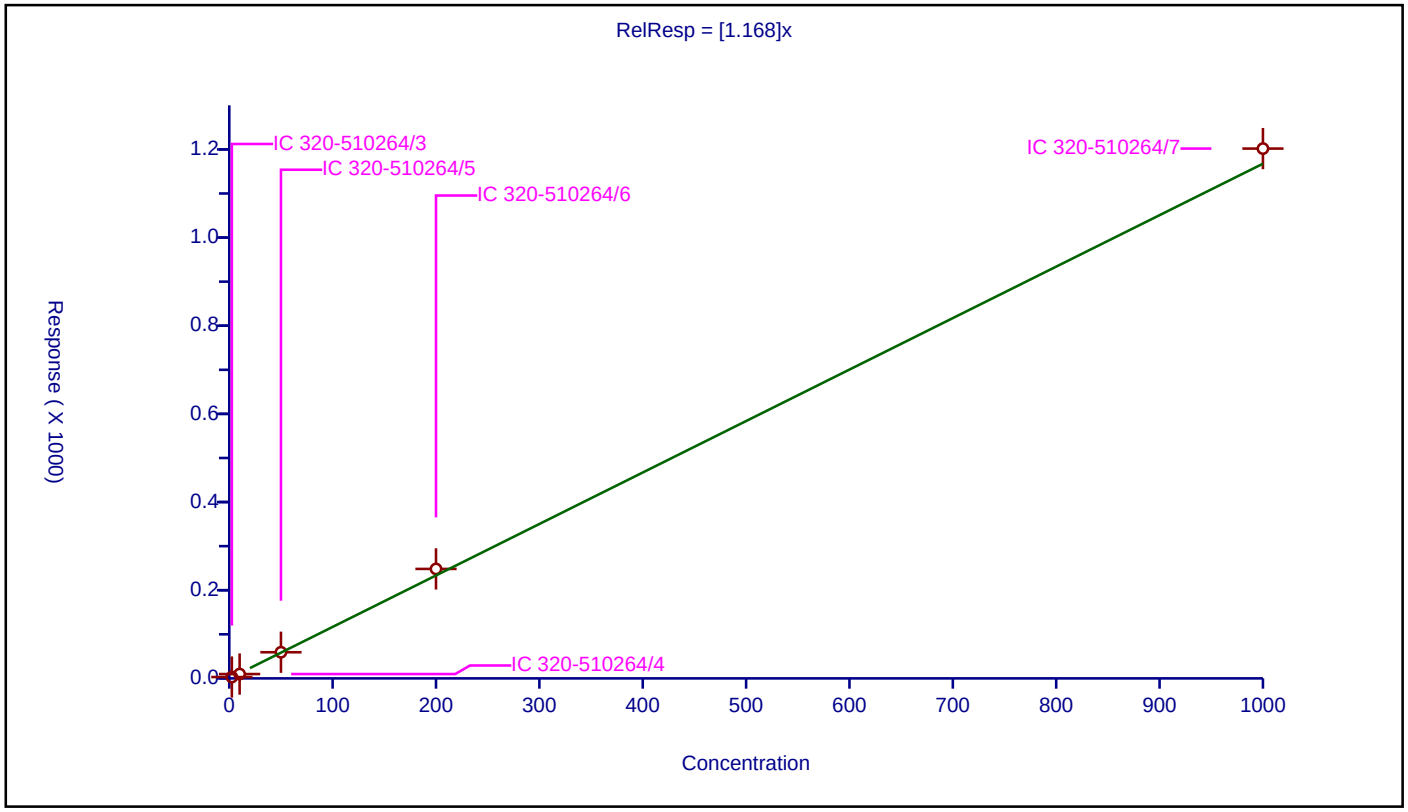

792544

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.018

Error Coefficients

Standard Error:	401000000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.601965	100.0	80591659.0	1.040786	Y
2	IC 320-510264/4	10.0	8.609629	100.0	74944110.0	0.860963	Y
3	IC 320-510264/5	50.0	52.328396	100.0	78214582.0	1.046568	Y
4	IC 320-510264/6	200.0	221.640486	100.0	75259591.0	1.108202	Y
5	IC 320-510264/7	1000.0	1035.570916	100.0	75649463.0	1.035571	Y

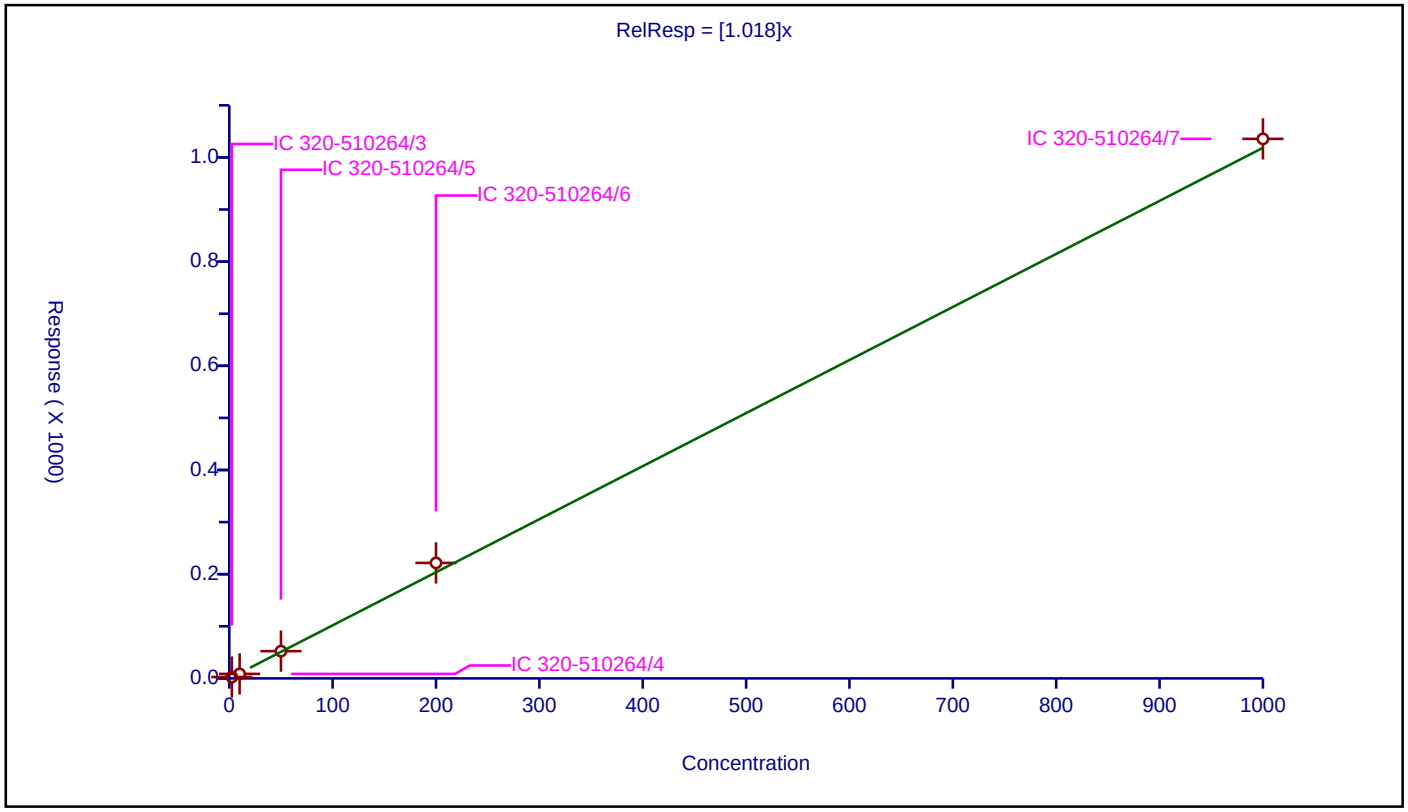

792545

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.254

Error Coefficients

Standard Error:	71900000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.62875	100.0	59957723.0	1.257499	Y
2	IC 320-510264/4	2.0	2.19411	100.0	53975587.0	1.097055	Y
3	IC 320-510264/5	10.0	12.651014	100.0	56155483.0	1.265101	Y
4	IC 320-510264/6	40.0	53.737487	100.0	55471422.0	1.343437	Y
5	IC 320-510264/7	200.0	261.501191	100.0	53698206.0	1.307506	Y

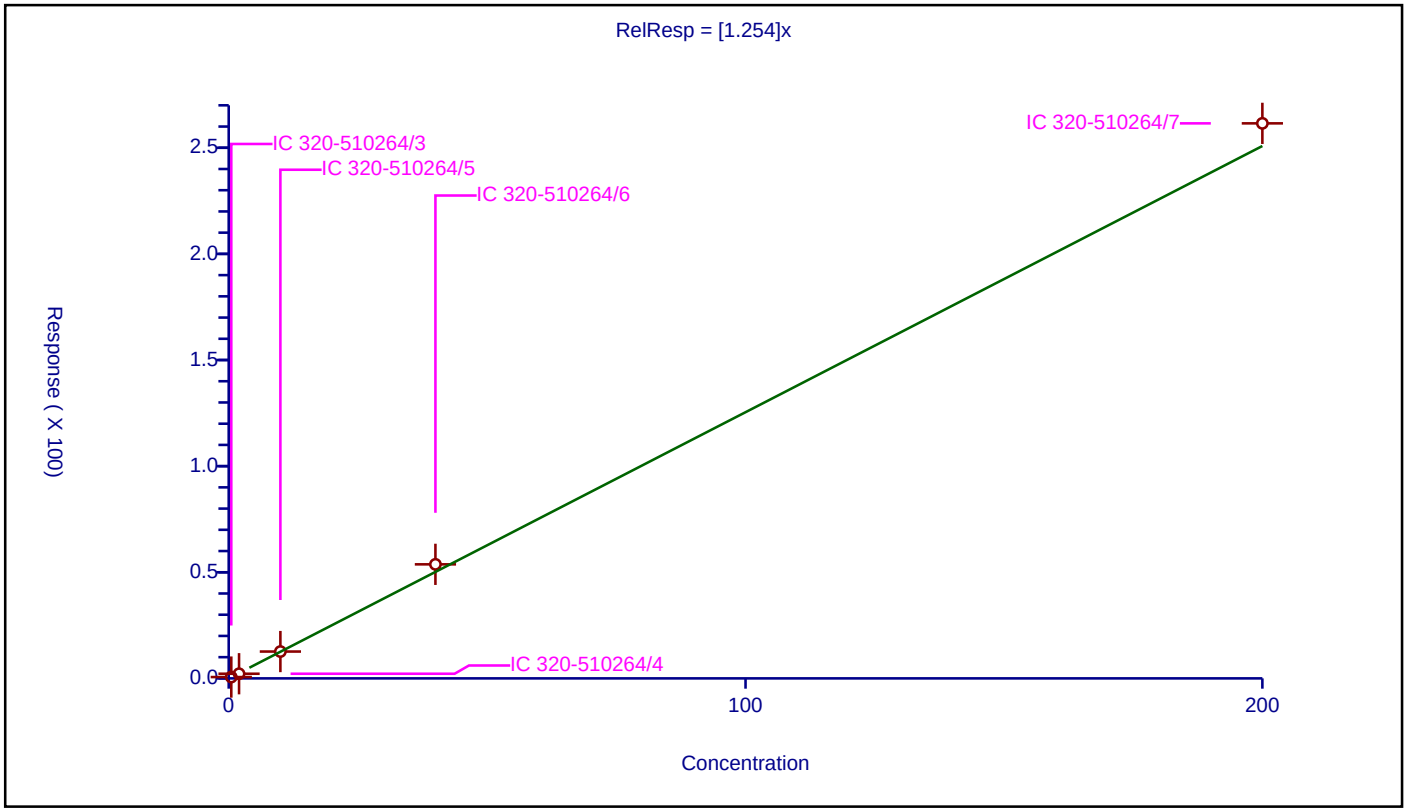

792546

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.024

Error Coefficients

Standard Error:	105000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.514358	100.0	108384725.0	1.028715	Y
2	IC 320-510264/4	2.0	1.739696	100.0	98246522.0	0.869848	Y
3	IC 320-510264/5	10.0	10.458407	100.0	101724636.0	1.045841	Y
4	IC 320-510264/6	40.0	44.37733	100.0	100332269.0	1.109433	Y
5	IC 320-510264/7	200.0	213.143097	100.0	95980421.0	1.065715	Y

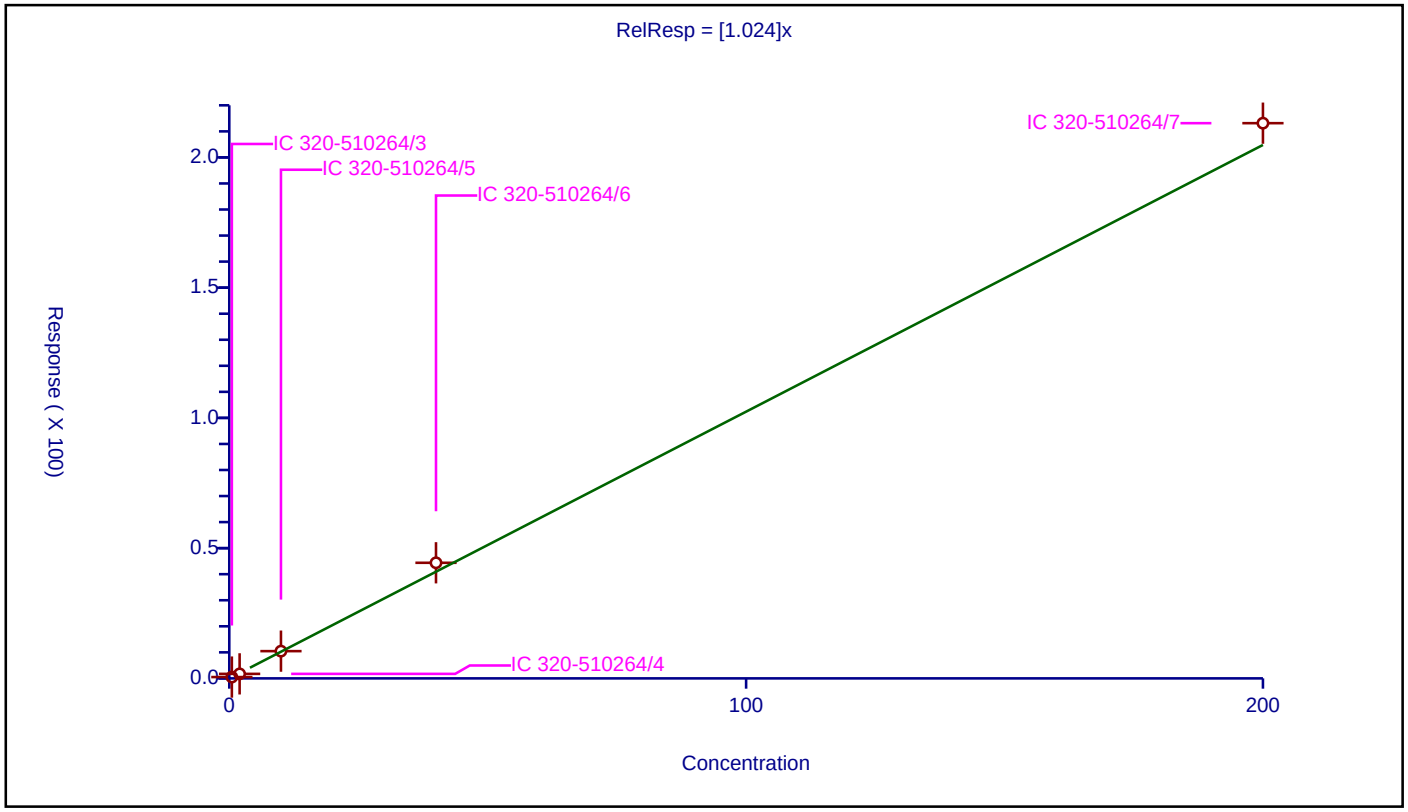

792547

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	72100000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.485229	100.0	65685883.0	0.970458	Y
2	IC 320-510264/4	2.0	1.95888	100.0	62853211.0	0.97944	Y
3	IC 320-510264/5	10.0	11.718119	100.0	62635225.0	1.171812	Y
4	IC 320-510264/6	40.0	47.503291	100.0	62046988.0	1.187582	Y
5	IC 320-510264/7	200.0	245.287862	100.0	57464333.0	1.226439	Y

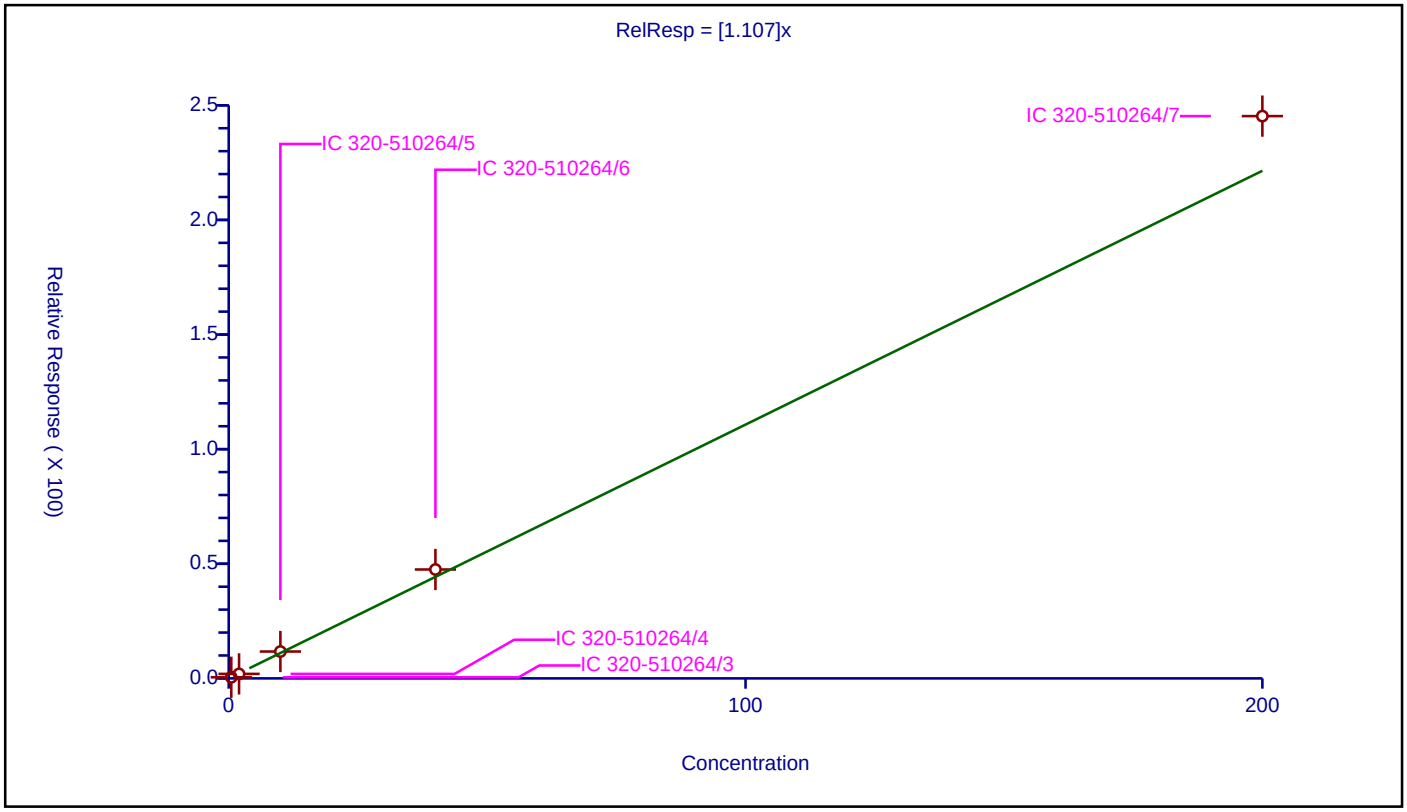

792548

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	325000000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	5.504666	200.0	57018462.0	1.100933	Y
2	IC 320-510264/4	20.0	19.269459	200.0	52034518.0	0.963473	Y
3	IC 320-510264/5	100.0	116.51708	200.0	54338243.0	1.165171	Y
4	IC 320-510264/6	400.0	473.162285	200.0	57303880.0	1.182906	Y
5	IC 320-510264/7	2000.0	2245.176522	200.0	56623863.0	1.122588	Y

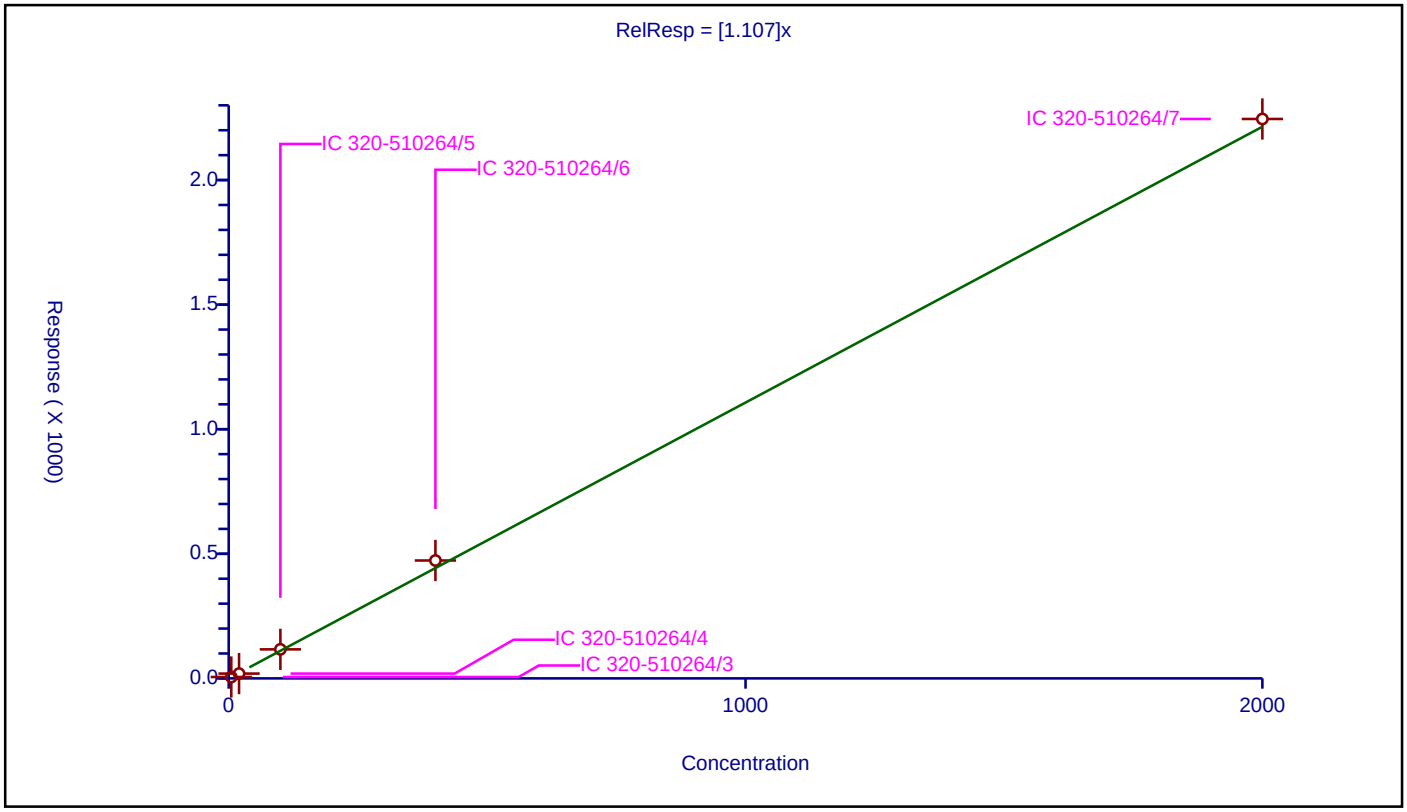

792549

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.438

Error Coefficients

Standard Error:	438000000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	6.931702	200.0	57018462.0	1.38634	Y
2	IC 320-510264/4	20.0	23.824451	200.0	52034518.0	1.191223	Y
3	IC 320-510264/5	100.0	151.448408	200.0	54338243.0	1.514484	Y
4	IC 320-510264/6	400.0	634.327267	200.0	57303880.0	1.585818	Y
5	IC 320-510264/7	2000.0	3025.883229	200.0	56623863.0	1.512942	Y

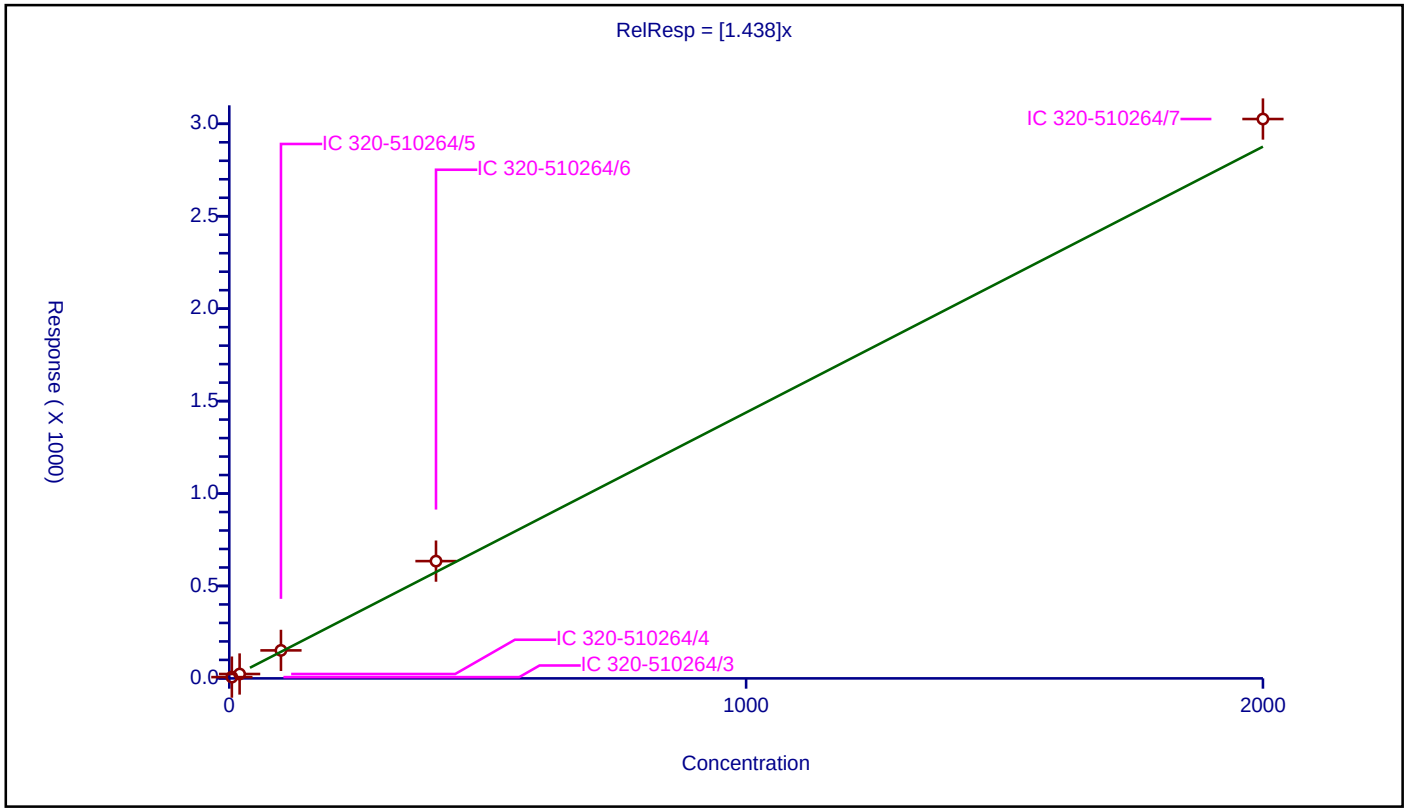

792550

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

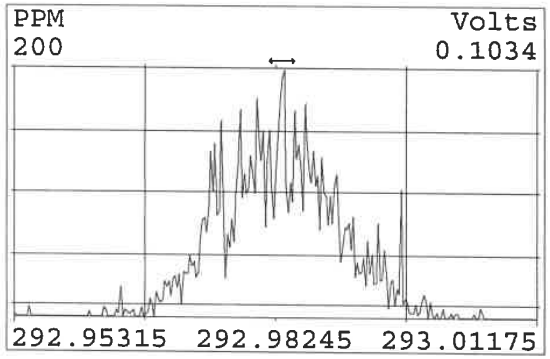

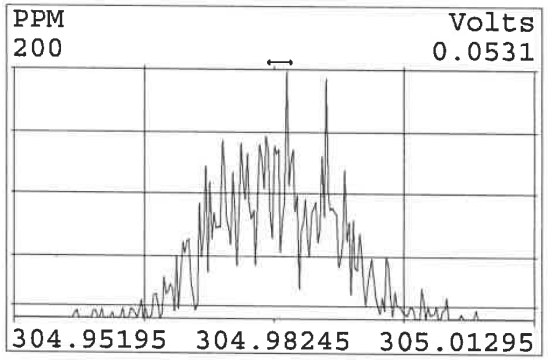

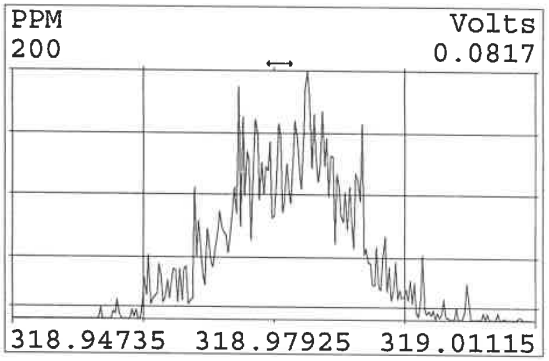

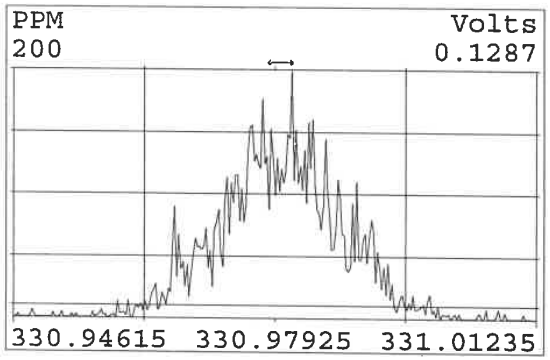

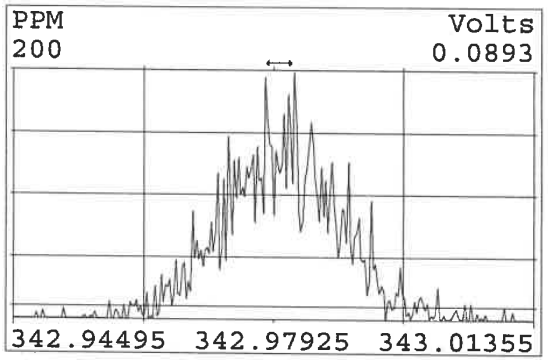

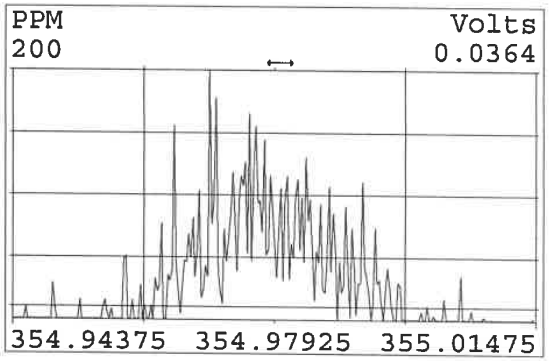

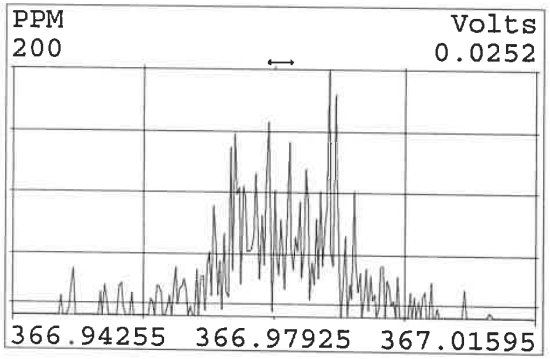

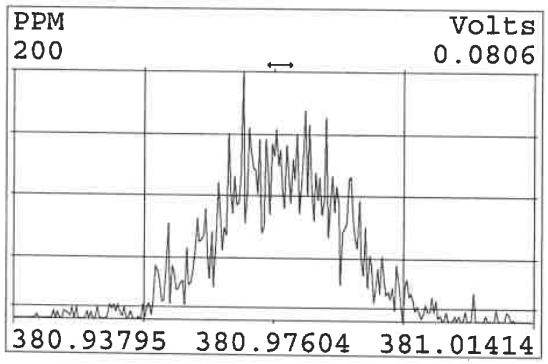

792554

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

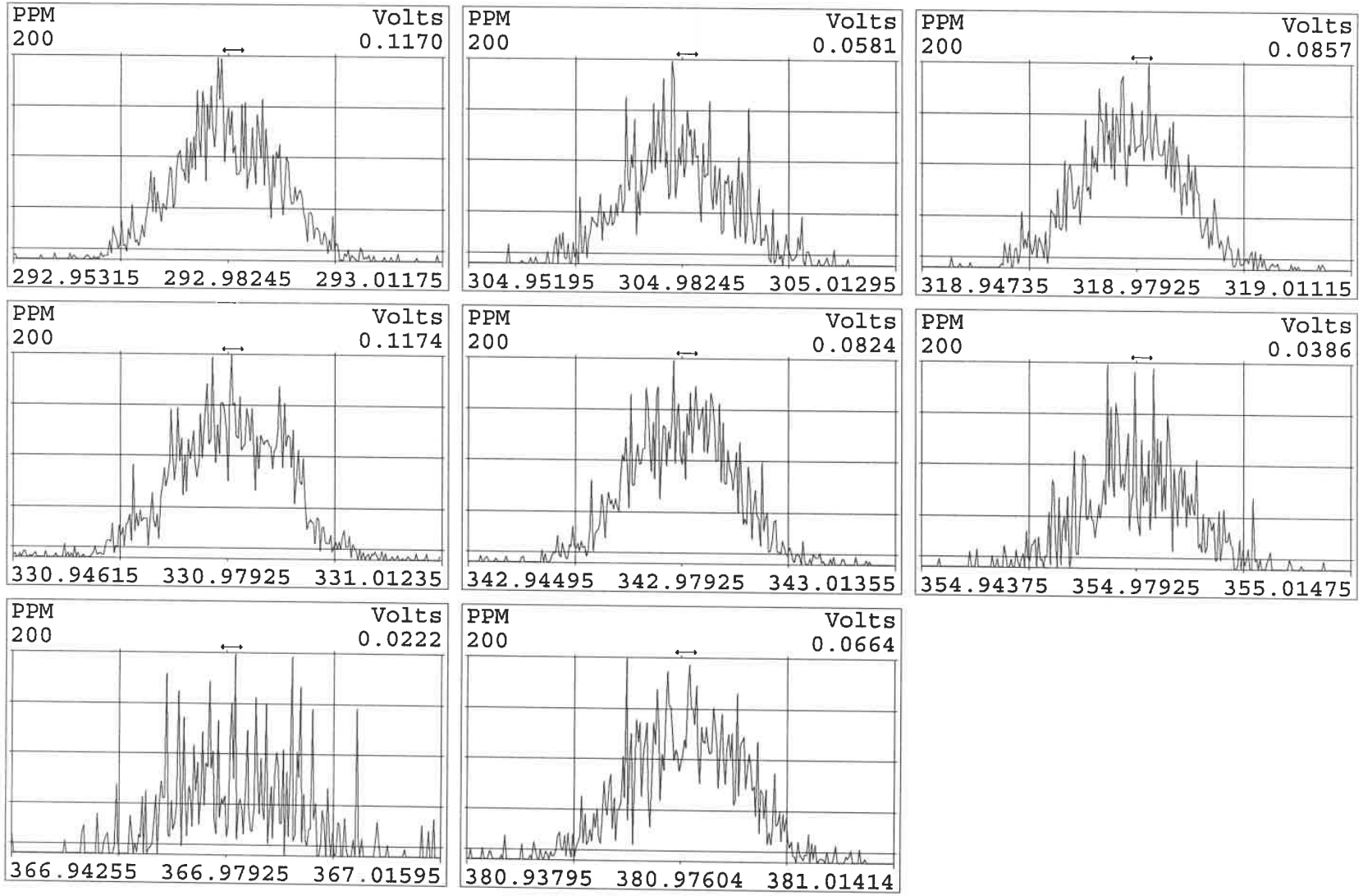

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

792556

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

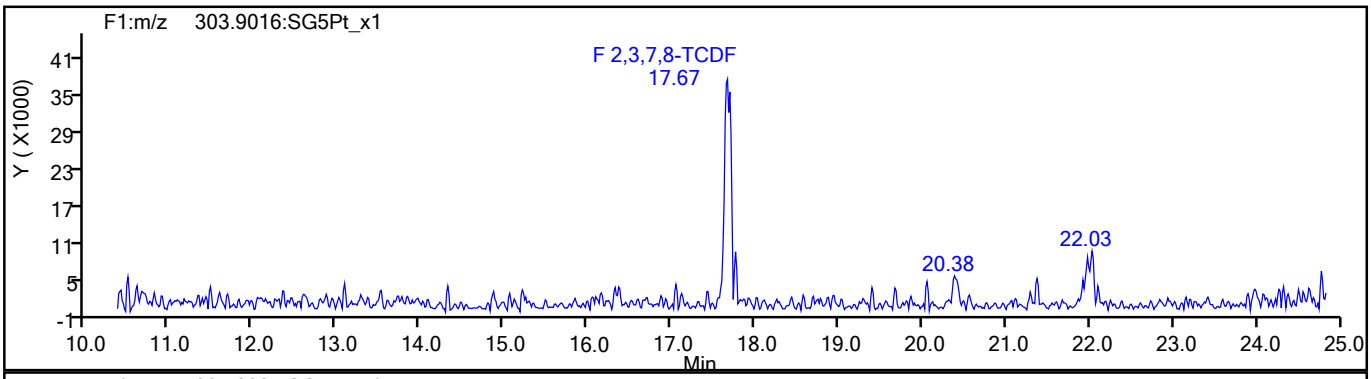

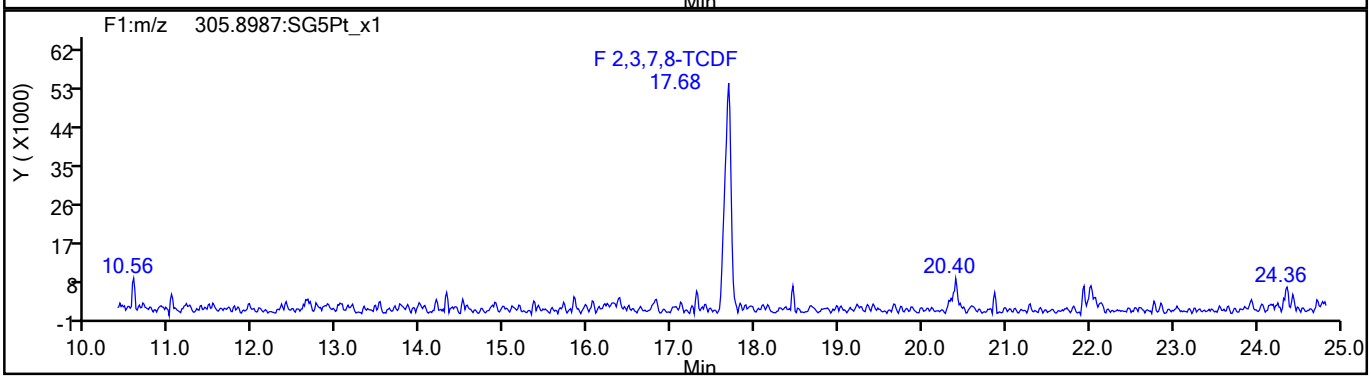

TCDF Standards

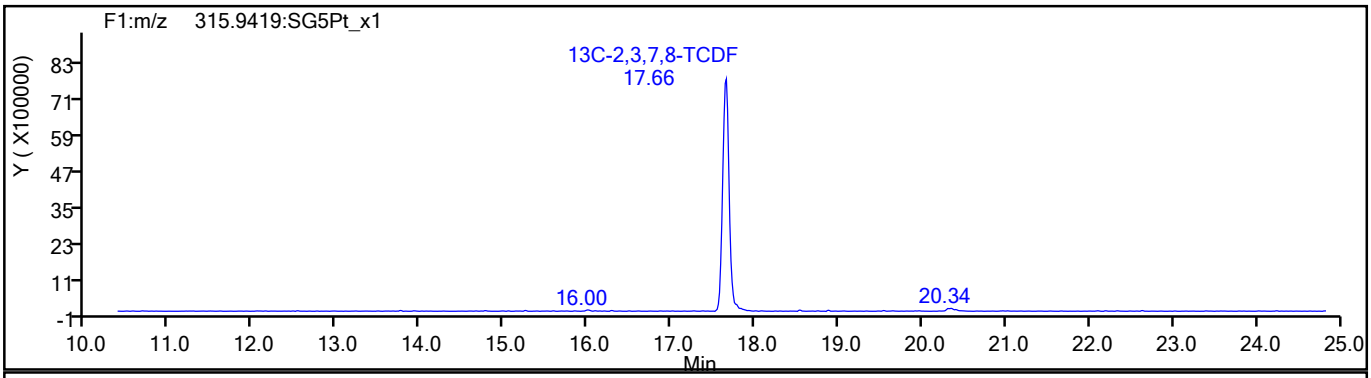

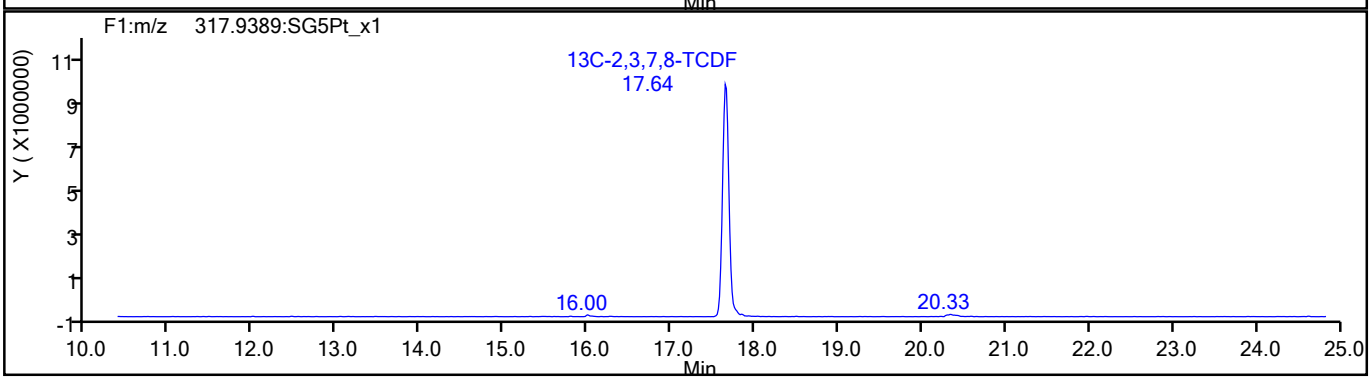

792558

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

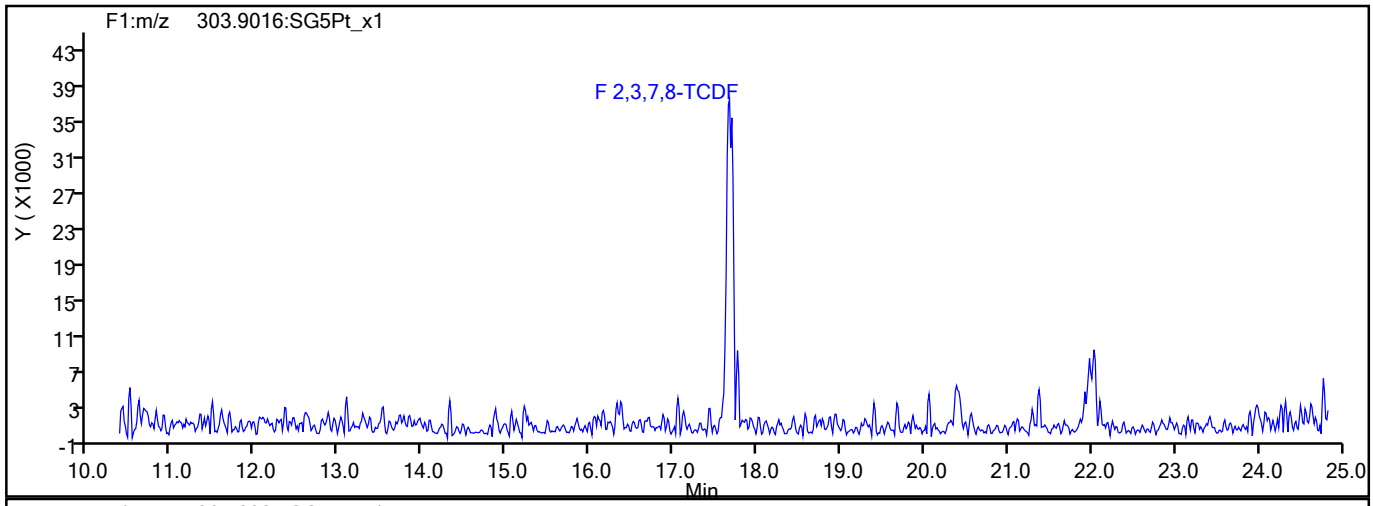

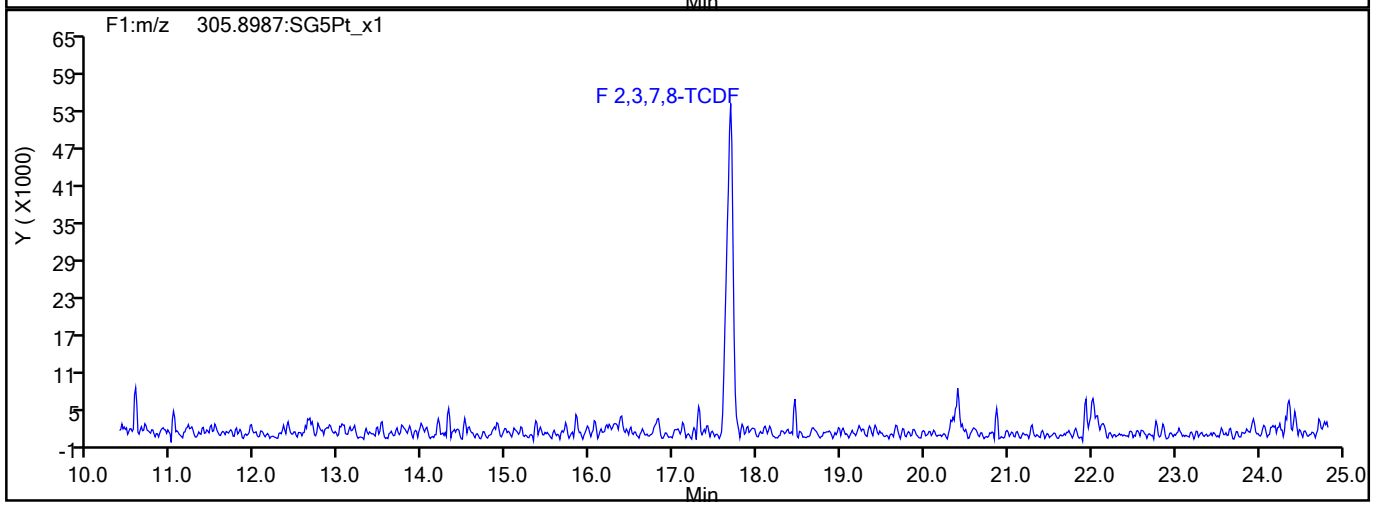

TCDF Interference Mass

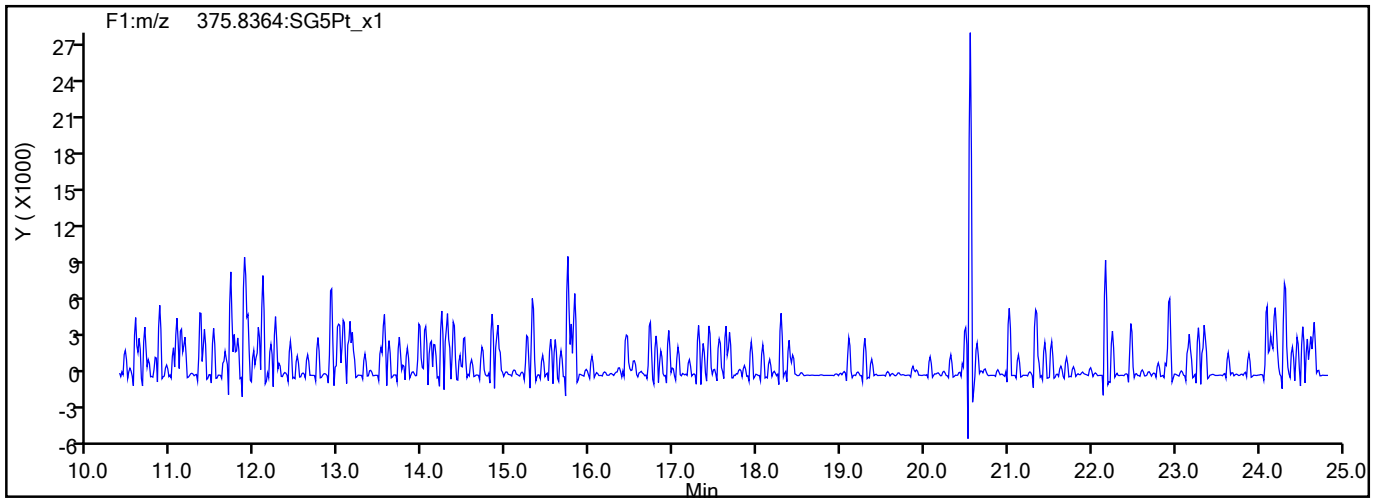

792559

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

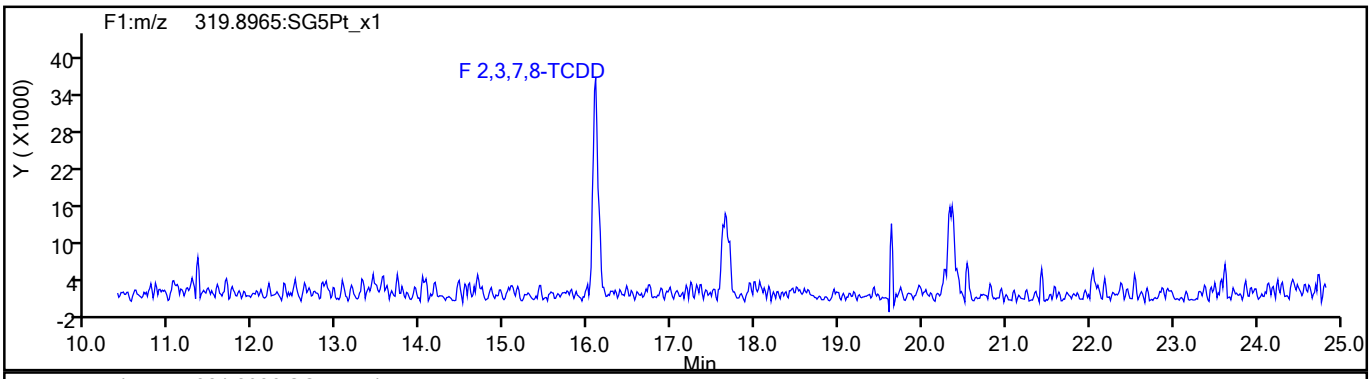

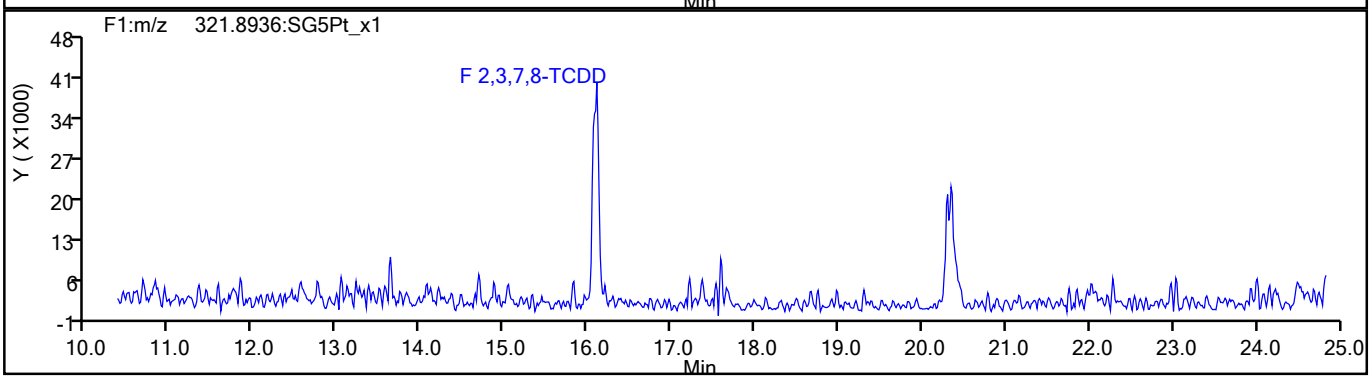

TCDD Standards

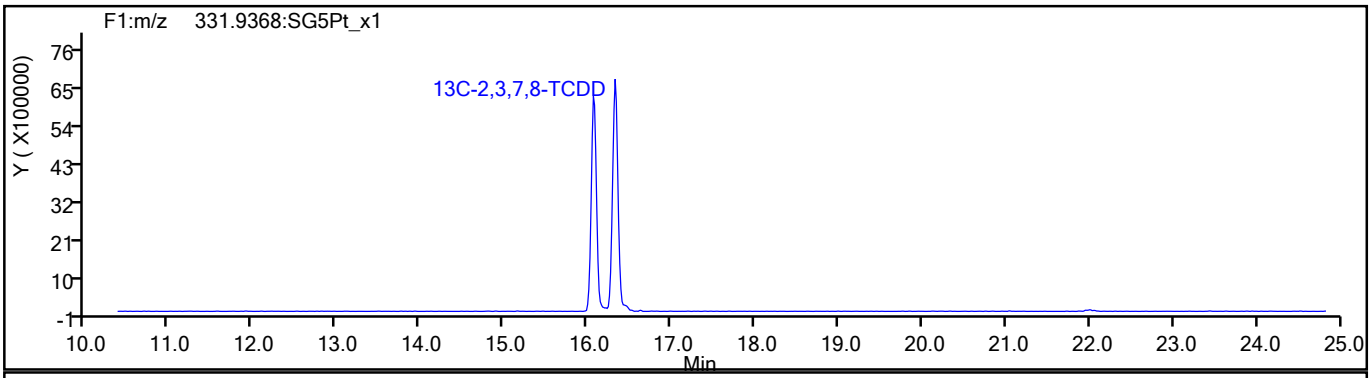

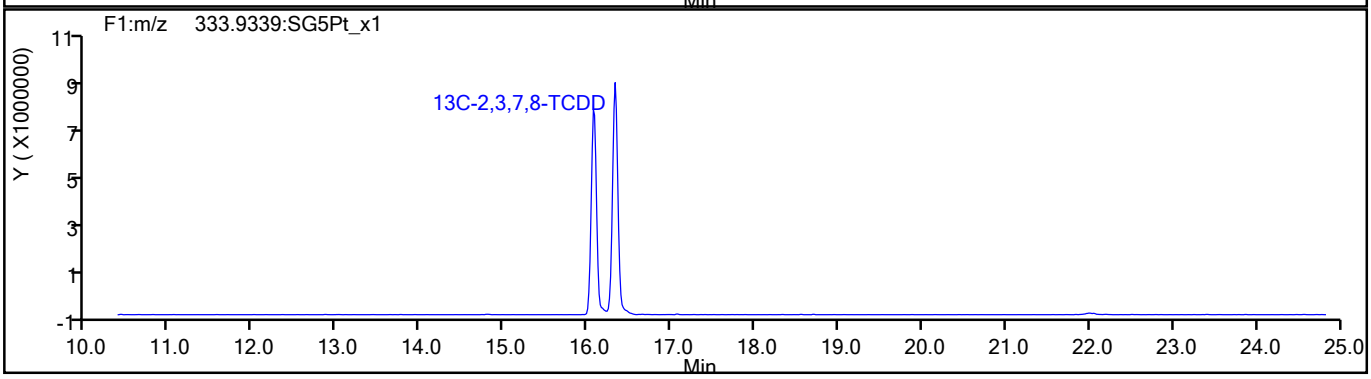

792560

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

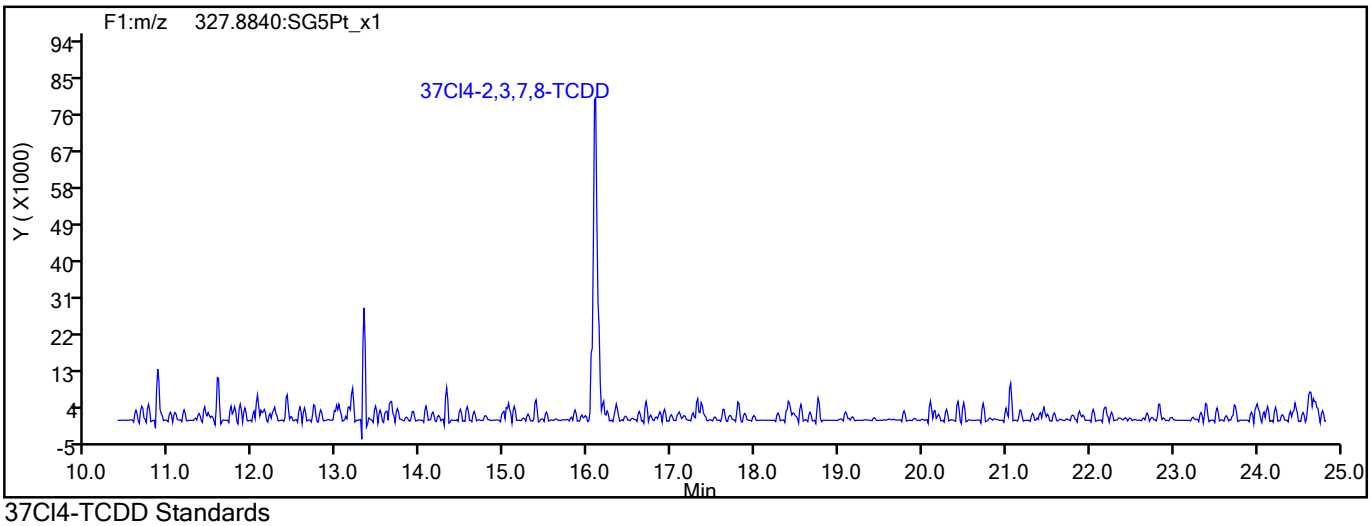

37Cl4-TCDD Standards

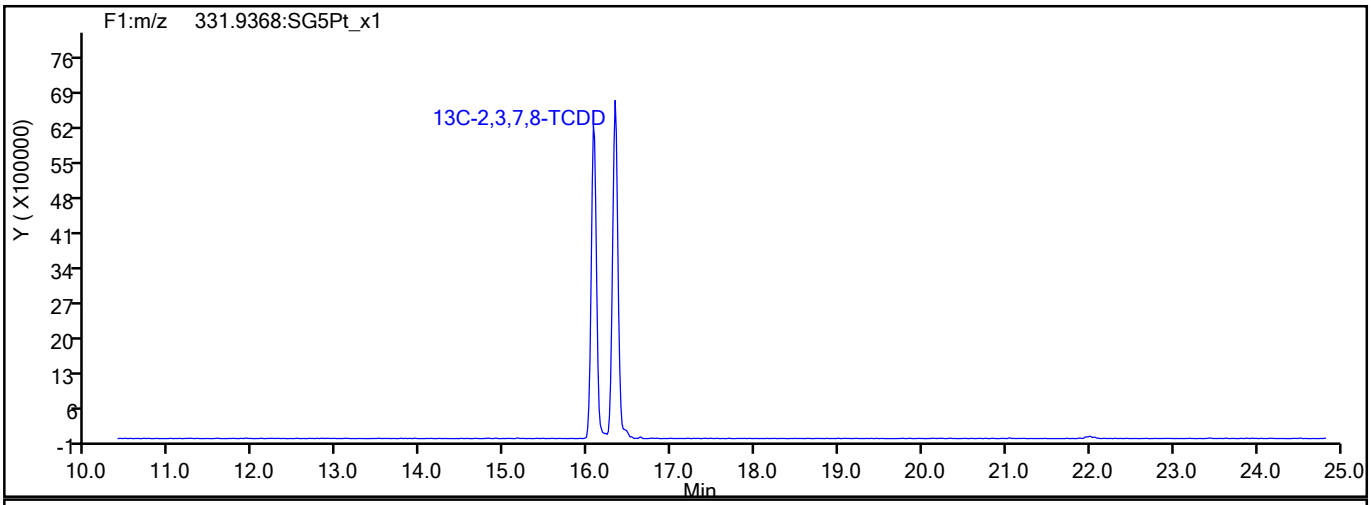

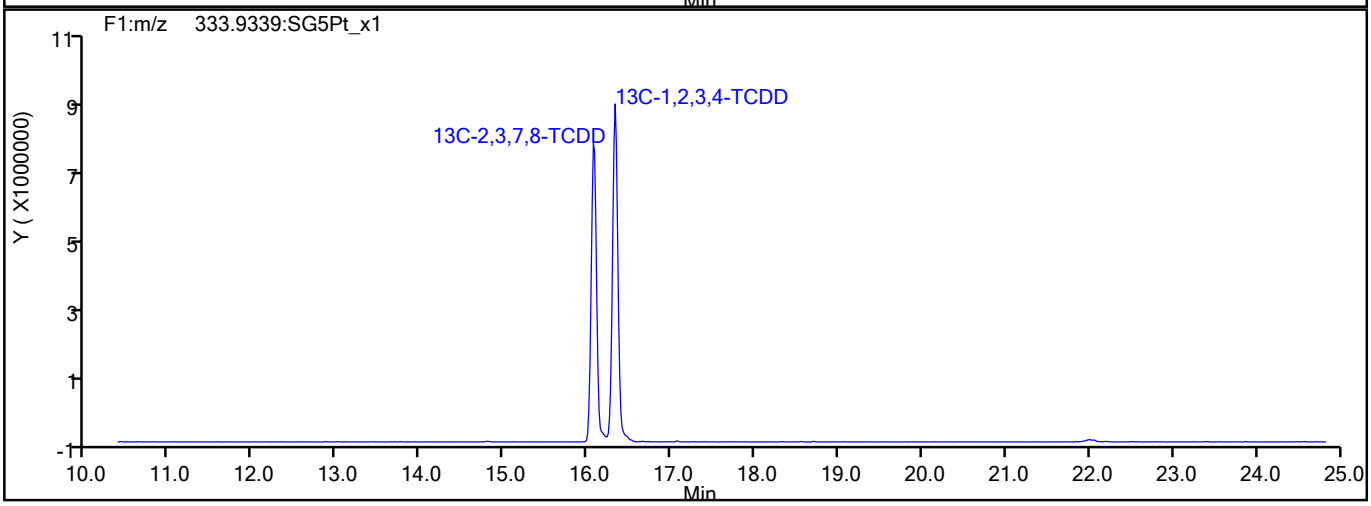

792561

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

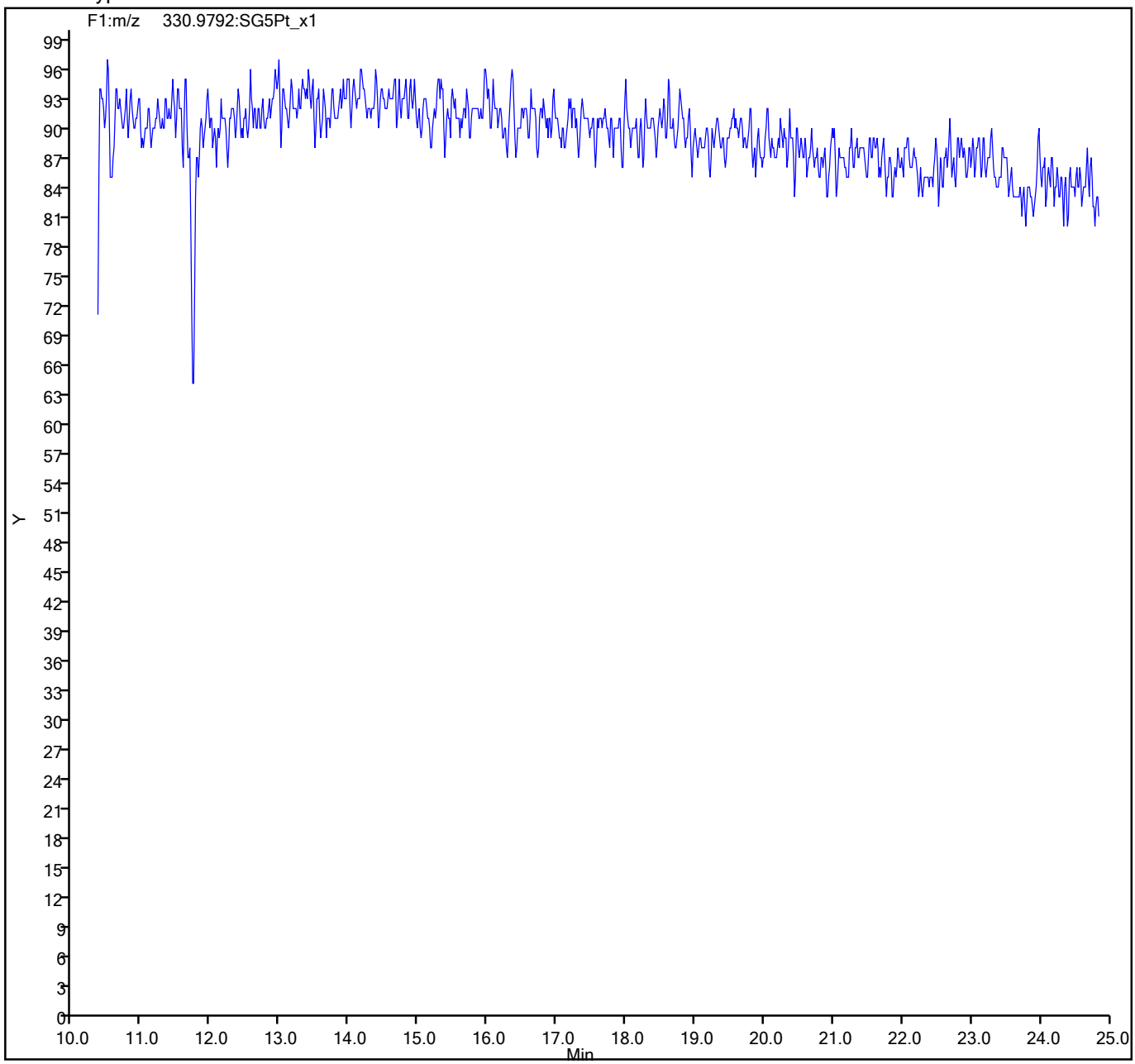

792562

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags
Review Flags
M - Manually Integrated

Reagents:
HRDXNL3_00029 Amount Added: 2.00 Units: uL

792563

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

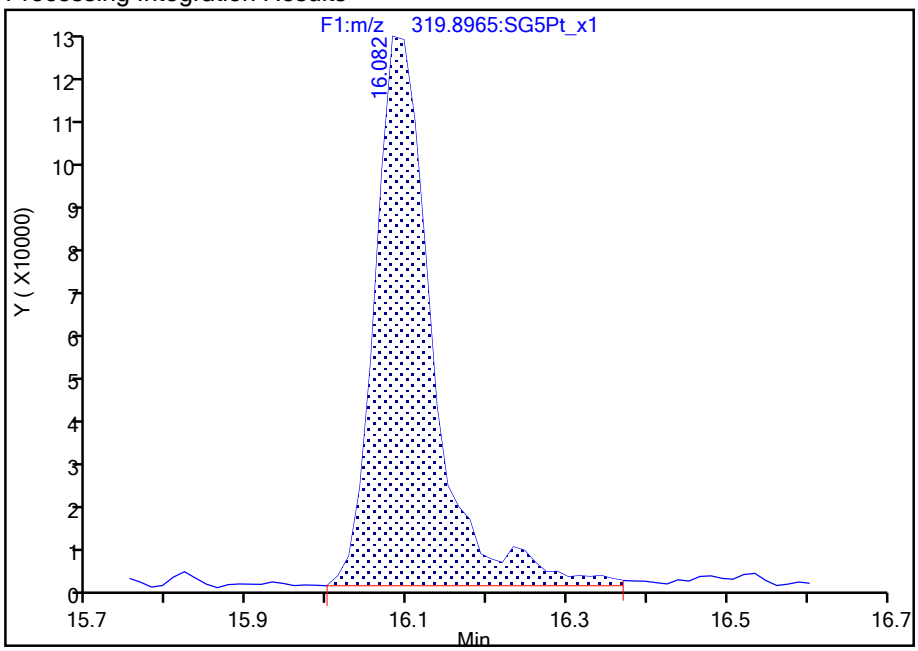

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

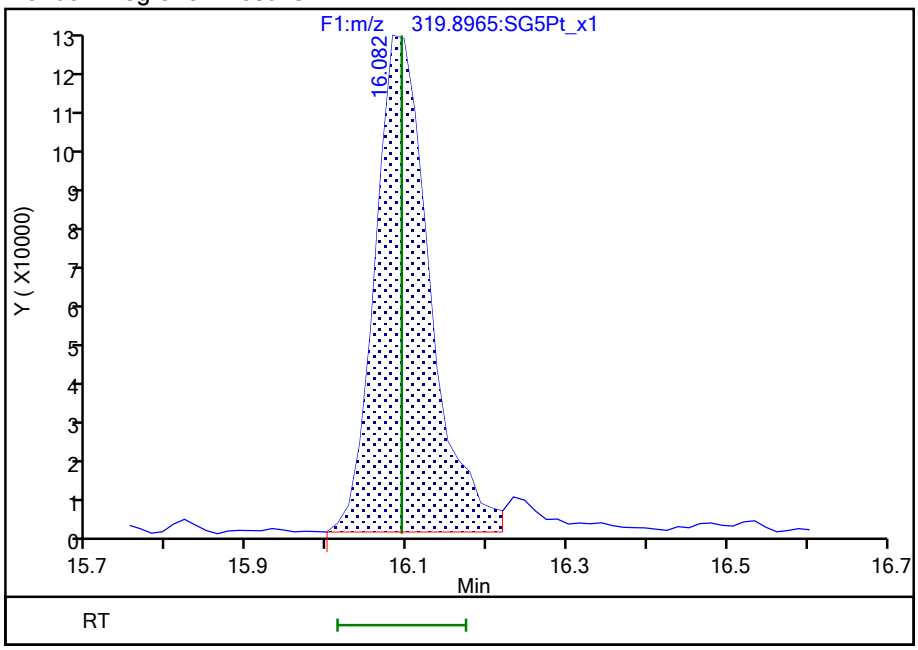

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

792565

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

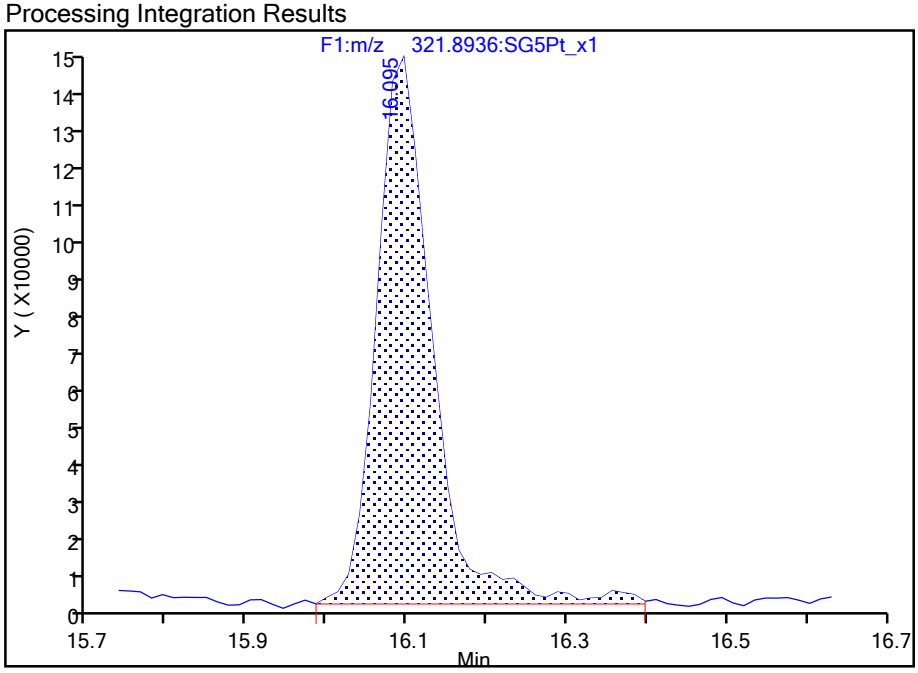

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

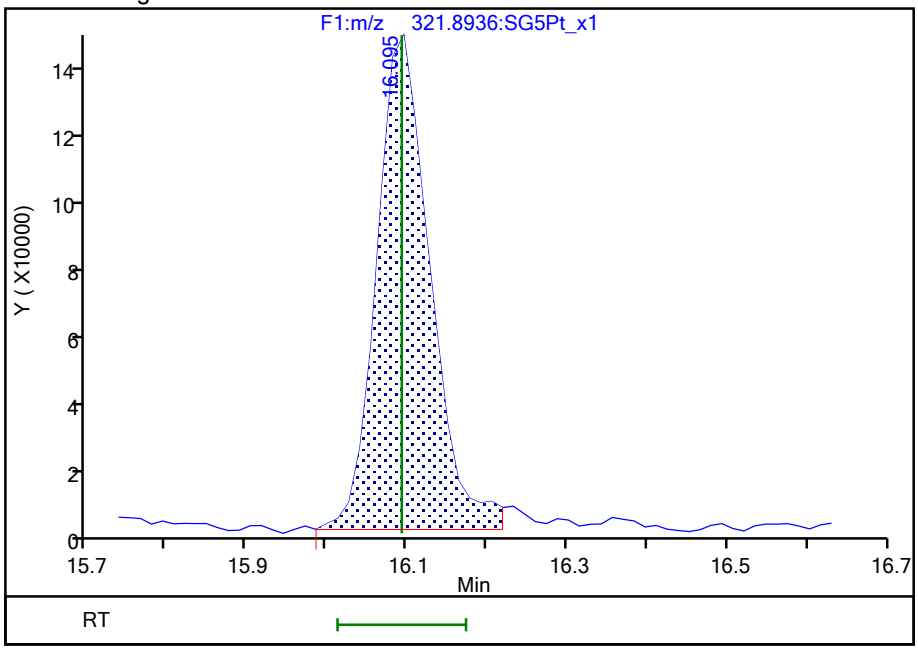

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

792566

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

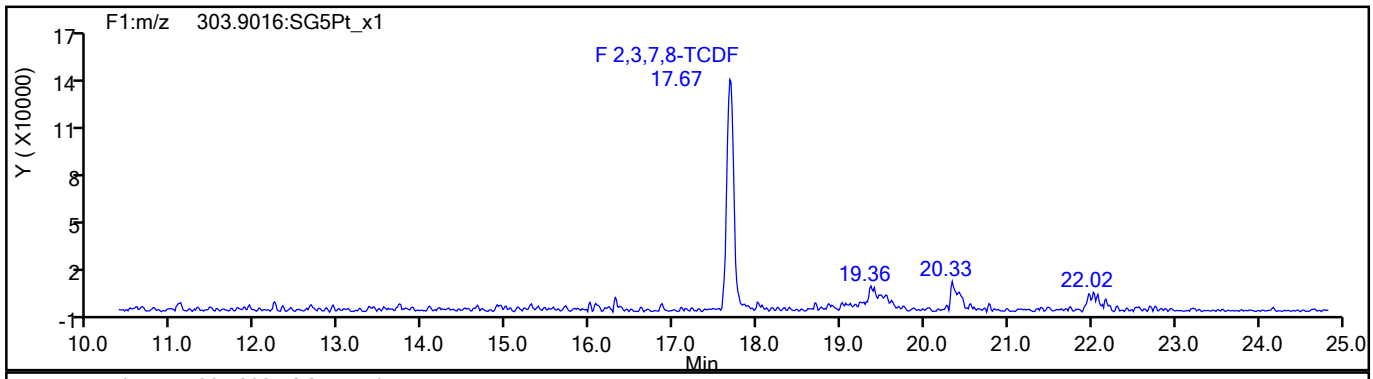

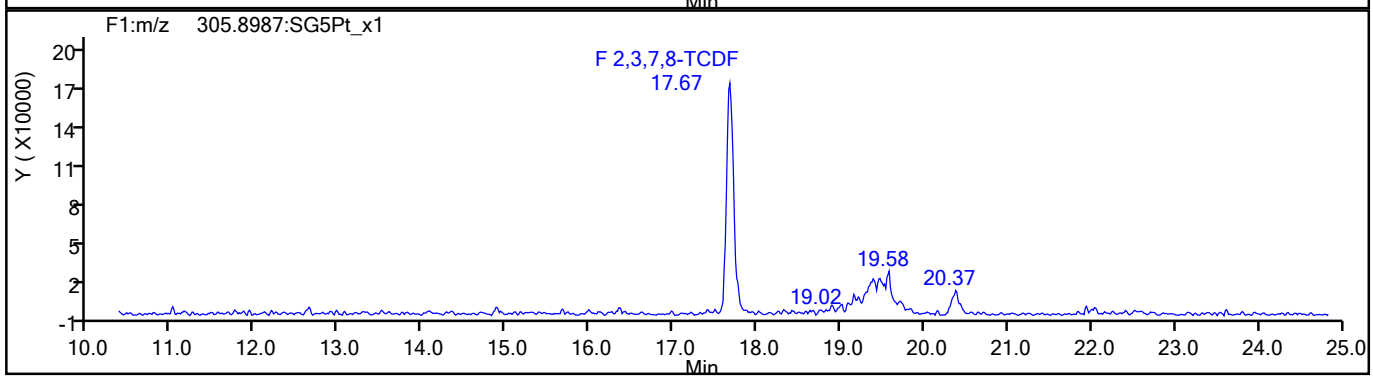

TCDF Standards

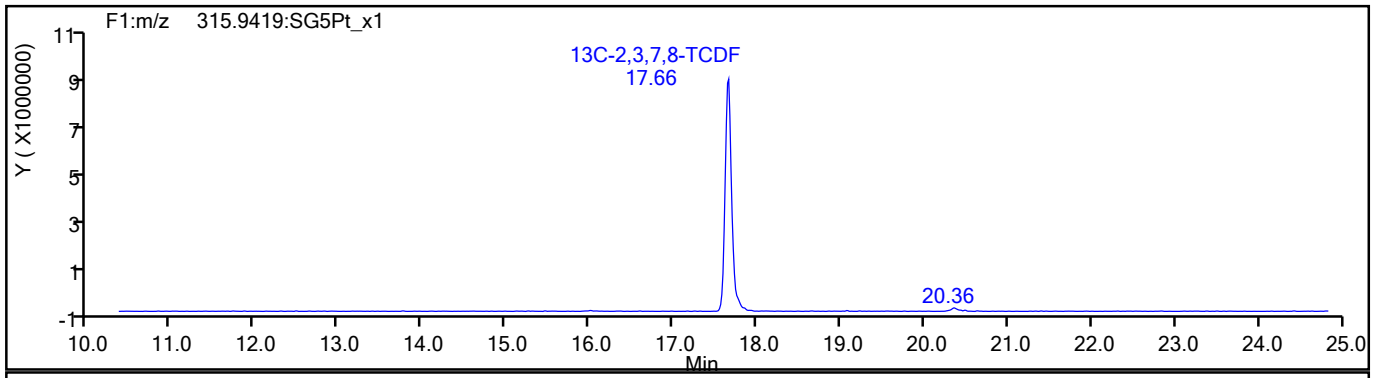

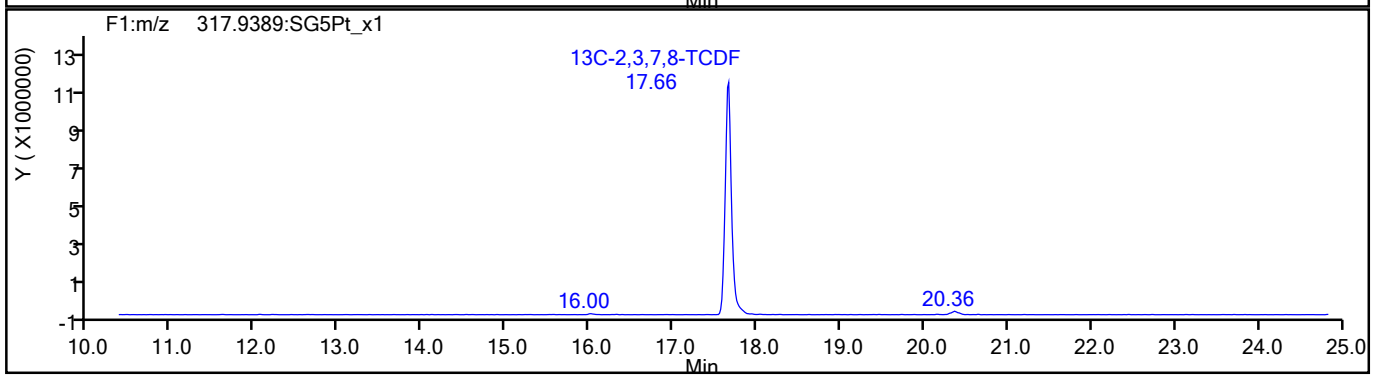

792567

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

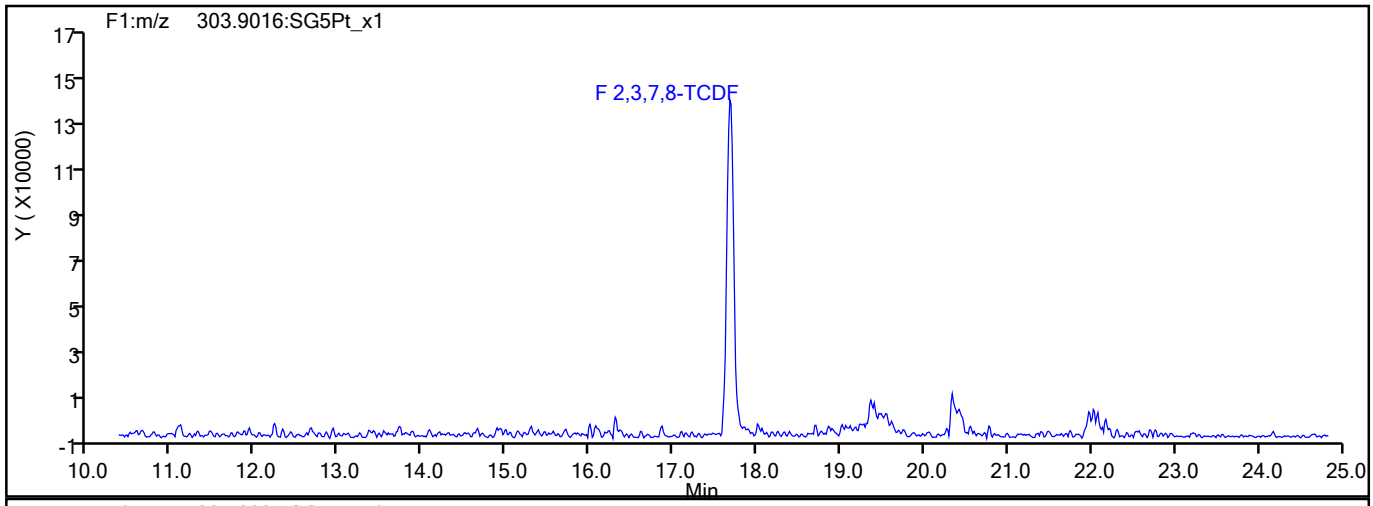

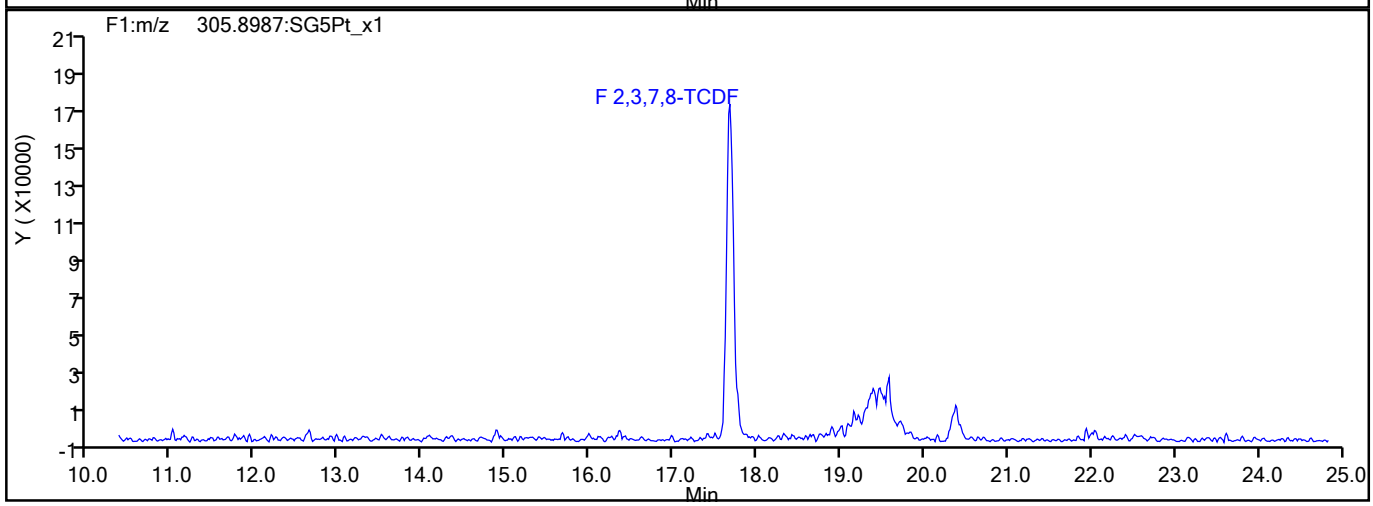

TCDF Interference Mass

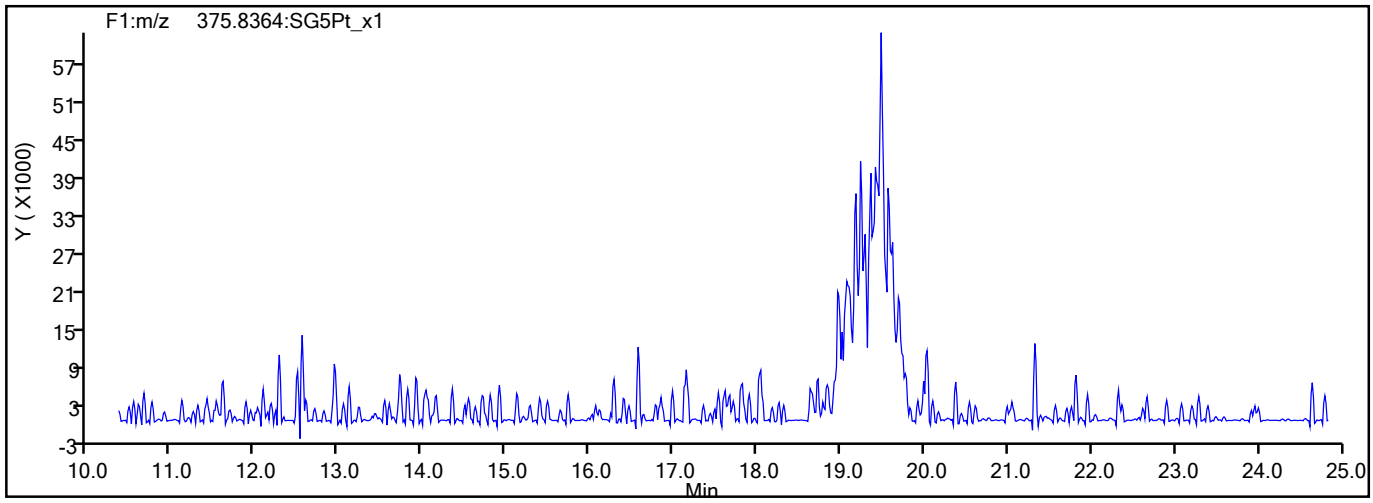

792568

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

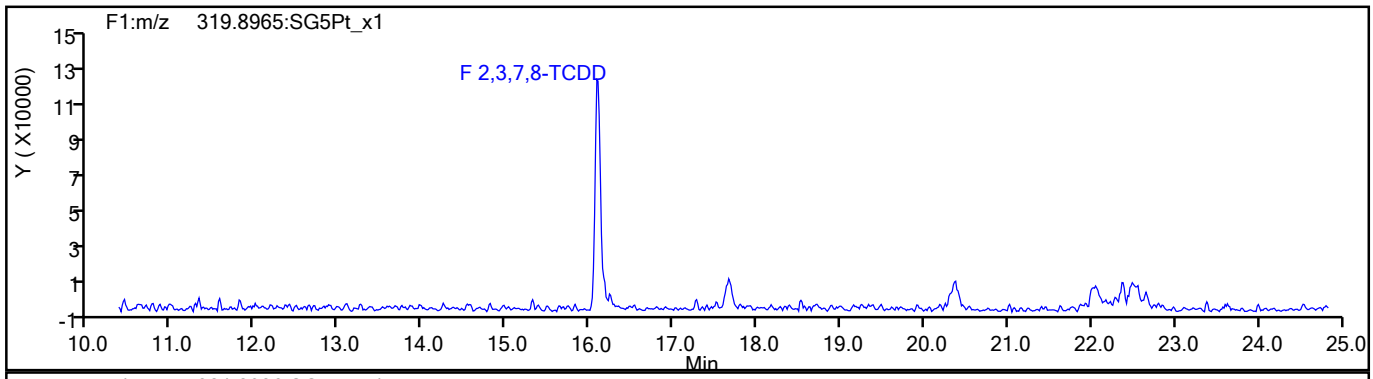

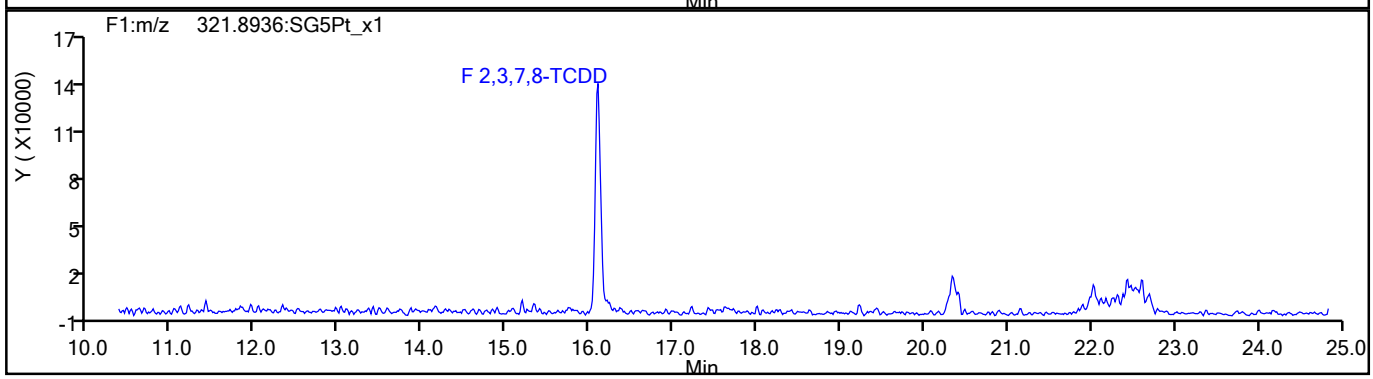

TCDD Standards

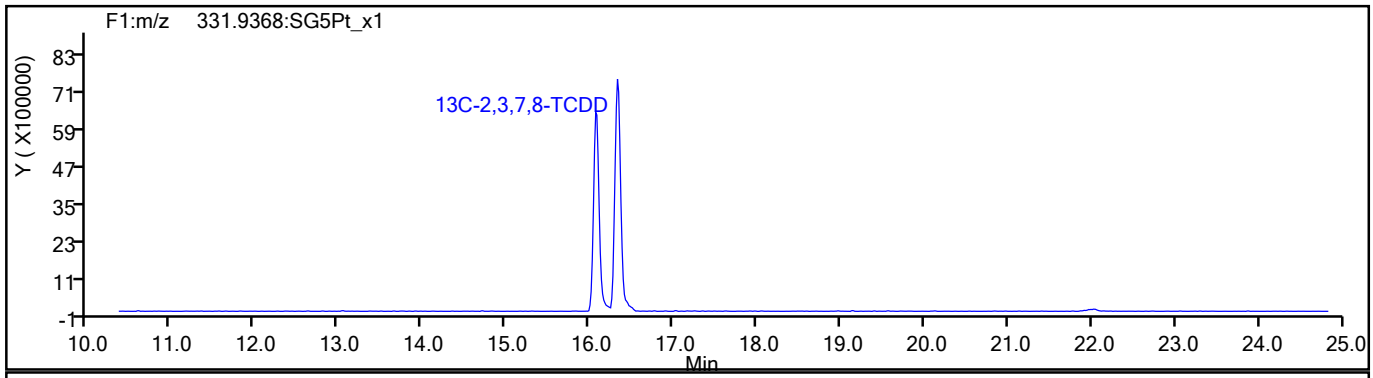

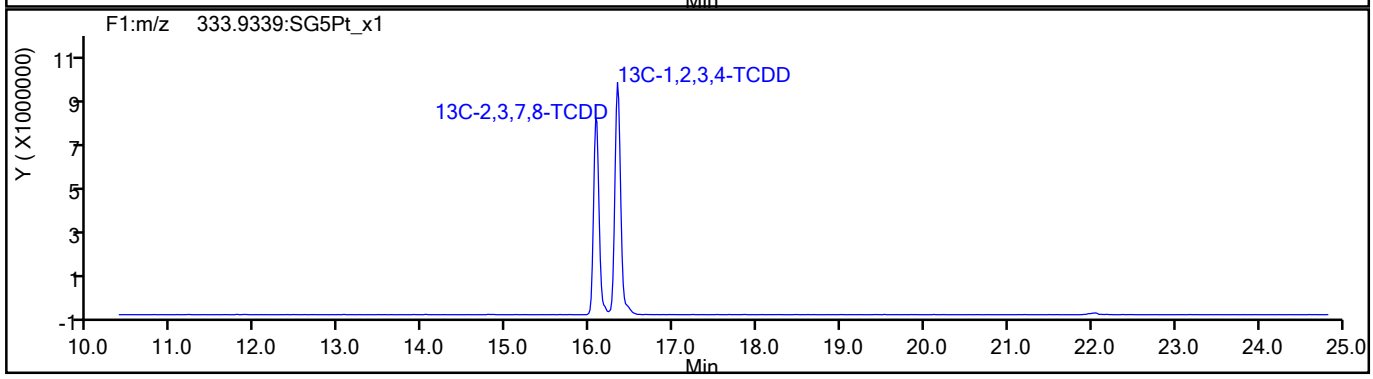

792569

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

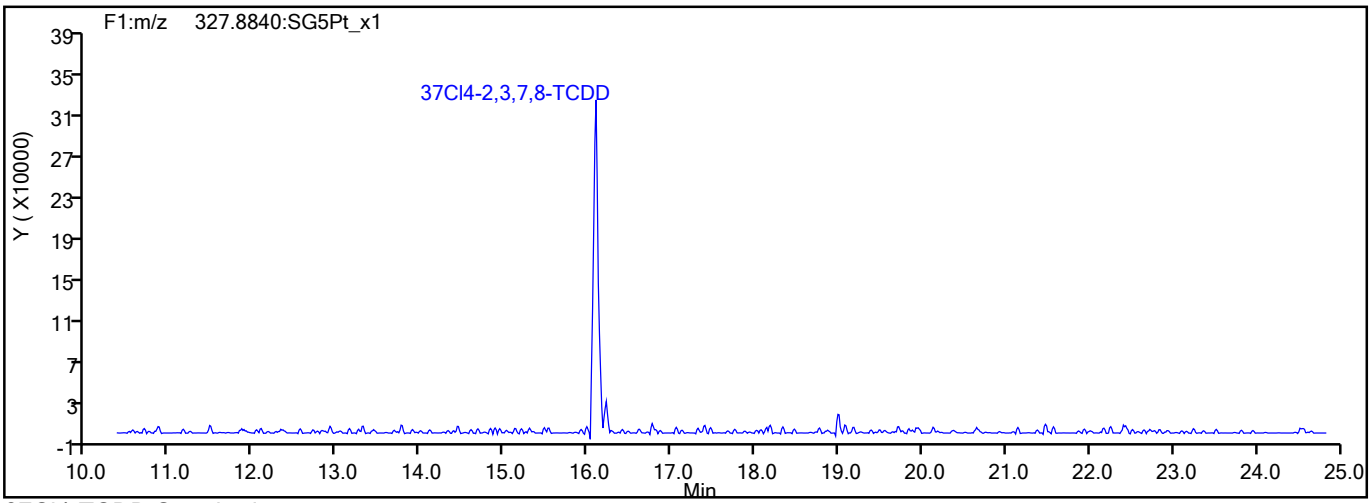

37Cl4-TCDD Standards

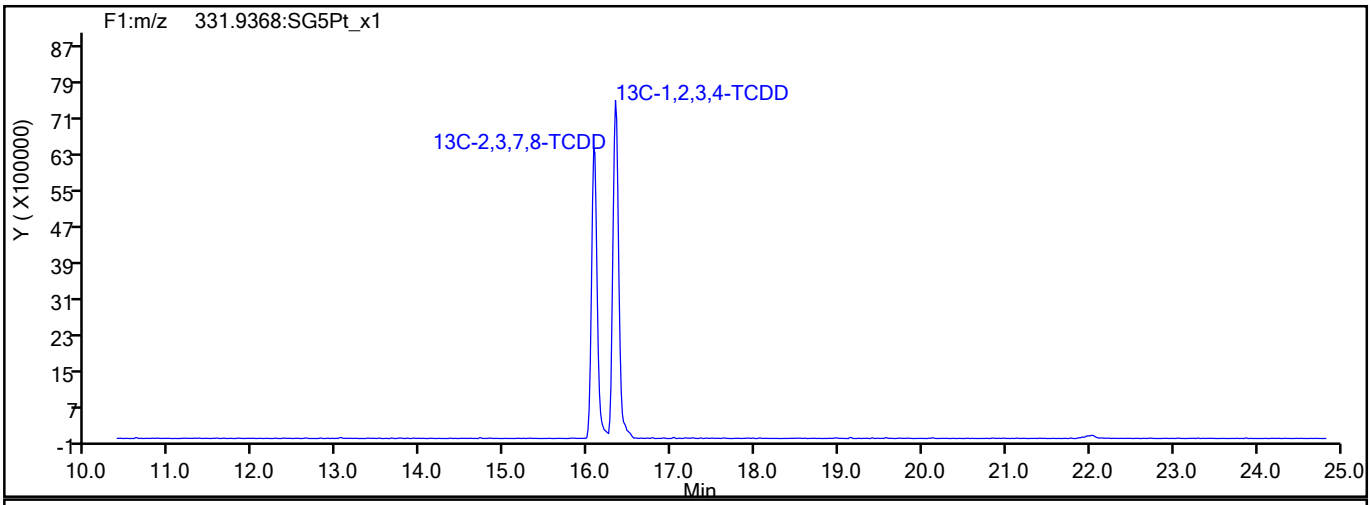

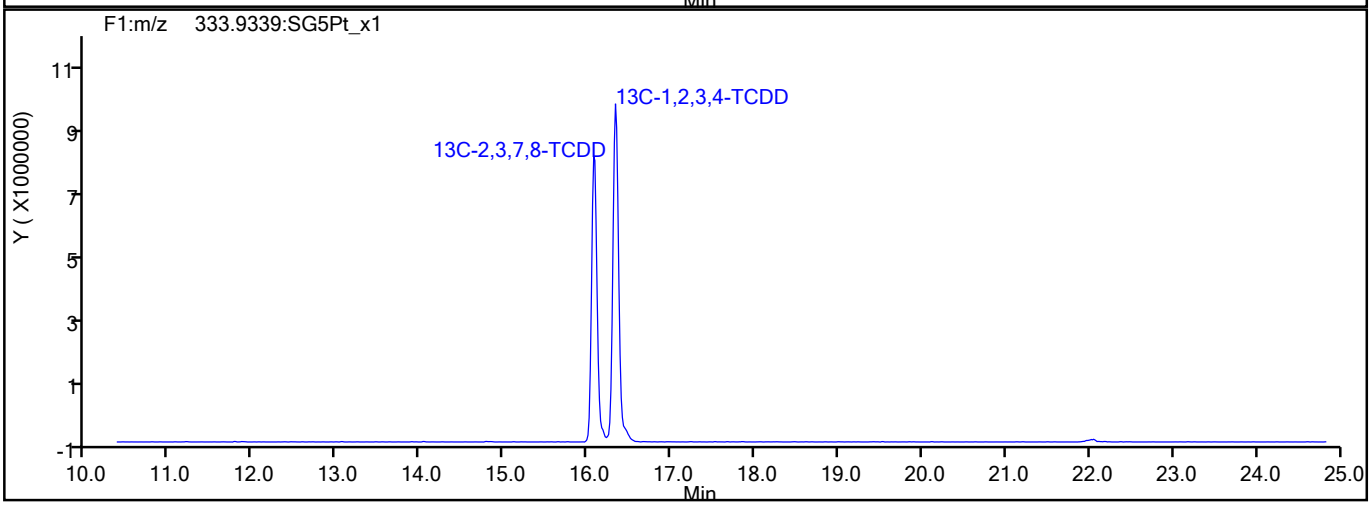

792570

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

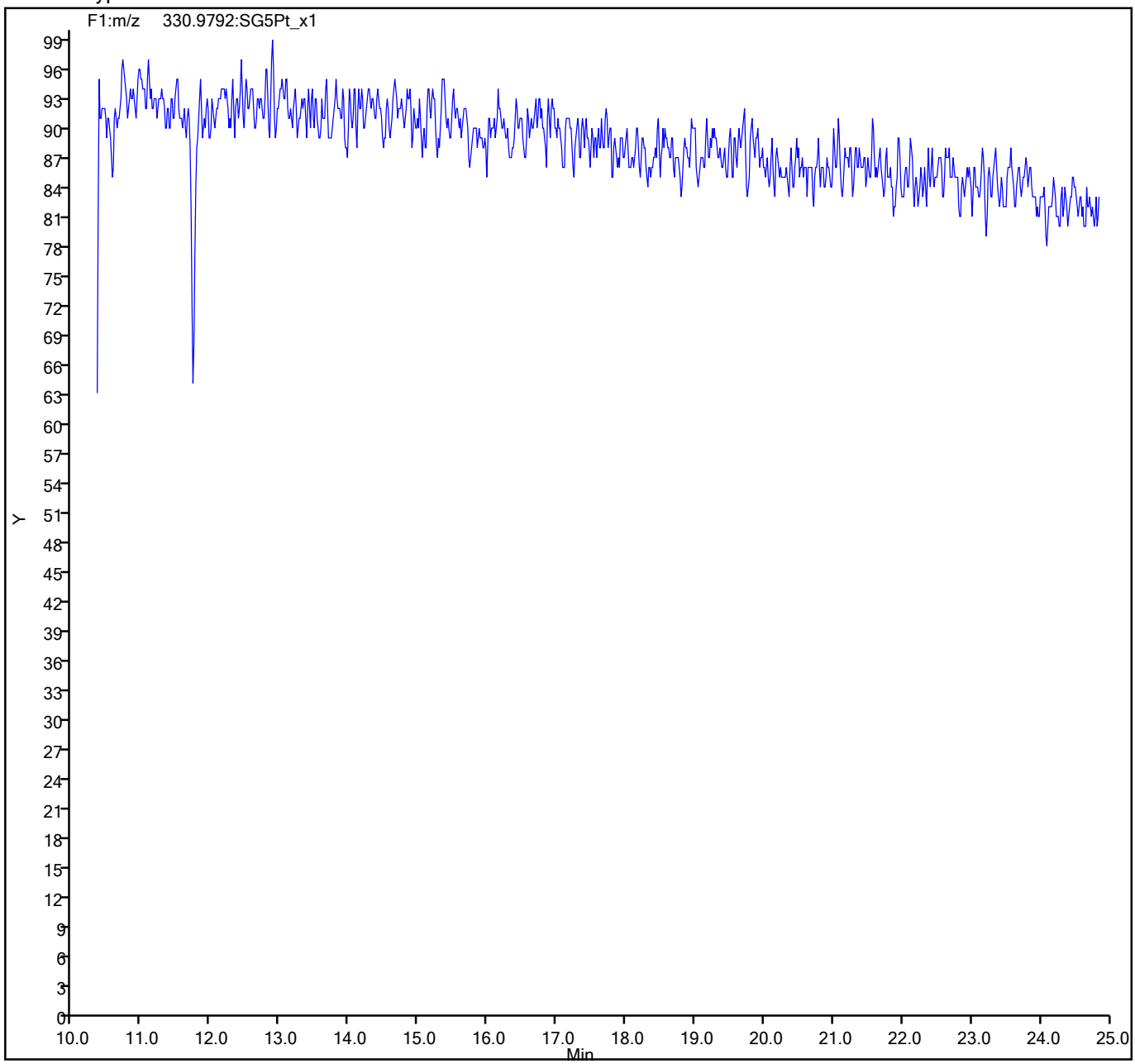

792571

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

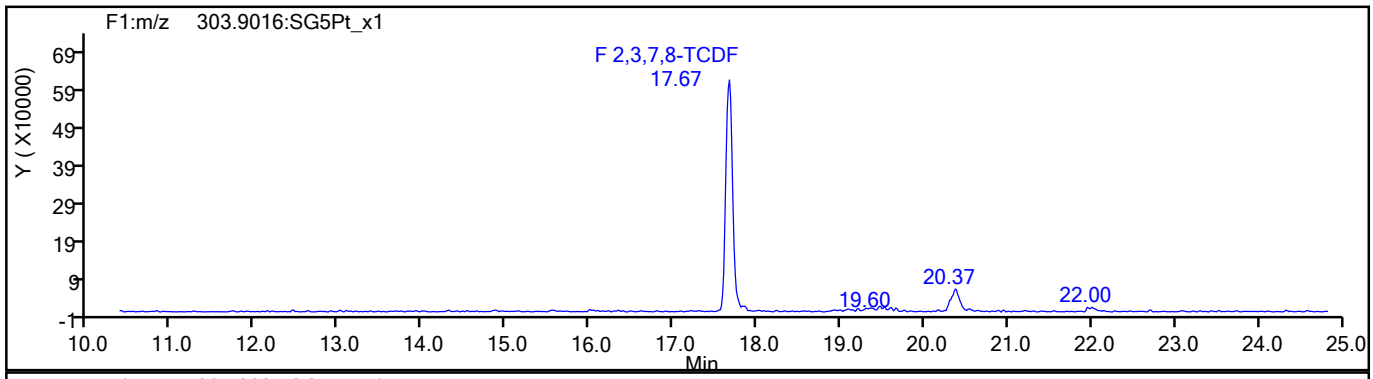

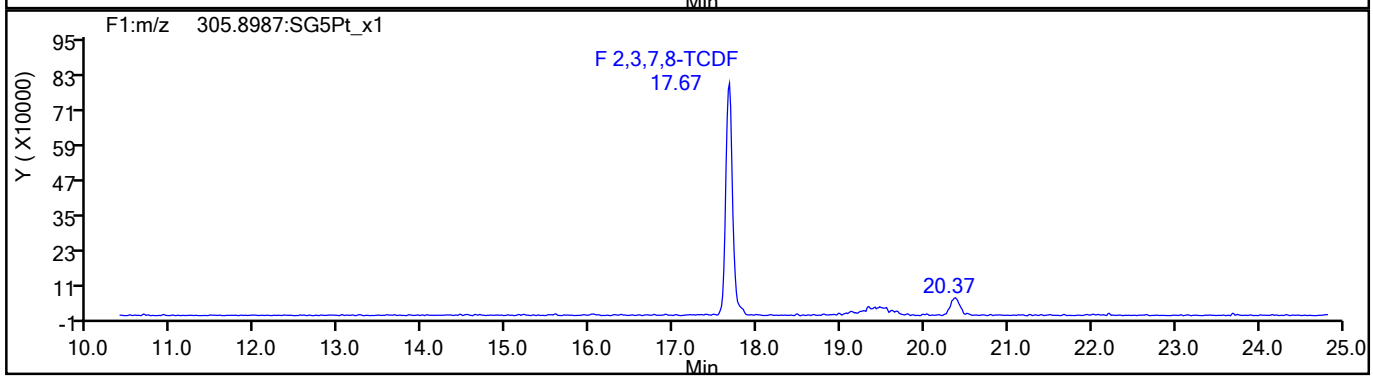

TCDF Standards

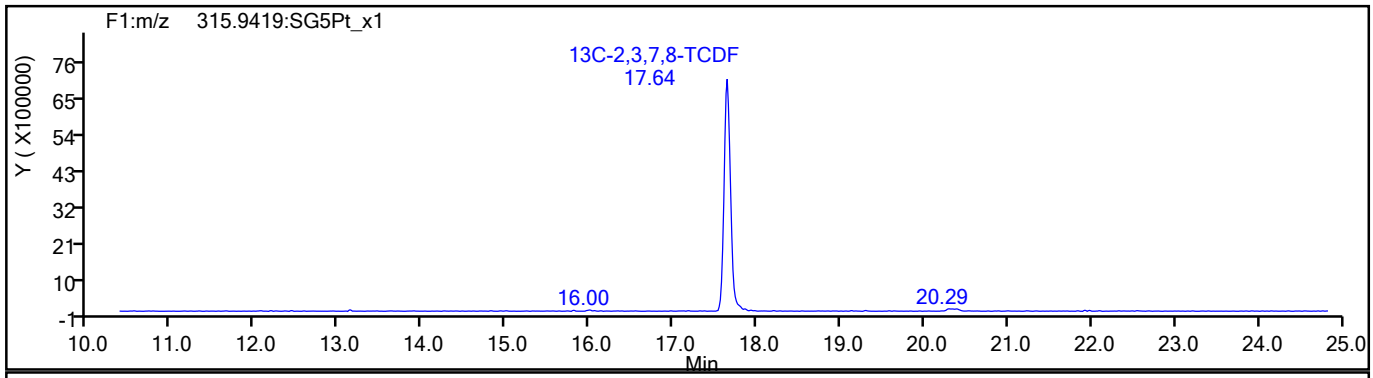

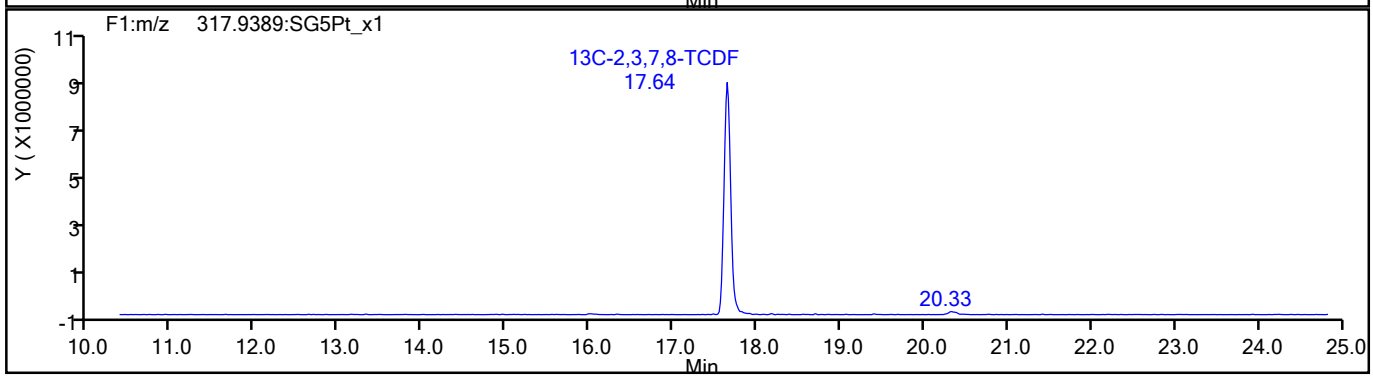

792574

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

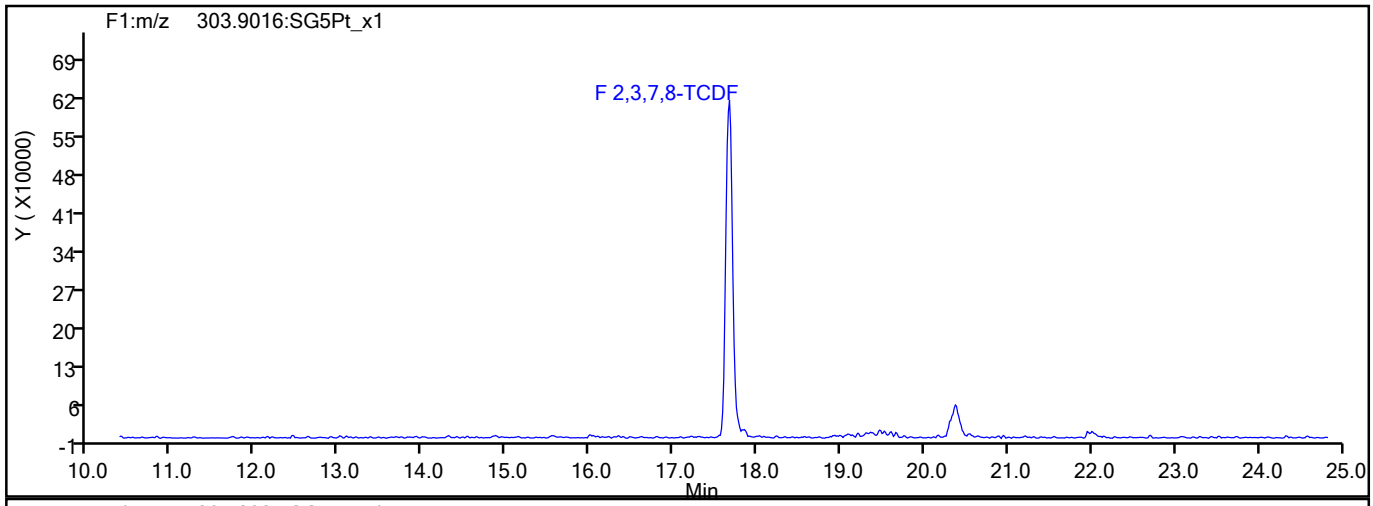

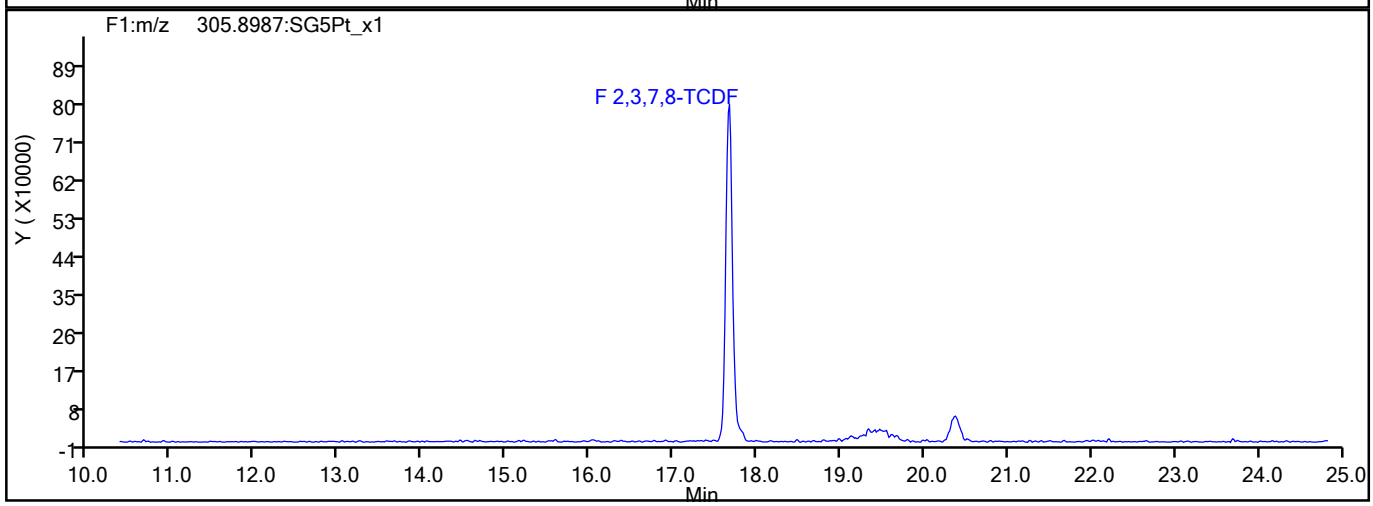

TCDF Interference Mass

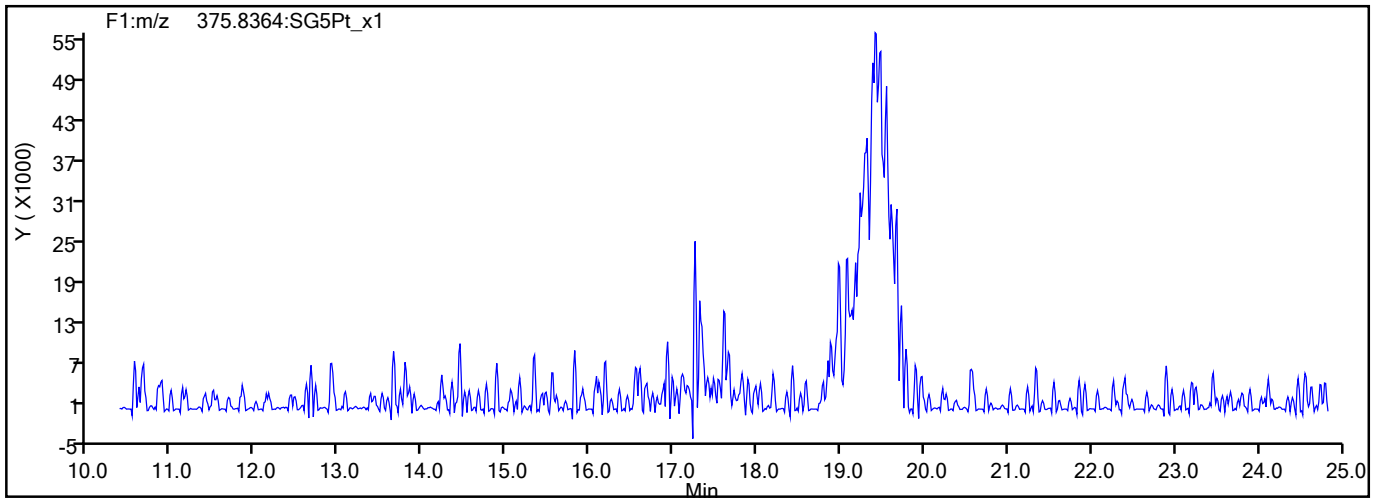

792575

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

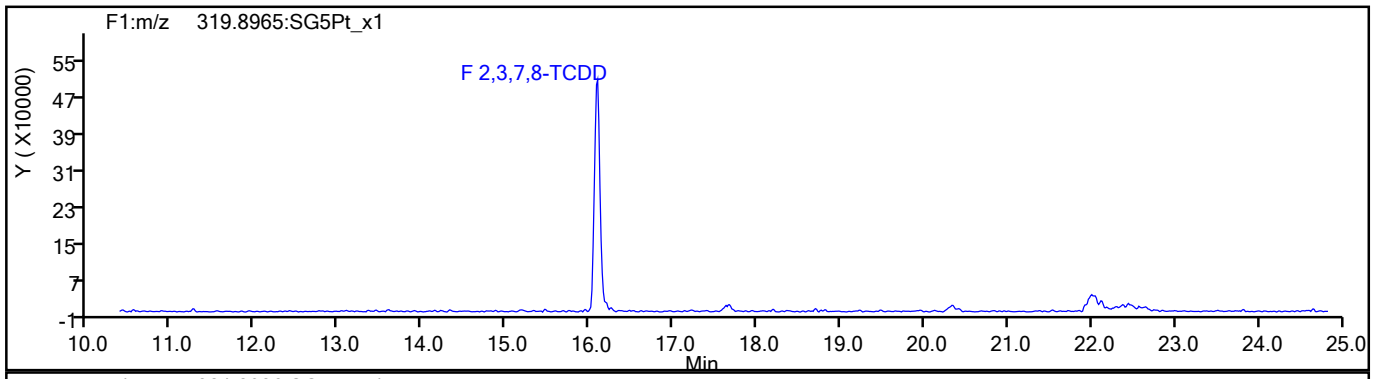

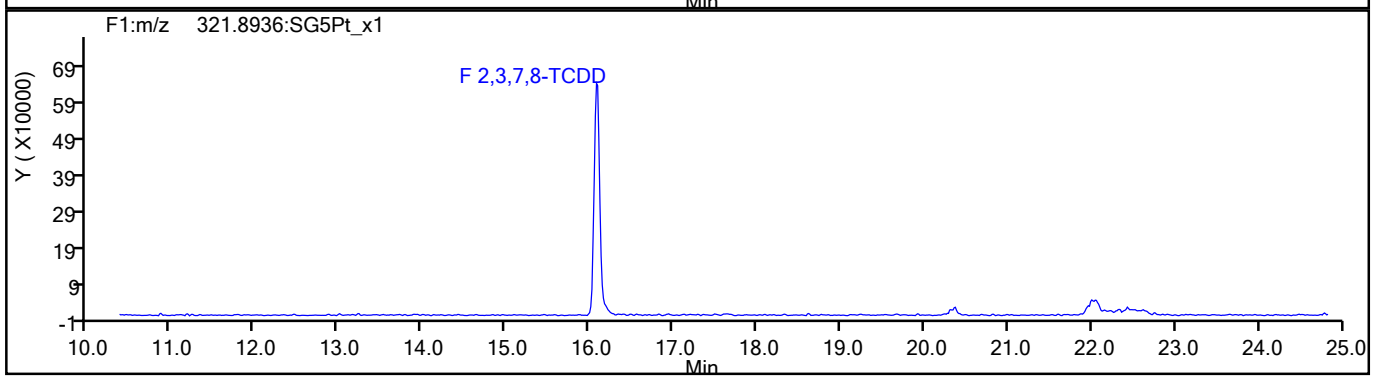

TCDD Standards

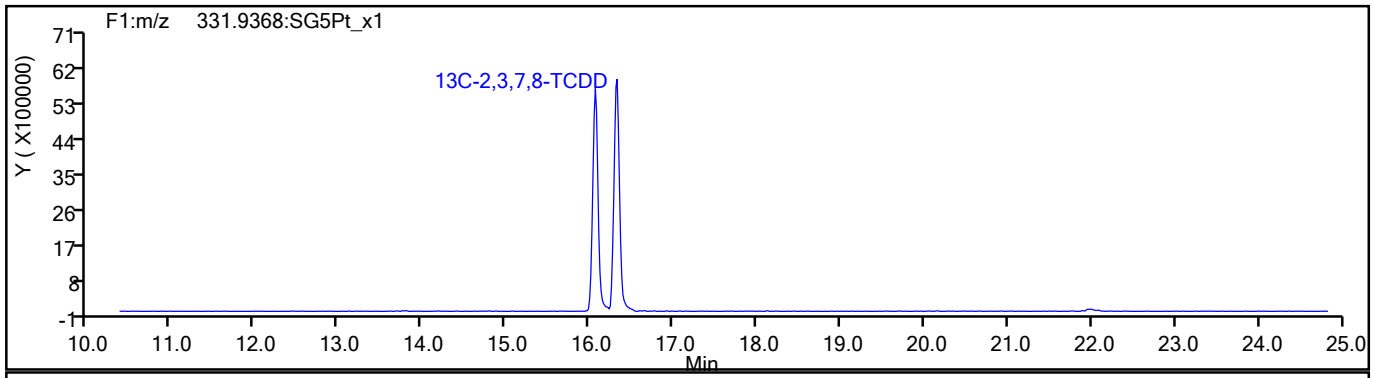

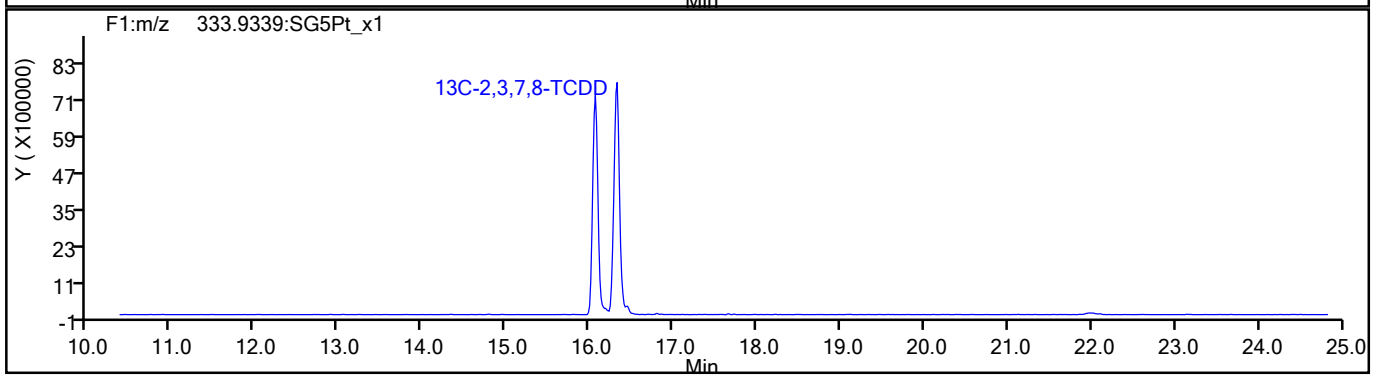

792576

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

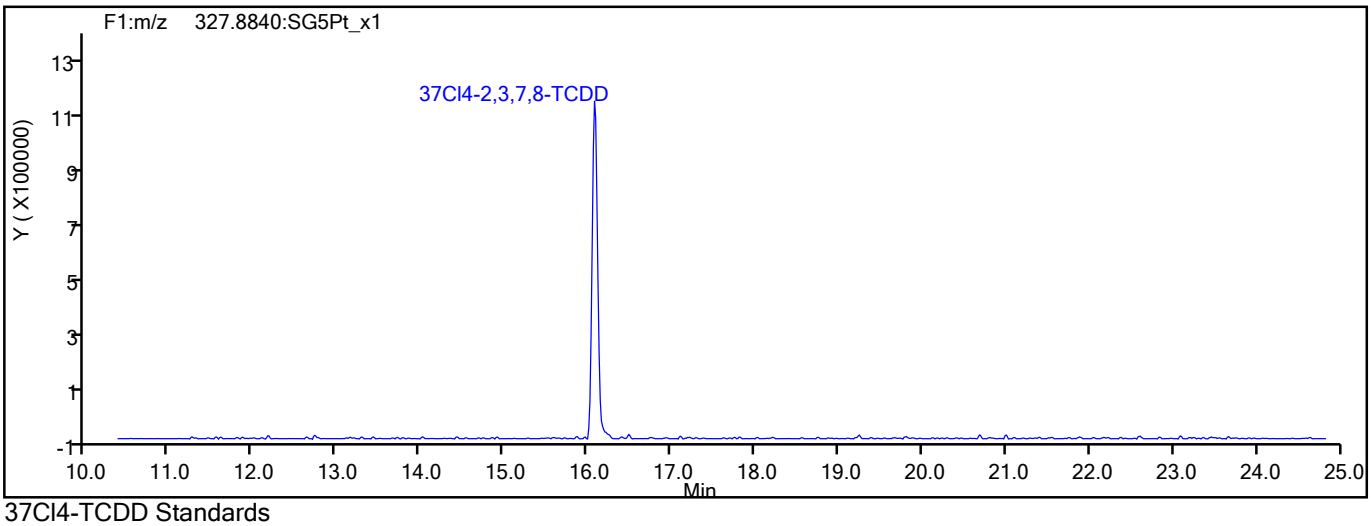

37Cl4-TCDD Standards

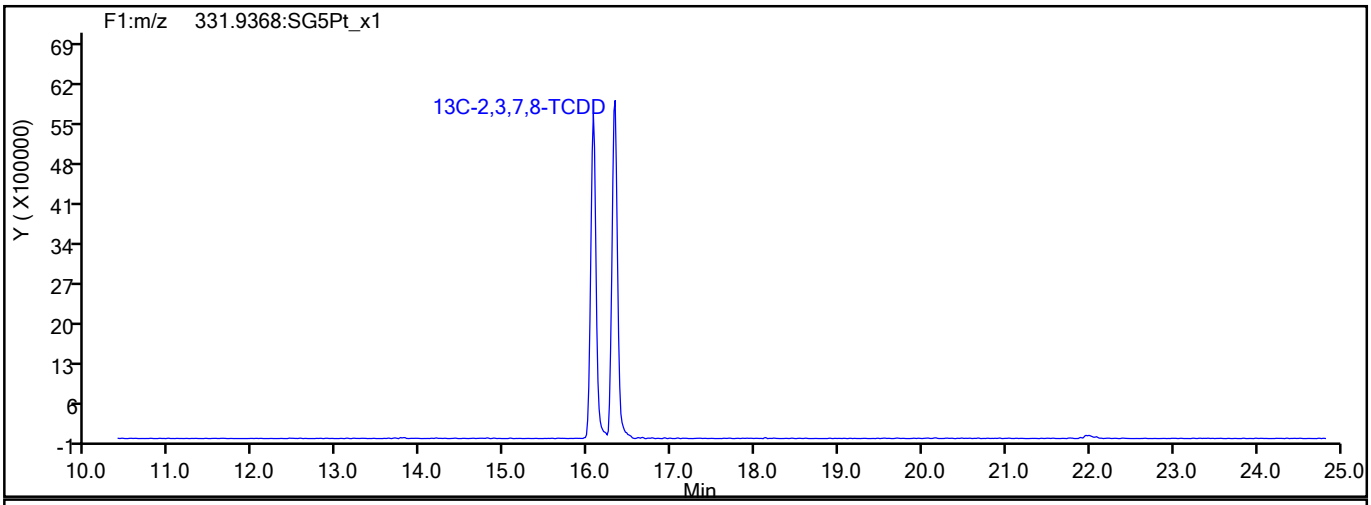

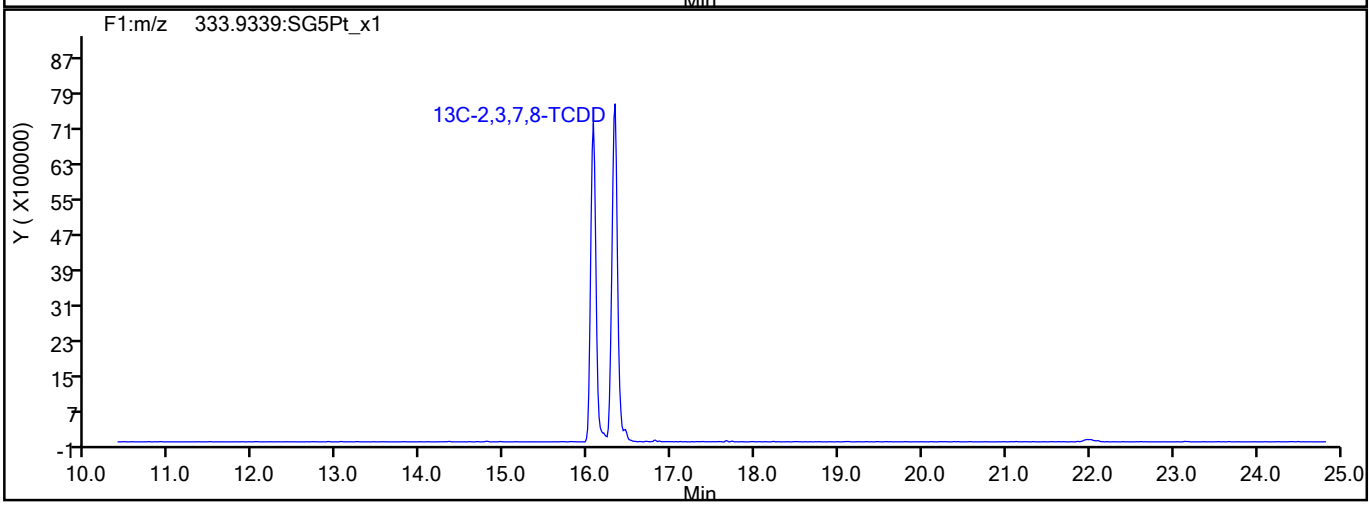

792577

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

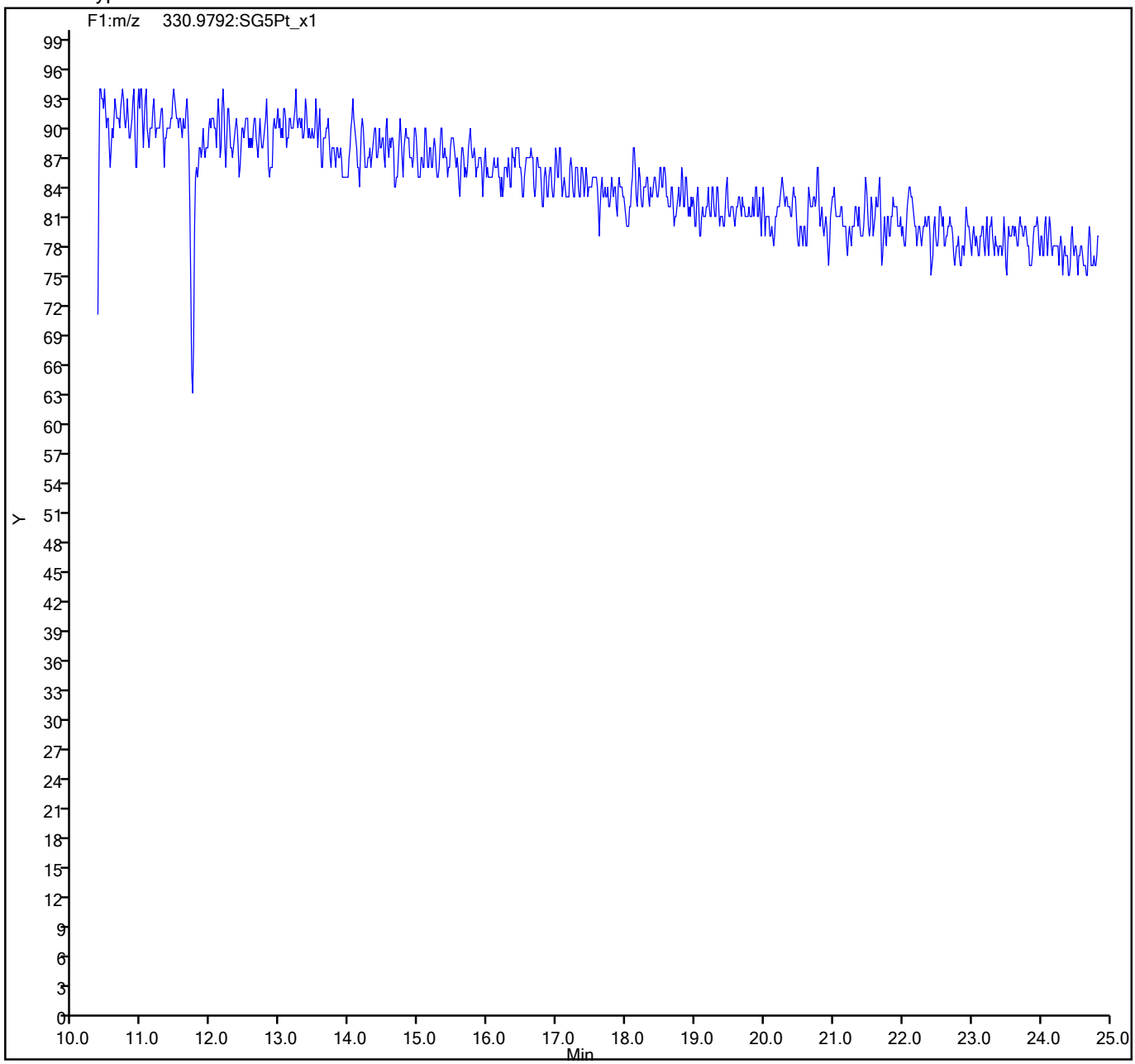

792578

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

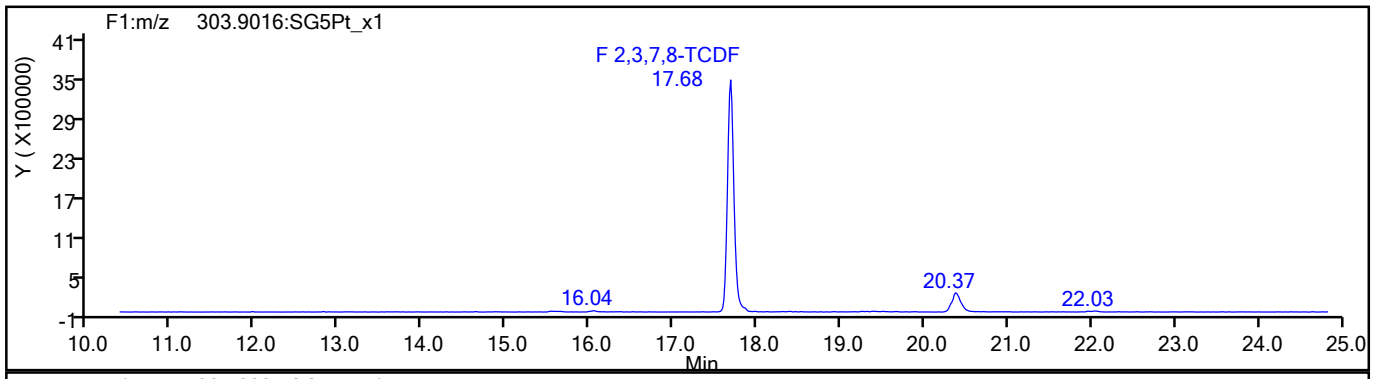

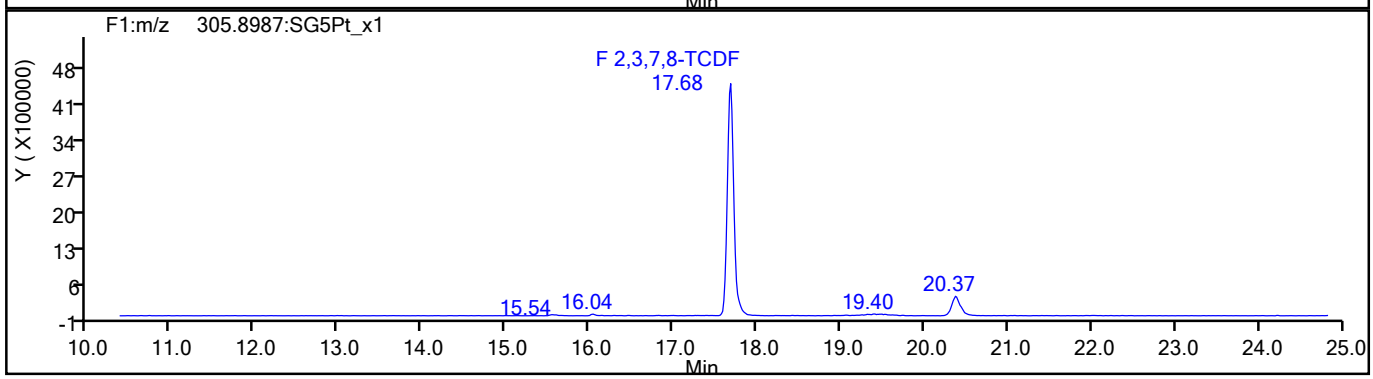

TCDF Standards

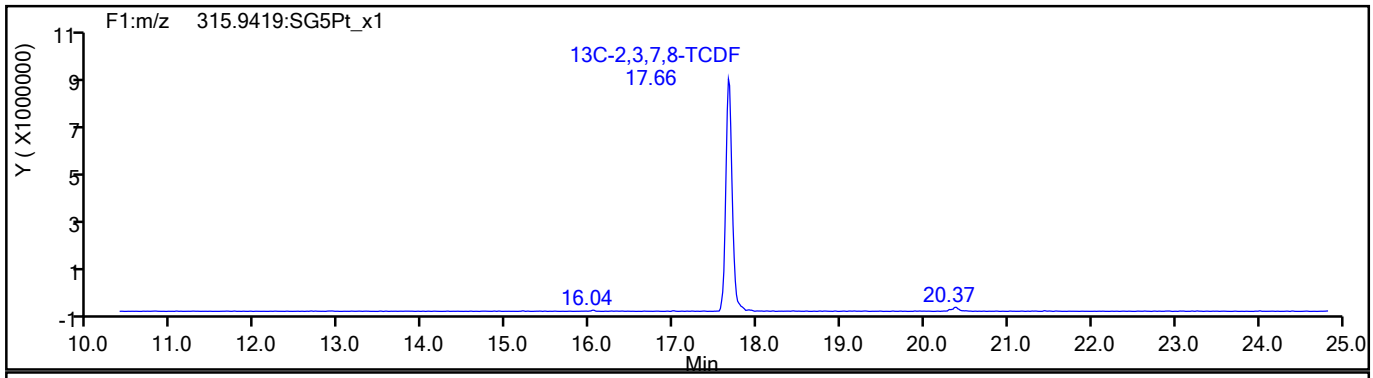

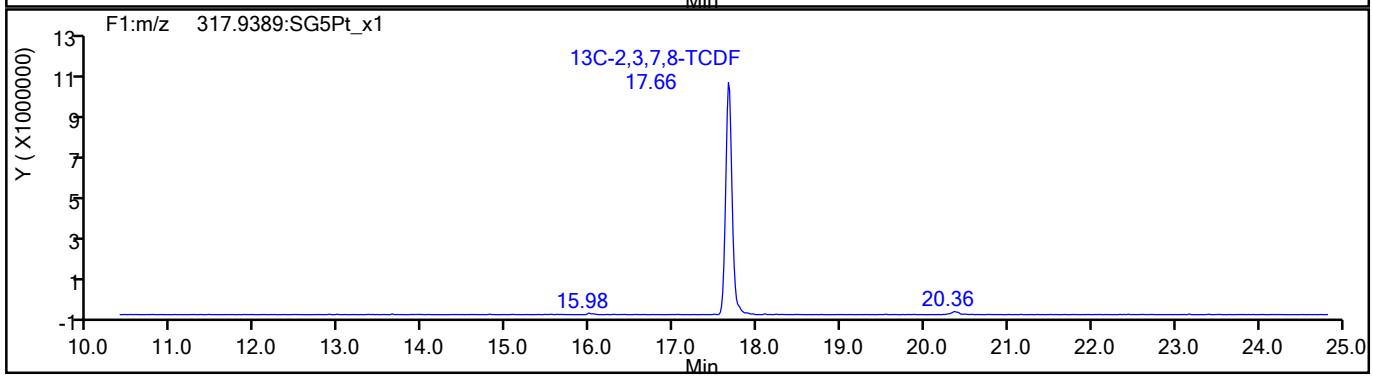

792581

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

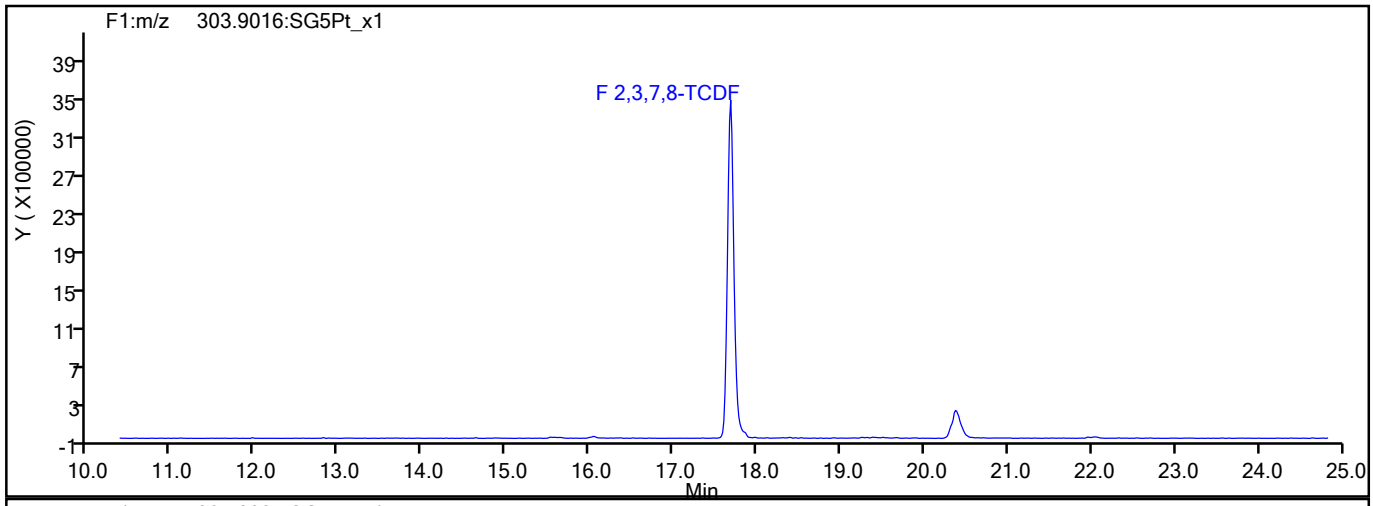

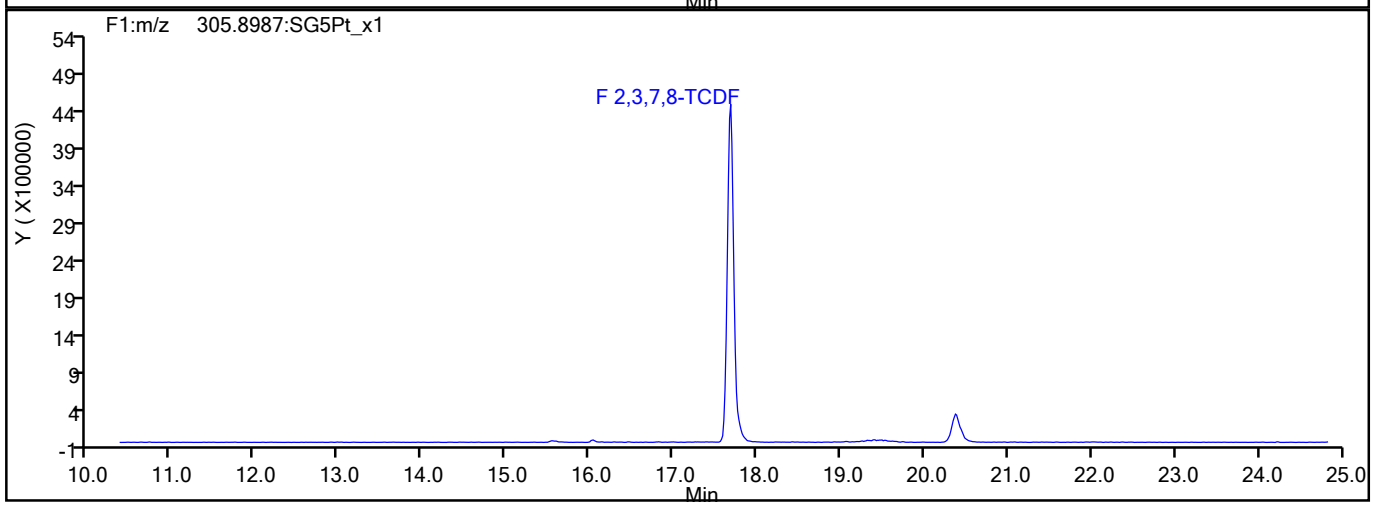

TCDF Interference Mass

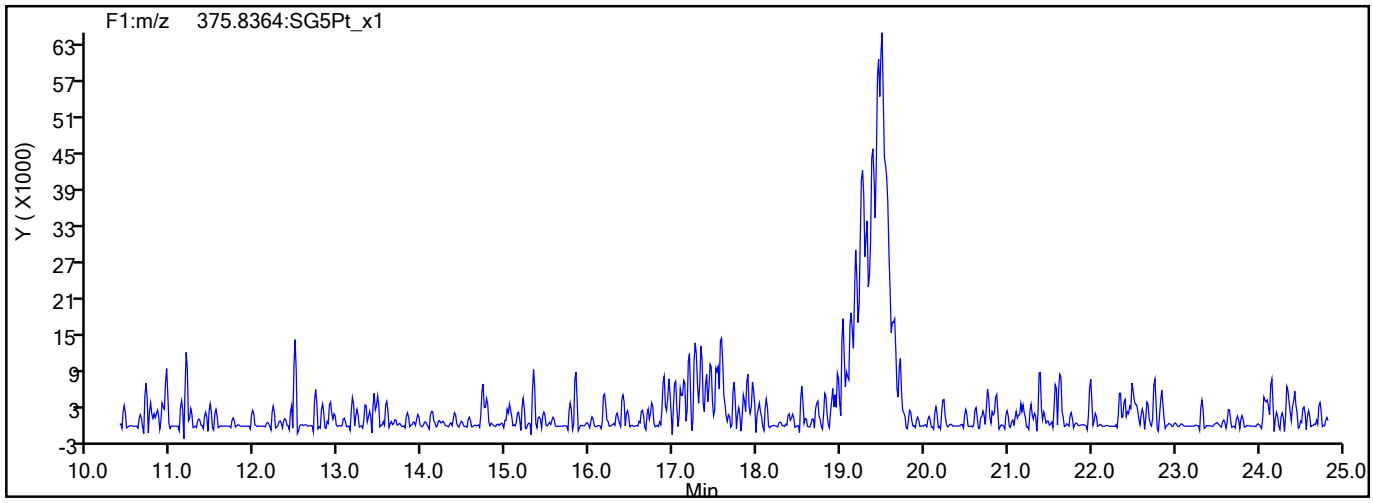

792582

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

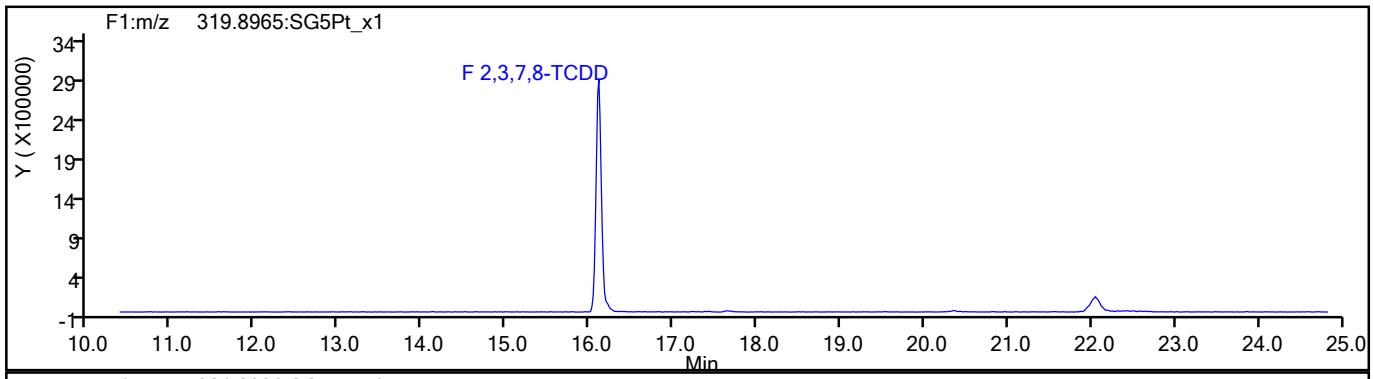

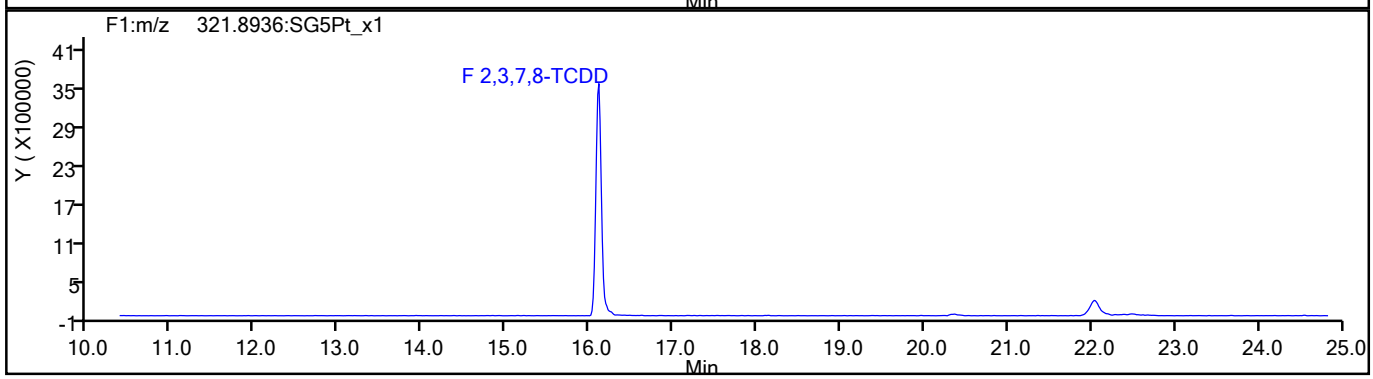

TCDD Standards

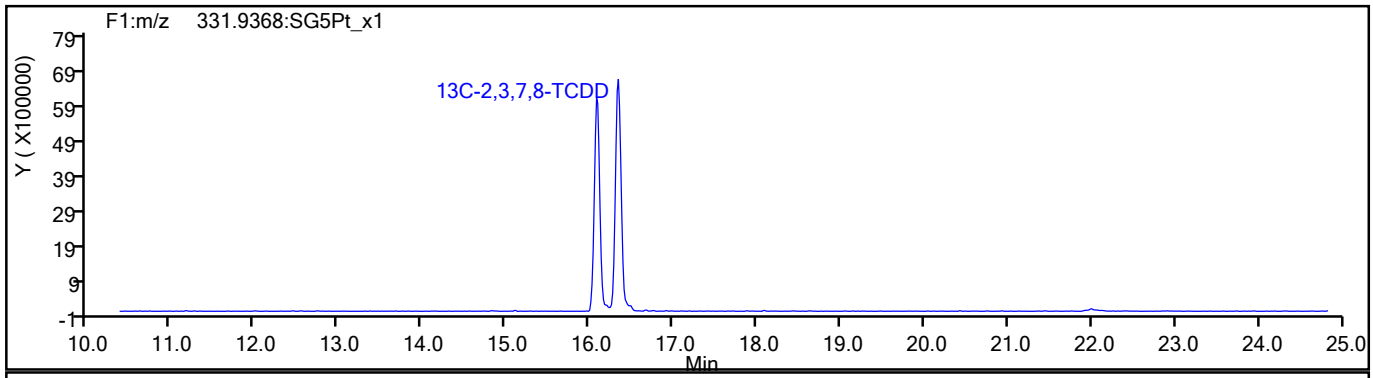

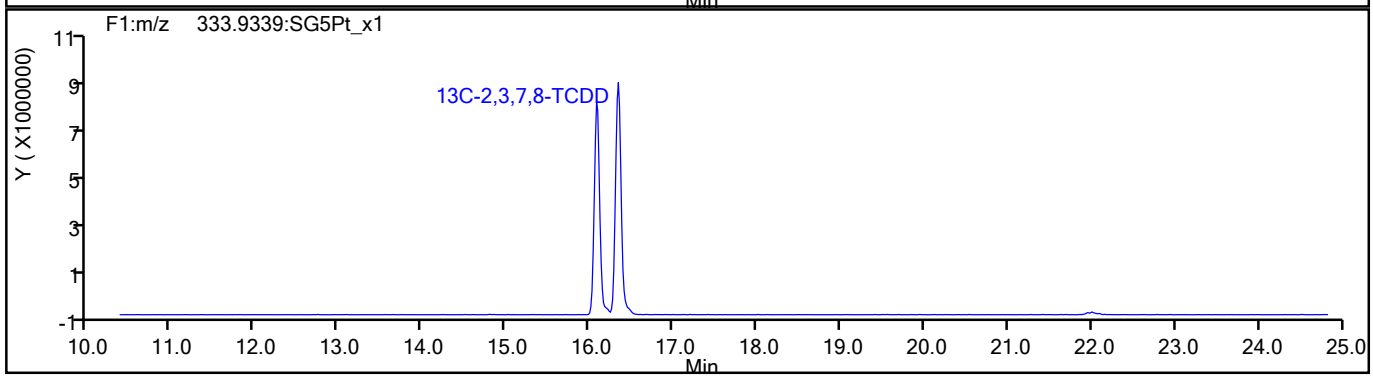

792583

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

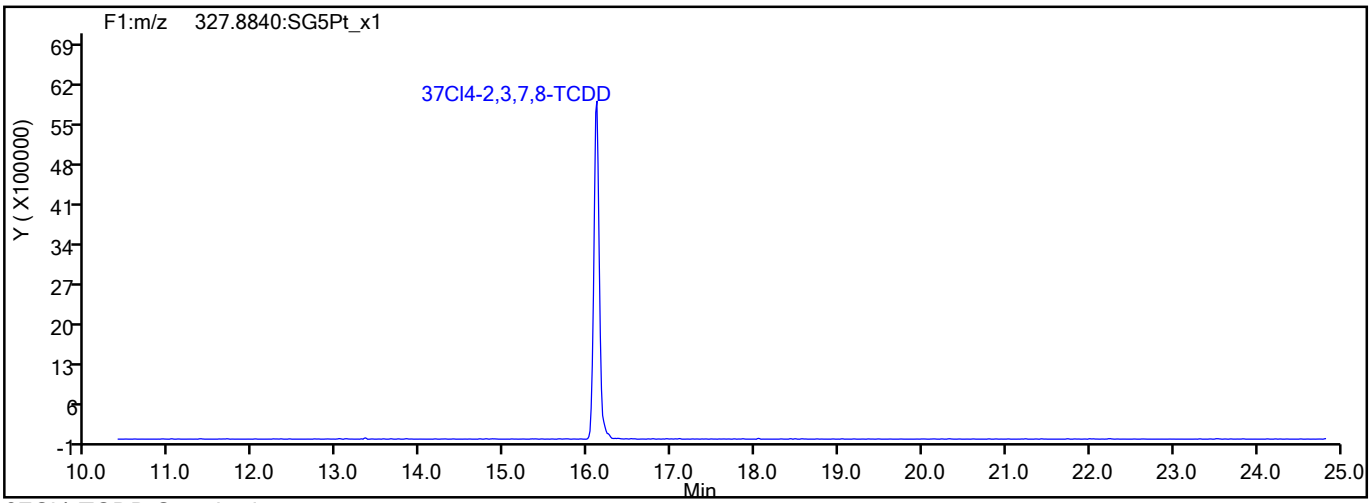

37Cl4-TCDD Standards

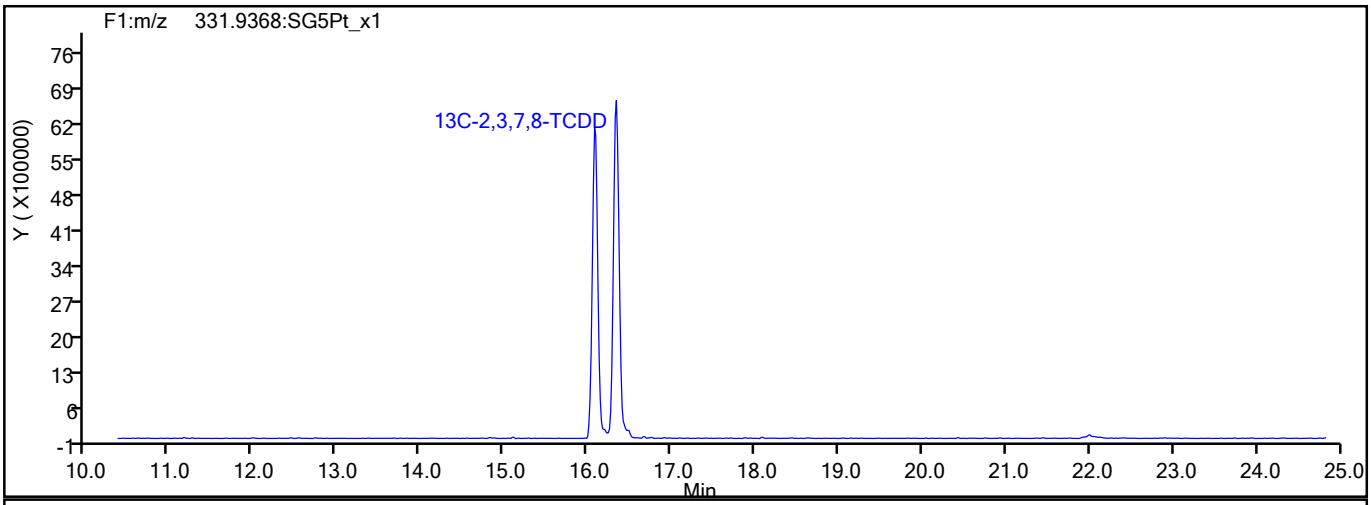

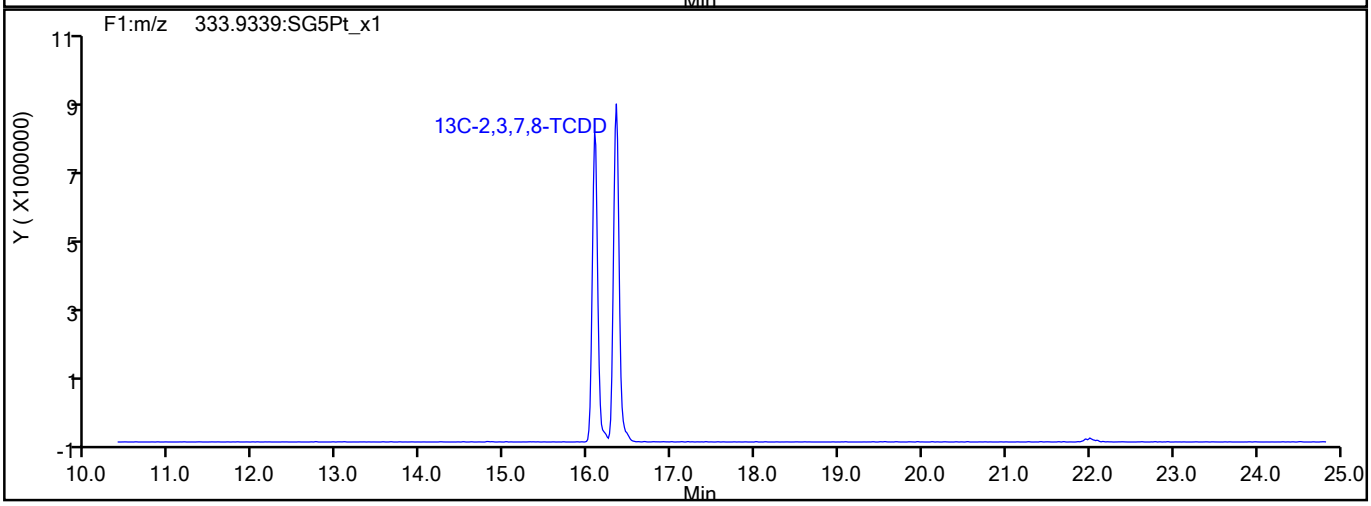

792584

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

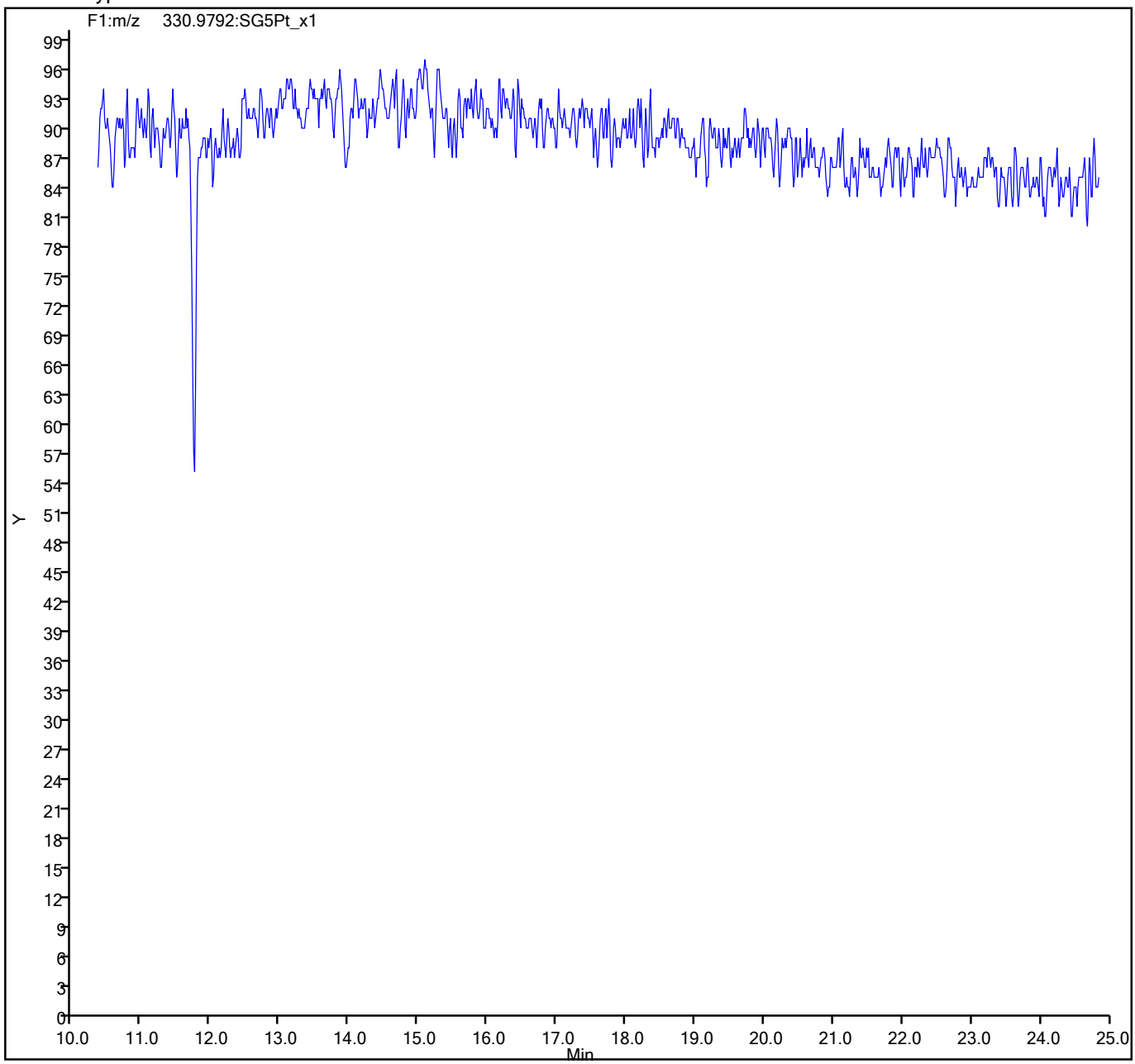

792585

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

792586

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

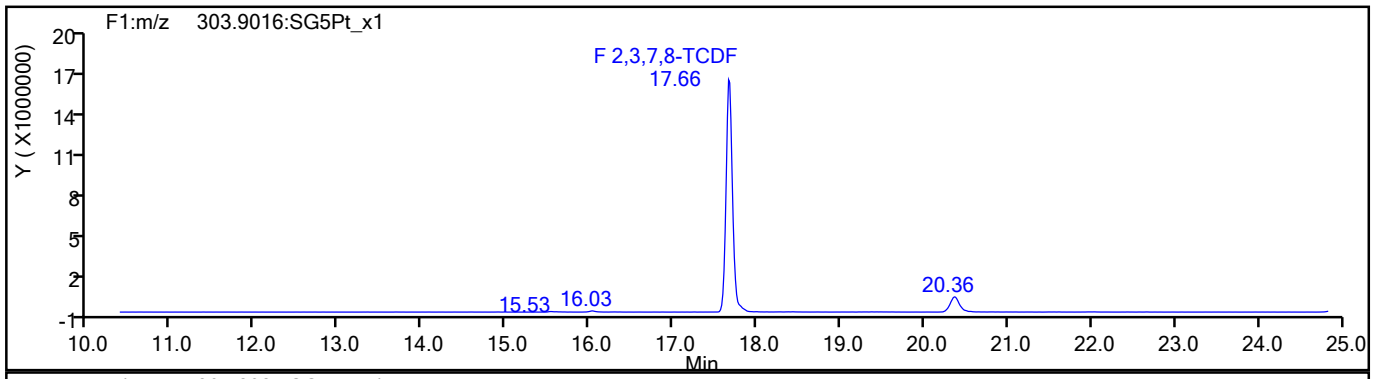

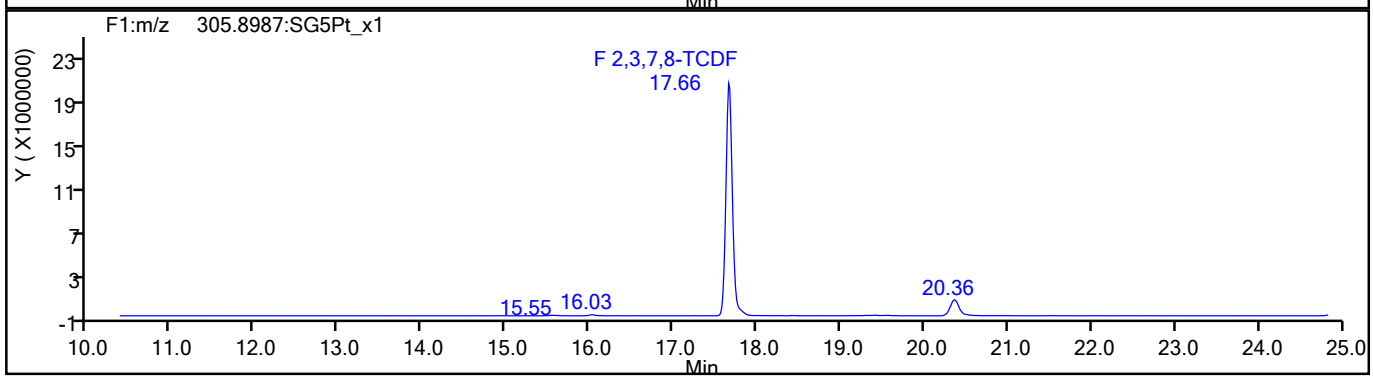

TCDF Standards

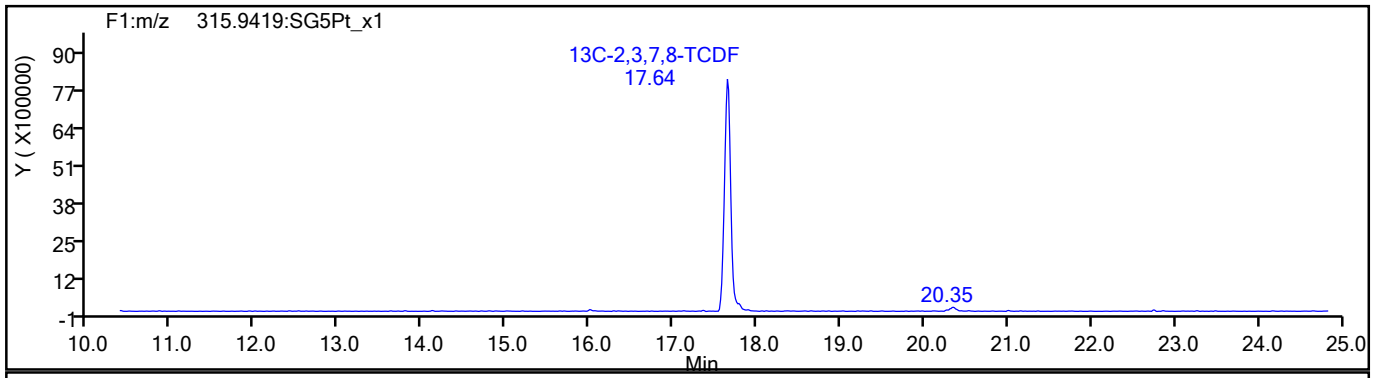

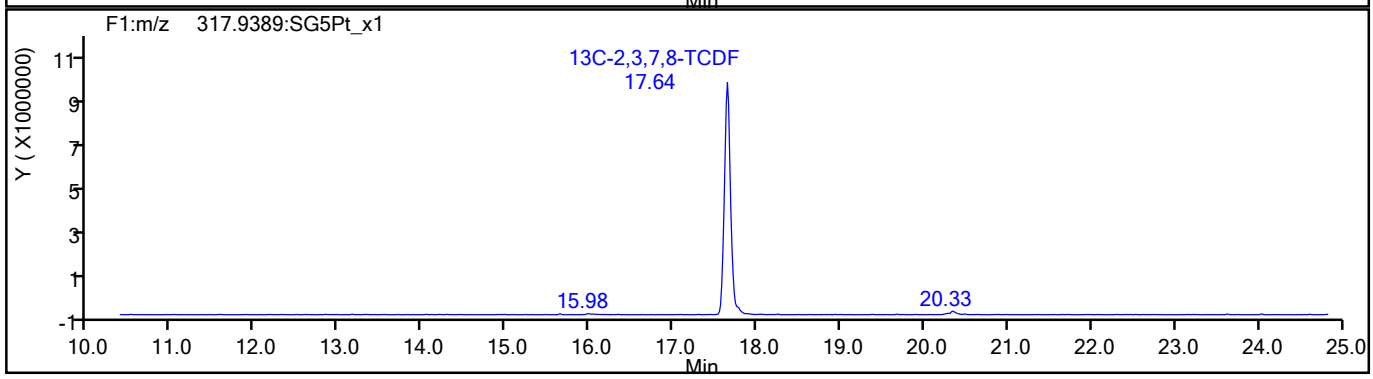

792588

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

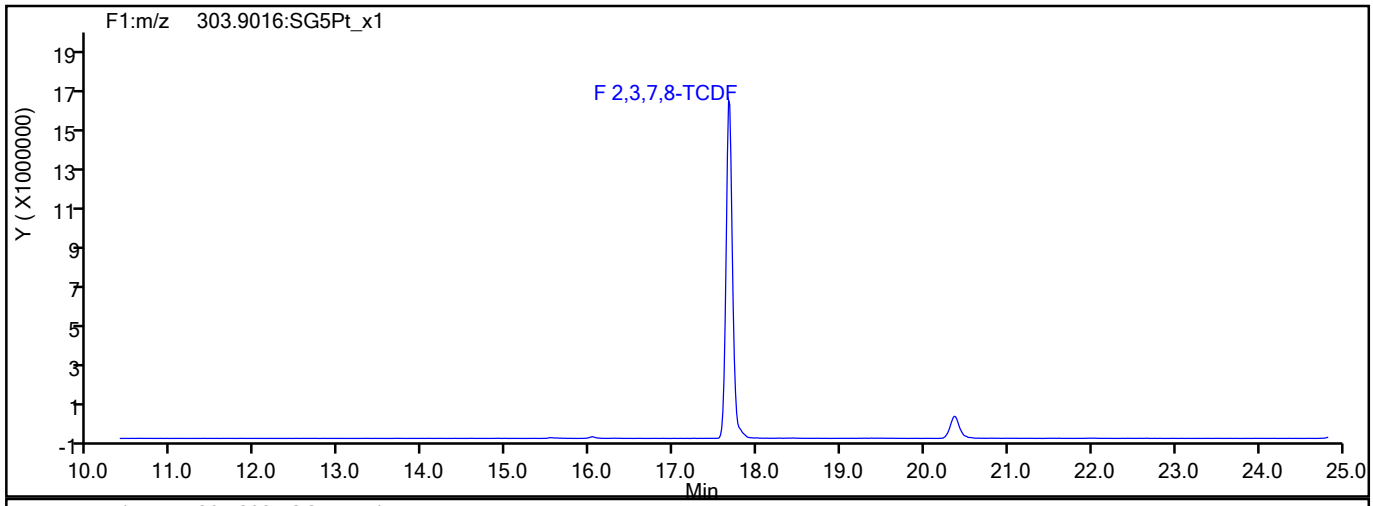

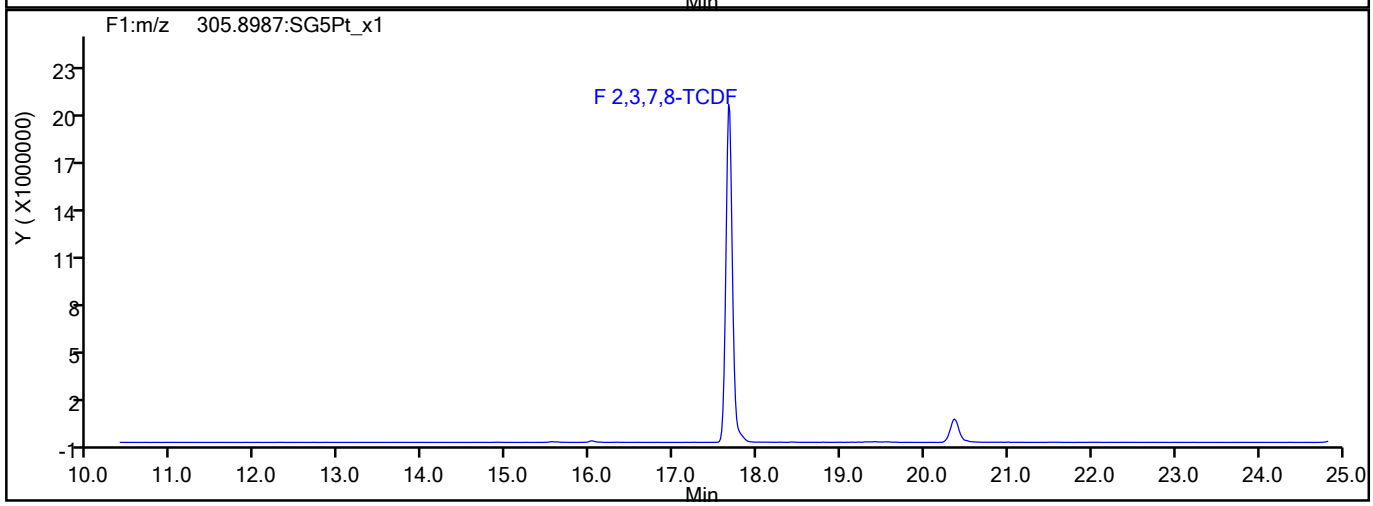

TCDF Interference Mass

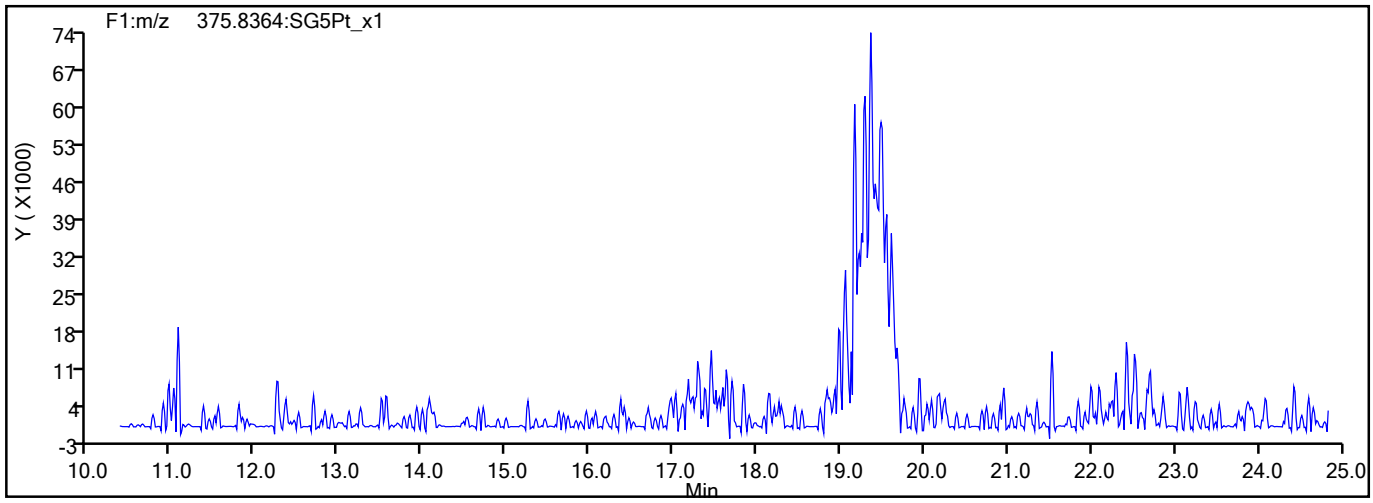

792589

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

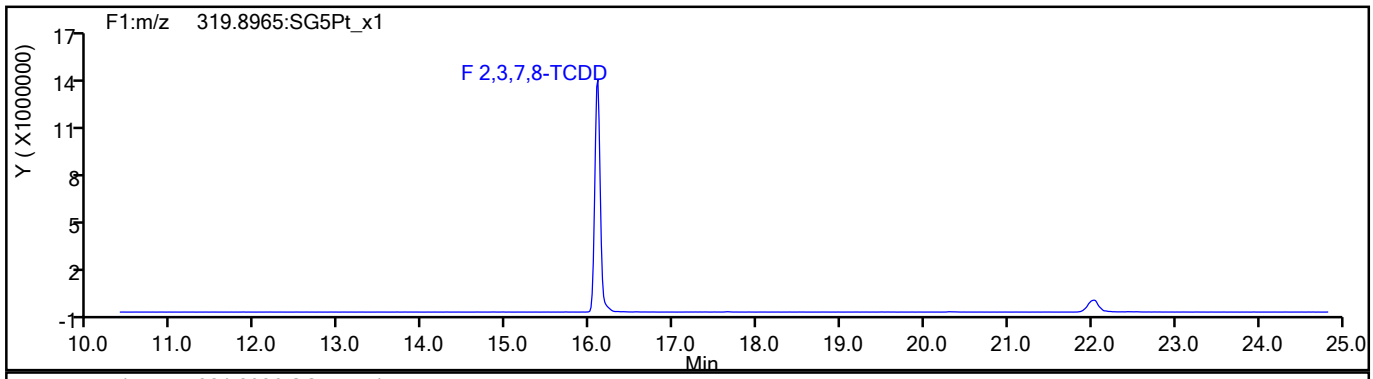

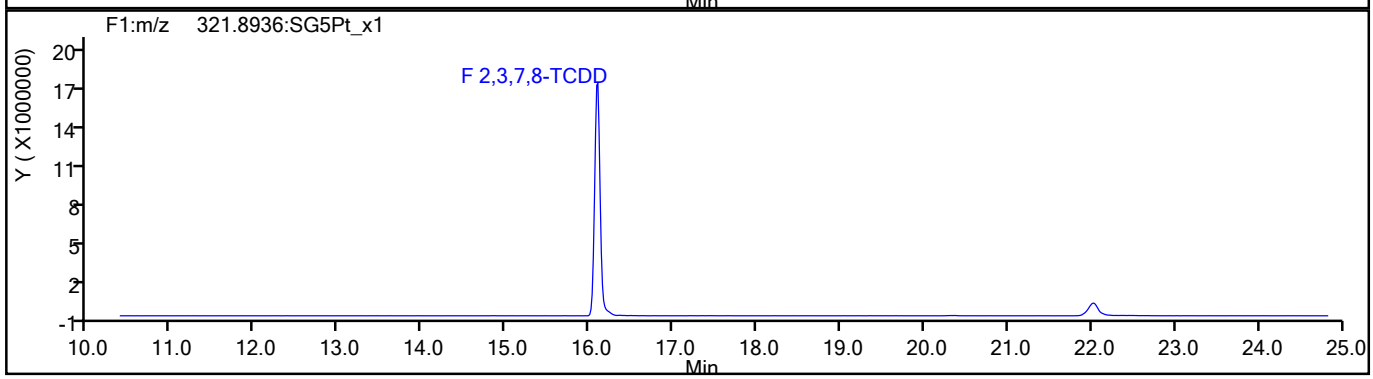

TCDD Standards

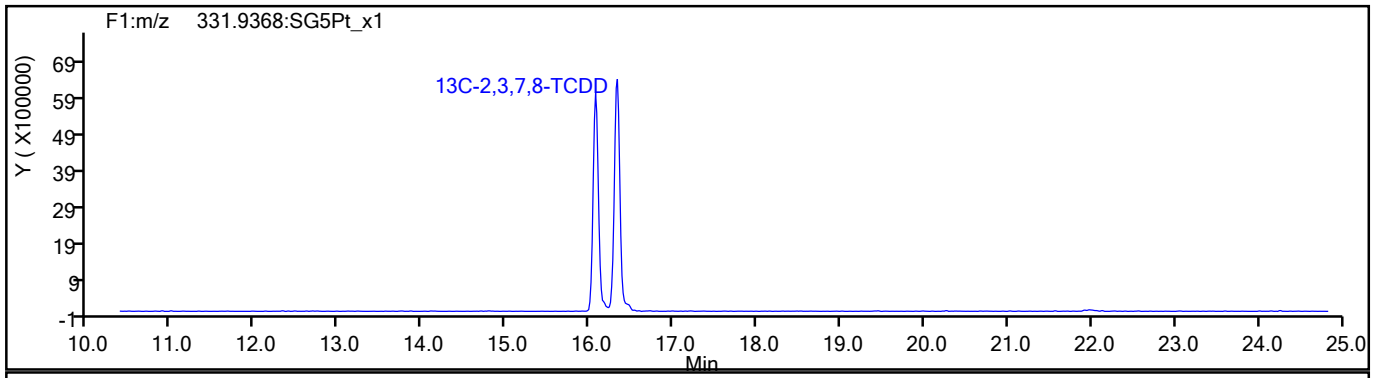

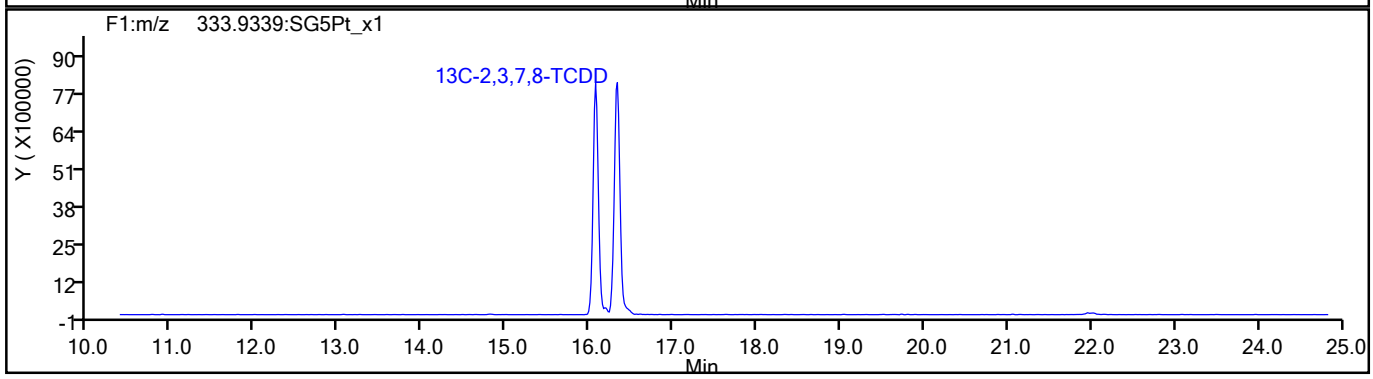

792590

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

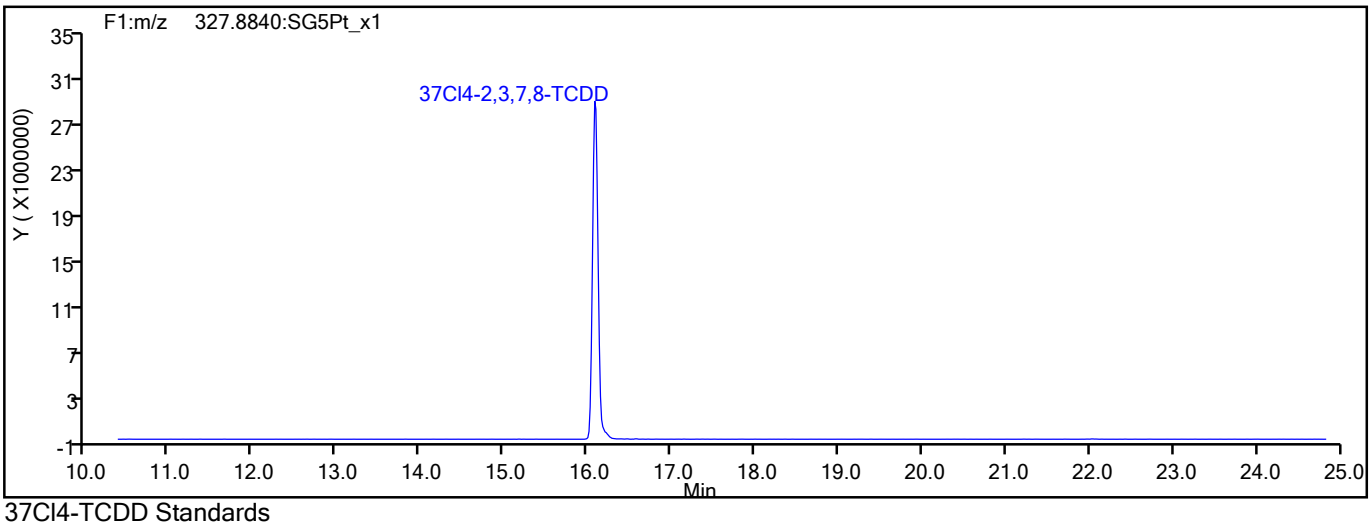

37Cl4-TCDD Standards

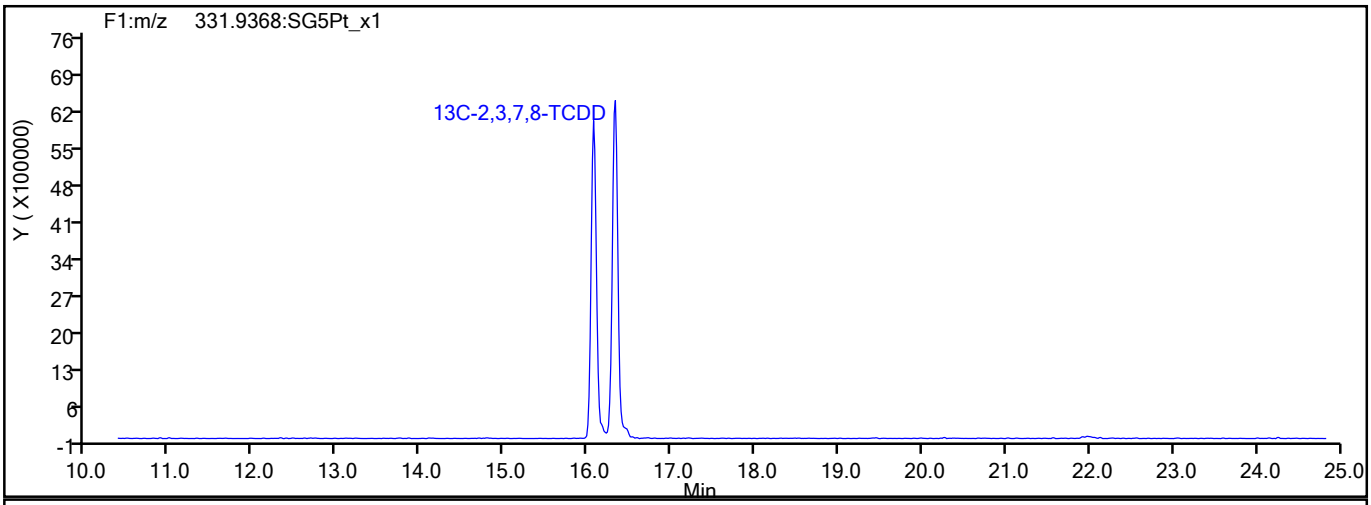

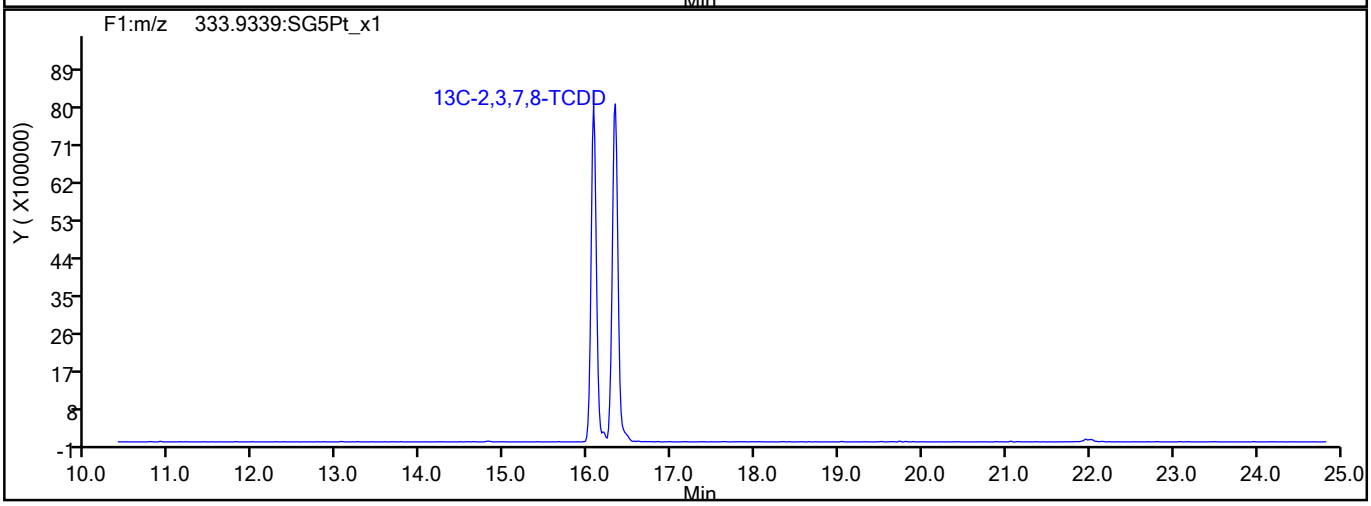

792591

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

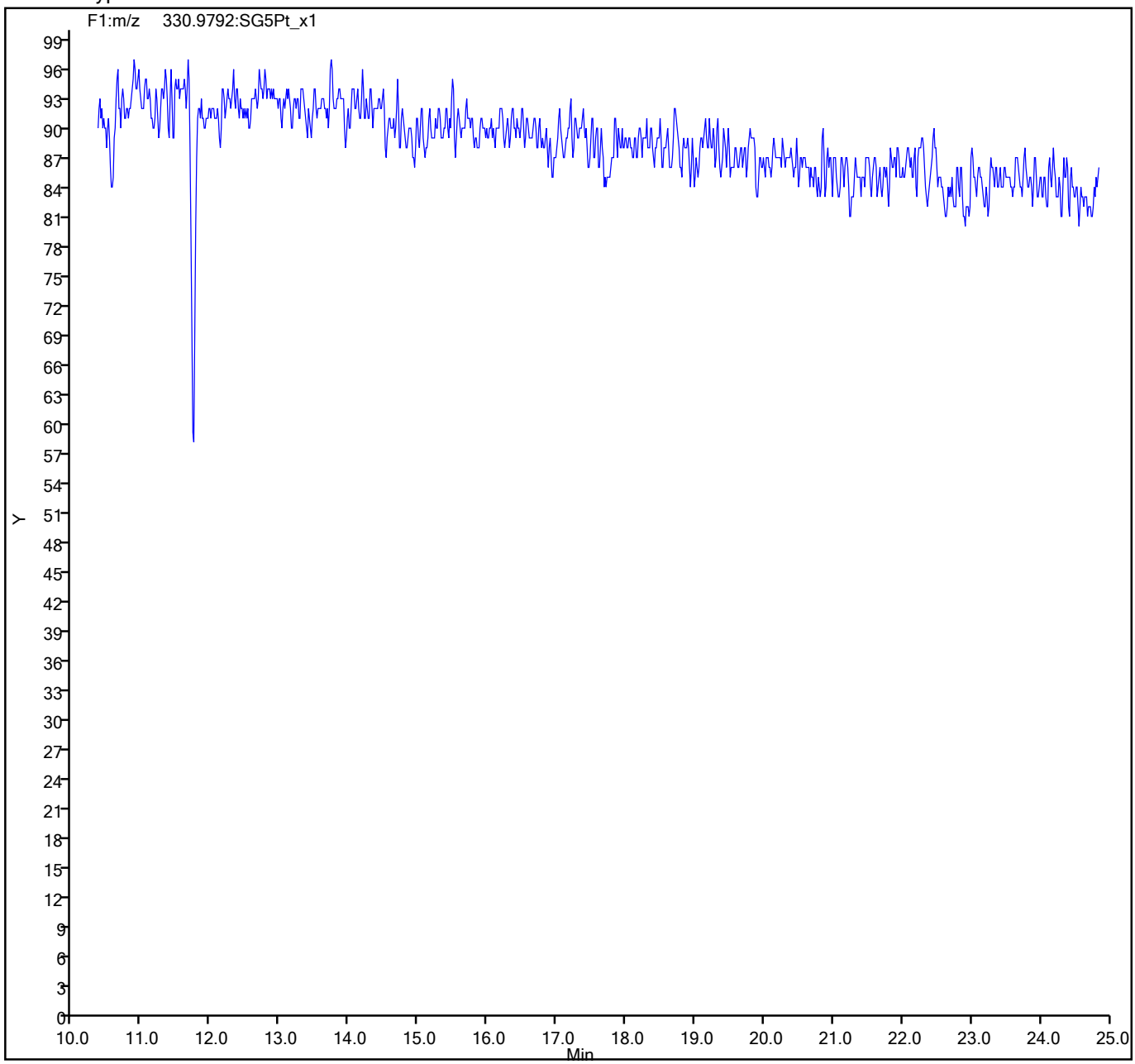

792592

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

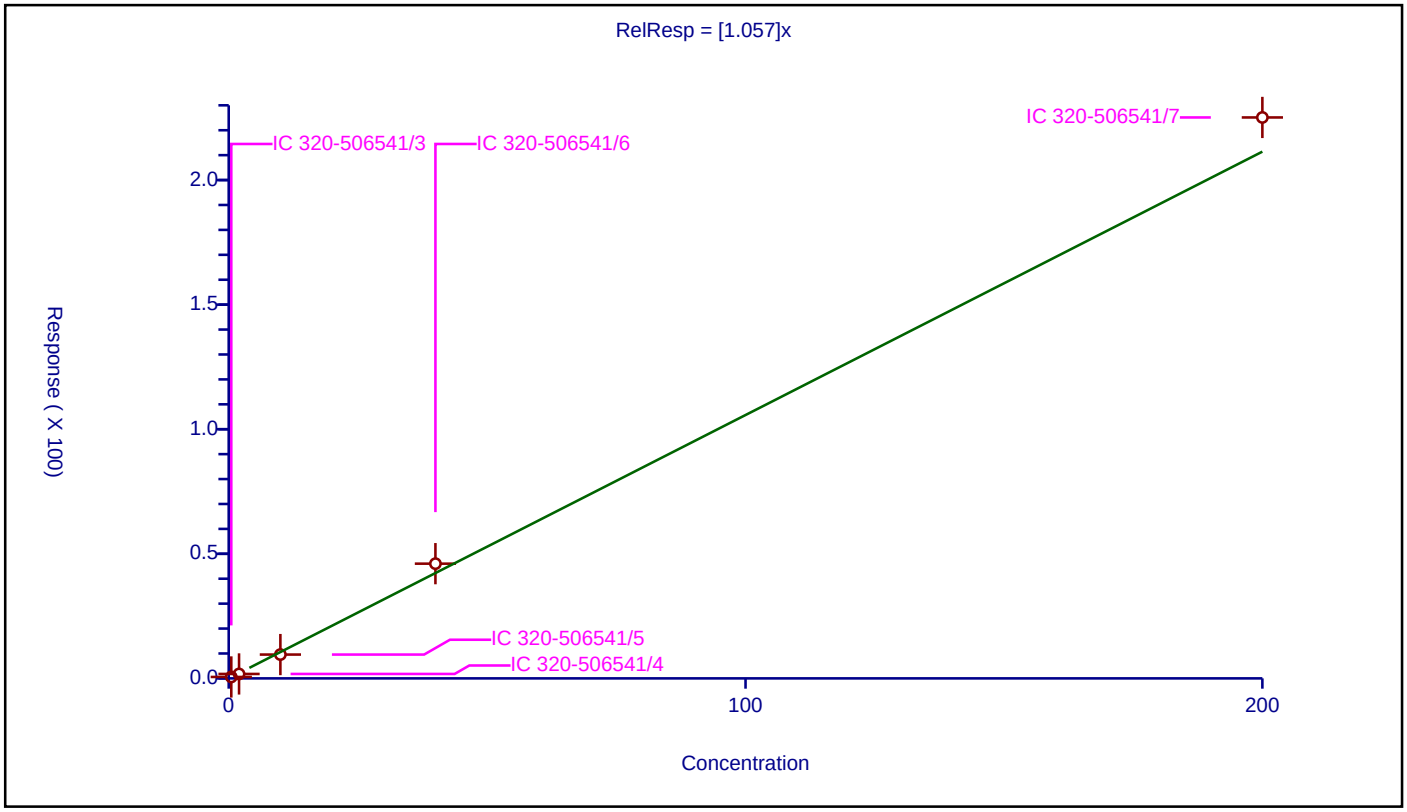

792593

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

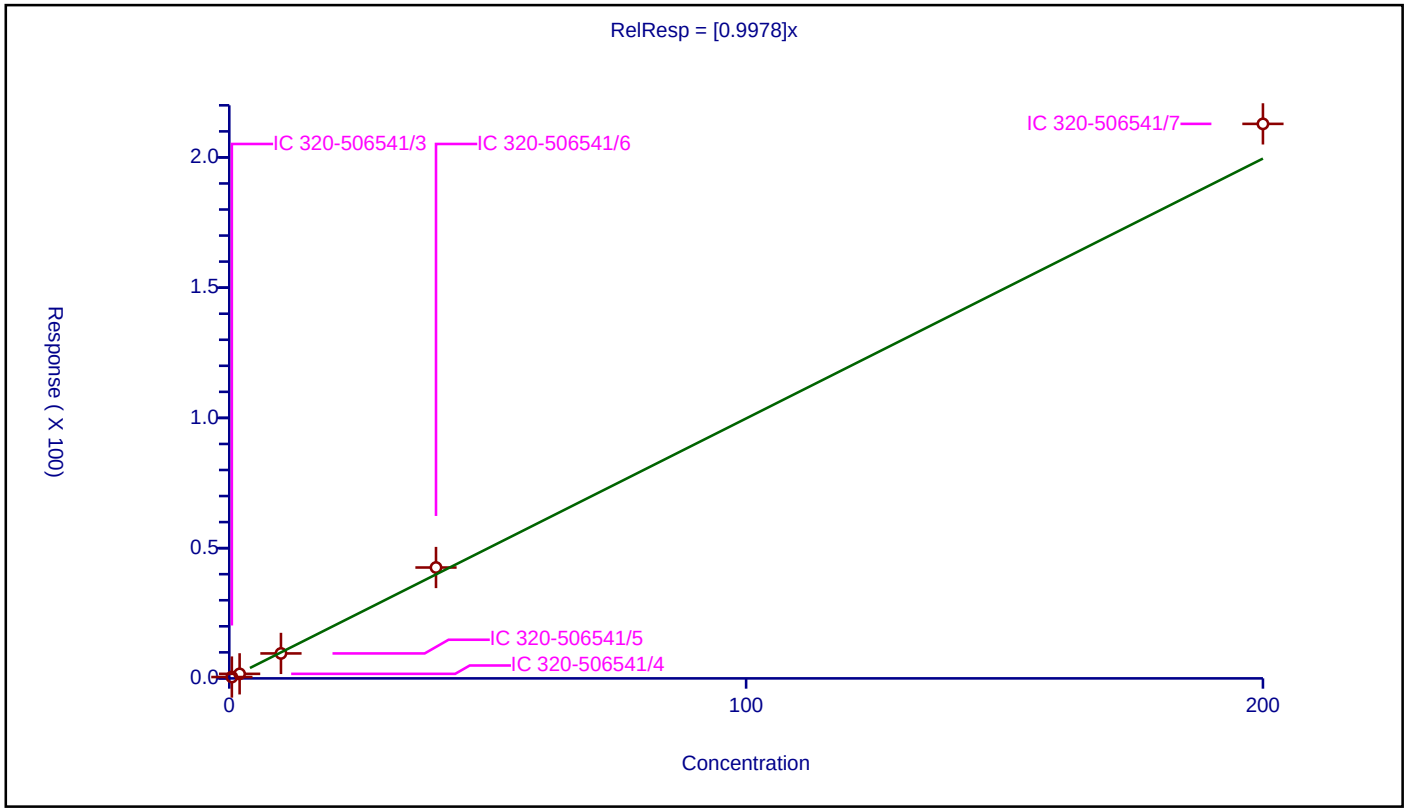

792594

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

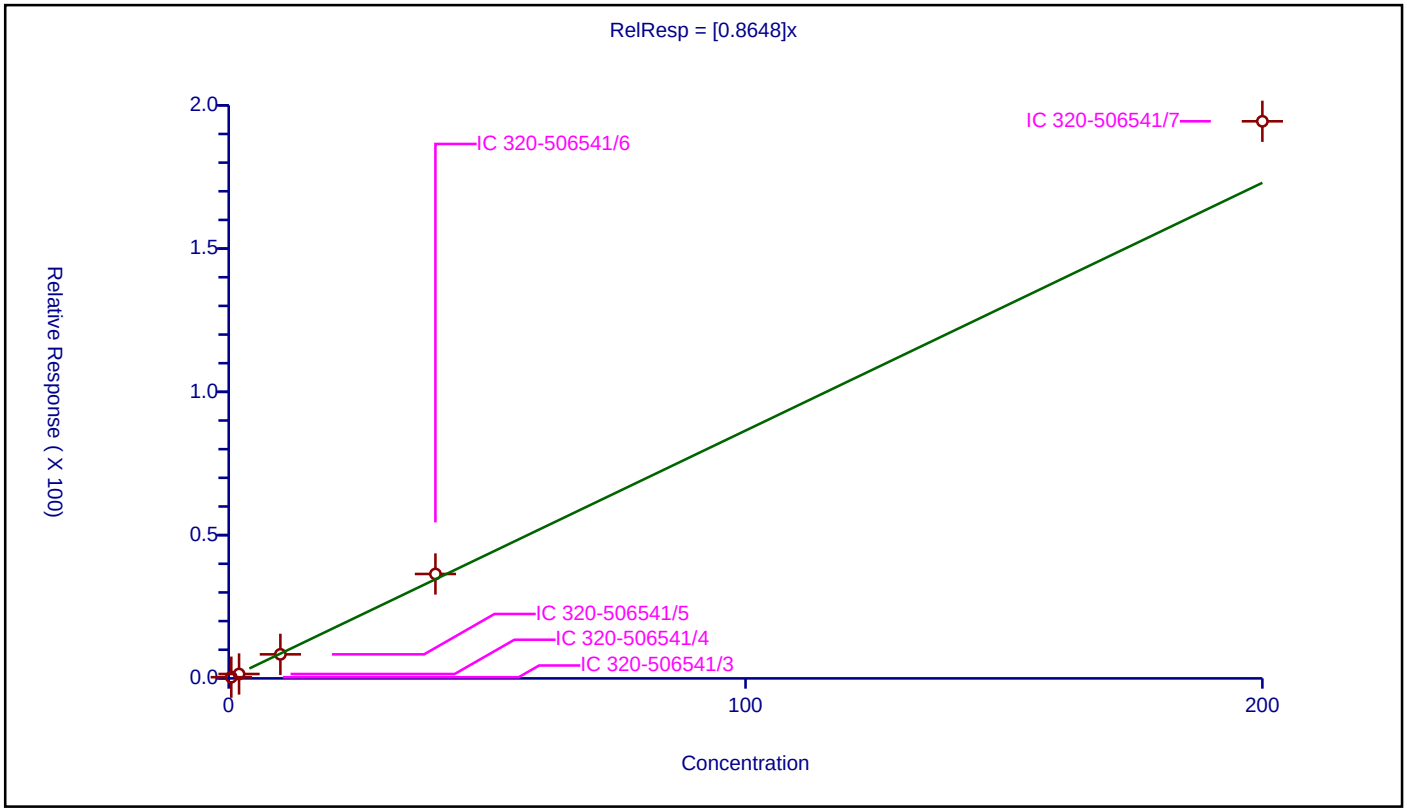

792595

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

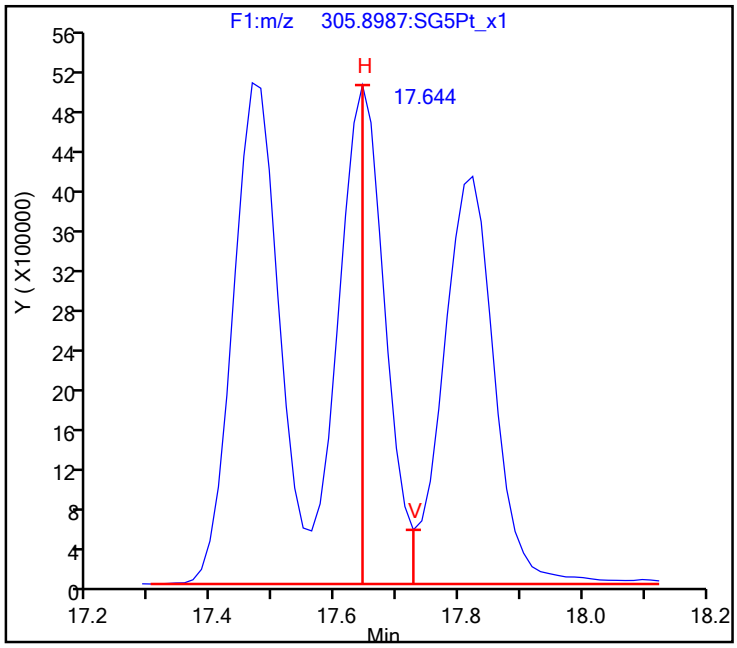

792597

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab Sample ID (1): WDM 320-510264/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 07/26/2021 09:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.34	18

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d				
Injection Date:	26-Jul-2021 09:21:58	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 725696
H (Peak Height) = 4136533

%R = 18 <= 25
Passed

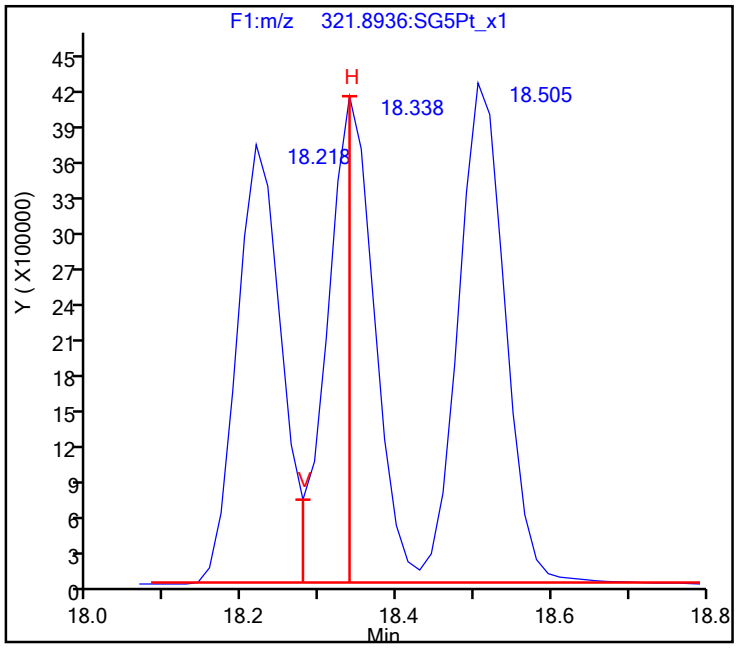

792599

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab Sample ID (1): WDM 320-519953/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 09:38

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	17.81	17

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d				
Injection Date:	25-Aug-2021 09:38:15	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 977605
H (Peak Height) = 5811153

%R = 17 <= 25
Passed

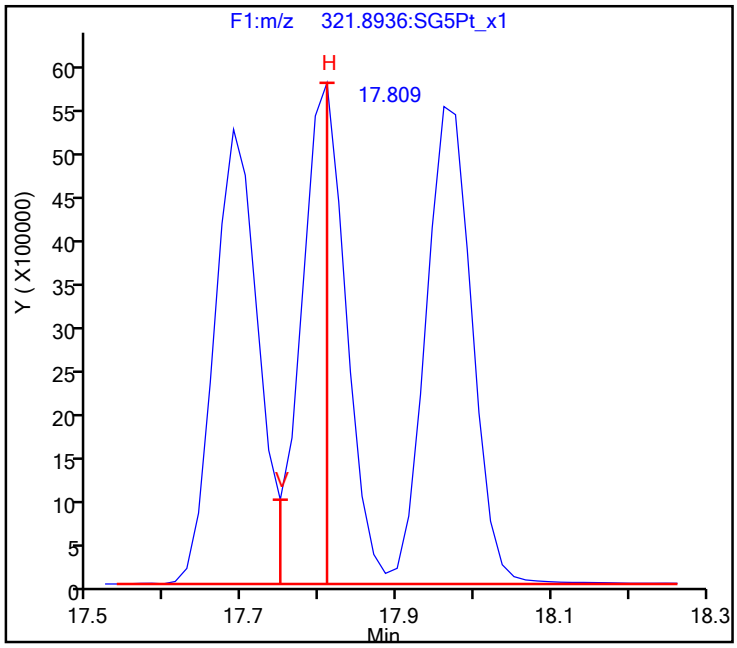

792601

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab Sample ID (1): WDM 320-519955/2 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 21:35

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	17.79	17

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d				
Injection Date:	25-Aug-2021 21:35:49	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	2
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1298157
H (Peak Height) = 7642383

%R = 17 <= 25
Passed

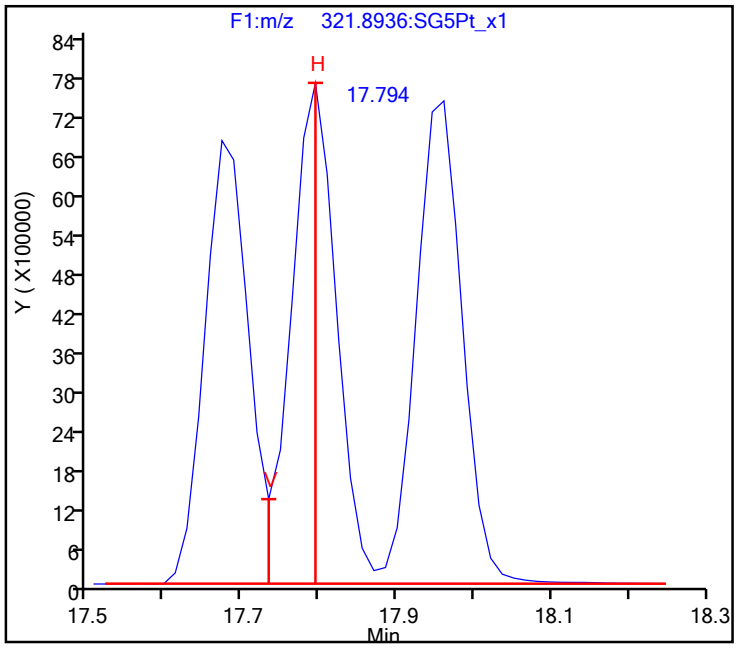

792603

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab Sample ID (1): CPS 320-520456/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/27/2021 15:38

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	12

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d				
Injection Date:	27-Aug-2021 15:38:16	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 527494
H (Peak Height) = 4488549

%R = 12 <= 25
Passed

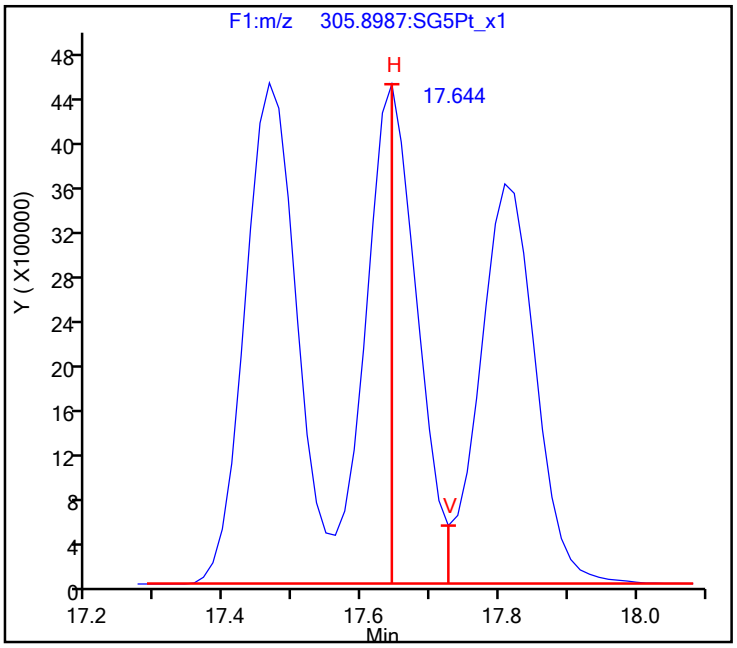

792605

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab Sample ID (1): CPS 320-520997/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/31/2021 13:13

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	10

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d				
Injection Date:	31-Aug-2021 13:13:23	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 264074
H (Peak Height) = 2622042

%R = 10 <= 25
Passed

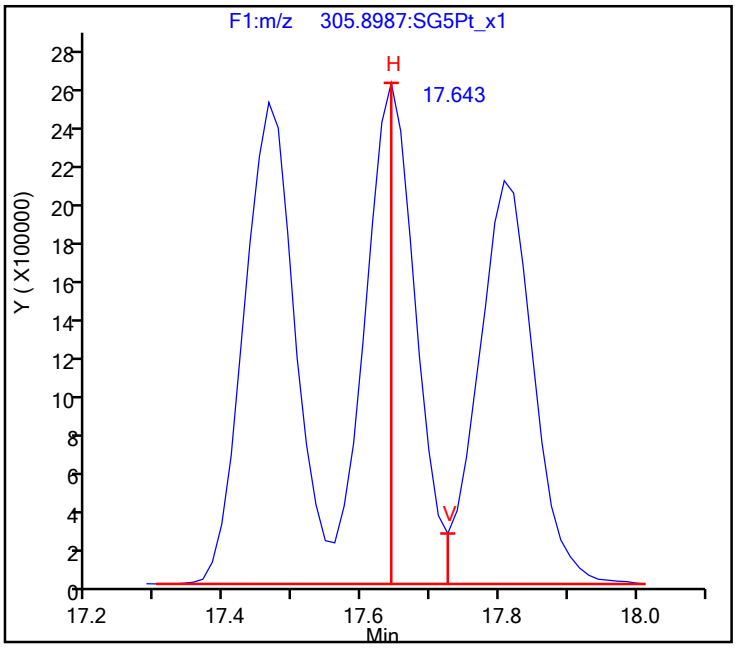

792607

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d				
Injection Date:	31-Aug-2021 13:13:23	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab Sample ID: ICV 320-510264/9 Calibration Date: 07/26/2021 15:31

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 26JL2110D5_9.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.105		43.2	40.0	108	70-130
2,3,7,8-TCDD	AveID	1.254	1.380		44.0	40.0	110	70-130
1,2,3,7,8-PeCDF	AveID	1.061	1.081		204	200	102	70-130
2,3,4,7,8-PeCDF	AveID	1.018	1.151		226	200	113	70-130
1,2,3,7,8-PeCDD	AveID	1.048	1.044		199	200	100	70-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.128		208	200	104	70-130
1,2,3,6,7,8-HxCDF	AveID	1.126	1.227		218	200	109	70-130
2,3,4,6,7,8-HxCDF	AveID	1.168	1.283		220	200	110	70-130
1,2,3,4,7,8-HxCDD	AveID	1.064	1.151		216	200	108	70-130
1,2,3,6,7,8-HxCDD	AveID	1.000	1.082		216	200	108	70-130
1,2,3,7,8,9-HxCDD	AveID	1.133	1.182		209	200	104	70-130
1,2,3,7,8,9-HxCDF	AveID	1.166	1.200		206	200	103	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.576		219	200	109	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.167		213	200	107	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.373		209	200	104	70-130
OCDD	AveID	1.107	1.211		438	400	109	70-130
OCDF	AveID	1.438	1.574		438	400	109	70-130
13C-2,3,7,8-TCDF	Ave	1.625	1.611		99.2	100	99	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9123		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.236		102	100	102	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.300		105	100	105	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7764		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.089		101	100	101	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.093		96.9	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.036		97.4	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7216		98.4	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8697		98.8	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9447		97.6	100	98	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7492		96.9	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6354		98.2	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7065		101	100	101	77-129
13C-OCDD	Ave	0.4472	0.4464		200	200	100	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.177		42.5	40.0	106	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	55225241	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.598	88976883	0.79	1.6249	99.2	99.2	0.1479	0.1479	99.15	
2,3,7,8-TCDF	17.613	39324874	0.78	1.0239	43.2	43.2	0.0666	0.0666	108	
A Non-2,3,7,8-sub-TCDF	17.311	524958	0.77	1.0239	0.6411	0.5762	0.0666	0.3057		RQ
S Total TCDF					43.8	43.7	0.0666	0.0666		RQ
D 13C-2,3,7,8-TCDD	18.323	50383801	0.80	0.8993	101.4	101.4	0.1314	0.1314	101	
2,3,7,8-TCDD	18.338	27801852	0.78	1.2541	44.0	44.0	0.0443	0.0443	110	
$ 37Cl4-2,3,7,8-TCDD	18.338	26006351		1.1071	42.5	42.5	0.0388	0.0388	106	
A Non-2,3,7,8-sub-TCDD	17.772	551726	0.77	1.2541	0.8732	0.8732	0.0443	0.8732		
S Total TCDD					44.9	44.9	0.0443	0.0443		
D 13C-1,2,3,7,8-PeCDF	22.749	68252478	1.57	1.2101	102.1	102.1	0.2097	0.2097	102	
1,2,3,7,8-PeCDF	22.762	147560573	1.57	1.0611	203.7	203.7	0.7454	0.7454	102	
D 13C-2,3,4,7,8-PeCDF	24.126	71797373	1.60	1.2395	104.9	104.9	0.2047	0.2047	105	
2,3,4,7,8-PeCDF	24.153	165293469	1.59	1.0184	226.1	226.1	0.7930	0.7930	113	
A F1 PeCDFs	20.244						0.0162	0.0162		
A Non-2,3,7,8-sub-PeCDF	23.473	3443801	1.55	1.0398	4.730	4.730	0.7686	4.730		
S Total PeCDF					434.5	434.5	0.7692	0.7692		
D 13C-1,2,3,7,8-PeCDD	24.862	42878117	1.62	0.7612	102.0	102.0	0.1090	0.1090	102	
1,2,3,7,8-PeCDD	24.889	89555111	1.58	1.0484	199.2	199.2	0.2271	0.2271	99.61	
A Non-2,3,7,8-sub-PeCDD	23.744						0.2271	0.2271		
S Total PeCDD					199.2	199.2	0.2271	0.2271		
D 13C-1,2,3,4,7,8-HxCDF	30.836	62488487	0.52	1.0837	100.5	100.5	0.4386	0.4386	101	
1,2,3,4,7,8-HxCDF	30.849	141029922	1.22	1.0851	208.0	208.0	1.073	1.073	104	
D 13C-1,2,3,6,7,8-HxCDF	30.995	62719524	0.52	1.1279	96.9	96.9	0.4214	0.4214	96.91	
1,2,3,6,7,8-HxCDF	31.008	153925065	1.22	1.1260	218.0	218.0	1.035	1.035	109	
D 13C-2,3,4,6,7,8-HxCDF	31.754	59440166	0.52	1.0637	97.4	97.4	0.4468	0.4468	97.39	
2,3,4,6,7,8-HxCDF	31.767	152499923	1.22	1.1675	219.7	219.7	0.8510	0.8510	110	
D 13C-1,2,3,7,8,9-HxCDF	32.513	54205090	0.51	0.9676	97.6	97.6	0.4912	0.4912	97.64	
1,2,3,7,8,9-HxCDF	32.526	130040433	1.23	1.1664	205.7	205.7	0.8755	0.8755	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
A Non-2,3,7,8-sub-HxCDF	30.542						0.9509	0.9509		
S Total HxCDF					851.4	851.4	0.9587	0.9587		
* 13C-1,2,3,7,8,9-HxCDD	32.340	57376962	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	41405543	1.26	0.7334	98.4	98.4	0.3599	0.3599	98.39	
1,2,3,4,7,8-HxCDD	31.940	95311816	1.31	1.0640	216.3	216.3	0.7396	0.7396	108	
D 13C-1,2,3,6,7,8-HxCDD	32.020	49899921	1.25	0.8802	98.8	98.8	0.2999	0.2999	98.81	
1,2,3,6,7,8-HxCDD	32.034	107959577	1.21	1.0001	216.3	216.3	0.7456	0.7456	108	
1,2,3,7,8,9-HxCDD	32.340	107964188	1.26	1.1325	208.8	208.8	0.6762	0.6762	104	
A Non-2,3,7,8-sub-HxCDD	31.215						0.7187	0.7187		
S Total HxCDD					641.5	641.5	0.7205	0.7205		
1,2,3,4,6,7,8-HpCDF	33.912	135529943	1.05	1.4413	218.8	218.8	2.088	2.088	109	
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	42985413	0.44	0.7730	96.9	96.9	0.9749	0.9749	96.91	
D 13C-1,2,3,4,7,8,9-HpCDF	35.006	40537577	0.44	0.7008	100.8	100.8	1.075	1.075	101	
1,2,3,4,7,8,9-HpCDF	35.018	111348980	1.06	1.3174	208.5	208.5	2.580	2.580	104	
A Non-2,3,7,8-sub-HpCDF	34.458						2.314	2.314		
S Total HpCDF					427.3	427.3	2.334	2.334		
D 13C-1,2,3,4,6,7,8-HpCDD	34.702	36455330	1.02	0.6472	98.2	98.2	0.5132	0.5132	98.17	
1,2,3,4,6,7,8-HpCDD	34.714	85115851	1.05	1.0943	213.4	213.4	1.044	1.044	107	
A Non-2,3,7,8-sub-HpCDD	33.504						1.044	1.044		
S Total HpCDD					213.4	213.4	1.044	1.044		
D 13C-OCDD	37.082	51228940	0.89	0.4472	199.7	199.7	0.2232	0.2232	99.84	
OCDF	37.189	161294219	0.91	1.4382	437.9	437.9	0.4409	0.4409	109	
OCDD	37.094	124067491	0.90	1.1070	437.5	437.5	0.5859	0.5859	109	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.127	18.142	-1		24811260	6334063	3297	8242	1921		
333.9339	18.127	18.142	-1		30413981	7612051	3296	8240	2309	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	0.971	39276583	9941961	7868	19670	1264		
317.9389	17.598	17.598	0	0.971	49700300	12596795	5536	13840	2275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.613	17.628	-1	1.001	17265923	4373947	2358	5895	1855		
305.8987	17.613	17.628	-1	1.001	22058951	5573170	3788	9470	1471	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.933	17.311	-23	0.962	161517	37808	2358	5895	16		
	Empc Correction				121157	34090	2358	5895	14		
305.8987	16.933	17.311	-23	0.962	157347	44274	3788	9470	12	1.03(0.65-0.89)	
303.9016	17.235	17.311	-5	0.979	125955	28258	2358	5895	12		
	Empc Correction				107214	28155	2358	5895	12		
305.8987	17.220	17.311	-5	0.979	139240	36566	3788	9470	10	0.90(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.011	22418240	5434734	3297	8242	1648		
333.9339	18.323	18.323	0	1.011	27965561	6697610	3296	8240	2032	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.338	0	1.001	12170563	2933733	1303	3257	2252		
321.8936	18.338	18.338	0	1.001	15631289	3775919	1394	3485	2709	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.012	26006351	6295077	2398	5995	2625		

792612

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											
319.8965	18.233	17.772	28	0.995	239239	60004	1303	3257	46		
321.8936	18.233	17.772	28	0.995	312487	80578	1394	3485	58	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.749	0	1.255	41668599	7333690	8485	21212	864		
353.8970	22.749	22.749	0	1.255	26583879	4652625	5670	14175	821	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.762	22.776	-1	1.001	90206138	15696498	23147	57867	678		
341.8567	22.762	22.776	-1	1.001	57354435	10012296	14777	36942	678	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.126	0	1.331	44217600	7271382	8485	21212	857		
353.8970	24.126	24.126	0	1.331	27579773	4468756	5670	14175	788	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.153	0	1.001	101392394	16526277	23147	57867	714		
341.8567	24.153	24.153	0	1.001	63901075	10428415	14777	36942	706	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.244						338	845			
341.8567	20.244						462	1155			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.308	23.473	-10	1.025	2092429	352488	23147	57867	15		
341.8567	23.308	23.473	-10	1.025	1351372	223195	14777	36942	15	1.55(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.862	0	1.372	26514155	4045355	2631	6577	1538		
369.8919	24.862	24.862	0	1.372	16363962	2537743	2000	5000	1269	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.889	0	1.001	54803563	8416527	3860	9650	2180		
357.8516	24.889	24.889	0	1.001	34751548	5423049	2410	6025	2250	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.744						3860	9650			
357.8516	23.744						2410	6025			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.836	30.835	0	0.953	21423741	4602993	10138	25345	454		
385.8610	30.836	30.835	0	0.953	41064746	8805011	18904	47260	466	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.862	-1	1.000	77446041	17056861	34028	85070	501		
375.8178	30.849	30.862	-1	1.000	63583881	14029731	28421	71052	494	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.008	-1	0.958	21527343	4645676	10138	25345	458		
385.8610	30.995	31.008	-1	0.958	41192181	8744916	18904	47260	463	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.008	31.021	-1	1.000	84458486	18178004	34028	85070	534		
375.8178	31.008	31.021	-1	1.000	69466579	15063201	28421	71052	530	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.754	0	0.982	20418672	5425134	10138	25345	535		
385.8610	31.754	31.754	0	0.982	39021494	10287607	18904	47260	544	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.767	0	1.000	83657687	22340712	34028	85070	657		
375.8178	31.767	31.767	0	1.000	68842236	18269489	28421	71052	643	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.513	32.526	-1	1.005	18351639	5227320	10138	25345	516		
385.8610	32.513	32.526	-1	1.005	35853451	10061715	18904	47260	532	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.539	-1	1.000	71665418	20282625	34028	85070	596		
375.8178	32.526	32.539	-1	1.000	58375015	16239209	28421	71052	571	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.542						34028	85070			
375.8178	30.542						28421	71052			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.340	32.339	0		32156760	8544429	8352	20880	1023		
403.8529	32.326	32.339	-1		25220202	6731682	7778	19445	865	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.927	0	0.987	23052563	6987052	8352	20880	837		
403.8529	31.927	31.927	0	0.987	18352980	5468630	7778	19445	703	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.940	0	1.000	54057818	15589077	22398	55995	696		
391.8127	31.940	31.940	0	1.000	41253998	12285721	16811	42027	731	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.020	32.033	-1	0.990	27736555	7273068	8352	20880	871		
403.8529	32.020	32.033	-1	0.990	22163366	5871752	7778	19445	755	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.034	32.047	-1	1.000	59116629	16185483	22398	55995	723		
391.8127	32.034	32.047	-1	1.000	48842948	13061351	16811	42027	777	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.340	32.353	-1	1.013	60106510	15800454	22398	55995	705		
391.8127	32.340	32.353	-1	1.013	47857678	12979231	16811	42027	772	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	31.215						22398	55995			
391.8127	31.215						16811	42027			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.912	33.911	0	1.000	69518297	21985720	82461	206152	267		
409.7789	33.912	33.911	0	1.000	66011646	21358881	78734	196835	271	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.912	0	1.049	13138473	4149229	14216	35540	292		
419.8220	33.900	33.912	-1	1.048	29846940	9243997	31835	79587	290	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.006	35.005	0	1.082	12375038	3705586	14216	35540	261		
419.8220	35.006	35.005	0	1.082	28162539	8151296	31835	79587	256	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.018	35.005	1	1.000	57298984	16523888	82461	206152	200		
409.7789	35.006	35.005	0	1.000	54049996	15559126	78734	196835	198	1.06(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						82461	206152			
409.7789	34.458						78734	196835			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.702	34.714	-1	1.073	18400619	5331850	10315	25787	517		
437.8140	34.702	34.714	-1	1.073	18054711	5313047	9982	24955	532	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.714	0	1.000	43603241	12970820	24860	62150	522		
425.7737	34.714	34.714	0	1.000	41512610	12528364	23796	59490	526	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						24860	62150			
425.7737	33.504						23796	59490			
13C-OCDD											
469.7779	37.082	37.093	-1	1.147	24118371	6015882	2552	6380	2357		
471.7750	37.082	37.093	-1	1.147	27110569	6692443	3547	8867	1887	0.89(0.76-1.02)	
OCDF											
441.7428	37.189	37.201	-1	1.003	76746145	20468133	7616	19040	2688		
443.7399	37.189	37.201	-1	1.003	84548074	22394214	8501	21252	2634	0.91(0.76-1.02)	
OCDD											
457.7377	37.094	37.105	-1	1.000	58682484	14688537	7599	18997	1933		
459.7348	37.094	37.105	-1	1.000	65385007	16510536	8885	22212	1858	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	88976883	22538756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	88976883	22538756

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.933	161517	37808	157347	44274	0.3500	1.03	RQ
16.933	121157	34090	157347	44274	0.3057		Empc Correction
17.235	125955	28258	139240	36566	0.2911	0.90	RnQ
17.235	107214	28155	139240	36566	0.2705		Empc Correction
Signal Totals:							
	228371	62245	296587	80840			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	584059	146906				0.97	RQ
	524958	143085					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6411 = (584059 * 100.000) / (88976883 * 1.024)
Empc Amount: 0.5762 = (524958 * 100.000) / (88976883 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50383801	12132344

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50383801	12132344

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.233	239239	60004	312487	80578	0.8732	0.77	
Signal Totals:							
	239239	60004	312487	80578			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	551726	140582				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8732 = (551726 * 100.000) / (50383801 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68252478	11986315
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71797373	11740138

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70024925	11863226

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
23.308	2092429	352488	1351372	223195	4.73	1.55	
Signal Totals:							
	2092429	352488	1351372	223195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3443801	575683				1.55	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.730 = (3443801 * 100.000) / (70024925 * 1.040)

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

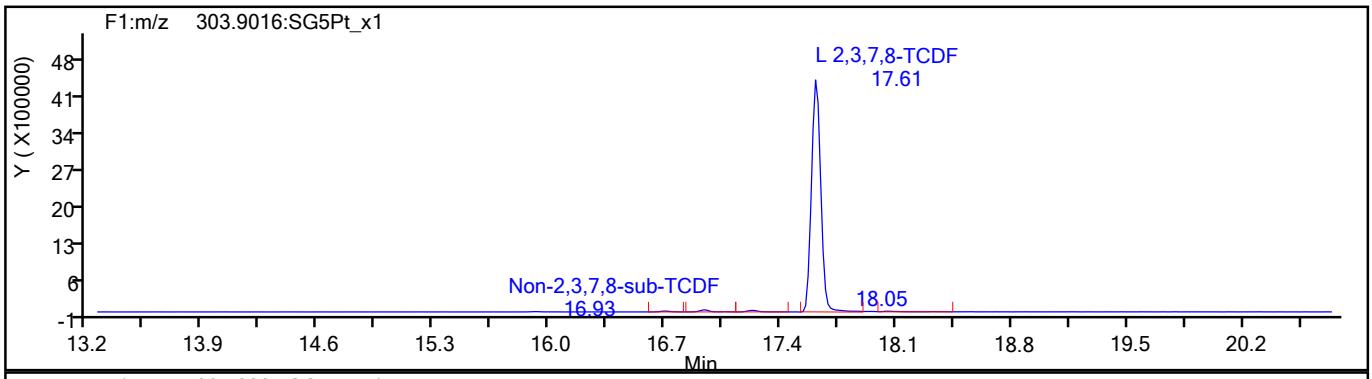

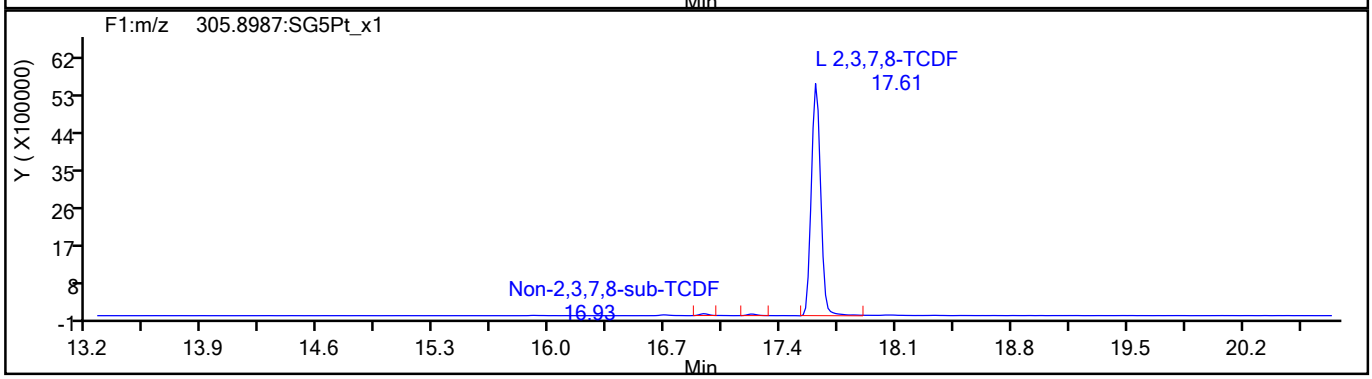

TCDF Standards

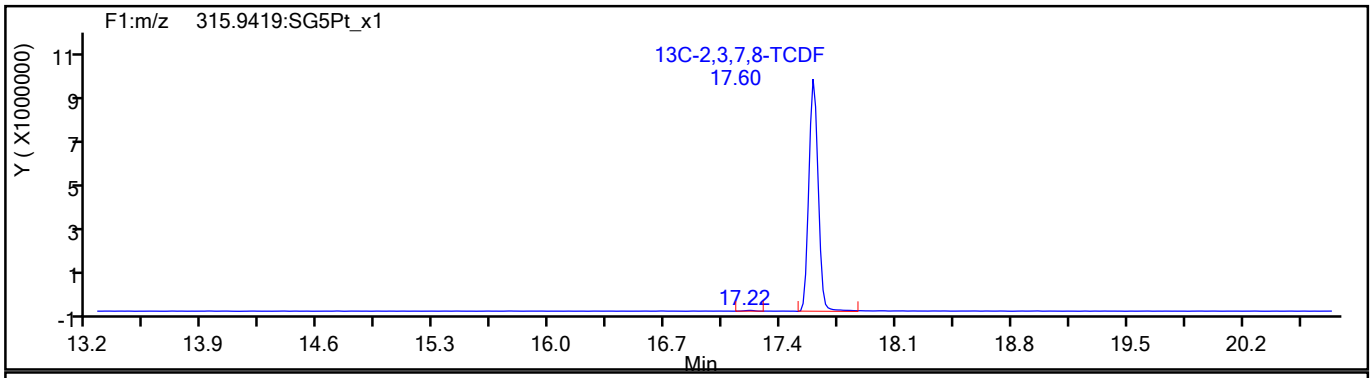

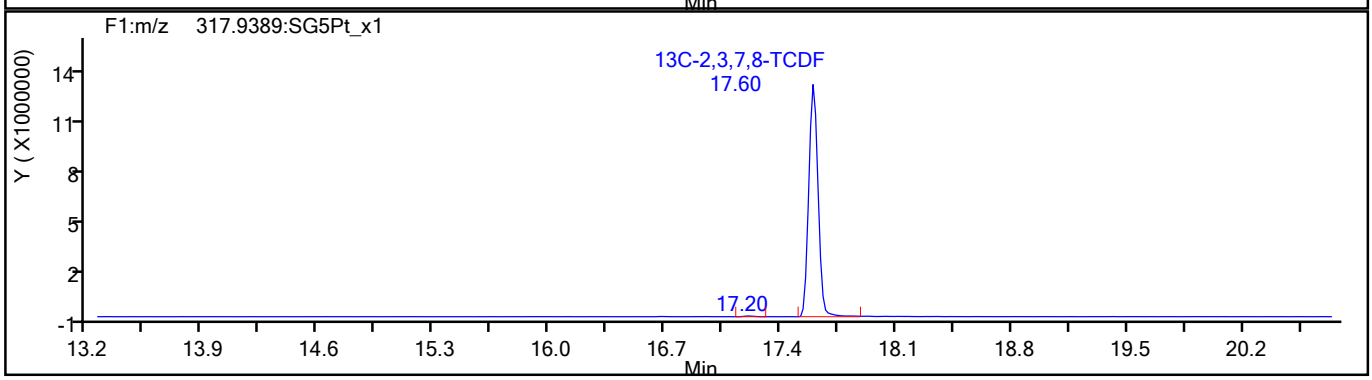

792619

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

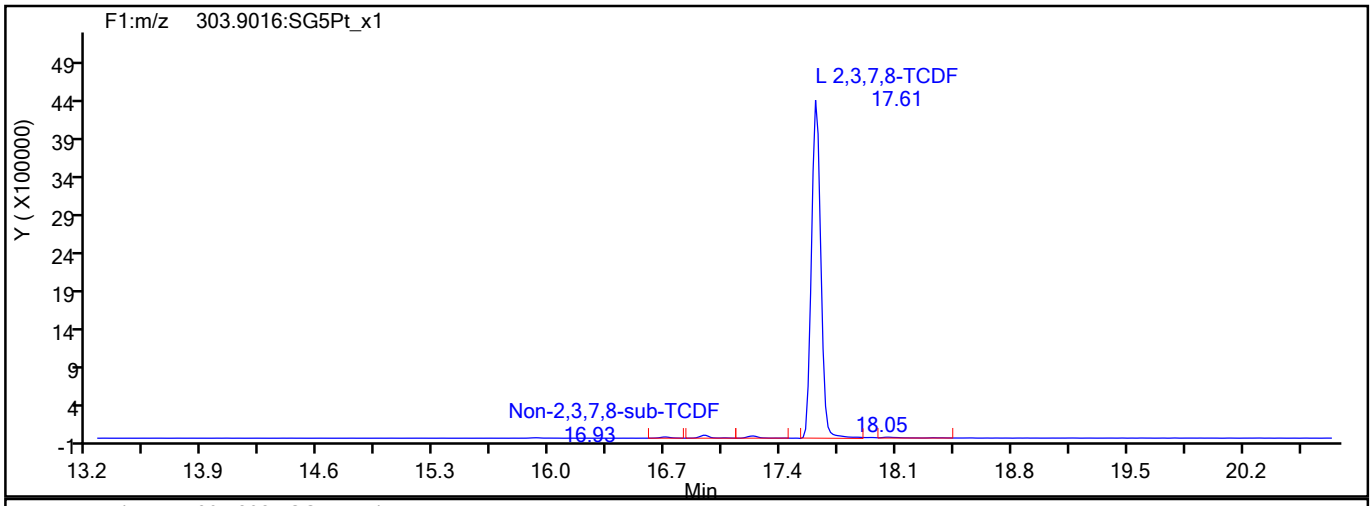

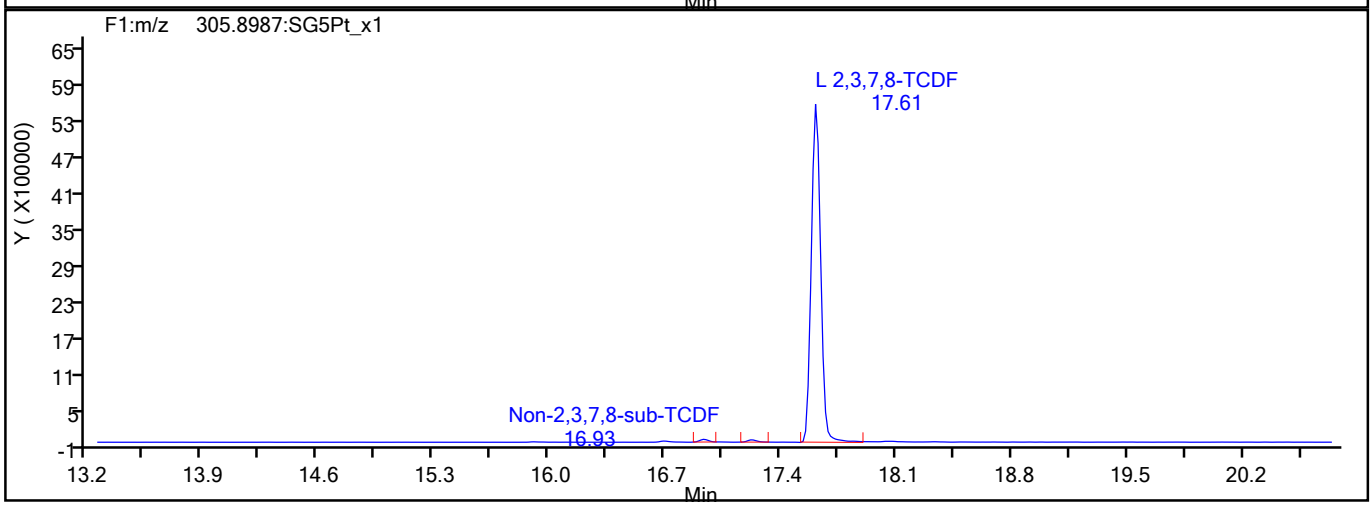

TCDF Interference Mass

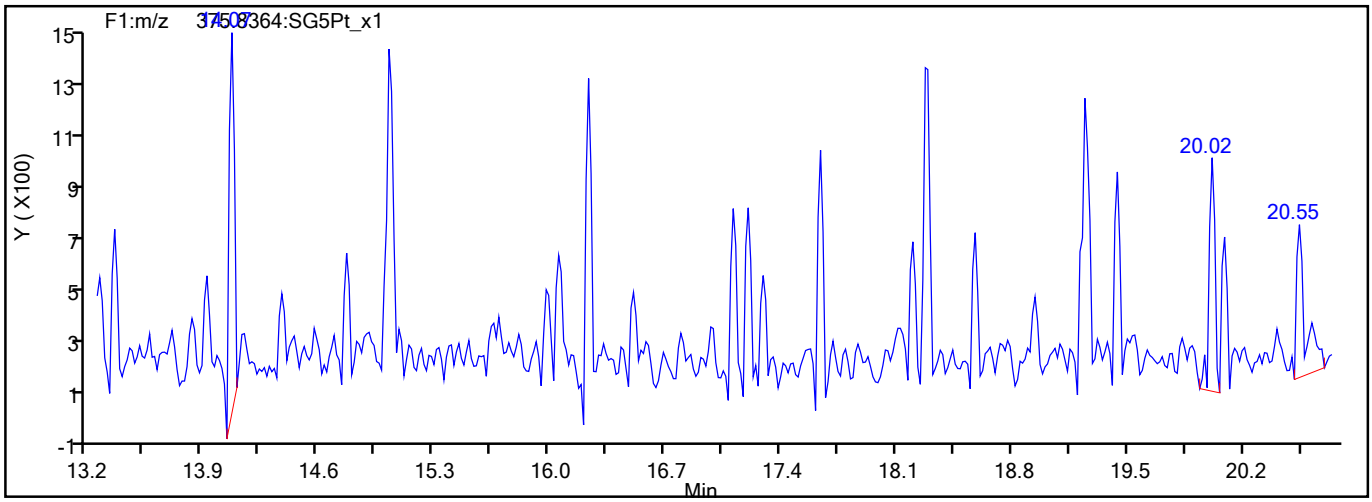

792620

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

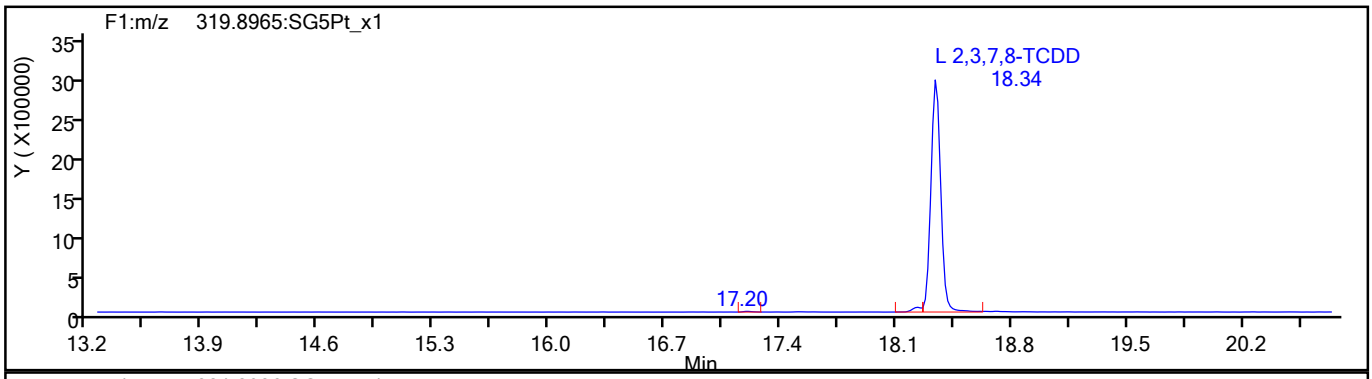

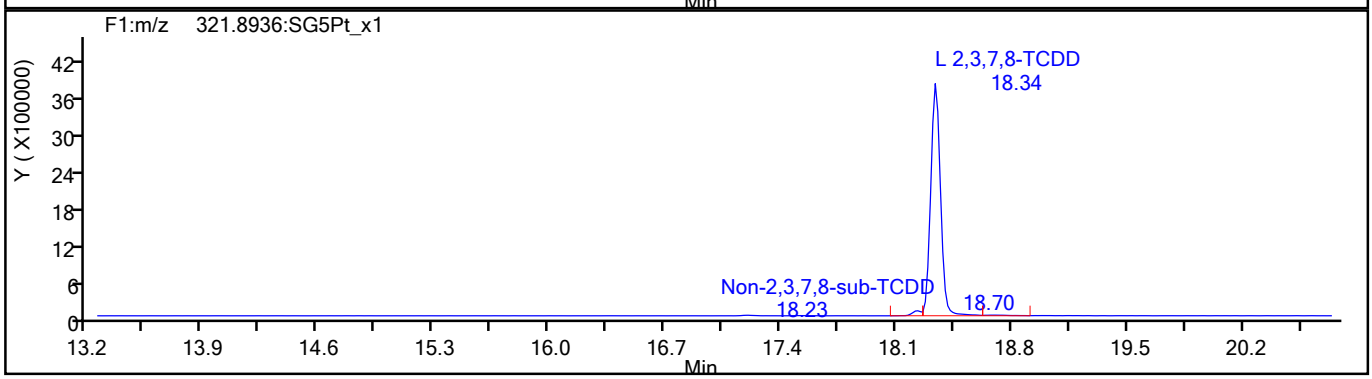

TCDD Standards

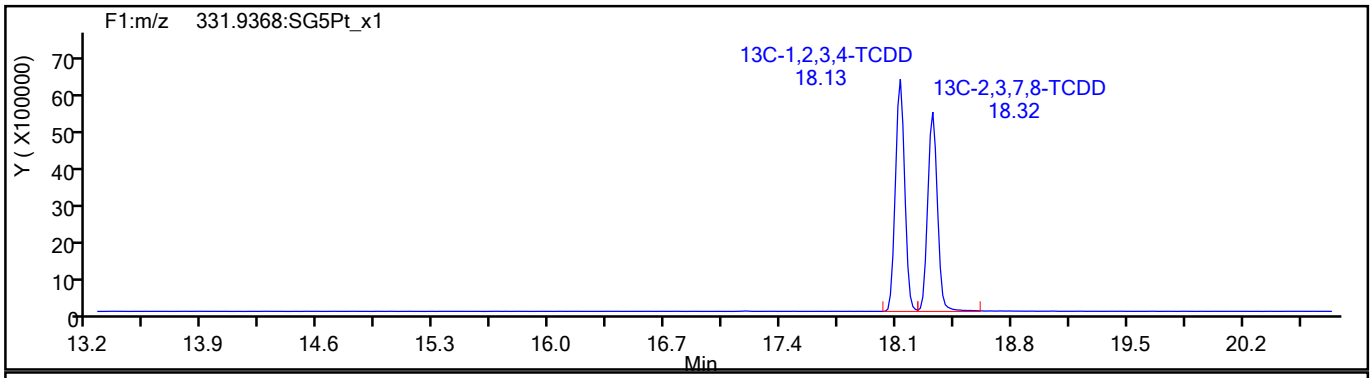

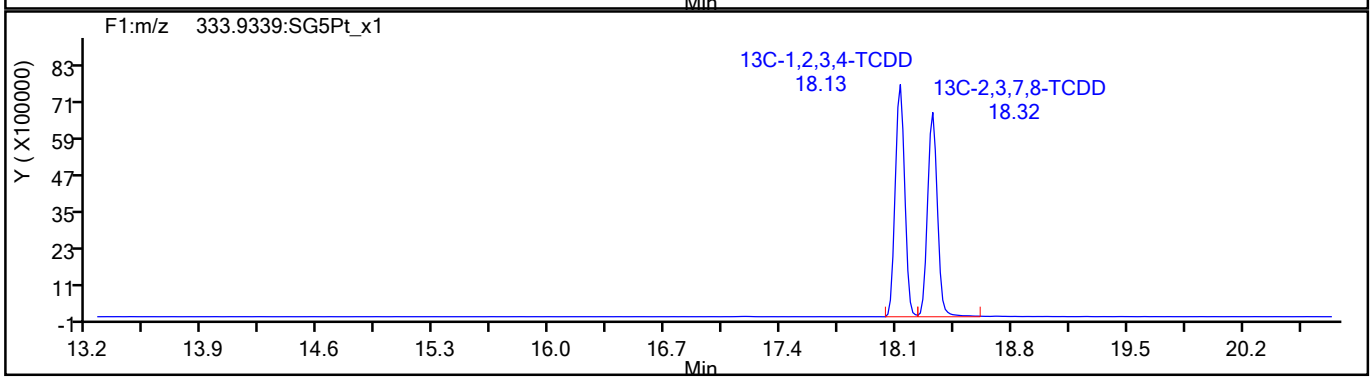

792621

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

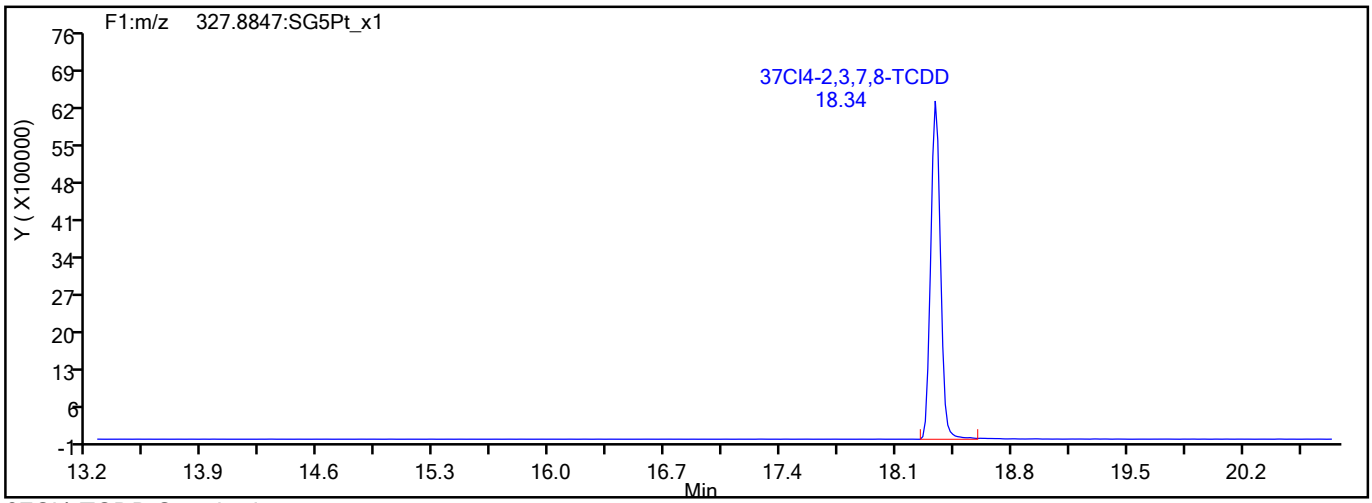

37Cl4-TCDD Standards

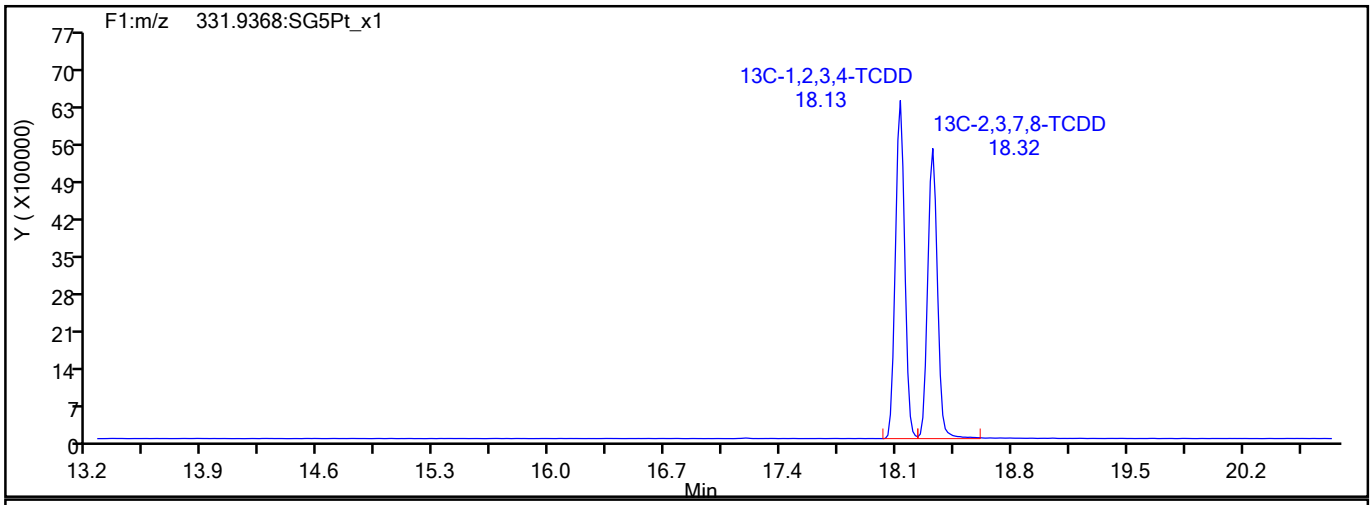

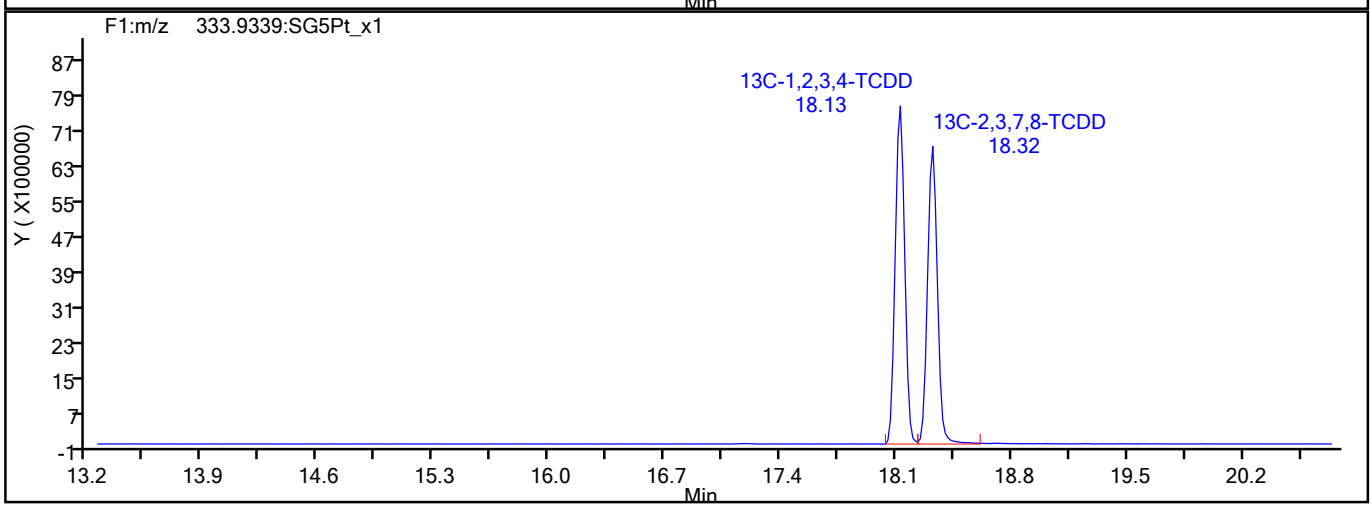

792622

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

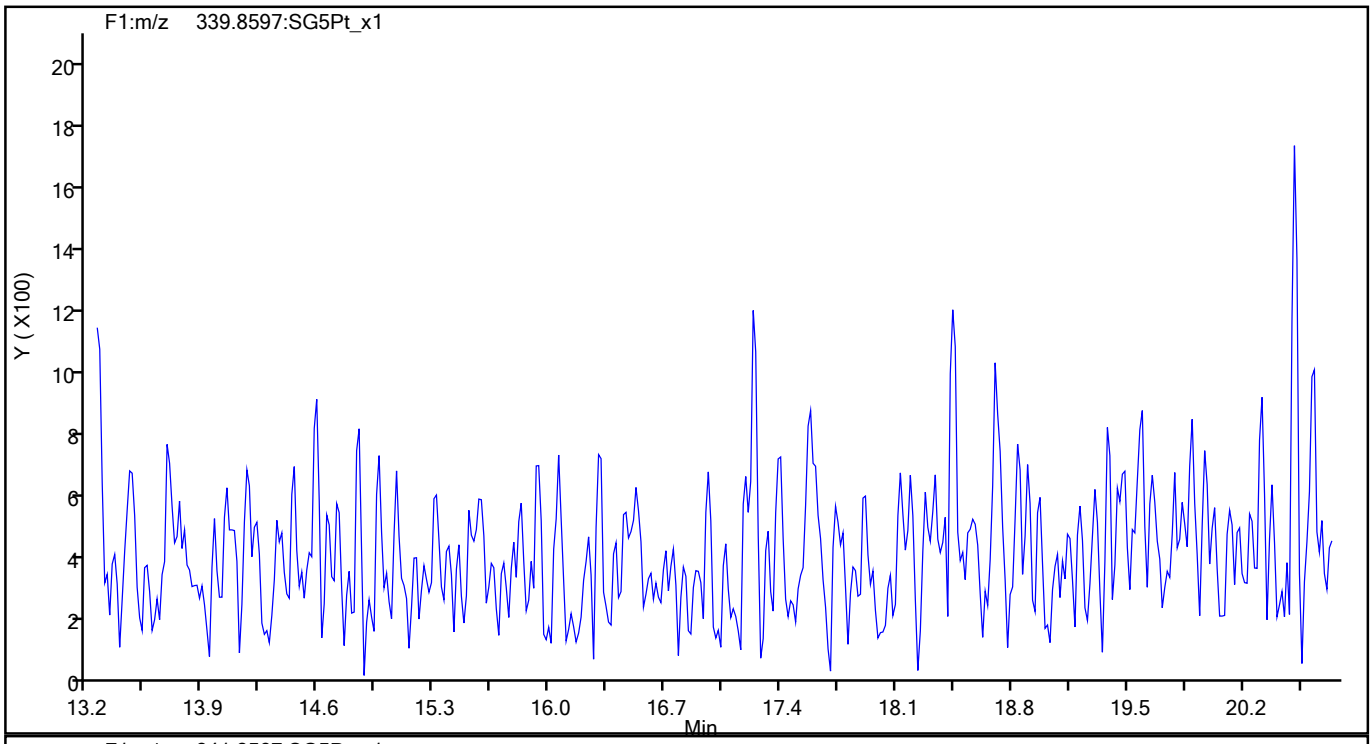

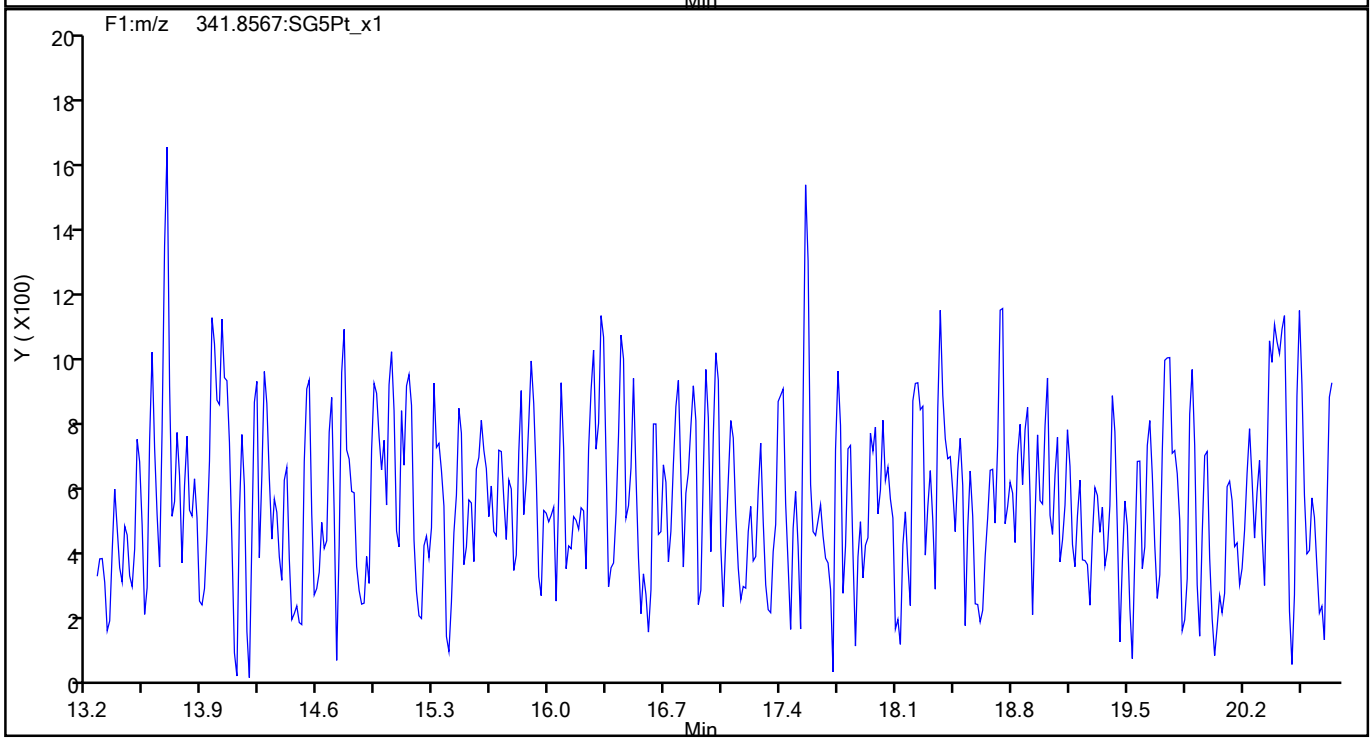

792623

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

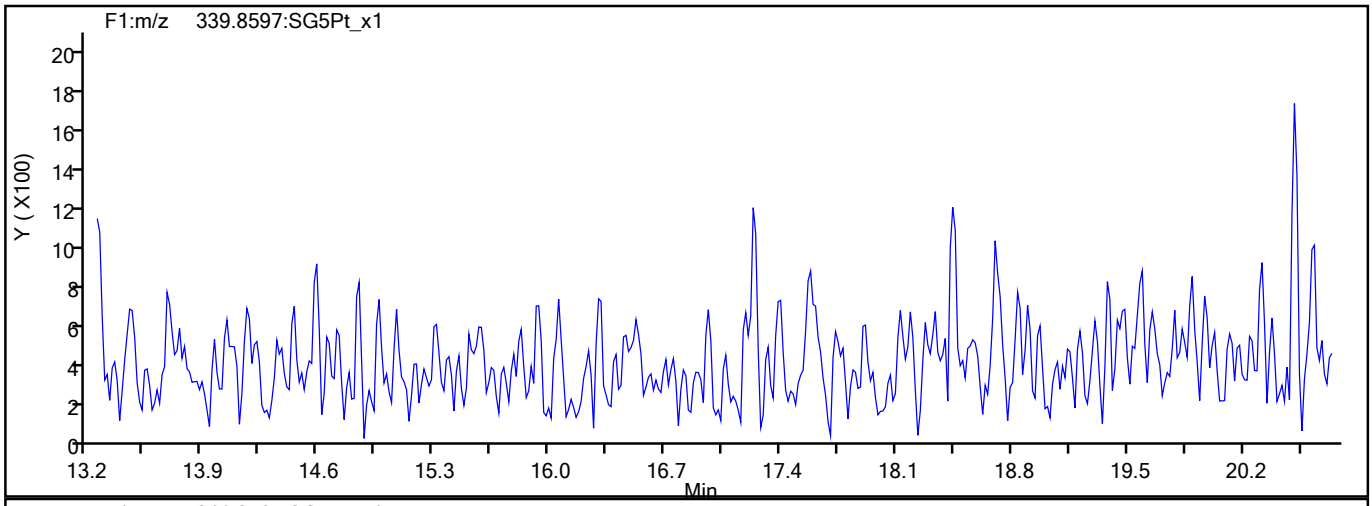

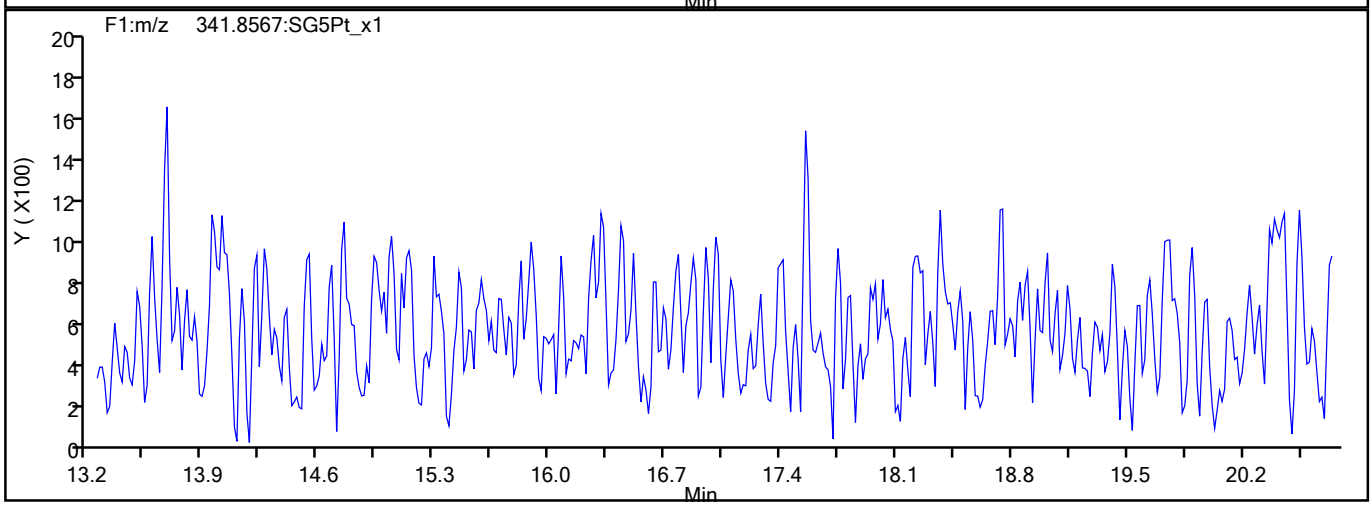

F1 PeCDFs Interference Mass

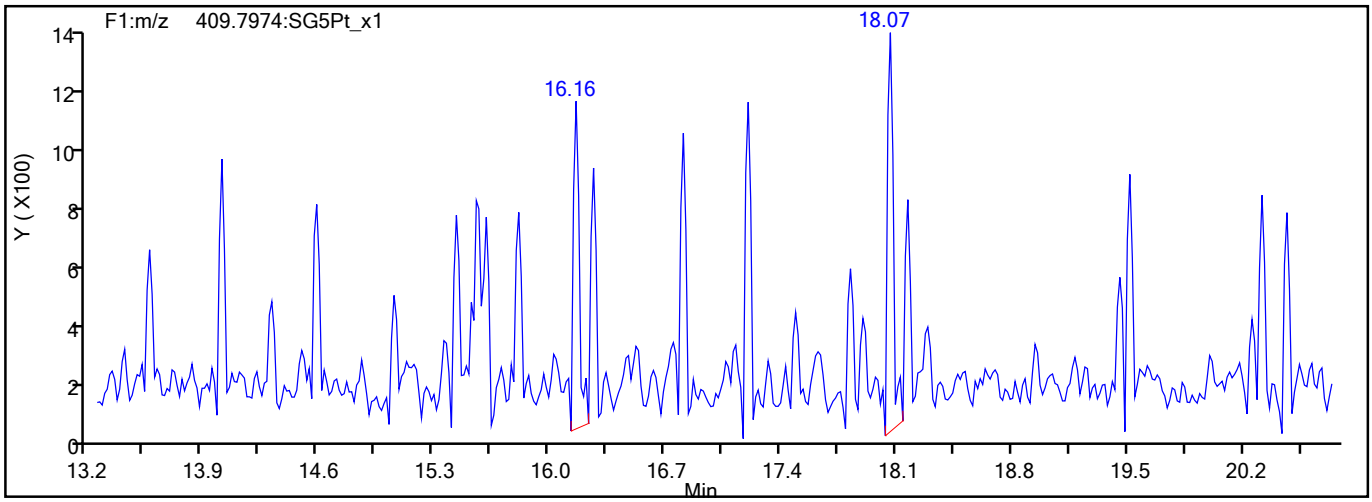

792624

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

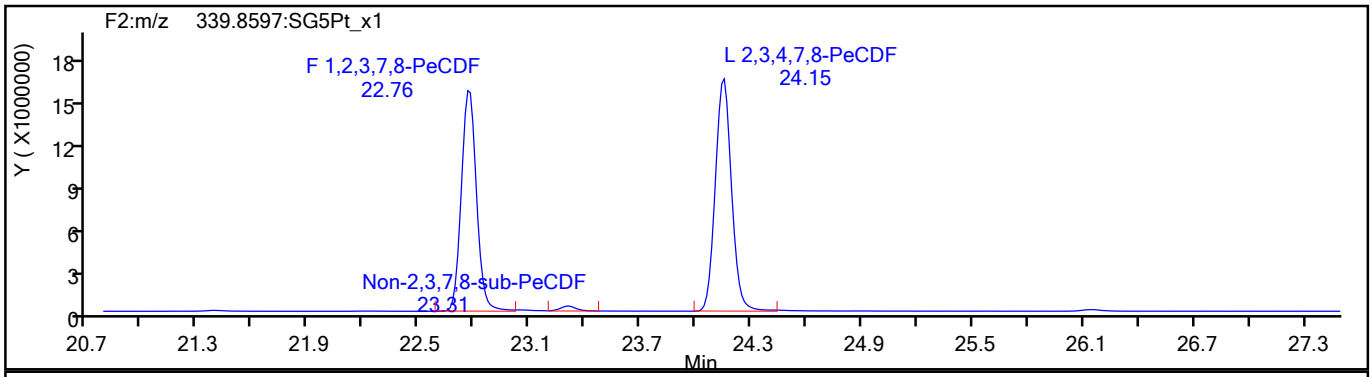

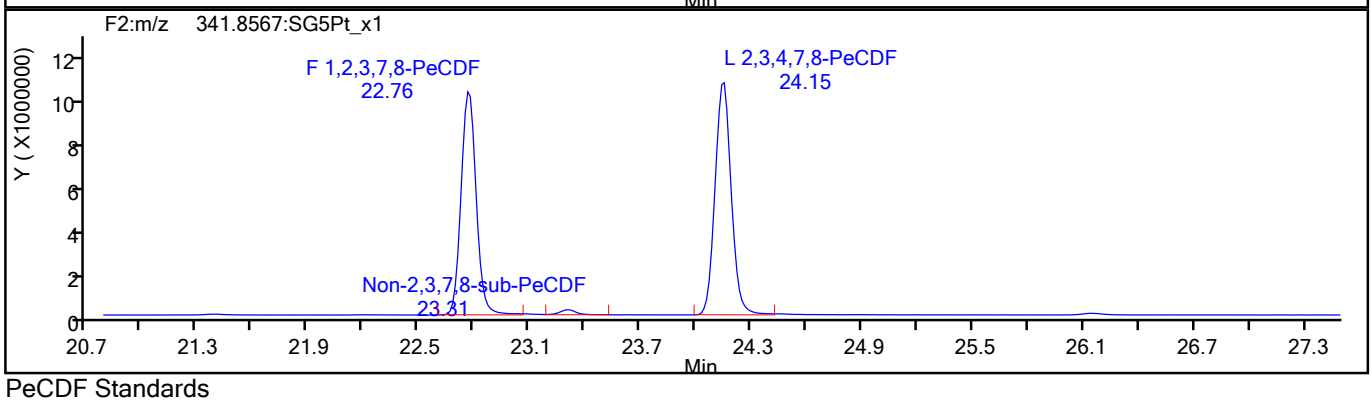

PeCDF Standards

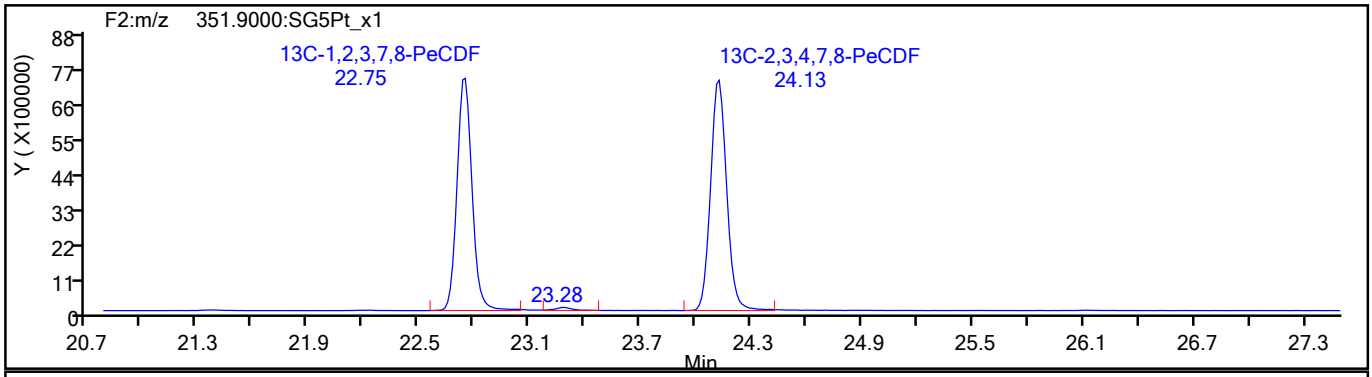

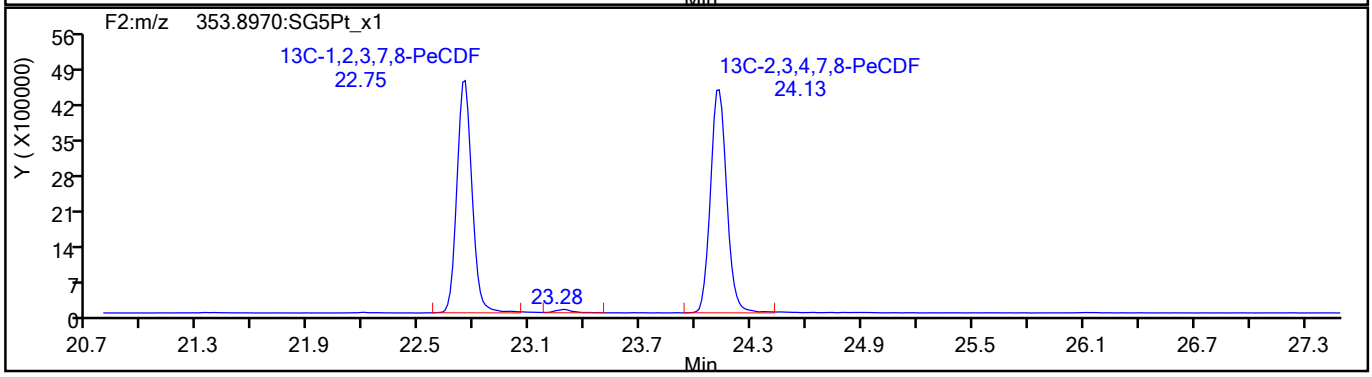

792625

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Eurofins TestAmerica, Sacramento

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PeCDF

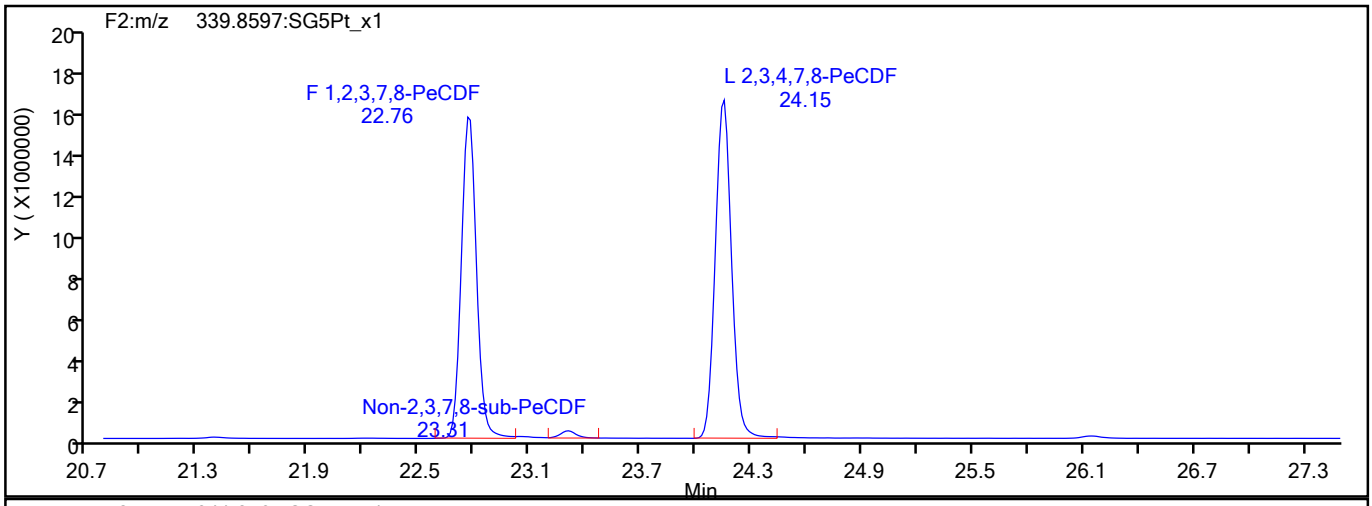

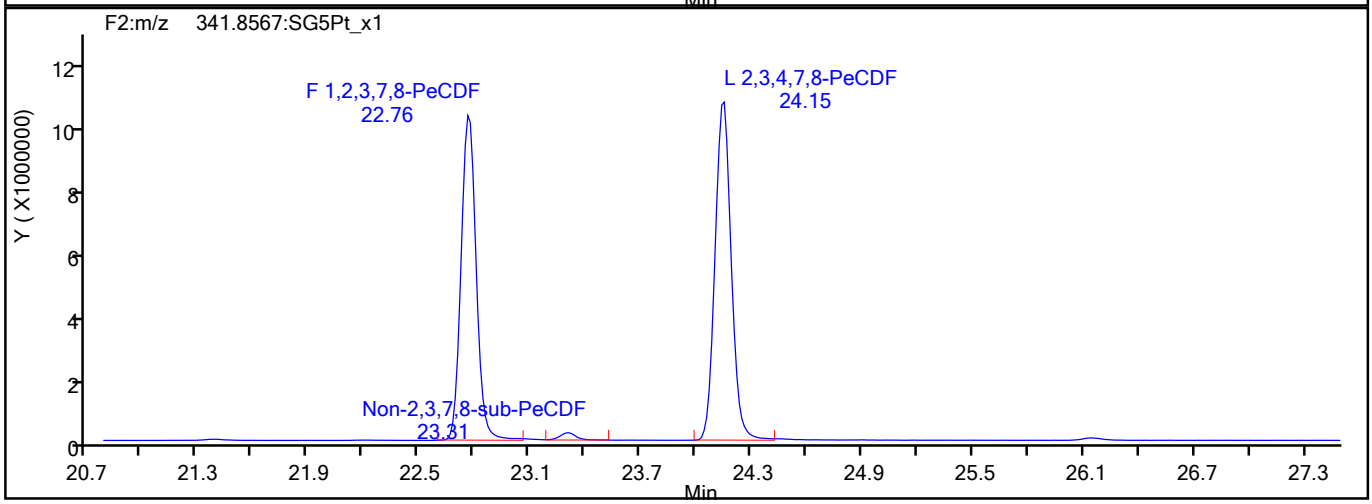

PeCDF Interference Mass

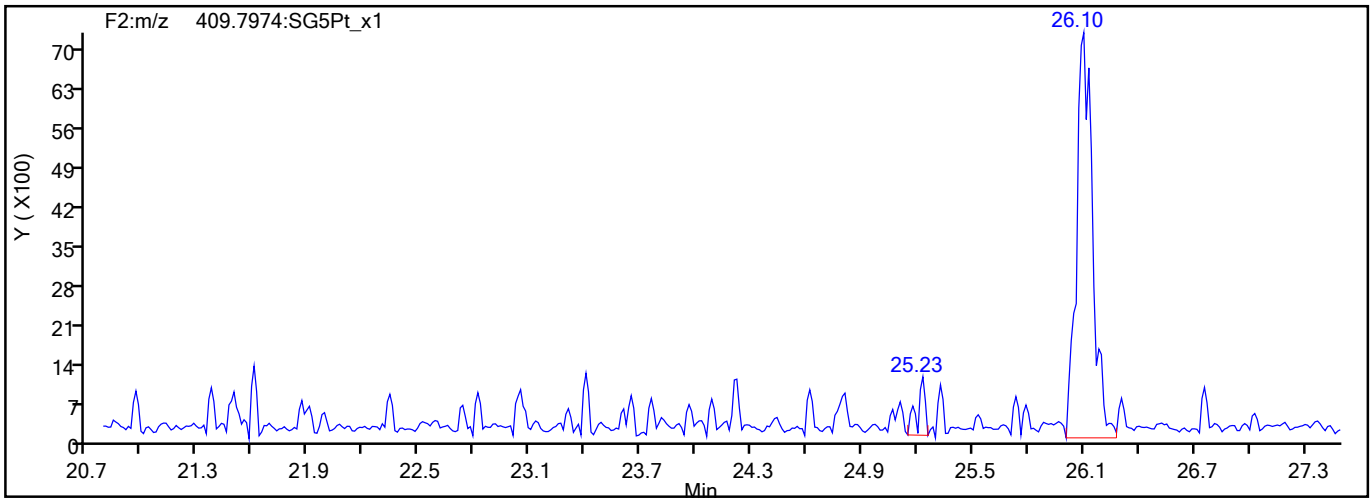

792626

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

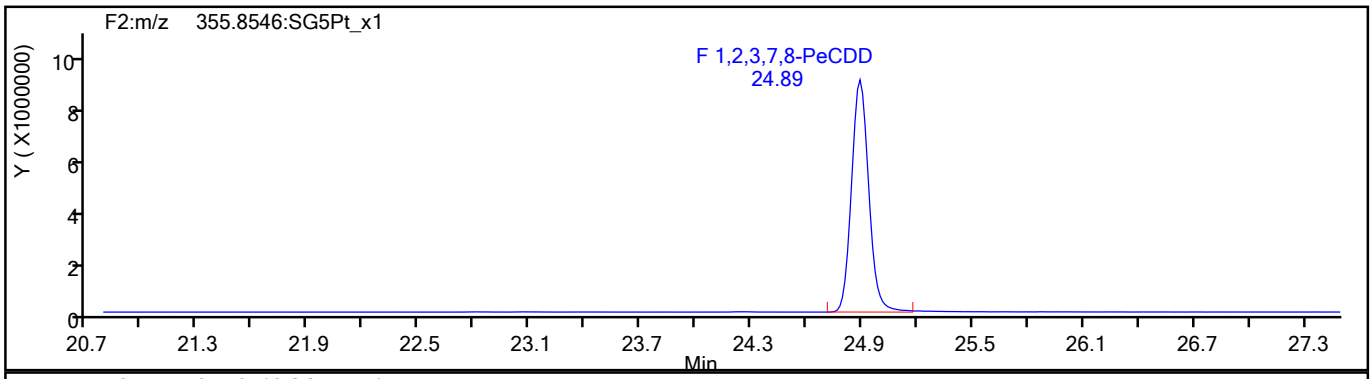

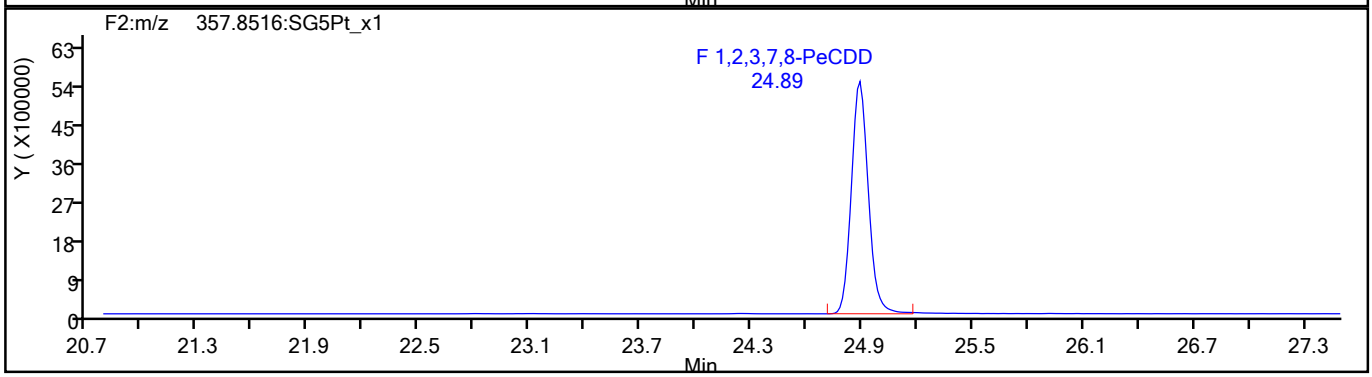

PeCDD Standards

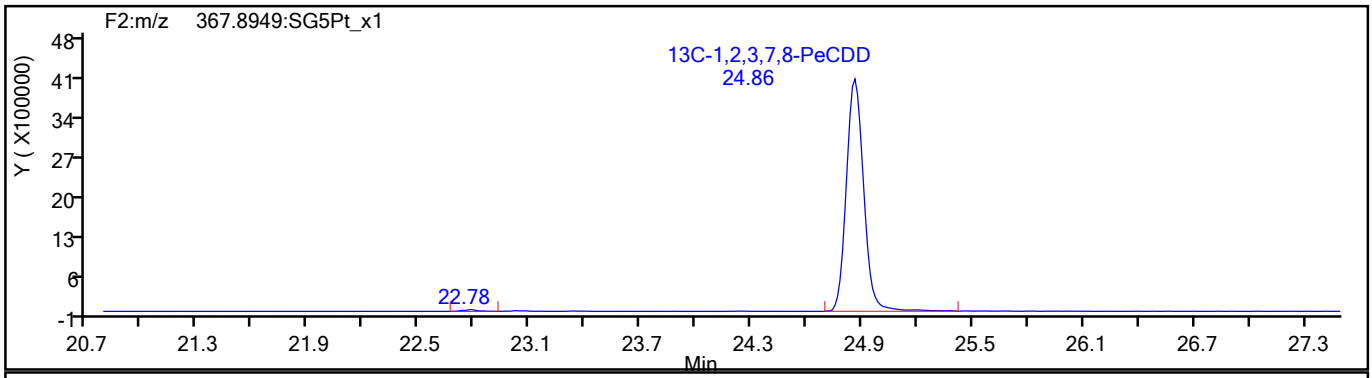

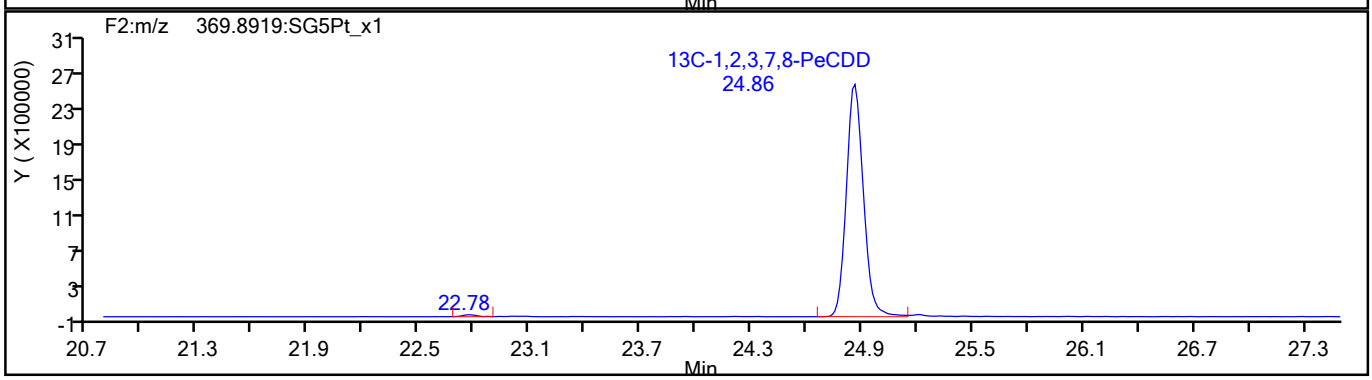

792627

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

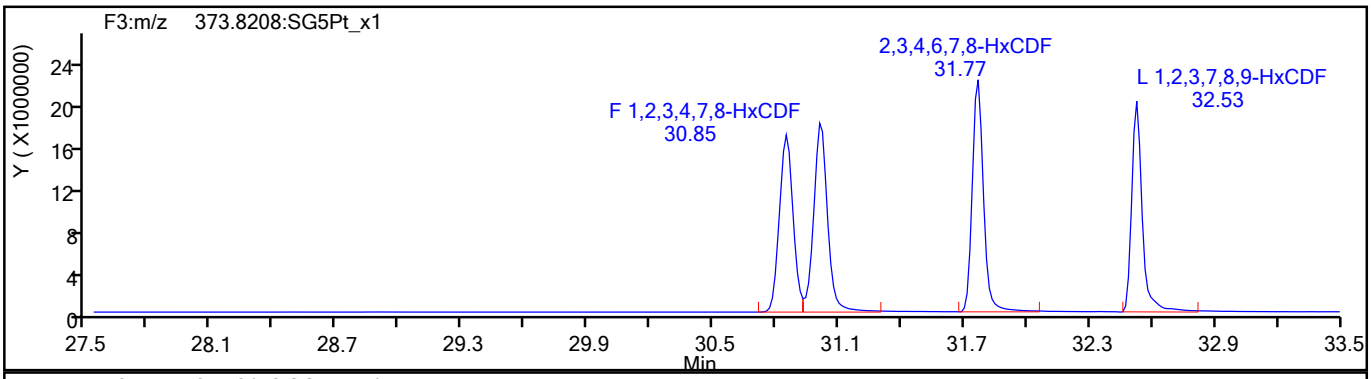

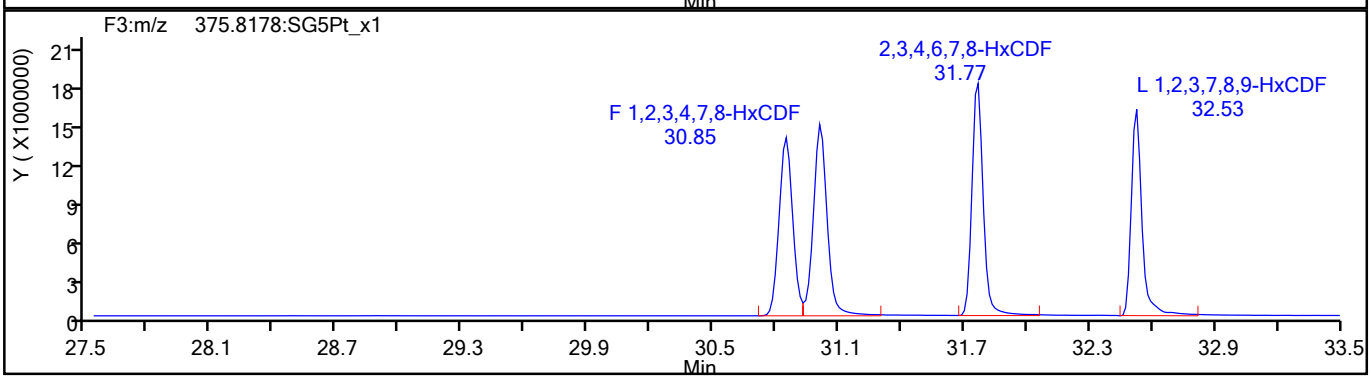

HxCDF Standards

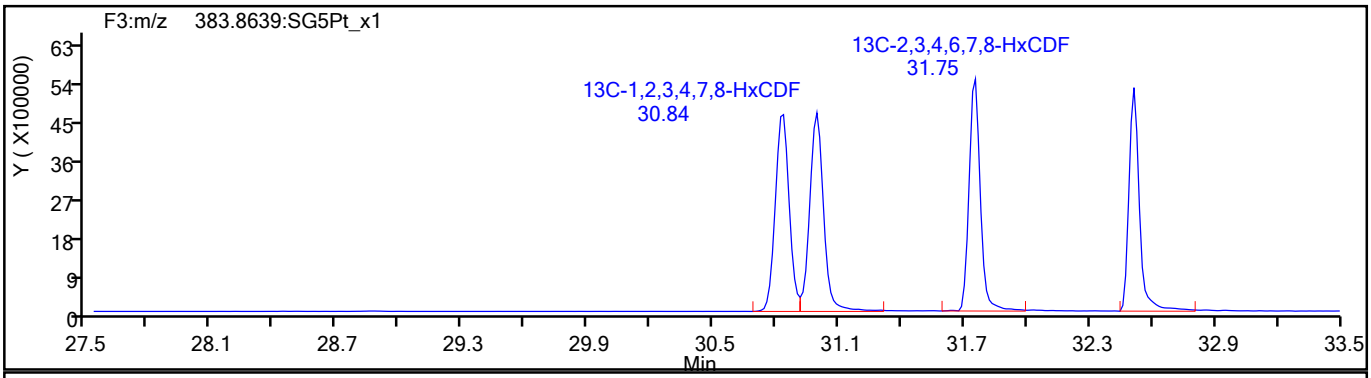

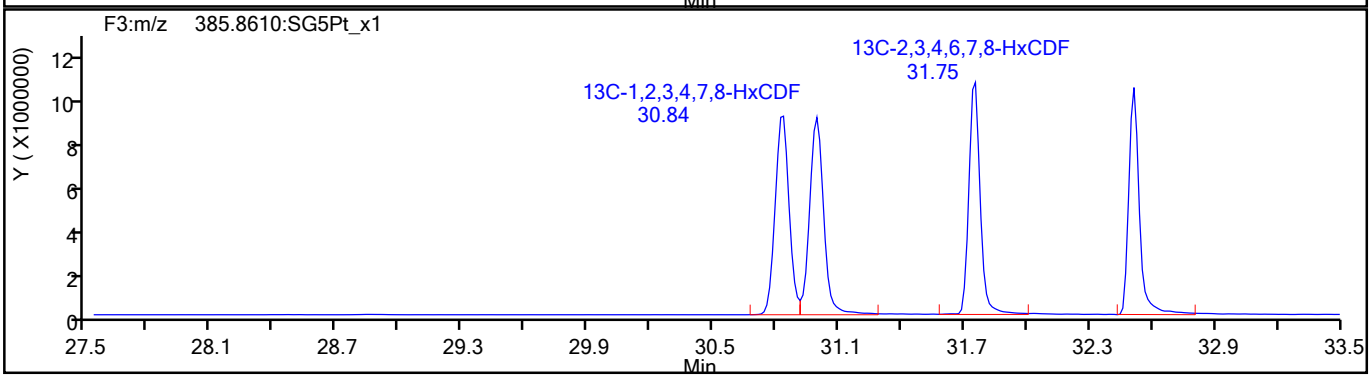

792628

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Eurofins TestAmerica, Sacramento

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HxCDF

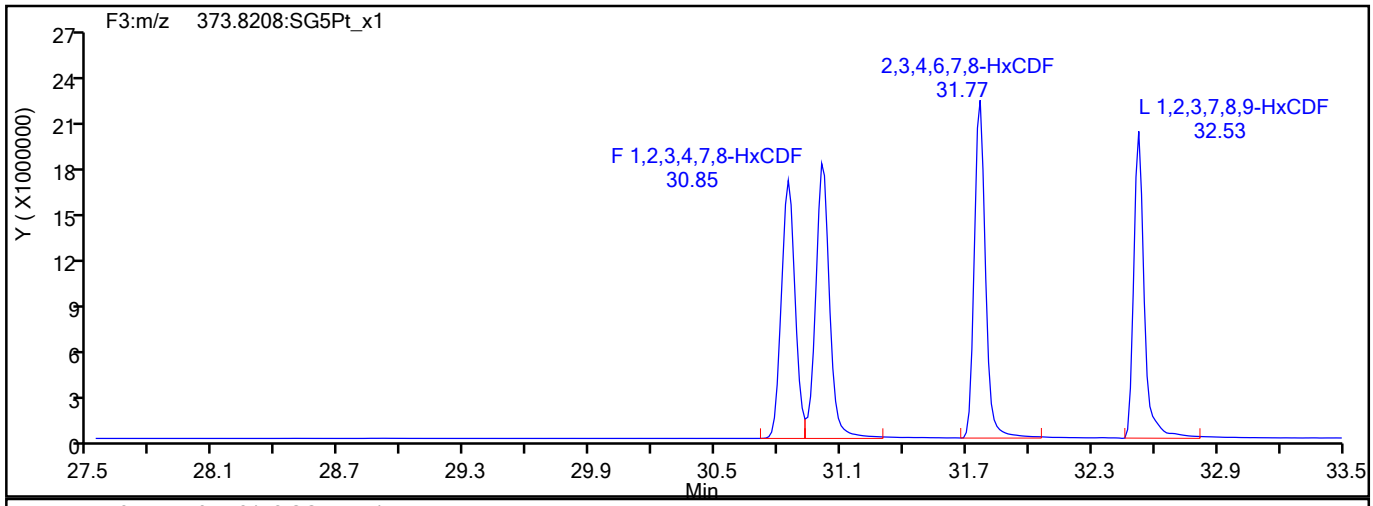

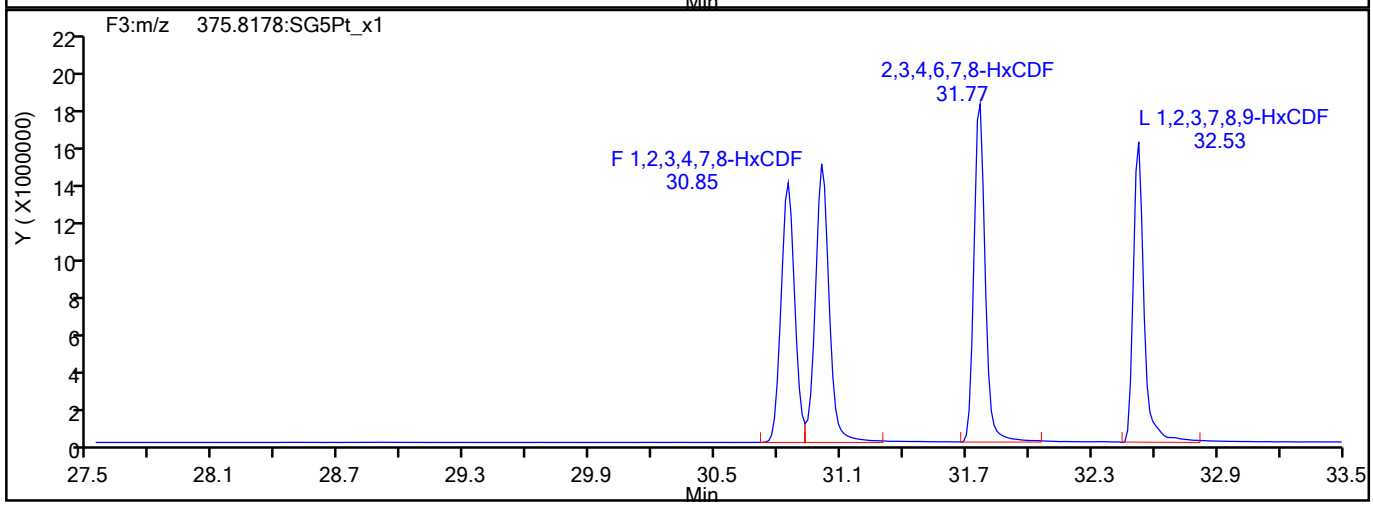

HxCDF Interference Mass

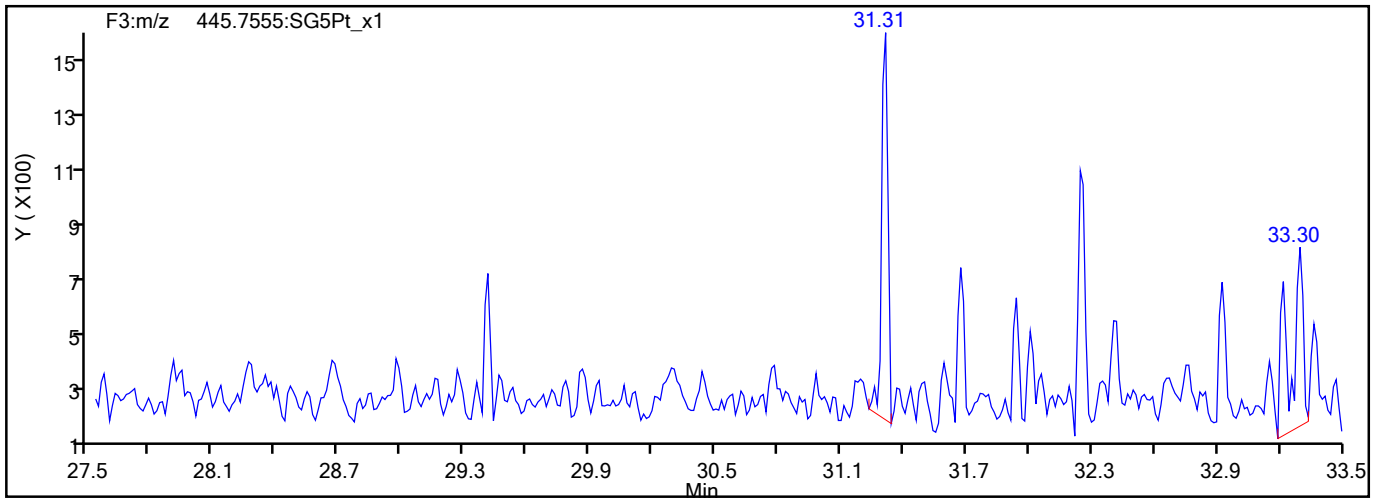

792629

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Eurofins TestAmerica, Sacramento

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HxCDD

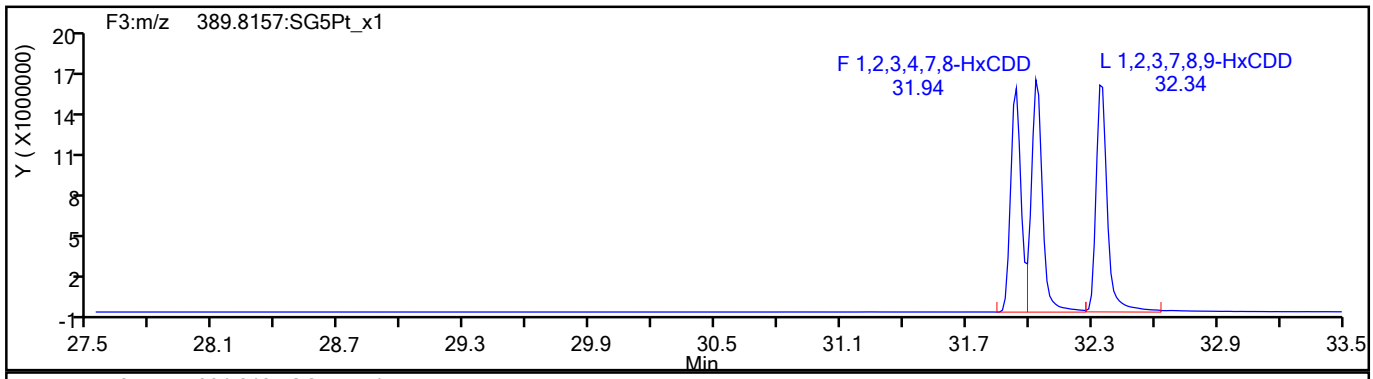

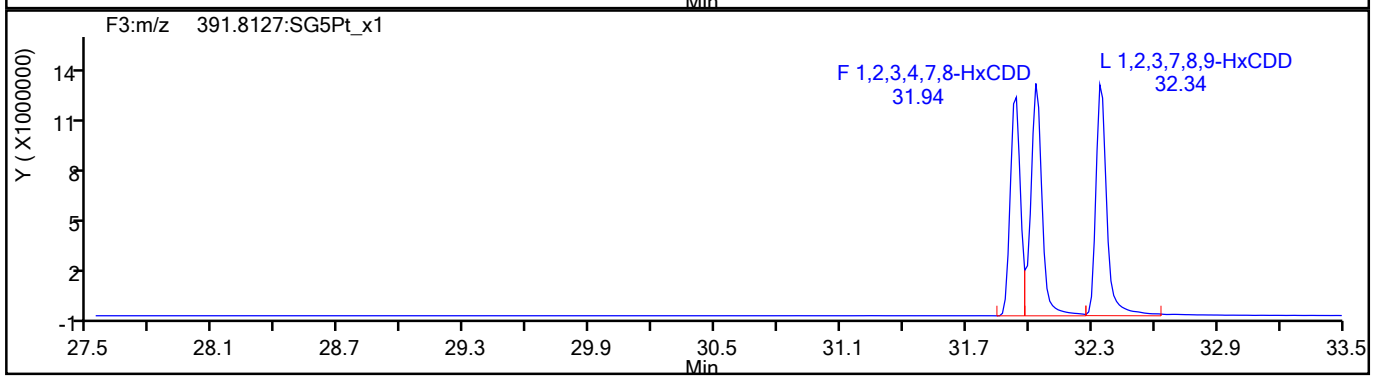

HxCDD Standards

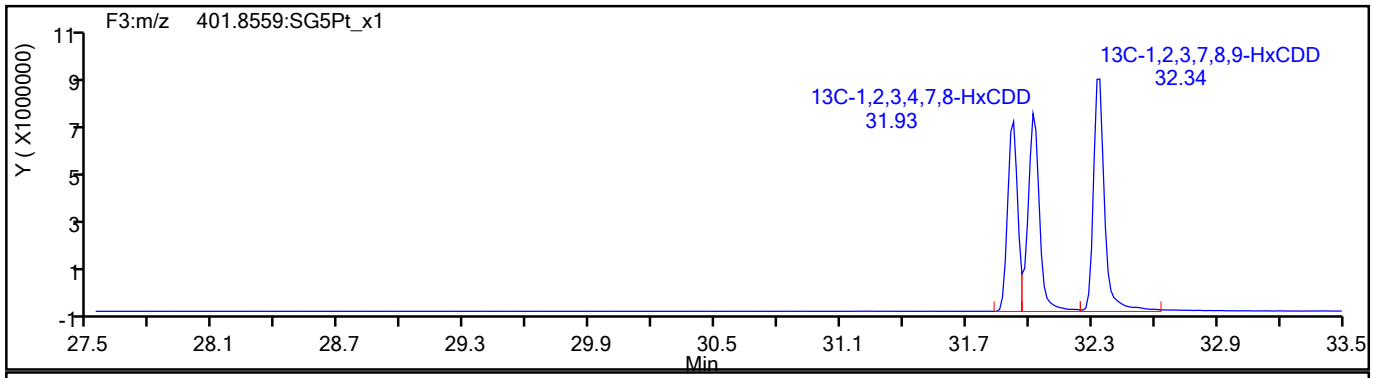

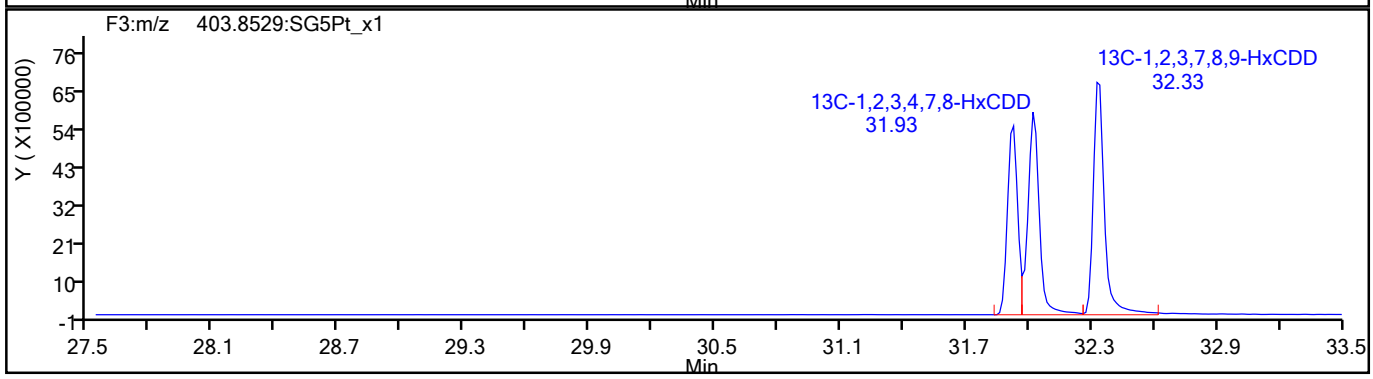

792630

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

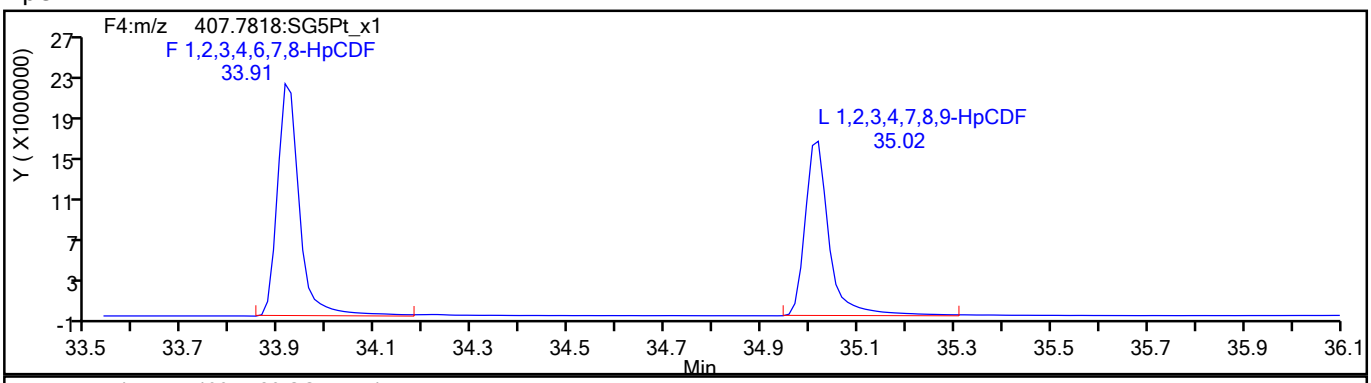

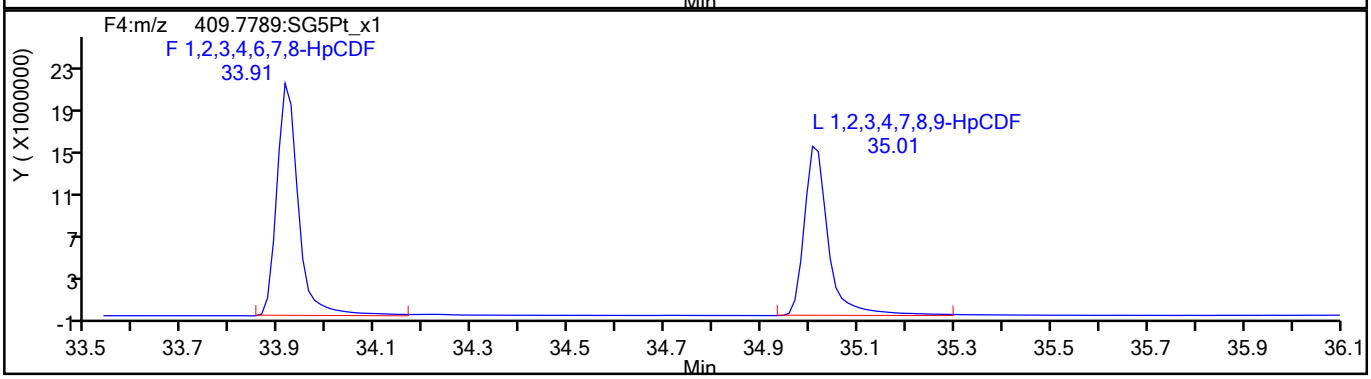

HpCDF Standards

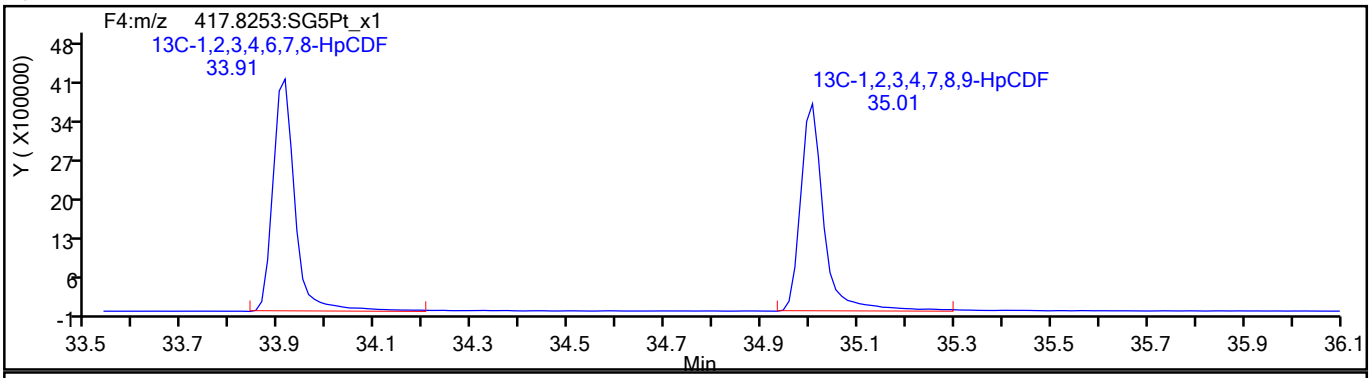

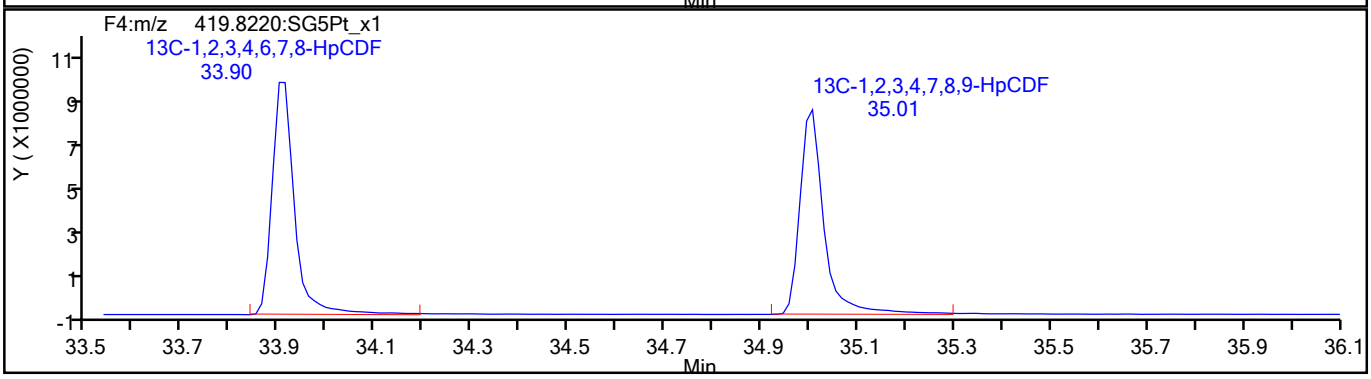

792631

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

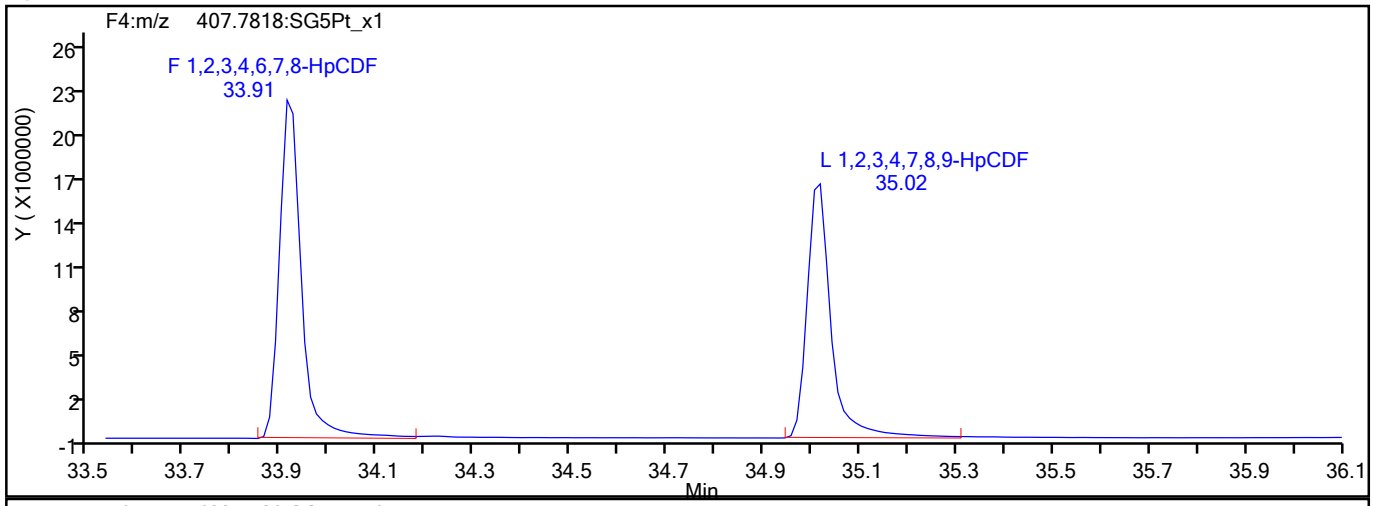

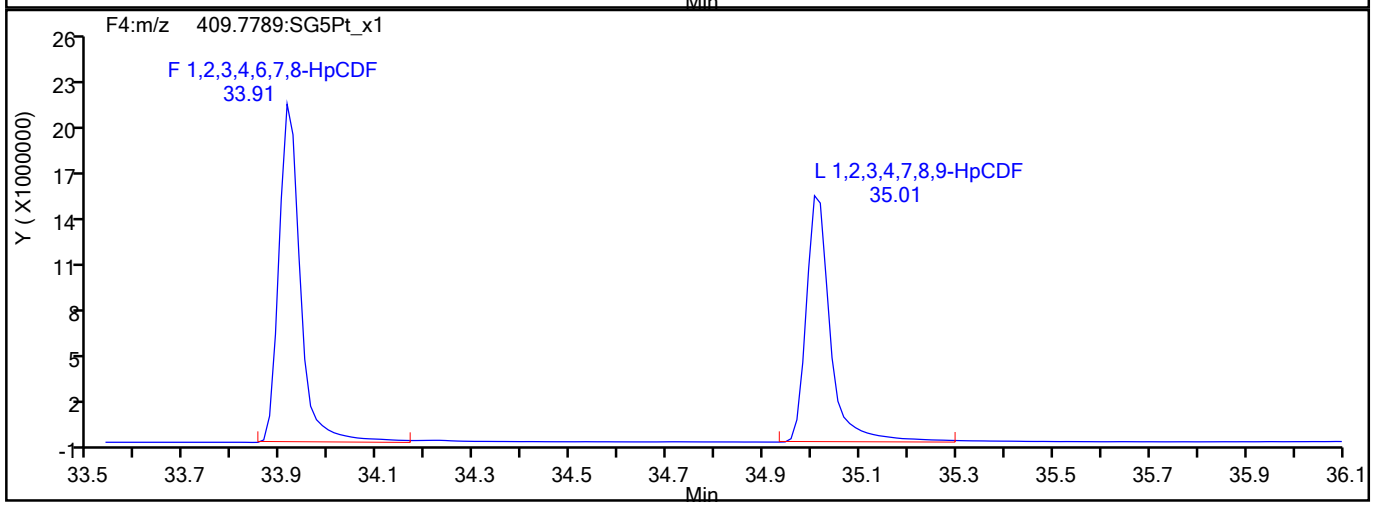

HpCDF Interference Mass

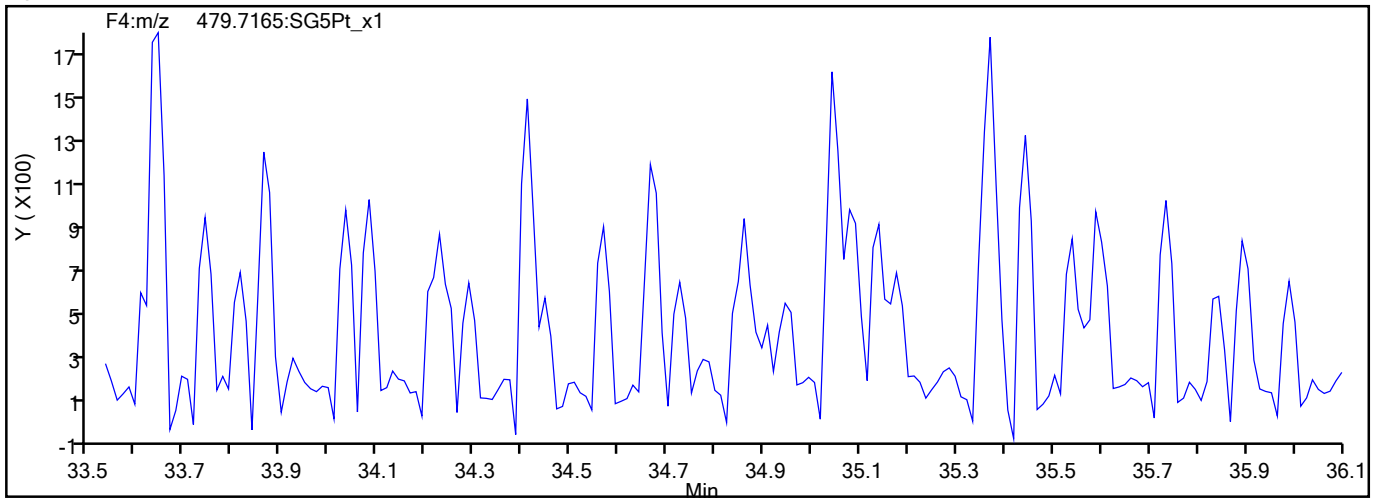

792632

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

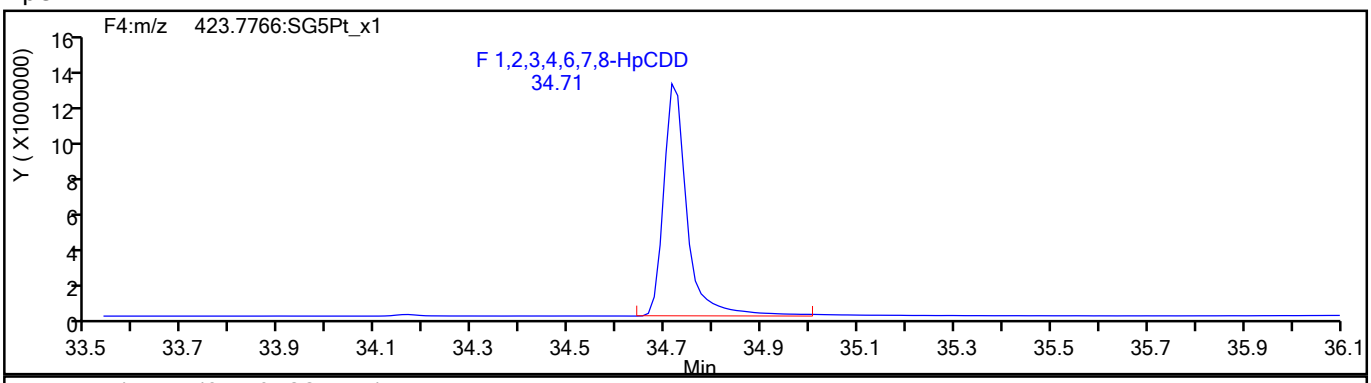

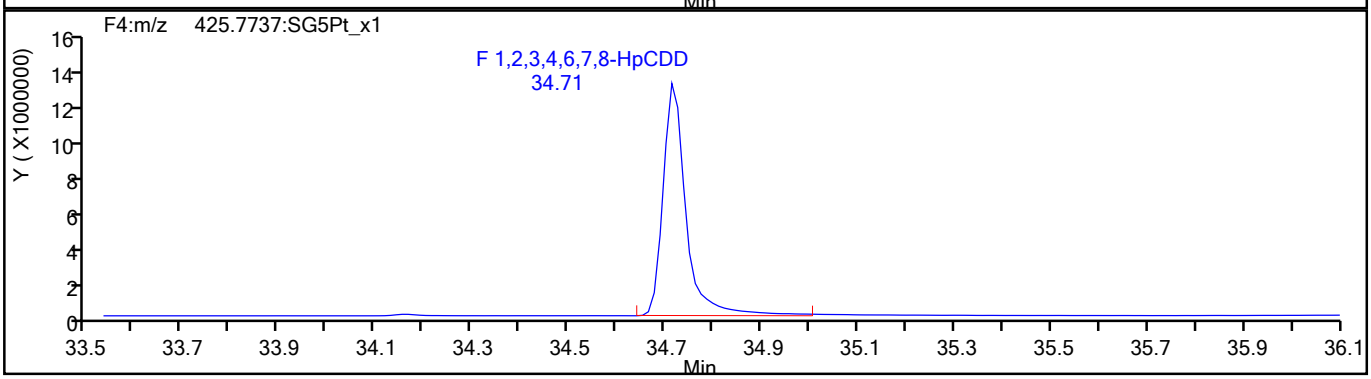

HpCDD Standards

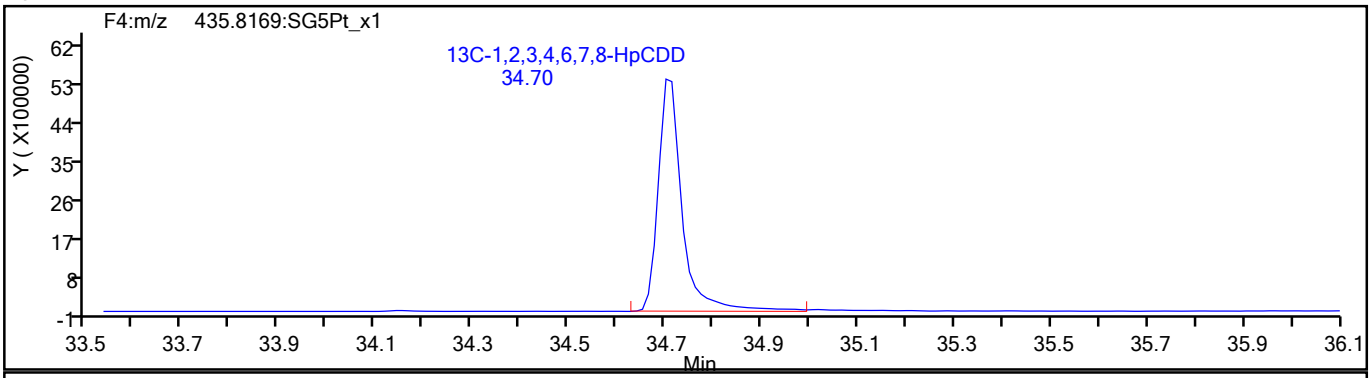

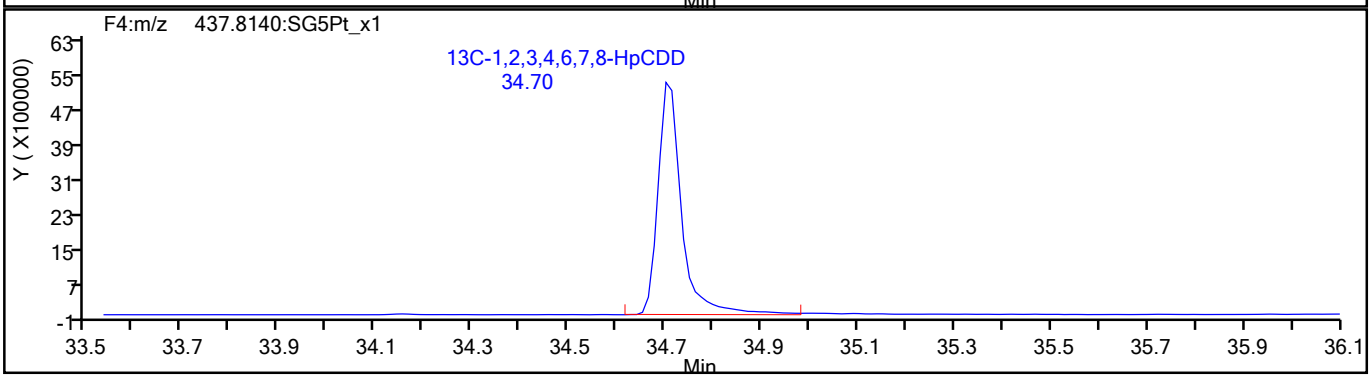

792633

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

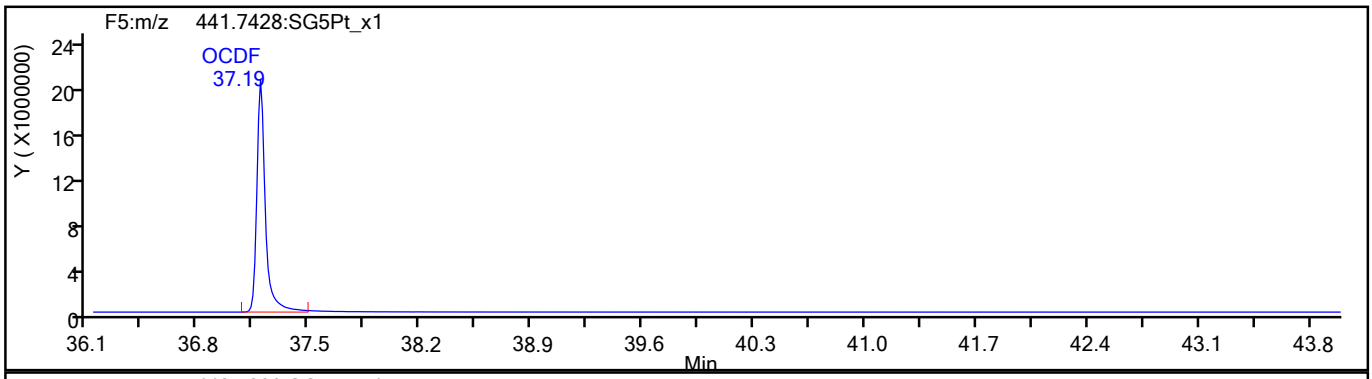

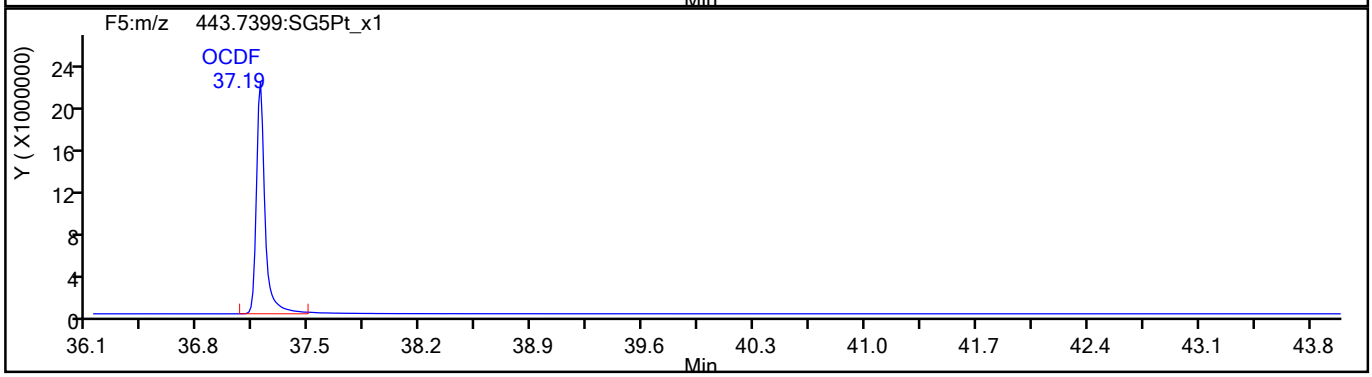

OCDF Standards

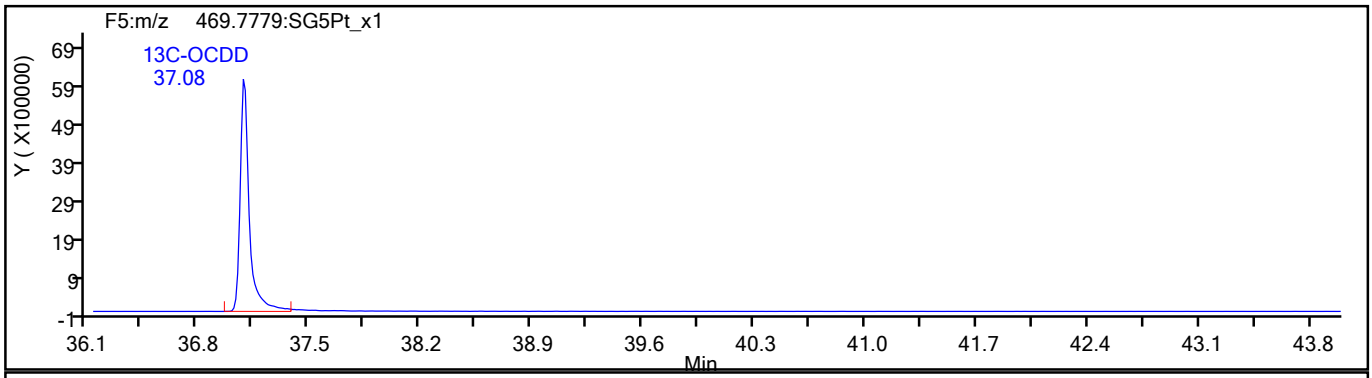

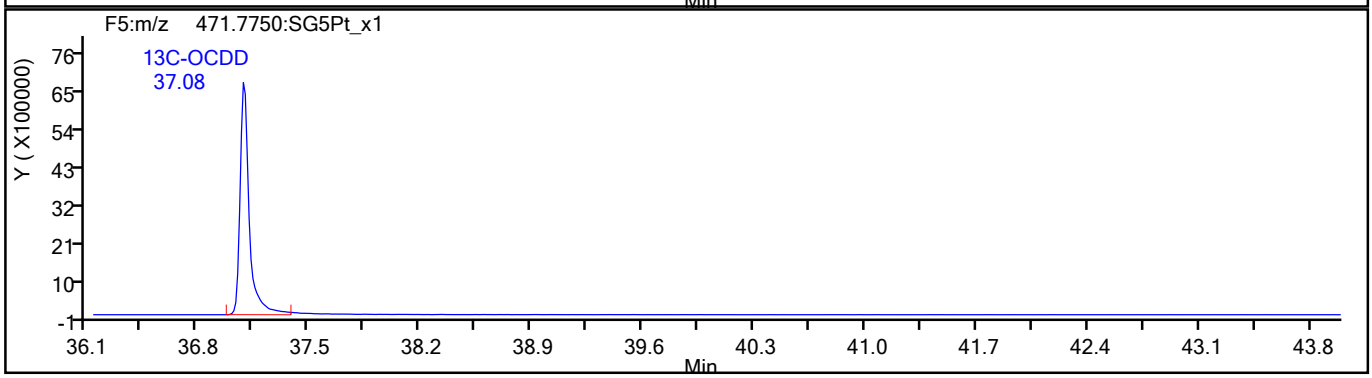

792634

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

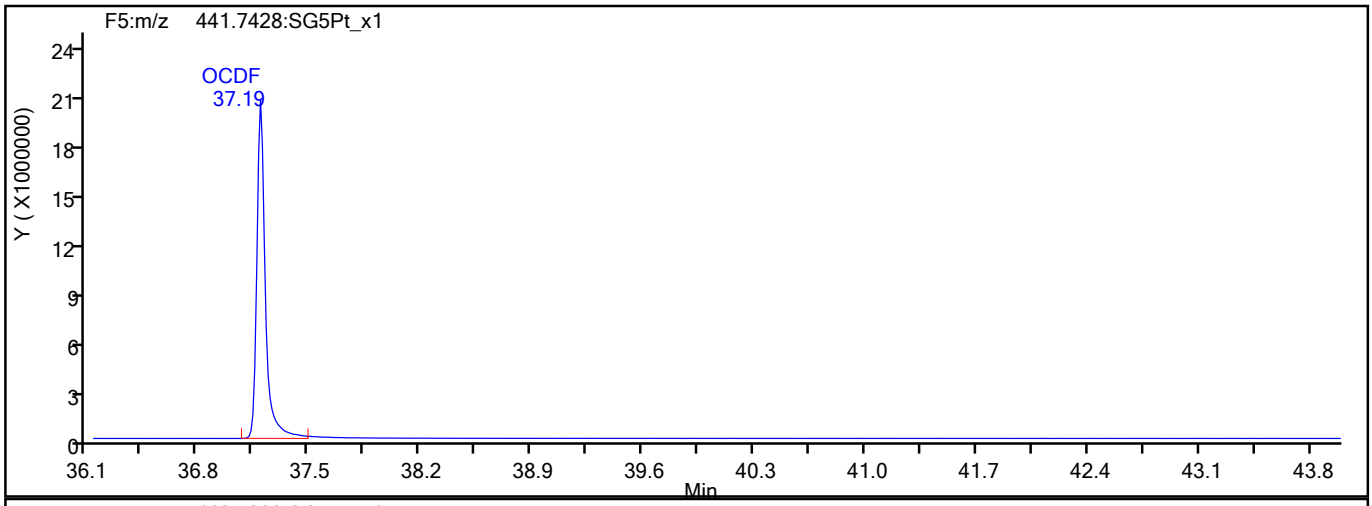

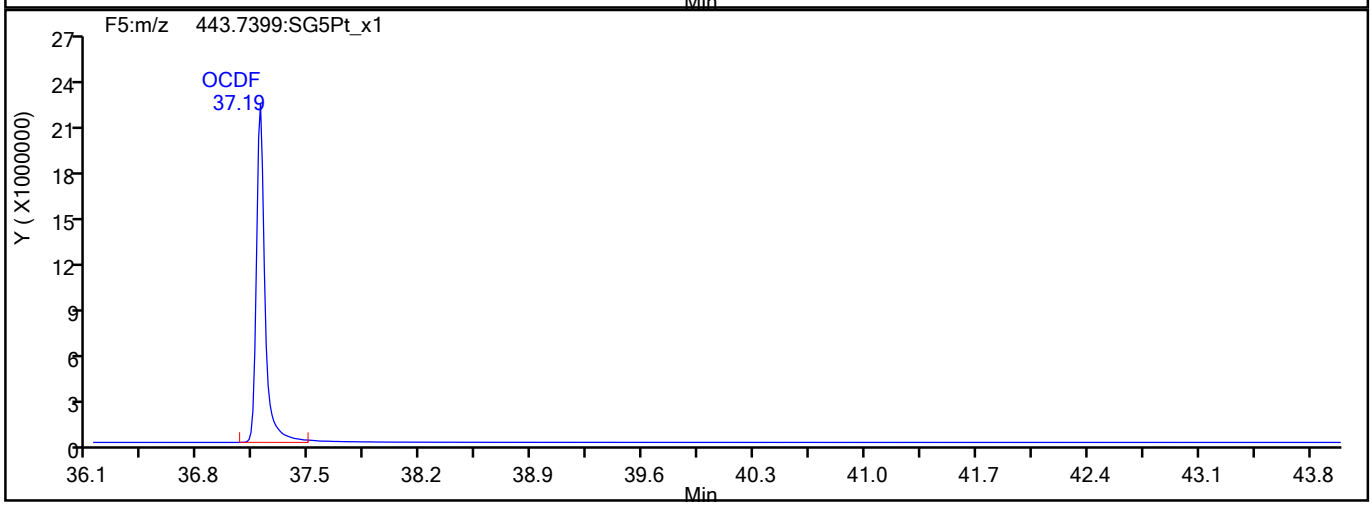

OCDF Interference Mass

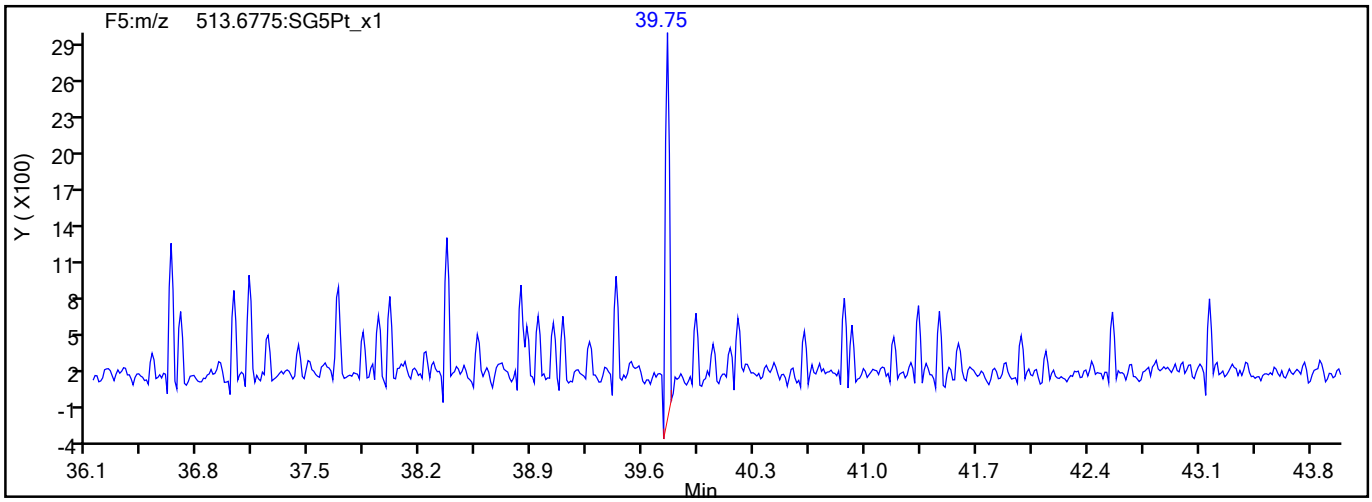

792635

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

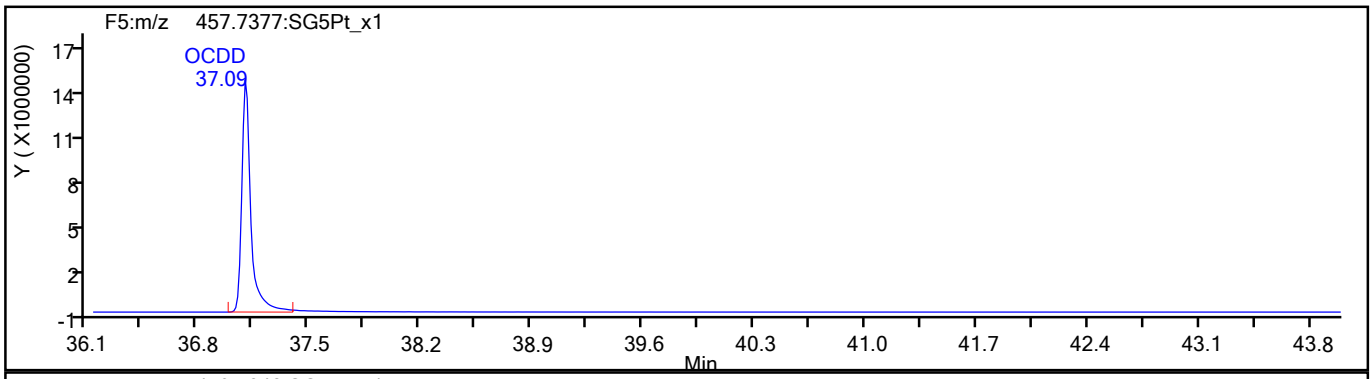

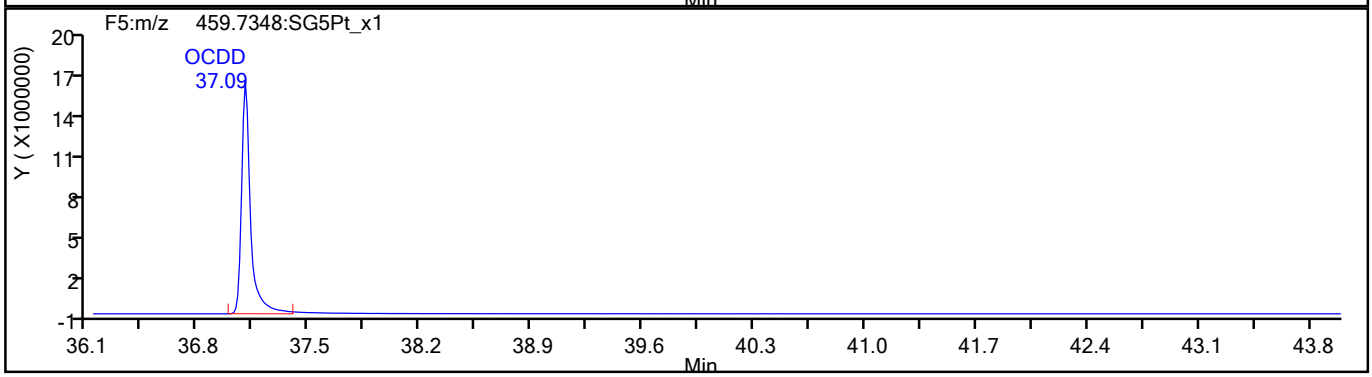

OCDD Standards

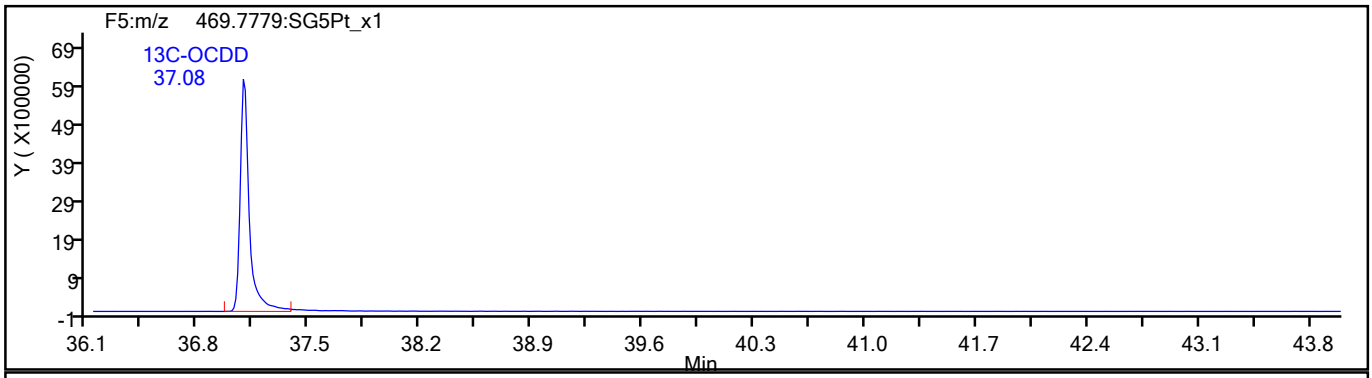

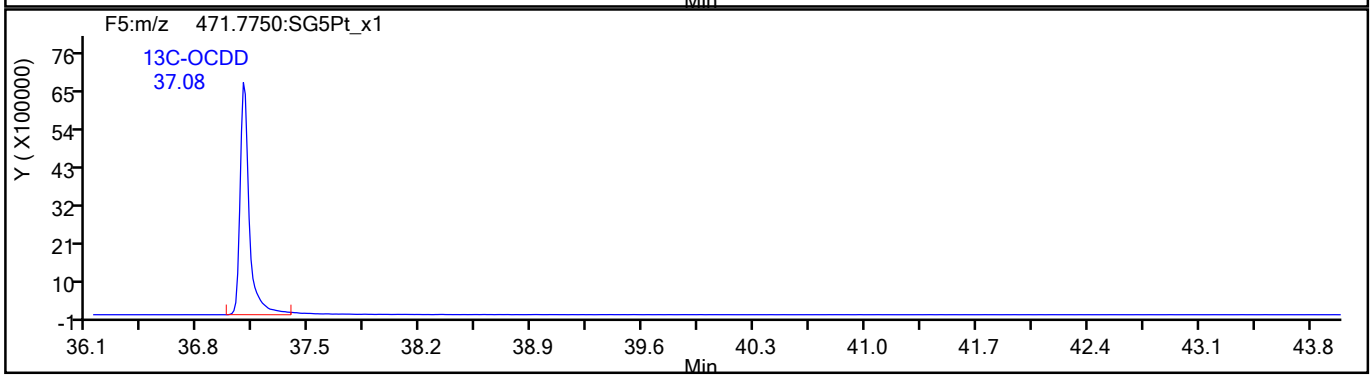

792636

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

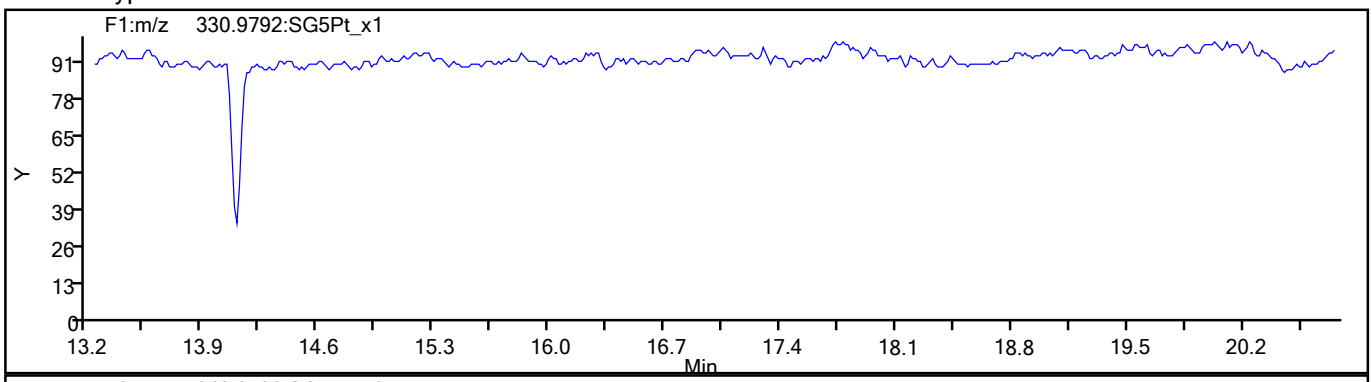

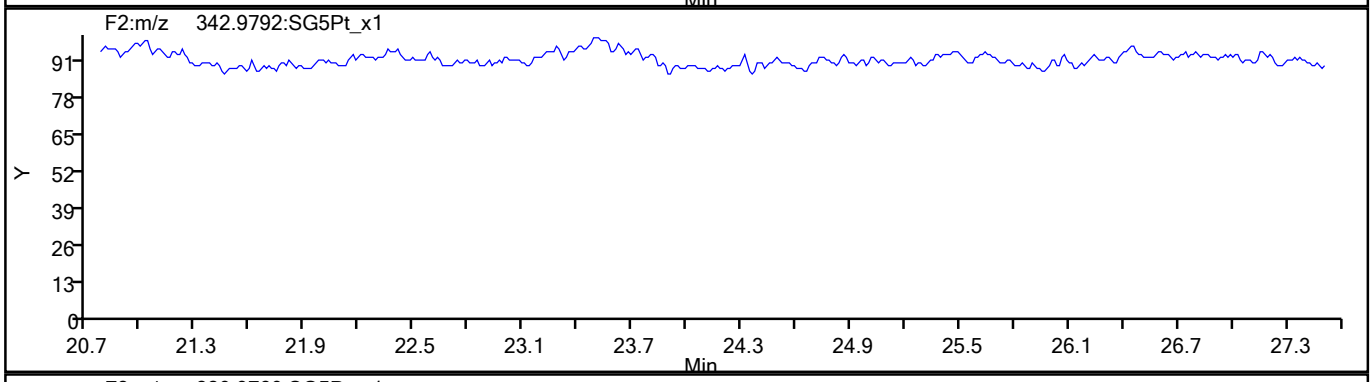

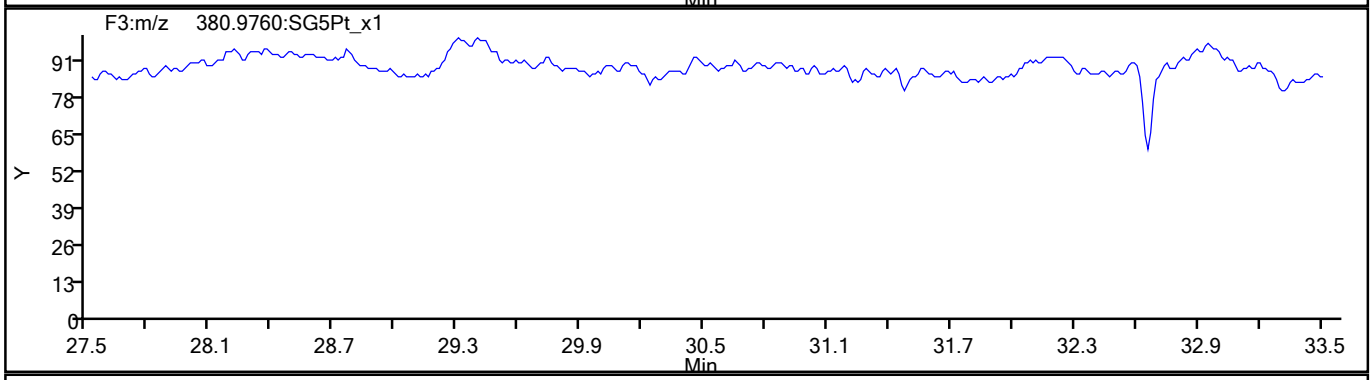

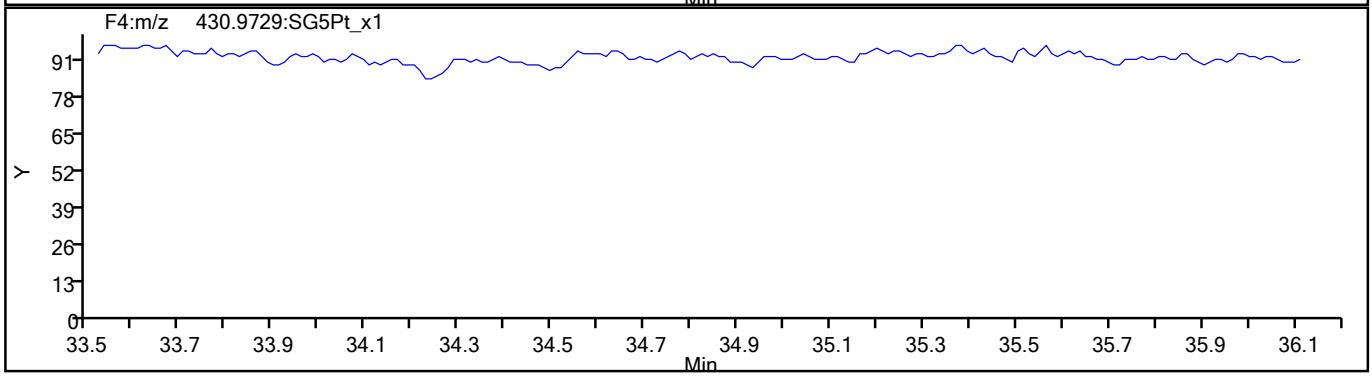

792637

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

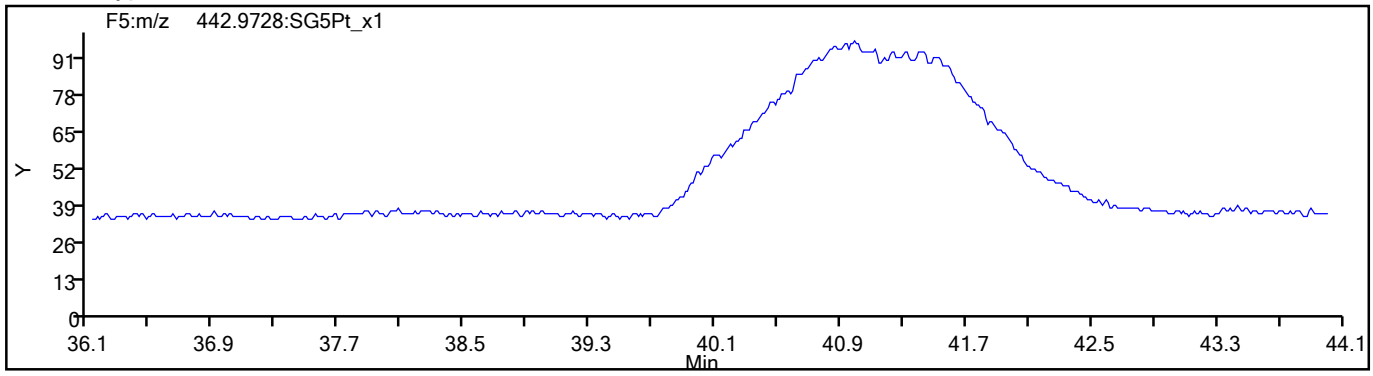

792638

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab Sample ID: CCV 320-519953/2 Calibration Date: 08/25/2021 10:23

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 25AU2110D5_2.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.033		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.264		10.1	10.0	101	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.071		50.5	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.030		50.6	50.0	101	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.040		49.6	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.065		49.1	50.0	98	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.133		50.3	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.164		49.9	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.081		50.8	50.0	102	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.035		51.7	50.0	103	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.162		51.3	50.0	103	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.174		50.3	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.492		51.8	50.0	104	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.112		50.8	50.0	102	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.336		50.7	50.0	101	86-116
OCDD	AveID	1.107	1.127		102	100	102	79-126
OCDF	AveID	1.438	1.437		99.9	100	100	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.567		96.5	100	96	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9108		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.224		101	100	101	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.259		102	100	102	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8158		107	100	107	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.143		105	100	105	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.110		98.4	100	98	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.054		99.1	100	99	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7889		108	100	108	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8458		96.1	100	96	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9641		99.6	100	100	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7122		92.1	100	92	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6224		96.2	100	96	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6382		91.1	100	91	77-129
13C-OCDD	Ave	0.4472	0.4538		203	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.183		10.7	10.0	107	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\25AU2110D5.SPL
Last Modified: Thursday, August 26, 2021 09:49:48 Pacific Daylight Time
Printed: Thursday, August 26, 2021 09:49:53 Pacific Daylight Time

Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	25AU2110D5_1	WDM HRDXNCP_00044	WDM 082521B	Tray01:1	Dioxin		SMA
2	25AU2110D5_2	CS-4 HRDXNL4_00099	CCV 082521	Tray01:2	Dioxin		SMA
3	25AU2110D5_3	MB 320-515492/1-A	MB 320-515492/1-A	Tray01:4	1613B/Solid	D270	SMA
4	25AU2110D5_4	LCS 320-515492/2-A	LCS 320-515492/2-A	Tray01:5	1613B/Solid	---	SMA
5	25AU2110D5_5	320-77214-A-1-A	320-77214-A-1-A	Tray01:6	1613B/Solid	---	SMA
6	25AU2110D5_6	320-77214-A-2-A	320-77214-A-2-A	Tray01:7	1613B/Solid		SMA
7	25AU2110D5_7	320-77214-A-2-B MS	320-77214-A-2-B MS	Tray01:8	1613B/Solid		SMA
8	25AU2110D5_8	320-77214-A-2-C MSD	320-77214-A-2-C MSD	Tray01:9	1613B/Solid	---	SMA
9	25AU2110D5_9	320-77214-A-3-A	320-77214-A-3-A	Tray01:10	1613B/Solid	---	SMA
10	25AU2110D5_10	320-77214-A-4-A	320-77214-A-4-A	Tray01:11	1613B/Solid		SMA
11	25AU2110D5_11	320-77214-A-5-A	320-77214-A-5-A	Tray01:15	1613B/Solid		SMA
12	25AU2110D5_12	320-77214-A-6-A	320-77214-A-6-A	Tray01:16	1613B/Solid		SMA
13	25AU2110D5_13	320-77214-A-7-A	320-77214-A-7-A	Tray01:17	1613B/Solid	---	SMA
14	25AU2110D5_14	SB Solvent Blank C-14	SB 082521	Tray01:3			SMA
15	25AU2110D5_15	CS-4 HRDXNL4_00099	CCV 082521A	Tray01:2	Dioxin		SMA
16	25AU2110D5_16	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
17	25AU2110D5_17	SB Solvent Blank C-14	SB 082521A	Tray01:3			SMA
18	25AU2110D5_18	320-77214-A-8-A	320-77214-A-8-A	Tray01:29	1613B/Solid	D270	SMA
19	25AU2110D5_19	320-77214-A-9-A	320-77214-A-9-A	Tray01:30	1613B/Solid		SMA
20	25AU2110D5_20	320-77214-A-13-A	320-77214-A-13-A	Tray01:31	1613B/Solid		SMA
21	25AU2110D5_21	320-77292-A-1-A	320-77292-A-1-A	Tray01:32	1613B/Solid		SMA
22	25AU2110D5_22	320-77292-A-2-A	320-77292-A-2-A	Tray01:33	1613B/Solid		SMA
23	25AU2110D5_23	320-77292-A-2-B MS	320-77292-A-2-B MS	Tray01:34	1613B/Solid		SMA
24	25AU2110D5_24	320-77292-A-2-C MSD	320-77292-A-2-C MSD	Tray01:35	1613B/Solid		SMA
25	25AU2110D5_25	320-77292-A-3-A	320-77292-A-3-A	Tray01:36	1613B/Solid		SMA
26	25AU2110D5_26	320-77292-A-4-A	320-77292-A-4-A	Tray01:37	1613B/Solid		SMA
27	25AU2110D5_27	320-77292-A-5-A	320-77292-A-5-A	Tray01:38	1613B/Solid		SMA
28	25AU2110D5_28	SB Solvent Blank C-14	SB 082521B	Tray01:3			SMA
29	25AU2110D5_29	CS-4 HRDXNL4_00099	CCV 082521B	Tray01:2	Dioxin		SMA
30	25AU2110D5_30	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
31	25AU2110D5_31	SB Solvent Blank C-14	SB 082521C	Tray01:3			SMA
32	25AU2110D5_32	320-77292-A-6-A	320-77292-A-6-A	Tray01:43	1613B/Solid	D270	SMA
33	25AU2110D5_33	320-77292-A-7-A	320-77292-A-7-A	Tray01:44	1613B/Solid		SMA
34	25AU2110D5_34	320-77292-A-8-A	320-77292-A-8-A	Tray01:45	1613B/Solid		SMA
35	25AU2110D5_35	320-77292-A-9-A	320-77292-A-9-A	Tray01:46	1613B/Solid		SMA
36	25AU2110D5_36	320-77292-A-13-A	320-77292-A-13-A	Tray01:47	1613B/Solid		SMA
37	25AU2110D5_37	400-206693-C-22-A	400-206693-C-22-A	Tray01:48	1613B/Solid		SMA
38	25AU2110D5_38	400-206693-C-36-A	400-206693-C-36-A	Tray01:49	1613B/Solid		SMA
39	25AU2110D5_39	400-206693-C-37-A	400-206693-C-37-A	Tray01:50	1613B/Solid		SMA
40	25AU2110D5_40	400-206693-C-38-A	400-206693-C-38-A	Tray01:51	1613B/Solid		SMA
41	25AU2110D5_41	400-206693-C-39-A	400-206693-C-39-A	Tray01:52	1613B/Solid		SMA
42	25AU2110D5_42	SB Solvent Blank C-14	SB 082521D	Tray01:3			SMA
43	25AU2110D5_43	CS-4 HRDXNL4_00099	CCV 082521C	Tray01:2	Dioxin		SMA
44	25AU2110D5_44	WDM HRDXNCP_00044	WDM 082521C	Tray01:1	Dioxin	---	SMA
45	25AU2110D5_45	SB Solvent Blank C-14	SB 082521E	Tray01:3			SMA

LOGFILE CHECKED
DB 8/26/21

792640

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover

Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
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---	---	C:\CHROM
---	---	C:\CHROM
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---	---	C:\CHROM
---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Wednesday, August 25, 2021 09:34:25 Pacific Daylight Time

M 292.9824 R 13583

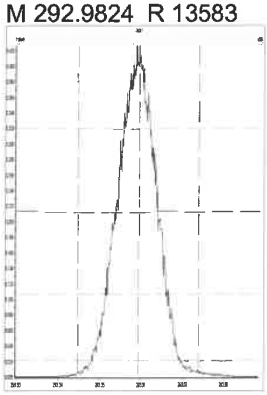

M 304.9824 R 13961

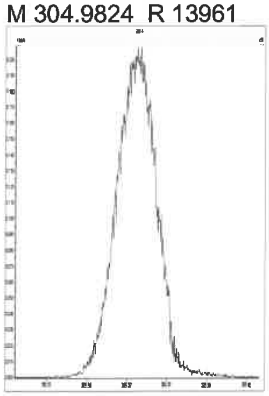

M 318.9792 R 14368

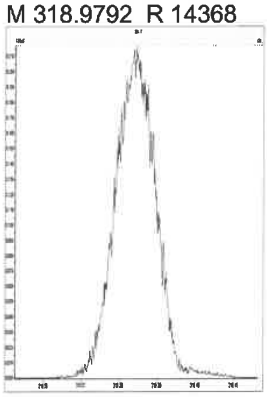

M 330.9792 R 13971

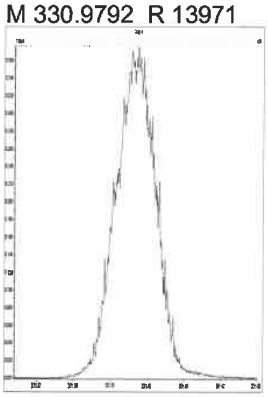

M 342.9792 R 13809

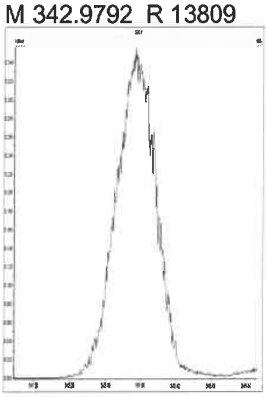

M 354.9792 R 14200

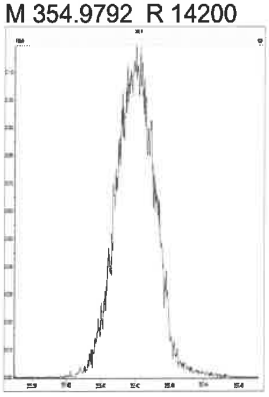

M 366.9792 R 13736

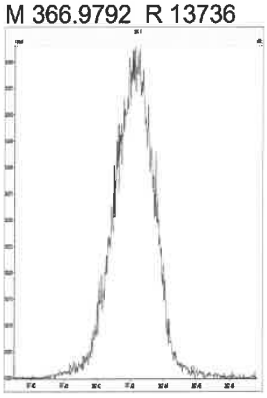

M 380.9760 R 14449

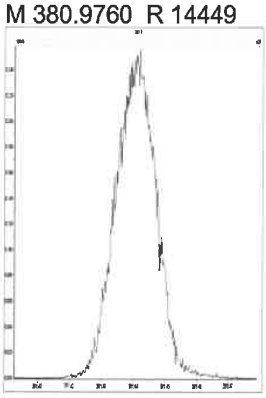

M 392.9760 R 13809

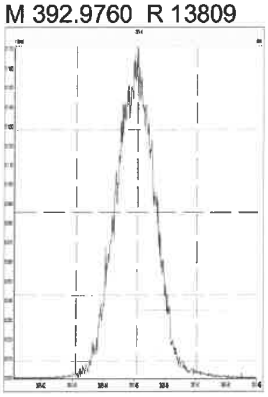

M 404.9760 R 13370

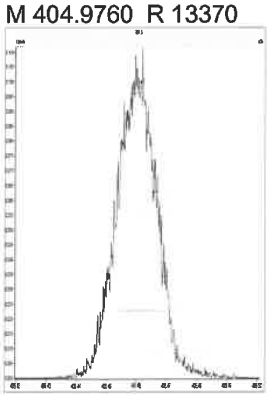

M 416.9760 R 13735

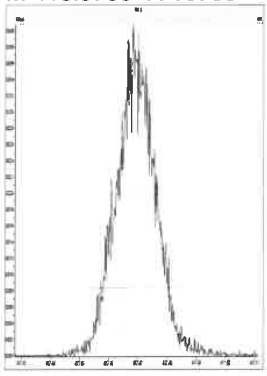

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Wednesday, August 25, 2021 09:35:09 Pacific Daylight Time

M 318.9792 R 14045

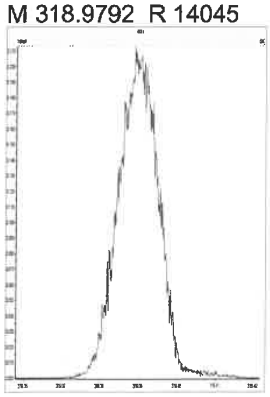

M 330.9792 R 14284

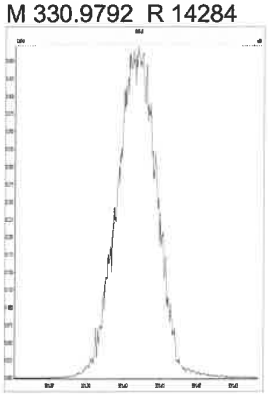

M 342.9792 R 13733

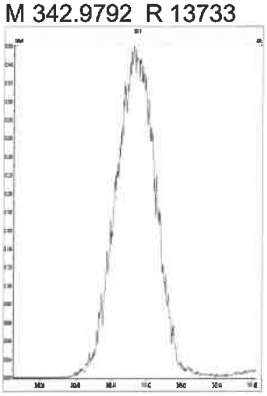

M 354.9792 R 14200

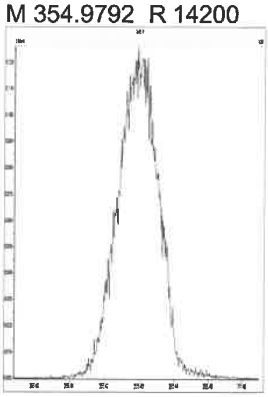

M 366.9792 R 14124

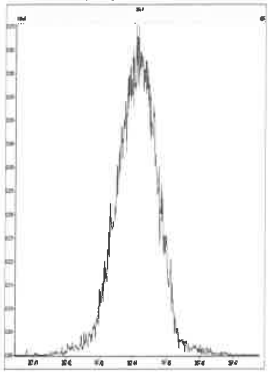

M 380.9760 R 13586

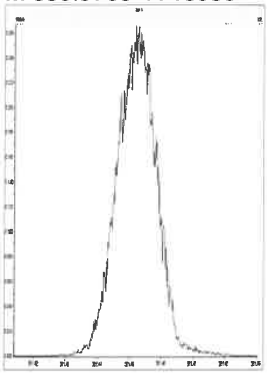

M 392.9760 R 14127

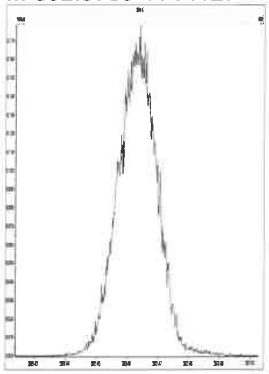

M 404.9760 R 13442

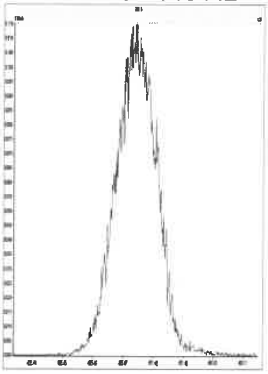

M 416.9760 R 13736

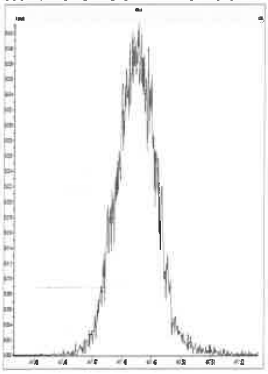

792644

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Wednesday, August 25, 2021 09:35:47 Pacific Daylight Time

M 366.9792 R 14622

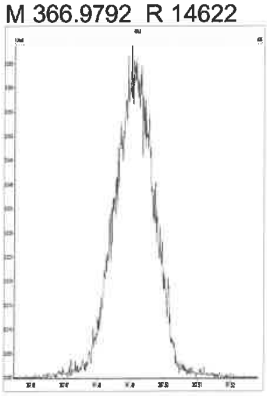

M 380.9760 R 13813

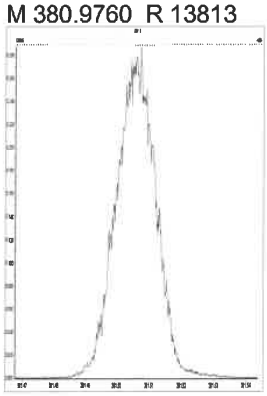

M 392.9760 R 13736

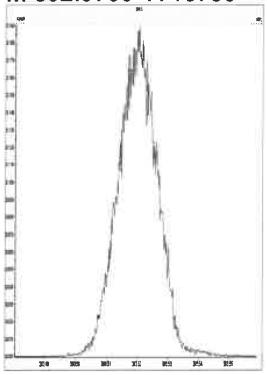

M 404.9760 R 14284

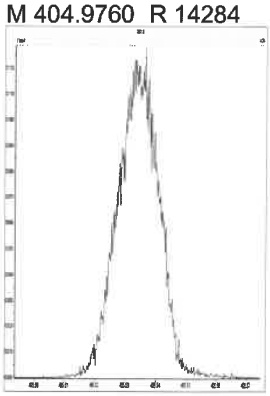

M 416.9760 R 13738

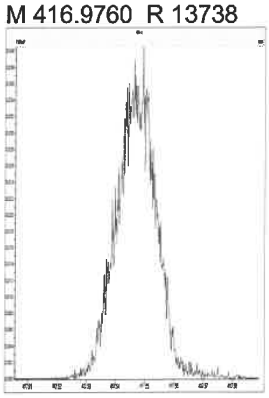

M 430.9728 R 13808

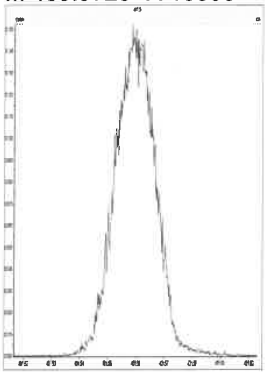

M 442.9728 R 14367

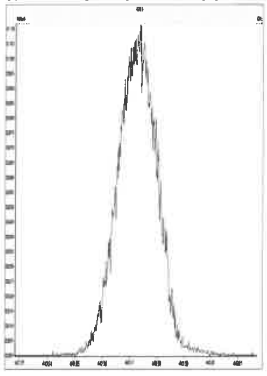

M 454.9728 R 13965

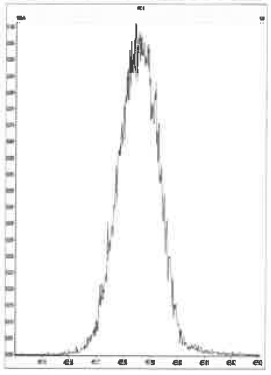

792645

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed: Wednesday, August 25, 2021 09:36:29 Pacific Daylight Time

M 380.9760 R 14448

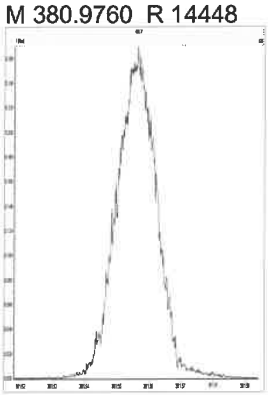

M 392.9760 R 14206

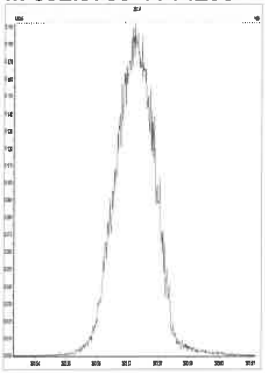

M 404.9760 R 13736

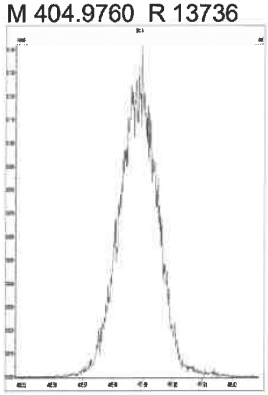

M 416.9760 R 14449

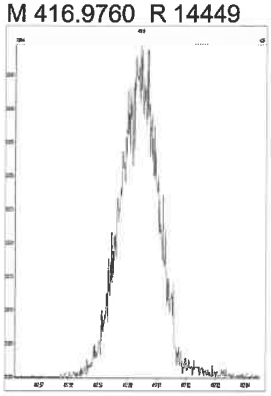

M 430.9728 R 13815

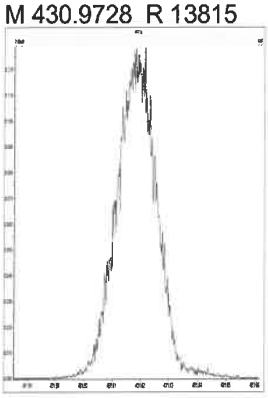

M 442.9728 R 14126

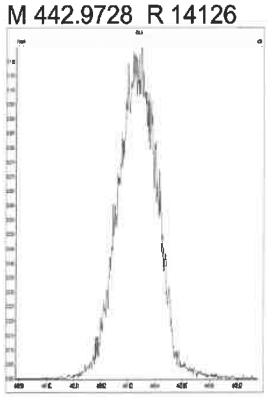

M 454.9728 R 13812

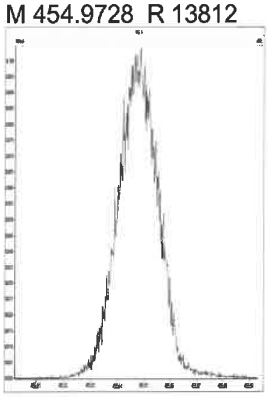

M 466.9728 R 13735

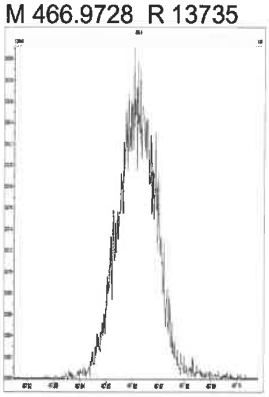

M 480.9696 R 13659

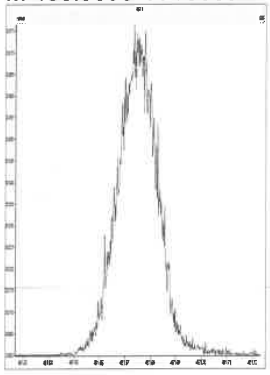

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed: Wednesday, August 25, 2021 09:37:18 Pacific Daylight Time

M 380.9760 R 13815

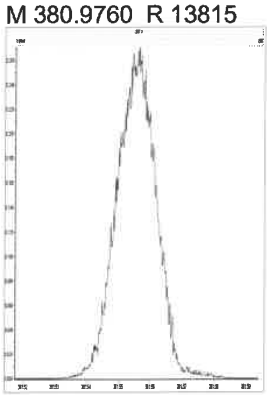

M 392.9760 R 13962

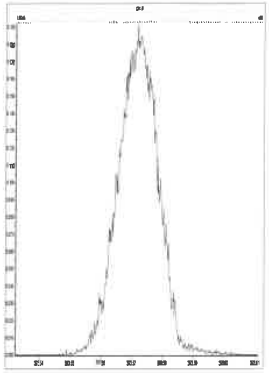

M 404.9760 R 13889

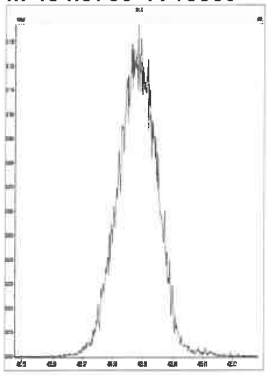

M 416.9760 R 14123

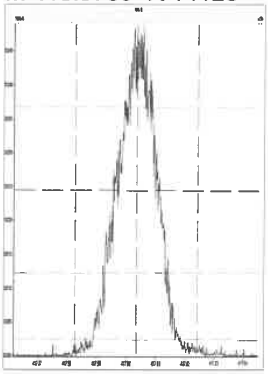

M 430.9728 R 14371

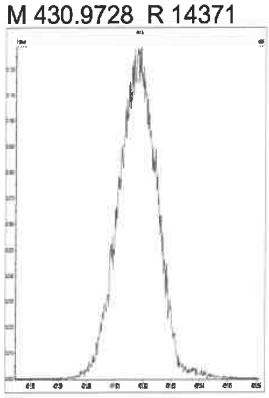

M 442.9728 R 14282

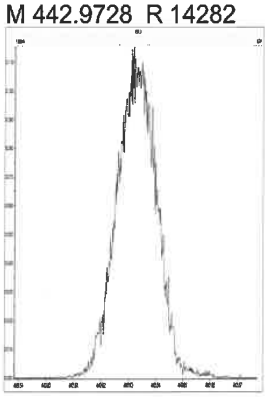

M 454.9728 R 13736

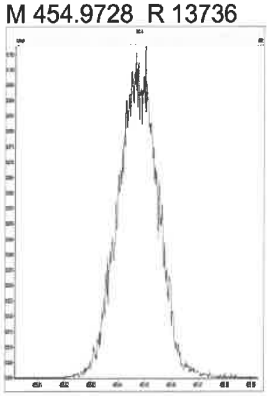

M 466.9728 R 14880

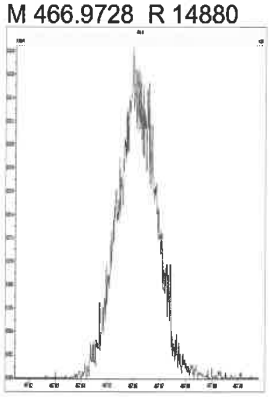

M 480.9696 R 14449

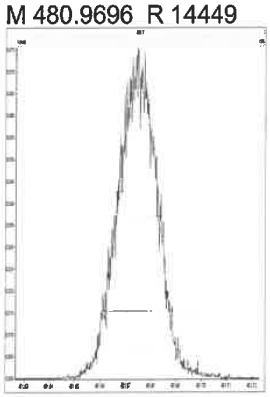

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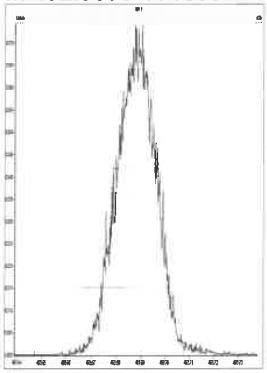

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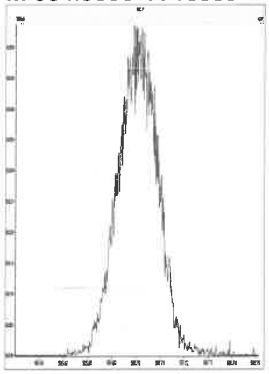

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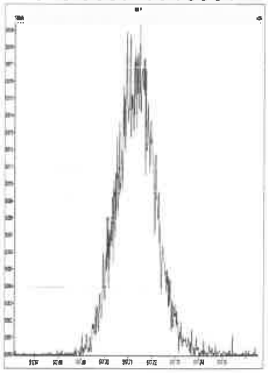

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M 292.9824 R 11469

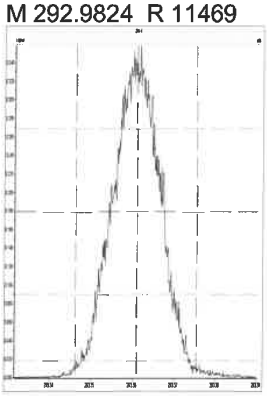

M 304.9824 R 11968

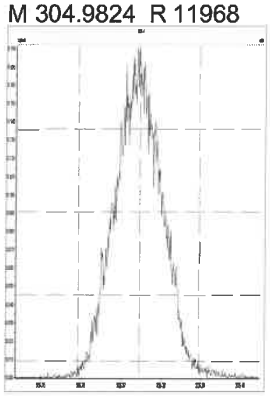

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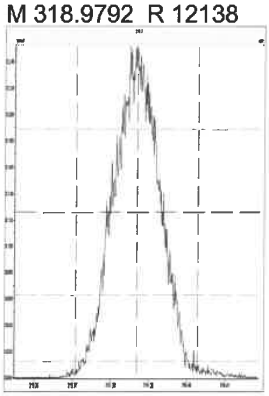

M 330.9792 R 11737

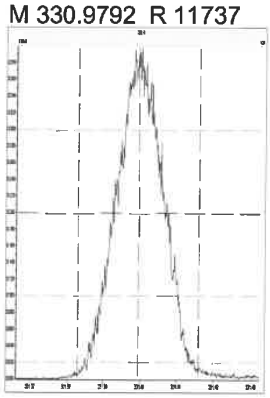

M 342.9792 R 11337

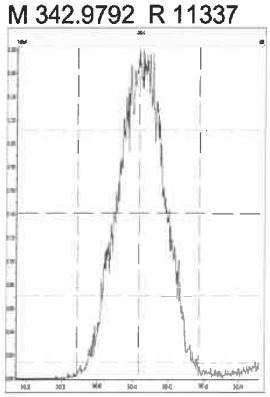

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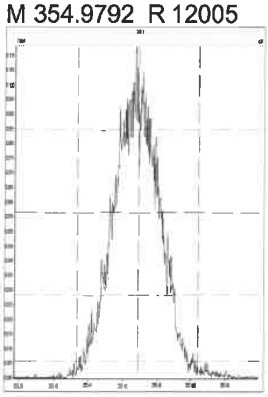

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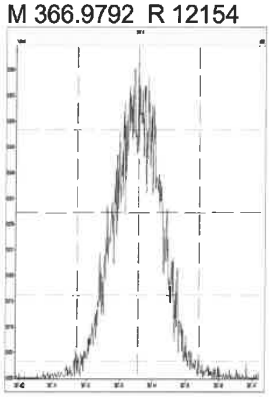

M 380.9760 R 11236

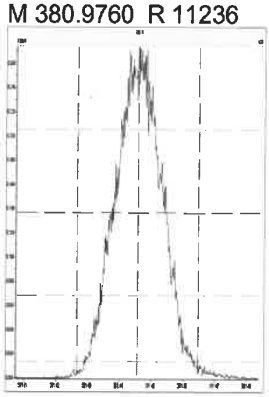

M 392.9760 R 11765

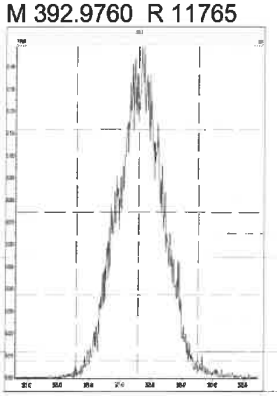

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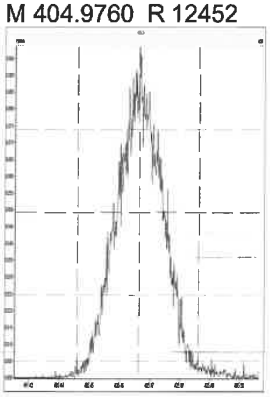

M 416.9760 R 12315

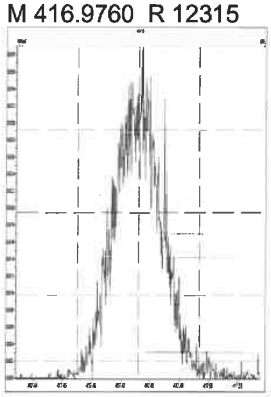

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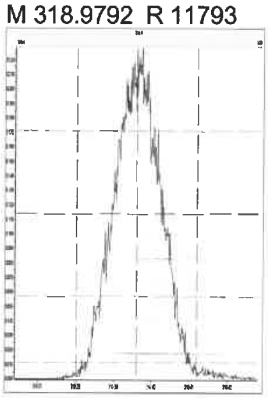

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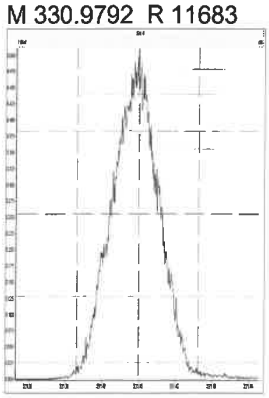

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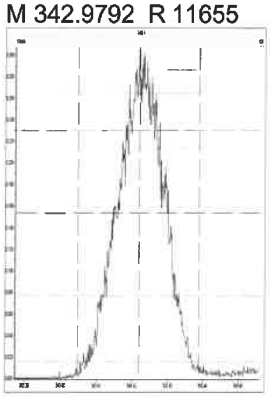

M 354.9792 R 11737

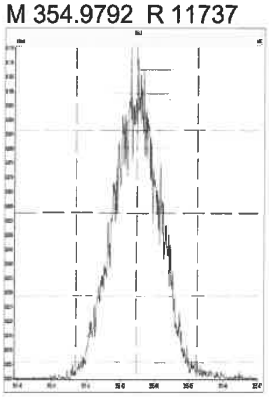

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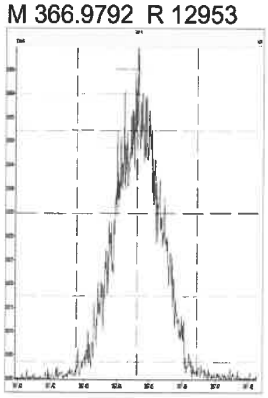

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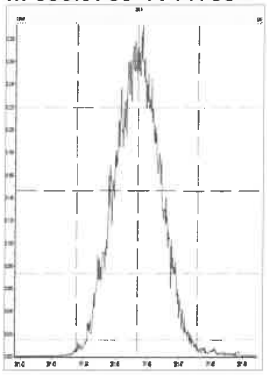

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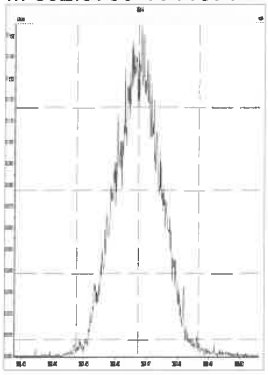

M 404.9760 R 12122

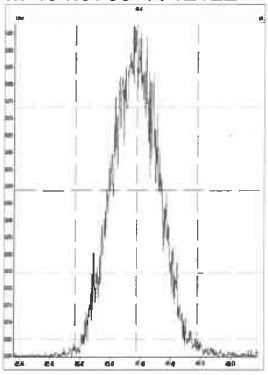

M 416.9760 R 12525

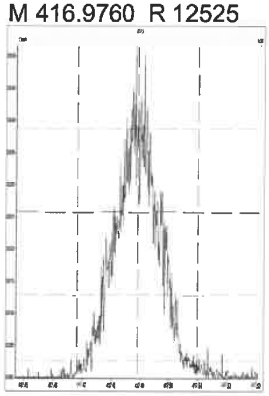

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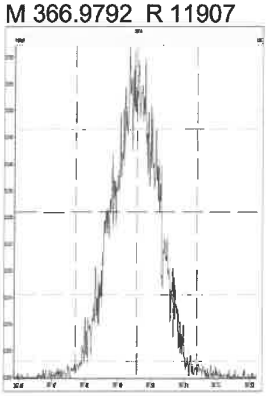

M 380.9760 R 11656

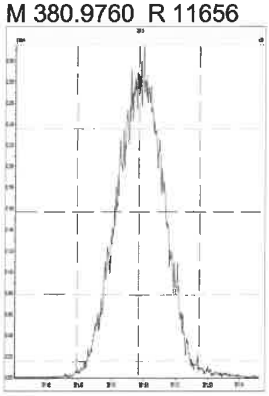

M 392.9760 R 11990

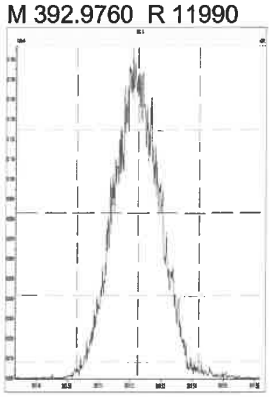

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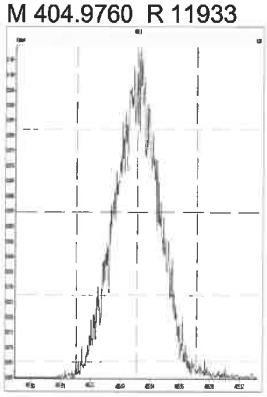

M 416.9760 R 12567

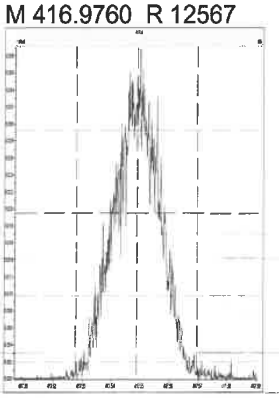

M 430.9728 R 11765

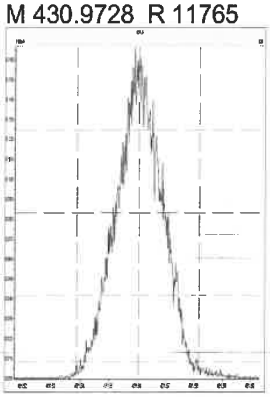

M 442.9728 R 12165

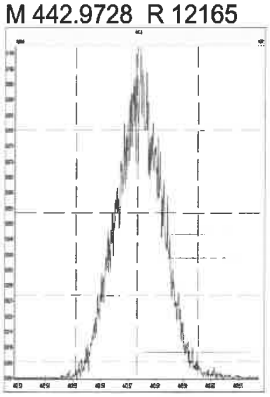

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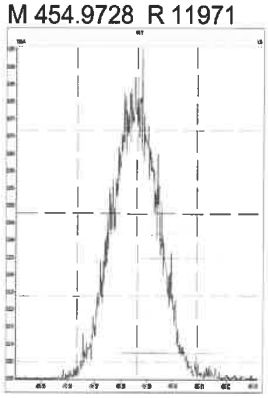

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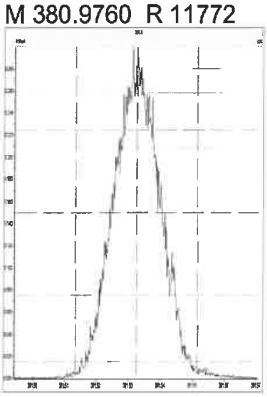

M 392.9760 R 12142

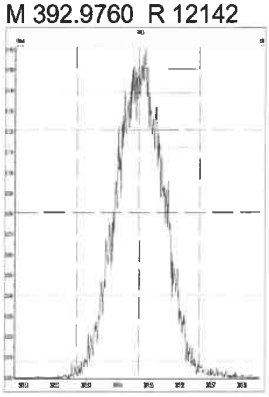

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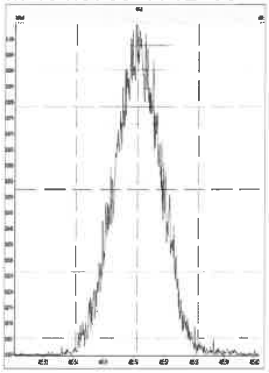

M 416.9760 R 12470

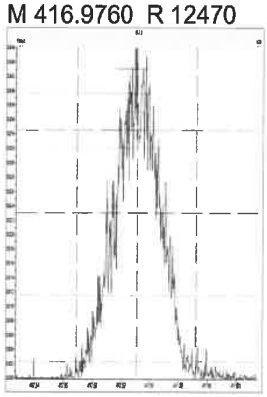

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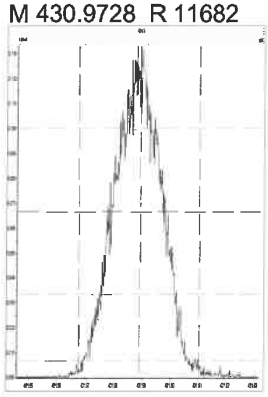

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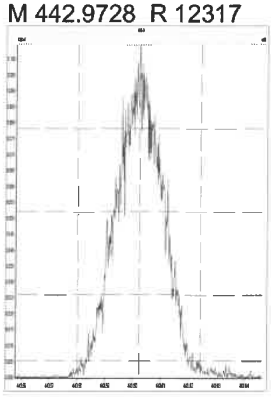

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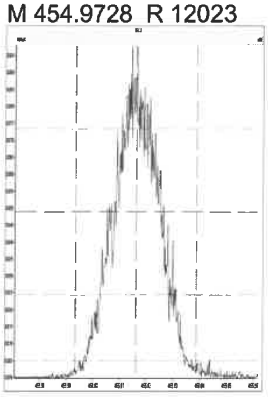

M 466.9728 R 12574

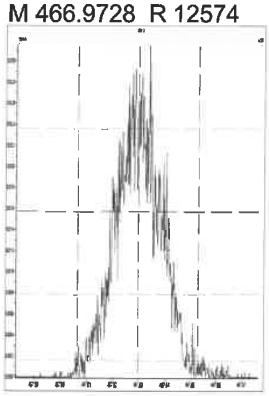

M 480.9696 R 11993

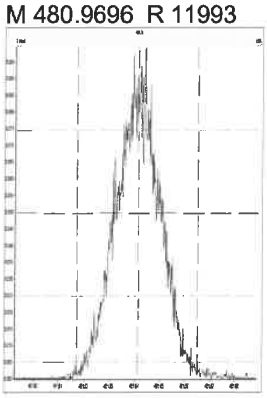

M 380.9760 R 11966

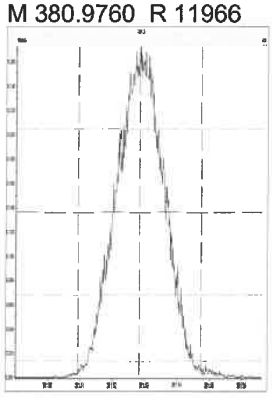

M 392.9760 R 11990

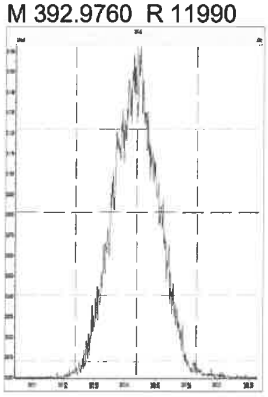

M 404.9760 R 12005

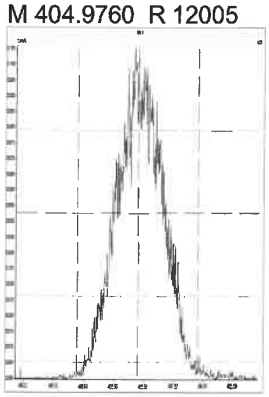

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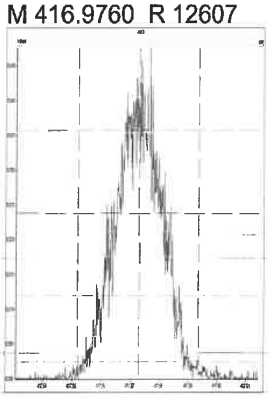

M 430.9728 R 11852

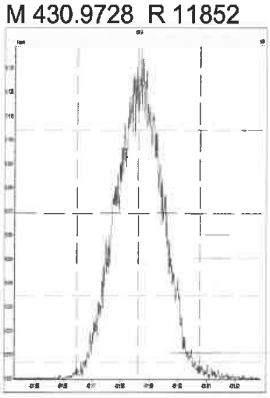

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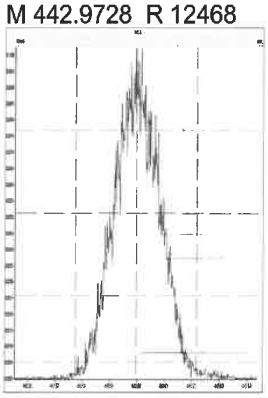

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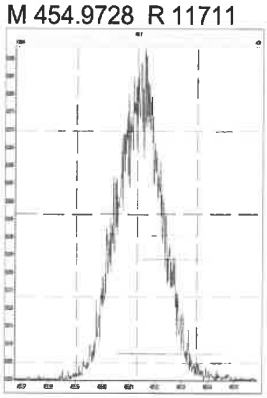

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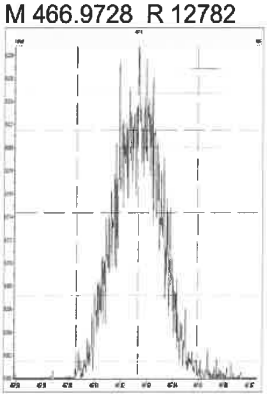

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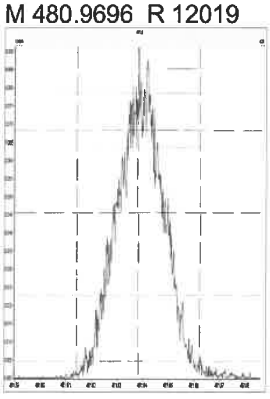

M 492.9696 R 12345

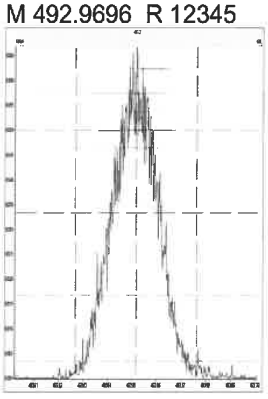

M 504.9696 R 11934

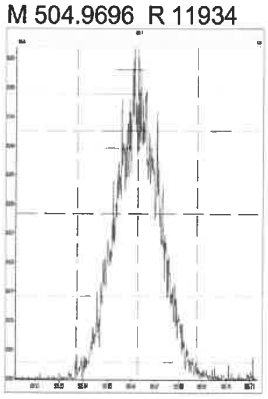

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Printed: Wednesday, August 25, 2021 19:45:28 Pacific Daylight Time

M 516.9697 R 12181

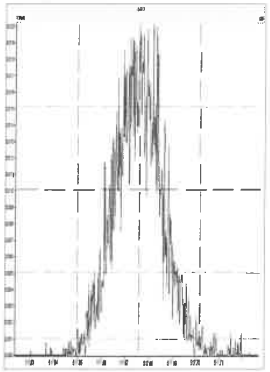

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 10:23:18 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521 CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:07:33 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 09:53:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	95426706	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	149558042	0.77	1.6249	96.5	96.5	0.1278	0.1278	96.45	
2,3,7,8-TCDF	17.114	15442033	0.76	1.0239	10.1	10.1	0.0119	0.0119	101	
A Non-2,3,7,8-sub-TCDF	17.076						0.0119	0.0119		n
S Total TCDF					10.1	10.1	0.0119	0.0119		
D 13C-2,3,7,8-TCDD	17.794	86917847	0.80	0.8993	101.3	101.3	0.1056	0.1056	101	
2,3,7,8-TCDD	17.809	10985356	0.77	1.2541	10.1	10.1	0.0146	0.0146	101	
$ 37Cl4-2,3,7,8-TCDD	17.809	11292579		1.1071	10.7	10.7	0.0131	0.0131	107	
A Non-2,3,7,8-sub-TCDD	17.537						0.0146	0.0146		
S Total TCDD					10.1	10.1	0.0146	0.0146		
D 13C-1,2,3,7,8-PeCDF	22.020	116756186	1.57	1.2101	101.1	101.1	0.1265	0.1265	101	
1,2,3,7,8-PeCDF	22.047	62539011	1.59	1.0611	50.5	50.5	0.0855	0.0855	101	
D 13C-2,3,4,7,8-PeCDF	23.343	120116302	1.55	1.2395	101.6	101.6	0.1235	0.1235	102	
2,3,4,7,8-PeCDF	23.370	61838250	1.60	1.0184	50.6	50.6	0.0923	0.0923	101	
A F1 PeCDFs	19.851						0.009352	0.009352		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0888	0.0888		n
S Total PeCDF					101.0	101.0	0.0889	0.0889		
D 13C-1,2,3,7,8-PeCDD	24.052	77848987	1.59	0.7612	107.2	107.2	0.0785	0.0785	107	
1,2,3,7,8-PeCDD	24.079	40474436	1.58	1.0484	49.6	49.6	0.0357	0.0357	99.18	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0357	0.0357		
S Total PeCDD					49.6	49.6	0.0357	0.0357		
D 13C-1,2,3,4,7,8-HxCDF	30.186	99336191	0.53	1.0837	105.5	105.5	0.1987	0.1987	105	
1,2,3,4,7,8-HxCDF	30.213	52900636	1.23	1.0851	49.1	49.1	0.1545	0.1545	98.15	
D 13C-1,2,3,6,7,8-HxCDF	30.399	96483405	0.51	1.1279	98.4	98.4	0.1909	0.1909	98.42	
1,2,3,6,7,8-HxCDF	30.412	54659951	1.21	1.1260	50.3	50.3	0.1450	0.1450	101	
D 13C-2,3,4,6,7,8-HxCDF	31.291	91593699	0.52	1.0637	99.1	99.1	0.2024	0.2024	99.07	
2,3,4,6,7,8-HxCDF	31.317	53318614	1.22	1.1675	49.9	49.9	0.1090	0.1090	99.72	
D 13C-1,2,3,7,8,9-HxCDF	32.143	83790666	0.51	0.9676	99.6	99.6	0.2225	0.2225	99.64	
1,2,3,7,8,9-HxCDF	32.156	49172613	1.22	1.1664	50.3	50.3	0.1004	0.1004	101	
A Non-2,3,7,8-sub-HxCDF	30.338						0.1236	0.1236		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					199.6	199.6	0.1272	0.1272		
* 13C-1,2,3,7,8,9-HxCDD	31.956	86914319	1.20	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.504	68569558	1.23	0.7334	107.6	107.6	0.1931	0.1931	108	
1,2,3,4,7,8-HxCDD	31.517	37045049	1.27	1.0640	50.8	50.8	0.1077	0.1077	102	
D 13C-1,2,3,6,7,8-HxCDD	31.610	73508450	1.21	0.8802	96.1	96.1	0.1609	0.1609	96.09	
1,2,3,6,7,8-HxCDD	31.624	38037775	1.27	1.0001	51.7	51.7	0.1038	0.1038	103	
1,2,3,7,8,9-HxCDD	31.969	41264327	1.28	1.1325	51.3	51.3	0.0962	0.0962	103	
A Non-2,3,7,8-sub-HxCDD	30.525						0.1023	0.1023		
S Total HxCDD					153.8	153.8	0.1026	0.1026		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	61903063	0.45	0.7730	92.1	92.1	0.7607	0.7607	92.14	
1,2,3,4,6,7,8-HpCDF	33.615	46189366	1.04	1.4413	51.8	51.8	0.3832	0.3832	104	
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	55466008	0.44	0.7008	91.1	91.1	0.8391	0.8391	91.06	
1,2,3,4,7,8,9-HpCDF	34.685	37045047	1.05	1.3174	50.7	50.7	0.5046	0.5046	101	
A Non-2,3,7,8-sub-HpCDF	34.150						0.4374	0.4374		
S Total HpCDF					102.5	102.5	0.4439	0.4439		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	54097651	1.03	0.6472	96.2	96.2	0.3643	0.3643	96.17	
1,2,3,4,6,7,8-HpCDD	34.405	30069728	1.04	1.0943	50.8	50.8	0.1121	0.1121	102	
A Non-2,3,7,8-sub-HpCDD	34.223						0.1121	0.1121		
S Total HpCDD					50.8	50.8	0.1121	0.1121		
D 13C-OCDD	36.701	78890798	0.88	0.4472	203.0	203.0	0.1367	0.1367	101	
OCDF	36.797	56664152	0.90	1.4382	99.9	99.9	0.0518	0.0518	99.89	
OCDD	36.713	44448060	0.90	1.1070	101.8	101.8	0.0691	0.0691	102	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 10:23:18 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521 CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:07:33 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 09:53:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		42636469	10783942	4601	11502	2344		
333.9339	17.598	17.598	0		52790237	13523329	4632	11580	2920	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	0.972	64979120	17289325	11211	28027	1542		
317.9389	17.099	17.099	0	0.972	84578922	22501260	8979	22447	2506	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	6673154	1784472	819	2047	2179		
305.8987	17.114	17.114	0	1.001	8768879	2378418	1117	2792	2129	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.751	17.076	-19	0.980	28277	7073	819	2047	9		
305.8987	16.736	17.076	-20	0.979	33568	9535	1117	2792	9	0.84(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.011	38757049	9780640	4601	11502	2126		
333.9339	17.794	17.794	0	1.011	48160798	12185649	4632	11580	2631	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	4796214	1216842	916	2290	1328		
321.8936	17.809	17.809	0	1.001	6189142	1616489	696	1740	2323	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	11292579	2874252	1415	3537	2031		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.537						916	2290			
321.8936	17.537						696	1740			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	71302934	13323114	9020	22550	1477		
353.8970	22.020	22.020	0	1.251	45453252	8492167	5867	14667	1447	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.047	22.047	0	1.001	38375584	7269250	4572	11430	1590		
341.8567	22.047	22.047	0	1.001	24163427	4582774	3346	8365	1370	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.326	73058694	12781407	9020	22550	1417		
353.8970	23.343	23.343	0	1.326	47057608	8285675	5867	14667	1412	1.55(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370	23.370	0	1.001	38046727	6684330	4572	11430	1462		
341.8567	23.370	23.370	0	1.001	23791523	4200844	3346	8365	1255	1.60(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						225	562			
341.8567	19.851						609	1522			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.566	23.067	-30	1.025	288822	45293	4572	11430	10		
341.8567	22.566	23.067	-30	1.025	210196	29709	3346	8365	9	1.37(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.367	47825839	7773639	3395	8487	2290		
369.8919	24.052	24.052	0	1.367	30023148	4919671	2412	6030	2040	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079	24.079	0	1.001	24767137	4107038	1194	2985	3440		
357.8516	24.079	24.079	0	1.001	15707299	2563400	707	1767	3626	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1194	2985			
357.8516	23.696						707	1767			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.186	30.186	0	0.945	34233266	6021161	7305	18262	824		
385.8610	30.186	30.186	0	0.945	65102925	11323547	13504	33760	839	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.213	30.213	0	1.001	29168092	5093723	6383	15957	798		
375.8178	30.213	30.213	0	1.001	23732544	4088073	5250	13125	779	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	32782818	6104406	7305	18262	836		
385.8610	30.399	30.399	0	0.951	63700587	11709167	13504	33760	867	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.000	29925349	5641728	6383	15957	884		
375.8178	30.412	30.412	0	1.000	24734602	4662932	5250	13125	888	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.979	31290006	7903080	7305	18262	1082		
385.8610	31.291	31.291	0	0.979	60303693	14959211	13504	33760	1108	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317	31.317	0	1.001	29303955	7574478	6383	15957	1187		
375.8178	31.317	31.317	0	1.001	24014659	6161019	5250	13125	1174	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.143	0	1.006	28350597	8369834	7305	18262	1146		
385.8610	32.143	32.143	0	1.006	55440069	16459604	13504	33760	1219	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.156	32.156	0	1.000	26995736	8080479	6383	15957	1266		
375.8178	32.156	32.156	0	1.000	22176877	6632348	5250	13125	1263	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.338						6383	15957			
375.8178	30.338						5250	13125			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		47393034	13105507	8114	20285	1615		
403.8529	31.956	31.956	0		39521285	11057140	5572	13930	1984	1.20(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.504	31.504	0	0.986	37757708	10075244	8114	20285	1242		
403.8529	31.504	31.504	0	0.986	30811850	8262027	5572	13930	1483	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.517	31.517	0	1.000	20757104	5832636	4864	12160	1199		
391.8127	31.517	31.517	0	1.000	16287945	4484323	3543	8857	1266	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	40252330	11084473	8114	20285	1366		
403.8529	31.610	31.610	0	0.989	33256120	9155930	5572	13930	1643	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.624	31.624	0	1.000	21259538	5857482	4864	12160	1204		
391.8127	31.624	31.624	0	1.000	16778237	4665965	3543	8857	1317	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.969	31.969	0	1.015	23177969	6599118	4864	12160	1357		
391.8127	31.969	31.969	0	1.015	18086358	5109007	3543	8857	1442	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.525						4864	12160			
391.8127	30.525						3543	8857			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	19122193	7025458	16900	42250	416		
419.8220	33.603	33.603	0	1.052	42780870	15997374	39934	99835	401	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.615	0	1.000	23554347	8851066	24046	60115	368		
409.7789	33.615	33.615	0	1.000	22635019	8606504	26821	67052	321	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.672	0	1.085	16855088	5868781	16900	42250	347		
419.8220	34.672	34.672	0	1.085	38610920	13260503	39934	99835	332	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685	34.685	0	1.000	18976375	6679062	24046	60115	278		
409.7789	34.685	34.685	0	1.000	18068672	6337781	26821	67052	236	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						24046	60115			
409.7789	34.150						26821	67052			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	27397468	9930820	12548	31370	791		
437.8140	34.393	34.393	0	1.076	26700183	9787811	10240	25600	956	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	15298599	5518182	5713	14282	966		
425.7737	34.405	34.405	0	1.000	14771129	5248913	3965	9912	1324	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						5713	14282			
425.7737	34.223						3965	9912			
13C-OCDD											
469.7779	36.701	36.701	0	1.148	36914421	11312043	2832	7080	3994		
471.7750	36.701	36.701	0	1.148	41976377	12923885	3077	7692	4200	0.88(0.76-1.02)	
OCDF											
441.7428	36.797	36.797	0	1.003	26790568	8306782	1686	4215	4927		
443.7399	36.797	36.797	0	1.003	29873584	9434250	1922	4805	4909	0.90(0.76-1.02)	
OCDD											
457.7377	36.713	36.713	0	1.000	21012564	6604645	1431	3577	4615		
459.7348	36.713	36.713	0	1.000	23435496	7392070	2276	5690	3248	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

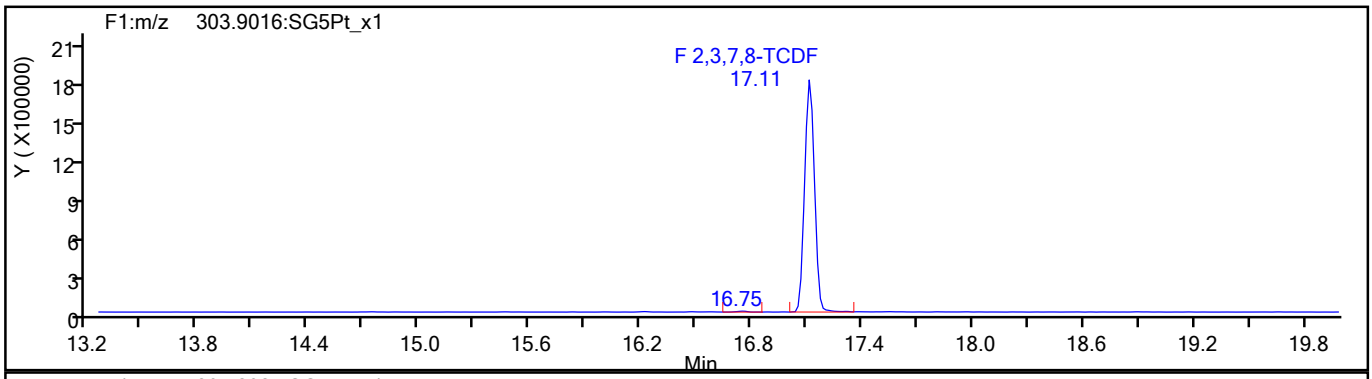

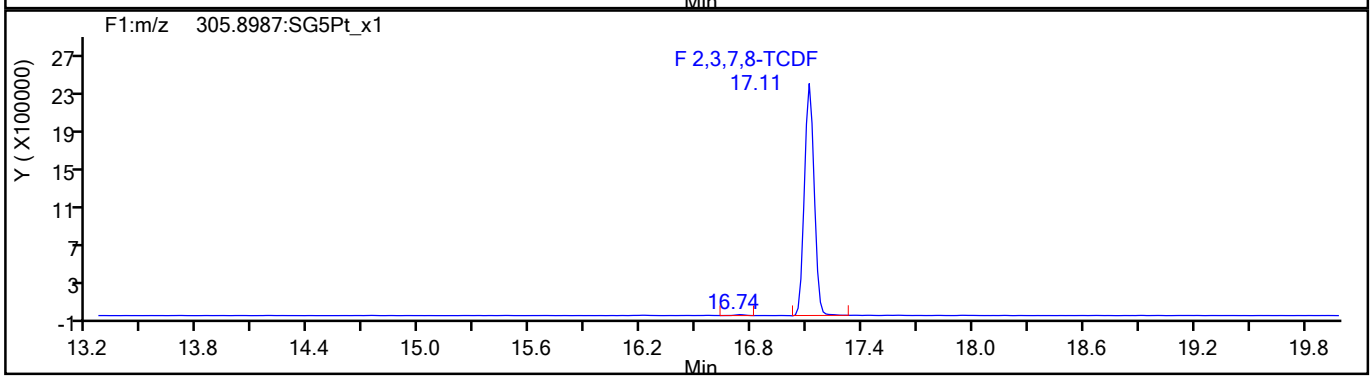

TCDF Standards

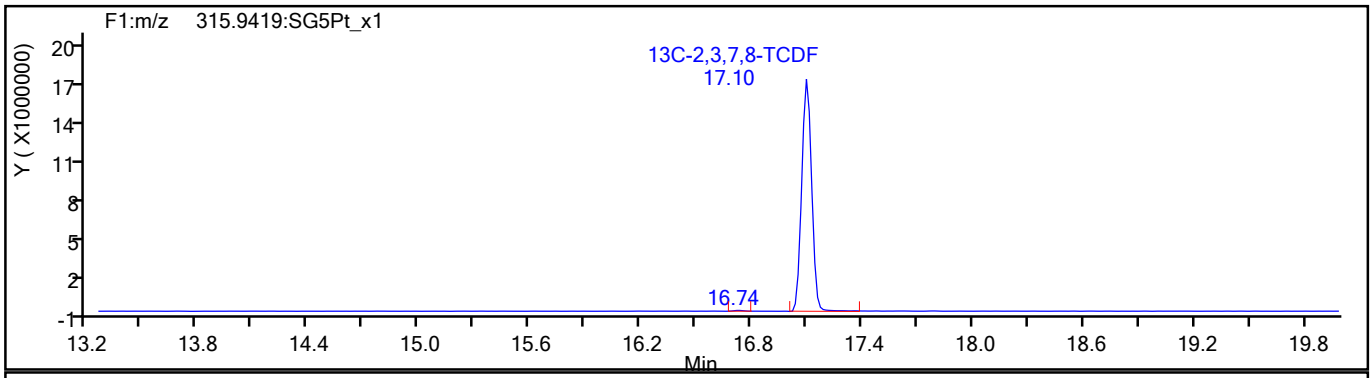

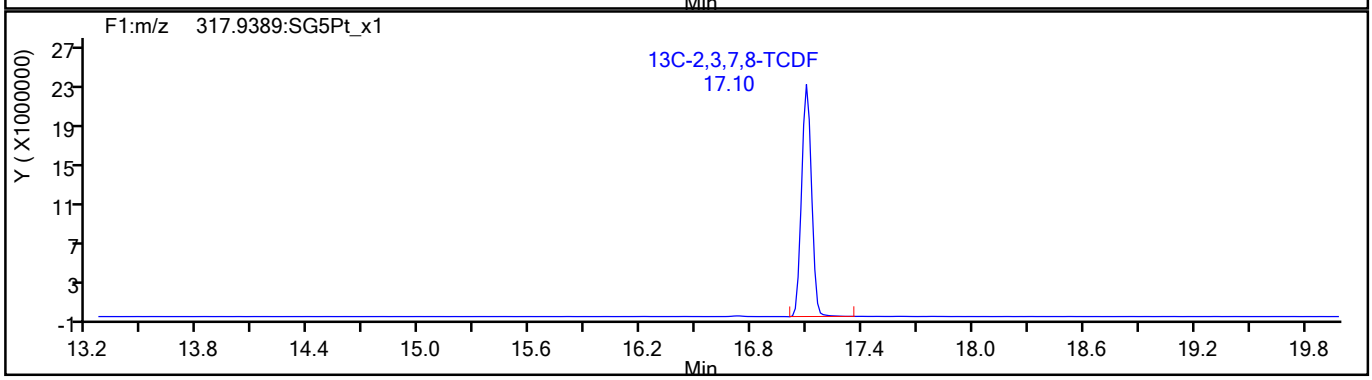

792658

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

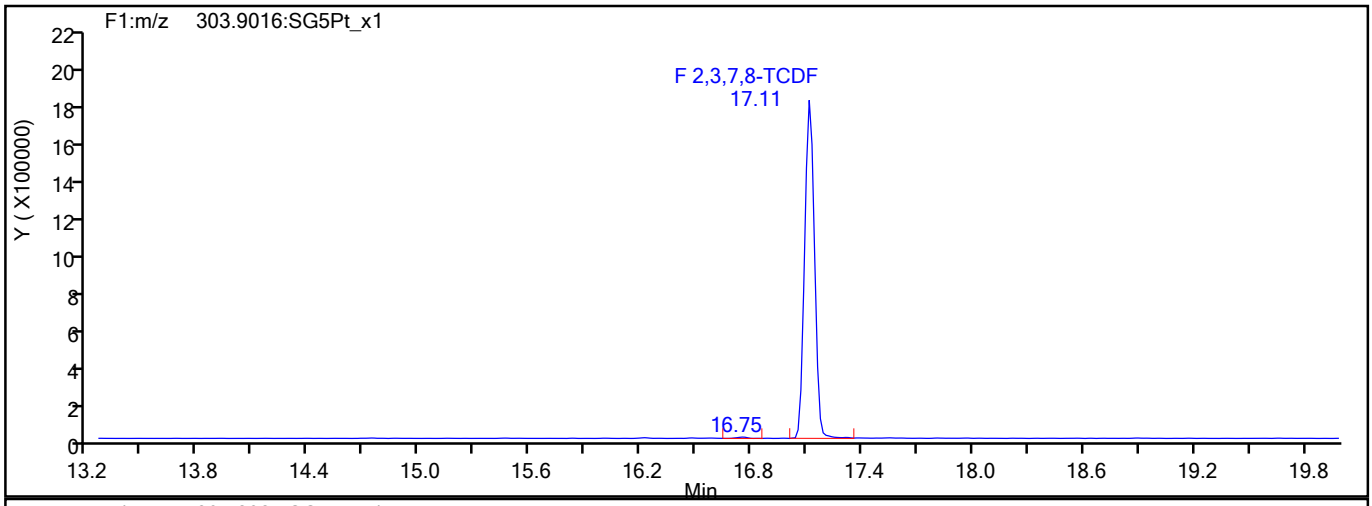

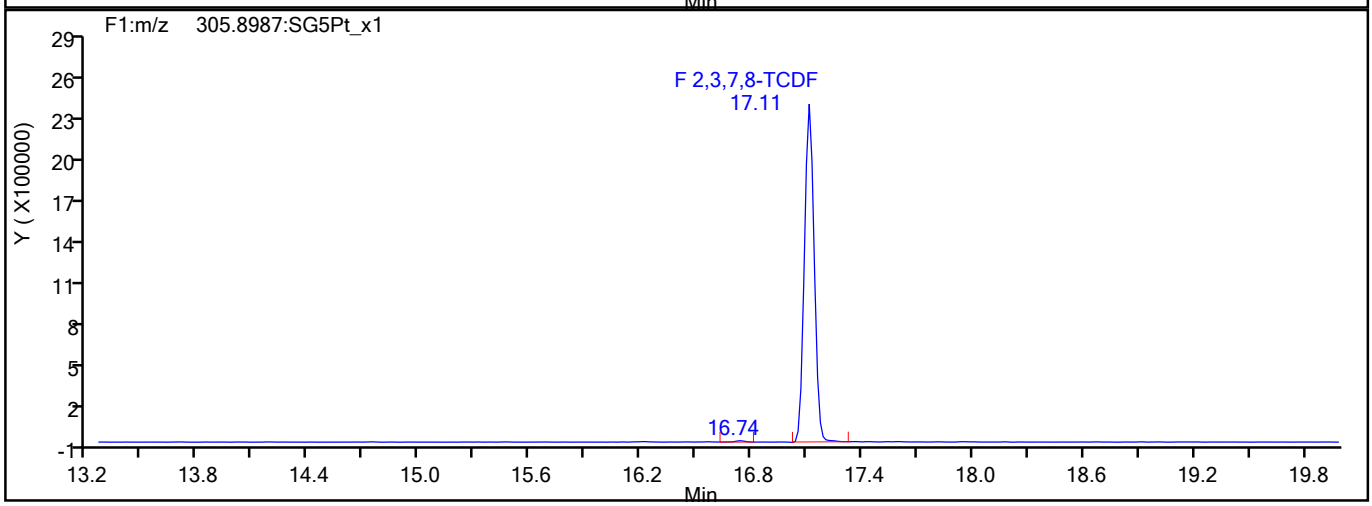

TCDF Interference Mass

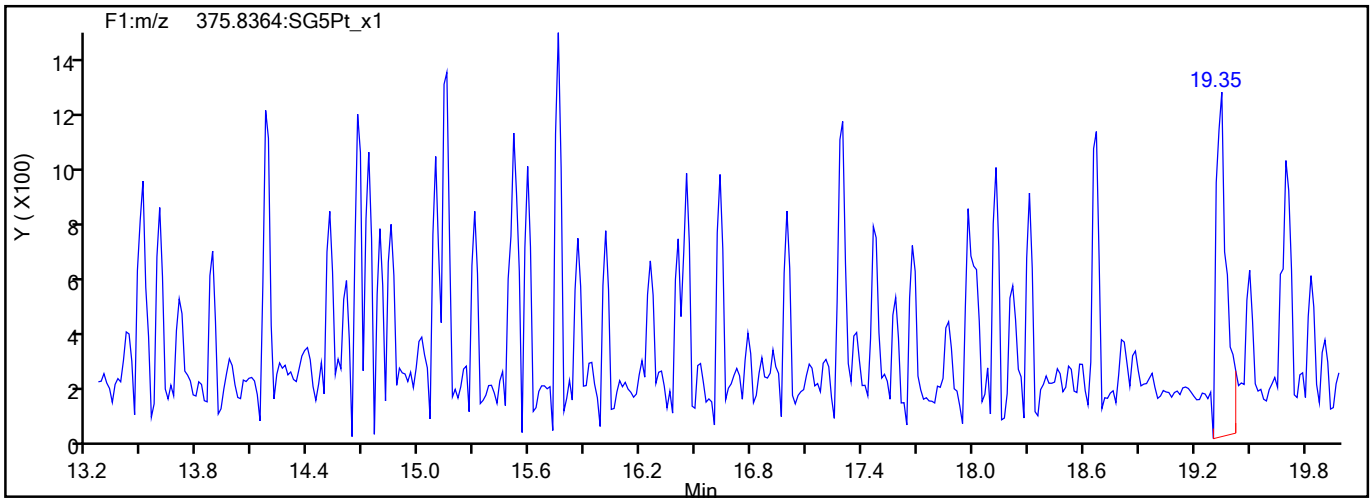

792659

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

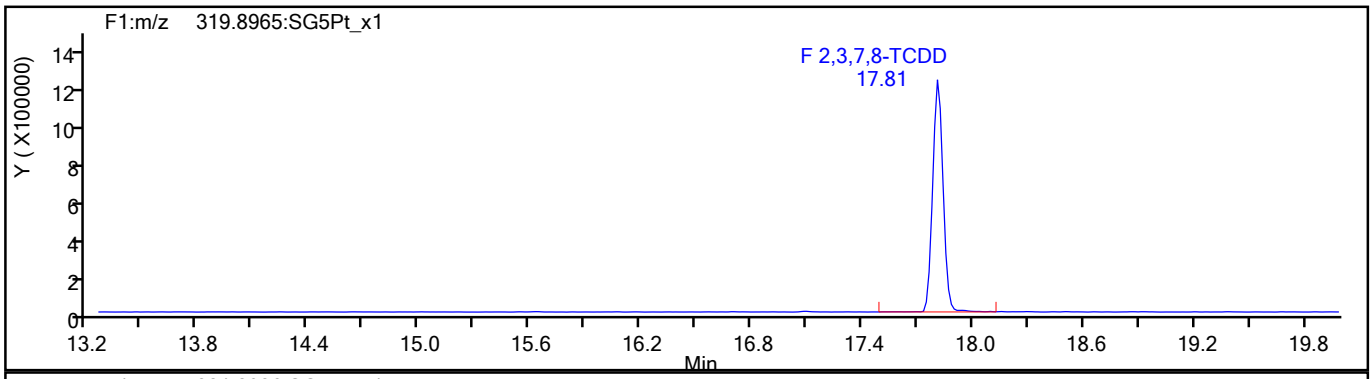

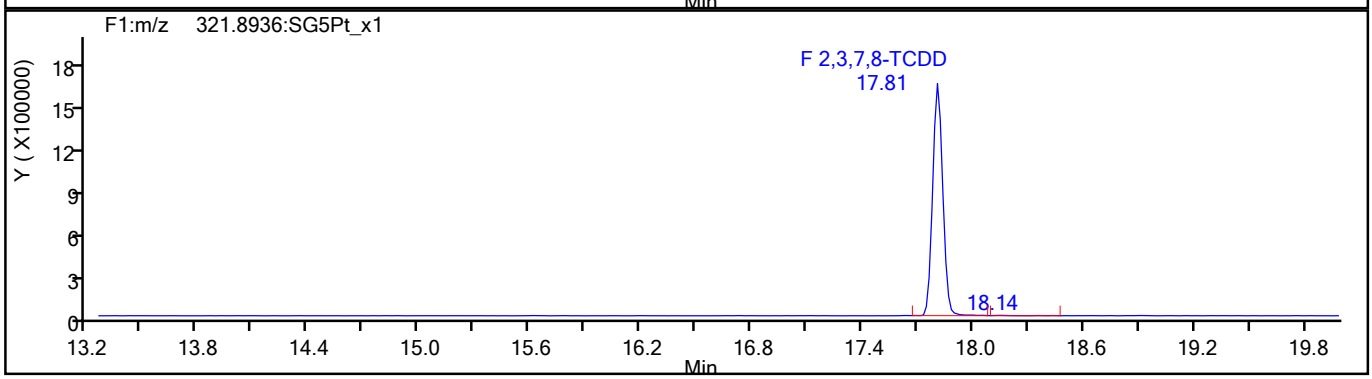

TCDD Standards

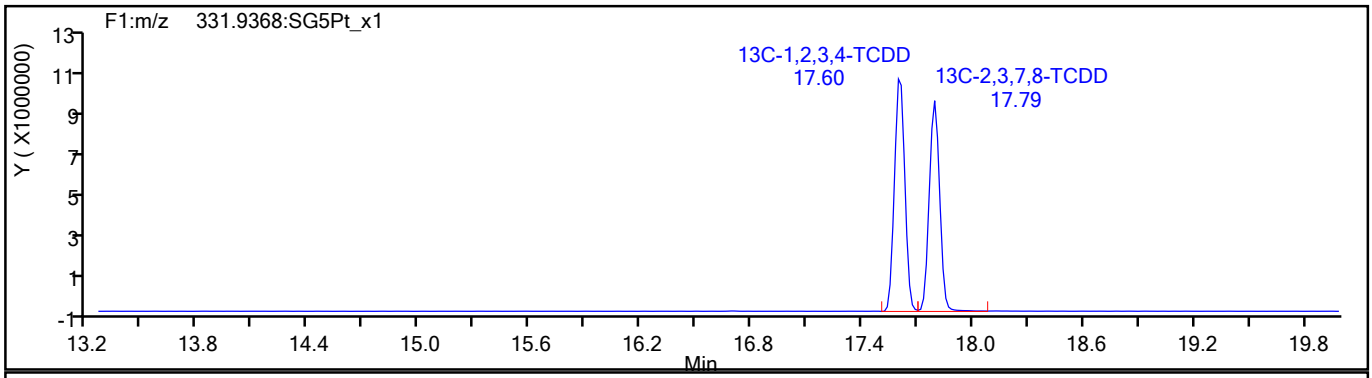

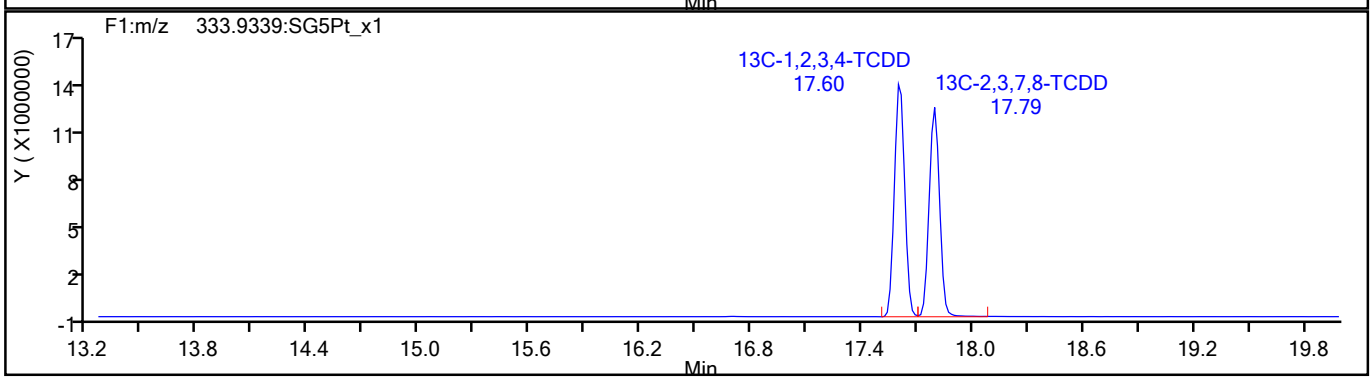

792660

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

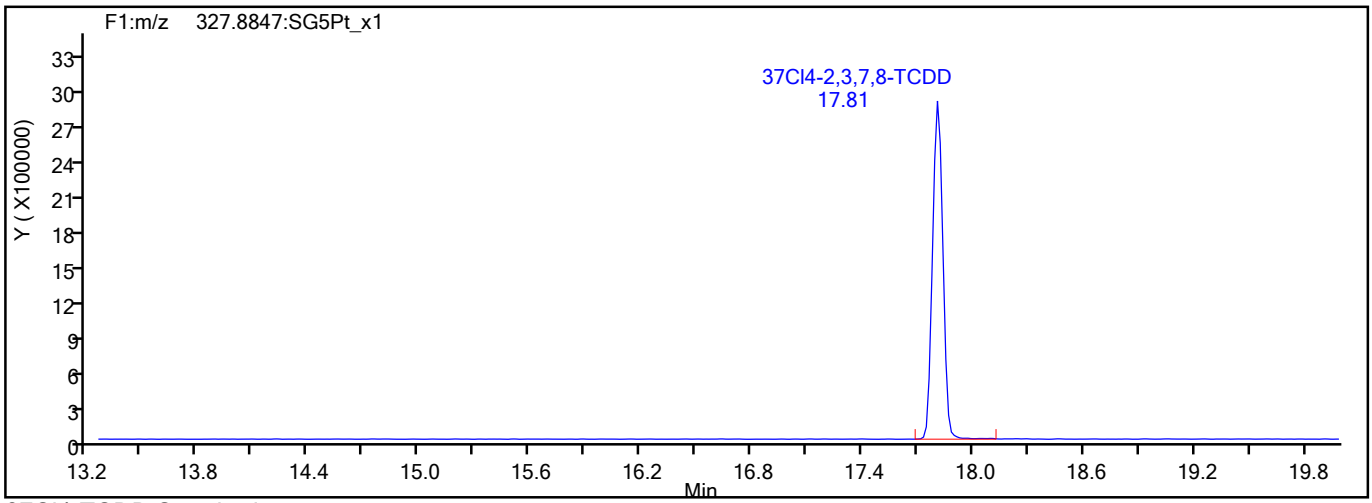

37Cl4-TCDD Standards

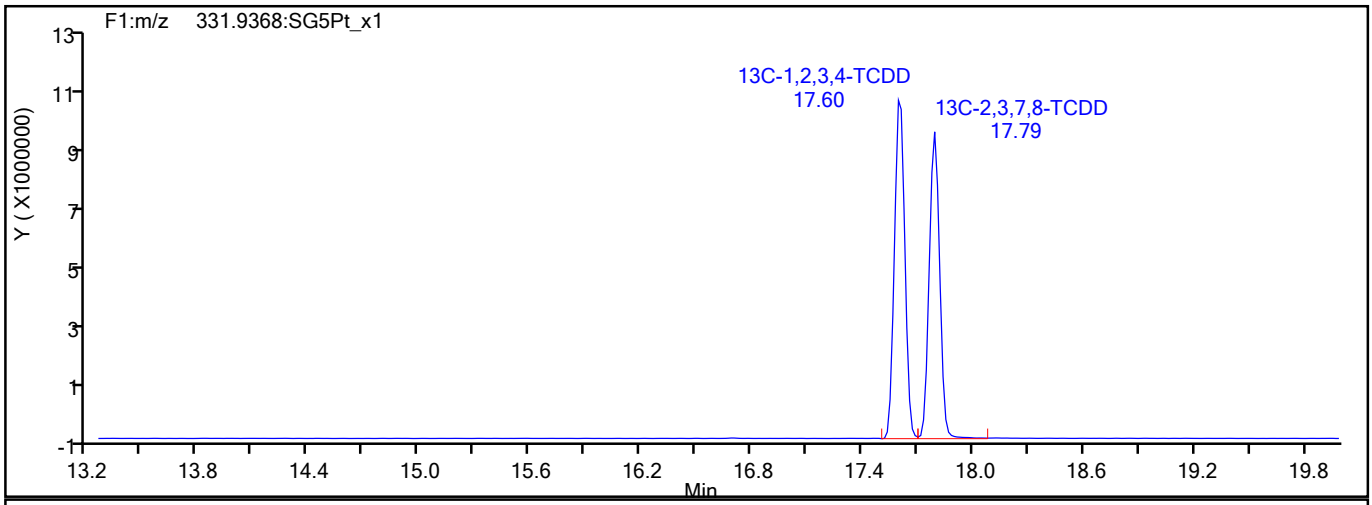

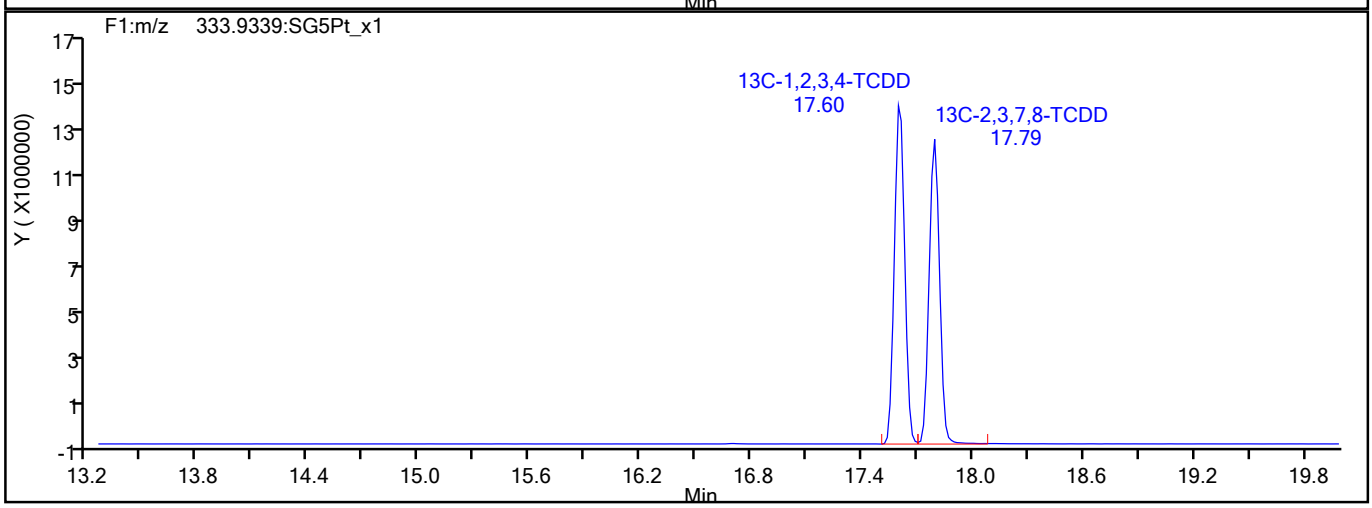

792661

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

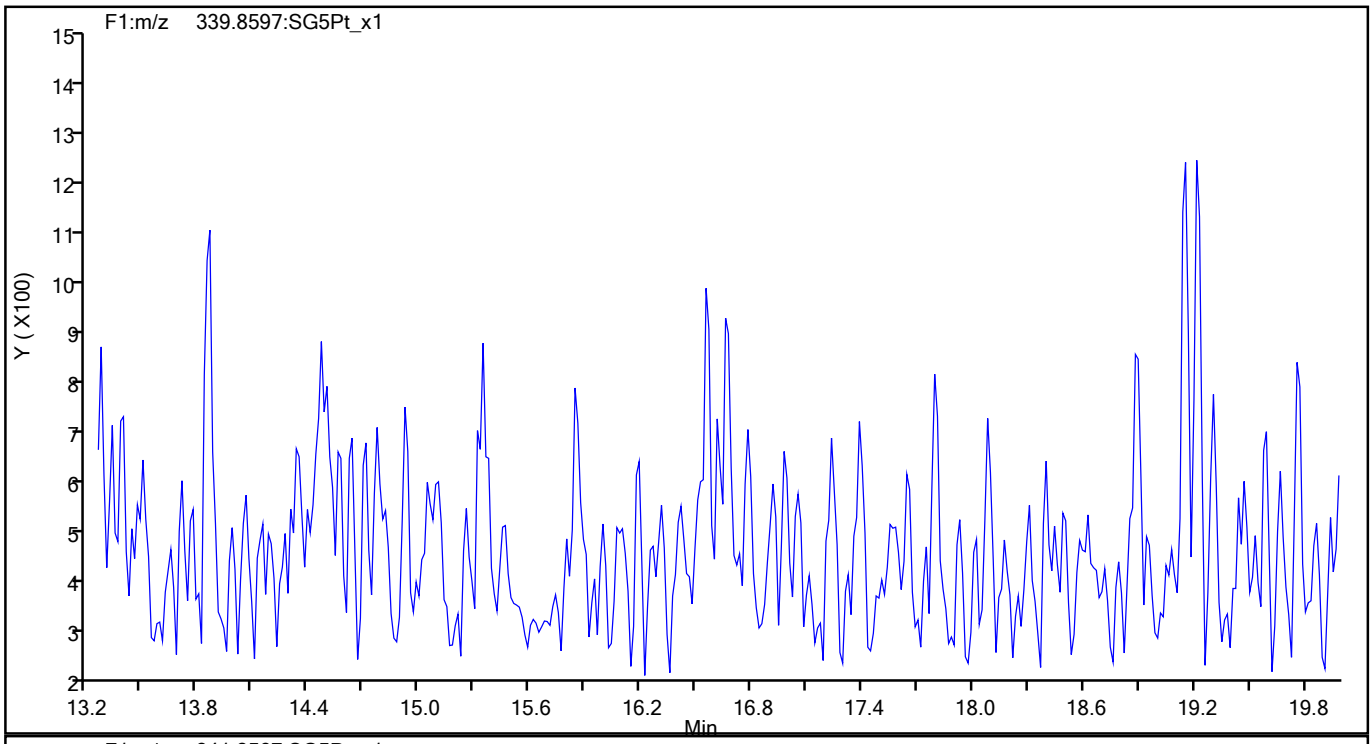

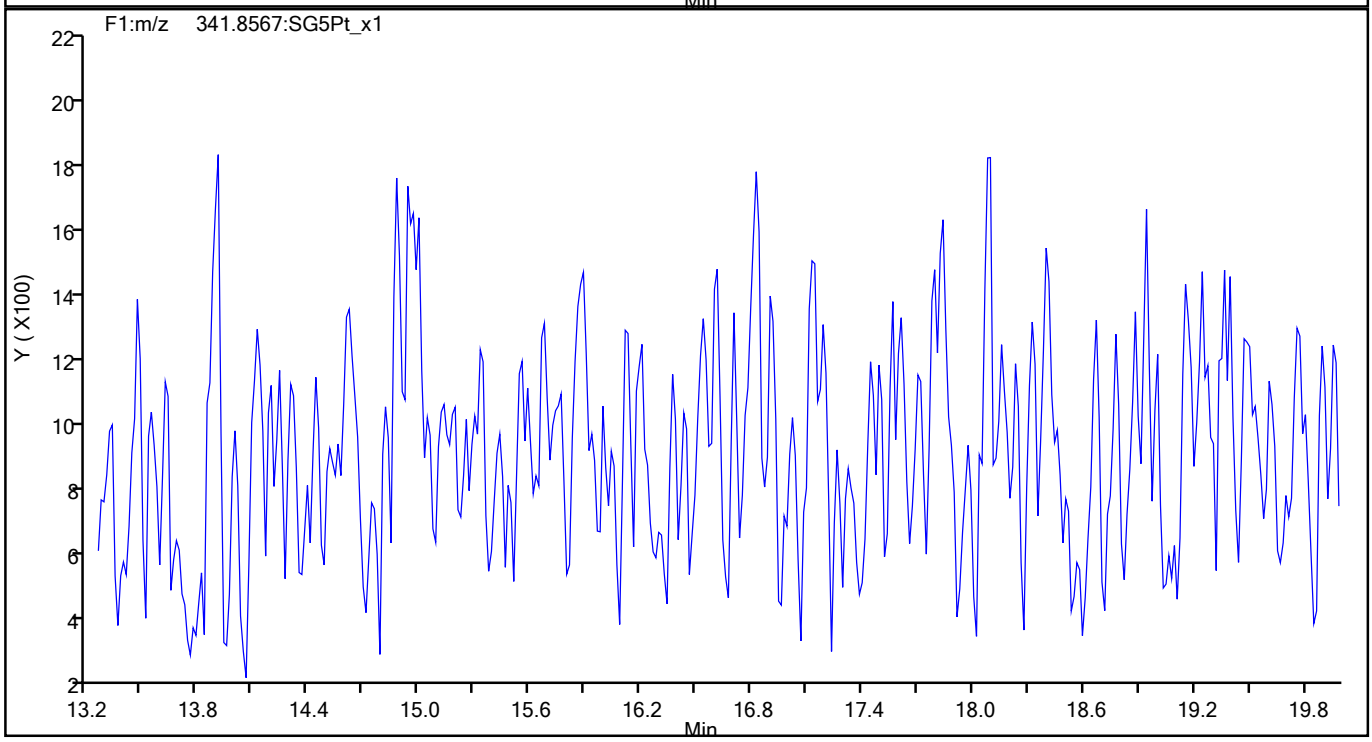

792662

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

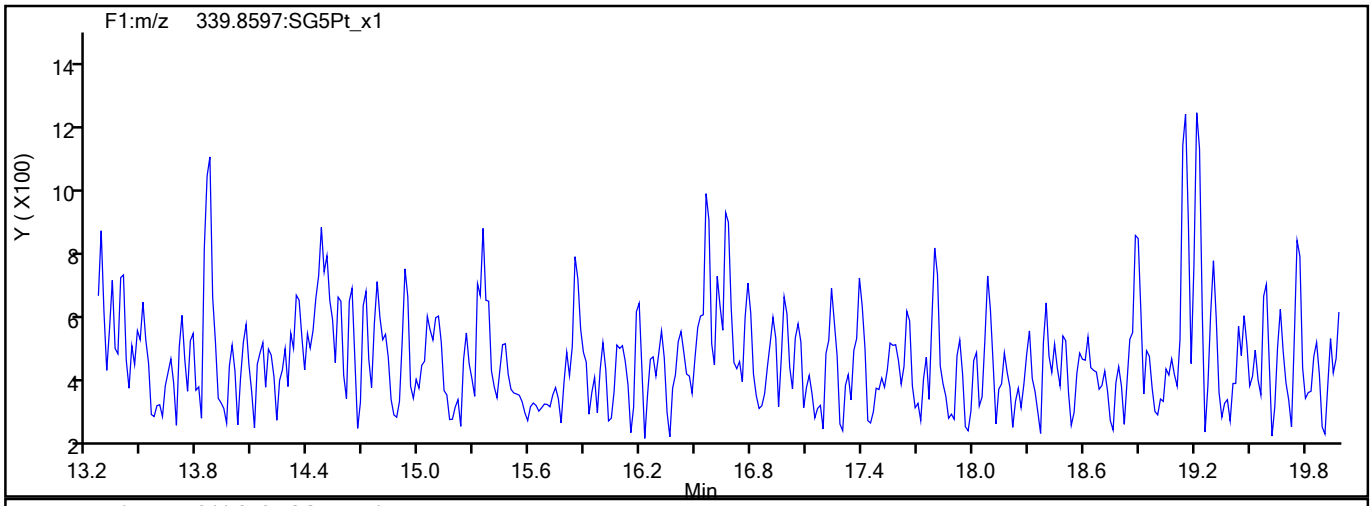

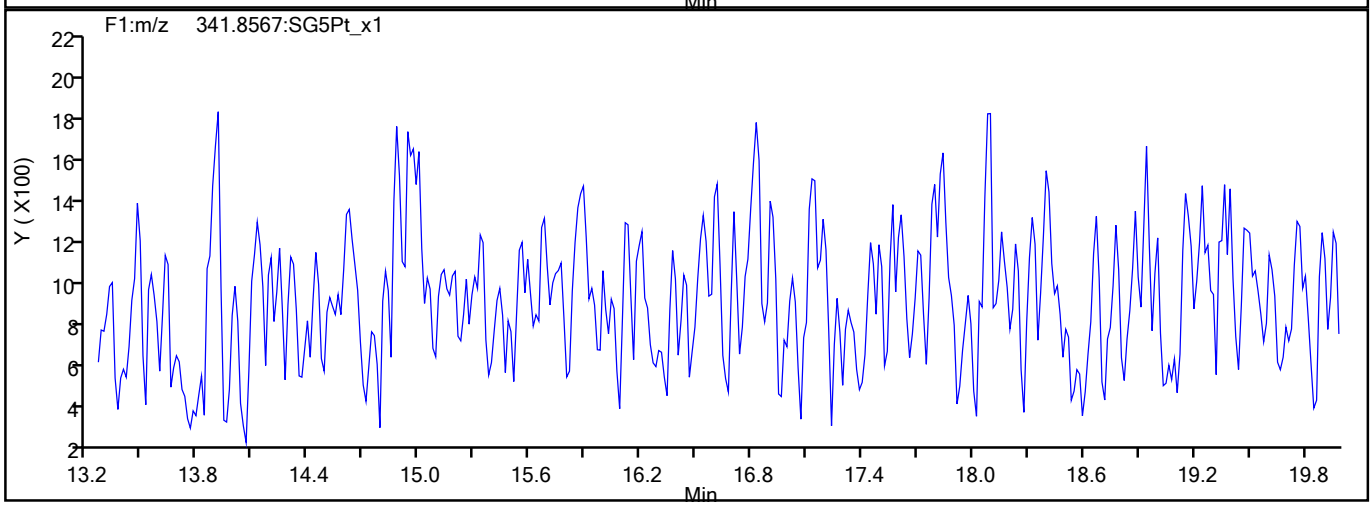

F1 PeCDFs Interference Mass

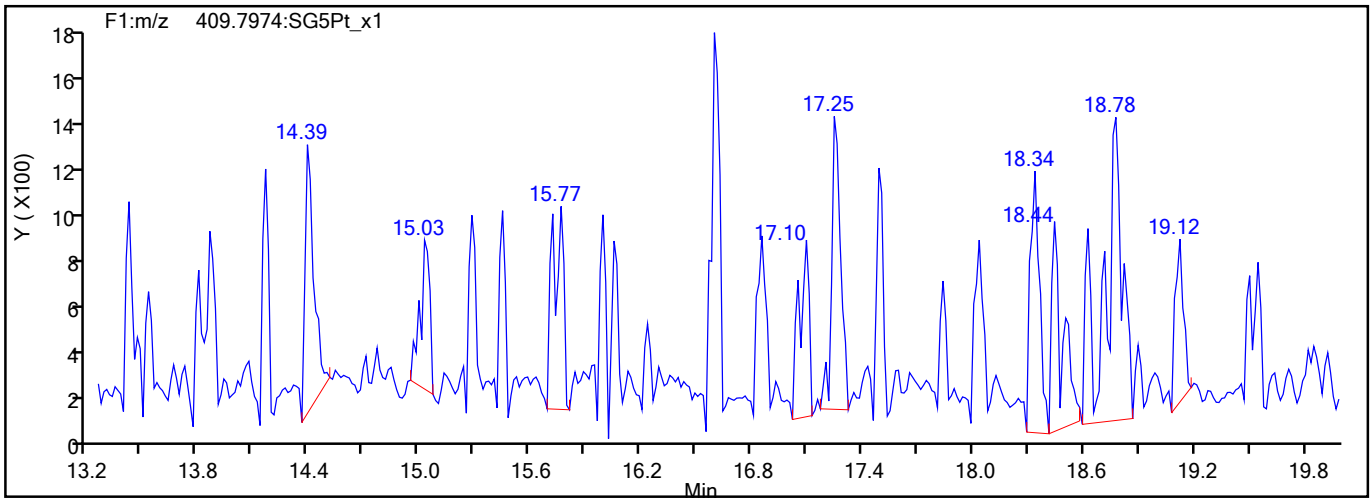

792663

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

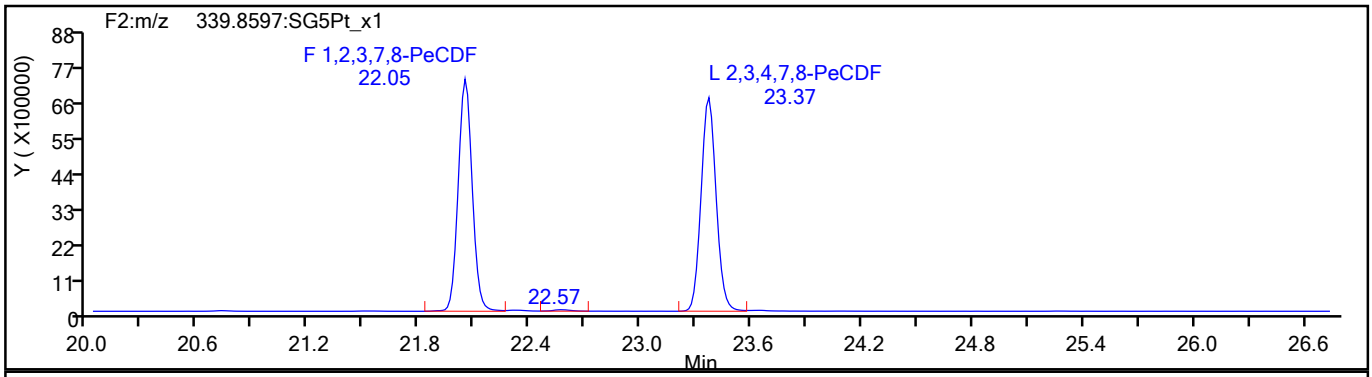

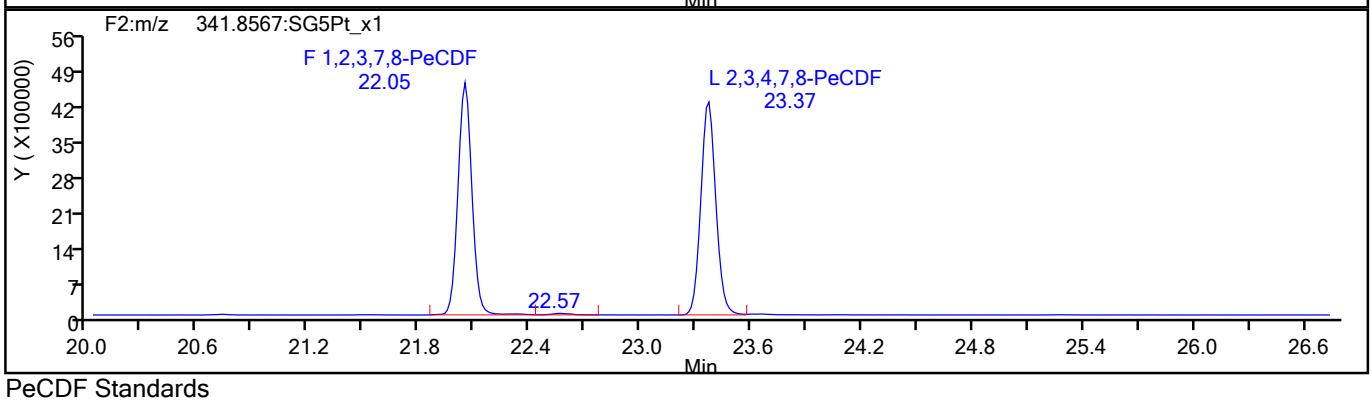

PeCDF Standards

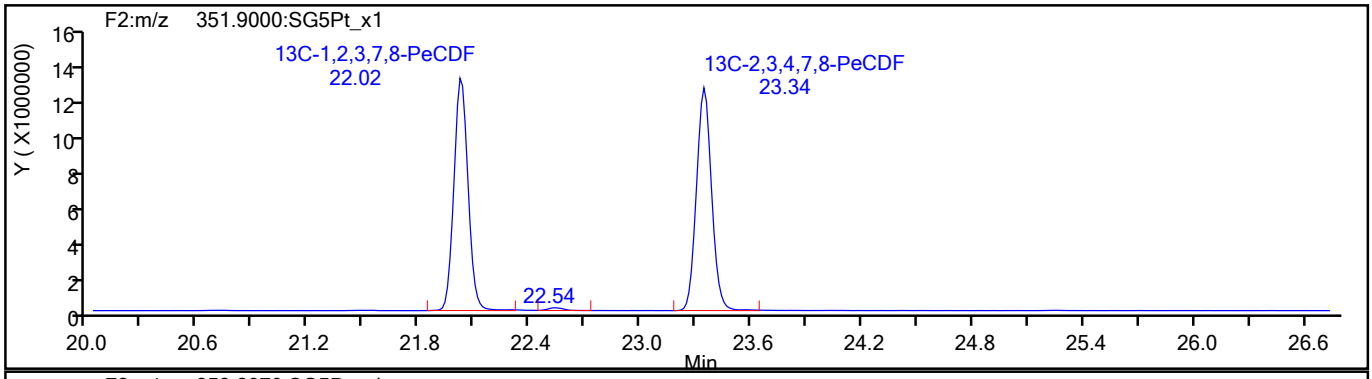

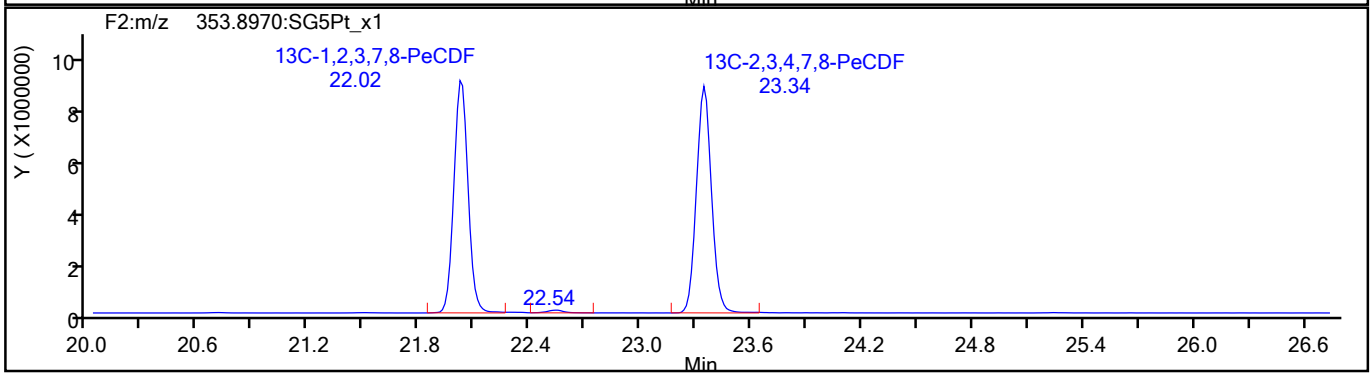

792664

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

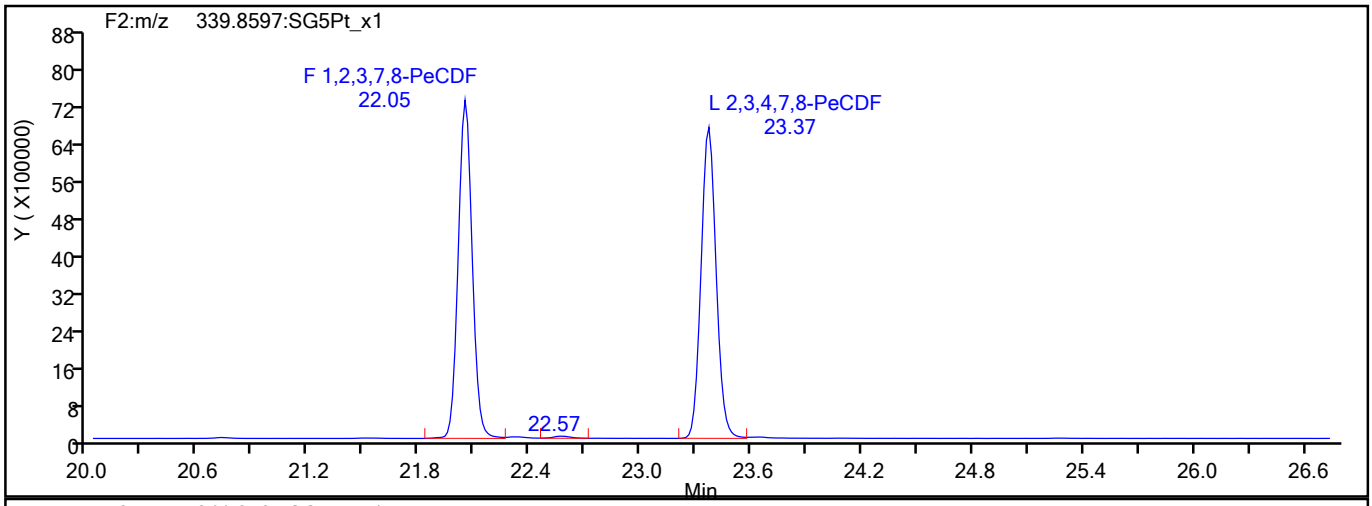

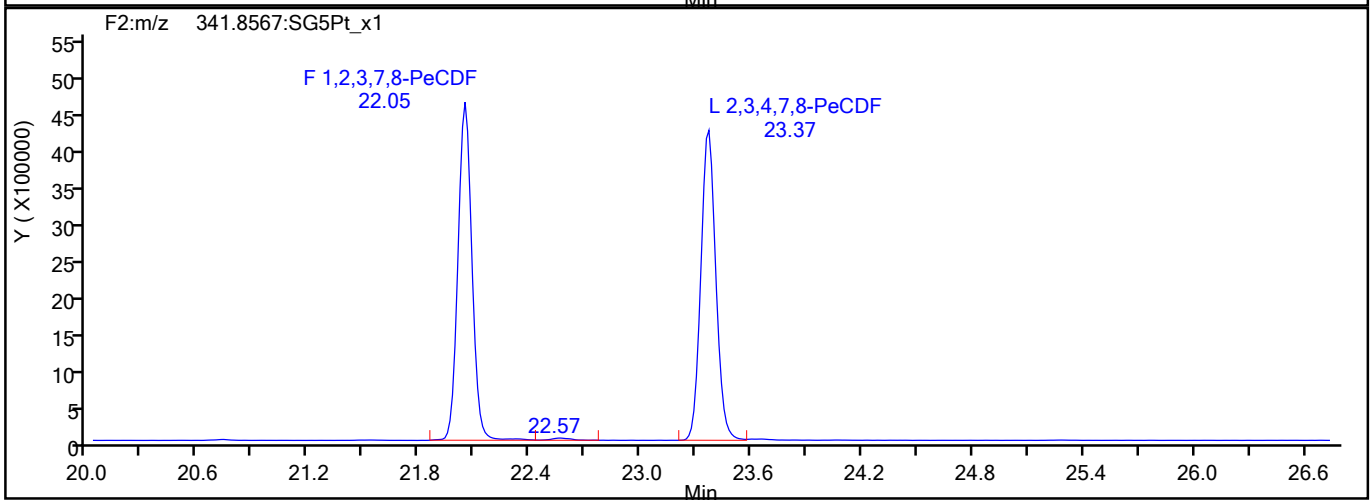

PeCDF Interference Mass

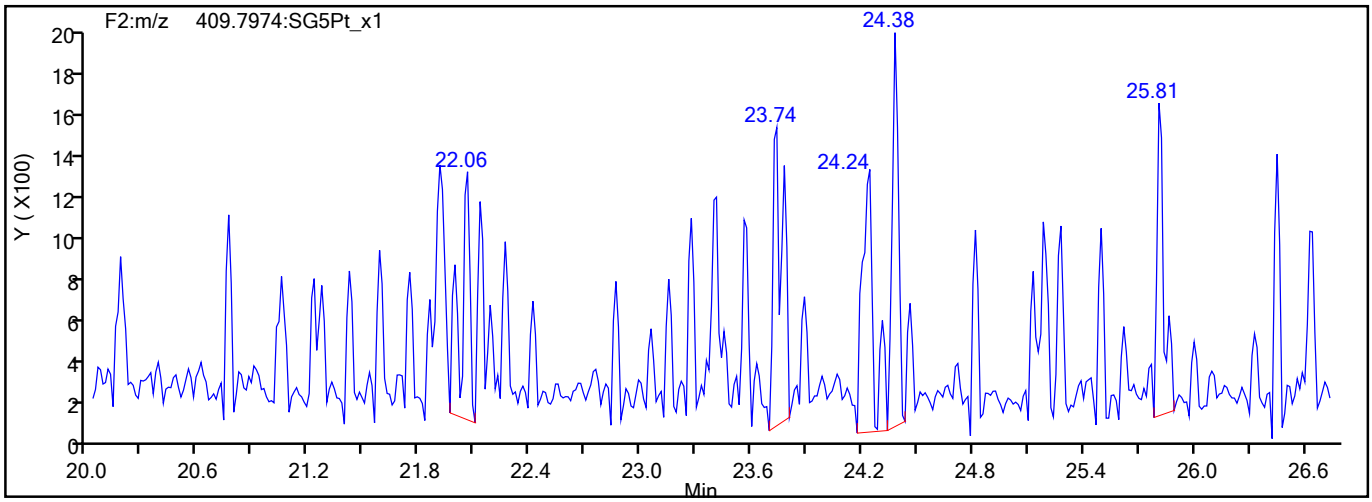

792665

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

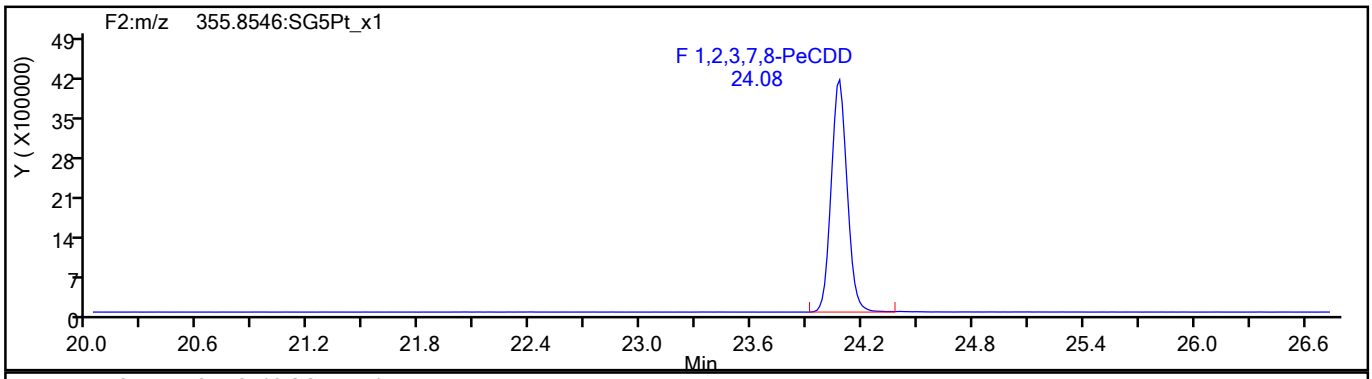

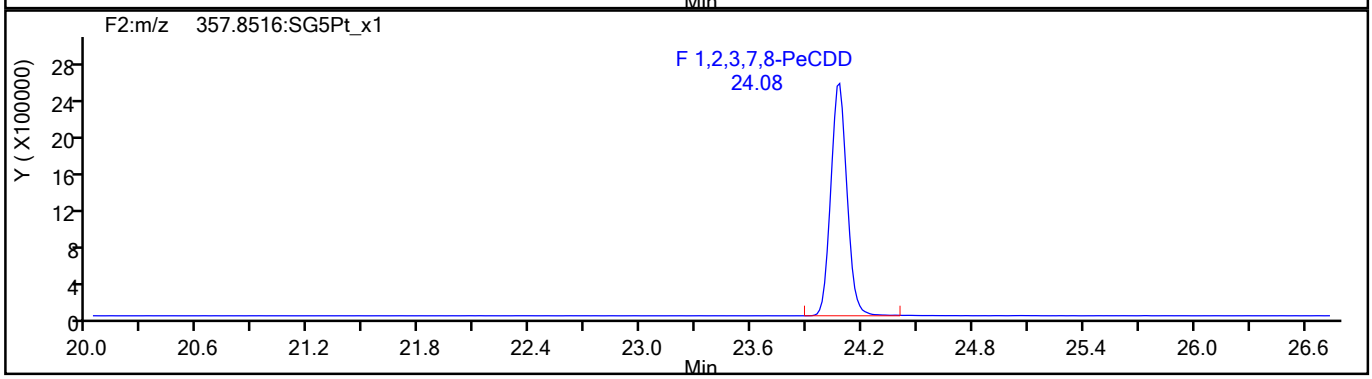

PeCDD Standards

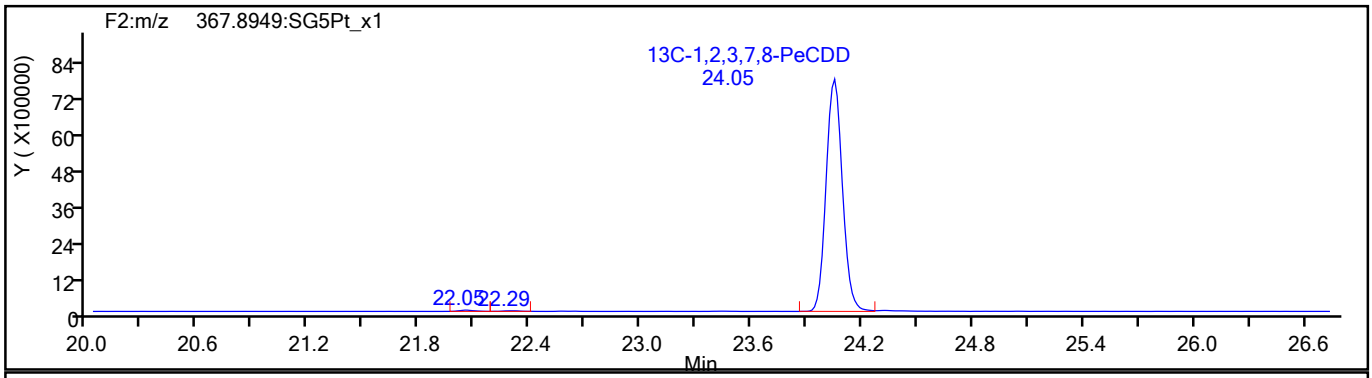

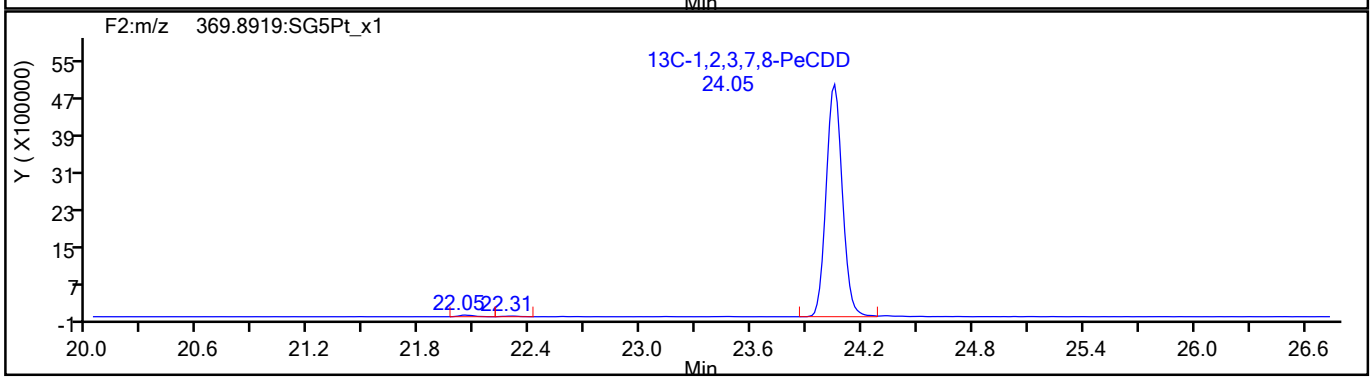

792666

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

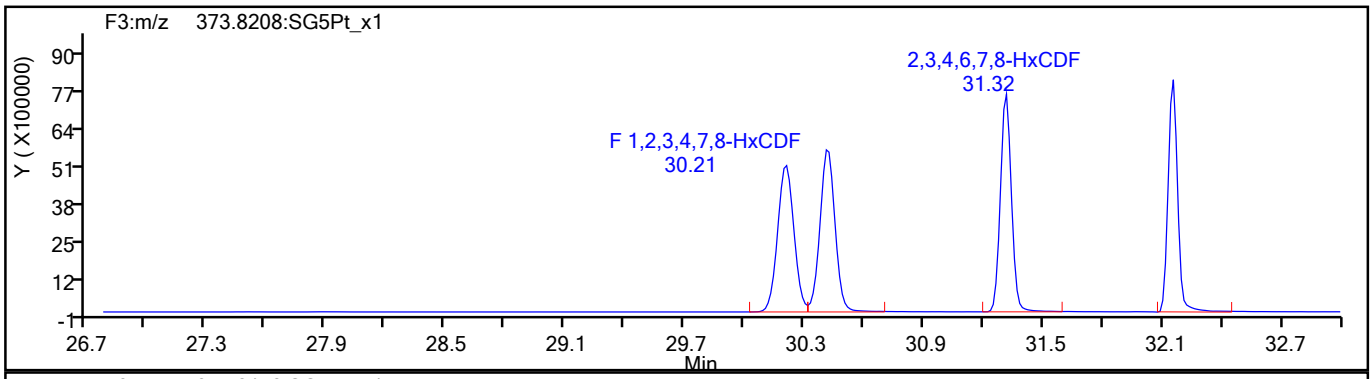

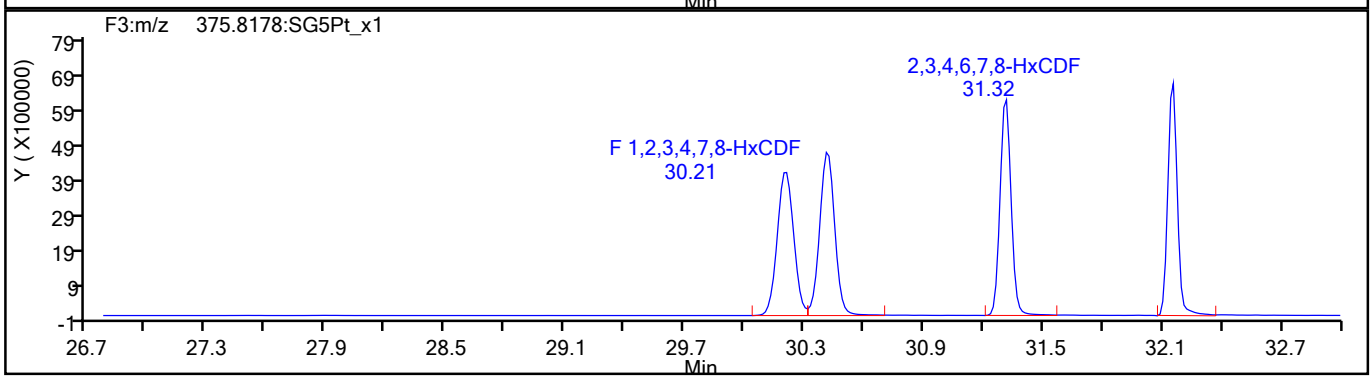

HxCDF Standards

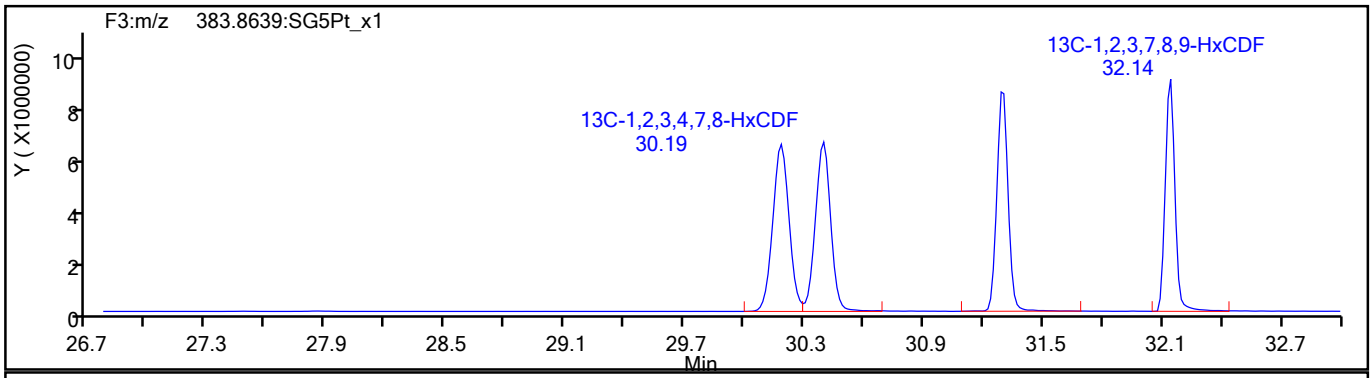

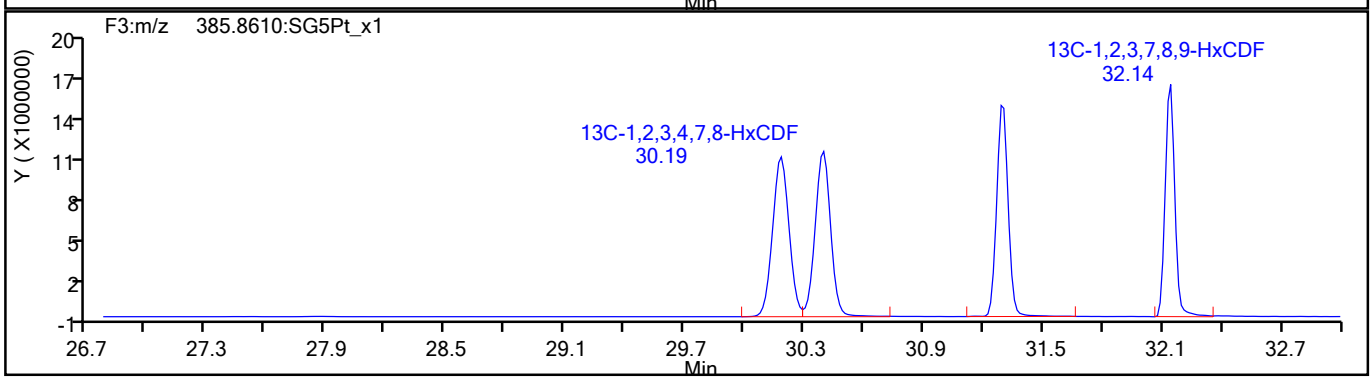

792667

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

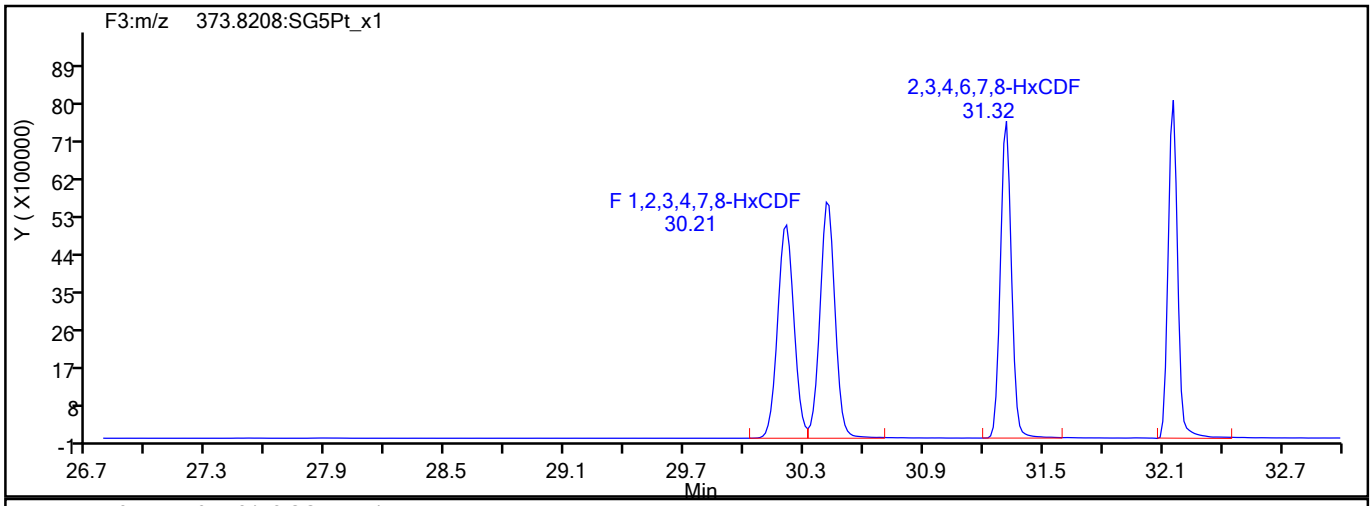

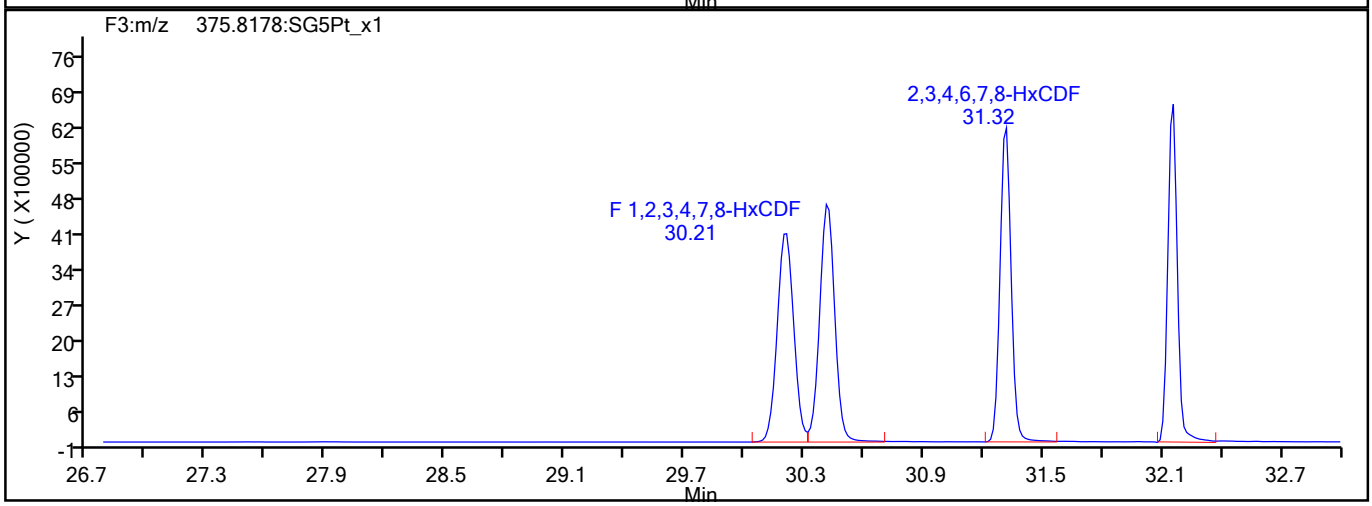

HxCDF Interference Mass

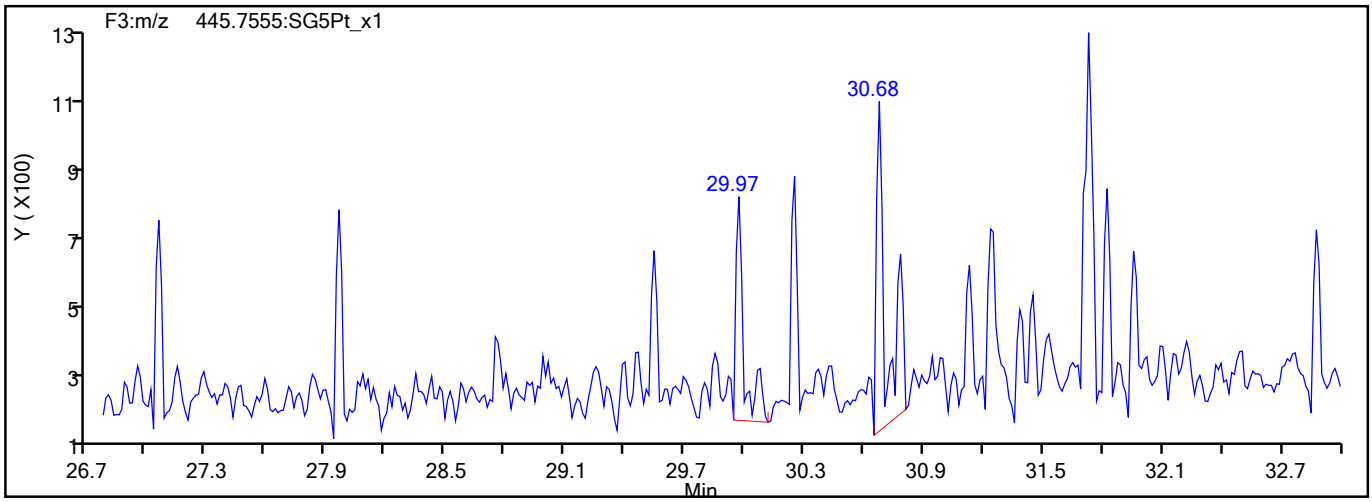

792668

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

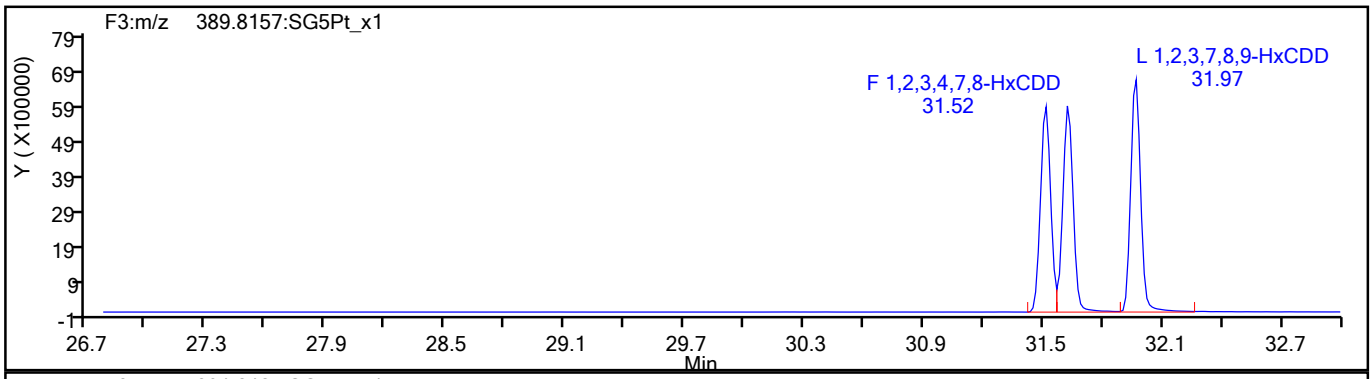

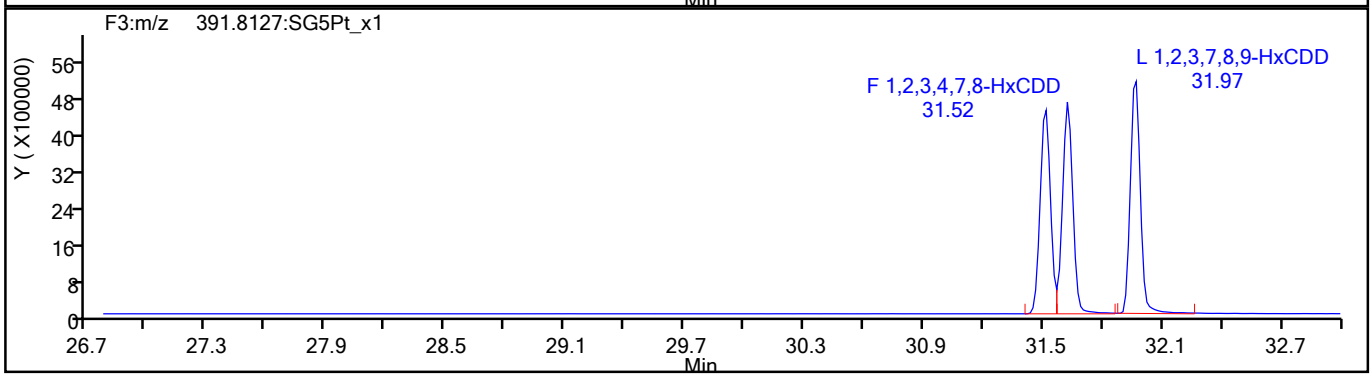

HxCDD Standards

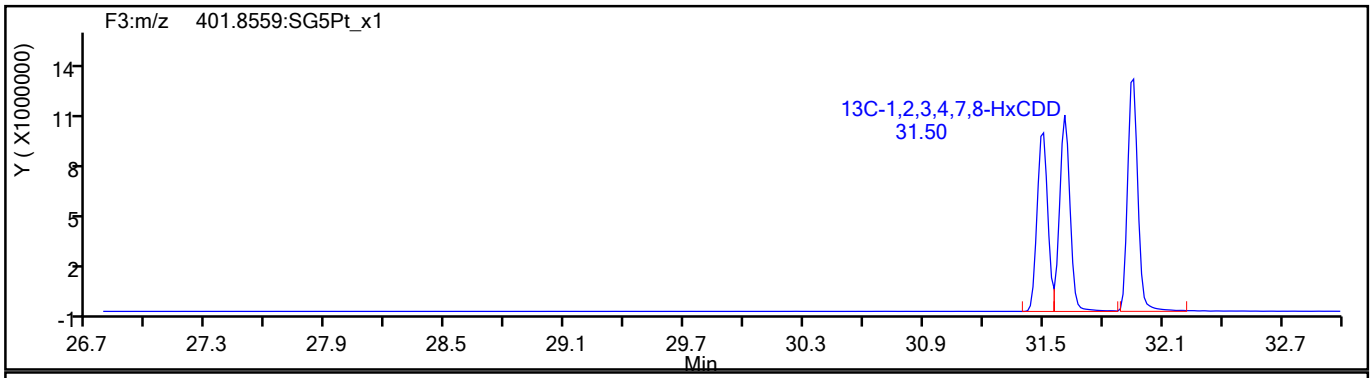

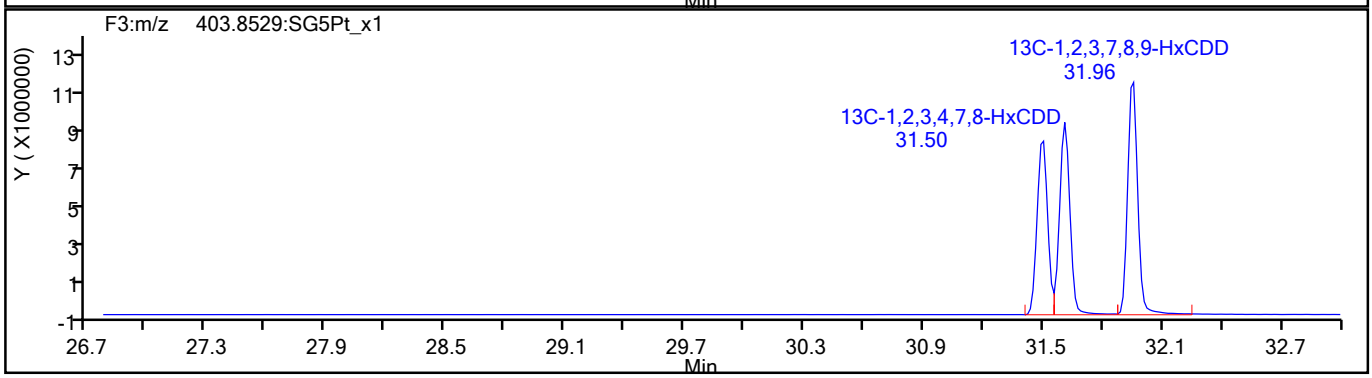

792669

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

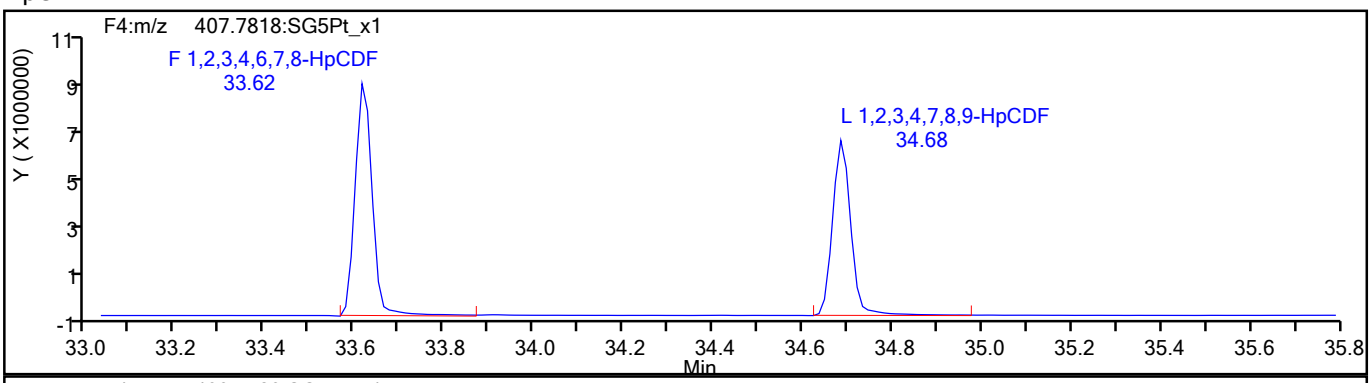

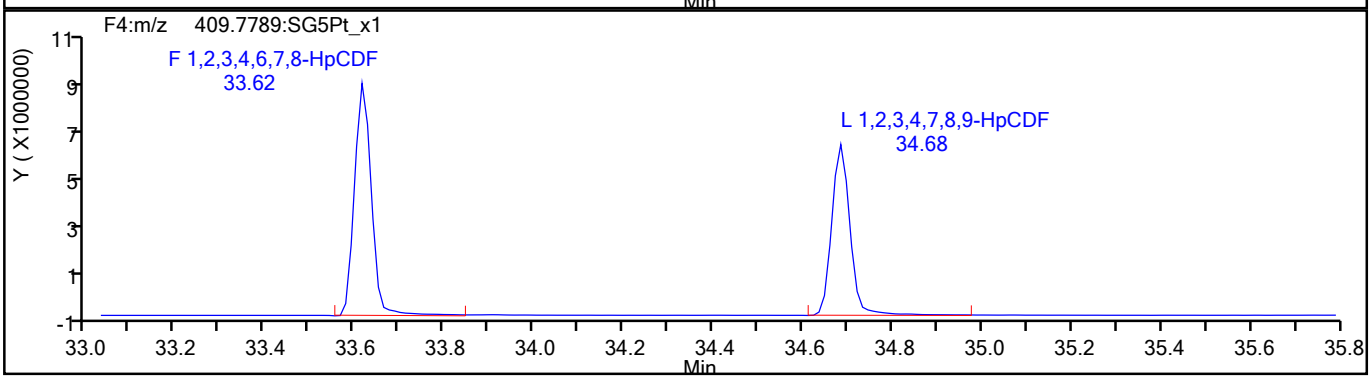

HpCDF Standards

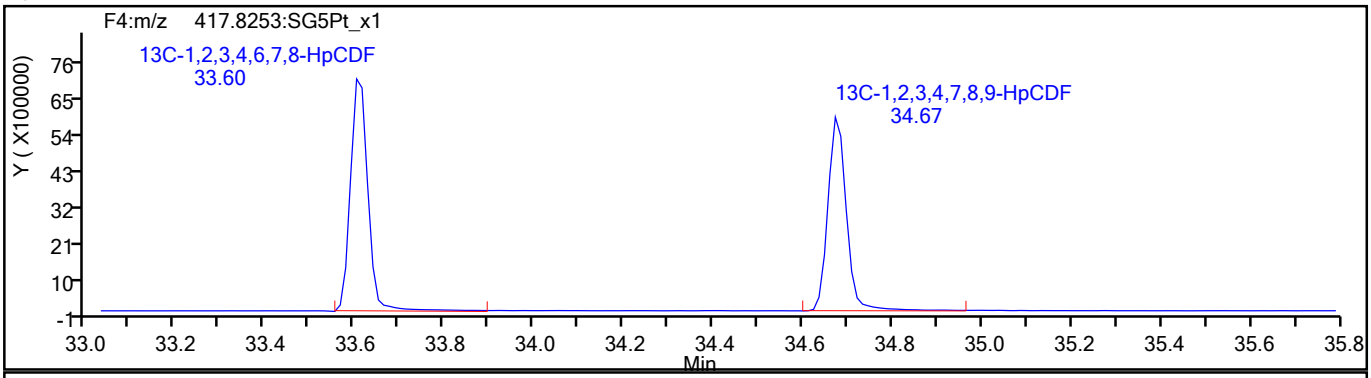

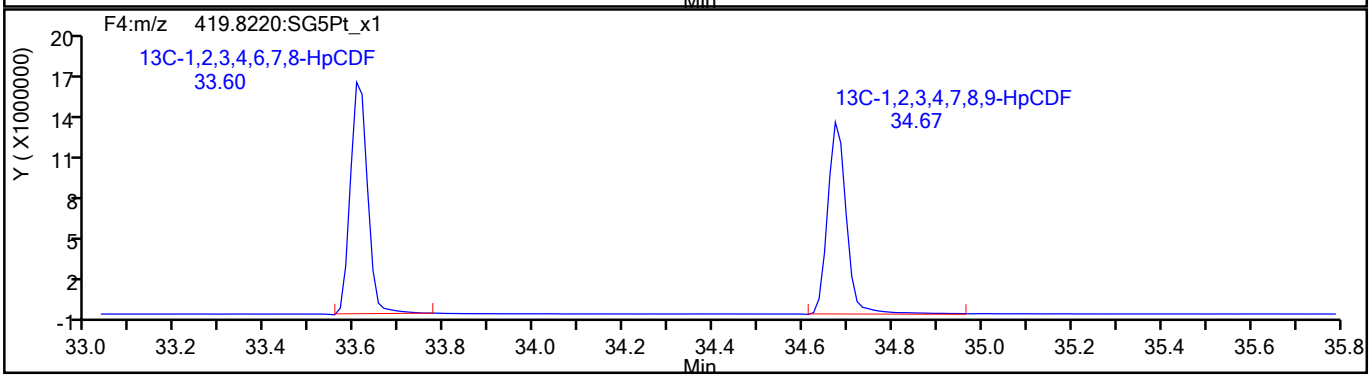

792670

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

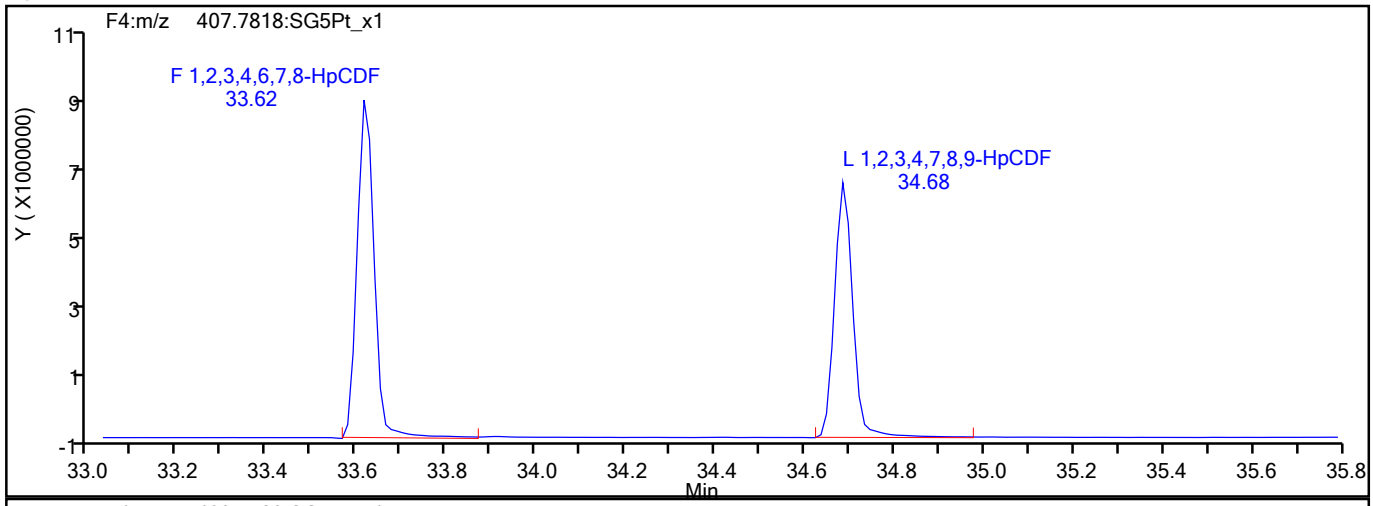

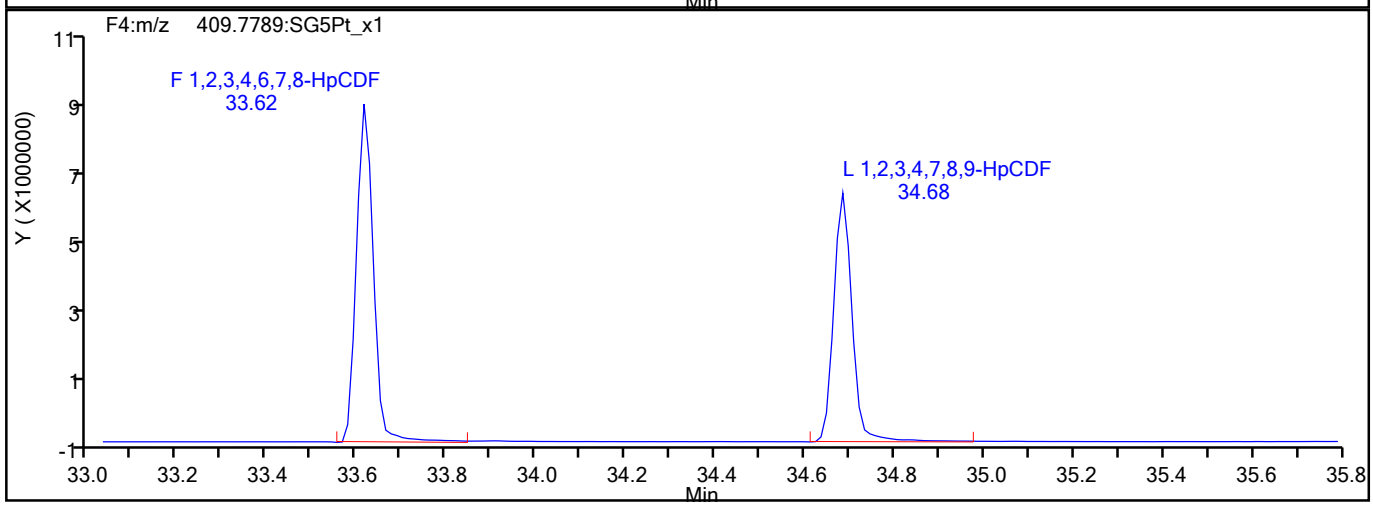

HpCDF Interference Mass

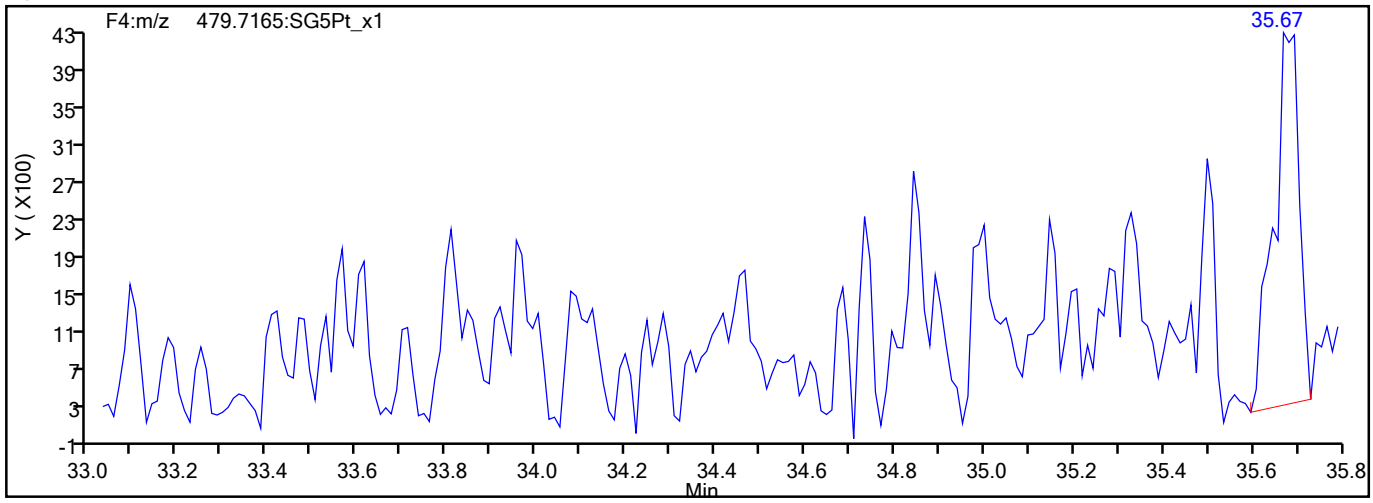

792671

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

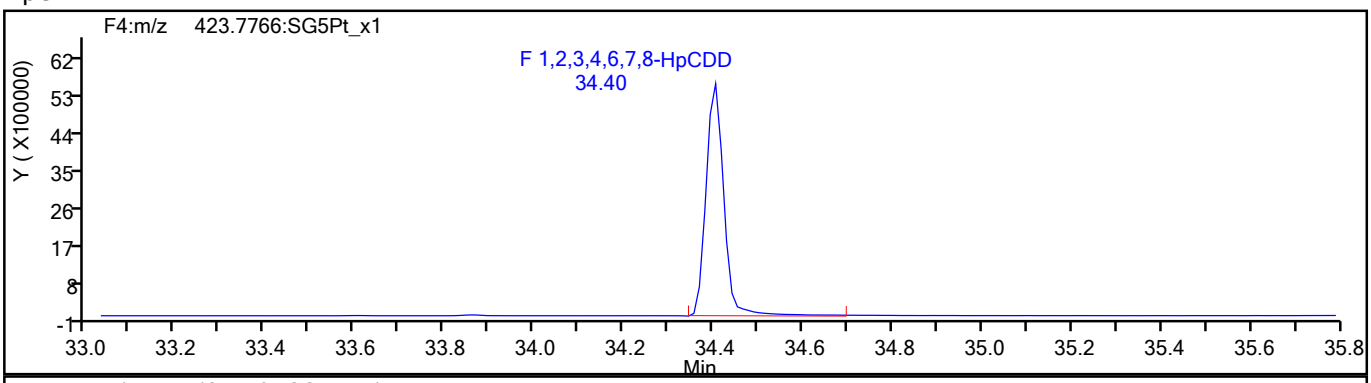

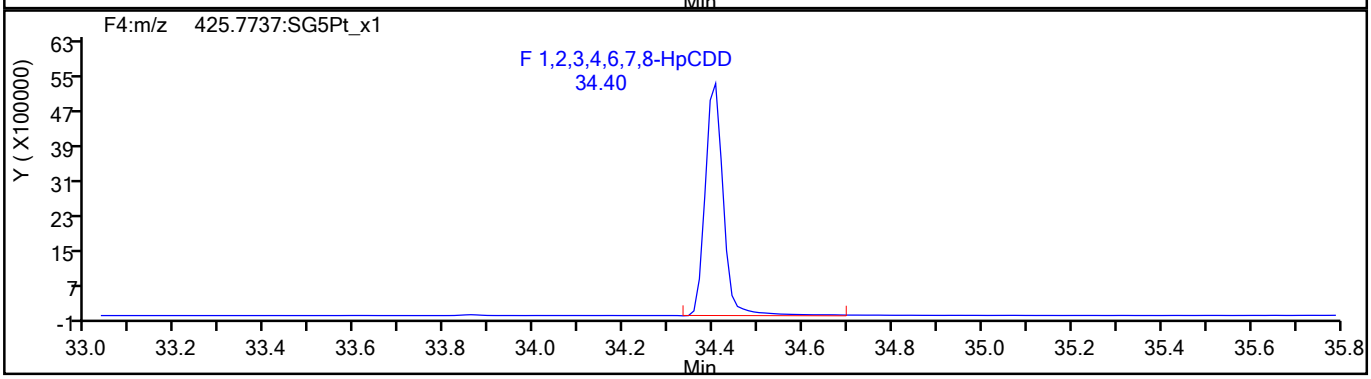

HpCDD Standards

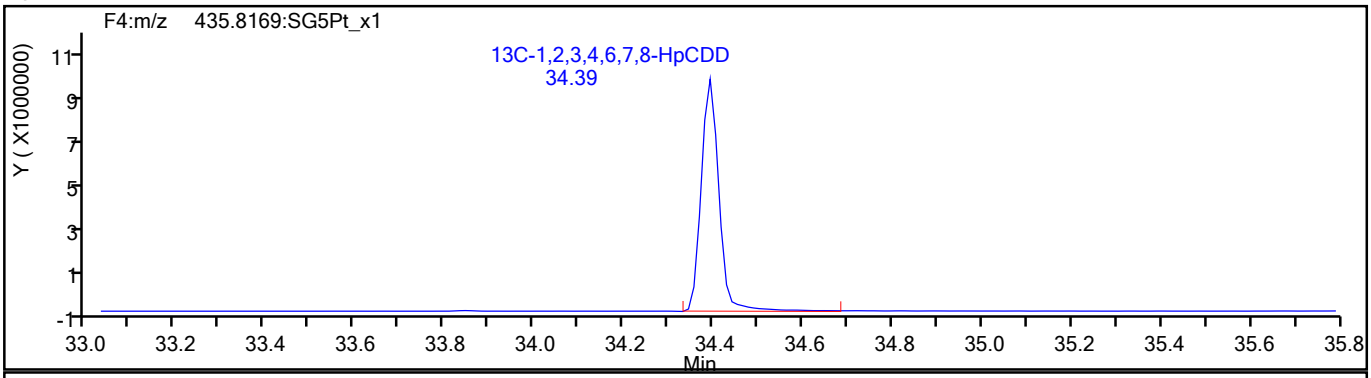

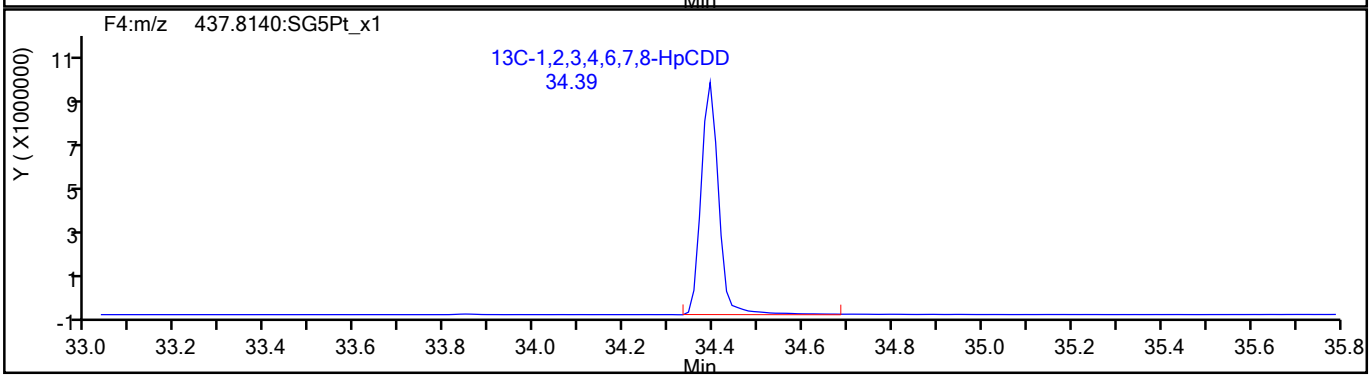

792672

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

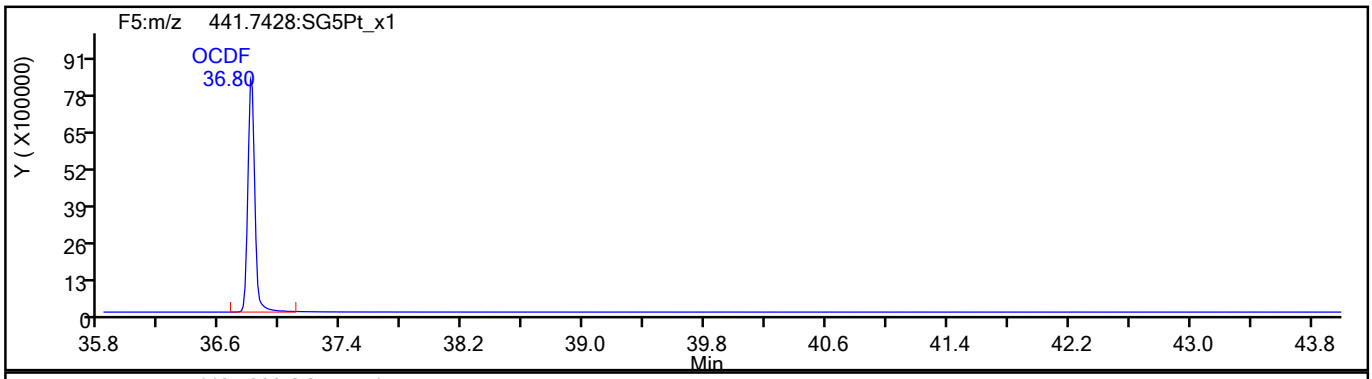

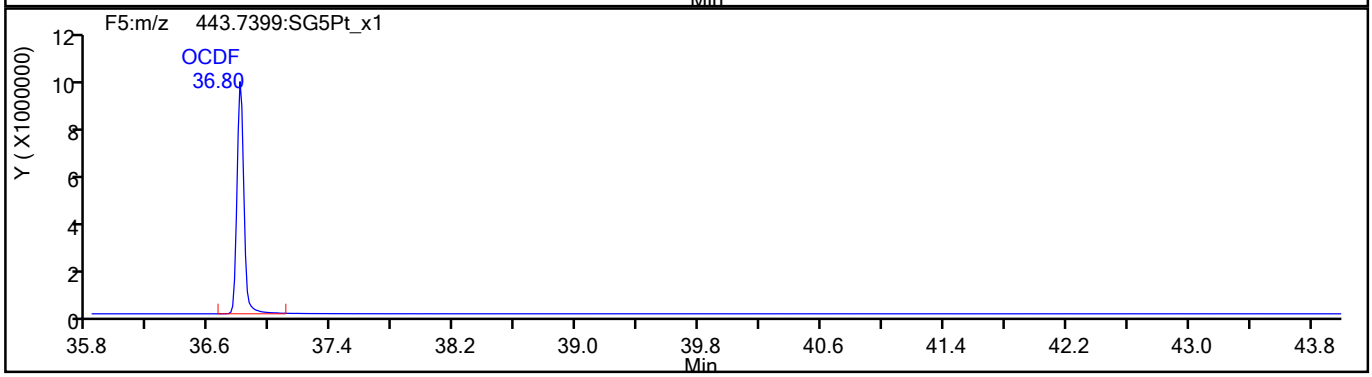

OCDF Standards

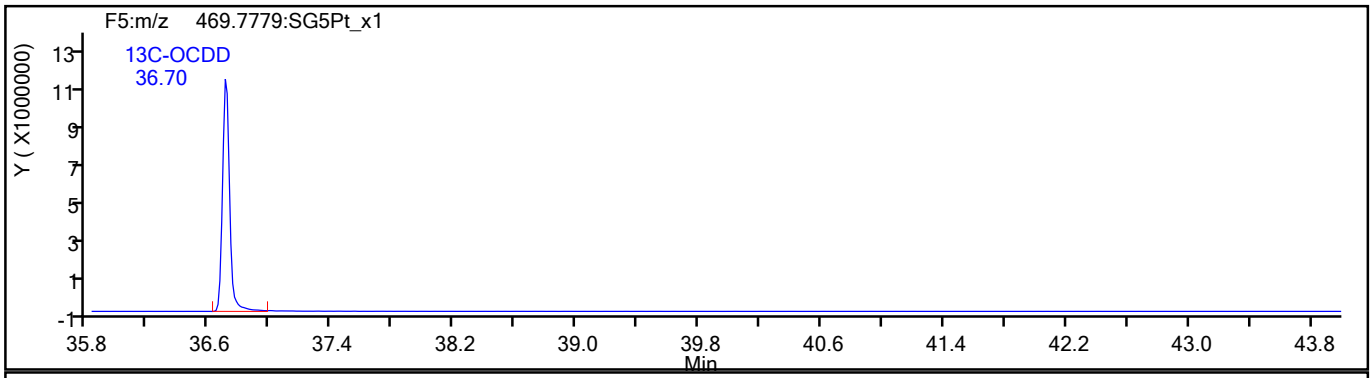

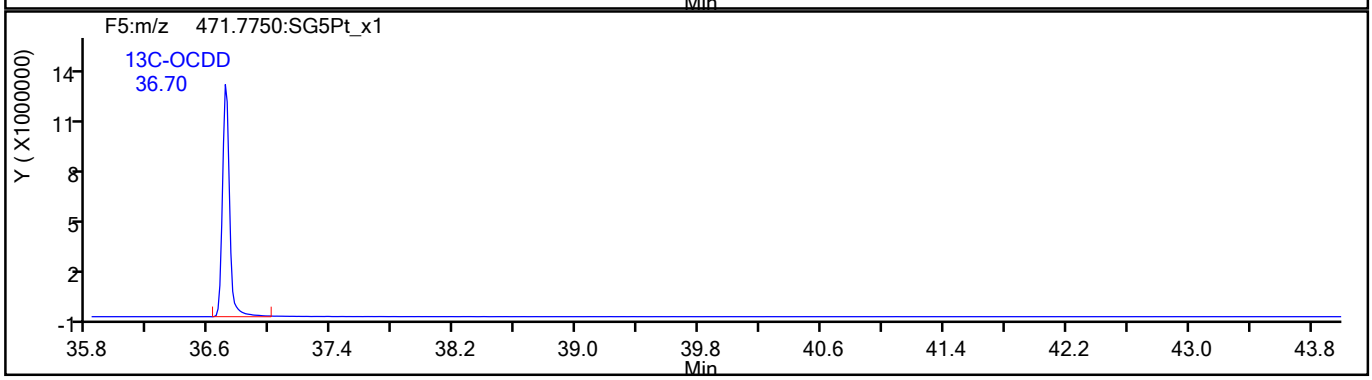

792673

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

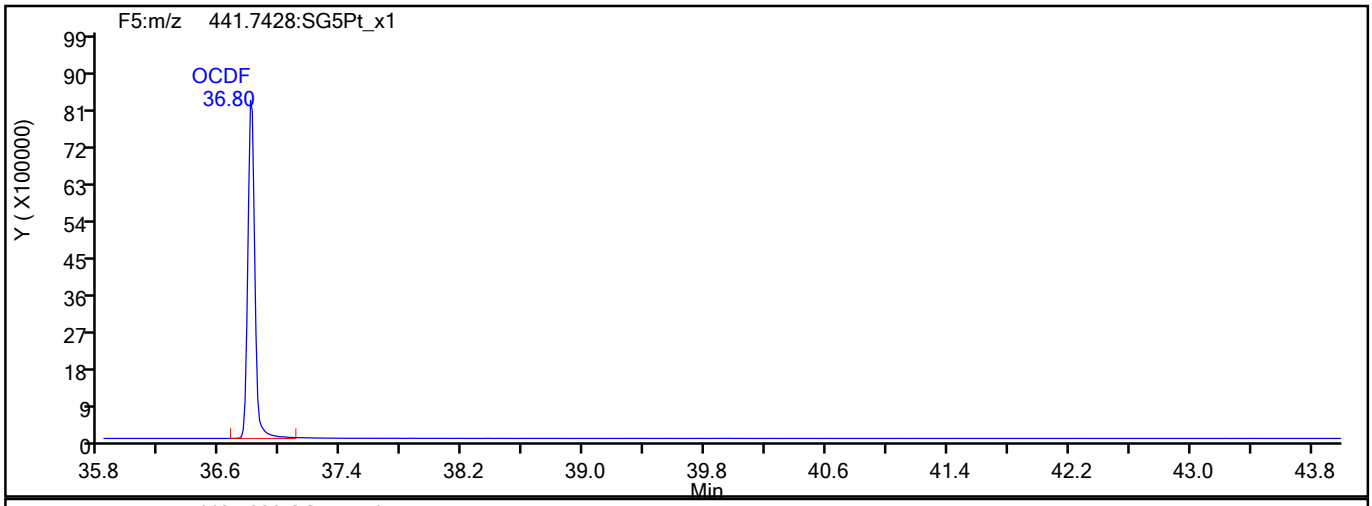

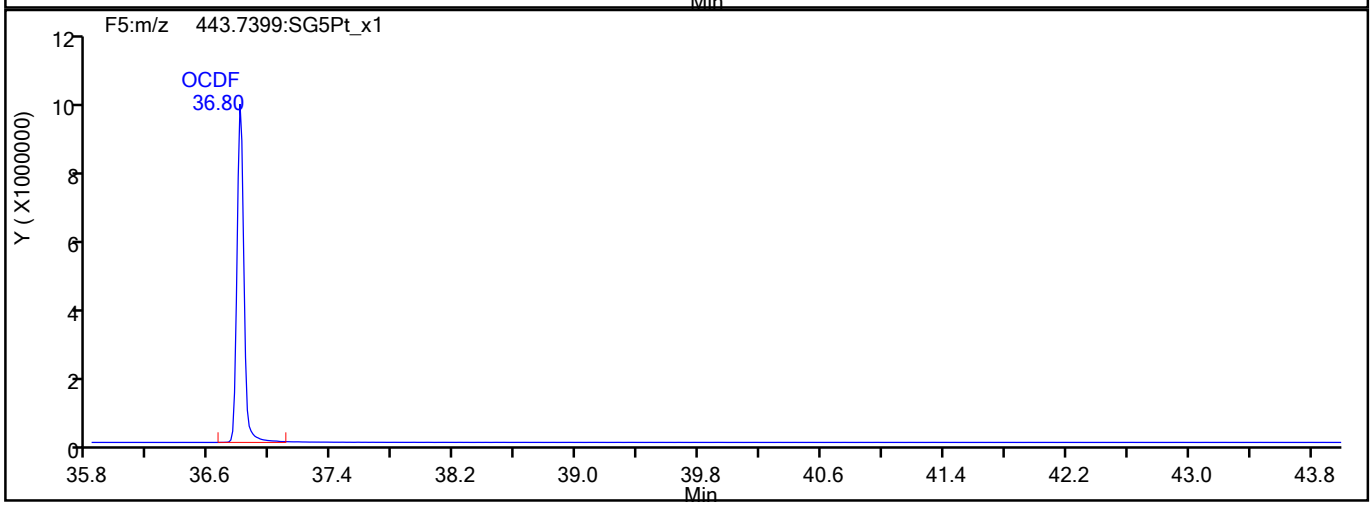

OCDF Interference Mass

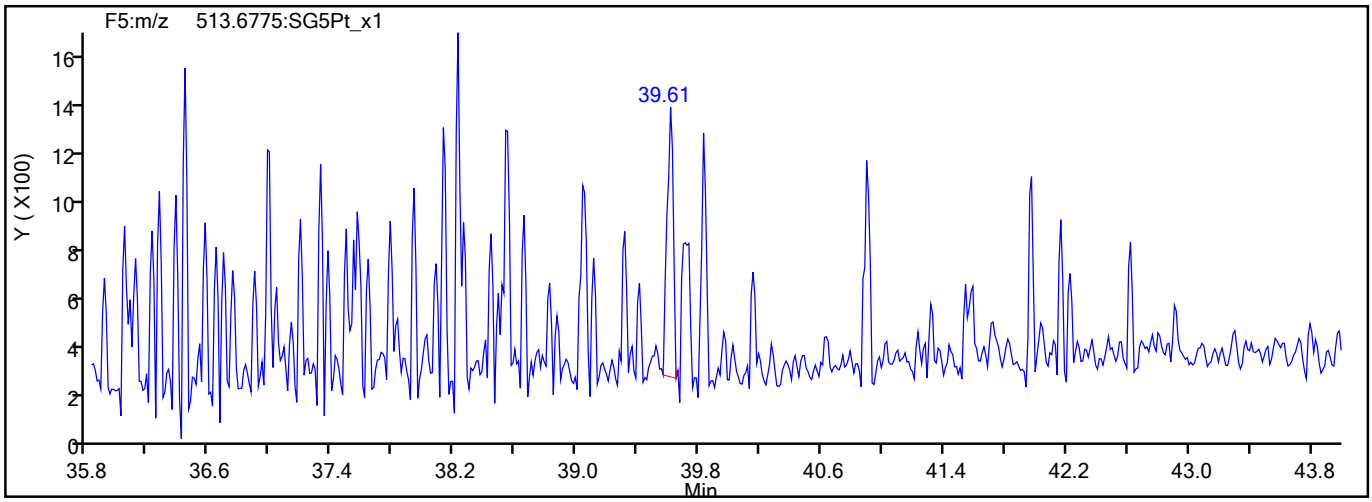

792674

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

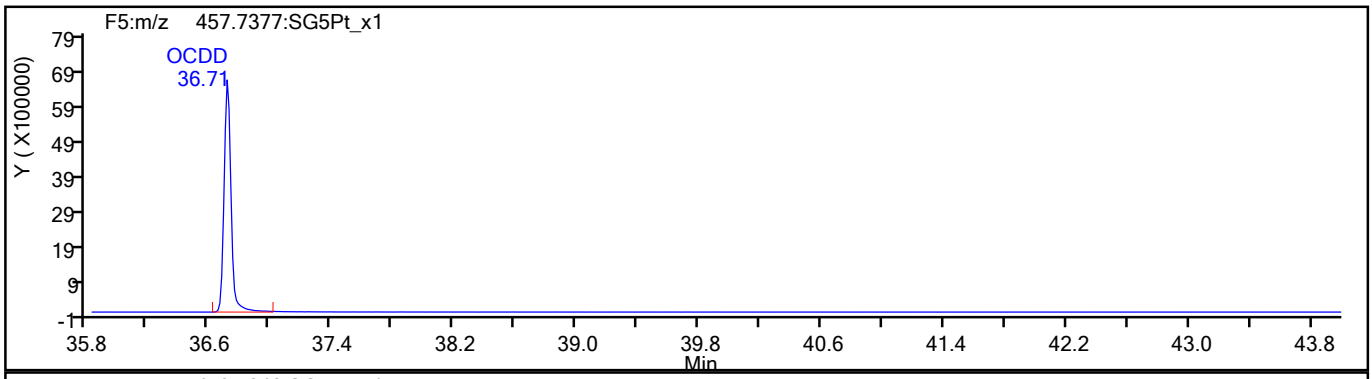

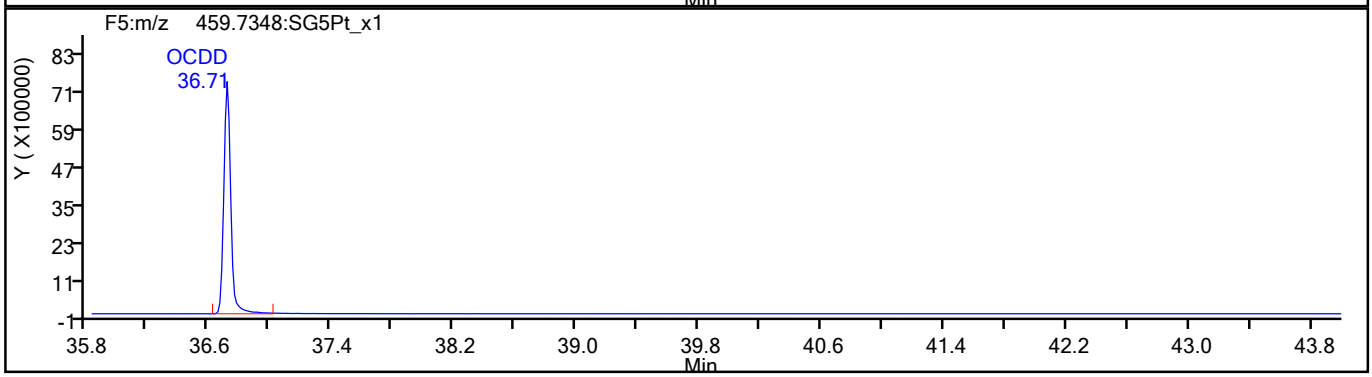

OCDD Standards

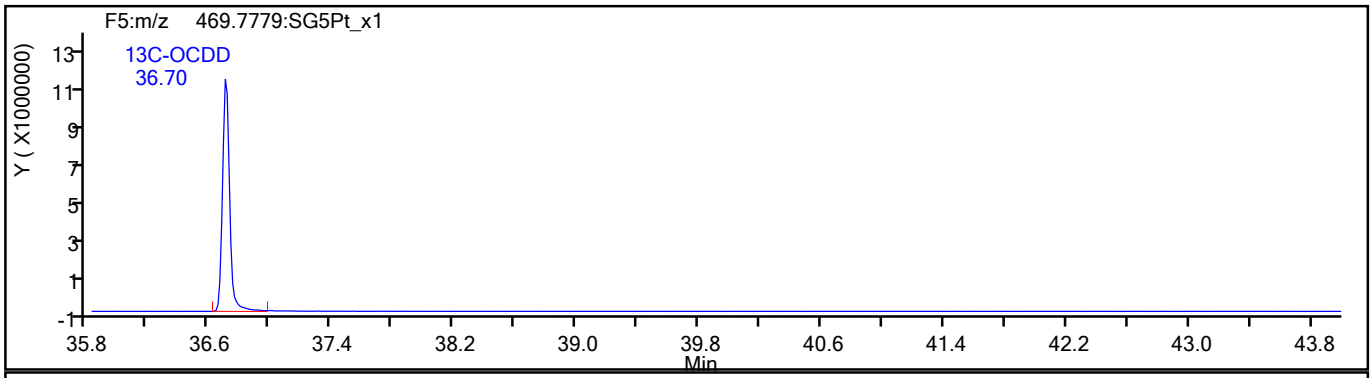

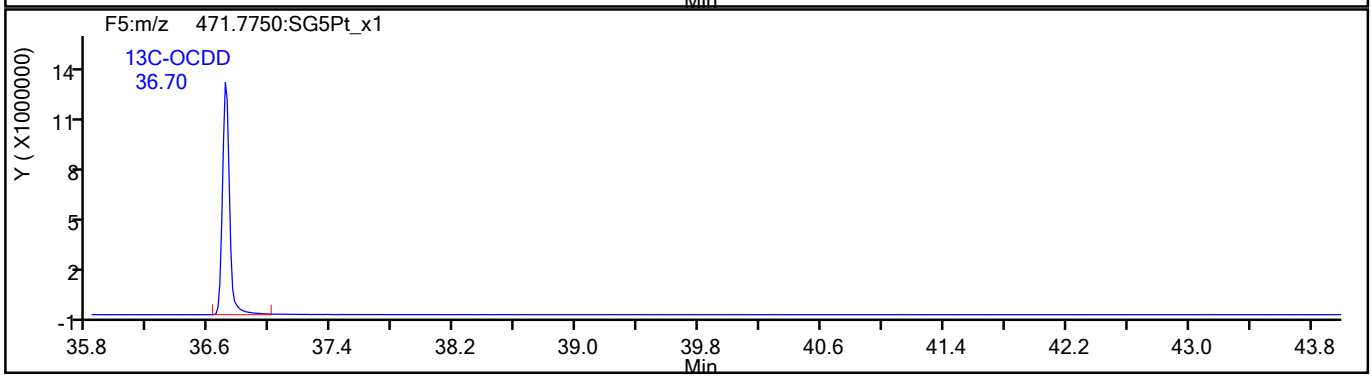

792675

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

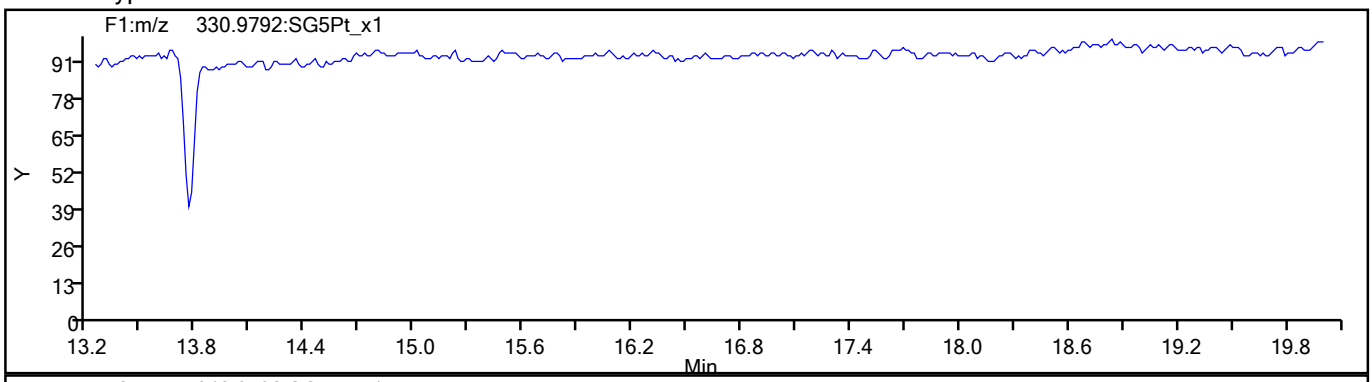

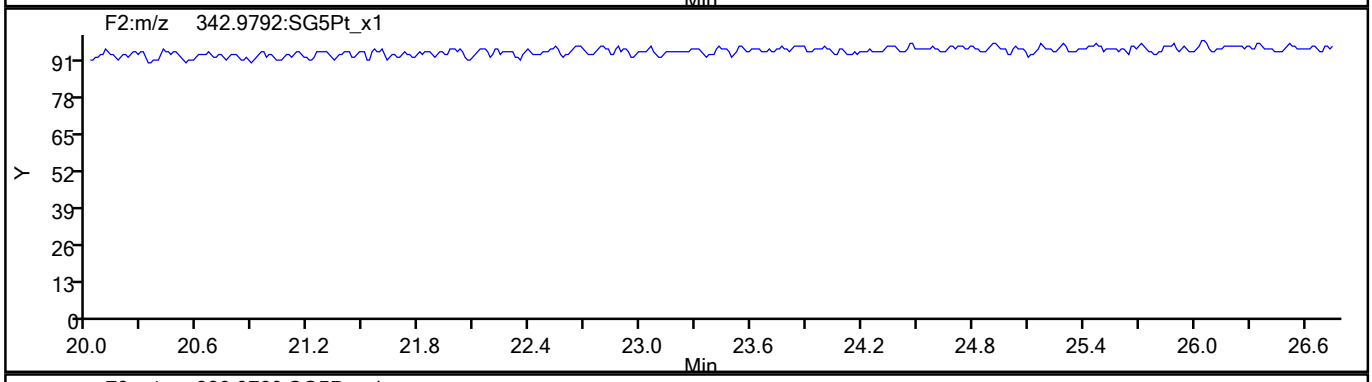

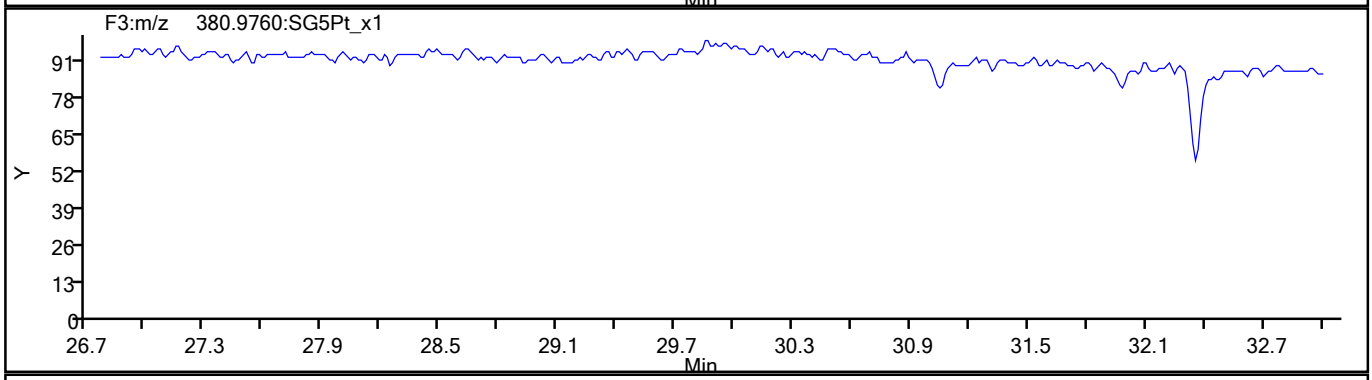

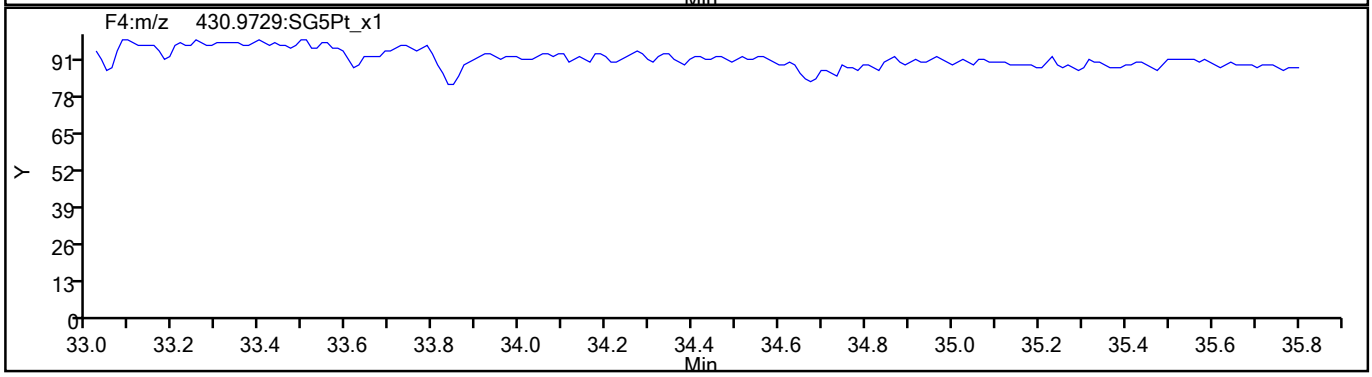

792676

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

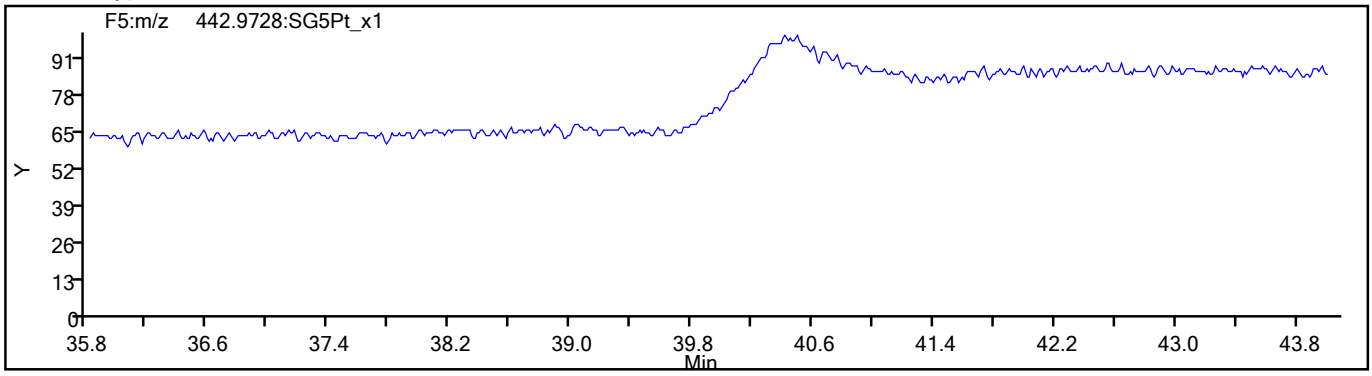

792677

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab Sample ID: CCV 320-519955/1 Calibration Date: 08/25/2021 20:40

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 25AU2110D5_15.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.028		10.0	10.0	100	84-120
2,3,7,8-TCDD	AveID	1.254	1.237		9.86	10.0	99	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.078		50.8	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.036		50.9	50.0	102	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.041		49.7	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.080		49.8	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.141		50.7	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.170		50.1	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.093		51.3	50.0	103	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.048		52.4	50.0	105	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.192		52.6	50.0	105	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.175		50.4	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.481		51.4	50.0	103	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.077		49.2	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.344		51.0	50.0	102	86-116
OCDD	AveID	1.107	1.116		101	100	101	79-126
OCDF	AveID	1.438	1.422		98.9	100	99	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.569		96.6	100	97	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9113		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.218		101	100	101	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.234		99.6	100	100	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8056		106	100	106	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.122		104	100	104	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.094		97.0	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.035		97.3	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7668		105	100	105	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8242		93.6	100	94	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9731		101	100	101	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7189		93.0	100	93	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6450		99.6	100	100	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6363		90.8	100	91	77-129
13C-OCDD	Ave	0.4472	0.4804		215	200	107	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.184		10.7	10.0	107	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\25AU2110D5.SPL
Last Modified: Thursday, August 26, 2021 09:49:48 Pacific Daylight Time
Printed: Thursday, August 26, 2021 09:49:53 Pacific Daylight Time

Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
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2	25AU2110D5_2	CS-4 HRDXNL4_00099	CCV 082521	Tray01:2	Dioxin		SMA
3	25AU2110D5_3	MB 320-515492/1-A	MB 320-515492/1-A	Tray01:4	1613B/Solid	D270	SMA
4	25AU2110D5_4	LCS 320-515492/2-A	LCS 320-515492/2-A	Tray01:5	1613B/Solid	---	SMA
5	25AU2110D5_5	320-77214-A-1-A	320-77214-A-1-A	Tray01:6	1613B/Solid	---	SMA
6	25AU2110D5_6	320-77214-A-2-A	320-77214-A-2-A	Tray01:7	1613B/Solid		SMA
7	25AU2110D5_7	320-77214-A-2-B MS	320-77214-A-2-B MS	Tray01:8	1613B/Solid		SMA
8	25AU2110D5_8	320-77214-A-2-C MSD	320-77214-A-2-C MSD	Tray01:9	1613B/Solid	---	SMA
9	25AU2110D5_9	320-77214-A-3-A	320-77214-A-3-A	Tray01:10	1613B/Solid	---	SMA
10	25AU2110D5_10	320-77214-A-4-A	320-77214-A-4-A	Tray01:11	1613B/Solid		SMA
11	25AU2110D5_11	320-77214-A-5-A	320-77214-A-5-A	Tray01:15	1613B/Solid		SMA
12	25AU2110D5_12	320-77214-A-6-A	320-77214-A-6-A	Tray01:16	1613B/Solid		SMA
13	25AU2110D5_13	320-77214-A-7-A	320-77214-A-7-A	Tray01:17	1613B/Solid	---	SMA
14	25AU2110D5_14	SB Solvent Blank C-14	SB 082521	Tray01:3			SMA
15	25AU2110D5_15	CS-4 HRDXNL4_00099	CCV 082521A	Tray01:2	Dioxin		SMA
16	25AU2110D5_16	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
17	25AU2110D5_17	SB Solvent Blank C-14	SB 082521A	Tray01:3			SMA
18	25AU2110D5_18	320-77214-A-8-A	320-77214-A-8-A	Tray01:29	1613B/Solid	D270	SMA
19	25AU2110D5_19	320-77214-A-9-A	320-77214-A-9-A	Tray01:30	1613B/Solid		SMA
20	25AU2110D5_20	320-77214-A-13-A	320-77214-A-13-A	Tray01:31	1613B/Solid		SMA
21	25AU2110D5_21	320-77292-A-1-A	320-77292-A-1-A	Tray01:32	1613B/Solid		SMA
22	25AU2110D5_22	320-77292-A-2-A	320-77292-A-2-A	Tray01:33	1613B/Solid		SMA
23	25AU2110D5_23	320-77292-A-2-B MS	320-77292-A-2-B MS	Tray01:34	1613B/Solid		SMA
24	25AU2110D5_24	320-77292-A-2-C MSD	320-77292-A-2-C MSD	Tray01:35	1613B/Solid		SMA
25	25AU2110D5_25	320-77292-A-3-A	320-77292-A-3-A	Tray01:36	1613B/Solid		SMA
26	25AU2110D5_26	320-77292-A-4-A	320-77292-A-4-A	Tray01:37	1613B/Solid		SMA
27	25AU2110D5_27	320-77292-A-5-A	320-77292-A-5-A	Tray01:38	1613B/Solid		SMA
28	25AU2110D5_28	SB Solvent Blank C-14	SB 082521B	Tray01:3			SMA
29	25AU2110D5_29	CS-4 HRDXNL4_00099	CCV 082521B	Tray01:2	Dioxin		SMA
30	25AU2110D5_30	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
31	25AU2110D5_31	SB Solvent Blank C-14	SB 082521C	Tray01:3			SMA
32	25AU2110D5_32	320-77292-A-6-A	320-77292-A-6-A	Tray01:43	1613B/Solid	D270	SMA
33	25AU2110D5_33	320-77292-A-7-A	320-77292-A-7-A	Tray01:44	1613B/Solid		SMA
34	25AU2110D5_34	320-77292-A-8-A	320-77292-A-8-A	Tray01:45	1613B/Solid		SMA
35	25AU2110D5_35	320-77292-A-9-A	320-77292-A-9-A	Tray01:46	1613B/Solid		SMA
36	25AU2110D5_36	320-77292-A-13-A	320-77292-A-13-A	Tray01:47	1613B/Solid		SMA
37	25AU2110D5_37	400-206693-C-22-A	400-206693-C-22-A	Tray01:48	1613B/Solid		SMA
38	25AU2110D5_38	400-206693-C-36-A	400-206693-C-36-A	Tray01:49	1613B/Solid		SMA
39	25AU2110D5_39	400-206693-C-37-A	400-206693-C-37-A	Tray01:50	1613B/Solid		SMA
40	25AU2110D5_40	400-206693-C-38-A	400-206693-C-38-A	Tray01:51	1613B/Solid		SMA
41	25AU2110D5_41	400-206693-C-39-A	400-206693-C-39-A	Tray01:52	1613B/Solid		SMA
42	25AU2110D5_42	SB Solvent Blank C-14	SB 082521D	Tray01:3			SMA
43	25AU2110D5_43	CS-4 HRDXNL4_00099	CCV 082521C	Tray01:2	Dioxin		SMA
44	25AU2110D5_44	WDM HRDXNCP_00044	WDM 082521C	Tray01:1	Dioxin	---	SMA
45	25AU2110D5_45	SB Solvent Blank C-14	SB 082521E	Tray01:3			SMA

LOGFILE CHECKED
DB 8/26/21

792679

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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover

Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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---	---	C:\CHROM
---	---	C:\CHROM
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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M 292.9824_R 11547

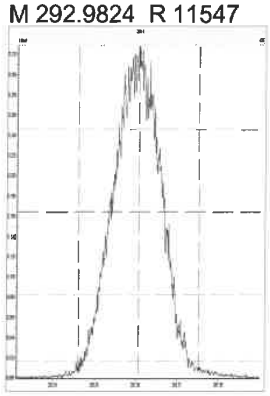

M 304.9824_R 11798

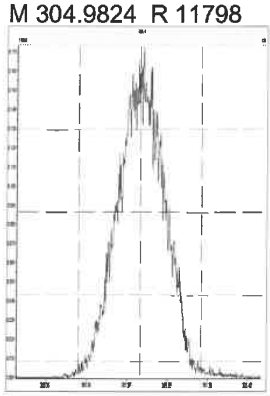

M 318.9792_R 11792

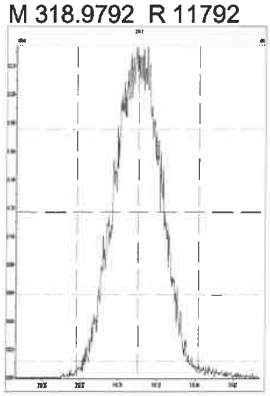

M 330.9792_R 11497

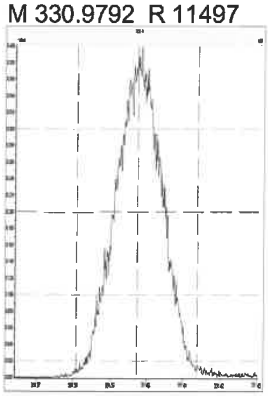

M 342.9792_R 11767

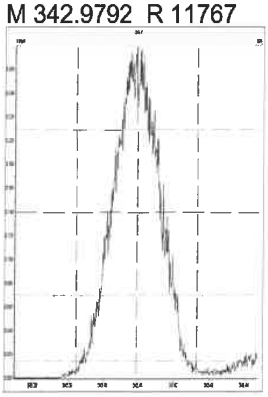

M 354.9792_R 11852

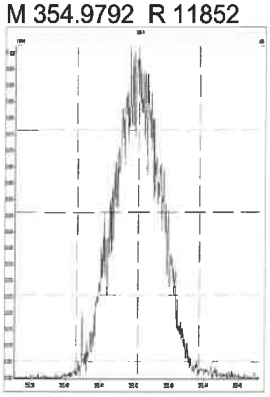

M 366.9792_R 12140

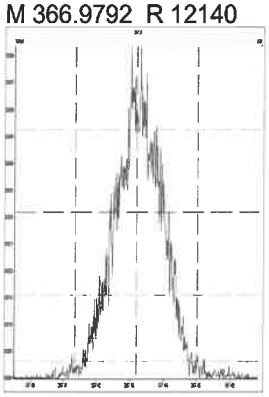

M 380.9760_R 11995

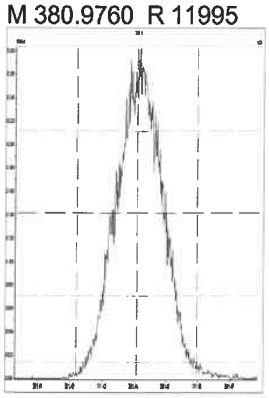

M 392.9760_R 11657

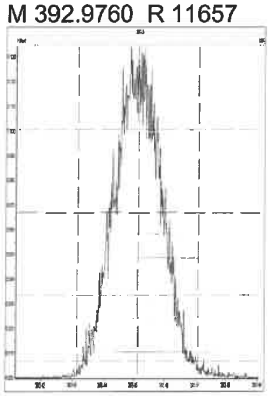

M 404.9760_R 11934

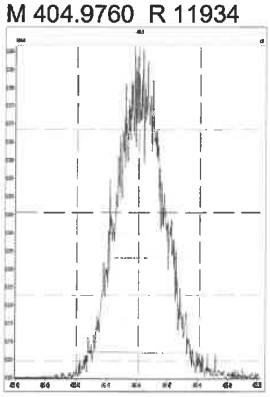

M 416.9760_R 12724

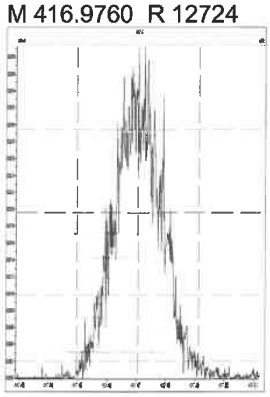

M 318.9792_R 12048

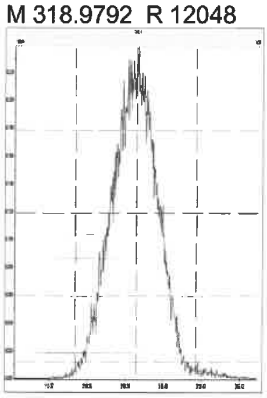

M 330.9792_R 11709

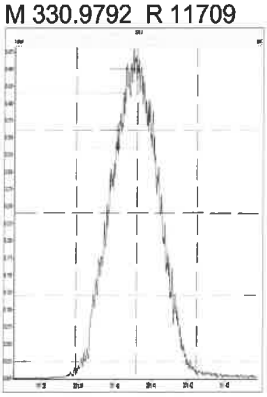

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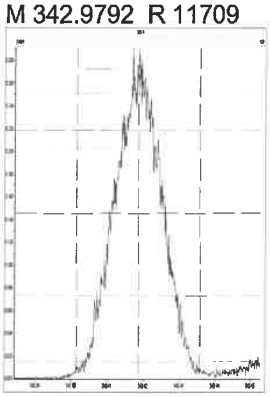

M 354.9792_R 12107

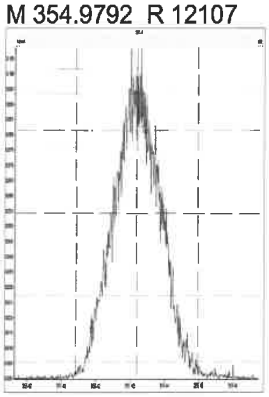

M 366.9792_R 12315

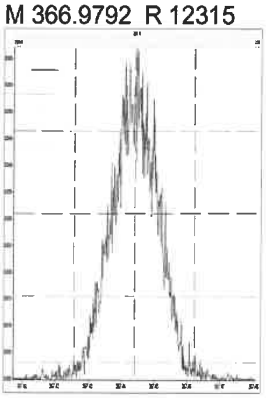

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M 380.9760 R 11848

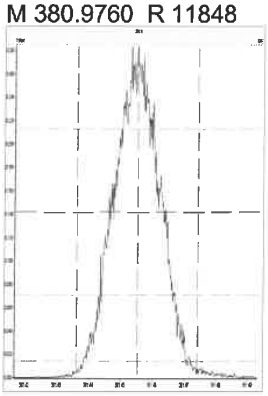

M 392.9760 R 11536

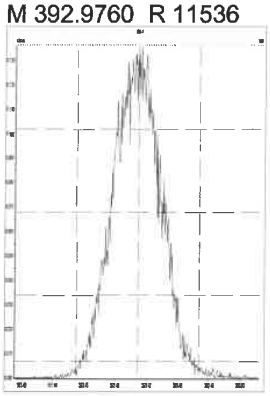

M 404.9760 R 12029

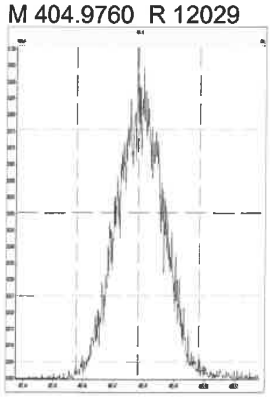

M 416.9760 R 12452

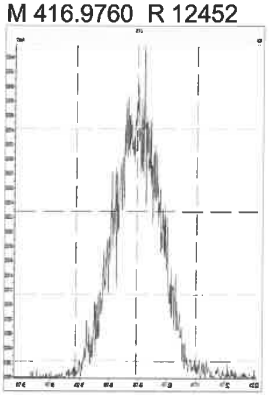

M 366.9792 R 11494

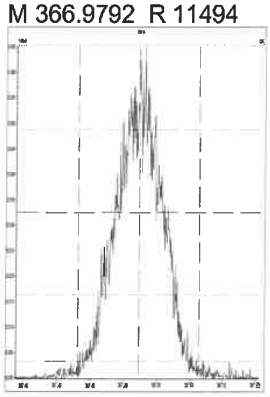

M 380.9760 R 11848

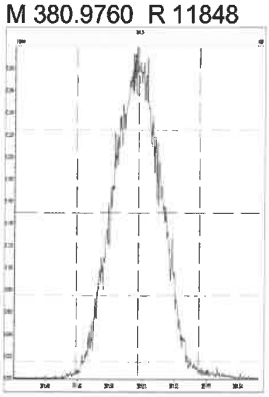

M 392.9760 R 12081

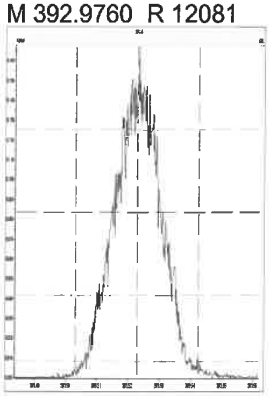

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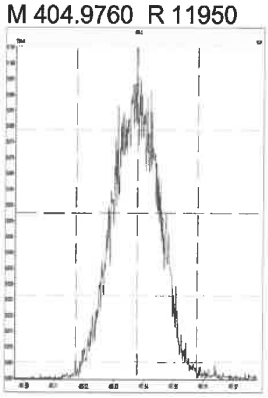

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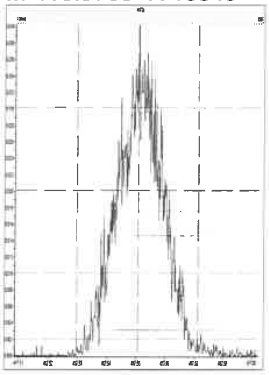

M 430.9728 R 11684

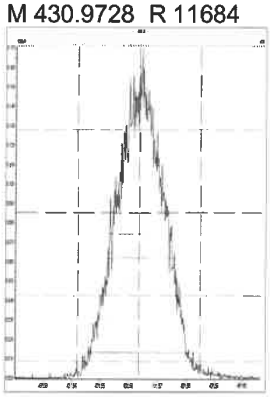

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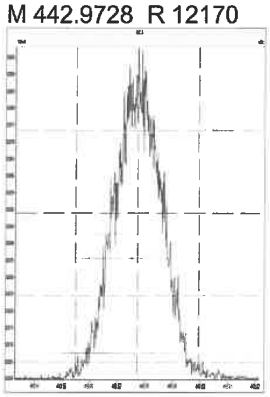

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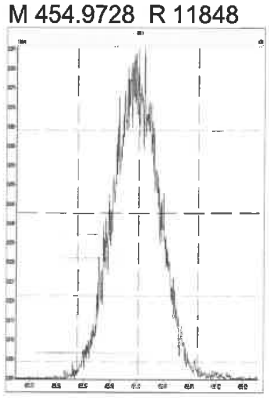

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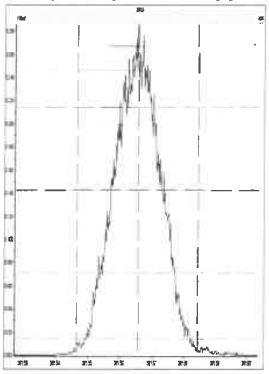

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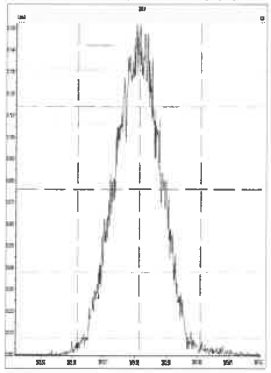

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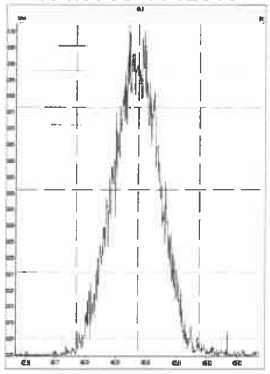

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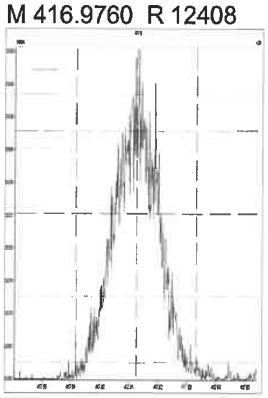

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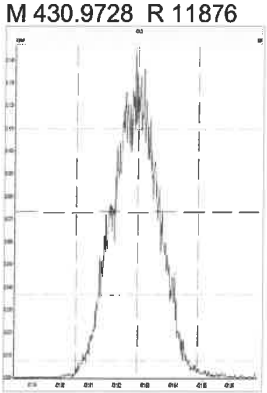

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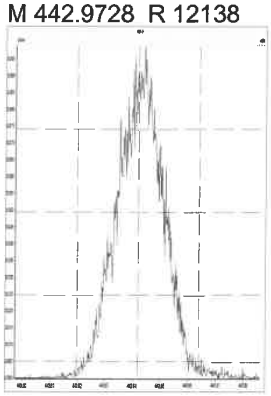

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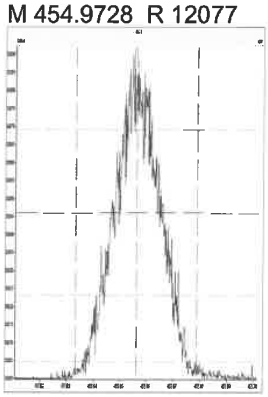

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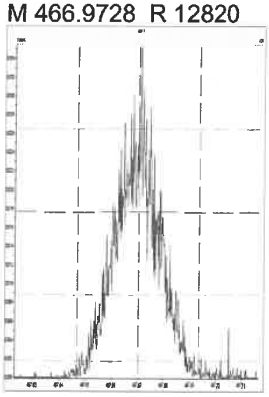

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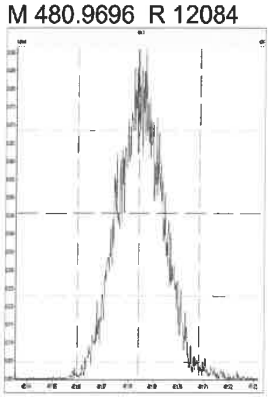

M 380.9760 R 11848

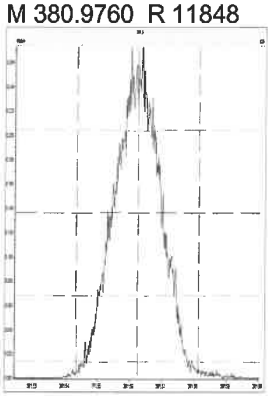

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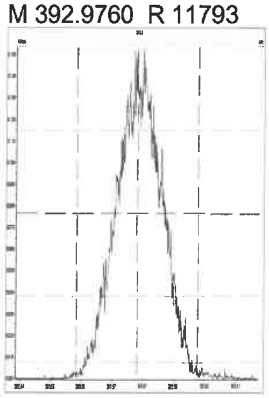

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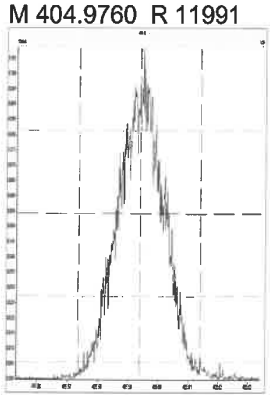

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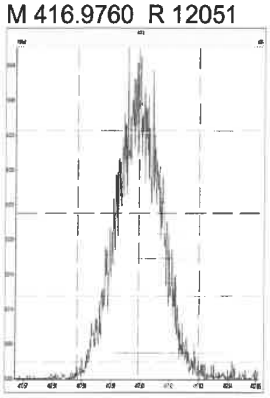

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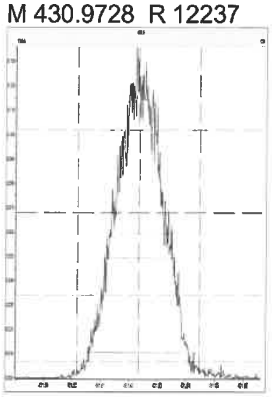

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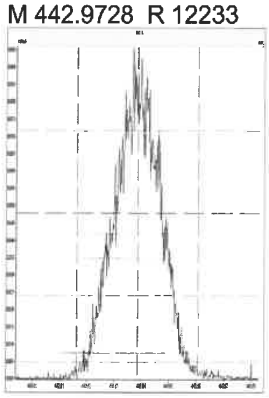

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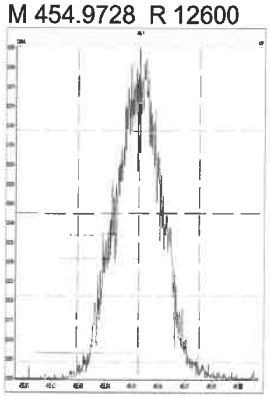

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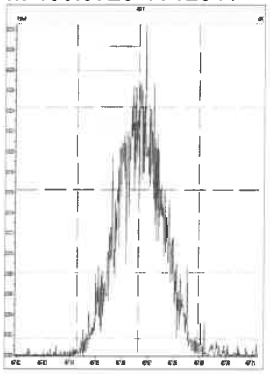

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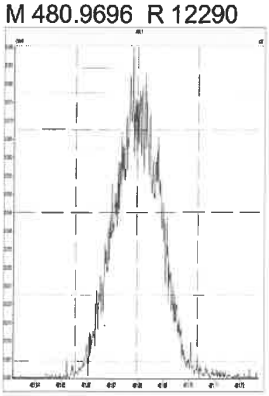

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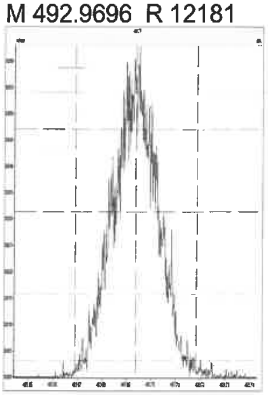

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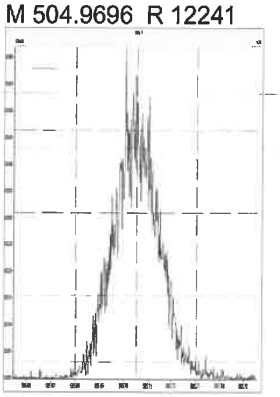

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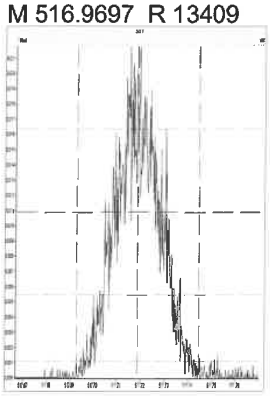

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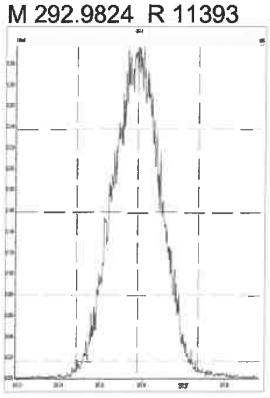

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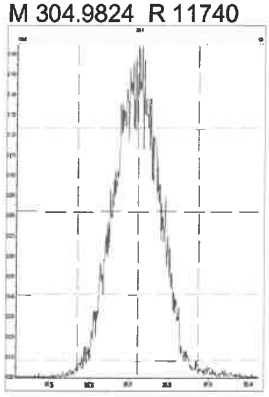

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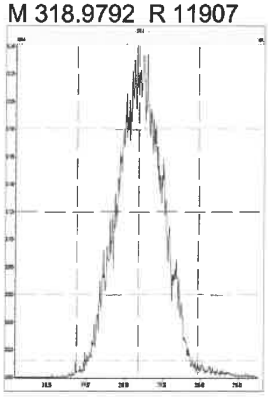

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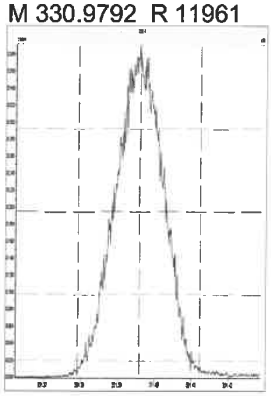

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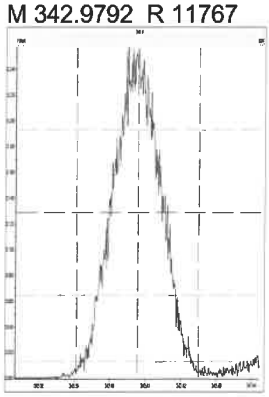

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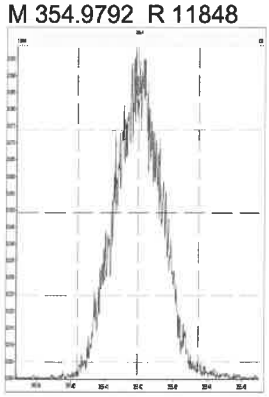

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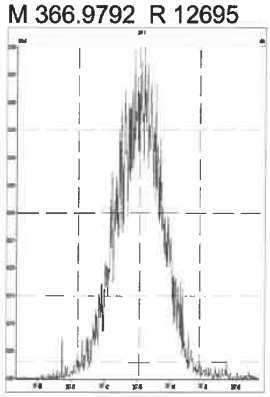

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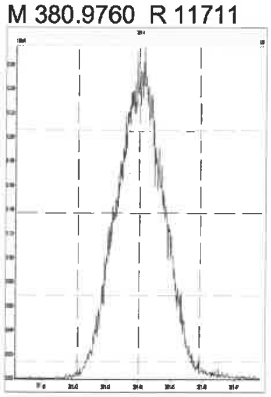

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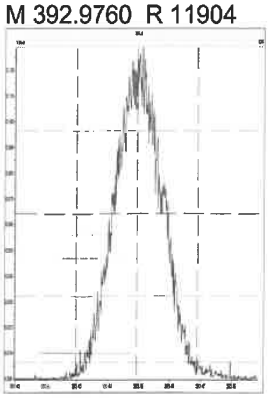

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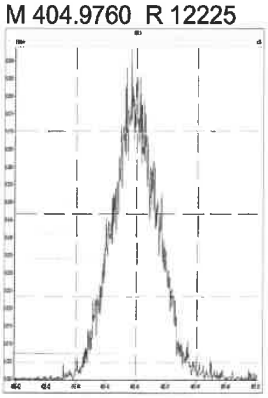

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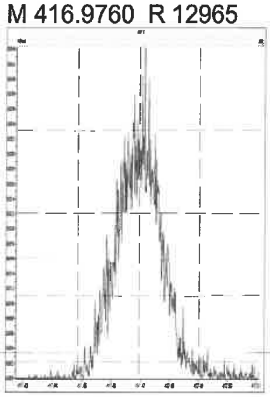

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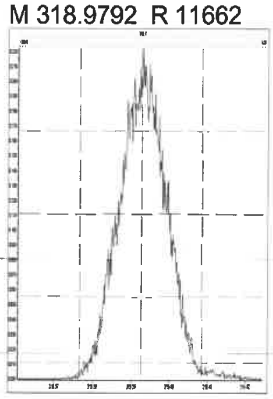

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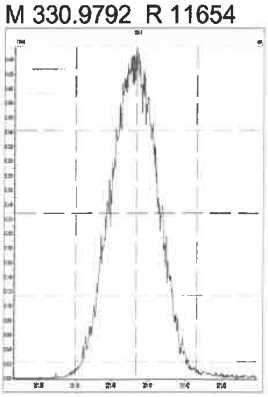

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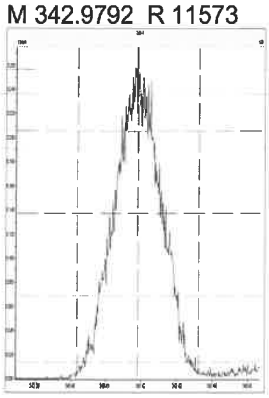

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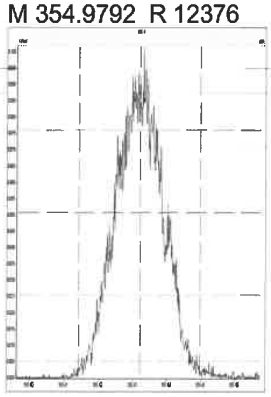

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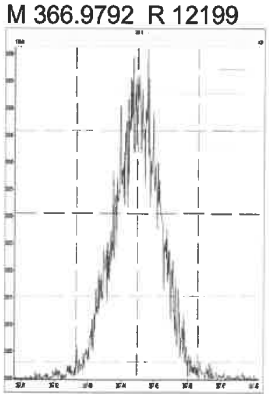

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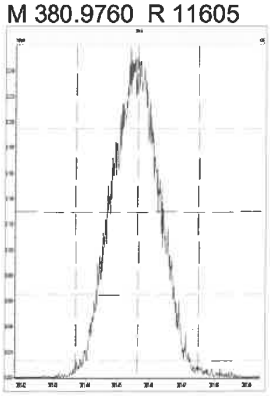

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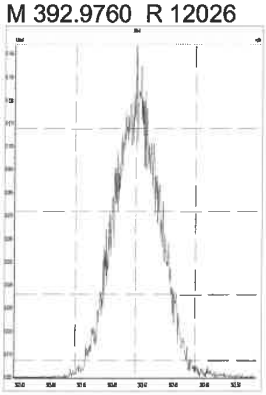

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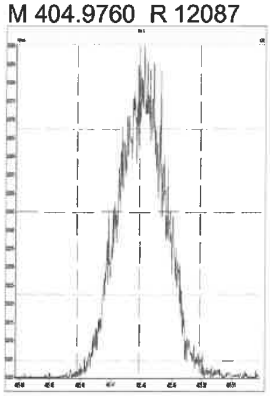

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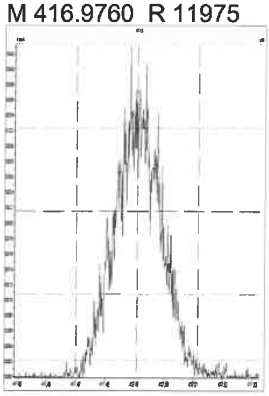

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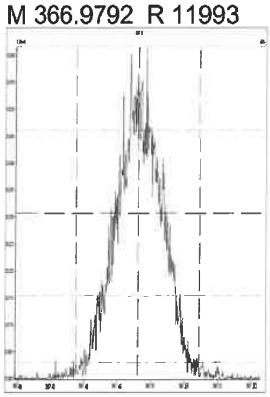

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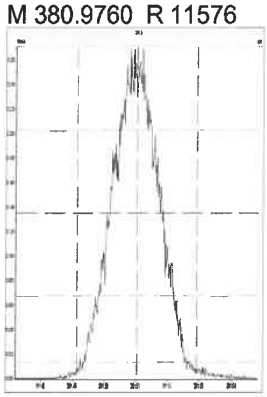

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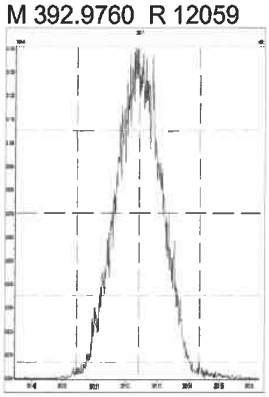

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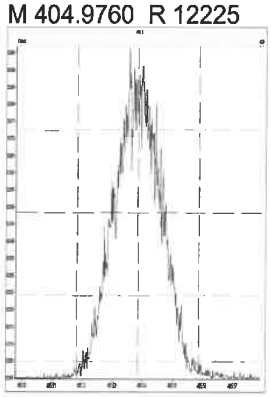

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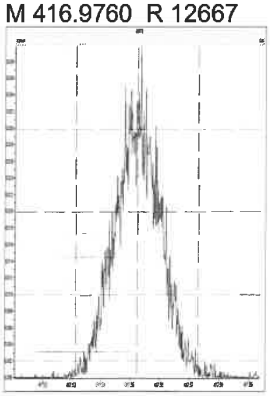

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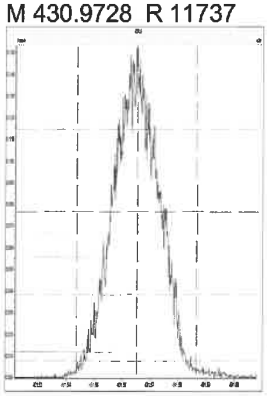

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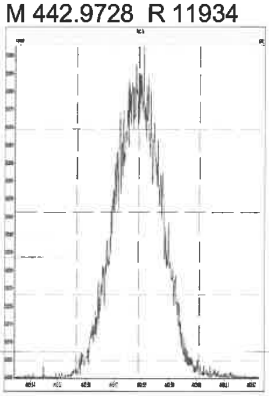

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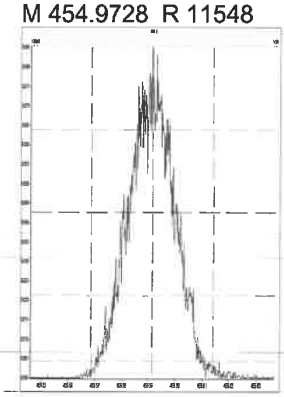

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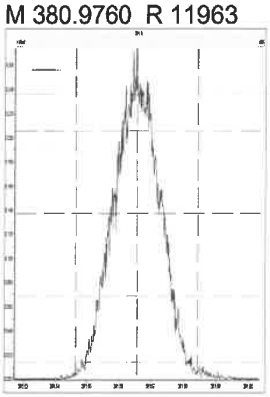

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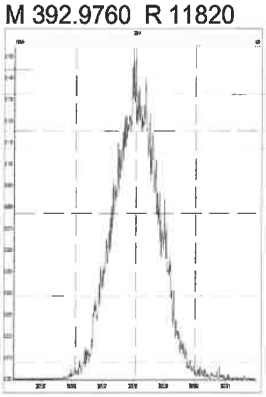

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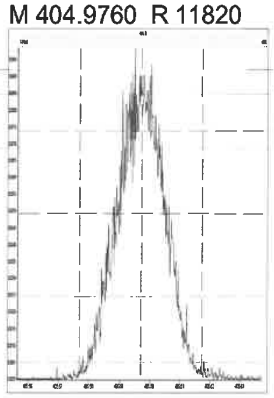

M 416.9760 R 12854

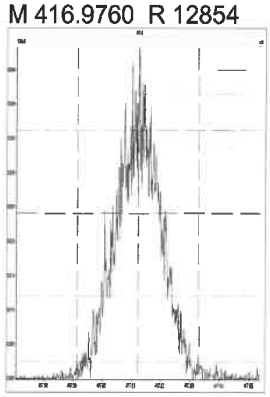

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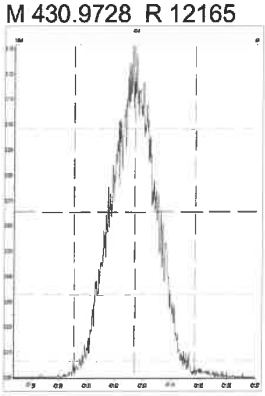

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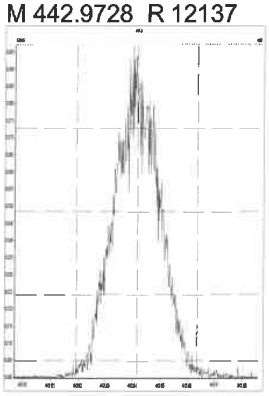

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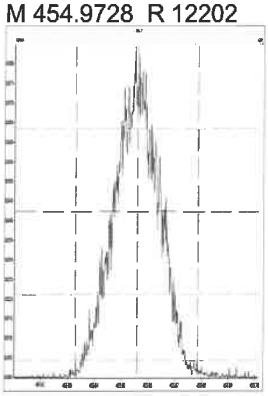

M 466.9728 R 12407

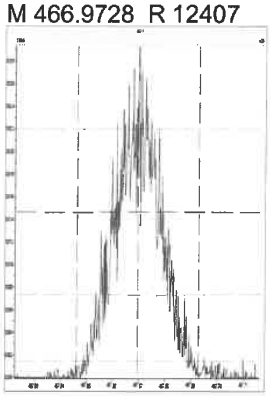

M 480.9696 R 11794

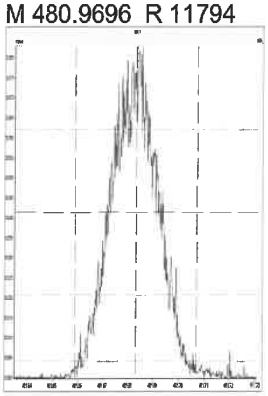

M 380.9760 R 11764

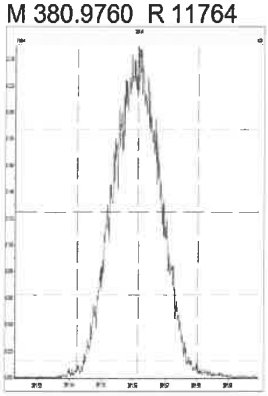

M 392.9760 R 11904

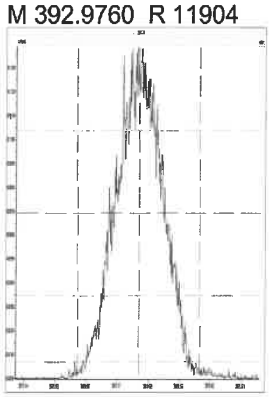

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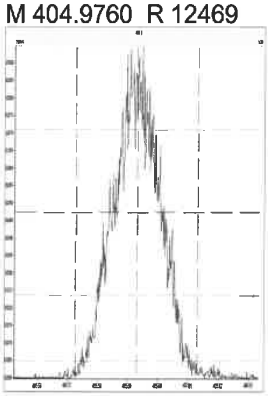

M 416.9760 R 12565

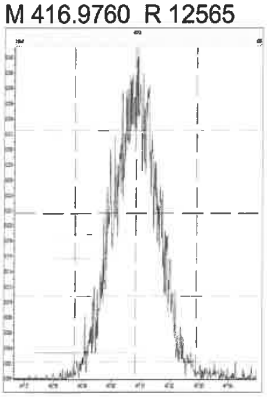

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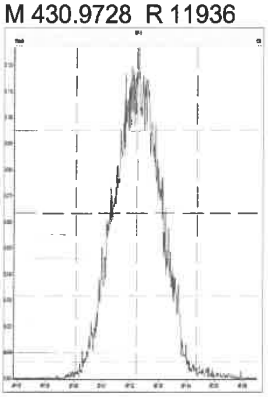

M 442.9728 R 12142

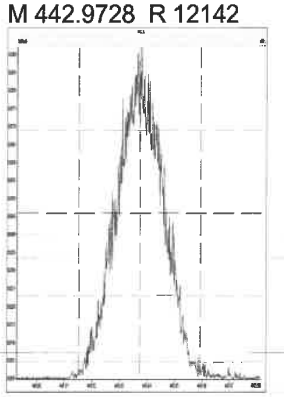

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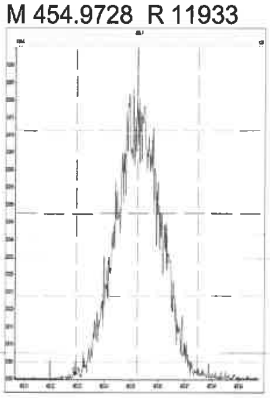

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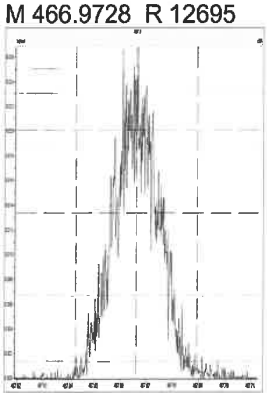

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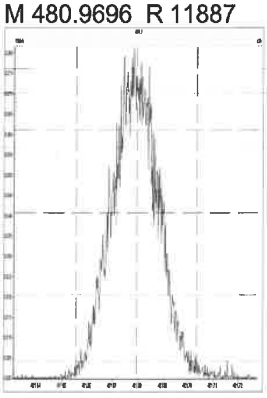

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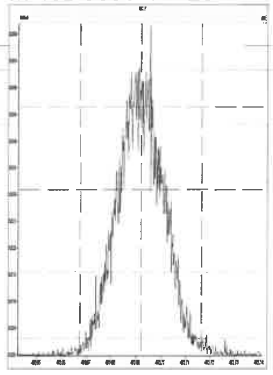

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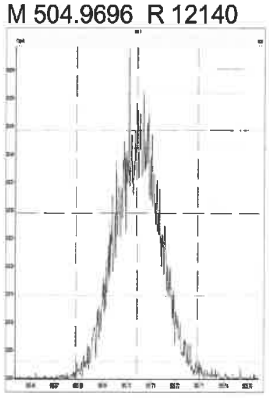

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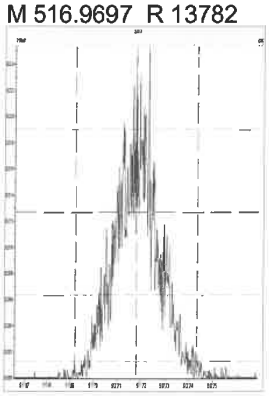

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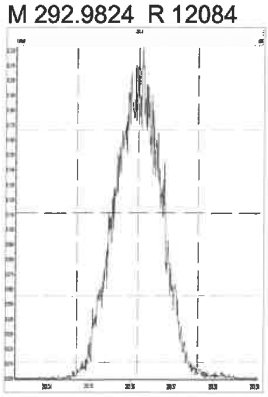

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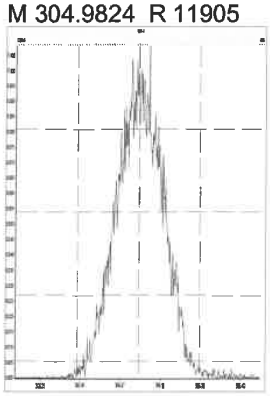

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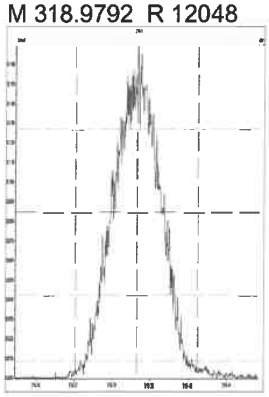

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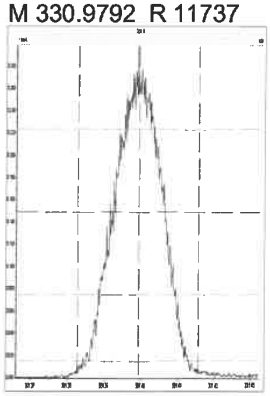

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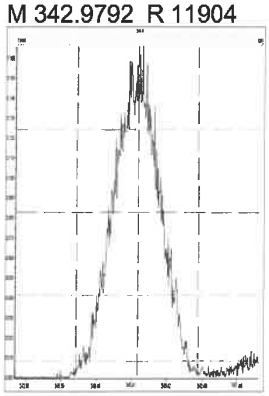

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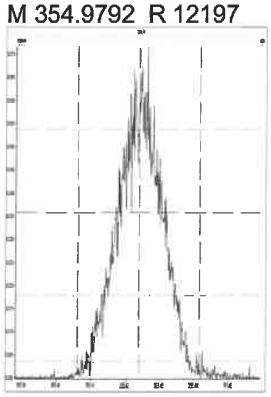

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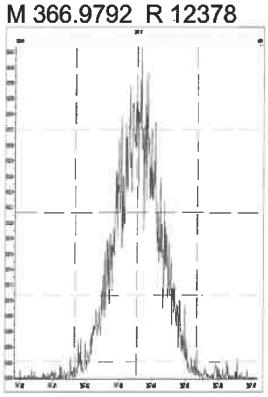

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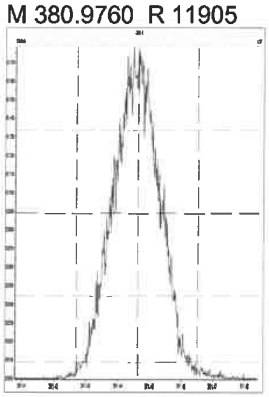

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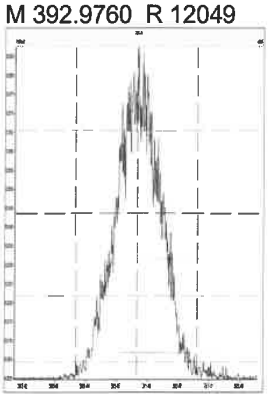

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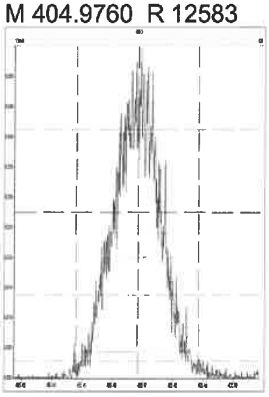

M 416.9760 R 12438

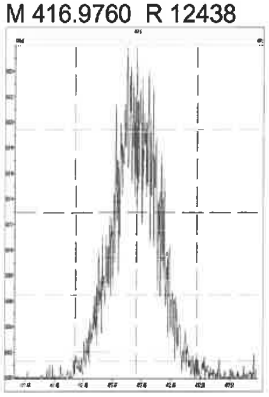

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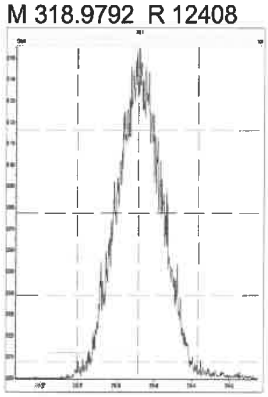

M 330.9792 R 12019

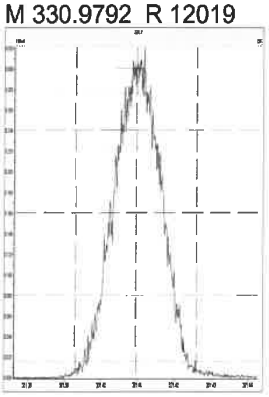

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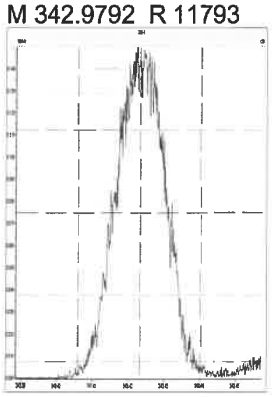

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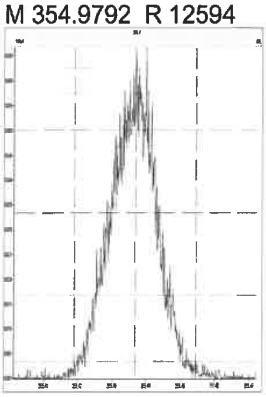

M 366.9792 R 12126

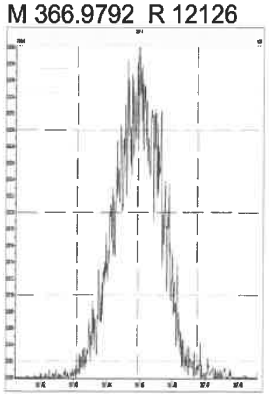

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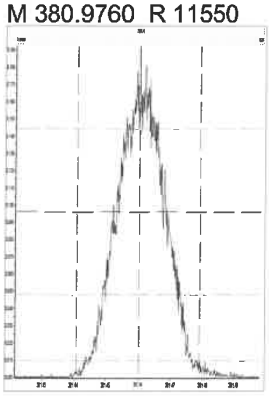

M 392.9760 R 11869

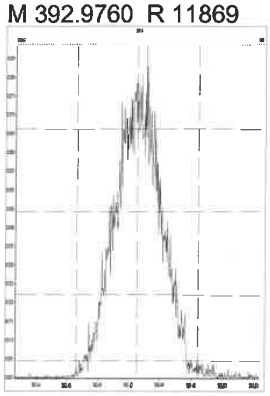

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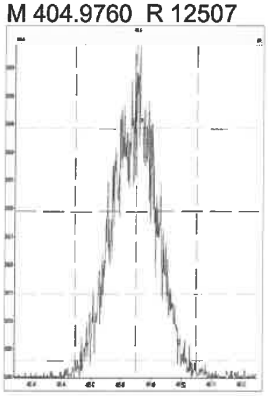

M 416.9760 R 13021

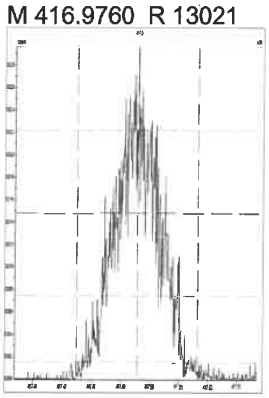

M 366.9792 R 12288

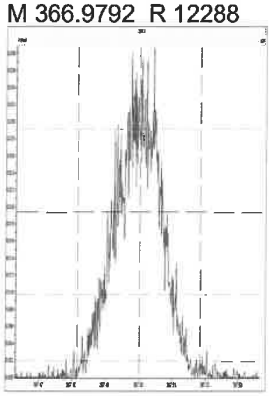

M 380.9760 R 11765

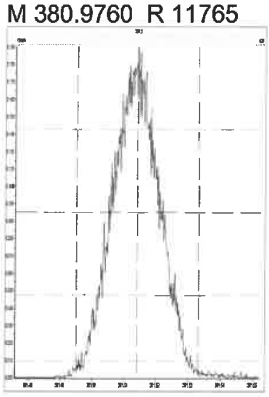

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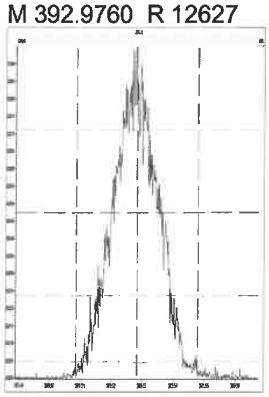

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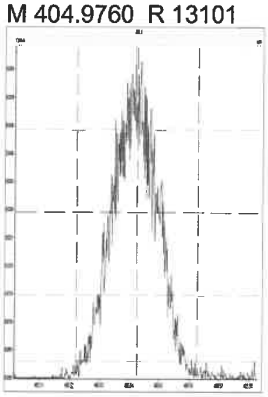

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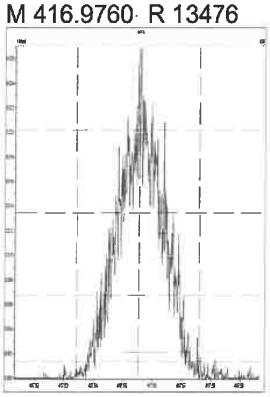

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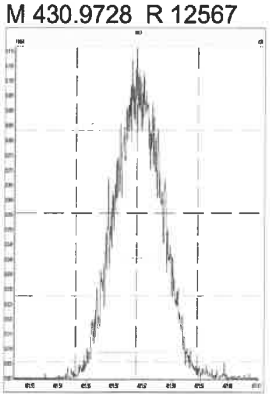

M 442.9728 R 12690

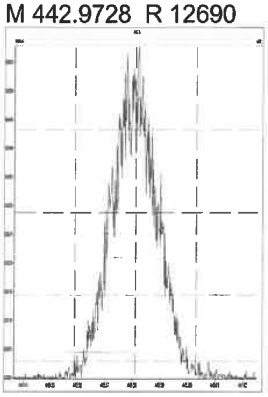

M 454.9728 R 11905

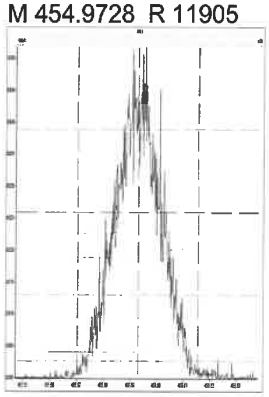

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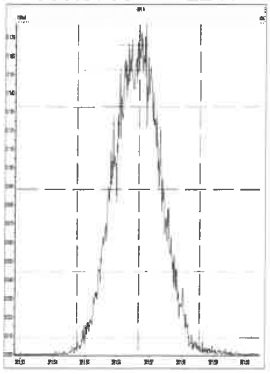

M 392.9760 R 11904

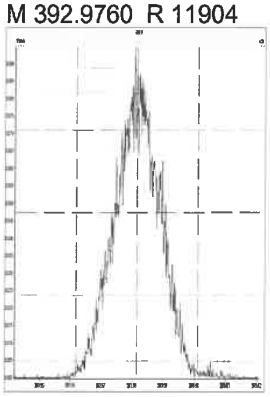

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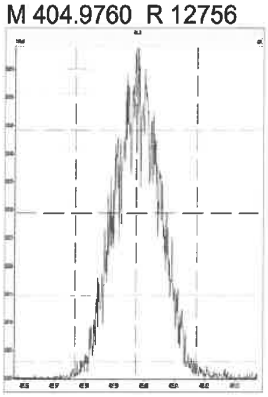

M 416.9760 R 12019

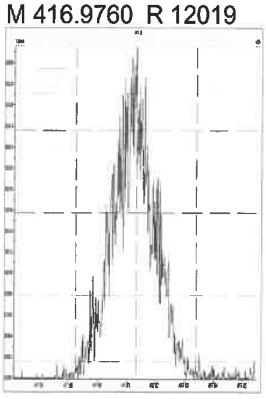

Printed: Thursday, August 26, 2021 06:45:41 Pacific Daylight Time

M 430.9728 R 11682

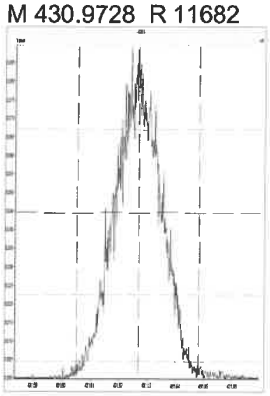

M 442.9728 R 12315

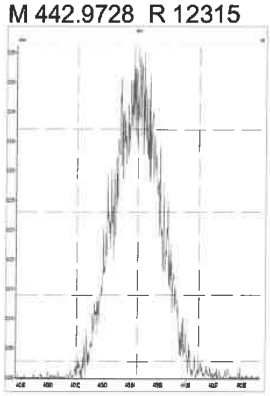

M 454.9728 R 12284

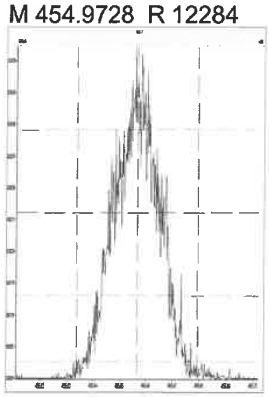

M 466.9728 R 12197

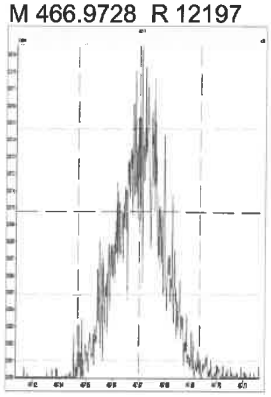

M 480.9696 R 12762

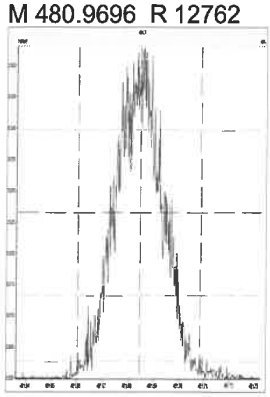

M 380.9760 R 11737

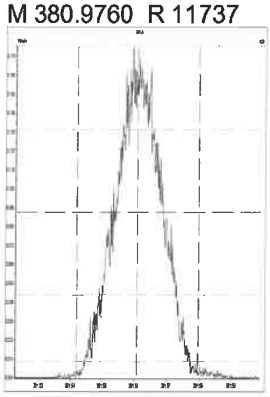

M 392.9760 R 11834

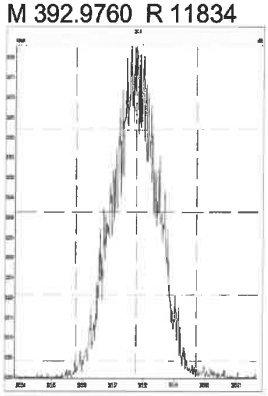

M 404.9760 R 11961

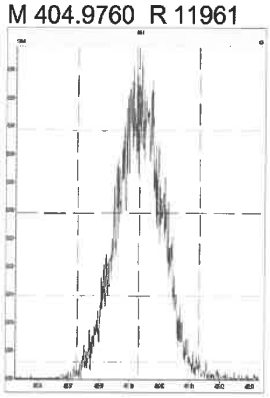

M 416.9760 R 12690

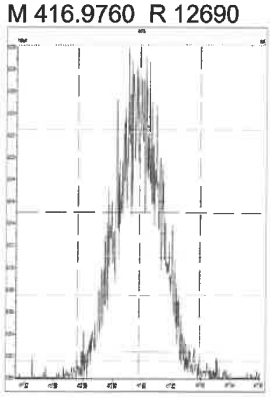

M 430.9728 R 12019

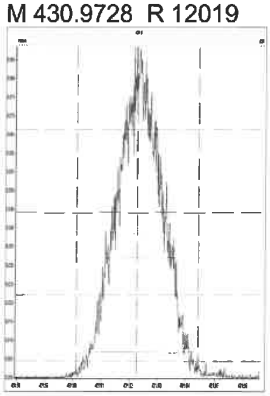

M 442.9728 R 12665

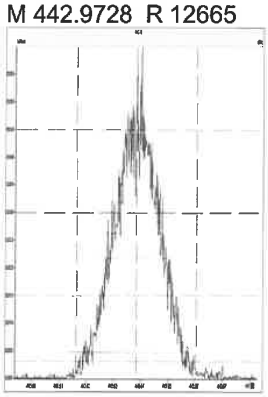

M 454.9728 R 12286

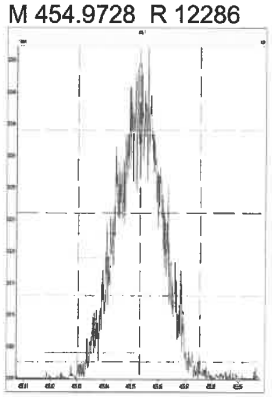

M 466.9728 R 13332

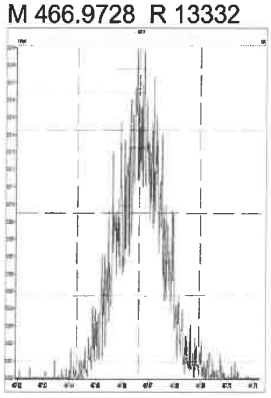

M 480.9696 R 12938

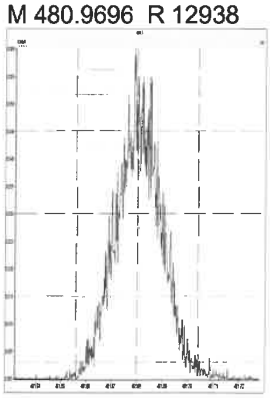

M 492.9696 R 12854

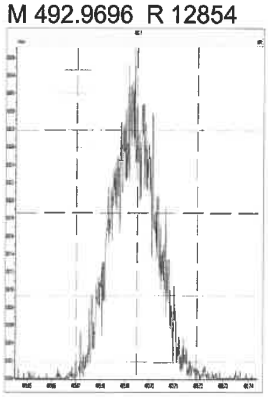

M 504.9696 R 12255

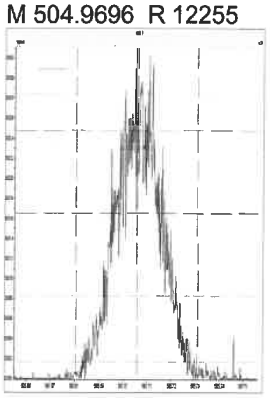

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M 516.9697 R 14214

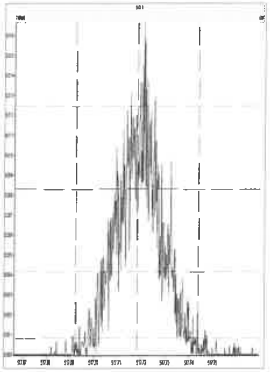

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 20:40:41 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521A CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:47:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 10:34:44

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	114162124	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	179170031	0.77	1.6249	96.6	96.6	0.1661	0.1661	96.59	
2,3,7,8-TCDF	17.114	18424700	0.76	1.0239	10.0	10.0	0.0163	0.0163	100	
A Non-2,3,7,8-sub-TCDF	17.076						0.0163	0.0163		Rn
S Total TCDF					10.0	10.0	0.0163	0.0163		
D 13C-2,3,7,8-TCDD	17.794	104038414	0.79	0.8993	101.3	101.3	0.1008	0.1008	101	
2,3,7,8-TCDD	17.809	12869222	0.79	1.2541	9.863	9.863	0.0130	0.0130	98.63	
$ 37Cl4-2,3,7,8-TCDD	17.809	13512459		1.1071	10.7	10.7	0.0128	0.0128	107	
A Non-2,3,7,8-sub-TCDD	17.530						0.0130	0.0130		
S Total TCDD					9.863	9.863	0.0130	0.0130		
D 13C-1,2,3,7,8-PeCDF	22.020	139045231	1.55	1.2101	100.7	100.7	0.1276	0.1276	101	
1,2,3,7,8-PeCDF	22.047	74923542	1.58	1.0611	50.8	50.8	0.0907	0.0907	102	
D 13C-2,3,4,7,8-PeCDF	23.343	140922707	1.54	1.2395	99.6	99.6	0.1246	0.1246	99.59	
2,3,4,7,8-PeCDF	23.370	73012473	1.57	1.0184	50.9	50.9	0.1016	0.1016	102	
A F1 PeCDFs	19.851						0.009195	0.009195		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0959	0.0959		n
S Total PeCDF					101.7	101.7	0.0962	0.0962		
D 13C-1,2,3,7,8-PeCDD	24.052	91963618	1.60	0.7612	105.8	105.8	0.0778	0.0778	106	
1,2,3,7,8-PeCDD	24.079	47886998	1.59	1.0484	49.7	49.7	0.0368	0.0368	99.33	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0368	0.0368		
S Total PeCDD					49.7	49.7	0.0368	0.0368		
D 13C-1,2,3,4,7,8-HxCDF	30.186	119996593	0.52	1.0837	103.5	103.5	0.2311	0.2311	104	
1,2,3,4,7,8-HxCDF	30.212	64814583	1.21	1.0851	49.8	49.8	0.1720	0.1720	99.55	
D 13C-1,2,3,6,7,8-HxCDF	30.399	117007399	0.53	1.1279	97.0	97.0	0.2220	0.2220	96.99	
1,2,3,6,7,8-HxCDF	30.412	66745854	1.21	1.1260	50.7	50.7	0.1618	0.1618	101	
D 13C-2,3,4,6,7,8-HxCDF	31.291	110727855	0.53	1.0637	97.3	97.3	0.2354	0.2354	97.32	
2,3,4,6,7,8-HxCDF	31.317	64797217	1.22	1.1675	50.1	50.1	0.1207	0.1207	100	
D 13C-1,2,3,7,8,9-HxCDF	32.142	104082078	0.52	0.9676	100.6	100.6	0.2588	0.2588	101	
1,2,3,7,8,9-HxCDF	32.156	61173374	1.21	1.1664	50.4	50.4	0.1129	0.1129	101	
A Non-2,3,7,8-sub-HxCDF	30.331						0.1379	0.1379		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					201.0	201.0	0.1419	0.1419		
* 13C-1,2,3,7,8,9-HxCDD	31.956	106956569	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.503	82011748	1.25	0.7334	104.5	104.5	0.2299	0.2299	105	
1,2,3,4,7,8-HxCDD	31.517	44803827	1.27	1.0640	51.3	51.3	0.1165	0.1165	103	
D 13C-1,2,3,6,7,8-HxCDD	31.610	88158641	1.23	0.8802	93.6	93.6	0.1915	0.1915	93.65	
1,2,3,6,7,8-HxCDD	31.623	46192612	1.26	1.0001	52.4	52.4	0.1143	0.1143	105	
1,2,3,7,8,9-HxCDD	31.969	50727870	1.26	1.1325	52.6	52.6	0.1050	0.1050	105	
A Non-2,3,7,8-sub-HxCDD	30.519						0.1116	0.1116		
S Total HxCDD					156.4	156.4	0.1119	0.1119		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	76892142	0.44	0.7730	93.0	93.0	0.9442	0.9442	93.00	
1,2,3,4,6,7,8-HpCDF	33.615	56931307	1.04	1.4413	51.4	51.4	0.3136	0.3136	103	
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	68051725	0.45	0.7008	90.8	90.8	1.041	1.041	90.79	
1,2,3,4,7,8,9-HpCDF	34.684	45731591	1.04	1.3174	51.0	51.0	0.4110	0.4110	102	
A Non-2,3,7,8-sub-HpCDF	34.138						0.3572	0.3572		
S Total HpCDF					102.4	102.4	0.3623	0.3623		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	68981955	1.03	0.6472	99.6	99.6	0.5318	0.5318	99.65	
1,2,3,4,6,7,8-HpCDD	34.405	37129661	1.05	1.0943	49.2	49.2	0.2136	0.2136	98.37	
A Non-2,3,7,8-sub-HpCDD	34.223						0.2136	0.2136		
S Total HpCDD					49.2	49.2	0.2136	0.2136		
D 13C-OCDD	36.701	102754035	0.88	0.4472	214.8	214.8	0.1820	0.1820	107	
OCDF	36.797	73073478	0.90	1.4382	98.9	98.9	0.0580	0.0580	98.90	
OCDD	36.713	57319561	0.89	1.1070	100.8	100.8	0.0889	0.0889	101	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 20:40:41 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521A CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:47:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 10:34:44

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		50863464	13175107	4799	11997	2745		
333.9339	17.598	17.598	0		63298660	16424626	5937	14842	2766	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	0.972	78087026	20629866	12788	31970	1613		
317.9389	17.099	17.099	0	0.972	101083005	26486866	19167	47917	1382	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	7965523	2111252	1622	4055	1302		
305.8987	17.114	17.114	0	1.001	10459177	2754776	1531	3827	1799	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.736	17.069	-20	0.979	32665	8844	1622	4055	5		
305.8987	16.736	17.069	-20	0.979	57871	15057	1531	3827	10	0.56(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.011	45918108	11183544	4799	11997	2330		
333.9339	17.794	17.794	0	1.011	58120306	14151695	5937	14842	2384	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	5674510	1471774	848	2120	1736		
321.8936	17.809	17.809	0	1.001	7194712	1842625	803	2007	2295	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	13512459	3426543	1675	4187	2046		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.530						848	2120			
321.8936	17.530						803	2007			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	84597034	15895976	10902	27255	1458		
353.8970	22.020	22.020	0	1.251	54448197	10109172	7383	18457	1369	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.047	22.047	0	1.001	45912931	8636444	5920	14800	1459		
341.8567	22.047	22.047	0	1.001	29010611	5460850	4095	10237	1334	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.326	85516036	14699684	10902	27255	1348		
353.8970	23.343	23.343	0	1.326	55406671	9501142	7383	18457	1287	1.54(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370	23.370	0	1.001	44637834	7805502	5920	14800	1318		
341.8567	23.370	23.370	0	1.001	28374639	4948946	4095	10237	1209	1.57(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						257	642			
341.8567	19.851						703	1757			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.565	23.067	-30	1.025	339228	53393	5920	14800	9		
341.8567	22.579	23.067	-29	1.025	227009	34407	4095	10237	8	1.49(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.367	56560329	9299645	4456	11140	2087		
369.8919	24.052	24.052	0	1.367	35403289	5807455	2554	6385	2274	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079	24.079	0	1.001	29373234	4749938	1435	3587	3310		
357.8516	24.079	24.079	0	1.001	18513764	3004789	895	2237	3357	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1435	3587			
357.8516	23.696						895	2237			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.186	30.186	0	0.945	41066942	7264634	10299	25747	705		
385.8610	30.186	30.186	0	0.945	78929651	13693087	18963	47407	722	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.212	30.212	0	1.001	35478856	6175709	8558	21395	722		
375.8178	30.199	30.212	-1	1.000	29335727	5099983	7084	17710	720	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	40285825	7410201	10299	25747	720		
385.8610	30.399	30.399	0	0.951	76721574	14049318	18963	47407	741	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.000	36612207	6905037	8558	21395	807		
375.8178	30.412	30.412	0	1.000	30133647	5689393	7084	17710	803	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.979	38142735	9507771	10299	25747	923		
385.8610	31.291	31.291	0	0.979	72585120	18240793	18963	47407	962	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317	31.317	0	1.001	35582042	8886351	8558	21395	1038		
375.8178	31.317	31.317	0	1.001	29215175	7234440	7084	17710	1021	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.142	32.142	0	1.006	35430450	10130665	10299	25747	984		
385.8610	32.142	32.142	0	1.006	68651628	19563080	18963	47407	1032	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.156	32.156	0	1.000	33506085	9715818	8558	21395	1135		
375.8178	32.156	32.156	0	1.000	27667289	7970936	7084	17710	1125	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.331						8558	21395			
375.8178	30.331						7084	17710			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		59252149	16215250	11953	29882	1357		
403.8529	31.956	31.956	0		47704420	13000000	7749	19372	1678	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.503	31.503	0	0.986	45517975	12210716	11953	29882	1022		
403.8529	31.503	31.503	0	0.986	36493773	9612147	7749	19372	1240	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.517	31.517	0	1.000	25058438	7024579	6198	15495	1133		
391.8127	31.517	31.517	0	1.000	19745389	5425696	4626	11565	1173	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	48572591	12959093	11953	29882	1084		
403.8529	31.610	31.610	0	0.989	39586050	10720245	7749	19372	1383	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.623	31.623	0	1.000	25734187	7002716	6198	15495	1130		
391.8127	31.623	31.623	0	1.000	20458425	5628580	4626	11565	1217	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.969	31.969	0	1.015	28234466	7888248	6198	15495	1273		
391.8127	31.969	31.969	0	1.015	22493404	6176601	4626	11565	1335	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.519						6198	15495			
391.8127	30.519						4626	11565			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	23396914	8543068	25720	64300	332		
419.8220	33.603	33.603	0	1.052	53495228	19371914	59576	148940	325	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.615	0	1.000	29017911	10689336	31624	79060	338		
409.7789	33.615	33.615	0	1.000	27913396	10346614	18846	47115	549	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.672	0	1.085	21016576	7228327	25720	64300	281		
419.8220	34.672	34.672	0	1.085	47035149	16074631	59576	148940	270	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.684	34.684	0	1.000	23341165	7997286	31624	79060	253		
409.7789	34.684	34.684	0	1.000	22390426	7671807	18846	47115	407	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						31624	79060			
409.7789	34.138						18846	47115			

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Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	35078619	12246728	21462	53655	571		
437.8140	34.393	34.393	0	1.076	33903336	11866878	18762	46905	632	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	18991502	6650843	11799	29497	564		
425.7737	34.405	34.405	0	1.000	18138159	6220787	10748	26870	579	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						11799	29497			
425.7737	34.223						10748	26870			
13C-OCDD											
469.7779	36.701	36.701	0	1.148	48147302	14377153	4707	11767	3054		
471.7750	36.701	36.701	0	1.148	54606733	16330577	4802	12005	3401	0.88(0.76-1.02)	
OCDF											
441.7428	36.797	36.797	0	1.003	34657650	10433120	2456	6140	4248		
443.7399	36.797	36.797	0	1.003	38415828	11689295	2668	6670	4381	0.90(0.76-1.02)	
OCDD											
457.7377	36.713	36.713	0	1.000	26999141	8235432	2787	6967	2955		
459.7348	36.713	36.713	0	1.000	30320420	9177910	3259	8147	2816	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

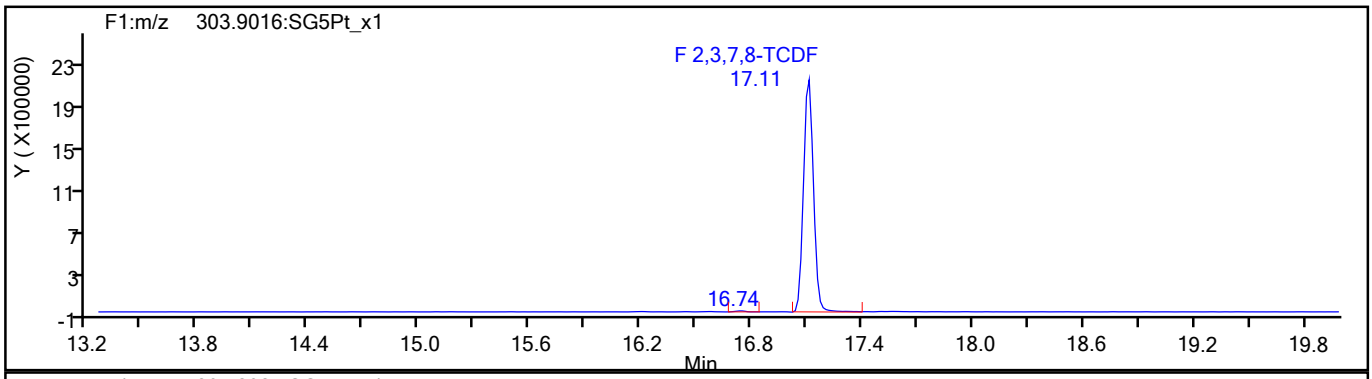

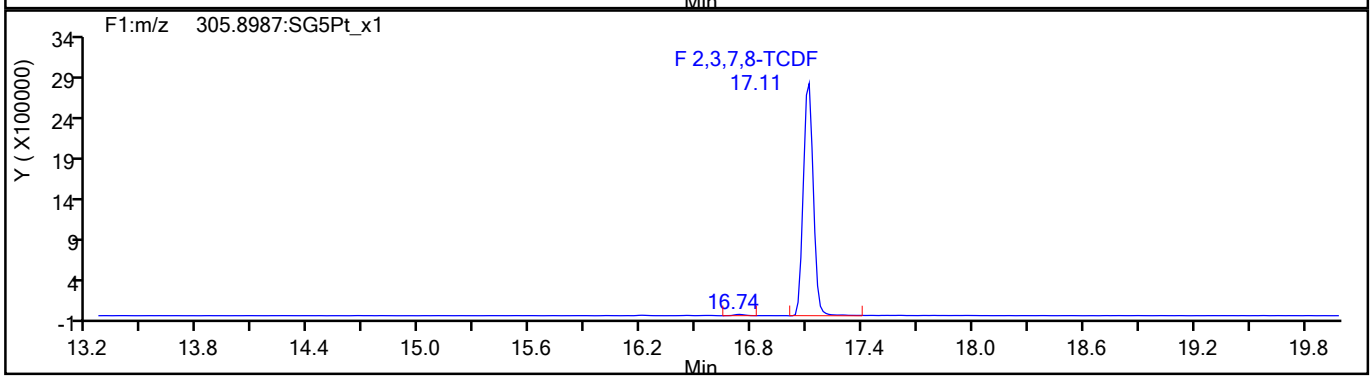

TCDF Standards

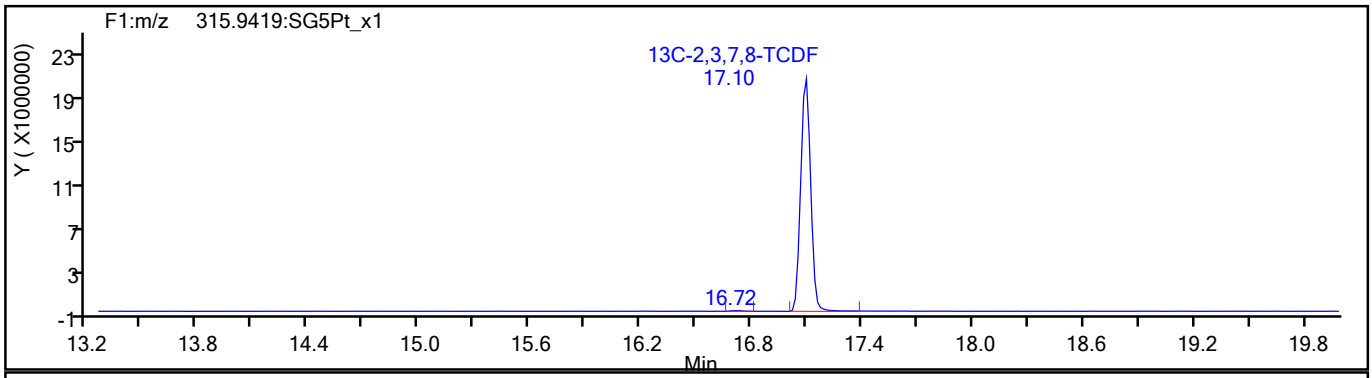

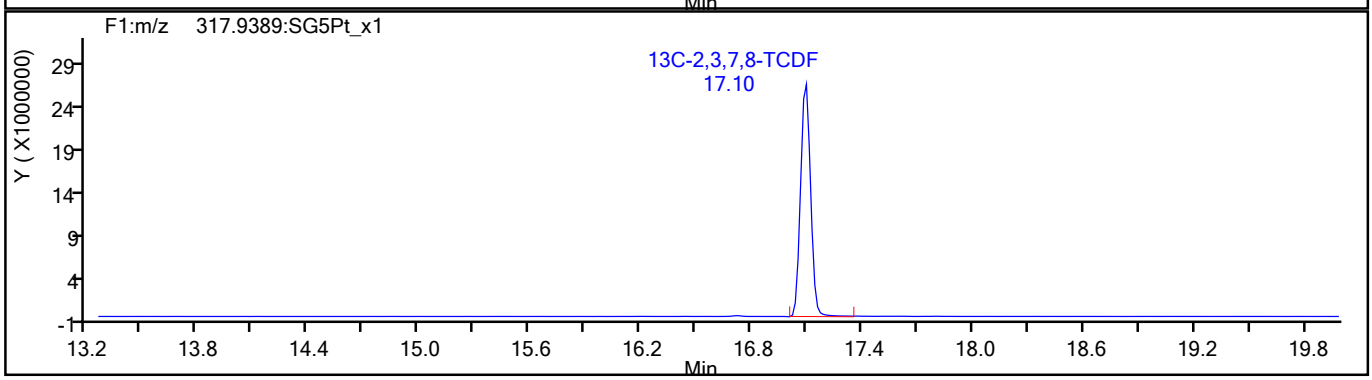

792700

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

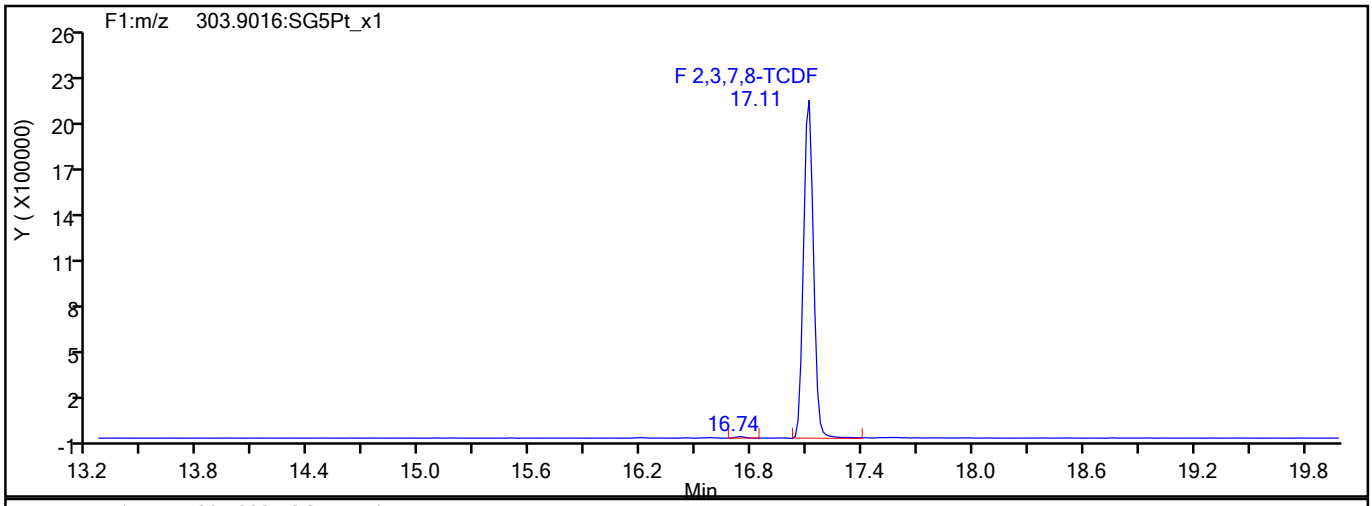

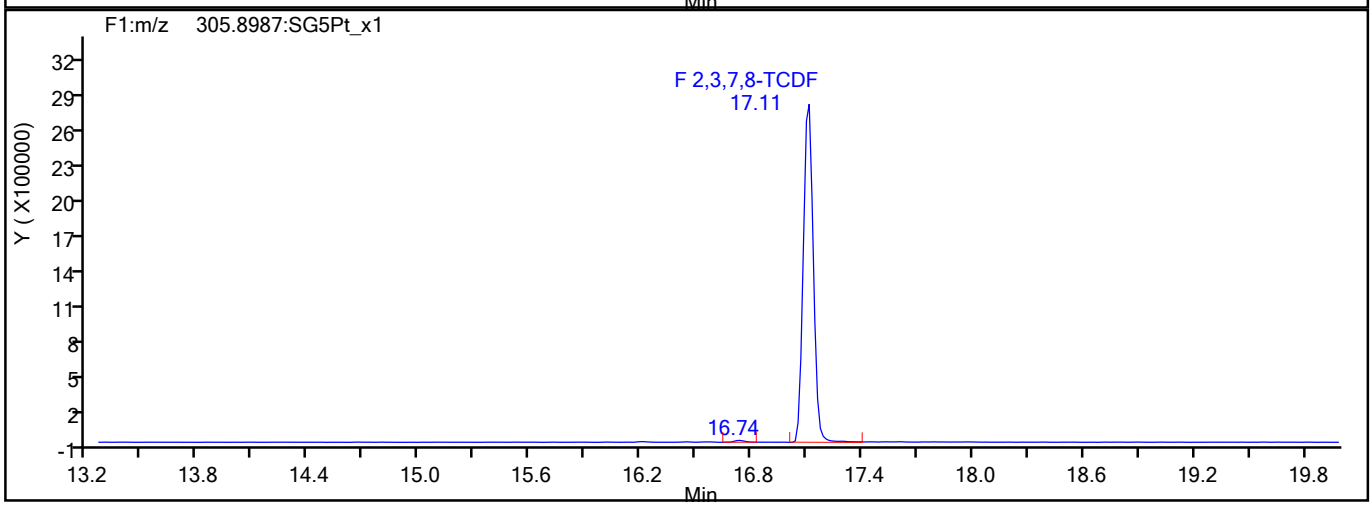

TCDF Interference Mass

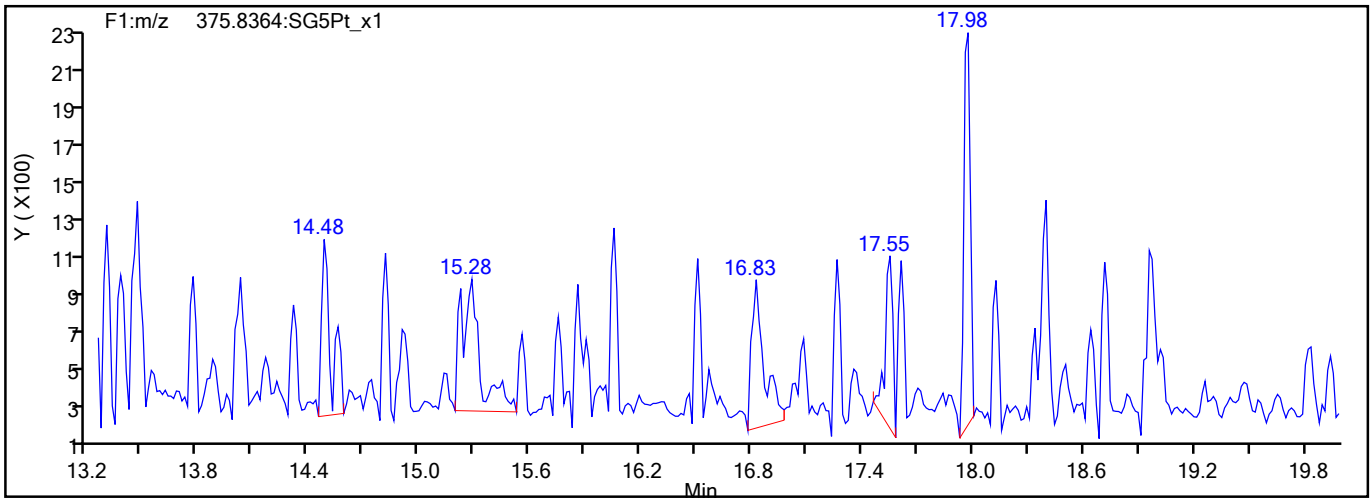

792701

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

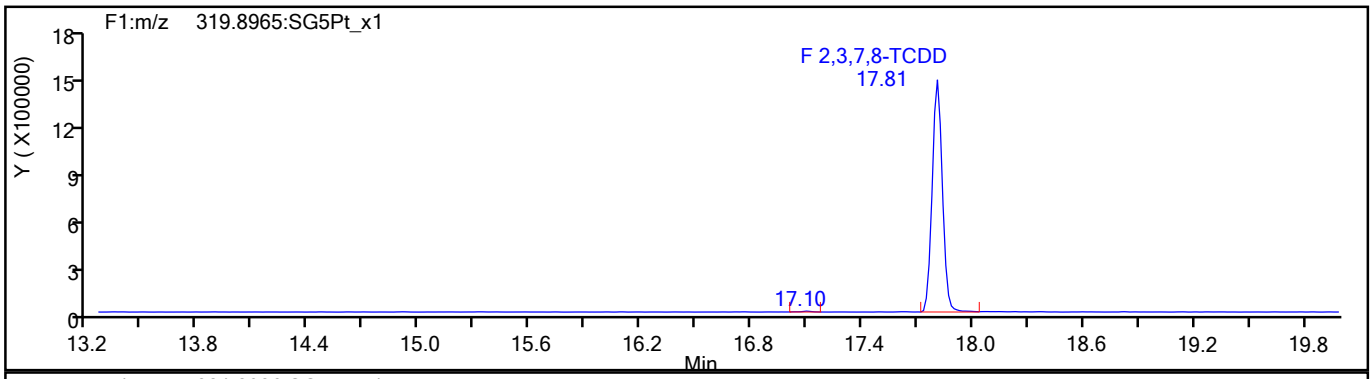

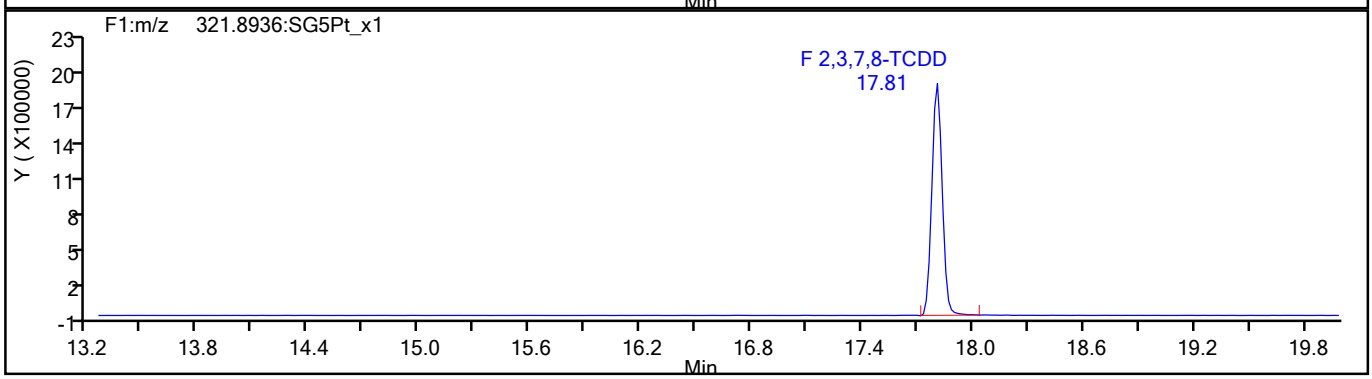

TCDD Standards

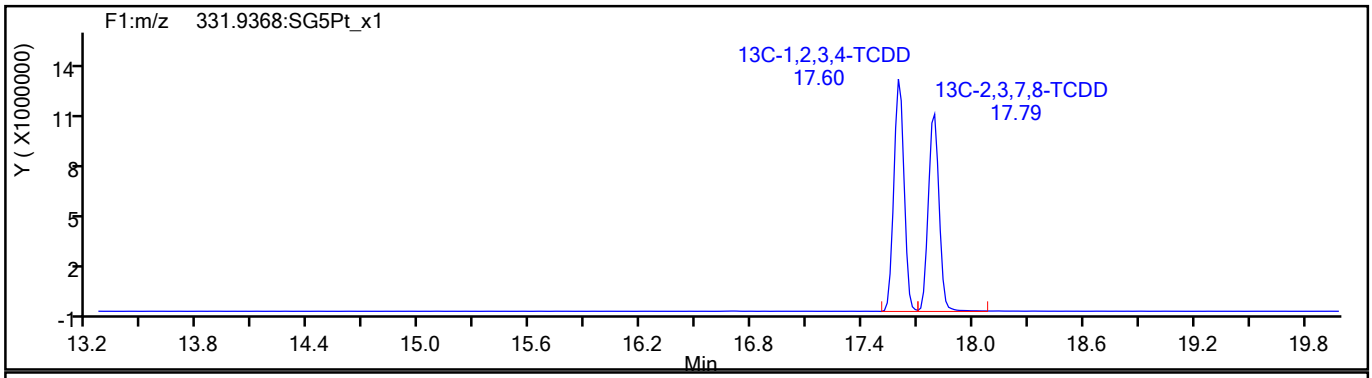

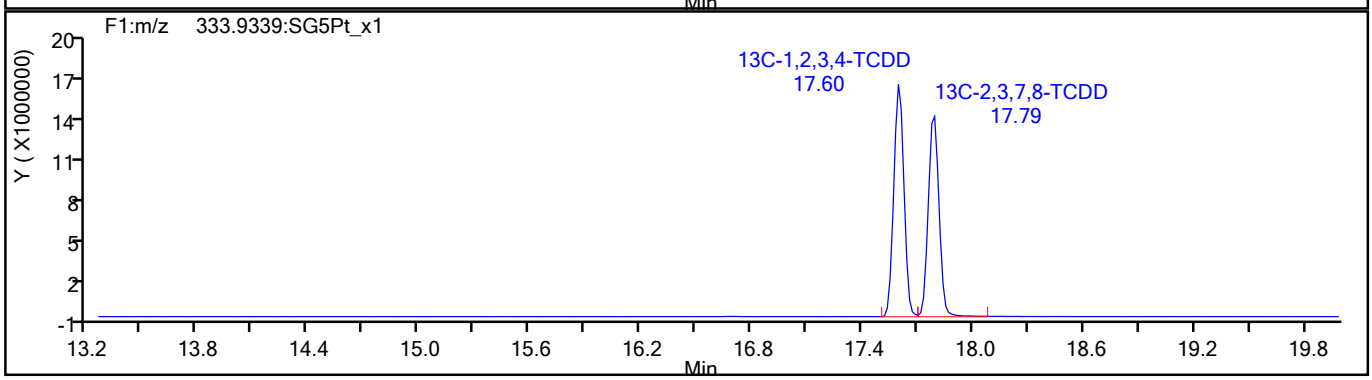

792702

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

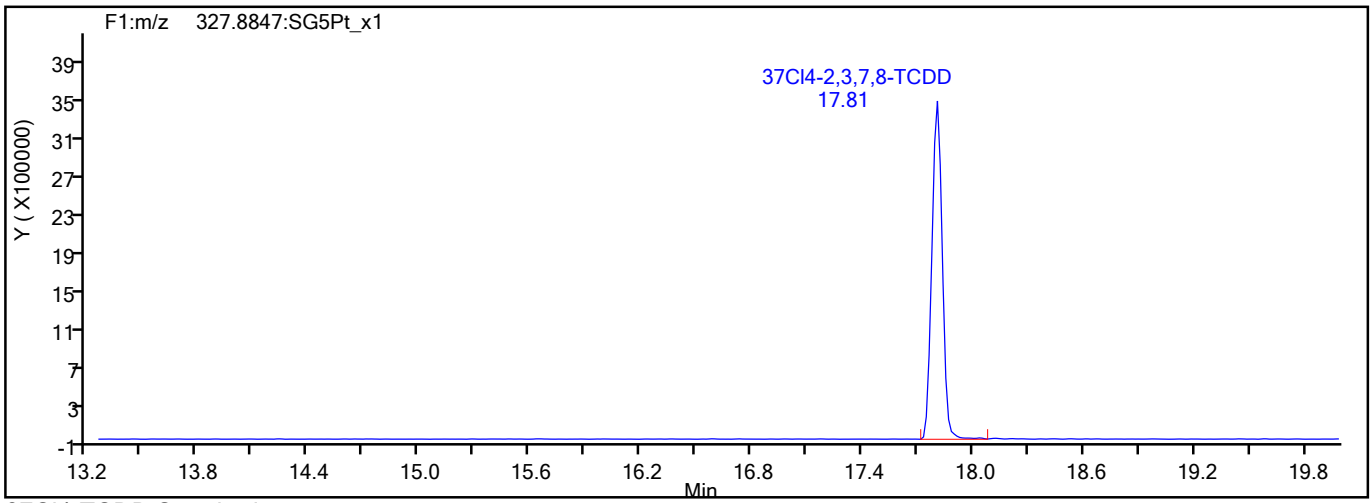

37Cl4-TCDD Standards

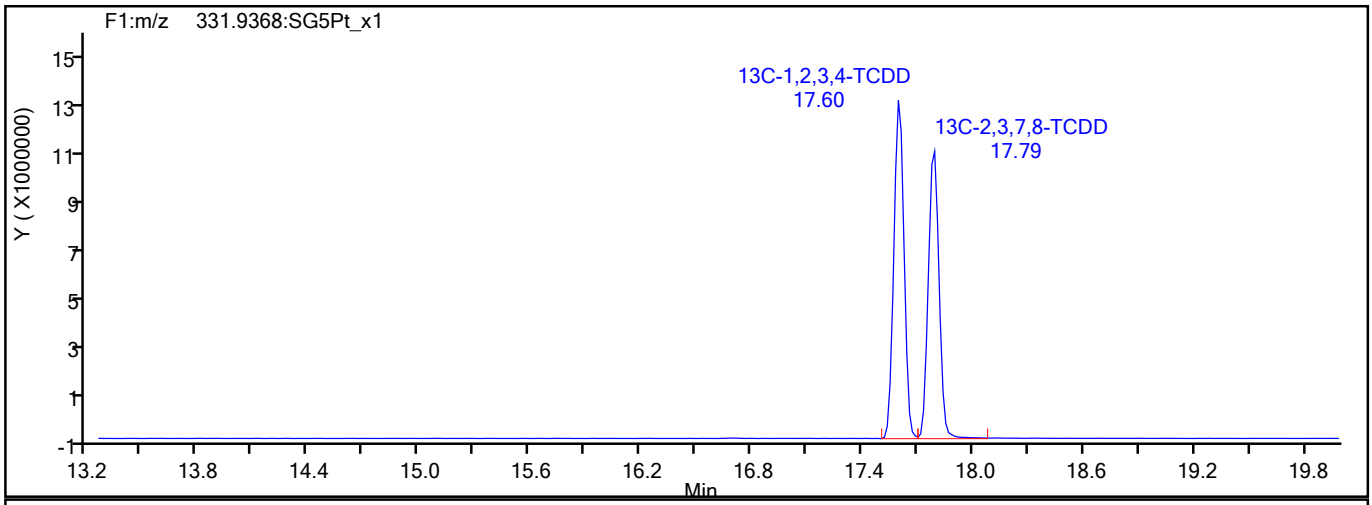

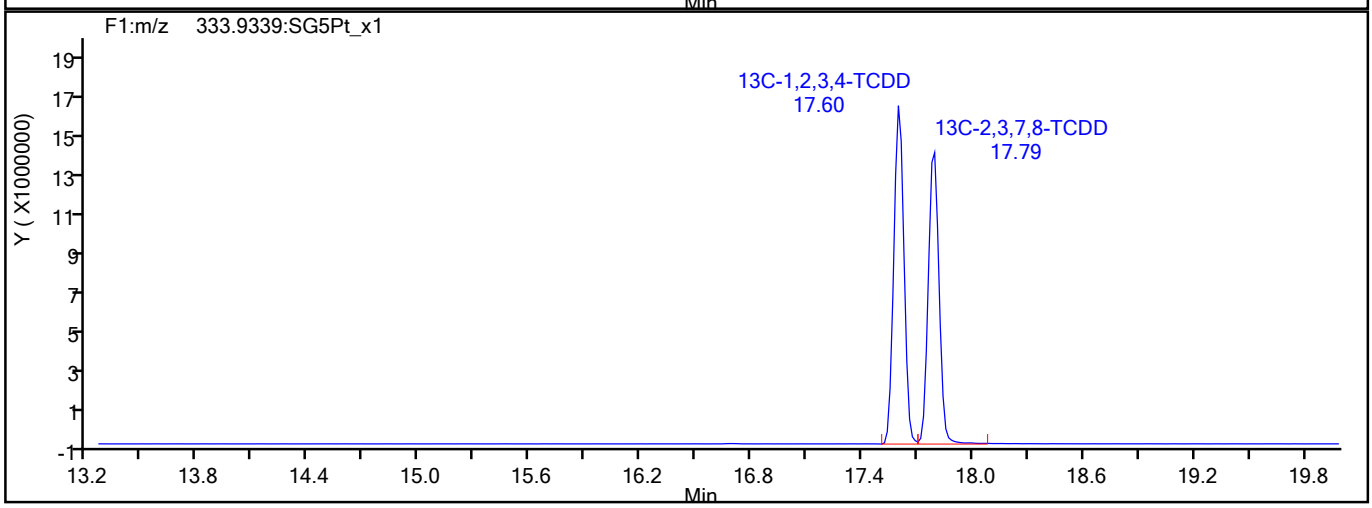

792703

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

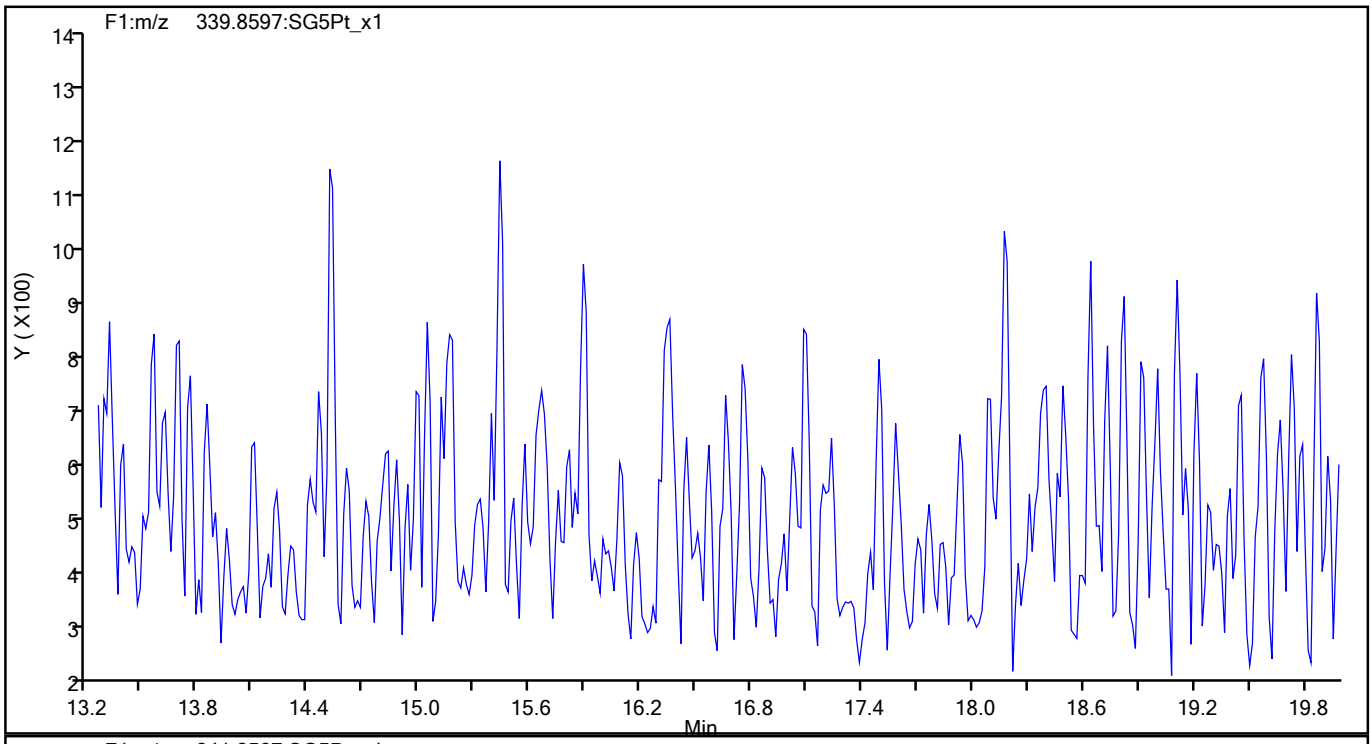

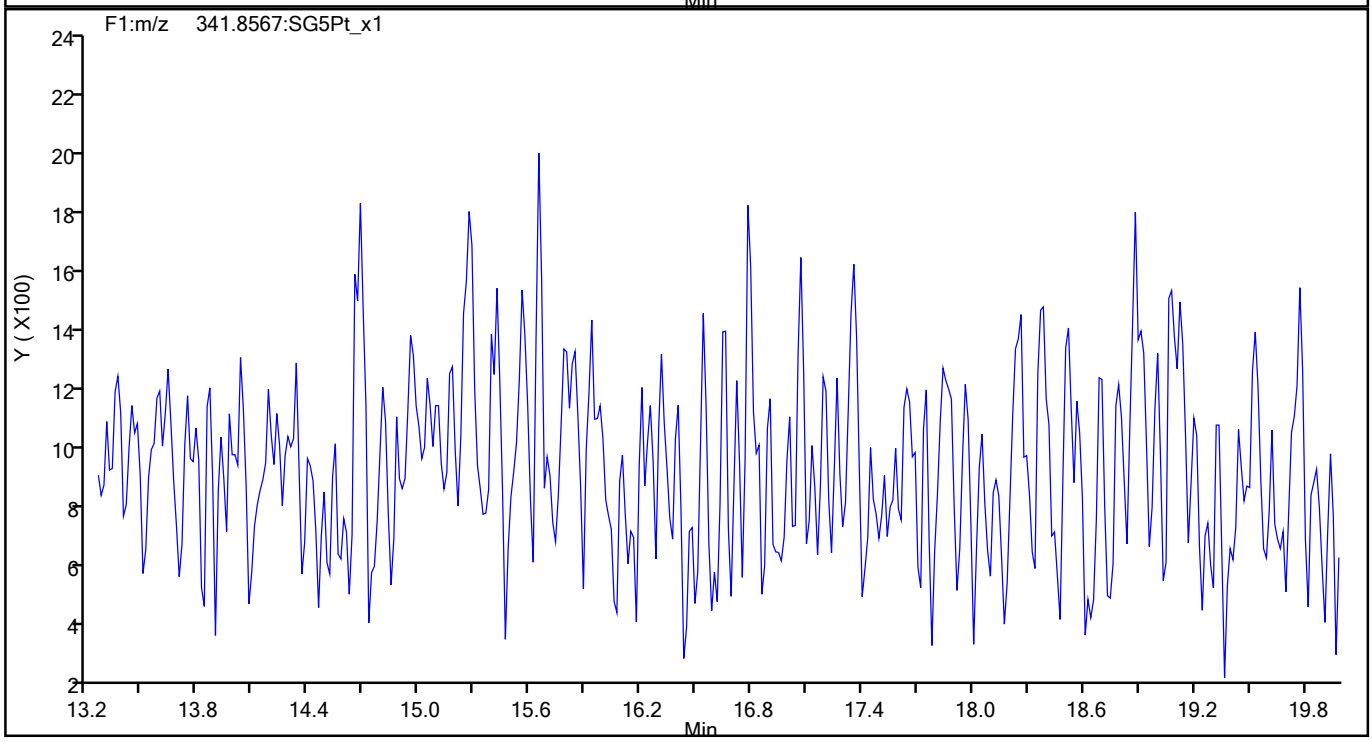

792704

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

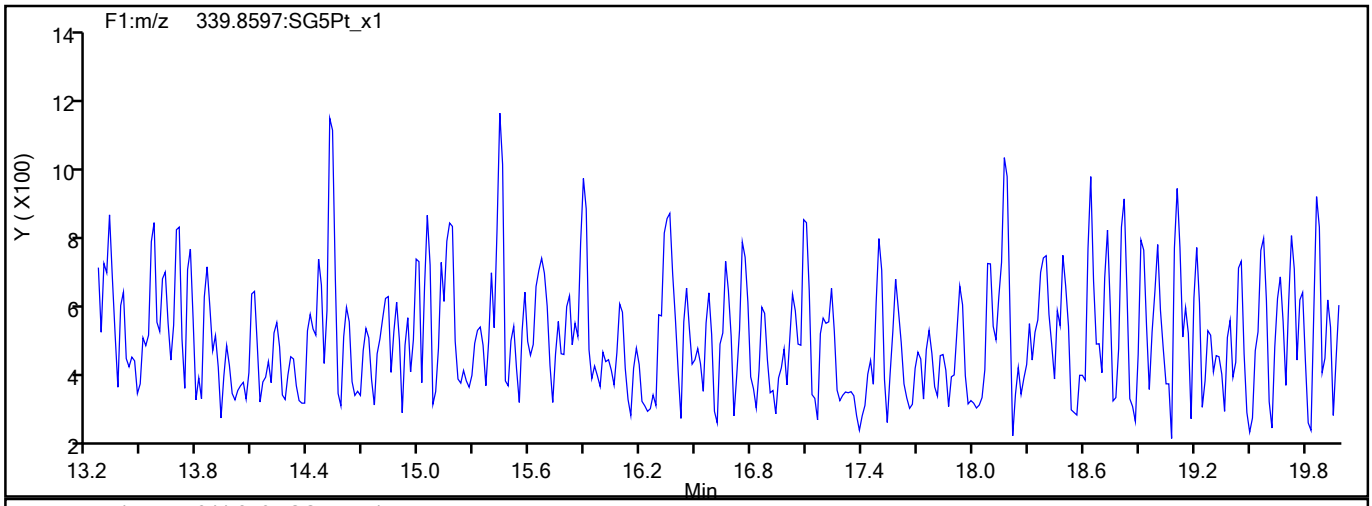

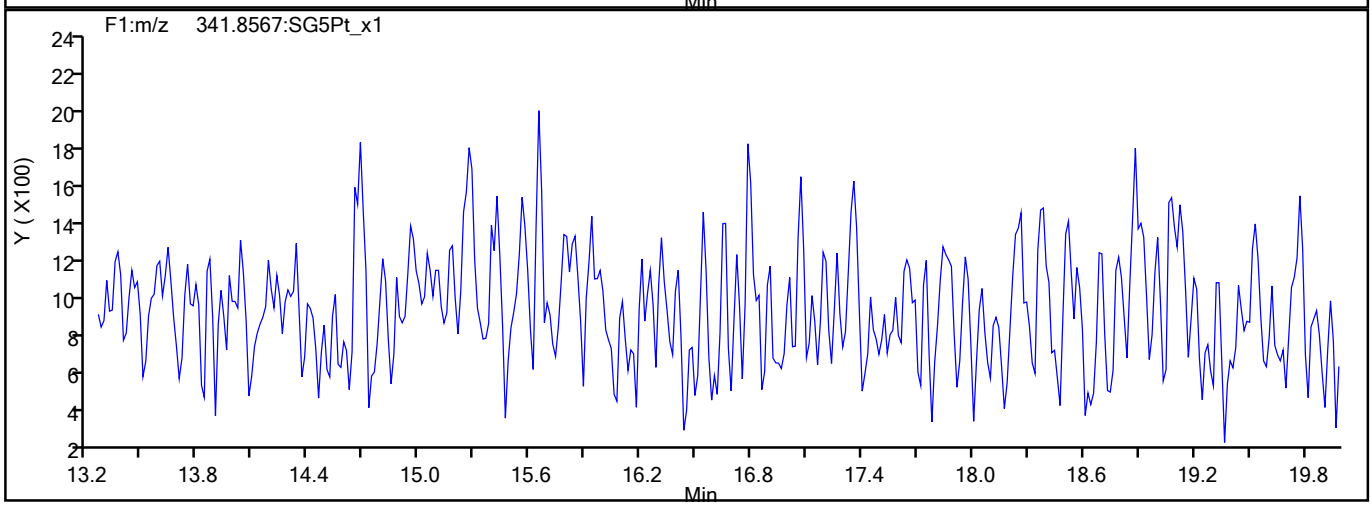

F1 PeCDFs Interference Mass

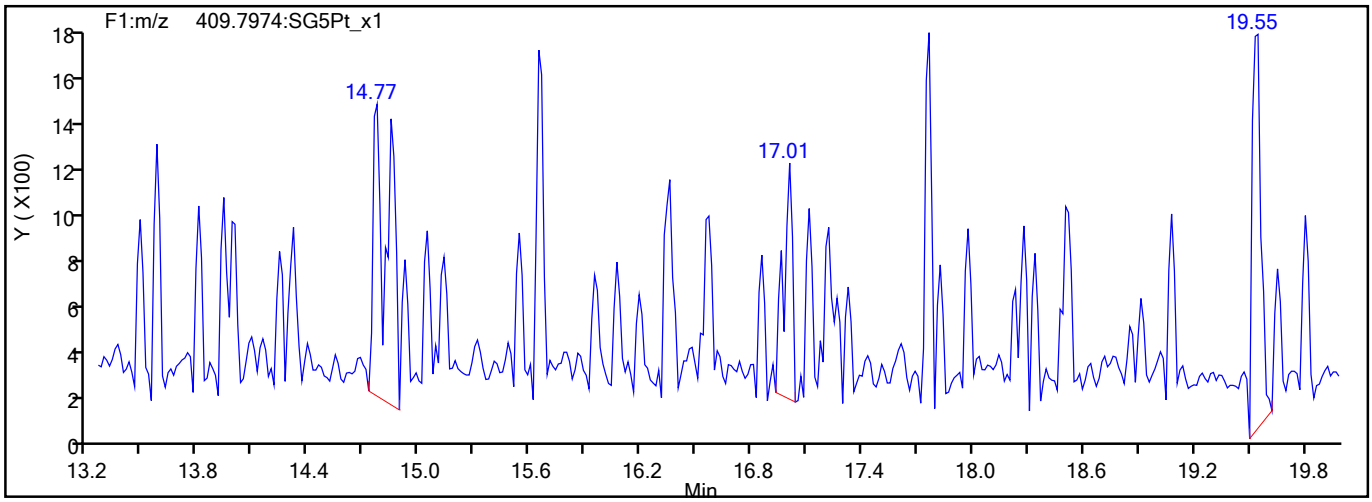

792705

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

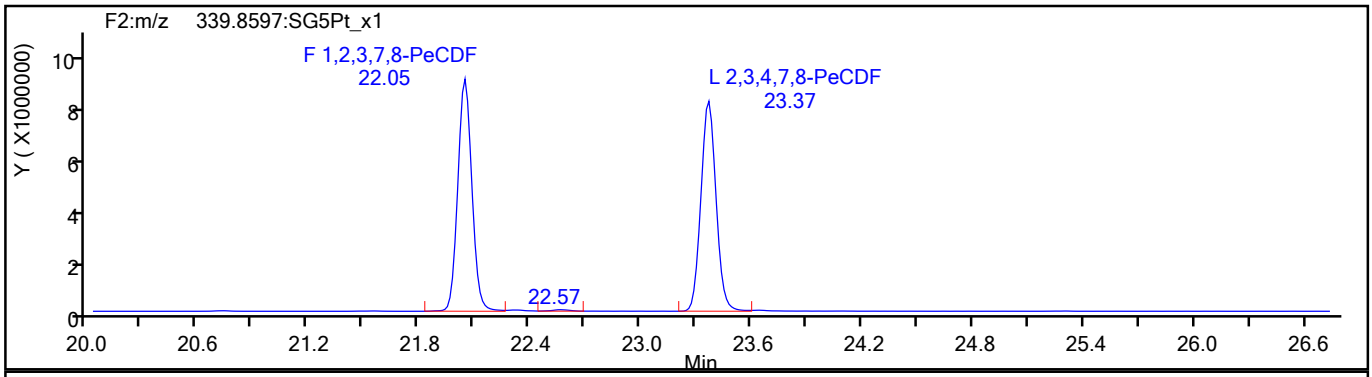

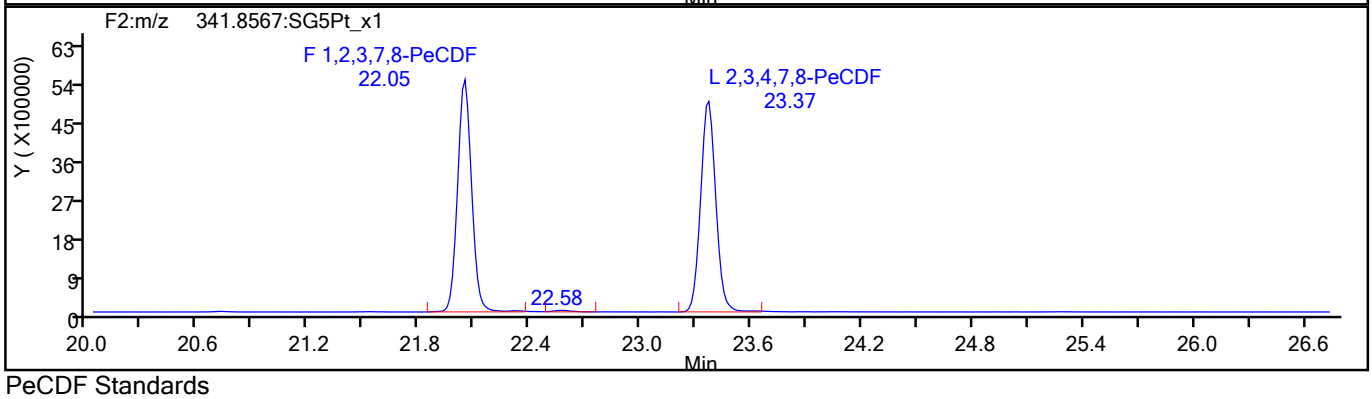

PeCDF Standards

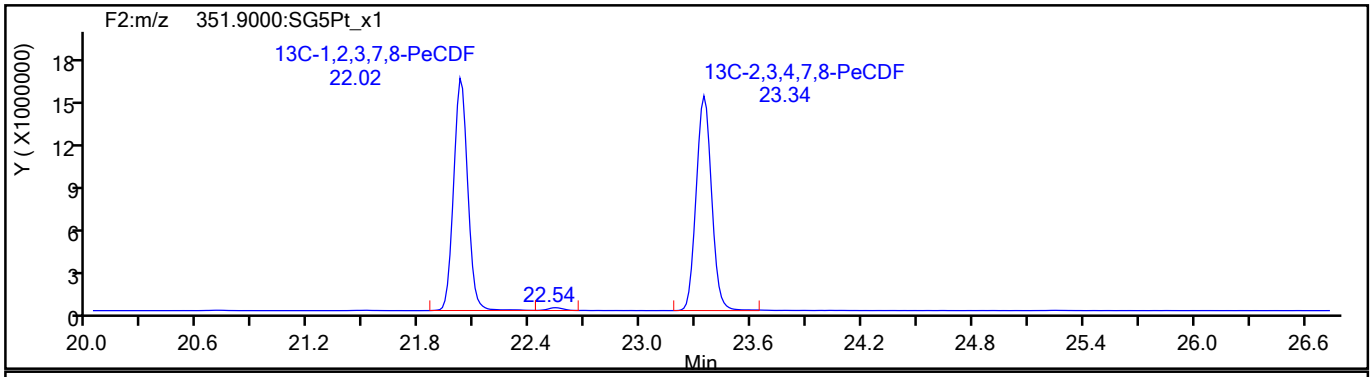

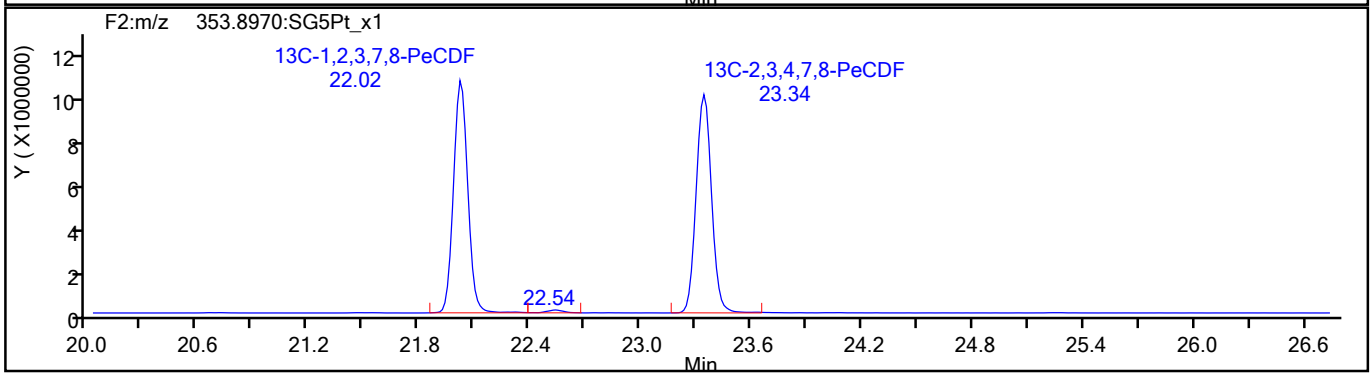

792706

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

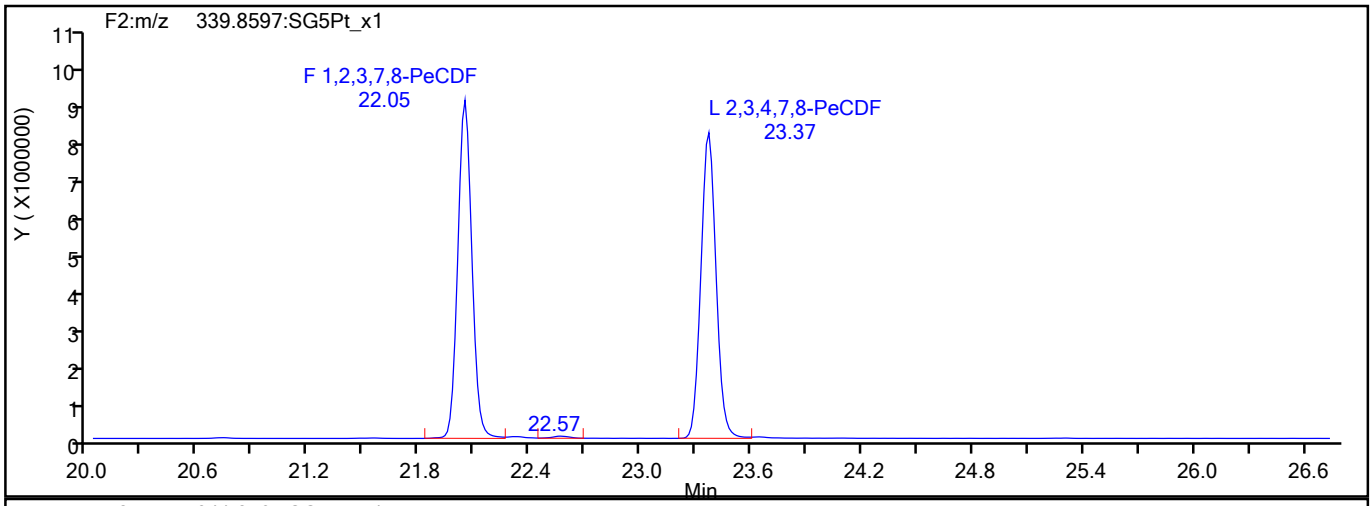

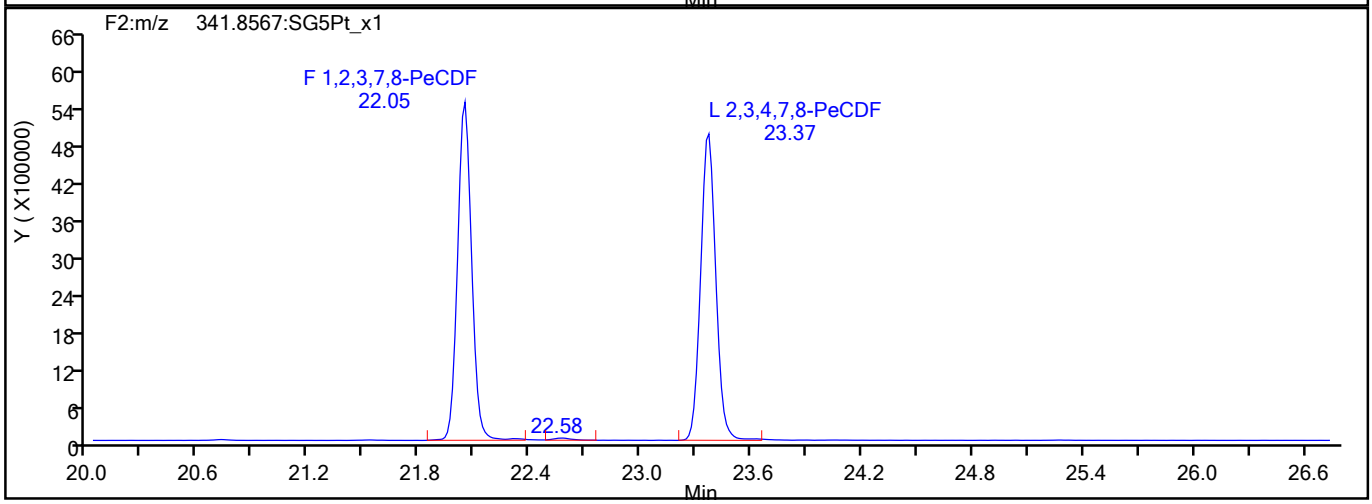

PeCDF Interference Mass

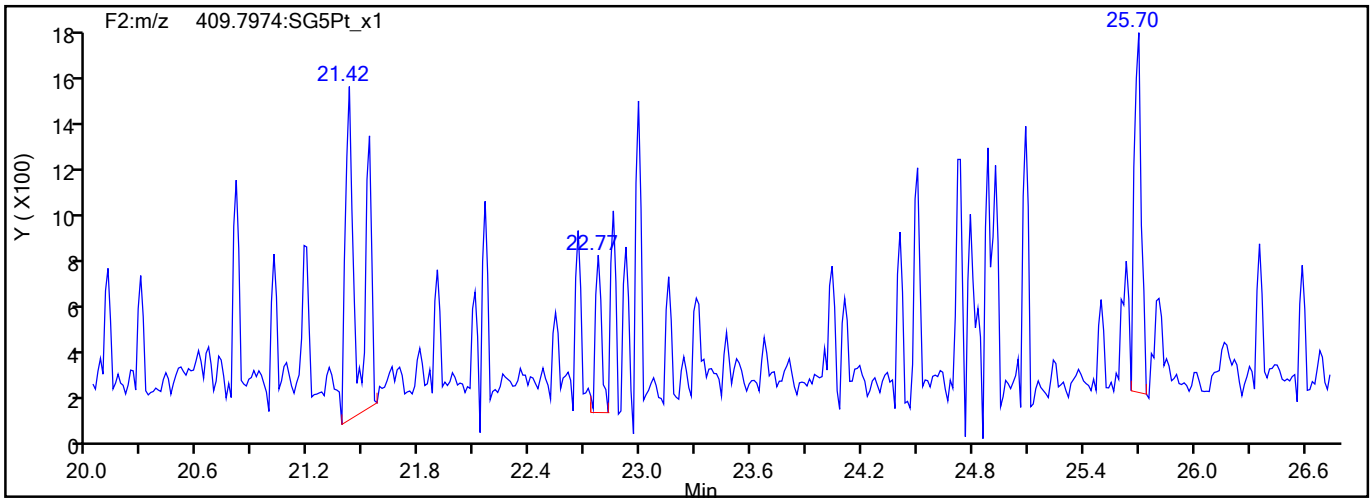

792707

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

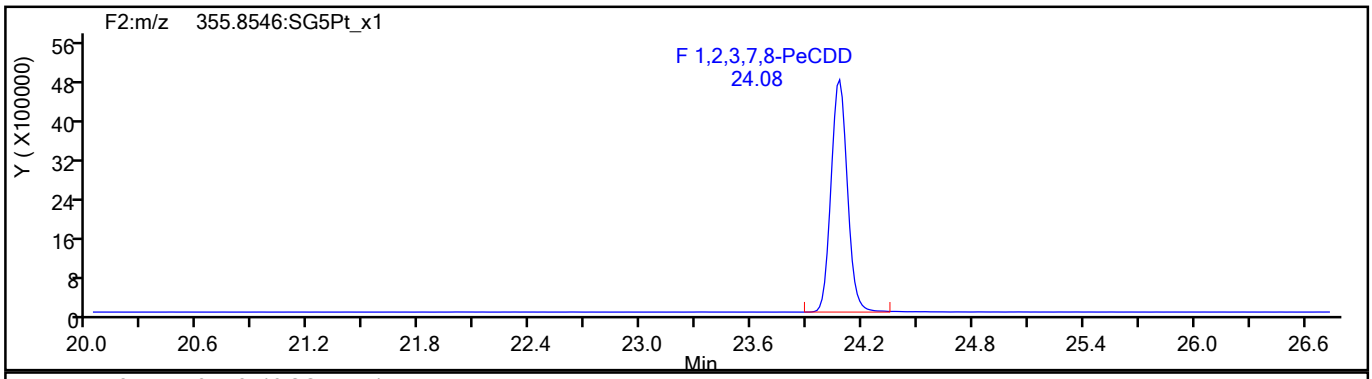

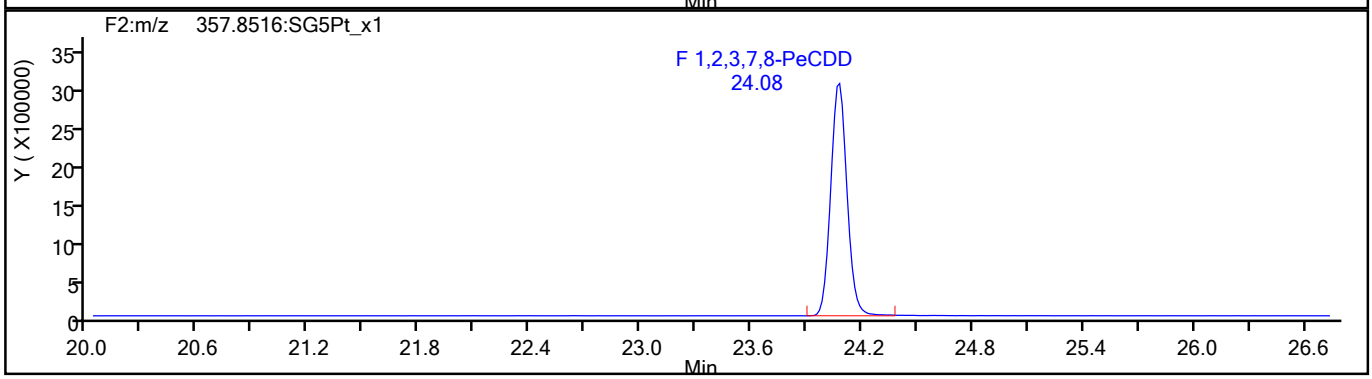

PeCDD Standards

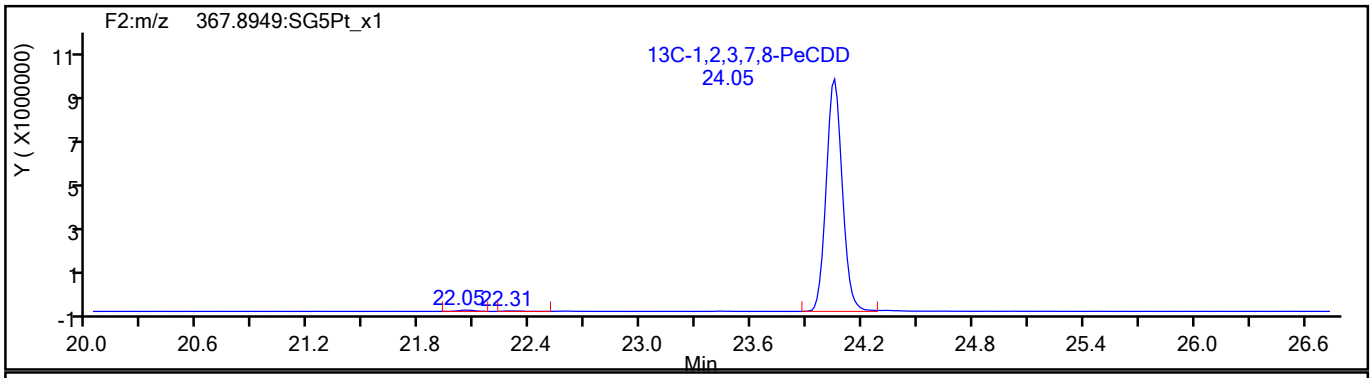

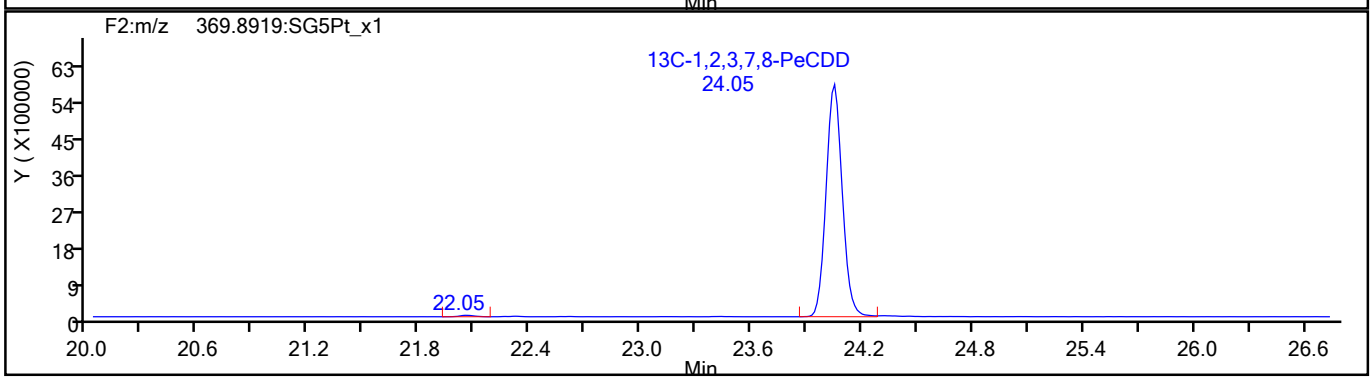

792708

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

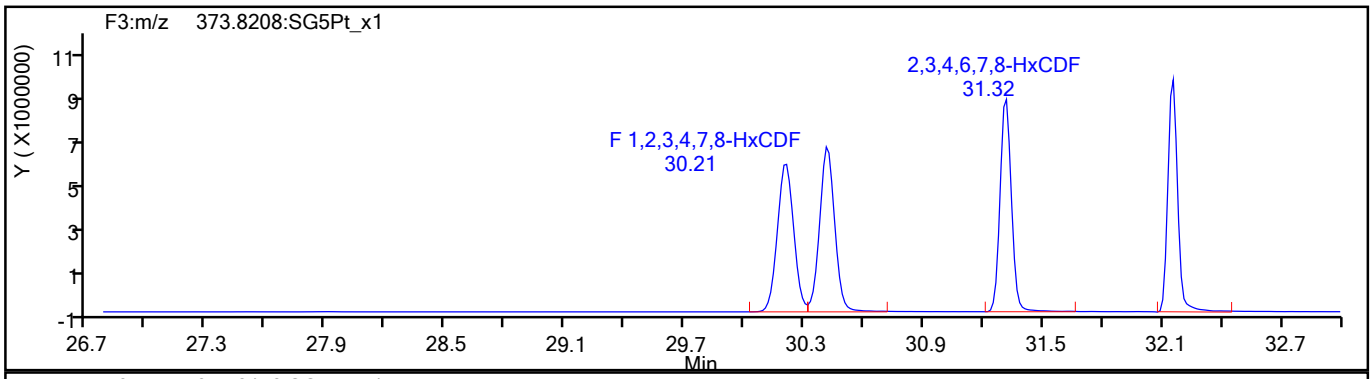

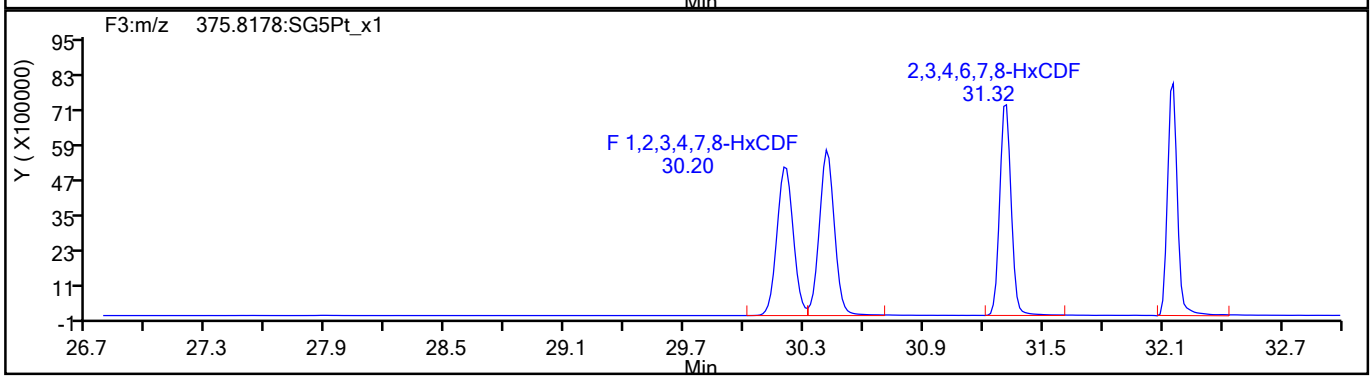

HxCDF Standards

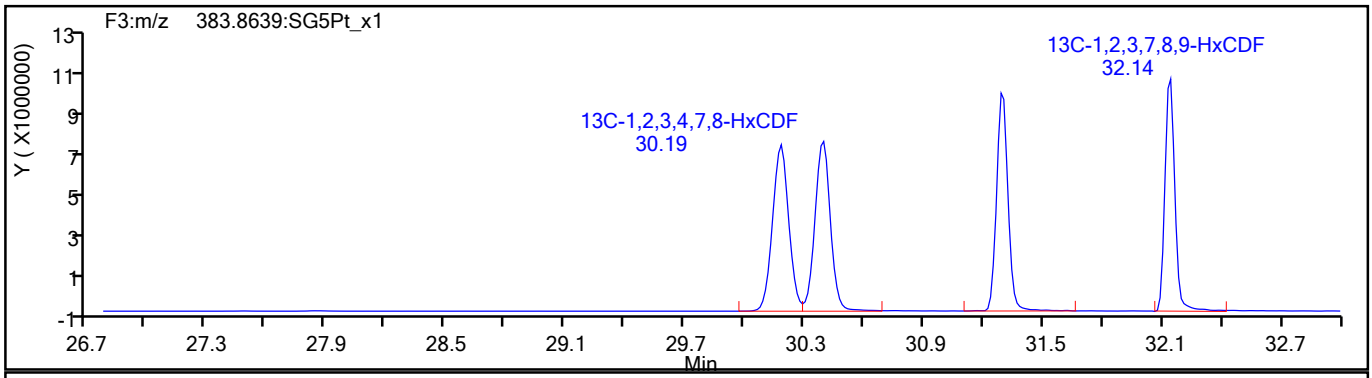

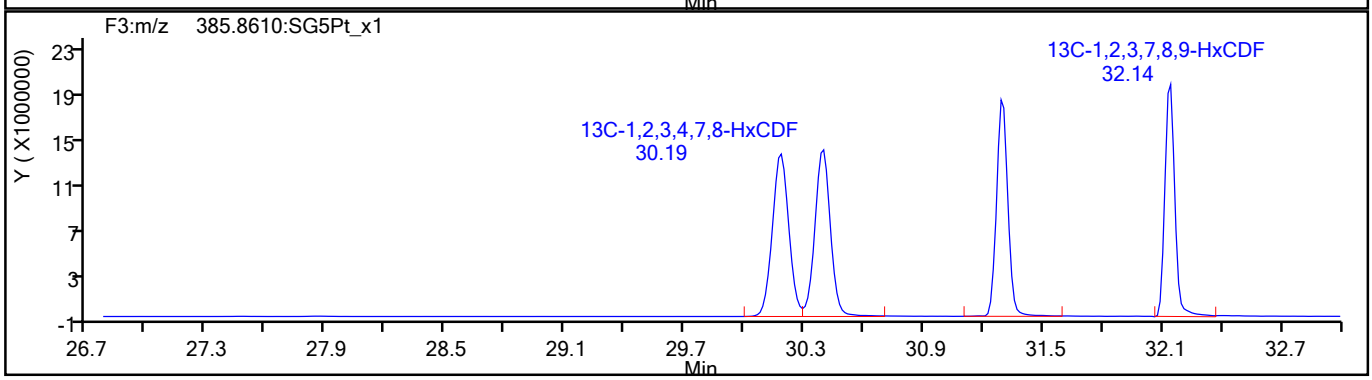

792709

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

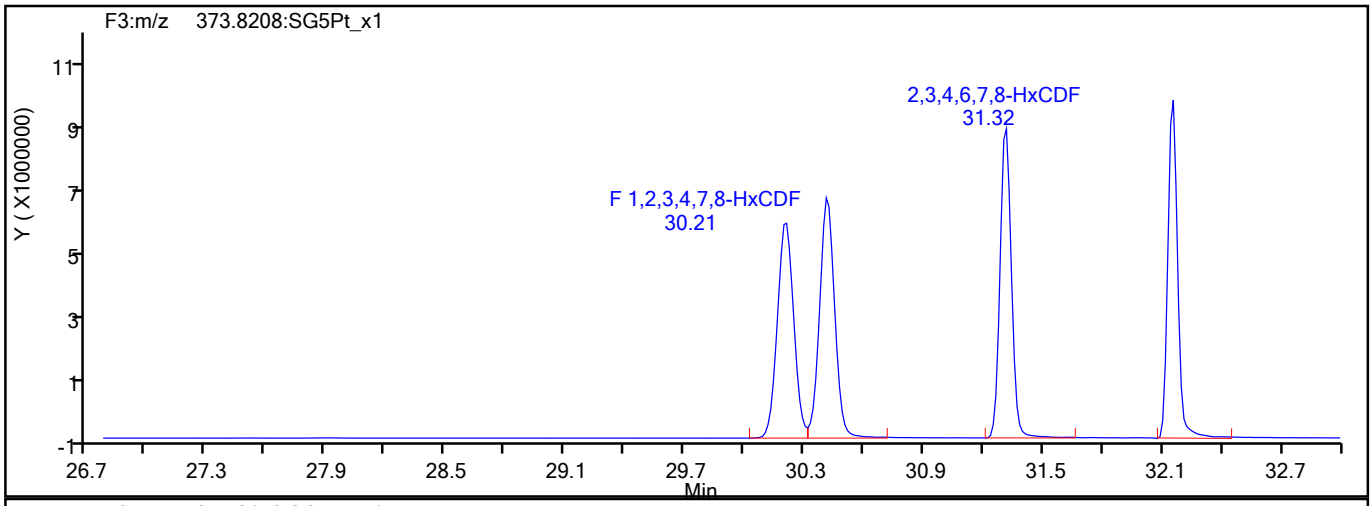

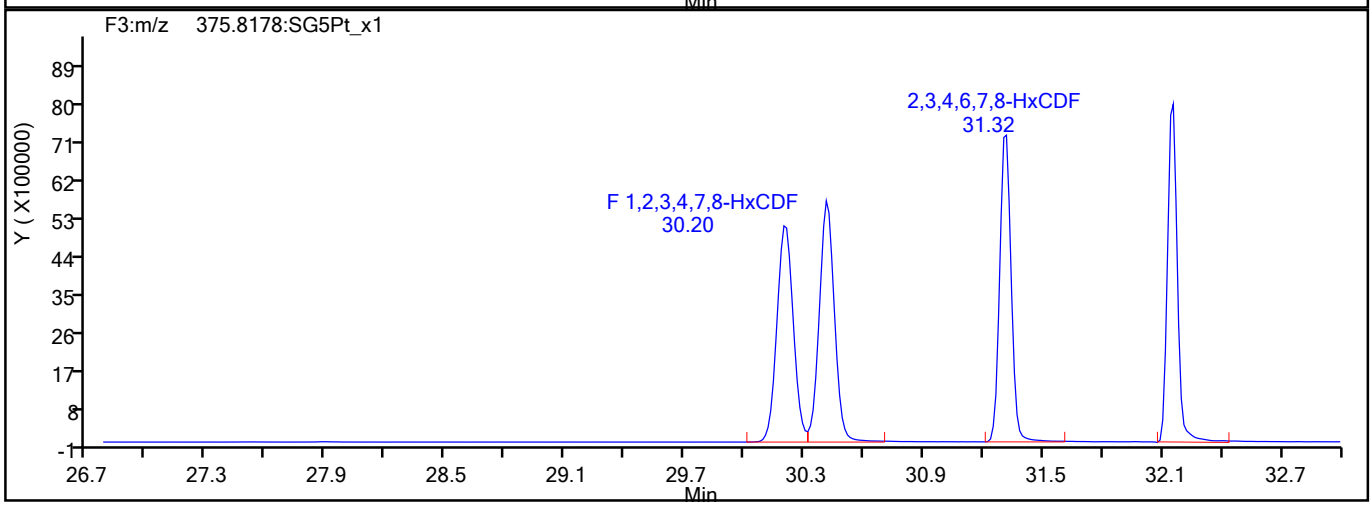

HxCDF Interference Mass

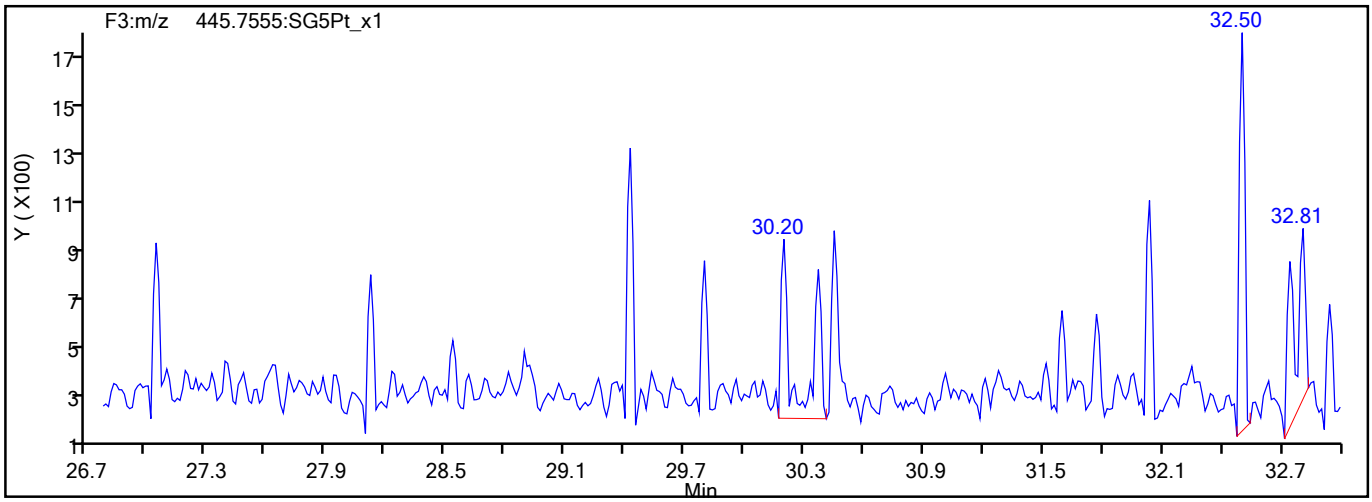

792710

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

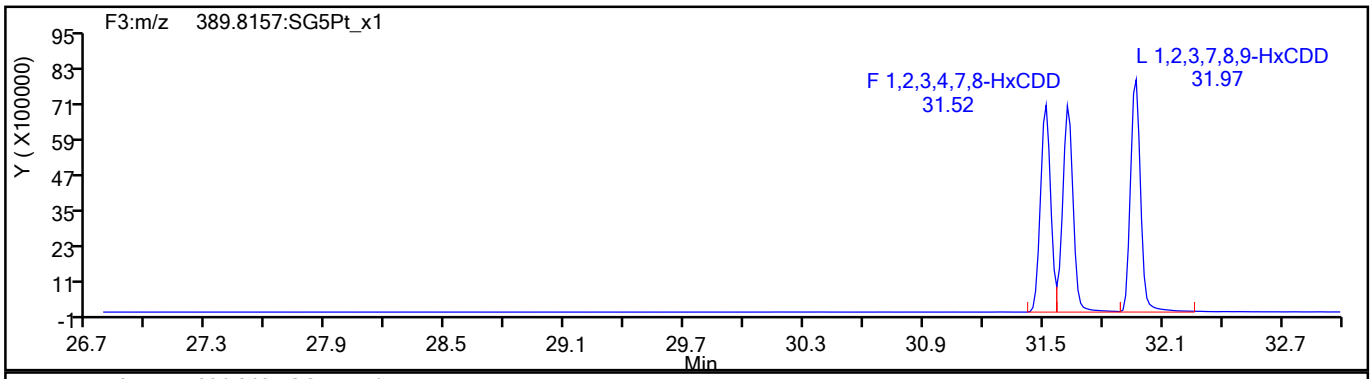

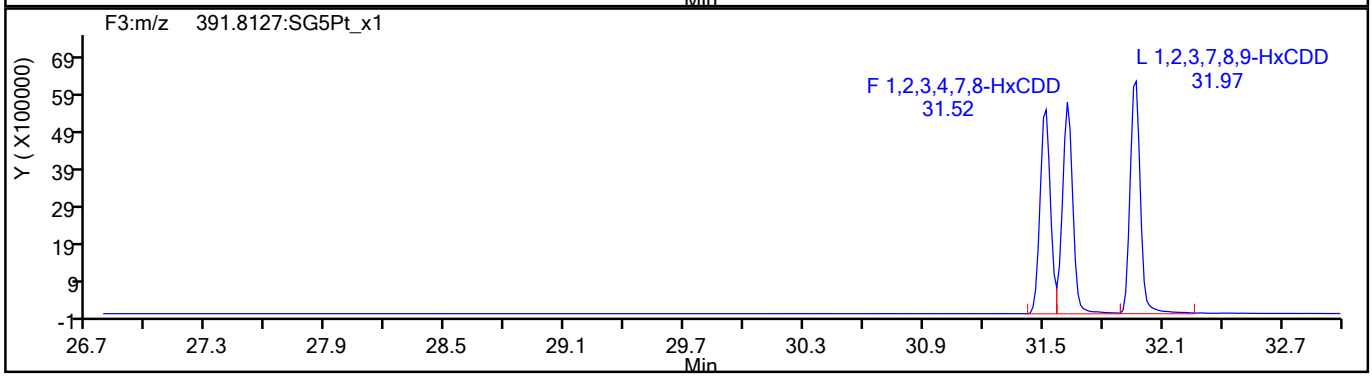

HxCDD Standards

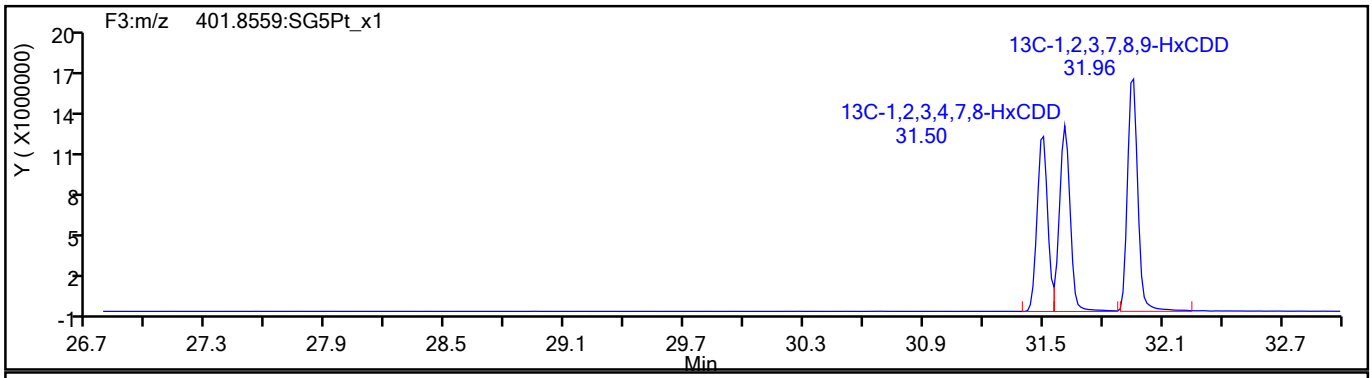

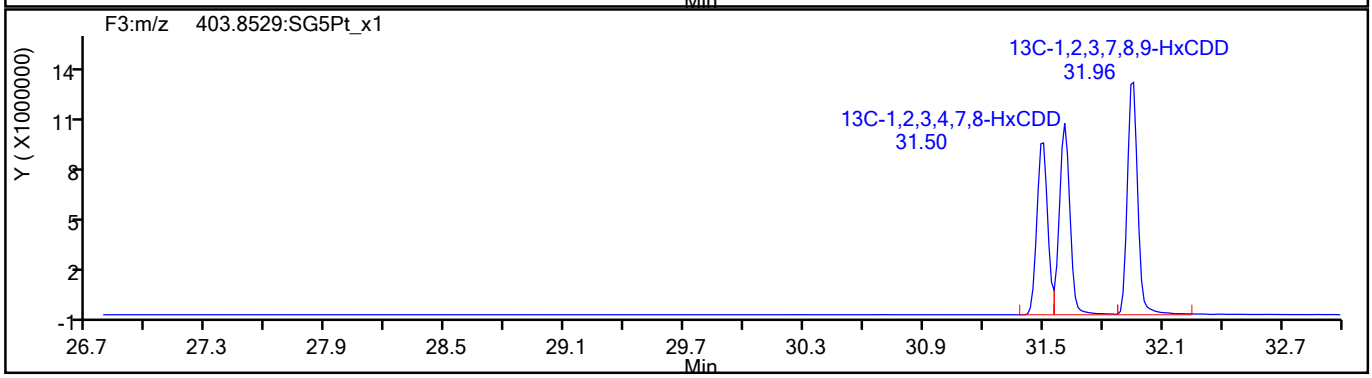

792711

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

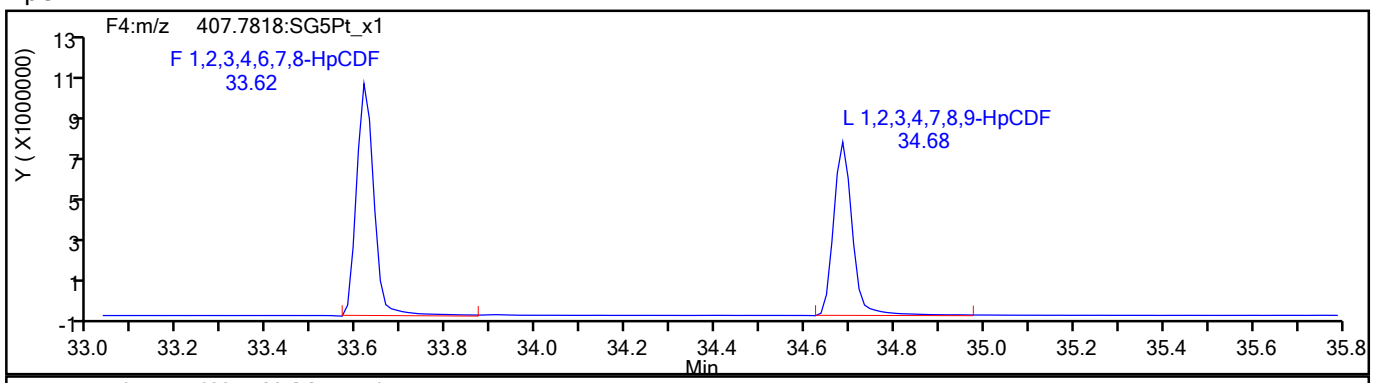

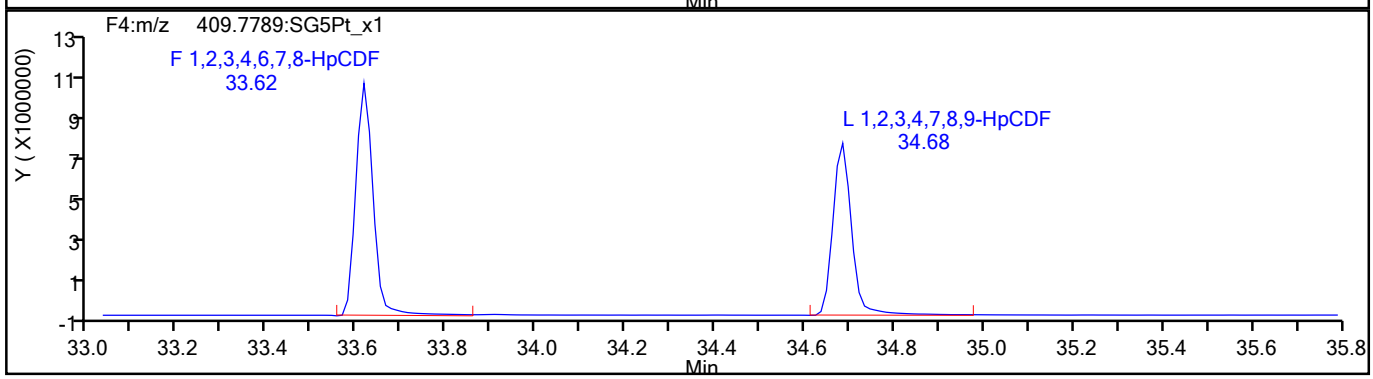

HpCDF Standards

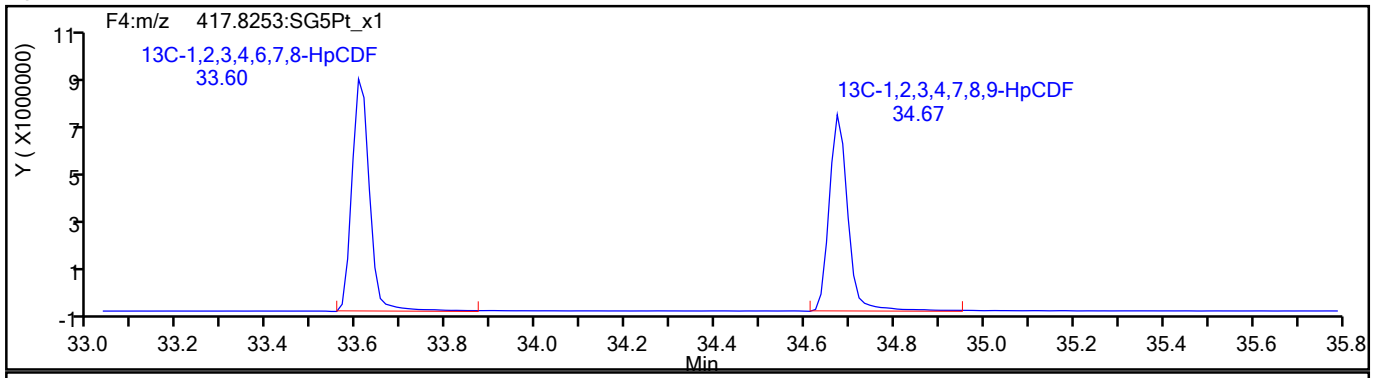

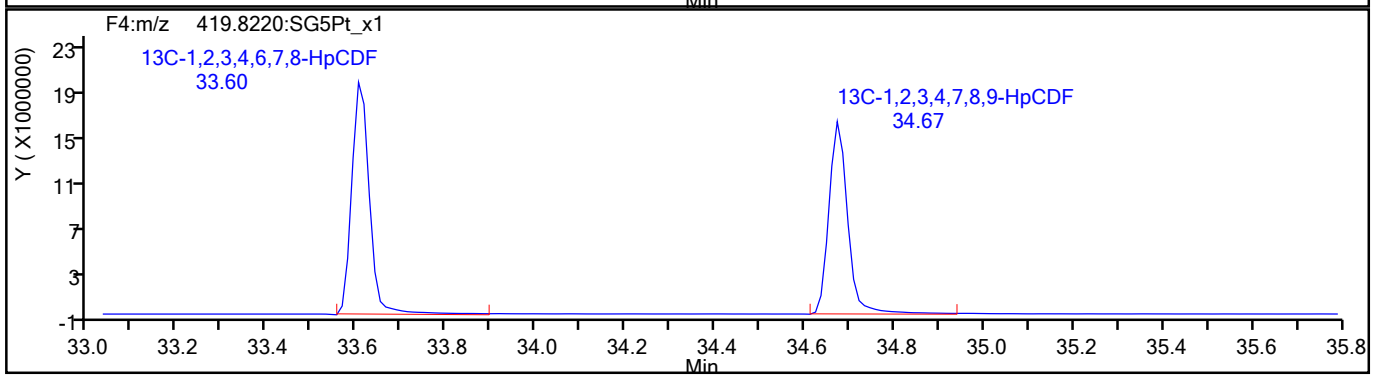

792712

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

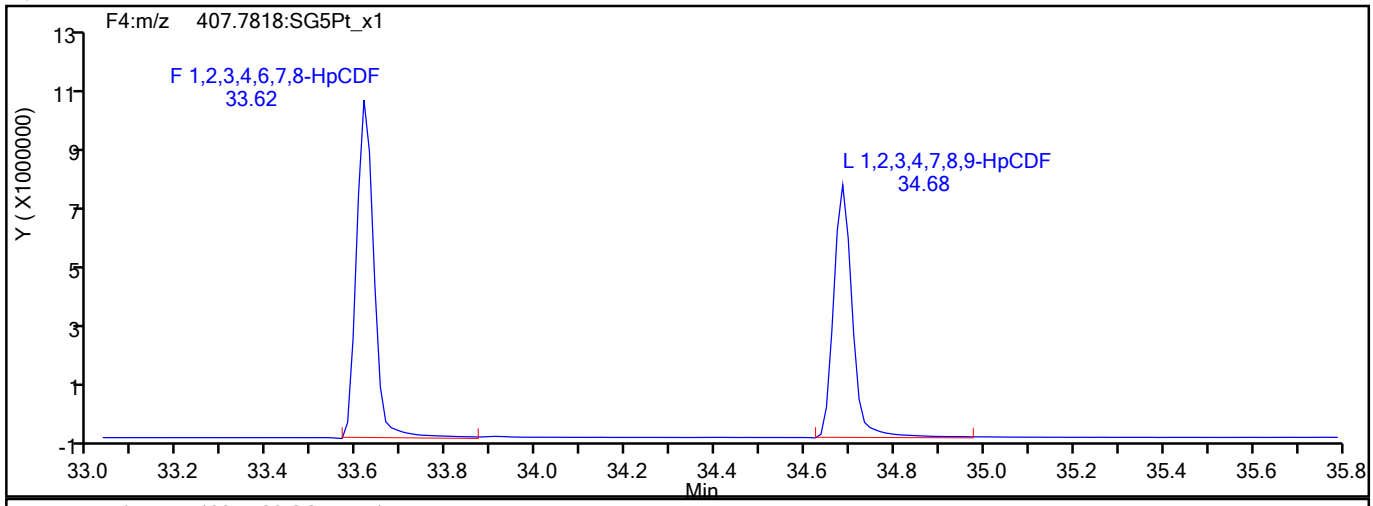

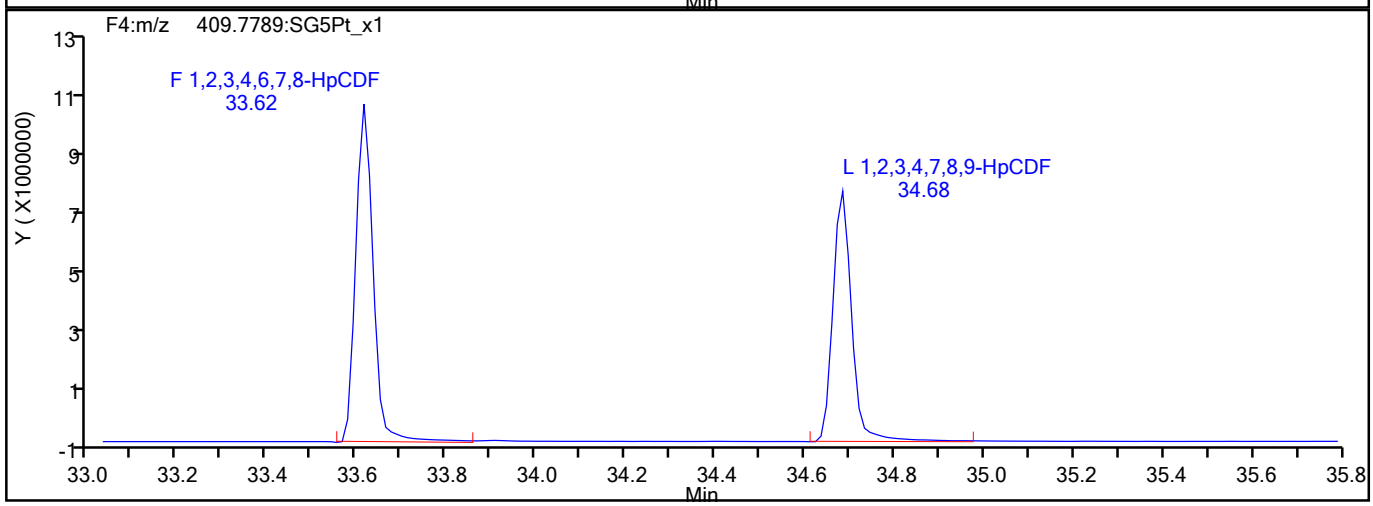

HpCDF Interference Mass

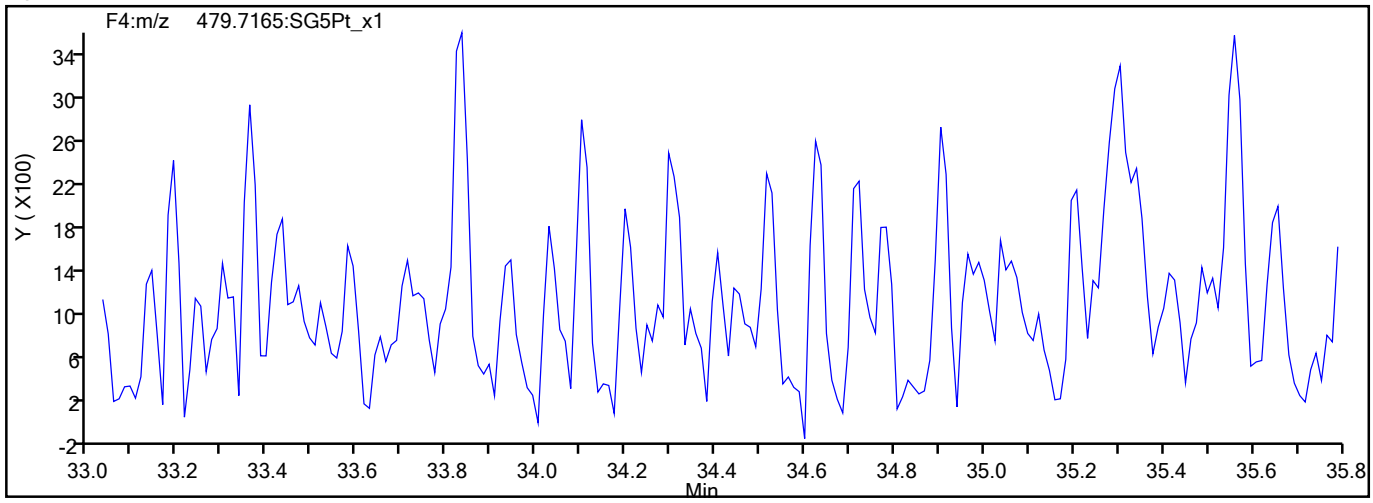

792713

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

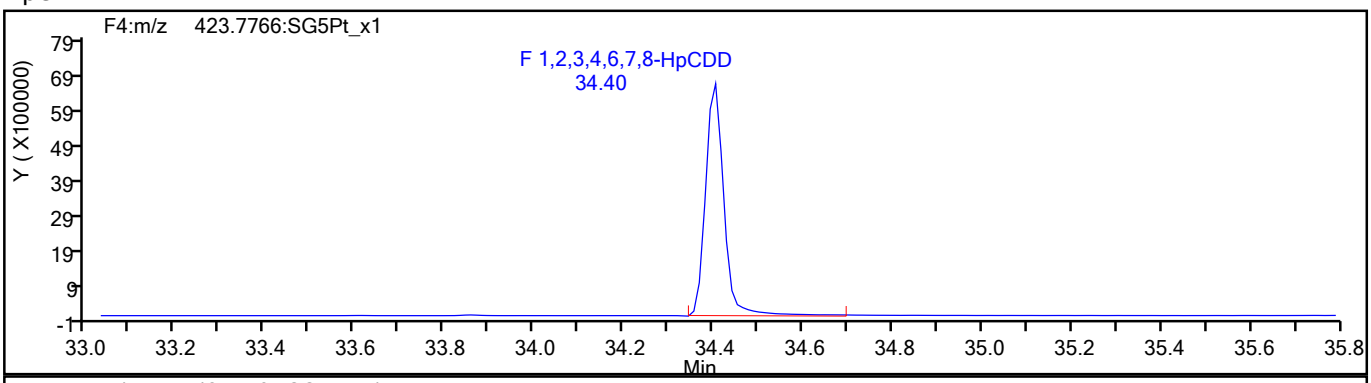

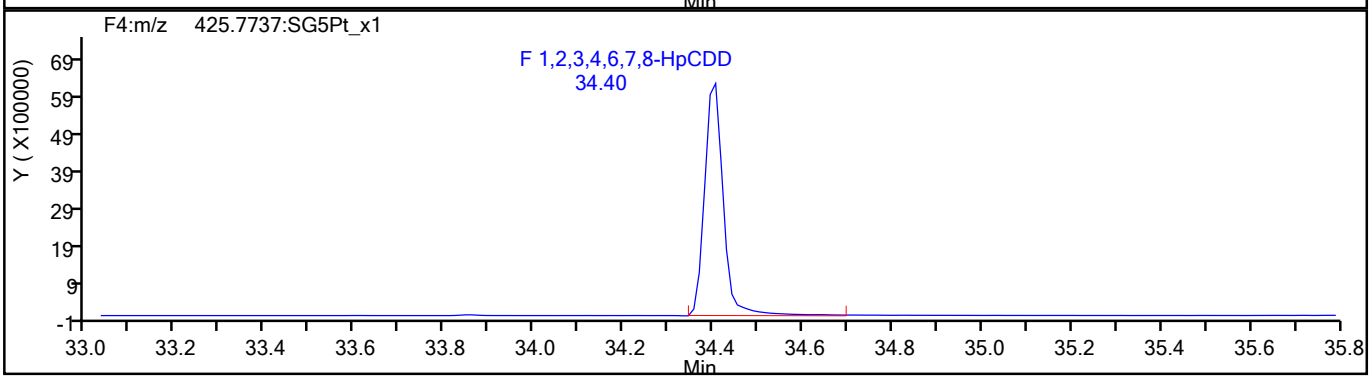

HpCDD Standards

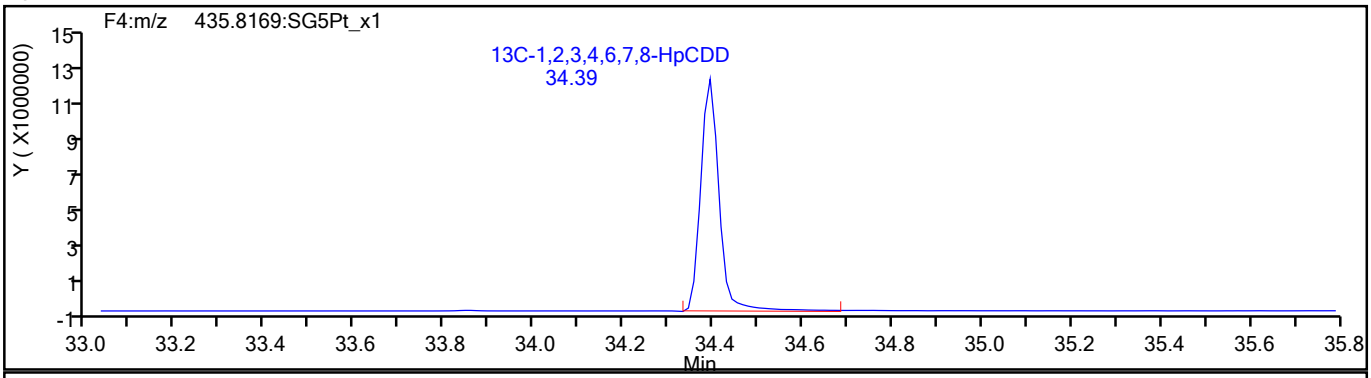

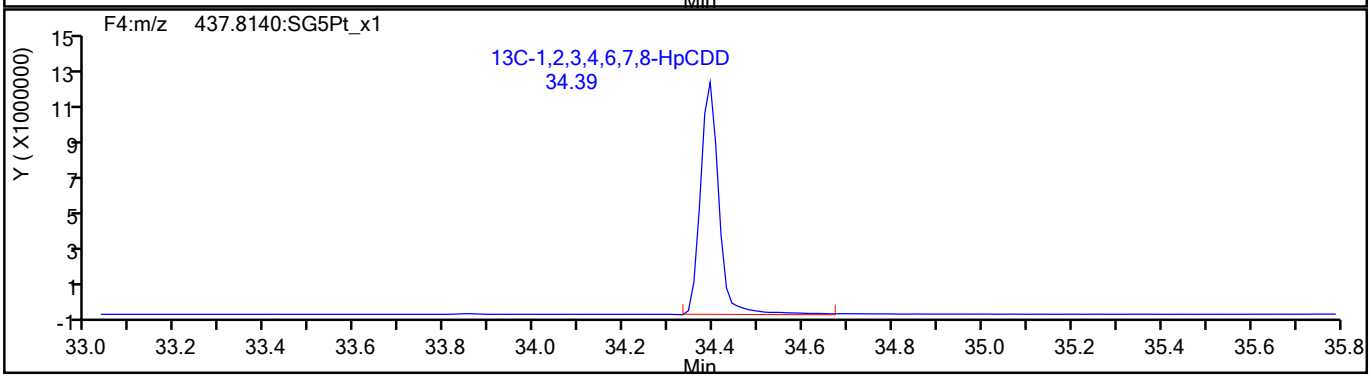

792714

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

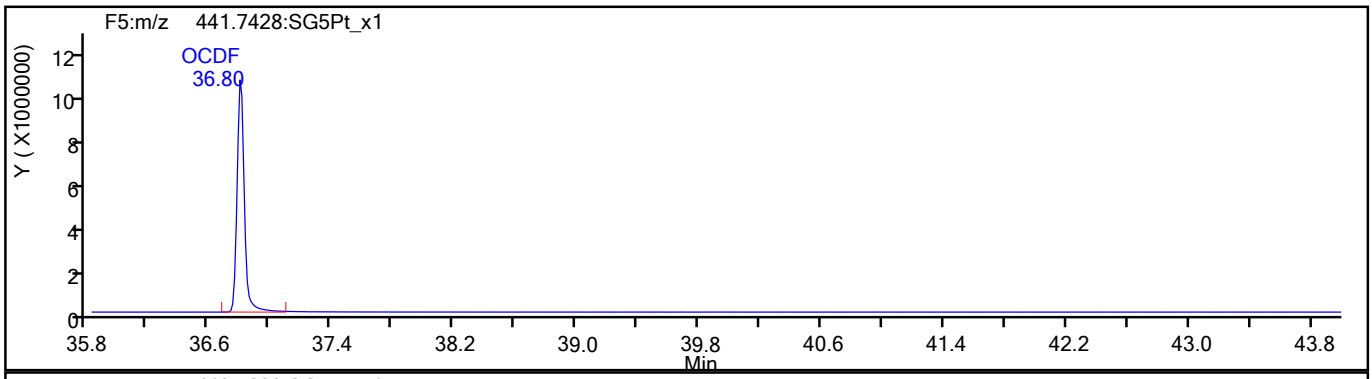

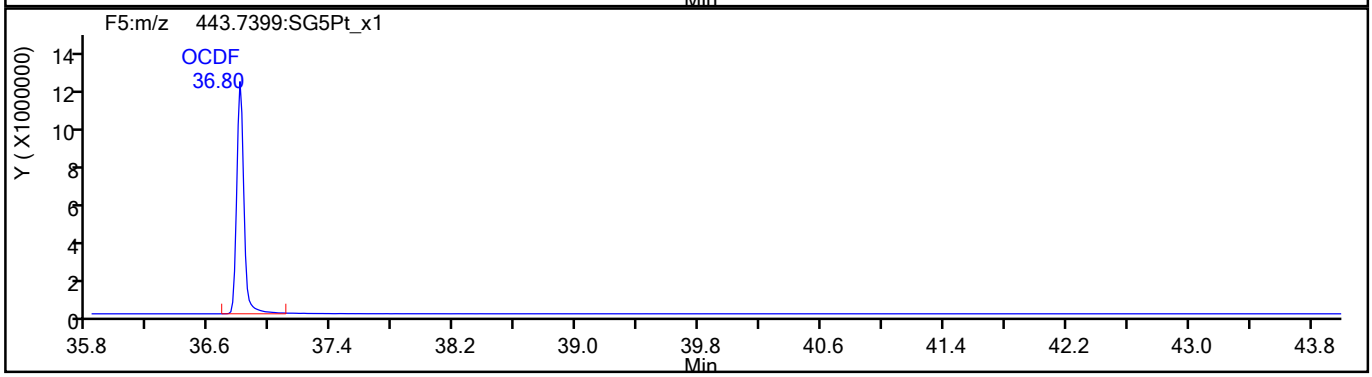

OCDF Standards

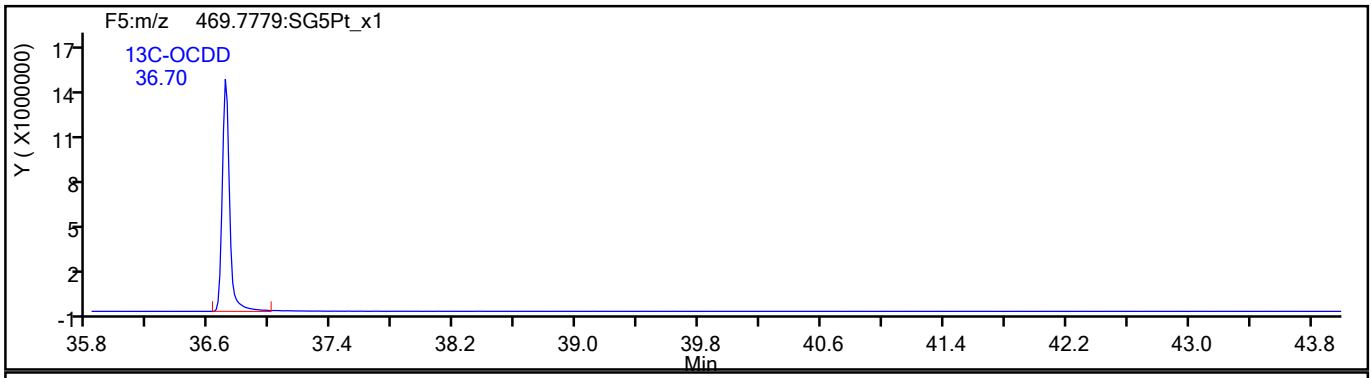

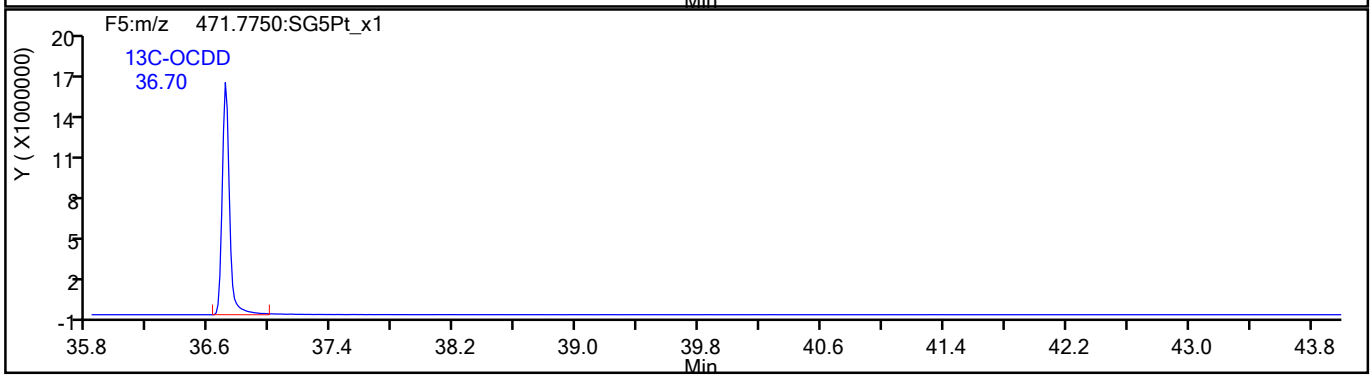

792715

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

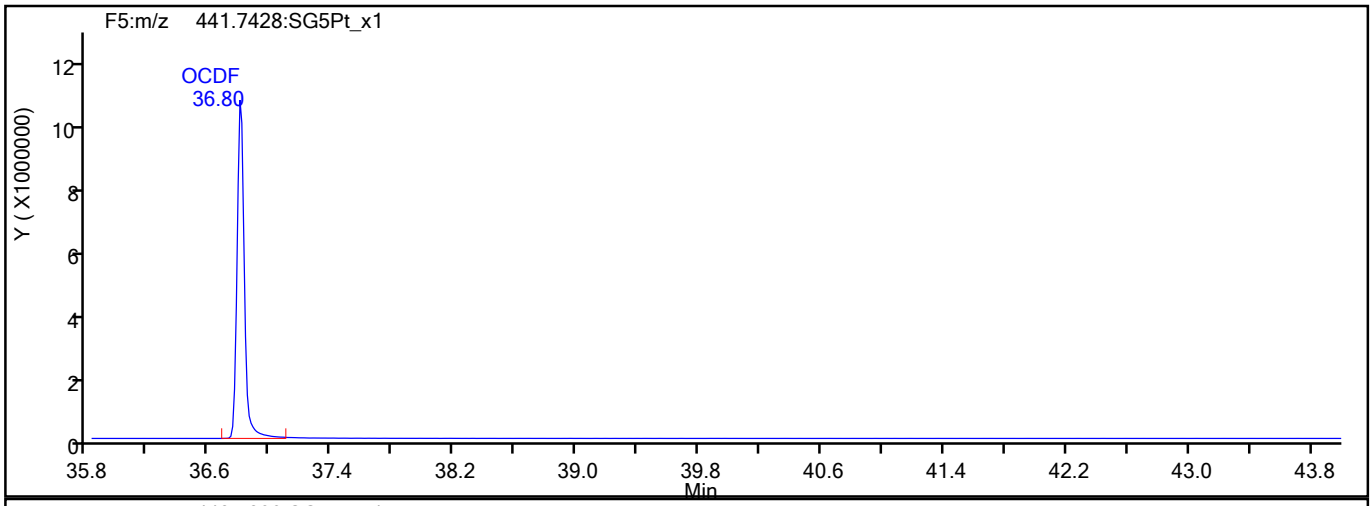

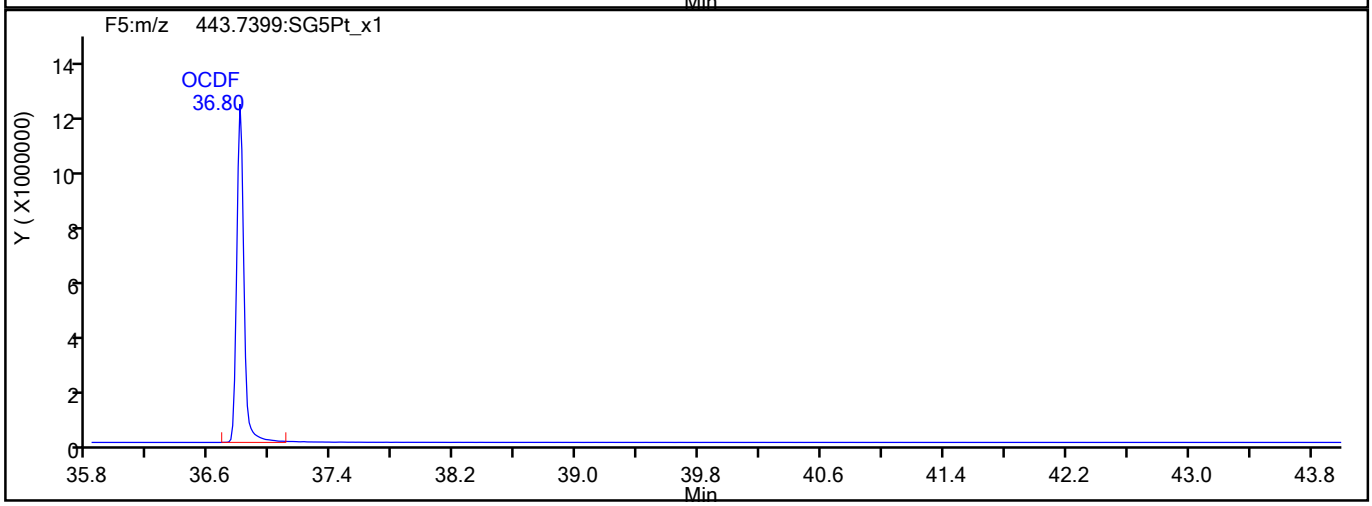

OCDF Interference Mass

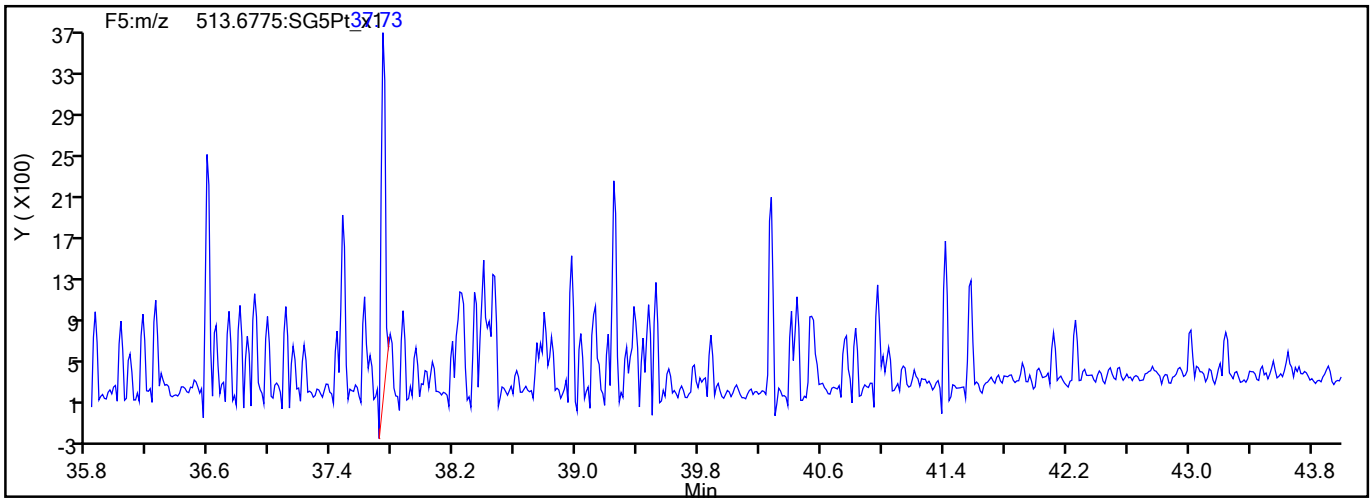

792716

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

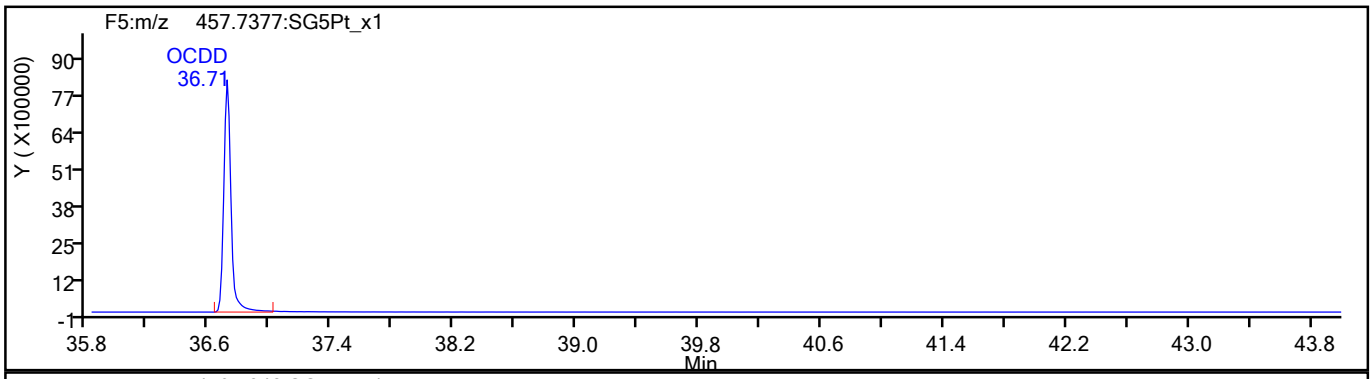

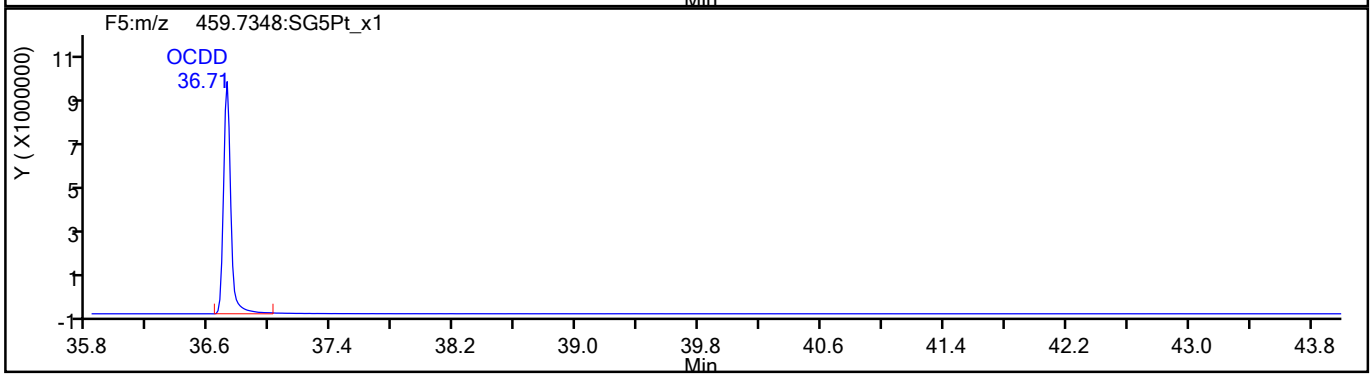

OCDD Standards

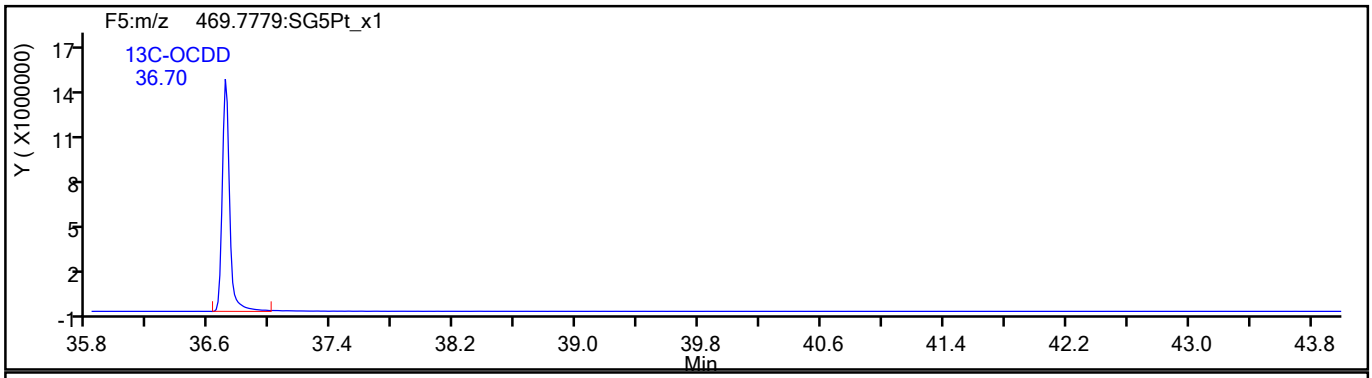

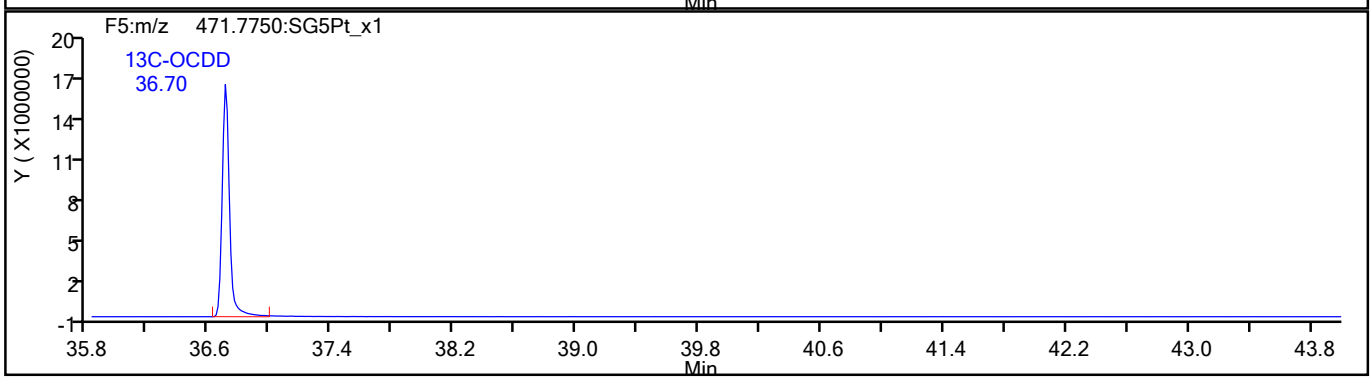

792717

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

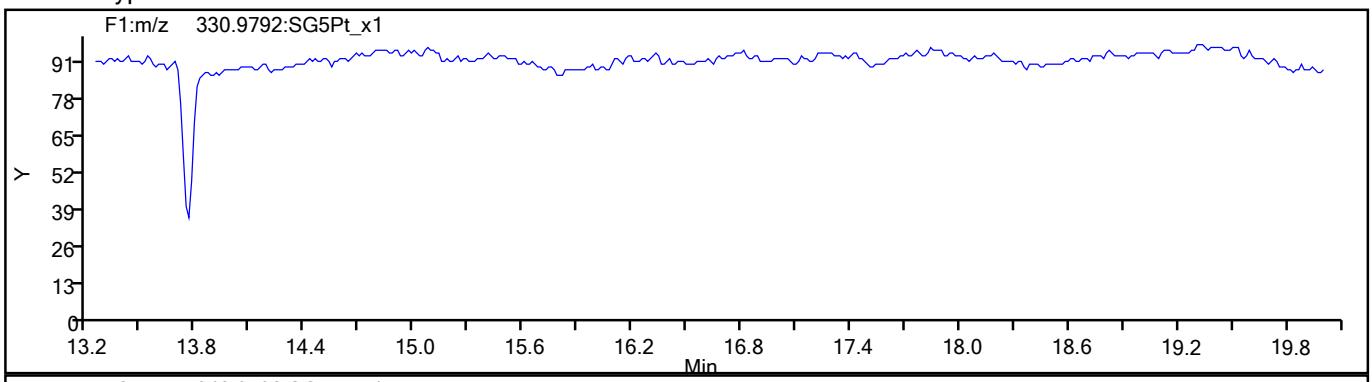

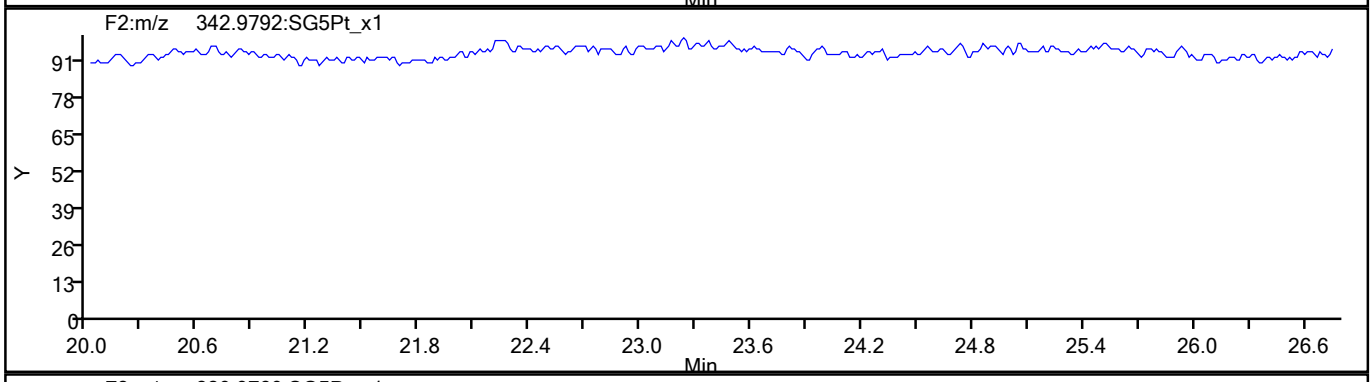

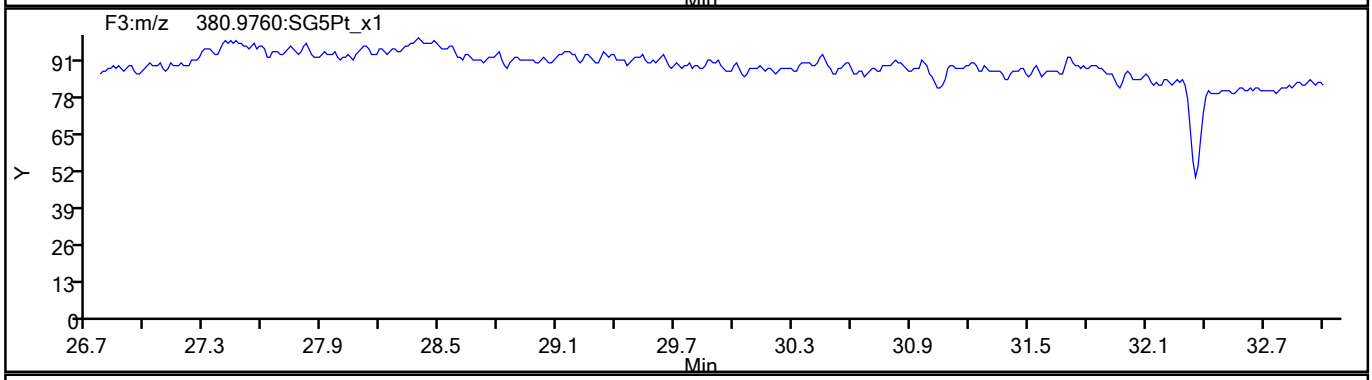

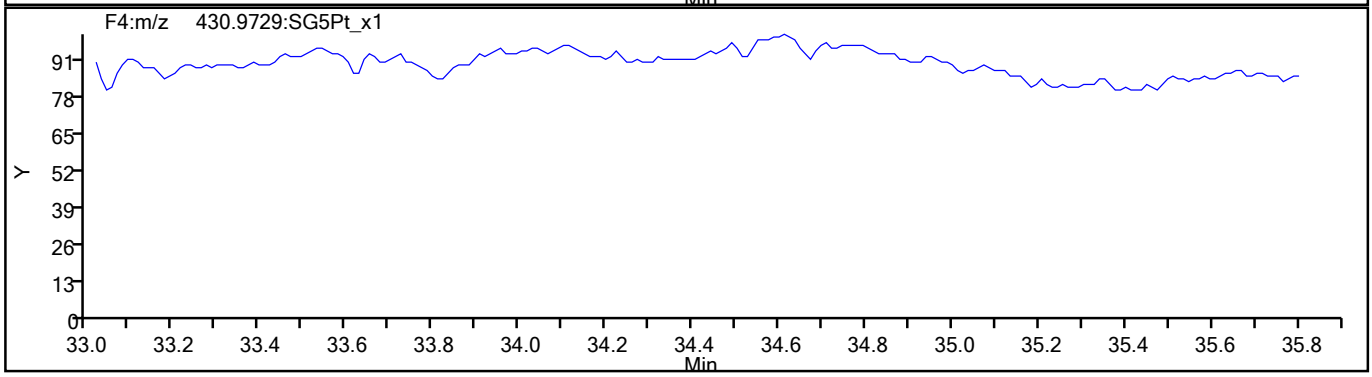

792718

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

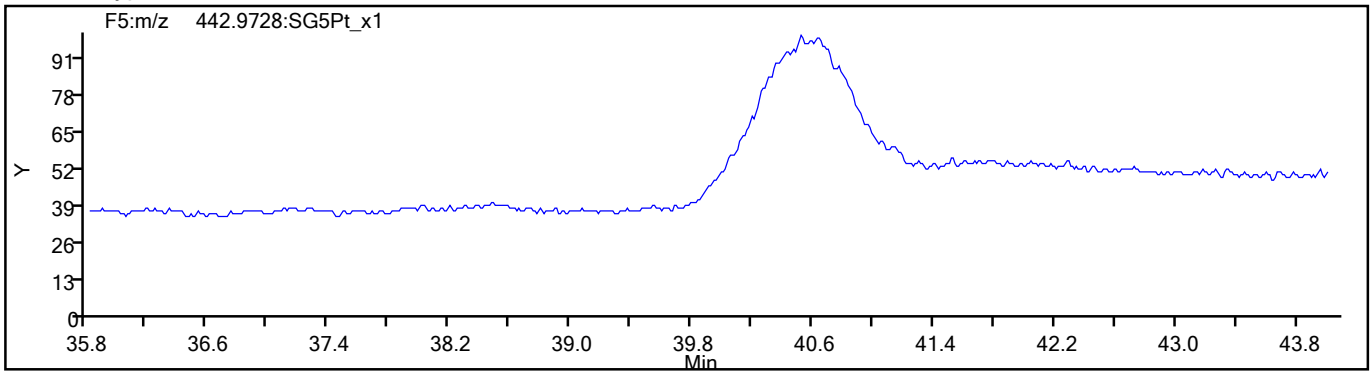

792719

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

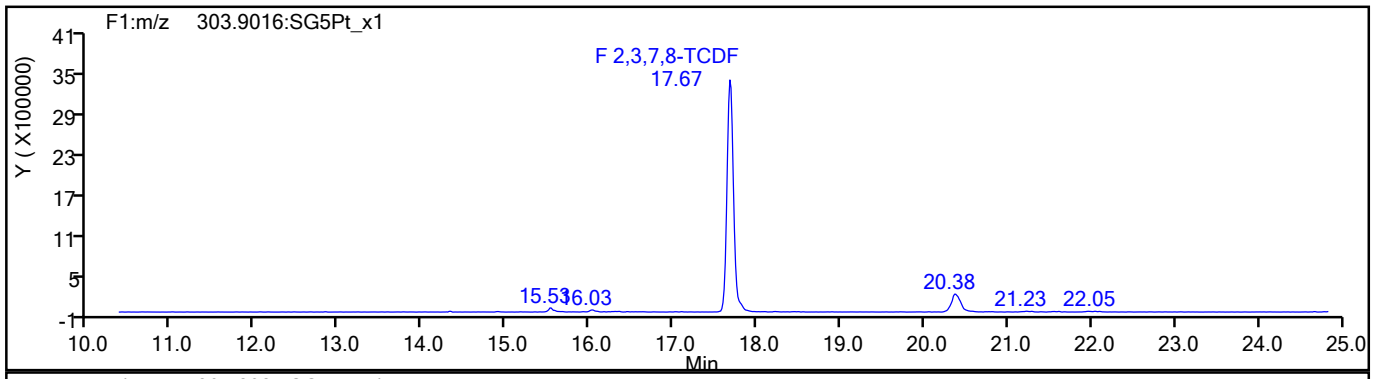

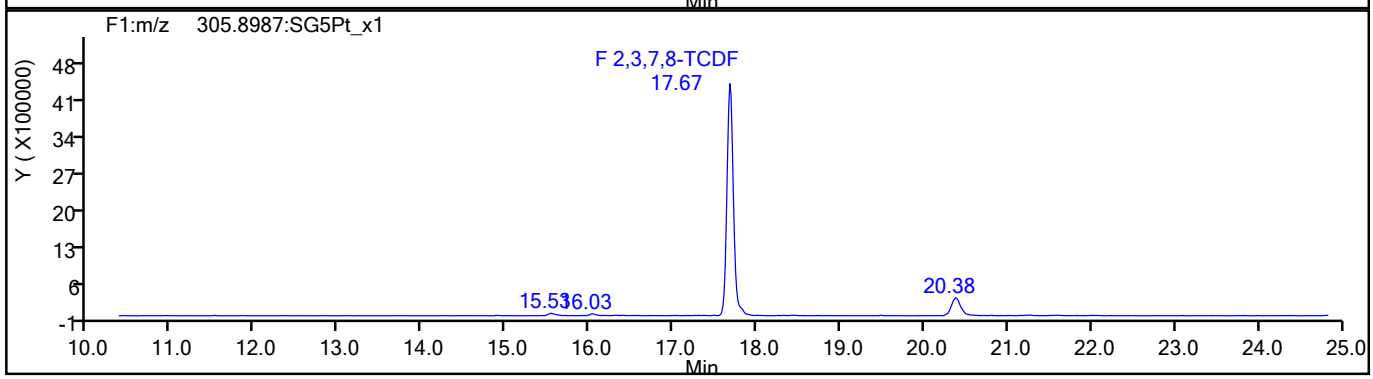

TCDF Standards

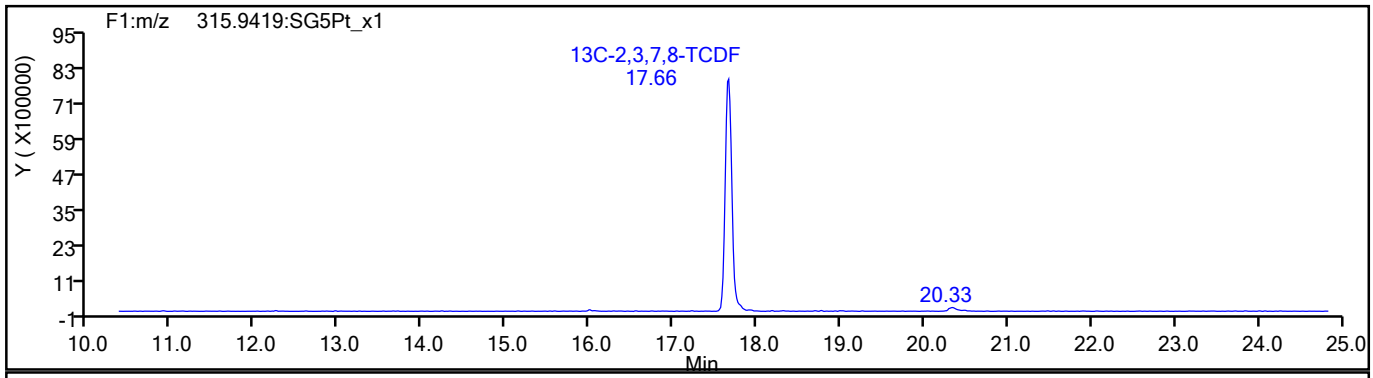

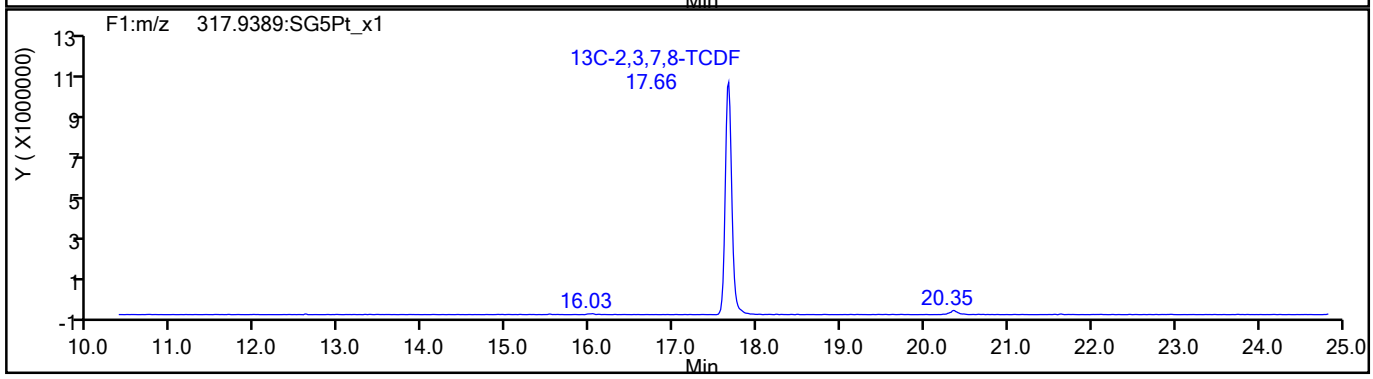

792723

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

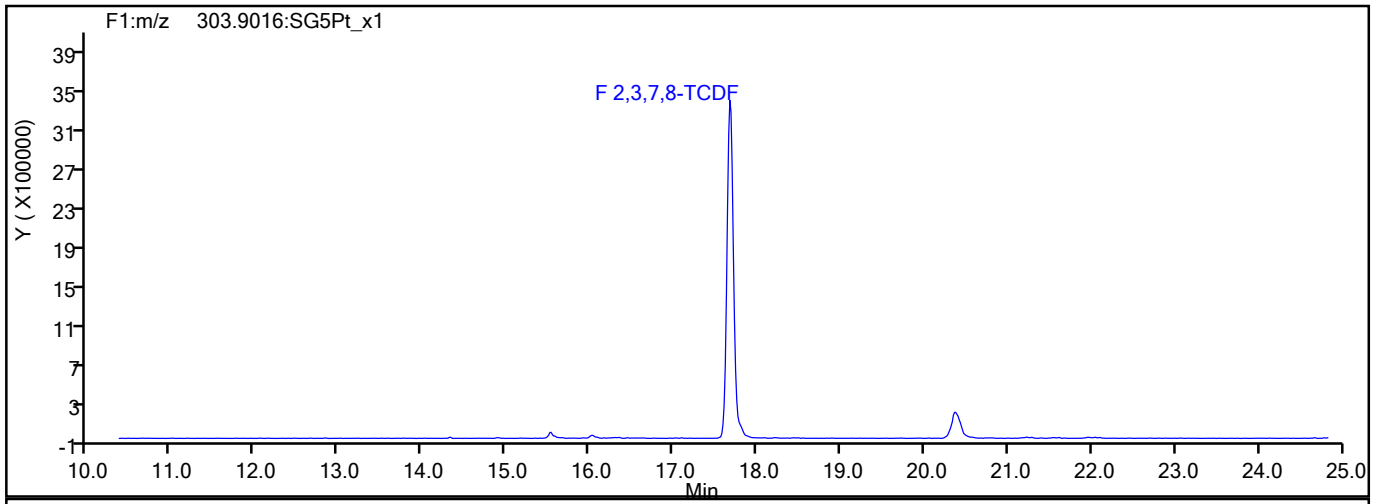

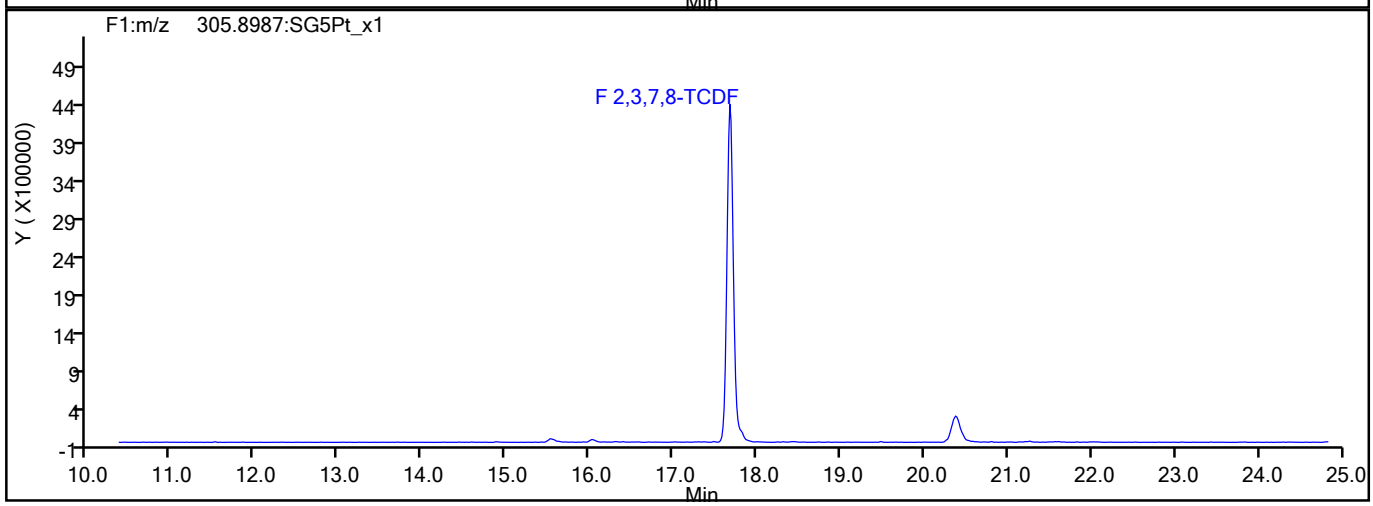

TCDF Interference Mass

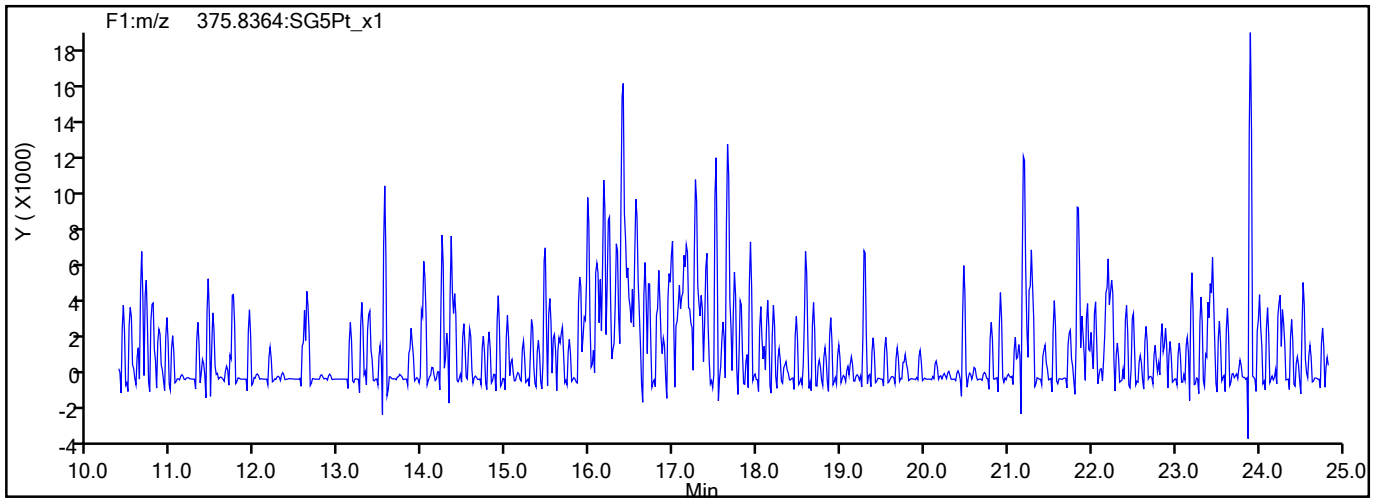

792724

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

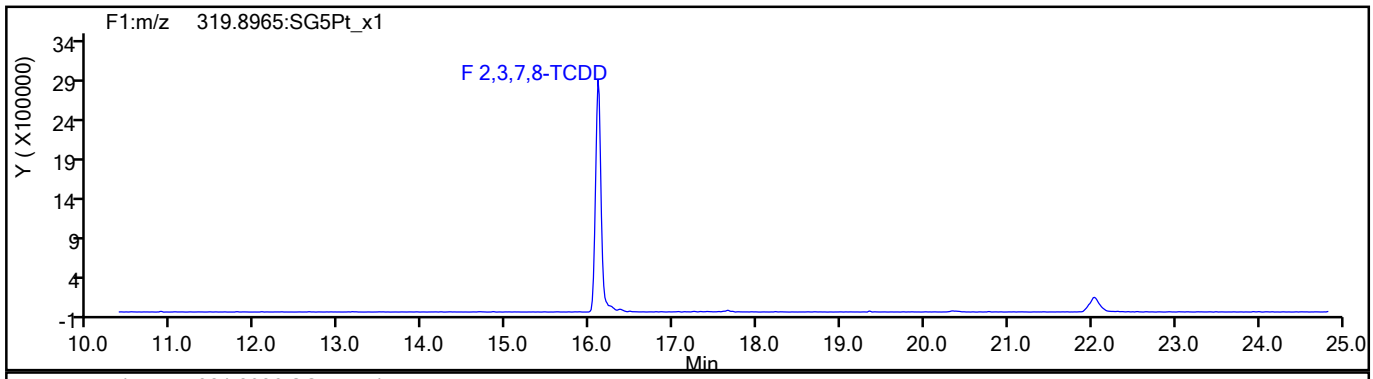

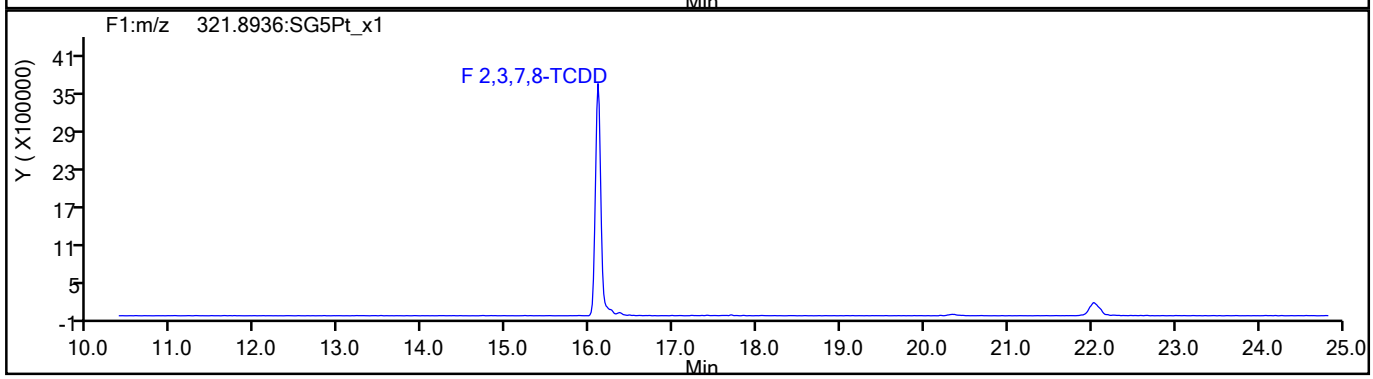

TCDD Standards

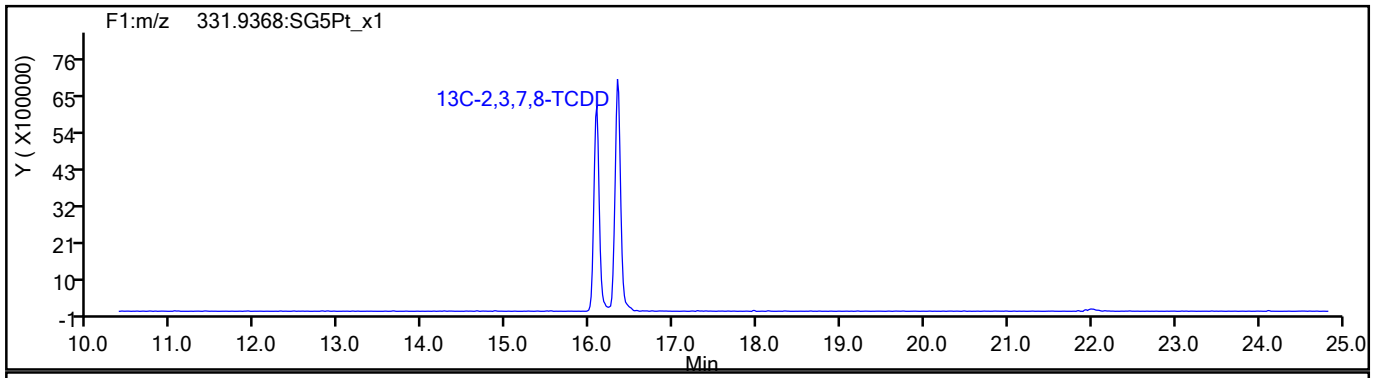

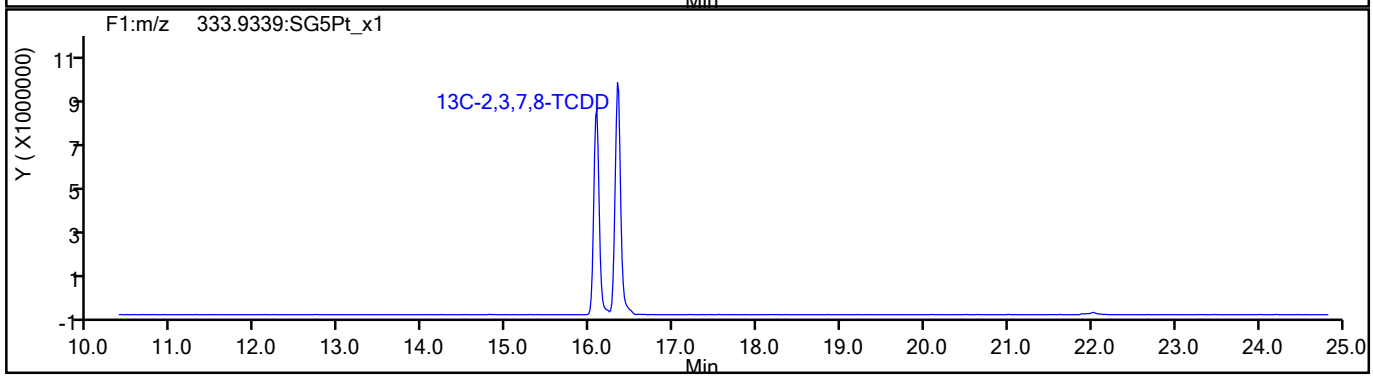

792725

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

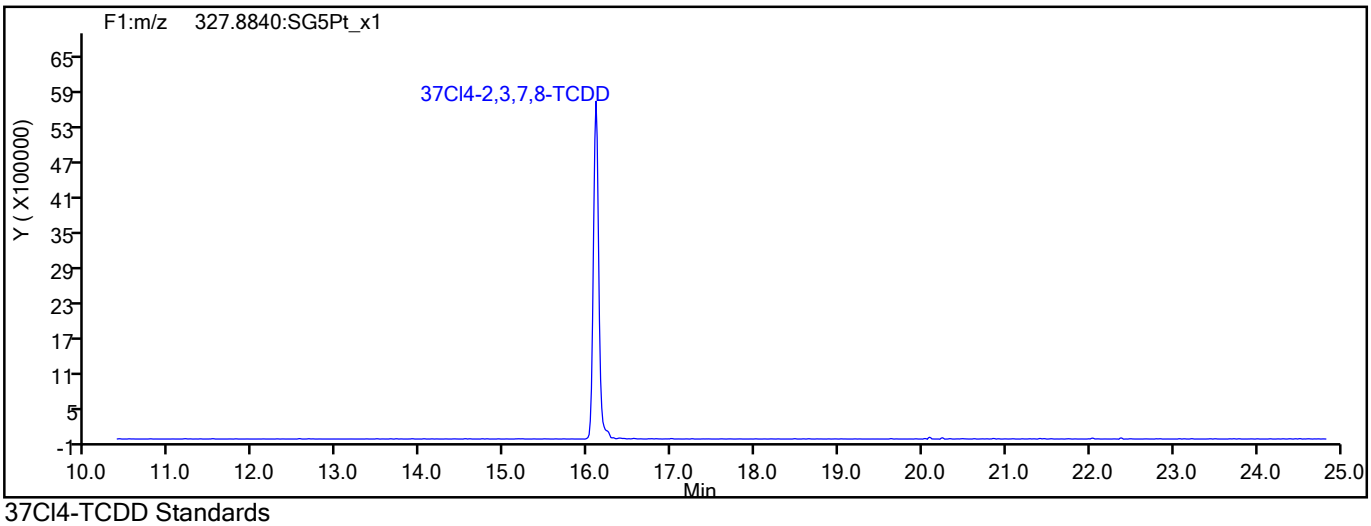

37Cl4-TCDD Standards

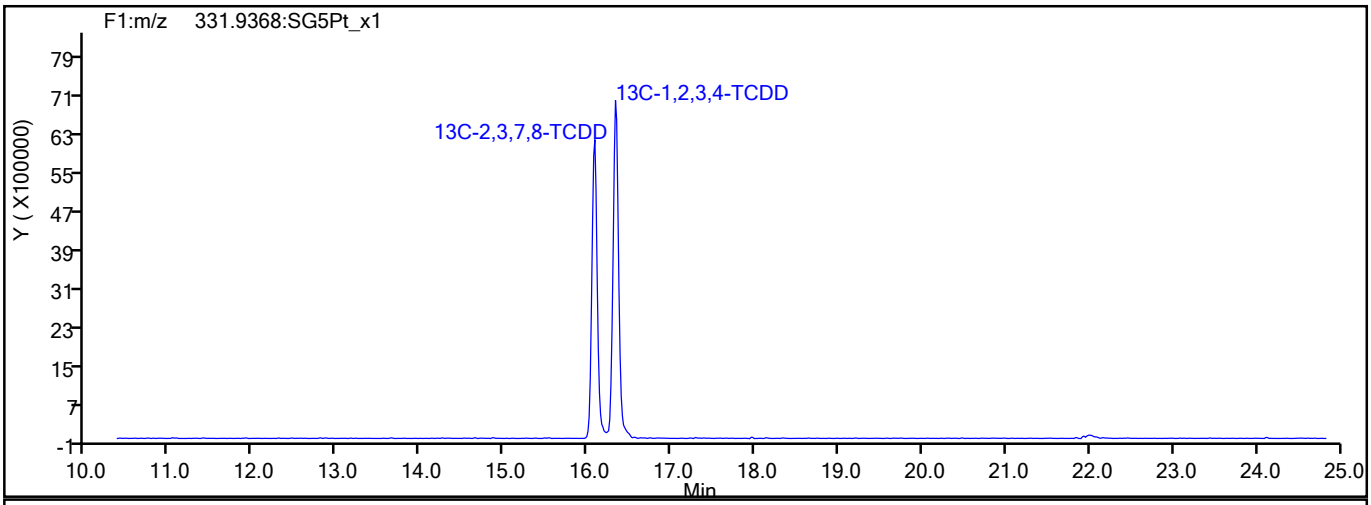

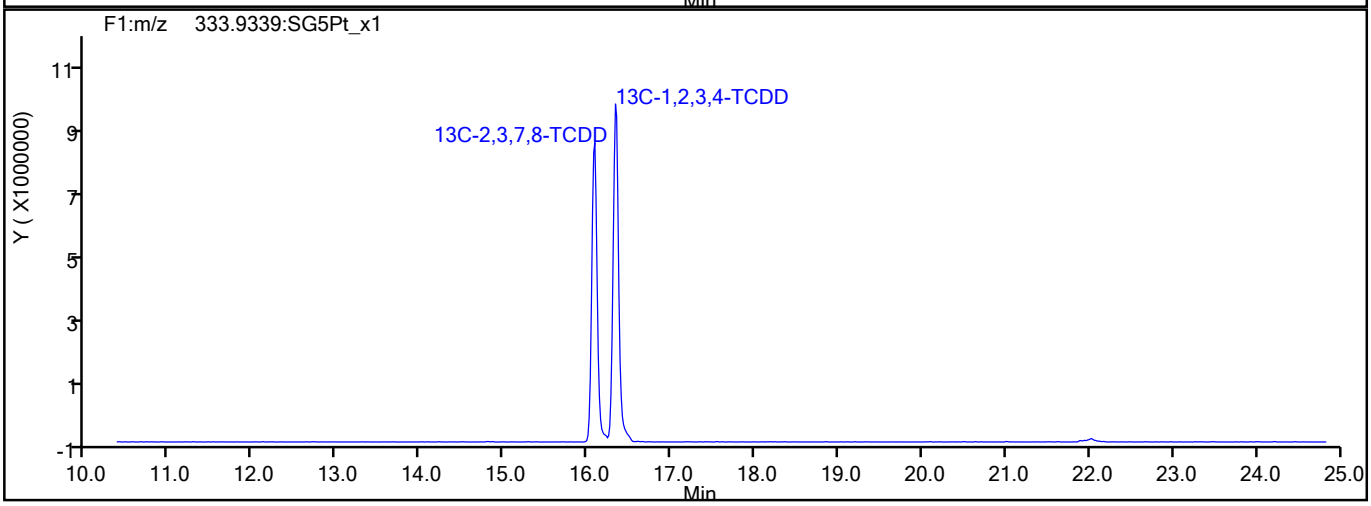

792726

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

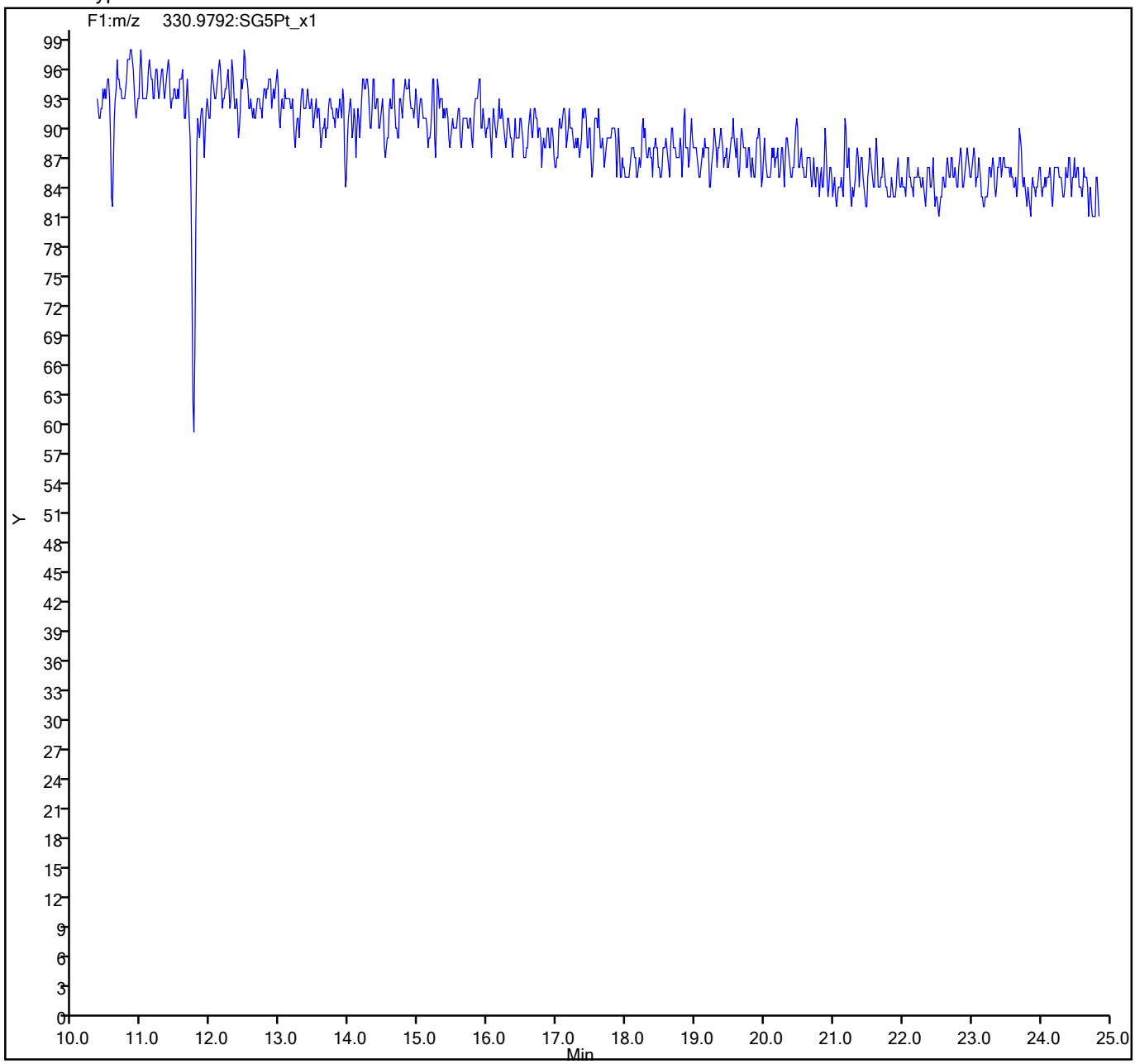

792727

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab Sample ID: CCV 320-520456/2 Calibration Date: 08/27/2021 16:16

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 27AU21A11D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.015		9.60	10.0	96	78-129
2,3,7,8-TCDF	AveID	0.998	0.9289		9.31	10.0	93	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9723		111	100	111	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.539		116	100	116	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9437		10.9	10.0	109	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
27AU21A11D2	1	CPS 082721	CPS HRDXNCP_00044				1.00000	
27AU21A11D2	2	CCV 082721	CCV CS-4 HRDXNL4_00100				1.00000	
27AU21A11D2	3	SB 082721	Solvent Blank C-14				1.00000	
27AU21A11D2	4	320-513879	320-76901-A-3-A	20	1613B/Solid	D267	10.00000	g
27AU21A11D2	5	320-513879	320-76901-A-4-A	20	1613B/Solid		10.00000	g
27AU21A11D2	6	320-513879	320-76901-A-7-A	20	1613B/Solid		10.00000	g
27AU21A11D2	7	320-513879	320-76901-A-8-A	20	1613B/Solid		10.00000	g
27AU21A11D2	8	320-513879	320-76901-A-9-A	20	1613B/Solid		10.00000	g
27AU21A11D2	9	320-515492	320-77214-A-9-A	20	1613B/Solid	D270	10.00000	g
27AU21A11D2	10	320-515492	320-77214-A-13-A	20	1613B/Solid		10.00000	g
27AU21A11D2	11	320-515492	320-77214-A-6-A	20	1613B/Solid		10.00000	g
27AU21A11D2	12	320-515492	320-77214-A-8-A	20	1613B/Solid		10.00000	g
27AU21A11D2	13	320-515492	320-77214-A-4-A	20	1613B/Solid		10.00000	g
27AU21A11D2	14	320-515492	320-77214-A-7-A	20	1613B/Solid		10.00000	g
27AU21A11D2	15	320-515492	320-77214-A-5-A	20	1613B/Solid		10.00000	g
27AU21A11D2	16	320-515492	320-77214-A-3-A	20	1613B/Solid		10.00000	g
27AU21A11D2	17	320-513879	320-76901-A-5-A	20	1613B/Solid	D267	10.00000	g
27AU21A11D2	18	320-513879	320-76901-A-1-A	20	1613B/Solid		10.00000	g
27AU21A11D2	19						1.00000	
27AU21A11D2	20						1.00000	
27AU21A11D2	21						1.00000	
27AU21A11D2	22						1.00000	
27AU21A11D2	23		DB 08-28-21				1.00000	
27AU21A11D2	24						1.00000	

Logfile ✓ id
8/30/21
KSS

Peak Locate Examination:27-AUG-2021:15:37 File:27AU21A11D2
Experiment:DB225RES Function:1 Reference:PFK

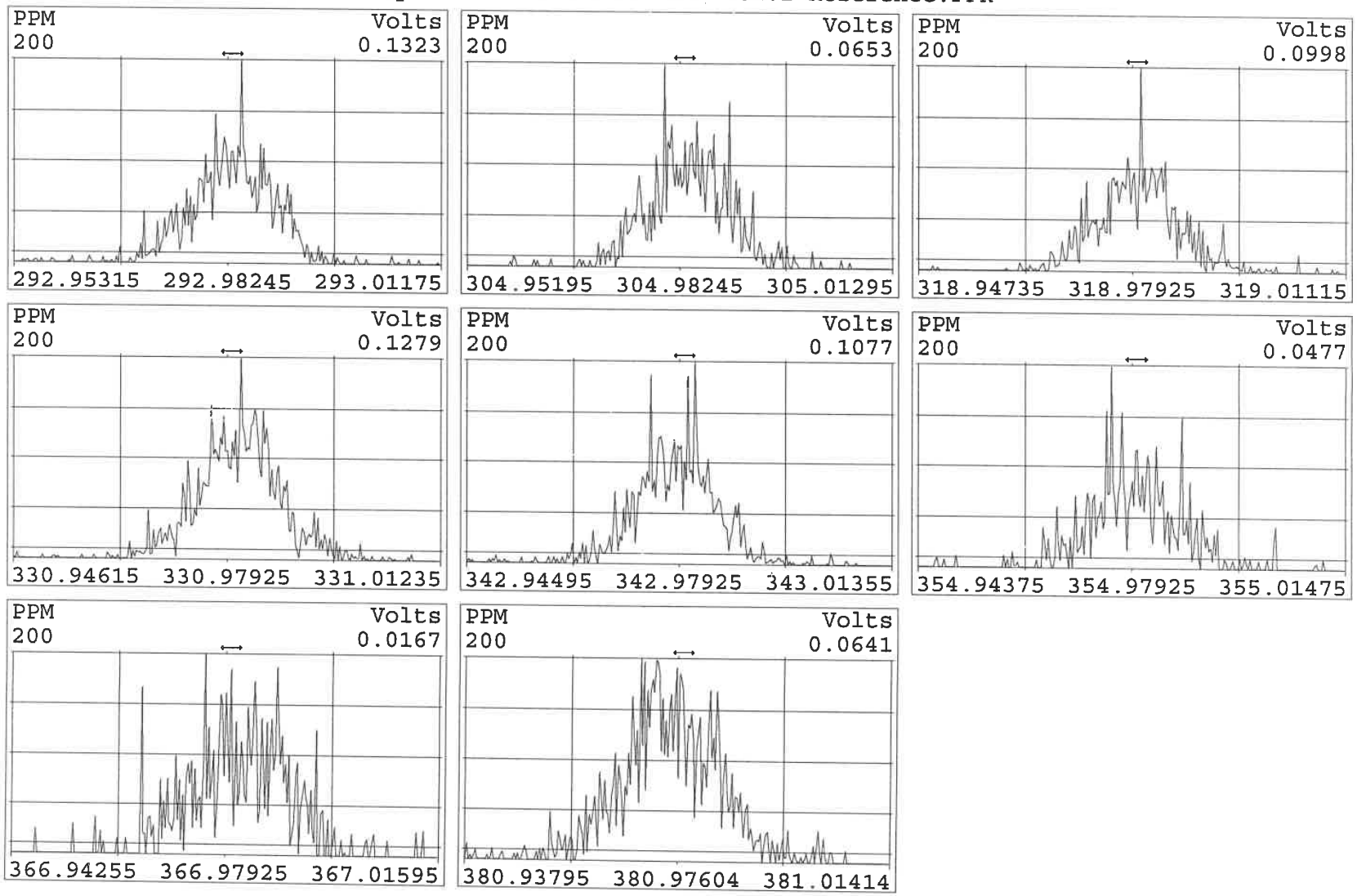

792730

Peak Locate Examination:30-AUG-2021:09:20 File:30AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

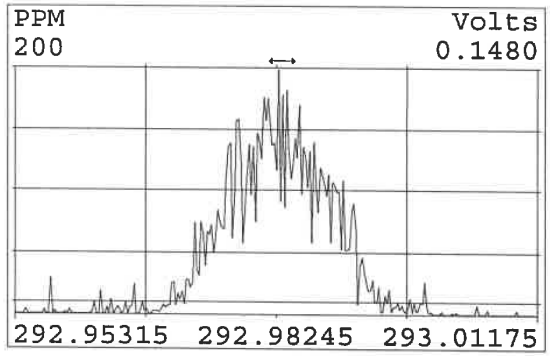

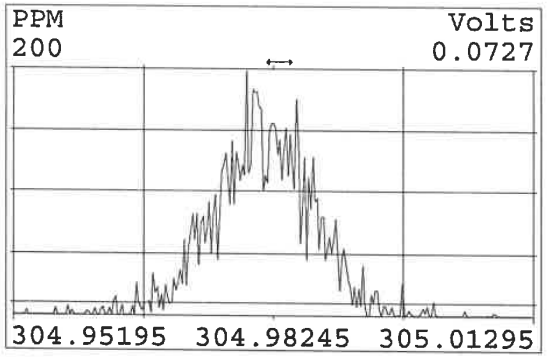

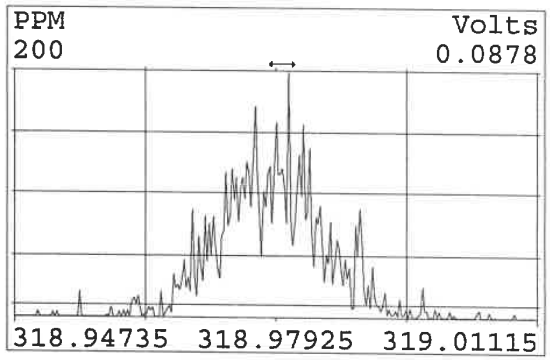

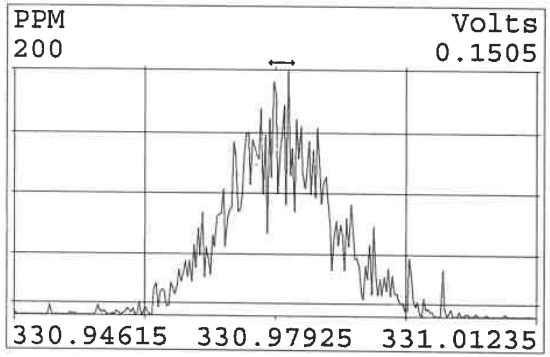

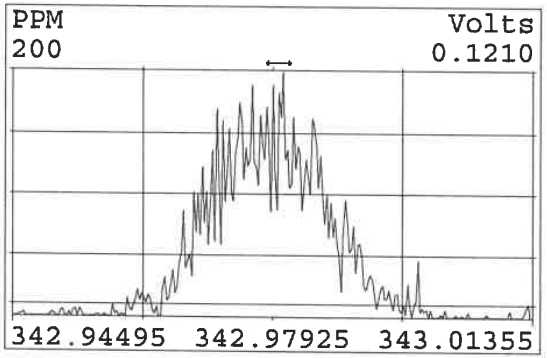

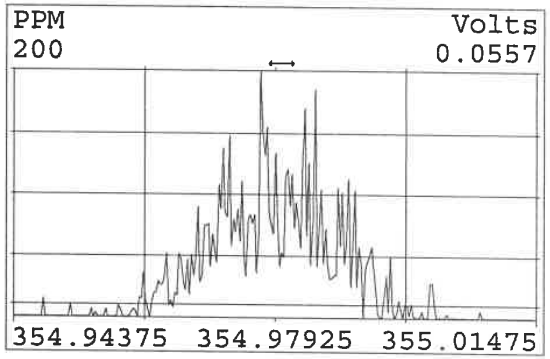

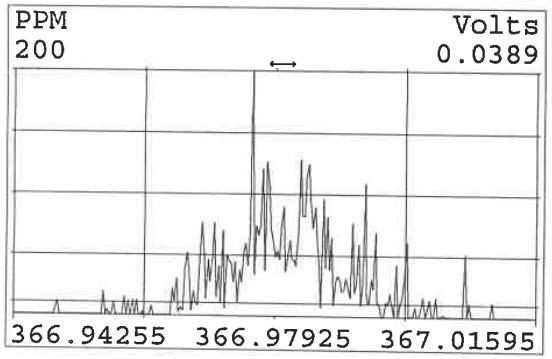

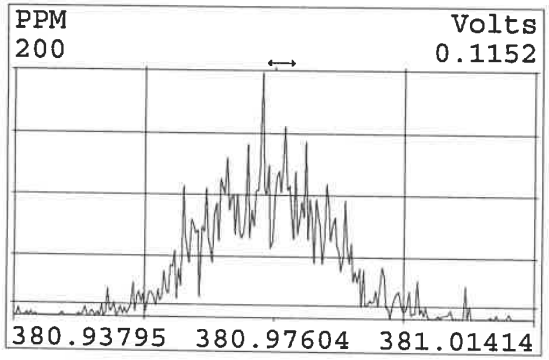

792731

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 16:16:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:56

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.300	59556751	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.616	91683910	0.79	1.3327	115.5	115.5	0.2031	0.2031	116	
2,3,7,8-TCDF	17.644	8516074	0.75	0.9978	9.309	9.309	0.0439	0.0439	93.09	
D 13C-2,3,7,8-TCDD	16.066	57904157	0.76	0.8749	111.1	111.1	0.2489	0.2489	111	
2,3,7,8-TCDD	16.080	5876060	0.77	1.0570	9.601	9.601	0.0419	0.0419	96.01	
$ 37Cl4-2,3,7,8-TCDD	16.080	5620446		0.8648	10.9	10.9	0.0372	0.0372	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

792732

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Aug-2021 16:16:33 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:30 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:56

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.300	16.300	0		26013127	5710640	6230	15575	917		
333.9339	16.300	16.300	0		33543624	7492944	5271	13177	1422	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.616	17.616	0	1.081	40596412	7743193	6996	17490	1107		
317.9389	17.616	17.616	0	1.081	51087498	9604898	7298	18245	1316	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.644	0	1.002	3658590	684488	1314	3285	521		
305.8987	17.644	17.644	0	1.002	4857484	875548	1725	4312	508	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	0.986	24957849	5501958	6230	15575	883		
333.9339	16.066	16.066	0	0.986	32946308	7425811	5271	13177	1409	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.080	16.080	0	1.001	2562809	565022	1197	2992	472		
321.8936	16.080	16.080	0	1.001	3313251	720270	1091	2727	660	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.080	0	0.987	5620446	1244371	1700	4250	732		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

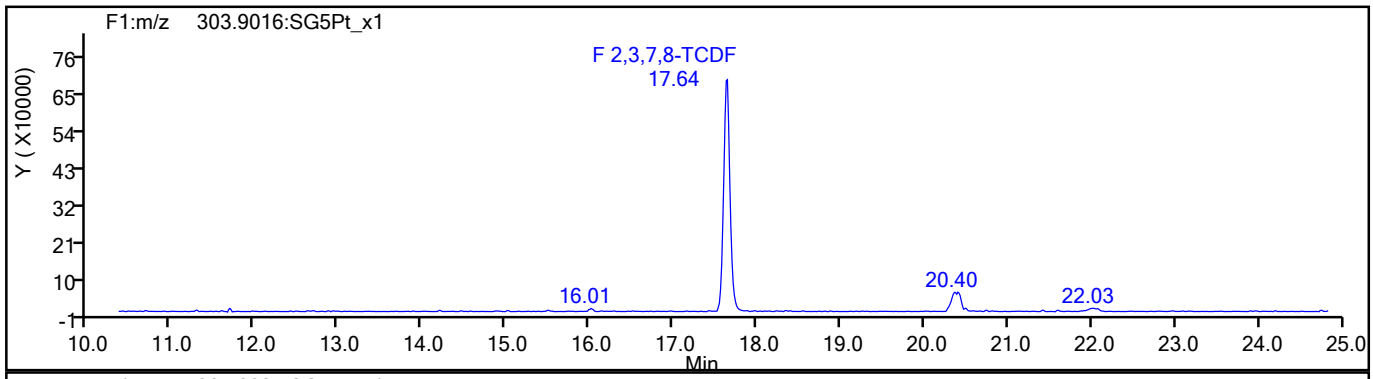

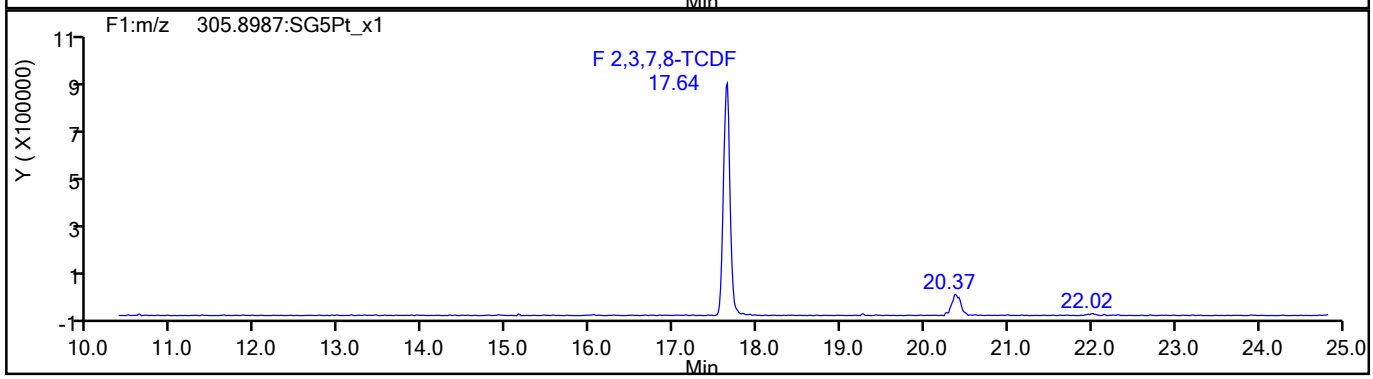

TCDF Standards

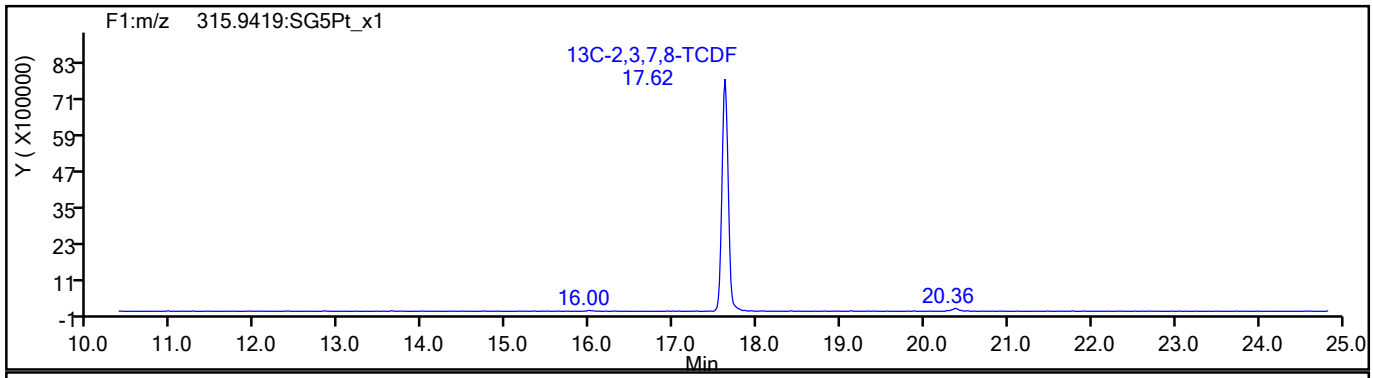

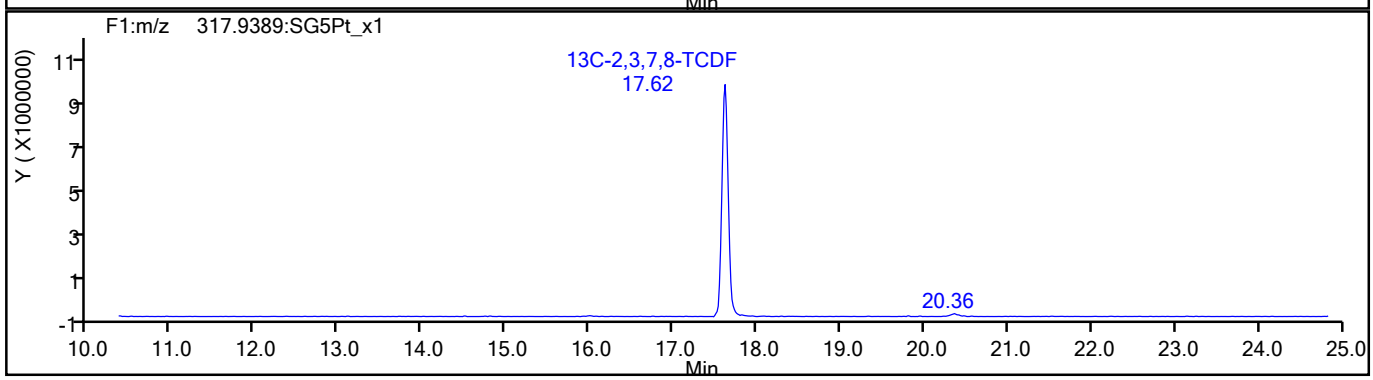

792734

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

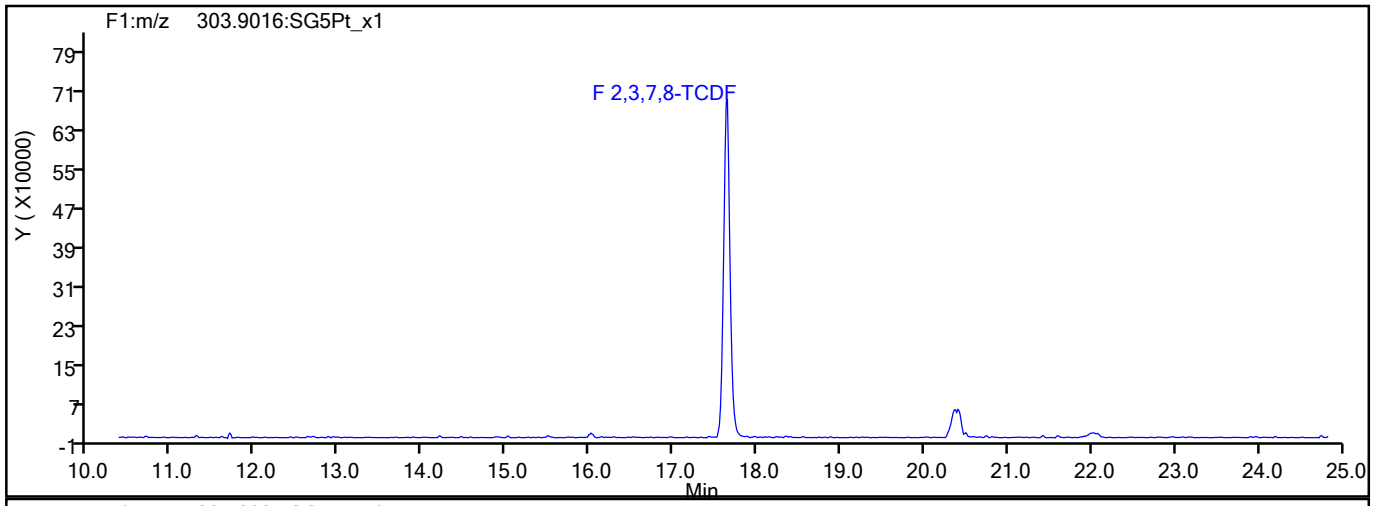

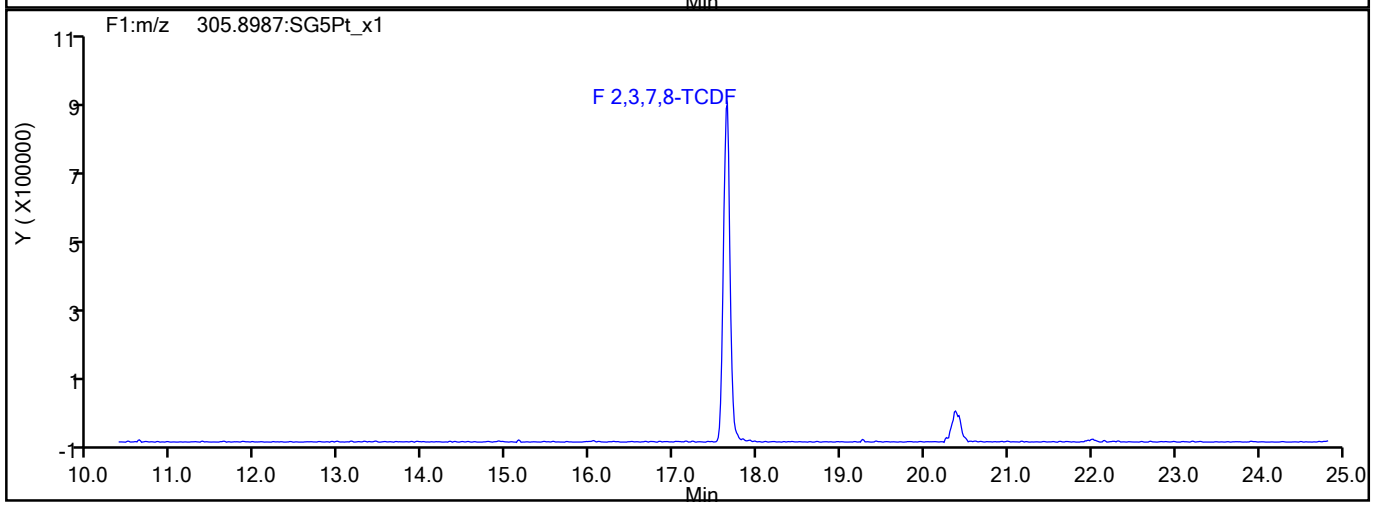

TCDF Interference Mass

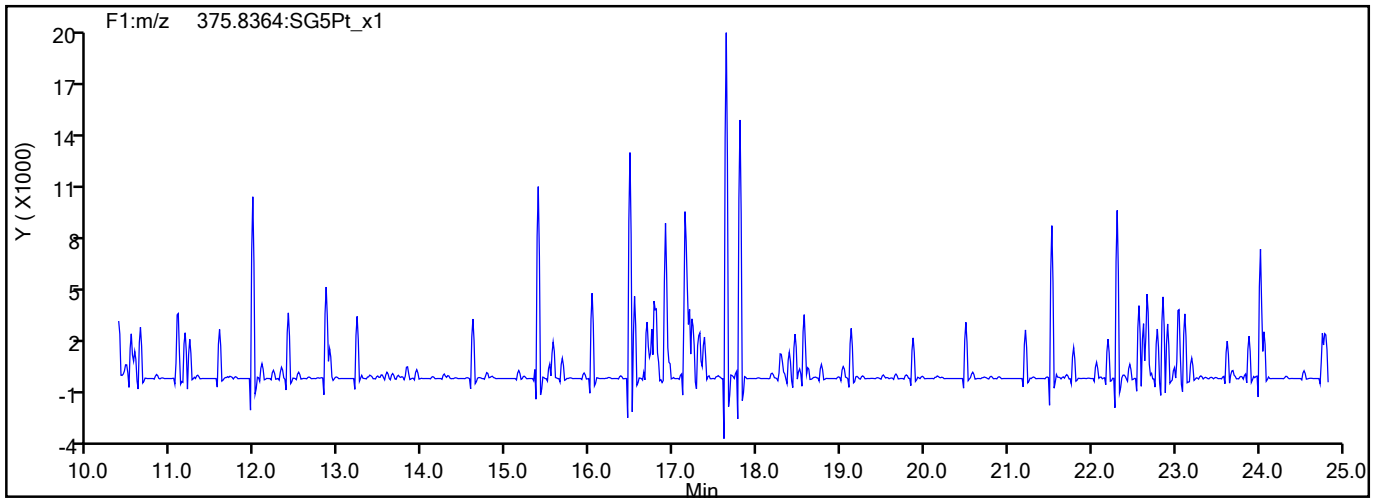

792735

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

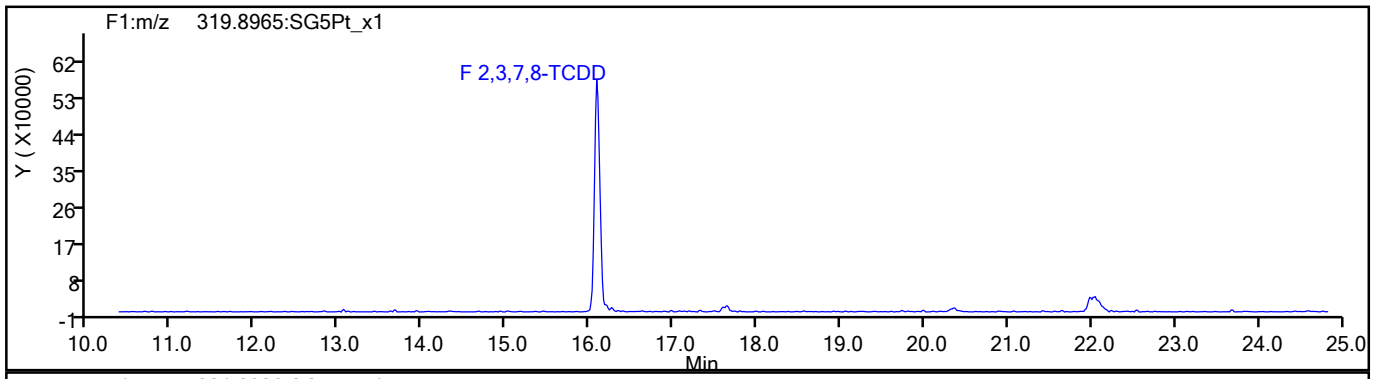

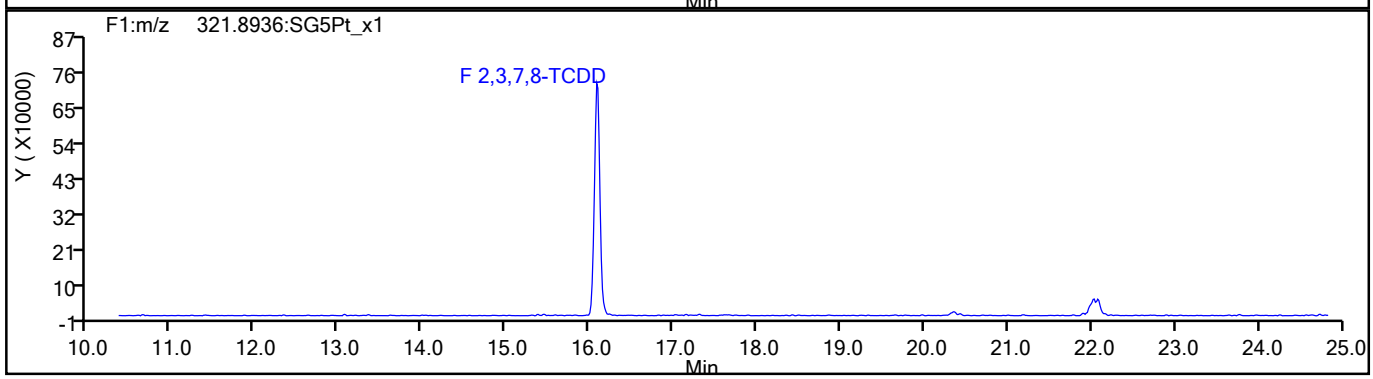

TCDD Standards

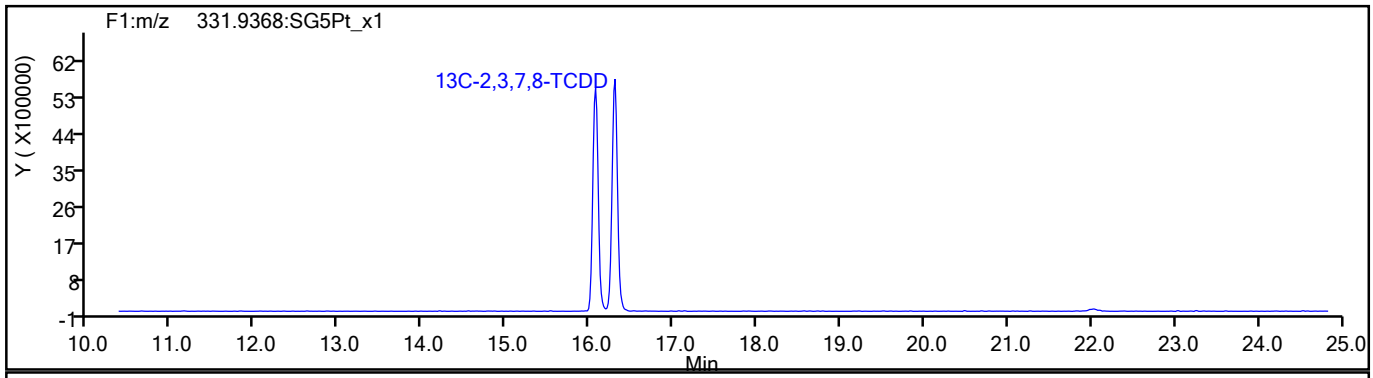

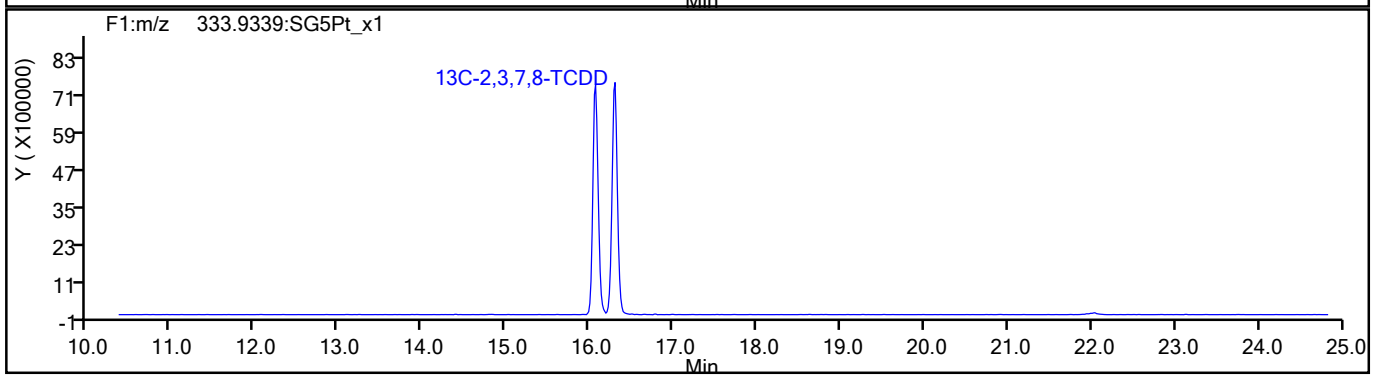

792736

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

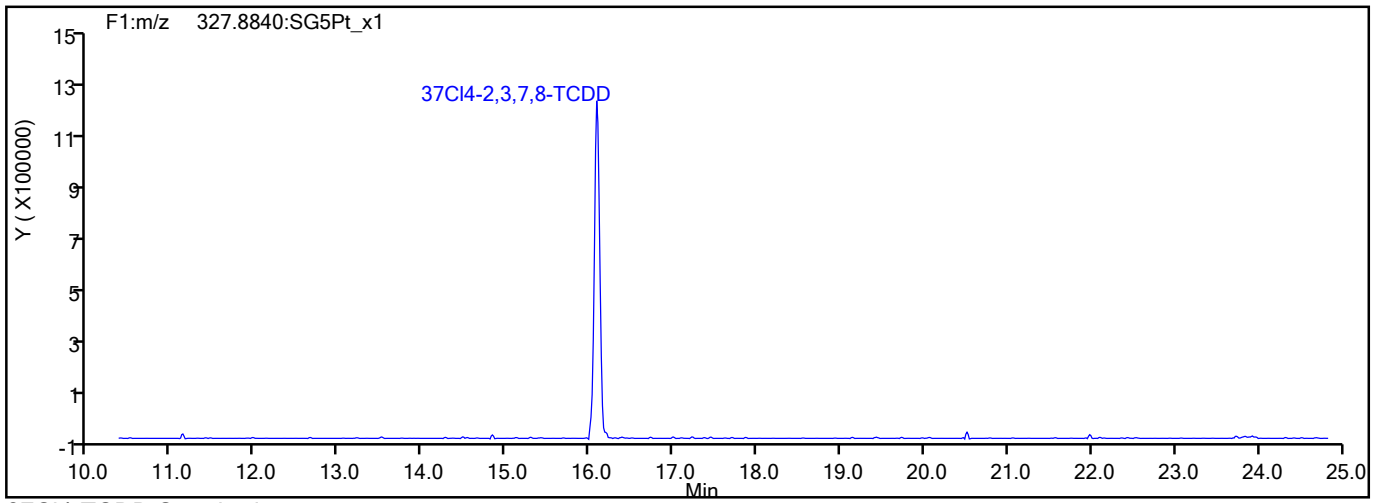

37Cl4-TCDD Standards

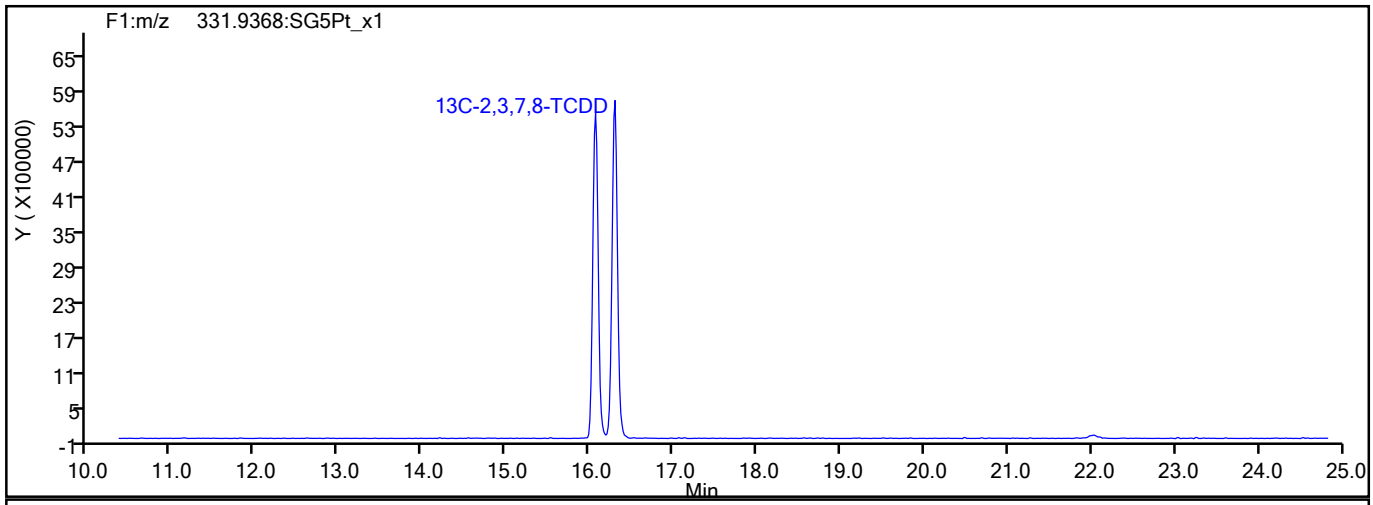

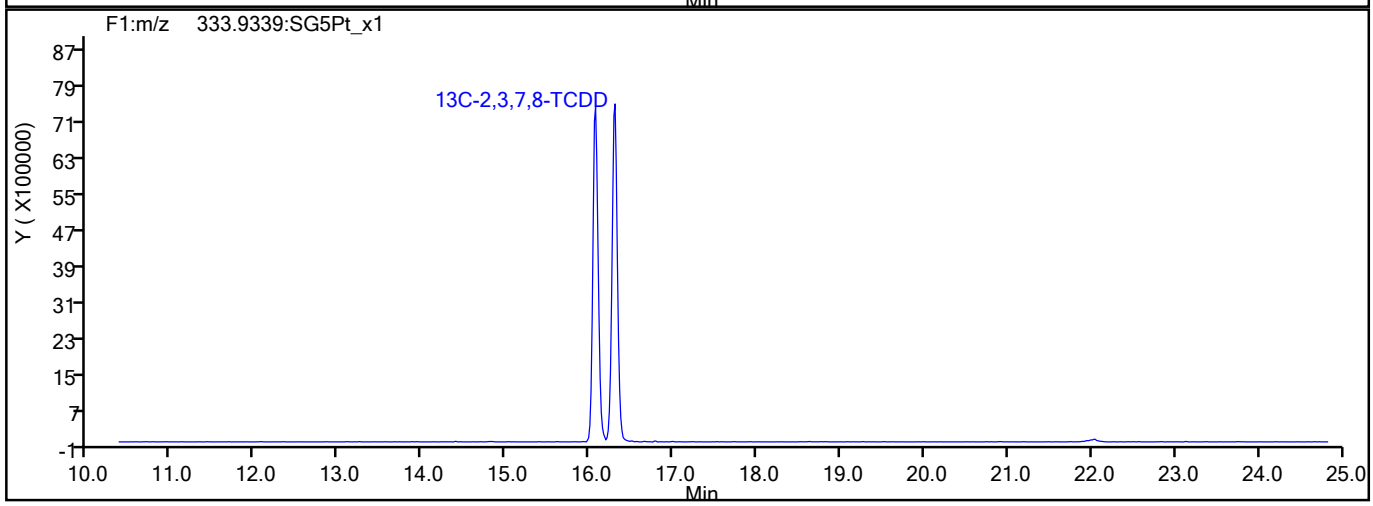

792737

Report Date: 30-Aug-2021 09:51:30 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_002.d		
Injection Date:	27-Aug-2021 16:16:33	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

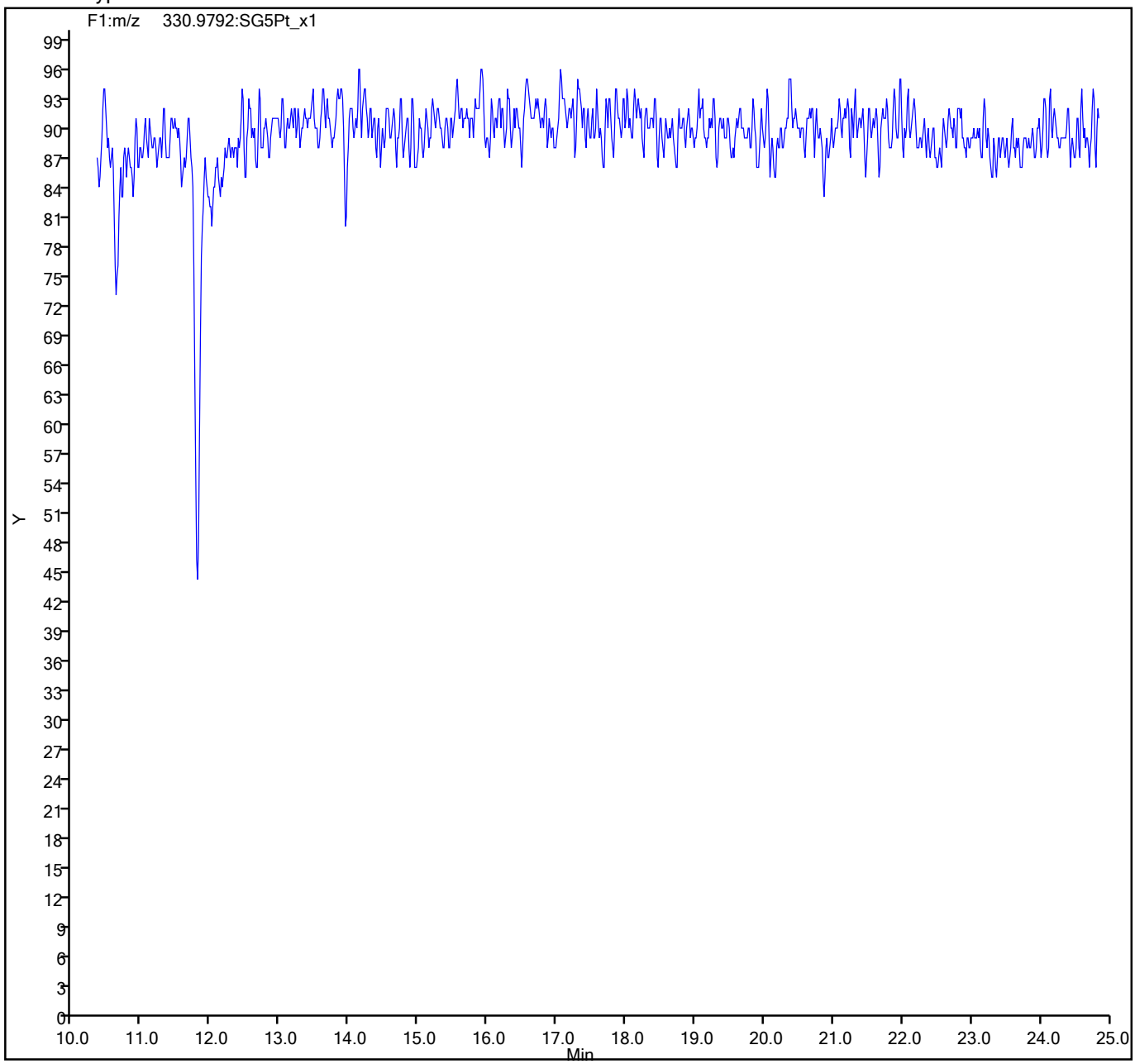

792738

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Lab Sample ID: CCV 320-520997/2 Calibration Date: 08/31/2021 13:51

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 31AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	0.9829		9.30	10.0	93	78-129
2,3,7,8-TCDF	AveID	0.998	0.9159		9.18	10.0	92	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9120		104	100	104	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.391		104	100	104	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9746		11.3	10.0	113	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
31AU2111D2	1	CPS 083121	CPS HRDXNCP_00044				1.00000	
31AU2111D2	2	CCV 083121	CCV CS-4 HRDXNL4_00100				1.00000	
31AU2111D2	3	SB 083121	Solvent Blank C-14				1.00000	
31AU2111D2	4	320-514809	400-206693-C-19-A	20	1613B/Solid	D268	10.00000	g
31AU2111D2	5	320-514809	400-206693-C-20-A	20	1613B/Solid		10.00000	g
31AU2111D2	6	320-514809	400-206693-C-36-A	20	1613B/Solid		10.00000	g
31AU2111D2	7	320-514809	400-206693-C-39-A	20	1613B/Solid		10.00000	g
31AU2111D2	8	320-515138	400-206693-C-42-A	20	1613B/Solid	D267	10.00000	g
31AU2111D2	9	320-515492	320-77292-A-1-A	20	1613B/Solid	D270	10.00000	g
31AU2111D2	10	320-515492	320-77292-A-2-A	20	1613B/Solid		10.00000	g
31AU2111D2	11	320-515492	320-77292-A-2-B MS	20	1613B/Solid		10.00000	g
31AU2111D2	12	320-515492	320-77292-A-2-C MSD	20	1613B/Solid		10.00000	g
31AU2111D2	13	320-515492	320-77292-A-3-A	20	1613B/Solid		10.00000	g
31AU2111D2	14	320-515492	320-77292-A-4-A	20	1613B/Solid		10.00000	g
31AU2111D2	15	320-515492	320-77214-A-2-A	20	1613B/Solid		10.00000	g
31AU2111D2	16	320-515492	320-77214-A-2-B MS	20	1613B/Solid		10.00000	g
31AU2111D2	17	320-515492	320-77214-A-2-C MSD	20	1613B/Solid		10.00000	g
31AU2111D2	18	320-515492	320-76901-A-1-A X10	20	1613B/Solid	D267	10.00000	g
31AU2111D2	19						1.00000	
31AU2111D2	20						1.00000	
31AU2111D2	21						1.00000	
31AU2111D2	22		DB 08-31-21				1.00000	
31AU2111D2	23						1.00000	

LOGFILE CHECKED
DB 9/1/21

Peak Locate Examination:31-AUG-2021:13:11 File:31AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

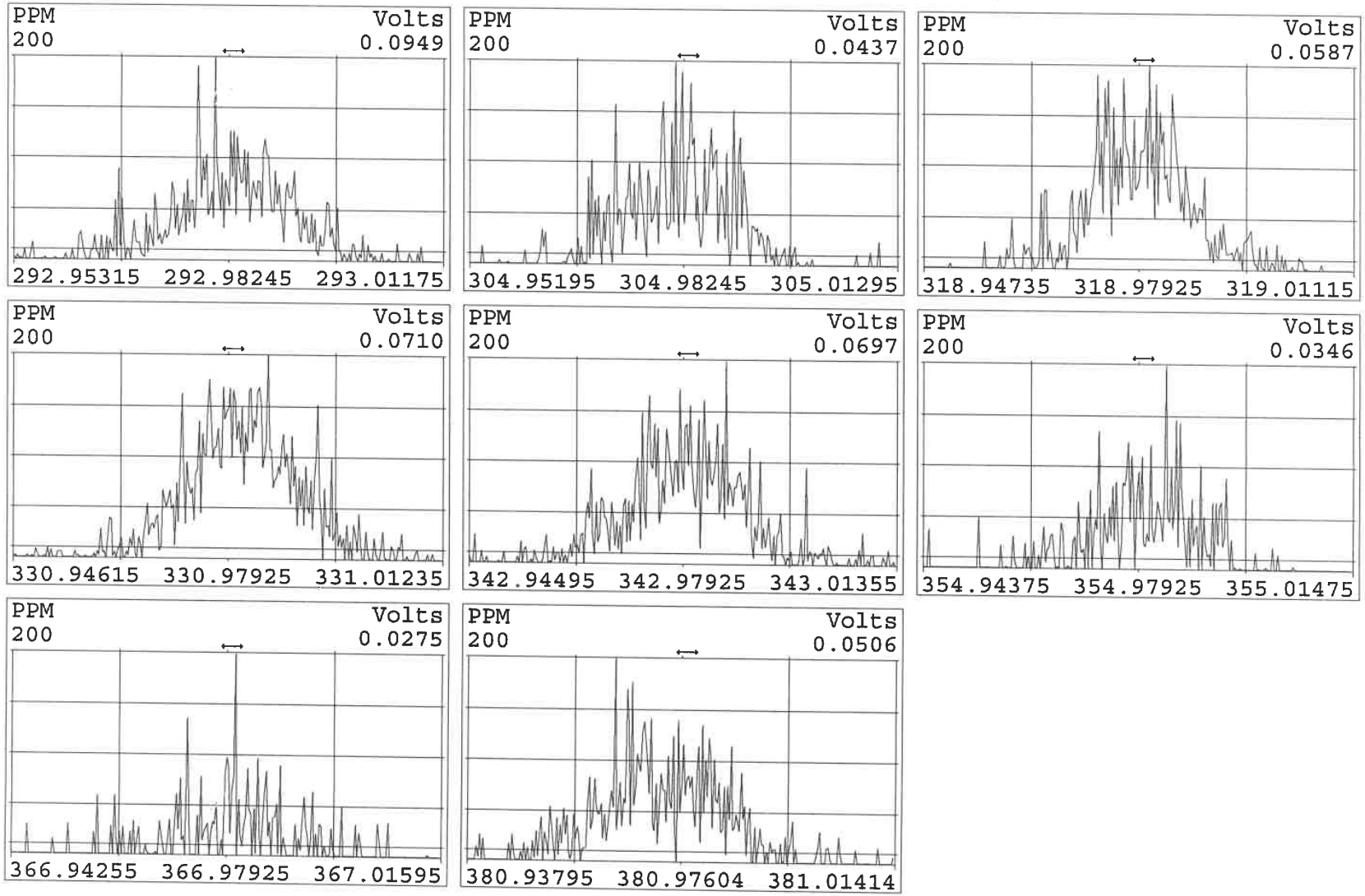

Peak Locate Examination: 1-SEP-2021:01:07 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

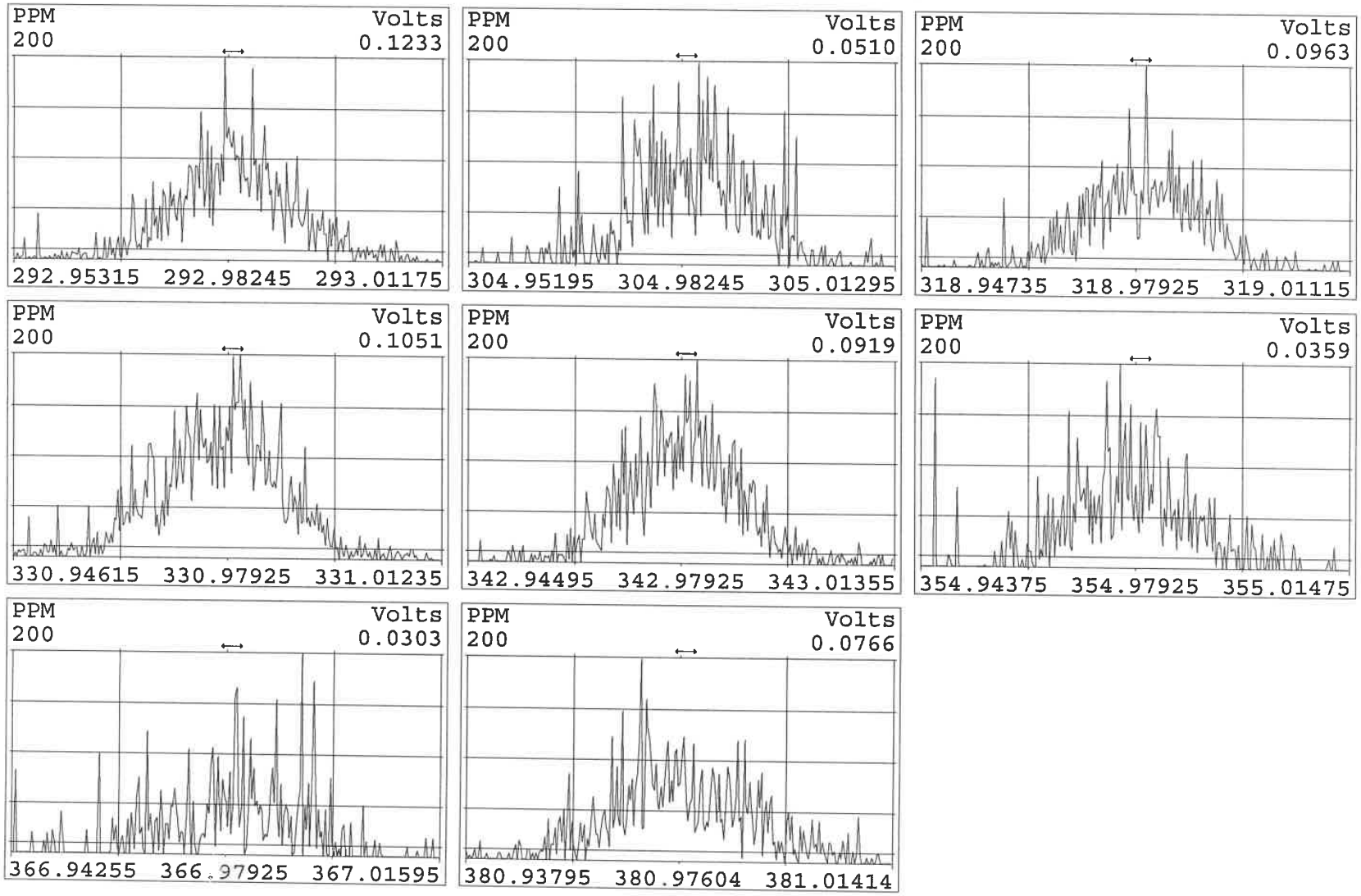

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 31-Aug-2021 13:51:44 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:32:30

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.275	36409593	0.80	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.605	50660828	0.76	1.3327	104.4	104.4	0.4579	0.4579	104	
2,3,7,8-TCDF	17.619	4640207	0.78	0.9978	9.179	9.179	0.1321	0.1321	91.79	
D 13C-2,3,7,8-TCDD	16.055	33207325	0.74	0.8749	104.2	104.2	0.6983	0.6983	104	
2,3,7,8-TCDD	16.069	3263875	0.86	1.0570	9.299	9.299	0.1532	0.1532	92.99	
$ 37Cl4-2,3,7,8-TCDD	16.069	3548395		0.8648	11.3	11.3	0.1017	0.1017	113	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

792743

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 31-Aug-2021 13:51:44 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:32:30

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.275	16.275	0		16219970	3519442	11993	29982	293		
333.9339	16.275	16.275	0		20189623	4540712	7706	19265	589	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.605	17.605	0	1.082	21896549	4215589	10001	25002	422		
317.9389	17.605	17.605	0	1.082	28764279	5472152	9674	24185	566	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.619	17.619	0	1.001	2040587	388832	1840	4600	211		
305.8987	17.619	17.619	0	1.001	2599620	526255	3269	8172	161	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.055	16.055	0	0.987	14138429	3126695	11993	29982	261		
333.9339	16.055	16.055	0	0.987	19068896	4455590	7706	19265	578	0.74(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.069	16.069	0	1.001	1505976	324568	2564	6410	127		
321.8936	16.069	16.069	0	1.001	1757899	372701	2349	5872	159	0.86(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.069	16.069	0	0.987	3548395	729773	2835	7087	257		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

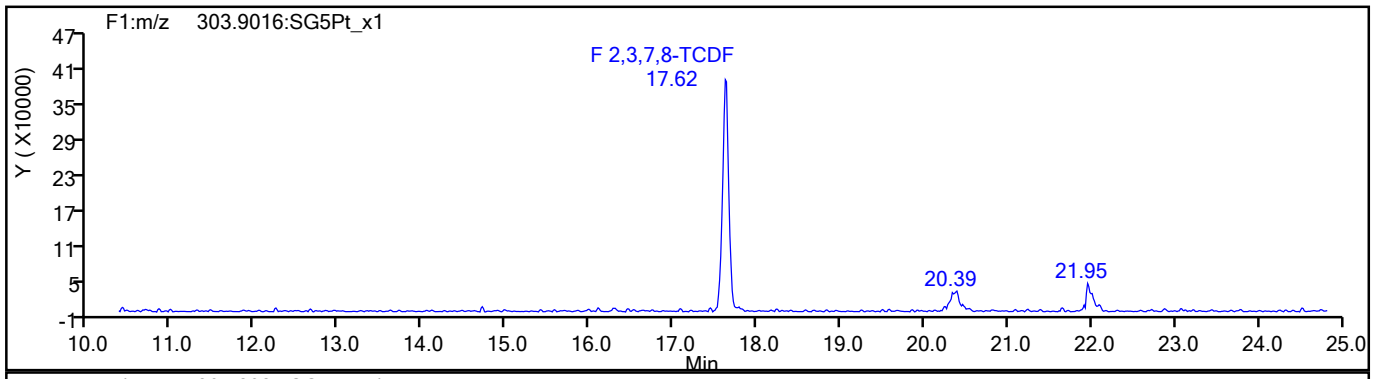

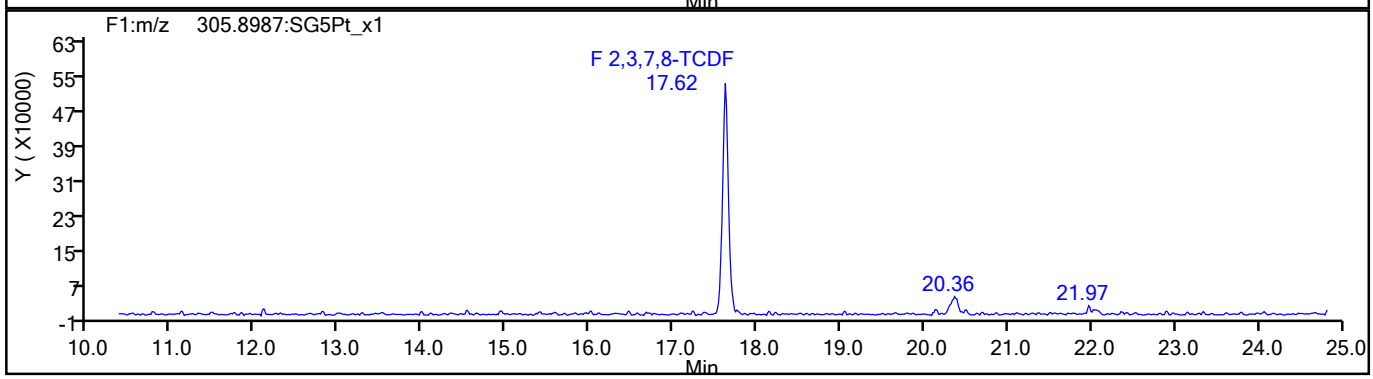

TCDF Standards

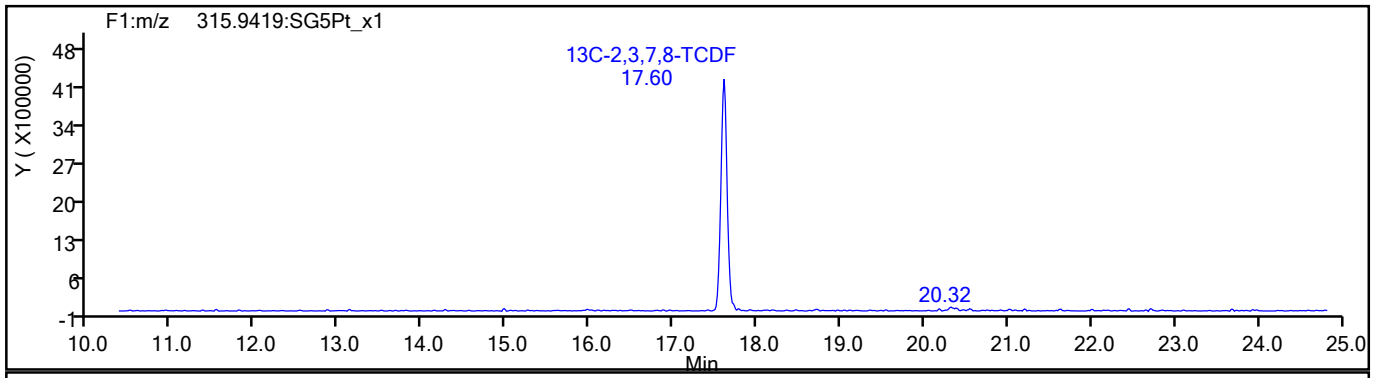

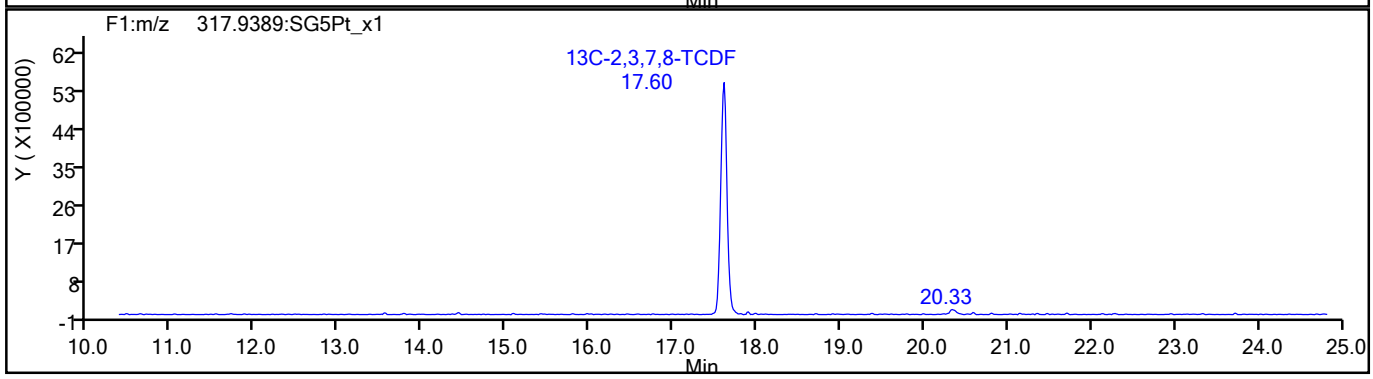

792745

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

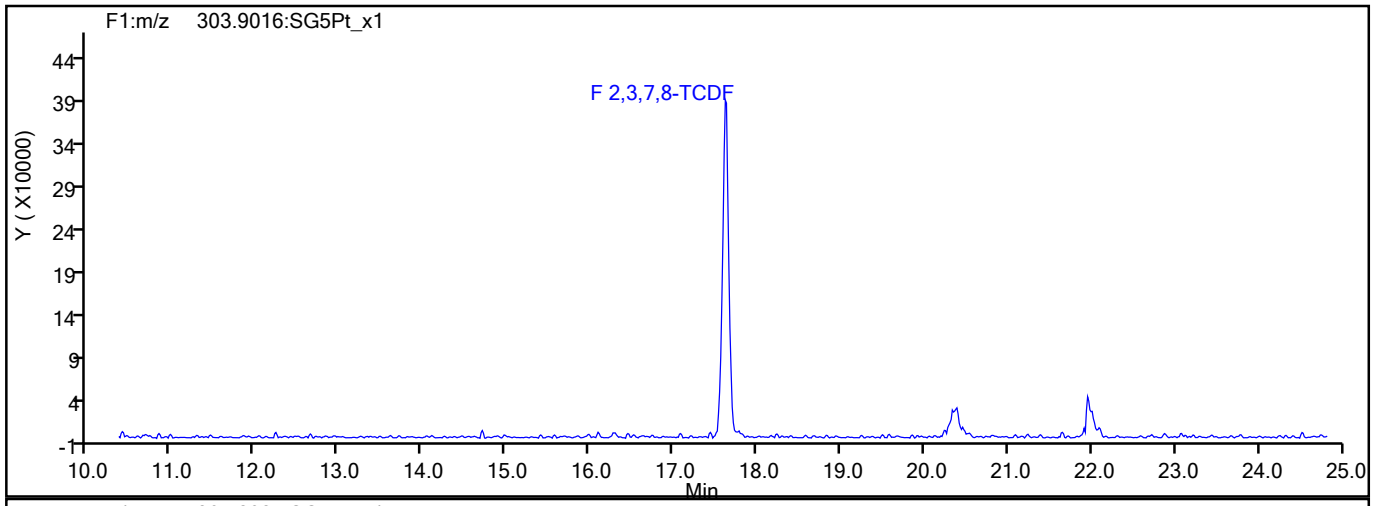

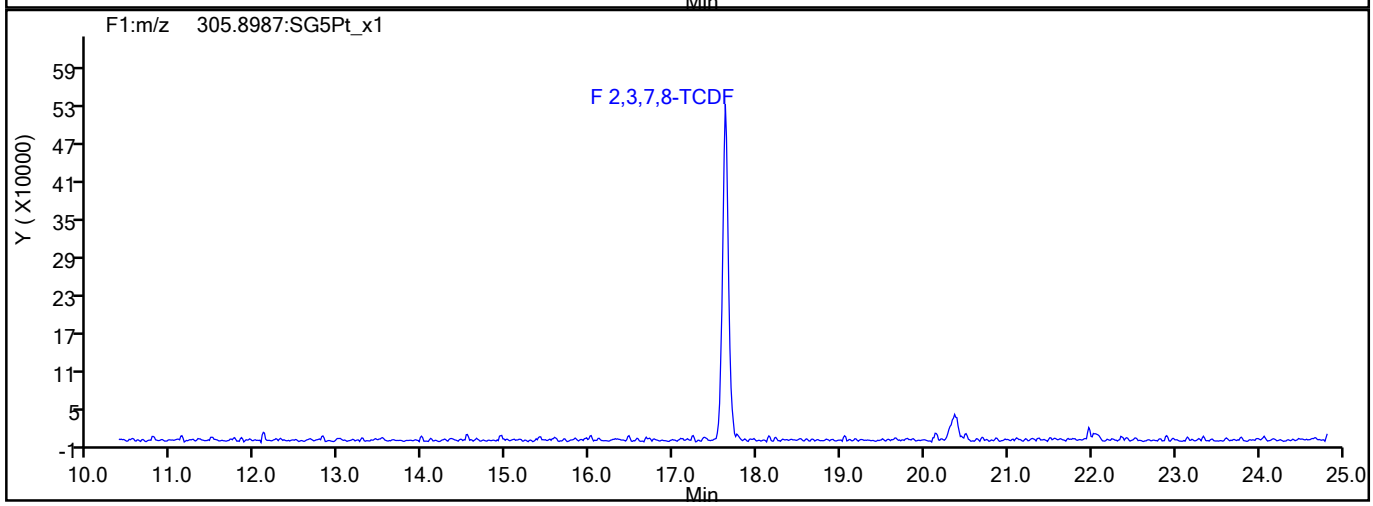

TCDF Interference Mass

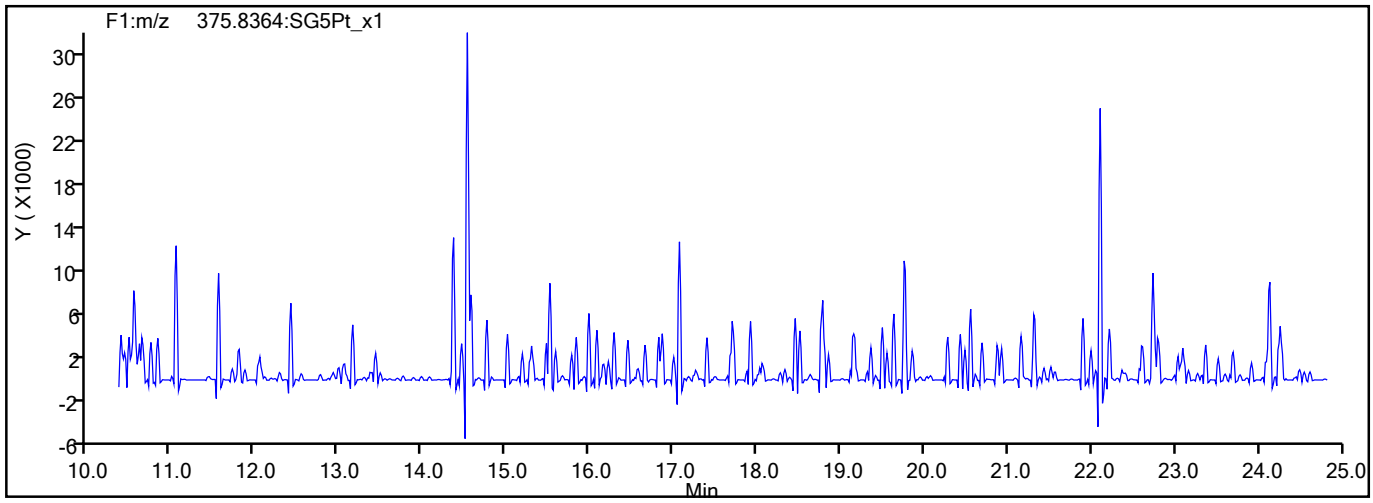

792746

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

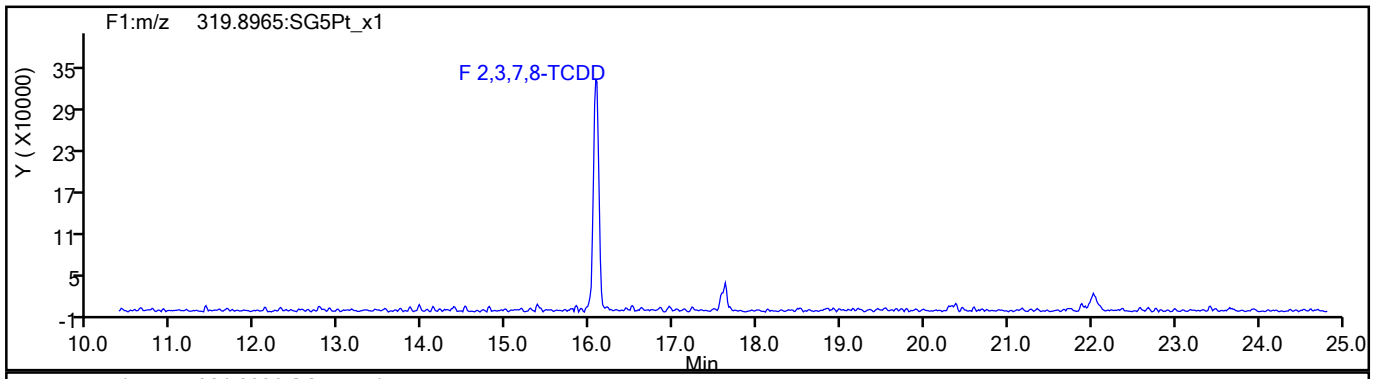

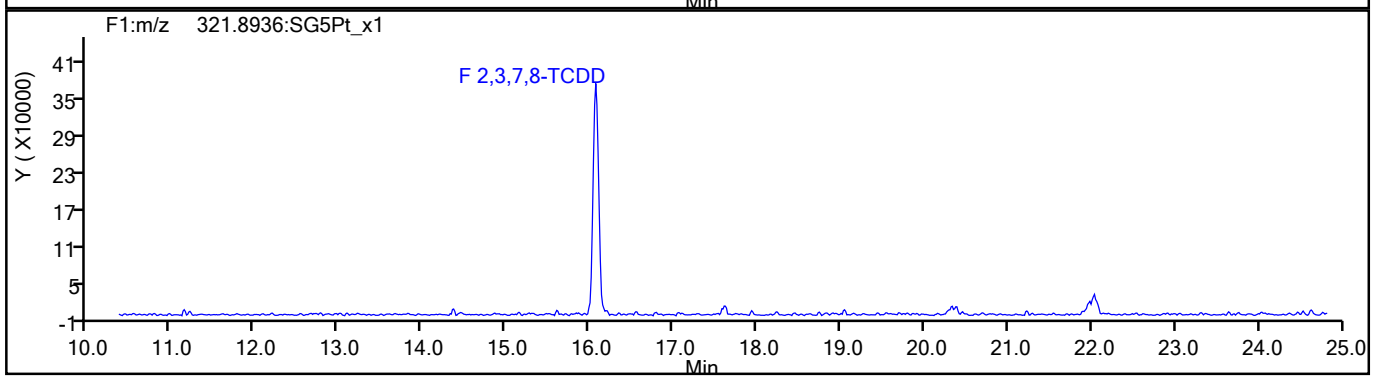

TCDD Standards

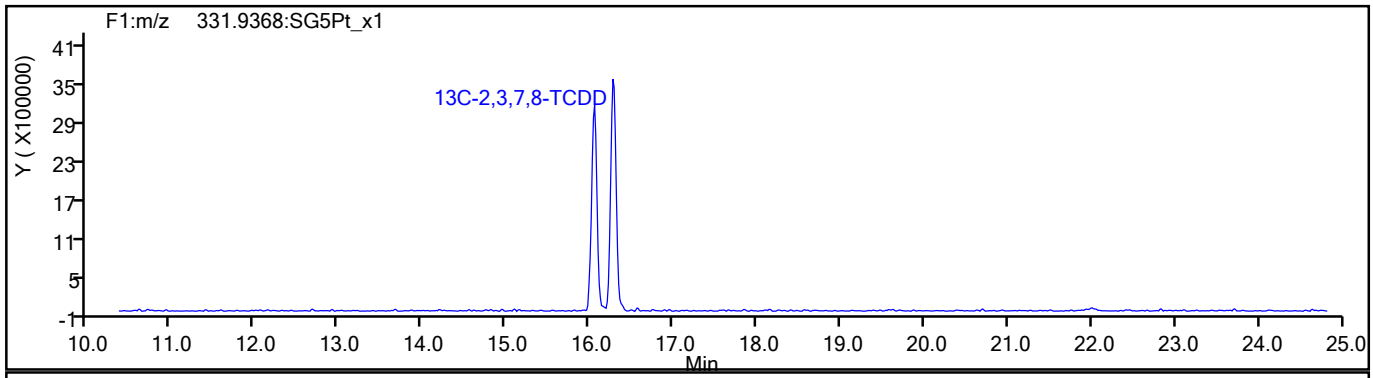

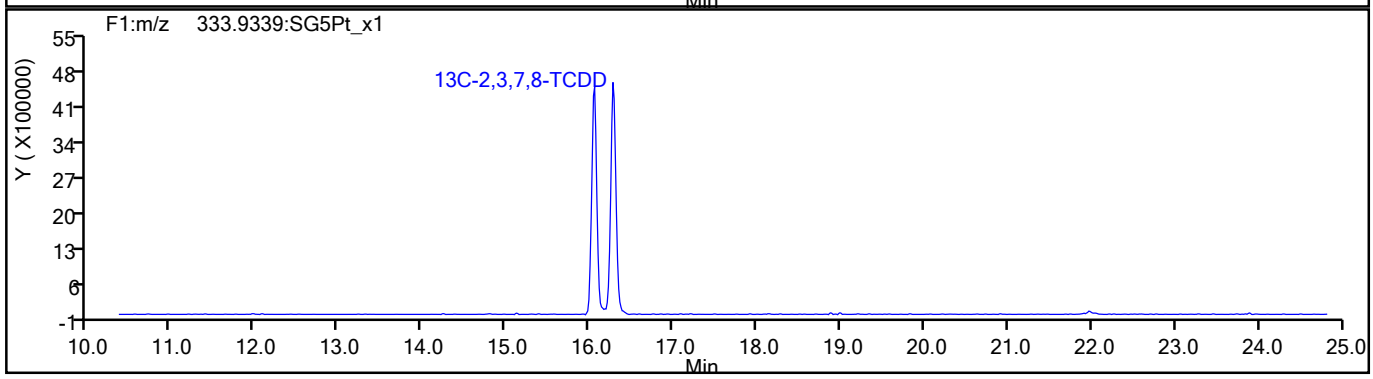

792747

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

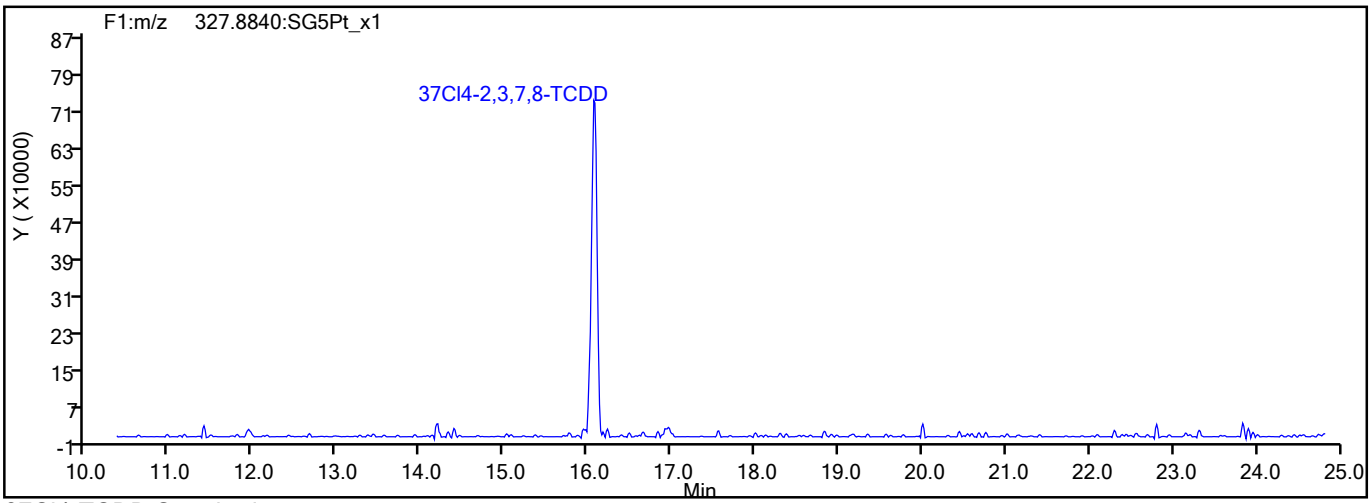

37Cl4-TCDD Standards

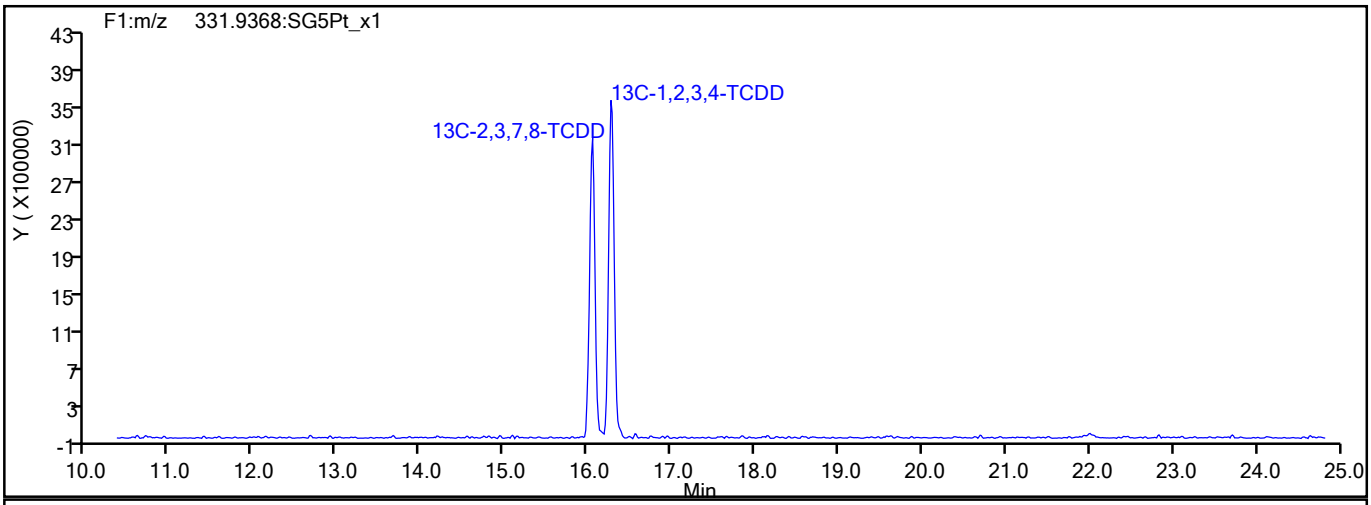

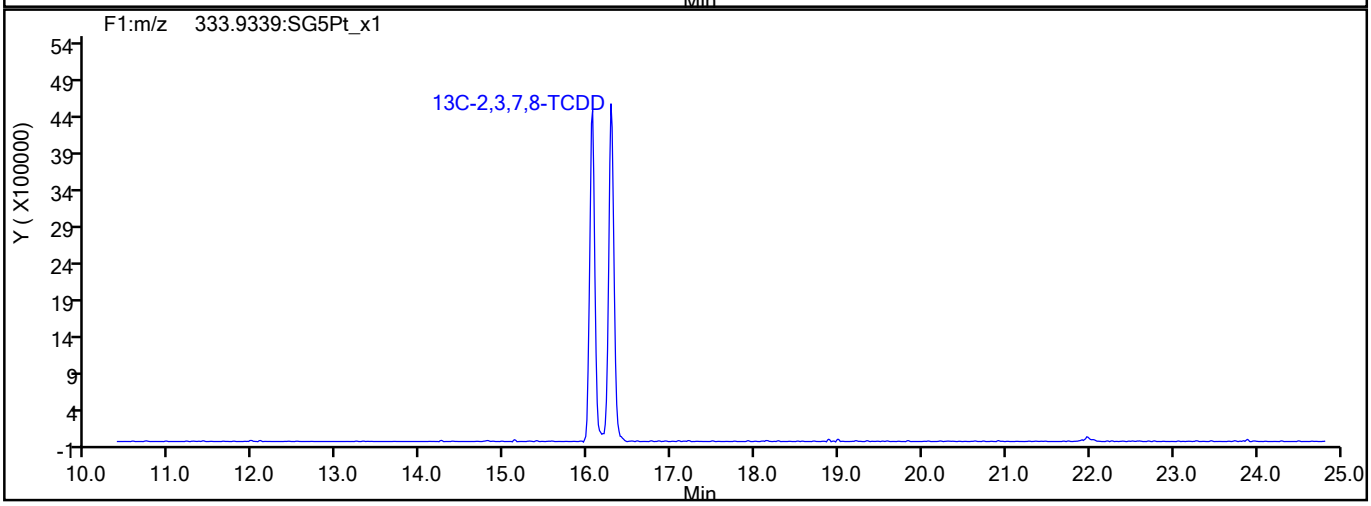

792748

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

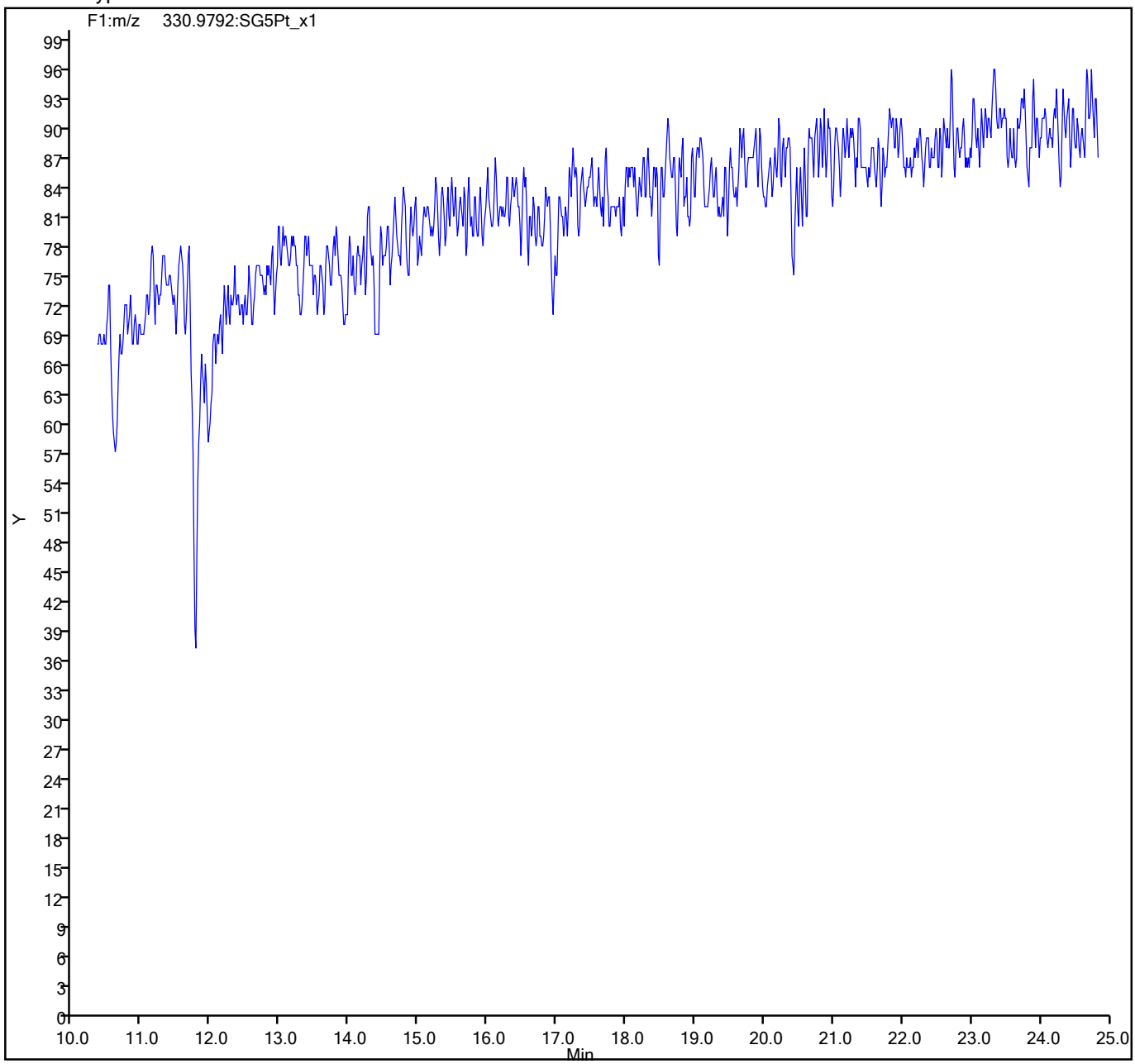

792749

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.598	43192451	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.628	95812265	0.77	1.0239	86.7	86.7	0.4368	0.4368		
A Non-2,3,7,8-sub-TCDF	17.311	141340622	0.77	1.0239	127.8	127.8	0.4368	50.4		
S Total TCDF					214.5	214.5	0.4368	0.4368		
D 13C-2,3,7,8-TCDD	18.323	22643725	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.338	31002300	0.78	1.2541	43.7	43.7	0.2199	0.2199		
A Non-2,3,7,8-sub-TCDD	17.772	120319254	0.78	1.2541	169.5	169.5	0.2199	46.0		
S Total TCDD					213.1	213.1	0.2199	0.2199		
A F1 PeCDFs	20.244	36548211	1.59	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.473	28699153	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.744	44367204	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.542	988216341	1.23	0.0000						
A Non-2,3,7,8-sub-HxCDF	30.542	1016402527	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	31.215	43254937	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.911	28490431	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	35.005	21744380	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.458						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.714	17168827	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.133	55744963	0.78							a
1,3,6,8-TCDD	16.071	32157911	0.78							a
2,3,4,7-TCDF	17.628	95812265	0.77							a
1,2,3,7-TCDD	18.218	26254918	0.77							a
1,2,3,9-TCDF	18.505	41465019	0.77							a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,9-TCDD	18.505	32677146	0.79							a
1,2,8,9-TCDD	19.472	12707183								a
1,2,8,9-TCDF	19.488	41982512	0.76							a
1,3,4,6,8-PeCDF	19.760	36548211	1.59							a
1,2,4,7,9-PeCDD	21.576	23369968	1.58							a
1,2,3,8,9-PeCDD	25.912	20997236	1.59							a
1,2,3,8,9-PeCDF	26.144	28026312	1.61							a
1,2,3,4,6,8-HxCDF	28.479	29886017	1.22							a
1,2,4,6,7,9-HxCDD	30.023	21768457	1.27							a
1,2,3,4,6,7-HxCDD	32.299	21486480	1.24							a
1,2,3,4,8,9-HxCDF	32.605	28186186	1.23							a
1,2,3,4,6,7,9-HpCDD	34.154						0.0	0.0		U

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	1.000	18796968	4666881	8168	20420	571		
317.9389	17.598	17.598	0	1.000	24395483	6066397	3473	8682	1747	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.002	41629702	9682578	19585	48962	494		
305.8987	17.628	17.631	0	1.002	54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.133	17.311	-130	0.860	24509538	7569037	19585	48962	386		
305.8987	15.133	17.311	-130	0.860	31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
303.9016	18.505	17.311	72	1.052	18061189	4195885	19585	48962	214		
305.8987	18.505	17.311	72	1.052	23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
303.9016	19.488	17.311	130	1.107	18098944	4035450	19585	48962	206		
305.8987	19.488	17.311	130	1.107	23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
303.9016	19.775	17.311	148	1.124	944774	152570	19585	48962	8		
305.8987	19.775	17.311	148	1.124	1203354	204203	28414	71035	7	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.000	10063481	2396990	3086	7715	777		
333.9339	18.323	18.323	0	1.000	12580244	3018588	1527	3817	1977	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.357	-1	1.001	13597515	3193209	6116	15290	522		
321.8936	18.338	18.357	-1	1.001	17404785	4135946	8817	22042	469	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	16.071	17.772	-102	0.877	14103074	4061475	6116	15290	664		
321.8936	16.071	17.772	-102	0.877	18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
319.8965	18.218	17.772	27	0.994	11446127	2829889	6116	15290	463		
321.8936	18.218	17.772	27	0.994	14808791	3726958	8817	22042	423	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Δ Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	18.505	17.772	44	1.010	14439496	3301963	6116	15290	540		
321.8936	18.505	17.772	44	1.010	18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
319.8965	19.472	17.772	102	1.063	12707183	2751784	6116	15290	450		
321.8936	19.472	17.772	102	1.063	16522096	3661962	8817	22042	415	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.760	20.244	-29	1.000	22414023	4920048	649	1622	7581		
341.8567	19.760	20.244	-29	1.000	14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.344	23.473	-127	1.000	84191	14080	2633	6582	5		
341.8567	21.344	23.473	-127	1.000	53909	7615	1950	4875	4	1.56(1.32-1.78)	
339.8597	22.176	23.473	-78	1.000	88076	13805	2633	6582	5		
341.8567	22.190	23.473	-77	1.000	48170	9635	1950	4875	5	1.83(1.32-1.78)	
339.8597	22.749	23.473	-43	1.000	168309	20506	2633	6582	8		
341.8567	22.762	23.473	-43	1.000	82177	12827	1950	4875	7	2.05(1.32-1.78)	
339.8597	23.321	23.473	-9	1.000	142716	22963	2633	6582	9		
341.8567	23.321	23.473	-9	1.000	79356	11480	1950	4875	6	1.80(1.32-1.78)	
339.8597	26.144	23.473	160	1.000	17301746	2425915	2633	6582	921		
341.8567	26.144	23.473	160	1.000	10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.576	23.744	-130	1.000	14314296	2552271	2414	6035	1057		
357.8516	21.576	23.744	-130	1.000	9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
355.8546	25.912	23.744	130	1.000	12881489	1801570	2414	6035	746		
357.8516	25.912	23.744	130	1.000	8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	32.605	30.542	124	1.000	15534015	4607321	4603	11507	1001		
375.8178	32.605	30.542	124	1.000	12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.023	31.215	-71	1.000	12175655	1922535	6506	16265	296		
391.8127	30.023	31.215	-71	1.000	9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
389.8157	32.299	31.215	65	1.000	11903453	3254284	6506	16265	500		
391.8127	32.299	31.215	65	1.000	9583027	2649988	5715	14287	464	1.24(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.911	33.926	-1	1.000	14581587	4505694	20273	50682	222		
409.7789	33.911	33.926	-1	1.000	13908844	4348275	17441	43602	249	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.005	35.020	-1	1.000	11106344	3153936	20273	50682	156		
409.7789	35.005	35.020	-1	1.000	10638036	3040493	17441	43602	174	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						20273	50682			
409.7789	34.458						17441	43602			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.726	-1	1.000	8809155	2526480	13831	34577	183		
425.7737	34.714	34.726	-1	1.000	8359672	2427581	13744	34360	177	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						13831	34577			
425.7737	33.504						13744	34360			
1,3,6,8-TCDF											a
303.9016	15.133	15.133	0		24509538	7569037	19585	48962	386		a
305.8987	15.133	15.133	0		31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
1,3,6,8-TCDD											a
319.8965	16.071	16.071	0		14103074	4061475	6116	15290	664		a
321.8936	16.071	16.071	0		18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
2,3,4,7-TCDF											a
303.9016	17.628	17.628	0		41629702	9682578	19585	48962	494		a
305.8987	17.628	17.628	0		54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
1,2,3,7-TCDD											a
319.8965	18.218	18.218	0		11446127	2829889	6116	15290	463		a
321.8936	18.218	18.218	0		14808791	3726958	8817	22042	423	0.77(0.65-0.89)	
1,2,3,9-TCDF											a
303.9016	18.505	18.505	0		18061189	4195885	19585	48962	214		a
305.8987	18.505	18.505	0		23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
1,2,3,9-TCDD											a
319.8965	18.505	18.505	0		14439496	3301963	6116	15290	540		a
321.8936	18.505	18.505	0		18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
1,2,8,9-TCDD											a
319.8965	19.472	19.472	0		12707183	2751784	6116	15290	450		a
1,2,8,9-TCDF											a
303.9016	19.488	19.488	0		18098944	4035450	19585	48962	206		a
305.8987	19.488	19.488	0		23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
1,3,4,6,8-PeCDF											a
339.8597	19.760	19.760	0		22414023	4920048	649	1622	7581		a
341.8567	19.760	19.760	0		14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	21.576	21.576	0		14314296	2552271	2414	6035	1057		a
357.8516	21.576	21.576	0		9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											a
355.8546	25.912	25.912	0		12881489	1801570	2414	6035	746		a
357.8516	25.912	25.912	0		8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	26.144	26.144	0		17301746	2425915	2633	6582	921		a
341.8567	26.144	26.144	0		10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											a
373.8208	28.479	28.479	0		16406487	2121744	4603	11507	461		a
375.8178	28.479	28.479	0		13479530	1752621	3729	9322	470	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											a
389.8157	30.023	30.023	0		12175655	1922535	6506	16265	296		a
391.8127	30.023	30.023	0		9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											a
389.8157	32.299	32.299	0		11903453	3254284	6506	16265	500		a
391.8127	32.299	32.299	0		9583027	2649988	5715	14287	464	1.24(1.05-1.43)	

Report Date: 27-Jul-2021 15:09:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,8,9-HxCDF											a
373.8208	32.605	32.605	0		15534015	4607321	4603	11507	1001		a
375.8178	32.605	32.605	0		12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.154						13831	34577			
425.7737	34.154						13744	34360			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	43192451	10733278

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	43192451	10733278

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.133	24509538	7569037	31235425	9722736	50.4	0.78	
18.505	18061189	4195885	23403830	5509968	37.5	0.77	
19.488	18098944	4035450	23883568	5304928	38.0	0.76	
19.775	944774	152570	1203354	204203	1.94	0.79	
Signal Totals:	61614445	15952942	79726177	20741835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141340622	36694777				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 127.837 = (141340622 * 40.000) / (43192451 * 1.024)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	22643725	5415578

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	22643725	5415578

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.071	14103074	4061475	18054837	5166402	45.3	0.78	
18.218	11446127	2829889	14808791	3726958	37.0	0.77	
18.505	14439496	3301963	18237650	4248308	46.0	0.79	
19.472	12707183	2751784	16522096	3661962	41.2	0.77	
Signal Totals:							
	52695880	12945111	67623374	16803630			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	120319254	29748741				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 169.476 = (120319254 * 40.000) / (22643725 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

F1 PeCDFs, RT: 20.244

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.760	22414023	4920048	14134188	3116108		1.59	
Signal Totals:							
	22414023	4920048	14134188	3116108			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	36548211	8036156				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (36548211 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.344	84191	14080	53909	7615		1.56	
22.176	88076	13805	48170	9635		1.83	R
22.749	168309	20506	82177	12827		2.05	R
23.321	142716	22963	79356	11480		1.80	R
26.144	17301746	2425915	10724566	1530575		1.61	
Signal Totals:							
	17785038	2497269	10988178	1572132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28773216	4069401				1.62	RQ
	28699153	4064735					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (28773216 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (28699153 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.744

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.576	14314296	2552271	9055672	1599456		1.58	
25.912	12881489	1801570	8115747	1169053		1.59	
Signal Totals:							
	27195785	4353841	17171419	2768509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	44367204	7122350				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (44367204 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.542

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
32.605	15534015	4607321	12652171	3734547		1.23	
Signal Totals:							
	15534015	4607321	12652171	3734547			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	988216341	287497877				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (988216341 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 31.215

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.023	12175655	1922535	9592802	1497827		1.27	
32.299	11903453	3254284	9583027	2649988		1.24	
Signal Totals:							
	24079108	5176819	19175829	4147815			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43254937	9324634				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43254937 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

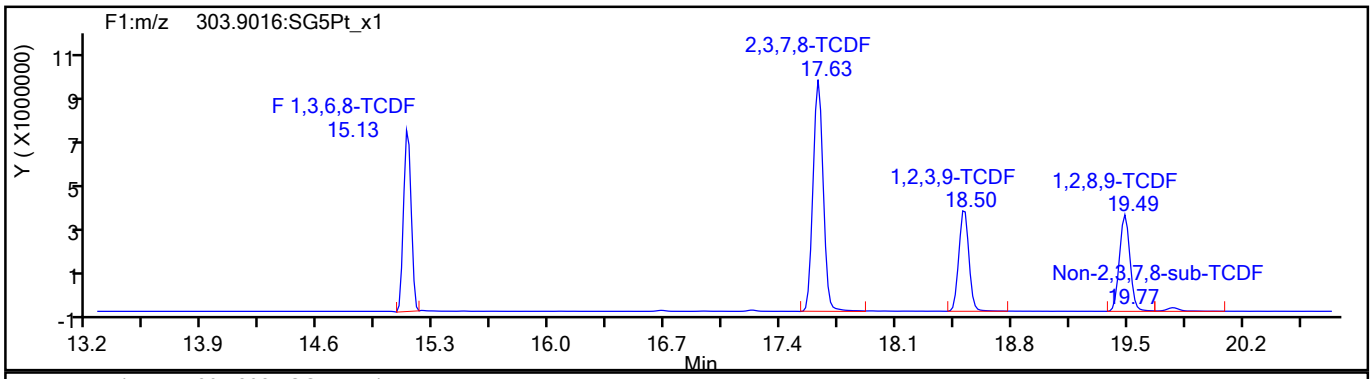

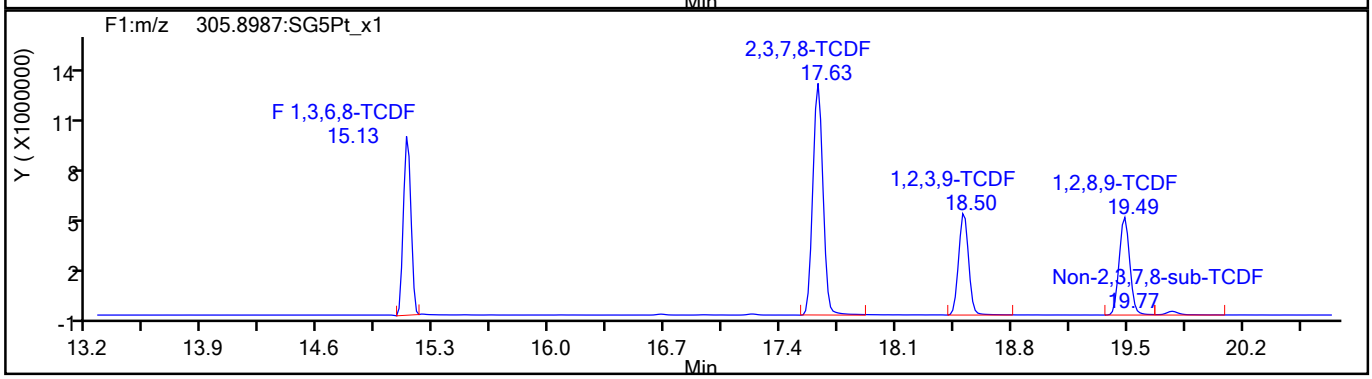

TCDF Standards

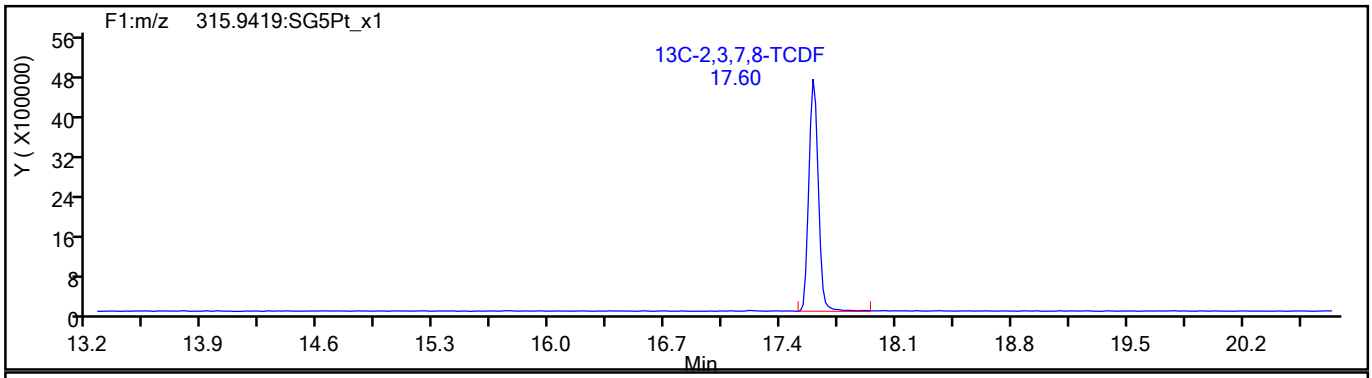

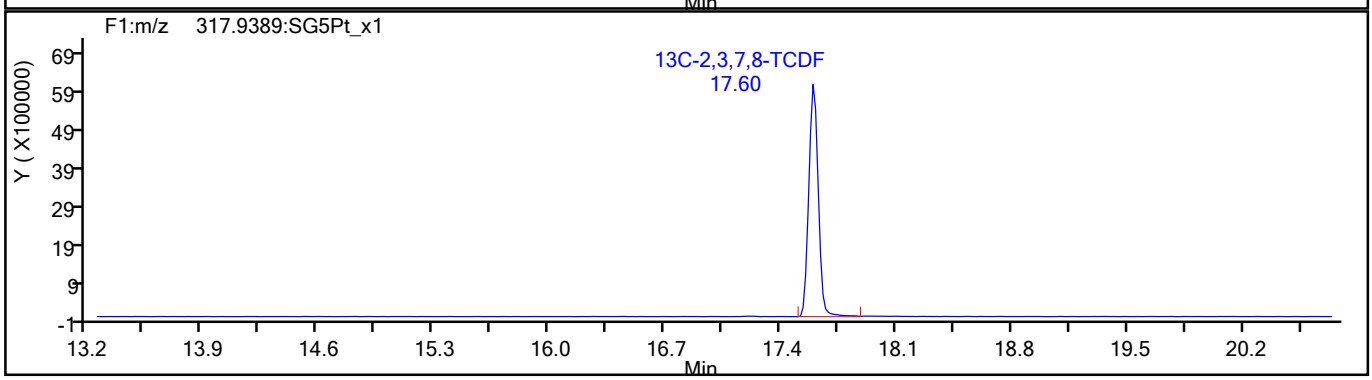

792764

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

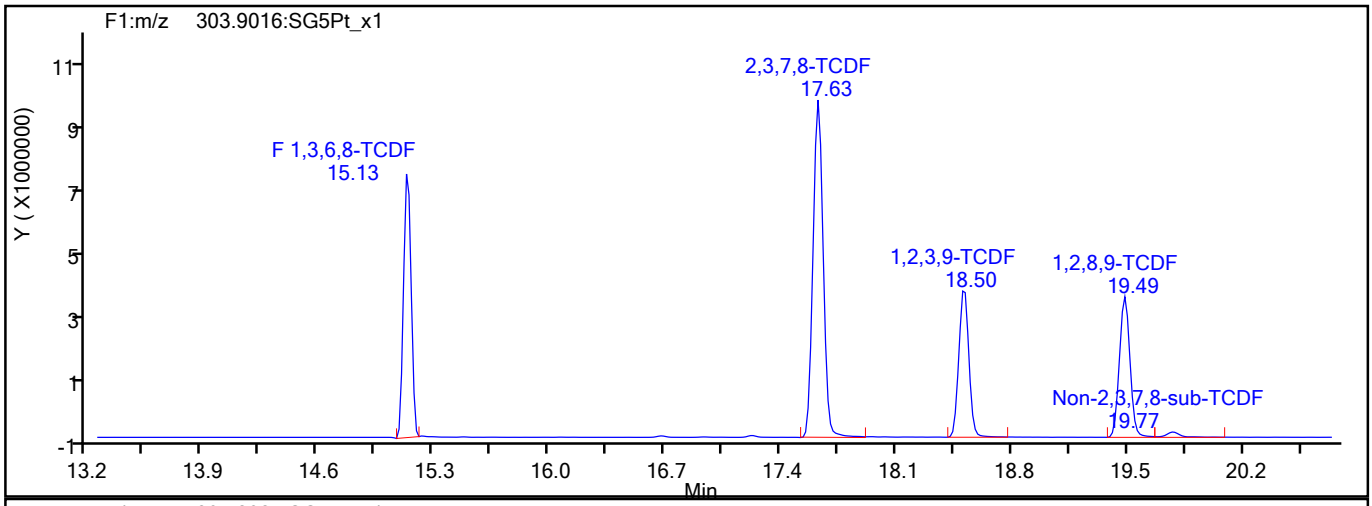

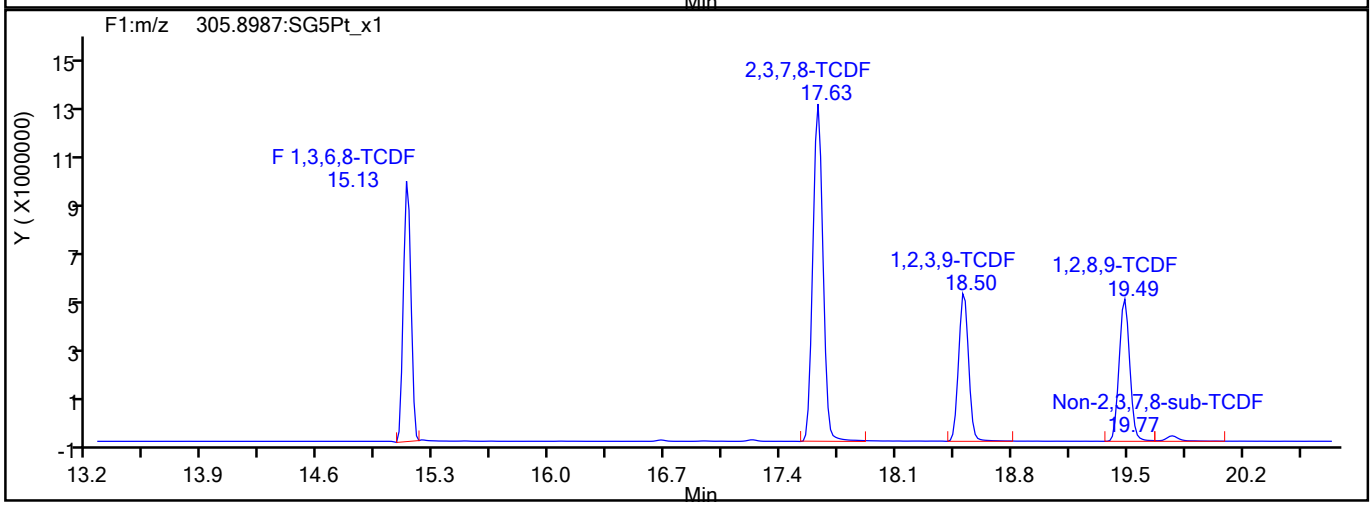

TCDF Interference Mass

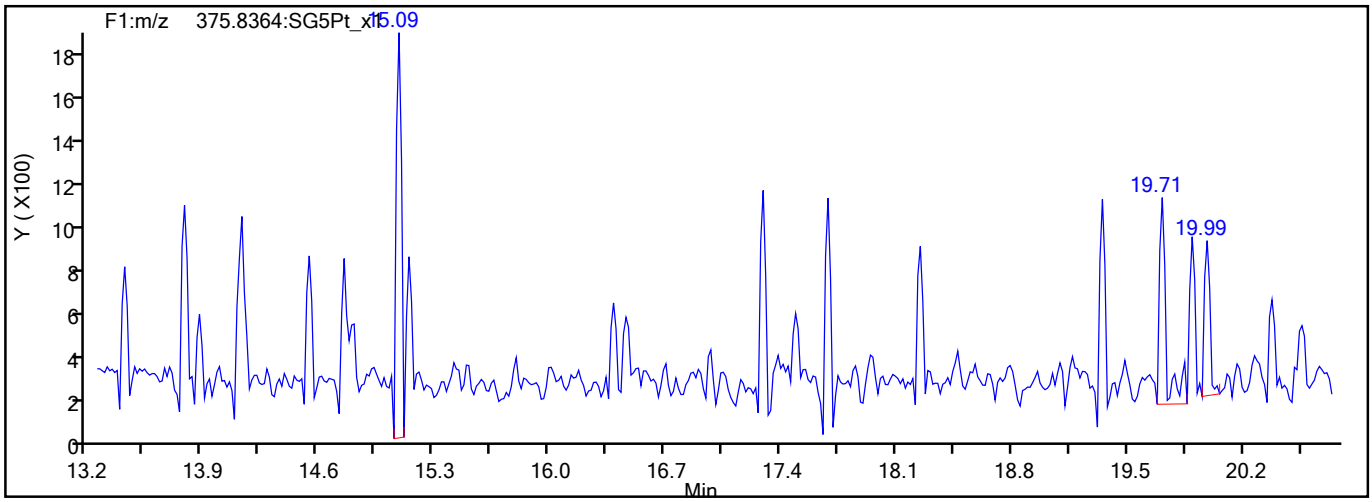

792765

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

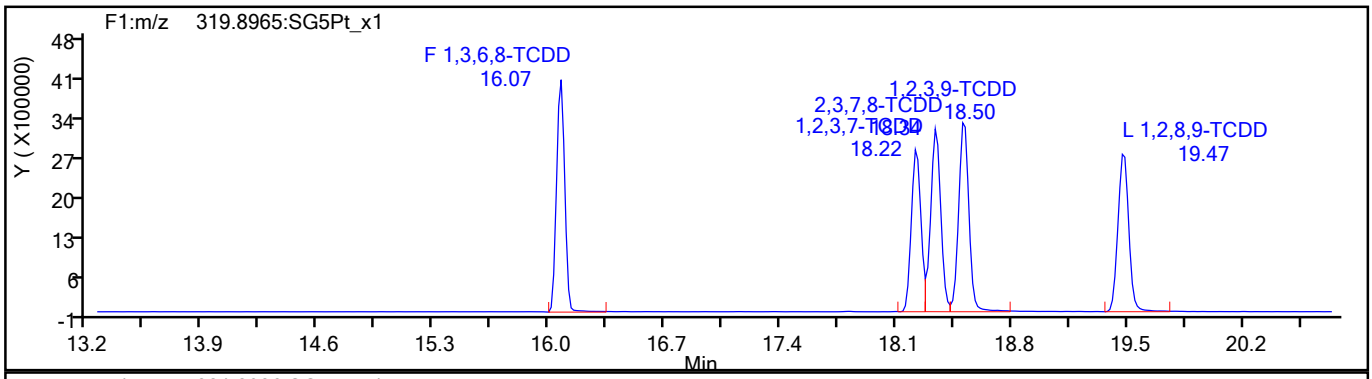

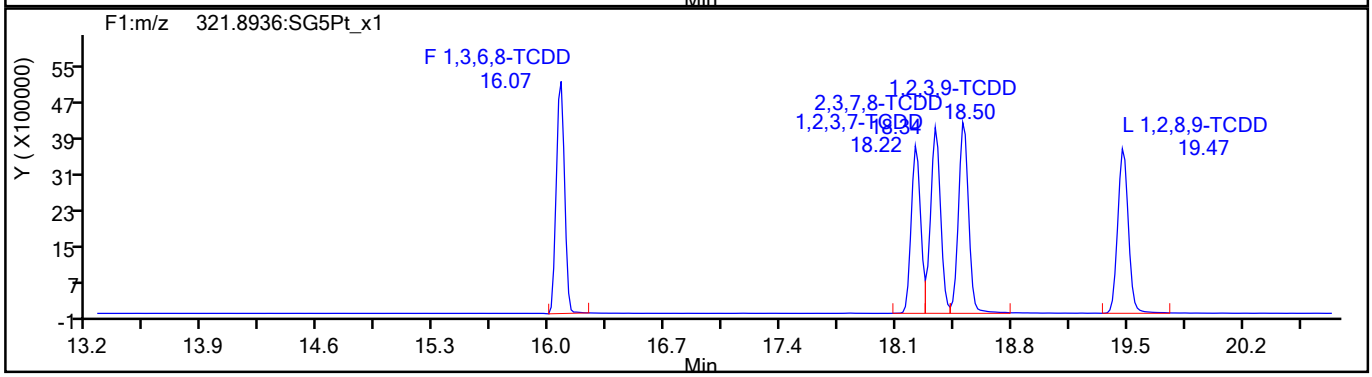

TCDD Standards

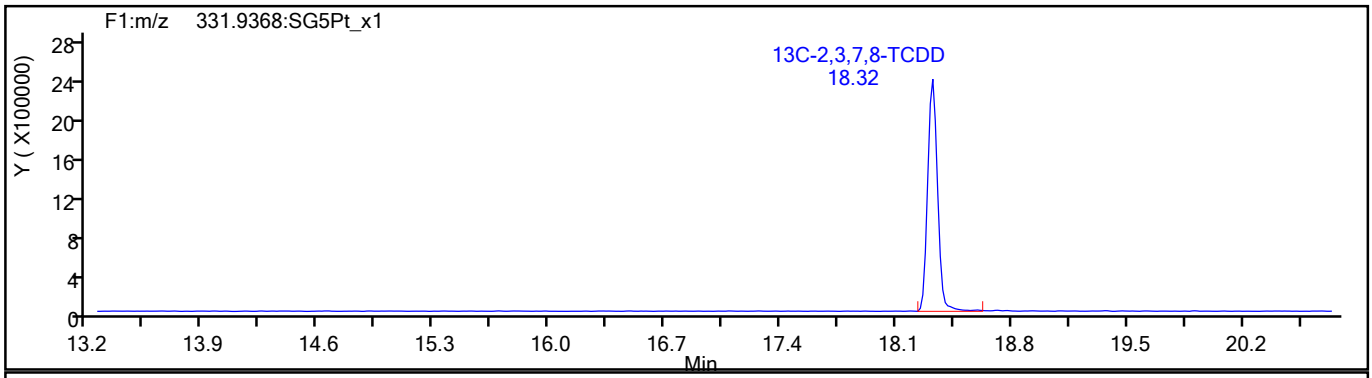

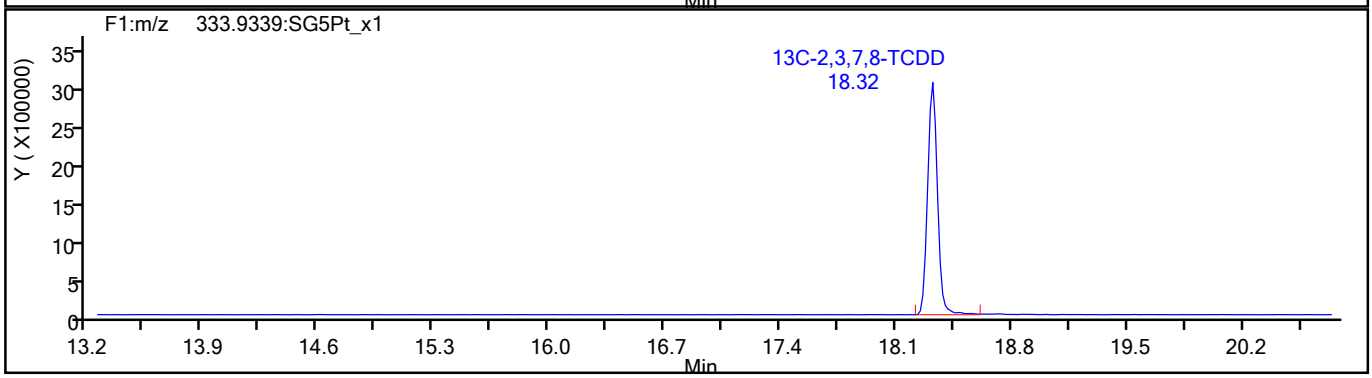

792766

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Eurofins TestAmerica, Sacramento

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37Cl4-TCDD

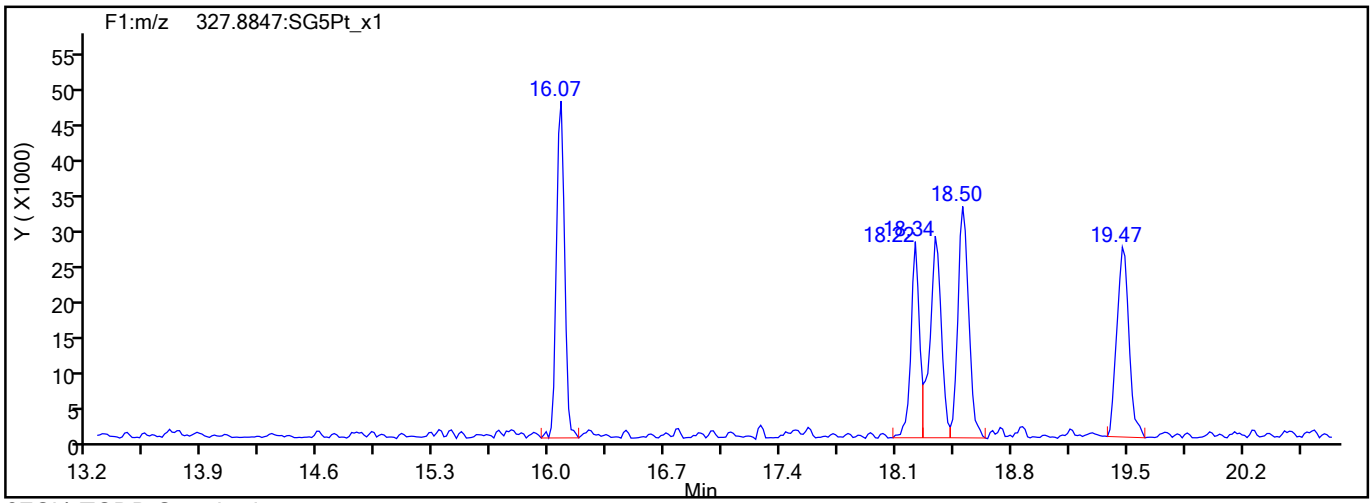

37Cl4-TCDD Standards

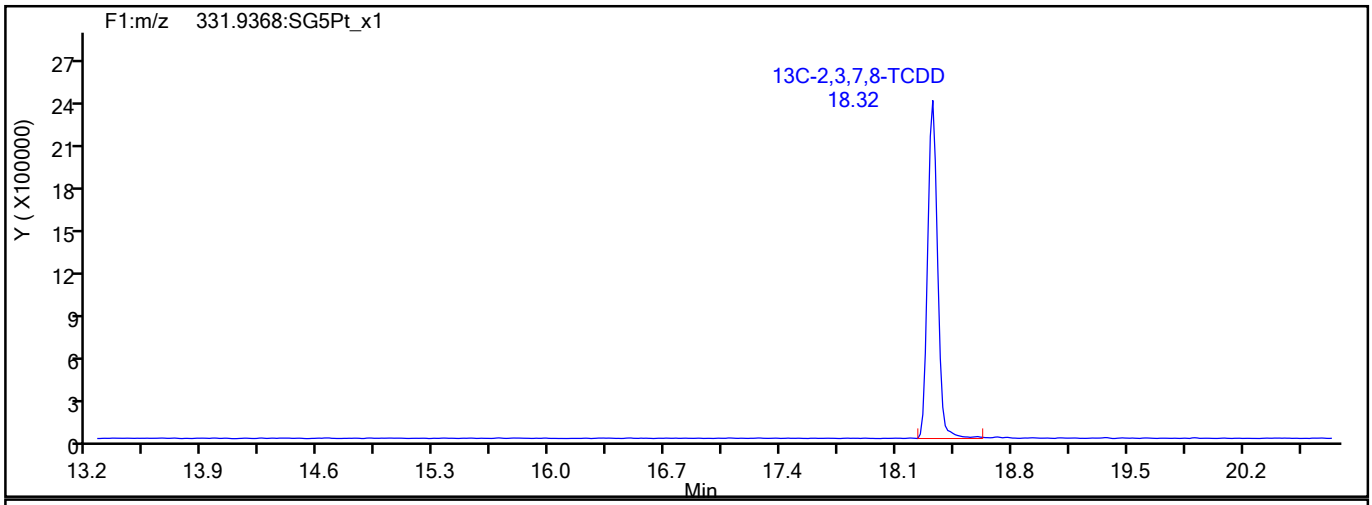

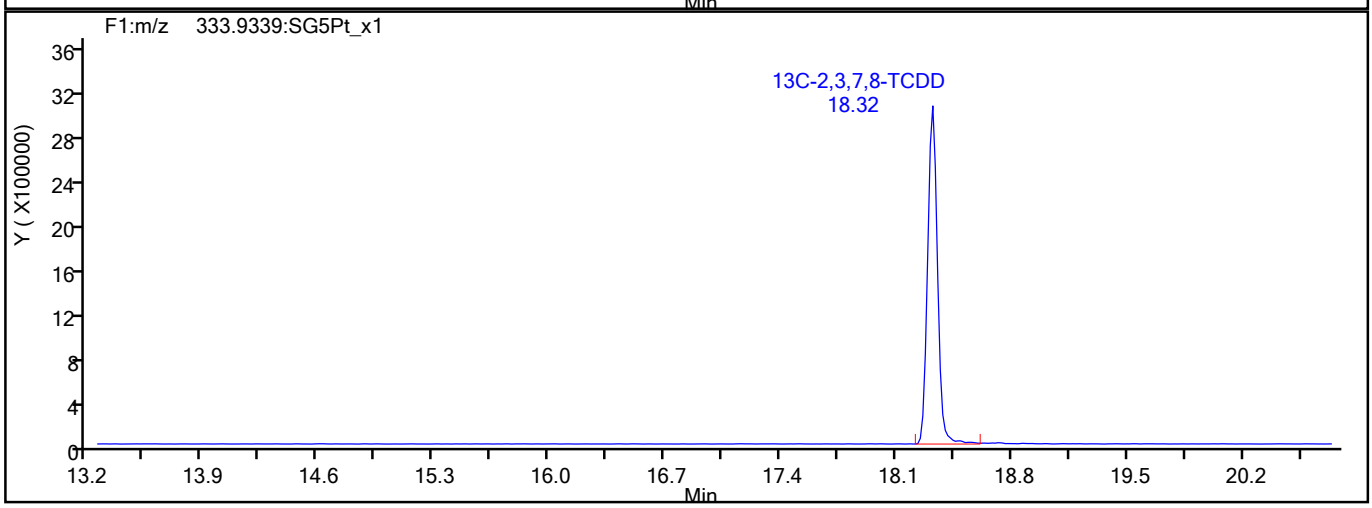

792767

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

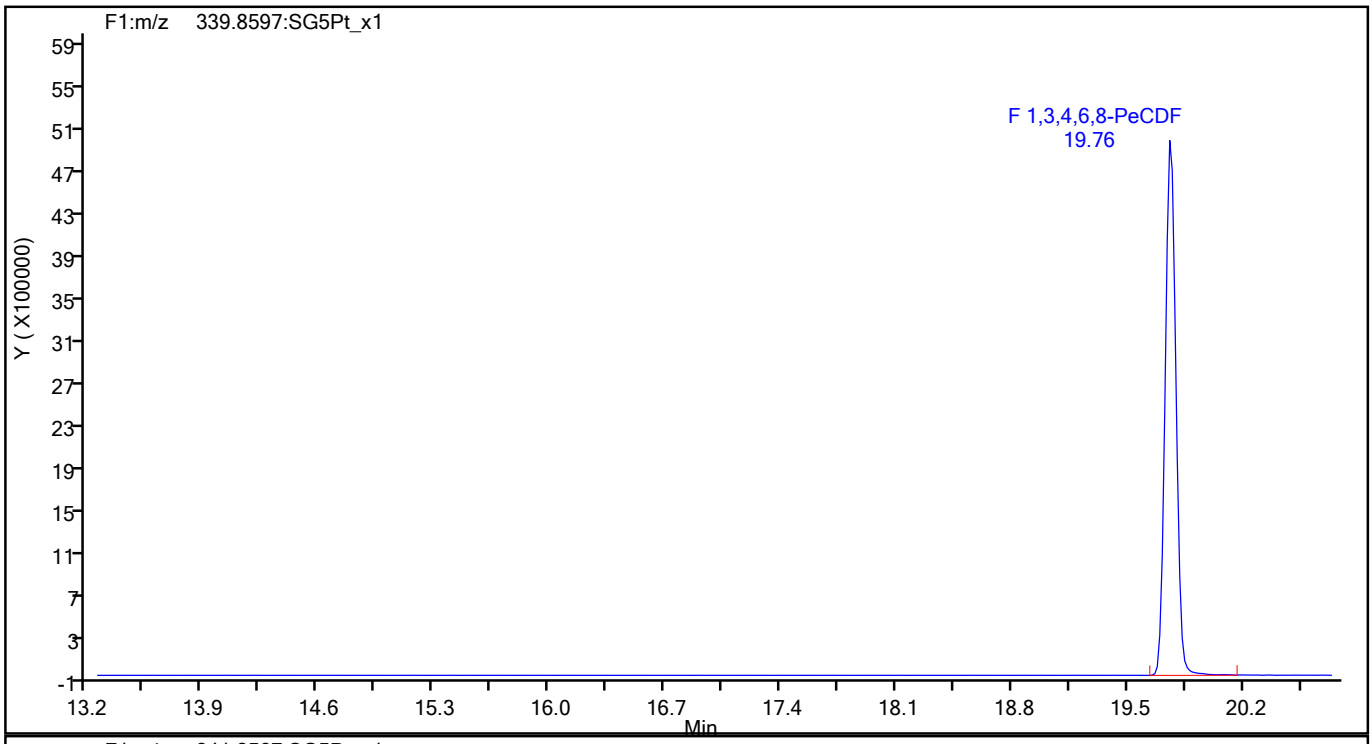

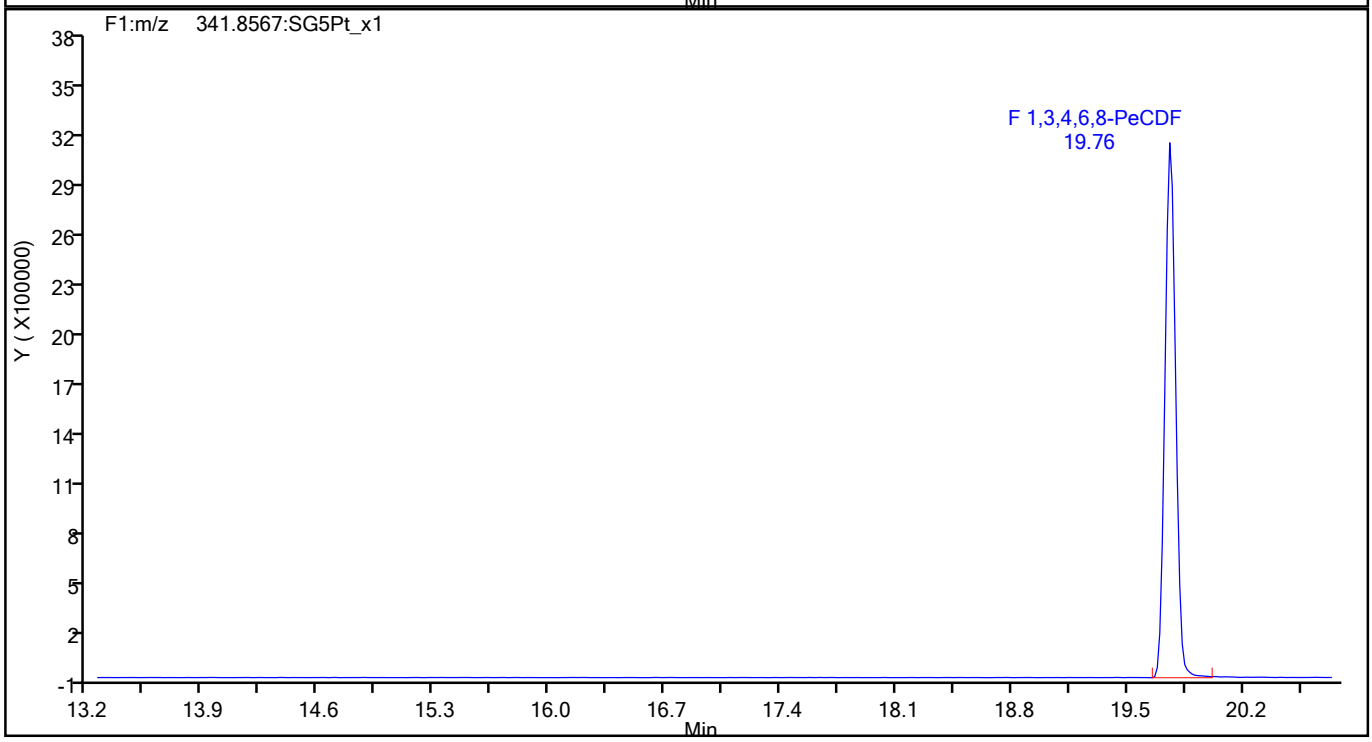

792768

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Eurofins TestAmerica, Sacramento

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F1 PeCDFs

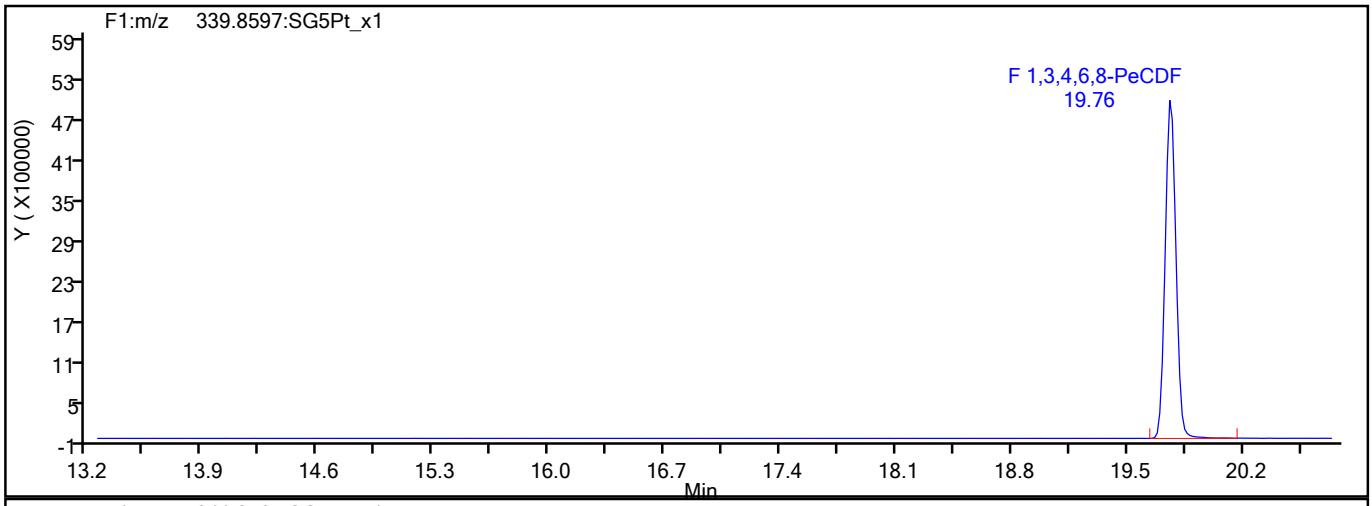

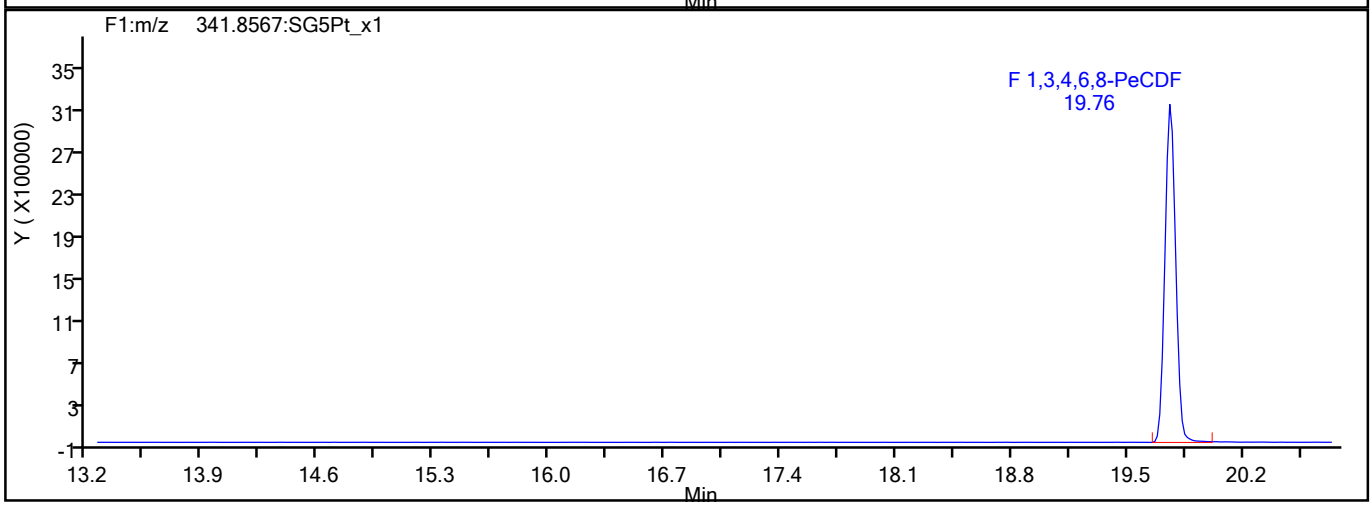

F1 PeCDFs Interference Mass

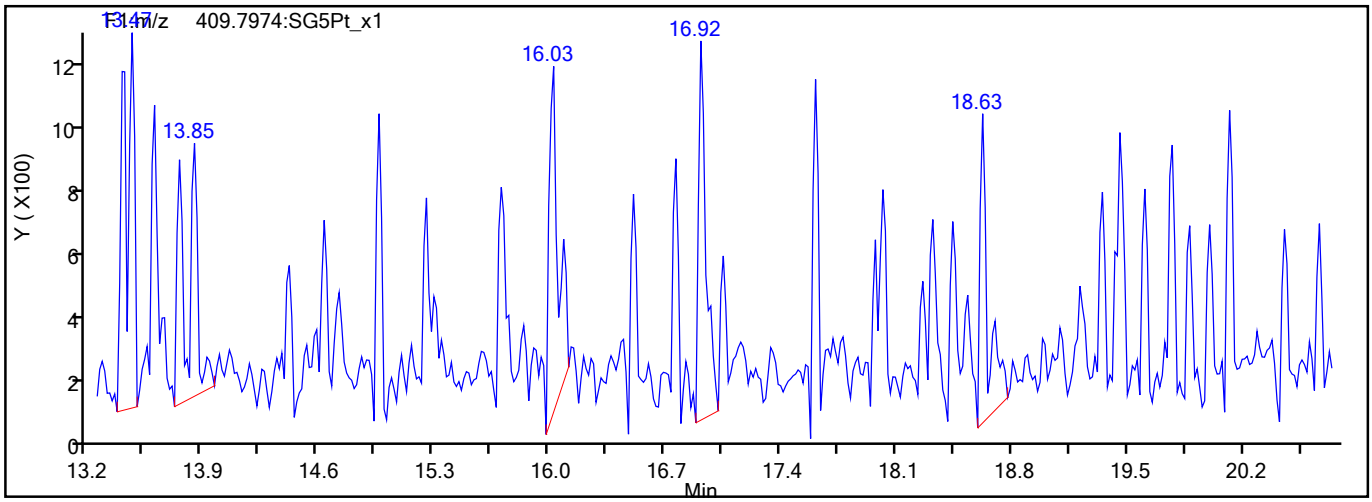

792769

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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PeCDF

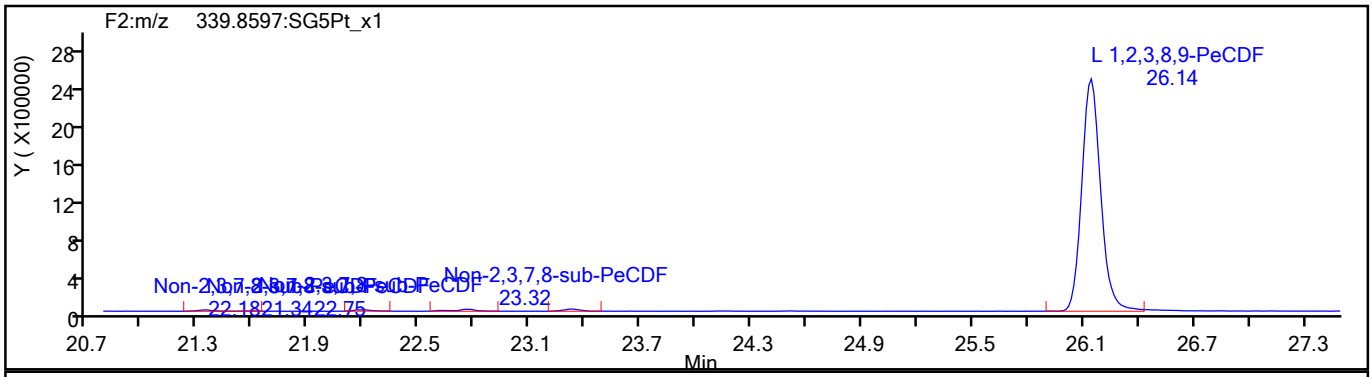

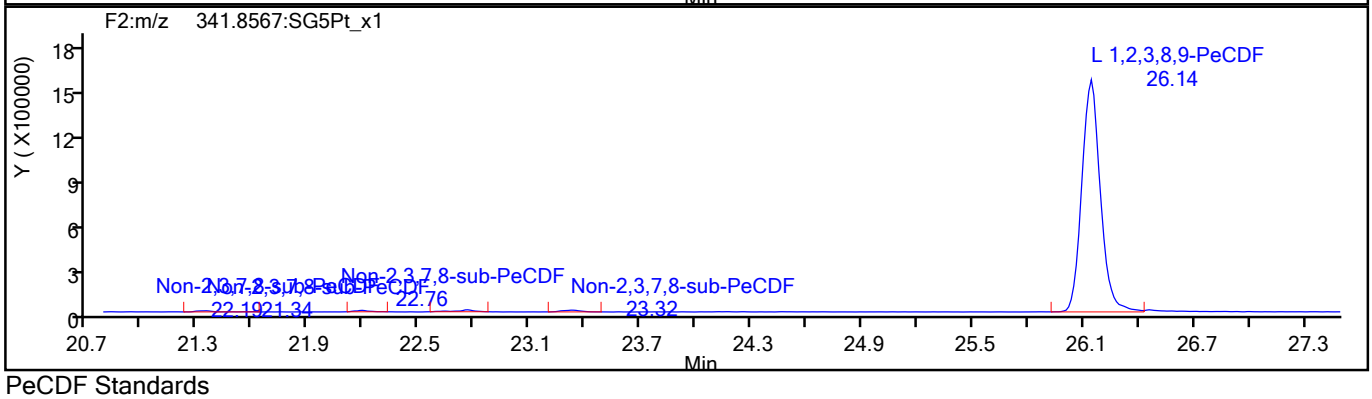

PeCDF Standards

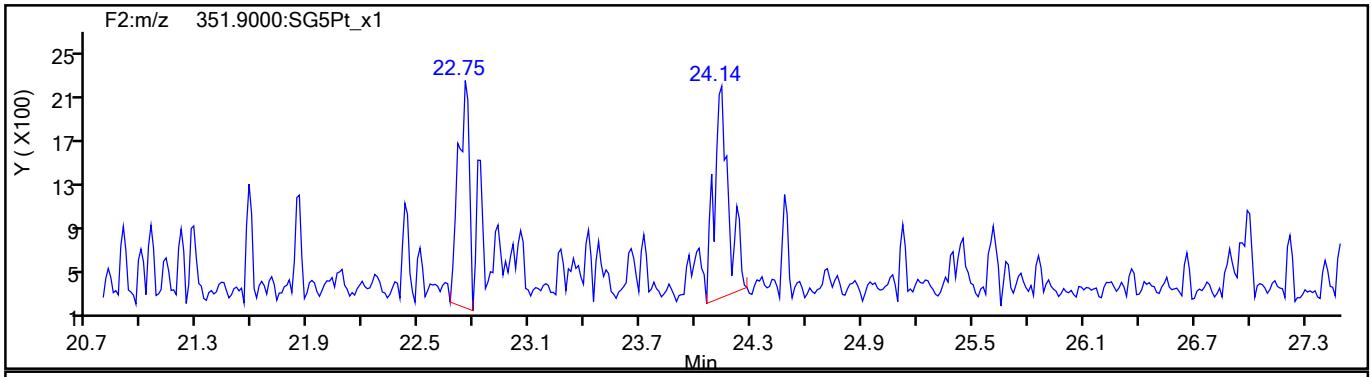

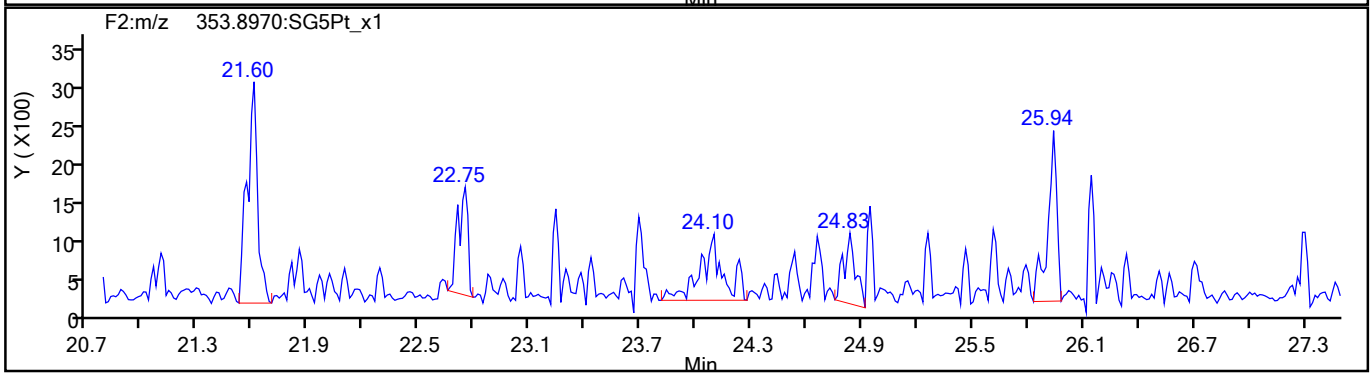

792770

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Eurofins TestAmerica, Sacramento

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PeCDF

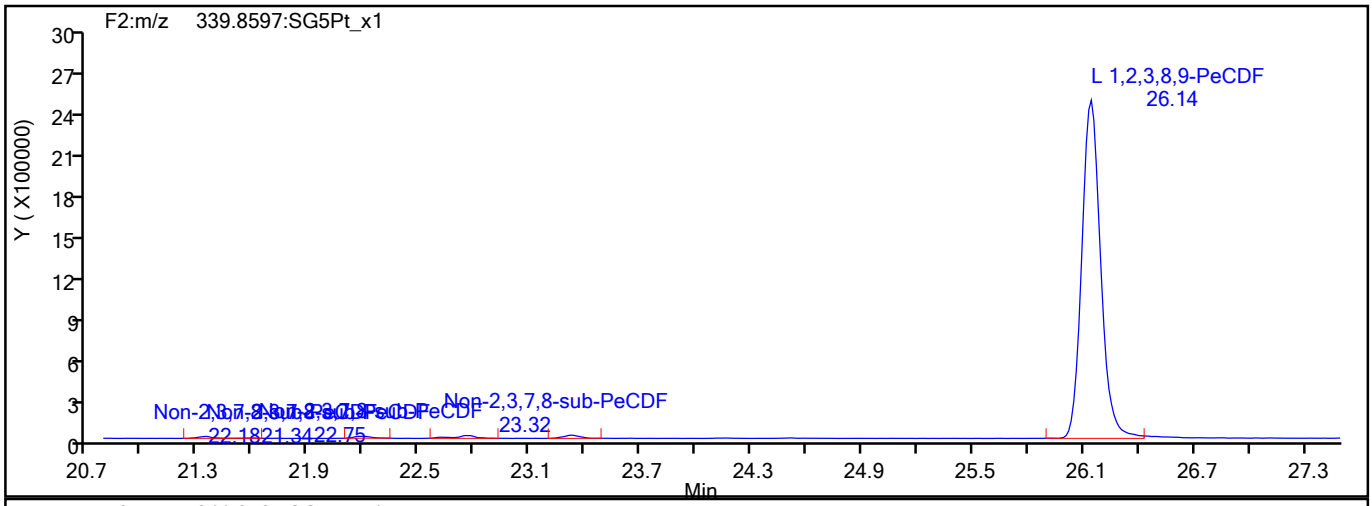

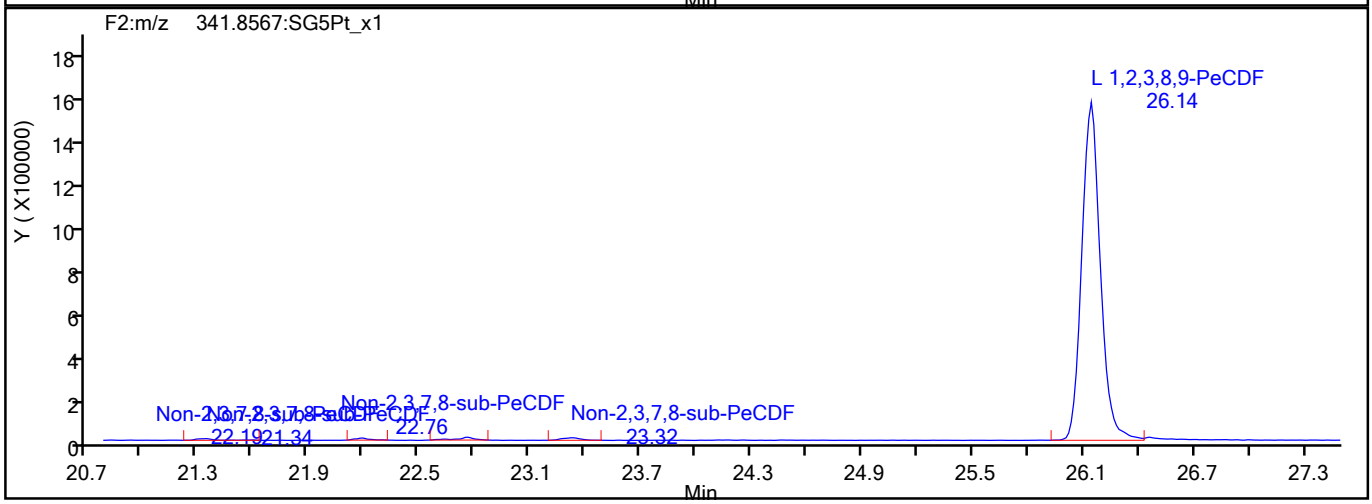

PeCDF Interference Mass

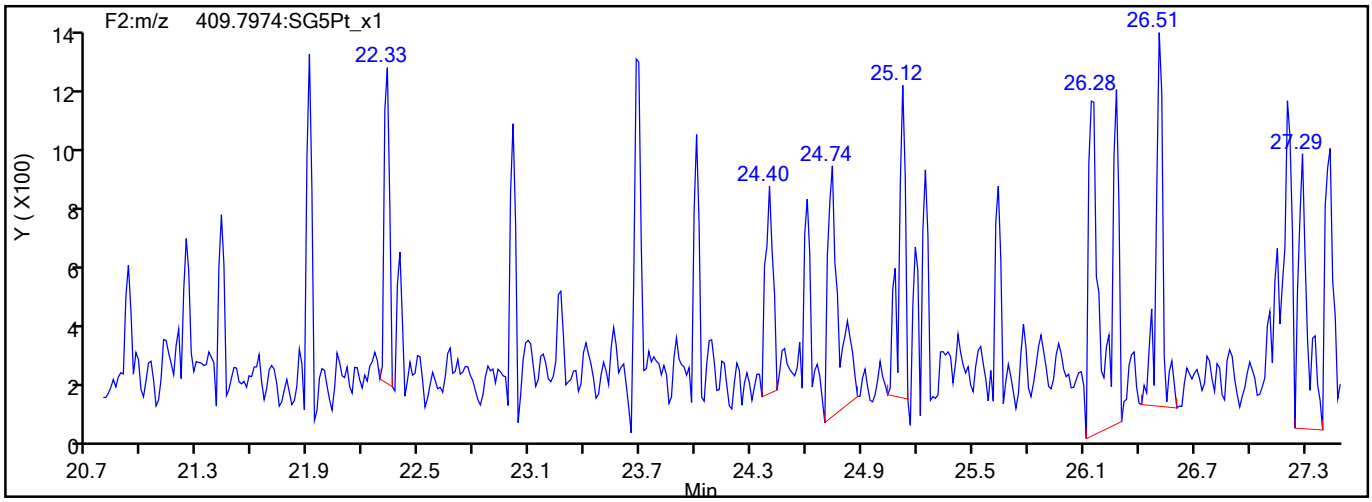

792771

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

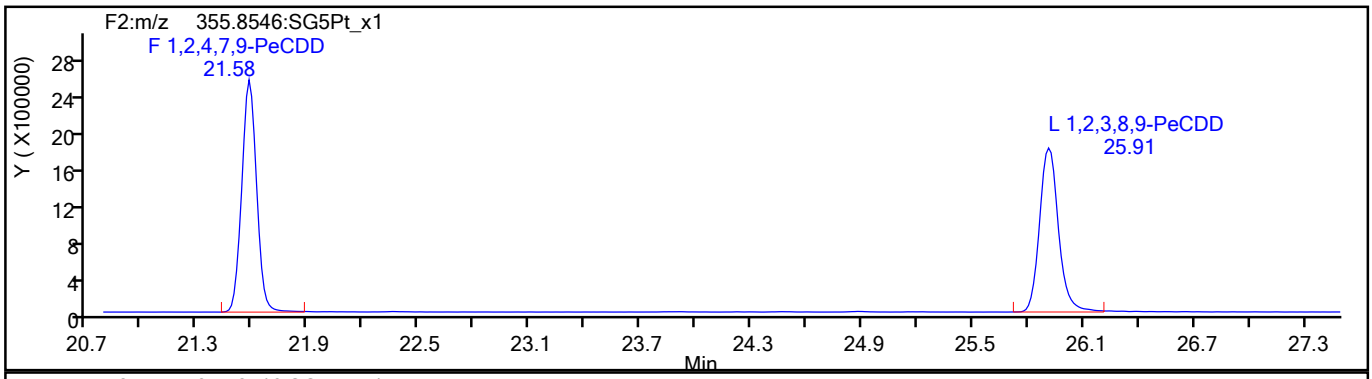

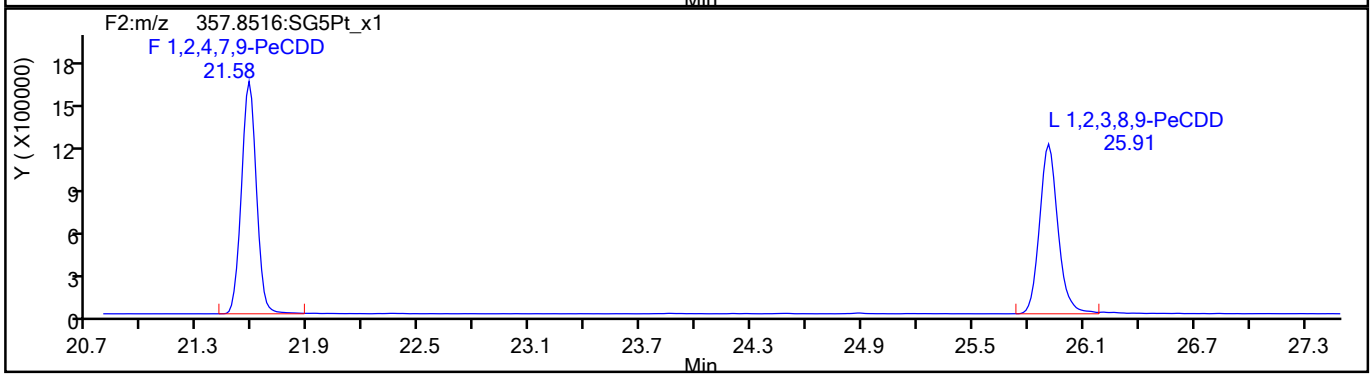

PeCDD Standards

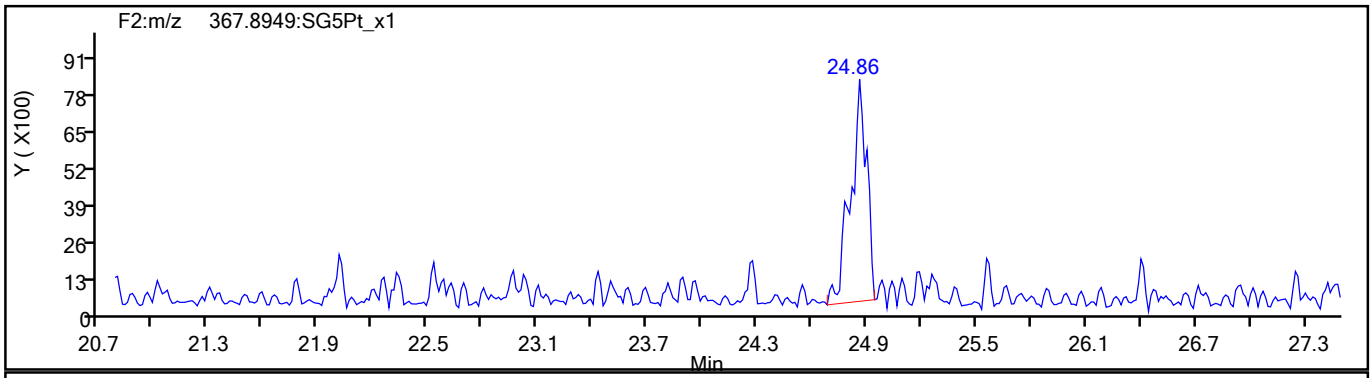

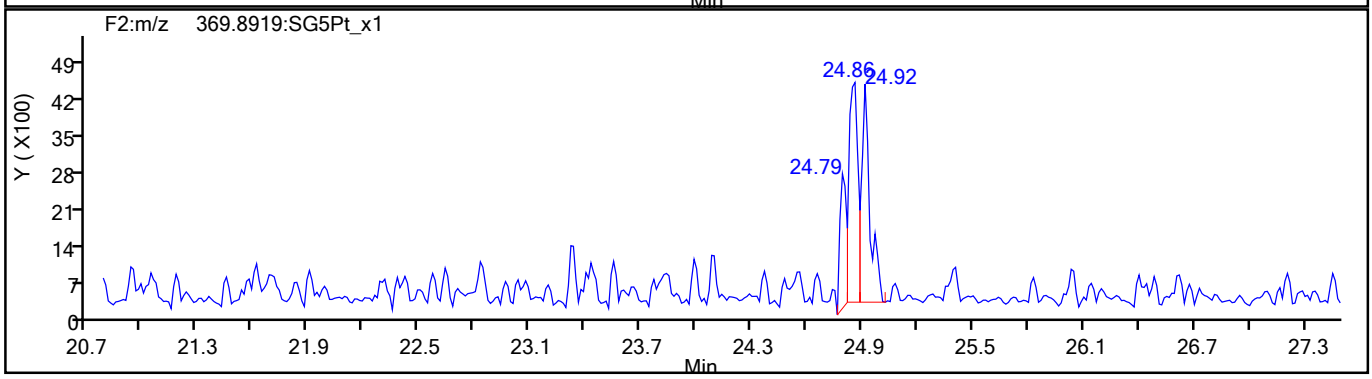

792772

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

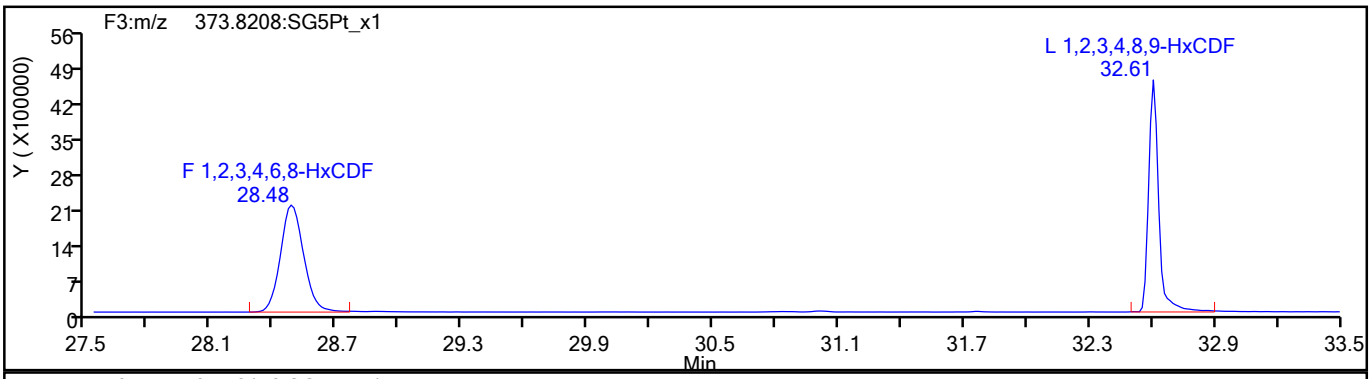

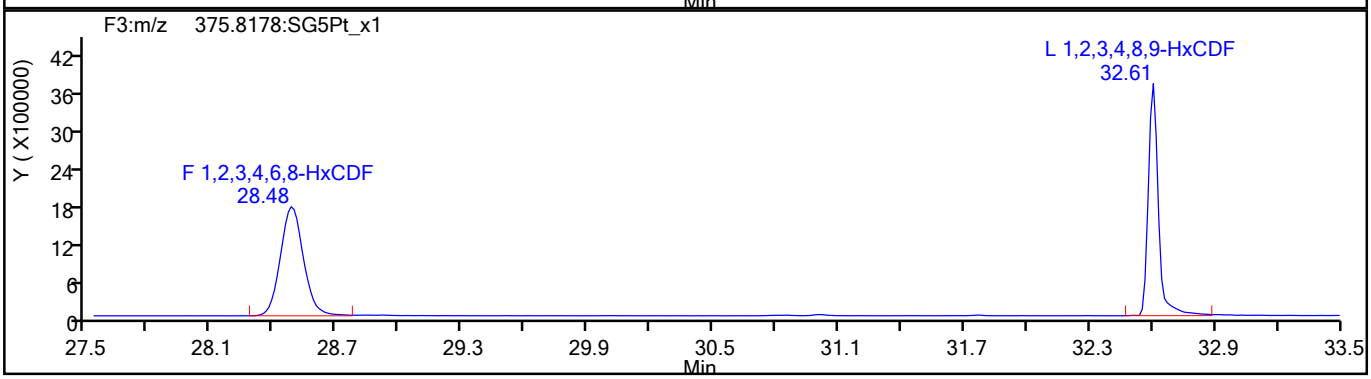

HxCDF Standards

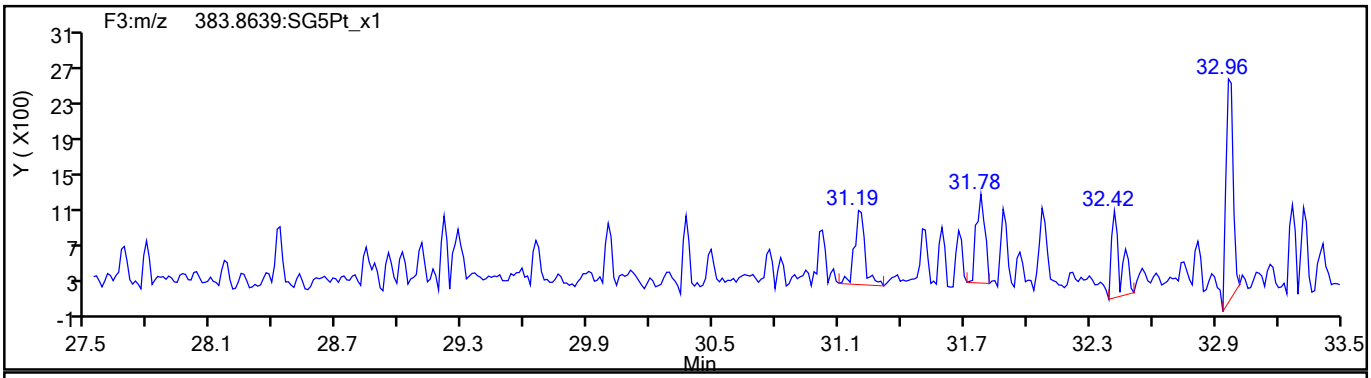

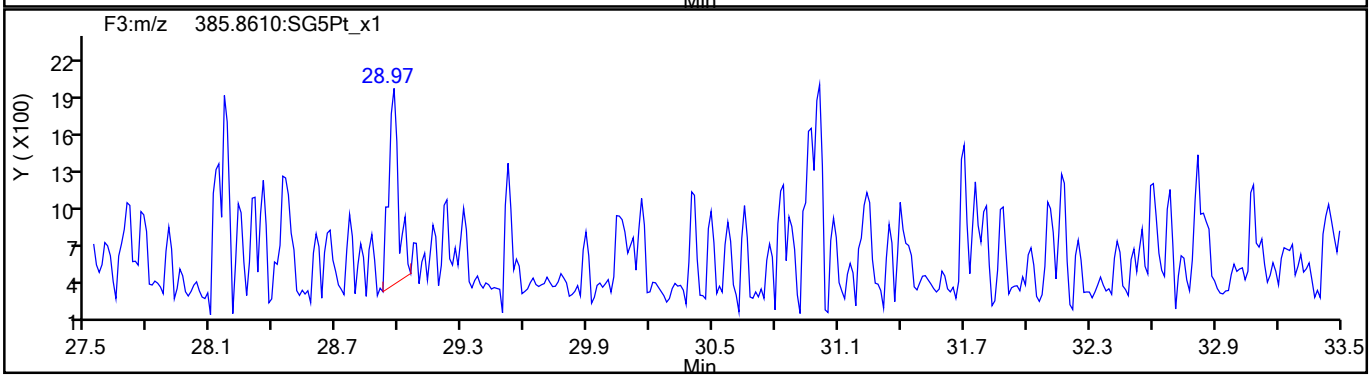

792773

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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HxCDF

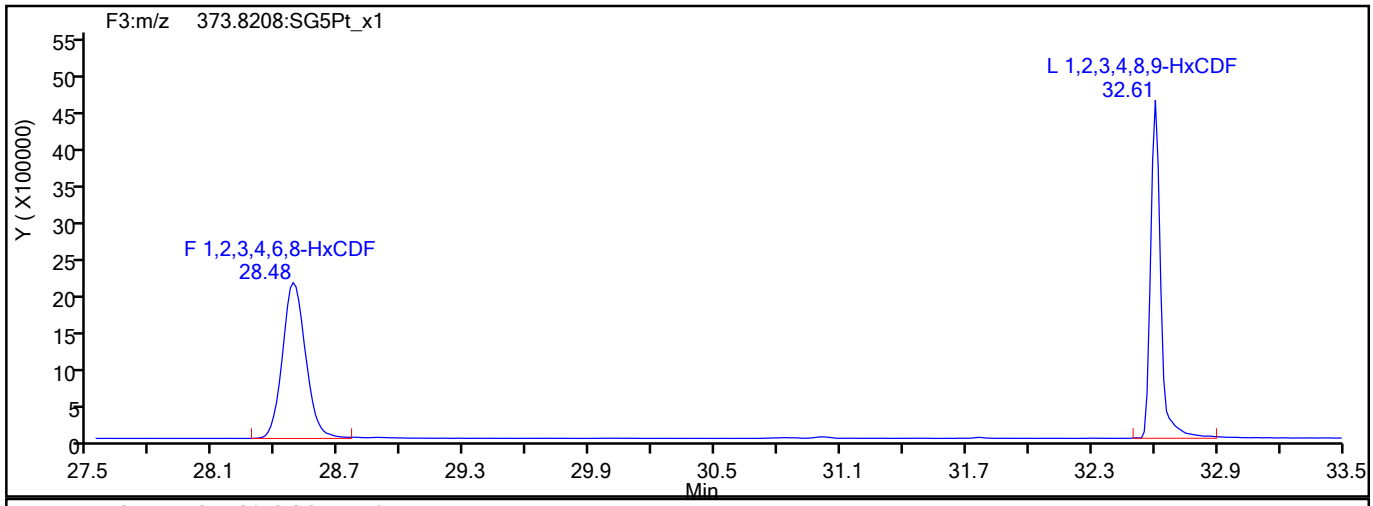

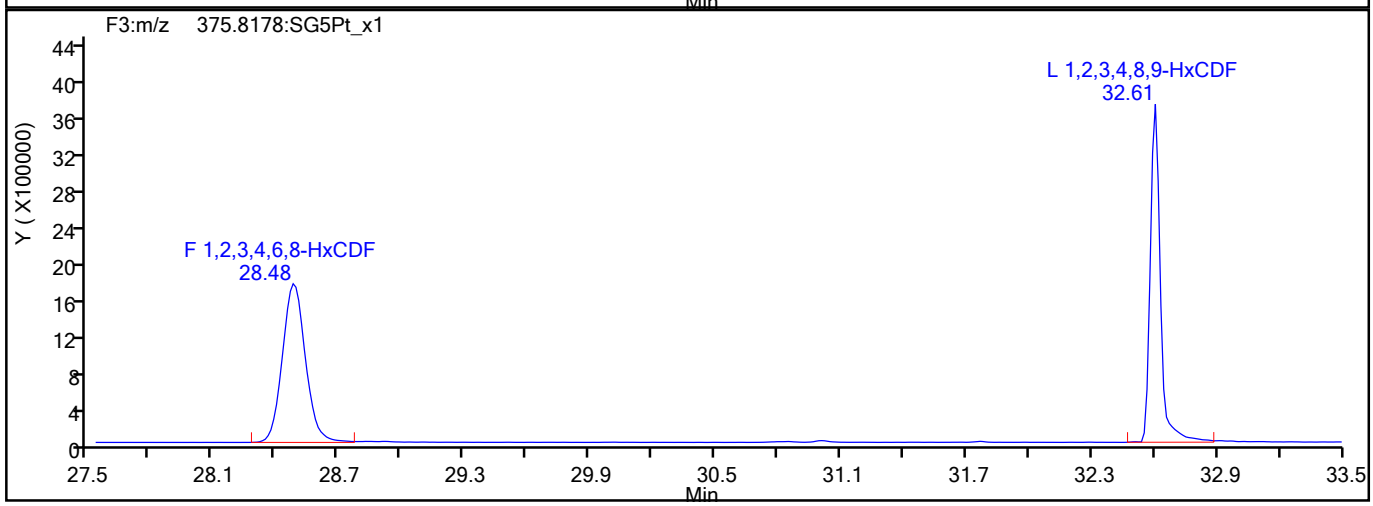

HxCDF Interference Mass

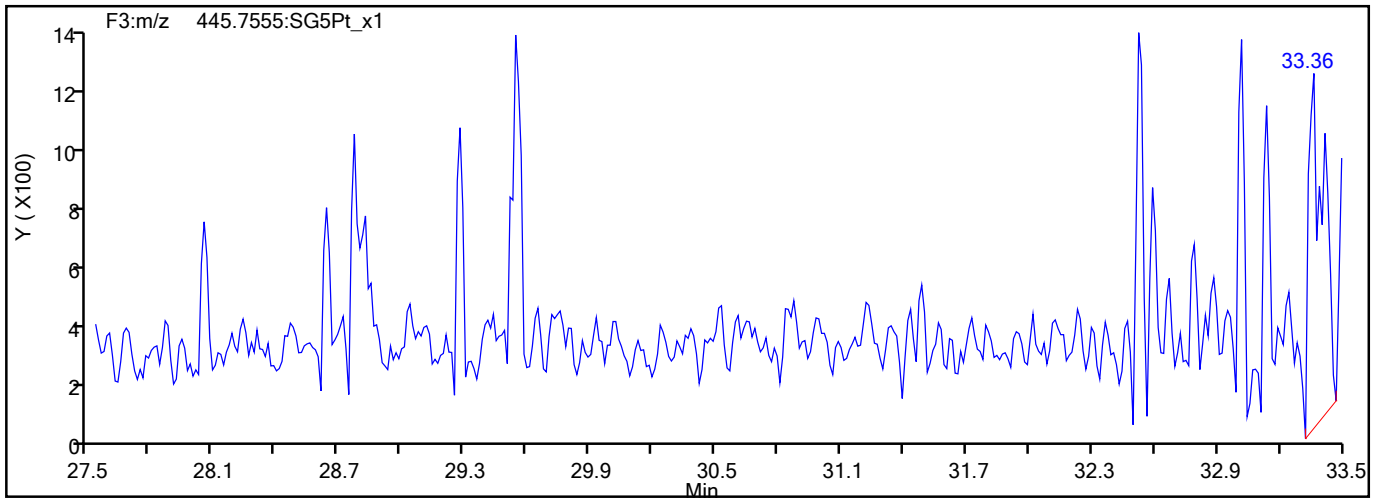

792774

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

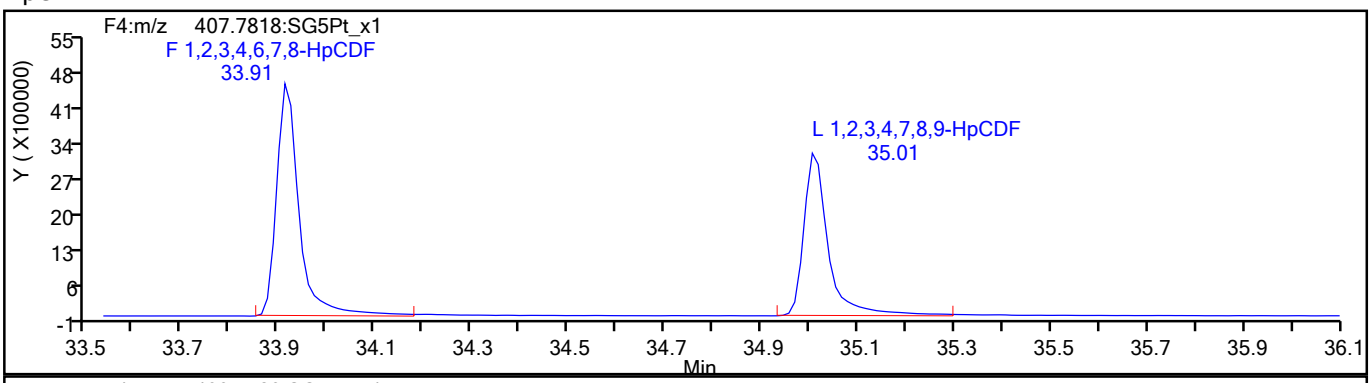

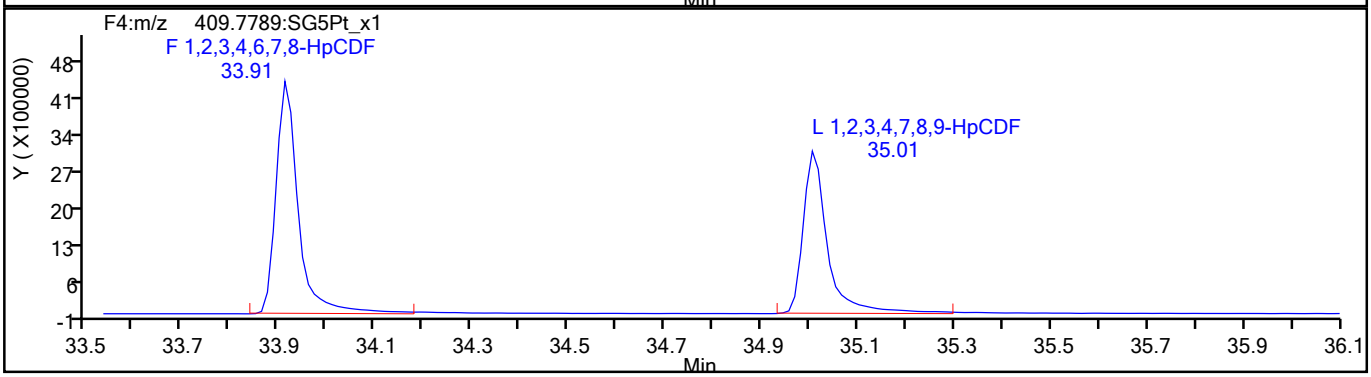

HpCDF Standards

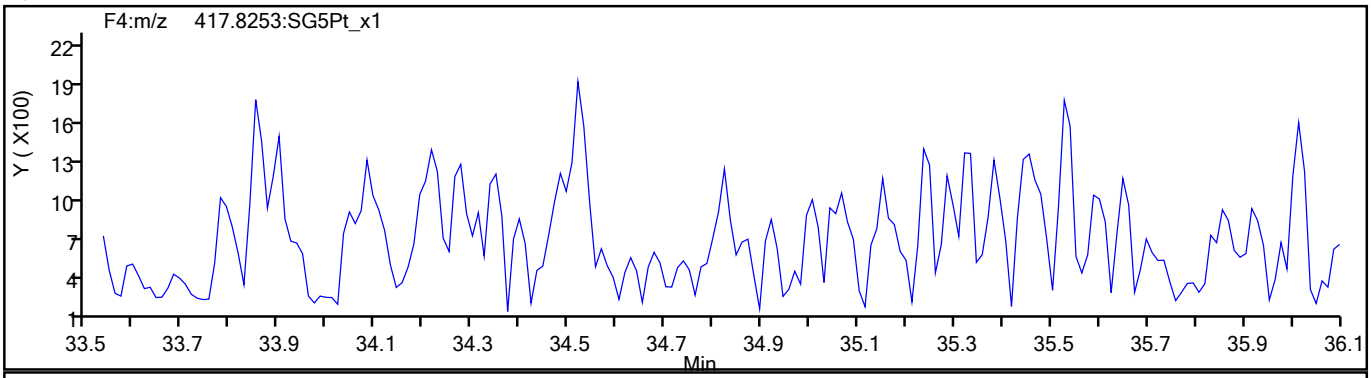

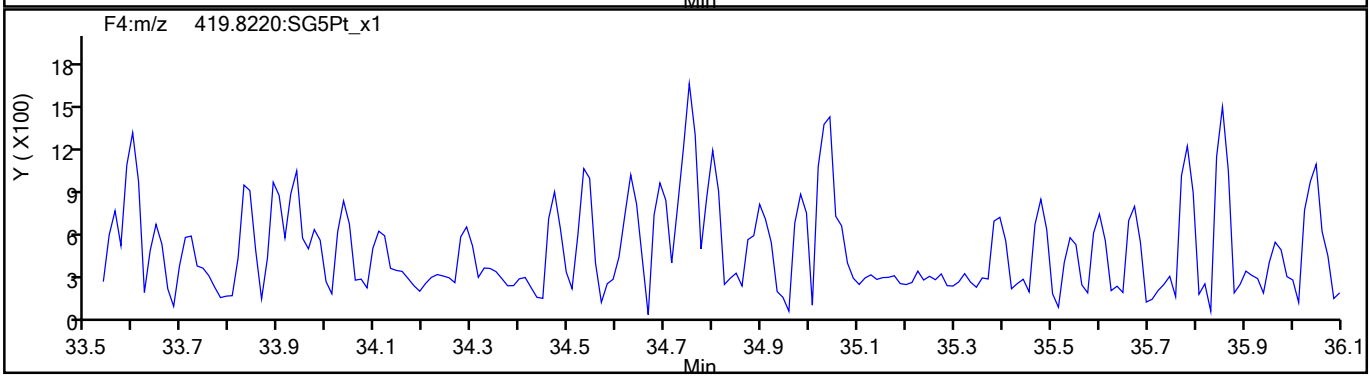

792775

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

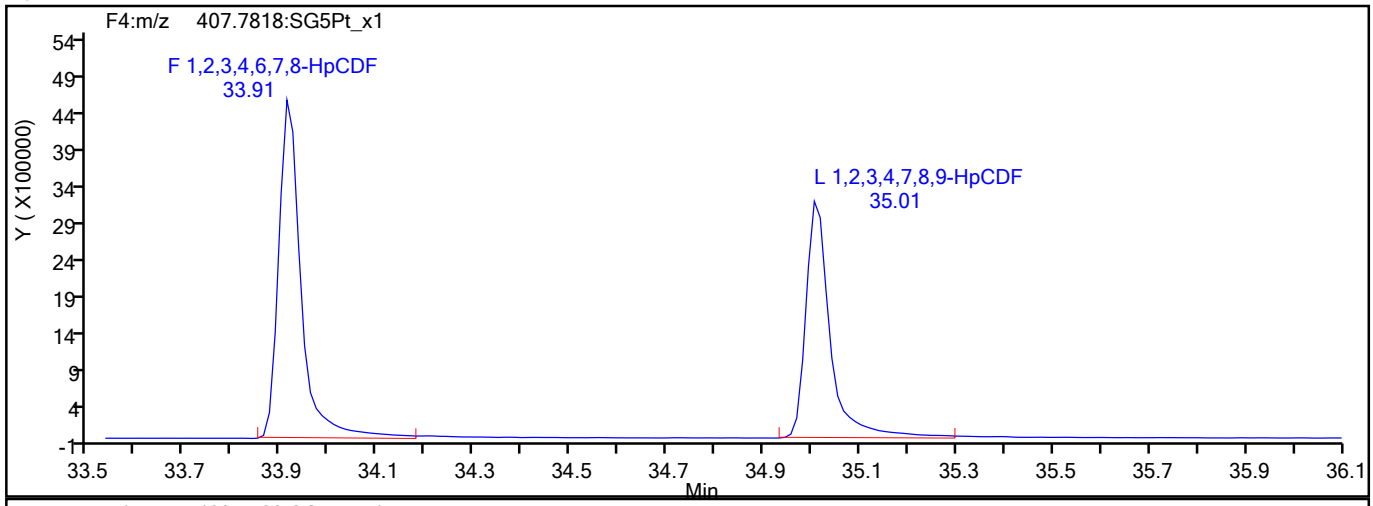

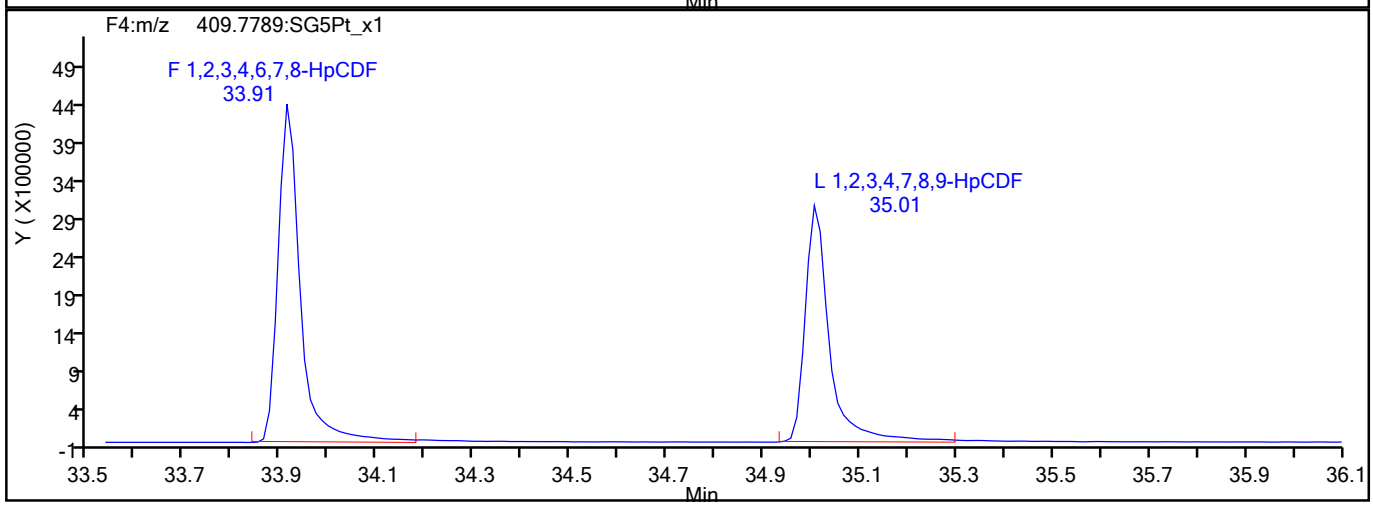

HpCDF Interference Mass

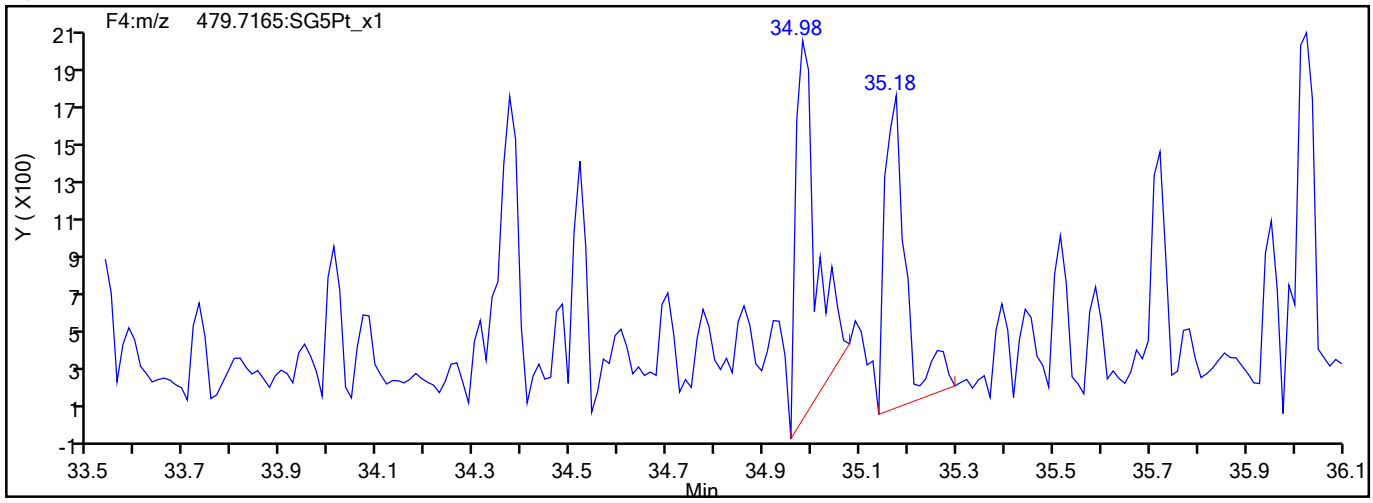

792776

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

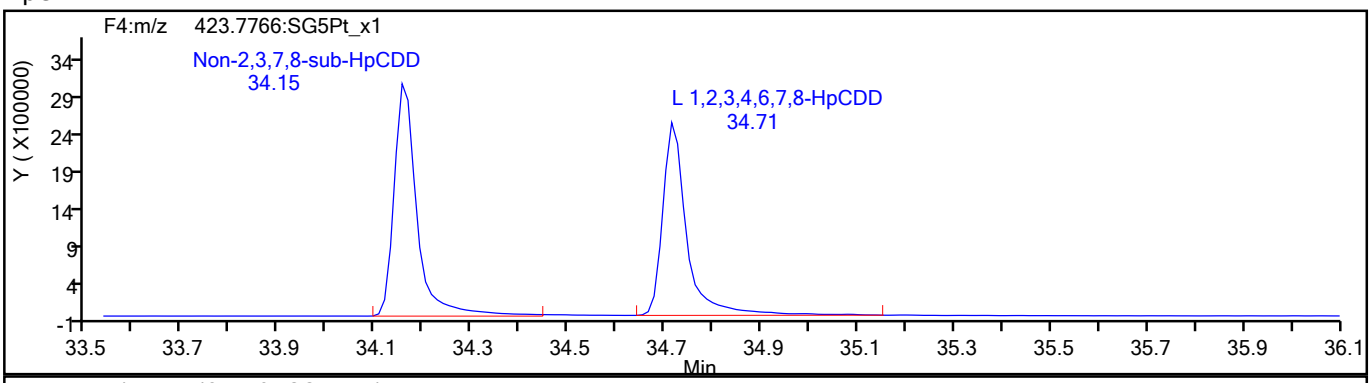

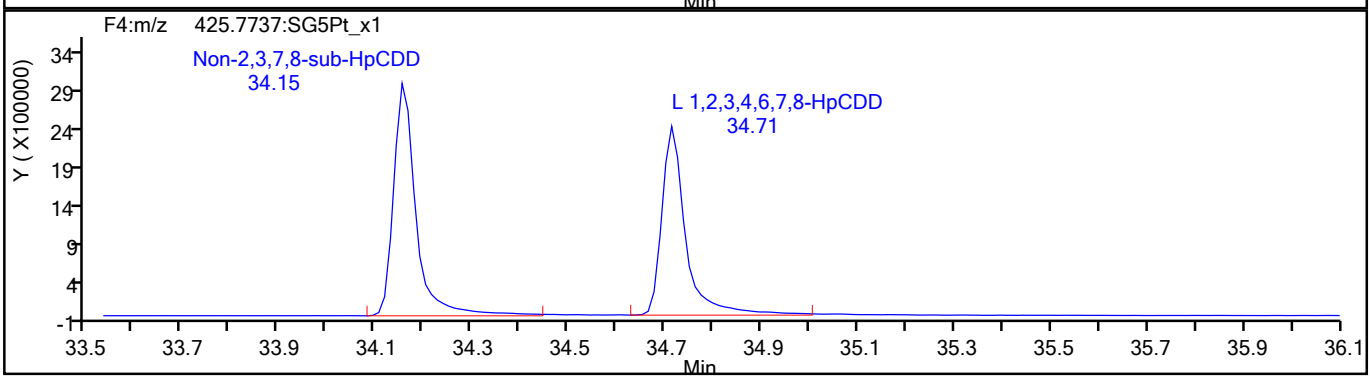

HpCDD Standards

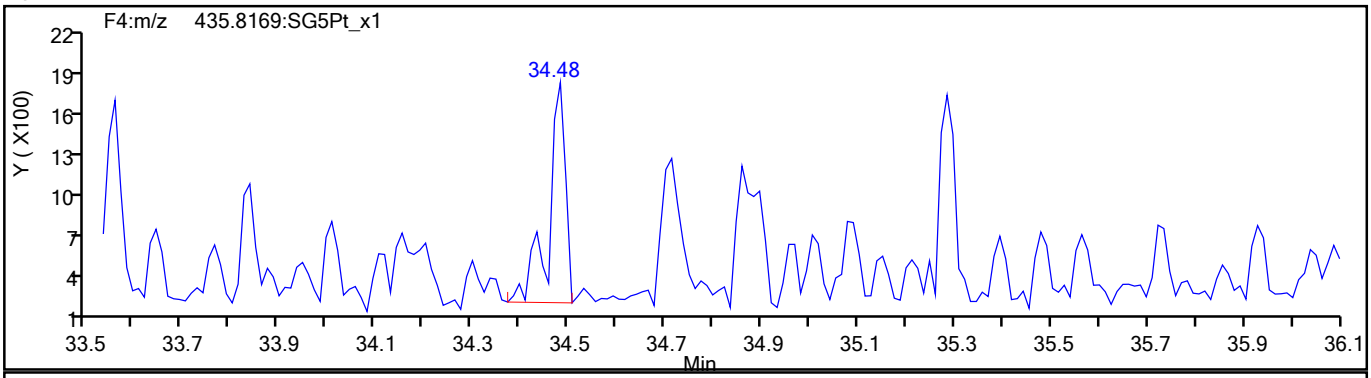

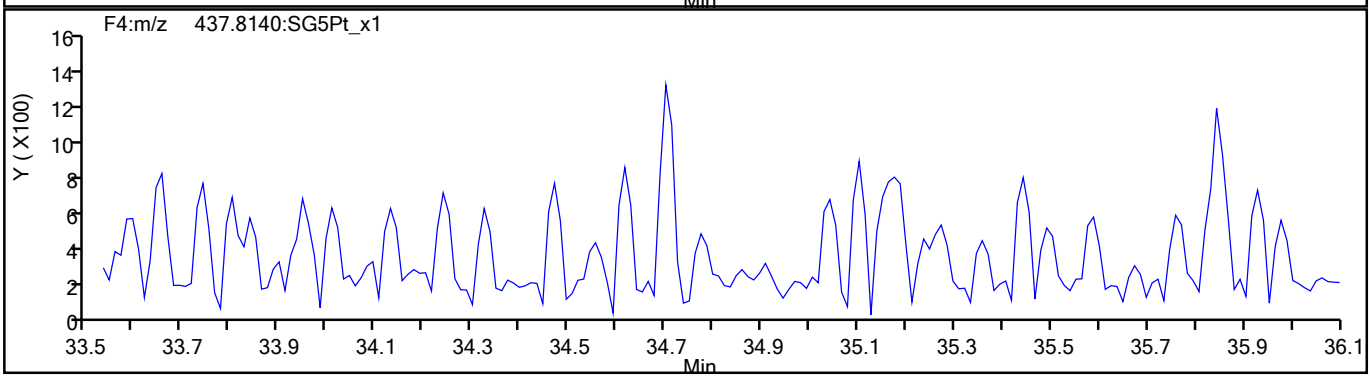

792777

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

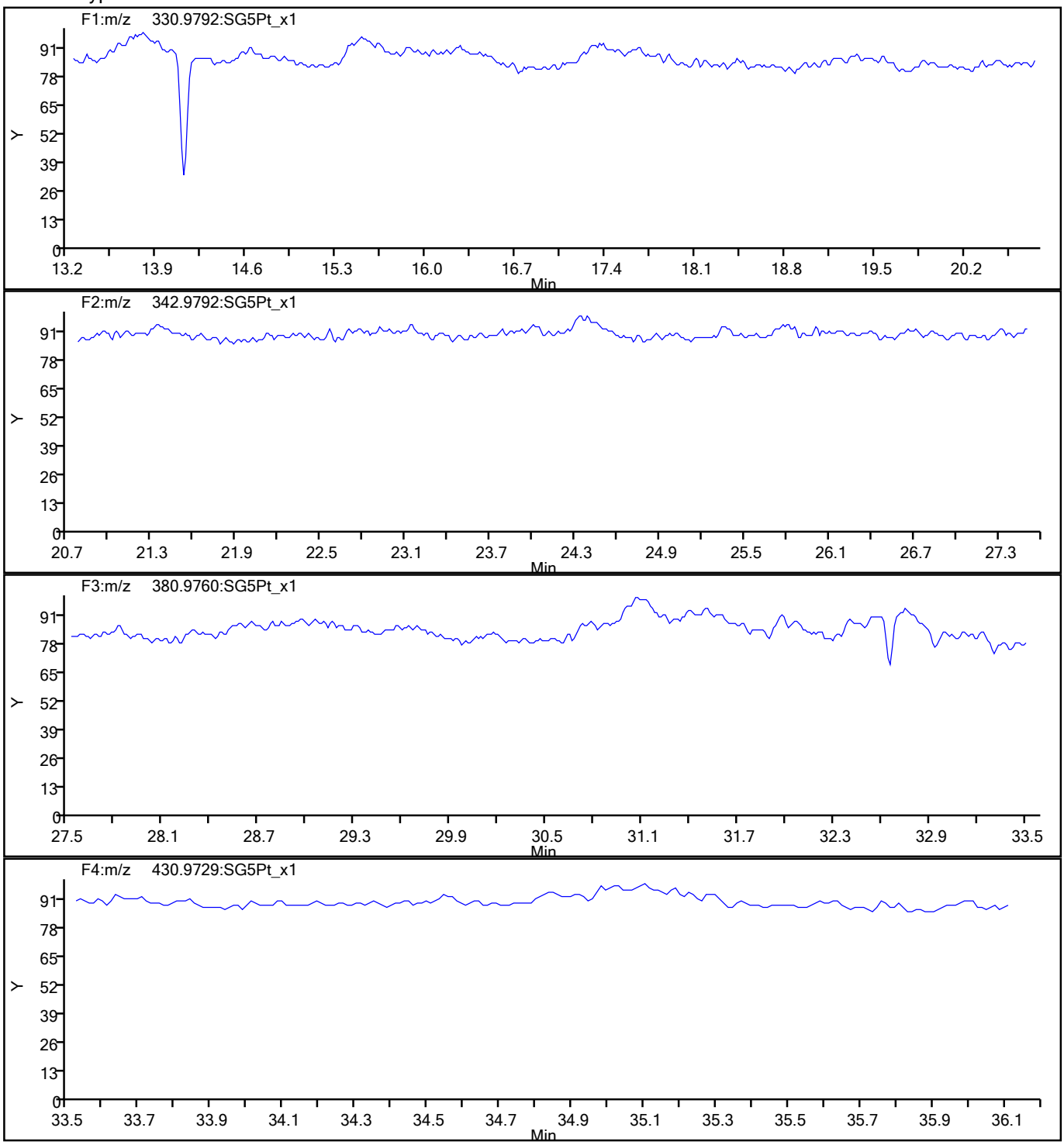

792778

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

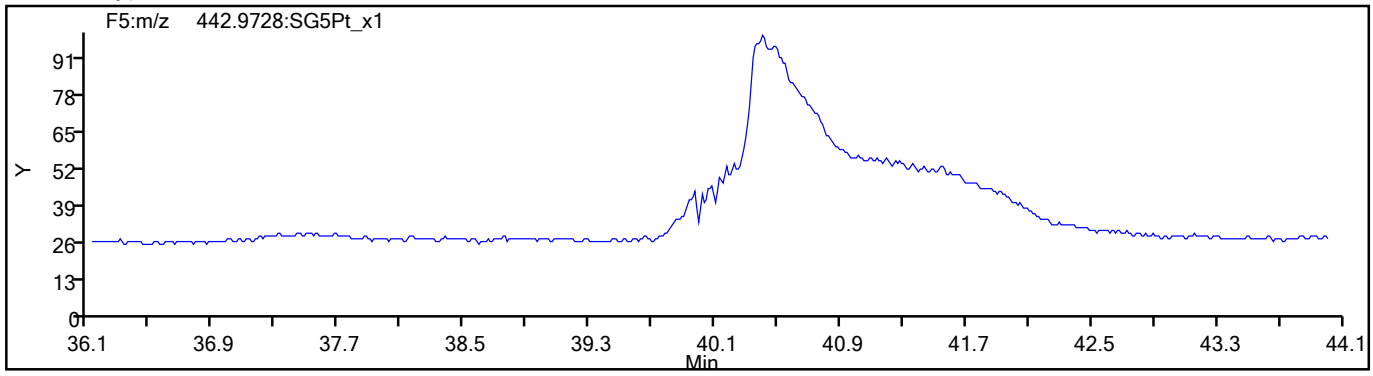

792779

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 25-Aug-2021 09:38:15 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521 WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:07:31 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 09:52:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.099	56999943	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.114	121813715	0.77	1.0239	83.5	83.5	0.4017	0.4017		
A Non-2,3,7,8-sub-TCDF	17.076	102998627	0.76	1.0239	70.6	70.6	0.4017	35.9		
S Total TCDF					154.1	154.1	0.4017	0.4017		
D 13C-2,3,7,8-TCDD	17.794	30493136	0.80	0.8993					0.00	
2,3,7,8-TCDD	17.809	41147298	0.79	1.2541	43.0	43.0	0.2473	0.2473		
A Non-2,3,7,8-sub-TCDD	17.537	115649881	0.78	1.2541	121.0	121.0	0.2473	43.6		
S Total TCDD					164.0	164.0	0.2473	0.2473		
A F1 PeCDFs	19.851	48902269	1.56	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.067	41048828	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.696	62925921	1.59	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.338	39643438	1.24	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.525	29683302	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.615	33959149	1.04	1.4413						
1,2,3,4,7,8,9-HpCDF	34.685	27411005	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.150						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.405	21912703	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.223						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.725	69566921	0.76							
1,3,6,8-TCDD	15.632	41513030	0.79							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.172						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.916	29394237	1.28							
1,2,3,4,8,9-HxCDF	32.249	35970266	1.23							
1,2,3,4,6,7,9-HpCDD	33.858	24693234	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 25-Aug-2021 09:38:15 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521 WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:07:31 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 09:52:09

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	1.000	24801764	6462524	8874	22185	728		
317.9389	17.099	17.099	0	1.000	32198179	8393715	2966	7415	2830	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	52987478	12648552	25565	63912	495		
305.8987	17.114	17.114	0	1.001	68826237	16701152	35540	88850	470	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.961	17.076	53	1.050	22725406	5605407	25565	63912	219		
305.8987	17.961	17.076	53	1.050	29653618	7394635	35540	88850	208	0.77(0.65-0.89)	
303.9016	18.898	17.076	109	1.105	21740344	5423885	25565	63912	212		
305.8987	18.898	17.076	109	1.105	28879259	7337257	35540	88850	206	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.000	13507639	3316471	3805	9512	872		
333.9339	17.779	17.794	-1	1.000	16985497	4194973	1666	4165	2518	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	18197690	4594417	9728	24320	472		
321.8936	17.809	17.809	0	1.001	22949608	5811153	13572	33930	428	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.688	17.537	9	0.994	15882832	4027250	9728	24320	414		
321.8936	17.688	17.537	9	0.994	20635820	5271227	13572	33930	388	0.77(0.65-0.89)	
319.8965	17.961	17.537	25	1.009	18541382	4424461	9728	24320	455		
321.8936	17.961	17.537	25	1.009	23123978	5536133	13572	33930	408	0.80(0.65-0.89)	
319.8965	18.898	17.537	81	1.062	16399748	3990548	9728	24320	410		
321.8936	18.898	17.537	81	1.062	21066121	5048394	13572	33930	372	0.78(0.65-0.89)	
A F1 PeCDFs											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	19.170	19.851	-41	1.000	29822641	6875070	703	1757	9780		
341.8567	19.170	19.851	-41	1.000	19079628	4407459	787	1967	5600	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.670	23.067	-144	1.000	63648	12949	2558	6395	5		
341.8567	20.656	23.067	-144	1.000	51100	8959	1912	4780	5	1.25(1.32-1.78)	
339.8597	21.502	23.067	-94	1.000	82054	15477	2558	6395	6		
341.8567	21.475	23.067	-95	1.000	54055	10866	1912	4780	6	1.52(1.32-1.78)	
339.8597	22.034	23.067	-62	1.000	164889	28723	2558	6395	11		
341.8567	22.047	23.067	-61	1.000	126764	17242	1912	4780	9	1.30(1.32-1.78)	
339.8597	22.593	23.067	-28	1.000	115456	21902	2558	6395	9		
341.8567	22.593	23.067	-28	1.000	73199	13388	1912	4780	7	1.58(1.32-1.78)	
339.8597	25.265	23.067	132	1.000	24768733	3816175	2558	6395	1492		
341.8567	25.265	23.067	132	1.000	15579351	2357781	1912	4780	1233	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	20.915	23.696	-167	1.000	19723040	3659182	1691	4227	2164		
357.8516	20.915	23.696	-167	1.000	12468740	2303816	1095	2737	2104	1.58(1.32-1.78)	
355.8546	25.047	23.696	81	1.000	18872463	2910605	1691	4227	1721		
357.8516	25.047	23.696	81	1.000	11861678	1823378	1095	2737	1665	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.497	30.338	-170	1.000	21929812	3061580	2814	7035	1088		
375.8178	27.497	30.338	-170	1.000	17713626	2458642	2374	5935	1036	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.055	30.525	-88	1.000	16402622	2093195	3527	8817	593		
391.8127	29.041	30.525	-89	1.000	12994498	1666525	3229	8072	516	1.26(1.05-1.43)	
389.8157	30.692	30.525	10	1.000	167749	33291	3527	8817	9		
391.8127	30.692	30.525	10	1.000	118433	25865	3229	8072	8	1.42(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.615	0	1.000	17272270	6330880	18063	45157	350		
409.7789	33.615	33.615	0	1.000	16686879	6288813	17997	44992	349	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685	34.685	0	1.000	13991806	4967325	18063	45157	275		
409.7789	34.685	34.685	0	1.000	13419199	4804516	17997	44992	267	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						18063	45157			
409.7789	34.150						17997	44992			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	11171874	4042998	7125	17812	567		
425.7737	34.405	34.405	0	1.000	10740829	3846884	7315	18287	526	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						7125	17812			
425.7737	34.223						7315	18287			
1,3,6,8-TCDF											
303.9016	14.725	14.725	0		29981572	9719502	25565	63912	380		
305.8987	14.725	14.725	0		39585349	12860810	35540	88850	362	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,3,6,8-TCDD											
319.8965	15.632	15.632	0		18262945	5320953	9728	24320	547		
321.8936	15.617	15.632	-1		23250085	6693712	13572	33930	493	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.537						25565	63912			
305.8987	17.537						35540	88850			
1,2,3,7-TCDD											
319.8965	18.172						9728	24320			
321.8936	18.172						13572	33930			
1,2,3,9-TCDD											
319.8965	18.414						9728	24320			
321.8936	18.414						13572	33930			
1,2,3,9-TCDF											
303.9016	18.414						25565	63912			
305.8987	18.414						35540	88850			
1,2,8,9-TCDD											
319.8965	19.382						9728	24320			
1,2,8,9-TCDF											
303.9016	19.427						25565	63912			
305.8987	19.427						35540	88850			
1,3,4,6,8-PeCDF											
339.8597	19.669						703	1757			
341.8567	19.669						787	1967			
1,2,4,7,9-PeCDD											
355.8546	21.480						1691	4227			
357.8516	21.480						1095	2737			
1,2,3,8,9-PeCDD											
355.8546	25.790						1691	4227			
357.8516	25.790						1095	2737			
1,2,3,8,9-PeCDF											
339.8597	26.021						2558	6395			
341.8567	26.021						1912	4780			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						2814	7035			
375.8178	28.333						2374	5935			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						3527	8817			
391.8127	29.890						3229	8072			
1,2,3,4,6,7-HxCDD											
389.8157	31.916	31.916	0		16480209	4865015	3527	8817	1379		
391.8127	31.916	31.916	0		12914028	3813170	3229	8072	1181	1.28(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.249	32.249	0		19818636	6110382	2814	7035	2171		
375.8178	32.236	32.249	-1		16151630	5000661	2374	5935	2106	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.858	33.858	0		12582438	4717571	7125	17812	662		
425.7737	33.858	33.858	0		12110796	4483963	7315	18287	613	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	56999943	14856239

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	56999943	14856239

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.961	22725406	5605407	29653618	7394635	35.9	0.77	
18.898	21740344	5423885	28879259	7337257	34.7	0.75	
Signal Totals:							
	44465750	11029292	58532877	14731892			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	102998627	25761184				0.76	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 70.592 = (102998627 * 40.000) / (56999943 * 1.024)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	30493136	7511444

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	30493136	7511444

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.688	15882832	4027250	20635820	5271227	38.2	0.77	
17.961	18541382	4424461	23123978	5536133	43.6	0.80	
18.898	16399748	3990548	21066121	5048394	39.2	0.78	
Signal Totals:							
	50823962	12442259	64825919	15855754			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	115649881	28298013				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 120.966 = (115649881 * 40.000) / (30493136 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.170	29822641	6875070	19079628	4407459		1.56	
Signal Totals:							
	29822641	6875070	19079628	4407459			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	48902269	11282529				1.56	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (48902269 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.670	63648	12949	51100	8959		1.25	R
21.502	82054	15477	54055	10866		1.52	
22.034	164889	28723	126764	17242		1.30	R
22.593	115456	21902	73199	13388		1.58	
25.265	24768733	3816175	15579351	2357781		1.59	
Signal Totals:							
	25194780	3895226	15884469	2408236			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	41079249	6303462				1.59	RQ
	41048828	6304145					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (41079249 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (41048828 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.915	19723040	3659182	12468740	2303816		1.58	
25.047	18872463	2910605	11861678	1823378		1.59	
Signal Totals:							
	38595503	6569787	24330418	4127194			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	62925921	10696981				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (62925921 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.497	21929812	3061580	17713626	2458642		1.24	
Signal Totals:							
	21929812	3061580	17713626	2458642			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	39643438	5520222				1.24	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (39643438 * 0.0) / (0 * 0.000)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.055	16402622	2093195	12994498	1666525		1.26	
30.692	167749	33291	118433	25865		1.42	
Signal Totals:							
	16570371	2126486	13112931	1692390			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	29683302	3818876				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (29683302 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

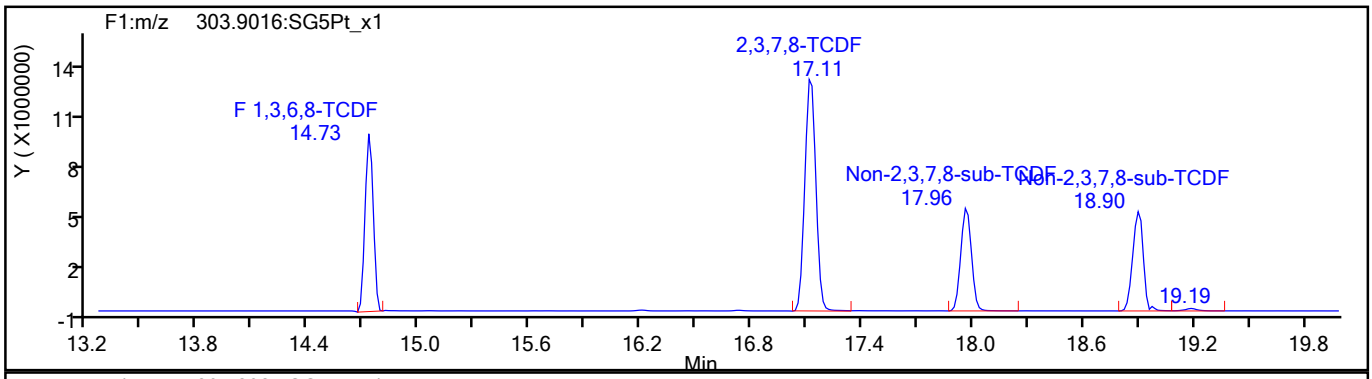

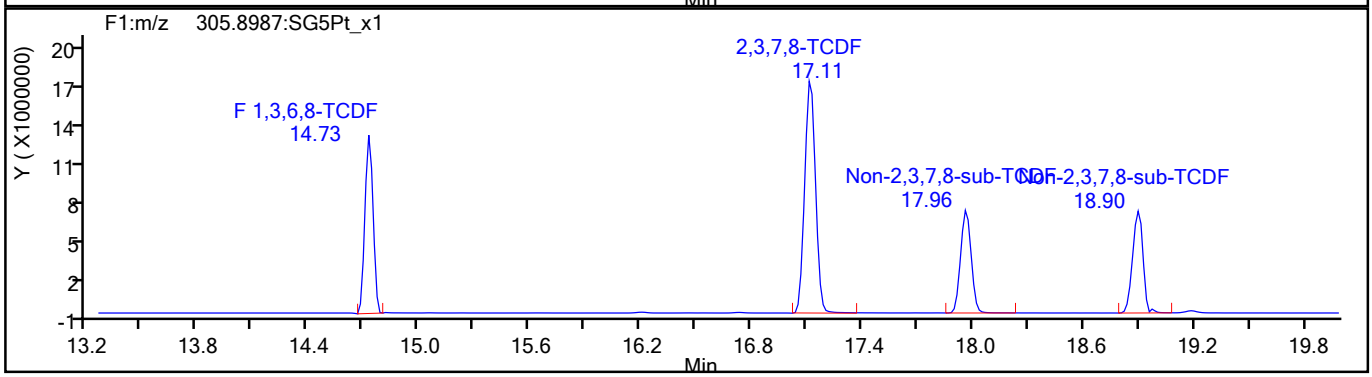

TCDF Standards

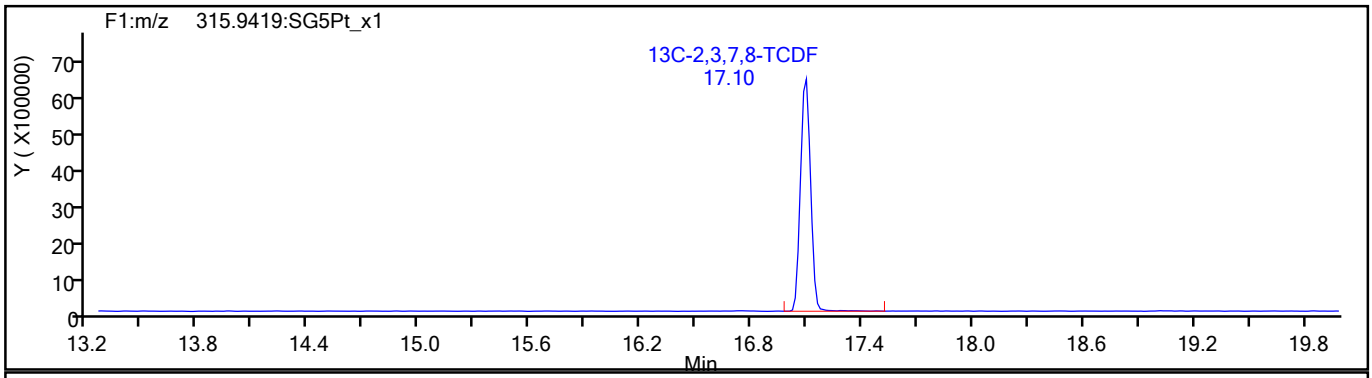

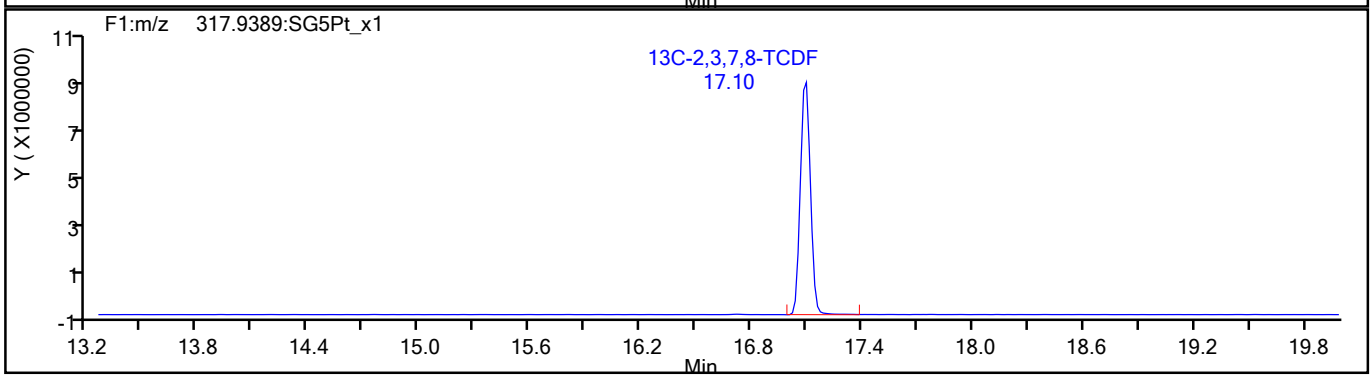

792793

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

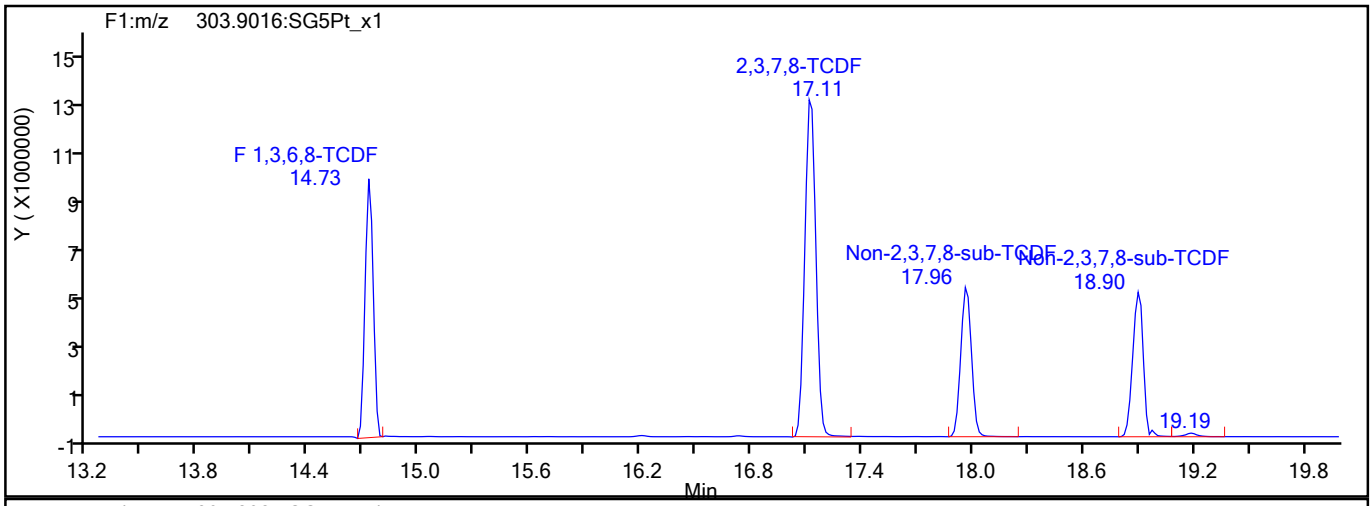

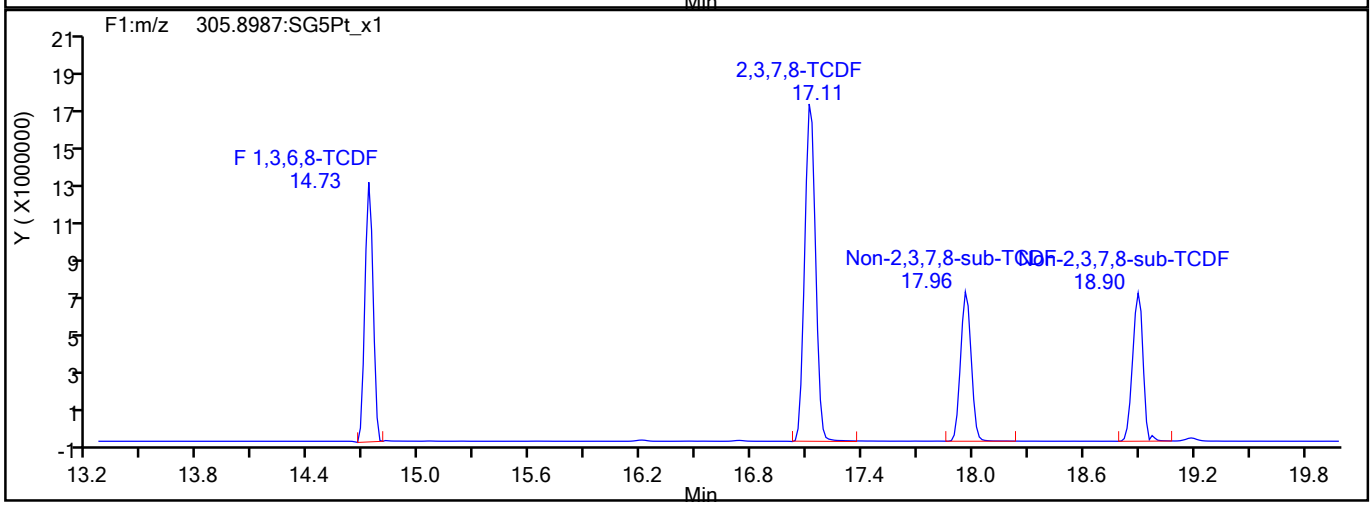

TCDF Interference Mass

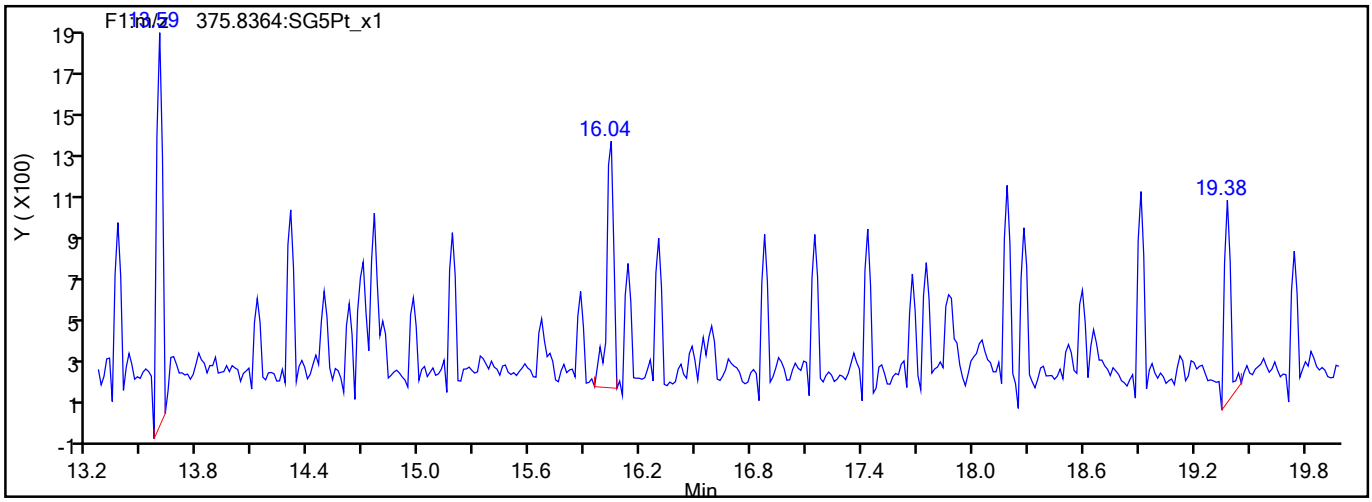

792794

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

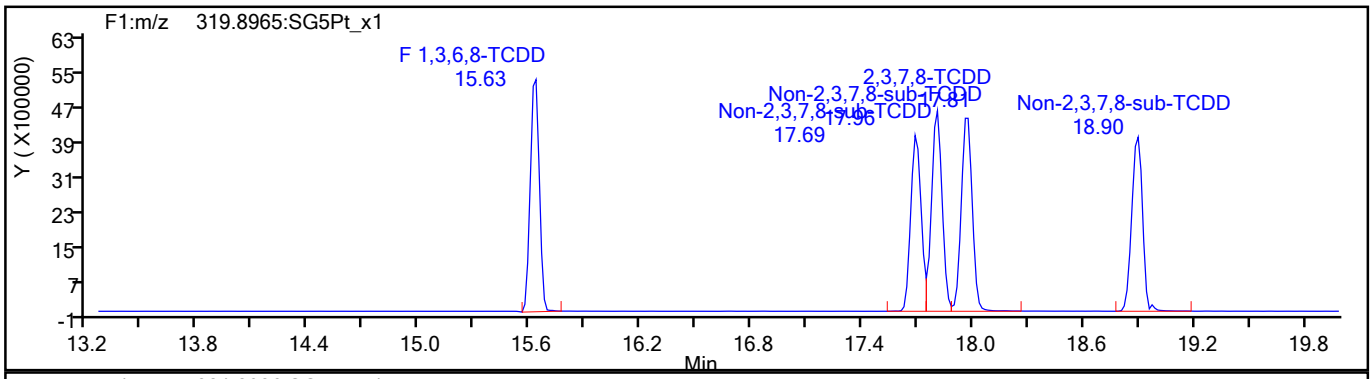

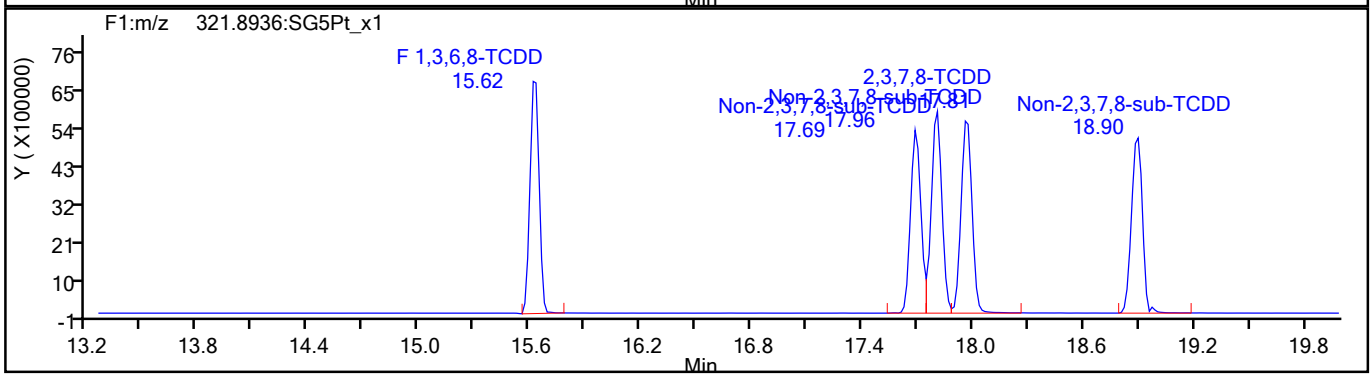

TCDD Standards

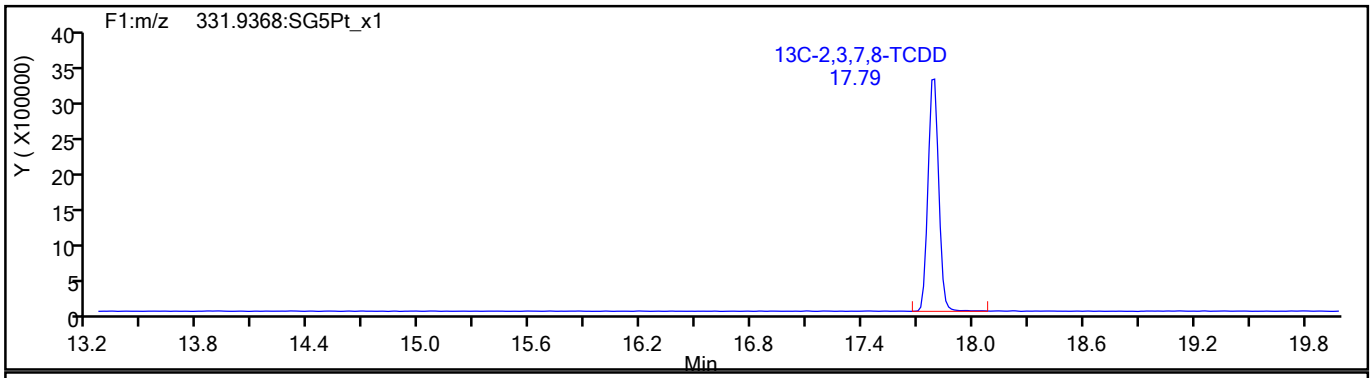

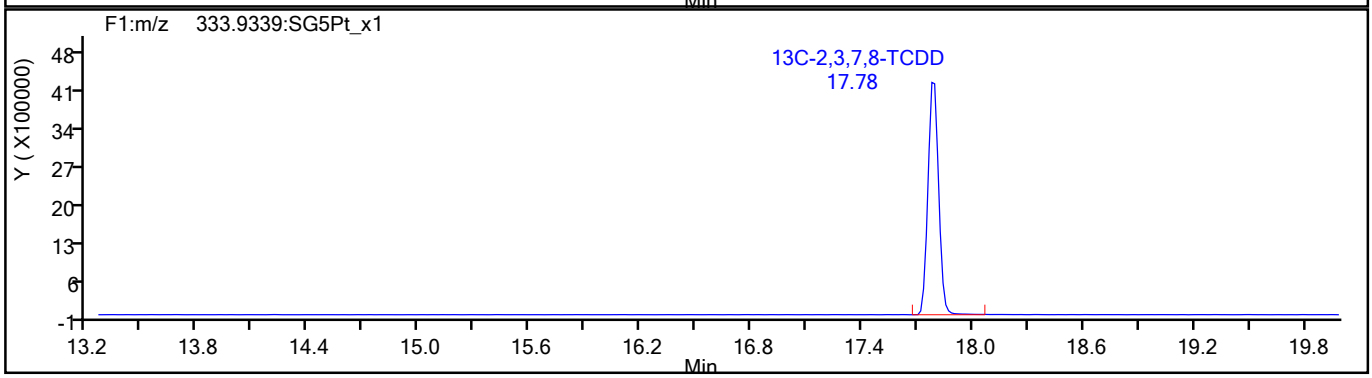

792795

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

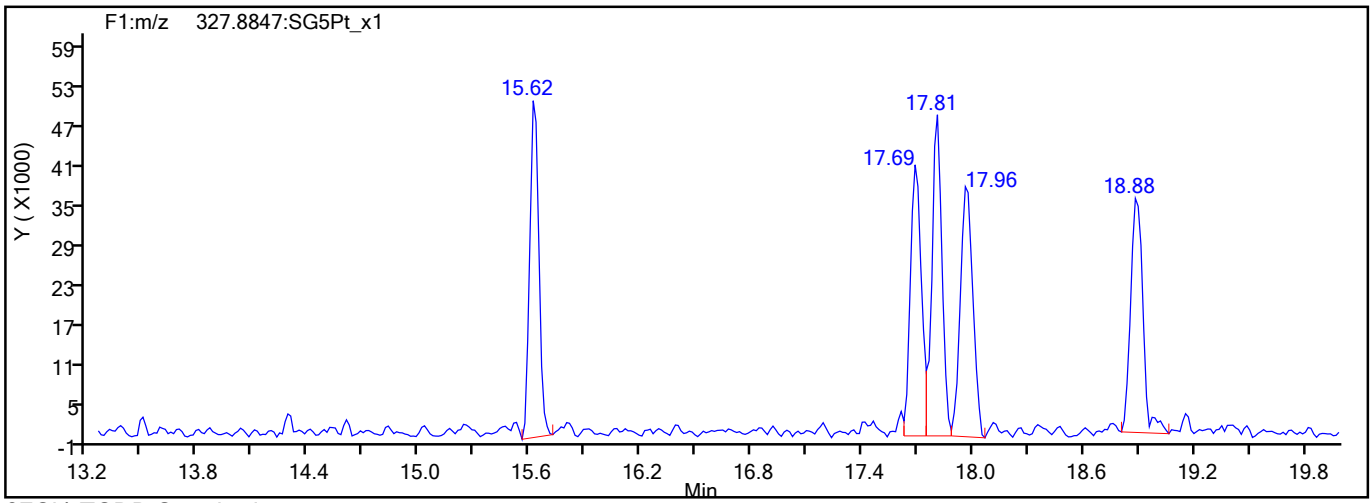

37Cl4-TCDD Standards

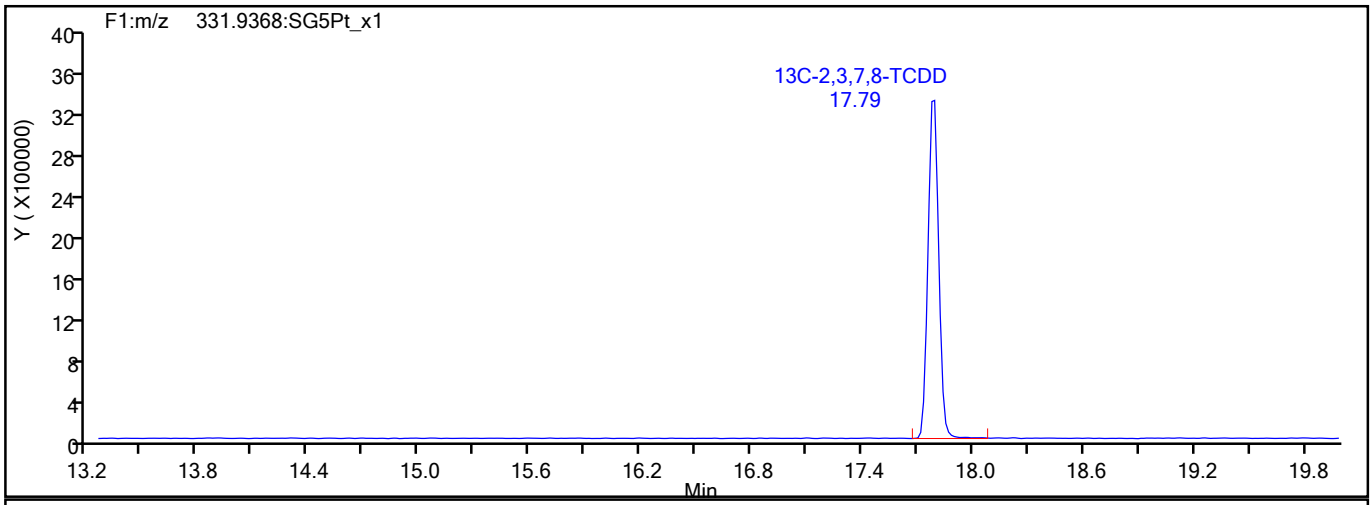

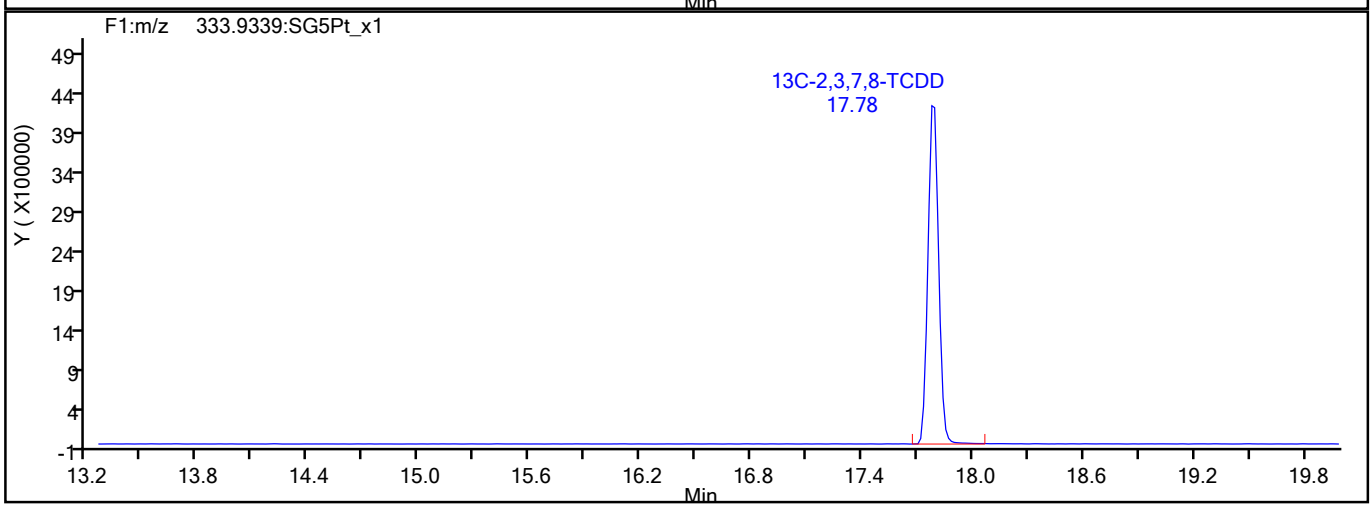

792796

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

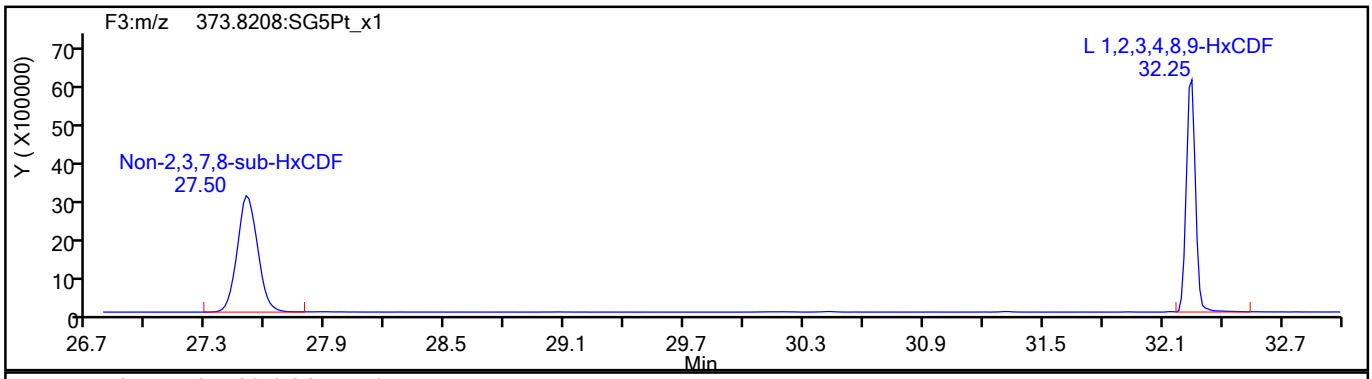

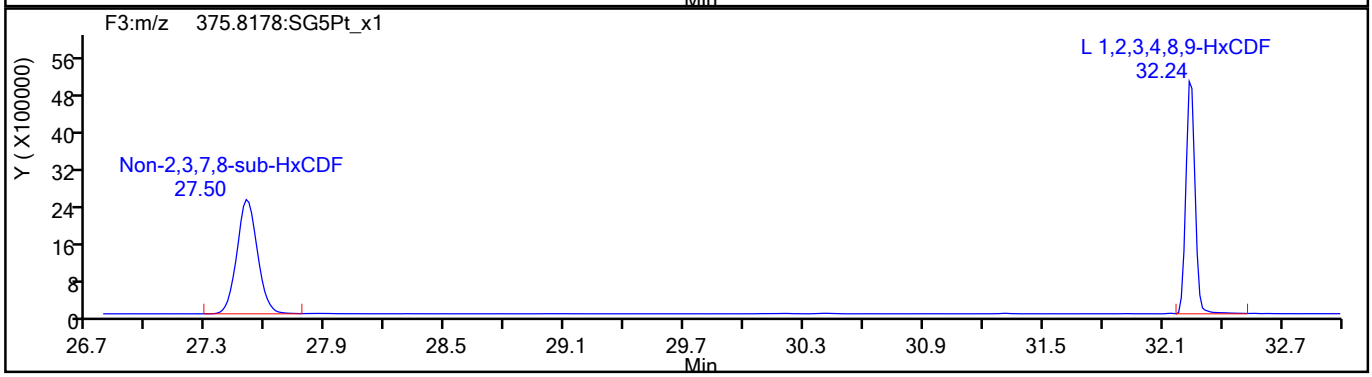

HxCDF Standards

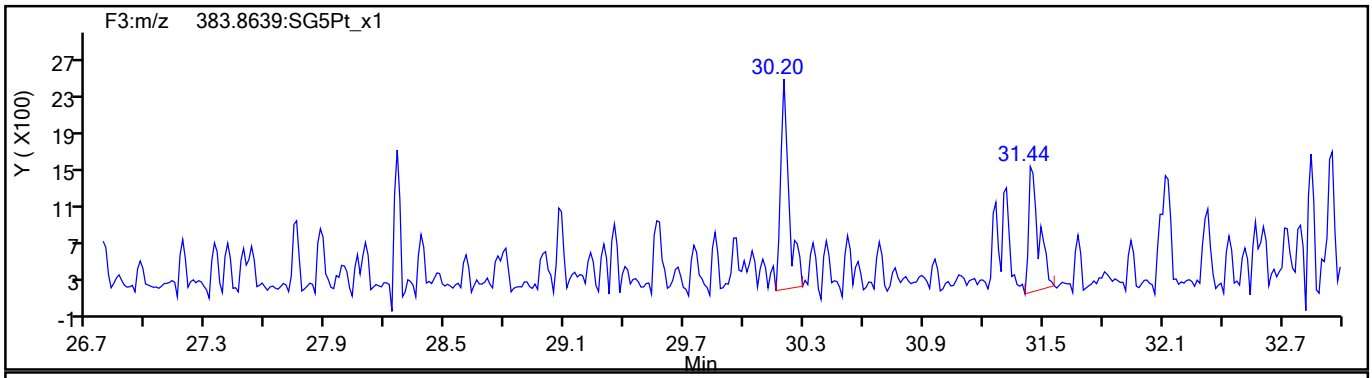

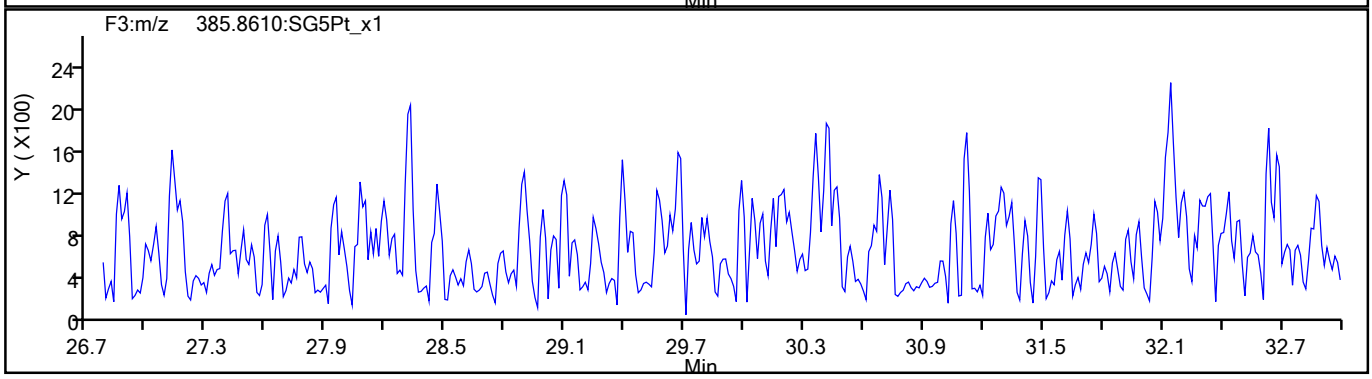

792797

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

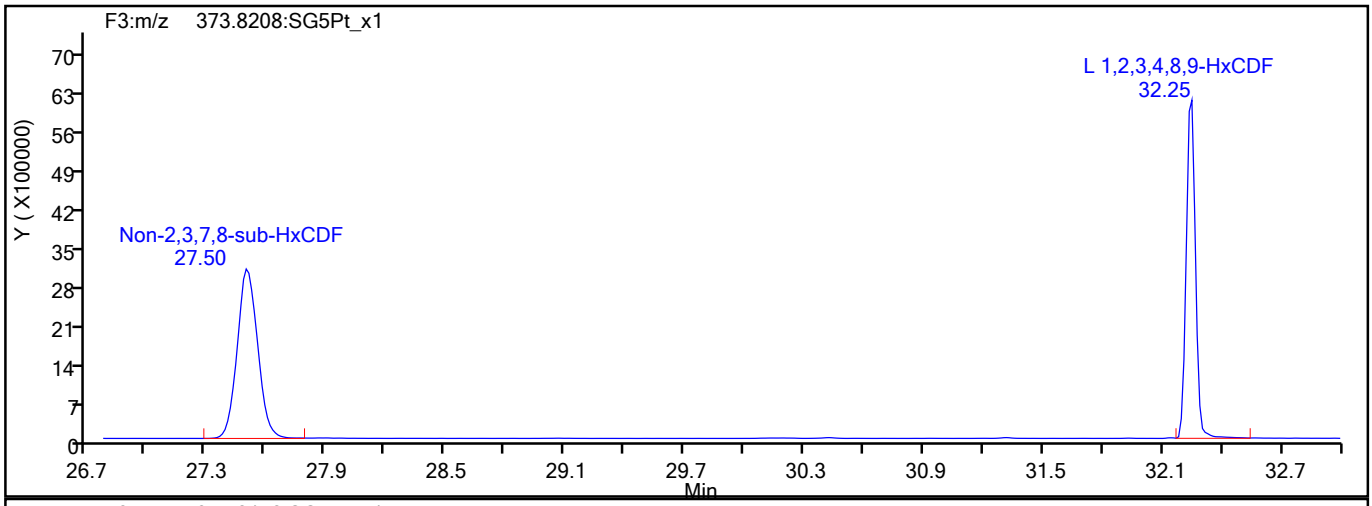

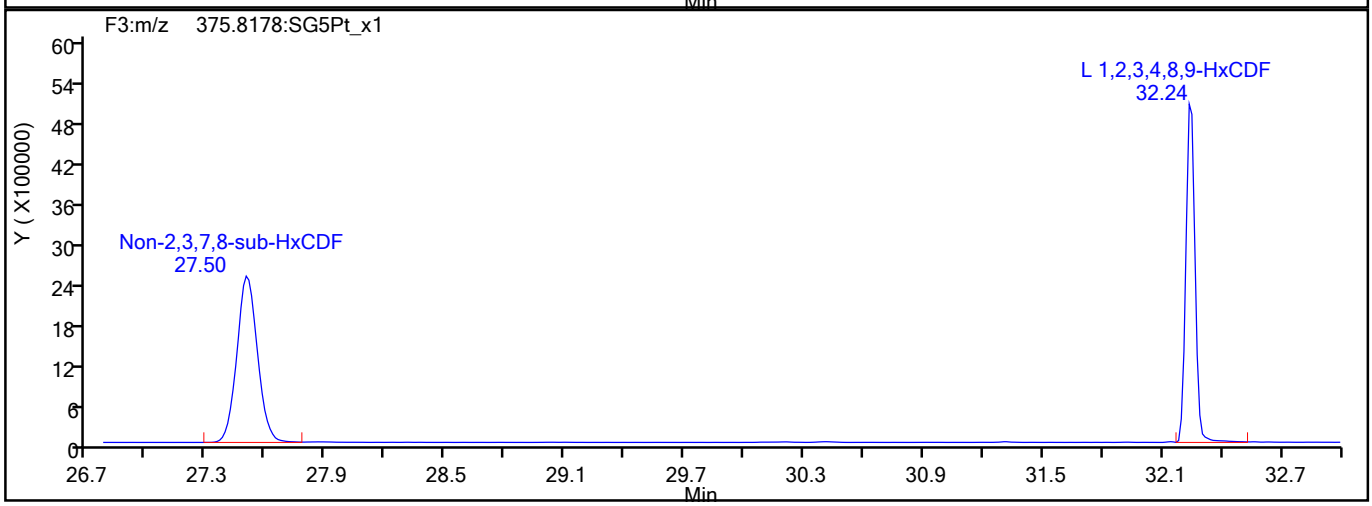

HxCDF Interference Mass

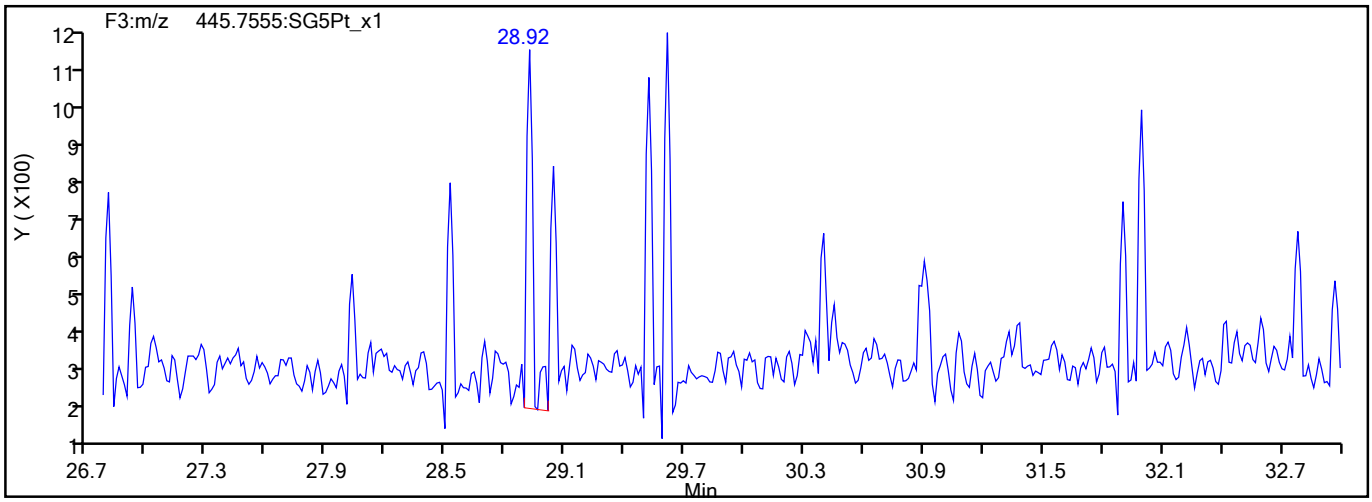

792798

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

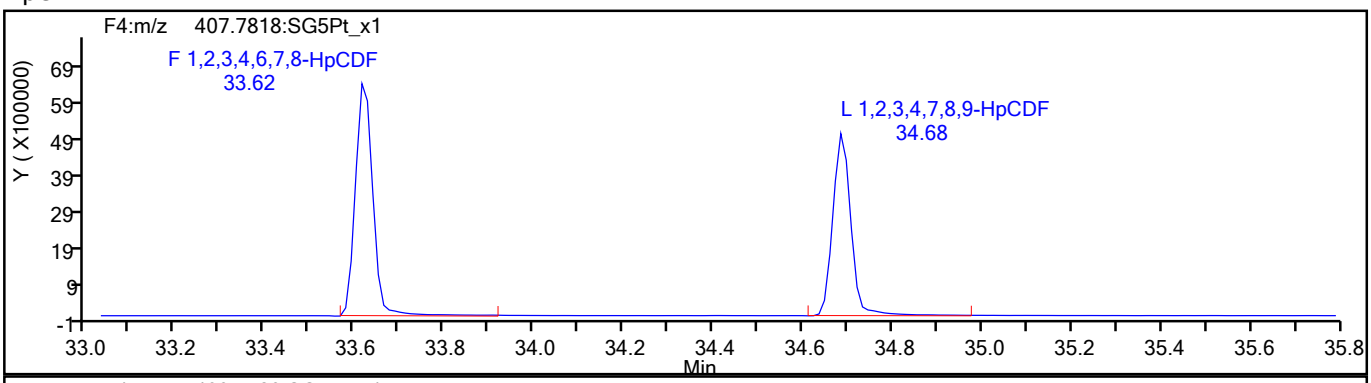

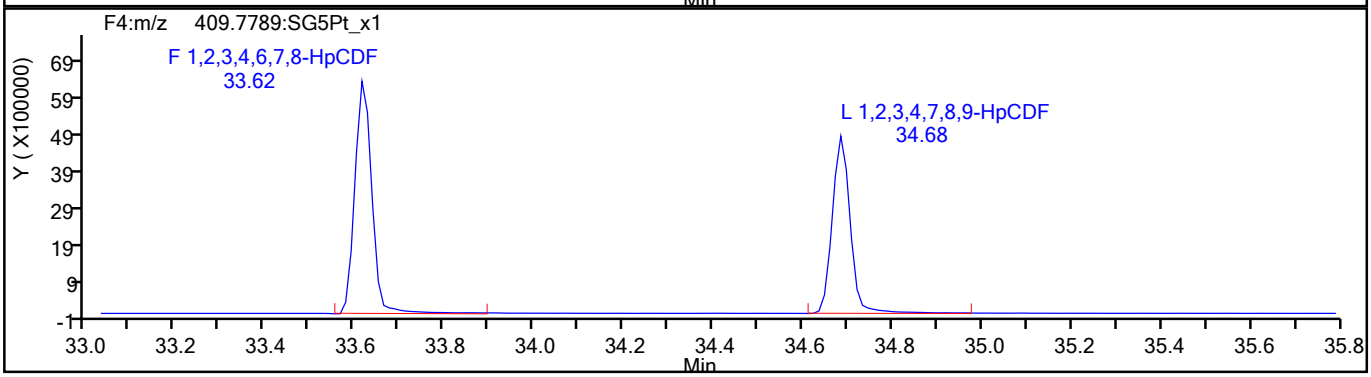

HpCDF Standards

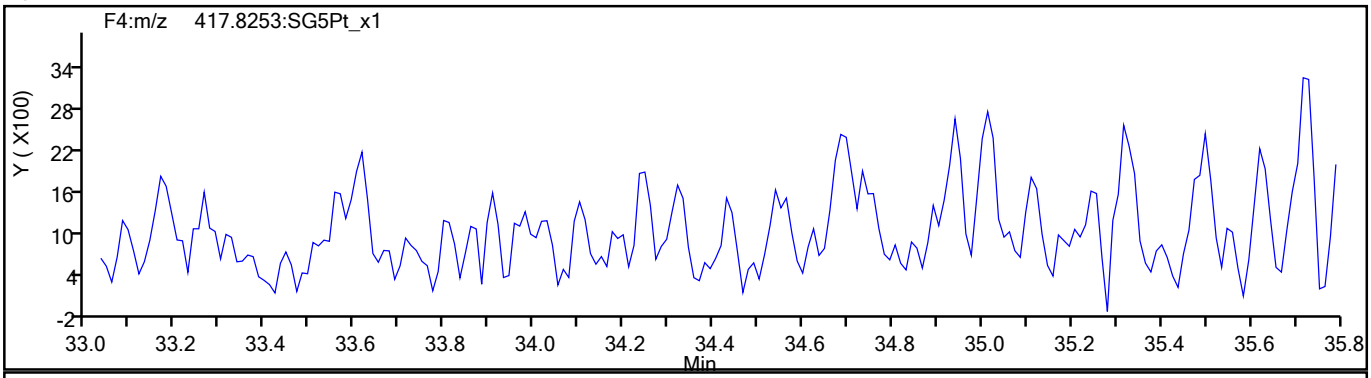

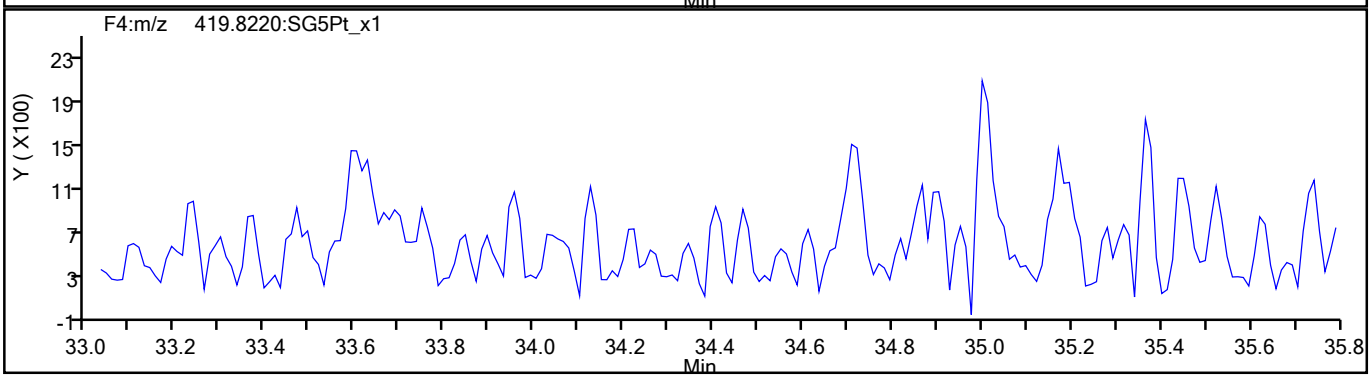

792799

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

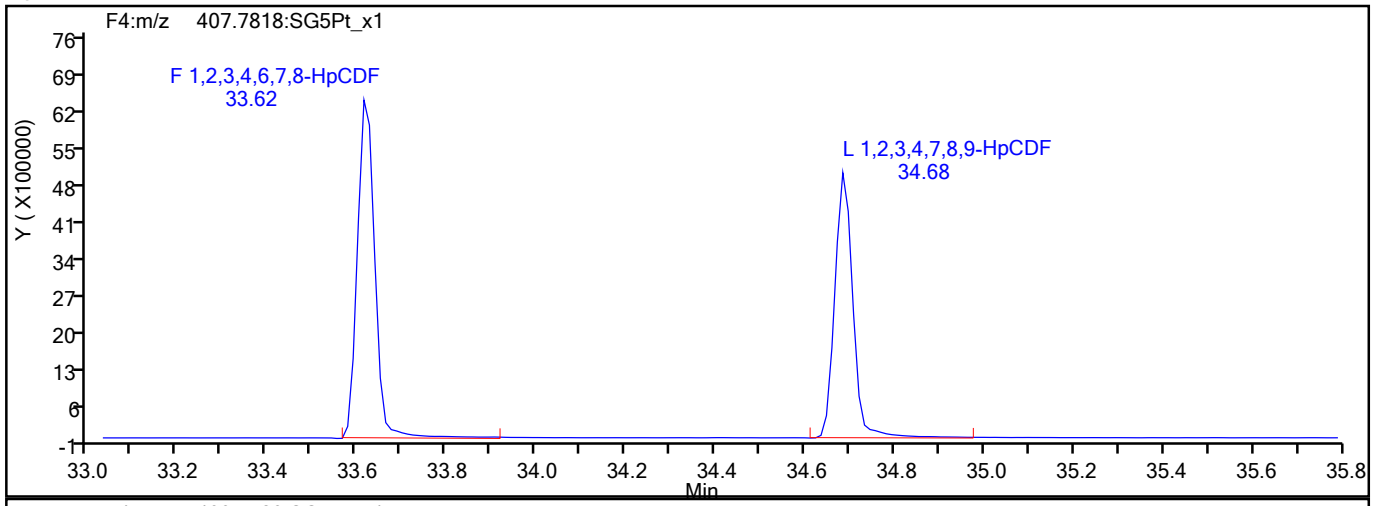

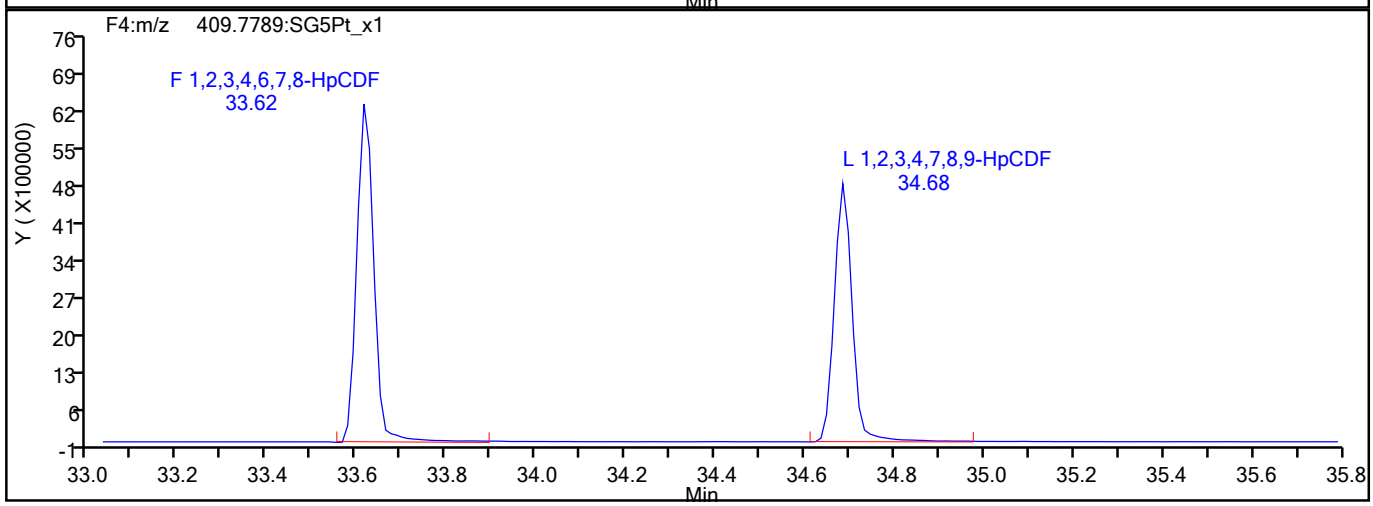

HpCDF Interference Mass

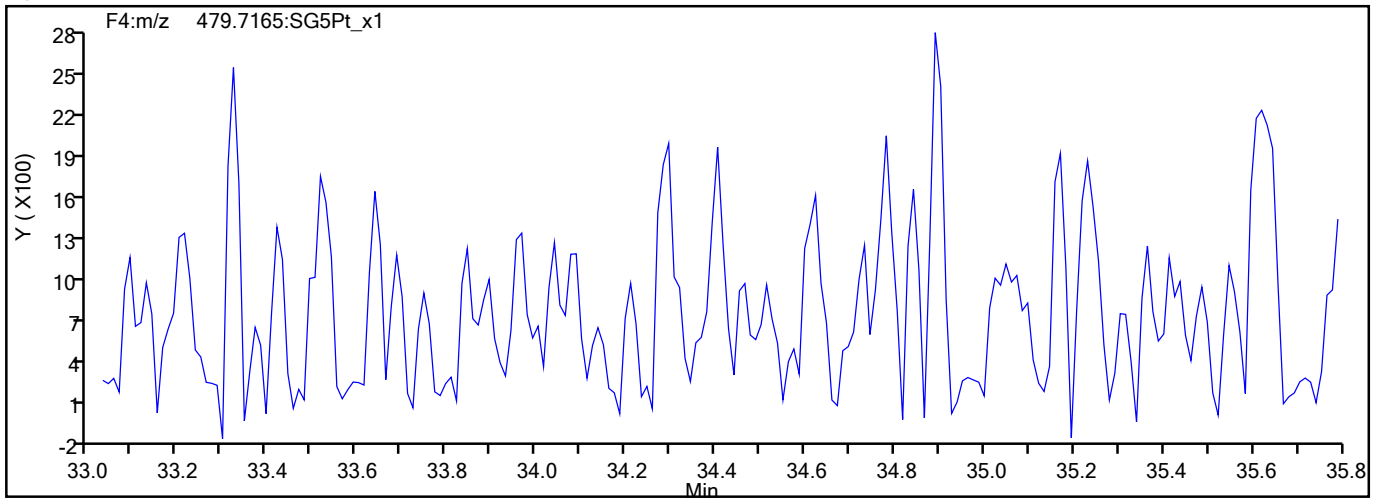

792800

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

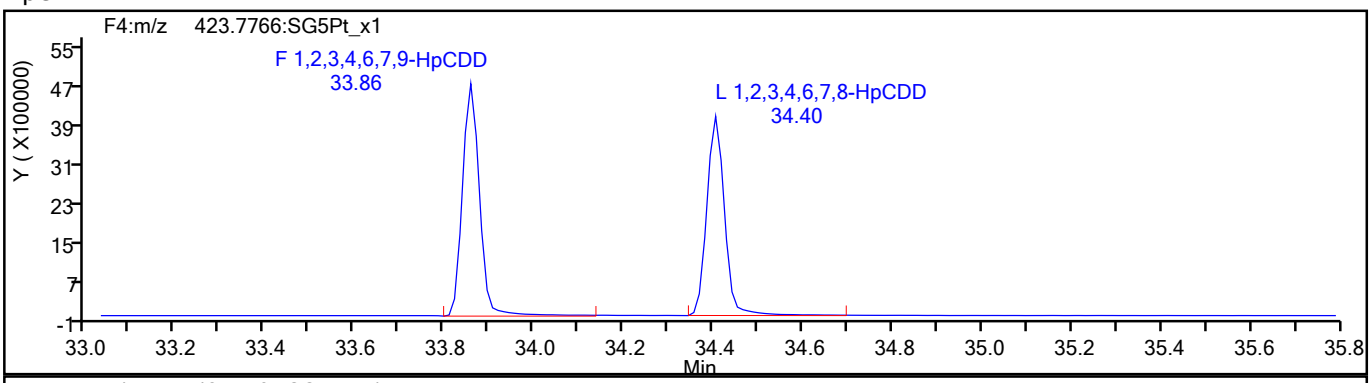

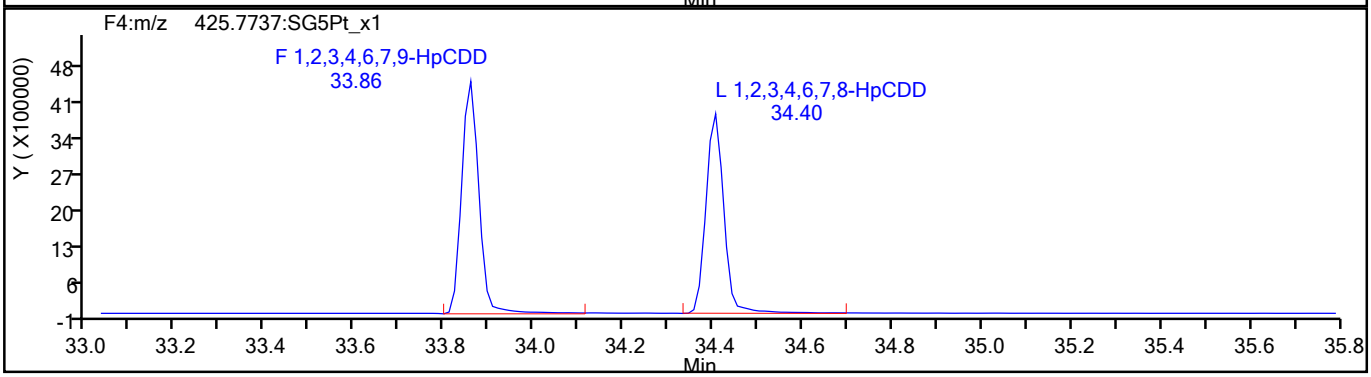

HpCDD Standards

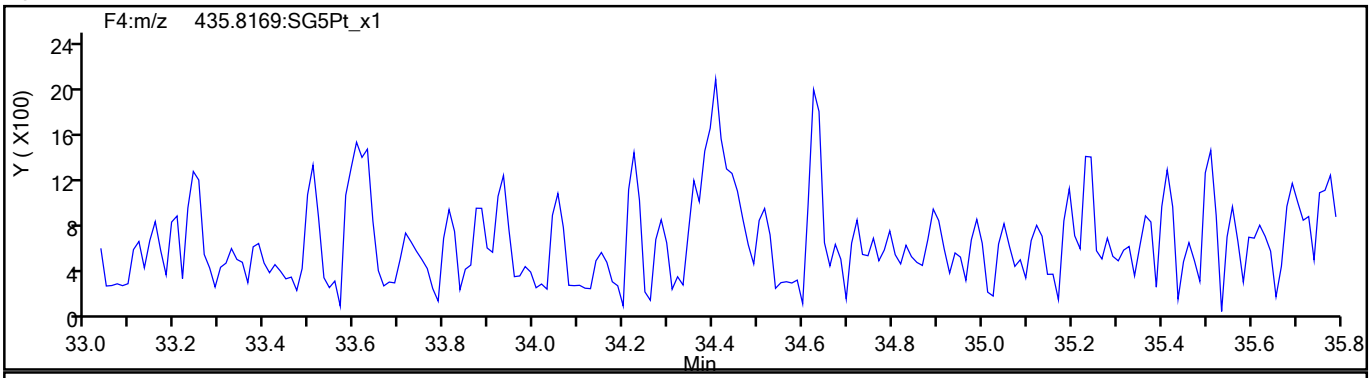

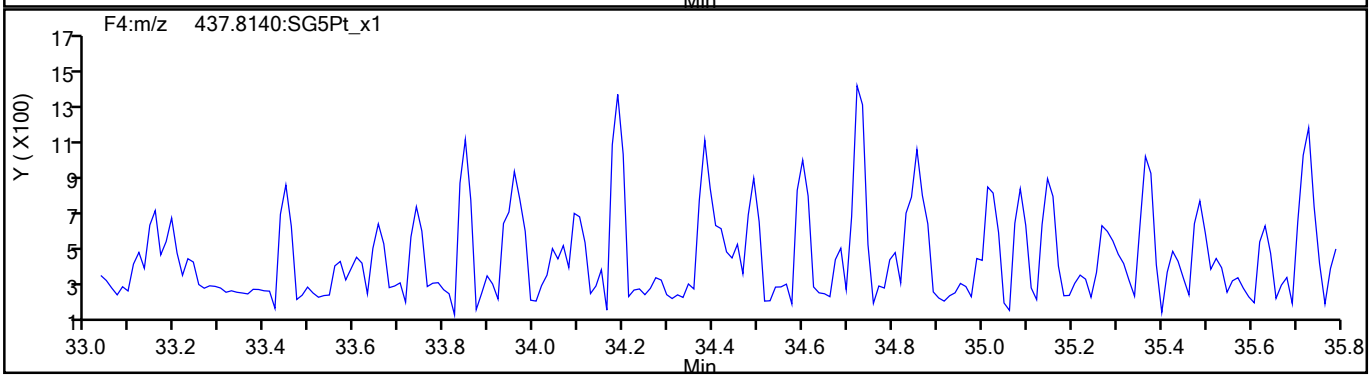

792801

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

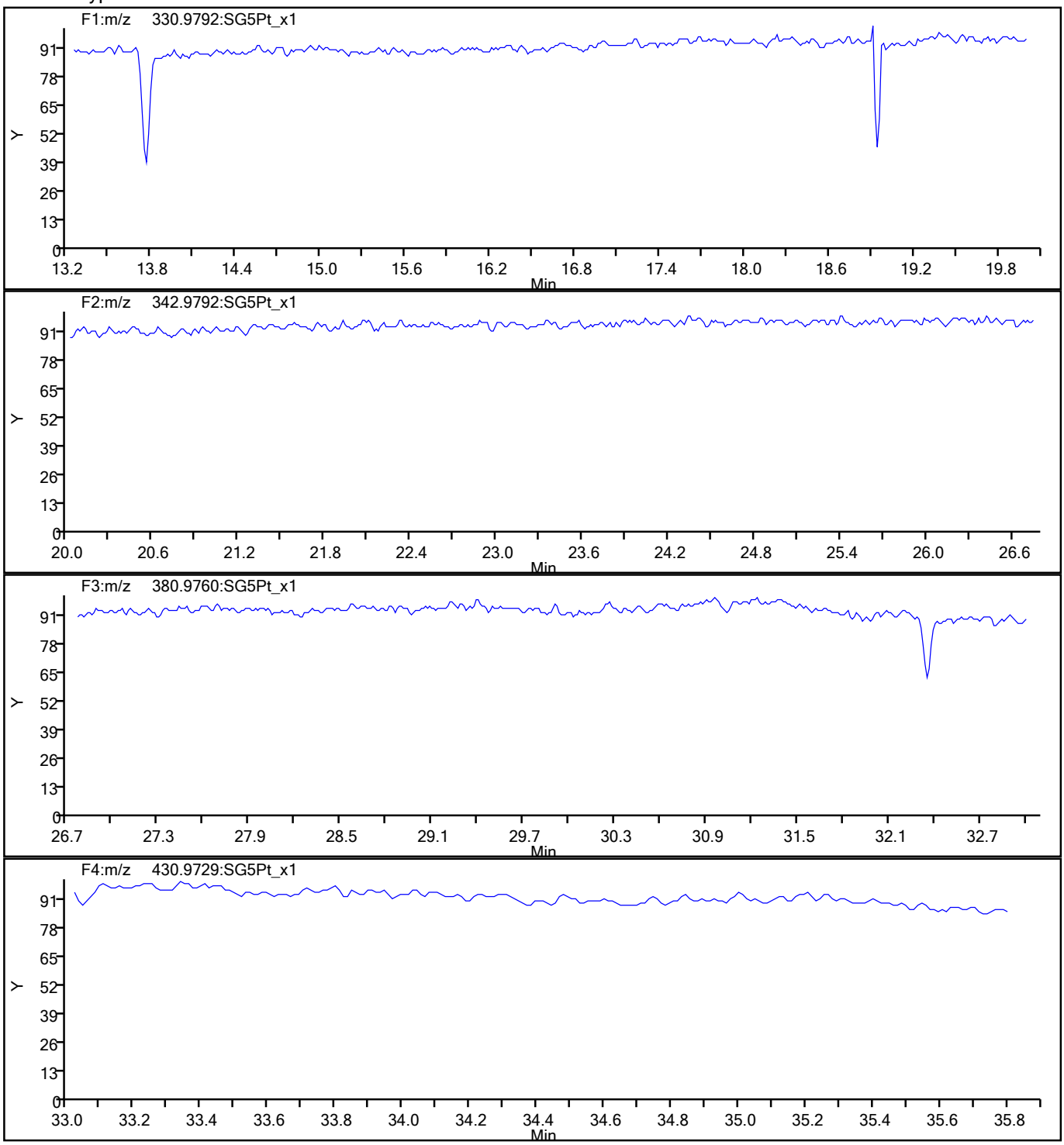

792802

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

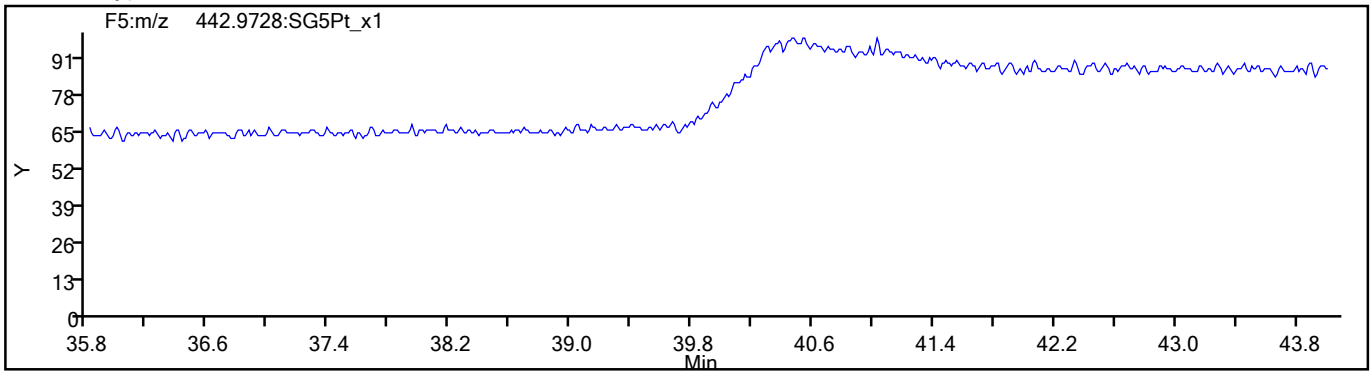

792803

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 25-Aug-2021 21:35:49 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521A WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:47:04 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 10:35:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.084	74388120	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.099	159997258	0.76	1.0239	84.0	84.0	0.3627	0.3627		
A Non-2,3,7,8-sub-TCDF	17.069	140883117	0.77	1.0239	74.0	74.0	0.3627	37.6		
S Total TCDF					158.0	158.0	0.3627	0.3627		
D 13C-2,3,7,8-TCDD	17.779	40521919	0.78	0.8993					0.00	
2,3,7,8-TCDD	17.794	54572596	0.78	1.2541	43.0	43.0	0.2594	0.2594		
A Non-2,3,7,8-sub-TCDD	17.530	153892625	0.78	1.2541	121.1	121.1	0.2594	43.5		
S Total TCDD					164.1	164.1	0.2594	0.2594		
A F1 PeCDFs	19.851	65266147	1.58	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.067	54189309	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.696	82705634	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.331	53586347	1.22	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.519	39695684	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.603	43294157	1.04	1.4413						
1,2,3,4,7,8,9-HpCDF	34.673	36211070	1.05	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.138						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.393	28640279	1.03	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.223						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.710	89743358	0.77							
1,3,6,8-TCDD	15.617	54255255	0.78							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.172						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.917	38883880	1.26							
1,2,3,4,8,9-HxCDF	32.236	47807565	1.22							
1,2,3,4,6,7,9-HpCDD	33.846	31570188	1.03							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 25-Aug-2021 21:35:49 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521A WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:47:04 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 10:35:11

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.084	17.084	0	1.000	32323167	8621543	6628	16570	1301		
317.9389	17.084	17.084	0	1.000	42064953	11085793	5116	12790	2167	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.099	17.099	0	1.001	69319978	16365691	28593	71482	572		
305.8987	17.099	17.099	0	1.001	90677280	21385185	44592	111480	480	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.945	17.069	53	1.050	30052123	7209328	28593	71482	252		
305.8987	17.945	17.069	53	1.050	39165578	9496018	44592	111480	213	0.77(0.65-0.89)	
303.9016	18.883	17.069	109	1.105	31094339	7154782	28593	71482	250		
305.8987	18.883	17.069	109	1.105	40571077	9344405	44592	111480	210	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.779	17.779	0	1.000	17742401	4421826	3384	8460	1307		
333.9339	17.779	17.779	0	1.000	22779518	5620867	2334	5835	2408	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.794	17.794	0	1.001	23998282	5996302	12780	31950	469		
321.8936	17.794	17.794	0	1.001	30574314	7642168	19893	49732	384	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.673	17.530	9	0.994	20564539	5151481	12780	31950	403		
321.8936	17.673	17.530	9	0.994	26572656	6761809	19893	49732	340	0.77(0.65-0.89)	
319.8965	17.961	17.530	26	1.010	24367217	5909696	12780	31950	462		
321.8936	17.961	17.530	26	1.010	30884604	7367861	19893	49732	370	0.79(0.65-0.89)	
319.8965	18.883	17.530	81	1.062	22563336	5247375	12780	31950	411		
321.8936	18.883	17.530	81	1.062	28940273	6736130	19893	49732	339	0.78(0.65-0.89)	
A F1 PeCDFs											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	19.155	19.851	-42	1.000	39966213	8908855	665	1662	13397		
341.8567	19.155	19.851	-42	1.000	25299934	5733839	983	2457	5833	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.656	23.067	-144	1.000	97574	17131	3361	8402	5		
341.8567	20.656	23.067	-144	1.000	54775	11836	2646	6615	4	1.78(1.32-1.78)	
339.8597	21.475	23.067	-95	1.000	127261	24792	3361	8402	7		
341.8567	21.475	23.067	-95	1.000	58432	13401	2646	6615	5	2.18(1.32-1.78)	
339.8597	22.034	23.067	-62	1.000	241269	41075	3361	8402	12		
341.8567	22.034	23.067	-62	1.000	188461	25346	2646	6615	10	1.28(1.32-1.78)	
339.8597	22.579	23.067	-29	1.000	168384	27442	3361	8402	8		
341.8567	22.566	23.067	-30	1.000	97299	18101	2646	6615	7	1.73(1.32-1.78)	
339.8597	25.252	23.067	131	1.000	32805798	5042919	3361	8402	1500		
341.8567	25.252	23.067	131	1.000	20419552	3191833	2646	6615	1206	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	20.902	23.696	-167	1.000	26002082	4742565	2517	6292	1884		
357.8516	20.902	23.696	-167	1.000	16527788	3016560	1584	3960	1904	1.57(1.32-1.78)	
355.8546	25.034	23.696	80	1.000	24642898	3723681	2517	6292	1479		
357.8516	25.034	23.696	80	1.000	15532866	2363453	1584	3960	1492	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.497	30.331	-170	1.000	29496594	4050629	4076	10190	994		
375.8178	27.484	30.331	-170	1.000	24089753	3299313	3201	8002	1031	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.042	30.519	-88	1.000	21909983	2755605	7443	18607	370		
391.8127	29.028	30.519	-89	1.000	17417167	2167101	5856	14640	370	1.26(1.05-1.43)	
389.8157	30.678	30.519	10	1.000	199387	39528	7443	18607	5		
391.8127	30.692	30.519	10	1.000	169147	31524	5856	14640	5	1.18(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603	33.603	0	1.000	22072838	8057659	19102	47755	422		
409.7789	33.603	33.603	0	1.000	21221319	8000430	19548	48870	409	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673	34.673	0	1.000	18558826	6373334	19102	47755	334		
409.7789	34.673	34.673	0	1.000	17652244	6113772	19548	48870	313	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						19102	47755			
409.7789	34.138						19548	48870			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	14534486	5108509	16615	41537	307		
425.7737	34.393	34.393	0	1.000	14105793	5035439	20282	50705	248	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						16615	41537			
425.7737	34.223						20282	50705			
1,3,6,8-TCDF											
303.9016	14.710	14.710	0		39075114	12523325	28593	71482	438		
305.8987	14.710	14.710	0		50668244	16274864	44592	111480	365	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,3,6,8-TCDD											
319.8965	15.617	15.617	0		23811446	6916572	12780	31950	541		
321.8936	15.617	15.617	0		30443809	8702675	19893	49732	437	0.78(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.537						28593	71482			
305.8987	17.537						44592	111480			
1,2,3,7-TCDD											
319.8965	18.172						12780	31950			
321.8936	18.172						19893	49732			
1,2,3,9-TCDD											
319.8965	18.414						12780	31950			
321.8936	18.414						19893	49732			
1,2,3,9-TCDF											
303.9016	18.414						28593	71482			
305.8987	18.414						44592	111480			
1,2,8,9-TCDD											
319.8965	19.382						12780	31950			
1,2,8,9-TCDF											
303.9016	19.427						28593	71482			
305.8987	19.427						44592	111480			
1,3,4,6,8-PeCDF											
339.8597	19.669						665	1662			
341.8567	19.669						983	2457			
1,2,4,7,9-PeCDD											
355.8546	21.480						2517	6292			
357.8516	21.480						1584	3960			
1,2,3,8,9-PeCDD											
355.8546	25.790						2517	6292			
357.8516	25.790						1584	3960			
1,2,3,8,9-PeCDF											
339.8597	26.021						3361	8402			
341.8567	26.021						2646	6615			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						4076	10190			
375.8178	28.333						3201	8002			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						7443	18607			
391.8127	29.890						5856	14640			
1,2,3,4,6,7-HxCDD											
389.8157	31.917	31.917	0		21657242	6174171	7443	18607	830		
391.8127	31.903	31.917	-1		17226638	4945369	5856	14640	844	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.236	32.236	0		26293189	8356423	4076	10190	2050		
375.8178	32.236	32.236	0		21514376	6764058	3201	8002	2113	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.846	33.846	0		16052996	5838798	16615	41537	351		
425.7737	33.846	33.846	0		15517192	5735924	20282	50705	283	1.03(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	74388120	19707336

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	74388120	19707336

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.945	30052123	7209328	39165578	9496018	36.4	0.77	
18.883	31094339	7154782	40571077	9344405	37.6	0.77	
Signal Totals:							
	61146462	14364110	79736655	18840423			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	140883117	33204533				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 73.987 = (140883117 * 40.000) / (74388120 * 1.024)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	40521919	10042693

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	40521919	10042693

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.673	20564539	5151481	26572656	6761809	37.1	0.77	
17.961	24367217	5909696	30884604	7367861	43.5	0.79	
18.883	22563336	5247375	28940273	6736130	40.5	0.78	
Signal Totals:							
	67495092	16308552	86397533	20865800			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	153892625	37174352				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 121.129 = (153892625 * 40.000) / (40521919 * 1.254)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.155	39966213	8908855	25299934	5733839		1.58	
Signal Totals:							
	39966213	8908855	25299934	5733839			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	65266147	14642694				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (65266147 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.656	97574	17131	54775	11836		1.78	
21.475	127261	24792	58432	13401		2.18	R
22.034	241269	41075	188461	25346		1.28	R
22.579	168384	27442	97299	18101		1.73	
25.252	32805798	5042919	20419552	3191833		1.61	
Signal Totals:							
	33440286	5153359	20818519	3260517			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	54258805	8413876				1.61	RQ
	54189309	8411009					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (54258805 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (54189309 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.902	26002082	4742565	16527788	3016560		1.57	
25.034	24642898	3723681	15532866	2363453		1.59	
Signal Totals:							
	50644980	8466246	32060654	5380013			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	82705634	13846259				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (82705634 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-HxCDF, RT: 30.331

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.497	29496594	4050629	24089753	3299313		1.22	
Signal Totals:							
	29496594	4050629	24089753	3299313			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	53586347	7349942				1.22	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (53586347 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.042	21909983	2755605	17417167	2167101		1.26	
30.678	199387	39528	169147	31524		1.18	
Signal Totals:							
	22109370	2795133	17586314	2198625			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	39695684	4993758				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (39695684 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

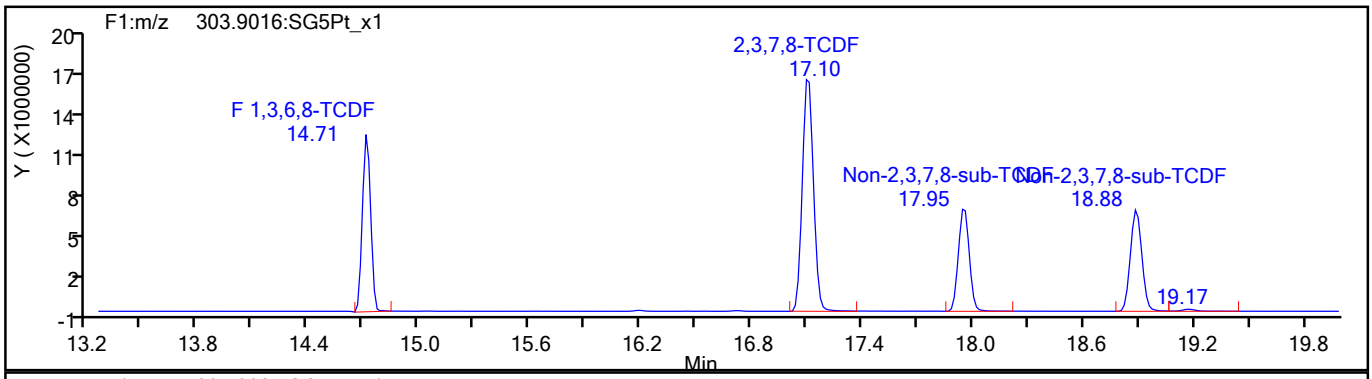

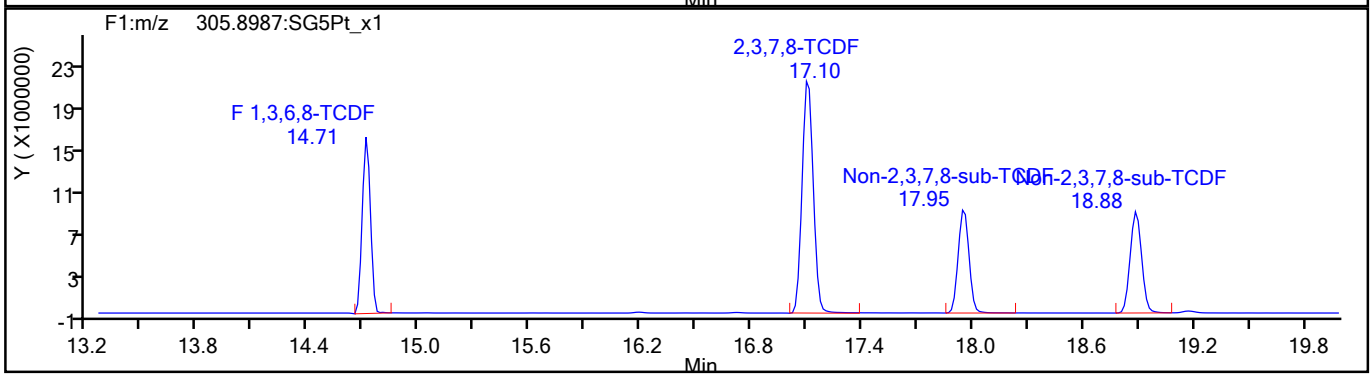

TCDF Standards

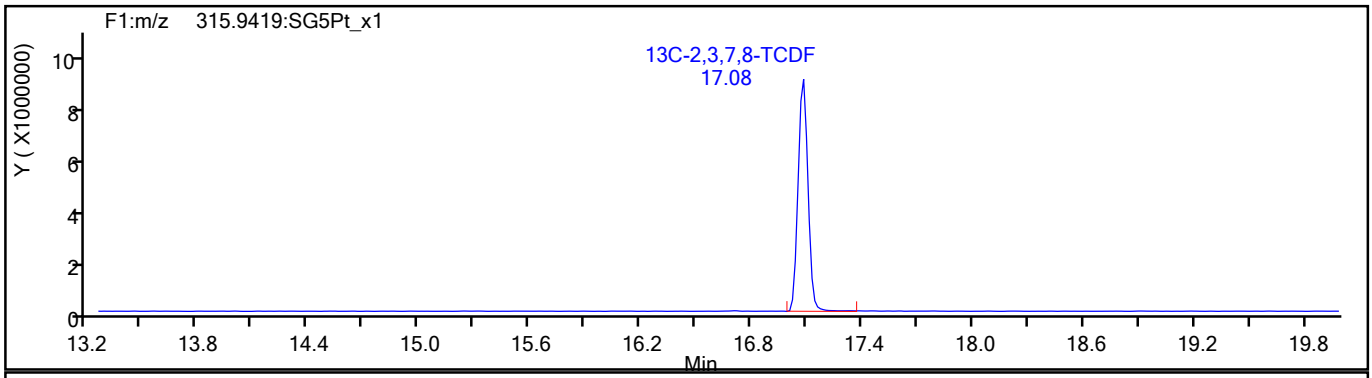

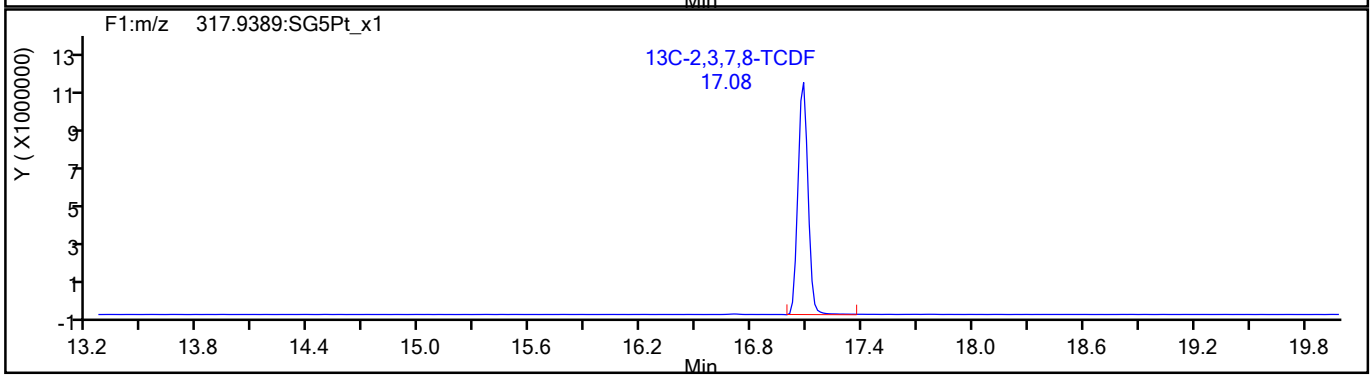

792817

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

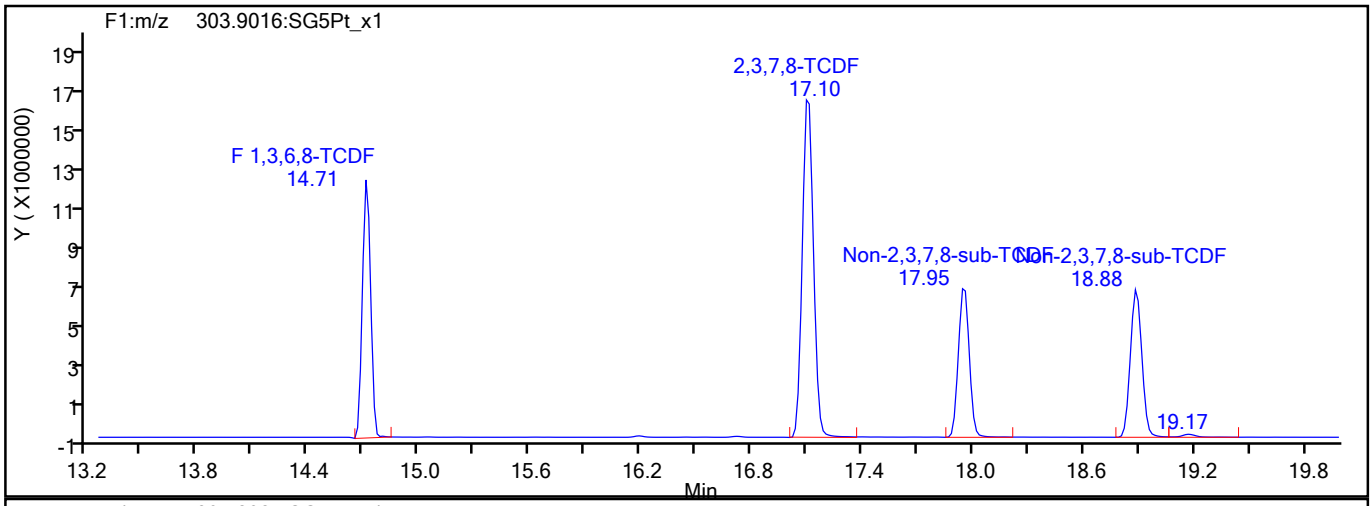

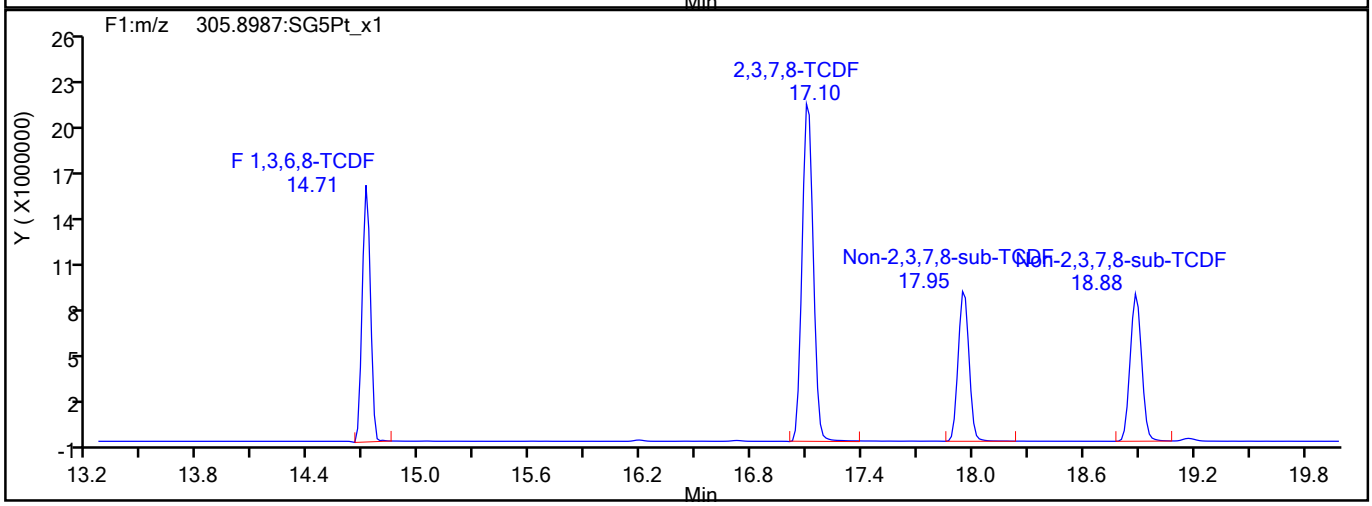

TCDF Interference Mass

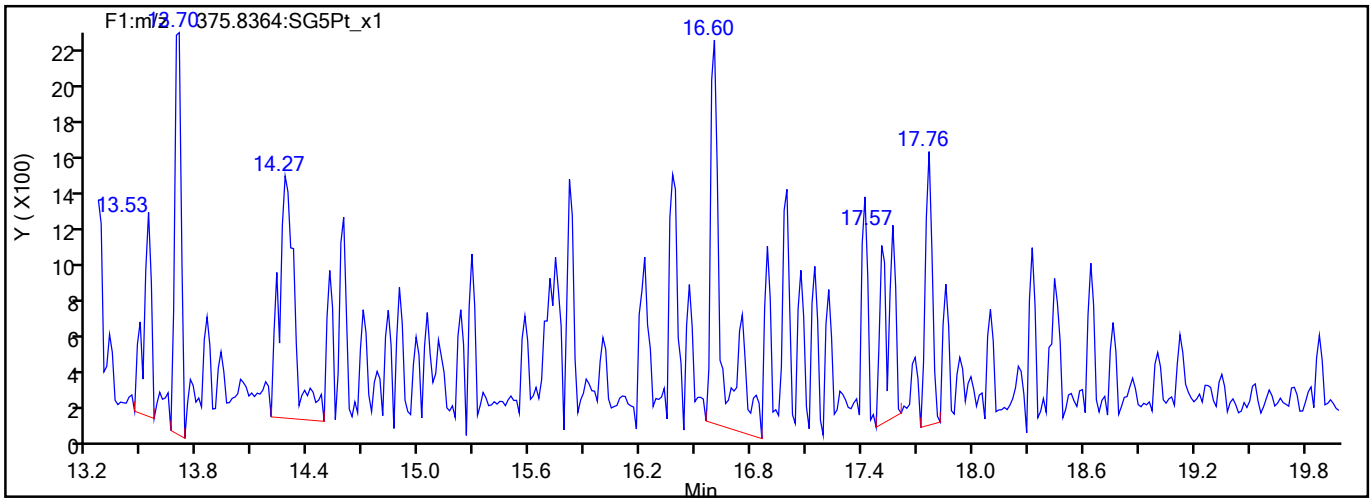

792818

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

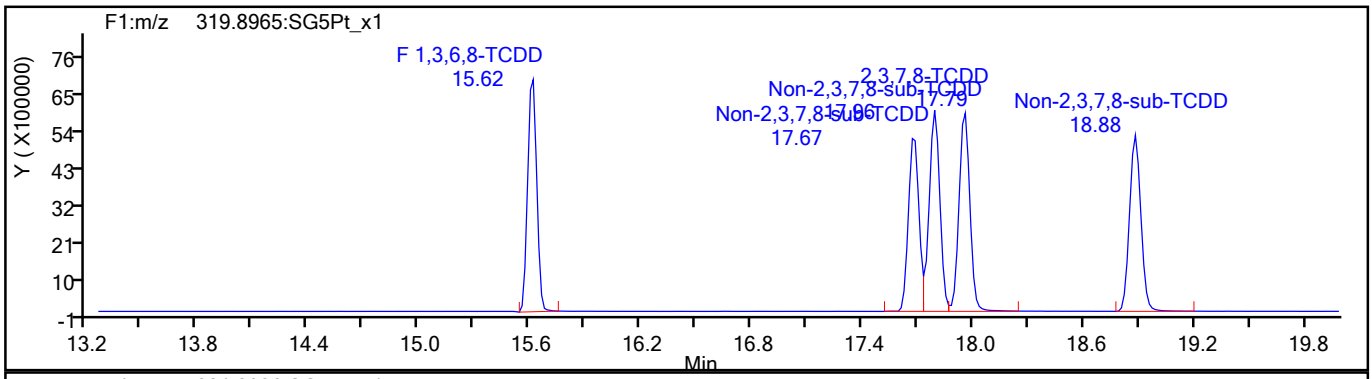

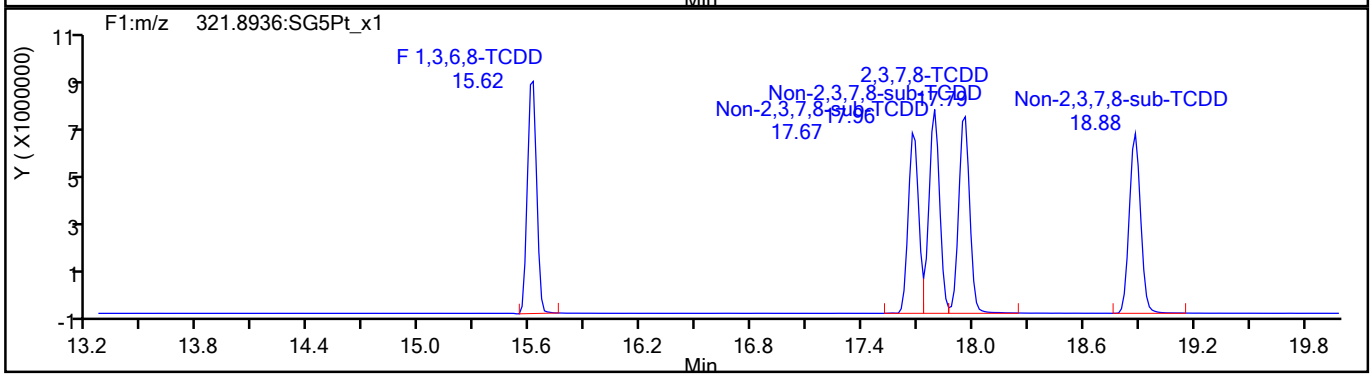

TCDD Standards

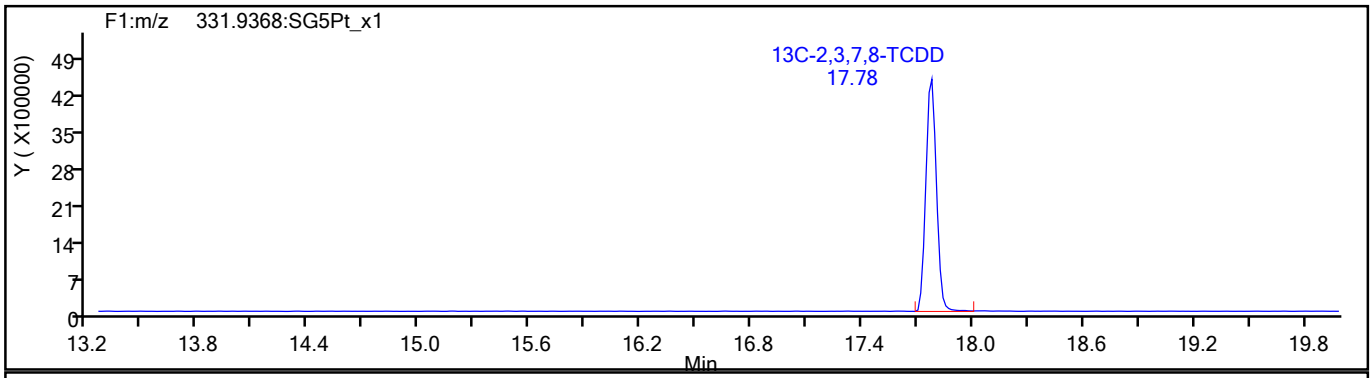

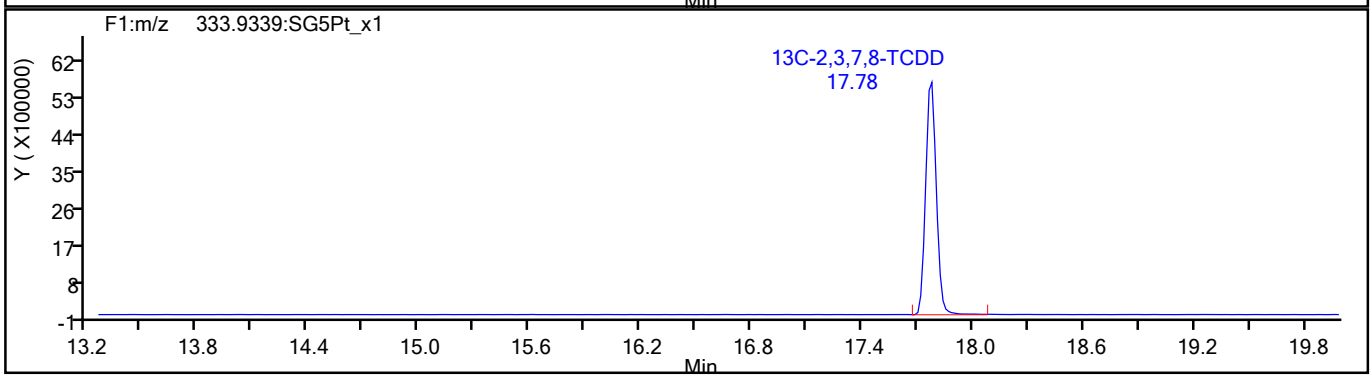

792819

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

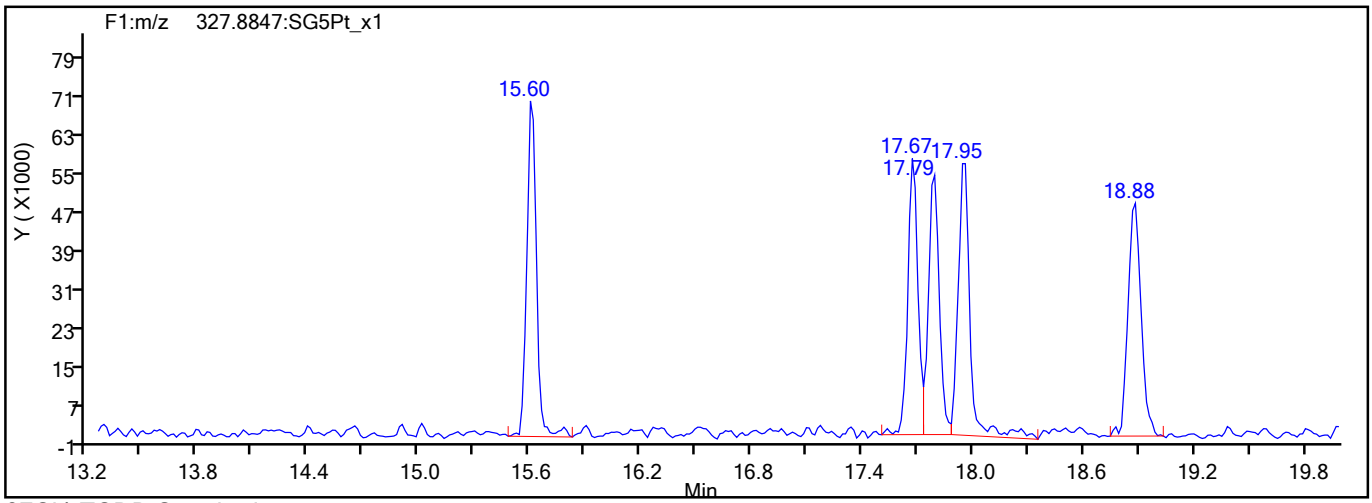

37Cl4-TCDD Standards

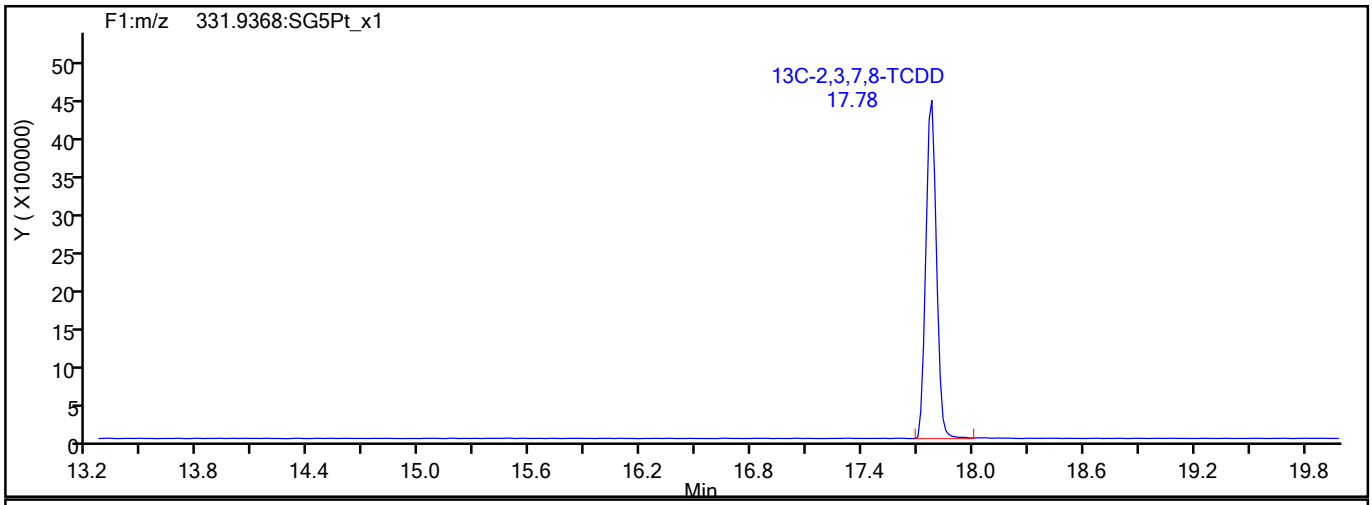

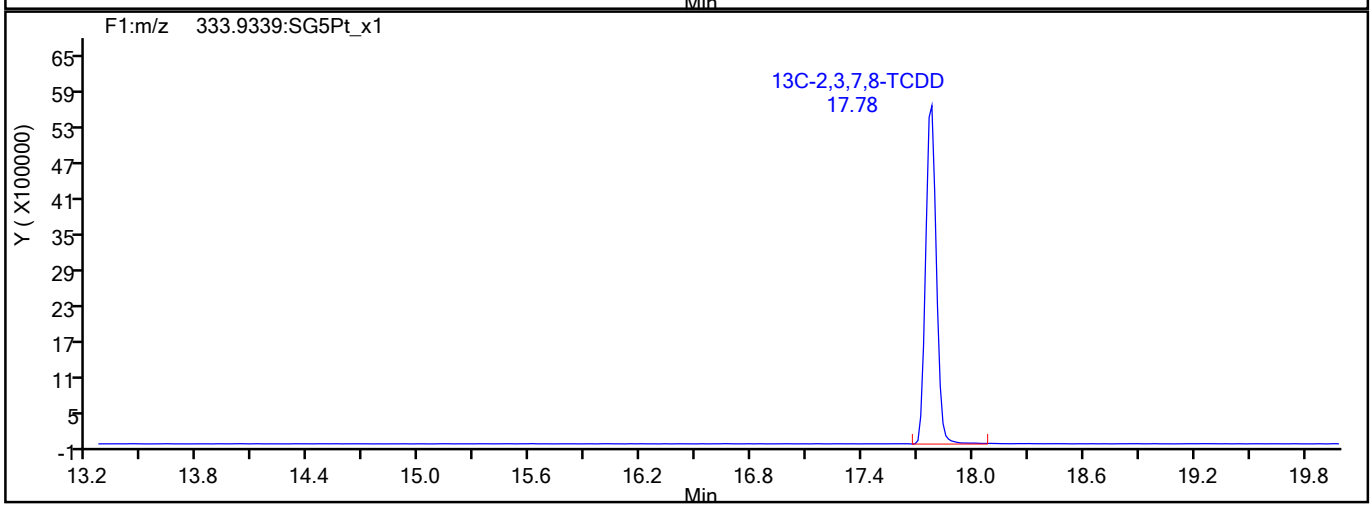

792820

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

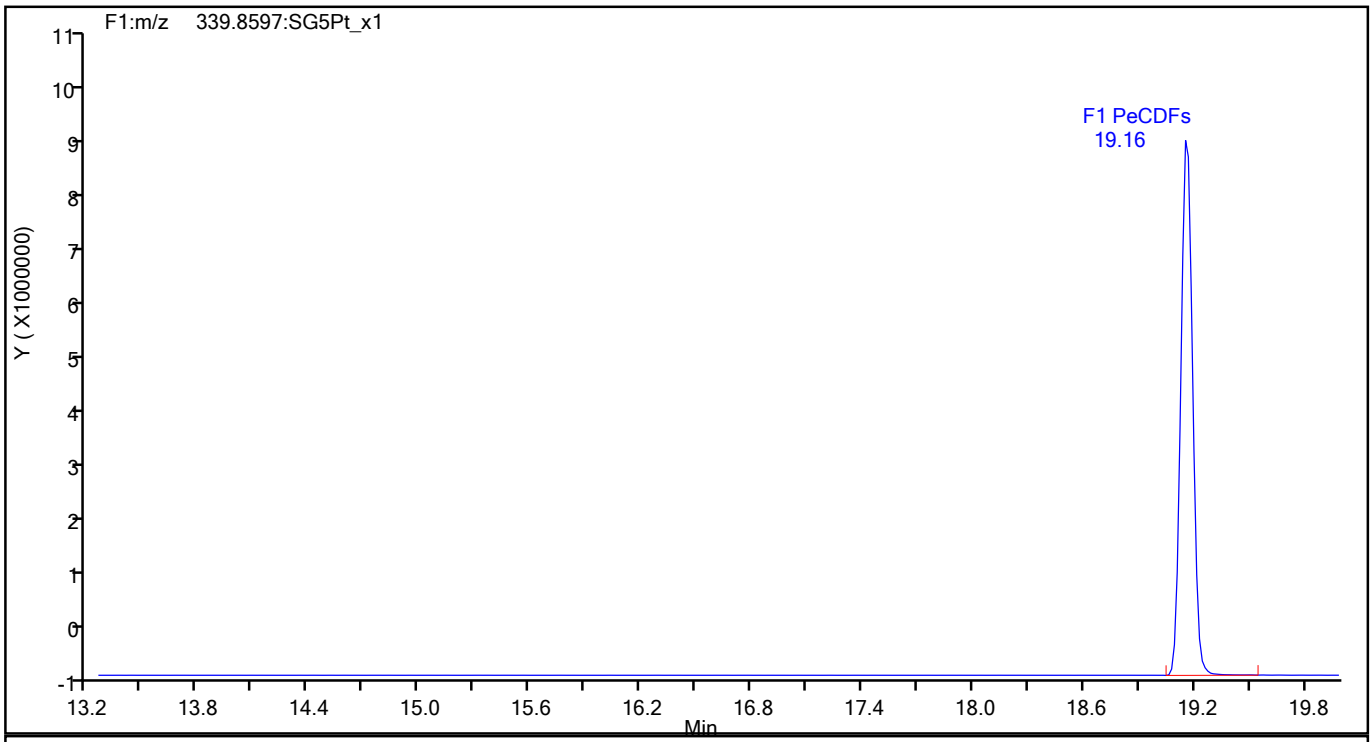

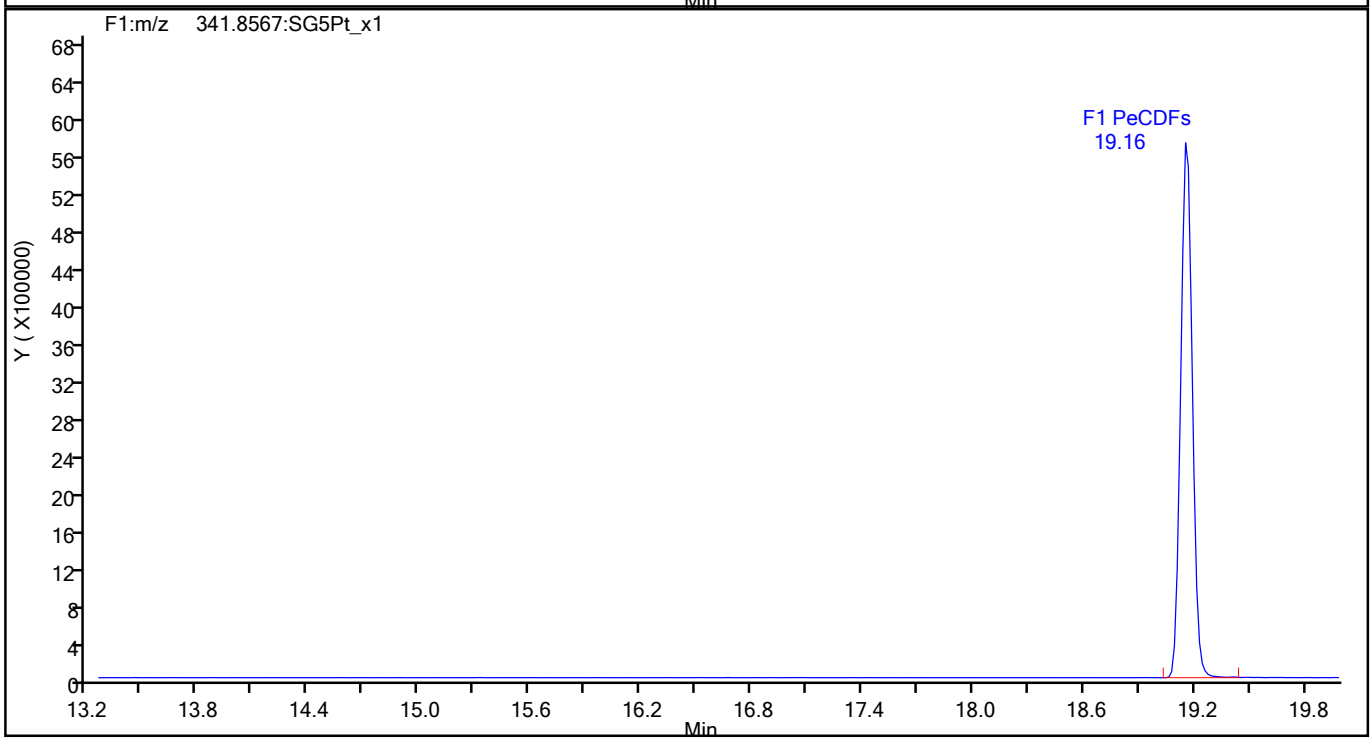

792821

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

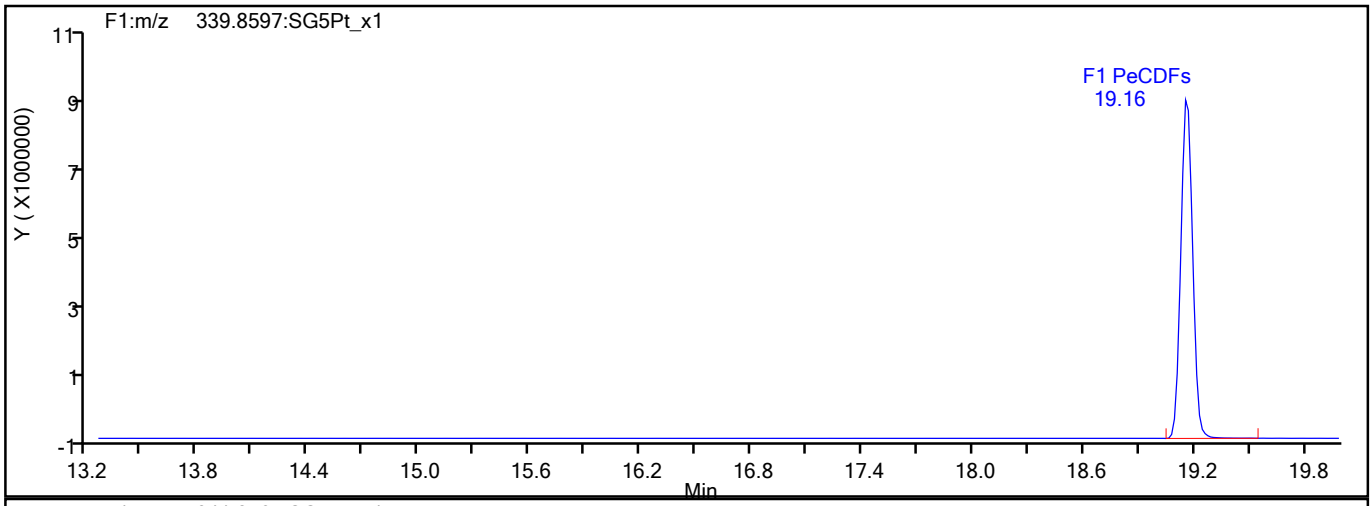

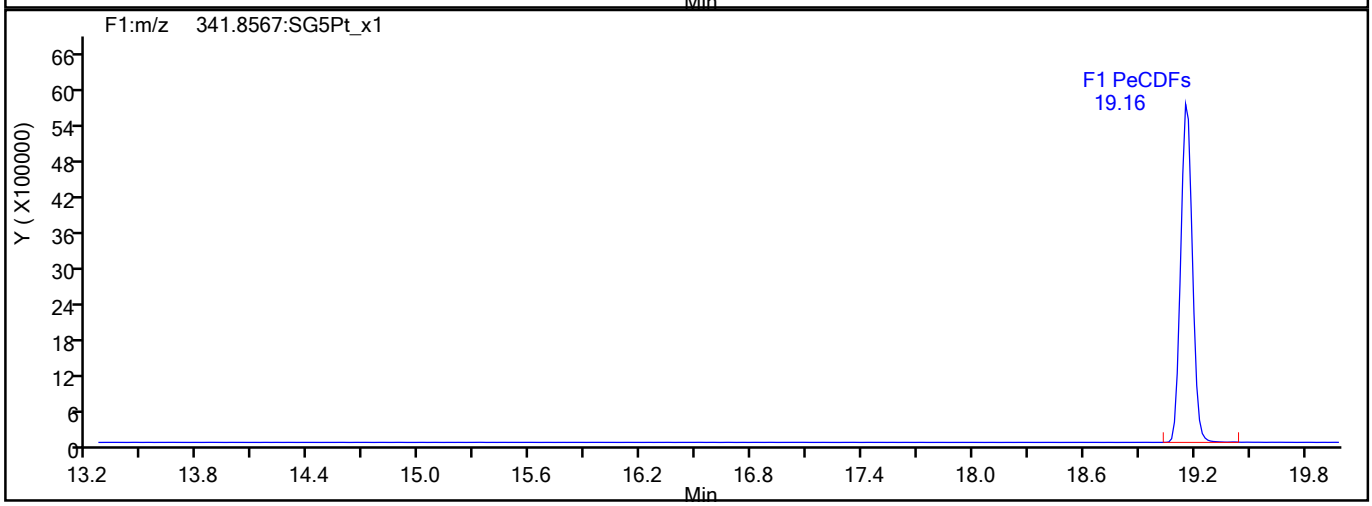

F1 PeCDFs Interference Mass

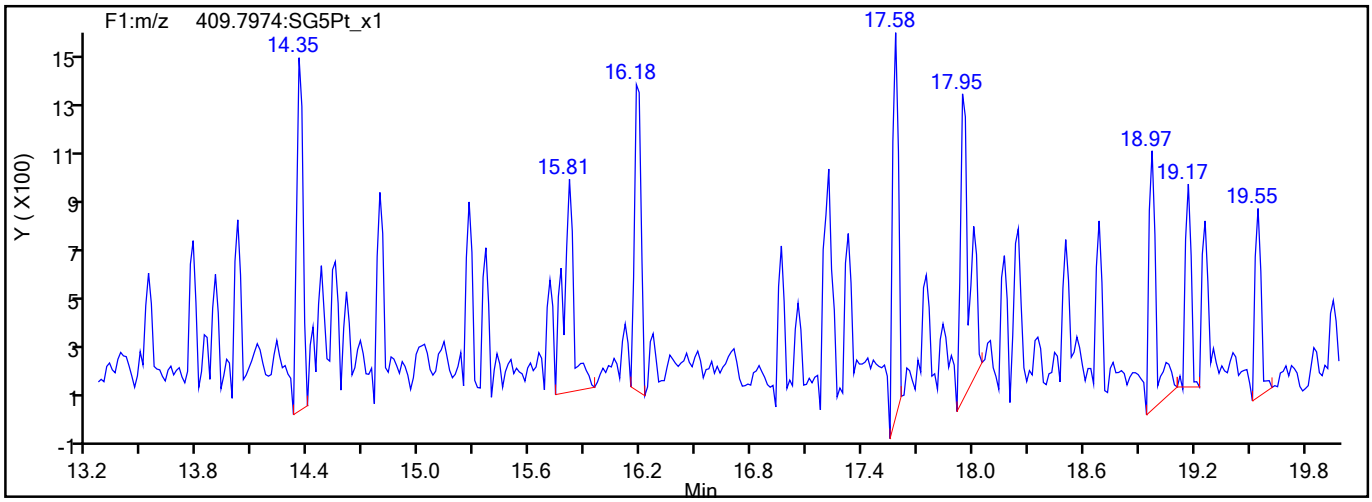

792822

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

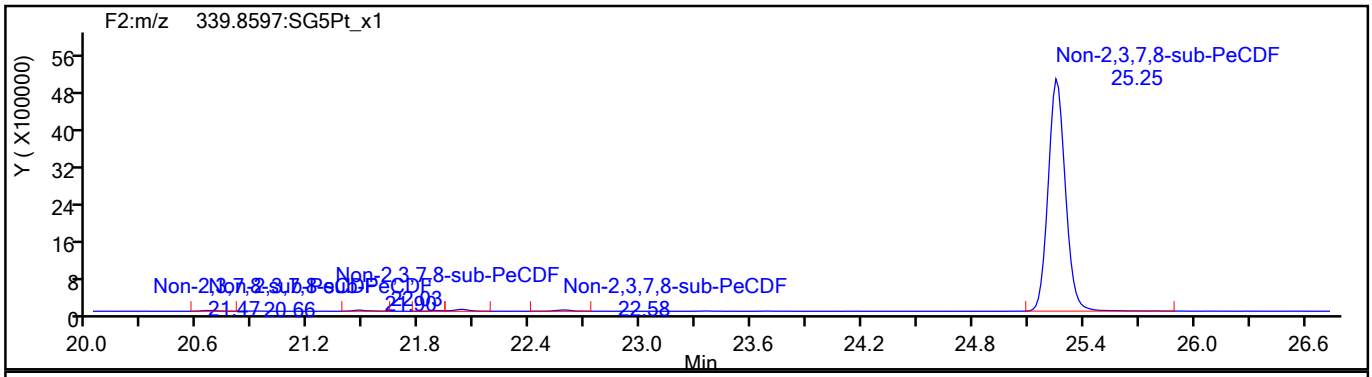

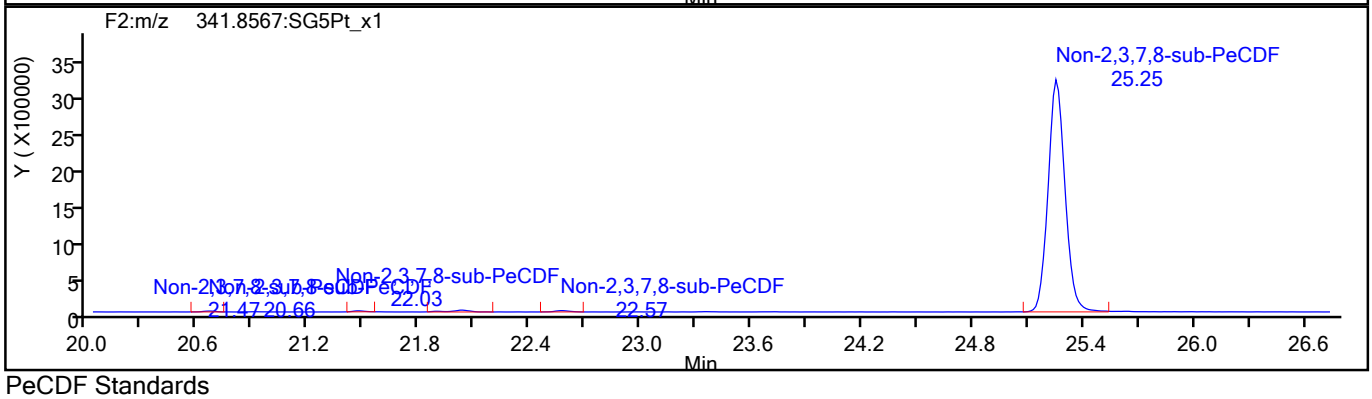

PeCDF Standards

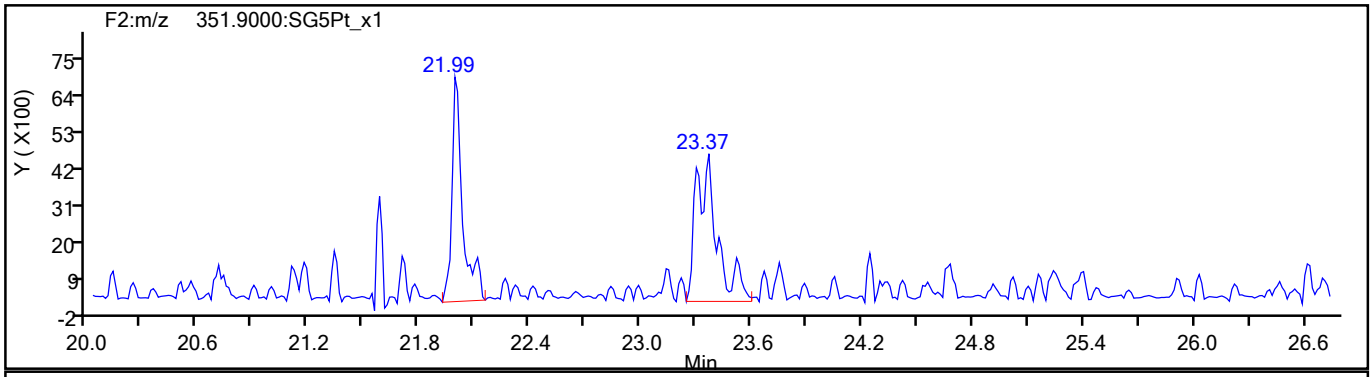

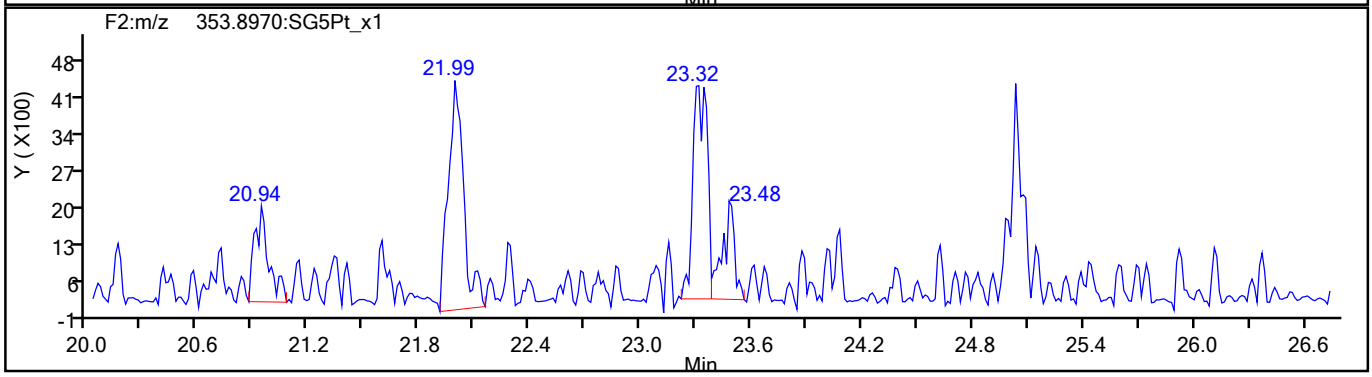

792823

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

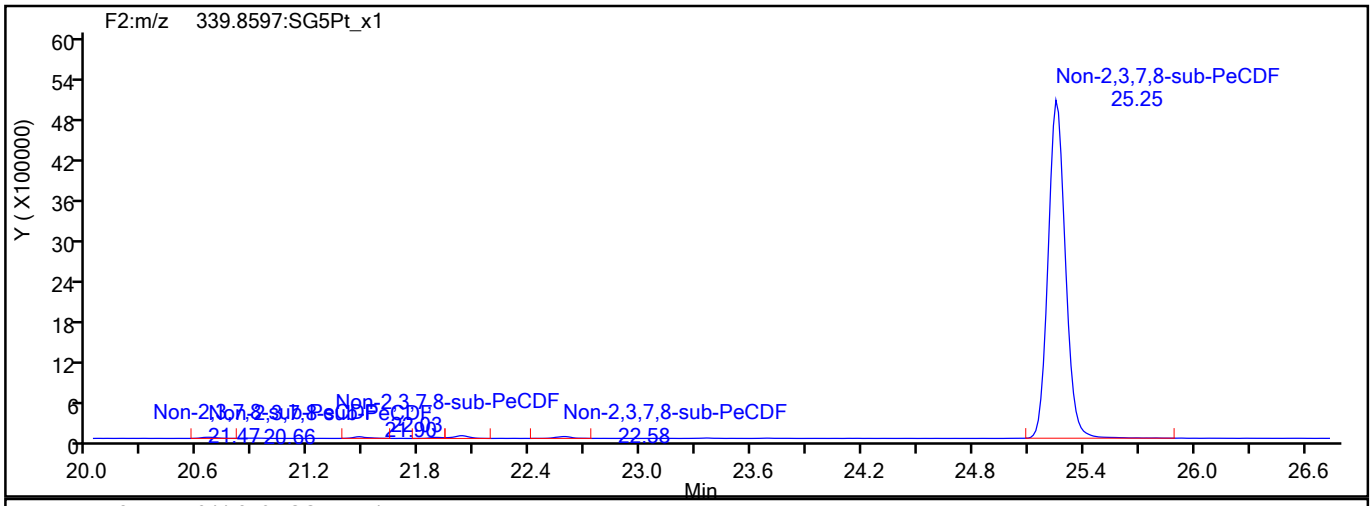

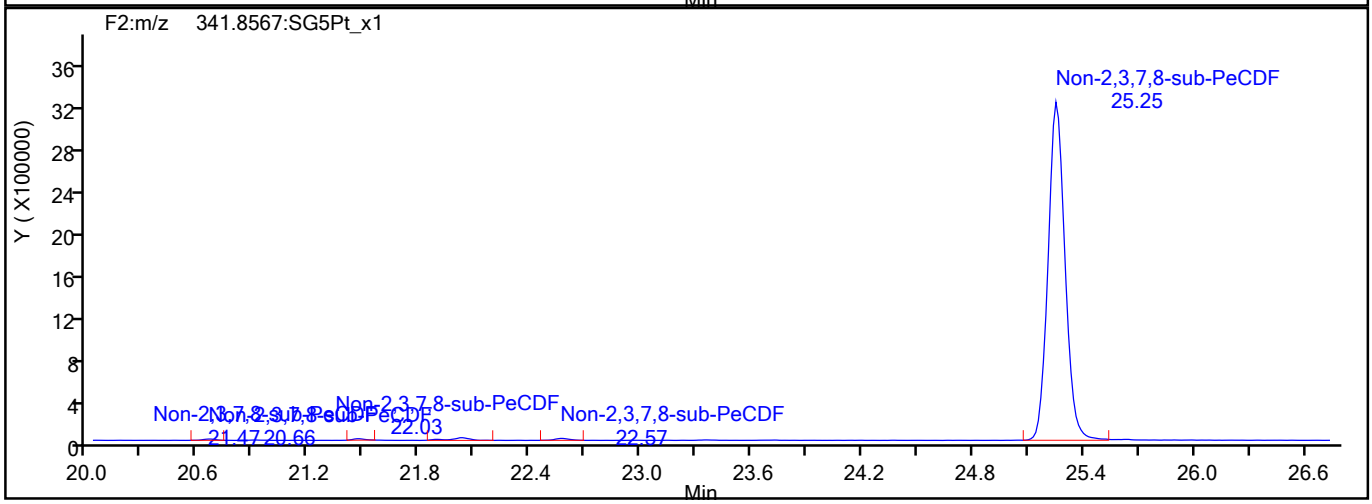

PeCDF Interference Mass

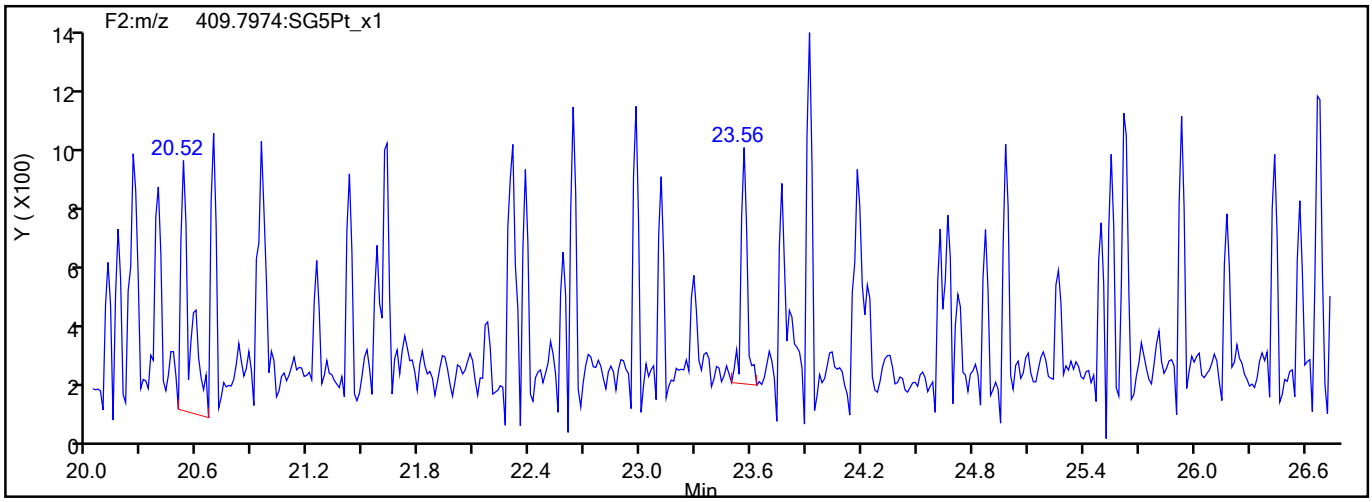

792824

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

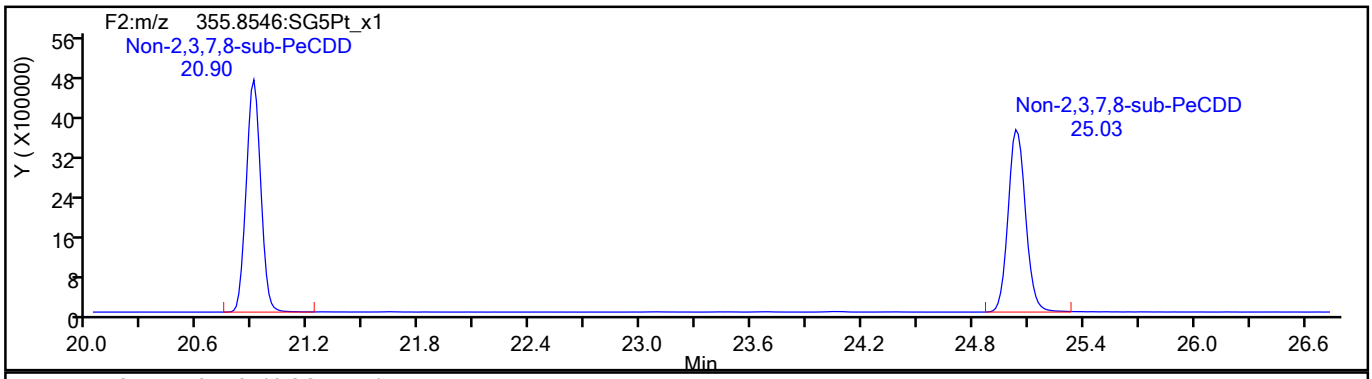

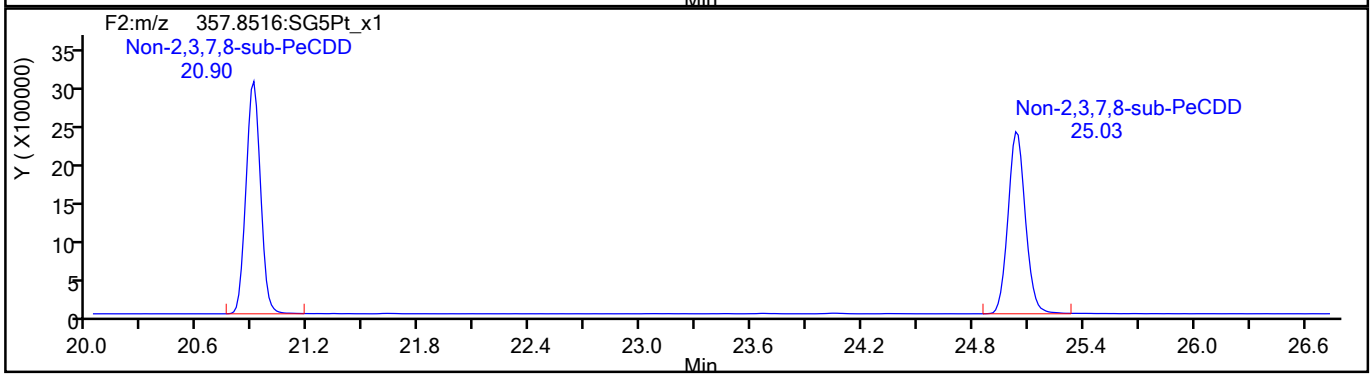

PeCDD Standards

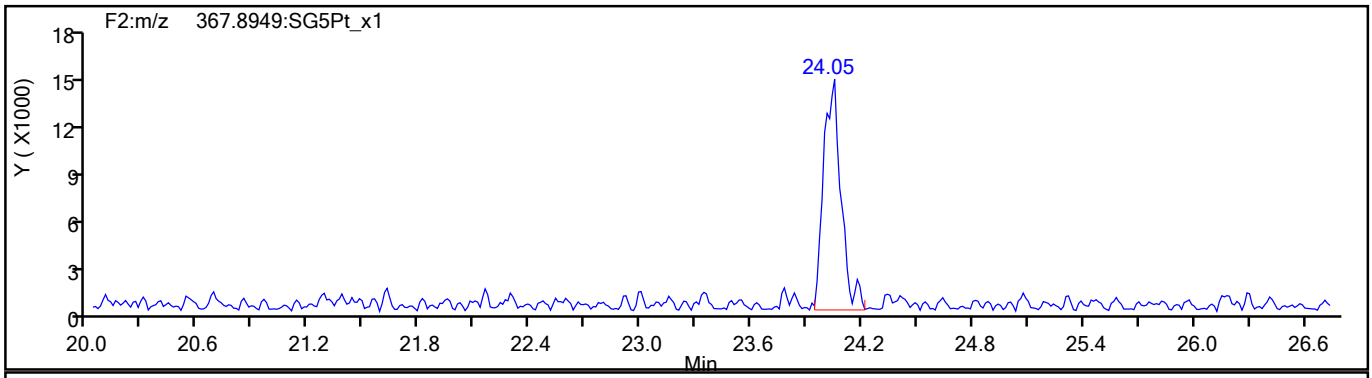

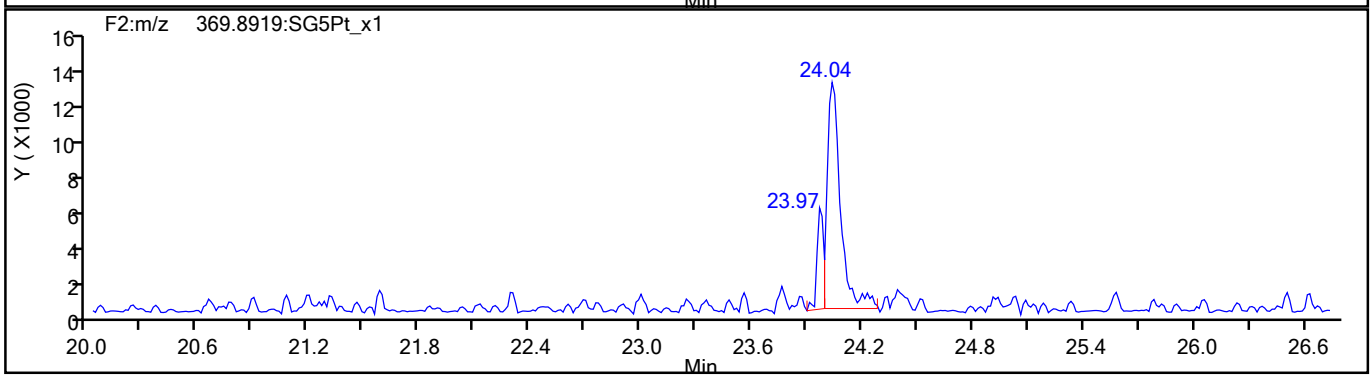

792825

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

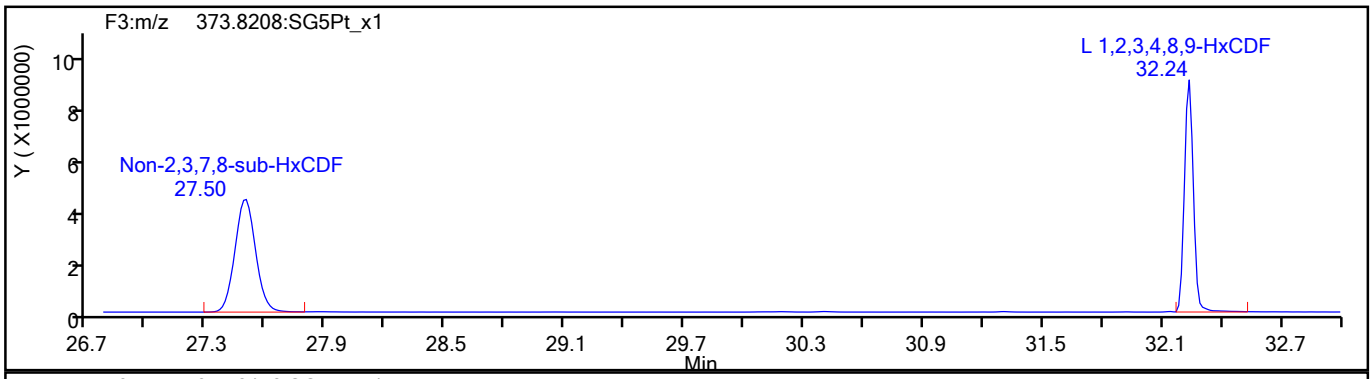

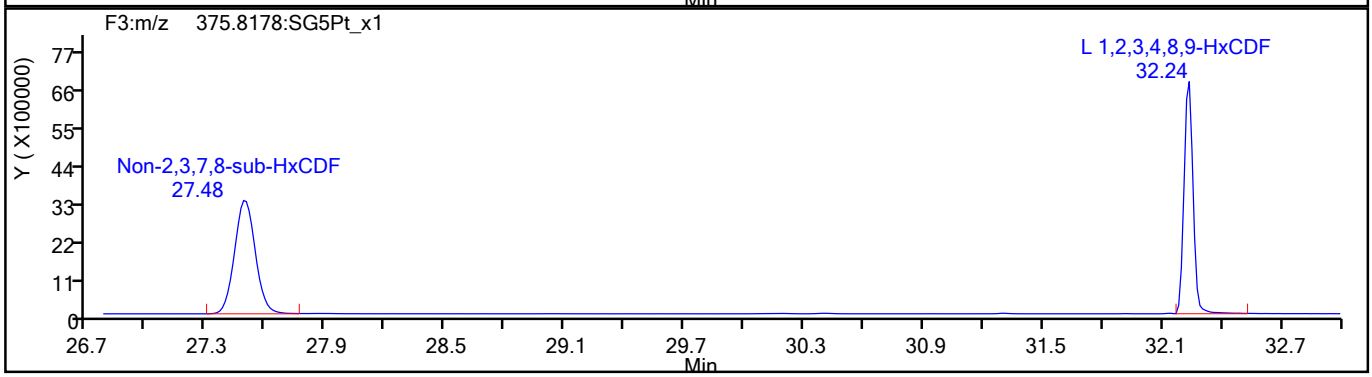

HxCDF Standards

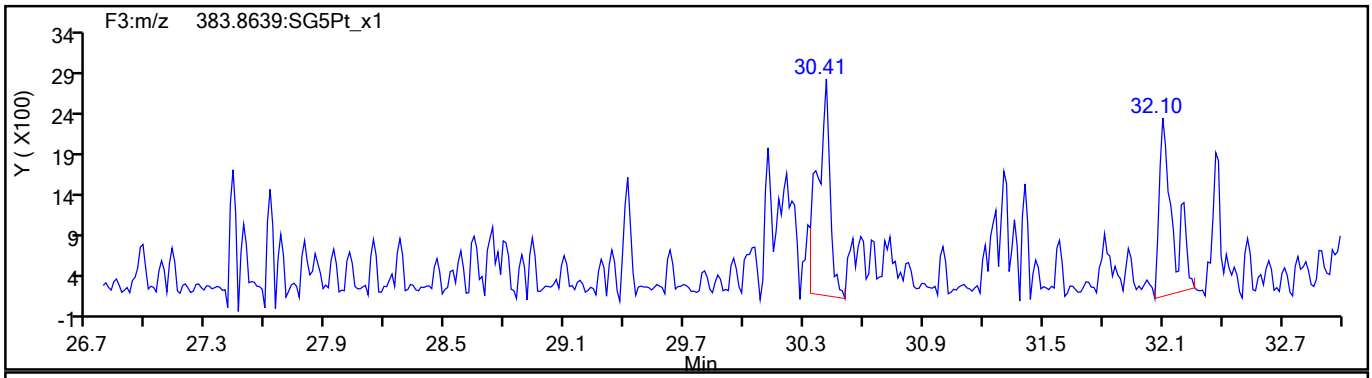

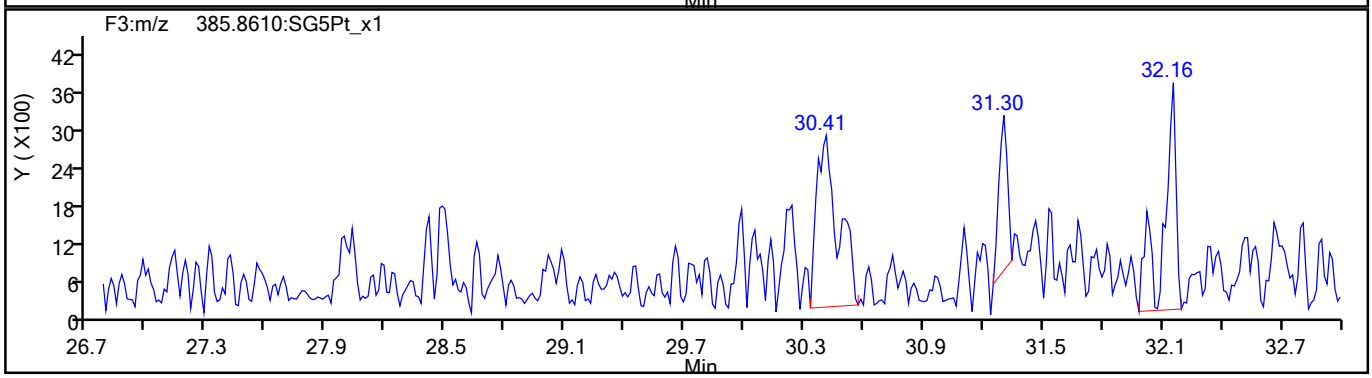

792826

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

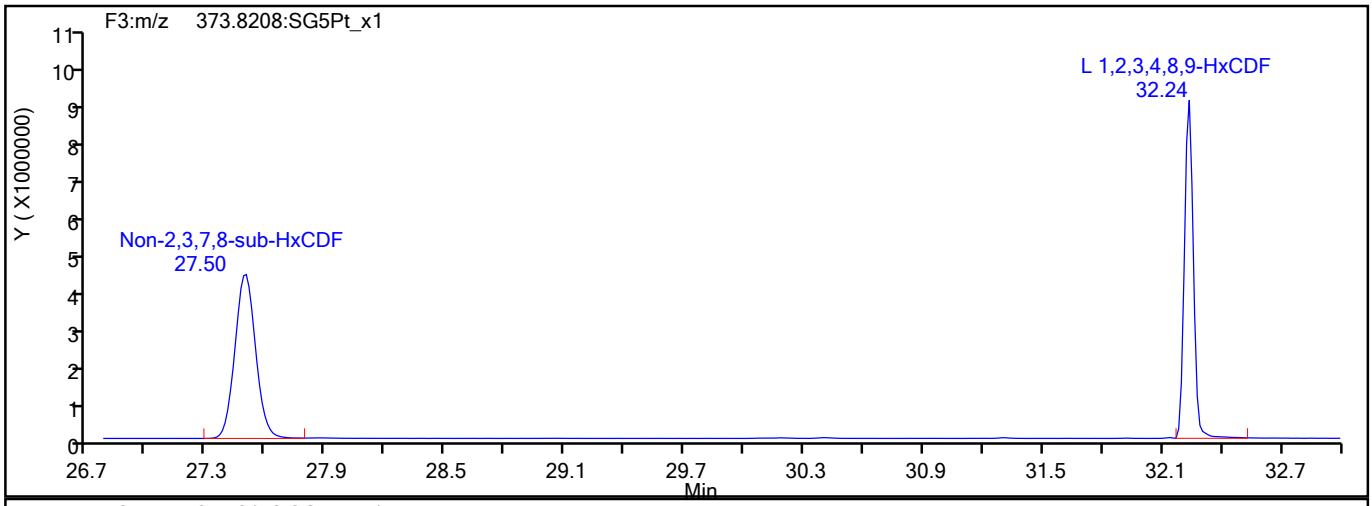

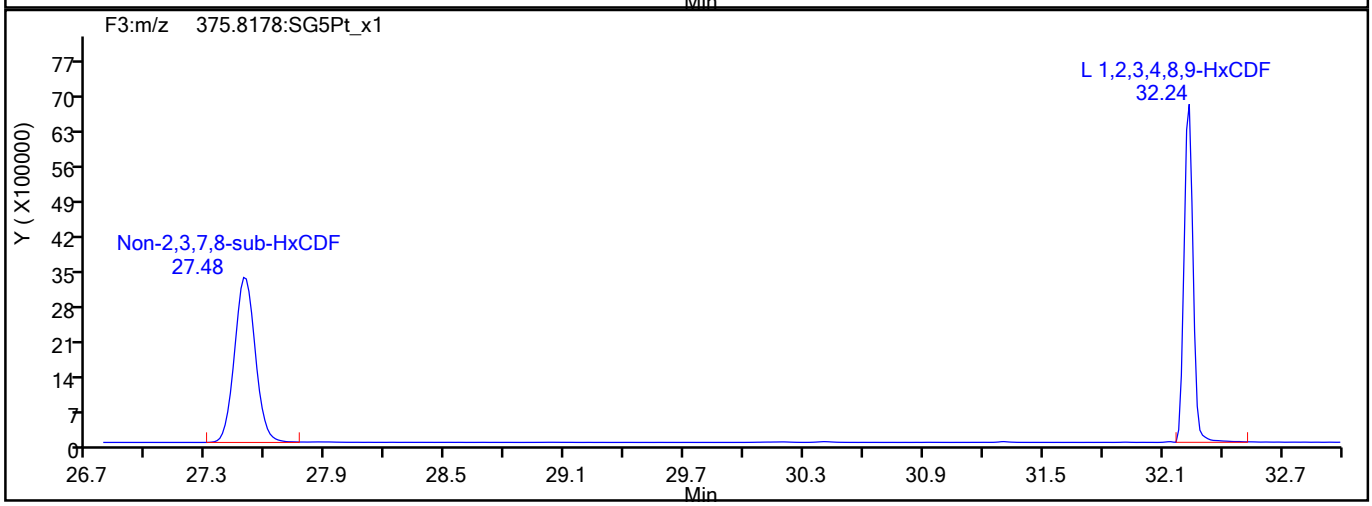

HxCDF Interference Mass

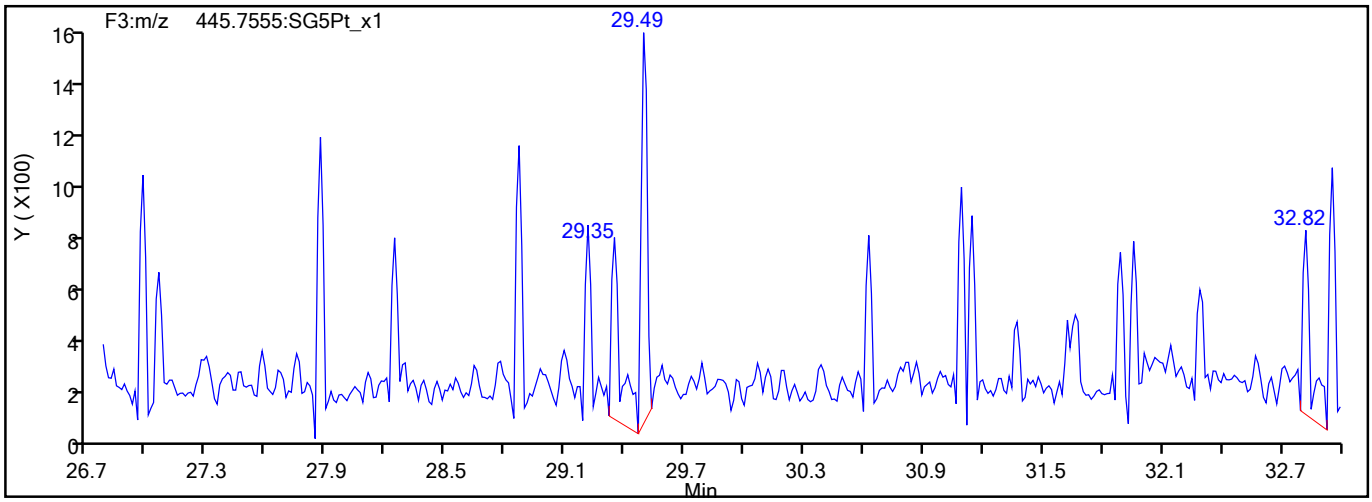

792827

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

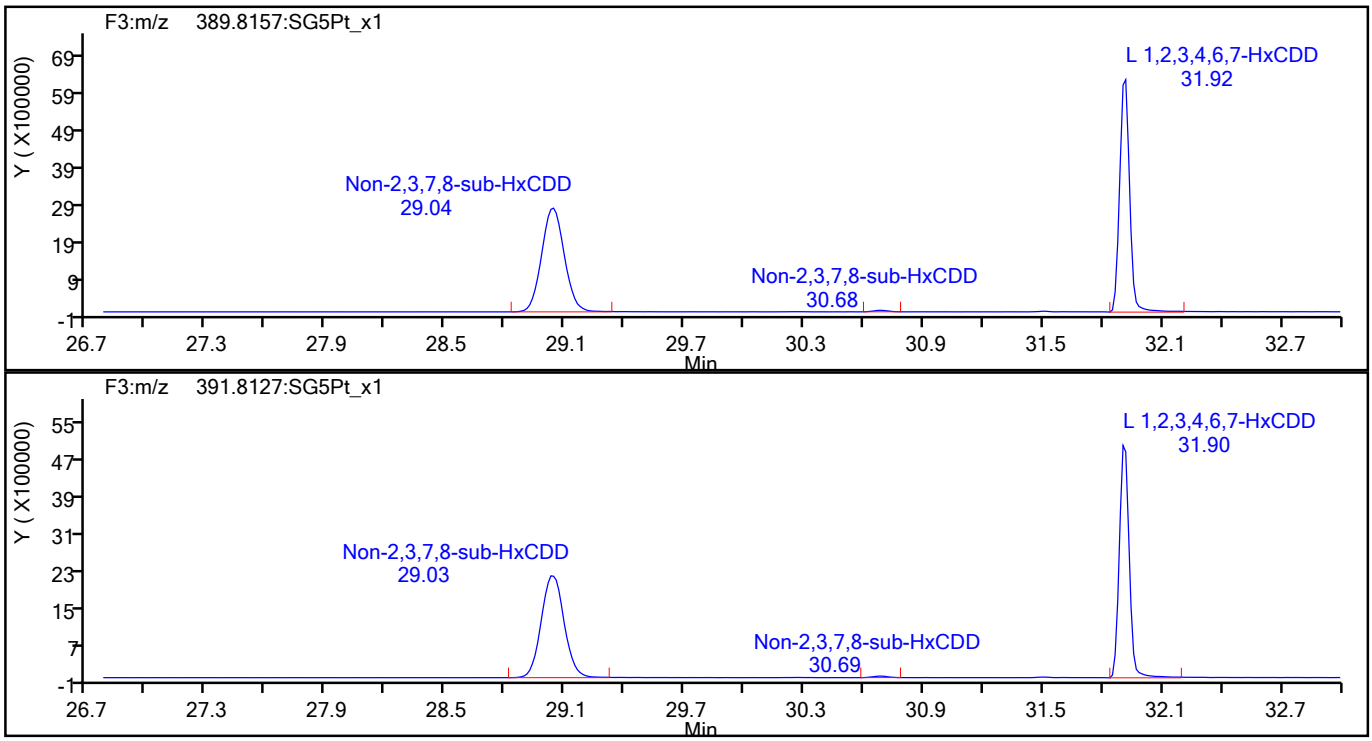

HxCDD Standards

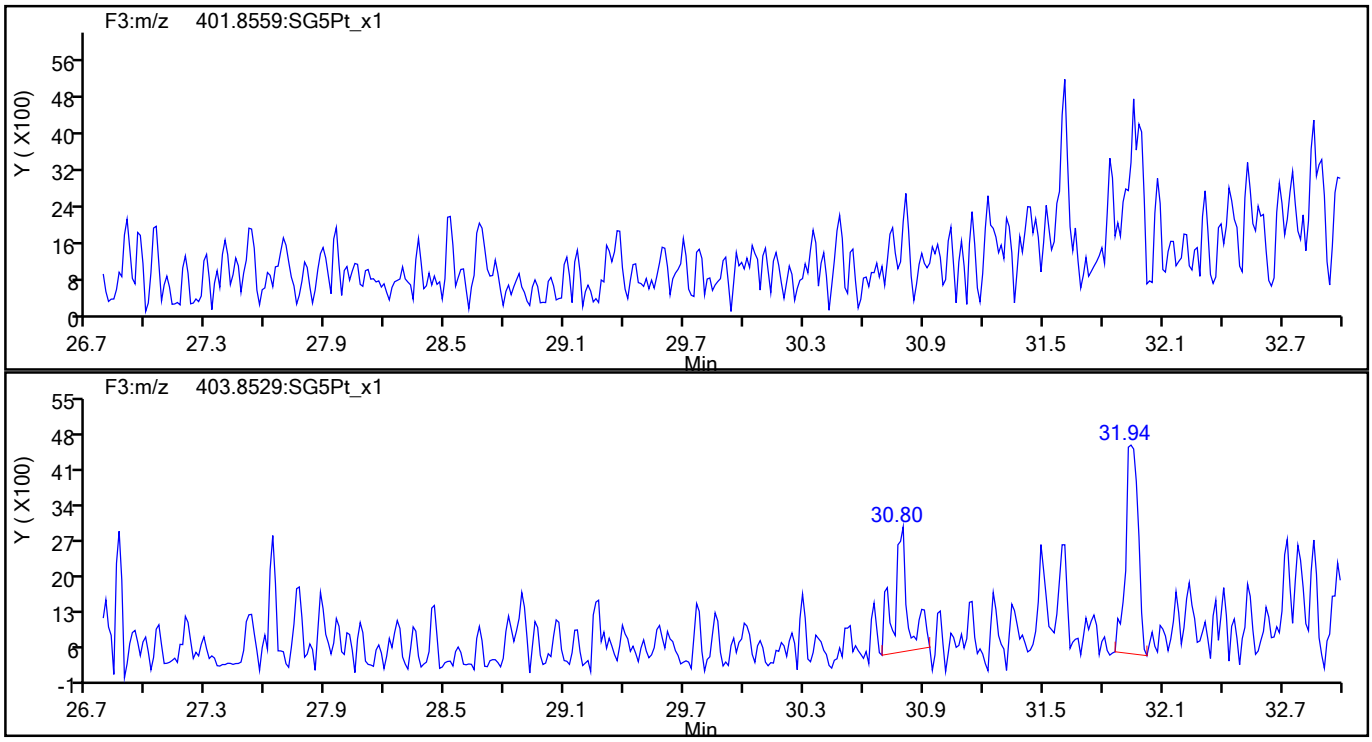

792828

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

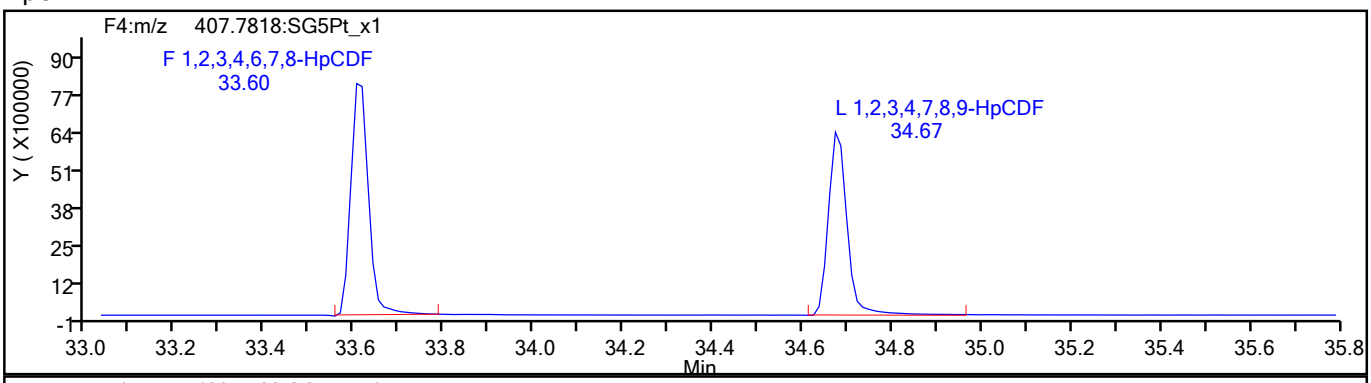

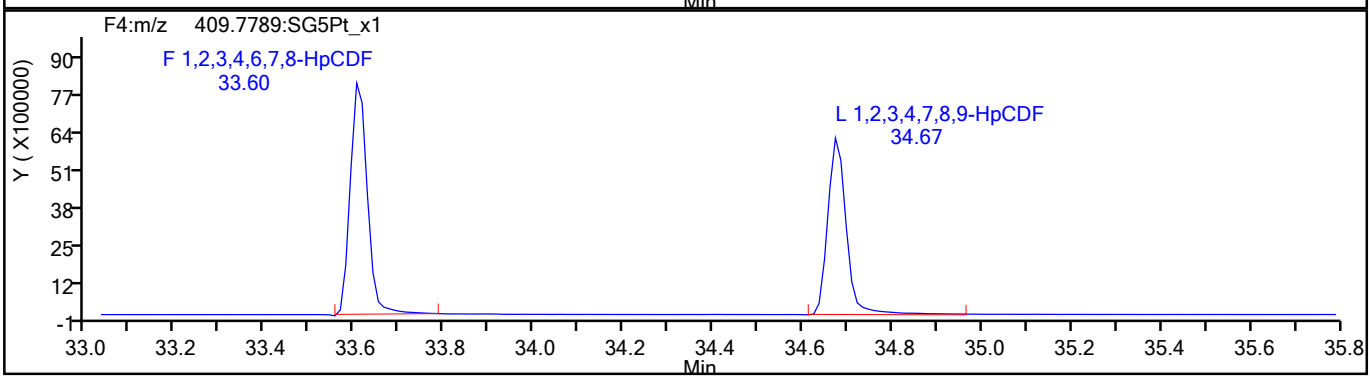

HpCDF Standards

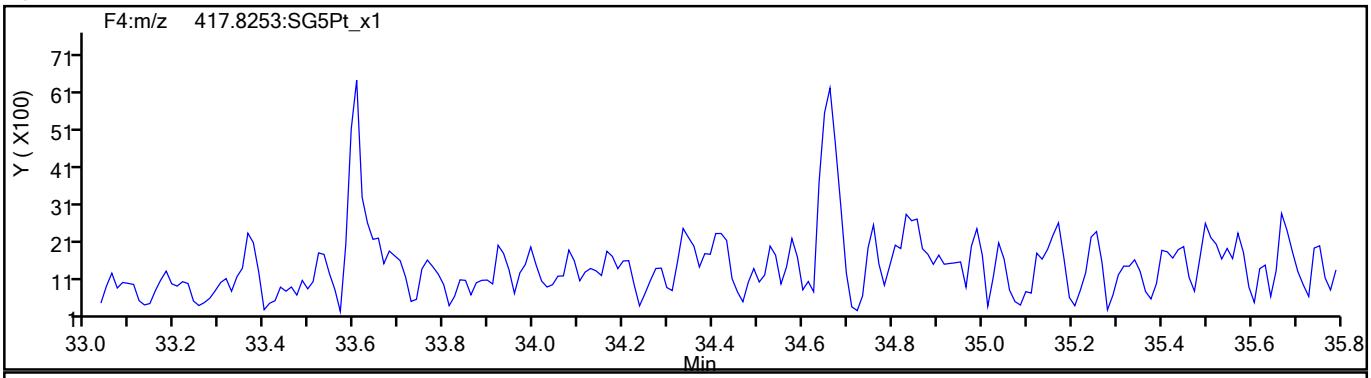

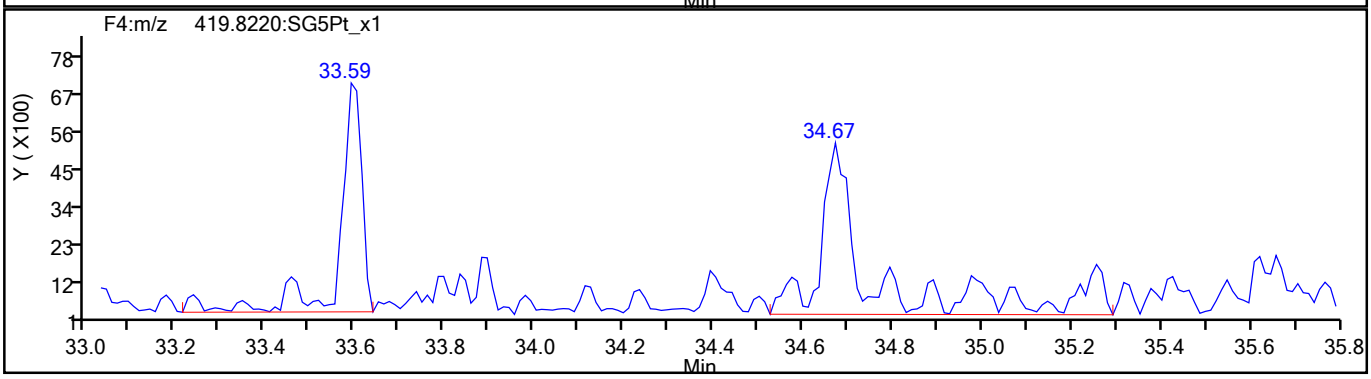

792829

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

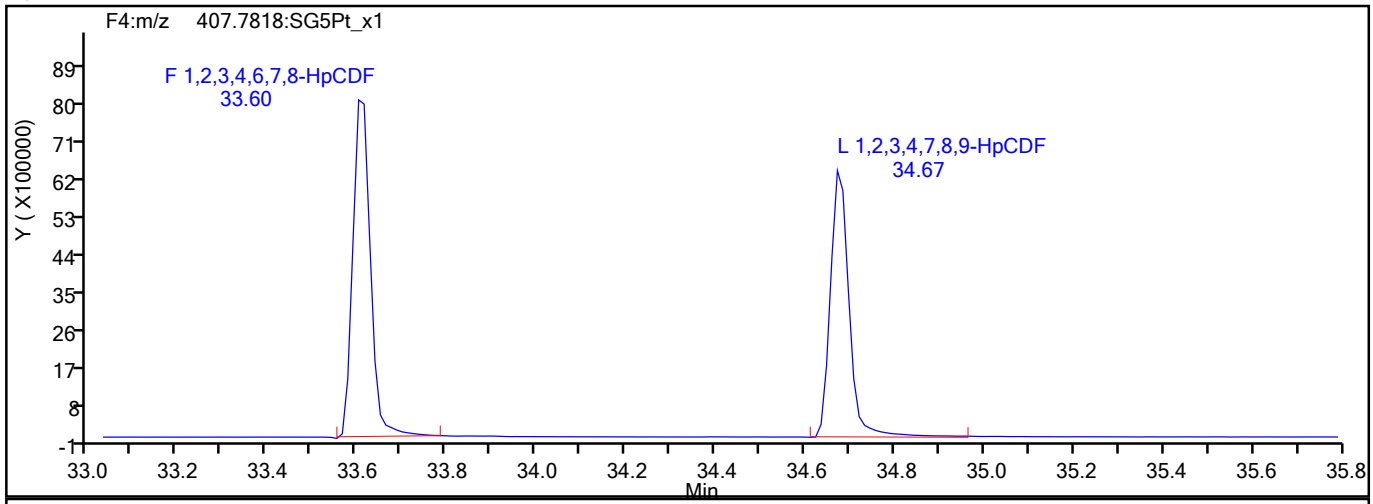

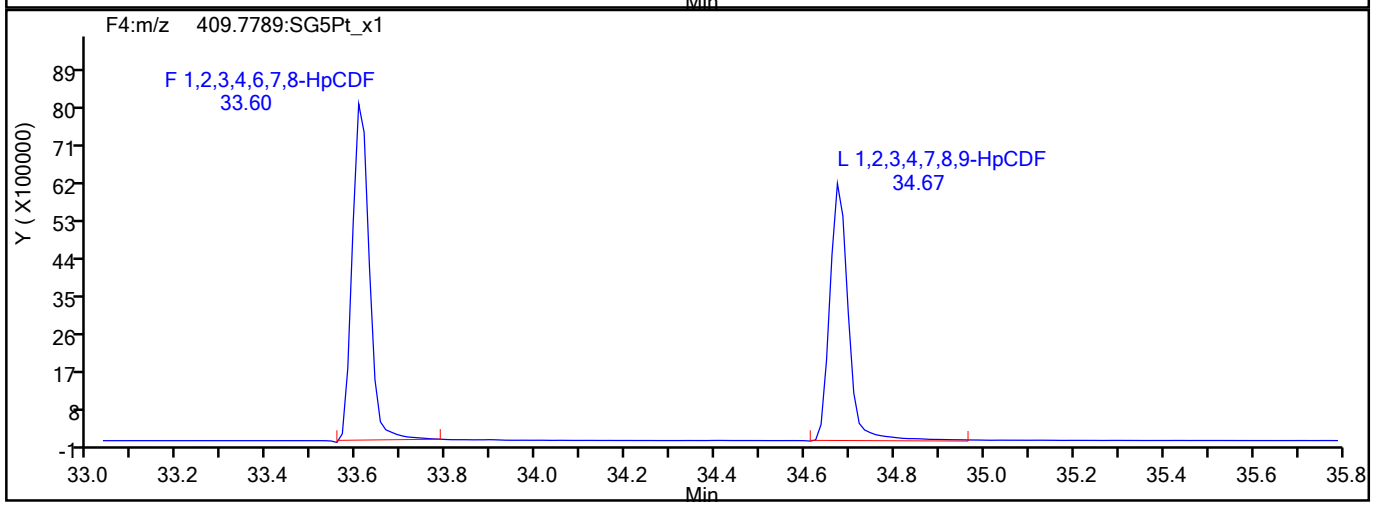

HpCDF Interference Mass

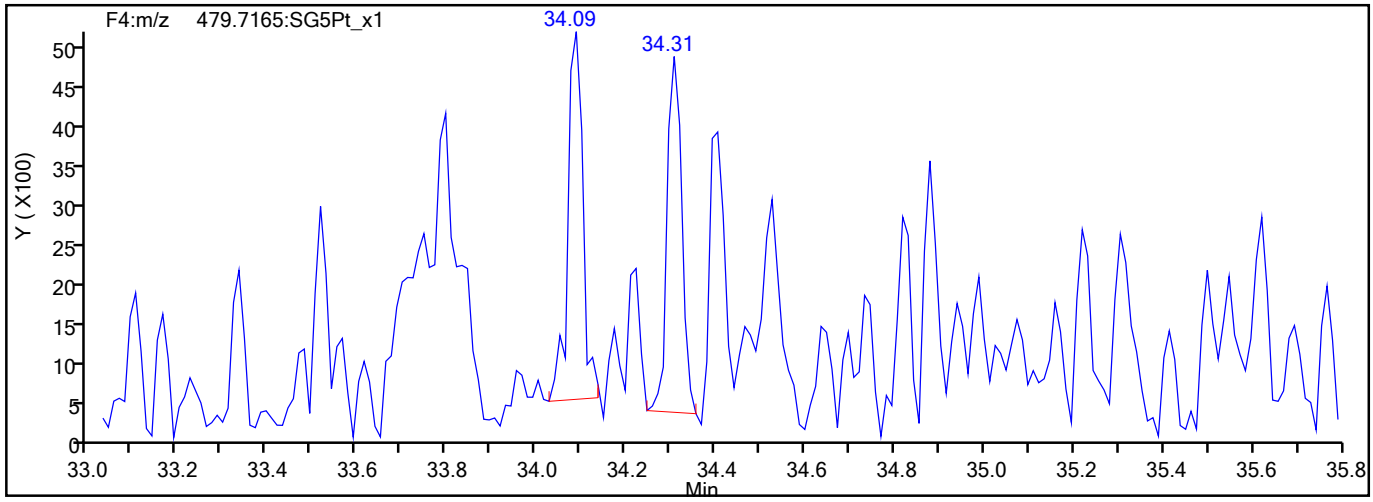

792830

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

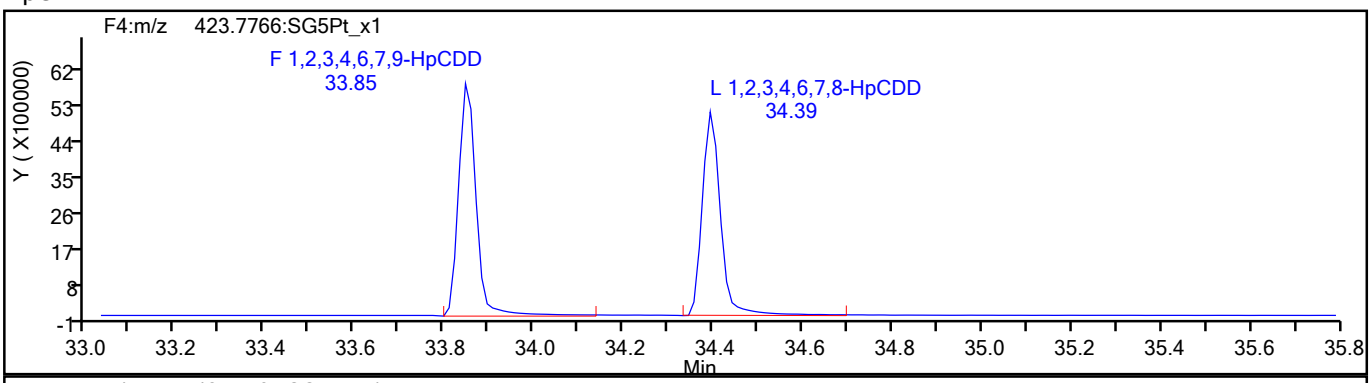

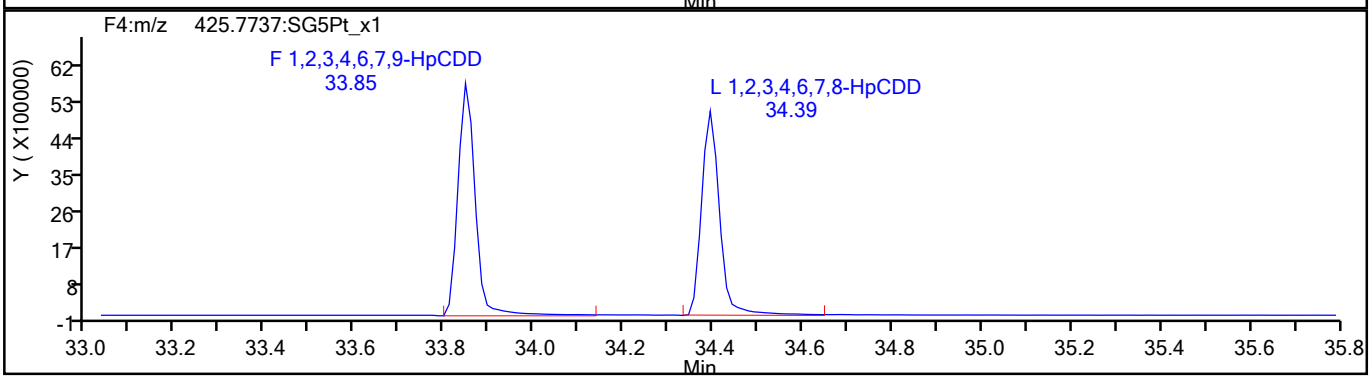

HpCDD Standards

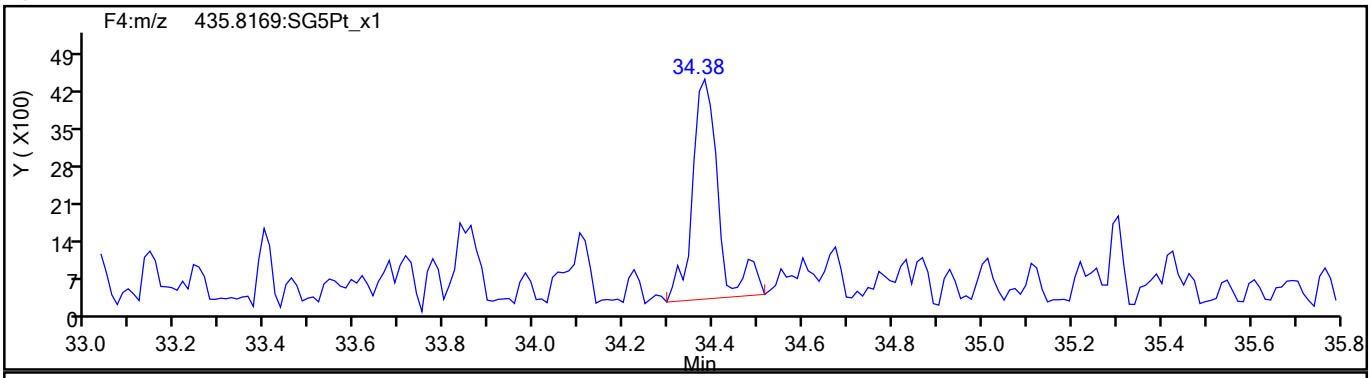

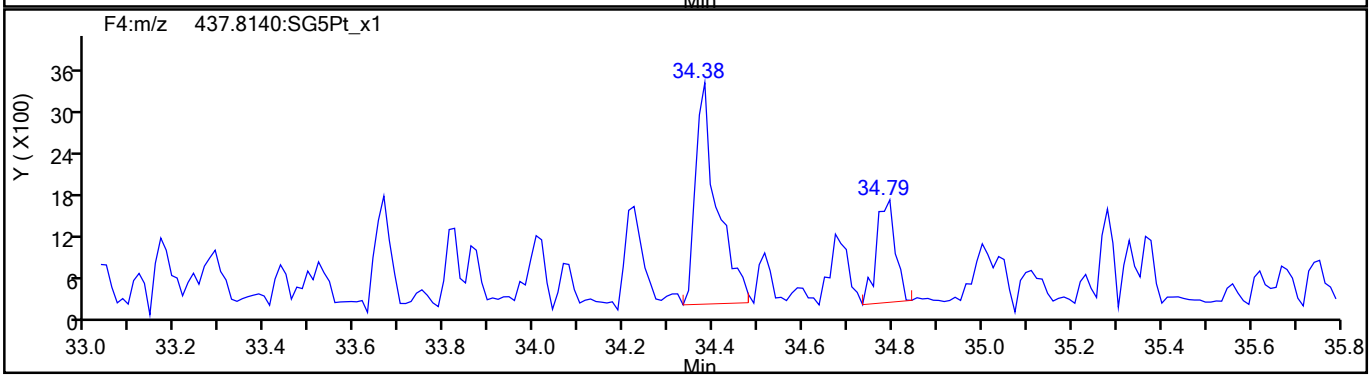

792831

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

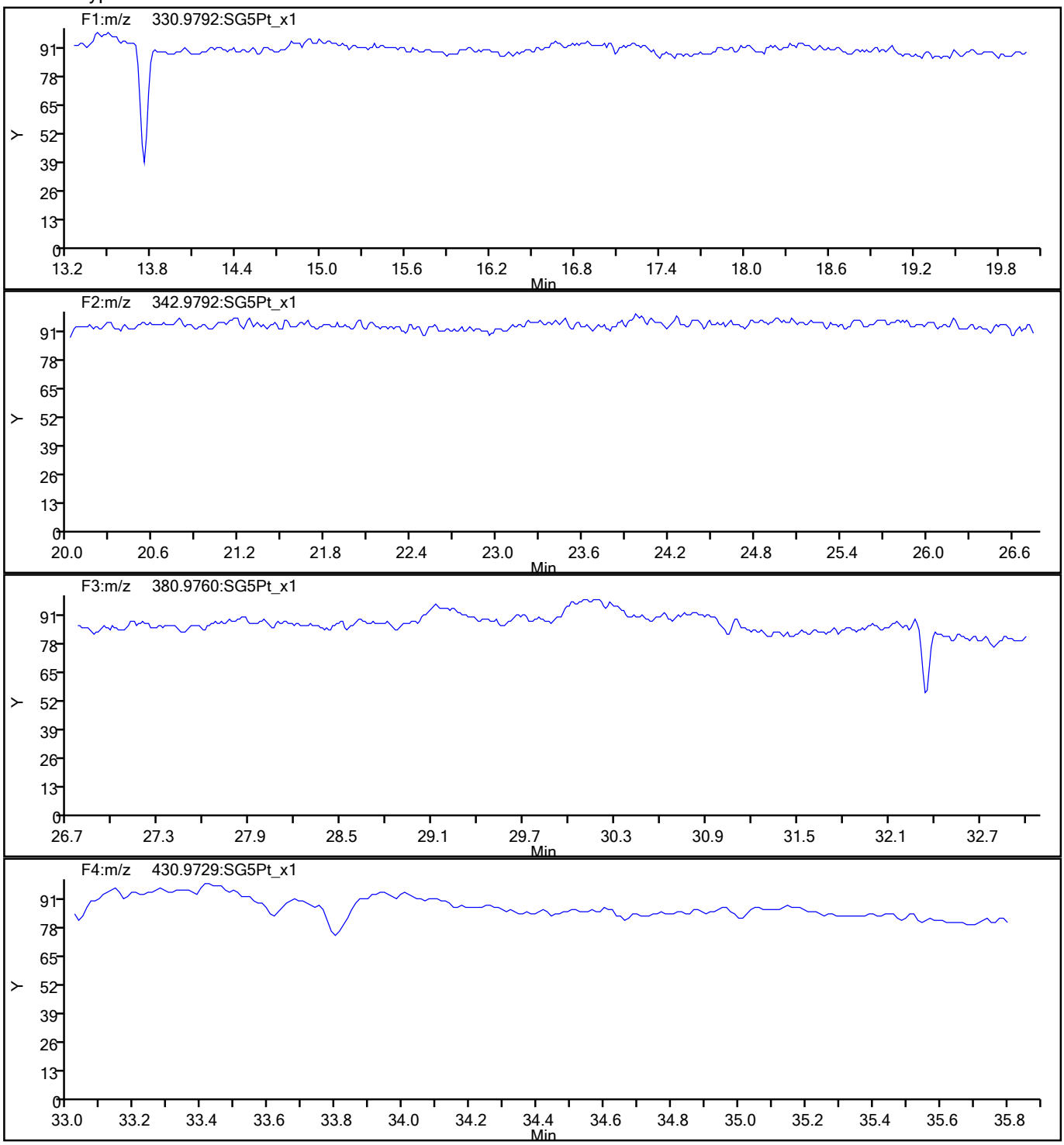

792832

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

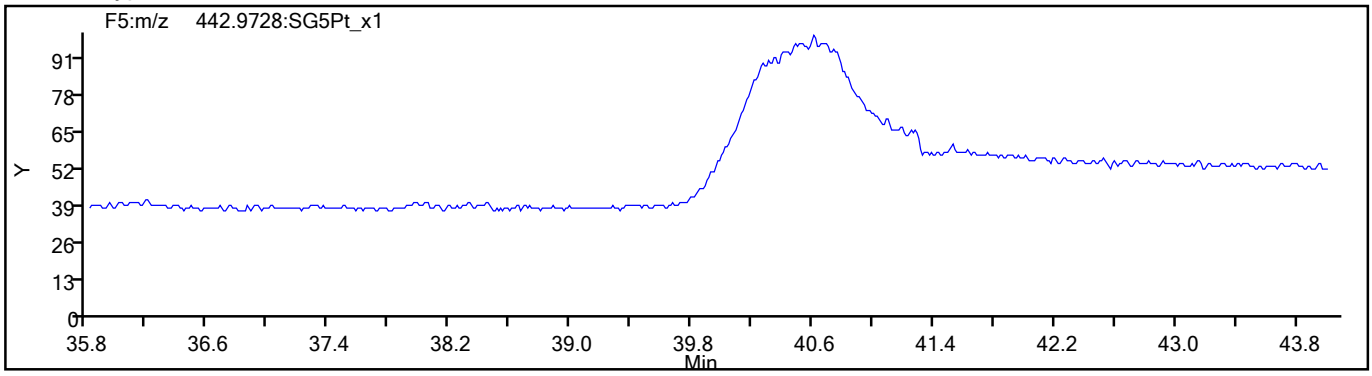

792833

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

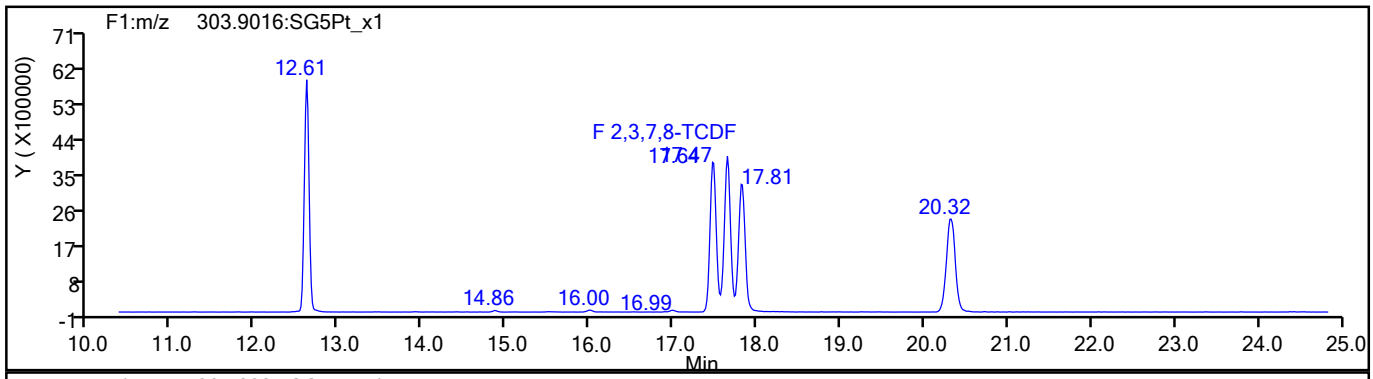

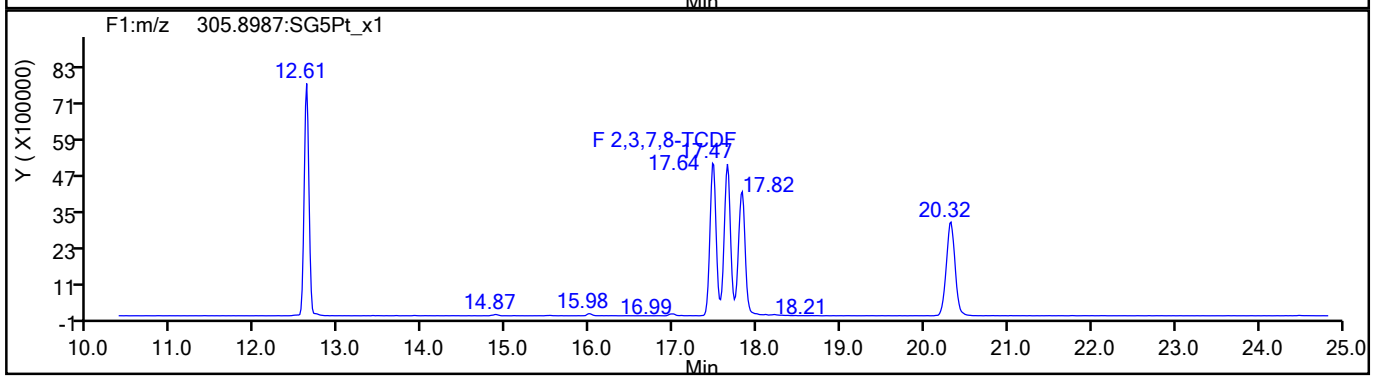

TCDF Standards

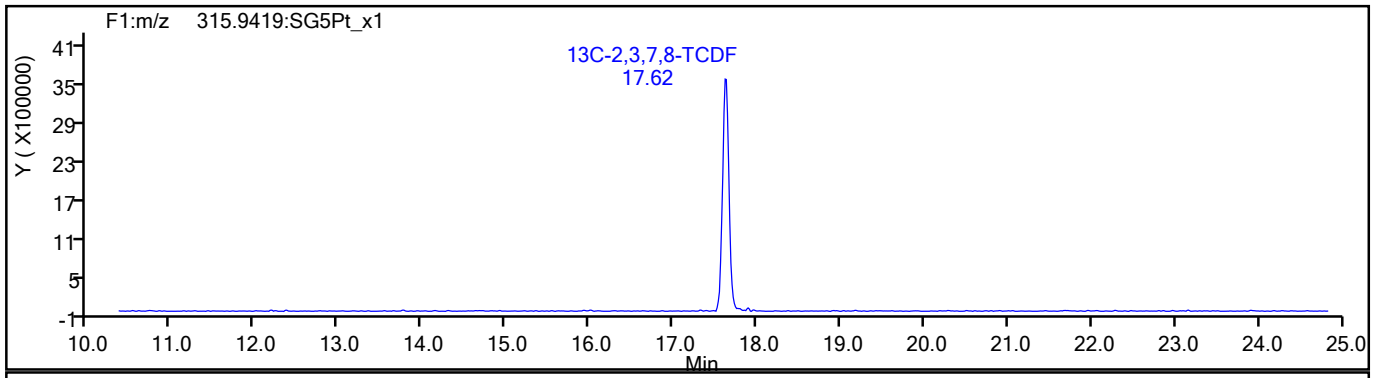

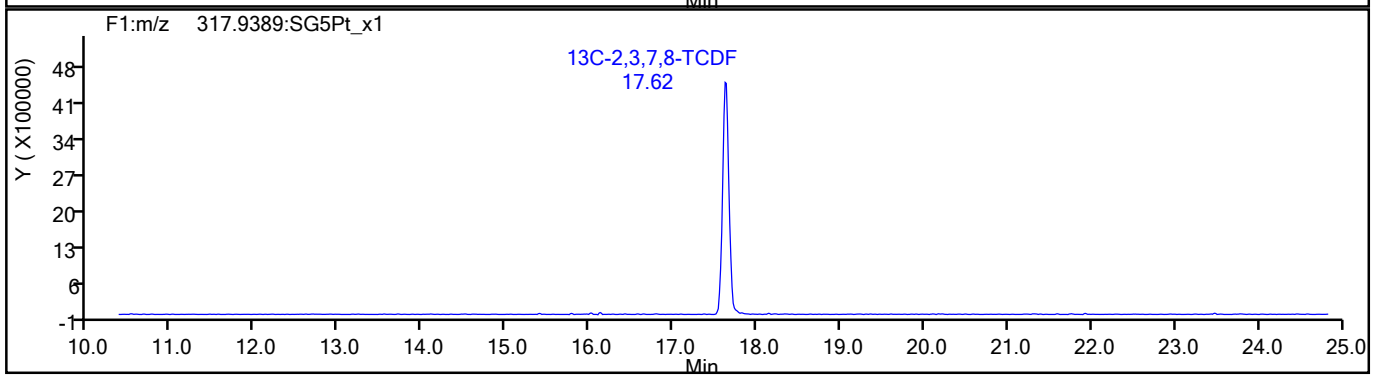

792836

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

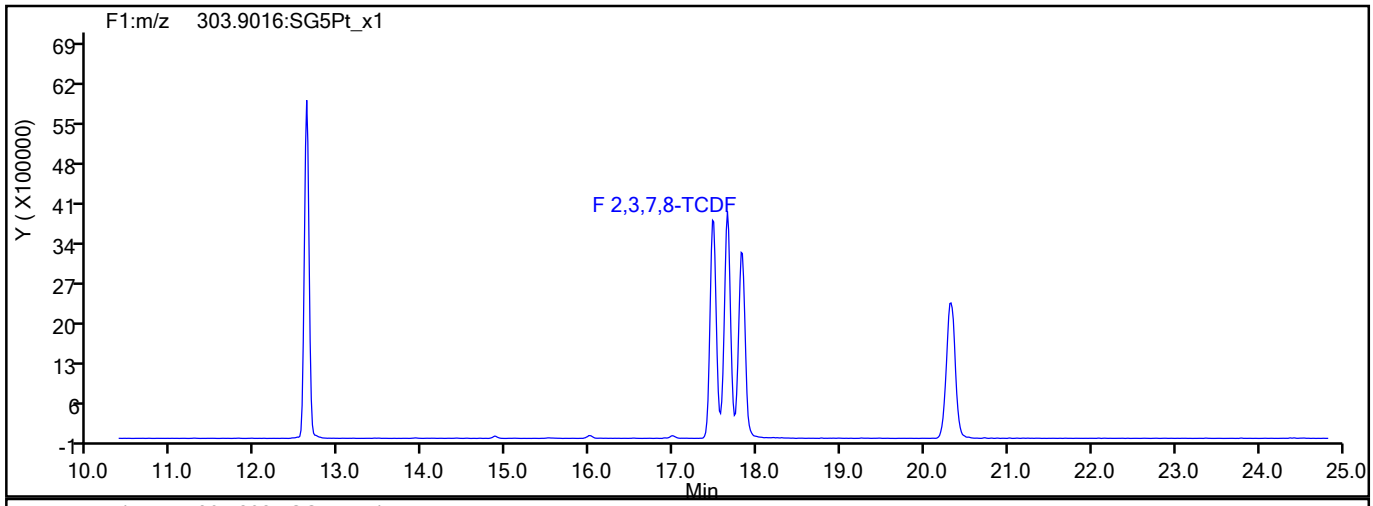

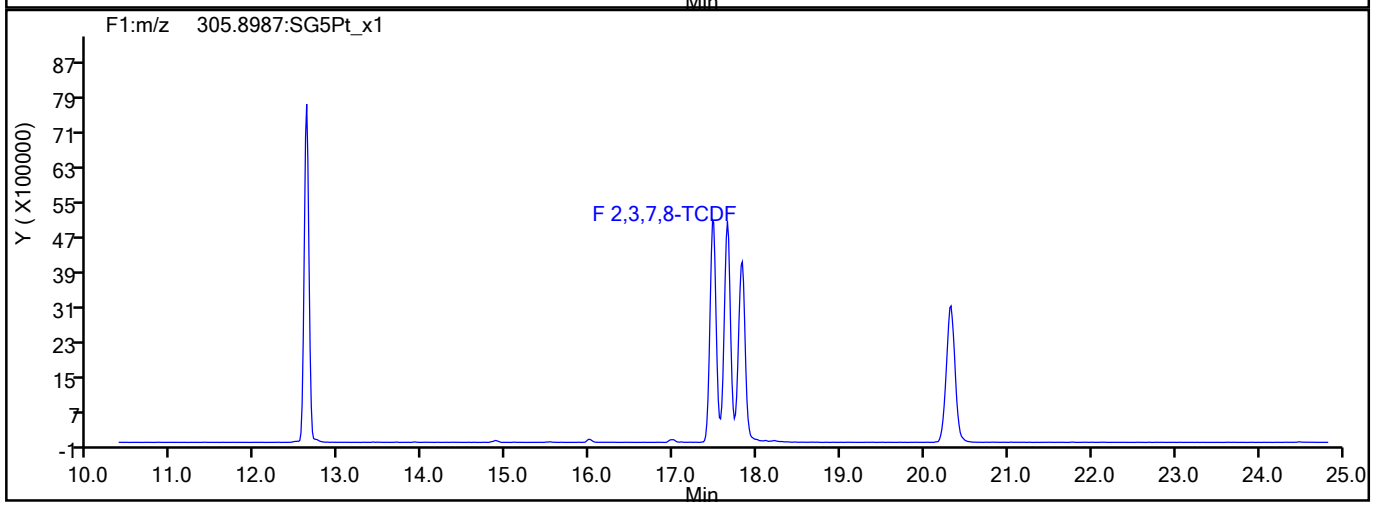

TCDF Interference Mass

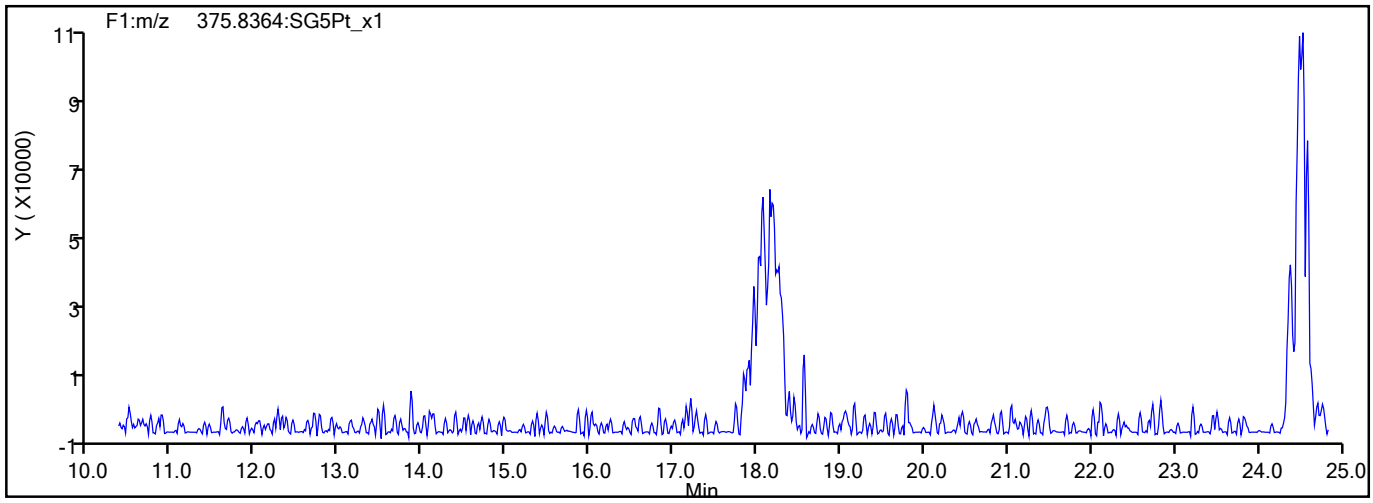

792837

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

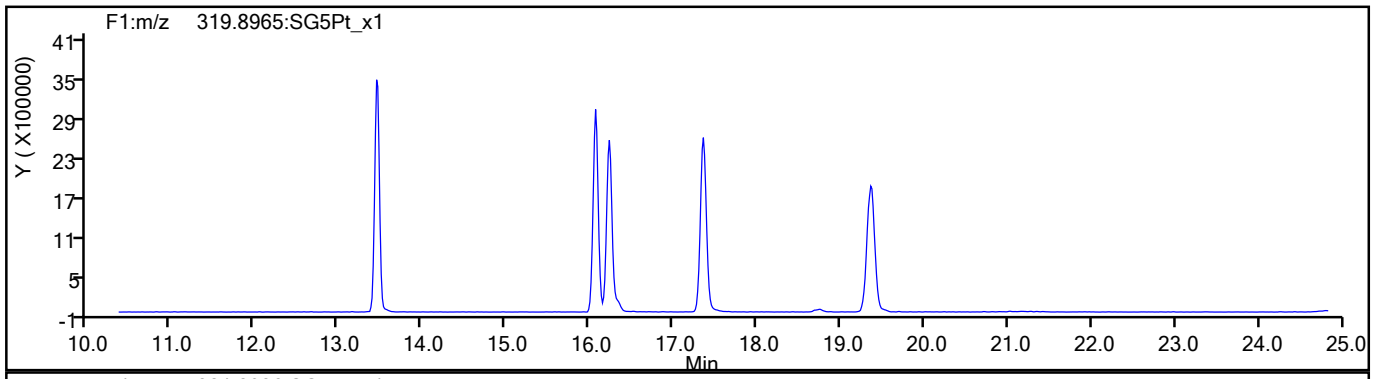

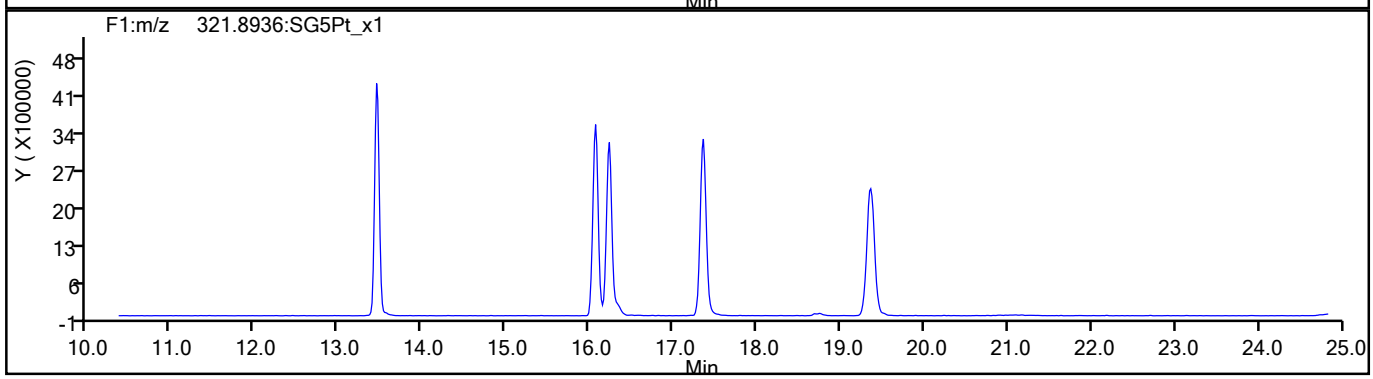

TCDD Standards

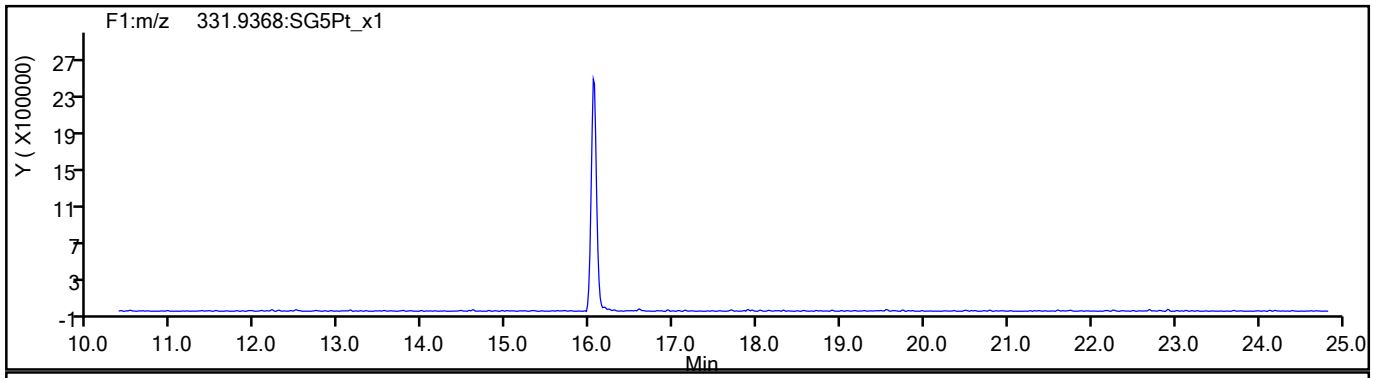

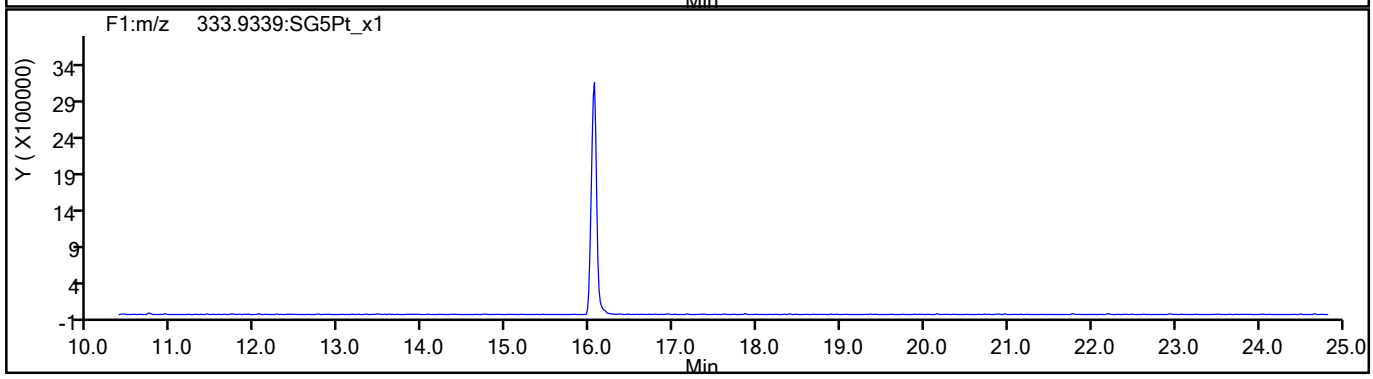

792838

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

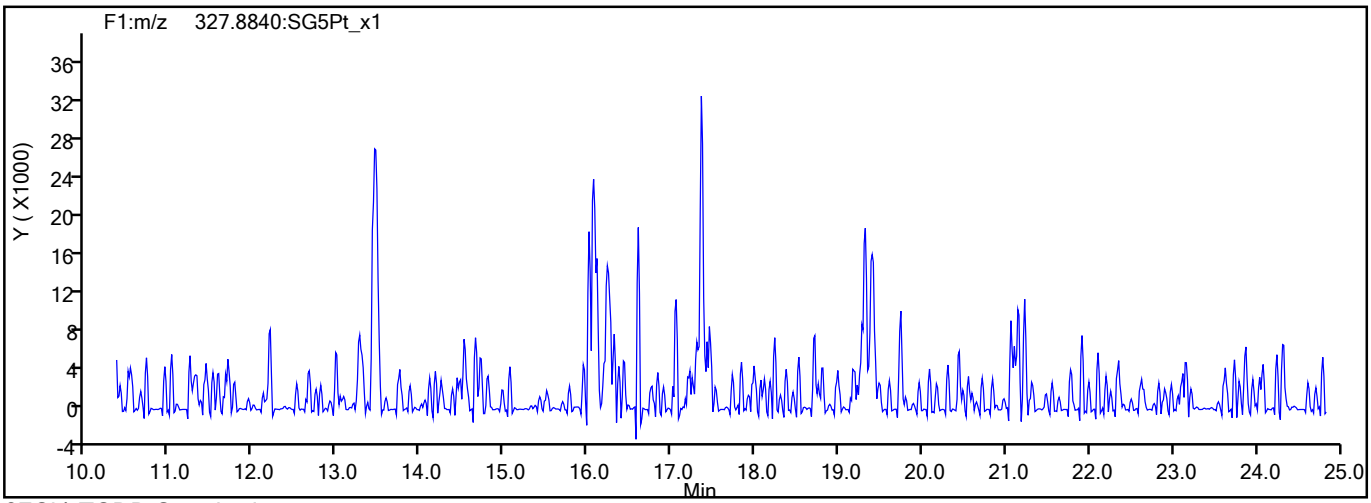

37Cl4-TCDD Standards

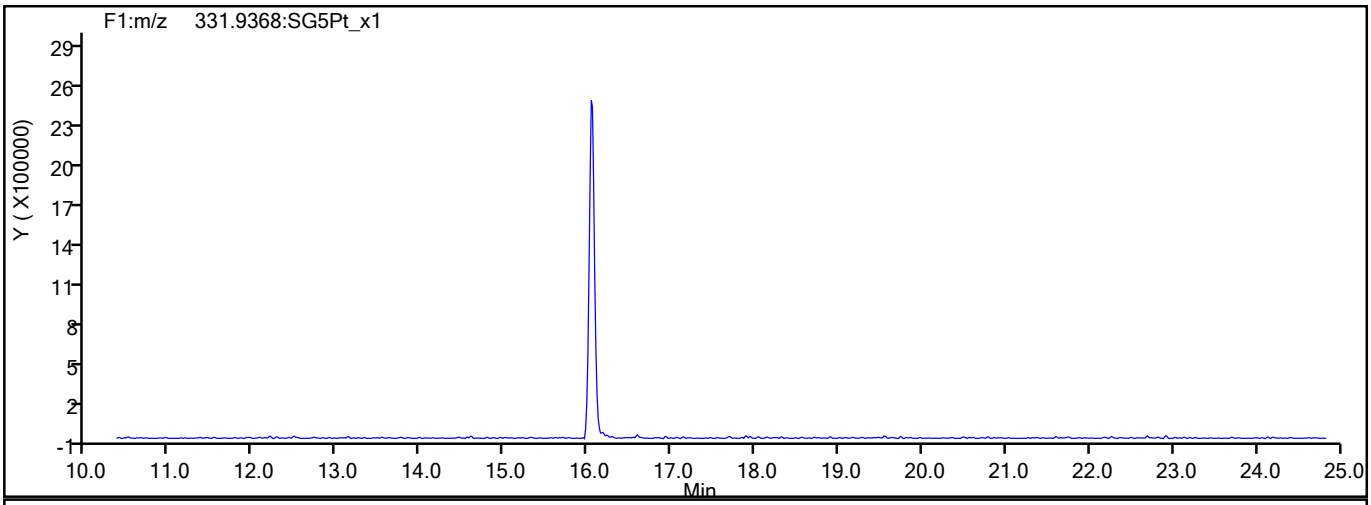

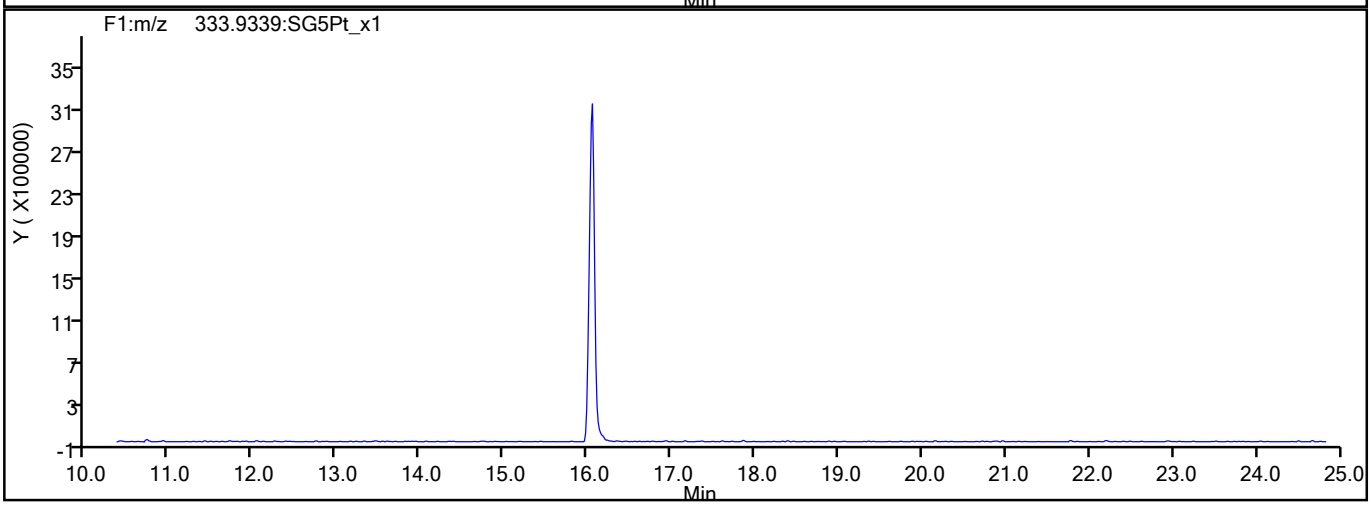

792839

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

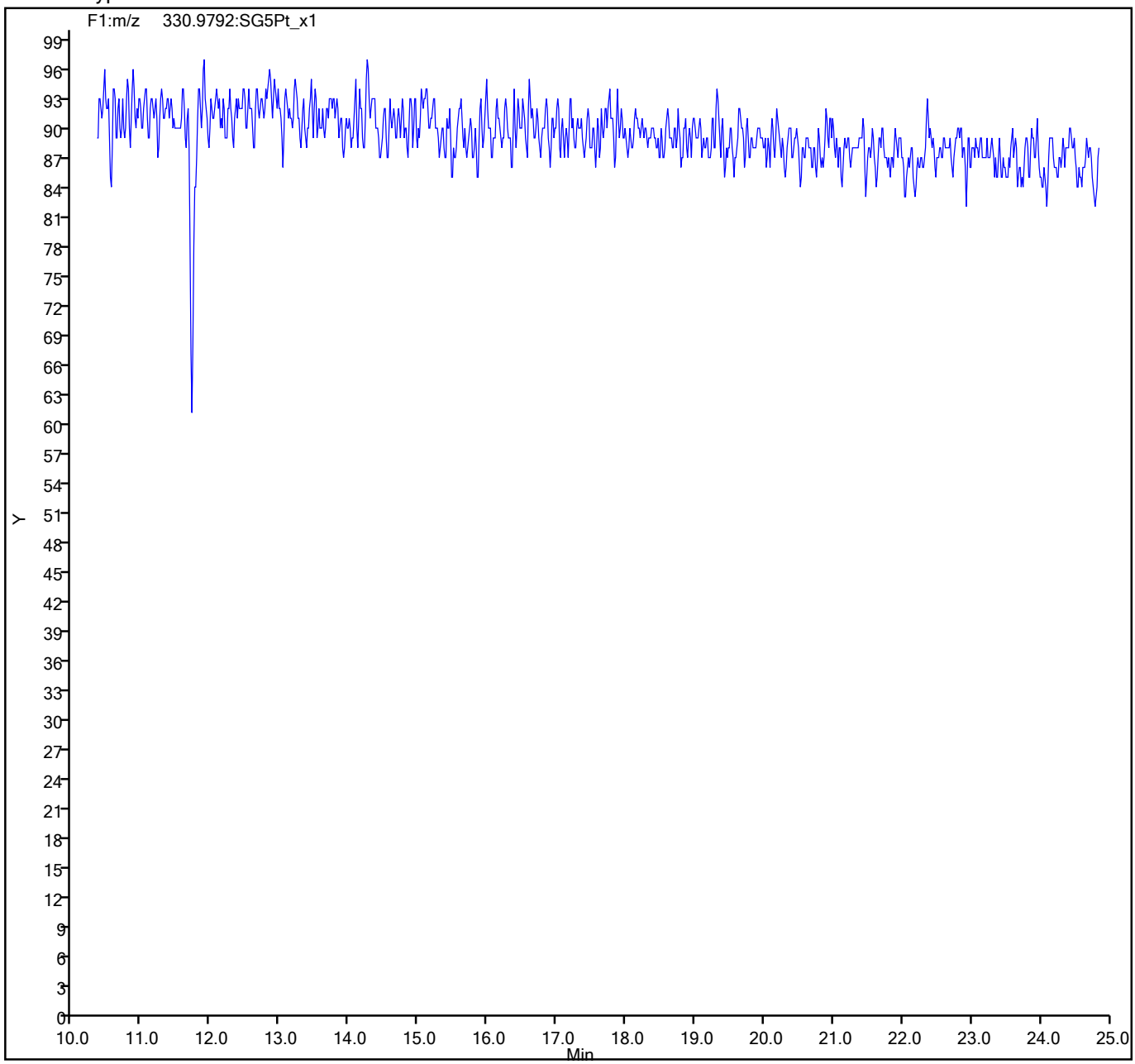

792840

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 15:38:16 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:34

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.630	38788235	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	40896159	0.78	0.9978	42.3	42.3	0.0758	0.0758		
D 13C-2,3,7,8-TCDD	16.066	22001037	0.78	0.8749					0.00	
2,3,7,8-TCDD	16.094	27039314	0.77	1.0570	46.5	46.5	0.0922	0.0922		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 27-Aug-2021 15:38:16 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 09:51:29 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1639

First Level Reviewer: bennettd Date: 30-Aug-2021 09:38:34

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.630	17.630	0	1.000	17459073	3357288	5103	12757	658		
317.9389	17.630	17.630	0	1.000	21329162	3970010	4724	11810	840	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.644	0	1.001	17951435	3500124	2560	6400	1367		
305.8987	17.644	17.644	0	1.001	22944724	4488937	2979	7447	1507	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	1.000	9618318	2124266	3723	9307	571		
333.9339	16.066	16.066	0	1.000	12382719	2869762	3053	7632	940	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.094	16.094	0	1.002	11755596	2658333	2029	5072	1310		
321.8936	16.094	16.094	0	1.002	15283718	3448816	2838	7095	1215	0.77(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d		
Injection Date:	27-Aug-2021 15:38:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

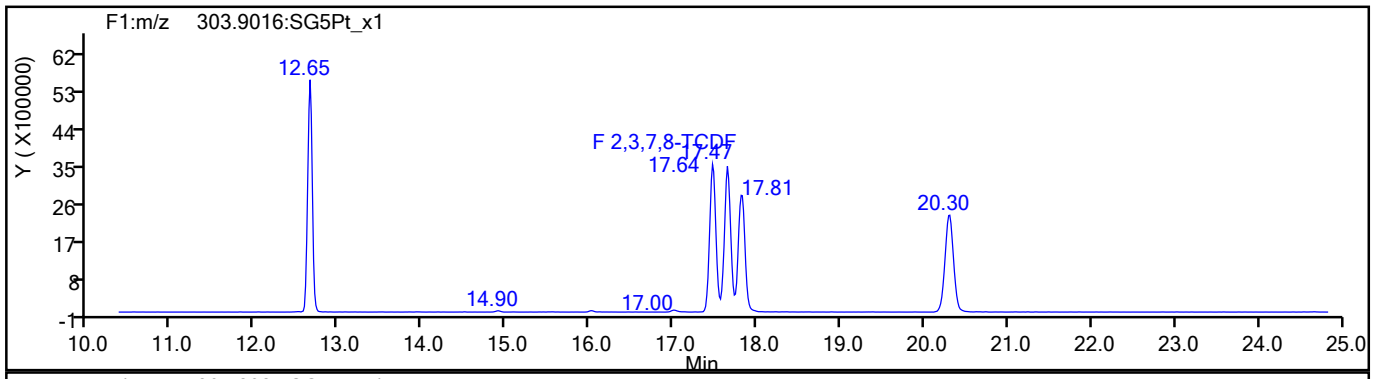

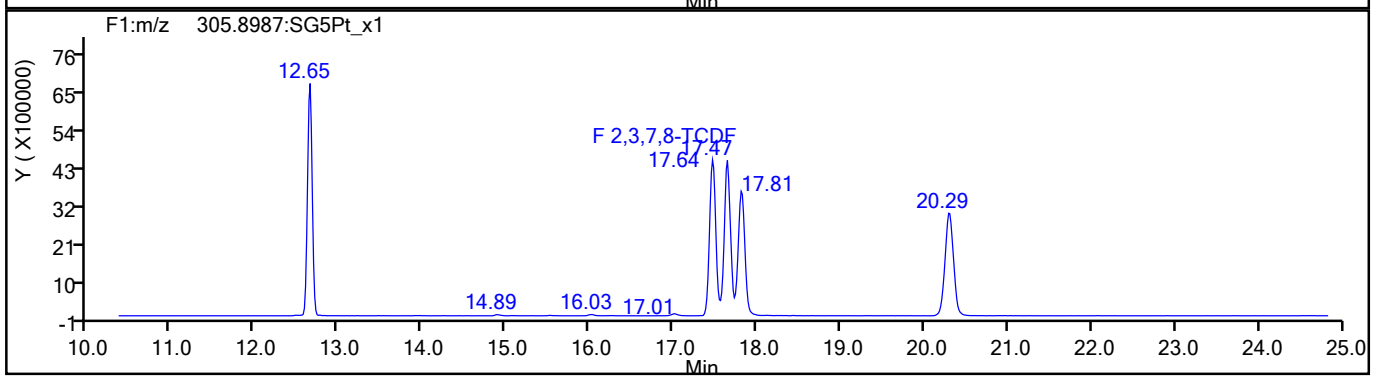

TCDF Standards

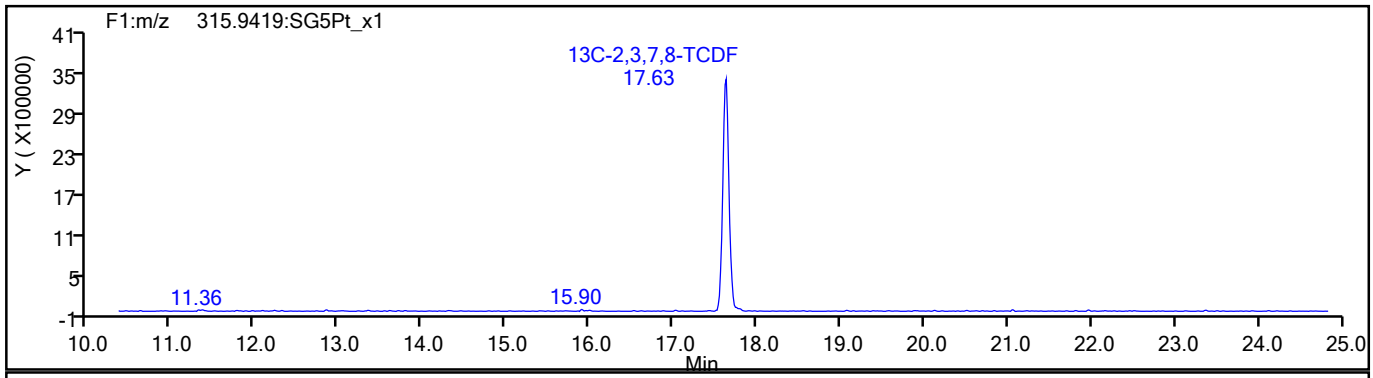

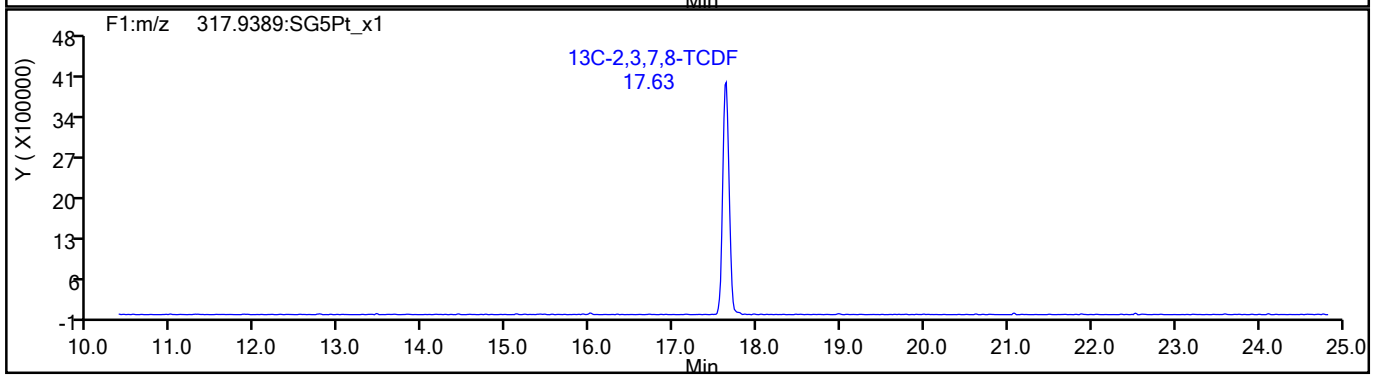

792843

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d		
Injection Date:	27-Aug-2021 15:38:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

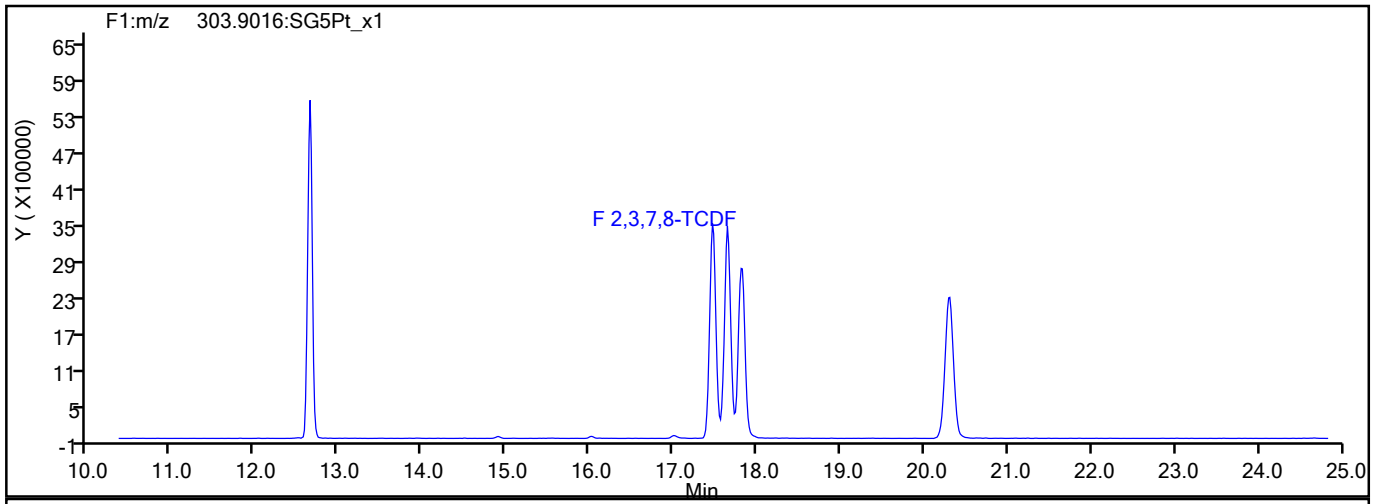

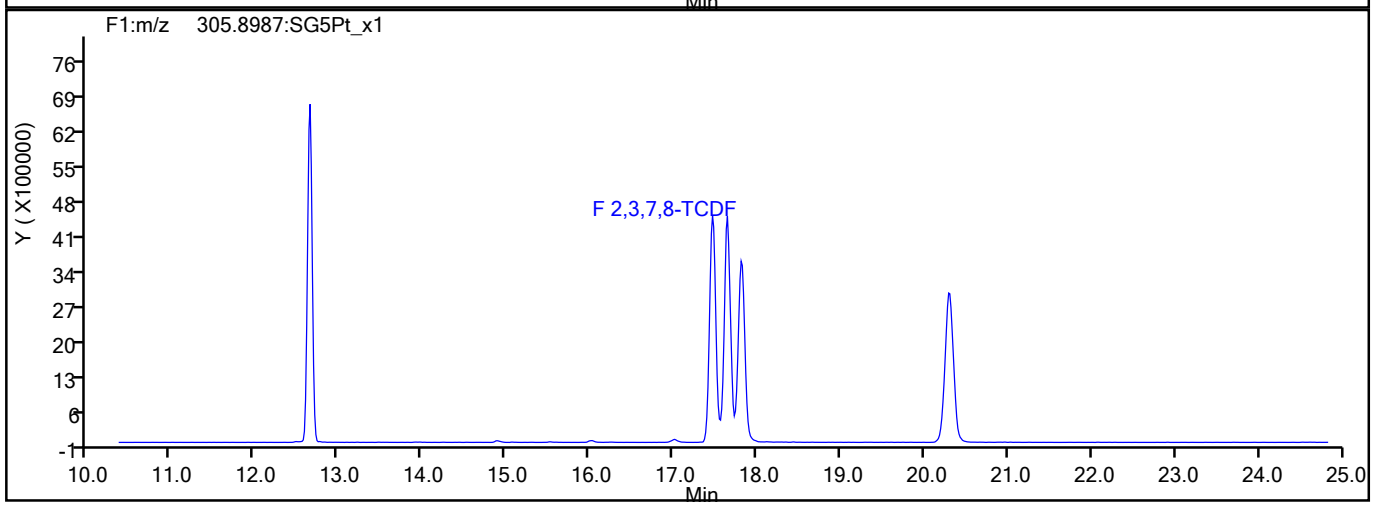

TCDF Interference Mass

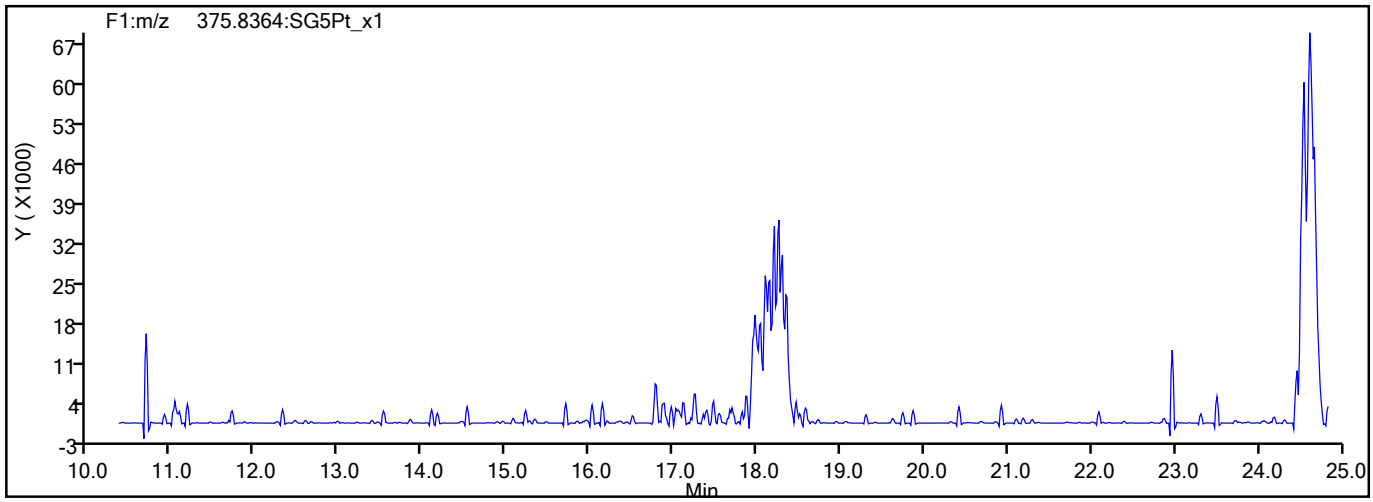

792844

Report Date: 30-Aug-2021 09:51:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210827-125885.b\27AU21A11D2_001.d		
Injection Date:	27-Aug-2021 15:38:16	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520456	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

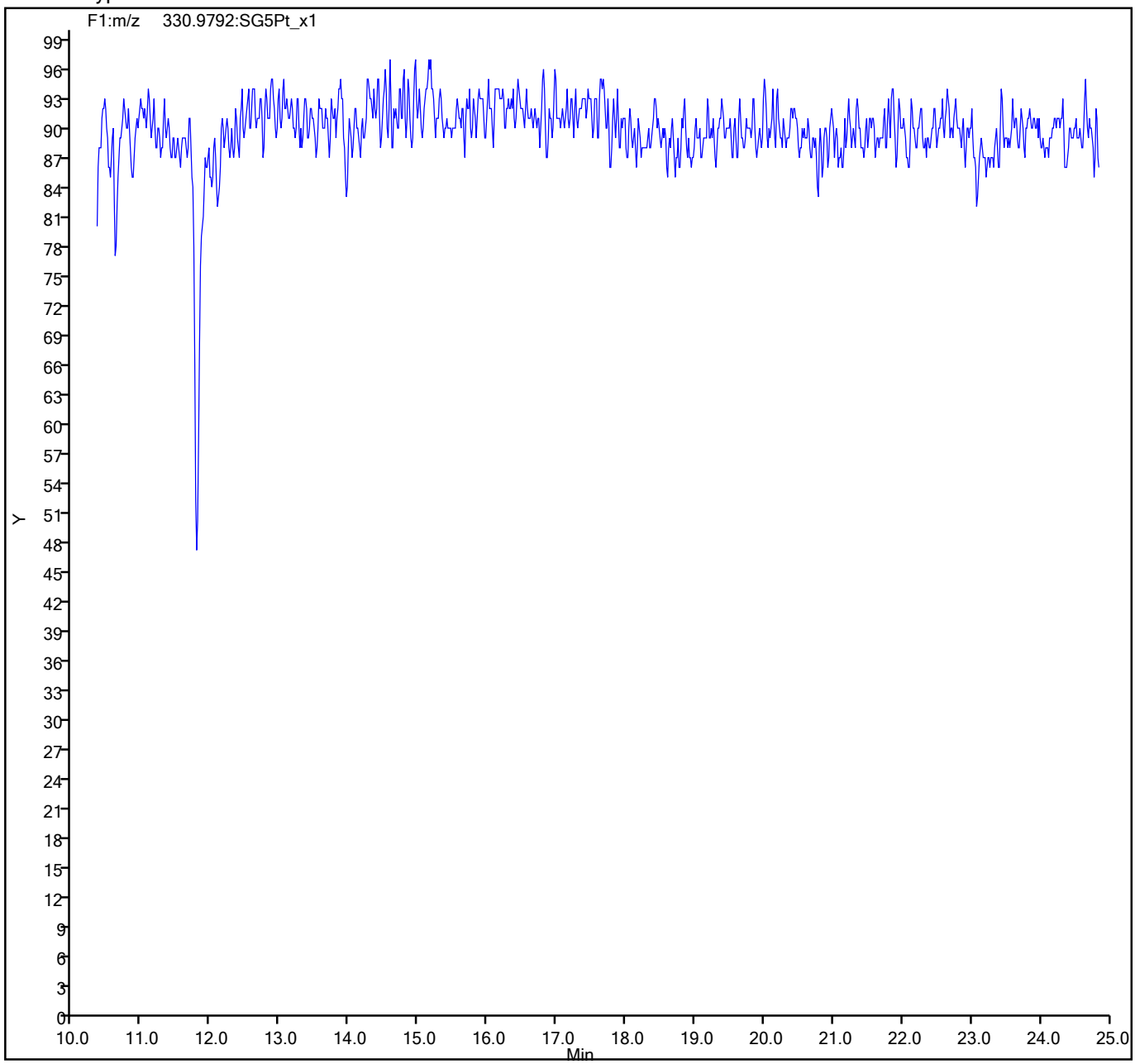

792845

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 31-Aug-2021 13:13:23 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:23:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.615	22417948	0.81	1.3327					0.00	
2,3,7,8-TCDF	17.643	23342457	0.77	0.9978	41.7	41.7	0.1627	0.1627		
D 13C-2,3,7,8-TCDD	16.066	12921619	0.78	0.8749					0.00	
2,3,7,8-TCDD	16.093	15061406	0.79	1.0570	44.1	44.1	0.1717	0.1717		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 31-Aug-2021 13:13:23 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:23:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.000	10066028	1874406	7328	18320	256		
317.9389	17.615	17.615	0	1.000	12351920	2267129	6374	15935	356	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.643	0	1.002	10180224	1970531	2750	6875	717		
305.8987	17.643	17.643	0	1.002	13162233	2621871	3972	9930	660	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	1.000	5662824	1377022	8352	20880	165		
333.9339	16.066	16.066	0	1.000	7258795	1574336	3193	7982	493	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.093	0	1.002	6664374	1524555	3063	7657	498		
321.8936	16.093	16.093	0	1.002	8397032	1845328	2293	5732	805	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d		
Injection Date:	31-Aug-2021 13:13:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

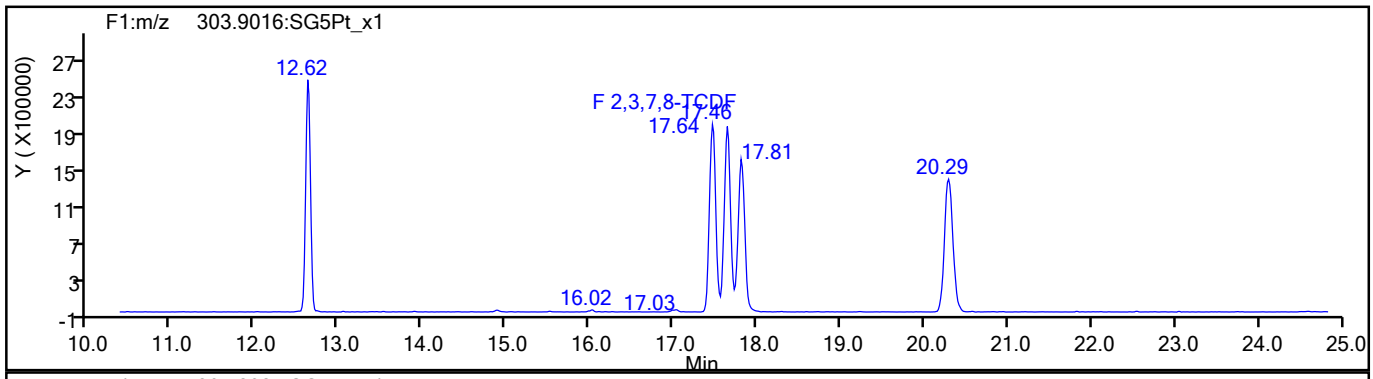

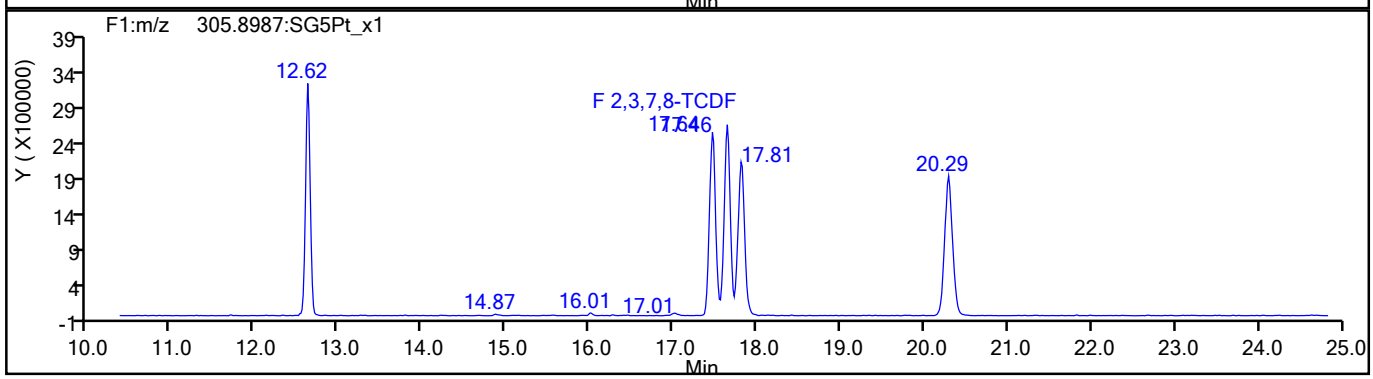

TCDF Standards

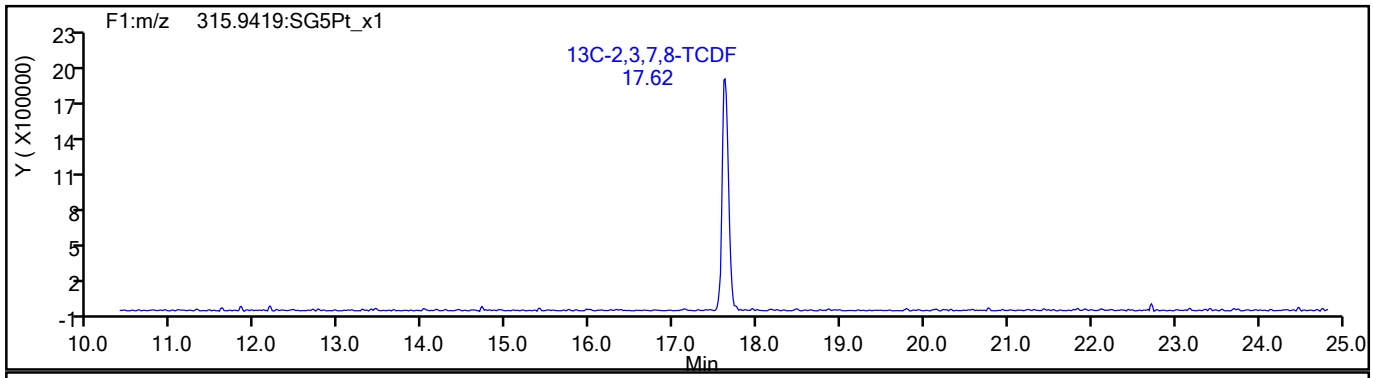

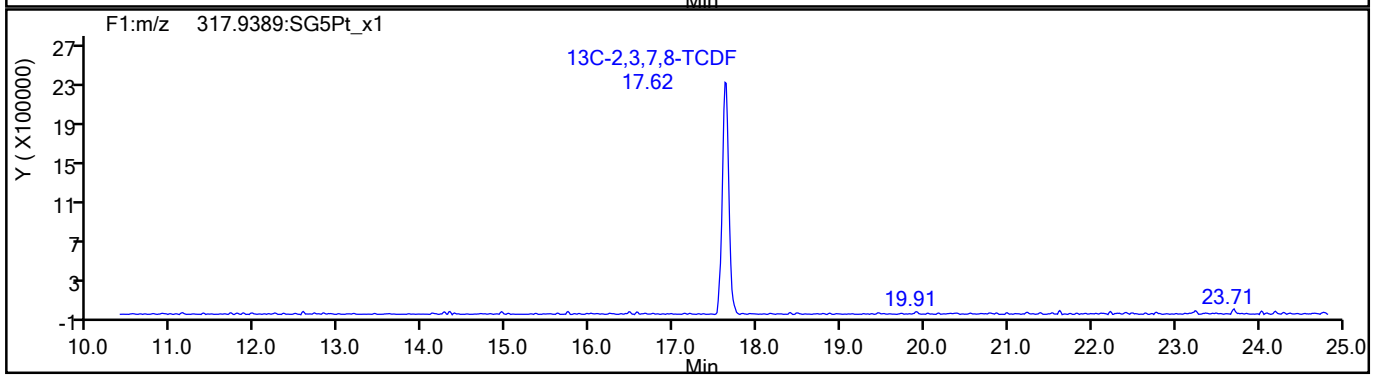

792848

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d		
Injection Date:	31-Aug-2021 13:13:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

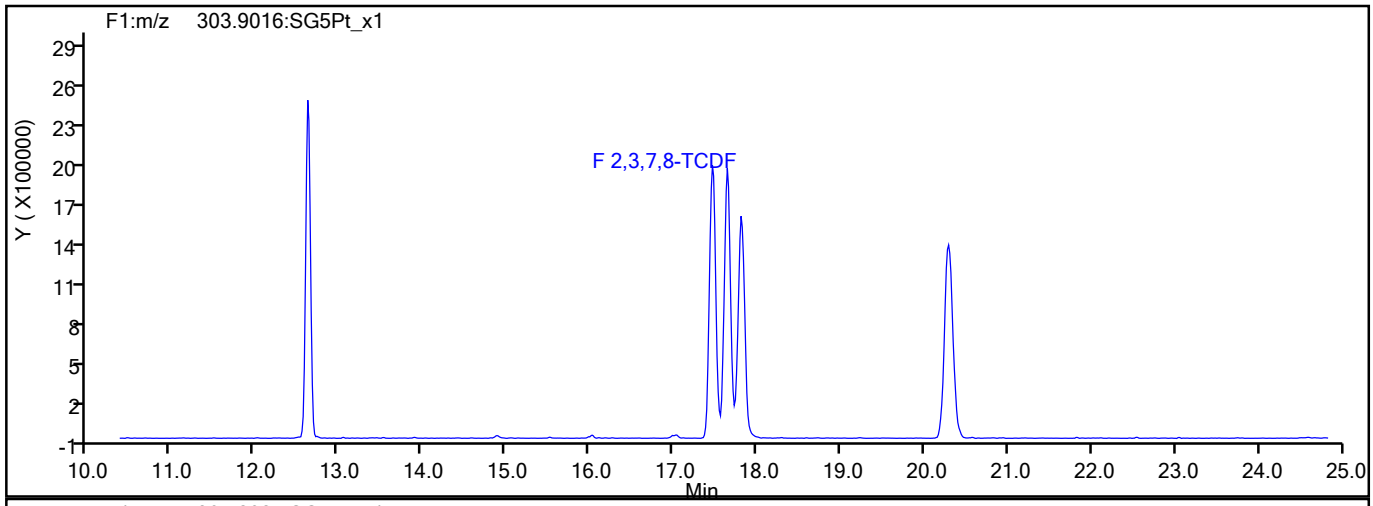

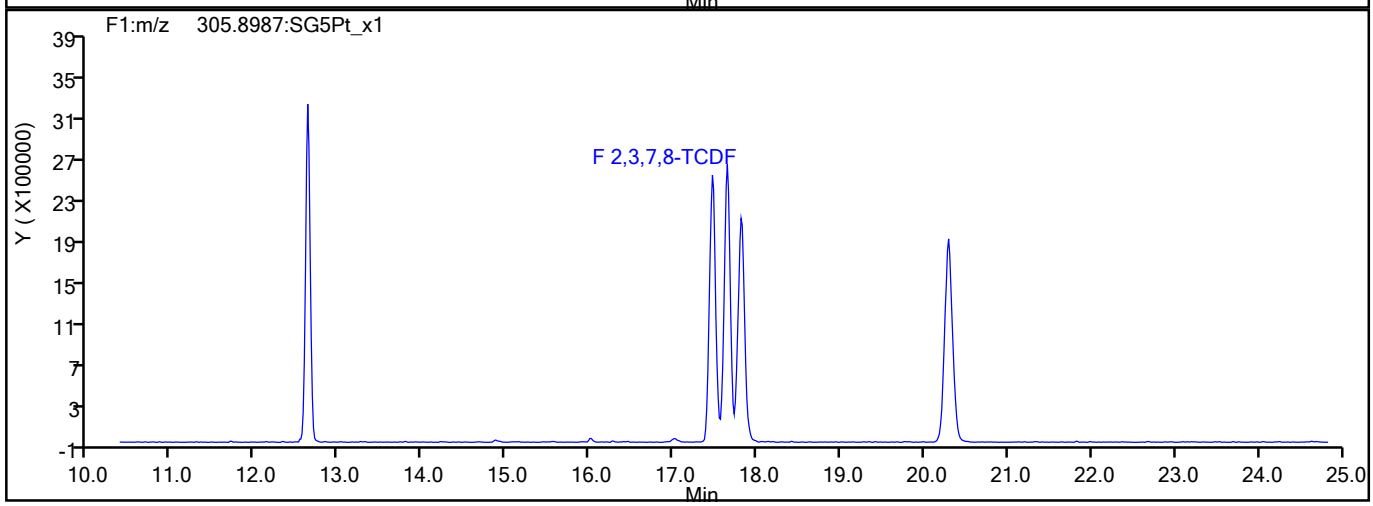

TCDF Interference Mass

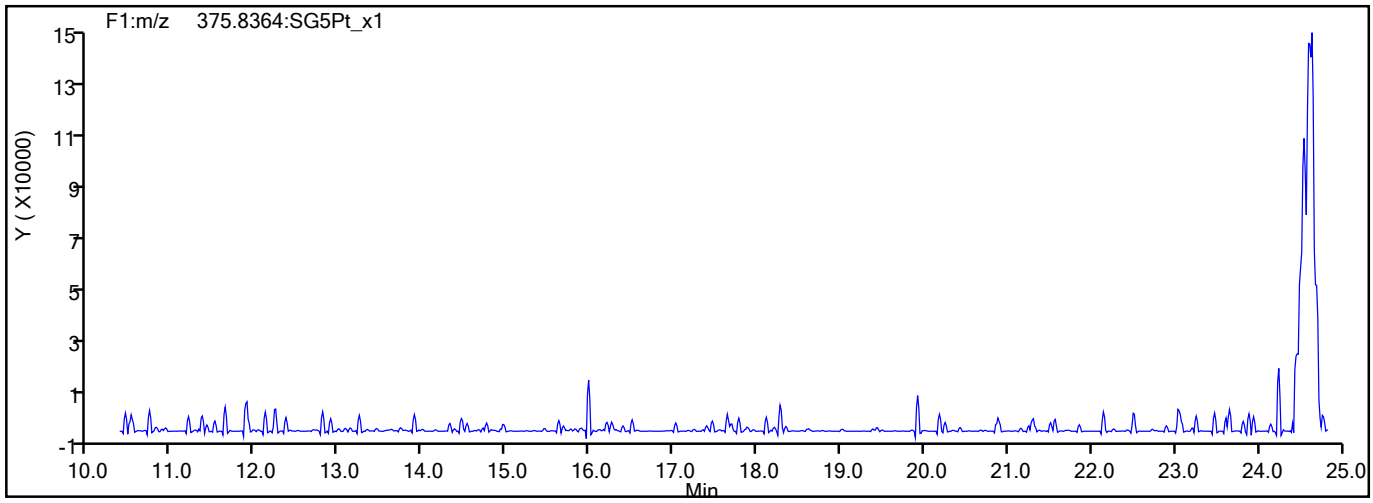

792849

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d		
Injection Date:	31-Aug-2021 13:13:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

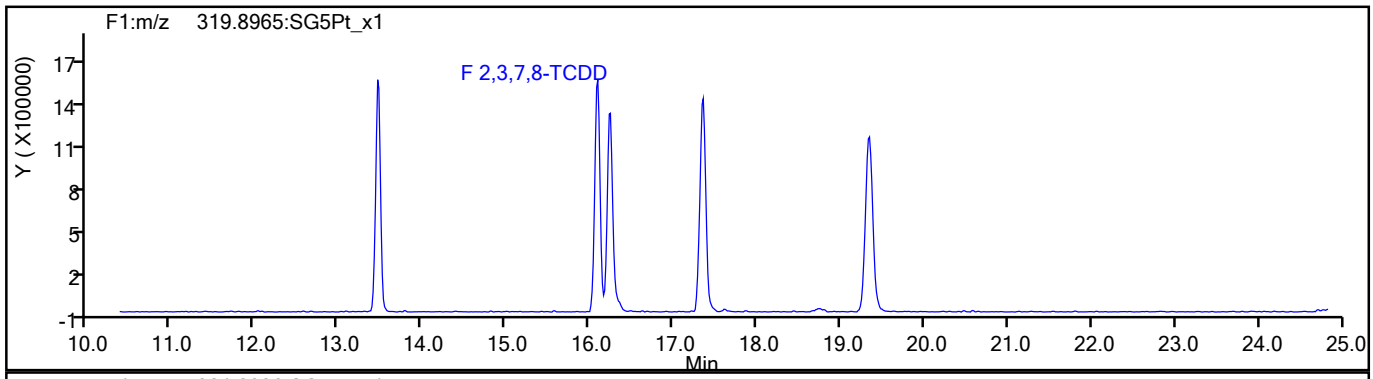

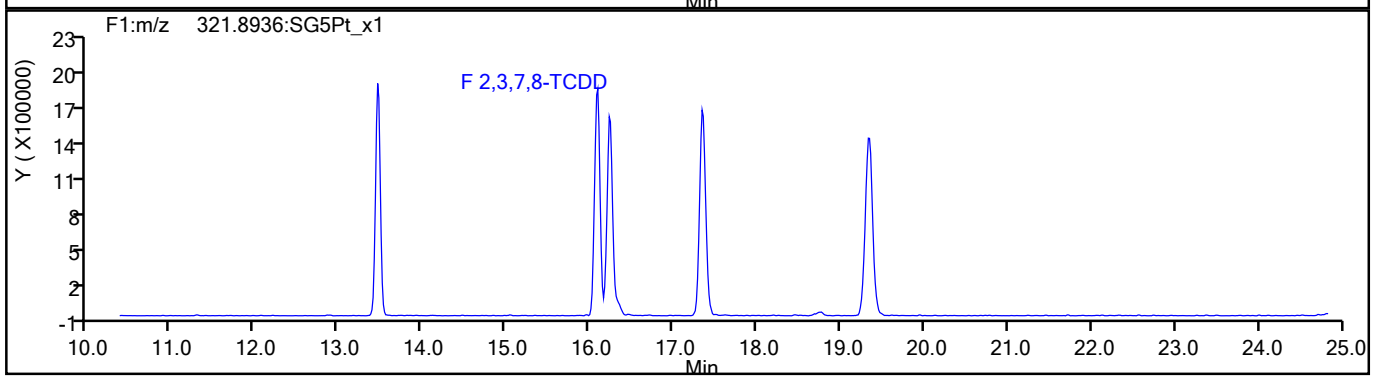

TCDD Standards

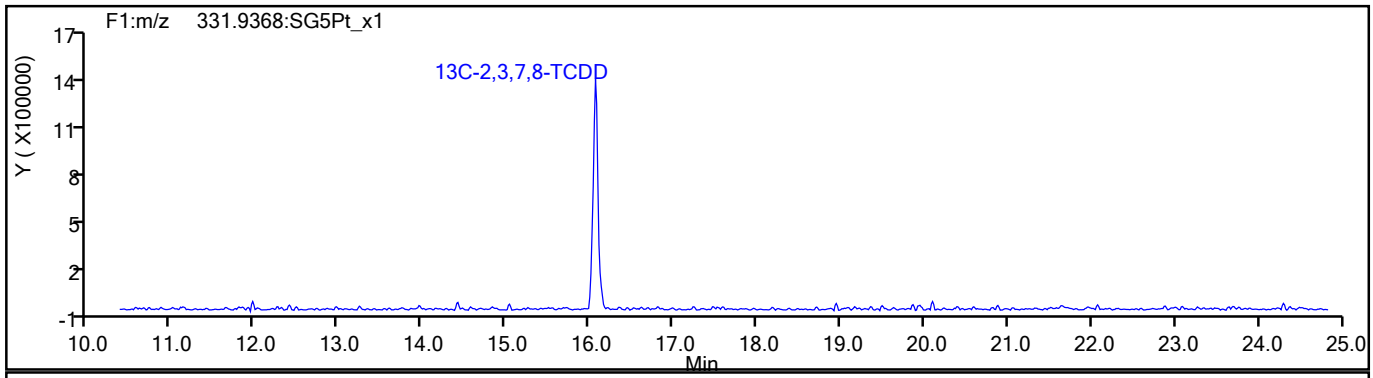

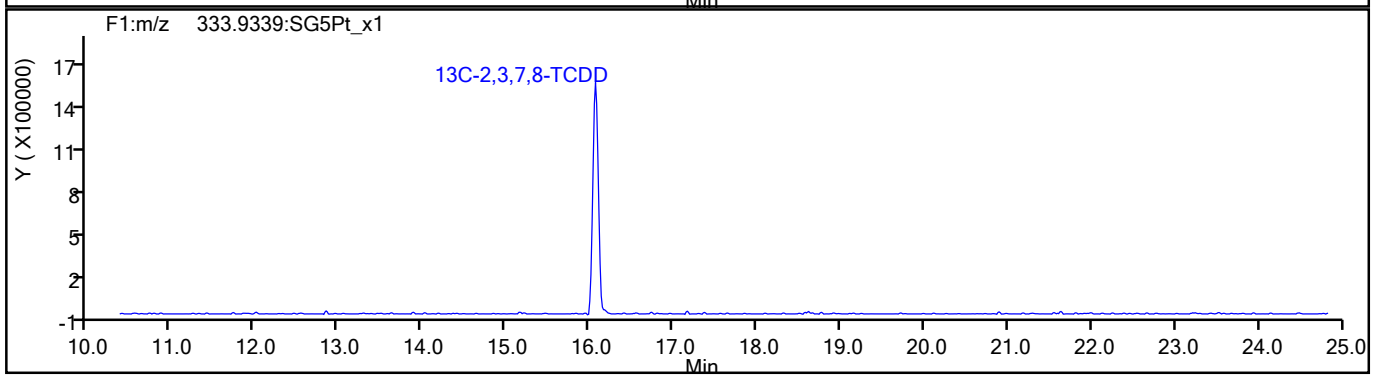

792850

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d		
Injection Date:	31-Aug-2021 13:13:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

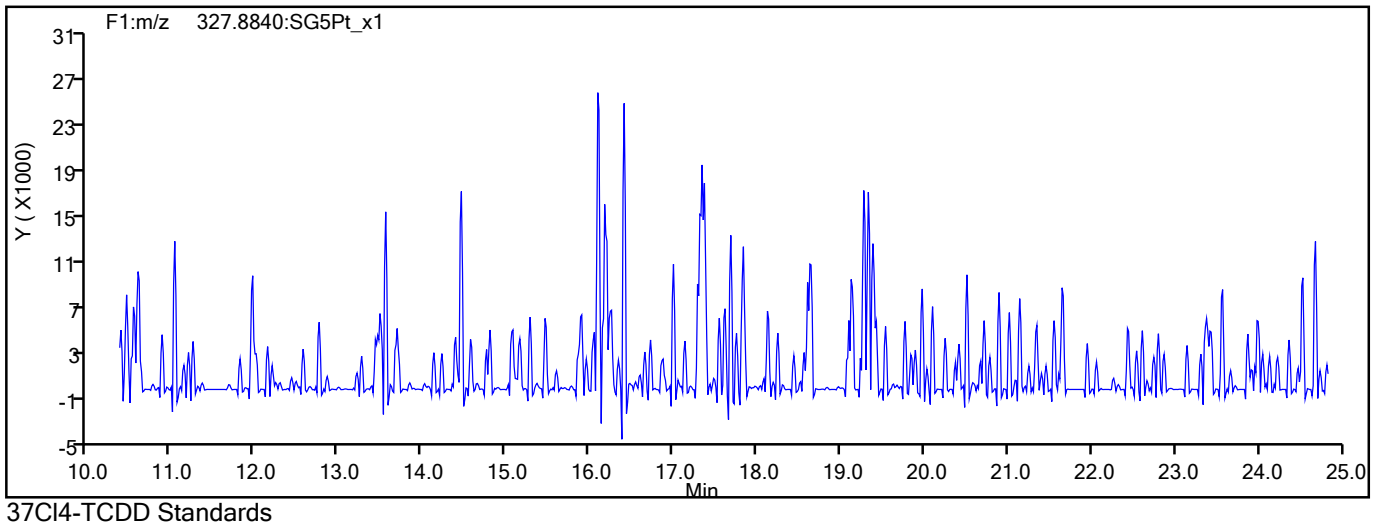

37Cl4-TCDD Standards

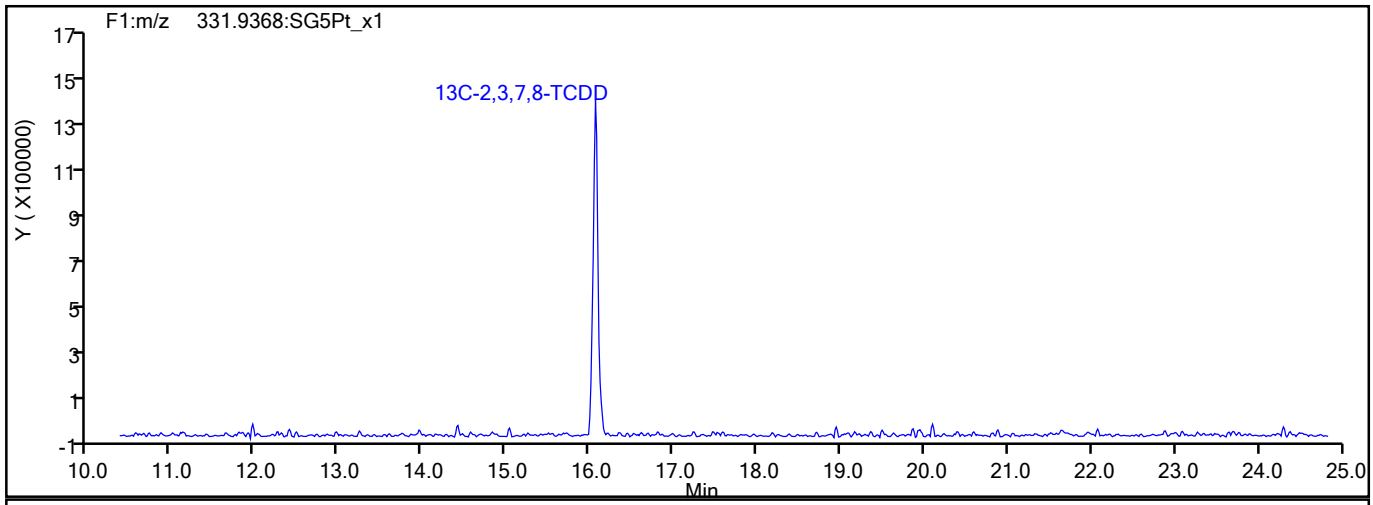

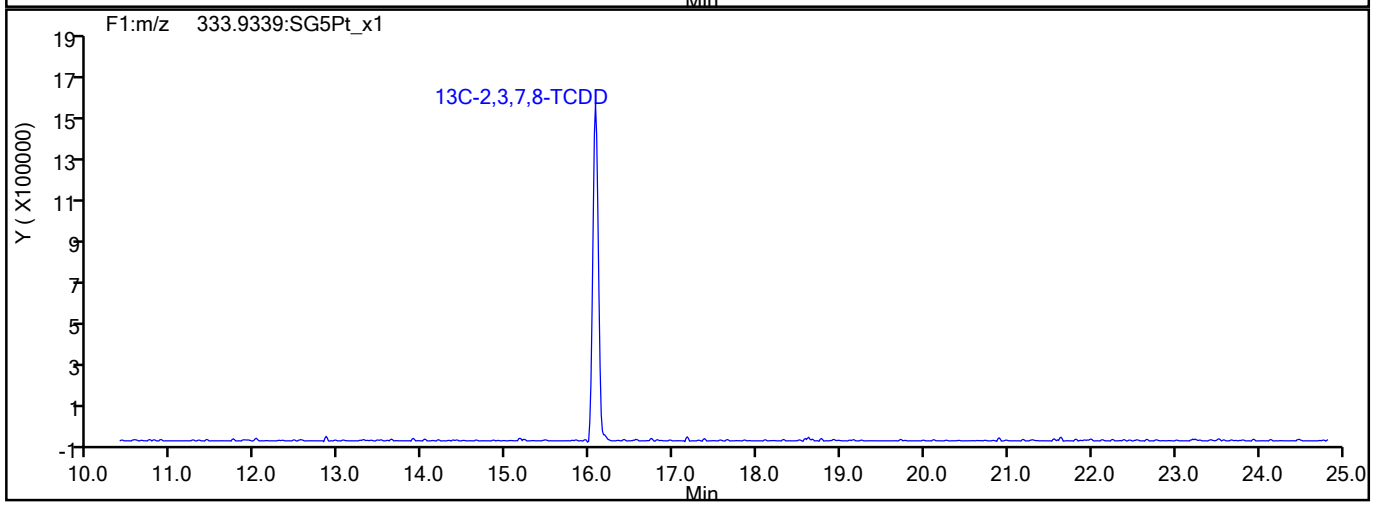

792851

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d		
Injection Date:	31-Aug-2021 13:13:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

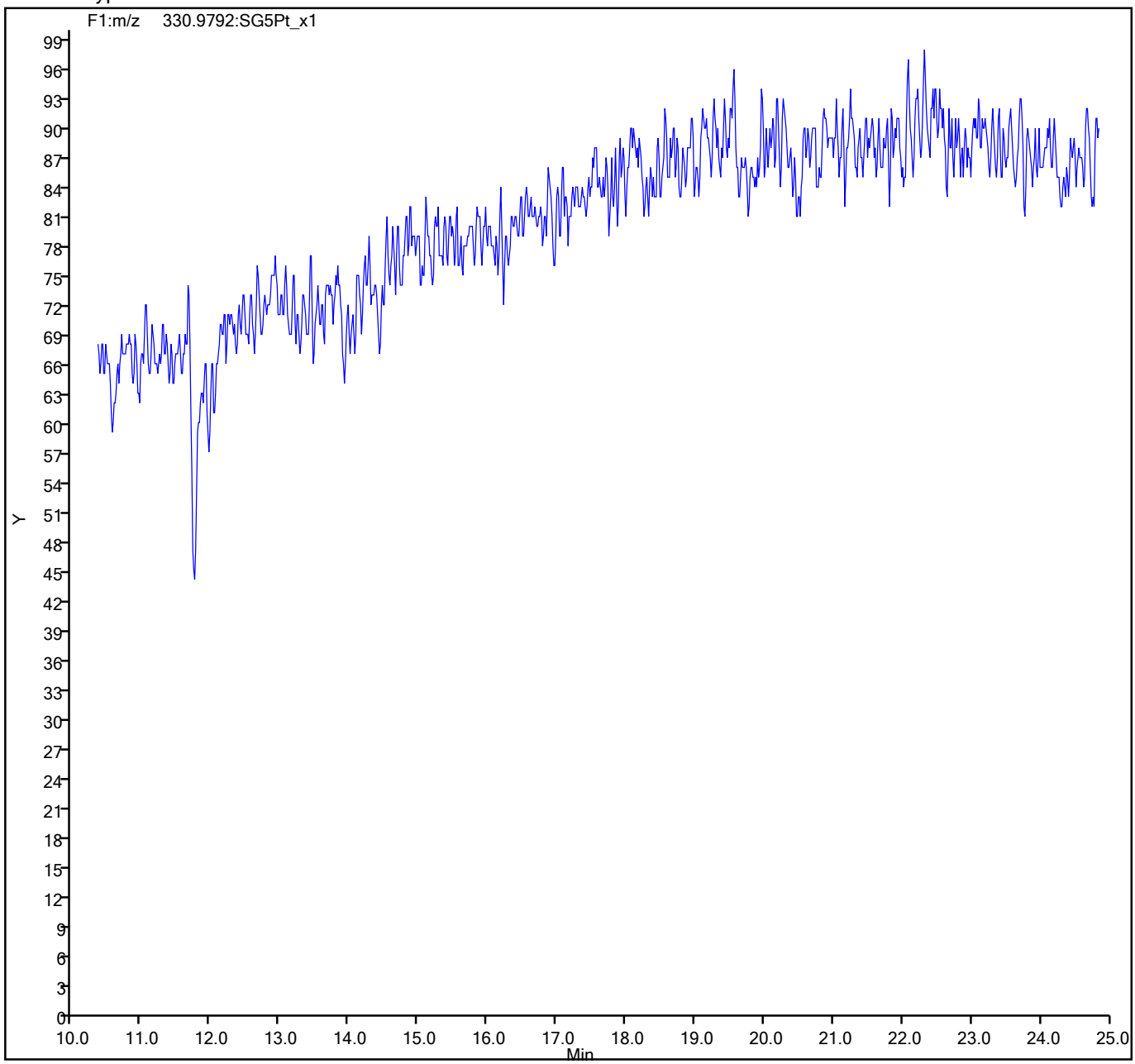

792852

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-2
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-515492/1-A
Matrix: Sediment
Lab File ID: 25AU2110D5_3.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10(g)
Date Analyzed: 08/25/2021 11:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.14
51207-31-9	2,3,7,8-TCDF	0.190	J	1.0	0.073
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.16
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.13
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.13
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.0	0.10
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.11
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.099
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.093
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.093
72918-21-9	1,2,3,7,8,9-HxCDF	ND		5.0	0.061
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.065
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.227	J	5.0	0.055
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		5.0	0.092
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.11
3268-87-9	OCDD	1.16	J	10	0.10
39001-02-0	OCDF	0.668	J	10	0.095
41903-57-5	Total TCDD	ND		1.0	0.14
30402-14-3	Total TCDF	0.190	J	1.0	0.073
36088-22-9	Total PeCDD	ND		5.0	0.16
30402-15-4	Total PeCDF	ND		5.0	0.13
34465-46-8	Total HxCDD	ND		5.0	0.11
55684-94-1	Total HxCDF	ND		5.0	0.093
37871-00-4	Total HpCDD	0.423	J	5.0	0.055
38998-75-3	Total HpCDF	ND		5.0	0.11

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-515492/1-A

Matrix: Sediment Lab File ID: 25AU2110D5_3.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/12/2021 05:19

Sample wt/vol: 10(g) Date Analyzed: 08/25/2021 11:20

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 519953 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		25-164
89059-46-1	13C-2,3,7,8-TCDF	52		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	57		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	54		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	59		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	49		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	58		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	49		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	52		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	51		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	51		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	49		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	54		26-138
114423-97-1	13C-OCDD	59		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	66		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d
Lims ID: MB 320-515492/1-A
Client ID:
Sample Type: MB
Inject. Date: 25-Aug-2021 11:20:44 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-515492/1-A MB 320-515492/1-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:26:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:54:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.567	29883312	0.79	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.053	25142269	0.74	1.6249	51.8	51.8	0.2140	0.2140	51.78	
2,3,7,8-TCDF	17.069	24444	0.77	1.0239	0.1217	0.0950	0.0366	0.0366		RQM
A Non-2,3,7,8-sub-TCDF	17.076						0.0366	0.0366		
S Total TCDF					0.1217	0.0950	0.0366	0.0366		RQ
D 13C-2,3,7,8-TCDD	17.764	14568724	0.79	0.8993	54.2	54.2	0.2072	0.2072	54.21	
2,3,7,8-TCDD	17.809						0.0716	0.0716		
$ 37Cl4-2,3,7,8-TCDD	17.779	8751472		1.1071	26.5	26.5	0.0605	0.0605	66.13	
A Non-2,3,7,8-sub-TCDD	17.537						0.0716	0.0716		
S Total TCDD							0.0716	0.0716		
D 13C-1,2,3,7,8-PeCDF	22.020	19603570	1.55	1.2101	54.2	54.2	0.1045	0.1045	54.21	
1,2,3,7,8-PeCDF	22.047						0.0636	0.0636		
D 13C-2,3,4,7,8-PeCDF	23.343	22023538	1.60	1.2395	59.5	59.5	0.1020	0.1020	59.46	
2,3,4,7,8-PeCDF	23.370						0.0633	0.0633		
A F1 PeCDFs	19.851						0.0570	0.0570		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0634	0.0634		
S Total PeCDF							0.0636	0.0636		
D 13C-1,2,3,7,8-PeCDD	24.052	12936475	1.63	0.7612	56.9	56.9	0.0766	0.0766	56.87	
1,2,3,7,8-PeCDD	24.079						0.0794	0.0794		
A Non-2,3,7,8-sub-PeCDD	23.696						0.0794	0.0794		
S Total PeCDD							0.0794	0.0794		
D 13C-1,2,3,4,7,8-HxCDF	30.199	18899674	0.52	1.0837	57.6	57.6	0.1758	0.1758	57.61	
1,2,3,4,7,8-HxCDF	30.213						0.0464	0.0464		
D 13C-1,2,3,6,7,8-HxCDF	30.399	16749571	0.52	1.1279	49.1	49.1	0.1689	0.1689	49.06	
1,2,3,6,7,8-HxCDF	30.412						0.0464	0.0464		
D 13C-2,3,4,6,7,8-HxCDF	31.304	16549499	0.51	1.0637	51.4	51.4	0.1791	0.1791	51.39	
2,3,4,6,7,8-HxCDF	31.317						0.0324	0.0324		
D 13C-1,2,3,7,8,9-HxCDF	32.143	15217541	0.51	0.9676	52.0	52.0	0.1969	0.1969	51.95	
1,2,3,7,8,9-HxCDF	32.156						0.0307	0.0307		
A Non-2,3,7,8-sub-HxCDF	30.338						0.0377	0.0377		
S Total HxCDF							0.0464	0.0464		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	31.956	30271630	1.27	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.504	12800681	1.23	0.7334	57.7	57.7	0.1950	0.1950	57.66	
1,2,3,4,7,8-HxCDD	31.517						0.0524	0.0524		RQU
D 13C-1,2,3,6,7,8-HxCDD	31.610	12948793	1.21	0.8802	48.6	48.6	0.1625	0.1625	48.60	
1,2,3,6,7,8-HxCDD	31.517						0.0567	0.0567		RQU
1,2,3,7,8,9-HxCDD	31.969						0.0497	0.0497		
A Non-2,3,7,8-sub-HxCDD	30.525						0.0528	0.0528		U
S Total HxCDD							0.0567	0.0567		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	11519496	0.45	0.7730	49.2	49.2	0.5788	0.5788	49.23	
1,2,3,4,6,7,8-HpCDF	33.615						0.0461	0.0461		
D 13C-1,2,3,4,7,8,9-HpCDF	34.673	11506086	0.42	0.7008	54.2	54.2	0.6384	0.6384	54.24	
1,2,3,4,7,8,9-HpCDF	34.685						0.0535	0.0535		
A Non-2,3,7,8-sub-HpCDF	34.150						0.0496	0.0496		
S Total HpCDF							0.0535	0.0535		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	9959429	1.00	0.6472	50.8	50.8	0.4600	0.4600	50.83	
1,2,3,4,6,7,8-HpCDD	34.405	12349	1.04	1.0943	0.1466	0.1133	0.0273	0.0273		RQM
A Non-2,3,7,8-sub-HpCDD	34.223	10693	1.04	1.0943	0.1265	0.0981	0.0273	0.0981		RQM
S Total HpCDD					0.2731	0.2114	0.0273	0.0273		RQ
D 13C-OCDD	36.701	15843349	0.88	0.4472	117.0	117.0	0.3238	0.3238	58.52	
OCDF	36.797	38074	0.89	1.4382	0.3727	0.3342	0.0475	0.0475		RQM
OCDD	36.713	50874	0.92	1.1070	0.5801	0.5801	0.0513	0.0513		M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d
Lims ID: MB 320-515492/1-A
Client ID:
Sample Type: MB
Inject. Date: 25-Aug-2021 11:20:44 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-515492/1-A MB 320-515492/1-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:26:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:54:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.567	17.598	-2		13169191	3437394	4069	10172	845		a
333.9339	17.567	17.598	-2		16714121	4346740	1734	4335	2507	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.053	17.099	-3	0.971	10706570	2704495	7372	18430	367		
317.9389	17.053	17.099	-3	0.971	14435699	3713861	3456	8640	1075	0.74(0.65-0.89)	
2,3,7,8-TCDF											RQM
303.9016	17.069	17.114	-3	1.001	10634	2780	339	847	8		M
305.8987	17.084	17.114	-2	1.002	20697	4646	623	1557	7	0.51(0.65-0.89)	
	Empc Correction				13810	3610	623	1557	6		
A Non-2,3,7,8-sub-TCDF											
303.9016	17.076						339	847			
305.8987	17.076						623	1557			
13C-2,3,7,8-TCDD											
331.9368	17.764	17.794	-2	1.011	6436642	1562061	4069	10172	384		
333.9339	17.764	17.794	-2	1.011	8132082	1966432	1734	4335	1134	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809						836	2090			
321.8936	17.809						432	1080			
37Cl4-2,3,7,8-TCDD											
327.8847	17.779	17.809	-2	1.012	8751472	2145464	2087	5217	1028		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.537						836	2090			
321.8936	17.537						432	1080			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.253	11929209	2253060	2205	5512	1022		
353.8970	22.020	22.020	0	1.253	7674361	1454588	1732	4330	840	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.047						237	592			
341.8567	22.047						764	1910			
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.329	13547656	2391698	2205	5512	1085		
353.8970	23.343	23.343	0	1.329	8475882	1486861	1732	4330	858	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370						237	592			
341.8567	23.370						764	1910			
A F1 PeCDFs											
339.8597	19.851						232	580			
341.8567	19.851						668	1670			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.067						237	592			
341.8567	23.067						764	1910			
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.369	8022940	1343012	1068	2670	1258		
369.8919	24.052	24.052	0	1.369	4913535	794351	748	1870	1062	1.63(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079						515	1287			
357.8516	24.079						197	492			
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						515	1287			
357.8516	23.696						197	492			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.199	30.186	1	0.945	6465926	1148968	3389	8472	339		
385.8610	30.186	30.186	0	0.945	12433748	2208690	3402	8505	649	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.213						398	995			
375.8178	30.213						279	697			
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	5713520	1127867	3389	8472	333		
385.8610	30.399	30.399	0	0.951	11036051	2108760	3402	8505	620	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412						398	995			
375.8178	30.412						279	697			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.304	31.291	1	0.980	5558725	1512399	3389	8472	446		
385.8610	31.304	31.291	1	0.980	10990774	2954889	3402	8505	869	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317						398	995			
375.8178	31.317						279	697			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.143	0	1.006	5118427	1606580	3389	8472	474		
385.8610	32.143	32.143	0	1.006	10099114	3116314	3402	8505	916	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.156						398	995			
375.8178	32.156						279	697			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.338						398	995			
375.8178	30.338						279	697			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		16912518	4980246	2870	7175	1735		
403.8529	31.956	31.956	0		13359112	3929684	2226	5565	1765	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.504	31.504	0	0.986	7056039	2029906	2870	7175	707		
403.8529	31.504	31.504	0	0.986	5744642	1633767	2226	5565	734	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8157	31.517						432	1080			
391.8127	31.517						385	962			
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	7094657	1989733	2870	7175	693		
403.8529	31.610	31.610	0	0.989	5854136	1609259	2226	5565	723	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8157	31.624						432	1080			
391.8127	31.624						385	962			
1,2,3,7,8,9-HxCDD											
389.8157	31.969						432	1080			
391.8127	31.969						385	962			
A Non-2,3,7,8-sub-HxCDD											U
389.8157	30.525						432	1080			
391.8127	30.525						385	962			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	3578307	1319781	4391	10977	301		
419.8220	33.603	33.603	0	1.052	7941189	3120604	11555	28887	270	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615						901	2252			
409.7789	33.615						279	697			
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.673	34.672	0	1.085	3388005	1248206	4391	10977	284		
419.8220	34.673	34.672	0	1.085	8118081	2934164	11555	28887	254	0.42(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685						901	2252			
409.7789	34.685						279	697			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						901	2252			
409.7789	34.150						279	697			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	4968890	1847092	8092	20230	228		
437.8140	34.393	34.393	0	1.076	4990539	1826875	2519	6297	725	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											RQM
423.7766	34.405	34.405	0	1.000	6296	2257	263	657	9		M
425.7737	34.405	34.405	0	1.000	9677	3475	176	440	20	0.65(0.88-1.20)	M
	Empc Correction				6053	2170	176	440	12		
A Non-2,3,7,8-sub-HpCDD											RQM
423.7766	33.858	34.223	-22	0.984	8547	2277	263	657	9		M
	Empc Correction				5451	1860	263	657	7		
425.7737	33.858	34.223	-22	0.984	5242	1789	176	440	10	1.63(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.701	0	1.148	7431427	2403818	3595	8987	669		
471.7750	36.701	36.701	0	1.148	8411922	2748839	1565	3912	1756	0.88(0.76-1.02)	
OCDF											RQM
441.7428	36.797	36.797	0	1.003	22310	6605	281	702	24		M
	Empc Correction				17929	5201	281	702	19		
443.7399	36.797	36.797	0	1.003	20145	5844	423	1057	14	1.11(0.76-1.02)	
OCDD											M
457.7377	36.713	36.713	0	1.000	24319	7562	318	795	24		M
459.7348	36.713	36.713	0	1.000	26555	8005	267	667	30	0.92(0.76-1.02)	M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d
Lims ID: MB 320-515492/1-A
Client ID:
Inject. Date: 25-Aug-2021 11:20:44 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	12800681	3663673
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	12948793	3598992
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	12874737	3631332

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d
Lims ID: MB 320-515492/1-A
Client ID:
Inject. Date: 25-Aug-2021 11:20:44 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 3

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	9959429	3673967

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	9959429	3673967

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.858	8547	2277	5242	1789	0.1265	1.63	RQM
33.858	5451	1860	5242	1789	0.0981		Empc Correction
Signal Totals:							
	5451	1860	5242	1789			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13789	4066				1.63	RQM
	10693	3649					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1265 = (13789 * 100.000) / (9959429 * 1.094)
Empc Amount: 0.0981 = (10693 * 100.000) / (9959429 * 1.094)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.07
Area: 11266
Amount: 0.124160
Amount Units: pg/ul

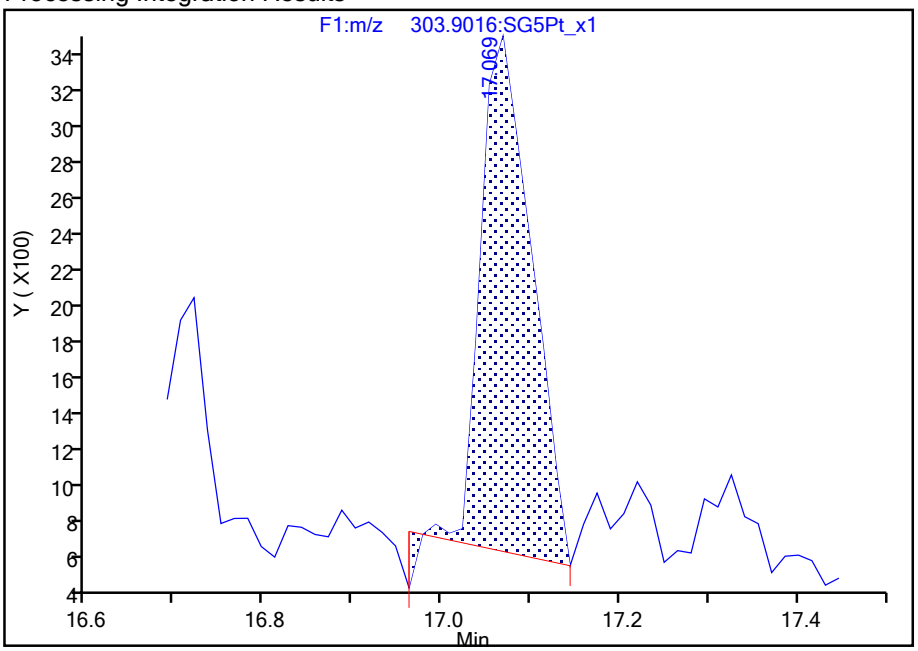

Manual Integration Results

RT: 17.07
Area: 10634
Amount: 0.121705
Amount Units: pg/ul

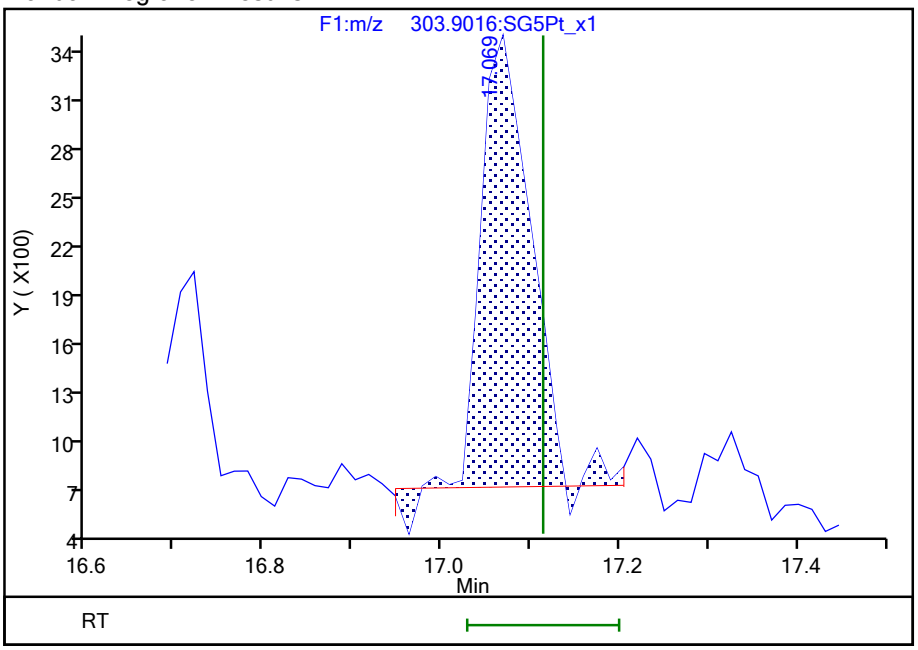

Reviewer: dadunj, 27-Aug-2021 09:25:06

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 34.41
Area: 9682
Amount: 0.189629
Amount Units: pg/ul

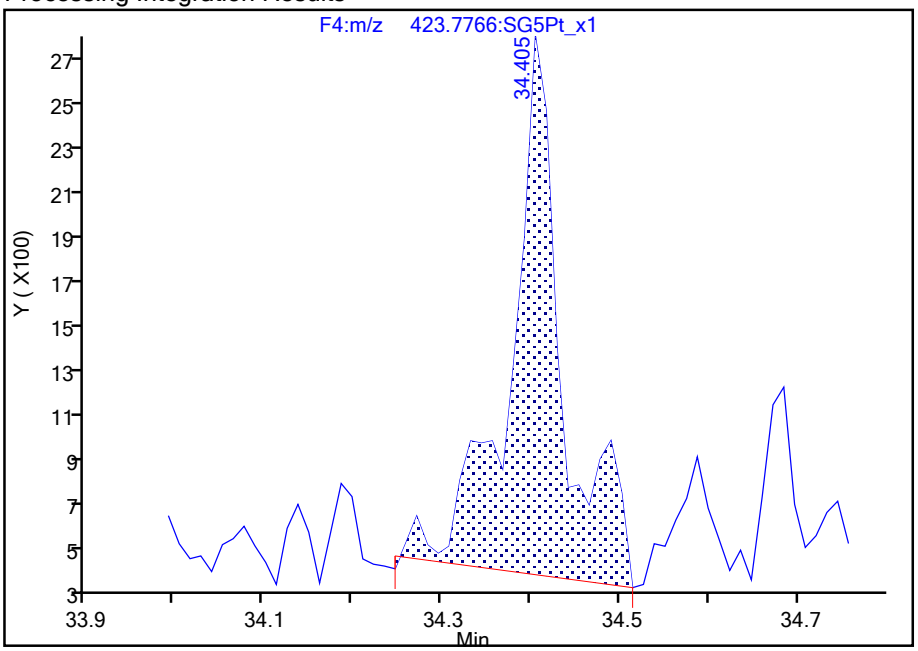

Manual Integration Results

RT: 34.41
Area: 6296
Amount: 0.146560
Amount Units: pg/ul

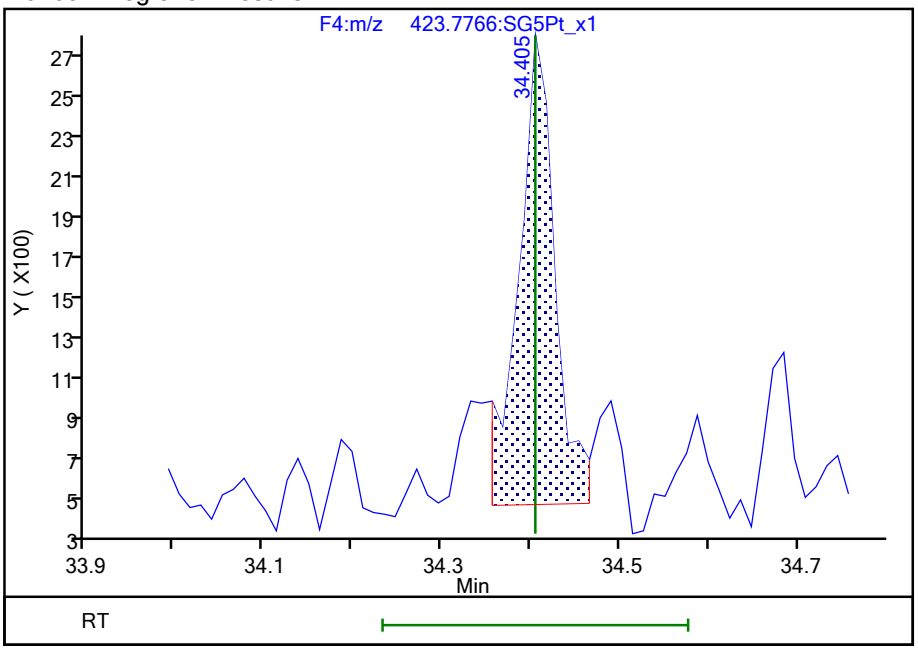

Reviewer: dadunj, 27-Aug-2021 09:25:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 34.41
Area: 10985
Amount: 0.189629
Amount Units: pg/ul

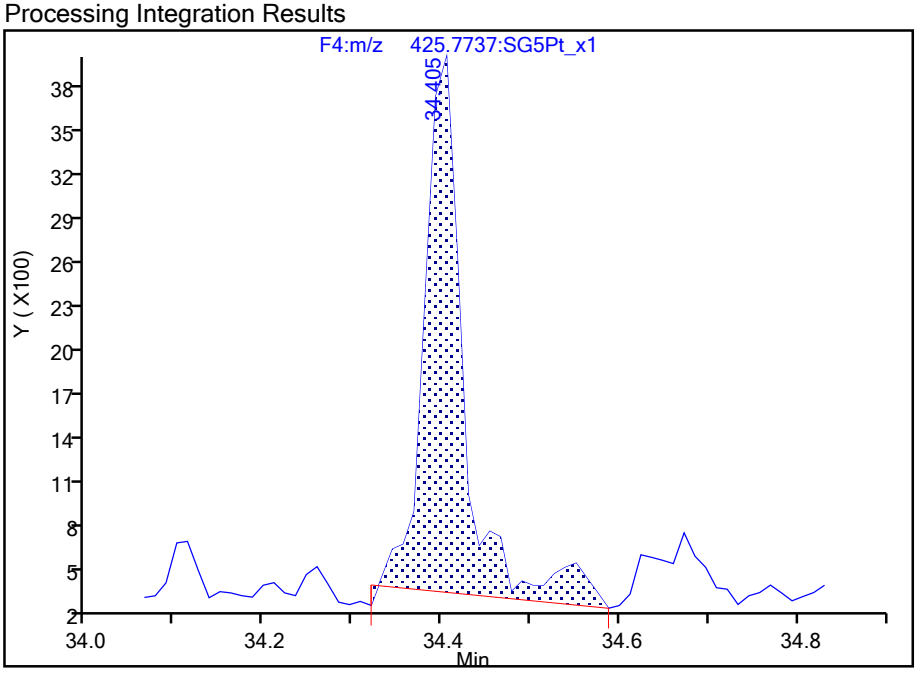

Manual Integration Results

RT: 34.41
Area: 9677
Amount: 0.146560
Amount Units: pg/ul

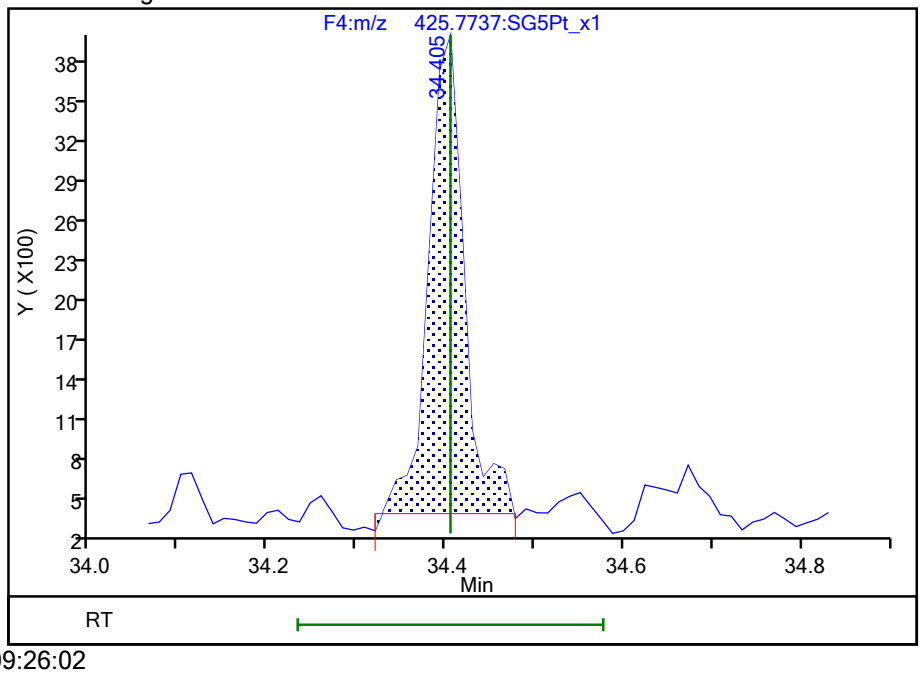

Reviewer: dadunj, 27-Aug-2021 09:26:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

792865

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 1, m/z: 423.7766, RT: (33.85- 34.60)

Signal: 1

Processing Integration Results

RT = 33.858 Area = 10488

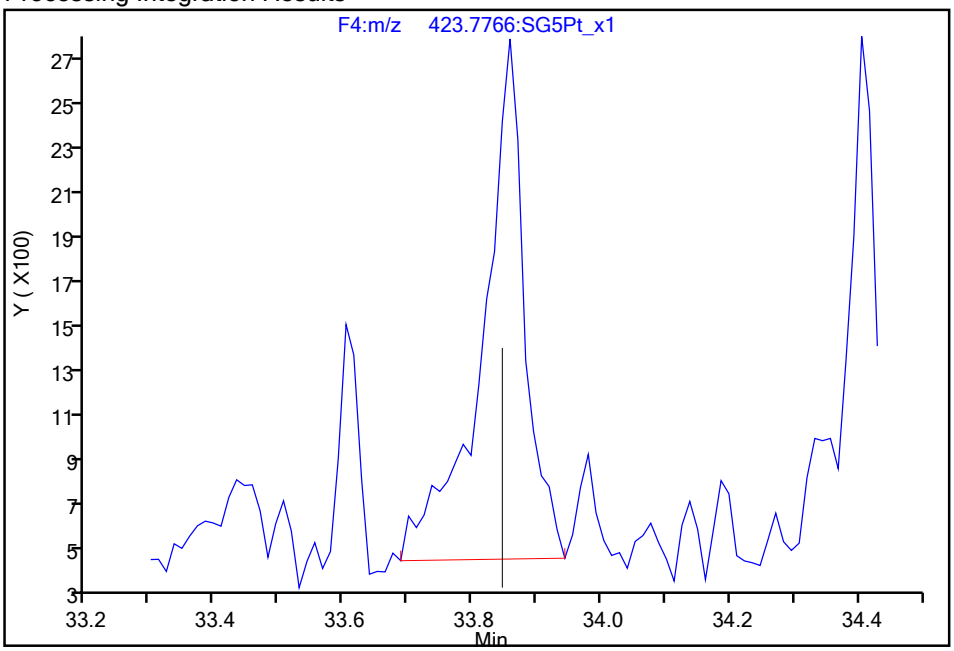

Manual Integration Results

RT = 33.858 Area = 8547 M

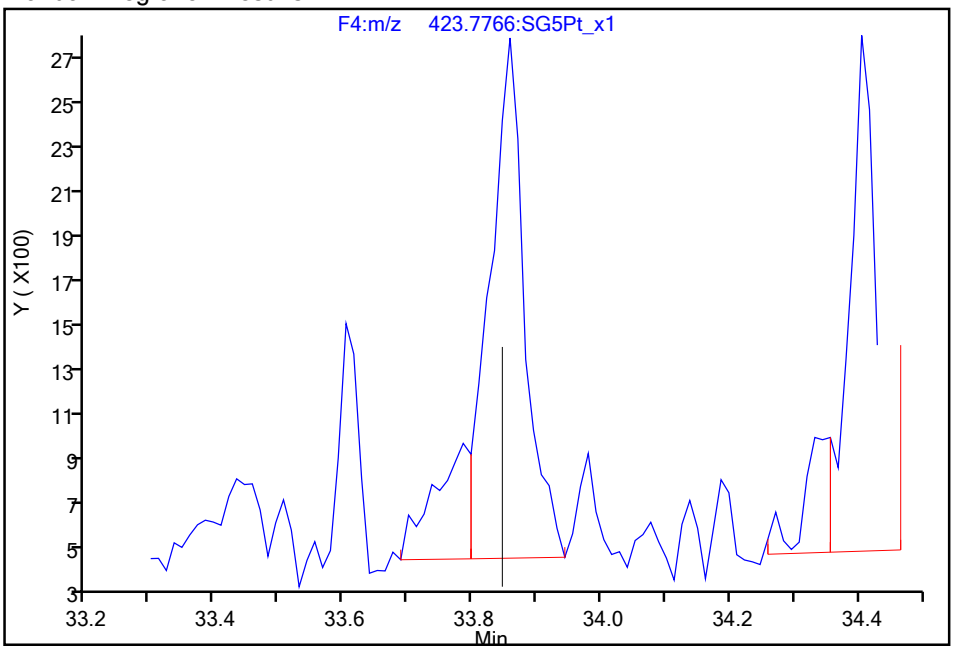

Reviewer: dadunj, 27-Aug-2021 09:26:05

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.80
Area: 23576
Amount: 0.383765
Amount Units: pg/ul

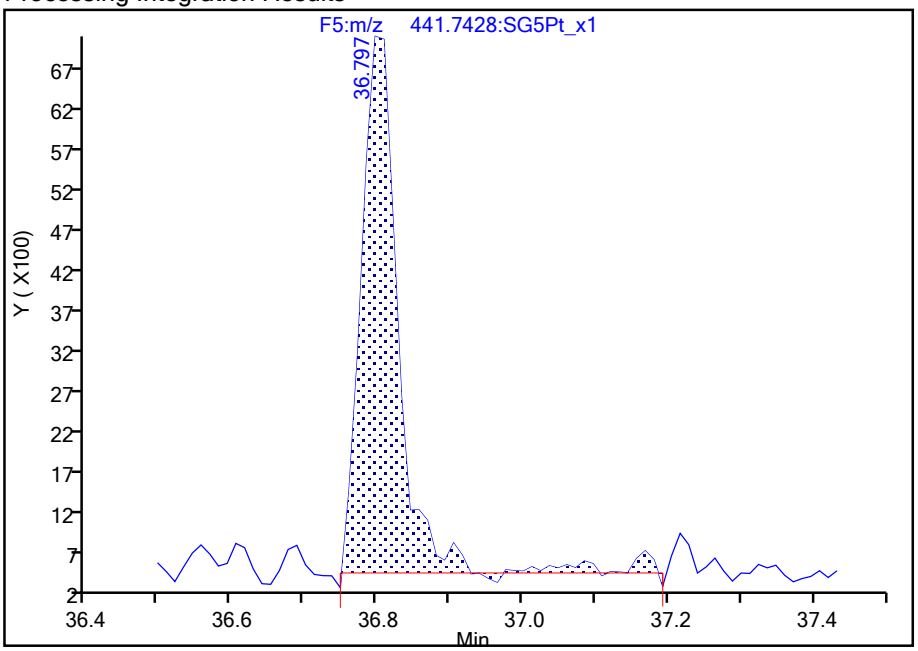

Manual Integration Results

RT: 36.80
Area: 22310
Amount: 0.372653
Amount Units: pg/ul

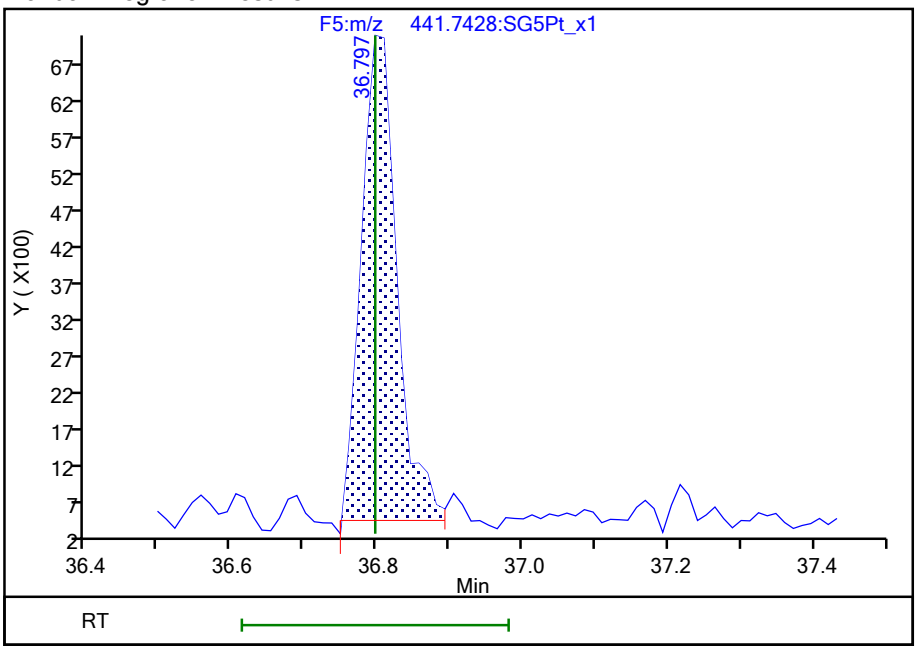

Reviewer: dadunj, 27-Aug-2021 09:26:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 36.71
Area: 27894
Amount: 0.631924
Amount Units: pg/ul

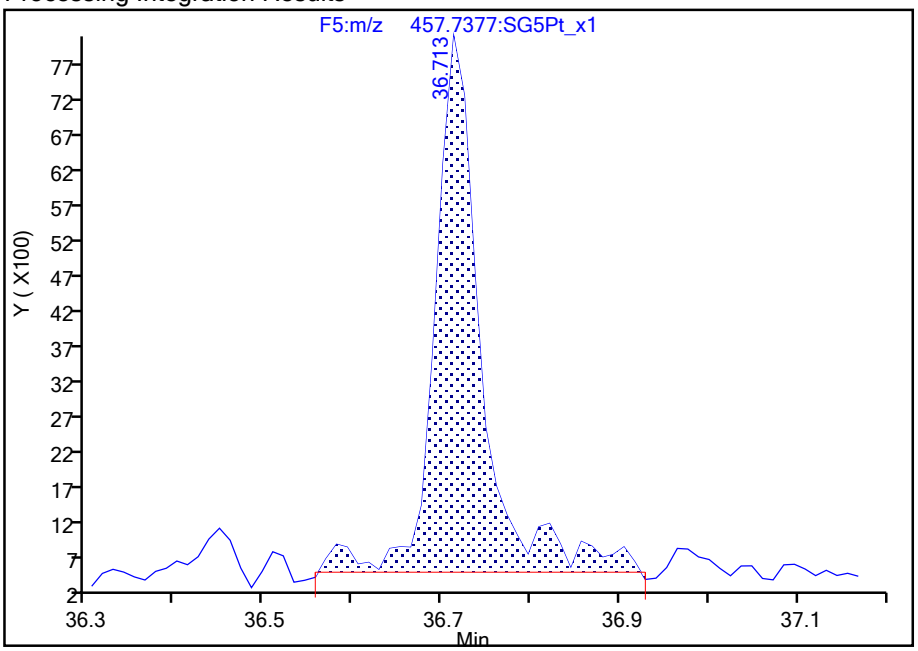

Manual Integration Results

RT: 36.71
Area: 24319
Amount: 0.580131
Amount Units: pg/ul

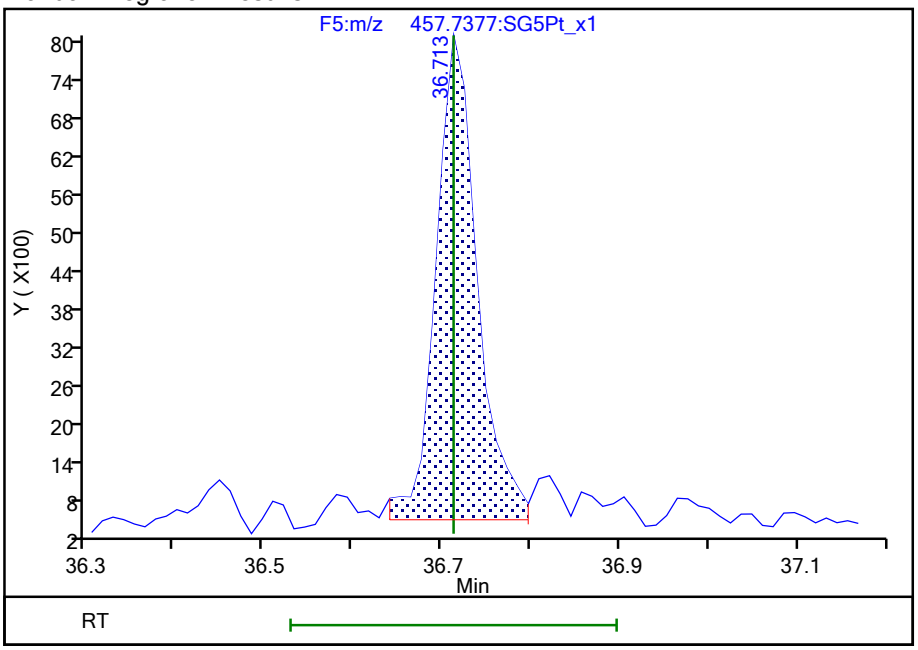

Reviewer: dadunj, 27-Aug-2021 09:26:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 2

Processing Integration Results

RT: 36.71
Area: 27522
Amount: 0.631924
Amount Units: pg/ul

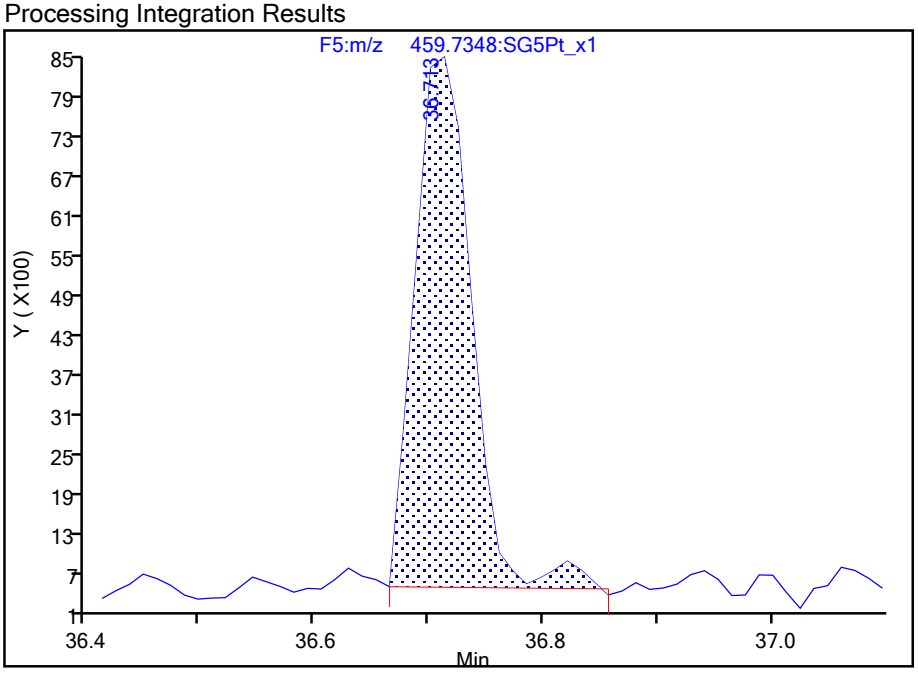

Manual Integration Results

RT: 36.71
Area: 26555
Amount: 0.580131
Amount Units: pg/ul

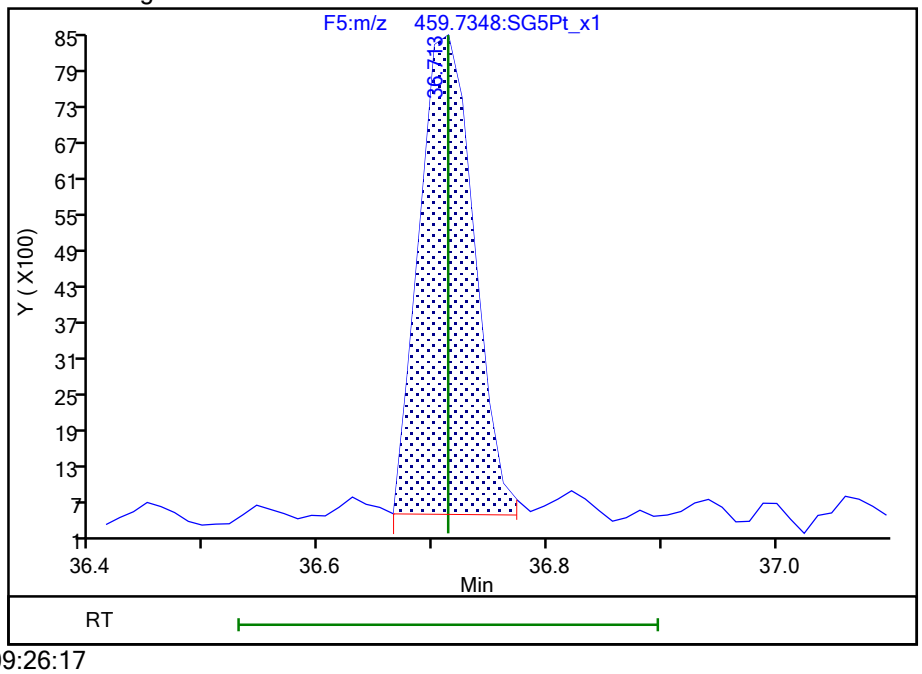

Reviewer: dadunj, 27-Aug-2021 09:26:17
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

792869

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

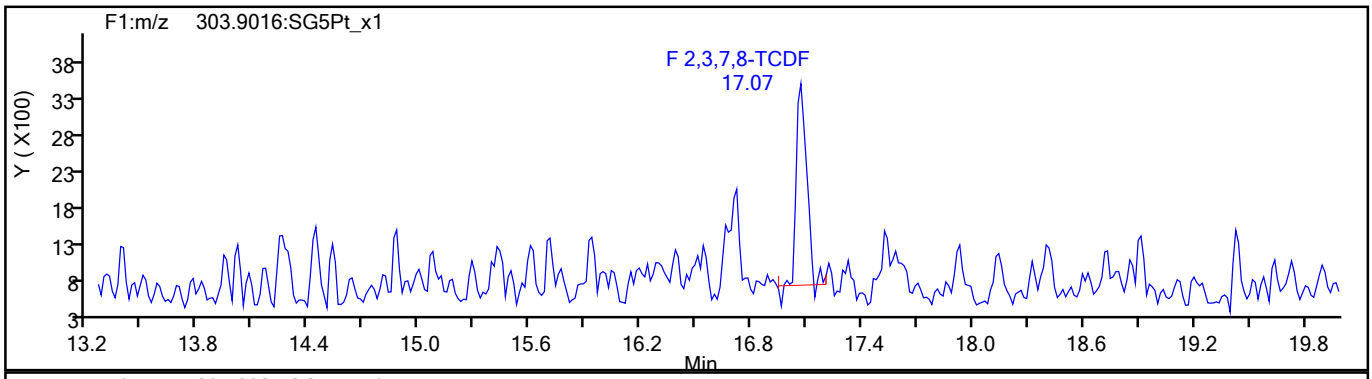

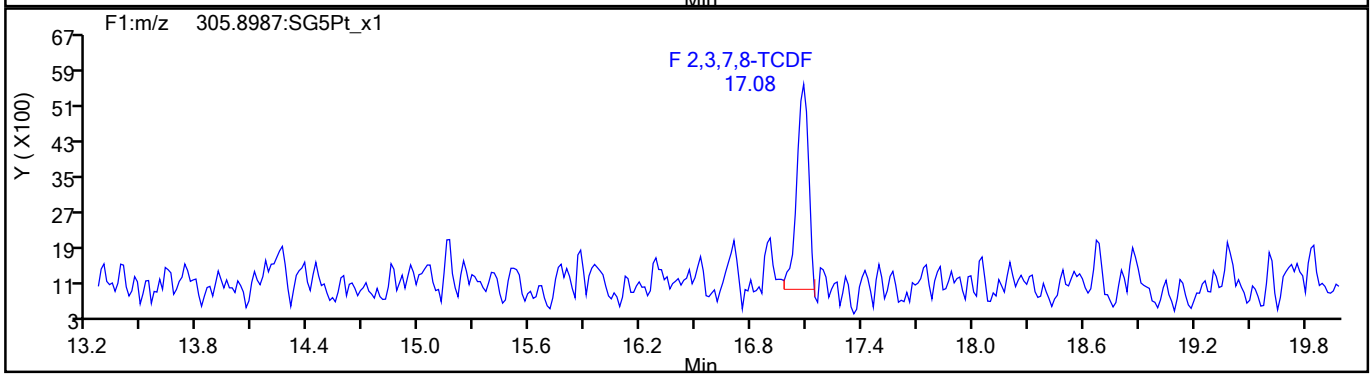

TCDF Standards

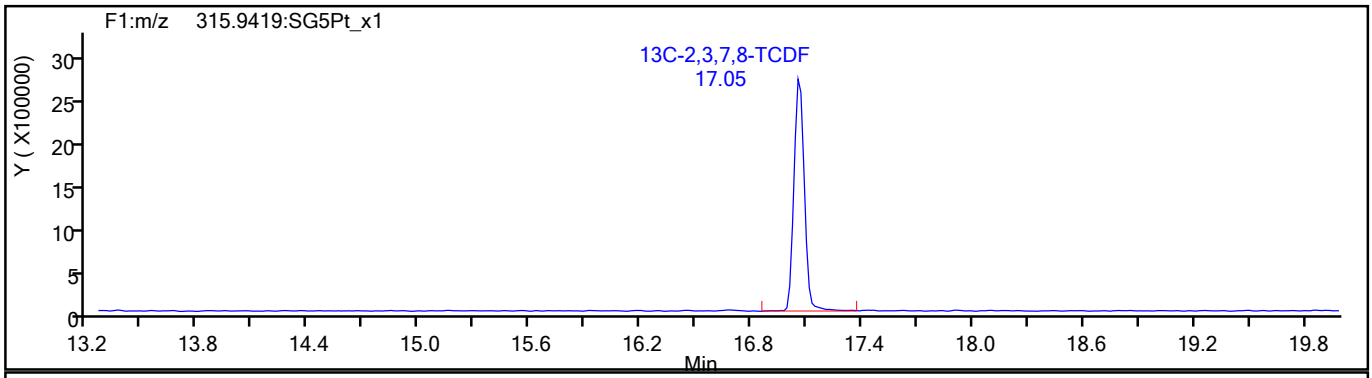

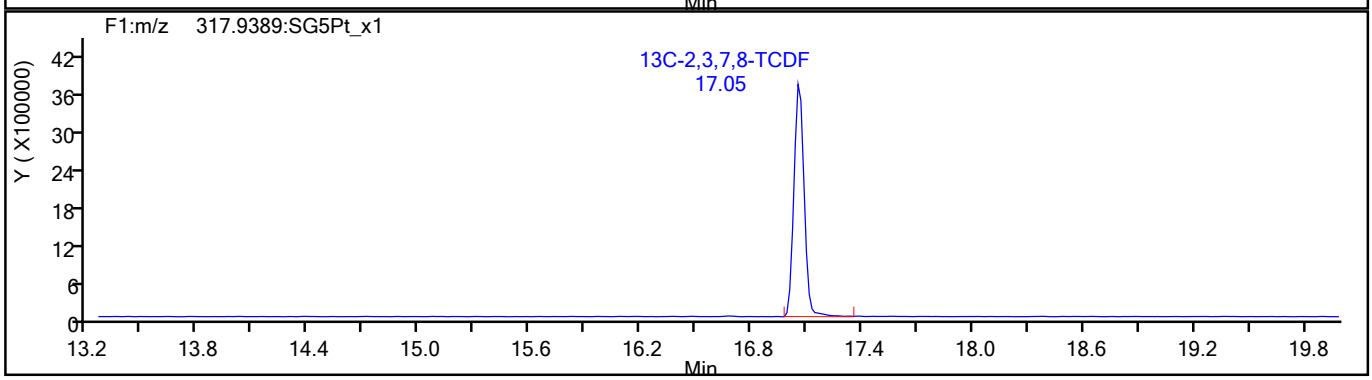

792870

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

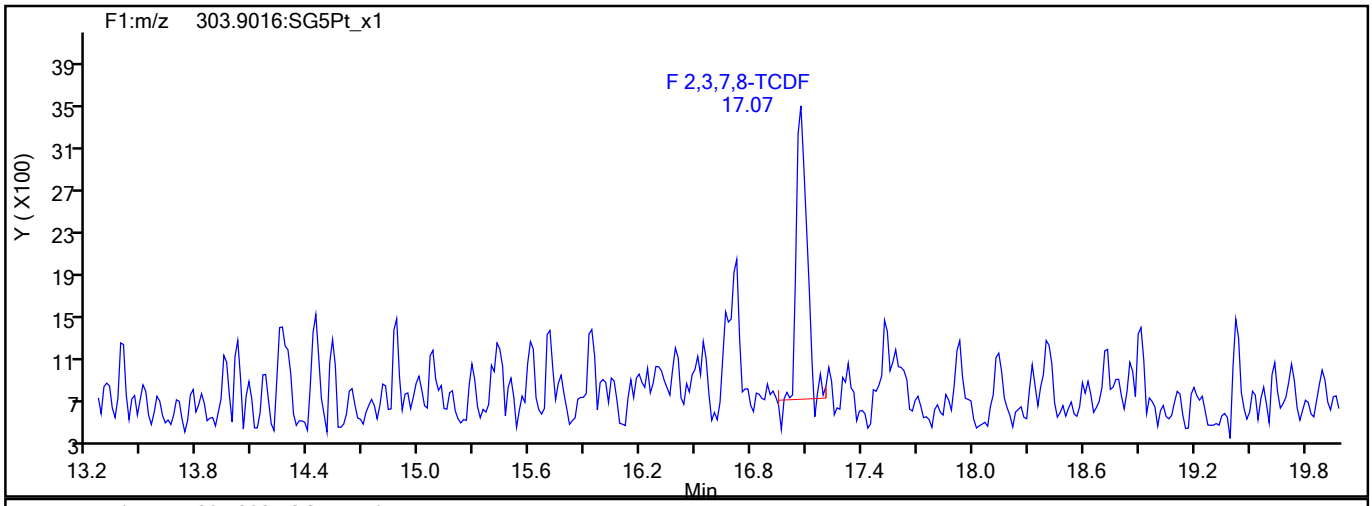

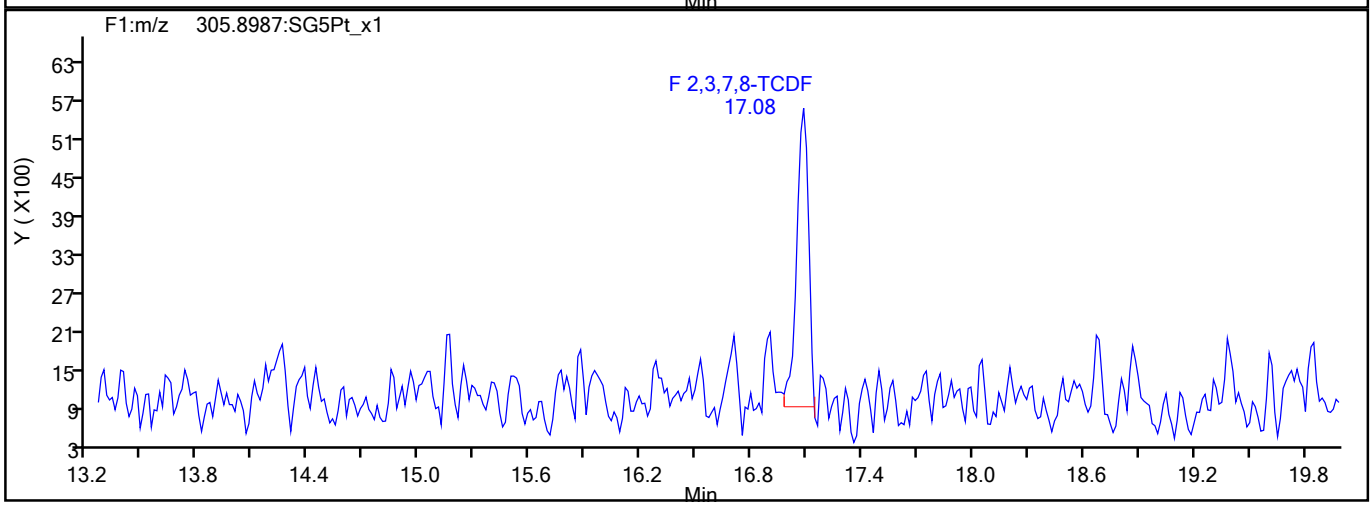

TCDF Interference Mass

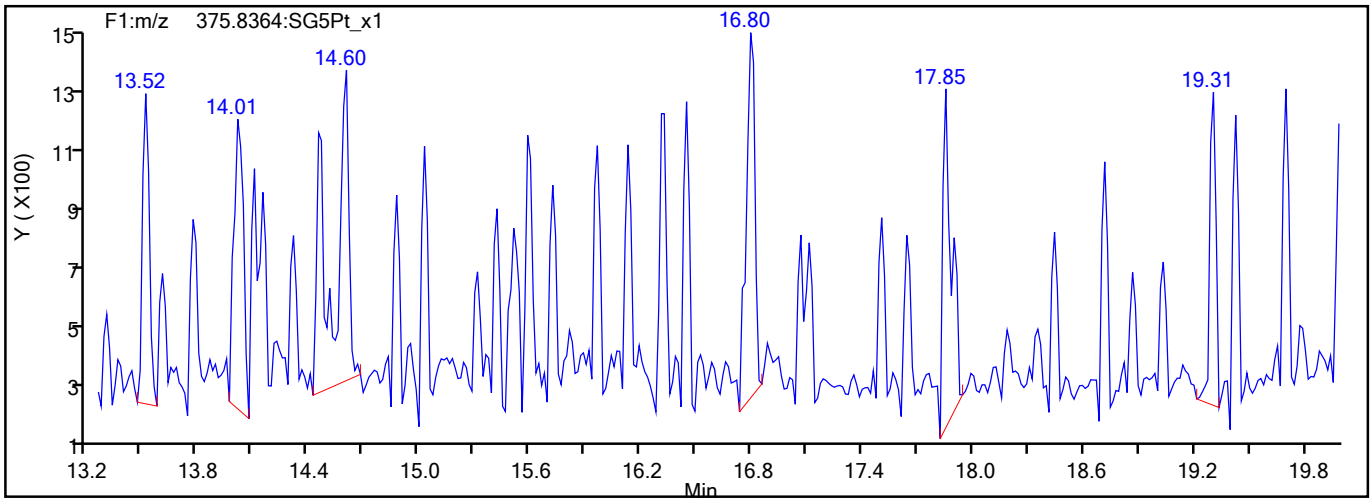

792871

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

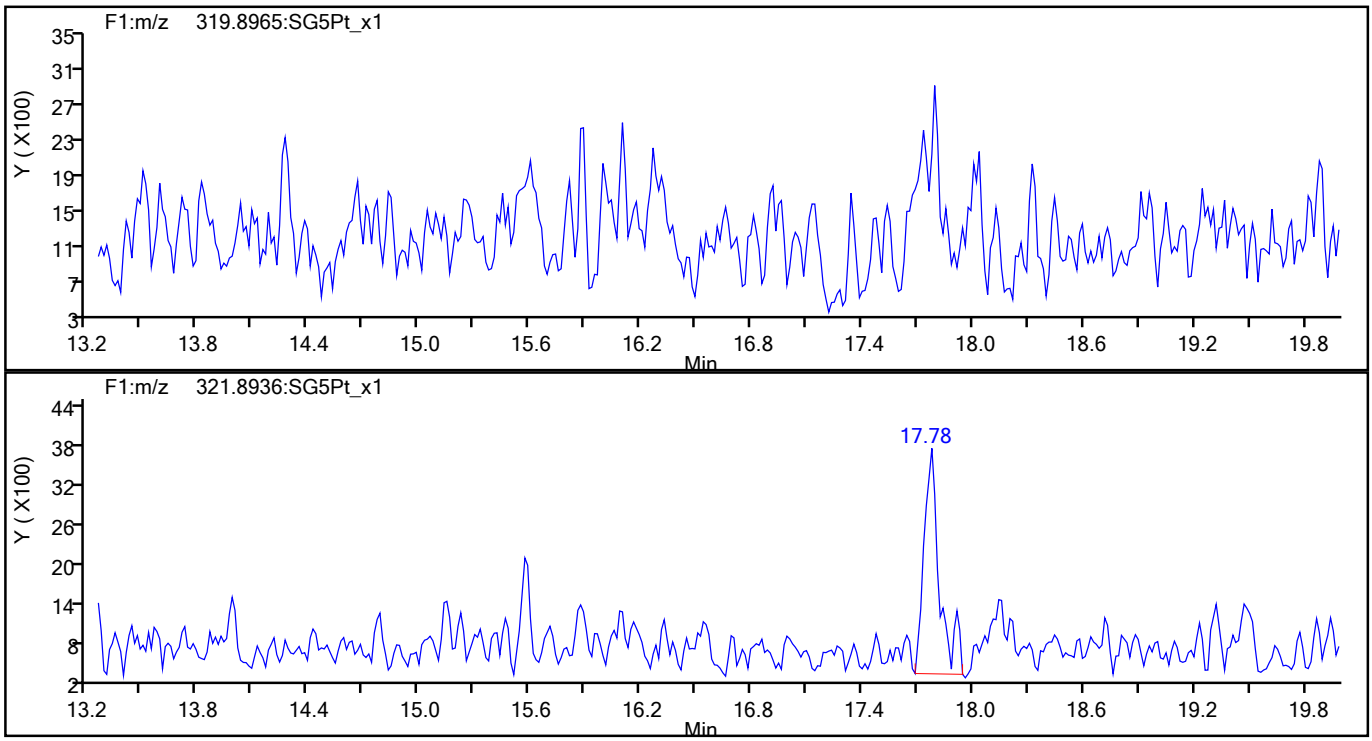

TCDD Standards

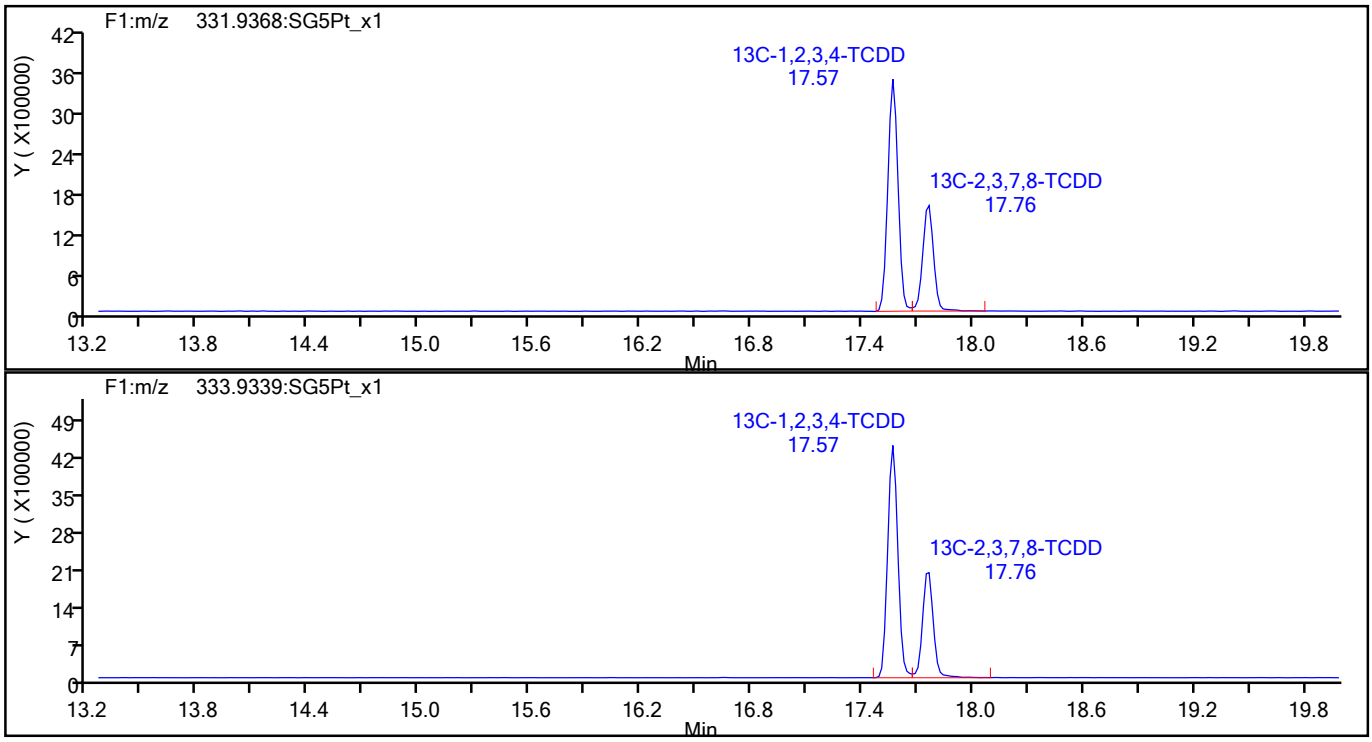

792872

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

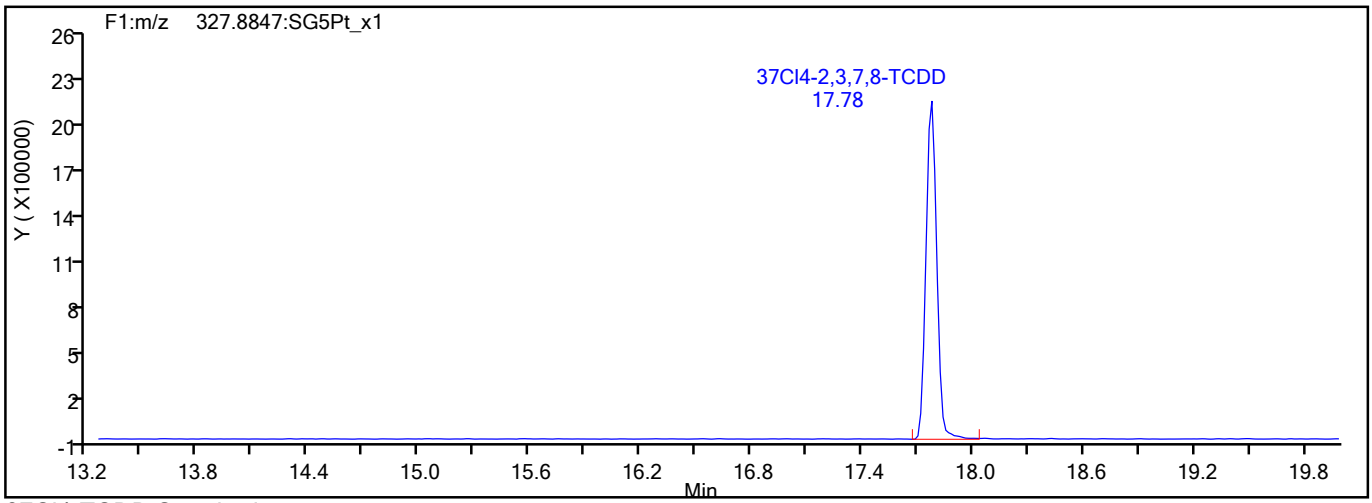

37Cl4-TCDD Standards

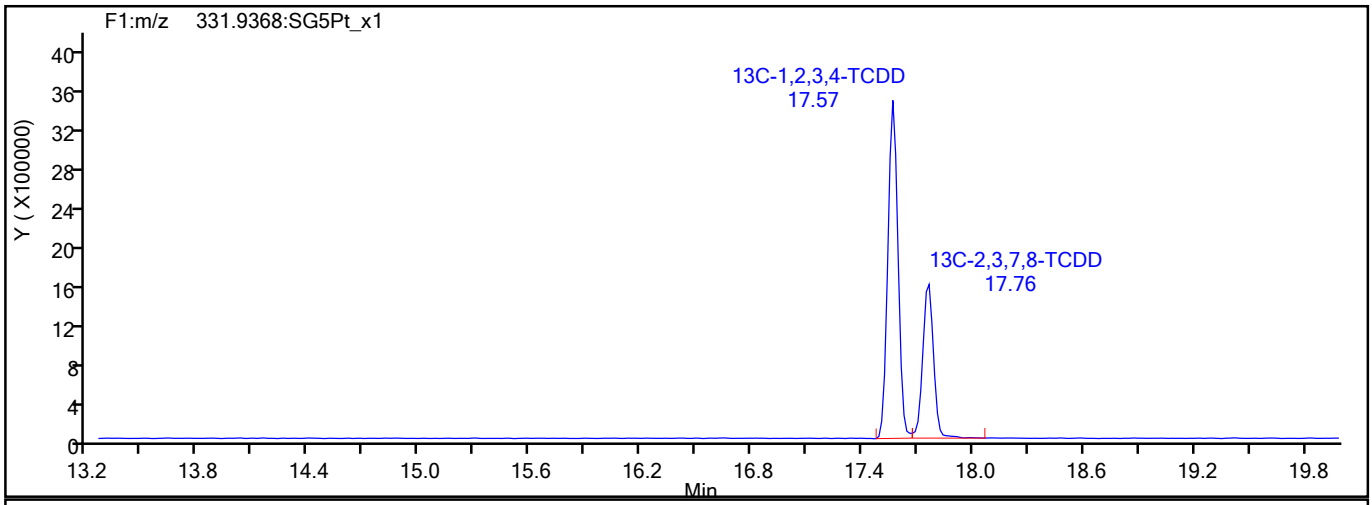

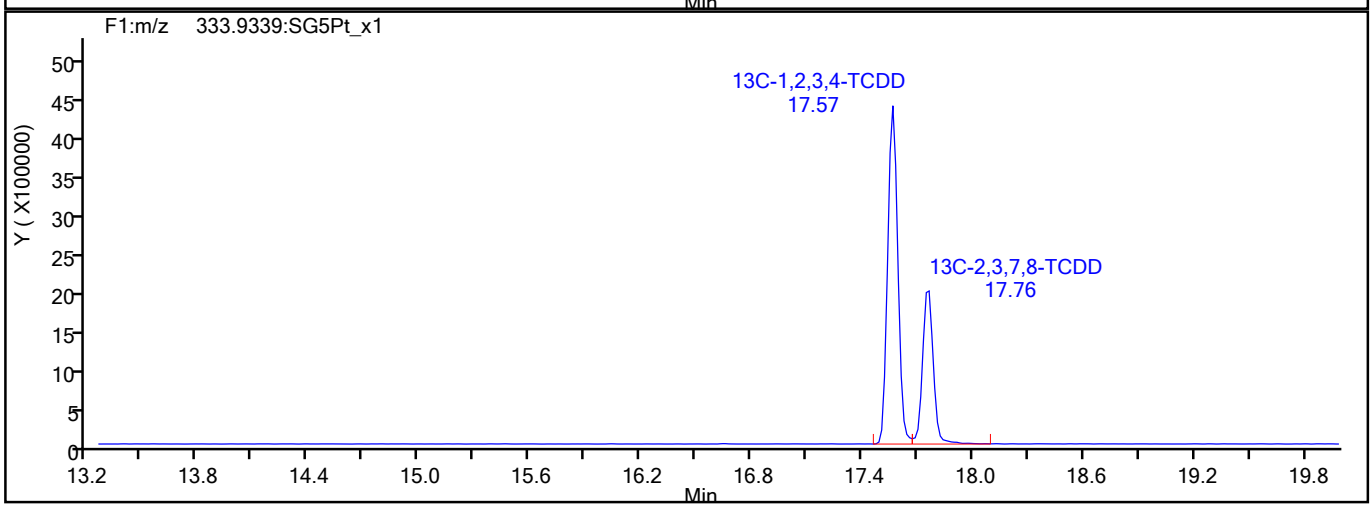

792873

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

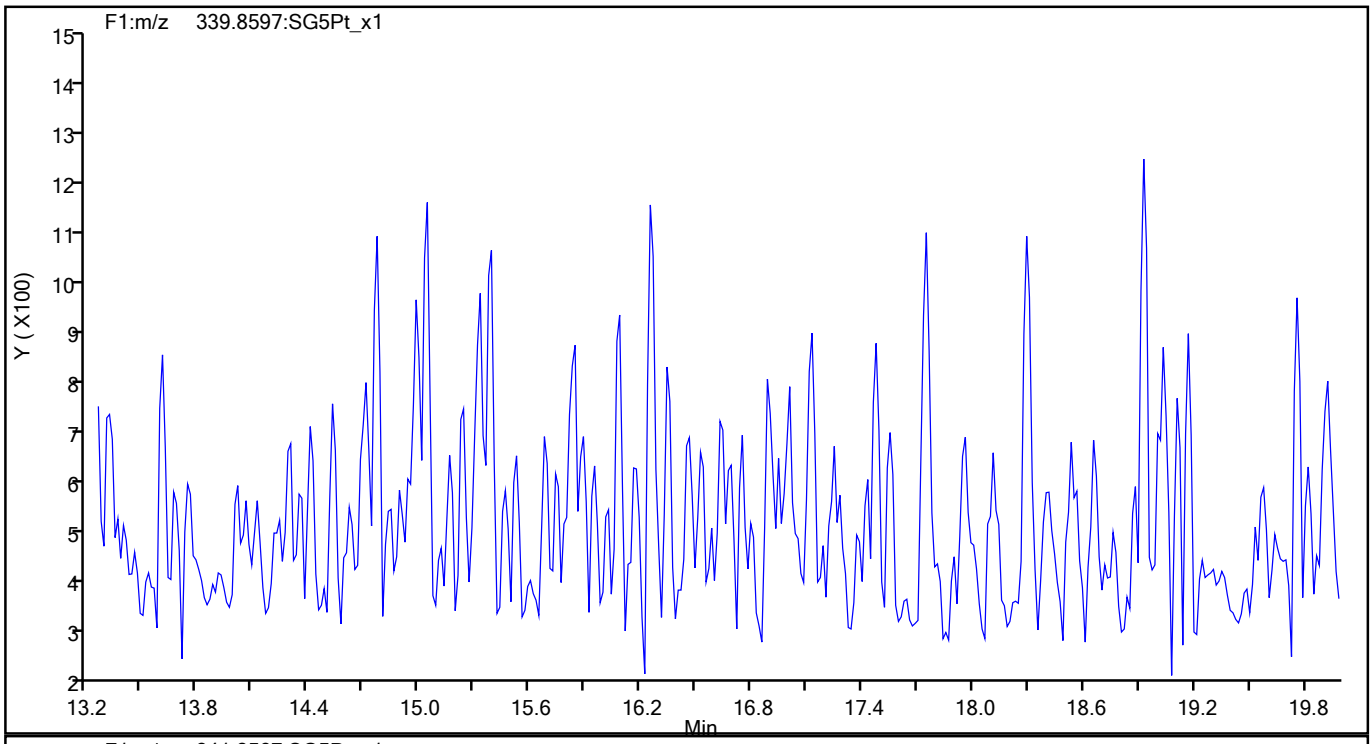

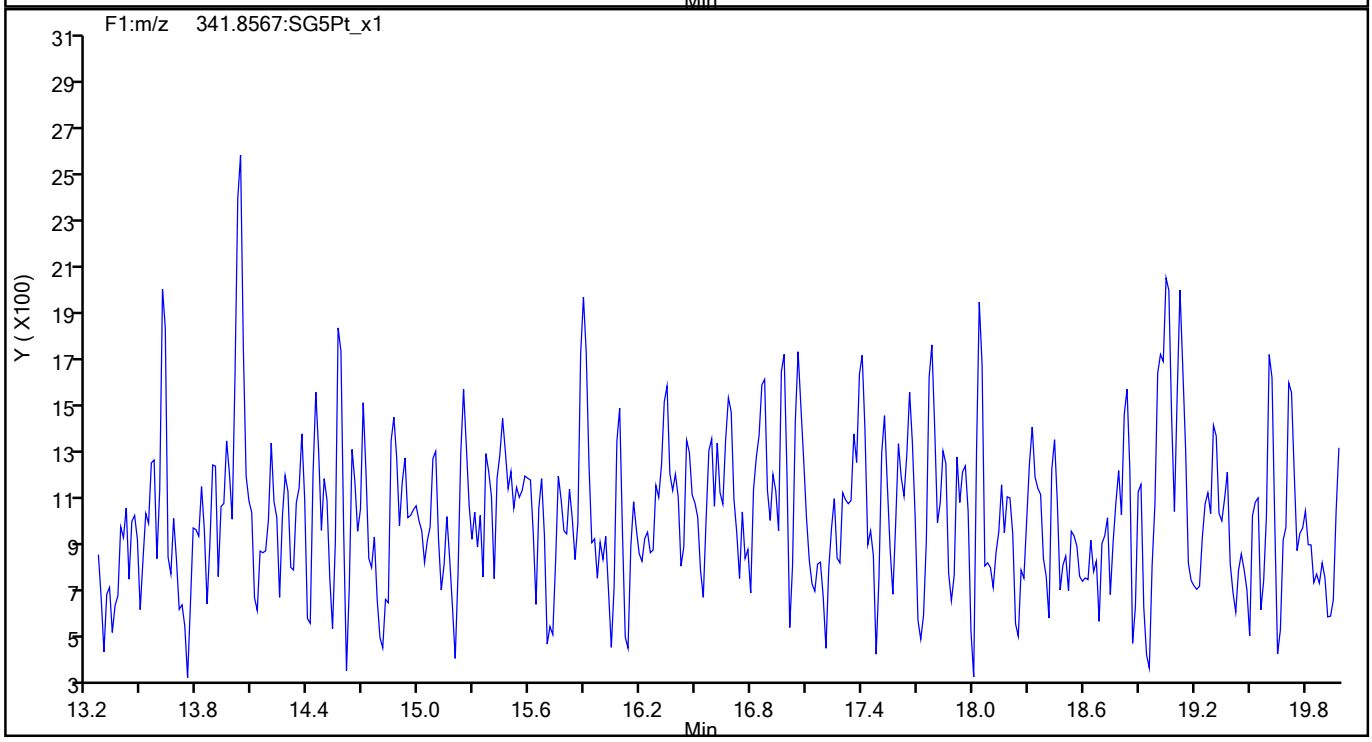

792874

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

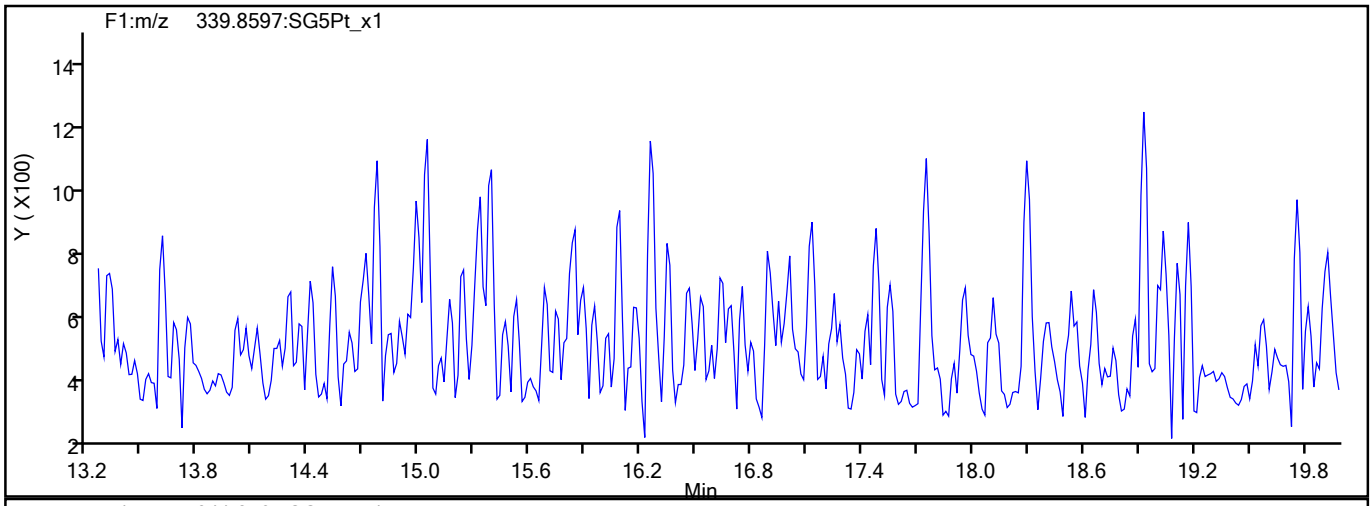

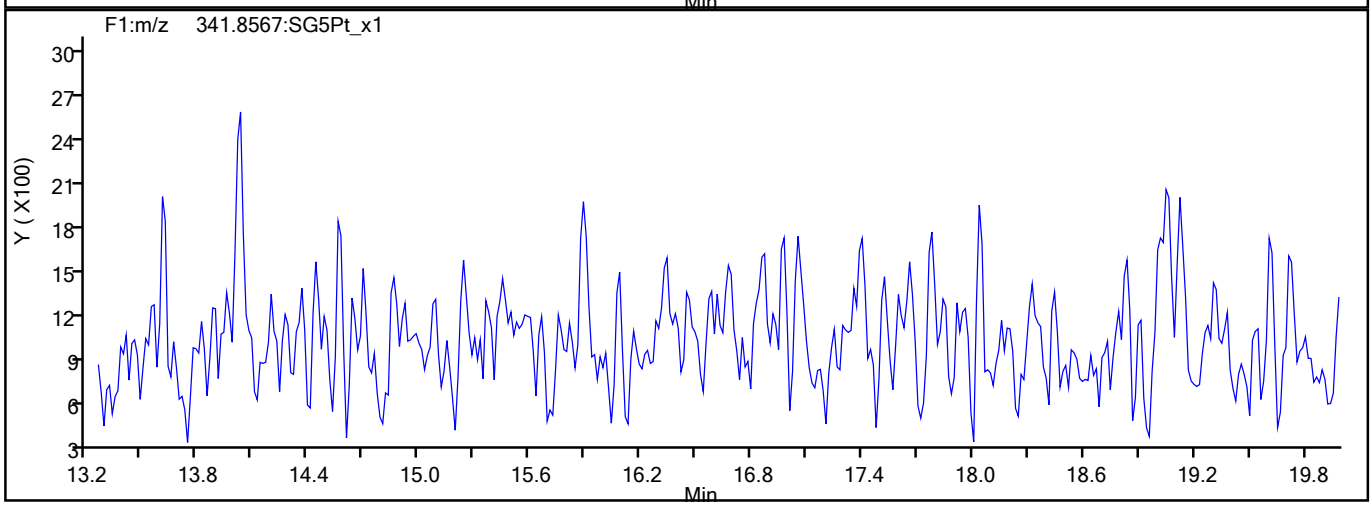

F1 PeCDFs Interference Mass

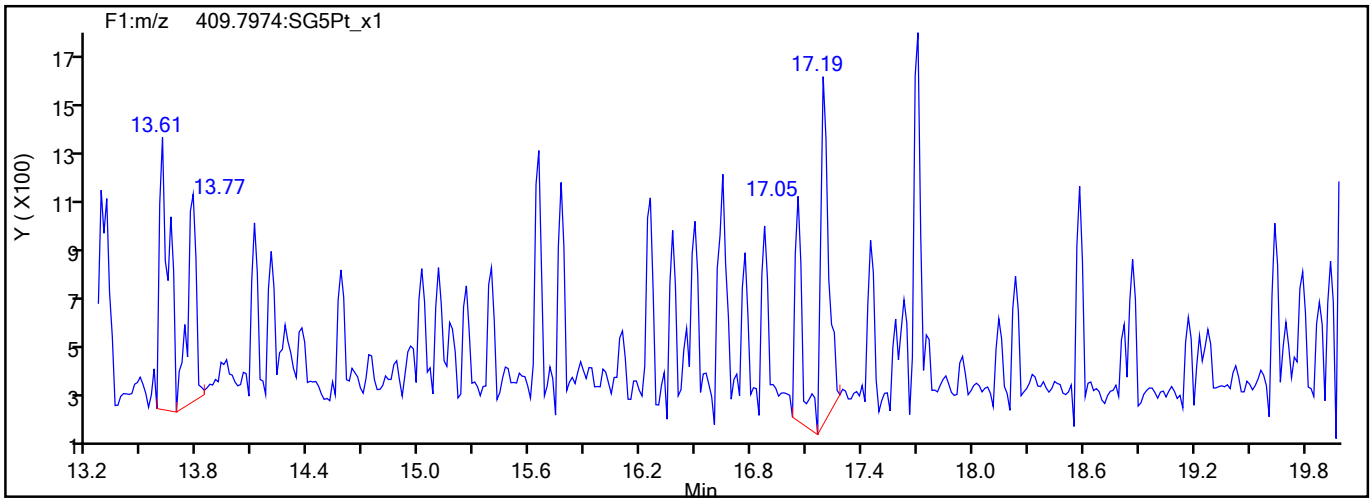

792875

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

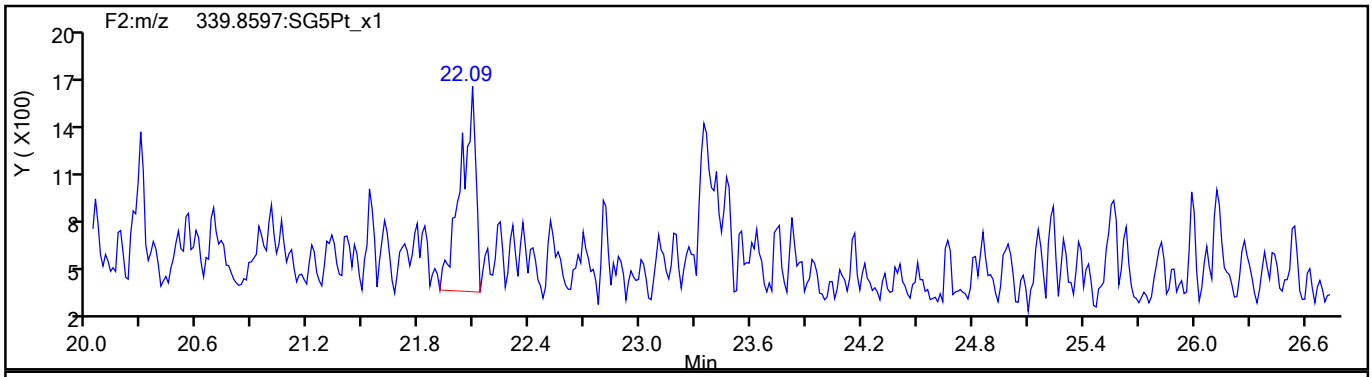

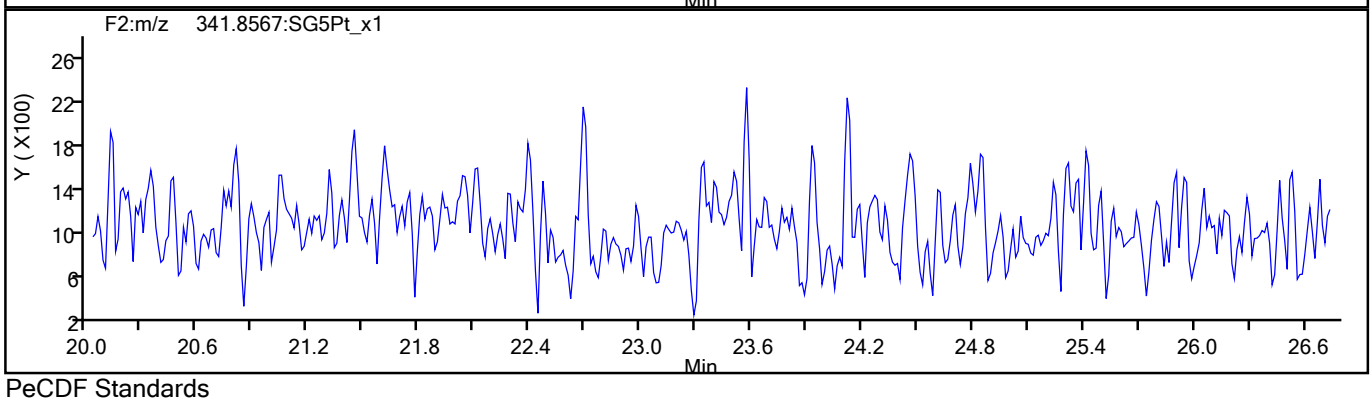

PeCDF Standards

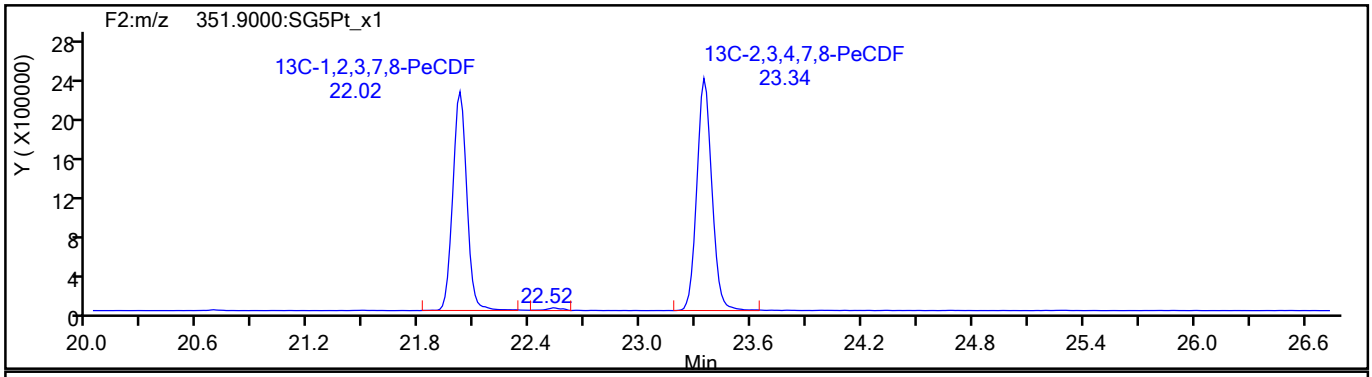

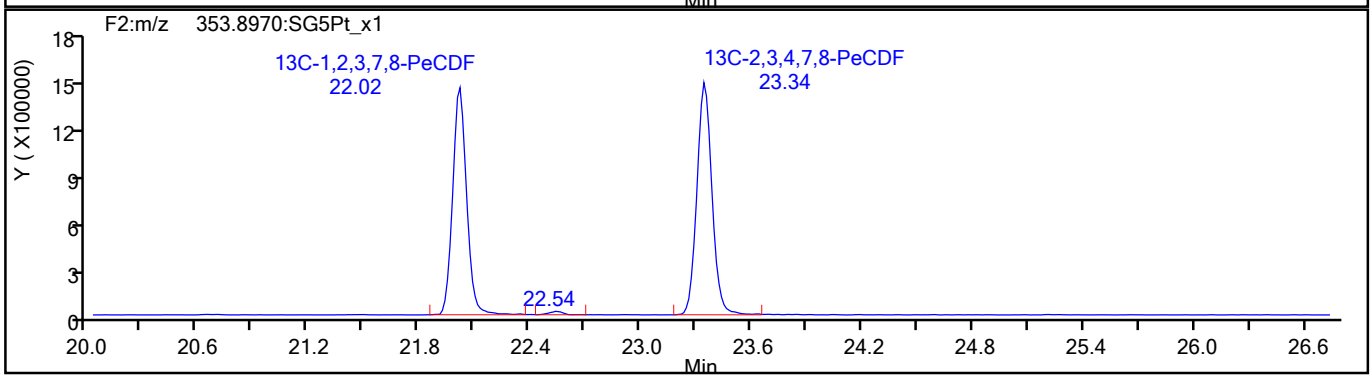

792876

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

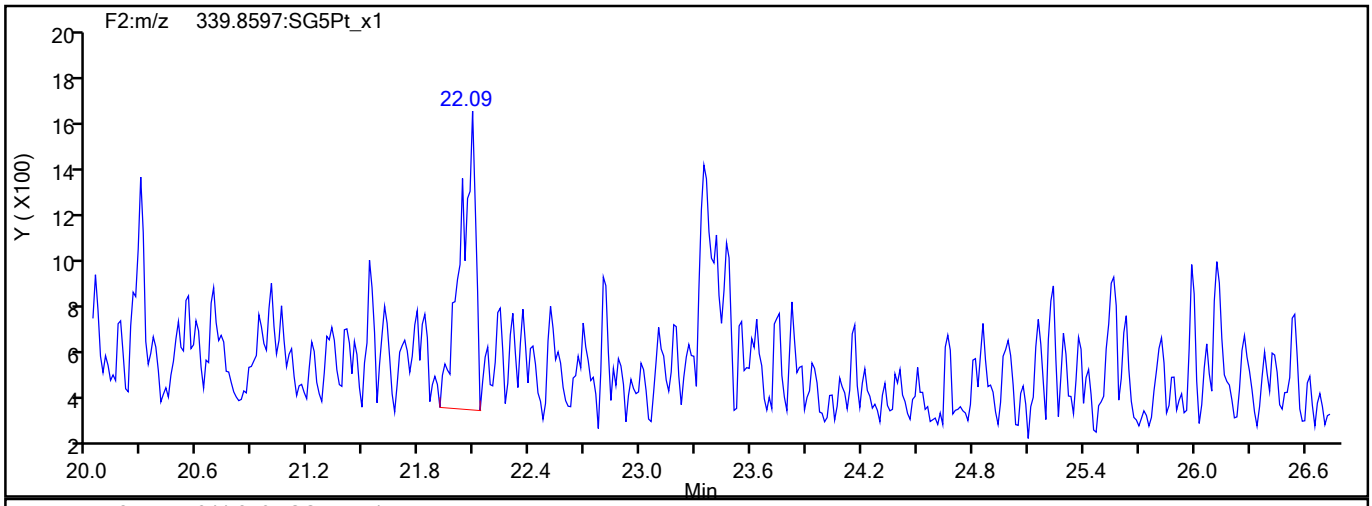

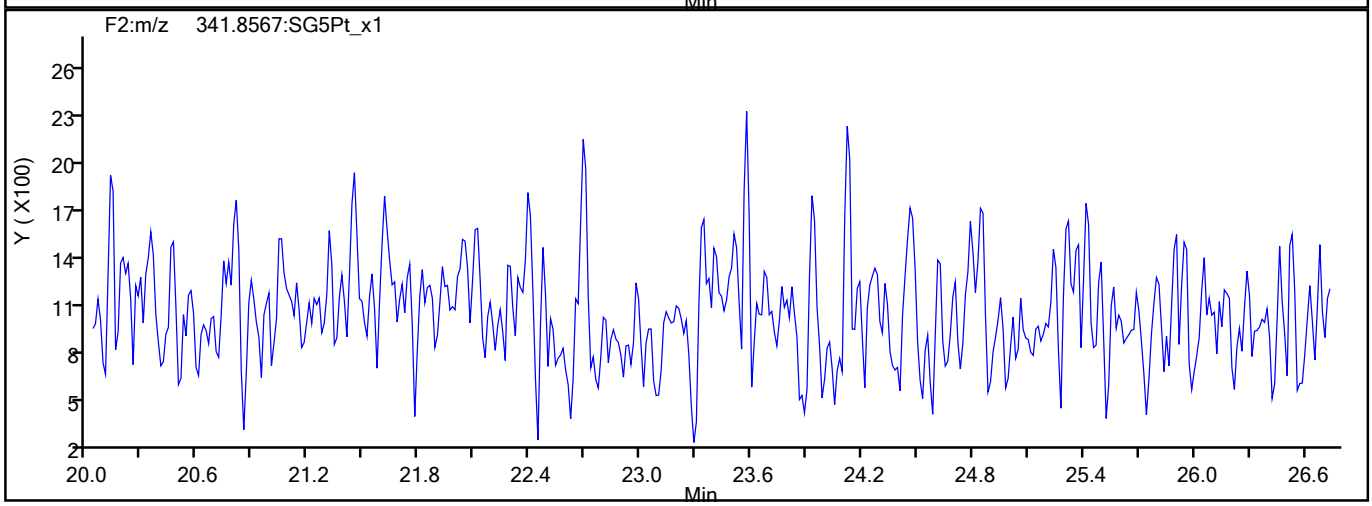

PeCDF Interference Mass

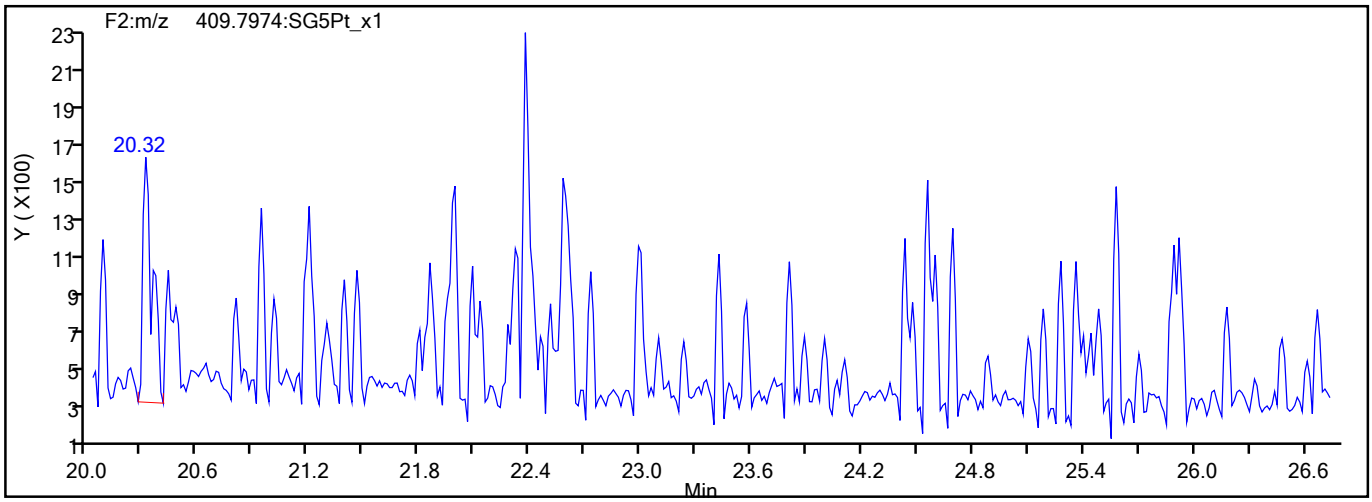

792877

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

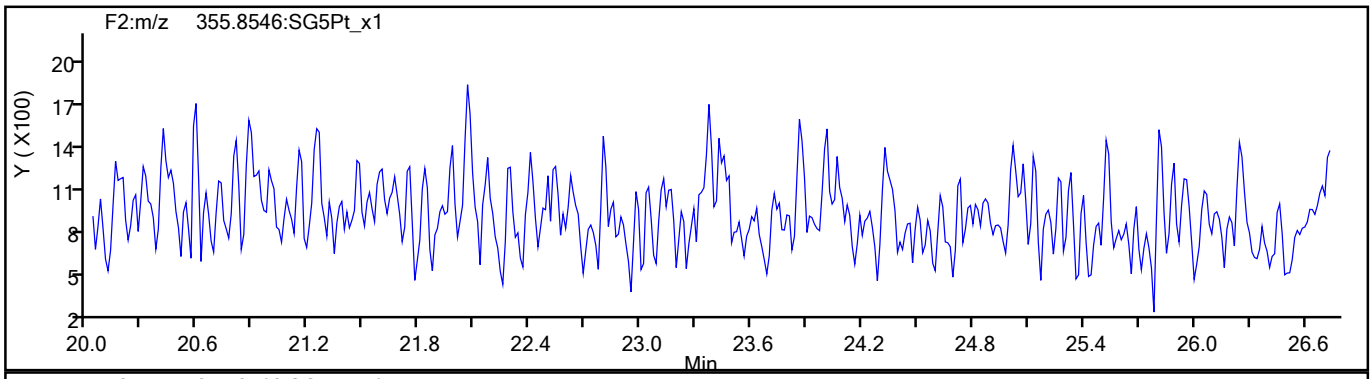

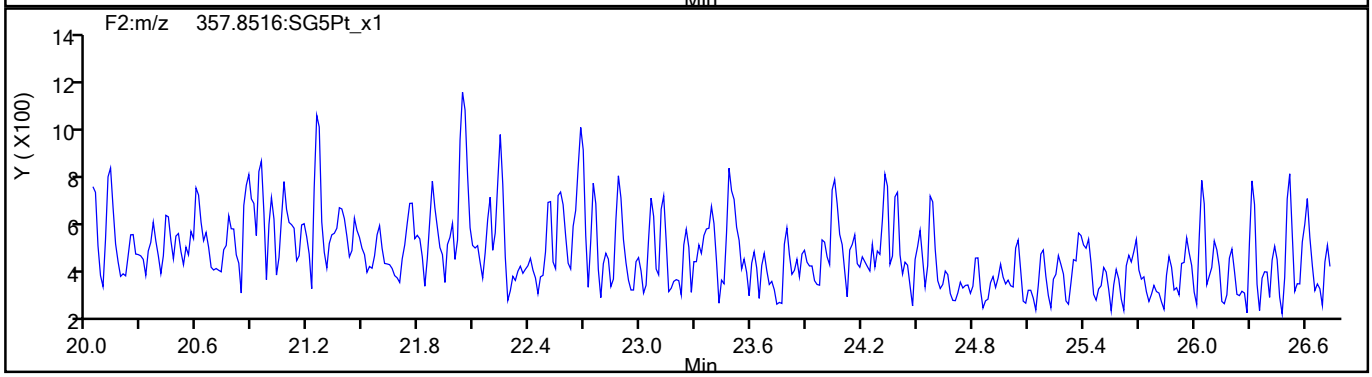

PeCDD Standards

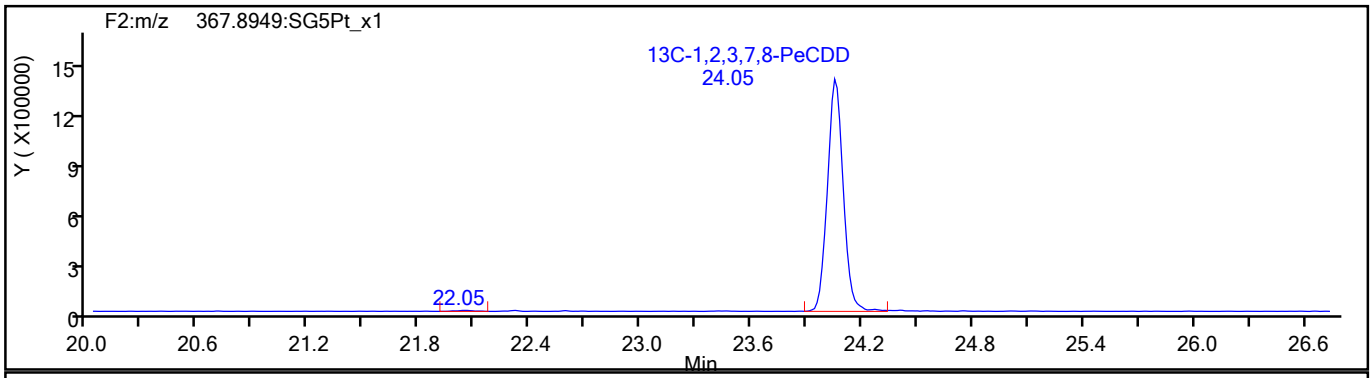

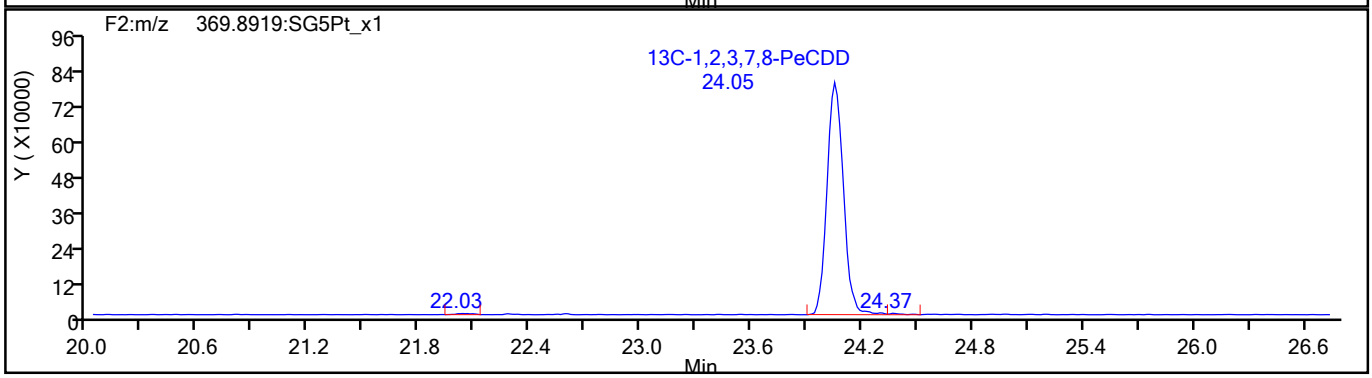

792878

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

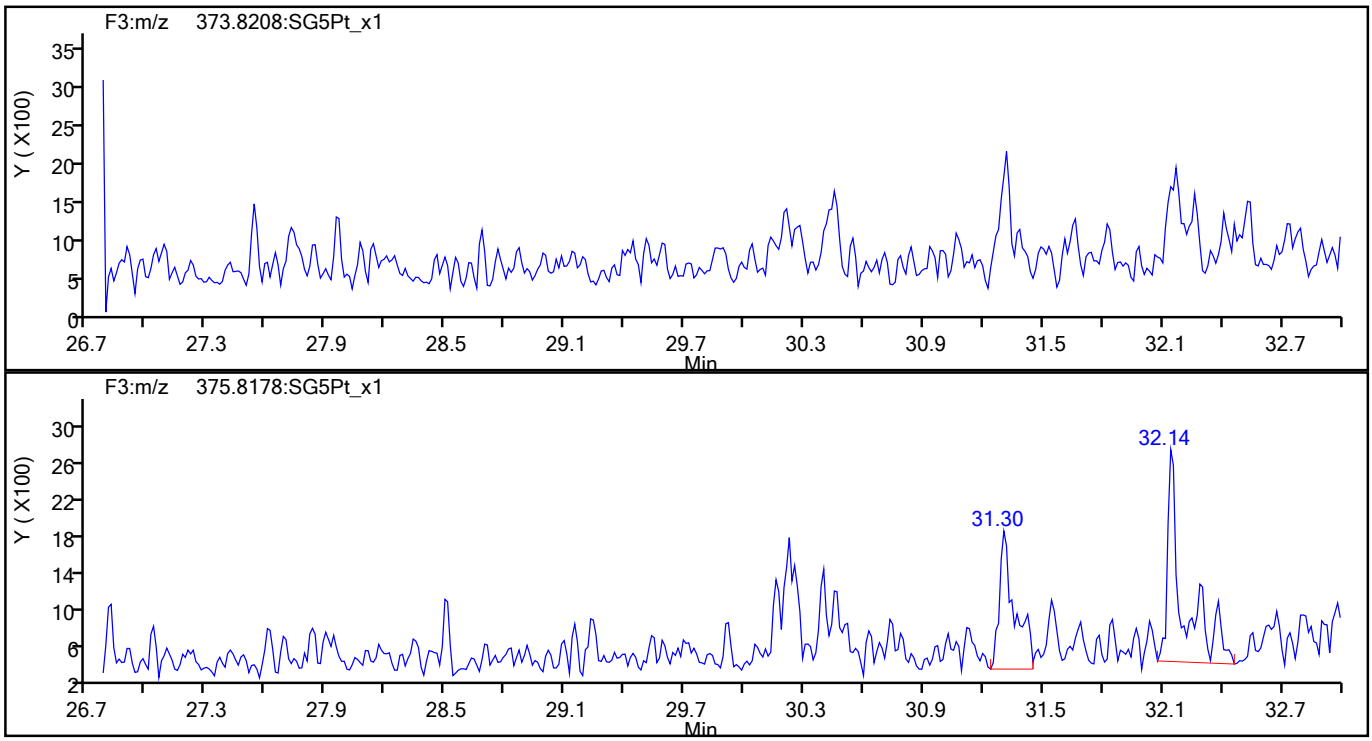

HxCDF Standards

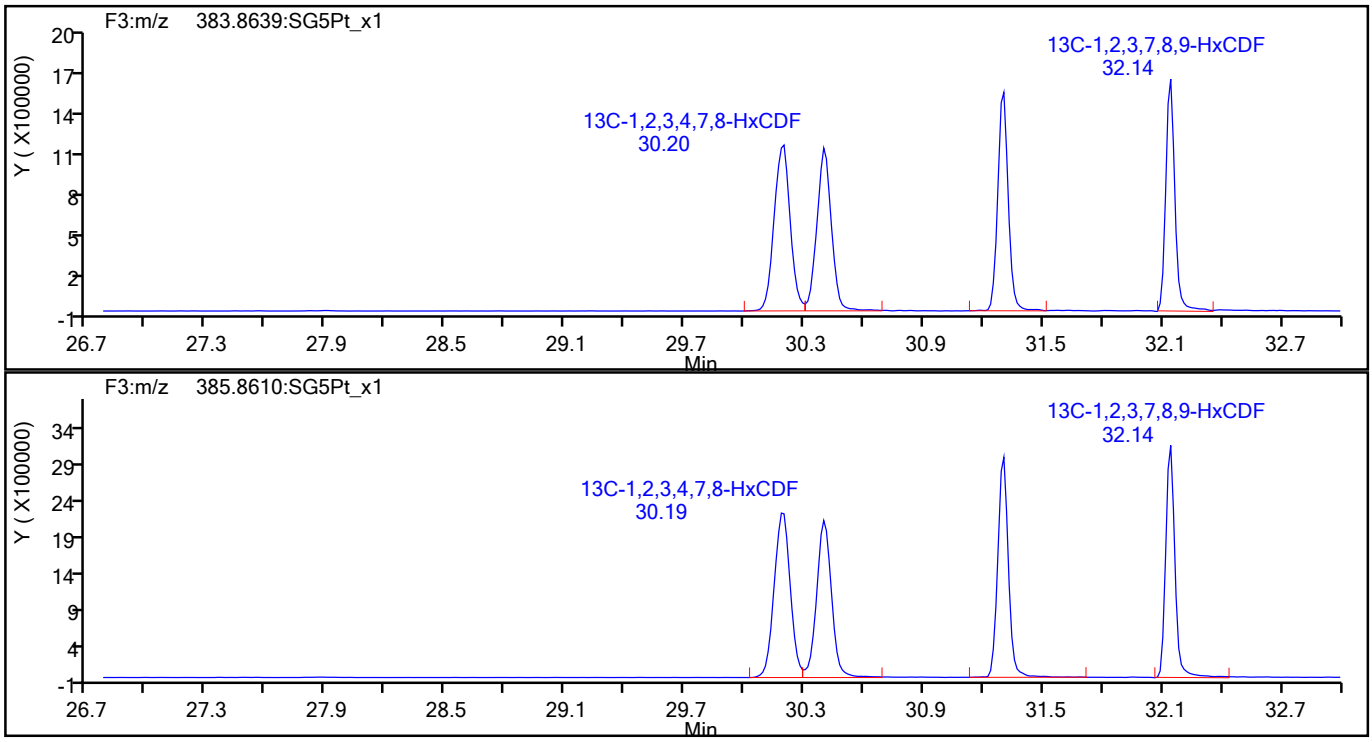

792879

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

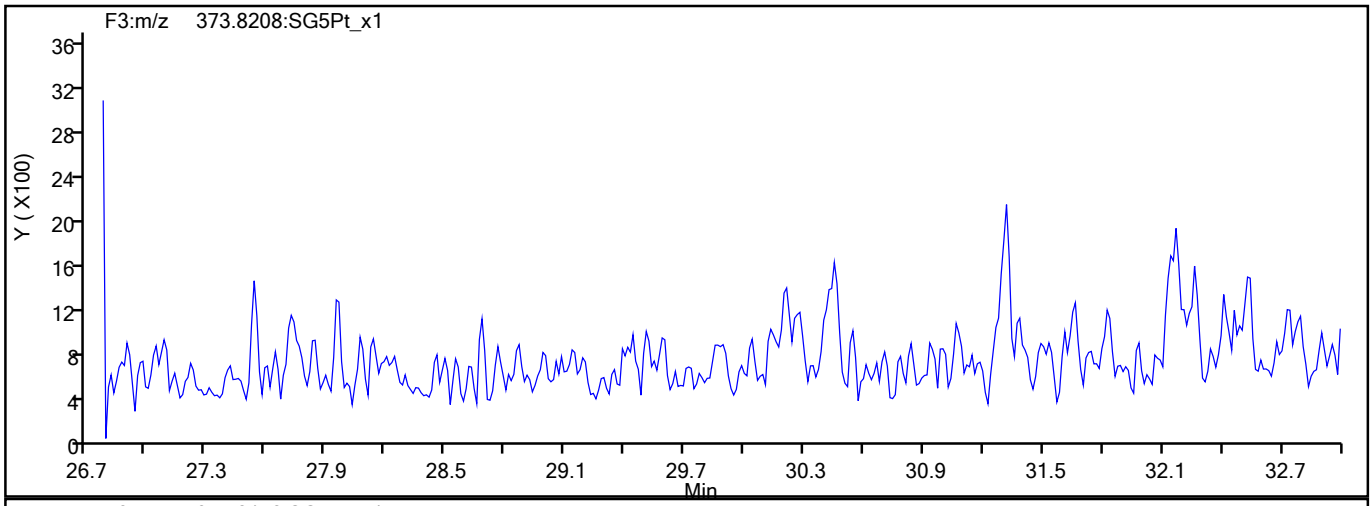

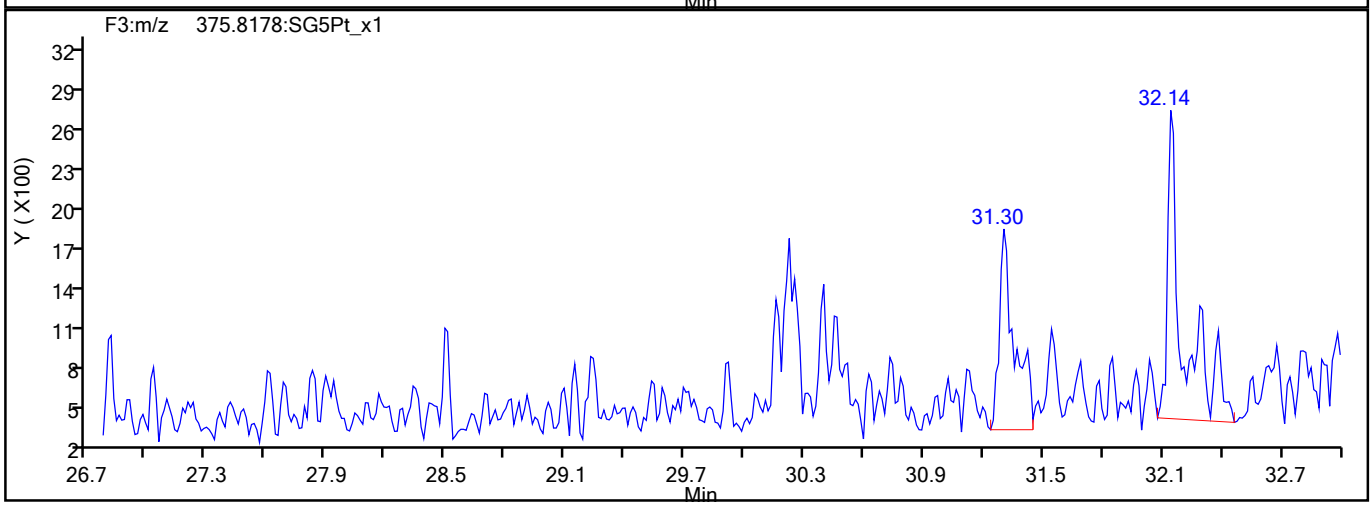

HxCDF Interference Mass

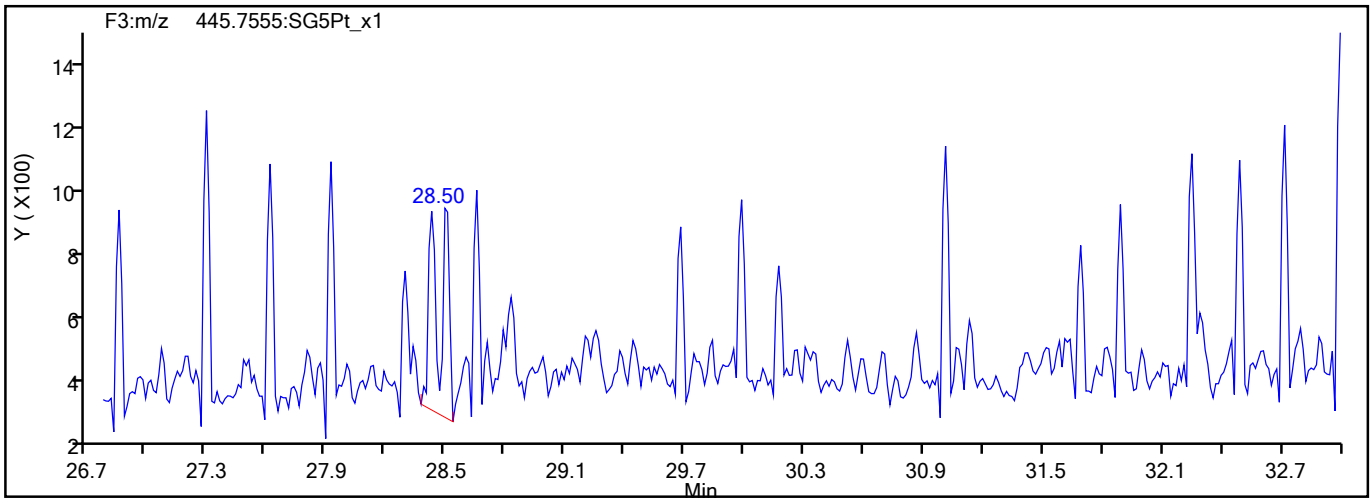

792880

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

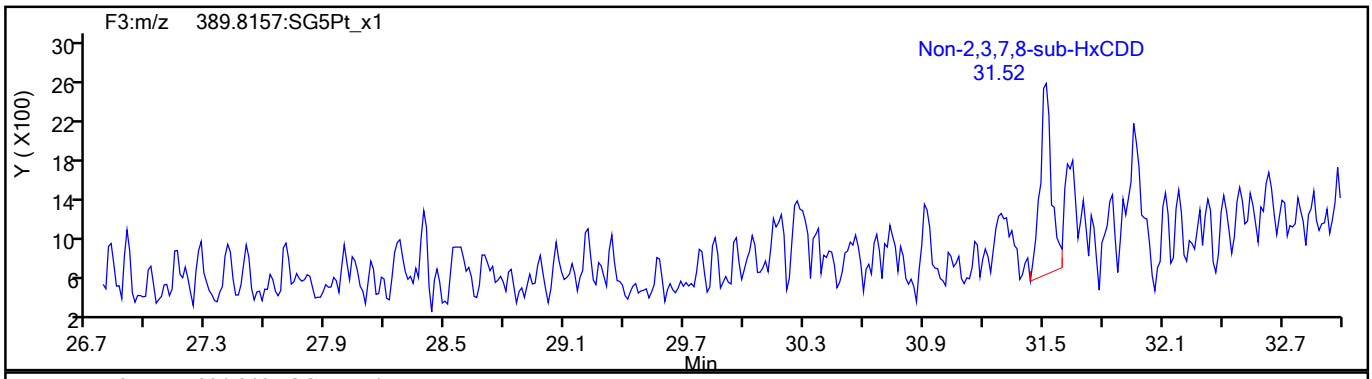

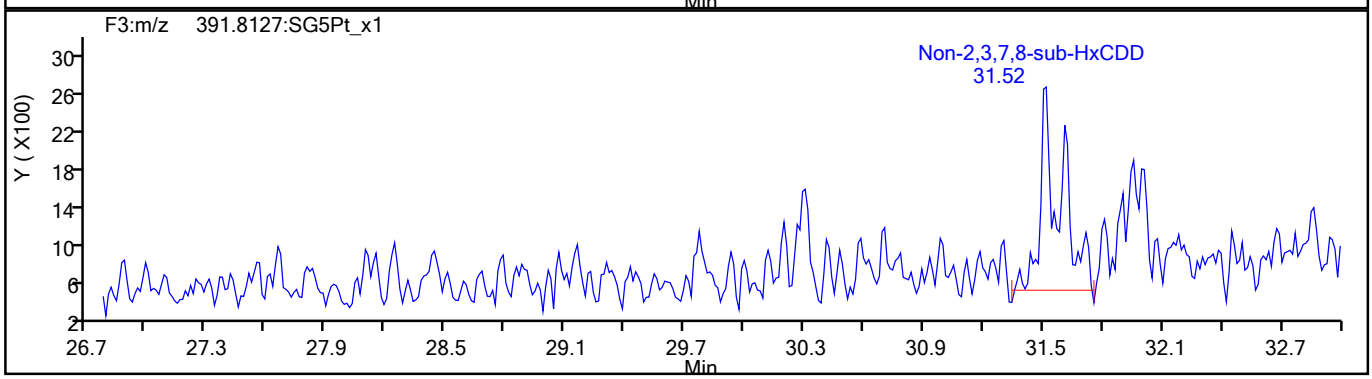

HxCDD Standards

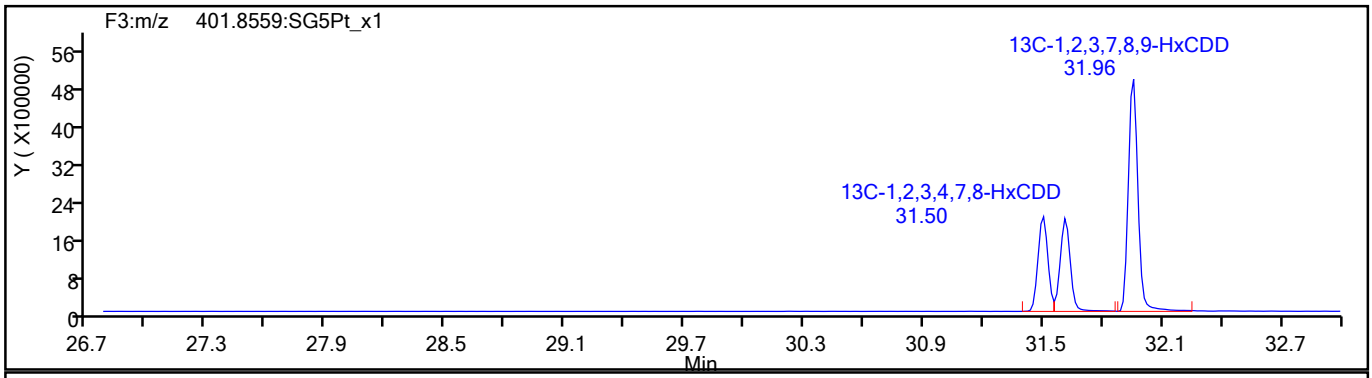

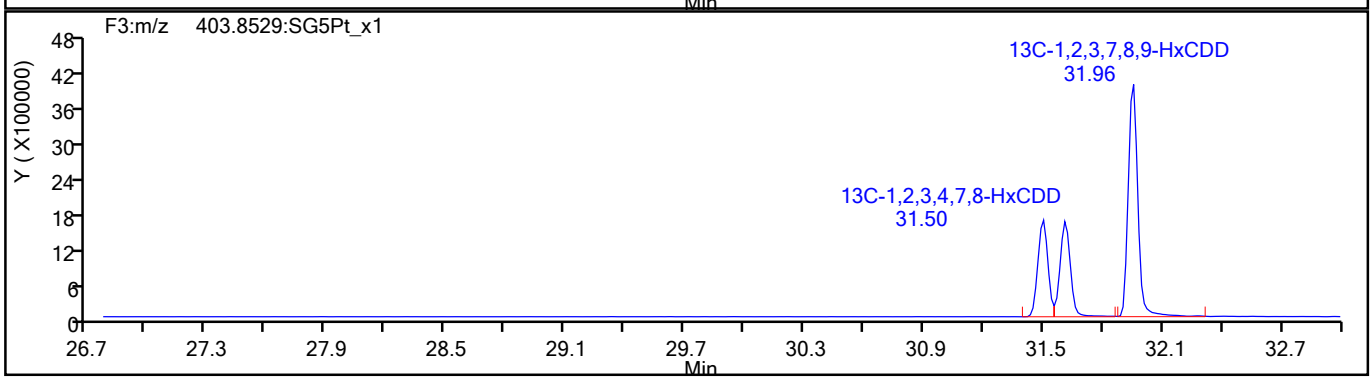

792881

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

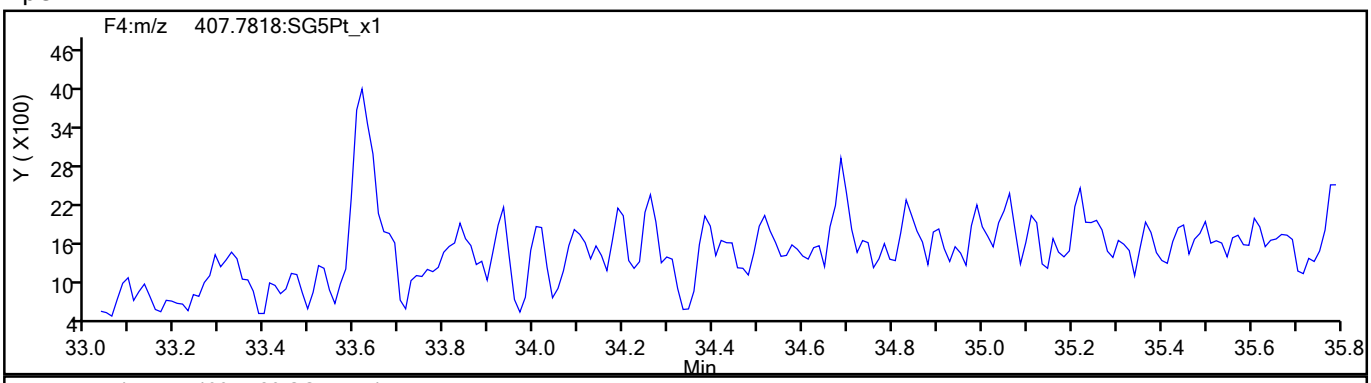

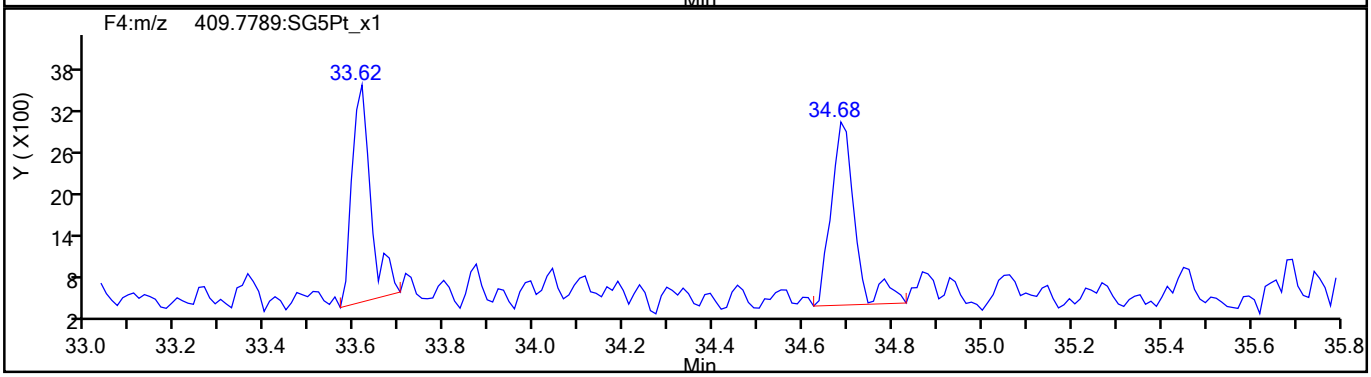

HpCDF Standards

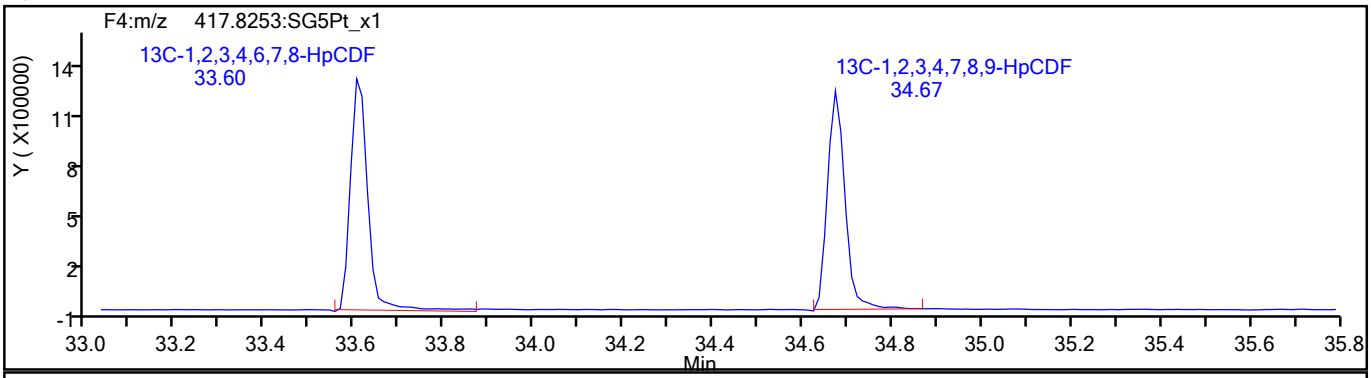

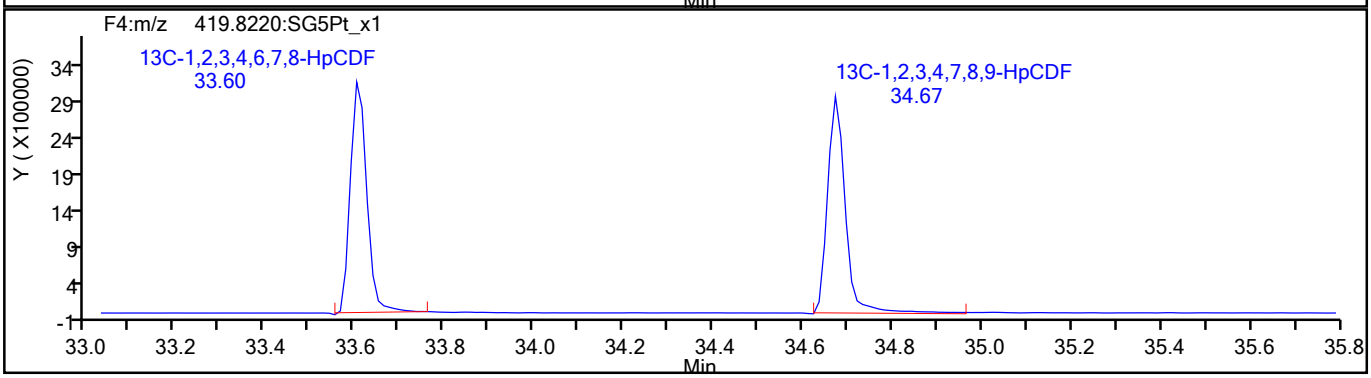

792882

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

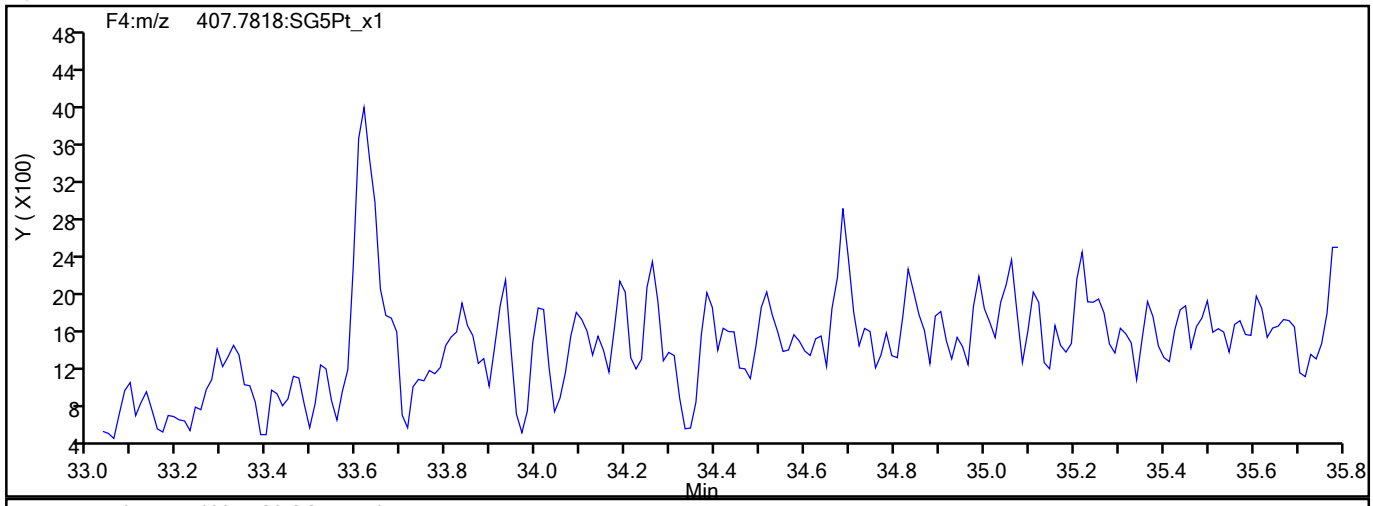

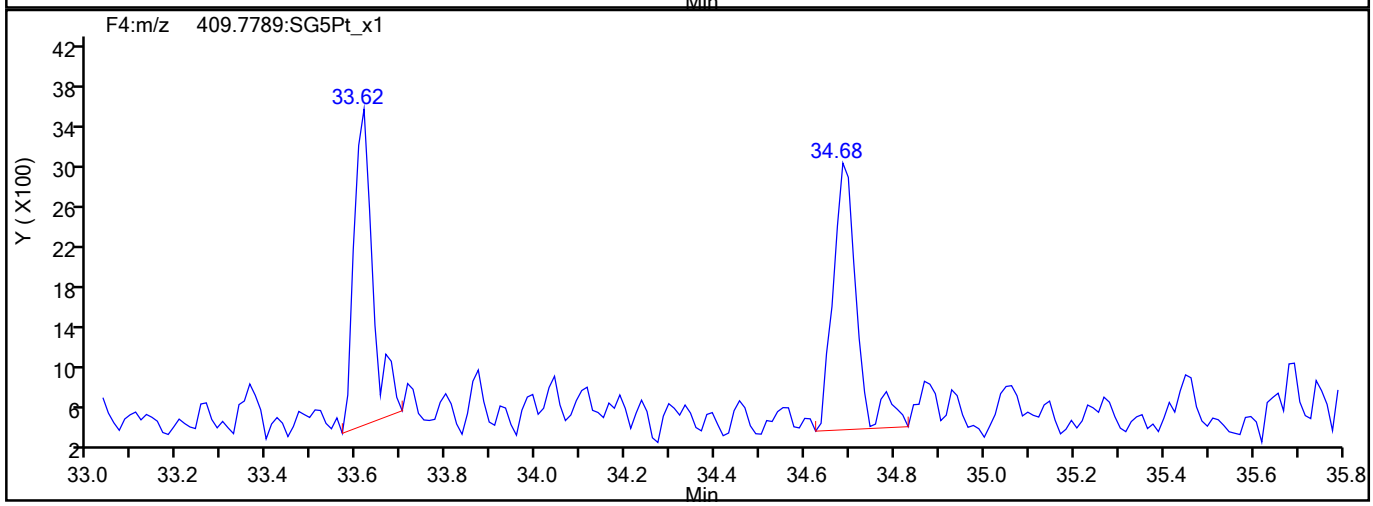

HpCDF Interference Mass

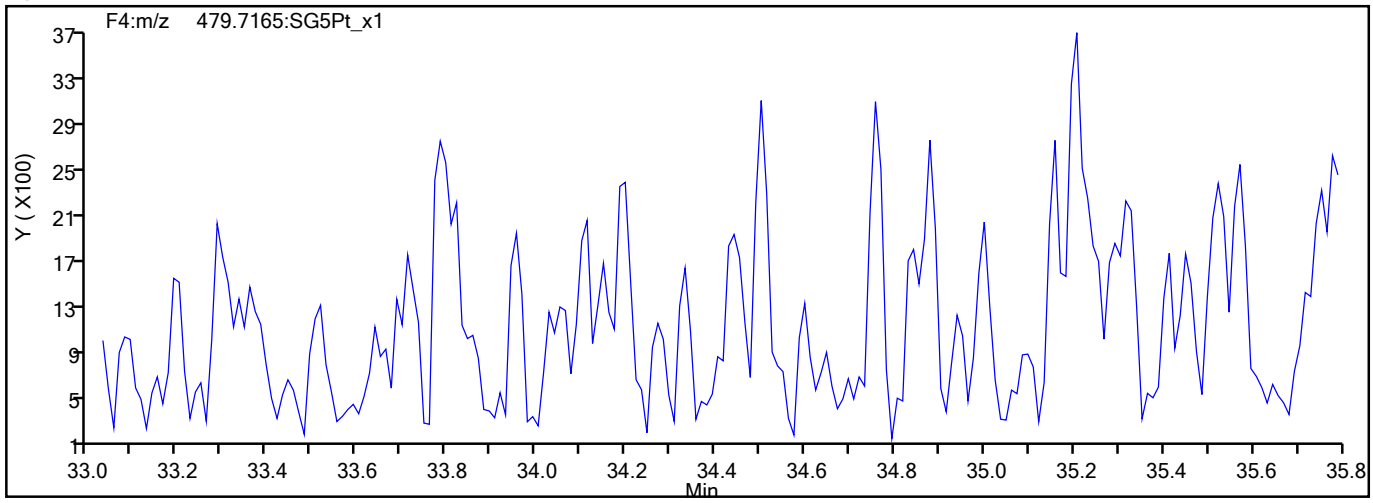

792883

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

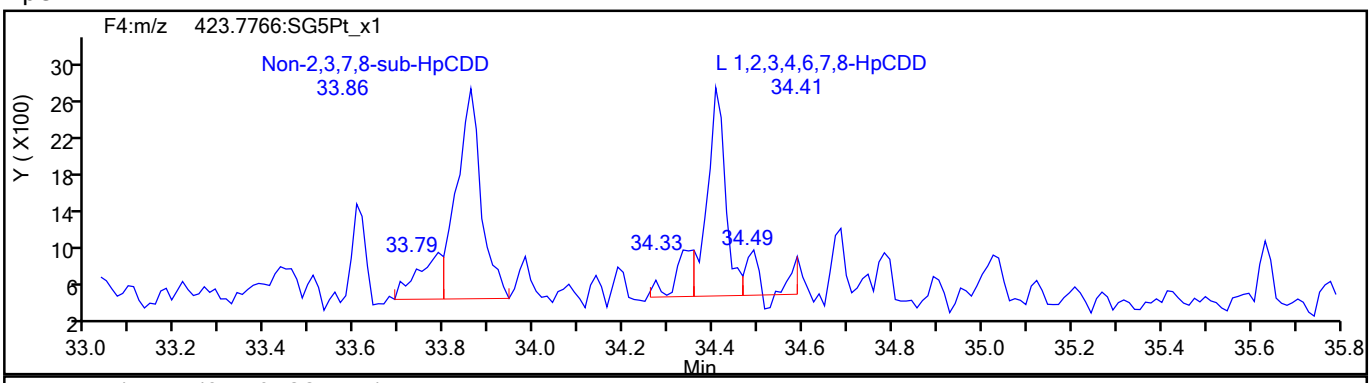

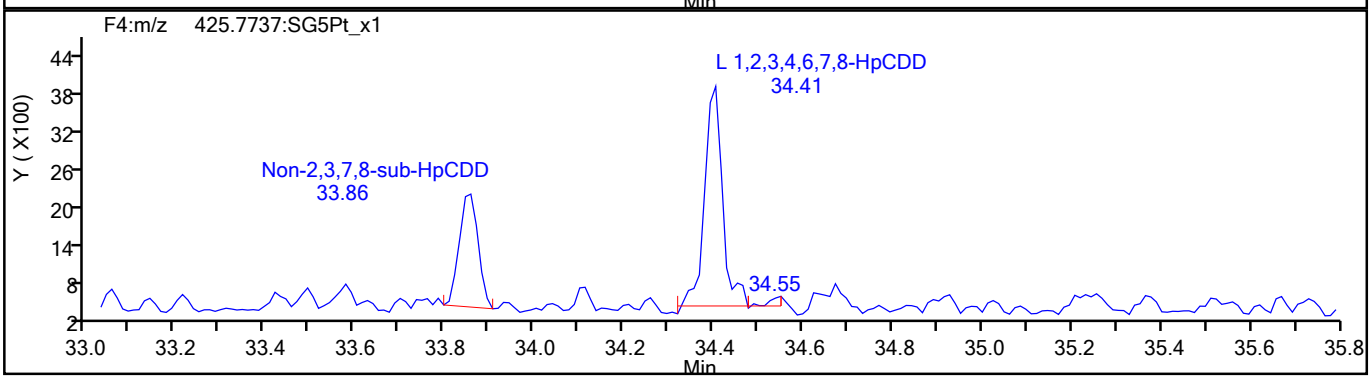

HpCDD Standards

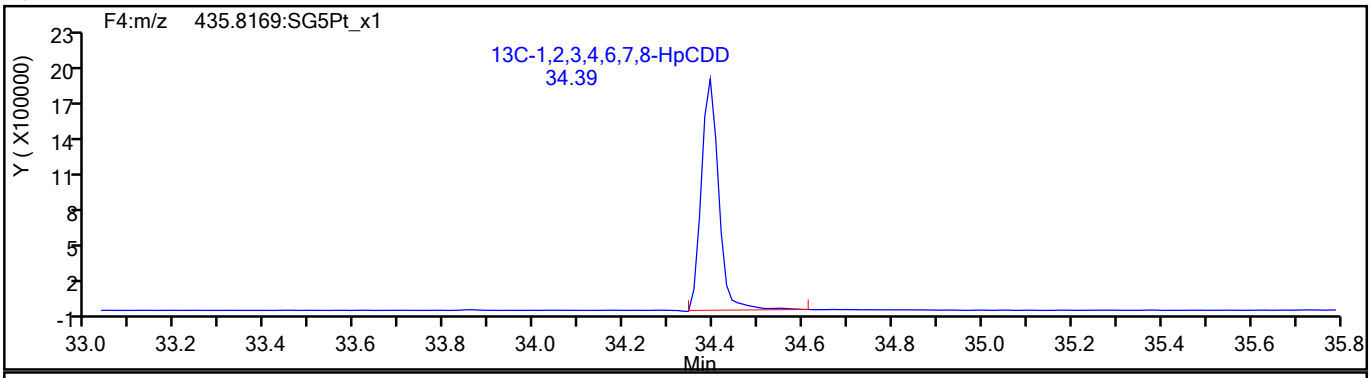

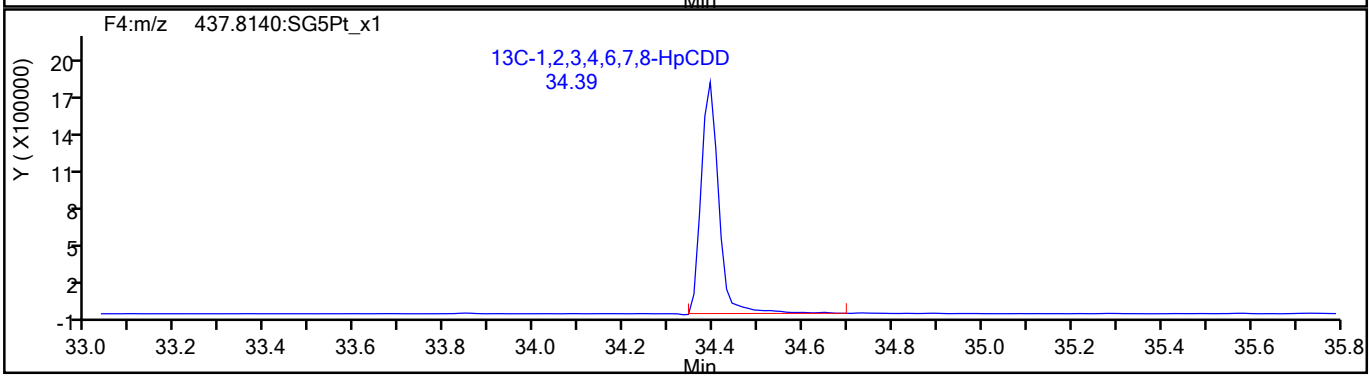

792884

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

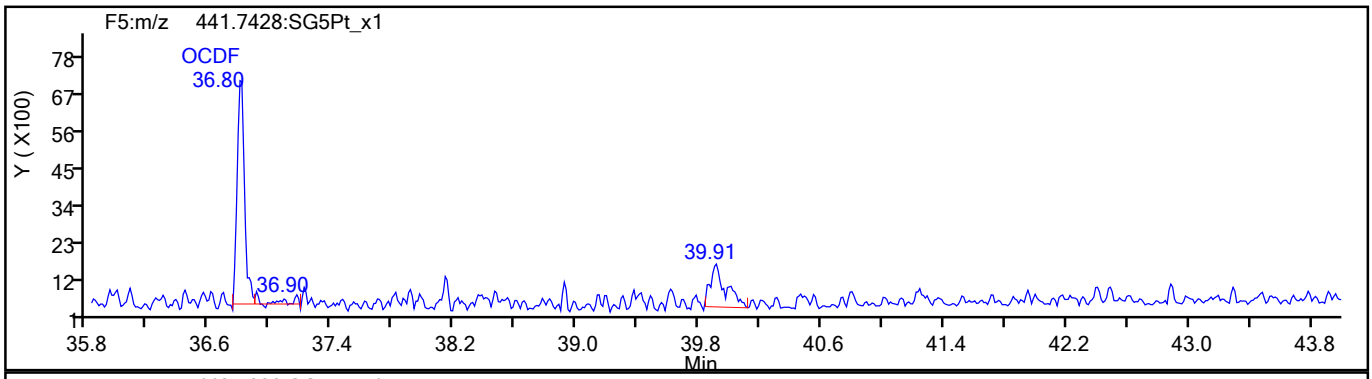

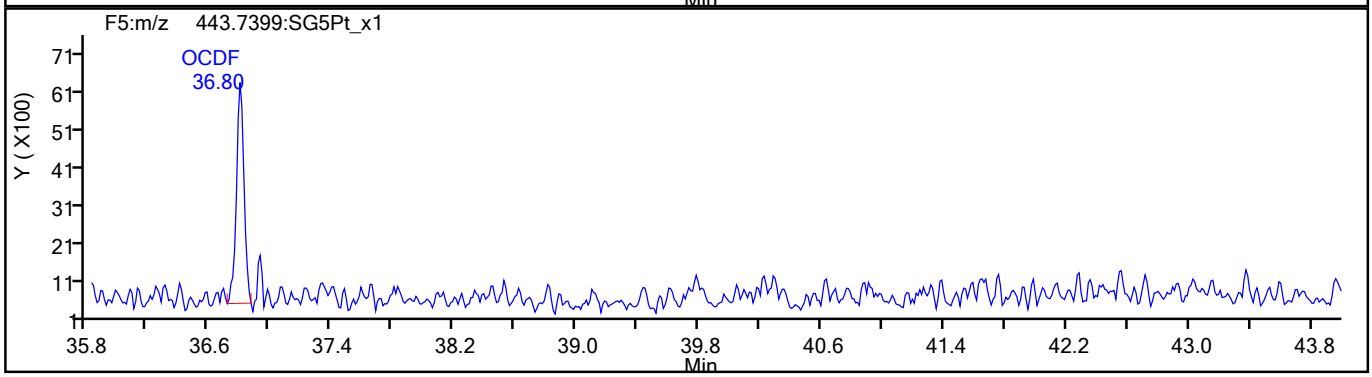

OCDF Standards

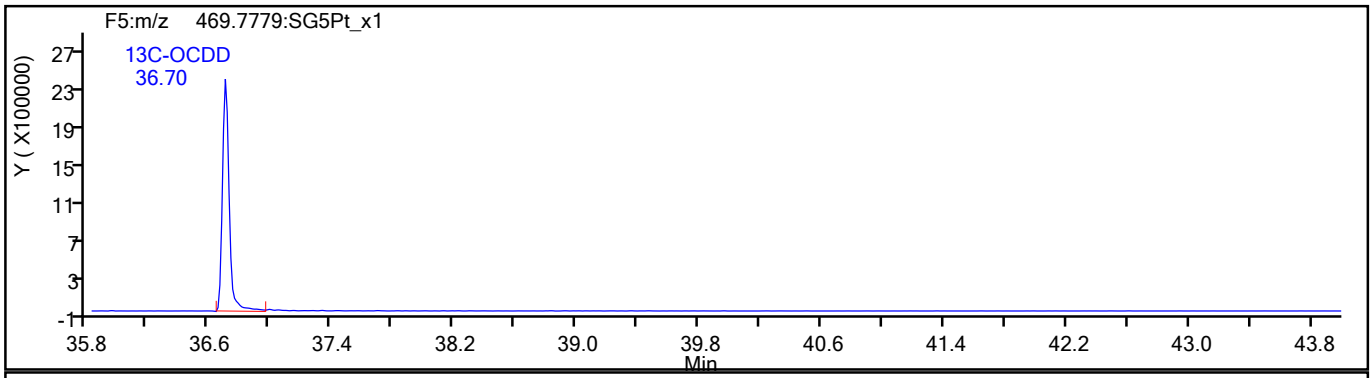

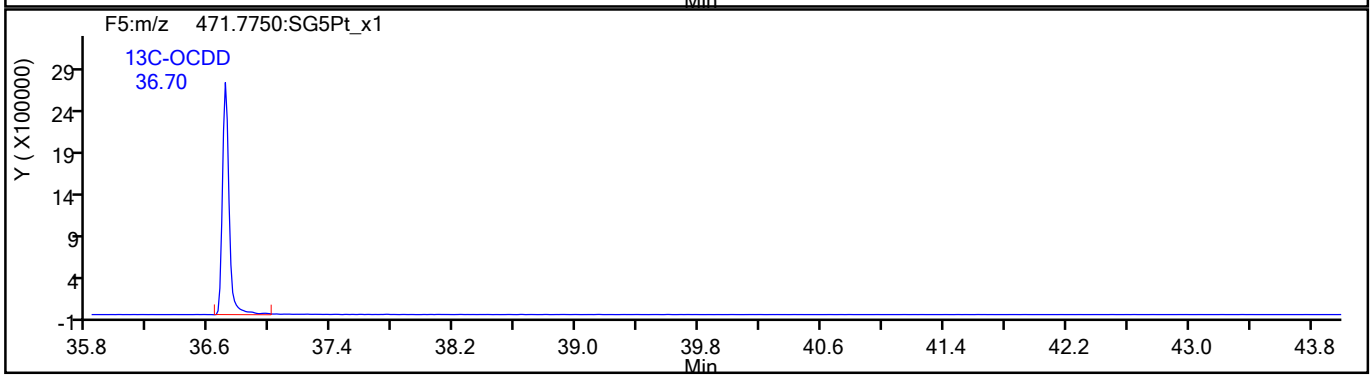

792885

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

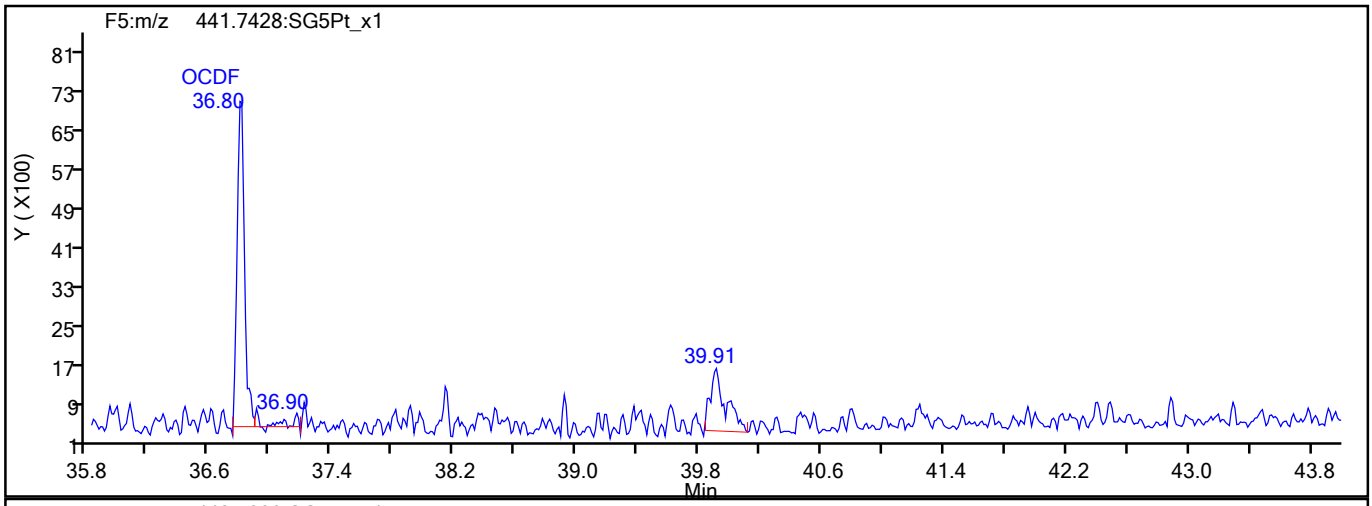

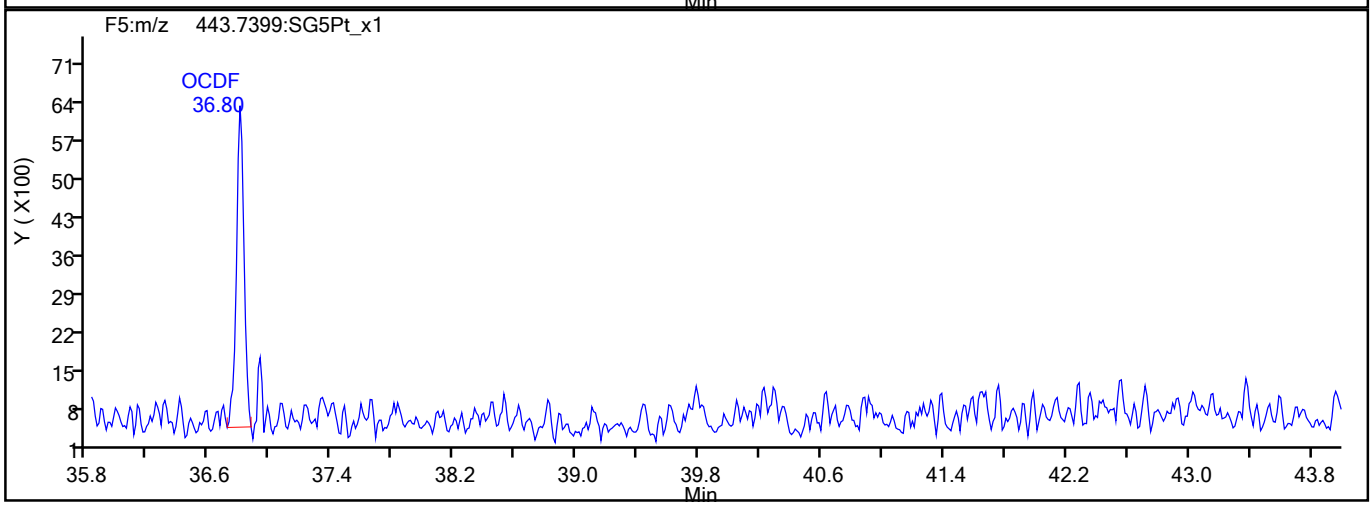

OCDF Interference Mass

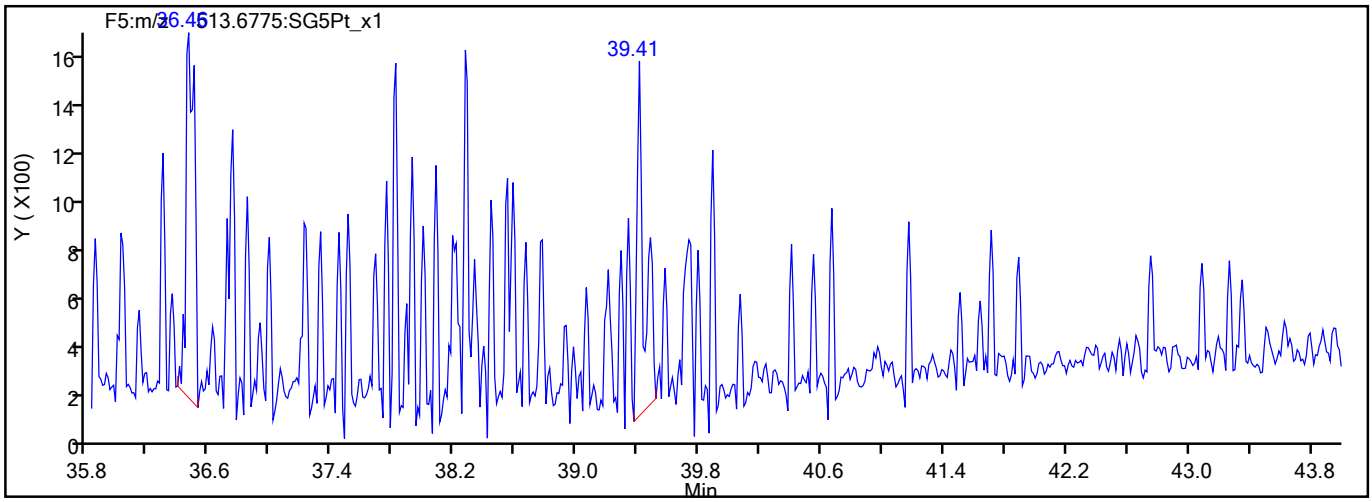

792886

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

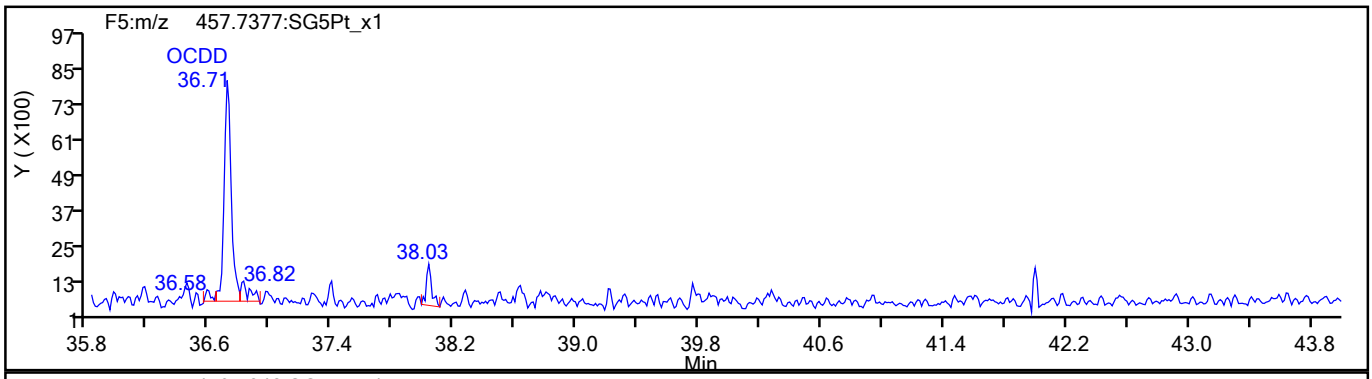

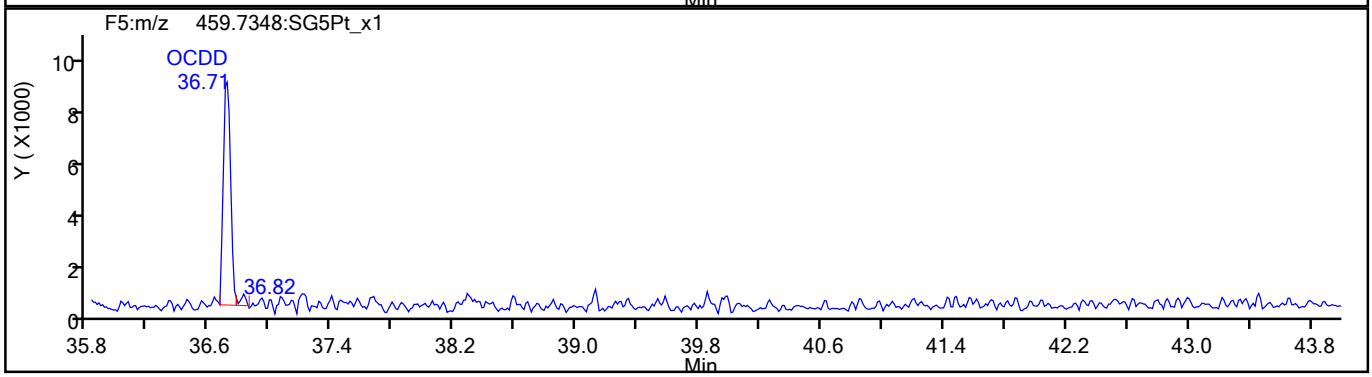

OCDD Standards

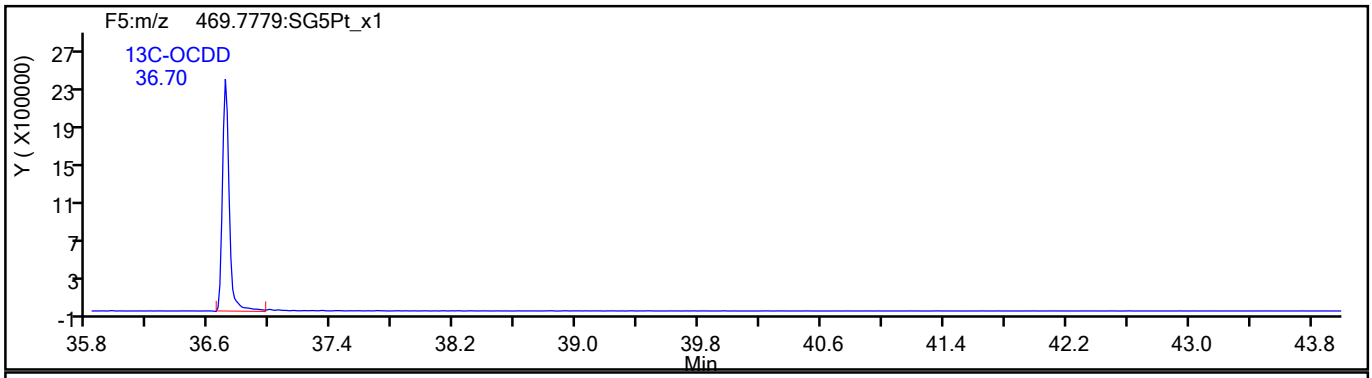

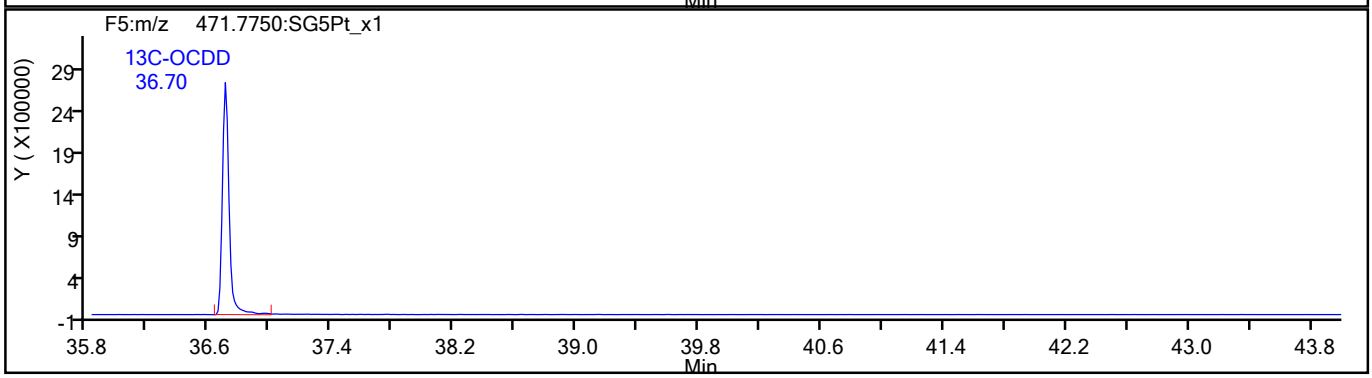

792887

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

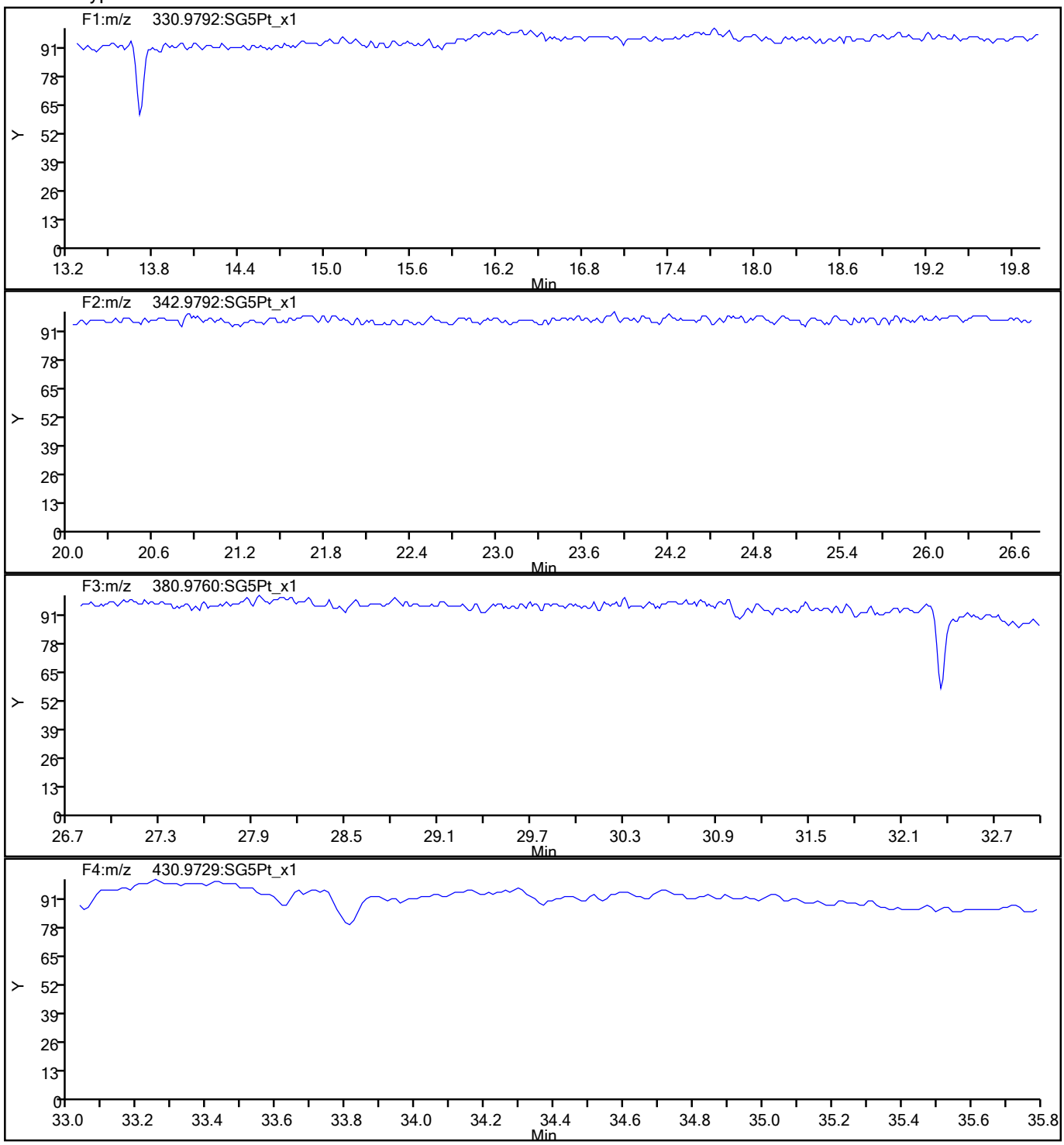

792888

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

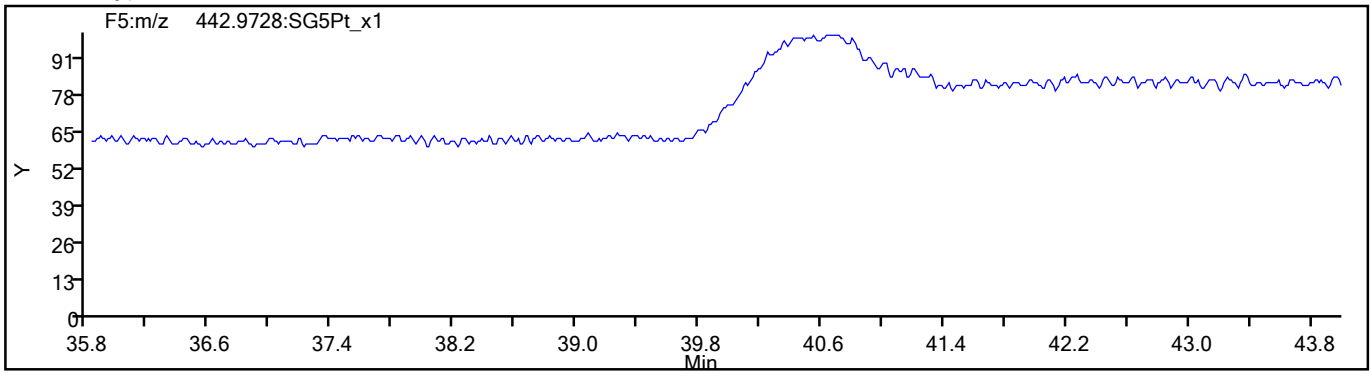

792889

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-2
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-515492/2-A
Matrix: Sediment
Lab File ID: 25AU2110D5_4.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10(g)
Date Analyzed: 08/25/2021 12:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	21.3		1.0	0.056
51207-31-9	2,3,7,8-TCDF	21.7		1.0	0.044
40321-76-4	1,2,3,7,8-PeCDD	108		5.0	0.11
57117-41-6	1,2,3,7,8-PeCDF	111		5.0	0.23
57117-31-4	2,3,4,7,8-PeCDF	102		5.0	0.23
39227-28-6	1,2,3,4,7,8-HxCDD	101		5.0	0.23
57653-85-7	1,2,3,6,7,8-HxCDD	111		5.0	0.23
19408-74-3	1,2,3,7,8,9-HxCDD	107		5.0	0.21
70648-26-9	1,2,3,4,7,8-HxCDF	96.9		5.0	0.39
57117-44-9	1,2,3,6,7,8-HxCDF	108		5.0	0.39
72918-21-9	1,2,3,7,8,9-HxCDF	107		5.0	0.28
60851-34-5	2,3,4,6,7,8-HxCDF	107		5.0	0.29
35822-46-9	1,2,3,4,6,7,8-HpCDD	109		5.0	0.30
67562-39-4	1,2,3,4,6,7,8-HpCDF	108		5.0	0.66
55673-89-7	1,2,3,4,7,8,9-HpCDF	102		5.0	0.80
3268-87-9	OCDD	213		10	0.19
39001-02-0	OCDF	208		10	0.14
41903-57-5	Total TCDD	21.3		1.0	0.056
30402-14-3	Total TCDF	21.9		1.0	0.044
36088-22-9	Total PeCDD	108		5.0	0.11
30402-15-4	Total PeCDF	214		5.0	0.23
34465-46-8	Total HxCDD	319		5.0	0.22
55684-94-1	Total HxCDF	420		5.0	0.34
37871-00-4	Total HpCDD	109		5.0	0.30
38998-75-3	Total HpCDF	210		5.0	0.73

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-515492/2-A

Matrix: Sediment Lab File ID: 25AU2110D5_4.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/12/2021 05:19

Sample wt/vol: 10(g) Date Analyzed: 08/25/2021 12:05

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 519953 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	47		20-175
89059-46-1	13C-2,3,7,8-TCDF	46		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	50		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	47		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	50		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	54		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	47		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	54		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	47		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	47		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	47		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	46		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	44		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	48		20-186
114423-97-1	13C-OCDD	50		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	65		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d
Lims ID: LCS 320-515492/2-A
Client ID:
Sample Type: LCS
Inject. Date: 25-Aug-2021 12:05:46 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 320-515492/2-A LCS 320-515492/2-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:26:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:55:08

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.613	116313177	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	86197808	0.77	1.6249	45.6	45.6	0.0743	0.0743	45.61	
2,3,7,8-TCDF	17.114	9594315	0.75	1.0239	10.9	10.9	0.0219	0.0219	109	
A Non-2,3,7,8-sub-TCDF	17.076	85308	0.77	1.0239	0.0967	0.0967	0.0219	0.0967	0.00	
S Total TCDF					11.0	11.0	0.0219	0.0219		
D 13C-2,3,7,8-TCDD	17.794	49616225	0.83	0.8993	47.4	47.4	0.1397	0.1397	47.43	
2,3,7,8-TCDD	17.809	6619535	0.77	1.2541	10.6	10.6	0.0278	0.0278	106	
$ 37Cl4-2,3,7,8-TCDD	17.809	33457645		1.1071	26.0	26.0	0.0257	0.0257	64.95	
A Non-2,3,7,8-sub-TCDD	17.537						0.0278	0.0278		
S Total TCDD					10.6	10.6	0.0278	0.0278		
D 13C-1,2,3,7,8-PeCDF	22.020	65768959	1.56	1.2101	46.7	46.7	0.0712	0.0712	46.73	
1,2,3,7,8-PeCDF	22.047	38852552	1.60	1.0611	55.7	55.7	0.1140	0.1140	111	
D 13C-2,3,4,7,8-PeCDF	23.343	71589573	1.52	1.2395	49.7	49.7	0.0695	0.0695	49.66	
2,3,4,7,8-PeCDF	23.370	37165027	1.59	1.0184	51.0	51.0	0.1169	0.1169	102	
A F1 PeCDFs	19.851						0.0185	0.0185		
A Non-2,3,7,8-sub-PeCDF	23.067	333485	1.52	1.0398	0.4670	0.4670	0.1154	0.4670	0.00	
S Total PeCDF					107.1	107.1	0.1154	0.1154		
D 13C-1,2,3,7,8-PeCDD	24.052	44110503	1.61	0.7612	49.8	49.8	0.0406	0.0406	49.82	
1,2,3,7,8-PeCDD	24.065	25064557	1.59	1.0484	54.2	54.2	0.0538	0.0538	108	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0538	0.0538		
S Total PeCDD					54.2	54.2	0.0538	0.0538		
D 13C-1,2,3,4,7,8-HxCDF	30.186	61084713	0.52	1.0837	54.1	54.1	0.1138	0.1138	54.11	
1,2,3,4,7,8-HxCDF	30.213	32099272	1.23	1.0851	48.4	48.4	0.1968	0.1968	96.85	
D 13C-1,2,3,6,7,8-HxCDF	30.399	55461911	0.51	1.1279	47.2	47.2	0.1094	0.1094	47.20	
1,2,3,6,7,8-HxCDF	30.412	33799121	1.22	1.1260	54.1	54.1	0.1949	0.1949	108	
D 13C-2,3,4,6,7,8-HxCDF	31.304	52535805	0.52	1.0637	47.4	47.4	0.1160	0.1160	47.41	
2,3,4,6,7,8-HxCDF	31.317	32955345	1.21	1.1675	53.7	53.7	0.1438	0.1438	107	
D 13C-1,2,3,7,8,9-HxCDF	32.143	46916272	0.51	0.9676	46.5	46.5	0.1275	0.1275	46.54	
1,2,3,7,8,9-HxCDF	32.156	29343058	1.21	1.1664	53.6	53.6	0.1397	0.1397	107	
A Non-2,3,7,8-sub-HxCDF	30.338						0.1650	0.1650		
S Total HxCDF					209.9	209.9	0.1688	0.1688		

792892

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	31.956	104179892	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.504	41185024	1.24	0.7334	53.9	53.9	0.1381	0.1381	53.90	
1,2,3,4,7,8-HxCDD	31.517	22091720	1.26	1.0640	50.4	50.4	0.1134	0.1134	101	
D 13C-1,2,3,6,7,8-HxCDD	31.610	42762799	1.25	0.8802	46.6	46.6	0.1151	0.1151	46.63	
1,2,3,6,7,8-HxCDD	31.624	23759486	1.26	1.0001	55.6	55.6	0.1172	0.1172	111	
1,2,3,7,8,9-HxCDD	31.969	25524658	1.26	1.1325	53.7	53.7	0.1050	0.1050	107	
A Non-2,3,7,8-sub-HxCDD	30.525						0.1116	0.1116		
S Total HxCDD					159.7	159.7	0.1118	0.1118		
D 13C-1,2,3,4,6,7,8-HpCDF	33.615	35780816	0.44	0.7730	44.4	44.4	0.3441	0.3441	44.43	
1,2,3,4,6,7,8-HpCDF	33.627	27838664	1.03	1.4413	54.0	54.0	0.3289	0.3289	108	
D 13C-1,2,3,4,7,8,9-HpCDF	34.685	35355129	0.43	0.7008	48.4	48.4	0.3795	0.3795	48.42	
1,2,3,4,7,8,9-HpCDF	34.685	23749131	1.05	1.3174	51.0	51.0	0.3994	0.3994	102	
A Non-2,3,7,8-sub-HpCDF	34.150						0.3616	0.3616		
S Total HpCDF					105.0	105.0	0.3641	0.3641		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	30979860	1.02	0.6472	45.9	45.9	0.1517	0.1517	45.95	
1,2,3,4,6,7,8-HpCDD	34.405	18540489	1.03	1.0943	54.7	54.7	0.1513	0.1513	109	
A Non-2,3,7,8-sub-HpCDD	34.223						0.1513	0.1513		
S Total HpCDD					54.7	54.7	0.1513	0.1513		
D 13C-OCDD	36.713	46315484	0.87	0.4472	99.4	99.4	0.0930	0.0930	49.71	
OCDF	36.809	34674091	0.89	1.4382	104.1	104.1	0.0707	0.0707	104	
OCDD	36.725	27293037	0.88	1.1070	106.5	106.5	0.0930	0.0930	106	

QC Flag Legend

Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d
Lims ID: LCS 320-515492/2-A
Client ID:
Sample Type: LCS
Inject. Date: 25-Aug-2021 12:05:46 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 320-515492/2-A LCS 320-515492/2-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:26:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:55:08

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.613	17.598	1		51952593	13128111	5283	13207	2485		
333.9339	17.613	17.598	1		64360584	16217837	9463	23657	1714	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	0.971	37571271	9880013	9672	24180	1022		
317.9389	17.099	17.099	0	0.971	48626537	12763365	4509	11272	2831	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	4122780	1076758	820	2050	1313		
305.8987	17.114	17.114	0	1.001	5471535	1458060	1212	3030	1203	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.751	17.076	-19	0.980	37078	8304	820	2050	10		
305.8987	16.736	17.076	-20	0.979	48230	12096	1212	3030	10	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.010	22518242	5687480	5283	13207	1077		
333.9339	17.794	17.794	0	1.010	27097983	7000657	9463	23657	740	0.83(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	2886458	712795	1115	2787	639		
321.8936	17.809	17.809	0	1.001	3733077	938463	655	1637	1433	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.011	33457645	8366742	3340	8350	2505		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.537						1115	2787			
321.8936	17.537						655	1637			
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.250	40089574	7314475	5820	14550	1257		
353.8970	22.020	22.020	0	1.250	25679385	4781778	4293	10732	1114	1.56(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.047	22.047	0	1.001	23884079	4450061	3262	8155	1364		
341.8567	22.047	22.047	0	1.001	14968473	2768480	2592	6480	1068	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.325	43188266	7333077	5820	14550	1260		
353.8970	23.343	23.343	0	1.325	28401307	4963080	4293	10732	1156	1.52(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370	23.370	0	1.001	22835482	3904097	3262	8155	1197		
341.8567	23.370	23.370	0	1.001	14329545	2463879	2592	6480	951	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						235	587			
341.8567	19.851						705	1762			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.565	23.067	-30	1.025	201081	34731	3262	8155	11		
341.8567	22.565	23.067	-30	1.025	132404	24626	2592	6480	10	1.52(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.366	27199535	4476672	2209	5522	2027		
369.8919	24.038	24.052	-1	1.365	16910968	2752118	1416	3540	1944	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.065	24.079	-1	1.001	15388216	2502571	1032	2580	2425		
357.8516	24.065	24.079	-1	1.001	9676341	1584459	598	1495	2650	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1032	2580			
357.8516	23.696						598	1495			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.186	30.186	0	0.945	20835888	3641392	5034	12585	723		
385.8610	30.186	30.186	0	0.945	40248825	6876719	9729	24322	707	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.213	30.213	0	1.001	17675342	3113033	4542	11355	685		
375.8178	30.213	30.213	0	1.001	14423930	2508173	4441	11102	565	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	18802087	3486735	5034	12585	693		
385.8610	30.399	30.399	0	0.951	36659824	6743608	9729	24322	693	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.000	18560743	3371428	4542	11355	742		
375.8178	30.412	30.412	0	1.000	15238378	2764717	4441	11102	623	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.304	31.291	1	0.980	18048041	4638075	5034	12585	921		
385.8610	31.304	31.291	1	0.980	34487764	8737254	9729	24322	898	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317	31.317	0	1.000	18065921	4695769	4542	11355	1034		
375.8178	31.317	31.317	0	1.000	14889424	3909435	4441	11102	880	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.143	0	1.006	15937648	4722094	5034	12585	938		
385.8610	32.143	32.143	0	1.006	30978624	9059222	9729	24322	931	0.51(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.156	32.156	0	1.000	16092574	4793547	4542	11355	1055		
375.8178	32.156	32.156	0	1.000	13250484	3941488	4441	11102	888	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.338						4542	11355			
375.8178	30.338						4441	11102			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		57564291	16579593	6674	16685	2484		
403.8529	31.956	31.956	0		46615601	13338506	5450	13625	2447	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.504	31.504	0	0.986	22810219	6222605	6674	16685	932		
403.8529	31.504	31.504	0	0.986	18374805	5005106	5450	13625	918	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.517	31.517	0	1.000	12316199	3429883	3081	7702	1113		
391.8127	31.517	31.517	0	1.000	9775521	2705714	2336	5840	1158	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	23741411	6426043	6674	16685	963		
403.8529	31.610	31.610	0	0.989	19021388	5128311	5450	13625	941	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.624	31.624	0	1.000	13248494	3512524	3081	7702	1140		
391.8127	31.624	31.624	0	1.000	10510992	2838913	2336	5840	1215	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.969	31.969	0	1.015	14223147	4116493	3081	7702	1336		
391.8127	31.969	31.969	0	1.015	11301511	3232738	2336	5840	1384	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.525						3081	7702			
391.8127	30.525						2336	5840			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.615	33.603	1	1.052	10867374	4098467	10142	25355	404		
419.8220	33.615	33.603	1	1.052	24913442	9216265	21687	54217	425	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.627	33.615	1	1.000	14124100	5239793	11340	28350	462		
409.7789	33.627	33.615	1	1.000	13714564	4853678	13910	34775	349	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.685	34.672	1	1.085	10682190	3615183	10142	25355	356		
419.8220	34.685	34.672	1	1.085	24672939	8383490	21687	54217	387	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685	34.685	0	1.000	12150400	4061940	11340	28350	358		
409.7789	34.685	34.685	0	1.000	11598731	3961654	13910	34775	285	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						11340	28350			
409.7789	34.150						13910	34775			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	15638324	5390078	5306	13265	1016		
437.8140	34.393	34.393	0	1.076	15341536	5341169	6446	16115	829	1.02(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	9415719	3299547	3099	7747	1065		
425.7737	34.405	34.405	0	1.000	9124770	3261395	4007	10017	814	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						3099	7747			
425.7737	34.223						4007	10017			
13C-OCDD											
469.7779	36.713	36.701	1	1.149	21505619	6636959	2361	5902	2811		
471.7750	36.713	36.701	1	1.149	24809865	7568325	2617	6542	2892	0.87(0.76-1.02)	
OCDF											
441.7428	36.809	36.797	1	1.003	16328082	5119075	1355	3387	3778		
443.7399	36.809	36.797	1	1.003	18346009	5567496	1534	3835	3629	0.89(0.76-1.02)	
OCDD											
457.7377	36.725	36.713	1	1.000	12789551	3848755	1190	2975	3234		
459.7348	36.713	36.713	0	1.000	14503486	4417257	1735	4337	2546	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

Report Date: 27-Aug-2021 09:27:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d
Lims ID: LCS 320-515492/2-A
Client ID:
Inject. Date: 25-Aug-2021 12:05:46 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	86197808	22643378

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	86197808	22643378

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.751	37078	8304	48230	12096	0.0967	0.77	
Signal Totals:							
	37078	8304	48230	12096			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	85308	20400				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0967 = (85308 * 100.000) / (86197808 * 1.024)

Report Date: 27-Aug-2021 09:27:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d
Lims ID: LCS 320-515492/2-A
Client ID:
Inject. Date: 25-Aug-2021 12:05:46 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 4

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	65768959	12096253
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71589573	12296157

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	68679266	12196205

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.565	201081	34731	132404	24626	0.4670	1.52	
Signal Totals:							
	201081	34731	132404	24626			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	333485	59357				1.52	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4670 = (333485 * 100.000) / (68679266 * 1.040)

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

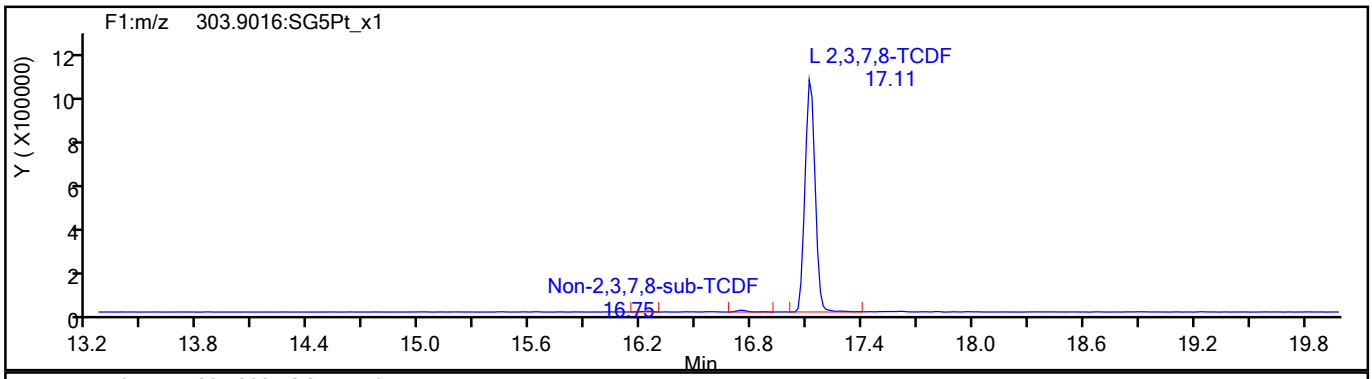

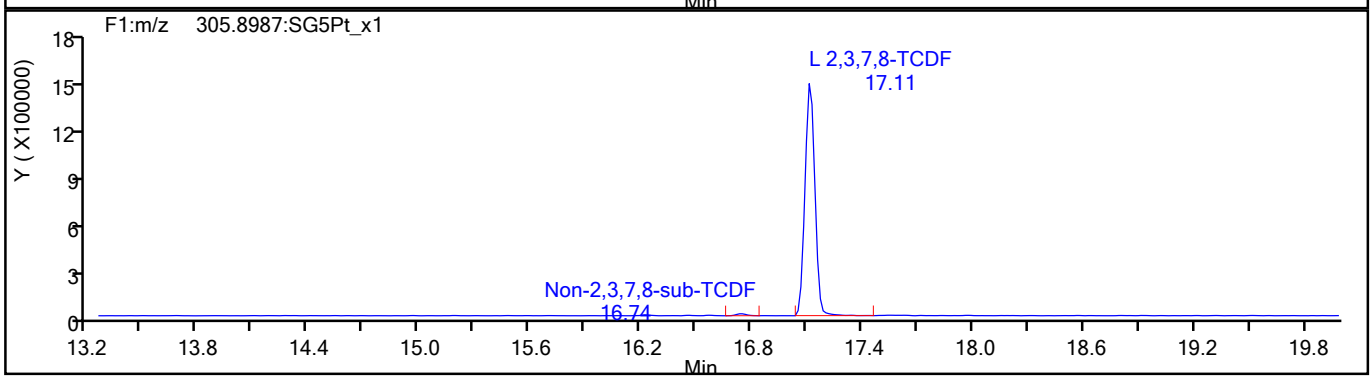

TCDF Standards

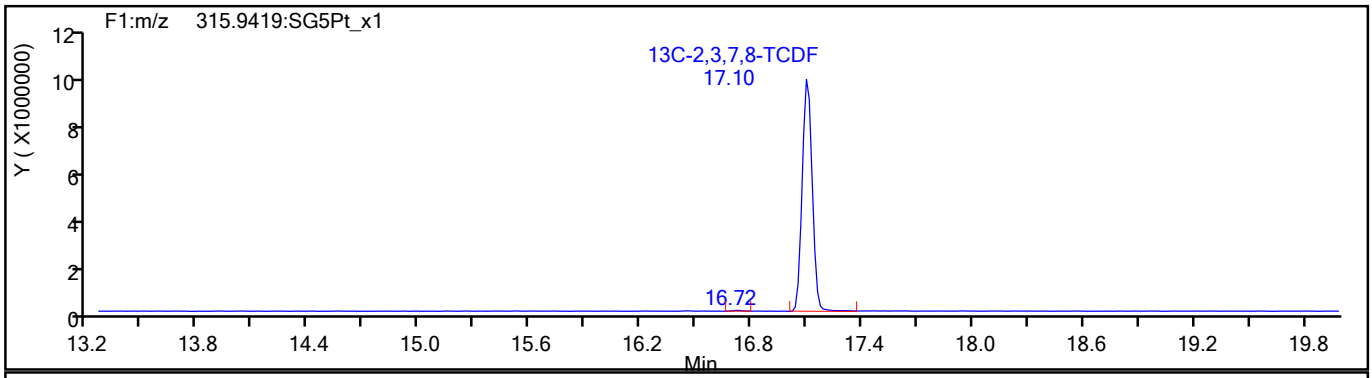

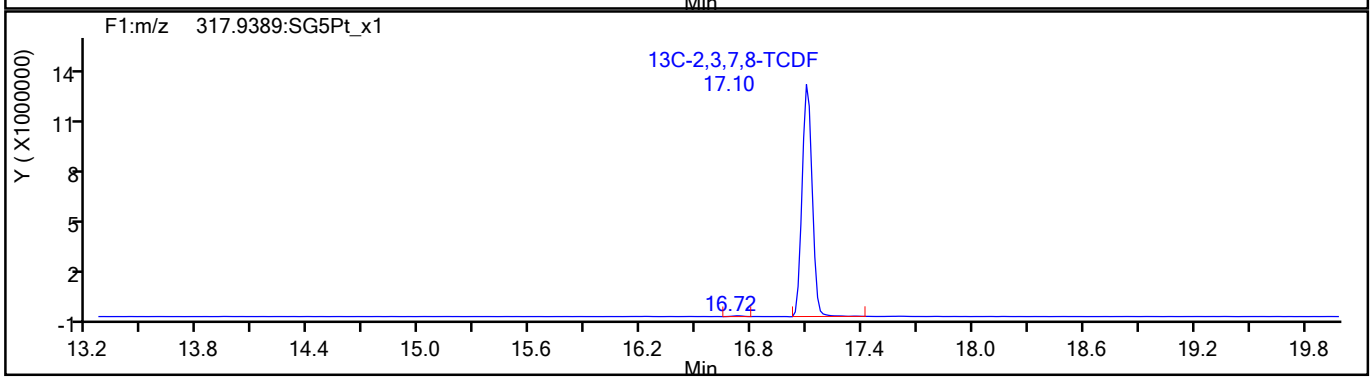

792900

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

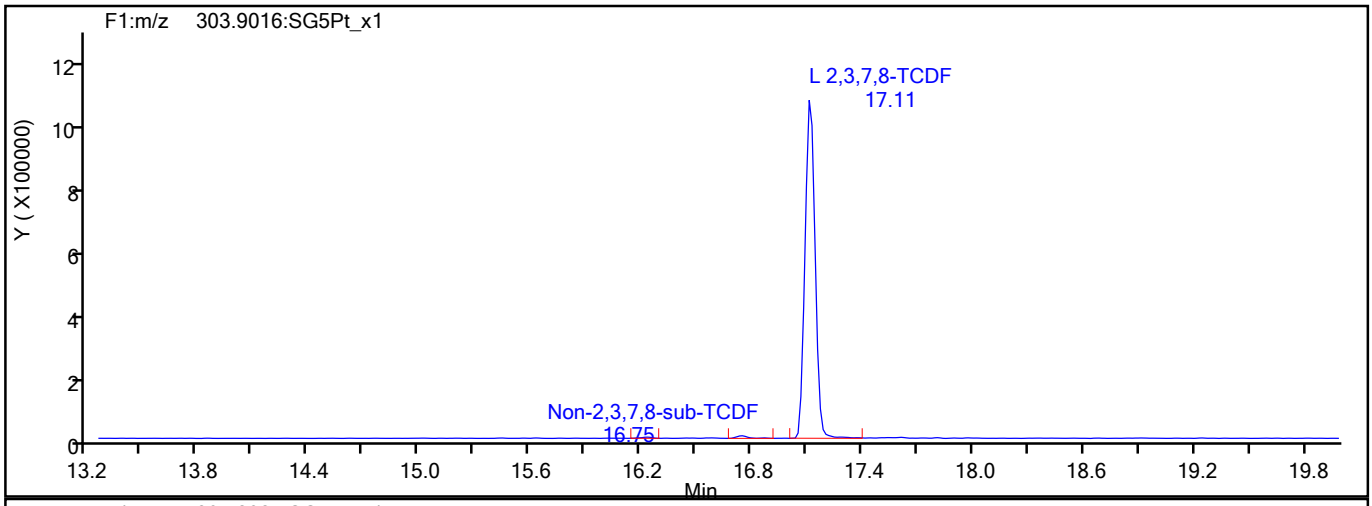

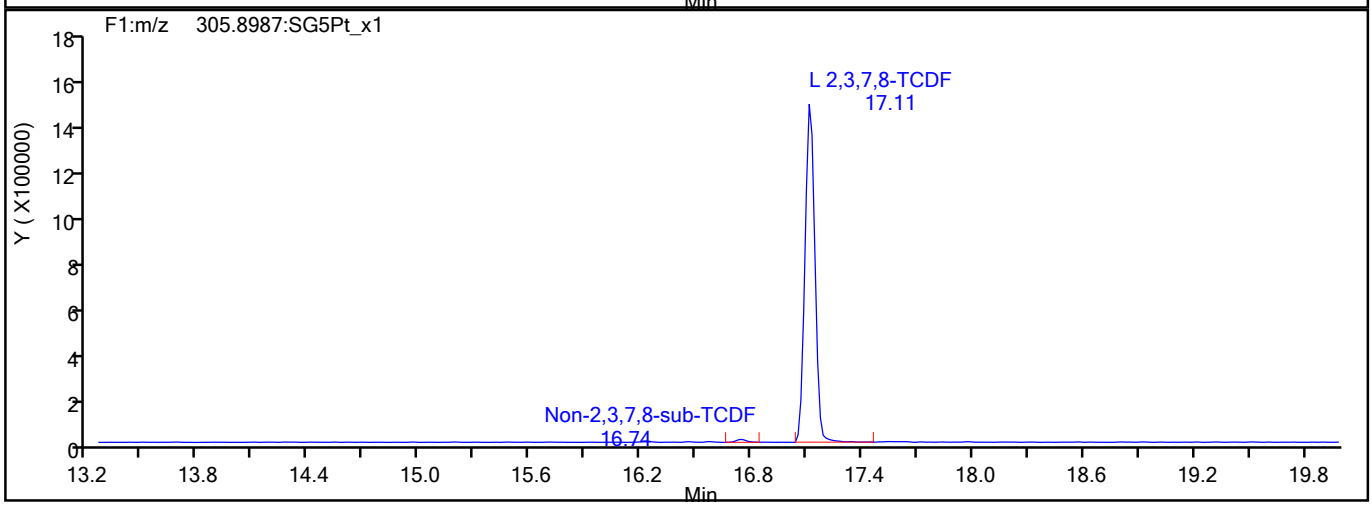

TCDF Interference Mass

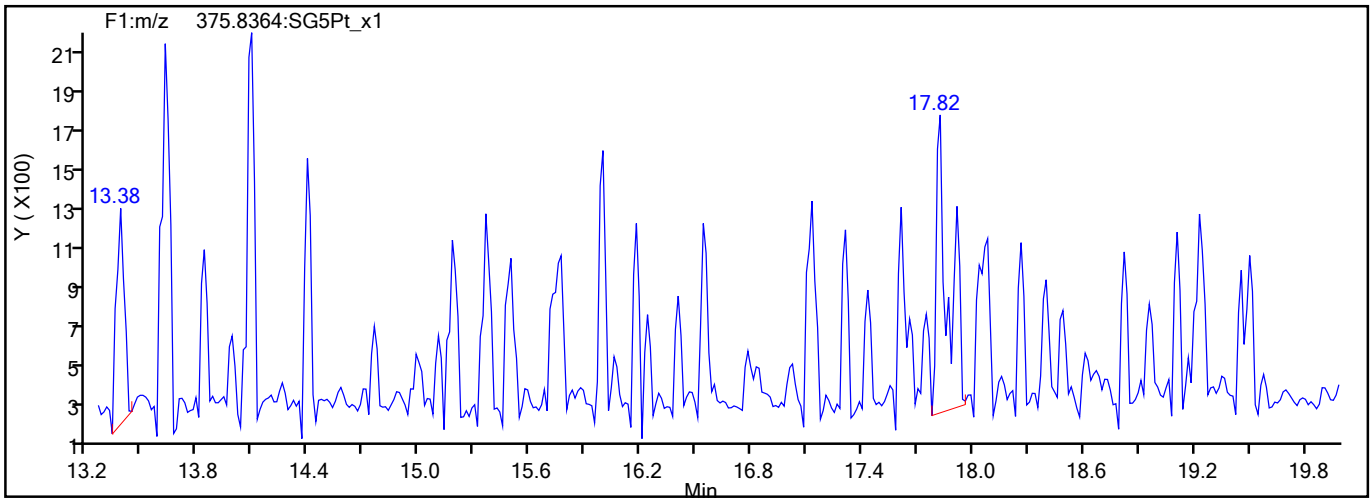

792901

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

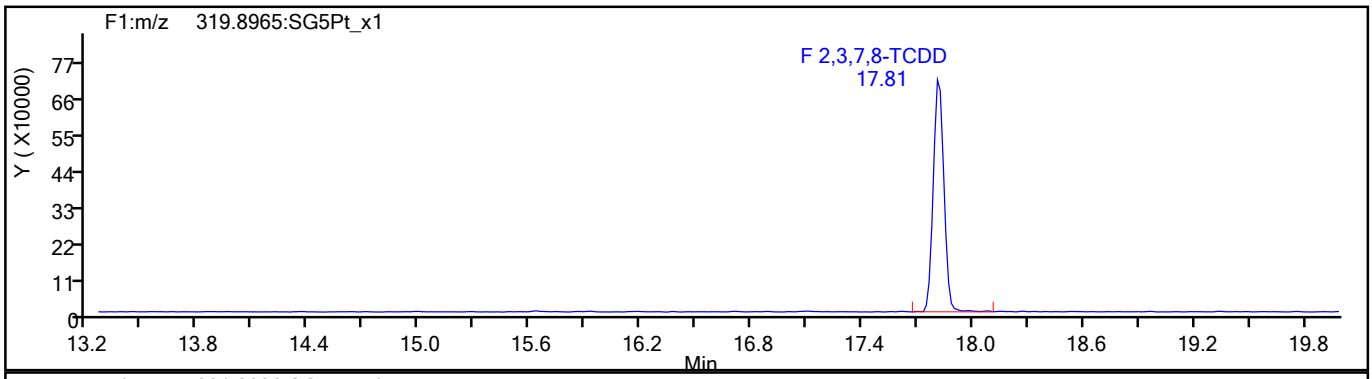

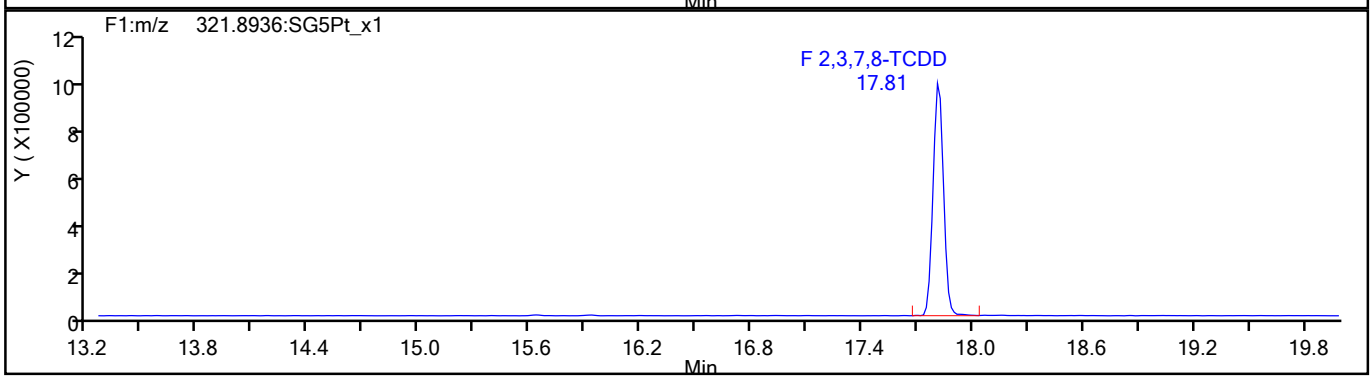

TCDD Standards

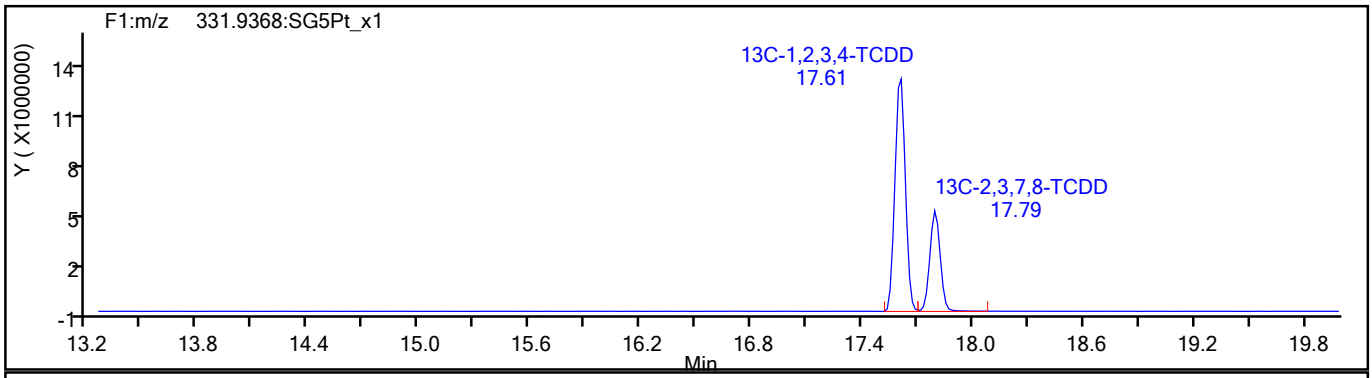

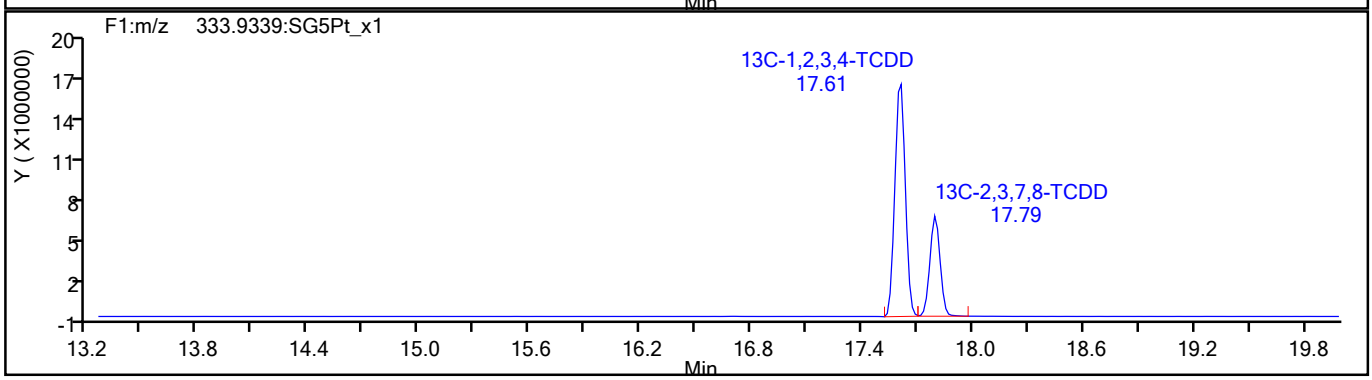

792902

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

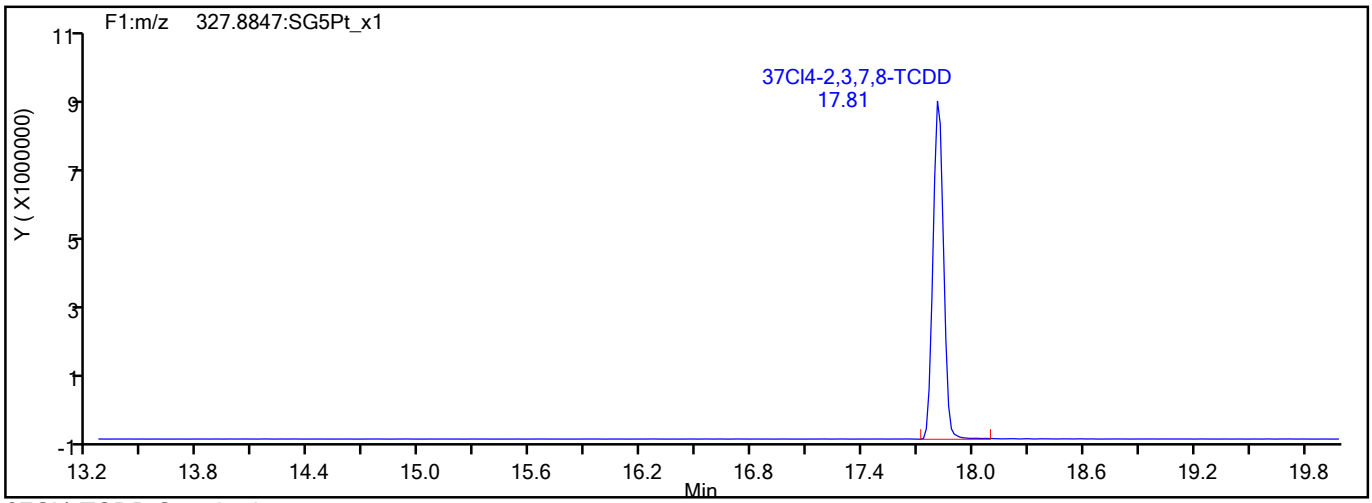

37Cl4-TCDD Standards

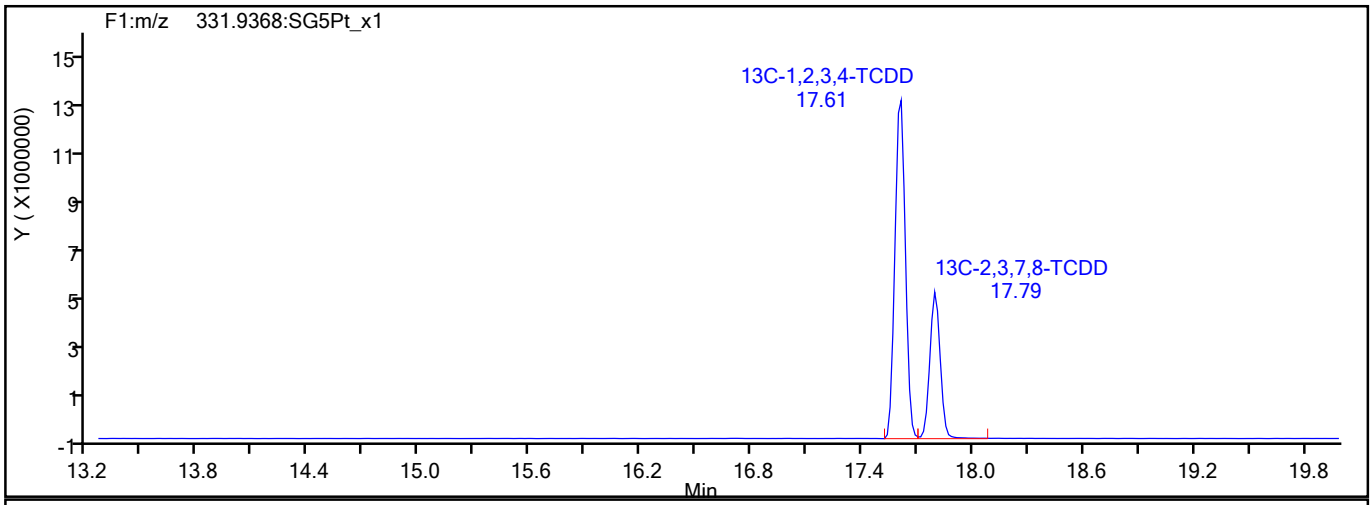

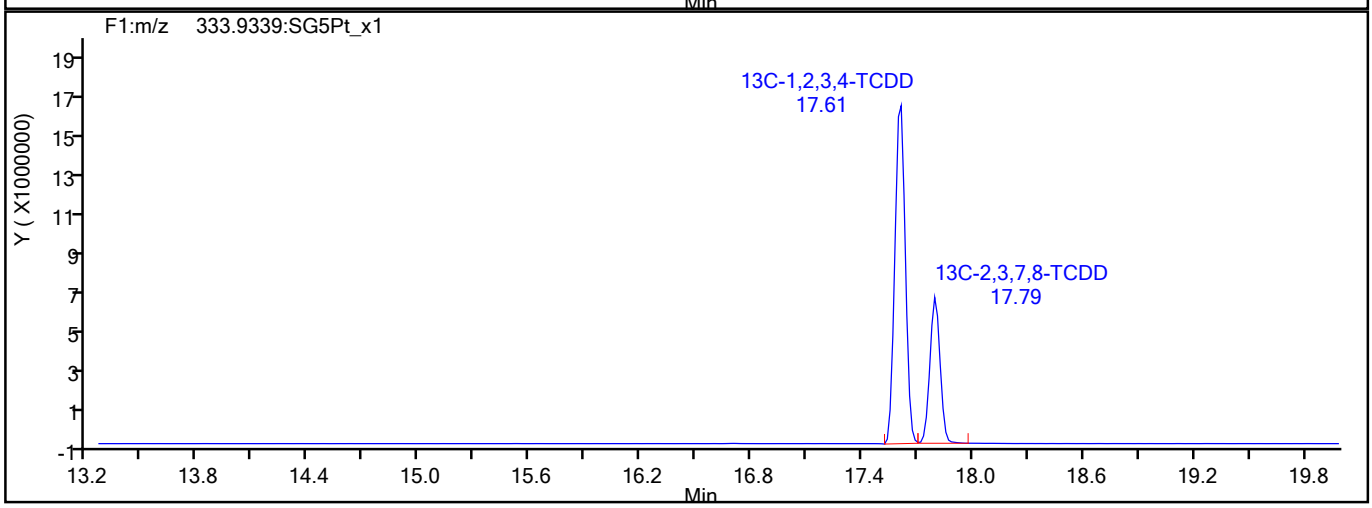

792903

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

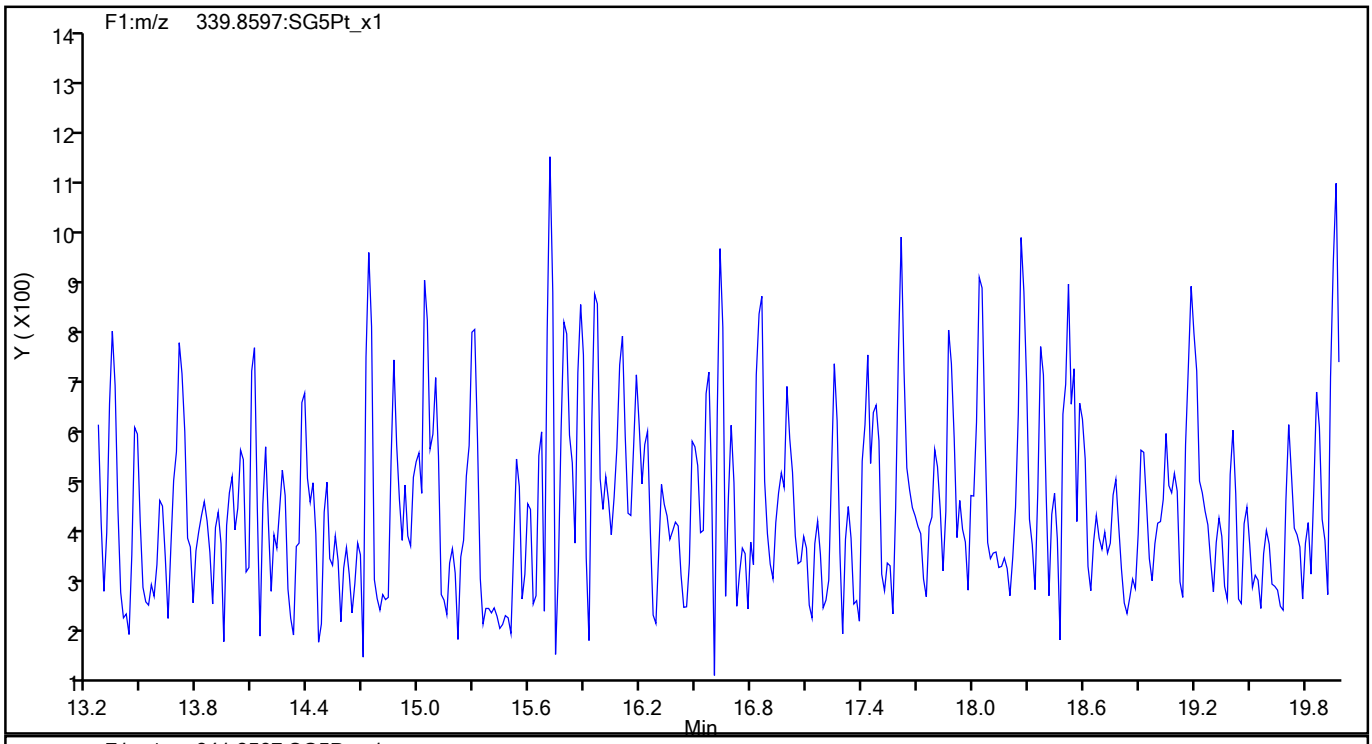

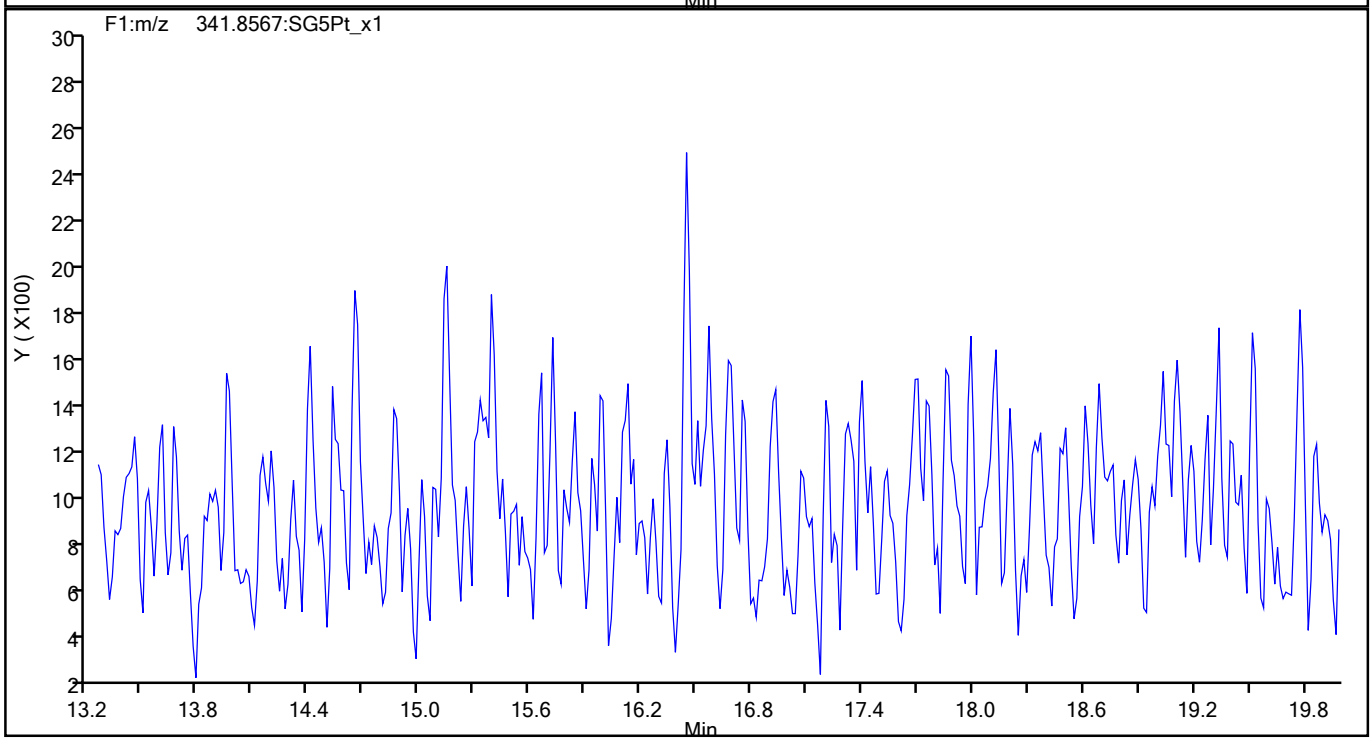

792904

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

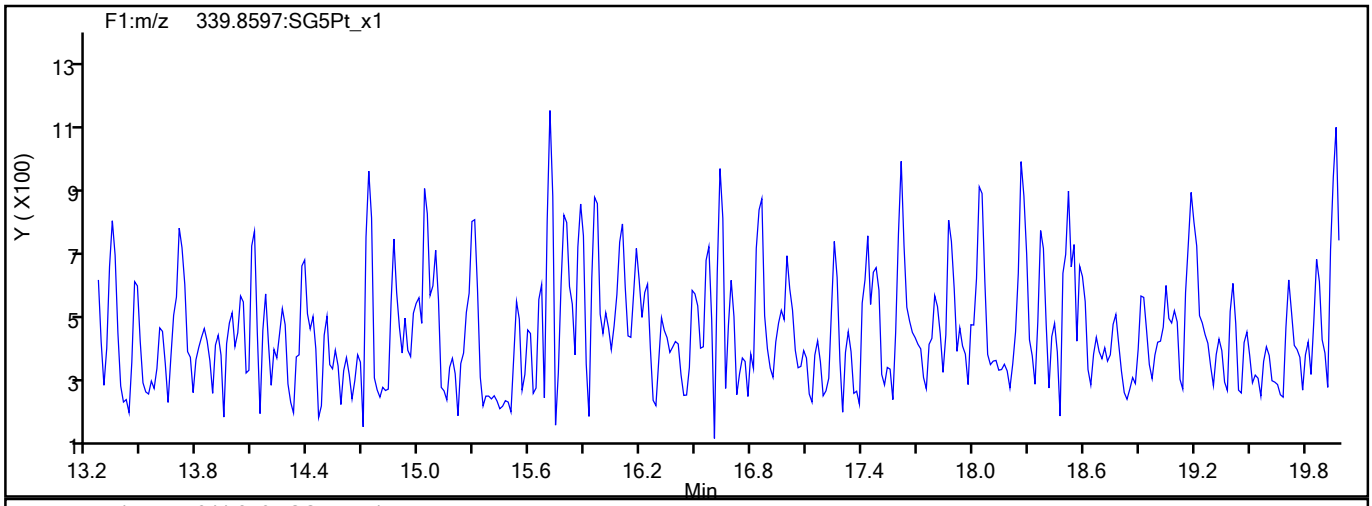

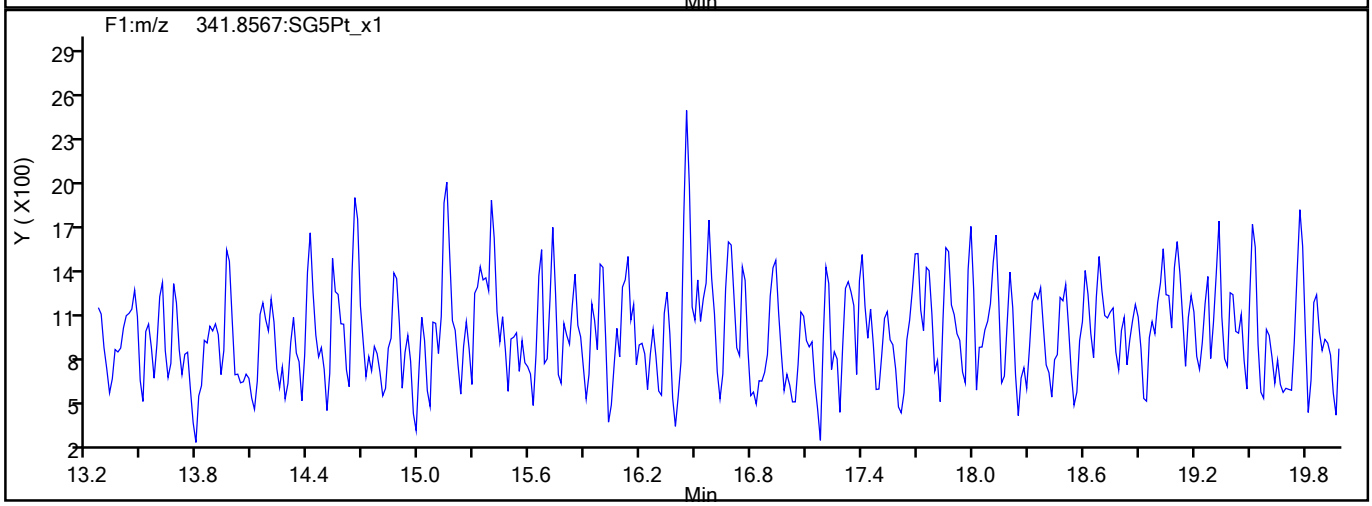

F1 PeCDFs Interference Mass

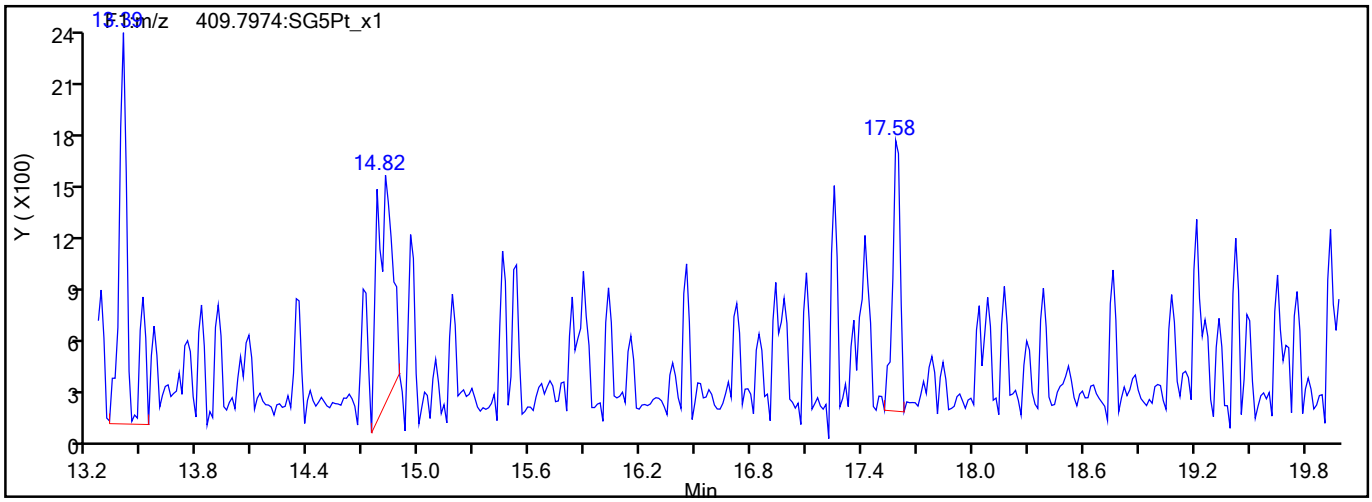

792905

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

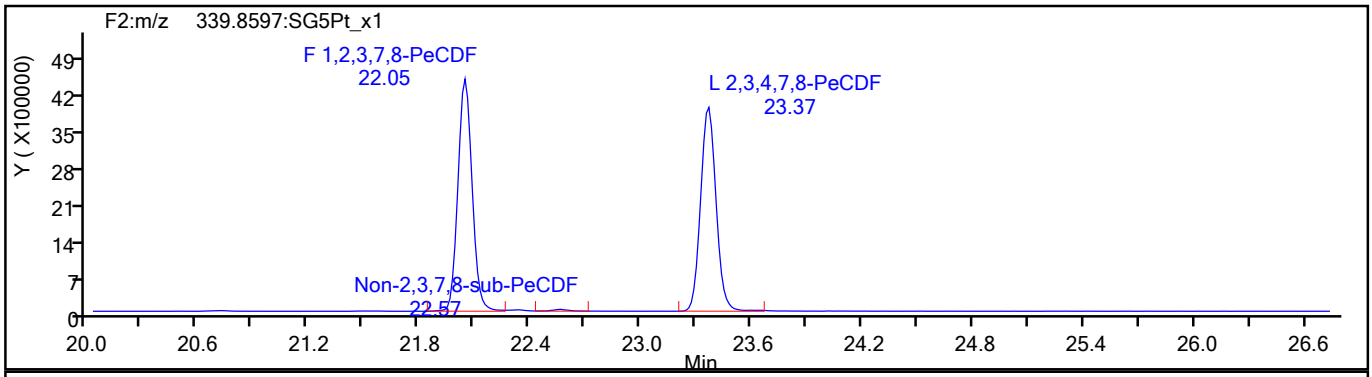

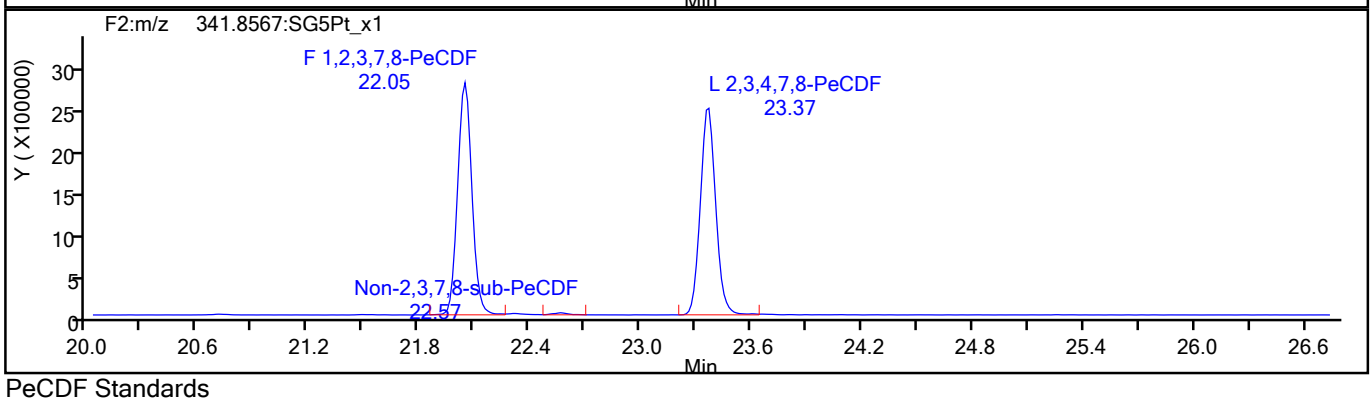

PeCDF Standards

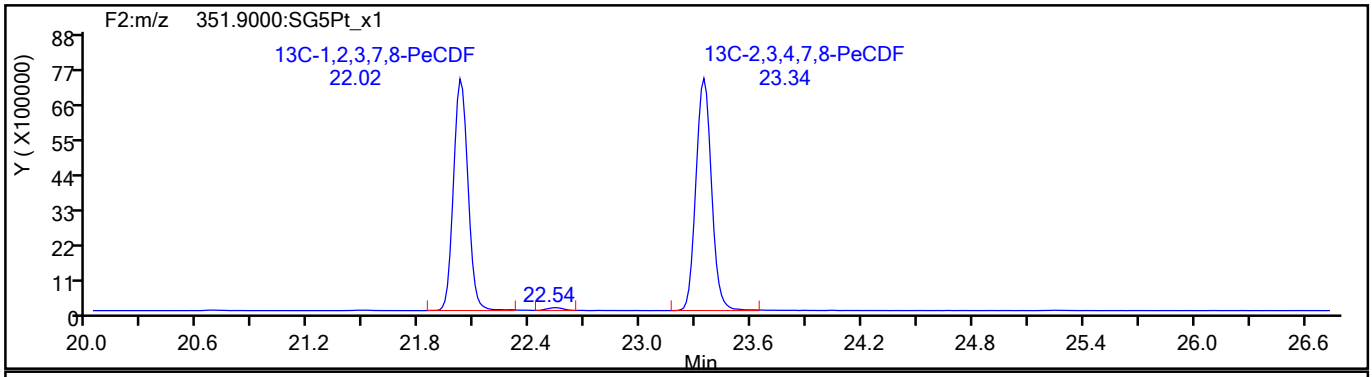

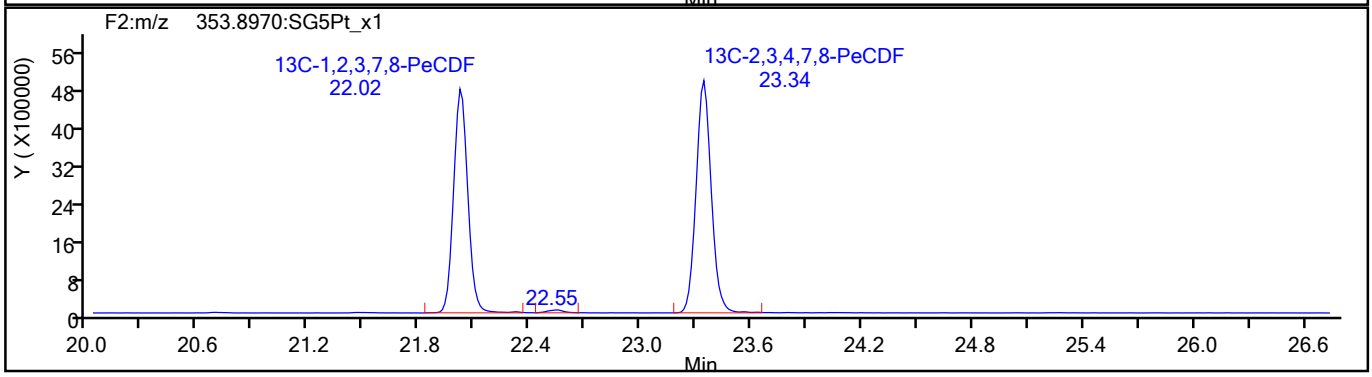

792906

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

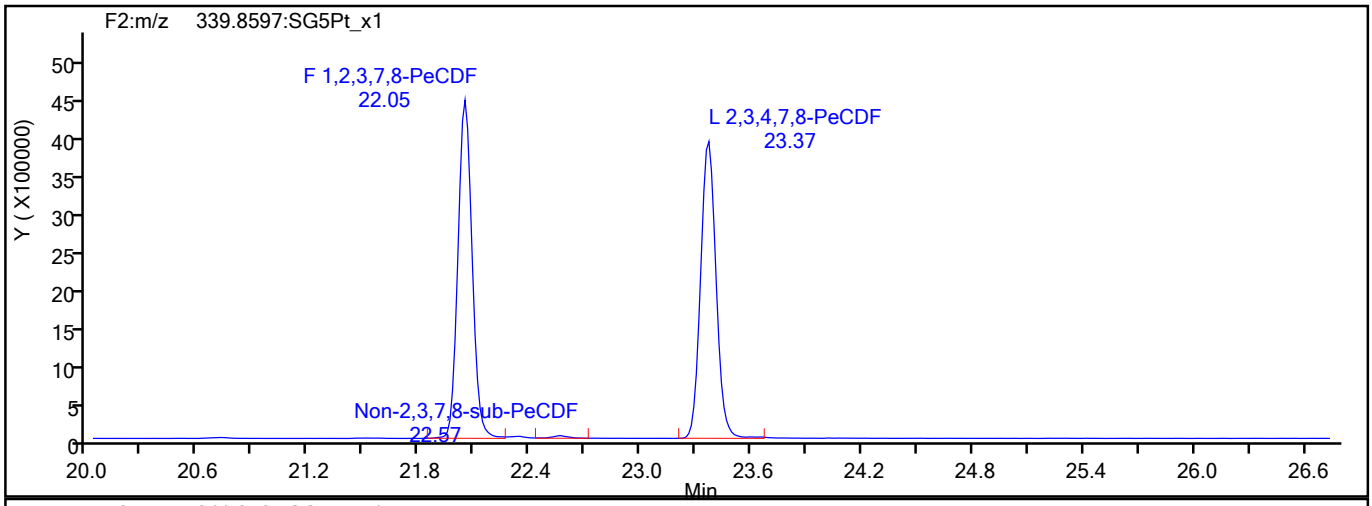

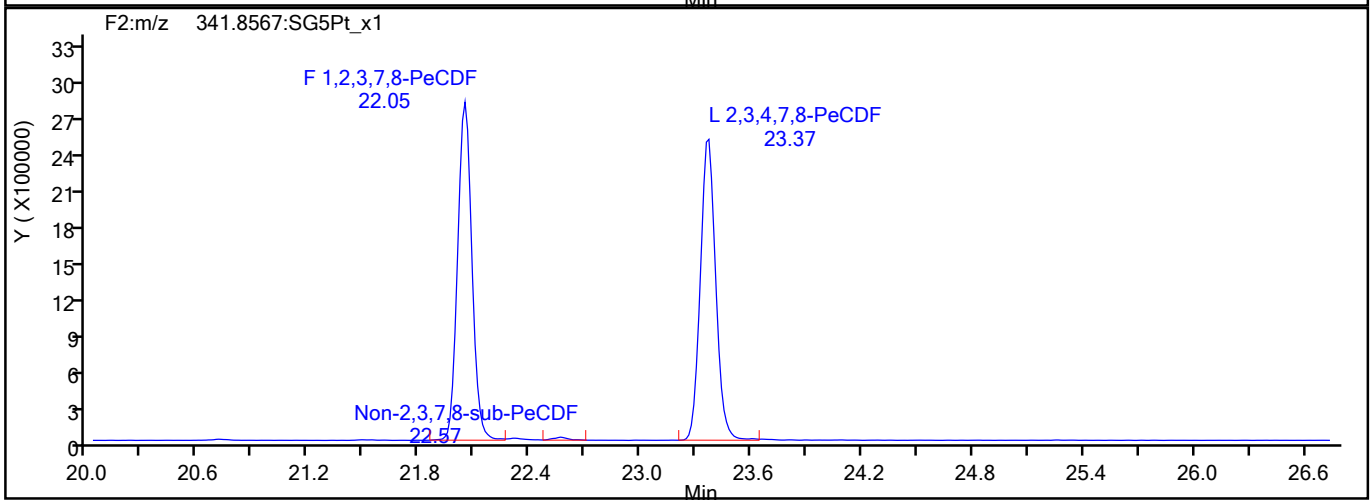

PeCDF Interference Mass

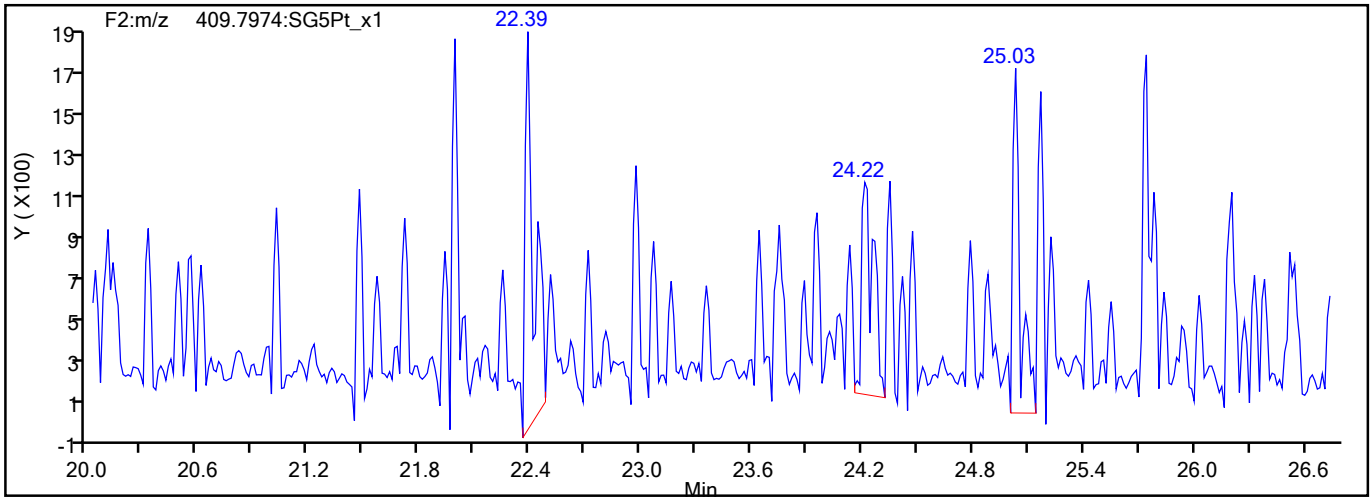

792907

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

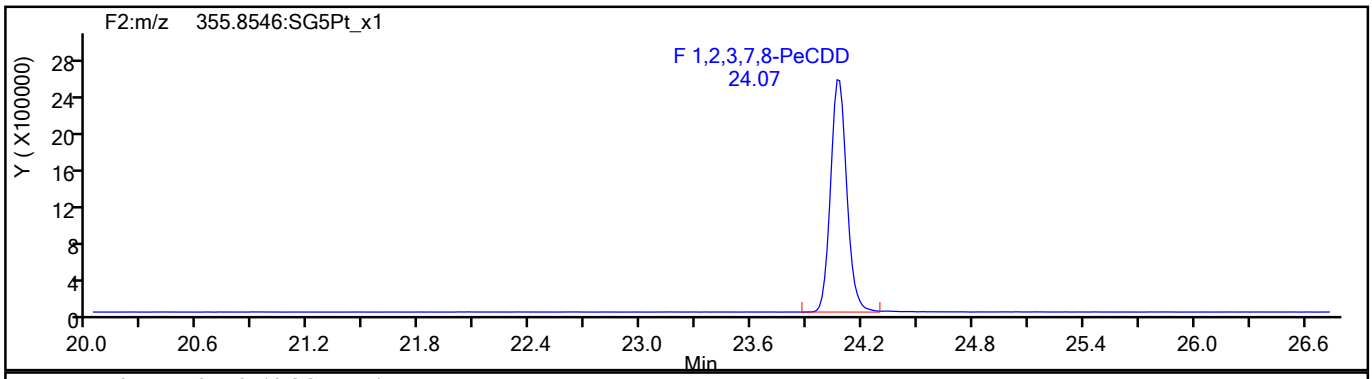

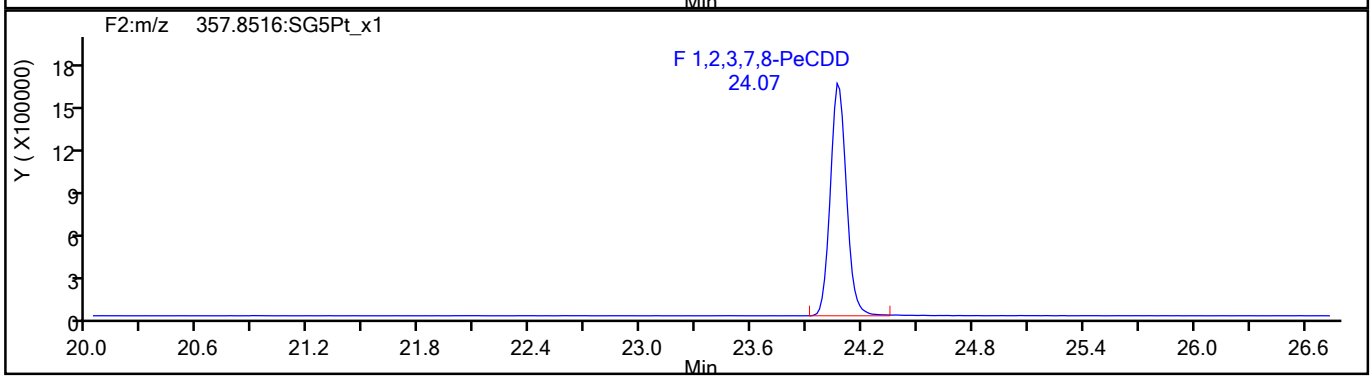

PeCDD Standards

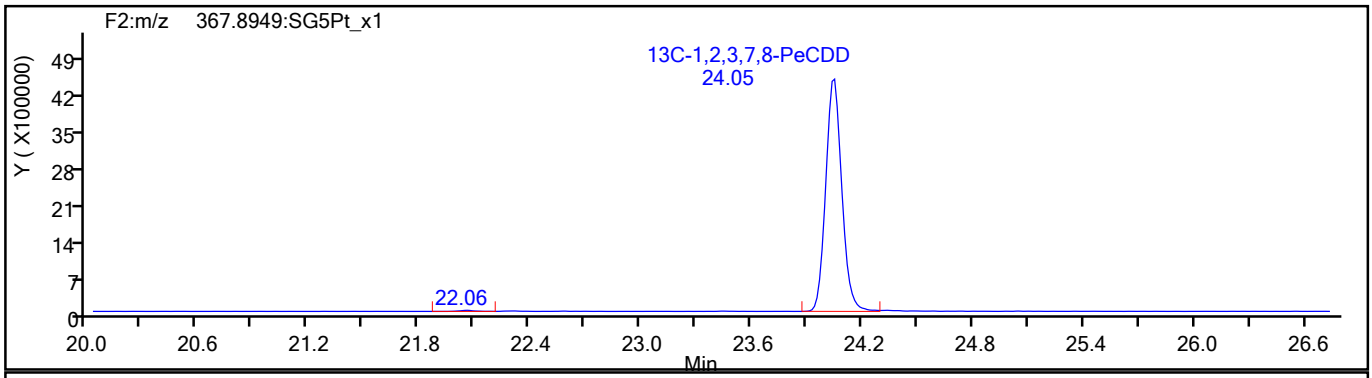

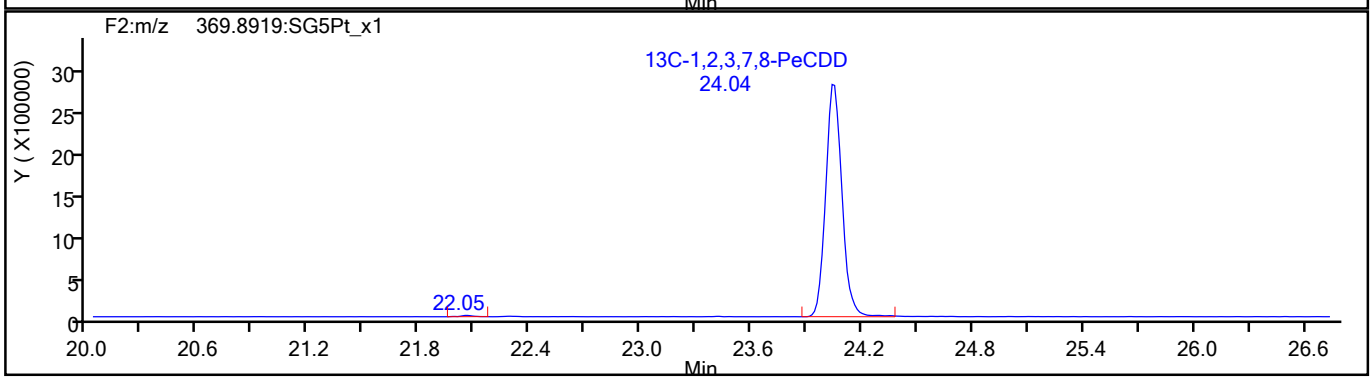

792908

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

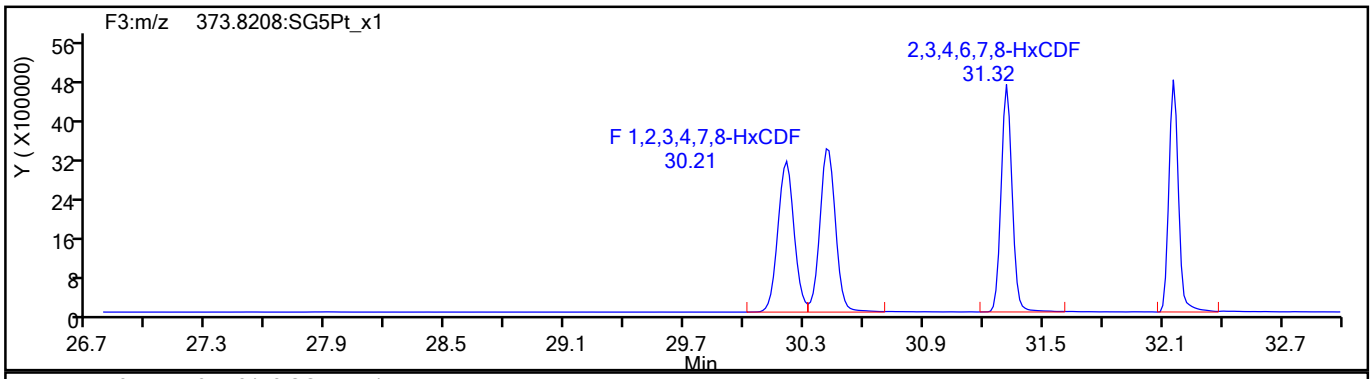

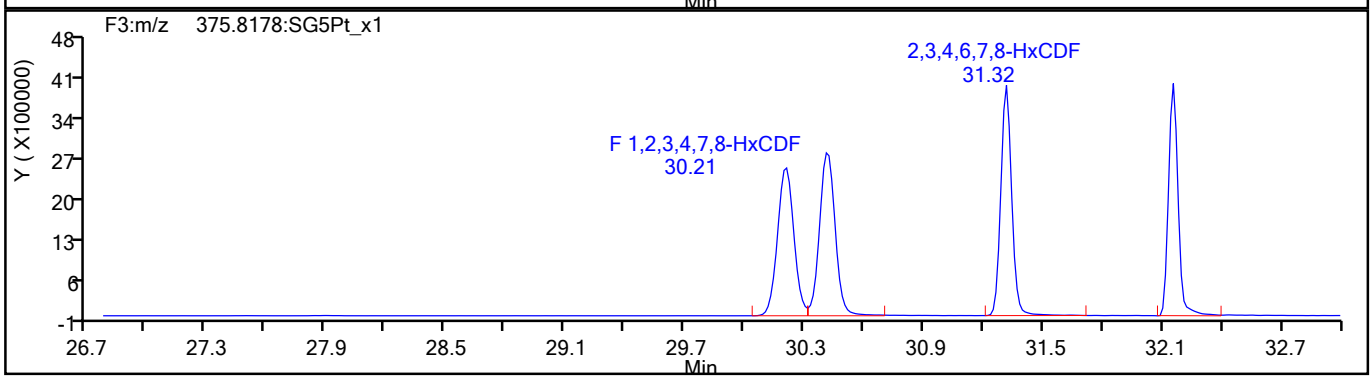

HxCDF Standards

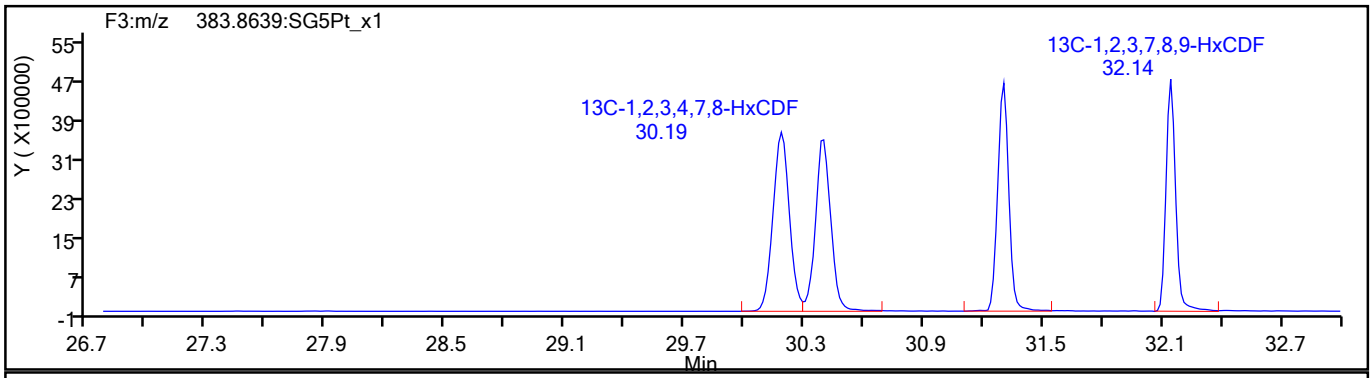

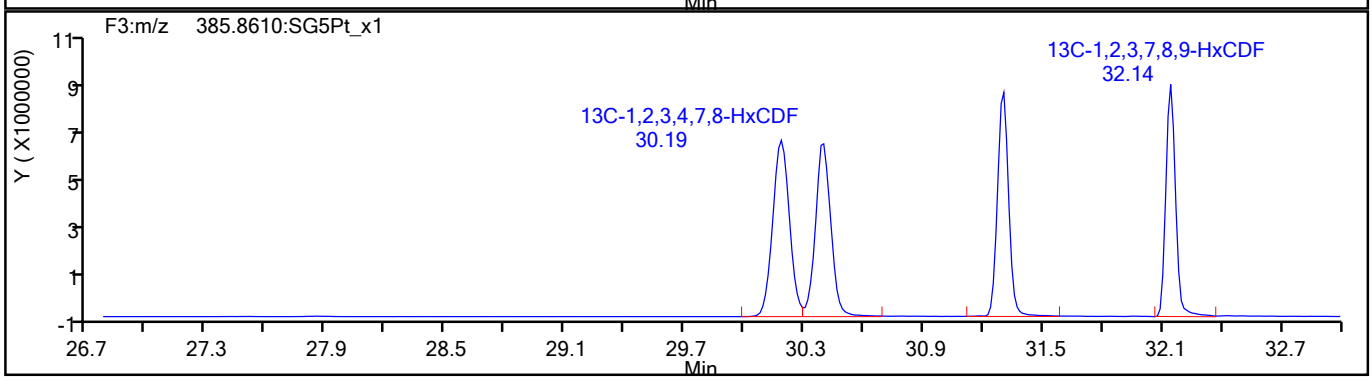

792909

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

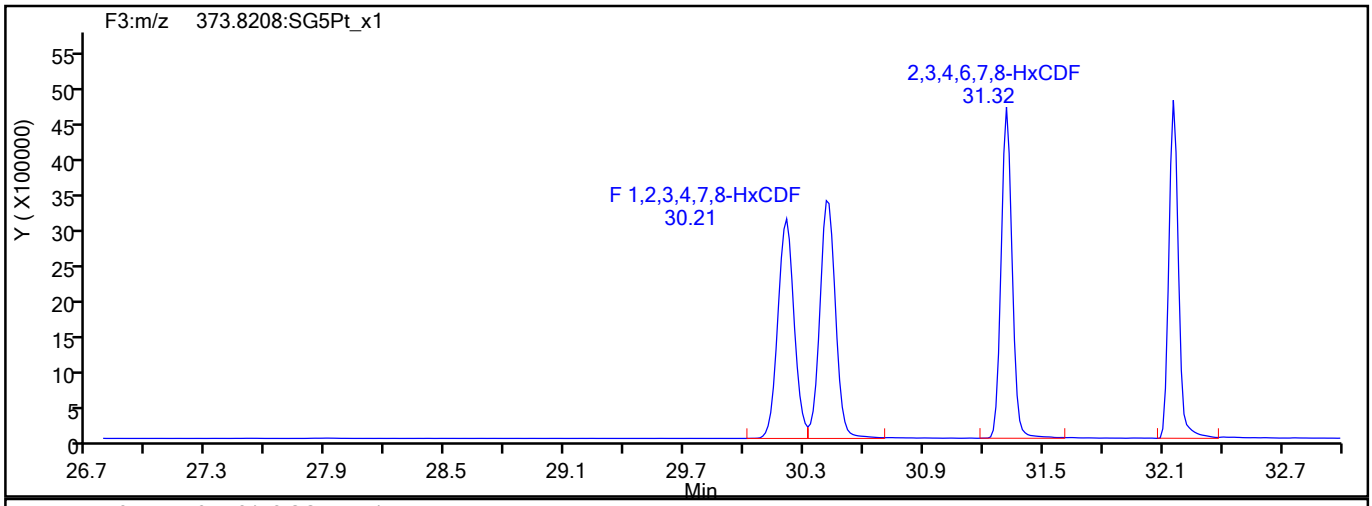

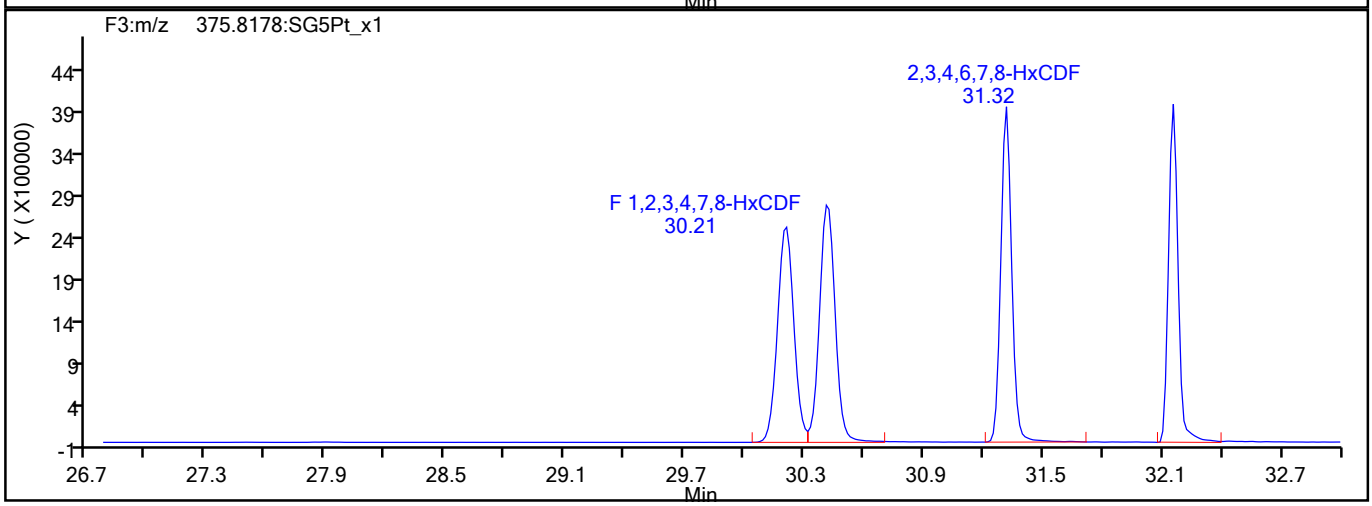

HxCDF Interference Mass

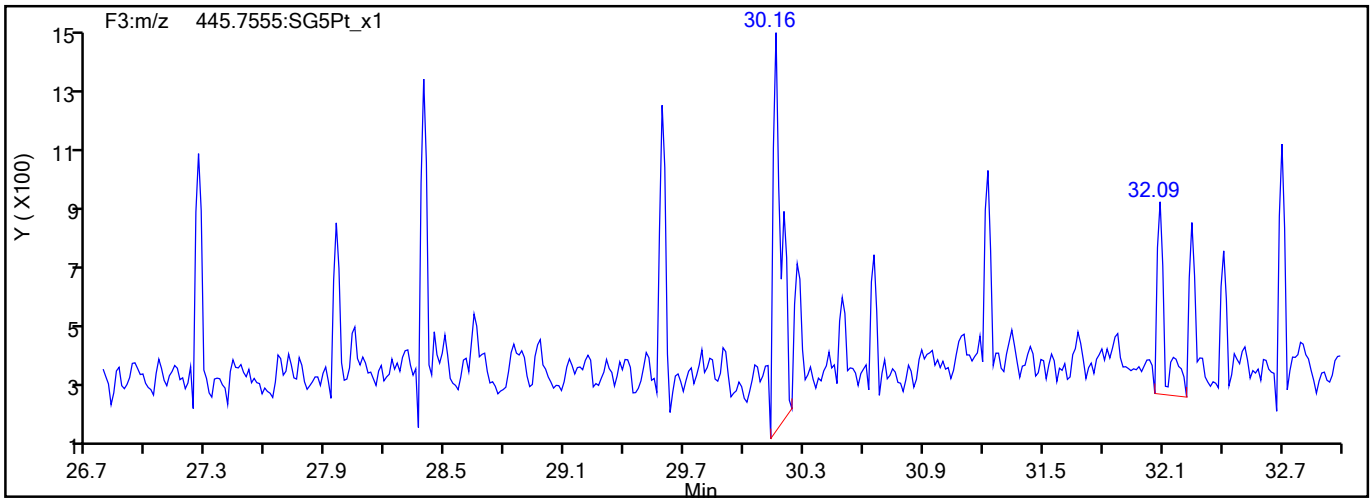

792910

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

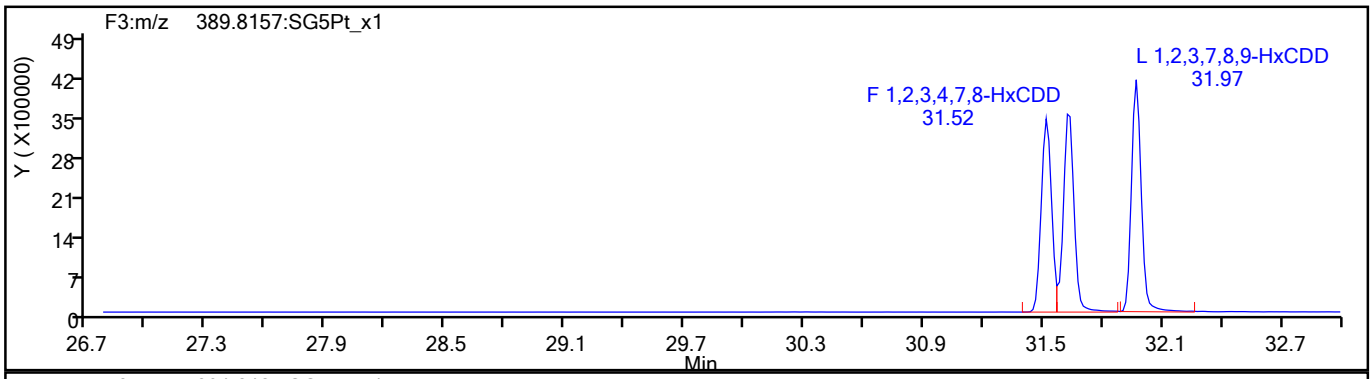

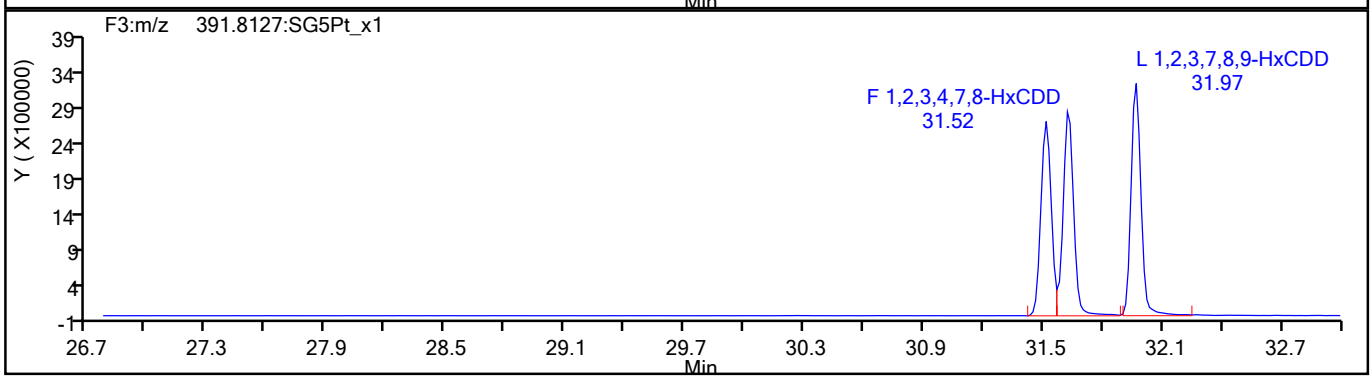

HxCDD Standards

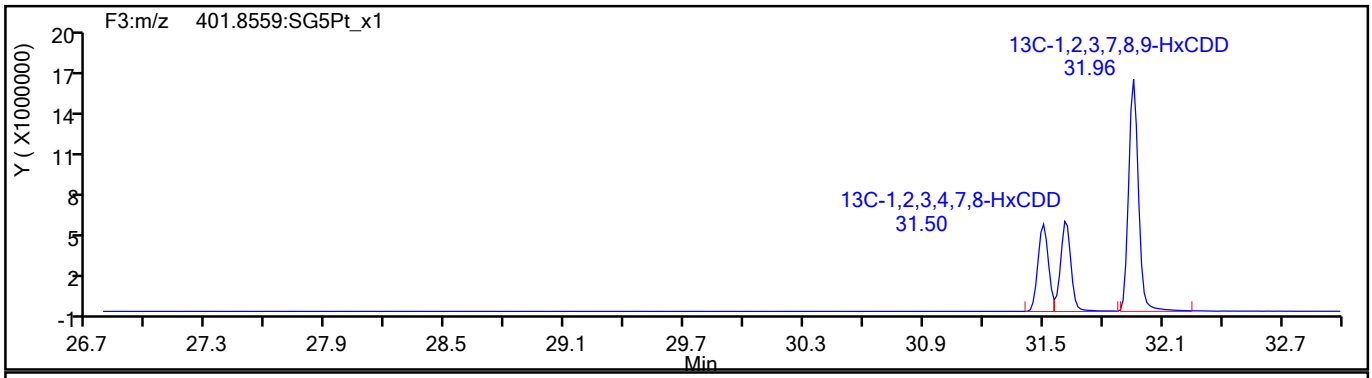

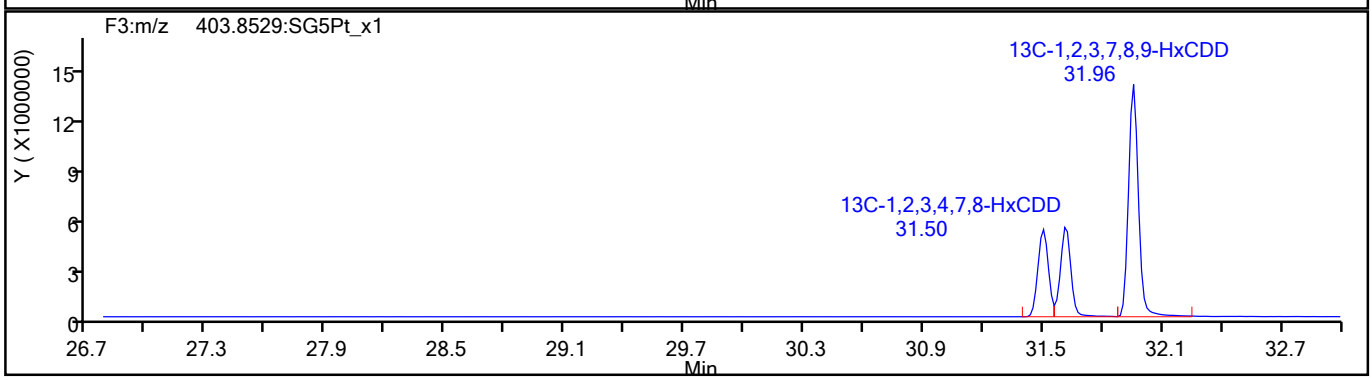

792911

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

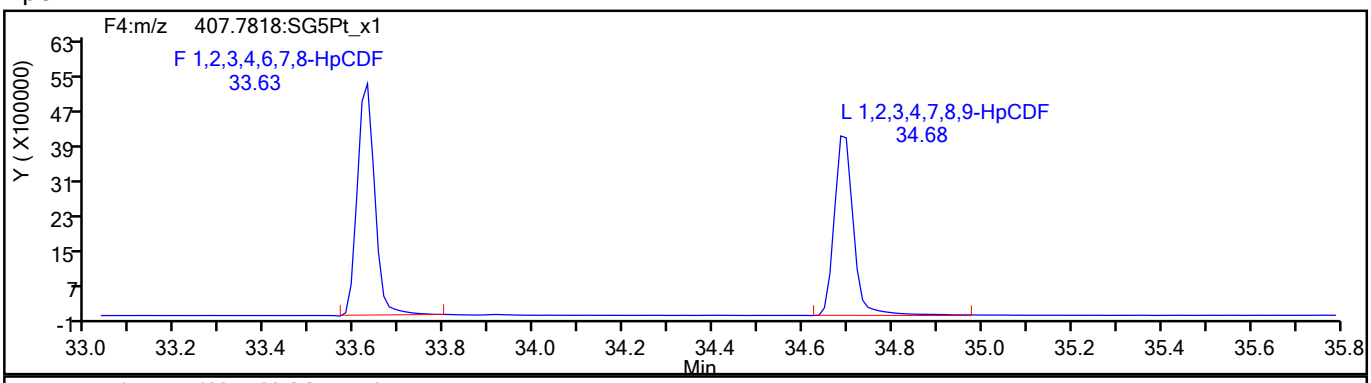

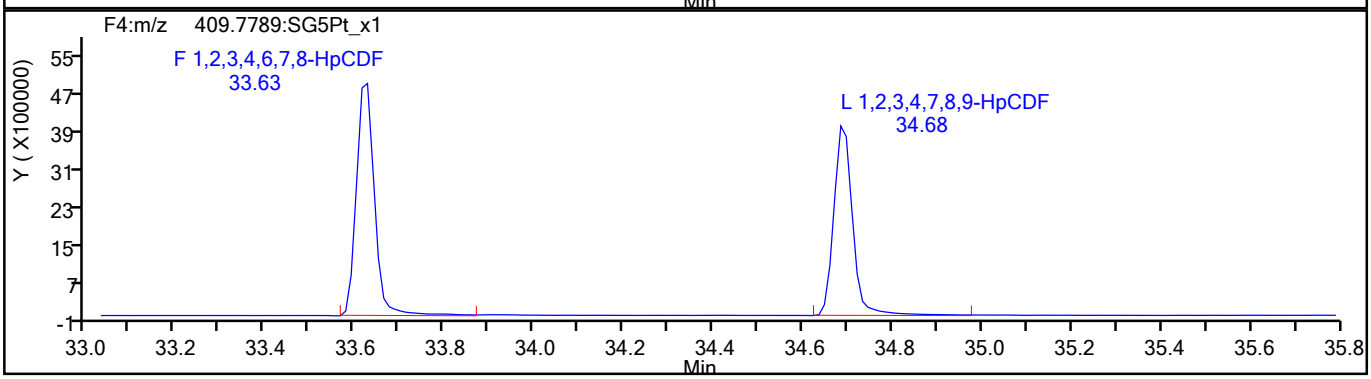

HpCDF Standards

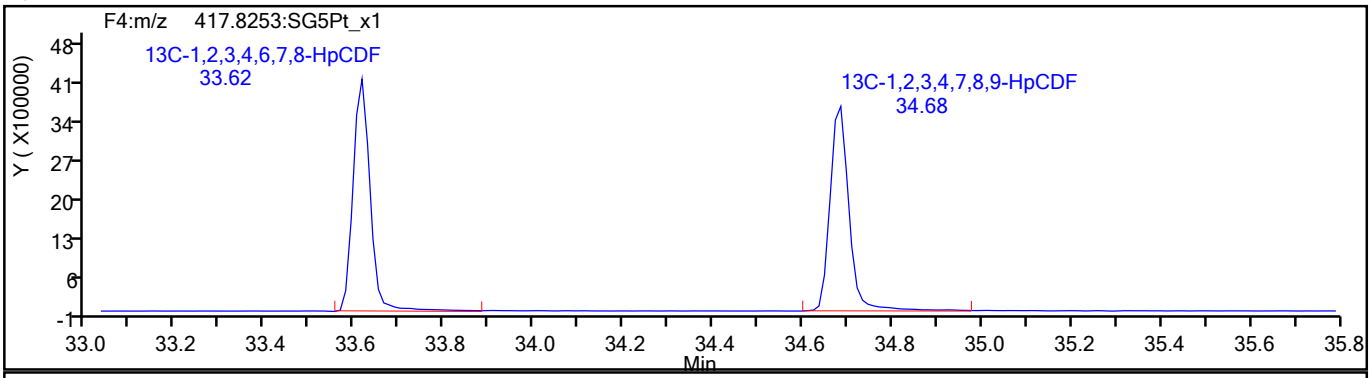

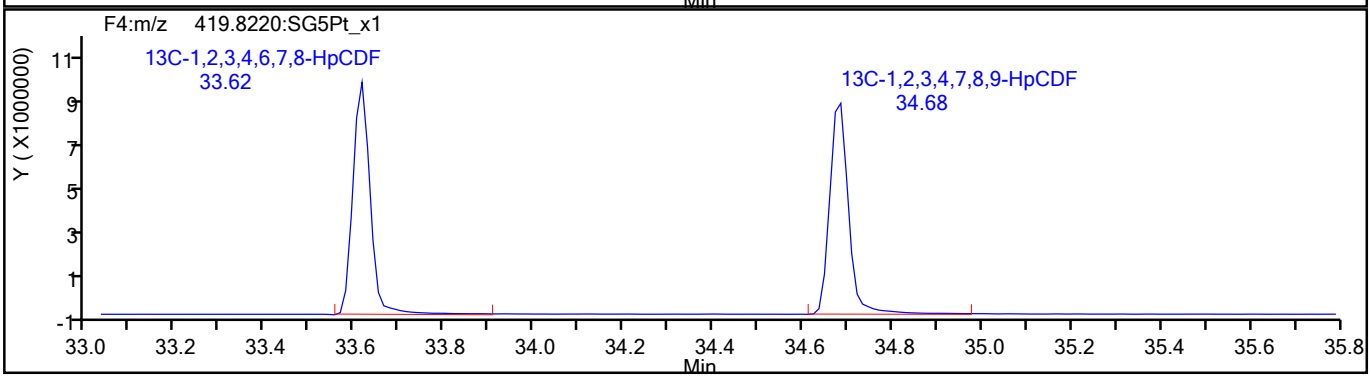

792912

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

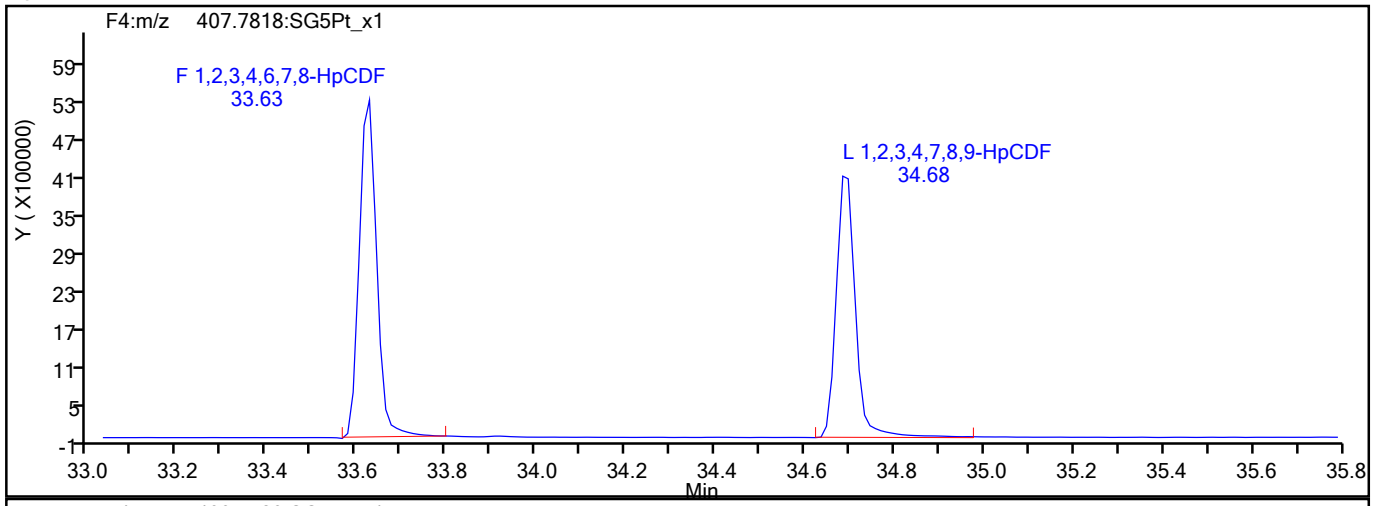

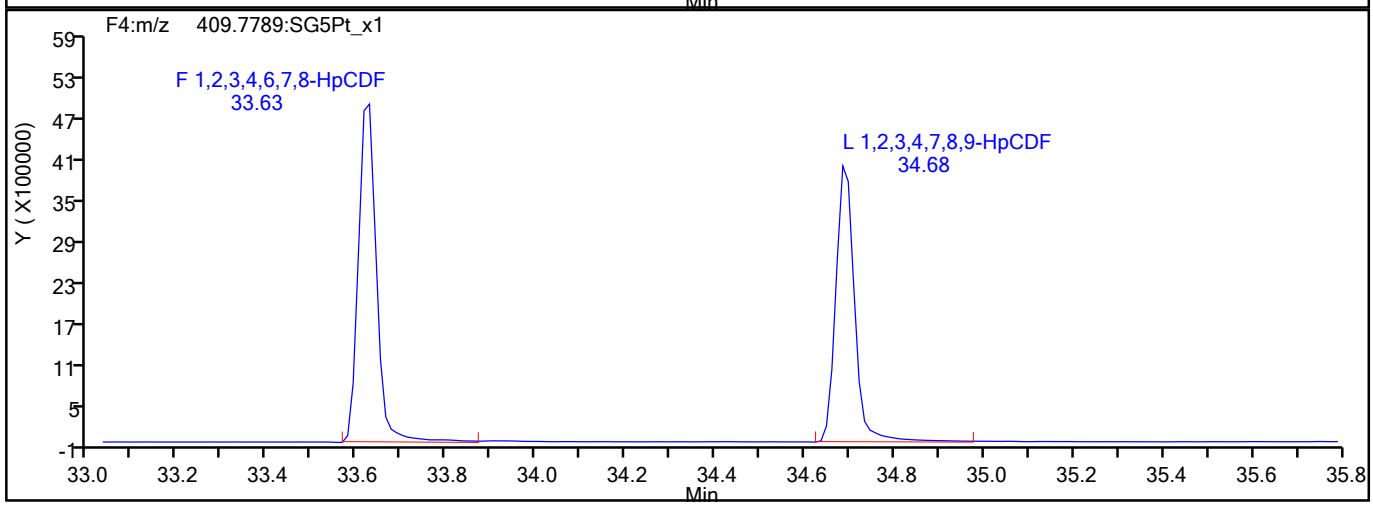

HpCDF Interference Mass

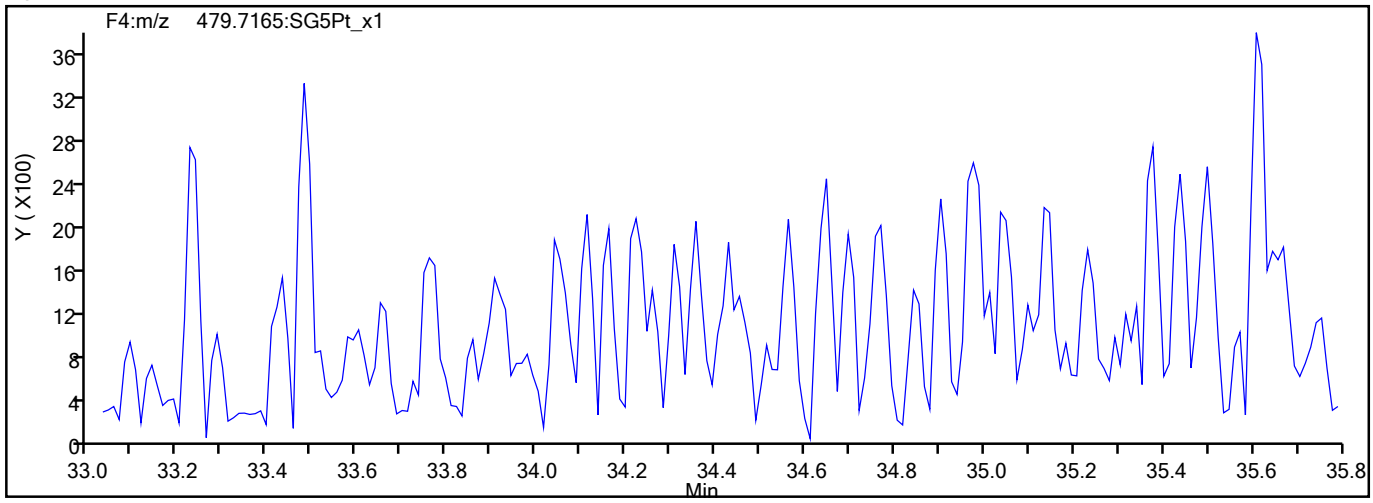

792913

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

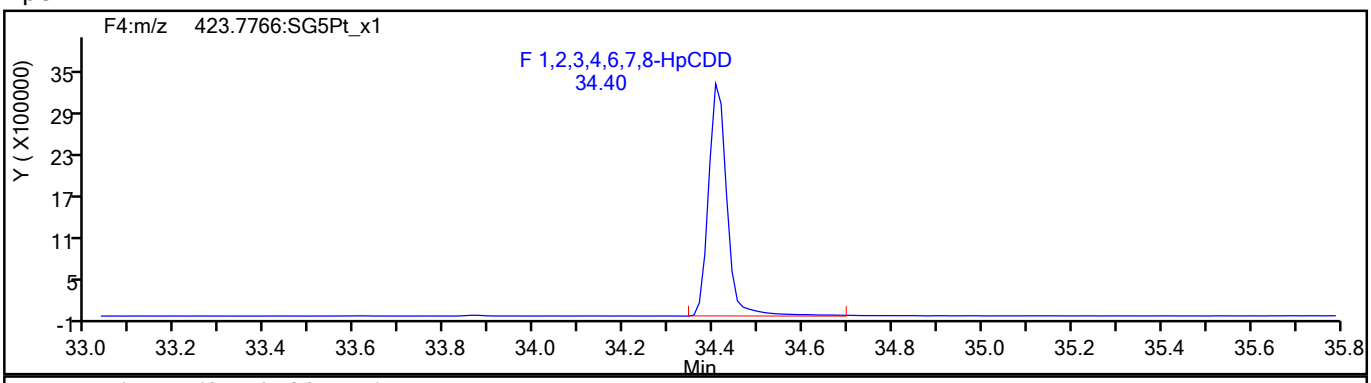

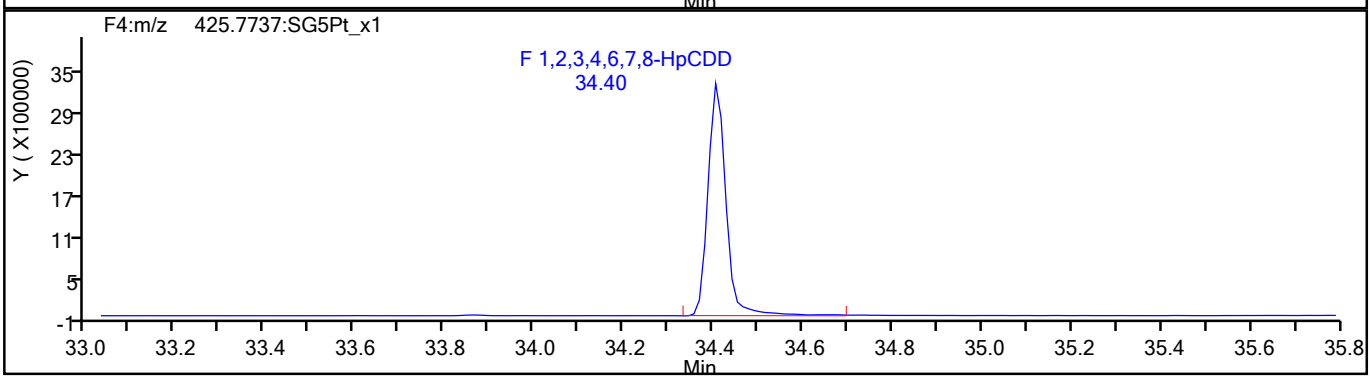

HpCDD Standards

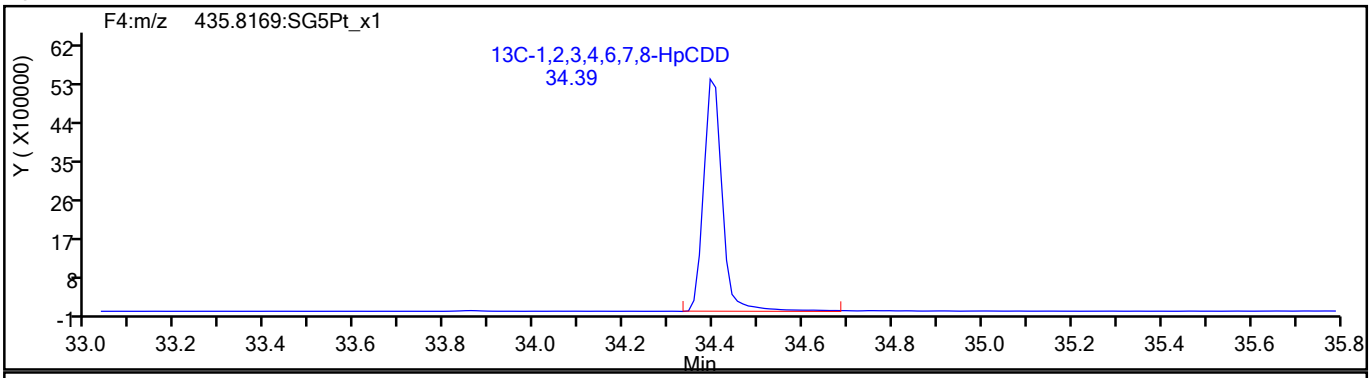

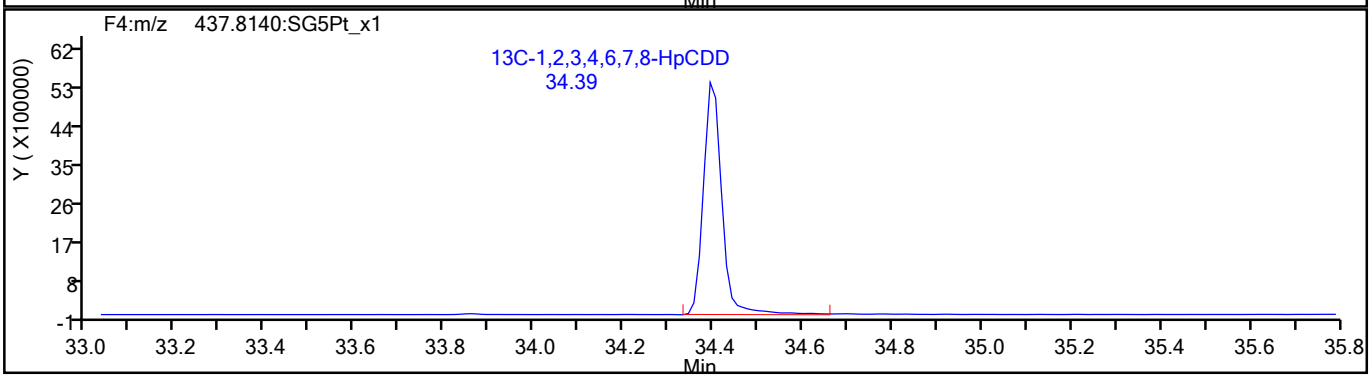

792914

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

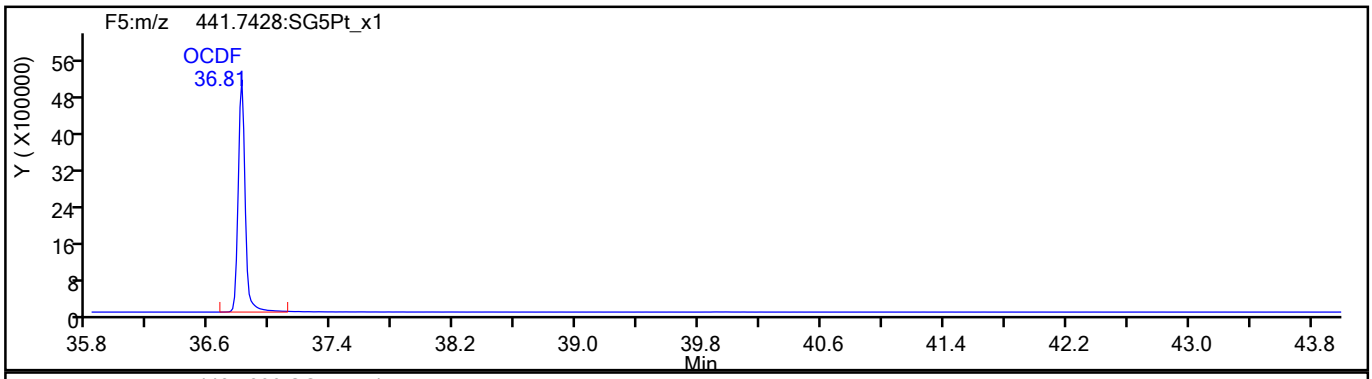

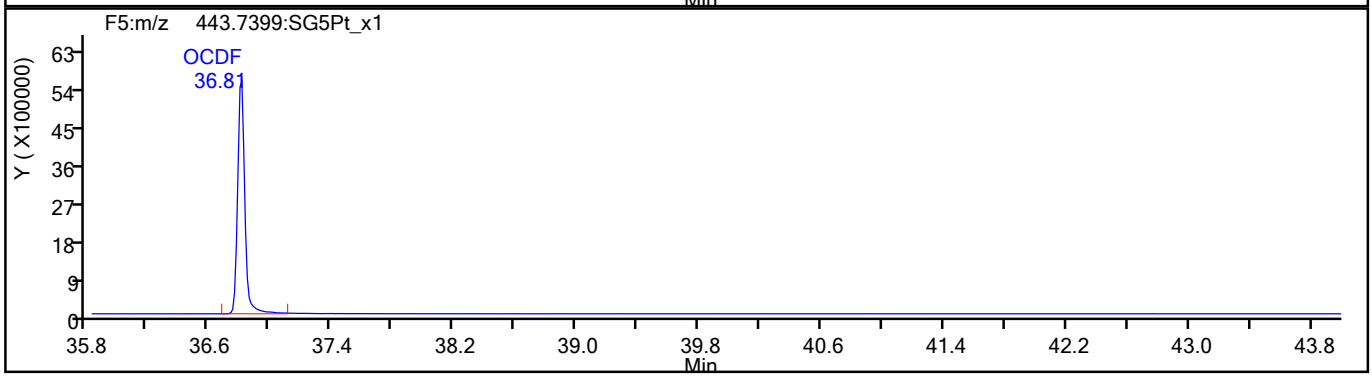

OCDF Standards

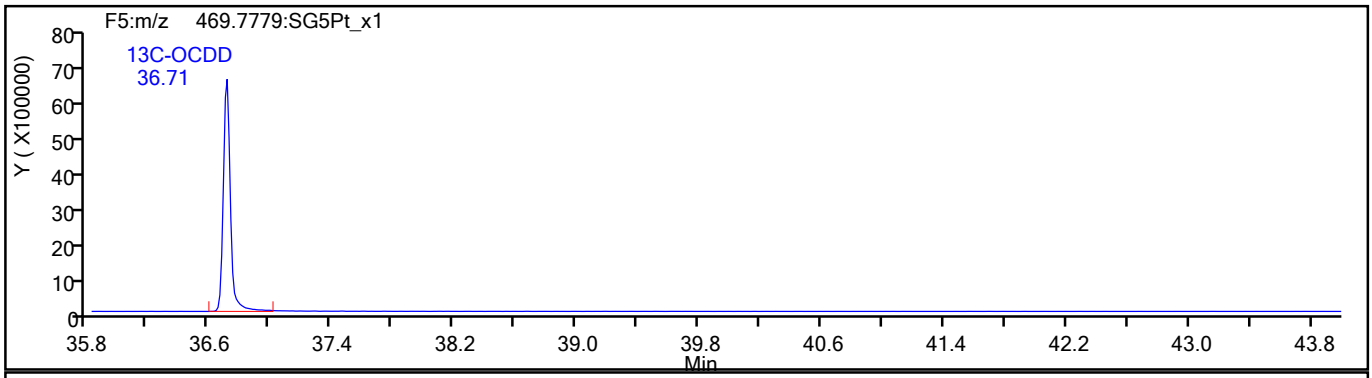

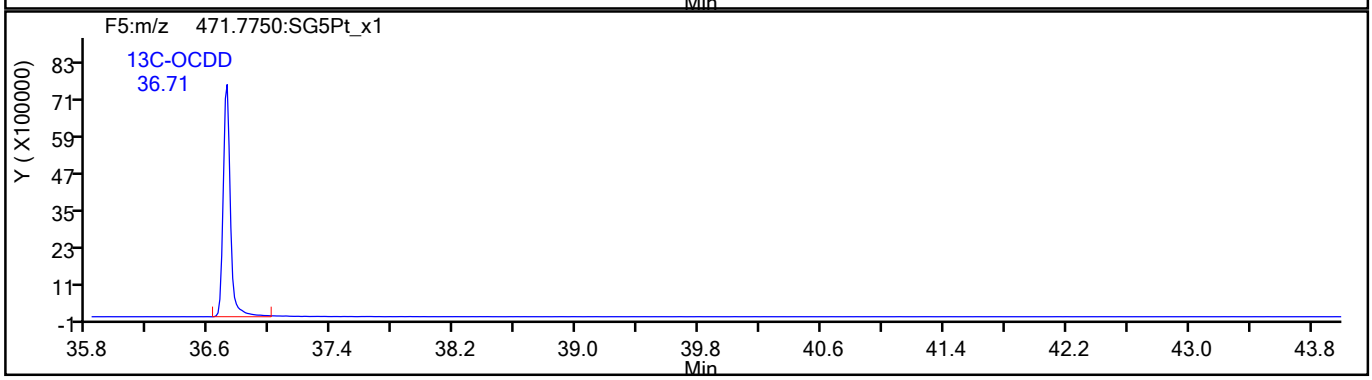

792915

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

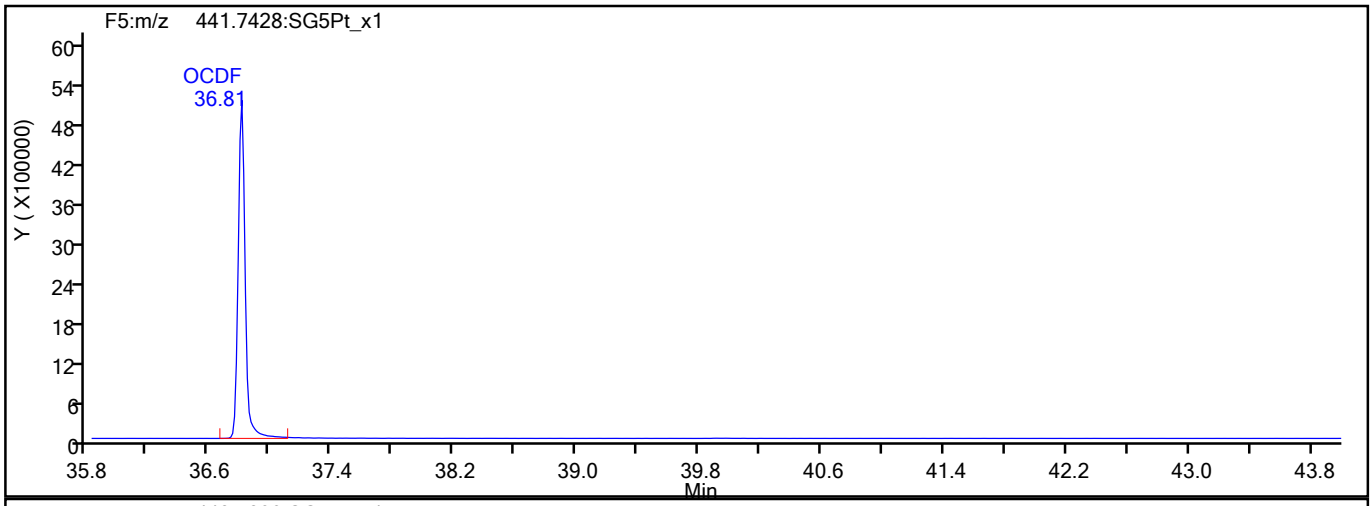

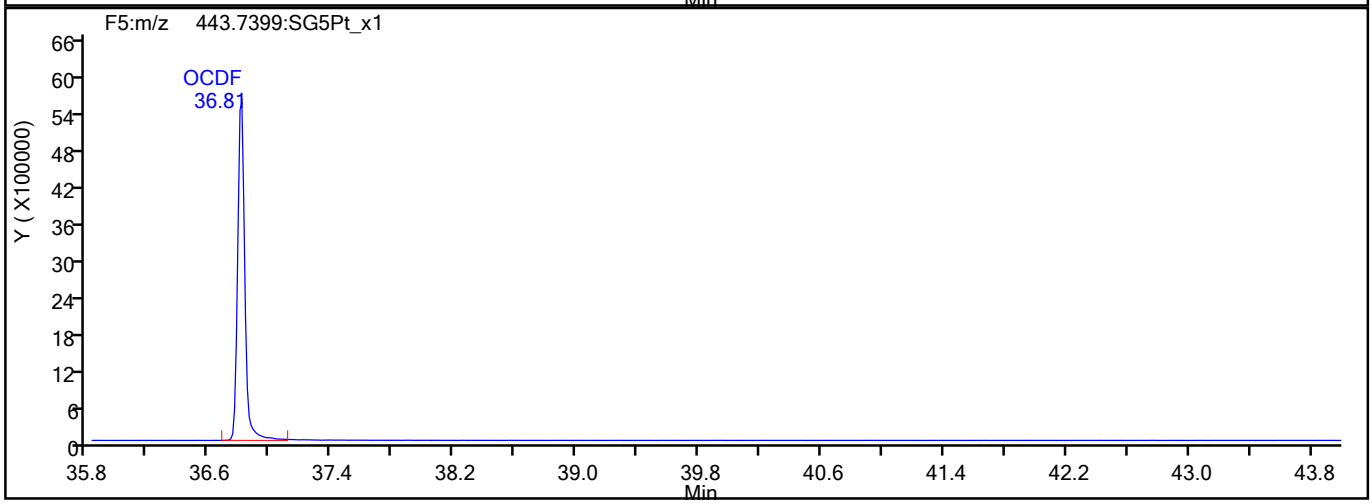

OCDF Interference Mass

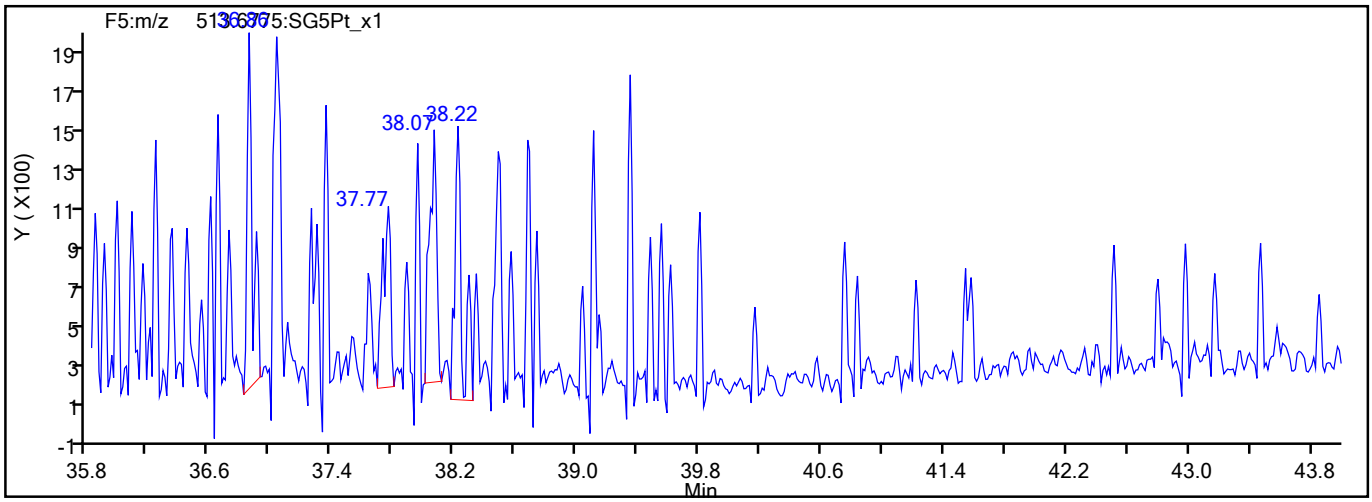

792916

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

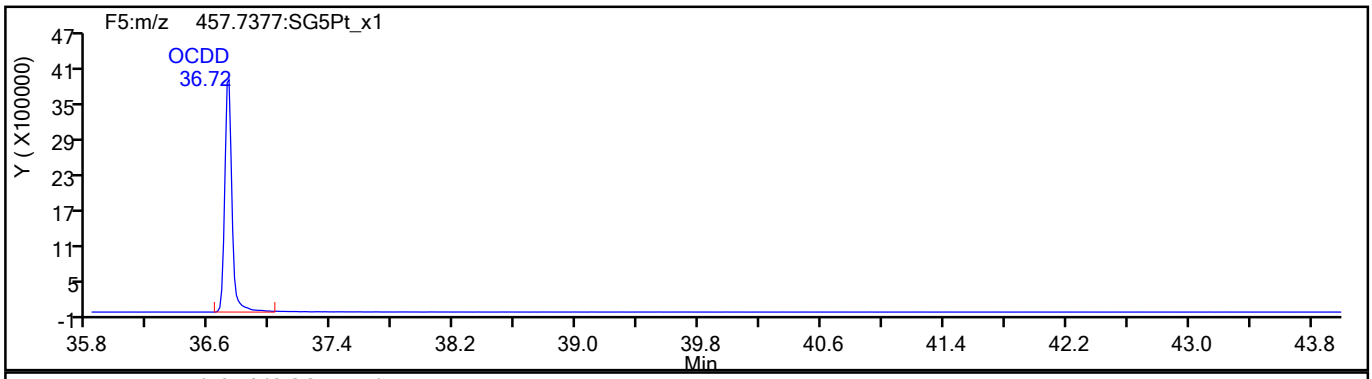

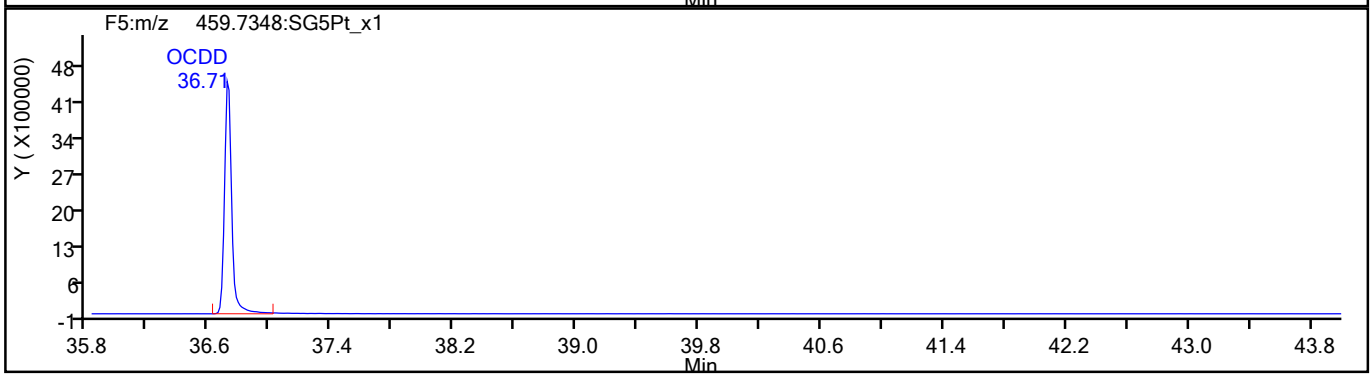

OCDD Standards

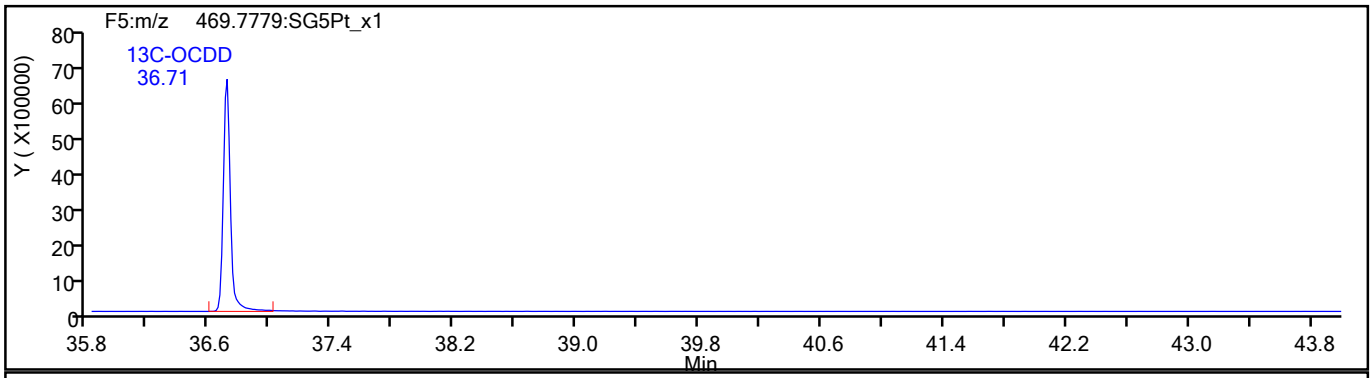

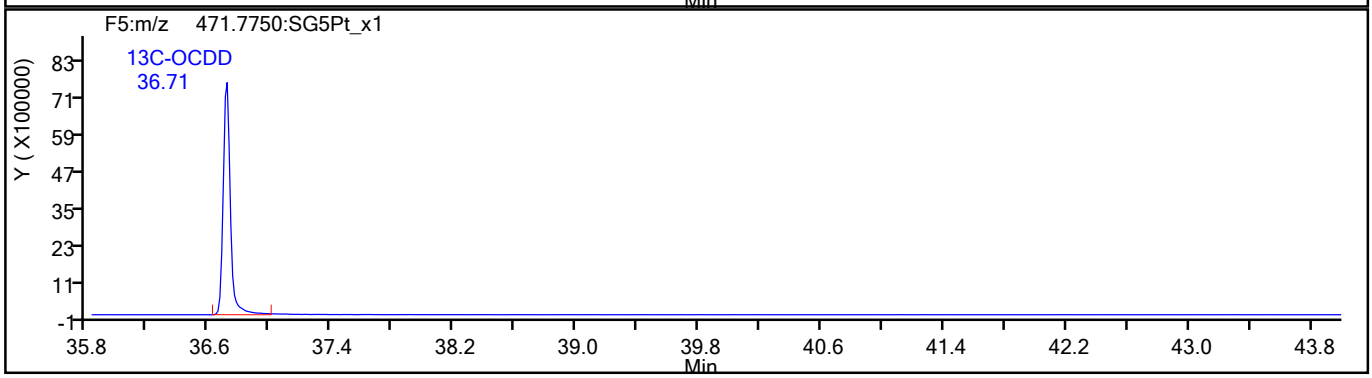

792917

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

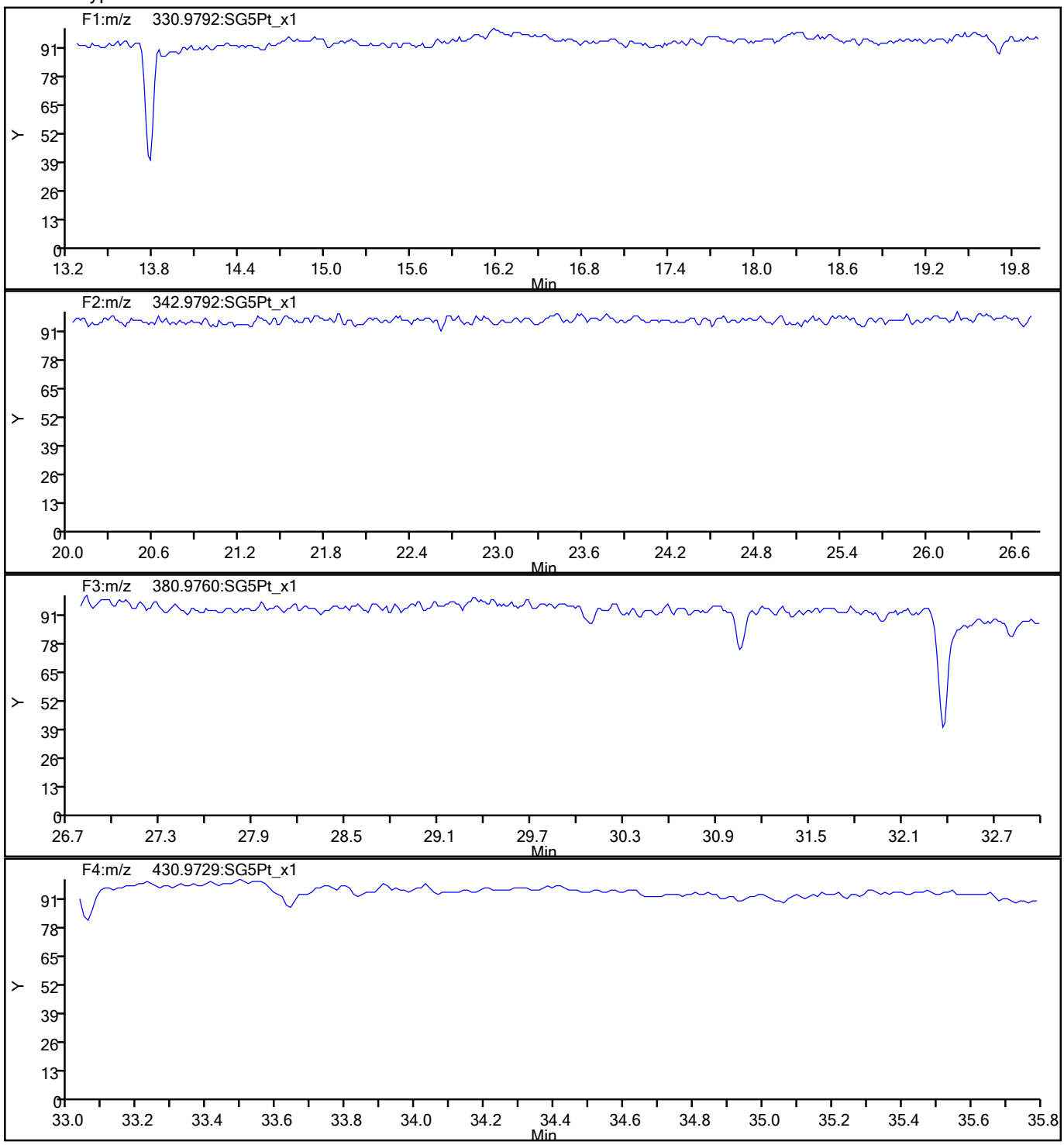

792918

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

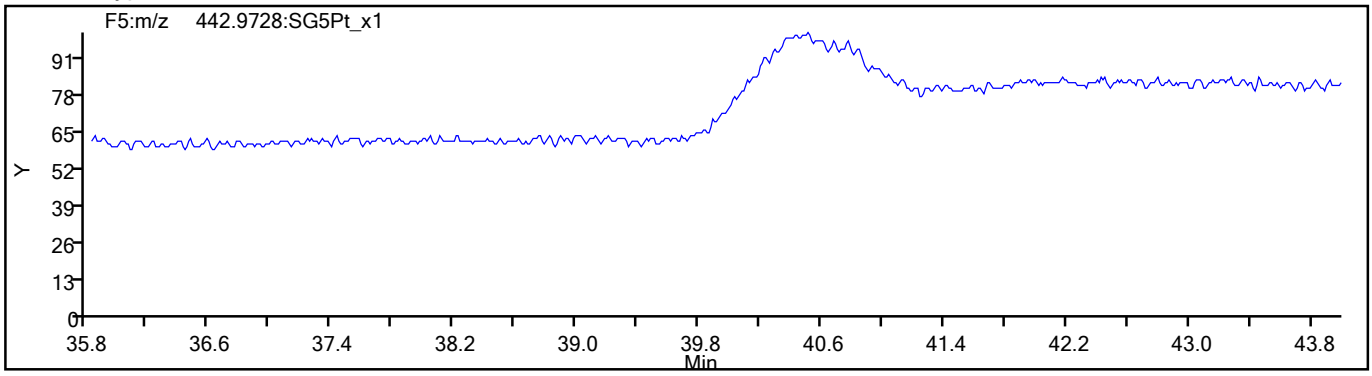

792919

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-77214-A-2-B MS
Matrix: Sediment
Lab File ID: 25AU2110D5_7.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.69(g)
Date Analyzed: 08/25/2021 14:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	3690		11	11
40321-76-4	1,2,3,7,8-PeCDD	178		6.8	0.57
57117-41-6	1,2,3,7,8-PeCDF	416		6.8	1.9
57117-31-4	2,3,4,7,8-PeCDF	305		6.8	1.8
39227-28-6	1,2,3,4,7,8-HxCDD	139		6.8	1.6
57653-85-7	1,2,3,6,7,8-HxCDD	156		6.8	1.6
19408-74-3	1,2,3,7,8,9-HxCDD	143		6.8	1.4
70648-26-9	1,2,3,4,7,8-HxCDF	454		6.8	2.3
57117-44-9	1,2,3,6,7,8-HxCDF	237		6.8	2.3
72918-21-9	1,2,3,7,8,9-HxCDF	147		6.8	1.7
60851-34-5	2,3,4,6,7,8-HxCDF	160		6.8	1.8
35822-46-9	1,2,3,4,6,7,8-HpCDD	211		6.8	1.2
67562-39-4	1,2,3,4,6,7,8-HpCDF	255		6.8	2.4
55673-89-7	1,2,3,4,7,8,9-HpCDF	172		6.8	2.5
3268-87-9	OCDD	1340		14	1.4
39001-02-0	OCDF	338		14	0.21
41903-57-5	Total TCDD	7390		11	11
30402-14-3	Total TCDF	17300		39	39
36088-22-9	Total PeCDD	180		6.8	0.57
30402-15-4	Total PeCDF	953		6.8	1.9
34465-46-8	Total HxCDD	460		6.8	1.5
55684-94-1	Total HxCDF	1040		6.8	2.0
37871-00-4	Total HpCDD	287		6.8	1.2
38998-75-3	Total HpCDF	472		6.8	2.5

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-77214-A-2-B MS
Matrix: Sediment
Lab File ID: 25AU2110D5_7.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.69(g)
Date Analyzed: 08/25/2021 14:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	40		25-164
89059-46-1	13C-2,3,7,8-TCDF	57		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	81		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	68		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	76		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	63		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	67		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	57		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	56		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	57		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	54		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	47		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	58		26-138
114423-97-1	13C-OCDD	59		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	63		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MS
Inject. Date: 25-Aug-2021 14:20:45 ALS Bottle#: 8 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-B MS 320-77214-A-2-B MS
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:46:41 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:58:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.688	88729057	0.81	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.174	81764368	0.78	1.6249	56.7	56.7	0.3401	0.3401	56.71	
2,3,7,8-TCDF	17.190	3148930068	0.79	1.0239	3761.3	3761.3	14.5	14.5	37613	Ea
A Non-2,3,7,8-sub-TCDF	17.076	2193021351	0.77	1.0239	2629.9	2619.5	14.5	1965.0	0.00	RQ
S Total TCDF					6391.2	6380.8	14.5	14.5		RQ
D 13C-2,3,7,8-TCDD	17.930	32161772	0.82	0.8993	40.3	40.3	0.3455	0.3455	40.31	a
2,3,7,8-TCDD	17.945	549002158	0.79	1.2541	1361.1	1361.1	3.912	3.912	13611	Ea
$ 37Cl4-2,3,7,8-TCDD	17.930	24863734		1.1071	25.3	25.3	0.1355	0.1355	63.28	
A Non-2,3,7,8-sub-TCDD	17.537	549002158	0.79	1.2541	1361.1	1361.1	3.912	1361.1	0.00	
S Total TCDD					2722.2	2722.2	3.912	3.912		
D 13C-1,2,3,7,8-PeCDF	22.156	73467188	1.58	1.2101	68.4	68.4	0.2114	0.2114	68.43	
1,2,3,7,8-PeCDF	22.170	119360085	1.59	1.0611	153.1	153.1	0.7119	0.7119	306	a
D 13C-2,3,4,7,8-PeCDF	23.465	83592541	1.56	1.2395	76.0	76.0	0.2064	0.2064	76.01	
2,3,4,7,8-PeCDF	23.479	95653872	1.58	1.0184	112.4	112.4	0.6529	0.6529	225	
A F1 PeCDFs	19.851	316165	1.46	1.0398	0.3872	0.3872	0.0234	0.3872	0.00	a
A Non-2,3,7,8-sub-PeCDF	23.067	69595665	1.59	1.0398	85.2	85.2	0.6803	31.8	0.00	a
S Total PeCDF					351.1	351.1	0.6824	0.6824		
D 13C-1,2,3,7,8-PeCDD	24.147	54461762	1.61	0.7612	80.6	80.6	0.1390	0.1390	80.63	
1,2,3,7,8-PeCDD	24.174	37354486	1.56	1.0484	65.4	65.4	0.2118	0.2118	131	
A Non-2,3,7,8-sub-PeCDD	23.696	570525	1.55	1.0484	1.329	0.999	0.2118	0.4066	0.00	RQ
S Total PeCDD					66.7	66.4	0.2118	0.2118		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.252	75980320	0.52	1.0837	66.8	66.8	0.1288	0.1288	66.76	
1,2,3,4,7,8-HxCDF	30.279	137934400	1.21	1.0851	167.3	167.3	0.8477	0.8477	335	
D 13C-1,2,3,6,7,8-HxCDF	30.452	67782938	0.52	1.1279	57.2	57.2	0.1237	0.1237	57.22	
1,2,3,6,7,8-HxCDF	30.479	66604500	1.22	1.1260	87.3	87.3	0.8429	0.8429	175	
D 13C-2,3,4,6,7,8-HxCDF	31.344	63906666	0.52	1.0637	57.2	57.2	0.1312	0.1312	57.20	
2,3,4,6,7,8-HxCDF	31.357	43882677	1.21	1.1675	58.8	58.8	0.6588	0.6588	118	
D 13C-1,2,3,7,8,9-HxCDF	32.169	56533895	0.52	0.9676	55.6	55.6	0.1442	0.1442	55.63	
1,2,3,7,8,9-HxCDF	32.182	35705325	1.22	1.1664	54.1	54.1	0.6276	0.6276	108	
A Non-2,3,7,8-sub-HxCDF	30.338	12179290	1.24	1.1363	16.2	16.2	0.7324	9.422	0.00	a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					383.8	383.8	0.7443	0.7443		
* 13C-1,2,3,7,8,9-HxCDD	31.983	105027168	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.544	48436730	1.26	0.7334	62.9	62.9	0.1562	0.1562	62.88	
1,2,3,4,7,8-HxCDD	31.557	26418700	1.27	1.0640	51.3	51.3	0.5760	0.5760	103	
D 13C-1,2,3,6,7,8-HxCDD	31.650	51384475	1.24	0.8802	55.6	55.6	0.1302	0.1302	55.59	
1,2,3,6,7,8-HxCDD	31.663	29562822	1.27	1.0001	57.5	57.5	0.5808	0.5808	115	
1,2,3,7,8,9-HxCDD	31.996	29837861	1.27	1.1325	52.8	52.8	0.5266	0.5266	106	
A Non-2,3,7,8-sub-HxCDD	30.525	4163333	1.20	1.0655	7.828	7.828	0.5597	4.679	0.00	
S Total HxCDD					169.4	169.4	0.5611	0.5611		
D 13C-1,2,3,4,6,7,8-HpCDF	33.627	37909050	0.45	0.7730	46.7	46.7	0.4652	0.4652	46.69	
1,2,3,4,6,7,8-HpCDF	33.639	51292114	1.06	1.4413	93.9	93.9	0.8908	0.8908	188	
D 13C-1,2,3,4,7,8,9-HpCDF	34.696	42348328	0.43	0.7008	57.5	57.5	0.5131	0.5131	57.54	
1,2,3,4,7,8,9-HpCDF	34.709	35367284	1.05	1.3174	63.4	63.4	0.9314	0.9314	127	
A Non-2,3,7,8-sub-HpCDF	34.150	9276695	1.06	1.3793	16.8	16.8	0.9097	16.8	0.00	a
S Total HpCDF					174.0	174.0	0.9111	0.9111		
D 13C-1,2,3,4,6,7,8-HpCDD	34.405	36723117	1.02	0.6472	54.0	54.0	0.2928	0.2928	54.02	
1,2,3,4,6,7,8-HpCDD	34.417	31198490	1.04	1.0943	77.6	77.6	0.4244	0.4244	155	
A Non-2,3,7,8-sub-HpCDD	34.223	11327977	1.08	1.0943	28.2	28.2	0.4244	28.2	0.00	a
S Total HpCDD					105.8	105.8	0.4244	0.4244		
D 13C-OCDD	36.725	55353217	0.88	0.4472	117.9	117.9	0.1505	0.1505	58.93	
OCDF	36.821	49640138	0.90	1.4382	124.7	124.7	0.0770	0.0770	125	
OCDD	36.725	150835326	0.89	1.1070	492.3	492.3	0.5021	0.5021	492	
1,3,6,8-TCDF	14.725						0.0	0.0		
1,3,6,8-TCDD	15.632						0.0	0.0		
2,3,4,7-TCDF	17.613	224858897	0.77							
1,2,3,7-TCDD	18.248	72144973	0.80							
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.996						0.0	0.0		U
1,2,3,4,8,9-HxCDF	32.182						0.0	0.0		U
1,2,3,4,6,7,9-HpCDD	33.882						0.0	0.0		U
1,2,3,4,6,7,9-HpCDF	33.639						0.0	0.0		U
1,2,3,8-TCDD	0.0						0.0	0.0		
1,3,7,9-TCDD	0.0						0.0	0.0		
1,2,3,4,7-PeCDD	0.0						0.0	0.0		
1,4,7,8-TCDD	0.0						0.0	0.0		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

U - Marked Undetected

a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MS
Inject. Date: 25-Aug-2021 14:20:45 ALS Bottle#: 8 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-B MS 320-77214-A-2-B MS
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:46:41 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:58:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.688	17.598	5		39831941	7349370	9144	22860	804		a
333.9339	17.688	17.598	5		48897116	9010637	11191	27977	805	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.174	17.099	5	0.971	35764505	9941427	18015	45037	552		
317.9389	17.174	17.099	5	0.971	45999863	12745305	18153	45382	702	0.78(0.65-0.89)	
2,3,7,8-TCDF											Ea
303.9016	17.190	17.114	5	1.001	1386145054	358605217	533871	1334677	672		a
305.8987	17.190	17.114	5	1.001	1762785014	454208683	810845	2027112	560	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	15.799	17.076	-77	0.920	17303785	5220278	533871	1334677	10		
305.8987	15.799	17.076	-77	0.920	31223632	6609744	810845	2027112	8	0.55(0.65-0.89)	
	Empc Correction				22472447	6779581	810845	2027112	8		
303.9016	16.071	17.076	-60	0.936	28582180	4988639	533871	1334677	9		
305.8987	16.071	17.076	-60	0.936	37070075	6418948	810845	2027112	8	0.77(0.65-0.89)	
303.9016	16.298	17.076	-47	0.949	33367666	8182580	533871	1334677	15		
305.8987	16.298	17.076	-47	0.949	43359301	10698161	810845	2027112	13	0.77(0.65-0.89)	
303.9016	16.539	17.076	-32	0.963	54625233	15649078	533871	1334677	29		
305.8987	16.539	17.076	-32	0.963	70558915	19946187	810845	2027112	25	0.77(0.65-0.89)	
303.9016	16.796	17.076	-17	0.978	720998477	180042323	533871	1334677	337		
305.8987	16.796	17.076	-17	0.978	924109638	232293964	810845	2027112	286	0.78(0.65-0.89)	
303.9016	19.004	17.076	115	1.107	105406316	24528214	533871	1334677	46		
305.8987	19.004	17.076	115	1.107	135167318	31627345	810845	2027112	39	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	17.930	17.794	8	1.014	14508469	3950461	9144	22860	432		a
333.9339	17.930	17.794	8	1.014	17653303	4813237	11191	27977	430	0.82(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											Ea
319.8965	17.945	17.809	8	1.001	241946674	67915309	89783	224457	756		a
321.8936	17.930	17.809	7	1.000	307055484	85468670	82202	205505	1040	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.930	17.809	7	1.014	24863734	7094774	9814	24535	723		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.945	17.537	24	1.001	241946674	67915309	89783	224457	756		
321.8936	17.930	17.537	24	1.000	307055484	85468670	82202	205505	1040	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.156	22.020	8	1.253	44979768	7921263	10042	25105	789		
353.8970	22.156	22.020	8	1.253	28487420	4952256	6702	16755	739	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.170	22.047	7	1.001	73287081	12306630	24432	61080	504		a
341.8567	22.170	22.047	7	1.001	46073004	7840102	14468	36170	542	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.465	23.343	7	1.327	50999877	8942120	10042	25105	890		
353.8970	23.452	23.343	7	1.326	32592664	5682628	6702	16755	848	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.479	23.370	7	1.001	58630417	10534738	24432	61080	431		
341.8567	23.479	23.370	7	1.001	37023455	6722790	14468	36170	465	1.58(1.32-1.78)	
A F1 PeCDFs											a
339.8597	19.306	19.851	-33	0.871	187636	40981	484	1210	85		a
341.8567	19.306	19.851	-33	0.871	128529	27214	854	2135	32	1.46(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											a
339.8597	20.833	23.067	-134	0.940	15971985	3275822	24432	61080	134		
341.8567	20.833	23.067	-134	0.940	9978601	2052580	14468	36170	142	1.60(1.32-1.78)	
339.8597	21.652	23.067	-85	0.977	1575504	204038	24432	61080	8		
341.8567	21.638	23.067	-86	0.977	1043307	137399	14468	36170	9	1.51(1.32-1.78)	
339.8597	22.047	23.067	-61	0.995	2508080	696506	24432	61080	29		a
341.8567	22.047	23.067	-61	0.995	1583830	433809	14468	36170	30	1.58(1.32-1.78)	
339.8597	22.456	23.067	-37	1.014	712274	156560	24432	61080	6		
341.8567	22.456	23.067	-37	1.014	451040	95991	14468	36170	7	1.58(1.32-1.78)	
339.8597	22.674	23.067	-24	1.023	11930423	2320173	24432	61080	95		
341.8567	22.674	23.067	-24	1.023	7501781	1480327	14468	36170	102	1.59(1.32-1.78)	
339.8597	23.820	23.067	45	1.075	7930485	1220712	24432	61080	50		
341.8567	23.806	23.067	44	1.074	4930709	760357	14468	36170	53	1.61(1.32-1.78)	
339.8597	25.361	23.067	137	1.145	2129018	327251	24432	61080	13		
341.8567	25.361	23.067	137	1.145	1348628	215280	14468	36170	15	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.147	24.052	6	1.365	33594133	5805622	4174	10435	1391		
369.8919	24.147	24.052	6	1.365	20867629	3565462	2750	6875	1297	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.174	24.079	6	1.001	22782965	3960085	5332	13330	743		
357.8516	24.174	24.079	6	1.001	14571521	2540182	2993	7482	849	1.56(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	22.429	23.696	-76	0.929	108049	23639	5332	13330	4		
357.8516	22.429	23.696	-76	0.929	64091	14144	2993	7482	5	1.69(1.32-1.78)	
355.8546	22.729	23.696	-58	0.941	123382	23677	5332	13330	4		
	Empc Correction				101025	20504	5332	13330	4		
357.8516	22.729	23.696	-58	0.941	65178	13229	2993	7482	4	1.89(1.32-1.78)	
355.8546	24.652	23.696	57	1.021	307325	34559	5332	13330	6		
	Empc Correction				141130	16701	5332	13330	3		
357.8516	24.652	23.696	57	1.021	91052	10775	2993	7482	4	3.38(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.252	30.186	4	0.946	25953816	4772612	6797	16992	702		
385.8610	30.252	30.186	4	0.946	50026504	9236554	10562	26405	875	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.279	30.213	4	1.001	75577579	14045172	28483	71207	493		
375.8178	30.279	30.213	4	1.001	62356821	11629150	23066	57665	504	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.452	30.399	3	0.952	23146673	4643962	6797	16992	683		
385.8610	30.452	30.399	3	0.952	44636265	8933522	10562	26405	846	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.479	30.412	4	1.001	36574713	7515369	28483	71207	264		
375.8178	30.479	30.412	4	1.001	30029787	6184140	23066	57665	268	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.344	31.291	3	0.980	21867679	5740576	6797	16992	845		
385.8610	31.344	31.291	3	0.980	42038987	11014565	10562	26405	1043	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.357	31.317	2	1.000	24042540	6528749	28483	71207	229		
375.8178	31.357	31.317	2	1.000	19840137	5431032	23066	57665	235	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.169	32.143	2	1.006	19324826	5981244	6797	16992	880		
385.8610	32.169	32.143	2	1.006	37209069	11624027	10562	26405	1101	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.182	32.156	2	1.000	19601507	6355644	28483	71207	223		
375.8178	32.182	32.156	2	1.000	16103818	5302985	23066	57665	230	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											a
373.8208	29.321	30.338	-61	0.969	1970254	267063	28483	71207	9		
375.8178	29.321	30.338	-61	0.969	1613628	234105	23066	57665	10	1.22(1.05-1.43)	
373.8208	31.237	30.338	54	1.033	835297	227750	28483	71207	8		
375.8178	31.237	30.338	54	1.033	688698	180129	23066	57665	8	1.21(1.05-1.43)	
373.8208	32.276	30.338	116	1.067	3929573	1213868	28483	71207	43		a
375.8178	32.276	30.338	116	1.067	3141840	959451	23066	57665	42	1.25(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.983	31.956	2		57840382	17119469	7749	19372	2209		
403.8529	31.983	31.956	2		47186786	13980111	6504	16260	2149	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.544	31.504	2	0.986	27032592	7628029	7749	19372	984		
403.8529	31.544	31.504	2	0.986	21404138	6077399	6504	16260	934	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDD											
389.8157	31.557	31.517	2	1.000	14792636	4391689	18548	46370	237		
391.8127	31.557	31.517	2	1.000	11626064	3423828	15051	37627	227	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.650	31.610	2	0.990	28464172	8015339	7749	19372	1034		
403.8529	31.650	31.610	2	0.990	22920303	6445918	6504	16260	991	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.663	31.624	2	1.000	16535559	4617526	18548	46370	249		
391.8127	31.663	31.624	2	1.000	13027263	3685259	15051	37627	245	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.996	31.969	2	1.014	16687697	4956392	18548	46370	267		
391.8127	31.996	31.969	2	1.014	13150164	3979692	15051	37627	264	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.161	30.525	-82	0.921	1344636	174352	18548	46370	9		
391.8127	29.161	30.525	-82	0.921	1144002	152461	15051	37627	10	1.18(1.05-1.43)	
389.8157	30.758	30.525	14	0.972	924001	186389	18548	46370	10		
391.8127	30.745	30.525	13	0.971	750694	155972	15051	37627	10	1.23(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.627	33.603	1	1.051	11710949	4484718	15832	39580	283		
419.8220	33.627	33.603	1	1.051	26198101	10144776	28900	72250	351	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.639	33.615	1	1.000	26442148	10013300	36219	90547	276		
409.7789	33.639	33.615	1	1.000	24849966	9397603	38909	97272	242	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.696	34.672	1	1.085	12758399	4687017	15832	39580	296		
419.8220	34.696	34.672	1	1.085	29589929	10619890	28900	72250	367	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.709	34.685	1	1.000	18083819	6320192	36219	90547	174		
409.7789	34.696	34.685	1	1.000	17283465	6194677	38909	97272	159	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											a
407.7818	33.931	34.150	-13	1.009	4764416	1854120	36219	90547	51		a
409.7789	33.931	34.150	-13	1.009	4512279	1771475	38909	97272	46	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.405	34.393	1	1.076	18498906	6459350	10222	25555	632		
437.8140	34.405	34.393	1	1.076	18224211	6308707	13356	33390	472	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.417	34.405	1	1.000	15882754	5583578	12090	30225	462		
425.7737	34.417	34.405	1	1.000	15315736	5520082	11631	29077	475	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.882	34.223	-20	0.985	5890939	2218626	12090	30225	184		a
425.7737	33.882	34.223	-20	0.985	5437038	2083544	11631	29077	179	1.08(0.88-1.20)	
13C-OCDD											
469.7779	36.725	36.701	1	1.148	25832321	8093289	4518	11295	1791		
471.7750	36.725	36.701	1	1.148	29520896	9238290	3855	9637	2396	0.88(0.76-1.02)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											
441.7428	36.821	36.797	1	1.003	23521254	7489274	1849	4622	4050		
443.7399	36.809	36.797	1	1.002	26118884	8022484	1992	4980	4027	0.90(0.76-1.02)	
OCDD											
457.7377	36.725	36.713	1	1.000	71201580	22134820	11738	29345	1886		
459.7348	36.725	36.713	1	1.000	79633746	25279838	7528	18820	3358	0.89(0.76-1.02)	
1,3,6,8-TCDF											
303.9016	14.725						533871	1334677			
305.8987	14.725						810845	2027112			
1,3,6,8-TCDD											
319.8965	15.632						89783	224457			
321.8936	15.632						82202	205505			
2,3,4,7-TCDF											
303.9016	17.613	17.537	5		98149183	25990579	533871	1334677	49		
305.8987	17.613	17.537	5		126709714	33476415	810845	2027112	41	0.77(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.248	18.172	5		32008003	7340108	89783	224457	82		
321.8936	18.233	18.172	4		40136970	9385223	82202	205505	114	0.80(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.414						89783	224457			
321.8936	18.414						82202	205505			
1,2,3,9-TCDF											
303.9016	18.414						533871	1334677			
305.8987	18.414						810845	2027112			
1,2,8,9-TCDD											
319.8965	19.382						89783	224457			
1,2,8,9-TCDF											
303.9016	19.427						533871	1334677			
305.8987	19.427						810845	2027112			
1,3,4,6,8-PeCDF											
339.8597	19.669						484	1210			
341.8567	19.669						854	2135			
1,2,4,7,9-PeCDD											
355.8546	21.480						5332	13330			
357.8516	21.480						2993	7482			
1,2,3,8,9-PeCDD											
355.8546	25.790						5332	13330			
357.8516	25.790						2993	7482			
1,2,3,8,9-PeCDF											
339.8597	26.021						24432	61080			
341.8567	26.021						14468	36170			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						28483	71207			
375.8178	28.333						23066	57665			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						18548	46370			
391.8127	29.890						15051	37627			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7-HxCDD											U
389.8157	31.916						18548	46370			
391.8127	31.916						15051	37627			
1,2,3,4,8,9-HxCDF											U
373.8208	32.249						28483	71207			
375.8178	32.249						23066	57665			
1,2,3,4,6,7,9-HpCDD											U
423.7766	33.858						12090	30225			
425.7737	33.858						11631	29077			
1,2,3,4,6,7,9-HpCDF											U
407.7818	33.916						36219	90547			
409.7789	33.916						38909	97272			
1,2,3,8-TCDD											
319.8965	0.0						89783	224457			
321.8936	0.0						82202	205505			
1,3,7,9-TCDD											
319.8965	0.0						89783	224457			
321.8936	0.0						82202	205505			
1,2,3,4,7-PeCDD											
355.8546	0.0						5332	13330			
357.8516	0.0						2993	7482			
1,4,7,8-TCDD											
319.8965	0.0						89783	224457			
321.8936	0.0						82202	205505			

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- E - Exceeded Maximum Amount
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	81764368	22686732

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	81764368	22686732

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.799	17303785	5220278	31223632	6609744	58.0	0.55	RQ
15.799	17303785	5220278	22472447	6779581	47.5		Empc Correction
16.071	28582180	4988639	37070075	6418948	78.4	0.77	
16.298	33367666	8182580	43359301	10698161	91.6	0.77	
16.539	54625233	15649078	70558915	19946187	149.5	0.77	
16.796	720998477	180042323	924109638	232293964	1965.0	0.78	
19.004	105406316	24528214	135167318	31627345	287.4	0.78	
Signal Totals:							
	960283657	238611112	1232737694	307764186			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2201772536	546205461				0.77	RQ
	2193021351	546375298					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2629.9 = (2201772536 * 100.000) / (81764368 * 1.024)
Empc Amount: 2619.5 = (2193021351 * 100.000) / (81764368 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	32161772	8763698

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	32161772	8763698

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.945	241946674	67915309	307055484	85468670	1361.1	0.79	
Signal Totals:							
	241946674	67915309	307055484	85468670			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	549002158	153383979				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1361.1 = (549002158 * 100.000) / (32161772 * 1.254)

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	73467188	12873519
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	83592541	14624748

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	78529864	13749133

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.306	187636	40981	128529	27214	0.3872	1.46	a
Signal Totals:							
	187636	40981	128529	27214			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	316165	68195				1.46	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3872 = (316165 * 100.000) / (78529864 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	73467188	12873519
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	83592541	14624748

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	78529864	13749133

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.833	15971985	3275822	9978601	2052580	31.8	1.60	
21.652	1575504	204038	1043307	137399	3.21	1.51	
22.047	2508080	696506	1583830	433809	5.01	1.58	a
22.456	712274	156560	451040	95991	1.42	1.58	
22.674	11930423	2320173	7501781	1480327	23.8	1.59	
23.820	7930485	1220712	4930709	760357	15.8	1.61	
25.361	2129018	327251	1348628	215280	4.26	1.58	
Signal Totals:							
	42757769	8201062	26837896	5175743			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	69595665	13376805				1.59	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 85.233 = (69595665 * 100.000) / (78529864 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Lims ID:	320-77214-A-2-B MS		
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Inject. Date:	25-Aug-2021 14:20:45	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	7

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	54461762	9371084

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	54461762	9371084

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.429	108049	23639	64091	14144	0.3015	1.69	
22.729	123382	23677	65178	13229	0.3302	1.89	RQ
22.729	101025	20504	65178	13229	0.2911		Empc Correction
24.652	307325	34559	91052	10775	0.6977	3.38	RQ
24.652	141130	16701	91052	10775	0.4066		Empc Correction
Signal Totals:							
	350204	60844	220321	38148			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	759077	120023				2.45	RQ
	570525	98992					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.329 = (759077 * 100.000) / (54461762 * 1.048)

Empc Amount: 0.999 = (570525 * 100.000) / (54461762 * 1.048)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	75980320	14009166
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	67782938	13577484
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	63906666	16755141
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	56533895	17605271

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	66050954	15486765

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.321	1970254	267063	1613628	234105	4.78	1.22	
31.237	835297	227750	688698	180129	2.03	1.21	
32.276	3929573	1213868	3141840	959451	9.42	1.25	a
Signal Totals:							
	6735124	1708681	5444166	1373685			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12179290	3082366				1.24	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 16.228 = (12179290 * 100.000) / (66050954 * 1.136)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	48436730	13705428
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	51384475	14461257
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	49910602	14083342

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.161	1344636	174352	1144002	152461	4.68	1.18	
30.758	924001	186389	750694	155972	3.15	1.23	
Signal Totals:							
	2268637	360741	1894696	308433			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4163333	669174				1.20	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.828 = (4163333 * 100.000) / (49910602 * 1.066)

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-HpCDF, RT: 34.150

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	37909050	14629494
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	42348328	15306907

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	40128689	14968200

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
33.931	4764416	1854120	4512279	1771475	16.8	1.06	a
Signal Totals:							
	4764416	1854120	4512279	1771475			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9276695	3625595				1.06	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 16.760 = (9276695 * 100.000) / (40128689 * 1.379)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 14:20:45 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 7

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	36723117	12768057

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	36723117	12768057

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.882	5890939	2218626	5437038	2083544	28.2	1.08	a
Signal Totals:							
	5890939	2218626	5437038	2083544			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11327977	4302170				1.08	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 28.189 = (11327977 * 100.000) / (36723117 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d				
Injection Date:	25-Aug-2021 14:20:45	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.04
Area: 16749148
Amount: 44.203239
Amount Units: pg/ul

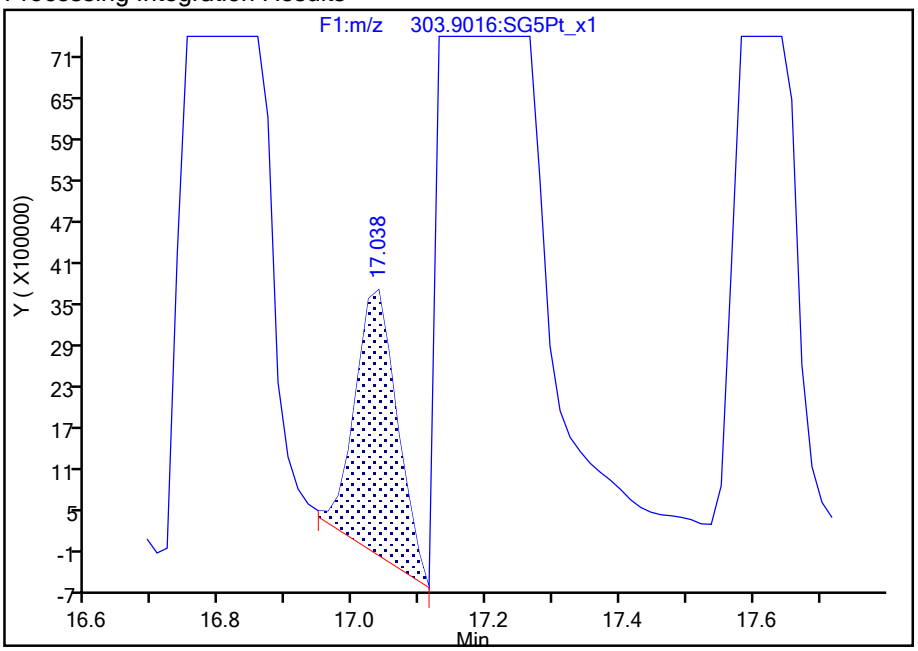

Manual Integration Results

RT: 17.19
Area: 1386145054
Amount: 3761.2910
Amount Units: pg/ul

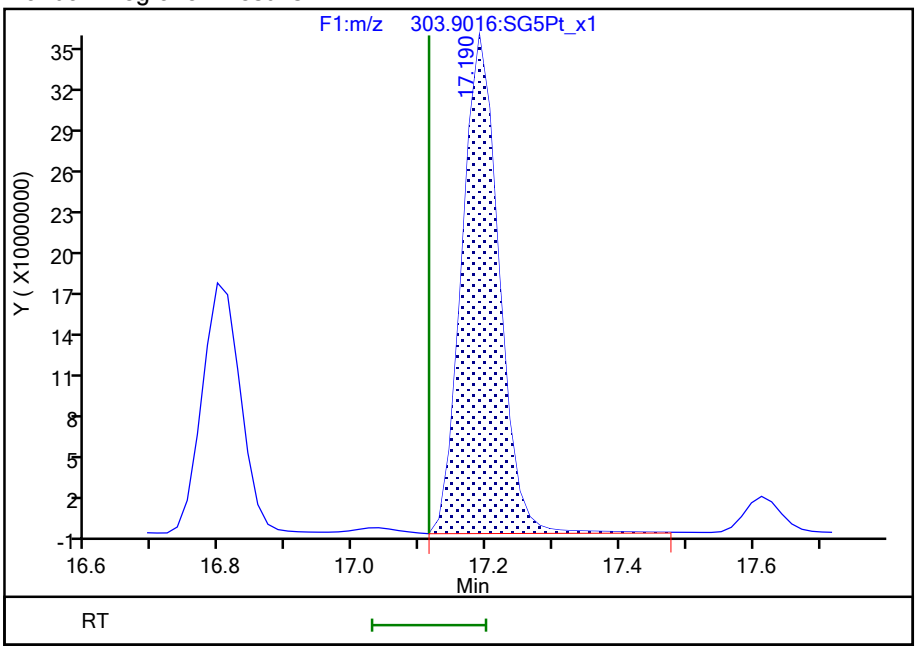

Reviewer: bennettd, 26-Aug-2021 10:01:49

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d				
Injection Date:	25-Aug-2021 14:20:45	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 17.69
Area: 39831941
Amount: 111.1955
Amount Units: pg/ul

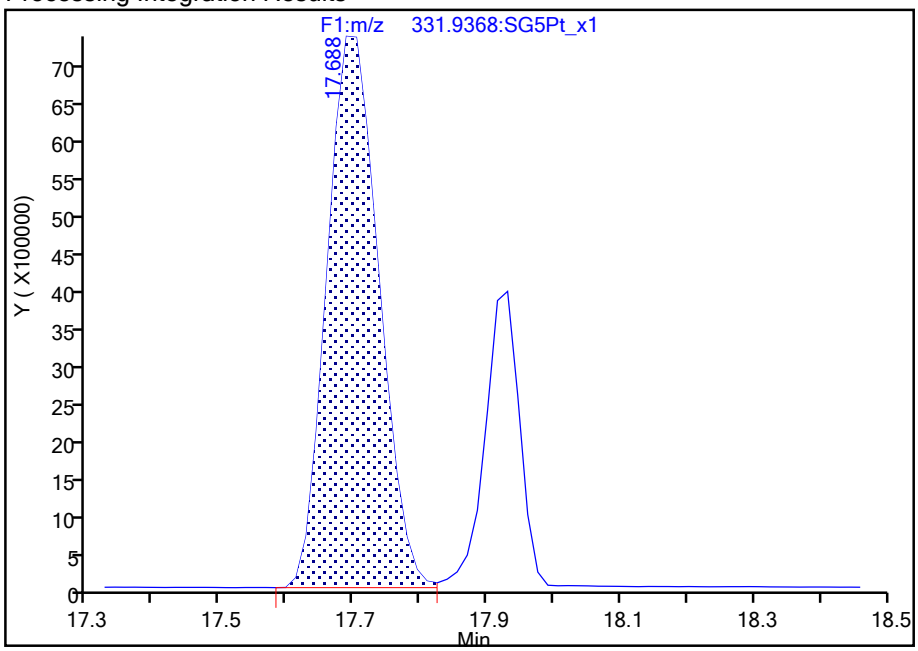

Manual Integration Results

RT: 17.93
Area: 14508469
Amount: 40.305237
Amount Units: pg/ul

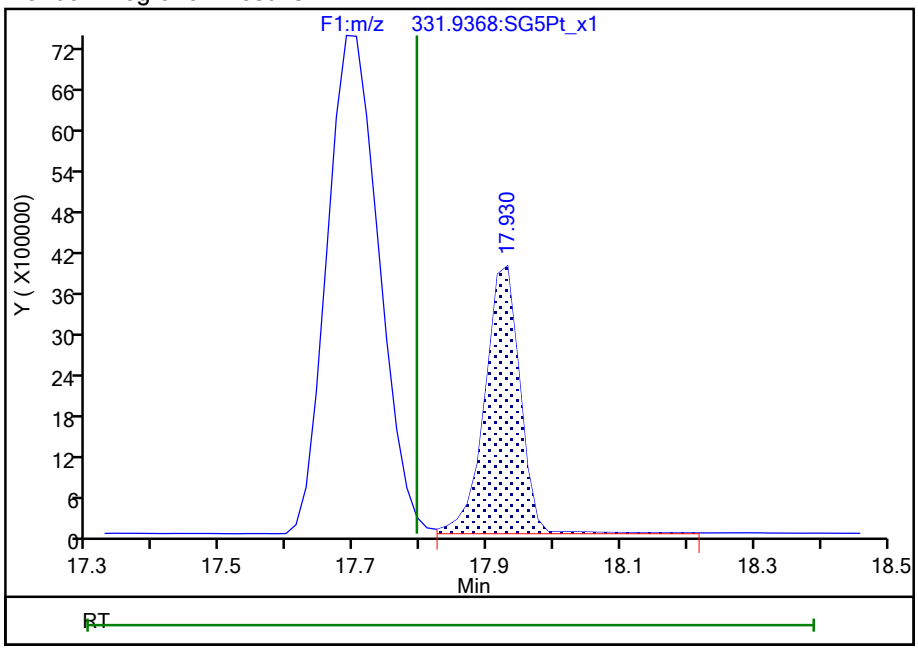

Reviewer: bennettd, 26-Aug-2021 09:58:05

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d				
Injection Date:	25-Aug-2021 14:20:45	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.81

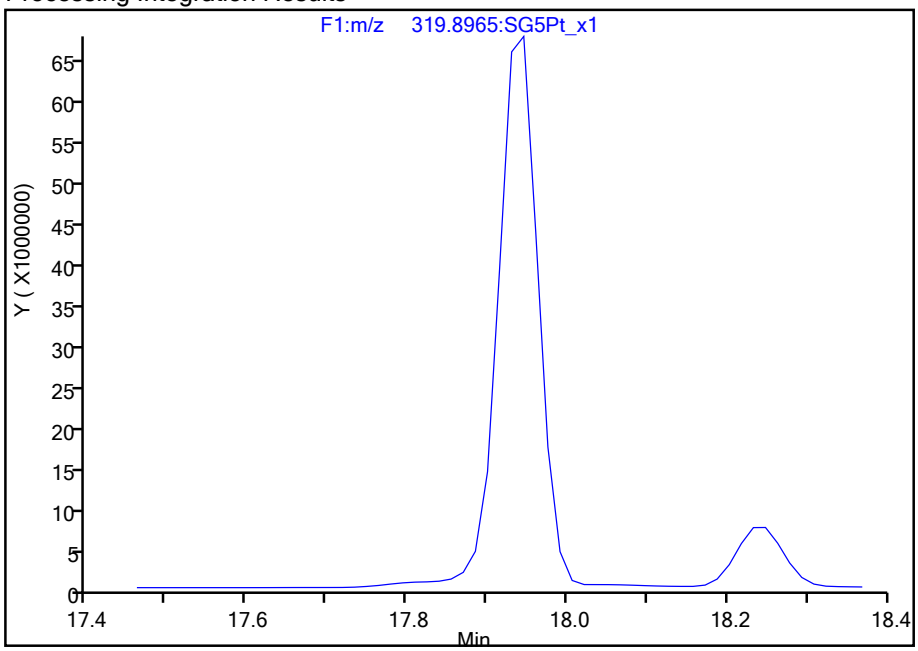

Manual Integration Results

RT: 17.95
Area: 241946674
Amount: 1361.1157
Amount Units: pg/ul

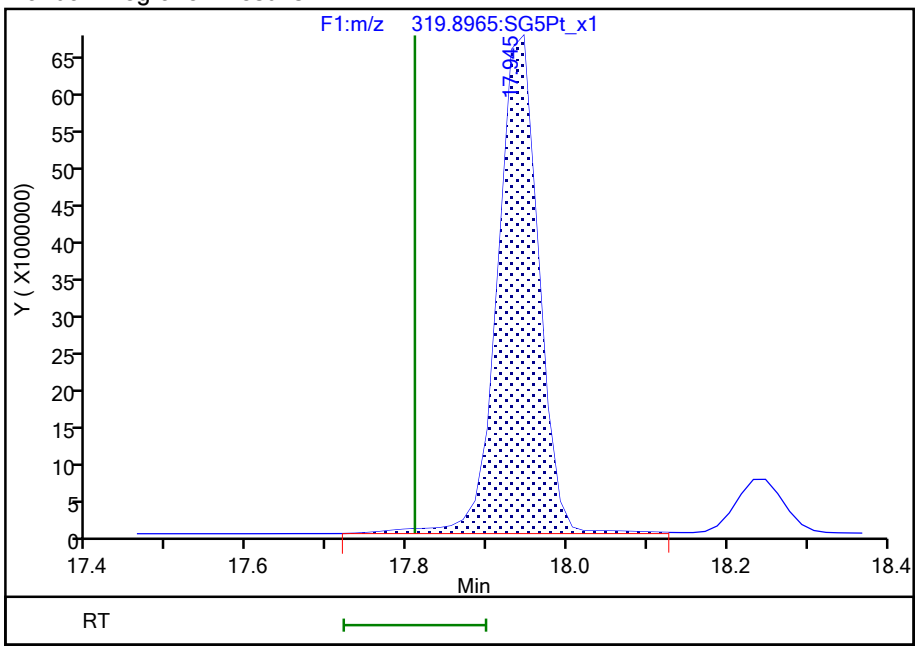

Reviewer: bennettd, 26-Aug-2021 10:02:10
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

792942

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d				
Injection Date:	25-Aug-2021 14:20:45	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.05
Area: 1583830
Amount: 5.248826
Amount Units: pg/ul

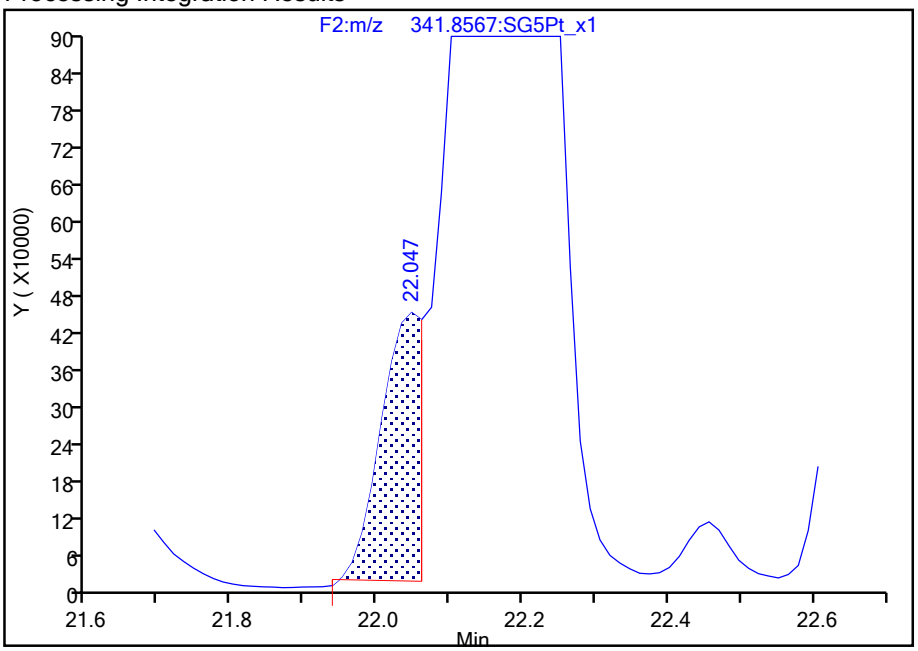

Manual Integration Results

RT: 22.17
Area: 46073004
Amount: 153.1070
Amount Units: pg/ul

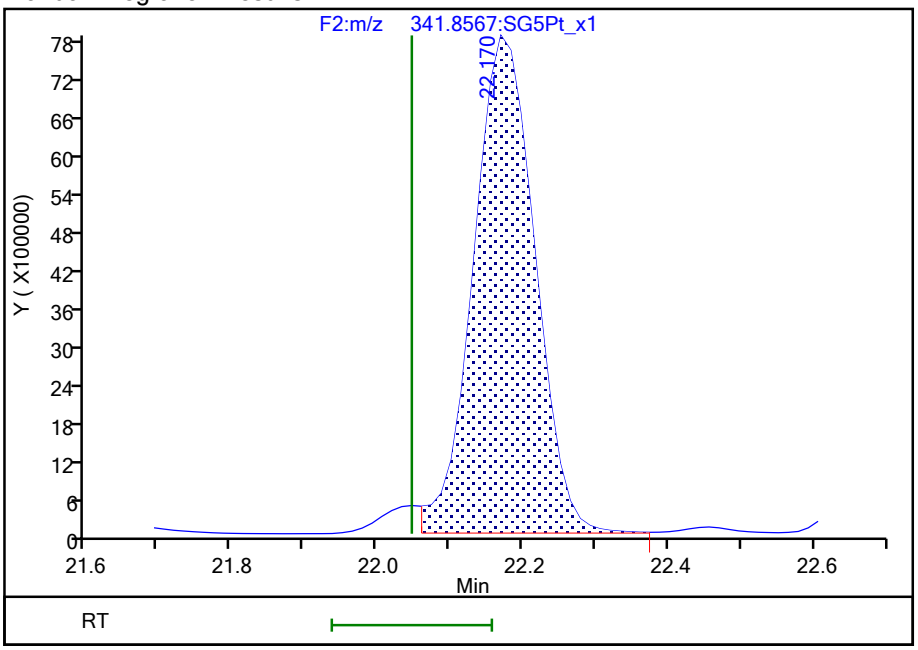

Reviewer: dadunj, 27-Aug-2021 09:44:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d				
Injection Date:	25-Aug-2021 14:20:45	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

RT: 22.05
Area: 4091910
Amount: 5.248826
Amount Units: pg/ul

Processing Integration Results

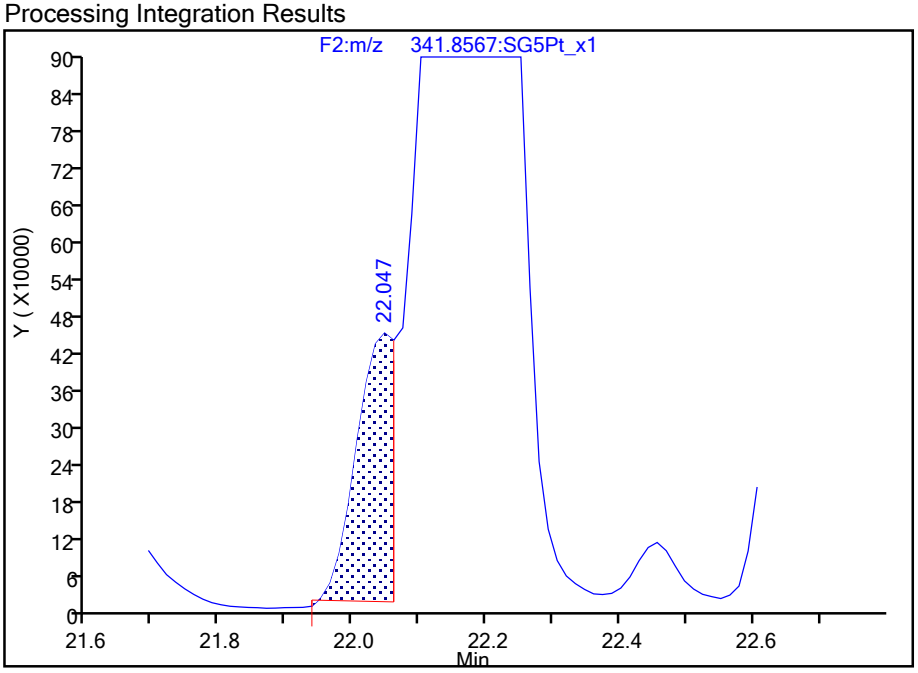

Manual Integration Results

RT: 22.17
Area: 119360085
Amount: 153.1070
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 09:44:04
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d				
Injection Date:	25-Aug-2021 14:20:45	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	8	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.05
Area: 2508080
Amount: 5.248826
Amount Units: pg/ul

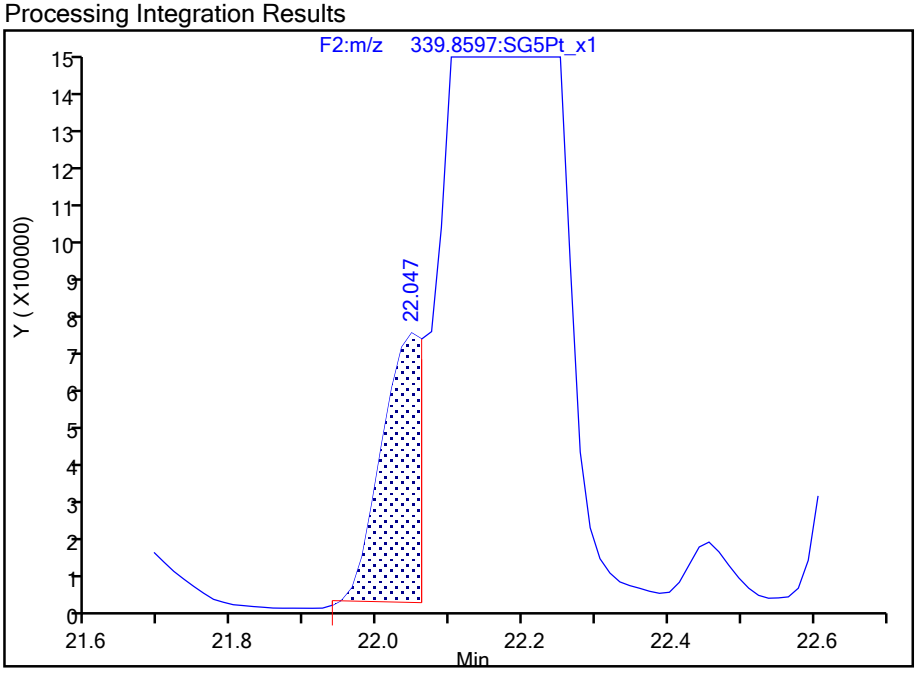

Manual Integration Results

RT: 22.17
Area: 73287081
Amount: 153.1070
Amount Units: pg/ul

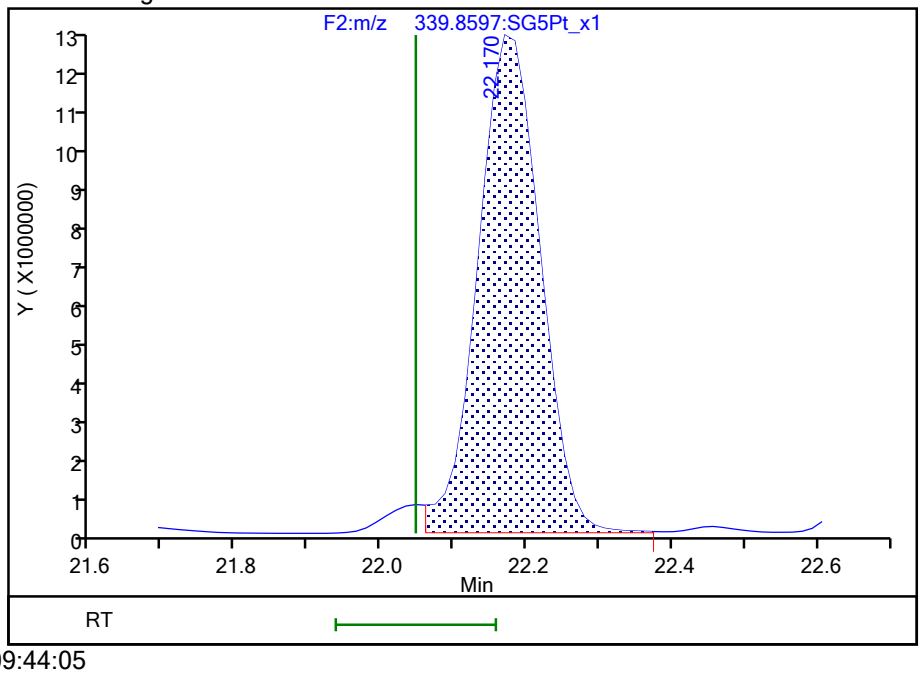

Reviewer: dadunj, 27-Aug-2021 09:44:05
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

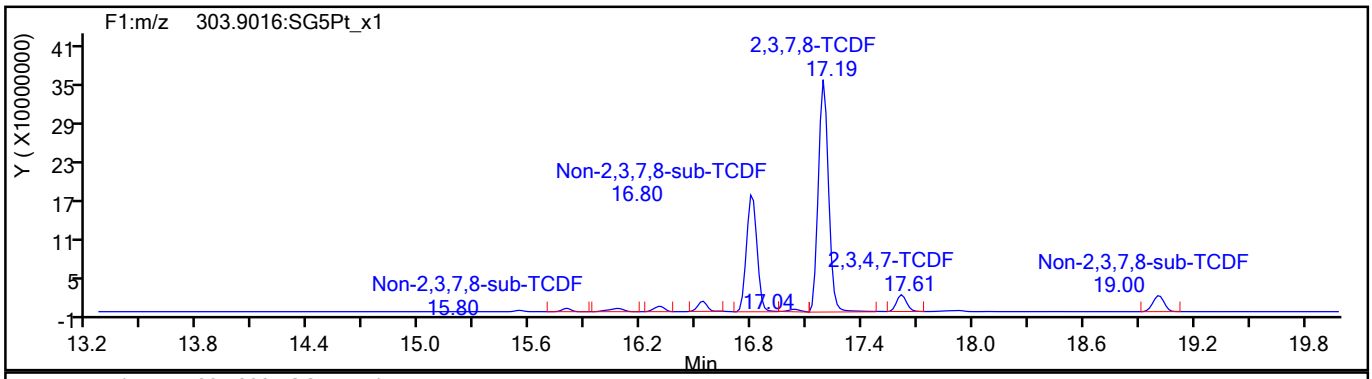

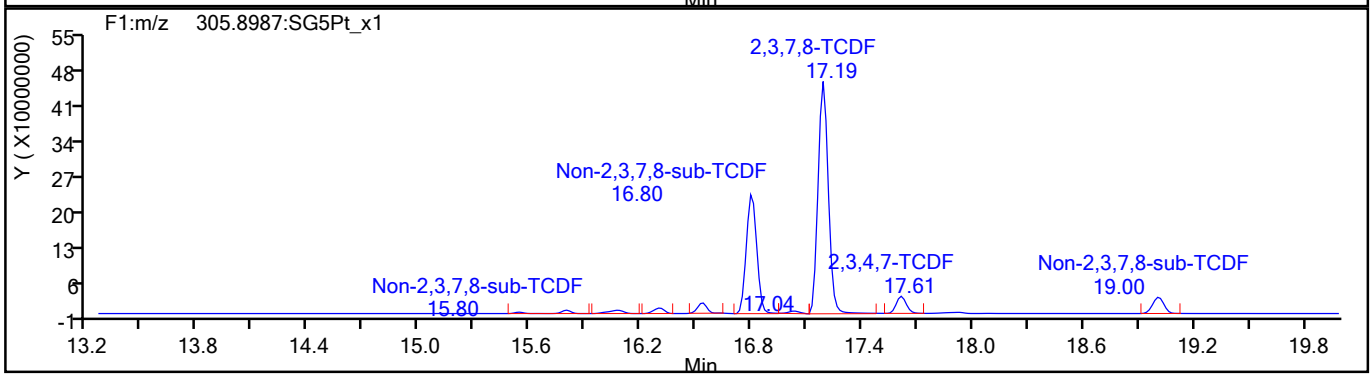

TCDF Standards

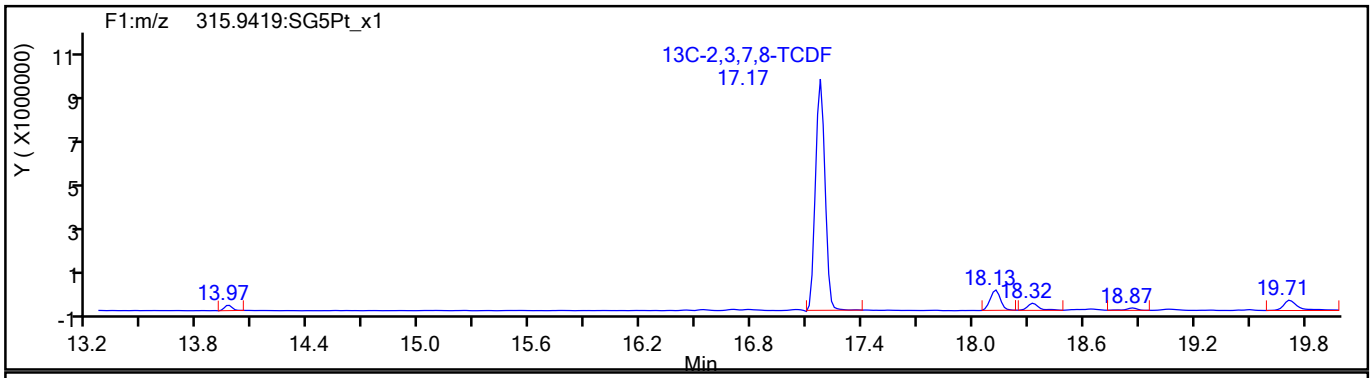

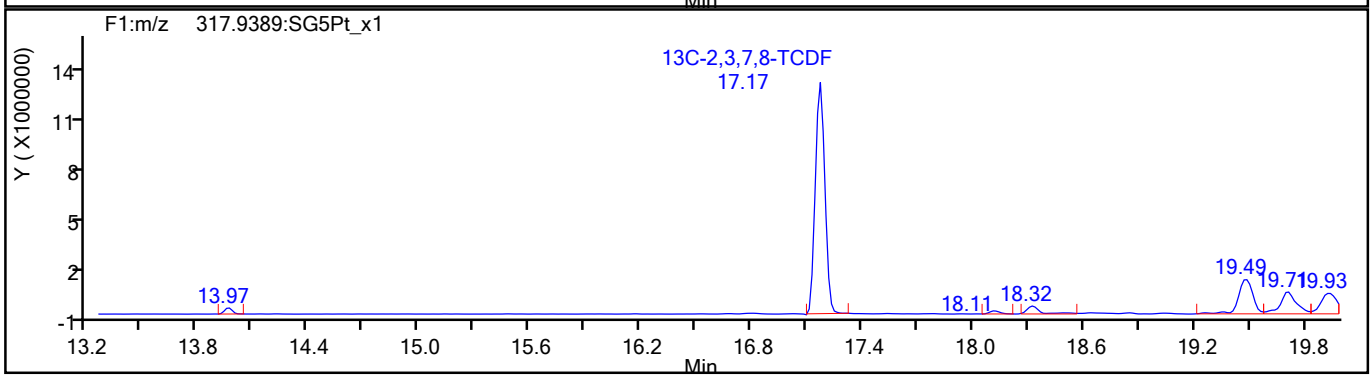

792946

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

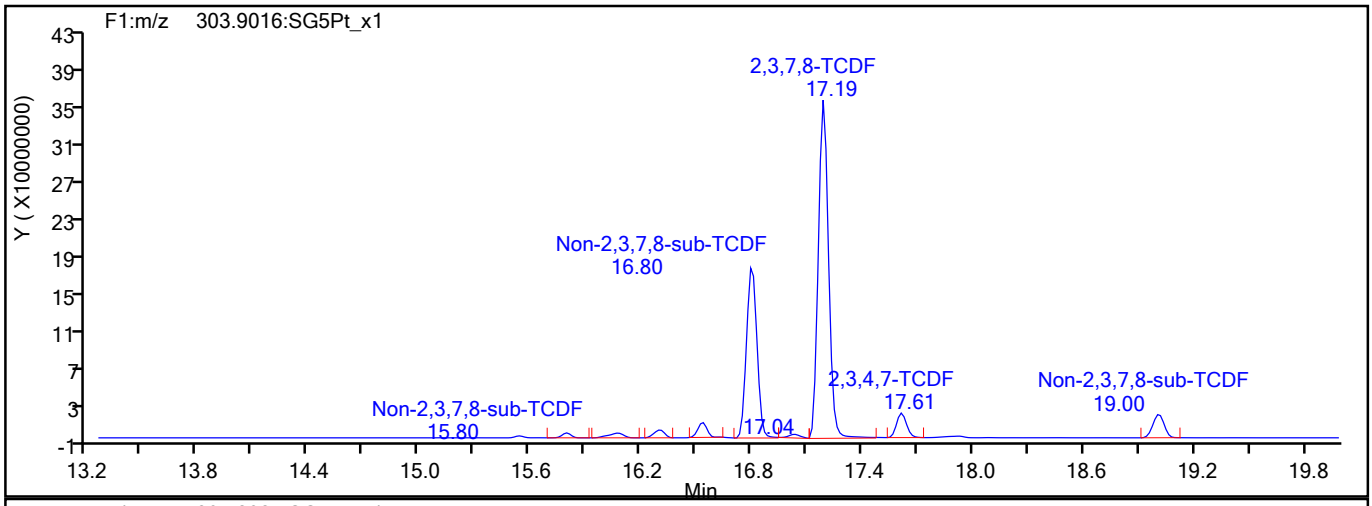

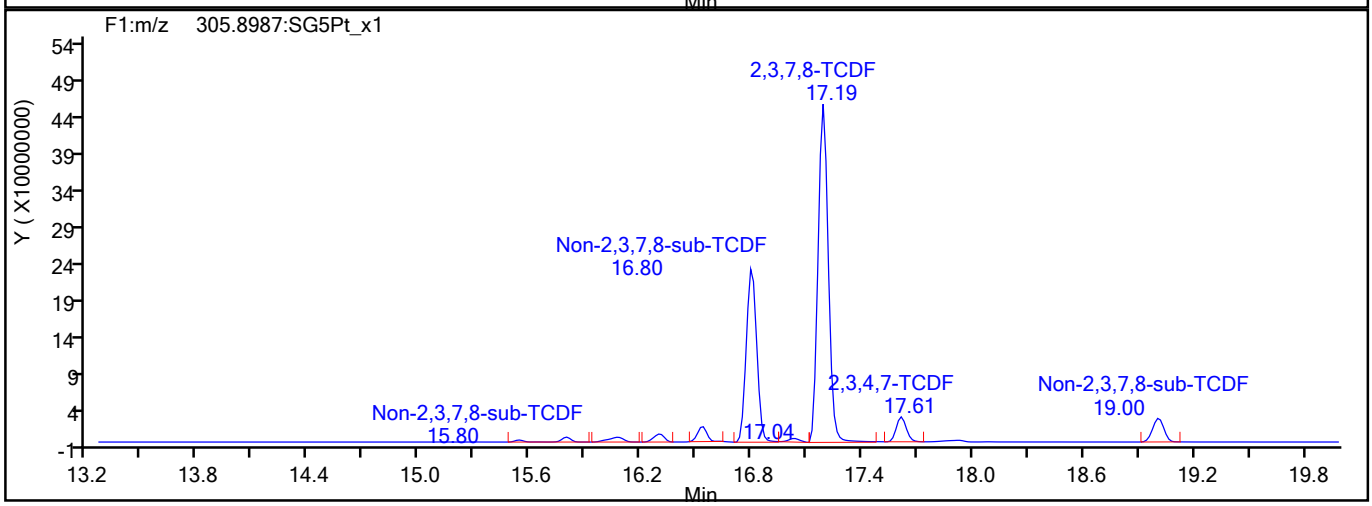

TCDF Interference Mass

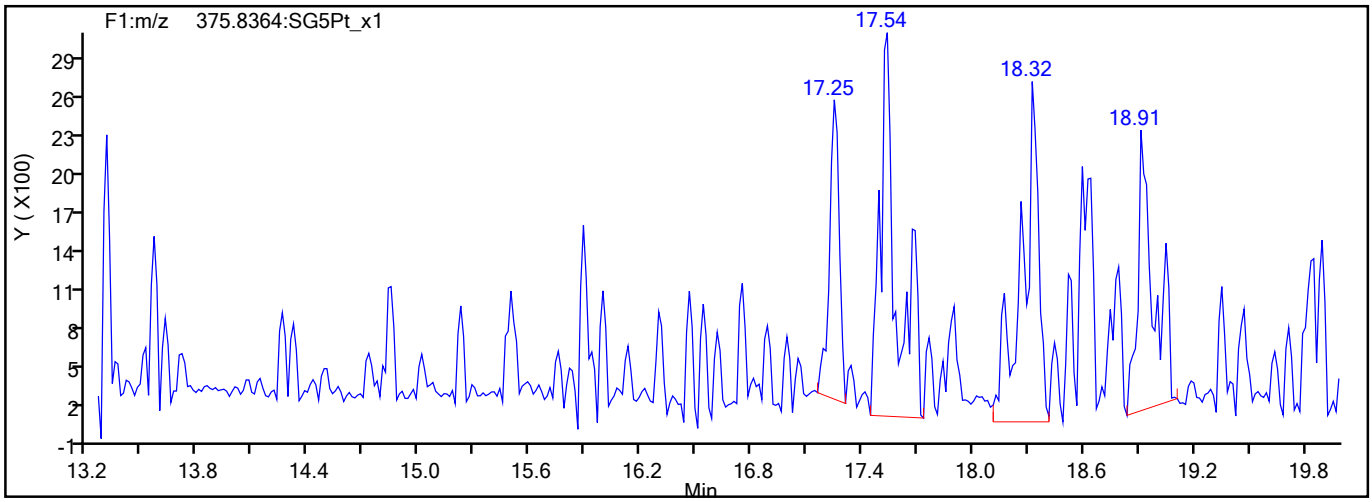

792947

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

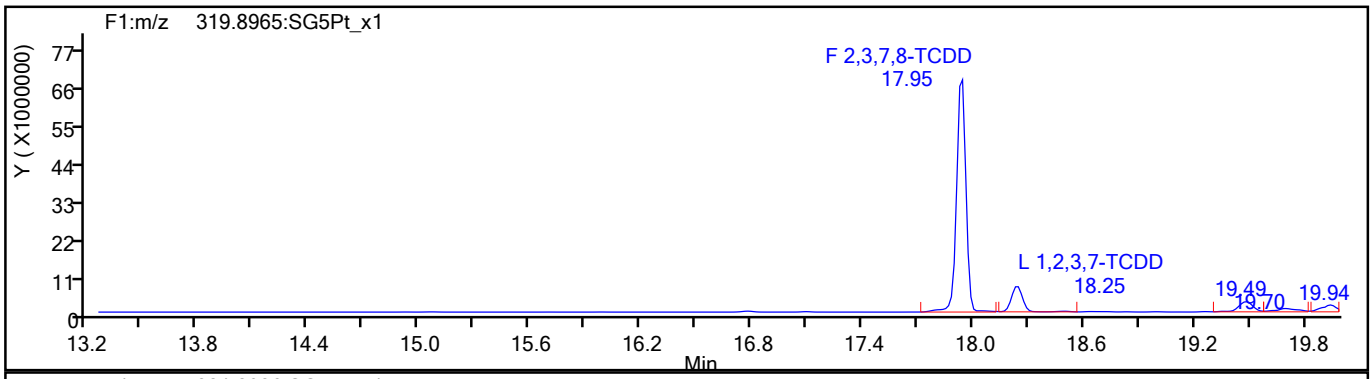

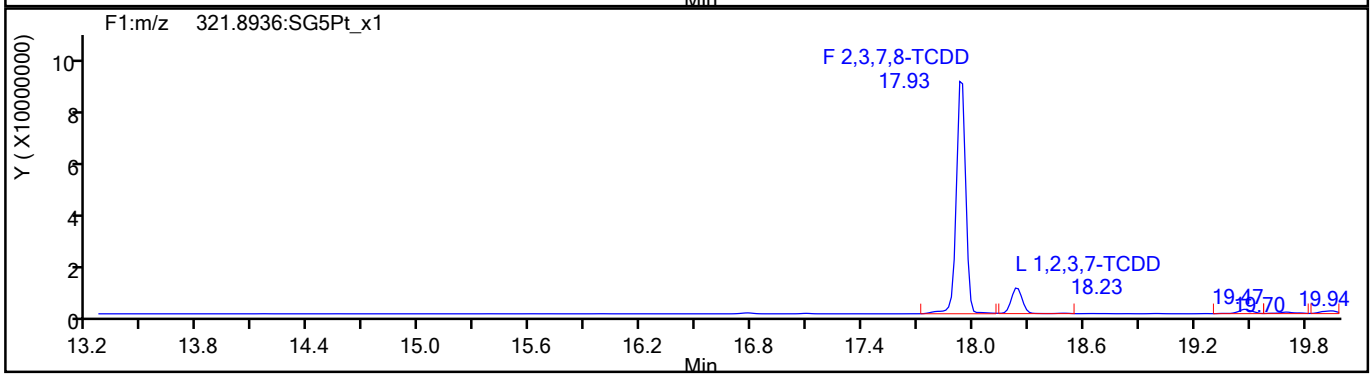

TCDD Standards

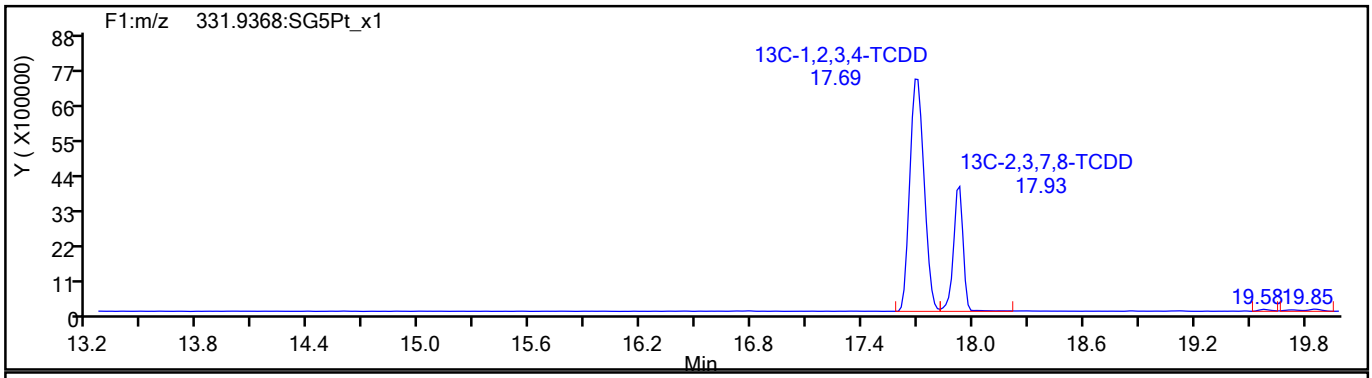

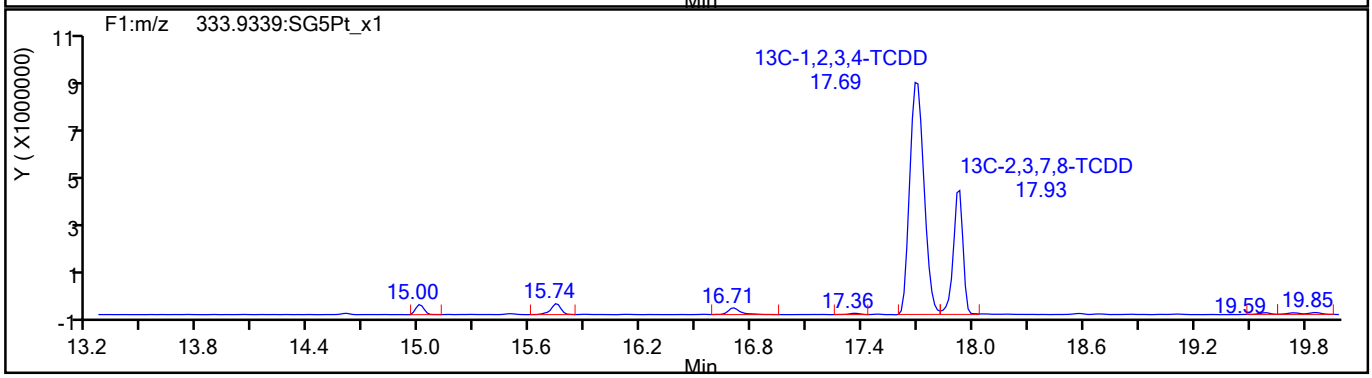

792948

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

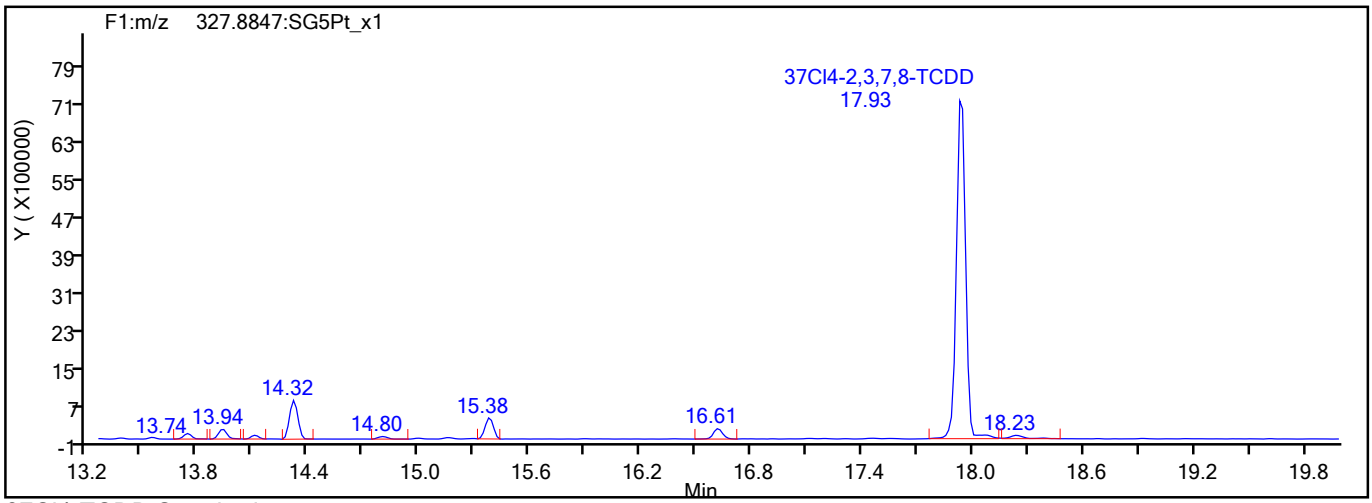

37Cl4-TCDD Standards

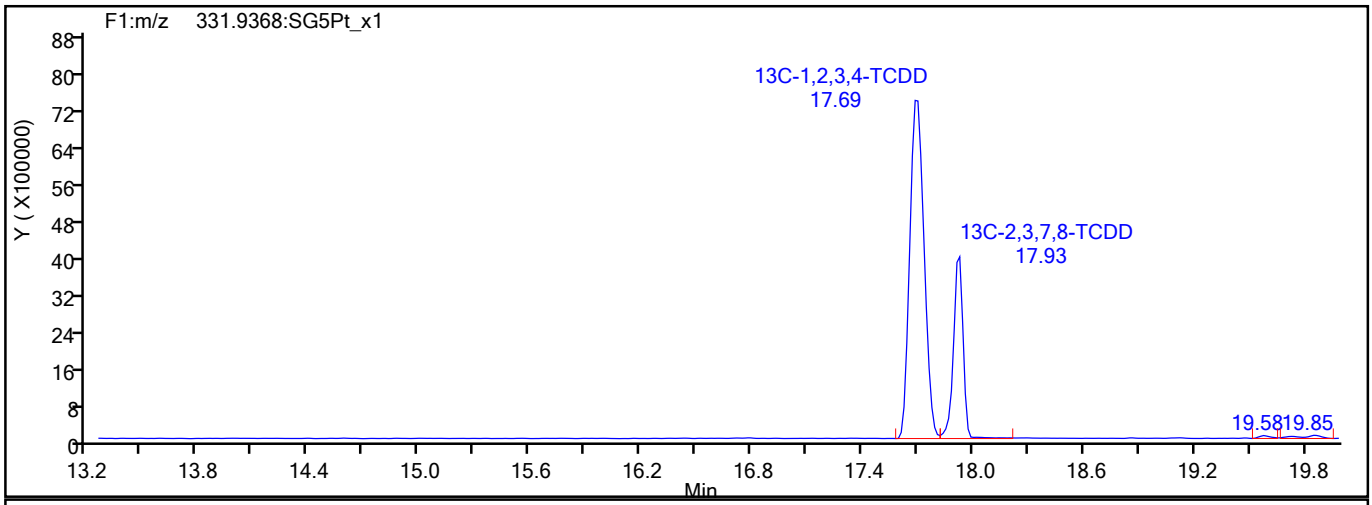

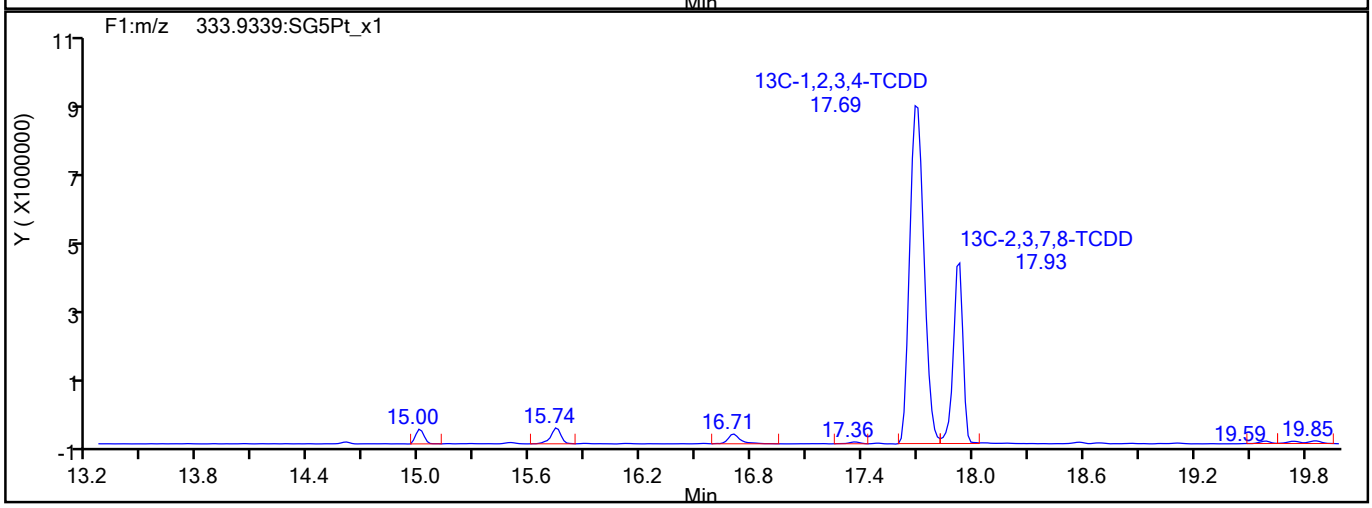

792949

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

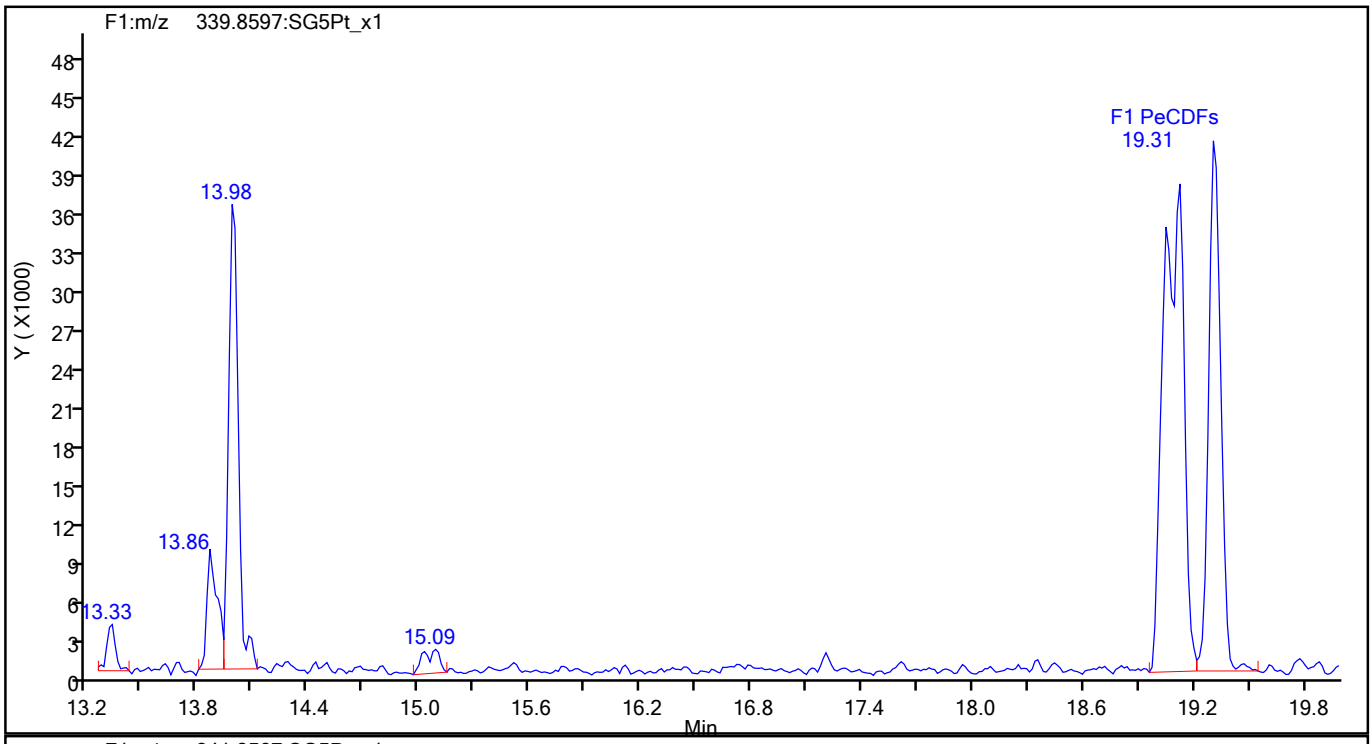

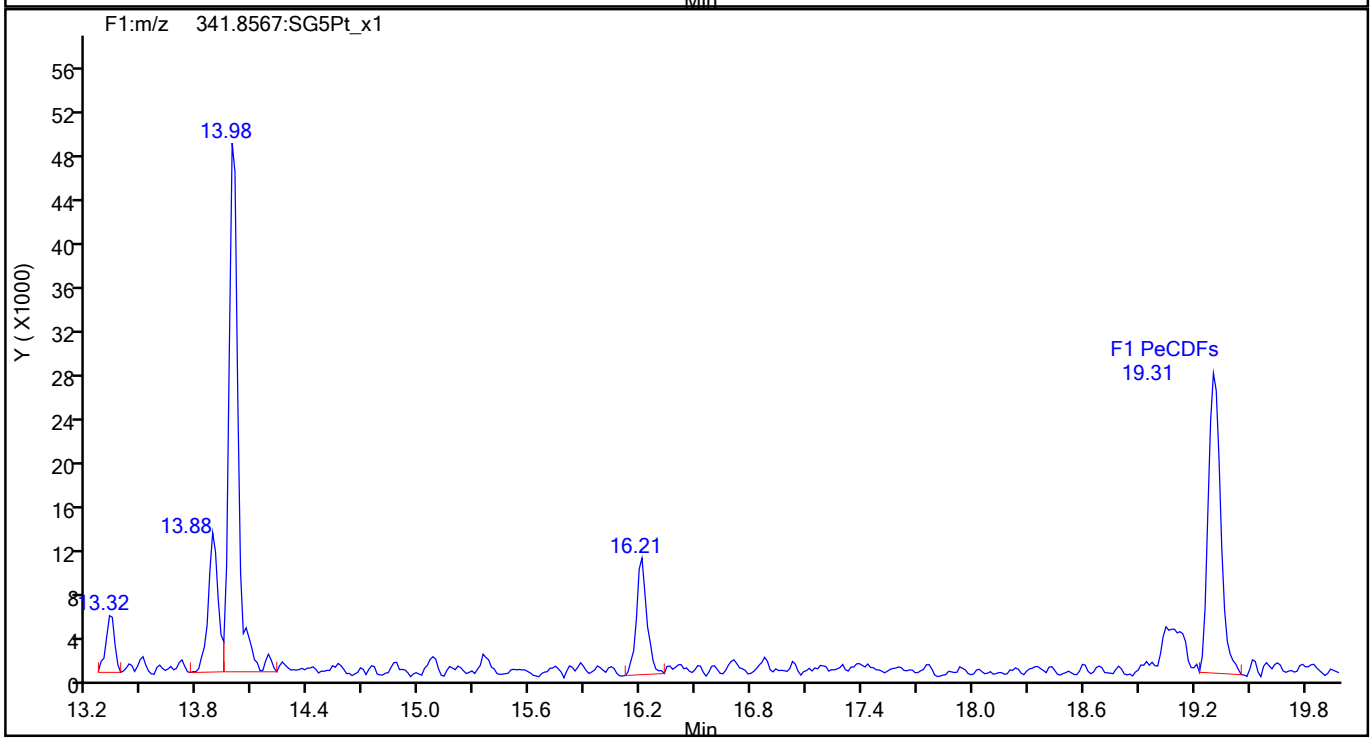

792950

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

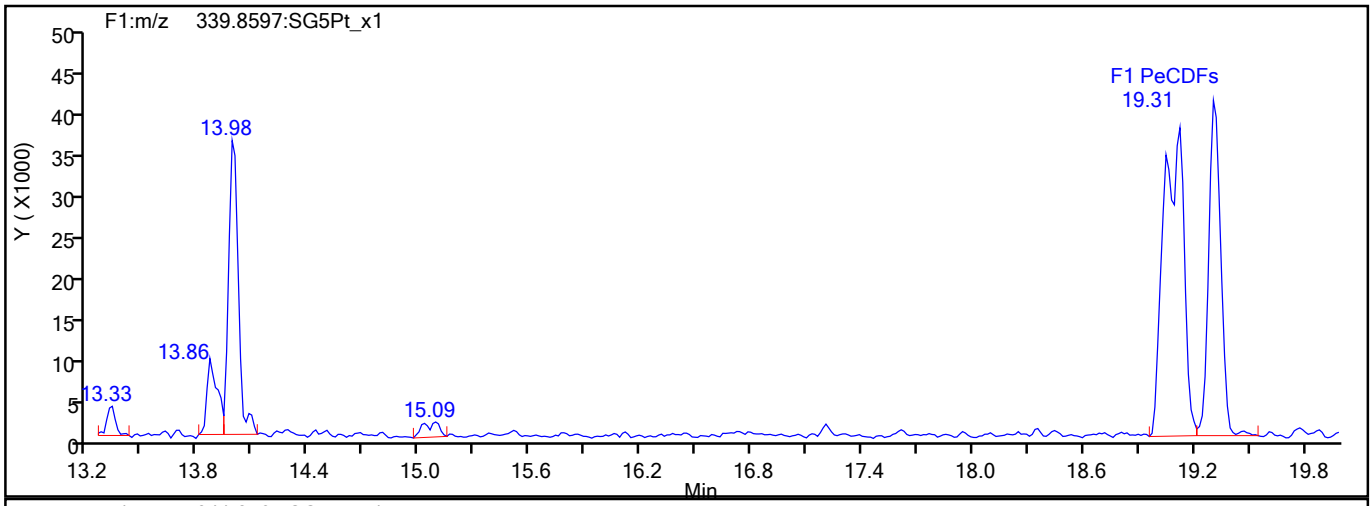

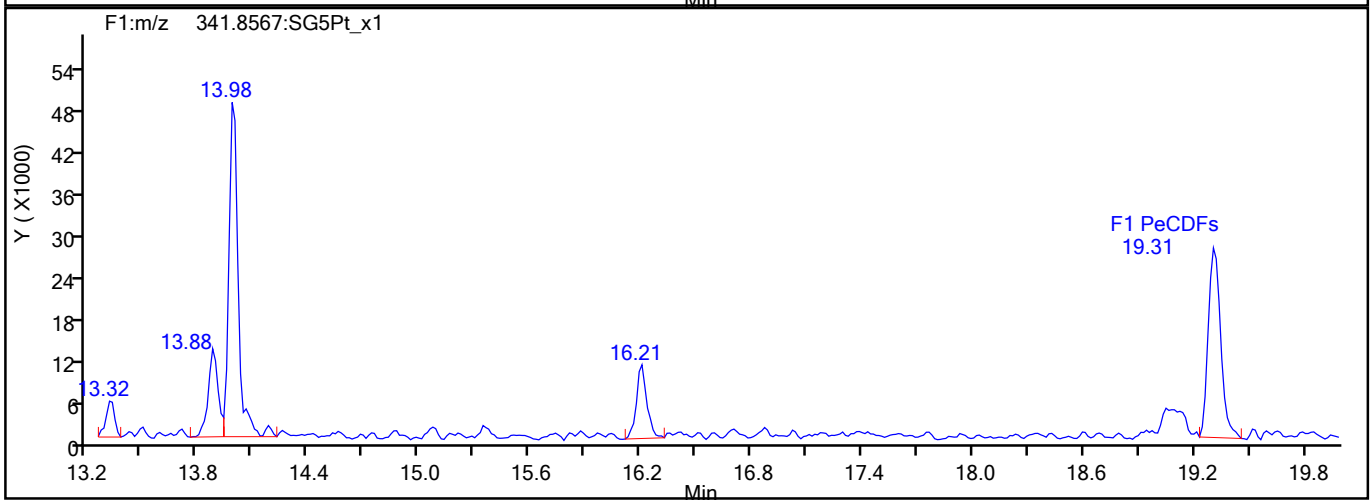

F1 PeCDFs Interference Mass

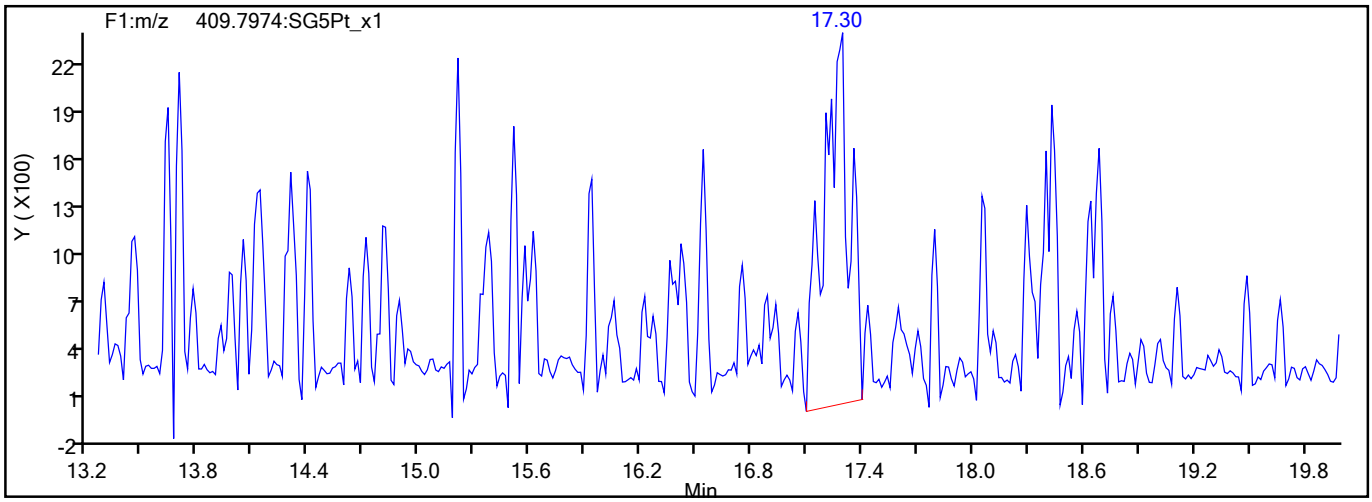

792951

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

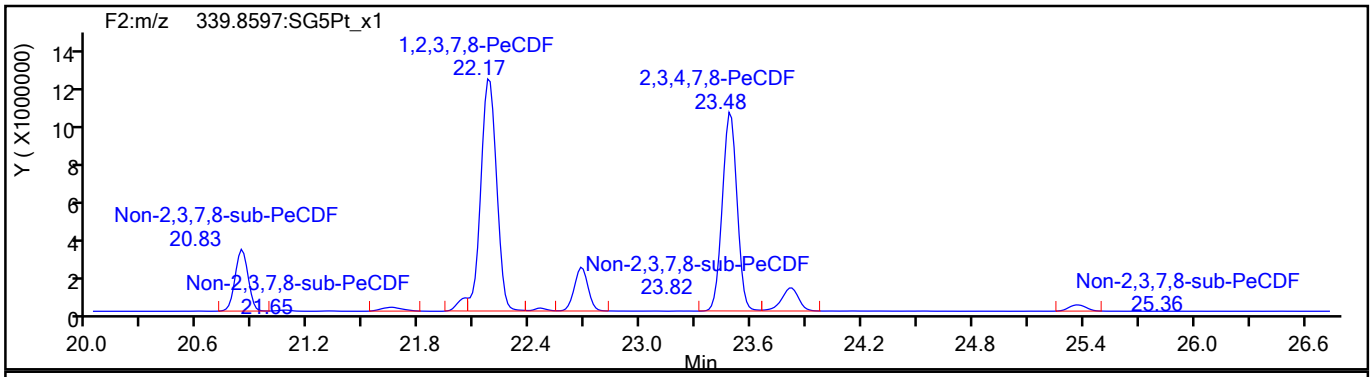

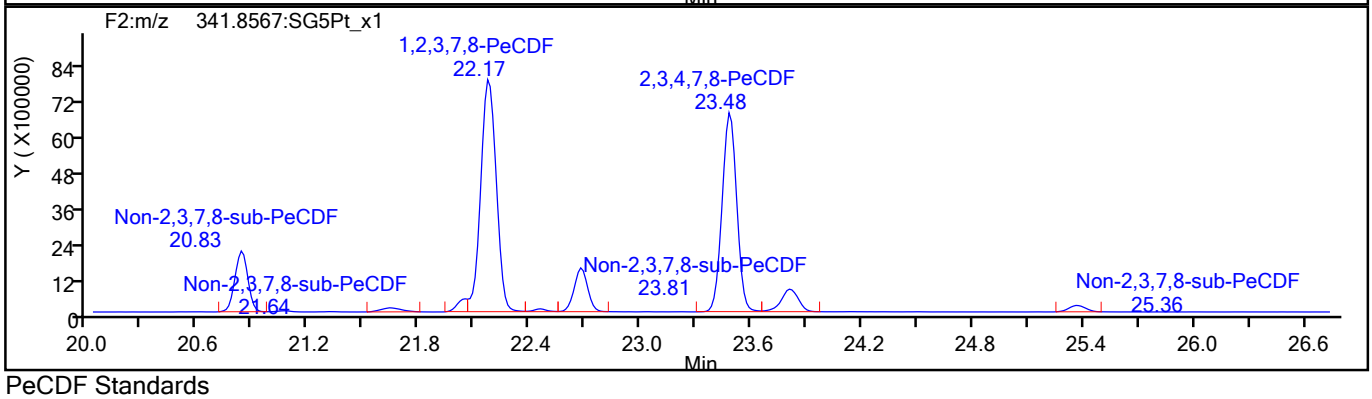

PeCDF Standards

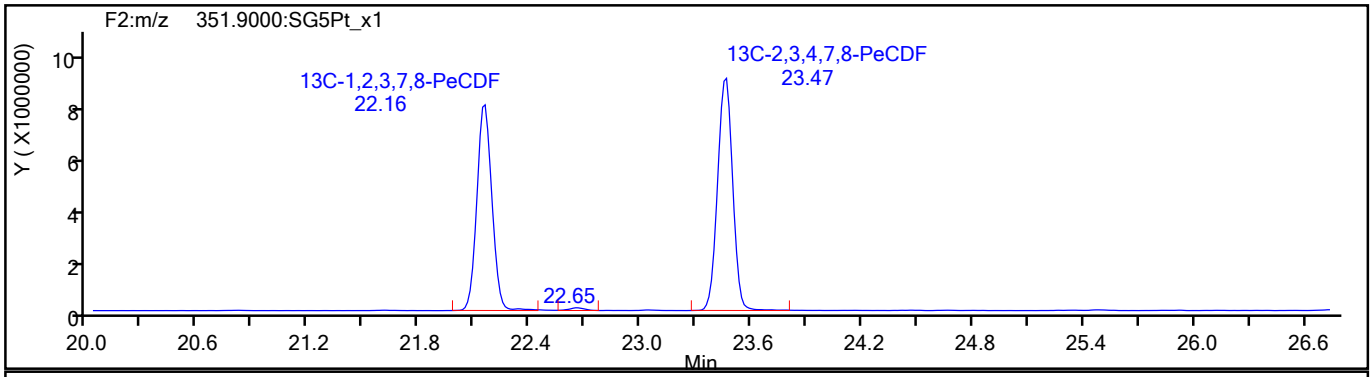

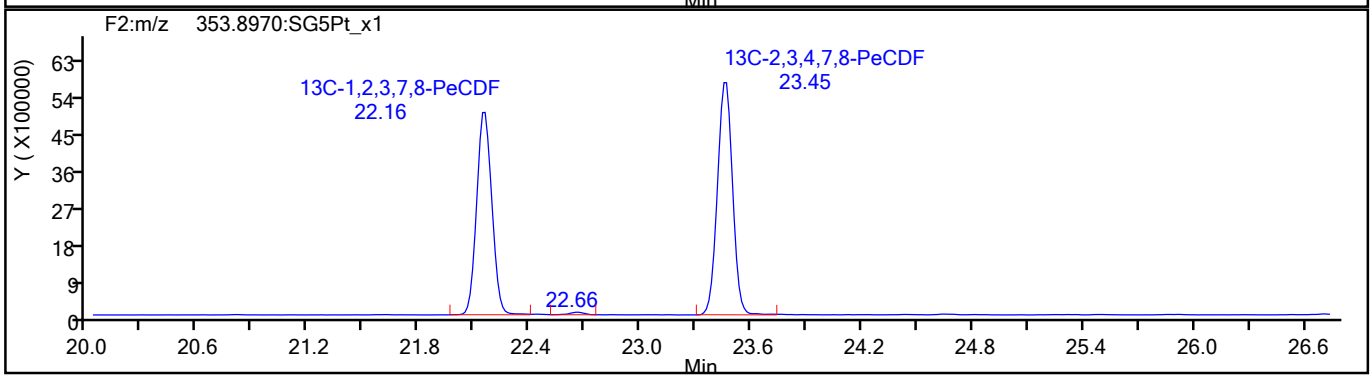

792952

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
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PeCDF

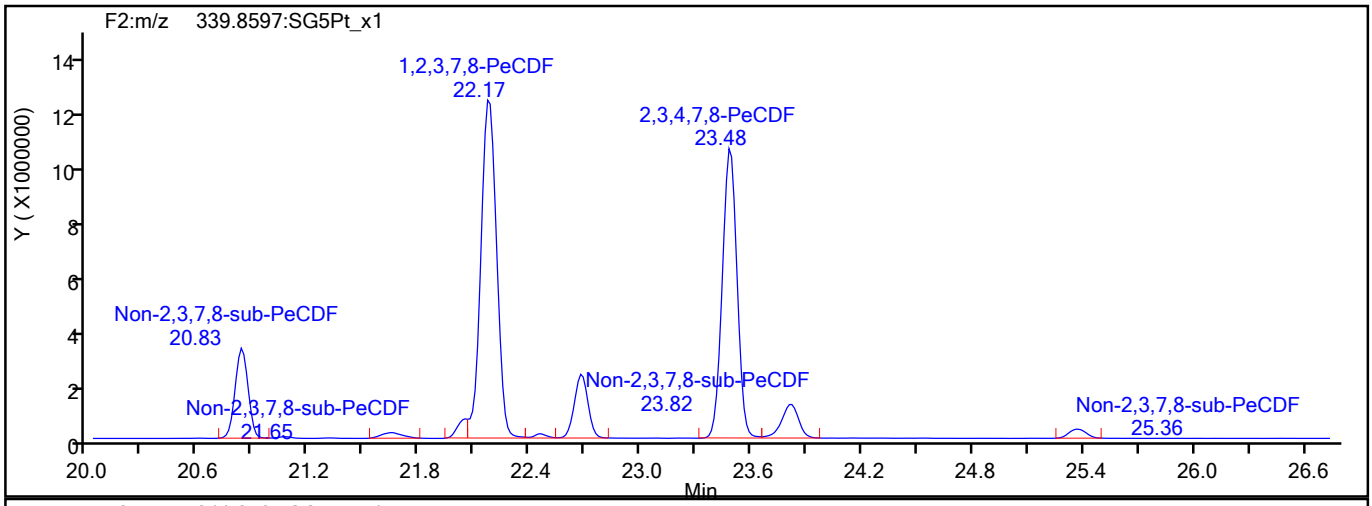

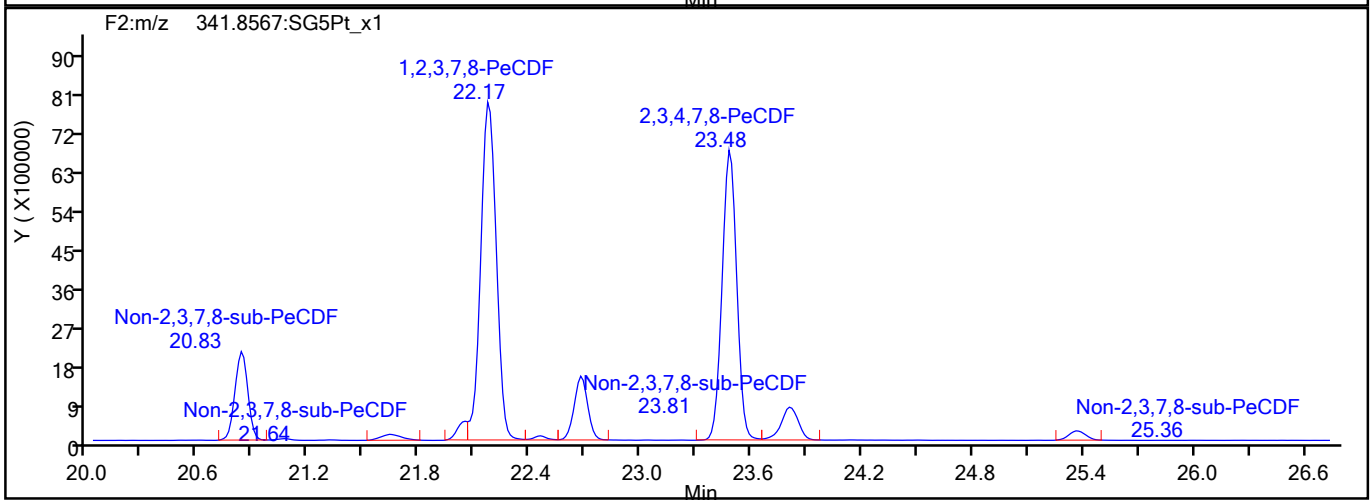

PeCDF Interference Mass

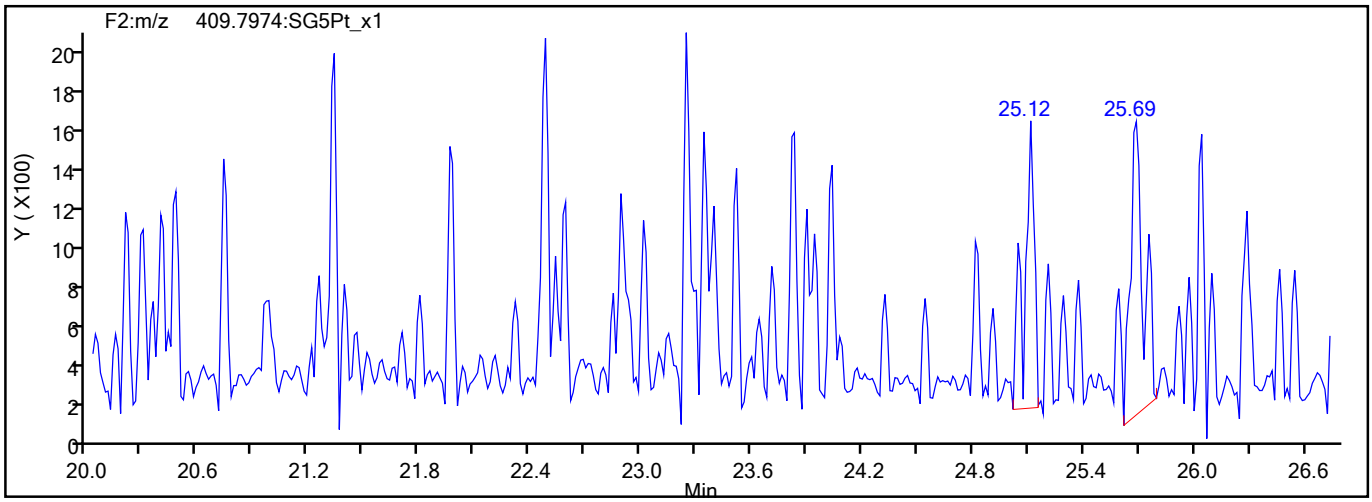

792953

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

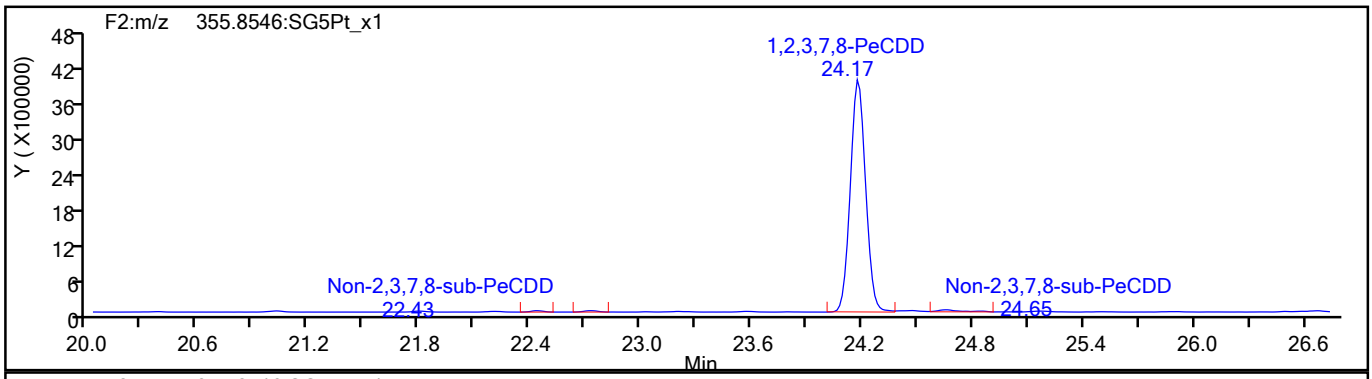

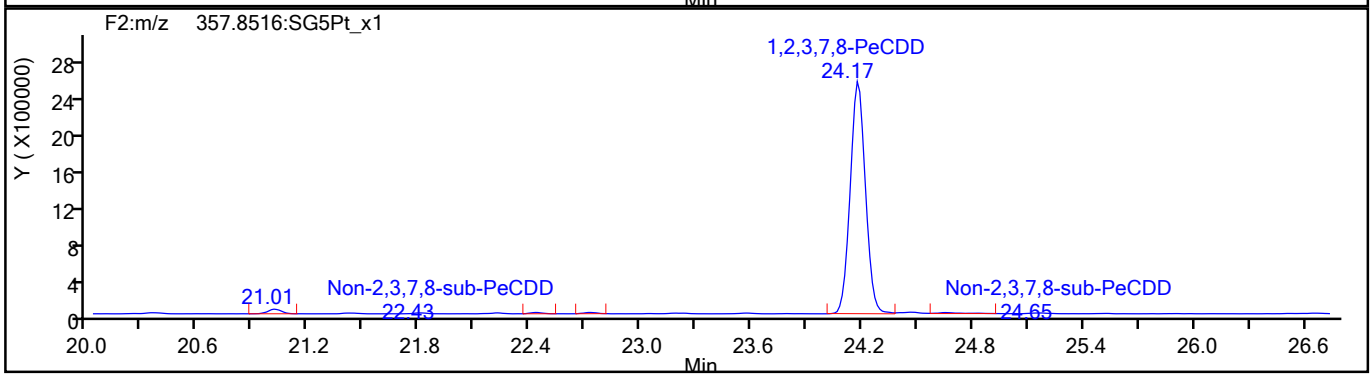

PeCDD Standards

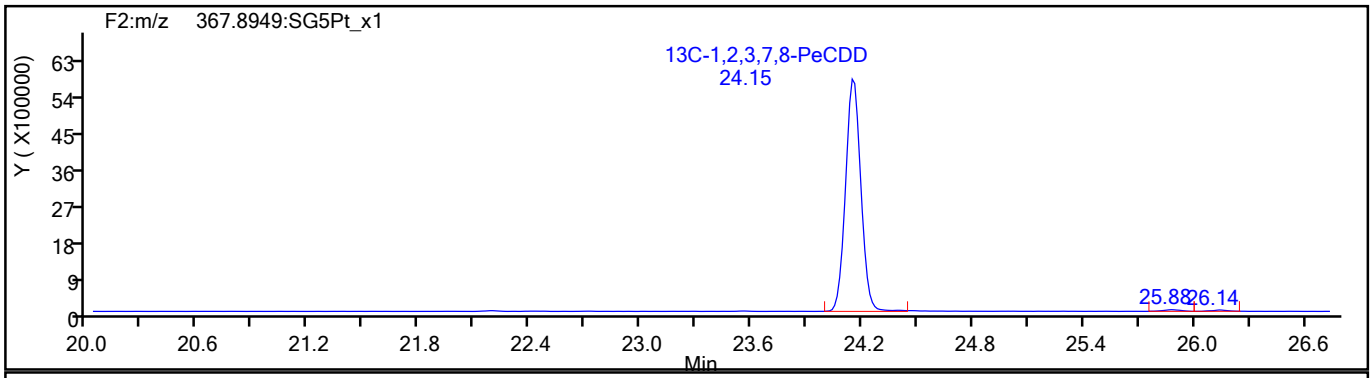

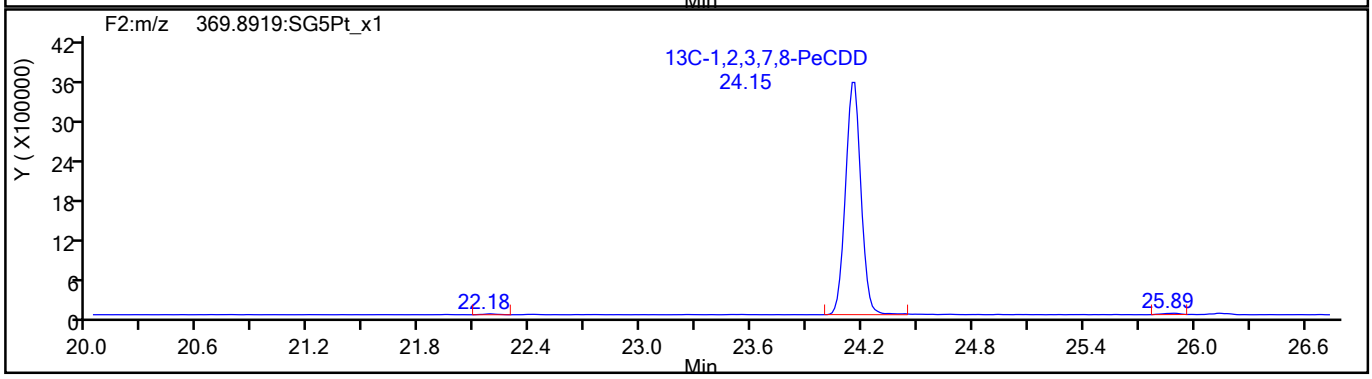

792954

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

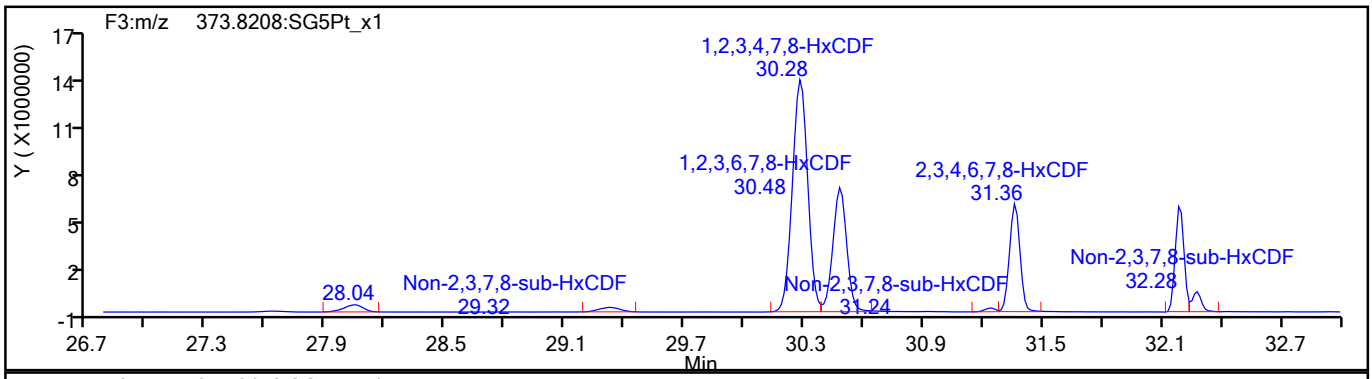

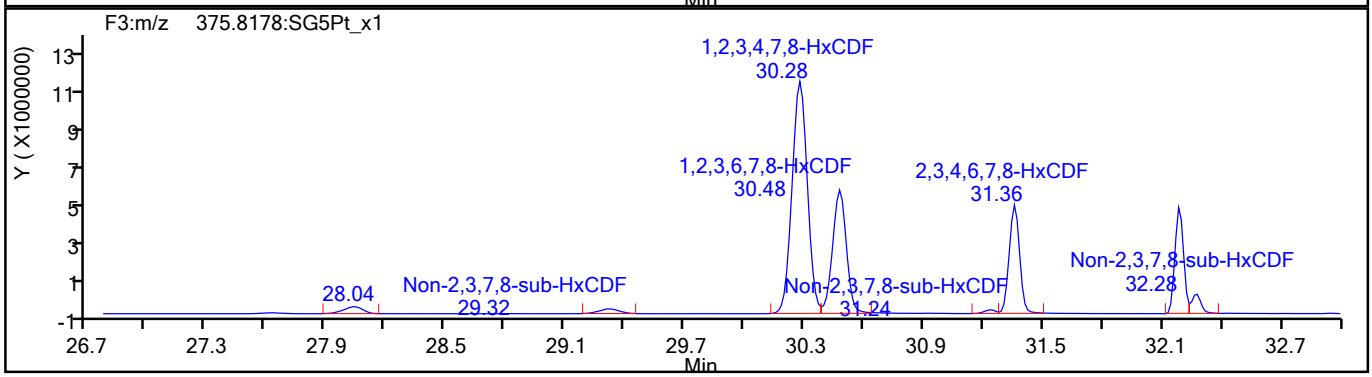

HxCDF Standards

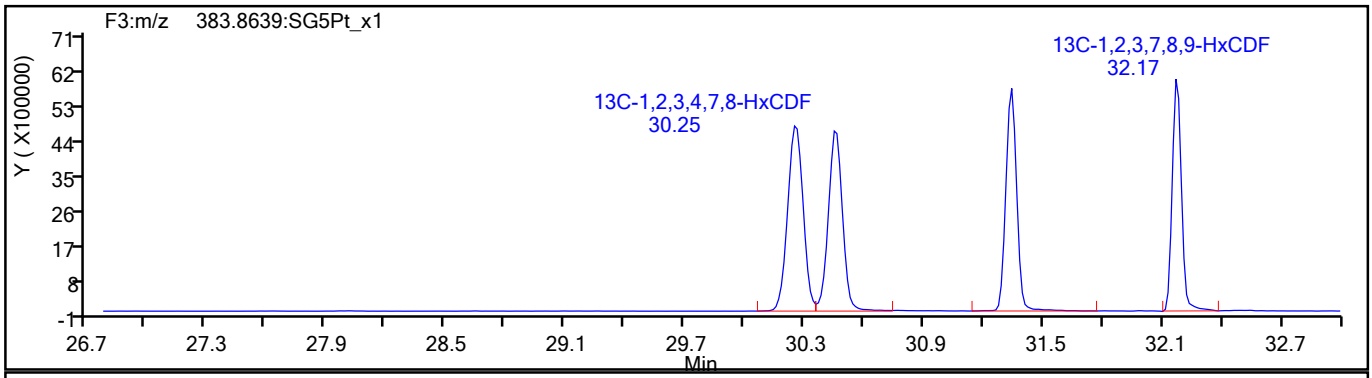

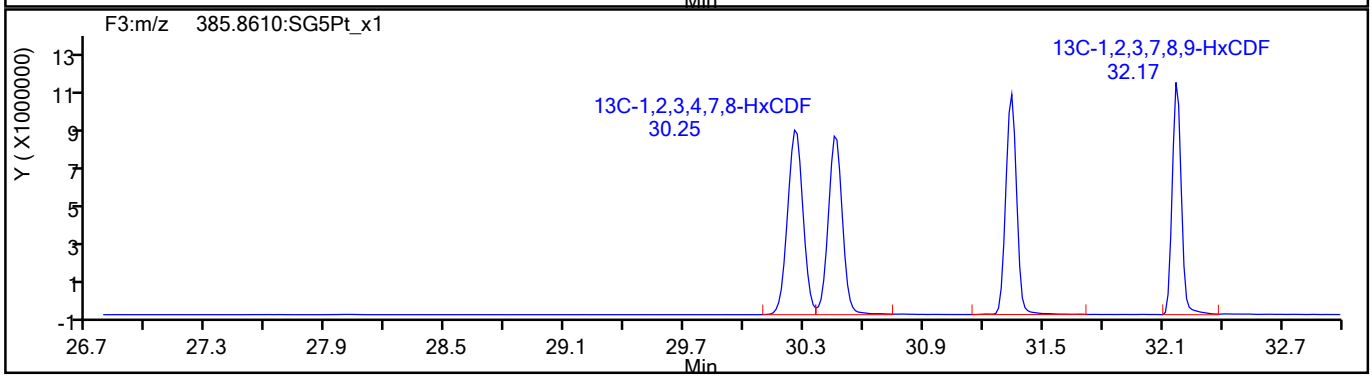

792955

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

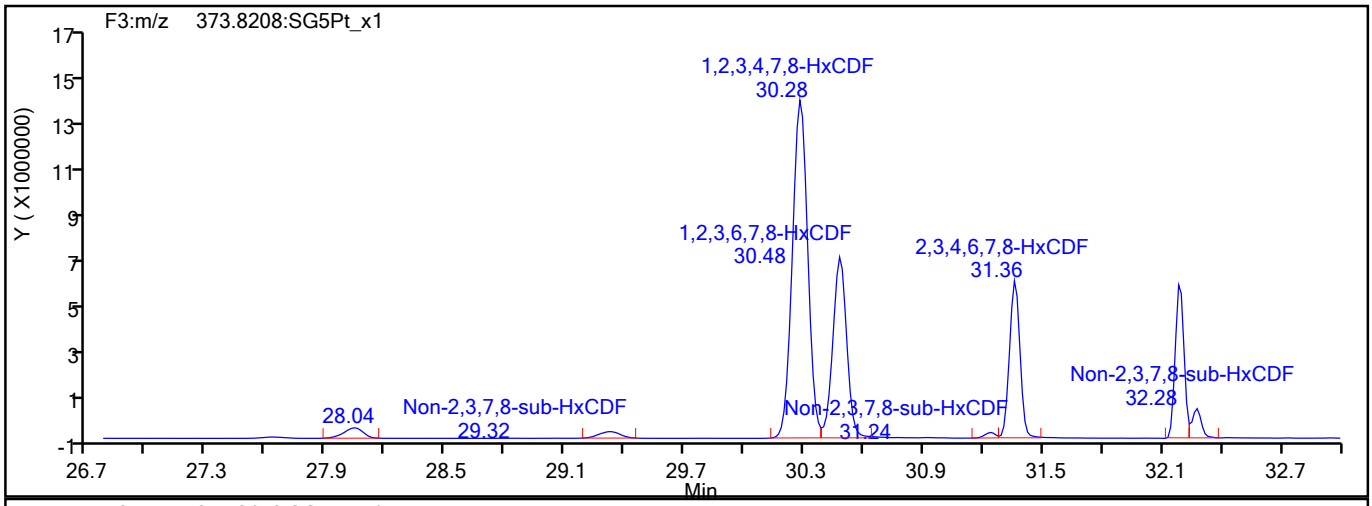

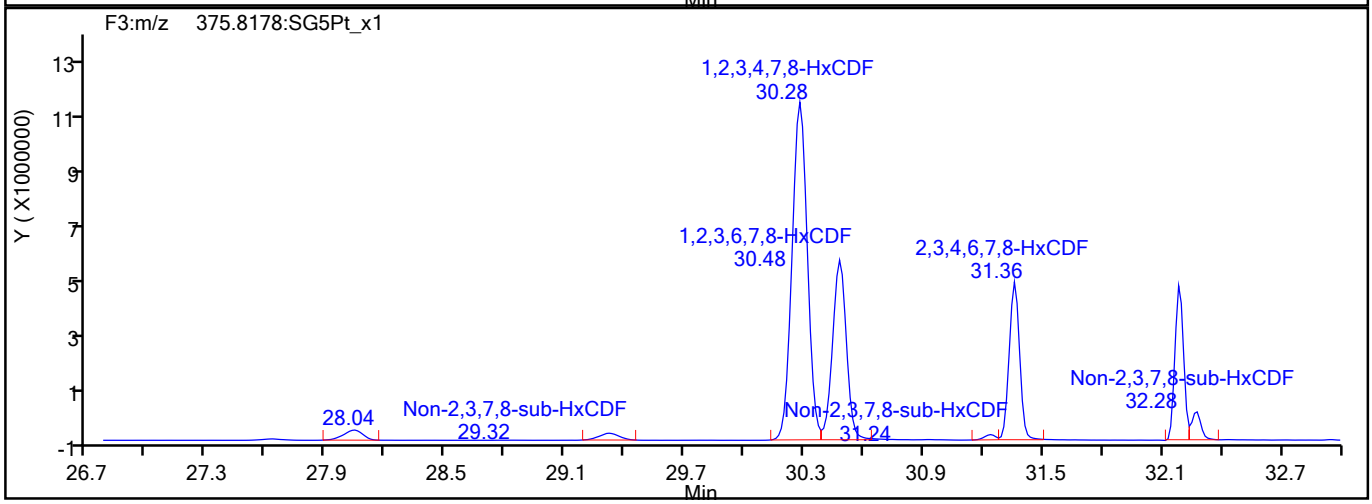

HxCDF Interference Mass

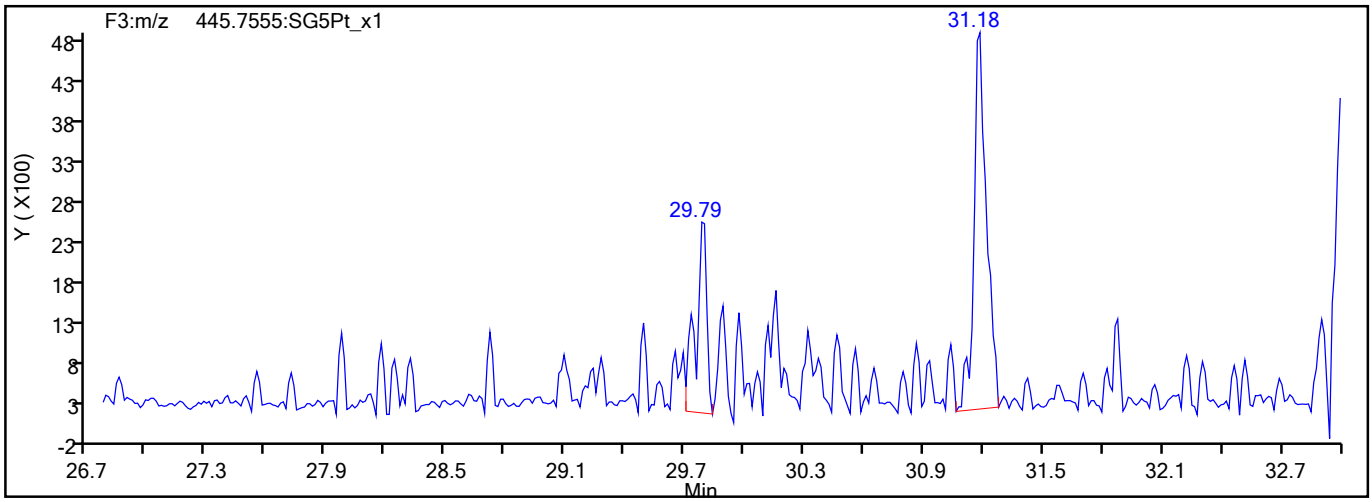

792956

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

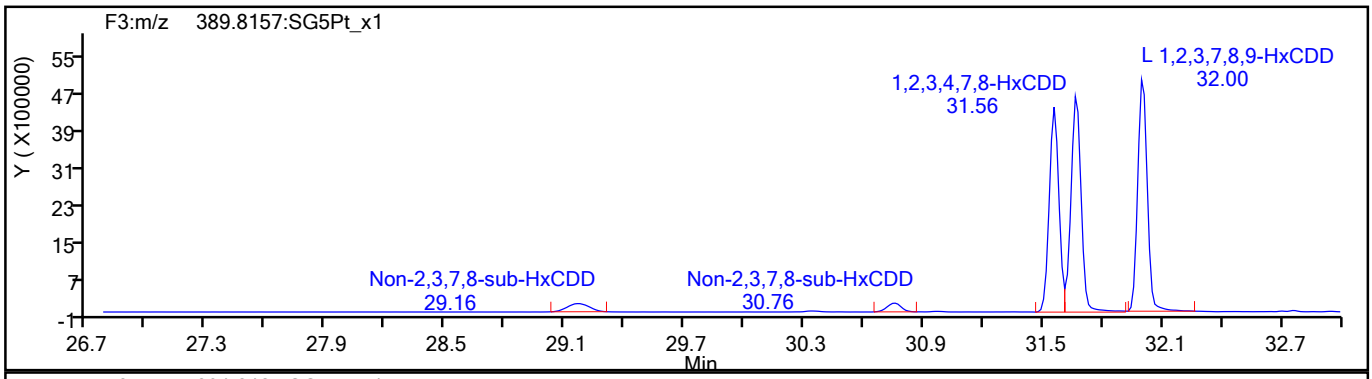

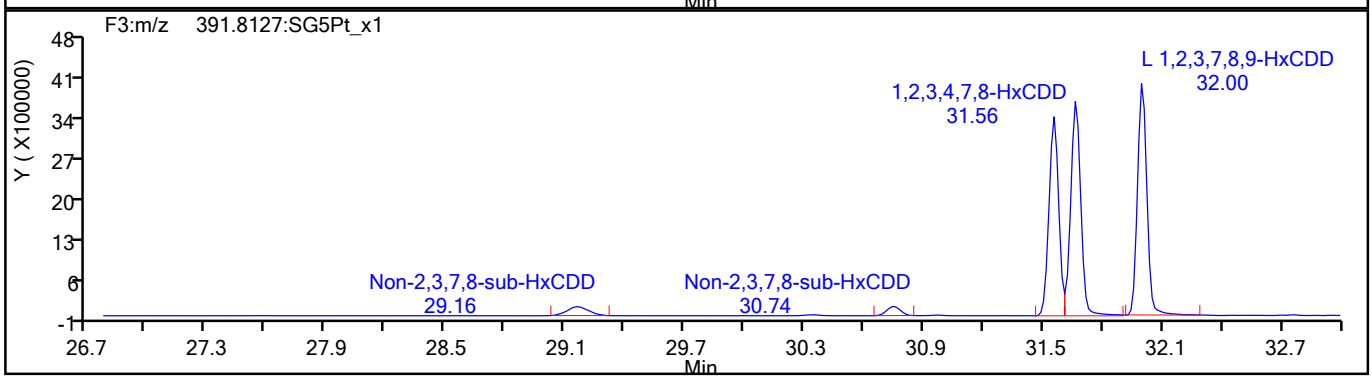

HxCDD Standards

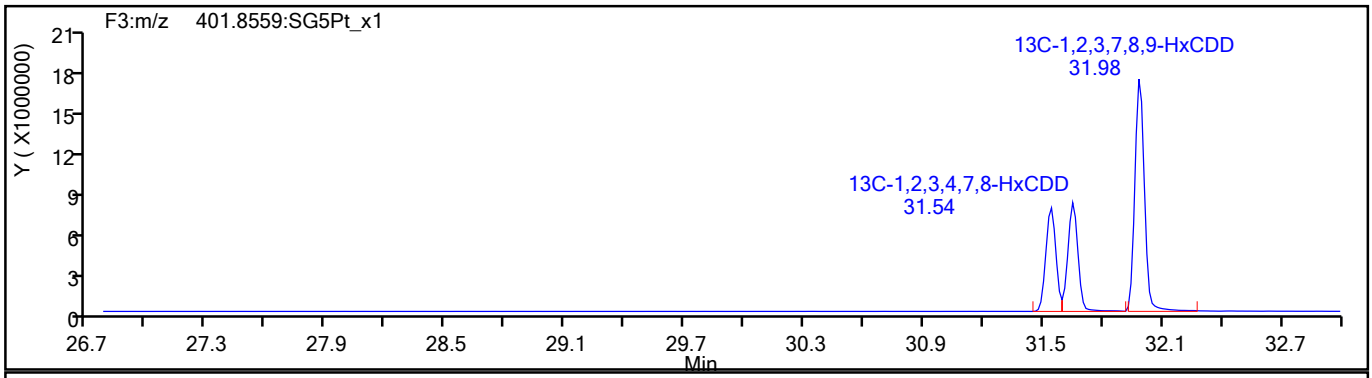

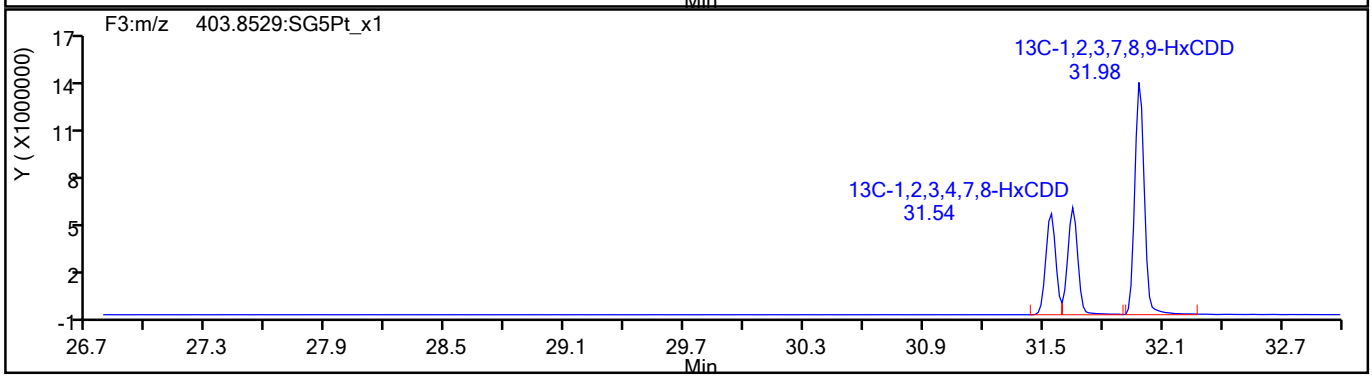

792957

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

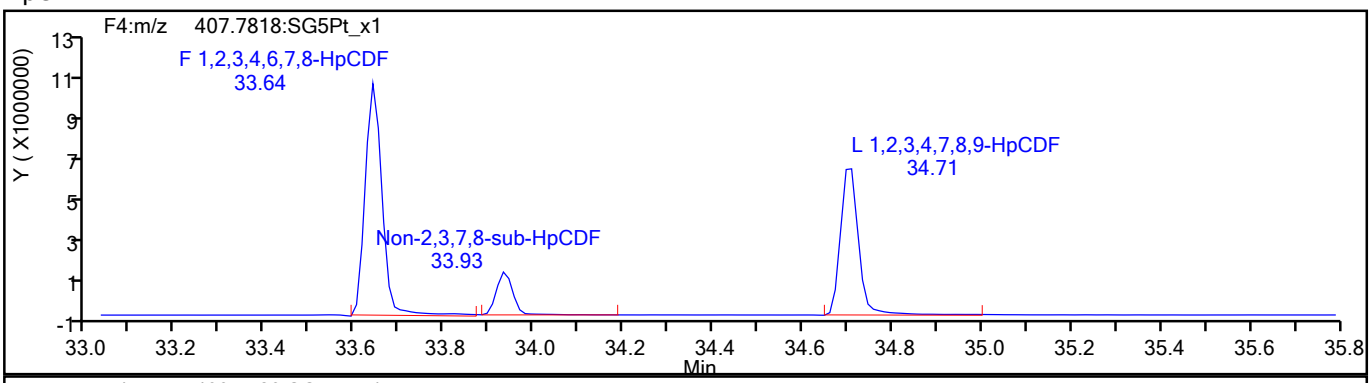

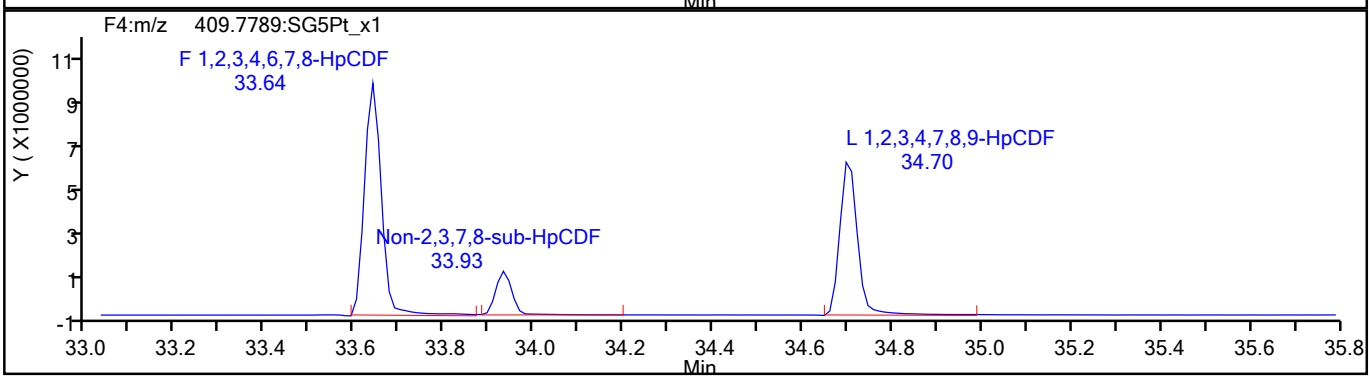

HpCDF Standards

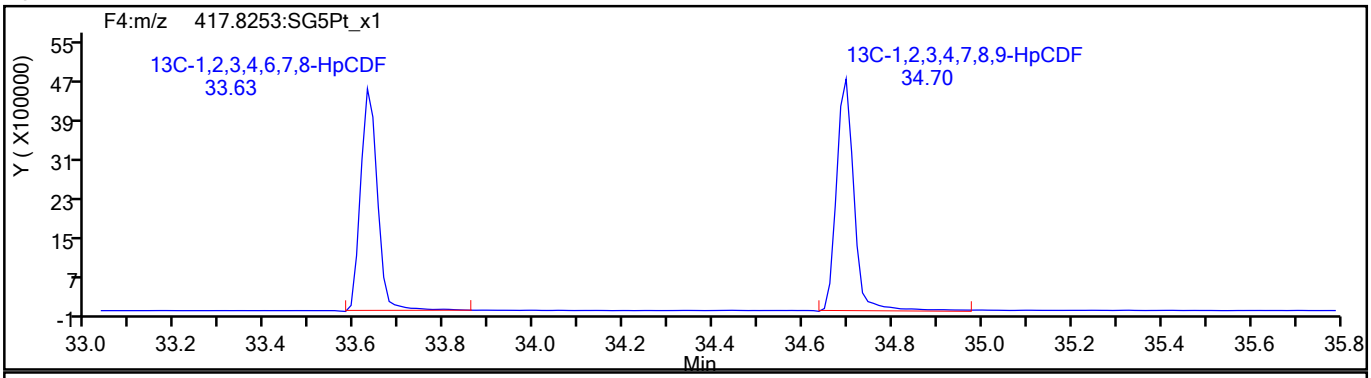

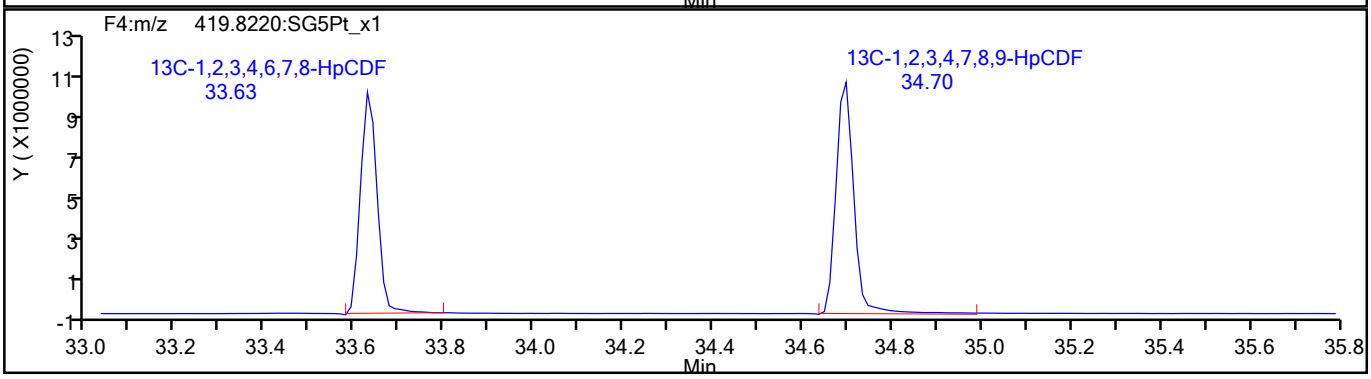

792958

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

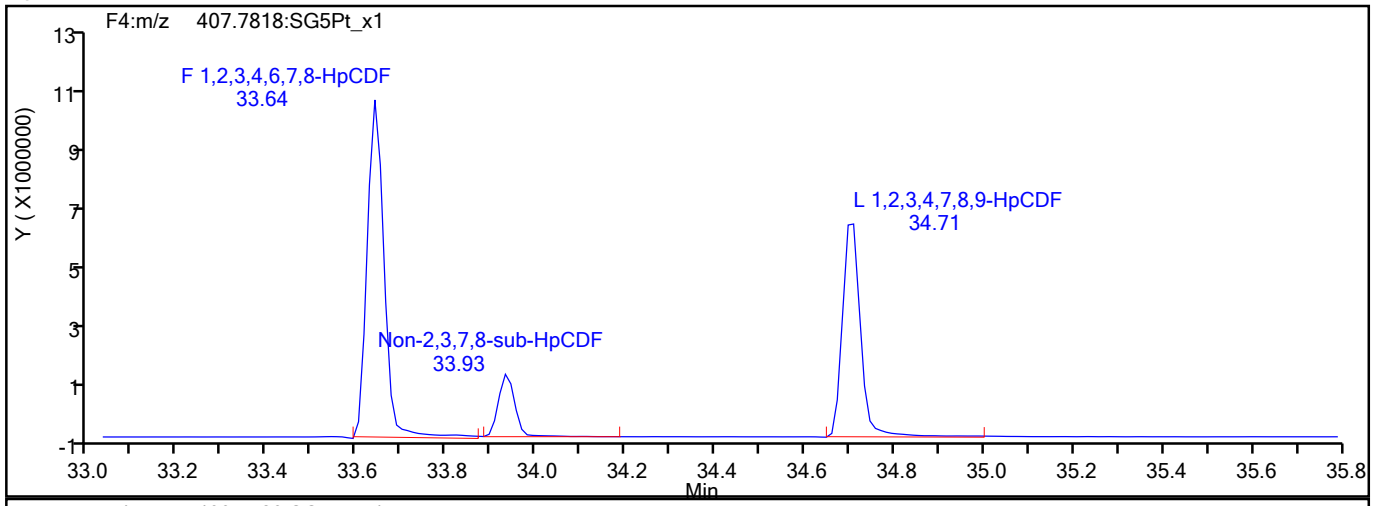

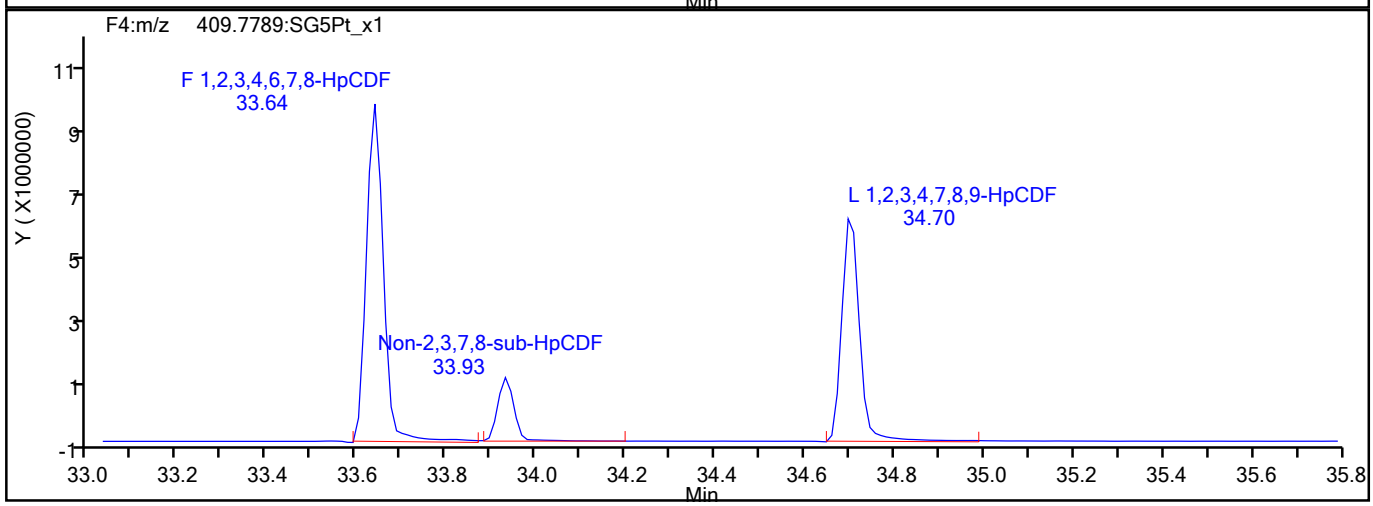

HpCDF Interference Mass

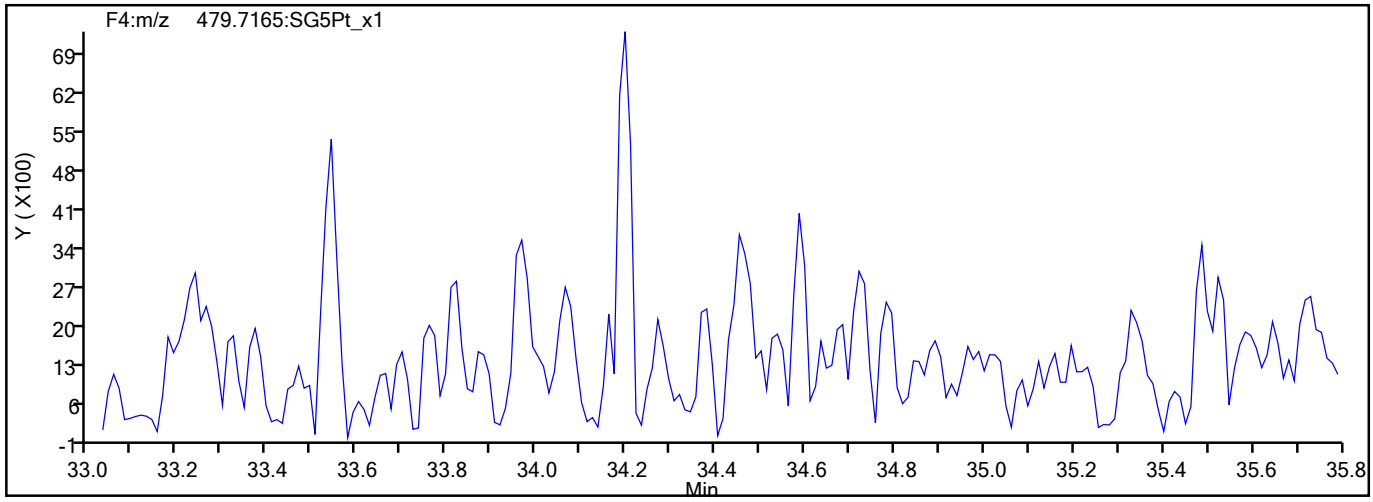

792959

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

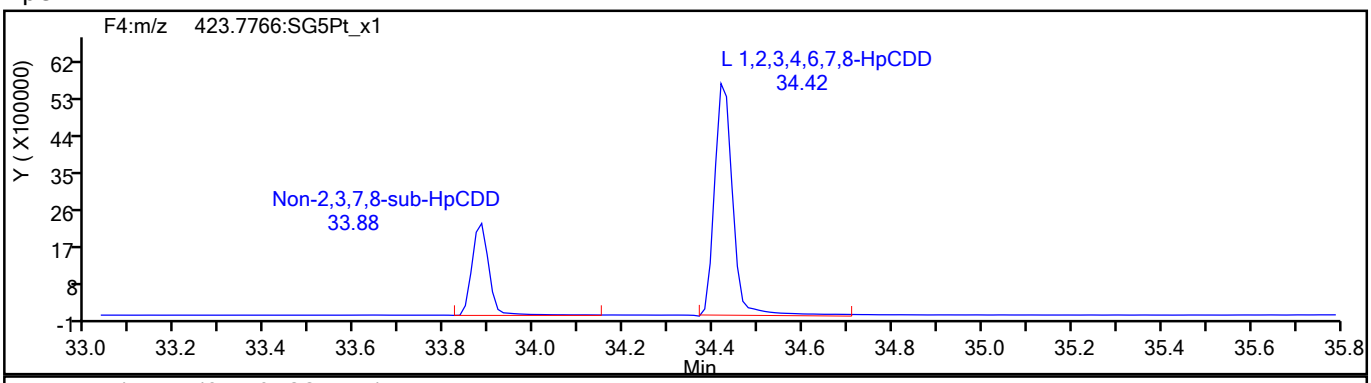

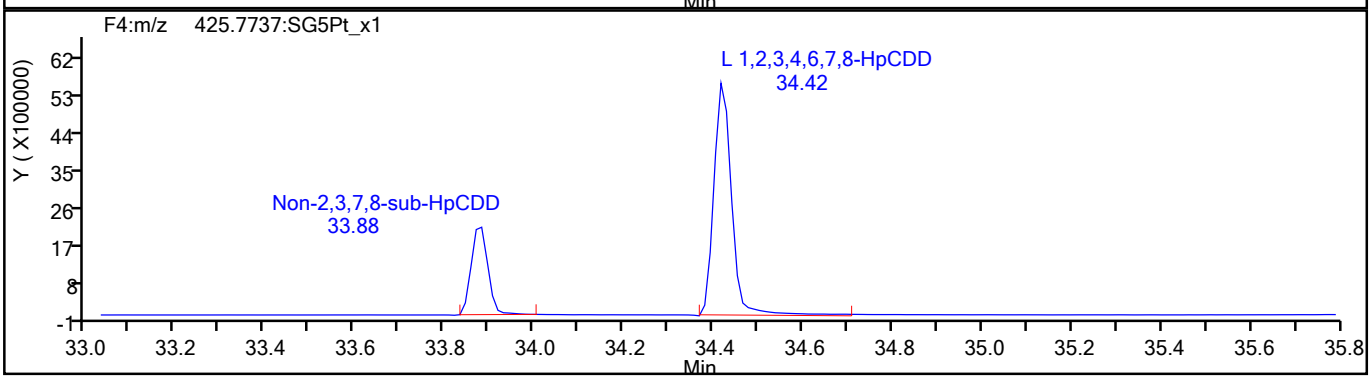

HpCDD Standards

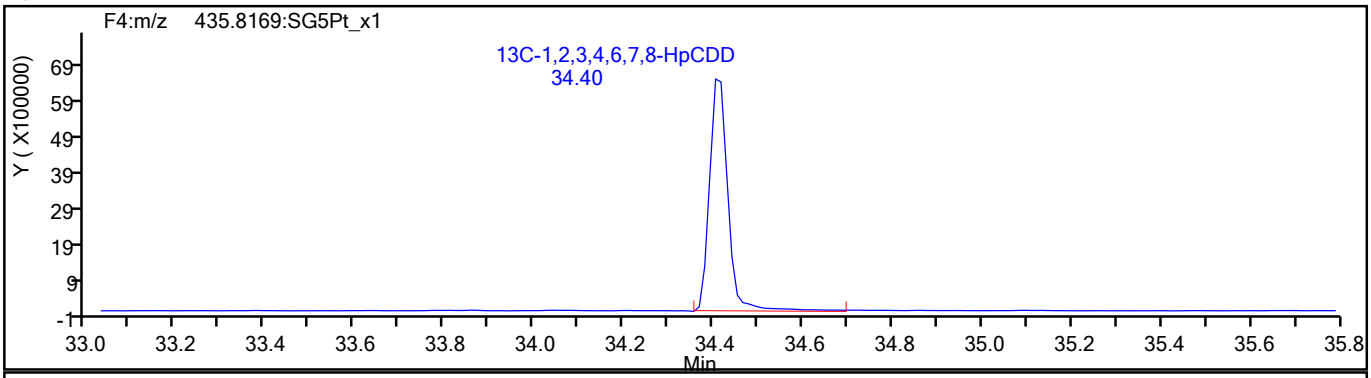

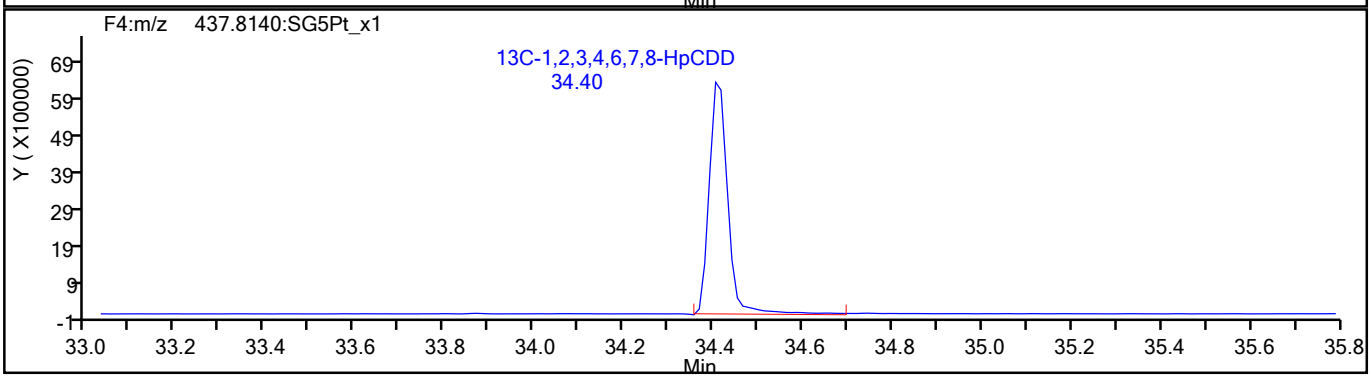

792960

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

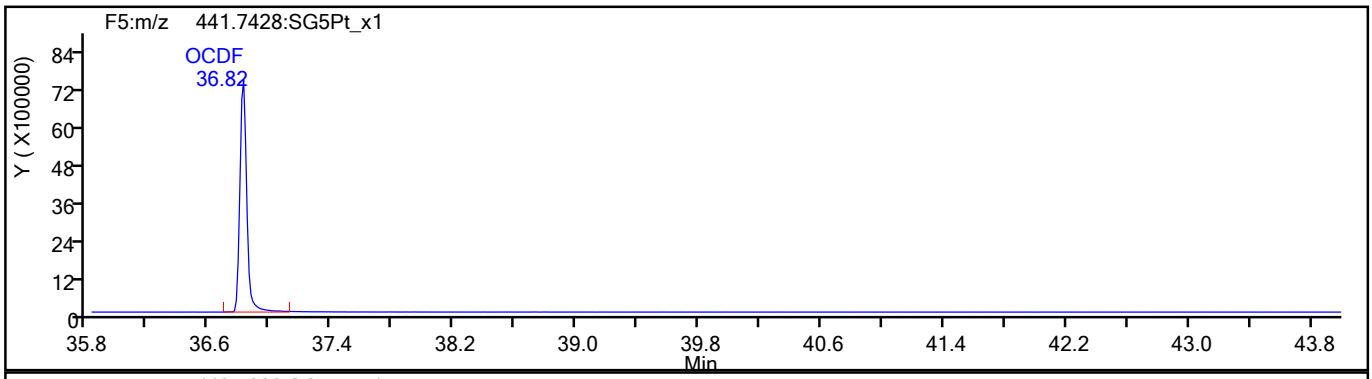

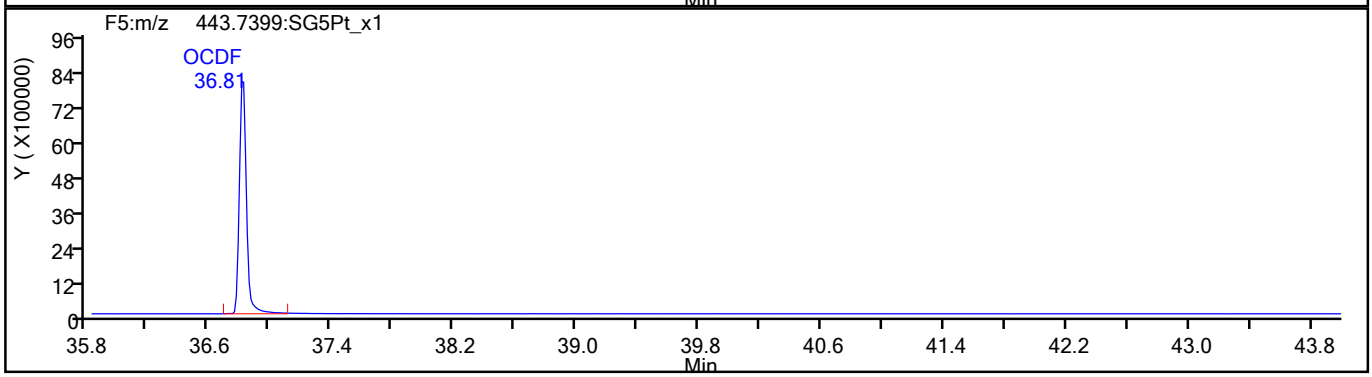

OCDF Standards

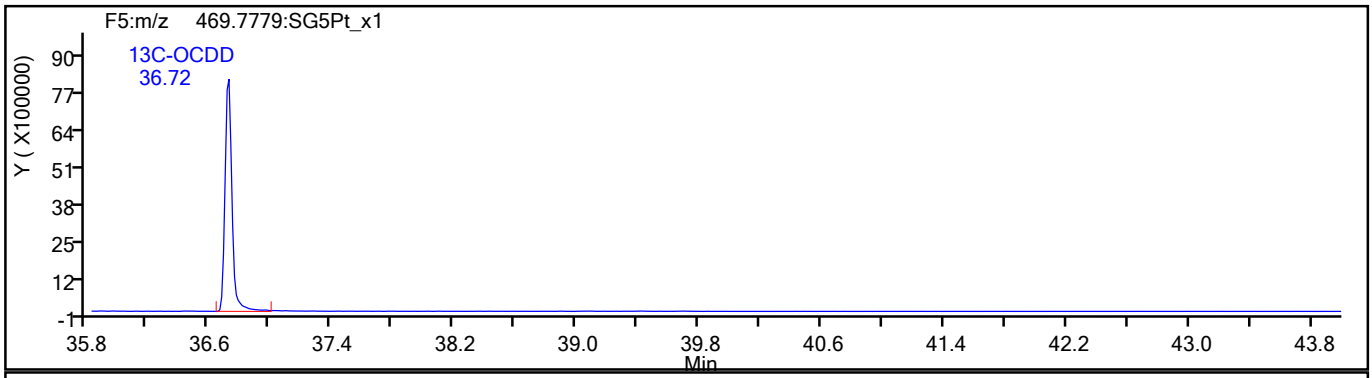

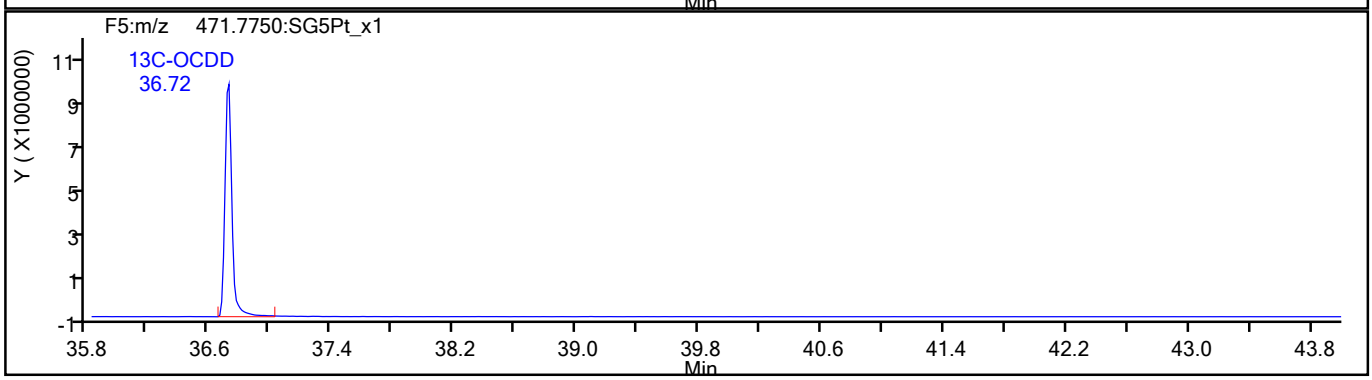

792961

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

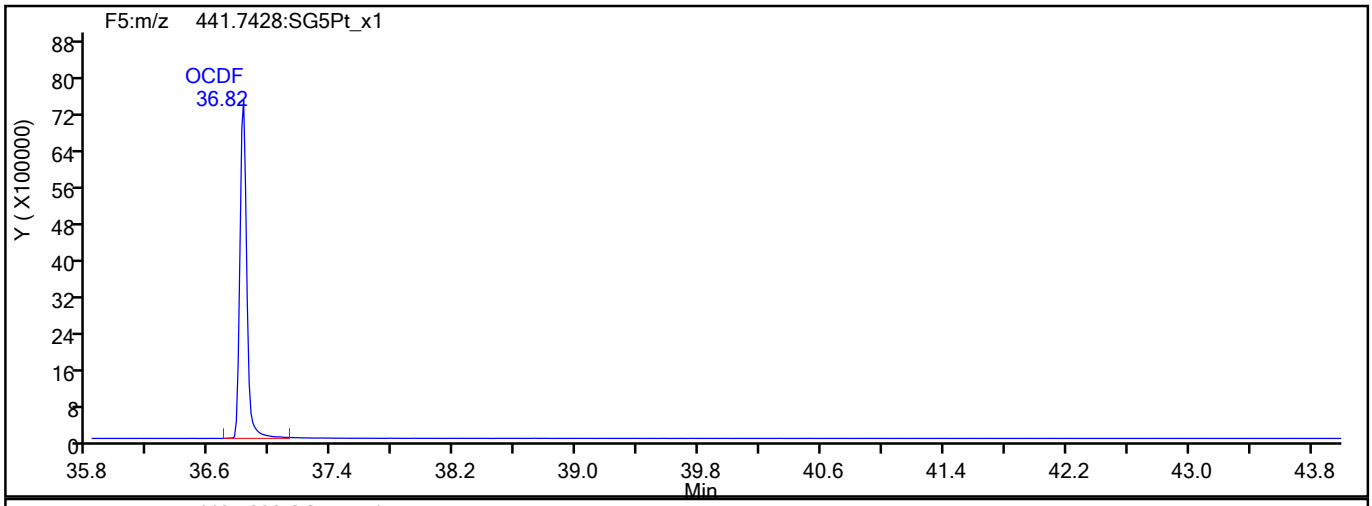

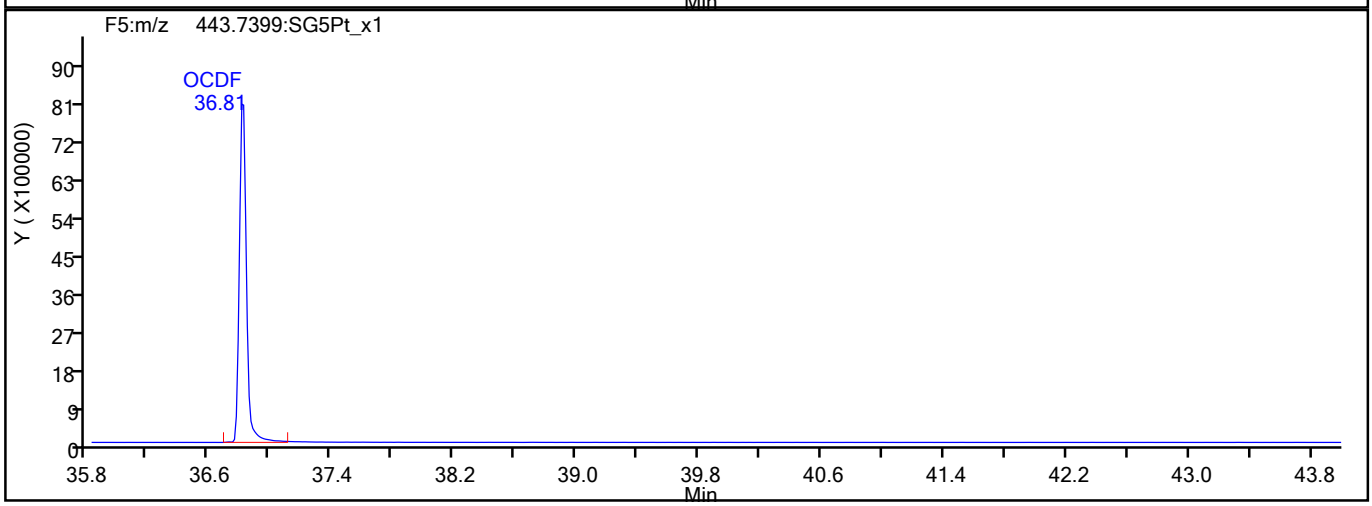

OCDF Interference Mass

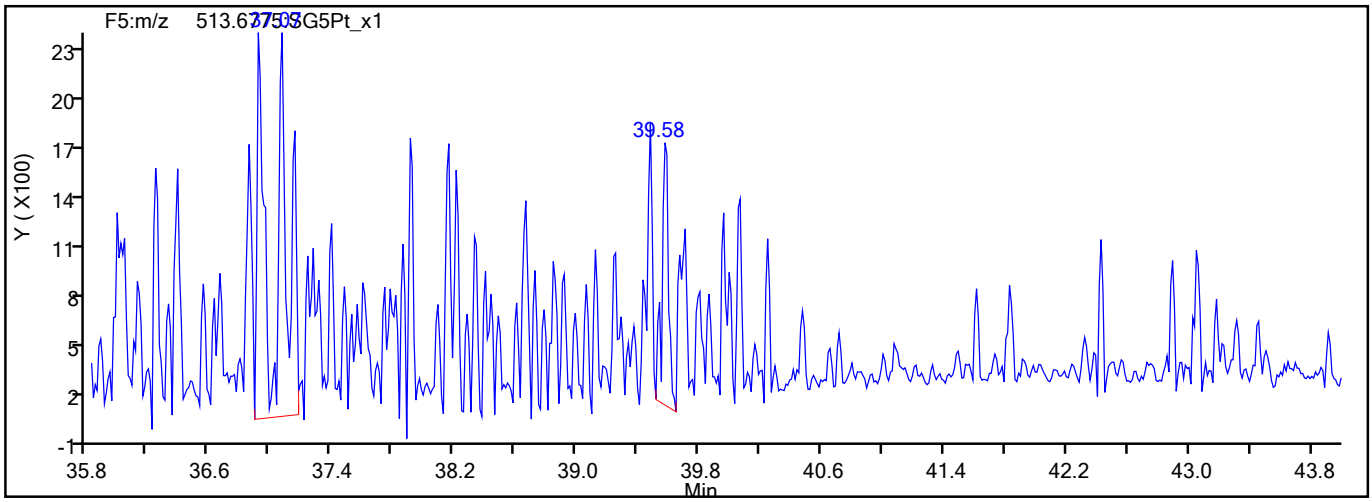

792962

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

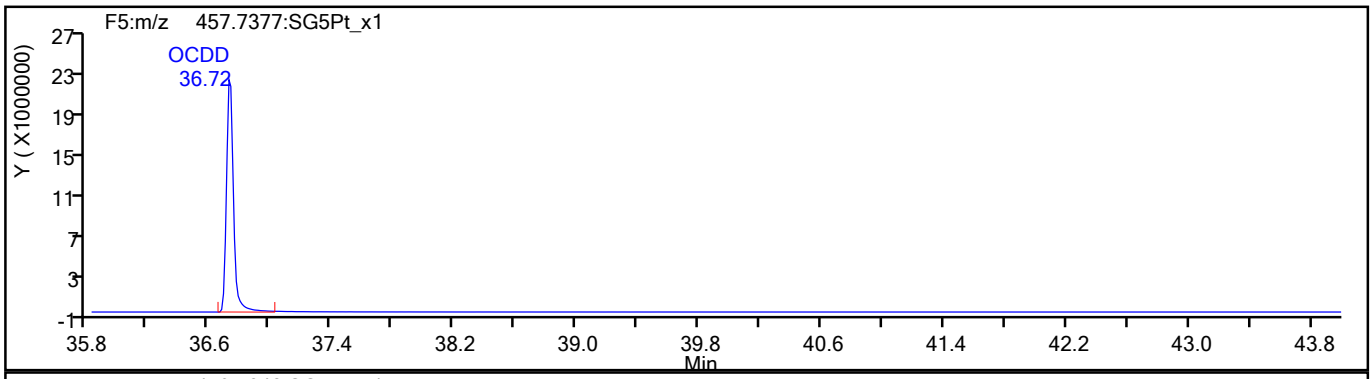

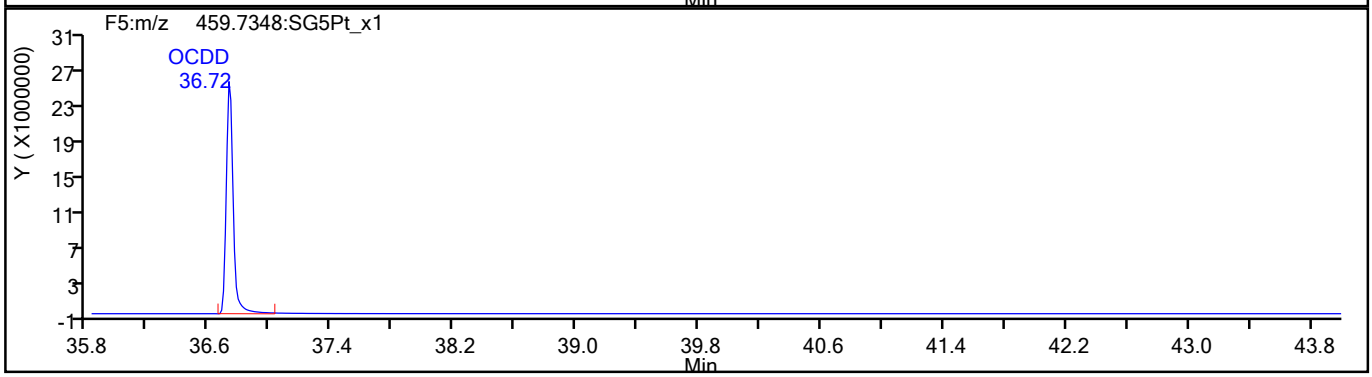

OCDD Standards

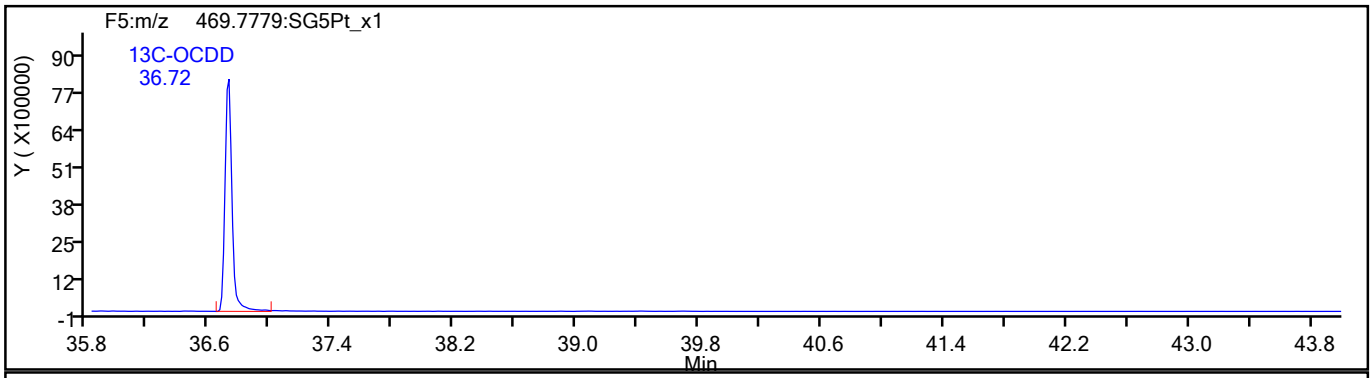

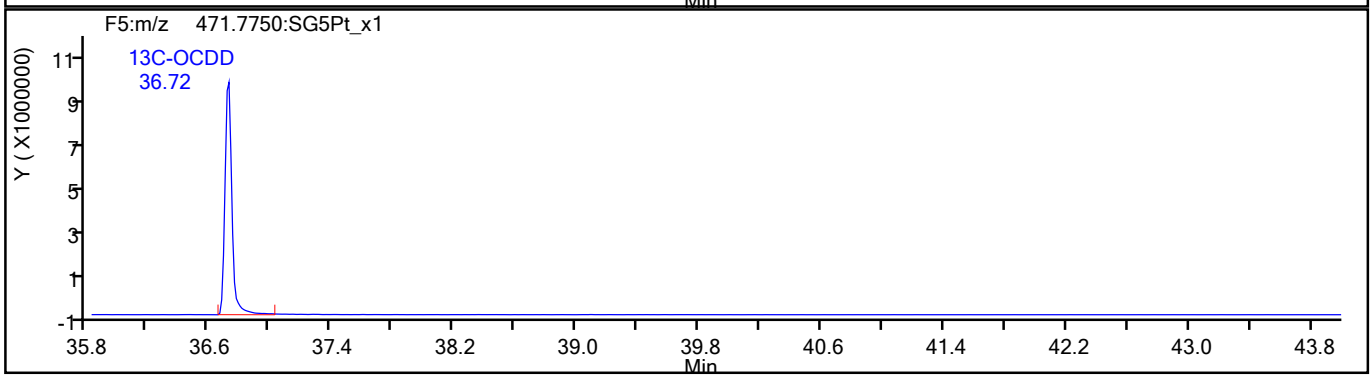

792963

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

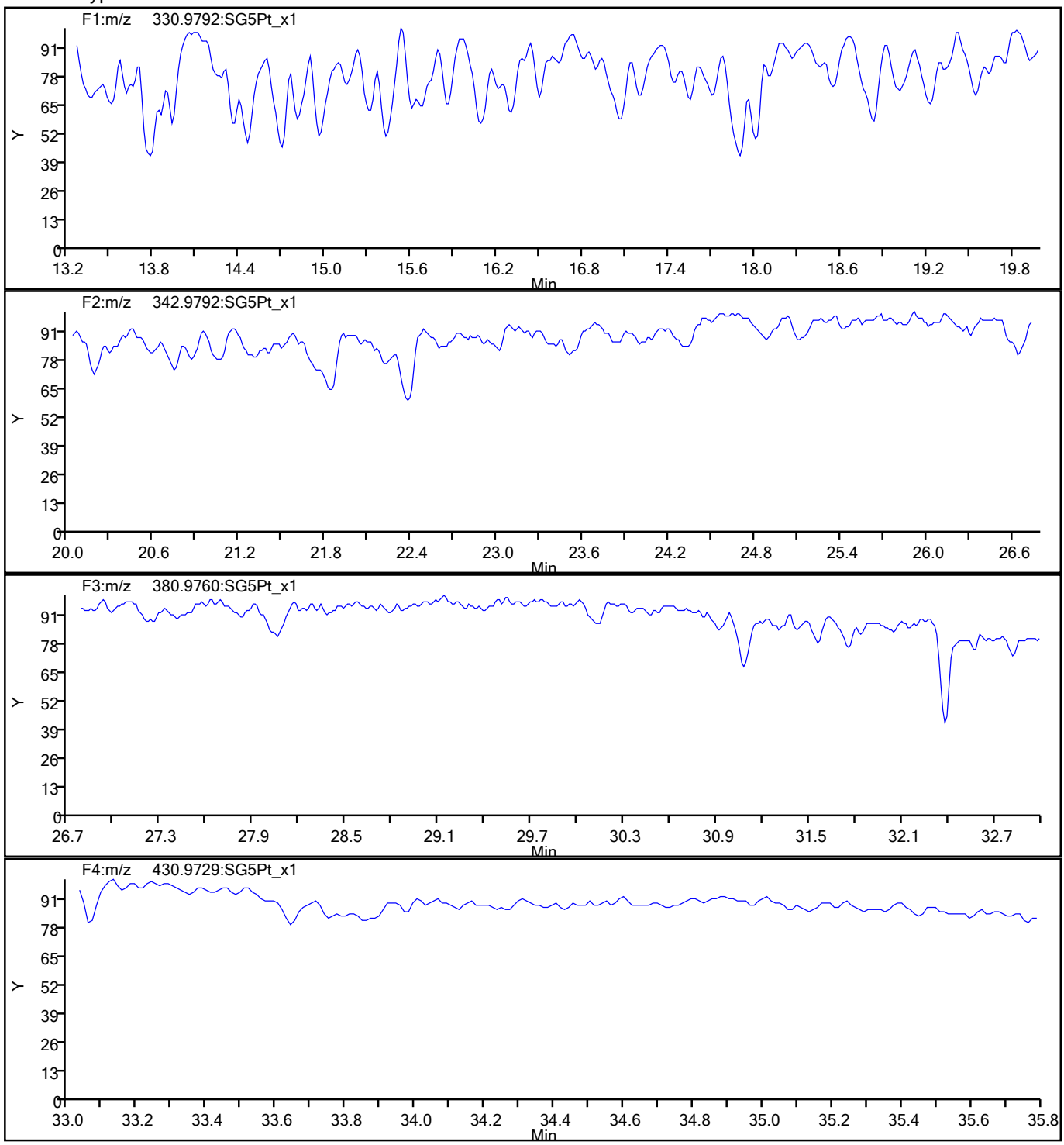

792964

Report Date: 27-Aug-2021 09:46:42 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_7.d		
Injection Date:	25-Aug-2021 14:20:45	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

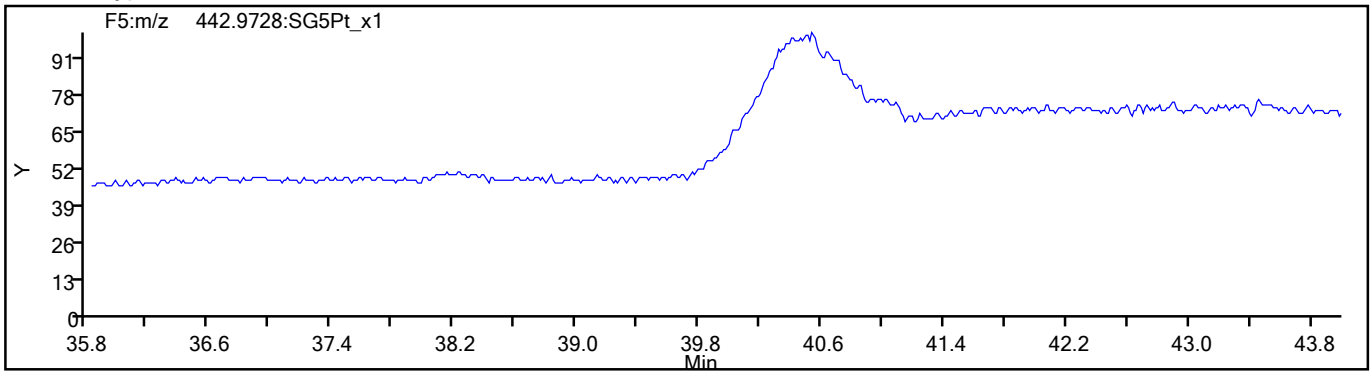

792965

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-77214-A-2-B MS RA
Matrix: Sediment
Lab File ID: 31AU2111D2_016.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.69(g)
Date Analyzed: 08/31/2021 22:48
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520997
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	9380		16	16

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	38		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	52		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MS
Inject. Date: 31-Aug-2021 22:48:56 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:48:43

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.342	39022101	0.86	7.2E+05	100.0	100.0				M
D 13C-2,3,7,8-TCDF	17.686	19589150	0.72	1.3327	37.7	37.7	5.546	5.546	37.67	M
2,3,7,8-TCDF	17.700	675220719	0.79	0.9978	3454.5	3454.5	5.907	5.907	34545	E
D 13C-2,3,7,8-TCDD	16.108	15558185	0.75	0.8749	45.6	45.6	27.4	27.4	45.57	
2,3,7,8-TCDD	16.122	171253773	0.78	1.0570	1041.4	1041.4	9.445	9.445	10414	E
$ 37Cl4-2,3,7,8-TCDD	16.122	6997155		0.8648	20.7	20.7	0.6452	0.6452	51.84	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d
Lims ID: 320-77214-A-2-B MS
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MS
Inject. Date: 31-Aug-2021 22:48:56 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:48:43

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.342	16.275	4		18034197	3219300	352265	880662	9		M
333.9339	16.342	16.275	4		20987904	3753202	316601	791502	12	0.86(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.686	17.605	5	1.082	8171421	1590415	93796	234490	17		M
317.9389	17.686	17.605	5	1.082	11417729	1923285	112332	280830	17	0.72(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.700	17.619	5	1.001	297587700	50123101	44140	110350	1136		
305.8987	17.700	17.619	5	1.001	377633019	63453477	38702	96755	1640	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.108	16.055	3	0.986	6675414	1476966	352265	880662	4		
333.9339	16.108	16.055	3	0.986	8882771	1870618	316601	791502	6	0.75(0.65-0.89)	
2,3,7,8-TCDD											E
319.8965	16.122	16.069	3	1.001	75052609	16877630	76117	190292	222		
321.8936	16.122	16.069	3	1.001	96201164	21580656	57563	143907	375	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.122	16.069	3	0.987	6997155	1566289	15562	38905	101		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d				
Injection Date:	31-Aug-2021 22:48:56	Instrument ID:	11D2		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.69
Area: 7463105
Amount: 42.714972
Amount Units: pg/ul

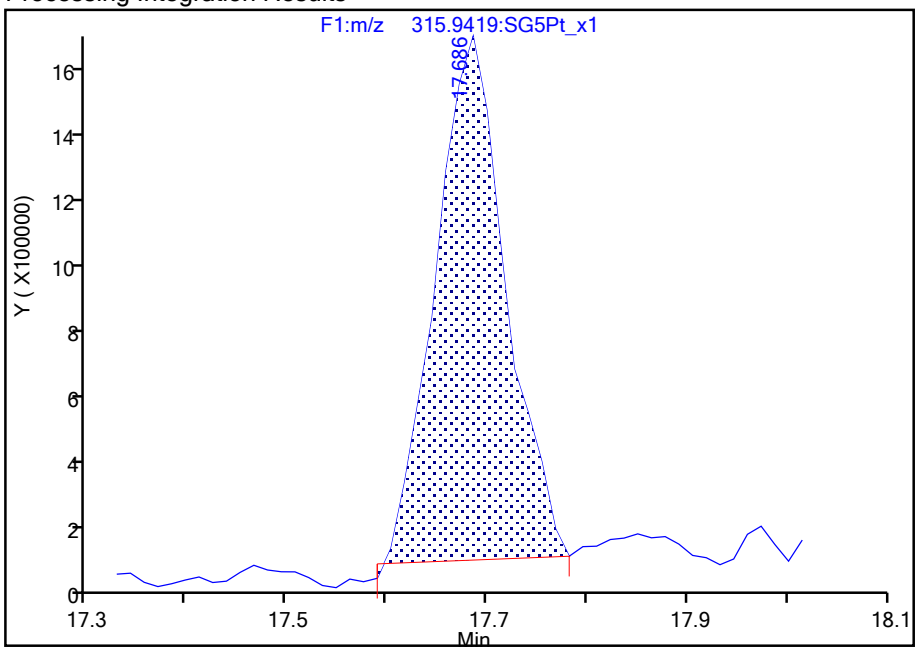

Manual Integration Results

RT: 17.69
Area: 8171421
Amount: 37.668394
Amount Units: pg/ul

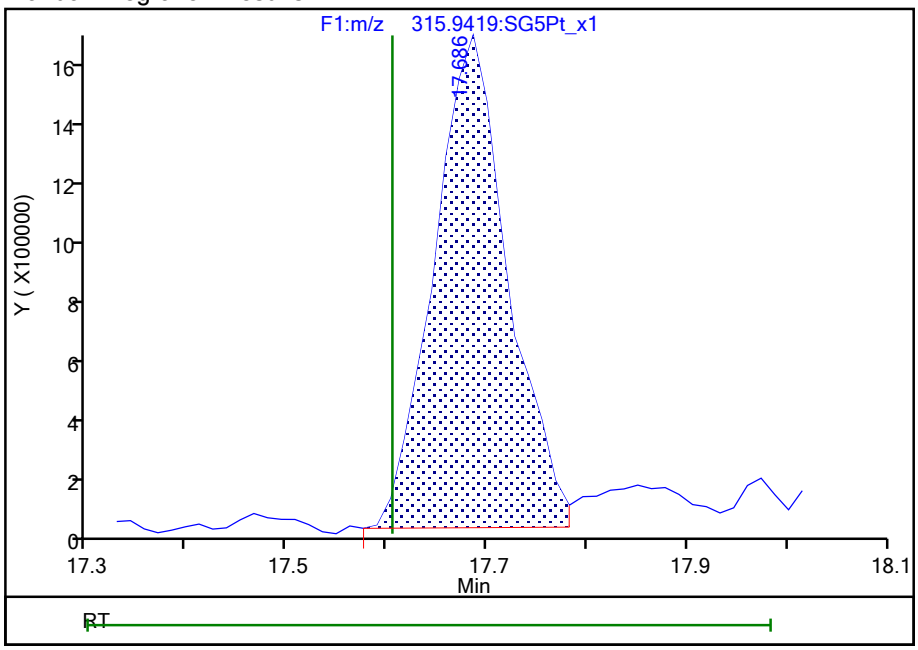

Reviewer: bennettd, 01-Sep-2021 09:48:31

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

792969

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d				
Injection Date:	31-Aug-2021 22:48:56	Instrument ID:	11D2		
Lims ID:	320-77214-A-2-B MS				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	16
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.69
Area: 14750478
Amount: 42.714972
Amount Units: pg/ul

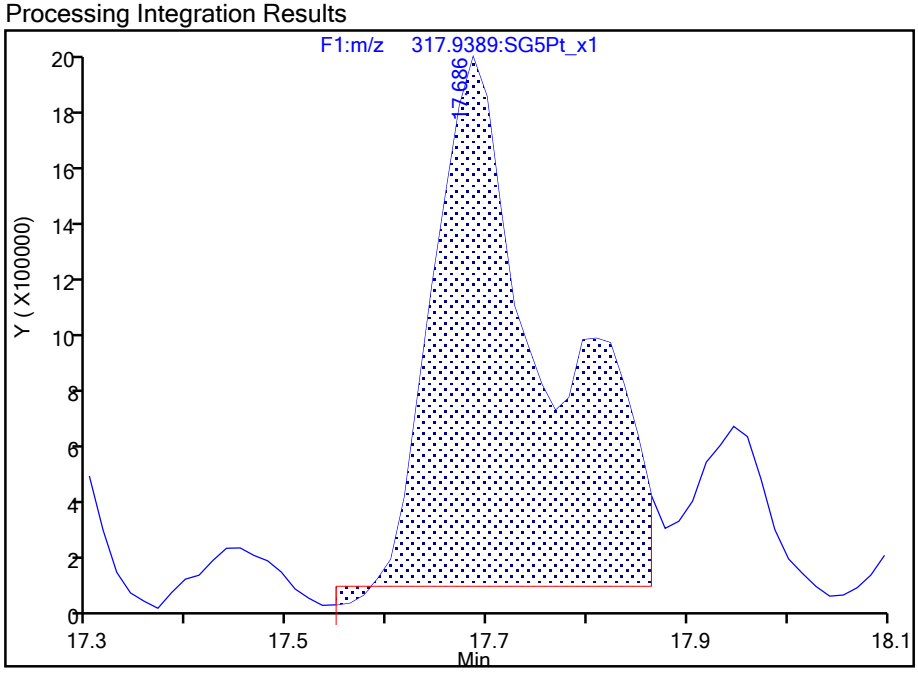

Manual Integration Results

RT: 17.69
Area: 11417729
Amount: 37.668394
Amount Units: pg/ul

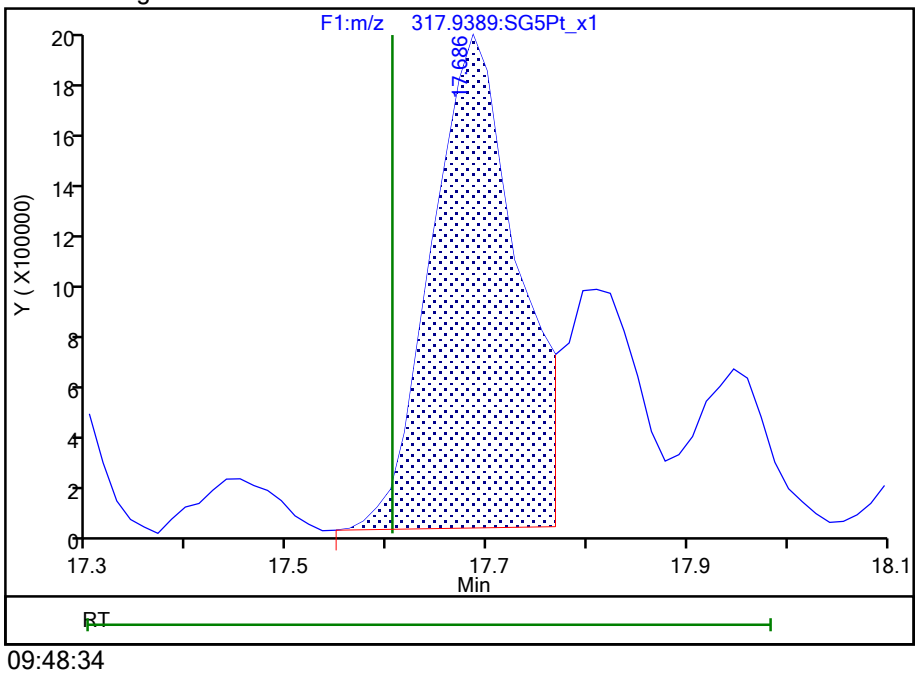

Reviewer: bennettd, 01-Sep-2021 09:48:34

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

792970

Report Date: 01-Sep-2021 09:57:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d		
Injection Date:	31-Aug-2021 22:48:56	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

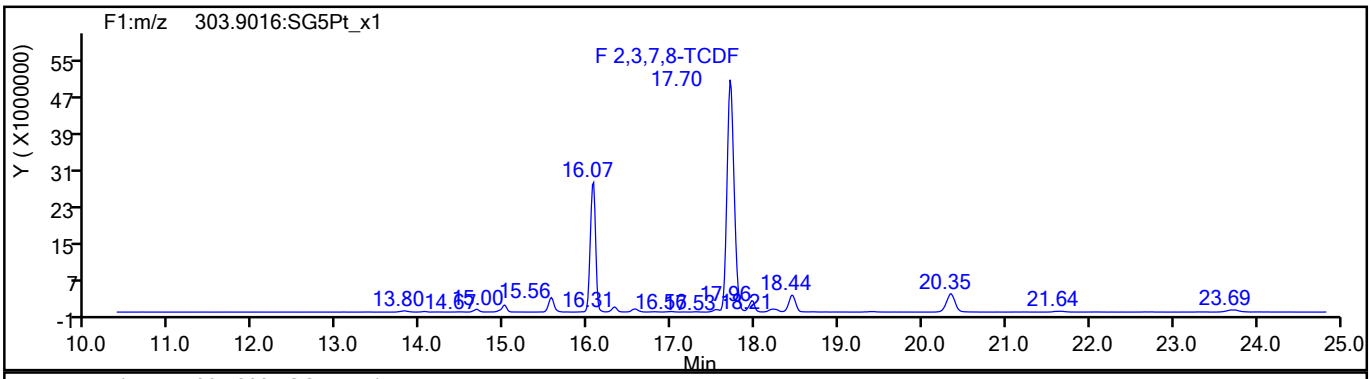

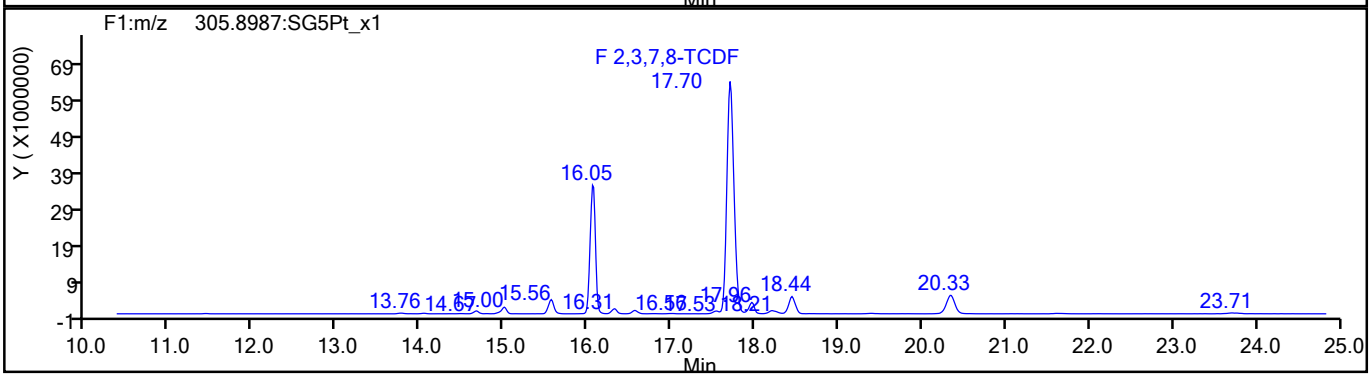

TCDF Standards

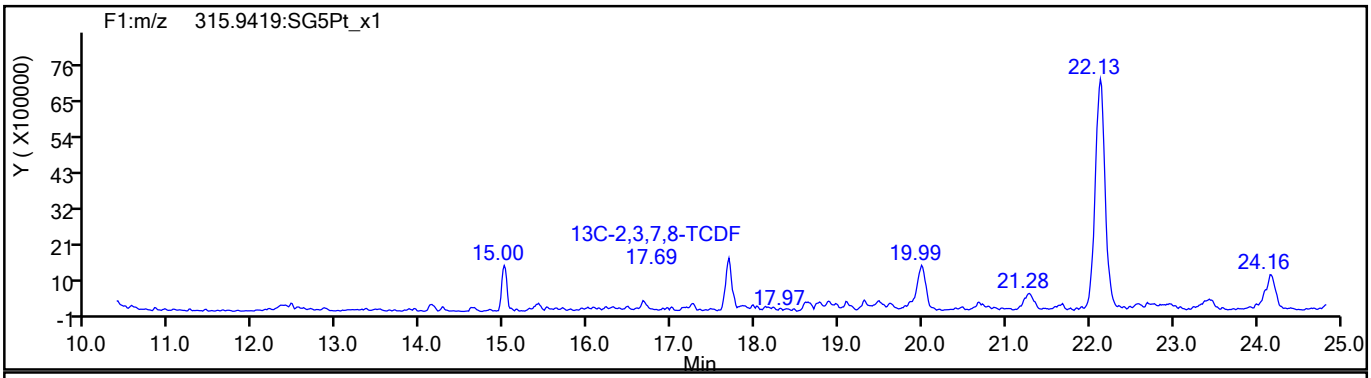

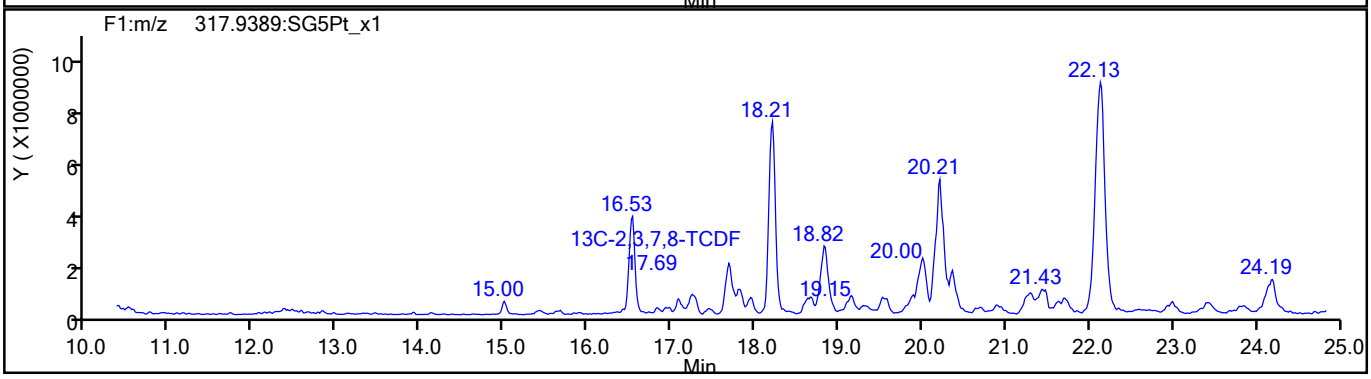

792971

Report Date: 01-Sep-2021 09:57:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d		
Injection Date:	31-Aug-2021 22:48:56	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

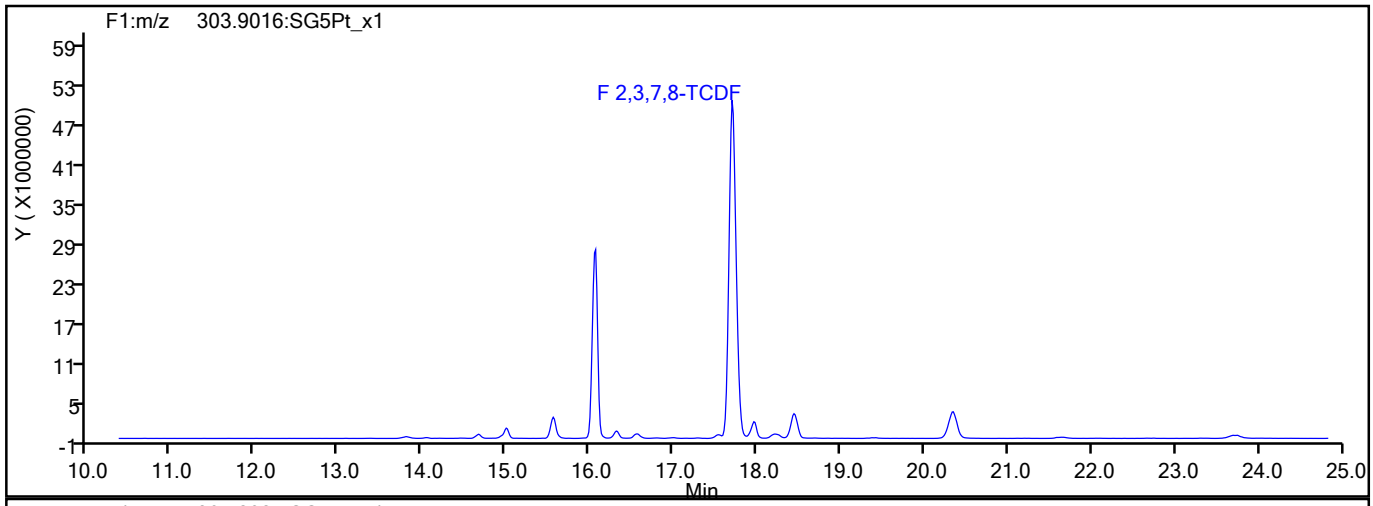

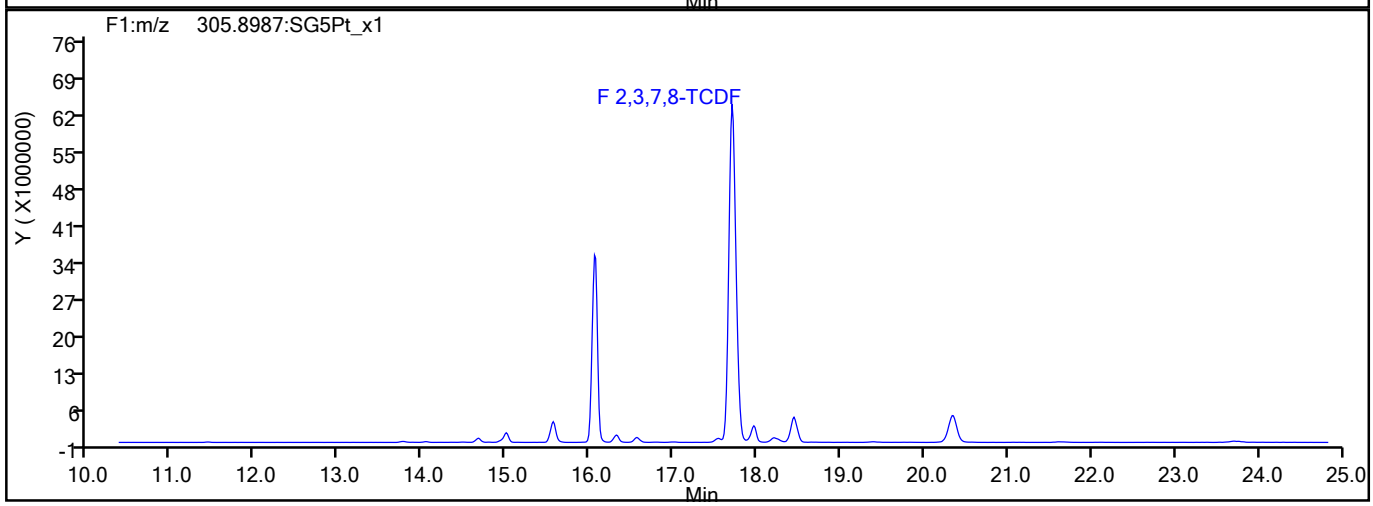

TCDF Interference Mass

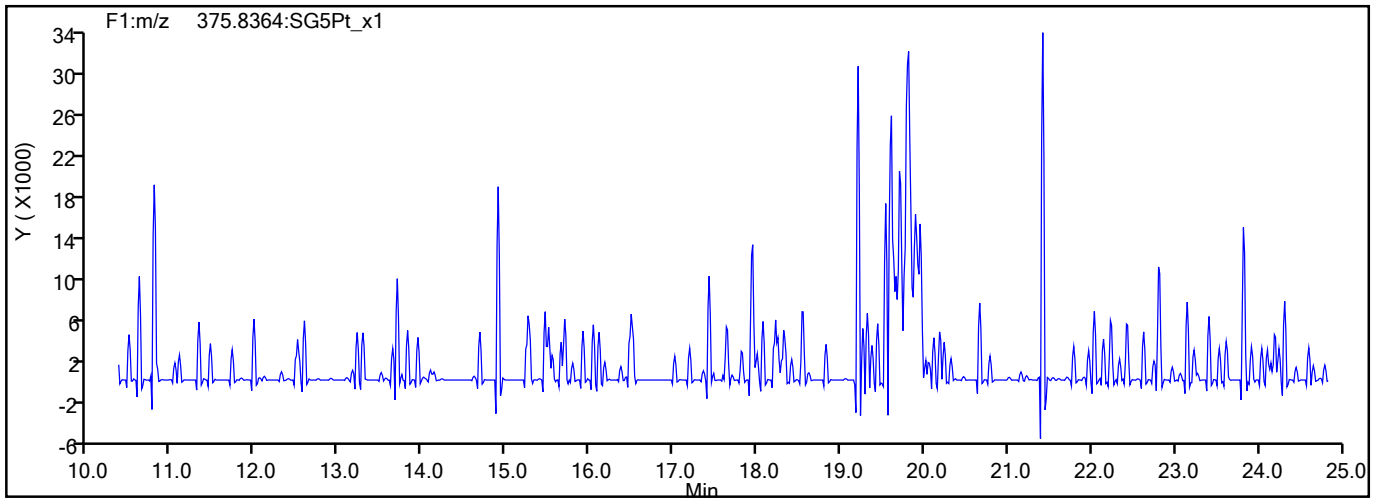

792972

Report Date: 01-Sep-2021 09:57:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d		
Injection Date:	31-Aug-2021 22:48:56	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

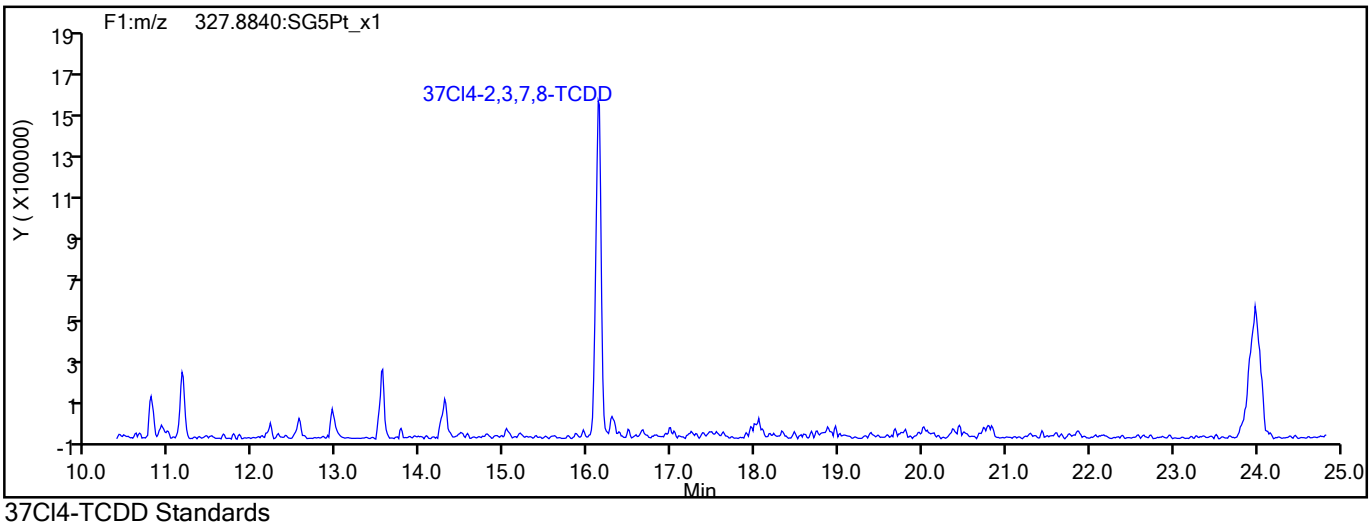

37Cl4-TCDD Standards

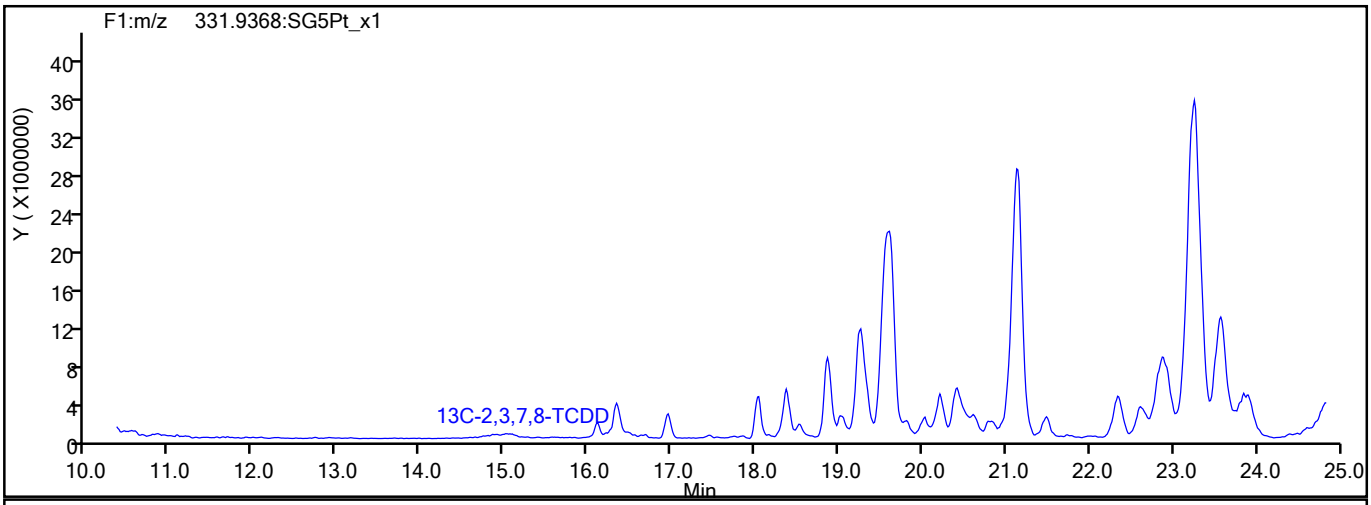

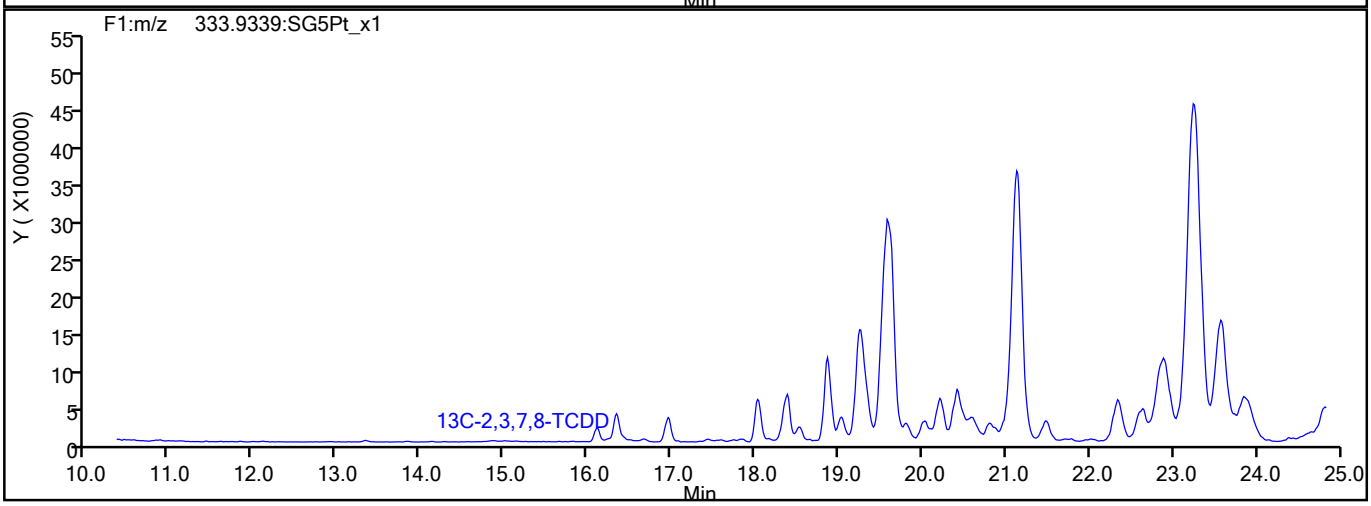

792973

Report Date: 01-Sep-2021 09:57:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_016.d		
Injection Date:	31-Aug-2021 22:48:56	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	16
Column Type:	DB-225	Column Dia:	0.32 mm

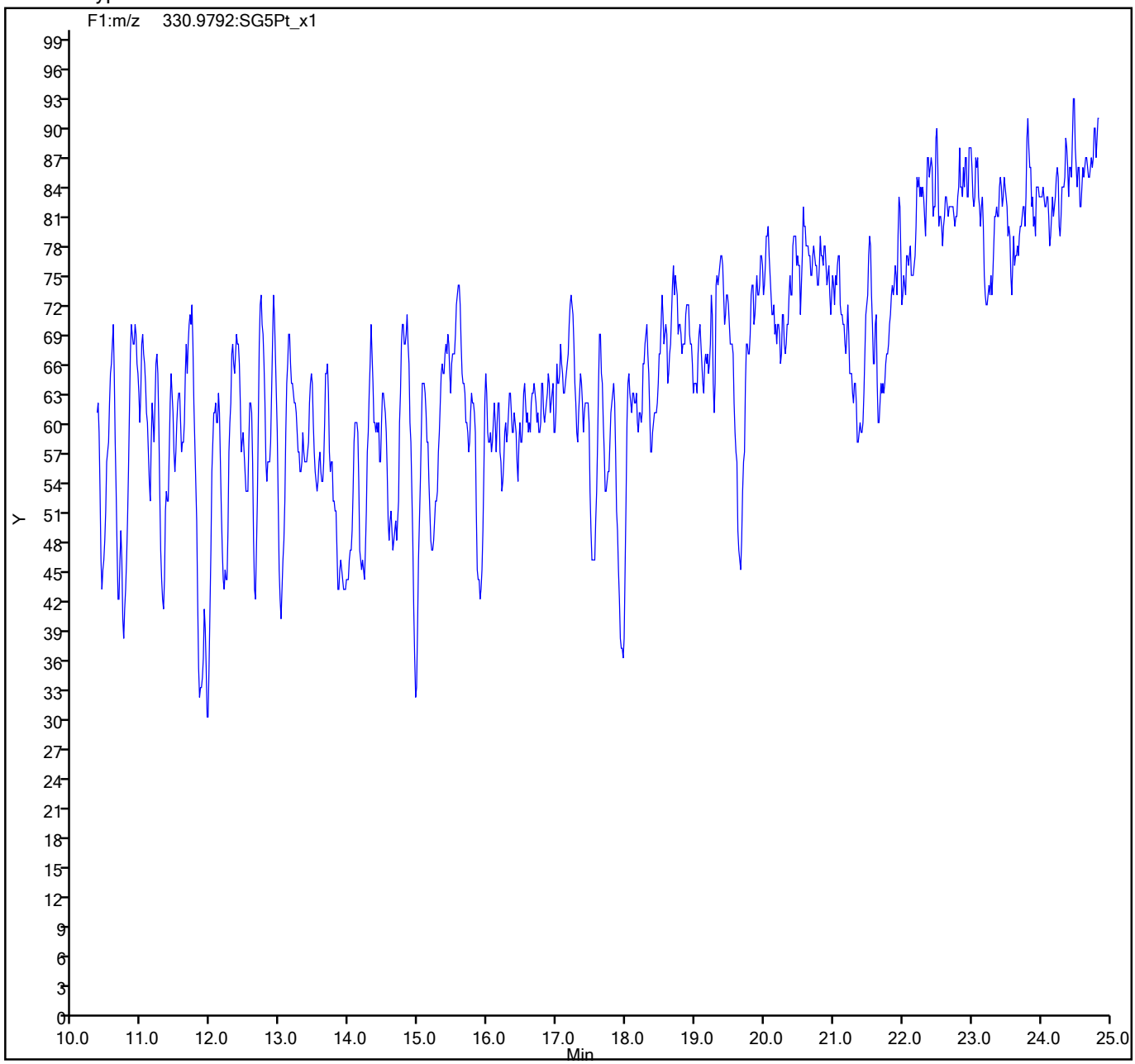

792974

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-77214-A-2-C MSD
Matrix: Sediment
Lab File ID: 25AU2110D5_8.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.05(g)
Date Analyzed: 08/25/2021 15:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	2400		6.5	6.5
40321-76-4	1,2,3,7,8-PeCDD	161		6.5	0.49
57117-41-6	1,2,3,7,8-PeCDF	389		6.5	1.5
57117-31-4	2,3,4,7,8-PeCDF	266		6.5	1.4
39227-28-6	1,2,3,4,7,8-HxCDD	137		6.5	1.4
57653-85-7	1,2,3,6,7,8-HxCDD	141		6.5	1.5
19408-74-3	1,2,3,7,8,9-HxCDD	137		6.5	1.3
70648-26-9	1,2,3,4,7,8-HxCDF	432		6.5	2.2
57117-44-9	1,2,3,6,7,8-HxCDF	223		6.5	2.2
72918-21-9	1,2,3,7,8,9-HxCDF	144		6.5	1.5
60851-34-5	2,3,4,6,7,8-HxCDF	151		6.5	1.6
35822-46-9	1,2,3,4,6,7,8-HpCDD	198		6.5	0.73
67562-39-4	1,2,3,4,6,7,8-HpCDF	230		6.5	0.81
55673-89-7	1,2,3,4,7,8,9-HpCDF	162		6.5	0.85
3268-87-9	OCDD	1350		13	0.85
39001-02-0	OCDF	323		13	0.18
41903-57-5	Total TCDD	4810		6.5	6.5
30402-14-3	Total TCDF	11400		21	21
36088-22-9	Total PeCDD	162		6.5	0.49
30402-15-4	Total PeCDF	861		6.5	1.5
34465-46-8	Total HxCDD	434		6.5	1.4
55684-94-1	Total HxCDF	983		6.5	1.9
37871-00-4	Total HpCDD	268		6.5	0.73
38998-75-3	Total HpCDF	426		6.5	0.83

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-77214-A-2-C MSD
Matrix: Sediment
Lab File ID: 25AU2110D5_8.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.05(g)
Date Analyzed: 08/25/2021 15:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	45		25-164
89059-46-1	13C-2,3,7,8-TCDF	60		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	83		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	73		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	80		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	65		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	59		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	69		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	59		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	59		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	60		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	57		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	51		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	61		26-138
114423-97-1	13C-OCDD	64		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	67		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MSD
Inject. Date: 25-Aug-2021 15:05:43 ALS Bottle#: 9 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-C MSD 320-77214-A-2-C MSD
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:50:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:00:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.673	96795268	0.82	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.159	94703845	0.78	1.6249	60.2	60.2	0.3227	0.3227	60.21	
2,3,7,8-TCDF	17.174	2341069376	0.78	1.0239	2414.3	2414.3	8.189	8.189	24143	E
A Non-2,3,7,8-sub-TCDF	17.076	1880041120	0.78	1.0239	1938.8	1938.8	8.189	1255.2	0.00	a
S Total TCDF					4353.1	4353.1	8.189	8.189		
D 13C-2,3,7,8-TCDD	17.885	39193029	0.83	0.8993	45.0	45.0	0.4009	0.4009	45.02	a
2,3,7,8-TCDD	17.900	451634282	0.79	1.2541	918.8	918.8	2.497	2.497	9188	Ea
$ 37Cl4-2,3,7,8-TCDD	17.900	28682080		1.1071	26.8	26.8	0.1292	0.1292	66.91	
A Non-2,3,7,8-sub-TCDD	17.537	451634282	0.79	1.2541	918.8	918.8	2.497	918.8	0.00	
S Total TCDD					1837.7	1837.7	2.497	2.497		
D 13C-1,2,3,7,8-PeCDF	22.115	85511666	1.56	1.2101	73.0	73.0	0.1850	0.1850	73.01	
1,2,3,7,8-PeCDF	22.129	134829737	1.57	1.0611	148.6	148.6	0.5786	0.5786	297	a
D 13C-2,3,4,7,8-PeCDF	23.411	96027381	1.57	1.2395	80.0	80.0	0.1806	0.1806	80.04	
2,3,4,7,8-PeCDF	23.438	99553016	1.58	1.0184	101.8	101.8	0.5366	0.5366	204	
A F1 PeCDFs	19.851	436768	1.68	1.0398	0.4628	0.4628	0.0179	0.4628	0.00	a
A Non-2,3,7,8-sub-PeCDF	23.067	73786753	1.55	1.0398	78.8	78.2	0.5562	32.1	0.00	RQa
S Total PeCDF					329.6	329.0	0.5576	0.5576		RQ
D 13C-1,2,3,7,8-PeCDD	24.120	61400023	1.62	0.7612	83.3	83.3	0.1165	0.1165	83.33	
1,2,3,7,8-PeCDD	24.133	39555109	1.58	1.0484	61.4	61.4	0.1860	0.1860	123	
A Non-2,3,7,8-sub-PeCDD	23.696	202442	1.44	1.0484	0.3145	0.3145	0.1860	0.3145	0.00	
S Total PeCDD					61.8	61.8	0.1860	0.1860		
D 13C-1,2,3,4,7,8-HxCDF	30.226	87278648	0.52	1.0837	69.0	69.0	0.1664	0.1664	68.99	
1,2,3,4,7,8-HxCDF	30.253	156345106	1.21	1.0851	165.1	165.1	0.8254	0.8254	330	
D 13C-1,2,3,6,7,8-HxCDF	30.439	78146968	0.52	1.1279	59.4	59.4	0.1599	0.1599	59.35	
1,2,3,6,7,8-HxCDF	30.452	74864770	1.22	1.1260	85.1	85.1	0.8276	0.8276	170	
D 13C-2,3,4,6,7,8-HxCDF	31.317	73926520	0.52	1.0637	59.5	59.5	0.1695	0.1695	59.53	
2,3,4,6,7,8-HxCDF	31.344	49724598	1.22	1.1675	57.6	57.6	0.6256	0.6256	115	
D 13C-1,2,3,7,8,9-HxCDF	32.156	66246037	0.52	0.9676	58.7	58.7	0.1864	0.1864	58.65	
1,2,3,7,8,9-HxCDF	32.169	42396666	1.22	1.1664	54.9	54.9	0.5900	0.5900	110	
A Non-2,3,7,8-sub-HxCDF	30.338	11336616	1.28	1.1363	13.1	13.1	0.7024	9.137	0.00	a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					375.7	375.7	0.7171	0.7171		
* 13C-1,2,3,7,8,9-HxCDD	31.970	116736468	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.517	55509484	1.22	0.7334	64.8	64.8	0.1320	0.1320	64.83	
1,2,3,4,7,8-HxCDD	31.544	30902251	1.24	1.0640	52.3	52.3	0.5490	0.5490	105	
D 13C-1,2,3,6,7,8-HxCDD	31.637	61118563	1.22	0.8802	59.5	59.5	0.1100	0.1100	59.48	
1,2,3,6,7,8-HxCDD	31.650	32928209	1.24	1.0001	53.9	53.9	0.5622	0.5622	108	
1,2,3,7,8,9-HxCDD	31.983	34632983	1.27	1.1325	52.4	52.4	0.5059	0.5059	105	
A Non-2,3,7,8-sub-HxCDD	30.525	4450511	1.23	1.0655	7.163	7.163	0.5377	4.424	0.00	
S Total HxCDD					165.8	165.8	0.5390	0.5390		
D 13C-1,2,3,4,6,7,8-HpCDF	33.616	45823922	0.44	0.7730	50.8	50.8	0.5108	0.5108	50.78	
1,2,3,4,6,7,8-HpCDF	33.628	58034466	1.06	1.4413	87.9	87.9	0.3094	0.3094	176	
D 13C-1,2,3,4,7,8,9-HpCDF	34.685	49952879	0.44	0.7008	61.1	61.1	0.5635	0.5635	61.06	
1,2,3,4,7,8,9-HpCDF	34.697	40680598	1.05	1.3174	61.8	61.8	0.3265	0.3265	124	
A Non-2,3,7,8-sub-HpCDF	34.150	8758501	1.05	1.3793	13.3	13.3	0.3175	13.3	0.00	a
S Total HpCDF					162.9	162.9	0.3179	0.3179		
D 13C-1,2,3,4,6,7,8-HpCDD	34.405	43091817	1.03	0.6472	57.0	57.0	0.2198	0.2198	57.03	
1,2,3,4,6,7,8-HpCDD	34.405	35679974	1.05	1.0943	75.7	75.7	0.2796	0.2796	151	
A Non-2,3,7,8-sub-HpCDD	34.223	12671127	1.03	1.0943	26.9	26.9	0.2796	26.9	0.00	a
S Total HpCDD					102.5	102.5	0.2796	0.2796		
D 13C-OCDD	36.713	66659390	0.89	0.4472	127.7	127.7	0.0958	0.0958	63.85	
OCDF	36.809	59251293	0.90	1.4382	123.6	123.6	0.0698	0.0698	124	
OCDD	36.725	189851860	0.90	1.1070	514.6	514.6	0.3233	0.3233	515	
1,3,6,8-TCDF	14.725						0.0	0.0		
1,3,6,8-TCDD	15.632						0.0	0.0		
2,3,4,7-TCDF	17.598	167690424	0.77							
1,2,3,7-TCDD	18.218	51897405	0.76							
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,8,9-TCDD	19.442	12981912								
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.983						0.0	0.0		U
1,2,3,4,8,9-HxCDF	32.169						0.0	0.0		U
1,2,3,4,6,7,9-HpCDD	33.871						0.0	0.0		U
1,2,3,4,6,7,9-HpCDF	33.628						0.0	0.0		U
1,2,3,8-TCDD	0.0						0.0	0.0		
1,3,7,9-TCDD	0.0						0.0	0.0		
1,2,3,4,7-PeCDD	0.0						0.0	0.0		
1,4,7,8-TCDD	0.0						0.0	0.0		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test
E - Exceeded Maximum Amount
Q - EMPC-Estimated Max. Possible Conc.

Review Flags

U - Marked Undetected

a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MSD
Inject. Date: 25-Aug-2021 15:05:43 ALS Bottle#: 9 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-C MSD 320-77214-A-2-C MSD
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:50:12 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:00:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.673	17.598	5		43584703	8906251	11759	29397	757		a
333.9339	17.673	17.598	5		53210565	10890990	16793	41982	649	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.159	17.099	4	0.971	41531554	11075442	17678	44195	627		
317.9389	17.144	17.099	3	0.970	53172291	14045444	23846	59615	589	0.78(0.65-0.89)	
2,3,7,8-TCDF											E
303.9016	17.174	17.114	4	1.001	1024965718	262877772	368233	920582	714		
305.8987	17.174	17.114	4	1.001	1316103658	333066393	474329	1185822	702	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	15.526	17.076	-93	0.905	6168774	1863608	368233	920582	5		
305.8987	15.526	17.076	-93	0.905	8069636	2427619	474329	1185822	5	0.76(0.65-0.89)	
303.9016	15.783	17.076	-77	0.920	20289753	5911103	368233	920582	16		
305.8987	15.783	17.076	-77	0.920	26362507	7593481	474329	1185822	16	0.77(0.65-0.89)	
303.9016	16.056	17.076	-61	0.936	28248942	5103417	368233	920582	14		
305.8987	16.056	17.076	-61	0.936	36870558	6580407	474329	1185822	14	0.77(0.65-0.89)	
303.9016	16.282	17.076	-48	0.949	27726659	7252843	368233	920582	20		
305.8987	16.282	17.076	-48	0.949	35929656	9377718	474329	1185822	20	0.77(0.65-0.89)	
303.9016	16.509	17.076	-34	0.962	40505682	11278426	368233	920582	31		
305.8987	16.509	17.076	-34	0.962	51527987	14678953	474329	1185822	31	0.79(0.65-0.89)	
303.9016	16.781	17.076	-18	0.978	532881627	138676184	368233	920582	377		
305.8987	16.781	17.076	-18	0.978	684279700	178189280	474329	1185822	376	0.78(0.65-0.89)	
303.9016	17.008	17.076	-4	0.991	14011545	3417721	368233	920582	9		
305.8987	17.008	17.076	-4	0.991	18192265	4479407	474329	1185822	9	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.598	17.076	31	1.026	72973619	19003754	368233	920582	52		a
305.8987	17.598	17.076	31	1.026	94716805	24481096	474329	1185822	52	0.77(0.65-0.89)	
303.9016	18.974	17.076	114	1.106	79212732	18627694	368233	920582	51		
305.8987	18.974	17.076	114	1.106	102072673	24066311	474329	1185822	51	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											a
331.9368	17.885	17.794	5	1.012	17807065	5101488	11759	29397	434		a
333.9339	17.885	17.794	5	1.012	21385964	6223444	16793	41982	371	0.83(0.65-0.89)	
2,3,7,8-TCDD											Ea
319.8965	17.900	17.809	5	1.001	199613269	58150870	75162	187905	774		a
321.8936	17.900	17.809	5	1.001	252021013	74431554	66715	166787	1116	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.900	17.809	5	1.013	28682080	8461599	11328	28320	747		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.900	17.537	22	1.001	199613269	58150870	75162	187905	774		
321.8936	17.900	17.537	22	1.001	252021013	74431554	66715	166787	1116	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.115	22.020	6	1.251	52158009	9371967	10552	26380	888		
353.8970	22.115	22.020	6	1.251	33353657	5983241	7172	17930	834	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											a
339.8597	22.129	22.047	5	1.001	82440470	14371518	22822	57055	630		a
341.8567	22.129	22.047	5	1.001	52389267	9070298	14889	37222	609	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.411	23.343	4	1.325	58657845	10536240	10552	26380	999		
353.8970	23.411	23.343	4	1.325	37369536	6715018	7172	17930	936	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.438	23.370	4	1.001	60968424	10921673	22822	57055	479		
341.8567	23.438	23.370	4	1.001	38584592	6980464	14889	37222	469	1.58(1.32-1.78)	
A F1 PeCDFs											a
339.8597	19.276	19.851	-34	0.872	273792	65996	475	1187	139		a
341.8567	19.276	19.851	-34	0.872	162976	41008	738	1845	56	1.68(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQa
339.8597	20.806	23.067	-135	0.941	18637161	3809817	22822	57055	167		
341.8567	20.806	23.067	-135	0.941	11635752	2344008	14889	37222	157	1.60(1.32-1.78)	
339.8597	21.625	23.067	-86	0.978	1354963	170830	22822	57055	7		
341.8567	21.597	23.067	-88	0.977	856504	111646	14889	37222	7	1.58(1.32-1.78)	
339.8597	22.006	23.067	-64	0.995	3004091	719798	22822	57055	32		a
	Empc Correction				2431616	705141	22822	57055	31		
341.8567	22.006	23.067	-64	0.995	1568785	454930	14889	37222	31	1.91(1.32-1.78)	
339.8597	22.647	23.067	-25	1.024	13171766	2417307	22822	57055	106		
341.8567	22.633	23.067	-26	1.023	8193293	1488416	14889	37222	100	1.61(1.32-1.78)	
339.8597	23.779	23.067	43	1.075	7815279	1214895	22822	57055	53		
341.8567	23.765	23.067	42	1.075	4873889	759419	14889	37222	51	1.60(1.32-1.78)	
339.8597	25.334	23.067	136	1.146	2010942	310864	22822	57055	14		
341.8567	25.334	23.067	136	1.146	1236803	197605	14889	37222	13	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.120	24.052	4	1.365	37996037	6477341	3776	9440	1715		
369.8919	24.120	24.052	4	1.365	23403986	3996641	3244	8110	1232	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.133	24.079	3	1.001	24201636	4099118	4826	12065	849		
357.8516	24.133	24.079	3	1.001	15353473	2634943	3344	8360	788	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	22.688	23.696	-60	0.941	119580	24826	4826	12065	5		
357.8516	22.688	23.696	-60	0.941	82862	15887	3344	8360	5	1.44(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.226	30.186	2	0.945	29854350	5398888	8309	20772	650		
385.8610	30.226	30.186	2	0.945	57424298	10273828	16586	41465	619	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.253	30.213	2	1.001	85751272	15107261	30863	77157	489		
375.8178	30.253	30.213	2	1.001	70593834	12381385	25284	63210	490	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.439	30.399	2	0.952	26709526	5123232	8309	20772	617		
385.8610	30.439	30.399	2	0.952	51437442	9940309	16586	41465	599	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.452	30.412	2	1.000	41173664	8171456	30863	77157	265		
375.8178	30.452	30.412	2	1.000	33691106	6810972	25284	63210	269	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.317	31.291	2	0.980	25427279	6629070	8309	20772	798		
385.8610	31.317	31.291	2	0.980	48499241	12588562	16586	41465	759	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.344	31.317	2	1.001	27352642	7126812	30863	77157	231		
375.8178	31.331	31.317	1	1.000	22371956	5781804	25284	63210	229	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.156	32.143	1	1.006	22707519	7049445	8309	20772	848		
385.8610	32.156	32.143	1	1.006	43538518	13346825	16586	41465	805	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.169	32.156	1	1.000	23339985	7630047	30863	77157	247		
375.8178	32.169	32.156	1	1.000	19056681	6187851	25284	63210	245	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											a
373.8208	29.281	30.338	-63	0.969	1901988	274589	30863	77157	9		
375.8178	29.281	30.338	-63	0.969	1502498	214994	25284	63210	9	1.27(1.05-1.43)	
373.8208	32.263	30.338	115	1.067	4462633	1349053	30863	77157	44		a
375.8178	32.249	30.338	114	1.067	3469497	1071962	25284	63210	42	1.29(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.970	31.956	1		64684220	19101459	7278	18195	2625		
403.8529	31.970	31.956	1		52052248	15406758	6085	15212	2532	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.517	31.504	1	0.986	30512911	8456519	7278	18195	1162		
403.8529	31.517	31.504	1	0.986	24996573	7028797	6085	15212	1155	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDD											
389.8157	31.544	31.517	2	1.001	17128331	4740408	20081	50202	236		
391.8127	31.531	31.517	1	1.000	13773920	3797467	16099	40247	236	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.637	31.610	2	0.990	33636119	8776975	7278	18195	1206		
403.8529	31.637	31.610	2	0.990	27482444	7308983	6085	15212	1201	1.22(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.650	31.624	2	1.000	18226836	5219508	20081	50202	260		
391.8127	31.650	31.624	2	1.000	14701373	4158769	16099	40247	258	1.24(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.983	31.969	1	1.015	19355722	5782341	20081	50202	288		
391.8127	31.983	31.969	1	1.015	15277261	4590954	16099	40247	285	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.121	30.525	-84	0.920	1520018	216404	20081	50202	11		
391.8127	29.121	30.525	-84	0.920	1228992	162658	16099	40247	10	1.24(1.05-1.43)	
389.8157	30.732	30.525	12	0.971	938956	192092	20081	50202	10		
391.8127	30.732	30.525	12	0.971	762545	152167	16099	40247	9	1.23(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.616	33.603	1	1.051	14012674	5251702	16852	42130	312		
419.8220	33.616	33.603	1	1.051	31811248	11946807	37656	94140	317	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.628	33.615	1	1.000	29860982	11161940	15661	39152	713		
409.7789	33.628	33.615	1	1.000	28173484	10502848	15020	37550	699	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.685	34.672	1	1.085	15341073	5505214	16852	42130	327		
419.8220	34.685	34.672	1	1.085	34611806	12329823	37656	94140	327	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.697	34.685	1	1.000	20854887	7296941	15661	39152	466		
409.7789	34.685	34.685	0	1.000	19825711	6873015	15020	37550	458	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											a
407.7818	33.919	34.150	-14	1.009	4482878	1731317	15661	39152	111		a
409.7789	33.919	34.150	-14	1.009	4275623	1640753	15020	37550	109	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.405	34.393	1	1.076	21904261	7412194	13352	33380	555		
437.8140	34.393	34.393	0	1.076	21187556	7220674	6281	15702	1150	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	18249707	6300048	9492	23730	664		
425.7737	34.405	34.405	0	1.000	17430267	6201339	8414	21035	737	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.871	34.223	-21	0.984	6432758	2485038	9492	23730	262		a
425.7737	33.871	34.223	-21	0.984	6238369	2349792	8414	21035	279	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.713	36.701	1	1.148	31353239	9741671	2944	7360	3309		
471.7750	36.713	36.701	1	1.148	35306151	10857314	2969	7422	3657	0.89(0.76-1.02)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											
441.7428	36.809	36.797	1	1.003	28100229	8920244	1992	4980	4478		
443.7399	36.809	36.797	1	1.003	31151064	9694033	2144	5360	4521	0.90(0.76-1.02)	
OCDD											
457.7377	36.725	36.713	1	1.000	89905193	27370724	6750	16875	4055		
459.7348	36.713	36.713	0	1.000	99946667	29960418	7994	19985	3748	0.90(0.76-1.02)	
1,3,6,8-TCDF											
303.9016	14.725						368233	920582			
305.8987	14.725						474329	1185822			
1,3,6,8-TCDD											
319.8965	15.632						75162	187905			
321.8936	15.632						66715	166787			
2,3,4,7-TCDF											
303.9016	17.598	17.537	4		72973619	19003754	368233	920582	52		
305.8987	17.598	17.537	4		94716805	24481096	474329	1185822	52	0.77(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.218	18.172	3		22457127	5546509	75162	187905	74		
321.8936	18.218	18.172	3		29440278	6993365	66715	166787	105	0.76(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.414						75162	187905			
321.8936	18.414						66715	166787			
1,2,3,9-TCDF											
303.9016	18.414						368233	920582			
305.8987	18.414						474329	1185822			
1,2,8,9-TCDD											
319.8965	19.442	19.382	4		12981912	2400434	75162	187905	32		
1,2,8,9-TCDF											
303.9016	19.427						368233	920582			
305.8987	19.427						474329	1185822			
1,3,4,6,8-PeCDF											
339.8597	19.669						475	1187			
341.8567	19.669						738	1845			
1,2,4,7,9-PeCDD											
355.8546	21.480						4826	12065			
357.8516	21.480						3344	8360			
1,2,3,8,9-PeCDD											
355.8546	25.790						4826	12065			
357.8516	25.790						3344	8360			
1,2,3,8,9-PeCDF											
339.8597	26.021						22822	57055			
341.8567	26.021						14889	37222			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						30863	77157			
375.8178	28.333						25284	63210			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						20081	50202			
391.8127	29.890						16099	40247			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7-HxCDD											U
389.8157	31.916						20081	50202			
391.8127	31.916						16099	40247			
1,2,3,4,8,9-HxCDF											U
373.8208	32.249						30863	77157			
375.8178	32.249						25284	63210			
1,2,3,4,6,7,9-HpCDD											U
423.7766	33.858						9492	23730			
425.7737	33.858						8414	21035			
1,2,3,4,6,7,9-HpCDF											U
407.7818	33.916						15661	39152			
409.7789	33.916						15020	37550			
1,2,3,8-TCDD											
319.8965	0.0						75162	187905			
321.8936	0.0						66715	166787			
1,3,7,9-TCDD											
319.8965	0.0						75162	187905			
321.8936	0.0						66715	166787			
1,2,3,4,7-PeCDD											
355.8546	0.0						4826	12065			
357.8516	0.0						3344	8360			
1,4,7,8-TCDD											
319.8965	0.0						75162	187905			
321.8936	0.0						66715	166787			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

E - Exceeded Maximum Amount

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

U - Marked Undetected

a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	94703845	25120886

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	94703845	25120886

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.526	6168774	1863608	8069636	2427619	14.7	0.76	
15.783	20289753	5911103	26362507	7593481	48.1	0.77	
16.056	28248942	5103417	36870558	6580407	67.2	0.77	
16.282	27726659	7252843	35929656	9377718	65.6	0.77	
16.509	40505682	11278426	51527987	14678953	94.9	0.79	
16.781	532881627	138676184	684279700	178189280	1255.2	0.78	
17.008	14011545	3417721	18192265	4479407	33.2	0.77	
17.598	72973619	19003754	94716805	24481096	172.9	0.77	a
18.974	79212732	18627694	102072673	24066311	187.0	0.78	
Signal Totals:							
	822019333	211134750	1058021787	271874272			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1880041120	483009022				0.78	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1938.8 = (1880041120 * 100.000) / (94703845 * 1.024)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Lims ID:	320-77214-A-2-C MSD		
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Inject. Date:	25-Aug-2021 15:05:43	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	8

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	39193029	11324932

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	39193029	11324932

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.900	199613269	58150870	252021013	74431554	918.8	0.79	
Signal Totals:							
	199613269	58150870	252021013	74431554			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	451634282	132582424				0.79	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 918.838 = (451634282 * 100.000) / (39193029 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	85511666	15355208
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	96027381	17251258

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	90769523	16303233

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.276	273792	65996	162976	41008	0.4628	1.68	a
Signal Totals:							
	273792	65996	162976	41008			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	436768	107004				1.68	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4628 = (436768 * 100.000) / (90769523 * 1.040)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	85511666	15355208
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	96027381	17251258

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	90769523	16303233

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.806	18637161	3809817	11635752	2344008	32.1	1.60	
21.625	1354963	170830	856504	111646	2.34	1.58	
22.006	3004091	719798	1568785	454930	4.85	1.91	RQa
22.006	2431616	705141	1568785	454930	4.24		Empc Correction
22.647	13171766	2417307	8193293	1488416	22.6	1.61	
23.779	7815279	1214895	4873889	759419	13.4	1.60	
25.334	2010942	310864	1236803	197605	3.44	1.63	
Signal Totals:							
	45421727	8628854	28365026	5356024			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	74359228	13999535				1.62	RQa
	73786753	13984878					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 78.787 = (74359228 * 100.000) / (90769523 * 1.040)
Empc Amount: 78.180 = (73786753 * 100.000) / (90769523 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Lims ID:	320-77214-A-2-C MSD		
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Inject. Date:	25-Aug-2021 15:05:43	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519953	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	61400023	10473982

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	61400023	10473982

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
22.688	119580	24826	82862	15887	0.3145	1.44	
Signal Totals:							
	119580	24826	82862	15887			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	202442	40713				1.44	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.3145 = (202442 * 100.000) / (61400023 * 1.048)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	87278648	15672716
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	78146968	15063541
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	73926520	19217632
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	66246037	20396270

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	76399543	17587539

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
29.281	1901988	274589	1502498	214994	3.92	1.27	
32.263	4462633	1349053	3469497	1071962	9.14	1.29	a
Signal Totals:							
	6364621	1623642	4971995	1286956			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	11336616	2910598				1.28	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 13.059 = (11336616 * 100.000) / (76399543 * 1.136)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	55509484	15485316
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	61118563	16085958
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	58314023	15785637

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.121	1520018	216404	1228992	162658	4.42	1.24	
30.732	938956	192092	762545	152167	2.74	1.23	
Signal Totals:	2458974	408496	1991537	314825			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4450511	723321				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 7.163 = (4450511 * 100.000) / (58314023 * 1.066)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDF, RT: 34.150

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	45823922	17198509
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	49952879	17835037

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	47888400	17516773

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
33.919	4482878	1731317	4275623	1640753	13.3	1.05	a
Signal Totals:	4482878	1731317	4275623	1640753			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8758501	3372070				1.05	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 13.260 = (8758501 * 100.000) / (47888400 * 1.379)

QC Flag Legend

Review Flags
a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Inject. Date: 25-Aug-2021 15:05:43 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	43091817	14632868

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	43091817	14632868

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.871	6432758	2485038	6238369	2349792	26.9	1.03	a
Signal Totals:							
	6432758	2485038	6238369	2349792			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12671127	4834830				1.03	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 26.871 = (12671127 * 100.000) / (43091817 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d				
Injection Date:	25-Aug-2021 15:05:43	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDD, CAS: 76523-40-5

Signal: 1

Processing Integration Results

RT: 17.67
Area: 43584703
Amount: 111.1955
Amount Units: pg/ul

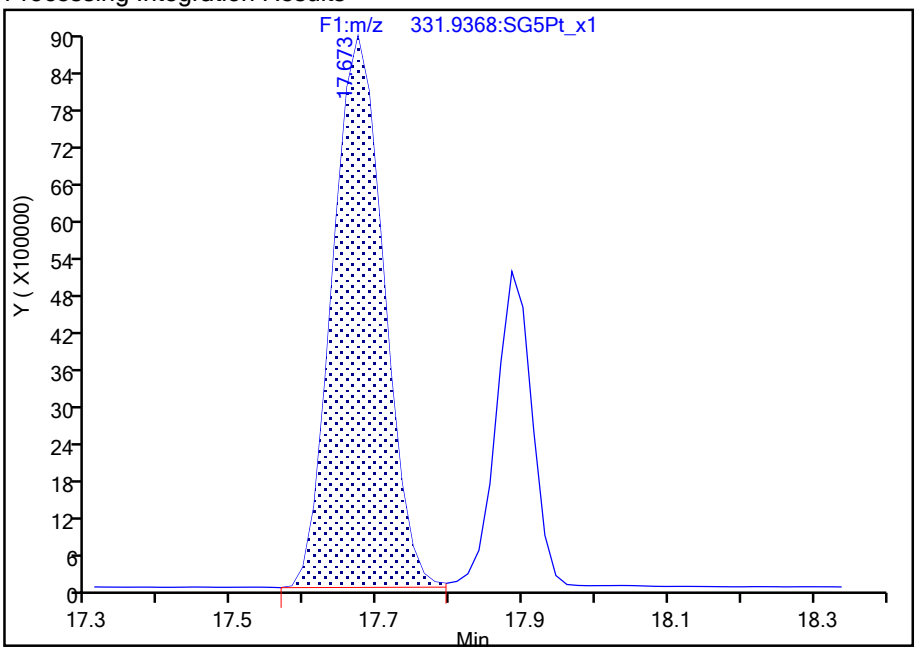

Manual Integration Results

RT: 17.89
Area: 17807065
Amount: 45.023793
Amount Units: pg/ul

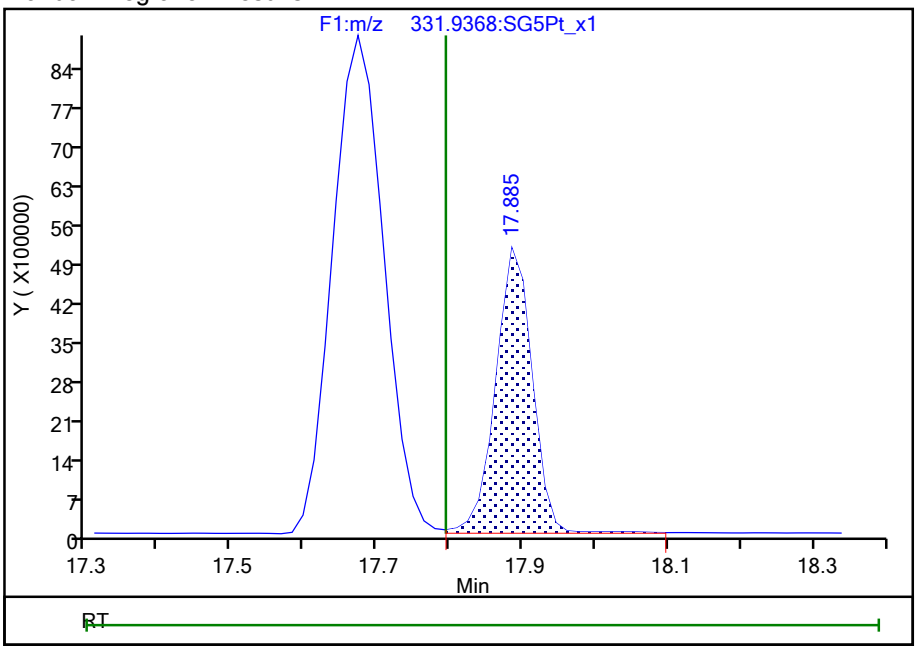

Reviewer: bennettd, 26-Aug-2021 09:59:35

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d				
Injection Date:	25-Aug-2021 15:05:43	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 17.79
Area: 2024791
Amount: 9.591997
Amount Units: pg/ul

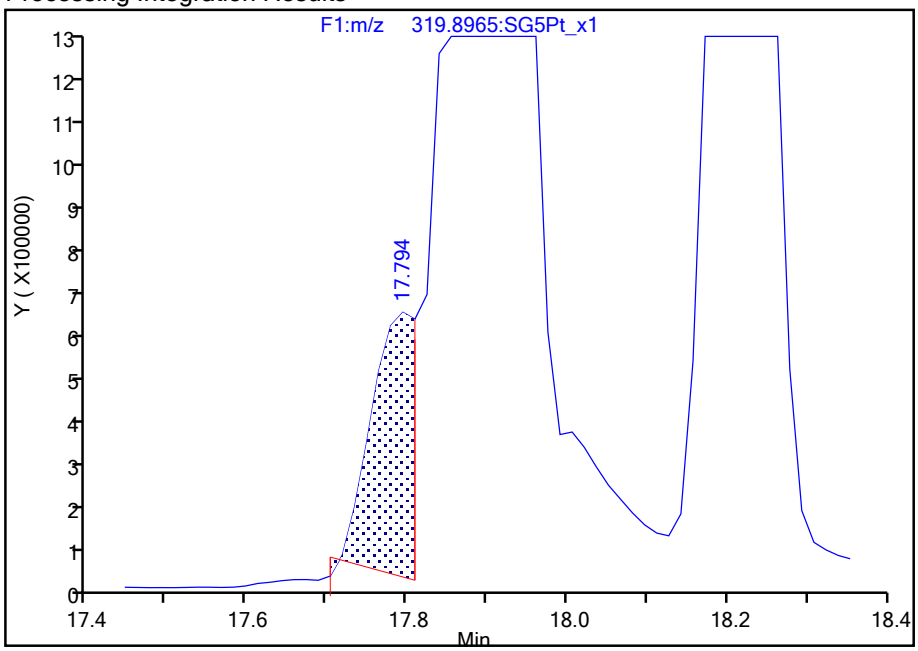

Manual Integration Results

RT: 17.90
Area: 199613269
Amount: 918.8382
Amount Units: pg/ul

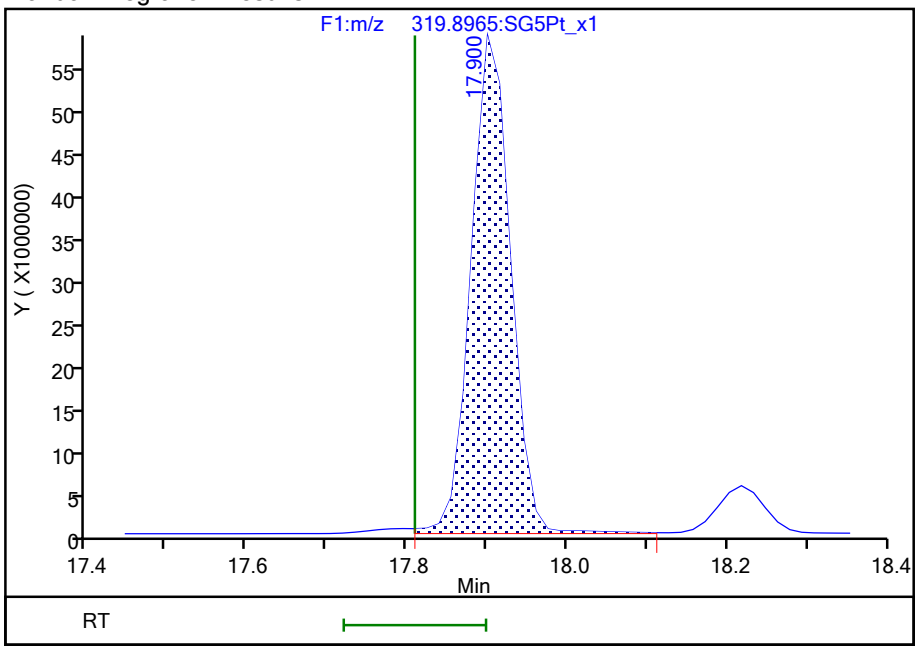

Reviewer: bennettd, 26-Aug-2021 10:02:50

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

792997

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d				
Injection Date:	25-Aug-2021 15:05:43	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.01
Area: 1568785
Amount: 5.039571
Amount Units: pg/ul

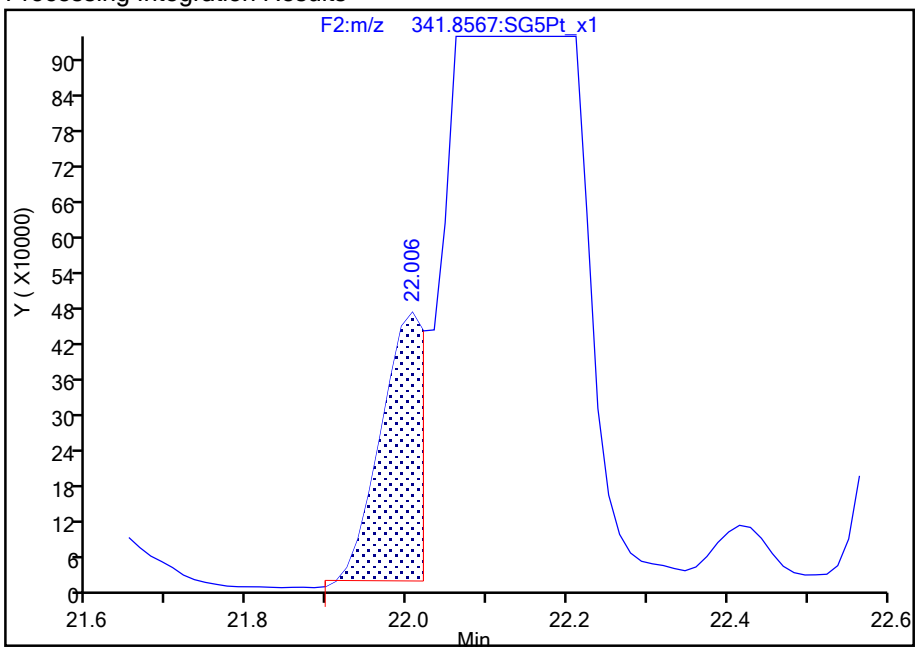

Manual Integration Results

RT: 22.13
Area: 52389267
Amount: 148.5901
Amount Units: pg/ul

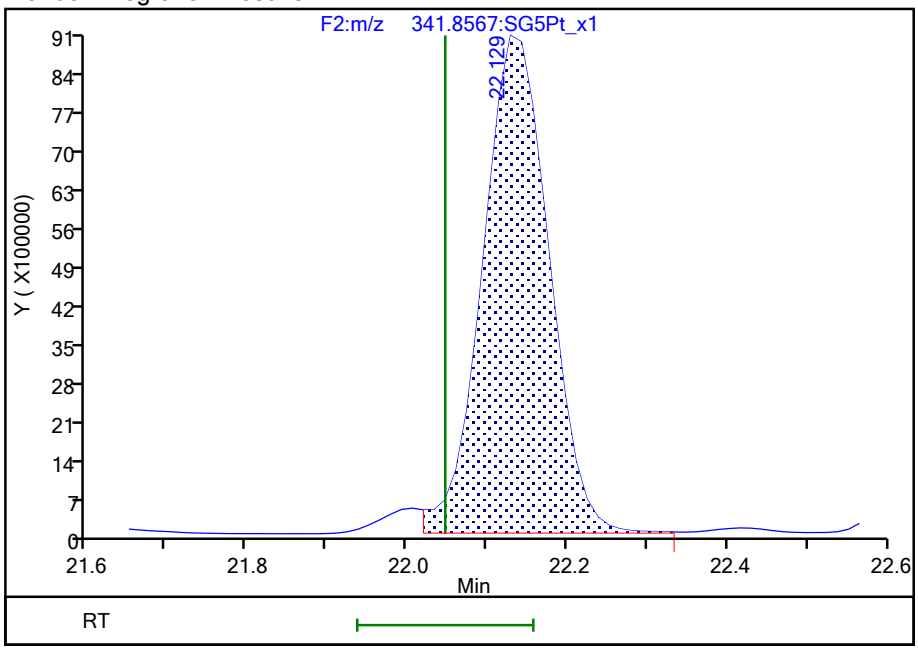

Reviewer: dadunj, 27-Aug-2021 09:47:16
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

792998

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d				
Injection Date:	25-Aug-2021 15:05:43	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 3

Processing Integration Results

RT: 22.01
Area: 4572876
Amount: 5.039571
Amount Units: pg/ul

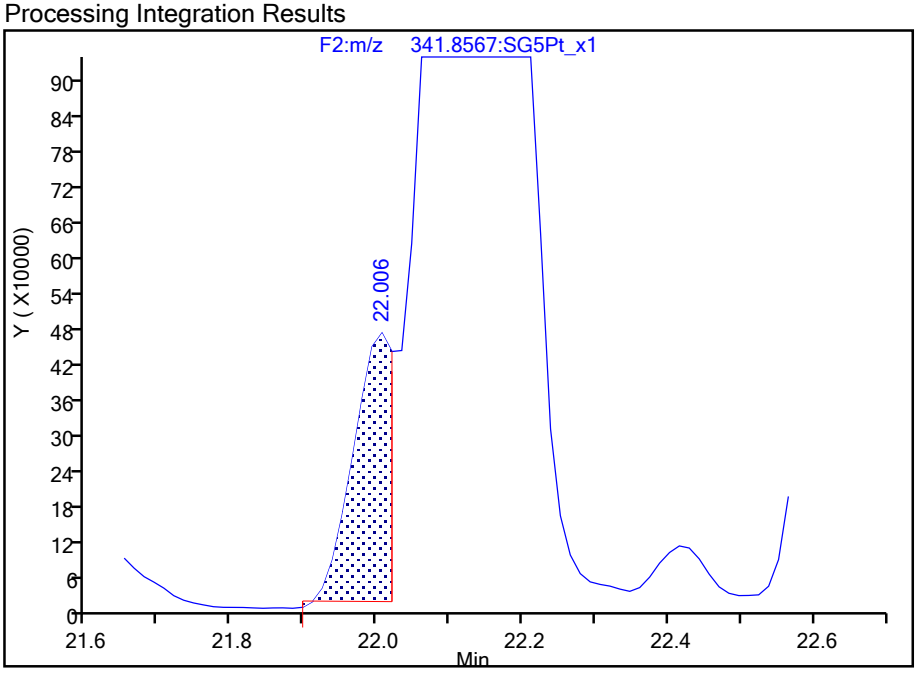

Manual Integration Results

RT: 22.13
Area: 134829737
Amount: 148.5901
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 09:47:16
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d				
Injection Date:	25-Aug-2021 15:05:43	Instrument ID:	10D5		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:	SMA	ALS Bottle#:	9	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.01
Area: 3004091
Amount: 5.039571
Amount Units: pg/ul

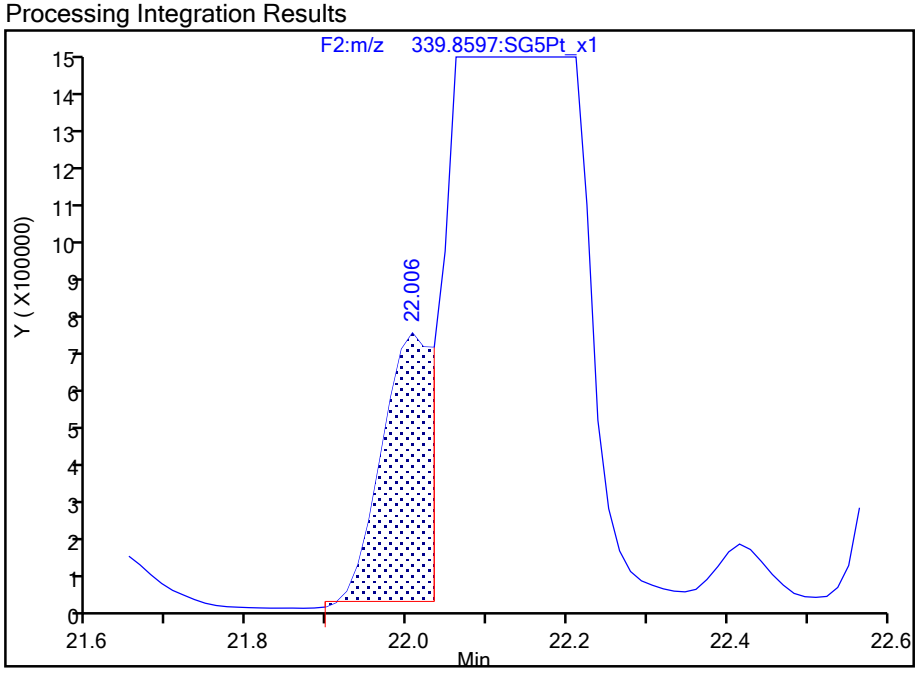

Manual Integration Results

RT: 22.13
Area: 82440470
Amount: 148.5901
Amount Units: pg/ul

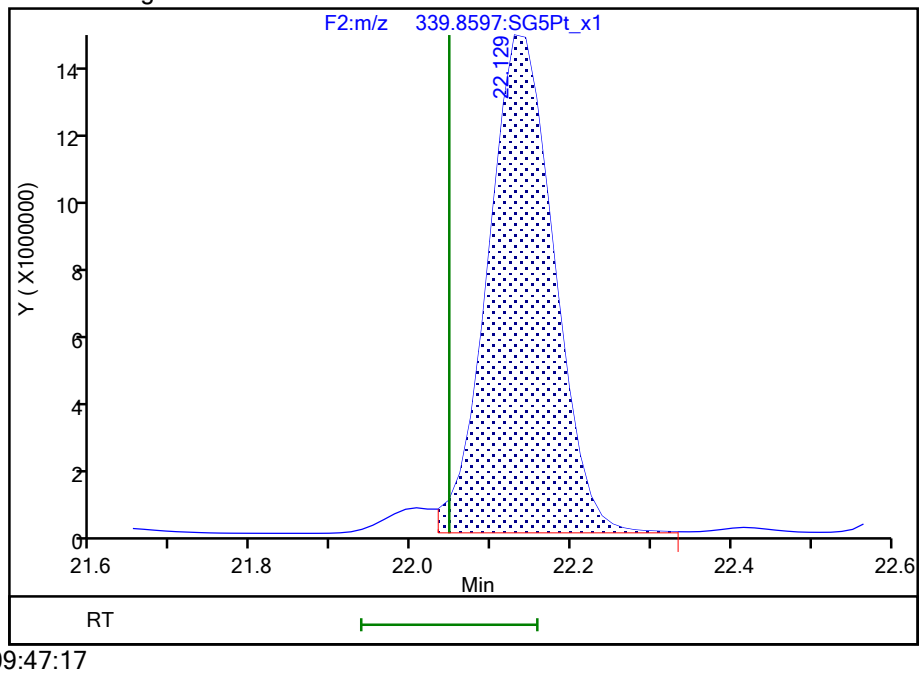

Reviewer: dadunj, 27-Aug-2021 09:47:17

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

793000

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

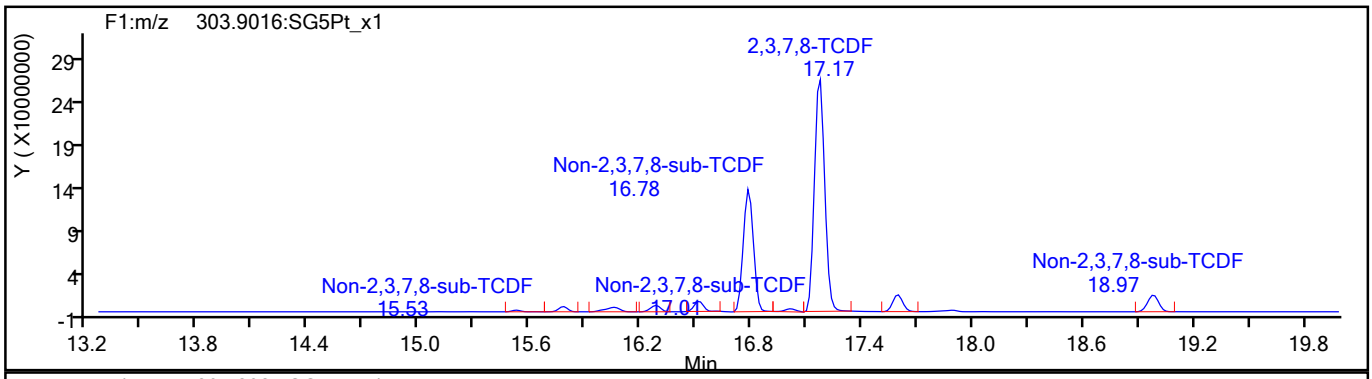

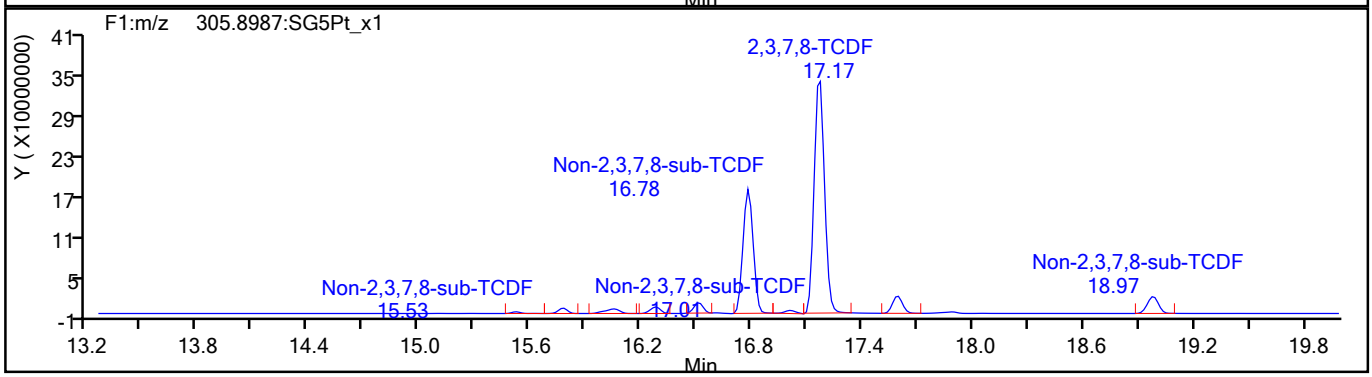

TCDF Standards

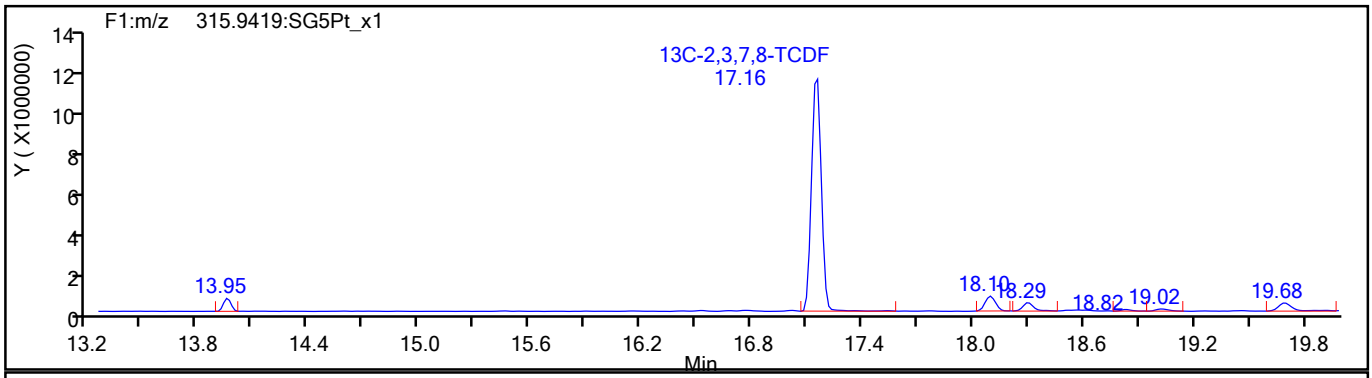

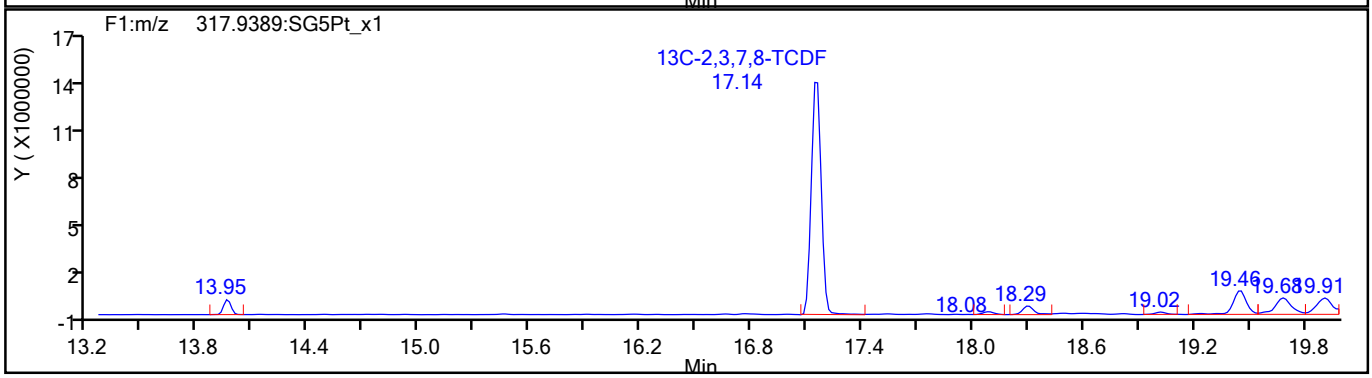

793001

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

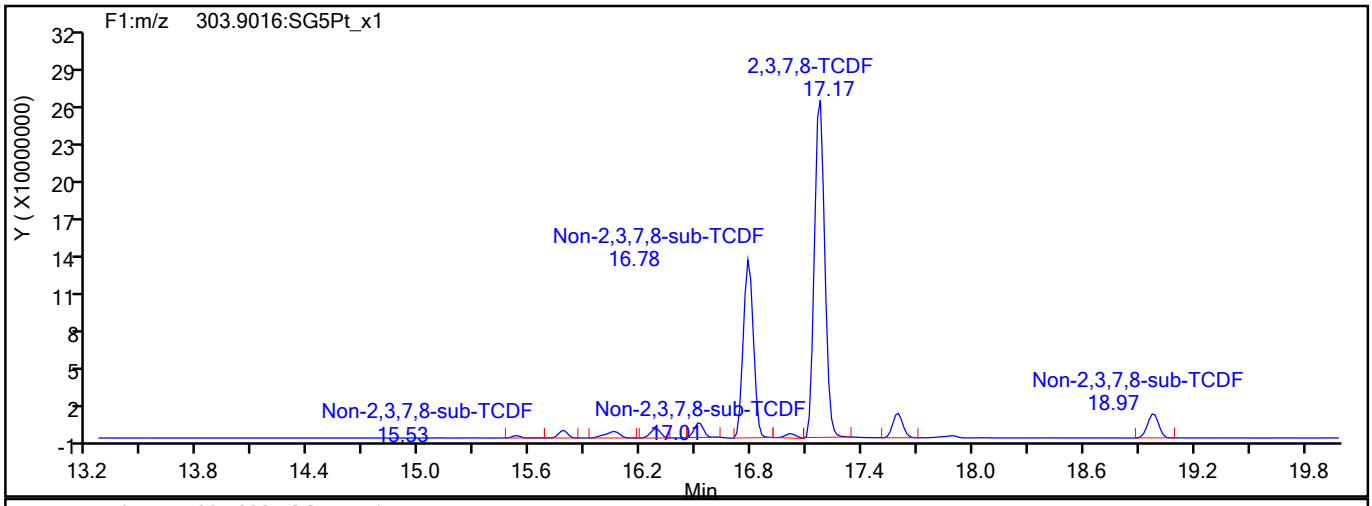

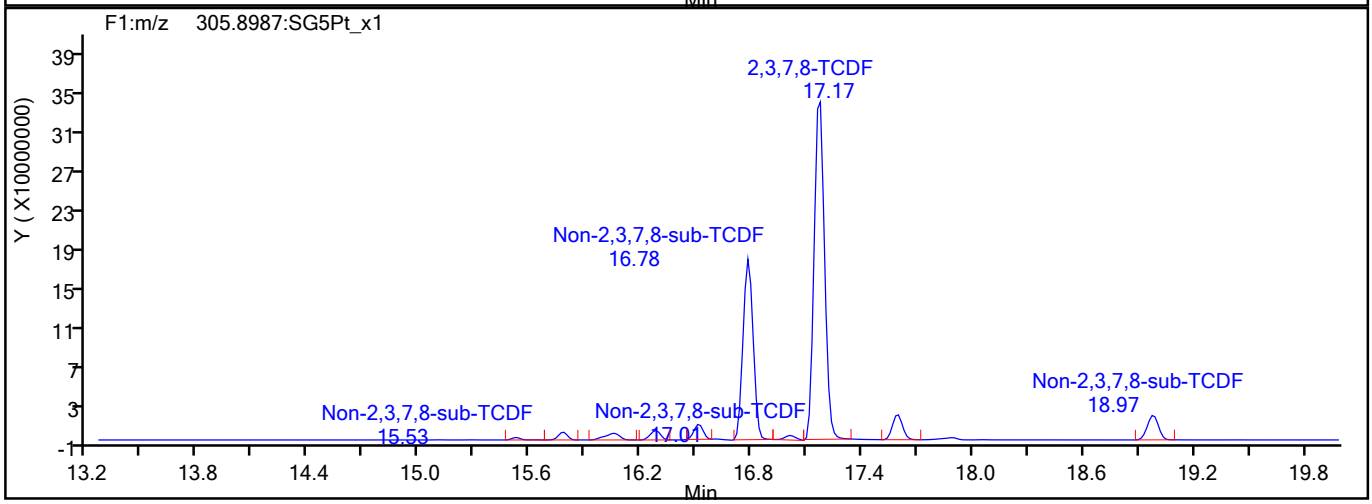

TCDF Interference Mass

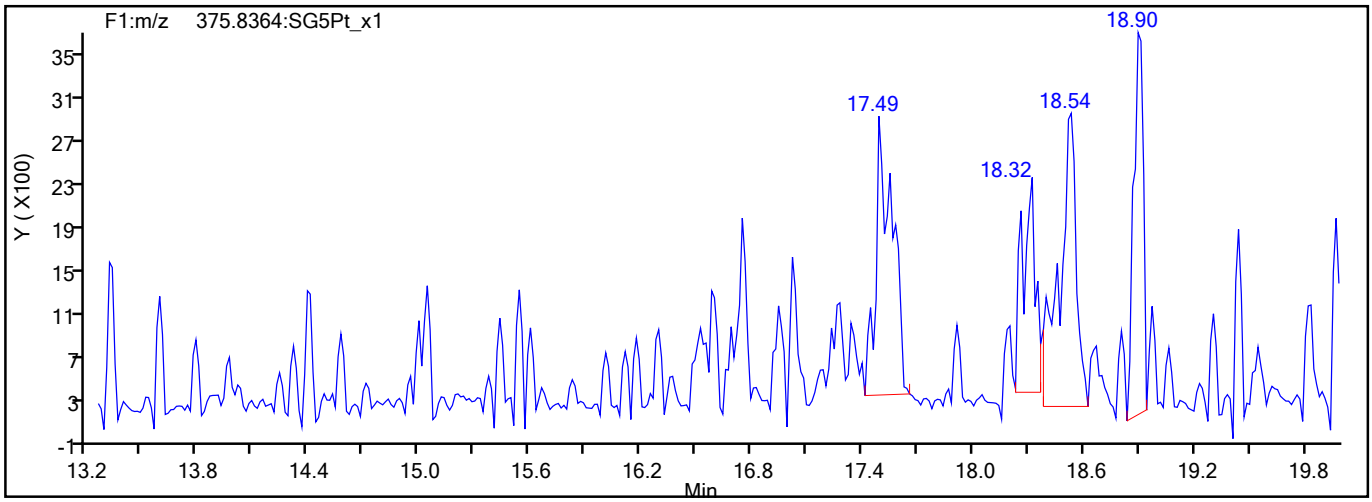

793002

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

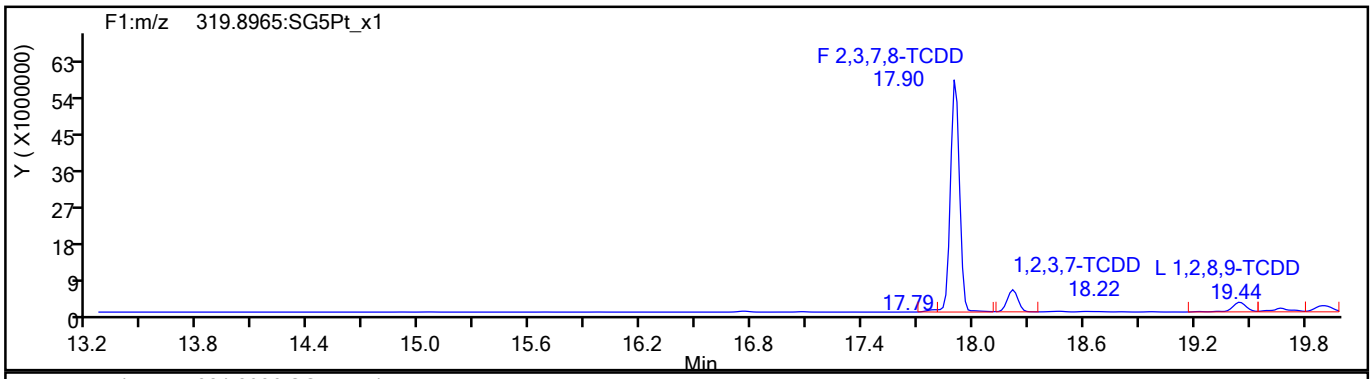

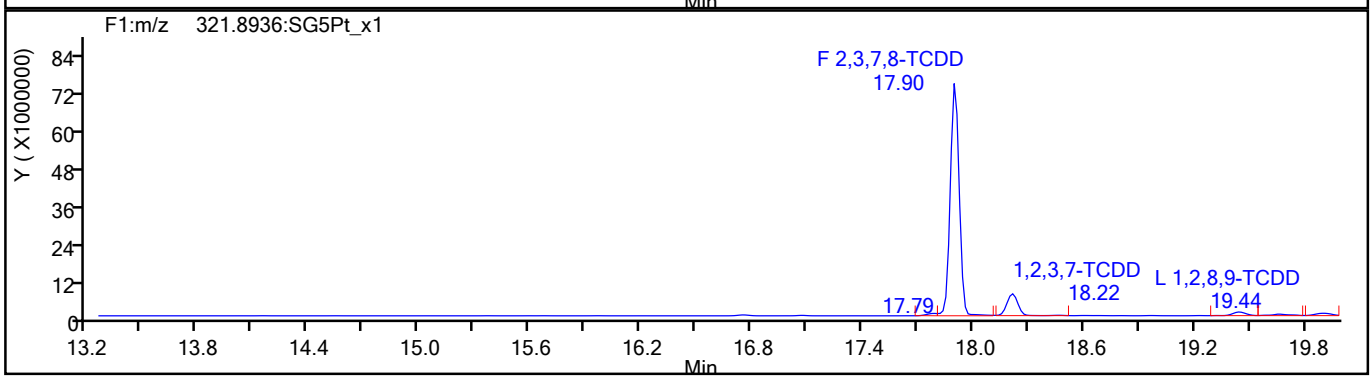

TCDD Standards

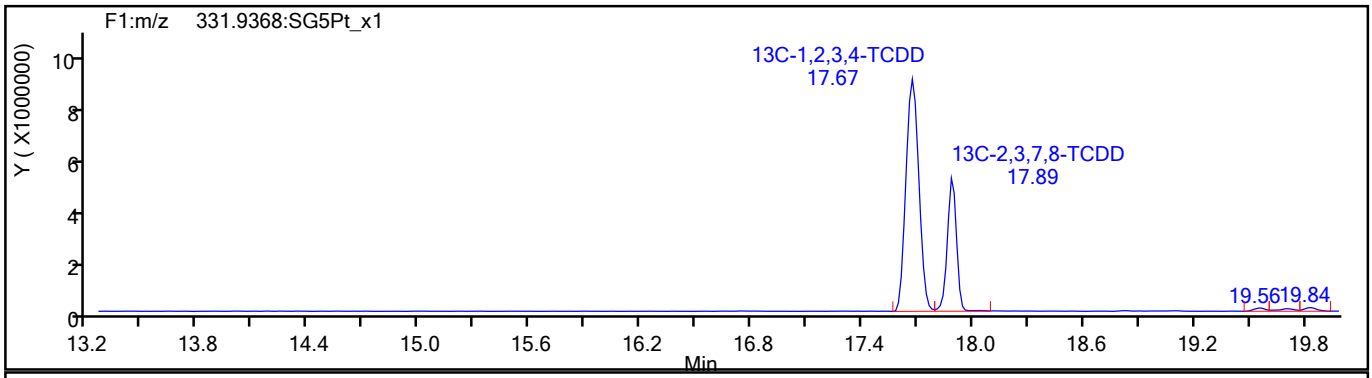

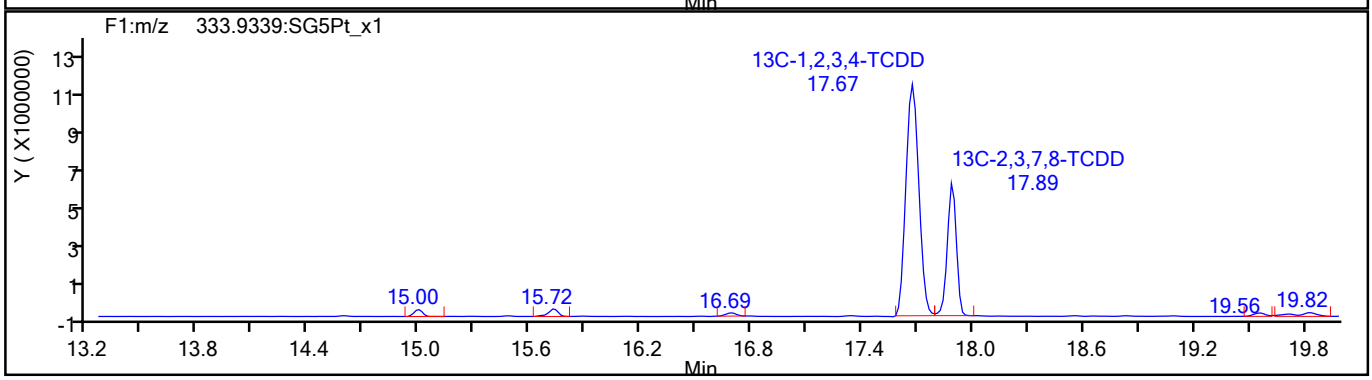

793003

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

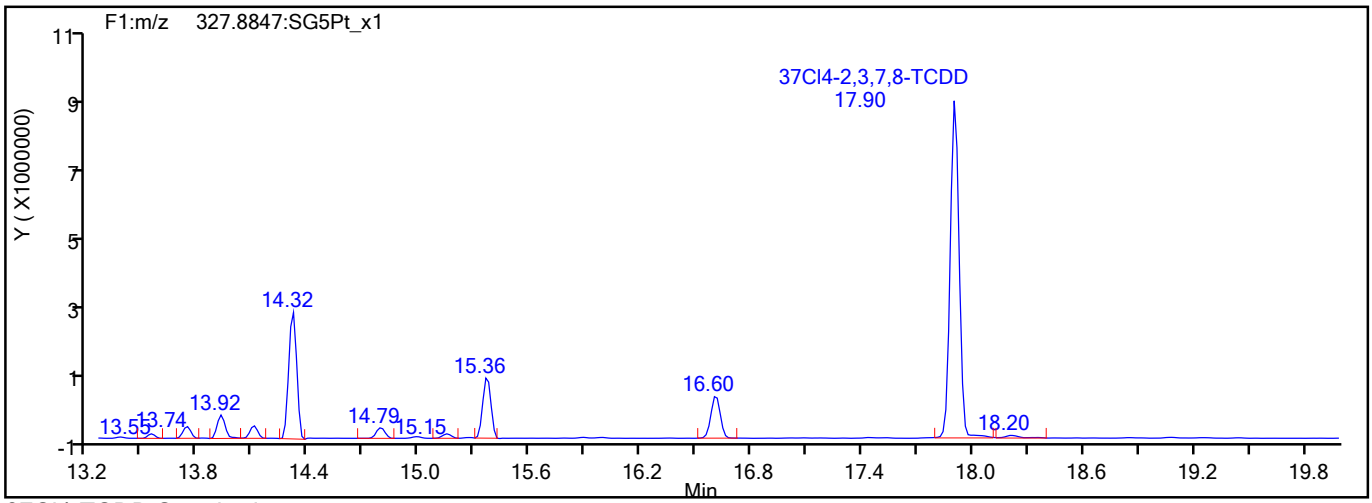

37Cl4-TCDD Standards

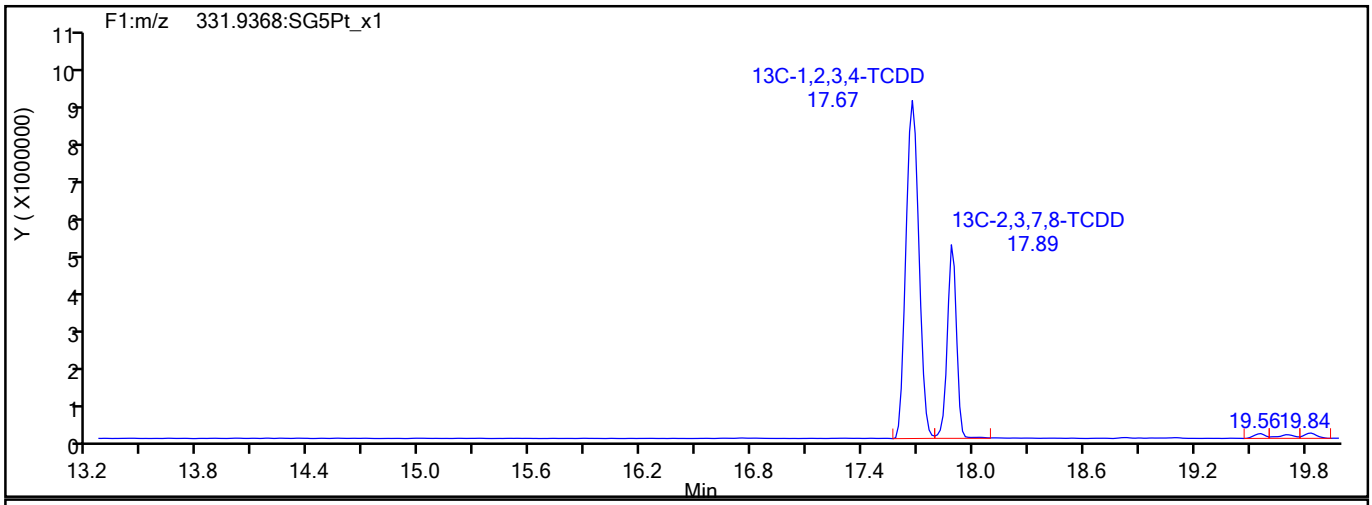

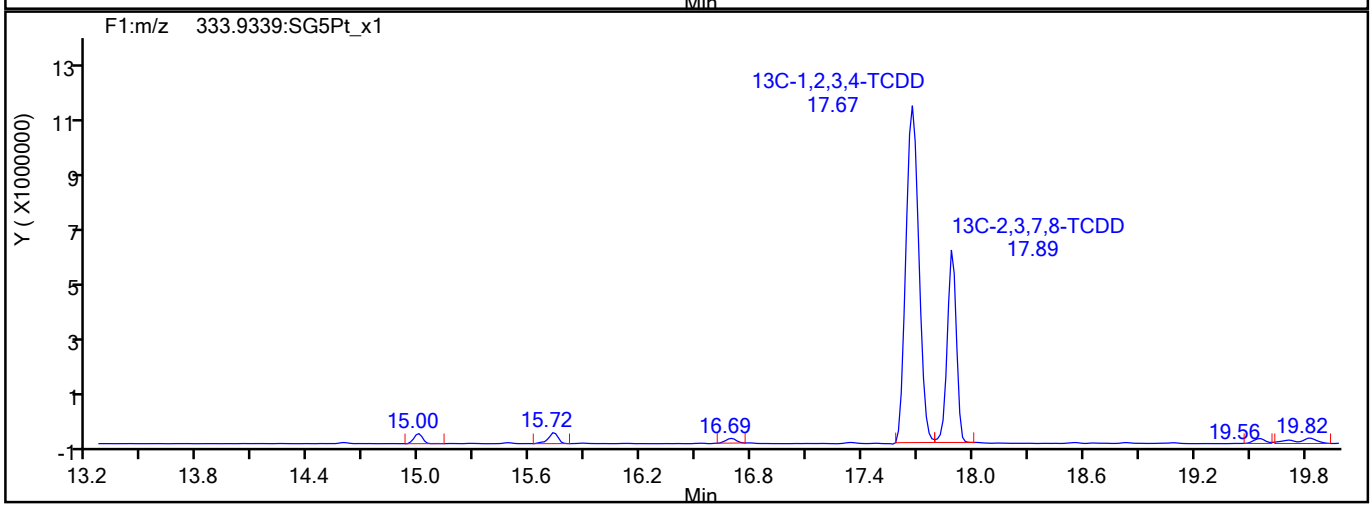

793004

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

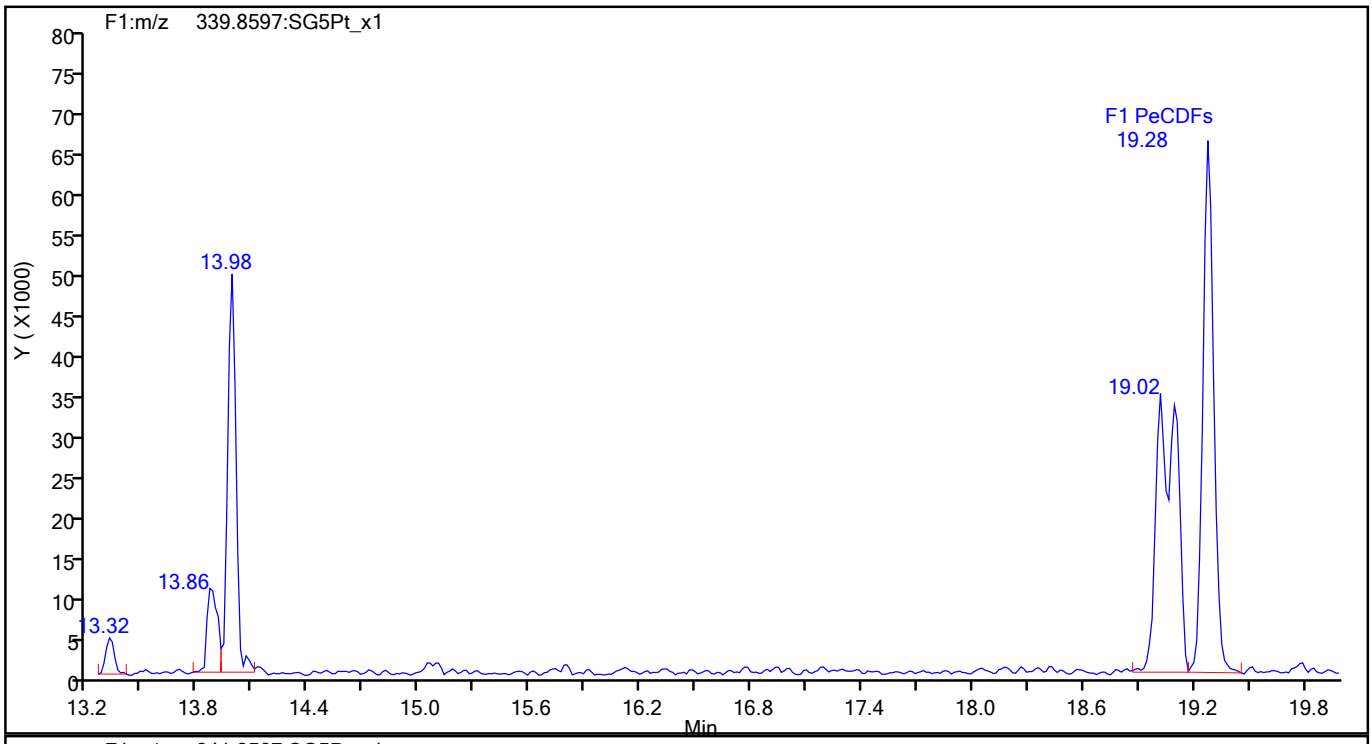

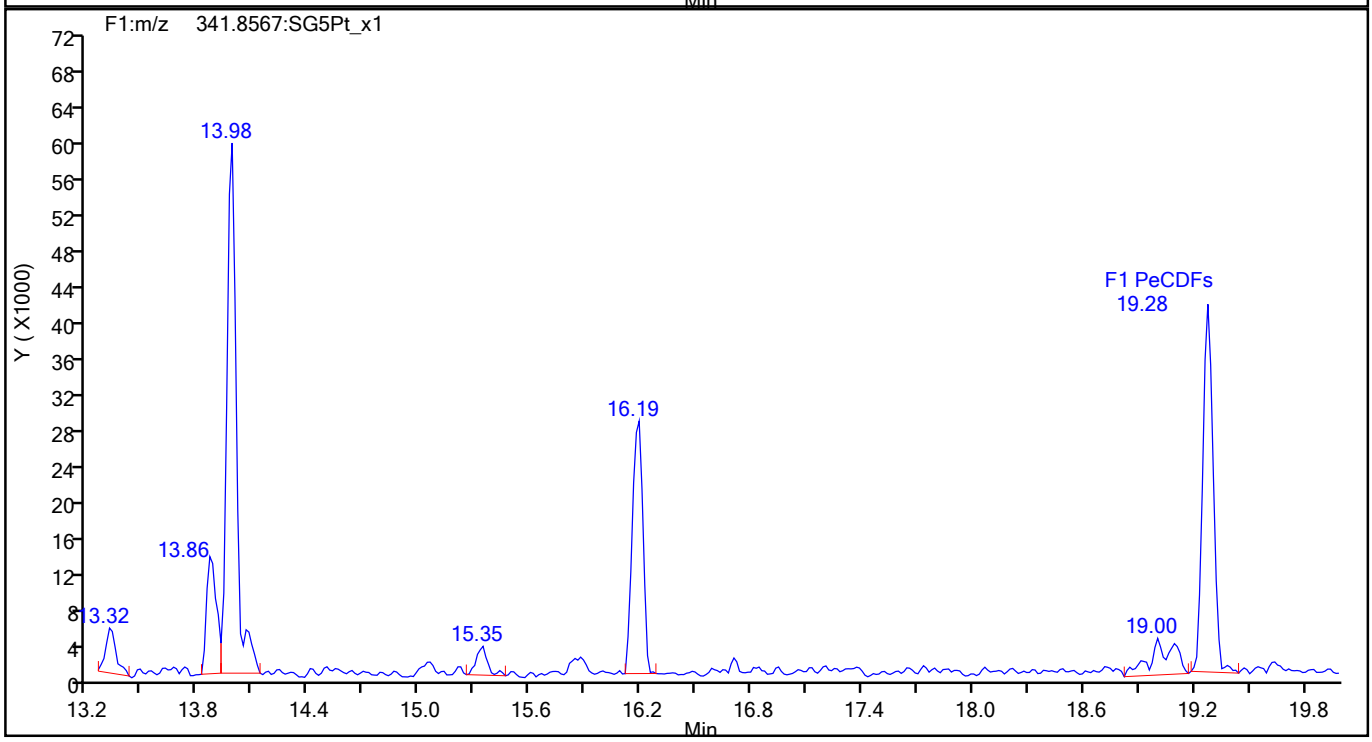

793005

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

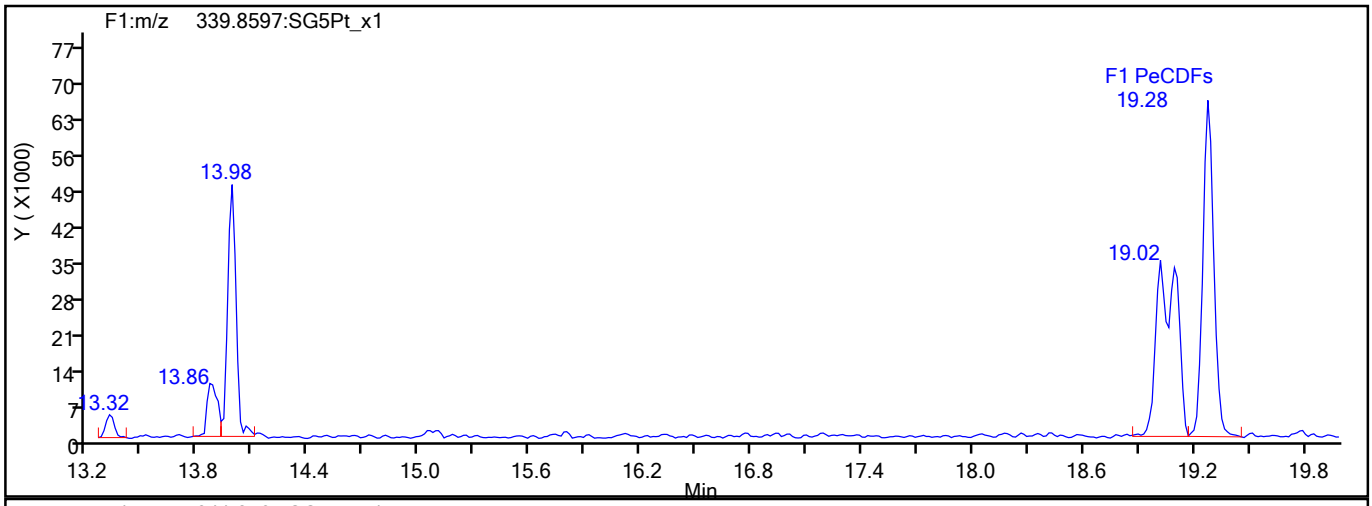

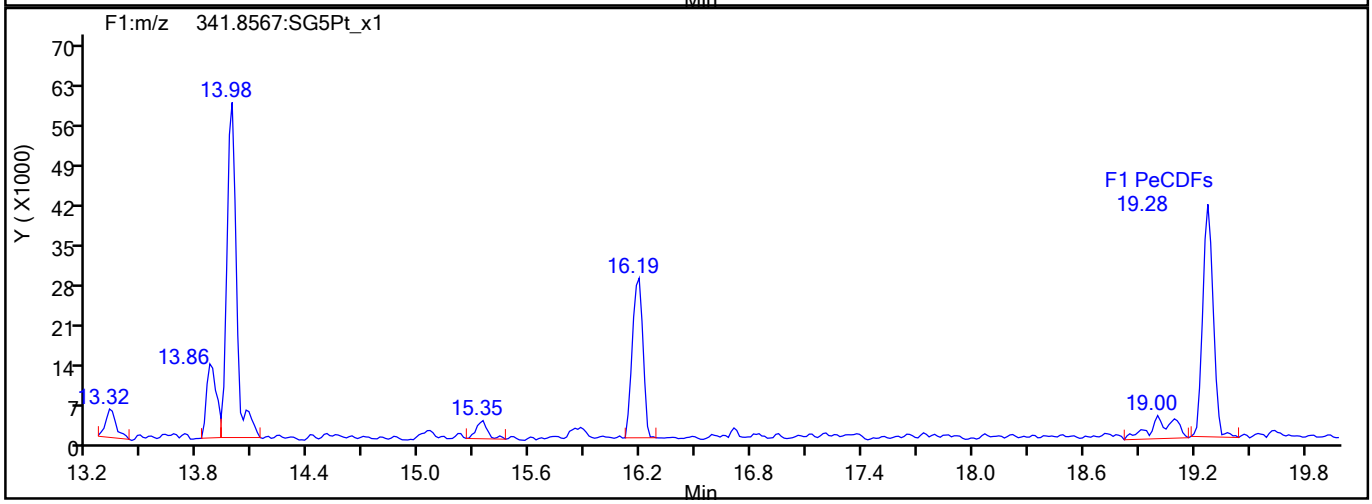

F1 PeCDFs Interference Mass

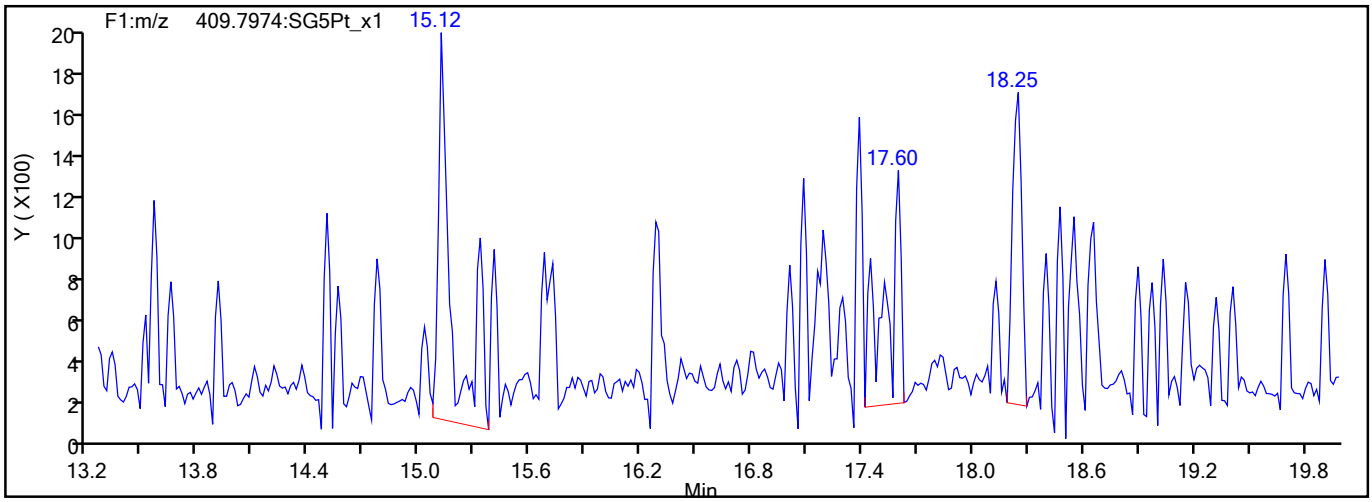

793006

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

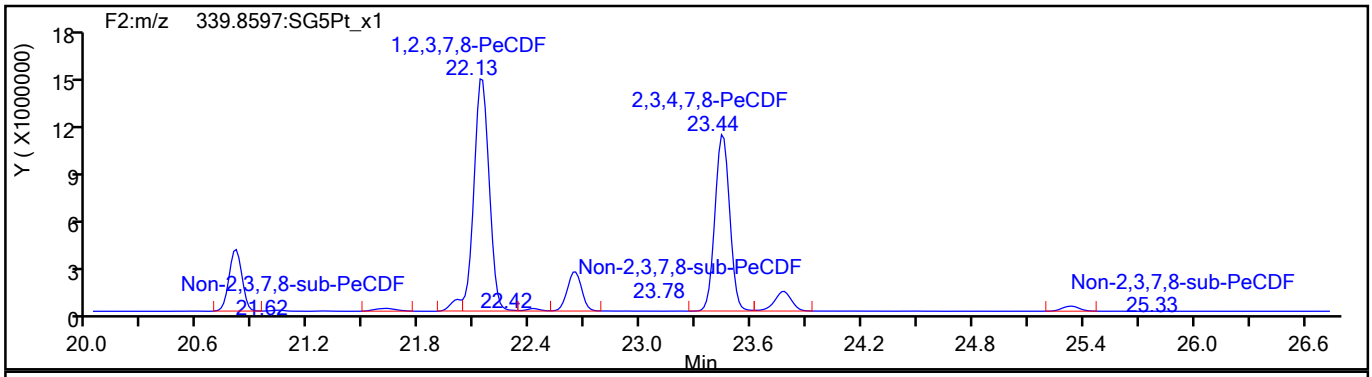

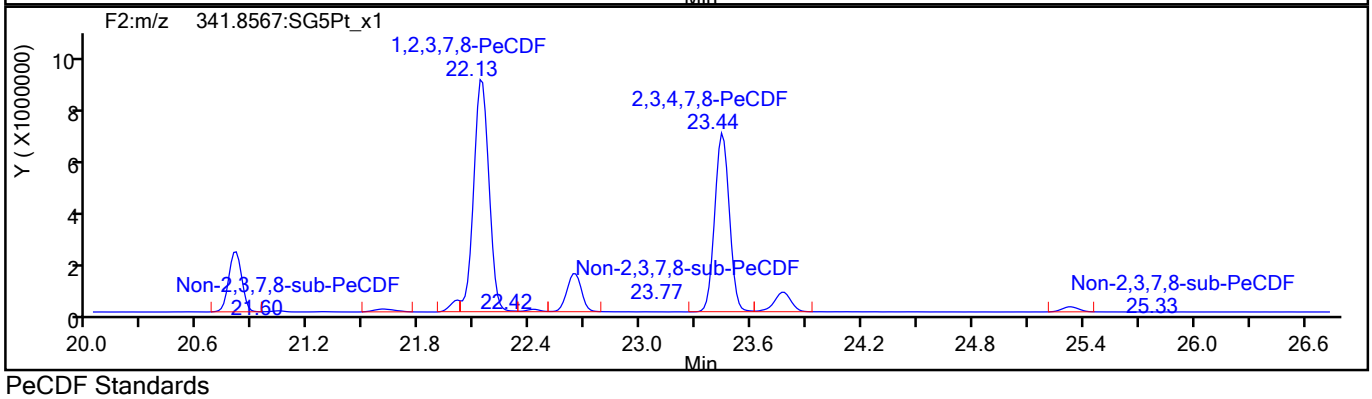

PeCDF Standards

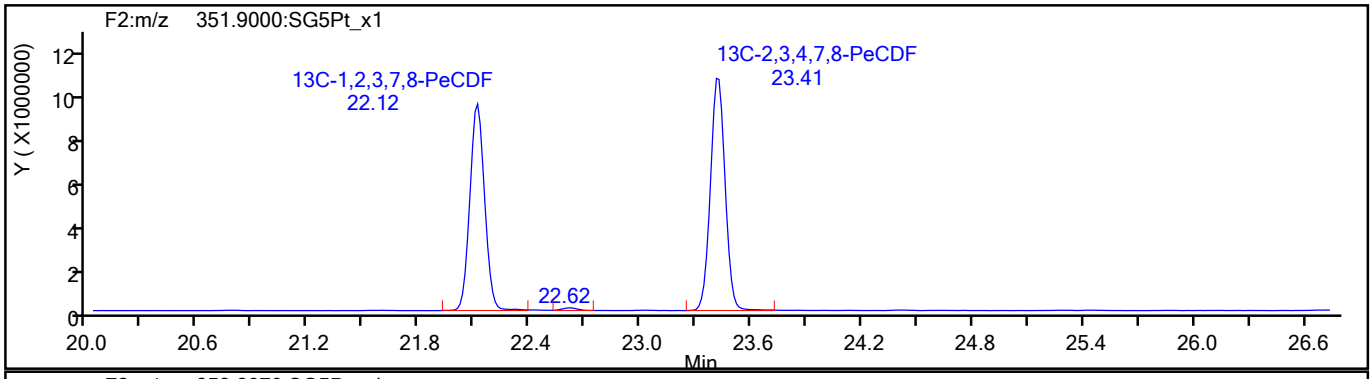

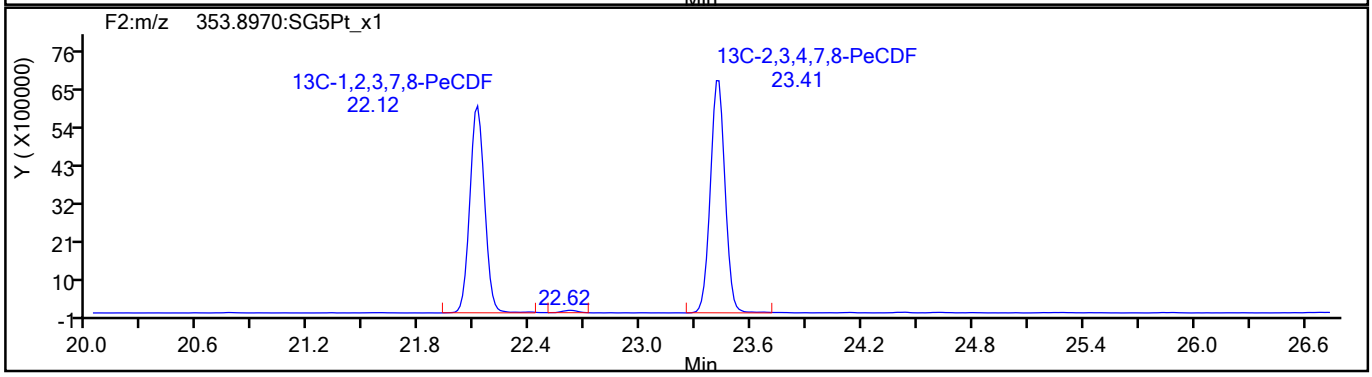

793007

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

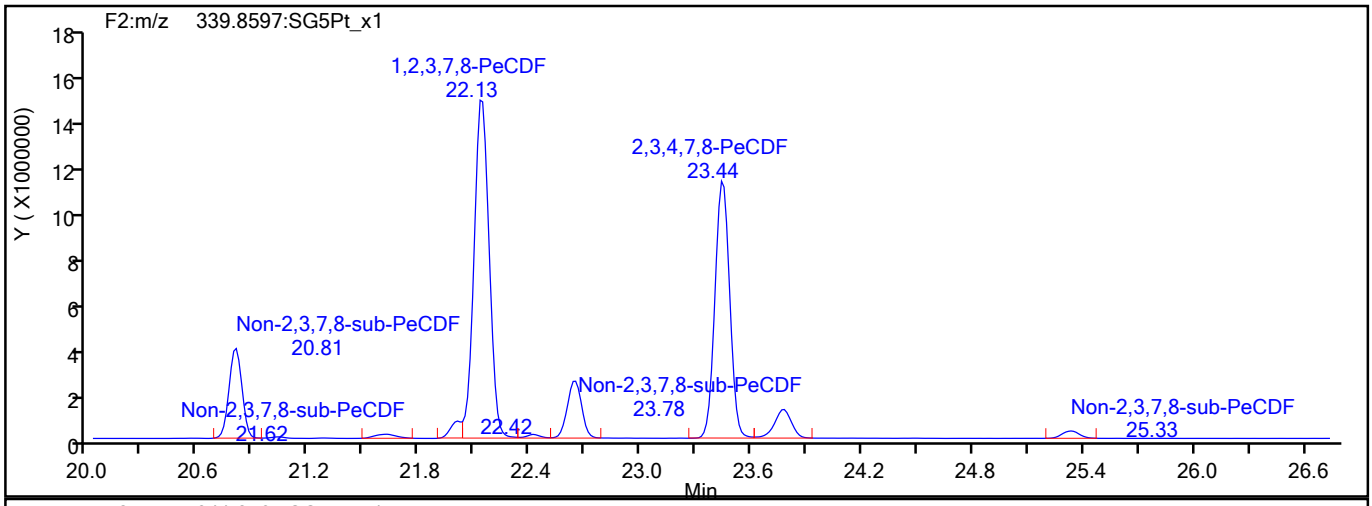

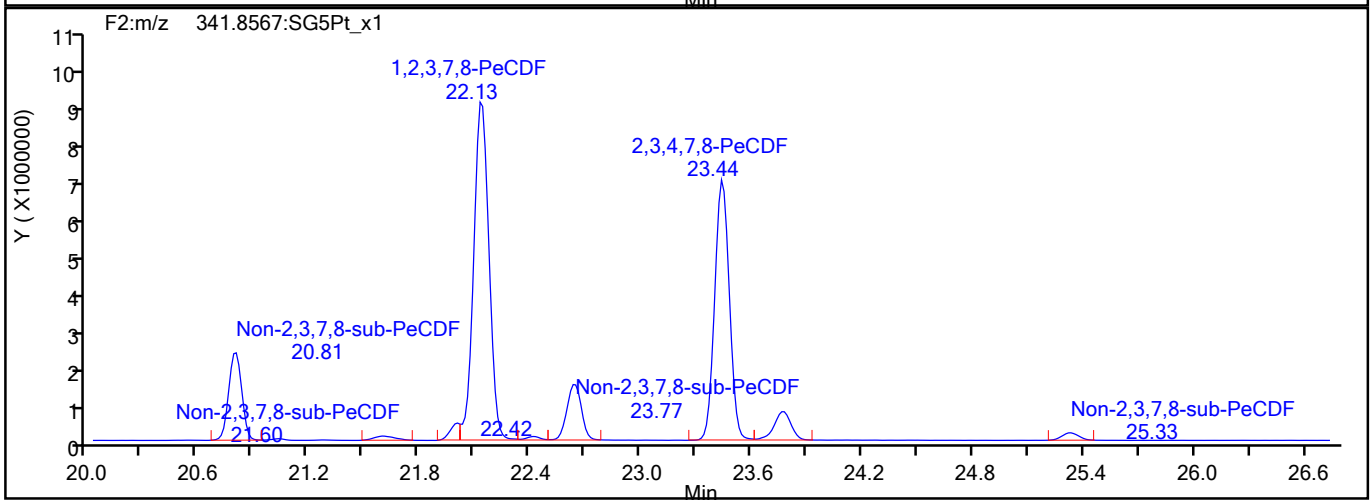

PeCDF Interference Mass

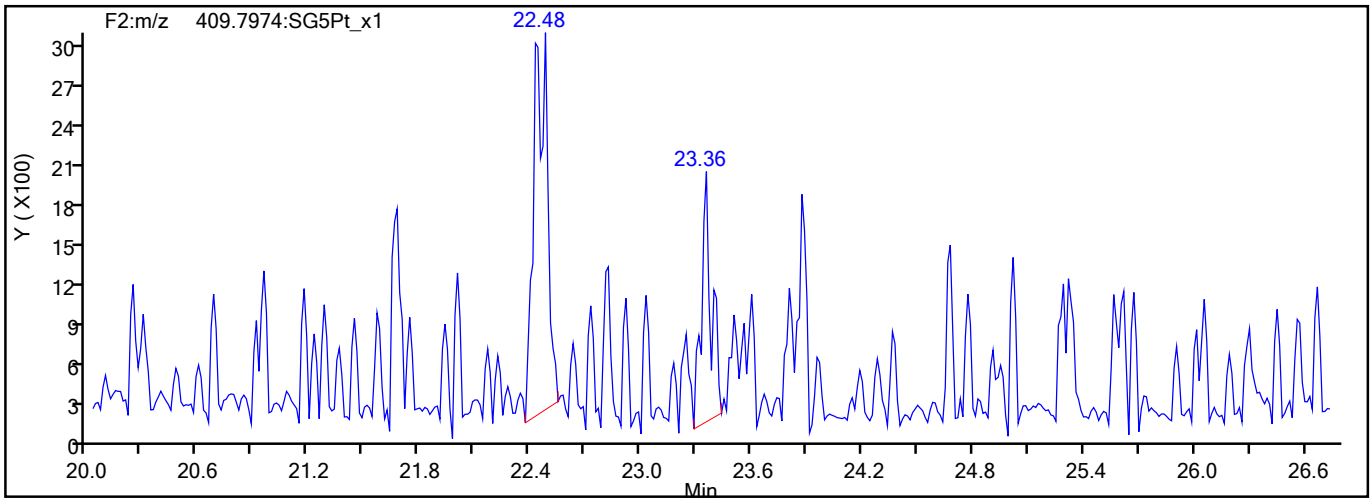

793008

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

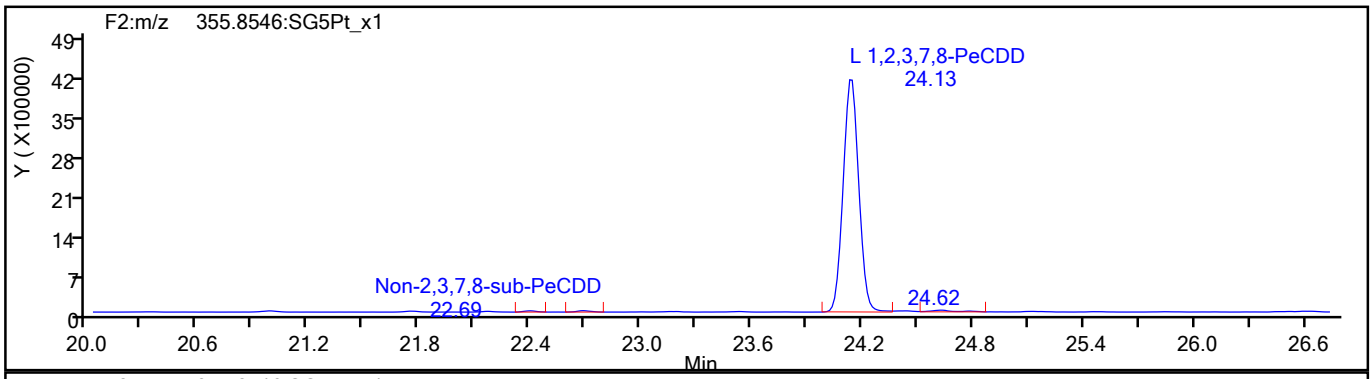

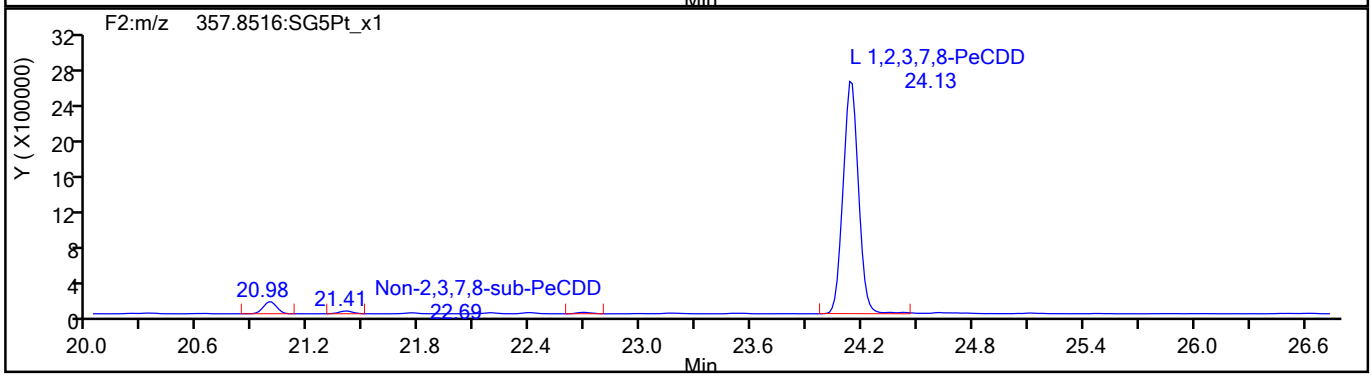

PeCDD Standards

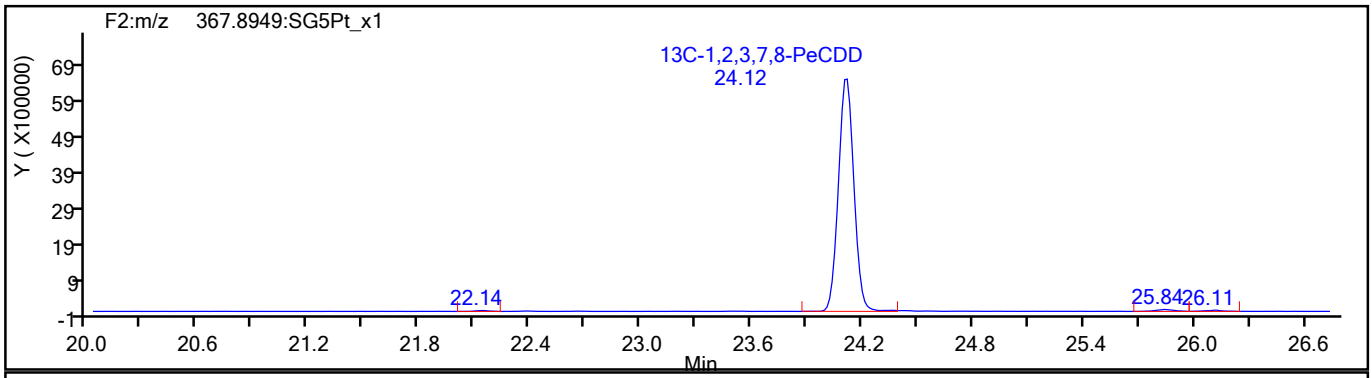

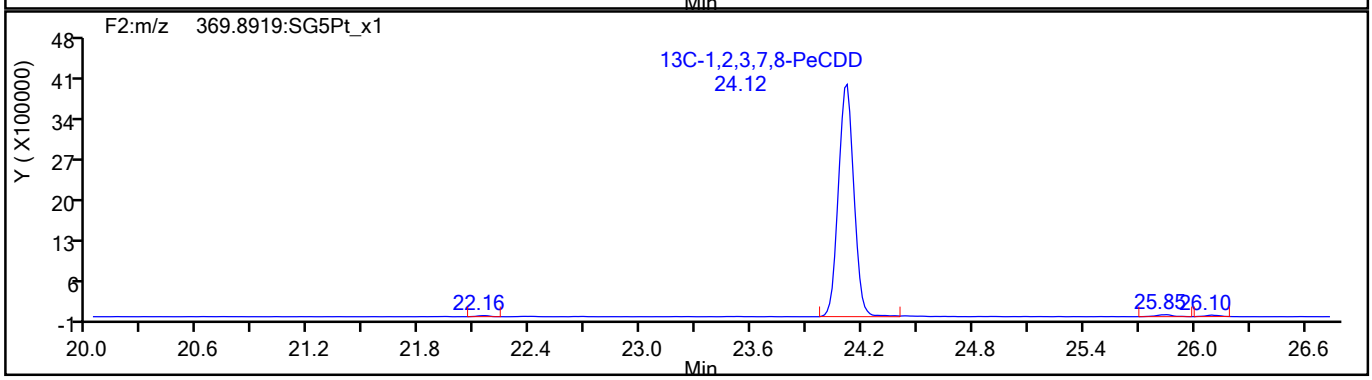

793009

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

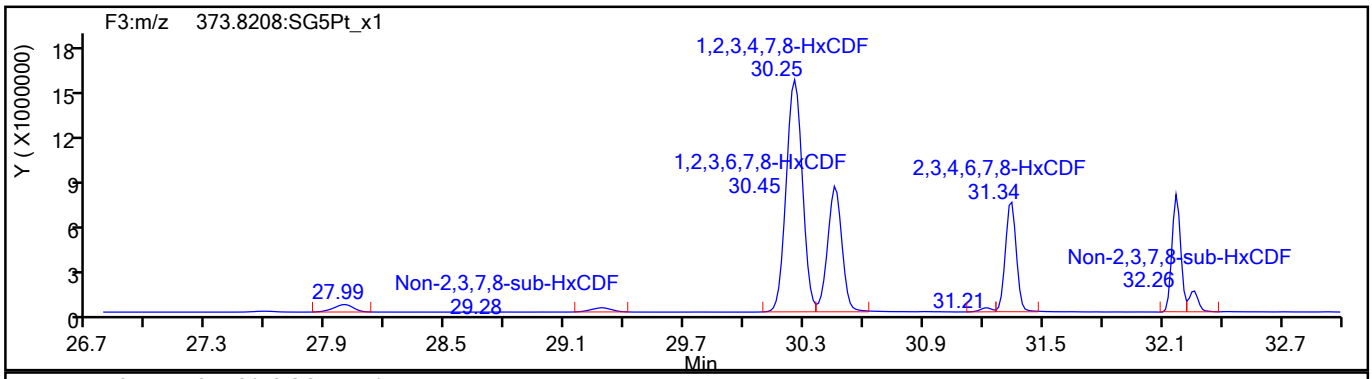

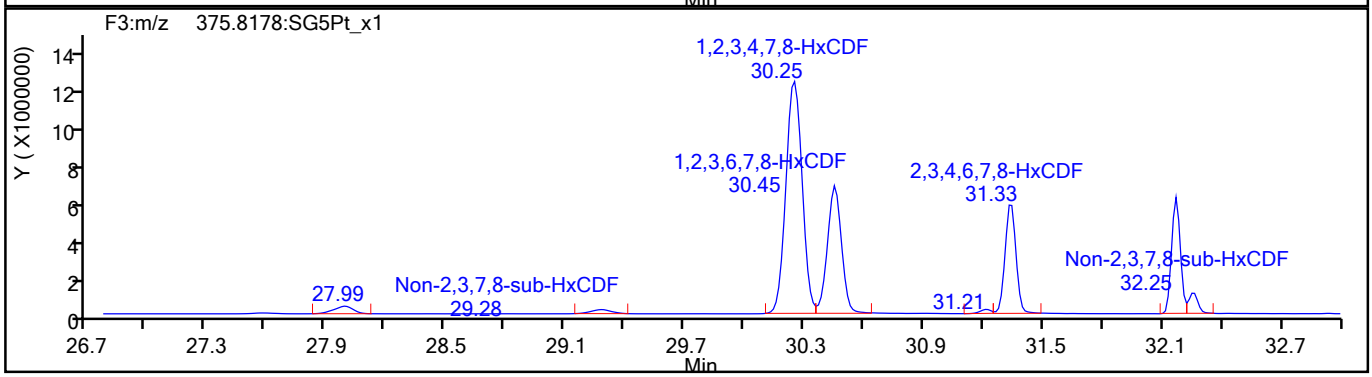

HxCDF Standards

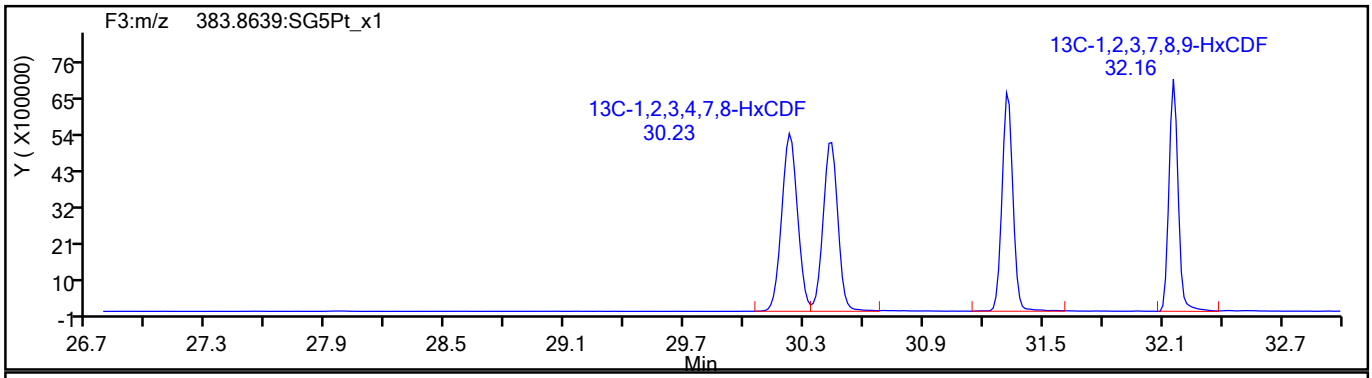

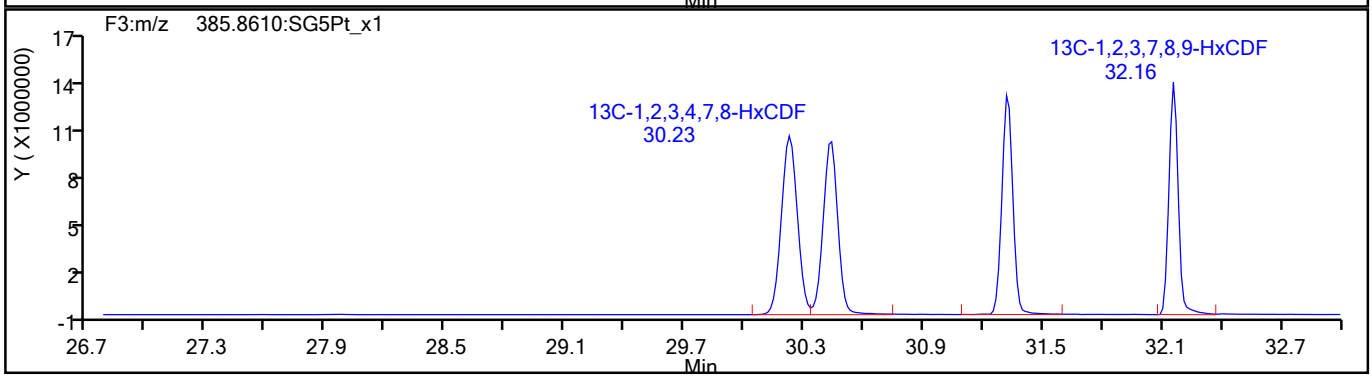

793010

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

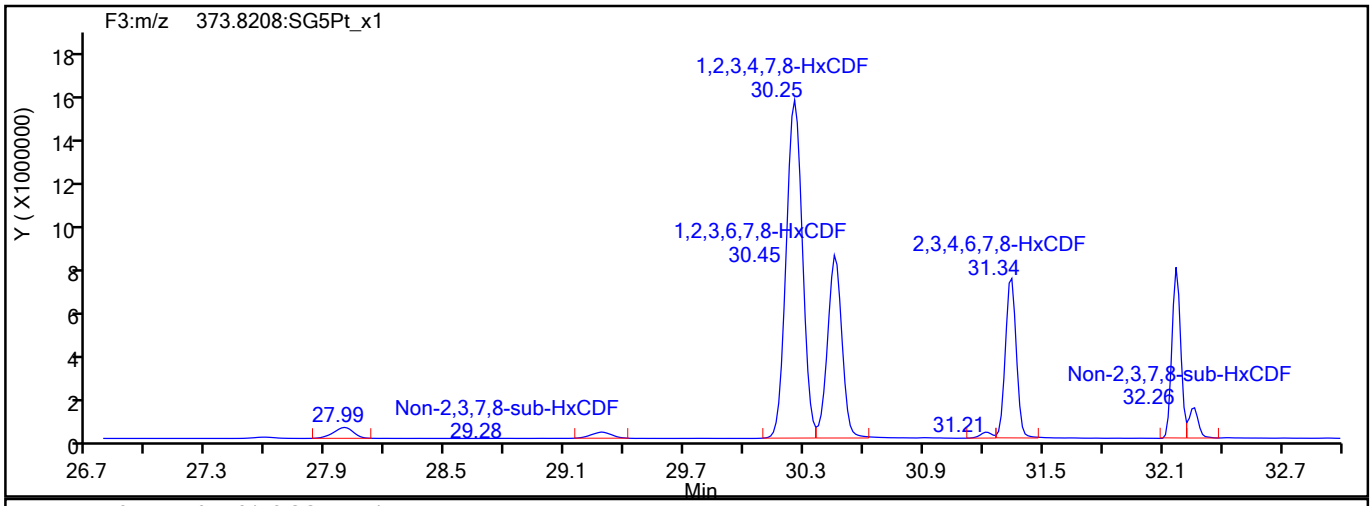

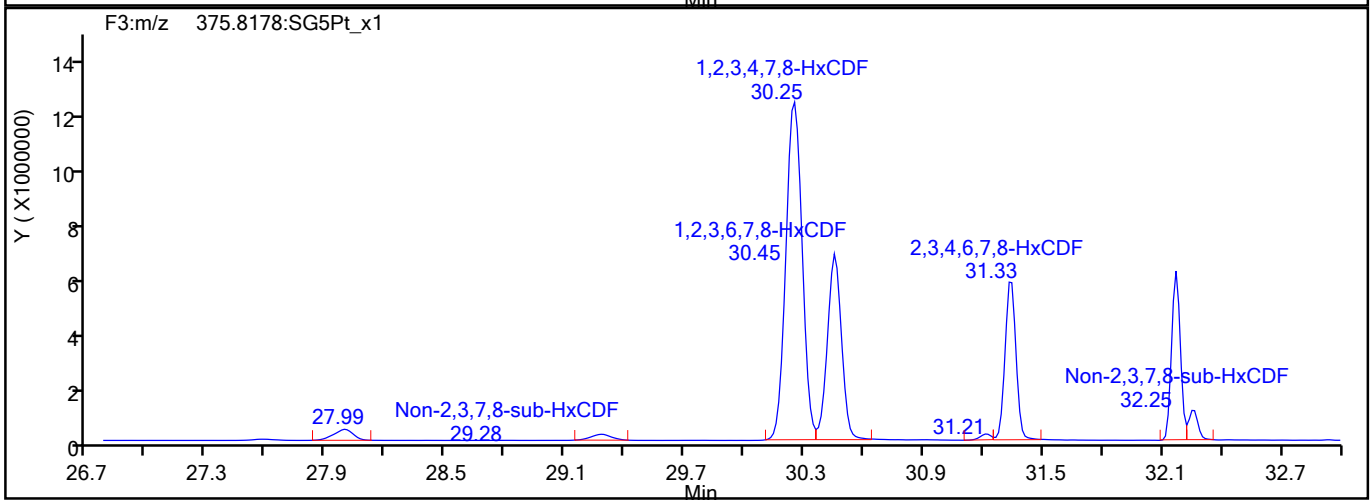

HxCDF Interference Mass

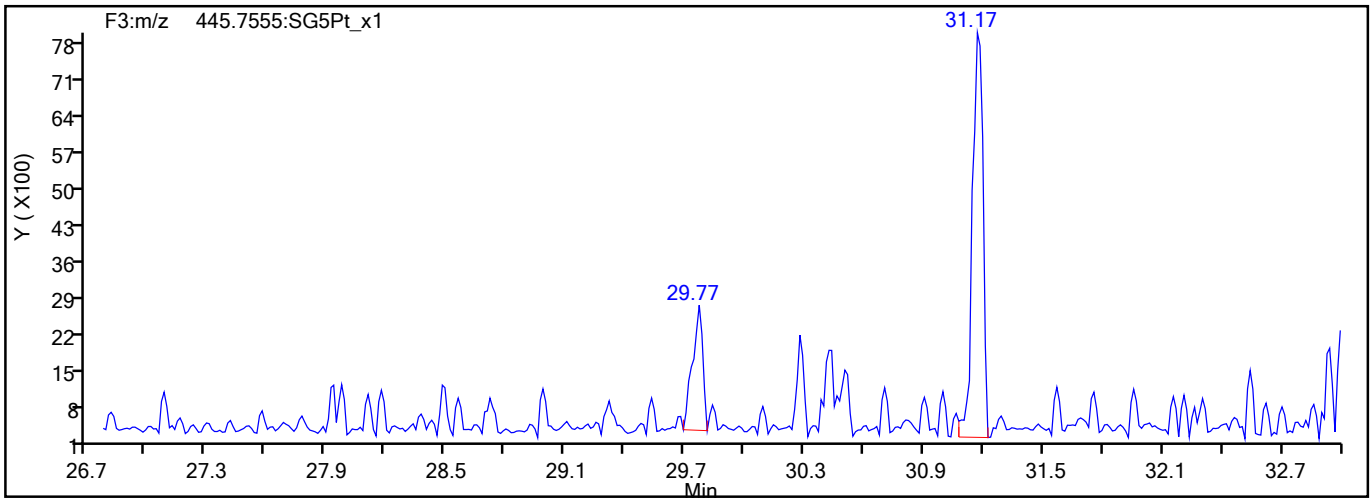

793011

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

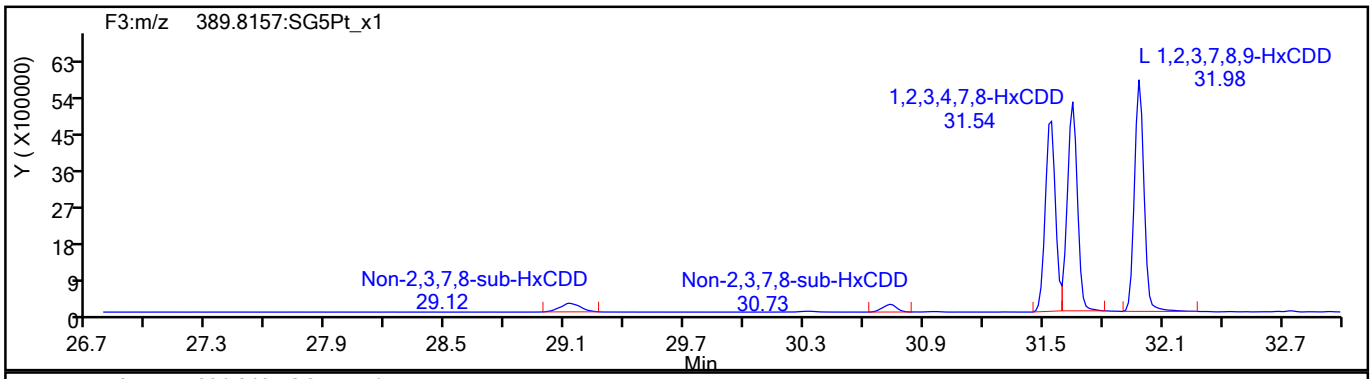

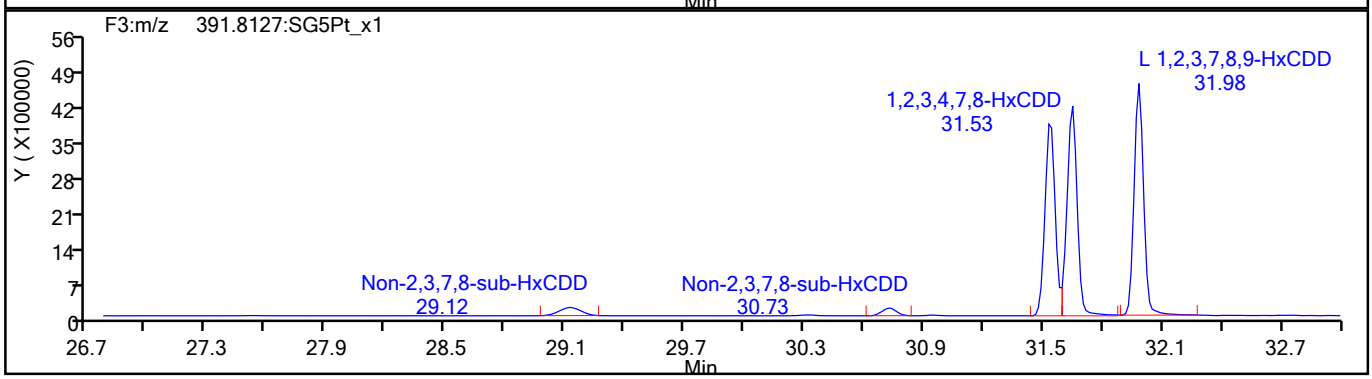

HxCDD Standards

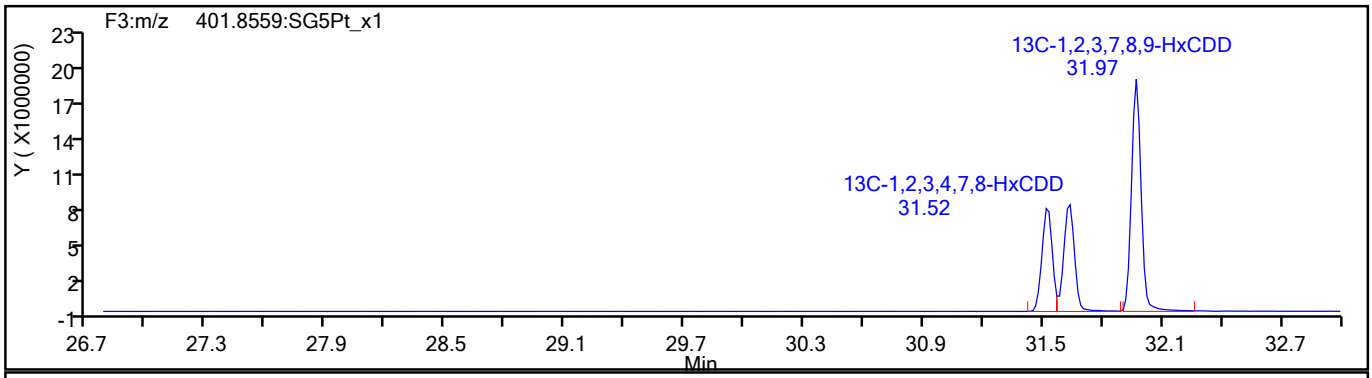

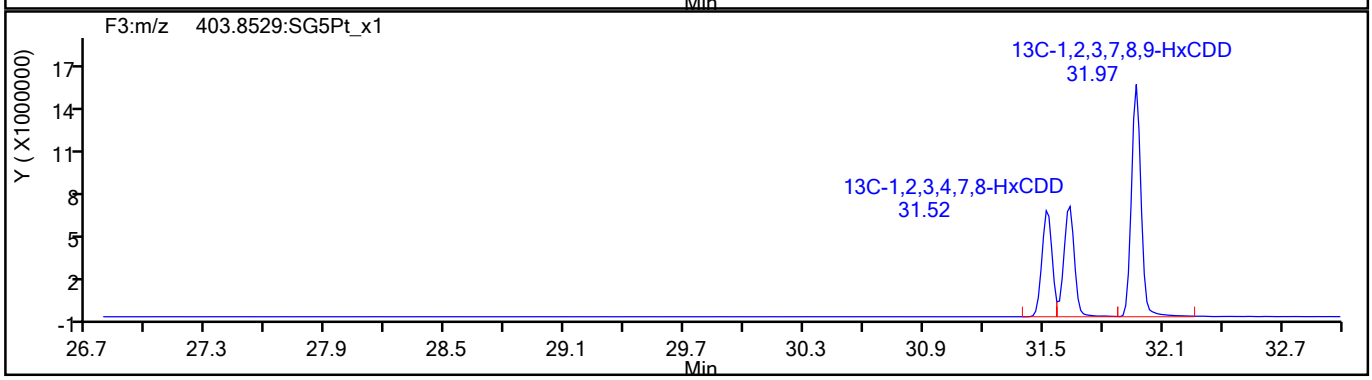

793012

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

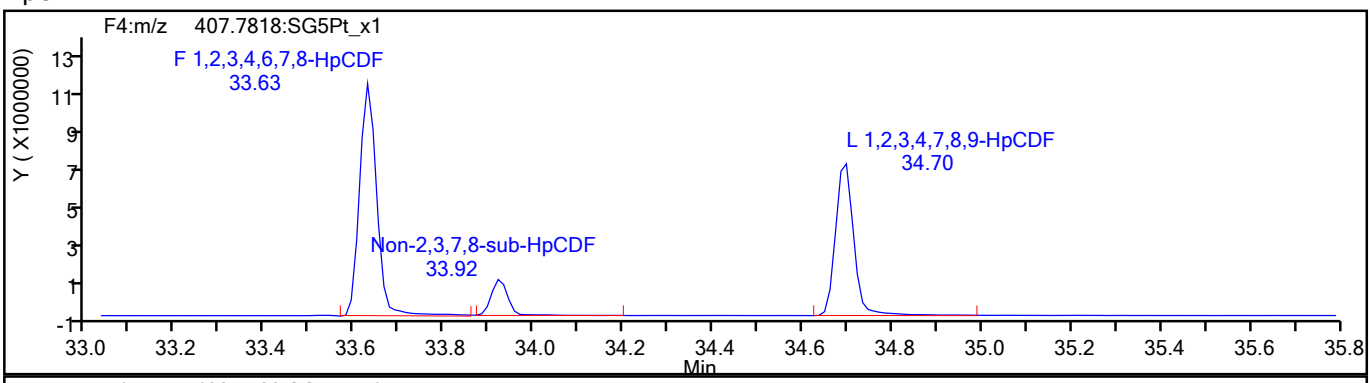

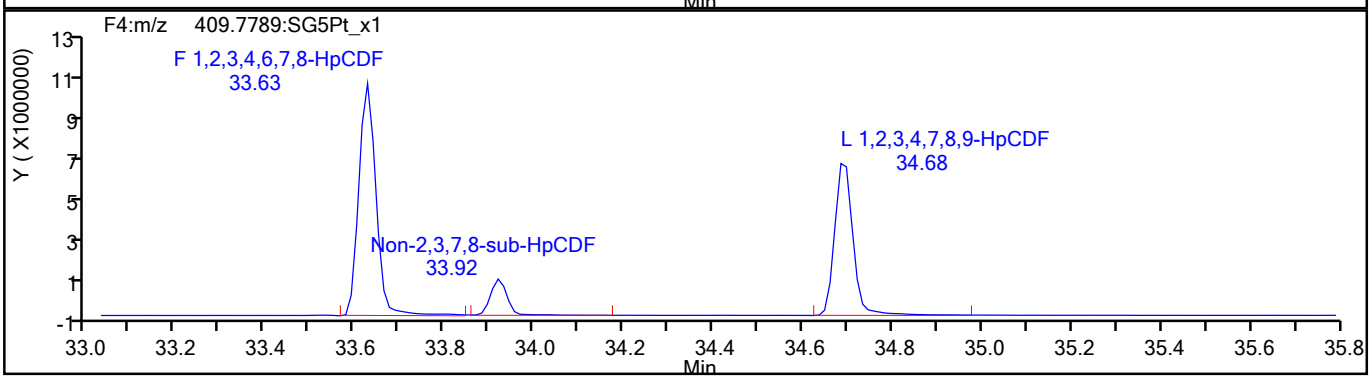

HpCDF Standards

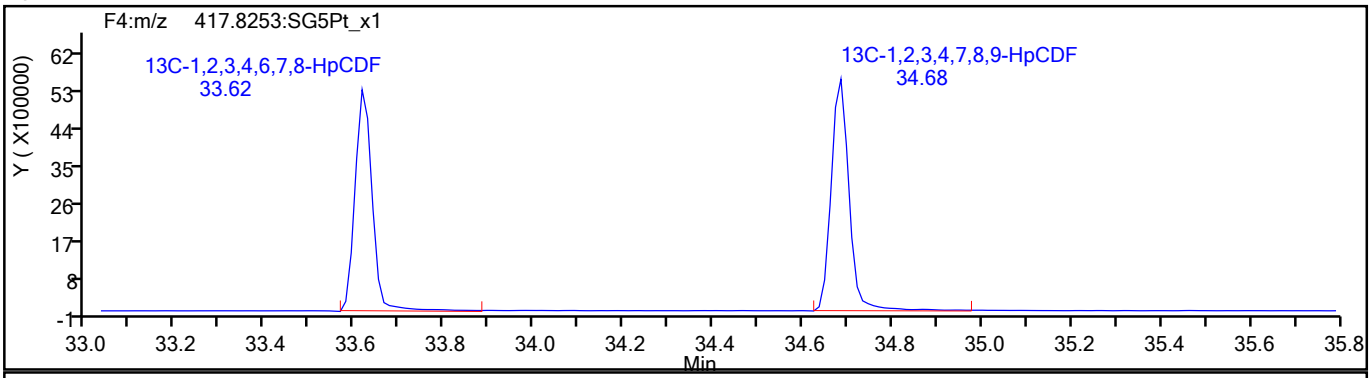

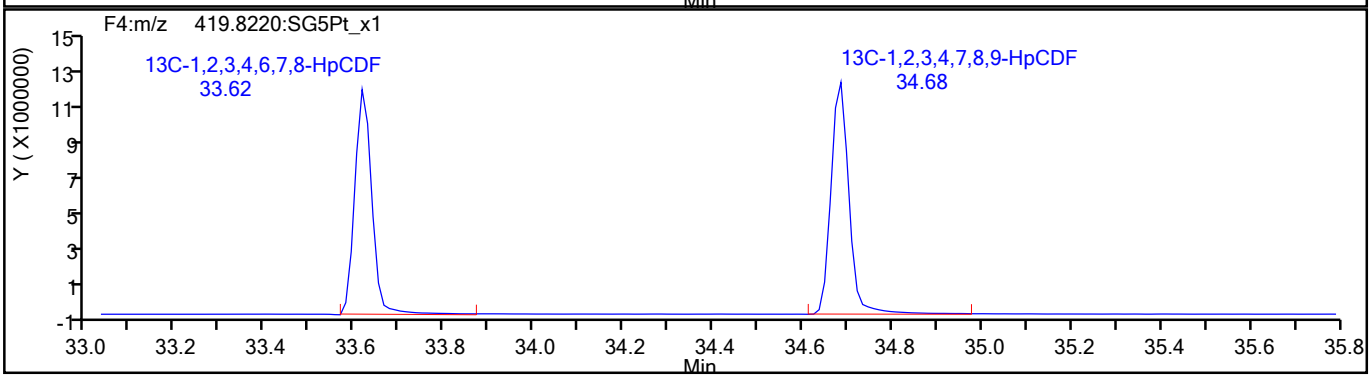

793013

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

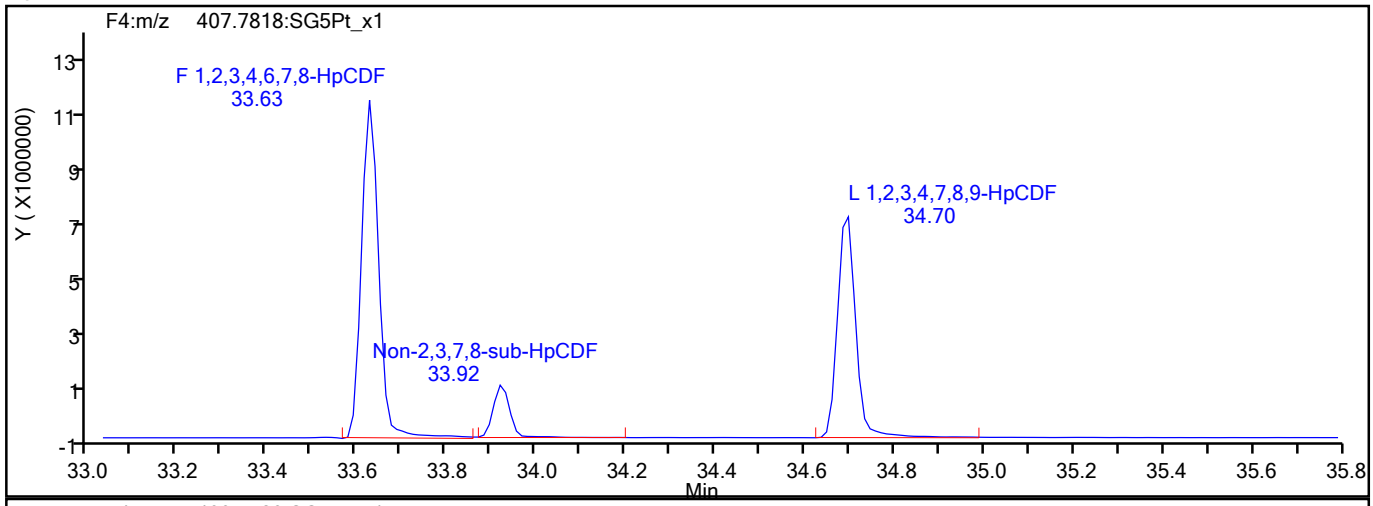

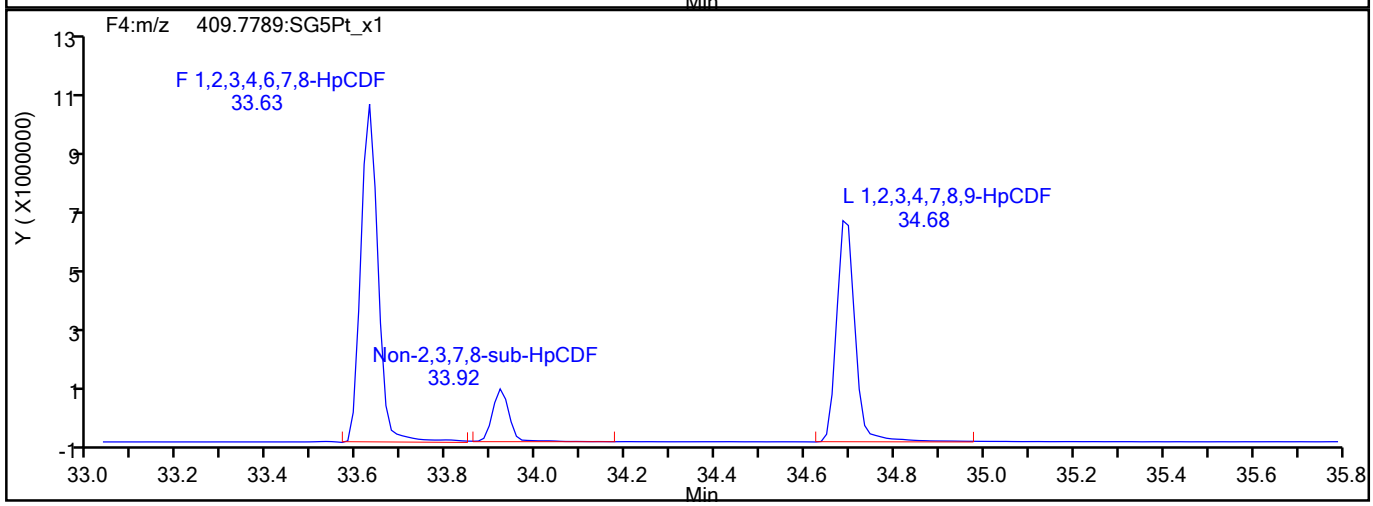

HpCDF Interference Mass

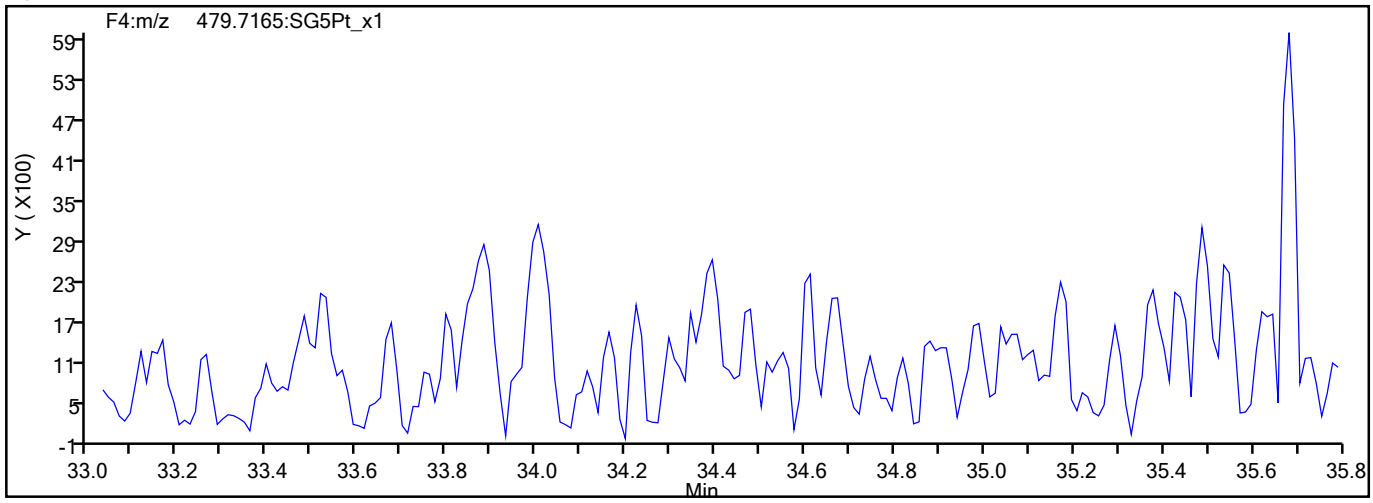

793014

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

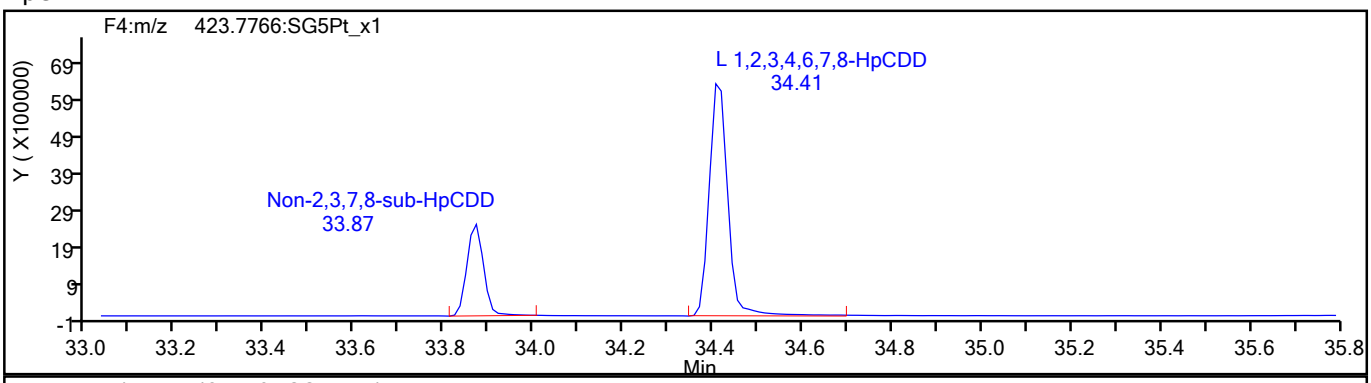

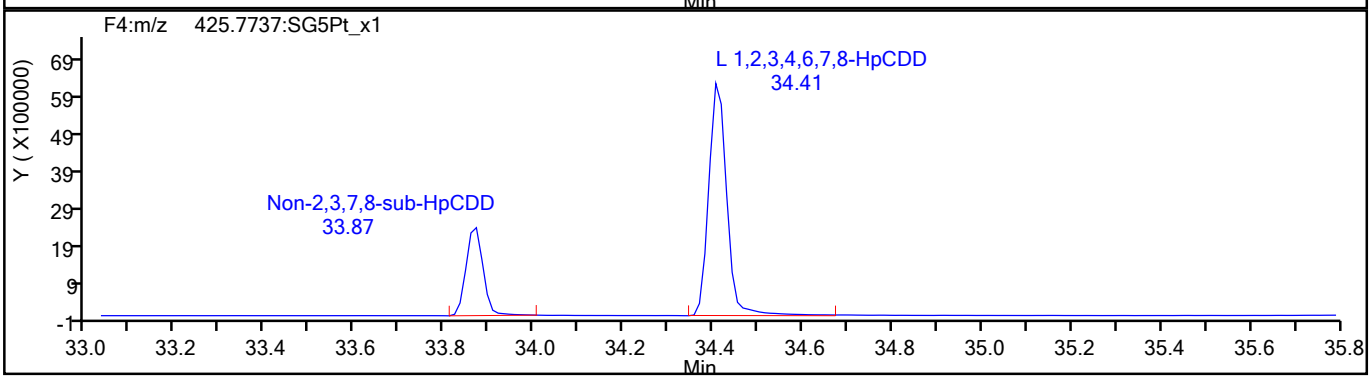

HpCDD Standards

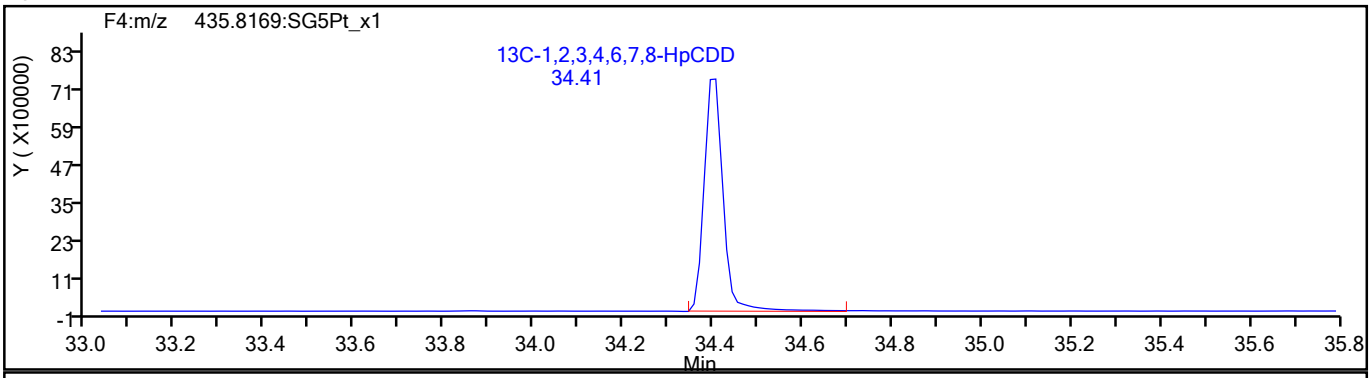

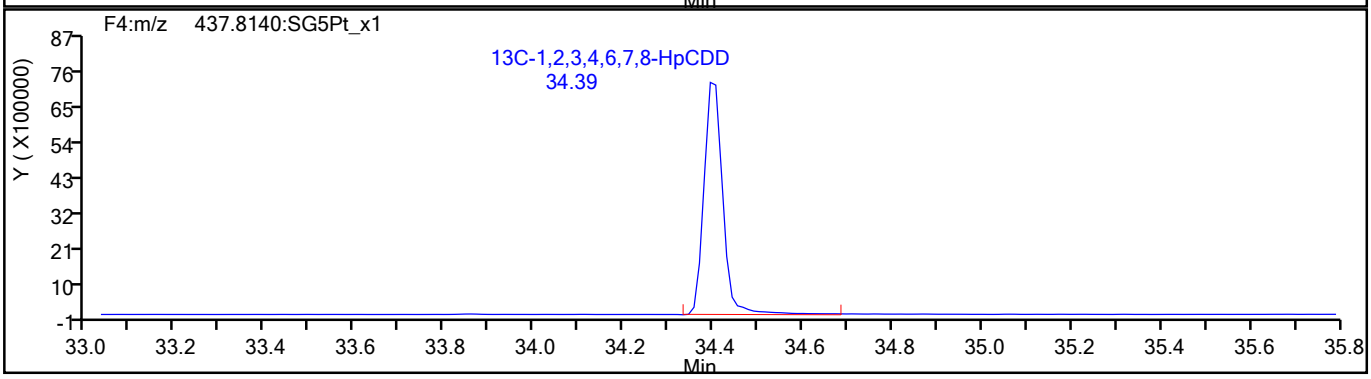

793015

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

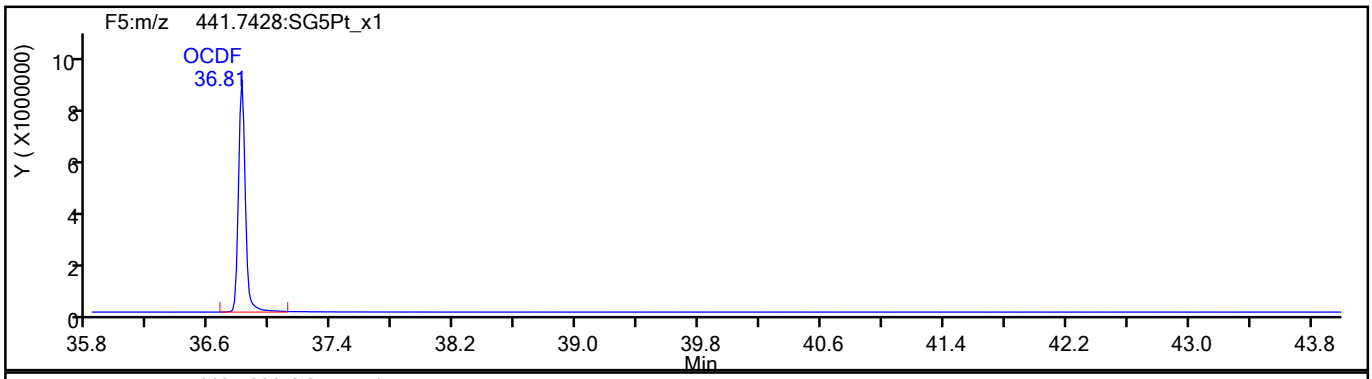

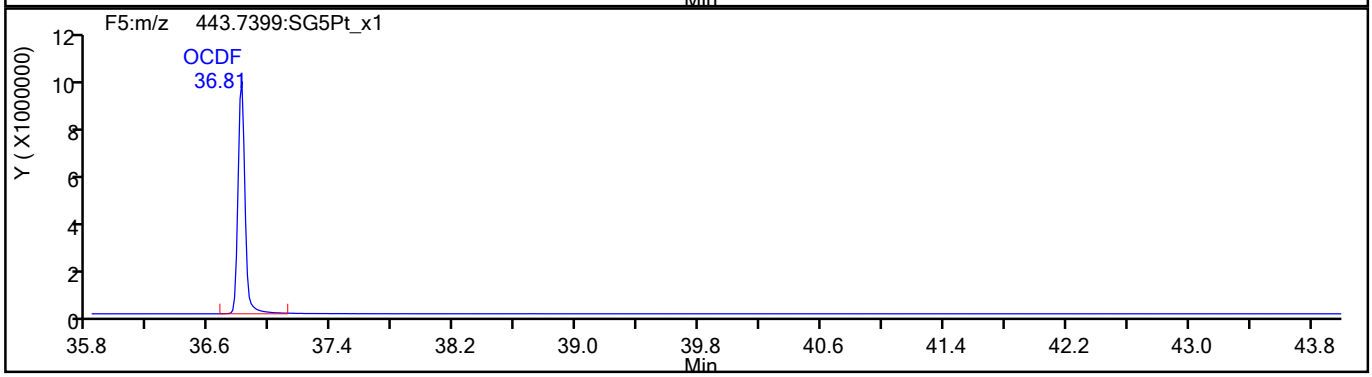

OCDF Standards

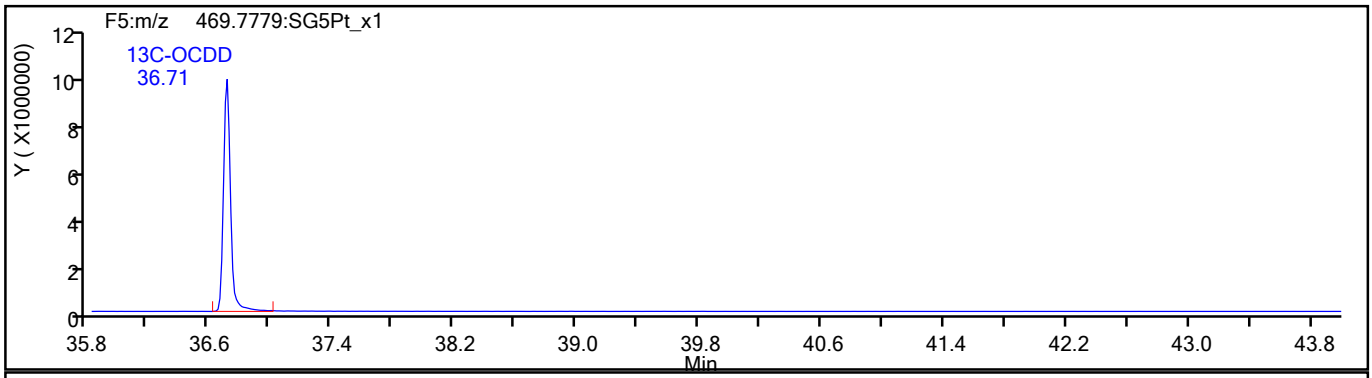

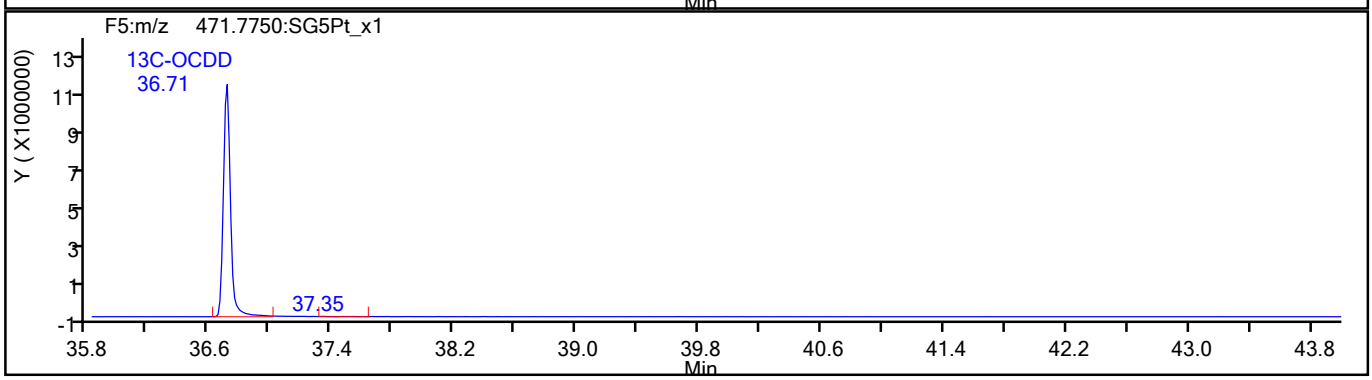

793016

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

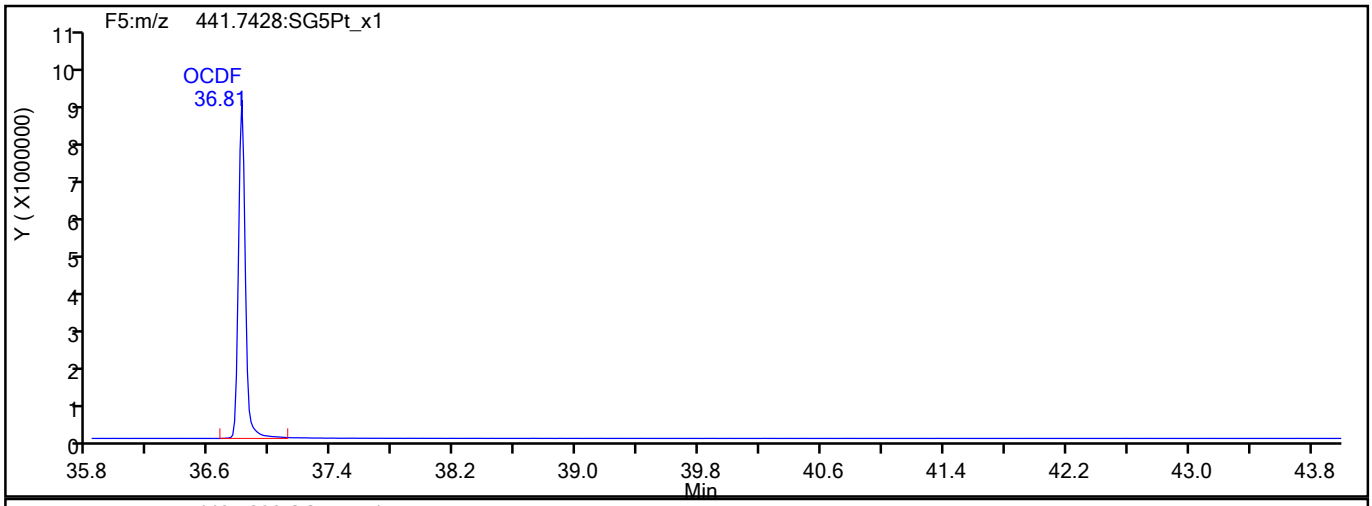

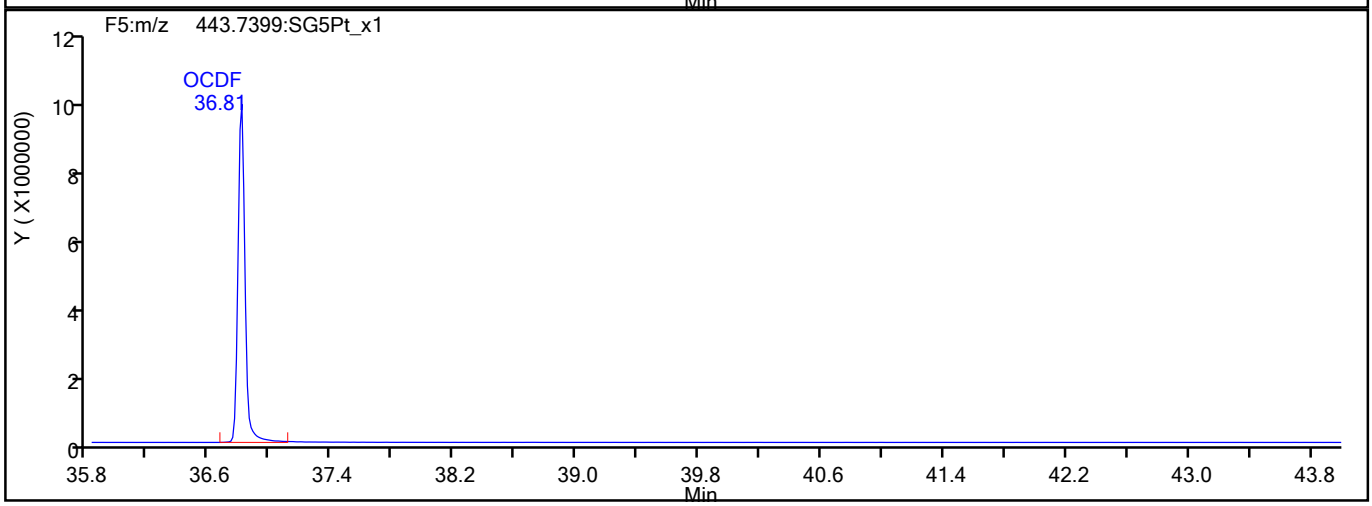

OCDF Interference Mass

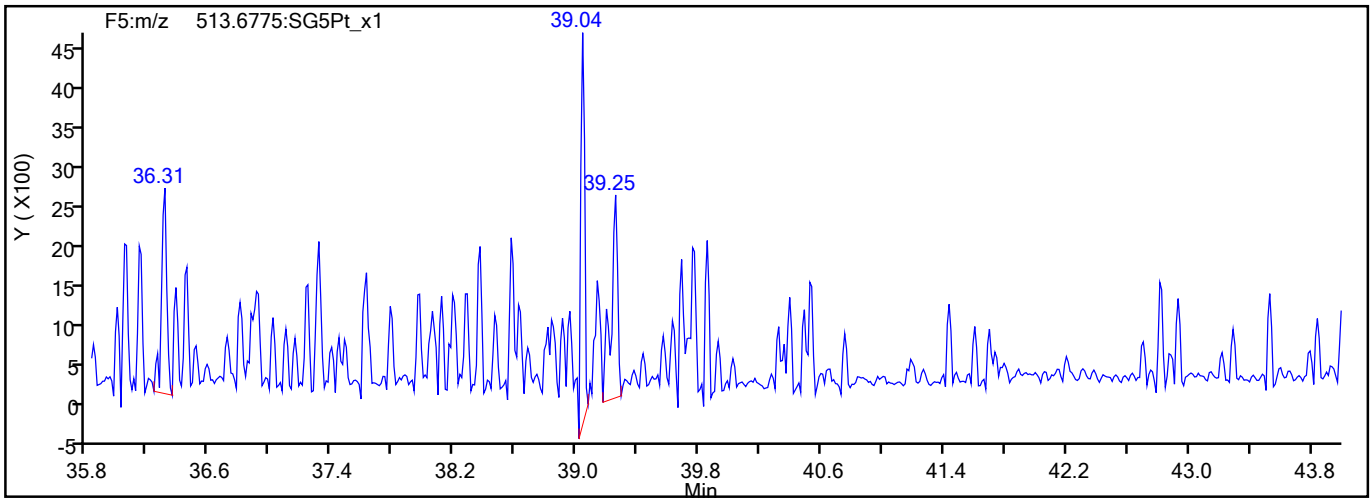

793017

Report Date: 27-Aug-2021 09:50:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

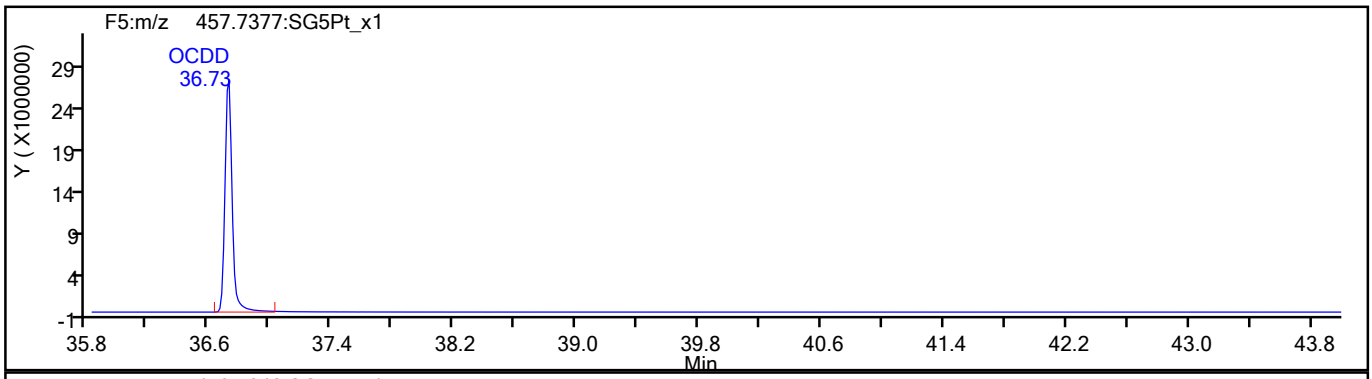

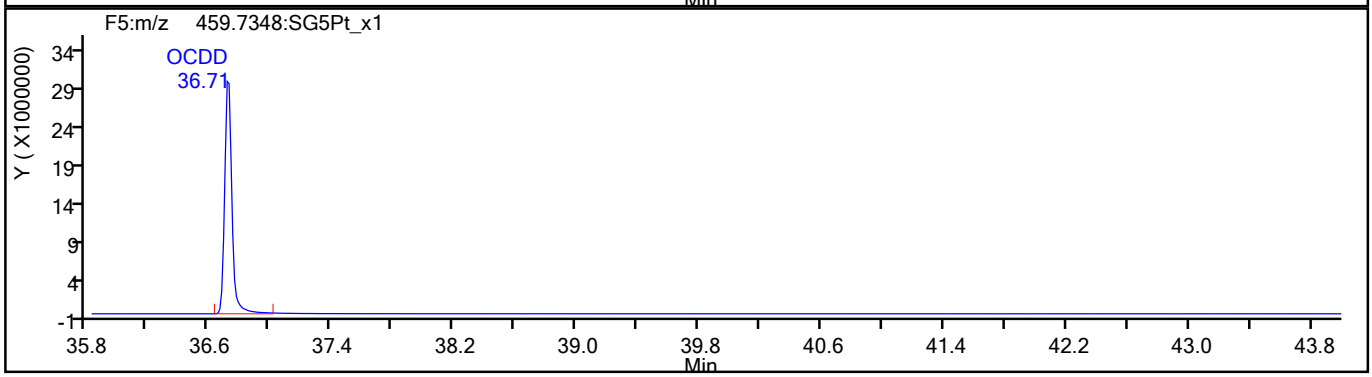

OCDD Standards

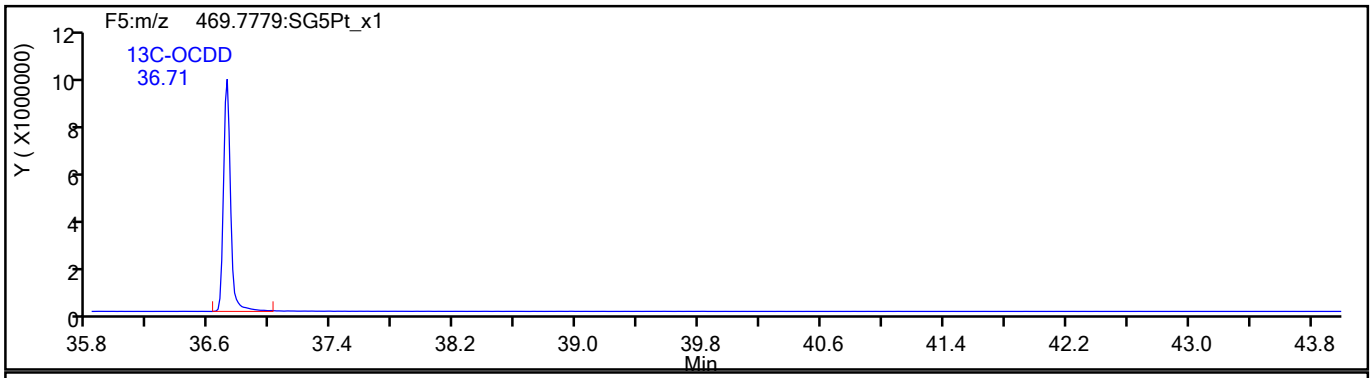

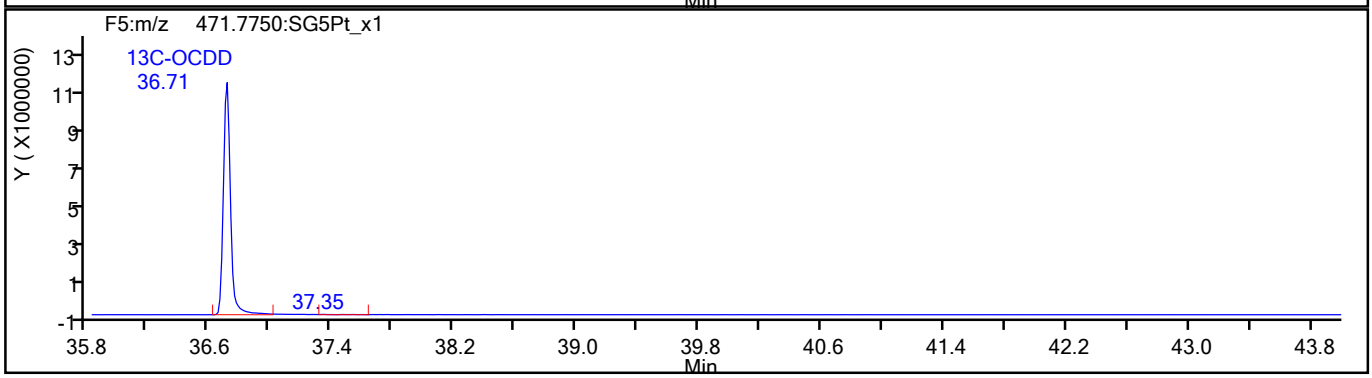

793018

Report Date: 27-Aug-2021 09:50:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

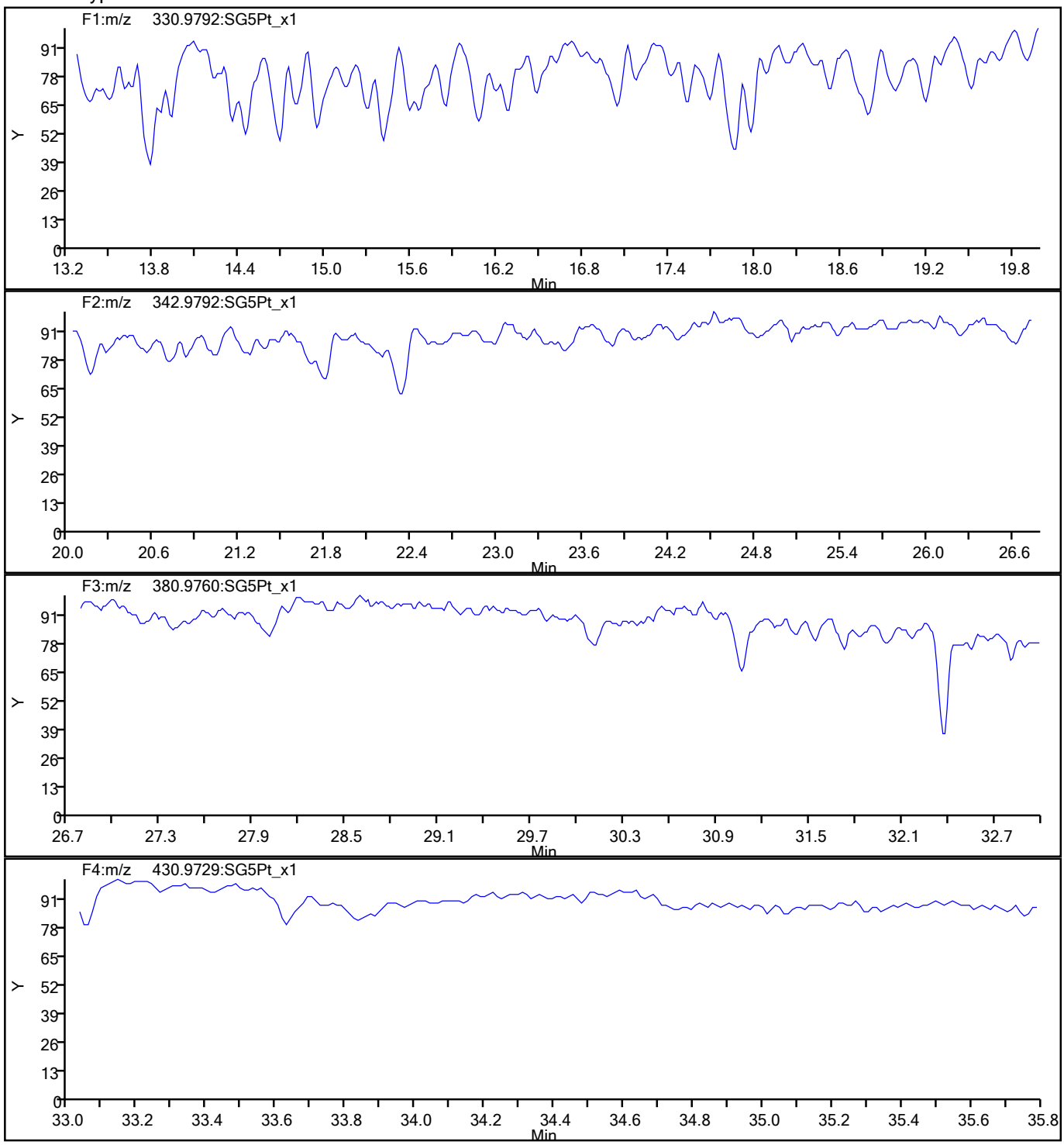

793019

Report Date: 27-Aug-2021 09:50:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_8.d		
Injection Date:	25-Aug-2021 15:05:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	519953	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

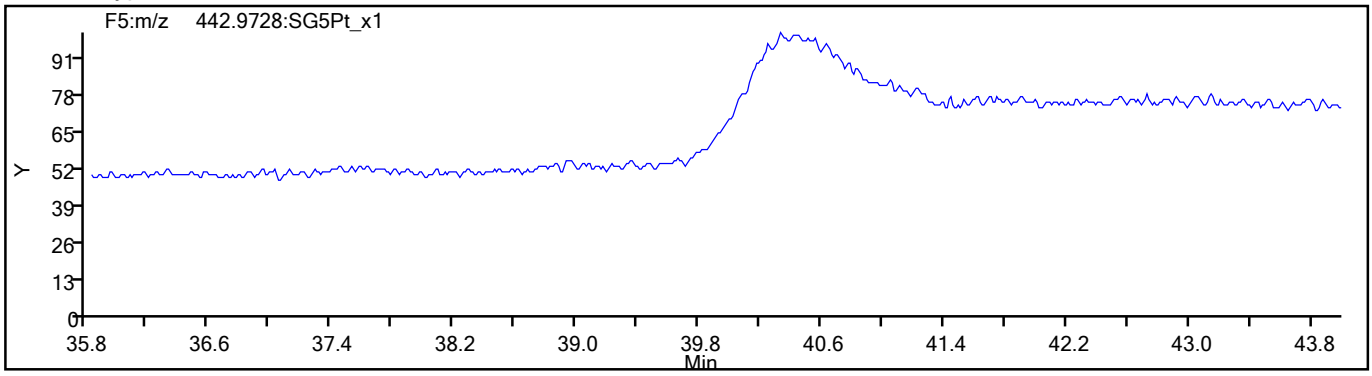

793020

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77214-2
SDG No.:
Client Sample ID:
Lab Sample ID: 320-77214-A-2-C MSD RA
Matrix: Sediment
Lab File ID: 31AU2111D2_017.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.05(g)
Date Analyzed: 08/31/2021 23:27
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 23.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520997
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	5870		9.8	9.8

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	45		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	53		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MSD
Inject. Date: 31-Aug-2021 23:27:20 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:50:55

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.319	36437842	0.88	7.2E+05	100.0	100.0				M
D 13C-2,3,7,8-TCDF	17.649	21862093	0.66	1.3327	45.0	45.0	4.661	4.661	45.02	M
2,3,7,8-TCDF	17.677	489266495	0.79	0.9978	2242.9	2242.9	3.739	3.739	22429	E
D 13C-2,3,7,8-TCDD	16.085	15153205	0.80	0.8749	47.5	47.5	21.8	21.8	47.53	M
2,3,7,8-TCDD	16.099	120268237	0.79	1.0570	750.9	750.9	8.013	8.013	7509	E
$ 37Cl4-2,3,7,8-TCDD	16.099	6720433		0.8648	21.3	21.3	0.6450	0.6450	53.32	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d
Lims ID: 320-77214-A-2-C MSD
Client ID: 11215702-080221-BN-SJSB090 (2-4)
Sample Type: MSD
Inject. Date: 31-Aug-2021 23:27:20 ALS Bottle#: 0 Worklist Smp#: 17
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77214-A-2-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:50:55

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											M
331.9368	16.319	16.275	3		17101541	3320537	273530	683825	12		M
333.9339	16.319	16.275	3		19336301	3698320	261863	654657	14	0.88(0.65-0.89)	M
13C-2,3,7,8-TCDF											M
315.9419	17.649	17.605	3	1.082	8723927	1585035	76521	191302	21		M
317.9389	17.663	17.605	3	1.082	13138166	2251649	97868	244670	23	0.66(0.65-0.89)	M
2,3,7,8-TCDF											E
303.9016	17.677	17.619	3	1.002	215698480	39220847	29786	74465	1317		
305.8987	17.677	17.619	3	1.002	273568015	48709743	27467	68667	1773	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											M
331.9368	16.085	16.055	2	0.986	6725589	1510386	273530	683825	6		M
333.9339	16.085	16.055	2	0.986	8427616	1799187	261863	654657	7	0.80(0.65-0.89)	M
2,3,7,8-TCDD											E
319.8965	16.099	16.069	2	1.001	52897754	12122378	64934	162335	187		
321.8936	16.099	16.069	2	1.001	67370483	15435729	47193	117982	327	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.099	16.069	2	0.987	6720433	1540535	15661	39152	98		

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d				
Injection Date:	31-Aug-2021 23:27:20	Instrument ID:	11D2		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 1

Processing Integration Results

RT: 17.65
Area: 10135570
Amount: 57.251088
Amount Units: pg/ul

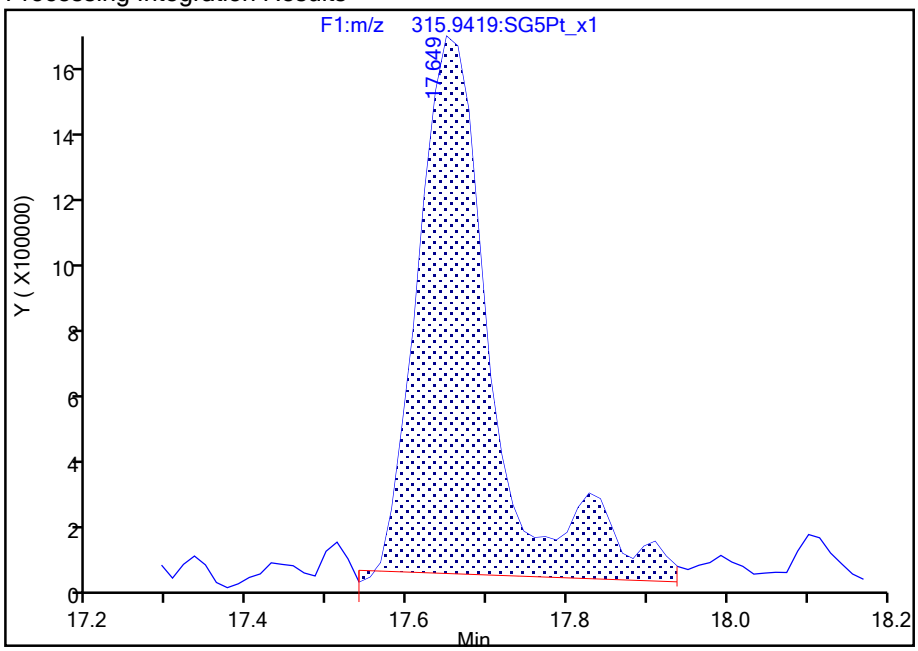

Manual Integration Results

RT: 17.65
Area: 8723927
Amount: 45.020597
Amount Units: pg/ul

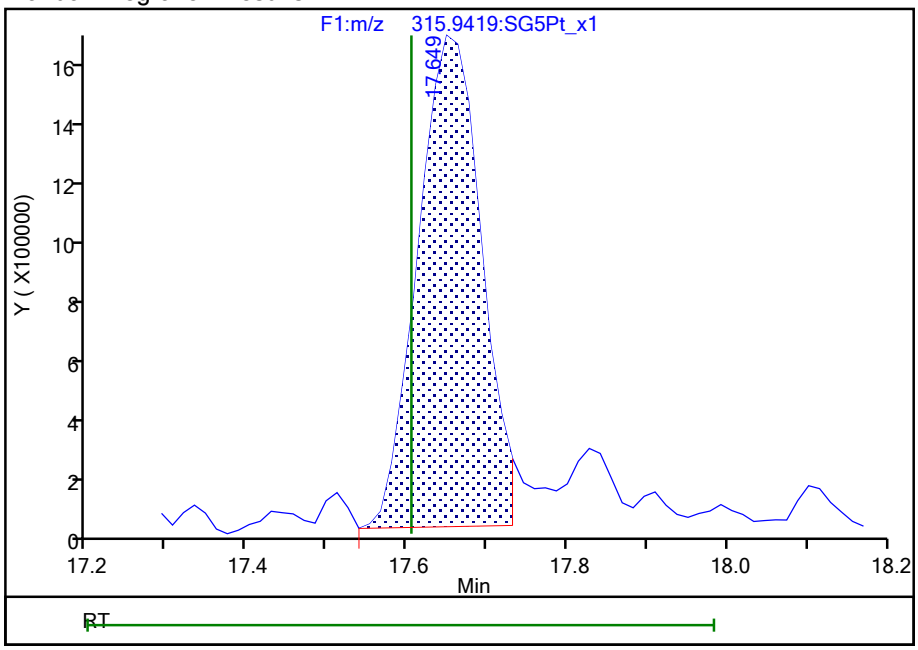

Reviewer: bennettd, 01-Sep-2021 09:50:39

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d				
Injection Date:	31-Aug-2021 23:27:20	Instrument ID:	11D2		
Lims ID:	320-77214-A-2-C MSD				
Client ID:	11215702-080221-BN-SJSB090 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

13C-2,3,7,8-TCDF, CAS: 89059-46-1

Signal: 2

Processing Integration Results

RT: 17.66
Area: 17665674
Amount: 57.251088
Amount Units: pg/ul

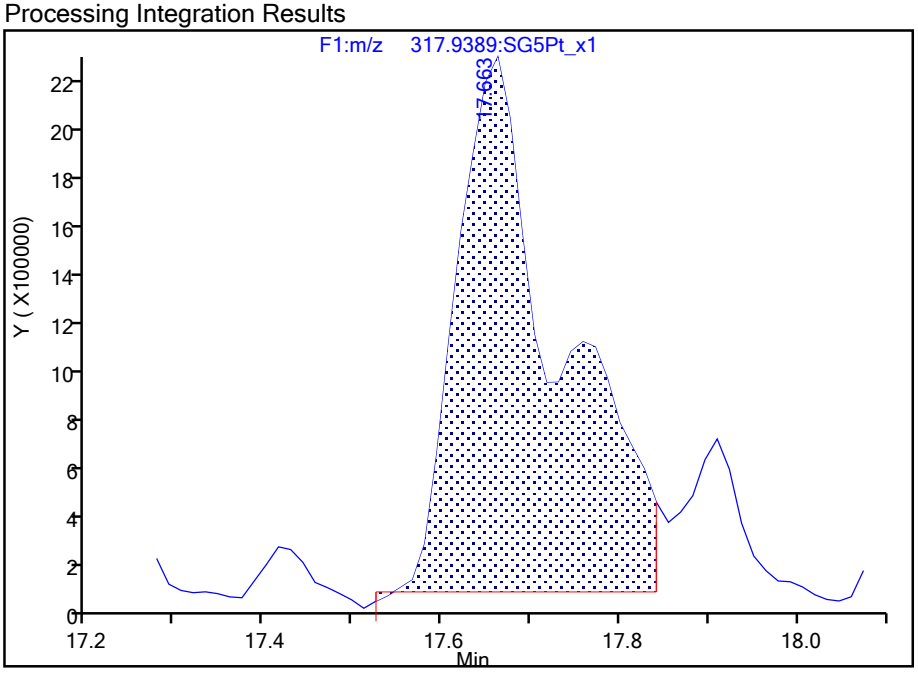

Manual Integration Results

RT: 17.66
Area: 13138166
Amount: 45.020597
Amount Units: pg/ul

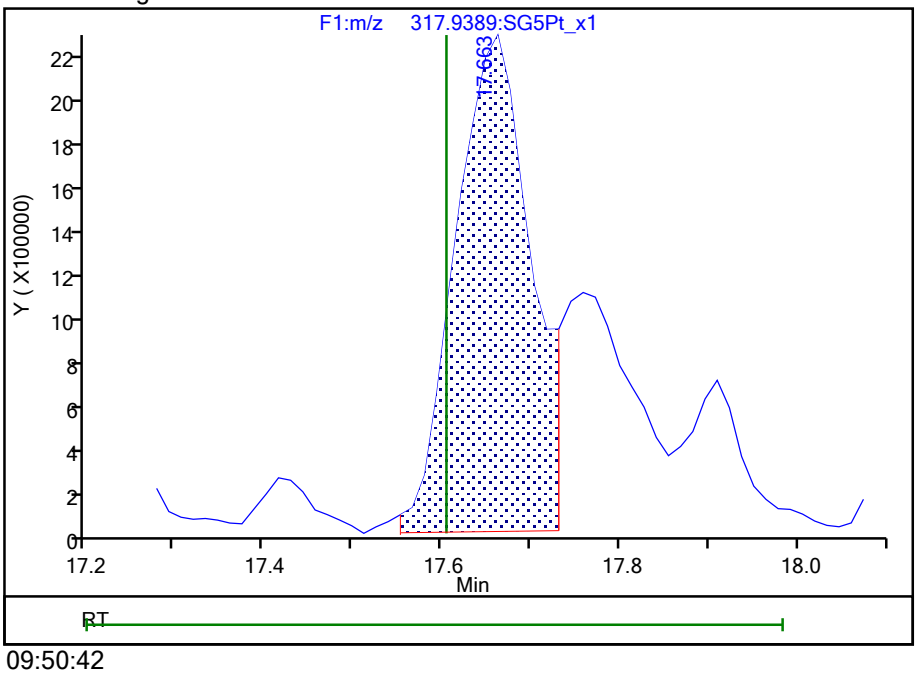

Reviewer: bennettd, 01-Sep-2021 09:50:42

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

793025

Report Date: 01-Sep-2021 09:57:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d		
Injection Date:	31-Aug-2021 23:27:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

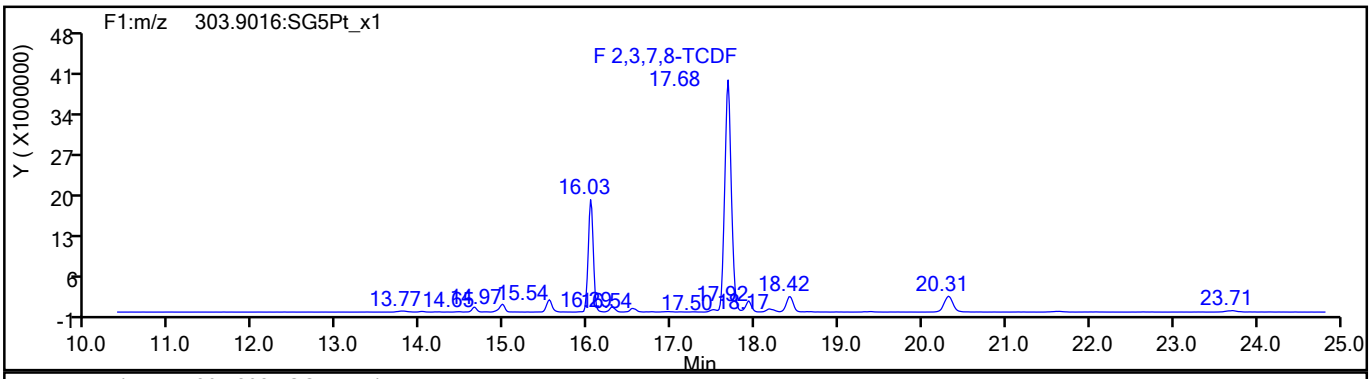

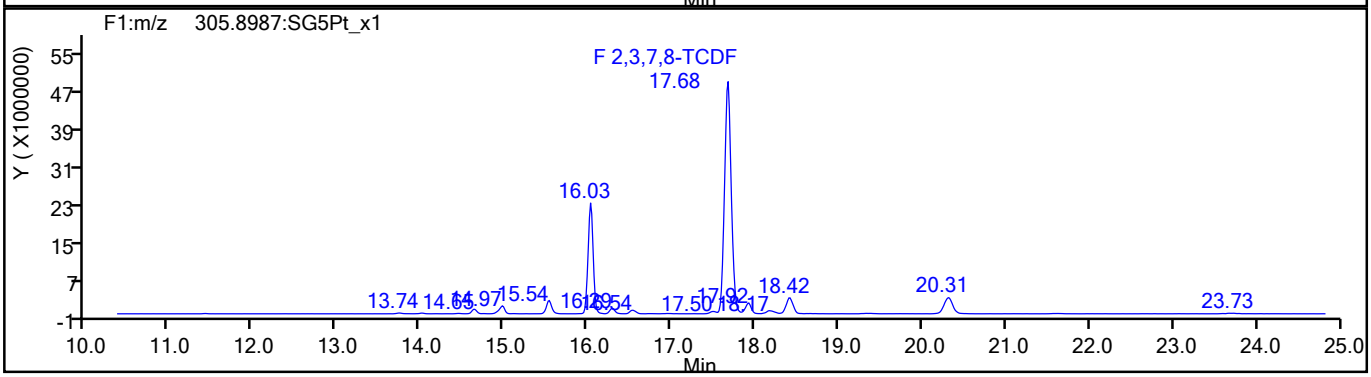

TCDF Standards

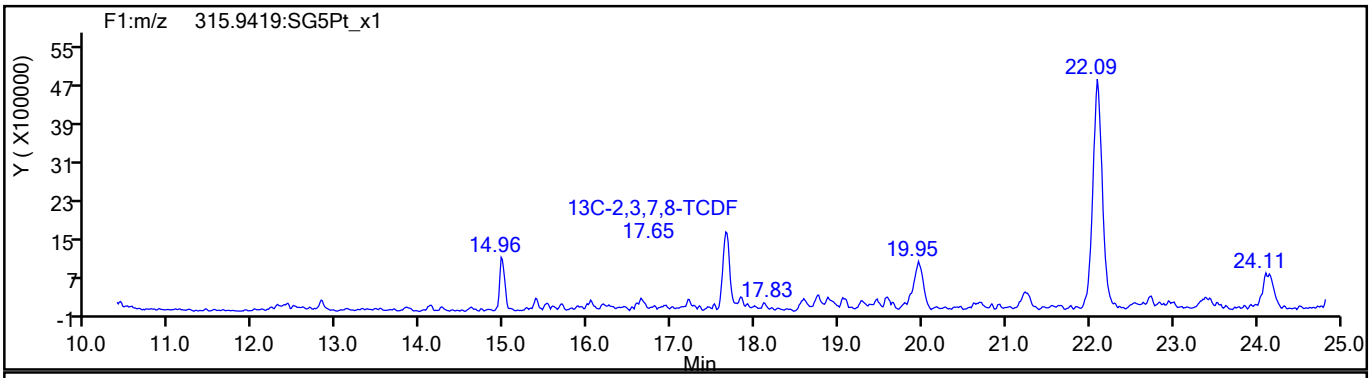

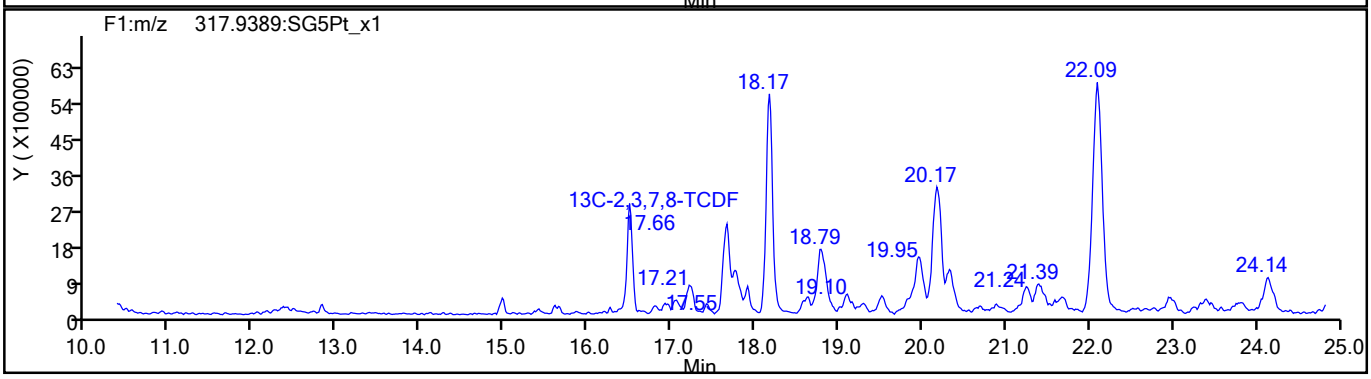

793026

Report Date: 01-Sep-2021 09:57:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d		
Injection Date:	31-Aug-2021 23:27:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

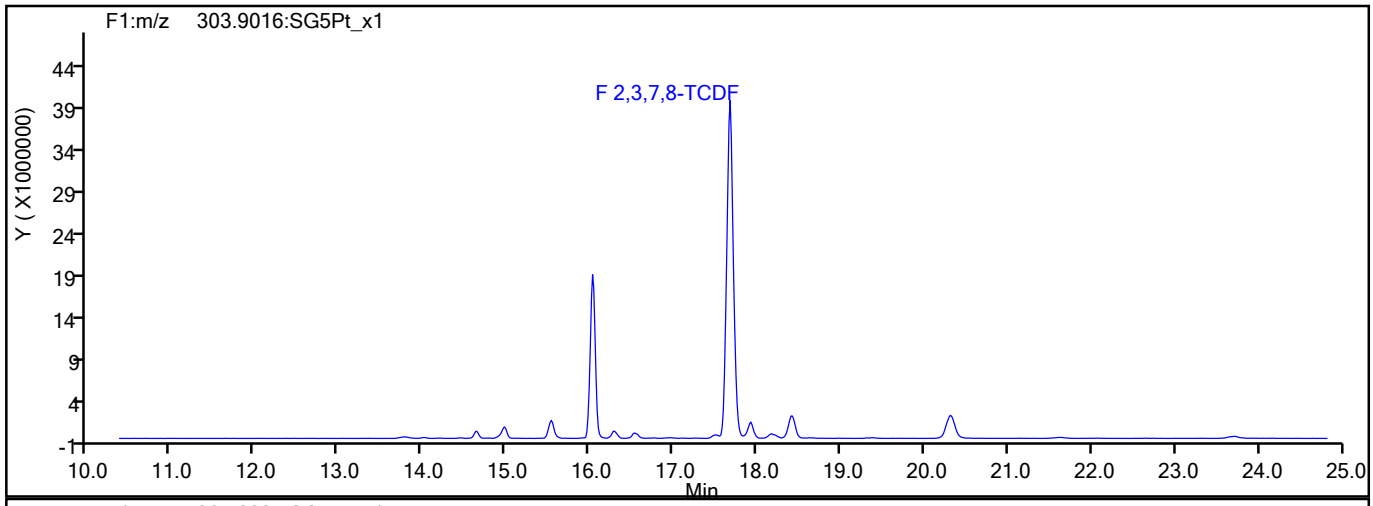

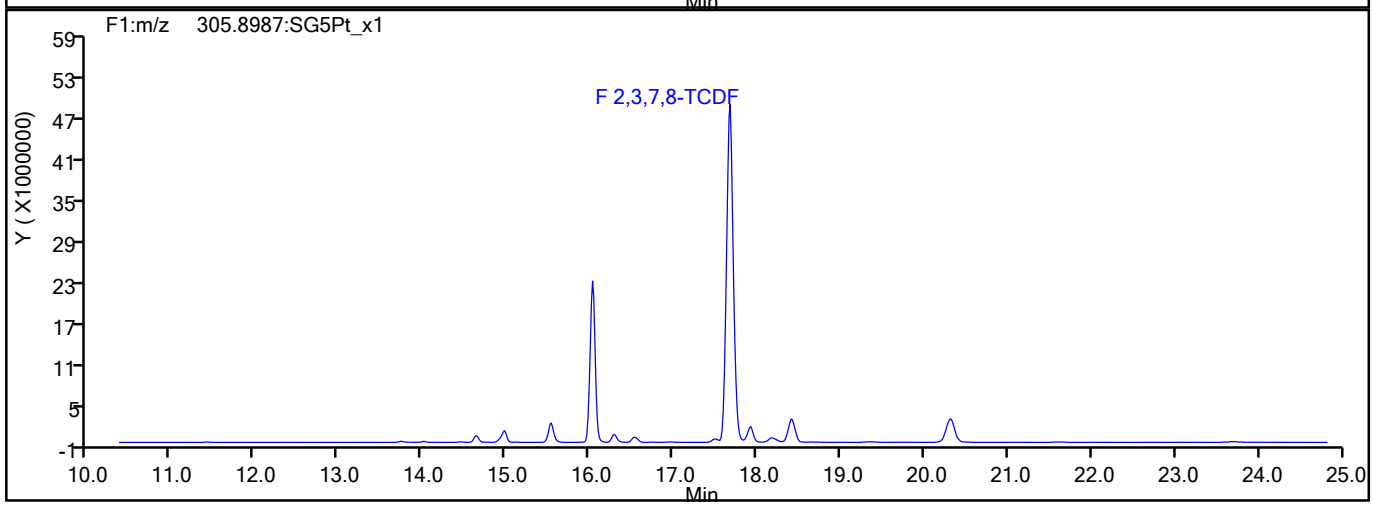

TCDF Interference Mass

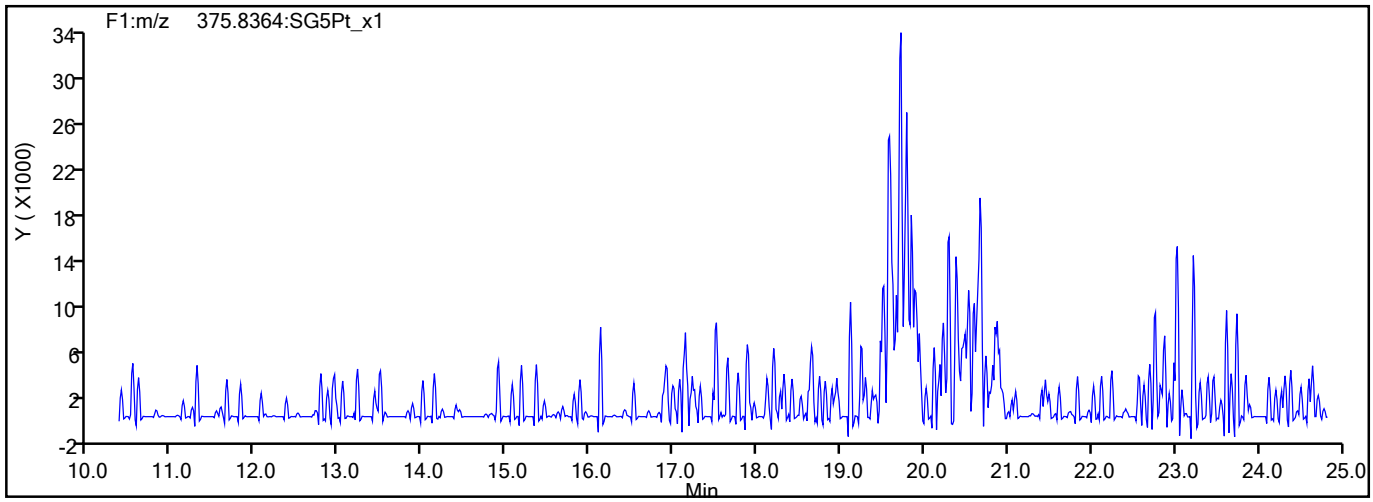

793027

Report Date: 01-Sep-2021 09:57:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d		
Injection Date:	31-Aug-2021 23:27:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

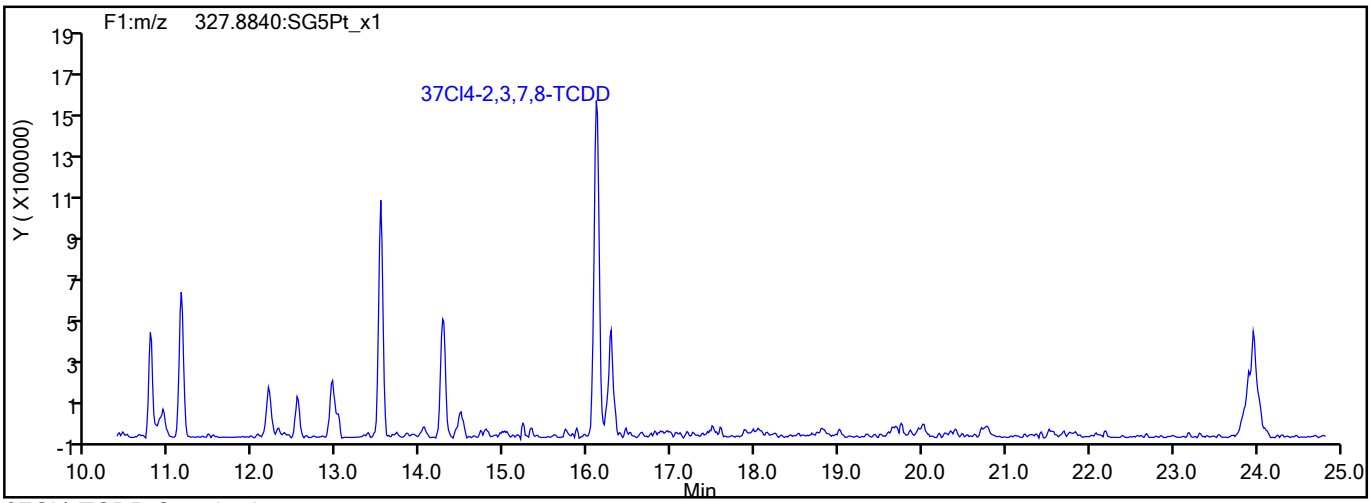

37Cl4-TCDD Standards

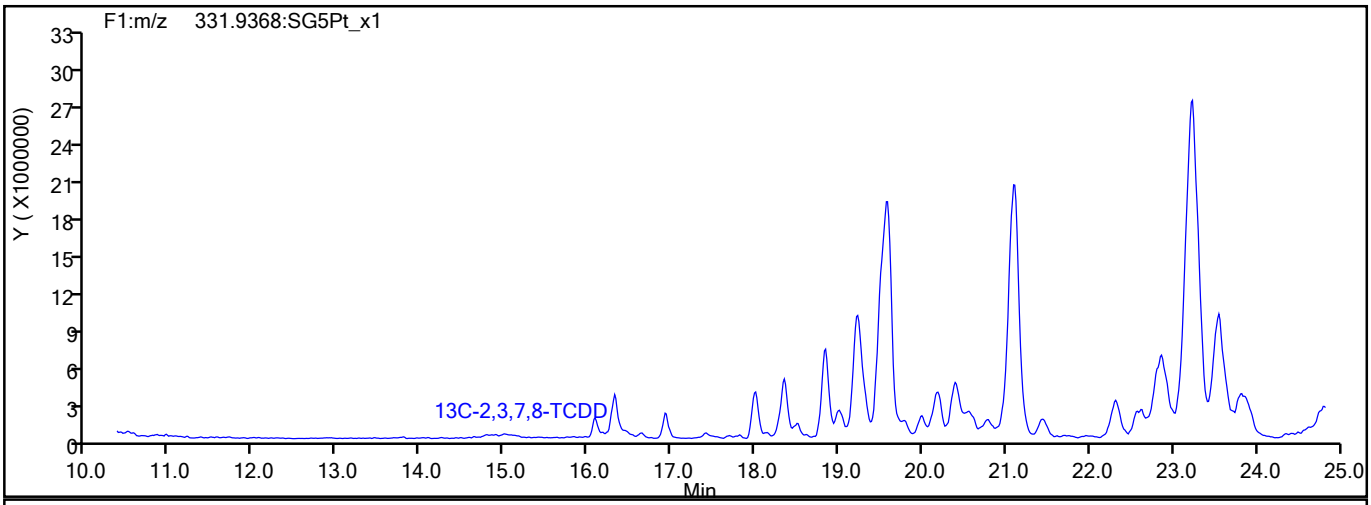

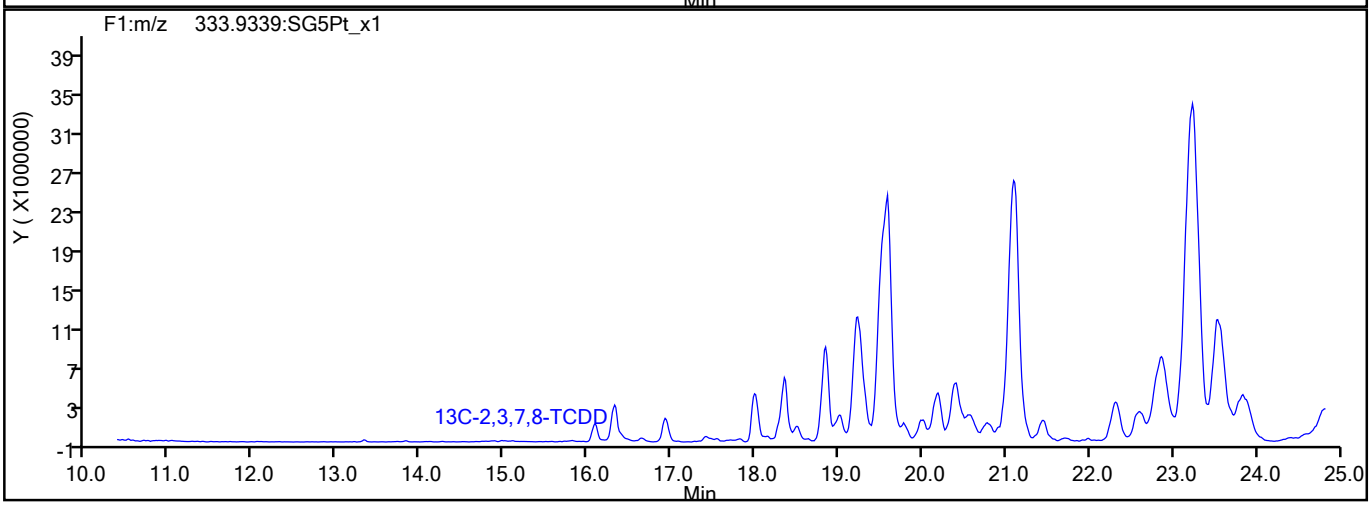

793028

Report Date: 01-Sep-2021 09:57:26 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_017.d		
Injection Date:	31-Aug-2021 23:27:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080221-BN-SJSB090 (2-4)		
Worklist#:	520997	Sample Line#:	17
Column Type:	DB-225	Column Dia:	0.32 mm

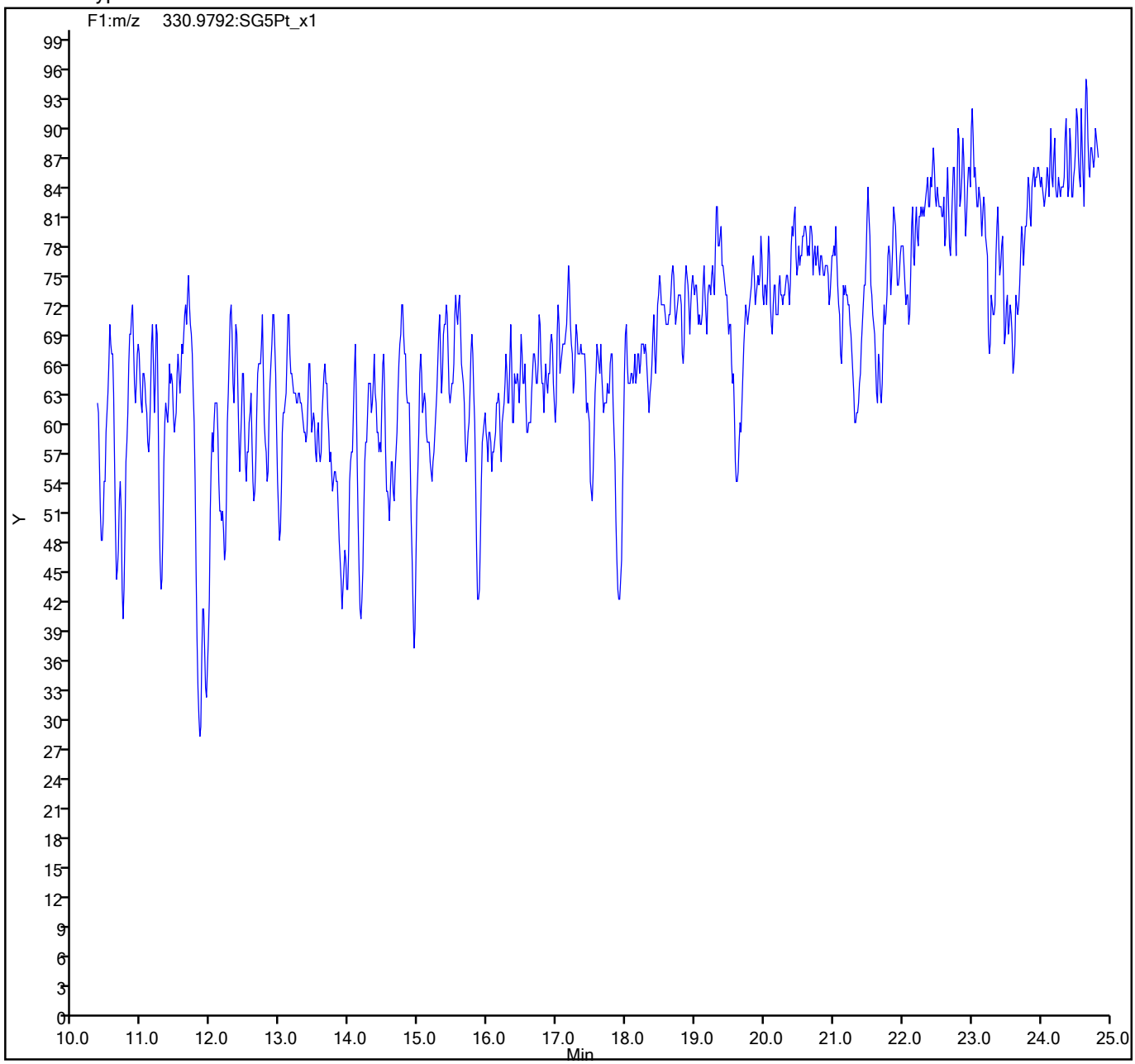

793029

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Instrument ID: 10D5 Start Date: 07/26/2021 09:21

Analysis Batch Number: 510264 End Date: 07/26/2021 15:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-510264/1		07/26/2021 09:21	1	26JL2110D5_1.d	DB-5 0.32(mm)
IC 320-510264/3		07/26/2021 10:51	1	26JL2110D5_3.d	DB-5 0.32(mm)
IC 320-510264/4		07/26/2021 11:36	1	26JL2110D5_4.d	DB-5 0.32(mm)
IC 320-510264/5		07/26/2021 12:21	1	26JL2110D5_5.d	DB-5 0.32(mm)
IC 320-510264/6		07/26/2021 13:06	1	26JL2110D5_6.d	DB-5 0.32(mm)
IC 320-510264/7		07/26/2021 13:51	1	26JL2110D5_7.d	DB-5 0.32(mm)
ICV 320-510264/9		07/26/2021 15:31	1	26JL2110D5_9.d	DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Instrument ID: 10D5 Start Date: 08/25/2021 09:38

Analysis Batch Number: 519953 End Date: 08/25/2021 18:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-519953/1		08/25/2021 09:38	1	25AU2110D5_1.d	DB-5 0.32(mm)
CCV 320-519953/2		08/25/2021 10:23	1	25AU2110D5_2.d	DB-5 0.32(mm)
MB 320-515492/1-A		08/25/2021 11:20	1	25AU2110D5_3.d	DB-5 0.32(mm)
LCS 320-515492/2-A		08/25/2021 12:05	1	25AU2110D5_4.d	DB-5 0.32(mm)
ZZZZZ		08/25/2021 12:50	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 13:35	1		DB-5 0.32(mm)
320-77214-A-2-B MS		08/25/2021 14:20	1	25AU2110D5_7.d	DB-5 0.32(mm)
320-77214-A-2-C MSD		08/25/2021 15:05	1	25AU2110D5_8.d	DB-5 0.32(mm)
ZZZZZ		08/25/2021 15:50	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 16:35	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 17:20	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 18:05	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 18:50	1		DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Instrument ID: 10D5 Start Date: 08/25/2021 20:40

Analysis Batch Number: 519955 End Date: 08/26/2021 05:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-519955/1		08/25/2021 20:40	1	25AU2110D5_15.d	DB-5 0.32(mm)
WDM 320-519955/2		08/25/2021 21:35	1	25AU2110D5_16.d	DB-5 0.32(mm)
ZZZZZ		08/25/2021 23:05	1		DB-5 0.32(mm)
320-77214-9	11215702-080221-BN-SJ SB090 (16-18)	08/25/2021 23:50	1	25AU2110D5_19.d	DB-5 0.32(mm)
ZZZZZ		08/26/2021 00:35	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 01:20	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 02:05	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 02:50	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 03:35	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 04:20	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 05:05	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 05:50	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/27/2021 15:38

Analysis Batch Number: 520456 End Date: 08/28/2021 02:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-520456/1		08/27/2021 15:38	1	27AU21A11D2_001 .d	DB-225 0.32(mm)
CCV 320-520456/2		08/27/2021 16:16	1	27AU21A11D2_002 .d	DB-225 0.32(mm)
ZZZZZ		08/27/2021 17:33	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 18:11	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 18:50	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 19:28	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 20:06	1		DB-225 0.32(mm)
320-77214-9 RA	11215702-080221-BN-SJ SB090 (16-18) RA	08/27/2021 20:45	1	27AU21A11D2_009 .d	DB-225 0.32(mm)
ZZZZZ		08/27/2021 21:23	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 22:01	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 22:40	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 23:18	1		DB-225 0.32(mm)
ZZZZZ		08/27/2021 23:56	1		DB-225 0.32(mm)
ZZZZZ		08/28/2021 00:35	1		DB-225 0.32(mm)
ZZZZZ		08/28/2021 01:13	1		DB-225 0.32(mm)
ZZZZZ		08/28/2021 01:52	1		DB-225 0.32(mm)
ZZZZZ		08/28/2021 02:30	1		DB-225 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Instrument ID: 11D2 Start Date: 08/31/2021 13:13

Analysis Batch Number: 520997 End Date: 09/01/2021 00:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-520997/1		08/31/2021 13:13	1	31AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-520997/2		08/31/2021 13:51	1	31AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/31/2021 15:08	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 15:46	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 16:25	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 17:03	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 17:41	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 18:20	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 18:58	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 19:37	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 20:15	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 20:53	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 21:32	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 22:10	1		DB-225 0.32(mm)
320-77214-A-2-B MS RA		08/31/2021 22:48	1	31AU2111D2_016.d	DB-225 0.32(mm)
320-77214-A-2-C MSD RA		08/31/2021 23:27	1	31AU2111D2_017.d	DB-225 0.32(mm)
ZZZZZ		09/01/2021 00:05	10		DB-225 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77214-2

SDG No.:

Batch Number: 515492 Batch Start Date: 08/12/21 05:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/24/21 07:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-515492/1		HRMS-Sox, 1613B		10 g	20.0 uL	G-1	78	1	1 mL
LCS 320-515492/2		HRMS-Sox, 1613B		10 g	20.0 uL	G-2	138	3	1 mL
320-77214-A-2 MS		HRMS-Sox, 1613B	T	9.69 g	20.0 uL	G-5	143	1	1 mL
320-77214-A-2 MSD		HRMS-Sox, 1613B	T	10.05 g	20.0 uL	G-6	144	3	1 mL
320-77214-A-9	11215702-080221-BN-SJSB090 (16-18)	HRMS-Sox, 1613B	T	9.56 g	20.0 uL	I-1	130	1	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-515492/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-515492/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-77214-A-2 MS		HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-77214-A-2 MSD		HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-77214-A-9	11215702-080221-BN-SJSB090 (16-18)	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77214-2

SDG No.:

Batch Number: 515492 Batch Start Date: 08/12/21 05:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/24/21 07:00

Batch Notes	
20% DCM:Hexane ID	DH28_00194 mL
65% DCM:Hexane ID	DH6535_00548
Acid Silica Gel ID	SA5644_00735
Acid Alumina ID	Acid_Alumina_00019
Balance ID	QA-074
Hexane ID	Hexane_00290/289
IFB Clean Up	SKV 8/23/21
Na2SO4 ID	SodiumSulfate_00166
Analyst ID - IDA Reagent Drop	FC 8/12/21 HD05018 HRDXNIDA_00479 B-4/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	TGL 8/12/21
Analyst ID - IS Reagent Drop	TGL 08/24/21 DB15270 HRDXNSU_00137 B 1/4 20.0 uL
Analyst ID - IS Reagent Drop Witness	FC 08/24/21
Analyst ID - SU Reagent Drop	FC 8/19/21 HD05018 HRDXNSU_00255 B-5/5 1.0 mL
Analyst ID - SU Reagent Drop Witness	TGL 8/19/21
Analyst ID - TA Reagent Drop	FC 8/12/21 DB15270 HRDXNTA_00137 B-5/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	TGL 8/12/21
Silica Gel ID	SilicaGel_00375
Soxhlet/Soxtherm End	8/12/21 9:45
Soxhlet/Soxtherm Start	8/12/21 6:45
Storage Box ID	DXN -270
Toluene ID	Toluene_00112

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-77214-2

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-080221-BN-SJSB090 (16-18)	320-77214-9

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-77214-2

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-77214-2

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77214-2

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 08/06/2021 14:43 End Date: 08/06/2021 14:43

Lab Sample Id	D/F	Type	Time	Analytes																								
				% Sol	Moist																							
ZZZZZZ			14:43																									
ZZZZZZ			14:43																									
ZZZZZZ			14:43																									
ZZZZZZ			14:43																									
ZZZZZZ			14:43																									
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ZZZZZZ			14:43																									
ZZZZZZ			14:43																									
ZZZZZZ			14:43																									
ZZZZZZ			14:43																									
320-77214-9	1	T	14:43	X	X																							
ZZZZZZ			14:43																									

Prep Types:
T = Total/NA

FORM XIII-IN

793042

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77214-2

SDG No.:

Batch Number: 513947 Batch Start Date: 08/06/21 14:43 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/09/21 09:09

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-77214-A-9	11215702-080221-BN-SJSB090 (16-18)	D 2216	T	13	1.01 g	9.16 g	6.10 g	37.5460122699387 %	62.4539877300613 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	08/09/2021 08:29
Date and Time Samples out of Desiccator	08/09/2021 09:09
Date samples were placed in the oven	08/06/2021
Oven Temp In	115 Degrees C
Time samples were place in the oven	14:43
Date samples were removed from oven	08/09/2021
Oven Temp Out	115 Degrees C
Time Samples were removed from oven	08:29
Oven ID	Soil Prep #2
Thermometer ID	151969607

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-77214-2

Batch: 513947
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-77214-A-9

Analysis Date: Aug 06, 2021 14:43

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	37.5460122699387	%
Percent Solids	None	1	62.4539877300613	%

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Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P
1.00	1.00	200.00	200.00	8/1/2021	DM	WT-3	P
1.00	1.00	200.00	200.00	08/02/21	NM	WT-3	P
1.00	1.00	200.00	200.00	8/3/21	HC	WT-3	P
1.00	1.00	200.00	200.00	08/04/21	NM	WT-3	P
1.00	1.01	200.00	199.99	8/5/21	KB	WT-3	P
1.00	1.00	200.00	199.99	8/6/21	TG	WT-3	P
1.00	1.00	200.00	200.00	08/09/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams): 1 Reviewed TG 8/12/21

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

793047

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins

Client Information			
Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:	Page: 1 of 2
Company: GHD Services Inc.			Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:		
City: Baton Rouge	TAT Requested (days): 15 business days		
State, Zip: LA, 70808			
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested		
Email: janie.smith@ghd.com	WO #:		
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702		
Site: San Jacinto Waste Pits	SSOW#: 11215702 - 2021-001		

Analysis Requested

320-77214 Chain of Custody

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-080221-BN-SJSB090 (0-2)	8-2-21	1310	G	S	N	N	X	X	X	1	
(2-4)		1315			N	Y	X	X	X	1	MS/MSD
(4-6)		1320			N	N	X	X	X	1	
(6-8)		1325			N	N	X	X	X	1	
(8-10)		1330			N	N	X	X	X	1	
(10-12)		1335			N	N	X	X	X	1	
(12-14)		1340			N	N	X	X	X	1	
(14-16)		1345			N	N	X	X	X	1	
(16-18)		1350			N	N	X	X	X	1	PRIORITY
(18-20)		1355			N	N	X	X	X	1	HOLD
(20-22)		1400			N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FedEx		
Relinquished by: Breanna North	Date/Time: 8-3-21 1500	Company: GHD	Received by: [signature]	Date/Time: 8-4-21 / 09:35	Company: ETASAC
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Custody Seals Intact: ☐ Yes ☒ No	Custody Seal No.: 1519431		Cooler Temperature(s) °C and Other Remarks: 2.4		

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

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Chain of Custody Record

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 2 of 2
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-080221-BN-SJSB090(22-24)	8-2-21	1405	G	S	N	N	X	X	X	1	HOLD
11215702-080221-BN-DUP-11	8-2-21	—	G	S	N	N	X	X	X	1	

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: Fed Ex

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Breanna North	8-3-21 1500	GHD	[illegible]	8-5-21/09:35	ETASA

Custody Seals Intact: ☒ Yes ☐ No | Custody Seal No.: 151943

Cooler Temperature(s) °C and Other Remarks: 2.4

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-77214-2

Login Number: 77214
List Number: 1
Creator: Gonzales, Justinn

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1519431
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Job Number: 320-77292-1

Job Description: SJRWP Supplemental Design Investigation

For:
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, LA 70808

Attention: Janie Smith

Approved for release.
Karen Dahl
Senior Project Manager
9/1/2021 4:30 PM

Karen Dahl, Senior Project Manager
880 Riverside Parkway, West Sacramento, CA, 95605
(916)374-4384
Karen.Dahl@Eurofinset.com
09/01/2021

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager or designee who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 320-77292-1
Project/Site: SJRWP Supplemental Design Investigation

Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Comments
No additional comments.

Receipt
The samples were received on 8/6/2021 10:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.2º C.

Receipt Exceptions
Per client request the following sample ID was updated to end in -18 instead of -11 as listed on COC: 11215702-080321-BN-DUP-18 (320-77292-13). A revised CoC was received and is included in this report.

Dioxin
Method 1613B: Results for non-detect PCDD/PCDF analytes are reported using the Estimated Detection Limit (EDL) convention, which provides the lowest possible detection limits for each analyte in each sample based on the magnitude of chromatographic and detector 'noise' at the expected retention time of each analyte. EDL values are typically well below 1 pg/g, and the TEQ-weighted sum of EDL values is below the targeted action limit of 30 pg/g in each reported sample.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: (CCV 320-519953/2), (LCS 320-515492/2-A) and (MB 320-515492/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: 11215702-080321-BN-SJSB091 (0-2) (320-77292-1), 11215702-080321-BN-SJSB091 (2-4) (320-77292-2), 11215702-080321-BN-SJSB091 (2-4) (320-77292-2[MS]), 11215702-080321-BN-SJSB091 (2-4) (320-77292-2[MSD]), 11215702-080321-BN-SJSB091 (4-6) (320-77292-3), 11215702-080321-BN-SJSB091 (6-8) (320-77292-4), 11215702-080321-BN-SJSB091 (8-10) (320-77292-5) and (CCV 320-519955/1). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The method specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV082521B). 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: 11215702-080321-BN-SJSB091 (10-12) (320-77292-6), 11215702-080321-BN-SJSB091 (12-14) (320-77292-7), 11215702-080321-BN-SJSB091 (14-16) (320-77292-8), 11215702-080321-BN-DUP-18 (320-77292-13) and (CCV 320-519966/1). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: Some of the matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 320-515492 and analytical batch 320-519955 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (0-2) — Lab Sample ID: 320-77292-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	8.6		2.2	0.25	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	1.1	J	11	0.16	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.50	J q	11	0.18	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	1.5	J	11	0.24	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	3.0	J	11	0.24	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	5.6	J	11	0.22	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	1.1	J	11	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.39	J	11	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.19	J	11	0.072	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	130	B	11	2.7	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.50	J	11	0.13	pg/g	1	☼	1613B	Total/NA
OCDD	4400	B	22	6.3	pg/g	1	☼	1613B	Total/NA
OCDF	3.3	J B	22	0.11	pg/g	1	☼	1613B	Total/NA
Total TCDD	12	q	2.2	0.25	pg/g	1	☼	1613B	Total/NA
Total TCDF	58	B	2.2	0.25	pg/g	1	☼	1613B	Total/NA
Total PeCDD	5.0	J	11	0.26	pg/g	1	☼	1613B	Total/NA
Total PeCDF	2.8	J q	11	0.17	pg/g	1	☼	1613B	Total/NA
Total HxCDD	51	q	11	0.23	pg/g	1	☼	1613B	Total/NA
Total HxCDF	1.7	J	11	0.094	pg/g	1	☼	1613B	Total/NA
Total HpCDD	300	B	11	2.7	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.50	J	11	0.13	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	31	B	2.2	1.1	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-080321-BN-SJSB091 (2-4) — Lab Sample ID: 320-77292-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	4.2		1.5	0.076	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.31	J	7.4	0.075	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.56	J q	7.4	0.054	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.23	J q	7.4	0.055	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.58	J	7.4	0.074	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.91	J	7.4	0.080	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.1	J	7.4	0.070	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.51	J	7.4	0.037	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.19	J	7.4	0.036	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.080	J q	7.4	0.025	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.040	J q	7.4	0.027	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	32	B	7.4	0.40	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.21	J	7.4	0.038	pg/g	1	☼	1613B	Total/NA
OCDD	770	F1 B	15	0.61	pg/g	1	☼	1613B	Total/NA
OCDF	0.24	J B q	15	0.036	pg/g	1	☼	1613B	Total/NA
Total TCDD	9.5	q	1.5	0.076	pg/g	1	☼	1613B	Total/NA
Total TCDF	25	B q	1.5	0.095	pg/g	1	☼	1613B	Total/NA
Total PeCDD	4.5	J q	7.4	0.075	pg/g	1	☼	1613B	Total/NA
Total PeCDF	2.1	J q	7.4	0.055	pg/g	1	☼	1613B	Total/NA
Total HxCDD	21	q	7.4	0.075	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.82	J q	7.4	0.031	pg/g	1	☼	1613B	Total/NA
Total HpCDD	83	B	7.4	0.40	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.21	J	7.4	0.042	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	11	B	1.5	0.77	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (4-6) — Lab Sample ID: 320-77292-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	3.2		1.3	0.053	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.11	J q	6.3	0.060	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.31	J	6.3	0.038	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.23	J	6.3	0.039	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.33	J	6.3	0.070	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	0.28	J	6.3	0.077	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	0.57	J	6.3	0.067	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.35	J	6.3	0.032	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.12	J	6.3	0.034	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.080	J	6.3	0.023	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.065	J q	6.3	0.025	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	10	B	6.3	0.18	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.21	J q	6.3	0.038	pg/g	1	☼	1613B	Total/NA
OCDD	340	B	13	0.29	pg/g	1	☼	1613B	Total/NA
OCDF	0.54	J B	13	0.034	pg/g	1	☼	1613B	Total/NA
Total TCDD	5.4	q	1.3	0.053	pg/g	1	☼	1613B	Total/NA
Total TCDF	32	q B	1.3	0.065	pg/g	1	☼	1613B	Total/NA
Total PeCDD	1.9	J q	6.3	0.060	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.75	J q	6.3	0.039	pg/g	1	☼	1613B	Total/NA
Total HxCDD	11	q	6.3	0.071	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.62	J q	6.3	0.028	pg/g	1	☼	1613B	Total/NA
Total HpCDD	38	B	6.3	0.18	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.21	J q	6.3	0.041	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	14	B	1.3	0.71	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-080321-BN-SJSB091 (6-8) — Lab Sample ID: 320-77292-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.72	J q	1.6	0.066	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.29	J	7.9	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.11	J q	7.9	0.055	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.66	J	7.9	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.1	J	7.9	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.7	J	7.9	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.096	J q	7.9	0.046	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDF	0.068	J q	7.9	0.046	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.15	J q	7.9	0.031	pg/g	1	☼	1613B	Total/NA
2,3,4,6,7,8-HxCDF	0.043	J q	7.9	0.033	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	39	B	7.9	0.77	pg/g	1	☼	1613B	Total/NA
OCDD	930	B	16	0.89	pg/g	1	☼	1613B	Total/NA
OCDF	0.21	J q B	16	0.051	pg/g	1	☼	1613B	Total/NA
Total TCDD	6.4	q	1.6	0.066	pg/g	1	☼	1613B	Total/NA
Total TCDF	4.3	q B	1.6	0.050	pg/g	1	☼	1613B	Total/NA
Total PeCDD	7.3	J q	7.9	0.12	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.11	J q	7.9	0.056	pg/g	1	☼	1613B	Total/NA
Total HxCDD	40		7.9	0.14	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.35	J q	7.9	0.039	pg/g	1	☼	1613B	Total/NA
Total HpCDD	130	B	7.9	0.77	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF - RA	3.1	B	1.6	0.69	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (8-10) — Lab Sample ID: 320-77292-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.50	J q	1.6	0.043	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF	1.4	J B	1.6	0.032	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.099	J q	7.9	0.034	pg/g	1	☼	1613B	Total/NA
2,3,4,7,8-PeCDF	0.048	J q	7.9	0.036	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.71	J	7.9	0.19	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.3	J	7.9	0.21	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.1	J	7.9	0.18	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.076	J q	7.9	0.033	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.14	J	7.9	0.022	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	55	B	7.9	0.75	pg/g	1	☼	1613B	Total/NA
OCDD	1400	B	16	1.1	pg/g	1	☼	1613B	Total/NA
OCDF	0.32	J B	16	0.029	pg/g	1	☼	1613B	Total/NA
Total TCDD	6.2	q	1.6	0.043	pg/g	1	☼	1613B	Total/NA
Total TCDF	2.6	B	1.6	0.032	pg/g	1	☼	1613B	Total/NA
Total PeCDD	8.5	q	7.9	0.082	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.15	J q	7.9	0.035	pg/g	1	☼	1613B	Total/NA
Total HxCDD	51	q	7.9	0.19	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.24	J q	7.9	0.028	pg/g	1	☼	1613B	Total/NA
Total HpCDD	190	B	7.9	0.75	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-080321-BN-SJSB091 (10-12) — Lab Sample ID: 320-77292-6

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.51	J q	1.8	0.12	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF	0.91	J B	1.8	0.059	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.27	J q	8.9	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	1.0	J	8.9	0.21	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.7	J	8.9	0.23	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.4	J	8.9	0.20	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.14	J q	8.9	0.050	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	62	B	8.9	0.84	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.20	J	8.9	0.060	pg/g	1	☼	1613B	Total/NA
OCDD	1500	B	18	1.3	pg/g	1	☼	1613B	Total/NA
OCDF	0.25	J q B	18	0.059	pg/g	1	☼	1613B	Total/NA
Total TCDD	9.0	q	1.8	0.12	pg/g	1	☼	1613B	Total/NA
Total TCDF	1.6	J q B	1.8	0.059	pg/g	1	☼	1613B	Total/NA
Total PeCDD	9.5	q	8.9	0.13	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.089	J q	8.9	0.060	pg/g	1	☼	1613B	Total/NA
Total HxCDD	50	q	8.9	0.21	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.14	J q	8.9	0.061	pg/g	1	☼	1613B	Total/NA
Total HpCDD	190	B	8.9	0.84	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.20	J	8.9	0.064	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-080321-BN-SJSB091 (12-14) — Lab Sample ID: 320-77292-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.74	J q	1.6	0.081	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF	1.3	J B	1.6	0.055	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.30	J	7.9	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.75	J	7.9	0.19	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.3	J	7.9	0.19	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	2.6	J	7.9	0.17	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-080321-BN-SJSB091 (12-14) (Continued) Lab Sample ID: 320-77292-7

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,7,8,9-HxCDF	0.086	J q	7.9	0.034	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	47	B	7.9	0.72	pg/g	1	☼	1613B	Total/NA
OCDD	1100	B	16	1.4	pg/g	1	☼	1613B	Total/NA
OCDF	0.17	J q B	16	0.042	pg/g	1	☼	1613B	Total/NA
Total TCDD	7.3	q	1.6	0.081	pg/g	1	☼	1613B	Total/NA
Total TCDF	2.9	q B	1.6	0.055	pg/g	1	☼	1613B	Total/NA
Total PeCDD	9.2	q	7.9	0.11	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.080	J q	7.9	0.057	pg/g	1	☼	1613B	Total/NA
Total HxCDD	36		7.9	0.18	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.086	J q	7.9	0.042	pg/g	1	☼	1613B	Total/NA
Total HpCDD	130	B	7.9	0.72	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-080321-BN-SJSB091 (14-16) Lab Sample ID: 320-77292-8

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.53	J q	1.8	0.094	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF	0.93	J B	1.8	0.038	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.81	J	8.8	0.22	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.5	J	8.8	0.23	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.2	J	8.8	0.20	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.087	J q	8.8	0.034	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	59	B	8.8	0.65	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.063	J q	8.8	0.040	pg/g	1	☼	1613B	Total/NA
OCDD	1200	B	18	0.89	pg/g	1	☼	1613B	Total/NA
OCDF	0.14	J q B	18	0.048	pg/g	1	☼	1613B	Total/NA
Total TCDD	8.6	q	1.8	0.094	pg/g	1	☼	1613B	Total/NA
Total TCDF	1.9	q B	1.8	0.038	pg/g	1	☼	1613B	Total/NA
Total PeCDD	11	q	8.8	0.12	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.063	J q	8.8	0.052	pg/g	1	☼	1613B	Total/NA
Total HxCDD	45		8.8	0.21	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.087	J q	8.8	0.042	pg/g	1	☼	1613B	Total/NA
Total HpCDD	150	B	8.8	0.65	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.063	J q	8.8	0.043	pg/g	1	☼	1613B	Total/NA

Client Sample ID: 11215702-080321-BN-DUP-18 Lab Sample ID: 320-77292-13

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDD	0.56	J q	1.6	0.090	pg/g	1	☼	1613B	Total/NA
2,3,7,8-TCDF	1.3	J B	1.6	0.045	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDD	0.30	J q	8.0	0.11	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8-PeCDF	0.16	J	8.0	0.055	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDD	0.77	J	8.0	0.13	pg/g	1	☼	1613B	Total/NA
1,2,3,6,7,8-HxCDD	1.4	J	8.0	0.14	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDD	3.3	J	8.0	0.12	pg/g	1	☼	1613B	Total/NA
1,2,3,4,7,8-HxCDF	0.15	J	8.0	0.046	pg/g	1	☼	1613B	Total/NA
1,2,3,7,8,9-HxCDF	0.20	J q	8.0	0.032	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDD	63	B	8.0	0.87	pg/g	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	0.12	J q	8.0	0.057	pg/g	1	☼	1613B	Total/NA
OCDD	1700	B	16	1.5	pg/g	1	☼	1613B	Total/NA
OCDF	0.45	J B	16	0.050	pg/g	1	☼	1613B	Total/NA
Total TCDD	7.4	q	1.6	0.090	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 11215702-080321-BN-DUP-18 (Continued) Lab Sample ID: 320-77292-13

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total TCDF	2.5	q B	1.6	0.045	pg/g	1	☼	1613B	Total/NA
Total PeCDD	10	q	8.0	0.11	pg/g	1	☼	1613B	Total/NA
Total PeCDF	0.16	J	8.0	0.057	pg/g	1	☼	1613B	Total/NA
Total HxCDD	54		8.0	0.13	pg/g	1	☼	1613B	Total/NA
Total HxCDF	0.34	J q	8.0	0.040	pg/g	1	☼	1613B	Total/NA
Total HpCDD	210	B	8.0	0.87	pg/g	1	☼	1613B	Total/NA
Total HpCDF	0.27	J q	8.0	0.060	pg/g	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (0-2)

Lab Sample ID: 320-77292-1
Date Collected: 08/03/21 13:30
Matrix: Sediment
Date Received: 08/06/21 10:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	55.6		0.1	0.1	%			08/09/21 11:17	1
Percent Solids	44.4		0.1	0.1	%			08/09/21 11:17	1

Client Sample ID: 11215702-080321-BN-SJSB091 (0-2)

Lab Sample ID: 320-77292-1
Date Collected: 08/03/21 13:30
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 44.4

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	8.6		2.2	0.25	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
1,2,3,7,8-PeCDD	ND		11	0.26	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
1,2,3,7,8-PeCDF	1.1	J	11	0.16	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
2,3,4,7,8-PeCDF	0.50	J q	11	0.18	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
1,2,3,4,7,8-HxCDD	1.5	J	11	0.24	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
1,2,3,6,7,8-HxCDD	3.0	J	11	0.24	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
1,2,3,7,8,9-HxCDD	5.6	J	11	0.22	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
1,2,3,4,7,8-HxCDF	1.1	J	11	0.12	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
1,2,3,6,7,8-HxCDF	0.39	J	11	0.11	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
1,2,3,7,8,9-HxCDF	0.19	J	11	0.072	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
2,3,4,6,7,8-HxCDF	ND		11	0.076	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
1,2,3,4,6,7,8-HpCDD	130	B	11	2.7	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
1,2,3,4,6,7,8-HpCDF	0.50	J	11	0.13	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
1,2,3,4,7,8,9-HpCDF	ND		11	0.14	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
OCDD	4400	B	22	6.3	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
OCDF	3.3	J B	22	0.11	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
Total TCDD	12	q	2.2	0.25	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
Total TCDF	58	B	2.2	0.25	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
Total PeCDD	5.0	J	11	0.26	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
Total PeCDF	2.8	J q	11	0.17	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
Total HxCDD	51	q	11	0.23	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
Total HxCDF	1.7	J	11	0.094	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
Total HpCDD	300	B	11	2.7	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1
Total HpCDF	0.50	J	11	0.13	pg/g	☼	08/12/21 05:19	08/26/21 01:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*67*		*25 - 164*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-2,3,7,8-TCDF	*63*		*24 - 169*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-1,2,3,7,8-PeCDD	*67*		*25 - 181*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-1,2,3,7,8-PeCDF	*65*		*24 - 185*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-2,3,4,7,8-PeCDF	*64*		*21 - 178*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-1,2,3,4,7,8-HxCDD	*64*		*32 - 141*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-1,2,3,6,7,8-HxCDD	*57*		*28 - 130*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-1,2,3,4,7,8-HxCDF	*65*		*26 - 152*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-1,2,3,6,7,8-HxCDF	*58*		*26 - 123*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-1,2,3,7,8,9-HxCDF	*66*		*29 - 147*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-2,3,4,6,7,8-HxCDF	*63*		*28 - 136*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*70*		*23 - 140*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*28 - 143*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*75*		*26 - 138*	*08/12/21 05:19*	*08/26/21 01:20*	*1*
13C-OCDD	*80*		*17 - 157*	*08/12/21 05:19*	*08/26/21 01:20*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (0-2)

Lab Sample ID: 320-77292-1
Date Collected: 08/03/21 13:30
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 44.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	73		35 - 197	08/12/21 05:19	08/26/21 01:20	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	31	B	2.2	1.1	pg/g	☼	08/12/21 05:19	08/31/21 18:20	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	67		24 - 169	08/12/21 05:19	08/31/21 18:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	76		35 - 197	08/12/21 05:19	08/31/21 18:20	1

Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)

Lab Sample ID: 320-77292-2
Date Collected: 08/03/21 13:35
Matrix: Sediment
Date Received: 08/06/21 10:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	38.1		0.1	0.1	%			08/09/21 11:17	1
Percent Solids	61.9		0.1	0.1	%			08/09/21 11:17	1

Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)

Lab Sample ID: 320-77292-2
Date Collected: 08/03/21 13:35
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 61.9

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	4.2		1.5	0.076	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
1,2,3,7,8-PeCDD	0.31	J	7.4	0.075	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
1,2,3,7,8-PeCDF	0.56	J q	7.4	0.054	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
2,3,4,7,8-PeCDF	0.23	J q	7.4	0.055	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
1,2,3,4,7,8-HxCDD	0.58	J	7.4	0.074	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
1,2,3,6,7,8-HxCDD	0.91	J	7.4	0.080	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
1,2,3,7,8,9-HxCDD	2.1	J	7.4	0.070	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
1,2,3,4,7,8-HxCDF	0.51	J	7.4	0.037	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
1,2,3,6,7,8-HxCDF	0.19	J	7.4	0.036	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
1,2,3,7,8,9-HxCDF	0.080	J q	7.4	0.025	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
2,3,4,6,7,8-HxCDF	0.040	J q	7.4	0.027	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
1,2,3,4,6,7,8-HpCDD	32	B	7.4	0.40	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
1,2,3,4,6,7,8-HpCDF	0.21	J	7.4	0.038	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
1,2,3,4,7,8,9-HpCDF	ND		7.4	0.045	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
OCDD	770	F1 B	15	0.61	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
OCDF	0.24	J B q	15	0.036	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
Total TCDD	9.5	q	1.5	0.076	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
Total TCDF	25	B q	1.5	0.095	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
Total PeCDD	4.5	J q	7.4	0.075	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
Total PeCDF	2.1	J q	7.4	0.055	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
Total HxCDD	21	q	7.4	0.075	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
Total HxCDF	0.82	J q	7.4	0.031	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
Total HpCDD	83	B	7.4	0.40	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1
Total HpCDF	0.21	J	7.4	0.042	pg/g	☼	08/12/21 05:19	08/26/21 02:05	1

Client Sample ID: 11215702-080321-BN-SJSB091 (2-4) Lab Sample ID: 320-77292-2

Date Collected: 08/03/21 13:35 **Matrix: Sediment**
Date Received: 08/06/21 10:15 **Percent Solids: 61.9**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	52		25 - 164	08/12/21 05:19	08/26/21 02:05	1
13C-2,3,7,8-TCDF	50		24 - 169	08/12/21 05:19	08/26/21 02:05	1
13C-1,2,3,7,8-PeCDD	52		25 - 181	08/12/21 05:19	08/26/21 02:05	1
13C-1,2,3,7,8-PeCDF	50		24 - 185	08/12/21 05:19	08/26/21 02:05	1
13C-2,3,4,7,8-PeCDF	54		21 - 178	08/12/21 05:19	08/26/21 02:05	1
13C-1,2,3,4,7,8-HxCDD	57		32 - 141	08/12/21 05:19	08/26/21 02:05	1
13C-1,2,3,6,7,8-HxCDD	49		28 - 130	08/12/21 05:19	08/26/21 02:05	1
13C-1,2,3,4,7,8-HxCDF	58		26 - 152	08/12/21 05:19	08/26/21 02:05	1
13C-1,2,3,6,7,8-HxCDF	50		26 - 123	08/12/21 05:19	08/26/21 02:05	1
13C-1,2,3,7,8,9-HxCDF	51		29 - 147	08/12/21 05:19	08/26/21 02:05	1
13C-2,3,4,6,7,8-HxCDF	51		28 - 136	08/12/21 05:19	08/26/21 02:05	1
13C-1,2,3,4,6,7,8-HpCDD	51		23 - 140	08/12/21 05:19	08/26/21 02:05	1
13C-1,2,3,4,6,7,8-HpCDF	48		28 - 143	08/12/21 05:19	08/26/21 02:05	1
13C-1,2,3,4,7,8,9-HpCDF	53		26 - 138	08/12/21 05:19	08/26/21 02:05	1
13C-OCDD	53		17 - 157	08/12/21 05:19	08/26/21 02:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	69		35 - 197	08/12/21 05:19	08/26/21 02:05	1

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	11	B	1.5	0.77	pg/g	☼	08/12/21 05:19	08/31/21 18:58	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	55		24 - 169	08/12/21 05:19	08/31/21 18:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	67		35 - 197	08/12/21 05:19	08/31/21 18:58	1

Client Sample ID: 11215702-080321-BN-SJSB091 (4-6) Lab Sample ID: 320-77292-3

Date Collected: 08/03/21 13:40 **Matrix: Sediment**
Date Received: 08/06/21 10:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21.7		0.1	0.1	%			08/09/21 11:17	1
Percent Solids	78.3		0.1	0.1	%			08/09/21 11:17	1

Client Sample ID: 11215702-080321-BN-SJSB091 (4-6) Lab Sample ID: 320-77292-3

Date Collected: 08/03/21 13:40 **Matrix: Sediment**
Date Received: 08/06/21 10:15 **Percent Solids: 78.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	3.2		1.3	0.053	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
1,2,3,7,8-PeCDD	0.11	J q	6.3	0.060	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
1,2,3,7,8-PeCDF	0.31	J	6.3	0.038	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
2,3,4,7,8-PeCDF	0.23	J	6.3	0.039	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
1,2,3,4,7,8-HxCDD	0.33	J	6.3	0.070	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
1,2,3,6,7,8-HxCDD	0.28	J	6.3	0.077	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
1,2,3,7,8,9-HxCDD	0.57	J	6.3	0.067	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
1,2,3,4,7,8-HxCDF	0.35	J	6.3	0.032	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
1,2,3,6,7,8-HxCDF	0.12	J	6.3	0.034	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1

Client Sample ID: 11215702-080321-BN-SJSB091 (4-6) Lab Sample ID: 320-77292-3

Date Collected: 08/03/21 13:40 **Matrix: Sediment**
Date Received: 08/06/21 10:15 **Percent Solids: 78.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDF	0.080	J	6.3	0.023	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
2,3,4,6,7,8-HxCDF	0.065	J q	6.3	0.025	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
1,2,3,4,6,7,8-HpCDD	10	B	6.3	0.18	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
1,2,3,4,6,7,8-HpCDF	0.21	J q	6.3	0.038	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
1,2,3,4,7,8,9-HpCDF	ND		6.3	0.044	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
OCDD	340	B	13	0.29	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
OCDF	0.54	J B	13	0.034	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
Total TCDD	5.4	q	1.3	0.053	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
Total TCDF	32	q B	1.3	0.065	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
Total PeCDD	1.9	J q	6.3	0.060	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
Total PeCDF	0.75	J q	6.3	0.039	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
Total HxCDD	11	q	6.3	0.071	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
Total HxCDF	0.62	J q	6.3	0.028	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
Total HpCDD	38	B	6.3	0.18	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1
Total HpCDF	0.21	J q	6.3	0.041	pg/g	☼	08/12/21 05:19	08/26/21 04:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*47*		*25 - 164*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-2,3,7,8-TCDF	*45*		*24 - 169*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-1,2,3,7,8-PeCDD	*46*		*25 - 181*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-1,2,3,7,8-PeCDF	*45*		*24 - 185*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-2,3,4,7,8-PeCDF	*48*		*21 - 178*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-1,2,3,4,7,8-HxCDD	*52*		*32 - 141*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-1,2,3,6,7,8-HxCDD	*45*		*28 - 130*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-1,2,3,4,7,8-HxCDF	*53*		*26 - 152*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-1,2,3,6,7,8-HxCDF	*44*		*26 - 123*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-1,2,3,7,8,9-HxCDF	*46*		*29 - 147*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-2,3,4,6,7,8-HxCDF	*46*		*28 - 136*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*46*		*23 - 140*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*43*		*28 - 143*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*49*		*26 - 138*	*08/12/21 05:19*	*08/26/21 04:20*	*1*
13C-OCDD	*49*		*17 - 157*	*08/12/21 05:19*	*08/26/21 04:20*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*69*		*35 - 197*	*08/12/21 05:19*	*08/26/21 04:20*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	14	B	1.3	0.71	pg/g	☼	08/12/21 05:19	08/31/21 20:53	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*49*		*24 - 169*	*08/12/21 05:19*	*08/31/21 20:53*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*70*		*35 - 197*	*08/12/21 05:19*	*08/31/21 20:53*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (6-8)

Lab Sample ID: 320-77292-4

Date Collected: 08/03/21 13:45
Matrix: Sediment
Date Received: 08/06/21 10:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	38.9		0.1	0.1	%			08/09/21 11:17	1
Percent Solids	61.1		0.1	0.1	%			08/09/21 11:17	1

Client Sample ID: 11215702-080321-BN-SJSB091 (6-8)

Lab Sample ID: 320-77292-4

Date Collected: 08/03/21 13:45
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 61.1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.72	J q	1.6	0.066	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
1,2,3,7,8-PeCDD	0.29	J	7.9	0.12	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
1,2,3,7,8-PeCDF	0.11	J q	7.9	0.055	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
2,3,4,7,8-PeCDF	ND		7.9	0.057	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
1,2,3,4,7,8-HxCDD	0.66	J	7.9	0.14	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
1,2,3,6,7,8-HxCDD	1.1	J	7.9	0.14	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
1,2,3,7,8,9-HxCDD	2.7	J	7.9	0.13	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
1,2,3,4,7,8-HxCDF	0.096	J q	7.9	0.046	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
1,2,3,6,7,8-HxCDF	0.068	J q	7.9	0.046	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
1,2,3,7,8,9-HxCDF	0.15	J q	7.9	0.031	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
2,3,4,6,7,8-HxCDF	0.043	J q	7.9	0.033	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
1,2,3,4,6,7,8-HpCDD	39	B	7.9	0.77	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
1,2,3,4,6,7,8-HpCDF	ND		7.9	0.057	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
1,2,3,4,7,8,9-HpCDF	ND		7.9	0.065	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
OCDD	930	B	16	0.89	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
OCDF	0.21	J q B	16	0.051	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
Total TCDD	6.4	q	1.6	0.066	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
Total TCDF	4.3	q B	1.6	0.050	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
Total PeCDD	7.3	J q	7.9	0.12	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
Total PeCDF	0.11	J q	7.9	0.056	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
Total HxCDD	40		7.9	0.14	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
Total HxCDF	0.35	J q	7.9	0.039	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
Total HpCDD	130	B	7.9	0.77	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1
Total HpCDF	ND		7.9	0.065	pg/g	☼	08/12/21 05:19	08/26/21 05:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*53*		*25 - 164*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-2,3,7,8-TCDF	*48*		*24 - 169*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-1,2,3,7,8-PeCDD	*50*		*25 - 181*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-1,2,3,7,8-PeCDF	*49*		*24 - 185*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-2,3,4,7,8-PeCDF	*51*		*21 - 178*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-1,2,3,4,7,8-HxCDD	*56*		*32 - 141*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-1,2,3,6,7,8-HxCDD	*48*		*28 - 130*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-1,2,3,4,7,8-HxCDF	*57*		*26 - 152*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-1,2,3,6,7,8-HxCDF	*48*		*26 - 123*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-1,2,3,7,8,9-HxCDF	*51*		*29 - 147*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-2,3,4,6,7,8-HxCDF	*50*		*28 - 136*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*53*		*23 - 140*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*47*		*28 - 143*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*55*		*26 - 138*	*08/12/21 05:19*	*08/26/21 05:05*	*1*
13C-OCDD	*55*		*17 - 157*	*08/12/21 05:19*	*08/26/21 05:05*	*1*

Client Sample ID: 11215702-080321-BN-SJSB091 (6-8) Lab Sample ID: 320-77292-4

Date Collected: 08/03/21 13:45 **Matrix: Sediment**
Date Received: 08/06/21 10:15 **Percent Solids: 61.1**

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*70*		*35 - 197*	*08/12/21 05:19*	*08/26/21 05:05*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	**3.1**	**B**	1.6	0.69	pg/g	☼	08/12/21 05:19	08/31/21 21:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDF	*53*		*24 - 169*	*08/12/21 05:19*	*08/31/21 21:32*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*76*		*35 - 197*	*08/12/21 05:19*	*08/31/21 21:32*	*1*

Client Sample ID: 11215702-080321-BN-SJSB091 (8-10) Lab Sample ID: 320-77292-5

Date Collected: 08/03/21 13:50 **Matrix: Sediment**
Date Received: 08/06/21 10:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**38.7**		0.1	0.1	%			08/09/21 11:17	1
Percent Solids	**61.3**		0.1	0.1	%			08/09/21 11:17	1

Client Sample ID: 11215702-080321-BN-SJSB091 (8-10) Lab Sample ID: 320-77292-5

Date Collected: 08/03/21 13:50 **Matrix: Sediment**
Date Received: 08/06/21 10:15 **Percent Solids: 61.3**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**0.50**	**J q**	1.6	0.043	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
2,3,7,8-TCDF	**1.4**	**J B**	1.6	0.032	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
1,2,3,7,8-PeCDD	ND		7.9	0.082	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
1,2,3,7,8-PeCDF	**0.099**	**J q**	7.9	0.034	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
2,3,4,7,8-PeCDF	**0.048**	**J q**	7.9	0.036	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
1,2,3,4,7,8-HxCDD	**0.71**	**J**	7.9	0.19	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
1,2,3,6,7,8-HxCDD	**1.3**	**J**	7.9	0.21	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
1,2,3,7,8,9-HxCDD	**3.1**	**J**	7.9	0.18	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
1,2,3,4,7,8-HxCDF	**0.076**	**J q**	7.9	0.033	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
1,2,3,6,7,8-HxCDF	ND		7.9	0.033	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
1,2,3,7,8,9-HxCDF	**0.14**	**J**	7.9	0.022	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
2,3,4,6,7,8-HxCDF	ND		7.9	0.023	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
1,2,3,4,6,7,8-HpCDD	**55**	**B**	7.9	0.75	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
1,2,3,4,6,7,8-HpCDF	ND		7.9	0.038	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
1,2,3,4,7,8,9-HpCDF	ND		7.9	0.043	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
OCDD	**1400**	**B**	16	1.1	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
OCDF	**0.32**	**J B**	16	0.029	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
Total TCDD	**6.2**	**q**	1.6	0.043	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
Total TCDF	**2.6**	**B**	1.6	0.032	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
Total PeCDD	**8.5**	**q**	7.9	0.082	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
Total PeCDF	**0.15**	**J q**	7.9	0.035	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
Total HxCDD	**51**	**q**	7.9	0.19	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
Total HxCDF	**0.24**	**J q**	7.9	0.028	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
Total HpCDD	**190**	**B**	7.9	0.75	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1
Total HpCDF	ND		7.9	0.043	pg/g	☼	08/12/21 05:19	08/26/21 05:50	1

Client Sample Results

Client: GHD Services Inc. Job ID: 320-77292-1
Project/Site: SJRWP Supplemental Design Investigation

Client Sample ID: 11215702-080321-BN-SJSB091 (8-10) Lab Sample ID: 320-77292-5

Date Collected: 08/03/21 13:50 **Matrix: Sediment**
Date Received: 08/06/21 10:15 **Percent Solids: 61.3**

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*57*		*25 - 164*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-2,3,7,8-TCDF	*54*		*24 - 169*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-1,2,3,7,8-PeCDD	*56*		*25 - 181*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-1,2,3,7,8-PeCDF	*55*		*24 - 185*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-2,3,4,7,8-PeCDF	*58*		*21 - 178*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-1,2,3,4,7,8-HxCDD	*61*		*32 - 141*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-1,2,3,6,7,8-HxCDD	*54*		*28 - 130*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-1,2,3,4,7,8-HxCDF	*61*		*26 - 152*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-1,2,3,6,7,8-HxCDF	*53*		*26 - 123*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-1,2,3,7,8,9-HxCDF	*55*		*29 - 147*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-2,3,4,6,7,8-HxCDF	*54*		*28 - 136*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*55*		*23 - 140*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*51*		*28 - 143*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*58*		*26 - 138*	*08/12/21 05:19*	*08/26/21 05:50*	*1*
13C-OCDD	*59*		*17 - 157*	*08/12/21 05:19*	*08/26/21 05:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*72*		*35 - 197*	*08/12/21 05:19*	*08/26/21 05:50*	*1*

Client Sample ID: 11215702-080321-BN-SJSB091 (10-12) Lab Sample ID: 320-77292-6

Date Collected: 08/03/21 13:55 **Matrix: Sediment**
Date Received: 08/06/21 10:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**42.2**		0.1	0.1	%			08/09/21 11:17	1
Percent Solids	**57.8**		0.1	0.1	%			08/09/21 11:17	1

Client Sample ID: 11215702-080321-BN-SJSB091 (10-12) Lab Sample ID: 320-77292-6

Date Collected: 08/03/21 13:55 **Matrix: Sediment**
Date Received: 08/06/21 10:15 **Percent Solids: 57.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**0.51**	**J q**	1.8	0.12	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
2,3,7,8-TCDF	**0.91**	**J B**	1.8	0.059	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
1,2,3,7,8-PeCDD	**0.27**	**J q**	8.9	0.13	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
1,2,3,7,8-PeCDF	ND		8.9	0.058	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
2,3,4,7,8-PeCDF	ND		8.9	0.062	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
1,2,3,4,7,8-HxCDD	**1.0**	**J**	8.9	0.21	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
1,2,3,6,7,8-HxCDD	**1.7**	**J**	8.9	0.23	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
1,2,3,7,8,9-HxCDD	**2.4**	**J**	8.9	0.20	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
1,2,3,4,7,8-HxCDF	ND		8.9	0.071	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
1,2,3,6,7,8-HxCDF	ND		8.9	0.071	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
1,2,3,7,8,9-HxCDF	**0.14**	**J q**	8.9	0.050	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
2,3,4,6,7,8-HxCDF	ND		8.9	0.054	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
1,2,3,4,6,7,8-HpCDD	**62**	**B**	8.9	0.84	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
1,2,3,4,6,7,8-HpCDF	**0.20**	**J**	8.9	0.060	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
1,2,3,4,7,8,9-HpCDF	ND		8.9	0.068	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
OCDD	**1500**	**B**	18	1.3	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
OCDF	**0.25**	**J q B**	18	0.059	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
Total TCDD	**9.0**	**q**	1.8	0.12	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1

Client Sample ID: 11215702-080321-BN-SJSB091 (10-12) Lab Sample ID: 320-77292-6

Date Collected: 08/03/21 13:55 **Matrix: Sediment**
Date Received: 08/06/21 10:15 **Percent Solids: 57.8**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TCDF	1.6	J q B	1.8	0.059	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
Total PeCDD	9.5	q	8.9	0.13	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
Total PeCDF	0.089	J q	8.9	0.060	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
Total HxCDD	50	q	8.9	0.21	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
Total HxCDF	0.14	J q	8.9	0.061	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
Total HpCDD	190	B	8.9	0.84	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1
Total HpCDF	0.20	J	8.9	0.064	pg/g	☼	08/12/21 05:19	08/26/21 10:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*51*		*25 - 164*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-2,3,7,8-TCDF	*48*		*24 - 169*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-1,2,3,7,8-PeCDD	*52*		*25 - 181*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-1,2,3,7,8-PeCDF	*52*		*24 - 185*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-2,3,4,7,8-PeCDF	*54*		*21 - 178*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-1,2,3,4,7,8-HxCDD	*54*		*32 - 141*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-1,2,3,6,7,8-HxCDD	*47*		*28 - 130*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-1,2,3,4,7,8-HxCDF	*56*		*26 - 152*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-1,2,3,6,7,8-HxCDF	*48*		*26 - 123*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-1,2,3,7,8,9-HxCDF	*48*		*29 - 147*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-2,3,4,6,7,8-HxCDF	*48*		*28 - 136*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*47*		*23 - 140*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*41*		*28 - 143*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*48*		*26 - 138*	*08/12/21 05:19*	*08/26/21 10:05*	*1*
13C-OCDD	*50*		*17 - 157*	*08/12/21 05:19*	*08/26/21 10:05*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*70*		*35 - 197*	*08/12/21 05:19*	*08/26/21 10:05*	*1*

Client Sample ID: 11215702-080321-BN-SJSB091 (12-14) Lab Sample ID: 320-77292-7

Date Collected: 08/03/21 14:00 **Matrix: Sediment**
Date Received: 08/06/21 10:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	36.8		0.1	0.1	%			08/09/21 11:17	1
Percent Solids	63.2		0.1	0.1	%			08/09/21 11:17	1

Client Sample ID: 11215702-080321-BN-SJSB091 (12-14) Lab Sample ID: 320-77292-7

Date Collected: 08/03/21 14:00 **Matrix: Sediment**
Date Received: 08/06/21 10:15 **Percent Solids: 63.2**

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.74	J q	1.6	0.081	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
2,3,7,8-TCDF	1.3	J B	1.6	0.055	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
1,2,3,7,8-PeCDD	0.30	J	7.9	0.11	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
1,2,3,7,8-PeCDF	ND		7.9	0.057	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
2,3,4,7,8-PeCDF	ND		7.9	0.057	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
1,2,3,4,7,8-HxCDD	0.75	J	7.9	0.19	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
1,2,3,6,7,8-HxCDD	1.3	J	7.9	0.19	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
1,2,3,7,8,9-HxCDD	2.6	J	7.9	0.17	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1

Client Sample ID: 11215702-080321-BN-SJSB091 (12-14) Lab Sample ID: 320-77292-7

Date Collected: 08/03/21 14:00 **Matrix: Sediment**
Date Received: 08/06/21 10:15 **Percent Solids: 63.2**

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDF	ND		7.9	0.048	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
1,2,3,6,7,8-HxCDF	ND		7.9	0.050	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
1,2,3,7,8,9-HxCDF	**0.086**	**J q**	7.9	0.034	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
2,3,4,6,7,8-HxCDF	ND		7.9	0.036	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
1,2,3,4,6,7,8-HpCDD	**47**	**B**	7.9	0.72	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
1,2,3,4,6,7,8-HpCDF	ND		7.9	0.049	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
1,2,3,4,7,8,9-HpCDF	ND		7.9	0.055	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
OCDD	**1100**	**B**	16	1.4	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
OCDF	**0.17**	**J q B**	16	0.042	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
Total TCDD	**7.3**	**q**	1.6	0.081	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
Total TCDF	**2.9**	**q B**	1.6	0.055	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
Total PeCDD	**9.2**	**q**	7.9	0.11	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
Total PeCDF	**0.080**	**J q**	7.9	0.057	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
Total HxCDD	**36**		7.9	0.18	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
Total HxCDF	**0.086**	**J q**	7.9	0.042	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
Total HpCDD	**130**	**B**	7.9	0.72	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1
Total HpCDF	ND		7.9	0.055	pg/g	☼	08/12/21 05:19	08/26/21 10:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*56*		*25 - 164*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-2,3,7,8-TCDF	*52*		*24 - 169*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-1,2,3,7,8-PeCDD	*55*		*25 - 181*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-1,2,3,7,8-PeCDF	*53*		*24 - 185*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-2,3,4,7,8-PeCDF	*57*		*21 - 178*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-1,2,3,4,7,8-HxCDD	*63*		*32 - 141*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-1,2,3,6,7,8-HxCDD	*52*		*28 - 130*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-1,2,3,4,7,8-HxCDF	*61*		*26 - 152*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-1,2,3,6,7,8-HxCDF	*53*		*26 - 123*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-1,2,3,7,8,9-HxCDF	*54*		*29 - 147*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-2,3,4,6,7,8-HxCDF	*54*		*28 - 136*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*51*		*23 - 140*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*48*		*28 - 143*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*54*		*26 - 138*	*08/12/21 05:19*	*08/26/21 10:50*	*1*
13C-OCDD	*57*		*17 - 157*	*08/12/21 05:19*	*08/26/21 10:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*72*		*35 - 197*	*08/12/21 05:19*	*08/26/21 10:50*	*1*

Client Sample ID: 11215702-080321-BN-SJSB091 (14-16) Lab Sample ID: 320-77292-8

Date Collected: 08/03/21 14:05 **Matrix: Sediment**
Date Received: 08/06/21 10:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**40.2**		0.1	0.1	%			08/09/21 11:17	1
Percent Solids	**59.8**		0.1	0.1	%			08/09/21 11:17	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (14-16)

Lab Sample ID: 320-77292-8

Date Collected: 08/03/21 14:05
Date Received: 08/06/21 10:15

Matrix: Sediment
Percent Solids: 59.8

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	**0.53**	**J q**	1.8	0.094	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
2,3,7,8-TCDF	**0.93**	**J B**	1.8	0.038	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
1,2,3,7,8-PeCDD	ND		8.8	0.12	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
1,2,3,7,8-PeCDF	ND		8.8	0.051	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
2,3,4,7,8-PeCDF	ND		8.8	0.054	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
1,2,3,4,7,8-HxCDD	**0.81**	**J**	8.8	0.22	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
1,2,3,6,7,8-HxCDD	**1.5**	**J**	8.8	0.23	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
1,2,3,7,8,9-HxCDD	**3.2**	**J**	8.8	0.20	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
1,2,3,4,7,8-HxCDF	ND		8.8	0.048	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
1,2,3,6,7,8-HxCDF	ND		8.8	0.049	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
1,2,3,7,8,9-HxCDF	**0.087**	**J q**	8.8	0.034	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
2,3,4,6,7,8-HxCDF	ND		8.8	0.037	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
1,2,3,4,6,7,8-HpCDD	**59**	**B**	8.8	0.65	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
1,2,3,4,6,7,8-HpCDF	**0.063**	**J q**	8.8	0.040	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
1,2,3,4,7,8,9-HpCDF	ND		8.8	0.046	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
OCDD	**1200**	**B**	18	0.89	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
OCDF	**0.14**	**J q B**	18	0.048	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
Total TCDD	**8.6**	**q**	1.8	0.094	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
Total TCDF	**1.9**	**q B**	1.8	0.038	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
Total PeCDD	**11**	**q**	8.8	0.12	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
Total PeCDF	**0.063**	**J q**	8.8	0.052	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
Total HxCDD	**45**		8.8	0.21	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
Total HxCDF	**0.087**	**J q**	8.8	0.042	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
Total HpCDD	**150**	**B**	8.8	0.65	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1
Total HpCDF	**0.063**	**J q**	8.8	0.043	pg/g	☼	08/12/21 05:19	08/26/21 11:35	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*59*		*25 - 164*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-2,3,7,8-TCDF	*55*		*24 - 169*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-1,2,3,7,8-PeCDD	*59*		*25 - 181*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-1,2,3,7,8-PeCDF	*58*		*24 - 185*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-2,3,4,7,8-PeCDF	*61*		*21 - 178*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-1,2,3,4,7,8-HxCDD	*65*		*32 - 141*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-1,2,3,6,7,8-HxCDD	*55*		*28 - 130*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-1,2,3,4,7,8-HxCDF	*67*		*26 - 152*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-1,2,3,6,7,8-HxCDF	*56*		*26 - 123*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-1,2,3,7,8,9-HxCDF	*56*		*29 - 147*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-2,3,4,6,7,8-HxCDF	*55*		*28 - 136*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*55*		*23 - 140*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*51*		*28 - 143*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*59*		*26 - 138*	*08/12/21 05:19*	*08/26/21 11:35*	*1*
13C-OCDD	*60*		*17 - 157*	*08/12/21 05:19*	*08/26/21 11:35*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*72*		*35 - 197*	*08/12/21 05:19*	*08/26/21 11:35*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-DUP-18

Lab Sample ID: 320-77292-13

Date Collected: 08/03/21 00:00
Matrix: Sediment
Date Received: 08/06/21 10:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	38.8		0.1	0.1	%			08/09/21 11:17	1
Percent Solids	61.2		0.1	0.1	%			08/09/21 11:17	1

Client Sample ID: 11215702-080321-BN-DUP-18

Lab Sample ID: 320-77292-13

Date Collected: 08/03/21 00:00
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 61.2

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.56	J q	1.6	0.090	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
2,3,7,8-TCDF	1.3	J B	1.6	0.045	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
1,2,3,7,8-PeCDD	0.30	J q	8.0	0.11	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
1,2,3,7,8-PeCDF	0.16	J	8.0	0.055	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
2,3,4,7,8-PeCDF	ND		8.0	0.059	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
1,2,3,4,7,8-HxCDD	0.77	J	8.0	0.13	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
1,2,3,6,7,8-HxCDD	1.4	J	8.0	0.14	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
1,2,3,7,8,9-HxCDD	3.3	J	8.0	0.12	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
1,2,3,4,7,8-HxCDF	0.15	J	8.0	0.046	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
1,2,3,6,7,8-HxCDF	ND		8.0	0.047	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
1,2,3,7,8,9-HxCDF	0.20	J q	8.0	0.032	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
2,3,4,6,7,8-HxCDF	ND		8.0	0.035	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
1,2,3,4,6,7,8-HpCDD	63	B	8.0	0.87	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
1,2,3,4,6,7,8-HpCDF	0.12	J q	8.0	0.057	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
1,2,3,4,7,8,9-HpCDF	ND		8.0	0.062	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
OCDD	1700	B	16	1.5	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
OCDF	0.45	J B	16	0.050	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
Total TCDD	7.4	q	1.6	0.090	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
Total TCDF	2.5	q B	1.6	0.045	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
Total PeCDD	10	q	8.0	0.11	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
Total PeCDF	0.16	J	8.0	0.057	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
Total HxCDD	54		8.0	0.13	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
Total HxCDF	0.34	J q	8.0	0.040	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
Total HpCDD	210	B	8.0	0.87	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1
Total HpCDF	0.27	J q	8.0	0.060	pg/g	☼	08/12/21 05:19	08/26/21 13:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*46*		*25 - 164*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-2,3,7,8-TCDF	*44*		*24 - 169*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-1,2,3,7,8-PeCDD	*47*		*25 - 181*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-1,2,3,7,8-PeCDF	*46*		*24 - 185*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-2,3,4,7,8-PeCDF	*49*		*21 - 178*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-1,2,3,4,7,8-HxCDD	*52*		*32 - 141*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-1,2,3,6,7,8-HxCDD	*45*		*28 - 130*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-1,2,3,4,7,8-HxCDF	*52*		*26 - 152*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-1,2,3,6,7,8-HxCDF	*45*		*26 - 123*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-1,2,3,7,8,9-HxCDF	*45*		*29 - 147*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-2,3,4,6,7,8-HxCDF	*45*		*28 - 136*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*46*		*23 - 140*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*42*		*28 - 143*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*49*		*26 - 138*	*08/12/21 05:19*	*08/26/21 13:05*	*1*
13C-OCDD	*48*		*17 - 157*	*08/12/21 05:19*	*08/26/21 13:05*	*1*

Client Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-DUP-18

Date Collected: 08/03/21 00:00
Date Received: 08/06/21 10:15

Lab Sample ID: 320-77292-13

Matrix: Sediment
Percent Solids: 61.2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	76		35 - 197	08/12/21 05:19	08/26/21 13:05	1

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (0-2) — Lab Sample ID: 320-77292-1

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	8.6		2.2	0.25	pg/g	1	8.6	1613B
1,2,3,7,8-PeCDD	ND		11	0.26	pg/g	1	0.13	1613B
1,2,3,7,8-PeCDF	1.1	J	11	0.16	pg/g	0.03	0.033	1613B
2,3,4,7,8-PeCDF	0.50	J q	11	0.18	pg/g	0.3	0.15	1613B
1,2,3,4,7,8-HxCDD	1.5	J	11	0.24	pg/g	0.1	0.15	1613B
1,2,3,6,7,8-HxCDD	3.0	J	11	0.24	pg/g	0.1	0.30	1613B
1,2,3,7,8,9-HxCDD	5.6	J	11	0.22	pg/g	0.1	0.56	1613B
1,2,3,4,7,8-HxCDF	1.1	J	11	0.12	pg/g	0.1	0.11	1613B
1,2,3,6,7,8-HxCDF	0.39	J	11	0.11	pg/g	0.1	0.039	1613B
1,2,3,7,8,9-HxCDF	0.19	J	11	0.072	pg/g	0.1	0.019	1613B
2,3,4,6,7,8-HxCDF	ND		11	0.076	pg/g	0.1	0.0038	1613B
1,2,3,4,6,7,8-HpCDD	130	B	11	2.7	pg/g	0.01	1.3	1613B
1,2,3,4,6,7,8-HpCDF	0.50	J	11	0.13	pg/g	0.01	0.0050	1613B
1,2,3,4,7,8,9-HpCDF	ND		11	0.14	pg/g	0.01	0.00070	1613B
OCDD	4400	B	22	6.3	pg/g	0.0003	1.3	1613B
OCDF	3.3	J B	22	0.11	pg/g	0.0003	0.00099	1613B
2,3,7,8-TCDF - RA	31	B	2.2	1.1	pg/g	0.1	3.1	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		16	TEQ

Client Sample ID: 11215702-080321-BN-SJSB091 (2-4) — Lab Sample ID: 320-77292-2

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	4.2		1.5	0.076	pg/g	1	4.2	1613B
1,2,3,7,8-PeCDD	0.31	J	7.4	0.075	pg/g	1	0.31	1613B
1,2,3,7,8-PeCDF	0.56	J q	7.4	0.054	pg/g	0.03	0.017	1613B
2,3,4,7,8-PeCDF	0.23	J q	7.4	0.055	pg/g	0.3	0.069	1613B
1,2,3,4,7,8-HxCDD	0.58	J	7.4	0.074	pg/g	0.1	0.058	1613B
1,2,3,6,7,8-HxCDD	0.91	J	7.4	0.080	pg/g	0.1	0.091	1613B
1,2,3,7,8,9-HxCDD	2.1	J	7.4	0.070	pg/g	0.1	0.21	1613B
1,2,3,4,7,8-HxCDF	0.51	J	7.4	0.037	pg/g	0.1	0.051	1613B
1,2,3,6,7,8-HxCDF	0.19	J	7.4	0.036	pg/g	0.1	0.019	1613B
1,2,3,7,8,9-HxCDF	0.080	J q	7.4	0.025	pg/g	0.1	0.0080	1613B
2,3,4,6,7,8-HxCDF	0.040	J q	7.4	0.027	pg/g	0.1	0.0040	1613B
1,2,3,4,6,7,8-HpCDD	32	B	7.4	0.40	pg/g	0.01	0.32	1613B
1,2,3,4,6,7,8-HpCDF	0.21	J	7.4	0.038	pg/g	0.01	0.0021	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.4	0.045	pg/g	0.01	0.00023	1613B
OCDD	770	F1 B	15	0.61	pg/g	0.0003	0.23	1613B
OCDF	0.24	J B q	15	0.036	pg/g	0.0003	0.000072	1613B
2,3,7,8-TCDF - RA	11	B	1.5	0.77	pg/g	0.1	1.1	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (2-4) (Continued) — Lab Sample ID: 320-77292-2

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		6.7	TEQ

Client Sample ID: 11215702-080321-BN-SJSB091 (4-6) — Lab Sample ID: 320-77292-3

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	3.2		1.3	0.053	pg/g	1	3.2	1613B
1,2,3,7,8-PeCDD	0.11	J q	6.3	0.060	pg/g	1	0.11	1613B
1,2,3,7,8-PeCDF	0.31	J	6.3	0.038	pg/g	0.03	0.0093	1613B
2,3,4,7,8-PeCDF	0.23	J	6.3	0.039	pg/g	0.3	0.069	1613B
1,2,3,4,7,8-HxCDD	0.33	J	6.3	0.070	pg/g	0.1	0.033	1613B
1,2,3,6,7,8-HxCDD	0.28	J	6.3	0.077	pg/g	0.1	0.028	1613B
1,2,3,7,8,9-HxCDD	0.57	J	6.3	0.067	pg/g	0.1	0.057	1613B
1,2,3,4,7,8-HxCDF	0.35	J	6.3	0.032	pg/g	0.1	0.035	1613B
1,2,3,6,7,8-HxCDF	0.12	J	6.3	0.034	pg/g	0.1	0.012	1613B
1,2,3,7,8,9-HxCDF	0.080	J	6.3	0.023	pg/g	0.1	0.0080	1613B
2,3,4,6,7,8-HxCDF	0.065	J q	6.3	0.025	pg/g	0.1	0.0065	1613B
1,2,3,4,6,7,8-HpCDD	10	B	6.3	0.18	pg/g	0.01	0.10	1613B
1,2,3,4,6,7,8-HpCDF	0.21	J q	6.3	0.038	pg/g	0.01	0.0021	1613B
1,2,3,4,7,8,9-HpCDF	ND		6.3	0.044	pg/g	0.01	0.00022	1613B
OCDD	340	B	13	0.29	pg/g	0.0003	0.10	1613B
OCDF	0.54	J B	13	0.034	pg/g	0.0003	0.00016	1613B
2,3,7,8-TCDF - RA	14	B	1.3	0.71	pg/g	0.1	1.4	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		5.2	TEQ

Client Sample ID: 11215702-080321-BN-SJSB091 (6-8) — Lab Sample ID: 320-77292-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	0.72	J q	1.6	0.066	pg/g	1	0.72	1613B
1,2,3,7,8-PeCDD	0.29	J	7.9	0.12	pg/g	1	0.29	1613B
1,2,3,7,8-PeCDF	0.11	J q	7.9	0.055	pg/g	0.03	0.0033	1613B
2,3,4,7,8-PeCDF	ND		7.9	0.057	pg/g	0.3	0.0086	1613B
1,2,3,4,7,8-HxCDD	0.66	J	7.9	0.14	pg/g	0.1	0.066	1613B
1,2,3,6,7,8-HxCDD	1.1	J	7.9	0.14	pg/g	0.1	0.11	1613B
1,2,3,7,8,9-HxCDD	2.7	J	7.9	0.13	pg/g	0.1	0.27	1613B
1,2,3,4,7,8-HxCDF	0.096	J q	7.9	0.046	pg/g	0.1	0.0096	1613B
1,2,3,6,7,8-HxCDF	0.068	J q	7.9	0.046	pg/g	0.1	0.0068	1613B
1,2,3,7,8,9-HxCDF	0.15	J q	7.9	0.031	pg/g	0.1	0.015	1613B
2,3,4,6,7,8-HxCDF	0.043	J q	7.9	0.033	pg/g	0.1	0.0043	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (6-8) (Continued) — Lab Sample ID: 320-77292-4

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,4,6,7,8-HpCDD	39	B	7.9	0.77	pg/g	0.01	0.39	1613B
1,2,3,4,6,7,8-HpCDF	ND		7.9	0.057	pg/g	0.01	0.00029	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.9	0.065	pg/g	0.01	0.00033	1613B
OCDD	930	B	16	0.89	pg/g	0.0003	0.28	1613B
OCDF	0.21	J q B	16	0.051	pg/g	0.0003	0.000063	1613B
2,3,7,8-TCDF - RA	3.1	B	1.6	0.69	pg/g	0.1	0.31	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2.5	TEQ

Client Sample ID: 11215702-080321-BN-SJSB091 (8-10) — Lab Sample ID: 320-77292-5

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	0.50	J q	1.6	0.043	pg/g	1	0.50	1613B
2,3,7,8-TCDF	1.4	J B	1.6	0.032	pg/g	0.1	0.14	1613B
1,2,3,7,8-PeCDD	ND		7.9	0.082	pg/g	1	0.041	1613B
1,2,3,7,8-PeCDF	0.099	J q	7.9	0.034	pg/g	0.03	0.0030	1613B
2,3,4,7,8-PeCDF	0.048	J q	7.9	0.036	pg/g	0.3	0.014	1613B
1,2,3,4,7,8-HxCDD	0.71	J	7.9	0.19	pg/g	0.1	0.071	1613B
1,2,3,6,7,8-HxCDD	1.3	J	7.9	0.21	pg/g	0.1	0.13	1613B
1,2,3,7,8,9-HxCDD	3.1	J	7.9	0.18	pg/g	0.1	0.31	1613B
1,2,3,4,7,8-HxCDF	0.076	J q	7.9	0.033	pg/g	0.1	0.0076	1613B
1,2,3,6,7,8-HxCDF	ND		7.9	0.033	pg/g	0.1	0.0017	1613B
1,2,3,7,8,9-HxCDF	0.14	J	7.9	0.022	pg/g	0.1	0.014	1613B
2,3,4,6,7,8-HxCDF	ND		7.9	0.023	pg/g	0.1	0.0012	1613B
1,2,3,4,6,7,8-HpCDD	55	B	7.9	0.75	pg/g	0.01	0.55	1613B
1,2,3,4,6,7,8-HpCDF	ND		7.9	0.038	pg/g	0.01	0.00019	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.9	0.043	pg/g	0.01	0.00022	1613B
OCDD	1400	B	16	1.1	pg/g	0.0003	0.42	1613B
OCDF	0.32	J B	16	0.029	pg/g	0.0003	0.000096	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2.2	TEQ

Client Sample ID: 11215702-080321-BN-SJSB091 (10-12) — Lab Sample ID: 320-77292-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	0.51	J q	1.8	0.12	pg/g	1	0.51	1613B
2,3,7,8-TCDF	0.91	J B	1.8	0.059	pg/g	0.1	0.091	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (10-12) (Continued)

Lab Sample ID: 320-77292-6

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
1,2,3,7,8-PeCDD	**0.27**	**J q**	8.9	0.13	pg/g	1	**0.27**	1613B
1,2,3,7,8-PeCDF	ND		8.9	0.058	pg/g	0.03	0.00087	1613B
2,3,4,7,8-PeCDF	ND		8.9	0.062	pg/g	0.3	0.0093	1613B
1,2,3,4,7,8-HxCDD	**1.0**	**J**	8.9	0.21	pg/g	0.1	**0.10**	1613B
1,2,3,6,7,8-HxCDD	**1.7**	**J**	8.9	0.23	pg/g	0.1	**0.17**	1613B
1,2,3,7,8,9-HxCDD	**2.4**	**J**	8.9	0.20	pg/g	0.1	**0.24**	1613B
1,2,3,4,7,8-HxCDF	ND		8.9	0.071	pg/g	0.1	0.0036	1613B
1,2,3,6,7,8-HxCDF	ND		8.9	0.071	pg/g	0.1	0.0036	1613B
1,2,3,7,8,9-HxCDF	**0.14**	**J q**	8.9	0.050	pg/g	0.1	**0.014**	1613B
2,3,4,6,7,8-HxCDF	ND		8.9	0.054	pg/g	0.1	0.0027	1613B
1,2,3,4,6,7,8-HpCDD	**62**	**B**	8.9	0.84	pg/g	0.01	**0.62**	1613B
1,2,3,4,6,7,8-HpCDF	**0.20**	**J**	8.9	0.060	pg/g	0.01	**0.0020**	1613B
1,2,3,4,7,8,9-HpCDF	ND		8.9	0.068	pg/g	0.01	0.00034	1613B
OCDD	**1500**	**B**	18	1.3	pg/g	0.0003	**0.45**	1613B
OCDF	**0.25**	**J q B**	18	0.059	pg/g	0.0003	**0.000075**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2.5	TEQ

Client Sample ID: 11215702-080321-BN-SJSB091 (12-14)

Lab Sample ID: 320-77292-7

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	TEQ	Method
2,3,7,8-TCDD	**0.74**	**J q**	1.6	0.081	pg/g	1	**0.74**	1613B
2,3,7,8-TCDF	**1.3**	**J B**	1.6	0.055	pg/g	0.1	**0.13**	1613B
1,2,3,7,8-PeCDD	**0.30**	**J**	7.9	0.11	pg/g	1	**0.30**	1613B
1,2,3,7,8-PeCDF	ND		7.9	0.057	pg/g	0.03	0.00086	1613B
2,3,4,7,8-PeCDF	ND		7.9	0.057	pg/g	0.3	0.0086	1613B
1,2,3,4,7,8-HxCDD	**0.75**	**J**	7.9	0.19	pg/g	0.1	**0.075**	1613B
1,2,3,6,7,8-HxCDD	**1.3**	**J**	7.9	0.19	pg/g	0.1	**0.13**	1613B
1,2,3,7,8,9-HxCDD	**2.6**	**J**	7.9	0.17	pg/g	0.1	**0.26**	1613B
1,2,3,4,7,8-HxCDF	ND		7.9	0.048	pg/g	0.1	0.0024	1613B
1,2,3,6,7,8-HxCDF	ND		7.9	0.050	pg/g	0.1	0.0025	1613B
1,2,3,7,8,9-HxCDF	**0.086**	**J q**	7.9	0.034	pg/g	0.1	**0.0086**	1613B
2,3,4,6,7,8-HxCDF	ND		7.9	0.036	pg/g	0.1	0.0018	1613B
1,2,3,4,6,7,8-HpCDD	**47**	**B**	7.9	0.72	pg/g	0.01	**0.47**	1613B
1,2,3,4,6,7,8-HpCDF	ND		7.9	0.049	pg/g	0.01	0.00025	1613B
1,2,3,4,7,8,9-HpCDF	ND		7.9	0.055	pg/g	0.01	0.00028	1613B
OCDD	**1100**	**B**	16	1.4	pg/g	0.0003	**0.33**	1613B
OCDF	**0.17**	**J q B**	16	0.042	pg/g	0.0003	**0.000051**	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (12-14) (Continued)

Lab Sample ID: 320-77292-7

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2.5	TEQ

Client Sample ID: 11215702-080321-BN-SJSB091 (14-16)

Lab Sample ID: 320-77292-8

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
2,3,7,8-TCDD	**0.53**	**J q**	1.8	0.094	pg/g	1	**0.53**	1613B
2,3,7,8-TCDF	**0.93**	**J B**	1.8	0.038	pg/g	0.1	**0.093**	1613B
1,2,3,7,8-PeCDD	ND		8.8	0.12	pg/g	1	0.060	1613B
1,2,3,7,8-PeCDF	ND		8.8	0.051	pg/g	0.03	0.00077	1613B
2,3,4,7,8-PeCDF	ND		8.8	0.054	pg/g	0.3	0.0081	1613B
1,2,3,4,7,8-HxCDD	**0.81**	**J**	8.8	0.22	pg/g	0.1	**0.081**	1613B
1,2,3,6,7,8-HxCDD	**1.5**	**J**	8.8	0.23	pg/g	0.1	**0.15**	1613B
1,2,3,7,8,9-HxCDD	**3.2**	**J**	8.8	0.20	pg/g	0.1	**0.32**	1613B
1,2,3,4,7,8-HxCDF	ND		8.8	0.048	pg/g	0.1	0.0024	1613B
1,2,3,6,7,8-HxCDF	ND		8.8	0.049	pg/g	0.1	0.0025	1613B
1,2,3,7,8,9-HxCDF	**0.087**	**J q**	8.8	0.034	pg/g	0.1	**0.0087**	1613B
2,3,4,6,7,8-HxCDF	ND		8.8	0.037	pg/g	0.1	0.0019	1613B
1,2,3,4,6,7,8-HpCDD	**59**	**B**	8.8	0.65	pg/g	0.01	**0.59**	1613B
1,2,3,4,6,7,8-HpCDF	**0.063**	**J q**	8.8	0.040	pg/g	0.01	**0.00063**	1613B
1,2,3,4,7,8,9-HpCDF	ND		8.8	0.046	pg/g	0.01	0.00023	1613B
OCDD	**1200**	**B**	18	0.89	pg/g	0.0003	**0.36**	1613B
OCDF	**0.14**	**J q B**	18	0.048	pg/g	0.0003	**0.000042**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2.2	TEQ

Client Sample ID: 11215702-080321-BN-DUP-18

Lab Sample ID: 320-77292-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
2,3,7,8-TCDD	**0.56**	**J q**	1.6	0.090	pg/g	1	**0.56**	1613B
2,3,7,8-TCDF	**1.3**	**J B**	1.6	0.045	pg/g	0.1	**0.13**	1613B
1,2,3,7,8-PeCDD	**0.30**	**J q**	8.0	0.11	pg/g	1	**0.30**	1613B
1,2,3,7,8-PeCDF	**0.16**	**J**	8.0	0.055	pg/g	0.03	**0.0048**	1613B
2,3,4,7,8-PeCDF	ND		8.0	0.059	pg/g	0.3	0.0089	1613B
1,2,3,4,7,8-HxCDD	**0.77**	**J**	8.0	0.13	pg/g	0.1	**0.077**	1613B
1,2,3,6,7,8-HxCDD	**1.4**	**J**	8.0	0.14	pg/g	0.1	**0.14**	1613B
1,2,3,7,8,9-HxCDD	**3.3**	**J**	8.0	0.12	pg/g	0.1	**0.33**	1613B
1,2,3,4,7,8-HxCDF	**0.15**	**J**	8.0	0.046	pg/g	0.1	**0.015**	1613B
1,2,3,6,7,8-HxCDF	ND		8.0	0.047	pg/g	0.1	0.0024	1613B
1,2,3,7,8,9-HxCDF	**0.20**	**J q**	8.0	0.032	pg/g	0.1	**0.020**	1613B

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Toxicity Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-DUP-18 (Continued) — Lab Sample ID: 320-77292-13

Analyte	Result	Qualifier	RL	EDL	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
2,3,4,6,7,8-HxCDF	ND		8.0	0.035	pg/g	0.1	0.0018	1613B
1,2,3,4,6,7,8-HpCDD	**63**	**B**	8.0	0.87	pg/g	0.01	**0.63**	1613B
1,2,3,4,6,7,8-HpCDF	**0.12**	**J q**	8.0	0.057	pg/g	0.01	**0.0012**	1613B
1,2,3,4,7,8,9-HpCDF	ND		8.0	0.062	pg/g	0.01	0.00031	1613B
OCDD	**1700**	**B**	16	1.5	pg/g	0.0003	**0.51**	1613B
OCDF	**0.45**	**J B**	16	0.050	pg/g	0.0003	**0.00014**	1613B

Analyte	Result	Qualifier	NONE	NONE	Unit	WHO 2005 ND = ½ EDL TEF	WHO 2005 ND = ½ EDL TEQ	Method
Total Dioxin/Furan TEQ					pg/g		2.7	TEQ

TEF Reference:

WHO 2005 = World Health Organization (WHO) 2005 TEF, Dioxins, Furans and PCB Congeners

Default Detection Limits

Client: GHD Services Inc.
Job ID: 320-77292-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Prep: HRMS-Sox

Analyte	RL		Units
1,2,3,4,6,7,8-HpCDD	5.0		pg/g
1,2,3,4,6,7,8-HpCDF	5.0		pg/g
1,2,3,4,7,8,9-HpCDF	5.0		pg/g
1,2,3,4,7,8-HxCDD	5.0		pg/g
1,2,3,4,7,8-HxCDF	5.0		pg/g
1,2,3,6,7,8-HxCDD	5.0		pg/g
1,2,3,6,7,8-HxCDF	5.0		pg/g
1,2,3,7,8,9-HxCDD	5.0		pg/g
1,2,3,7,8,9-HxCDF	5.0		pg/g
1,2,3,7,8-PeCDD	5.0		pg/g
1,2,3,7,8-PeCDF	5.0		pg/g
2,3,4,6,7,8-HxCDF	5.0		pg/g
2,3,4,7,8-PeCDF	5.0		pg/g
2,3,7,8-TCDD	1.0		pg/g
2,3,7,8-TCDF	1.0		pg/g
OCDD	10		pg/g
OCDF	10		pg/g
Total HpCDD	5.0		pg/g
Total HpCDF	5.0		pg/g
Total HxCDD	5.0		pg/g
Total HxCDF	5.0		pg/g
Total PeCDD	5.0		pg/g
Total PeCDF	5.0		pg/g
Total TCDD	1.0		pg/g
Total TCDF	1.0		pg/g

General Chemistry

Analyte	RL	MDL	Units
Percent Moisture	0.1	0.1	%
Percent Solids	0.1	0.1	%

Surrogate Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (35-197)							
320-77292-1	11215702-080321-BN-SJSB091	73							
320-77292-1 - RA	11215702-080321-BN-SJSB091 (0-2)	76							
320-77292-2	11215702-080321-BN-SJSB091 (2-4)	69							
320-77292-2 - RA	11215702-080321-BN-SJSB091 (2-4)	67							
320-77292-2 MS	11215702-080321-BN-SJSB091 (2-4)	73							
320-77292-2 MS - RA	11215702-080321-BN-SJSB091 (2-4)	72							
320-77292-2 MSD	11215702-080321-BN-SJSB091 (2-4)	72							
320-77292-2 MSD - RA	11215702-080321-BN-SJSB091 (2-4)	74							
320-77292-3	11215702-080321-BN-SJSB091 (4-6)	69							
320-77292-3 - RA	11215702-080321-BN-SJSB091 (4-6)	70							
320-77292-4	11215702-080321-BN-SJSB091 (6-8)	70							
320-77292-4 - RA	11215702-080321-BN-SJSB091 (6-8)	76							
320-77292-5	11215702-080321-BN-SJSB091 (8-10)	72							
320-77292-6	11215702-080321-BN-SJSB091 (10-12)	70							
320-77292-7	11215702-080321-BN-SJSB091 (12-14)	72							
320-77292-8	11215702-080321-BN-SJSB091 (14-16)	72							
320-77292-13	11215702-080321-BN-DUP-18	76							
MB 320-515492/1-A	Method Blank	66							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	37TCDD (31-191)							
LCS 320-515492/2-A	Lab Control Sample	65							

Surrogate Legend

37TCDD = 37Cl4-2,3,7,8-TCDD

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-77292-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
320-77292-1	11215702-080321-BN-SJSB091	67	63	67	65	64	64	57	65
320-77292-1 - RA	11215702-080321-BN-SJSB09 1 (0-2)		67						
320-77292-2	11215702-080321-BN-SJSB09 1 (2-4)	52	50	52	50	54	57	49	58
320-77292-2 - RA	11215702-080321-BN-SJSB09 1 (2-4)		55						
320-77292-2 MS	11215702-080321-BN-SJSB09 1 (2-4)	59	58	59	58	62	67	56	66
320-77292-2 MS - RA	11215702-080321-BN-SJSB09 1 (2-4)		60						
320-77292-2 MSD	11215702-080321-BN-SJSB09 1 (2-4)	59	55	58	57	61	64	56	64
320-77292-2 MSD - RA	11215702-080321-BN-SJSB09 1 (2-4)		57						
320-77292-3	11215702-080321-BN-SJSB09 1 (4-6)	47	45	46	45	48	52	45	53
320-77292-3 - RA	11215702-080321-BN-SJSB09 1 (4-6)		49						
320-77292-4	11215702-080321-BN-SJSB09 1 (6-8)	53	48	50	49	51	56	48	57
320-77292-4 - RA	11215702-080321-BN-SJSB09 1 (6-8)		53						
320-77292-5	11215702-080321-BN-SJSB09 1 (8-10)	57	54	56	55	58	61	54	61
320-77292-6	11215702-080321-BN-SJSB09 1 (10-12)	51	48	52	52	54	54	47	56
320-77292-7	11215702-080321-BN-SJSB09 1 (12-14)	56	52	55	53	57	63	52	61
320-77292-8	11215702-080321-BN-SJSB09 1 (14-16)	59	55	59	58	61	65	55	67
320-77292-13	11215702-080321-BN-DUP-18	46	44	47	46	49	52	45	52
MB 320-515492/1-A	Method Blank	54	52	57	54	59	58	49	58

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-77292-1	11215702-080321-BN-SJSB091	58	66	63	70	60	75	80
320-77292-1 - RA	11215702-080321-BN-SJSB09 1 (0-2)							
320-77292-2	11215702-080321-BN-SJSB09 1 (2-4)	50	51	51	51	48	53	53
320-77292-2 - RA	11215702-080321-BN-SJSB09 1 (2-4)							
320-77292-2 MS	11215702-080321-BN-SJSB09 1 (2-4)	57	58	58	58	54	61	61
320-77292-2 MS - RA	11215702-080321-BN-SJSB09 1 (2-4)							
320-77292-2 MSD	11215702-080321-BN-SJSB09 1 (2-4)	54	56	56	55	50	58	58
320-77292-2 MSD - RA	11215702-080321-BN-SJSB09 1 (2-4)							
320-77292-3	11215702-080321-BN-SJSB09 1 (4-6)	44	46	46	46	43	49	49
320-77292-3 - RA	11215702-080321-BN-SJSB09 1 (4-6)							

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 320-77292-1
Project/Site: SJRWP Supplemental Design Investigation

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (26-123)	HxCF (29-147)	13CHxCF (28-136)	HpCDD (23-140)	HpCDF (28-143)	HpCDF2 (26-138)	OCDD (17-157)
320-77292-4	11215702-080321-BN-SJSB091	48	51	50	53	47	55	55
320-77292-4 - RA	11215702-080321-BN-SJSB091 (6-8)							
320-77292-5	11215702-080321-BN-SJSB091 (8-10)	53	55	54	55	51	58	59
320-77292-6	11215702-080321-BN-SJSB091 (10-12)	48	48	48	47	41	48	50
320-77292-7	11215702-080321-BN-SJSB091 (12-14)	53	54	54	51	48	54	57
320-77292-8	11215702-080321-BN-SJSB091 (14-16)	56	56	55	55	51	59	60
320-77292-13	11215702-080321-BN-DUP-18	45	45	45	46	42	49	48
MB 320-515492/1-A	Method Blank	49	52	51	51	49	54	59

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Sediment **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (20-175)	TCDF (22-152)	PeCDD (21-227)	PeCDF (21-192)	PeCF (13-328)	HxCDD (21-193)	HxDD (25-163)	HxCDF (19-202)
LCS 320-515492/2-A	Lab Control Sample	47	46	50	47	50	54	47	54

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	HxDF (21-159)	HxCF (17-205)	13CHxCF (22-176)	HpCDD (26-166)	HpCDF (21-158)	HpCDF2 (20-186)	OCDD (13-199)
LCS 320-515492/2-A	Lab Control Sample	47	47	47	46	44	48	50

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF

Isotope Dilution Summary

Client: GHD Services Inc.

Job ID: 320-77292-1

Project/Site: SJRWP Supplemental Design Investigation

HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD

QC Sample Results

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-515492/1-A
Matrix: Sediment
Analysis Batch: 519953

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 515492

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.14	pg/g		08/12/21 05:19	08/25/21 11:20	1
2,3,7,8-TCDF	0.190	J q	1.0	0.073	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,7,8-PeCDD	ND		5.0	0.16	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,7,8-PeCDF	ND		5.0	0.13	pg/g		08/12/21 05:19	08/25/21 11:20	1
2,3,4,7,8-PeCDF	ND		5.0	0.13	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.10	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.11	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.099	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.093	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.093	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.061	pg/g		08/12/21 05:19	08/25/21 11:20	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.065	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,6,7,8-HpCDD	0.227	J q	5.0	0.055	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	0.092	pg/g		08/12/21 05:19	08/25/21 11:20	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.11	pg/g		08/12/21 05:19	08/25/21 11:20	1
OCDD	1.16	J	10	0.10	pg/g		08/12/21 05:19	08/25/21 11:20	1
OCDF	0.668	J q	10	0.095	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total TCDD	ND		1.0	0.14	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total TCDF	0.190	J q	1.0	0.073	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total PeCDD	ND		5.0	0.16	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total PeCDF	ND		5.0	0.13	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total HxCDD	ND		5.0	0.11	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total HxCDF	ND		5.0	0.093	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total HpCDD	0.423	J q	5.0	0.055	pg/g		08/12/21 05:19	08/25/21 11:20	1
Total HpCDF	ND		5.0	0.11	pg/g		08/12/21 05:19	08/25/21 11:20	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*54*		*25 - 164*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-2,3,7,8-TCDF	*52*		*24 - 169*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,7,8-PeCDD	*57*		*25 - 181*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,7,8-PeCDF	*54*		*24 - 185*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-2,3,4,7,8-PeCDF	*59*		*21 - 178*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,7,8-HxCDD	*58*		*32 - 141*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,6,7,8-HxCDD	*49*		*28 - 130*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,7,8-HxCDF	*58*		*26 - 152*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,6,7,8-HxCDF	*49*		*26 - 123*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,7,8,9-HxCDF	*52*		*29 - 147*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-2,3,4,6,7,8-HxCDF	*51*		*28 - 136*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*51*		*23 - 140*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*49*		*28 - 143*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*54*		*26 - 138*	*08/12/21 05:19*	*08/25/21 11:20*	*1*
13C-OCDD	*59*		*17 - 157*	*08/12/21 05:19*	*08/25/21 11:20*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
37Cl4-2,3,7,8-TCDD	*66*		*35 - 197*	*08/12/21 05:19*	*08/25/21 11:20*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-515492/2-A **Client Sample ID: Lab Control Sample**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519953 **Prep Batch: 515492**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	20.0	21.3		pg/g		106	67 - 158
2,3,7,8-TCDF	20.0	21.7		pg/g		109	75 - 158
1,2,3,7,8-PeCDD	100	108		pg/g		108	70 - 142
1,2,3,7,8-PeCDF	100	111		pg/g		111	80 - 134
2,3,4,7,8-PeCDF	100	102		pg/g		102	68 - 160
1,2,3,4,7,8-HxCDD	100	101		pg/g		101	70 - 164
1,2,3,6,7,8-HxCDD	100	111		pg/g		111	76 - 134
1,2,3,7,8,9-HxCDD	100	107		pg/g		107	64 - 162
1,2,3,4,7,8-HxCDF	100	96.9		pg/g		97	72 - 134
1,2,3,6,7,8-HxCDF	100	108		pg/g		108	84 - 130
1,2,3,7,8,9-HxCDF	100	107		pg/g		107	78 - 130
2,3,4,6,7,8-HxCDF	100	107		pg/g		107	70 - 156
1,2,3,4,6,7,8-HpCDD	100	109		pg/g		109	70 - 140
1,2,3,4,6,7,8-HpCDF	100	108		pg/g		108	82 - 122
1,2,3,4,7,8,9-HpCDF	100	102		pg/g		102	78 - 138
OCDD	200	213		pg/g		106	78 - 144
OCDF	200	208		pg/g		104	63 - 170

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*47*		*20 - 175*
13C-2,3,7,8-TCDF	*46*		*22 - 152*
13C-1,2,3,7,8-PeCDD	*50*		*21 - 227*
13C-1,2,3,7,8-PeCDF	*47*		*21 - 192*
13C-2,3,4,7,8-PeCDF	*50*		*13 - 328*
13C-1,2,3,4,7,8-HxCDD	*54*		*21 - 193*
13C-1,2,3,6,7,8-HxCDD	*47*		*25 - 163*
13C-1,2,3,4,7,8-HxCDF	*54*		*19 - 202*
13C-1,2,3,6,7,8-HxCDF	*47*		*21 - 159*
13C-1,2,3,7,8,9-HxCDF	*47*		*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*47*		*22 - 176*
13C-1,2,3,4,6,7,8-HpCDD	*46*		*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*44*		*21 - 158*
13C-1,2,3,4,7,8,9-HpCDF	*48*		*20 - 186*
13C-OCDD	*50*		*13 - 199*

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*65*		*31 - 191*

Lab Sample ID: 320-77292-2 MS **Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519955 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	4.2		33.0	37.6		pg/g	☼	101	67 - 158
1,2,3,7,8-PeCDD	0.31	J	165	168		pg/g	☼	102	70 - 142
1,2,3,7,8-PeCDF	0.56	J q	165	172		pg/g	☼	104	80 - 134
2,3,4,7,8-PeCDF	0.23	J q	165	156		pg/g	☼	94	68 - 160
1,2,3,4,7,8-HxCDD	0.58	J	165	154		pg/g	☼	93	70 - 164

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-77292-2 MS **Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)**

Matrix: Sediment **Prep Type: Total/NA**

Analysis Batch: 519955 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	0.91	J	165	172		pg/g	☼	104	76 - 134
1,2,3,7,8,9-HxCDD	2.1	J	165	165		pg/g	☼	98	64 - 162
1,2,3,4,7,8-HxCDF	0.51	J	165	150		pg/g	☼	91	72 - 134
1,2,3,6,7,8-HxCDF	0.19	J	165	169		pg/g	☼	102	84 - 130
1,2,3,7,8,9-HxCDF	0.080	J q	165	166		pg/g	☼	101	78 - 130
2,3,4,6,7,8-HxCDF	0.040	J q	165	165		pg/g	☼	100	70 - 156
1,2,3,4,6,7,8-HpCDD	32	B	165	199		pg/g	☼	101	70 - 140
1,2,3,4,6,7,8-HpCDF	0.21	J	165	165		pg/g	☼	100	82 - 122
1,2,3,4,7,8,9-HpCDF	ND		165	155		pg/g	☼	94	78 - 138
OCDD	770	F1 B	330	1050		pg/g	☼	87	78 - 144
OCDF	0.24	J B q	330	317		pg/g	☼	96	63 - 170

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*59*		*25 - 164*
13C-2,3,7,8-TCDF	*58*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*59*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*58*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*62*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*67*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*56*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*66*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*57*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*58*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*58*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*58*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*54*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*61*		*26 - 138*
13C-OCDD	*61*		*17 - 157*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*73*		*35 - 197*

Lab Sample ID: 320-77292-2 MSD **Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)**

Matrix: Sediment **Prep Type: Total/NA**

Analysis Batch: 519955 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD	4.2		30.6	36.1		pg/g	☼	104	67 - 158	4	50
1,2,3,7,8-PeCDD	0.31	J	153	161		pg/g	☼	105	70 - 142	4	50
1,2,3,7,8-PeCDF	0.56	J q	153	162		pg/g	☼	105	80 - 134	6	50
2,3,4,7,8-PeCDF	0.23	J q	153	150		pg/g	☼	98	68 - 160	4	50
1,2,3,4,7,8-HxCDD	0.58	J	153	153		pg/g	☼	99	70 - 164	1	50
1,2,3,6,7,8-HxCDD	0.91	J	153	159		pg/g	☼	103	76 - 134	8	50
1,2,3,7,8,9-HxCDD	2.1	J	153	154		pg/g	☼	100	64 - 162	6	50
1,2,3,4,7,8-HxCDF	0.51	J	153	144		pg/g	☼	94	72 - 134	4	50
1,2,3,6,7,8-HxCDF	0.19	J	153	162		pg/g	☼	106	84 - 130	4	50
1,2,3,7,8,9-HxCDF	0.080	J q	153	158		pg/g	☼	103	78 - 130	5	50
2,3,4,6,7,8-HxCDF	0.040	J q	153	158		pg/g	☼	103	70 - 156	4	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 320-77292-2 MSD **Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 519955 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	32	B	153	203		pg/g	☼	112	70 - 140	2	50
1,2,3,4,6,7,8-HpCDF	0.21	J	153	161		pg/g	☼	105	82 - 122	3	50
1,2,3,4,7,8,9-HpCDF	ND		153	149		pg/g	☼	97	78 - 138	4	50
OCDD	770	F1 B	306	1330	F1	pg/g	☼	184	78 - 144	23	50
OCDF	0.24	J B q	306	301		pg/g	☼	98	63 - 170	5	50

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*59*		*25 - 164*
13C-2,3,7,8-TCDF	*55*		*24 - 169*
13C-1,2,3,7,8-PeCDD	*58*		*25 - 181*
13C-1,2,3,7,8-PeCDF	*57*		*24 - 185*
13C-2,3,4,7,8-PeCDF	*61*		*21 - 178*
13C-1,2,3,4,7,8-HxCDD	*64*		*32 - 141*
13C-1,2,3,6,7,8-HxCDD	*56*		*28 - 130*
13C-1,2,3,4,7,8-HxCDF	*64*		*26 - 152*
13C-1,2,3,6,7,8-HxCDF	*54*		*26 - 123*
13C-1,2,3,7,8,9-HxCDF	*56*		*29 - 147*
13C-2,3,4,6,7,8-HxCDF	*56*		*28 - 136*
13C-1,2,3,4,6,7,8-HpCDD	*55*		*23 - 140*
13C-1,2,3,4,6,7,8-HpCDF	*50*		*28 - 143*
13C-1,2,3,4,7,8,9-HpCDF	*58*		*26 - 138*
13C-OCDD	*58*		*17 - 157*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD	*72*		*35 - 197*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA

Lab Sample ID: 320-77292-2 MS **Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 520997 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,3,7,8-TCDF - RA	11	B	33.0	47.7		pg/g	☼	110	75 - 158		

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-2,3,7,8-TCDF - RA	*60*		*24 - 169*

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD - RA	*72*		*35 - 197*

Lab Sample ID: 320-77292-2 MSD **Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)**
Matrix: Sediment **Prep Type: Total/NA**
Analysis Batch: 520997 **Prep Batch: 515492**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDF - RA	11	B	30.6	49.3		pg/g	☼	124	75 - 158	3	50

Method: 1613B - Dioxins and Furans (HRGC/HRMS) - RA (Continued)

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-2,3,7,8-TCDF - RA	*57*		*24 - 169*

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
37Cl4-2,3,7,8-TCDD - RA	*74*		*35 - 197*

Method: D 2216 - Percent Moisture

Lab Sample ID: 320-77346-A-1 DU **Client Sample ID: Duplicate**

Matrix: Sediment **Prep Type: Total/NA**

Analysis Batch: 514409

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	15.1			14.8		%				2	20
Percent Solids	84.9			85.2		%				0.3	20

QC Association Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Specialty Organics

Prep Batch: 515492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77292-1	11215702-080321-BN-SJSB091 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-77292-1 - RA	11215702-080321-BN-SJSB091 (0-2)	Total/NA	Sediment	HRMS-Sox	
320-77292-2	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-77292-2 - RA	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-77292-3	11215702-080321-BN-SJSB091 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-77292-3 - RA	11215702-080321-BN-SJSB091 (4-6)	Total/NA	Sediment	HRMS-Sox	
320-77292-4	11215702-080321-BN-SJSB091 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-77292-4 - RA	11215702-080321-BN-SJSB091 (6-8)	Total/NA	Sediment	HRMS-Sox	
320-77292-5	11215702-080321-BN-SJSB091 (8-10)	Total/NA	Sediment	HRMS-Sox	
320-77292-6	11215702-080321-BN-SJSB091 (10-12)	Total/NA	Sediment	HRMS-Sox	
320-77292-7	11215702-080321-BN-SJSB091 (12-14)	Total/NA	Sediment	HRMS-Sox	
320-77292-8	11215702-080321-BN-SJSB091 (14-16)	Total/NA	Sediment	HRMS-Sox	
320-77292-13	11215702-080321-BN-DUP-18	Total/NA	Sediment	HRMS-Sox	
MB 320-515492/1-A	Method Blank	Total/NA	Sediment	HRMS-Sox	
LCS 320-515492/2-A	Lab Control Sample	Total/NA	Sediment	HRMS-Sox	
320-77292-2 MS	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-77292-2 MS - RA	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-77292-2 MSD	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	HRMS-Sox	
320-77292-2 MSD - RA	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	HRMS-Sox	

Analysis Batch: 519953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-515492/1-A	Method Blank	Total/NA	Sediment	1613B	515492
LCS 320-515492/2-A	Lab Control Sample	Total/NA	Sediment	1613B	515492

Analysis Batch: 519955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77292-1	11215702-080321-BN-SJSB091 (0-2)	Total/NA	Sediment	1613B	515492
320-77292-2	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	1613B	515492
320-77292-3	11215702-080321-BN-SJSB091 (4-6)	Total/NA	Sediment	1613B	515492
320-77292-4	11215702-080321-BN-SJSB091 (6-8)	Total/NA	Sediment	1613B	515492
320-77292-5	11215702-080321-BN-SJSB091 (8-10)	Total/NA	Sediment	1613B	515492
320-77292-2 MS	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	1613B	515492
320-77292-2 MSD	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	1613B	515492

Analysis Batch: 519966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77292-6	11215702-080321-BN-SJSB091 (10-12)	Total/NA	Sediment	1613B	515492
320-77292-7	11215702-080321-BN-SJSB091 (12-14)	Total/NA	Sediment	1613B	515492
320-77292-8	11215702-080321-BN-SJSB091 (14-16)	Total/NA	Sediment	1613B	515492
320-77292-13	11215702-080321-BN-DUP-18	Total/NA	Sediment	1613B	515492

Analysis Batch: 520997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77292-1 - RA	11215702-080321-BN-SJSB091 (0-2)	Total/NA	Sediment	1613B	515492
320-77292-2 - RA	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	1613B	515492
320-77292-3 - RA	11215702-080321-BN-SJSB091 (4-6)	Total/NA	Sediment	1613B	515492
320-77292-4 - RA	11215702-080321-BN-SJSB091 (6-8)	Total/NA	Sediment	1613B	515492
320-77292-2 MS - RA	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	1613B	515492
320-77292-2 MSD - RA	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	1613B	515492

QC Association Summary

Client: GHD Services Inc.
Job ID: 320-77292-1
Project/Site: SJRWP Supplemental Design Investigation

General Chemistry

Analysis Batch: 514409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-77292-1	11215702-080321-BN-SJSB091 (0-2)	Total/NA	Sediment	D 2216	
320-77292-2	11215702-080321-BN-SJSB091 (2-4)	Total/NA	Sediment	D 2216	
320-77292-3	11215702-080321-BN-SJSB091 (4-6)	Total/NA	Sediment	D 2216	
320-77292-4	11215702-080321-BN-SJSB091 (6-8)	Total/NA	Sediment	D 2216	
320-77292-5	11215702-080321-BN-SJSB091 (8-10)	Total/NA	Sediment	D 2216	
320-77292-6	11215702-080321-BN-SJSB091 (10-12)	Total/NA	Sediment	D 2216	
320-77292-7	11215702-080321-BN-SJSB091 (12-14)	Total/NA	Sediment	D 2216	
320-77292-8	11215702-080321-BN-SJSB091 (14-16)	Total/NA	Sediment	D 2216	
320-77292-13	11215702-080321-BN-DUP-18	Total/NA	Sediment	D 2216	
320-77346-A-1 DU	Duplicate	Total/NA	Sediment	D 2216	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (0-2)
Lab Sample ID: 320-77292-1
Date Collected: 08/03/21 13:30
Matrix: Sediment
Date Received: 08/06/21 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	514409	08/09/21 11:17	TCS	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (0-2)
Lab Sample ID: 320-77292-1
Date Collected: 08/03/21 13:30
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 44.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519955	08/26/21 01:20	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520997	08/31/21 18:20	DB	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)
Lab Sample ID: 320-77292-2
Date Collected: 08/03/21 13:35
Matrix: Sediment
Date Received: 08/06/21 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	514409	08/09/21 11:17	TCS	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)
Lab Sample ID: 320-77292-2
Date Collected: 08/03/21 13:35
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 61.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519955	08/26/21 02:05	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520997	08/31/21 18:58	DB	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (4-6)
Lab Sample ID: 320-77292-3
Date Collected: 08/03/21 13:40
Matrix: Sediment
Date Received: 08/06/21 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	514409	08/09/21 11:17	TCS	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (4-6)
Lab Sample ID: 320-77292-3
Date Collected: 08/03/21 13:40
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 78.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519955	08/26/21 04:20	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520997	08/31/21 20:53	DB	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (6-8)
Lab Sample ID: 320-77292-4

Date Collected: 08/03/21 13:45
Matrix: Sediment
Date Received: 08/06/21 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	514409	08/09/21 11:17	TCS	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (6-8)
Lab Sample ID: 320-77292-4

Date Collected: 08/03/21 13:45
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 61.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519955	08/26/21 05:05	DB	TAL SAC
Total/NA	Prep	HRMS-Sox	RA		515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B	RA	1	520997	08/31/21 21:32	DB	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (8-10)
Lab Sample ID: 320-77292-5

Date Collected: 08/03/21 13:50
Matrix: Sediment
Date Received: 08/06/21 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	514409	08/09/21 11:17	TCS	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (8-10)
Lab Sample ID: 320-77292-5

Date Collected: 08/03/21 13:50
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 61.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519955	08/26/21 05:50	DB	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (10-12)
Lab Sample ID: 320-77292-6

Date Collected: 08/03/21 13:55
Matrix: Sediment
Date Received: 08/06/21 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	514409	08/09/21 11:17	TCS	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (10-12)
Lab Sample ID: 320-77292-6

Date Collected: 08/03/21 13:55
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 57.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519966	08/26/21 10:05	SMA	TAL SAC

Lab Chronicle

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Client Sample ID: 11215702-080321-BN-SJSB091 (12-14)
Lab Sample ID: 320-77292-7
Date Collected: 08/03/21 14:00
Matrix: Sediment
Date Received: 08/06/21 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	514409	08/09/21 11:17	TCS	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (12-14)
Lab Sample ID: 320-77292-7
Date Collected: 08/03/21 14:00
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 63.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519966	08/26/21 10:50	SMA	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (14-16)
Lab Sample ID: 320-77292-8
Date Collected: 08/03/21 14:05
Matrix: Sediment
Date Received: 08/06/21 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	514409	08/09/21 11:17	TCS	TAL SAC

Client Sample ID: 11215702-080321-BN-SJSB091 (14-16)
Lab Sample ID: 320-77292-8
Date Collected: 08/03/21 14:05
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 59.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519966	08/26/21 11:35	SMA	TAL SAC

Client Sample ID: 11215702-080321-BN-DUP-18
Lab Sample ID: 320-77292-13
Date Collected: 08/03/21 00:00
Matrix: Sediment
Date Received: 08/06/21 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	514409	08/09/21 11:17	TCS	TAL SAC

Client Sample ID: 11215702-080321-BN-DUP-18
Lab Sample ID: 320-77292-13
Date Collected: 08/03/21 00:00
Matrix: Sediment
Date Received: 08/06/21 10:15
Percent Solids: 61.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	HRMS-Sox			515492	08/12/21 05:19	FC	TAL SAC
Total/NA	Analysis	1613B		1	519966	08/26/21 13:05	SMA	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 320-77292-1
Project/Site: SJRWP Supplemental Design Investigation

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704399-19-13	05-31-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,6,7,8-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8,9-HpCDF
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,4,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8,9-HxCDF
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDD
1613B	HRMS-Sox	Sediment	1,2,3,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,4,6,7,8-HxCDF
1613B	HRMS-Sox	Sediment	2,3,4,7,8-PeCDF
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDD
1613B	HRMS-Sox	Sediment	2,3,7,8-TCDF
1613B	HRMS-Sox	Sediment	OCDD
1613B	HRMS-Sox	Sediment	OCDF
1613B	HRMS-Sox	Sediment	Total HpCDD
1613B	HRMS-Sox	Sediment	Total HpCDF
1613B	HRMS-Sox	Sediment	Total HxCDD
1613B	HRMS-Sox	Sediment	Total HxCDF
1613B	HRMS-Sox	Sediment	Total PeCDD
1613B	HRMS-Sox	Sediment	Total PeCDF
1613B	HRMS-Sox	Sediment	Total TCDD
1613B	HRMS-Sox	Sediment	Total TCDF
D 2216		Sediment	Percent Moisture
D 2216		Sediment	Percent Solids
TEQ		Sediment	Total Dioxin/Furan TEQ

Method Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	TAL SAC
TEQ	Total TEQ Calculation	Lab SOP	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
HRMS-Sox	Soxhlet Extraction	EPA	TAL SAC

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: GHD Services Inc.
Project/Site: SJRWP Supplemental Design Investigation

Job ID: 320-77292-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-77292-1	11215702-080321-BN-SJSB091 (0-2)	Sediment	08/03/21 13:30	08/06/21 10:15
320-77292-2	11215702-080321-BN-SJSB091 (2-4)	Sediment	08/03/21 13:35	08/06/21 10:15
320-77292-3	11215702-080321-BN-SJSB091 (4-6)	Sediment	08/03/21 13:40	08/06/21 10:15
320-77292-4	11215702-080321-BN-SJSB091 (6-8)	Sediment	08/03/21 13:45	08/06/21 10:15
320-77292-5	11215702-080321-BN-SJSB091 (8-10)	Sediment	08/03/21 13:50	08/06/21 10:15
320-77292-6	11215702-080321-BN-SJSB091 (10-12)	Sediment	08/03/21 13:55	08/06/21 10:15
320-77292-7	11215702-080321-BN-SJSB091 (12-14)	Sediment	08/03/21 14:00	08/06/21 10:15
320-77292-8	11215702-080321-BN-SJSB091 (14-16)	Sediment	08/03/21 14:05	08/06/21 10:15
320-77292-13	11215702-080321-BN-DUP-18	Sediment	08/03/21 00:00	08/06/21 10:15

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77292-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: WDM 320-510264/1 Client Sample ID:

Date Analyzed: 07/26/21 09:21 Lab File ID: 26JL2110D5_1.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,6,8-TCDF	15.13	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,6,8-TCDD	16.07	Peak assignment corrected	arghestanis	07/26/21 12:21
2,3,4,7-TCDF	17.63	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,7-TCDD	18.22	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDD	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,3,9-TCDF	18.51	Peak assignment corrected	arghestanis	07/26/21 12:21
1,2,8,9-TCDD	19.47	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,8,9-TCDF	19.49	Peak assignment corrected	arghestanis	07/26/21 12:21
1,3,4,6,8-PeCDF	19.76	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,4,7,9-PeCDD	21.58	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDD	25.91	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,8,9-PeCDF	26.14	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,8-HxCDF	28.48	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,4,6,7,9-HxCDD	30.02	Peak assignment corrected	arghestanis	07/26/21 12:22
1,2,3,4,6,7-HxCDD	32.30	Peak assignment corrected	arghestanis	07/26/21 12:23
1,2,3,4,8,9-HxCDF	32.61	Peak assignment corrected	arghestanis	07/26/21 12:23

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77292-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 510264

Lab Sample ID: IC 320-510264/3 Client Sample ID:

Date Analyzed: 07/26/21 10:51 Lab File ID: 26JL2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	18.35	Invalid Compound ID	stephensk	07/27/21 08:15

Lab Sample ID: IC 320-510264/4 Client Sample ID:

Date Analyzed: 07/26/21 11:36 Lab File ID: 26JL2110D5_4.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-2,3,4,7,8-PeCDF	24.13	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDF	30.84	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8-HxCDD	31.93	Peak assignment corrected	arghestanis	07/26/21 12:30
13C-1,2,3,4,7,8,9-HpCDF	35.01	Peak assignment corrected	arghestanis	07/26/21 12:31

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77292-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519953

Lab Sample ID: MB 320-515492/1-A Client Sample ID:

Date Analyzed: 08/25/21 11:20 Lab File ID: 25AU2110D5_3.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,4,7,8-HxCDD		Invalid Compound ID	dadunj	08/27/21 09:25
1,2,3,6,7,8-HxCDD		Invalid Compound ID	dadunj	08/27/21 09:25
2,3,7,8-TCDF	17.07	Baseline	dadunj	08/27/21 09:25
1,2,3,4,6,7,8-HpCDD	34.41	Split Peak	dadunj	08/27/21 09:25
OCDD	36.71	Split Peak	dadunj	08/27/21 09:26
OCDF	36.80	Split Peak	dadunj	08/27/21 09:26

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77292-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519955

Lab Sample ID: 320-77292-1 Client Sample ID: 11215702-080321-BN-SJSB091 (0-2)

Date Analyzed: 08/26/21 01:20 Lab File ID: 25AU2110D5_21.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	17.78	Split Peak	dadunj	08/27/21 08:27
1,2,3,7,8-PeCDF	22.02	Baseline	dadunj	08/27/21 08:28
2,3,4,7,8-PeCDF	23.36	Baseline	dadunj	08/27/21 08:28
1,2,3,6,7,8-HxCDD	31.62	Split Peak	dadunj	08/27/21 08:29
1,2,3,7,8,9-HxCDD	31.96	Split Peak	dadunj	08/27/21 08:29
1,2,3,7,8,9-HxCDF	32.16	Split Peak	dadunj	08/27/21 08:29
1,2,3,4,6,7,8-HpCDF	33.62	Split Peak	dadunj	08/27/21 08:29
OCDF	36.71	Split Peak	dadunj	08/27/21 08:30

Lab Sample ID: 320-77292-2 Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)

Date Analyzed: 08/26/21 02:05 Lab File ID: 25AU2110D5_22.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	17.81	Split Peak	dadunj	08/27/21 08:31
1,2,3,7,8-PeCDF	22.03	Split Peak	dadunj	08/27/21 08:32
1,2,3,4,7,8-HxCDF	30.20	Invalid Compound ID	dadunj	08/27/21 08:32
1,2,3,6,7,8-HxCDF	30.39	Split Peak	dadunj	08/27/21 08:32
2,3,4,6,7,8-HxCDF	31.32	Split Peak	dadunj	08/27/21 08:33
1,2,3,4,7,8-HxCDD	31.50	Invalid Compound ID	dadunj	08/27/21 08:34
1,2,3,6,7,8-HxCDD	31.62	Split Peak	dadunj	08/27/21 08:34
1,2,3,7,8,9-HxCDD	31.96	Split Peak	dadunj	08/27/21 08:34
1,2,3,7,8,9-HxCDF	32.16	Split Peak	dadunj	08/27/21 08:33
1,2,3,4,6,7,8-HpCDF	33.62	Split Peak	dadunj	08/27/21 08:35

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77292-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519955

Lab Sample ID: 320-77292-3 Client Sample ID: 11215702-080321-BN-SJSB091 (4-6)

Date Analyzed: 08/26/21 04:20 Lab File ID: 25AU2110D5_25.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8-PeCDF	22.03	Baseline	dadunj	08/27/21 09:12
1,2,3,6,7,8-HxCDF	30.39	Split Peak	dadunj	08/27/21 09:12
1,2,3,4,7,8-HxCDD	31.49	Split Peak	dadunj	08/27/21 09:13
1,2,3,6,7,8-HxCDD	31.60	Split Peak	dadunj	08/27/21 09:13
1,2,3,7,8,9-HxCDD	31.94	Split Peak	dadunj	08/27/21 09:15
1,2,3,7,8,9-HxCDF	32.14	Split Peak	dadunj	08/27/21 09:12
OCDF	36.79	Split Peak	dadunj	08/27/21 09:14

Lab Sample ID: 320-77292-4 Client Sample ID: 11215702-080321-BN-SJSB091 (6-8)

Date Analyzed: 08/26/21 05:05 Lab File ID: 25AU2110D5_26.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.10	Invalid Compound ID	dadunj	08/27/21 09:16
1,2,3,7,8-PeCDF	22.02	Split Peak	dadunj	08/27/21 09:16
1,2,3,7,8-PeCDD	24.07	Split Peak	dadunj	08/27/21 09:16
1,2,3,6,7,8-HxCDF	30.40	Split Peak	dadunj	08/27/21 09:16
2,3,4,6,7,8-HxCDF	31.30	Split Peak	dadunj	08/27/21 09:17
1,2,3,4,7,8-HxCDD	31.50	Split Peak	dadunj	08/27/21 09:17
1,2,3,6,7,8-HxCDD	31.61	Split Peak	dadunj	08/27/21 09:17
1,2,3,7,8,9-HxCDF	32.14	Split Peak	dadunj	08/27/21 09:17
OCDF	36.79	Split Peak	dadunj	08/27/21 09:17

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77292-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519955

Lab Sample ID: 320-77292-5 Client Sample ID: 11215702-080321-BN-SJSB091 (8-10)

Date Analyzed: 08/26/21 05:50 Lab File ID: 25AU2110D5_27.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	17.81	Split Peak	dadunj	08/27/21 09:18
1,2,3,7,8-PeCDF	22.03	Split Peak	dadunj	08/27/21 09:19
2,3,4,7,8-PeCDF	23.38	Split Peak	dadunj	08/27/21 09:19
1,2,3,4,7,8-HxCDF	30.20	Split Peak	dadunj	08/27/21 09:19
13C-1,2,3,6,7,8-HxCDF	30.39	Split Peak	dadunj	08/27/21 09:20
1,2,3,7,8,9-HxCDF	32.14	Split Peak	dadunj	08/27/21 09:20
OCDF	36.79	Invalid Compound ID	dadunj	08/27/21 09:20

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77292-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519966

Lab Sample ID: CCV 320-519966/1 Client Sample ID:

Date Analyzed: 08/26/21 07:40 Lab File ID: 25AU2110D5_29.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
13C-1,2,3,4-TCDD	17.57	Peak assignment corrected	bennettd	08/26/21 11:48

Lab Sample ID: 320-77292-6 Client Sample ID: 11215702-080321-BN-SJSB091 (10-12)

Date Analyzed: 08/26/21 10:05 Lab File ID: 25AU2110D5_32.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.11	Split Peak	dadunj	08/30/21 08:32
2,3,7,8-TCDD	17.81	Baseline	dadunj	08/30/21 08:33
1,2,3,7,8,9-HxCDD	31.96	Split Peak	dadunj	08/30/21 08:34
1,2,3,7,8,9-HxCDF	32.14	Baseline	dadunj	08/30/21 08:34
1,2,3,4,6,7,8-HpCDF	33.62	Split Peak	dadunj	08/30/21 08:35
OCDF	36.79	Split Peak	dadunj	08/30/21 08:35

Lab Sample ID: 320-77292-7 Client Sample ID: 11215702-080321-BN-SJSB091 (12-14)

Date Analyzed: 08/26/21 10:50 Lab File ID: 25AU2110D5_33.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3,7,8,9-HxCDF	32.13	Split Peak	dadunj	08/30/21 08:38
OCDF	36.80	Split Peak	dadunj	08/30/21 08:39

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77292-1

SDG No.:

Instrument ID: 10D5 Analysis Batch Number: 519966

Lab Sample ID: 320-77292-8 Client Sample ID: 11215702-080321-BN-SJSB091 (14-16)

Date Analyzed: 08/26/21 11:35 Lab File ID: 25AU2110D5_34.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.10	Split Peak	dadunj	08/30/21 08:52
2,3,7,8-TCDD	17.79	Split Peak	dadunj	08/30/21 08:53
1,2,3,7,8,9-HxCDF	32.13	Split Peak	dadunj	08/30/21 08:54
OCDF	36.79	Split Peak	dadunj	08/30/21 08:55

Lab Sample ID: 320-77292-13 Client Sample ID: 11215702-080321-BN-DUP-18

Date Analyzed: 08/26/21 13:05 Lab File ID: 25AU2110D5_36.d GC Column: DB-5 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.10	Baseline	dadunj	08/30/21 09:08
2,3,7,8-TCDD	17.79	Split Peak	dadunj	08/30/21 09:09
1,2,3,7,8-PeCDF	22.03	Split Peak	dadunj	08/30/21 09:01
1,2,3,7,8,9-HxCDF	32.13	Split Peak	dadunj	08/30/21 09:02
1,2,3,4,6,7,8-HpCDF	33.60	Split Peak	dadunj	08/30/21 09:02
OCDF	36.79	Split Peak	dadunj	08/30/21 09:03

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77292-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 506541

Lab Sample ID: IC 320-506541/4 Client Sample ID:

Date Analyzed: 07/14/21 12:52 Lab File ID: 14JL2111D2_004.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDD	16.08	Peak Tail	bennettd	07/15/21 09:06

1613B

DIOXIN MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 320-77292-1

SDG No.:

Instrument ID: 11D2 Analysis Batch Number: 520997

Lab Sample ID: 320-77292-2 MS RA Client Sample ID: 11215702-080321-BN-SJSB091 (2-4) MS RA

Date Analyzed: 08/31/21 19:37 Lab File ID: 31AU2111D2_011.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.62	Peak Tail	bennettd	09/01/21 09:41

Lab Sample ID: 320-77292-2 MSD RA Client Sample ID: 11215702-080321-BN-SJSB091 (2-4) MSD RA

Date Analyzed: 08/31/21 20:15 Lab File ID: 31AU2111D2_012.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.63	Peak Tail	bennettd	09/01/21 09:42

Lab Sample ID: 320-77292-3 RA Client Sample ID: 11215702-080321-BN-SJSB091 (4-6) RA

Date Analyzed: 08/31/21 20:53 Lab File ID: 31AU2111D2_013.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.64	Peak Tail	bennettd	09/01/21 09:42

Lab Sample ID: 320-77292-4 RA Client Sample ID: 11215702-080321-BN-SJSB091 (6-8) RA

Date Analyzed: 08/31/21 21:32 Lab File ID: 31AU2111D2_014.d GC Column: DB-225 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,3,7,8-TCDF	17.64	Missed Peak	bennettd	09/01/21 09:43

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNCP_00042	07/30/21	07/30/20	C14, Lot STBJ3715	6 mL	HRDXNCP_00041	1.2 mL	1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,6,8-HxCDF	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,2,3,7-TCDD	40 pg/uL
							1,2,3,8,9-PeCDD	40 pg/uL
							1,2,3,8,9-PeCDF	40 pg/uL
							1,2,3,9-TCDD	40 pg/uL
							1,2,3,9-TCDF	40 pg/uL
							1,2,4,6,7,9-HxCDD	40 pg/uL
							1,2,4,7,9-PeCDD	40 pg/uL
							1,2,8,9-TCDD	40 pg/uL
							1,2,8,9-TCDF	40 pg/uL
							1,3,4,6,8-PeCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL
							2,3,4,7-TCDF	40 pg/uL
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00041	03/31/25		CIL, Lot ER03111502		(Purchased Reagent)		1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,6,8-HxCDF	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,2,3,7-TCDD	200 ng/mL
							1,2,3,8,9-PeCDD	200 ng/mL
							1,2,3,8,9-PeCDF	200 ng/mL
							1,2,3,9-TCDD	200 ng/mL
							1,2,3,9-TCDF	200 ng/mL
							1,2,4,6,7,9-HxCDD	200 ng/mL
							1,2,4,7,9-PeCDD	200 ng/mL
							1,2,8,9-TCDD	200 ng/mL
							1,2,8,9-TCDF	200 ng/mL
							1,3,4,6,8-PeCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,4,7-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNCP_00044	05/12/22	05/12/21	C14, Lot STBJ7343	6 mL	HRDXNCP_00043	1.2 mL	1,2,3,4,6,7,9-HpCDD	40 pg/uL
							1,2,3,4,6,7-HxCDD	40 pg/uL
							1,2,3,4,8,9-HxCDF	40 pg/uL
							1,3,6,8-TCDD	40 pg/uL
							1,3,6,8-TCDF	40 pg/uL
							13C-2,3,7,8-TCDD	40 pg/uL
							13C-2,3,7,8-TCDF	40 pg/uL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,7,8-TCDD	40 pg/uL
							2,3,7,8-TCDF	40 pg/uL
.HRDXNCP_00043	03/31/25	CIL, Lot ER03111502			(Purchased Reagent)		1,2,3,4,6,7,9-HpCDD	200 ng/mL
							1,2,3,4,6,7-HxCDD	200 ng/mL
							1,2,3,4,8,9-HxCDF	200 ng/mL
							1,3,6,8-TCDD	200 ng/mL
							1,3,6,8-TCDF	200 ng/mL
							13C-2,3,7,8-TCDD	200 ng/mL
							13C-2,3,7,8-TCDF	200 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
HRDXNIC_00047	01/14/22	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNSU_00234	50 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00108	500 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00108	03/01/25	Wellington Labs, Lot 13PAR0418			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
HRDXNIDA_00479	07/28/22	07/28/21	Acetone, Lot 0000274597	1000 mL	HRDXNIDA_00435	5 mL	13C-1,2,3,4,7,8,9-HpCDF	2 pg/uL
							13C-1,2,3,4,7,8-HxCDD	2 pg/uL
							13C-1,2,3,4,7,8-HxCDF	2 pg/uL
							13C-2,3,4,7,8-PeCDF	2 pg/uL
					HRDXNIDA_00450	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 pg/uL
							13C-2,3,7,8-TCDD	2 pg/uL
							13C-2,3,7,8-TCDF	2 pg/uL
							13C-1,2,3,6,7,8-HxCDD	2 pg/uL
							13C-OCDD	4 pg/uL
					HRDXNIDA_00465	10 mL	13C-1,2,3,6,7,8-HxCDF	2 pg/uL
							13C-2,3,4,6,7,8-HxCDF	2 pg/uL
							13C-1,2,3,7,8,9-HxCDF	2 pg/uL
							13C-1,2,3,7,8-PeCDF	2 pg/uL
							13C-1,2,3,4,6,7,8-HpCDD	2 pg/uL
							13C-1,2,3,7,8-PeCDD	2 pg/uL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
..HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
..HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
..HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
..HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
HRDXNIS_00137	08/02/22	08/02/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
.HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
..HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
..HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
HRDXNL2_00032	10/02/21	02/02/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	625 uL	37Cl4-2,3,7,8-TCDD	0.5 ng/mL
					HRDXNTA_00128	125 uL	1,2,3,4,6,7,8-HpCDD	2.5 ng/mL
							1,2,3,4,6,7,8-HpCDF	2.5 ng/mL
							1,2,3,4,7,8,9-HpCDF	2.5 ng/mL
							1,2,3,4,7,8-HxCDD	2.5 ng/mL
							1,2,3,4,7,8-HxCDF	2.5 ng/mL
							1,2,3,6,7,8-HxCDD	2.5 ng/mL
							1,2,3,6,7,8-HxCDF	2.5 ng/mL
							1,2,3,7,8,9-HxCDD	2.5 ng/mL
							1,2,3,7,8,9-HxCDF	2.5 ng/mL
							1,2,3,7,8-PeCDD	2.5 ng/mL
							1,2,3,7,8-PeCDF	2.5 ng/mL
							2,3,4,6,7,8-HxCDF	2.5 ng/mL
							2,3,4,7,8-PeCDF	2.5 ng/mL
							2,3,7,8-TCDD	0.5 ng/mL
							2,3,7,8-TCDF	0.5 ng/mL
							OCDD	5 ng/mL
							OCDF	5 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL3_00029	10/02/21	01/20/21	C14, Lot STBJ3715	0.5 mL	HRDXNIDA_00435	125 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	250 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	250 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	500 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00246	1250 uL	37Cl4-2,3,7,8-TCDD	2 ng/mL
					HRDXNTA_00128	250 uL	1,2,3,4,6,7,8-HpCDD	10 ng/mL
							1,2,3,4,6,7,8-HpCDF	10 ng/mL
							1,2,3,4,7,8,9-HpCDF	10 ng/mL
							1,2,3,4,7,8-HxCDD	10 ng/mL
							1,2,3,4,7,8-HxCDF	10 ng/mL
							1,2,3,6,7,8-HxCDD	10 ng/mL
							1,2,3,6,7,8-HxCDF	10 ng/mL
							1,2,3,7,8,9-HxCDD	10 ng/mL
							1,2,3,7,8,9-HxCDF	10 ng/mL
							1,2,3,7,8-PeCDD	10 ng/mL
							1,2,3,7,8-PeCDF	10 ng/mL
							2,3,4,6,7,8-HxCDF	10 ng/mL
							2,3,4,7,8-PeCDF	10 ng/mL
							2,3,7,8-TCDD	2 ng/mL
							2,3,7,8-TCDF	2 ng/mL
							OCDD	20 ng/mL
							OCDF	20 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00246	12/29/21	12/29/20	Isooctane, Lot B00S6184	500 mL	HRDXNSU_00234	1 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
..HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
...HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
....HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00128	10/02/21	12/10/20	Acetone, Lot 00000267457	25 mL	HRDXNTA_00112	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
..HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00099	01/14/22	03/23/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00435	250 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	500 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	500 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	1,2,3,4,6,7,8-HpCDD	50 ng/mL
							1,2,3,4,6,7,8-HpCDF	50 ng/mL
							1,2,3,4,7,8,9-HpCDF	50 ng/mL
							1,2,3,4,7,8-HxCDD	50 ng/mL
							1,2,3,4,7,8-HxCDF	50 ng/mL
							1,2,3,6,7,8-HxCDD	50 ng/mL
							1,2,3,6,7,8-HxCDF	50 ng/mL
							1,2,3,7,8,9-HxCDD	50 ng/mL
							1,2,3,7,8,9-HxCDF	50 ng/mL
							1,2,3,7,8-PeCDD	50 ng/mL
							1,2,3,7,8-PeCDF	50 ng/mL
							2,3,4,6,7,8-HxCDF	50 ng/mL
							2,3,4,7,8-PeCDF	50 ng/mL
							2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
							OCDD	100 ng/mL
							OCDF	100 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26		CIL, Lot ER04251601		(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26		CIL, Lot ER04211601		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27		CIL, Lot ER04211701		(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27		CIL, Lot ER01061701		(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24		CIL, Lot ER08101404		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26		CIL, Lot ER03031601		(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26		CIL, Lot ER09131601		(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL4_00100	01/14/22	06/22/21	C14, Lot STBJ3715	1 mL	HRDXNIDA_00464	500 uL	13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
					HRDXNIS_00133	1000 uL	13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	25 uL	37Cl4-2,3,7,8-TCDD	10 ng/mL
					HRDXNTA_00112	25 uL	2,3,7,8-TCDD	10 ng/mL
							2,3,7,8-TCDF	10 ng/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
HRDXNL5_00032	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	20 uL	37Cl4-2,3,7,8-TCDD	40 ng/mL
					HRDXNTA_00112	20 uL	1,2,3,4,6,7,8-HpCDD	200 ng/mL
							1,2,3,4,6,7,8-HpCDF	200 ng/mL
							1,2,3,4,7,8,9-HpCDF	200 ng/mL
							1,2,3,4,7,8-HxCDD	200 ng/mL
							1,2,3,4,7,8-HxCDF	200 ng/mL
							1,2,3,6,7,8-HxCDD	200 ng/mL
							1,2,3,6,7,8-HxCDF	200 ng/mL
							1,2,3,7,8,9-HxCDD	200 ng/mL
							1,2,3,7,8,9-HxCDF	200 ng/mL
							1,2,3,7,8-PeCDD	200 ng/mL
							1,2,3,7,8-PeCDF	200 ng/mL
							2,3,4,6,7,8-HxCDF	200 ng/mL
							2,3,4,7,8-PeCDF	200 ng/mL
							2,3,7,8-TCDD	40 ng/mL
							2,3,7,8-TCDF	40 ng/mL
							OCDD	400 ng/mL
							OCDF	400 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL
...HRDXNIDA_00443	03/31/28	CIL, Lot ER03151801			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27	CIL, Lot ER04051701			(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26	CIL, Lot ER02241603			(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30	CIL, Lot ER01062015			(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30	CIL, Lot ER01062016			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29	CIL, Lot ER102111904			(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26	CIL, Lot ER09271601			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24	CIL, Lot ER08041401			(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26	CIL, Lot ER08221601			(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27	CIL, Lot ER11081602			(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24	WELLINGTON LABS, Lot MCDD0480505			(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26	CIL, Lot ER02241602			(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNL6_00028	01/14/22	01/20/21	C14, Lot STBJ3715	0.2 mL	HRDXNIDA_00435	50 uL	13C-1,2,3,4,7,8,9-HpCDF	100 ng/mL
							13C-1,2,3,4,7,8-HxCDD	100 ng/mL
							13C-1,2,3,4,7,8-HxCDF	100 ng/mL
							13C-2,3,4,7,8-PeCDF	100 ng/mL
					HRDXNIDA_00464	100 uL	13C-1,2,3,4,6,7,8-HpCDF	100 ng/mL
							13C-2,3,7,8-TCDD	100 ng/mL
							13C-2,3,7,8-TCDF	100 ng/mL
							13C-1,2,3,6,7,8-HxCDD	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							13C-OCDD	200 ng/mL
					HRDXNIDA_00465	100 uL	13C-1,2,3,6,7,8-HxCDF	100 ng/mL
							13C-2,3,4,6,7,8-HxCDF	100 ng/mL
							13C-1,2,3,7,8,9-HxCDF	100 ng/mL
							13C-1,2,3,7,8-PeCDF	100 ng/mL
							13C-1,2,3,4,6,7,8-HpCDD	100 ng/mL
							13C-1,2,3,7,8-PeCDD	100 ng/mL
					HRDXNIS_00133	200 uL	13C-1,2,3,7,8,9-HxCDD	100 ng/mL
							13C-1,2,3,4-TCDD	100 ng/mL
					HRDXNSU_00234	100 uL	37Cl4-2,3,7,8-TCDD	200 ng/mL
					HRDXNTA_00112	100 uL	1,2,3,4,6,7,8-HpCDD	1000 ng/mL
							1,2,3,4,6,7,8-HpCDF	1000 ng/mL
							1,2,3,4,7,8,9-HpCDF	1000 ng/mL
							1,2,3,4,7,8-HxCDD	1000 ng/mL
							1,2,3,4,7,8-HxCDF	1000 ng/mL
							1,2,3,6,7,8-HxCDD	1000 ng/mL
							1,2,3,6,7,8-HxCDF	1000 ng/mL
							1,2,3,7,8,9-HxCDD	1000 ng/mL
							1,2,3,7,8,9-HxCDF	1000 ng/mL
							1,2,3,7,8-PeCDD	1000 ng/mL
							1,2,3,7,8-PeCDF	1000 ng/mL
							2,3,4,6,7,8-HxCDF	1000 ng/mL
							2,3,4,7,8-PeCDF	1000 ng/mL
							2,3,7,8-TCDD	200 ng/mL
							2,3,7,8-TCDF	200 ng/mL
							OCDD	2000 ng/mL
							OCDF	2000 ng/mL
.HRDXNIDA_00435	05/31/26	08/25/20	Isooctane, Lot B00S6184	100 mL	HRDXNIDA_00417	800 uL	13C-1,2,3,4,7,8,9-HpCDF	0.4 ug/mL
					HRDXNIDA_00418	800 uL	13C-1,2,3,4,7,8-HxCDD	0.4 ug/mL
					HRDXNIDA_00419	800 uL	13C-1,2,3,4,7,8-HxCDF	0.4 ug/mL
					HRDXNIDA_00420	800 uL	13C-2,3,4,7,8-PeCDF	0.4 ug/mL
..HRDXNIDA_00417	05/31/26	CIL, Lot ER04251601			(Purchased Reagent)		13C-1,2,3,4,7,8,9-HpCDF	50 ug/mL
..HRDXNIDA_00418	06/30/26	CIL, Lot ER04211601			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDD	50 ug/mL
..HRDXNIDA_00419	07/31/27	CIL, Lot ER04211701			(Purchased Reagent)		13C-1,2,3,4,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00420	01/31/27	CIL, Lot ER01061701			(Purchased Reagent)		13C-2,3,4,7,8-PeCDF	50 ug/mL
.HRDXNIDA_00464	10/27/24	01/19/21	Isooctane, Lot B00S6184	50 mL	HRDXNIDA_00450	5 mL	13C-1,2,3,4,6,7,8-HpCDF	0.2 ug/mL
							13C-2,3,7,8-TCDD	0.2 ug/mL
							13C-2,3,7,8-TCDF	0.2 ug/mL
							13C-1,2,3,6,7,8-HxCDD	0.2 ug/mL
							13C-OCDD	0.4 ug/mL
..HRDXNIDA_00450	10/27/24	10/27/20	Acetone, Lot 0000242180	25 mL	HRDXNIDA_00440	1 mL	13C-1,2,3,4,6,7,8-HpCDF	2 ug/mL
					HRDXNIDA_00441	1 mL	13C-2,3,7,8-TCDD	2 ug/mL
					HRDXNIDA_00442	1 mL	13C-2,3,7,8-TCDF	2 ug/mL
					HRDXNIDA_00443	1 mL	13C-1,2,3,6,7,8-HxCDD	2 ug/mL
					HRDXNIDA_00448	10 mL	13C-OCDD	4 ug/mL
...HRDXNIDA_00440	11/30/24	CIL, Lot ER08101404			(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDF	50 ug/mL
...HRDXNIDA_00441	03/31/26	CIL, Lot ER03031601			(Purchased Reagent)		13C-2,3,7,8-TCDD	50 ug/mL
...HRDXNIDA_00442	09/30/26	CIL, Lot ER09131601			(Purchased Reagent)		13C-2,3,7,8-TCDF	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HRDXNIDA_00443	03/31/28		CIL, Lot ER03151801		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDD	50 ug/mL
...HRDXNIDA_00448	04/30/27		CIL, Lot ER04051701		(Purchased Reagent)		13C-OCDD	10 ug/mL
.HRDXNIDA_00465	08/31/24	01/19/21	Isooctane, Lot B00S6184	250 mL	HRDXNIDA_00457	1 mL	13C-1,2,3,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00458	1 mL	13C-2,3,4,6,7,8-HxCDF	0.2 ug/mL
					HRDXNIDA_00459	1 mL	13C-1,2,3,7,8,9-HxCDF	0.2 ug/mL
					HRDXNIDA_00460	1 mL	13C-1,2,3,7,8-PeCDF	0.2 ug/mL
					HRDXNIDA_00461	1 mL	13C-1,2,3,4,6,7,8-HpCDD	0.2 ug/mL
					HRDXNIDA_00462	1 mL	13C-1,2,3,7,8-PeCDD	0.2 ug/mL
..HRDXNIDA_00457	04/30/26		CIL, Lot ER02241603		(Purchased Reagent)		13C-1,2,3,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00458	01/31/30		CIL, Lot ER01062015		(Purchased Reagent)		13C-2,3,4,6,7,8-HxCDF	50 ug/mL
..HRDXNIDA_00459	12/31/30		CIL, Lot ER01062016		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDF	50 ug/mL
..HRDXNIDA_00460	01/31/29		CIL, Lot ER102111904		(Purchased Reagent)		13C-1,2,3,7,8-PeCDF	50 ug/mL
..HRDXNIDA_00461	10/31/26		CIL, Lot ER09271601		(Purchased Reagent)		13C-1,2,3,4,6,7,8-HpCDD	50 ug/mL
..HRDXNIDA_00462	08/31/24		CIL, Lot ER08041401		(Purchased Reagent)		13C-1,2,3,7,8-PeCDD	50 ug/mL
.HRDXNIS_00133	01/14/22	01/14/21	C14, Lot STBJ3715	100 mL	HRDXNIS_00128	2 mL	13C-1,2,3,7,8,9-HxCDD	0.1 ug/mL
							13C-1,2,3,4-TCDD	0.1 ug/mL
..HRDXNIS_00128	05/05/25	05/05/20	Isooctane, Lot 0000221197	10 mL	HRDXNIS_00126	1 mL	13C-1,2,3,7,8,9-HxCDD	5 ug/mL
					HRDXNIS_00127	1 mL	13C-1,2,3,4-TCDD	5 ug/mL
...HRDXNIS_00126	09/30/26		CIL, Lot ER08221601		(Purchased Reagent)		13C-1,2,3,7,8,9-HxCDD	50 ug/mL
...HRDXNIS_00127	01/31/27		CIL, Lot ER11081602		(Purchased Reagent)		13C-1,2,3,4-TCDD	50 ug/mL
.HRDXNSU_00234	08/01/24	01/22/20	Isooctane, Lot 0000221197	25 mL	HRDXNSU_00233	2 mL	37Cl4-2,3,7,8-TCDD	0.4 ug/mL
..HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
...HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL
.HRDXNTA_00112	04/30/26		CIL, Lot ER02241602		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2 ug/mL
							1,2,3,4,6,7,8-HpCDF	2 ug/mL
							1,2,3,4,7,8,9-HpCDF	2 ug/mL
							1,2,3,4,7,8-HxCDD	2 ug/mL
							1,2,3,4,7,8-HxCDF	2 ug/mL
							1,2,3,6,7,8-HxCDD	2 ug/mL
							1,2,3,6,7,8-HxCDF	2 ug/mL
							1,2,3,7,8,9-HxCDD	2 ug/mL
							1,2,3,7,8,9-HxCDF	2 ug/mL
							1,2,3,7,8-PeCDD	2 ug/mL
							1,2,3,7,8-PeCDF	2 ug/mL
							2,3,4,6,7,8-HxCDF	2 ug/mL
							2,3,4,7,8-PeCDF	2 ug/mL
							2,3,7,8-TCDD	0.4 ug/mL
							2,3,7,8-TCDF	0.4 ug/mL
							OCDD	4 ug/mL
							OCDF	4 ug/mL
HRDXNSU_00255	07/28/22	07/28/21	Isooctane, Lot R24F725	500 mL	HRDXNSU_00233	0.08 mL	37Cl4-2,3,7,8-TCDD	0.8 pg/uL
.HRDXNSU_00233	08/01/24	01/22/20	Isooctane, Lot 0000221197	10 mL	HRDXNSU_00201	1 mL	37Cl4-2,3,7,8-TCDD	5 ug/mL
..HRDXNSU_00201	08/01/24		WELLINGTON LABS, Lot MCDD0480505		(Purchased Reagent)		37Cl4-2,3,7,8-TCDD	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HRDXNTA_00137	07/01/22	07/01/21	Acetone, Lot 00000274597	25 mL	HRDXNTA_00132	0.25 mL	1,2,3,4,6,7,8-HpCDD	20 ng/mL
							1,2,3,4,6,7,8-HpCDF	20 ng/mL
							1,2,3,4,7,8,9-HpCDF	20 ng/mL
							1,2,3,4,7,8-HxCDD	20 ng/mL
							1,2,3,4,7,8-HxCDF	20 ng/mL
							1,2,3,6,7,8-HxCDD	20 ng/mL
							1,2,3,6,7,8-HxCDF	20 ng/mL
							1,2,3,7,8,9-HxCDD	20 ng/mL
							1,2,3,7,8,9-HxCDF	20 ng/mL
							1,2,3,7,8-PeCDD	20 ng/mL
							1,2,3,7,8-PeCDF	20 ng/mL
							2,3,4,6,7,8-HxCDF	20 ng/mL
							2,3,4,7,8-PeCDF	20 ng/mL
							2,3,7,8-TCDD	4 ng/mL
							2,3,7,8-TCDF	4 ng/mL
							OCDD	40 ng/mL
							OCDF	40 ng/mL
.HRDXNTA_00132	08/31/30		CIL, Lot ER09031903		(Purchased Reagent)		1,2,3,4,6,7,8-HpCDD	2000 ng/mL
							1,2,3,4,6,7,8-HpCDF	2000 ng/mL
							1,2,3,4,7,8,9-HpCDF	2000 ng/mL
							1,2,3,4,7,8-HxCDD	2000 ng/mL
							1,2,3,4,7,8-HxCDF	2000 ng/mL
							1,2,3,6,7,8-HxCDD	2000 ng/mL
							1,2,3,6,7,8-HxCDF	2000 ng/mL
							1,2,3,7,8,9-HxCDD	2000 ng/mL
							1,2,3,7,8,9-HxCDF	2000 ng/mL
							1,2,3,7,8-PeCDD	2000 ng/mL
							1,2,3,7,8-PeCDF	2000 ng/mL
							2,3,4,6,7,8-HxCDF	2000 ng/mL
							2,3,4,7,8-PeCDF	2000 ng/mL
							2,3,7,8-TCDD	400 ng/mL
							2,3,7,8-TCDF	400 ng/mL
							OCDD	4000 ng/mL
							OCDF	4000 ng/mL

Reagent

HRDXNCP_00041

rec 7/29/20 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

793124

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

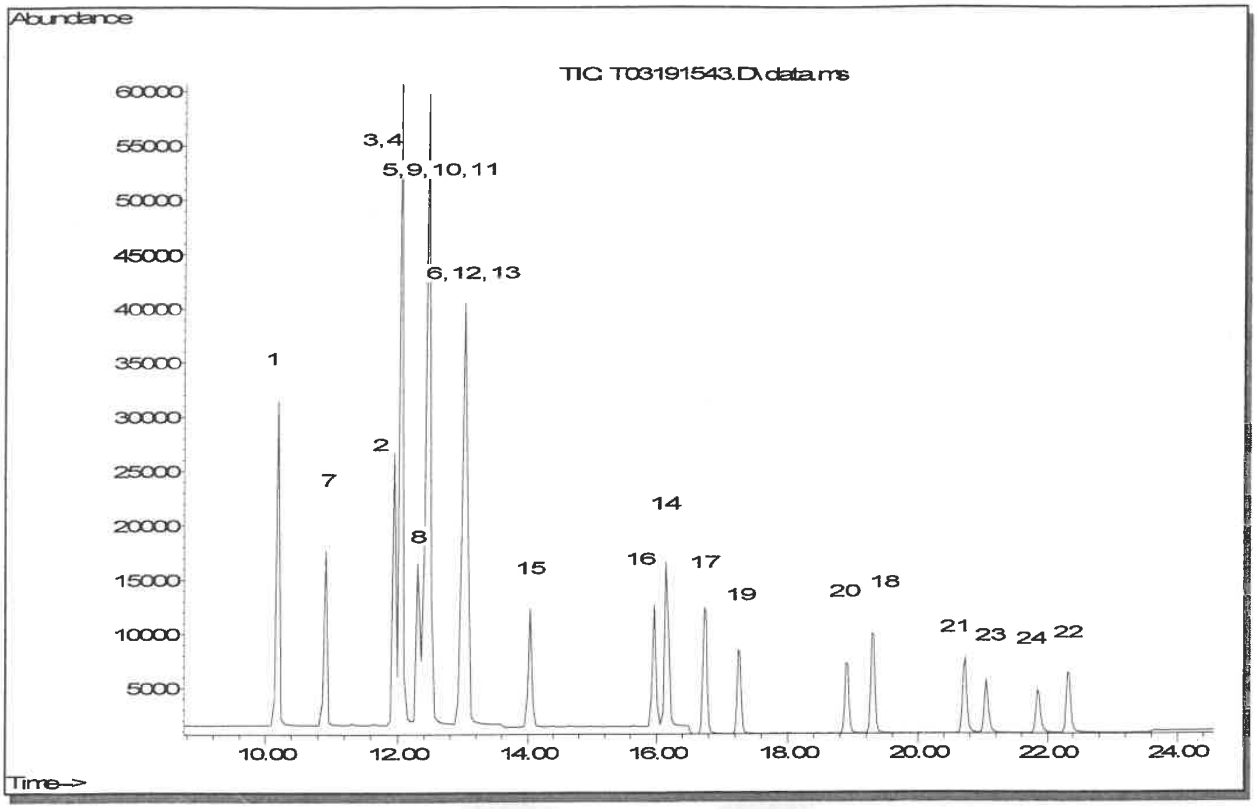

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNCP_00043

n 5/6/2021 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

PCDD/PCDF Window Defining and Isomer Specificity Mix (DB-5)

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-4147
Solution Lot:	ER03111502
Expiration Date:	March 2025
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2015
Date

Component	Chromatographic Purity	Concentration
1,3,6,8-Tetrachlorodibenzo-p-dioxin	99.9%	200.3 ± 2.0 ng/mL
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	99.8%	200.6 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin	99.2%	200.3 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.9%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzo-p-dioxin	99.6%	199.9 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzo-p-dioxin	99.2%	200.2 ± 2.0 ng/mL
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	98.9%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	99.0%	200.1 ± 2.0 ng/mL
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	98.7%	200.2 ± 2.0 ng/mL
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	98.9%	200.1 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	99.8%	200.3 ± 2.0 ng/mL
1,3,6,8-Tetrachlorodibenzofuran	98.5%	200.1 ± 2.0 ng/mL
1,2,3,9-Tetrachlorodibenzofuran	98.2%	200.4 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran	99.4%	200.0 ± 2.0 ng/mL
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.2%	200.5 ± 2.0 ng/mL
2,3,4,7-Tetrachlorodibenzofuran	98.7%	200.2 ± 2.0 ng/mL
1,2,8,9-Tetrachlorodibenzofuran	99.3%	199.9 ± 2.0 ng/mL
1,3,4,6,8-Pentachlorodibenzofuran	99.5%	200.6 ± 2.0 ng/mL
1,2,3,8,9-Pentachlorodibenzofuran	99.0%	200.5 ± 2.0 ng/mL
1,2,3,4,6,8-Hexachlorodibenzofuran	98.6%	200.5 ± 2.0 ng/mL
1,2,3,4,8,9-Hexachlorodibenzofuran	99.7%	200.5 ± 2.0 ng/mL
1,2,3,4,6,7,8-Heptachlorodibenzofuran	98.9%	200.6 ± 2.0 ng/mL
1,2,3,4,7,8,9-Heptachlorodibenzofuran	99.1%	200.1 ± 2.0 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 300°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
1,3,6,8-Tetrachlorodibenzo-p-dioxin	200.4	± 10%	1.6	≤ 5%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin/ 2,3,7,8-Tetrachlorodibenzo-p-dioxin/ 1,2,3,9-Tetrachlorodibenzo-p-dioxin [1]	591.2	± 10%	1.6	≤ 5%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	196.8	± 10%	2.7	≤ 5%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	197.2	± 10%	2.8	≤ 5%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	194.6	± 10%	2.8	≤ 5%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	194.7	± 10%	2.3	≤ 5%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	195.3	± 10%	1.7	≤ 5%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	192.6	± 10%	2.3	≤ 5%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	191.2	± 10%	2.5	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	196.7	± 10%	2.1	≤ 5%
1,3,6,8-Tetrachlorodibenzofuran	202.3	± 10%	2.1	≤ 5%
1,2,3,9-Tetrachlorodibenzofuran	194.4	± 10%	2.4	≤ 5%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	198.0	± 10%	3.3	≤ 5%
2,3,4,7-Tetrachlorodibenzofuran/ 2,3,7,8-Tetrachlorodibenzofuran [1]	399.3	± 10%	2.4	≤ 5%
1,2,8,9-Tetrachlorodibenzofuran	198.9	± 10%	2.9	≤ 5%
1,3,4,6,8-Pentachlorodibenzofuran	195.0	± 10%	2.1	≤ 5%
1,2,3,8,9-Pentachlorodibenzofuran	199.6	± 10%	2.1	≤ 5%
1,2,3,4,6,8-Hexachlorodibenzofuran	195.5	± 10%	2.4	≤ 5%
1,2,3,4,8,9-Hexachlorodibenzofuran	196.4	± 10%	1.8	≤ 5%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	197.4	± 10%	2.9	≤ 5%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	195.3	± 10%	2.1	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

[1] Compounds co-elute. Concentration is the sum of both or all analytes.

Neat Material Data

Compound	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity
1,3,6,8-Tetrachlorodibenzo-p-dioxin	ER040811-02	33423-92-6	$C_{12}H_4Cl_4O_2$	321.97	99.9%
1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin	ER021510-01	NA	$C_{12}H_4Cl_4O_2$	321.97	99.8%
2,3,7,8-Tetrachlorodibenzo-p-dioxin	ER061009-02	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	ER01031401	76523-40-5	$^{13}C_{12}H_4Cl_4O_2$	333.84	98.9%
1,2,3,9-Tetrachlorodibenzo-p-dioxin	ER0529401	71669-26-6	$C_{12}H_4Cl_4O_2$	321.97	99.6%
1,2,8,9-Tetrachlorodibenzo-p-dioxin	ER11201301	62470-54-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%
1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin	ER11051302	NA	$C_{12}H_3Cl_5O_2$	356.42	98.9%
1,2,3,8,9-Pentachlorodibenzo-p-dioxin	ER05161401	NA	$C_{12}H_3Cl_5O_2$	356.42	99.0%
1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin	ER08101402	NA	$C_{12}H_2Cl_6O_2$	390.86	98.7%
1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin	ER030107-01	NA	$C_{12}H_2Cl_6O_2$	390.86	99.0%
1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin	ER01201502	58200-70-7	$C_{12}HCl_7O_2$	425.31	98.9%
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	ER100207-02	35822-46-9	$C_{12}HCl_7O_2$	425.31	99.8%
1,3,6,8-Tetrachlorodibenzofuran	ER021808-01	71998-72-6	$C_{12}H_4Cl_4O$	305.98	98.5%
1,2,3,9-Tetrachlorodibenzofuran	ER071107-01	NA	$C_{12}H_4Cl_4O$	305.98	98.2%
2,3,7,8-Tetrachlorodibenzofuran	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.98	99.4%
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	ER12101304	89059-46-1	$^{13}C_{12}H_4Cl_4O$	317.88	99.2%
2,3,4,7-Tetrachlorodibenzofuran	ER052307-01	NA	$C_{12}H_4Cl_4O$	305.98	98.7%
1,2,8,9-Tetrachlorodibenzofuran	ER041508-03	NA	$C_{12}H_4Cl_4O$	305.98	99.3%
1,3,4,6,8-Pentachlorodibenzofuran	ER04231401	NA	$C_{12}H_3Cl_5O$	340.42	99.5%
1,2,3,8,9-Pentachlorodibenzofuran	ER12101303	NA	$C_{12}H_3Cl_5O$	340.42	99.0%
1,2,3,4,6,8-Hexachlorodibenzofuran	ER04231402	NA	$C_{12}H_2Cl_6O$	374.86	98.6%
1,2,3,4,8,9-Hexachlorodibenzofuran	ER12091401	92341-07-6	$C_{12}H_2Cl_6O$	374.86	99.7%
1,2,3,4,6,7,8-Heptachlorodibenzofuran	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%
1,2,3,4,7,8,9-Heptachlorodibenzofuran	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%

Product Analysis

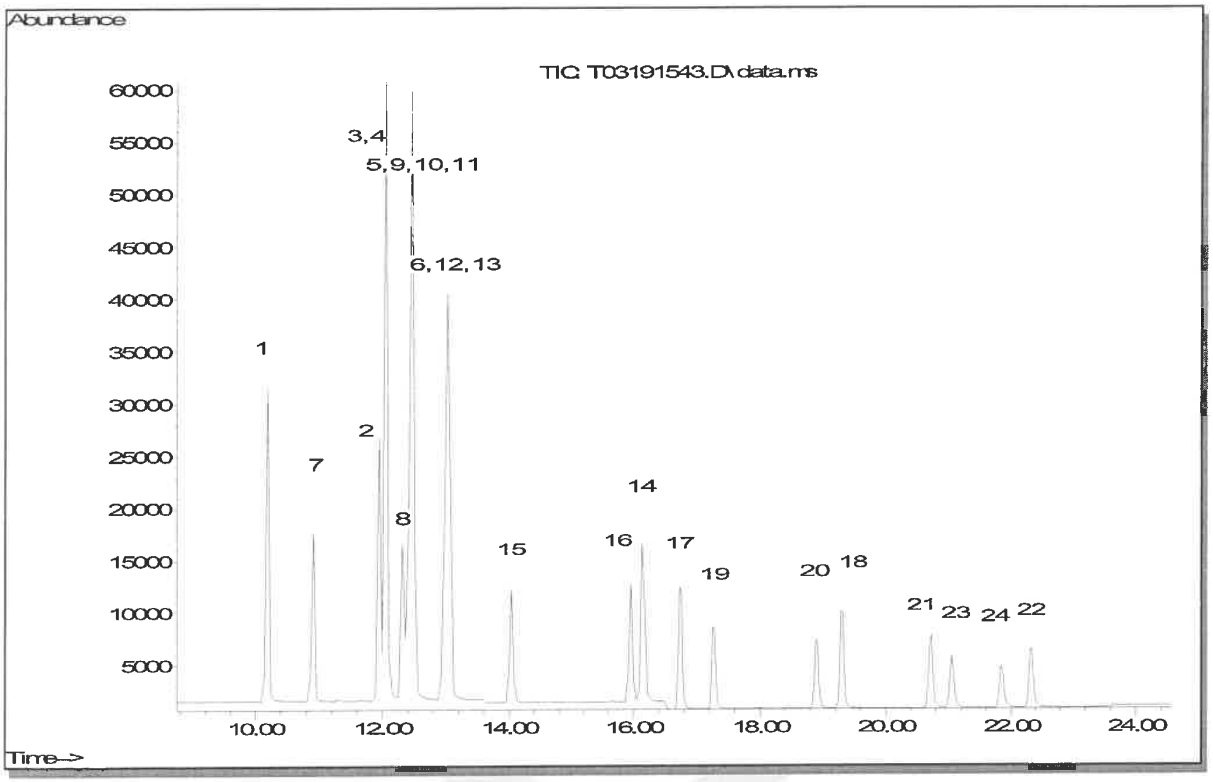

1 1,3,6,8-Tetrachlorodibenzofuran
2 2,3,4,7-Tetrachlorodibenzofuran
3 2,3,7,8-Tetrachlorodibenzofuran
4 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
5 1,2,3,9-Tetrachlorodibenzofuran
6 1,2,8,9-Tetrachlorodibenzofuran
7 1,3,6,8-Tetrachlorodibenzo-p-dioxin
8 1,2,3,7/1,2,3,8-Tetrachlorodibenzo-p-dioxin
9 1,2,3,9-Tetrachlorodibenzo-p-dioxin
10 2,3,7,8-Tetrachlorodibenzo-p-dioxin
11 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
12 1,2,8,9-Tetrachlorodibenzo-p-dioxin
13 1,3,4,6,8-Pentachlorodibenzofuran
14 1,2,3,8,9-Pentachlorodibenzofuran
15 1,2,4,6,8/1,2,4,7,9-Pentachlorodibenzo-p-dioxin
16 1,2,3,8,9-Pentachlorodibenzo-p-dioxin
17 1,2,3,4,6,8-Hexachlorodibenzofuran
18 1,2,3,4,8,9-Hexachlorodibenzofuran
19 1,2,4,6,7,9/1,2,4,6,8,9-Hexachlorodibenzo-p-dioxin
20 1,2,3,4,6,7-Hexachlorodibenzo-p-dioxin
21 1,2,3,4,6,7,8-Heptachlorodibenzofuran
22 1,2,3,4,7,8,9-Heptachlorodibenzofuran
23 1,2,3,4,6,7,9-Heptachlorodibenzo-p-dioxin
24 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin

COA Revision History

Revision No.	Date	Reason for Revision
00	March 24, 2015	Initial version

Reagent

HRDXNIDA_00417

r. 3/30/20

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Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$

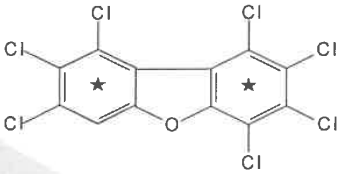

Catalog Number:	EF-988
Solution Lot:	ER04251601
Expiration Date:	May 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$	99.1%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04251601	49.11	± 5%	0.2	≤ 3%
Previous Lot	ER053107-02	50.58	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 09, 2016
Date

793138

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER04041602

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-94-0
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.1%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.10%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data (cont.)

GC/FID

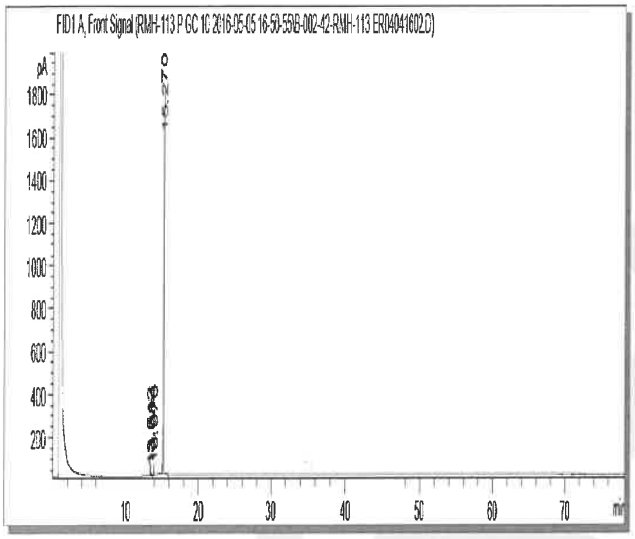

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-113 P GC 10 2016-05-05 16-50-55\B-002-42.D
Instrument:	GC#10
Sample Name:	ER04041602
Acquired:	May 05, 2016

Peak #	Ret Time	Area	Height	Area %
1	13.51	8.76	2.52	0.12
2	13.68	17.42	7.45	0.24
3	13.97	39.65	15.48	0.54
4	15.27	7226.95	1798.33	99.10

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8,9-Heptachlorodibenzofuran-13C12
Lot Number	: ER04041602
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed May 04 15:34:28 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

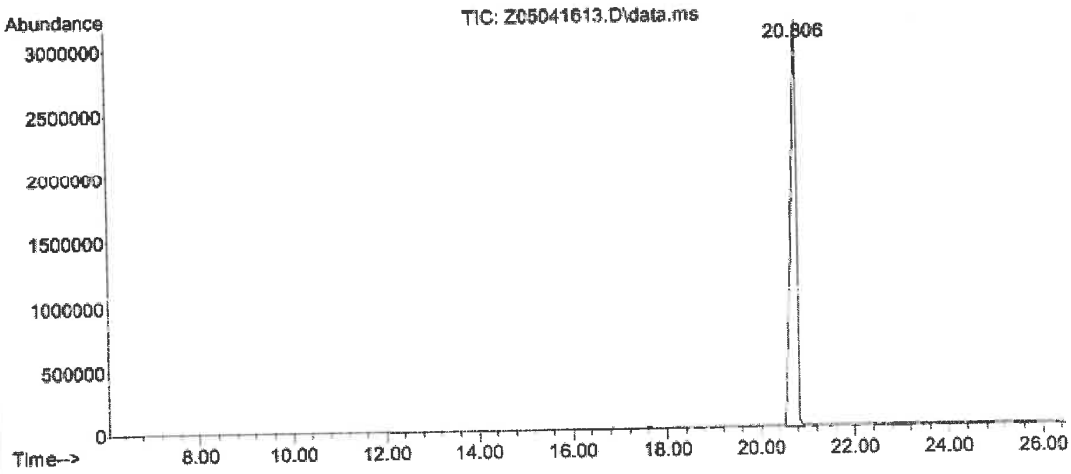

Mass Spectrum

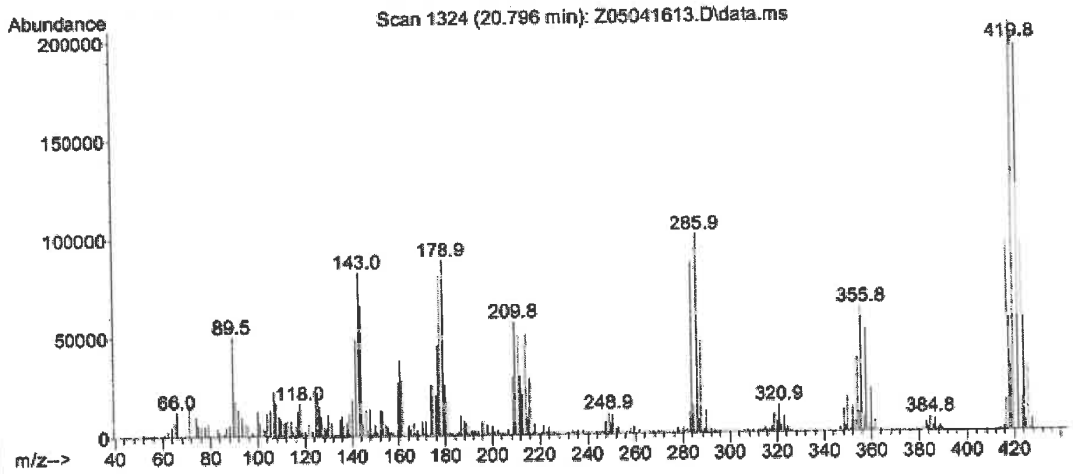

COA Revision History

Revision No.	Date	Reason for Revision
00	June 21, 2016	Initial version
01	November 09, 2016	Corrected Expiration Date from March 2026 to May 2026.

Reagent

HRDXNIDA_00418

r: 3/20/20 SAL

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Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

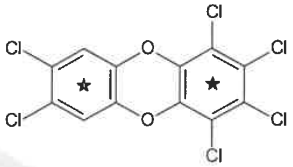

Catalog Number:	ED-946
Solution Lot:	ER04211601
Expiration Date:	June 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass, Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211601	49.24	± 5%	0.4	≤ 3%
Previous Lot	ER102711-01	49.69	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

August 11, 2016
Date

793145

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER011008-01

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-80-4
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.08% $^{13}C_0$ vs $^{13}C_{12}$
		0.21% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.26%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

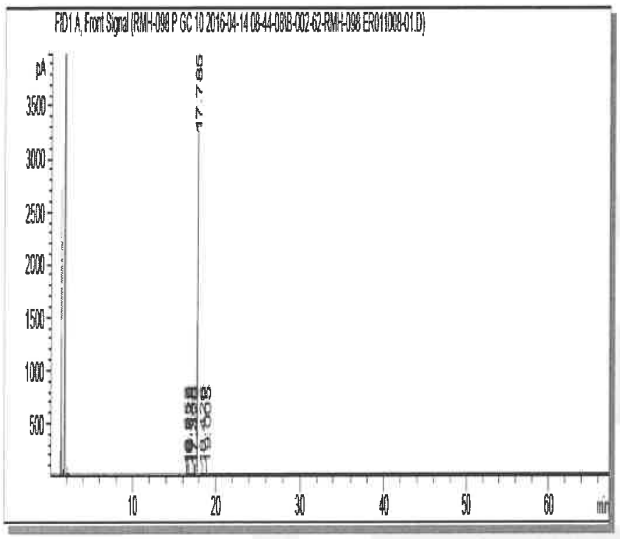

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-098 P GC 10 2016-04-14 08-44-08\B-002-62.D
Instrument:	GC#10
Sample Name:	ER011008-01
Acquired:	April 14, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.56	16.58	7.74	0.19
2	16.72	11.25	5.08	0.13
3	16.83	8.45	4.05	0.10
4	17.30	1.81	0.71	0.02
5	17.48	1.07	0.50	0.01
6	17.79	8682.22	3203.58	99.29
7	18.43	1.99	0.68	0.02
8	19.01	20.62	6.08	0.24

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number	: BR011008-01
Instrument	: Agilent GCMS
Operator	: BCM(SGIUFFRE)
Date Reported	: Wed Apr 13 07:10:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

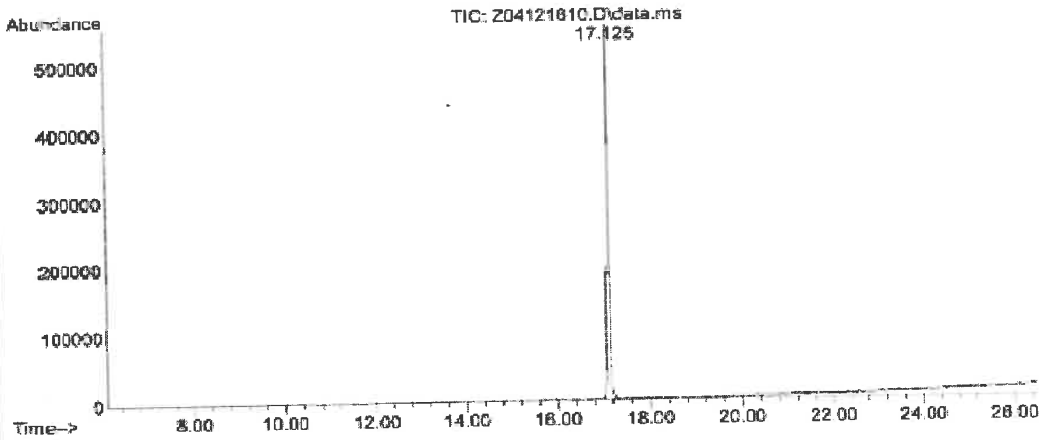

Mass Spectrum

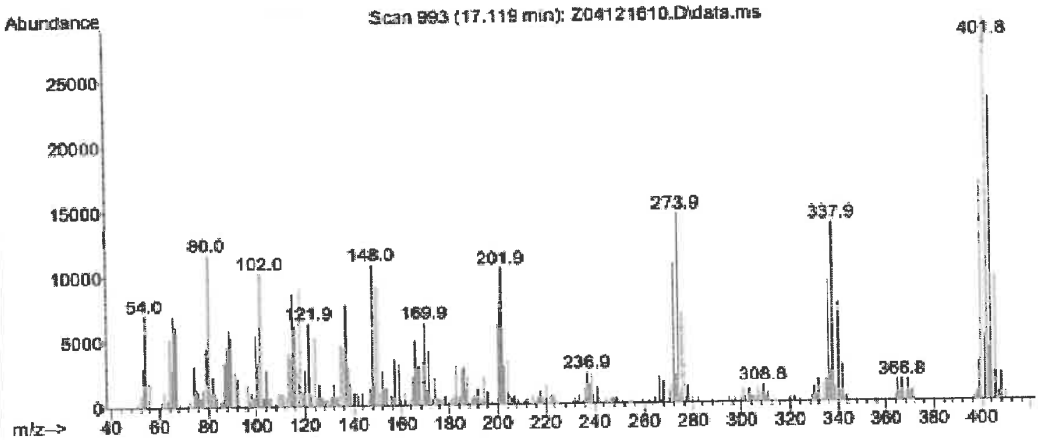

Reagent

HRDXNIDA_00419

r: 3/30/20 SKV

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

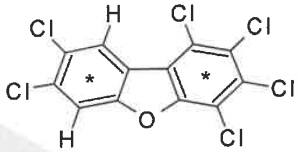

Catalog Number: EF-963
Solution Lot: ER04211701
Expiration Date: July 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.4%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER04211701	49.47	± 5%	0.2	≤ 3%
Previous Lot	ER072810-02	45.87	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release

Traceability

- Gravemetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED

Darron Ellsworth, Quality Assurance Manager

September 11, 2017
Date

793150

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,4,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot:	ER11281601

Chemical Formula:	$^{13}C_{12}Cl_6H_2O$
CAS Number:	114423-98-2
Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		99.31%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

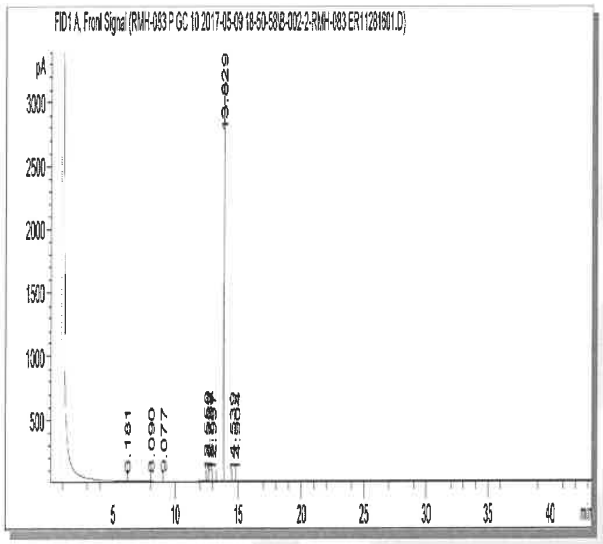

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 30 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-083 P GC 10 2017-05-09 18-50-58\B-002-2.D
Instrument:	GC#10
Sample Name:	ER11281601
Acquired:	May 09, 2017

Peak #	Ret Time	Area	Height	Area %
1	6.18	1.10	0.64	0.01
2	8.09	2.00	0.70	0.02
3	9.08	1.17	0.48	0.01
4	12.55	14.76	7.25	0.16
5	12.73	32.67	11.32	0.36
6	12.84	5.45	2.50	0.06
7	13.00	2.51	1.30	0.03
8	13.83	8993.56	3122.16	99.30
9	14.54	1.11	0.20	0.01
10	14.90	2.71	0.86	0.03

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,4,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER11281601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon May 08 09:30:09 2017
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

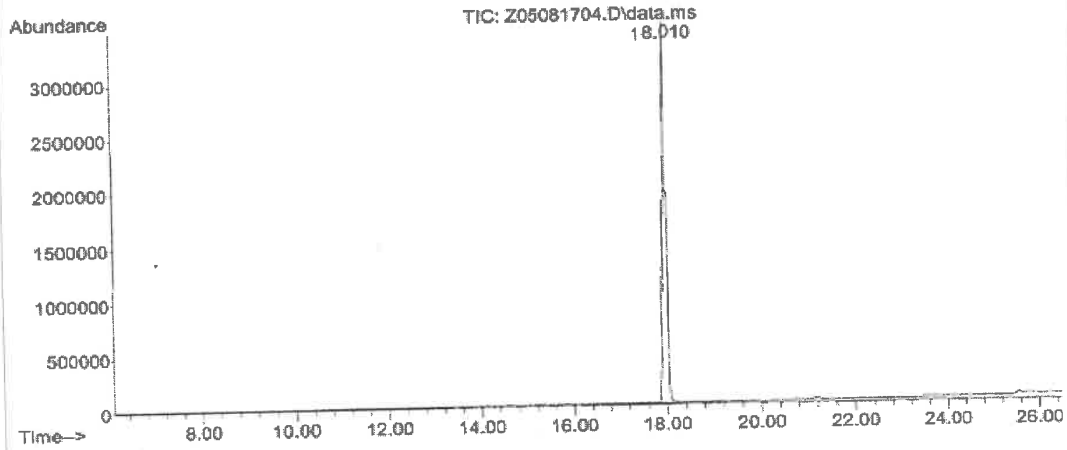

Mass Spectrum

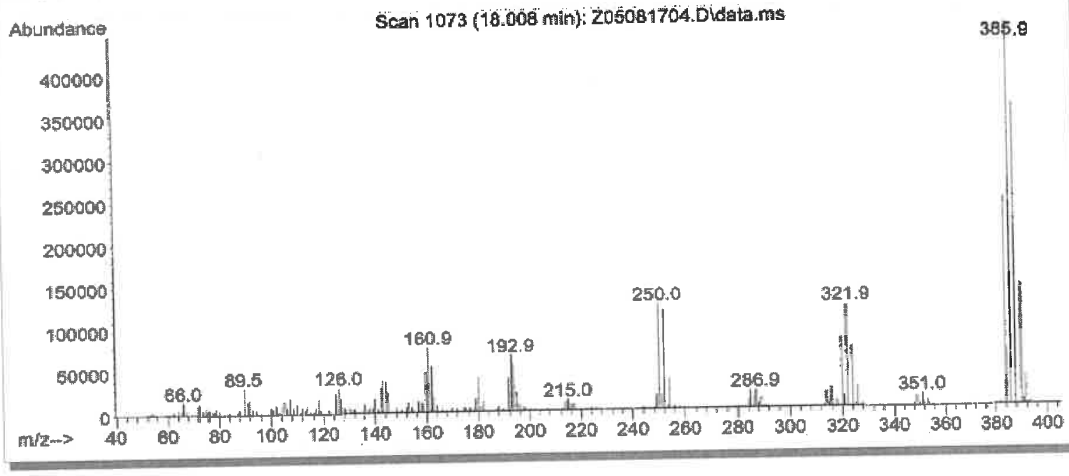

Reagent

HRDXNIDA_00420

r: 3/20/20 SKV

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Analytical Reference Standards
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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-958
Solution Lot: ER01061701
Expiration Date: January 2027
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

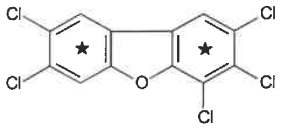

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	97.9%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s), measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01061701	50.51	± 5%	0.1	≤ 3%
Previous Lot	ER11041601	49.56	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO/IEC 17025 ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 27, 2017
Date

793155

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER11101601

Chemical Formula: $^{13}C_{12}H_3Cl_5O$
CAS Number: 116843-02-8
Molecular Weight: 352.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0102	98.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 0.5%
Mass Balance Purity Factor		98.33%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

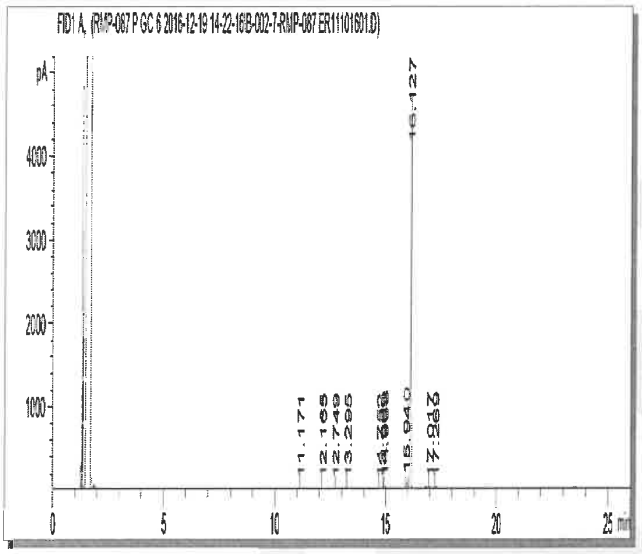

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-087 P GC 6 2016-12-19 14-22-16\B-002-7.D
Instrument:	GC#6
Sample Name:	ER11101601
Acquired:	December 19, 2016

Peak #	Ret Time	Area	Height	Area %
1	11.17	0.94	0.40	0.01
2	12.17	1.30	0.39	0.01
3	12.75	0.47	0.20	0.00
4	13.30	0.90	0.35	0.01
5	14.75	1.70	0.87	0.02
6	14.91	1.09	0.56	0.01
7	14.97	32.24	17.54	0.29
8	15.94	124.38	64.36	1.13
9	16.13	10866.60	4688.80	98.41
10	17.02	6.31	2.46	0.06
11	17.27	6.76	2.34	0.06

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER11101601
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Dec 20 12:19:55 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

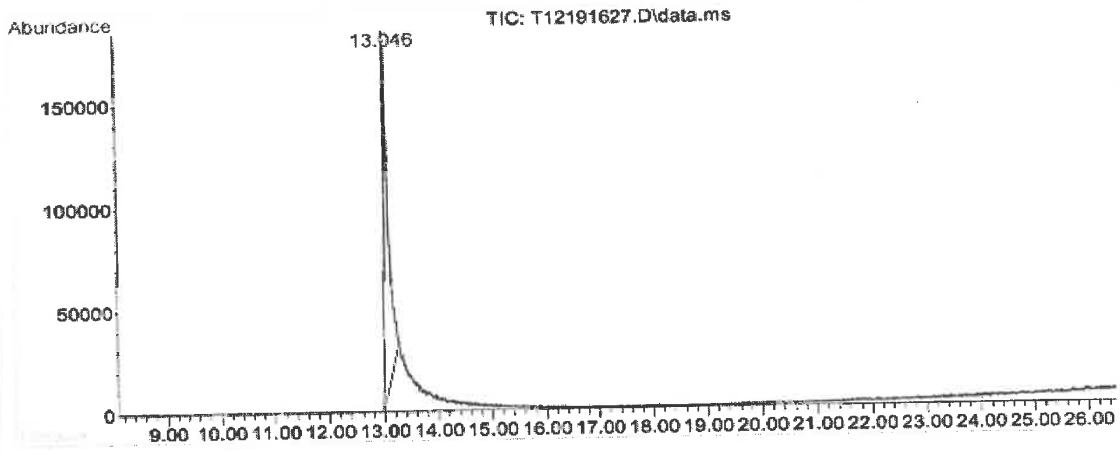

Mass Spectrum

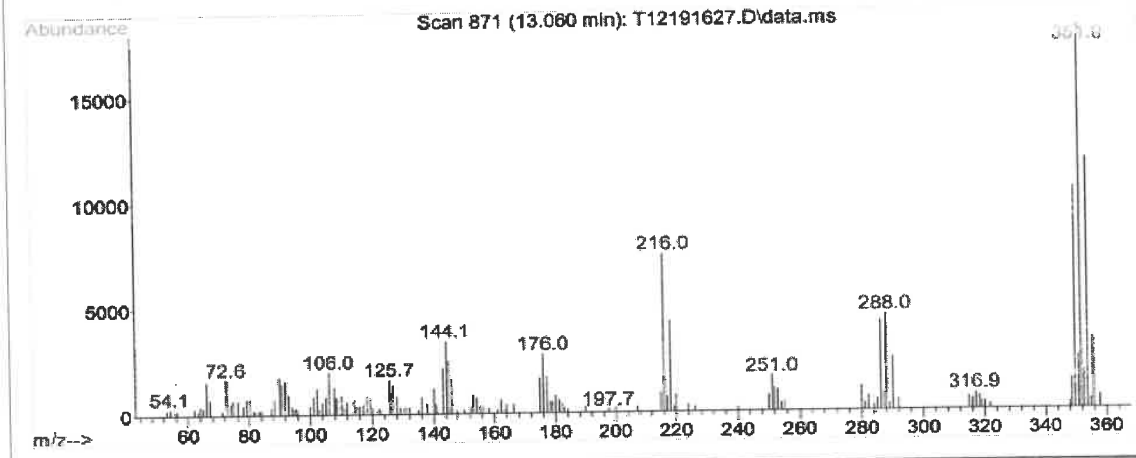

Reagent

HRDXNIDA_00440

Rec'd 10-12-20

Cerilliant
Analytical Reference Standards
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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$

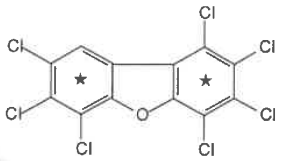

Catalog Number: EF-974
Solution Lot: ER08101404
Expiration Date: November 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$	98.3%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08101404	48.75	± 5%	0.3	≤ 3%
Previous Lot	ER102711-02	51.49	± 5%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

December 03, 2015
Date

793160

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER020507-02

Chemical Formula: $^{13}C_{12}HCl_7O$
CAS Number: 109719-84-8
Molecular Weight: 421.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.7%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.16% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	Pass
		no single DD/DF impurity ≥1.0%
Purity Factor		98.69%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

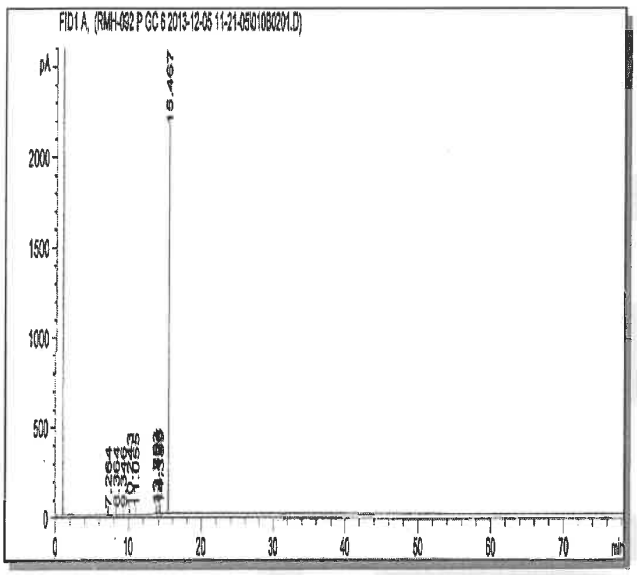

Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 65 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Data File Name: RMH-092 P GC 6 2013-12-05 11-21-05\010B0201.D
Instrument: GC#6
Sample Name: ER020507-02
Acquired: December 05, 2013

Peak #	Ret Time	Area	Height	Area %
1	7.26	4.41	2.08	0.05
2	8.36	11.76	5.45	0.12
3	9.35	5.20	2.32	0.05
4	10.24	1.47	0.62	0.02
5	11.06	0.34	0.17	0.00
6	13.75	8.81	4.38	0.09
7	13.80	23.67	9.98	0.25
8	14.13	43.07	16.42	0.45
9	14.20	21.73	8.77	0.23
10	14.39	4.79	1.81	0.05
11	15.47	9349.36	2200.33	98.68

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,4,6,7,8-Heptachlorodibenzofuran-13C12
Lot Number : ER020507-02
Instrument : Agilent GCMS
Operator : ECM(BRYAN_DOCKERY)
Date Reported : Tue Dec 17 09:08:58 2013
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

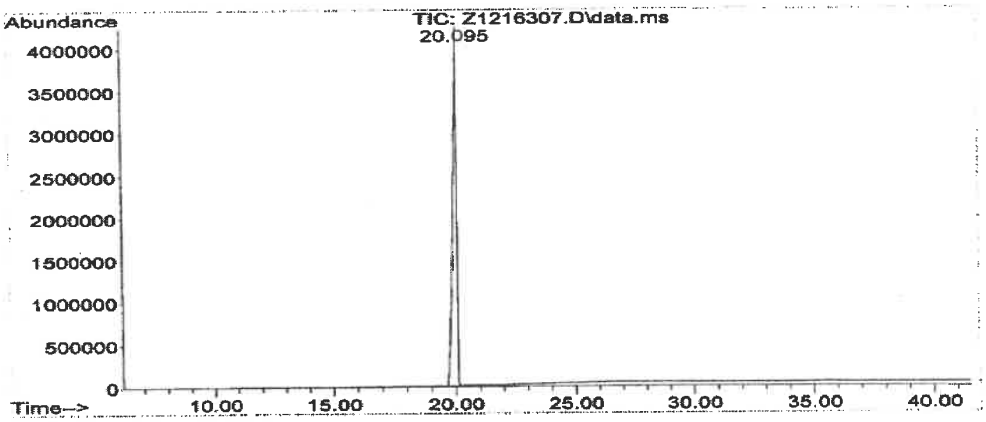

Mass Spectrum

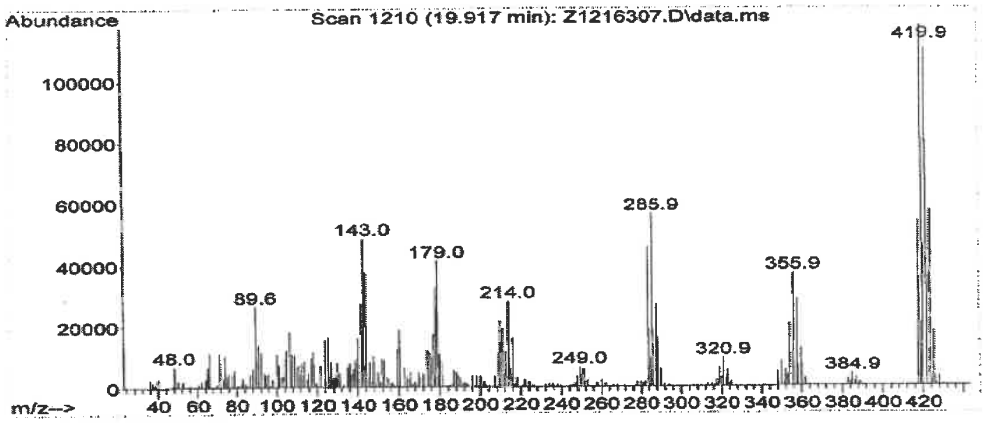

COA Revision History

Revision No.	Date	Reason for Revision
00	January 19, 2015	Initial version
01	December 04, 2015	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet"

Reagent

HRDXNIDA_00441

Rec'd 10-12-20

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

Catalog Number: ED-900
Solution Lot: ER03031601
Expiration Date: March 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

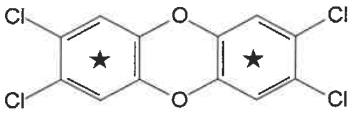

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03031601	52.66	± 5%	0.3	≤ 3%
Previous Lot	ER01031401	49.83	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

March 24, 2016
Date

793167

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-35ms 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER01201405

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 76523-40-5
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.3%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity and Distribution by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.05% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.34%

- The primary chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

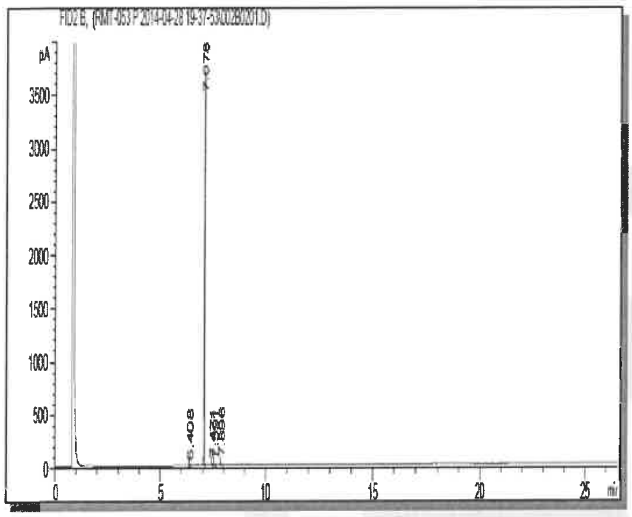

Column:	DB-35ms, 30 m x 0.53 mm ID, 1.0 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-053 P 2014-04-28 19-37-53\002B0201.D
Instrument:	GC#6
Sample Name:	ER01201405
Acquired:	April 28, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.41	4.36	2.80	0.08
2	7.08	5225.21	3678.99	99.32
3	7.47	5.29	3.00	0.10
4	7.59	9.11	4.81	0.17
5	7.90	17.05	9.22	0.32

GC/MS

```
Compound Name          : 2,3,7,8-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER01201405
Instrument             : Agilent GCMS
Operator               : ECM(SAMUEL_GIUFFRE)
Date Reported          : Tue May 06 09:30:26 2014
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

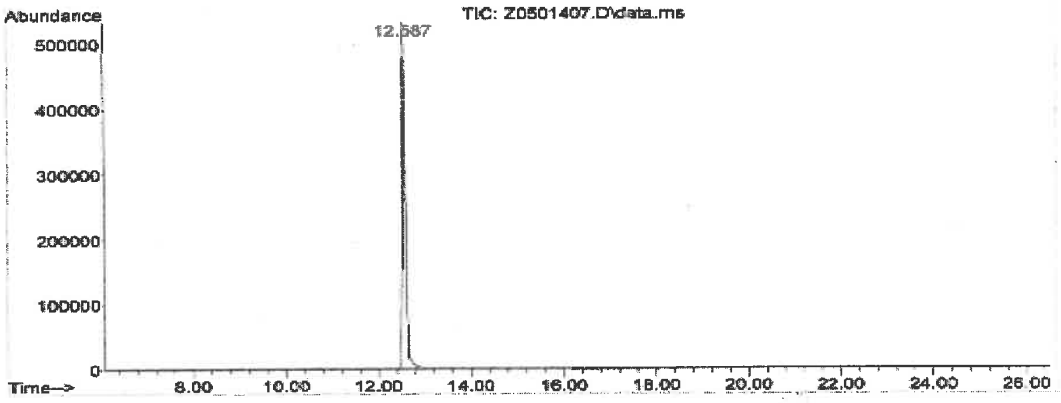

Mass Spectrum

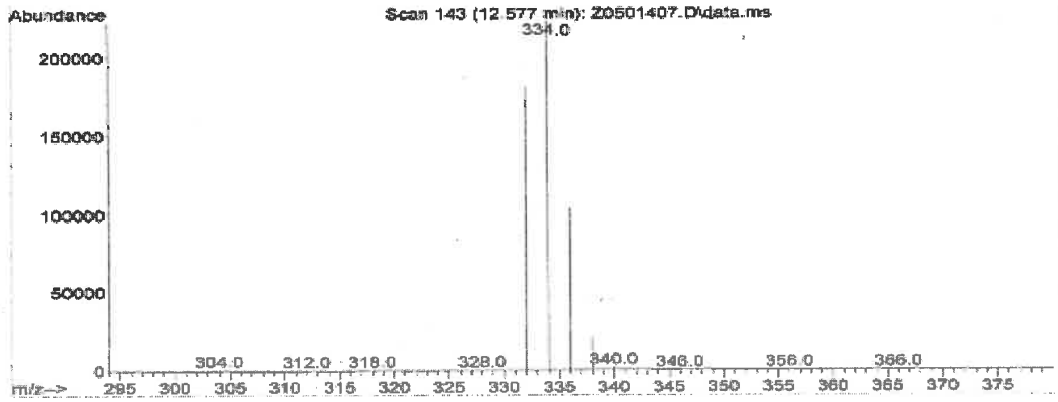

Reagent

HRDXNIDA_00442

Rec'd 10-19-20

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CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$

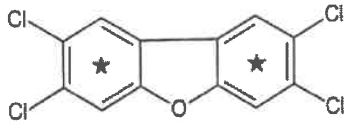

Catalog Number: EF-904
Solution Lot: ER09131601
Expiration Date: September 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20°C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09131601	49.91	± 5%	0.2	≤ 3%
Previous Lot	ER12101304	51.13	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

November 02, 2016
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

793172

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 100°C to 300°C at 15°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,7,8-Tetrachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER01161401

Chemical Formula: $^{13}C_{12}H_4Cl_4O$
CAS Number: 89059-46-1
Molecular Weight: 317.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.2%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS SIM	SP10-0105	No single DD/DF ≥ 0.5%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_{12}$
		0.00% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.24%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/FID

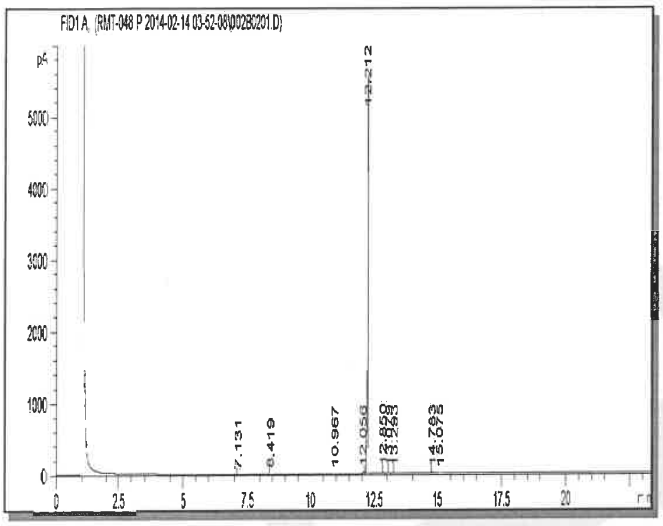

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-048 P 2014-02-14 03-52-08\002B0201.D
Instrument:	GC#10
Sample Name:	ER01161401
Acquired:	February 14, 2014

Peak #	Ret Time	Area	Height	Area %
1	7.13	1.19	0.61	0.01
2	8.42	3.23	1.42	0.03
3	10.97	3.57	1.04	0.03
4	12.06	20.86	12.47	0.18
5	12.21	11764.70	5466.96	99.29
6	12.85	30.72	15.48	0.26
7	13.08	7.62	4.03	0.06
8	13.29	5.47	2.91	0.05
9	14.78	7.62	2.76	0.06
10	15.08	3.87	1.33	0.03

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

GC/MS

Compound Name	: 2,3,7,8-Tetrachlorodibenzofuran-13C12
Lot Number	: ER01161401
Instrument	: Agilent GCMS
Operator	: ECM(SAMUEL GIUFFRE)
Date Reported	: Thu Feb 13 11:57:07 2014
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

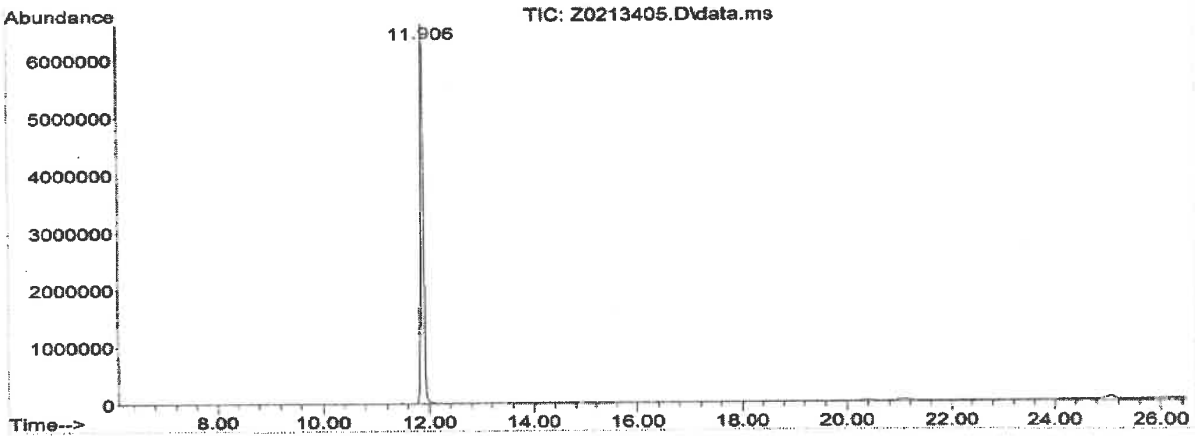

Mass Spectrum

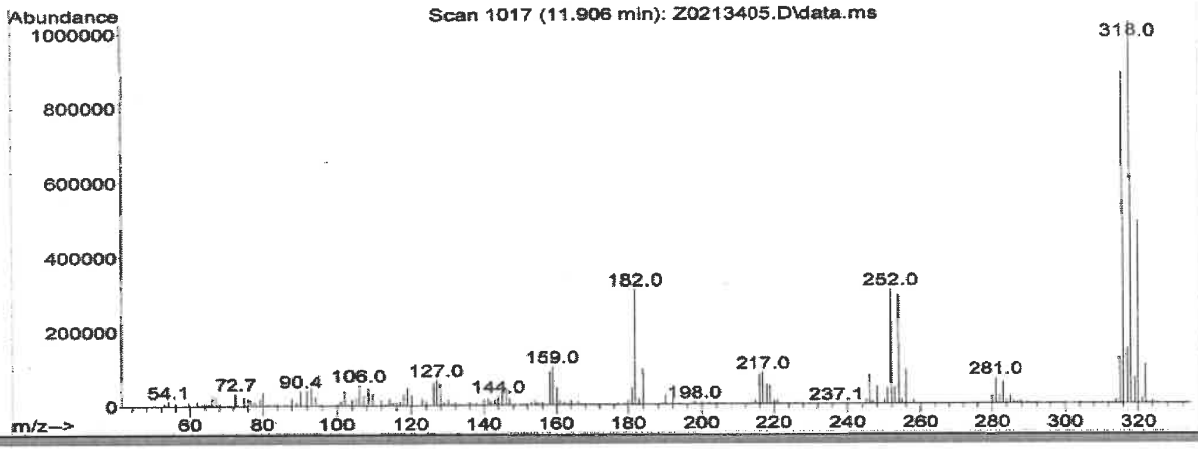

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Reagent

HRDXNIDA_00443

Rev'ed 10-19-20

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Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

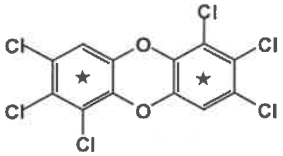

Catalog Number:	ED-966
Solution Lot:	ER03151801
Expiration Date:	March 2028
Solvent:	n-Nonane:Toluene (80:20) (v/v)
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	> 99.9%	50.03 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER03151801	52.29	± 5%	0.2	≤ 3%
Previous Lot	ER010209-01	48.05	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 19, 2018
Date

793177

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: FN01151802

Chemical Formula: $^{13}C_{12}H_2Cl_6O_2$
CAS Number: 109719-81-5
Molecular Weight: 402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

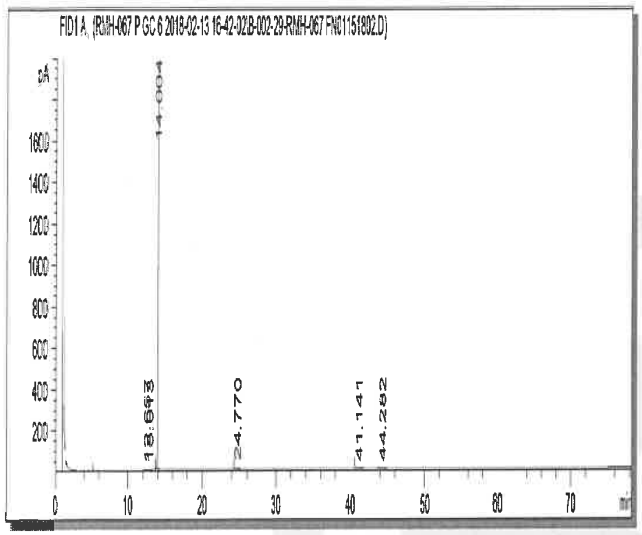

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-067 P GC 6 2018-02-13 16-42-02\B-002-29.D
Instrument:	GC#6
Sample Name:	FN01151802
Acquired:	February 13, 2018

Peak #	Ret Time	Area	Height	Area %
1	12.66	1.69	0.62	0.03
2	13.01	1.96	0.53	0.03
3	14.00	5617.62	1952.76	98.87
4	24.77	5.26	0.34	0.09
5	41.14	10.58	0.38	0.19
6	44.28	44.69	1.49	0.79

GC/MS

```
Compound Name          : 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-13C12
Lot Number             : FN01151802
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Mon Mar 05 10:17:33 2018
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

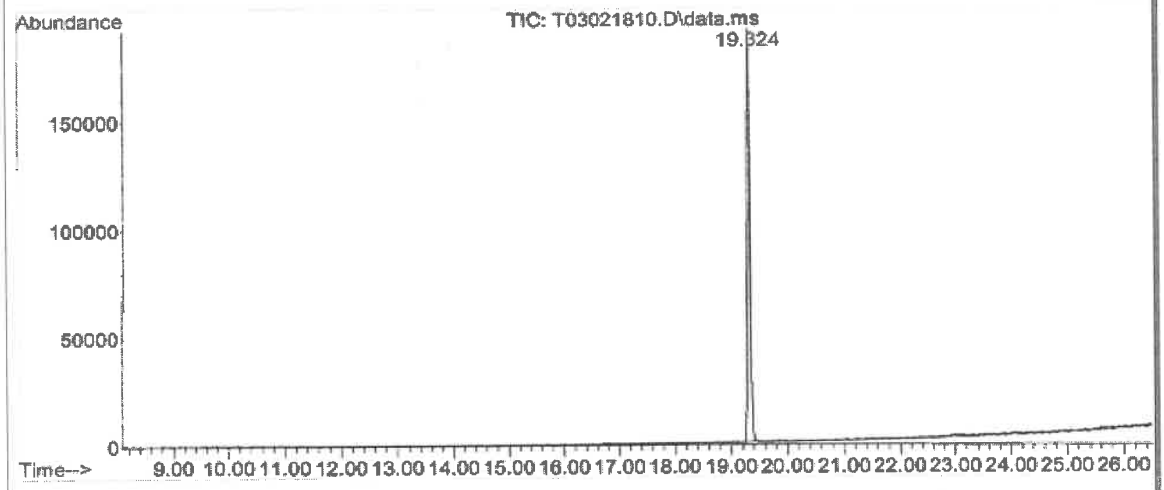

Mass Spectrum

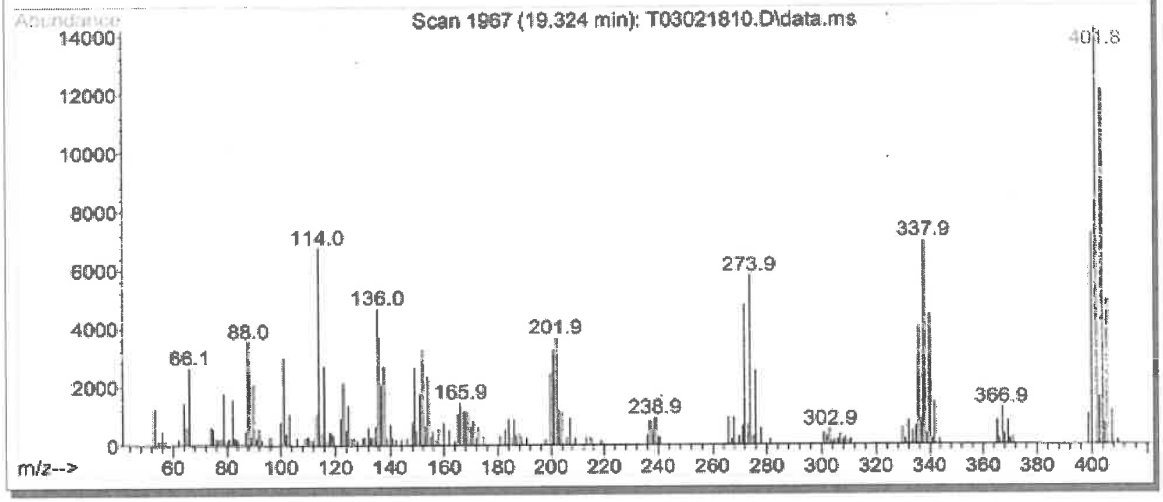

Reagent

HRDXNIDA_00457

r: 1/18/21 SW

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Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

Catalog Number: EF-985
Solution Lot: ER02241603
Expiration Date: April 2026
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

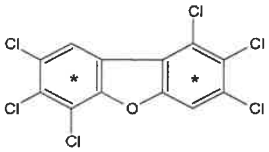

- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER02241603	50.09	± 5%	0.4	≤ 3%
Previous Lot	ER053107-03	50.81	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

May 04, 2016
Date

793182

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O$
Compound Lot:	ER051607-01	**CAS Number:**	116843-03-9
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.01% $^{13}C_0$ vs $^{13}C_{12}$
		0.06% $^{13}C_6$ vs $^{13}C_{12}$
Impurities by GC/MS SIM Analysis	SP10-0105	no single DD/DF impurity $\geq$ 0.5%
Mass Balance Purity Factor		99.01%

- The chromatographic purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Mass Balance Purity Factor.
- Mass Balance Purity Factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

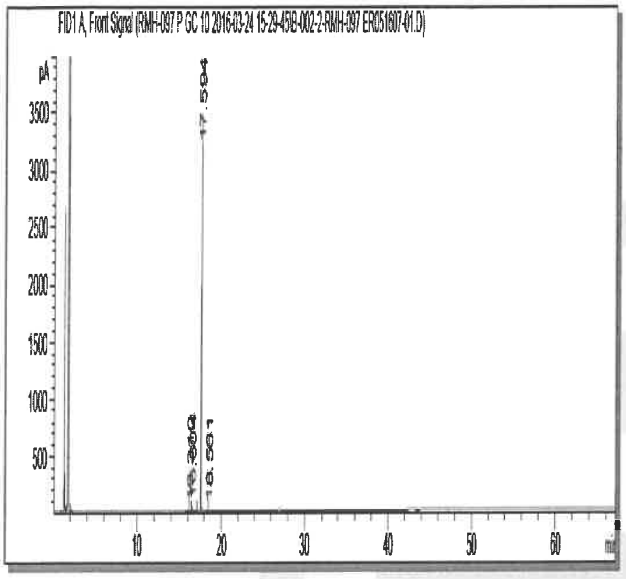

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMH-097 P GC 10 2016-03-24 15-29-45\B-002-2.D
Instrument:	GC#10
Sample Name:	ER051607-01
Acquired:	March 24, 2016

Peak #	Ret Time	Area	Height	Area %
1	16.31	6.97	3.21	0.08
2	16.60	77.08	33.51	0.83
3	17.59	9156.82	3458.38	99.00
4	18.56	8.48	2.69	0.09

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER051607-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Fri Mar 18 07:08:54 2016
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

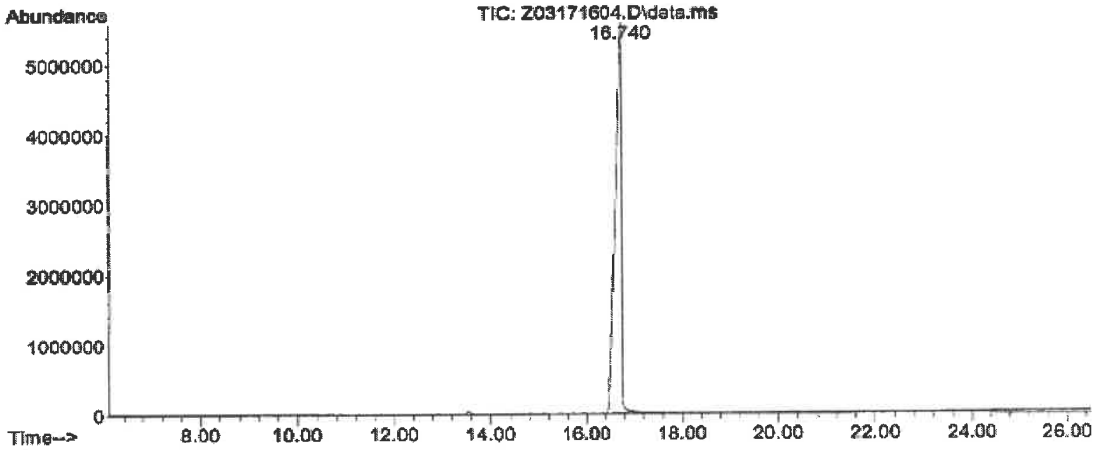

Mass Spectrum

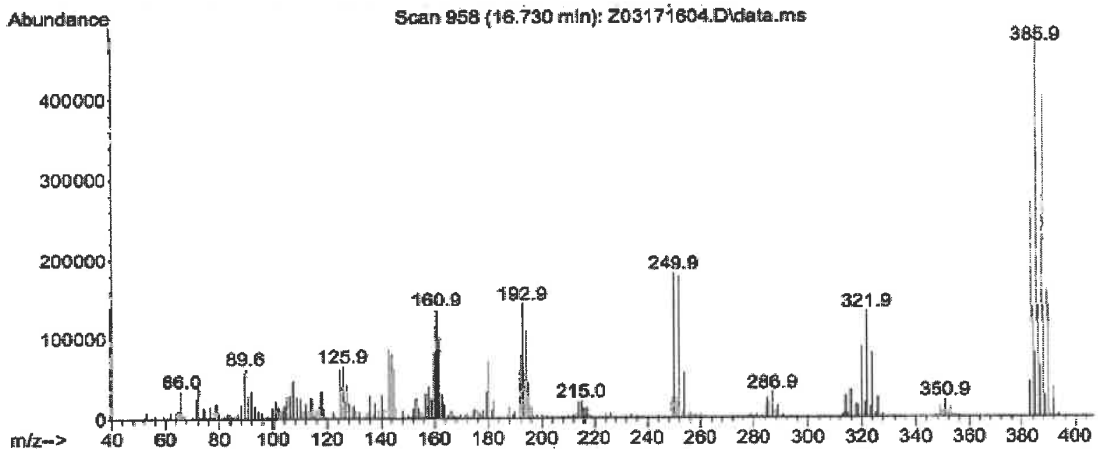

COA Revision History

Revision No.	Date	Reason for Revision
00	May 04, 2016	Initial version

Reagent

HRDXNIDA_00458

r: 1/18/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$

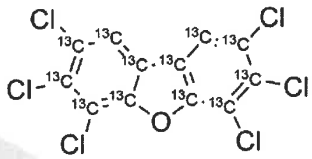

Catalog Number: EF-987
Solution Lot: ER01062015
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$	99.3%	49.97 ± 0.27 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062015	50.13	± 5%	0.3	≤ 3%
Previous Lot	ER100610-02	49.53	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

April 16, 2020
Date

793189

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 2,3,4,6,7,8-Hexachlorodibenzofuran-$^{13}C_{12}$
Compound Lot: ER09051801

Chemical Formula: $^{13}C_{12}H_2Cl_6O$
CAS Number: 116843-05-1
Molecular Weight: 386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.04% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS SIM	SP10-0105	No Single DD/DF ≥ 1.0%
Mass Balance Purity Factor		98.96%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

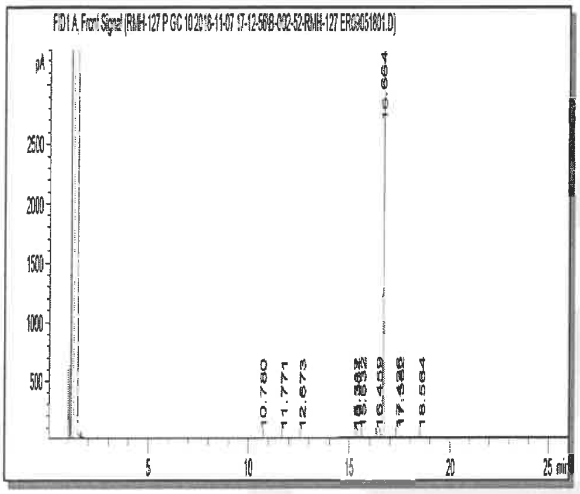

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER09051801
Acquired:	February 13, 2018

Peak #	Ret Time	Area %
1	12.66	0.03
2	13.01	0.03
3	14.00	98.87
4	24.77	0.09
5	41.14	0.19
6	44.28	0.79

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 2,3,4,6,7,8-Hexachlorodibenzofuran-13C12
Lot Number	: ER09051801
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Mon Nov 05 12:24:41 2018
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

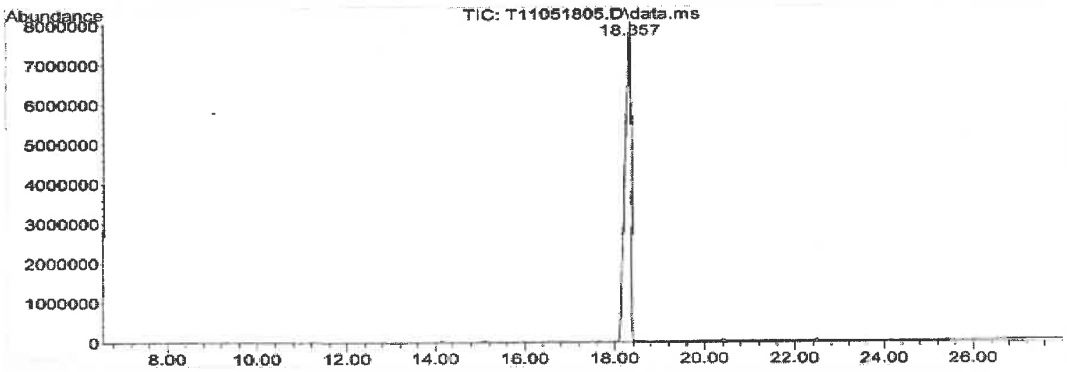

Mass Spectrum

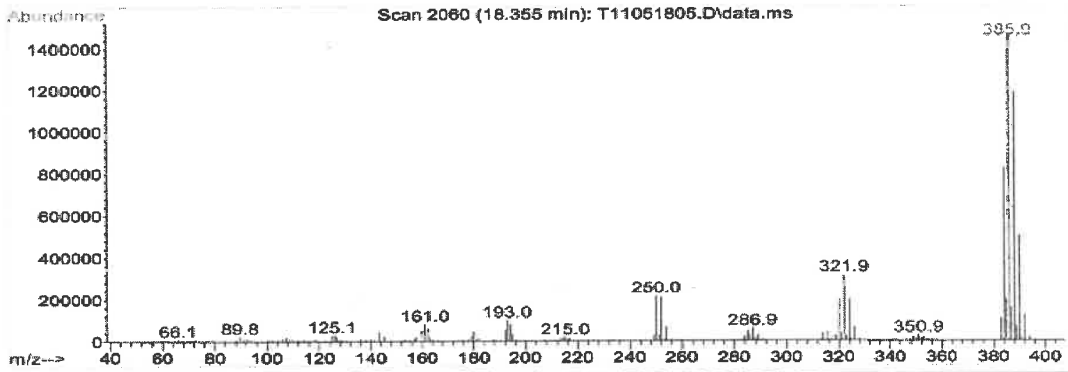

COA Revision History

Revision No.	Date	Reason for Revision
00	April 16, 2020	Initial version

Reagent

HRDXNIDA_00459

r: 1/18/21 SKJ

Cerilliant Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$

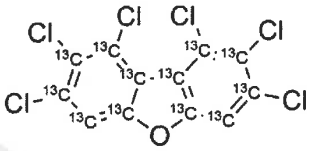

Catalog Number: EF-986
Solution Lot: ER01062016
Expiration Date: January 2030
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	99.5%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER01062016	49.54	± 5%	0.5	≤ 3%
Previous Lot	ER100610-01	49.08	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 03, 2020
Date

793196

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2OCl_6$
Compound Lot:	ER080108-03	**CAS Number:**	116843-04-0
		Molecular Weight:	386.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.5%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.02% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	SP10-0105	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		99.47%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

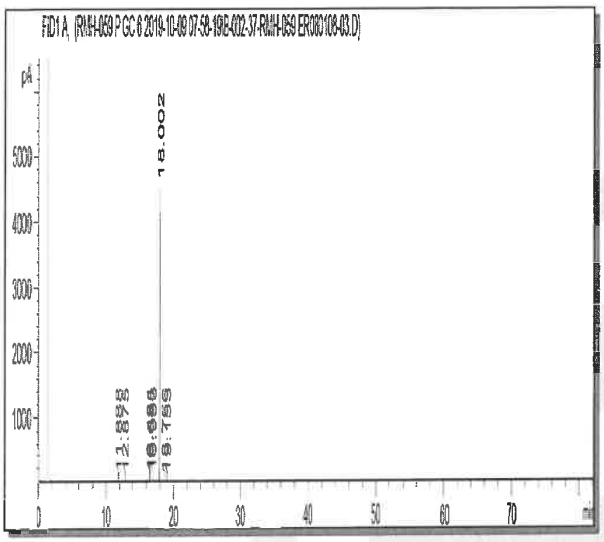

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER080108-03
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.89	0.00
2	12.88	0.00
3	16.48	0.33
4	16.64	0.01
5	16.95	0.17
6	18.00	99.47
7	18.76	0.00
8	19.15	0.00

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8,9-Hexachlorodibenzofuran-13C12
Lot Number	: ER080108-03
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Tue Oct 08 10:54:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

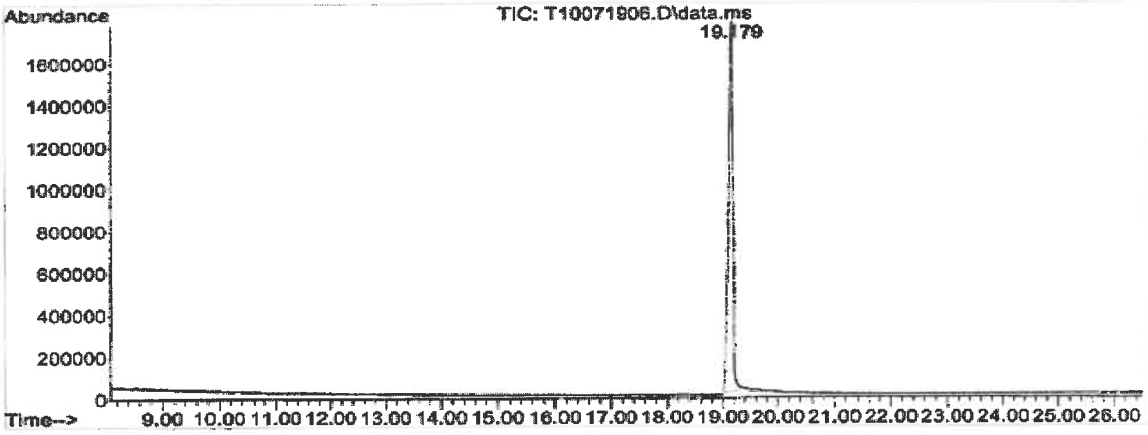

Mass Spectrum

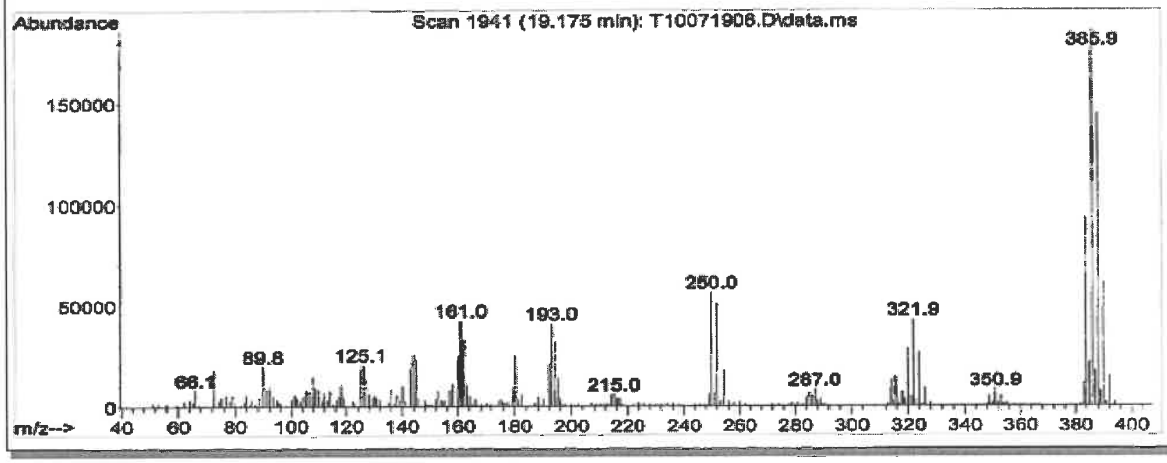

COA Revision History

Revision No.	Date	Reason for Revision
00	February 03, 2020	Initial version

Reagent

HRDXNIDA_00460

r: 1/18/21 SKN

Cerilliant® Analytical Reference Standards
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CIL

Certificate of Analysis

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 13485
ISO 14001
ISO 9001

1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$

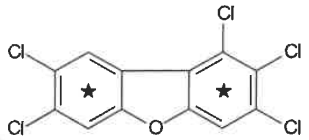

Catalog Number: EF-952
Solution Lot: ER10211904
Expiration Date: December 2029
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	99.6%	50.00 ± 0.28 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER10211904	49.25	± 5%	0.2	≤ 3%
Previous Lot	ER012111-01	48.12	± 5%	0.3	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using balances that have been qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 07, 2020
Date

793203

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8-Pentachlorodibenzofuran-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_3Cl_5O$
Compound Lot:	ER090110-01	**CAS Number:**	109719-77-9
		Molecular Weight:	352.32

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	98.6%
Identity by GC/MS Analysis	AM1029	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	AM1029	0.00% $^{13}C_0$ vs $^{13}C_6$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Impurity by GC/MS SIM Analysis	AM1029	No single DD/DF impurity ≥ 0.5%
Mass Balance Purity Factor		98.59%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

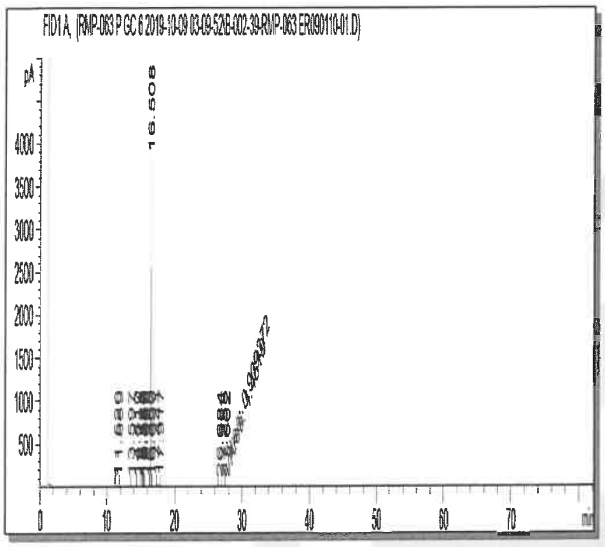

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Sample Name:	ER090110-01
Acquired:	October 09, 2019

Peak #	Ret Time	Area %
1	11.52	0.24
2	11.89	0.02
3	13.60	0.26
4	14.41	0.01
5	14.52	0.01
6	15.12	0.01
7	15.34	0.01
8	15.39	0.03
9	15.46	0.13
10	15.56	0.15
11	15.69	0.01
12	16.38	0.00
13	16.51	98.61
14	16.63	0.02
15	16.69	0.01
16	17.44	0.21
17	17.92	0.21
18	26.68	0.04
19	27.26	0.01
20	27.66	0.02

Spectral and Physical Data (cont.)

GC/MS

Compound Name	: 1,2,3,7,8-Pentachlorodibenzofuran-13C12
Lot Number	: ER090110-01
Instrument	: Agilent GCMS
Operator	: ECM(SGIUFFRE)
Date Reported	: Wed Oct 23 08:39:22 2019
Column Type	: DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program	: 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.	: Cool on-column
Carrier Gas	: Helium
Flow Rate (mL\min)	: 0.80 mL/min
Transfer Line Temp.	: 280°C
Scan Range	: 50-550

Total Ion Chromatogram

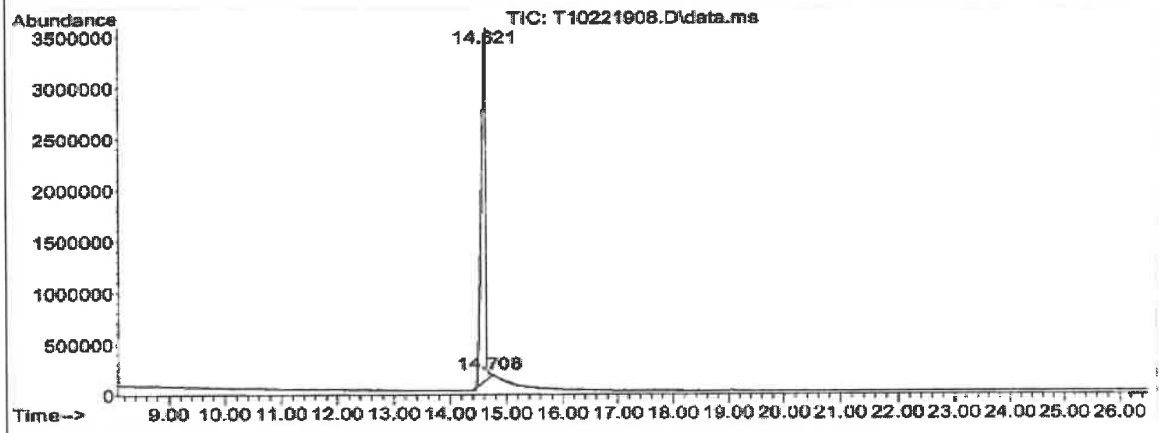

Mass Spectrum

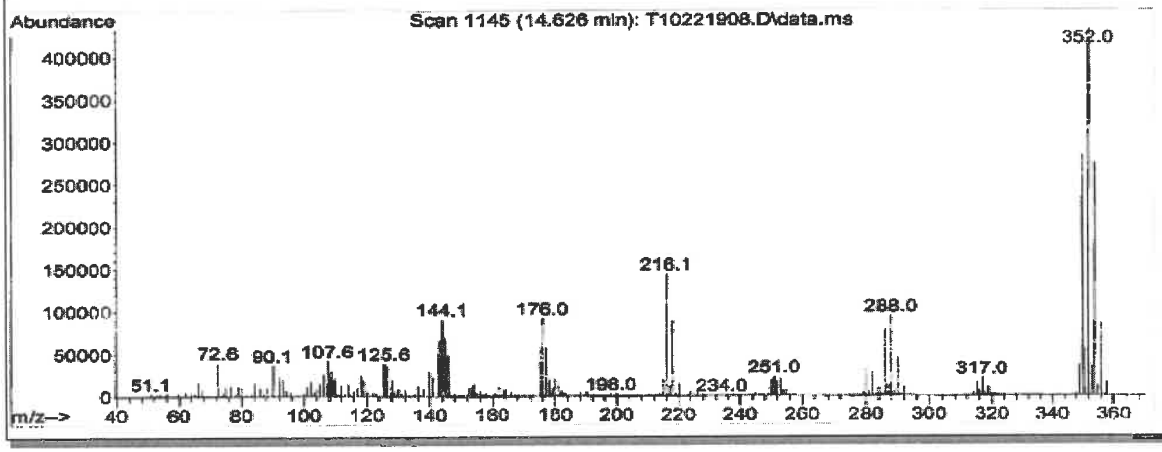

793206

COA Revision History

Revision No.	Date	Reason for Revision
00	January 07, 2020	Initial version

Reagent

HRDXNIDA_00461

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$

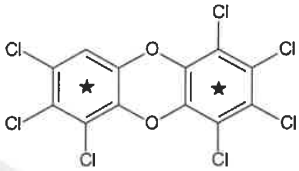

Catalog Number:	ED-972
Solution Lot:	ER09271601
Expiration Date:	October 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.4%	49.99 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER09271601	51.51	± 5%	0.2	≤ 3%
Previous Lot	ER111010-01	52.04	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

October 26, 2016
Date

793210

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 0.999

Neat Material Data

Compound Name: 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER100110-01

Chemical Formula: $^{13}C_{12}HCl_7O_2$
CAS Number: 109719-83-7
Molecular Weight: 437.22

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.02% $^{13}C_0$ vs $^{13}C_{12}$
		0.10% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		98.91%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

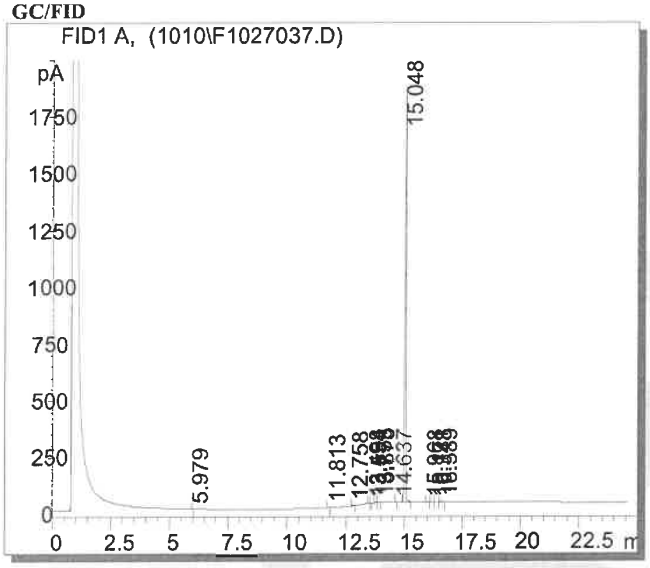

Column:	DB-5ms, 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1010\F1027037.D
Instrument:	GC#6
Sample Name:	ER100110-01
Acquired:	October 28, 2010

Peak #	Ret Time	Area	Height	Area %
1	5.98	0.34	0.18	0.00
2	11.81	1.00	0.08	0.01
3	12.76	10.96	2.89	0.16
4	13.50	1.19	0.32	0.02
5	13.55	2.63	0.80	0.04
6	13.75	13.39	3.28	0.19
7	13.88	7.04	1.81	0.10
8	14.64	0.86	0.28	0.01
9	15.05	6900.70	1812.09	98.81
10	15.97	3.15	0.73	0.05
11	16.17	2.25	0.55	0.03
12	16.35	5.12	1.10	0.07
13	16.59	18.93	4.26	0.27
14	26.99	15.17	0.35	0.22
15	35.58	0.06	0.21	0.00
16	41.80	0.77	0.13	0.01

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-13C
Lot Number             : ER100110-01
Instrument             : Agilent 5973N MSD/6890N GC
Operator-Inst ID       : RPC - C10106
Date Reported          : Wed Oct 27 15:05:05 2010
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 300°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate [mL\min]     : 0.80 mL/min
Transfer Line Temp.    : 280°C

Scan Range             : 50-550
```

Total Ion Chromatogram

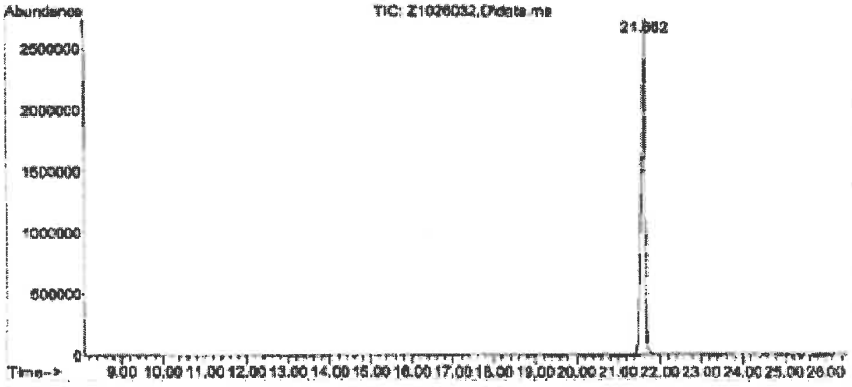

Mass Spectrum

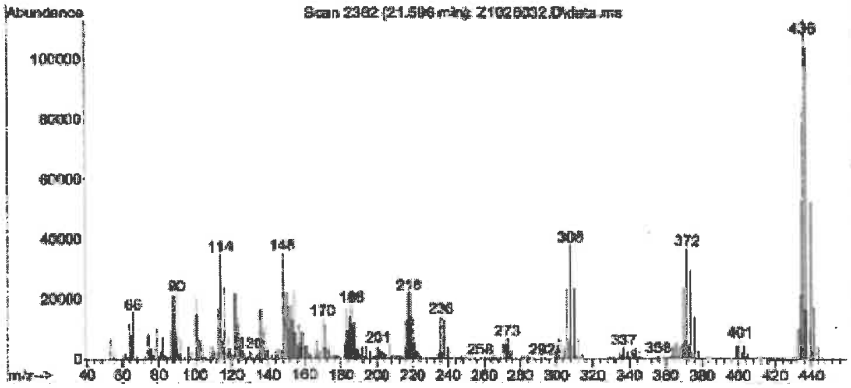

Reagent

HRDXNIDA_00462

r: 1/18/21 SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$

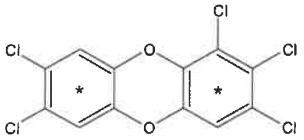

Catalog Number: ED-955
Solution Lot: ER08041401
Expiration Date: August 2024
Solvent: n-Nonane
Volume per Ampule: Not less than 1.2 mL
Storage: Store at room temperature. Do not store cold.
Intended Use: For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$	98.2%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08041401	48.80	± 5%	0.3	≤ 3%
Previous Lot	ER030907-02	49.84	± 5%	0.4	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.1% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ACLASS ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

February 10, 2016
Date

793215

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER06241403

Chemical Formula: $^{13}C_{12}H_3Cl_5O_2$
CAS Number: 109719-79-1
Molecular Weight: 368.33

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	98.9%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS-SIM Analysis	SP10-0105	0.07% $^{13}C_0$ vs $^{13}C_{12}$
		0.14% $^{13}C_6$ vs $^{13}C_{12}$
Impurity Analysis by GC/MS	SP10-0105	No single DD/DF $\geq$ 0.5%
Mass Balance Purity Factor		98.90%

- Primary purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The primary chromatographic purity value is used to calculate the Purity Factor.
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

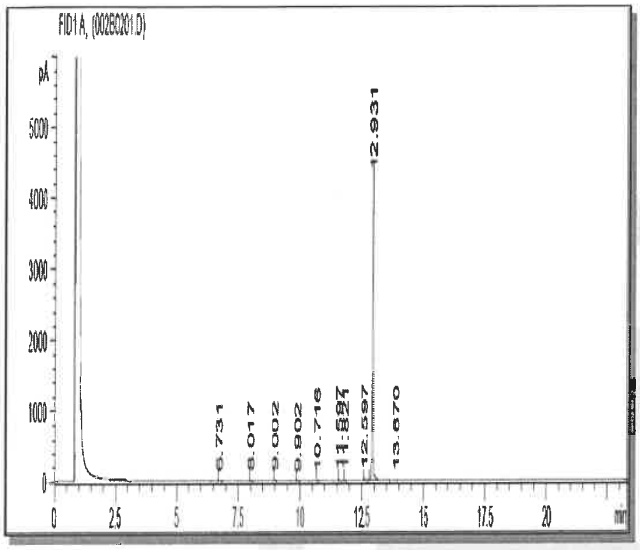

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min, hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMP-085 P GC 6 2014-07-30 18-11-11\002B0201.D
Instrument:	GC#6
Sample Name:	ER06241403
Acquired:	July 30, 2014

Peak #	Ret Time	Area	Height	Area %
1	6.73	7.32	3.42	0.07
2	8.02	3.79	1.60	0.04
3	9.00	8.74	3.64	0.08
4	9.90	3.38	1.35	0.03
5	10.72	1.31	0.45	0.01
6	11.60	14.46	6.69	0.14
7	11.82	2.21	1.11	0.02
8	12.60	68.05	28.10	0.64
9	12.93	10594.10	4235.85	98.91
10	13.87	7.09	2.57	0.07

Spectral and Physical Data (cont.)

GC/MS

Compound Name : 1,2,3,7,8-Pentachlorodibenzo-p-dioxin-13C12
Lot Number : 2B06241403
Instrument : Agilent GCMS
Operator : ICM(ALONG)
Date Reported : Wed Jul 30 14:18:25 2014
Column Type : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp. : Cool on-column
Carrier Gas : Helium
Flow Rate (mL\min) : 0.80 mL/min
Transfer Line Temp. : 280°C
Scan Range : 50-550

Total Ion Chromatogram

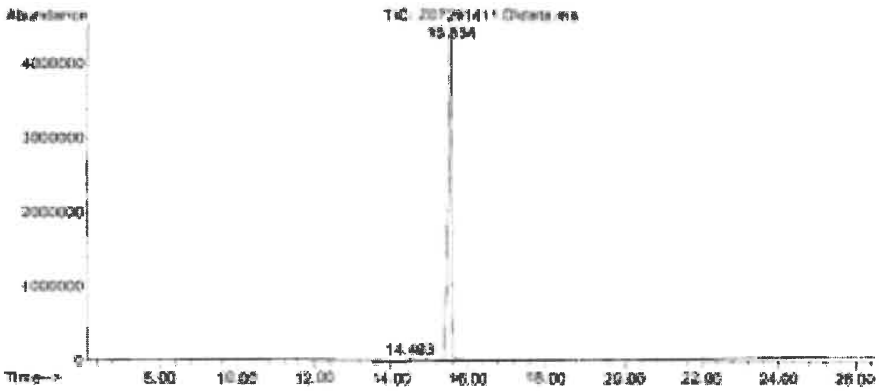

Mass Spectrum

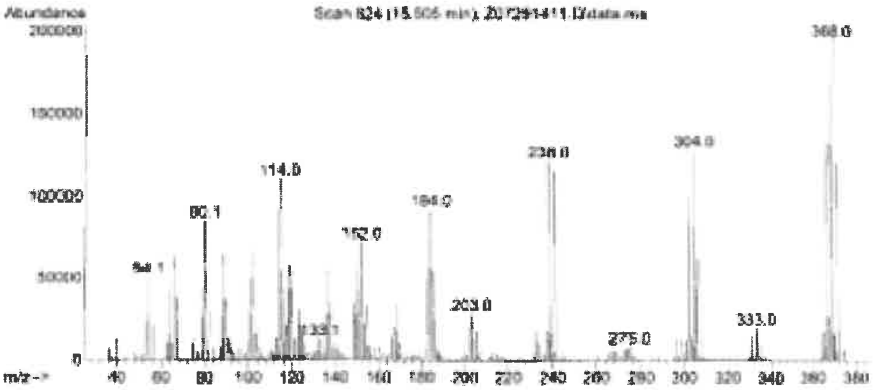

COA Revision History

Revision No.	Date	Reason for Revision
00	September 24, 2014	Initial version
01	February 10, 2016	Updated Safety Section from "Flammable" to "Danger. See Safety Data Sheet".

Reagent

HRDXNIS_00126

Rec'd. 3/26/20 SW

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$

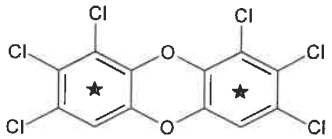

Catalog Number:	ED-996
Solution Lot:	ER08221601
Expiration Date:	September 2026
Solvent:	n-Nonane:Toluene (80:20)
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.5%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution; and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER08221601	49.20	± 5%	0.3	≤ 3%
Previous Lot	ER021313-01	49.56	± 5%	0.2	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

August 16, 2019
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

793222

Standard Solution Assay Parameters

Analysis Method:	GC/FID
Column:	DB-5ms 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	60°C to 300°C at 40°C/min hold 10 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	4
Linearity (r):	1.000

Neat Material Data

Compound Name:	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-$^{13}C_{12}$	**Chemical Formula:**	$^{13}C_{12}H_2Cl_6O_2$
Compound Lot:	ER110510-01	**CAS Number:**	109719-82-6
		Molecular Weight:	402.77

Neat Material Characterization Summary

Analytical Test	Method	Results
Primary Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.04% $^{13}C_0$ vs $^{13}C_{12}$
		0.27% $^{13}C_6$ vs $^{13}C_{12}$
Mass Balance Purity Factor		99.02%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other.
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity.

Spectral and Physical Data

GC/FID

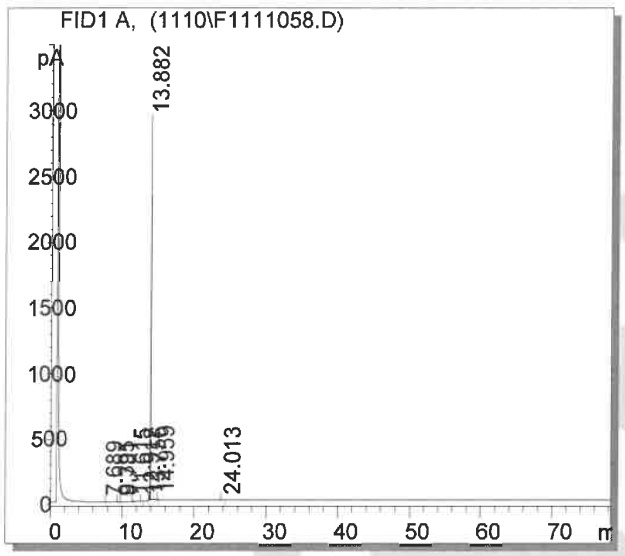

Column:	DB-5ms 30m x 0.53mm ID, 1.5 µm film thickness
Temp Program:	100°C to 300°C at 15°C/min hold 65 min
Injector Temp:	Cool-on-column
Detector Temp:	325°C
Data File Name:	S:\GC\GC6\2010\1110\F1111058.D
Instrument:	GC#6
Sample Name:	ER110510-01
Acquired:	November 12, 2010

Peak #	Ret Time	Area	Height	Area %
1	4.69	0.45	0.10	0.01
2	9.40	0.72	0.14	0.01
3	9.78	0.80	0.13	0.01
4	11.62	7.34	2.54	0.09
5	12.91	2.59	0.23	0.03
6	13.76	1.91	1.00	0.02
7	13.88	8026.07	2938.74	99.11
8	14.96	36.82	11.38	0.45
9	24.01	21.08	1.62	0.26

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name     : 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin-13C12
Lot Number        : ER110510-01
Instrument        : Agilent 5973N MSD /6890N GC
Operator-Inst ID  : RPC - A147434
Date Reported     : Fri Nov 12 16:41:14 2010
Column Type       : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program     : 140°C to 200°C @40°C/min,200°C to 320°C @4°C/min
Injector Temp.    : Cool on-column          Trans. Line Temp : 280°C
Carrier Gas       : Helium                  Flow Rate        : 0.80 mL/min
```

Total Ion Chromatogram
S:\GCMS\GCMS2\2010\1110\

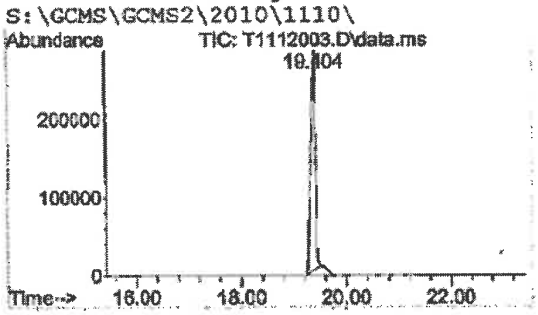

Mass Spectrum
Scan Number: 1976 Scan Range: 50-550 amu

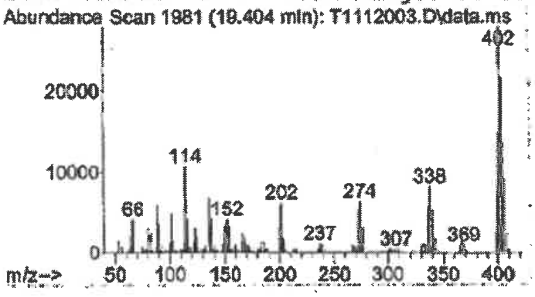

SIM Ion Chromatogram 1

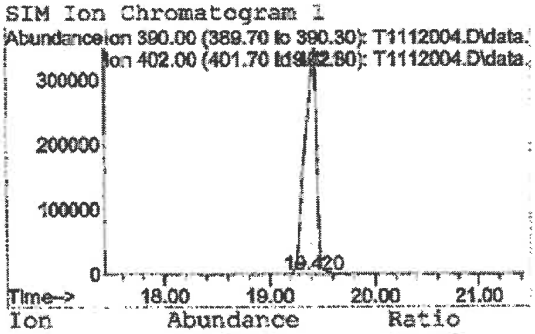

Ion	Abundance	Ratio
402	26368380	99.96
390	9776	0.04

SIM Ion Chromatogram 2

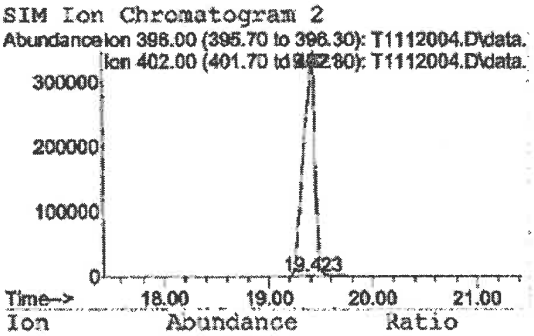

Ion	Abundance	Ratio
402	26368380	99.73
396	71626	0.27

COA Revision History

Revision No.	Date	Reason for Revision
00	September 28, 2016	Initial version
01	August 16, 2019	Corrected Solvent from n-Nonane to n-Nonane:Toluene (80:20)
		Added Structure

Reagent

HRDXNIS_00127

r: 3/26/20 SKJ

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$

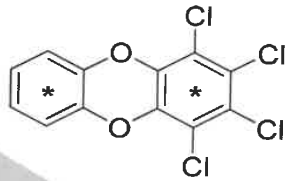

Cerilliant Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 13194
ISO 9001
GMP/GLP

Catalog Number:	ED-911
Solution Lot:	ER11081602
Expiration Date:	January 2027
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies.
- Ampules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to quantitatively transfer desired volumes of this standard using established good laboratory practices to dilute to the desired concentration.

Component	Solution Purity	Certified Concentration
1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$	99.7%	50.00 ± 0.23 µg/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- This standard is prepared gravimetrically and mass results are reported on the conventional basis for weighing in air. Concentration is calculated based on: the actual measured mass; Purity Factor of the analyte(s); measured mass of the solution, and the density of the pure diluent at 20 °C.
- Concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Solution Standard Verification and Homogeneity

Standard Solution	Lot Number	Verified Concentration (µg/mL) Actual Results	Verified Concentration (µg/mL) Acceptance Criteria	%RSD - Homogeneity Actual Results	%RSD - Homogeneity Acceptance Criteria
New Lot	ER11081602	51.01	± 10%	0.1	≤ 3%
Previous Lot	ER060710-01	50.59	± 10%	0.1	≤ 3%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity of the New Lot is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The % RSD of samples pulled from across the lot demonstrate homogeneity of the New Lot.
- The % RSD of the Previous Lot represents variability of the analysis performed at the time of release.

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared 4-point calibration curve gravimetrically prepared using balances calibrated to NIST.
- In addition, each neat material utilized has been identified and thoroughly characterized through the use of multiple analytical techniques. Spectral data is provided on subsequent pages of the COA.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

January 23, 2017
Date

Cerilliant Corporation 811 Paloma Drive, Suite A, Round Rock, TX 78665 800-848-7837 / 512-238-9974

793229

Standard Solution Assay Parameters

Analysis Method: GC/FID
Column: DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program: 60°C to 300°C at 40°C/min hold 10 min
Injector Temp: Cool-on-Column
Detector Temp: 325°C

Calibration Curve

Calibration Curve: Linear Regression
Number of Points: 4
Linearity (r): 1.000

Neat Material Data

Compound Name: 1,2,3,4-Tetrachlorodibenzo-p-dioxin-$^{13}C_{12}$
Compound Lot: ER02021602

Chemical Formula: $^{13}C_{12}H_4Cl_4O_2$
CAS Number: 114423-99-3
Molecular Weight: 333.88

Neat Material Characterization Summary

Analytical Test	Method	Results
Chromatographic Purity by GC/FID Analysis	SP10-0101	99.0%
Identity by GC/MS Analysis	SP10-0105	Consistent with Structure
Impurity Analysis by GC/MS	SP10-0105	no single DD/DF impurity ≥ 1.0%
Isotopic Purity by GC/MS SIM Analysis	SP10-0105	0.03% $^{13}C_0$ vs $^{13}C_{12}$
		0.01% $^{13}C_6$ vs $^{13}C_{12}$
Identity by ^{1}H-NMR Analysis	USP <761>, SP10-0116	Consistent with Structure
Residual Solvent by ^{1}H-NMR Analysis	USP <761>, SP10-0116	0.31% Dichloromethane
Mass Balance Purity Factor		98.71%

- Purity is calculated as the average of two independently performed analyses utilizing two different methods. Acceptance criteria requires the purity values to be within 0.5% of each other
- The chromatographic purity value is used to calculate the Purity Factor
- Purity factor does not include adjustment for chiral and/or isotopic purity

Spectral and Physical Data

GC/FID

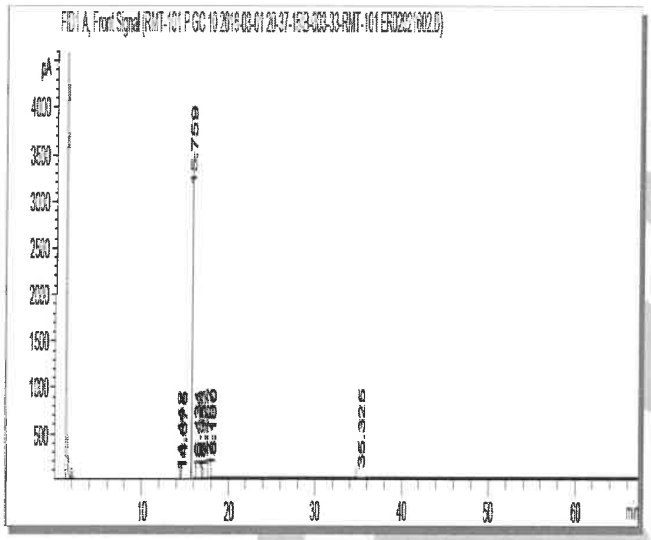

Column:	DB-5ms, 30 m x 0.53 mm ID, 1.5 µm film thickness
Temp Program:	40°C to 300°C at 15°C/min hold 50 min
Injector Temp:	Cool-on-Column
Detector Temp:	325°C
Data File Name:	RMT-101 P GC 10 2016-03-01 20-37-15\B-003-33.D
Instrument:	GC#10
Sample Name:	ER02021602
Acquired:	March 01, 2016

Peak #	Ret Time	Area	Height	Area %
1	14.44	1.34	0.53	0.02
2	14.68	3.60	0.58	0.05
3	15.76	7522.29	3054.11	99.22
4	16.43	3.51	0.80	0.05
5	16.96	2.38	1.09	0.03
6	17.13	4.79	2.26	0.06
7	17.77	8.72	3.38	0.11
8	18.10	1.68	0.54	0.02
9	35.33	32.94	1.28	0.43

^{1}H NMR

Instrument:	JEOL ECS 400
Solvent:	Chloroform-D

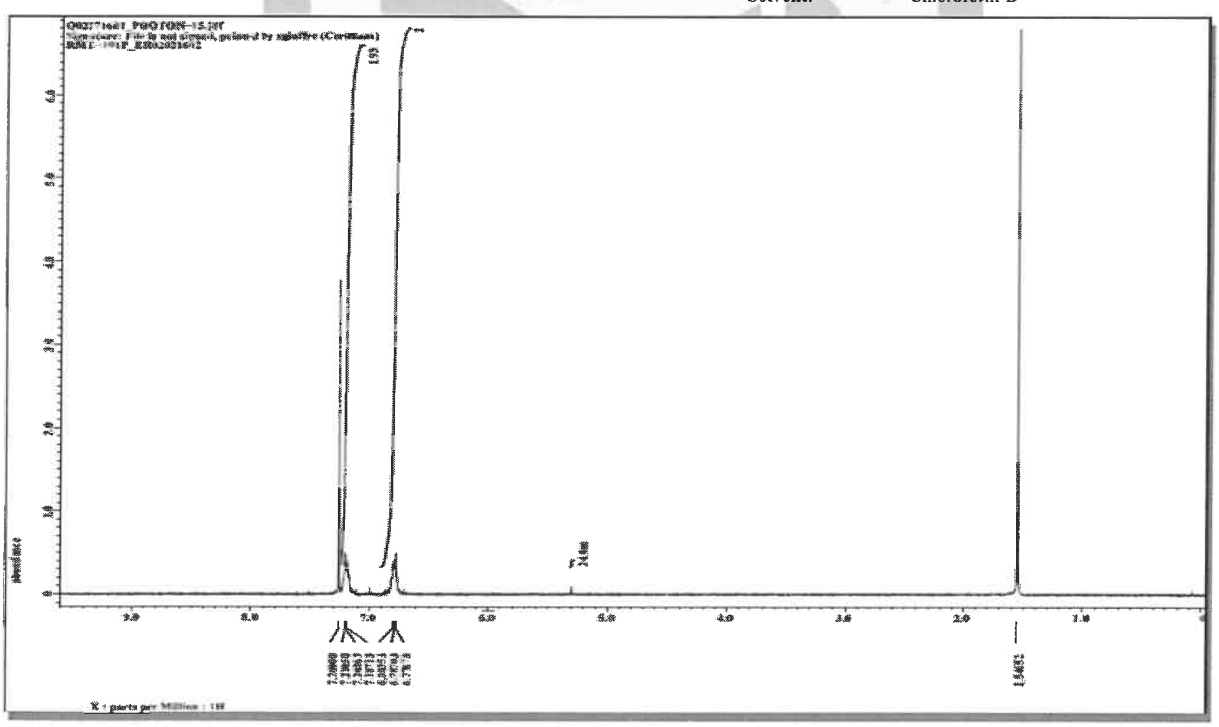

Spectral and Physical Data (cont.)

GC/MS

```
Compound Name          : 1,2,3,4-Tetrachlorodibenzo-p-dioxin-13C12
Lot Number             : ER02021602
Instrument             : Agilent GCMS
Operator               : ECM(SGIUFFRE)
Date Reported          : Fri Feb 19 12:55:12 2016
Column Type            : DB-5ms, 30m x 0.25mm ID, 0.25um film thickness
Temp. Program          : 140°C to 200°C@40°C/min,200°C to 320°C@4°C/min
Injector Temp.         : Cool on-column
Carrier Gas            : Helium
Flow Rate (mL\min)     : 0.80 mL/min
Transfer Line Temp.    : 280°C
Scan Range             : 50-550
```

Total Ion Chromatogram

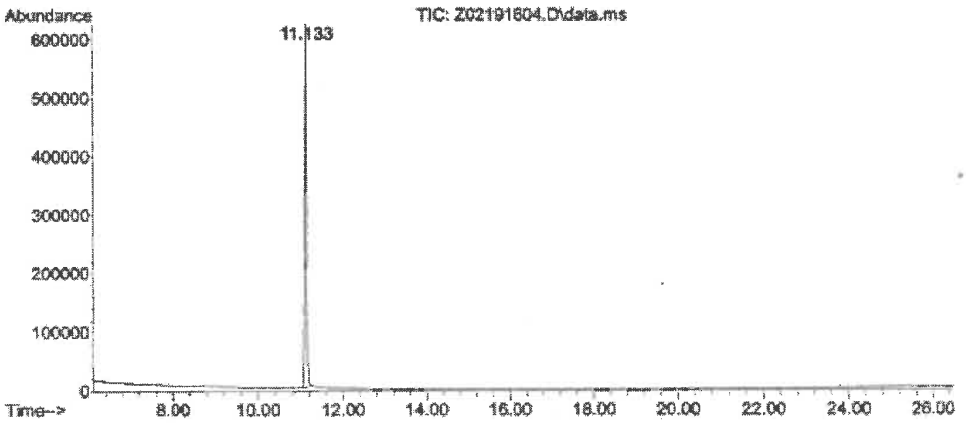

Mass Spectrum

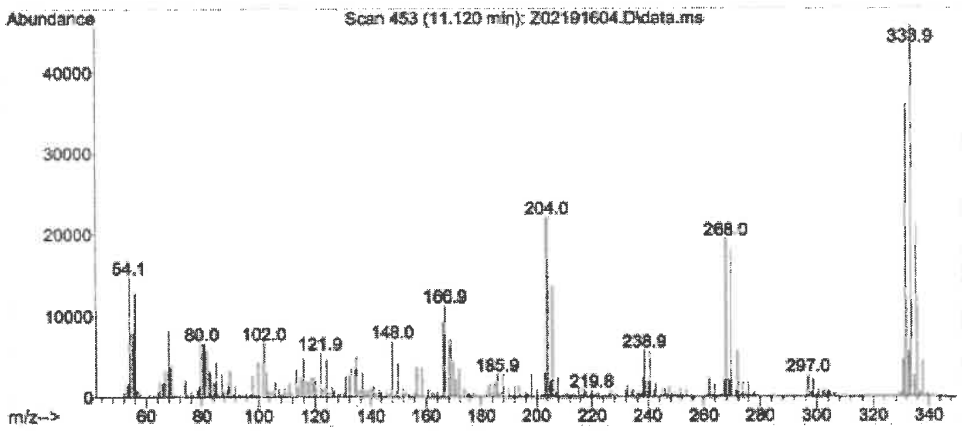

Reagent

HRDXNTA_00108

(2)

P: 4ba/19 SKJ

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

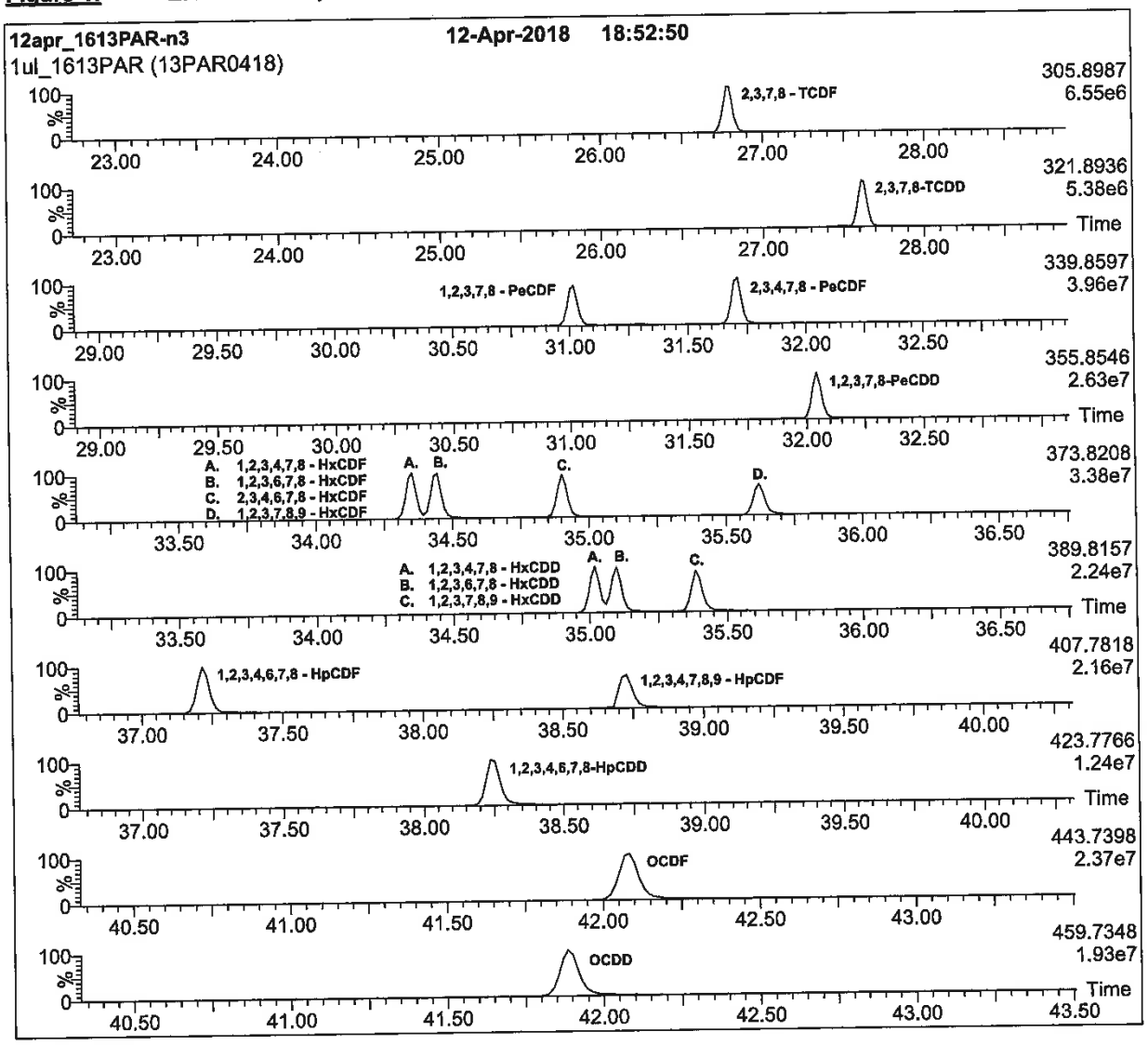

HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Reagent

HRDXNTA_00112

(3)

P: 4/3dic SKV

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Method 1613 PAR Stock Solution

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Catalog Number:	EDF-7999-10X
Solution Lot:	ER02241602
Expiration Date:	April 2026
Solvent:	n-Nonane
Volume per Ampule:	Not less than 1.2 mL
Storage:	Store at room temperature. Do not store cold.
Intended Use:	For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety:	**Danger. See Safety Data Sheet.**

- Expiration Date has been established through real time stability studies
- Ampules are overfilled to ensure a minimum 1.2 volume We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER04271502	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.2%	399.9 ± 4.0 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.9 ± 4.0 ng/mL
1,2,3,7,8-PeCDD	ER110909-02	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.2%	2000 ± 20 ng/mL
1,2,3,7,8-PeCDF	ER03121401	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.5%	1999 ± 20 ng/mL
2,3,4,7,8-PeCDF	ER070710-01	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	1999 ± 20 ng/mL
1,2,3,4,7,8-HxCDD	ER080108-02	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	98.6%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390 86	99.6%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDD	ER02041601	19408-74-3	$C_{12}H_2Cl_6O_2$	390 86	99.2%	2000 ± 20 ng/mL
1,2,3,4,7,8-HxCDF	ER021110-01	70648-26-9	$C_{12}H_2Cl_6O$	374.86	99 0%	2000 ± 20 ng/mL
1,2,3,6,7,8-HxCDF	ER04161501	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99 8%	2000 ± 20 ng/mL
1,2,3,7,8,9-HxCDF	ER060107-01	72918-21-9	$C_{12}H_2Cl_6O$	374.86	97.5%	1999 ± 20 ng/mL
2,3,4,6,7,8-HxCDF	ER02041602	60851-34-5	$C_{12}H_2Cl_6O$	374 86	99.1%	2001 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	1999 ± 20 ng/mL
1,2,3,4,6,7,8-HpCDF	ER02281403	67562-39-4	$C_{12}HCl_7O$	409.31	98.9%	1999 ± 20 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01121503	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	1999 ± 20 ng/mL
OCDD	ER05221301	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3999 ± 40 ng/mL
OCDF	ER040811-01	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4000 ± 40 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and Guide 34 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB

Darron Ellsworth, Quality Assurance Manager

April 28, 2016
Date

793239

Traceability

- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo using NIST traceable weights. Calibration verification performed weekly and prior to each use utilizing NIST traceable weights. Each balance has been assigned a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure weighing complies with USP tolerances of no more than 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/ECD
Column:	DB-5ms, 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min, 200°C to 300°C at 4°C/min hold 3 min
Injector Temp:	Cool on-column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Acceptance Criteria	%RSD - Homogeneity %	Acceptance Criteria
2,3,7,8-TeCDD	397.1	± 10%	0.7	≤ 5%
2,3,7,8-TeCDF	386.6	± 10%	0.7	≤ 5%
1,2,3,7,8-PeCDD	1937	± 10%	0.8	≤ 5%
1,2,3,7,8-PeCDF	1919	± 10%	0.8	≤ 5%
2,3,4,7,8-PeCDF	1941	± 10%	0.8	≤ 5%
1,2,3,4,7,8-HxCDD	1932	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDD	1987	± 10%	0.8	≤ 5%
1,2,3,7,8,9-HxCDD	1943	± 10%	0.7	≤ 5%
1,2,3,4,7,8-HxCDF	1933	± 10%	0.9	≤ 5%
1,2,3,6,7,8-HxCDF	1909	± 10%	0.9	≤ 5%
1,2,3,7,8,9-HxCDF	1942	± 10%	0.7	≤ 5%
2,3,4,6,7,8-HxCDF	1950	± 10%	0.8	≤ 5%
1,2,3,4,6,7,8-HpCDD	1930	± 10%	0.9	≤ 5%
1,2,3,4,6,7,8-HpCDF	1919	± 10%	0.9	≤ 5%
1,2,3,4,7,8,9-HpCDF	1943	± 10%	1.0	≤ 5%
OCDD	3844	± 10%	1.0	≤ 5%
OCDF	3906	± 10%	0.9	≤ 5%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration solution.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

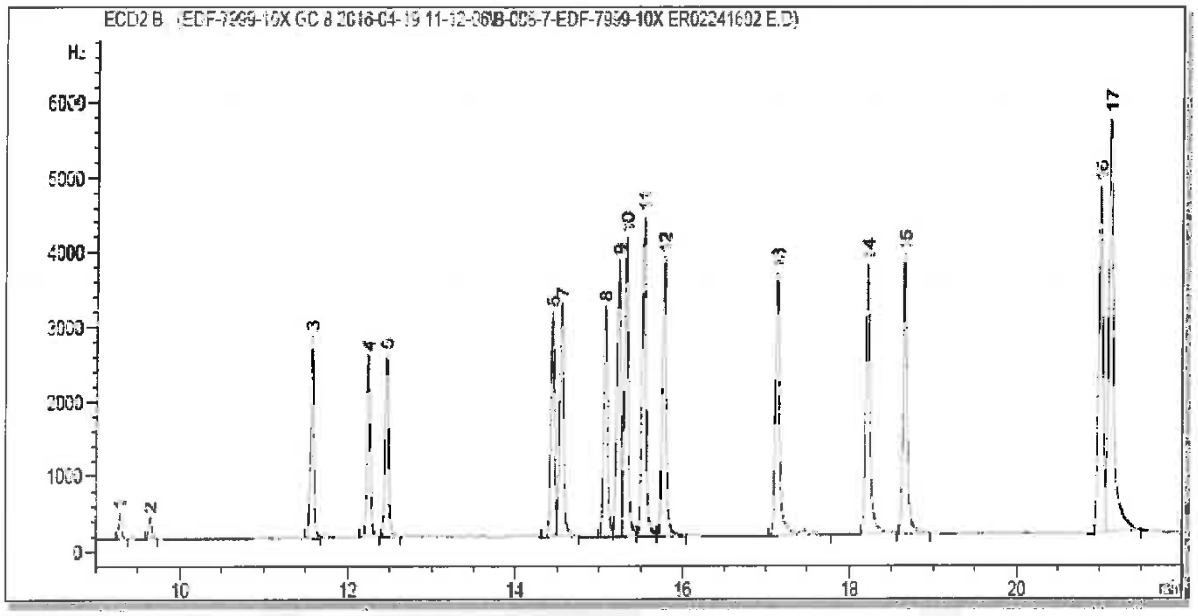

Peak:	Analyte:
1	2,3,7,8-Tetrachlorodibenzofuran
2	2,3,7,8-Tetrachloro-p-dioxin
3	1,2,3,7,8-Pentachlorodibenzofuran
4	2,3,4,7,8-Pentachlorodibenzofuran
5	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6	1,2,3,4,7,8-Hexachlorodibenzofuran
7	1,2,3,6,7,8-Hexachlorodibenzofuran
8	2,3,4,6,7,8-Hexachlorodibenzofuran
9	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
11	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12	1,2,3,7,8,9-Hexachlorodibenzofuran
13	1,2,3,4,6,7,8-Heptachlorodibenzofuran
14	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
16	Octachlorodibenzo-p-dioxin
17	Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	April 28, 2016	Initial version

Reagent

HRDXNTA_00132

r: 5/10/21 SKV

Cerilliant®
Analytical Reference Standards
a SIGMA-ALDRICH company

CIL

Certificate of Analysis

Method 1613 PAR Stock Solution

Cerilliant Quality
ISO 17034
ISO/IEC 17025
ISO 14001
ISO 9001

Catalog Number: EDF-7999-10X
Solution Lot: ER09031903
Expiration Date: August 2030
Solvent: n-Nonane
Volume per Ampoule: Not less than 1.2 mL
Storage: Room Temperature. Do not store cold.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.
Safety: **Danger. See Safety Data Sheet**

- Expiration Date has been established through real time stability studies.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration.

Component	Lot Number	CAS Number	Chemical Formula	Molecular Weight	Chromatographic Purity	Concentration
2,3,7,8-TeCDD	ER12161901	1746-01-6	$C_{12}H_4Cl_4O_2$	321.97	99.1%	400.6 ± 4.2 ng/mL
2,3,7,8-TeCDF	ER101211-02	51207-31-9	$C_{12}H_4Cl_4O$	305.97	99.4%	399.4 ± 4.2 ng/mL
1,2,3,7,8-PeCDD	ER07091901	40321-76-4	$C_{12}H_3Cl_5O_2$	356.42	99.1%	2002 ± 21 ng/mL
1,2,3,7,8-PeCDF	ER11081603	57117-41-6	$C_{12}H_3Cl_5O$	340.42	99.7%	1992 ± 21 ng/mL
2,3,4,7,8-PeCDF	ER03211901	57117-31-4	$C_{12}H_3Cl_5O$	340.42	99.4%	2011 ± 21 ng/mL
1,2,3,4,7,8-HxCDD	ER05012008	39227-28-6	$C_{12}H_2Cl_6O_2$	390.86	99.2%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDD	ER03231501	57653-85-7	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2013 ± 21 ng/mL
1,2,3,7,8,9-HxCDD	ER01142001	19408-74-3	$C_{12}H_2Cl_6O_2$	390.86	99.6%	2017 ± 21 ng/mL
1,2,3,4,7,8-HxCDF	ER03022008	70648-26-9	$C_{12}H_2Cl_6O$	374.86	98.3%	2004 ± 21 ng/mL
1,2,3,6,7,8-HxCDF	ER06231602	57117-44-9	$C_{12}H_2Cl_6O$	374.86	99.1%	2005 ± 21 ng/mL
1,2,3,7,8,9-HxCDF	ER10281601	72918-21-9	$C_{12}H_2Cl_6O$	374.86	99.7%	2005 ± 21 ng/mL
2,3,4,6,7,8-HxCDF	ER070131801	60851-34-5	$C_{12}H_2Cl_6O$	374.86	99.1%	2004 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDD	ER01201504	35822-46-9	$C_{12}HCl_7O_2$	425.31	98.5%	2002 ± 21 ng/mL
1,2,3,4,6,7,8-HpCDF	ER12261901	67562-39-4	$C_{12}HCl_7O$	409.31	98.7%	2005 ± 21 ng/mL
1,2,3,4,7,8,9-HpCDF	ER01261701	55673-89-7	$C_{12}HCl_7O$	409.31	99.1%	2003 ± 21 ng/mL
OCDD	ER09191601	3268-87-9	$C_{12}Cl_8O_2$	459.75	99.9%	3975 ± 42 ng/mL
OCDF	ER03031701	39001-02-0	$C_{12}Cl_8O$	443.75	98.9%	4002 ± 42 ng/mL

- Uncertainty of the concentration is expressed as an expanded uncertainty in accordance with ISO 17025 and ISO 17034 at the approximate 95% confidence interval using a coverage factor of k = 2 and has been calculated by statistical analysis of our production system and incorporates uncertainty of the purity factor, material density, and balance and weighing technique.
- Stock solution concentration is corrected for chromatographic purity, residual water, residual solvents and residual inorganics.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration/retest date when stored unopened as recommended. Product should be used shortly after opening to avoid concentration changes due to evaporation. Warranty does not apply to ampoules stored after opening.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Darron Ellsworth, Quality Assurance Manager

September 16, 2020
Date

793244

Traceability

- This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error.
- Concentration is verified against an independently prepared calibration solution gravimetrically prepared using balances calibrated to NIST.

Standard Solution Assay Parameters

Analysis Method:	GC/MS
Column:	DB-5ms 30 m x 0.25 mm ID, 0.25 µm film thickness
Temp Program:	140°C to 200°C at 40°C/min 200°C to 292°C at 4°C/min
Injector Temp:	Cool-on-Column
Detector Temp:	280°C

Calibration Curve

Calibration Curve:	Linear Regression
Number of Points:	1

Solution Standard Verification and Homogeneity

Compound	Verified Concentration ng/mL	Verified Concentration Acceptance Criteria	%RSD - Homogeneity %	%RSD - Homogeneity Acceptance Criteria
2,3,7,8-TeCDD	407.4	± 10%	0.9	≤ 10%
2,3,7,8-TeCDF	402.5	± 10%	0.8	≤ 10%
1,2,3,7,8-PeCDD	2014	± 10%	0.6	≤ 10%
1,2,3,7,8-PeCDF	2008	± 10%	2.7	≤ 10%
2,3,4,7,8-PeCDF	2033	± 10%	1.1	≤ 10%
1,2,3,4,7,8-HxCDD	2000	± 10%	3.4	≤ 10%
1,2,3,6,7,8-HxCDD	1903	± 10%	4.0	≤ 10%
1,2,3,7,8,9-HxCDD	2025	± 10%	1.6	≤ 10%
1,2,3,4,7,8-HxCDF	2010	± 10%	1.4	≤ 10%
1,2,3,6,7,8-HxCDF	2024	± 10%	1.3	≤ 10%
1,2,3,7,8,9-HxCDF	2024	± 10%	1.2	≤ 10%
2,3,4,6,7,8-HxCDF	1995	± 10%	1.0	≤ 10%
1,2,3,4,6,7,8-HpCDD	1993	± 10%	1.1	≤ 10%
1,2,3,4,6,7,8-HpCDF	2007	± 10%	1.5	≤ 10%
1,2,3,4,7,8,9-HpCDF	2038	± 10%	2.0	≤ 10%
OCDD	3964	± 10%	1.6	≤ 10%
OCDF	4081	± 10%	3.5	≤ 10%

- Concentration is verified through multiple analyses and is calculated as the average of multiple analyses compared to an independently prepared calibration curve.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot demonstrate homogeneity.
- Product is compared to prior lot and meets acceptance criteria of ± 10%.

Product Analysis

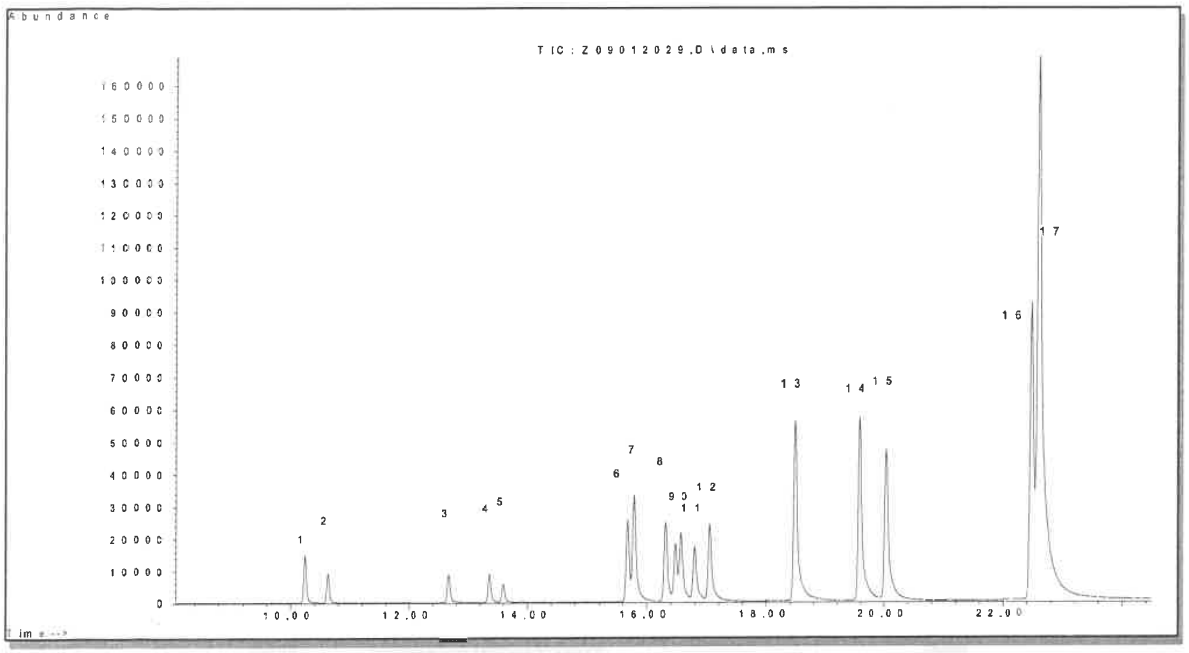

1. 2,3,7,8-Tetrachlorodibenzofuran
2. 2,3,7,8-Tetrachlorodibenzo-p-dioxin
3. 1,2,3,7,8-Pentachlorodibenzofuran
4. 2,3,4,7,8-Pentachlorodibenzofuran
5. 1,2,3,7,8-Pentachlorodibenzo-p-dioxin
6. 1,2,3,4,7,8-Hexachlorodibenzofuran
7. 1,2,3,6,7,8-Hexachlorodibenzofuran
8. 2,3,4,6,7,8-Hexachlorodibenzofuran
9. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
10. 1,2,3,6,7,8,-Hexachlorodibenzo-p-dioxin
11. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
12. 1,2,3,7,8,9-Hexachlorodibenzofuran
13. 1,2,3,4,6,7,8-Heptachlorodibenzofuran
14. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
15. 1,2,3,4,7,8,9-Heptachlorodibenzofuran
16. Octachlorodibenzo-p-dioxin
17. Octachlorodibenzofuran

COA Revision History

Revision No.	Date	Reason for Revision
00	September 16, 2020	Initial version

Method 1613B

Dioxins and Furans (HRGC/HRMS) by Method 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
	LCS 320-515492/2-A	46	47	65	47	50	50	54	47

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	22-152
TCDD = 13C-2,3,7,8-TCDD	20-175
37TCDD = 37Cl4-2,3,7,8-TCDD	31-191
PeCDF = 13C-1,2,3,7,8-PeCDF	21-192
PeCF = 13C-2,3,4,7,8-PeCDF	13-328
PeCDD = 13C-1,2,3,7,8-PeCDD	21-227
HxCDF = 13C-1,2,3,4,7,8-HxCDF	19-202
HxDF = 13C-1,2,3,6,7,8-HxCDF	21-159

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
	LCS 320-515492/2-A	47	54	47	47	44	46	48	50

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	22-176
HxCDD = 13C-1,2,3,4,7,8-HxCDD	21-193
HxDD = 13C-1,2,3,6,7,8-HxCDD	25-163
HxCF = 13C-1,2,3,7,8,9-HxCDF	17-205
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	21-158
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	26-166
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	20-186
OCDD = 13C-OCDD	13-199

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-225 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	37TCDD #
11215702-080321-BN -SJSB091 (0-2) RA	320-77292-1 RA	67	76
11215702-080321-BN -SJSB091 (2-4) RA	320-77292-2 RA	55	67
11215702-080321-BN -SJSB091 (4-6) RA	320-77292-3 RA	49	70
11215702-080321-BN -SJSB091 (6-8) RA	320-77292-4 RA	53	76
11215702-080321-BN -SJSB091 (2-4) MS RA	320-77292-2 MS RA	60	72
11215702-080321-BN -SJSB091 (2-4) MSD RA	320-77292-2 MSD RA	57	74

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCDF #	TCDD #	37TCDD #	PeCDF #	PeCF #	PeCDD #	HxCDF #	HxDF #
11215702-080321-BN -SJSB091 (0-2)	320-77292-1	63	67	73	65	64	67	65	58
11215702-080321-BN -SJSB091 (2-4)	320-77292-2	50	52	69	50	54	52	58	50
11215702-080321-BN -SJSB091 (4-6)	320-77292-3	45	47	69	45	48	46	53	44
11215702-080321-BN -SJSB091 (6-8)	320-77292-4	48	53	70	49	51	50	57	48
11215702-080321-BN -SJSB091 (8-10)	320-77292-5	54	57	72	55	58	56	61	53
11215702-080321-BN -SJSB091 (10-12)	320-77292-6	48	51	70	52	54	52	56	48
11215702-080321-BN -SJSB091 (12-14)	320-77292-7	52	56	72	53	57	55	61	53
11215702-080321-BN -SJSB091 (14-16)	320-77292-8	55	59	72	58	61	59	67	56
11215702-080321-BN -DUP-18	320-77292-13	44	46	76	46	49	47	52	45
	MB 320-515492/1-A	52	54	66	54	59	57	58	49
11215702-080321-BN -SJSB091 (2-4) MS	320-77292-2 MS	58	59	73	58	62	59	66	57
11215702-080321-BN -SJSB091 (2-4) MSD	320-77292-2 MSD	55	59	72	57	61	58	64	54

	QC LIMITS
TCDF = 13C-2,3,7,8-TCDF	24-169
TCDD = 13C-2,3,7,8-TCDD	25-164
37TCDD = 37Cl4-2,3,7,8-TCDD	35-197
PeCDF = 13C-1,2,3,7,8-PeCDF	24-185
PeCF = 13C-2,3,4,7,8-PeCDF	21-178
PeCDD = 13C-1,2,3,7,8-PeCDD	25-181
HxCDF = 13C-1,2,3,4,7,8-HxCDF	26-152
HxDF = 13C-1,2,3,6,7,8-HxCDF	26-123

Column to be used to flag recovery values

FORM II 1613B

FORM II
DIOXIN SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Matrix: Sediment Level: Low

GC Column (1): DB-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	13CHxCF #	HxCDD #	HxDD #	HxCF #	HpCDF #	HpCDD #	HpCDF2 #	OCDD #
11215702-080321-BN -SJSB091 (0-2)	320-77292-1	63	64	57	66	60	70	75	80
11215702-080321-BN -SJSB091 (2-4)	320-77292-2	51	57	49	51	48	51	53	53
11215702-080321-BN -SJSB091 (4-6)	320-77292-3	46	52	45	46	43	46	49	49
11215702-080321-BN -SJSB091 (6-8)	320-77292-4	50	56	48	51	47	53	55	55
11215702-080321-BN -SJSB091 (8-10)	320-77292-5	54	61	54	55	51	55	58	59
11215702-080321-BN -SJSB091 (10-12)	320-77292-6	48	54	47	48	41	47	48	50
11215702-080321-BN -SJSB091 (12-14)	320-77292-7	54	63	52	54	48	51	54	57
11215702-080321-BN -SJSB091 (14-16)	320-77292-8	55	65	55	56	51	55	59	60
11215702-080321-BN -DUP-18	320-77292-13	45	52	45	45	42	46	49	48
	MB 320-515492/1-A	51	58	49	52	49	51	54	59
11215702-080321-BN -SJSB091 (2-4) MS	320-77292-2 MS	58	67	56	58	54	58	61	61
11215702-080321-BN -SJSB091 (2-4) MSD	320-77292-2 MSD	56	64	56	56	50	55	58	58

	QC LIMITS
13CHxCF = 13C-2,3,4,6,7,8-HxCDF	28-136
HxCDD = 13C-1,2,3,4,7,8-HxCDD	32-141
HxDD = 13C-1,2,3,6,7,8-HxCDD	28-130
HxCF = 13C-1,2,3,7,8,9-HxCDF	29-147
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF	28-143
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD	23-140
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF	26-138
OCDD = 13C-OCDD	17-157

Column to be used to flag recovery values

FORM II 1613B

FORM III
DIOXIN LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2110D5_4.d

Lab ID: LCS 320-515492/2-A Client ID:

COMPOUND	SPIKE ADDED (pg/g)	LCS CONCENTRATION (pg/g)	LCS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	20.0	21.3	106	67-158	
2,3,7,8-TCDF	20.0	21.7	109	75-158	
1,2,3,7,8-PeCDD	100	108	108	70-142	
1,2,3,7,8-PeCDF	100	111	111	80-134	
2,3,4,7,8-PeCDF	100	102	102	68-160	
1,2,3,4,7,8-HxCDD	100	101	101	70-164	
1,2,3,6,7,8-HxCDD	100	111	111	76-134	
1,2,3,7,8,9-HxCDD	100	107	107	64-162	
1,2,3,4,7,8-HxCDF	100	96.9	97	72-134	
1,2,3,6,7,8-HxCDF	100	108	108	84-130	
1,2,3,7,8,9-HxCDF	100	107	107	78-130	
2,3,4,6,7,8-HxCDF	100	107	107	70-156	
1,2,3,4,6,7,8-HpCDD	100	109	109	70-140	
1,2,3,4,6,7,8-HpCDF	100	108	108	82-122	
1,2,3,4,7,8,9-HpCDF	100	102	102	78-138	
OCDD	200	213	106	78-144	
OCDF	200	208	104	63-170	
13C-2,3,7,8-TCDD	200	94.9	47	20-175	
13C-2,3,7,8-TCDF	200	91.2	46	22-152	
13C-1,2,3,7,8-PeCDD	200	99.6	50	21-227	
13C-1,2,3,7,8-PeCDF	200	93.5	47	21-192	
13C-2,3,4,7,8-PeCDF	200	99.3	50	13-328	
13C-1,2,3,4,7,8-HxCDD	200	108	54	21-193	
13C-1,2,3,6,7,8-HxCDD	200	93.3	47	25-163	
13C-1,2,3,4,7,8-HxCDF	200	108	54	19-202	
13C-1,2,3,6,7,8-HxCDF	200	94.4	47	21-159	
13C-1,2,3,7,8,9-HxCDF	200	93.1	47	17-205	
13C-2,3,4,6,7,8-HxCDF	200	94.8	47	22-176	
13C-1,2,3,4,6,7,8-HpCDD	200	91.9	46	26-166	
13C-1,2,3,4,6,7,8-HpCDF	200	88.9	44	21-158	
13C-1,2,3,4,7,8,9-HpCDF	200	96.8	48	20-186	
13C-OCDD	400	199	50	13-199	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2110D5_23.d

Lab ID: 320-77292-2 MS Client ID: 11215702-080321-BN-SJSB091 (2-4

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDD	33.0	4.2	37.6	101	67-158	
1,2,3,7,8-PeCDD	165	0.31 J	168	102	70-142	
1,2,3,7,8-PeCDF	165	0.56 J	172	104	80-134	
2,3,4,7,8-PeCDF	165	0.23 J	156	94	68-160	
1,2,3,4,7,8-HxCDD	165	0.58 J	154	93	70-164	
1,2,3,6,7,8-HxCDD	165	0.91 J	172	104	76-134	
1,2,3,7,8,9-HxCDD	165	2.1 J	165	98	64-162	
1,2,3,4,7,8-HxCDF	165	0.51 J	150	91	72-134	
1,2,3,6,7,8-HxCDF	165	0.19 J	169	102	84-130	
1,2,3,7,8,9-HxCDF	165	0.080 J	166	101	78-130	
2,3,4,6,7,8-HxCDF	165	0.040 J	165	100	70-156	
1,2,3,4,6,7,8-HpCDD	165	32	199	101	70-140	
1,2,3,4,6,7,8-HpCDF	165	0.21 J	165	100	82-122	
1,2,3,4,7,8,9-HpCDF	165	ND	155	94	78-138	
OCDD	330	770	1050	87	78-144	
OCDF	330	0.24 J	317	96	63-170	
13C-2,3,7,8-TCDD	330	160	195	59	25-164	
13C-2,3,7,8-TCDF	330	150	191	58	24-169	
13C-1,2,3,7,8-PeCDD	330	150	196	59	25-181	
13C-1,2,3,7,8-PeCDF	330	150	191	58	24-185	
13C-2,3,4,7,8-PeCDF	330	160	204	62	21-178	
13C-1,2,3,4,7,8-HxCDD	330	170	223	67	32-141	
13C-1,2,3,6,7,8-HxCDD	330	150	184	56	28-130	
13C-1,2,3,4,7,8-HxCDF	330	170	219	66	26-152	
13C-1,2,3,6,7,8-HxCDF	330	150	187	57	26-123	
13C-1,2,3,7,8,9-HxCDF	330	150	192	58	29-147	
13C-2,3,4,6,7,8-HxCDF	330	150	192	58	28-136	
13C-1,2,3,4,6,7,8-HpCDD	330	150	190	58	23-140	
13C-1,2,3,4,6,7,8-HpCDF	330	140	179	54	28-143	
13C-1,2,3,4,7,8,9-HpCDF	330	160	200	61	26-138	
13C-OCDD	660	320	402	61	17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 31AU2111D2_011.d

Lab ID: 320-77292-2 MS RA Client ID: 11215702-080321-BN-SJSB091 (2-4

COMPOUND	SPIKE ADDED (pg/g)	SAMPLE CONCENTRATION (pg/g)	MS CONCENTRATION (pg/g)	MS % REC	QC LIMITS REC	#
2,3,7,8-TCDF	33.0	11	47.7	110	75-158	
13C-2,3,7,8-TCDF	330	160	198	60	24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 25AU2110D5_24.d

Lab ID: 320-77292-2 MSD Client ID: 11215702-080321-BN-SJSB091 (2-4

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
2,3,7,8-TCDD	30.6	36.1	104	4	50	67-158	
1,2,3,7,8-PeCDD	153	161	105	4	50	70-142	
1,2,3,7,8-PeCDF	153	162	105	6	50	80-134	
2,3,4,7,8-PeCDF	153	150	98	4	50	68-160	
1,2,3,4,7,8-HxCDD	153	153	99	1	50	70-164	
1,2,3,6,7,8-HxCDD	153	159	103	8	50	76-134	
1,2,3,7,8,9-HxCDD	153	154	100	6	50	64-162	
1,2,3,4,7,8-HxCDF	153	144	94	4	50	72-134	
1,2,3,6,7,8-HxCDF	153	162	106	4	50	84-130	
1,2,3,7,8,9-HxCDF	153	158	103	5	50	78-130	
2,3,4,6,7,8-HxCDF	153	158	103	4	50	70-156	
1,2,3,4,6,7,8-HpCDD	153	203	112	2	50	70-140	
1,2,3,4,6,7,8-HpCDF	153	161	105	3	50	82-122	
1,2,3,4,7,8,9-HpCDF	153	149	97	4	50	78-138	
OCDD	306	1330	184	23	50	78-144	F1
OCDF	306	301	98	5	50	63-170	
13C-2,3,7,8-TCDD	306	179	59			25-164	
13C-2,3,7,8-TCDF	306	169	55			24-169	
13C-1,2,3,7,8-PeCDD	306	178	58			25-181	
13C-1,2,3,7,8-PeCDF	306	173	57			24-185	
13C-2,3,4,7,8-PeCDF	306	186	61			21-178	
13C-1,2,3,4,7,8-HxCDD	306	195	64			32-141	
13C-1,2,3,6,7,8-HxCDD	306	170	56			28-130	
13C-1,2,3,4,7,8-HxCDF	306	195	64			26-152	
13C-1,2,3,6,7,8-HxCDF	306	165	54			26-123	
13C-1,2,3,7,8,9-HxCDF	306	171	56			29-147	
13C-2,3,4,6,7,8-HxCDF	306	170	56			28-136	
13C-1,2,3,4,6,7,8-HpCDD	306	168	55			23-140	
13C-1,2,3,4,6,7,8-HpCDF	306	152	50			28-143	
13C-1,2,3,4,7,8,9-HpCDF	306	178	58			26-138	
13C-OCDD	611	357	58			17-157	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM III
DIOXIN MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Matrix: Sediment Level: Low Lab File ID: 31AU2111D2_012.d

Lab ID: 320-77292-2 MSD RA Client ID: 11215702-080321-BN-SJSB091 (2-4

COMPOUND	SPIKE ADDED (pg/g)	MSD CONCENTRATION (pg/g)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
2,3,7,8-TCDF	30.6	49.3	124	3	50	75-158	
13C-2,3,7,8-TCDF	306	174	57			24-169	

Column to be used to flag recovery and RPD values

FORM III 1613B

FORM IV
DIOXIN METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab File ID: 25AU2110D5_3.d Lab Sample ID: MB 320-515492/1-A

Matrix: Sediment Date Extracted: 08/12/2021 05:19

Instrument ID: 10D5 Date Analyzed: 08/25/2021 11:20

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-515492/2-A	25AU2110D5_4.d	08/25/2021 12:05
11215702-080321-BN-SJSB091 (0-2)	320-77292-1	25AU2110D5_21.d	08/26/2021 01:20
11215702-080321-BN-SJSB091 (2-4)	320-77292-2	25AU2110D5_22.d	08/26/2021 02:05
11215702-080321-BN-SJSB091 (2-4) MS	320-77292-2 MS	25AU2110D5_23.d	08/26/2021 02:50
11215702-080321-BN-SJSB091 (2-4) MSD	320-77292-2 MSD	25AU2110D5_24.d	08/26/2021 03:35
11215702-080321-BN-SJSB091 (4-6)	320-77292-3	25AU2110D5_25.d	08/26/2021 04:20
11215702-080321-BN-SJSB091 (6-8)	320-77292-4	25AU2110D5_26.d	08/26/2021 05:05
11215702-080321-BN-SJSB091 (8-10)	320-77292-5	25AU2110D5_27.d	08/26/2021 05:50
11215702-080321-BN-SJSB091 (10-12)	320-77292-6	25AU2110D5_32.d	08/26/2021 10:05
11215702-080321-BN-SJSB091 (12-14)	320-77292-7	25AU2110D5_33.d	08/26/2021 10:50
11215702-080321-BN-SJSB091 (14-16)	320-77292-8	25AU2110D5_34.d	08/26/2021 11:35
11215702-080321-BN-DUP-18	320-77292-13	25AU2110D5_36.d	08/26/2021 13:05
11215702-080321-BN-SJSB091 (0-2) RA	320-77292-1 RA	31AU2111D2_009.d	08/31/2021 18:20
11215702-080321-BN-SJSB091 (2-4) RA	320-77292-2 RA	31AU2111D2_010.d	08/31/2021 18:58
11215702-080321-BN-SJSB091 (2-4) MS RA	320-77292-2 MS RA	31AU2111D2_011.d	08/31/2021 19:37
11215702-080321-BN-SJSB091 (2-4) MSD RA	320-77292-2 MSD RA	31AU2111D2_012.d	08/31/2021 20:15
11215702-080321-BN-SJSB091 (4-6) RA	320-77292-3 RA	31AU2111D2_013.d	08/31/2021 20:53
11215702-080321-BN-SJSB091 (6-8) RA	320-77292-4 RA	31AU2111D2_014.d	08/31/2021 21:32

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (0-2)
Lab Sample ID: 320-77292-1
Matrix: Sediment
Lab File ID: 25AU2110D5_21.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:30
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.14(g)
Date Analyzed: 08/26/2021 01:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 55.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	8.6		2.2	0.25
40321-76-4	1,2,3,7,8-PeCDD	ND		11	0.26
57117-41-6	1,2,3,7,8-PeCDF	1.1	J	11	0.16
57117-31-4	2,3,4,7,8-PeCDF	0.50	J q	11	0.18
39227-28-6	1,2,3,4,7,8-HxCDD	1.5	J	11	0.24
57653-85-7	1,2,3,6,7,8-HxCDD	3.0	J	11	0.24
19408-74-3	1,2,3,7,8,9-HxCDD	5.6	J	11	0.22
70648-26-9	1,2,3,4,7,8-HxCDF	1.1	J	11	0.12
57117-44-9	1,2,3,6,7,8-HxCDF	0.39	J	11	0.11
72918-21-9	1,2,3,7,8,9-HxCDF	0.19	J	11	0.072
60851-34-5	2,3,4,6,7,8-HxCDF	ND		11	0.076
35822-46-9	1,2,3,4,6,7,8-HpCDD	130	B	11	2.7
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.50	J	11	0.13
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		11	0.14
3268-87-9	OCDD	4400	B	22	6.3
39001-02-0	OCDF	3.3	J B	22	0.11
41903-57-5	Total TCDD	12	q	2.2	0.25
30402-14-3	Total TCDF	58	B	2.2	0.25
36088-22-9	Total PeCDD	5.0	J	11	0.26
30402-15-4	Total PeCDF	2.8	J q	11	0.17
34465-46-8	Total HxCDD	51	q	11	0.23
55684-94-1	Total HxCDF	1.7	J	11	0.094
37871-00-4	Total HpCDD	300	B	11	2.7
38998-75-3	Total HpCDF	0.50	J	11	0.13

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB091 (0-2)
Lab Sample ID: 320-77292-1
Matrix: Sediment
Lab File ID: 25AU2110D5_21.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:30
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.14(g)
Date Analyzed: 08/26/2021 01:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 55.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	67		25-164
89059-46-1	13C-2,3,7,8-TCDF	63		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	67		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	65		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	64		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	64		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	57		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	65		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	58		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	66		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	63		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	70		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	60		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	75		26-138
114423-97-1	13C-OCDD	80		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	73		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d
Lims ID: 320-77292-A-1-A
Client ID: 11215702-080321-BN-SJSB091 (0-2)
Sample Type: Client
Inject. Date: 26-Aug-2021 01:20:46 ALS Bottle#: 32 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-1-A 320-77292-A-1-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:31:07 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:42:10

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.567	37829655	0.79	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.053	38604385	0.77	1.6249	62.8	62.8	0.1667	0.1667	62.80	
2,3,7,8-TCDF	17.069	2961588	0.78	1.0239	7.492	7.492	0.0564	0.0564		
A Non-2,3,7,8-sub-TCDF	17.069	2204545	0.78	1.0239	5.577	5.577	0.0564	3.254		
S Total TCDF					13.1	13.1	0.0564	0.0564		
D 13C-2,3,7,8-TCDD	17.764	22767102	0.80	0.8993	66.9	66.9	0.1683	0.1683	66.92	
2,3,7,8-TCDD	17.779	553863	0.85	1.2541	1.940	1.940	0.0556	0.0556		M
$ 37Cl4-2,3,7,8-TCDD	17.779	12272736		1.1071	29.3	29.3	0.0688	0.0688	73.26	
A Non-2,3,7,8-sub-TCDD	17.530	238265	0.77	1.2541	0.8803	0.8345	0.0556	0.3679		RQMa
S Total TCDD					2.820	2.774	0.0556	0.0556		RQ
D 13C-1,2,3,7,8-PeCDF	22.006	29721186	1.58	1.2101	64.9	64.9	0.1066	0.1066	64.93	
1,2,3,7,8-PeCDF	22.020	76249	1.35	1.0611	0.2418	0.2418	0.0360	0.0360		M
D 13C-2,3,4,7,8-PeCDF	23.329	29803174	1.55	1.2395	63.6	63.6	0.1041	0.1041	63.56	
2,3,4,7,8-PeCDF	23.356	34108	1.55	1.0184	0.1255	0.1124	0.0402	0.0402		RQM
A F1 PeCDFs	19.851						0.0453	0.0453		
A Non-2,3,7,8-sub-PeCDF	23.067	87372	1.55	1.0398	0.3589	0.2823	0.0380	0.1941		RQM
S Total PeCDF					0.7261	0.6365	0.0381	0.0381		RQ
D 13C-1,2,3,7,8-PeCDD	24.052	19383695	1.64	0.7612	67.3	67.3	0.0731	0.0731	67.31	
1,2,3,7,8-PeCDD	24.079						0.0583	0.0583		
A Non-2,3,7,8-sub-PeCDD	23.696	230196	1.59	1.0484	1.133	1.133	0.0583	0.5322		M
S Total PeCDD					1.133	1.133	0.0583	0.0583		
D 13C-1,2,3,4,7,8-HxCDF	30.173	26042592	0.52	1.0837	65.2	65.2	0.1691	0.1691	65.19	
1,2,3,4,7,8-HxCDF	30.173	71113	1.22	1.0851	0.2516	0.2516	0.0264	0.0264		
D 13C-1,2,3,6,7,8-HxCDF	30.385	24202430	0.53	1.1279	58.2	58.2	0.1625	0.1625	58.20	
1,2,3,6,7,8-HxCDF	30.426	23832	1.05	1.1260	0.0874	0.0874	0.0251	0.0251		
D 13C-2,3,4,6,7,8-HxCDF	31.291	24871181	0.52	1.0637	63.4	63.4	0.1723	0.1723	63.42	
2,3,4,6,7,8-HxCDF	31.317						0.0172	0.0172		
D 13C-1,2,3,7,8,9-HxCDF	32.129	23550300	0.51	0.9676	66.0	66.0	0.1894	0.1894	66.02	
1,2,3,7,8,9-HxCDF	32.156	11892	1.13	1.1664	0.0433	0.0433	0.0162	0.0162		M
A Non-2,3,7,8-sub-HxCDF	30.331						0.0203	0.0203		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.3824	0.3824	0.0212	0.0212		
* 13C-1,2,3,7,8,9-HxCDD	31.943	36867506	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.490	17368565	1.23	0.7334	64.2	64.2	0.1953	0.1953	64.23	
1,2,3,4,7,8-HxCDD	31.504	62686	1.38	1.0640	0.3392	0.3392	0.0544	0.0544		
D 13C-1,2,3,6,7,8-HxCDD	31.610	18518120	1.25	0.8802	57.1	57.1	0.1627	0.1627	57.07	
1,2,3,6,7,8-HxCDD	31.624	126055	1.36	1.0001	0.6807	0.6807	0.0530	0.0530		M
1,2,3,7,8,9-HxCDD	31.956	255817	1.21	1.1325	1.259	1.259	0.0488	0.0488		M
A Non-2,3,7,8-sub-HxCDD	30.519	1758306	1.24	1.0655	9.239	9.196	0.0519	5.529		RQ
S Total HxCDD					11.5	11.5	0.0521	0.0521		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	17081664	0.45	0.7730	59.9	59.9	0.8040	0.8040	59.94	
1,2,3,4,6,7,8-HpCDF	33.615	27821	1.10	1.4413	0.1130	0.1130	0.0289	0.0289		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	19293124	0.44	0.7008	74.7	74.7	0.8869	0.8869	74.67	
1,2,3,4,7,8,9-HpCDF	34.673						0.0308	0.0308		
A Non-2,3,7,8-sub-HpCDF	34.138						0.0298	0.0298		
S Total HpCDF					0.1130	0.1130	0.0298	0.0298		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	16627397	1.02	0.6472	69.7	69.7	0.8849	0.8849	69.68	
1,2,3,4,6,7,8-HpCDD	34.405	5205720	1.04	1.0943	28.6	28.6	0.5995	0.5995		
A Non-2,3,7,8-sub-HpCDD	34.223	7037034	1.03	1.0943	38.7	38.7	0.5995	38.7		
S Total HpCDD					67.3	67.3	0.5995	0.5995		
D 13C-OCDD	36.701	26284382	0.89	0.4472	159.4	159.4	0.2362	0.2362	79.72	
OCDF	36.713	142018	0.90	1.4382	0.7514	0.7514	0.0252	0.0252		M
OCDD	36.713	143989973	0.90	1.1070	989.7	989.7	1.427	1.427		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d
Lims ID: 320-77292-A-1-A
Client ID: 11215702-080321-BN-SJSB091 (0-2)
Sample Type: Client
Inject. Date: 26-Aug-2021 01:20:46 ALS Bottle#: 32 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-1-A 320-77292-A-1-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:31:07 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:42:10

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.567	17.598	-2		16730280	4436159	3926	9815	1130		a
333.9339	17.567	17.598	-2		21099375	5565485	2130	5325	2613	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.053	17.084	-2	0.971	16772432	4386937	7959	19897	551		
317.9389	17.053	17.084	-2	0.971	21831953	5630673	2880	7200	1955	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.069	17.099	-2	1.001	1301598	328316	967	2417	340		
305.8987	17.069	17.099	-2	1.001	1659990	414801	1346	3365	308	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.179	17.069	-113	0.890	39906	11494	967	2417	12		
305.8987	15.179	17.069	-113	0.890	51848	15662	1346	3365	12	0.77(0.65-0.89)	
303.9016	15.677	17.069	-83	0.919	26022	7222	967	2417	7		
305.8987	15.663	17.069	-84	0.918	34662	9150	1346	3365	7	0.75(0.65-0.89)	
303.9016	15.965	17.069	-66	0.936	37138	7536	967	2417	8		
305.8987	15.950	17.069	-67	0.935	44421	10060	1346	3365	7	0.84(0.65-0.89)	
303.9016	16.177	17.069	-53	0.949	41822	11638	967	2417	12		
305.8987	16.177	17.069	-53	0.949	56616	12247	1346	3365	9	0.74(0.65-0.89)	
303.9016	16.419	17.069	-39	0.963	53762	12826	967	2417	13		
305.8987	16.419	17.069	-39	0.963	66830	19224	1346	3365	14	0.80(0.65-0.89)	
303.9016	16.691	17.069	-23	0.979	570720	158247	967	2417	164		
305.8987	16.691	17.069	-23	0.979	715596	188843	1346	3365	140	0.80(0.65-0.89)	
303.9016	17.507	17.069	26	1.027	100916	23563	967	2417	24		
305.8987	17.492	17.069	25	1.026	143135	31827	1346	3365	24	0.71(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.883	17.069	109	1.107	98926	22711	967	2417	23		
305.8987	18.883	17.069	109	1.107	122225	28641	1346	3365	21	0.81(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.764	17.779	-1	1.011	10133314	2442144	3926	9815	622		
333.9339	17.764	17.779	-1	1.011	12633788	3023506	2130	5325	1419	0.80(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	17.779	17.794	-1	1.001	253755	60814	890	2225	68		M
321.8936	17.779	17.794	-1	1.001	300108	75548	635	1587	119	0.85(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	17.779	17.809	-2	1.012	12272736	3039984	3046	7615	998		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	16.660	17.530	-52	0.938	48124	12010	890	2225	13		
321.8936	16.645	17.530	-53	0.937	56916	16476	635	1587	26	0.85(0.65-0.89)	
319.8965	17.673	17.530	9	0.995	38895	10125	890	2225	11		M
321.8936	17.658	17.530	8	0.994	50108	12607	635	1587	20	0.78(0.65-0.89)	M
319.8965	18.142	17.530	37	1.021	19238	5080	890	2225	6		
321.8936	18.127	17.530	36	1.020	38067	9157	635	1587	14	0.51(0.65-0.89)	
	Empc Correction				24984	6597	635	1587	10		
13C-1,2,3,7,8-PeCDF											
351.9000	22.006	22.020	-1	1.253	18193978	3396990	2943	7357	1154		
353.8970	22.006	22.020	-1	1.253	11527208	2229406	2219	5547	1005	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.020	22.047	-2	1.001	43758	9050	288	720	31		M
341.8567	22.034	22.047	-1	1.001	32491	6086	571	1427	11	1.35(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.329	23.343	-1	1.328	18130259	3176135	2943	7357	1079		
353.8970	23.329	23.343	-1	1.328	11672915	2061616	2219	5547	929	1.55(1.32-1.78)	
2,3,4,7,8-PeCDF											RQM
339.8597	23.356	23.370	-1	1.001	24702	4319	288	720	15		
	Empc Correction				20732	4140	288	720	14		
341.8567	23.384	23.370	1	1.002	13376	2671	571	1427	5	1.85(1.32-1.78)	M
A F1 PeCDFs											
339.8597	19.851						320	800			
341.8567	19.851						703	1757			
A Non-2,3,7,8-sub-PeCDF											RQM
339.8597	20.411	23.067	-159	0.927	36502	5656	288	720	20		
341.8567	20.424	23.067	-158	0.928	41297	7121	571	1427	12	0.88(1.32-1.78)	
	Empc Correction				23549	3649	571	1427	6		
339.8597	20.711	23.067	-141	0.941	16607	3602	288	720	13		
341.8567	20.725	23.067	-140	0.942	16650	2820	571	1427	5	1.00(1.32-1.78)	M
	Empc Correction				10714	2323	571	1427	4		
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.369	12054870	1986840	1208	3020	1645		
369.8919	24.038	24.052	-1	1.368	7328825	1245704	1017	2542	1225	1.64(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											
355.8546	24.079						459	1147			
357.8516	24.079						332	830			
A Non-2,3,7,8-sub-PeCDD											M
355.8546	21.638	23.696	-123	0.900	65778	13228	459	1147	29		M
357.8516	21.638	23.696	-123	0.900	42378	7594	332	830	23	1.55(1.32-1.78)	M
355.8546	22.593	23.696	-66	0.939	51216	8539	459	1147	19		M
357.8516	22.620	23.696	-64	0.940	30077	5741	332	830	17	1.70(1.32-1.78)	
355.8546	23.084	23.696	-37	0.960	24236	4039	459	1147	9		
357.8516	23.084	23.696	-37	0.960	16511	3425	332	830	10	1.47(1.32-1.78)	M
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.173	30.186	-1	0.945	8863906	1537634	2740	6850	561		
385.8610	30.173	30.186	-1	0.945	17178686	3026129	5071	12677	597	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.173	30.212	-2	1.000	39125	6041	291	727	21		
375.8178	30.199	30.212	-1	1.001	31988	6081	231	577	26	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.385	30.399	-1	0.951	8371019	1617050	2740	6850	590		
385.8610	30.385	30.399	-1	0.951	15831411	2999611	5071	12677	592	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.426	30.412	1	1.001	12203	2694	291	727	9		
375.8178	30.426	30.412	1	1.001	11629	2840	231	577	12	1.05(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.980	8499155	2209629	2740	6850	806		
385.8610	31.291	31.291	0	0.980	16372026	4284776	5071	12677	845	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317						291	727			
375.8178	31.317						231	577			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.142	-1	1.006	7998224	2357198	2740	6850	860		
385.8610	32.129	32.142	-1	1.006	15552076	4560323	5071	12677	899	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.156	32.156	0	1.001	6320	2364	291	727	8		M
375.8178	32.156	32.156	0	1.001	5572	1376	231	577	6	1.13(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.331						291	727			
375.8178	30.331						231	577			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.956	-1		20364012	5887084	3328	8320	1769		
403.8529	31.943	31.956	-1		16503494	4766029	2775	6937	1717	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.490	31.503	-1	0.986	9568901	2656931	3328	8320	798		
403.8529	31.490	31.503	-1	0.986	7799664	2197389	2775	6937	792	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.504	31.517	-1	1.000	36322	9529	574	1435	17		
391.8127	31.504	31.517	-1	1.000	26364	7597	550	1375	14	1.38(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.990	10282577	2969008	3328	8320	892		
403.8529	31.610	31.610	0	0.990	8235543	2335521	2775	6937	842	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.624	31.623	0	1.000	72574	21358	574	1435	37		M
391.8127	31.624	31.623	0	1.000	53481	14798	550	1375	27	1.36(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											M
389.8157	31.956	31.969	-1	1.015	140023	31520	574	1435	55		M
391.8127	31.969	31.969	0	1.015	115794	29475	550	1375	54	1.21(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.055	30.519	-88	0.919	589244	73587	574	1435	128		
391.8127	29.055	30.519	-88	0.919	467831	62596	550	1375	114	1.26(1.05-1.43)	
389.8157	30.266	30.519	-15	0.957	32493	4634	574	1435	8		
	Empc Correction				24352	4916	574	1435	9		
391.8127	30.266	30.519	-15	0.957	19639	3965	550	1375	7	1.65(1.05-1.43)	
389.8157	30.692	30.519	10	0.971	319041	59206	574	1435	103		
391.8127	30.692	30.519	10	0.971	279452	53259	550	1375	97	1.14(1.05-1.43)	
389.8157	30.931	30.519	25	0.979	31641	5981	574	1435	10		
391.8127	30.905	30.519	23	0.978	27106	6229	550	1375	11	1.17(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	5275504	2031997	6273	15682	324		
419.8220	33.603	33.603	0	1.052	11806160	4714794	20212	50530	233	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.615	33.603	1	1.000	14577	5418	894	2235	6		M
409.7789	33.615	33.603	1	1.000	13244	4798	230	575	21	1.10(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.672	0	1.085	5889618	2085602	6273	15682	332		
419.8220	34.672	34.672	0	1.085	13403506	4849651	20212	50530	240	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673						894	2235			
409.7789	34.673						230	575			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						894	2235			
409.7789	34.138						230	575			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.077	8415273	2961790	9958	24895	297		
437.8140	34.393	34.393	0	1.077	8212124	2885580	14449	36122	200	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.393	1	1.000	2648320	920722	7735	19337	119		
425.7737	34.405	34.393	1	1.000	2557400	867298	7609	19022	114	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.858	34.223	-22	0.984	3566484	1330342	7735	19337	172		
425.7737	33.858	34.223	-22	0.984	3470550	1274908	7609	19022	168	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.701	0	1.149	12411429	3854622	2602	6505	1481		
471.7750	36.701	36.701	0	1.149	13872953	4378252	1898	4745	2307	0.89(0.76-1.02)	

Report Date: 27-Aug-2021 08:31:07 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
OCDF											M
441.7428	36.713	36.797	-5	1.000	67461	15402	254	635	61		M
443.7399	36.725	36.797	-4	1.001	74557	18074	343	857	53	0.90(0.76-1.02)	M
OCDD											
457.7377	36.713	36.713	0	1.000	68064216	21140610	11215	28037	1885		
459.7348	36.713	36.713	0	1.000	75925757	23183337	14801	37002	1566	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 27-Aug-2021 08:31:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d
Lims ID: 320-77292-A-1-A
Client ID: 11215702-080321-BN-SJSB091 (0-2)
Inject. Date: 26-Aug-2021 01:20:46 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 7

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	38604385	10017610

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	38604385	10017610

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.179	39906	11494	51848	15662	0.2321	0.77	
15.677	26022	7222	34662	9150	0.1535	0.75	
15.965	37138	7536	44421	10060	0.2063	0.84	
16.177	41822	11638	56616	12247	0.2490	0.74	
16.419	53762	12826	66830	19224	0.3051	0.80	
16.691	570720	158247	715596	188843	3.25	0.80	
17.507	100916	23563	143135	31827	0.6174	0.71	
18.883	98926	22711	122225	28641	0.5595	0.81	
Signal Totals:							
	969212	255237	1235333	315654			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2204545	570891				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 5.577 = (2204545 * 100.000) / (38604385 * 1.024)

Report Date: 27-Aug-2021 08:31:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Lims ID:	320-77292-A-1-A		
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Inject. Date:	26-Aug-2021 01:20:46	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	7

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	22767102	5465650

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	22767102	5465650

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.660	48124	12010	56916	16476	0.3679	0.85	
17.673	38895	10125	50108	12607	0.3117	0.78	M
18.142	19238	5080	38067	9157	0.2007	0.51	RQ
18.142	19238	5080	24984	6597	0.1549		Empc Correction
Signal Totals:							
	106257	27215	132008	35680			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	251348	65455				0.73	RQM
	238265	62895					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8803 = (251348 * 100.000) / (22767102 * 1.254)
Empc Amount: 0.8345 = (238265 * 100.000) / (22767102 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 27-Aug-2021 08:31:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Lims ID:	320-77292-A-1-A		
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Inject. Date:	26-Aug-2021 01:20:46	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	7

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	29721186	5626396
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	29803174	5237751

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	29762180	5432073

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.411	36502	5656	41297	7121	0.2514	0.88	RQ
20.411	36502	5656	23549	3649	0.1941		Empc Correction
20.711	16607	3602	16650	2820	0.1075	1.00	RQM
20.711	16607	3602	10714	2323	0.0883		Empc Correction
Signal Totals:							
	53109	9258	34263	5972			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	111056	19199				0.92	RQM
	87372	15230					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.3589 = (111056 * 100.000) / (29762180 * 1.040)

Empc Amount: 0.2823 = (87372 * 100.000) / (29762180 * 1.040)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 27-Aug-2021 08:31:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Lims ID:	320-77292-A-1-A		
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Inject. Date:	26-Aug-2021 01:20:46	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	7

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	19383695	3232544

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	19383695	3232544

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.638	65778	13228	42378	7594	0.5322	1.55	M
22.593	51216	8539	30077	5741	0.4000	1.70	M
23.084	24236	4039	16511	3425	0.2005	1.47	M
Signal Totals:							
	141230	25806	88966	16760			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	230196	42566				1.59	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.133 = (230196 * 100.000) / (19383695 * 1.048)

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 27-Aug-2021 08:31:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Lims ID:	320-77292-A-1-A		
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Inject. Date:	26-Aug-2021 01:20:46	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	7

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	17368565	4854320
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	18518120	5304529
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	17943342	5079424

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.055	589244	73587	467831	62596	5.53	1.26	
30.266	32493	4634	19639	3965	0.2727	1.65	RQ
30.266	24352	4916	19639	3965	0.2301		Empc Correction
30.692	319041	59206	279452	53259	3.13	1.14	
30.931	31641	5981	27106	6229	0.3073	1.17	
Signal Totals:							
	964278	143690	794028	126049			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1766447	269457				1.22	RQ
	1758306	269739					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 9.239 = (1766447 * 100.000) / (17943342 * 1.066)
Empc Amount: 9.196 = (1758306 * 100.000) / (17943342 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 08:31:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Lims ID:	320-77292-A-1-A		
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Inject. Date:	26-Aug-2021 01:20:46	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	7

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	16627397	5847370

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	16627397	5847370

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.858	3566484	1330342	3470550	1274908	38.7	1.03	
Signal Totals:							
	3566484	1330342	3470550	1274908			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7037034	2605250				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 38.675 = (7037034 * 100.000) / (16627397 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 17.78
Area: 371789
Amount: 2.196677
Amount Units: pg/ul

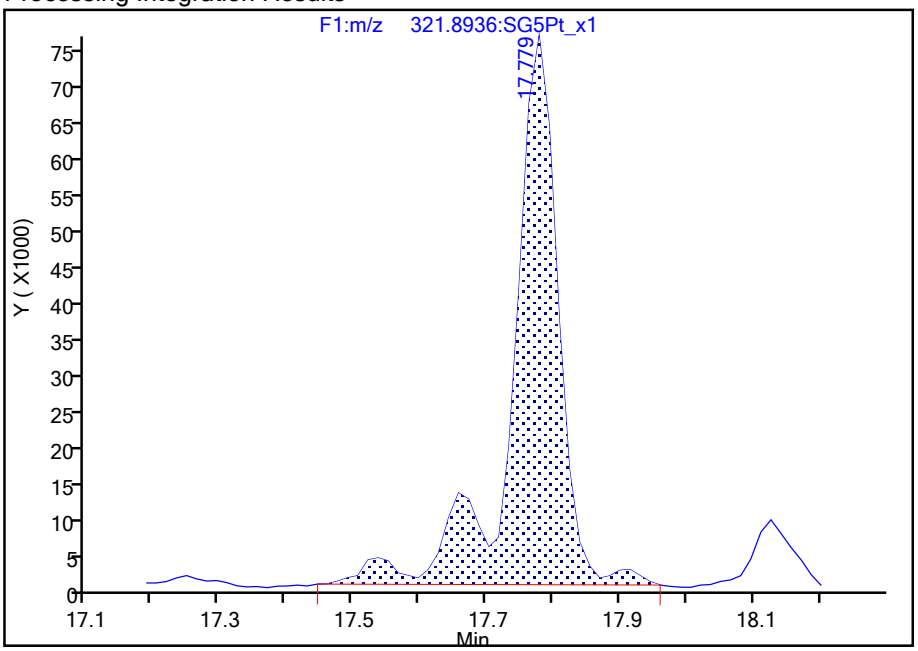

Manual Integration Results

RT: 17.78
Area: 300108
Amount: 1.939794
Amount Units: pg/ul

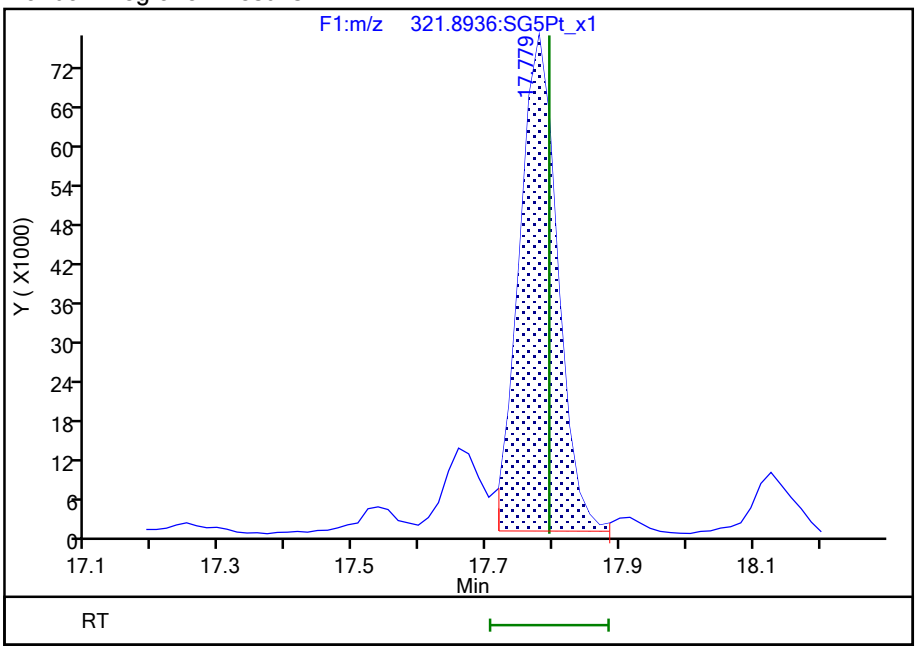

Reviewer: dadunj, 27-Aug-2021 08:27:16

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 17.78
Area: 255421
Amount: 2.196677
Amount Units: pg/ul

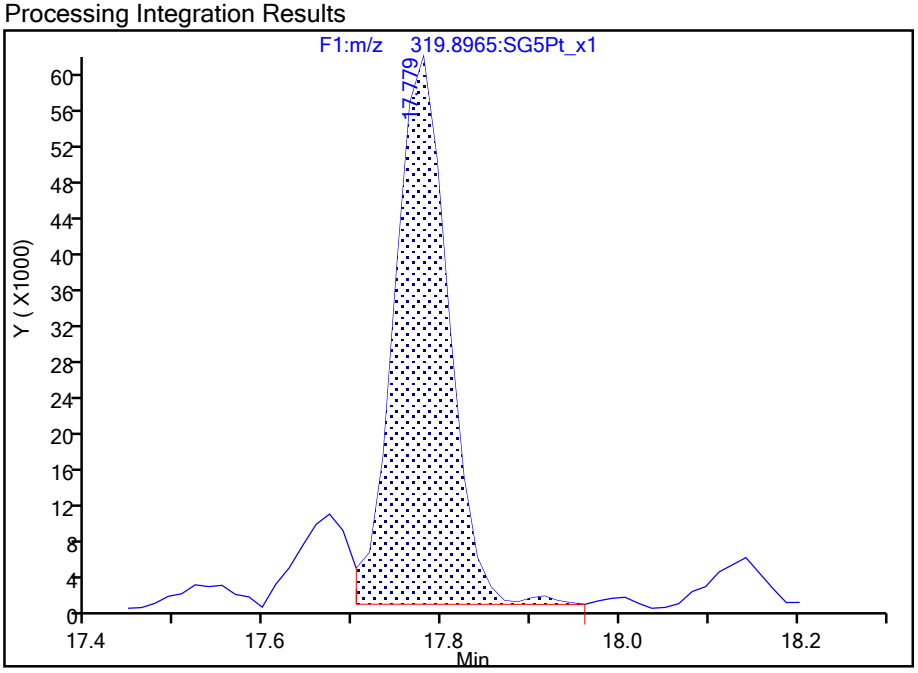

Manual Integration Results

RT: 17.78
Area: 253755
Amount: 1.939794
Amount Units: pg/ul

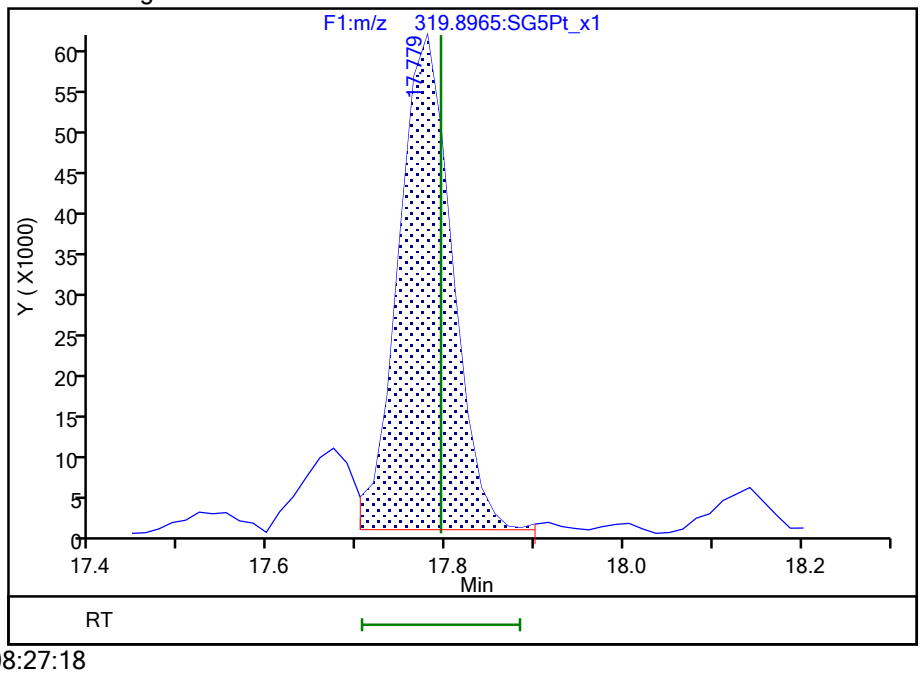

Reviewer: dadunj, 27-Aug-2021 08:27:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.59- 19.47)

Signal: 1

Processing Integration Results

RT = 17.673 Area = 38895

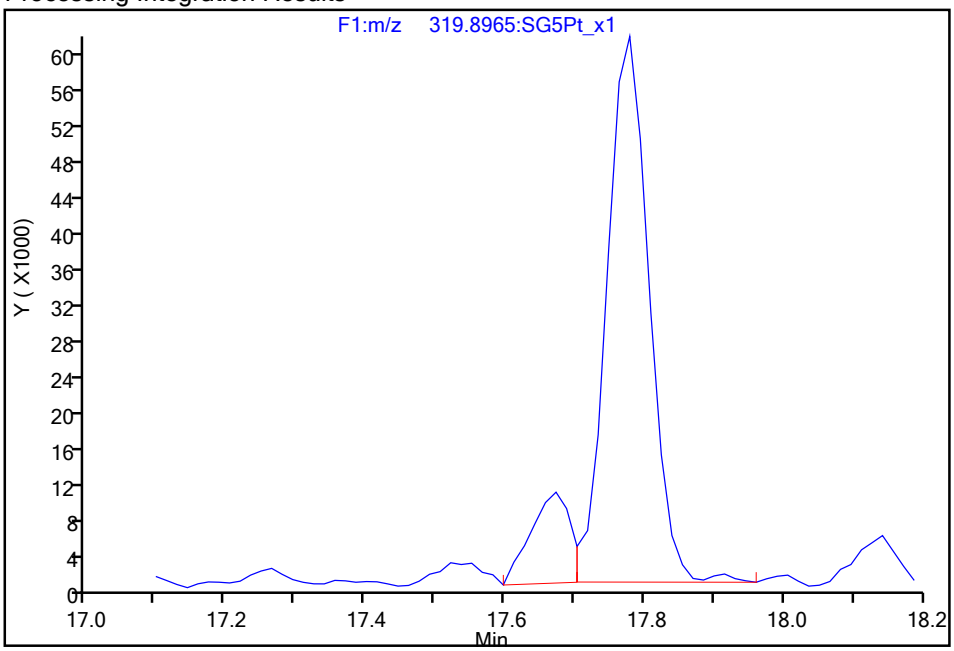

Manual Integration Results

RT = 17.673 Area = 38895

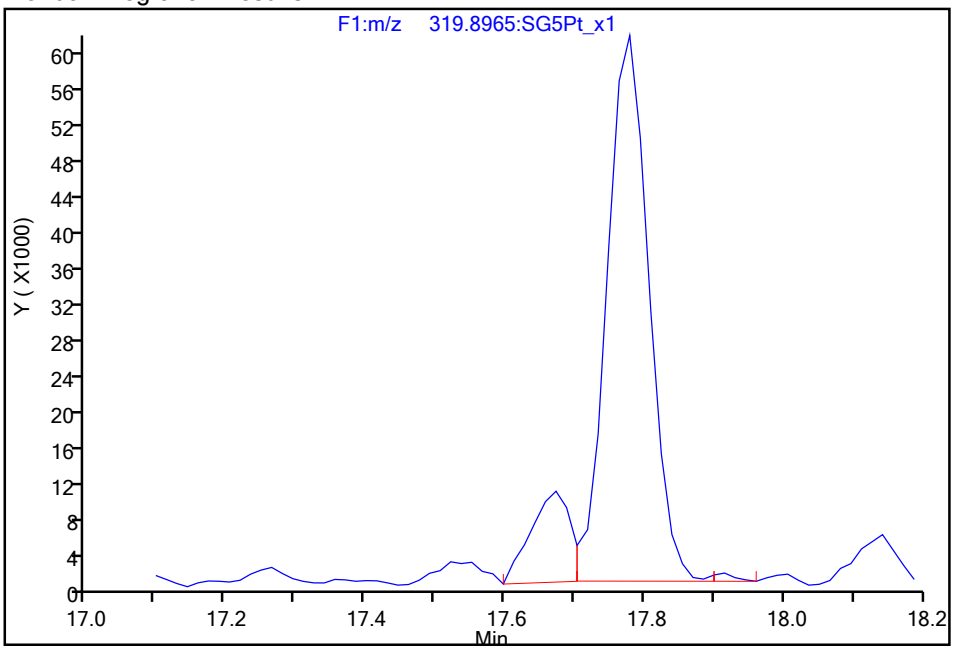

Reviewer: dadunj, 27-Aug-2021 08:27:25

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (15.59- 19.47)

Signal: 2

Processing Integration Results

Not Detected
RT: 15.59- 19.47

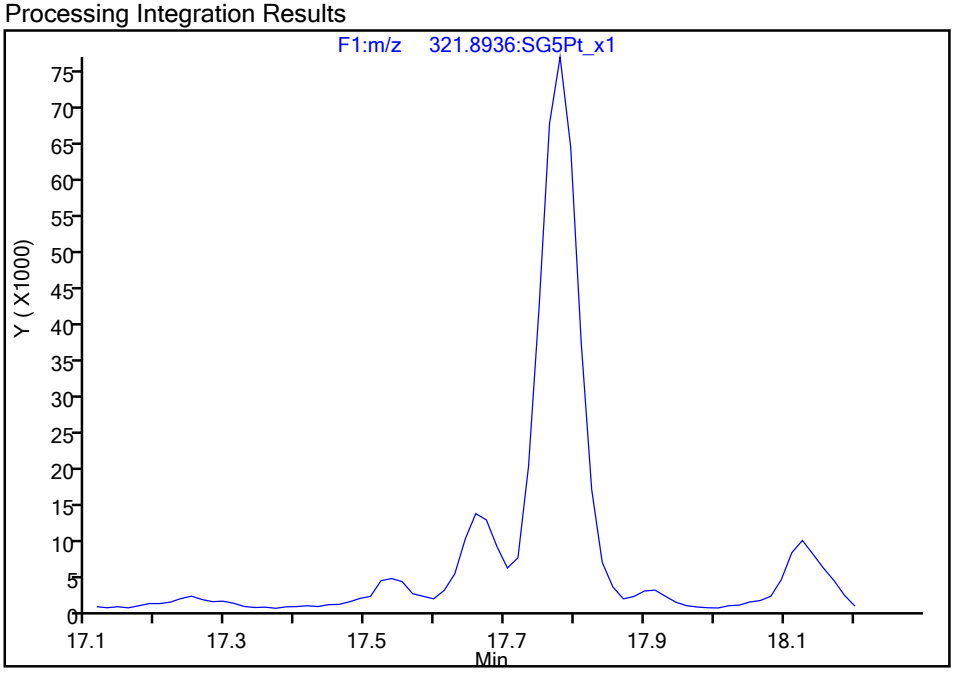

Manual Integration Results

RT = 17.658 Area = 50108 M

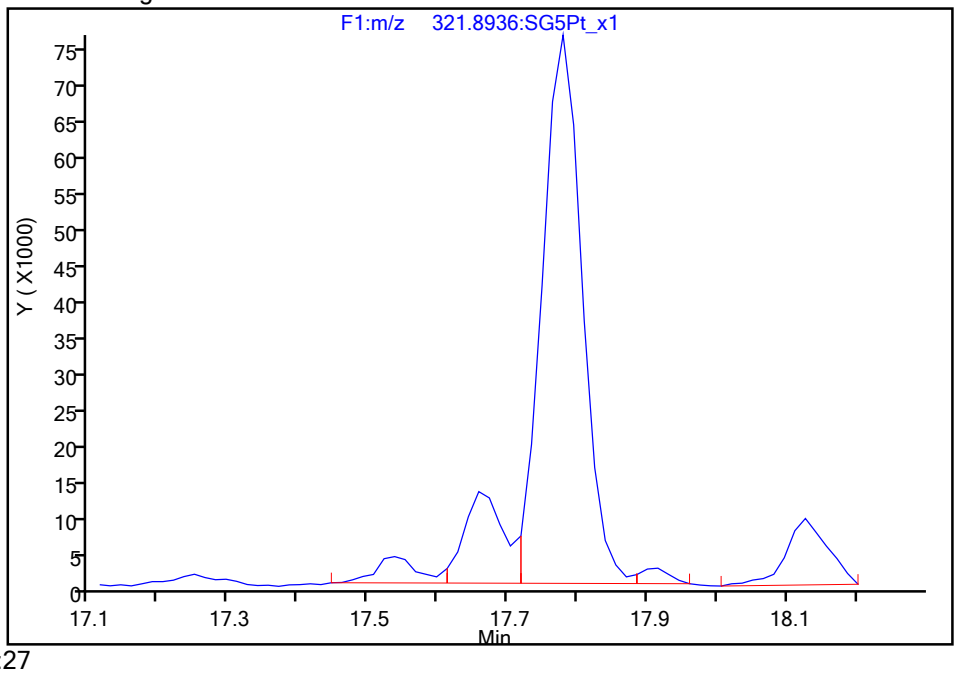

Reviewer: dadunj, 27-Aug-2021 08:27:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.02
Area: 44935
Amount: 0.248378
Amount Units: pg/ul

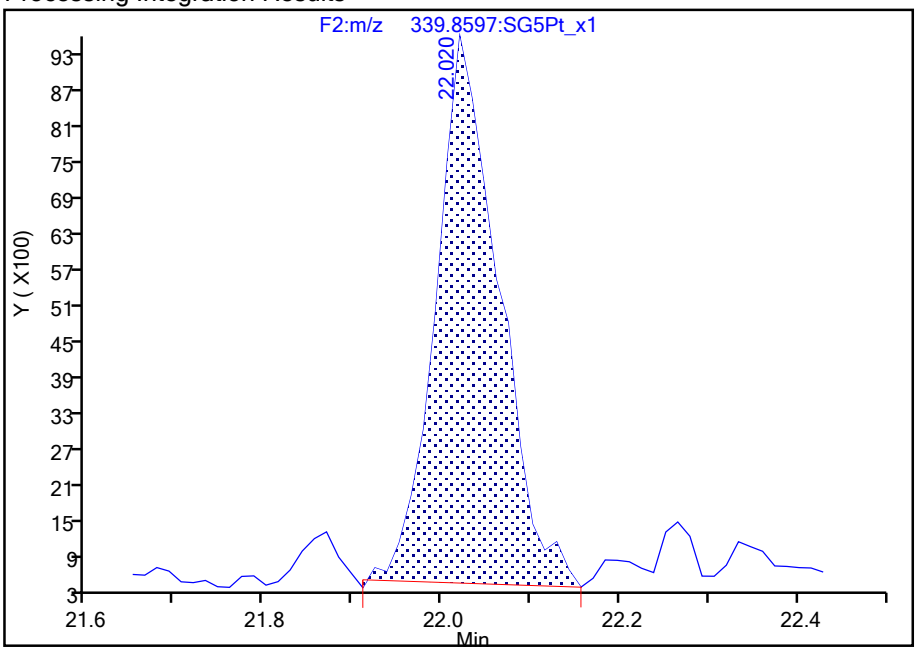

Manual Integration Results

RT: 22.02
Area: 43758
Amount: 0.241767
Amount Units: pg/ul

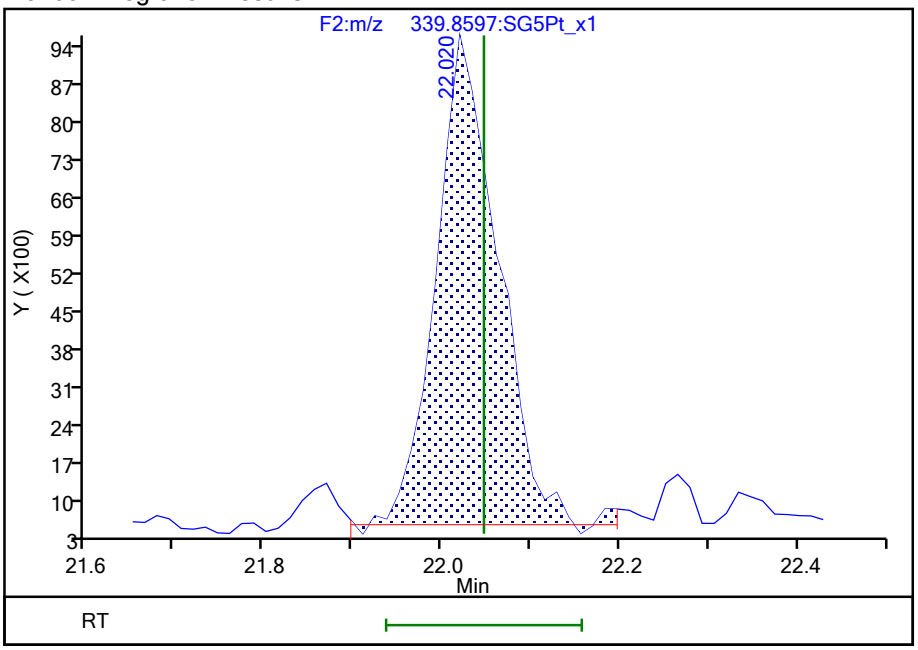

Reviewer: dadunj, 27-Aug-2021 08:28:18

Audit Action: Manually Integrated Audit Reason: Baseline

793280

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.03
Area: 33399
Amount: 0.248378
Amount Units: pg/ul

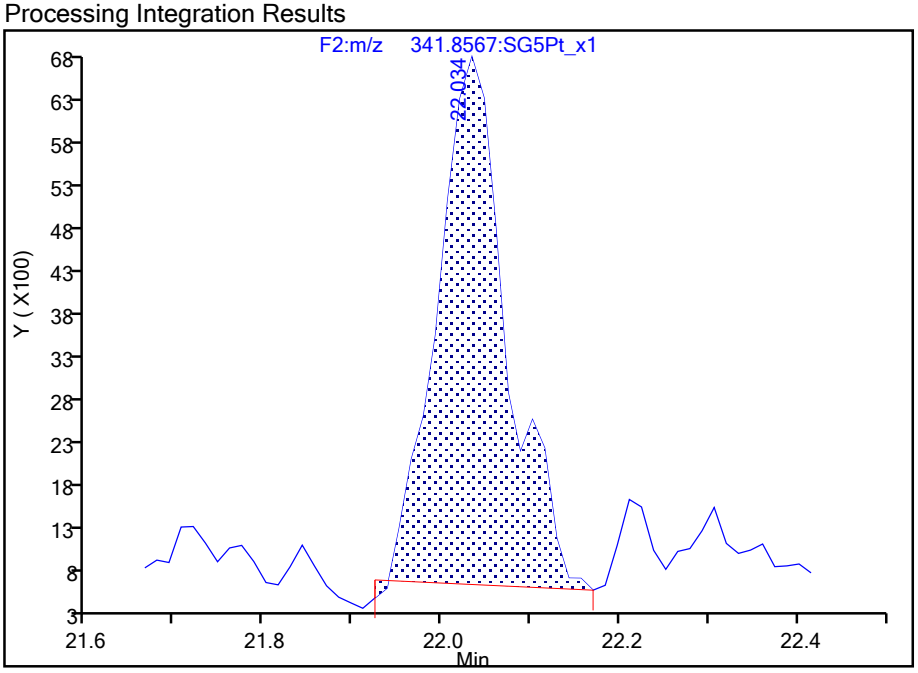

Manual Integration Results

RT: 22.03
Area: 32491
Amount: 0.241767
Amount Units: pg/ul

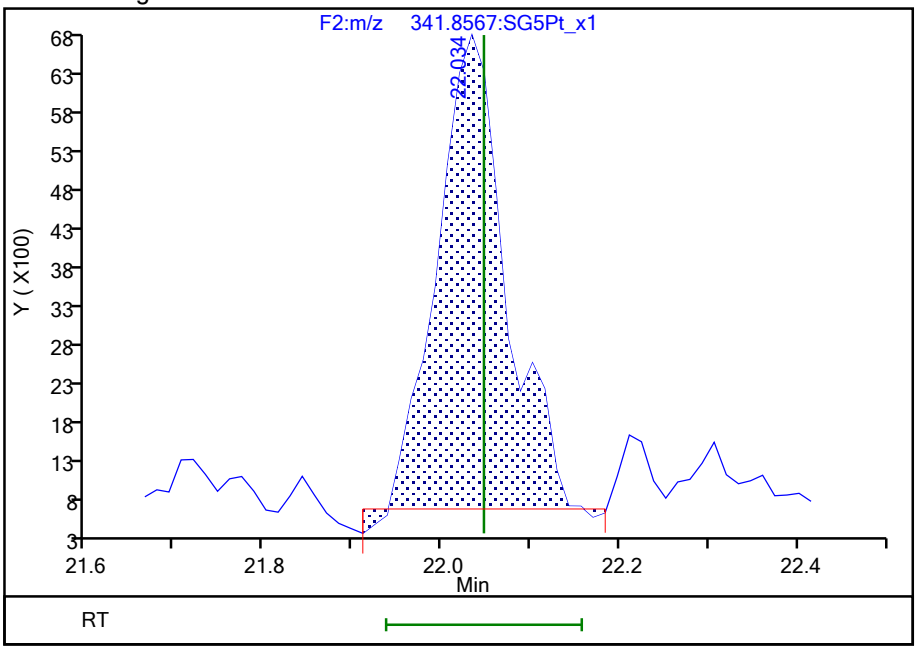

Reviewer: dadunj, 27-Aug-2021 08:28:23

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.38
Area: 13814
Amount: 0.126897
Amount Units: pg/ul

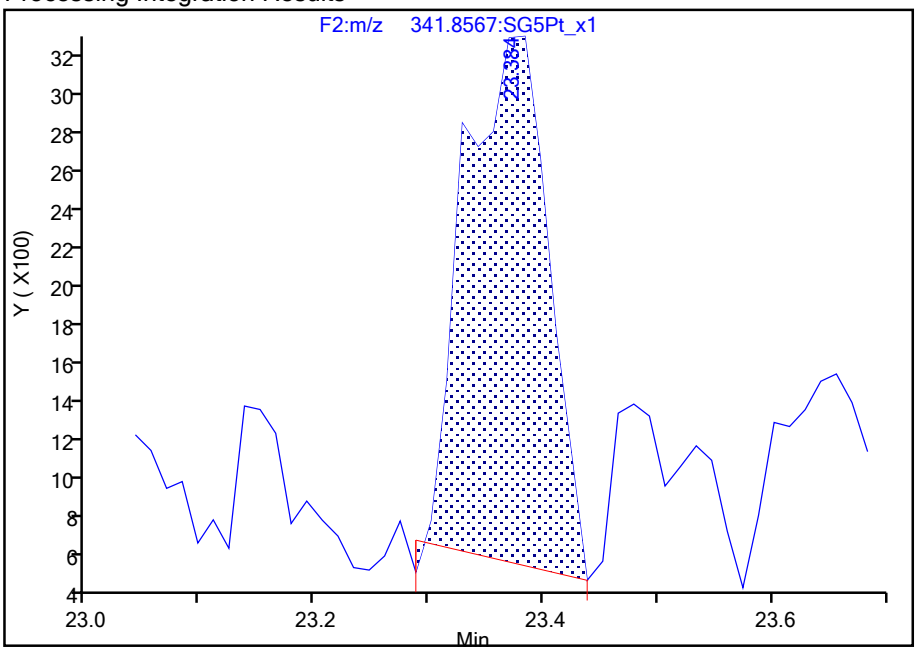

Manual Integration Results

RT: 23.38
Area: 13376
Amount: 0.125454
Amount Units: pg/ul

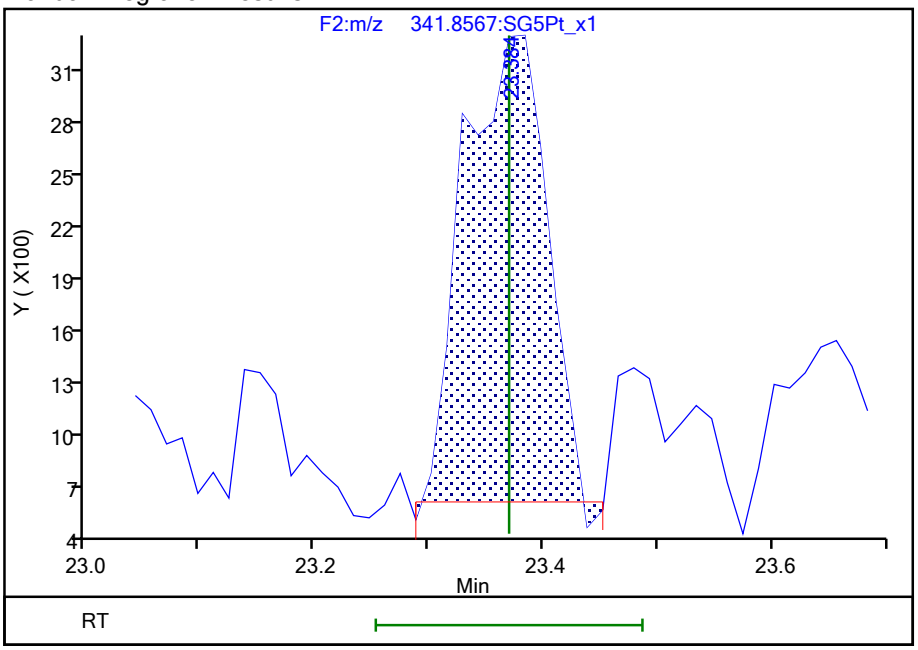

Reviewer: dadunj, 27-Aug-2021 08:28:39

Audit Action: Split an Integrated Peak Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDF, Signal: 2, m/z: 341.8567, RT: (20.02- 26.12)

Signal: 2

Processing Integration Results

RT = 20.725 Area = 20821

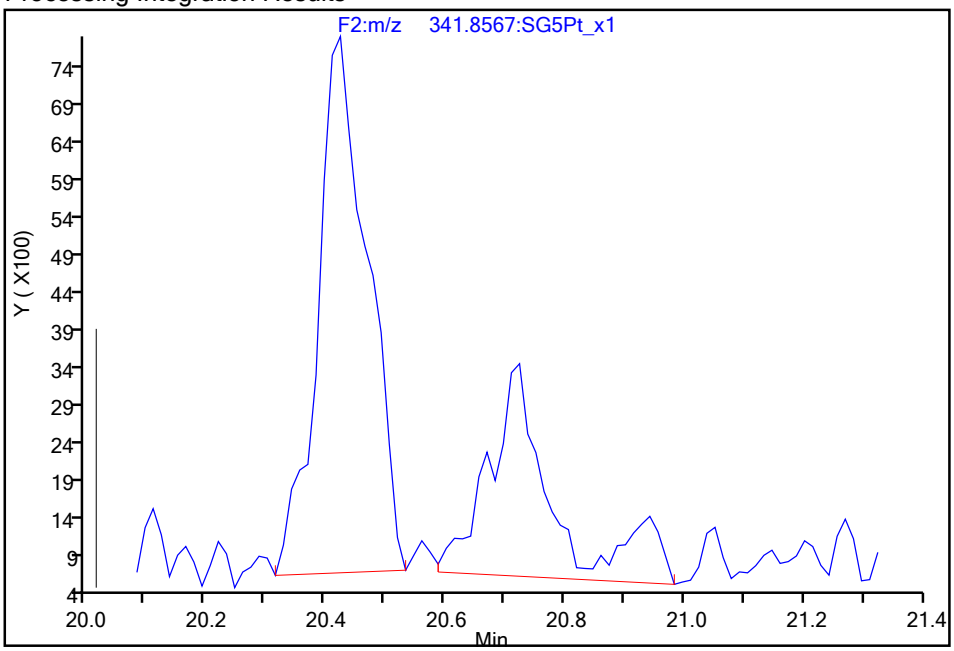

Manual Integration Results

RT = 20.725 Area = 16650 M

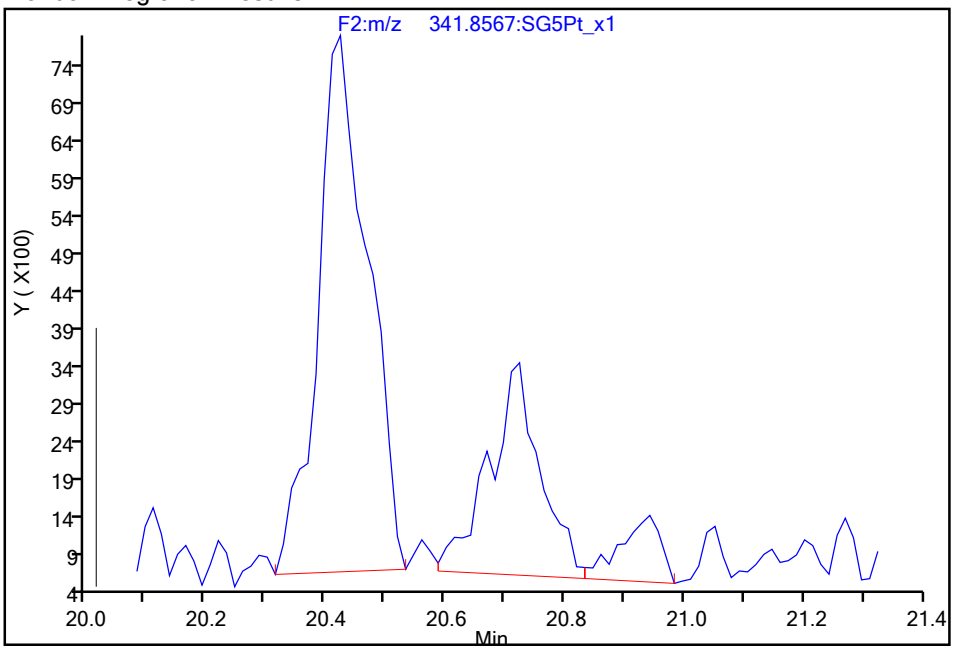

Reviewer: dadunj, 27-Aug-2021 08:28:47

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 27-Aug-2021 08:31:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 21.638 Area = 68343

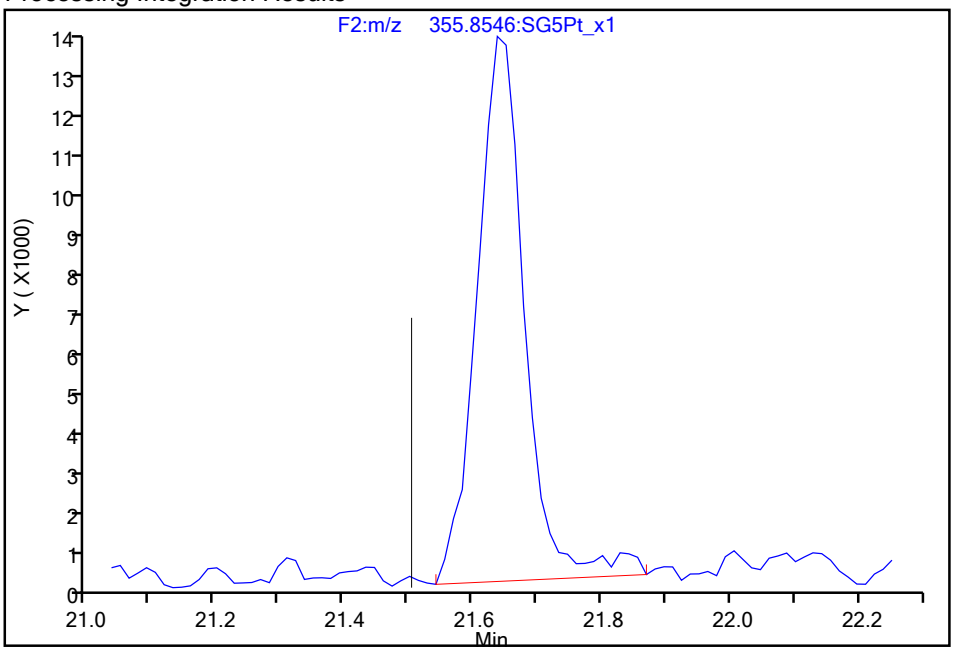

Manual Integration Results

RT = 21.638 Area = 65778 M

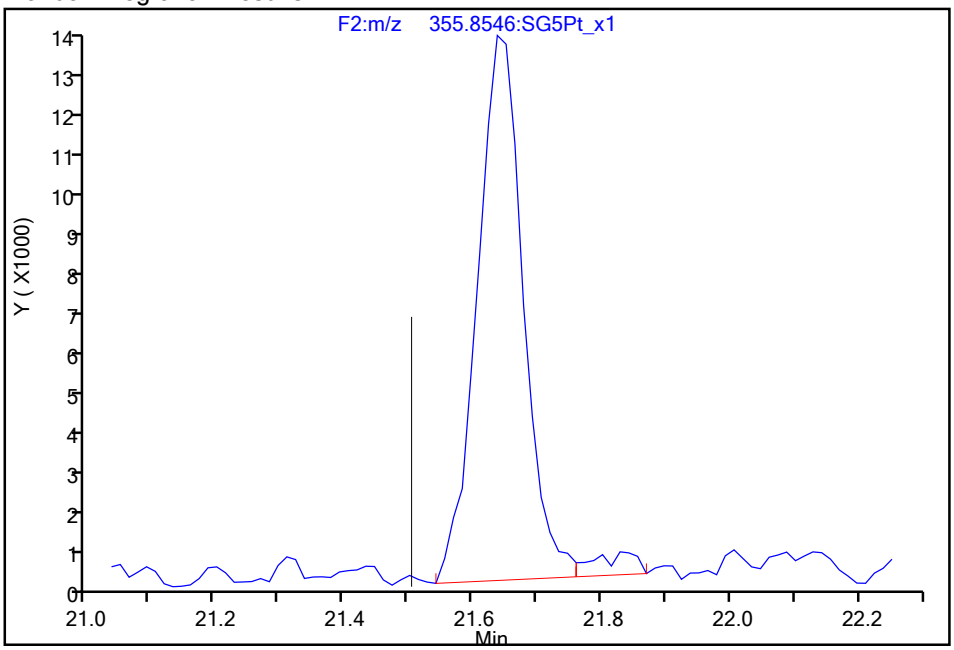

Reviewer: dadunj, 27-Aug-2021 08:28:59

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.50- 25.89)

Signal: 2

Processing Integration Results

RT = 21.638 Area = 53498

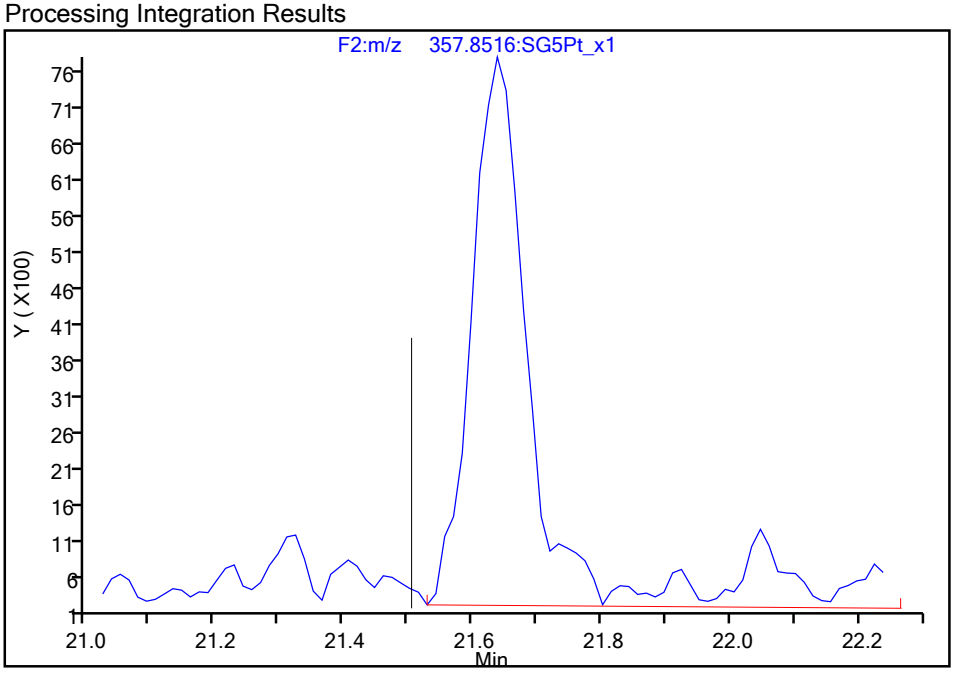

Manual Integration Results

RT = 21.638 Area = 42378 M

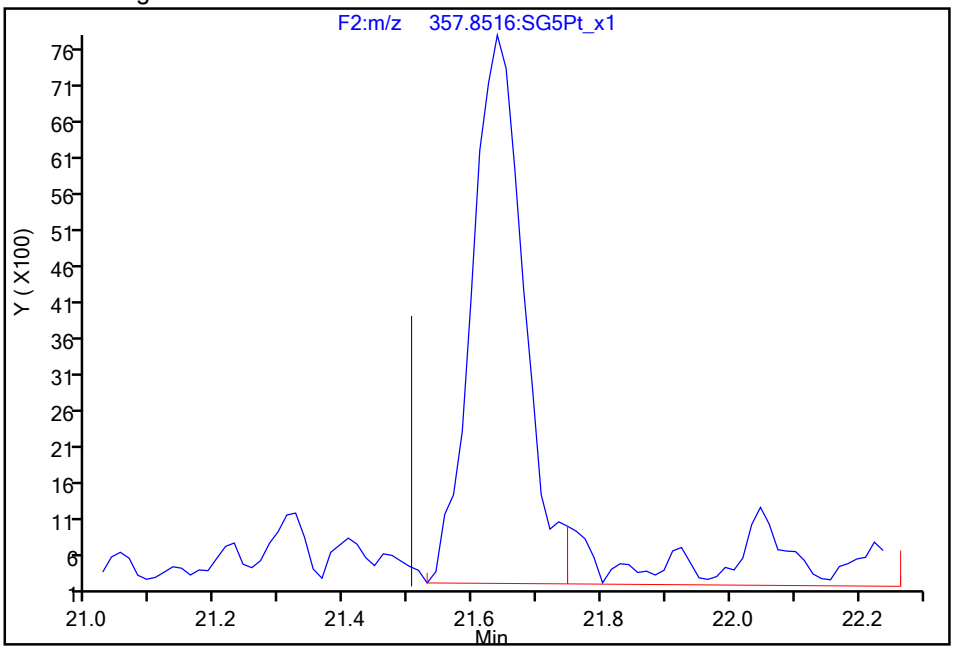

Reviewer: dadunj, 27-Aug-2021 08:28:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 22.593 Area = 53562

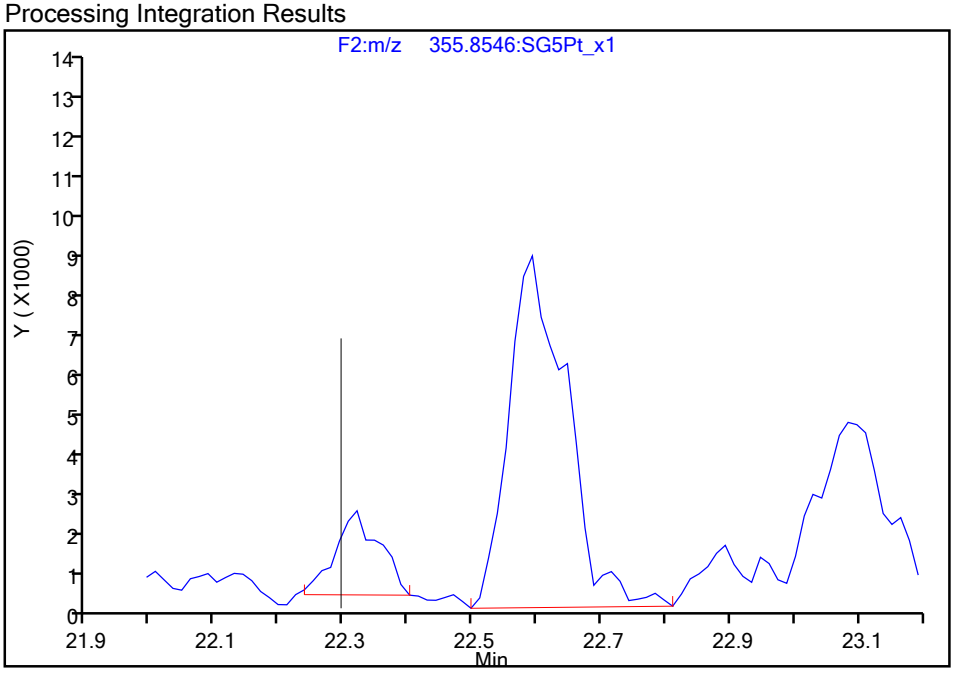

Manual Integration Results

RT = 22.593 Area = 51216 M

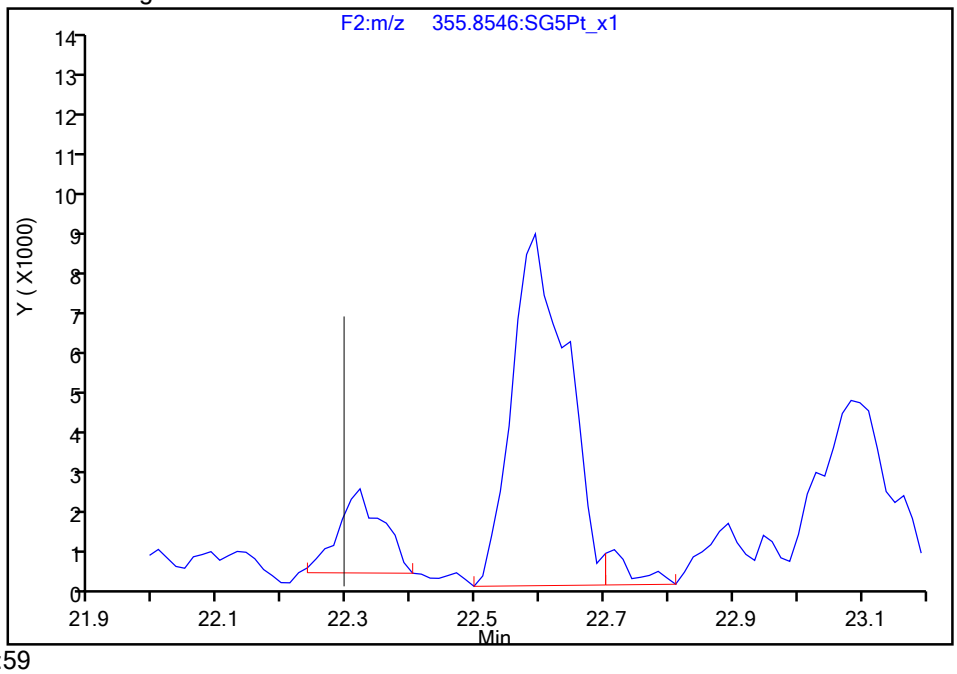

Reviewer: dadunj, 27-Aug-2021 08:28:59

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.50- 25.89)

Signal: 2

Processing Integration Results

RT = 23.084 Area = 23534

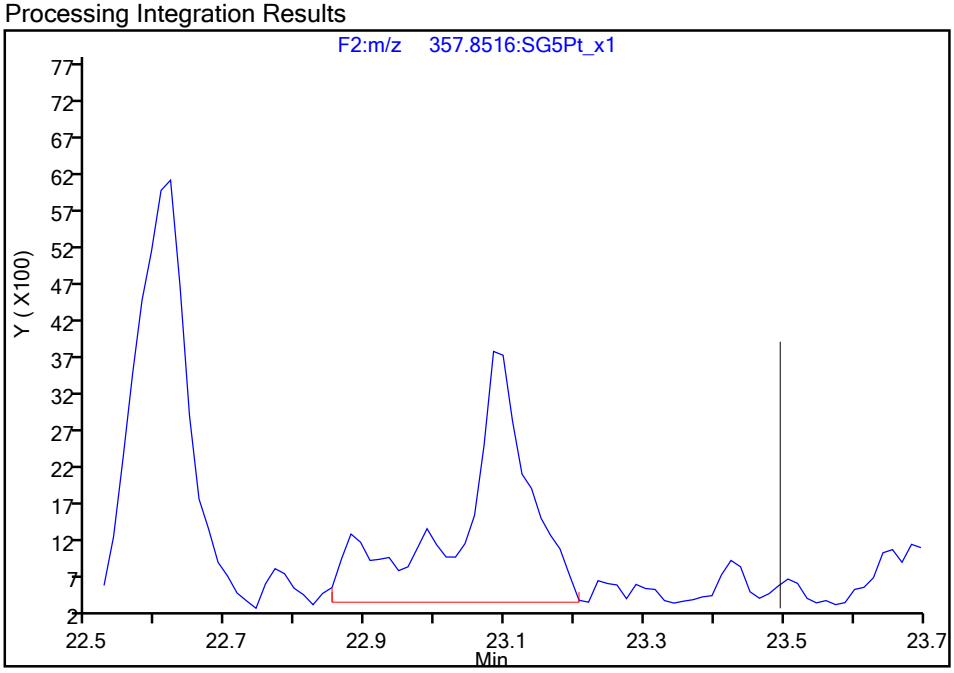

Manual Integration Results

RT = 23.084 Area = 16511 M

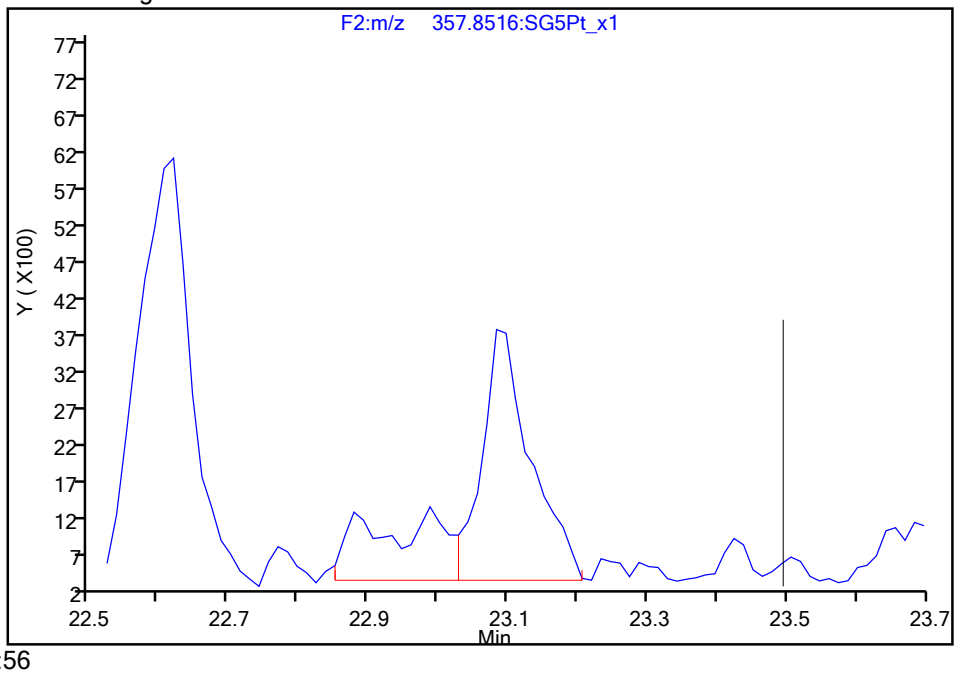

Reviewer: dadunj, 27-Aug-2021 08:28:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.16
Area: 6274
Amount: 0.045198
Amount Units: pg/ul

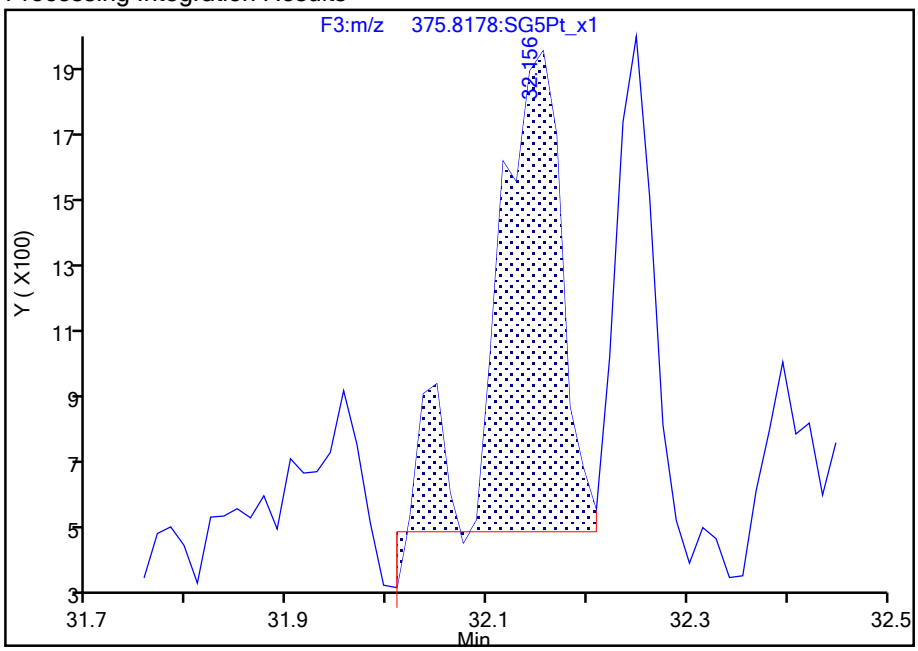

Manual Integration Results

RT: 32.16
Area: 5572
Amount: 0.043294
Amount Units: pg/ul

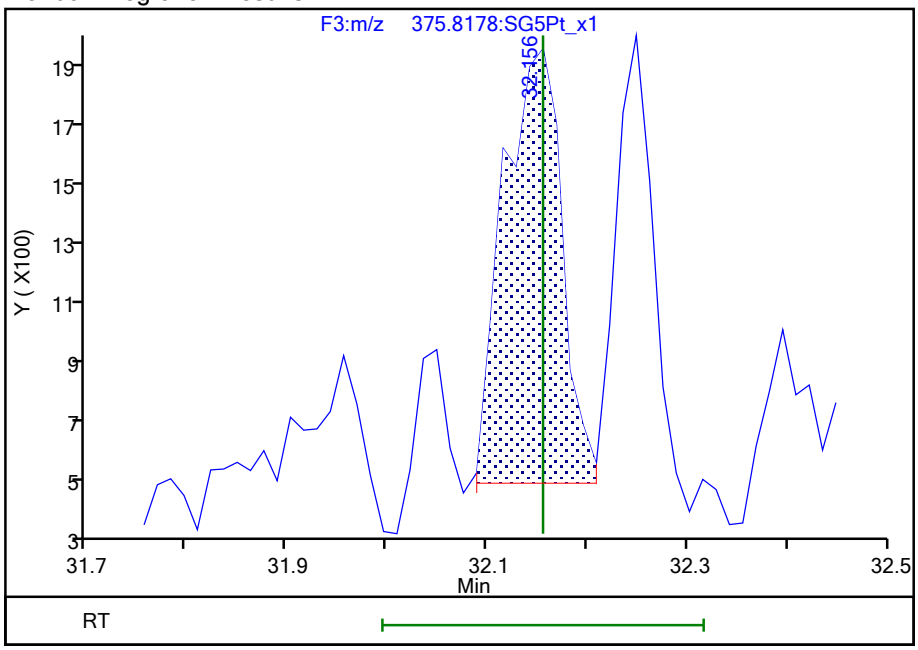

Reviewer: dadunj, 27-Aug-2021 08:29:16

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793288

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.16
Area: 6141
Amount: 0.045198
Amount Units: pg/ul

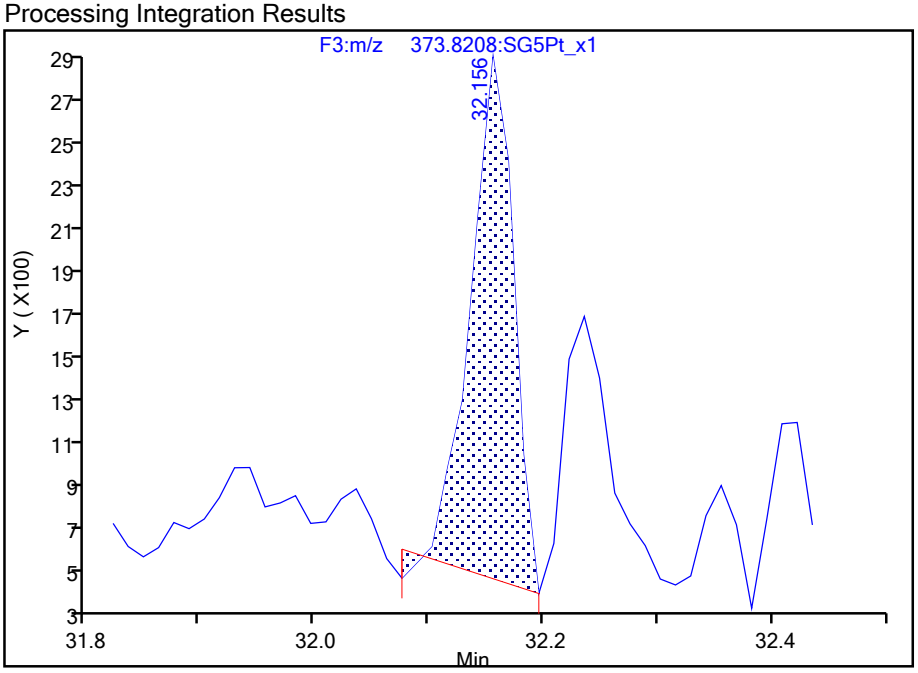

Manual Integration Results

RT: 32.16
Area: 6320
Amount: 0.043294
Amount Units: pg/ul

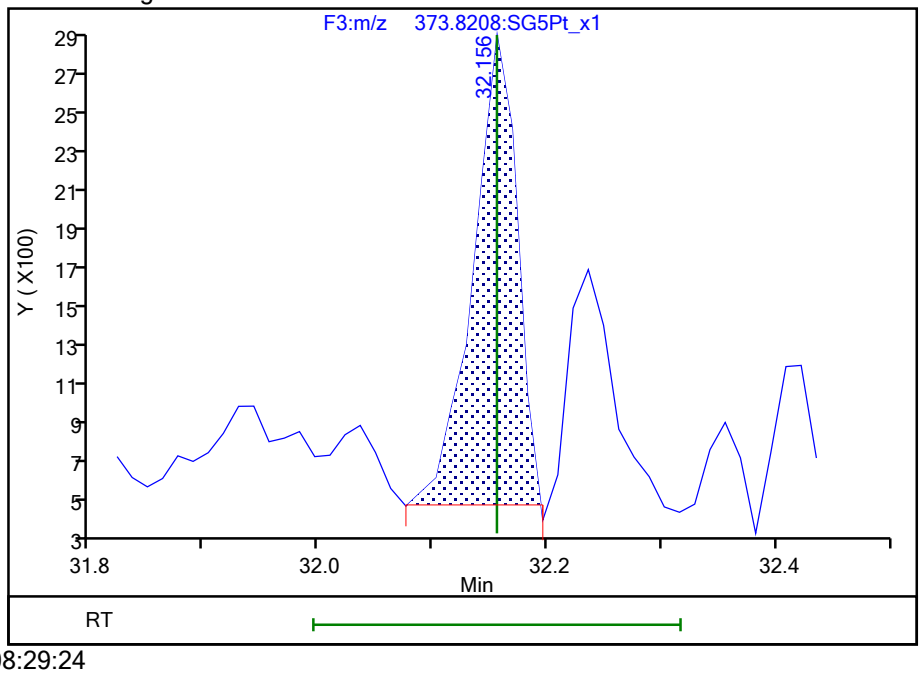

Reviewer: dadunj, 27-Aug-2021 08:29:24
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793289

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.62
Area: 78012
Amount: 0.722938
Amount Units: pg/ul

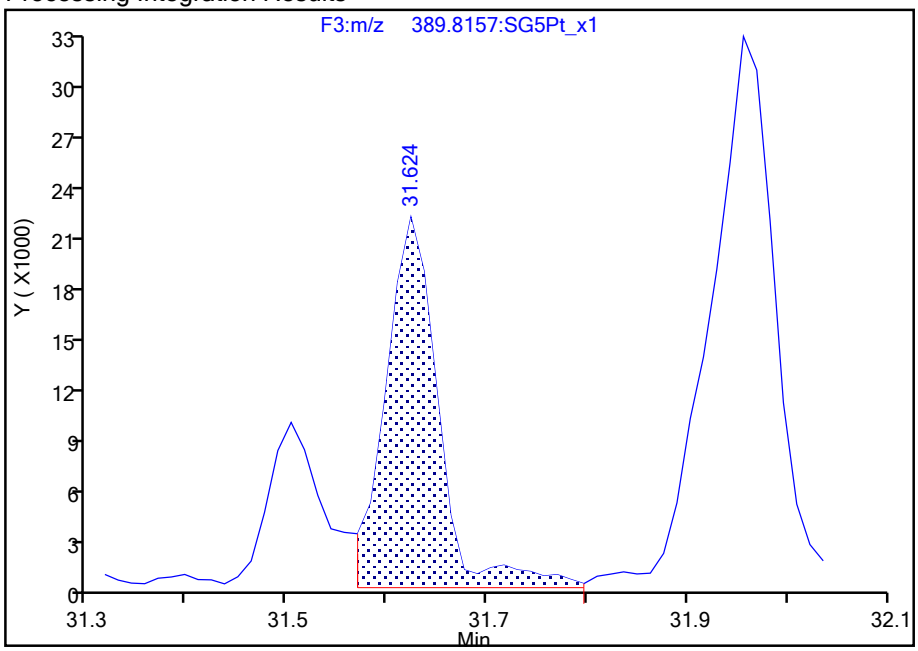

Manual Integration Results

RT: 31.62
Area: 72574
Amount: 0.680658
Amount Units: pg/ul

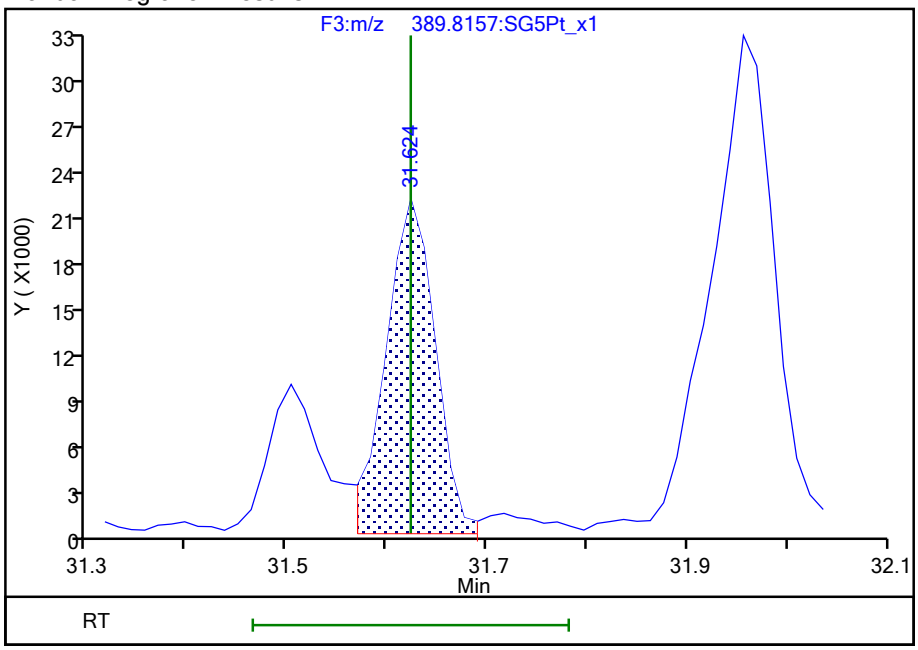

Reviewer: dadunj, 27-Aug-2021 08:29:33

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793290

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.62
Area: 55873
Amount: 0.722938
Amount Units: pg/ul

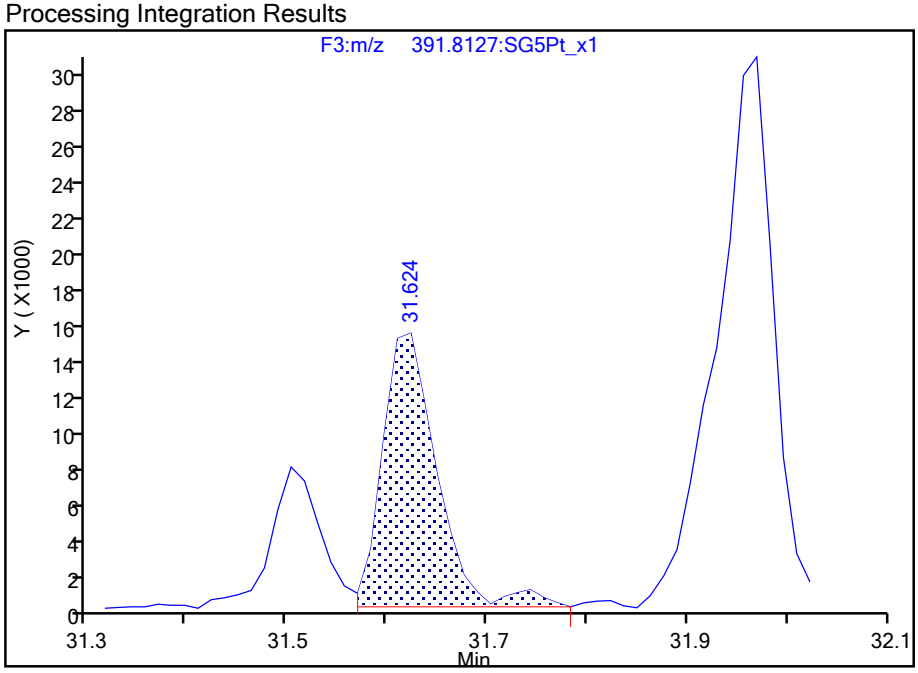

Manual Integration Results

RT: 31.62
Area: 53481
Amount: 0.680658
Amount Units: pg/ul

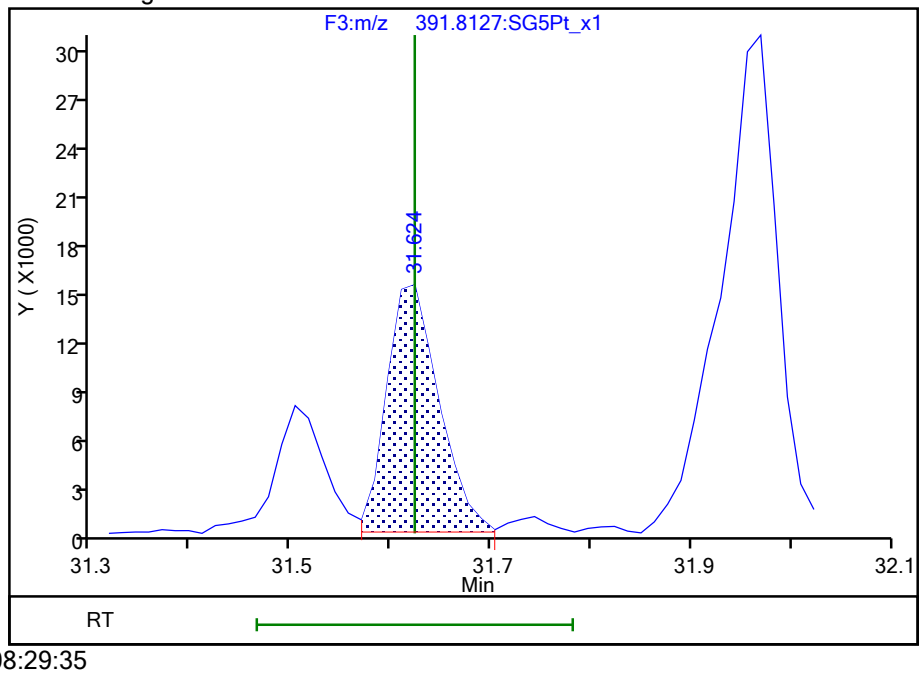

Reviewer: dadunj, 27-Aug-2021 08:29:35

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 31.96
Area: 150549
Amount: 1.343746
Amount Units: pg/ul

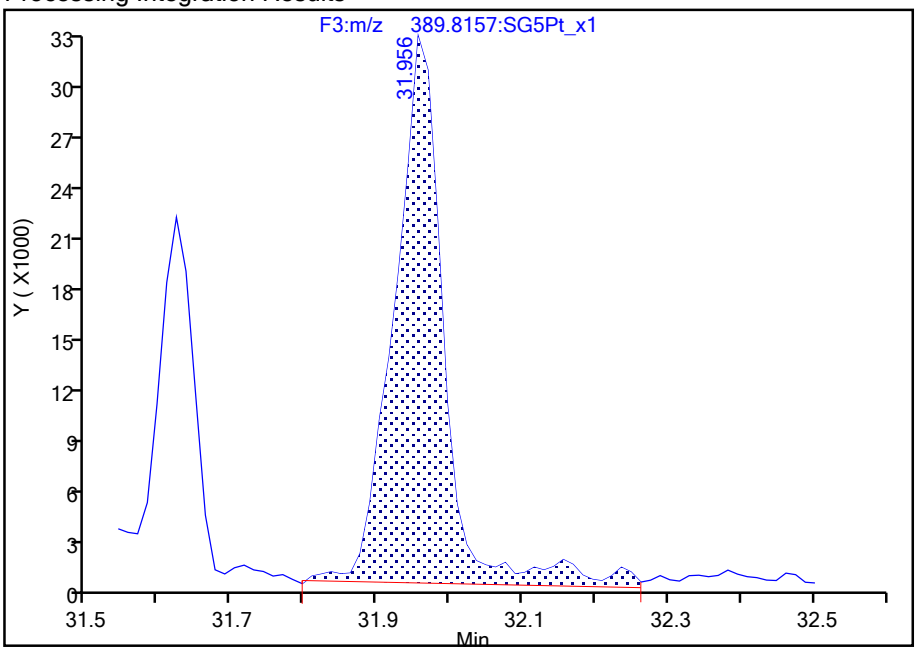

Manual Integration Results

RT: 31.96
Area: 140023
Amount: 1.258865
Amount Units: pg/ul

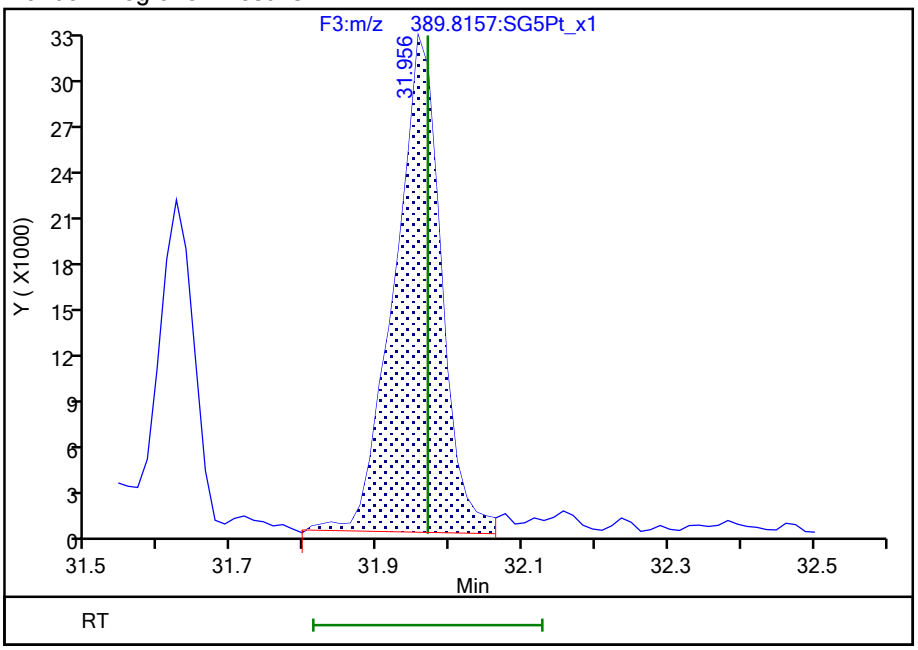

Reviewer: dadunj, 27-Aug-2021 08:29:40

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 31.97
Area: 122517
Amount: 1.343746
Amount Units: pg/ul

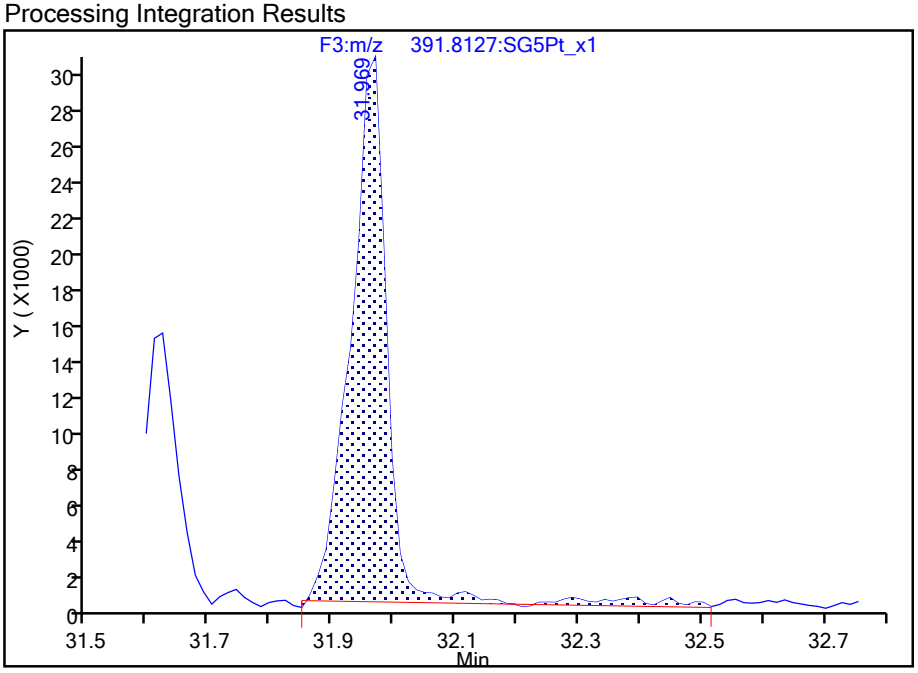

Manual Integration Results

RT: 31.97
Area: 115794
Amount: 1.258865
Amount Units: pg/ul

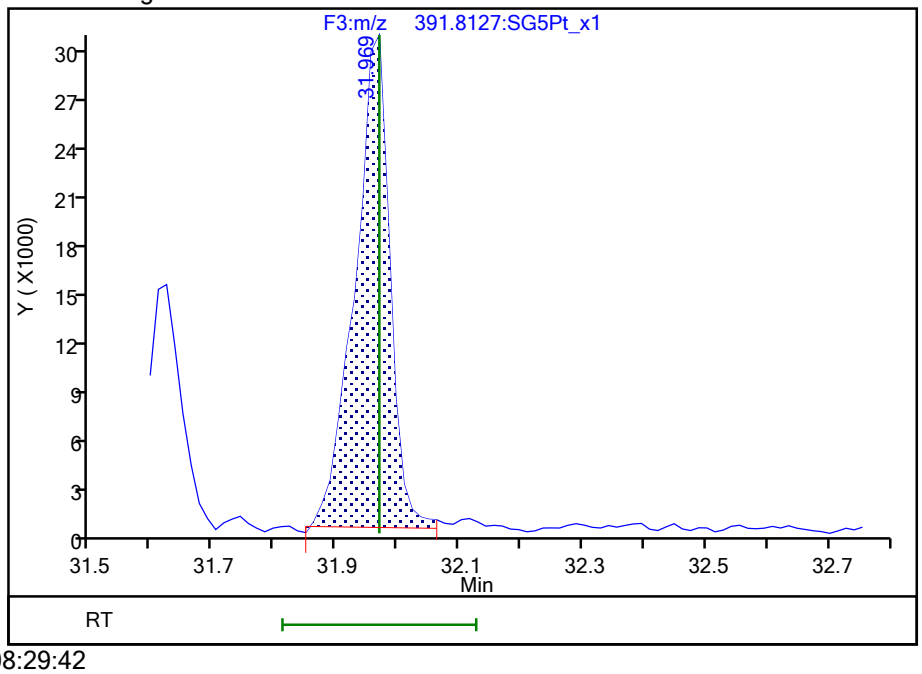

Reviewer: dadunj, 27-Aug-2021 08:29:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793293

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.62
Area: 14295
Amount: 0.111858
Amount Units: pg/ul

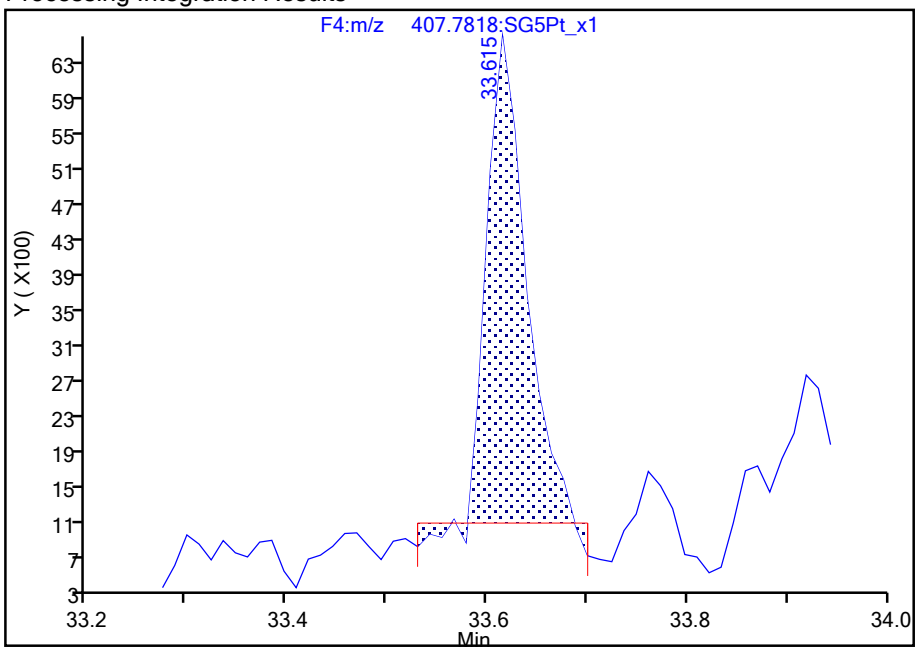

Manual Integration Results

RT: 33.62
Area: 14577
Amount: 0.113003
Amount Units: pg/ul

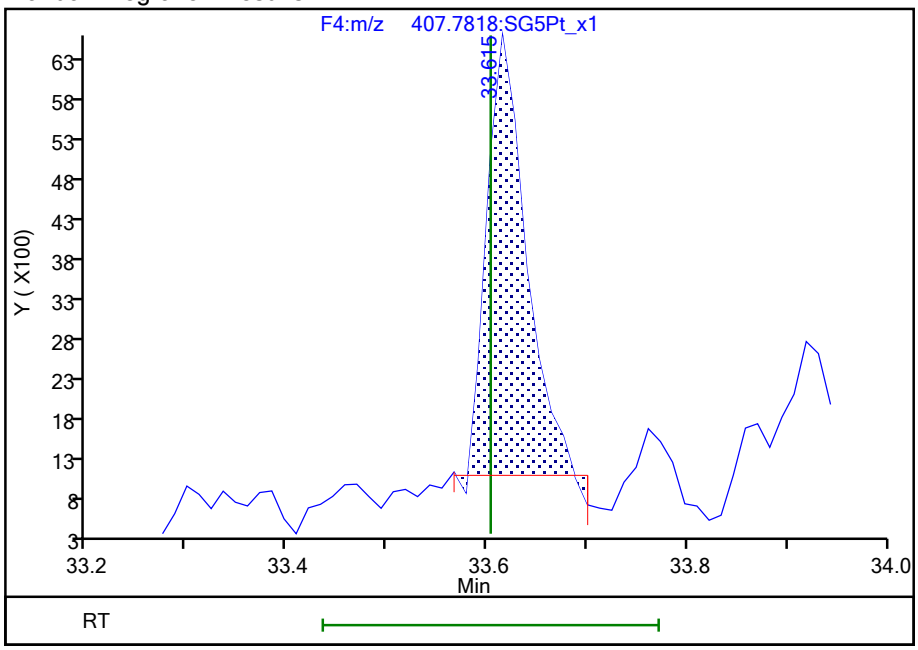

Reviewer: dadunj, 27-Aug-2021 08:29:48

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.73
Area: 84065
Amount: 0.814699
Amount Units: pg/ul

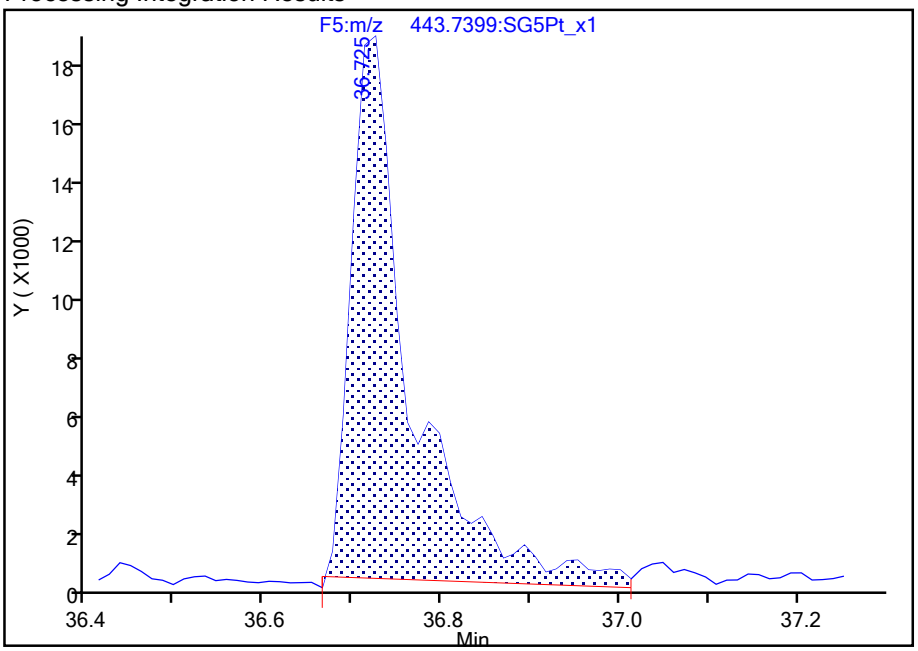

Manual Integration Results

RT: 36.73
Area: 74557
Amount: 0.751394
Amount Units: pg/ul

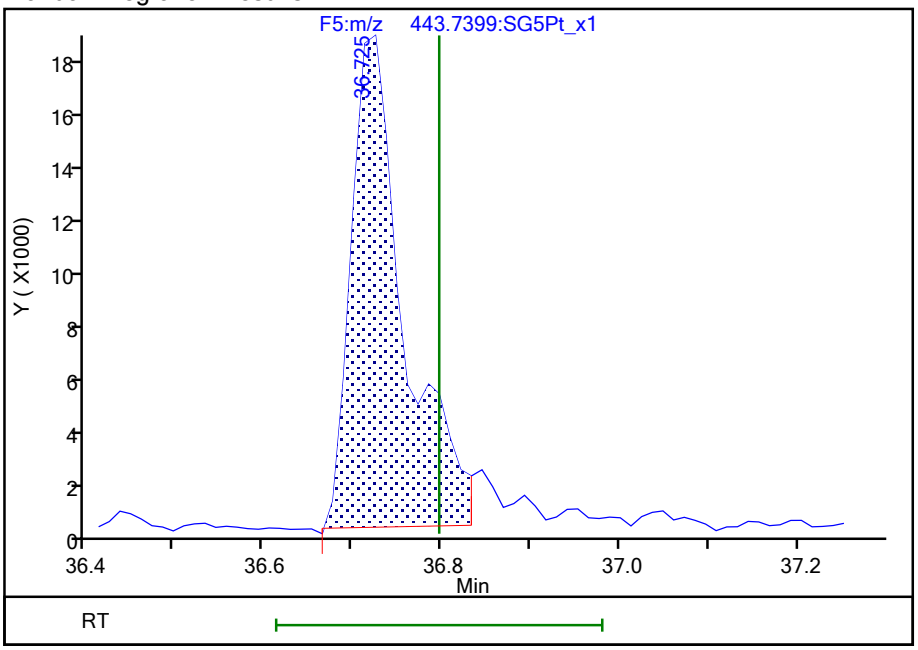

Reviewer: dadunj, 27-Aug-2021 08:30:14

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d				
Injection Date:	26-Aug-2021 01:20:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-1-A	Lab Sample ID:	320-77292-1		
Client ID:	11215702-080321-BN-SJSB091 (0-2)				
Operator ID:	SMA	ALS Bottle#:	32	Worklist Smp#:	7
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.71
Area: 69918
Amount: 0.814699
Amount Units: pg/ul

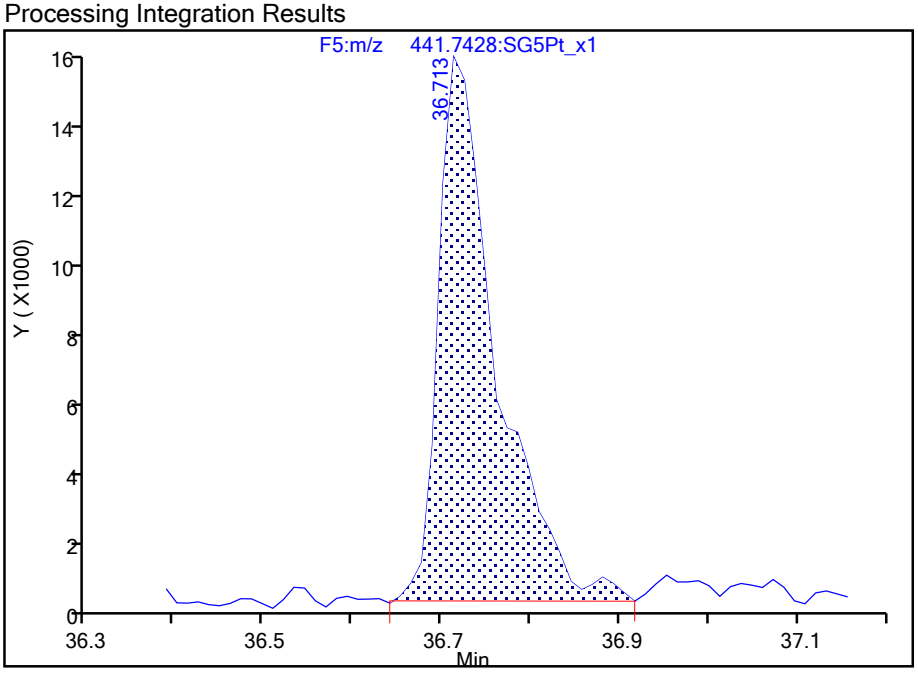

Manual Integration Results

RT: 36.71
Area: 67461
Amount: 0.751394
Amount Units: pg/ul

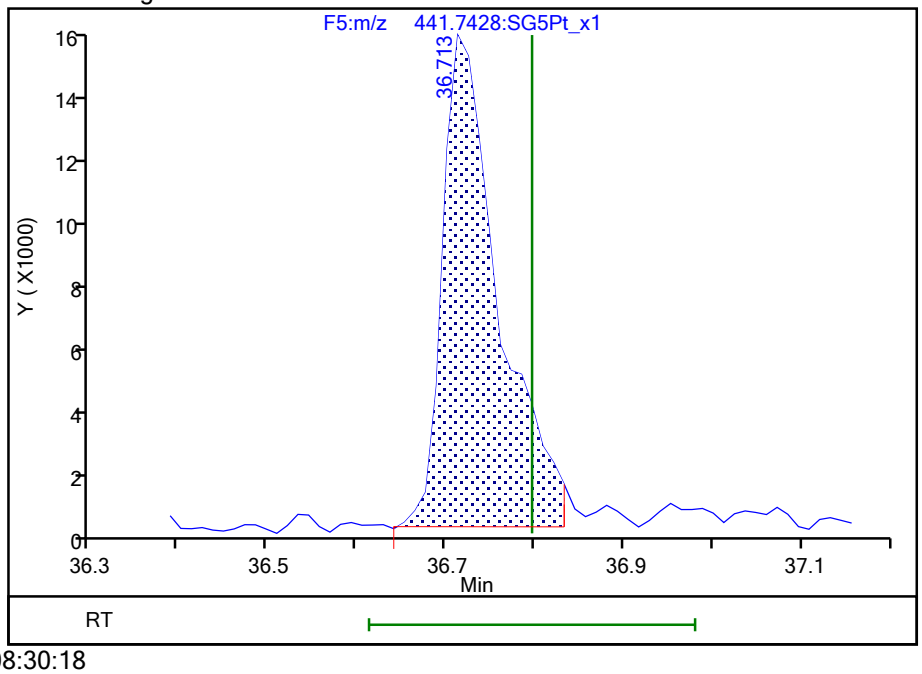

Reviewer: dadunj, 27-Aug-2021 08:30:18

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793296

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

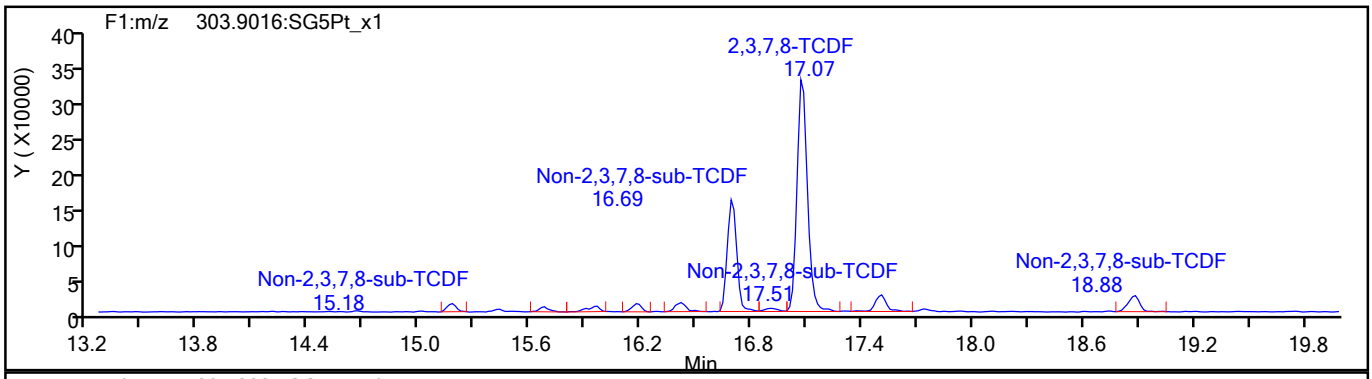

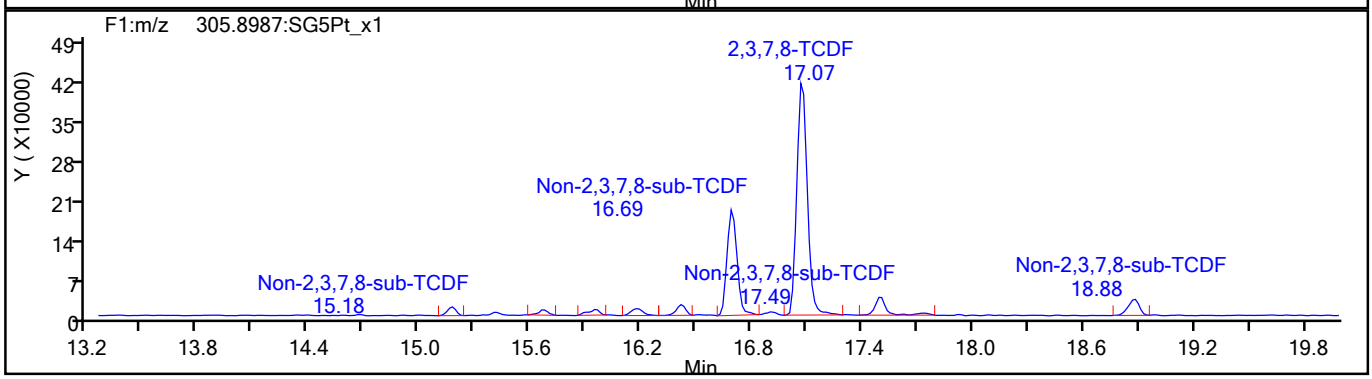

TCDF Standards

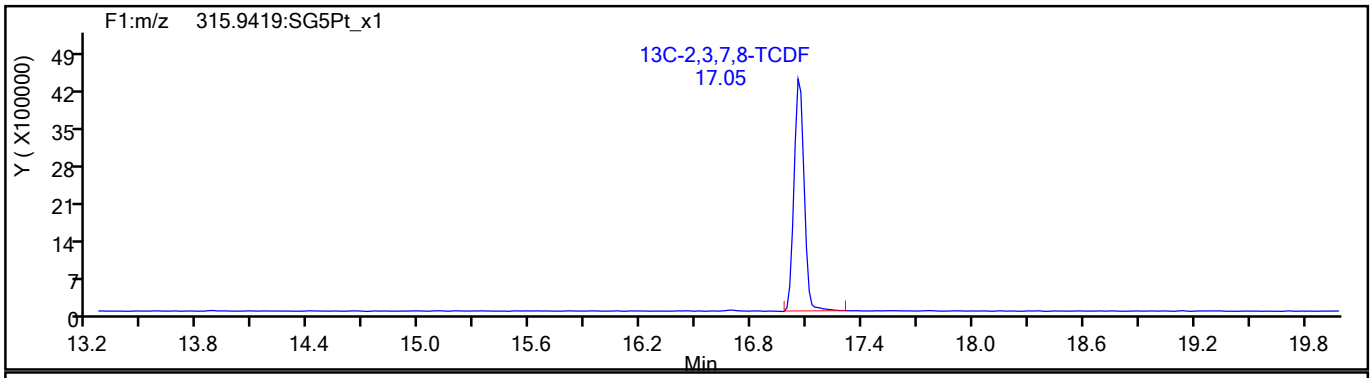

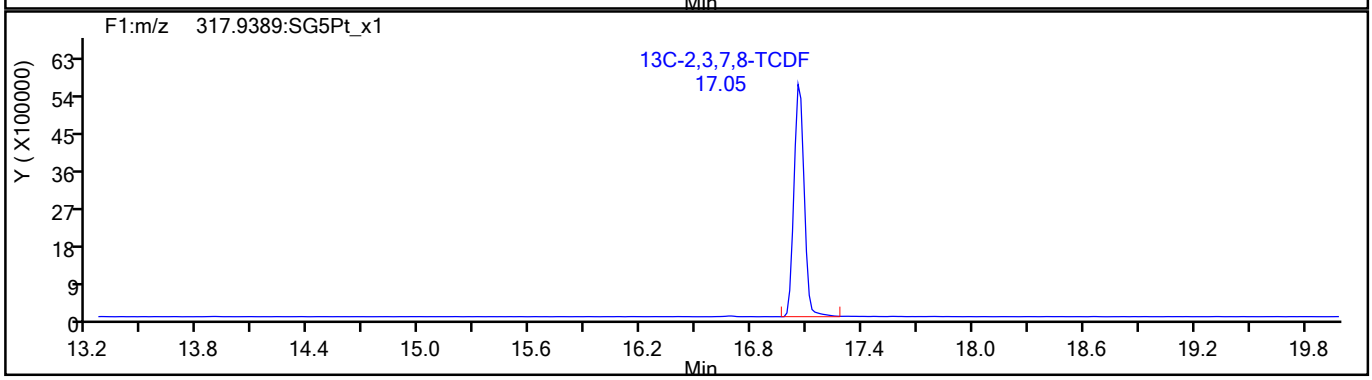

793297

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

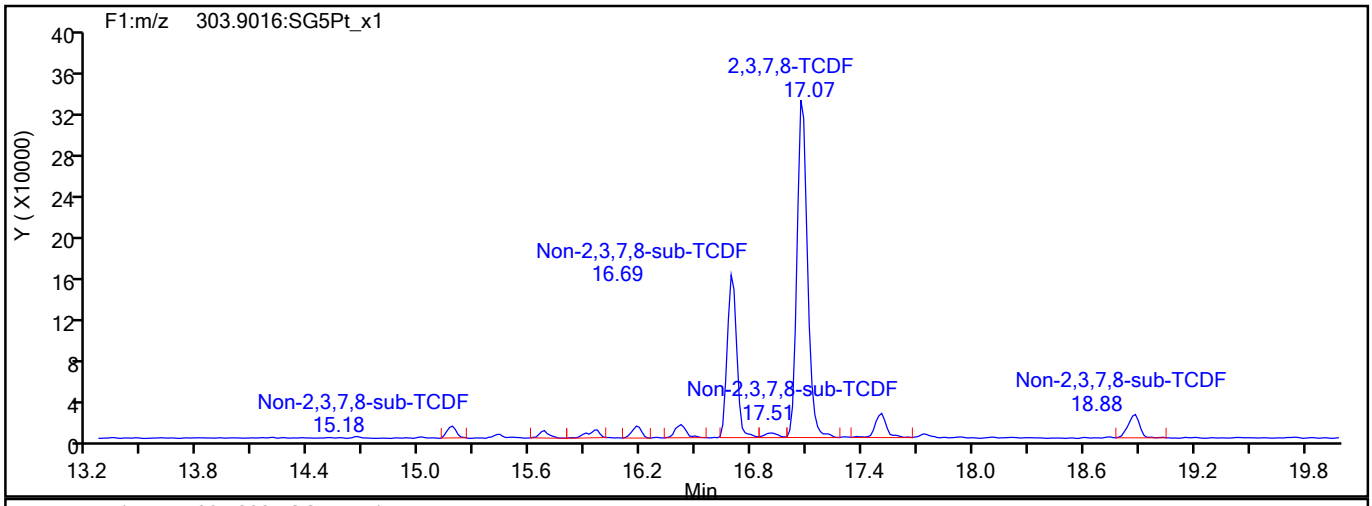

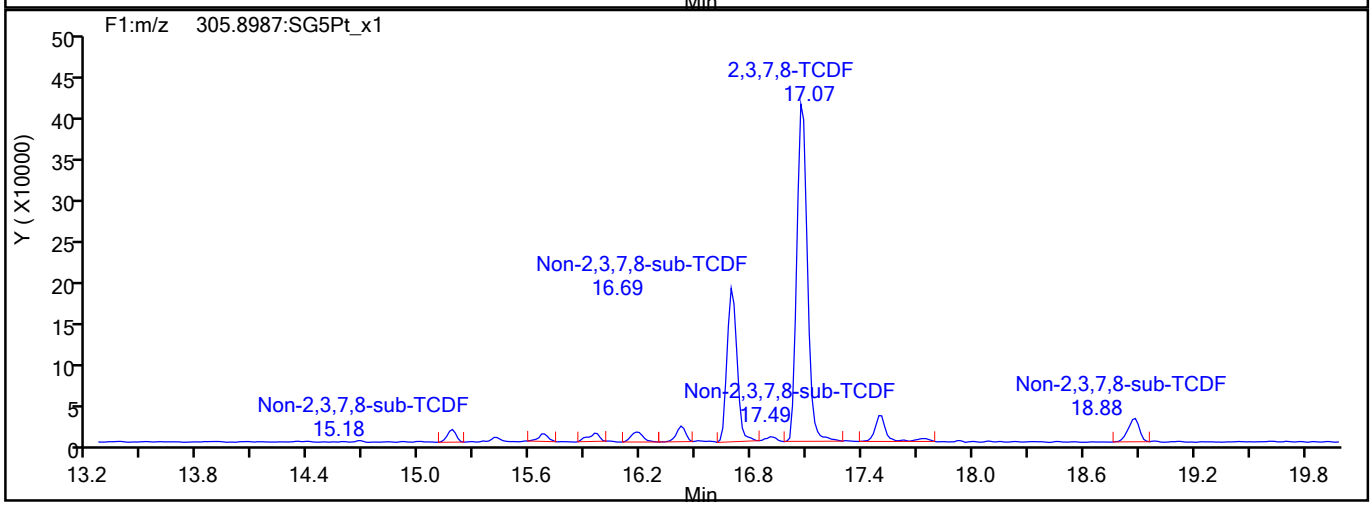

TCDF Interference Mass

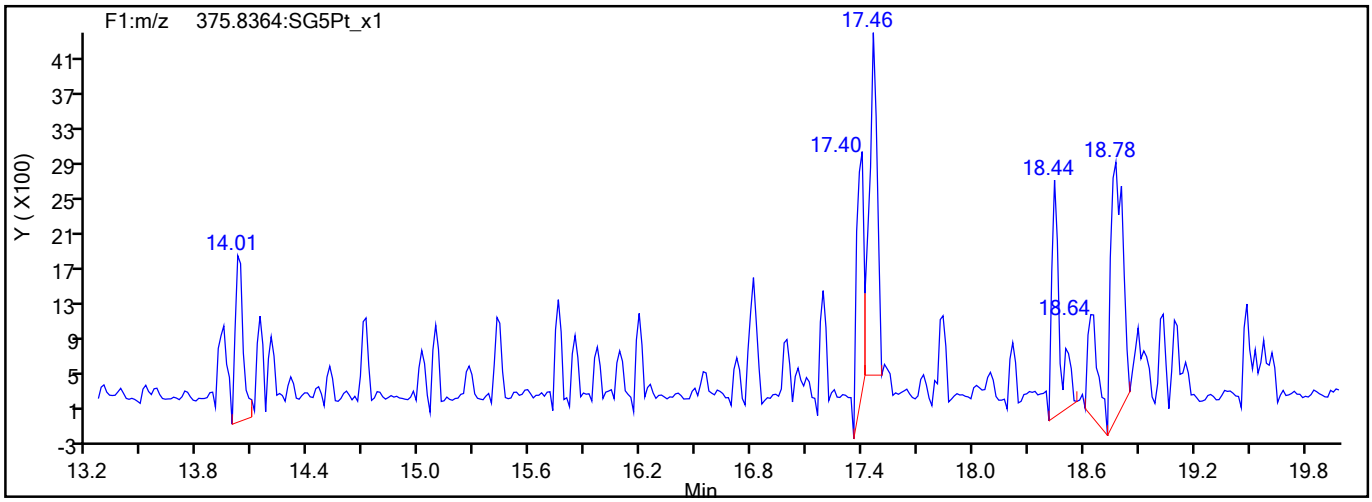

793298

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

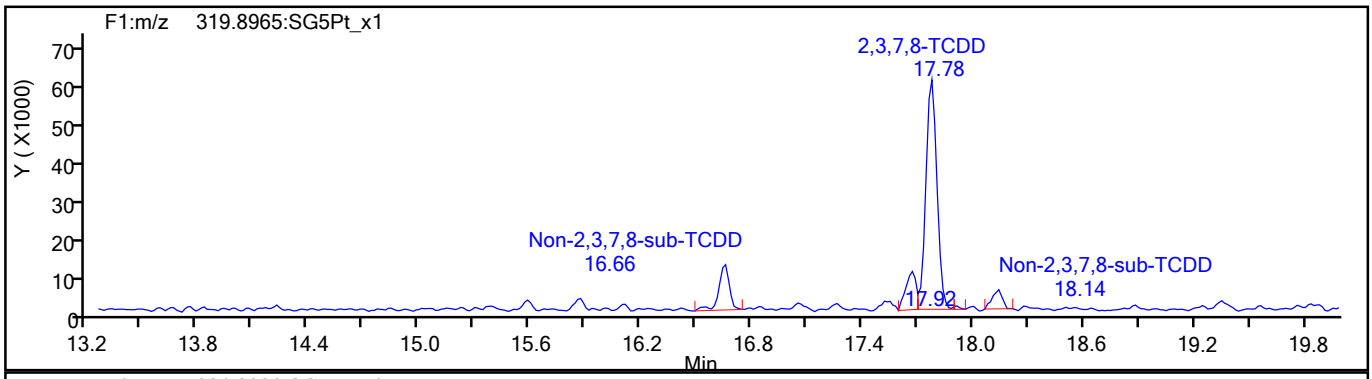

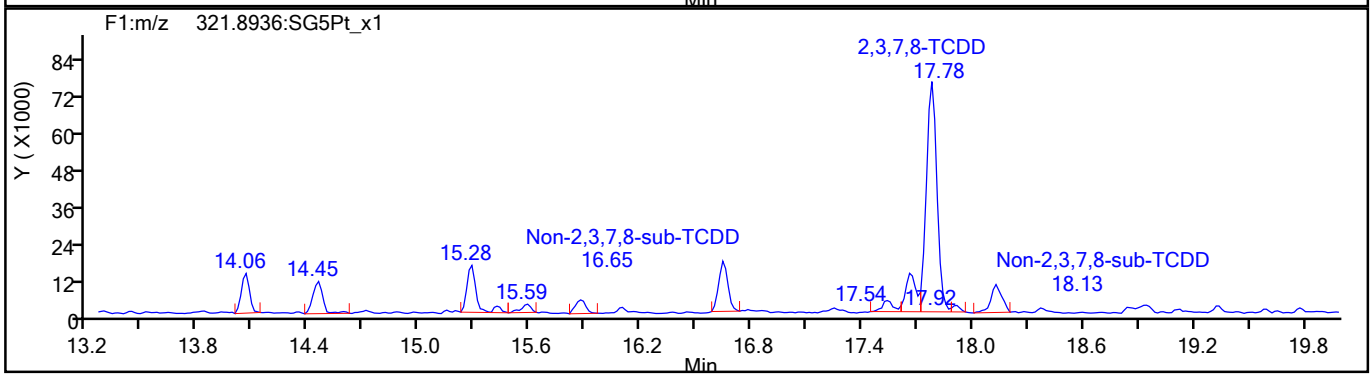

TCDD Standards

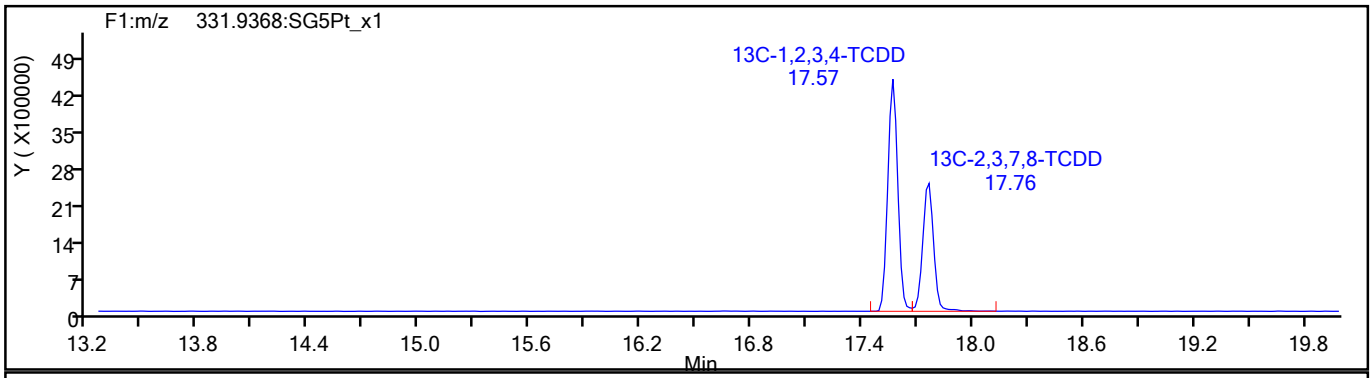

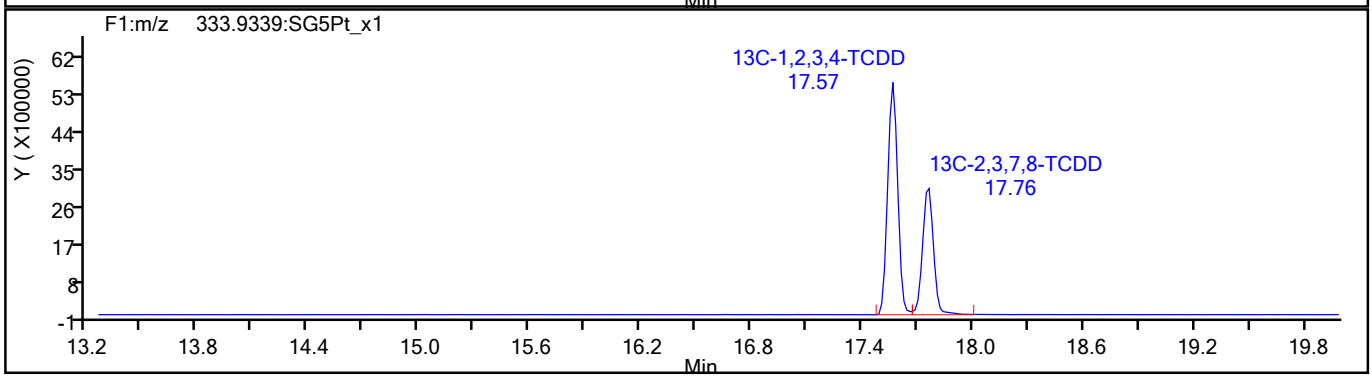

793299

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

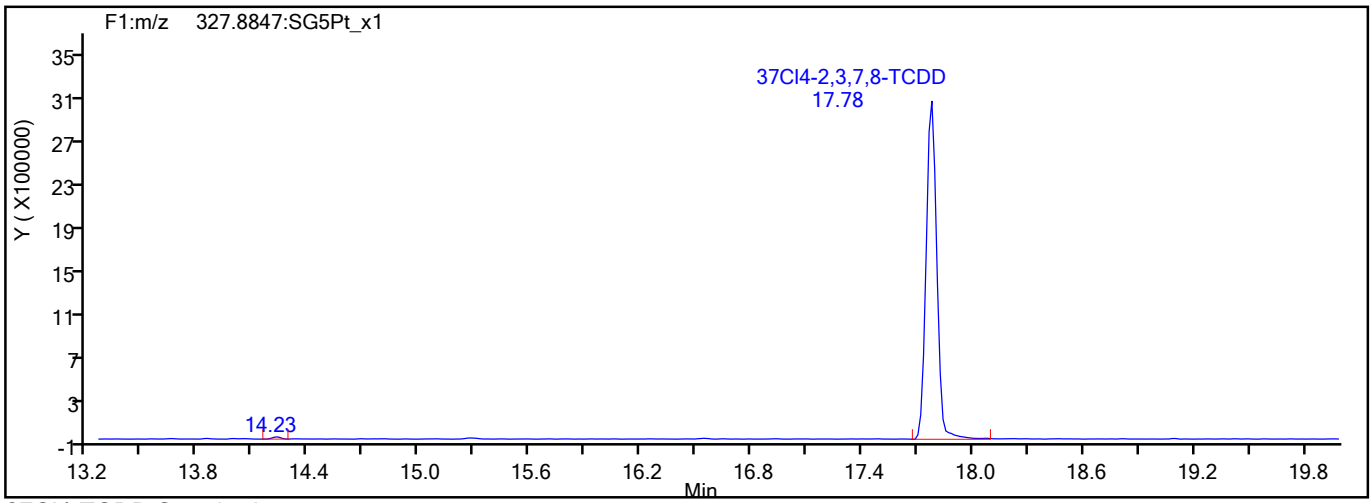

37Cl4-TCDD Standards

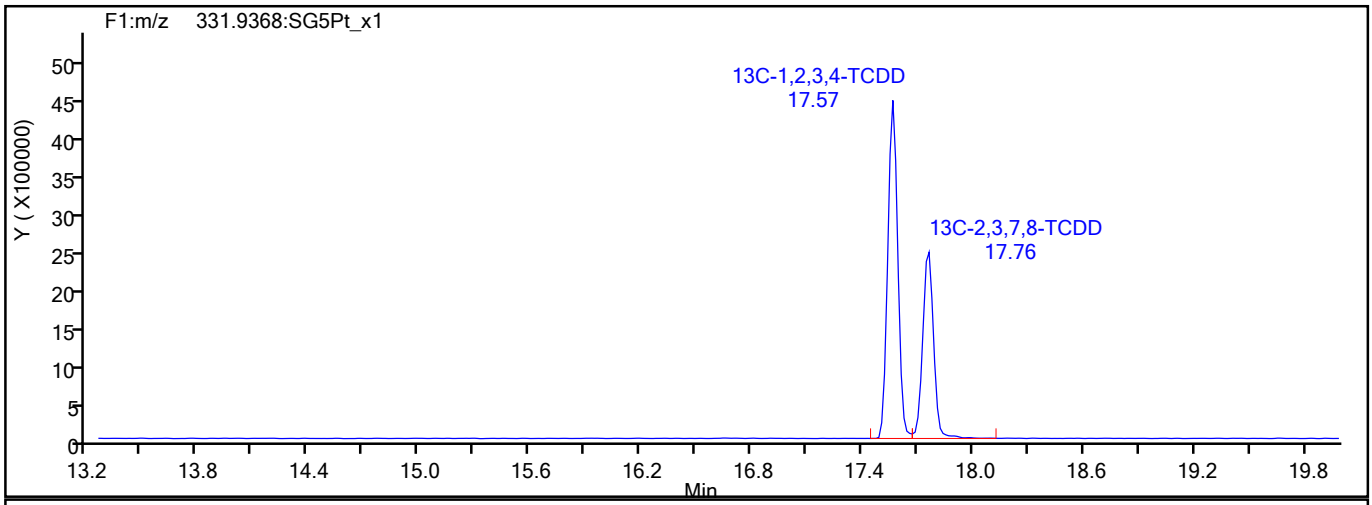

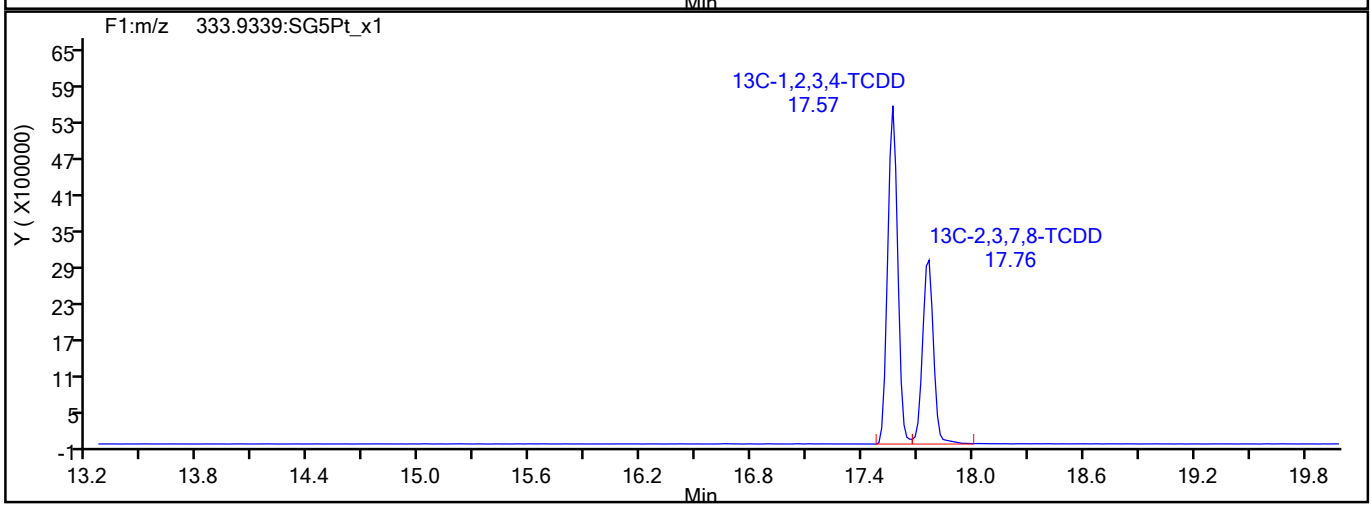

793300

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

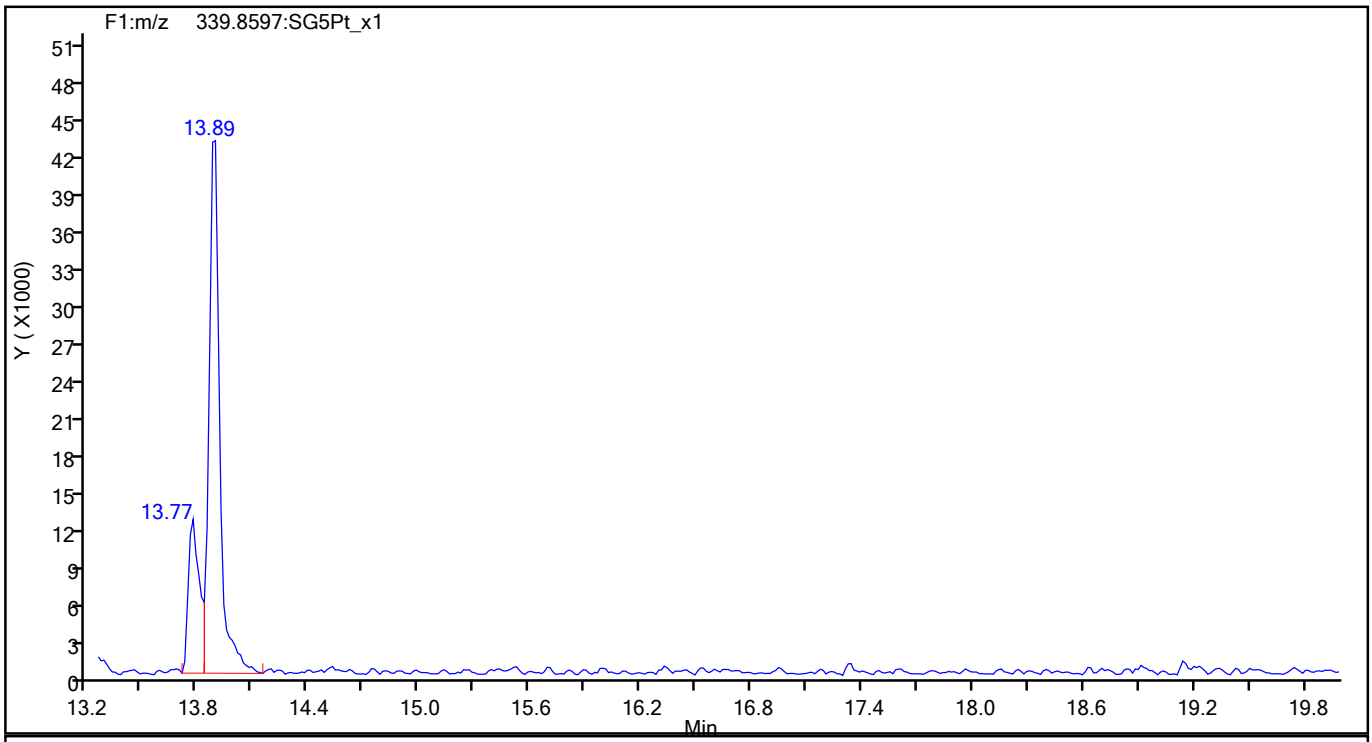

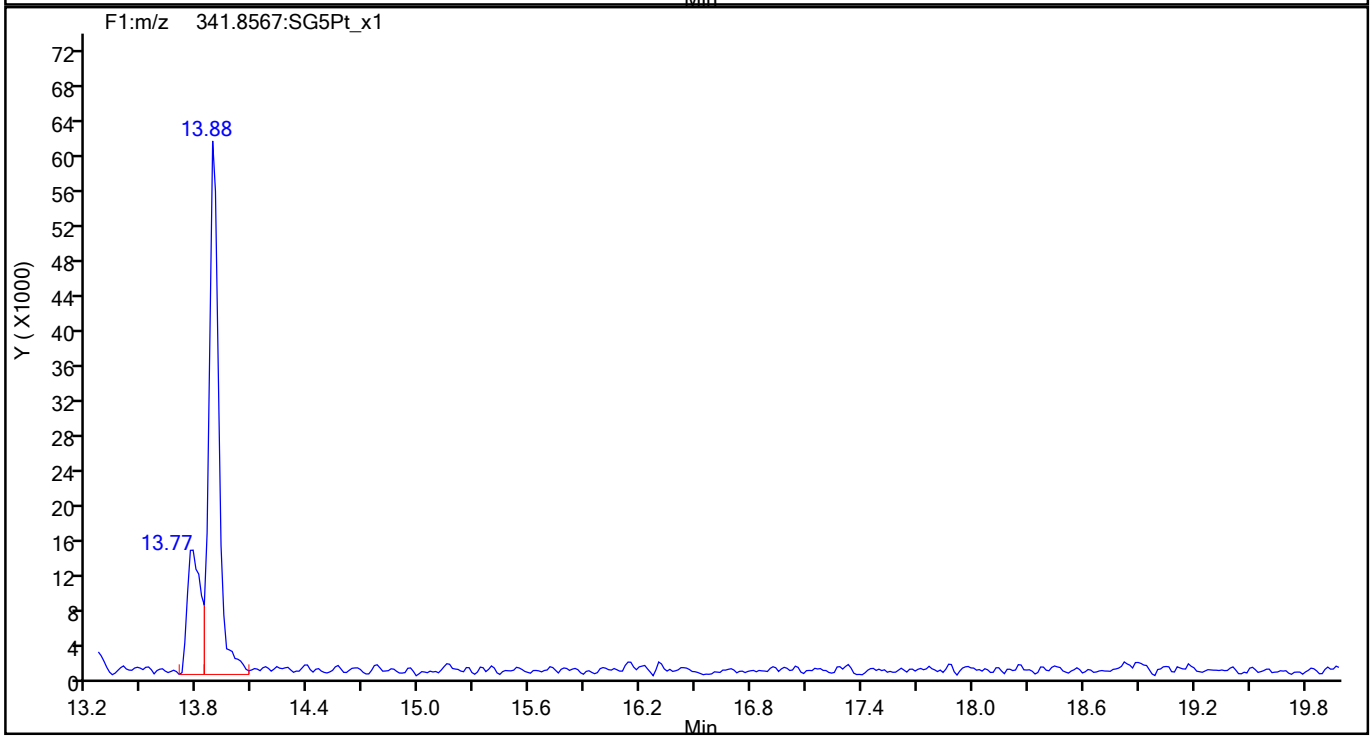

793301

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

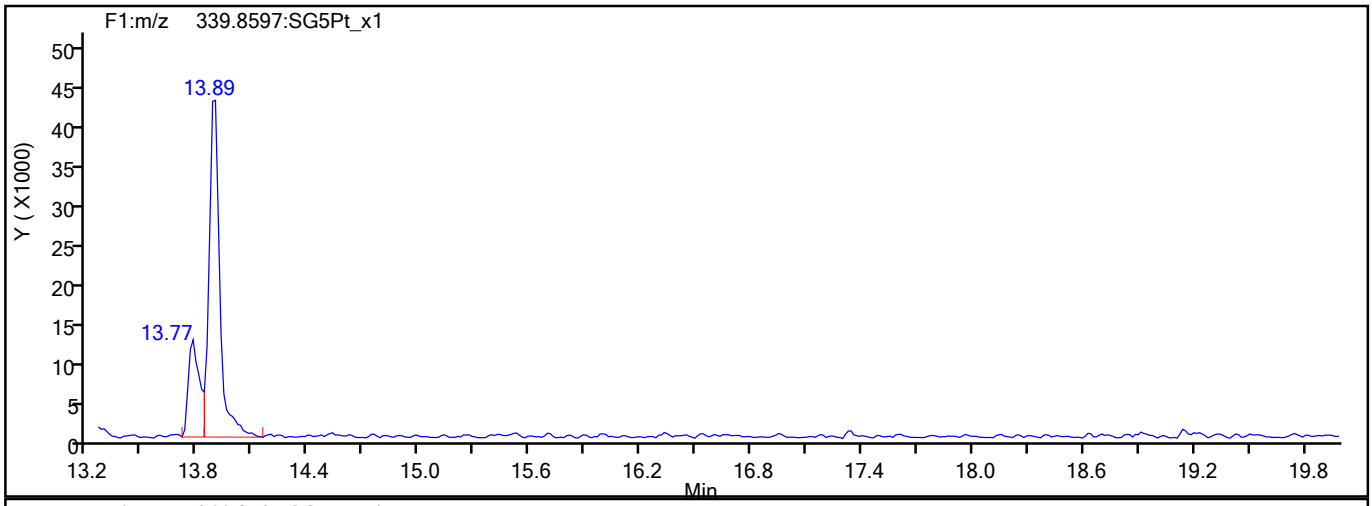

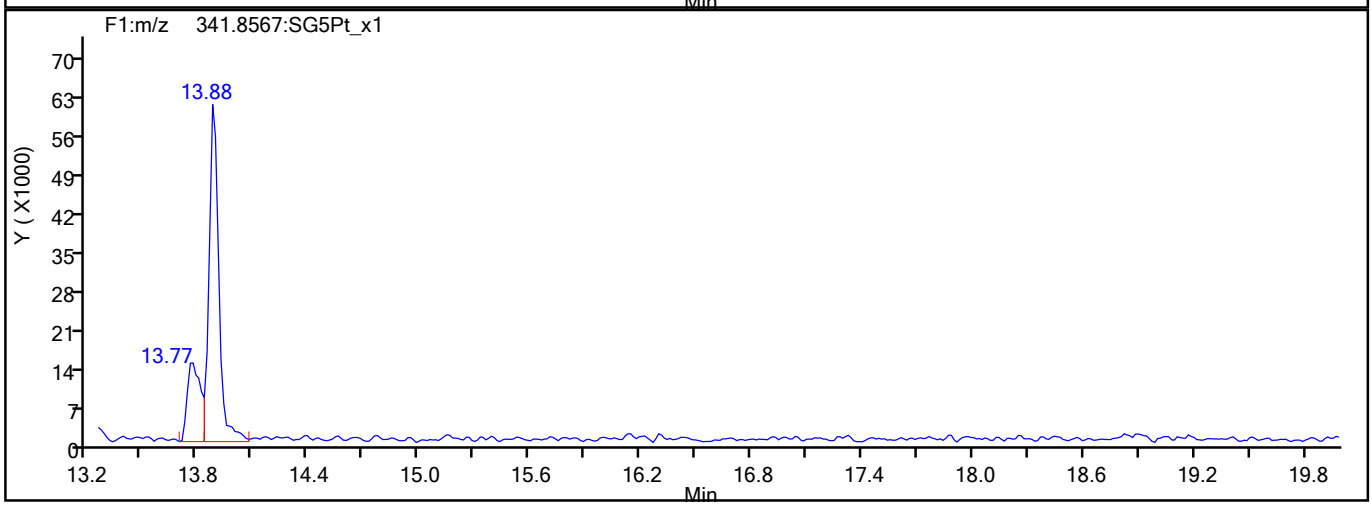

F1 PeCDFs Interference Mass

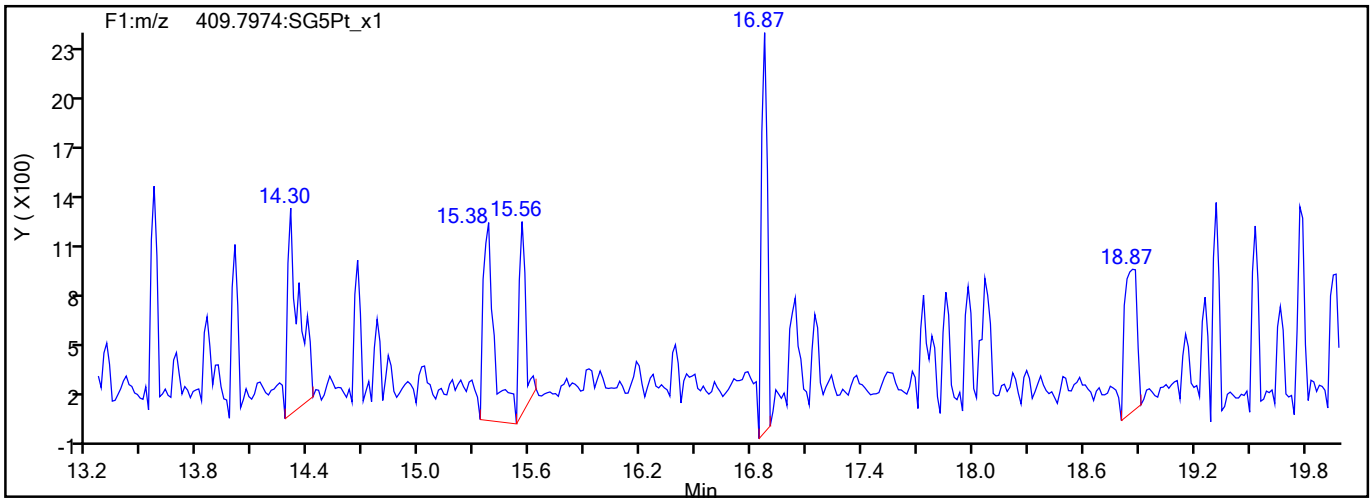

793302

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

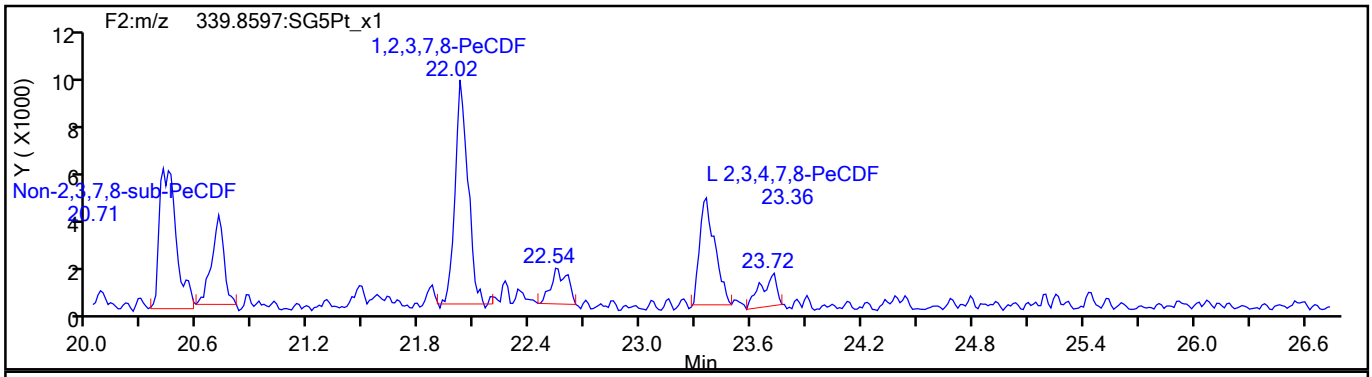

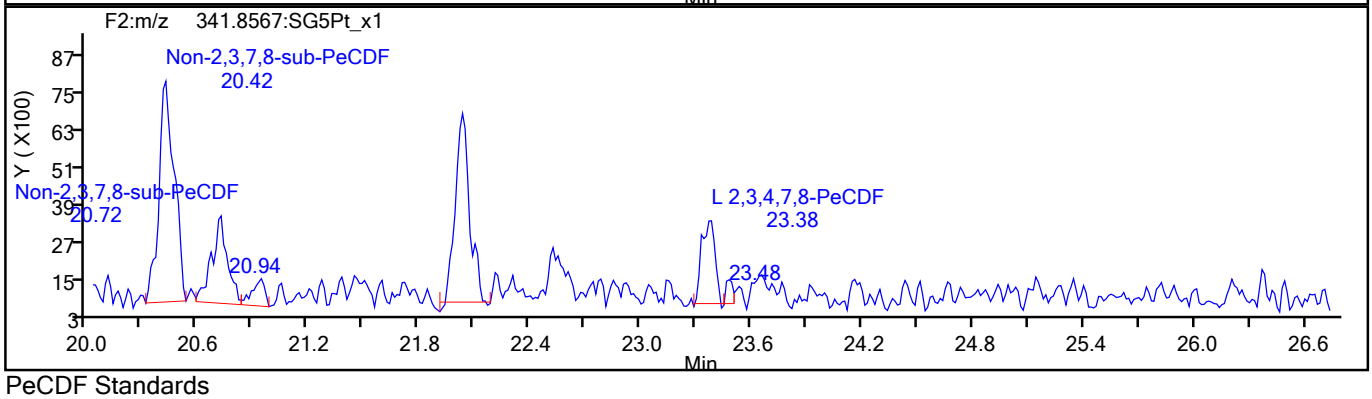

PeCDF Standards

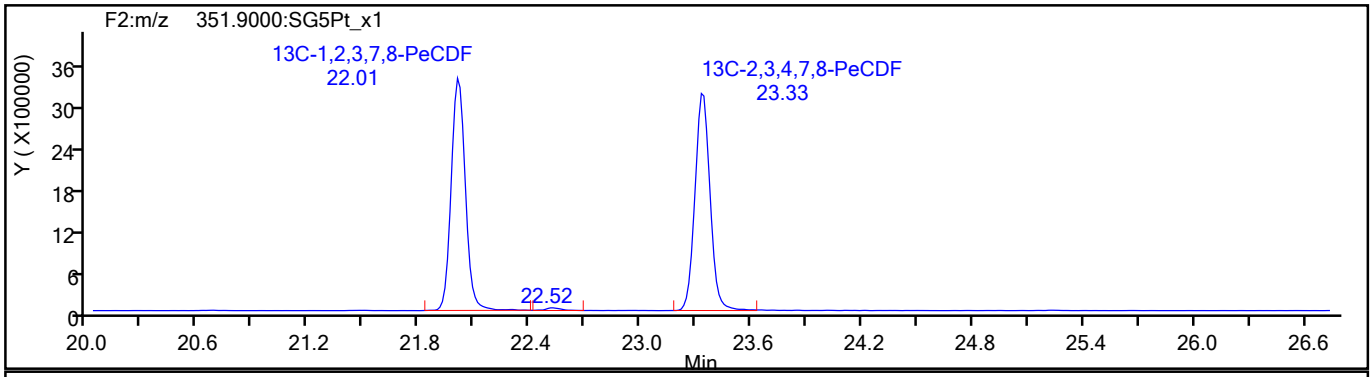

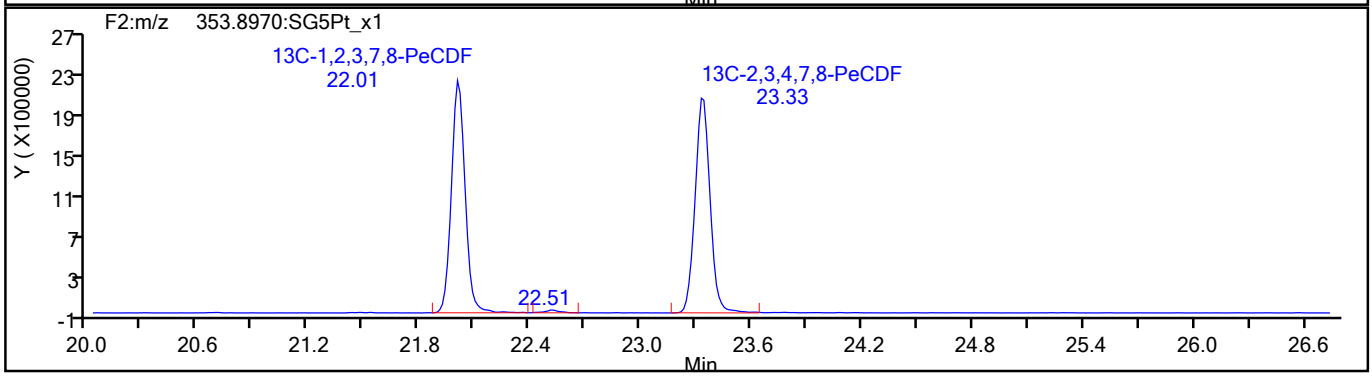

793303

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

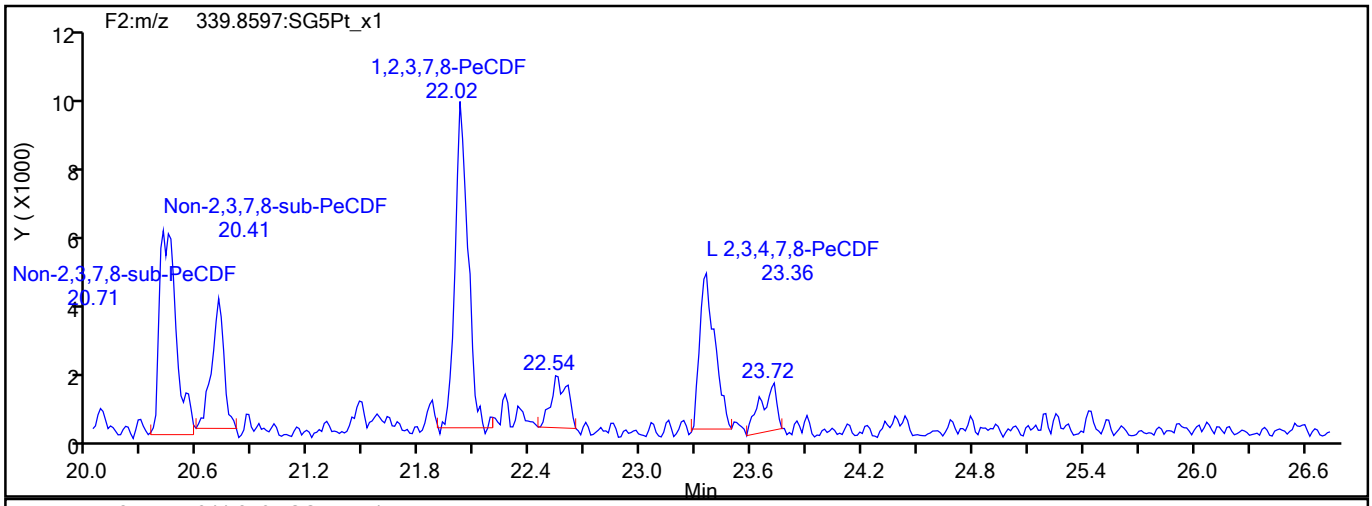

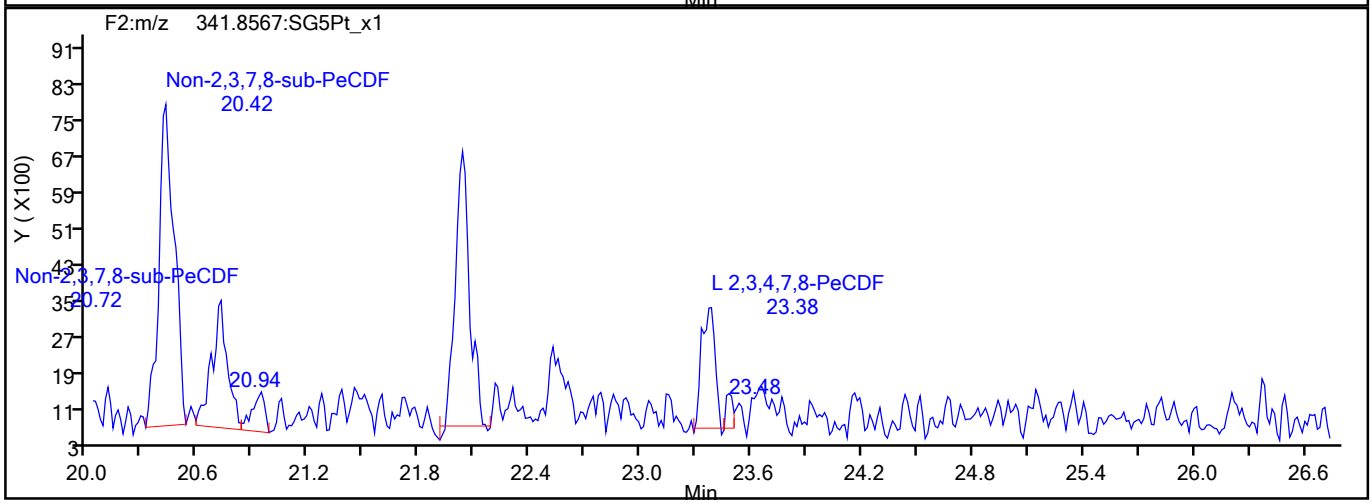

PeCDF Interference Mass

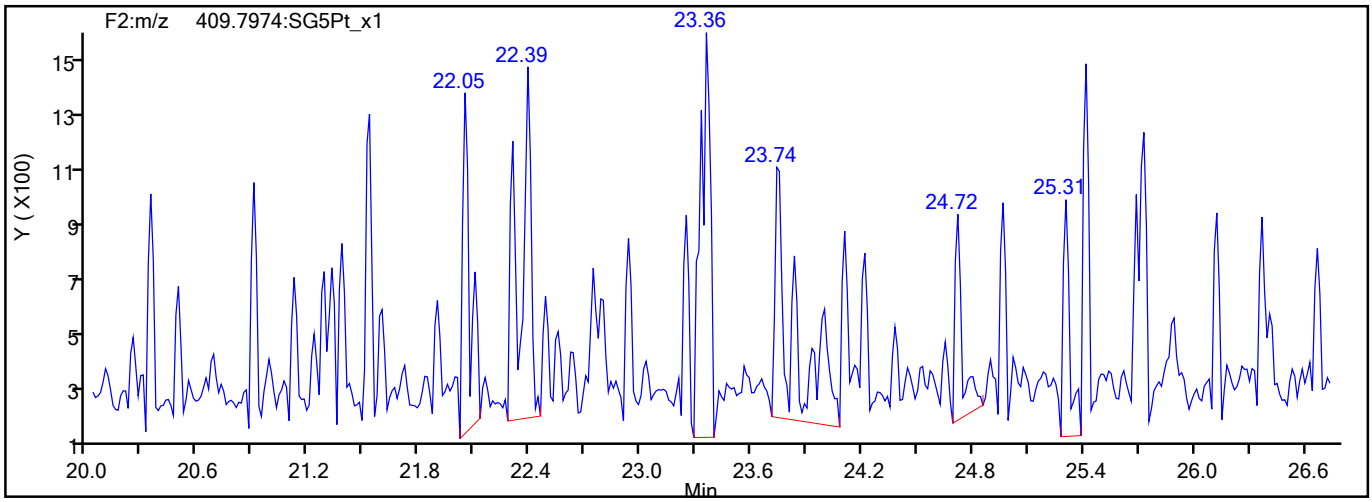

793304

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

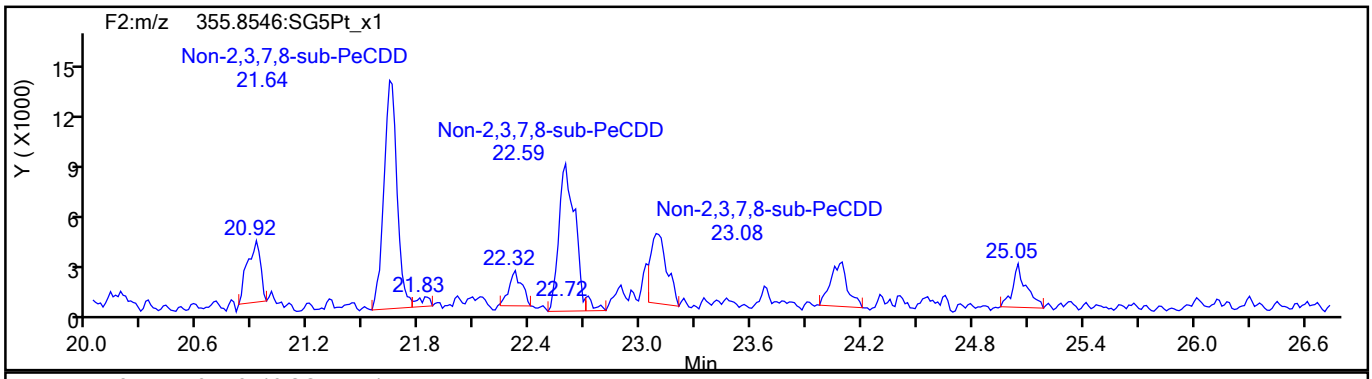

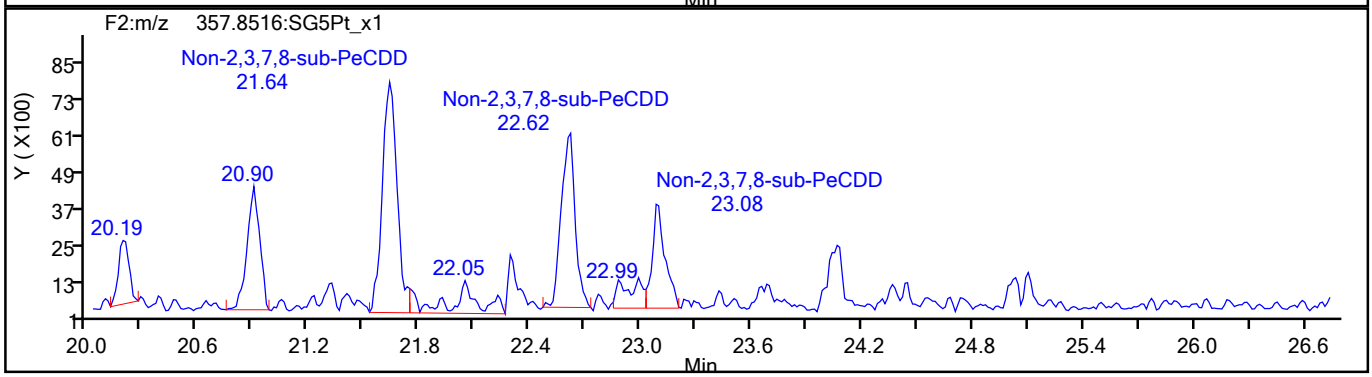

PeCDD Standards

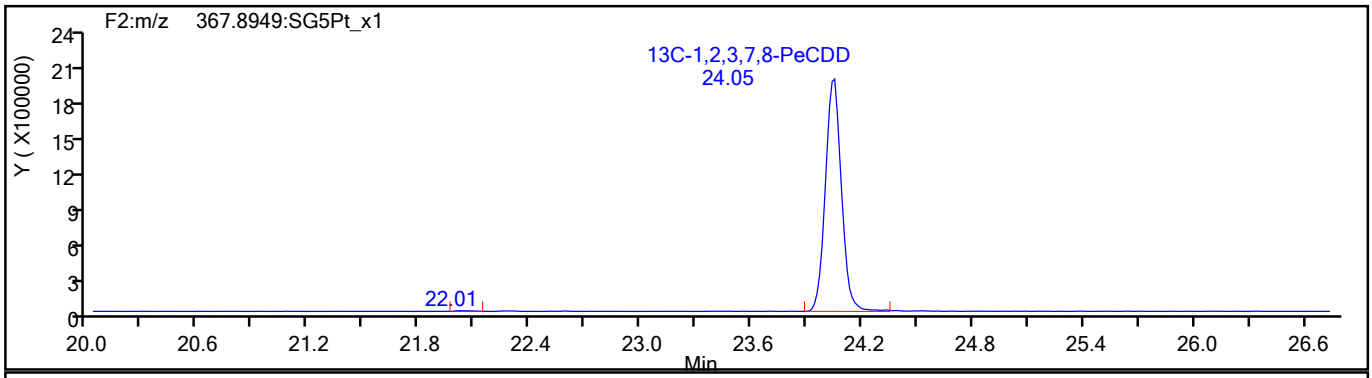

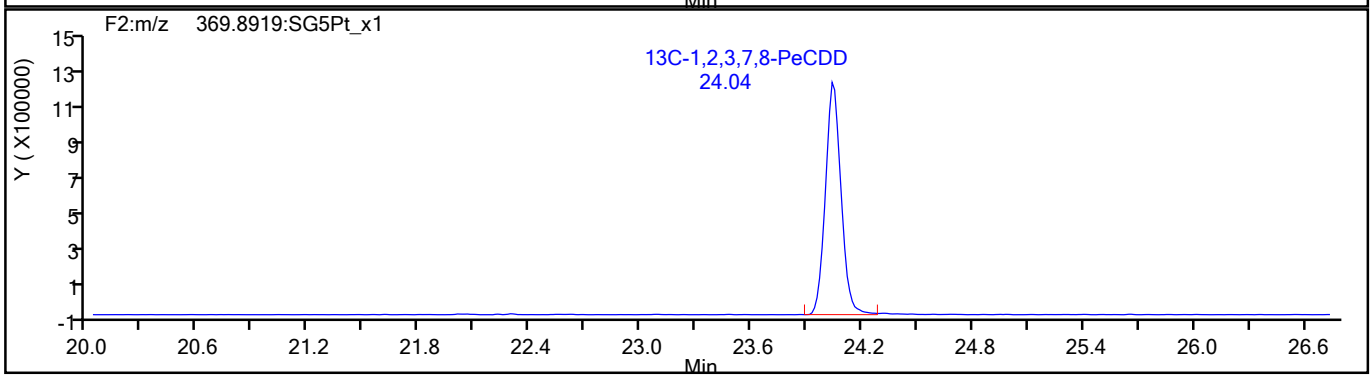

793305

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

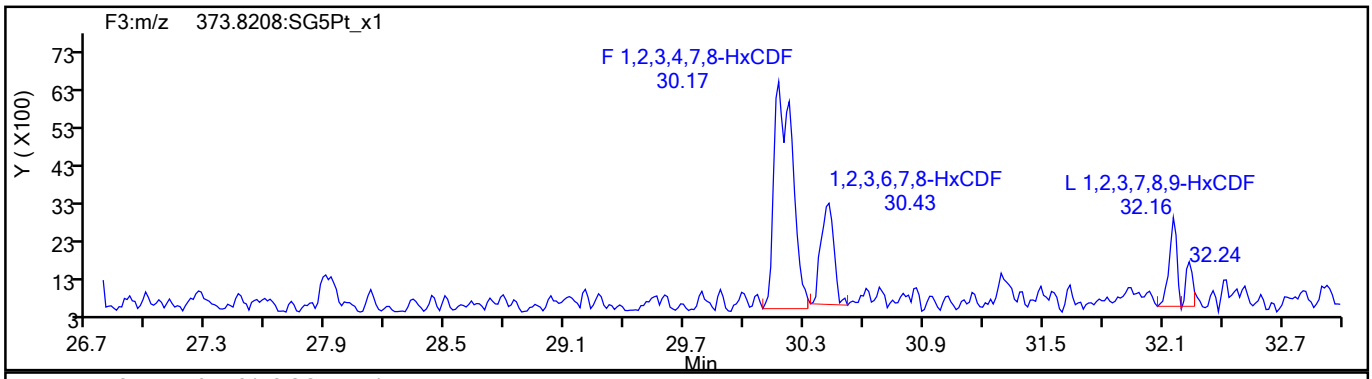

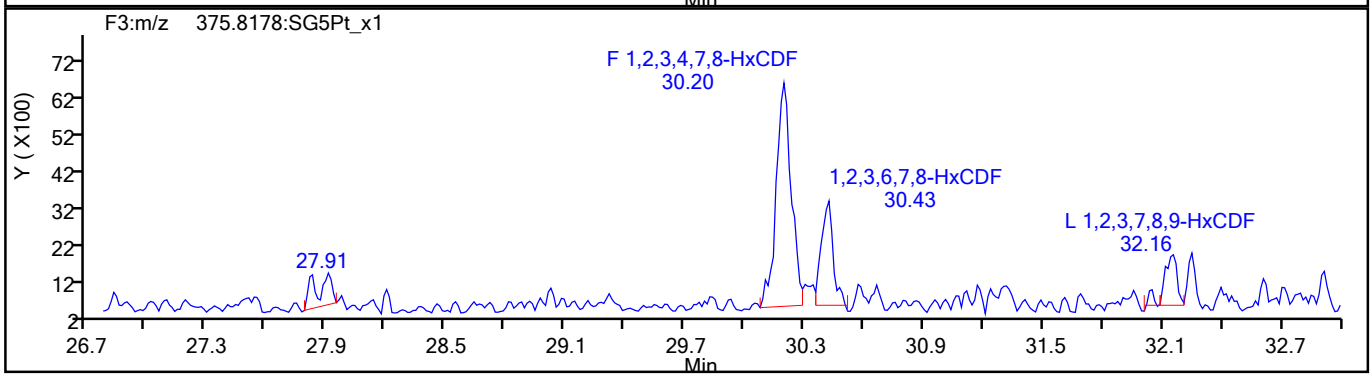

HxCDF Standards

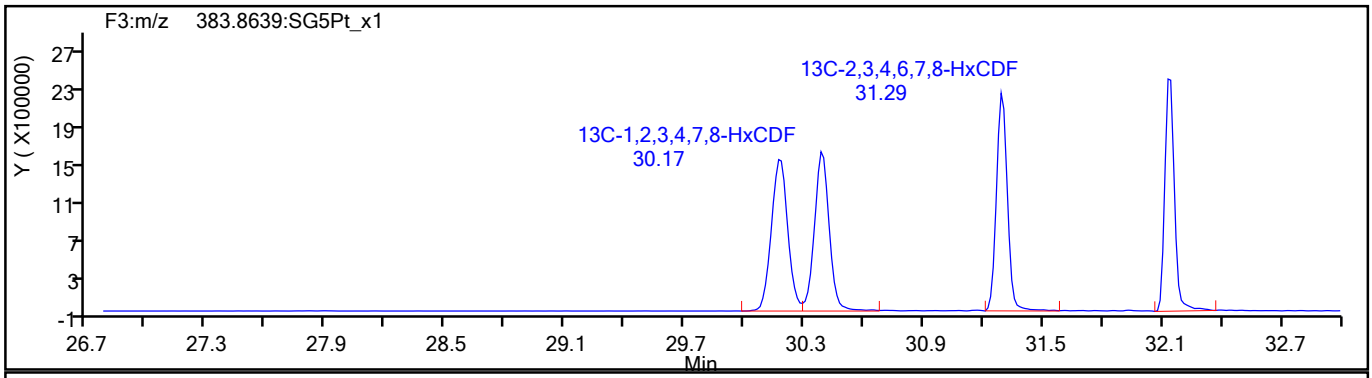

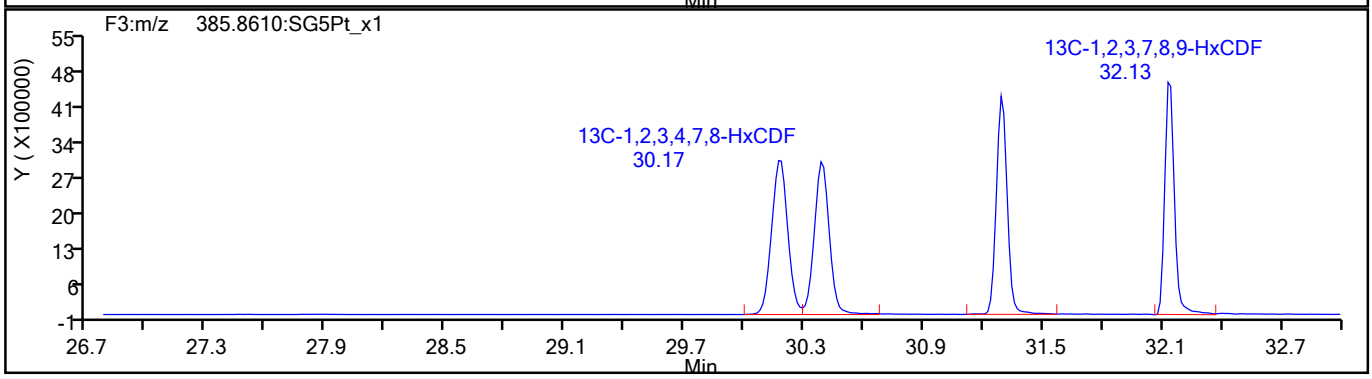

793306

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

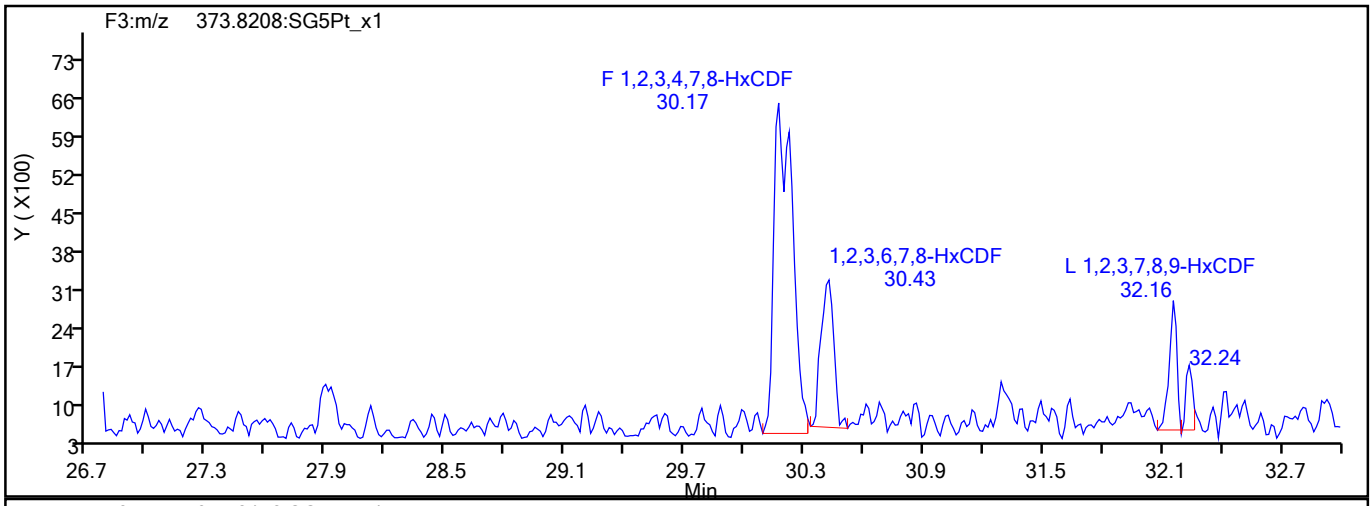

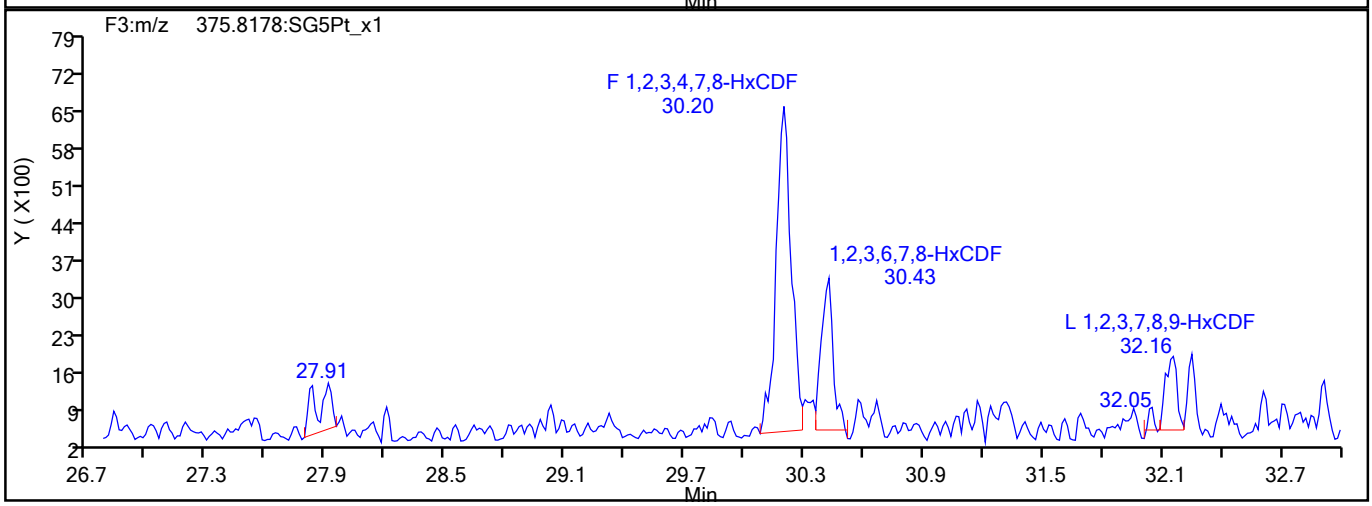

HxCDF Interference Mass

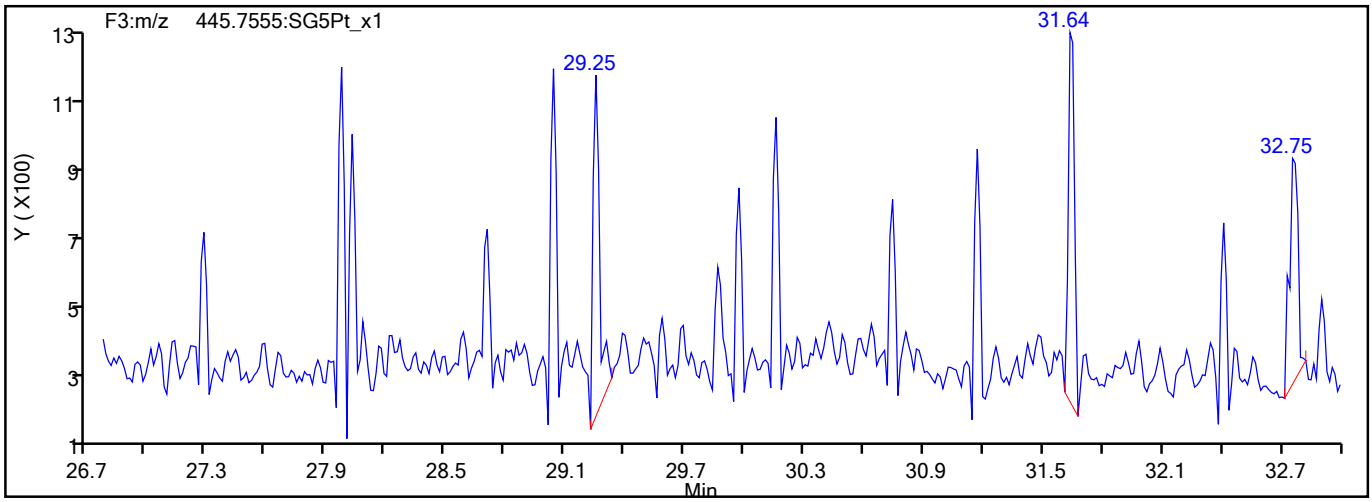

793307

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

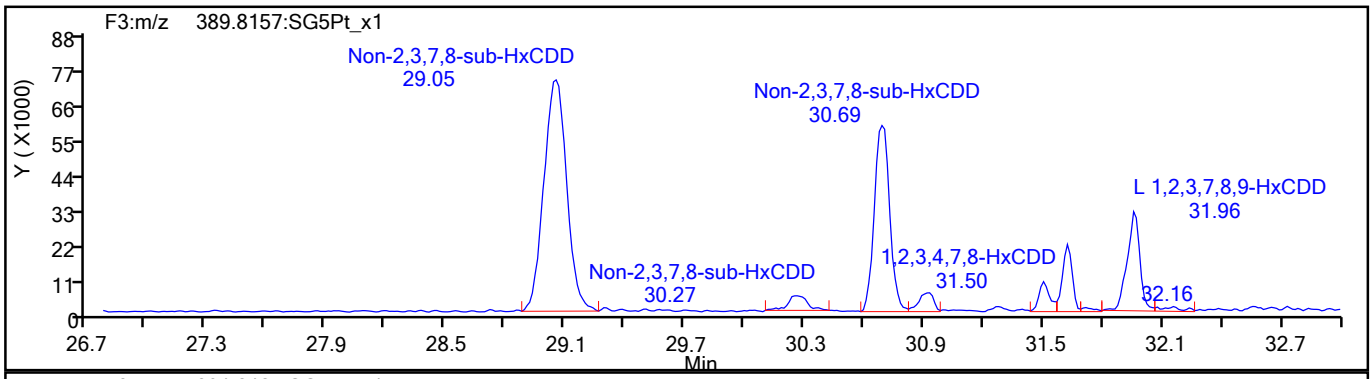

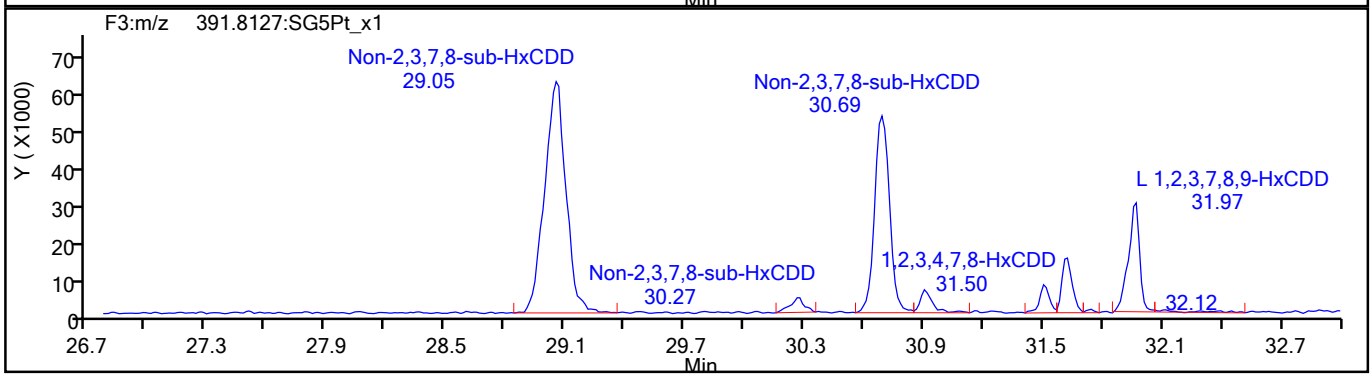

HxCDD Standards

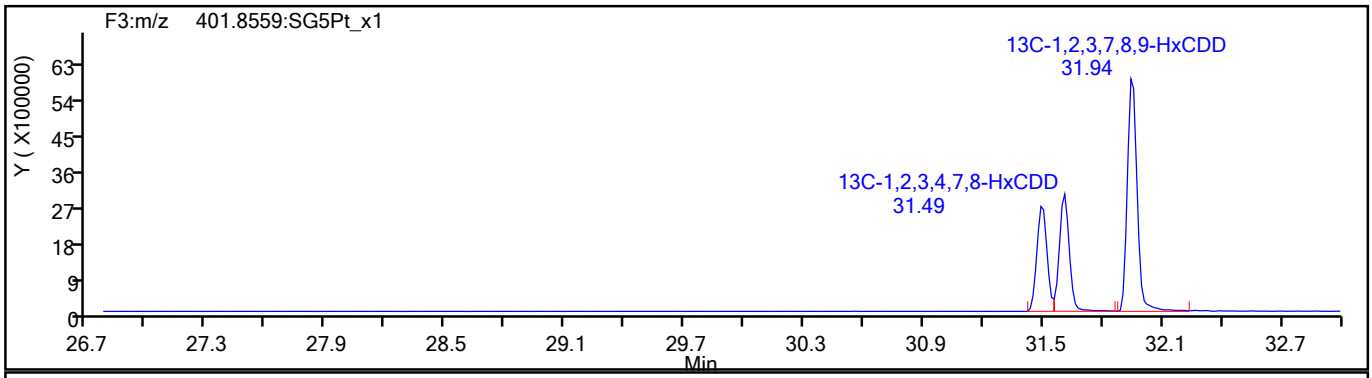

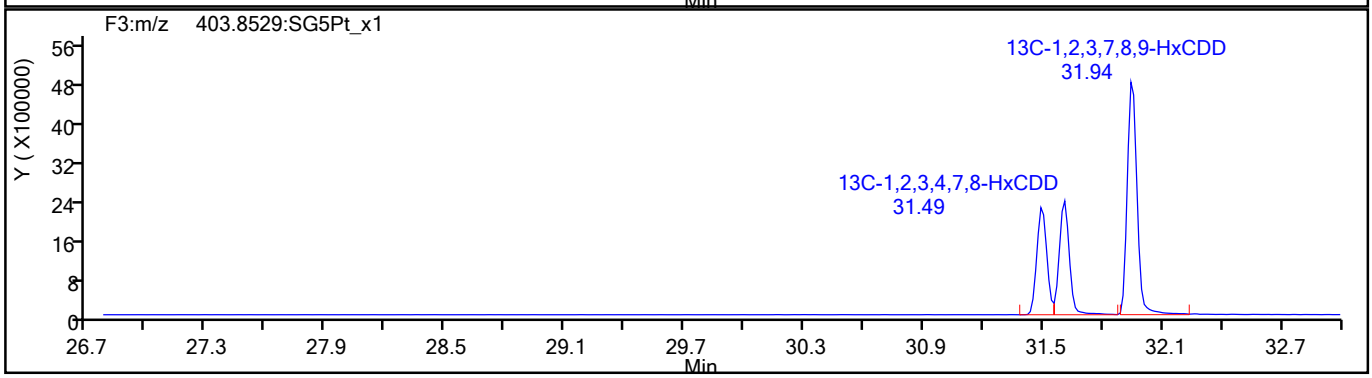

793308

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

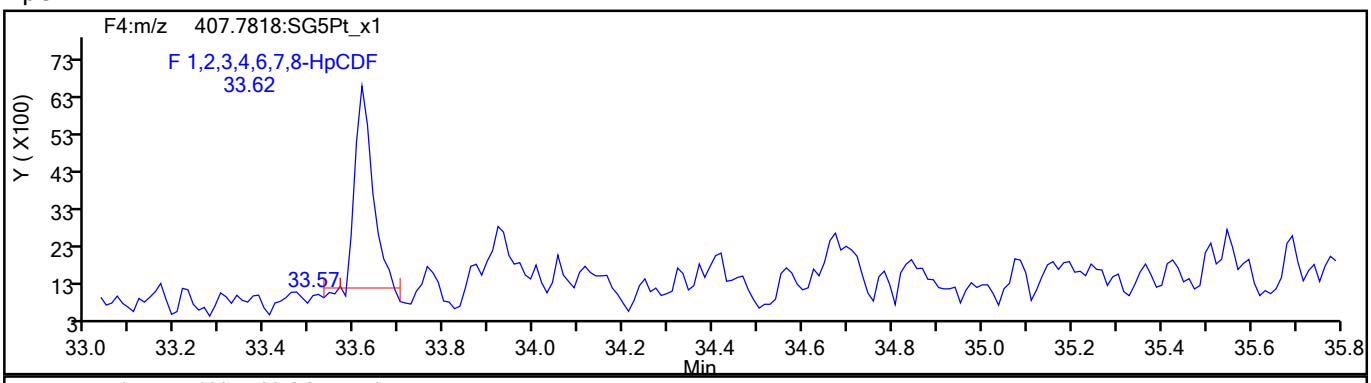

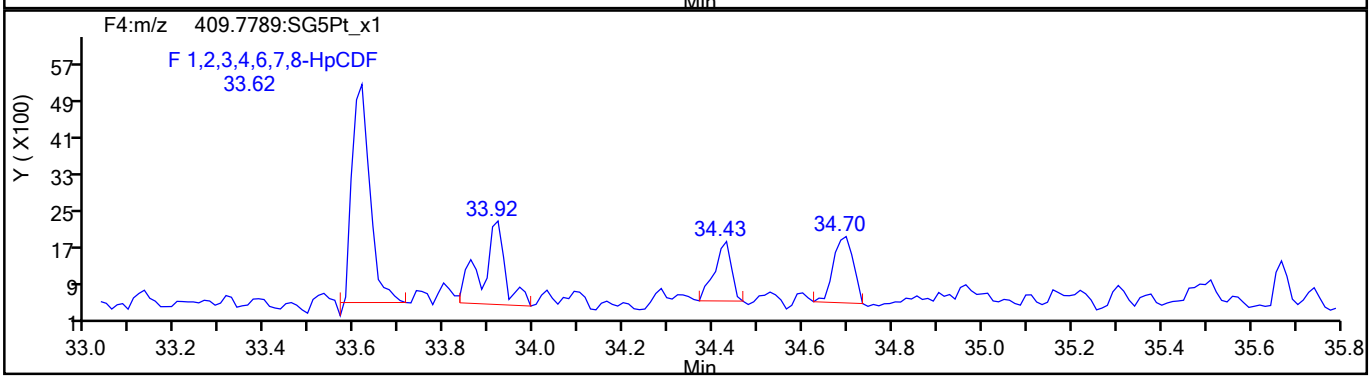

HpCDF Standards

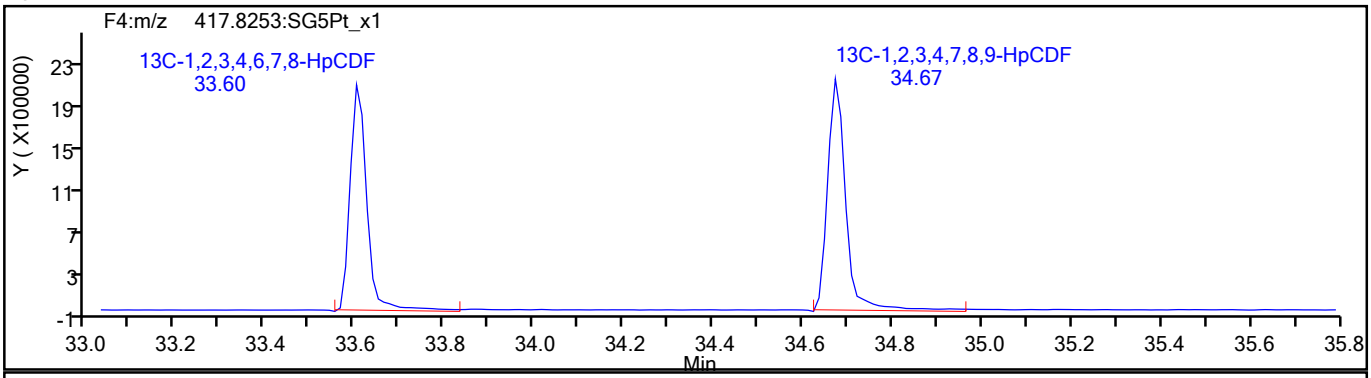

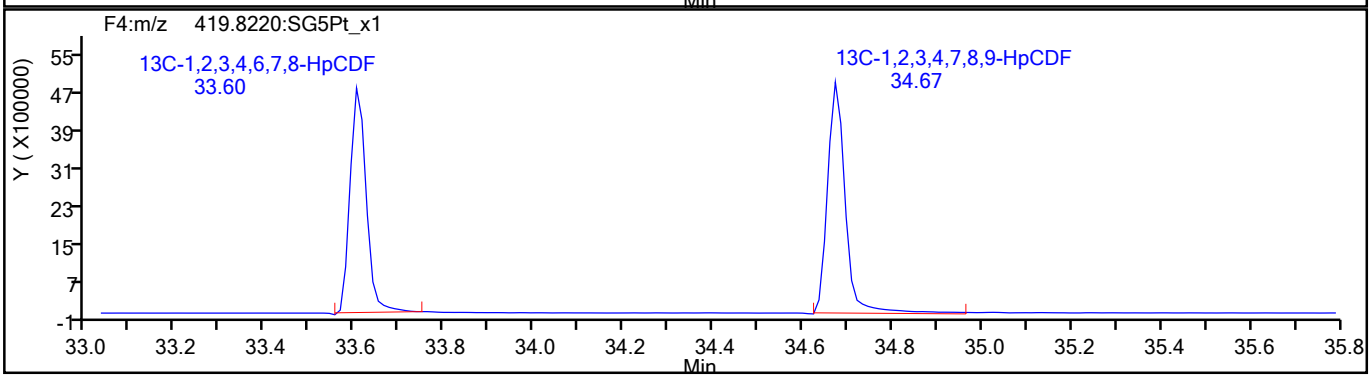

793309

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

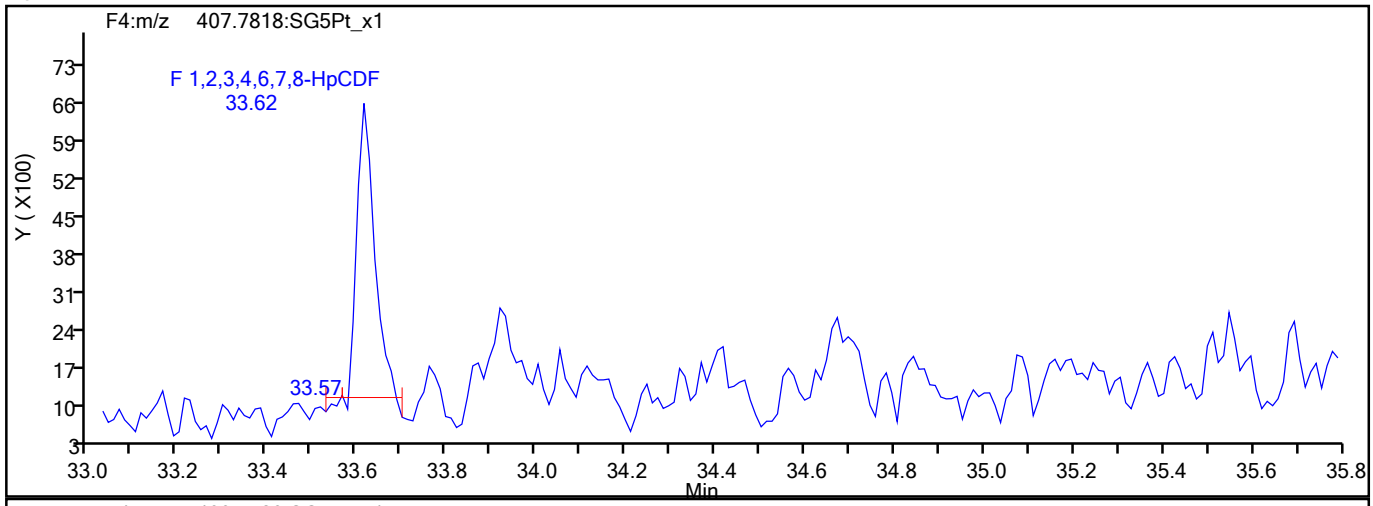

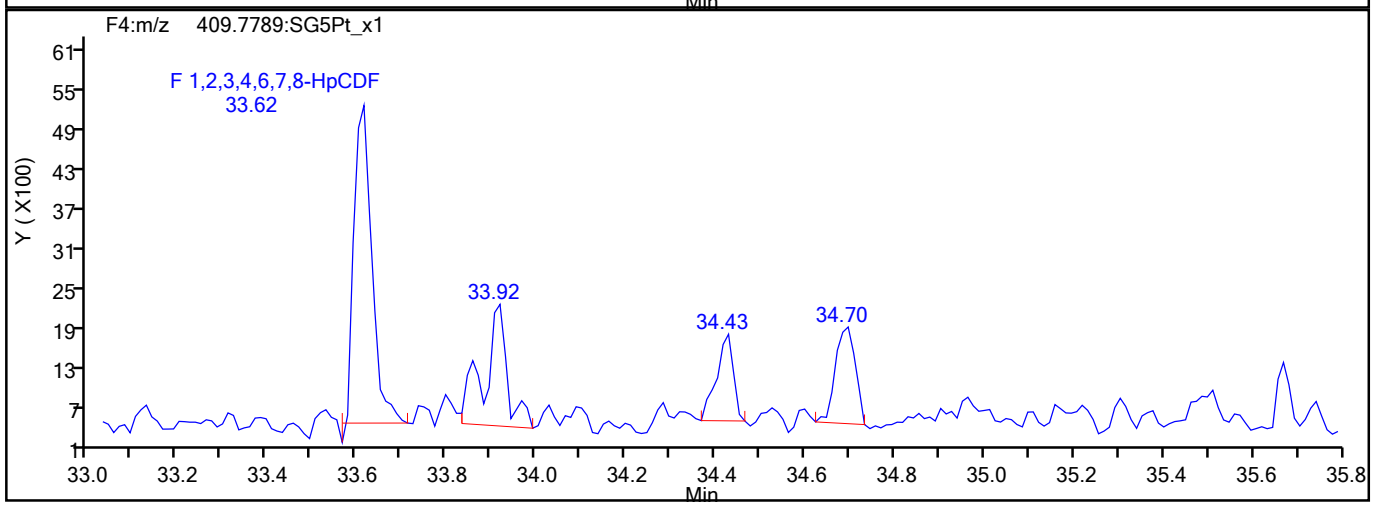

HpCDF Interference Mass

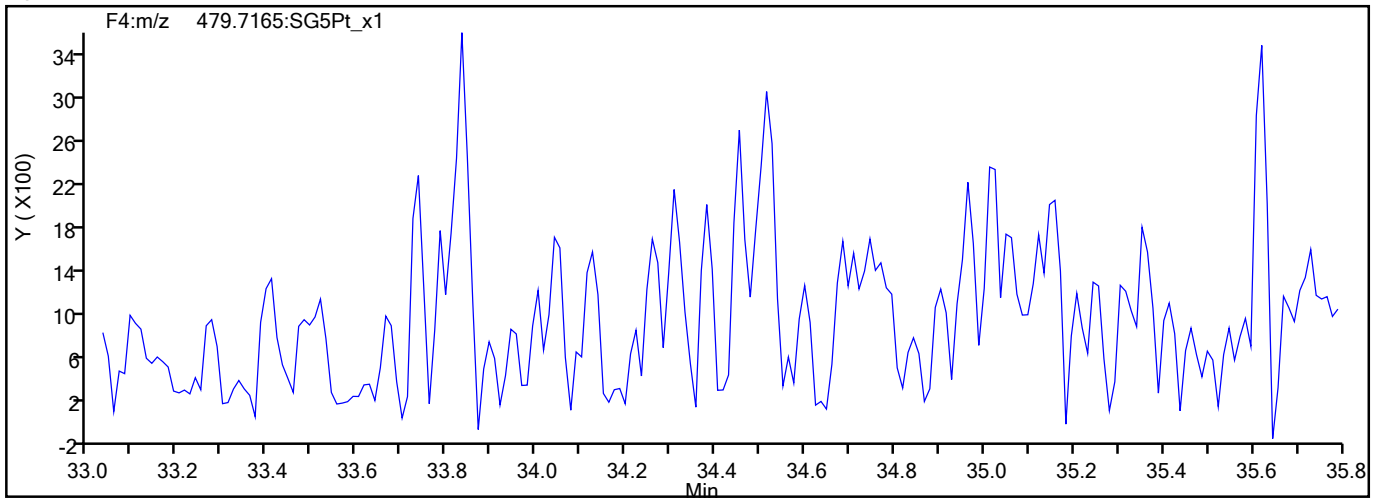

793310

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

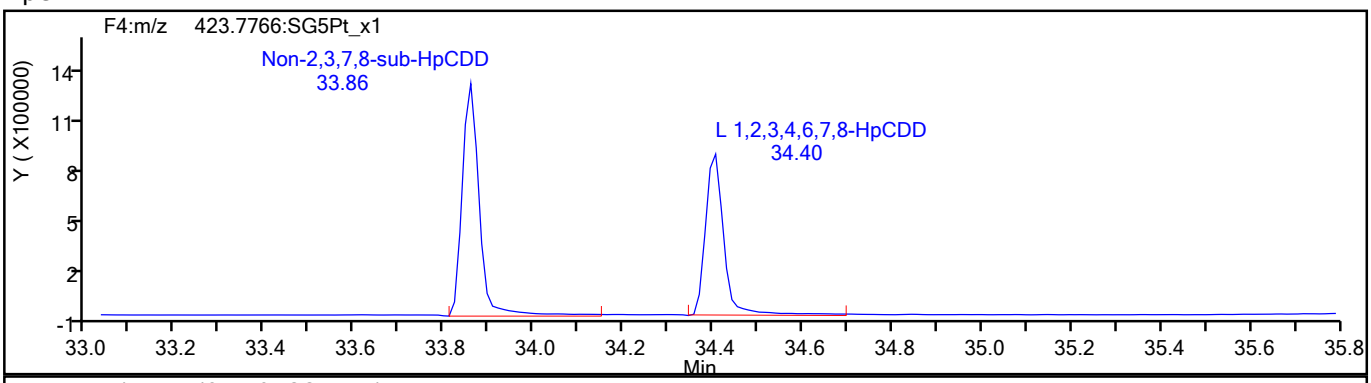

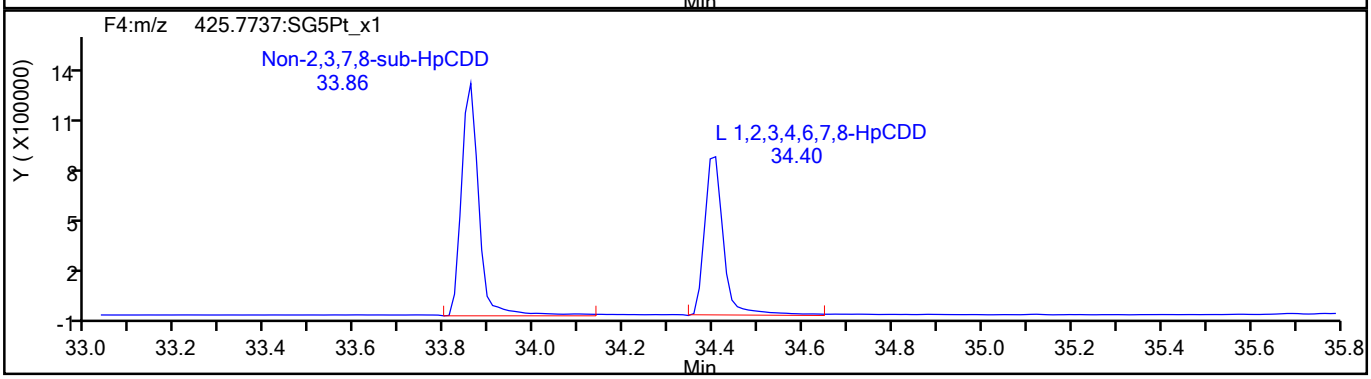

HpCDD Standards

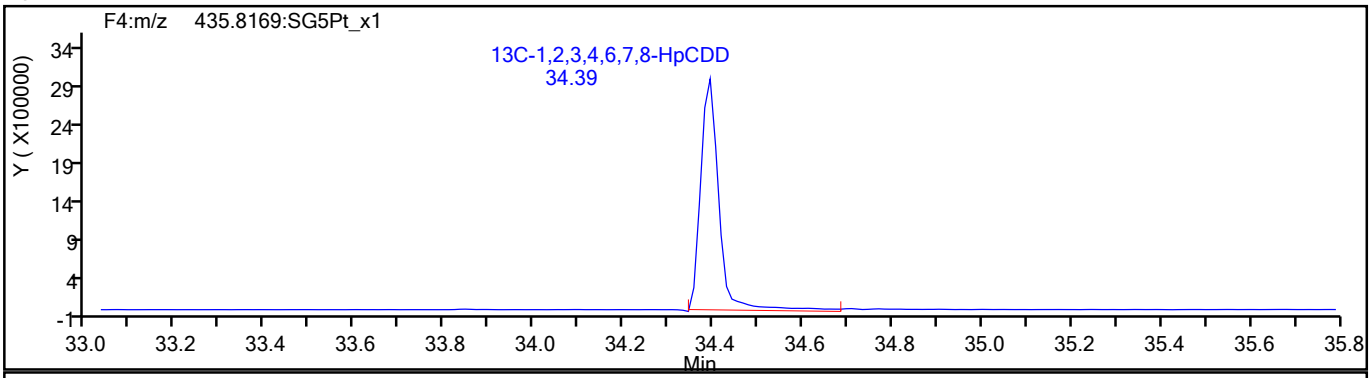

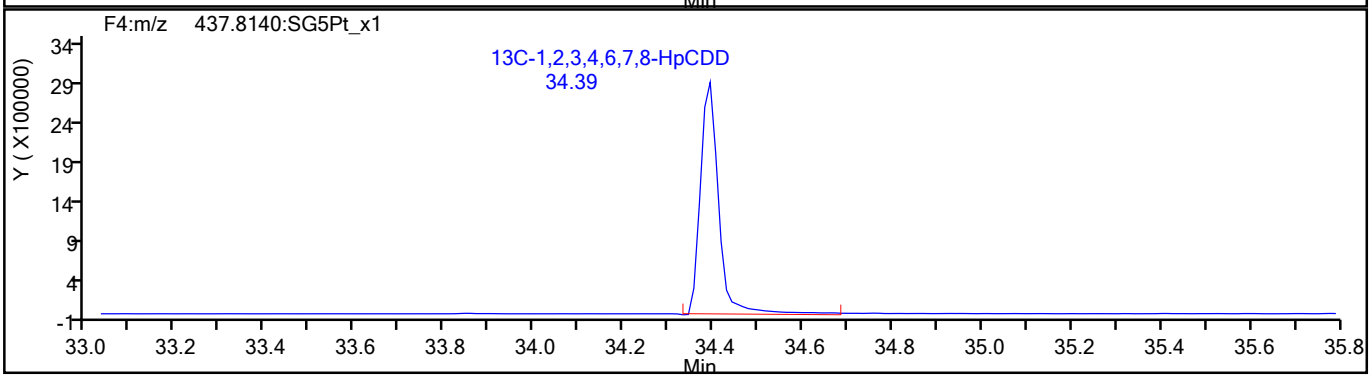

793311

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

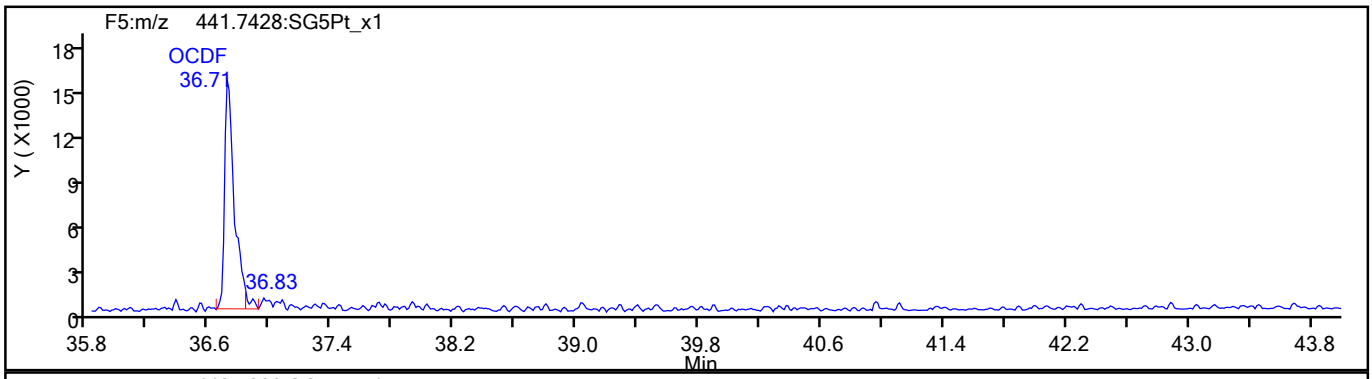

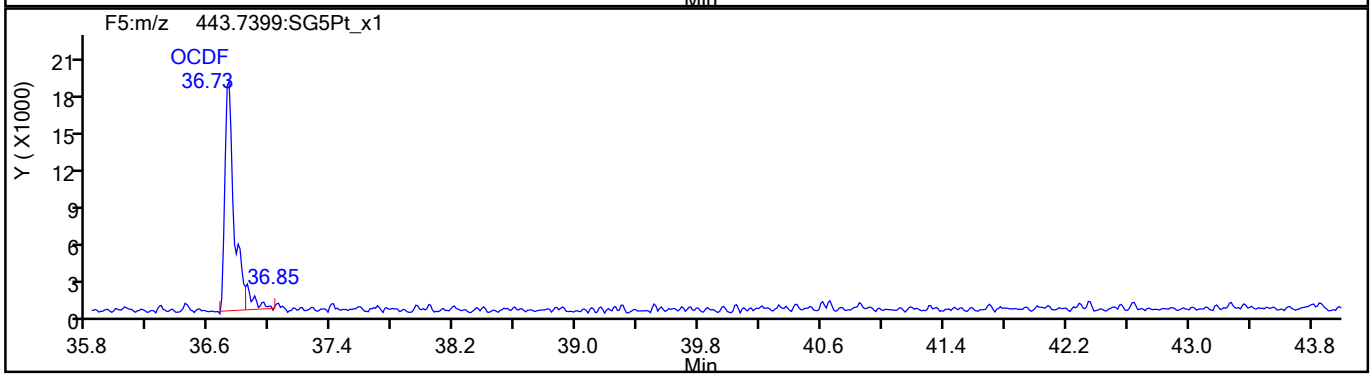

OCDF Standards

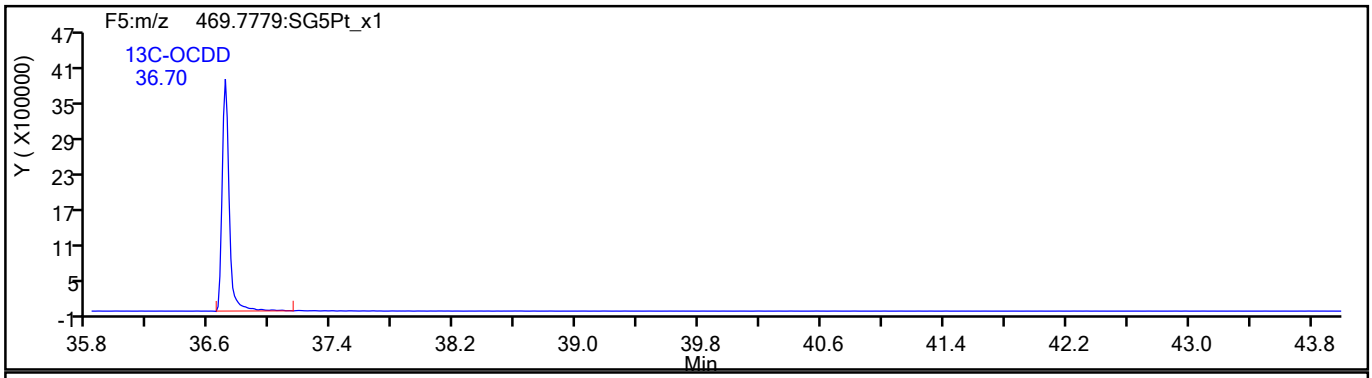

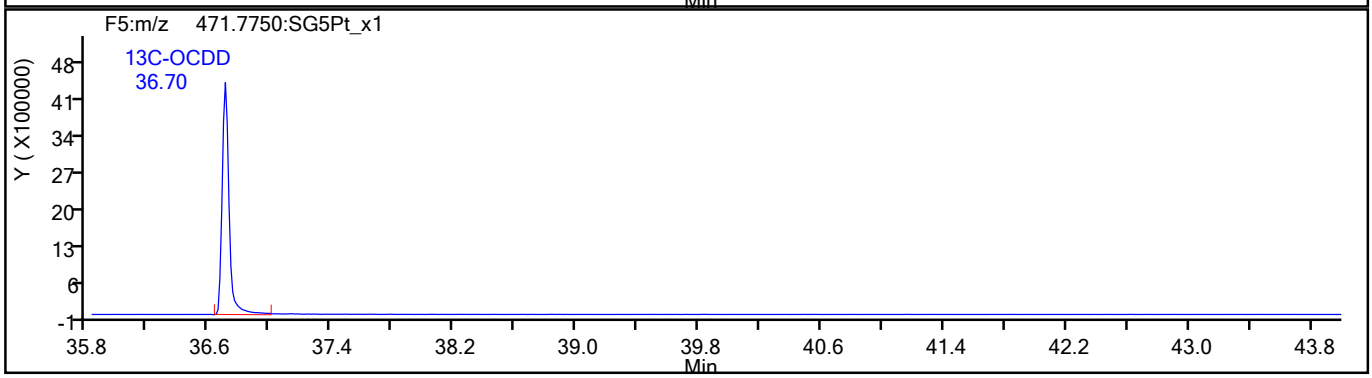

793312

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

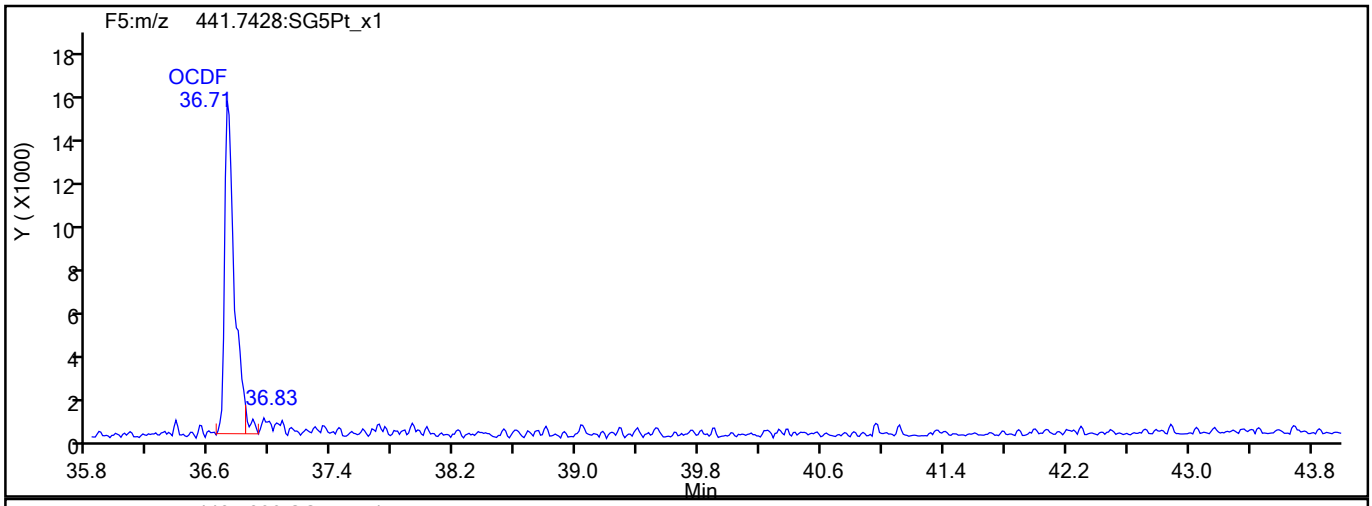

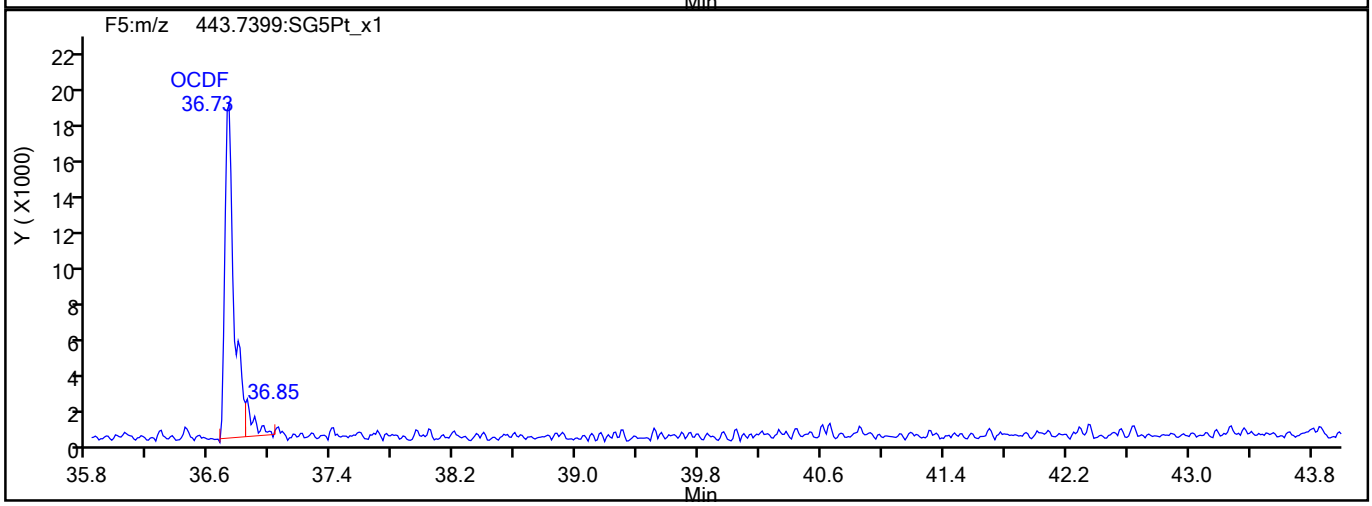

OCDF Interference Mass

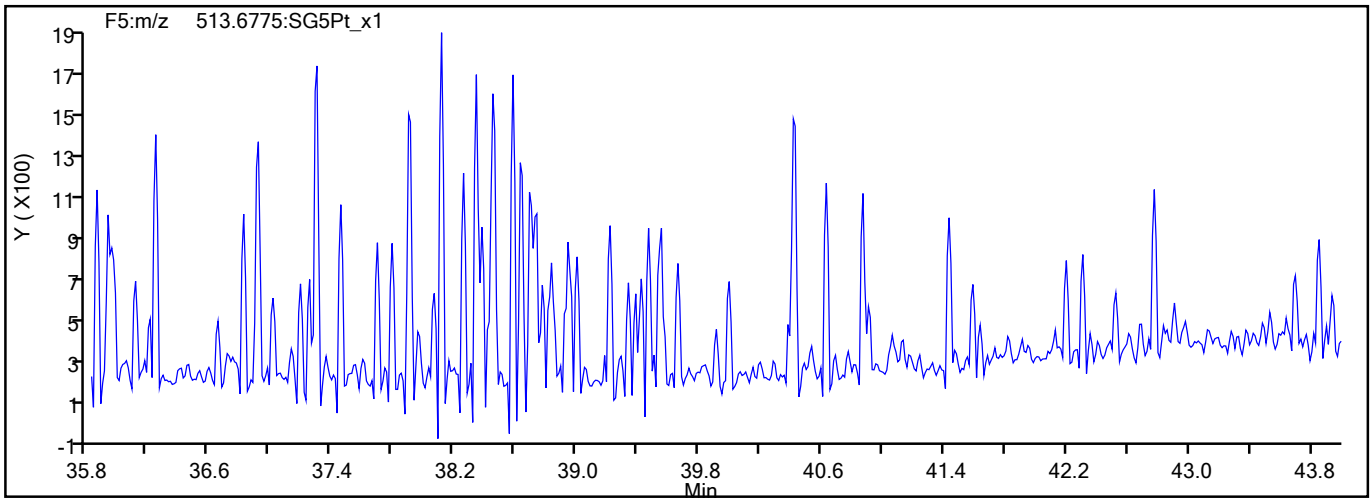

793313

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

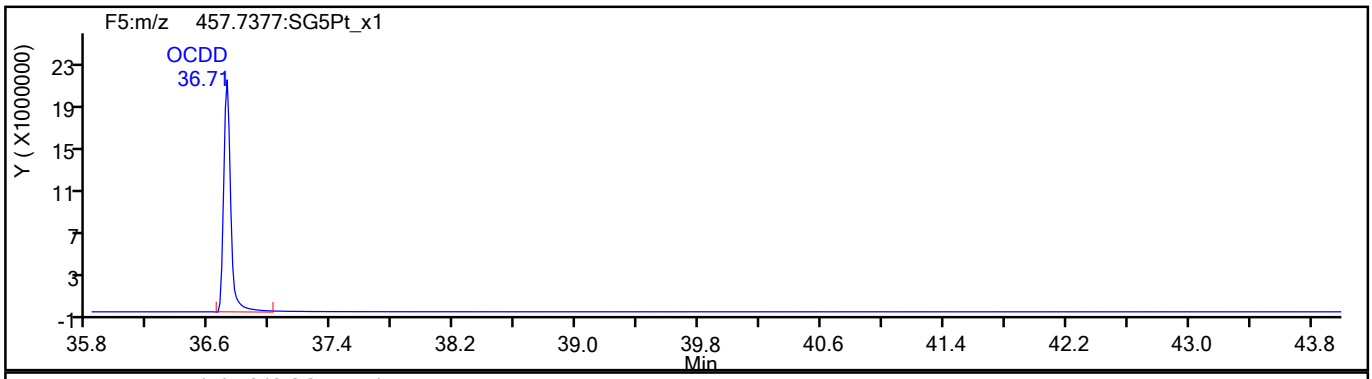

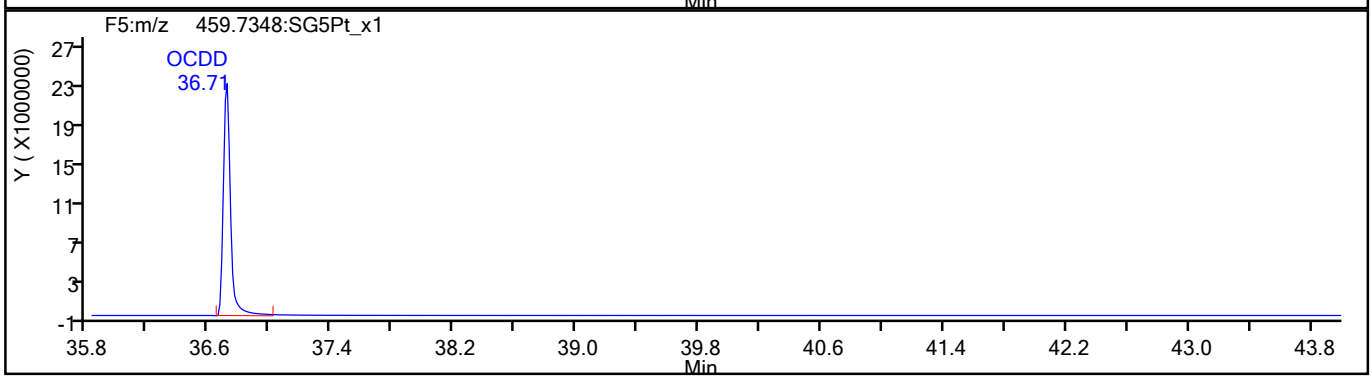

OCDD Standards

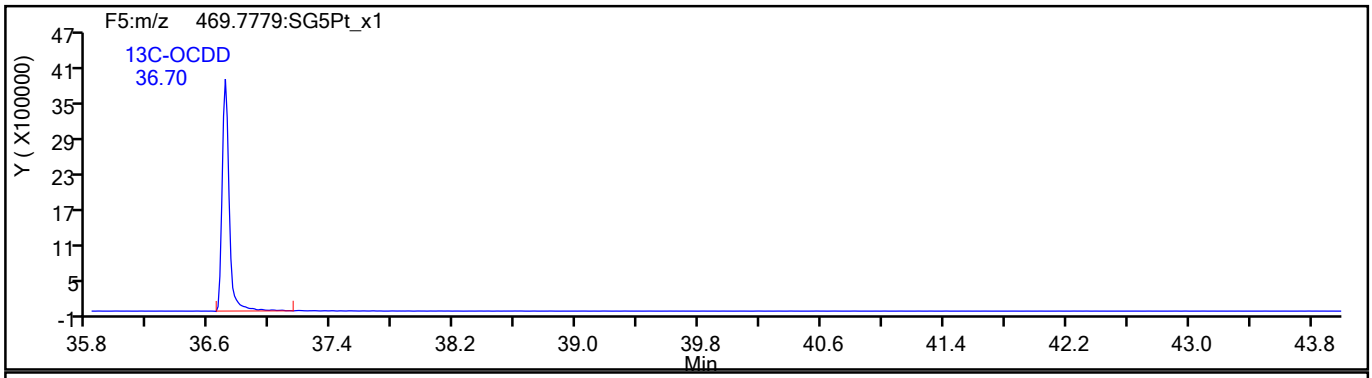

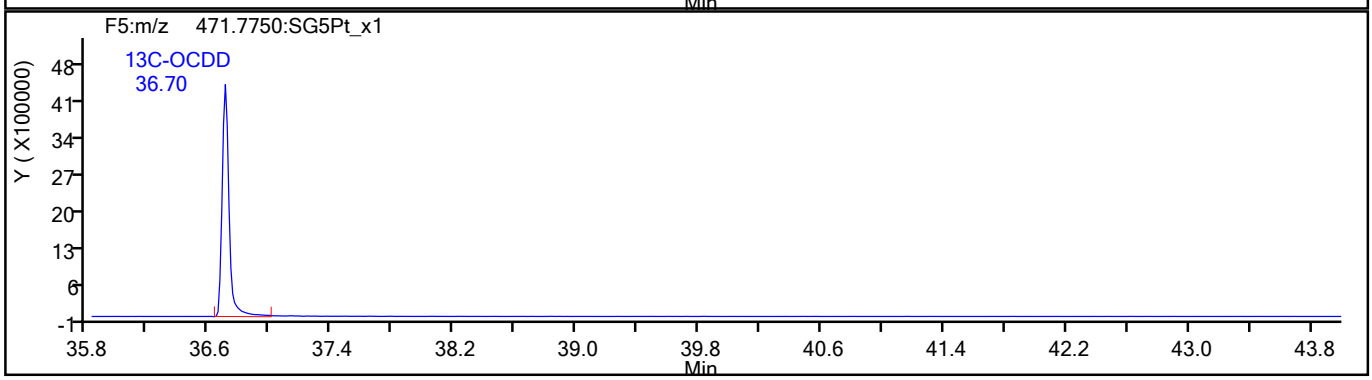

793314

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

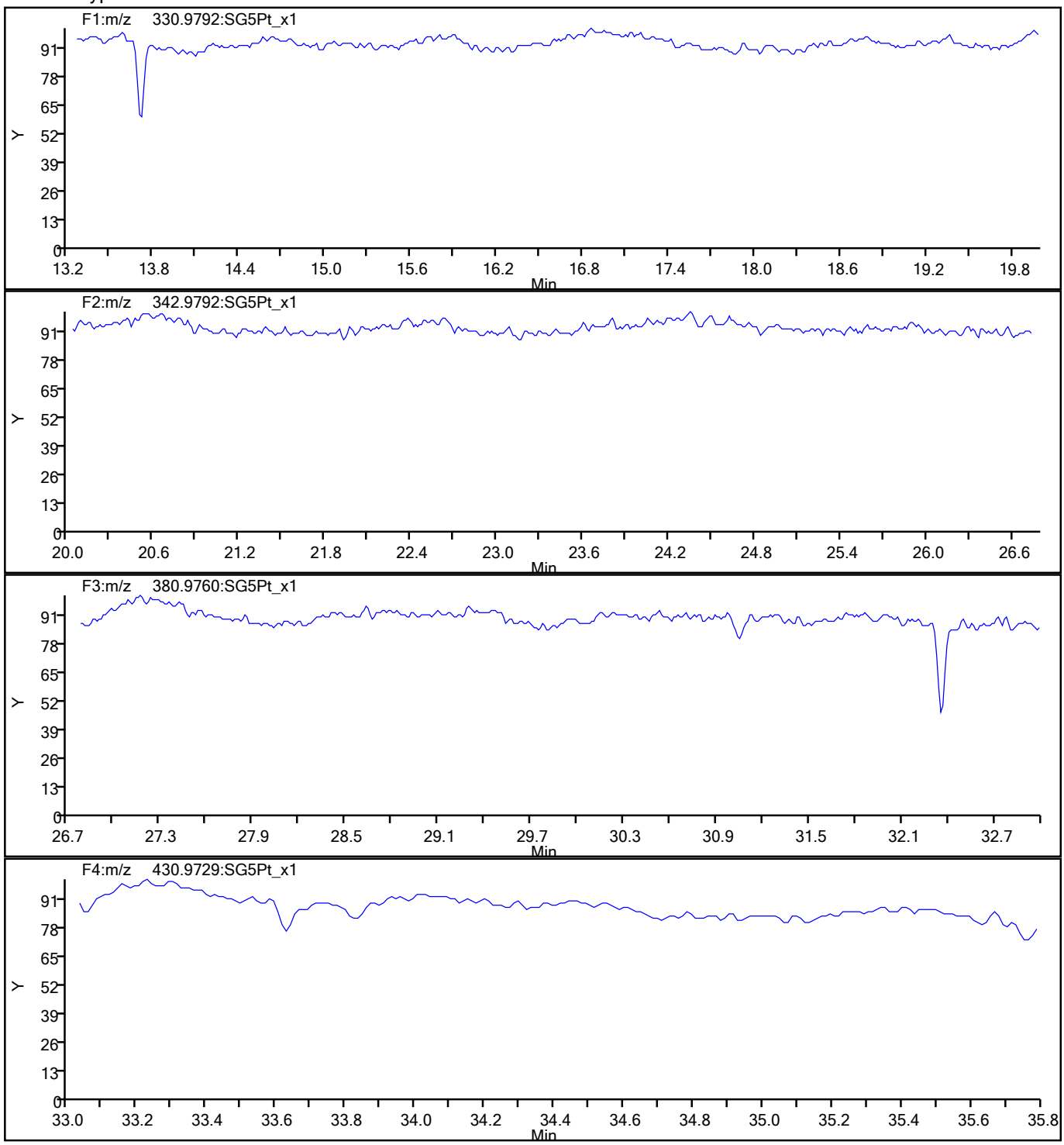

793315

Report Date: 27-Aug-2021 08:31:08 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_21.d		
Injection Date:	26-Aug-2021 01:20:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	519955	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

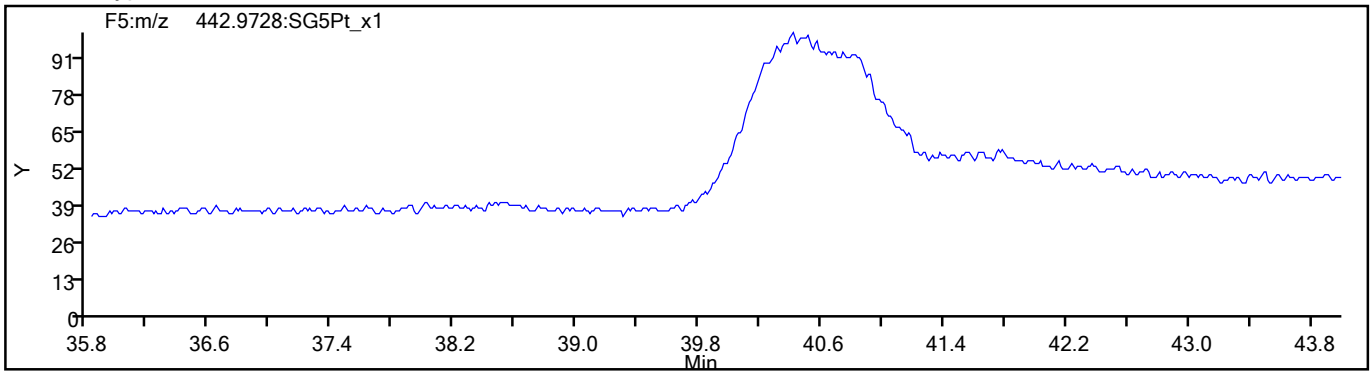

793316

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (0-2) RA
Lab Sample ID: 320-77292-1 RA
Matrix: Sediment
Lab File ID: 31AU2111D2_009.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:30
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.14(g)
Date Analyzed: 08/31/2021 18:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 55.6
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520997
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	31	B	2.2	1.1

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	67		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	76		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_009.d
Lims ID: 320-77292-A-1-A
Client ID: 11215702-080321-BN-SJSB091 (0-2)
Sample Type: Client
Inject. Date: 31-Aug-2021 18:20:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:40:48

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.285	36827820	0.80	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.602	33012691	0.80	1.3327	67.3	67.3	0.4088	0.4088	67.26	
2,3,7,8-TCDF	17.629	2285100	0.76	0.9978	6.937	6.937	0.2385	0.2385		
D 13C-2,3,7,8-TCDD	16.065	22051248	0.81	0.8749	68.4	68.4	0.8809	0.8809	68.44	
2,3,7,8-TCDD	16.079	462203	0.81	1.0570	1.983	1.983	0.2939	0.2939		
$ 37Cl4-2,3,7,8-TCDD	16.079	9738297		0.8648	30.6	30.6	0.1274	0.1274	76.44	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_009.d
Lims ID: 320-77292-A-1-A
Client ID: 11215702-080321-BN-SJSB091 (0-2)
Sample Type: Client
Inject. Date: 31-Aug-2021 18:20:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-1-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:40:48

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.285	16.275	1		16421642	3662067	15804	39510	232		
333.9339	16.285	16.275	1		20406178	4568556	9569	23922	477	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.602	17.605	0	1.081	14705834	2637338	8021	20052	329		
317.9389	17.615	17.605	1	1.082	18306857	3471472	9914	24785	350	0.80(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.619	1	1.002	989435	183875	1513	3782	122		
305.8987	17.629	17.619	1	1.002	1295665	235817	4301	10752	55	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.065	16.055	1	0.987	9883641	2193205	15804	39510	139		
333.9339	16.065	16.055	1	0.987	12167607	2796825	9569	23922	292	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.079	16.069	1	1.001	206366	50471	3765	9412	13		
321.8936	16.079	16.069	1	1.001	255837	62748	2435	6087	26	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.079	16.069	1	0.987	9738297	2126778	3628	9070	586		

QC Flag Legend

Processing Flags

Report Date: 01-Sep-2021 09:57:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_009.d		
Injection Date:	31-Aug-2021 18:20:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	520997	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

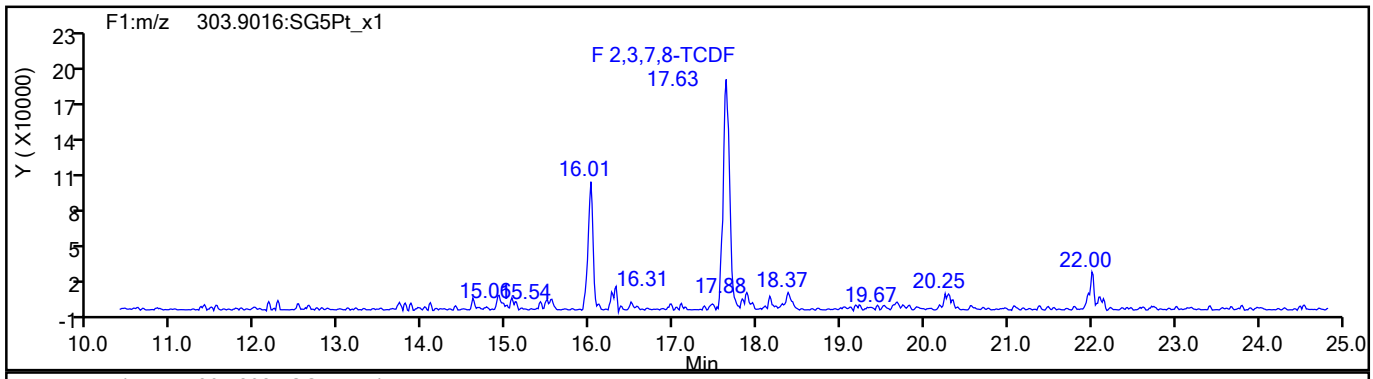

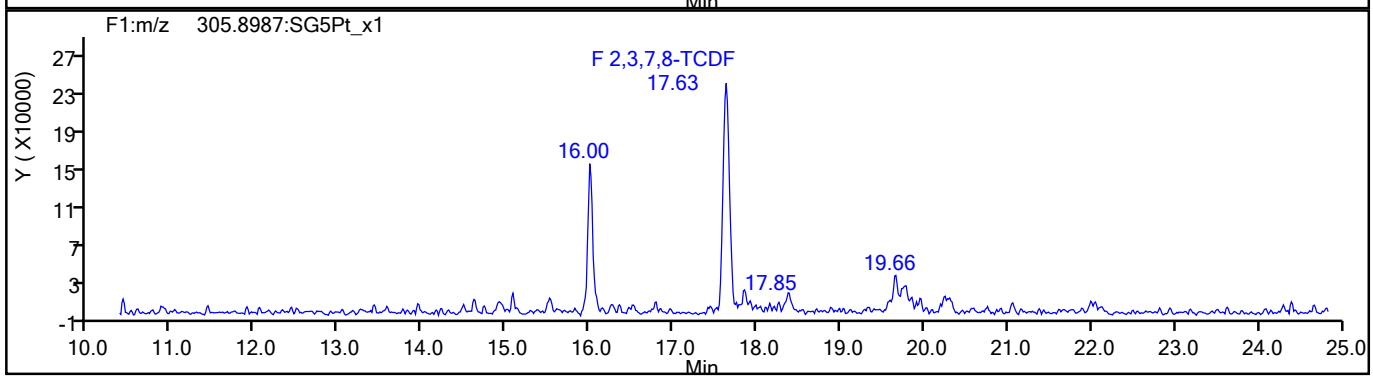

TCDF Standards

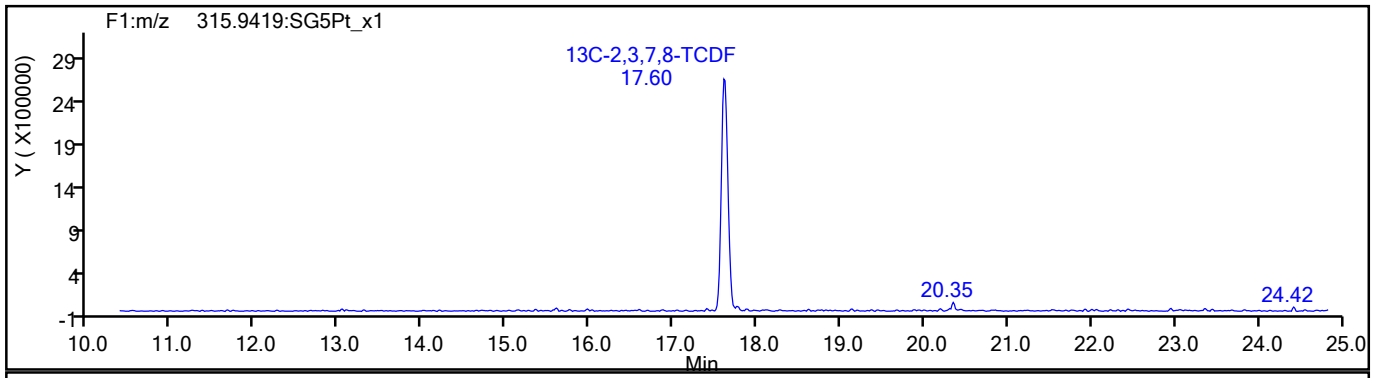

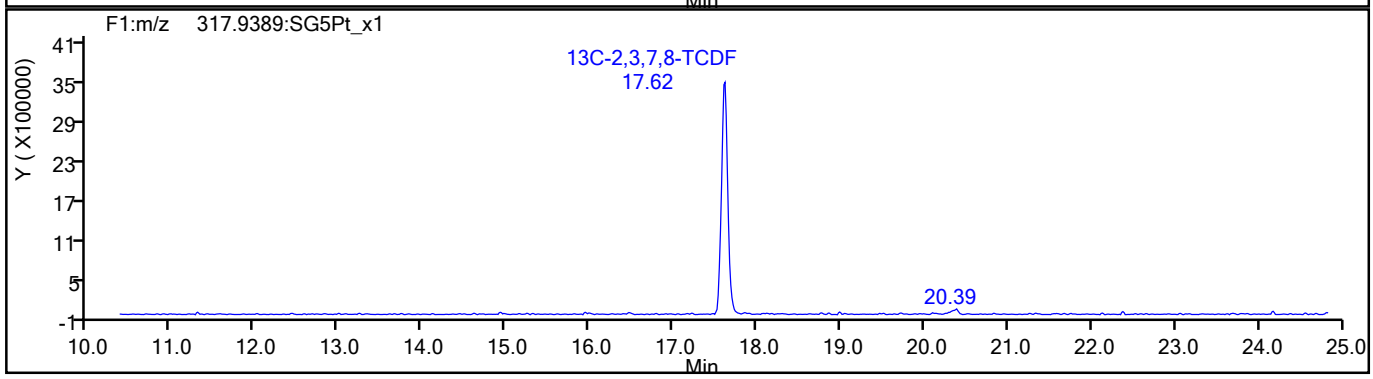

793320

Report Date: 01-Sep-2021 09:57:18 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_009.d		
Injection Date:	31-Aug-2021 18:20:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	520997	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

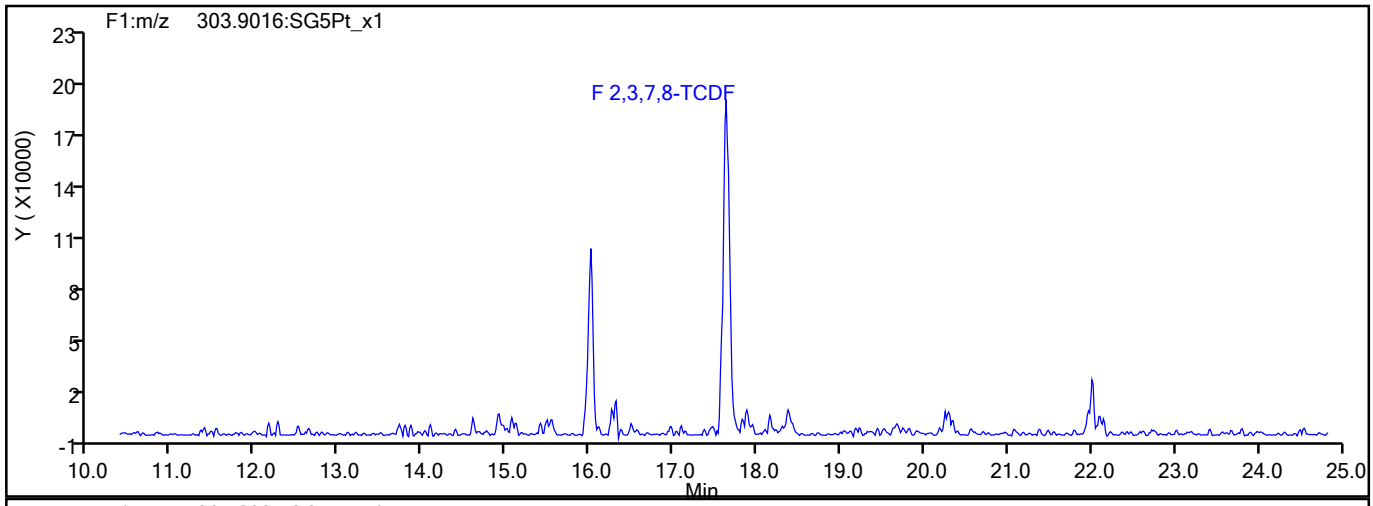

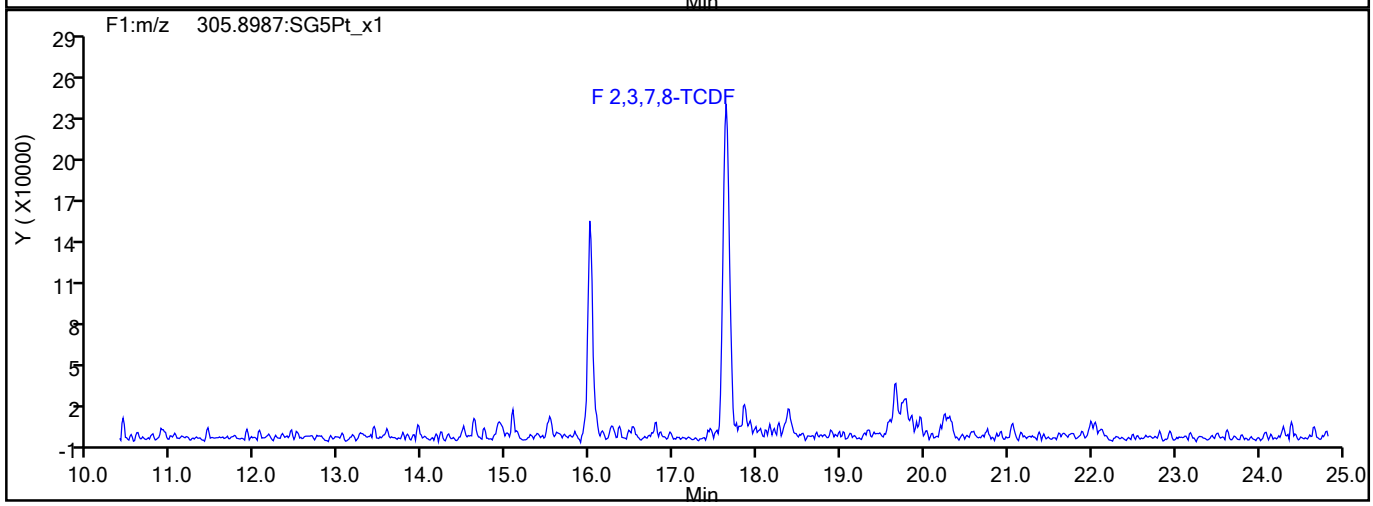

TCDF Interference Mass

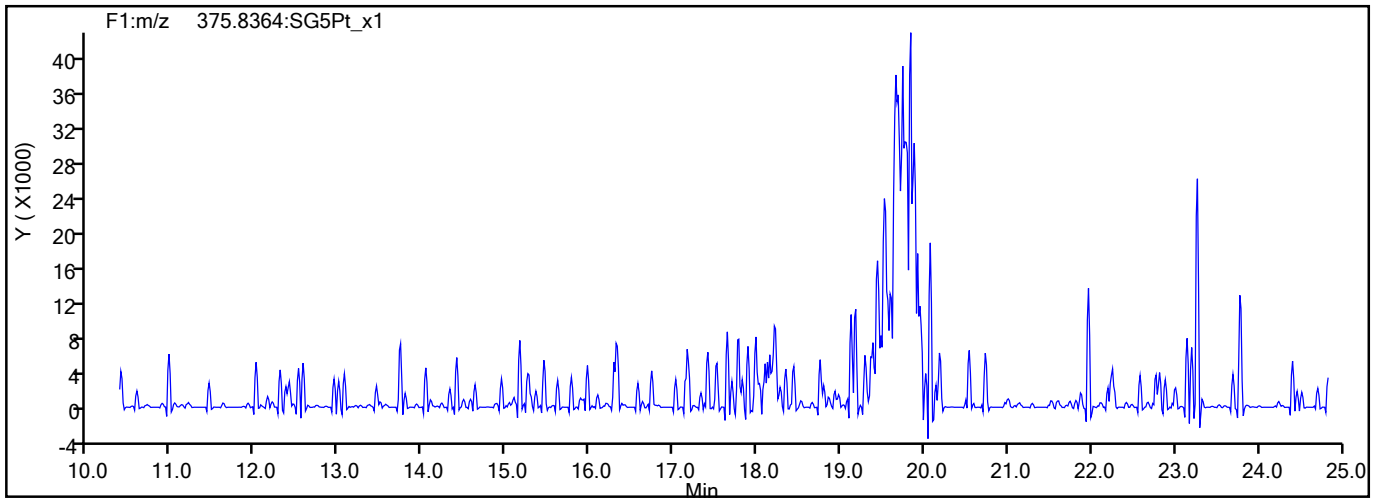

793321

Report Date: 01-Sep-2021 09:57:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_009.d		
Injection Date:	31-Aug-2021 18:20:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	520997	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

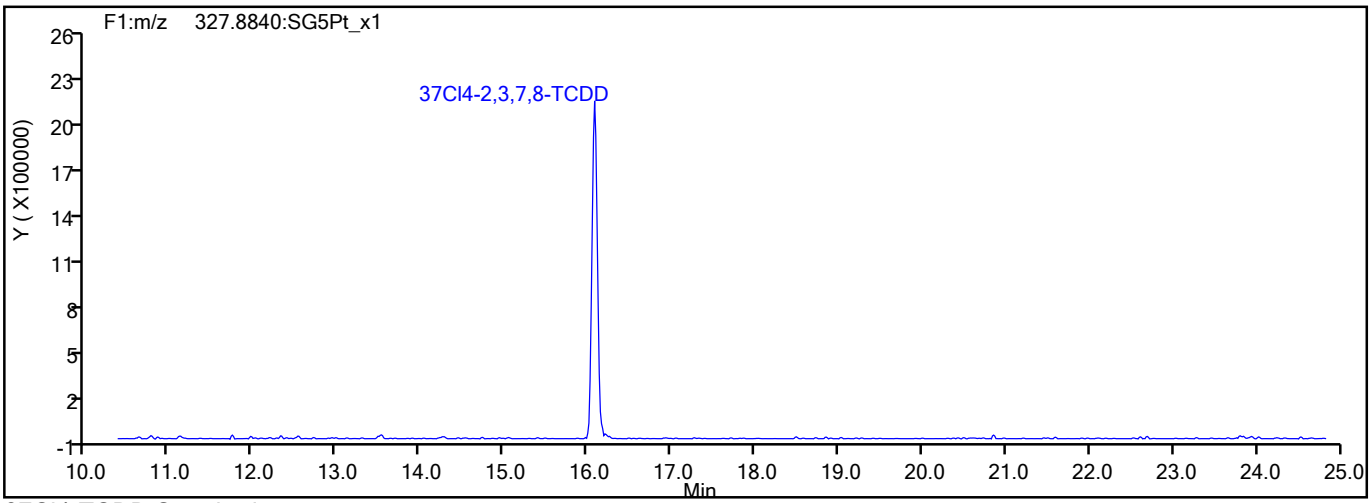

37Cl4-TCDD Standards

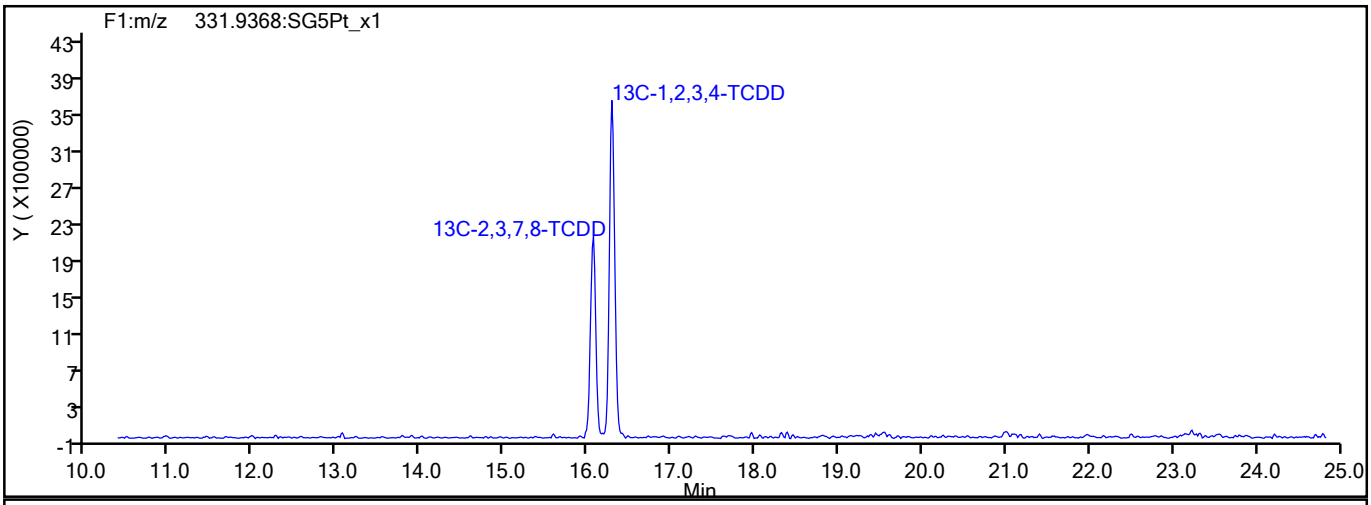

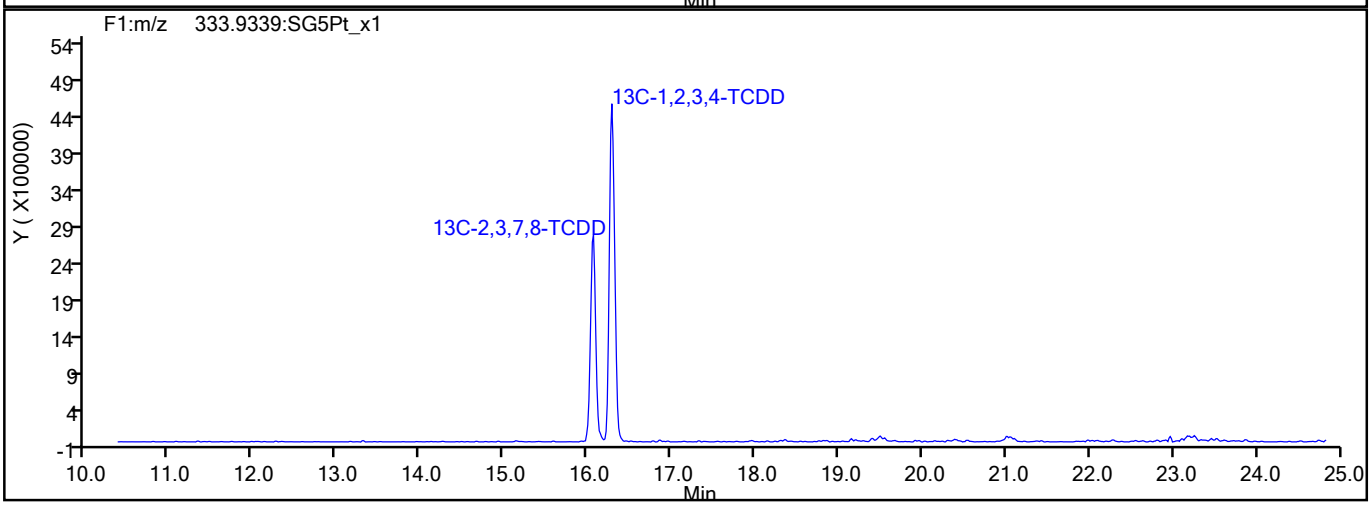

793322

Report Date: 01-Sep-2021 09:57:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_009.d		
Injection Date:	31-Aug-2021 18:20:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (0-2)		
Worklist#:	520997	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

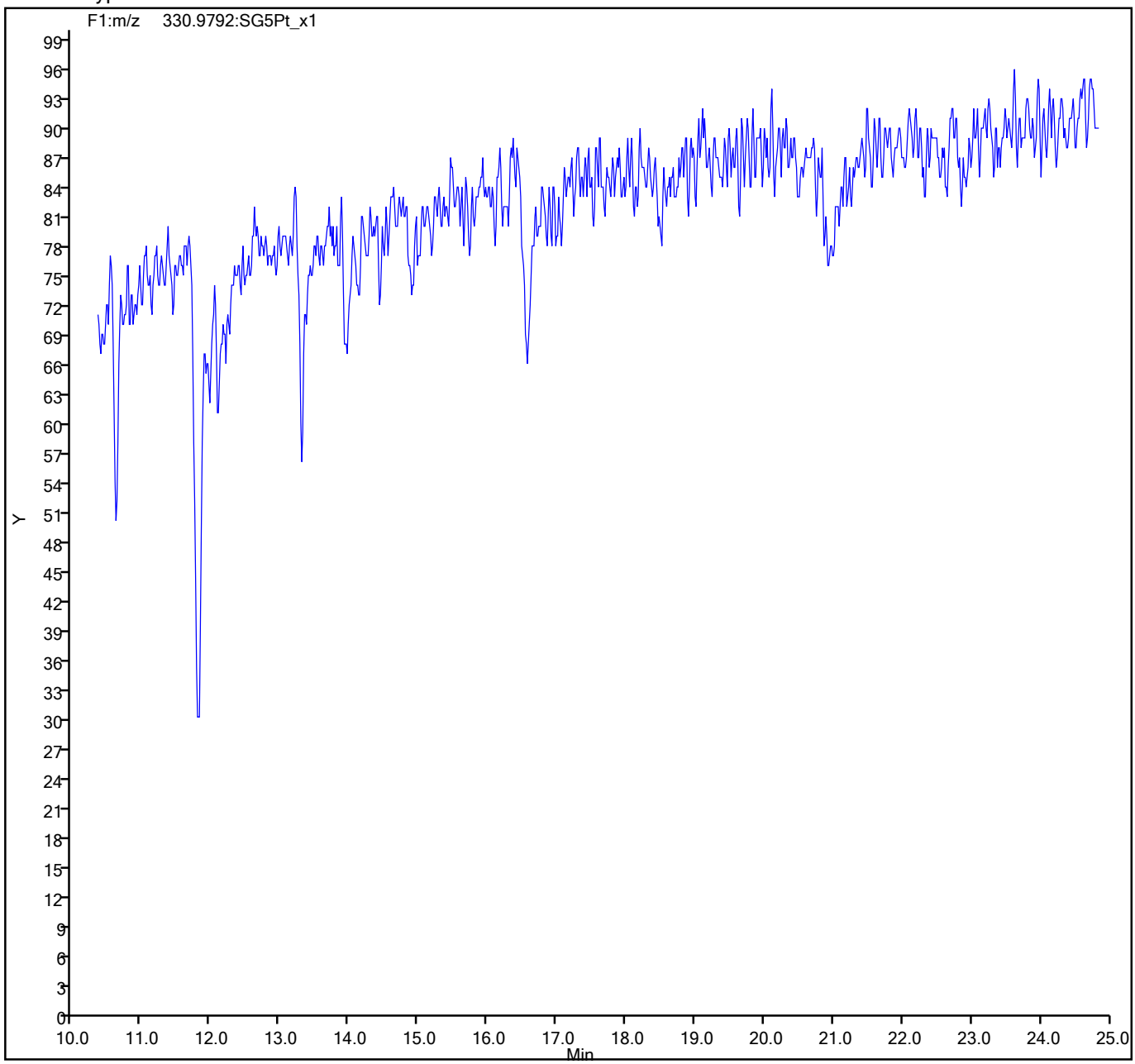

793323

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)
Lab Sample ID: 320-77292-2
Matrix: Sediment
Lab File ID: 25AU2110D5_22.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.86(g)
Date Analyzed: 08/26/2021 02:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	4.2		1.5	0.076
40321-76-4	1,2,3,7,8-PeCDD	0.31	J	7.4	0.075
57117-41-6	1,2,3,7,8-PeCDF	0.56	J q	7.4	0.054
57117-31-4	2,3,4,7,8-PeCDF	0.23	J q	7.4	0.055
39227-28-6	1,2,3,4,7,8-HxCDD	0.58	J	7.4	0.074
57653-85-7	1,2,3,6,7,8-HxCDD	0.91	J	7.4	0.080
19408-74-3	1,2,3,7,8,9-HxCDD	2.1	J	7.4	0.070
70648-26-9	1,2,3,4,7,8-HxCDF	0.51	J	7.4	0.037
57117-44-9	1,2,3,6,7,8-HxCDF	0.19	J	7.4	0.036
72918-21-9	1,2,3,7,8,9-HxCDF	0.080	J q	7.4	0.025
60851-34-5	2,3,4,6,7,8-HxCDF	0.040	J q	7.4	0.027
35822-46-9	1,2,3,4,6,7,8-HpCDD	32	B	7.4	0.40
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.21	J	7.4	0.038
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.4	0.045
3268-87-9	OCDD	770	F1 B	15	0.61
39001-02-0	OCDF	0.24	J B q	15	0.036
41903-57-5	Total TCDD	9.5	q	1.5	0.076
30402-14-3	Total TCDF	25	B q	1.5	0.095
36088-22-9	Total PeCDD	4.5	J q	7.4	0.075
30402-15-4	Total PeCDF	2.1	J q	7.4	0.055
34465-46-8	Total HxCDD	21	q	7.4	0.075
55684-94-1	Total HxCDF	0.82	J q	7.4	0.031
37871-00-4	Total HpCDD	83	B	7.4	0.40
38998-75-3	Total HpCDF	0.21	J	7.4	0.042

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB091 (2-4)
Lab Sample ID: 320-77292-2
Matrix: Sediment
Lab File ID: 25AU2110D5_22.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.86(g)
Date Analyzed: 08/26/2021 02:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	52		25-164
89059-46-1	13C-2,3,7,8-TCDF	50		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	52		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	50		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	54		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	57		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	49		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	58		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	50		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	51		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	51		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	51		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	48		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	53		26-138
114423-97-1	13C-OCDD	53		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	69		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d
Lims ID: 320-77292-A-2-A
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Sample Type: Client
Inject. Date: 26-Aug-2021 02:05:46 ALS Bottle#: 33 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-2-A 320-77292-A-2-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:36:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:43:00

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	131831686	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	107232219	0.77	1.6249	50.1	50.1	0.0765	0.0765	50.06	
2,3,7,8-TCDF	17.114	4875575	0.77	1.0239	4.441	4.441	0.0320	0.0320		
A Non-2,3,7,8-sub-TCDF	17.069	4319132	0.77	1.0239	3.967	3.934	0.0320	2.019		RQ
S Total TCDF					8.407	8.374	0.0320	0.0320		RQ
D 13C-2,3,7,8-TCDD	17.794	62154098	0.81	0.8993	52.4	52.4	0.0874	0.0874	52.42	
2,3,7,8-TCDD	17.809	1108245	0.75	1.2541	1.422	1.422	0.0254	0.0254		M
$ 37Cl4-2,3,7,8-TCDD	17.809	40405703		1.1071	27.7	27.7	0.0187	0.0187	69.21	
A Non-2,3,7,8-sub-TCDD	17.530	1379240	0.77	1.2541	1.955	1.769	0.0254	0.5507		RQMa
S Total TCDD					3.377	3.191	0.0254	0.0254		RQ
D 13C-1,2,3,7,8-PeCDF	22.020	80232121	1.56	1.2101	50.3	50.3	0.0675	0.0675	50.29	
1,2,3,7,8-PeCDF	22.034	160269	1.55	1.0611	0.2038	0.1882	0.0182	0.0182		RQM
D 13C-2,3,4,7,8-PeCDF	23.329	88498322	1.58	1.2395	54.2	54.2	0.0659	0.0659	54.16	
2,3,4,7,8-PeCDF	23.356	68995	1.55	1.0184	0.0873	0.0766	0.0185	0.0185		RQ
A F1 PeCDFs	19.851						0.0184	0.0184		
A Non-2,3,7,8-sub-PeCDF	23.067	395152	1.55	1.0398	0.5494	0.4505	0.0184	0.2829		RQ
S Total PeCDF					0.8405	0.7153	0.0184	0.0184		RQ
D 13C-1,2,3,7,8-PeCDD	24.038	52280432	1.61	0.7612	52.1	52.1	0.0403	0.0403	52.10	
1,2,3,7,8-PeCDD	24.079	56247	1.50	1.0484	0.1026	0.1026	0.0252	0.0252		
A Non-2,3,7,8-sub-PeCDD	23.696	772497	1.55	1.0484	1.415	1.409	0.0252	0.5270		RQM
S Total PeCDD					1.517	1.512	0.0252	0.0252		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.173	73924810	0.51	1.0837	57.9	57.9	0.1277	0.1277	57.93	
1,2,3,4,7,8-HxCDF	30.199	138722	1.23	1.0851	0.1729	0.1729	0.0123	0.0123		M
D 13C-1,2,3,6,7,8-HxCDF	30.386	66345785	0.52	1.1279	50.0	50.0	0.1227	0.1227	49.95	
1,2,3,6,7,8-HxCDF	30.386	47049	1.09	1.1260	0.0630	0.0630	0.0121	0.0121		Ma
D 13C-2,3,4,6,7,8-HxCDF	31.291	63504223	0.52	1.0637	50.7	50.7	0.1301	0.1301	50.70	
2,3,4,6,7,8-HxCDF	31.317	9876	1.24	1.1675	0.0150	0.0133	0.009066	0.009066		RQM
D 13C-1,2,3,7,8,9-HxCDF	32.129	58420015	0.53	0.9676	51.3	51.3	0.1431	0.1431	51.28	
1,2,3,7,8,9-HxCDF	32.156	18336	1.24	1.1664	0.0311	0.0269	0.008449	0.008449		RQM
A Non-2,3,7,8-sub-HxCDF	30.331						0.0102	0.0102		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.2820	0.2761	0.0105	0.0105		RQ
* 13C-1,2,3,7,8,9-HxCDD	31.943	117752421	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.490	48911103	1.23	0.7334	56.6	56.6	0.1414	0.1414	56.63	
1,2,3,4,7,8-HxCDD	31.504	101345	1.40	1.0640	0.1947	0.1947	0.0249	0.0249		Ma
D 13C-1,2,3,6,7,8-HxCDD	31.610	51157109	1.23	0.8802	49.4	49.4	0.1179	0.1179	49.36	
1,2,3,6,7,8-HxCDD	31.624	157087	1.39	1.0001	0.3070	0.3070	0.0269	0.0269		M
1,2,3,7,8,9-HxCDD	31.956	399611	1.20	1.1325	0.7052	0.7052	0.0236	0.0236		M
A Non-2,3,7,8-sub-HxCDD	30.519	3057469	1.24	1.0655	5.777	5.735	0.0251	3.581		RQ
S Total HxCDD					6.984	6.942	0.0251	0.0251		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	43468225	0.44	0.7730	47.8	47.8	0.3419	0.3419	47.75	
1,2,3,4,6,7,8-HpCDF	33.615	44091	1.00	1.4413	0.0704	0.0704	0.0127	0.0127		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	43802906	0.43	0.7008	53.1	53.1	0.3771	0.3771	53.08	
1,2,3,4,7,8,9-HpCDF	34.673						0.0153	0.0153		
A Non-2,3,7,8-sub-HpCDF	34.138						0.0139	0.0139		
S Total HpCDF					0.0704	0.0704	0.0140	0.0140		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	38509420	1.01	0.6472	50.5	50.5	0.1761	0.1761	50.53	
1,2,3,4,6,7,8-HpCDD	34.405	4476264	1.00	1.0943	10.6	10.6	0.1355	0.1355		
A Non-2,3,7,8-sub-HpCDD	34.223	7337916	0.99	1.0943	17.4	17.4	0.1355	17.4		
S Total HpCDD					28.0	28.0	0.1355	0.1355		
D 13C-OCDD	36.701	56079721	0.88	0.4472	106.5	106.5	0.1146	0.1146	53.25	
OCDF	36.809	33190	0.89	1.4382	0.0969	0.0823	0.0122	0.0122		RQ
OCDD	36.713	79931303	0.89	1.1070	257.5	257.5	0.2055	0.2055		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 27-Aug-2021 08:36:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d
Lims ID: 320-77292-A-2-A
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Sample Type: Client
Inject. Date: 26-Aug-2021 02:05:46 ALS Bottle#: 33 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-2-A 320-77292-A-2-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:36:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:43:00

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		59346924	15637204	5275	13187	2964		
333.9339	17.598	17.598	0		72484762	19000408	5616	14040	3383	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.084	1	0.972	46775990	12247023	10116	25290	1211		
317.9389	17.099	17.084	1	0.972	60456229	15744238	7109	17772	2215	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.099	1	1.001	2118829	529708	1639	4097	323		
305.8987	17.114	17.099	1	1.001	2756746	685422	2026	5065	338	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	15.224	17.069	-110	0.890	187012	54574	1639	4097	33		
305.8987	15.224	17.069	-110	0.890	241278	79377	2026	5065	39	0.78(0.65-0.89)	
303.9016	15.466	17.069	-96	0.904	45715	10842	1639	4097	7		
	Empc Correction				27120	9721	1639	4097	6		
305.8987	15.466	17.069	-96	0.904	35221	12625	2026	5065	6	1.30(0.65-0.89)	
303.9016	15.723	17.069	-81	0.920	58957	15152	1639	4097	9		
305.8987	15.723	17.069	-81	0.920	83263	19006	2026	5065	9	0.71(0.65-0.89)	
303.9016	15.995	17.069	-64	0.935	82487	18019	1639	4097	11		
305.8987	15.995	17.069	-64	0.935	107026	21362	2026	5065	11	0.77(0.65-0.89)	
303.9016	16.222	17.069	-51	0.949	100961	27424	1639	4097	17		
	Empc Correction				83260	21425	1639	4097	13		
305.8987	16.222	17.069	-51	0.949	108130	27825	2026	5065	14	0.93(0.65-0.89)	
303.9016	16.464	17.069	-36	0.963	115651	26475	1639	4097	16		
305.8987	16.464	17.069	-36	0.963	160424	33570	2026	5065	17	0.72(0.65-0.89)	
303.9016	16.736	17.069	-20	0.979	955241	257328	1639	4097	157		
305.8987	16.736	17.069	-20	0.979	1261564	335978	2026	5065	166	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.537	17.069	28	1.026	162235	37061	1639	4097	23		
305.8987	17.537	17.069	28	1.026	217165	48185	2026	5065	24	0.75(0.65-0.89)	
303.9016	17.779	17.069	43	1.040	34469	8792	1639	4097	5		
305.8987	17.779	17.069	43	1.040	53160	9926	2026	5065	5	0.65(0.65-0.89)	
303.9016	18.898	17.069	110	1.105	150827	35347	1639	4097	22		
305.8987	18.898	17.069	110	1.105	194642	42074	2026	5065	21	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.779	1	1.011	27898733	6899467	5275	13187	1308		
333.9339	17.794	17.779	1	1.011	34255365	8383361	5616	14040	1493	0.81(0.65-0.89)	
2,3,7,8-TCDD											M
319.8965	17.809	17.794	1	1.001	475481	123446	883	2207	140		M
321.8936	17.809	17.794	1	1.001	632764	157251	1065	2662	148	0.75(0.65-0.89)	M
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	40405703	10130596	2876	7190	3522		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	15.632	17.530	-114	0.879	39702	11458	883	2207	13		
321.8936	15.632	17.530	-114	0.879	54615	15901	1065	2662	15	0.73(0.65-0.89)	
319.8965	15.904	17.530	-97	0.894	56161	15808	883	2207	18		
321.8936	15.920	17.530	-96	0.895	76843	22287	1065	2662	21	0.73(0.65-0.89)	
319.8965	16.146	17.530	-83	0.907	13888	4198	883	2207	5		
321.8936	16.146	17.530	-83	0.907	17956	5139	1065	2662	5	0.77(0.65-0.89)	
319.8965	16.691	17.530	-50	0.938	144339	37819	883	2207	43		
321.8936	16.691	17.530	-50	0.938	176216	48843	1065	2662	46	0.82(0.65-0.89)	
319.8965	17.295	17.530	-14	0.972	19390	5227	883	2207	6		
	Empc Correction				12159	3475	883	2207	4		
321.8936	17.295	17.530	-14	0.972	15791	4513	1065	2662	4	1.23(0.65-0.89)	
319.8965	17.567	17.530	2	0.987	39818	10340	883	2207	12		
321.8936	17.567	17.530	2	0.987	49890	12415	1065	2662	12	0.80(0.65-0.89)	
319.8965	17.567	17.530	2	0.987	42201	10145	883	2207	11		M
	Empc Correction				33555	9052	883	2207	10		
321.8936	17.567	17.530	2	0.987	43579	11756	1065	2662	11	0.97(0.65-0.89)	
319.8965	17.704	17.530	10	0.995	184099	43352	883	2207	49		M
321.8936	17.704	17.530	10	0.995	245154	59034	1065	2662	55	0.75(0.65-0.89)	M
319.8965	18.172	17.530	38	1.021	53253	12747	883	2207	14		
321.8936	18.157	17.530	38	1.020	70125	17035	1065	2662	16	0.76(0.65-0.89)	
319.8965	18.898	17.530	82	1.062	22664	5809	883	2207	7		
321.8936	18.974	17.530	86	1.066	158441	25287	1065	2662	24	0.14(0.65-0.89)	
	Empc Correction				29433	7544	1065	2662	7		
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	48909937	9077812	6707	16767	1353		
353.8970	22.020	22.020	0	1.251	31322184	5789297	4605	11512	1257	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											RQM
339.8597	22.034	22.047	-1	1.001	97419	16421	417	1042	39		
341.8567	22.034	22.047	-1	1.001	76081	15449	733	1832	21	1.28(1.32-1.78)	M
	Empc Correction				62850	10594	733	1832	14		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	23.329	23.343	-1	1.326	54132536	9339146	6707	16767	1392		
353.8970	23.329	23.343	-1	1.326	34365786	5895619	4605	11512	1280	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											RQ
339.8597	23.356	23.370	-1	1.001	51668	8945	417	1042	21		
	Empc Correction				41938	7148	417	1042	17		
341.8567	23.343	23.370	-2	1.001	27057	4612	733	1832	6	1.91(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						419	1047			
341.8567	19.851						732	1830			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.479	23.067	-155	0.930	150859	24552	417	1042	59		
341.8567	20.479	23.067	-155	0.930	171191	25687	733	1832	35	0.88(1.32-1.78)	
	Empc Correction				97328	15840	733	1832	22		
339.8597	20.725	23.067	-140	0.941	57986	9131	417	1042	22		
341.8567	20.697	23.067	-142	0.940	37211	7443	733	1832	10	1.56(1.32-1.78)	
339.8597	21.720	23.067	-81	0.986	11214	2349	417	1042	6		
341.8567	21.733	23.067	-80	0.987	14810	3152	733	1832	4	0.76(1.32-1.78)	
	Empc Correction				7234	1515	733	1832	2		
339.8597	22.552	23.067	-31	1.024	25590	3853	417	1042	9		
	Empc Correction				20253	4158	417	1042	10		
341.8567	22.552	23.067	-31	1.024	13067	2683	733	1832	4	1.96(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.038	24.052	-1	1.366	32263966	5204844	2556	6390	2036		
369.8919	24.038	24.052	-1	1.366	20016466	3243321	1693	4232	1916	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079	24.079	0	1.002	33763	6373	569	1422	11		
357.8516	24.065	24.079	-1	1.001	22484	3584	325	812	11	1.50(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQM
355.8546	21.652	23.696	-122	0.901	137904	26448	569	1422	46		
357.8516	21.652	23.696	-122	0.901	86078	15255	325	812	47	1.60(1.32-1.78)	
355.8546	22.074	23.696	-97	0.918	19506	3649	569	1422	6		
357.8516	22.074	23.696	-97	0.918	12685	2187	325	812	7	1.54(1.32-1.78)	
355.8546	22.320	23.696	-82	0.929	24533	4889	569	1422	9		
357.8516	22.320	23.696	-82	0.929	15706	3354	325	812	10	1.56(1.32-1.78)	
355.8546	22.606	23.696	-65	0.940	176965	28977	569	1422	51		
357.8516	22.620	23.696	-64	0.941	111894	19970	325	812	61	1.58(1.32-1.78)	
355.8546	23.097	23.696	-36	0.961	99533	14174	569	1422	25		M
357.8516	23.111	23.696	-35	0.961	66170	9571	325	812	29	1.50(1.32-1.78)	
355.8546	24.352	23.696	39	1.013	13083	2140	569	1422	4		
357.8516	24.338	23.696	38	1.012	11351	1515	325	812	5	1.15(1.32-1.78)	
	Empc Correction				8440	1380	325	812	4		
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.173	30.186	-1	0.945	25124001	4272339	5912	14780	723		
385.8610	30.173	30.186	-1	0.945	48800809	8232123	12726	31815	647	0.51(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8-HxCDF											M
373.8208	30.199	30.212	-1	1.001	76539	13446	325	812	41		M
375.8178	30.186	30.212	-2	1.000	62183	9926	341	852	29	1.23(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.386	30.399	-1	0.951	22681203	4209512	5912	14780	712		
385.8610	30.386	30.399	-1	0.951	43664582	8004081	12726	31815	629	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											Ma
373.8208	30.386	30.412	-2	1.000	24561	3672	325	812	11		M
375.8178	30.386	30.412	-2	1.000	22488	3505	341	852	10	1.09(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.980	21784062	5420481	5912	14780	917		
385.8610	31.291	31.291	0	0.980	41720161	10309322	12726	31815	810	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQM
373.8208	31.317	31.317	0	1.001	6690	1625	325	812	5		M
	Empc Correction				5467	2049	325	812	6		
375.8178	31.304	31.317	-1	1.000	4409	1653	341	852	5	1.52(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.142	-1	1.006	20153061	5797155	5912	14780	981		
385.8610	32.129	32.142	-1	1.006	38266954	11098237	12726	31815	872	0.53(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	32.156	32.156	0	1.001	12997	3401	325	812	10		M
	Empc Correction				10150	3403	325	812	10		
375.8178	32.143	32.156	-1	1.000	8186	2745	341	852	8	1.59(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.331						325	812			
375.8178	30.331						341	852			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.956	-1		64865795	18460469	7452	18630	2477		
403.8529	31.943	31.956	-1		52886626	15202650	6516	16290	2333	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.490	31.503	-1	0.986	26961534	7310110	7452	18630	981		
403.8529	31.490	31.503	-1	0.986	21949569	6018498	6516	16290	924	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											Ma
389.8157	31.504	31.517	-1	1.000	59096	15343	834	2085	18		M
391.8127	31.504	31.517	-1	1.000	42249	12012	580	1450	21	1.40(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.990	28242647	7292625	7452	18630	979		
403.8529	31.597	31.610	-1	0.989	22914462	5864802	6516	16290	900	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.624	31.623	0	1.000	91242	22960	834	2085	28		
391.8127	31.624	31.623	0	1.000	65845	17172	580	1450	30	1.39(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											M
389.8157	31.956	31.969	-1	1.015	217602	48619	834	2085	58		M
391.8127	31.956	31.969	-1	1.015	182009	44408	580	1450	77	1.20(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQ

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
389.8157	29.041	30.519	-88	0.919	1056497	129291	834	2085	155		
391.8127	29.041	30.519	-88	0.919	852446	105257	580	1450	181	1.24(1.05-1.43)	
389.8157	30.266	30.519	-15	0.957	88991	13210	834	2085	16		
	Empc Correction				66300	12153	834	2085	15		
391.8127	30.266	30.519	-15	0.957	53468	9801	580	1450	17	1.66(1.05-1.43)	
389.8157	30.692	30.519	10	0.971	532232	106665	834	2085	128		
391.8127	30.692	30.519	10	0.971	402542	79652	580	1450	137	1.32(1.05-1.43)	
389.8157	30.891	30.519	22	0.977	51751	10079	834	2085	12		
391.8127	30.891	30.519	22	0.977	42233	9254	580	1450	16	1.23(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	13206412	4936633	10596	26490	466		
419.8220	33.603	33.603	0	1.052	30261813	11160649	24988	62470	447	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.615	33.603	1	1.000	22085	8145	892	2230	9		M
409.7789	33.615	33.603	1	1.000	22006	6912	285	712	24	1.00(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.672	0	1.085	13241203	4445291	10596	26490	420		
419.8220	34.672	34.672	0	1.085	30561703	10158274	24988	62470	407	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673						892	2230			
409.7789	34.673						285	712			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						892	2230			
409.7789	34.138						285	712			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.077	19328901	6580540	9741	24352	676		
437.8140	34.393	34.393	0	1.077	19180519	6467570	5605	14012	1154	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.393	1	1.000	2240005	755532	4063	10157	186		
425.7737	34.393	34.393	0	1.000	2236259	741791	3674	9185	202	1.00(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.858	34.223	-22	0.984	3658795	1315488	4063	10157	324		
425.7737	33.858	34.223	-22	0.984	3679121	1282012	3674	9185	349	0.99(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.701	0	1.149	26250626	7775828	2574	6435	3021		
471.7750	36.701	36.701	0	1.149	29829095	8887893	4328	10820	2054	0.88(0.76-1.02)	
OCDF											RQ
441.7428	36.809	36.797	1	1.003	21508	5359	259	647	21		
	Empc Correction				15629	4627	259	647	18		
443.7399	36.797	36.797	0	1.003	17561	5200	324	810	16	1.22(0.76-1.02)	
OCDD											
457.7377	36.713	36.713	0	1.000	37744725	11042411	3598	8995	3069		
459.7348	36.713	36.713	0	1.000	42186578	12112266	3982	9955	3042	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Report Date: 27-Aug-2021 08:36:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d
Lims ID: 320-77292-A-2-A
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Inject. Date: 26-Aug-2021 02:05:46 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	107232219	27991261

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	107232219	27991261

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.224	187012	54574	241278	79377	0.3901	0.78	
15.466	45715	10842	35221	12625	0.0737	1.30	RQ
15.466	27120	9721	35221	12625	0.0568		Empc Correction
15.723	58957	15152	83263	19006	0.1295	0.71	
15.995	82487	18019	107026	21362	0.1726	0.77	
16.222	100961	27424	108130	27825	0.1904	0.93	RQ
16.222	83260	21425	108130	27825	0.1743		Empc Correction
16.464	115651	26475	160424	33570	0.2514	0.72	
16.736	955241	257328	1261564	335978	2.02	0.76	
17.537	162235	37061	217165	48185	0.3455	0.75	
17.779	34469	8792	53160	9926	0.0798	0.65	
18.898	150827	35347	194642	42074	0.3146	0.77	
Signal Totals:							
	1857259	483894	2461873	629928			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4355428	1120942				0.77	RQ
	4319132	1113822					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.967 = (4355428 * 100.000) / (107232219 * 1.024)
Empc Amount: 3.934 = (4319132 * 100.000) / (107232219 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 08:36:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d
Lims ID: 320-77292-A-2-A
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Inject. Date: 26-Aug-2021 02:05:46 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 8

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	62154098	15282828

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	62154098	15282828

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.632	39702	11458	54615	15901	0.1210	0.73	
15.904	56161	15808	76843	22287	0.1706	0.73	
16.146	13888	4198	17956	5139	0.0409	0.77	
16.691	144339	37819	176216	48843	0.4112	0.82	
17.295	19390	5227	15791	4513	0.0451	1.23	RQ
17.295	12159	3475	15791	4513	0.0359		Empc Correction
17.567	39818	10340	49890	12415	0.1151	0.80	
17.567	42201	10145	43579	11756	0.1100	0.97	RQMa
17.567	33555	9052	43579	11756	0.0990		Empc Correction
17.704	184099	43352	245154	59034	0.5507	0.75	M
18.172	53253	12747	70125	17035	0.1583	0.76	
18.898	22664	5809	158441	25287	0.2323	0.14	RQ
18.898	22664	5809	29433	7544	0.0668		Empc Correction
Signal Totals:							
	599638	154058	779602	204467			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1524125	379113				0.68	RQMa
	1379240	358525					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.955 = (1524125 * 100.000) / (62154098 * 1.254)
Empc Amount: 1.769 = (1379240 * 100.000) / (62154098 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 27-Aug-2021 08:36:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Lims ID:	320-77292-A-2-A		
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Inject. Date:	26-Aug-2021 02:05:46	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	80232121	14867109
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	88498322	15234765

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	84365221	15050937

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.479	150859	24552	171191	25687	0.3671	0.88	RQ
20.479	150859	24552	97328	15840	0.2829		Empc Correction
20.725	57986	9131	37211	7443	0.1085	1.56	
21.720	11214	2349	14810	3152	0.0297	0.76	RQ
21.720	11214	2349	7234	1515	0.0210		Empc Correction
22.552	25590	3853	13067	2683	0.0441	1.96	RQ
22.552	20253	4158	13067	2683	0.0380		Empc Correction
Signal Totals:							
	240312	40190	154840	27481			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	481928	78850				1.04	RQ
	395152	67671					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5494 = (481928 * 100.000) / (84365221 * 1.040)

Empc Amount: 0.4505 = (395152 * 100.000) / (84365221 * 1.040)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 08:36:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Lims ID:	320-77292-A-2-A		
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Inject. Date:	26-Aug-2021 02:05:46	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	52280432	8448165

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	52280432	8448165

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.652	137904	26448	86078	15255	0.4086	1.60	
22.074	19506	3649	12685	2187	0.0587	1.54	
22.320	24533	4889	15706	3354	0.0734	1.56	
22.606	176965	28977	111894	19970	0.5270	1.58	
23.097	99533	14174	66170	9571	0.3023	1.50	M
24.352	13083	2140	11351	1515	0.0446	1.15	RQ
24.352	13083	2140	8440	1380	0.0393		Empc Correction
Signal Totals:							
	471524	80277	300973	51717			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	775408	132129				1.55	RQM
	772497	131994					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.415 = (775408 * 100.000) / (52280432 * 1.048)

Empc Amount: 1.409 = (772497 * 100.000) / (52280432 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Lims ID:	320-77292-A-2-A		
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Inject. Date:	26-Aug-2021 02:05:46	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	8

Non-2,3,7,8-sub-HxCDF, RT: 30.331

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	73924810	12504462
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	66345785	12213593
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	63504223	15729803
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	58420015	16895392

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	65548708	14335812

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d
Lims ID: 320-77292-A-2-A
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Inject. Date: 26-Aug-2021 02:05:46 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	48911103	13328608
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	51157109	13157427
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	50034106	13243017

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.041	1056497	129291	852446	105257	3.58	1.24	
30.266	88991	13210	53468	9801	0.2672	1.66	RQ
30.266	66300	12153	53468	9801	0.2246		Empc Correction
30.692	532232	106665	402542	79652	1.75	1.32	
30.891	51751	10079	42233	9254	0.1763	1.23	
Signal Totals:							
	1706780	258188	1350689	203964			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3080160	463209				1.28	RQ
	3057469	462152					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 5.777 = (3080160 * 100.000) / (50034106 * 1.066)
Empc Amount: 5.735 = (3057469 * 100.000) / (50034106 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d
Lims ID: 320-77292-A-2-A
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Inject. Date: 26-Aug-2021 02:05:46 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	38509420	13048110

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	38509420	13048110

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.858	3658795	1315488	3679121	1282012	17.4	0.99	
Signal Totals:							
	3658795	1315488	3679121	1282012			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7337916	2597500				0.99	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 17.413 = (7337916 * 100.000) / (38509420 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 17.81
Area: 482780
Amount: 1.767690
Amount Units: pg/ul

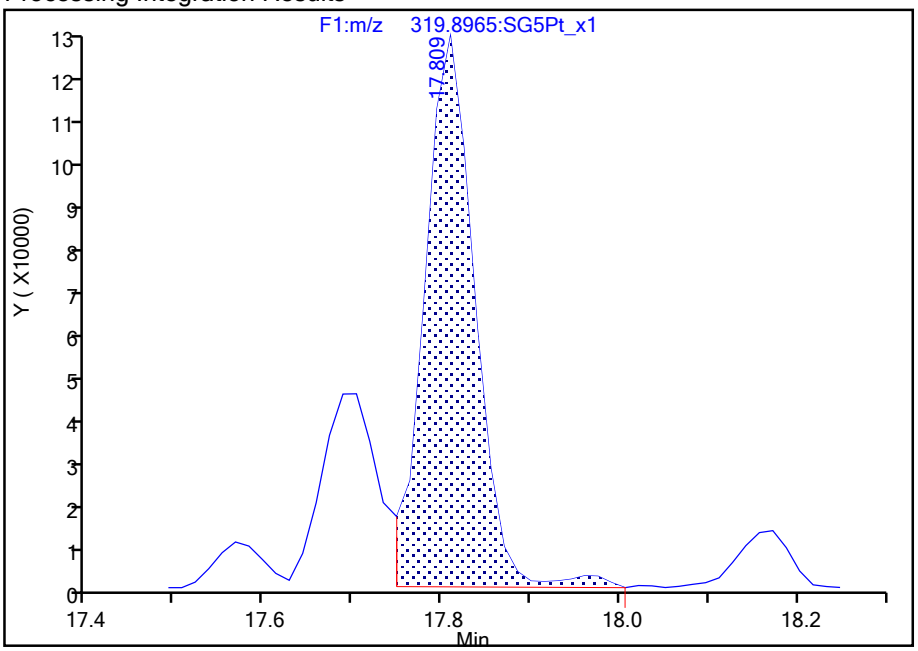

Manual Integration Results

RT: 17.81
Area: 475481
Amount: 1.421762
Amount Units: pg/ul

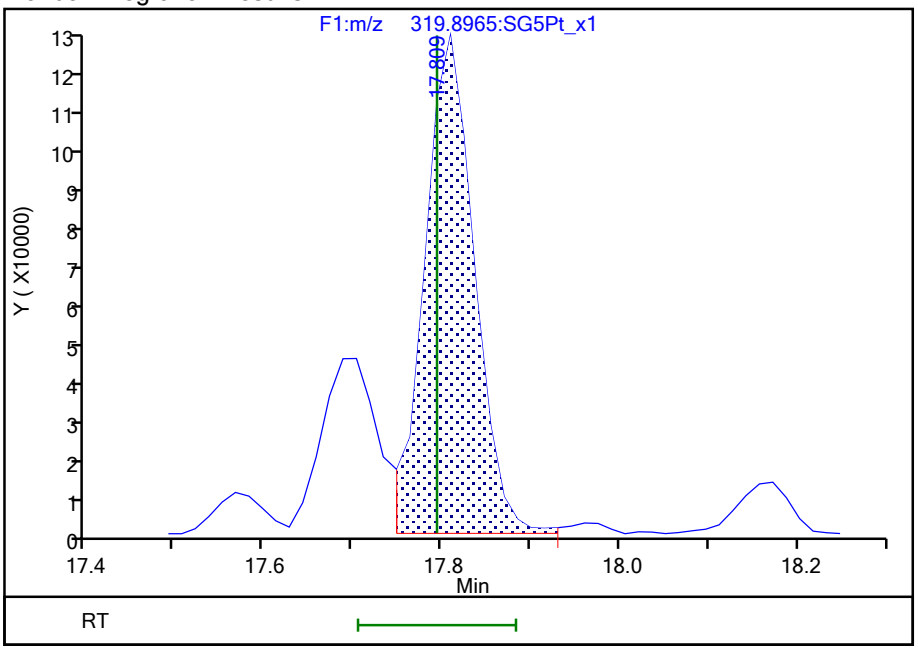

Reviewer: dadunj, 27-Aug-2021 08:31:49

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793344

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 17.81
Area: 895111
Amount: 1.767690
Amount Units: pg/ul

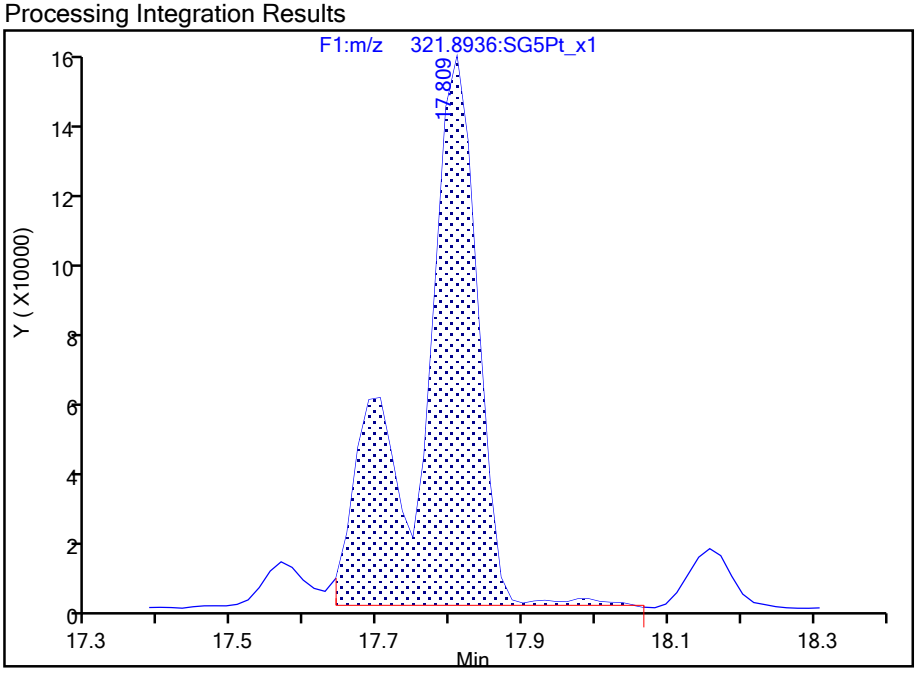

Manual Integration Results

RT: 17.81
Area: 632764
Amount: 1.421762
Amount Units: pg/ul

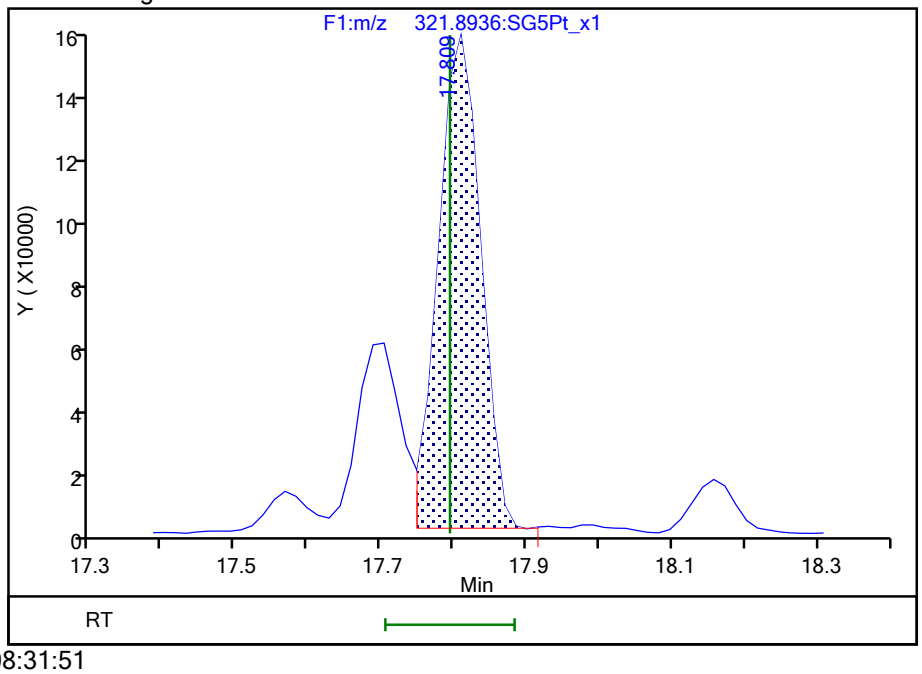

Reviewer: dadunj, 27-Aug-2021 08:31:51

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793345

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.59- 19.47)

Signal: 1

Processing Integration Results

RT = 17.567 Area = 39818

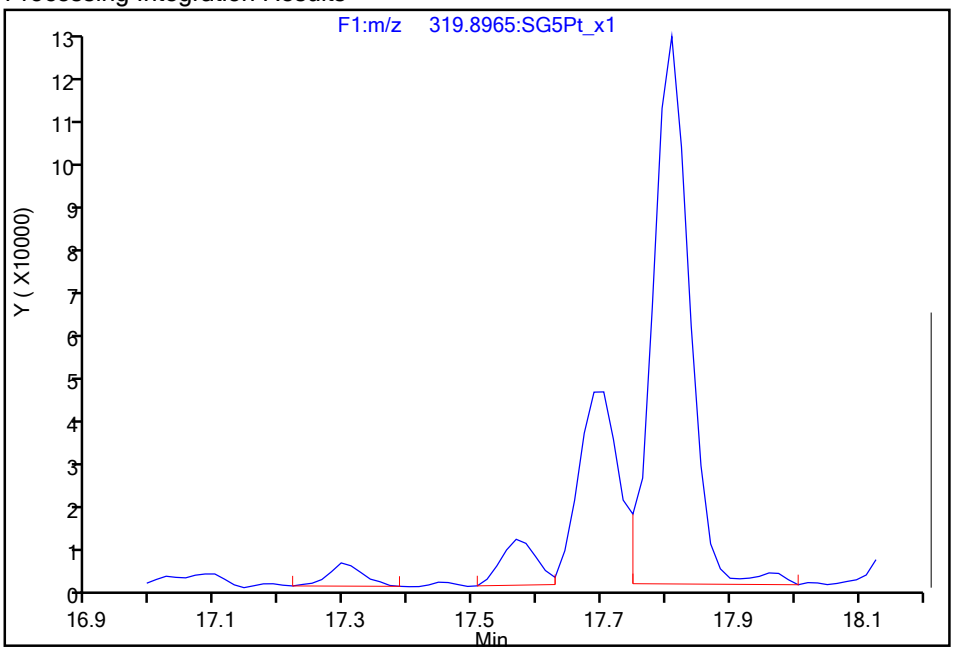

Manual Integration Results

RT = 17.567 Area = 42201 M

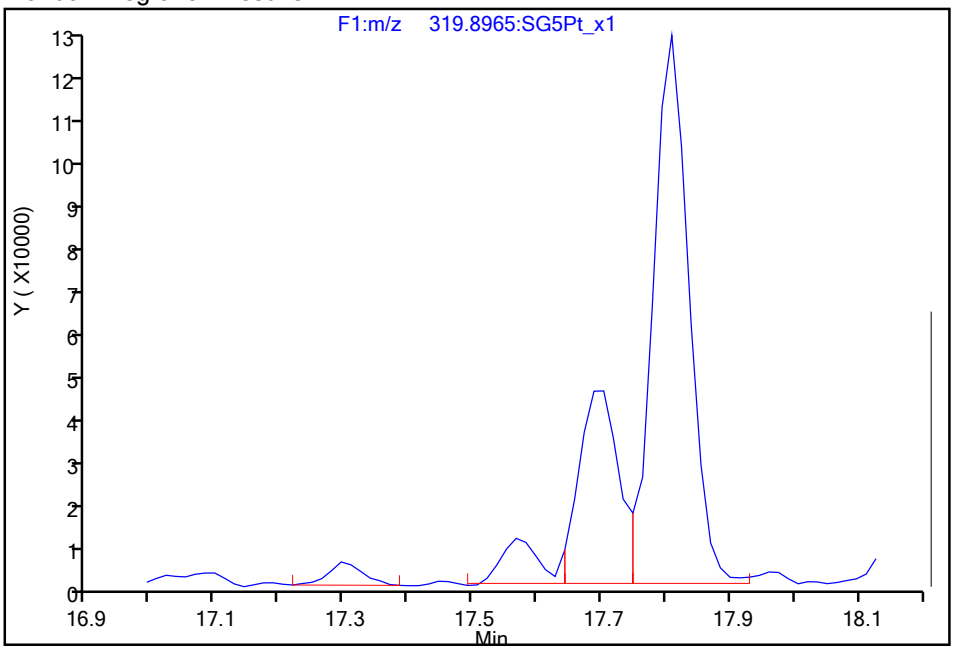

Reviewer: dadunj, 27-Aug-2021 08:32:03

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.59- 19.47)

Signal: 1

Processing Integration Results

Not Detected
RT: 15.59- 19.47

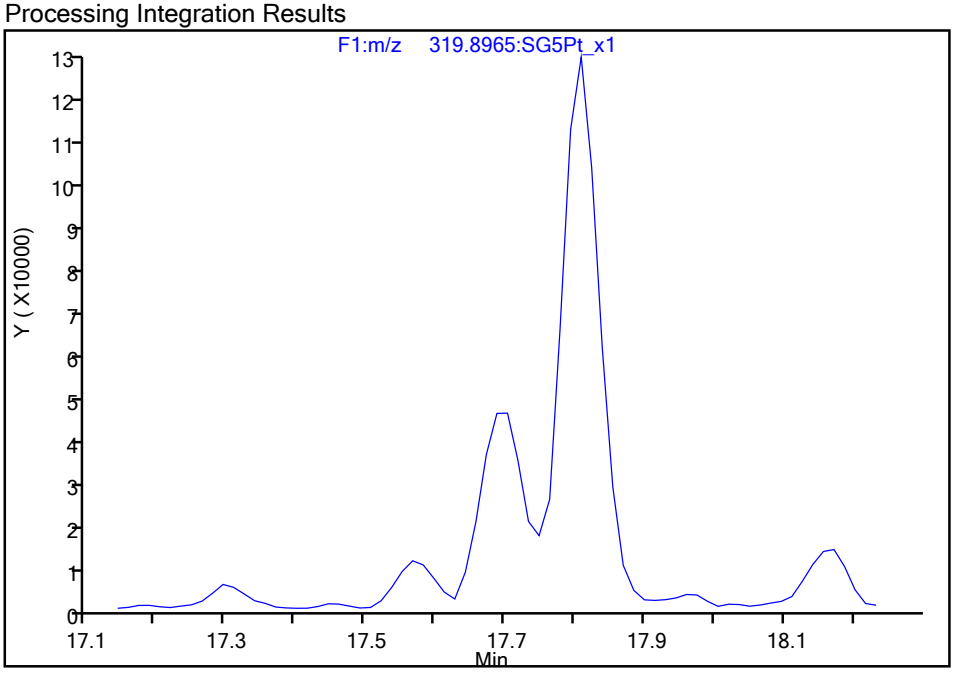

Manual Integration Results

RT = 17.704 Area = 184099 M

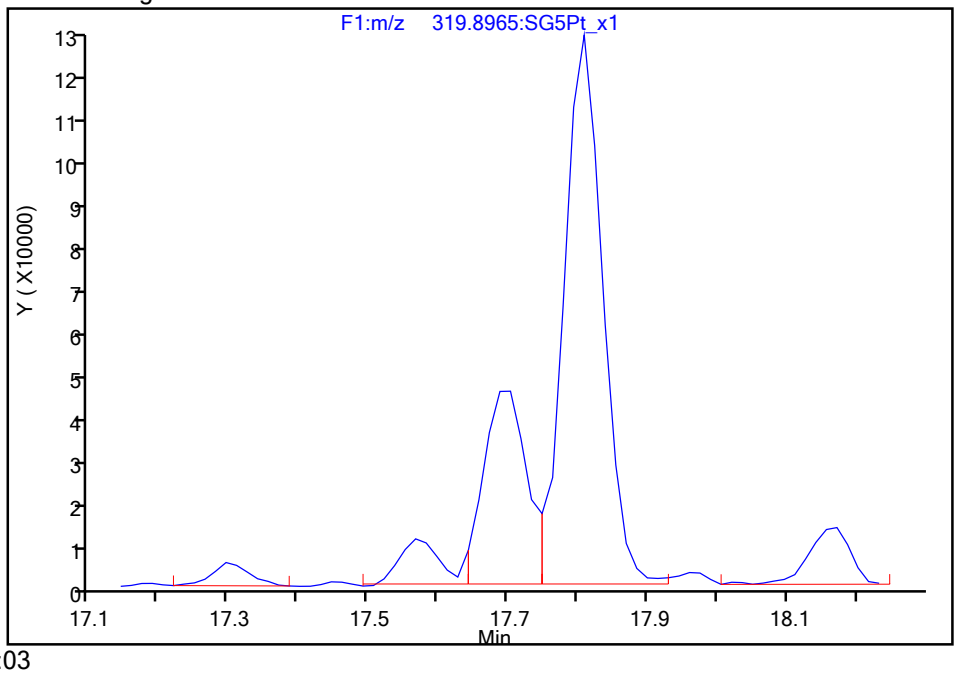

Reviewer: dadunj, 27-Aug-2021 08:32:03
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

793347

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (15.59- 19.47)

Signal: 2

Not Detected
RT: 15.59- 19.47

Processing Integration Results

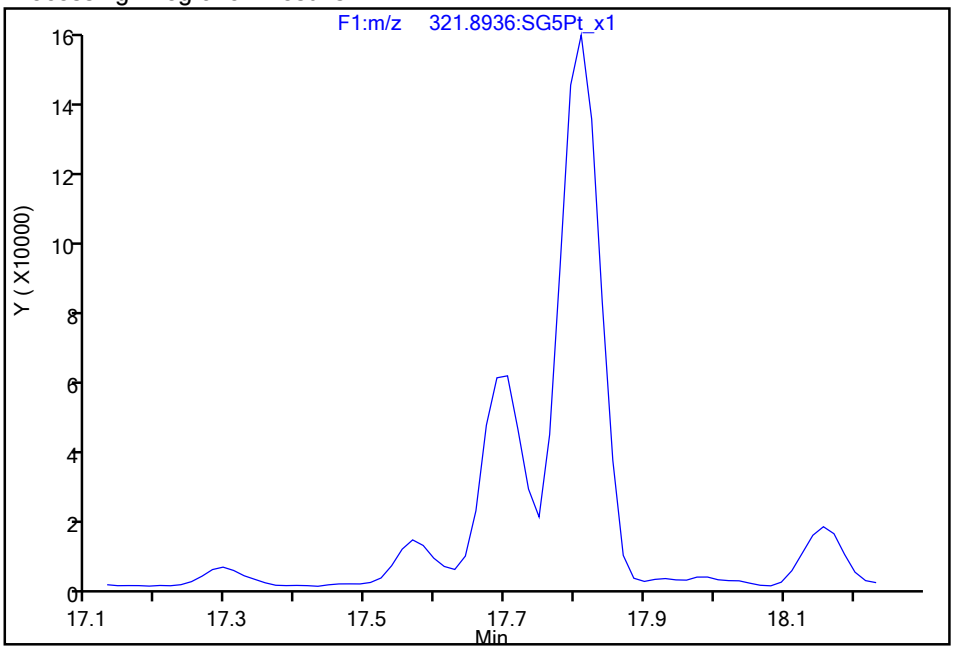

RT = 17.704 Area = 245154 M

Manual Integration Results

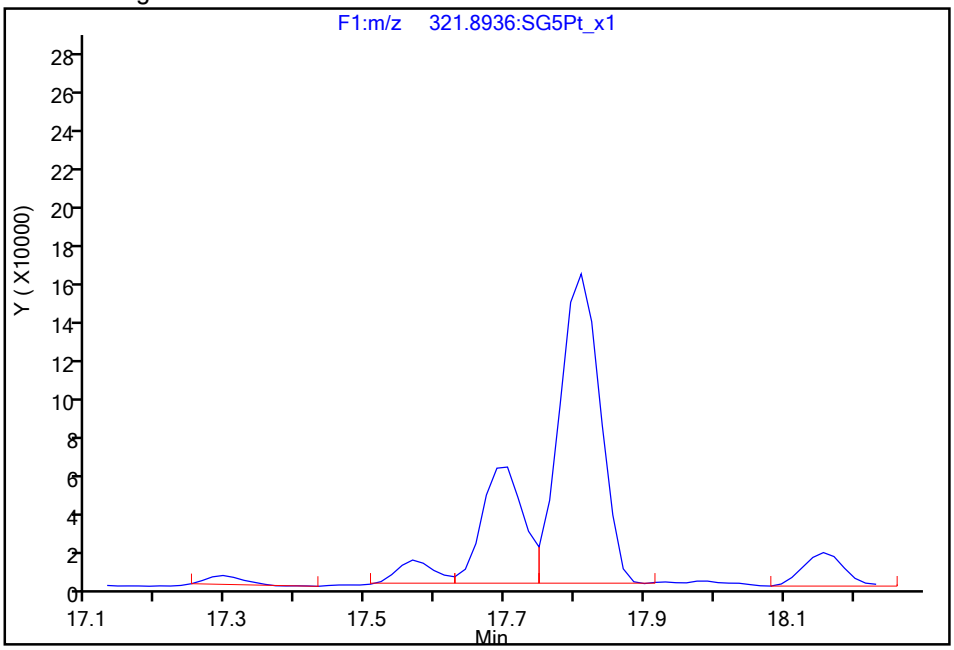

Reviewer: dadunj, 27-Aug-2021 08:32:00
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793348

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.03
Area: 79471
Amount: 0.207771
Amount Units: pg/ul

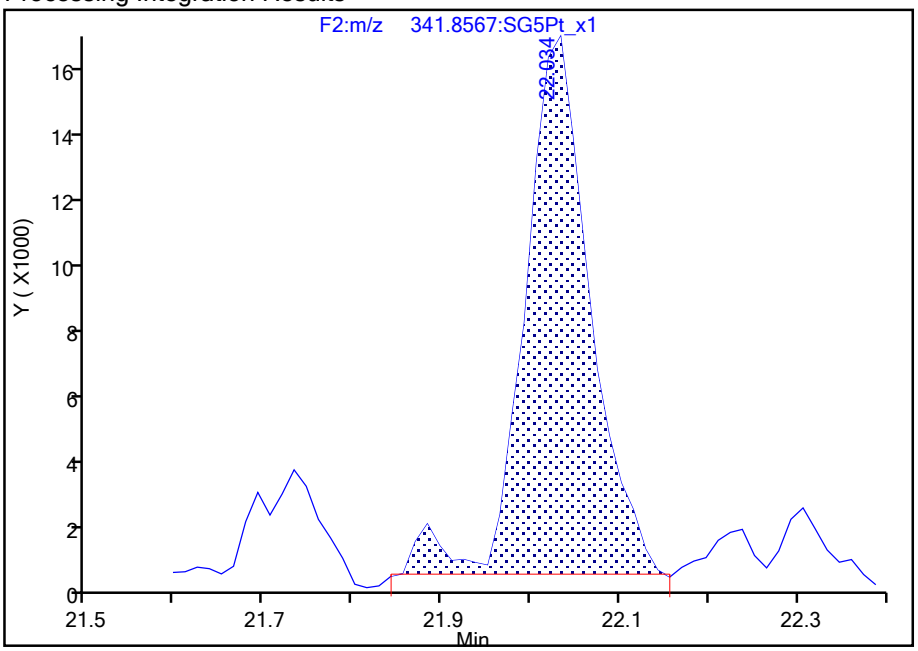

Manual Integration Results

RT: 22.03
Area: 76081
Amount: 0.203789
Amount Units: pg/ul

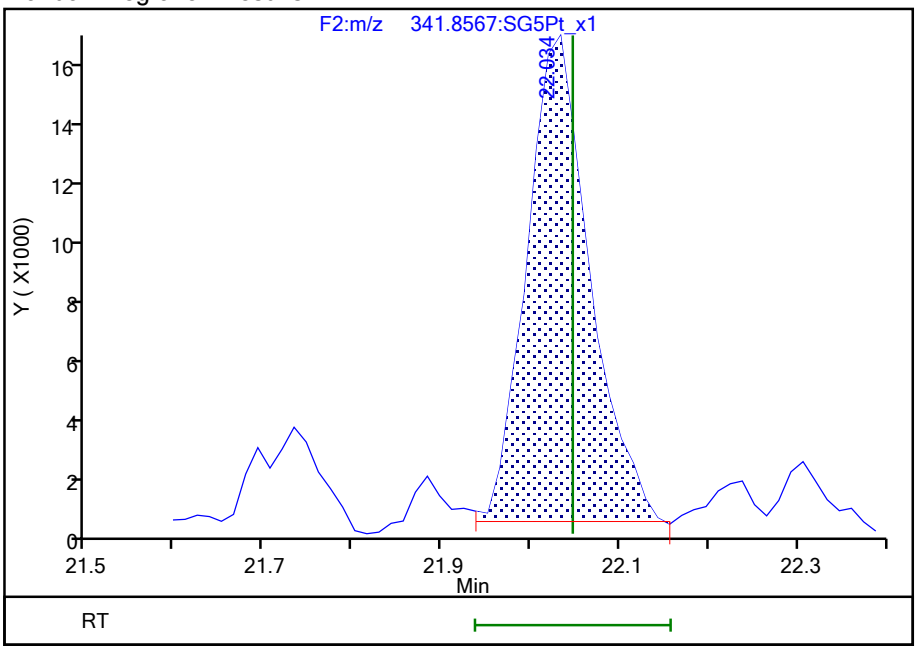

Reviewer: dadunj, 27-Aug-2021 08:32:24

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 23.097 Area = 138698

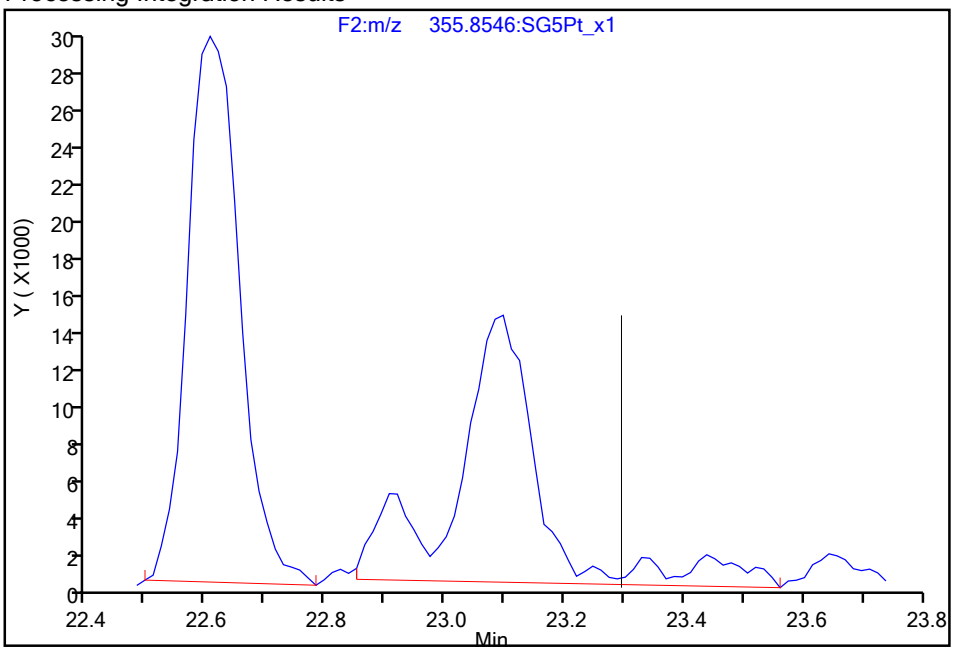

Manual Integration Results

RT = 23.097 Area = 99533 M

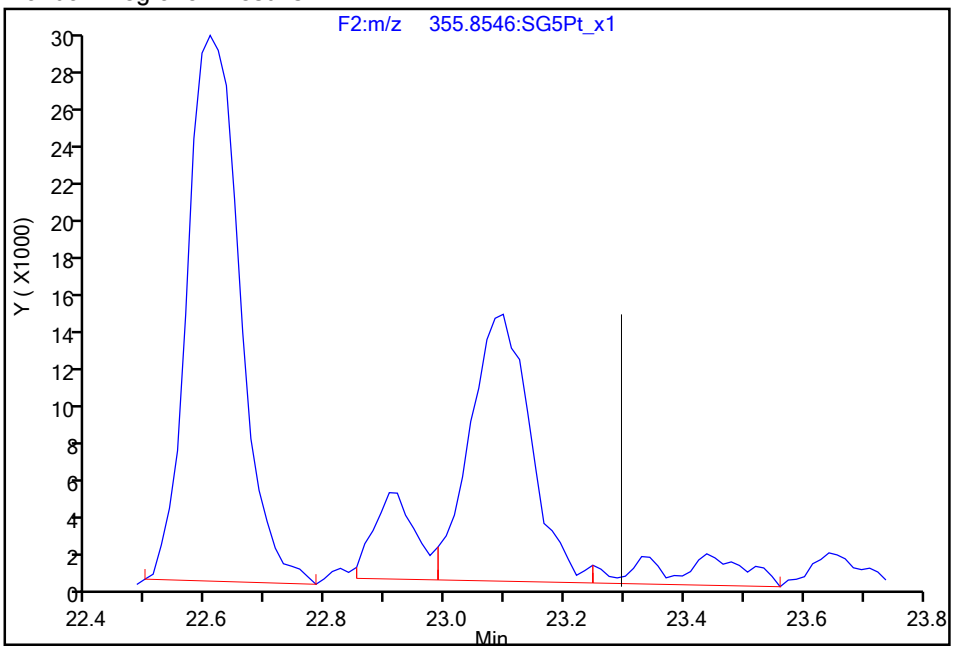

Reviewer: dadunj, 27-Aug-2021 08:32:42

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 3

Processing Integration Results

RT: 30.20
Area: 140043
Amount: 0.174578
Amount Units: pg/ul

Manual Integration Results

RT: 30.20
Area: 138722
Amount: 0.172932
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 08:32:59
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

RT: 30.20
Area: 76539
Amount: 0.174578
Amount Units: pg/ul

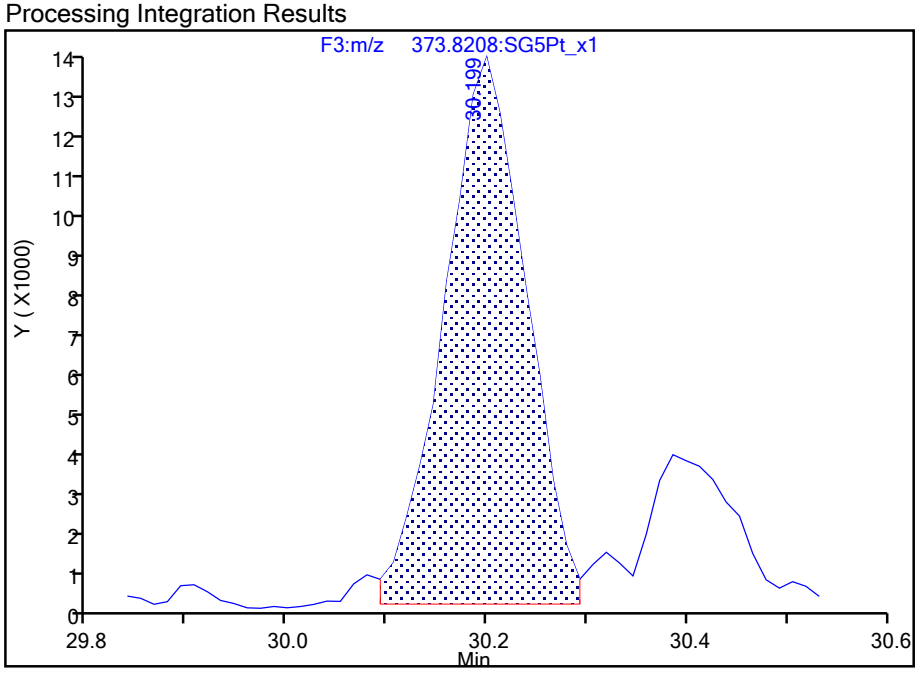

Manual Integration Results

RT: 30.20
Area: 76539
Amount: 0.172932
Amount Units: pg/ul

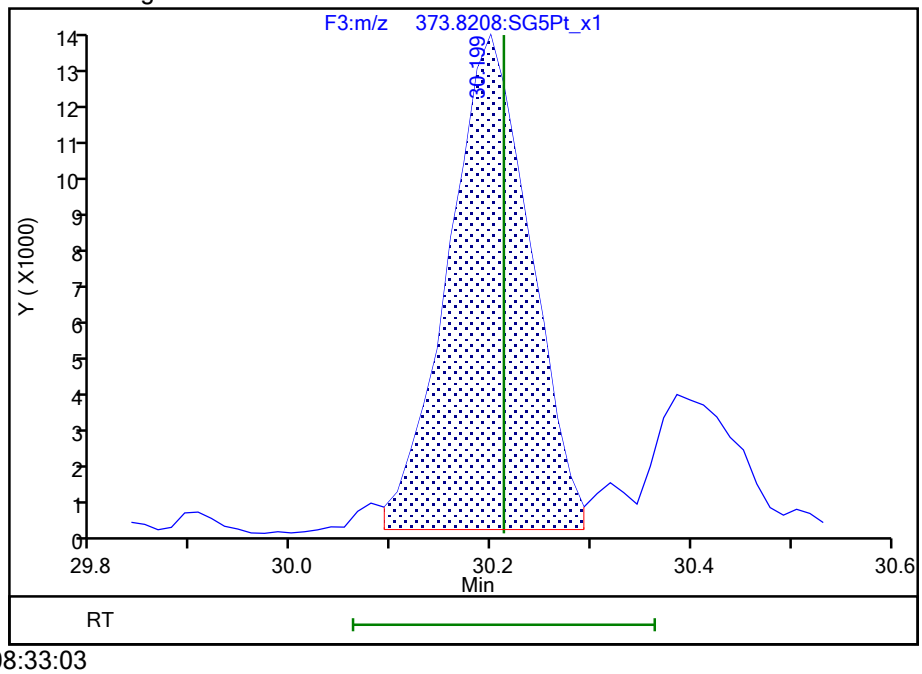

Reviewer: dadunj, 27-Aug-2021 08:33:03
Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 2

Processing Integration Results

RT: 30.19
Area: 63504
Amount: 0.174578
Amount Units: pg/ul

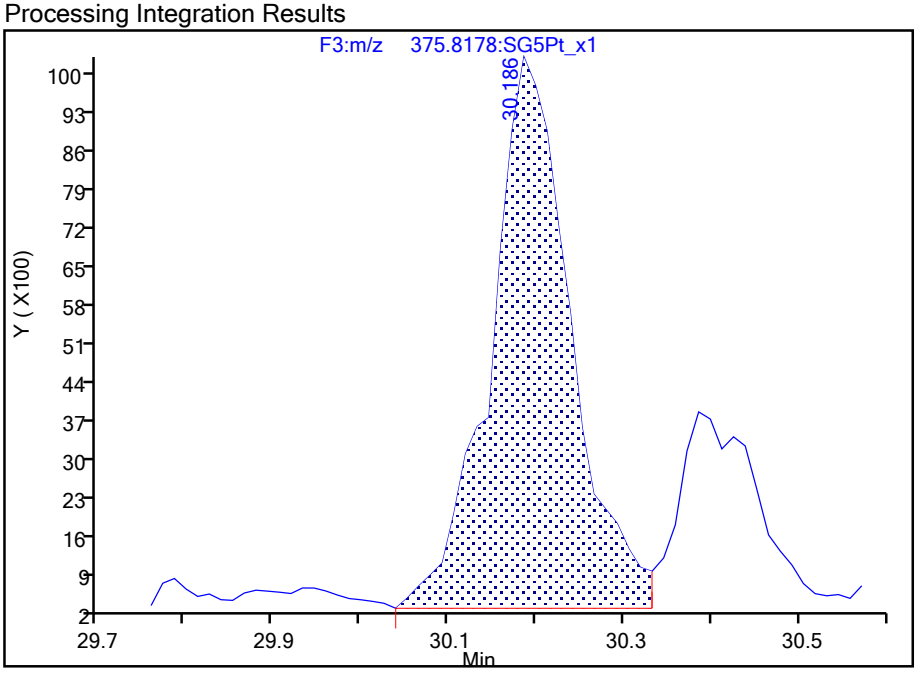

Manual Integration Results

RT: 30.19
Area: 62183
Amount: 0.172932
Amount Units: pg/ul

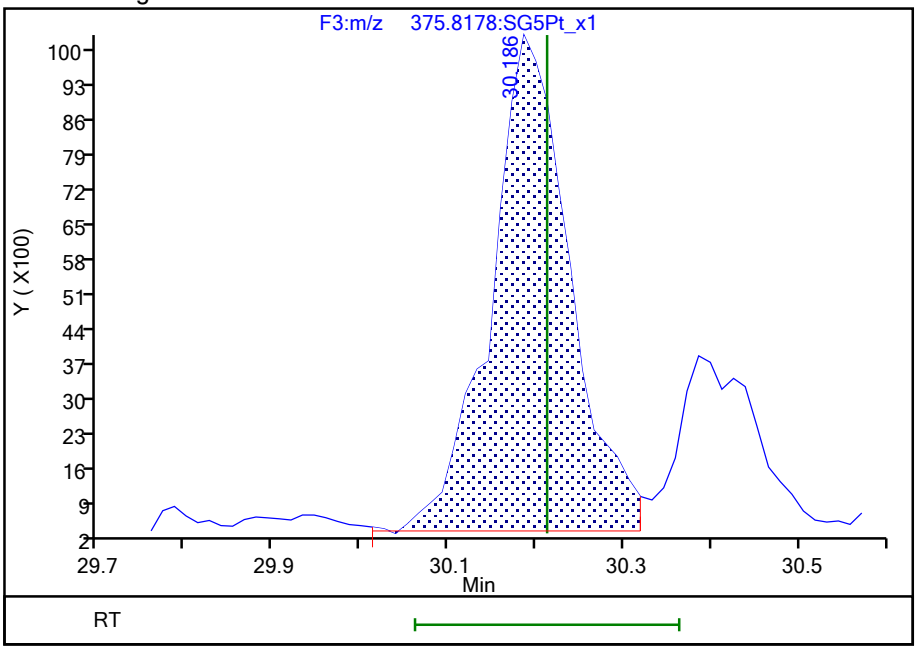

Reviewer: dadunj, 27-Aug-2021 08:33:20
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793353

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Not Detected
Expected RT: 30.41

Processing Integration Results

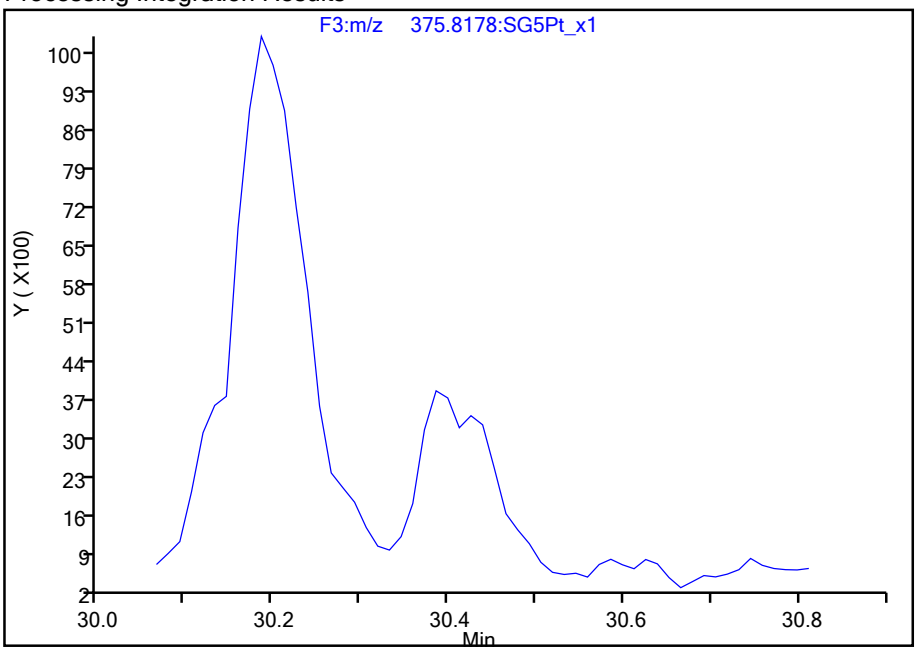

Manual Integration Results

RT: 30.39
Area: 22488
Amount: 0.062979
Amount Units: pg/ul

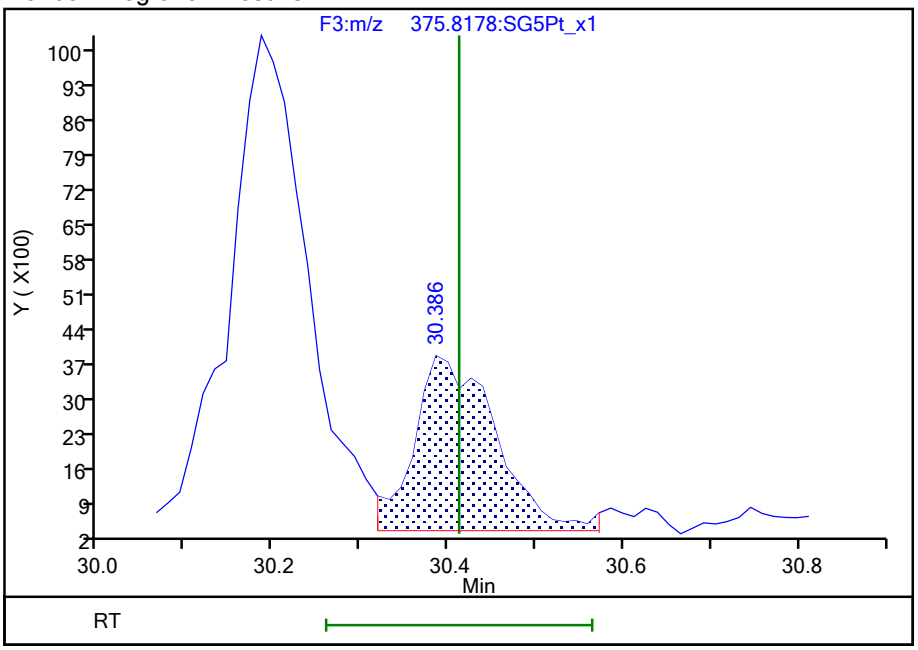

Reviewer: dadunj, 27-Aug-2021 08:32:55
Audit Action: Manually Integrated Audit Reason: Split Peak

793354

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Not Detected
Expected RT: 30.41

Processing Integration Results

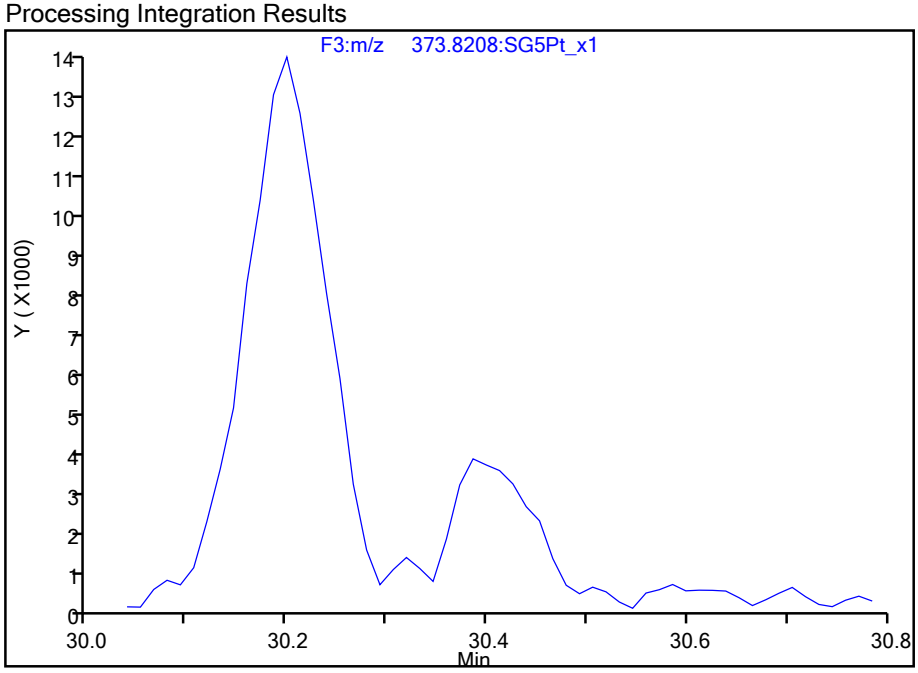

Manual Integration Results

RT: 30.39
Area: 24561
Amount: 0.062979
Amount Units: pg/ul

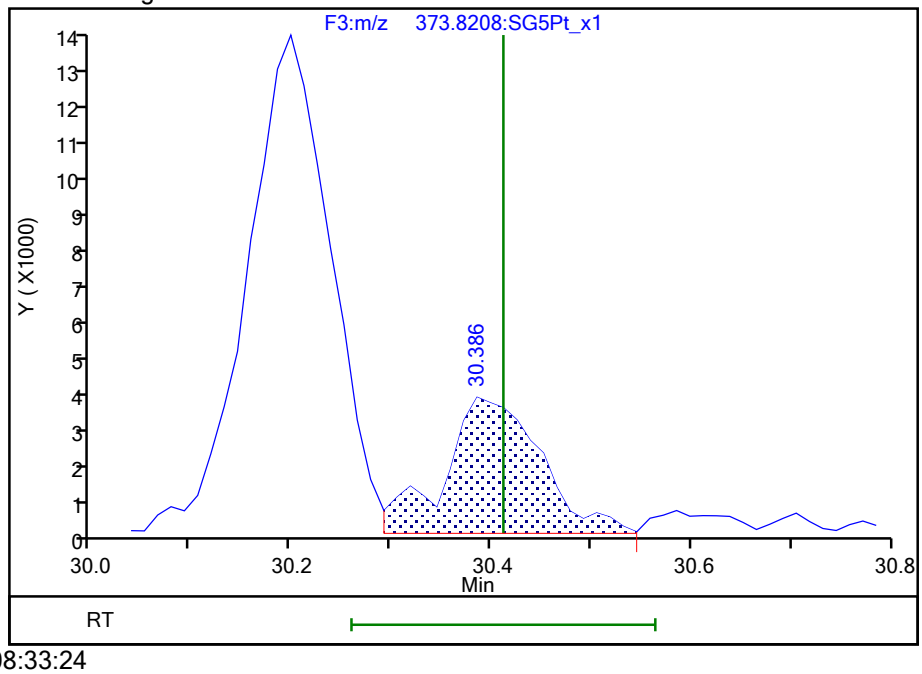

Reviewer: dadunj, 27-Aug-2021 08:33:24
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

793355

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.30
Area: 5894
Amount: 0.024169
Amount Units: pg/ul

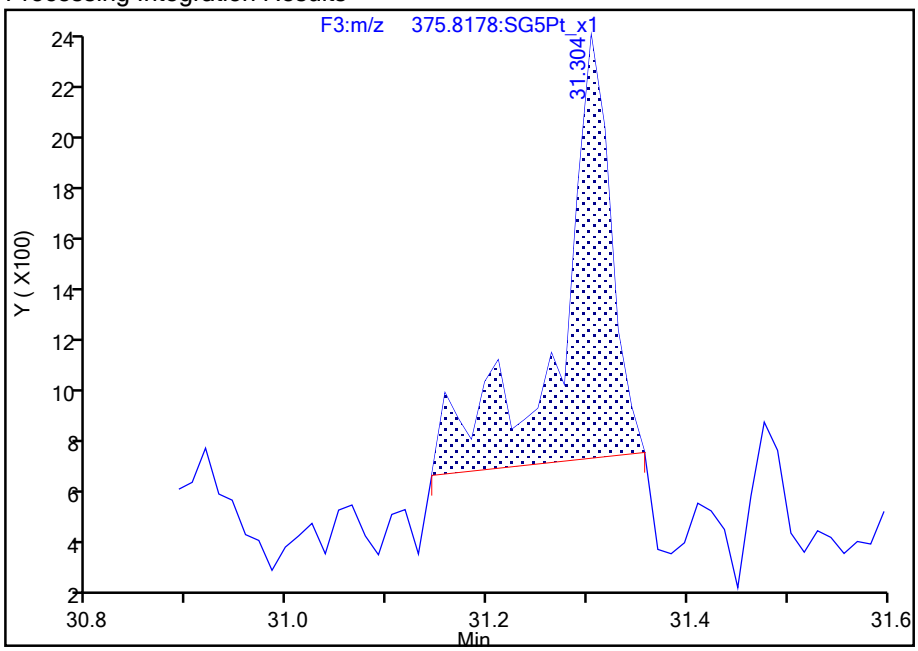

Manual Integration Results

RT: 31.30
Area: 4409
Amount: 0.014970
Amount Units: pg/ul

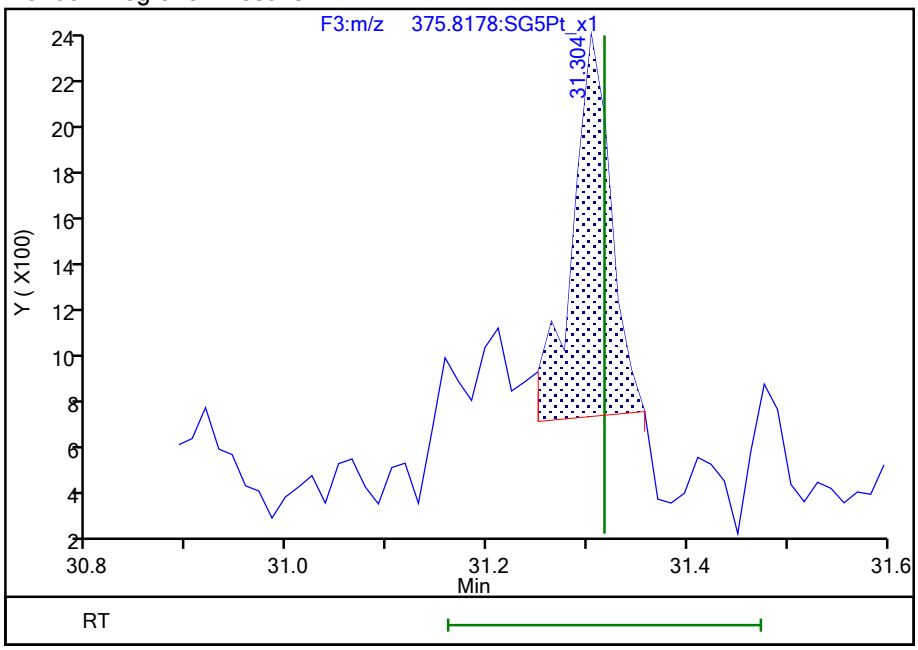

Reviewer: dadunj, 27-Aug-2021 08:33:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 1

Processing Integration Results

RT: 31.32
Area: 12026
Amount: 0.024169
Amount Units: pg/ul

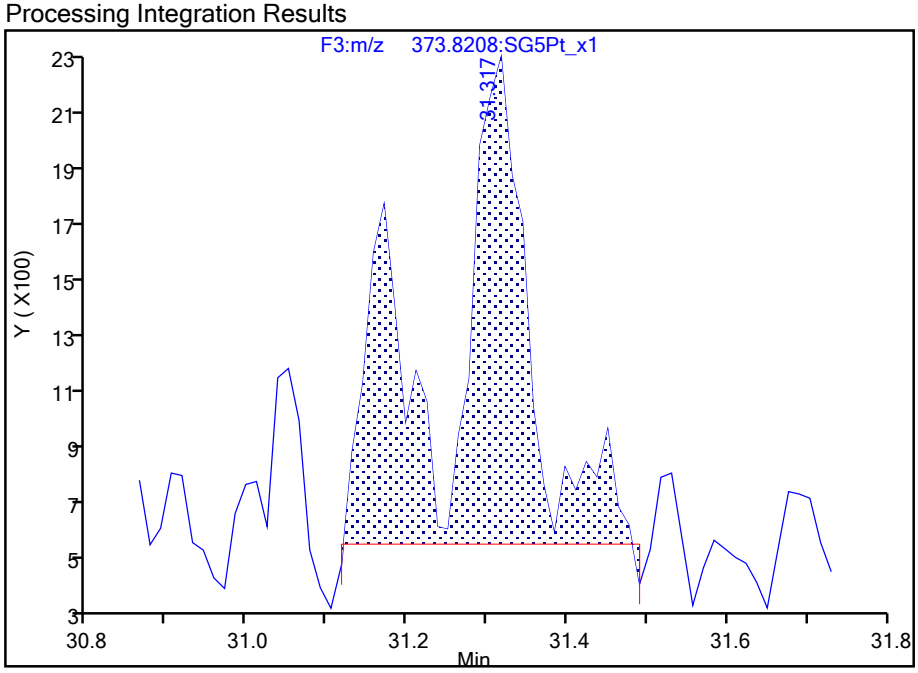

Manual Integration Results

RT: 31.32
Area: 6690
Amount: 0.014970
Amount Units: pg/ul

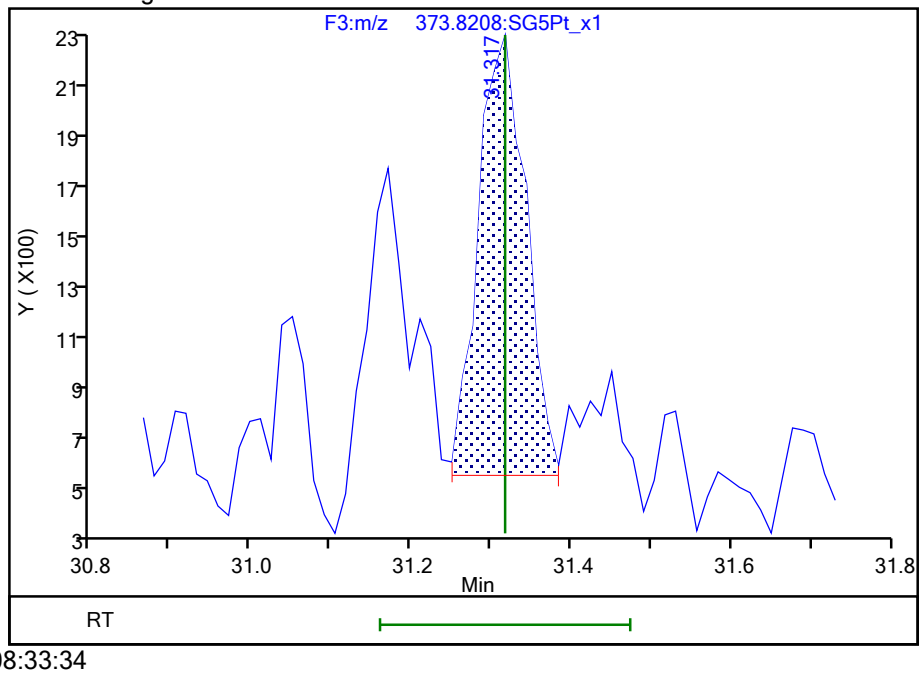

Reviewer: dadunj, 27-Aug-2021 08:33:34

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.16
Area: 18833
Amount: 0.045305
Amount Units: pg/ul

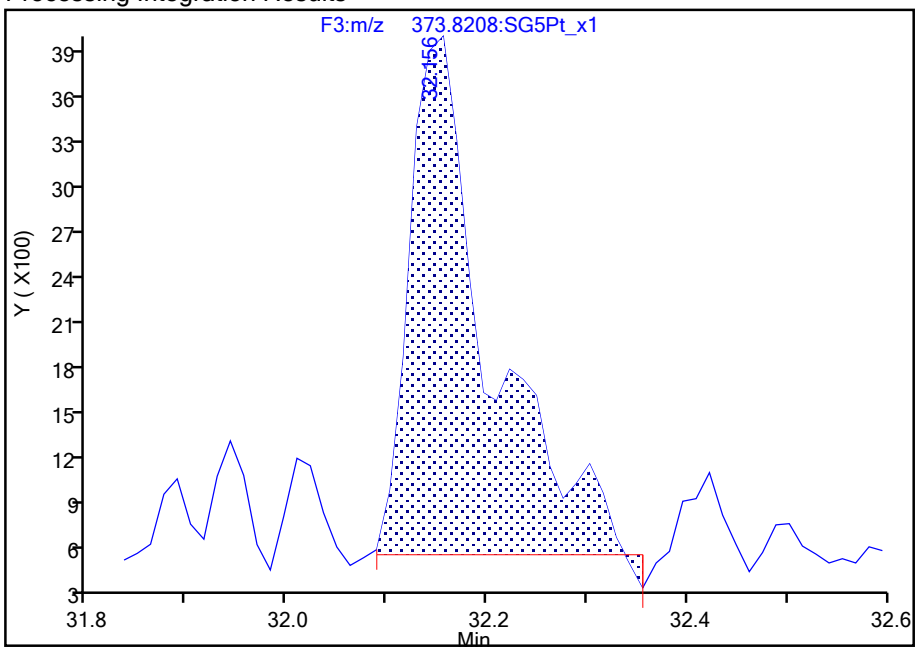

Manual Integration Results

RT: 32.16
Area: 12997
Amount: 0.031088
Amount Units: pg/ul

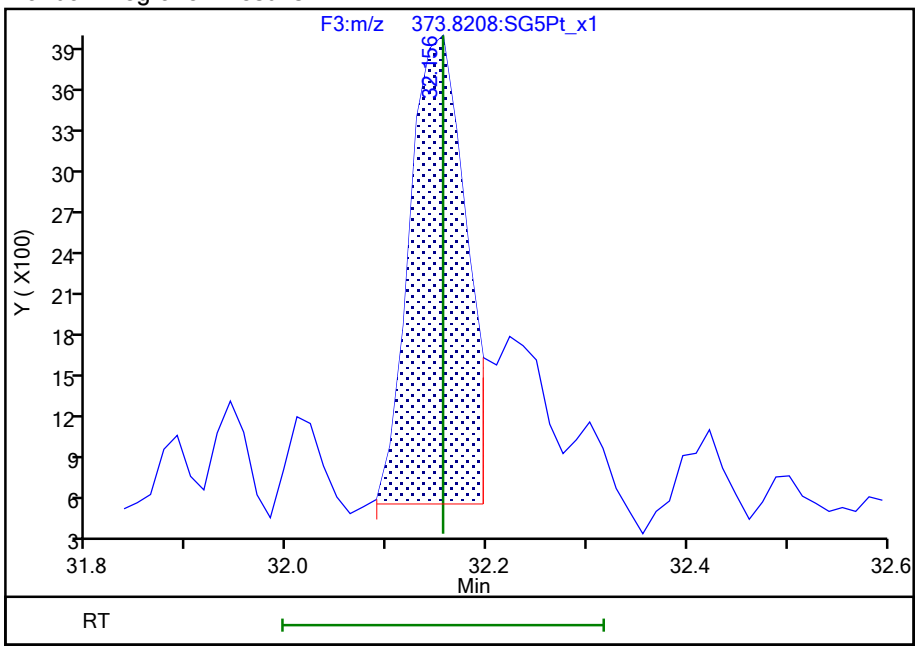

Reviewer: dadunj, 27-Aug-2021 08:33:38

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.14
Area: 12037
Amount: 0.045305
Amount Units: pg/ul

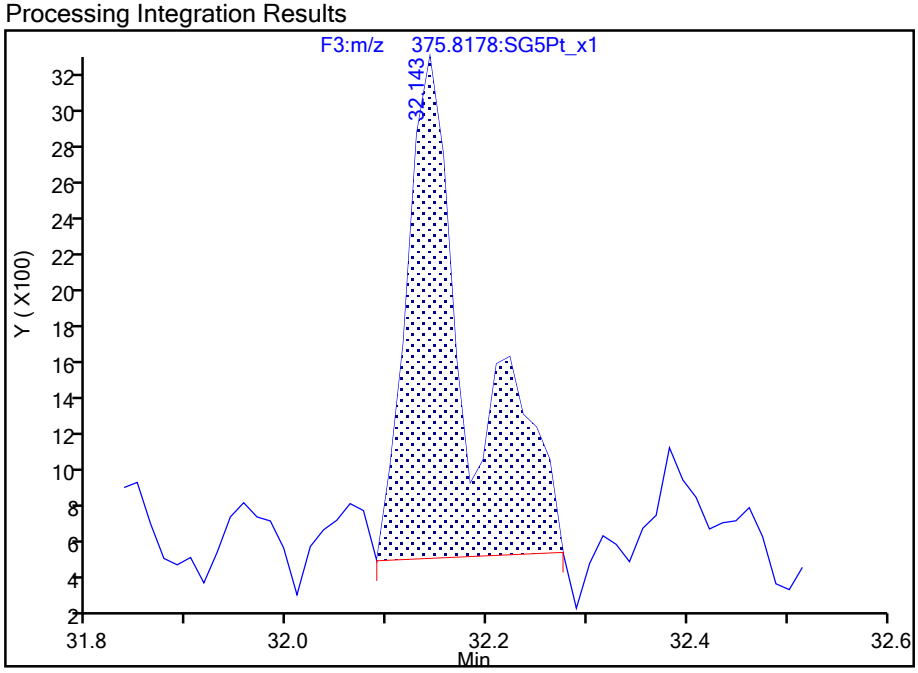

Manual Integration Results

RT: 32.14
Area: 8186
Amount: 0.031088
Amount Units: pg/ul

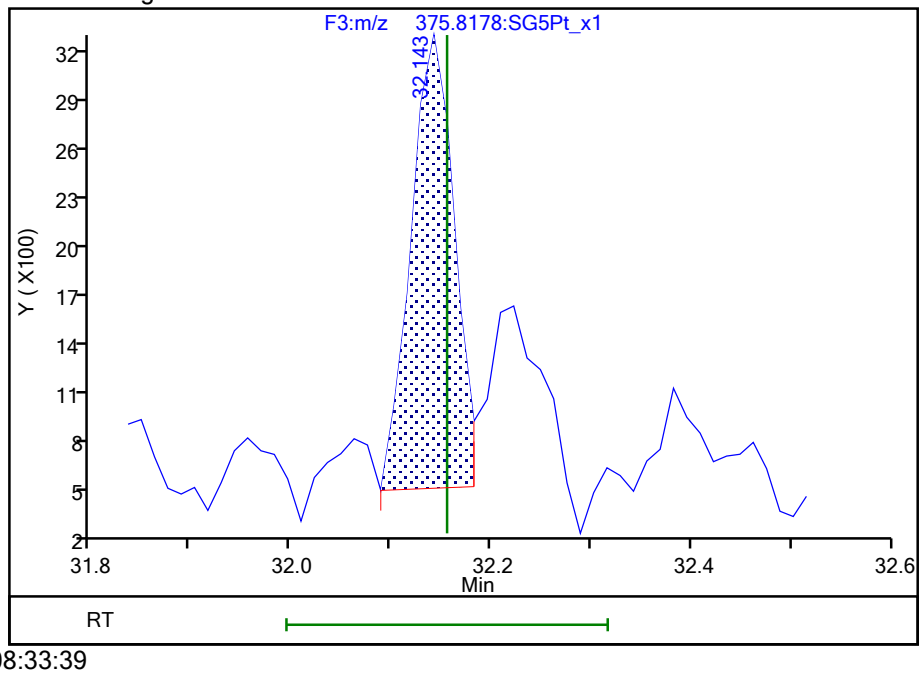

Reviewer: dadunj, 27-Aug-2021 08:33:39

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793359

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.62
Area: 72877
Amount: 0.315352
Amount Units: pg/ul

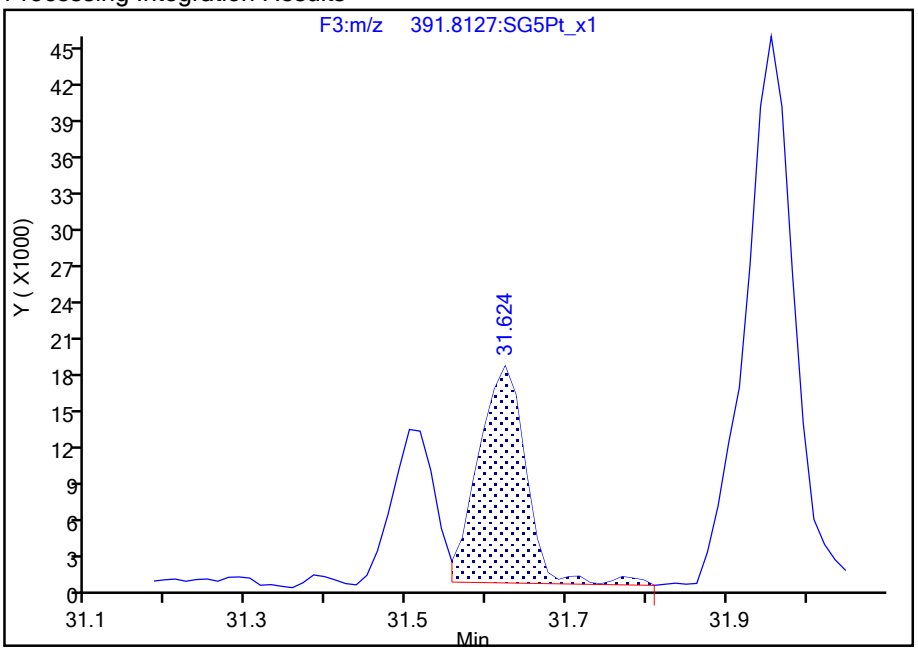

Manual Integration Results

RT: 31.50
Area: 42249
Amount: 0.194733
Amount Units: pg/ul

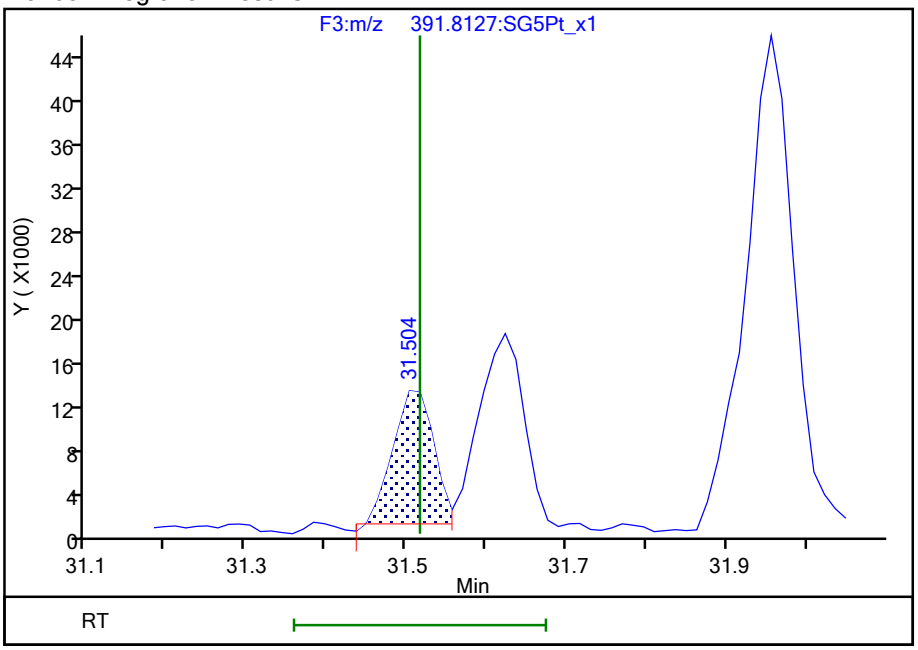

Reviewer: dadunj, 27-Aug-2021 08:34:46

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

793360

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 3

Processing Integration Results

RT: 31.62
Area: 164119
Amount: 0.315352
Amount Units: pg/ul

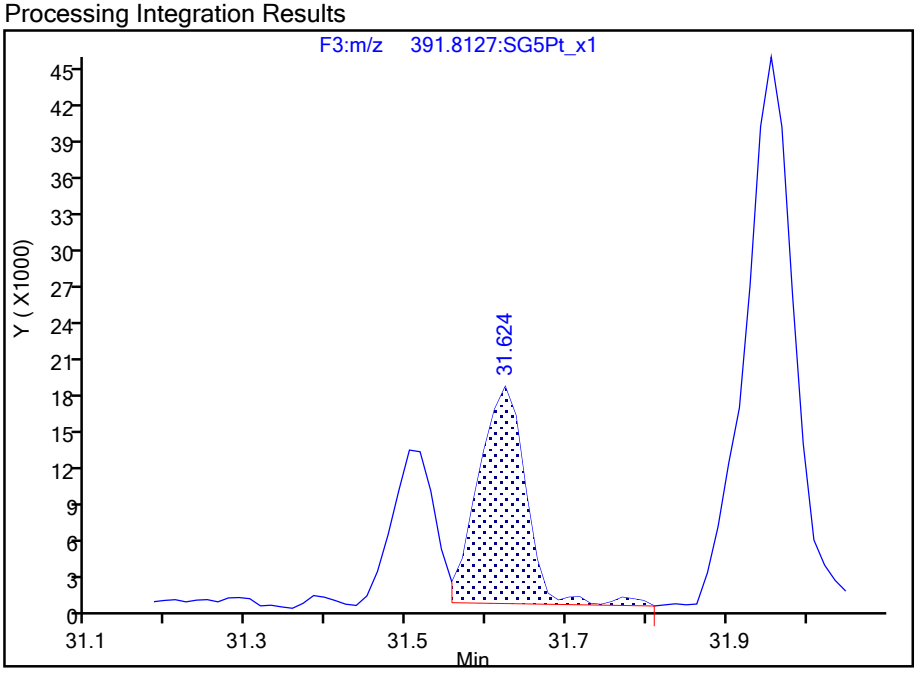

Manual Integration Results

RT: 31.50
Area: 101345
Amount: 0.194733
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 08:34:46
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.62
Area: 91242
Amount: 0.315352
Amount Units: pg/ul

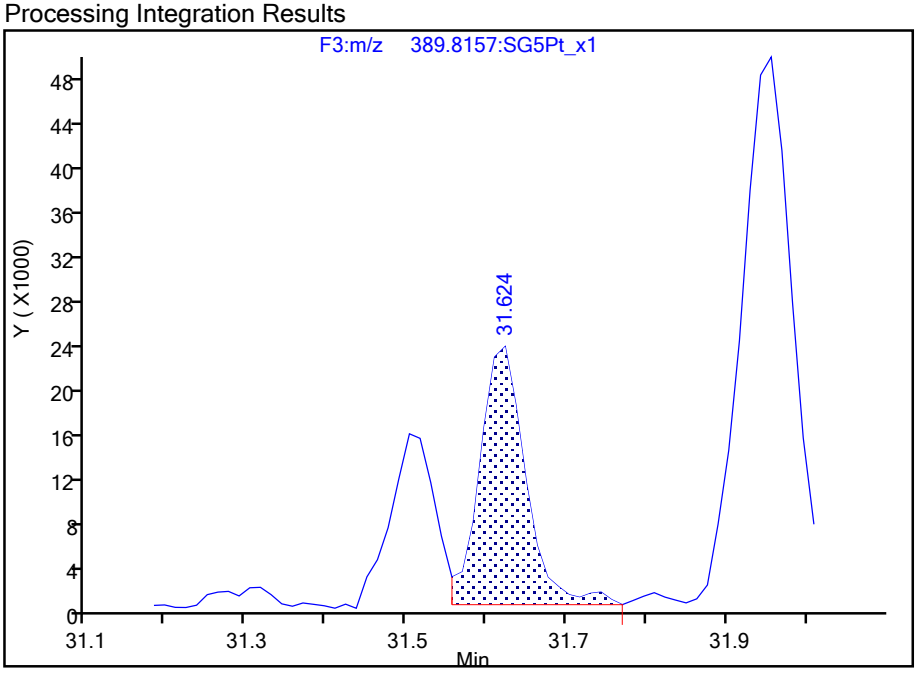

Manual Integration Results

RT: 31.50
Area: 59096
Amount: 0.194733
Amount Units: pg/ul

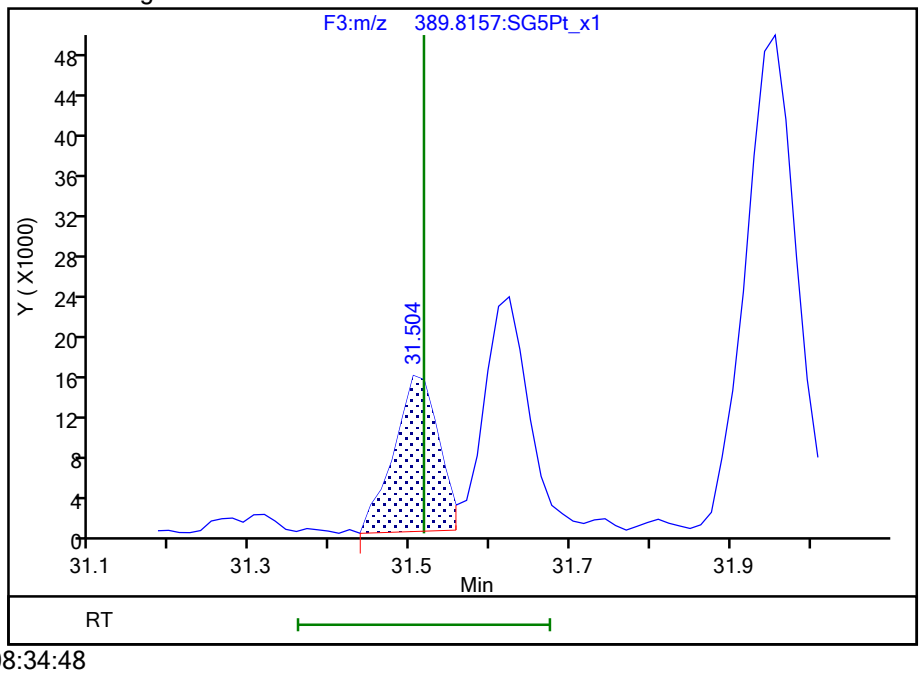

Reviewer: dadunj, 27-Aug-2021 08:34:48

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

793362

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.62
Area: 72877
Amount: 0.320788
Amount Units: pg/ul

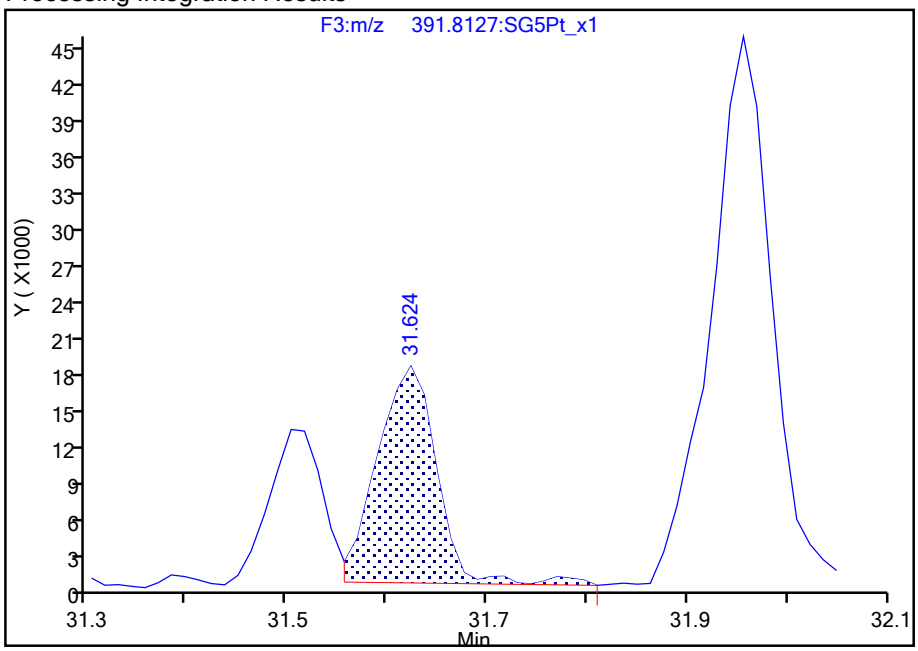

Manual Integration Results

RT: 31.62
Area: 65845
Amount: 0.307044
Amount Units: pg/ul

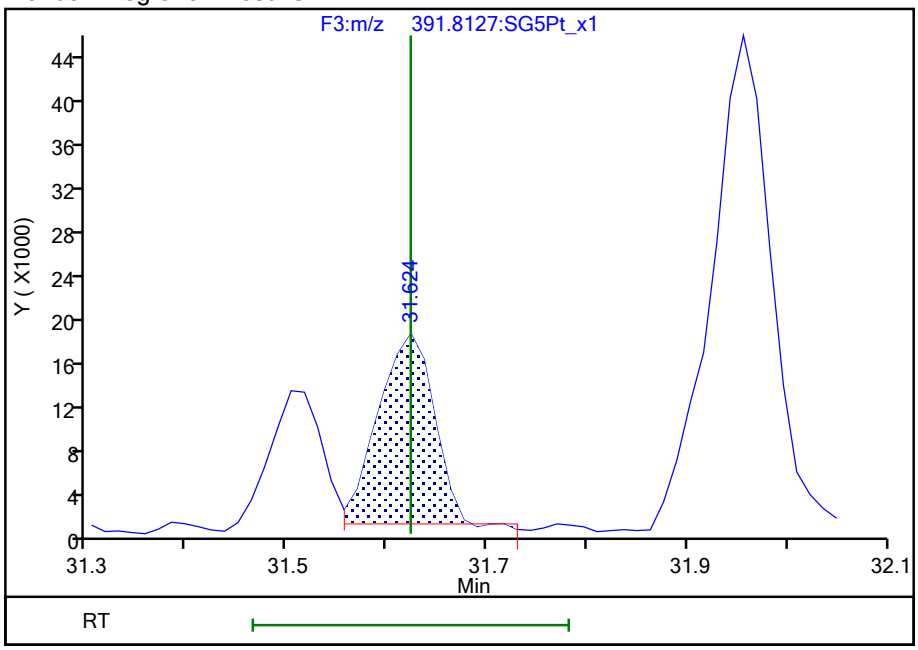

Reviewer: dadunj, 27-Aug-2021 08:34:45

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 31.96
Area: 234723
Amount: 0.758348
Amount Units: pg/ul

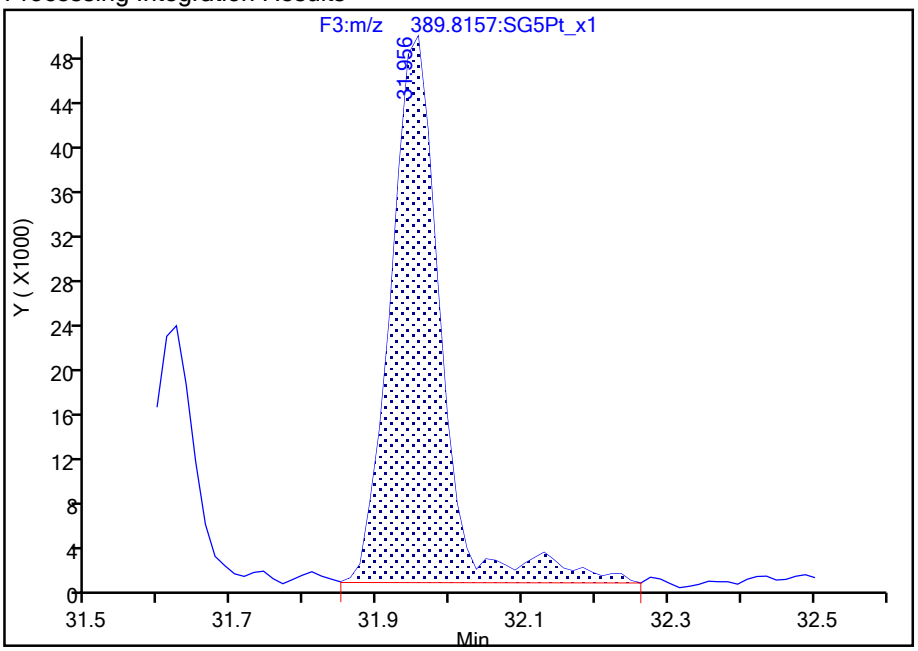

Manual Integration Results

RT: 31.96
Area: 217602
Amount: 0.705219
Amount Units: pg/ul

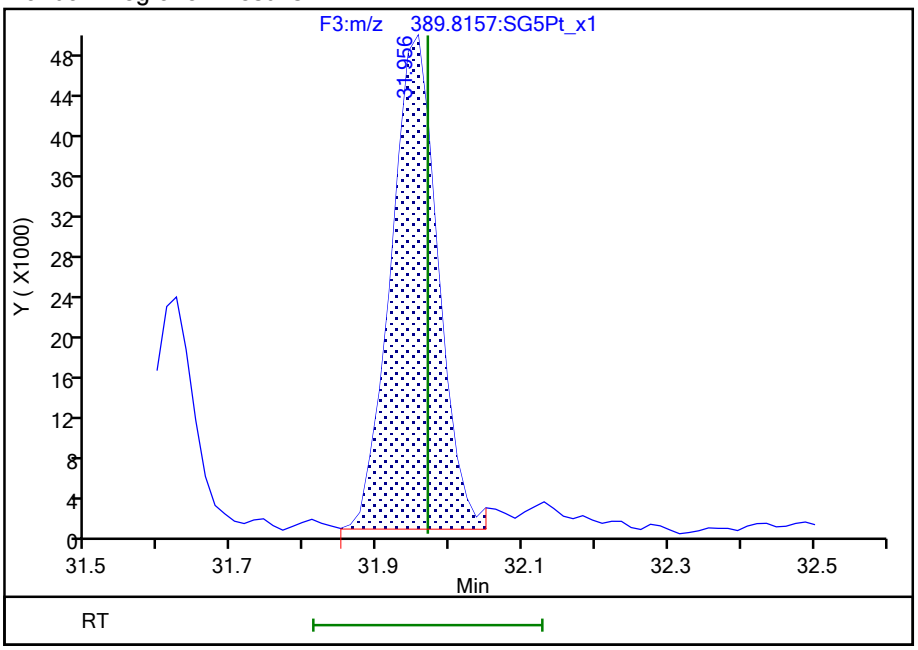

Reviewer: dadunj, 27-Aug-2021 08:34:55

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793364

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 31.96
Area: 194993
Amount: 0.758348
Amount Units: pg/ul

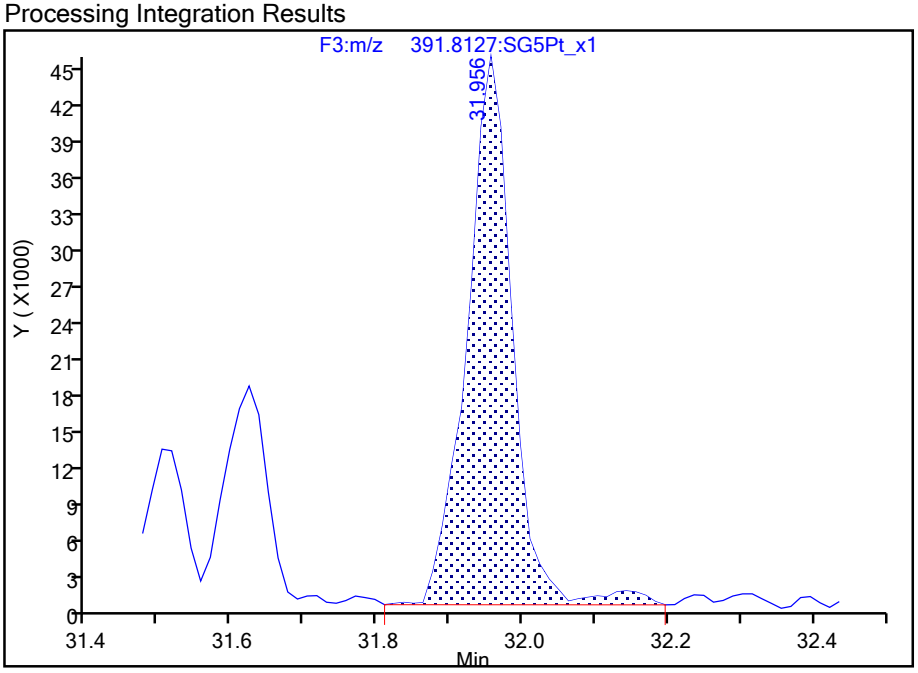

Manual Integration Results

RT: 31.96
Area: 182009
Amount: 0.705219
Amount Units: pg/ul

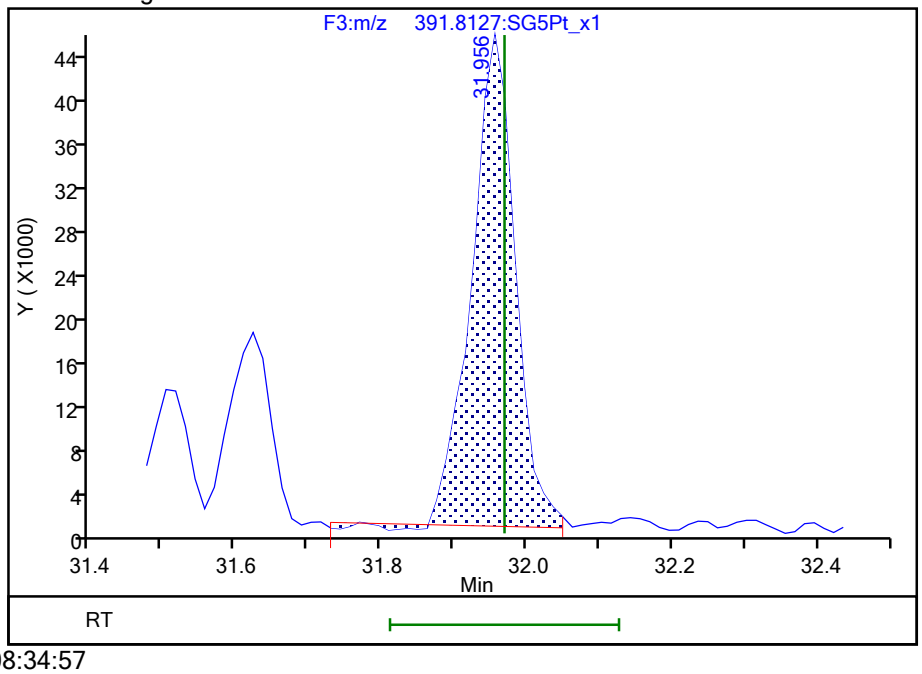

Reviewer: dadunj, 27-Aug-2021 08:34:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793365

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d				
Injection Date:	26-Aug-2021 02:05:46	Instrument ID:	10D5		
Lims ID:	320-77292-A-2-A	Lab Sample ID:	320-77292-2		
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:	SMA	ALS Bottle#:	33	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.62
Area: 23421
Amount: 0.072509
Amount Units: pg/ul

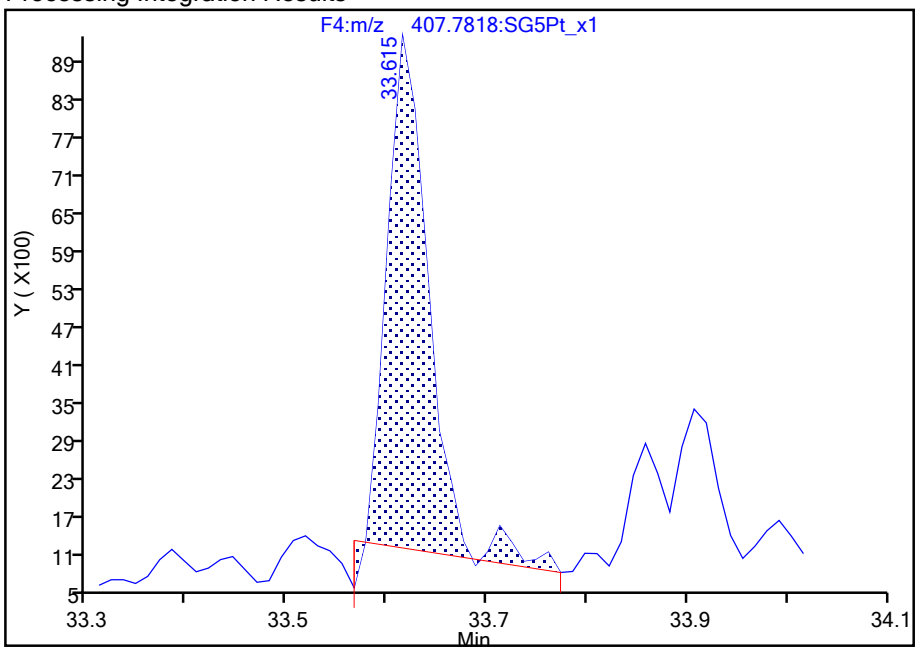

Manual Integration Results

RT: 33.62
Area: 22085
Amount: 0.070376
Amount Units: pg/ul

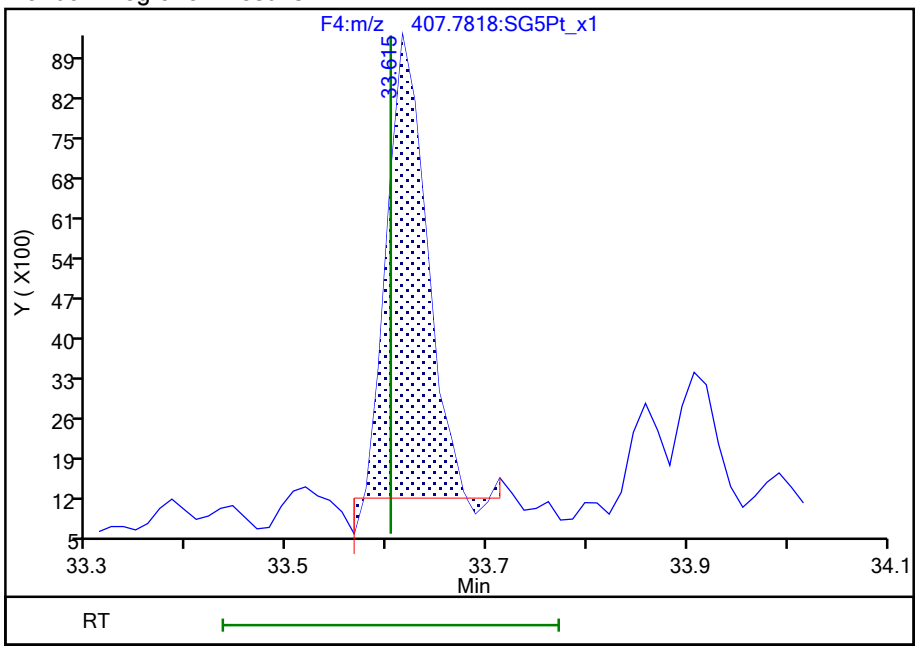

Reviewer: dadunj, 27-Aug-2021 08:35:28

Audit Action: Manually Integrated Audit Reason: Split Peak

793366

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

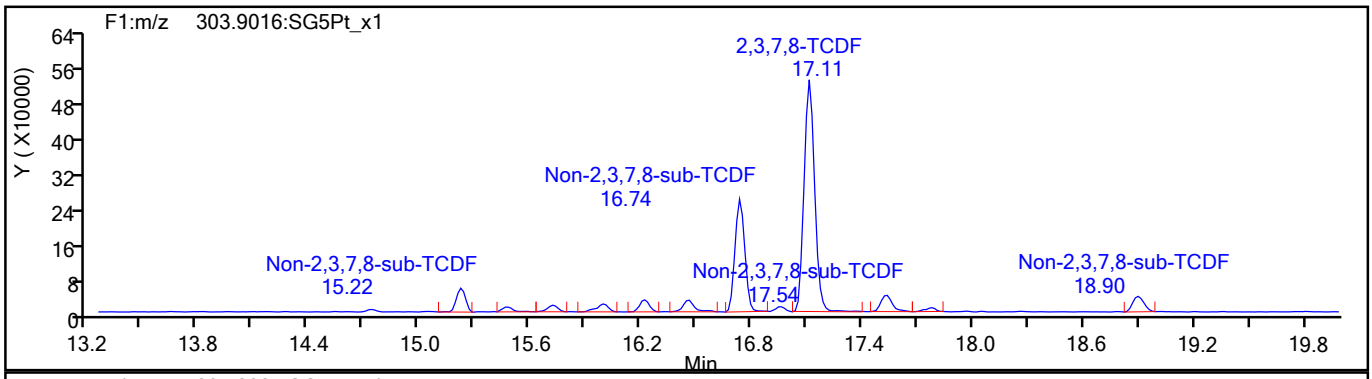

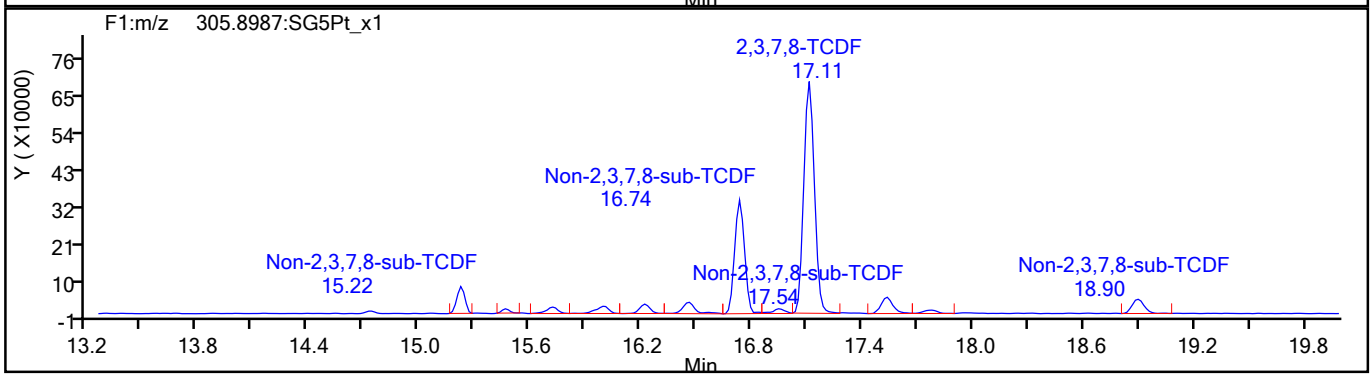

TCDF Standards

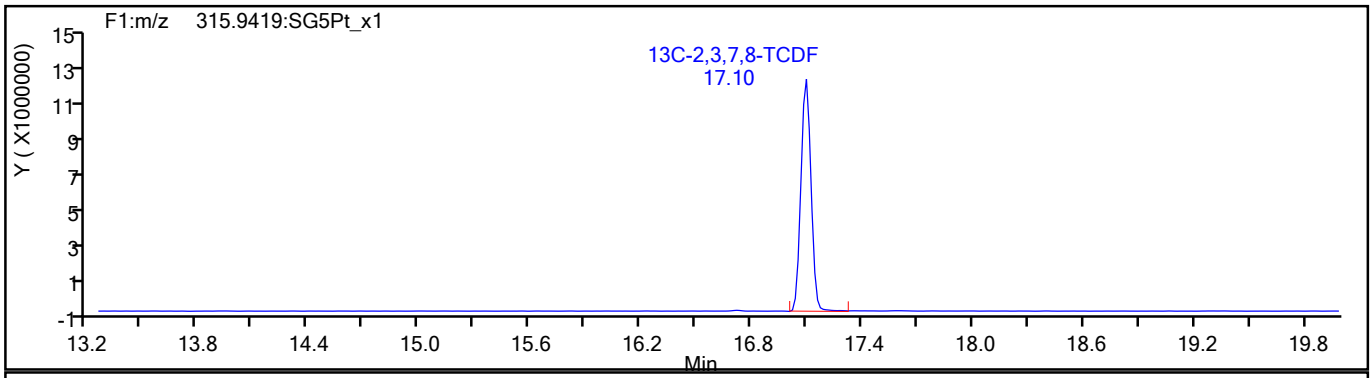

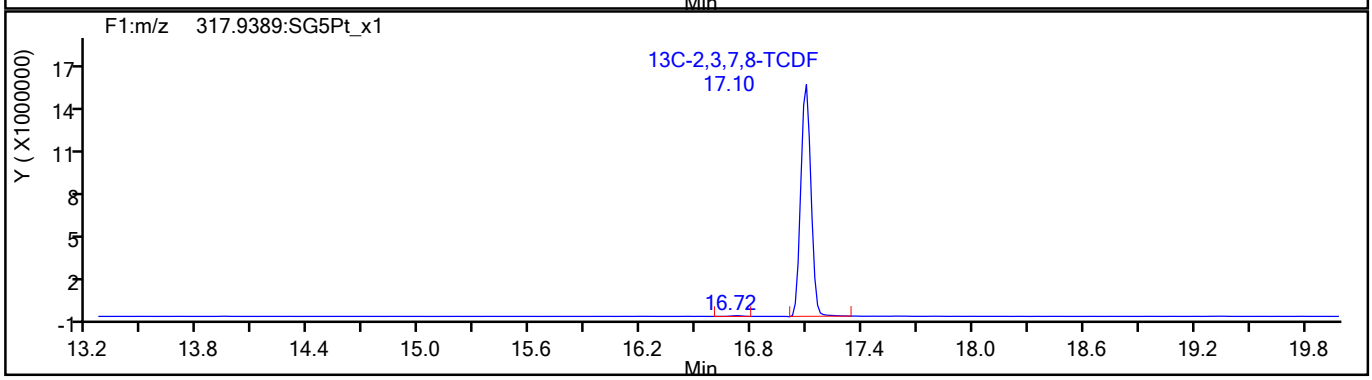

793367

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

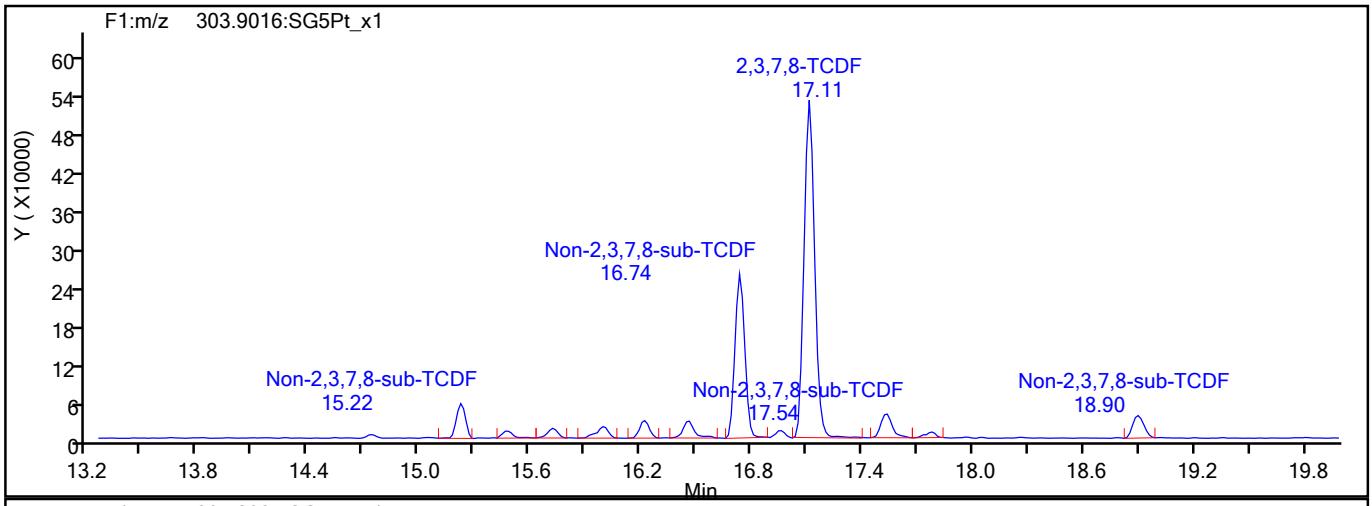

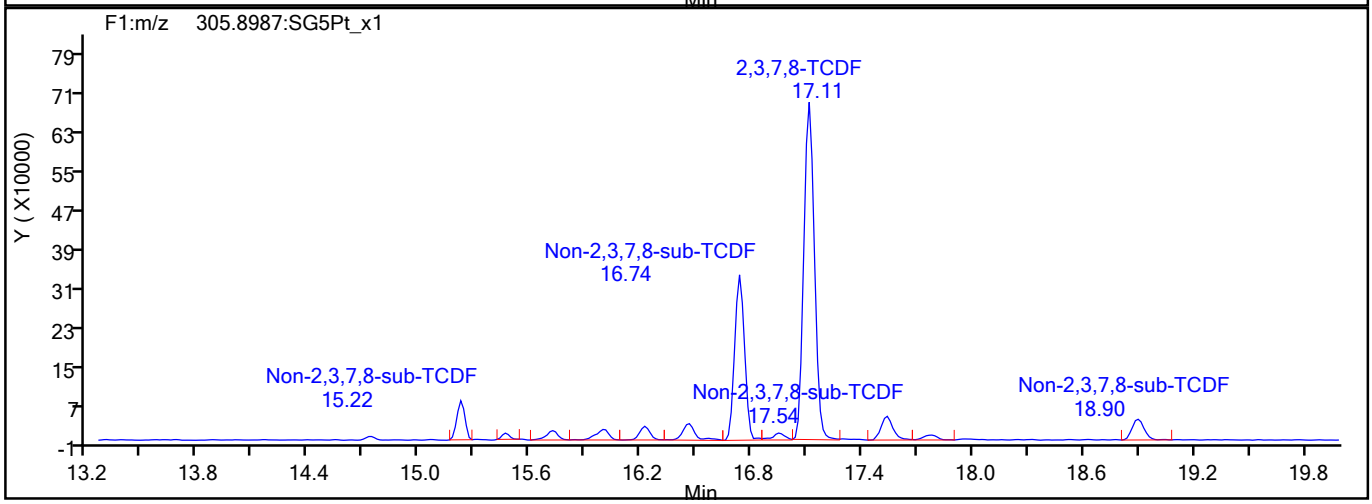

TCDF Interference Mass

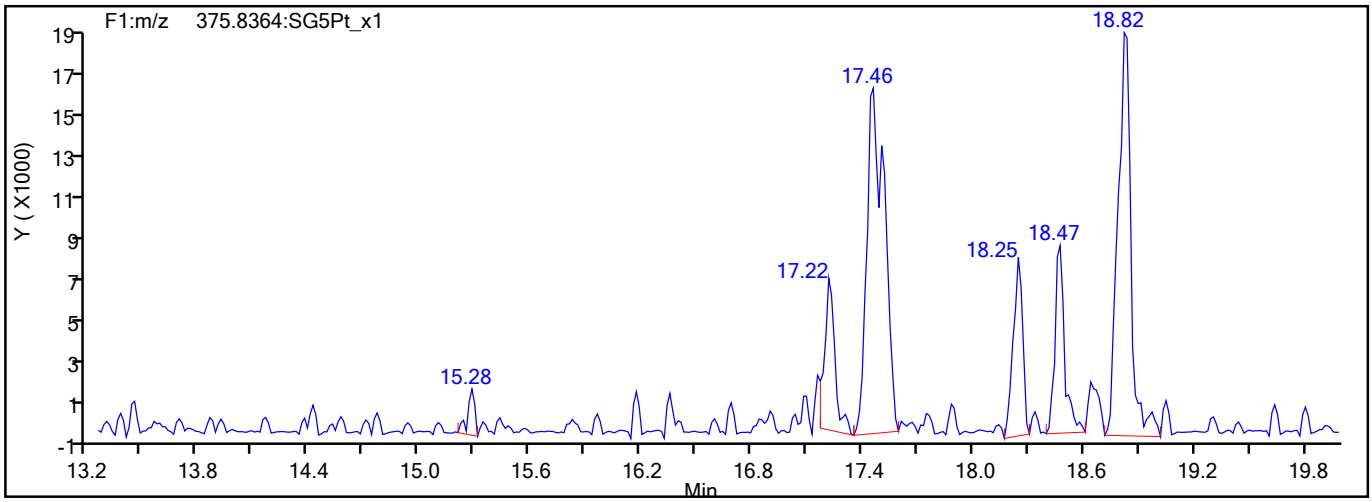

793368

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

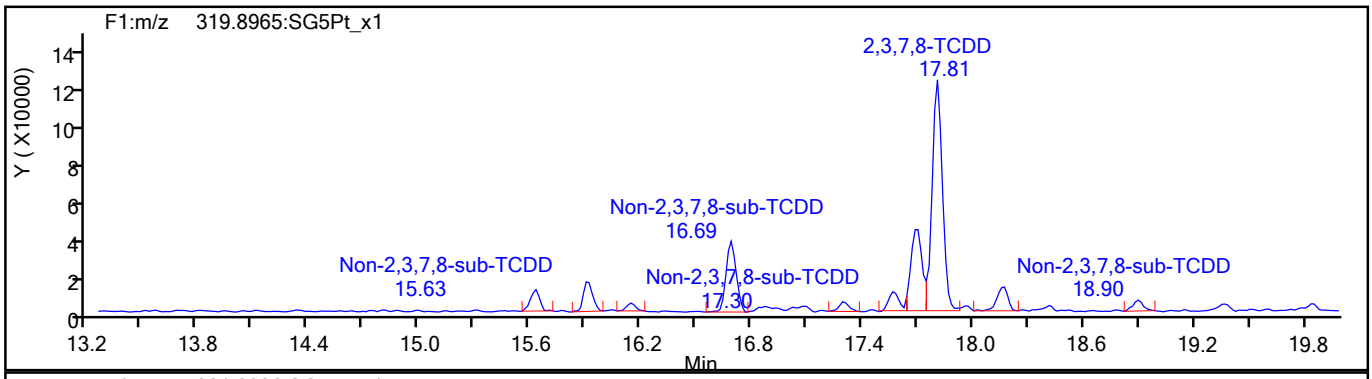

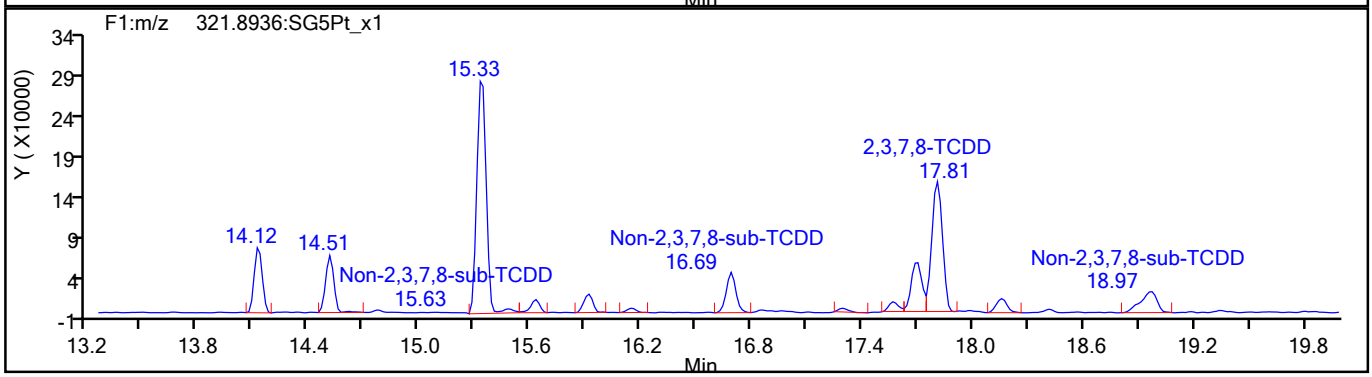

TCDD Standards

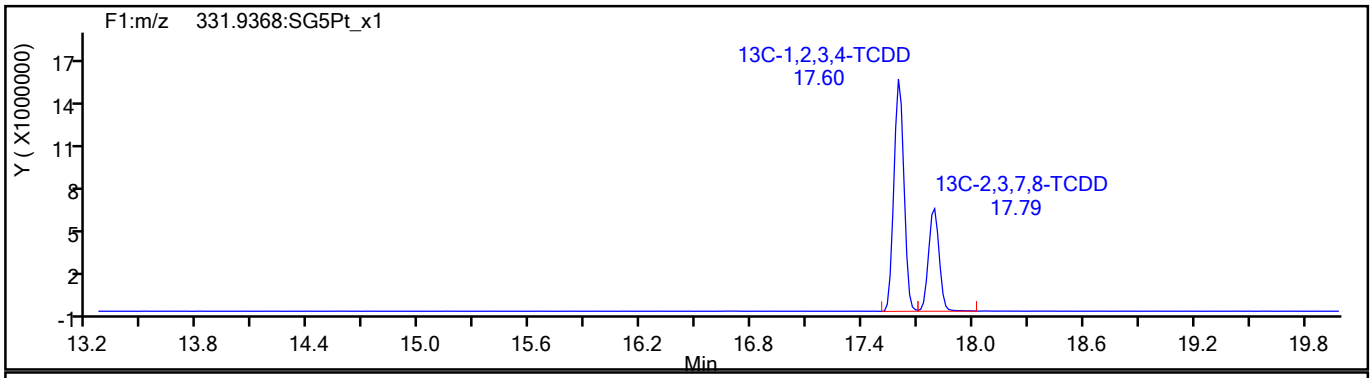

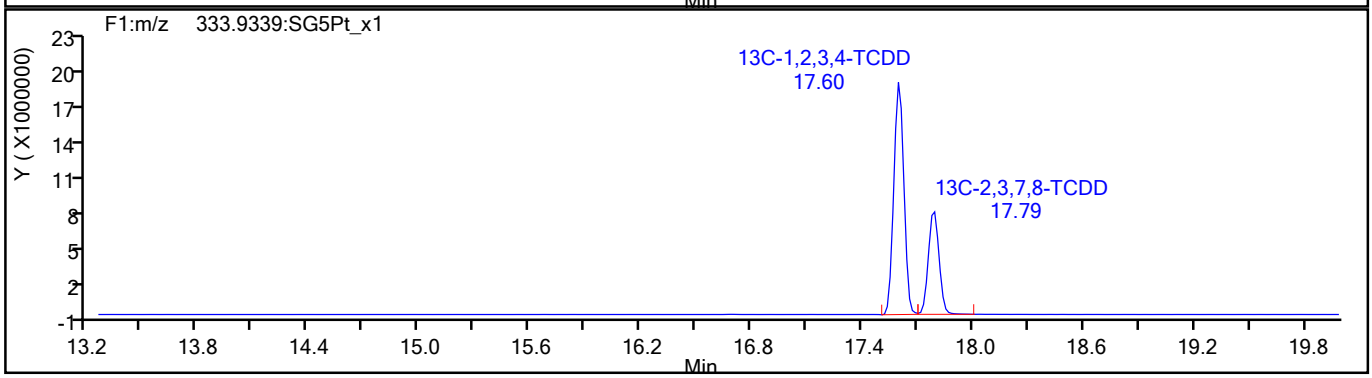

793369

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

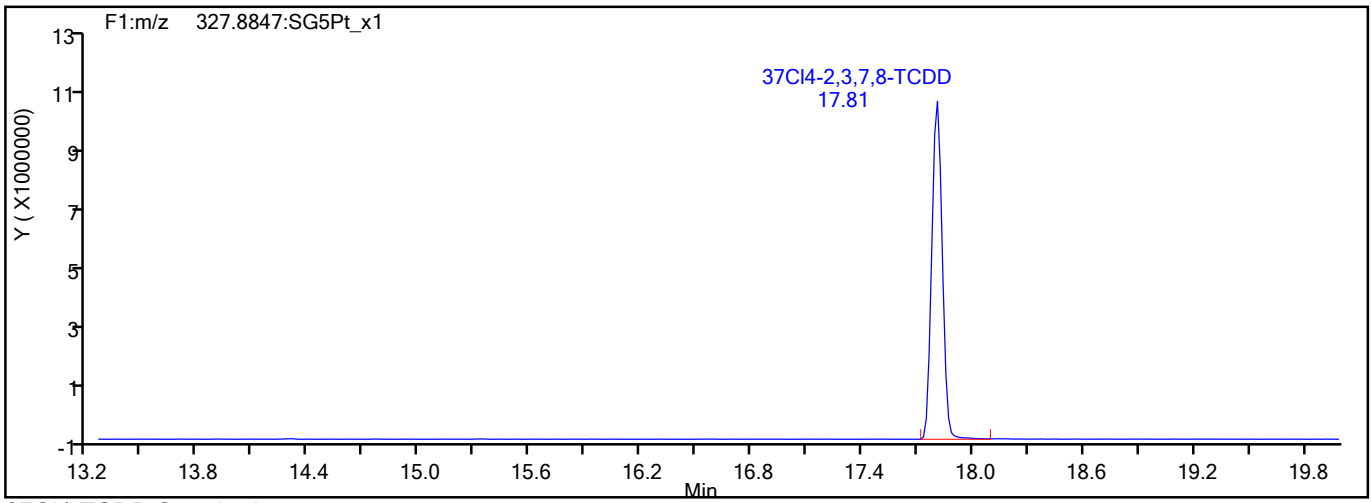

37Cl4-TCDD Standards

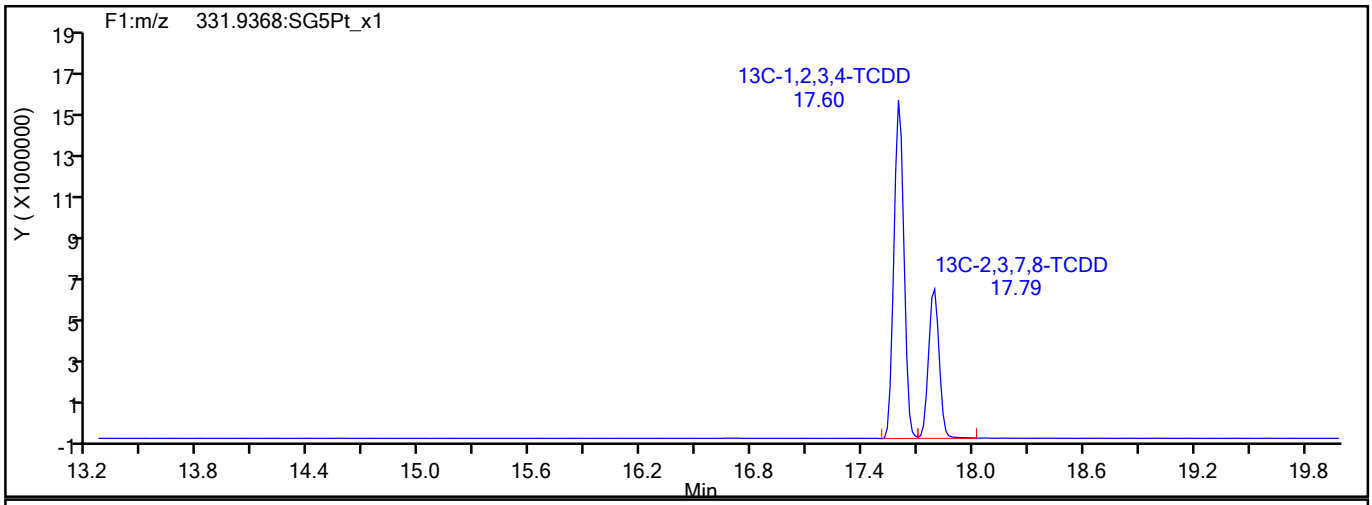

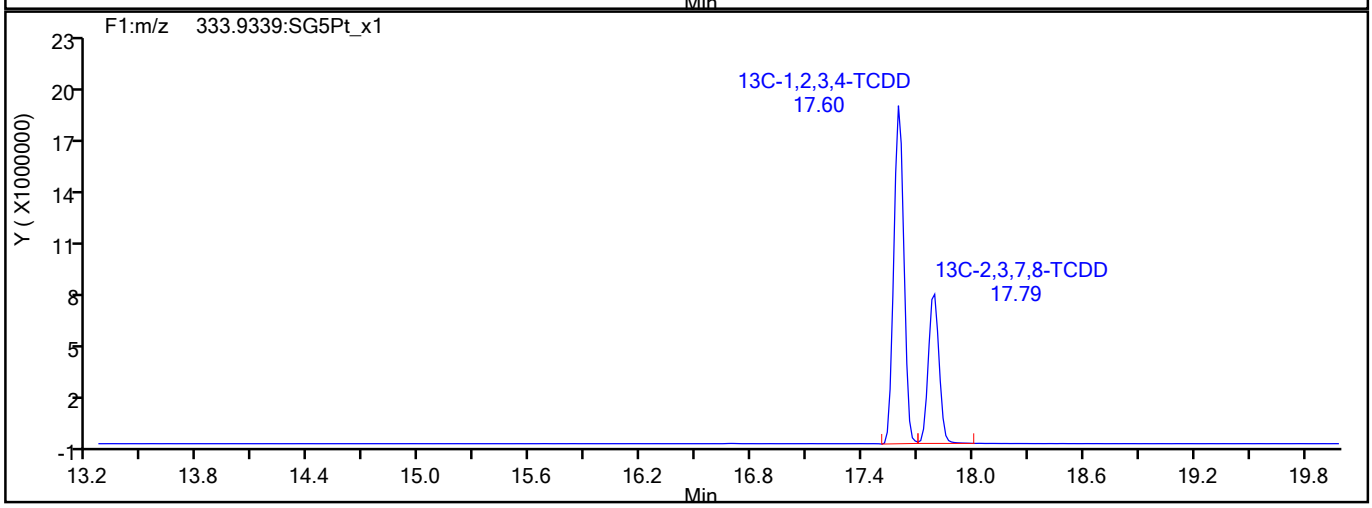

793370

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

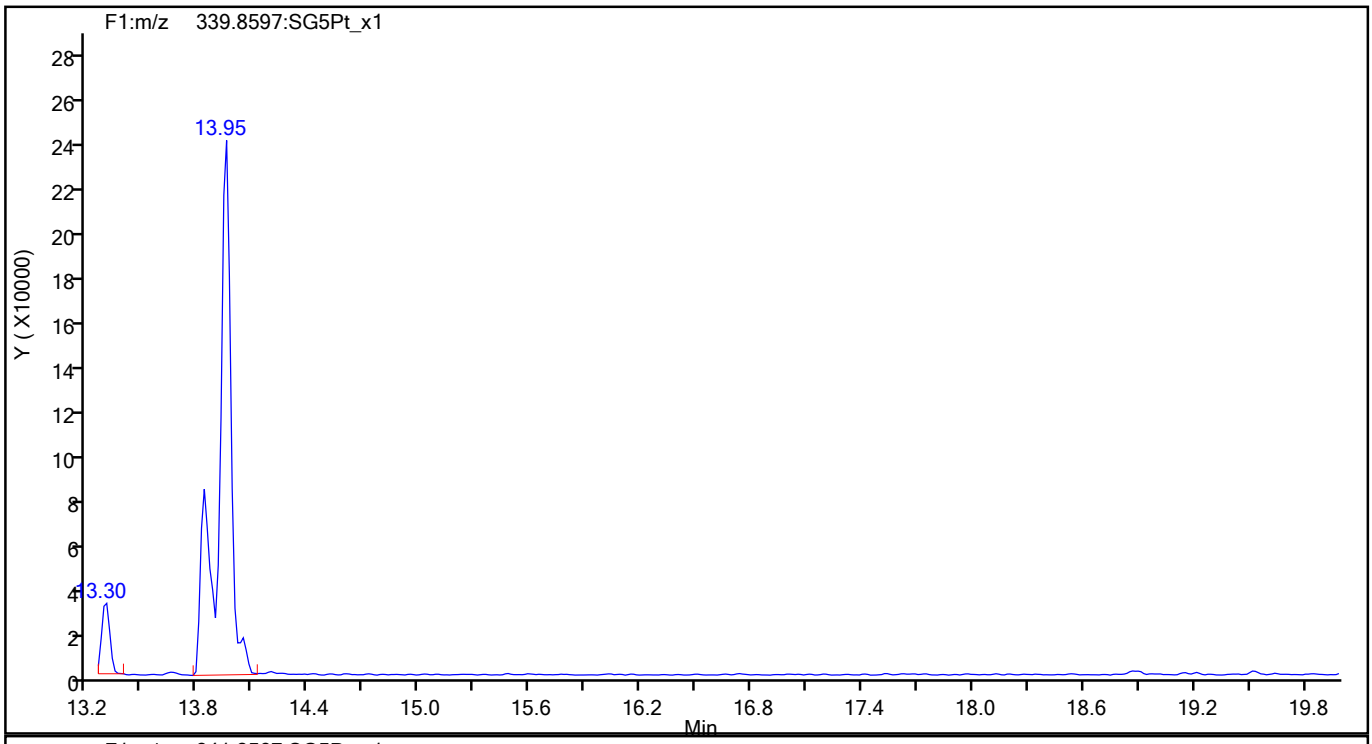

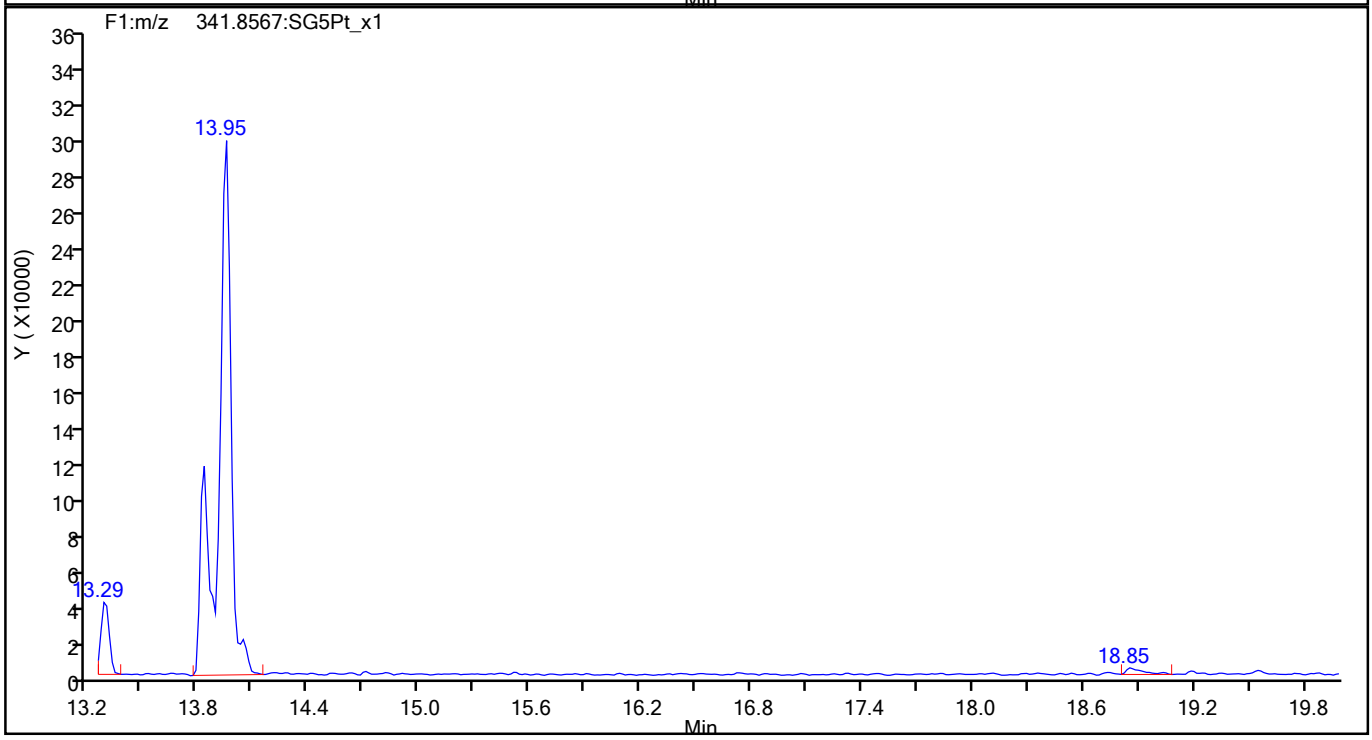

793371

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

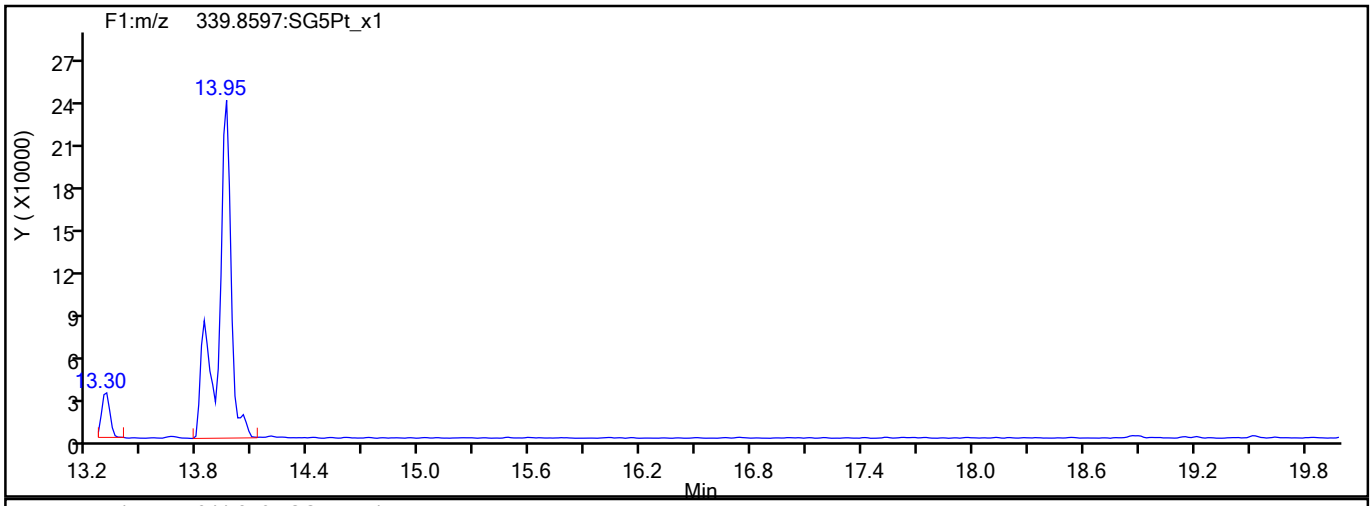

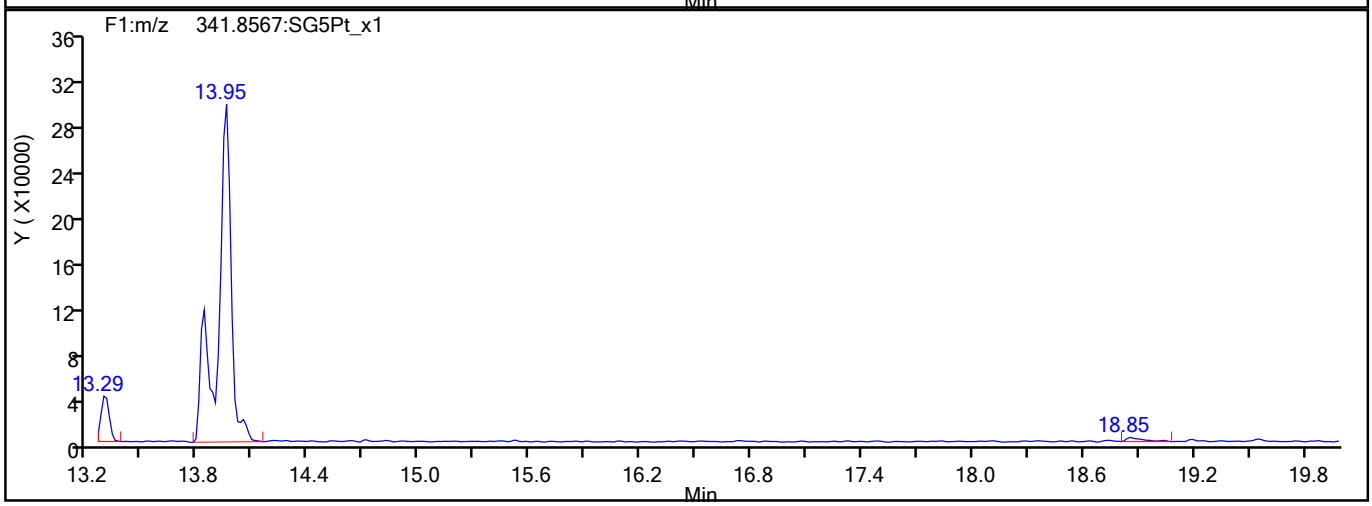

F1 PeCDFs Interference Mass

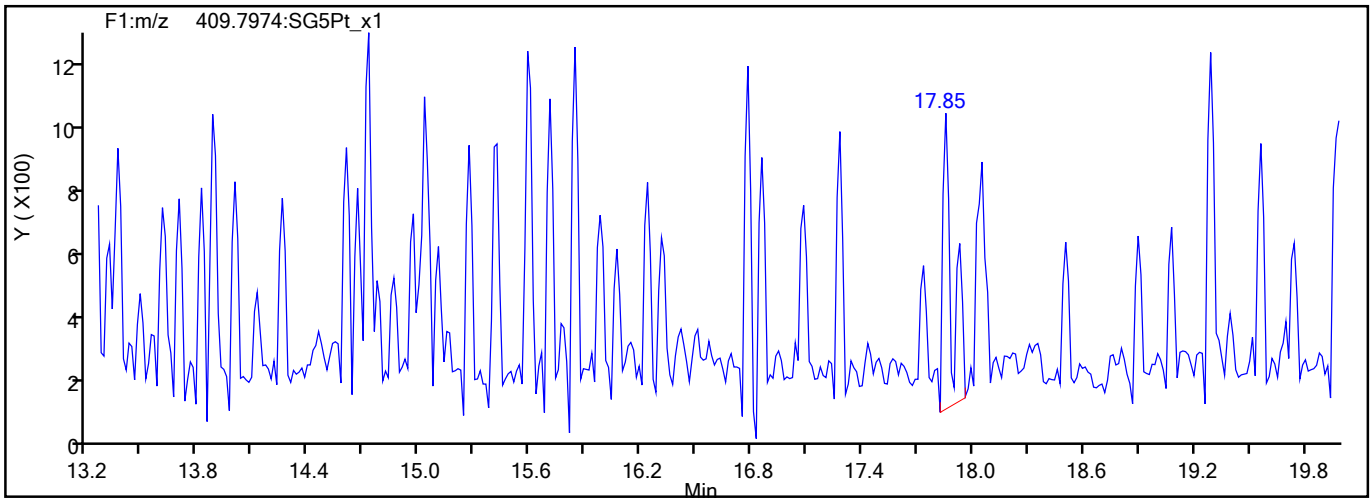

793372

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

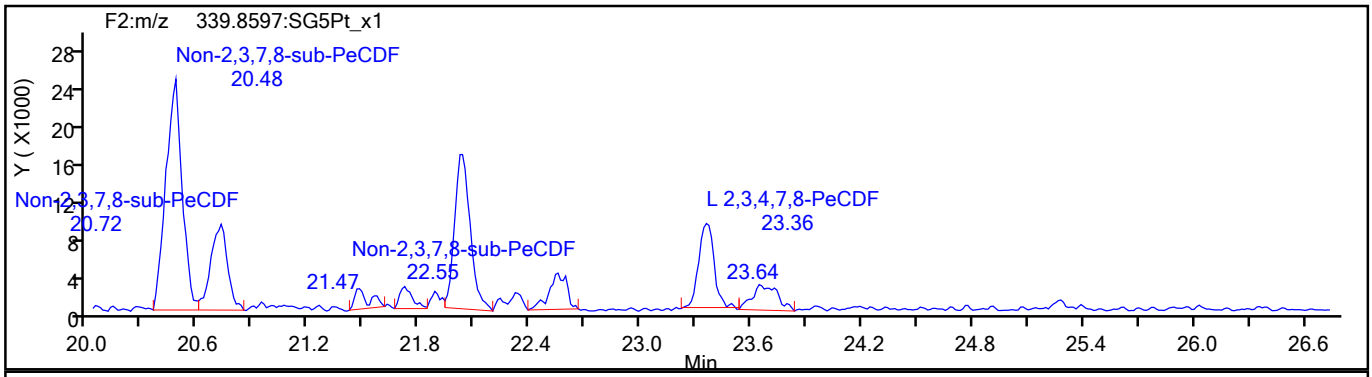

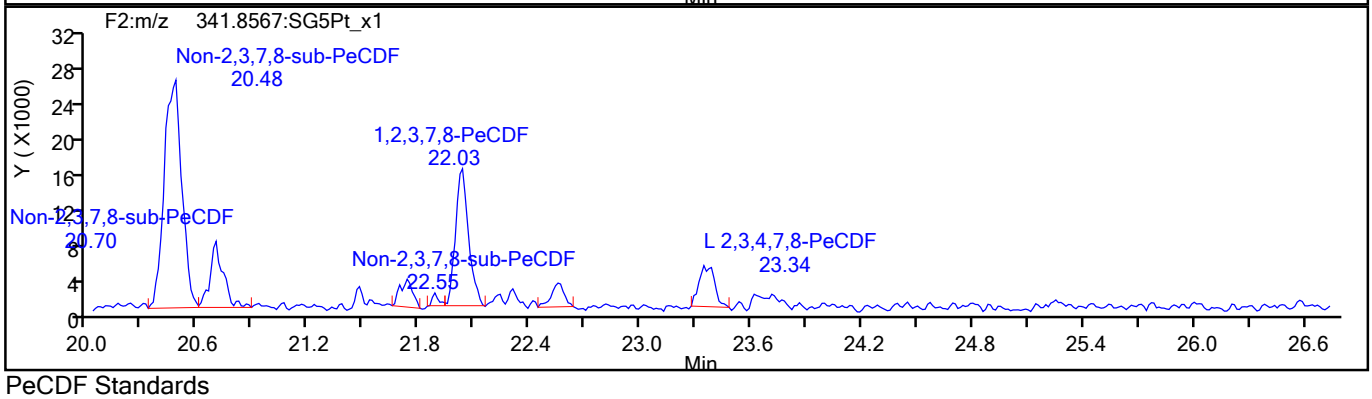

PeCDF Standards

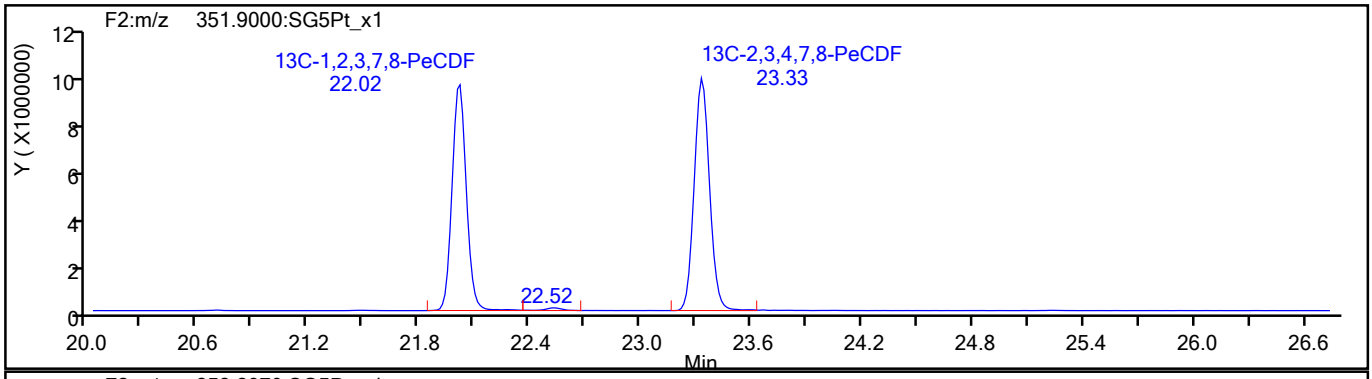

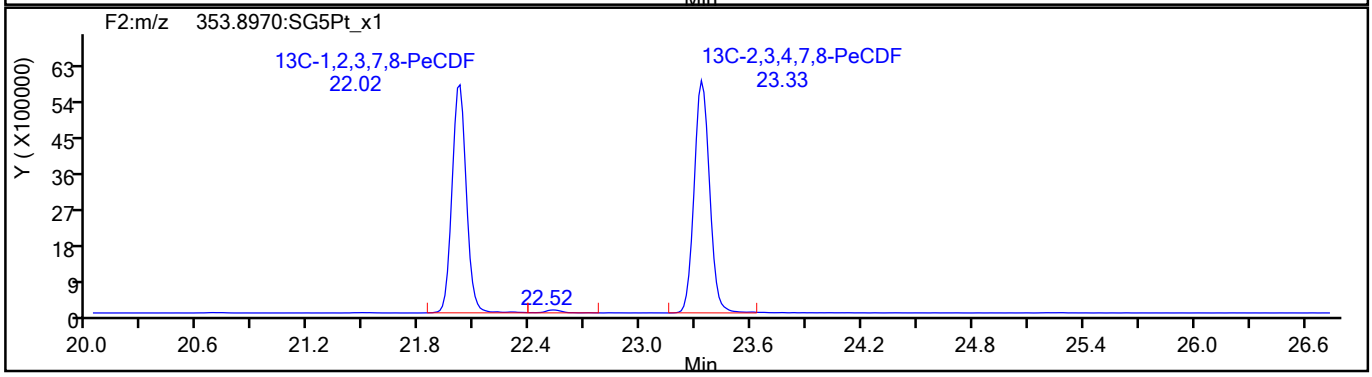

793373

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

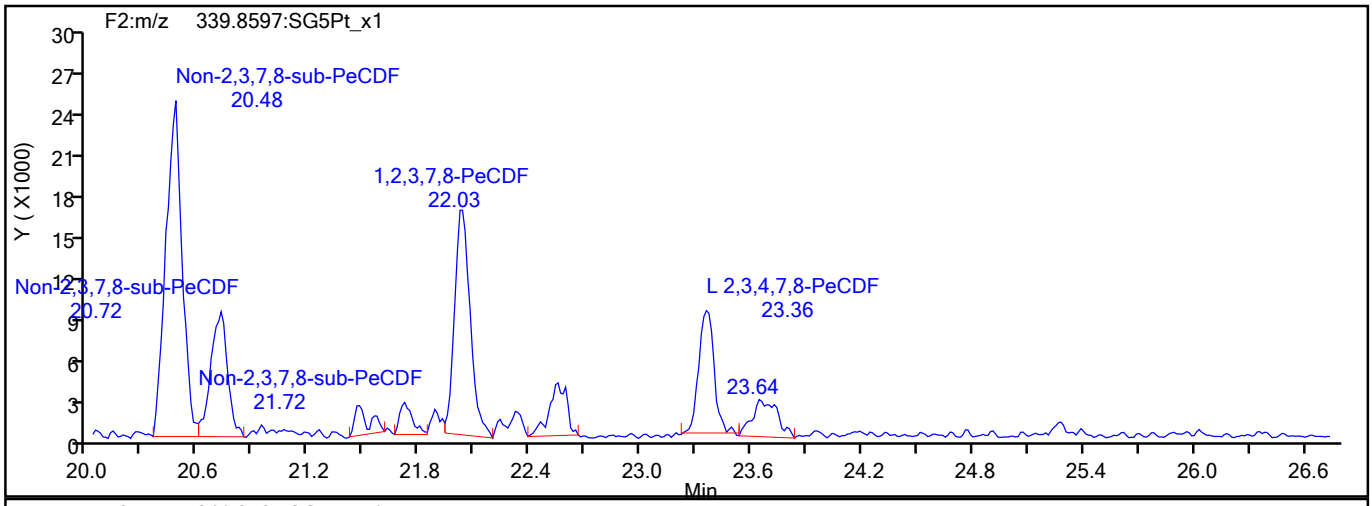

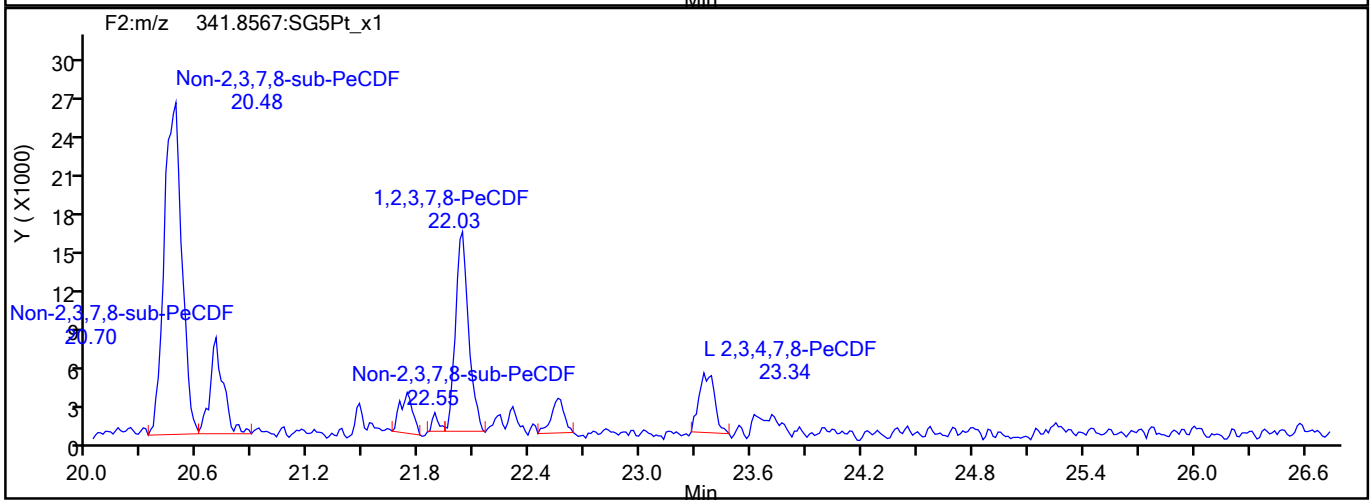

PeCDF Interference Mass

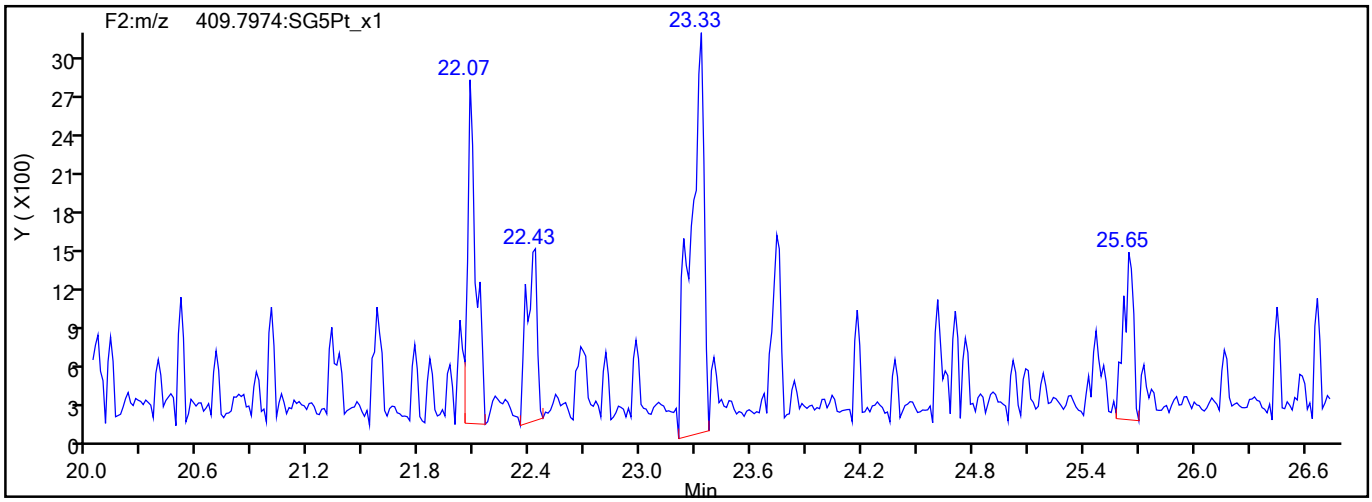

793374

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

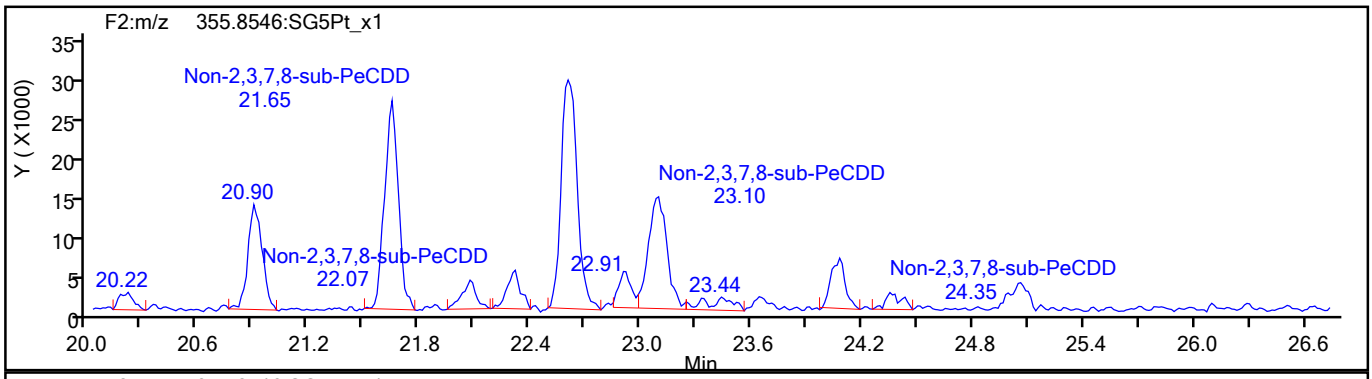

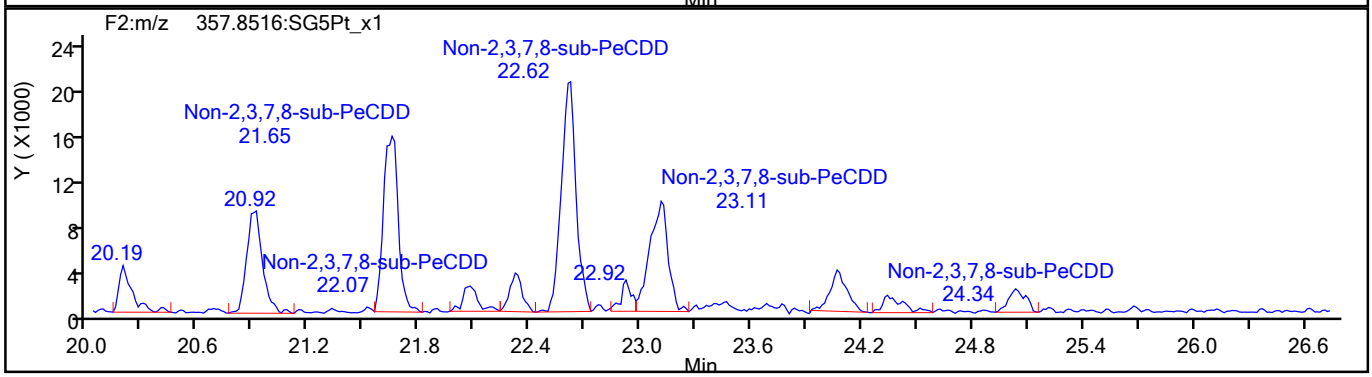

PeCDD Standards

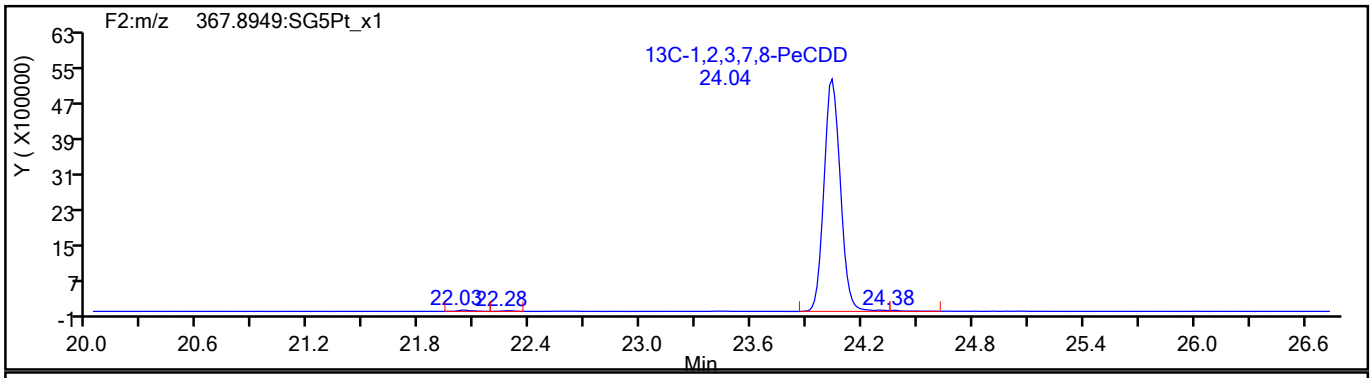

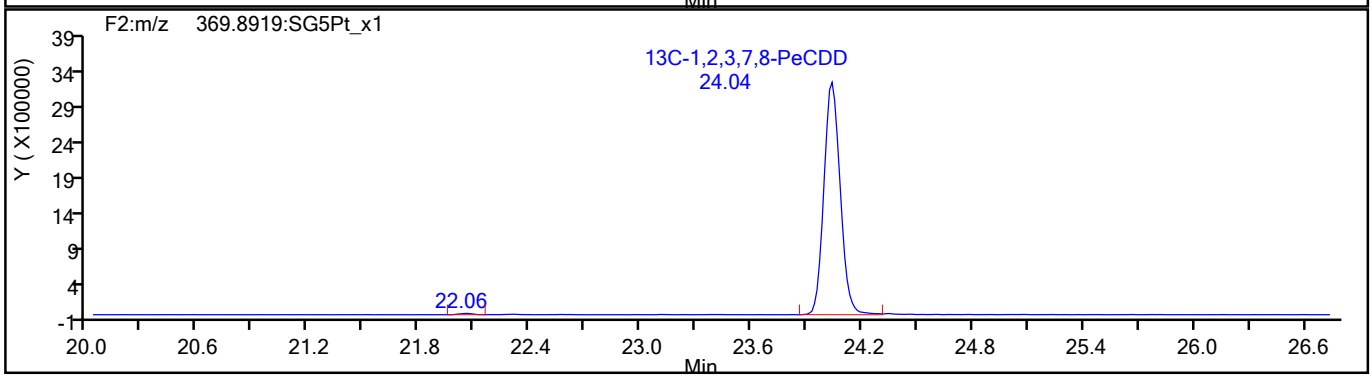

793375

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

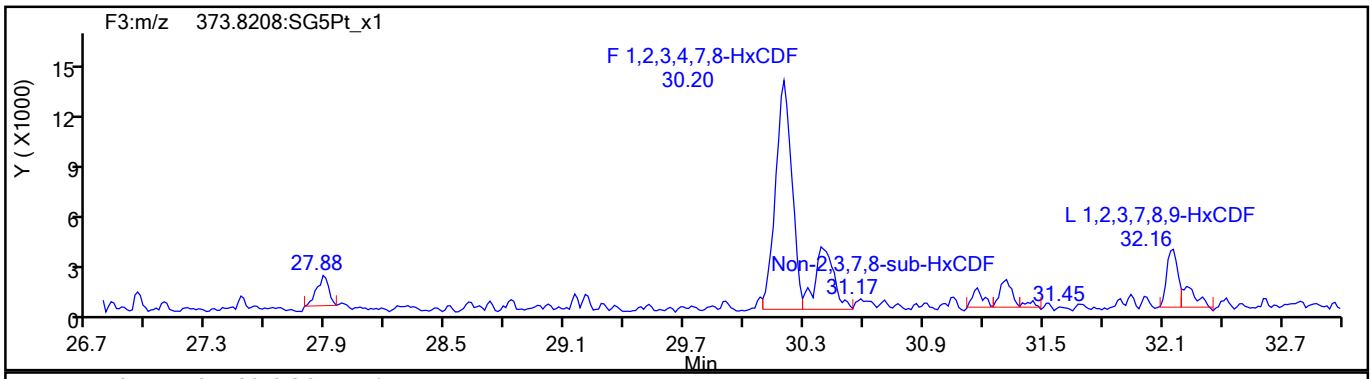

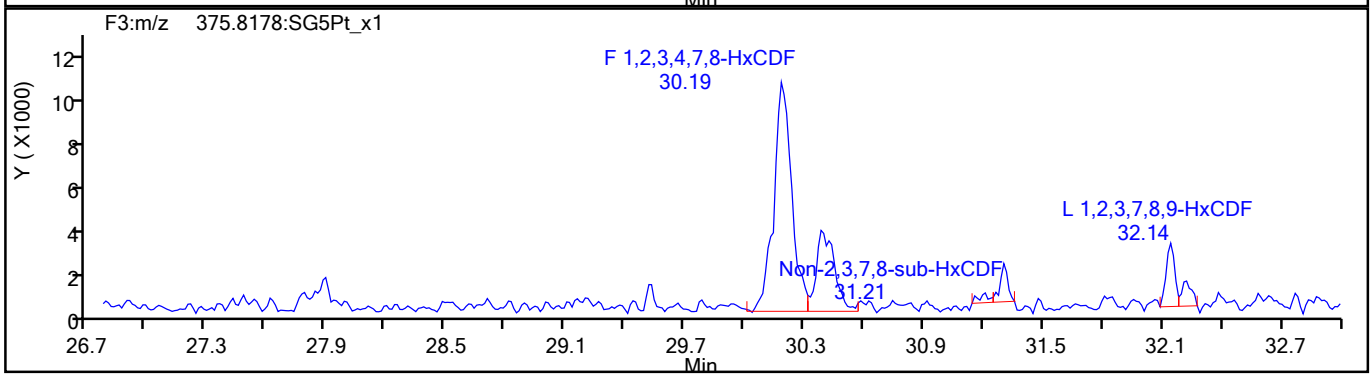

HxCDF Standards

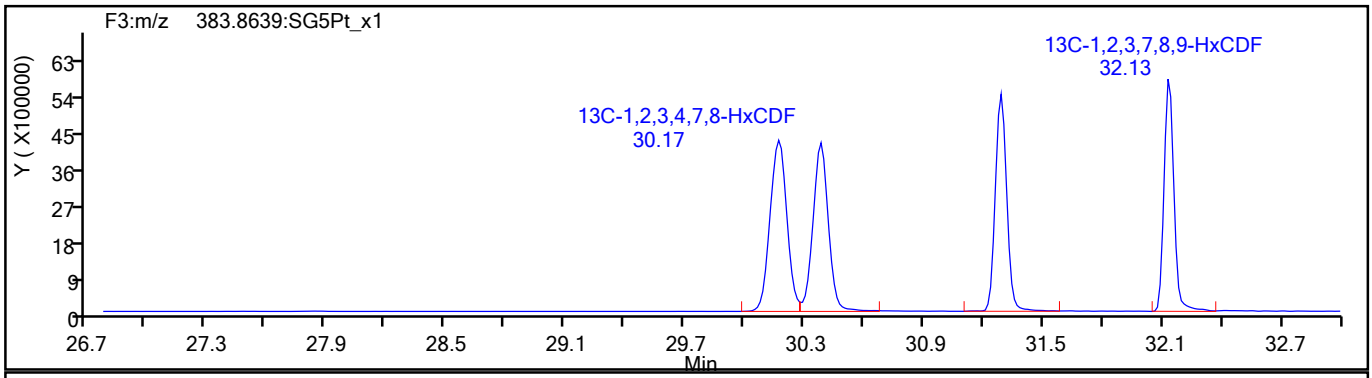

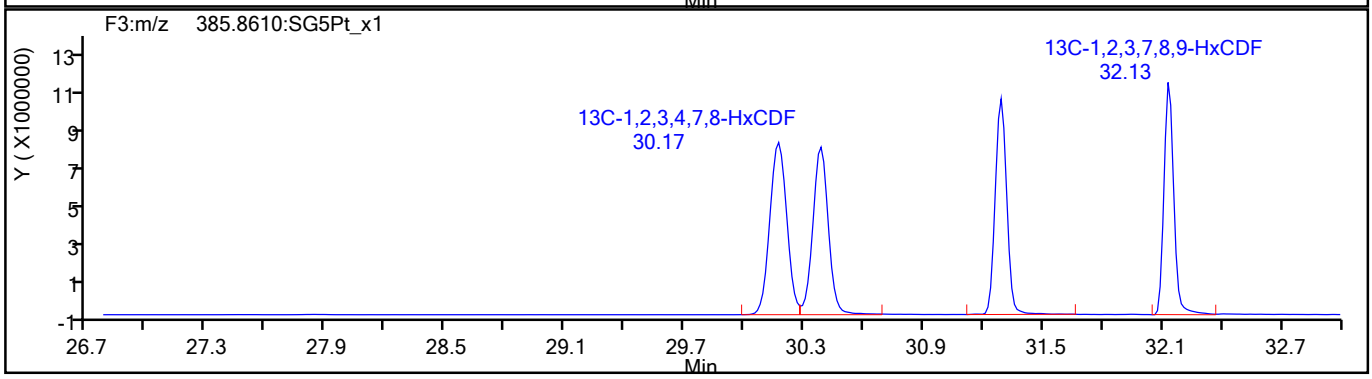

793376

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

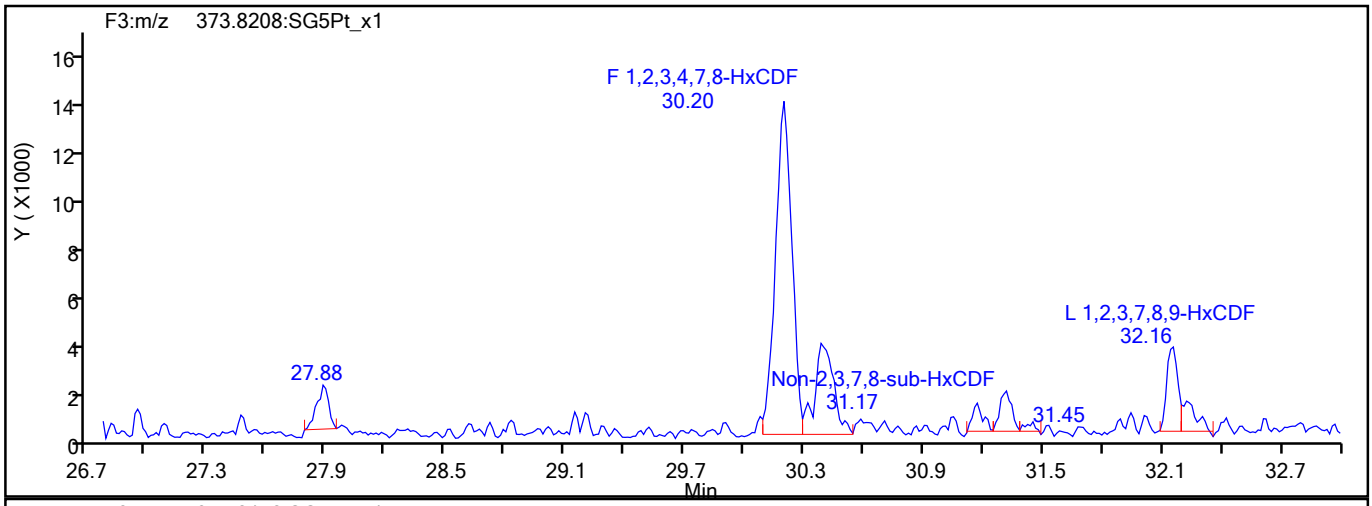

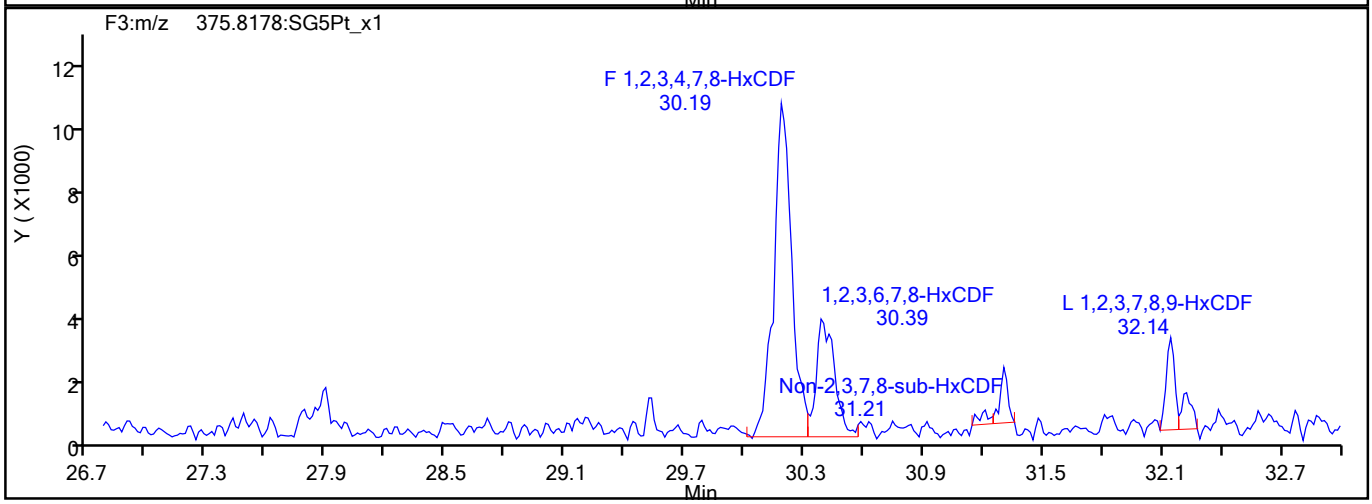

HxCDF Interference Mass

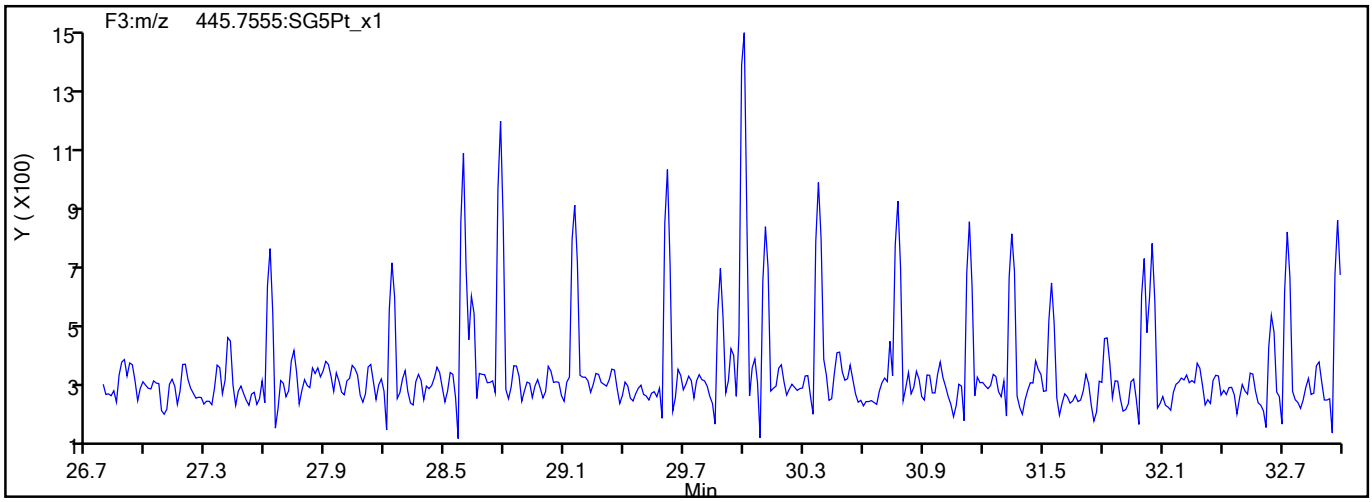

793377

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

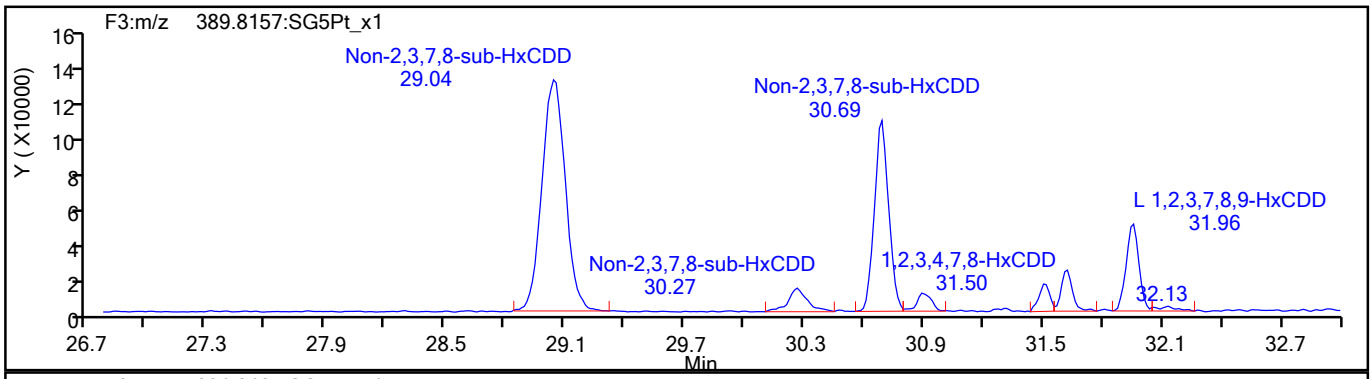

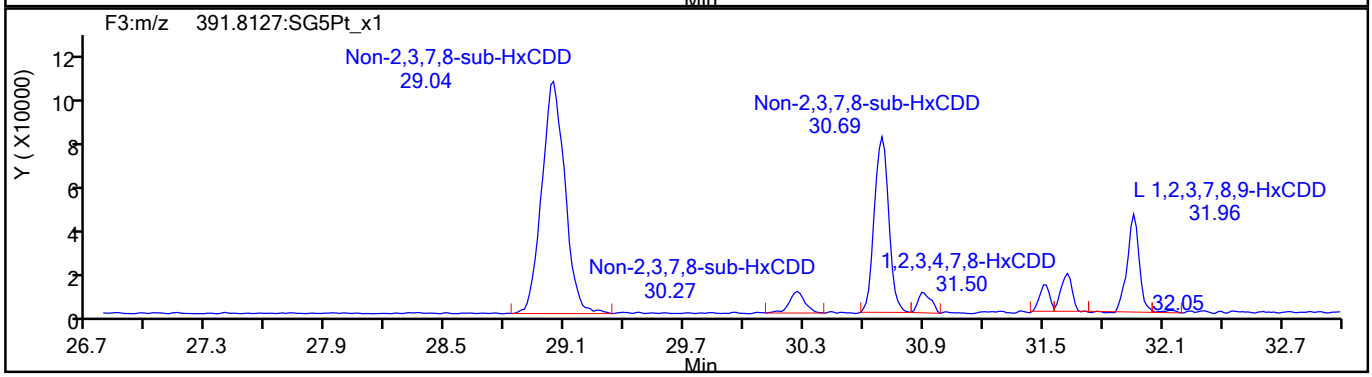

HxCDD Standards

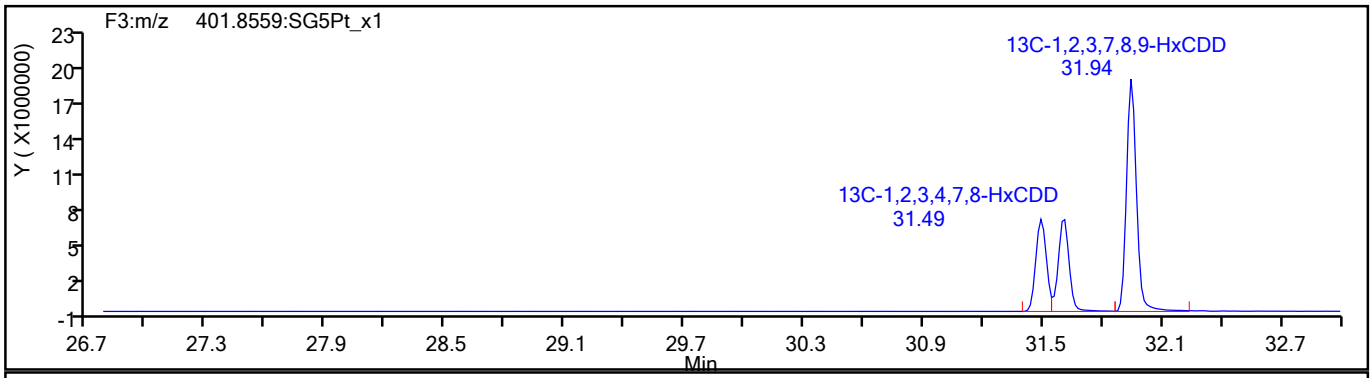

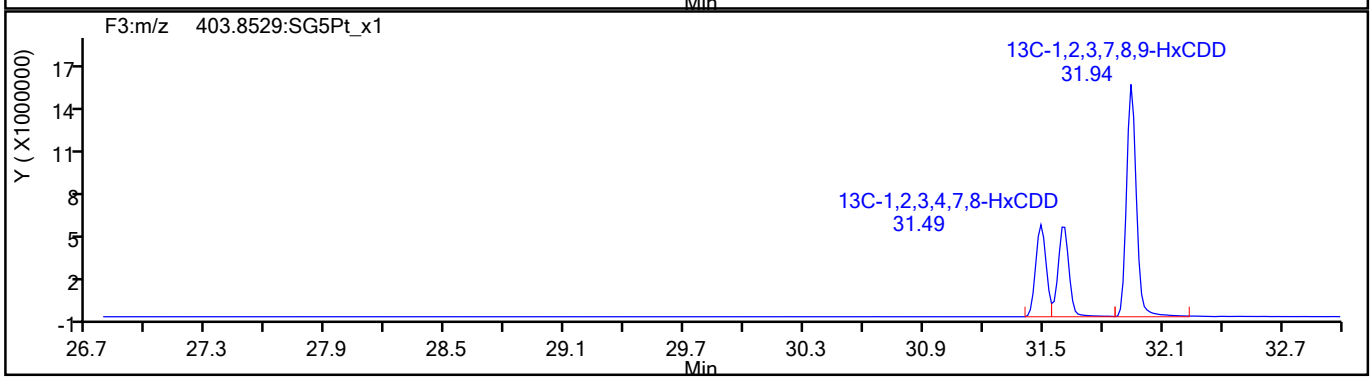

793378

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
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HpCDF

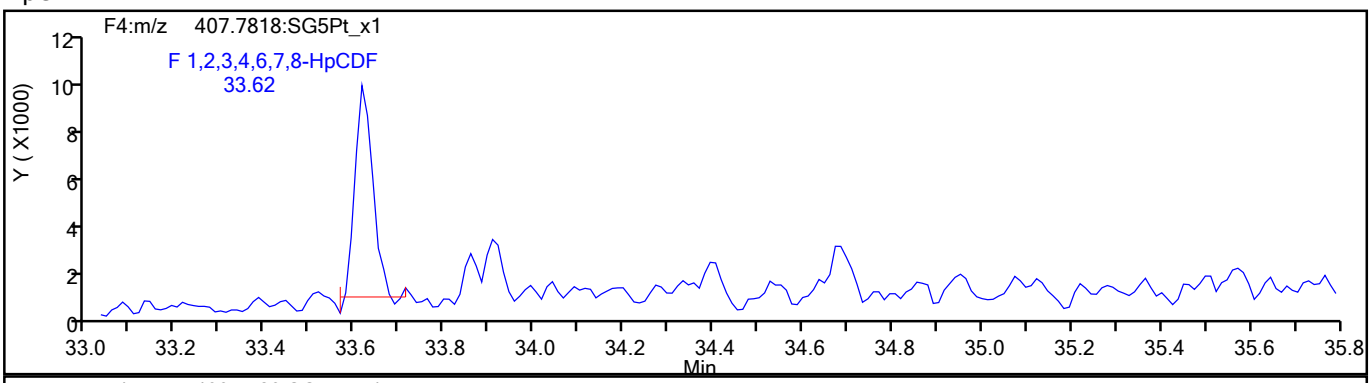

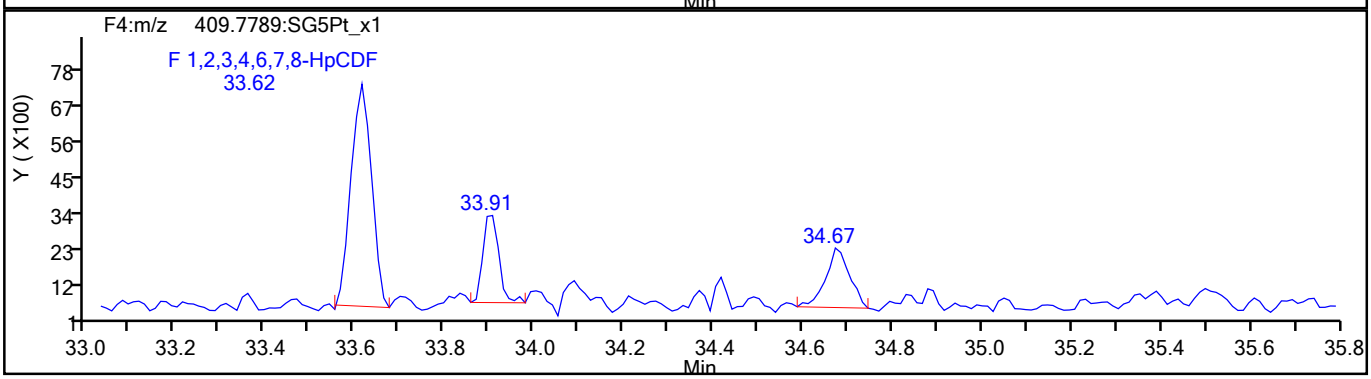

HpCDF Standards

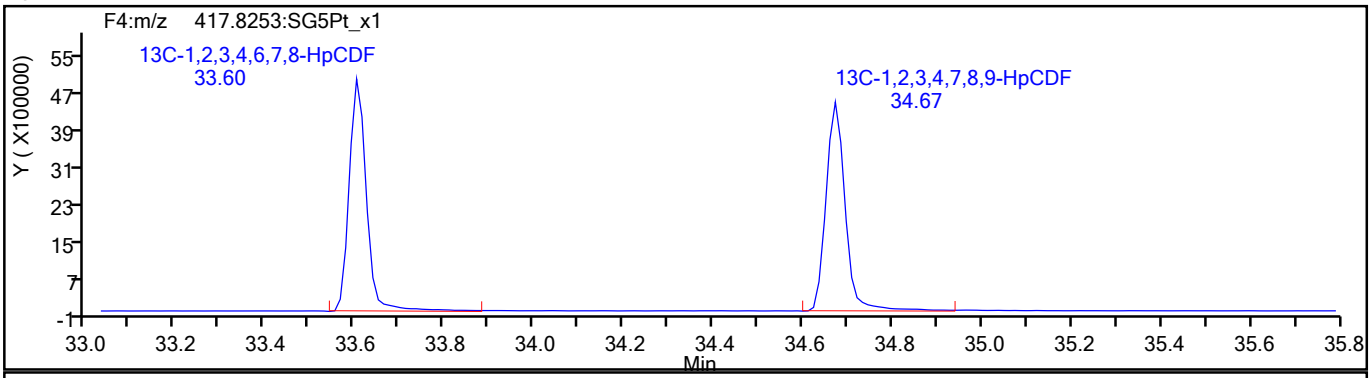

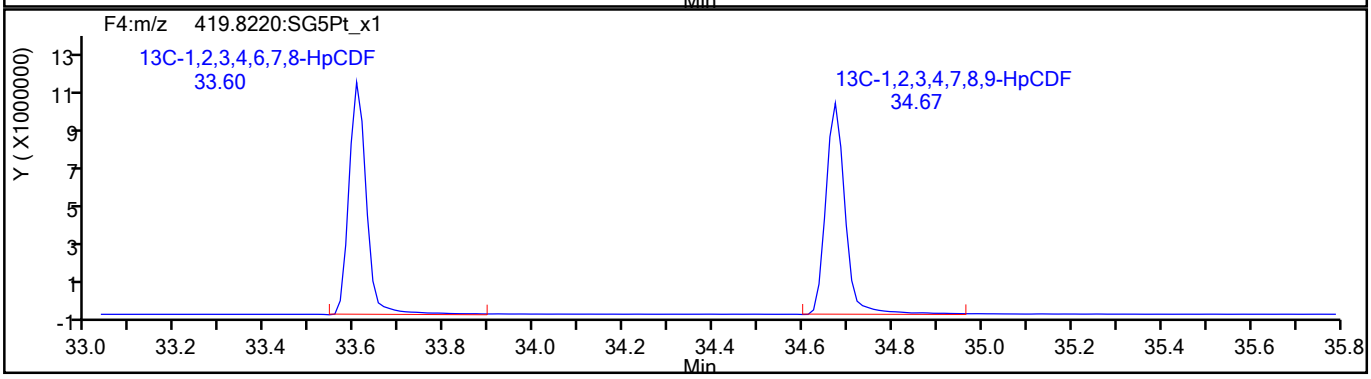

793379

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

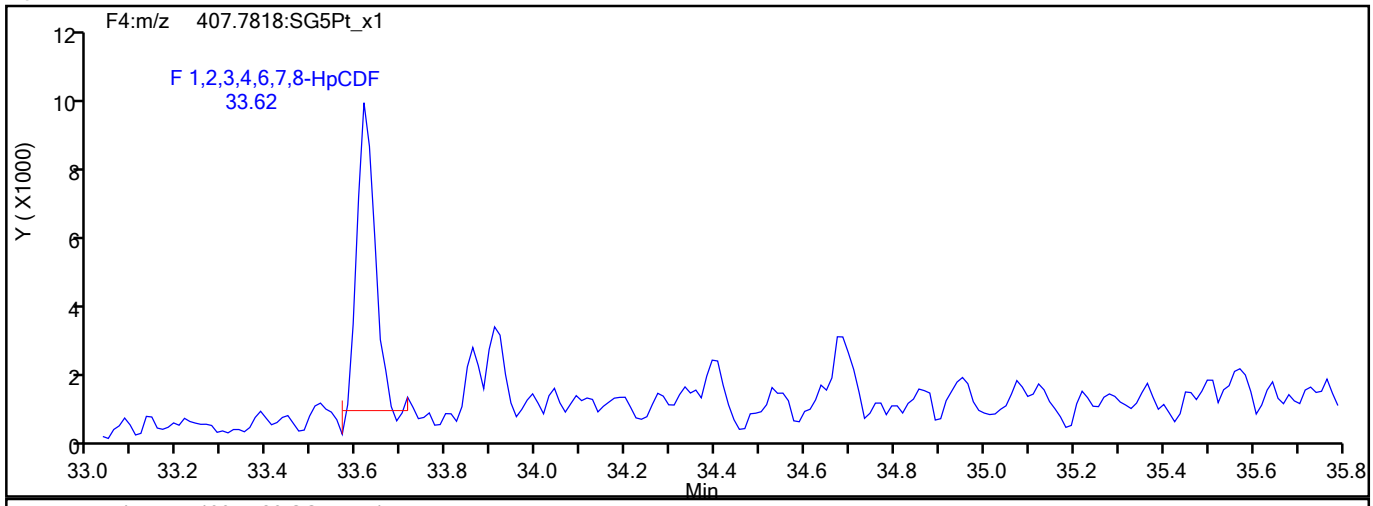

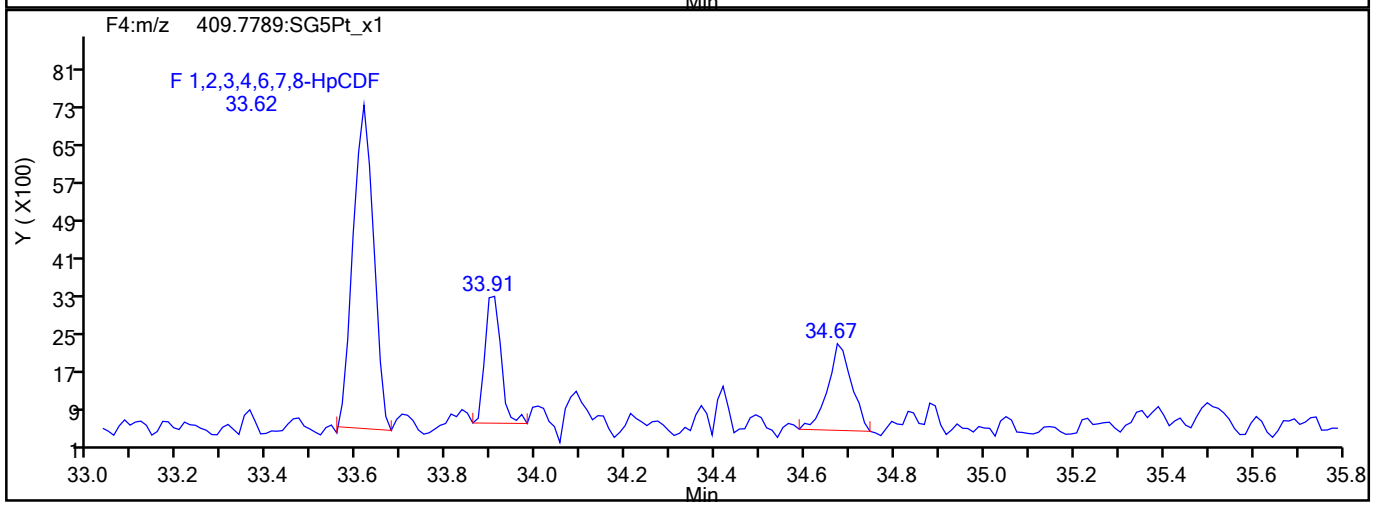

HpCDF Interference Mass

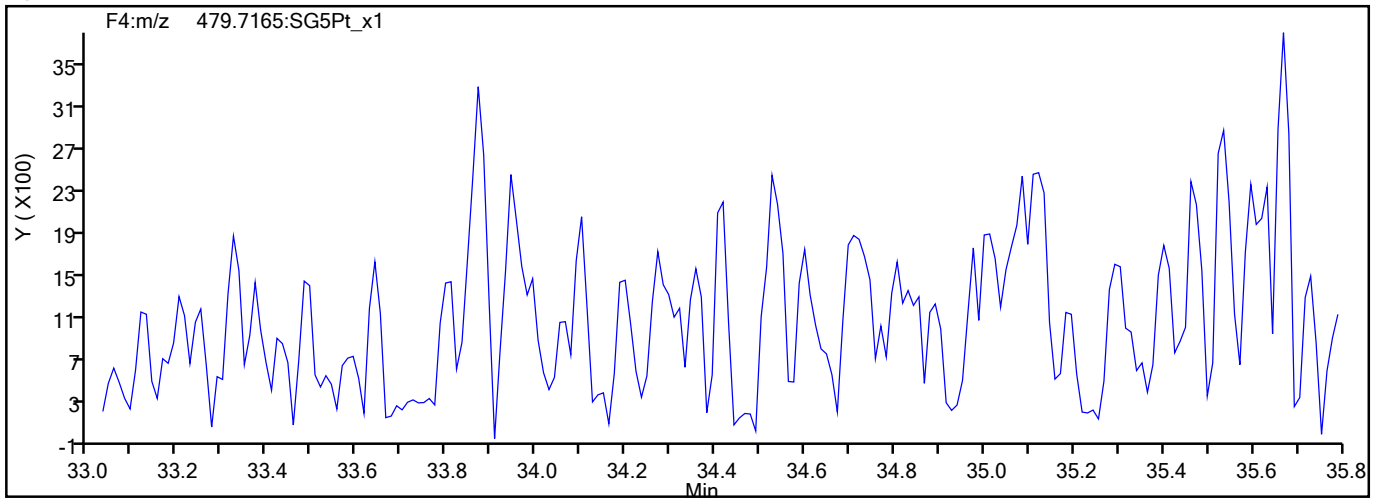

793380

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

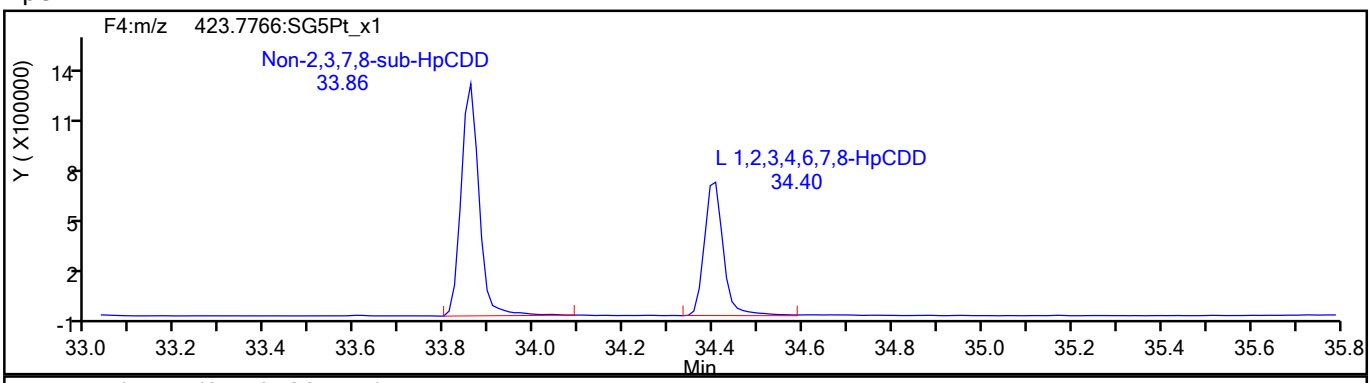

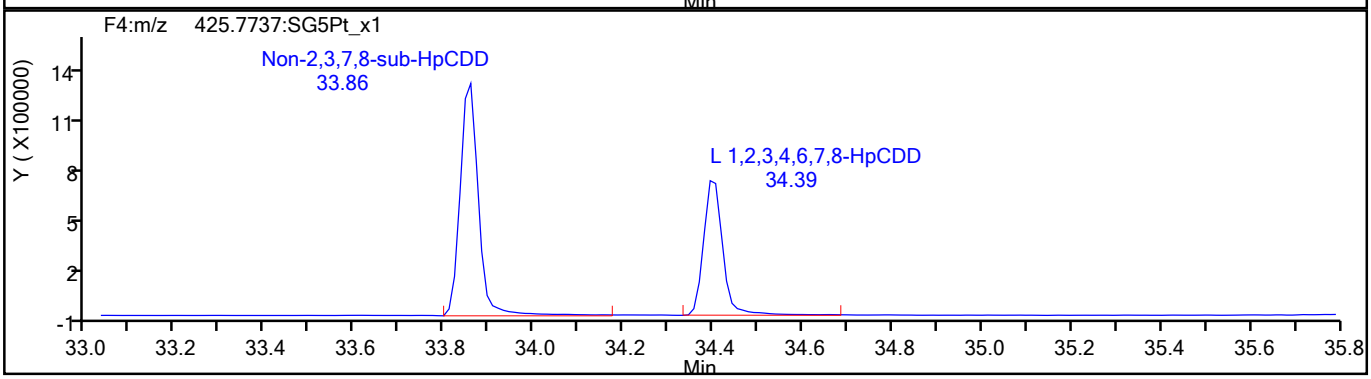

HpCDD Standards

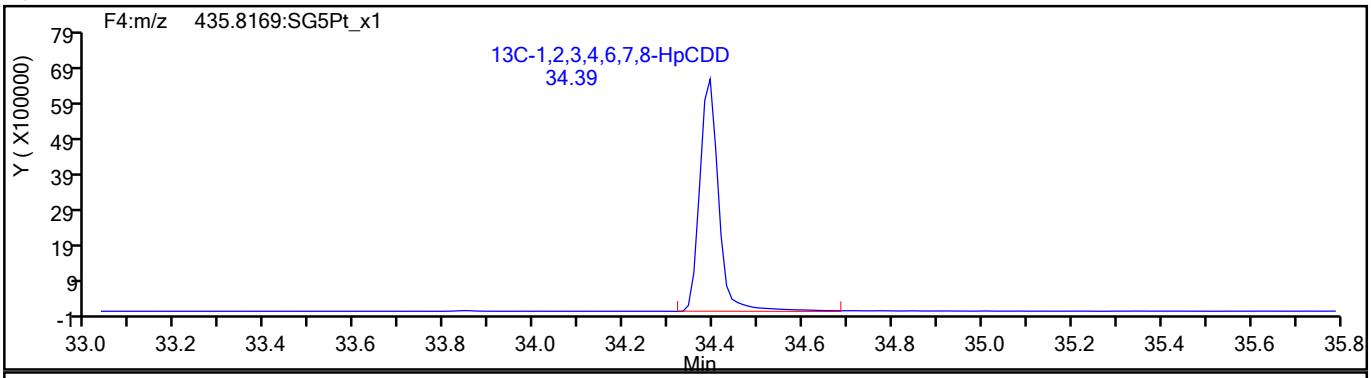

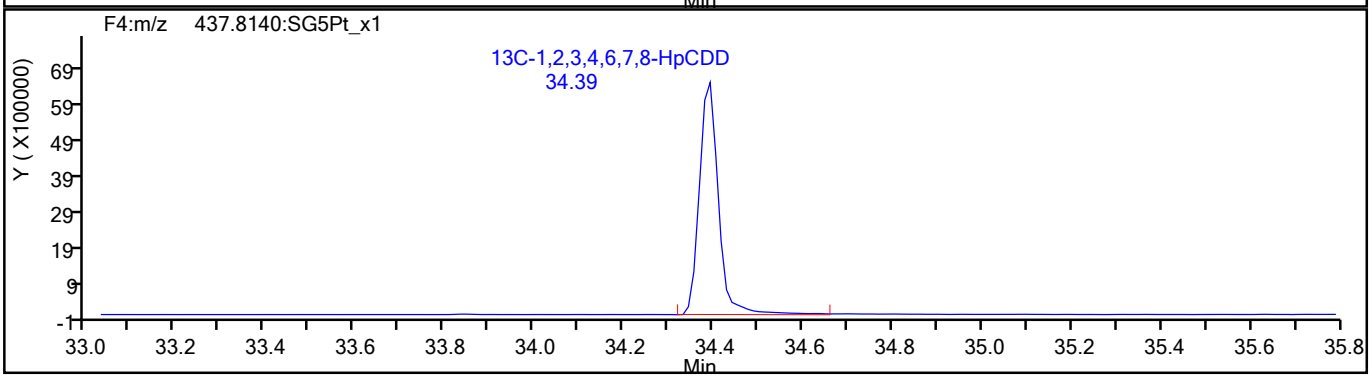

793381

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

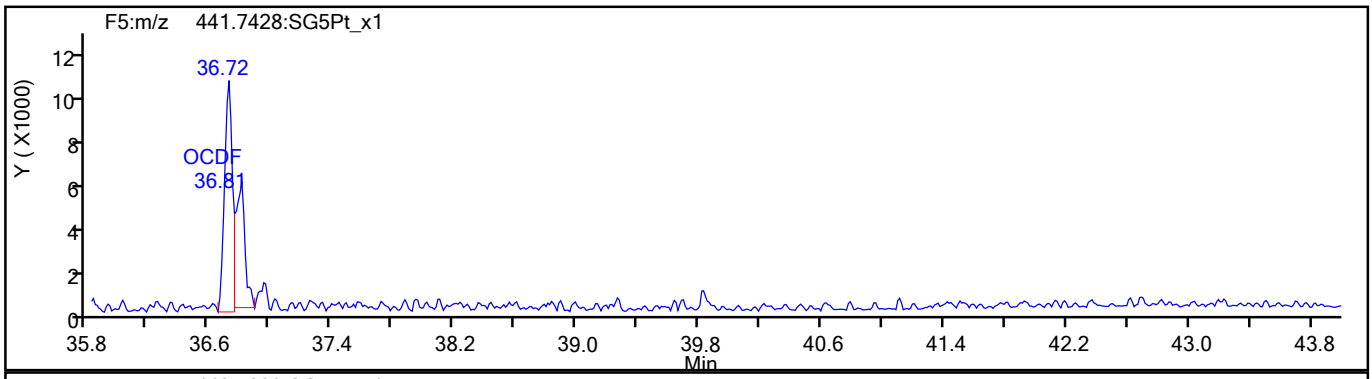

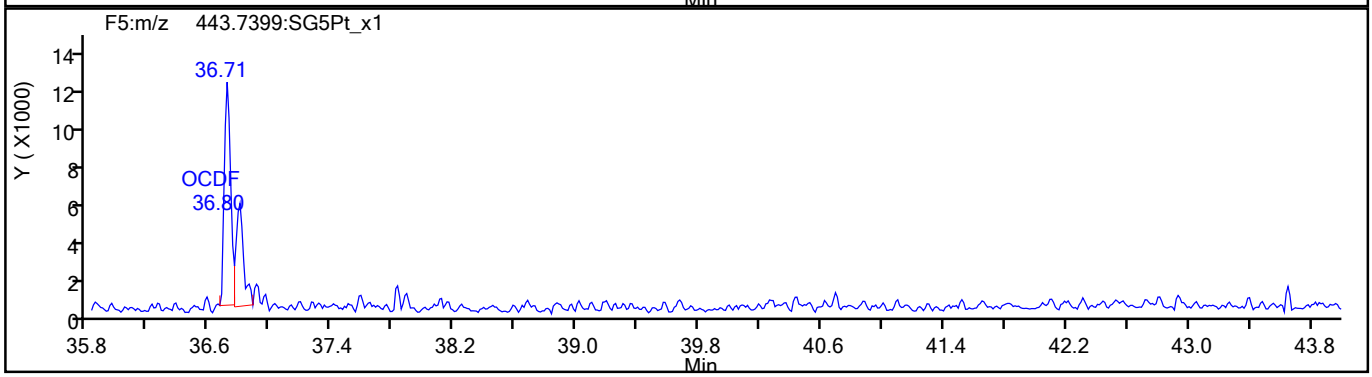

OCDF Standards

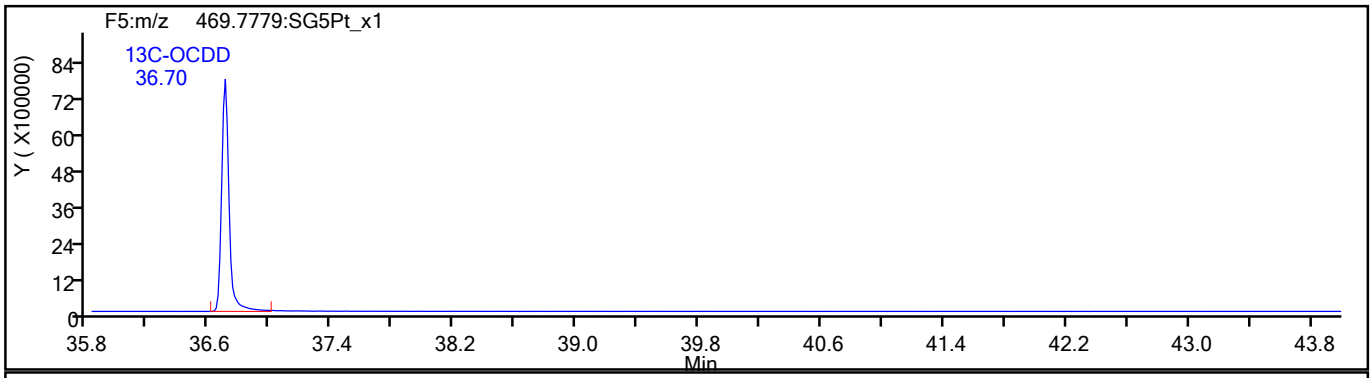

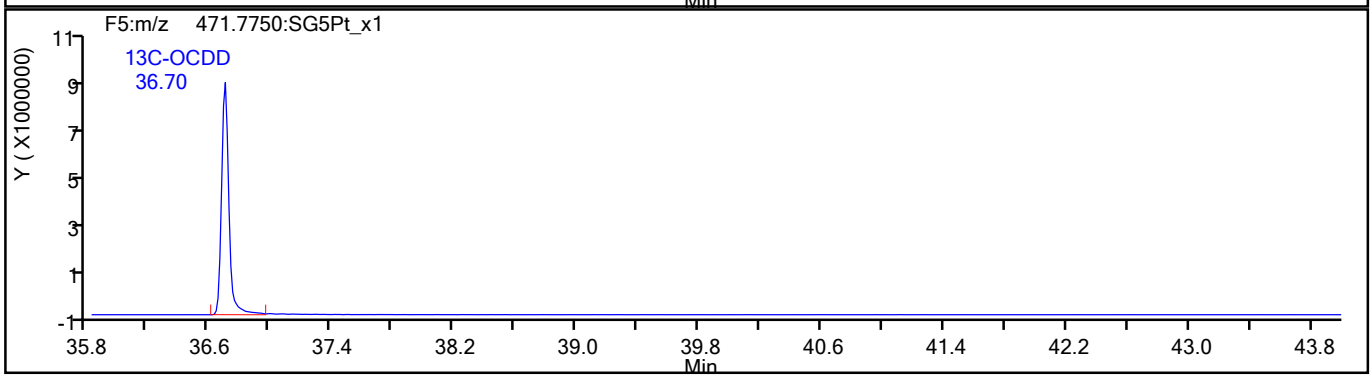

793382

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

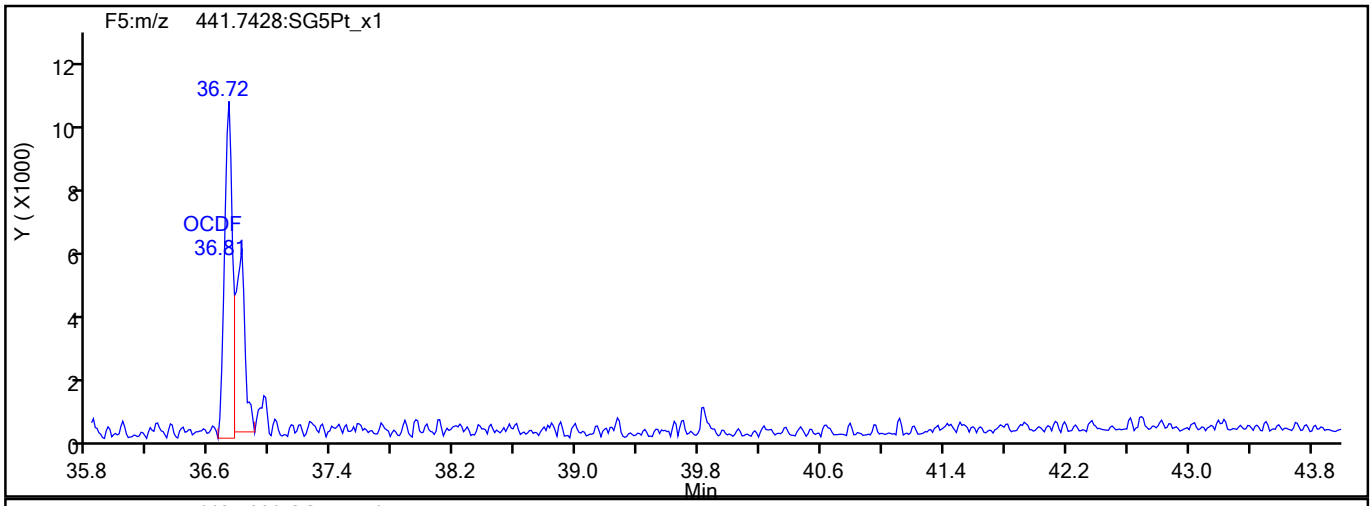

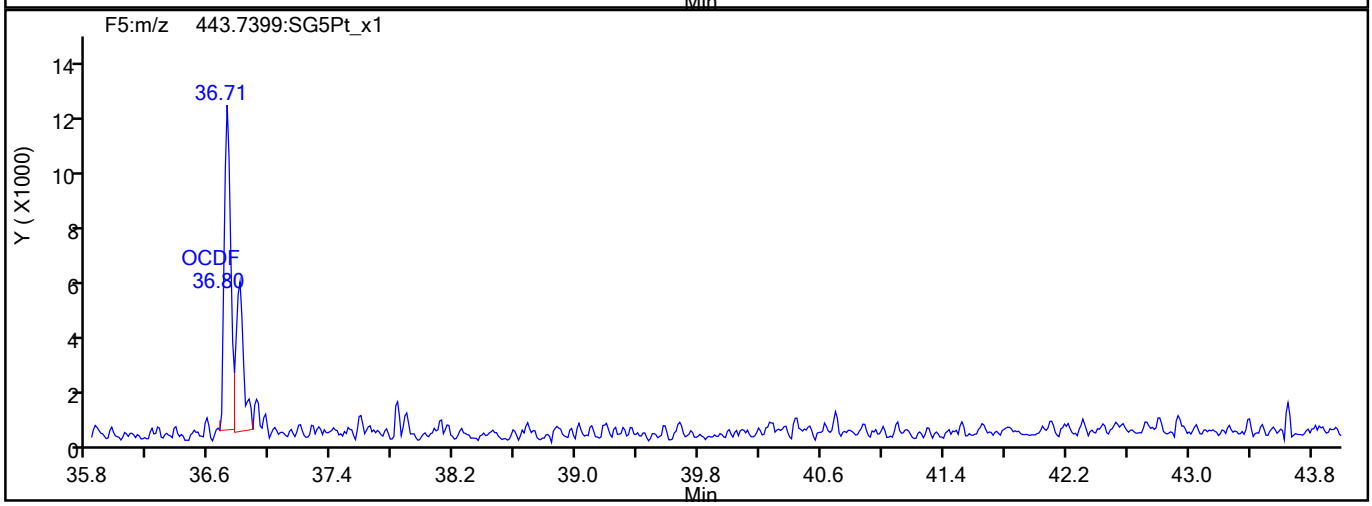

OCDF Interference Mass

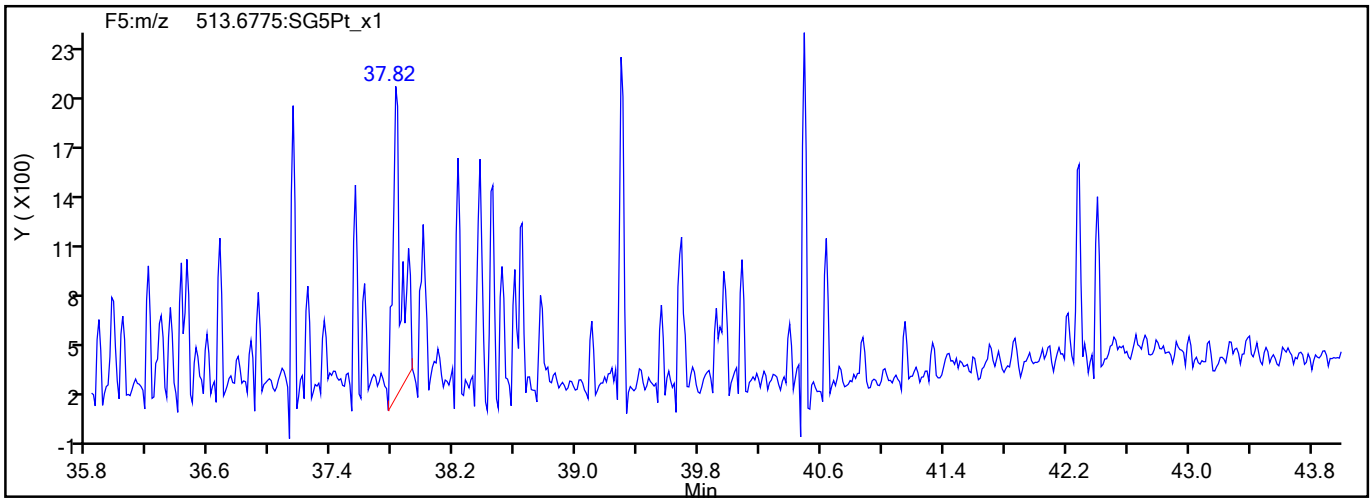

793383

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

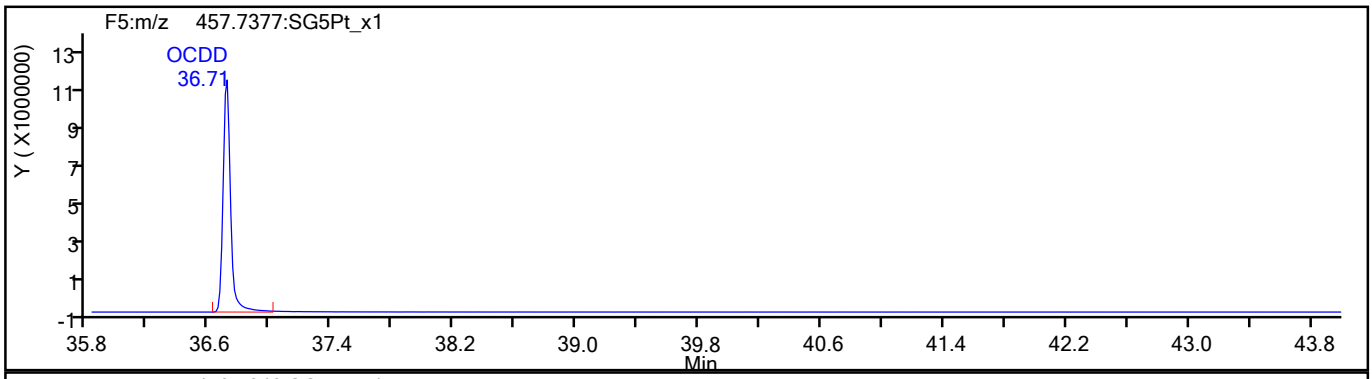

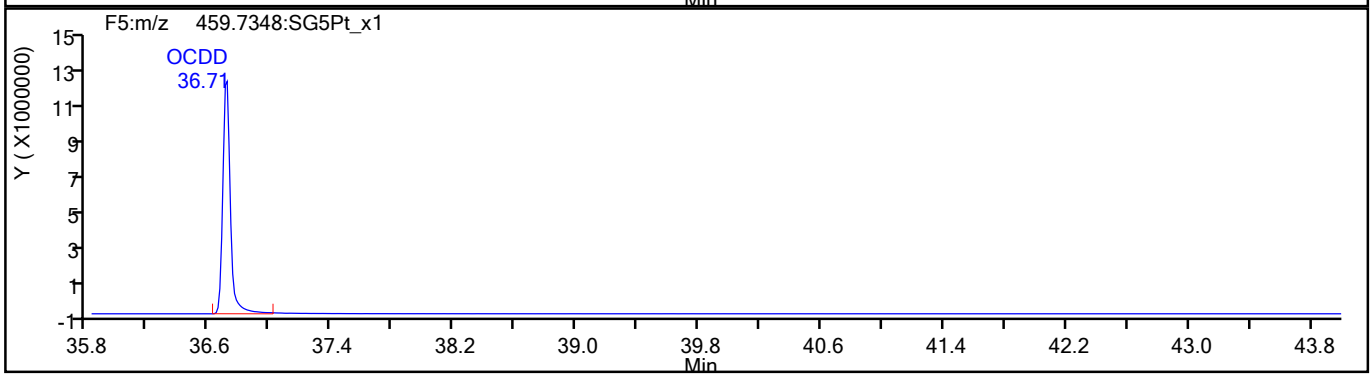

OCDD Standards

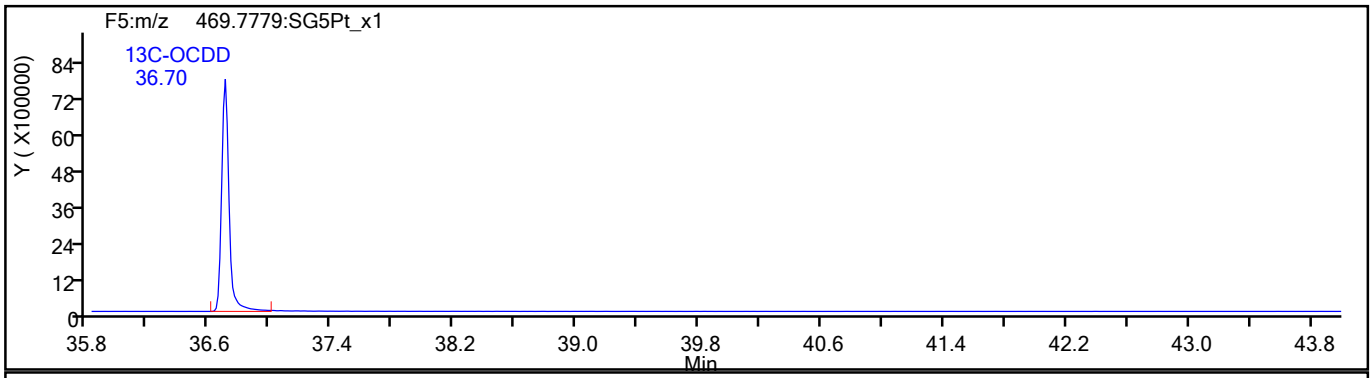

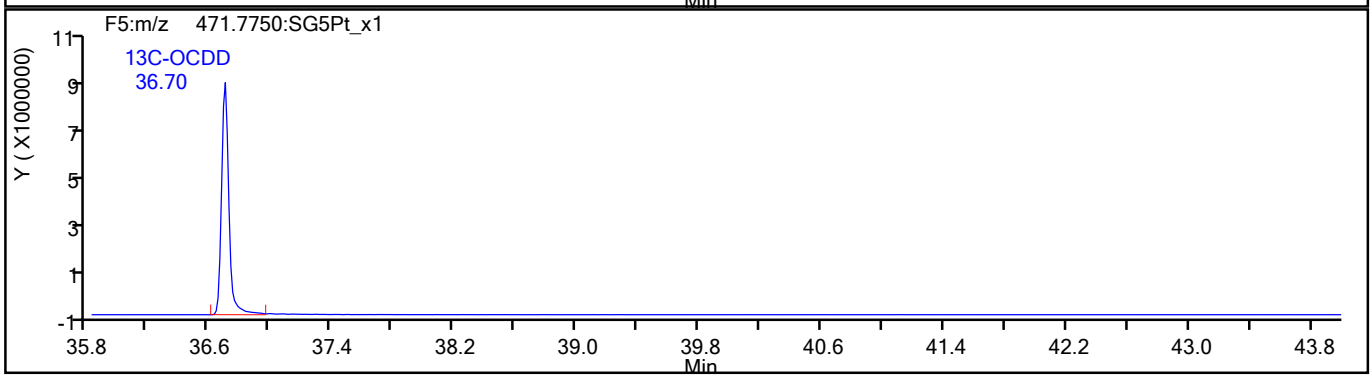

793384

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

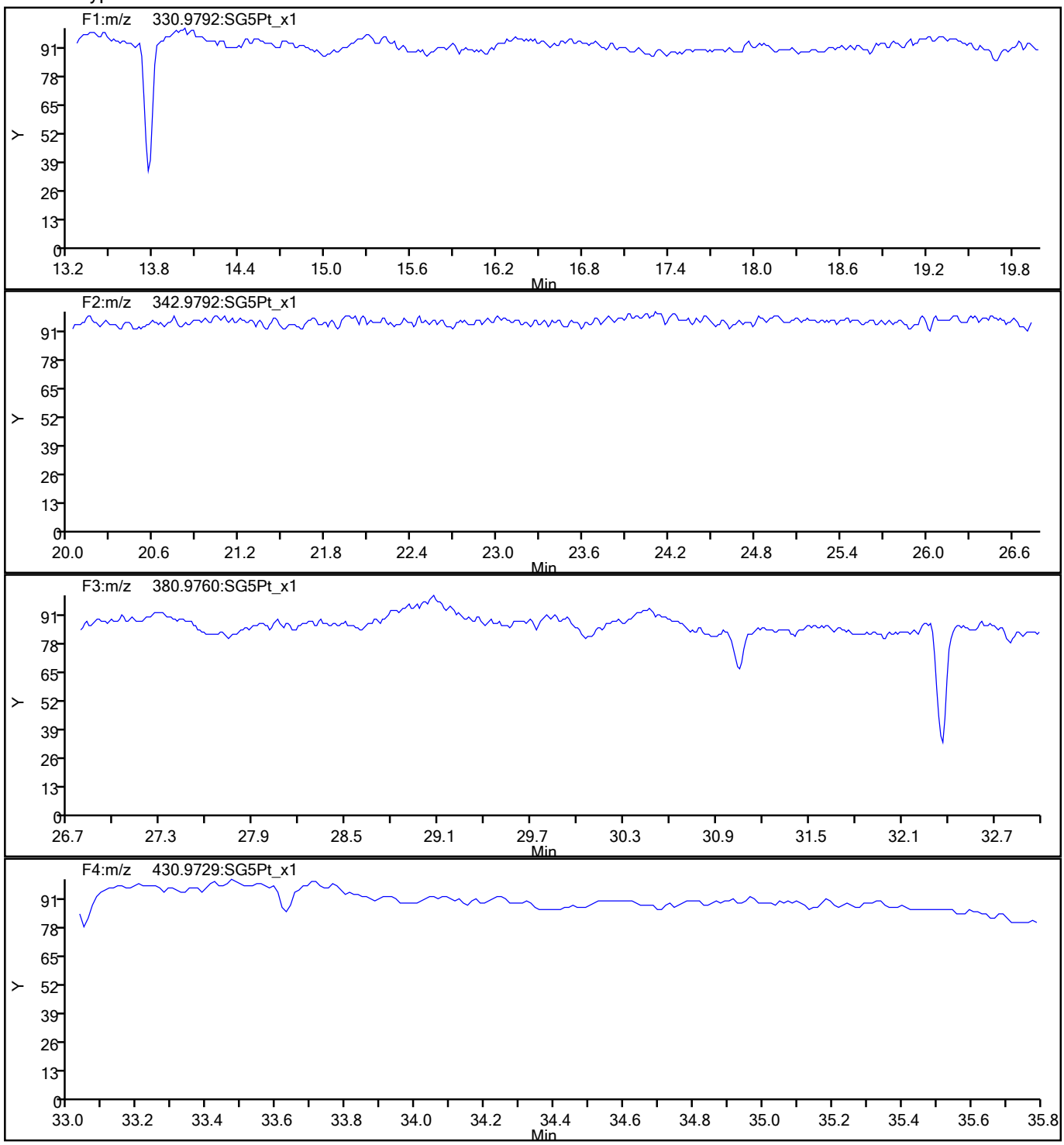

793385

Report Date: 27-Aug-2021 08:36:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_22.d		
Injection Date:	26-Aug-2021 02:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

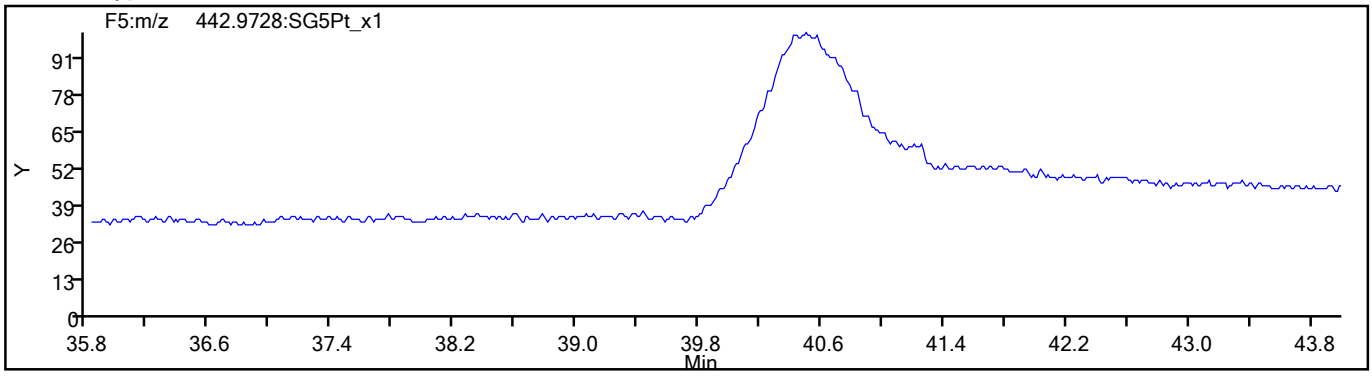

793386

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (2-4) RA
Lab Sample ID: 320-77292-2 RA
Matrix: Sediment
Lab File ID: 31AU2111D2_010.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.86(g)
Date Analyzed: 08/31/2021 18:58
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520997
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	11	B	1.5	0.77

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	55		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	67		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_010.d
Lims ID: 320-77292-A-2-A
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Sample Type: Client
Inject. Date: 31-Aug-2021 18:58:42 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-2-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:41:02

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.284	41783833	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.615	30361438	0.77	1.3327	54.5	54.5	0.3809	0.3809	54.52	
2,3,7,8-TCDF	17.629	1168584	0.89	0.9978	3.857	3.857	0.2578	0.2578		
D 13C-2,3,7,8-TCDD	16.051	19921900	0.76	0.8749	54.5	54.5	1.067	1.067	54.49	
2,3,7,8-TCDD	16.079	297758	0.77	1.0570	1.539	1.414	0.3054	0.3054		RQ
$ 37Cl4-2,3,7,8-TCDD	16.079	9748711		0.8648	27.0	27.0	0.0893	0.0893	67.45	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_010.d
Lims ID: 320-77292-A-2-A
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Sample Type: Client
Inject. Date: 31-Aug-2021 18:58:42 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-2-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:41:02

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.284	16.275	1		17867732	3789561	16276	40690	233		
333.9339	16.284	16.275	1		23916101	5251586	17496	43740	300	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.615	17.605	1	1.082	13227192	2454457	9336	23340	263		
317.9389	17.601	17.605	0	1.081	17134246	3112207	9020	22550	345	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.629	17.619	1	1.001	551630	108604	1525	3812	71		
305.8987	17.615	17.619	0	1.000	616954	117247	4204	10510	28	0.89(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.051	16.055	0	0.986	8603468	1885559	16276	40690	116		
333.9339	16.051	16.055	0	0.986	11318432	2573612	17496	43740	147	0.76(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	16.079	16.069	1	1.002	155840	38952	3105	7762	13		
	Empc Correction				129533	30227	3105	7762	10		
321.8936	16.079	16.069	1	1.002	168225	39257	2653	6632	15	0.93(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.079	16.069	1	0.987	9748711	2130125	2793	6982	763		

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 01-Sep-2021 09:57:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_010.d		
Injection Date:	31-Aug-2021 18:58:42	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	520997	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

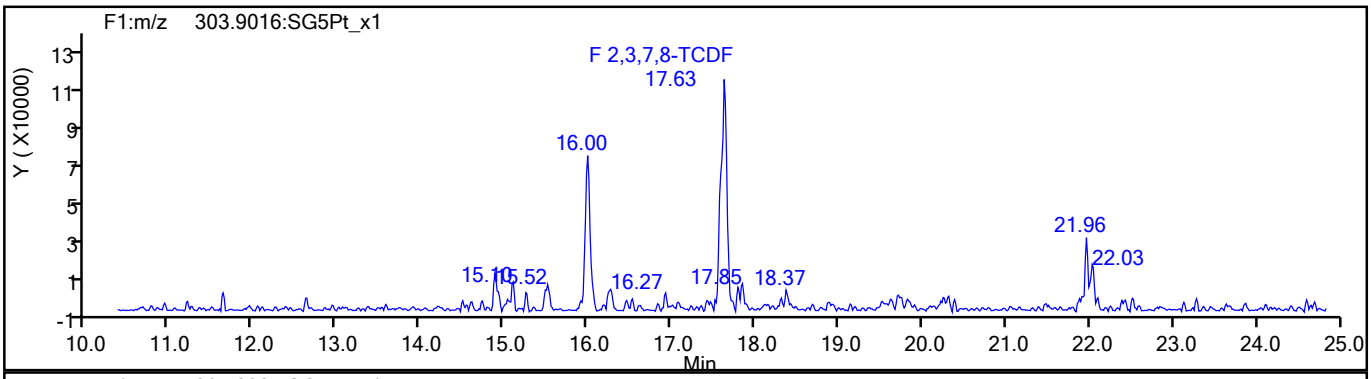

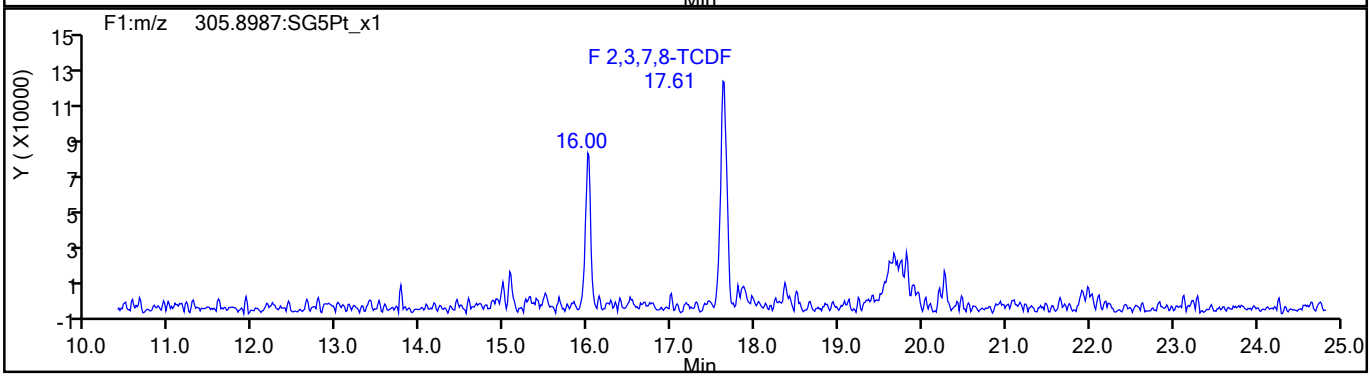

TCDF Standards

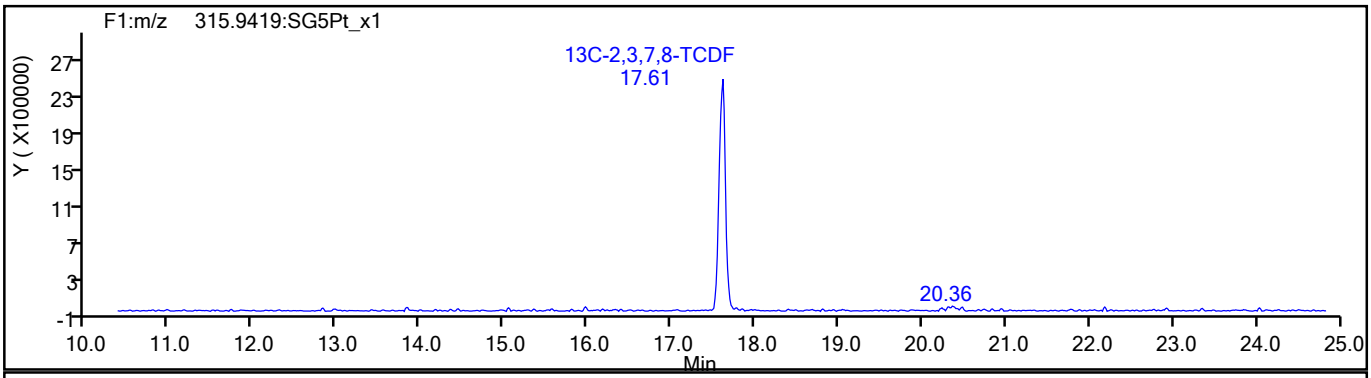

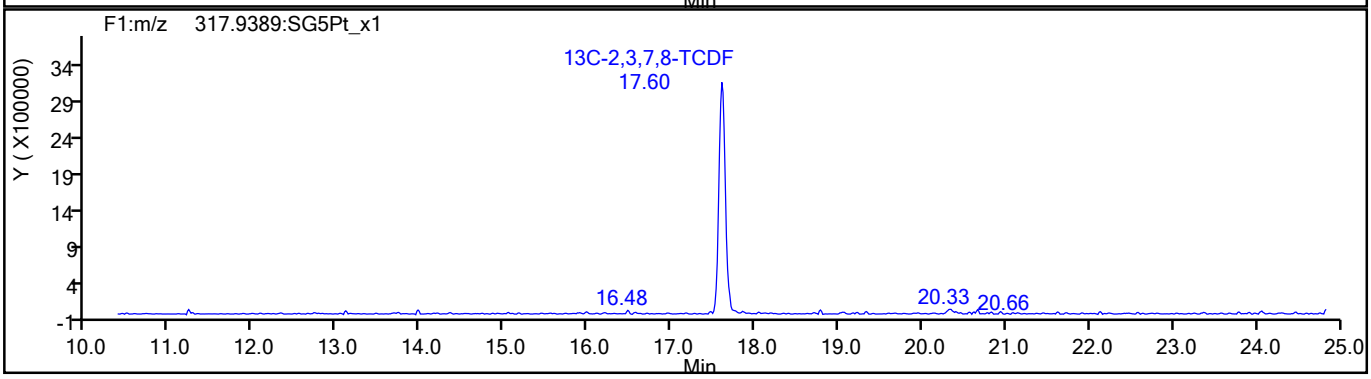

793390

Report Date: 01-Sep-2021 09:57:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_010.d		
Injection Date:	31-Aug-2021 18:58:42	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	520997	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

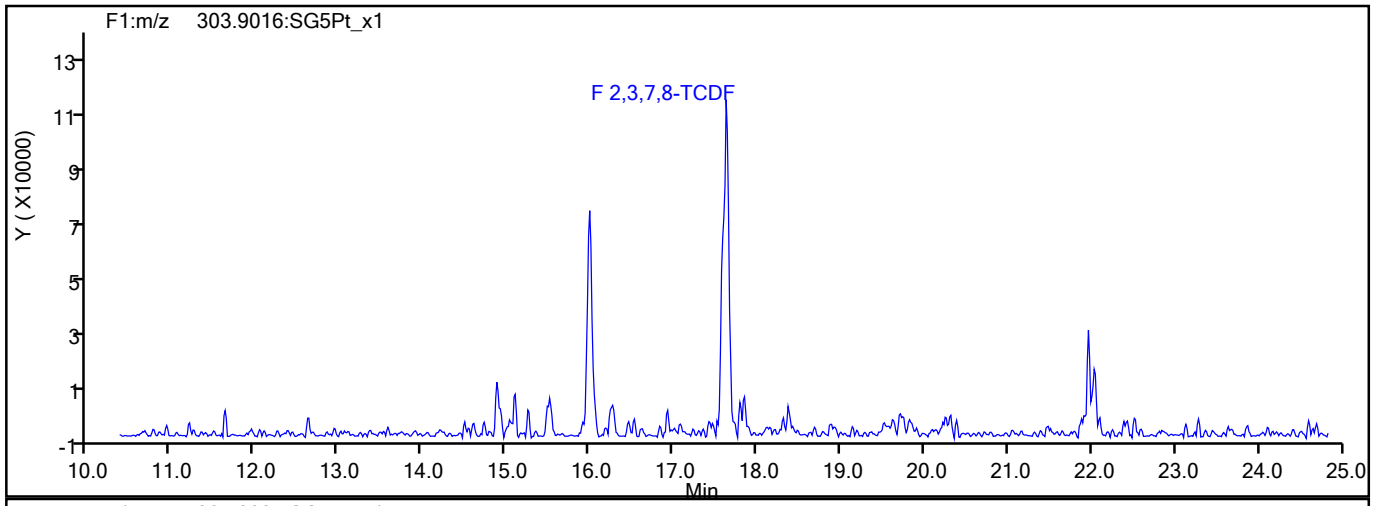

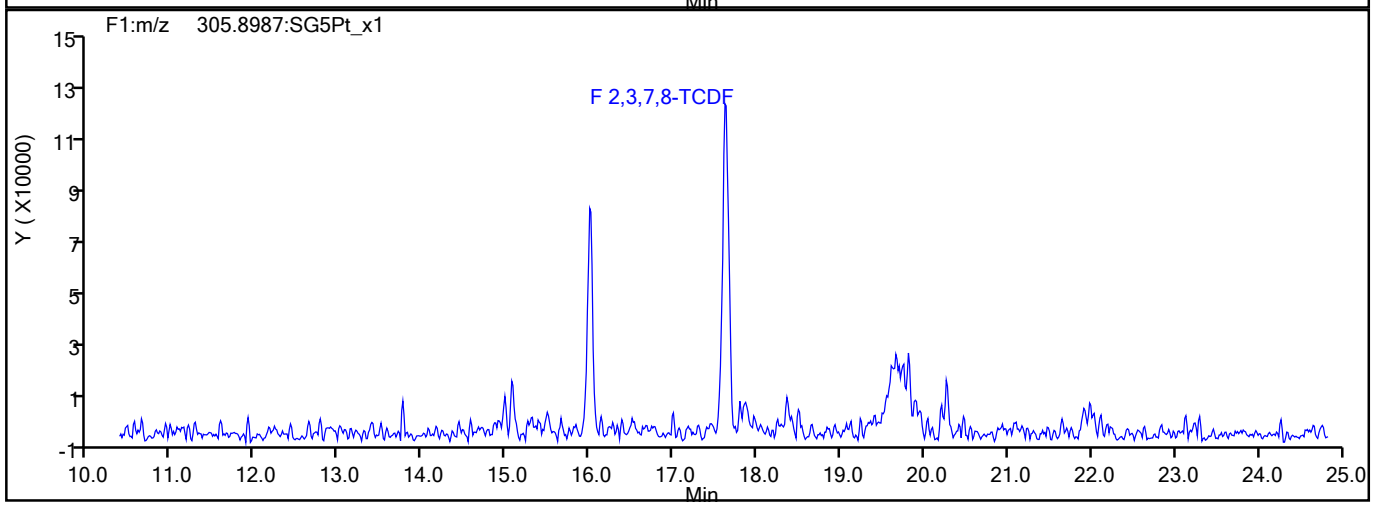

TCDF Interference Mass

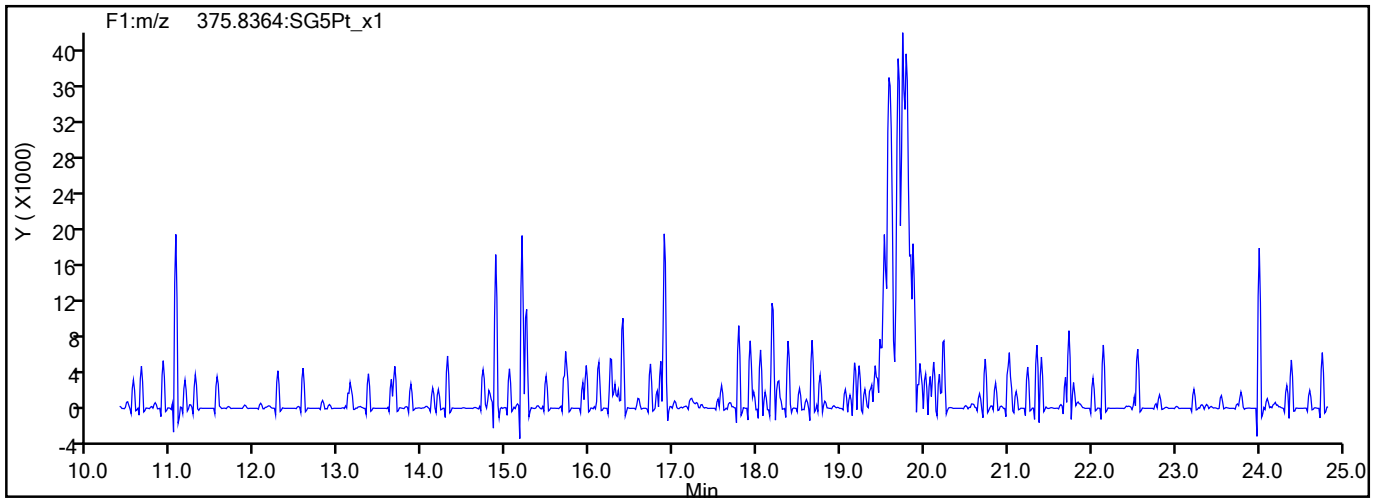

793391

Report Date: 01-Sep-2021 09:57:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_010.d		
Injection Date:	31-Aug-2021 18:58:42	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	520997	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

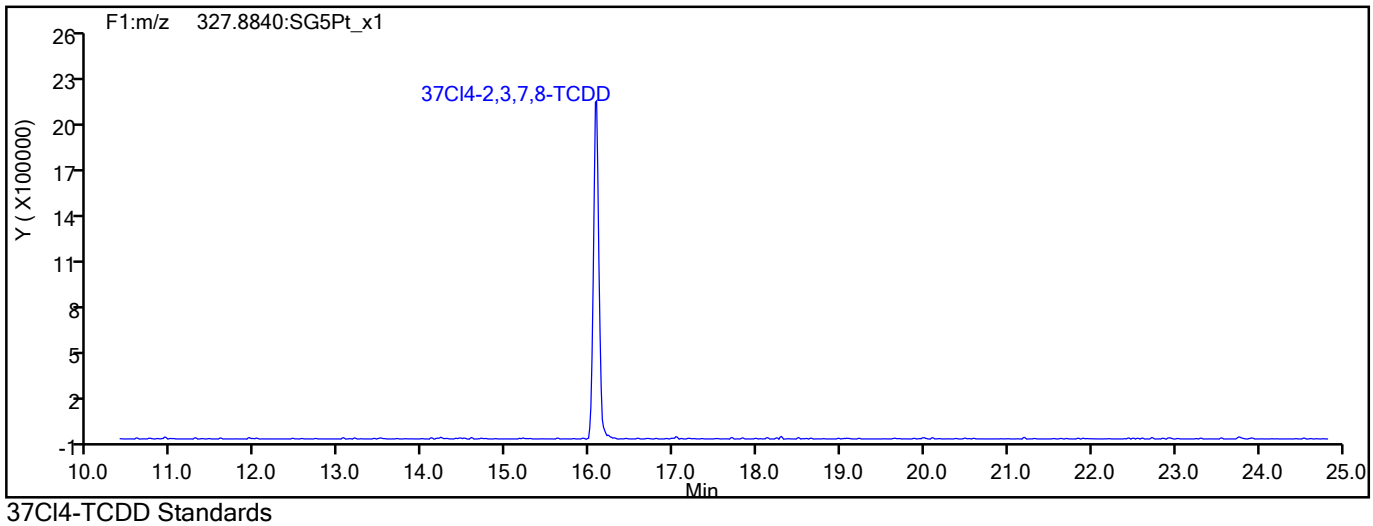

37Cl4-TCDD Standards

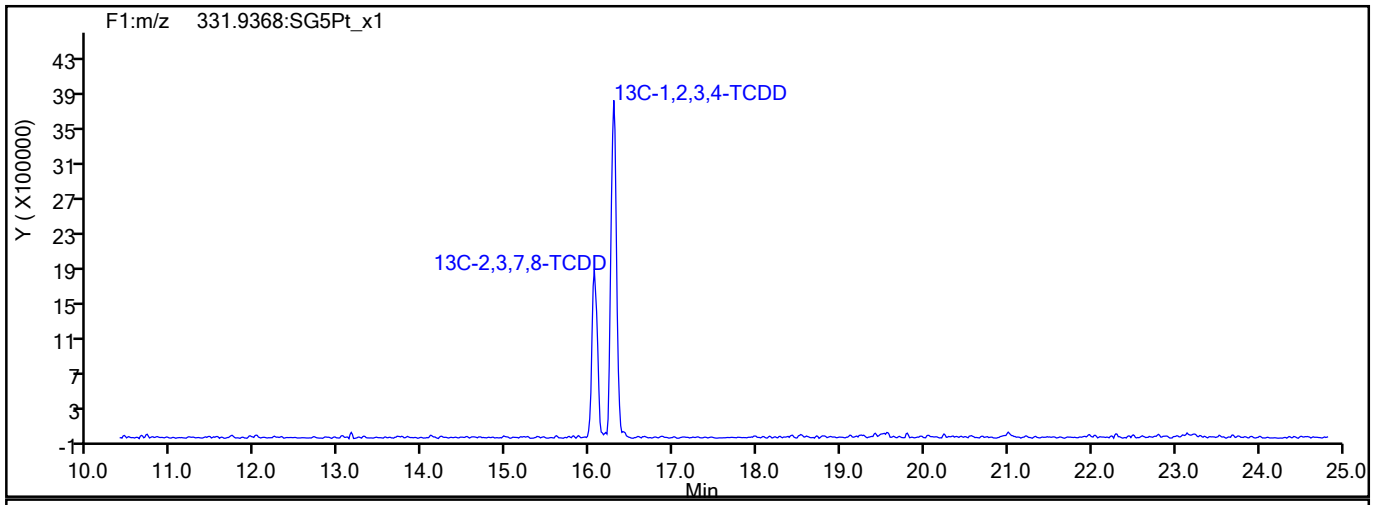

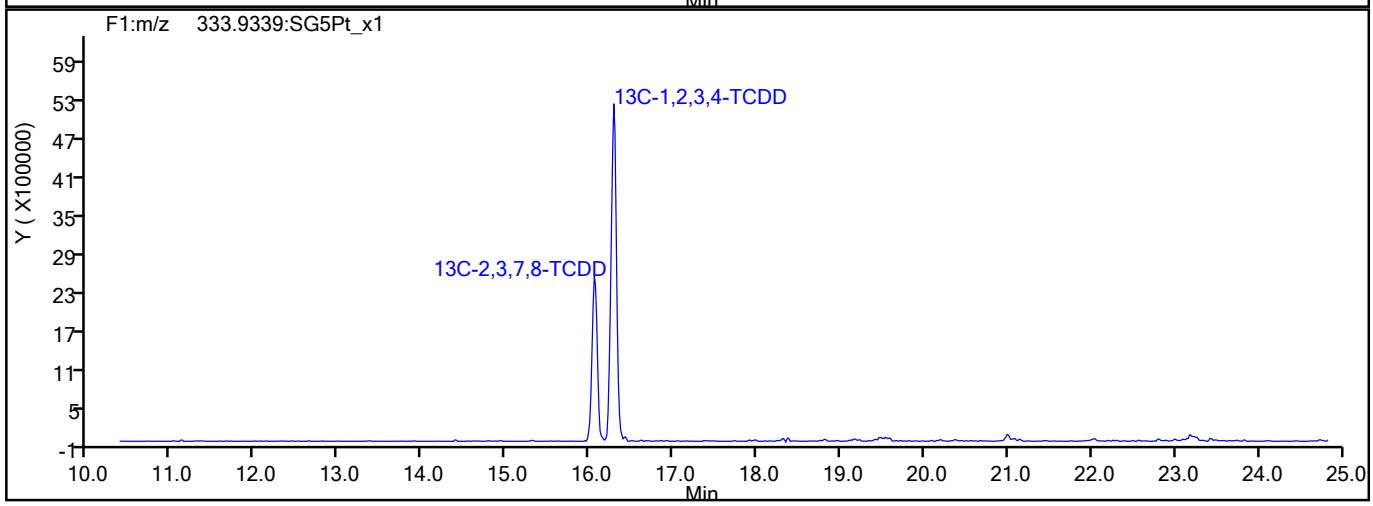

793392

Report Date: 01-Sep-2021 09:57:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_010.d		
Injection Date:	31-Aug-2021 18:58:42	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	520997	Sample Line#:	10
Column Type:	DB-225	Column Dia:	0.32 mm

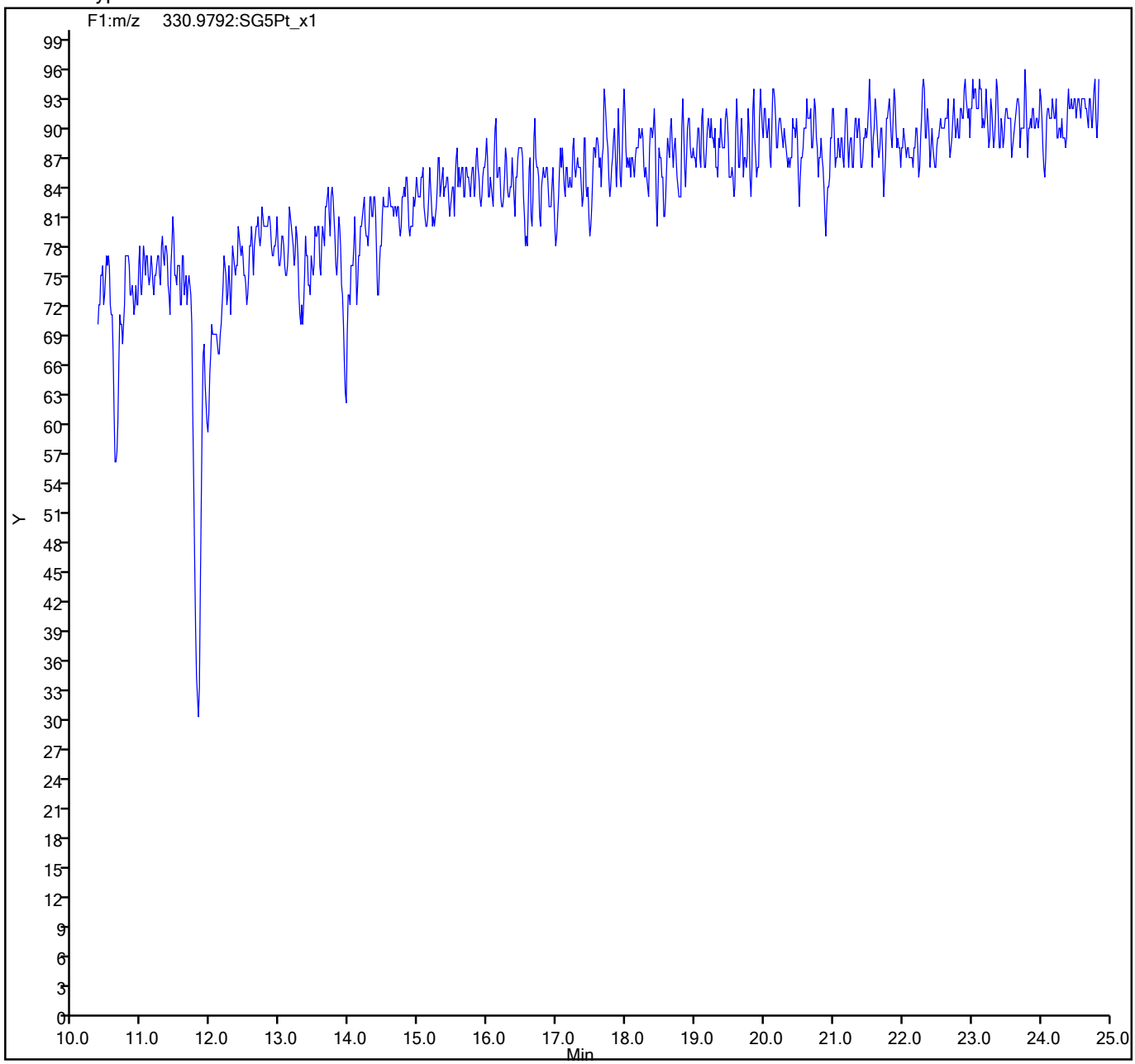

793393

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB091 (4-6)
Lab Sample ID: 320-77292-3
Matrix: Sediment
Lab File ID: 25AU2110D5_25.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:40
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.09(g)
Date Analyzed: 08/26/2021 04:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 21.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	3.2		1.3	0.053
40321-76-4	1,2,3,7,8-PeCDD	0.11	J q	6.3	0.060
57117-41-6	1,2,3,7,8-PeCDF	0.31	J	6.3	0.038
57117-31-4	2,3,4,7,8-PeCDF	0.23	J	6.3	0.039
39227-28-6	1,2,3,4,7,8-HxCDD	0.33	J	6.3	0.070
57653-85-7	1,2,3,6,7,8-HxCDD	0.28	J	6.3	0.077
19408-74-3	1,2,3,7,8,9-HxCDD	0.57	J	6.3	0.067
70648-26-9	1,2,3,4,7,8-HxCDF	0.35	J	6.3	0.032
57117-44-9	1,2,3,6,7,8-HxCDF	0.12	J	6.3	0.034
72918-21-9	1,2,3,7,8,9-HxCDF	0.080	J	6.3	0.023
60851-34-5	2,3,4,6,7,8-HxCDF	0.065	J q	6.3	0.025
35822-46-9	1,2,3,4,6,7,8-HpCDD	10	B	6.3	0.18
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.21	J q	6.3	0.038
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		6.3	0.044
3268-87-9	OCDD	340	B	13	0.29
39001-02-0	OCDF	0.54	J B	13	0.034
41903-57-5	Total TCDD	5.4	q	1.3	0.053
30402-14-3	Total TCDF	32	q B	1.3	0.065
36088-22-9	Total PeCDD	1.9	J q	6.3	0.060
30402-15-4	Total PeCDF	0.75	J q	6.3	0.039
34465-46-8	Total HxCDD	11	q	6.3	0.071
55684-94-1	Total HxCDF	0.62	J q	6.3	0.028
37871-00-4	Total HpCDD	38	B	6.3	0.18
38998-75-3	Total HpCDF	0.21	J q	6.3	0.041

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB091 (4-6)
Lab Sample ID: 320-77292-3
Matrix: Sediment
Lab File ID: 25AU2110D5_25.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:40
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.09(g)
Date Analyzed: 08/26/2021 04:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 21.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	47		25-164
89059-46-1	13C-2,3,7,8-TCDF	45		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	46		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	45		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	48		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	52		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	45		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	53		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	44		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	46		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	46		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	46		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	43		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	49		26-138
114423-97-1	13C-OCDD	49		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	69		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d
Lims ID: 320-77292-A-3-A
Client ID: 11215702-080321-BN-SJSB091 (4-6)
Sample Type: Client
Inject. Date: 26-Aug-2021 04:20:43 ALS Bottle#: 36 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-3-A 320-77292-A-3-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:15:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:45:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.583	131437956	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.084	95107080	0.78	1.6249	44.5	44.5	0.0625	0.0625	44.53	
2,3,7,8-TCDF	17.099	6686813	0.77	1.0239	6.867	6.867	0.0256	0.0256		
A Non-2,3,7,8-sub-TCDF	17.069	5633466	0.77	1.0239	5.790	5.785	0.0256	3.319		RQ
S Total TCDF					12.7	12.7	0.0256	0.0256		RQ
D 13C-2,3,7,8-TCDD	17.764	55046411	0.81	0.8993	46.6	46.6	0.1003	0.1003	46.57	
2,3,7,8-TCDD	17.779	865948	0.83	1.2541	1.254	1.254	0.0209	0.0209		
$ 37Cl4-2,3,7,8-TCDD	17.794	40329692		1.1071	27.7	27.7	0.0462	0.0462	69.28	
A Non-2,3,7,8-sub-TCDD	17.530	613855	0.77	1.2541	0.9091	0.8892	0.0209	0.3984		RQMa
S Total TCDD					2.163	2.144	0.0209	0.0209		RQ
D 13C-1,2,3,7,8-PeCDF	21.993	71105169	1.58	1.2101	44.7	44.7	0.0649	0.0649	44.71	
1,2,3,7,8-PeCDF	22.034	93477	1.52	1.0611	0.1239	0.1239	0.0150	0.0150		M
D 13C-2,3,4,7,8-PeCDF	23.302	78266993	1.59	1.2395	48.0	48.0	0.0634	0.0634	48.04	
2,3,4,7,8-PeCDF	23.329	73273	1.33	1.0184	0.0919	0.0919	0.0155	0.0155		
A F1 PeCDFs	19.851						0.0180	0.0180		
A Non-2,3,7,8-sub-PeCDF	23.067	62768	1.55	1.0398	0.0857	0.0808	0.0152	0.0498		RQ
S Total PeCDF					0.3015	0.2966	0.0152	0.0152		RQ
D 13C-1,2,3,7,8-PeCDD	24.011	46248821	1.60	0.7612	46.2	46.2	0.0368	0.0368	46.22	
1,2,3,7,8-PeCDD	24.052	21984	1.55	1.0484	0.0575	0.0453	0.0237	0.0237		RQ
A Non-2,3,7,8-sub-PeCDD	23.696	343900	1.55	1.0484	0.7149	0.7092	0.0237	0.4637		RQ
S Total PeCDD					0.7724	0.7546	0.0237	0.0237		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.146	66158605	0.52	1.0837	52.7	52.7	0.1051	0.1051	52.73	
1,2,3,4,7,8-HxCDF	30.186	100618	1.40	1.0851	0.1402	0.1402	0.0128	0.0128		
D 13C-1,2,3,6,7,8-HxCDF	30.359	58068281	0.52	1.1279	44.5	44.5	0.1009	0.1009	44.47	
1,2,3,6,7,8-HxCDF	30.385	31811	1.34	1.1260	0.0487	0.0487	0.0132	0.0132		M
D 13C-2,3,4,6,7,8-HxCDF	31.277	56253073	0.52	1.0637	45.7	45.7	0.1070	0.1070	45.68	
2,3,4,6,7,8-HxCDF	31.291	16826	1.24	1.1675	0.0280	0.0256	0.009728	0.009728		RQ
D 13C-1,2,3,7,8,9-HxCDF	32.116	51773826	0.52	0.9676	46.2	46.2	0.1177	0.1177	46.22	
1,2,3,7,8,9-HxCDF	32.143	19097	1.09	1.1664	0.0316	0.0316	0.008899	0.008899		M
A Non-2,3,7,8-sub-HxCDF	30.331						0.0109	0.0109		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.2485	0.2461	0.0112	0.0112		RQ
* 13C-1,2,3,7,8,9-HxCDD	31.930	115773253	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.477	44108027	1.24	0.7334	51.9	51.9	0.1465	0.1465	51.95	
1,2,3,4,7,8-HxCDD	31.490	60927	1.33	1.0640	0.1298	0.1298	0.0277	0.0277		M
D 13C-1,2,3,6,7,8-HxCDD	31.583	45635994	1.24	0.8802	44.8	44.8	0.1220	0.1220	44.78	
1,2,3,6,7,8-HxCDD	31.597	50720	1.06	1.0001	0.1111	0.1111	0.0303	0.0303		Ma
1,2,3,7,8,9-HxCDD	31.943	114067	1.07	1.1325	0.2245	0.2245	0.0264	0.0264		M
A Non-2,3,7,8-sub-HxCDD	30.519	1788665	1.24	1.0655	3.755	3.741	0.0280	2.820		RQ
S Total HxCDD					4.221	4.206	0.0281	0.0281		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.591	38485847	0.44	0.7730	43.0	43.0	0.4075	0.4075	43.00	
1,2,3,4,6,7,8-HpCDF	33.603	45708	1.04	1.4413	0.0956	0.0824	0.0151	0.0151		RQ
D 13C-1,2,3,4,7,8,9-HpCDF	34.660	39504778	0.43	0.7008	48.7	48.7	0.4495	0.4495	48.69	
1,2,3,4,7,8,9-HpCDF	34.673						0.0172	0.0172		
A Non-2,3,7,8-sub-HpCDF	34.138						0.0161	0.0161		
S Total HpCDF					0.0956	0.0824	0.0162	0.0162		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.381	34613088	1.02	0.6472	46.2	46.2	0.1487	0.1487	46.19	
1,2,3,4,6,7,8-HpCDD	34.393	1547215	1.06	1.0943	4.085	4.085	0.0723	0.0723		
A Non-2,3,7,8-sub-HpCDD	34.223	4179066	1.03	1.0943	11.0	11.0	0.0723	11.0		
S Total HpCDD					15.1	15.1	0.0723	0.0723		
D 13C-OCDD	36.689	50540991	0.87	0.4472	97.6	97.6	0.0928	0.0928	48.81	
OCDF	36.785	77532	0.87	1.4382	0.2133	0.2133	0.0135	0.0135		M
OCDD	36.701	38067646	0.89	1.1070	136.1	136.1	0.1159	0.1159		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d
Lims ID: 320-77292-A-3-A
Client ID: 11215702-080321-BN-SJSB091 (4-6)
Sample Type: Client
Inject. Date: 26-Aug-2021 04:20:43 ALS Bottle#: 36 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-3-A 320-77292-A-3-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:15:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:45:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.583	17.598	-1		58459508	14927920	4425	11062	3374		
333.9339	17.583	17.598	-1		72978448	18672823	7699	19247	2425	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.084	17.084	0	0.972	41583892	10734099	8512	21280	1261		
317.9389	17.084	17.084	0	0.972	53523188	13872285	5129	12822	2705	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.099	17.099	0	1.001	2905305	725040	1201	3002	604		
305.8987	17.099	17.099	0	1.001	3781508	931887	1375	3437	678	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	15.451	17.069	-97	0.904	24784	5463	1201	3002	5		
	Empc Correction				20192	5310	1201	3002	4		
305.8987	15.451	17.069	-97	0.904	26224	6897	1375	3437	5	0.95(0.65-0.89)	
303.9016	15.708	17.069	-81	0.919	92811	22641	1201	3002	19		
305.8987	15.708	17.069	-81	0.919	117714	32001	1375	3437	23	0.79(0.65-0.89)	
303.9016	15.980	17.069	-65	0.935	133041	29841	1201	3002	25		
305.8987	15.980	17.069	-65	0.935	171090	38328	1375	3437	28	0.78(0.65-0.89)	
303.9016	16.207	17.069	-52	0.949	115628	29560	1201	3002	25		
305.8987	16.207	17.069	-52	0.949	142069	37253	1375	3437	27	0.81(0.65-0.89)	
303.9016	16.449	17.069	-37	0.963	136354	33378	1201	3002	28		
305.8987	16.449	17.069	-37	0.963	166001	40199	1375	3437	29	0.82(0.65-0.89)	
303.9016	16.721	17.069	-21	0.979	1428446	387369	1201	3002	323		
305.8987	16.721	17.069	-21	0.979	1803673	489865	1375	3437	356	0.79(0.65-0.89)	
303.9016	16.933	17.069	-8	0.991	57294	14942	1201	3002	12		
305.8987	16.933	17.069	-8	0.991	76366	18429	1375	3437	13	0.75(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	17.522	17.069	27	1.026	235100	57567	1201	3002	48		
305.8987	17.522	17.069	27	1.026	303015	73292	1375	3437	53	0.78(0.65-0.89)	
303.9016	17.749	17.069	41	1.039	43979	8830	1201	3002	7		
305.8987	17.749	17.069	41	1.039	67259	15900	1375	3437	12	0.65(0.65-0.89)	
303.9016	18.883	17.069	109	1.105	208742	45630	1201	3002	38		
305.8987	18.883	17.069	109	1.105	288468	64013	1375	3437	47	0.72(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.764	17.779	-1	1.010	24661938	6042724	4425	11062	1366		
333.9339	17.764	17.779	-1	1.010	30384473	7652452	7699	19247	994	0.81(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.779	17.794	-1	1.001	393687	94390	729	1822	129		
321.8936	17.794	17.794	0	1.002	472261	112331	705	1762	159	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.794	17.809	-1	1.012	40329692	9929862	6872	17180	1445		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	15.602	17.530	-115	0.878	22679	6307	729	1822	9		
	Empc Correction				15763	4841	729	1822	7		
321.8936	15.617	17.530	-115	0.879	20472	6288	705	1762	9	1.11(0.65-0.89)	
319.8965	15.904	17.530	-97	0.895	17222	4102	729	1822	6		
321.8936	15.904	17.530	-97	0.895	22863	5538	705	1762	8	0.75(0.65-0.89)	
319.8965	16.116	17.530	-85	0.907	21170	6231	729	1822	9		
321.8936	16.116	17.530	-85	0.907	31116	8743	705	1762	12	0.68(0.65-0.89)	
319.8965	16.676	17.530	-51	0.939	124705	35771	729	1822	49		
321.8936	16.676	17.530	-51	0.939	150358	37872	705	1762	54	0.83(0.65-0.89)	
319.8965	17.552	17.530	1	0.988	25117	6194	729	1822	8		
321.8936	17.552	17.530	1	0.988	39429	9430	705	1762	13	0.64(0.65-0.89)	M
	Empc Correction				32619	8044	705	1762	11		
319.8965	17.688	17.530	10	0.996	18389	4980	729	1822	7		M
321.8936	17.673	17.530	9	0.995	22066	5474	705	1762	8	0.83(0.65-0.89)	
319.8965	18.142	17.530	37	1.021	50066	12593	729	1822	17		
321.8936	18.142	17.530	37	1.021	61929	13622	705	1762	19	0.81(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	21.993	22.020	-2	1.251	43523097	8250012	6230	15575	1324		
353.8970	21.993	22.020	-2	1.251	27582072	5175527	4328	10820	1196	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.034	22.047	-1	1.002	56409	8771	295	737	30		
341.8567	21.993	22.047	-3	1.000	37068	6137	560	1400	11	1.52(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.302	23.343	-2	1.325	48003573	8338300	6230	15575	1338		
353.8970	23.302	23.343	-2	1.325	30263420	5221226	4328	10820	1206	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.329	23.370	-2	1.001	41814	7035	295	737	24		
341.8567	23.316	23.370	-3	1.001	31459	6510	560	1400	12	1.33(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						264	660			
341.8567	19.851						746	1865			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.697	23.067	-142	0.941	27291	5075	295	737	17		
	Empc Correction				23490	4857	295	737	16		
341.8567	20.697	23.067	-142	0.941	15155	3134	560	1400	6	1.80(1.32-1.78)	
339.8597	22.538	23.067	-32	1.025	14288	2656	295	737	9		
341.8567	22.511	23.067	-33	1.024	9835	2272	560	1400	4	1.45(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.011	24.052	-2	1.366	28436492	4763054	2284	5710	2085		
369.8919	24.011	24.052	-2	1.366	17812329	2975635	1481	3702	2009	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											RQ
355.8546	24.052	24.079	-2	1.002	13363	2610	508	1270	5		
357.8516	24.024	24.079	-3	1.001	14515	2307	261	652	9	0.92(1.32-1.78)	
	Empc Correction				8621	1683	261	652	6		
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.625	23.696	-124	0.901	136679	26883	508	1270	53		
357.8516	21.625	23.696	-124	0.901	88143	16092	261	652	62	1.55(1.32-1.78)	
355.8546	22.006	23.696	-101	0.917	14033	2141	508	1270	4		
357.8516	22.034	23.696	-100	0.918	8041	1633	261	652	6	1.75(1.32-1.78)	
355.8546	22.893	23.696	-48	0.953	18219	3886	508	1270	8		
	Empc Correction				15459	3462	508	1270	7		
357.8516	22.906	23.696	-47	0.954	9974	2234	261	652	9	1.83(1.32-1.78)	
355.8546	23.070	23.696	-37	0.961	44207	7516	508	1270	15		
357.8516	23.056	23.696	-38	0.960	27364	4746	261	652	18	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.146	30.186	-2	0.944	22639670	3951366	5316	13290	743		
385.8610	30.146	30.186	-2	0.944	43518935	7417813	9731	24327	762	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.186	30.212	-2	1.001	58628	9895	354	885	28		
375.8178	30.159	30.212	-3	1.000	41990	6528	276	690	24	1.40(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.359	30.399	-2	0.951	19817335	3580382	5316	13290	674		
385.8610	30.359	30.399	-2	0.951	38250946	6980779	9731	24327	717	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											M
373.8208	30.385	30.412	-2	1.001	18241	3594	354	885	10		M
375.8178	30.359	30.412	-3	1.000	13570	2104	276	690	8	1.34(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.277	31.291	-1	0.980	19282112	4829347	5316	13290	908		
385.8610	31.277	31.291	-1	0.980	36970961	9037875	9731	24327	929	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											RQ
373.8208	31.291	31.317	-2	1.000	10910	2980	354	885	8		
	Empc Correction				9314	2098	354	885	6		
375.8178	31.317	31.317	0	1.001	7512	1692	276	690	6	1.45(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.116	32.142	-2	1.006	17608517	5187728	5316	13290	976		
385.8610	32.116	32.142	-2	1.006	34165309	9986383	9731	24327	1026	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											M
373.8208	32.143	32.156	-1	1.001	9972	2705	354	885	8		M
375.8178	32.143	32.156	-1	1.001	9125	2943	276	690	11	1.09(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.331						354	885			
375.8178	30.331						276	690			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.930	31.956	-2		64162106	18380601	7932	19830	2317		
403.8529	31.930	31.956	-2		51611147	14662487	6265	15662	2340	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.477	31.503	-2	0.986	24446985	6835897	7932	19830	862		
403.8529	31.477	31.503	-2	0.986	19661042	5514464	6265	15662	880	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.490	31.517	-2	1.000	34772	10124	1022	2555	10		M
391.8127	31.490	31.517	-2	1.000	26155	7465	435	1087	17	1.33(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.583	31.610	-2	0.989	25304000	6659609	7932	19830	840		
403.8529	31.583	31.610	-2	0.989	20331994	5365125	6265	15662	856	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											Ma
389.8157	31.597	31.623	-2	1.000	26151	7591	1022	2555	7		M
391.8127	31.597	31.623	-2	1.000	24569	6702	435	1087	15	1.06(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											M
389.8157	31.943	31.969	-2	1.015	58896	13866	1022	2555	14		
391.8127	31.943	31.969	-2	1.015	55171	12499	435	1087	29	1.07(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.014	30.519	-90	0.919	753333	91768	1022	2555	90		
391.8127	29.014	30.519	-90	0.919	594802	73863	435	1087	170	1.27(1.05-1.43)	
389.8157	30.252	30.519	-16	0.958	43431	6234	1022	2555	6		
391.8127	30.252	30.519	-16	0.958	38492	6160	435	1087	14	1.13(1.05-1.43)	
389.8157	30.678	30.519	10	0.971	176450	32984	1022	2555	32		
391.8127	30.665	30.519	9	0.971	152223	28596	435	1087	66	1.16(1.05-1.43)	
389.8157	30.891	30.519	22	0.978	16571	4694	1022	2555	5		
391.8127	30.878	30.519	22	0.978	20198	4285	435	1087	10	0.82(1.05-1.43)	
	Empc Correction				13363	3785	435	1087	9		
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.591	33.603	-1	1.052	11691885	4407359	11908	29770	370		
419.8220	33.591	33.603	-1	1.052	26793962	10018453	29725	74312	337	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQ
407.7818	33.603	33.603	0	1.000	30630	10079	926	2315	11		
	Empc Correction				23302	8997	926	2315	10		
409.7789	33.603	33.603	0	1.000	22406	8651	329	822	26	1.37(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.660	34.672	-1	1.086	11923912	4256186	11908	29770	357		
419.8220	34.660	34.672	-1	1.086	27580866	9564686	29725	74312	322	0.43(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673						926	2315			
409.7789	34.673						329	822			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						926	2315			
409.7789	34.138						329	822			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.381	34.393	-1	1.077	17519972	6089078	7522	18805	810		
437.8140	34.381	34.393	-1	1.077	17093116	5908769	5199	12997	1137	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	795447	269666	2221	5552	121		
425.7737	34.381	34.393	-1	1.000	751768	254894	1578	3945	162	1.06(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.846	34.223	-23	0.984	2121002	754587	2221	5552	340		
425.7737	33.846	34.223	-23	0.984	2058064	709911	1578	3945	450	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.689	36.701	-1	1.149	23534601	7031445	2547	6367	2761		
471.7750	36.689	36.701	-1	1.149	27006390	8050547	2935	7337	2743	0.87(0.76-1.02)	
OCDF											M
441.7428	36.785	36.797	-1	1.003	35990	11796	269	672	44		M
443.7399	36.785	36.797	-1	1.003	41542	11204	316	790	35	0.87(0.76-1.02)	M
OCDD											
457.7377	36.701	36.713	-1	1.000	17937558	5316457	1775	4437	2995		
459.7348	36.689	36.713	-1	1.000	20130088	6008719	2096	5240	2867	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 27-Aug-2021 09:15:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d
Lims ID: 320-77292-A-3-A
Client ID: 11215702-080321-BN-SJSB091 (4-6)
Inject. Date: 26-Aug-2021 04:20:43 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 11

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	95107080	24606384

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	95107080	24606384

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.451	24784	5463	26224	6897	0.0524	0.95	RQ
15.451	20192	5310	26224	6897	0.0477		Empc Correction
15.708	92811	22641	117714	32001	0.2162	0.79	
15.980	133041	29841	171090	38328	0.3123	0.78	
16.207	115628	29560	142069	37253	0.2646	0.81	
16.449	136354	33378	166001	40199	0.3105	0.82	
16.721	1428446	387369	1803673	489865	3.32	0.79	
16.933	57294	14942	76366	18429	0.1373	0.75	
17.522	235100	57567	303015	73292	0.5526	0.78	
17.749	43979	8830	67259	15900	0.1142	0.65	
18.883	208742	45630	288468	64013	0.5106	0.72	
Signal Totals:							
	2471587	635068	3161879	816177			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5638058	1451398				0.78	RQ
	5633466	1451245					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 5.790 = (5638058 * 100.000) / (95107080 * 1.024)
Empc Amount: 5.785 = (5633466 * 100.000) / (95107080 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d
Lims ID: 320-77292-A-3-A
Client ID: 11215702-080321-BN-SJSB091 (4-6)
Inject. Date: 26-Aug-2021 04:20:43 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 11

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	55046411	13695176

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	55046411	13695176

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.602	22679	6307	20472	6288	0.0625	1.11	RQ
15.602	15763	4841	20472	6288	0.0525		Empc Correction
15.904	17222	4102	22863	5538	0.0581	0.75	
16.116	21170	6231	31116	8743	0.0757	0.68	
16.676	124705	35771	150358	37872	0.3984	0.83	
17.552	25117	6194	39429	9430	0.0935	0.64	RQM
17.552	25117	6194	32619	8044	0.0836		Empc Correction
17.688	18389	4980	22066	5474	0.0586	0.83	Ma
18.142	50066	12593	61929	13622	0.1622	0.81	
Signal Totals:							
	272432	74712	341423	85581			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	627581	163145				0.80	RQMa
	613855	160293					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.9091 = (627581 * 100.000) / (55046411 * 1.254)
Empc Amount: 0.8892 = (613855 * 100.000) / (55046411 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 27-Aug-2021 09:15:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Lims ID:	320-77292-A-3-A		
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Inject. Date:	26-Aug-2021 04:20:43	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	11

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	71105169	13425539
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	78266993	13559526

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	74686081	13492532

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.697	27291	5075	15155	3134	0.0547	1.80	RQ
20.697	23490	4857	15155	3134	0.0498		Empc Correction
22.538	14288	2656	9835	2272	0.0311	1.45	
Signal Totals:							
	37778	7513	24990	5406			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	66569	13137				1.66	RQ
	62768	12919					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0857 = (66569 * 100.000) / (74686081 * 1.040)

Empc Amount: 0.0808 = (62768 * 100.000) / (74686081 * 1.040)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d
Lims ID: 320-77292-A-3-A
Client ID: 11215702-080321-BN-SJSB091 (4-6)
Inject. Date: 26-Aug-2021 04:20:43 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 11

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	46248821	7738689

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	46248821	7738689

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.625	136679	26883	88143	16092	0.4637	1.55	
22.006	14033	2141	8041	1633	0.0455	1.75	
22.893	18219	3886	9974	2234	0.0581	1.83	RQ
22.893	15459	3462	9974	2234	0.0525		Empc Correction
23.070	44207	7516	27364	4746	0.1476	1.62	
Signal Totals:							
	210378	40002	133522	24705			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	346660	65131				1.60	RQ
	343900	64707					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.7149 = (346660 * 100.000) / (46248821 * 1.048)
Empc Amount: 0.7092 = (343900 * 100.000) / (46248821 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d
Lims ID: 320-77292-A-3-A
Client ID: 11215702-080321-BN-SJSB091 (4-6)
Inject. Date: 26-Aug-2021 04:20:43 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 11

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	44108027	12350361
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	45635994	12024734
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	44872010	12187547

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.014	753333	91768	594802	73863	2.82	1.27	
30.252	43431	6234	38492	6160	0.1713	1.13	
30.678	176450	32984	152223	28596	0.6874	1.16	
30.891	16571	4694	20198	4285	0.0769	0.82	RQ
30.891	16571	4694	13363	3785	0.0626		Empc Correction
Signal Totals:							
	989785	135680	798880	112404			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1795500	248584				1.23	RQ
	1788665	248084					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.755 = (1795500 * 100.000) / (44872010 * 1.066)
Empc Amount: 3.741 = (1788665 * 100.000) / (44872010 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 09:15:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d
Lims ID: 320-77292-A-3-A
Client ID: 11215702-080321-BN-SJSB091 (4-6)
Inject. Date: 26-Aug-2021 04:20:43 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 11

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	34613088	11997847

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	34613088	11997847

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.846	2121002	754587	2058064	709911	11.0	1.03	
Signal Totals:							
	2121002	754587	2058064	709911			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4179066	1464498				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 11.033 = (4179066 * 100.000) / (34613088 * 1.094)

Report Date: 27-Aug-2021 09:15:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d				
Injection Date:	26-Aug-2021 04:20:43	Instrument ID:	10D5		
Lims ID:	320-77292-A-3-A	Lab Sample ID:	320-77292-3		
Client ID:	11215702-080321-BN-SJSB091 (4-6)				
Operator ID:	SMA	ALS Bottle#:	36	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (15.59- 19.47)

Signal: 2

Processing Integration Results

RT = 17.552 Area = 61527

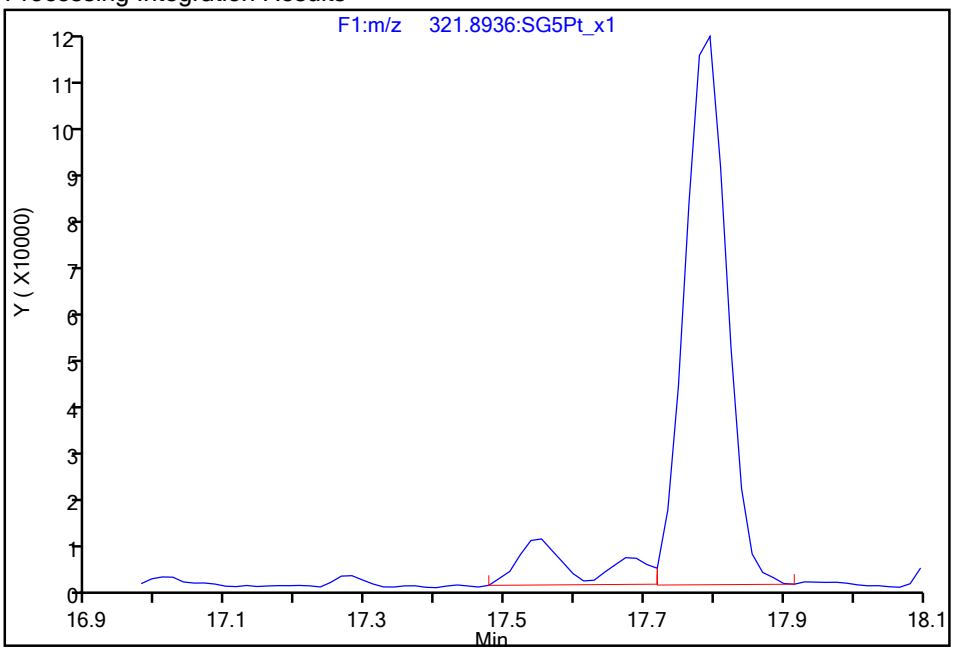

Manual Integration Results

RT = 17.552 Area = 39429 M

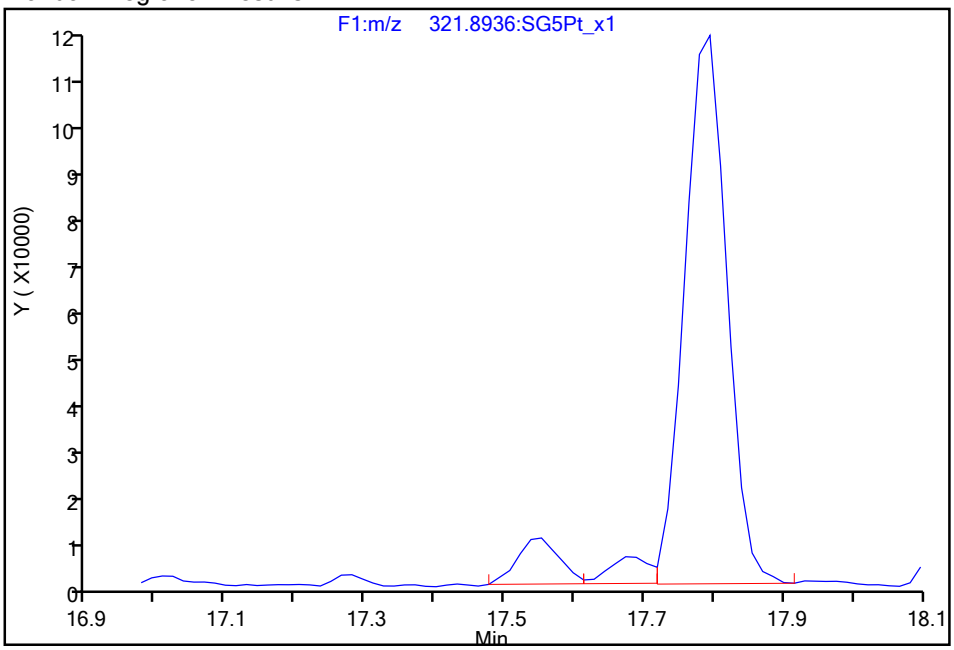

Reviewer: dadunj, 27-Aug-2021 09:12:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793411

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d				
Injection Date:	26-Aug-2021 04:20:43	Instrument ID:	10D5		
Lims ID:	320-77292-A-3-A	Lab Sample ID:	320-77292-3		
Client ID:	11215702-080321-BN-SJSB091 (4-6)				
Operator ID:	SMA	ALS Bottle#:	36	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.59- 19.47)

Signal: 1

Processing Integration Results

RT = 17.688 Area = 18389

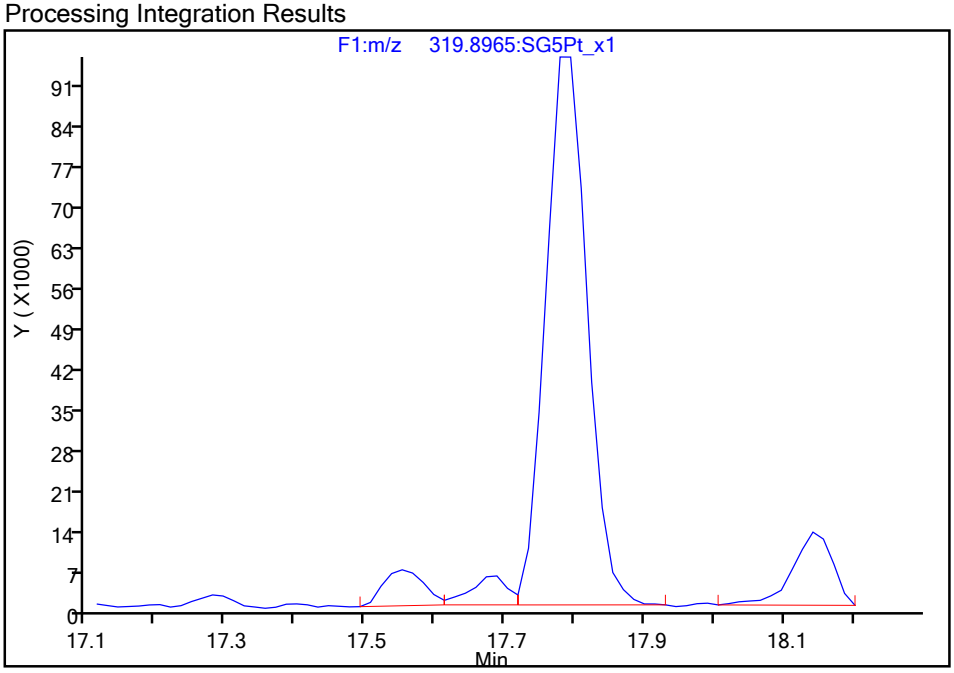

Manual Integration Results

RT = 17.688 Area = 18389

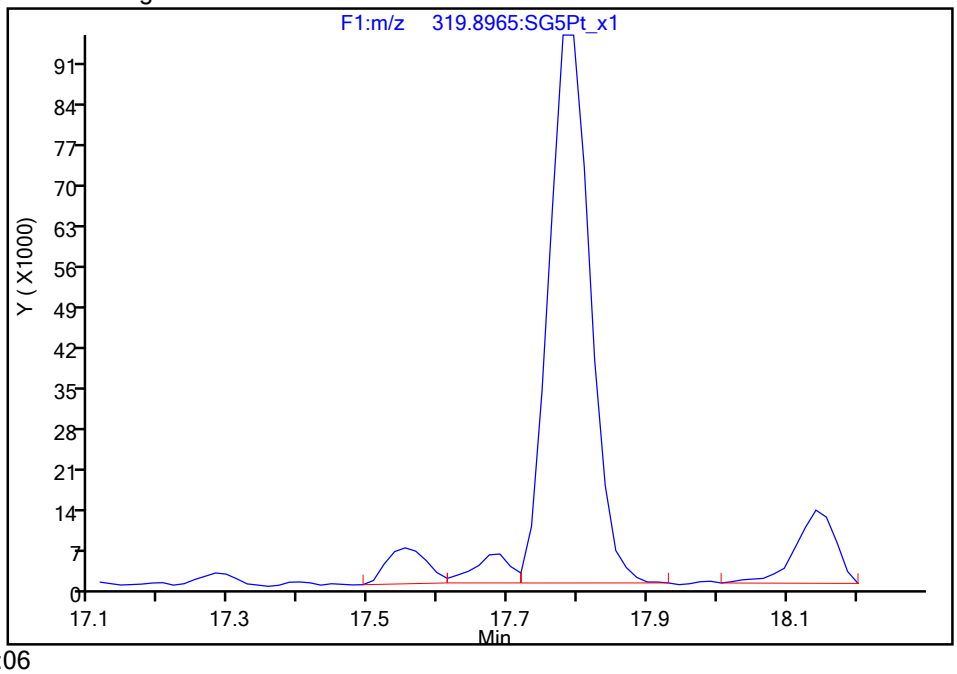

Reviewer: dadunj, 27-Aug-2021 09:12:06

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

793412

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d				
Injection Date:	26-Aug-2021 04:20:43	Instrument ID:	10D5		
Lims ID:	320-77292-A-3-A	Lab Sample ID:	320-77292-3		
Client ID:	11215702-080321-BN-SJSB091 (4-6)				
Operator ID:	SMA	ALS Bottle#:	36	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 21.99
Area: 37044
Amount: 0.123857
Amount Units: pg/ul

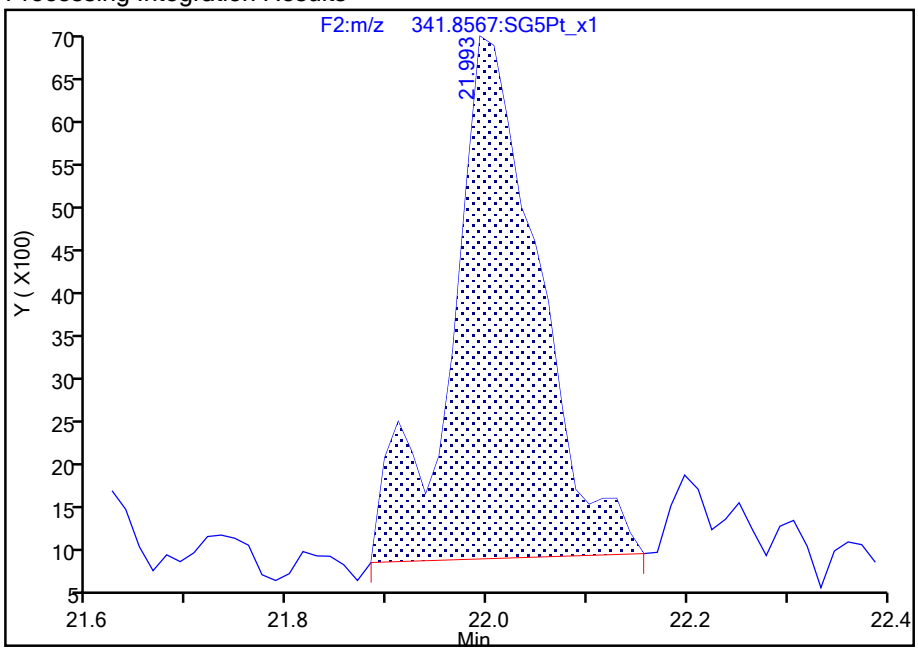

Manual Integration Results

RT: 21.99
Area: 37068
Amount: 0.123889
Amount Units: pg/ul

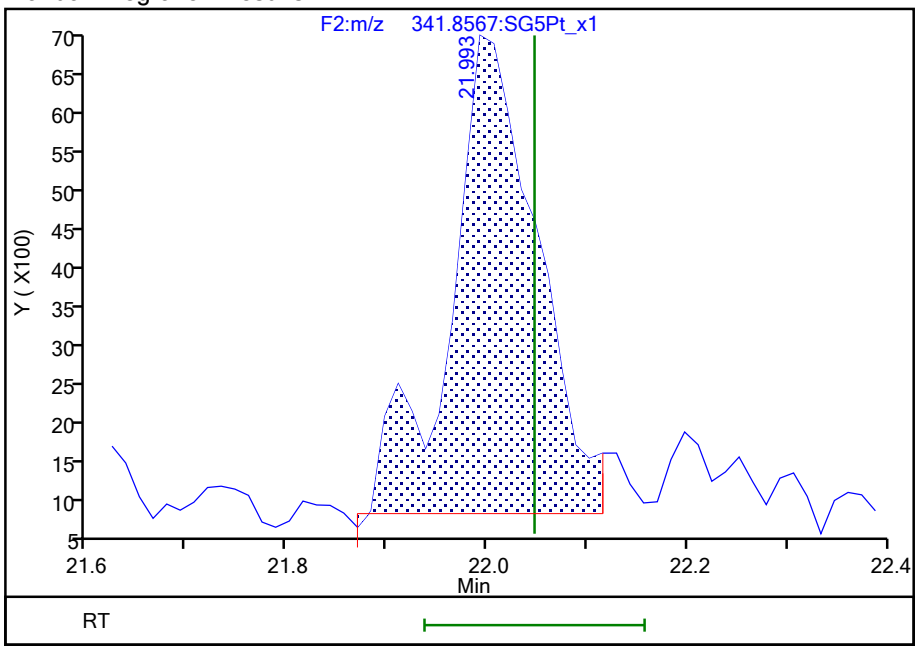

Reviewer: dadunj, 27-Aug-2021 09:12:18

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d				
Injection Date:	26-Aug-2021 04:20:43	Instrument ID:	10D5		
Lims ID:	320-77292-A-3-A	Lab Sample ID:	320-77292-3		
Client ID:	11215702-080321-BN-SJSB091 (4-6)				
Operator ID:	SMA	ALS Bottle#:	36	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.39
Area: 19615
Amount: 0.050753
Amount Units: pg/ul

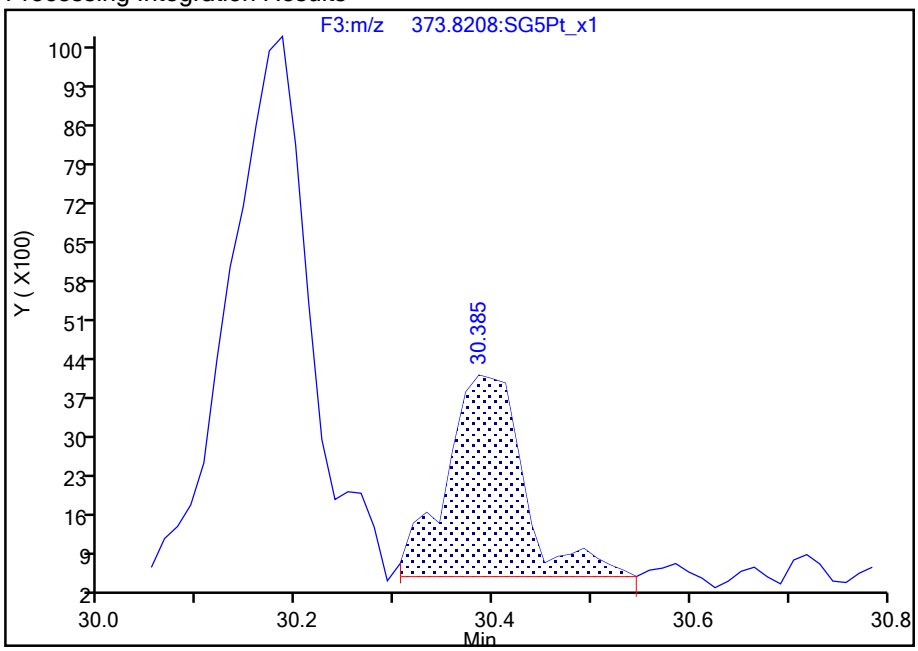

Manual Integration Results

RT: 30.39
Area: 18241
Amount: 0.048651
Amount Units: pg/ul

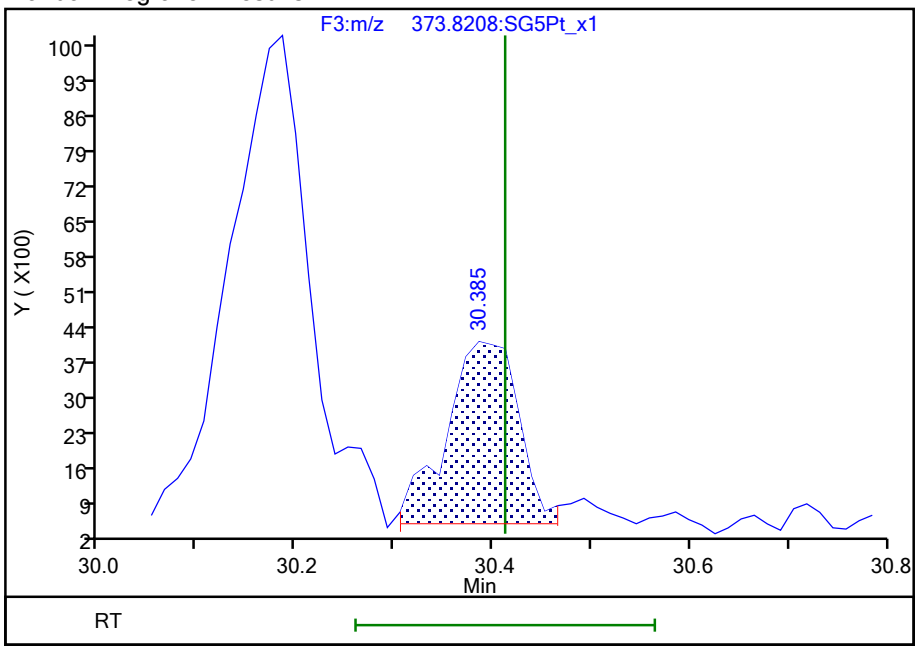

Reviewer: dadunj, 27-Aug-2021 09:12:49

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793414

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d				
Injection Date:	26-Aug-2021 04:20:43	Instrument ID:	10D5		
Lims ID:	320-77292-A-3-A	Lab Sample ID:	320-77292-3		
Client ID:	11215702-080321-BN-SJSB091 (4-6)				
Operator ID:	SMA	ALS Bottle#:	36	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.14
Area: 13060
Amount: 0.036738
Amount Units: pg/ul

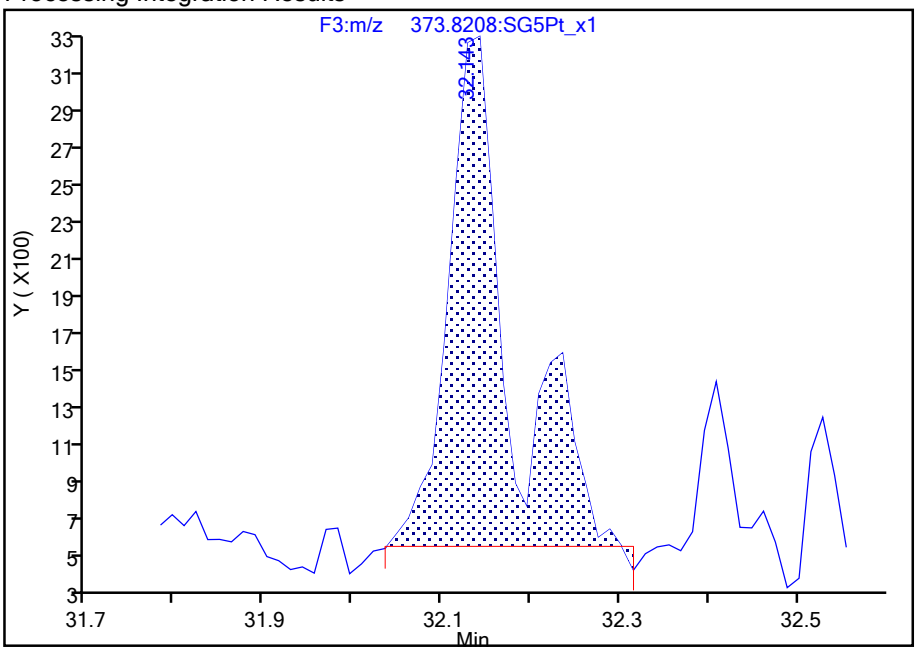

Manual Integration Results

RT: 32.14
Area: 9972
Amount: 0.031625
Amount Units: pg/ul

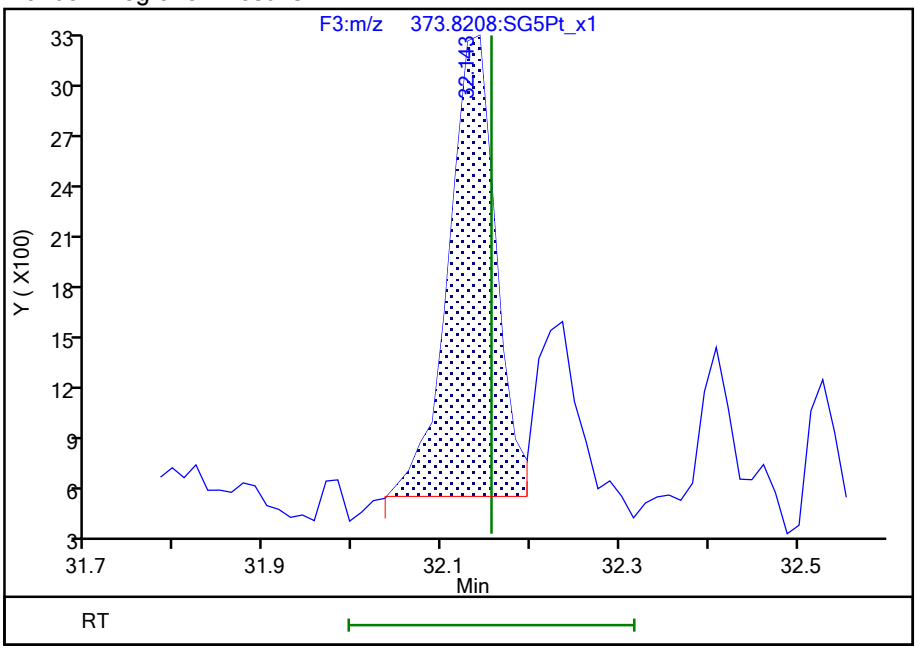

Reviewer: dadunj, 27-Aug-2021 09:12:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d				
Injection Date:	26-Aug-2021 04:20:43	Instrument ID:	10D5		
Lims ID:	320-77292-A-3-A	Lab Sample ID:	320-77292-3		
Client ID:	11215702-080321-BN-SJSB091 (4-6)				
Operator ID:	SMA	ALS Bottle#:	36	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.49
Area: 60920
Amount: 0.185533
Amount Units: pg/ul

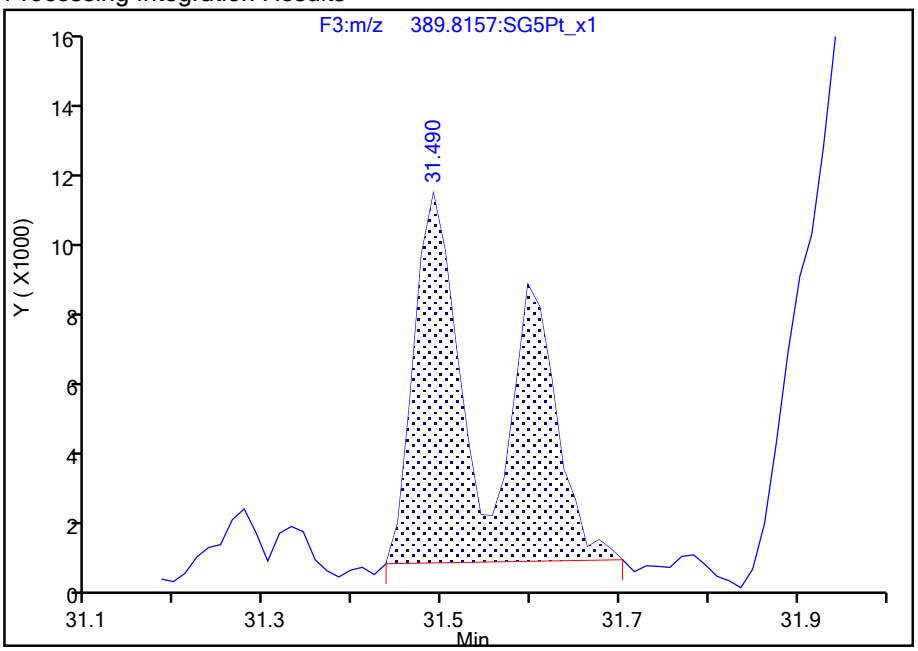

Manual Integration Results

RT: 31.49
Area: 34772
Amount: 0.129818
Amount Units: pg/ul

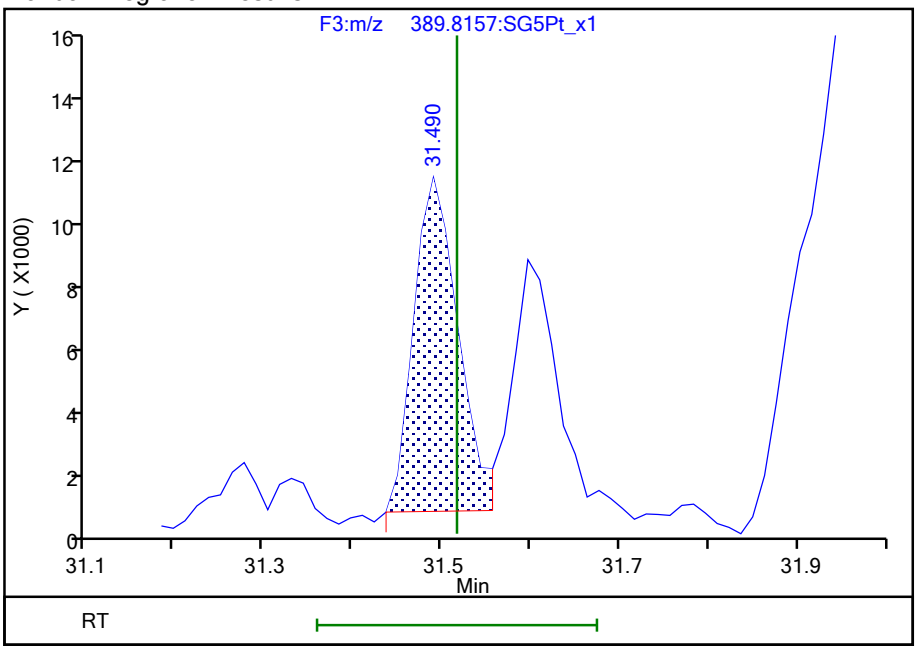

Reviewer: dadunj, 27-Aug-2021 09:13:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793416

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d				
Injection Date:	26-Aug-2021 04:20:43	Instrument ID:	10D5		
Lims ID:	320-77292-A-3-A	Lab Sample ID:	320-77292-3		
Client ID:	11215702-080321-BN-SJSB091 (4-6)				
Operator ID:	SMA	ALS Bottle#:	36	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.49
Area: 60920
Amount: 0.190788
Amount Units: pg/ul

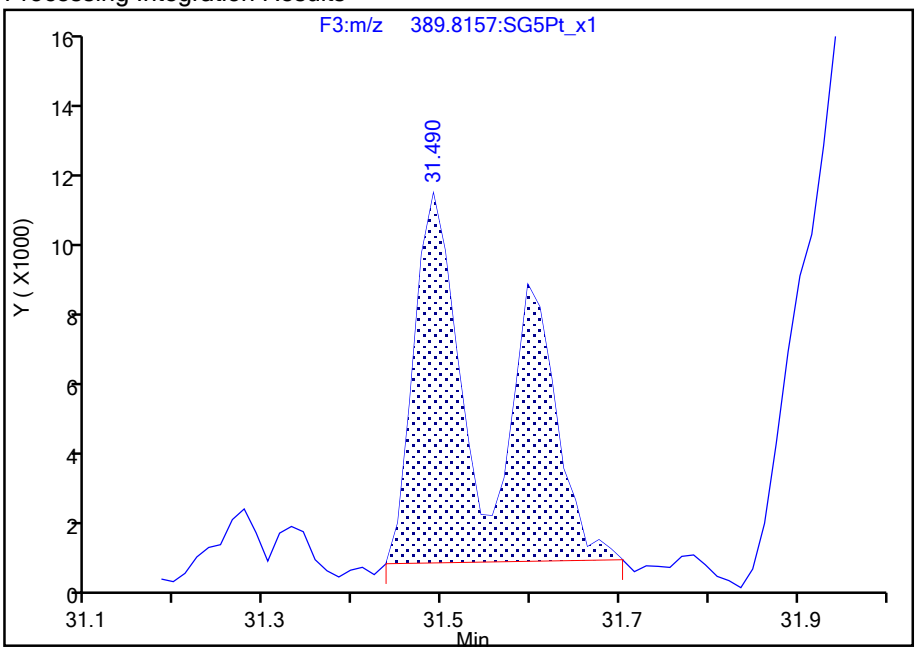

Manual Integration Results

RT: 31.60
Area: 26151
Amount: 0.111132
Amount Units: pg/ul

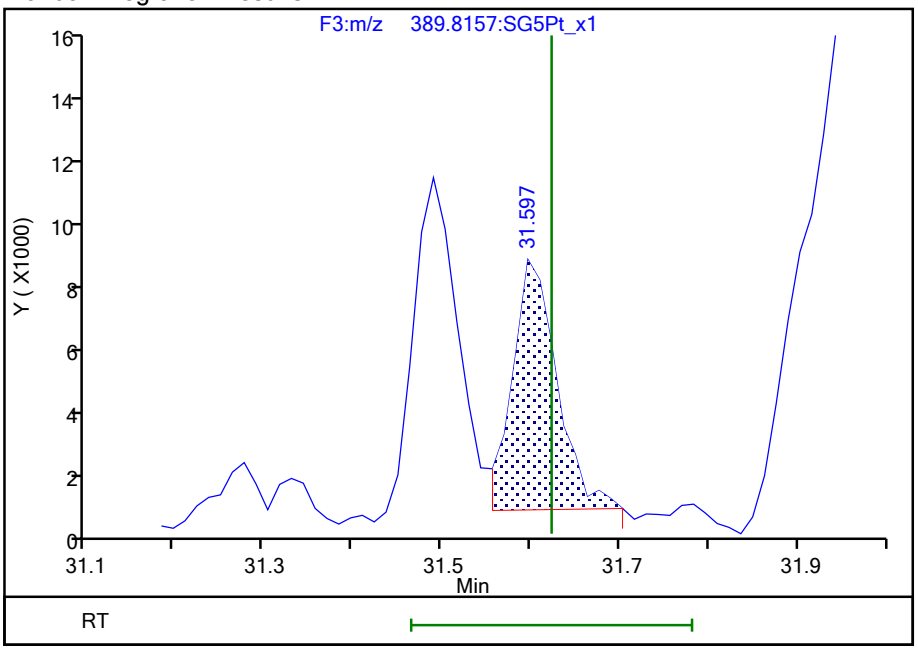

Reviewer: dadunj, 27-Aug-2021 09:13:06

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

793417

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d				
Injection Date:	26-Aug-2021 04:20:43	Instrument ID:	10D5		
Lims ID:	320-77292-A-3-A	Lab Sample ID:	320-77292-3		
Client ID:	11215702-080321-BN-SJSB091 (4-6)				
Operator ID:	SMA	ALS Bottle#:	36	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.49
Area: 26155
Amount: 0.190788
Amount Units: pg/ul

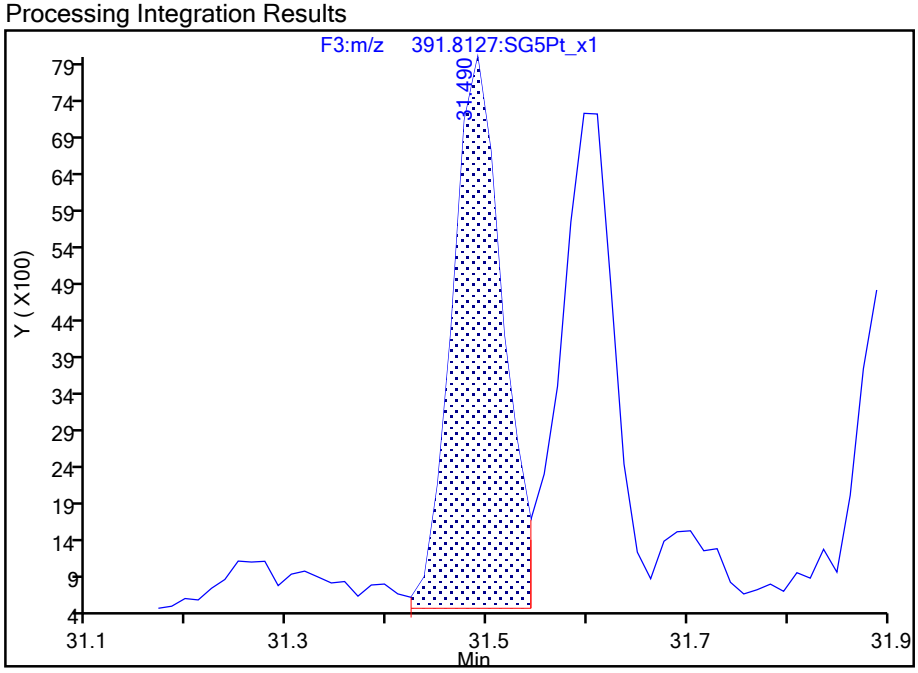

Manual Integration Results

RT: 31.60
Area: 24569
Amount: 0.111132
Amount Units: pg/ul

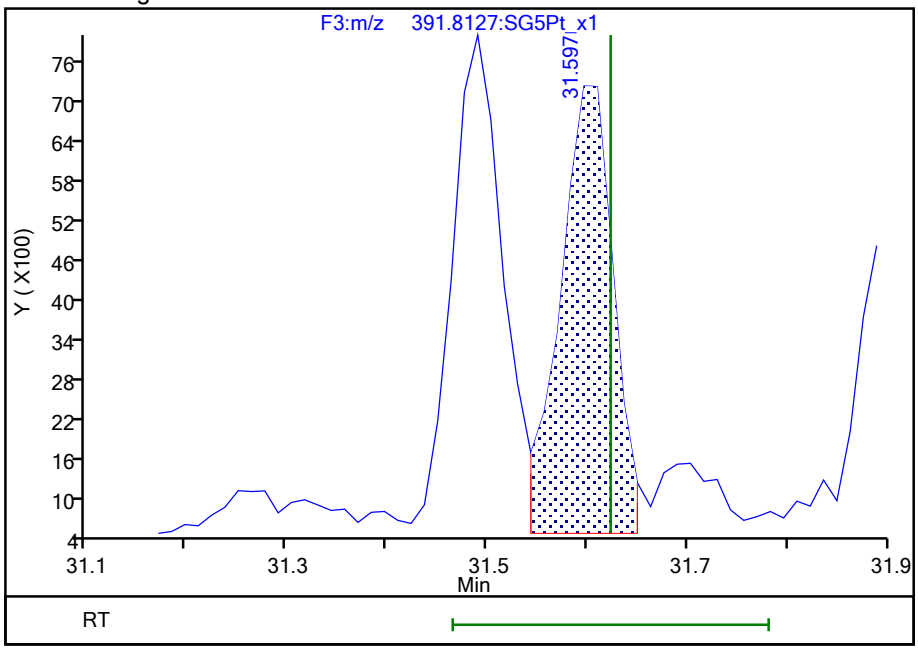

Reviewer: dadunj, 27-Aug-2021 09:15:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d				
Injection Date:	26-Aug-2021 04:20:43	Instrument ID:	10D5		
Lims ID:	320-77292-A-3-A	Lab Sample ID:	320-77292-3		
Client ID:	11215702-080321-BN-SJSB091 (4-6)				
Operator ID:	SMA	ALS Bottle#:	36	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 31.94
Area: 58777
Amount: 0.231555
Amount Units: pg/ul

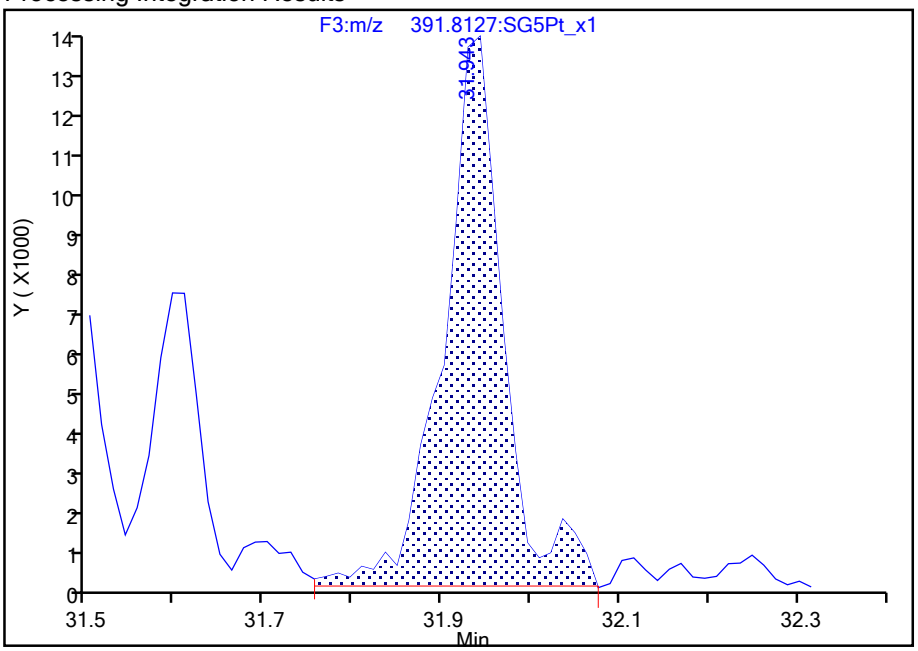

Manual Integration Results

RT: 31.94
Area: 55171
Amount: 0.224459
Amount Units: pg/ul

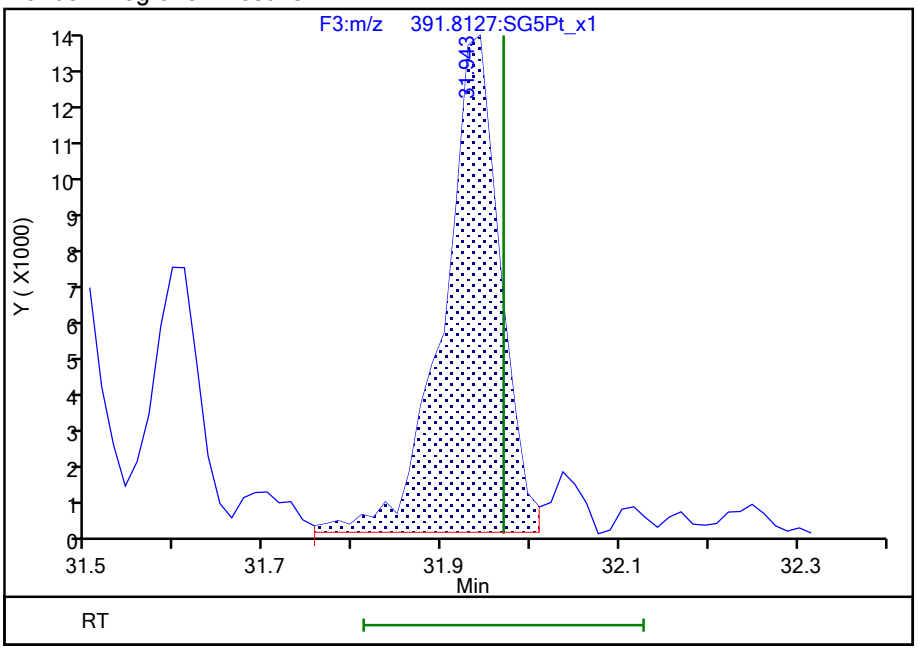

Reviewer: dadunj, 27-Aug-2021 09:15:20

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d				
Injection Date:	26-Aug-2021 04:20:43	Instrument ID:	10D5		
Lims ID:	320-77292-A-3-A	Lab Sample ID:	320-77292-3		
Client ID:	11215702-080321-BN-SJSB091 (4-6)				
Operator ID:	SMA	ALS Bottle#:	36	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.78
Area: 45553
Amount: 0.260347
Amount Units: pg/ul

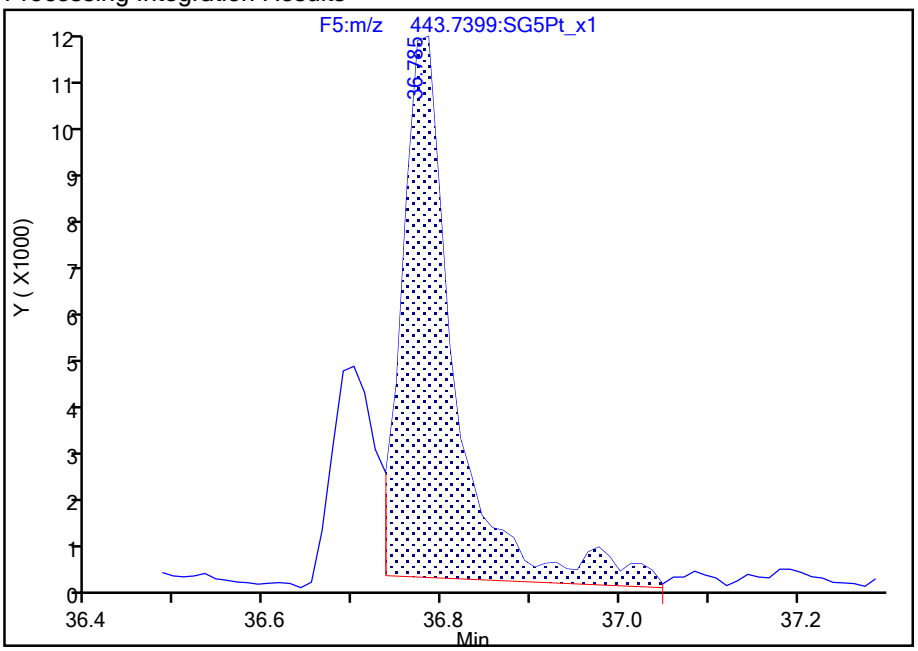

Manual Integration Results

RT: 36.78
Area: 41542
Amount: 0.213334
Amount Units: pg/ul

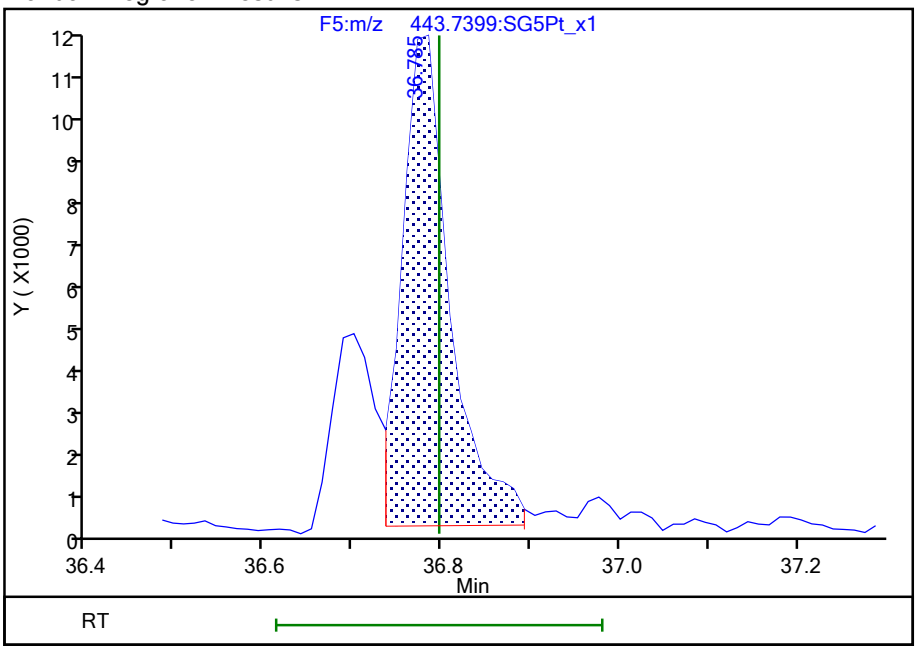

Reviewer: dadunj, 27-Aug-2021 09:14:32

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d				
Injection Date:	26-Aug-2021 04:20:43	Instrument ID:	10D5		
Lims ID:	320-77292-A-3-A	Lab Sample ID:	320-77292-3		
Client ID:	11215702-080321-BN-SJSB091 (4-6)				
Operator ID:	SMA	ALS Bottle#:	36	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.78
Area: 49065
Amount: 0.260347
Amount Units: pg/ul

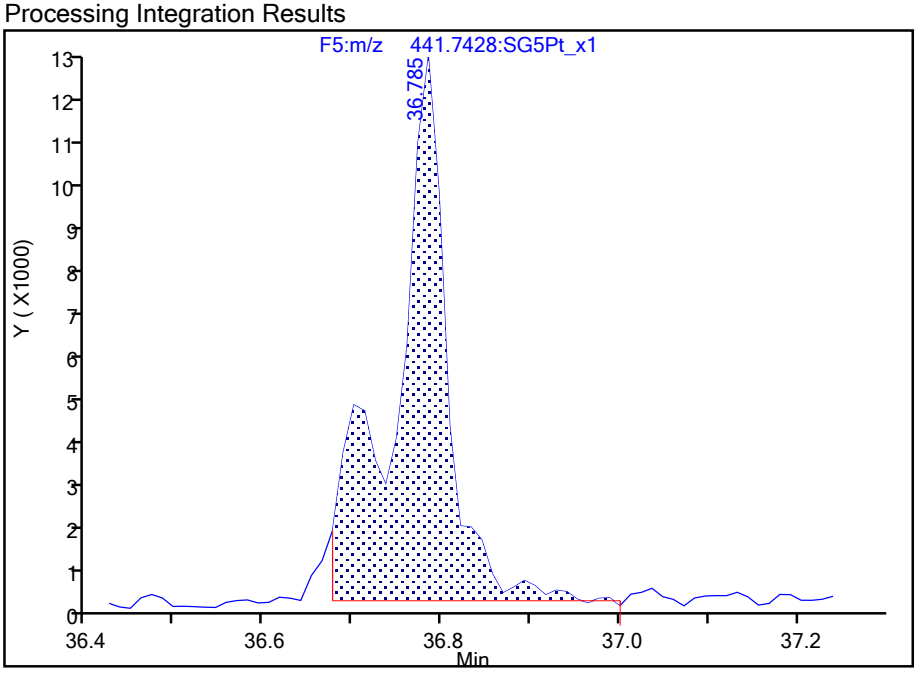

Manual Integration Results

RT: 36.78
Area: 35990
Amount: 0.213334
Amount Units: pg/ul

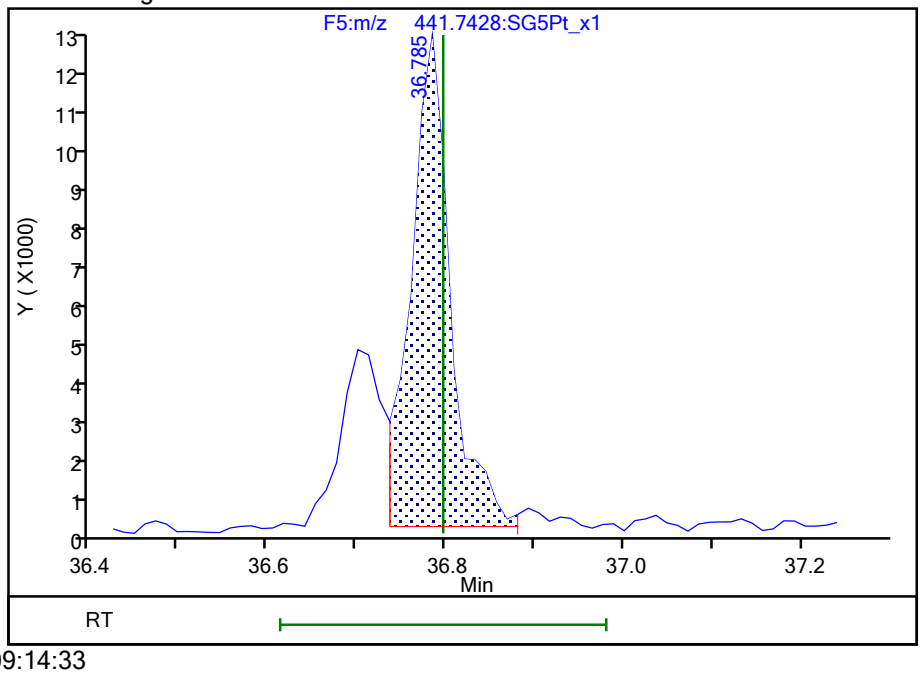

Reviewer: dadunj, 27-Aug-2021 09:14:33

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793421

Report Date: 27-Aug-2021 09:15:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

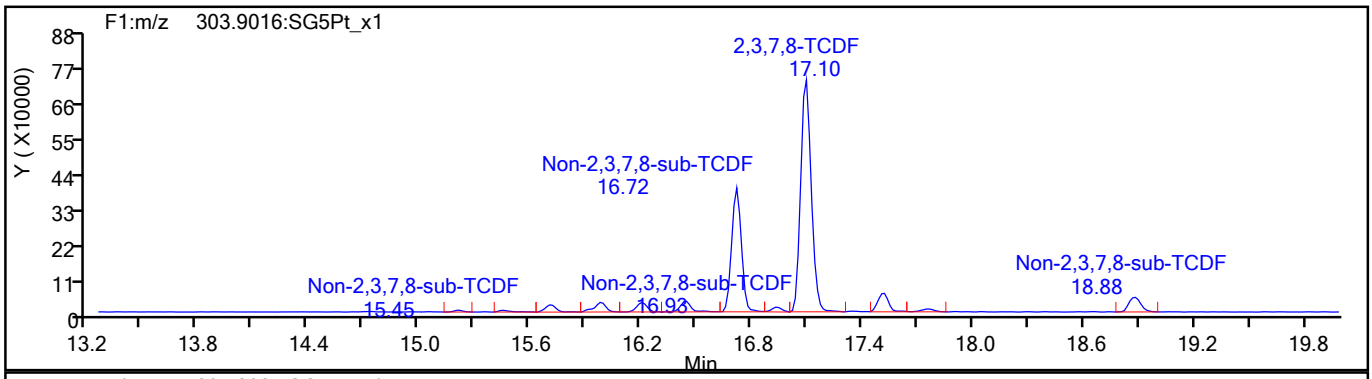

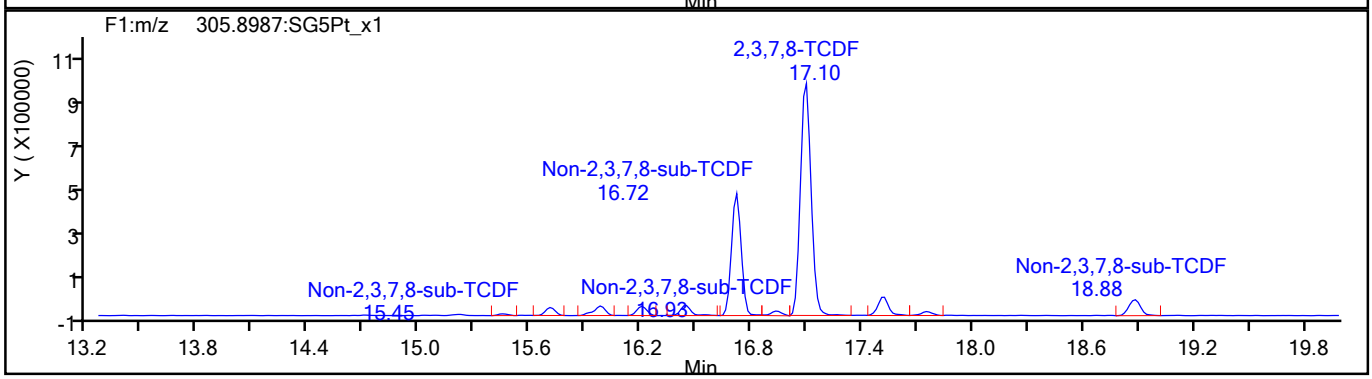

TCDF Standards

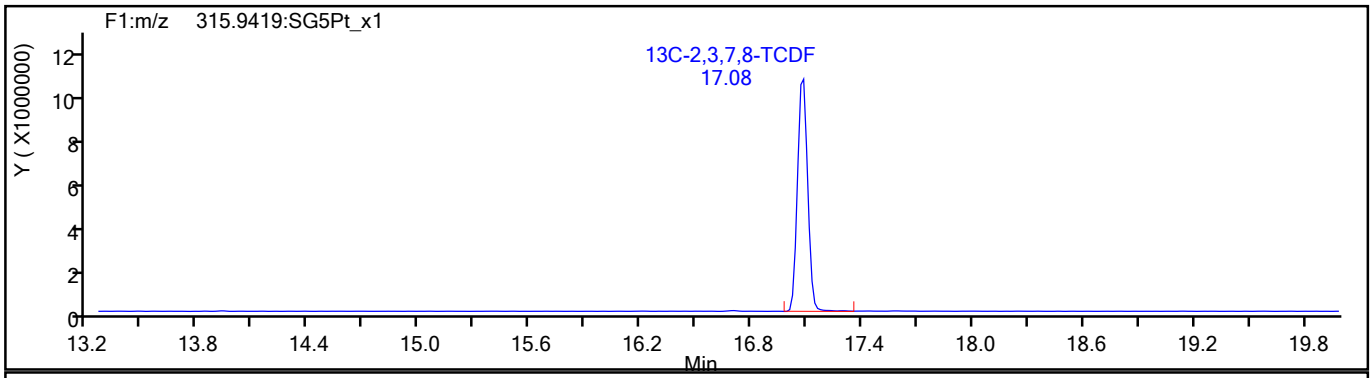

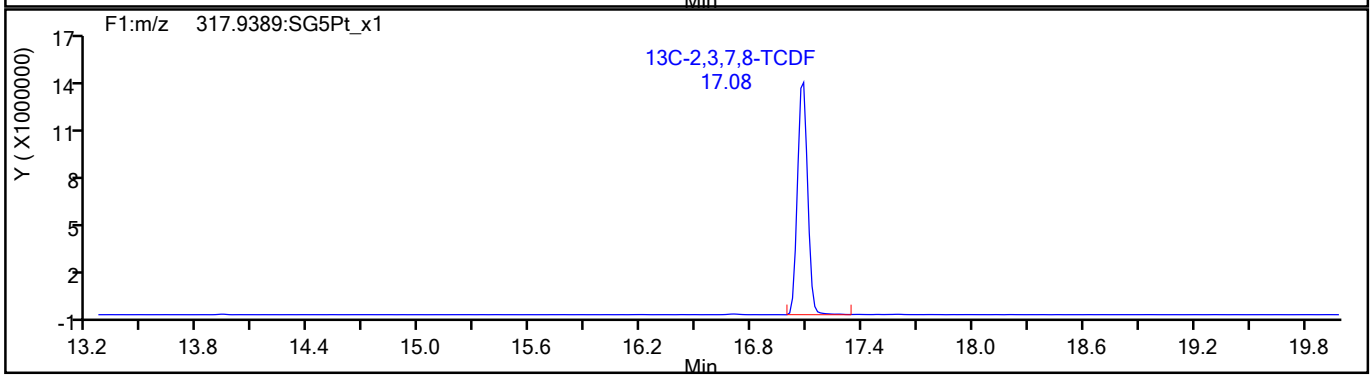

793422

Report Date: 27-Aug-2021 09:15:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

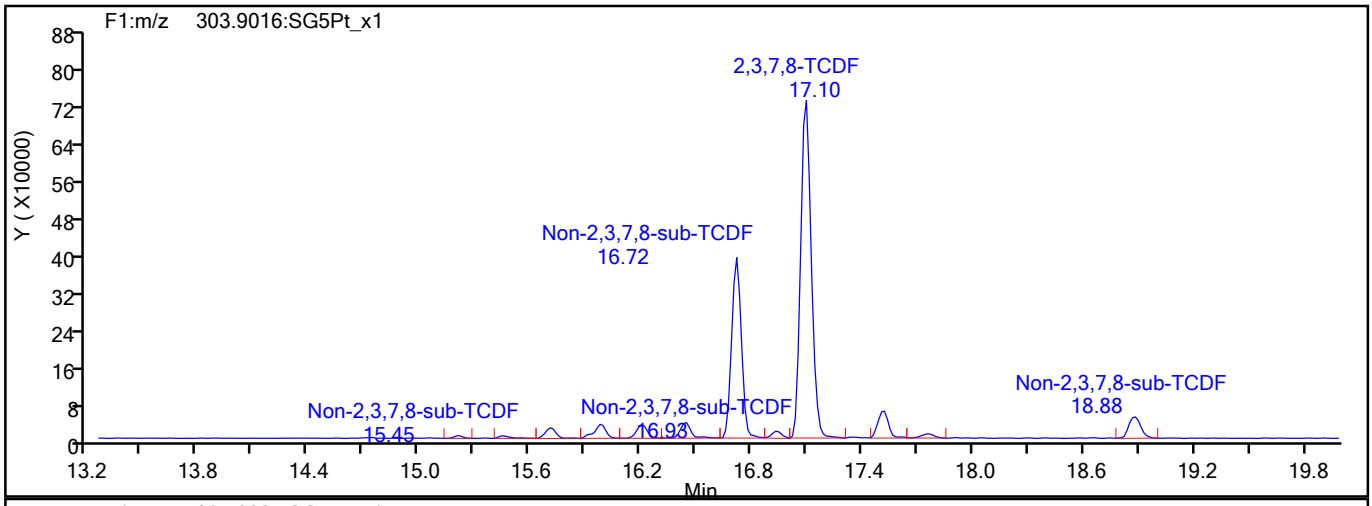

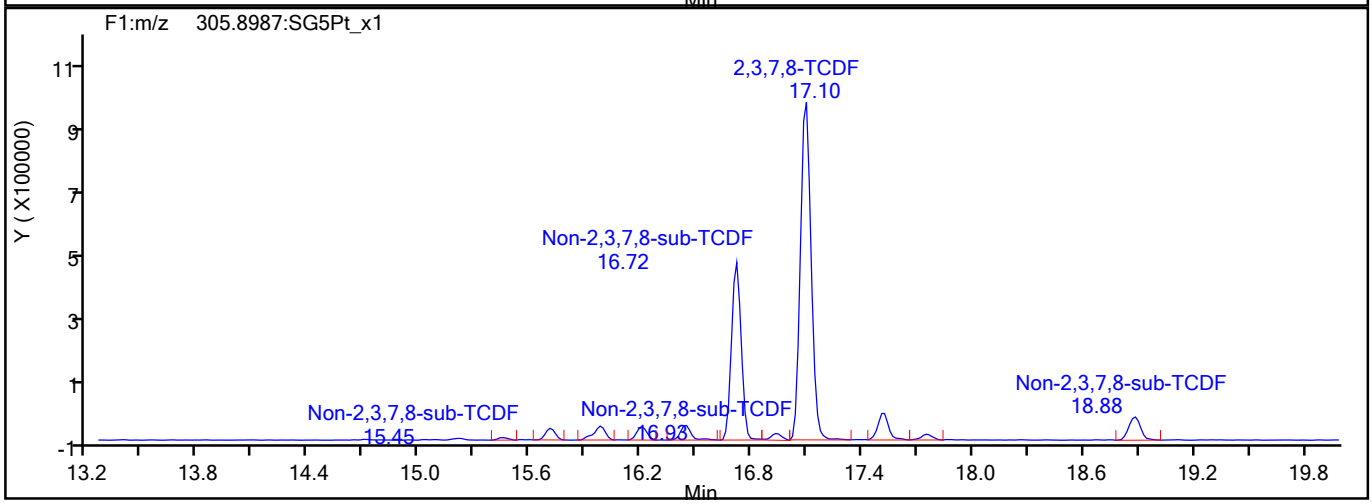

TCDF Interference Mass

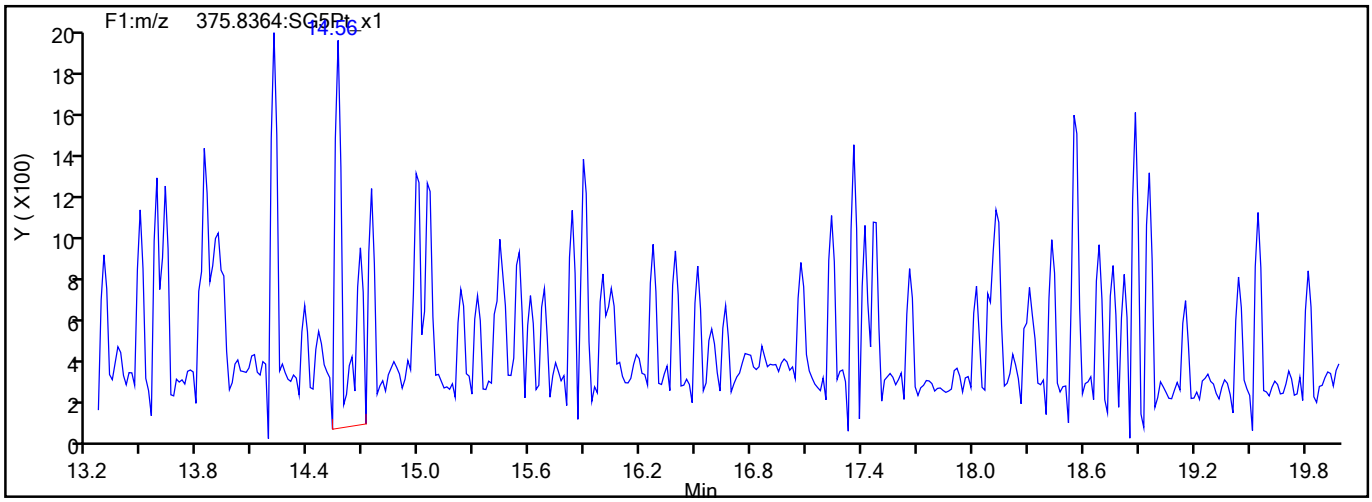

793423

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

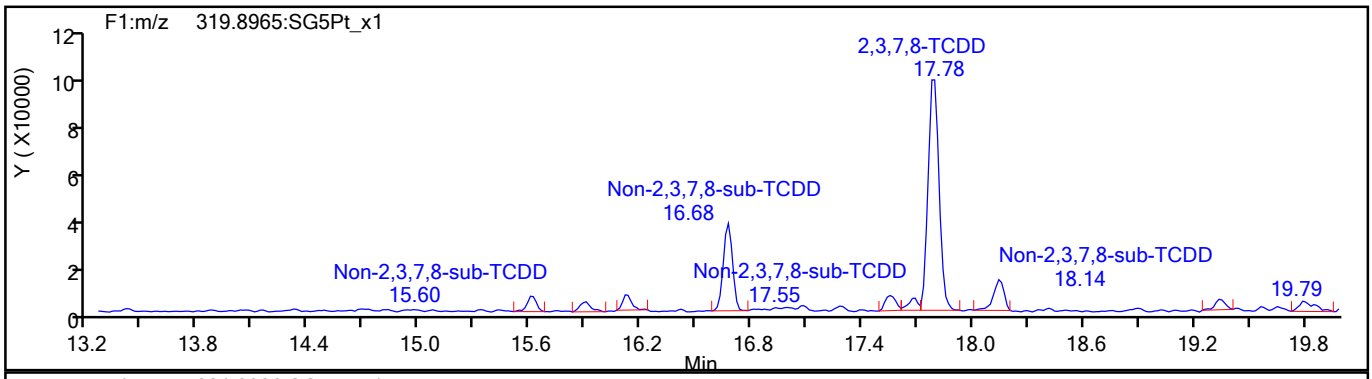

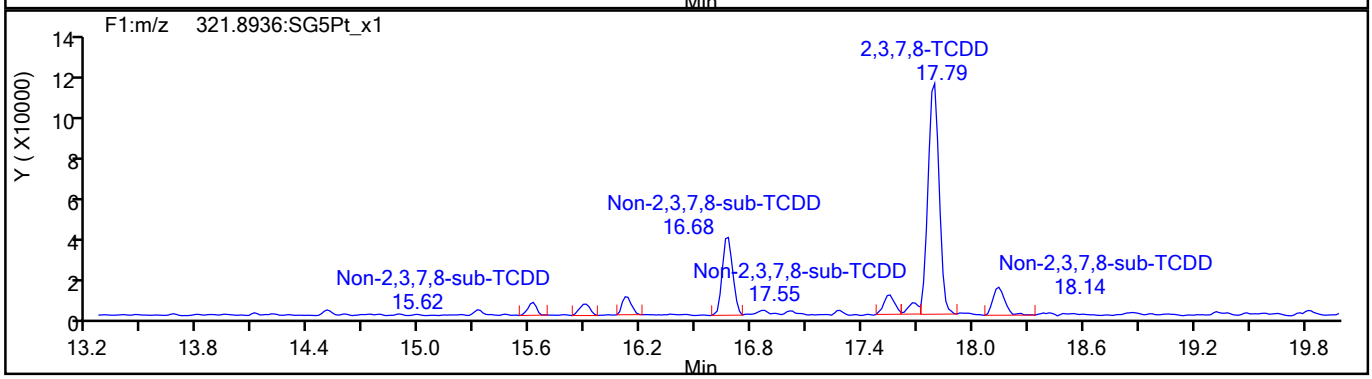

TCDD Standards

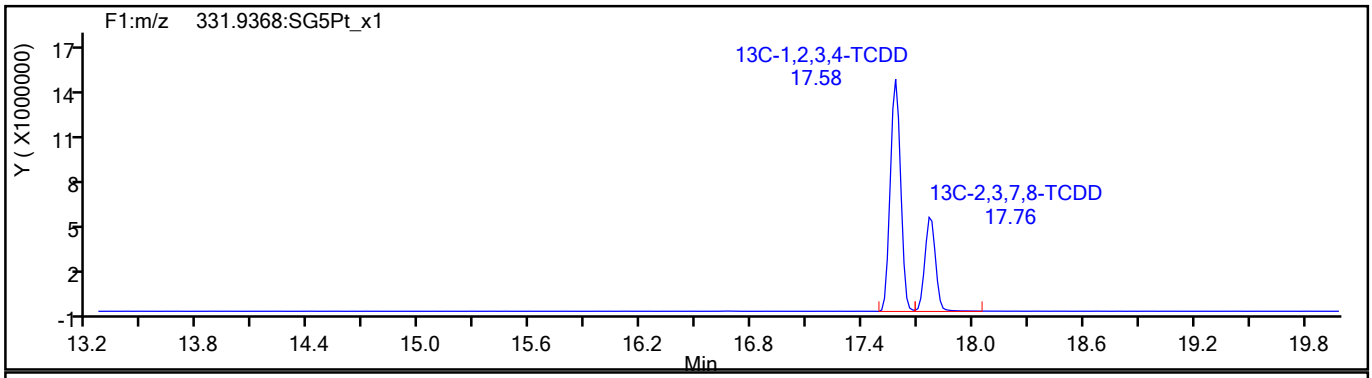

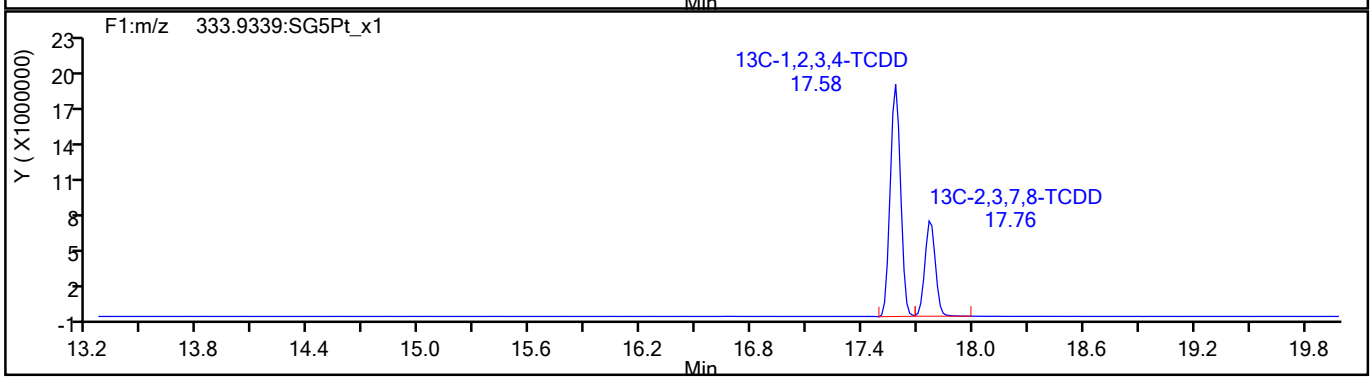

793424

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

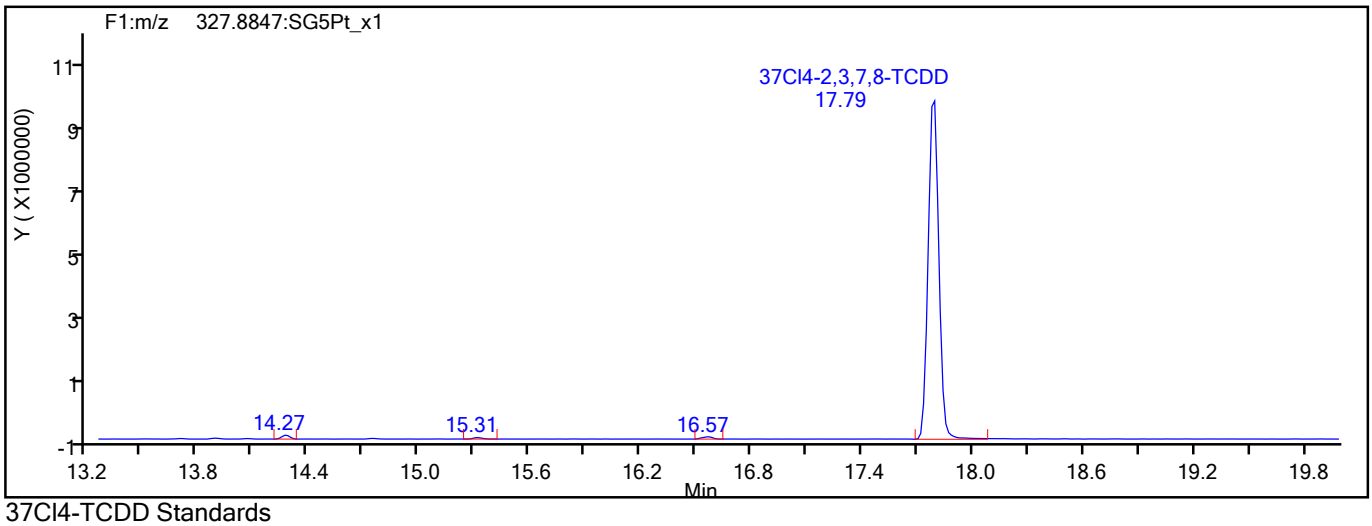

37Cl4-TCDD Standards

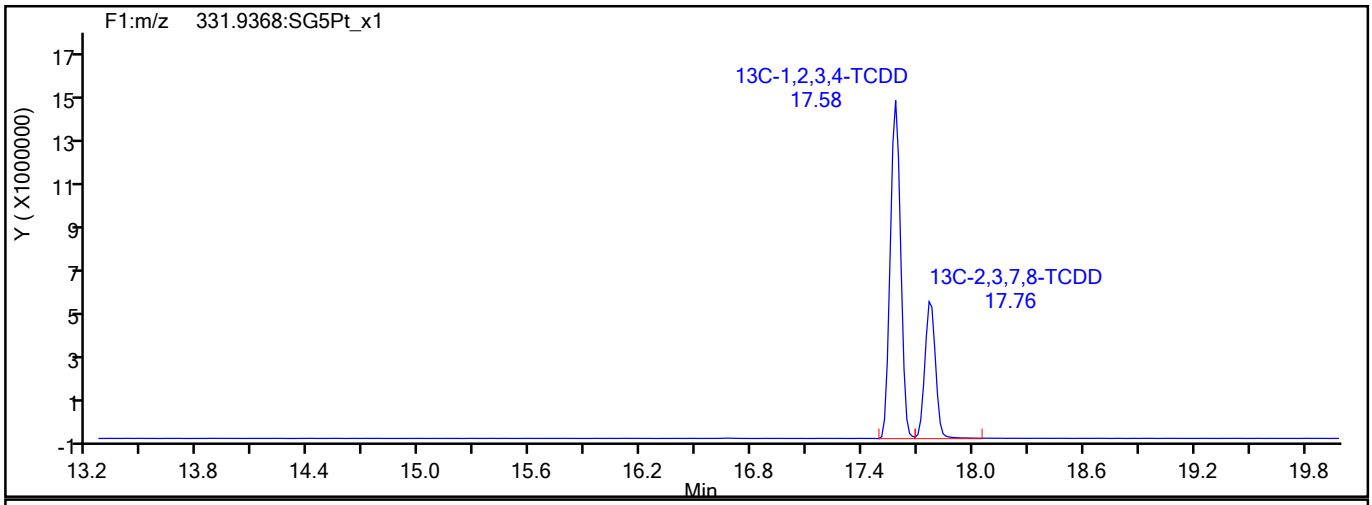

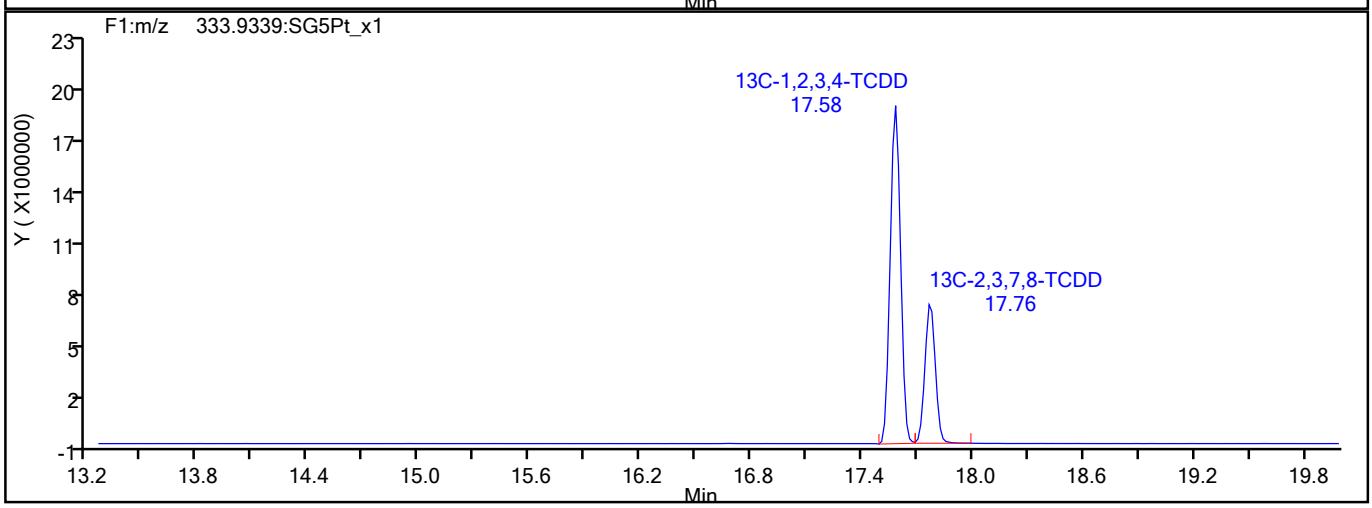

793425

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

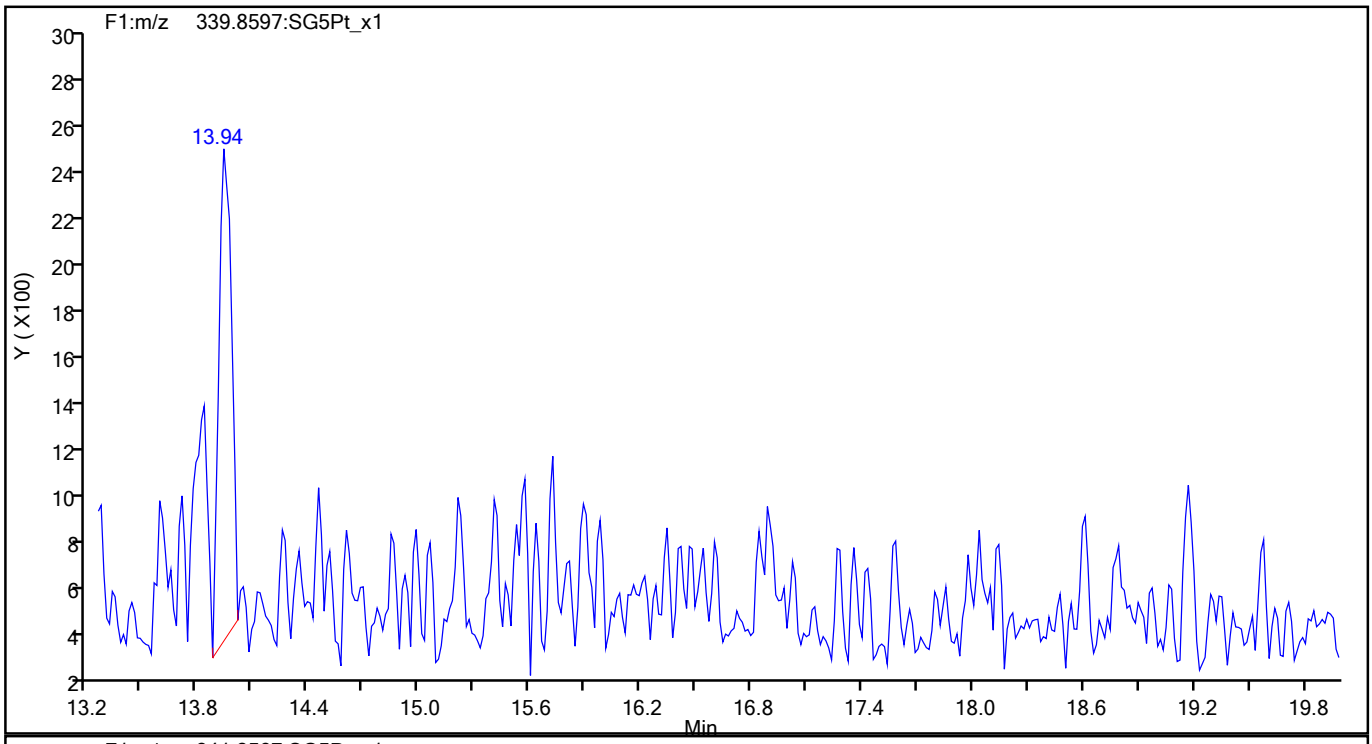

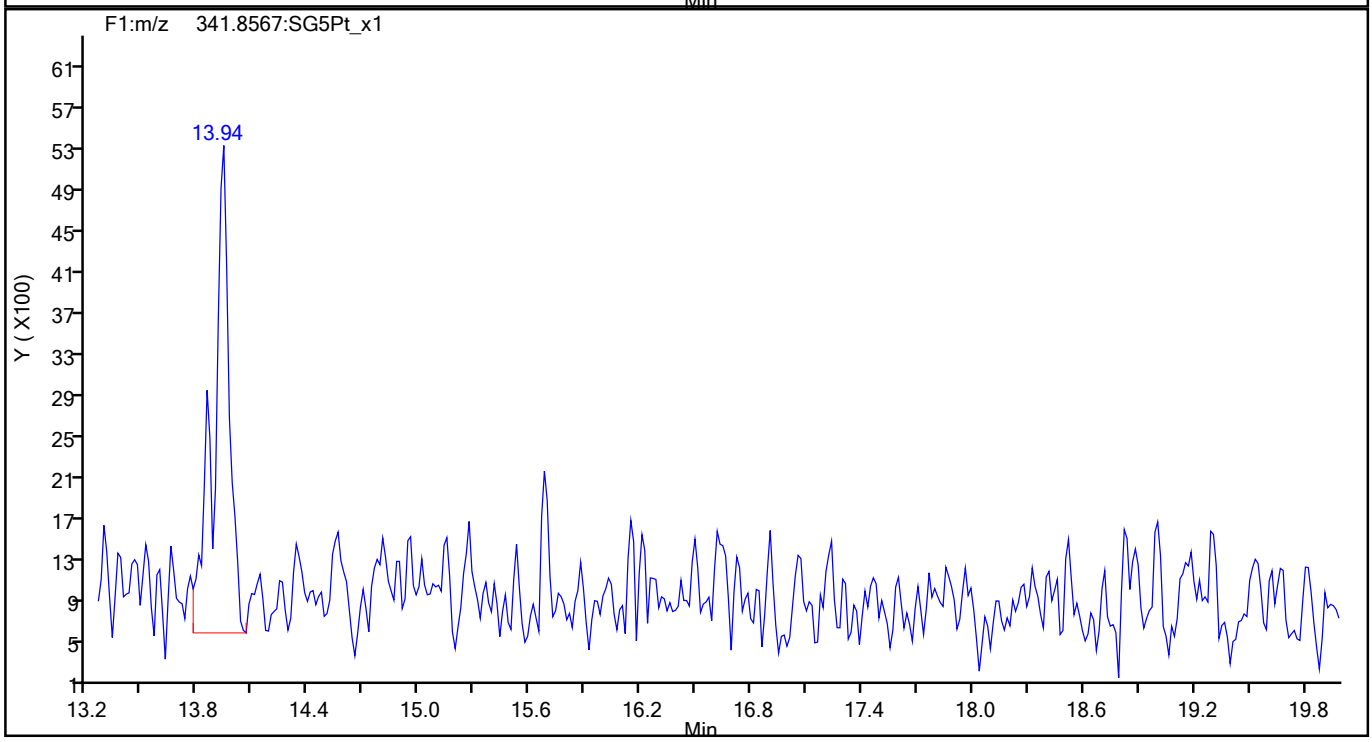

793426

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

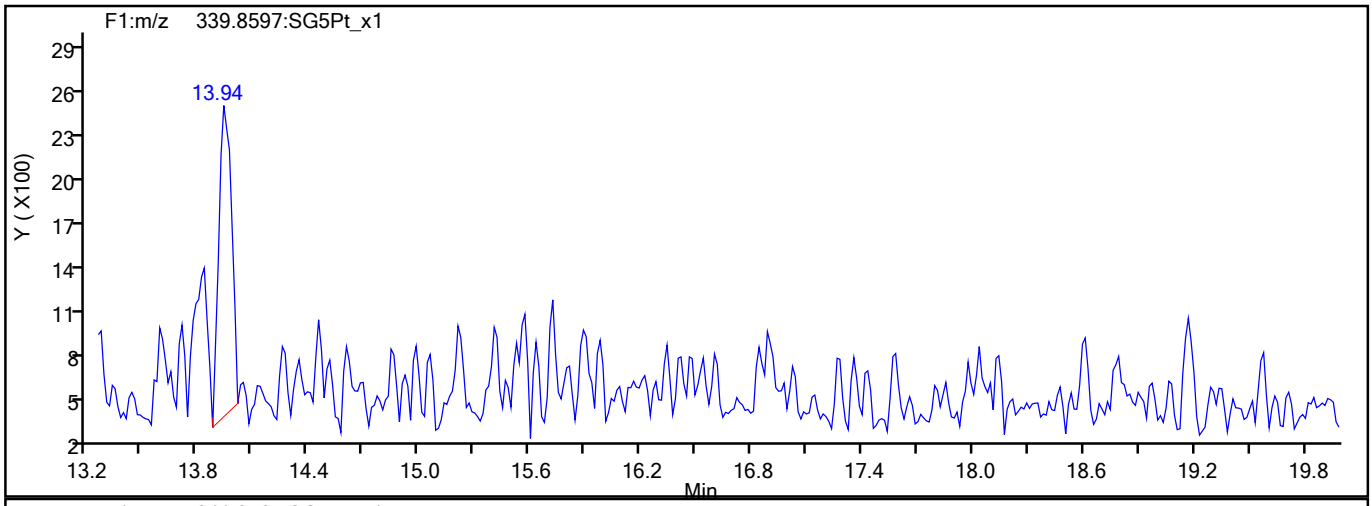

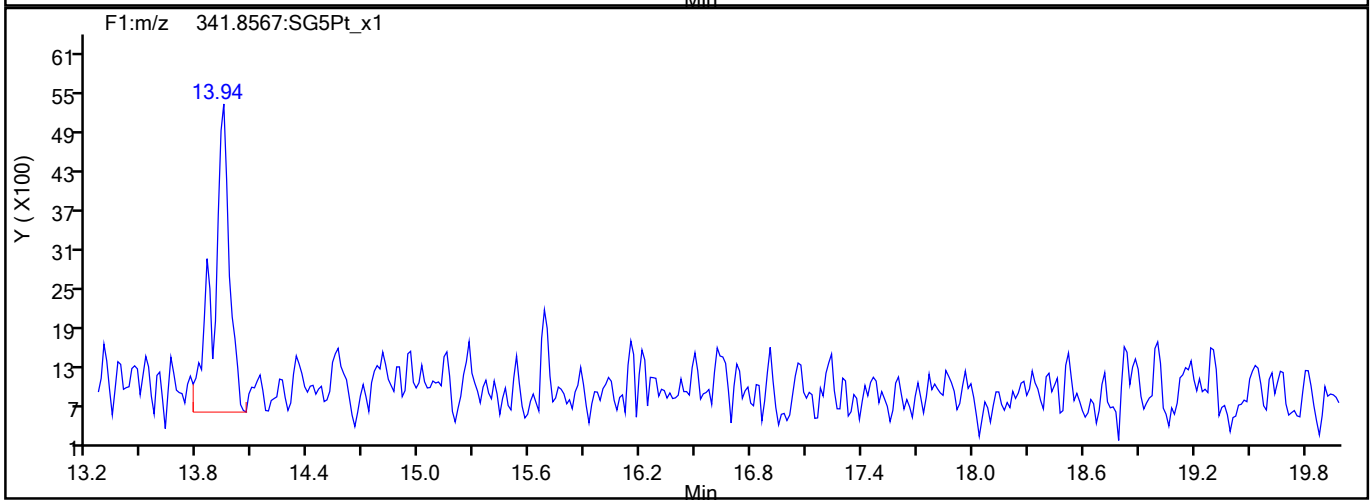

F1 PeCDFs Interference Mass

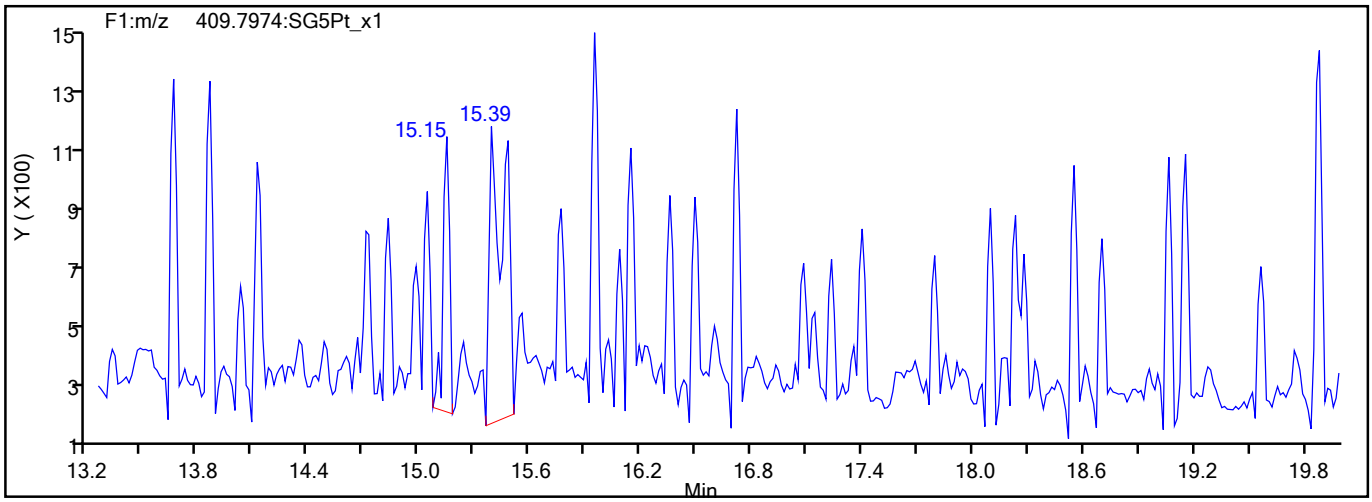

793427

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

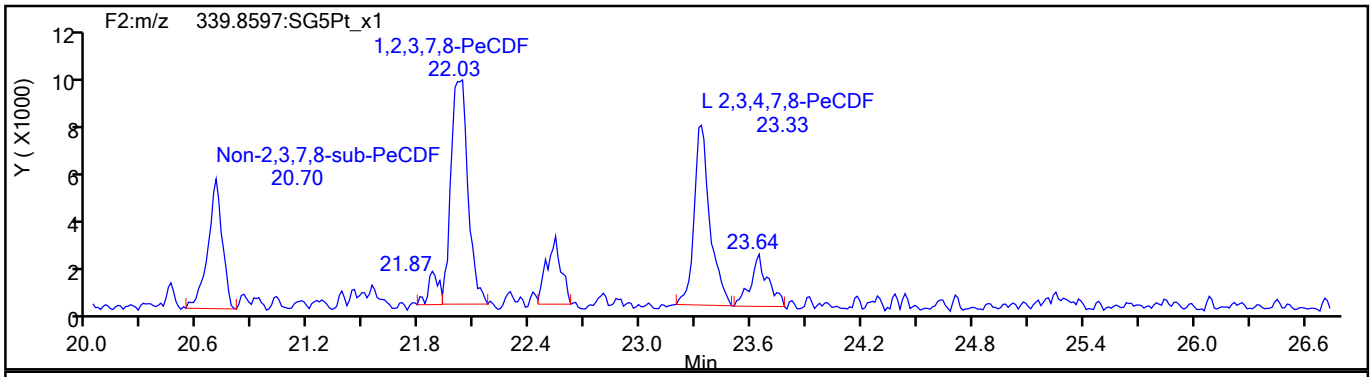

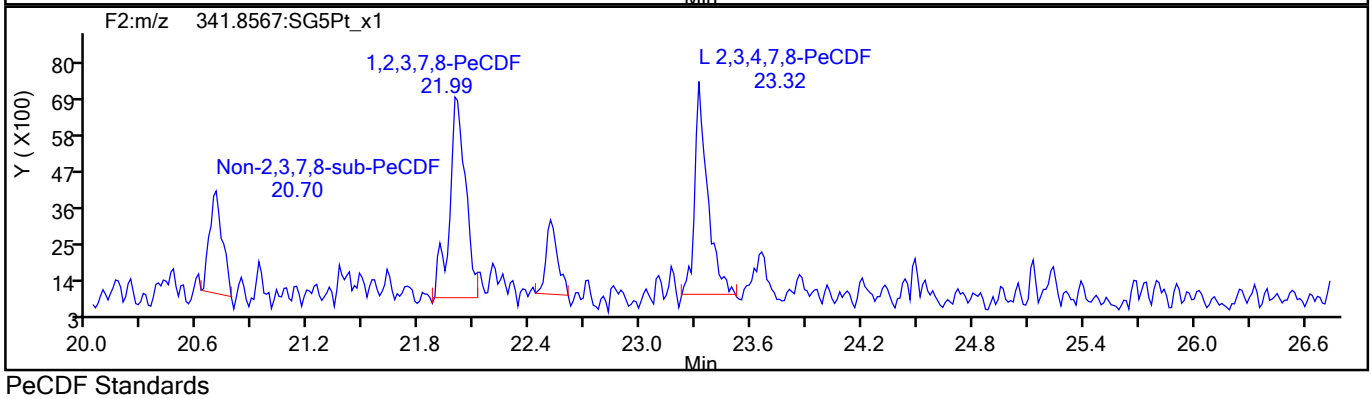

PeCDF Standards

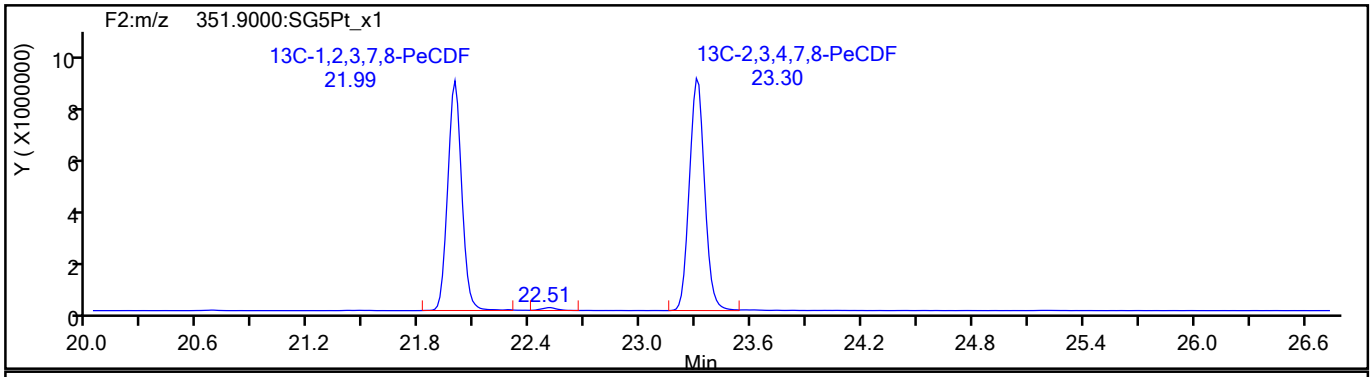

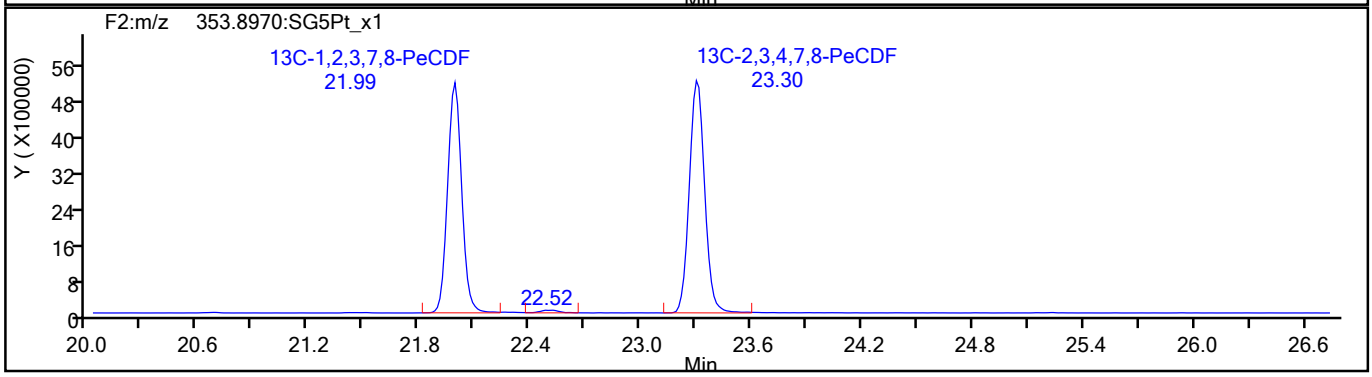

793428

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

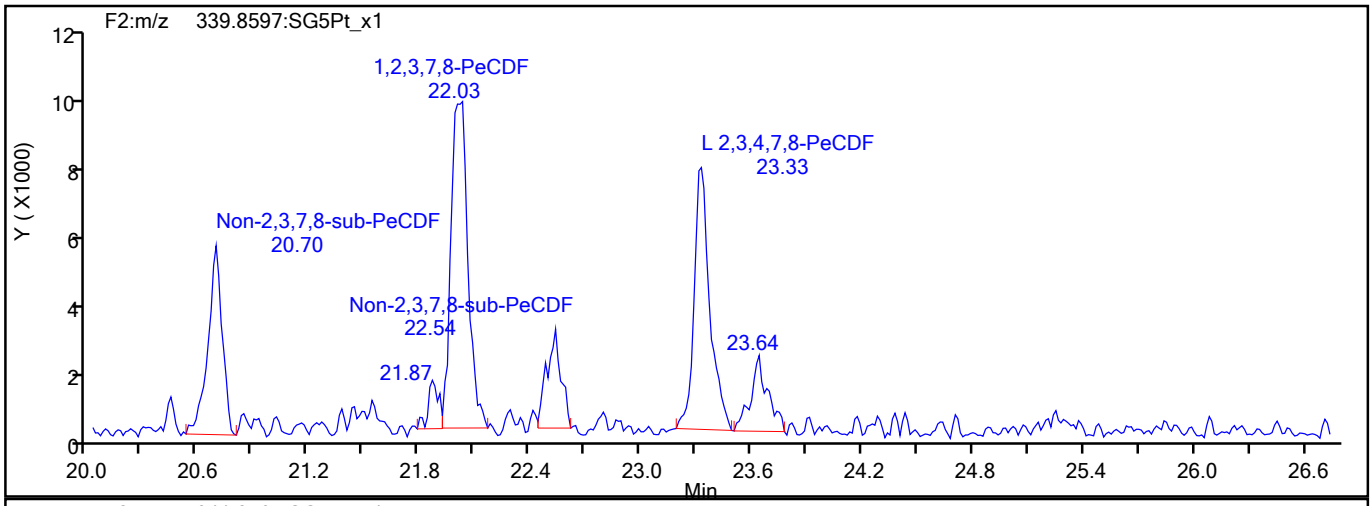

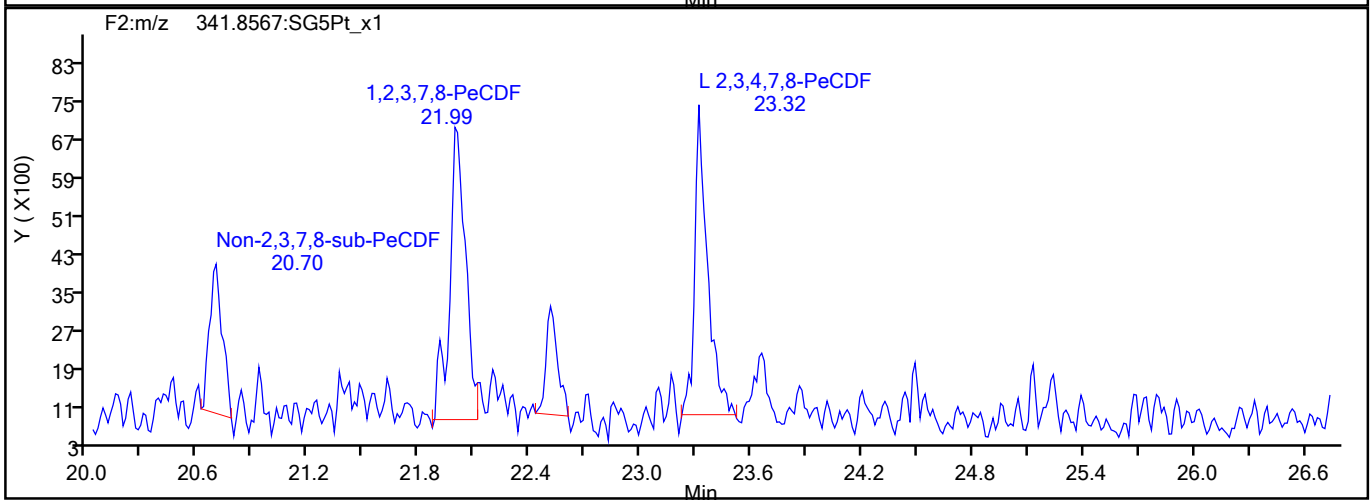

PeCDF Interference Mass

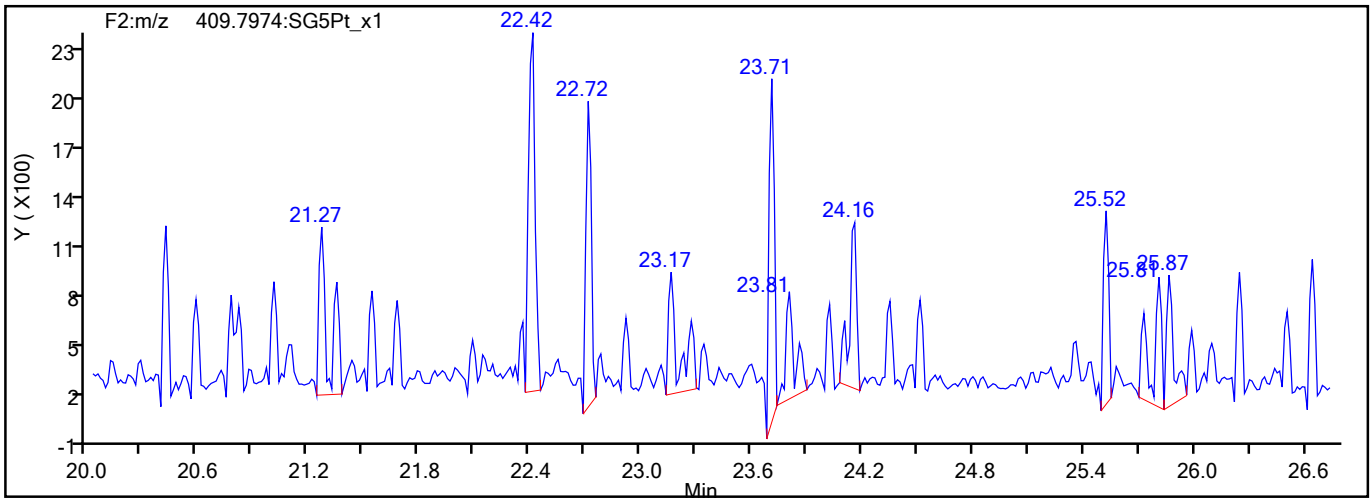

793429

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

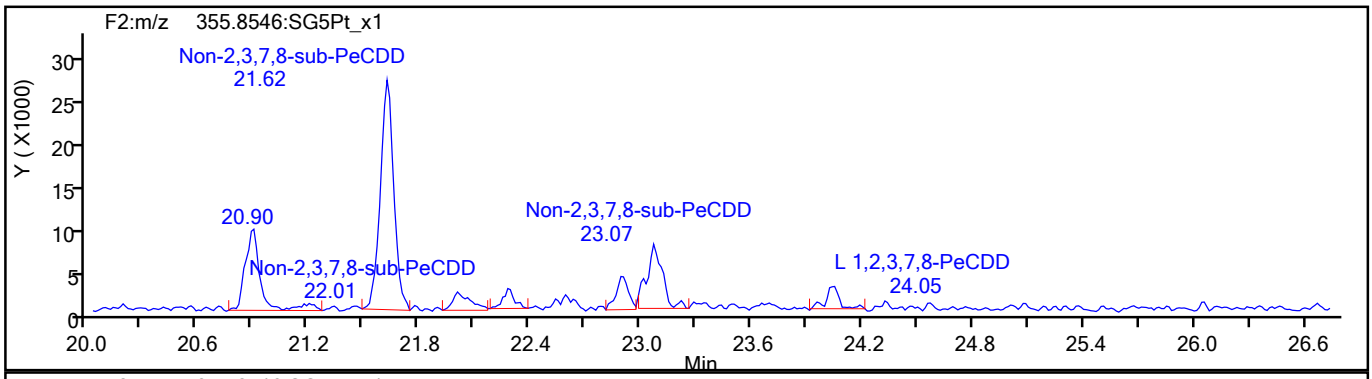

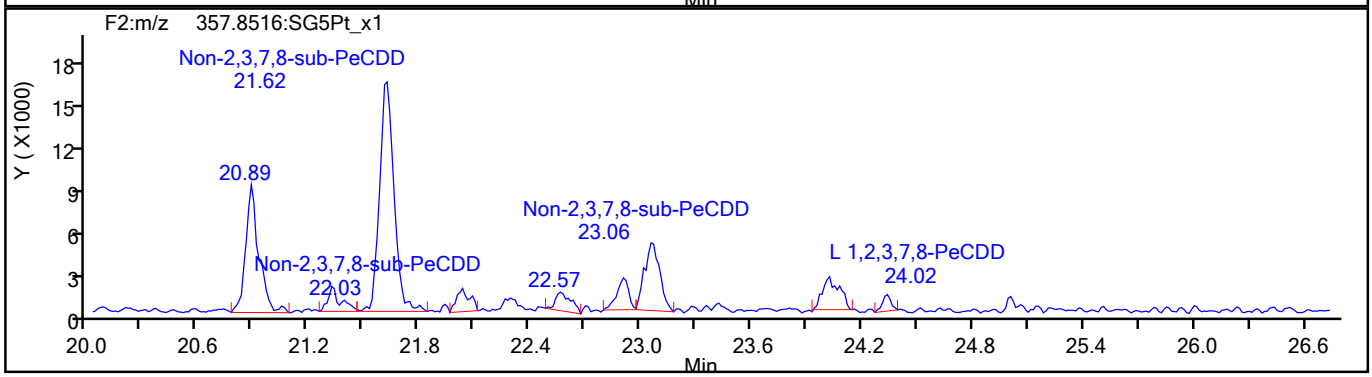

PeCDD Standards

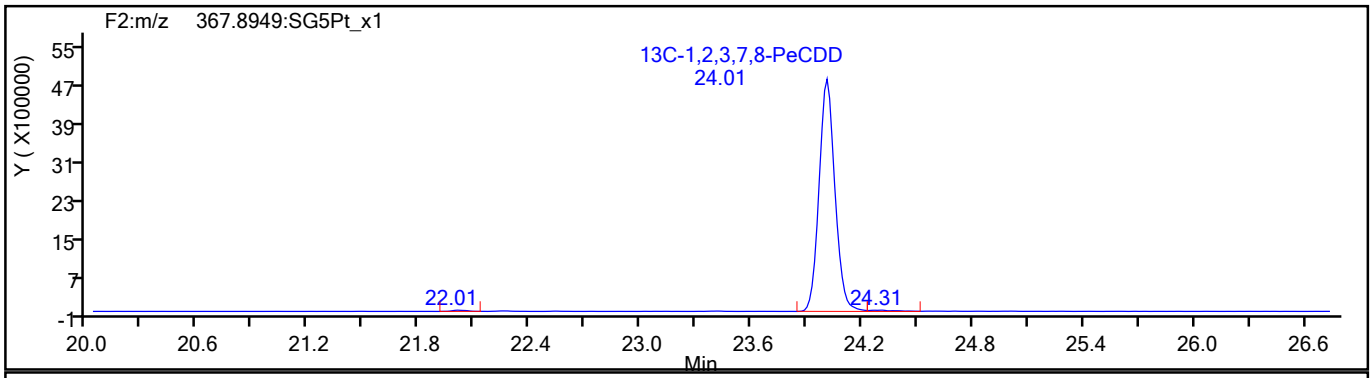

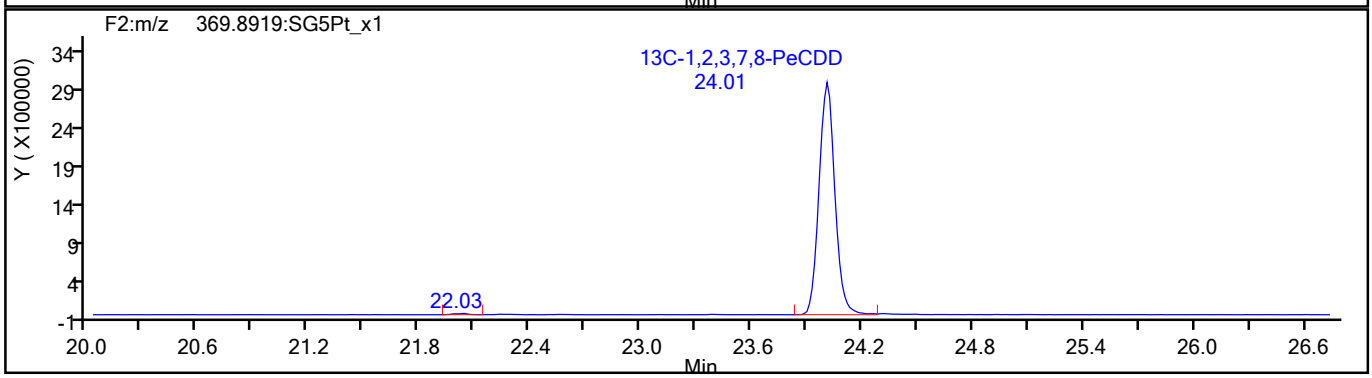

793430

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

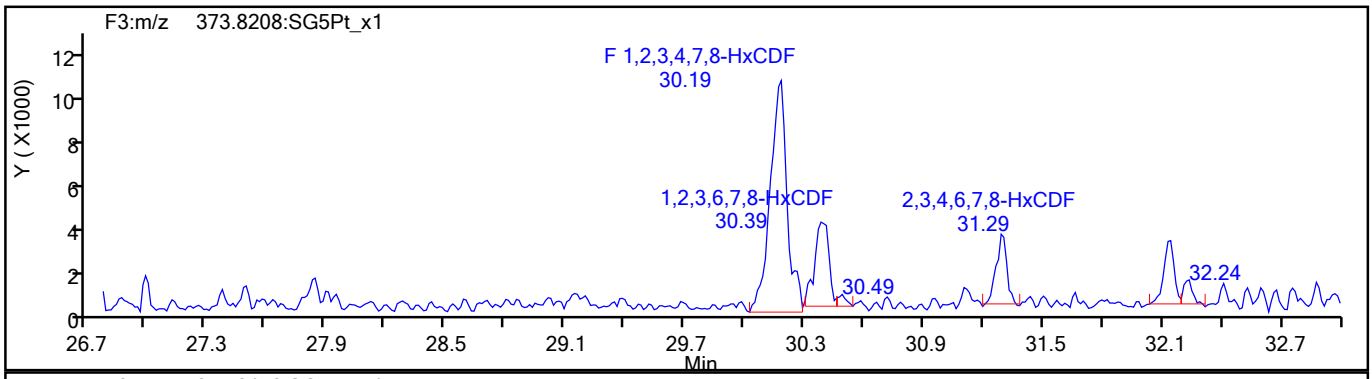

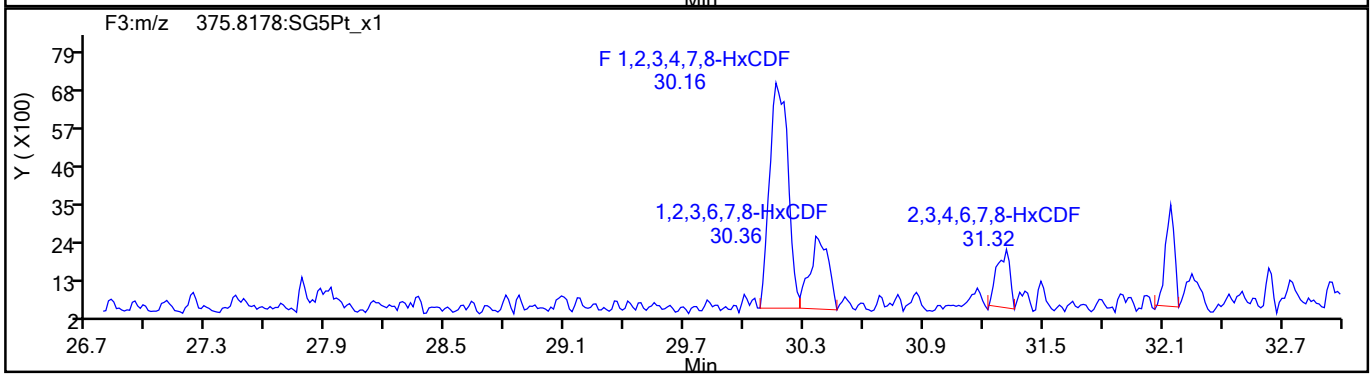

HxCDF Standards

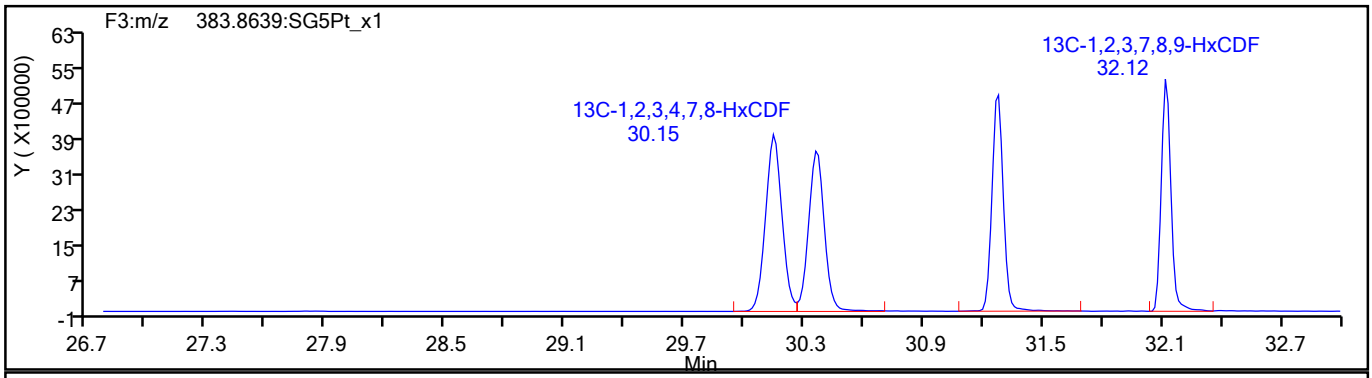

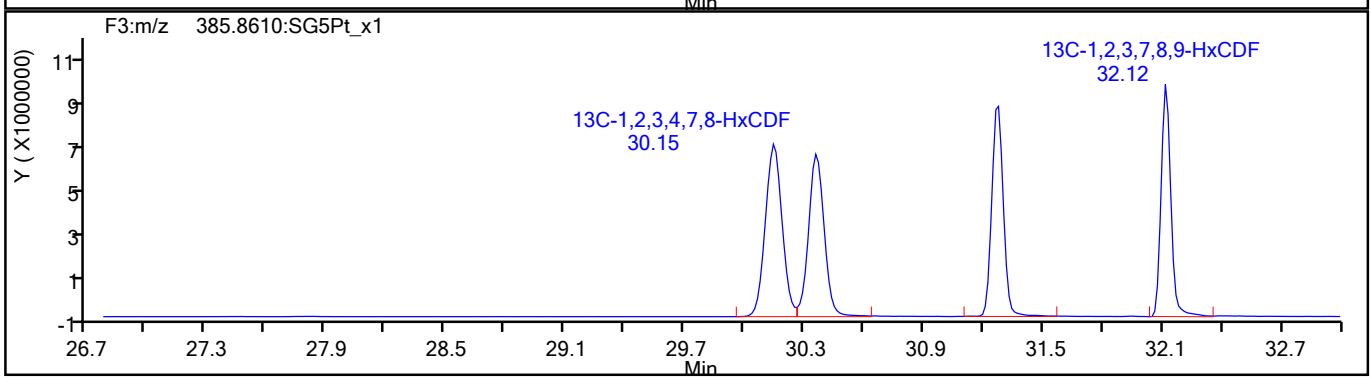

793431

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

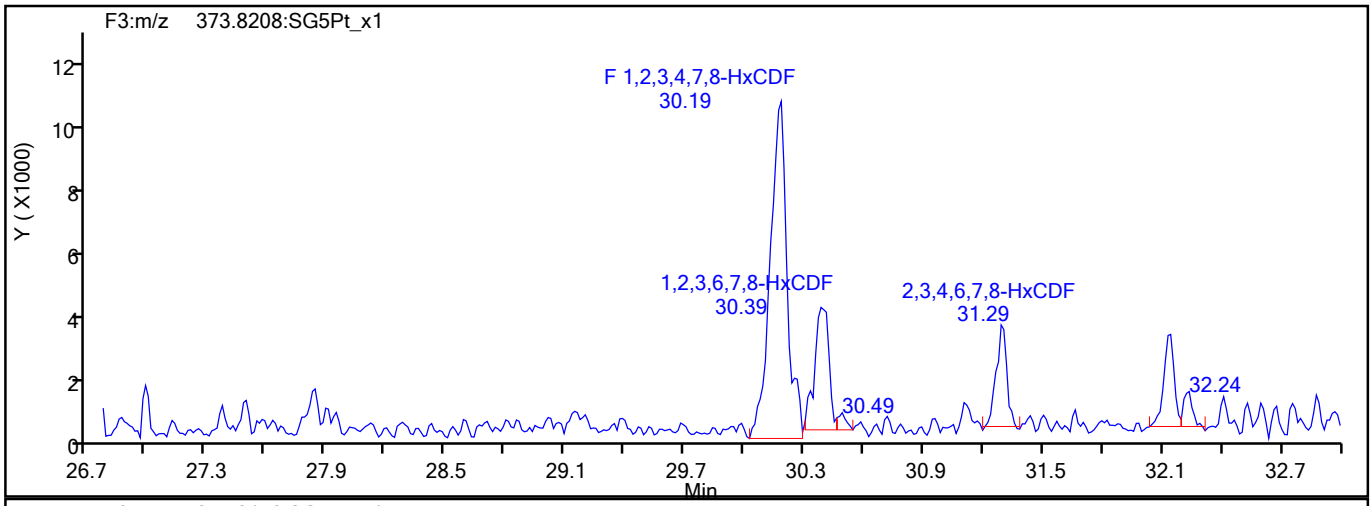

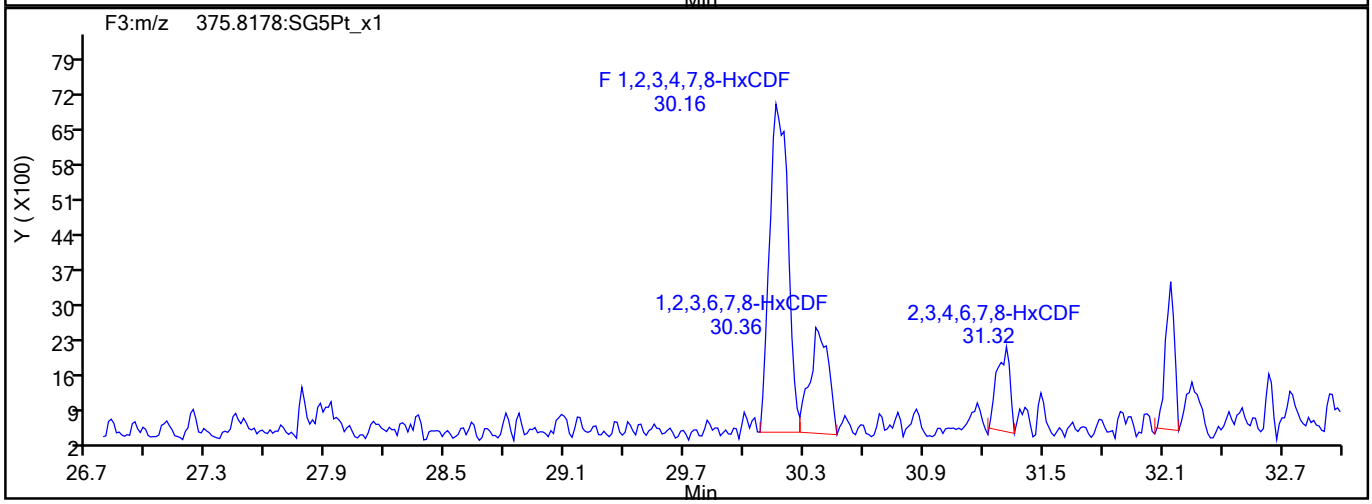

HxCDF Interference Mass

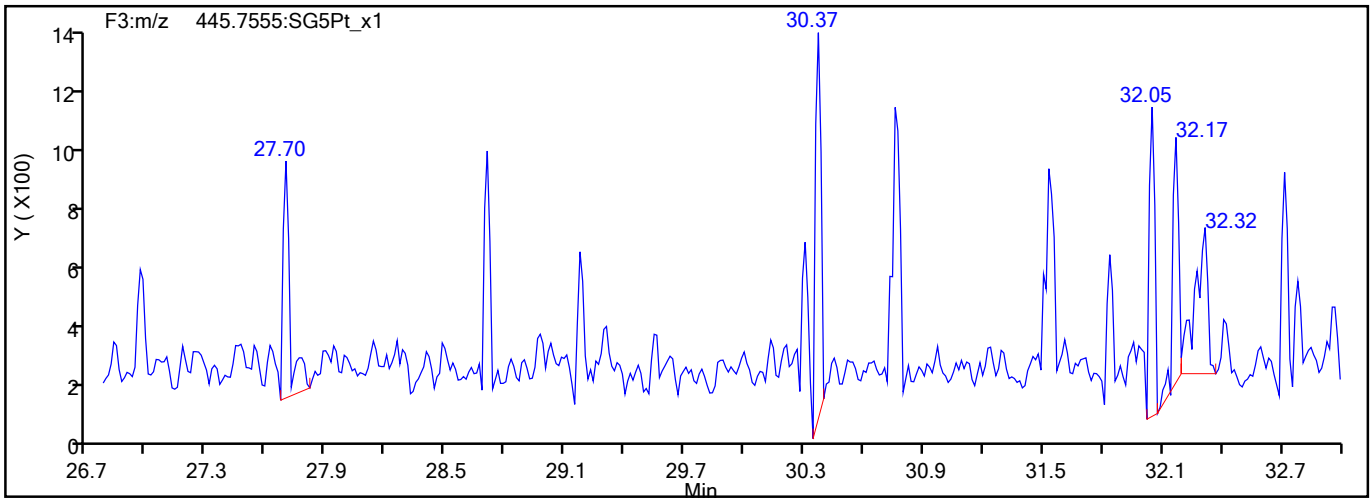

793432

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

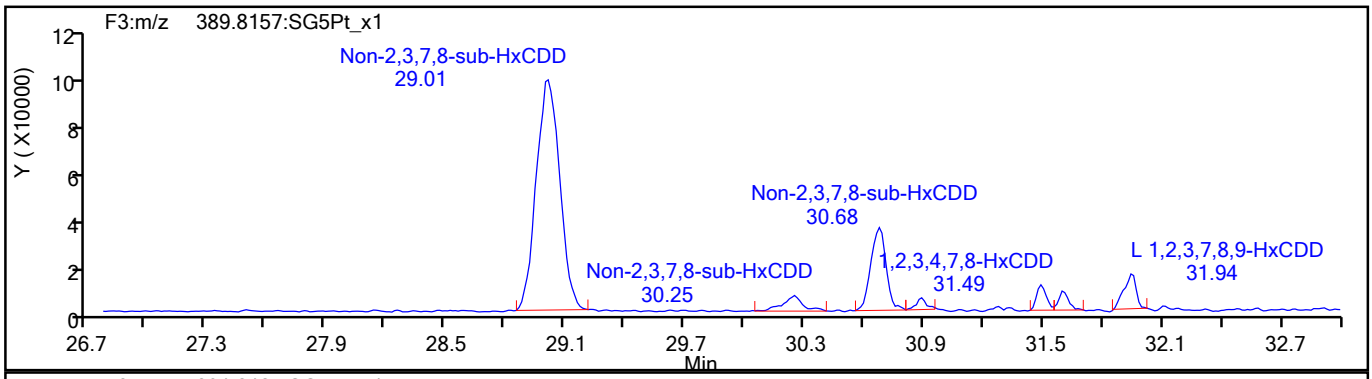

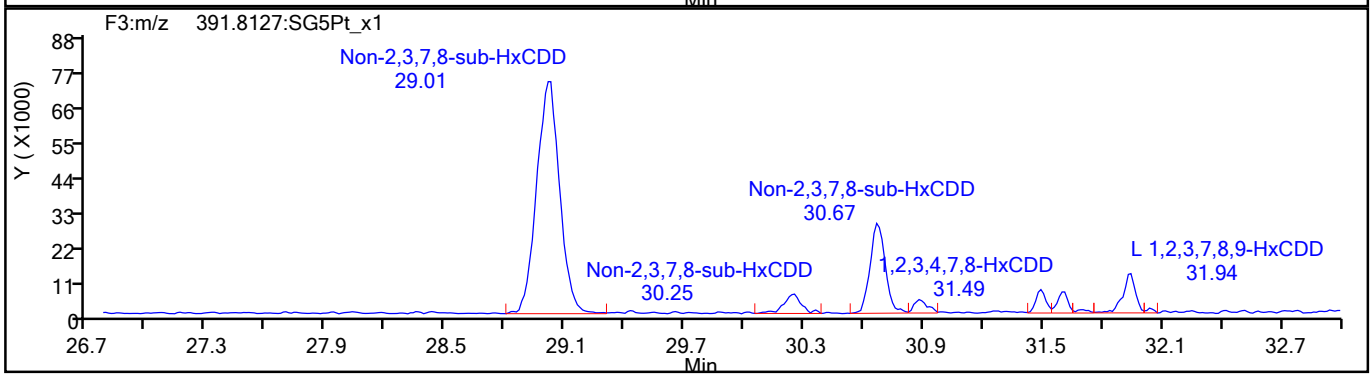

HxCDD Standards

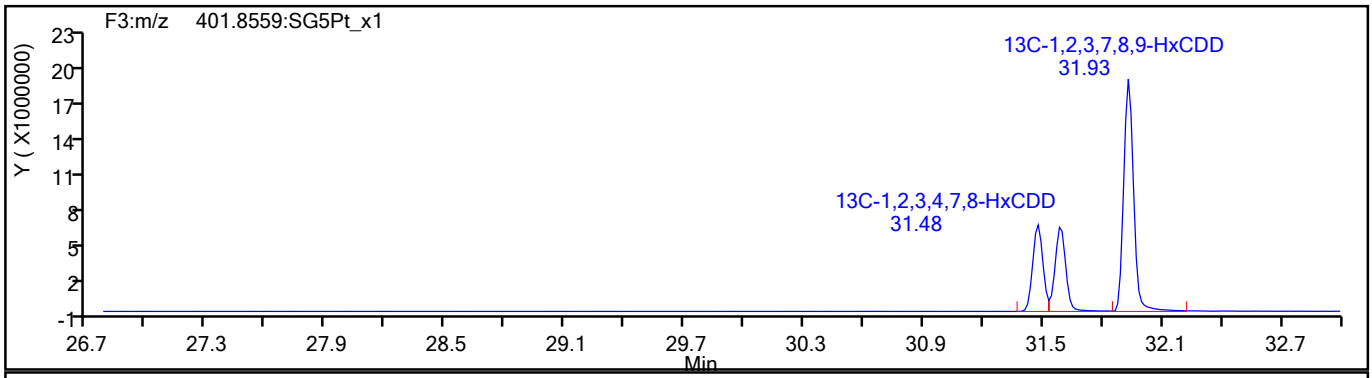

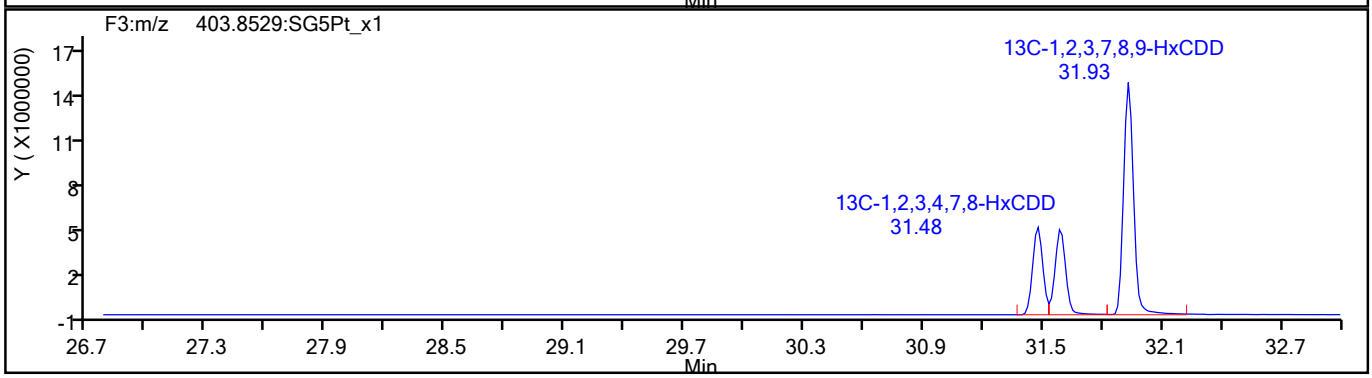

793433

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

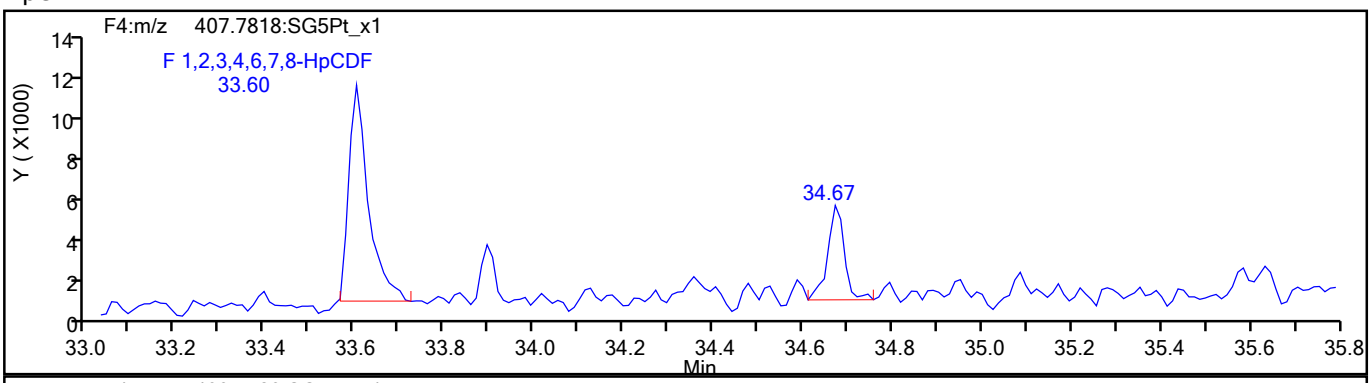

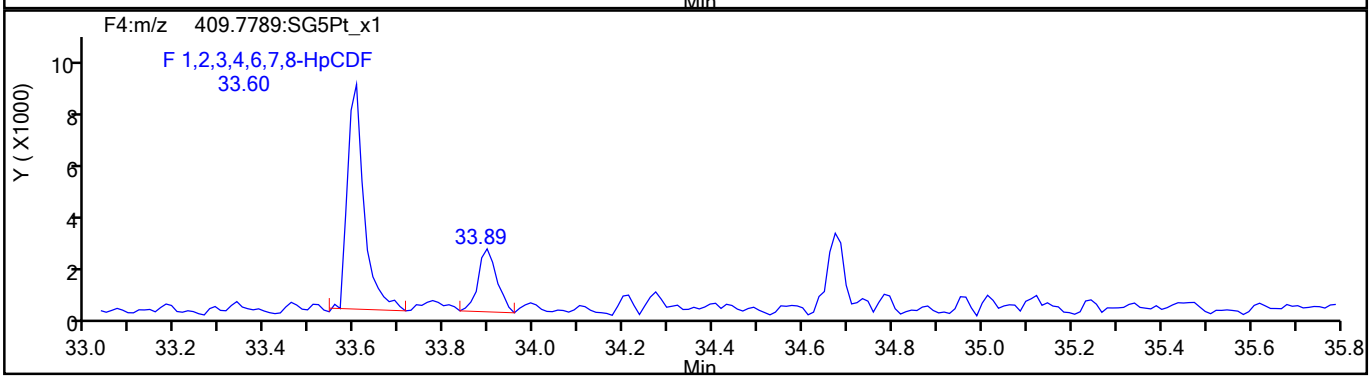

HpCDF Standards

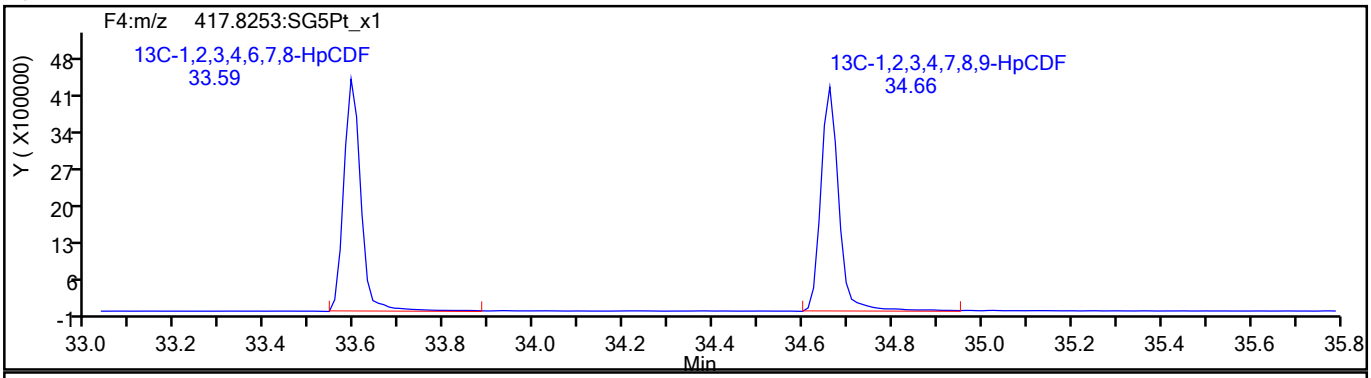

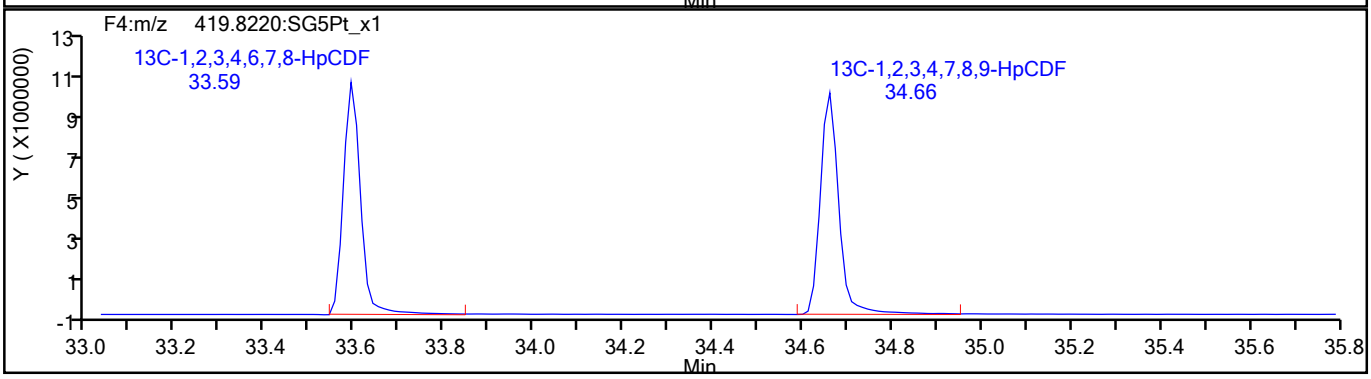

793434

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

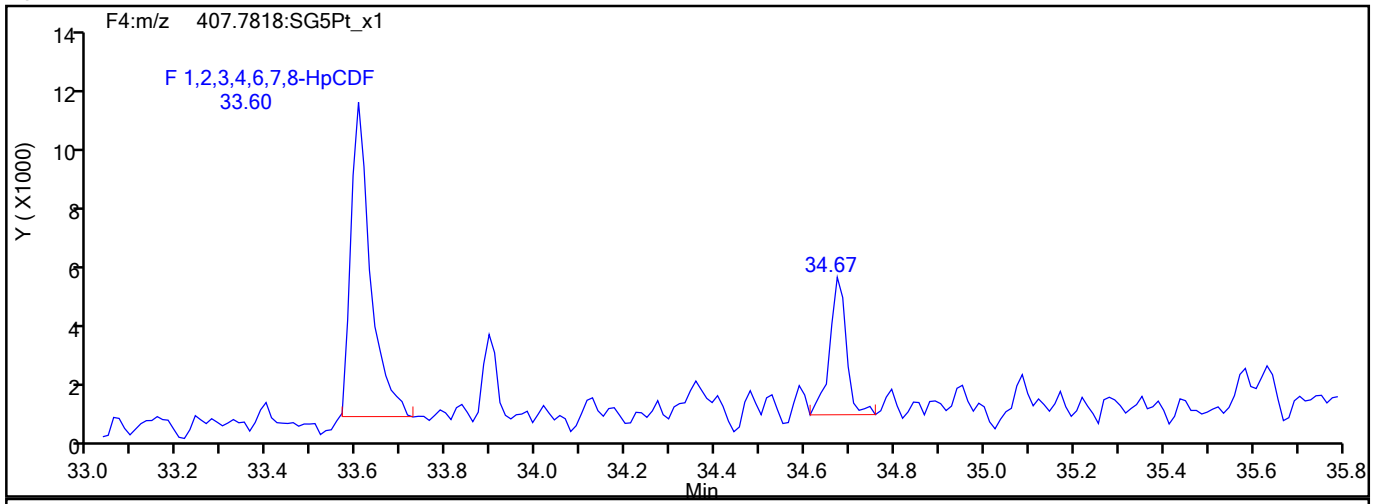

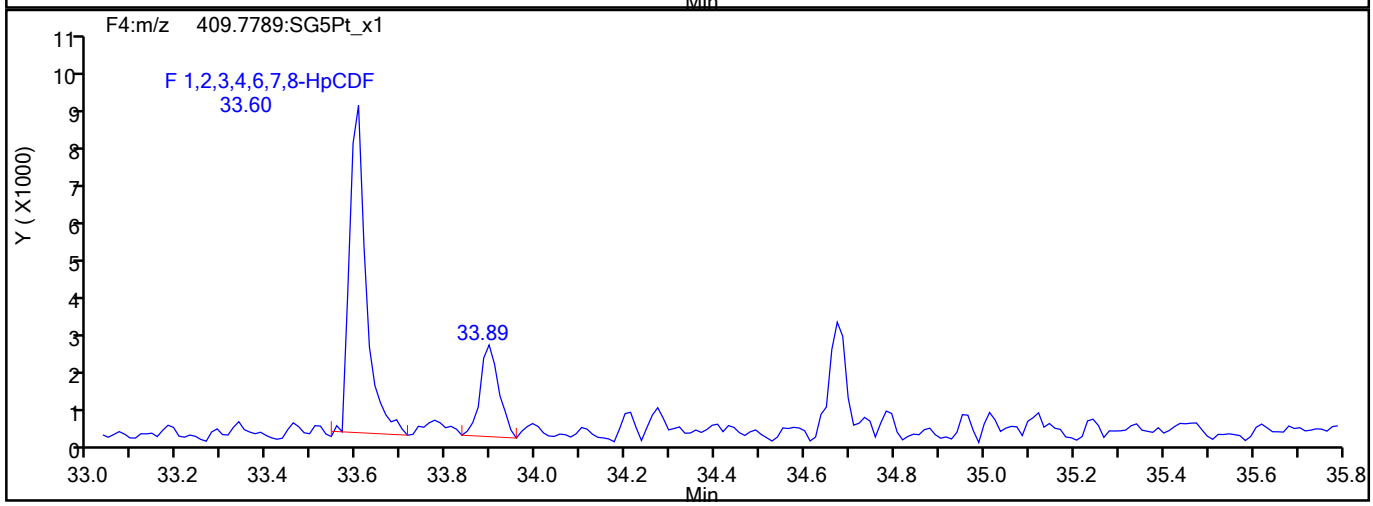

HpCDF Interference Mass

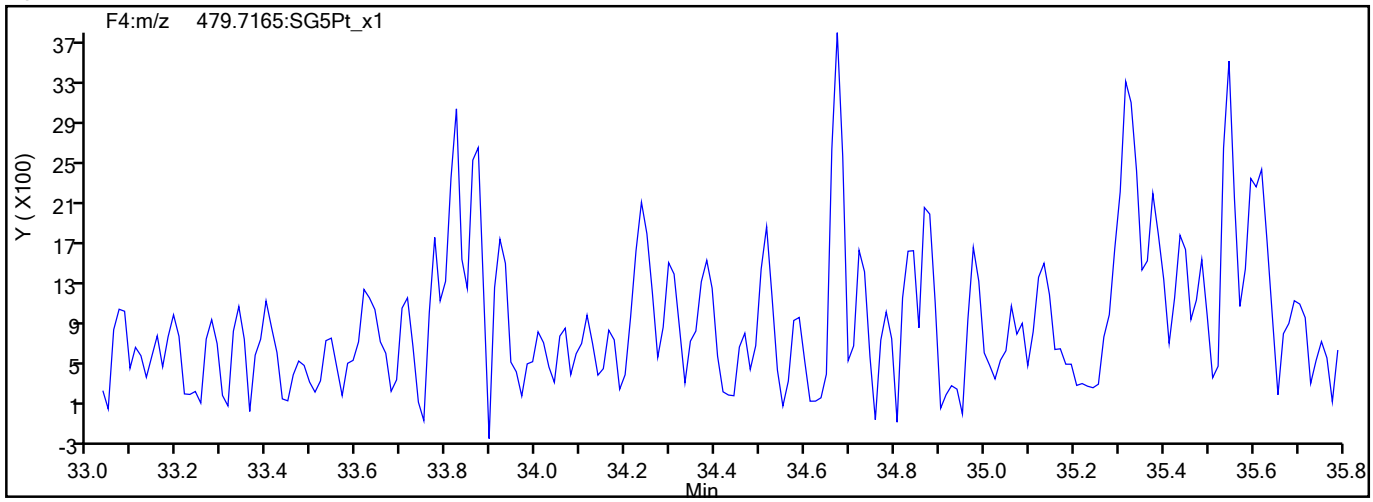

793435

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

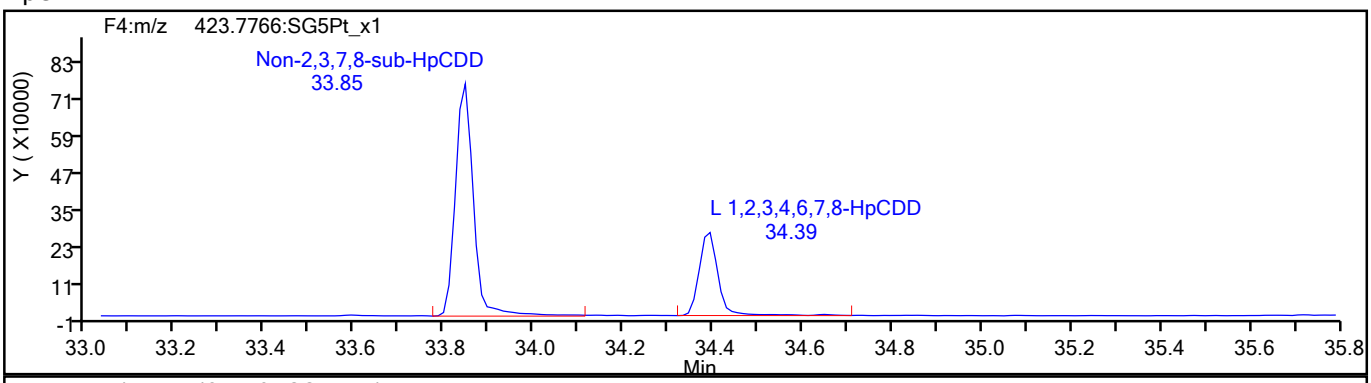

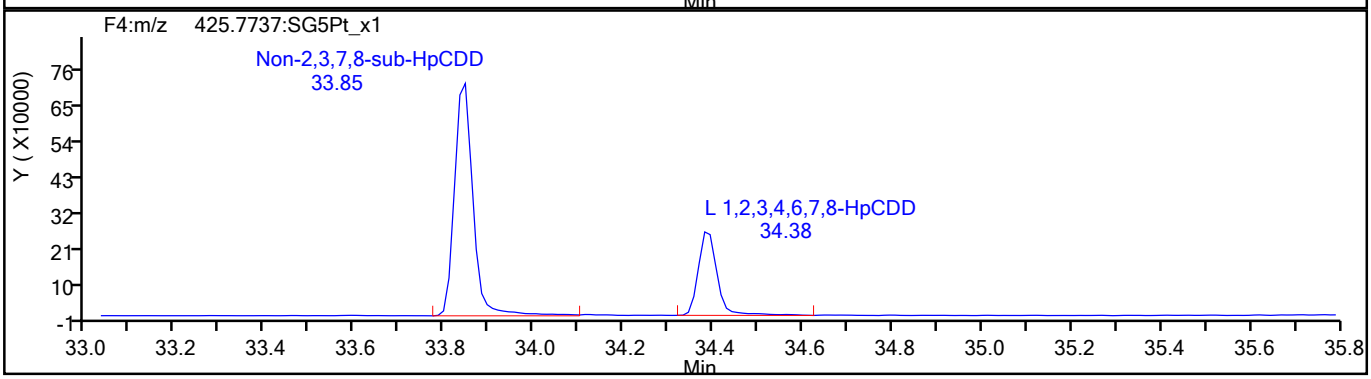

HpCDD Standards

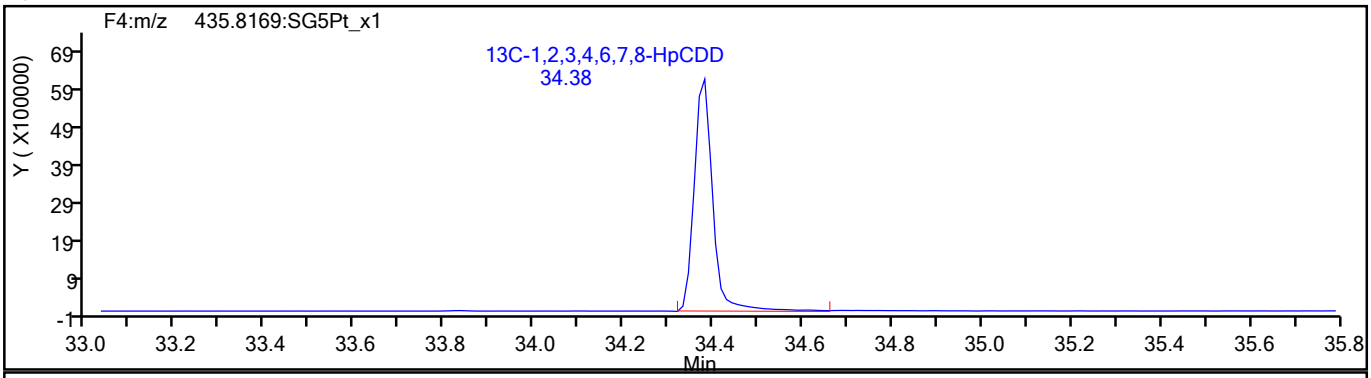

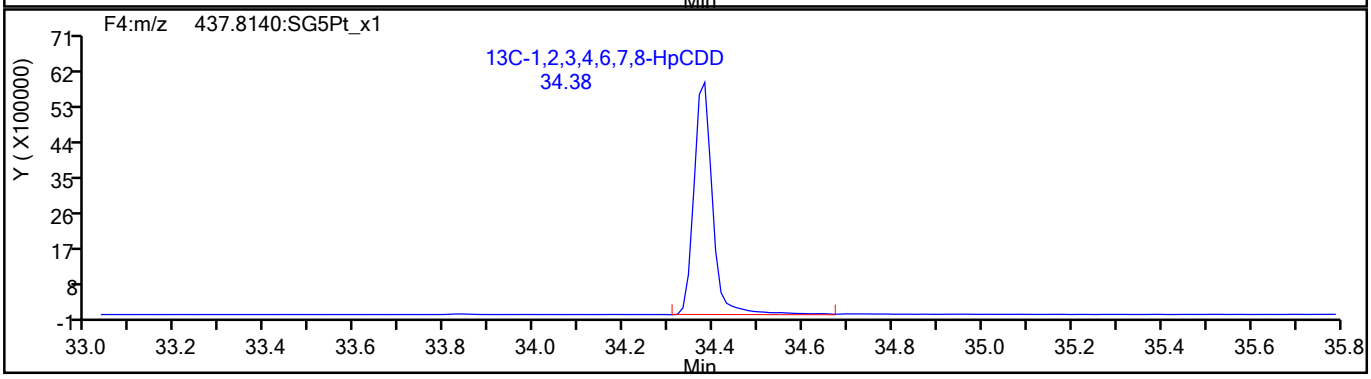

793436

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

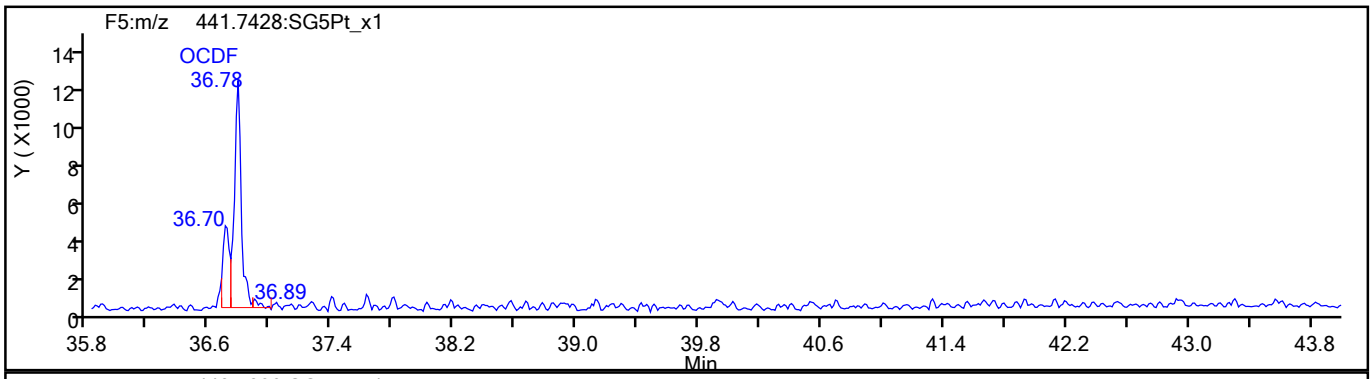

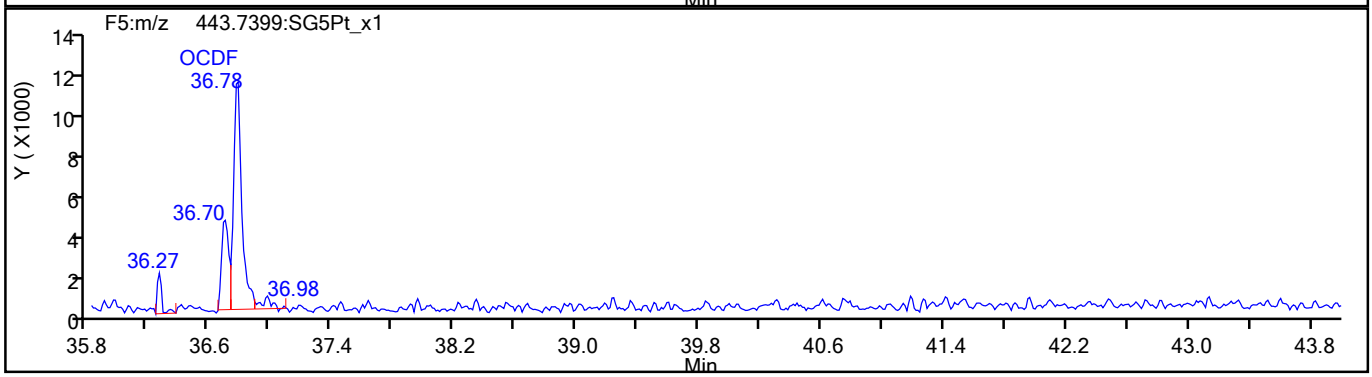

OCDF Standards

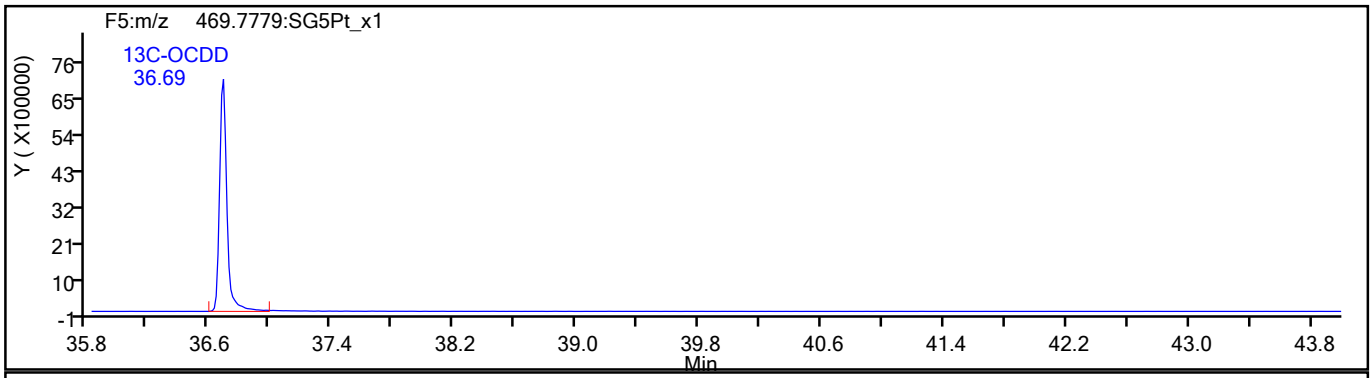

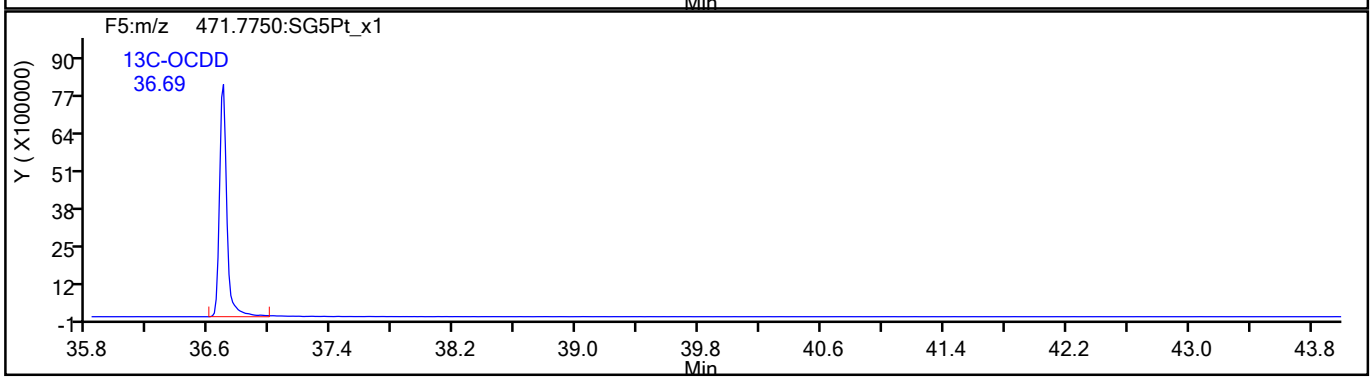

793437

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

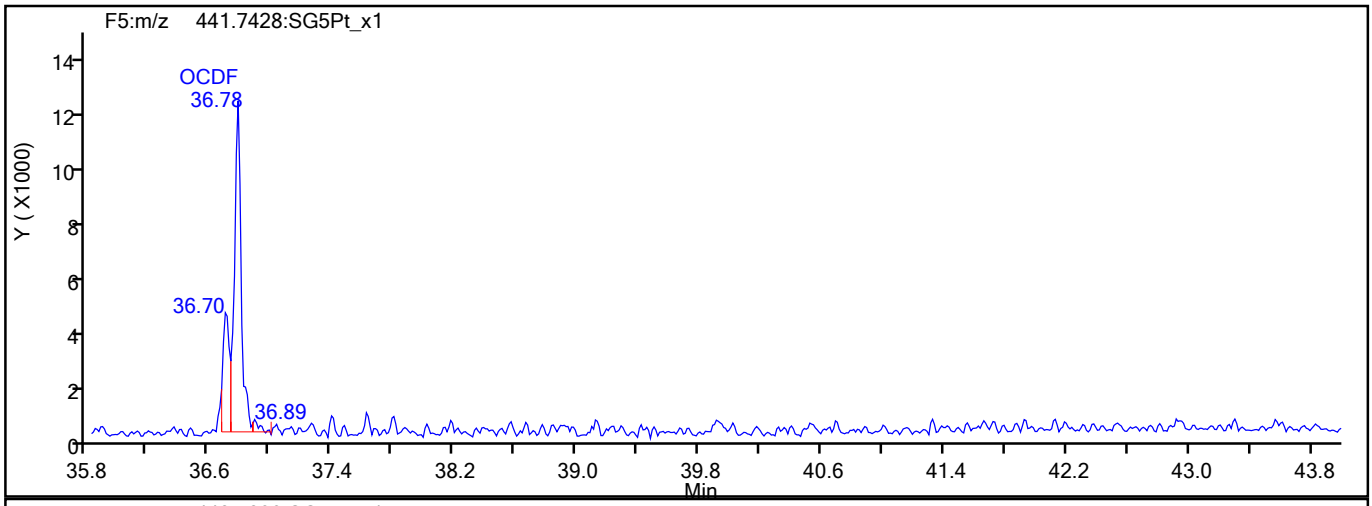

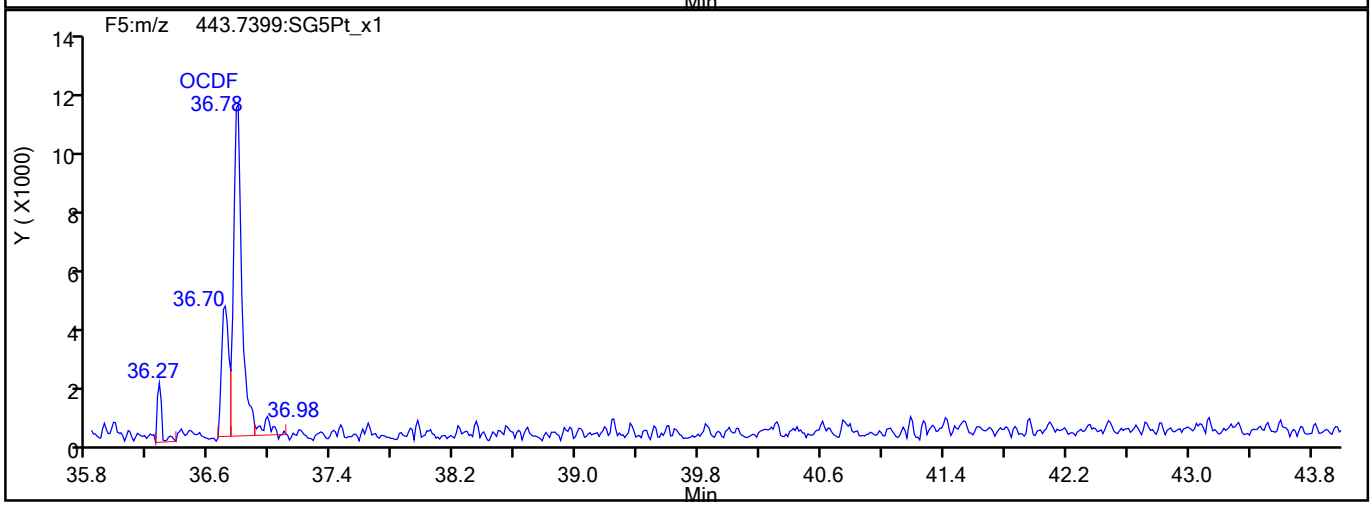

OCDF Interference Mass

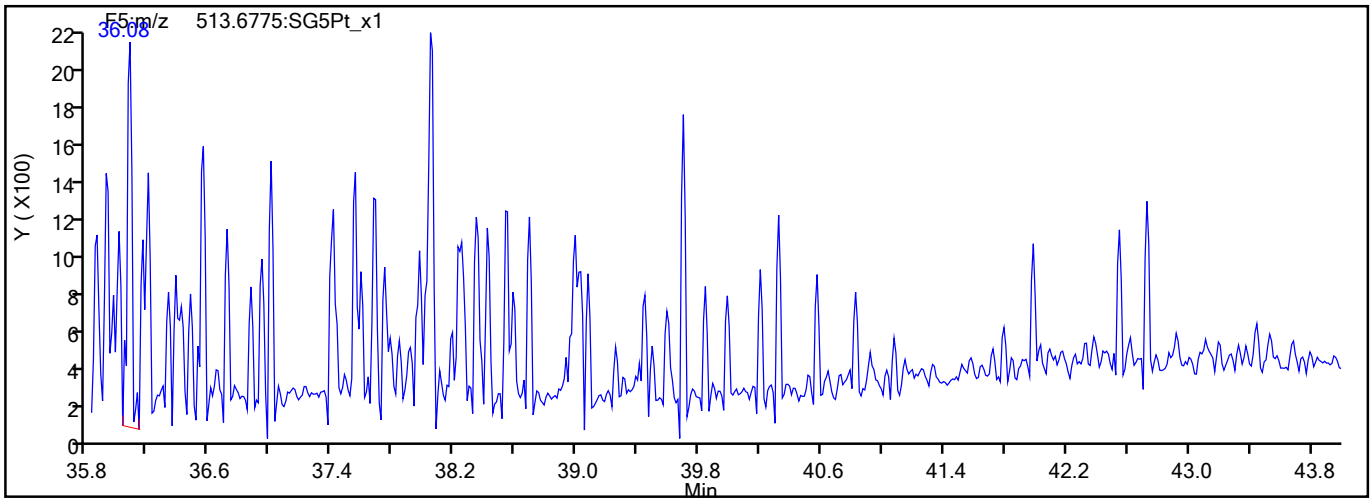

793438

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

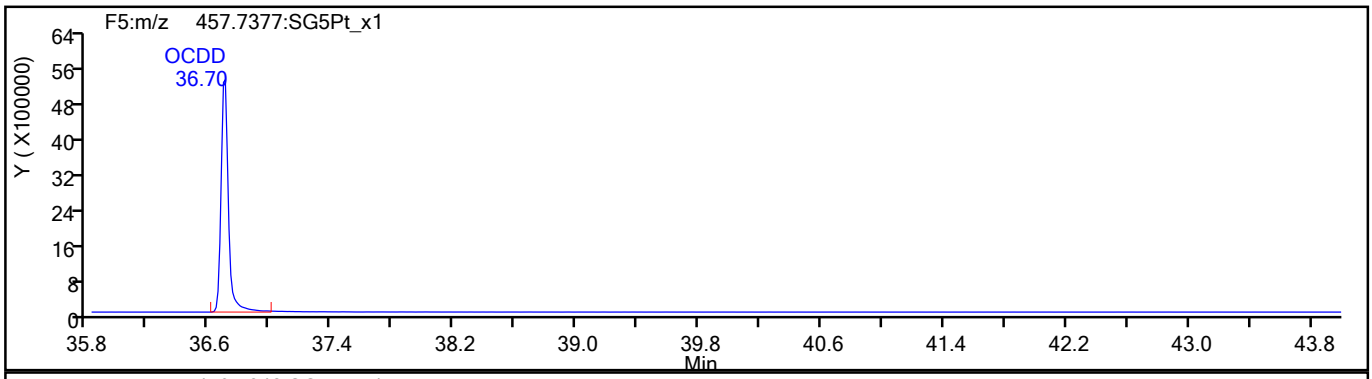

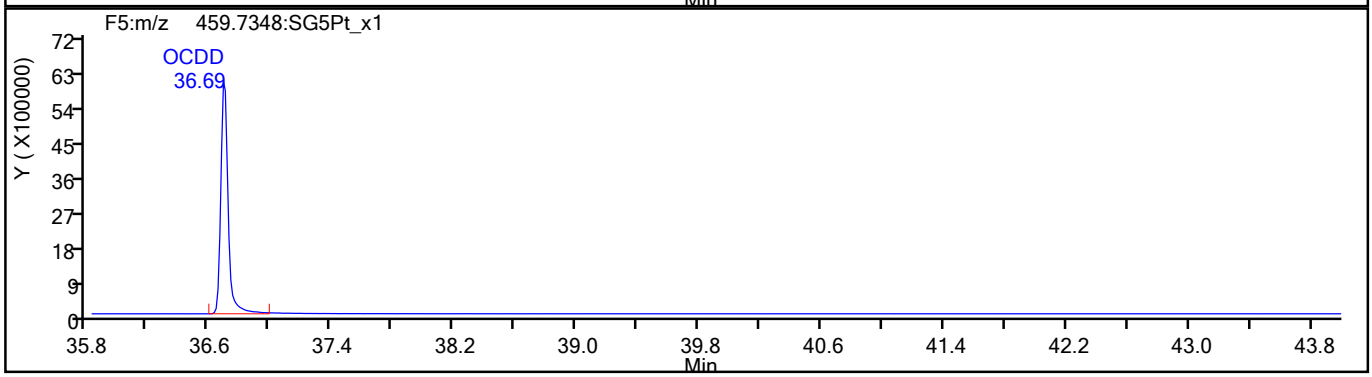

OCDD Standards

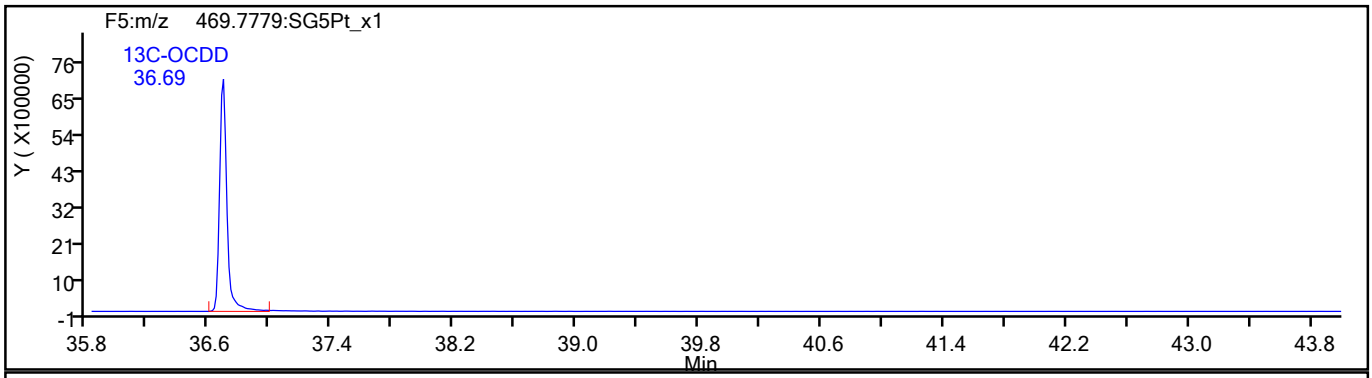

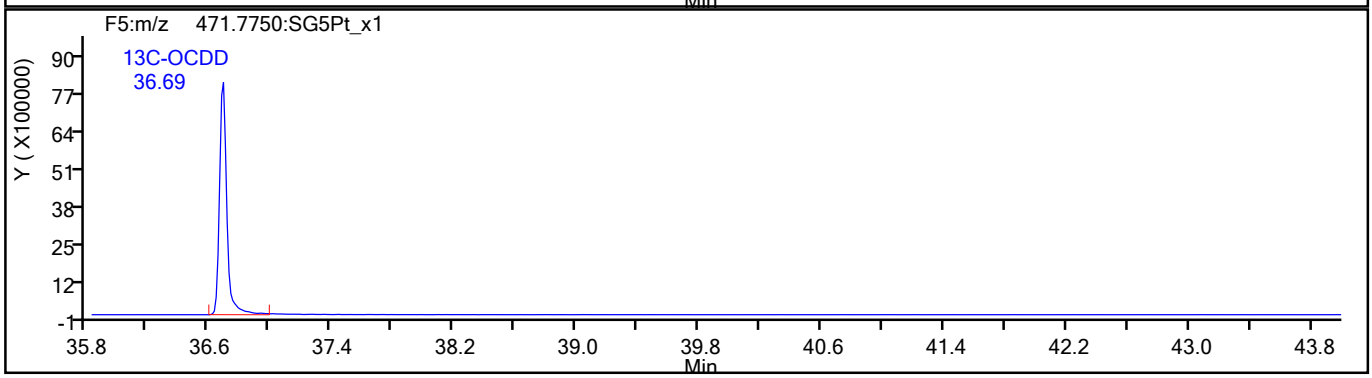

793439

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

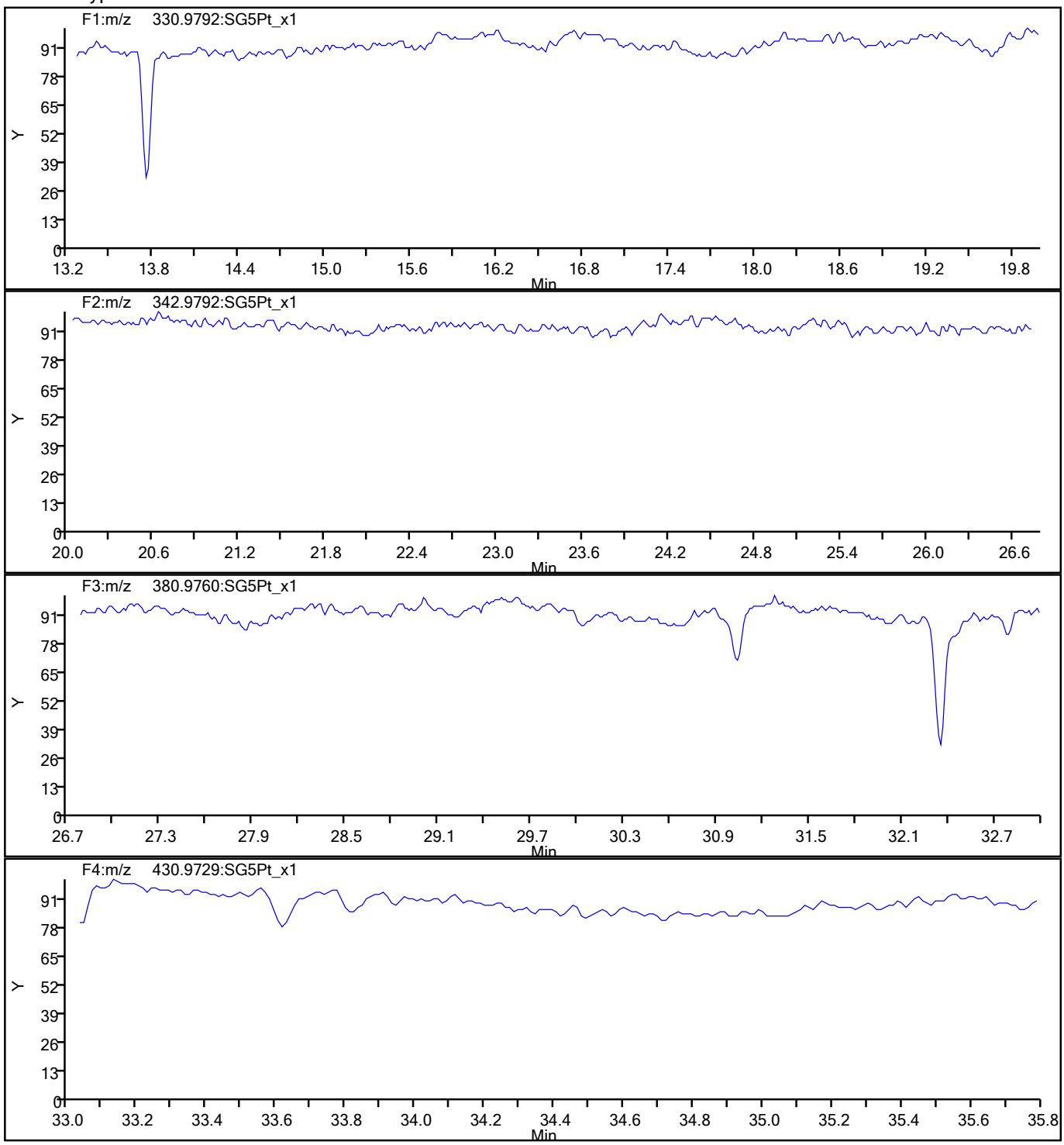

793440

Report Date: 27-Aug-2021 09:15:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_25.d		
Injection Date:	26-Aug-2021 04:20:43	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	519955	Sample Line#:	11
Column Type:	DB-5	Column Dia:	0.32 mm

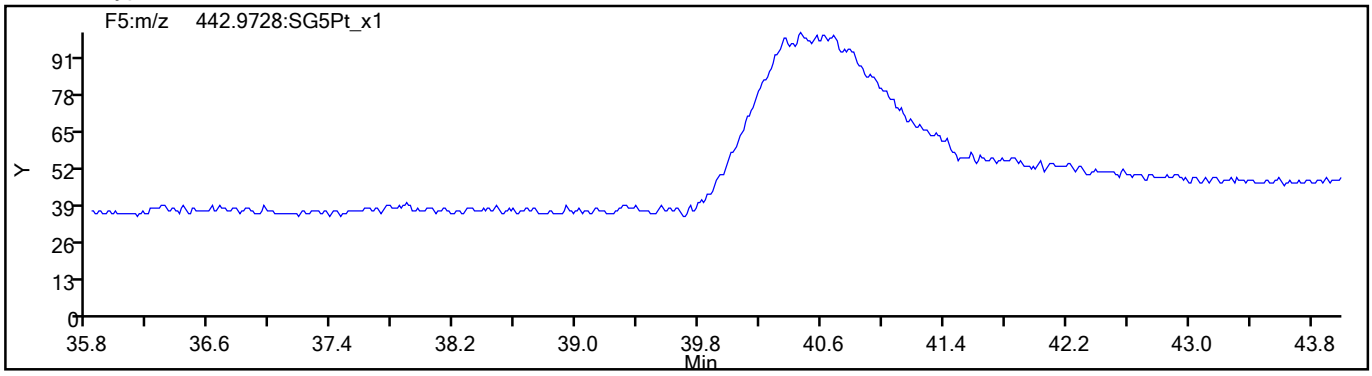

793441

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (4-6) RA
Lab Sample ID: 320-77292-3 RA
Matrix: Sediment
Lab File ID: 31AU2111D2_013.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:40
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.09(g)
Date Analyzed: 08/31/2021 20:53
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 21.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520997
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	14	B	1.3	0.71

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	49		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	70		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_013.d
Lims ID: 320-77292-A-3-A
Client ID: 11215702-080321-BN-SJSB091 (4-6)
Sample Type: Client
Inject. Date: 31-Aug-2021 20:53:50 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-3-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:42:36

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.291	39025605	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.621	25393532	0.84	1.3327	48.8	48.8	0.4665	0.4665	48.83	
2,3,7,8-TCDF	17.635	1449399	0.77	0.9978	5.720	5.720	0.2822	0.2822		M
D 13C-2,3,7,8-TCDD	16.057	16238119	0.78	0.8749	47.6	47.6	0.8123	0.8123	47.56	
2,3,7,8-TCDD	16.099	262898	0.65	1.0570	1.532	1.532	0.3035	0.3035		
$ 37Cl4-2,3,7,8-TCDD	16.085	9413073		0.8648	27.9	27.9	0.1210	0.1210	69.73	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_013.d
Lims ID: 320-77292-A-3-A
Client ID: 11215702-080321-BN-SJSB091 (4-6)
Sample Type: Client
Inject. Date: 31-Aug-2021 20:53:50 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-3-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:42:36

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.291	16.275	1		17167275	3780383	15647	39117	242		
333.9339	16.291	16.275	1		21858330	4700294	8461	21152	556	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.621	17.605	1	1.082	11599539	2083675	8299	20747	251		
317.9389	17.607	17.605	0	1.081	13793993	2542994	12789	31972	199	0.84(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.635	17.619	1	1.001	631295	108567	1333	3332	81		M
305.8987	17.635	17.619	1	1.001	818104	174595	3879	9697	45	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.057	16.055	0	0.986	7090051	1646389	15647	39117	105		
333.9339	16.071	16.055	1	0.987	9148068	2239004	8461	21152	265	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.099	16.069	2	1.003	104038	22166	3043	7607	7		
321.8936	16.085	16.069	1	1.002	158860	35713	1943	4857	18	0.65(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.085	16.069	1	0.987	9413073	2057883	3550	8875	580		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

793444

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_013.d				
Injection Date:	31-Aug-2021 20:53:50	Instrument ID:	11D2		
Lims ID:	320-77292-A-3-A	Lab Sample ID:	320-77292-3		
Client ID:	11215702-080321-BN-SJSB091 (4-6)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.63
Area: 643272
Amount: 5.767564
Amount Units: pg/ul

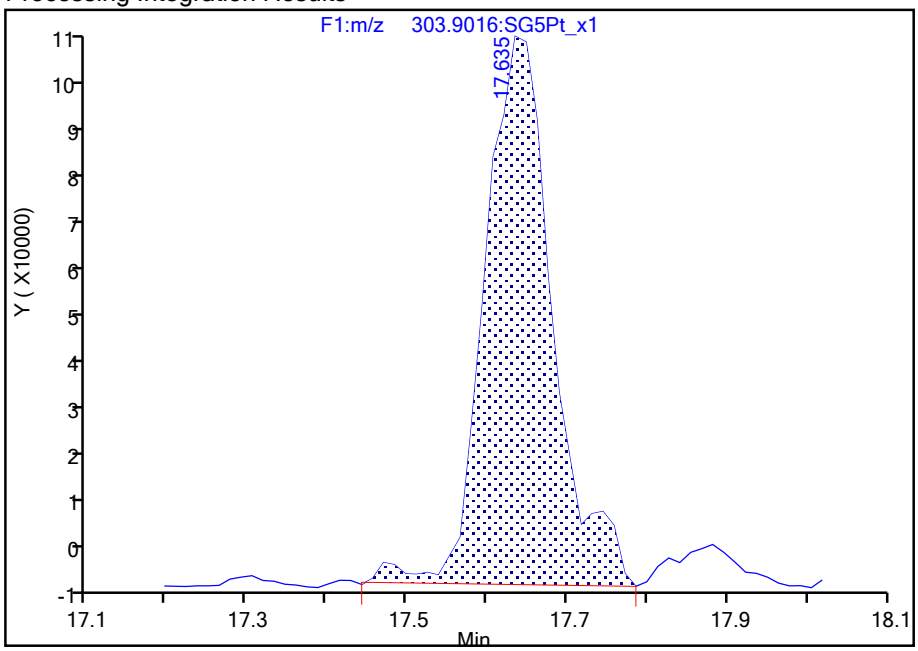

Manual Integration Results

RT: 17.63
Area: 631295
Amount: 5.720295
Amount Units: pg/ul

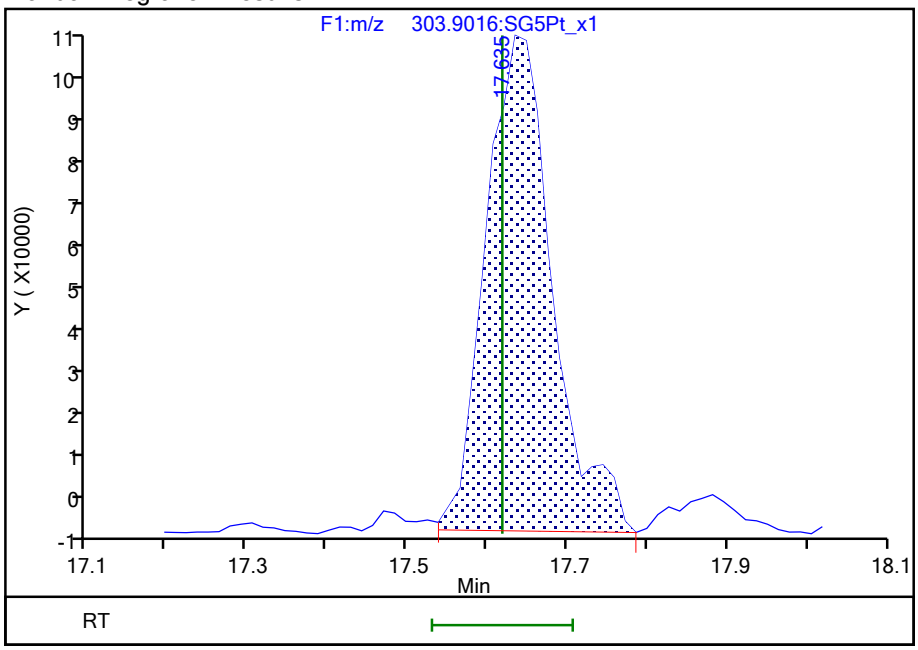

Reviewer: bennettd, 01-Sep-2021 09:42:30

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 01-Sep-2021 09:57:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_013.d		
Injection Date:	31-Aug-2021 20:53:50	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	520997	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

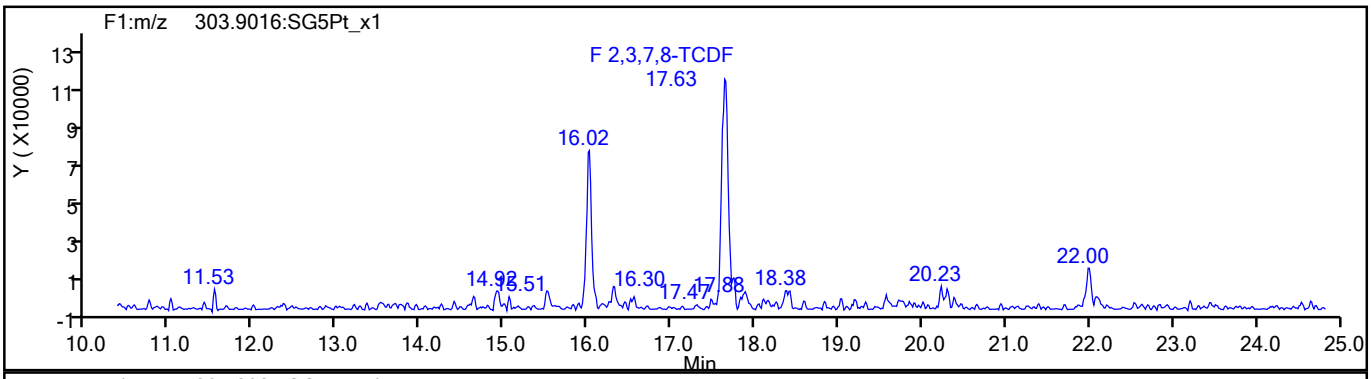

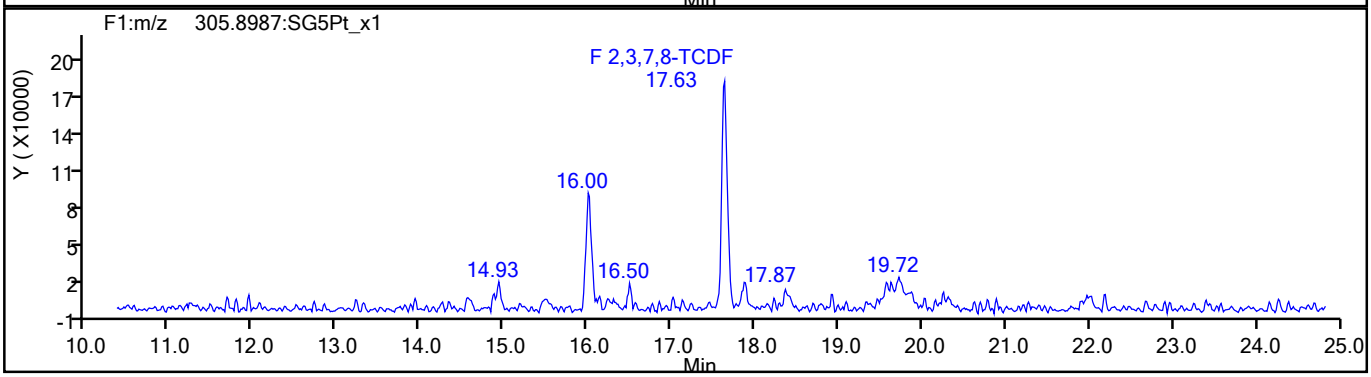

TCDF Standards

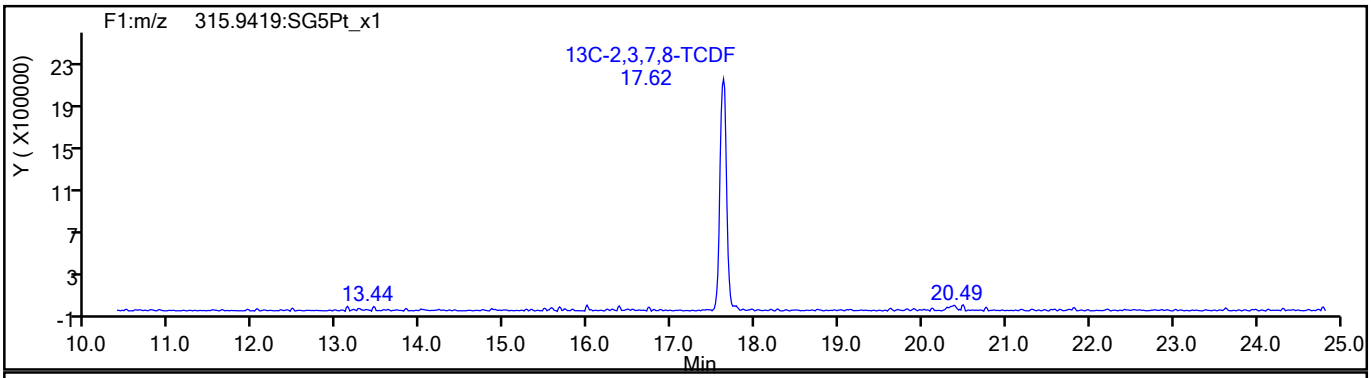

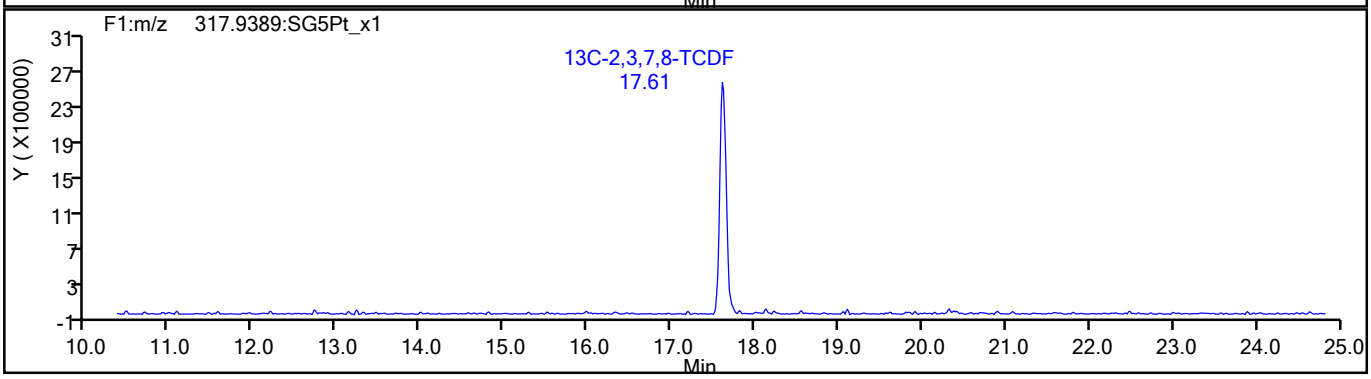

793446

Report Date: 01-Sep-2021 09:57:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_013.d		
Injection Date:	31-Aug-2021 20:53:50	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	520997	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

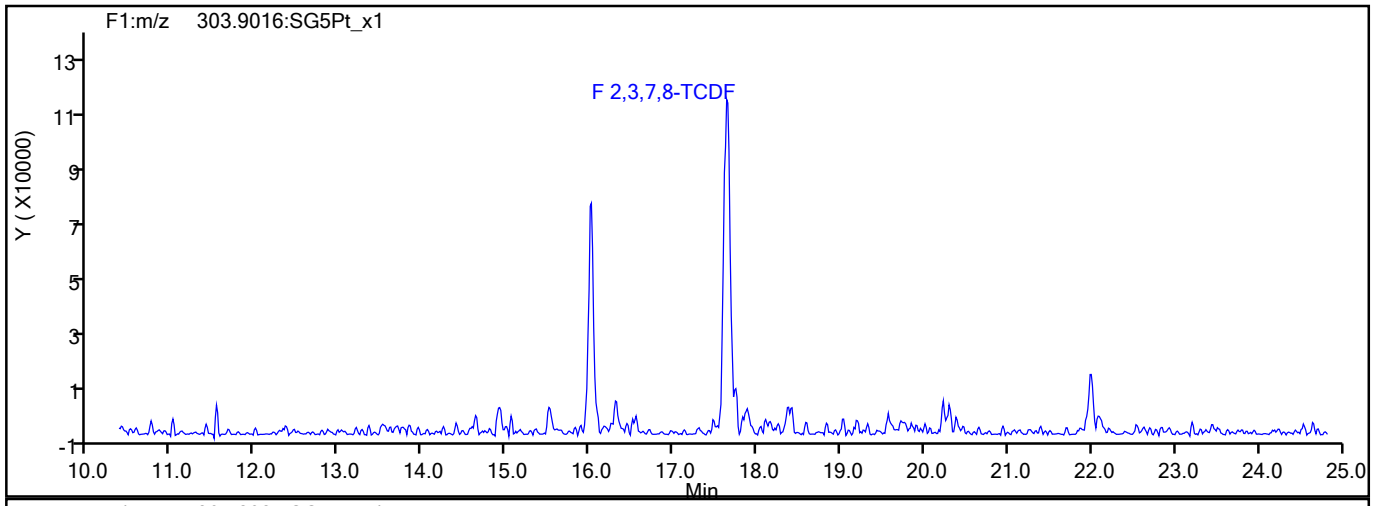

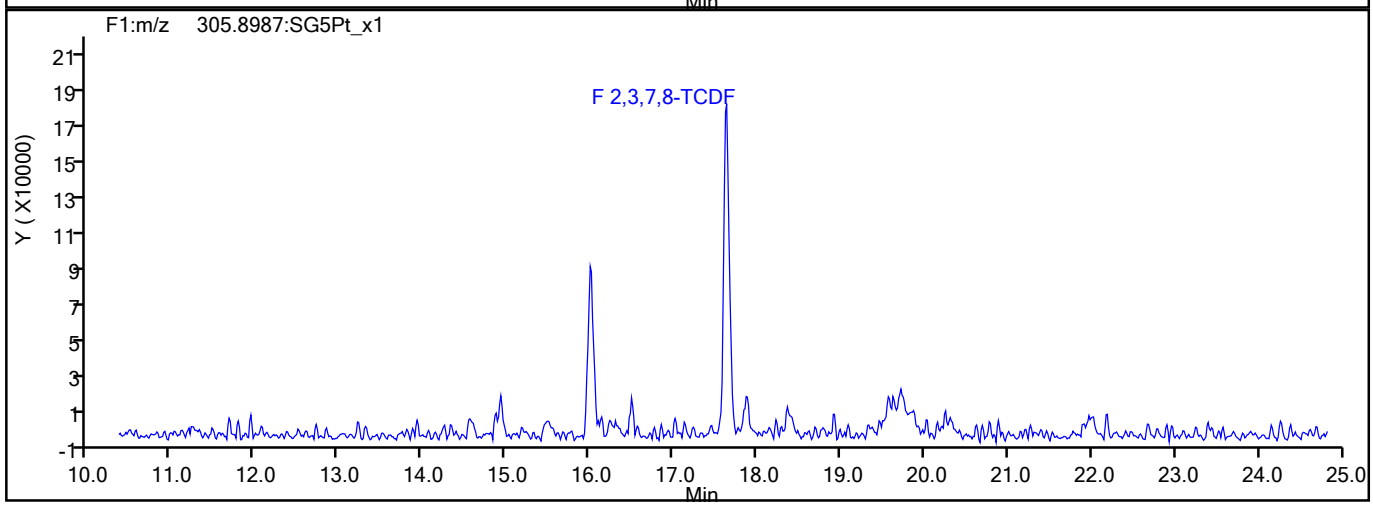

TCDF Interference Mass

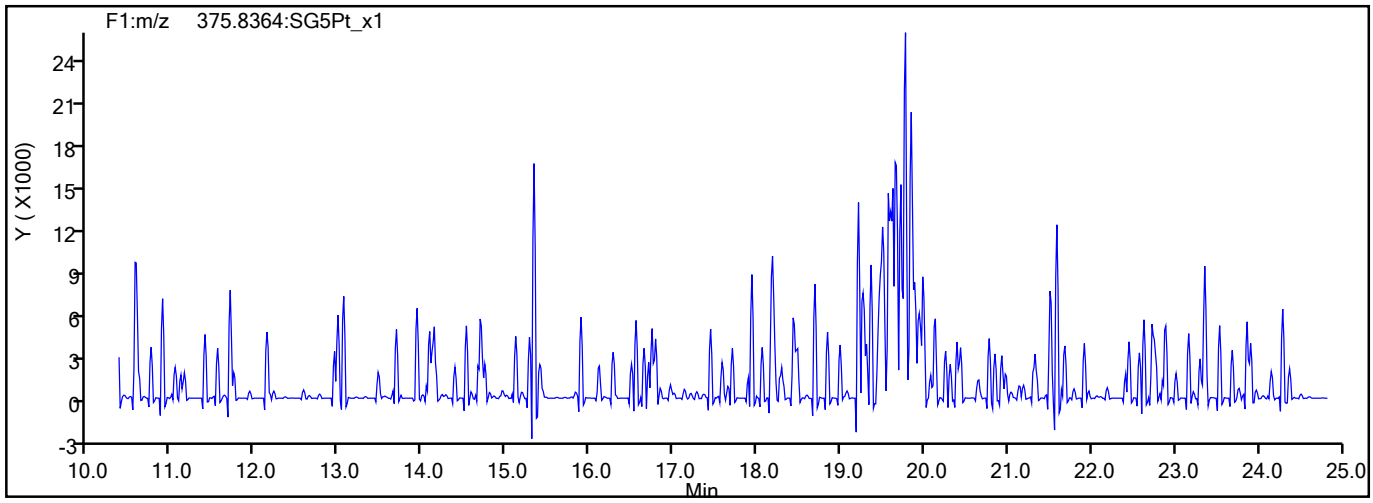

793447

Report Date: 01-Sep-2021 09:57:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_013.d		
Injection Date:	31-Aug-2021 20:53:50	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	520997	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

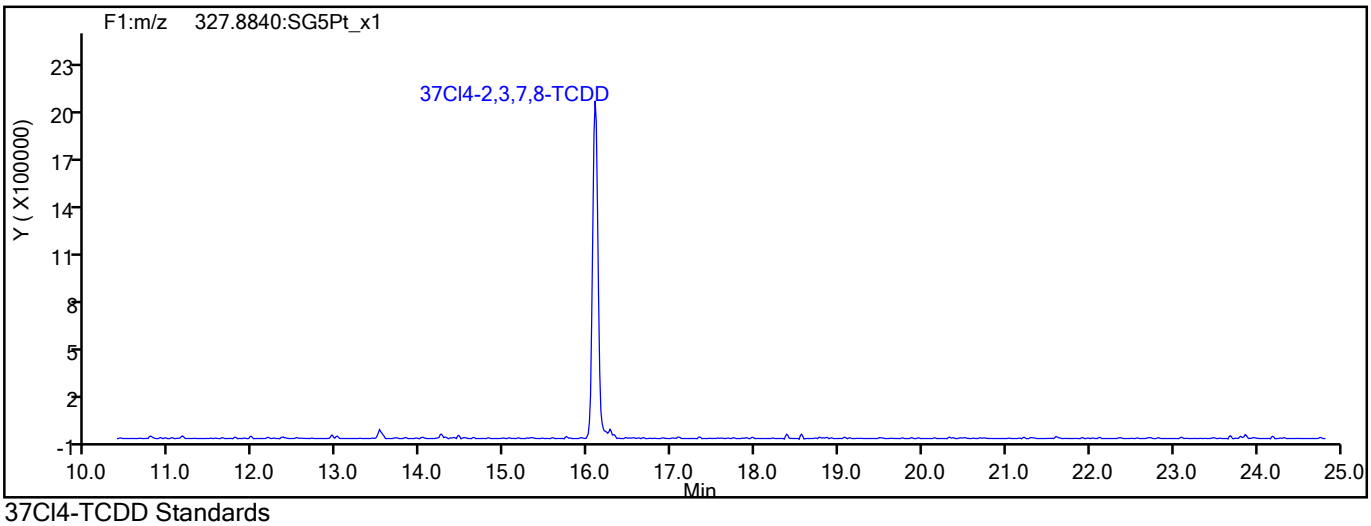

37Cl4-TCDD Standards

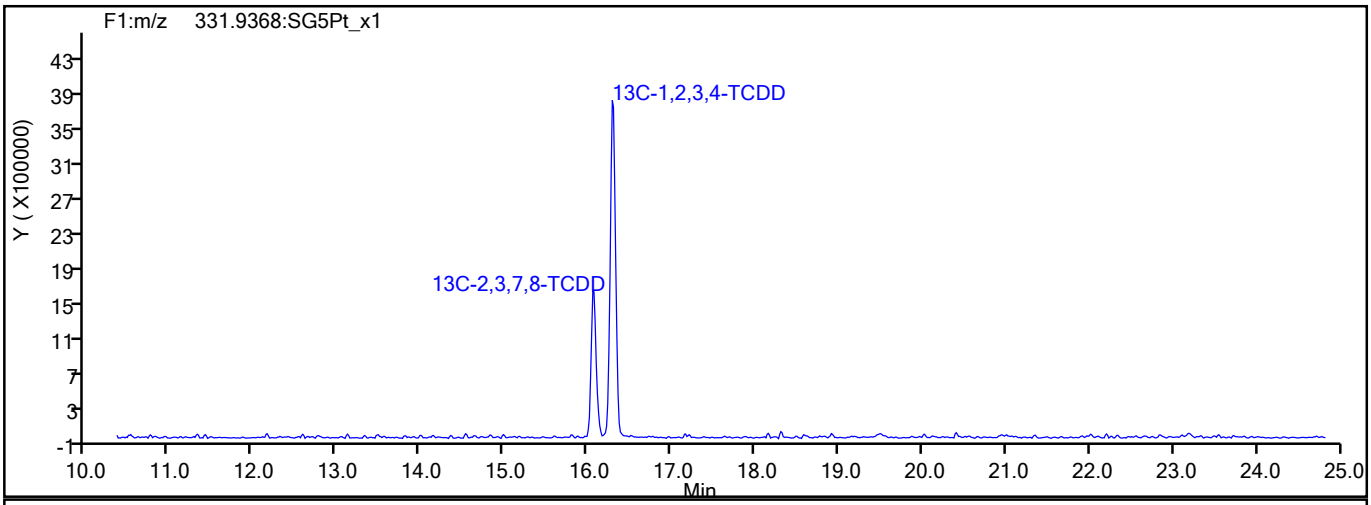

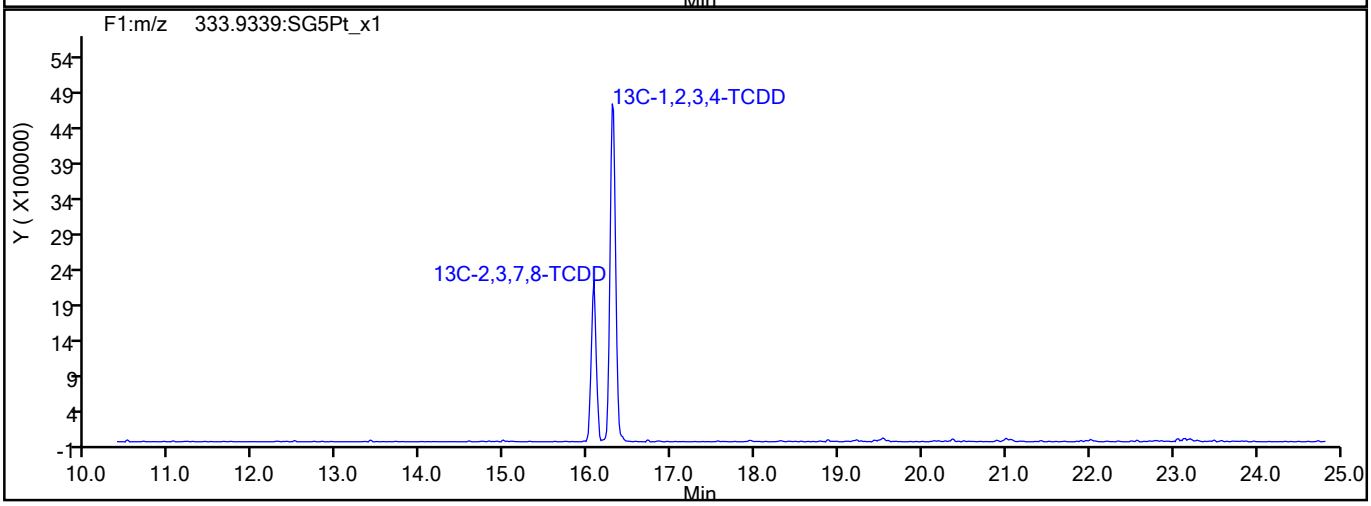

793448

Report Date: 01-Sep-2021 09:57:22 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_013.d		
Injection Date:	31-Aug-2021 20:53:50	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (4-6)		
Worklist#:	520997	Sample Line#:	13
Column Type:	DB-225	Column Dia:	0.32 mm

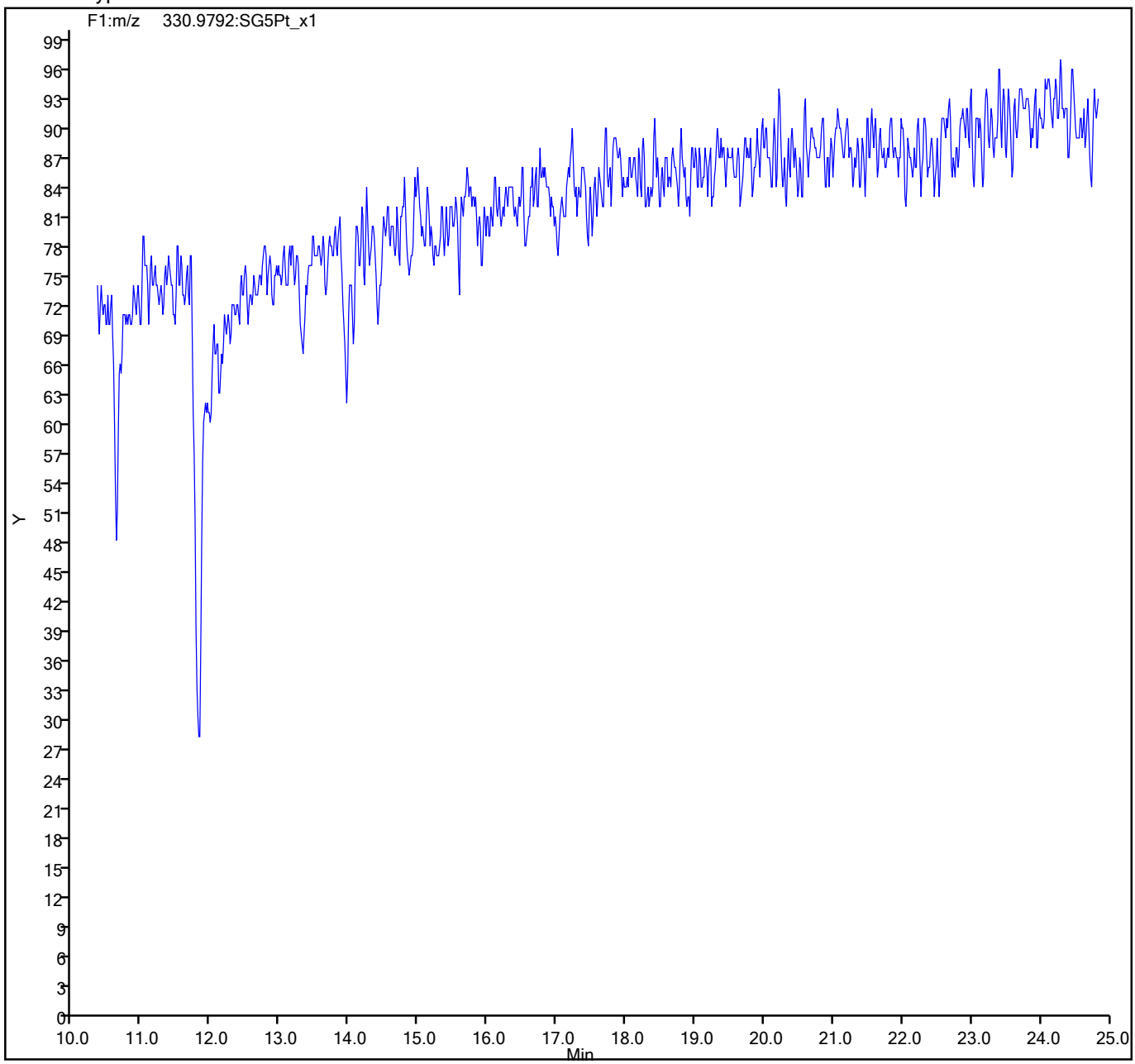

793449

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (6-8)
Lab Sample ID: 320-77292-4
Matrix: Sediment
Lab File ID: 25AU2110D5_26.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:45
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.32(g)
Date Analyzed: 08/26/2021 05:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.72	J q	1.6	0.066
40321-76-4	1,2,3,7,8-PeCDD	0.29	J	7.9	0.12
57117-41-6	1,2,3,7,8-PeCDF	0.11	J q	7.9	0.055
57117-31-4	2,3,4,7,8-PeCDF	ND		7.9	0.057
39227-28-6	1,2,3,4,7,8-HxCDD	0.66	J	7.9	0.14
57653-85-7	1,2,3,6,7,8-HxCDD	1.1	J	7.9	0.14
19408-74-3	1,2,3,7,8,9-HxCDD	2.7	J	7.9	0.13
70648-26-9	1,2,3,4,7,8-HxCDF	0.096	J q	7.9	0.046
57117-44-9	1,2,3,6,7,8-HxCDF	0.068	J q	7.9	0.046
72918-21-9	1,2,3,7,8,9-HxCDF	0.15	J q	7.9	0.031
60851-34-5	2,3,4,6,7,8-HxCDF	0.043	J q	7.9	0.033
35822-46-9	1,2,3,4,6,7,8-HpCDD	39	B	7.9	0.77
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		7.9	0.057
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.9	0.065
3268-87-9	OCDD	930	B	16	0.89
39001-02-0	OCDF	0.21	J q B	16	0.051
41903-57-5	Total TCDD	6.4	q	1.6	0.066
30402-14-3	Total TCDF	4.3	q B	1.6	0.050
36088-22-9	Total PeCDD	7.3	J q	7.9	0.12
30402-15-4	Total PeCDF	0.11	J q	7.9	0.056
34465-46-8	Total HxCDD	40		7.9	0.14
55684-94-1	Total HxCDF	0.35	J q	7.9	0.039
37871-00-4	Total HpCDD	130	B	7.9	0.77
38998-75-3	Total HpCDF	ND		7.9	0.065

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB091 (6-8)
Lab Sample ID: 320-77292-4
Matrix: Sediment
Lab File ID: 25AU2110D5_26.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:45
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.32(g)
Date Analyzed: 08/26/2021 05:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	53		25-164
89059-46-1	13C-2,3,7,8-TCDF	48		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	50		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	49		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	51		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	56		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	48		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	57		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	48		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	51		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	50		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	53		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	47		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	55		26-138
114423-97-1	13C-OCDD	55		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	70		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d
Lims ID: 320-77292-A-4-A
Client ID: 11215702-080321-BN-SJSB091 (6-8)
Sample Type: Client
Inject. Date: 26-Aug-2021 05:05:44 ALS Bottle#: 37 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-4-A 320-77292-A-4-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:18:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:46:04

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.583	100487480	0.78	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.069	78991106	0.76	1.6249	48.4	48.4	0.0788	0.0788	48.38	
2,3,7,8-TCDF	17.099	602395	0.71	1.0239	0.7448	0.7448	0.0158	0.0158		a
A Non-2,3,7,8-sub-TCDF	17.069	486436	0.77	1.0239	0.6174	0.6014	0.0158	0.3269		RQM
S Total TCDF					1.362	1.346	0.0158	0.0158		RQ
D 13C-2,3,7,8-TCDD	17.764	47451379	0.76	0.8993	52.5	52.5	0.1514	0.1514	52.51	
2,3,7,8-TCDD	17.779	135910	0.77	1.2541	0.2720	0.2284	0.0207	0.0207		RQ
$ 37Cl4-2,3,7,8-TCDD	17.794	31093592		1.1071	27.9	27.9	0.0332	0.0332	69.87	
A Non-2,3,7,8-sub-TCDD	17.530	1060819	0.77	1.2541	1.864	1.783	0.0207	0.6586		RQ
S Total TCDD					2.136	2.011	0.0207	0.0207		RQ
D 13C-1,2,3,7,8-PeCDF	22.006	59113410	1.56	1.2101	48.6	48.6	0.0703	0.0703	48.61	
1,2,3,7,8-PeCDF	22.020	22250	1.55	1.0611	0.0404	0.0355	0.0173	0.0173		RQM
D 13C-2,3,4,7,8-PeCDF	23.316	63448942	1.58	1.2395	50.9	50.9	0.0687	0.0687	50.94	
2,3,4,7,8-PeCDF	23.370						0.0181	0.0181		
A F1 PeCDFs	19.851						0.0189	0.0189		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0177	0.0177		U
S Total PeCDF					0.0404	0.0355	0.0177	0.0177		RQ
D 13C-1,2,3,7,8-PeCDD	24.024	38251951	1.60	0.7612	50.0	50.0	0.0425	0.0425	50.01	
1,2,3,7,8-PeCDD	24.066	36482	1.34	1.0484	0.0910	0.0910	0.0365	0.0365		M
A Non-2,3,7,8-sub-PeCDD	23.696	882935	1.55	1.0484	2.221	2.202	0.0365	1.288		RQ
S Total PeCDD					2.312	2.293	0.0365	0.0365		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.160	53560857	0.51	1.0837	56.6	56.6	0.1310	0.1310	56.57	
1,2,3,4,7,8-HxCDF	30.186	17594	1.24	1.0851	0.0356	0.0303	0.0144	0.0144		RQ
D 13C-1,2,3,6,7,8-HxCDF	30.372	47533876	0.51	1.1279	48.2	48.2	0.1258	0.1258	48.23	
1,2,3,6,7,8-HxCDF	30.399	11472	1.24	1.1260	0.0270	0.0214	0.0146	0.0146		RQM
D 13C-2,3,4,6,7,8-HxCDF	31.278	46642660	0.52	1.0637	50.2	50.2	0.1334	0.1334	50.19	
2,3,4,6,7,8-HxCDF	31.304	7459	1.24	1.1675	0.0153	0.0137	0.0106	0.0106		RQM
D 13C-1,2,3,7,8,9-HxCDF	32.129	43146424	0.51	0.9676	51.0	51.0	0.1467	0.1467	51.04	
1,2,3,7,8,9-HxCDF	32.143	23309	1.24	1.1664	0.0516	0.0463	0.009716	0.009716		RQM
A Non-2,3,7,8-sub-HxCDF	30.331						0.0120	0.0120		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.1296	0.1117	0.0123	0.0123		RQ
* 13C-1,2,3,7,8,9-HxCDD	31.943	87372393	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.490	36110323	1.26	0.7334	56.4	56.4	0.1544	0.1544	56.35	
1,2,3,4,7,8-HxCDD	31.504	80172	1.24	1.0640	0.2087	0.2087	0.0443	0.0443		M
D 13C-1,2,3,6,7,8-HxCDD	31.597	37052443	1.24	0.8802	48.2	48.2	0.1287	0.1287	48.18	
1,2,3,6,7,8-HxCDD	31.610	134175	1.35	1.0001	0.3621	0.3621	0.0448	0.0448		M
1,2,3,7,8,9-HxCDD	31.956	351051	1.41	1.1325	0.8474	0.8474	0.0406	0.0406		
A Non-2,3,7,8-sub-HxCDD	30.519	4342536	1.27	1.0655	11.1	11.1	0.0431	7.952		
S Total HxCDD					12.6	12.6	0.0432	0.0432		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	31964733	0.41	0.7730	47.3	47.3	0.7241	0.7241	47.33	
1,2,3,4,6,7,8-HpCDF	33.603						0.0180	0.0180		
D 13C-1,2,3,4,7,8,9-HpCDF	34.673	33867192	0.43	0.7008	55.3	55.3	0.7988	0.7988	55.31	
1,2,3,4,7,8,9-HpCDF	34.673						0.0206	0.0206		
A Non-2,3,7,8-sub-HpCDF	34.138						0.0192	0.0192		
S Total HpCDF							0.0206	0.0206		
D 13C-1,2,3,4,6,7,8-HpCDD	34.381	29733302	1.03	0.6472	52.6	52.6	0.3501	0.3501	52.58	
1,2,3,4,6,7,8-HpCDD	34.393	4016894	1.01	1.0943	12.3	12.3	0.2438	0.2438		
A Non-2,3,7,8-sub-HpCDD	34.223	9791293	1.03	1.0943	30.1	30.1	0.2438	30.1		
S Total HpCDD					42.4	42.4	0.2438	0.2438		
D 13C-OCDD	36.701	43251310	0.88	0.4472	110.7	110.7	0.1464	0.1464	55.35	
OCDF	36.785	20390	0.89	1.4382	0.0780	0.0656	0.0162	0.0162		RQM
OCDD	36.701	70159591	0.90	1.1070	293.1	293.1	0.2804	0.2804		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d
Lims ID: 320-77292-A-4-A
Client ID: 11215702-080321-BN-SJSB091 (6-8)
Sample Type: Client
Inject. Date: 26-Aug-2021 05:05:44 ALS Bottle#: 37 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-4-A 320-77292-A-4-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:18:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:46:04

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.583	17.598	-1		43975393	11065564	5675	14187	1950		
333.9339	17.583	17.598	-1		56512087	14162575	8064	20160	1756	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.069	17.084	-1	0.971	34050147	8669075	8706	21765	996		
317.9389	17.069	17.084	-1	0.971	44940959	11603093	4215	10537	2753	0.76(0.65-0.89)	
2,3,7,8-TCDF											a
303.9016	17.099	17.099	0	1.002	250777	58985	535	1337	110		a
305.8987	17.084	17.099	-1	1.001	351618	81765	774	1935	106	0.71(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	15.209	17.069	-111	0.891	31584	9473	535	1337	18		
305.8987	15.194	17.069	-112	0.890	40588	12515	774	1935	16	0.78(0.65-0.89)	
303.9016	16.177	17.069	-53	0.948	14975	2954	535	1337	6		
	Empc Correction				12131	2497	535	1337	5		
305.8987	16.207	17.069	-52	0.950	15755	3243	774	1935	4	0.95(0.65-0.89)	
303.9016	16.434	17.069	-38	0.963	13533	3484	535	1337	7		M
	Empc Correction				8453	2525	535	1337	5		
305.8987	16.434	17.069	-38	0.963	10978	3280	774	1935	4	1.23(0.65-0.89)	
303.9016	16.721	17.069	-21	0.980	118664	30554	535	1337	57		
305.8987	16.706	17.069	-22	0.979	145701	37225	774	1935	48	0.81(0.65-0.89)	
303.9016	17.522	17.069	27	1.027	31927	4645	535	1337	9		M
	Empc Correction				26933	5079	535	1337	9		
305.8987	17.507	17.069	26	1.026	34978	6597	774	1935	9	0.91(0.65-0.89)	
303.9016	18.883	17.069	109	1.106	18179	3916	535	1337	7		
305.8987	18.868	17.069	108	1.105	22492	5953	774	1935	8	0.81(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDD											
331.9368	17.764	17.779	-1	1.010	20463450	4946276	5675	14187	872		
333.9339	17.764	17.779	-1	1.010	26987929	6483442	8064	20160	804	0.76(0.65-0.89)	
2,3,7,8-TCDD											RQ
319.8965	17.779	17.794	-1	1.001	59125	13239	607	1517	22		
321.8936	17.779	17.794	-1	1.001	102747	25460	582	1455	44	0.58(0.65-0.89)	
	Empc Correction				76785	17193	582	1455	30		
37Cl4-2,3,7,8-TCDD											
327.8847	17.794	17.809	-1	1.012	31093592	7385965	3713	9282	1989		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	15.602	17.530	-115	0.878	18271	4441	607	1517	7		
	Empc Correction				12867	3468	607	1517	6		
321.8936	15.602	17.530	-115	0.878	16711	4504	582	1455	8	1.09(0.65-0.89)	
319.8965	15.889	17.530	-98	0.894	39925	11201	607	1517	18		
321.8936	15.889	17.530	-98	0.894	46402	11956	582	1455	21	0.86(0.65-0.89)	
319.8965	16.131	17.530	-84	0.908	35526	9472	607	1517	16		
321.8936	16.116	17.530	-85	0.907	59007	16460	582	1455	28	0.60(0.65-0.89)	
	Empc Correction				46137	12301	582	1455	21		
319.8965	16.676	17.530	-51	0.939	181625	45060	607	1517	74		
321.8936	16.660	17.530	-52	0.938	210282	58310	582	1455	100	0.86(0.65-0.89)	
319.8965	17.265	17.530	-16	0.972	17010	3851	607	1517	6		
321.8936	17.280	17.530	-15	0.973	28528	6262	582	1455	11	0.60(0.65-0.89)	
	Empc Correction				22090	5001	582	1455	9		
319.8965	17.537	17.530	0	0.987	85484	19105	607	1517	31		
321.8936	17.537	17.530	0	0.987	101106	24620	582	1455	42	0.85(0.65-0.89)	
319.8965	17.673	17.530	9	0.995	77028	18396	607	1517	30		
	Empc Correction				65884	15830	607	1517	26		
321.8936	17.673	17.530	9	0.995	85564	20559	582	1455	35	0.90(0.65-0.89)	
319.8965	18.127	17.530	36	1.020	15661	2912	607	1517	5		
321.8936	18.127	17.530	36	1.020	24539	3820	582	1455	7	0.64(0.65-0.89)	
	Empc Correction				20338	3781	582	1455	6		
319.8965	18.384	17.530	51	1.035	9102	3053	607	1517	5		
	Empc Correction				7526	2061	607	1517	3		
321.8936	18.399	17.530	52	1.036	9775	2677	582	1455	5	0.93(0.65-0.89)	
319.8965	18.883	17.530	81	1.063	24333	4892	607	1517	8		
	Empc Correction				17795	4224	607	1517	7		
321.8936	18.868	17.530	80	1.062	23111	5486	582	1455	9	1.05(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.006	22.020	-1	1.252	35988464	6575090	4953	12382	1327		
353.8970	22.006	22.020	-1	1.252	23124946	4337229	3634	9085	1194	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											RQM
339.8597	22.020	22.047	-2	1.001	13525	3237	253	632	13		M
341.8567	22.034	22.047	-1	1.001	11837	2649	547	1367	5	1.14(1.32-1.78)	M
	Empc Correction				8725	2088	547	1367	4		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	23.316	23.343	-2	1.326	38863526	6653146	4953	12382	1343		
353.8970	23.316	23.343	-2	1.326	24585416	4182665	3634	9085	1151	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370						253	632			
341.8567	23.370						547	1367			
A F1 PeCDFs											
339.8597	19.851						238	595			
341.8567	19.851						619	1547			
A Non-2,3,7,8-sub-PeCDF											U
339.8597	23.067						253	632			
341.8567	23.067						547	1367			
13C-1,2,3,7,8-PeCDD											
367.8949	24.024	24.052	-2	1.366	23559012	3765253	1813	4532	2077		
369.8919	24.024	24.052	-2	1.366	14692939	2413482	1449	3622	1666	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											M
355.8546	24.066	24.079	-1	1.002	20880	3905	533	1332	7		M
357.8516	24.093	24.079	1	1.003	15602	2170	414	1035	5	1.34(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.625	23.696	-124	0.900	313260	59152	533	1332	111		
357.8516	21.625	23.696	-124	0.900	203445	38722	414	1035	94	1.54(1.32-1.78)	
355.8546	22.306	23.696	-83	0.928	22435	4269	533	1332	8		
	Empc Correction				14766	2700	533	1332	5		
357.8516	22.334	23.696	-82	0.930	9527	1742	414	1035	4	2.35(1.32-1.78)	
355.8546	22.606	23.696	-65	0.941	24834	5333	533	1332	10		
357.8516	22.620	23.696	-64	0.942	16270	2517	414	1035	6	1.53(1.32-1.78)	
355.8546	22.893	23.696	-48	0.953	60797	11946	533	1332	22		
357.8516	22.893	23.696	-48	0.953	39891	7677	414	1035	19	1.52(1.32-1.78)	
355.8546	23.097	23.696	-36	0.961	124787	18095	533	1332	34		
357.8516	23.097	23.696	-36	0.961	75358	11087	414	1035	27	1.66(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.160	30.186	-2	0.944	18167873	3073791	5711	14277	538		
385.8610	30.160	30.186	-2	0.944	35392984	6124510	8434	21085	726	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQ
373.8208	30.186	30.212	-2	1.001	9740	2061	307	767	7		
375.8178	30.173	30.212	-2	1.000	10975	1733	270	675	6	0.89(1.05-1.43)	
	Empc Correction				7854	1662	270	675	6		
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.372	30.399	-2	0.951	16051986	2987305	5711	14277	523		
385.8610	30.372	30.399	-2	0.951	31481890	5765348	8434	21085	684	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											RQM
373.8208	30.399	30.412	-1	1.001	6351	1806	307	767	6		M
375.8178	30.386	30.412	-2	1.000	8095	1112	270	675	4	0.78(1.05-1.43)	M
	Empc Correction				5121	1456	270	675	5		
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.278	31.291	-1	0.979	16032523	4007430	5711	14277	702		
385.8610	31.278	31.291	-1	0.979	30610137	7697021	8434	21085	913	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											RQM
373.8208	31.304	31.317	-1	1.001	5018	1269	307	767	4		
	Empc Correction				4129	1582	307	767	5		
375.8178	31.317	31.317	0	1.001	3330	1276	270	675	5	1.51(1.05-1.43)	M
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.142	-1	1.006	14564623	4314993	5711	14277	756		
385.8610	32.129	32.142	-1	1.006	28581801	8409653	8434	21085	997	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	32.143	32.156	-1	1.000	15578	4455	307	767	15		
	Empc Correction				12903	4411	307	767	14		
375.8178	32.143	32.156	-1	1.000	10406	3558	270	675	13	1.50(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.331						307	767			
375.8178	30.331						270	675			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.956	-1		48204623	13778841	6120	15300	2251		
403.8529	31.943	31.956	-1		39167770	11137238	5169	12922	2155	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.490	31.503	-1	0.986	20126957	5416106	6120	15300	885		
403.8529	31.490	31.503	-1	0.986	15983366	4330459	5169	12922	838	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											M
389.8157	31.504	31.517	-1	1.000	44397	11662	853	2132	14		M
391.8127	31.490	31.517	-2	1.000	35775	9904	983	2457	10	1.24(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.597	31.610	-1	0.989	20516527	5632182	6120	15300	920		
403.8529	31.597	31.610	-1	0.989	16535916	4604291	5169	12922	891	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											M
389.8157	31.610	31.623	-1	1.000	77059	19441	853	2132	23		M
391.8127	31.610	31.623	-1	1.000	57116	14857	983	2457	15	1.35(1.05-1.43)	M
1,2,3,7,8,9-HxCDD											
389.8157	31.956	31.969	-1	1.015	205127	39979	853	2132	47		
391.8127	31.956	31.969	-1	1.015	145924	28056	983	2457	29	1.41(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.028	30.519	-89	0.919	1720642	223404	853	2132	262		
391.8127	29.028	30.519	-89	0.919	1378928	173903	983	2457	177	1.25(1.05-1.43)	
389.8157	30.253	30.519	-16	0.957	64763	11186	853	2132	13		
391.8127	30.239	30.519	-17	0.957	51552	9433	983	2457	10	1.26(1.05-1.43)	
389.8157	30.678	30.519	10	0.971	587078	115442	853	2132	135		
391.8127	30.678	30.519	10	0.971	441009	84361	983	2457	86	1.33(1.05-1.43)	
389.8157	30.905	30.519	23	0.978	55861	12588	853	2132	15		
391.8127	30.918	30.519	24	0.979	42703	8861	983	2457	9	1.31(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	9303033	3567562	14352	35880	249		
419.8220	33.603	33.603	0	1.052	22661700	8313774	41439	103597	201	0.41(0.37-0.51)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603						985	2462			
409.7789	33.603						246	615			
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.673	34.672	0	1.085	10210016	3464733	14352	35880	241		
419.8220	34.673	34.672	0	1.085	23657176	7884983	41439	103597	190	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673						985	2462			
409.7789	34.673						246	615			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						985	2462			
409.7789	34.138						246	615			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.381	34.393	-1	1.076	15071465	5292073	13123	32807	403		
437.8140	34.381	34.393	-1	1.076	14661837	5205432	9462	23655	550	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	2021756	711554	5459	13647	130		
425.7737	34.393	34.393	0	1.000	1995138	698449	5744	14360	122	1.01(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.846	34.223	-23	0.984	4976346	1770324	5459	13647	324		
425.7737	33.846	34.223	-23	0.984	4814947	1757238	5744	14360	306	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.701	0	1.149	20288057	5963923	3322	8305	1795		
471.7750	36.689	36.701	-1	1.149	22963253	6749687	3201	8002	2109	0.88(0.76-1.02)	
OCDF											RQM
441.7428	36.785	36.797	-1	1.002	9602	2537	246	615	10		M
443.7399	36.797	36.797	0	1.003	14652	3508	347	867	10	0.66(0.76-1.02)	M
	Empc Correction				10788	2850	347	867	8		
OCDD											
457.7377	36.701	36.713	-1	1.000	33281360	10060124	3827	9567	2629		
459.7348	36.701	36.713	-1	1.000	36878231	11225284	4066	10165	2761	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 27-Aug-2021 09:18:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d
Lims ID: 320-77292-A-4-A
Client ID: 11215702-080321-BN-SJSB091 (6-8)
Inject. Date: 26-Aug-2021 05:05:44 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 12

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	78991106	20272168

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	78991106	20272168

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.209	31584	9473	40588	12515	0.0892	0.78	
16.177	14975	2954	15755	3243	0.0380	0.95	RQ
16.177	12131	2497	15755	3243	0.0345		Empc Correction
16.434	13533	3484	10978	3280	0.0303	1.23	RQM
16.434	8453	2525	10978	3280	0.0240		Empc Correction
16.721	118664	30554	145701	37225	0.3269	0.81	
17.522	31927	4645	34978	6597	0.0827	0.91	RQM
17.522	26933	5079	34978	6597	0.0765		Empc Correction
18.883	18179	3916	22492	5953	0.0503	0.81	
Signal Totals:							
	215944	54044	270492	68813			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	499354	123839				0.85	RQM
	486436	122857					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6174 = (499354 * 100.000) / (78991106 * 1.024)
Empc Amount: 0.6014 = (486436 * 100.000) / (78991106 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 27-Aug-2021 09:18:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d
Lims ID: 320-77292-A-4-A
Client ID: 11215702-080321-BN-SJSB091 (6-8)
Inject. Date: 26-Aug-2021 05:05:44 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 12

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	47451379	11429718

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	47451379	11429718

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.602	18271	4441	16711	4504	0.0588	1.09	RQ
15.602	12867	3468	16711	4504	0.0497		Empc Correction
15.889	39925	11201	46402	11956	0.1451	0.86	
16.131	35526	9472	59007	16460	0.1589	0.60	RQ
16.131	35526	9472	46137	12301	0.1372		Empc Correction
16.676	181625	45060	210282	58310	0.6586	0.86	
17.265	17010	3851	28528	6262	0.0765	0.60	RQ
17.265	17010	3851	22090	5001	0.0657		Empc Correction
17.537	85484	19105	101106	24620	0.3135	0.85	
17.673	77028	18396	85564	20559	0.2732	0.90	RQ
17.673	65884	15830	85564	20559	0.2545		Empc Correction
18.127	15661	2912	24539	3820	0.0676	0.64	RQ
18.127	15661	2912	20338	3781	0.0605		Empc Correction
18.384	9102	3053	9775	2677	0.0317	0.93	RQ
18.384	7526	2061	9775	2677	0.0291		Empc Correction
18.883	24333	4892	23111	5486	0.0797	1.05	RQ
18.883	17795	4224	23111	5486	0.0687		Empc Correction
Signal Totals:							
	479303	117184	581516	149195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1108990	277037				0.83	RQ
	1060819	266379					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.864 = (1108990 * 100.000) / (47451379 * 1.254)
Empc Amount: 1.783 = (1060819 * 100.000) / (47451379 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d		
Lims ID:	320-77292-A-4-A		
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Inject. Date:	26-Aug-2021 05:05:44	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	12

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	59113410	10912319
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	63448942	10835811

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	61281176	10874065

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 27-Aug-2021 09:18:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d
Lims ID: 320-77292-A-4-A
Client ID: 11215702-080321-BN-SJSB091 (6-8)
Inject. Date: 26-Aug-2021 05:05:44 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 12

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	38251951	6178735

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	38251951	6178735

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.625	313260	59152	203445	38722	1.29	1.54	
22.306	22435	4269	9527	1742	0.0797	2.35	RQ
22.306	14766	2700	9527	1742	0.0606		Empc Correction
22.606	24834	5333	16270	2517	0.1025	1.53	
22.893	60797	11946	39891	7677	0.2511	1.52	
23.097	124787	18095	75358	11087	0.4991	1.66	
Signal Totals:							
	538444	97226	344491	61745			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	890604	160540				1.59	RQ
	882935	158971					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.221 = (890604 * 100.000) / (38251951 * 1.048)
Empc Amount: 2.202 = (882935 * 100.000) / (38251951 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d
Lims ID: 320-77292-A-4-A
Client ID: 11215702-080321-BN-SJSB091 (6-8)
Inject. Date: 26-Aug-2021 05:05:44 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 12

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	36110323	9746565
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	37052443	10236473
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	36581383	9991519

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.028	1720642	223404	1378928	173903	7.95	1.25	
30.253	64763	11186	51552	9433	0.2984	1.26	
30.678	587078	115442	441009	84361	2.64	1.33	
30.905	55861	12588	42703	8861	0.2529	1.31	
Signal Totals:							
	2428344	362620	1914192	276558			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4342536	639178				1.27	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 11.141 = (4342536 * 100.000) / (36581383 * 1.066)

Report Date: 27-Aug-2021 09:18:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d
Lims ID: 320-77292-A-4-A
Client ID: 11215702-080321-BN-SJSB091 (6-8)
Inject. Date: 26-Aug-2021 05:05:44 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 12

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	29733302	10497505

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	29733302	10497505

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.846	4976346	1770324	4814947	1757238	30.1	1.03	
Signal Totals:							
	4976346	1770324	4814947	1757238			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9791293	3527562				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 30.093 = (9791293 * 100.000) / (29733302 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.08
Area: 351618
Amount: 0.744803
Amount Units: pg/ul

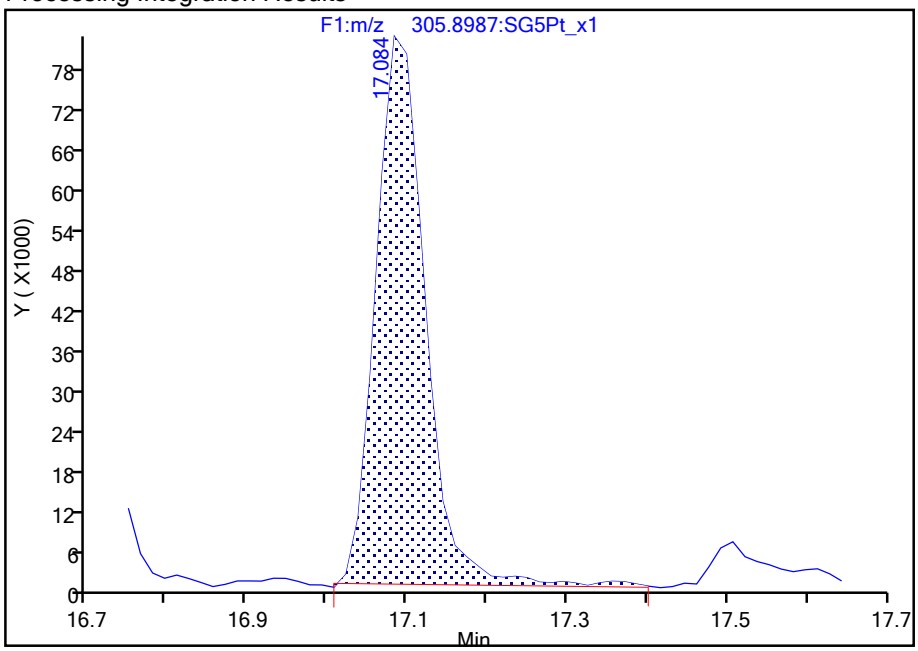

Manual Integration Results

RT: 17.08
Area: 351618
Amount: 0.744803
Amount Units: pg/ul

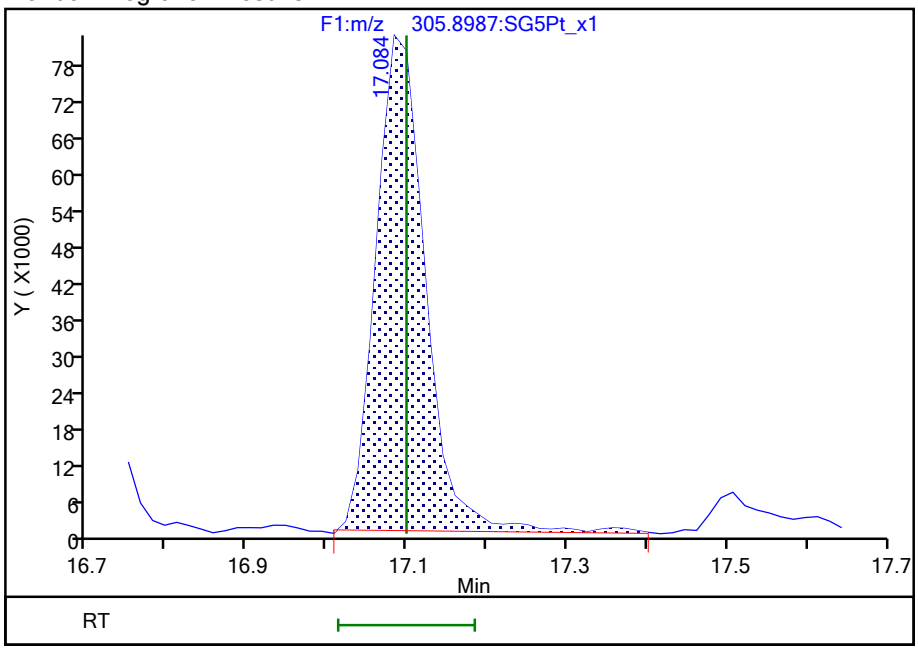

Reviewer: dadunj, 27-Aug-2021 09:16:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 3

RT: 17.10
Area: 602395
Amount: 0.744803
Amount Units: pg/ul

Processing Integration Results

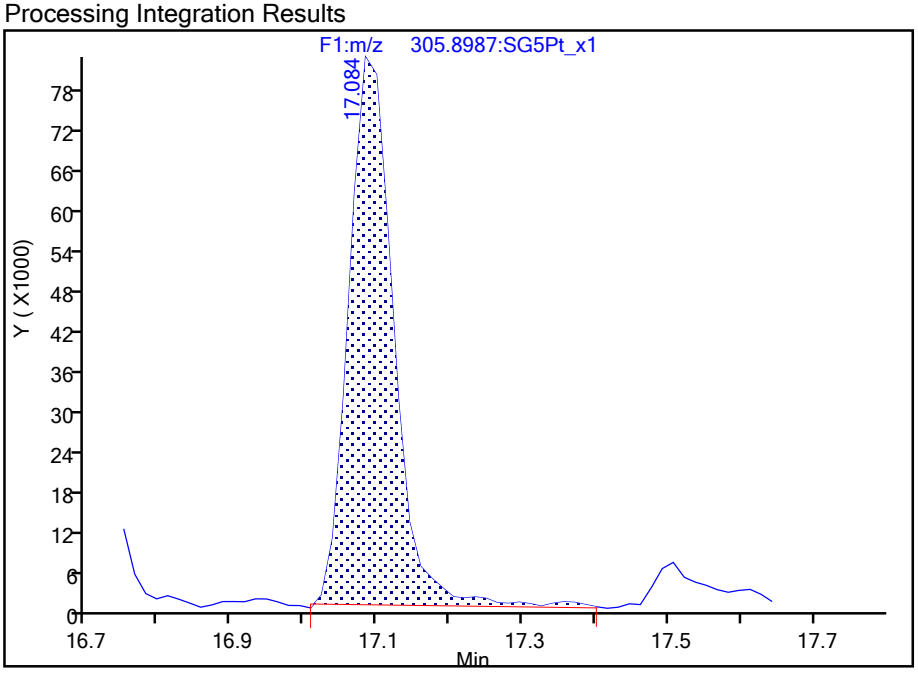

Manual Integration Results

RT: 17.10
Area: 602395
Amount: 0.744803
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 09:16:01
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

793468

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.10
Area: 250777
Amount: 0.744803
Amount Units: pg/ul

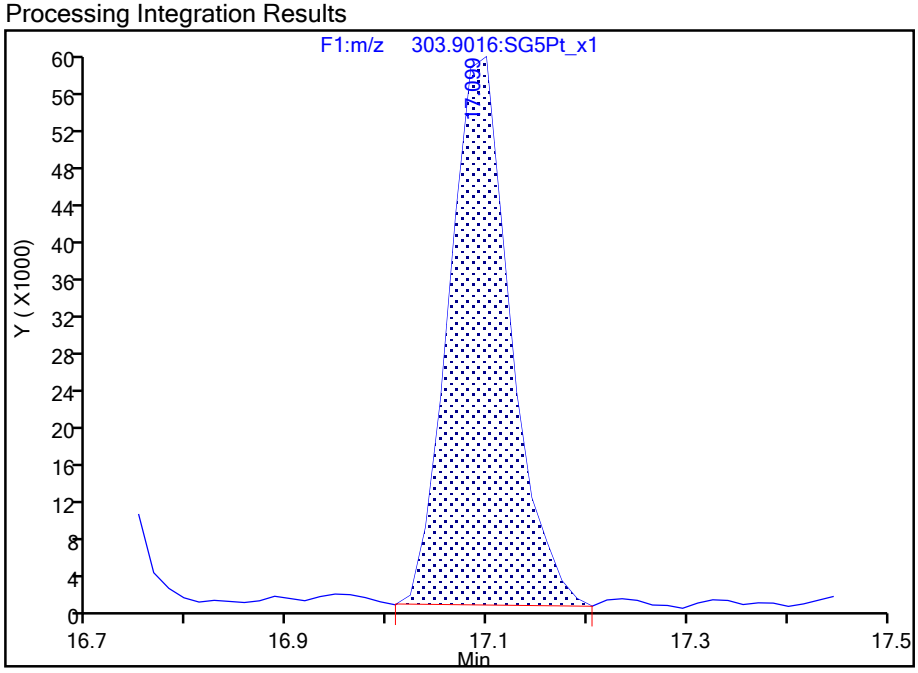

Manual Integration Results

RT: 17.10
Area: 250777
Amount: 0.744803
Amount Units: pg/ul

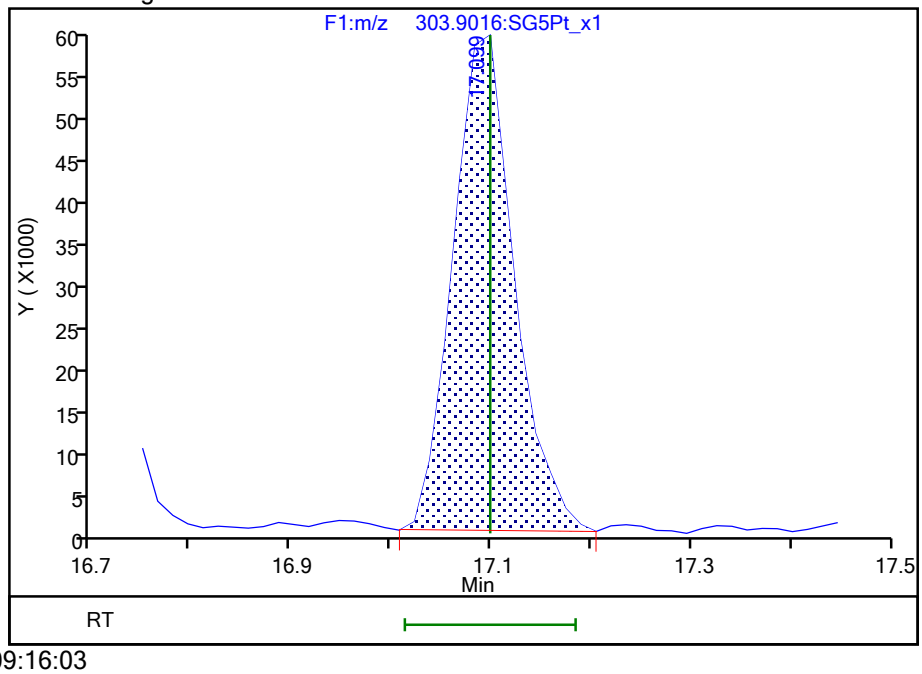

Reviewer: dadunj, 27-Aug-2021 09:16:03

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

793469

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.68- 19.46)

Signal: 1

Processing Integration Results

RT = 16.434 Area = 17697

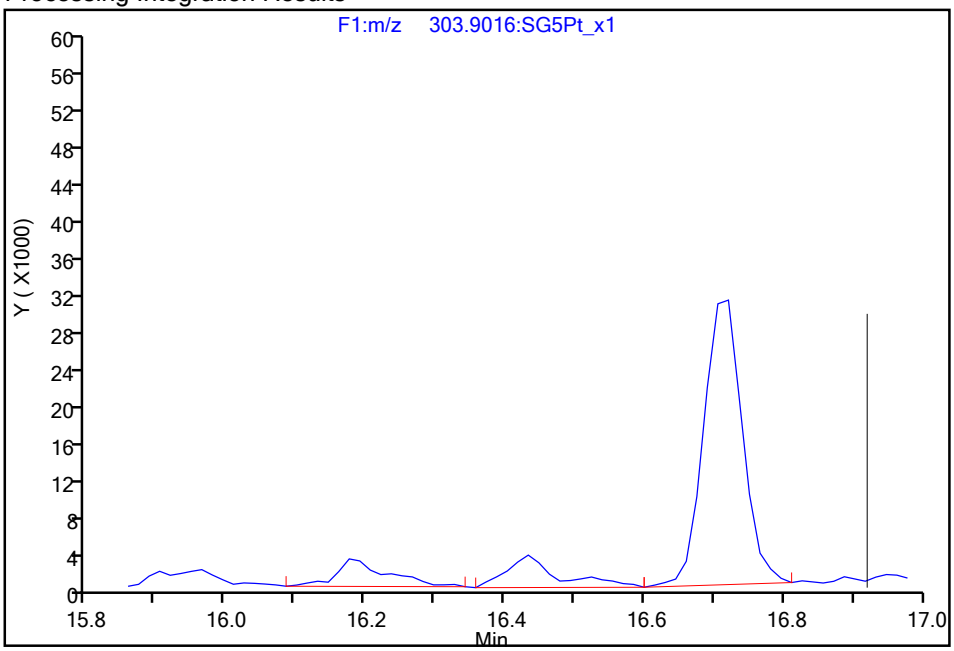

Manual Integration Results

RT = 16.434 Area = 13533 M

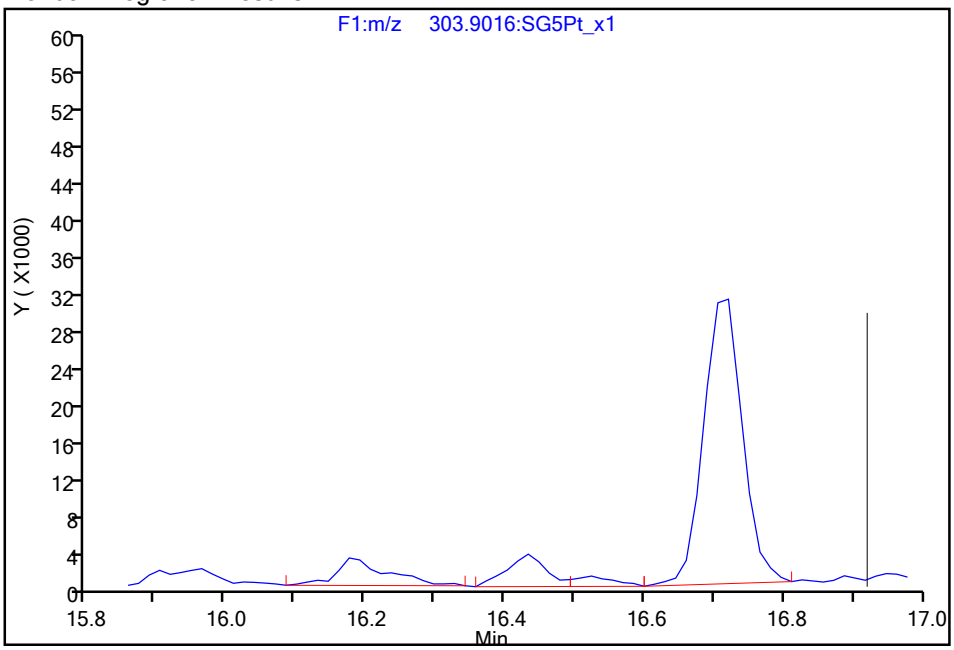

Reviewer: dadunj, 27-Aug-2021 09:18:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793470

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.68- 19.46)

Signal: 1

Processing Integration Results

RT = 17.522 Area = 36948

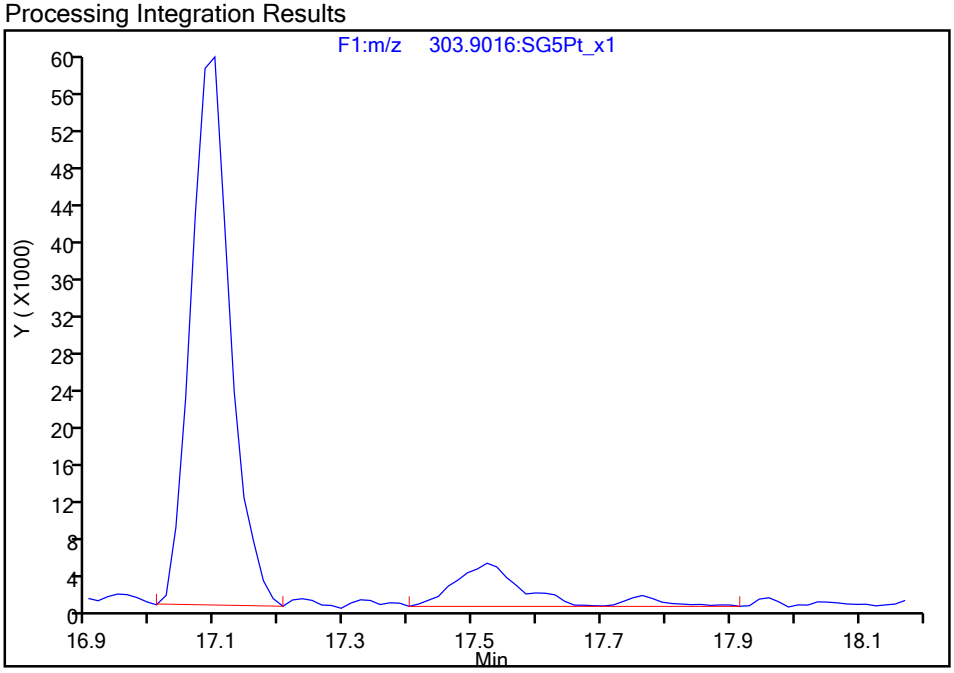

Manual Integration Results

RT = 17.522 Area = 31927 M

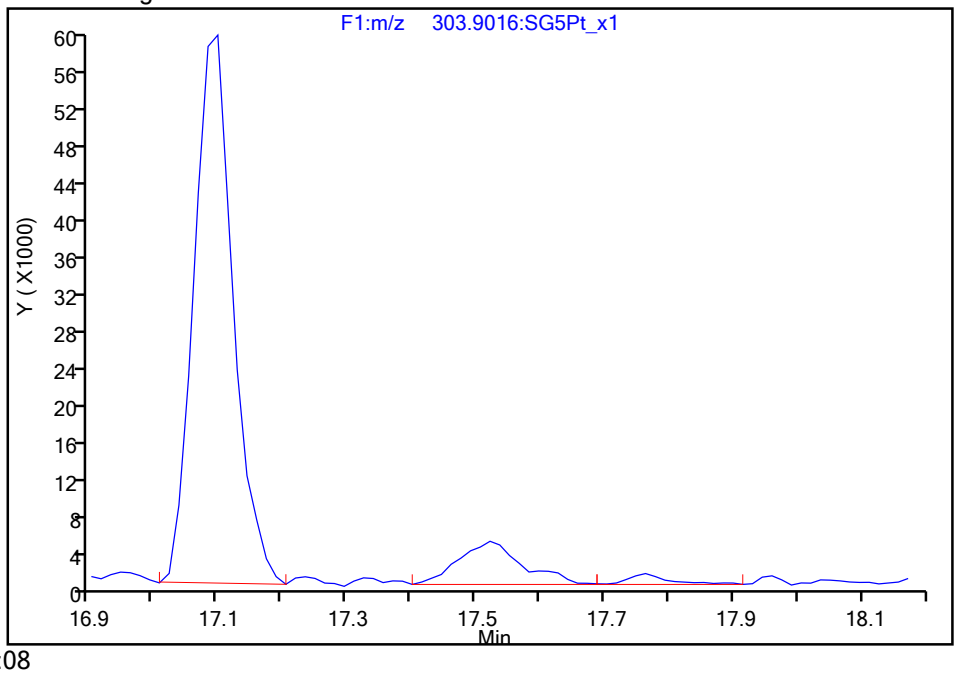

Reviewer: dadunj, 27-Aug-2021 09:18:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.03
Area: 22518
Amount: 0.066619
Amount Units: pg/ul

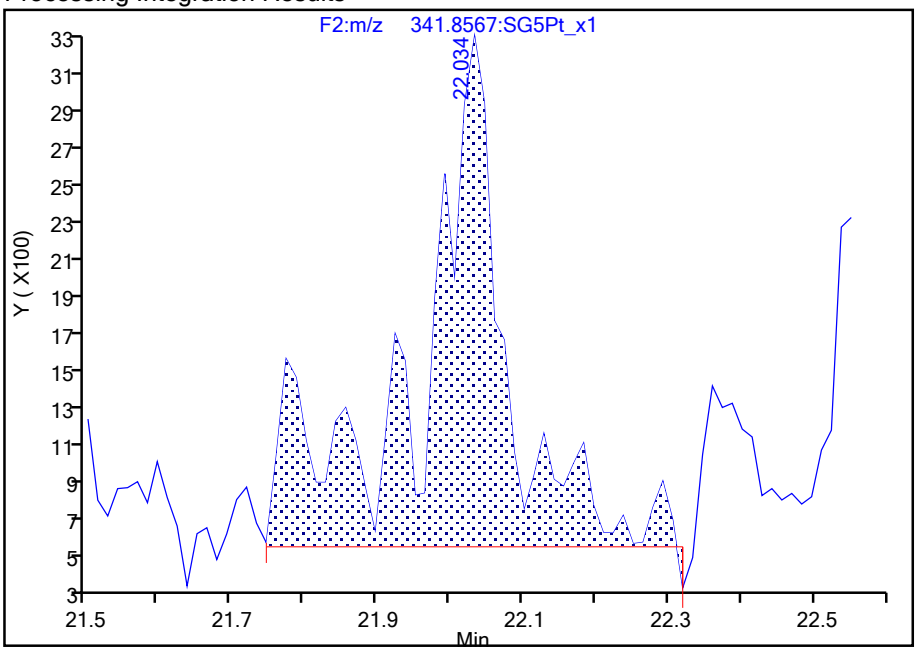

Manual Integration Results

RT: 22.03
Area: 11837
Amount: 0.040432
Amount Units: pg/ul

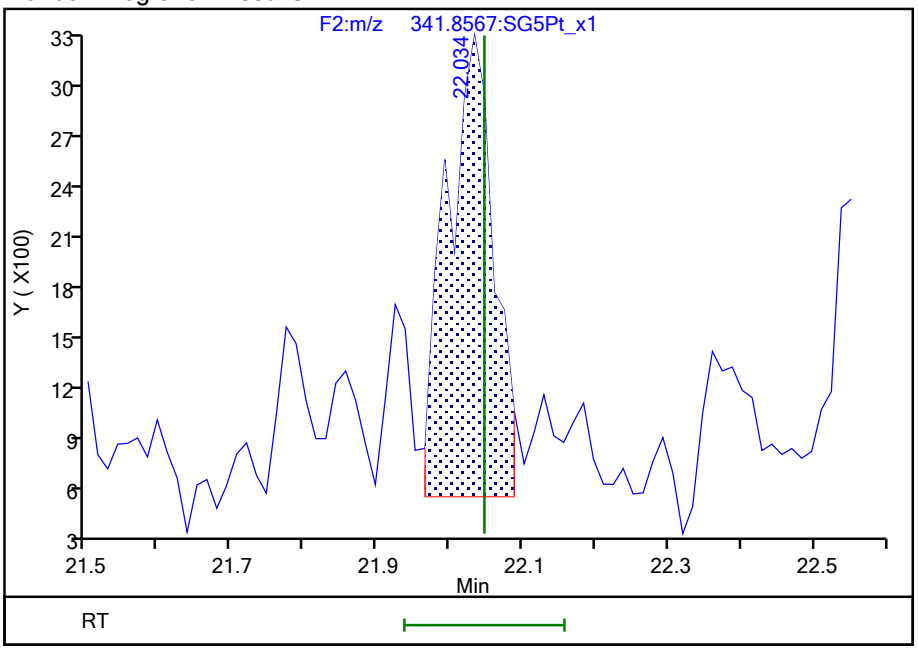

Reviewer: dadunj, 27-Aug-2021 09:16:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793472

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.02
Area: 19270
Amount: 0.066619
Amount Units: pg/ul

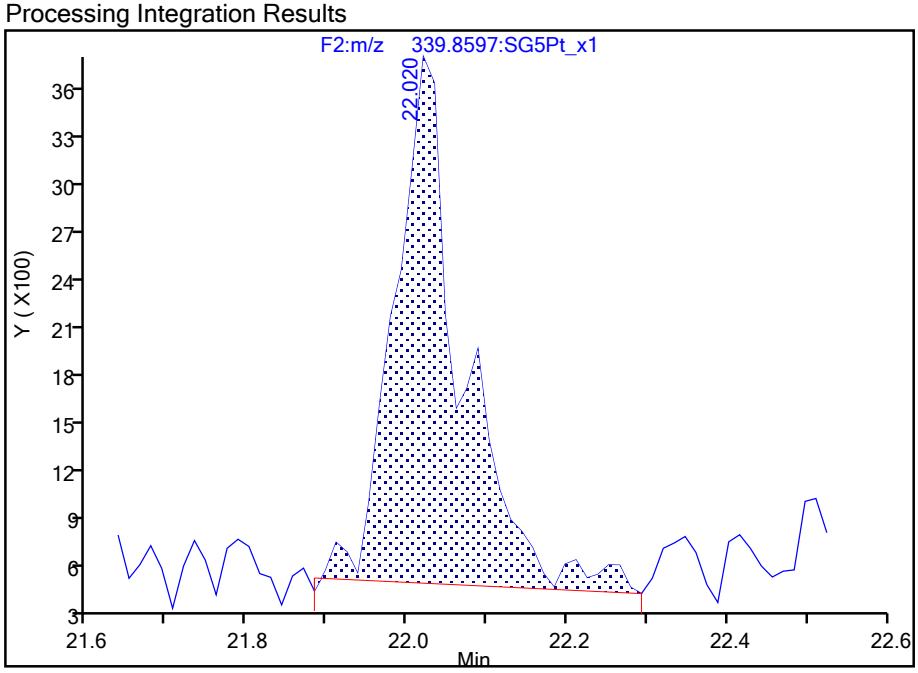

Manual Integration Results

RT: 22.02
Area: 13525
Amount: 0.040432
Amount Units: pg/ul

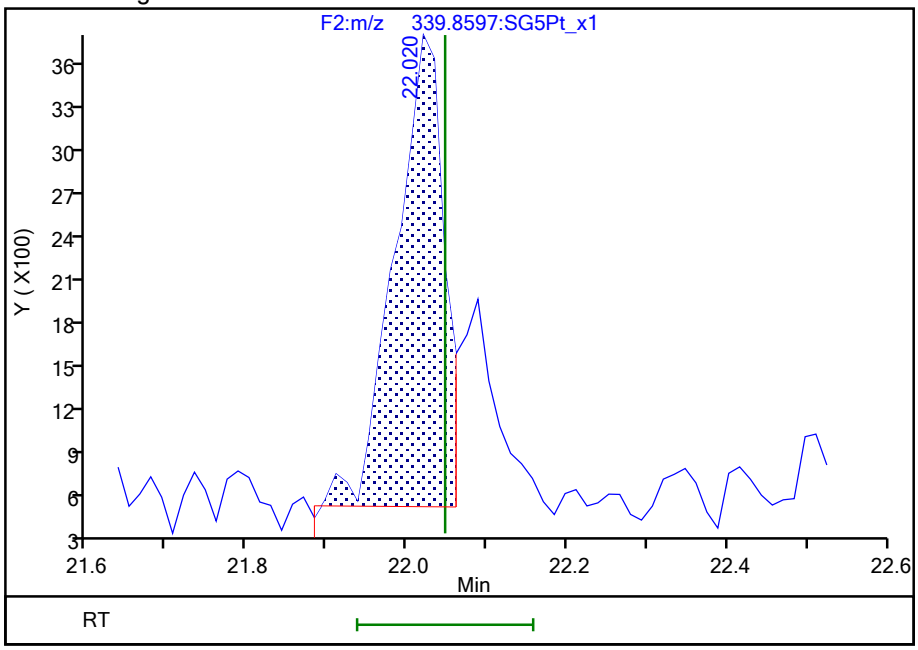

Reviewer: dadunj, 27-Aug-2021 09:16:39

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDD, CAS: 40321-76-4

Signal: 1

Processing Integration Results

RT: 24.07
Area: 28230
Amount: 0.109294
Amount Units: pg/ul

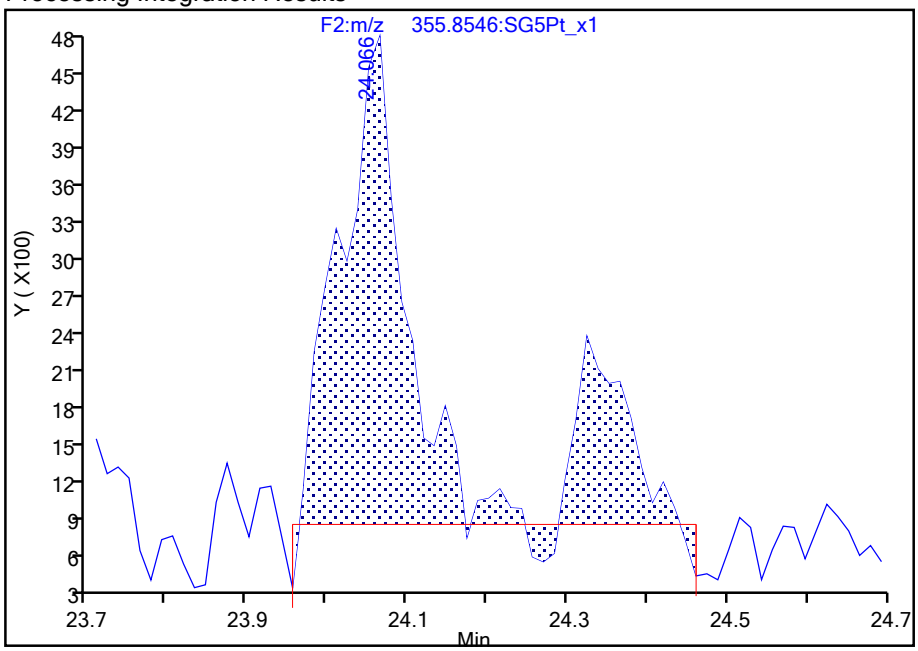

Manual Integration Results

RT: 24.07
Area: 20880
Amount: 0.090967
Amount Units: pg/ul

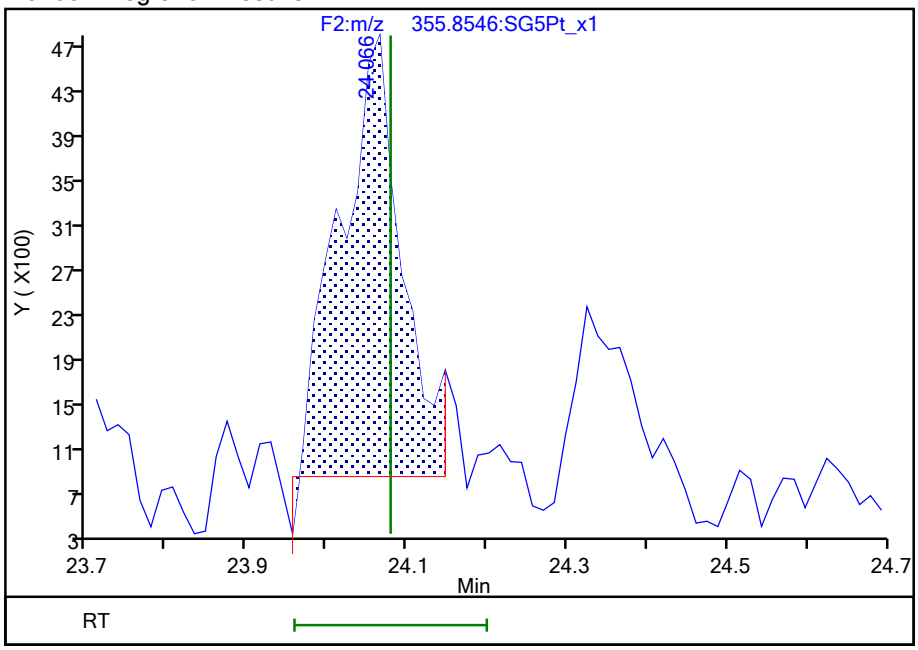

Reviewer: dadunj, 27-Aug-2021 09:16:49

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793474

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 1

Processing Integration Results

RT: 30.40
Area: 6402
Amount: 0.033983
Amount Units: pg/ul

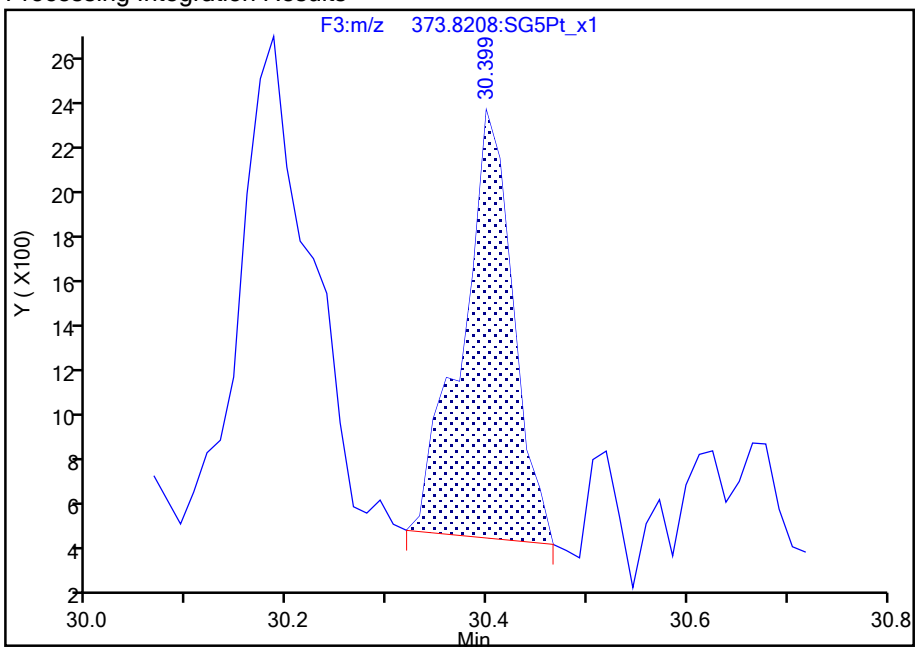

Manual Integration Results

RT: 30.40
Area: 6351
Amount: 0.026990
Amount Units: pg/ul

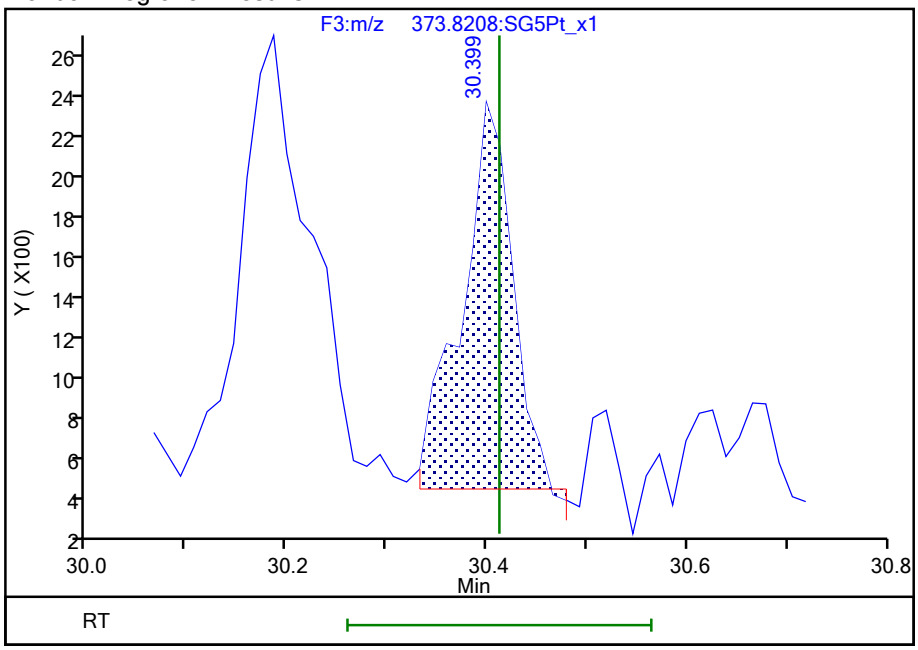

Reviewer: dadunj, 27-Aug-2021 09:16:58

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDF, CAS: 57117-44-9

Signal: 2

Processing Integration Results

RT: 30.39
Area: 11787
Amount: 0.033983
Amount Units: pg/ul

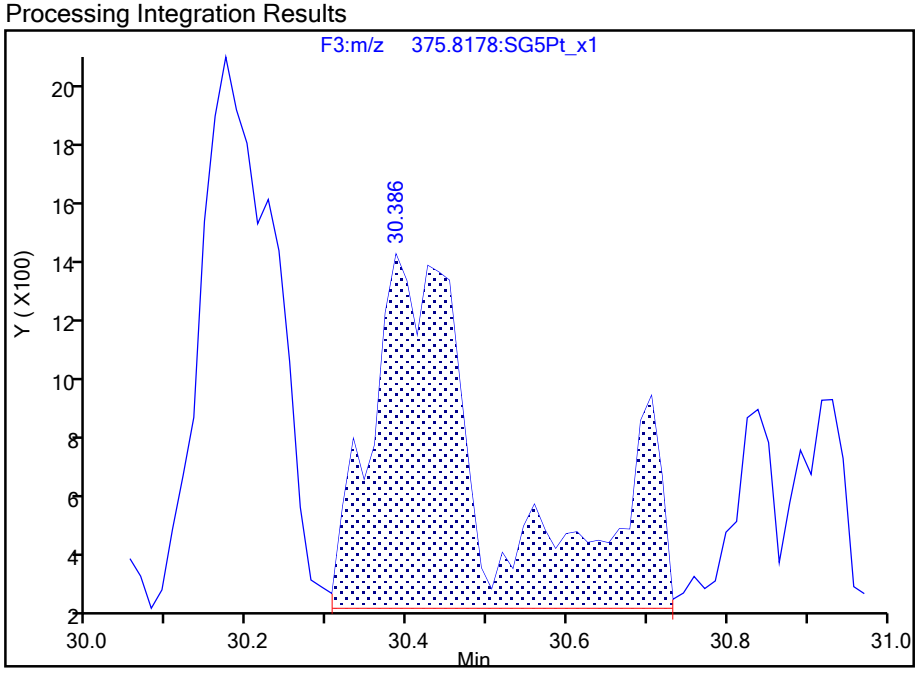

Manual Integration Results

RT: 30.39
Area: 8095
Amount: 0.026990
Amount Units: pg/ul

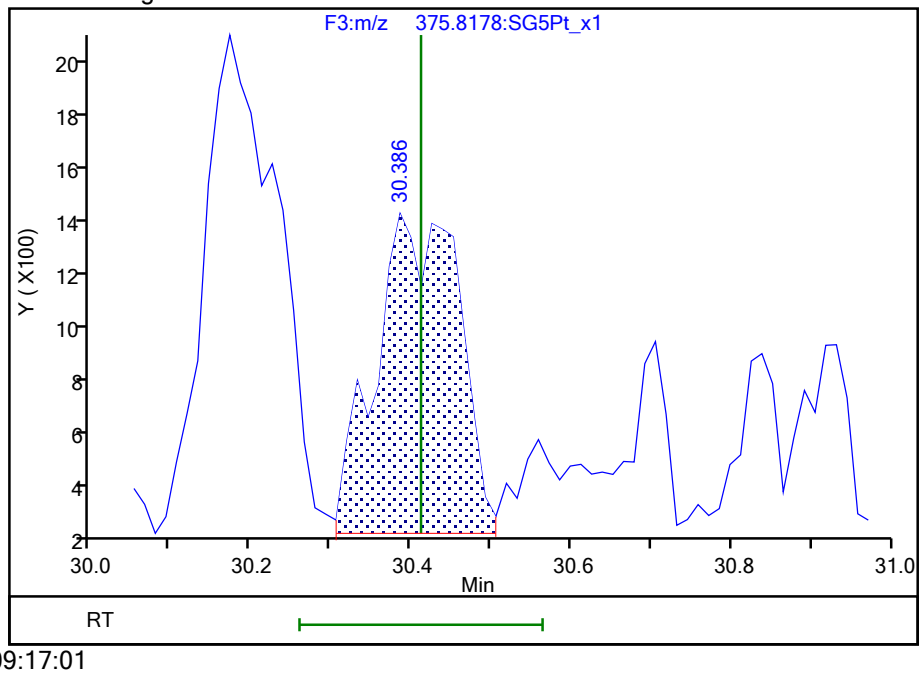

Reviewer: dadunj, 27-Aug-2021 09:17:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793476

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

2,3,4,6,7,8-HxCDF, CAS: 60851-34-5

Signal: 2

Processing Integration Results

RT: 31.32
Area: 4498
Amount: 0.017474
Amount Units: pg/ul

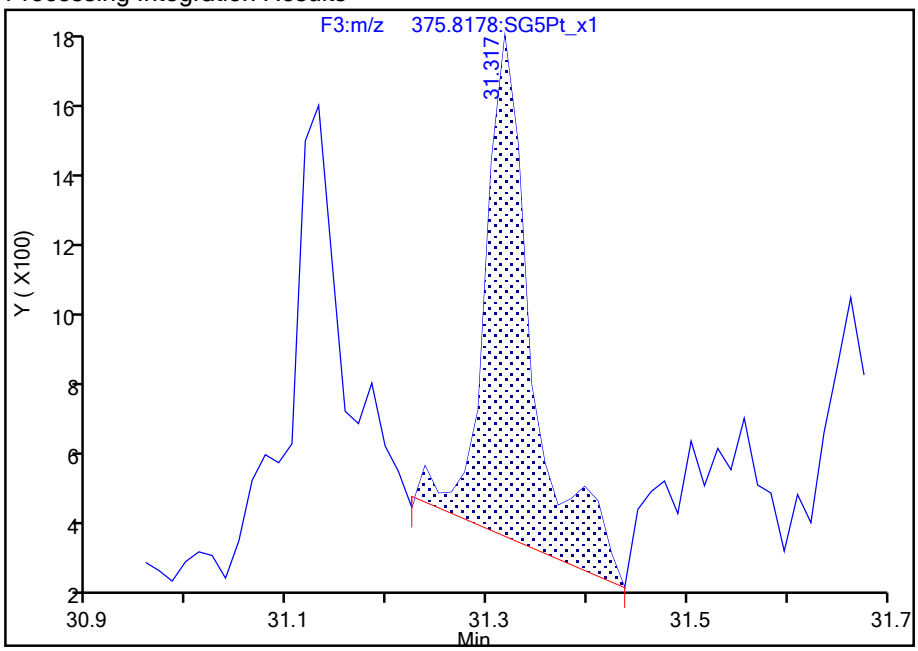

Manual Integration Results

RT: 31.32
Area: 3330
Amount: 0.015329
Amount Units: pg/ul

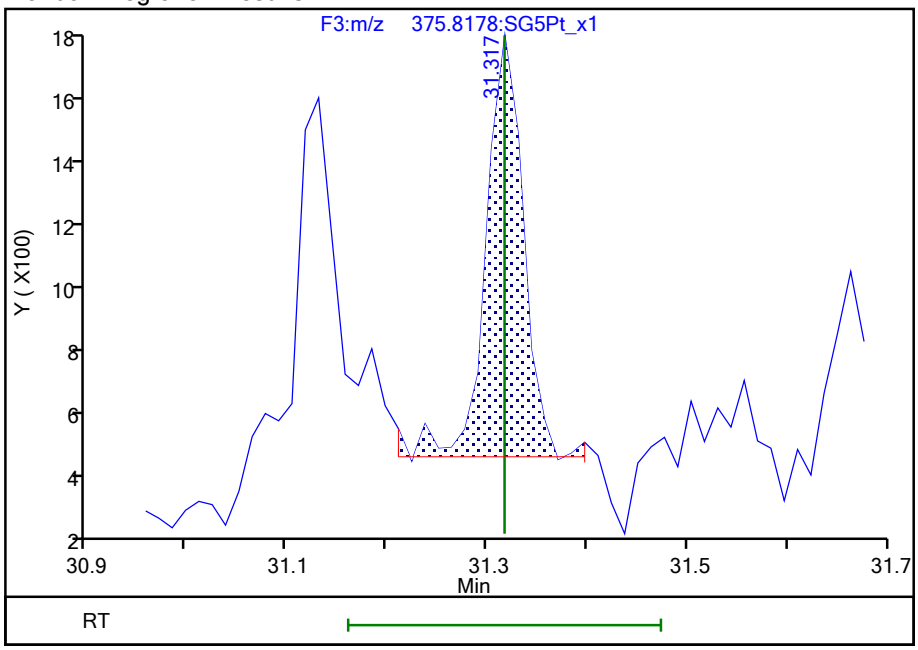

Reviewer: dadunj, 27-Aug-2021 09:17:07

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.14
Area: 14554
Amount: 0.059876
Amount Units: pg/ul

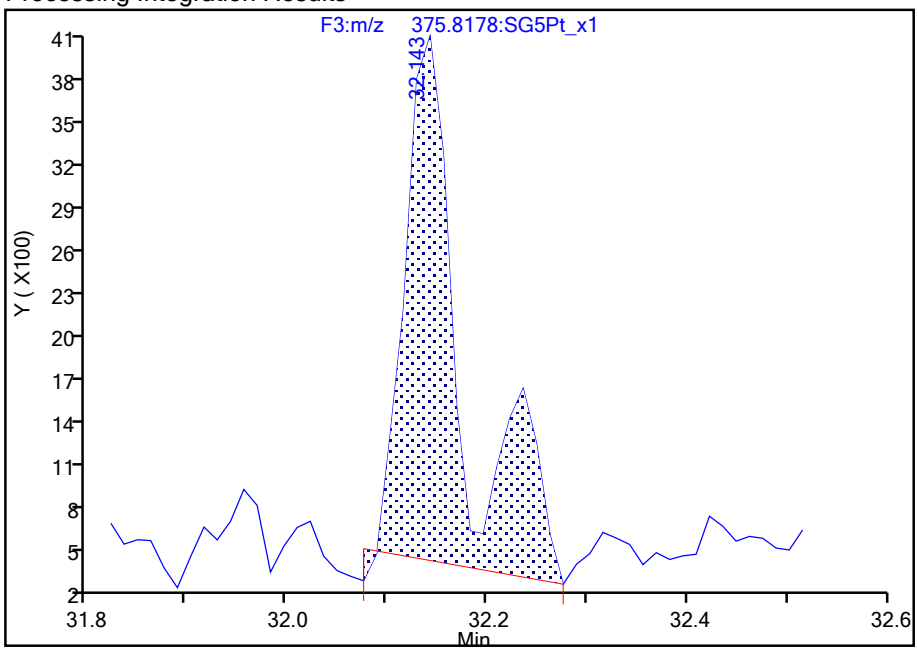

Manual Integration Results

RT: 32.14
Area: 10406
Amount: 0.051634
Amount Units: pg/ul

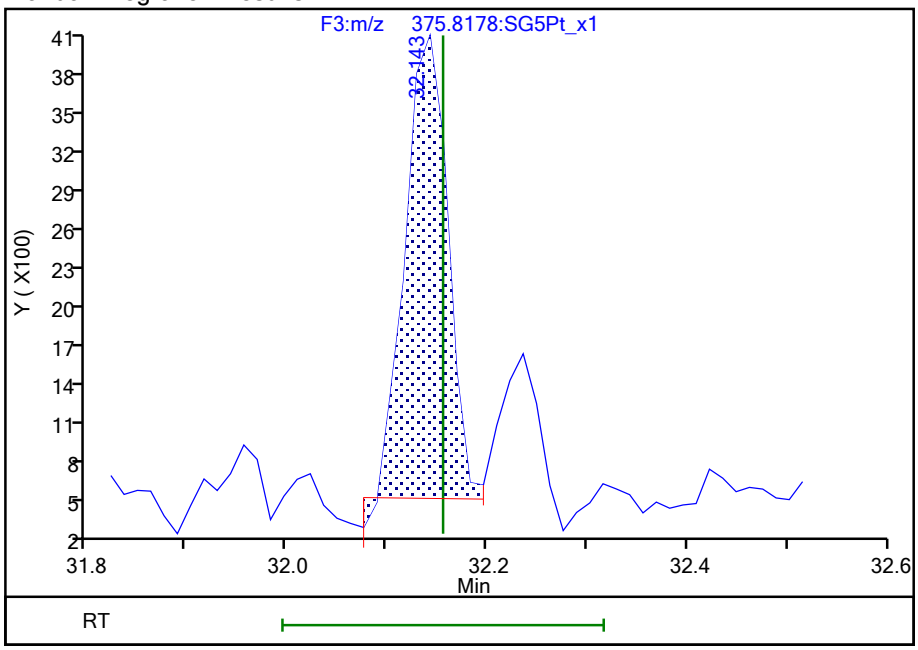

Reviewer: dadunj, 27-Aug-2021 09:17:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793478

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 1

Processing Integration Results

RT: 31.61
Area: 121524
Amount: 0.558101
Amount Units: pg/ul

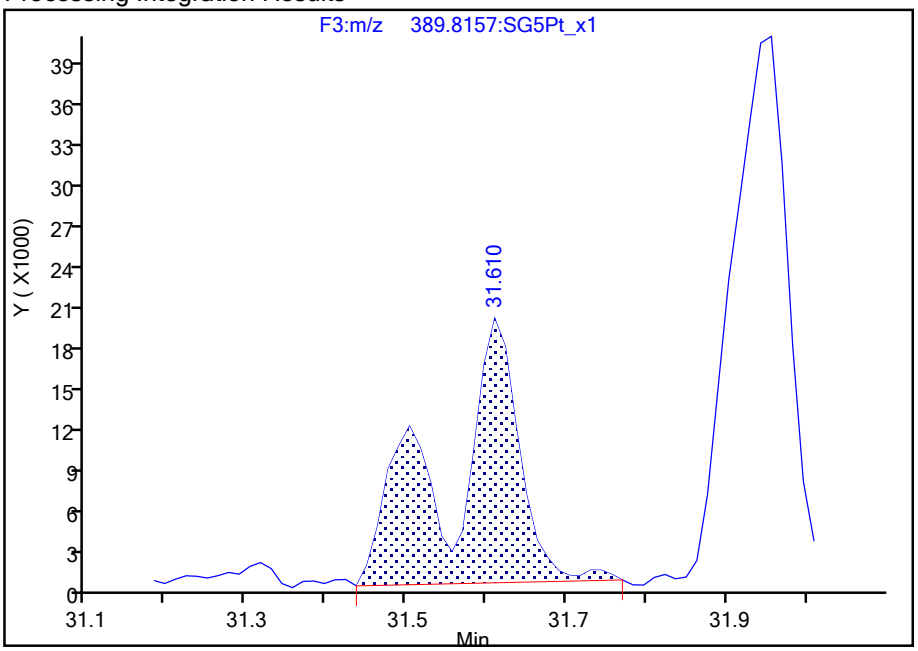

Manual Integration Results

RT: 31.50
Area: 44397
Amount: 0.208658
Amount Units: pg/ul

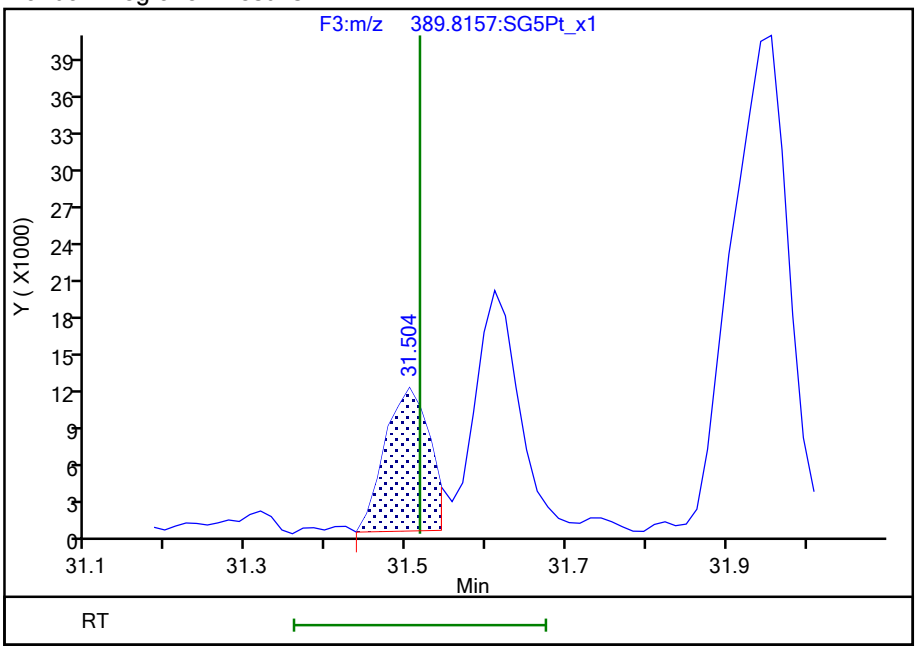

Reviewer: dadunj, 27-Aug-2021 09:17:23

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793479

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDD, CAS: 39227-28-6

Signal: 2

Processing Integration Results

RT: 31.61
Area: 92913
Amount: 0.558101
Amount Units: pg/ul

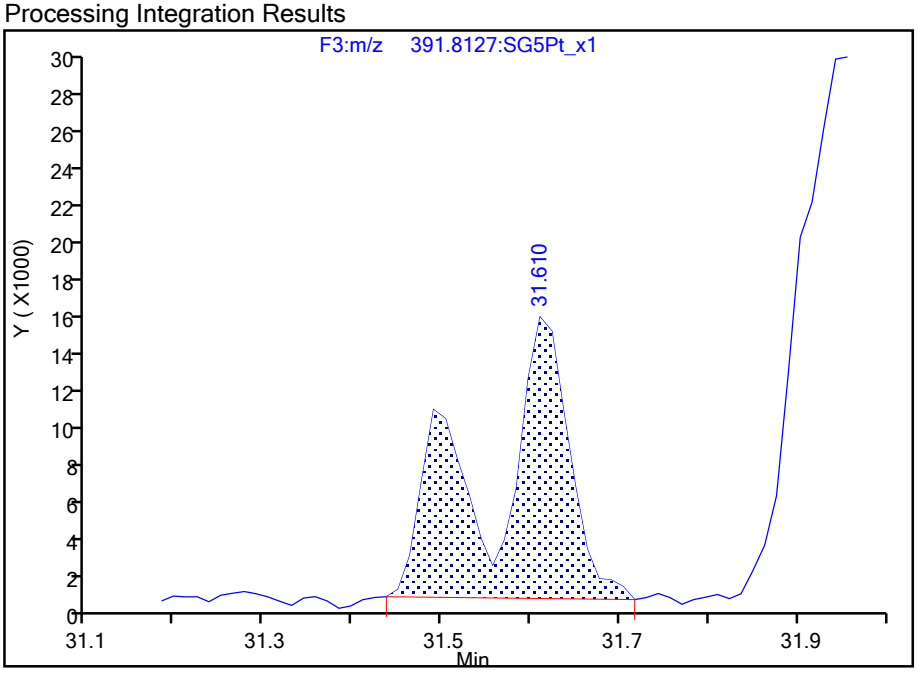

Manual Integration Results

RT: 31.49
Area: 35775
Amount: 0.208658
Amount Units: pg/ul

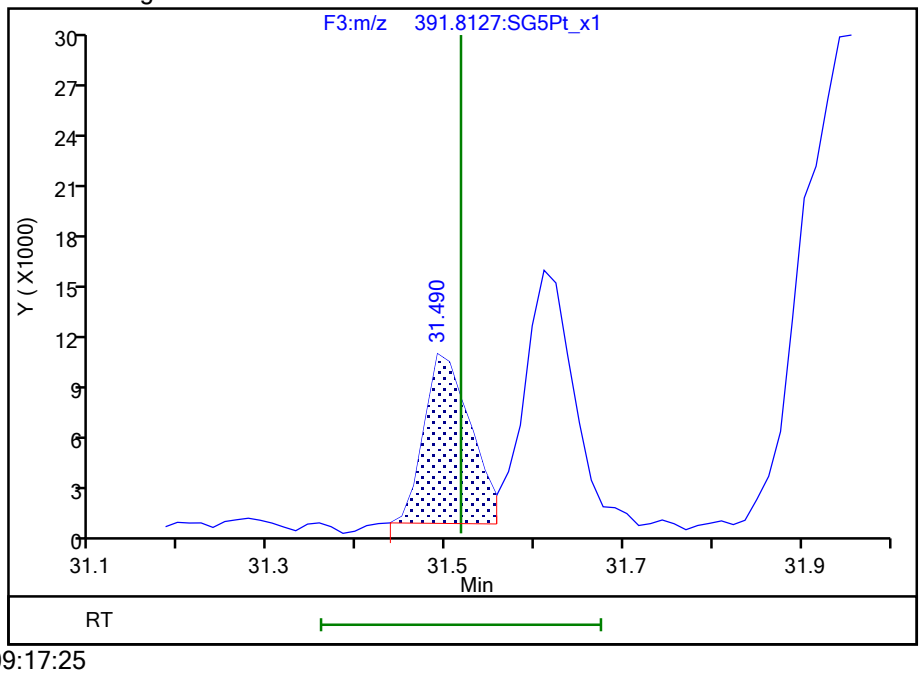

Reviewer: dadunj, 27-Aug-2021 09:17:25
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793480

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 1

Processing Integration Results

RT: 31.61
Area: 121524
Amount: 0.578694
Amount Units: pg/ul

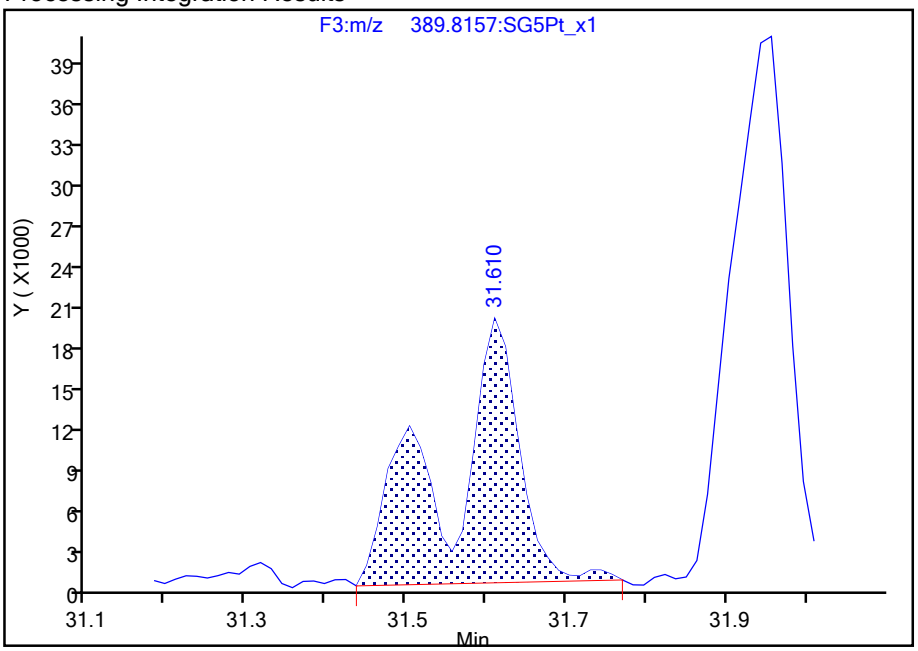

Manual Integration Results

RT: 31.61
Area: 77059
Amount: 0.362093
Amount Units: pg/ul

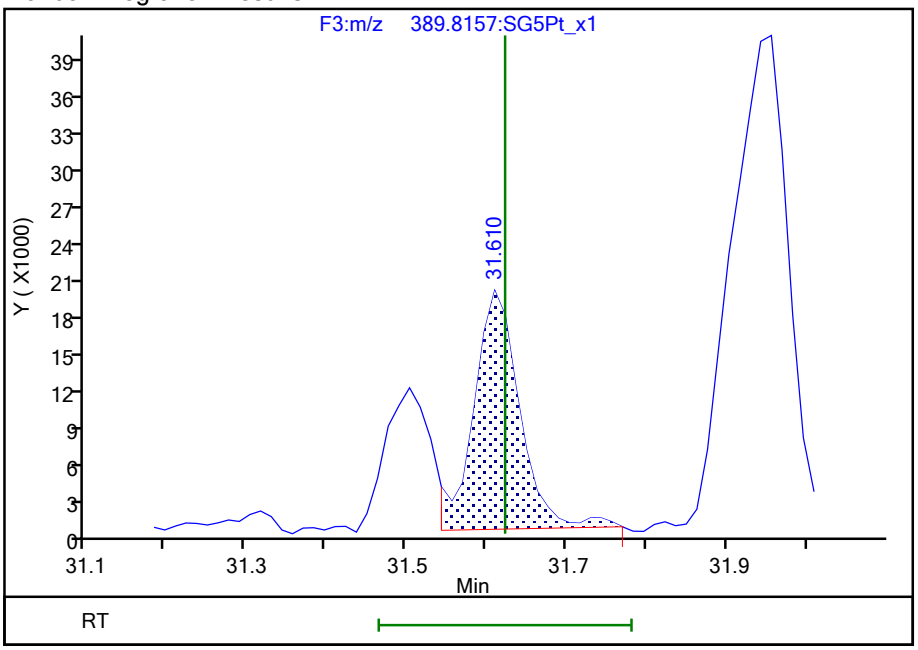

Reviewer: dadunj, 27-Aug-2021 09:17:23

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,6,7,8-HxCDD, CAS: 57653-85-7

Signal: 2

Processing Integration Results

RT: 31.61
Area: 92913
Amount: 0.578694
Amount Units: pg/ul

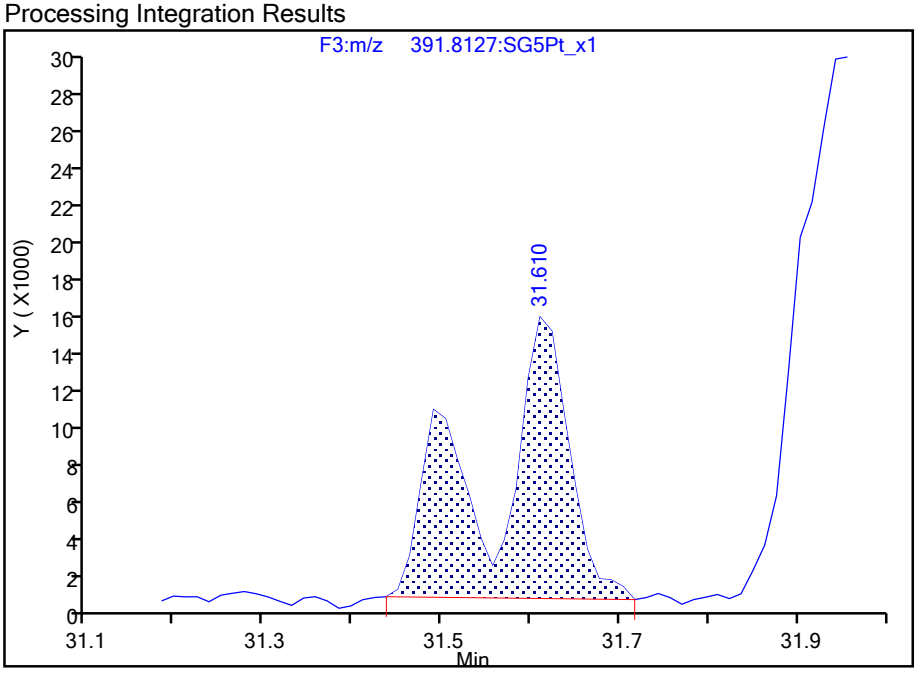

Manual Integration Results

RT: 31.61
Area: 57116
Amount: 0.362093
Amount Units: pg/ul

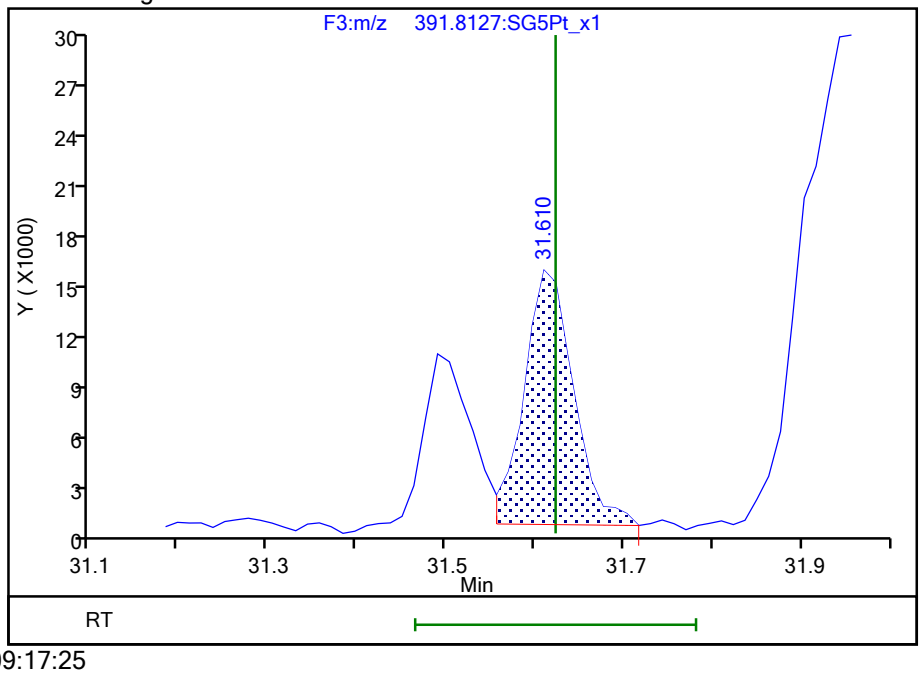

Reviewer: dadunj, 27-Aug-2021 09:17:25
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793482

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.71
Area: 38475
Amount: 0.191176
Amount Units: pg/ul

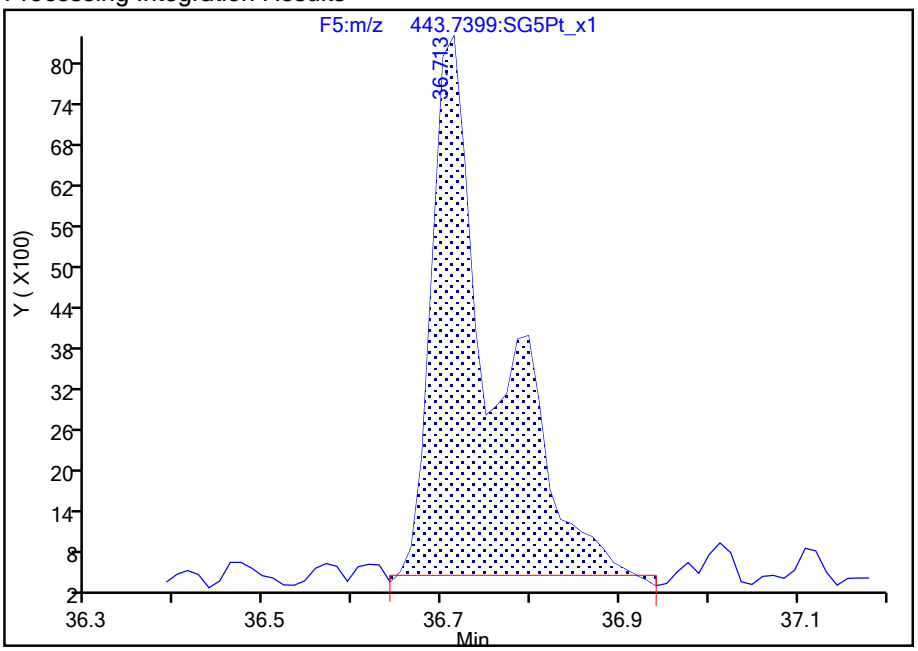

Manual Integration Results

RT: 36.80
Area: 14652
Amount: 0.077984
Amount Units: pg/ul

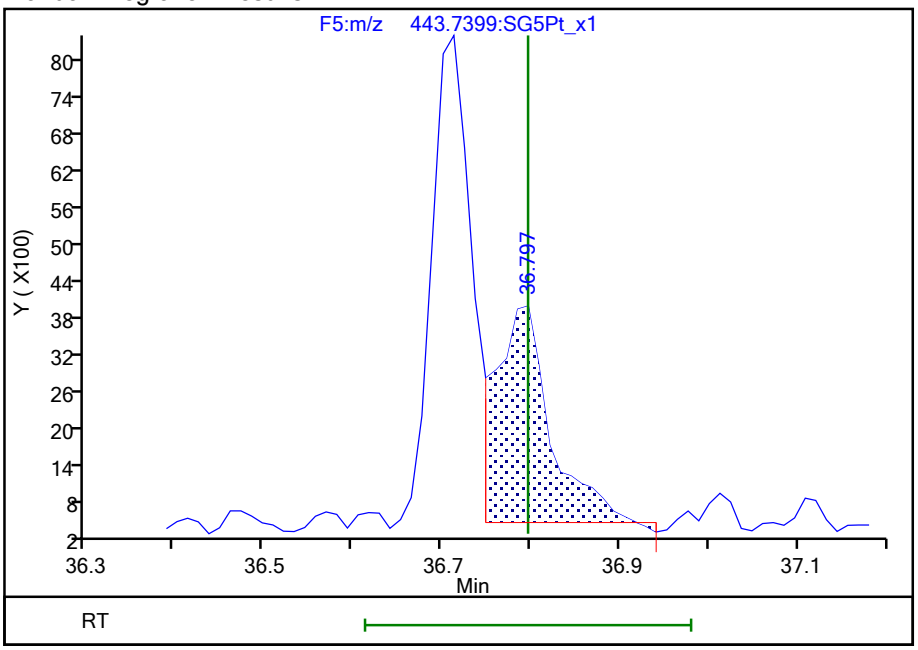

Reviewer: dadunj, 27-Aug-2021 09:17:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d				
Injection Date:	26-Aug-2021 05:05:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:	SMA	ALS Bottle#:	37	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.71
Area: 20983
Amount: 0.191176
Amount Units: pg/ul

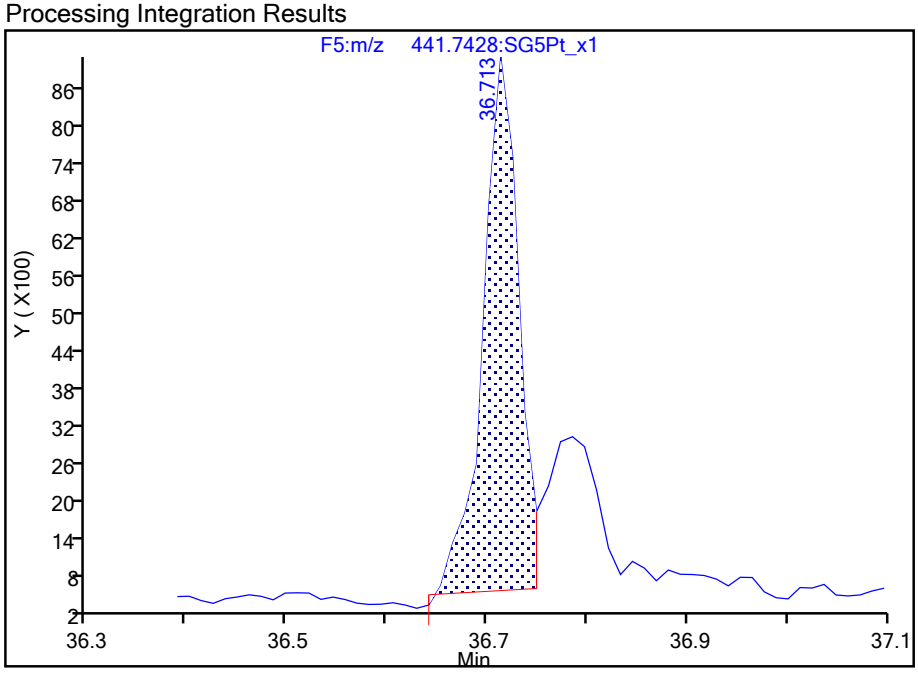

Manual Integration Results

RT: 36.79
Area: 9602
Amount: 0.077984
Amount Units: pg/ul

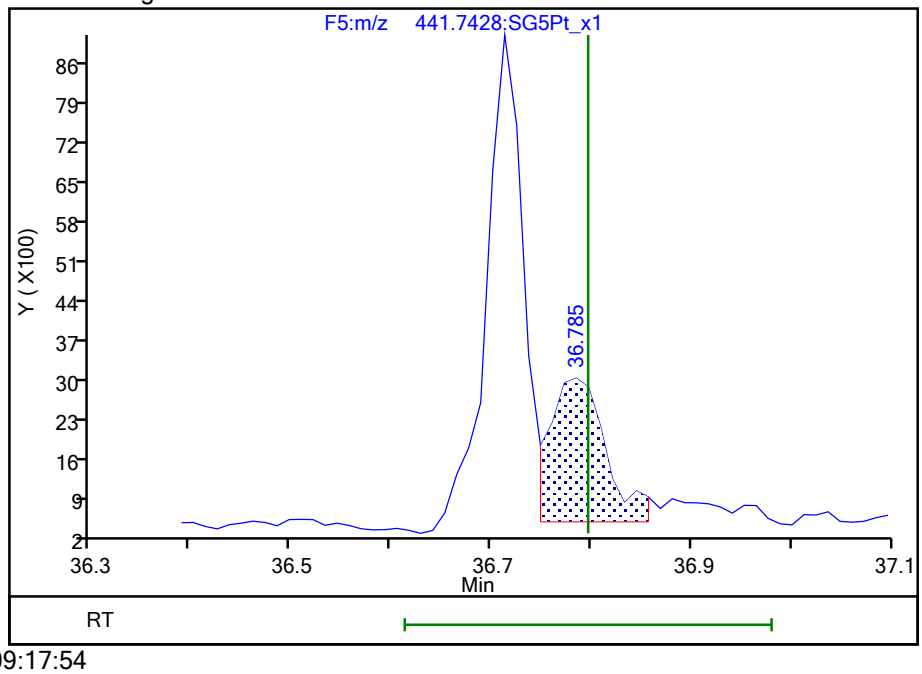

Reviewer: dadunj, 27-Aug-2021 09:17:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793484

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d		
Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

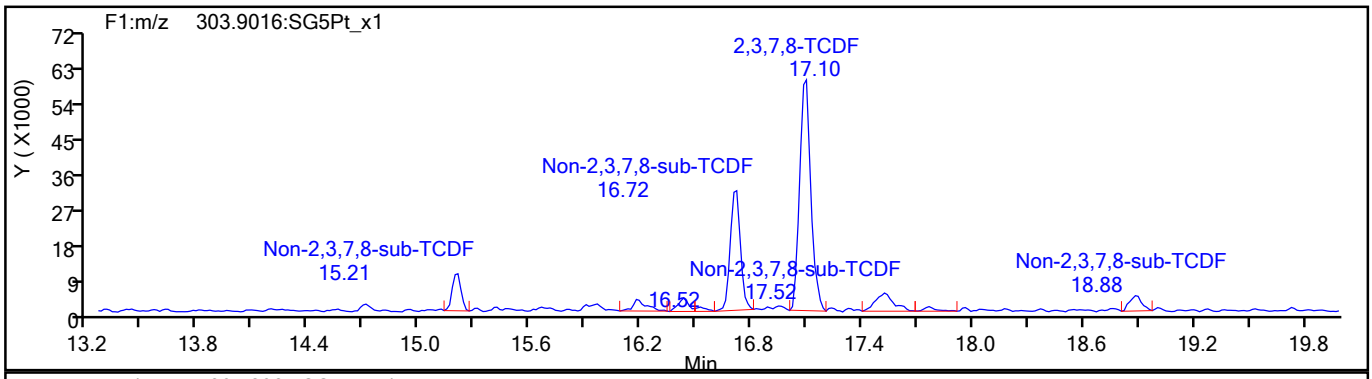

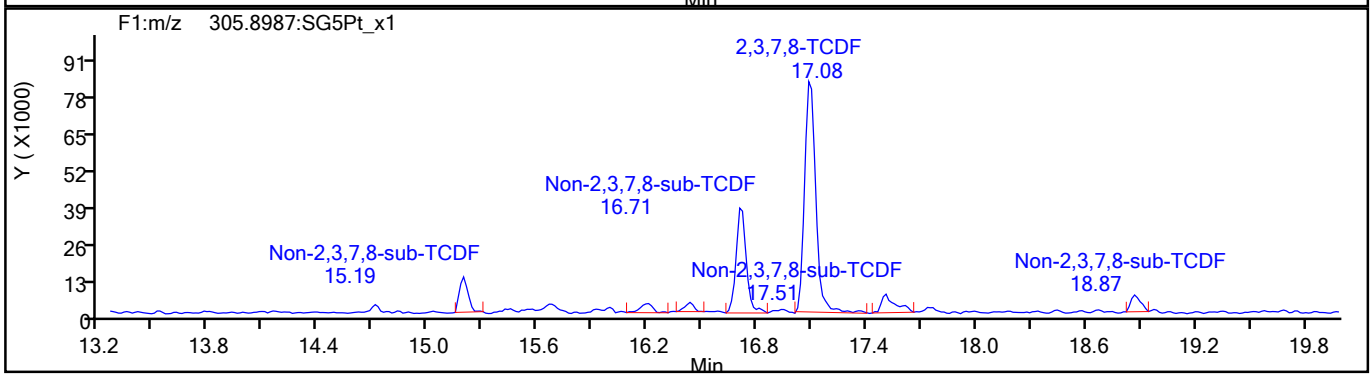

TCDF Standards

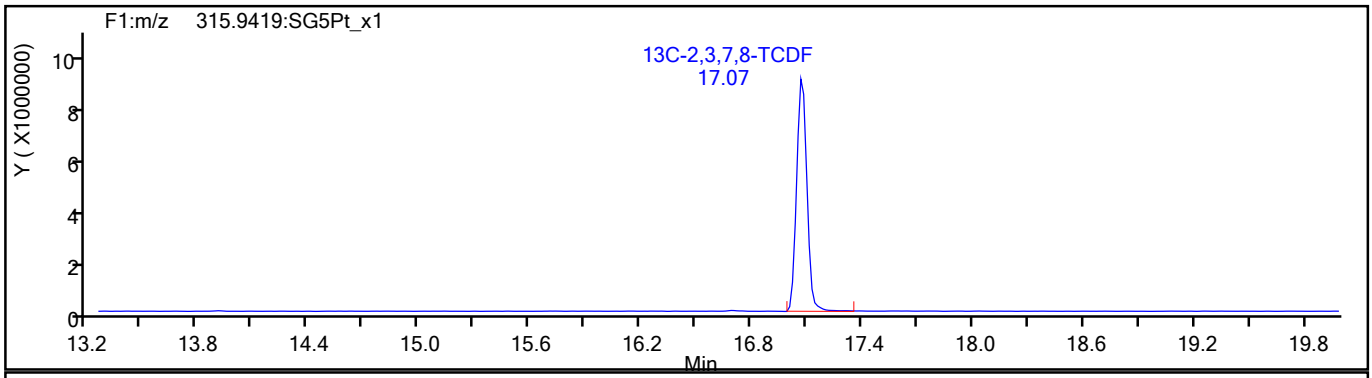

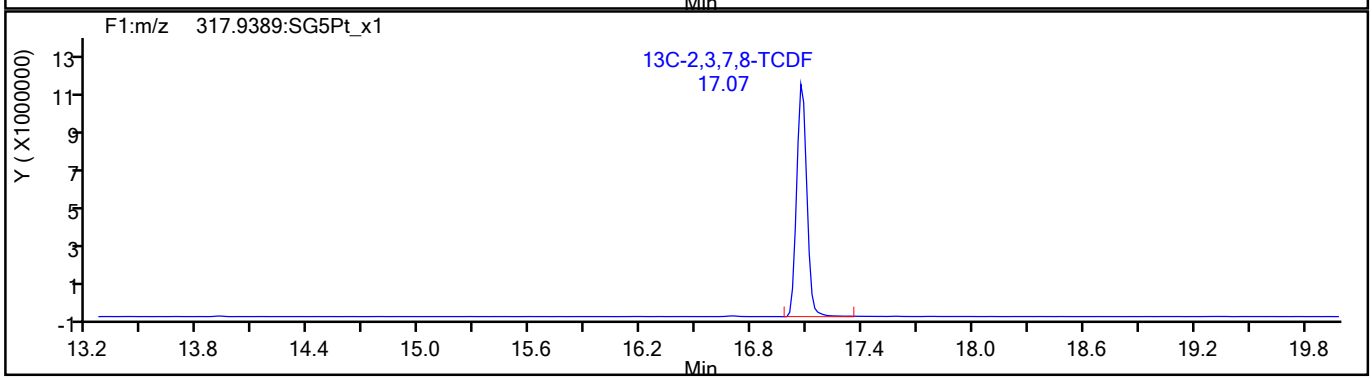

793485

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d		
Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

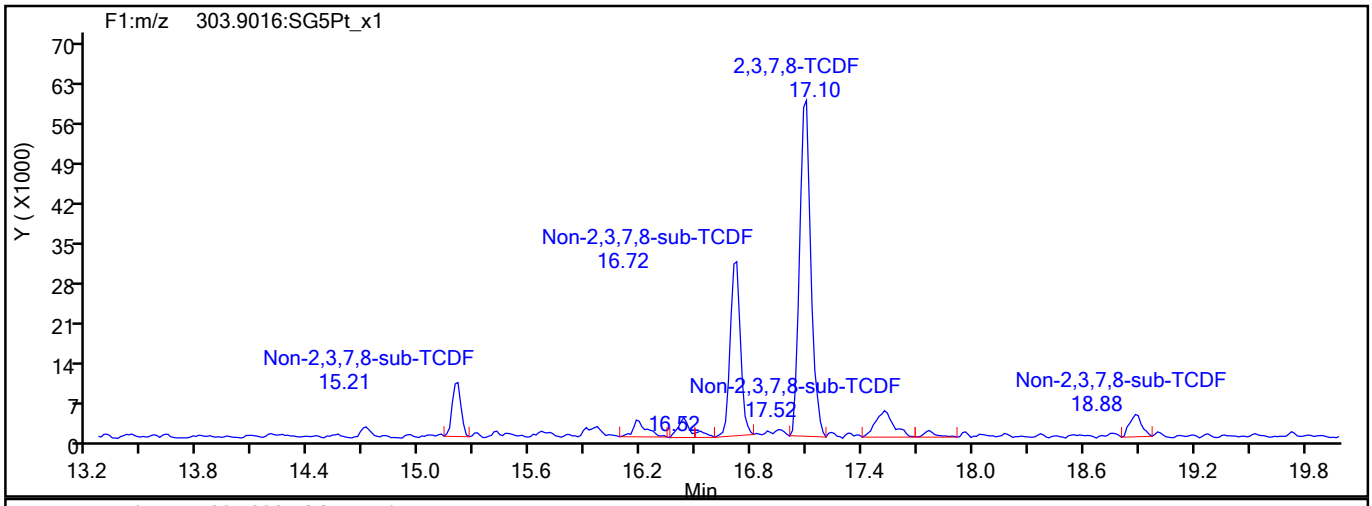

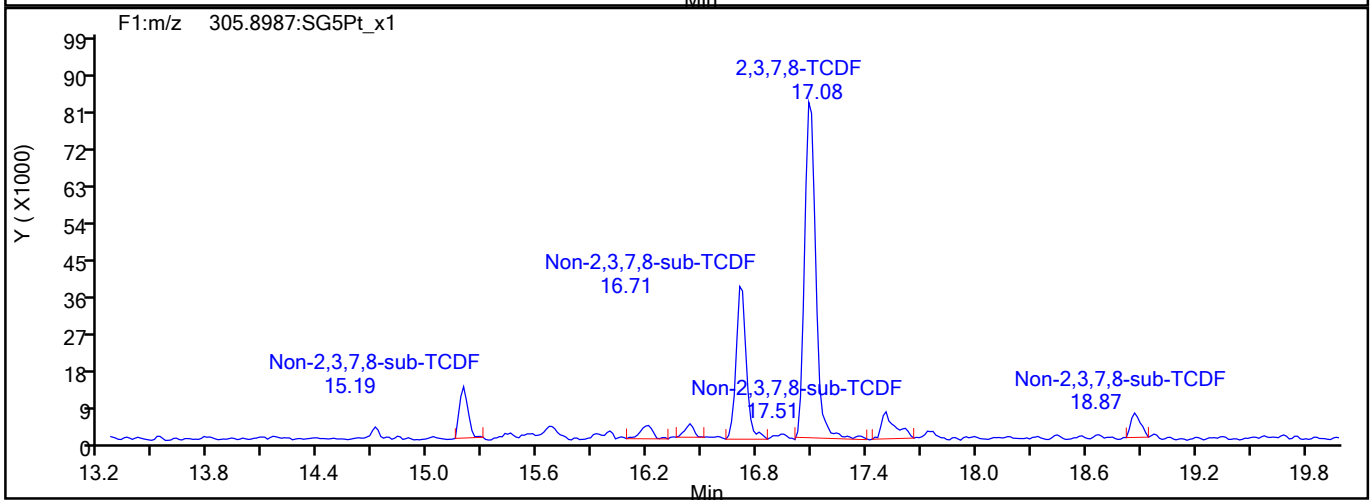

TCDF Interference Mass

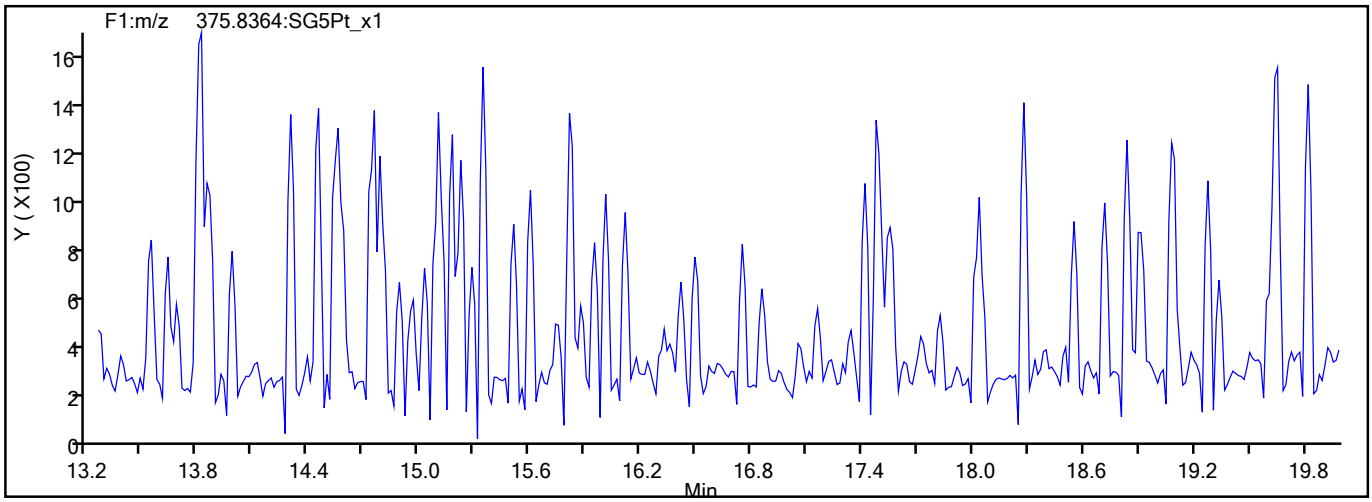

793486

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d		
Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

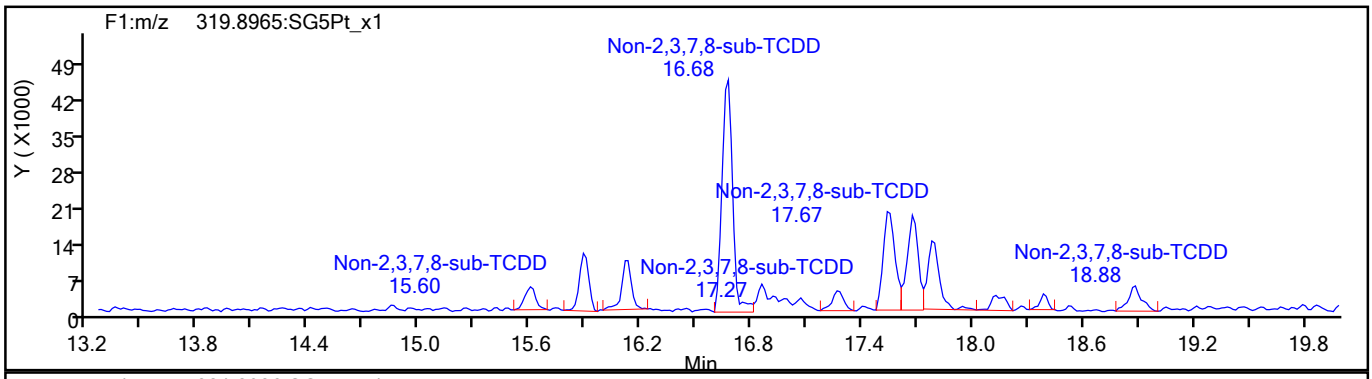

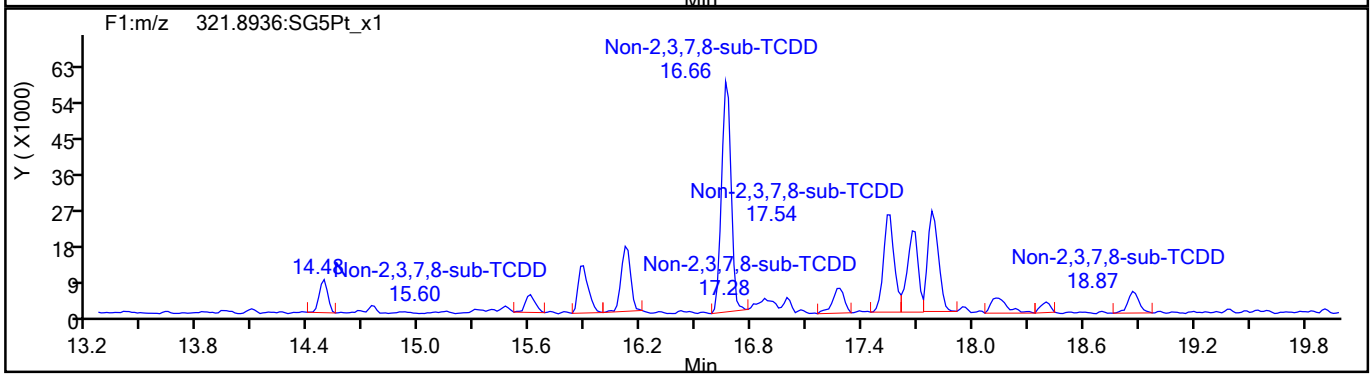

TCDD Standards

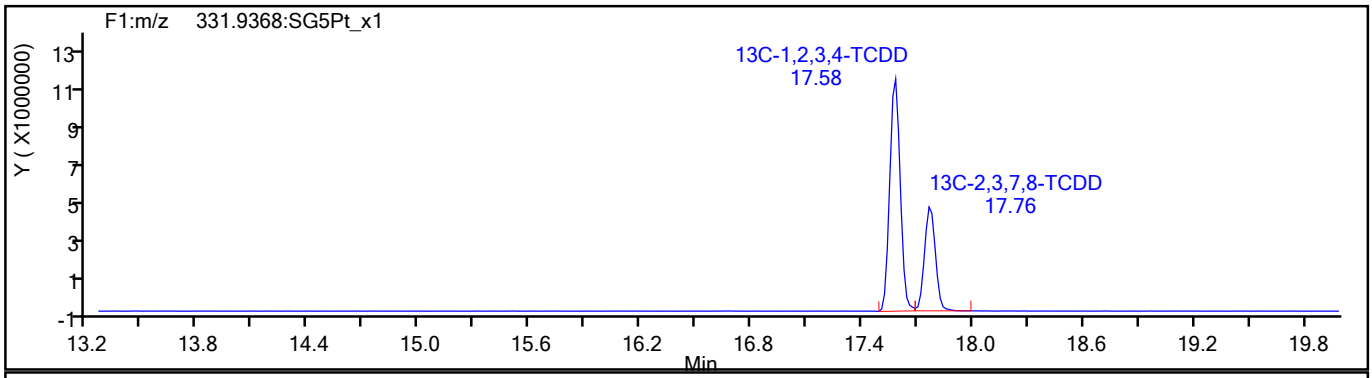

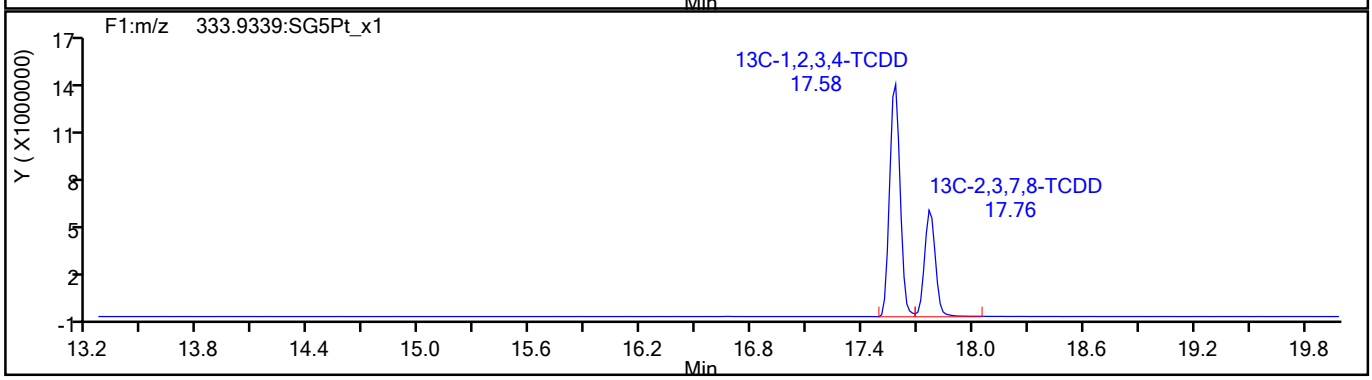

793487

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d		
Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

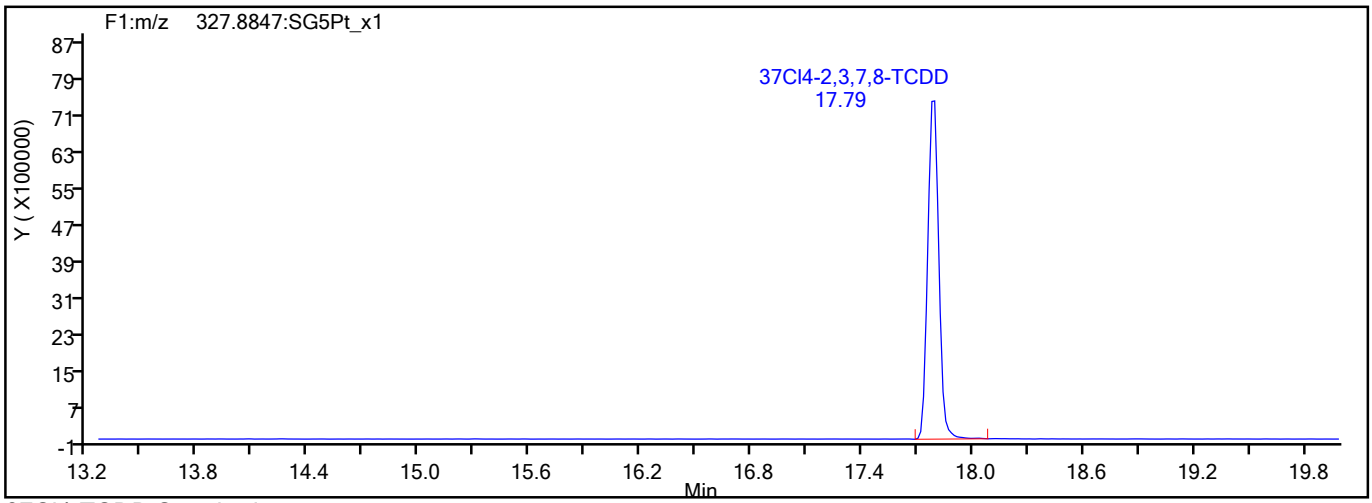

37Cl4-TCDD Standards

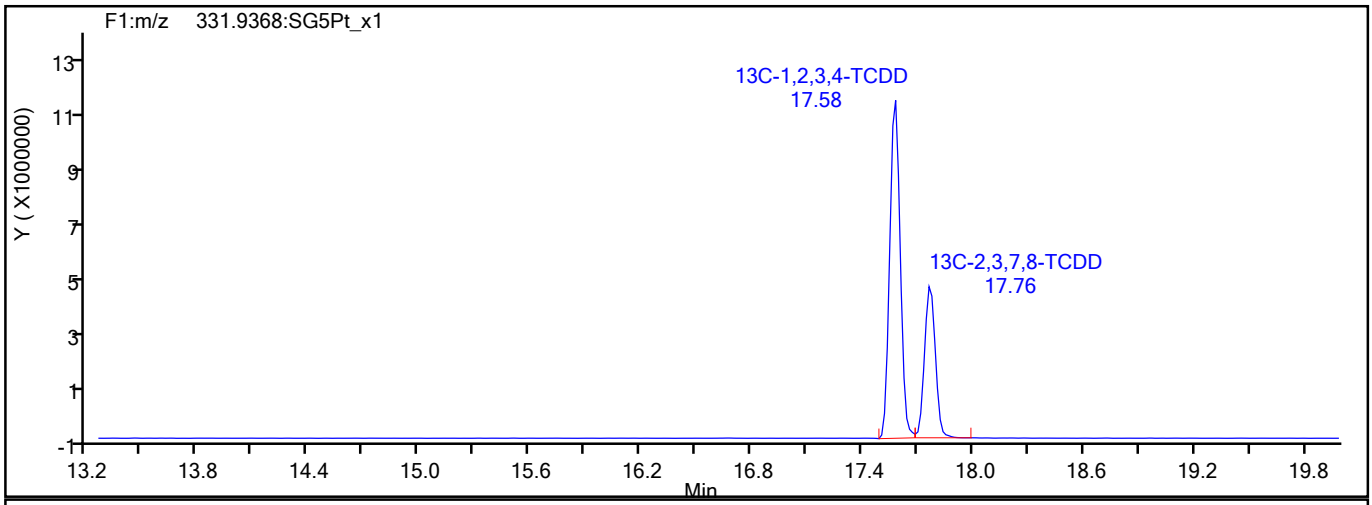

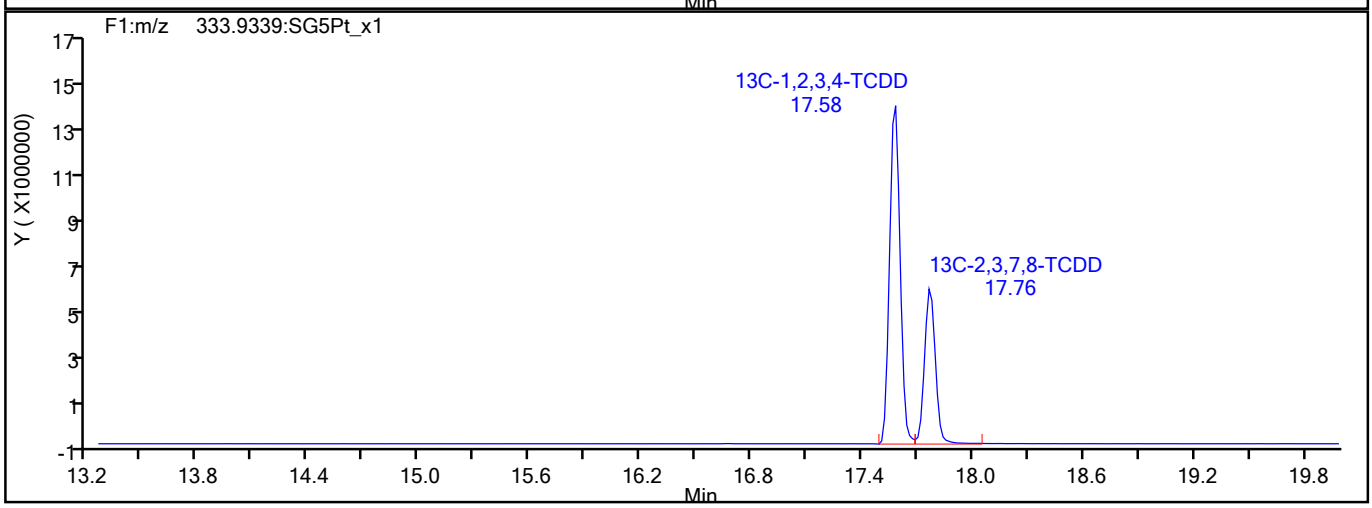

793488

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d		
Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

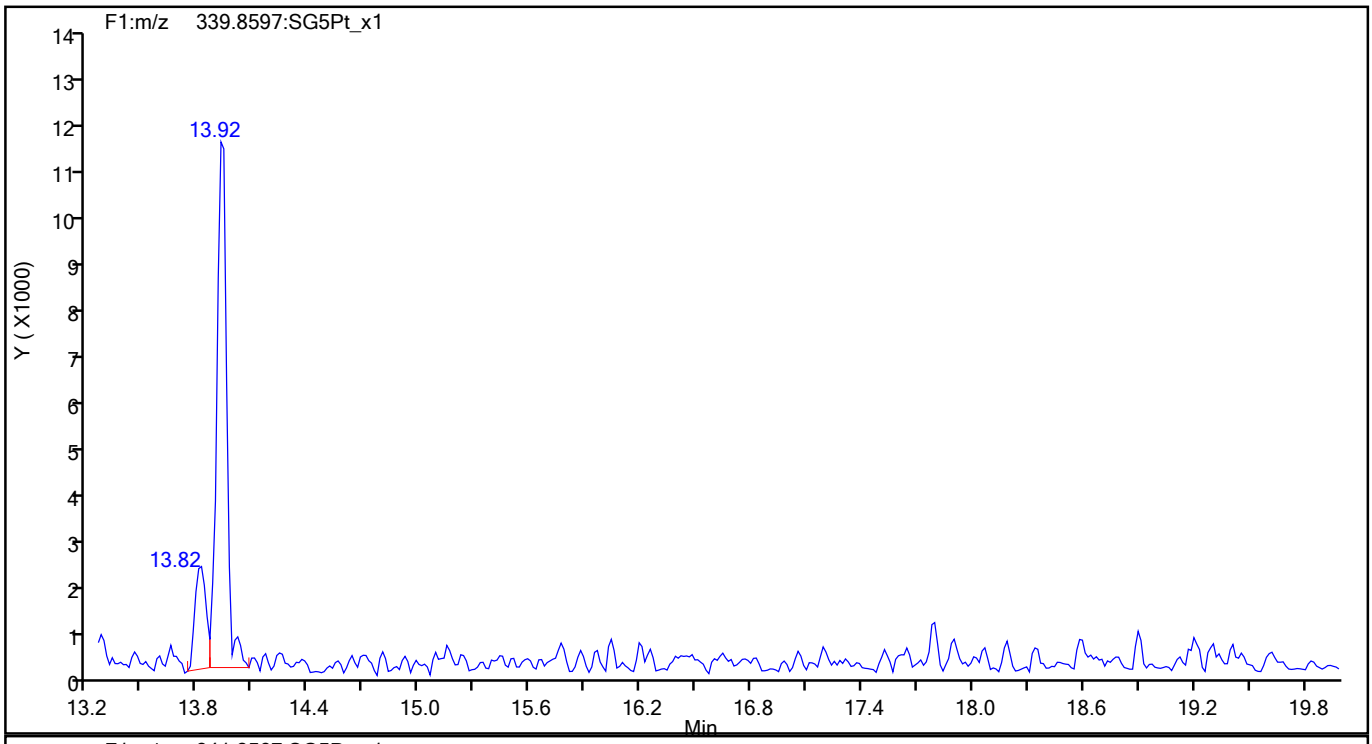

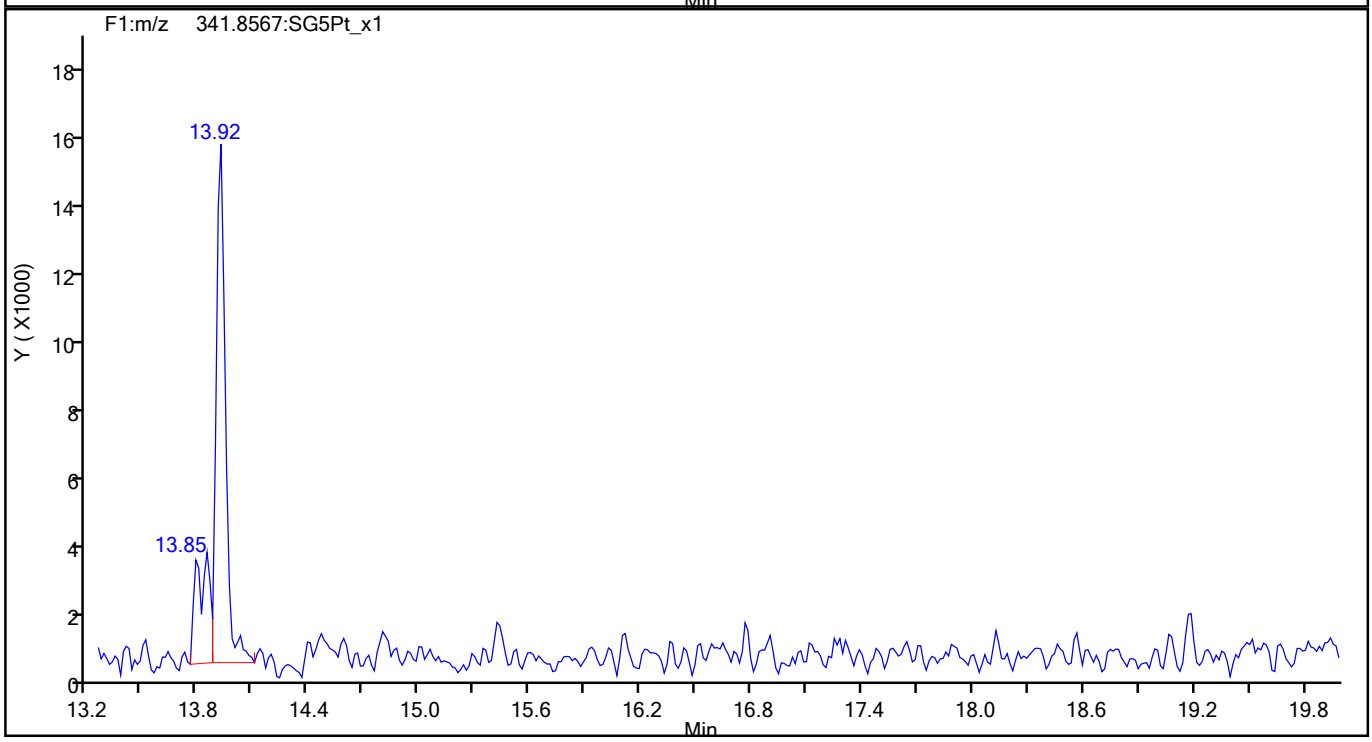

793489

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d		
Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

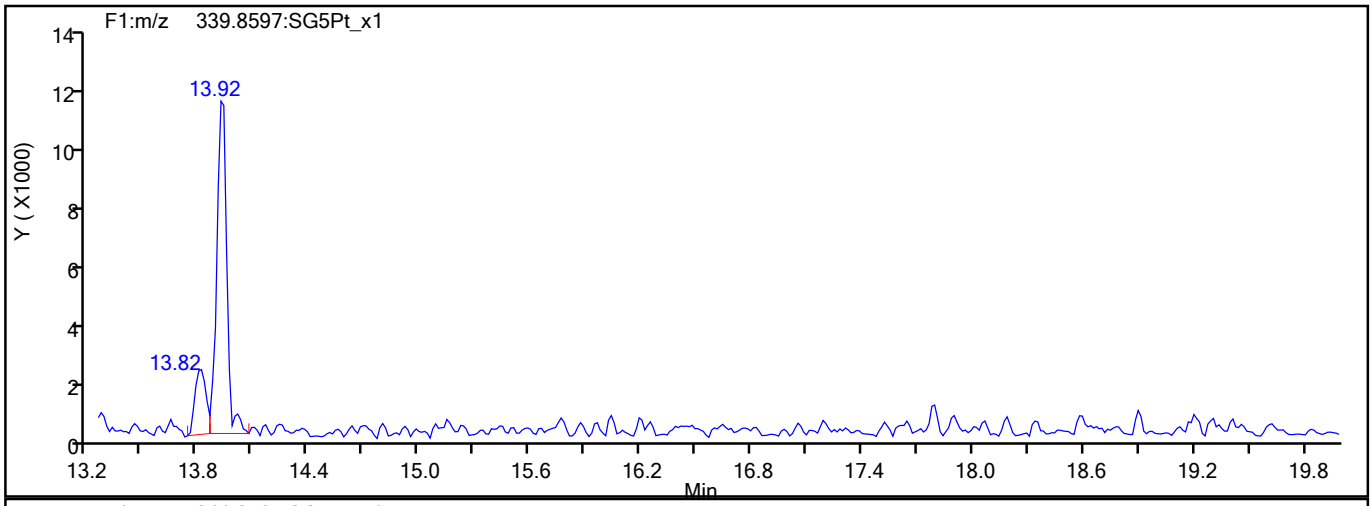

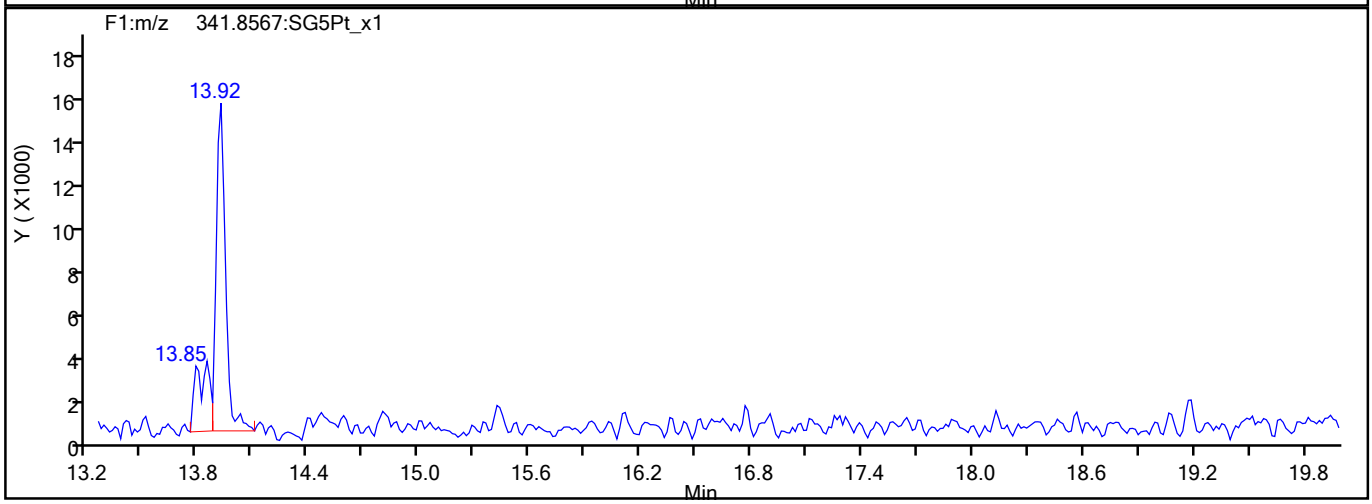

F1 PeCDFs Interference Mass

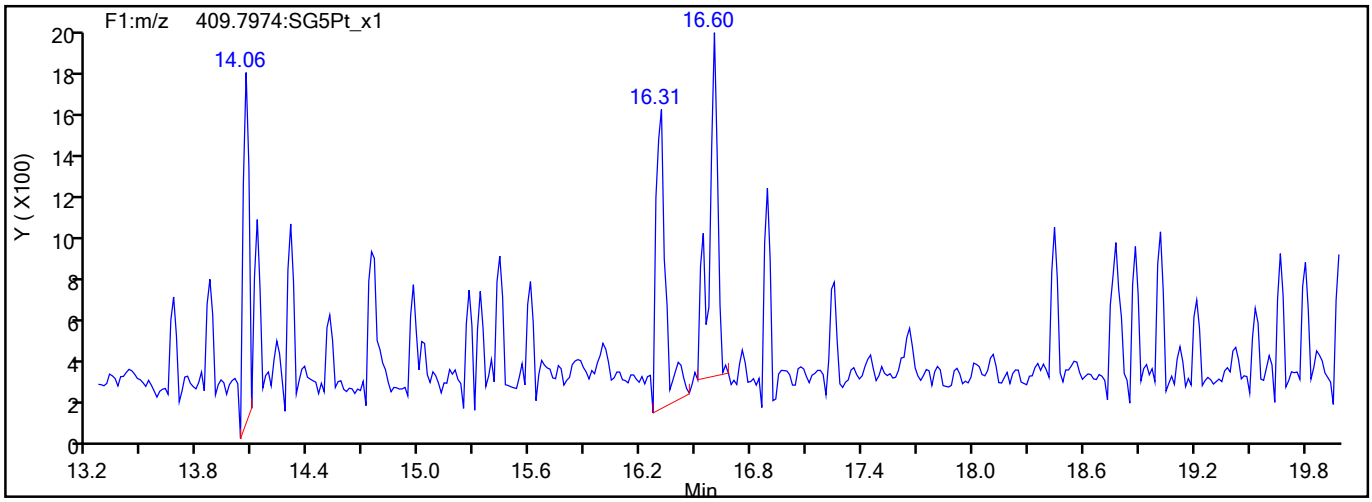

793490

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

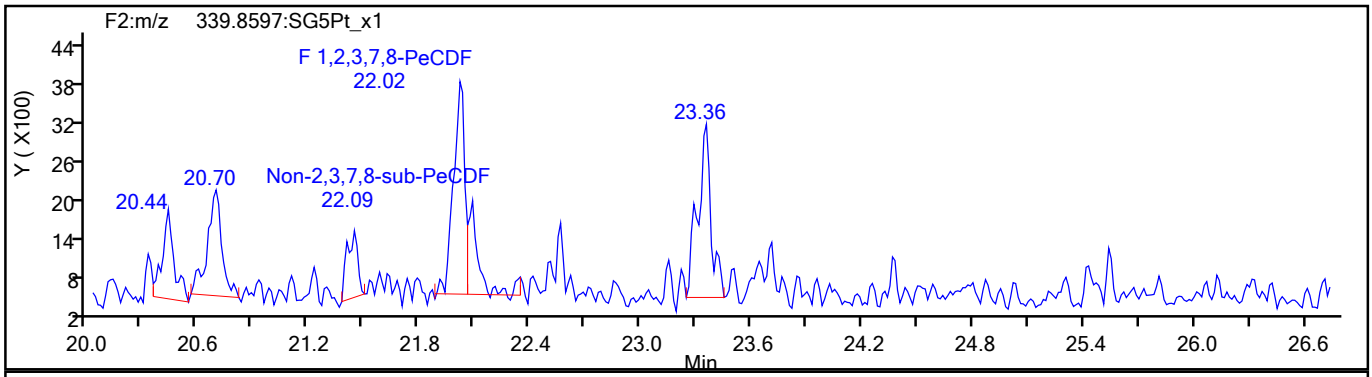

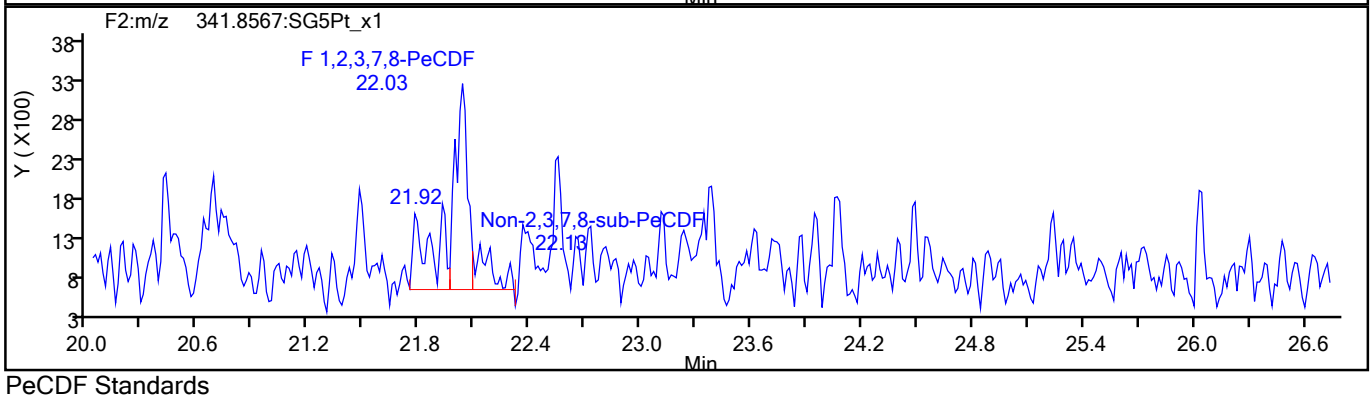

PeCDF Standards

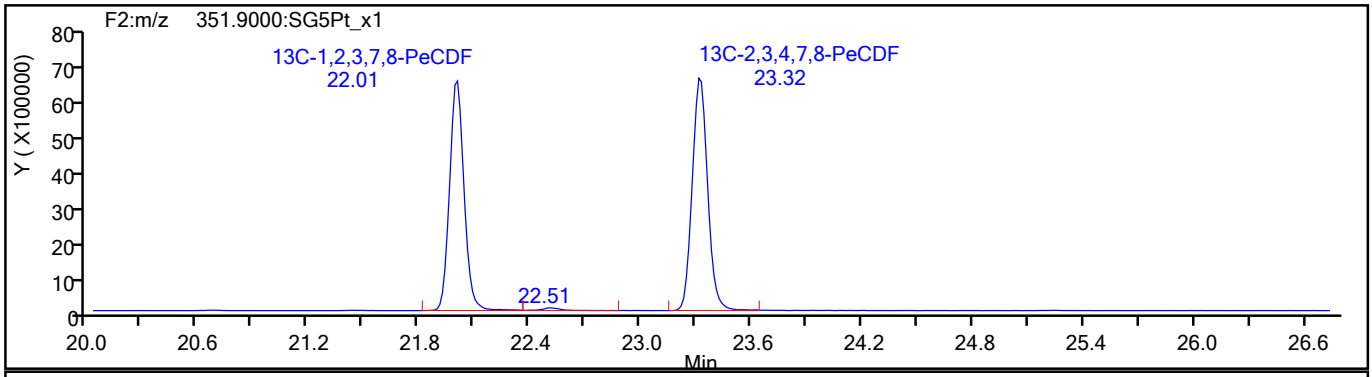

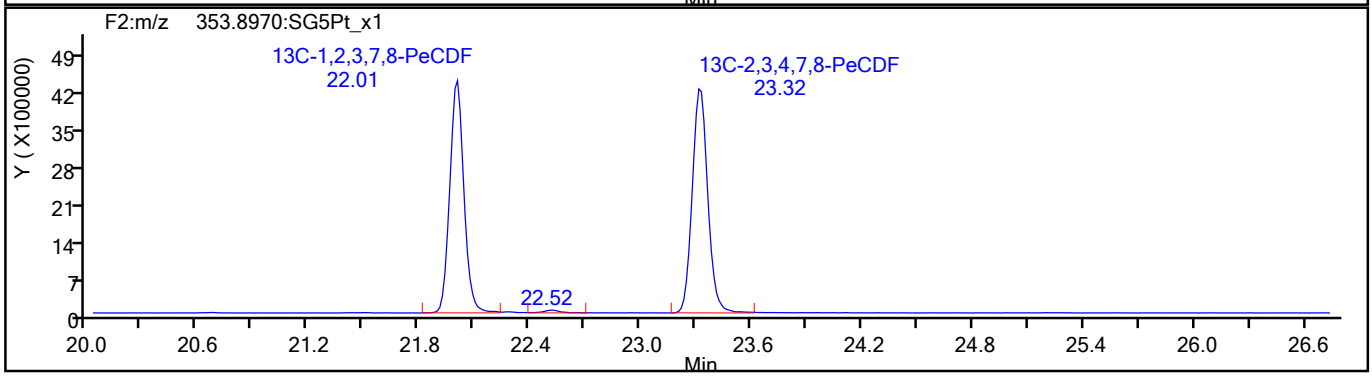

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Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

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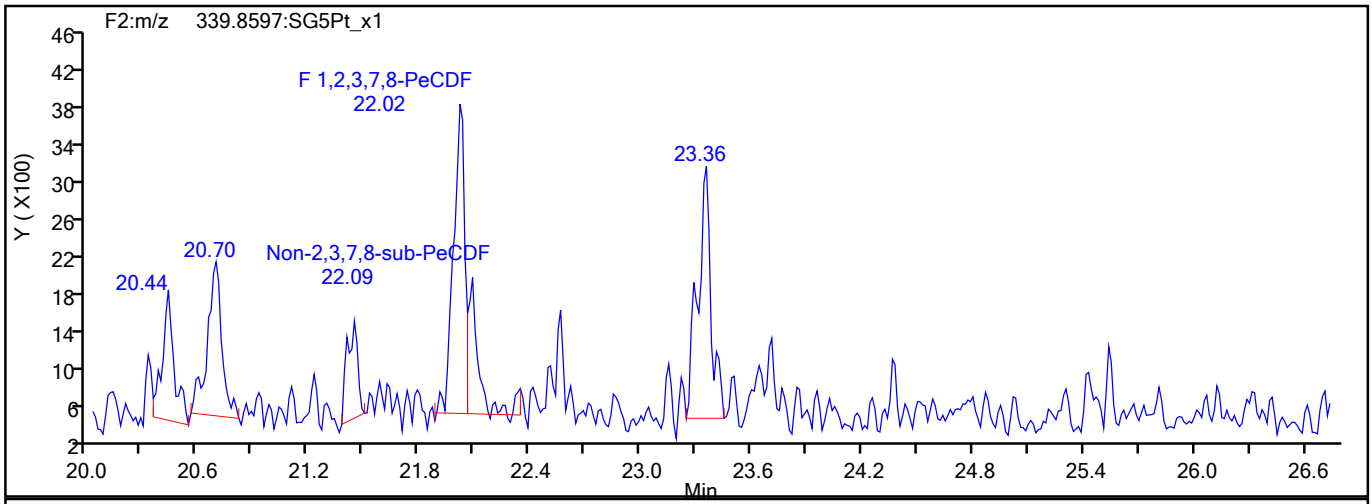

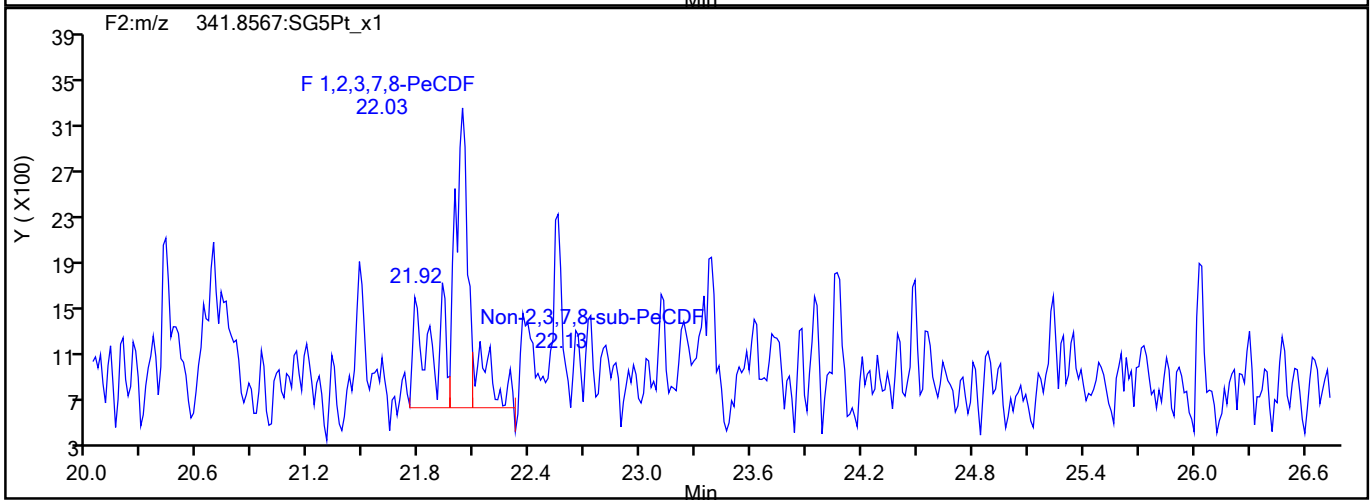

PeCDF Interference Mass

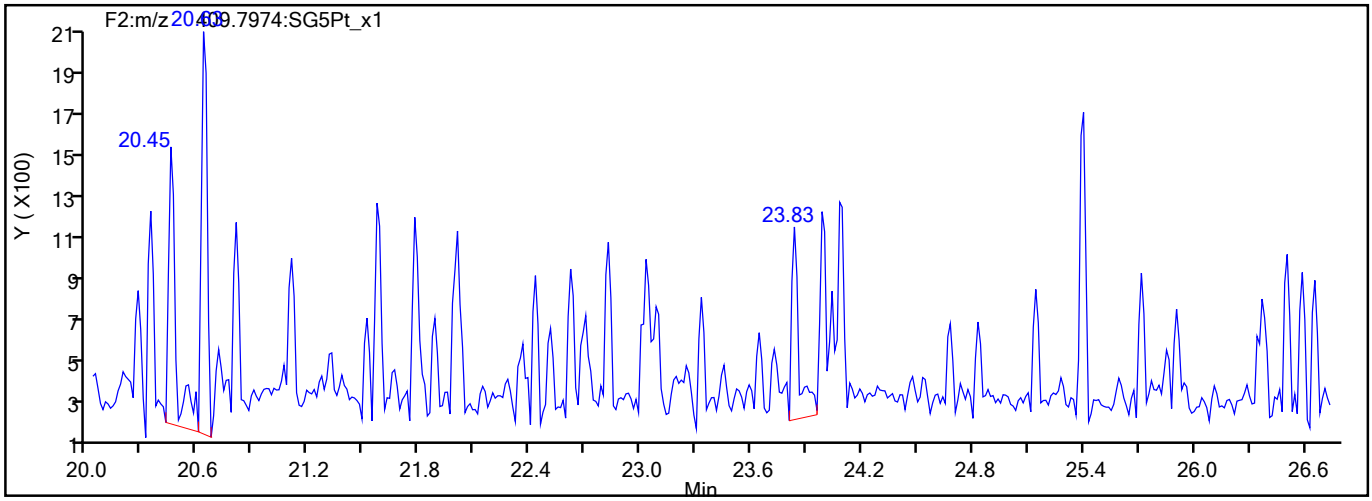

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Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

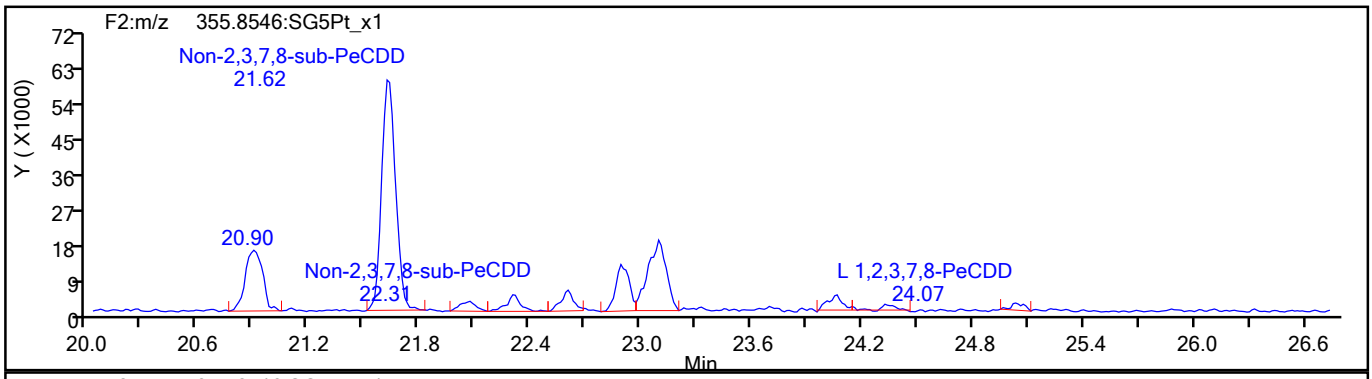

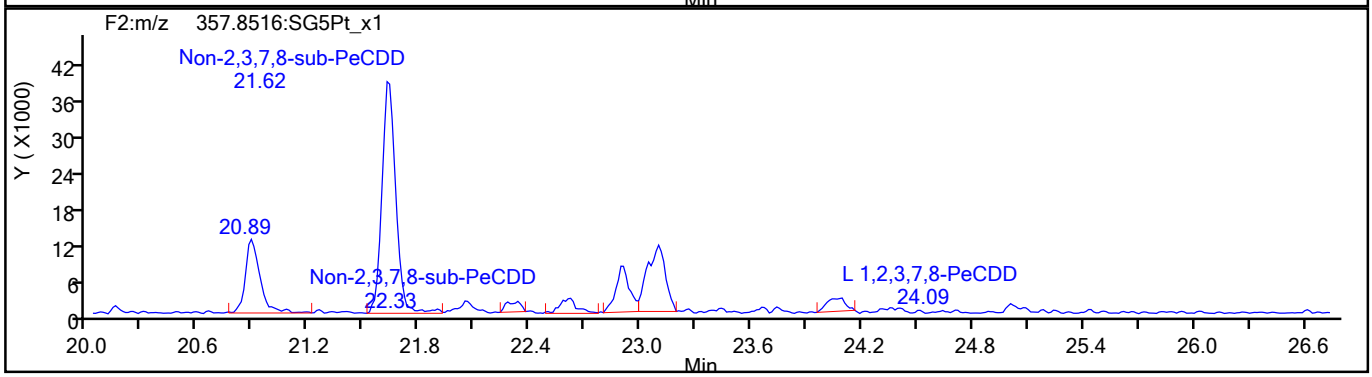

PeCDD Standards

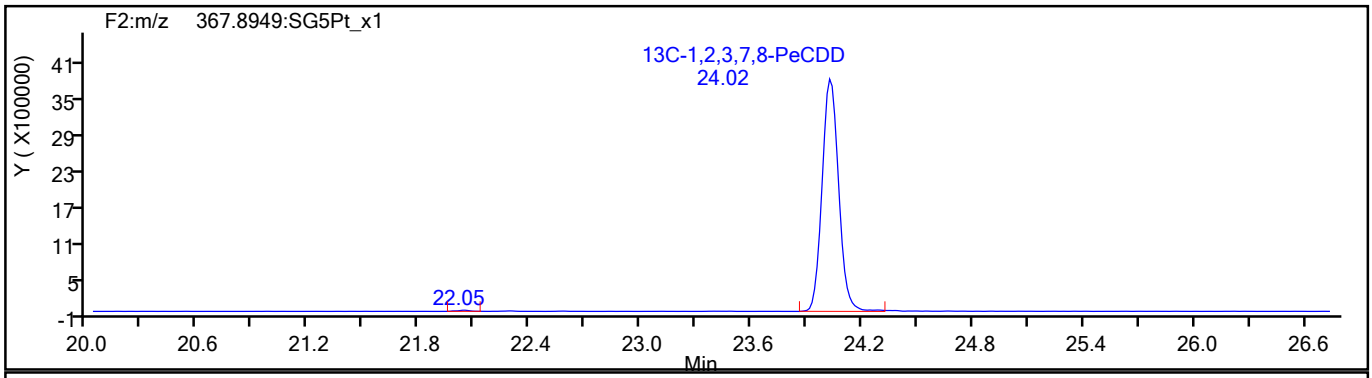

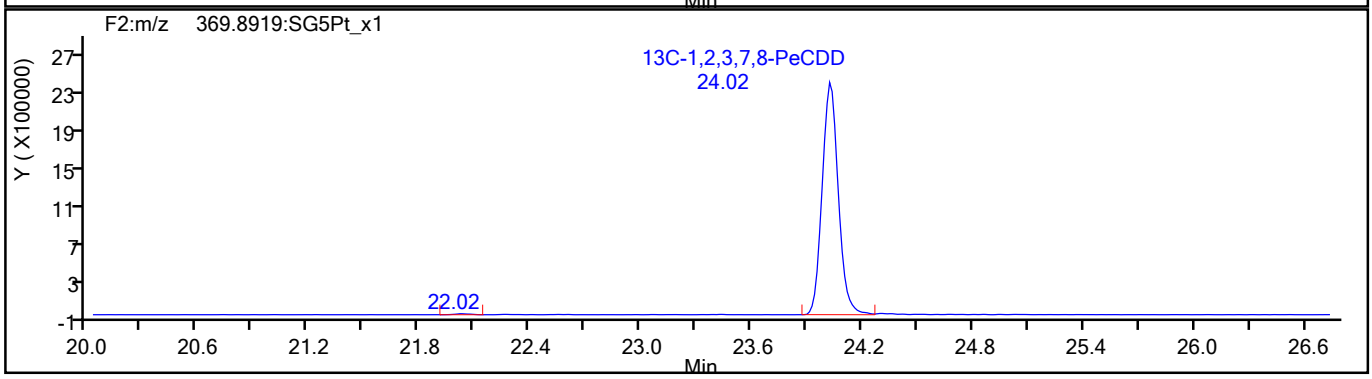

793493

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
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HxCDF

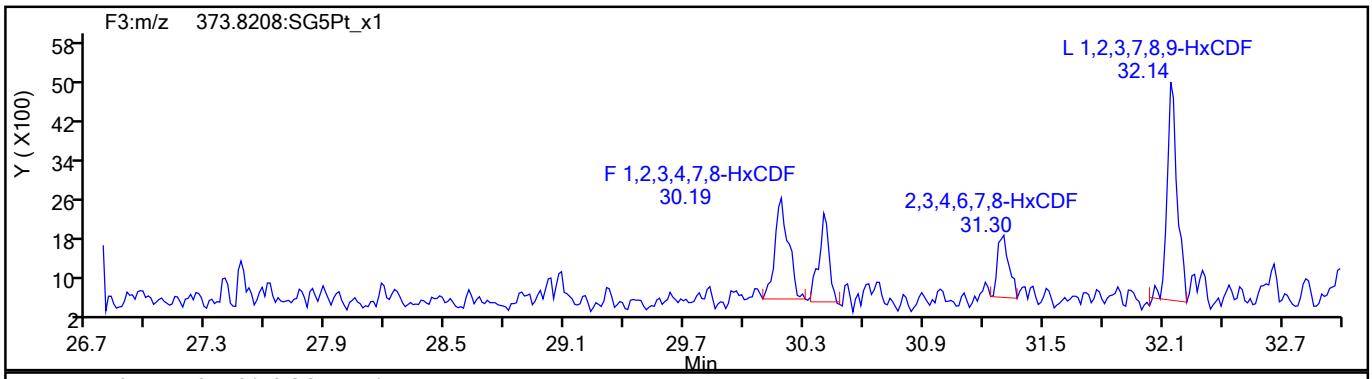

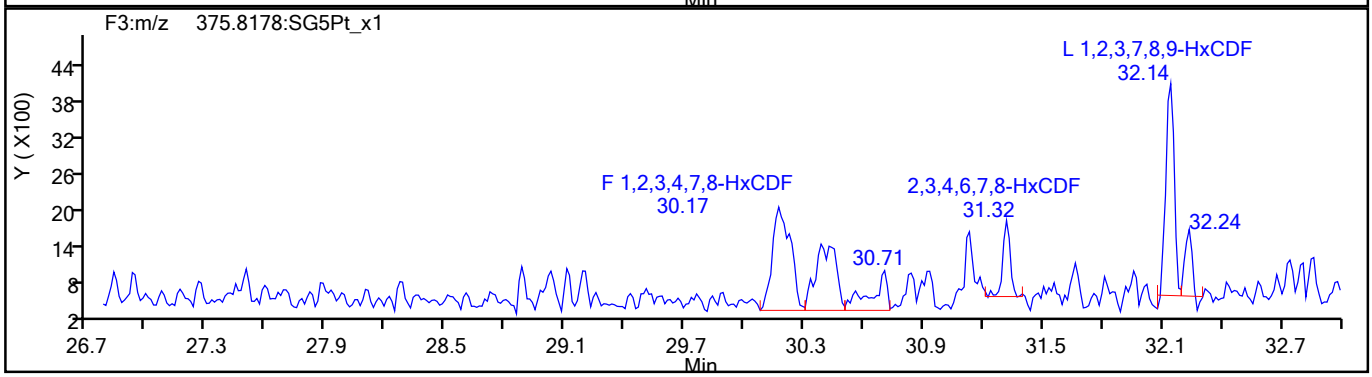

HxCDF Standards

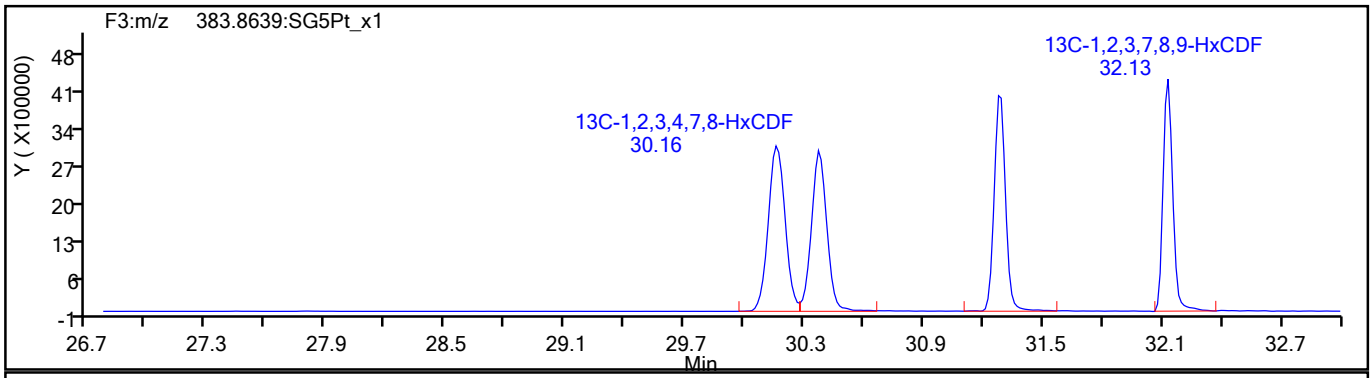

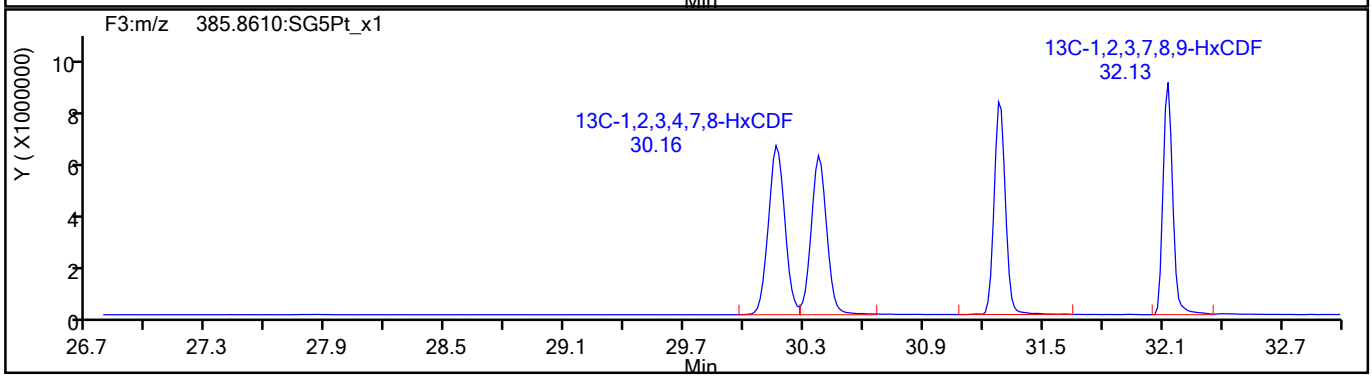

793494

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
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HxCDF

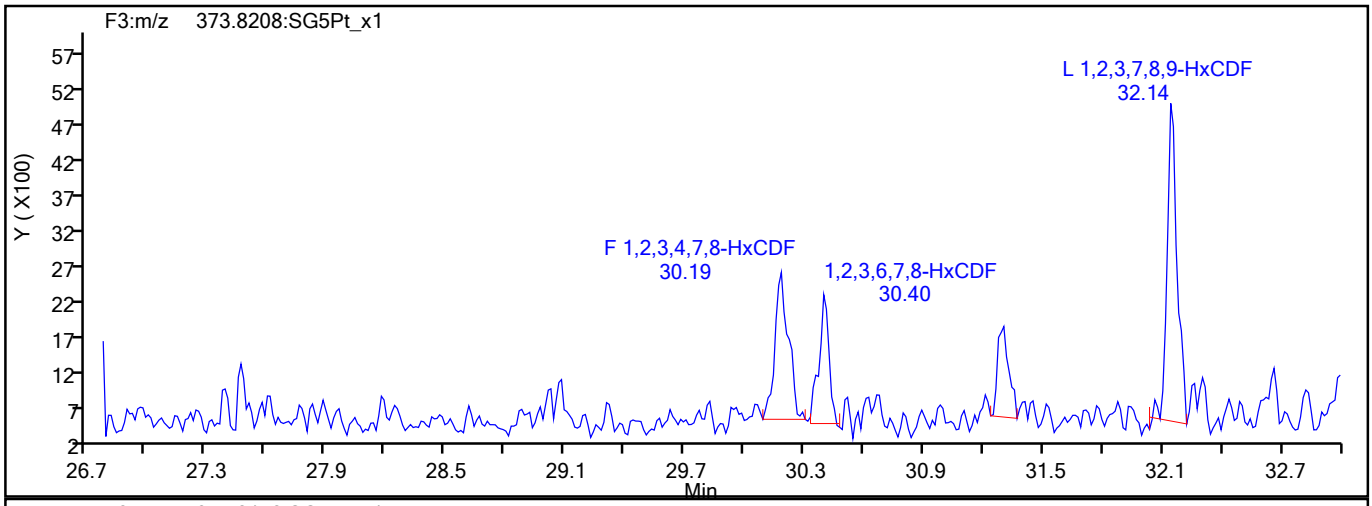

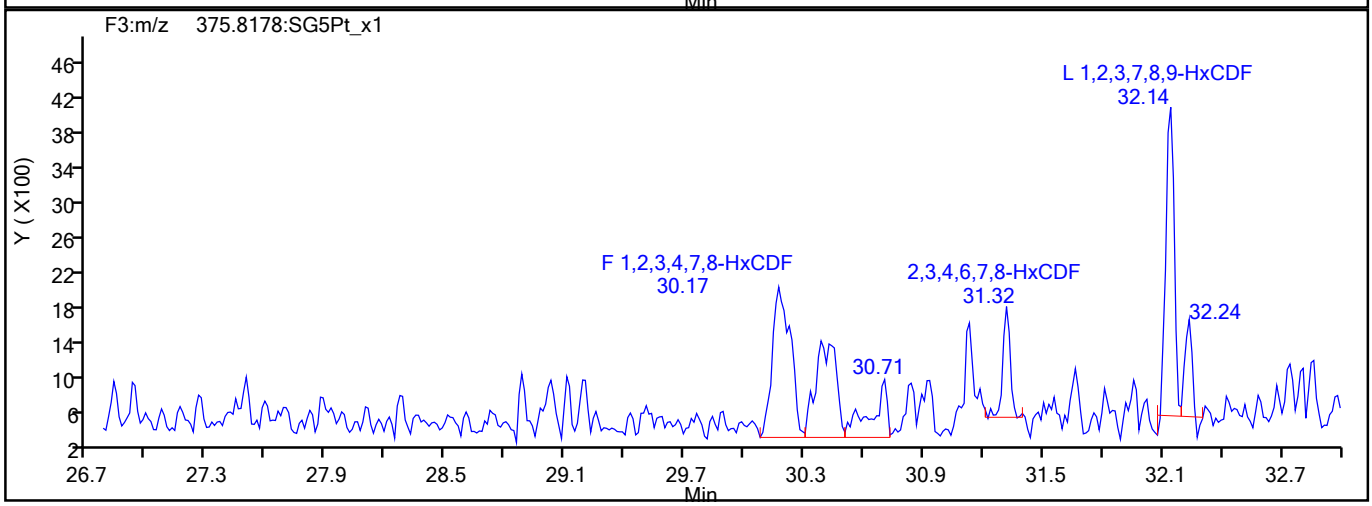

HxCDF Interference Mass

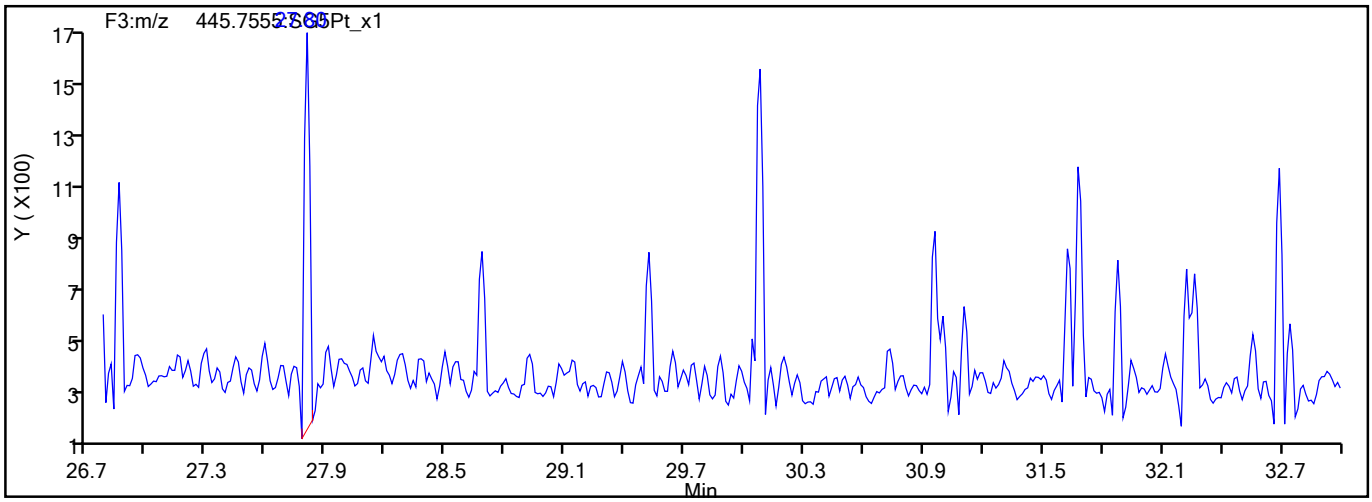

793495

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

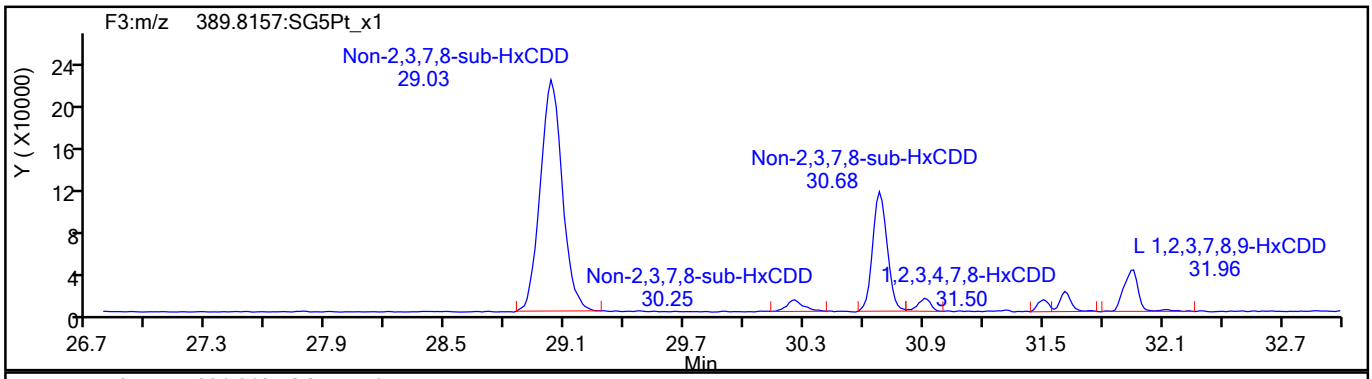

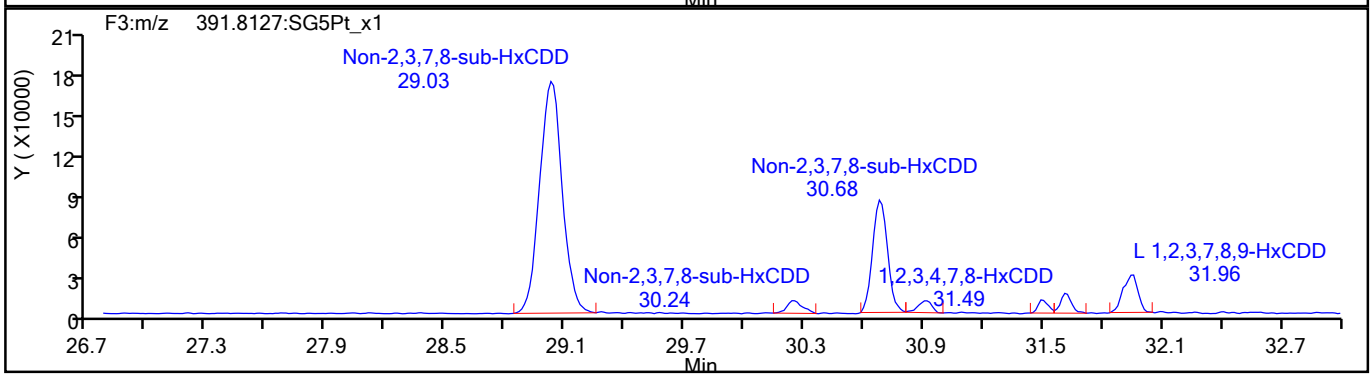

HxCDD Standards

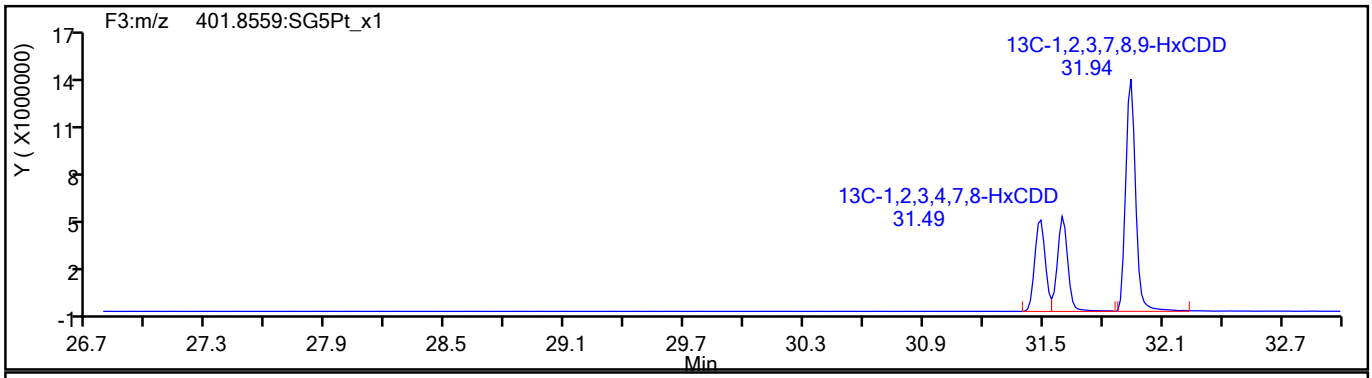

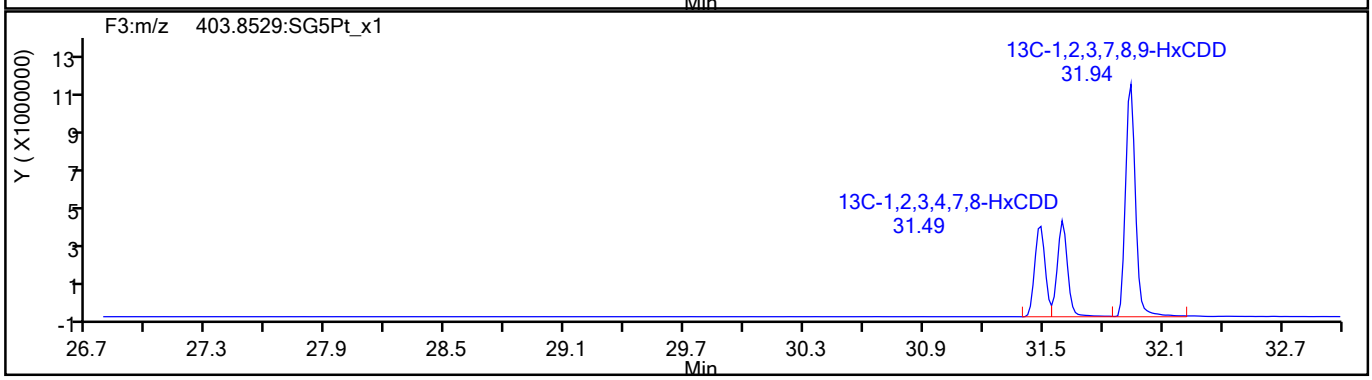

793496

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
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HpCDF

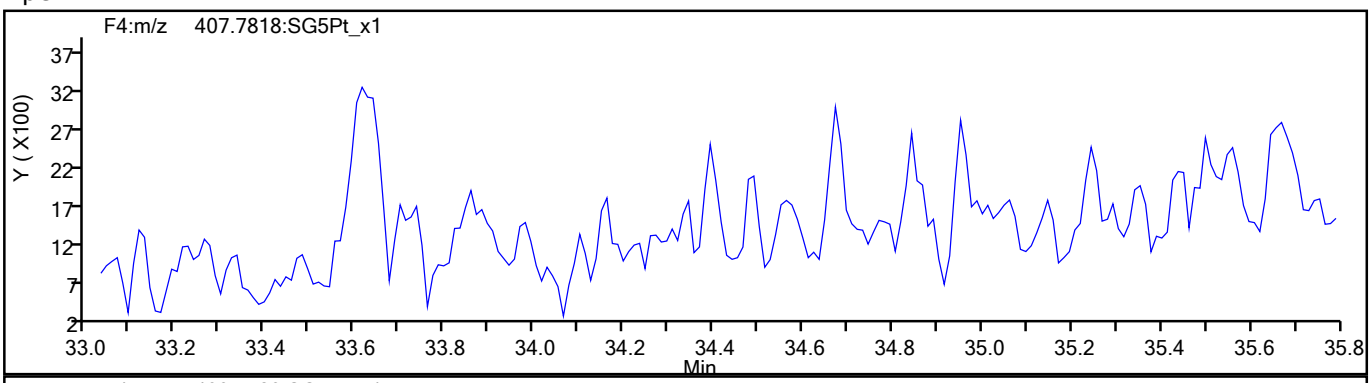

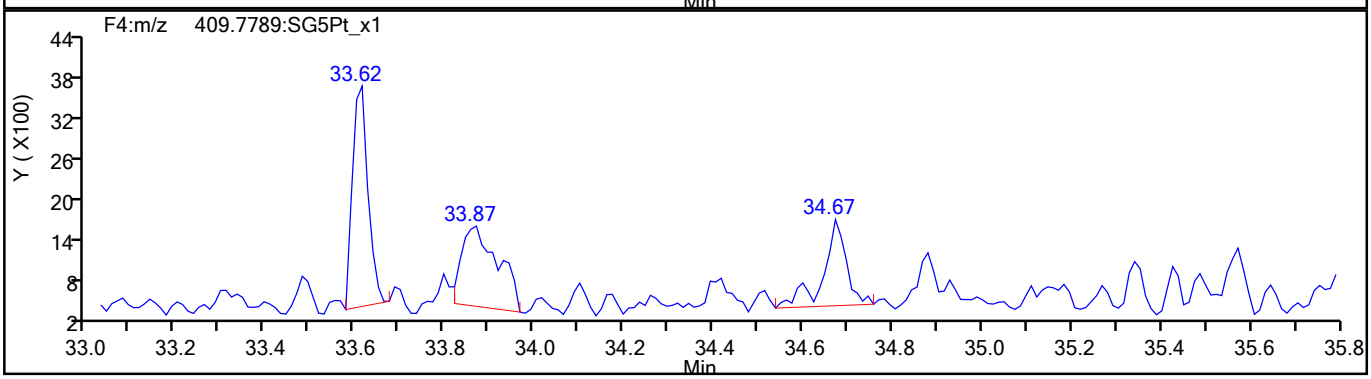

HpCDF Standards

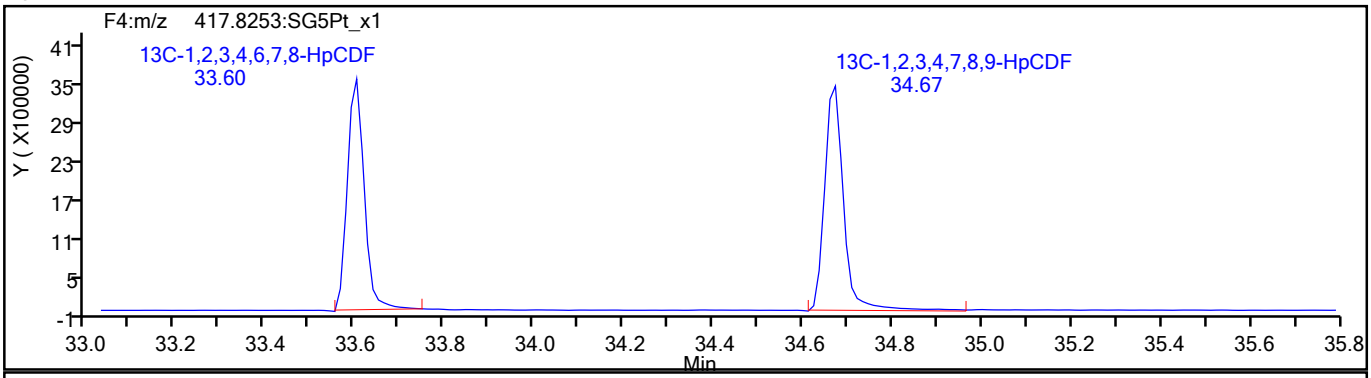

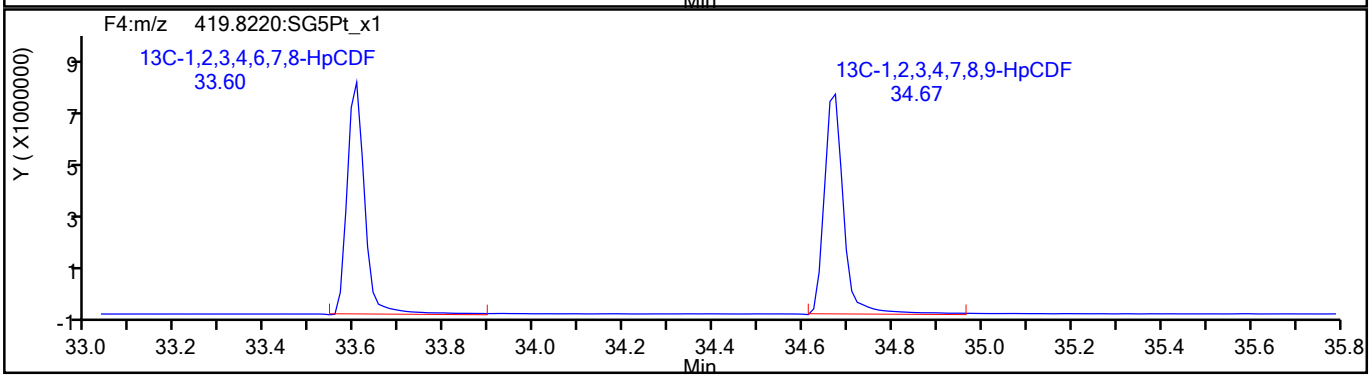

793497

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

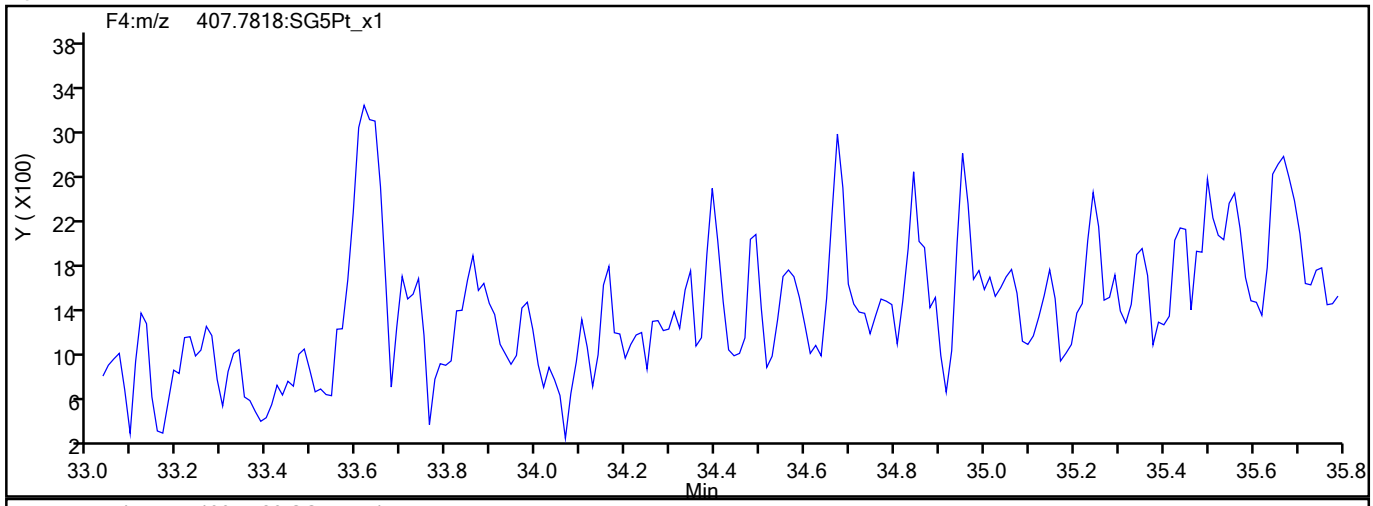

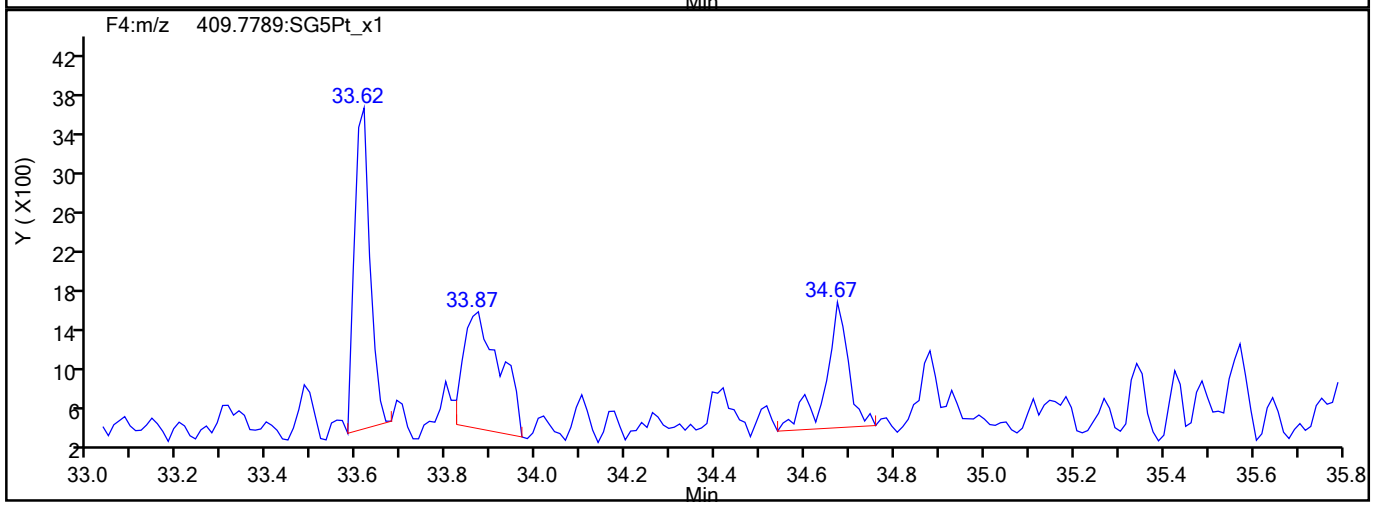

HpCDF Interference Mass

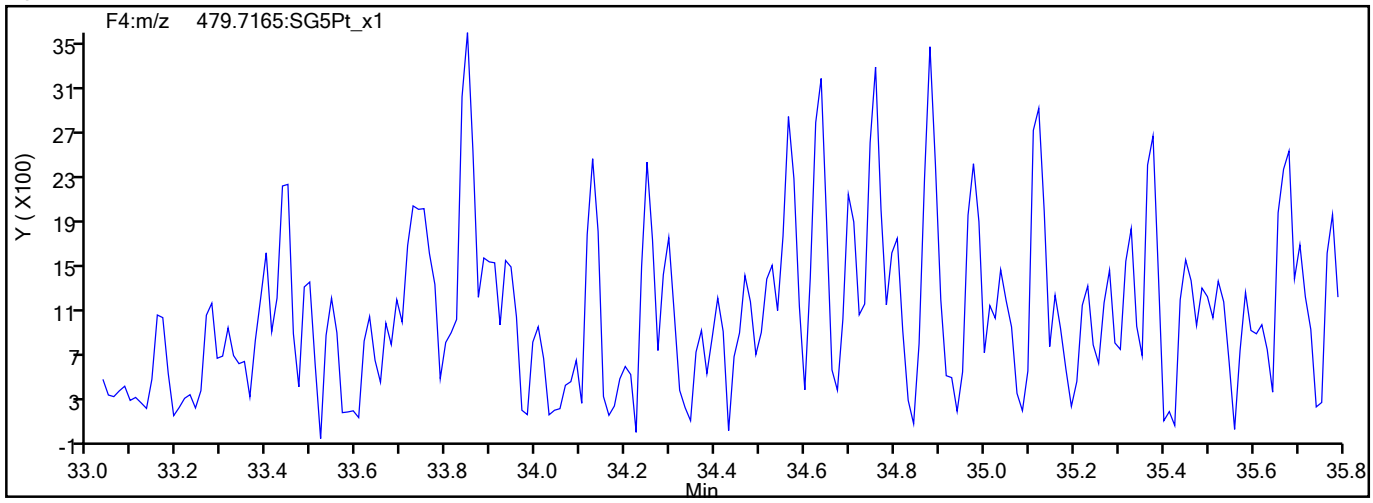

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Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d		
Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

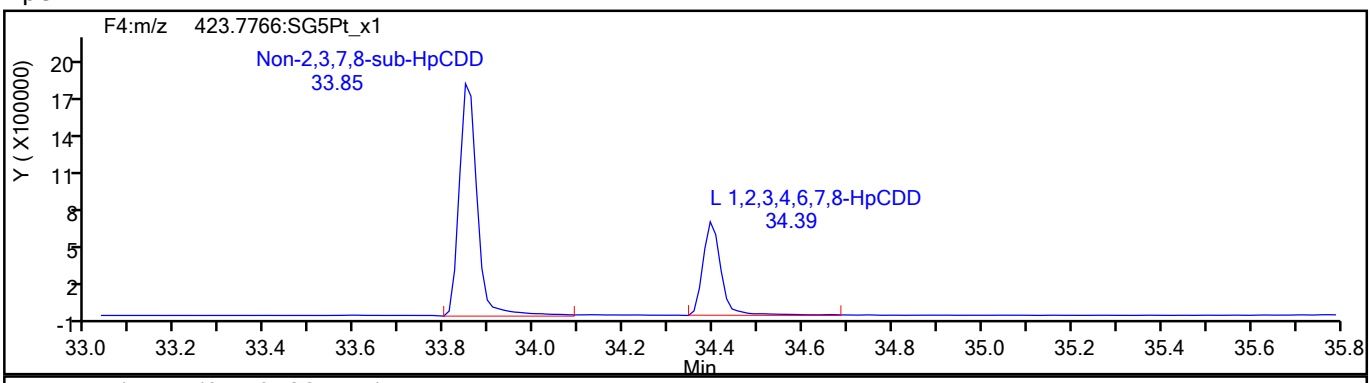

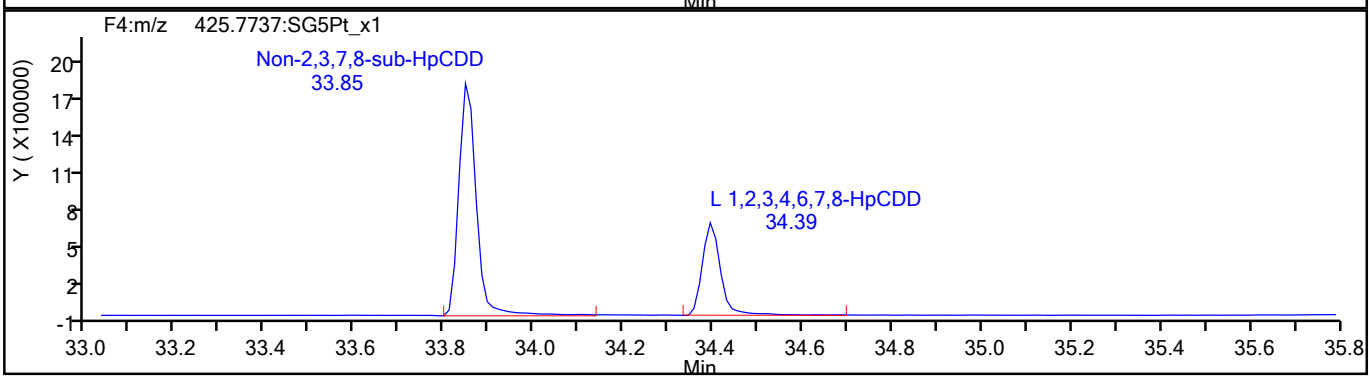

HpCDD Standards

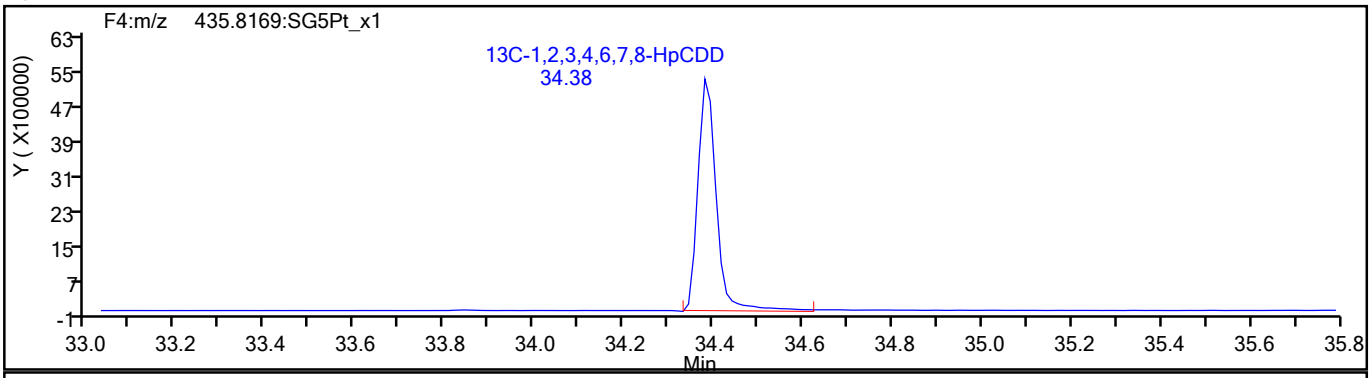

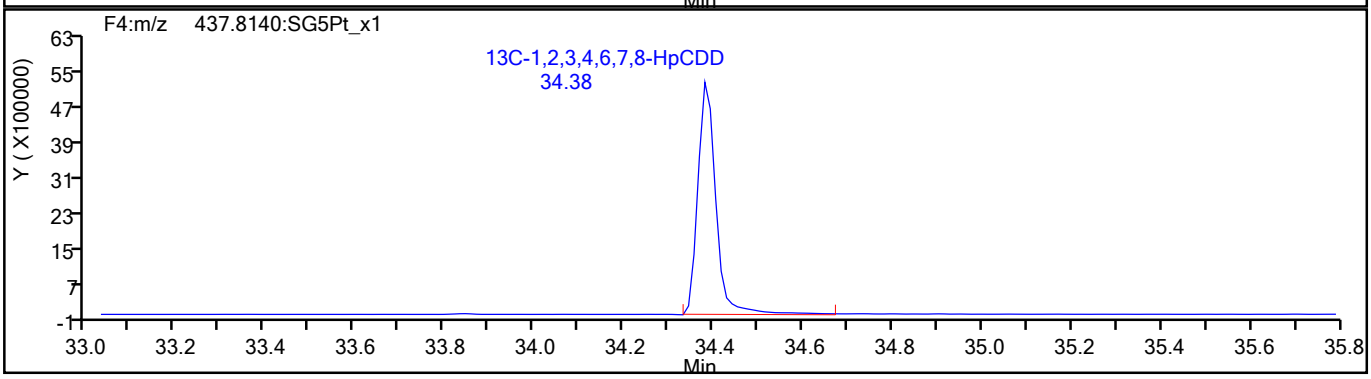

793499

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

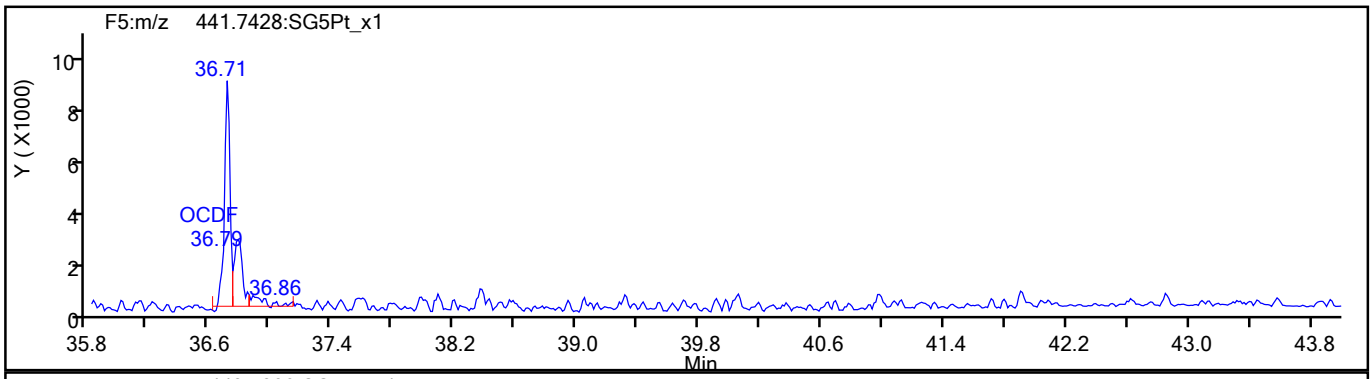

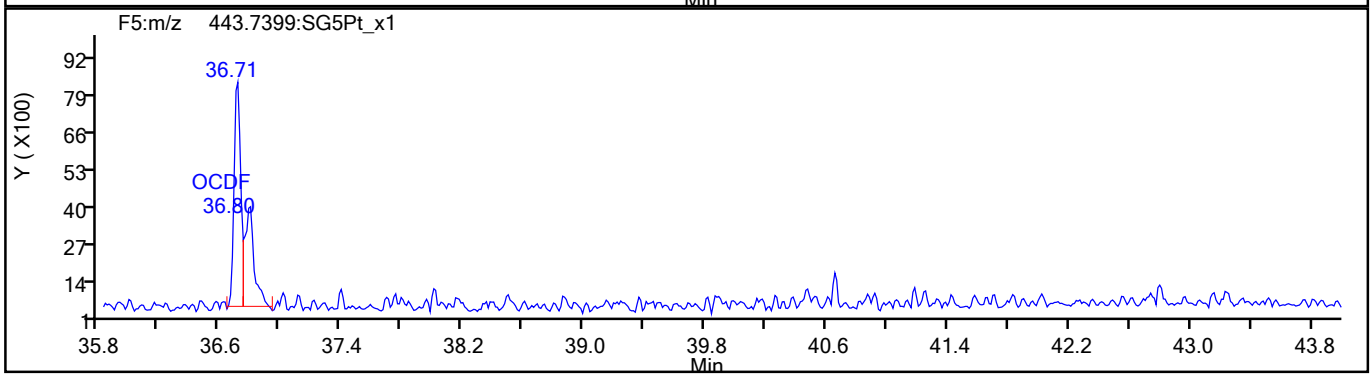

OCDF Standards

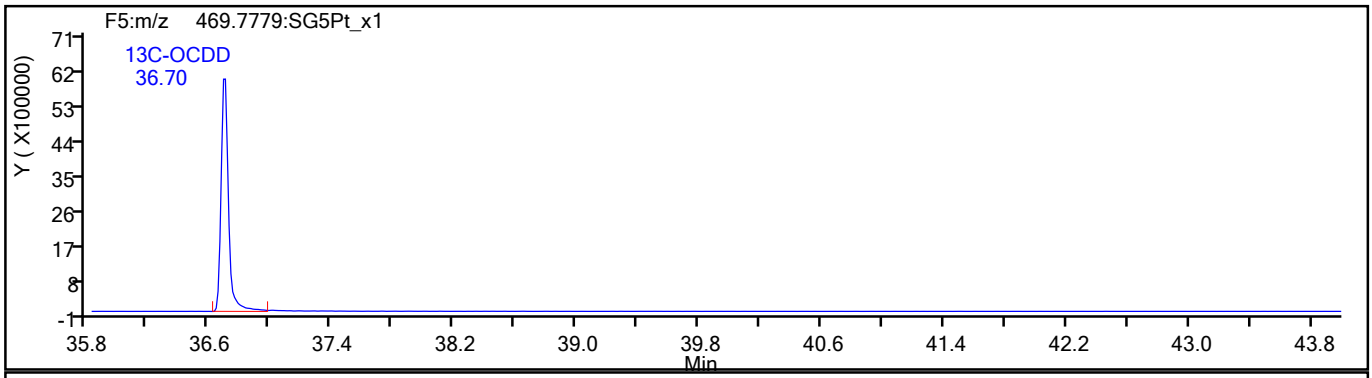

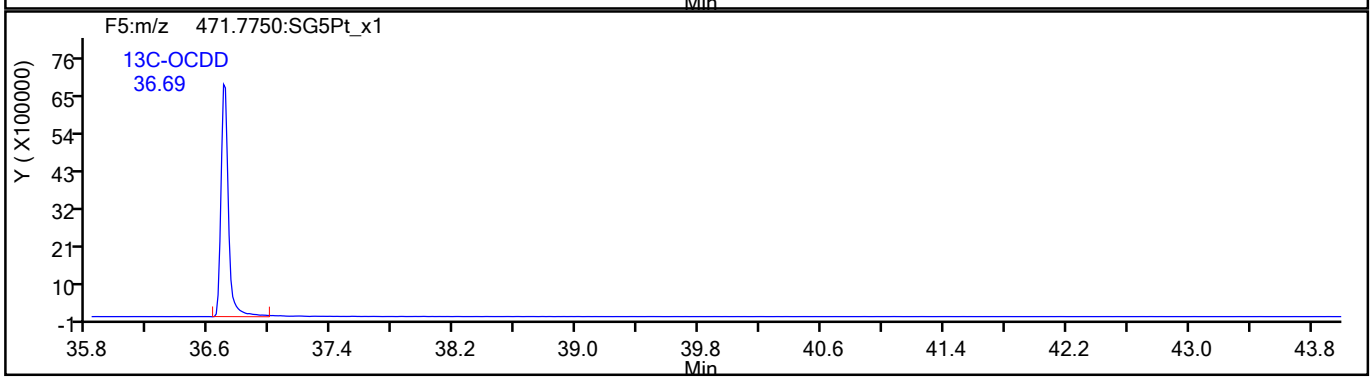

793500

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d		
Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

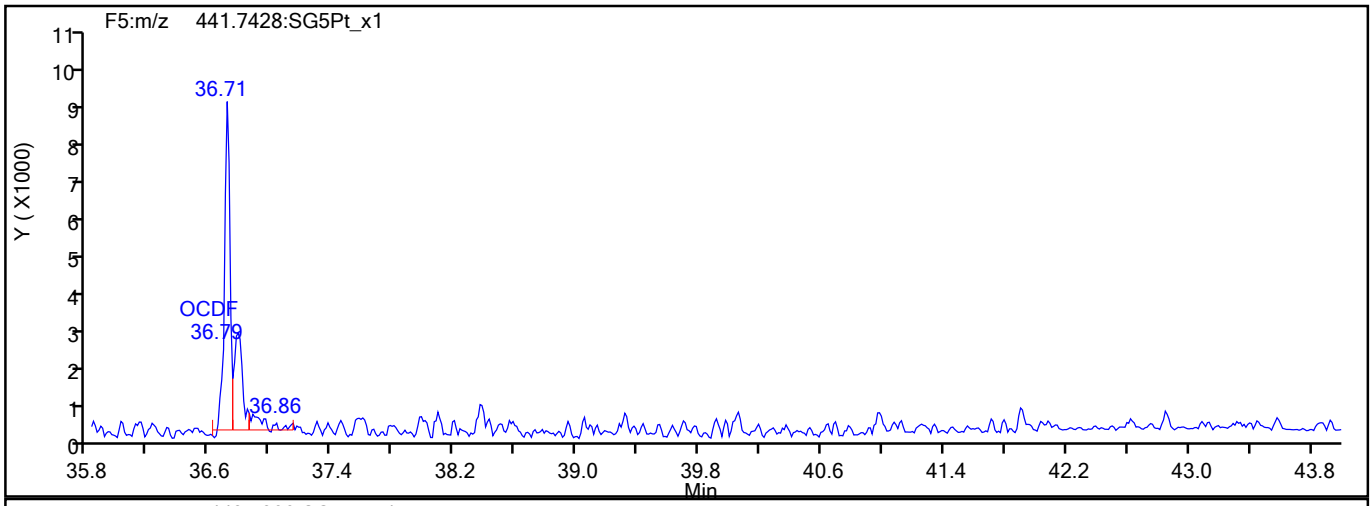

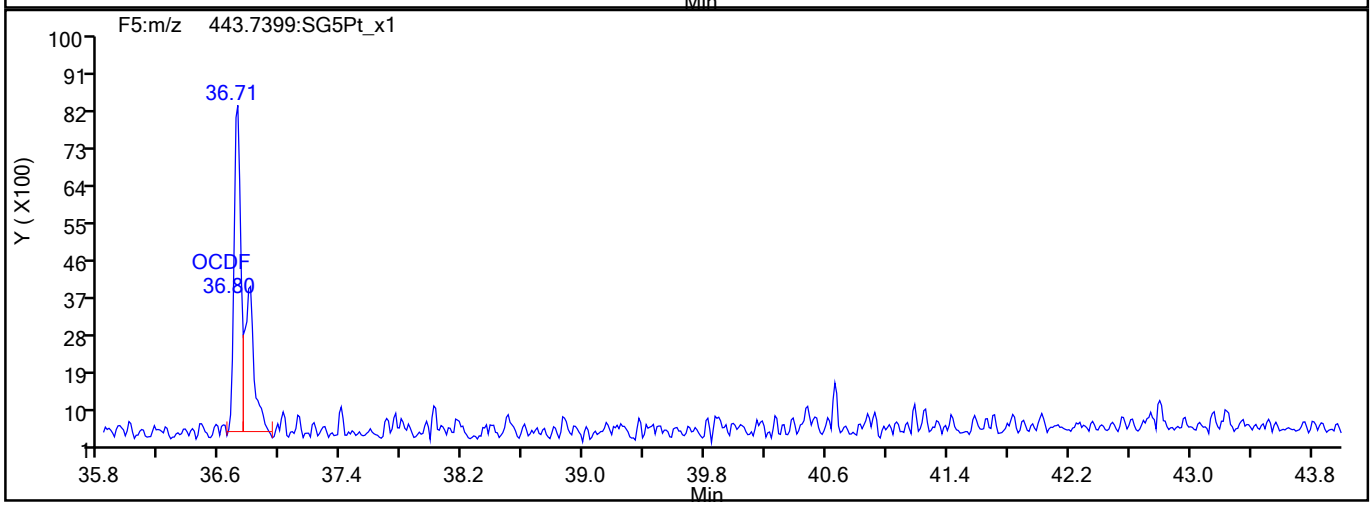

OCDF Interference Mass

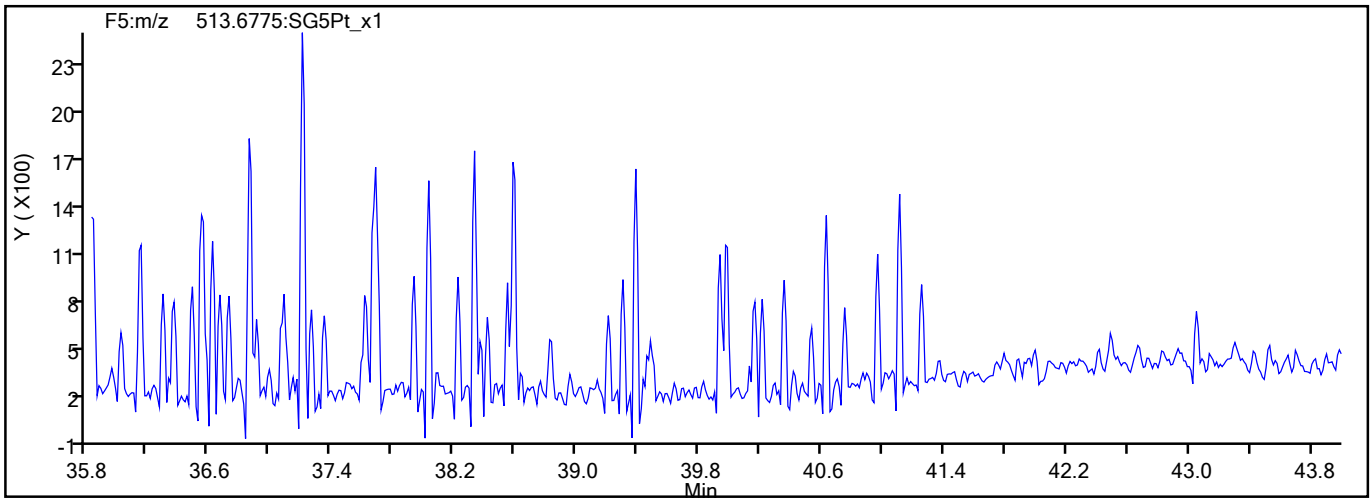

793501

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d		
Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

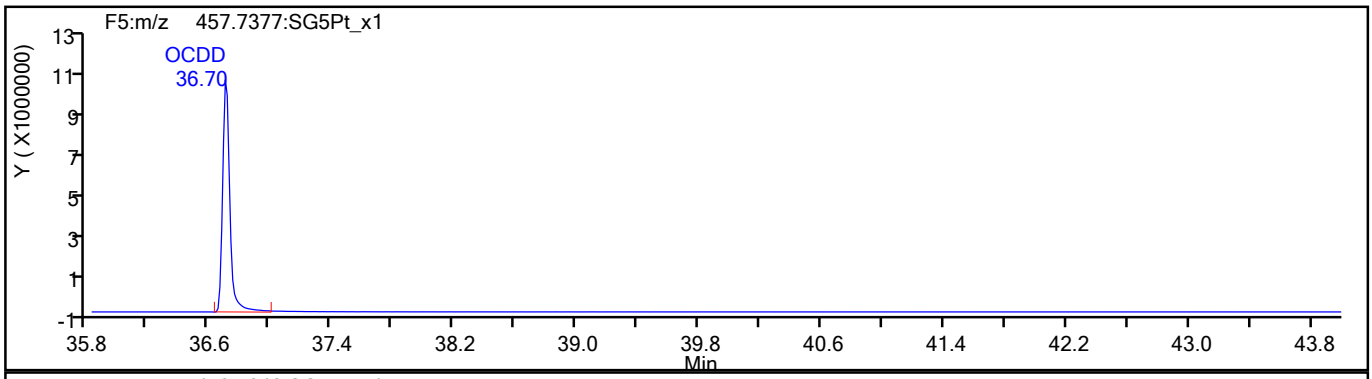

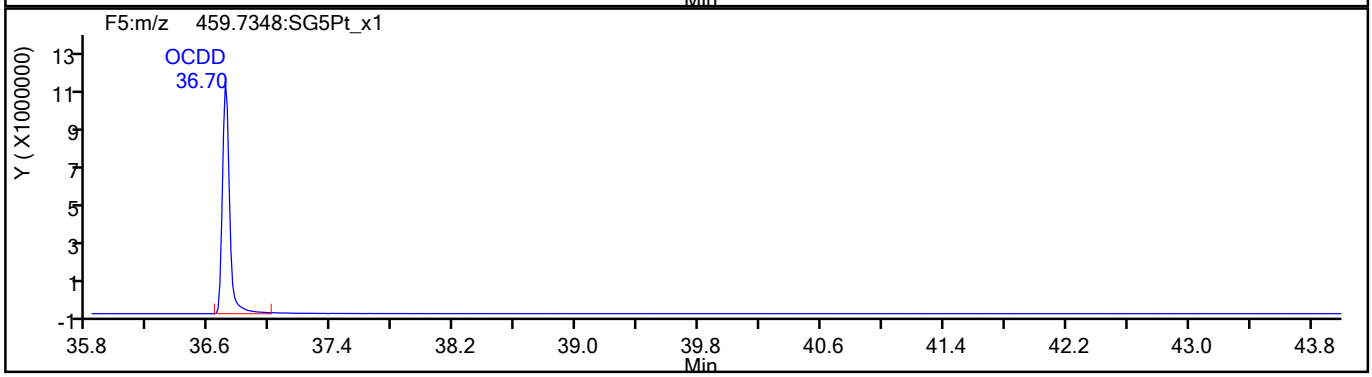

OCDD Standards

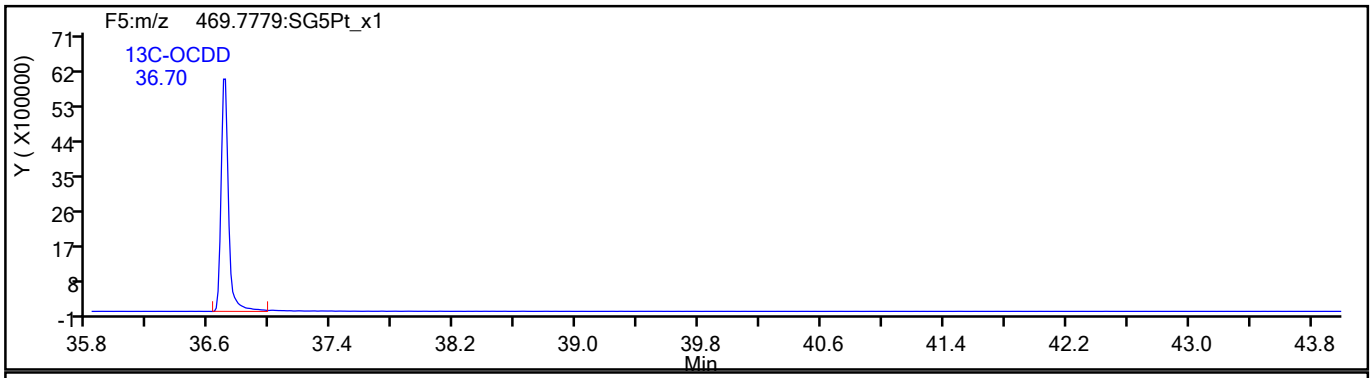

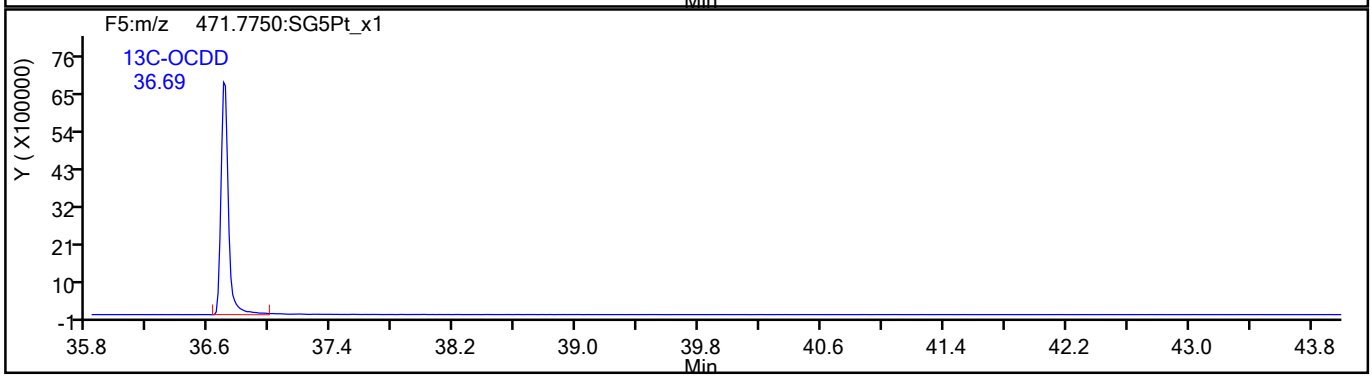

793502

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d		
Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

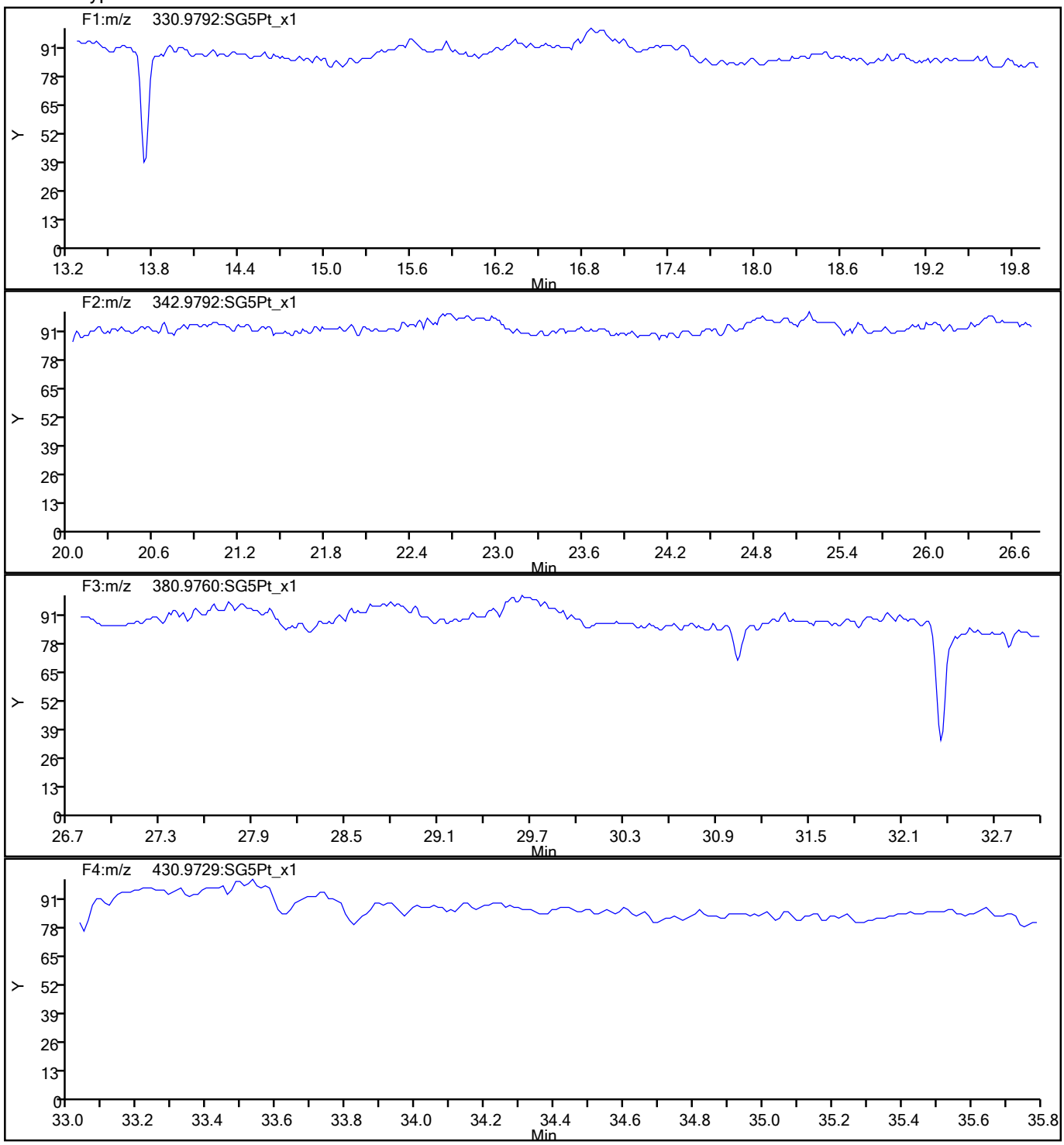

793503

Report Date: 27-Aug-2021 09:18:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_26.d		
Injection Date:	26-Aug-2021 05:05:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	519955	Sample Line#:	12
Column Type:	DB-5	Column Dia:	0.32 mm

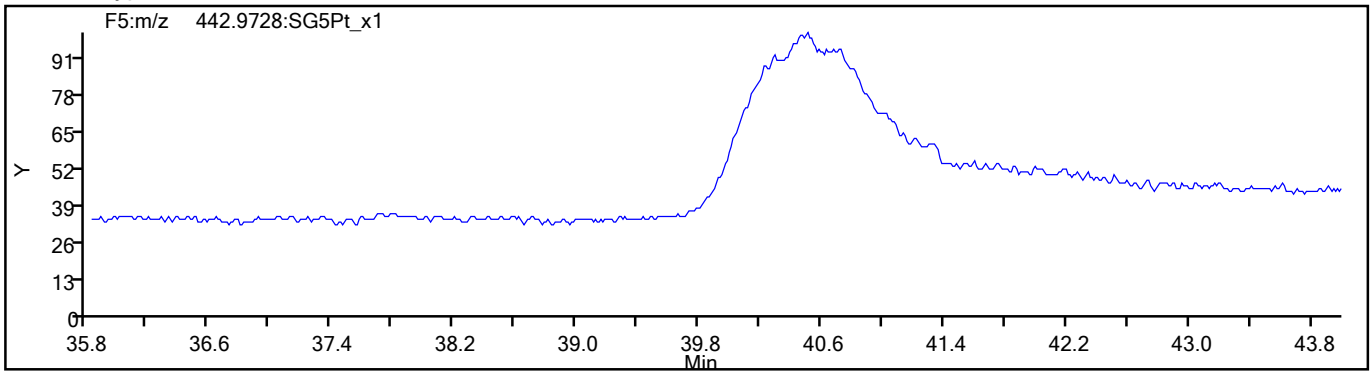

793504

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (6-8) RA
Lab Sample ID: 320-77292-4 RA
Matrix: Sediment
Lab File ID: 31AU2111D2_014.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:45
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.32(g)
Date Analyzed: 08/31/2021 21:32
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.9
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520997
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	3.1	B	1.6	0.69

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	53		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	76		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_014.d
Lims ID: 320-77292-A-4-A
Client ID: 11215702-080321-BN-SJSB091 (6-8)
Sample Type: Client
Inject. Date: 31-Aug-2021 21:32:12 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-4-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:43:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.284	35582773	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.600	25158599	0.76	1.3327	53.1	53.1	0.3920	0.3920	53.05	
2,3,7,8-TCDF	17.641	245246	0.76	0.9978	0.9769	0.9769	0.2190	0.2190		M
D 13C-2,3,7,8-TCDD	16.050	17011125	0.76	0.8749	54.6	54.6	0.6795	0.6795	54.64	
2,3,7,8-TCDD	16.069						0.3065	0.3065		
$ 37Cl4-2,3,7,8-TCDD	16.078	9301388		0.8648	30.2	30.2	0.1236	0.1236	75.57	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_014.d
Lims ID: 320-77292-A-4-A
Client ID: 11215702-080321-BN-SJSB091 (6-8)
Sample Type: Client
Inject. Date: 31-Aug-2021 21:32:12 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-4-A
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:43:17

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.284	16.275	1		15339485	3272908	12549	31372	261		
333.9339	16.284	16.275	1		20243288	4541399	6035	15087	753	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.600	17.605	0	1.081	10877270	2149107	8218	20545	262		
317.9389	17.600	17.605	0	1.081	14281329	2870062	8113	20282	354	0.76(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.641	17.619	1	1.002	106232	21797	1225	3062	18		M
305.8987	17.614	17.619	0	1.001	139014	26950	3162	7905	9	0.76(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.050	16.055	0	0.986	7327465	1662607	12549	31372	132		
333.9339	16.050	16.055	0	0.986	9683660	2236453	6035	15087	371	0.76(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.069						2677	6692			
321.8936	16.069						2376	5940			
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.069	1	0.987	9301388	1989875	3341	8352	596		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_014.d				
Injection Date:	31-Aug-2021 21:32:12	Instrument ID:	11D2		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

Not Detected
Expected RT: 17.62

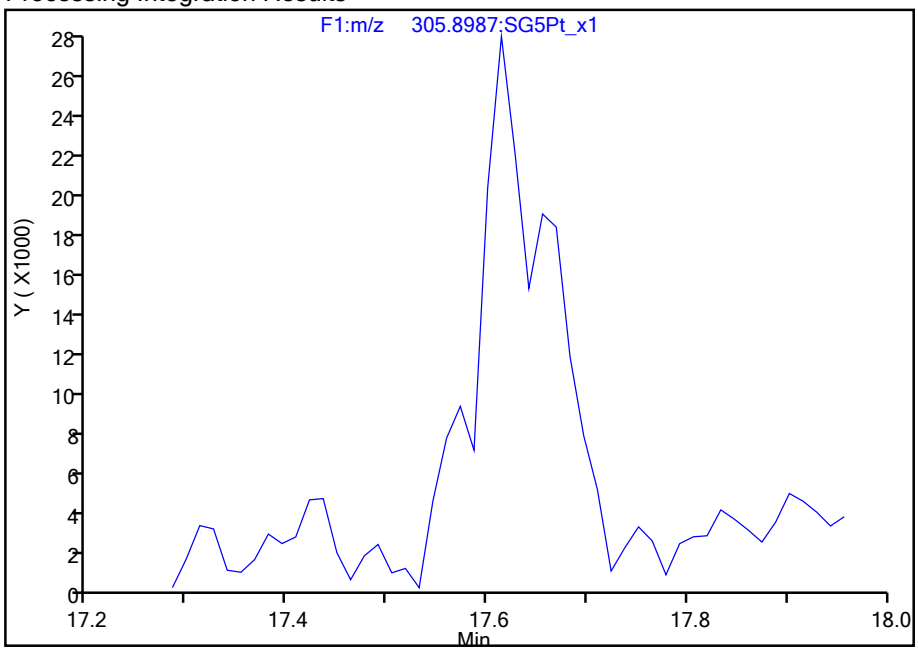

Manual Integration Results

RT: 17.61
Area: 139014
Amount: 0.976943
Amount Units: pg/ul

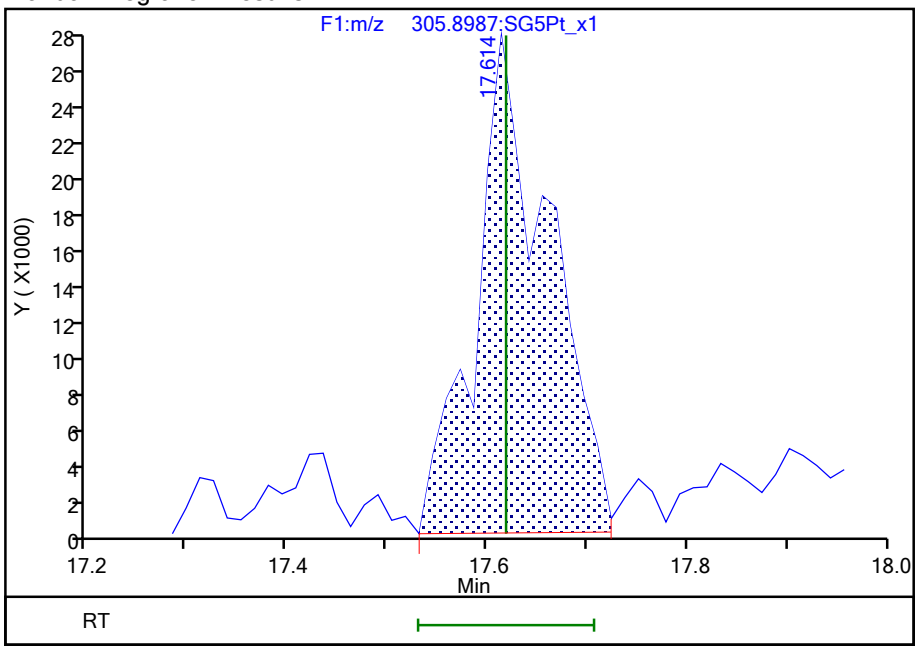

Reviewer: bennettd, 01-Sep-2021 09:43:06
Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

793508

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_014.d				
Injection Date:	31-Aug-2021 21:32:12	Instrument ID:	11D2		
Lims ID:	320-77292-A-4-A	Lab Sample ID:	320-77292-4		
Client ID:	11215702-080321-BN-SJSB091 (6-8)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	14
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.62

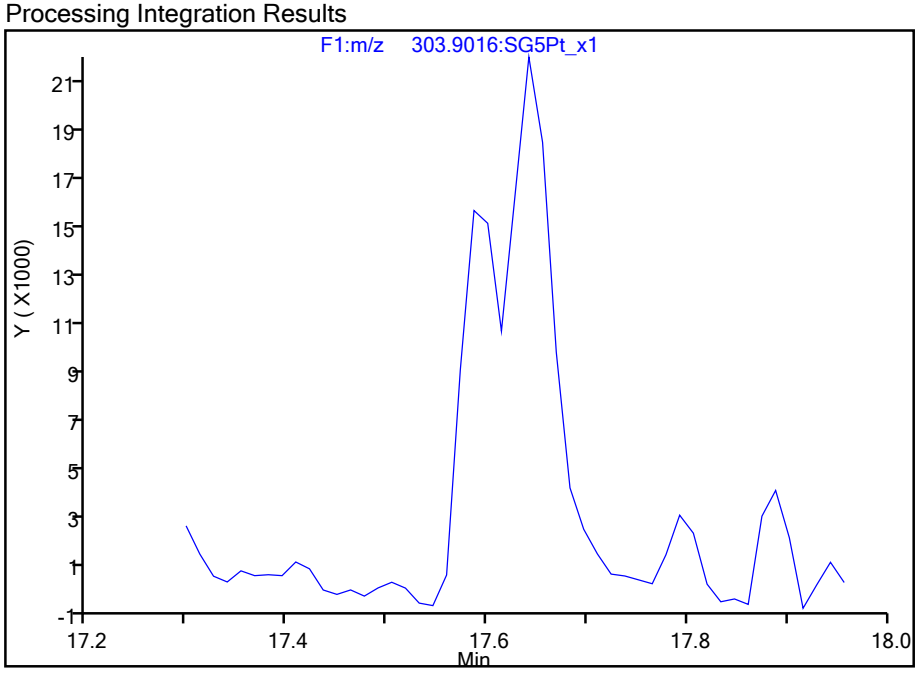

Manual Integration Results

RT: 17.64
Area: 106232
Amount: 0.976943
Amount Units: pg/ul

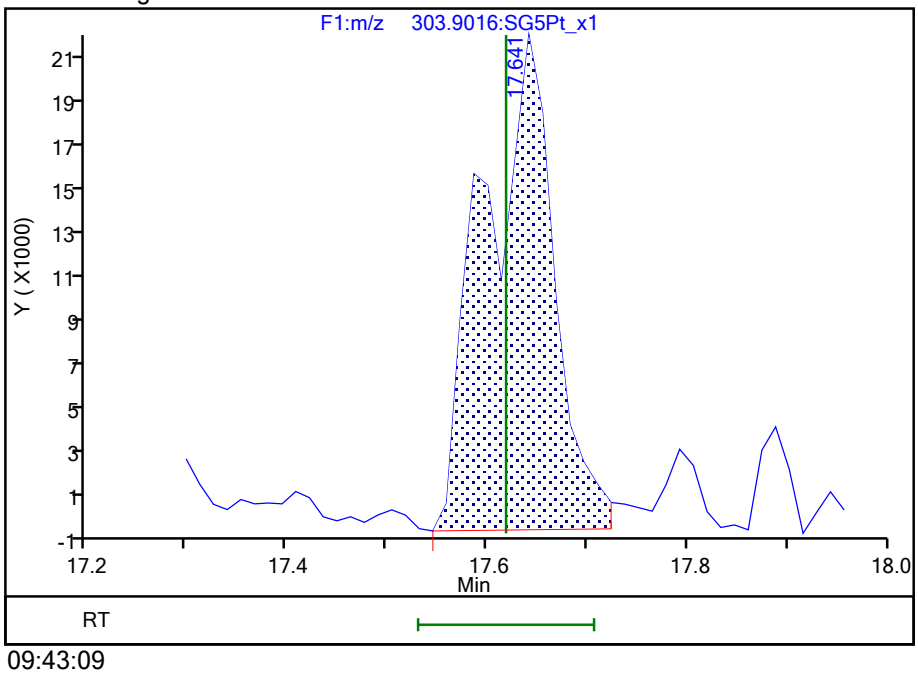

Reviewer: bennettd, 01-Sep-2021 09:43:09
Audit Action: Split an Integrated Peak Audit Reason: Missed Peak

793509

Report Date: 01-Sep-2021 09:57:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_014.d		
Injection Date:	31-Aug-2021 21:32:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	520997	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

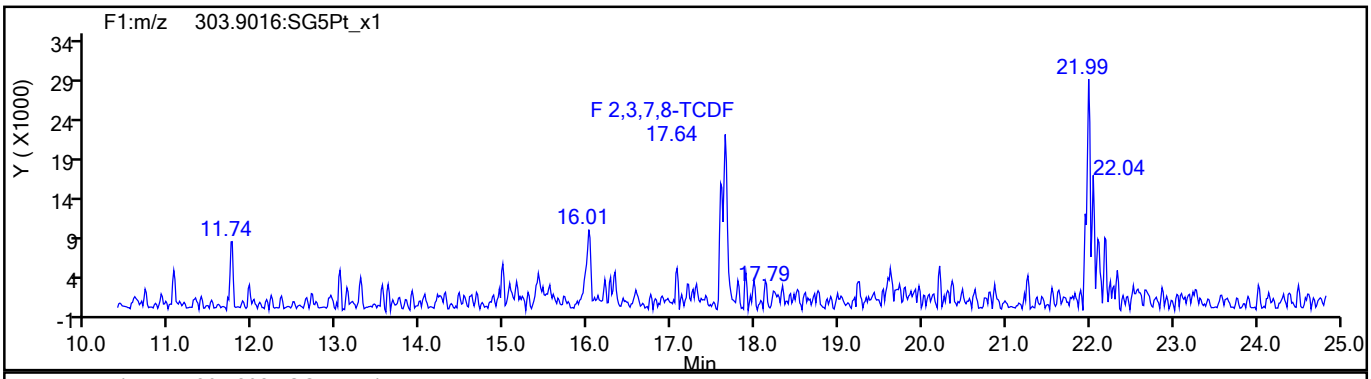

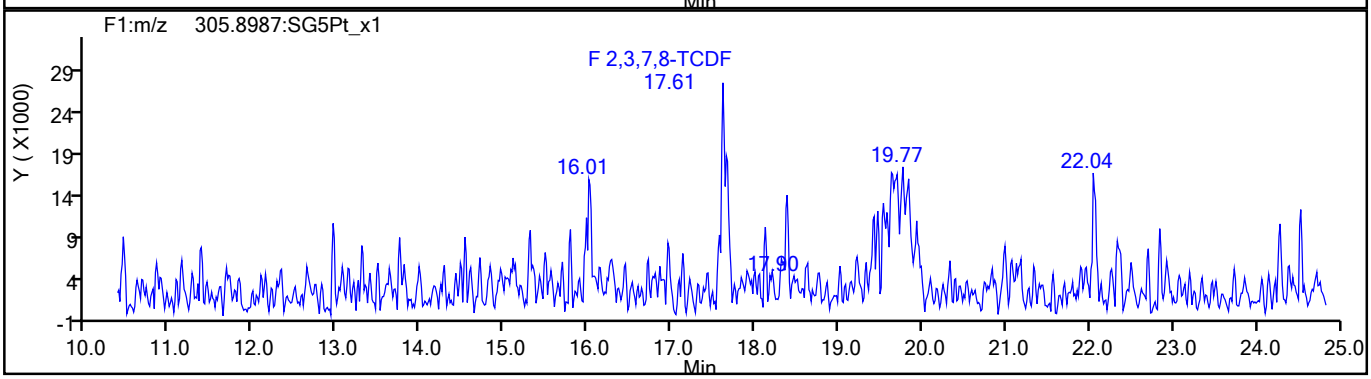

TCDF Standards

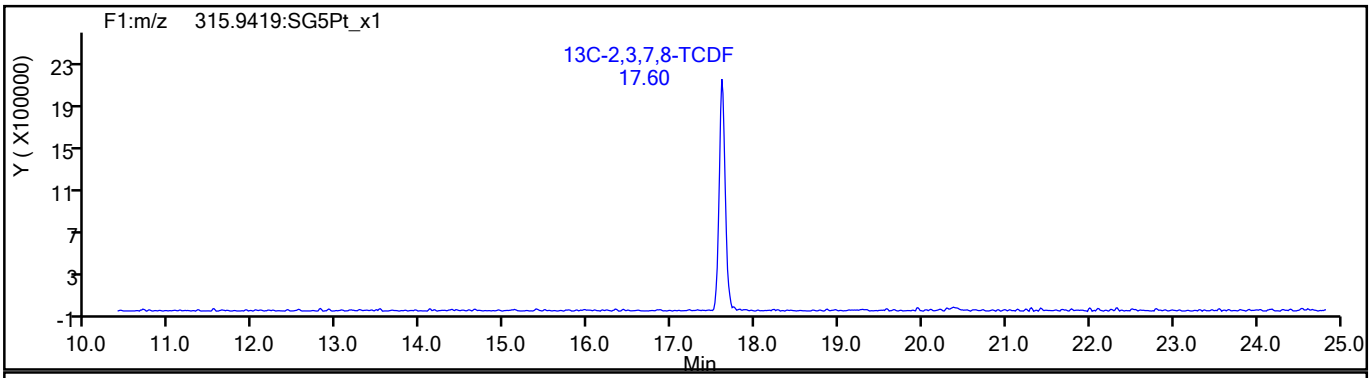

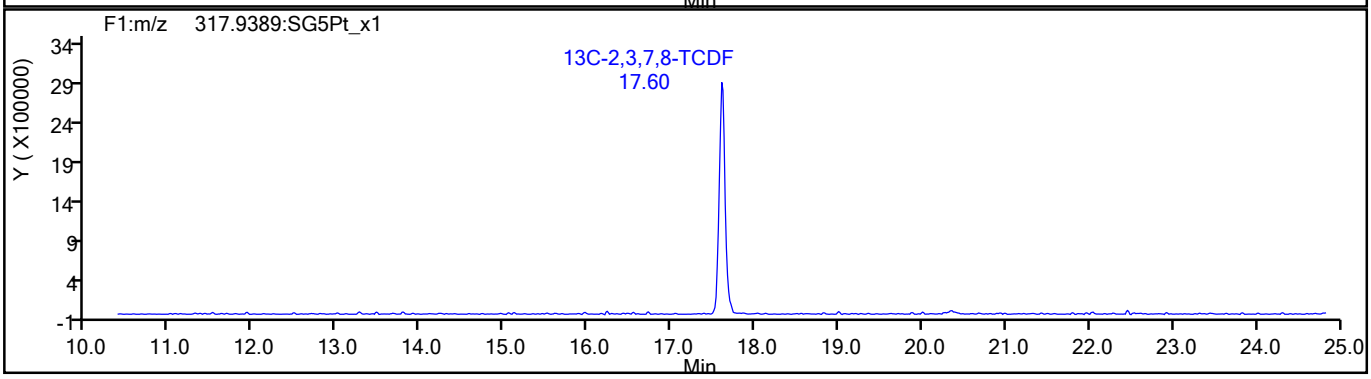

793510

Report Date: 01-Sep-2021 09:57:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_014.d		
Injection Date:	31-Aug-2021 21:32:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	520997	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

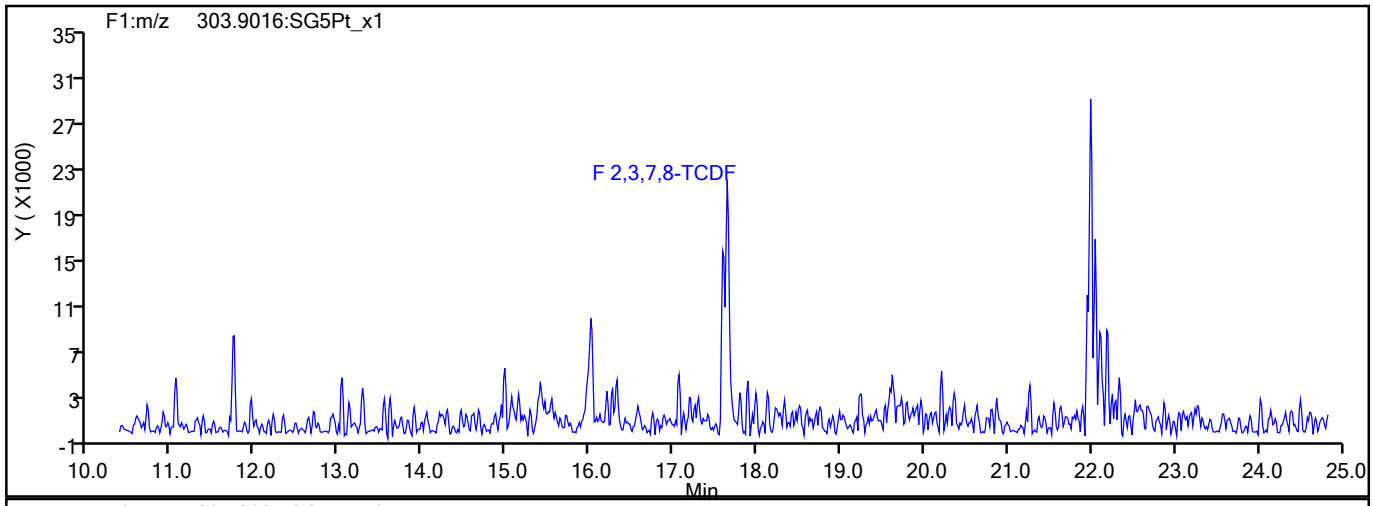

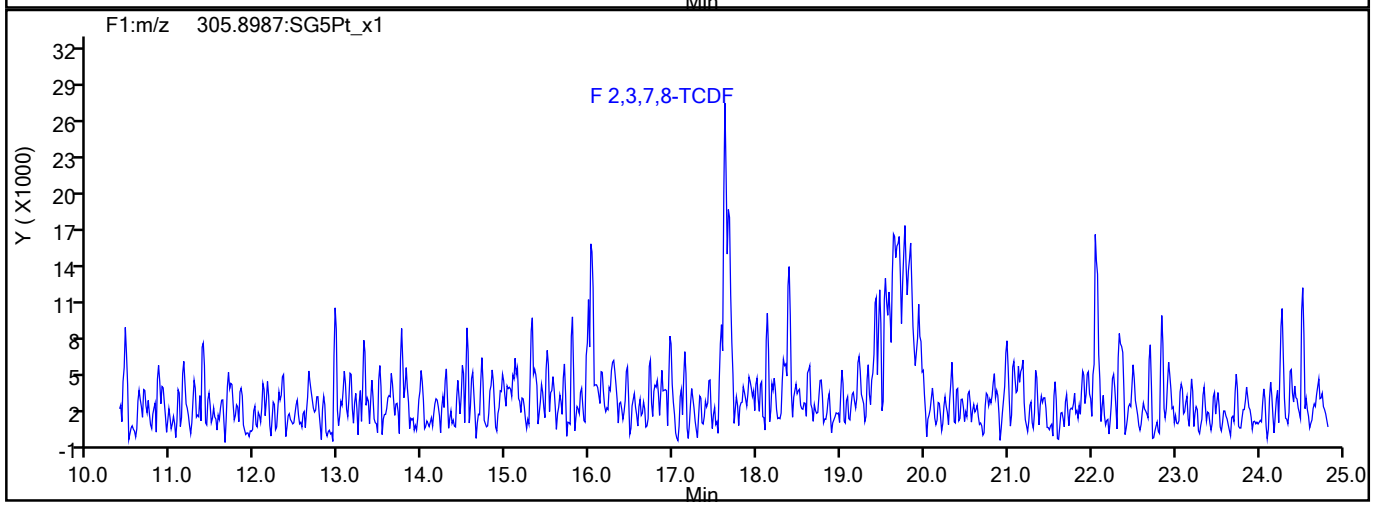

TCDF Interference Mass

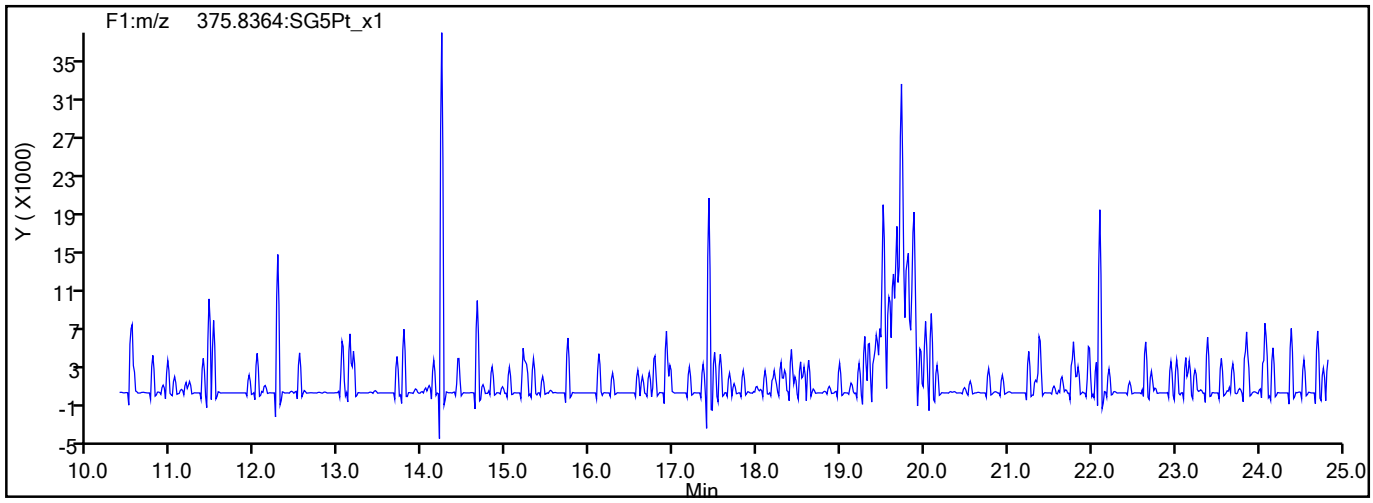

793511

Report Date: 01-Sep-2021 09:57:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_014.d		
Injection Date:	31-Aug-2021 21:32:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	520997	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

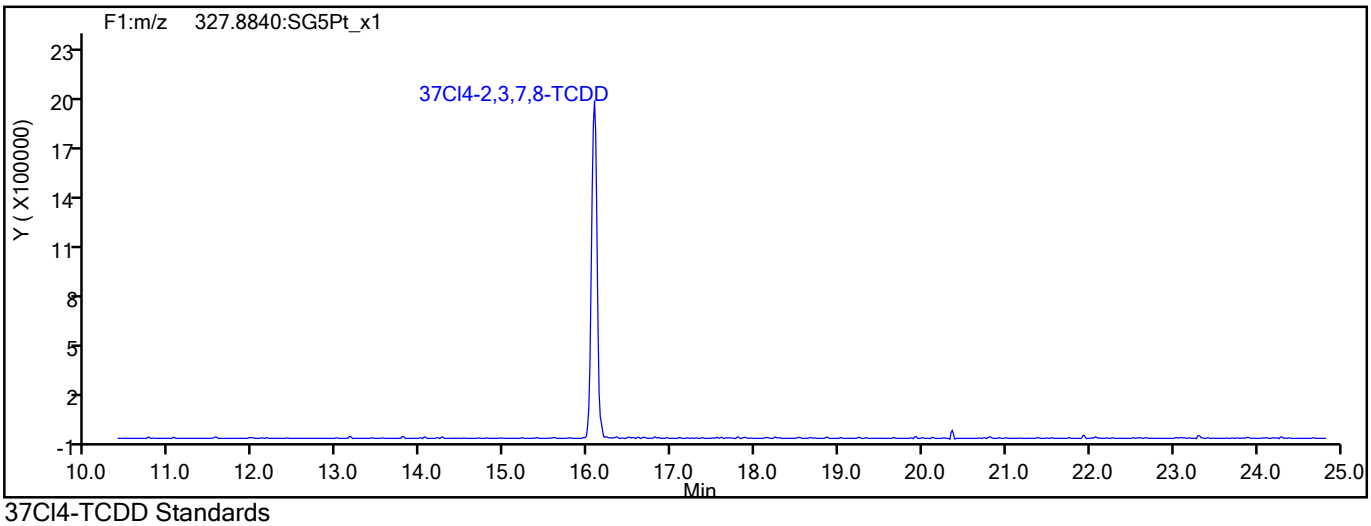

37Cl4-TCDD Standards

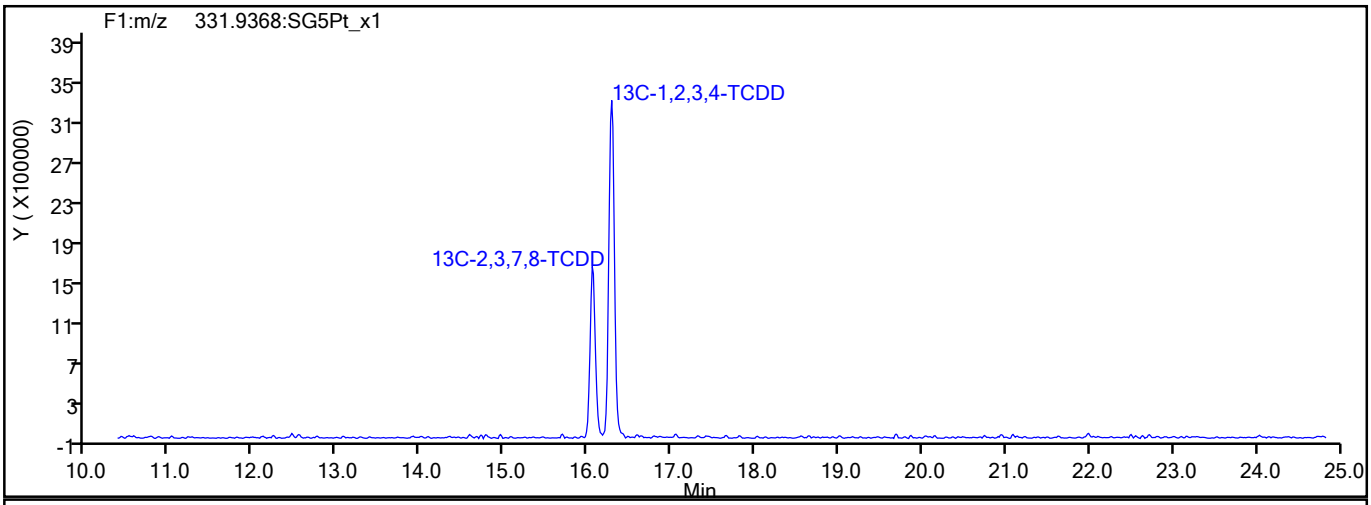

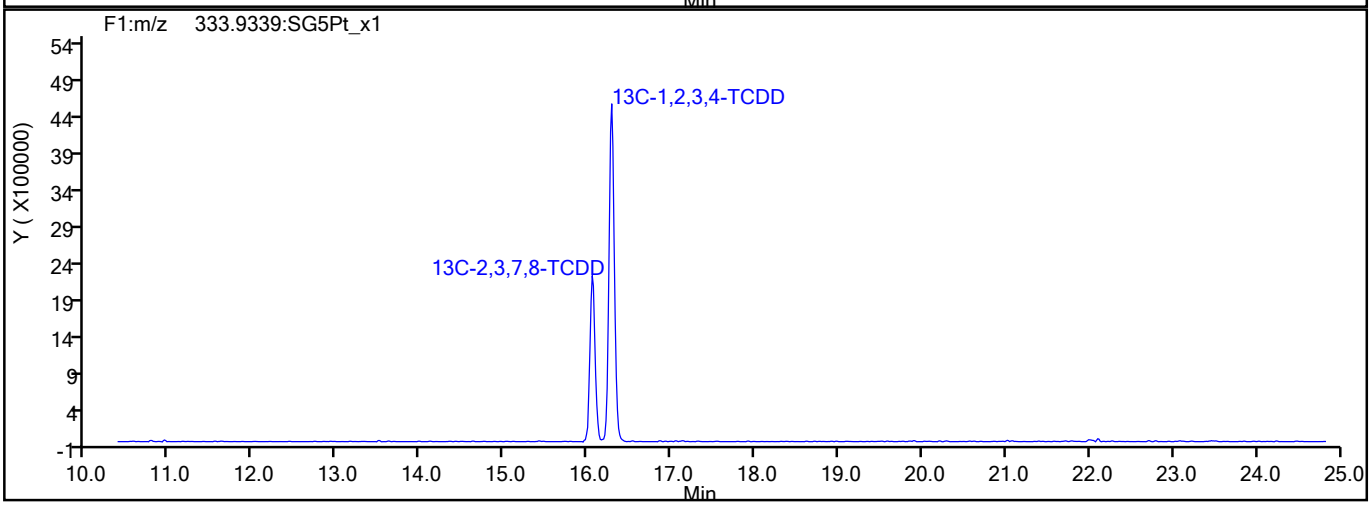

793512

Report Date: 01-Sep-2021 09:57:23 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_014.d		
Injection Date:	31-Aug-2021 21:32:12	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (6-8)		
Worklist#:	520997	Sample Line#:	14
Column Type:	DB-225	Column Dia:	0.32 mm

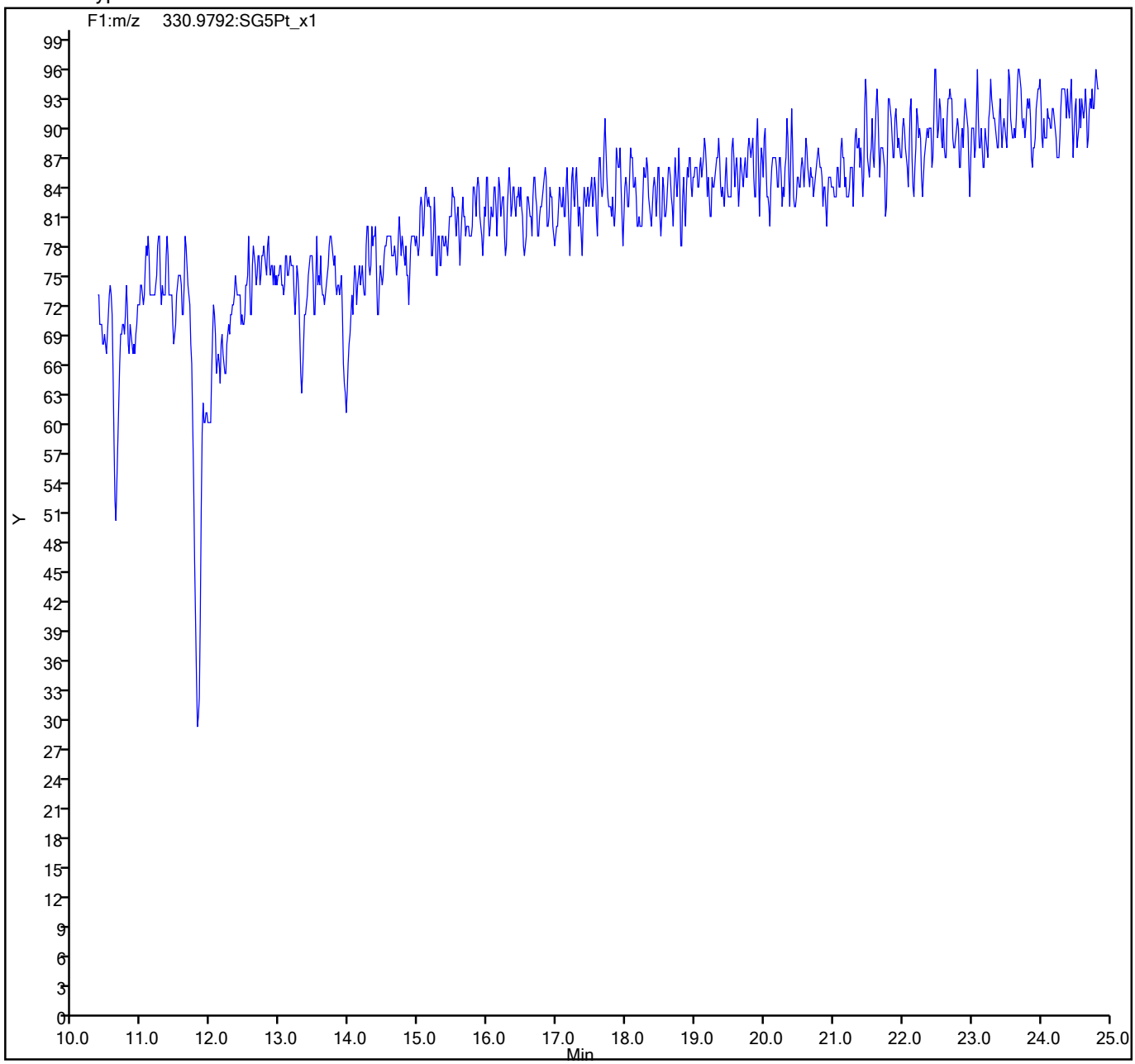

793513

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (8-10)
Lab Sample ID: 320-77292-5
Matrix: Sediment
Lab File ID: 25AU2110D5_27.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:50
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.39(g)
Date Analyzed: 08/26/2021 05:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.50	J q	1.6	0.043
51207-31-9	2,3,7,8-TCDF	1.4	J B	1.6	0.032
40321-76-4	1,2,3,7,8-PeCDD	ND		7.9	0.082
57117-41-6	1,2,3,7,8-PeCDF	0.099	J q	7.9	0.034
57117-31-4	2,3,4,7,8-PeCDF	0.048	J q	7.9	0.036
39227-28-6	1,2,3,4,7,8-HxCDD	0.71	J	7.9	0.19
57653-85-7	1,2,3,6,7,8-HxCDD	1.3	J	7.9	0.21
19408-74-3	1,2,3,7,8,9-HxCDD	3.1	J	7.9	0.18
70648-26-9	1,2,3,4,7,8-HxCDF	0.076	J q	7.9	0.033
57117-44-9	1,2,3,6,7,8-HxCDF	ND		7.9	0.033
72918-21-9	1,2,3,7,8,9-HxCDF	0.14	J	7.9	0.022
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.9	0.023
35822-46-9	1,2,3,4,6,7,8-HpCDD	55	B	7.9	0.75
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		7.9	0.038
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.9	0.043
3268-87-9	OCDD	1400	B	16	1.1
39001-02-0	OCDF	0.32	J B	16	0.029
41903-57-5	Total TCDD	6.2	q	1.6	0.043
30402-14-3	Total TCDF	2.6	B	1.6	0.032
36088-22-9	Total PeCDD	8.5	q	7.9	0.082
30402-15-4	Total PeCDF	0.15	J q	7.9	0.035
34465-46-8	Total HxCDD	51	q	7.9	0.19
55684-94-1	Total HxCDF	0.24	J q	7.9	0.028
37871-00-4	Total HpCDD	190	B	7.9	0.75
38998-75-3	Total HpCDF	ND		7.9	0.043

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB091 (8-10)
Lab Sample ID: 320-77292-5
Matrix: Sediment
Lab File ID: 25AU2110D5_27.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:50
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.39(g)
Date Analyzed: 08/26/2021 05:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.7
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	57		25-164
89059-46-1	13C-2,3,7,8-TCDF	54		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	56		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	55		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	58		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	61		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	54		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	61		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	53		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	55		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	55		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	51		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	58		26-138
114423-97-1	13C-OCDD	59		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d
Lims ID: 320-77292-A-5-A
Client ID: 11215702-080321-BN-SJSB091 (8-10)
Sample Type: Client
Inject. Date: 26-Aug-2021 05:50:44 ALS Bottle#: 38 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-5-A 320-77292-A-5-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:22:10 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:46:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	138479293	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	120426691	0.77	1.6249	53.5	53.5	0.1040	0.1040	53.52	
2,3,7,8-TCDF	17.114	546496	0.73	1.0239	0.4432	0.4432	0.0102	0.0102		
A Non-2,3,7,8-sub-TCDF	17.069	460785	0.83	1.0239	0.3737	0.3737	0.0102	0.2025		M
S Total TCDF					0.8169	0.8169	0.0102	0.0102		
D 13C-2,3,7,8-TCDD	17.779	71266121	0.81	0.8993	57.2	57.2	0.0984	0.0984	57.22	
2,3,7,8-TCDD	17.809	142756	0.77	1.2541	0.2248	0.1597	0.0137	0.0137		RQM
$ 37Cl4-2,3,7,8-TCDD	17.809	44232263		1.1071	28.9	28.9	0.0580	0.0580	72.13	
A Non-2,3,7,8-sub-TCDD	17.530	1634198	0.77	1.2541	1.866	1.828	0.0137	0.7639		RQMa
S Total TCDD					2.091	1.988	0.0137	0.0137		RQ
D 13C-1,2,3,7,8-PeCDF	22.020	91701122	1.58	1.2101	54.7	54.7	0.0739	0.0739	54.72	
1,2,3,7,8-PeCDF	22.034	30524	1.55	1.0611	0.0371	0.0314	0.0108	0.0108		RQM
D 13C-2,3,4,7,8-PeCDF	23.329	99155390	1.56	1.2395	57.8	57.8	0.0721	0.0721	57.77	
2,3,4,7,8-PeCDF	23.384	15275	1.55	1.0184	0.0193	0.0151	0.0115	0.0115		RQM
A F1 PeCDFs	19.851						0.0116	0.0116		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0112	0.0112		
S Total PeCDF					0.0564	0.0465	0.0112	0.0112		RQ
D 13C-1,2,3,7,8-PeCDD	24.038	59161117	1.57	0.7612	56.1	56.1	0.0442	0.0442	56.12	
1,2,3,7,8-PeCDD	24.079						0.0261	0.0261		
A Non-2,3,7,8-sub-PeCDD	23.696	1677426	1.55	1.0484	2.733	2.704	0.0261	1.668		RQ
S Total PeCDD					2.733	2.704	0.0261	0.0261		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.173	83206278	0.52	1.0837	61.0	61.0	0.1338	0.1338	61.04	
1,2,3,4,7,8-HxCDF	30.199	21994	1.24	1.0851	0.0270	0.0244	0.0105	0.0105		RQM
D 13C-1,2,3,6,7,8-HxCDF	30.386	75327242	0.52	1.1279	53.1	53.1	0.1285	0.1285	53.09	a
1,2,3,6,7,8-HxCDF	30.399	6361	0.00	1.1260	0.007499	0.007499	0.0104	0.0104		
D 13C-2,3,4,6,7,8-HxCDF	31.291	72706792	0.52	1.0637	54.3	54.3	0.1363	0.1363	54.34	
2,3,4,6,7,8-HxCDF	31.317						0.007380	0.007380		
D 13C-1,2,3,7,8,9-HxCDF	32.130	67159270	0.52	0.9676	55.2	55.2	0.1498	0.1498	55.18	
1,2,3,7,8,9-HxCDF	32.143	33925	1.36	1.1664	0.0433	0.0433	0.007002	0.007002		M
A Non-2,3,7,8-sub-HxCDF	30.331						0.008559	0.008559		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.0778	0.0752	0.008831	0.008831		RQ
* 13C-1,2,3,7,8,9-HxCDD	31.943	125792881	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.491	56069332	1.26	0.7334	60.8	60.8	0.1488	0.1488	60.77	
1,2,3,4,7,8-HxCDD	31.504	134874	1.35	1.0640	0.2261	0.2261	0.0613	0.0613		
D 13C-1,2,3,6,7,8-HxCDD	31.611	59247026	1.23	0.8802	53.5	53.5	0.1240	0.1240	53.51	
1,2,3,6,7,8-HxCDD	31.624	248315	1.35	1.0001	0.4191	0.4191	0.0659	0.0659		
1,2,3,7,8,9-HxCDD	31.957	639401	1.26	1.1325	0.9792	0.9792	0.0579	0.0579		
A Non-2,3,7,8-sub-HxCDD	30.519	8899921	1.24	1.0655	14.5	14.5	0.0615	10.5		RQ
S Total HxCDD					16.2	16.1	0.0617	0.0617		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.604	49926009	0.42	0.7730	51.3	51.3	0.5249	0.5249	51.34	
1,2,3,4,6,7,8-HpCDF	33.603						0.0121	0.0121		
D 13C-1,2,3,4,7,8,9-HpCDF	34.673	51470567	0.43	0.7008	58.4	58.4	0.5790	0.5790	58.39	
1,2,3,4,7,8,9-HpCDF	34.673						0.0138	0.0138		
A Non-2,3,7,8-sub-HpCDF	34.138						0.0129	0.0129		
S Total HpCDF							0.0138	0.0138		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	45160167	1.04	0.6472	55.5	55.5	0.2275	0.2275	55.47	
1,2,3,4,6,7,8-HpCDD	34.405	8645956	1.03	1.0943	17.5	17.5	0.2377	0.2377		
A Non-2,3,7,8-sub-HpCDD	34.223	20727595	1.00	1.0943	41.9	41.9	0.2377	41.9		
S Total HpCDD					59.4	59.4	0.2377	0.2377		
D 13C-OCDD	36.702	66202267	0.89	0.4472	117.7	117.7	0.1033	0.1033	58.85	
OCDF	36.785	48006	0.86	1.4382	0.1008	0.1008	0.009215	0.009215		Ma
OCDD	36.714	158312269	0.90	1.1070	432.0	432.0	0.3536	0.3536		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d
Lims ID: 320-77292-A-5-A
Client ID: 11215702-080321-BN-SJSB091 (8-10)
Sample Type: Client
Inject. Date: 26-Aug-2021 05:50:44 ALS Bottle#: 38 Worklist Smp#: 13
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-5-A 320-77292-A-5-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:22:10 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:46:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		61764519	15880567	6452	16130	2461		
333.9339	17.598	17.598	0		76714774	19755972	6163	15407	3206	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.084	1	0.972	52314663	13394114	10591	26477	1265		
317.9389	17.099	17.084	1	0.972	68112028	17262929	13487	33717	1280	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.099	1	1.001	230890	56440	570	1425	99		
305.8987	17.114	17.099	1	1.001	315606	77177	705	1762	109	0.73(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											M
303.9016	15.224	17.069	-110	0.890	37748	12157	570	1425	21		
305.8987	15.224	17.069	-110	0.890	44445	14295	705	1762	20	0.85(0.65-0.89)	
303.9016	16.207	17.069	-52	0.948	14405	3700	570	1425	6		
305.8987	16.207	17.069	-52	0.948	19830	6062	705	1762	9	0.73(0.65-0.89)	
303.9016	16.464	17.069	-36	0.963	12001	2887	570	1425	5		
305.8987	16.434	17.069	-38	0.961	16852	4511	705	1762	6	0.71(0.65-0.89)	M
303.9016	16.736	17.069	-20	0.979	115671	29532	570	1425	52		
305.8987	16.736	17.069	-20	0.979	134072	34126	705	1762	48	0.86(0.65-0.89)	
303.9016	17.567	17.069	30	1.027	29180	4324	570	1425	8		
305.8987	17.537	17.069	28	1.026	36581	5613	705	1762	8	0.80(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.779	17.779	0	1.010	31901352	7590374	6452	16130	1176		
333.9339	17.779	17.779	0	1.010	39364769	9624992	6163	15407	1562	0.81(0.65-0.89)	
2,3,7,8-TCDD											RQM
319.8965	17.809	17.794	1	1.002	62103	15618	688	1720	23		
321.8936	17.809	17.794	1	1.002	138809	31968	495	1237	65	0.45(0.65-0.89)	M
	Empc Correction				80653	20283	495	1237	41		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	44232263	10854005	9152	22880	1186		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	15.632	17.530	-114	0.879	20244	6359	688	1720	9		
321.8936	15.617	17.530	-115	0.878	23852	6428	495	1237	13	0.85(0.65-0.89)	
319.8965	15.905	17.530	-97	0.895	69292	18301	688	1720	27		
321.8936	15.905	17.530	-97	0.895	84474	24018	495	1237	49	0.82(0.65-0.89)	
319.8965	16.146	17.530	-83	0.908	58505	17768	688	1720	26		
321.8936	16.146	17.530	-83	0.908	79060	20902	495	1237	42	0.74(0.65-0.89)	
319.8965	16.691	17.530	-50	0.939	311593	82863	688	1720	120		
321.8936	16.691	17.530	-50	0.939	371154	97291	495	1237	197	0.84(0.65-0.89)	
319.8965	17.310	17.530	-13	0.974	30584	6658	688	1720	10		
321.8936	17.295	17.530	-14	0.973	37502	7384	495	1237	15	0.82(0.65-0.89)	
319.8965	17.567	17.530	2	0.988	130882	33552	688	1720	49		
	Empc Correction				112498	28681	688	1720	42		
321.8936	17.567	17.530	2	0.988	146102	37249	495	1237	75	0.90(0.65-0.89)	
319.8965	17.688	17.530	10	0.995	98441	25219	688	1720	37		M
321.8936	17.688	17.530	10	0.995	110666	29631	495	1237	60	0.89(0.65-0.89)	
319.8965	18.157	17.530	38	1.021	17470	4492	688	1720	7		
321.8936	18.142	17.530	37	1.020	24644	5265	495	1237	11	0.71(0.65-0.89)	
319.8965	18.883	17.530	81	1.062	16582	4673	688	1720	7		M
321.8936	18.898	17.530	82	1.063	37115	9611	495	1237	19	0.45(0.65-0.89)	
	Empc Correction				21535	6068	495	1237	12		
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	56152978	10555822	7553	18882	1398		
353.8970	22.020	22.020	0	1.251	35548144	6687872	5192	12980	1288	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											RQM
339.8597	22.034	22.047	-1	1.001	18554	3651	284	710	13		
341.8567	22.020	22.047	-2	1.000	17559	3383	510	1275	7	1.06(1.32-1.78)	M
	Empc Correction				11970	2355	510	1275	5		
13C-2,3,4,7,8-PeCDF											
351.9000	23.329	23.343	-1	1.326	60480664	10301405	7553	18882	1364		
353.8970	23.329	23.343	-1	1.326	38674726	6687264	5192	12980	1288	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											RQM
339.8597	23.384	23.370	1	1.002	9285	2207	284	710	8		M
341.8567	23.356	23.370	-1	1.001	10172	1831	510	1275	4	0.91(1.32-1.78)	M
	Empc Correction				5990	1423	510	1275	3		
A F1 PeCDFs											
339.8597	19.851						255	637			
341.8567	19.851						572	1430			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.067						284	710			
341.8567	23.067						510	1275			
13C-1,2,3,7,8-PeCDD											
367.8949	24.038	24.052	-1	1.366	36173957	5928052	2900	7250	2044		
369.8919	24.038	24.052	-1	1.366	22987160	3862103	1891	4727	2042	1.57(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											
355.8546	24.079						663	1657			
357.8516	24.079						408	1020			
A Non-2,3,7,8-sub-PeCDD											RQ
355.8546	21.652	23.696	-122	0.901	632181	124066	663	1657	187		
357.8516	21.638	23.696	-123	0.900	402254	73052	408	1020	179	1.57(1.32-1.78)	
355.8546	22.034	23.696	-100	0.917	15856	3213	663	1657	5		
	Empc Correction				11183	2219	663	1657	3		
357.8516	22.074	23.696	-97	0.918	7215	1432	408	1020	4	2.20(1.32-1.78)	
355.8546	22.607	23.696	-65	0.940	35215	7971	663	1657	12		
357.8516	22.593	23.696	-66	0.940	30066	5535	408	1020	14	1.17(1.32-1.78)	
	Empc Correction				22719	5142	408	1020	13		
355.8546	22.920	23.696	-46	0.953	89599	18193	663	1657	27		
357.8516	22.906	23.696	-47	0.953	56800	11661	408	1020	29	1.58(1.32-1.78)	
355.8546	23.097	23.696	-36	0.961	213502	29499	663	1657	44		
357.8516	23.084	23.696	-37	0.960	134617	18437	408	1020	45	1.59(1.32-1.78)	
355.8546	24.352	23.696	39	1.013	20197	3223	663	1657	5		
357.8516	24.379	23.696	41	1.014	14276	2613	408	1020	6	1.41(1.32-1.78)	
355.8546	25.061	23.696	82	1.043	28462	3474	663	1657	5		
	Empc Correction				22896	3926	663	1657	6		
357.8516	25.034	23.696	80	1.041	14772	2533	408	1020	6	1.93(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.173	30.186	-1	0.945	28589241	4885280	7309	18272	668		
385.8610	30.173	30.186	-1	0.945	54617037	9191968	13618	34045	675	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											RQM
373.8208	30.199	30.212	-1	1.001	14585	3208	366	915	9		M
	Empc Correction				12175	2782	366	915	8		
375.8178	30.199	30.212	-1	1.001	9819	2244	277	692	8	1.49(1.05-1.43)	M
13C-1,2,3,6,7,8-HxCDF											a
383.8639	30.386	30.399	-1	0.951	25740947	4689757	7309	18272	642		a
385.8610	30.386	30.399	-1	0.951	49586295	9005292	13618	34045	661	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.399	30.412	-1	1.000	6361	2003	366	915	5		
375.8178	30.412	30.412	0	0.000			277	692		0.00(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.980	24803191	6342353	7309	18272	868		
385.8610	31.291	31.291	0	0.980	47903601	12308321	13618	34045	904	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317						366	915			
375.8178	31.317						277	692			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.130	32.142	-1	1.006	23044822	6775744	7309	18272	927		
385.8610	32.130	32.142	-1	1.006	44114448	12900567	13618	34045	947	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											M
373.8208	32.143	32.156	-1	1.000	19556	5834	366	915	16		M
375.8178	32.143	32.156	-1	1.000	14369	4353	277	692	16	1.36(1.05-1.43)	M

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.331						366	915			
375.8178	30.331						277	692			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.956	-1		69620330	19956703	8836	22090	2259		
403.8529	31.943	31.956	-1		56172551	16130588	6922	17305	2330	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.491	31.503	-1	0.986	31256105	8897295	8836	22090	1007		
403.8529	31.491	31.503	-1	0.986	24813227	6875254	6922	17305	993	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.504	31.517	-1	1.000	77424	20079	2098	5245	10		
391.8127	31.517	31.517	0	1.001	57450	14817	2019	5047	7	1.35(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.611	31.610	0	0.990	32724168	8628167	8836	22090	976		
403.8529	31.611	31.610	0	0.990	26522858	6986830	6922	17305	1009	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.624	31.623	0	1.000	142819	39403	2098	5245	19		
391.8127	31.624	31.623	0	1.000	105496	29739	2019	5047	15	1.35(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.957	31.969	-1	1.015	356689	74779	2098	5245	36		
391.8127	31.957	31.969	-1	1.015	282712	59232	2019	5047	29	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											RQ
389.8157	29.041	30.519	-88	0.919	3629004	471534	2098	5245	225		
391.8127	29.028	30.519	-89	0.918	2844756	362199	2019	5047	179	1.28(1.05-1.43)	
389.8157	30.266	30.519	-15	0.957	110189	18967	2098	5245	9		
391.8127	30.266	30.519	-15	0.957	90660	17132	2019	5047	8	1.22(1.05-1.43)	
389.8157	30.692	30.519	10	0.971	1144881	219648	2098	5245	105		
391.8127	30.692	30.519	10	0.971	892379	173997	2019	5047	86	1.28(1.05-1.43)	
389.8157	30.919	30.519	24	0.978	143315	29290	2098	5245	14		
	Empc Correction				104100	25392	2098	5245	12		
391.8127	30.905	30.519	23	0.978	83952	20478	2019	5047	10	1.71(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.604	33.603	0	1.052	14653156	5614668	17072	42680	329		
419.8220	33.604	33.603	0	1.052	35272853	12936531	41499	103747	312	0.42(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603						979	2447			
409.7789	33.603						317	792			
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.673	34.672	0	1.085	15520756	5451057	17072	42680	319		
419.8220	34.673	34.672	0	1.085	35949811	12388219	41499	103747	299	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673						979	2447			
409.7789	34.673						317	792			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						979	2447			
409.7789	34.138						317	792			

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.077	23042442	7981718	12408	31020	643		
437.8140	34.393	34.393	0	1.077	22117725	7781333	8846	22115	880	1.04(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.393	1	1.000	4385714	1519417	7631	19077	199		
425.7737	34.393	34.393	0	1.000	4260242	1424724	8767	21917	163	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.859	34.223	-22	0.984	10372816	3843663	7631	19077	504		
425.7737	33.859	34.223	-22	0.984	10354779	3748520	8767	21917	428	1.00(0.88-1.20)	
13C-OCDD											
469.7779	36.702	36.701	0	1.149	31146023	9399455	2983	7457	3151		
471.7750	36.702	36.701	0	1.149	35056244	10521282	3684	9210	2856	0.89(0.76-1.02)	
OCDF											Ma
441.7428	36.785	36.797	-1	1.002	22231	5575	241	602	23		M
443.7399	36.762	36.797	-2	1.002	25775	6723	287	717	23	0.86(0.76-1.02)	
OCDD											
457.7377	36.714	36.713	0	1.000	74895547	22311228	6524	16310	3420		
459.7348	36.714	36.713	0	1.000	83416722	24366658	9073	22682	2686	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d
Lims ID: 320-77292-A-5-A
Client ID: 11215702-080321-BN-SJSB091 (8-10)
Inject. Date: 26-Aug-2021 05:50:44 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 13

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	120426691	30657043

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	120426691	30657043

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.224	37748	12157	44445	14295	0.0667	0.85	
16.207	14405	3700	19830	6062	0.0278	0.73	
16.464	12001	2887	16852	4511	0.0234	0.71	M
16.736	115671	29532	134072	34126	0.2025	0.86	
17.567	29180	4324	36581	5613	0.0533	0.80	
Signal Totals:							
	209005	52600	251780	64607			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	460785	117207				0.83	M

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.3737 = (460785 * 100.000) / (120426691 * 1.024)

QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d
Lims ID: 320-77292-A-5-A
Client ID: 11215702-080321-BN-SJSB091 (8-10)
Inject. Date: 26-Aug-2021 05:50:44 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 13

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	71266121	17215366

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	71266121	17215366

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.632	20244	6359	23852	6428	0.0493	0.85	
15.905	69292	18301	84474	24018	0.1720	0.82	
16.146	58505	17768	79060	20902	0.1539	0.74	
16.691	311593	82863	371154	97291	0.7639	0.84	
17.310	30584	6658	37502	7384	0.0762	0.82	
17.567	130882	33552	146102	37249	0.3099	0.90	RQ
17.567	112498	28681	146102	37249	0.2893		Empc Correction
17.688	98441	25219	110666	29631	0.2340	0.89	Ma
18.157	17470	4492	24644	5265	0.0471	0.71	
18.883	16582	4673	37115	9611	0.0601	0.45	RQM
18.883	16582	4673	21535	6068	0.0426		Empc Correction
Signal Totals:							
	735209	195014	898989	234236			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1668162	437664				0.82	RQMa
	1634198	429250					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.866 = (1668162 * 100.000) / (71266121 * 1.254)
Empc Amount: 1.828 = (1634198 * 100.000) / (71266121 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d
Lims ID: 320-77292-A-5-A
Client ID: 11215702-080321-BN-SJSB091 (8-10)
Inject. Date: 26-Aug-2021 05:50:44 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 13

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	59161117	9790155

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	59161117	9790155

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.652	632181	124066	402254	73052	1.67	1.57	
22.034	15856	3213	7215	1432	0.0372	2.20	RQ
22.034	11183	2219	7215	1432	0.0297		Empc Correction
22.607	35215	7971	30066	5535	0.1052	1.17	RQ
22.607	35215	7971	22719	5142	0.0934		Empc Correction
22.920	89599	18193	56800	11661	0.2360	1.58	
23.097	213502	29499	134617	18437	0.5612	1.59	
24.352	20197	3223	14276	2613	0.0556	1.41	
25.061	28462	3474	14772	2533	0.0697	1.93	RQ
25.061	22896	3926	14772	2533	0.0607		Empc Correction
Signal Totals:							
	1024773	189097	652653	114870			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1695012	304902				1.57	RQ
	1677426	303967					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.733 = (1695012 * 100.000) / (59161117 * 1.048)
Empc Amount: 2.704 = (1677426 * 100.000) / (59161117 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Lims ID:	320-77292-A-5-A		
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Inject. Date:	26-Aug-2021 05:50:44	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	13

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	56069332	15772549
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	59247026	15614997
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	57658179	15693773

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.041	3629004	471534	2844756	362199	10.5	1.28	
30.266	110189	18967	90660	17132	0.3269	1.22	
30.692	1144881	219648	892379	173997	3.32	1.28	
30.919	143315	29290	83952	20478	0.3699	1.71	RQ
30.919	104100	25392	83952	20478	0.3061		Empc Correction
Signal Totals:							
	4988174	735541	3911747	573806			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	8939136	1313245				1.29	RQ
	8899921	1309347					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 14.550 = (8939136 * 100.000) / (57658179 * 1.066)

Empc Amount: 14.486 = (8899921 * 100.000) / (57658179 * 1.066)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d
Lims ID: 320-77292-A-5-A
Client ID: 11215702-080321-BN-SJSB091 (8-10)
Inject. Date: 26-Aug-2021 05:50:44 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 13

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	45160167	15763051

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	45160167	15763051

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.859	10372816	3843663	10354779	3748520	41.9	1.00	
Signal Totals:							
	10372816	3843663	10354779	3748520			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	20727595	7592183				1.00	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 41.943 = (20727595 * 100.000) / (45160167 * 1.094)

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.68- 19.46)

Signal: 2

Processing Integration Results

RT = 16.434 Area = 22818

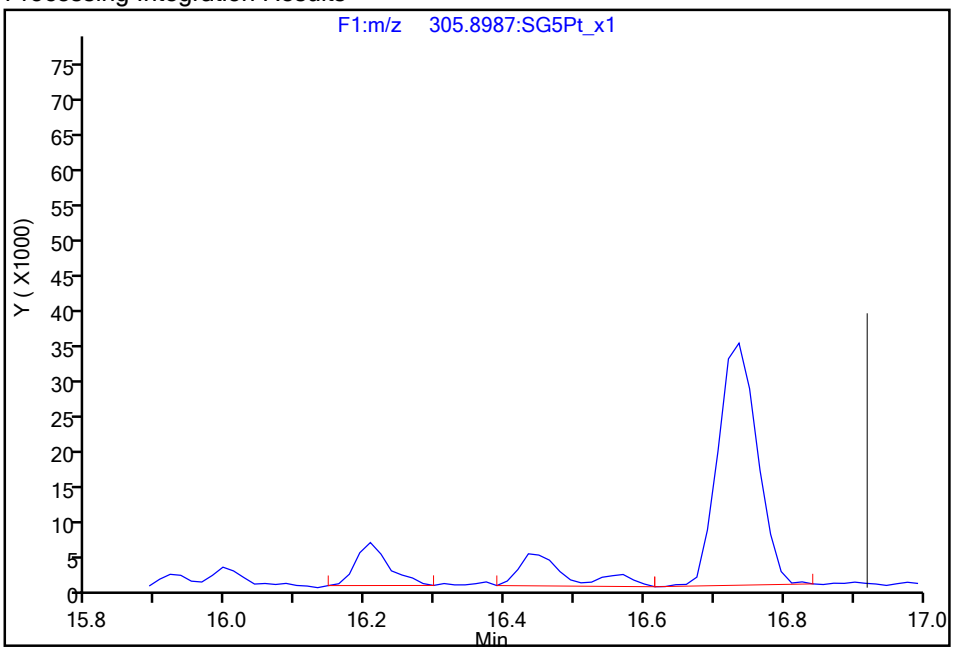

Manual Integration Results

RT = 16.434 Area = 16852 M

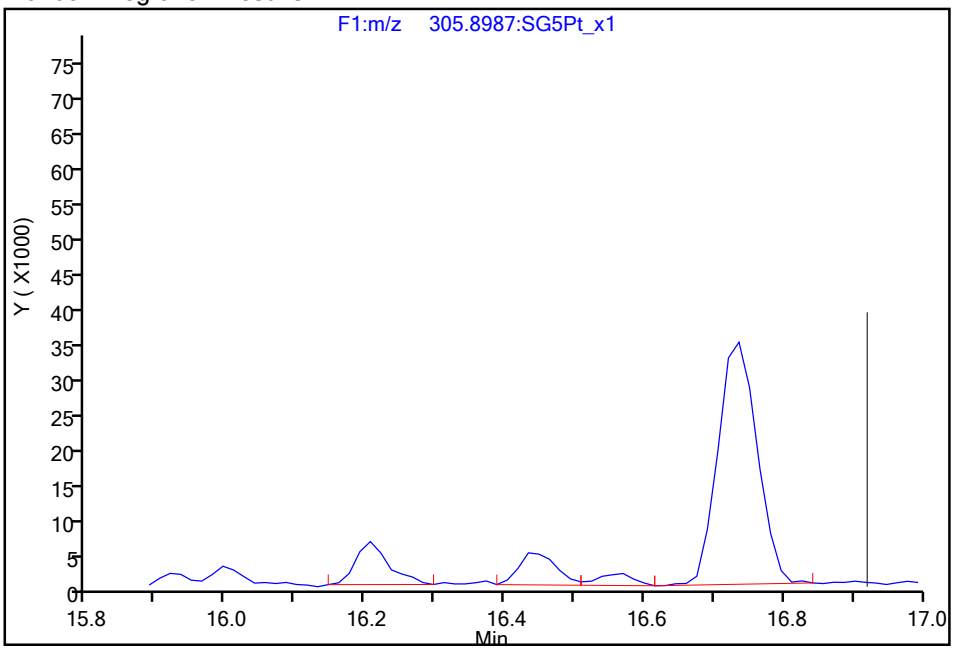

Reviewer: dadunj, 27-Aug-2021 09:18:47

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793530

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 17.81
Area: 249476
Amount: 0.348615
Amount Units: pg/ul

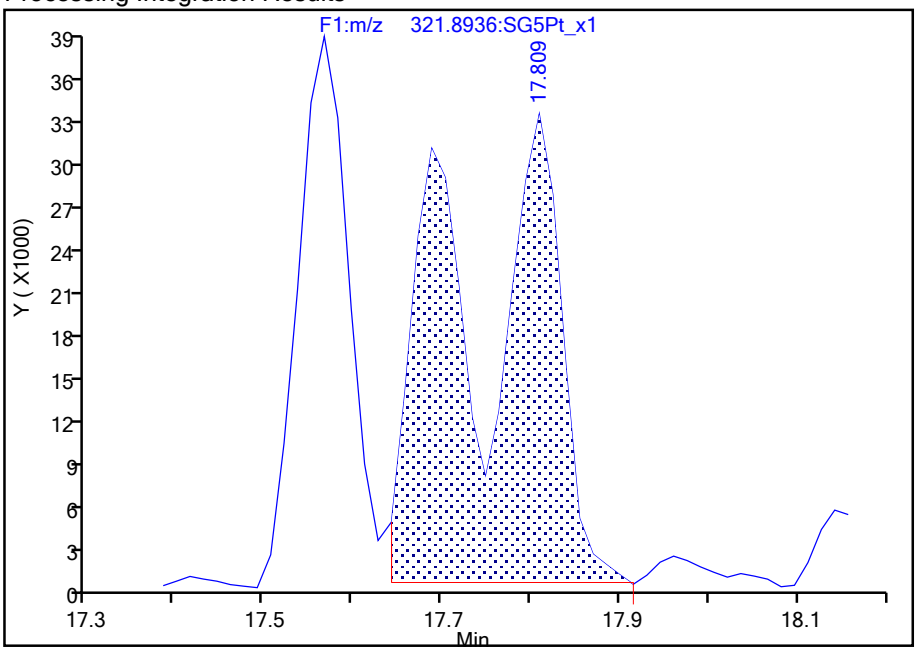

Manual Integration Results

RT: 17.81
Area: 138809
Amount: 0.224793
Amount Units: pg/ul

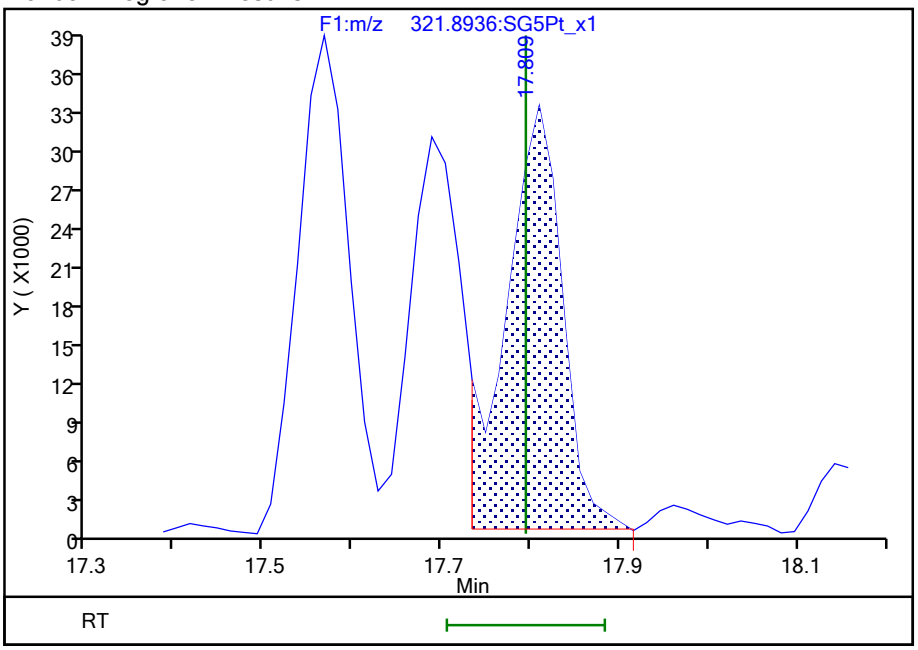

Reviewer: dadunj, 27-Aug-2021 09:18:53

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.59- 19.47)

Signal: 1

Processing Integration Results

RT = 17.688 Area = 98441

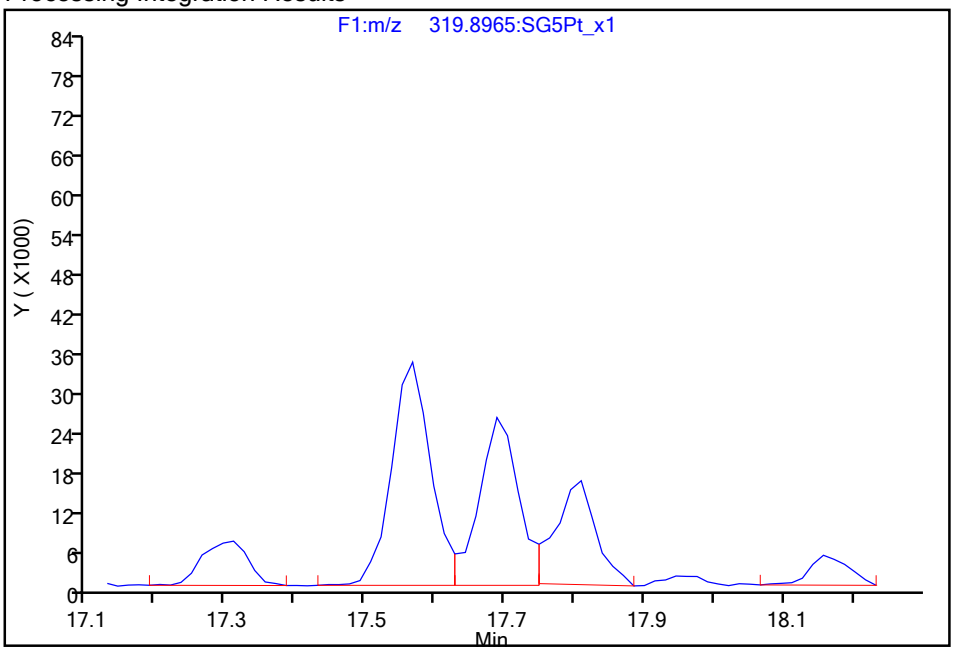

Manual Integration Results

RT = 17.688 Area = 98441

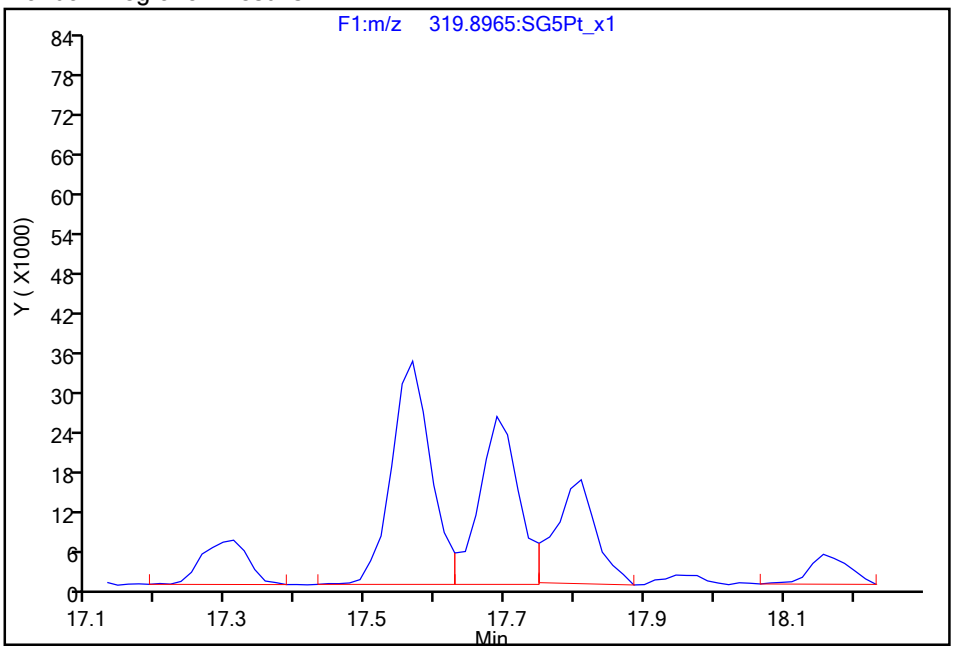

Reviewer: dadunj, 27-Aug-2021 09:21:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.59- 19.47)

Signal: 1

Processing Integration Results

RT = 18.883 Area = 23821

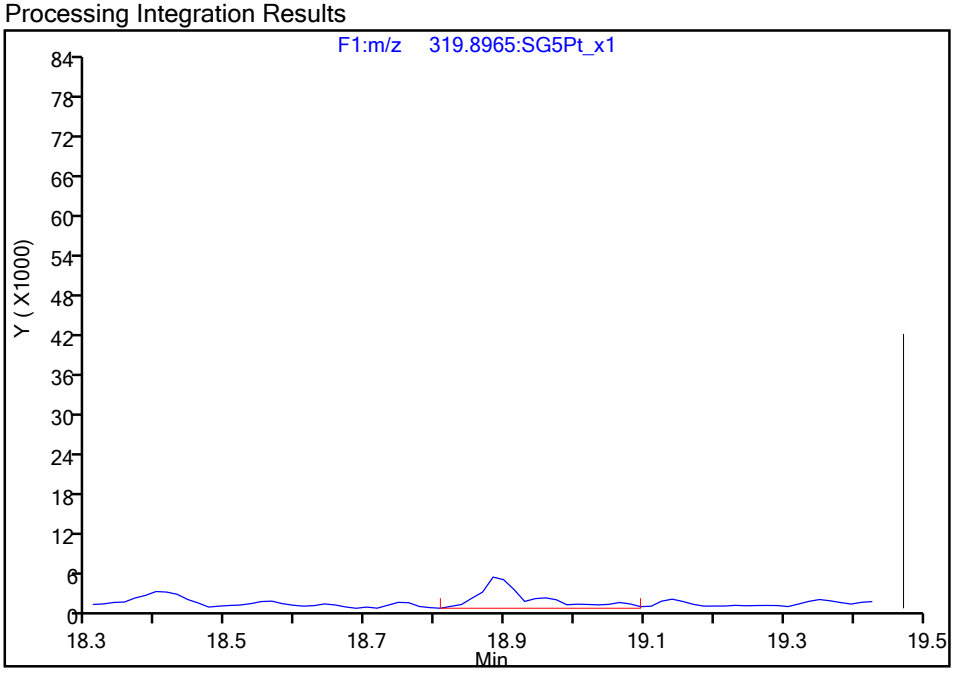

Manual Integration Results

RT = 18.883 Area = 16582 M

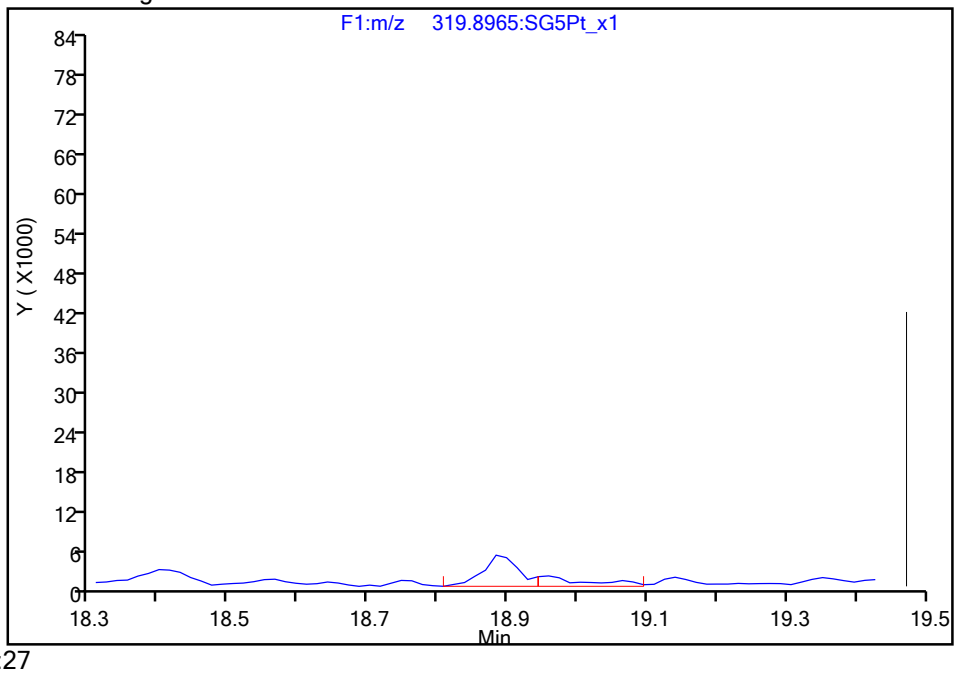

Reviewer: dadunj, 27-Aug-2021 09:21:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.02
Area: 23838
Amount: 0.043565
Amount Units: pg/ul

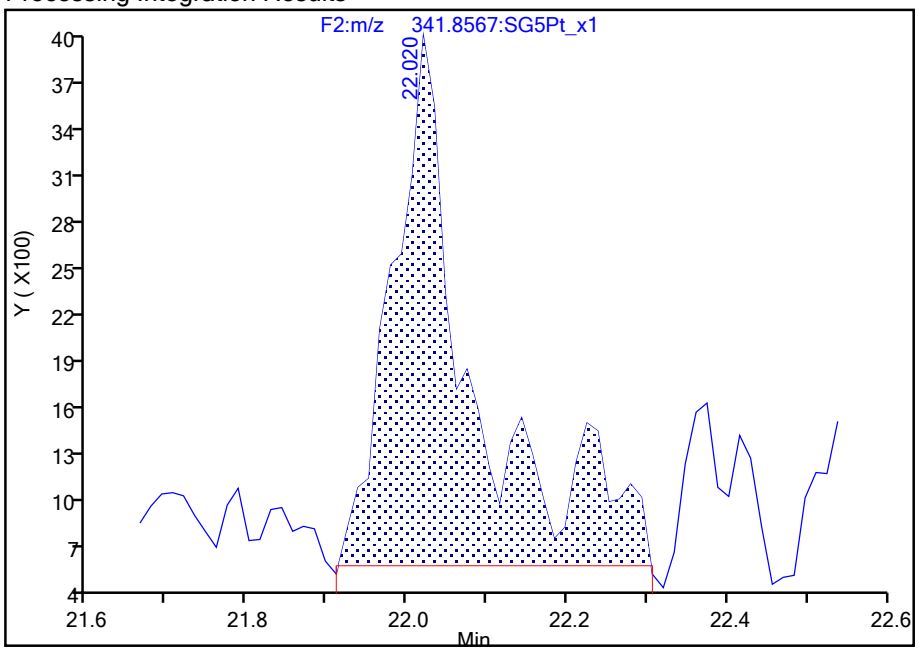

Manual Integration Results

RT: 22.02
Area: 17559
Amount: 0.037112
Amount Units: pg/ul

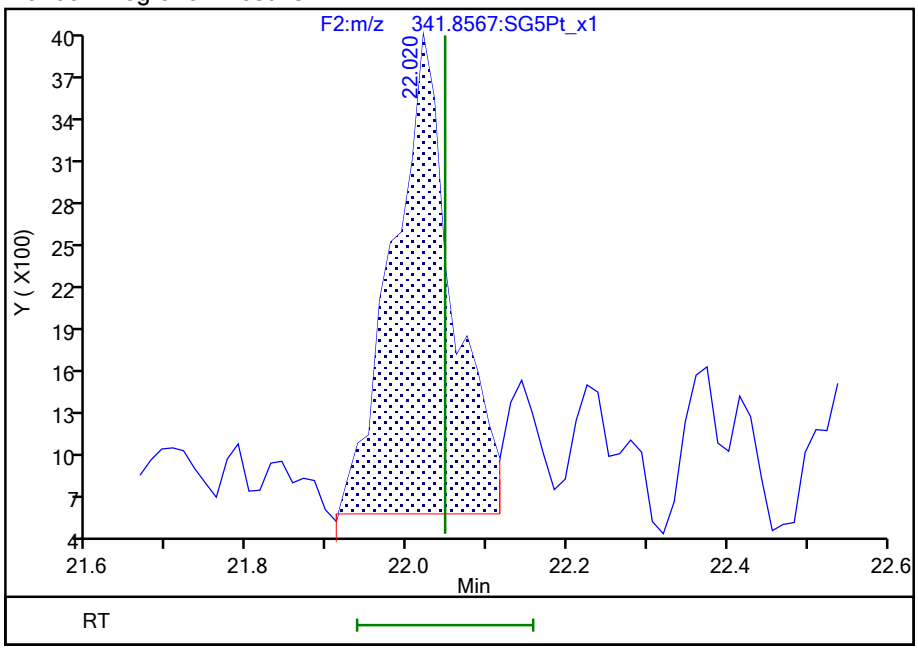

Reviewer: dadunj, 27-Aug-2021 09:19:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 2

Processing Integration Results

RT: 23.36
Area: 13400
Amount: 0.021967
Amount Units: pg/ul

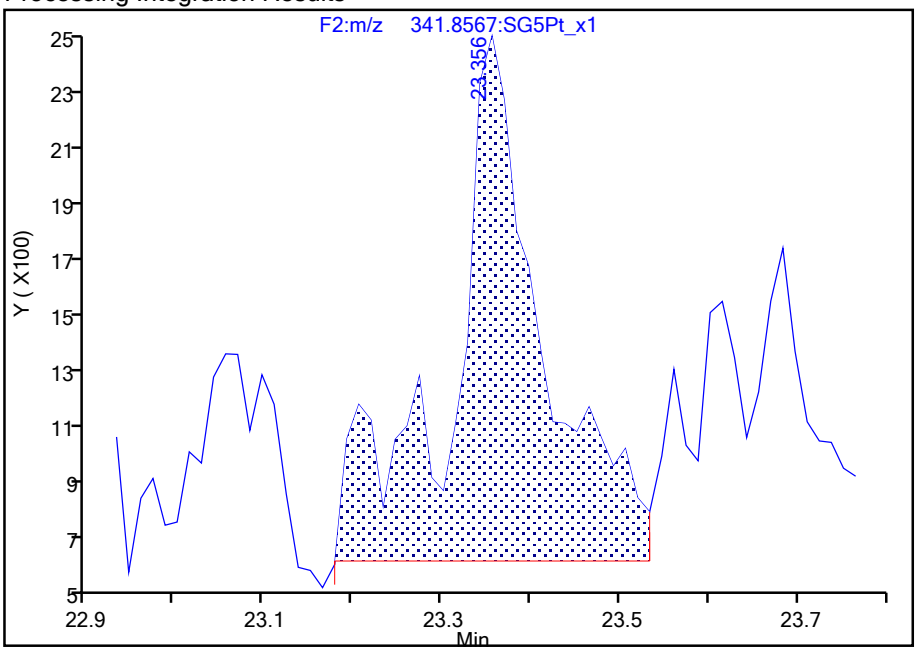

Manual Integration Results

RT: 23.36
Area: 10172
Amount: 0.019268
Amount Units: pg/ul

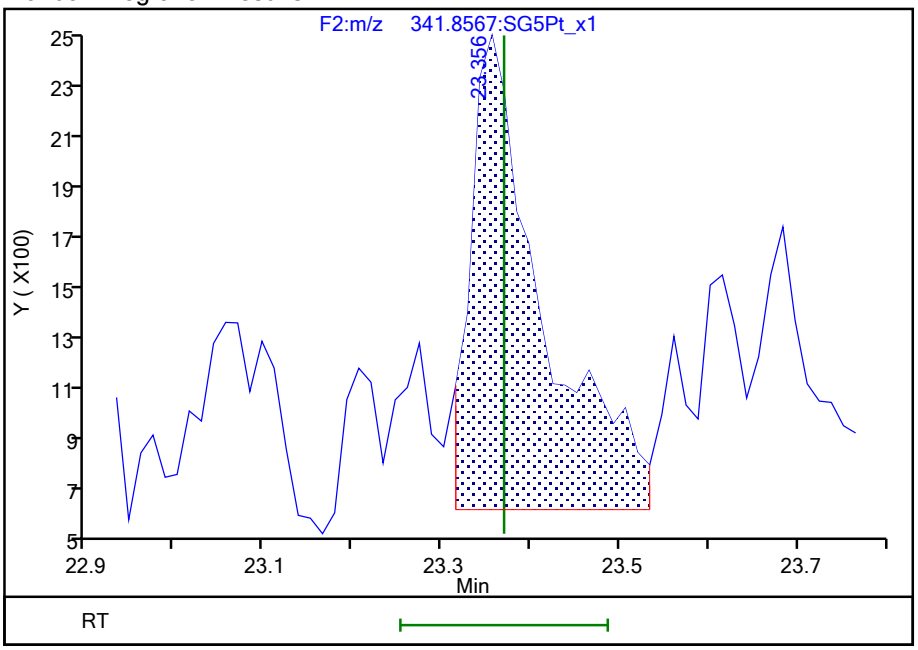

Reviewer: dadunj, 27-Aug-2021 09:19:26

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

2,3,4,7,8-PeCDF, CAS: 57117-31-4

Signal: 1

Processing Integration Results

RT: 23.38
Area: 8783
Amount: 0.021967
Amount Units: pg/ul

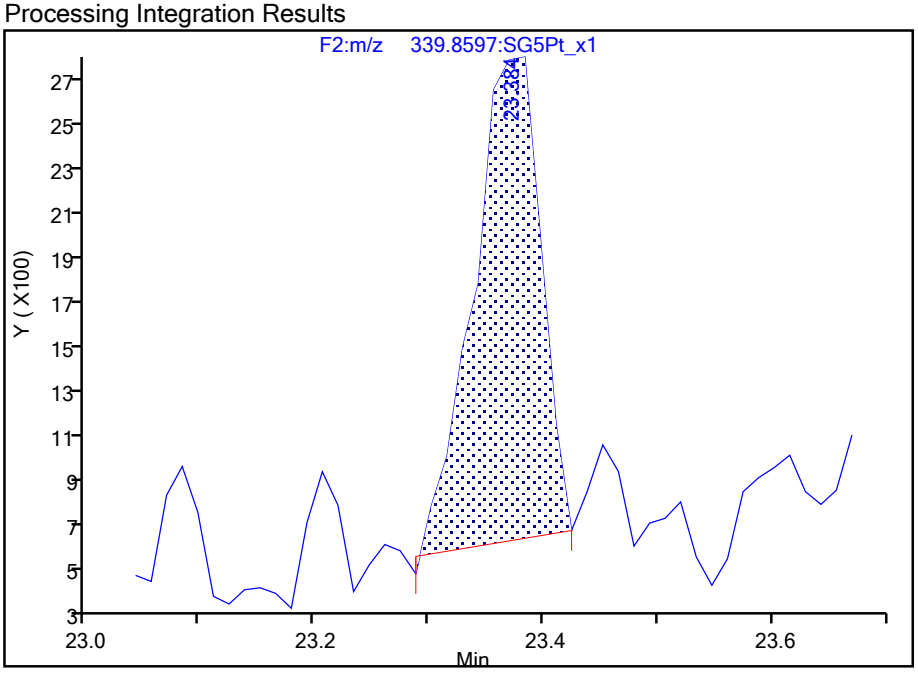

Manual Integration Results

RT: 23.38
Area: 9285
Amount: 0.019268
Amount Units: pg/ul

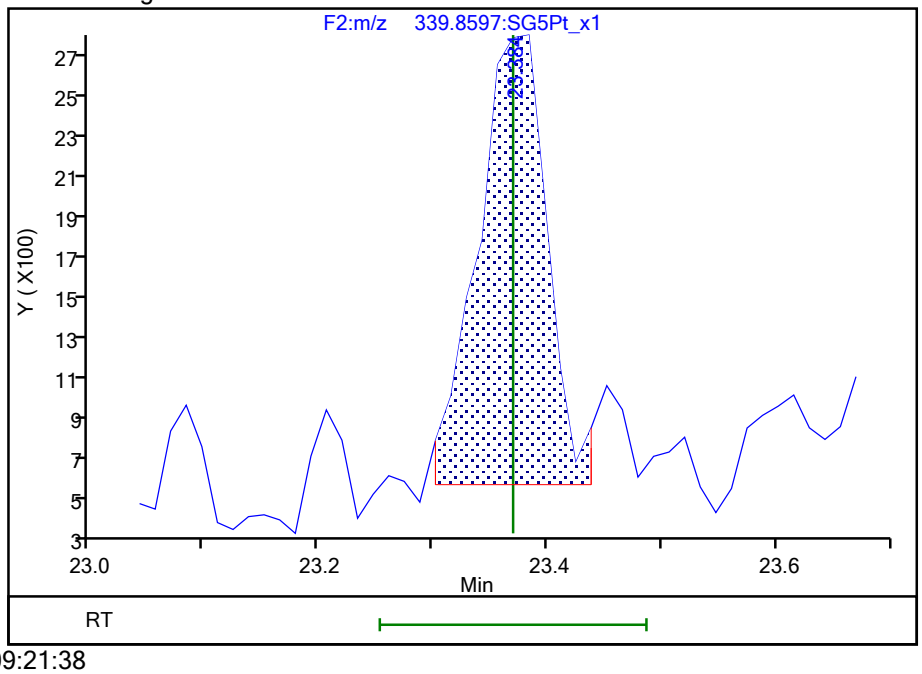

Reviewer: dadunj, 27-Aug-2021 09:21:38

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 1

Processing Integration Results

RT: 30.20
Area: 17060
Amount: 0.029948
Amount Units: pg/ul

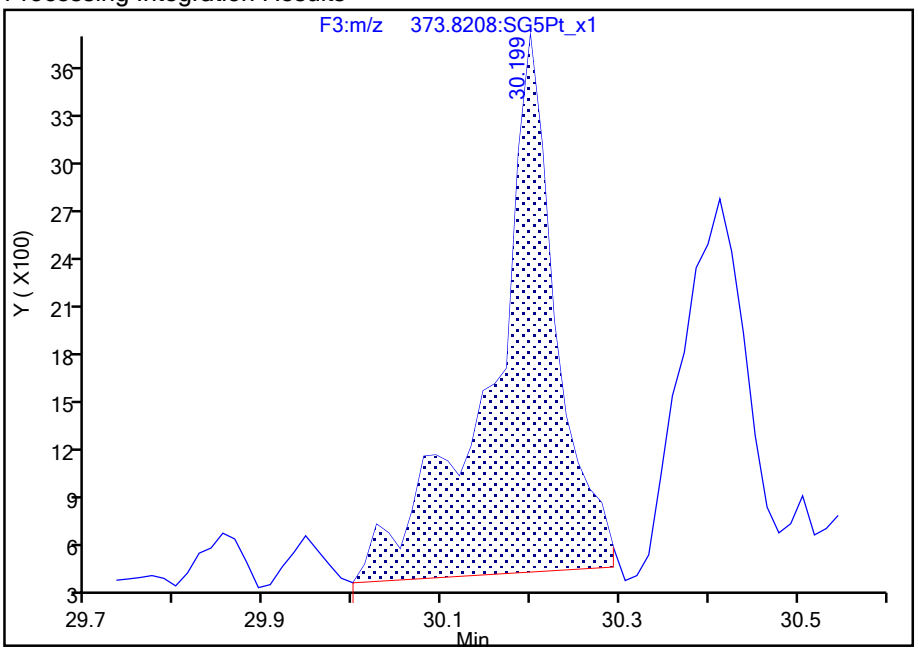

Manual Integration Results

RT: 30.20
Area: 14585
Amount: 0.027029
Amount Units: pg/ul

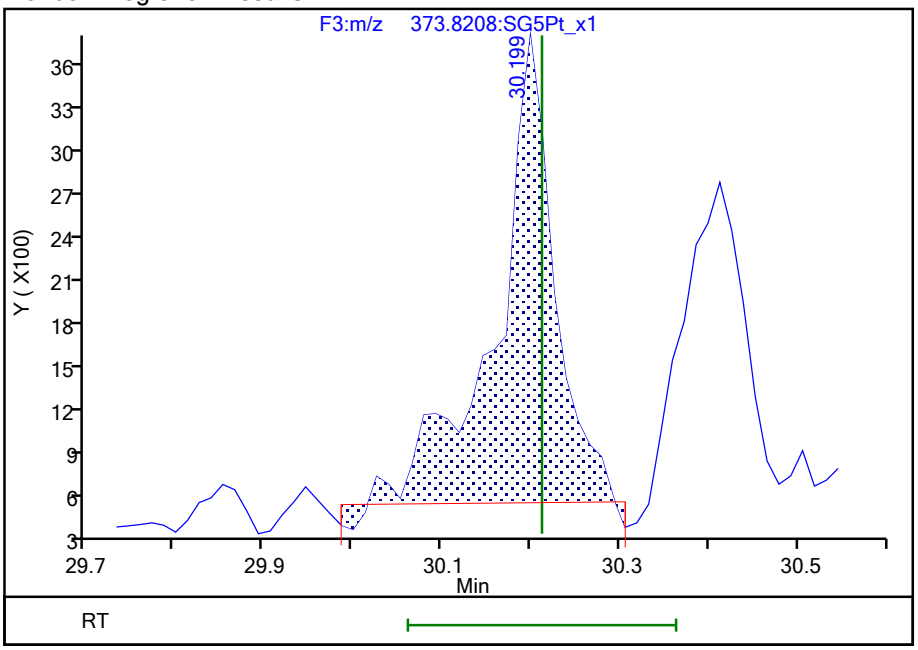

Reviewer: dadunj, 27-Aug-2021 09:19:57

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,4,7,8-HxCDF, CAS: 70648-26-9

Signal: 2

Processing Integration Results

RT: 30.20
Area: 9980
Amount: 0.029948
Amount Units: pg/ul

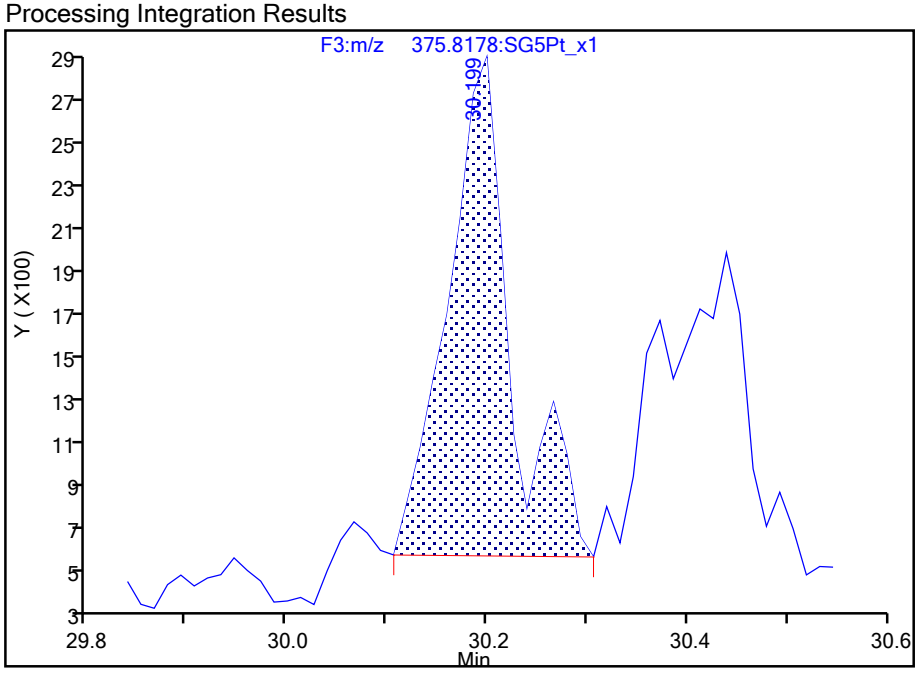

Manual Integration Results

RT: 30.20
Area: 9819
Amount: 0.027029
Amount Units: pg/ul

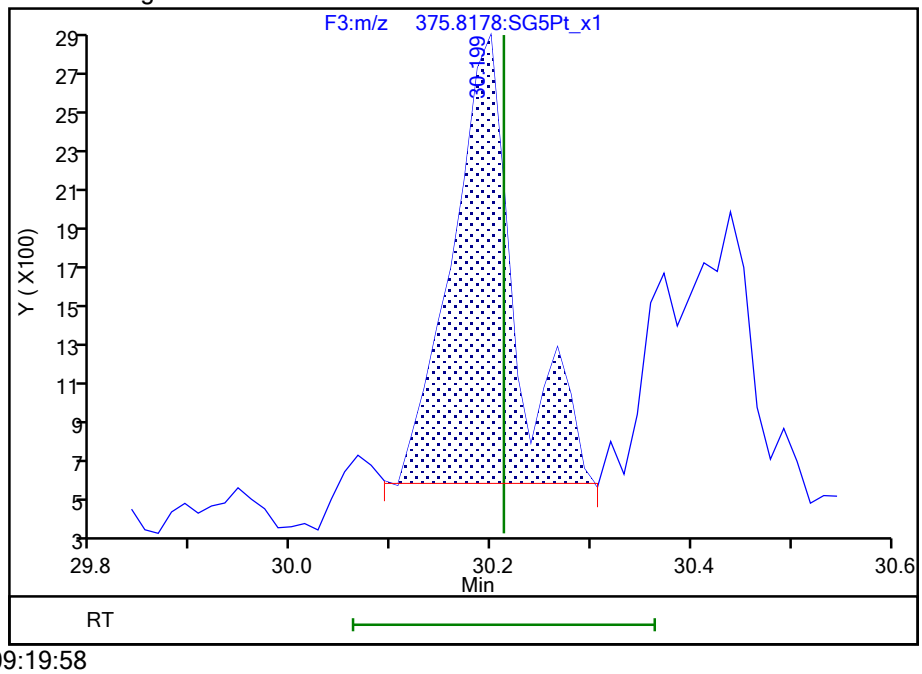

Reviewer: dadunj, 27-Aug-2021 09:19:58

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793538

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,6,7,8-HxCDF, CAS: 116843-03-9

Signal: 1

Processing Integration Results

RT: 30.39
Area: 25740947
Amount: 53.090745
Amount Units: pg/ul

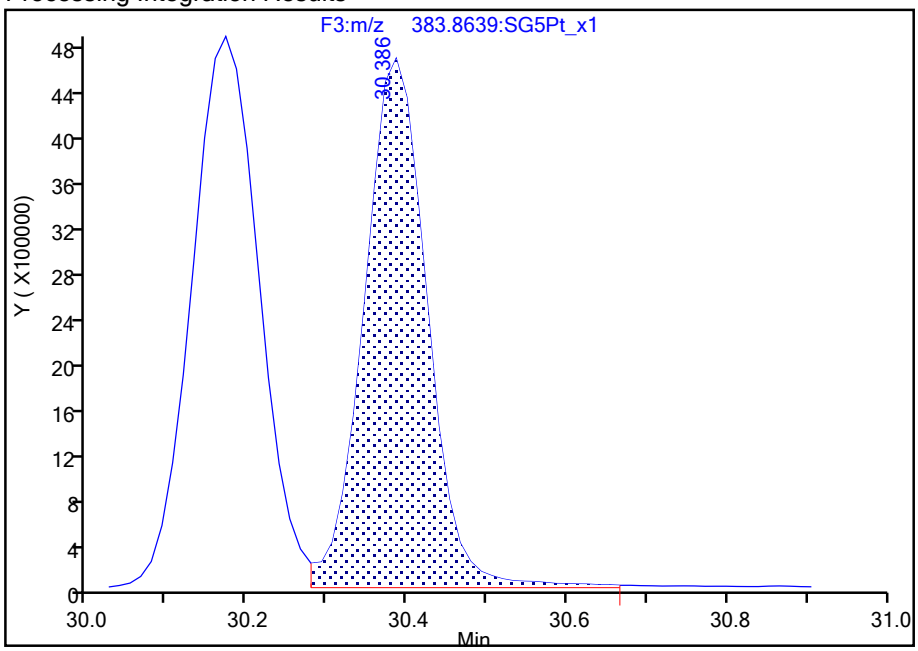

Manual Integration Results

RT: 30.39
Area: 25740947
Amount: 53.090745
Amount Units: pg/ul

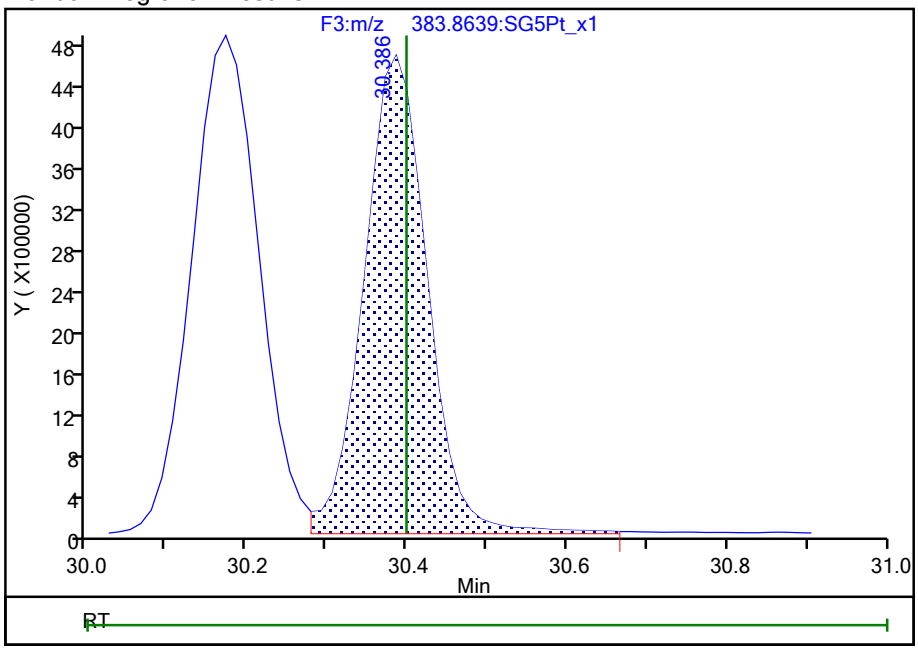

Reviewer: dadunj, 27-Aug-2021 09:20:01

Audit Action: Assigned Compound ID Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.14
Area: 22763
Amount: 0.049923
Amount Units: pg/ul

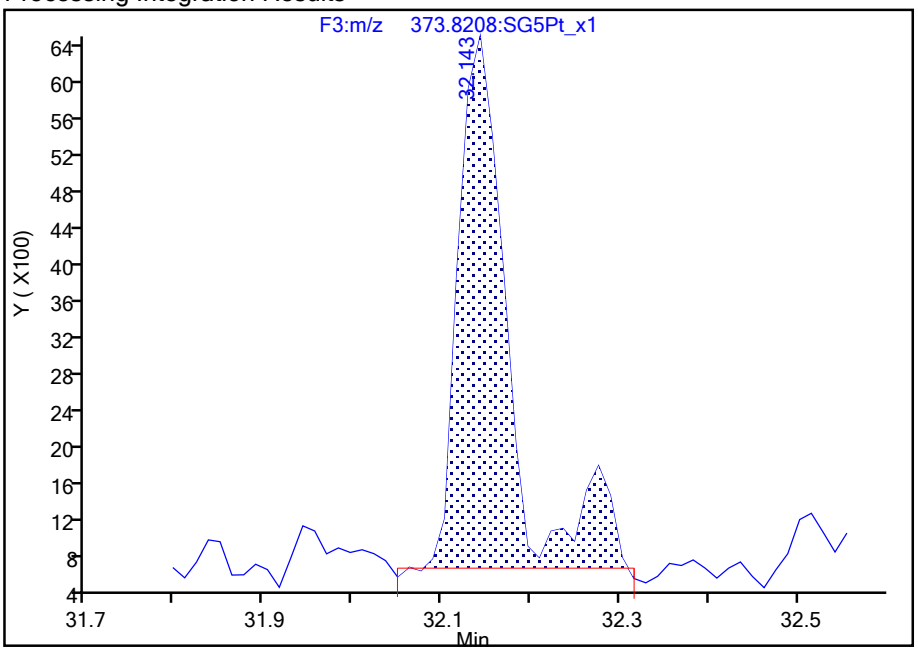

Manual Integration Results

RT: 32.14
Area: 19556
Amount: 0.043310
Amount Units: pg/ul

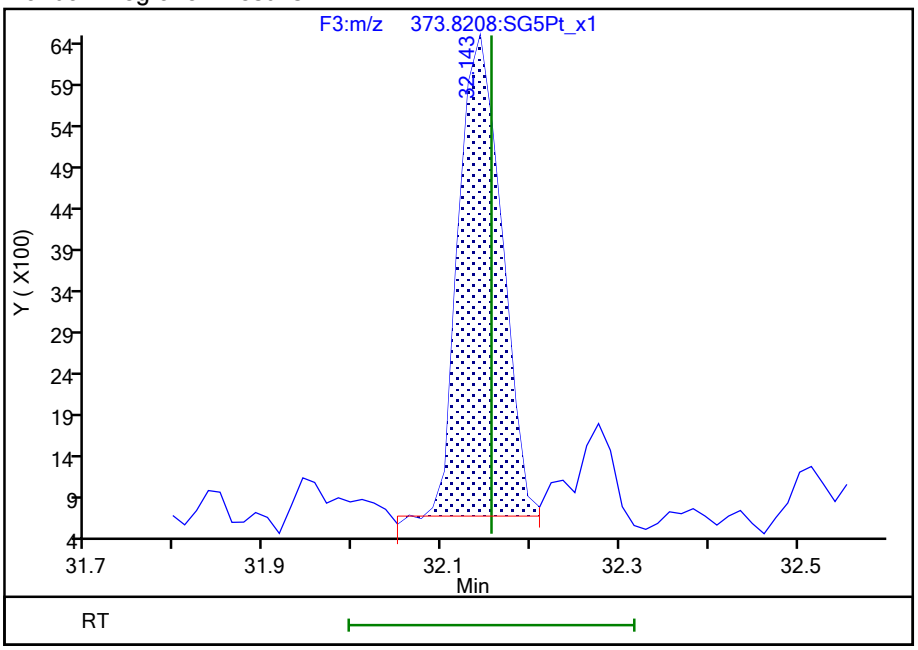

Reviewer: dadunj, 27-Aug-2021 09:20:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.14
Area: 16342
Amount: 0.049923
Amount Units: pg/ul

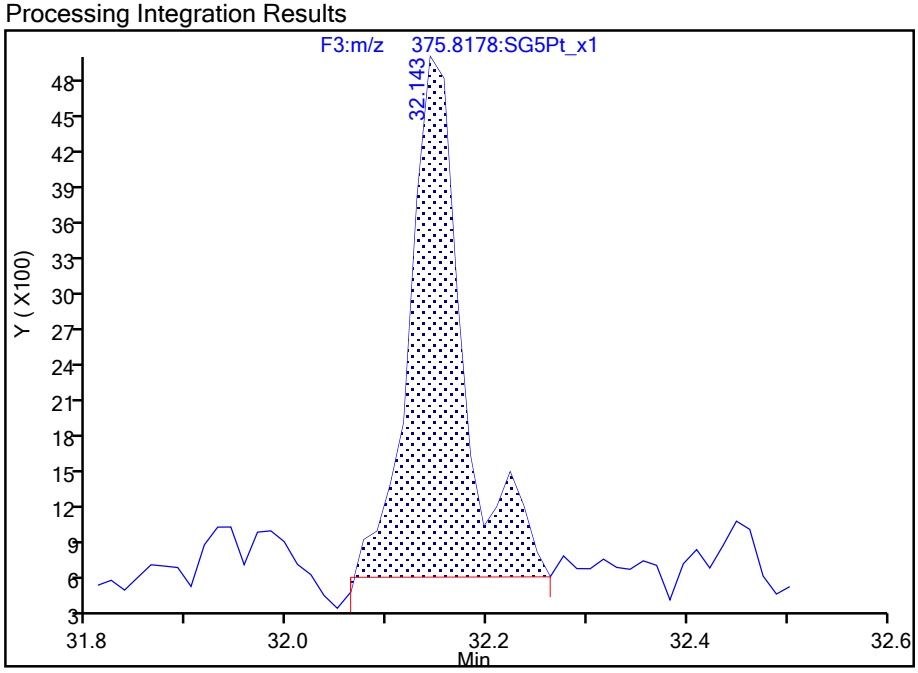

Manual Integration Results

RT: 32.14
Area: 14369
Amount: 0.043310
Amount Units: pg/ul

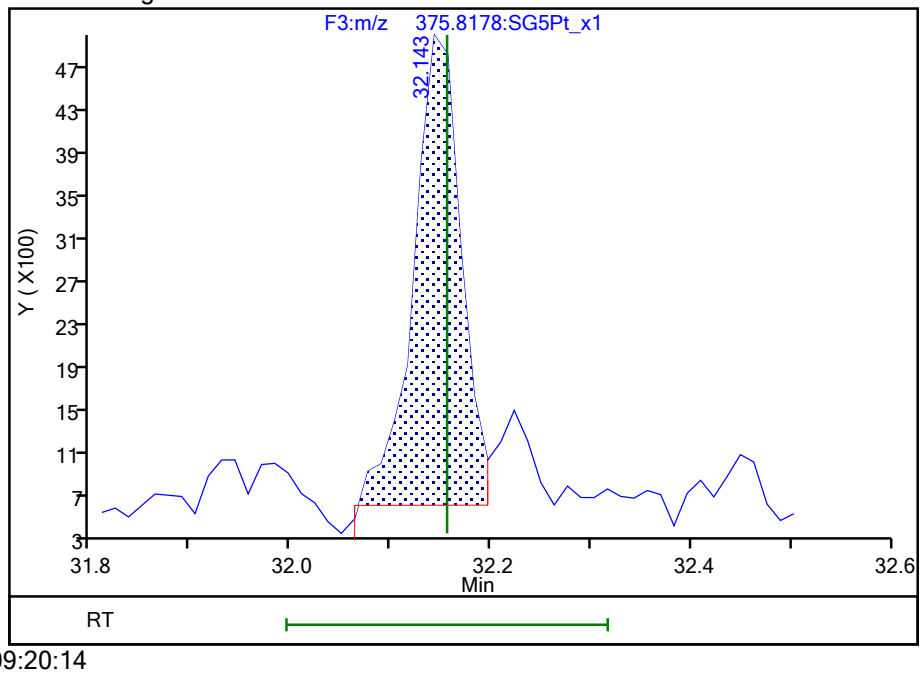

Reviewer: dadunj, 27-Aug-2021 09:20:14

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793541

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.71
Area: 83036
Amount: 0.340850
Amount Units: pg/ul

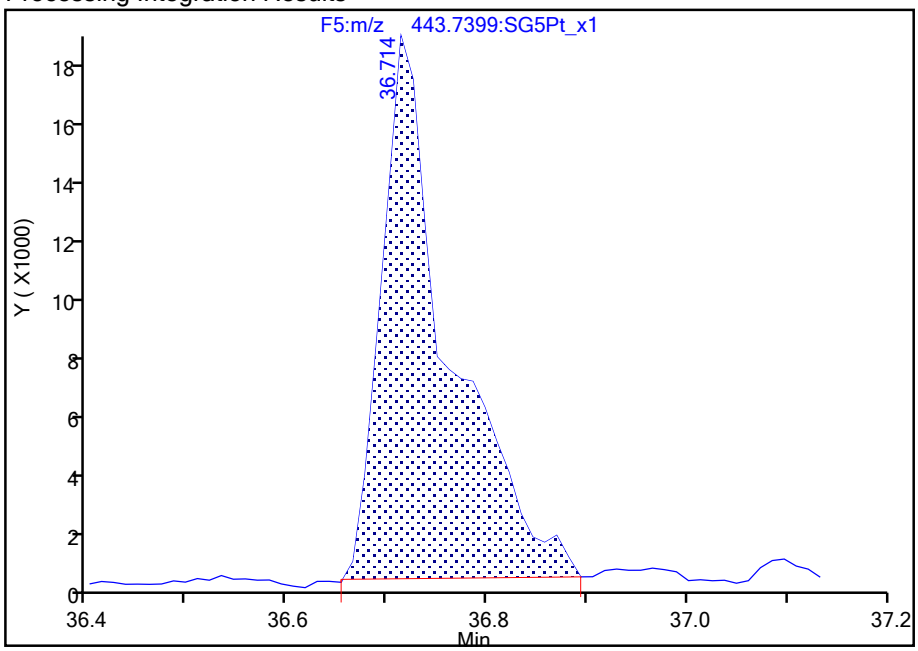

Manual Integration Results

RT: 36.76
Area: 25775
Amount: 0.100843
Amount Units: pg/ul

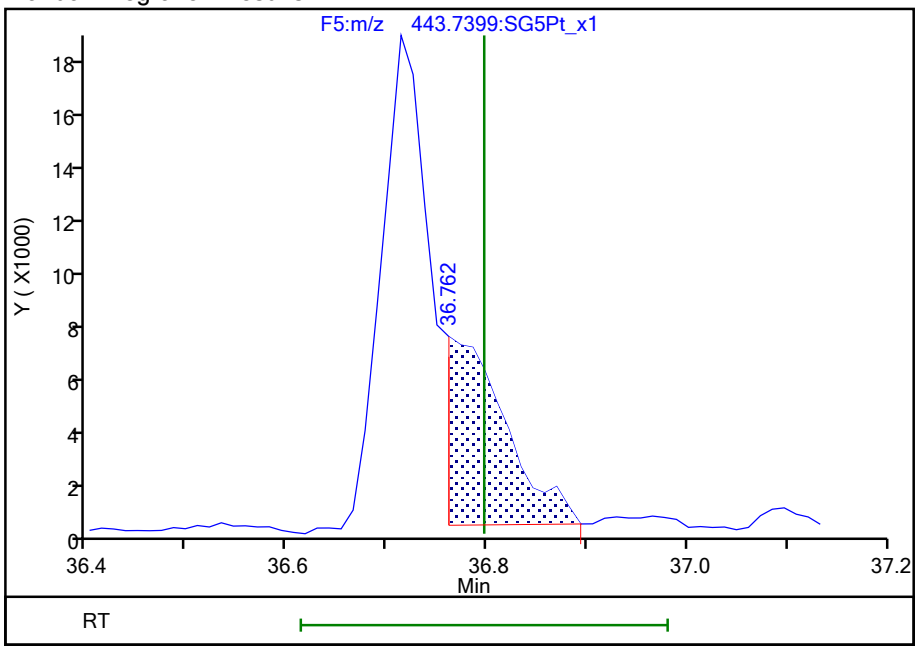

Reviewer: dadunj, 27-Aug-2021 09:20:46

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 3

Processing Integration Results

RT: 36.71
Area: 162261
Amount: 0.340850
Amount Units: pg/ul

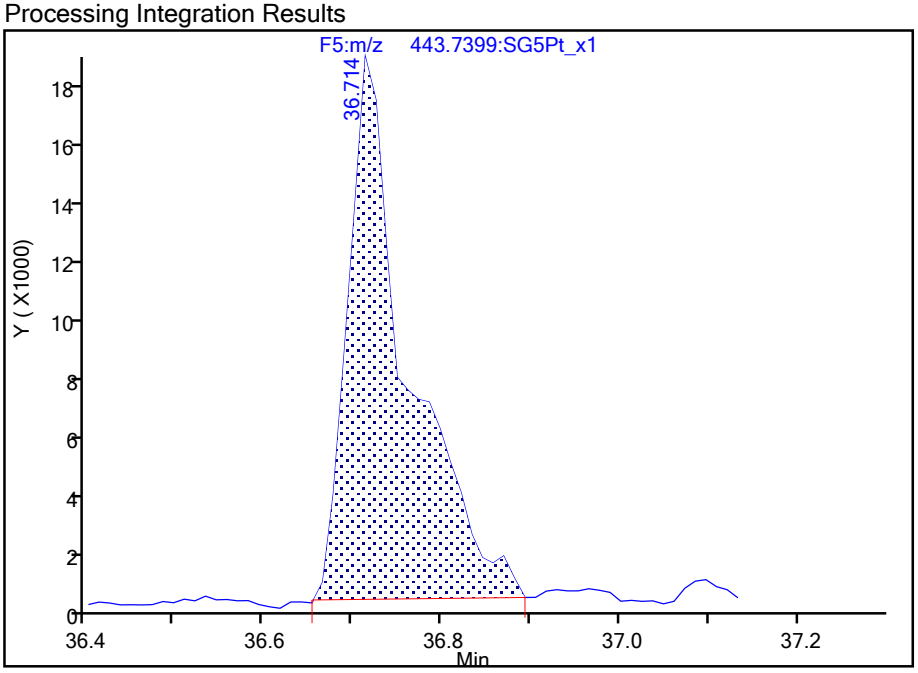

Manual Integration Results

RT: 36.79
Area: 48006
Amount: 0.100843
Amount Units: pg/ul
Reviewer: dadunj, 27-Aug-2021 09:20:46
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

793543

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d				
Injection Date:	26-Aug-2021 05:50:44	Instrument ID:	10D5		
Lims ID:	320-77292-A-5-A	Lab Sample ID:	320-77292-5		
Client ID:	11215702-080321-BN-SJSB091 (8-10)				
Operator ID:	SMA	ALS Bottle#:	38	Worklist Smp#:	13
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.71
Area: 79225
Amount: 0.340850
Amount Units: pg/ul

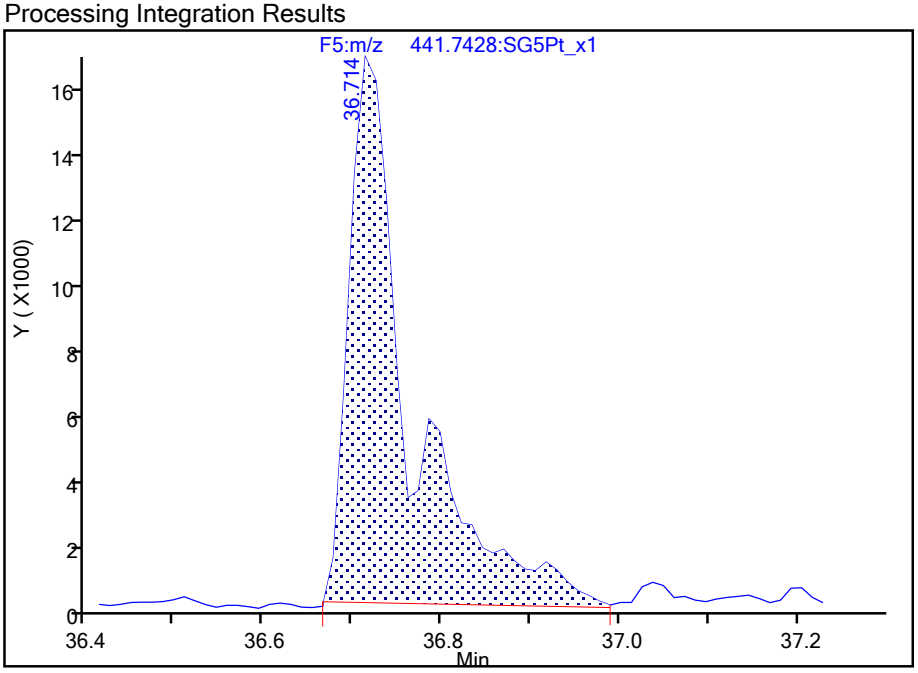

Manual Integration Results

RT: 36.79
Area: 22231
Amount: 0.100843
Amount Units: pg/ul

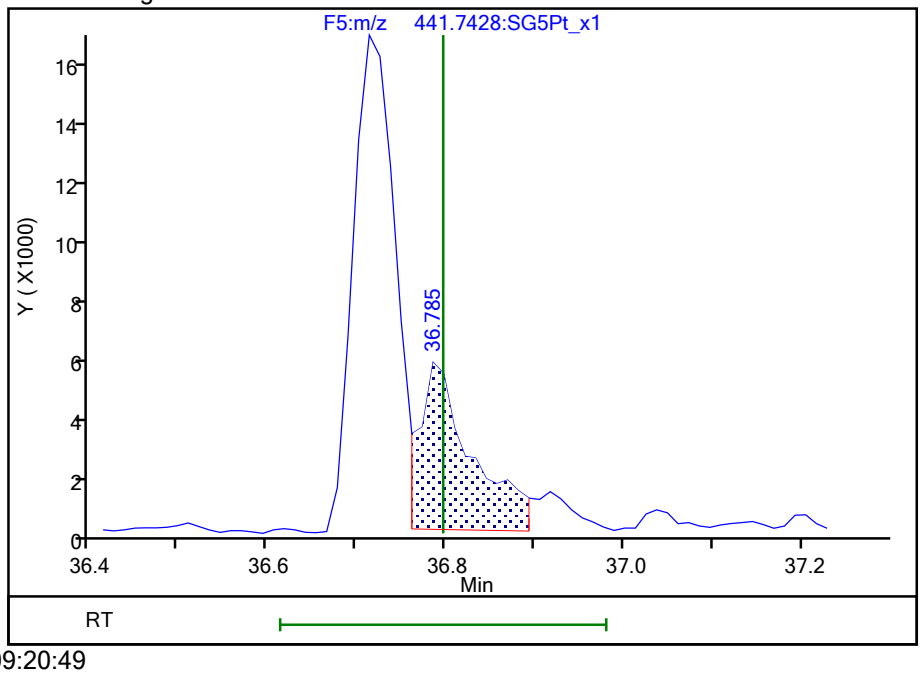

Reviewer: dadunj, 27-Aug-2021 09:20:49
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793544

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

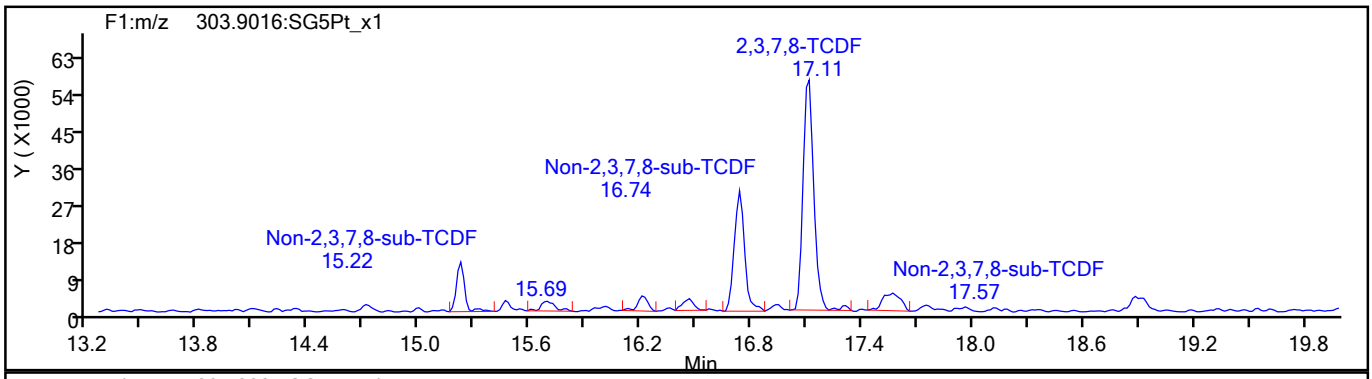

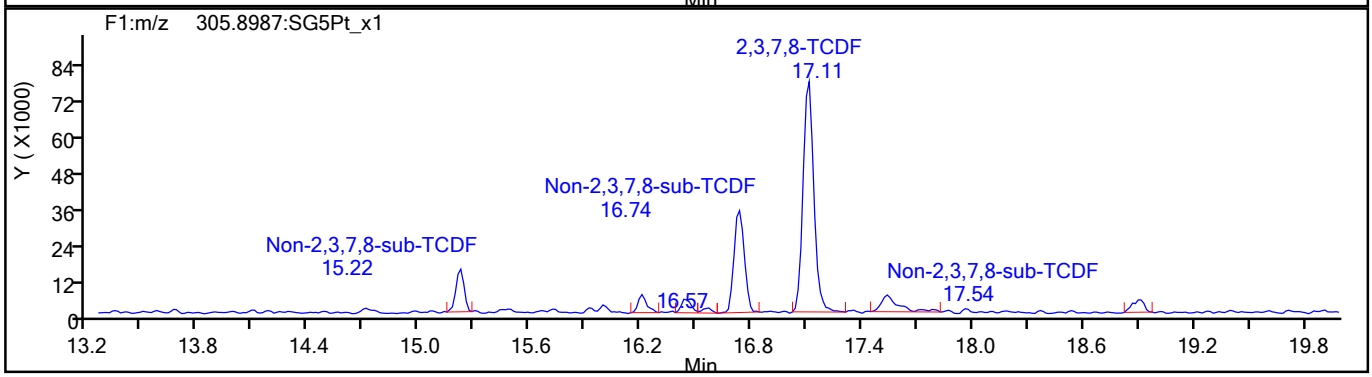

TCDF Standards

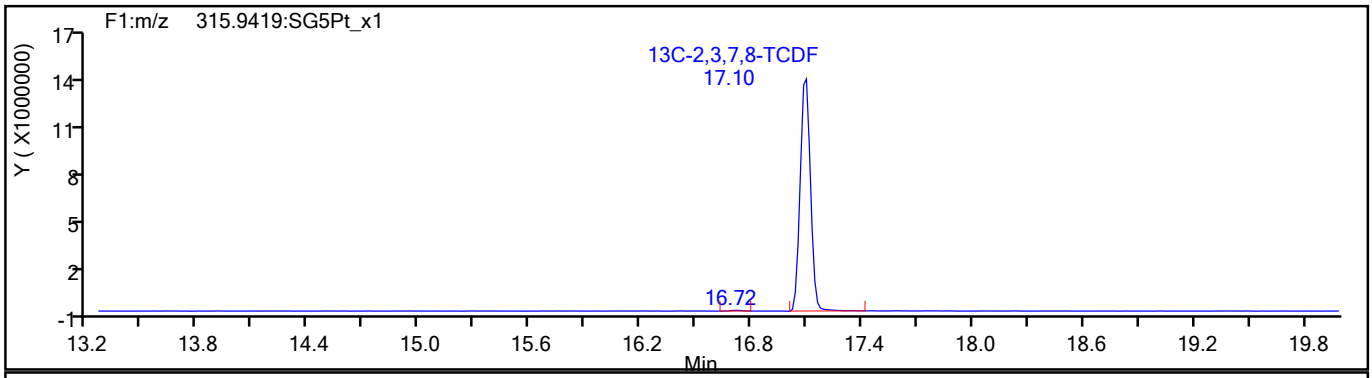

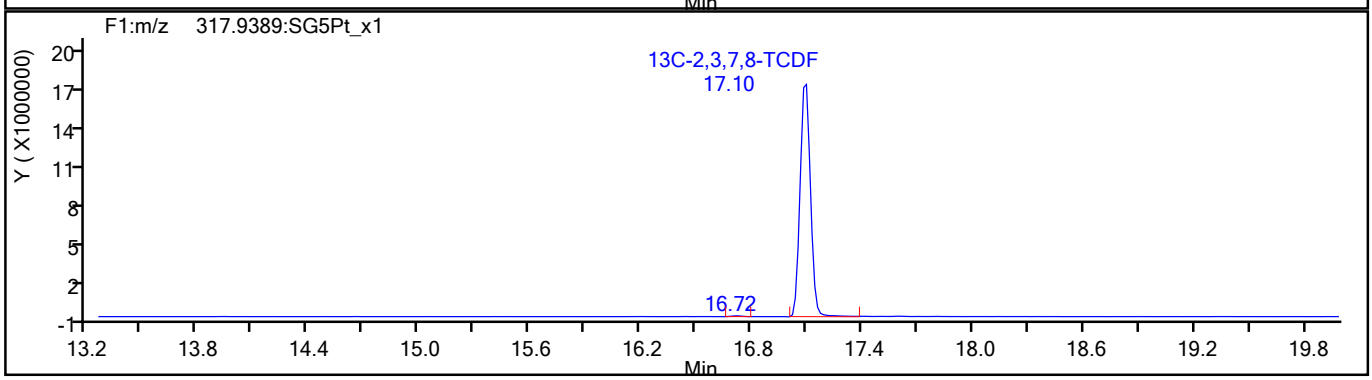

793545

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

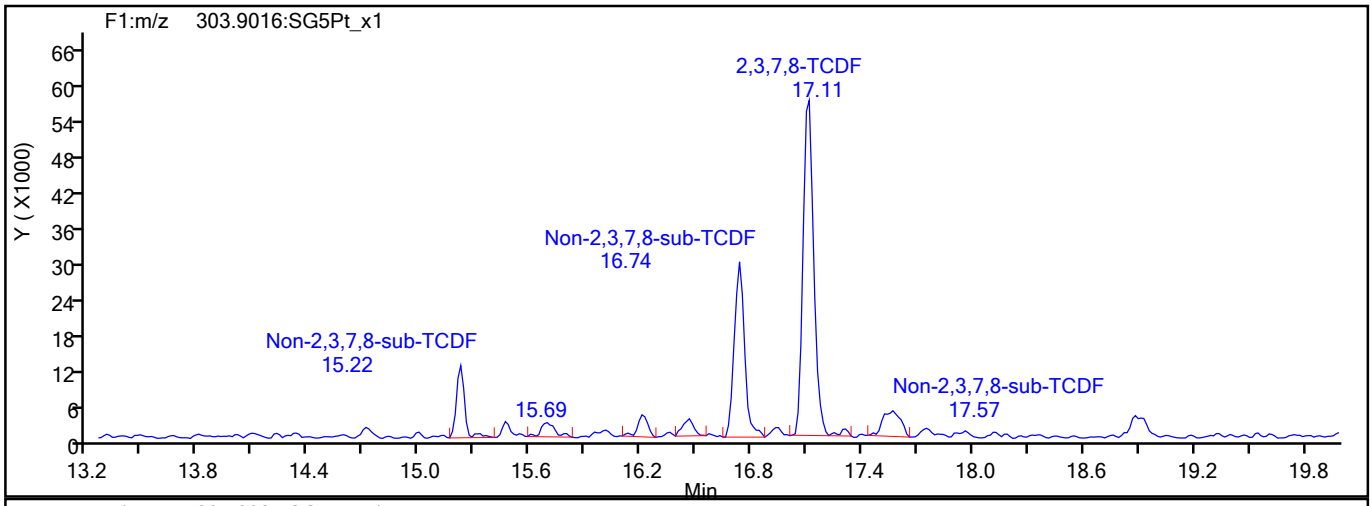

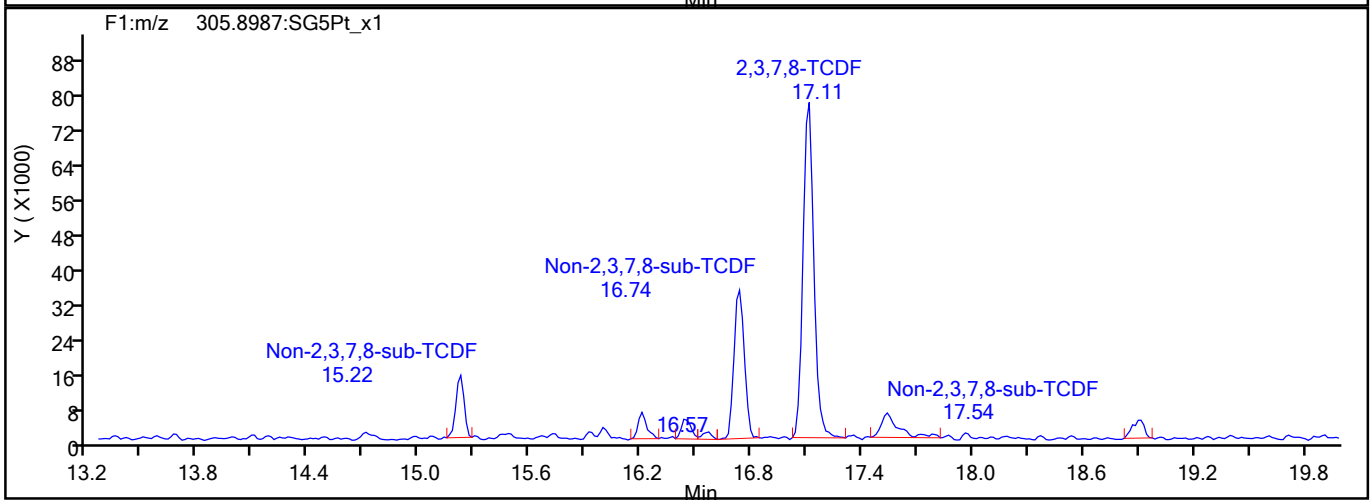

TCDF Interference Mass

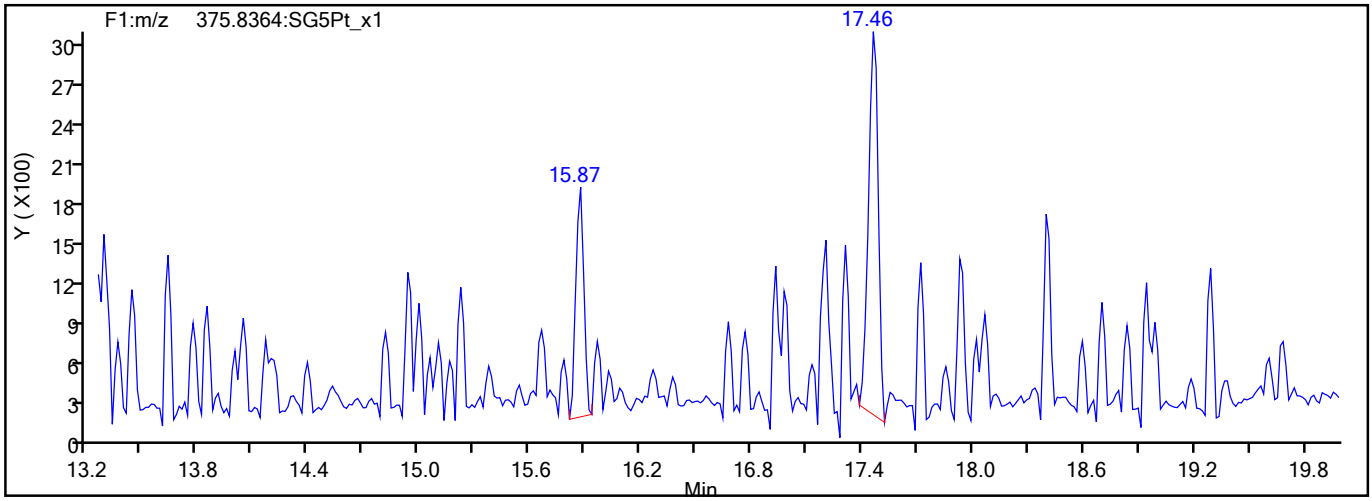

793546

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

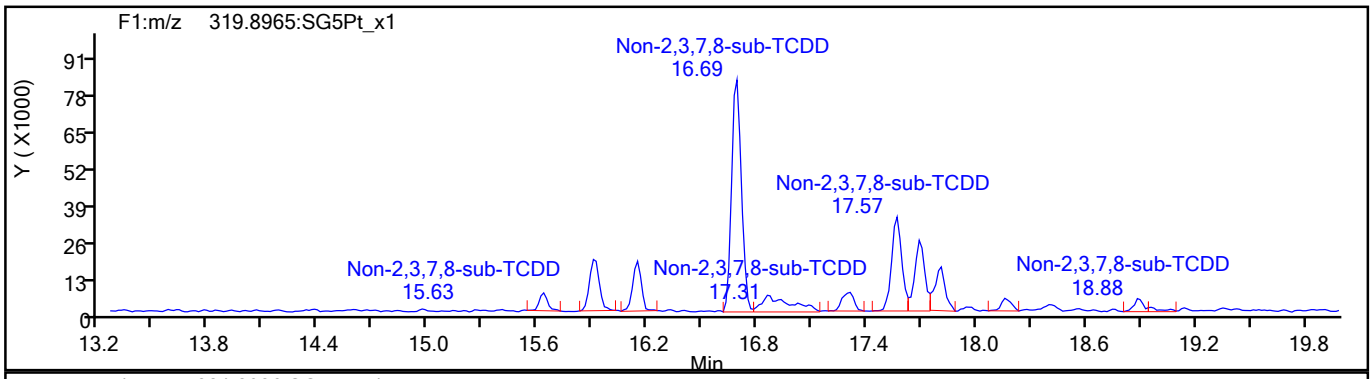

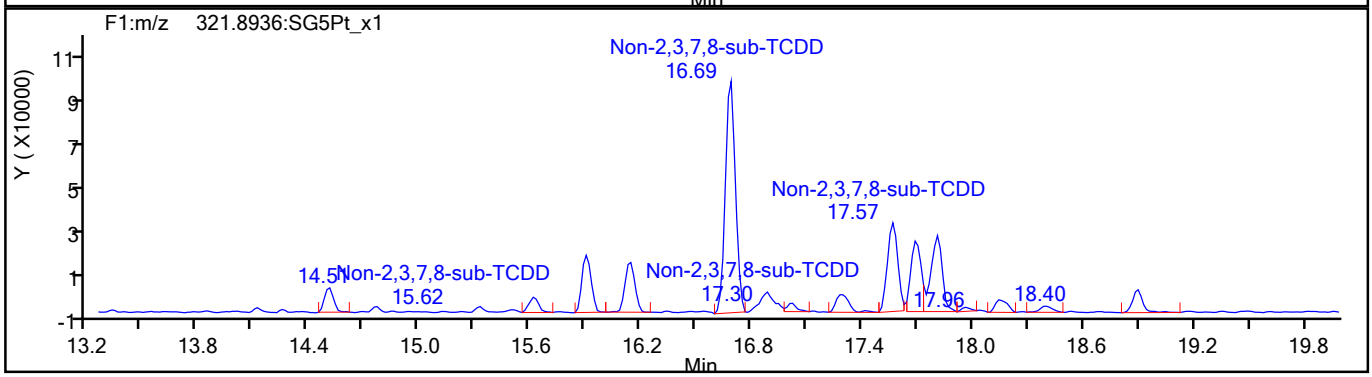

TCDD Standards

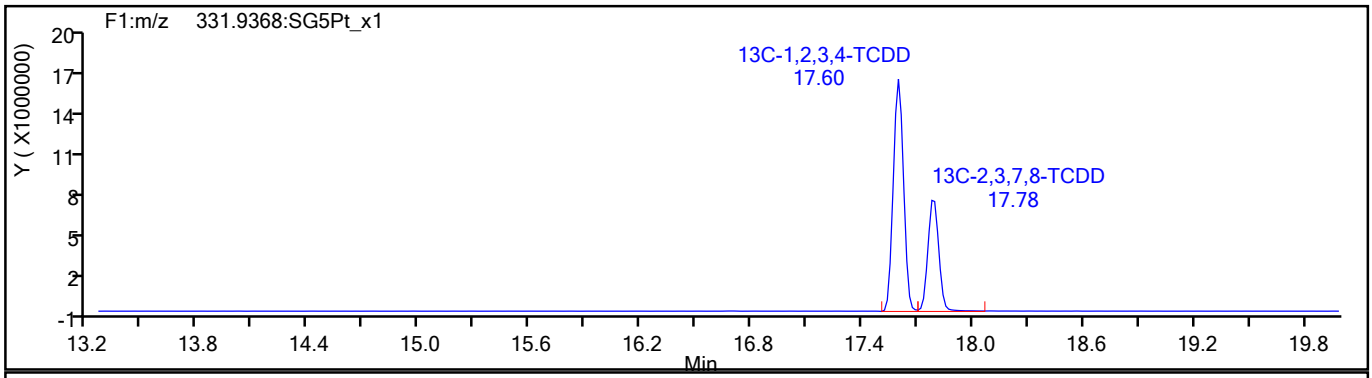

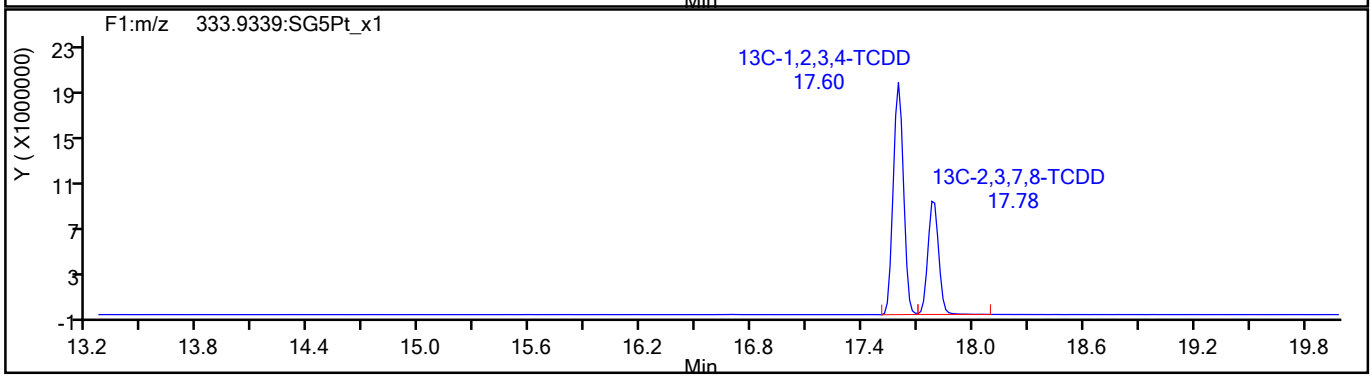

793547

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

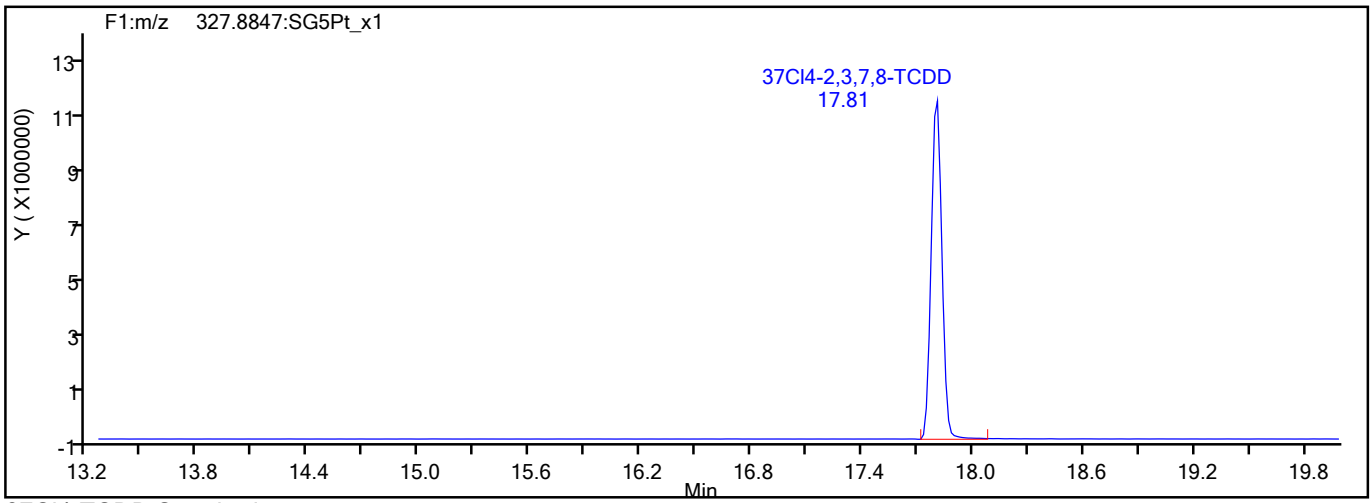

37Cl4-TCDD Standards

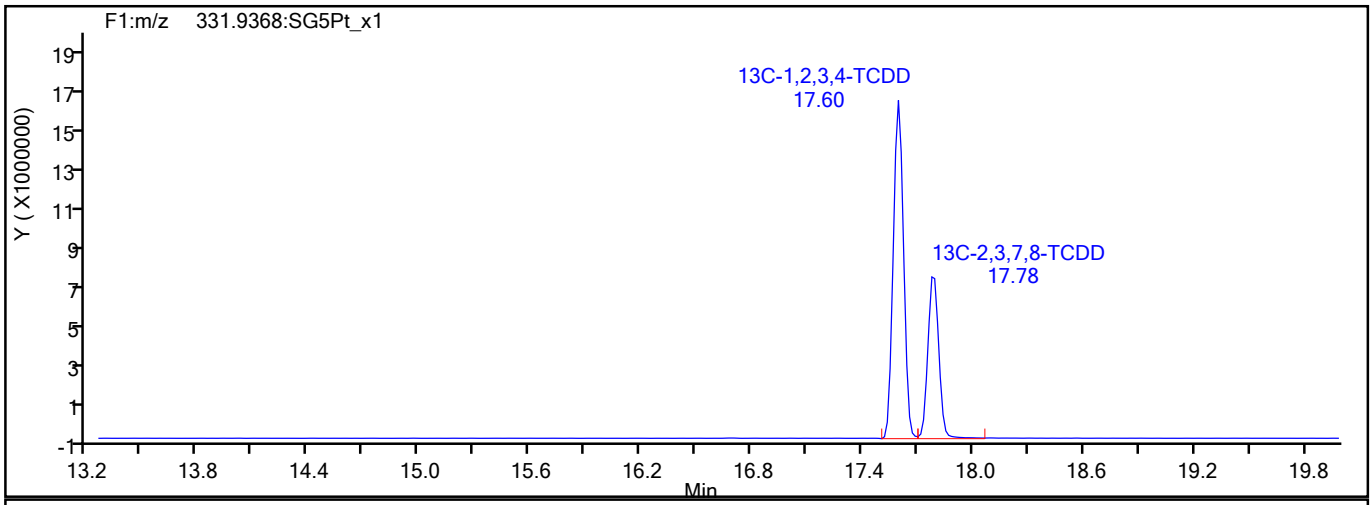

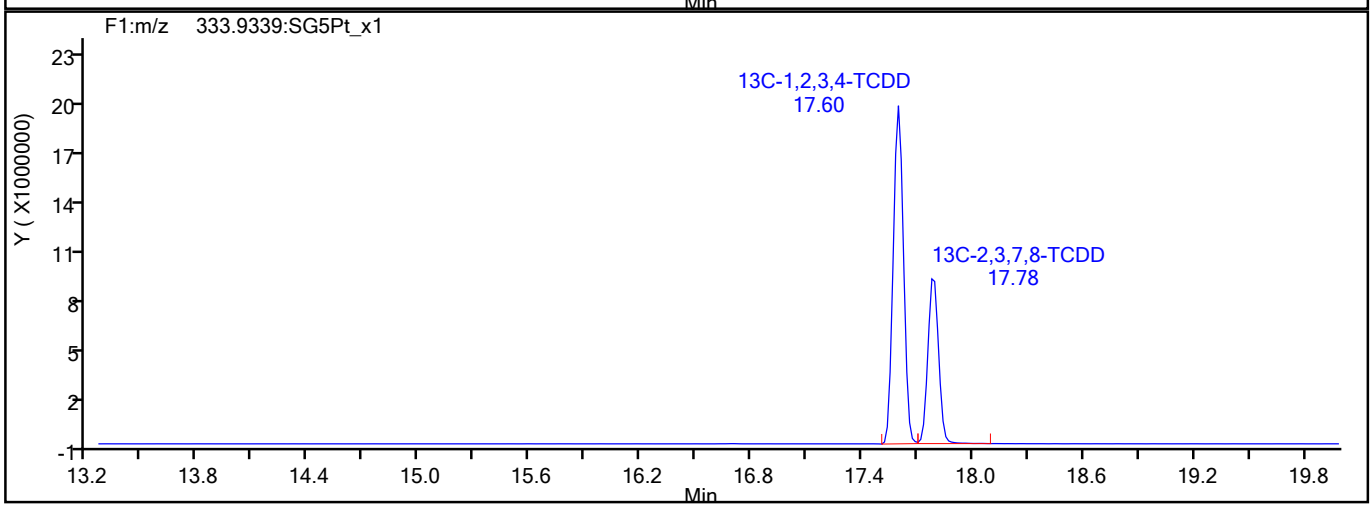

793548

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

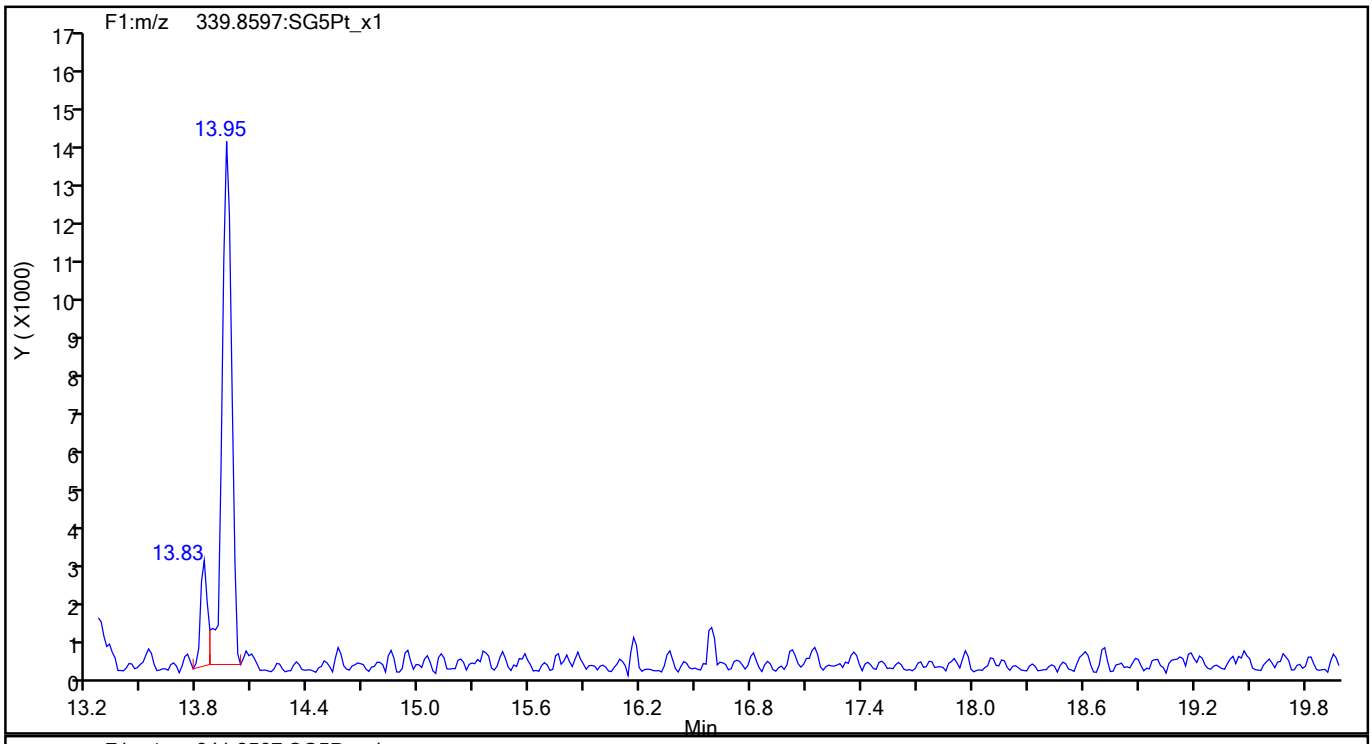

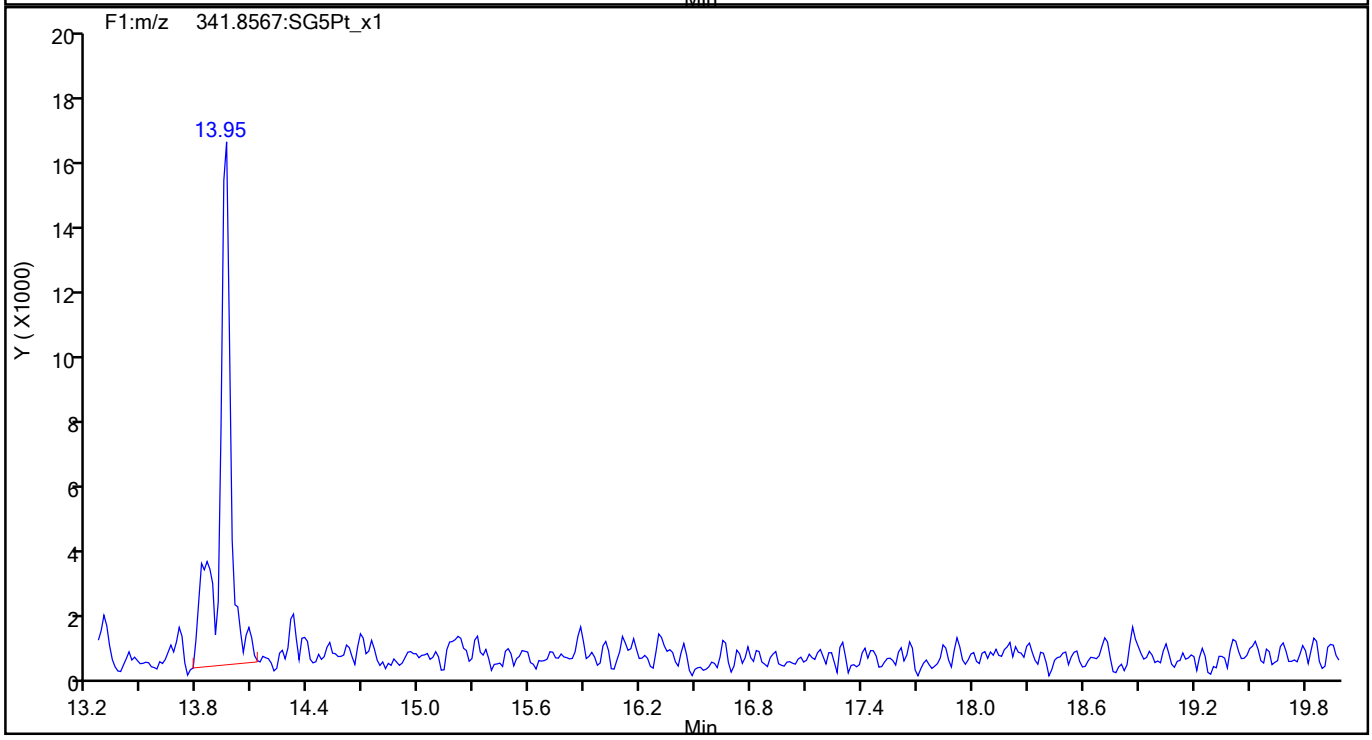

793549

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

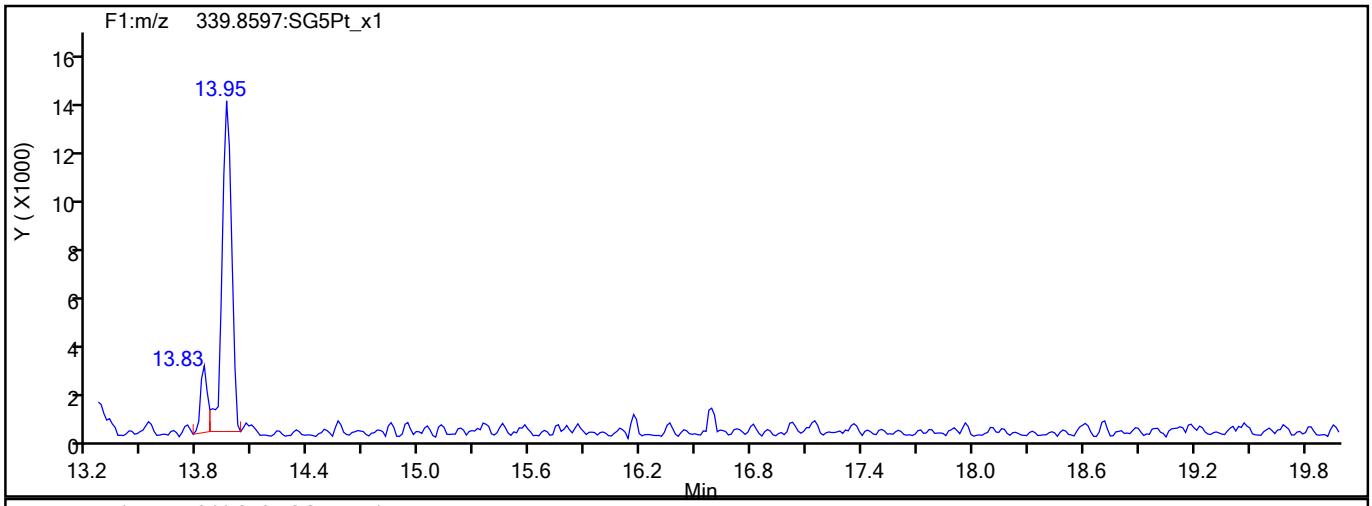

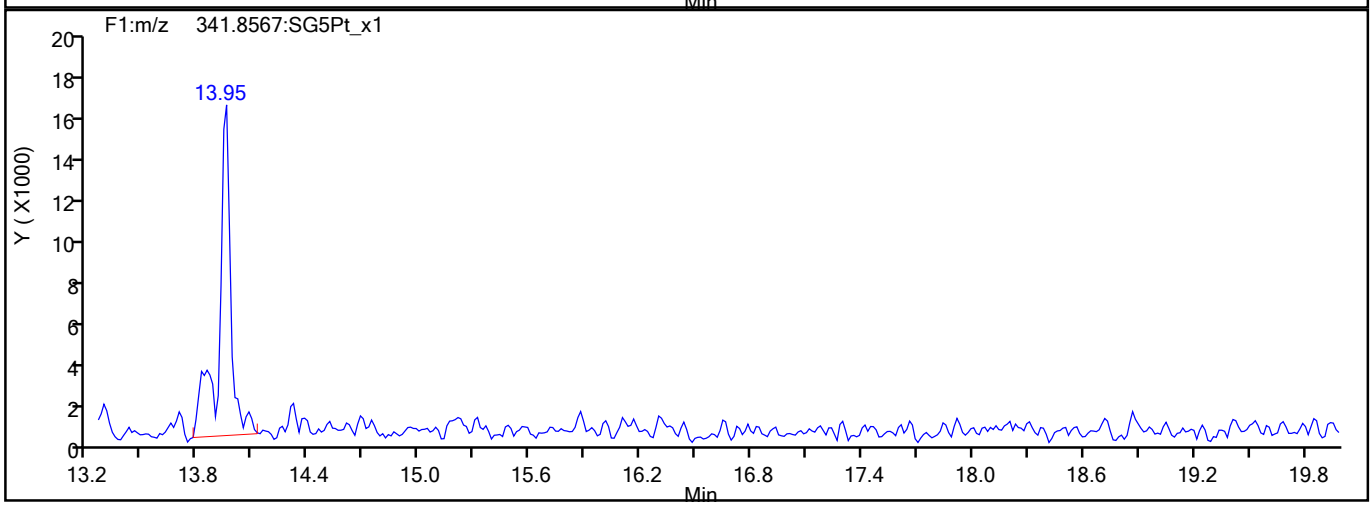

F1 PeCDFs Interference Mass

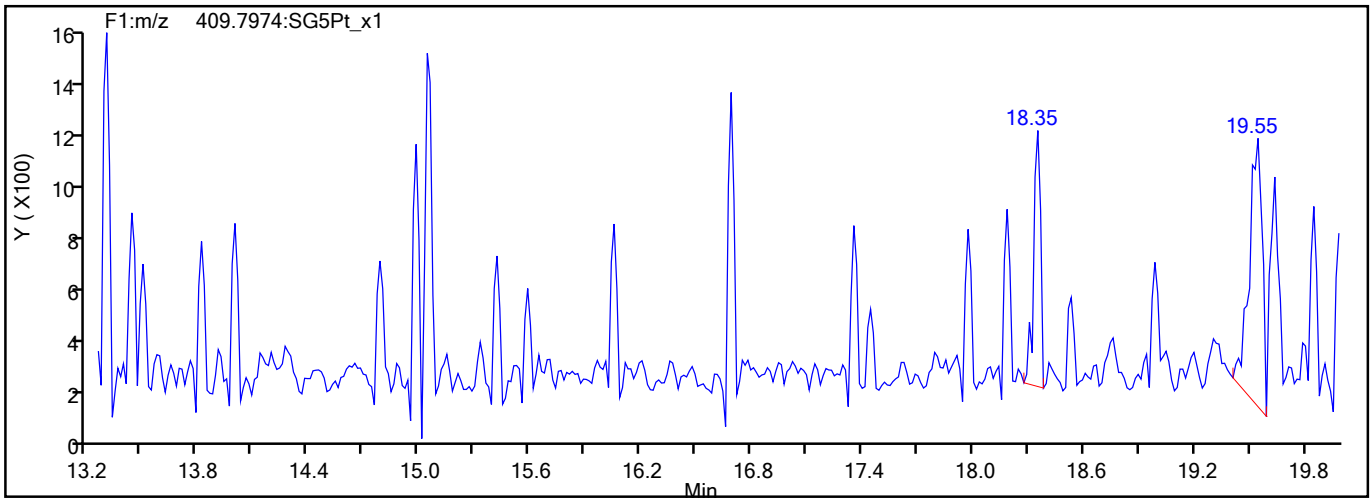

793550

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

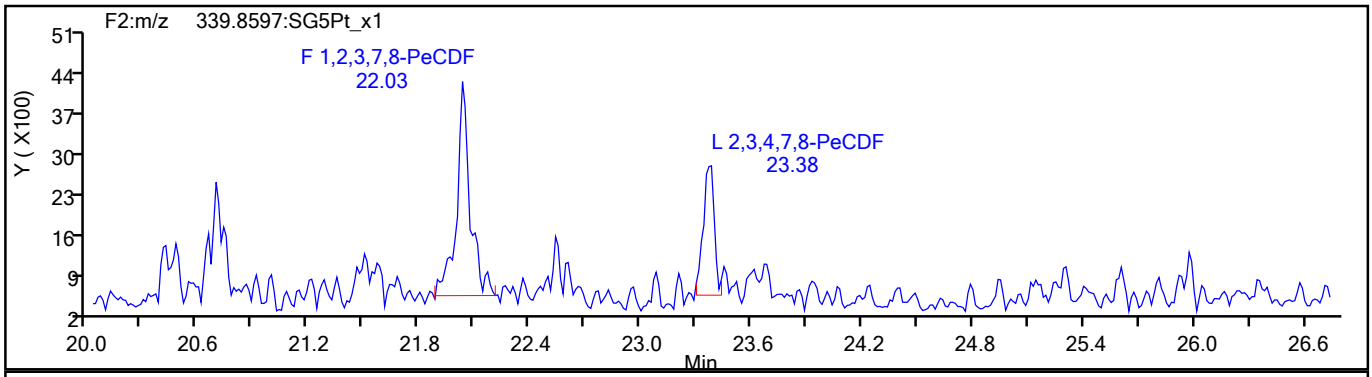

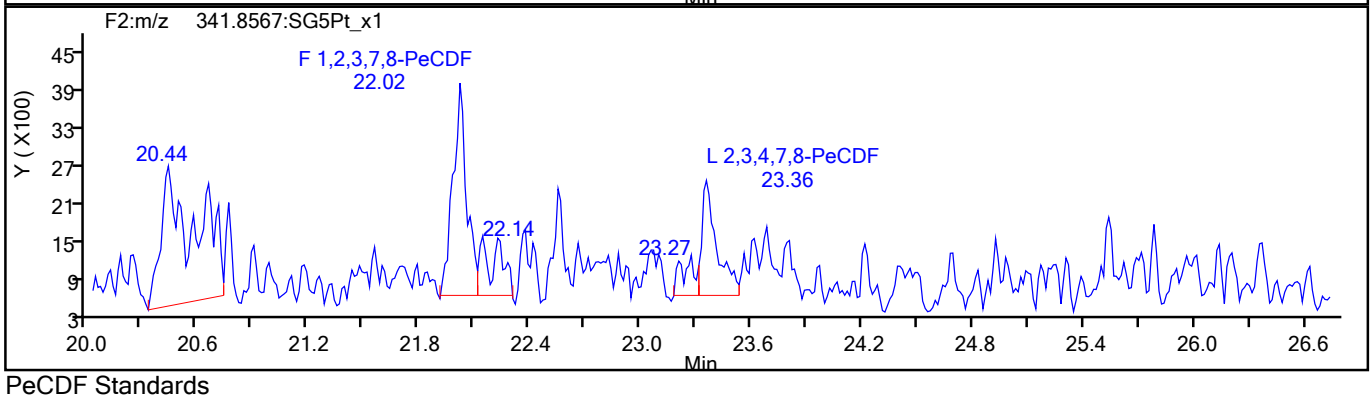

PeCDF Standards

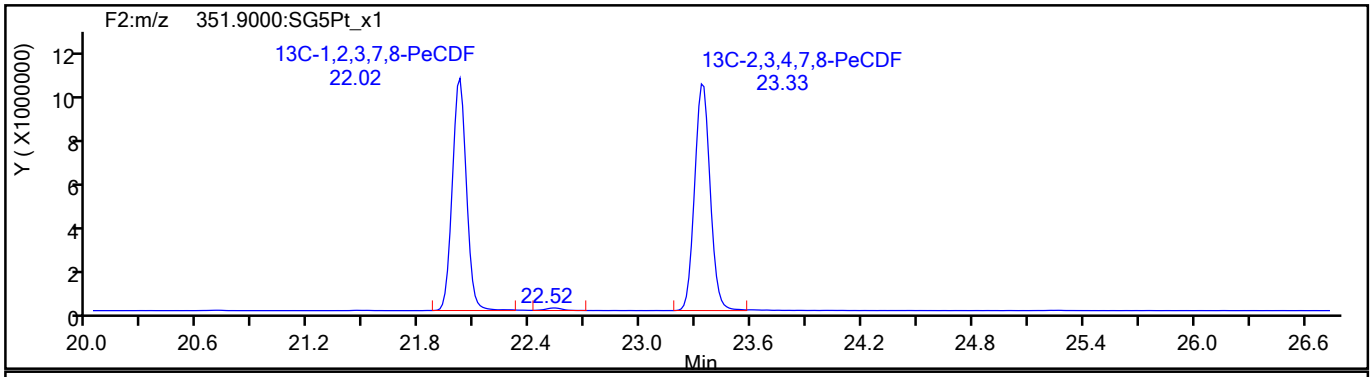

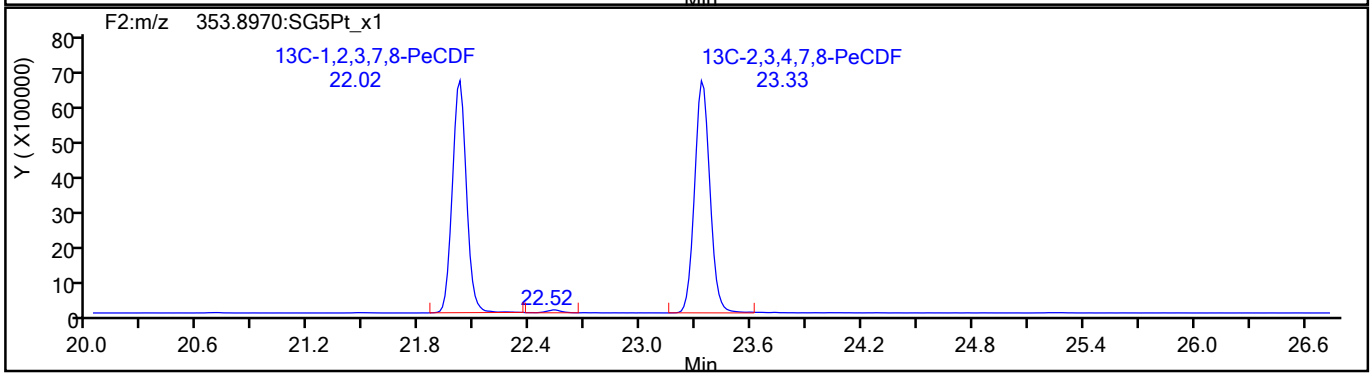

793551

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

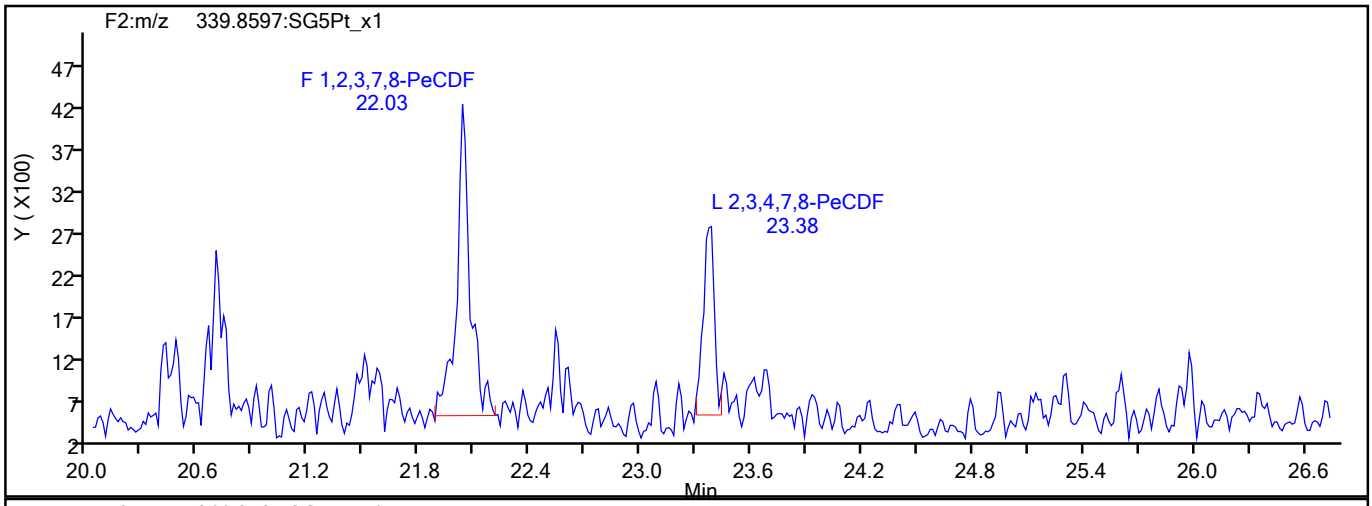

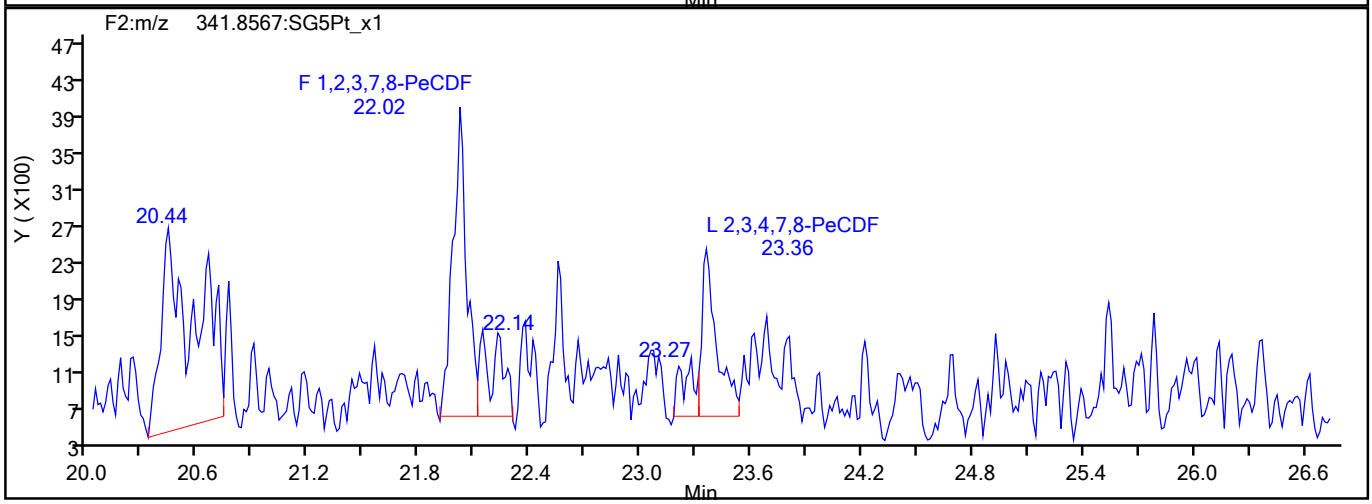

PeCDF Interference Mass

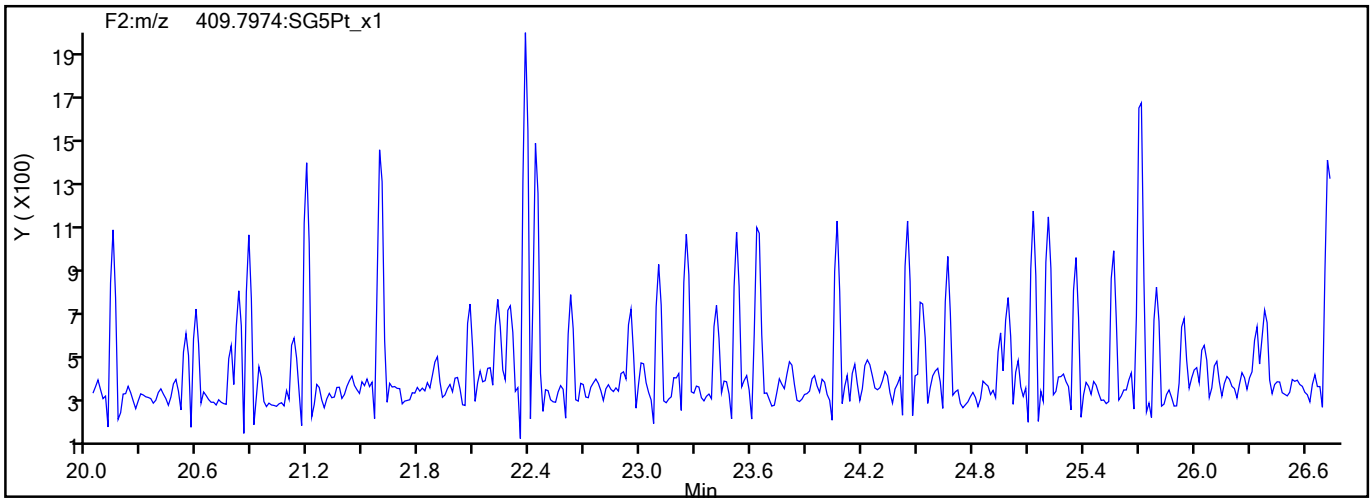

793552

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

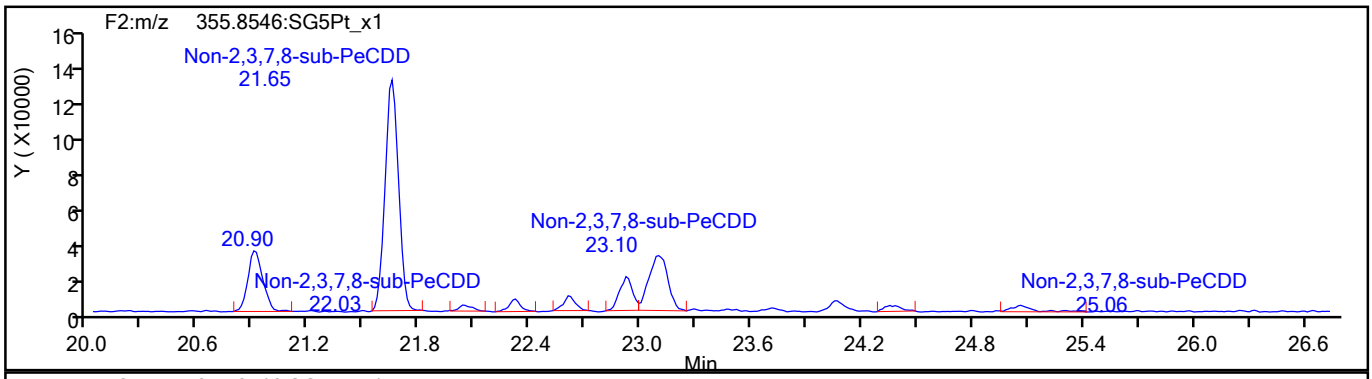

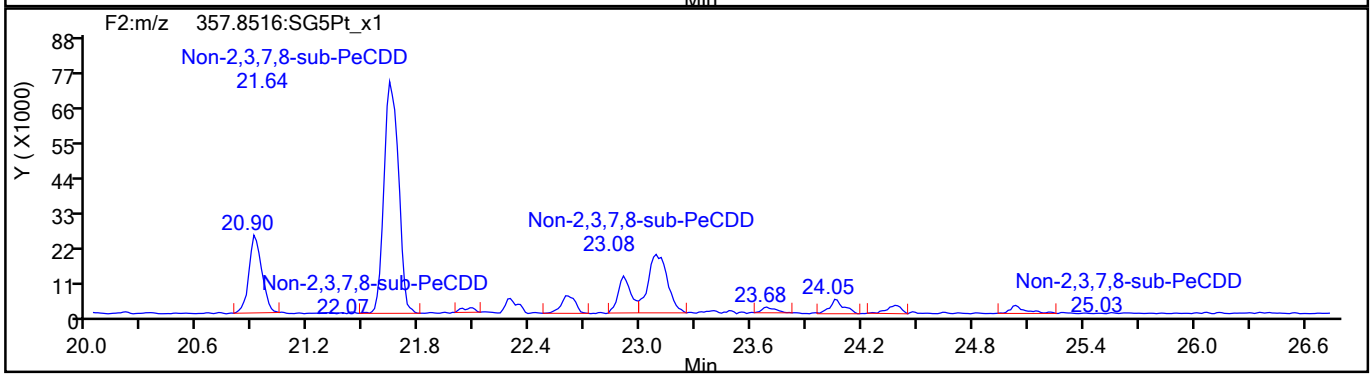

PeCDD Standards

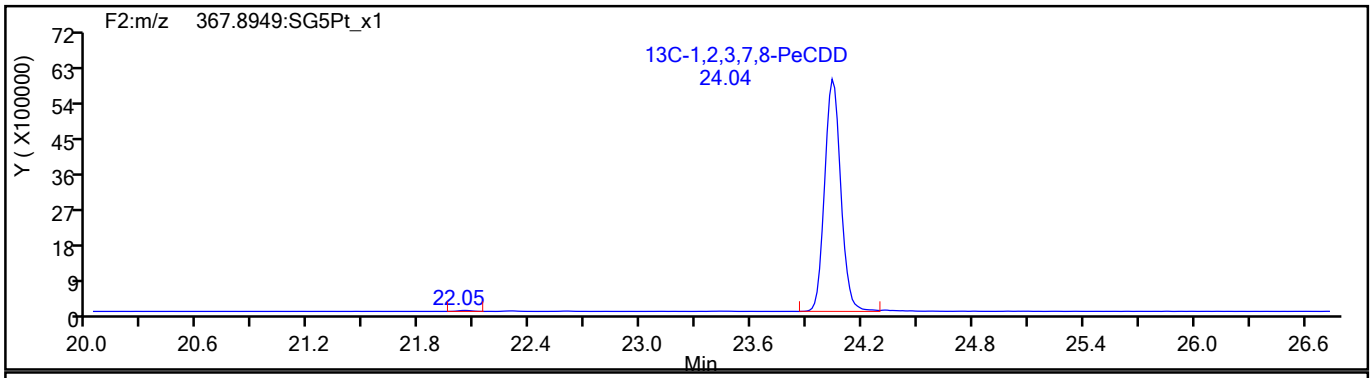

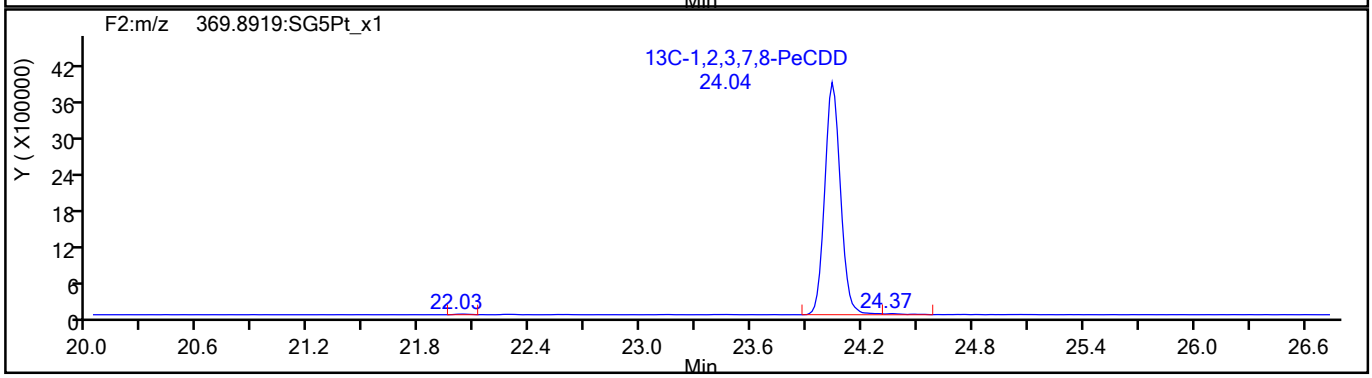

793553

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

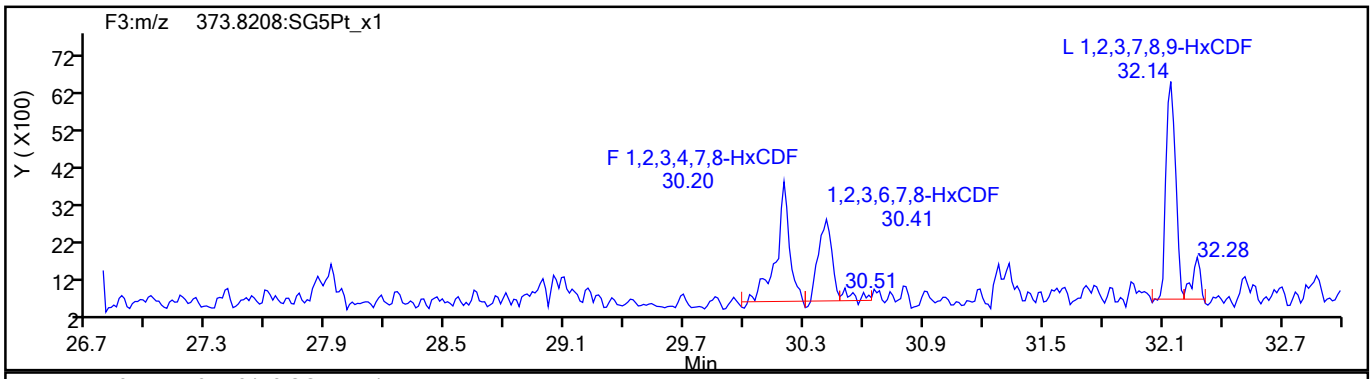

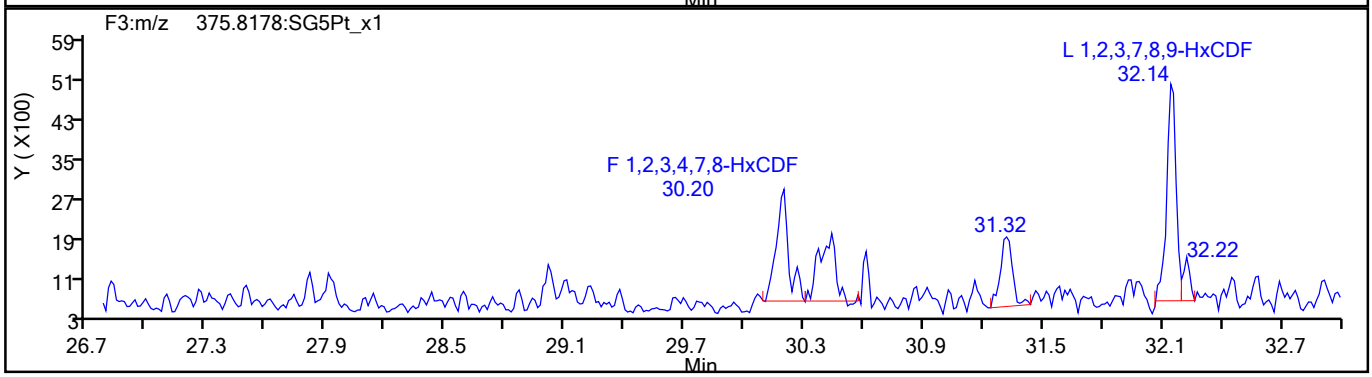

HxCDF Standards

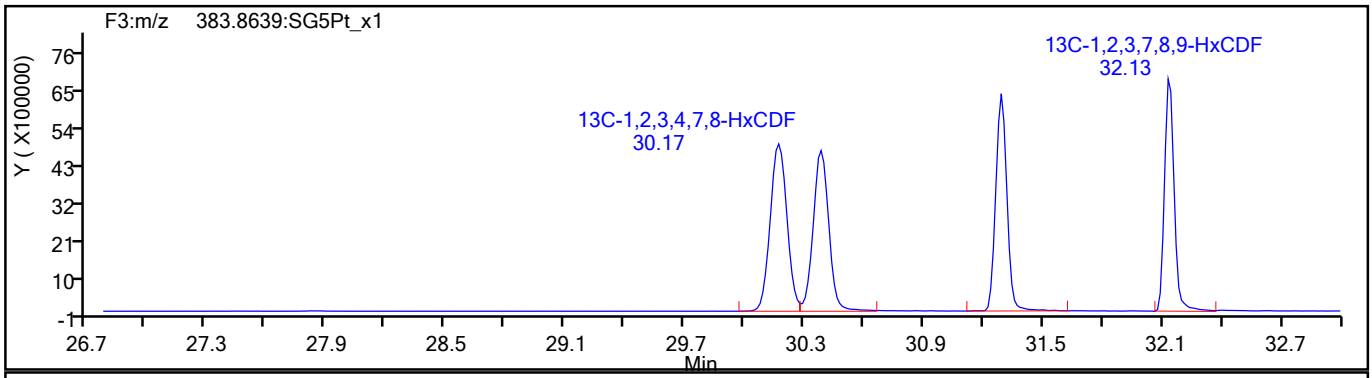

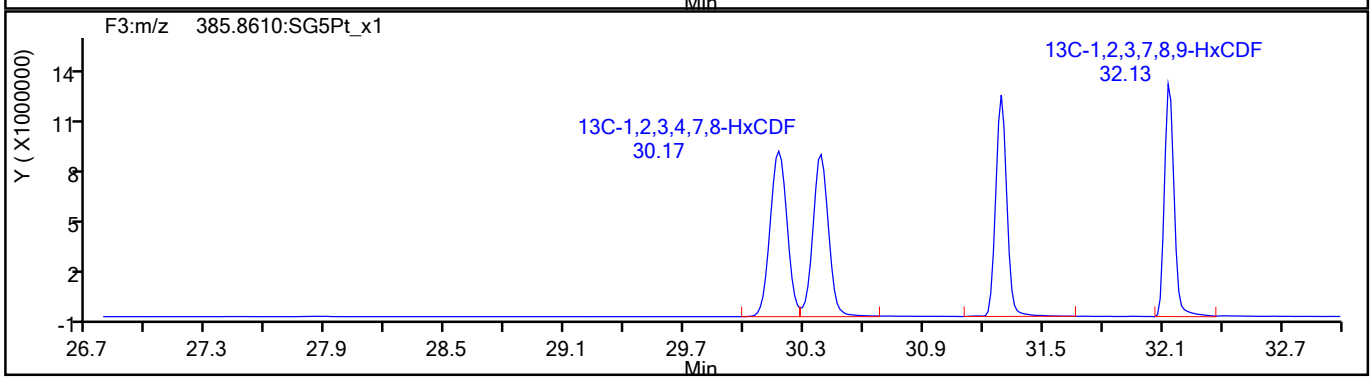

793554

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

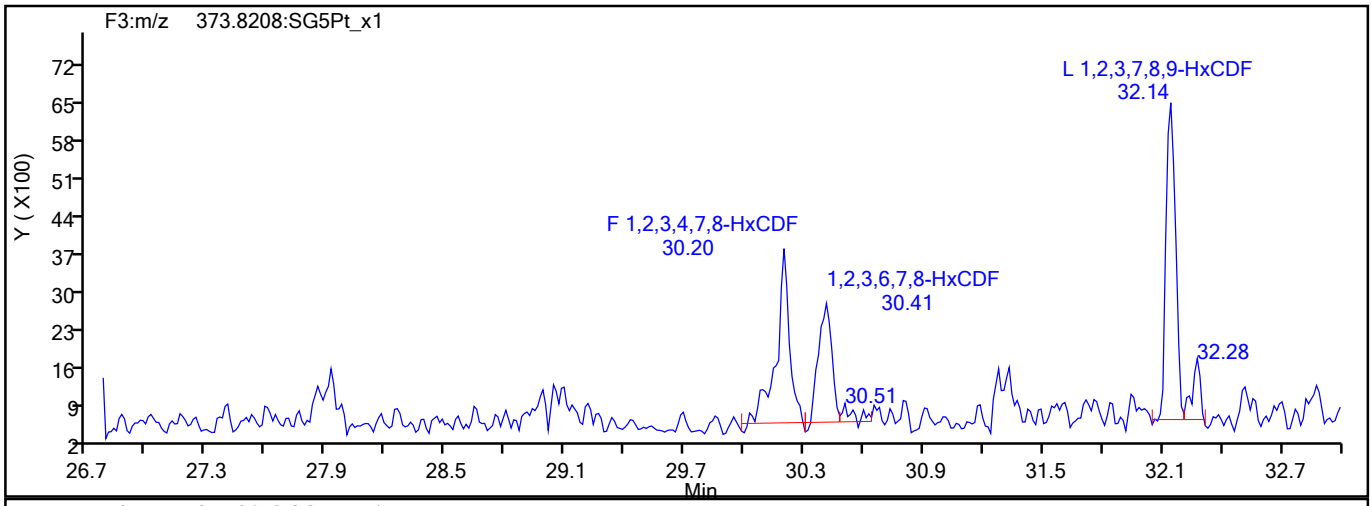

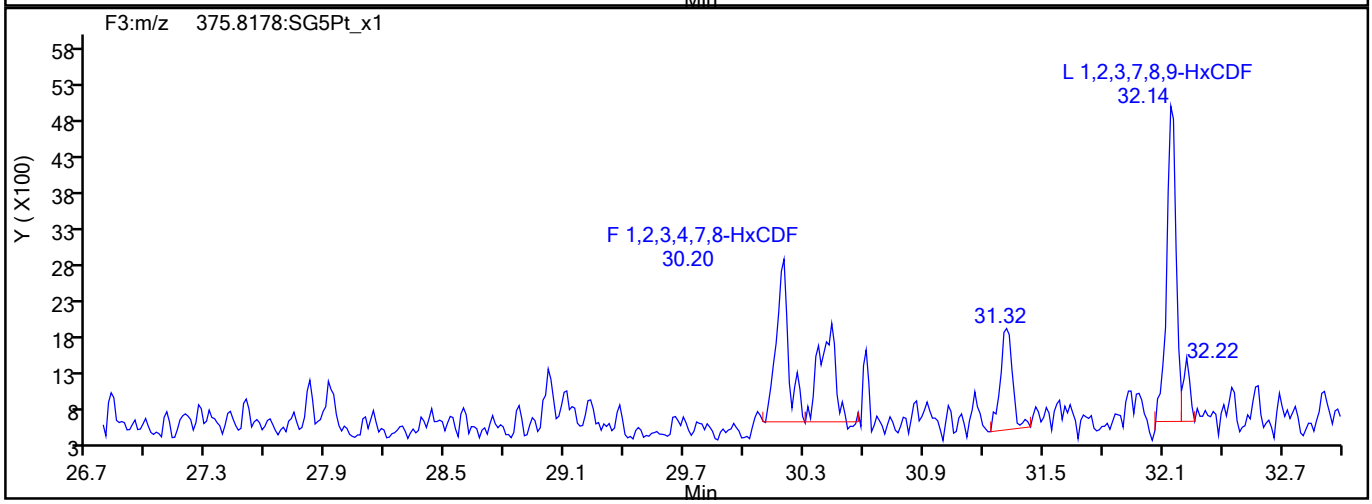

HxCDF Interference Mass

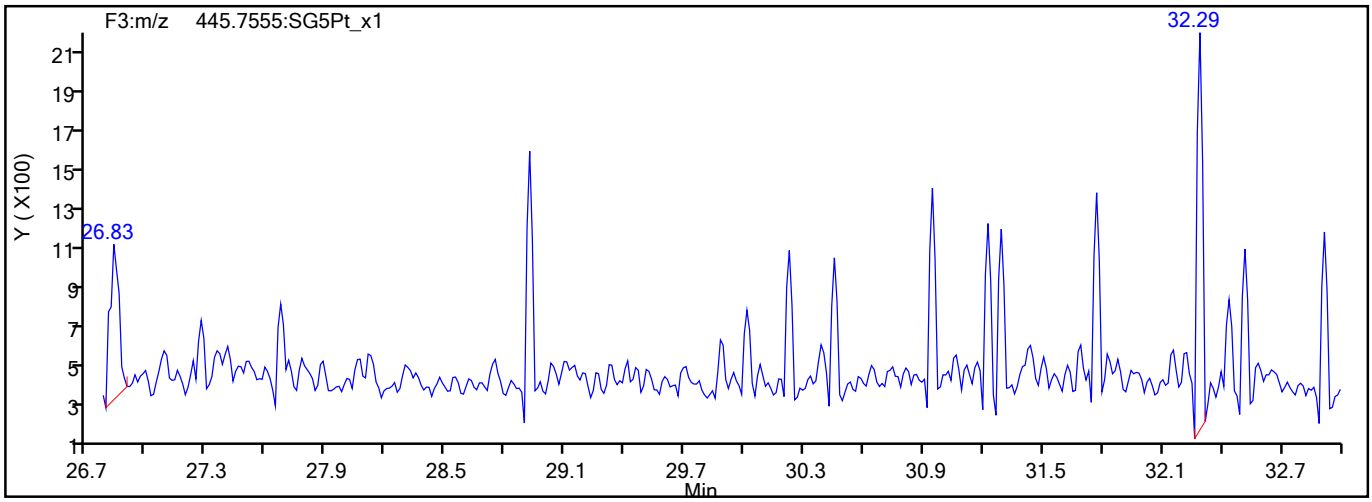

793555

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

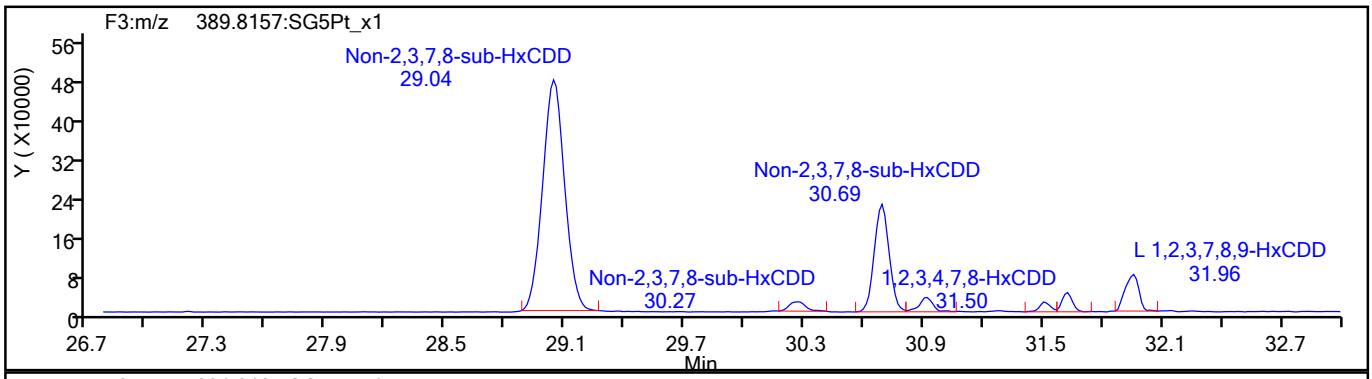

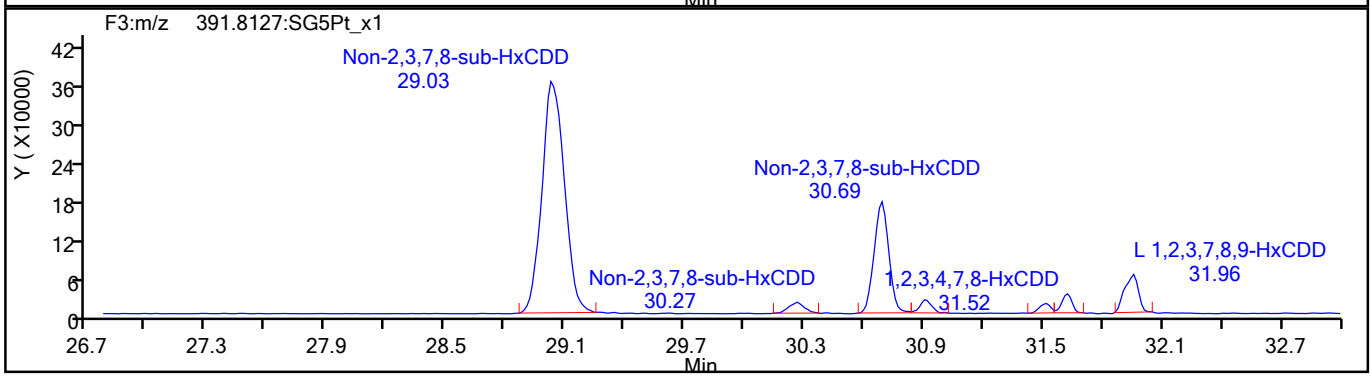

HxCDD Standards

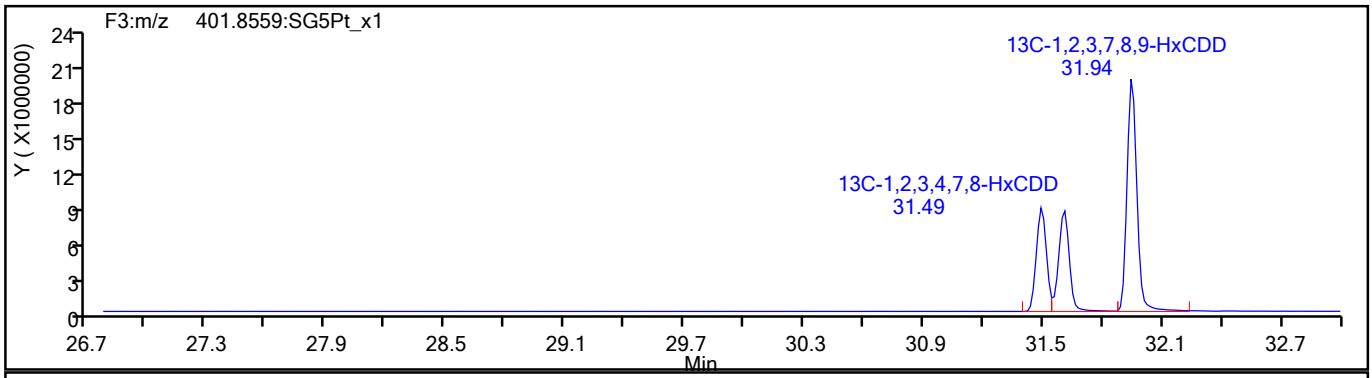

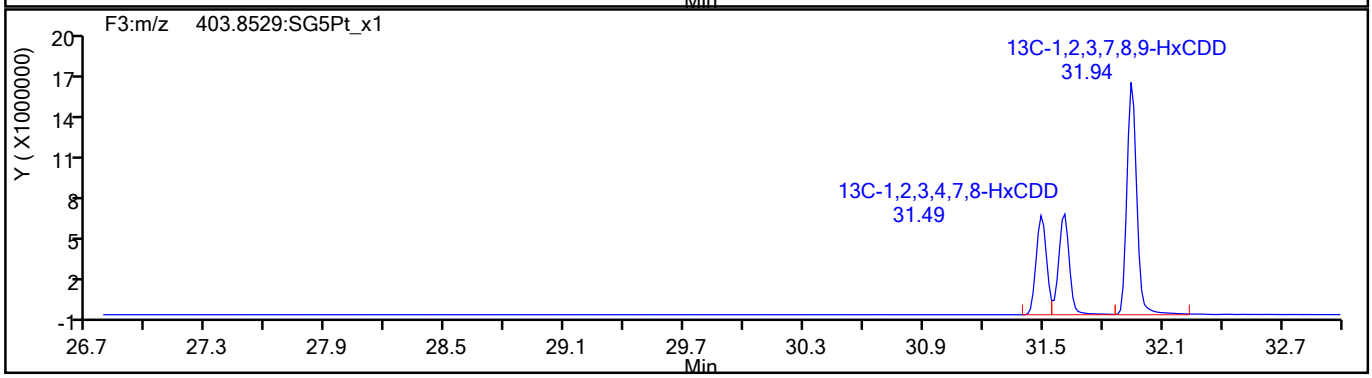

793556

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

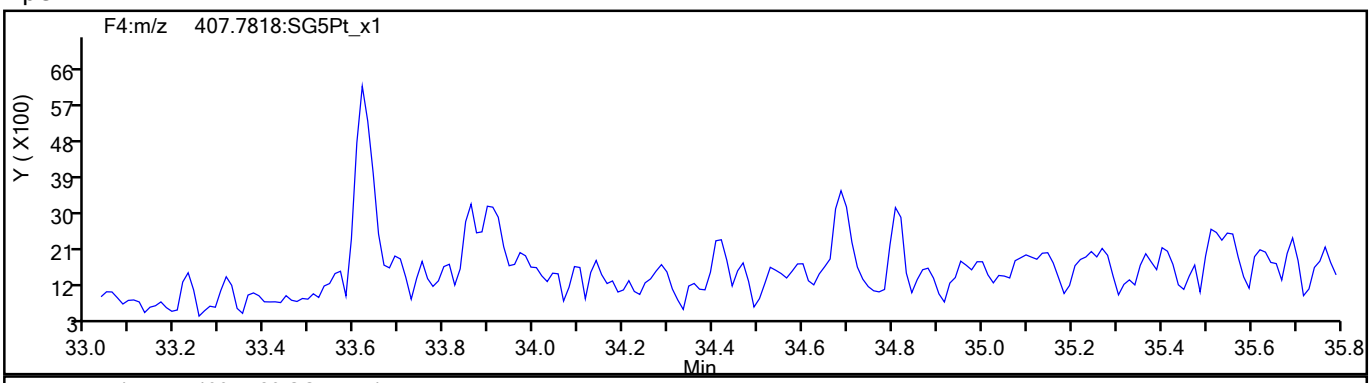

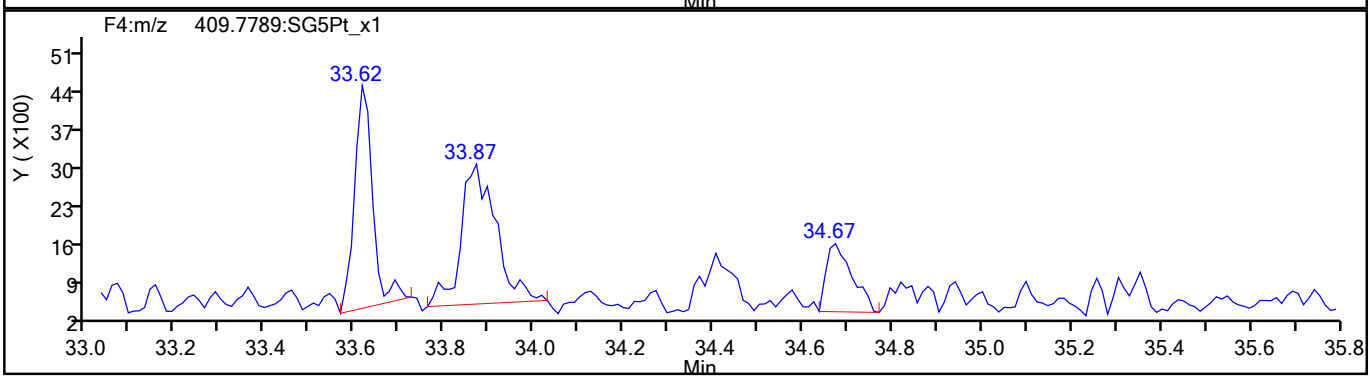

HpCDF Standards

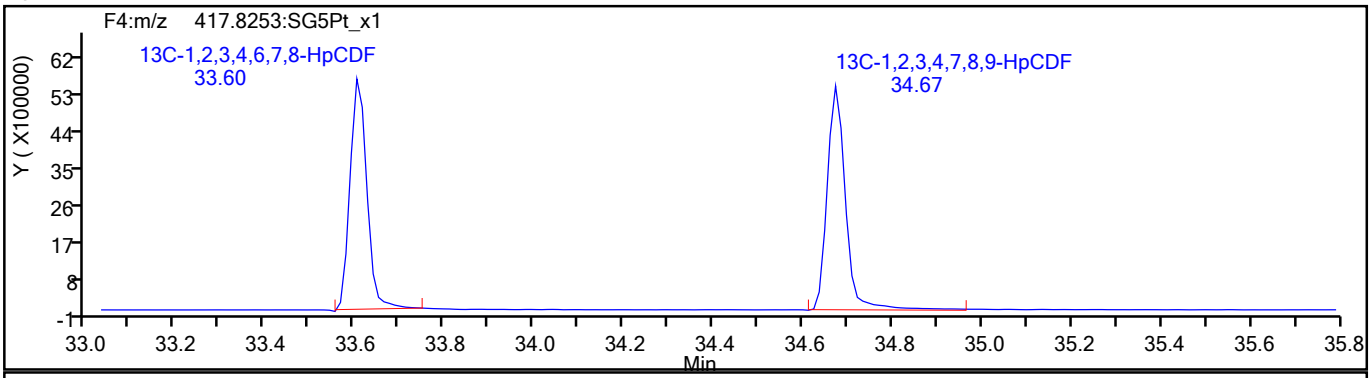

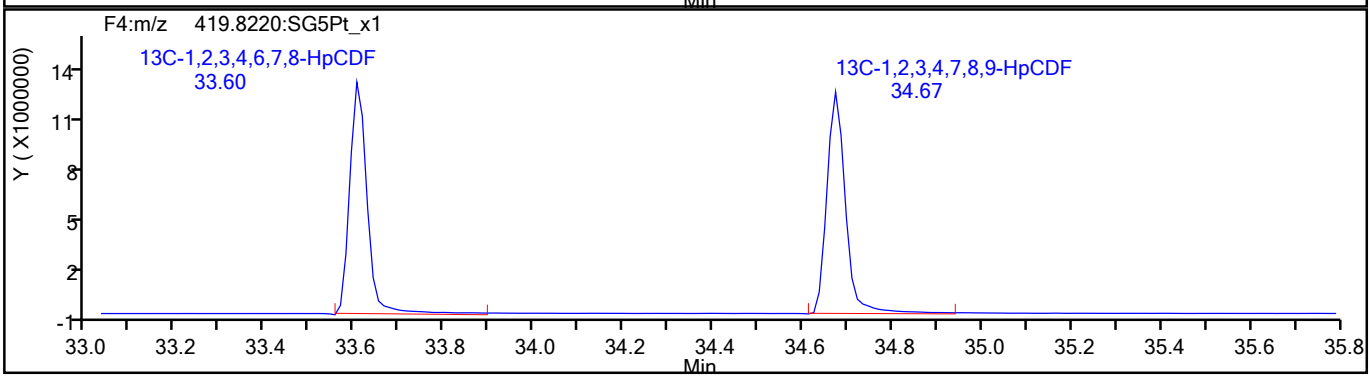

793557

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

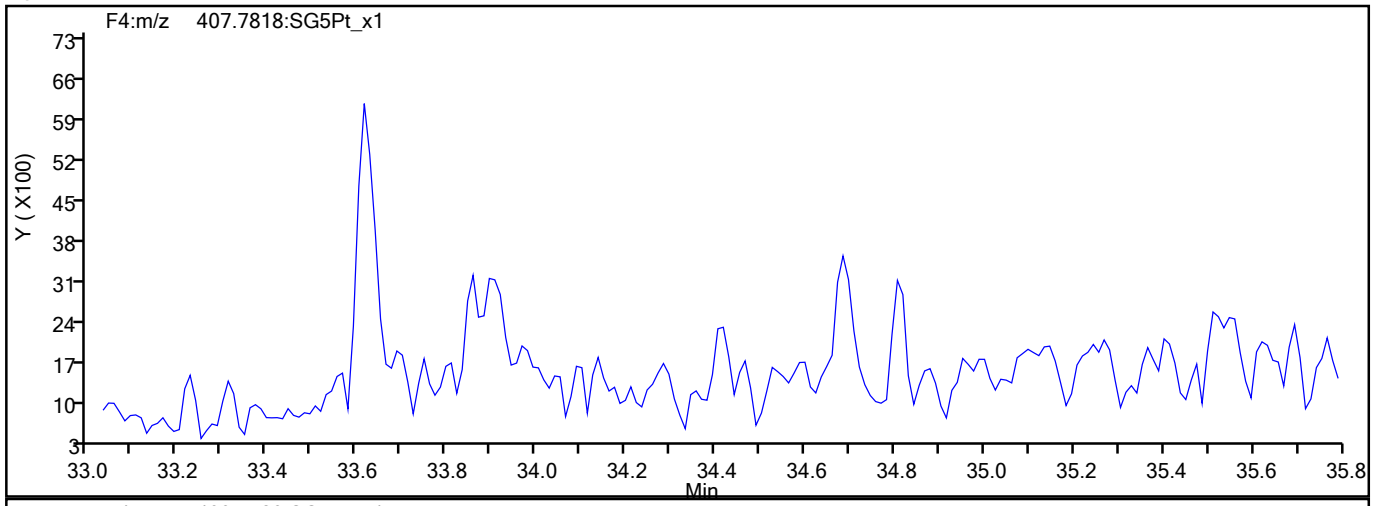

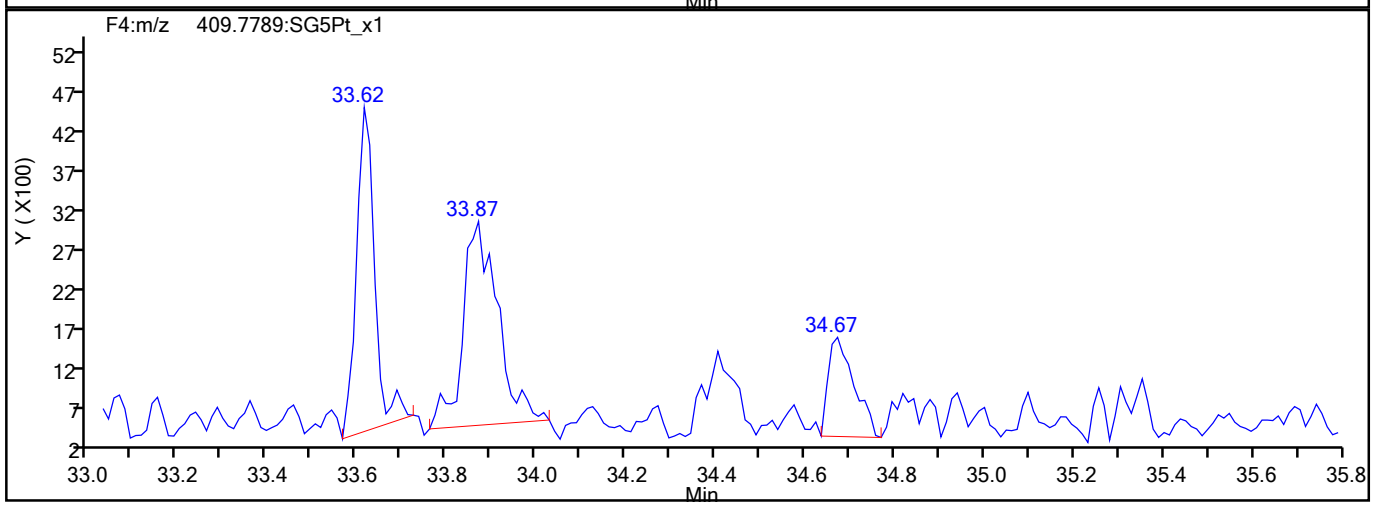

HpCDF Interference Mass

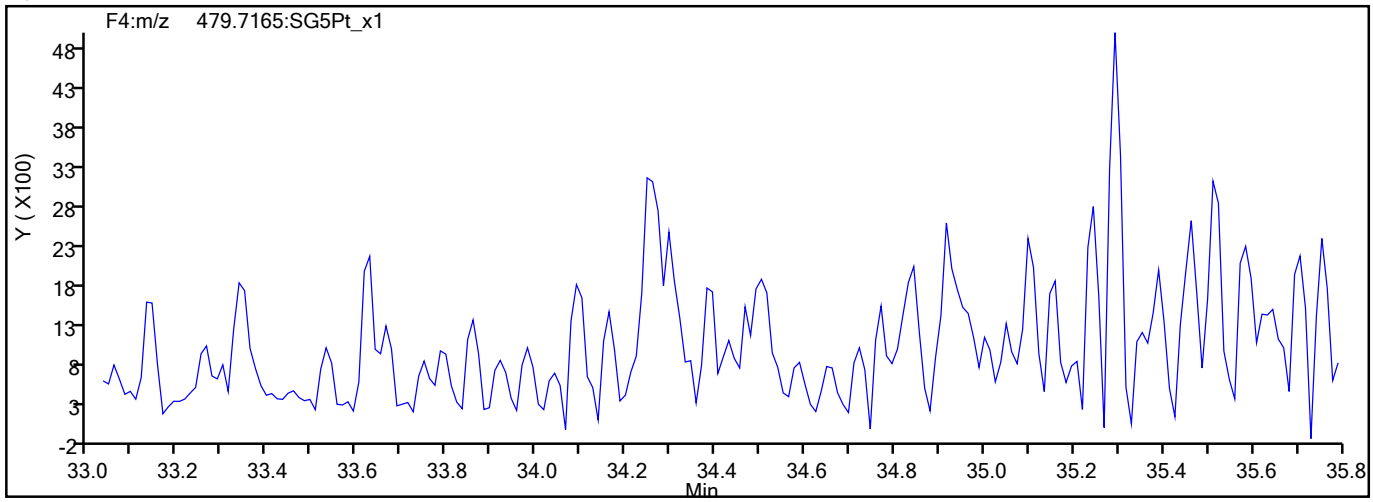

793558

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

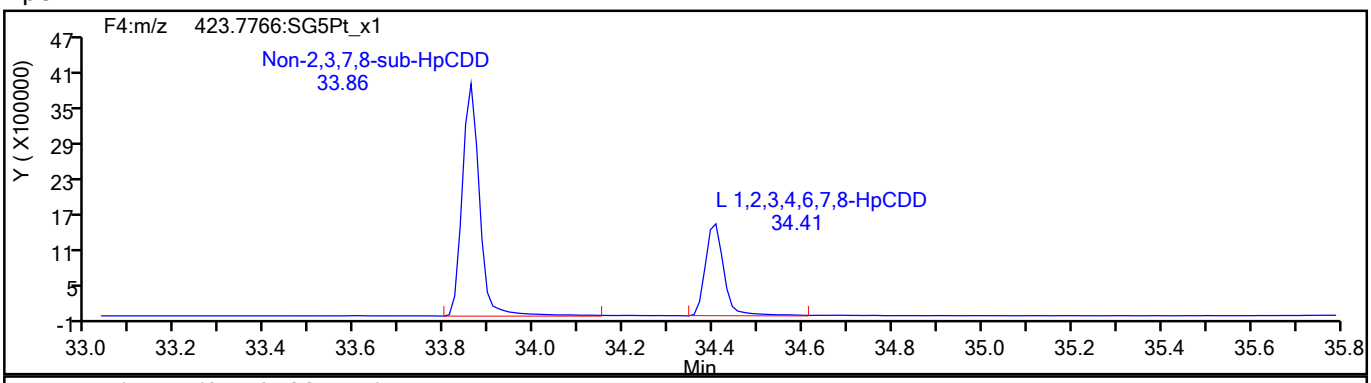

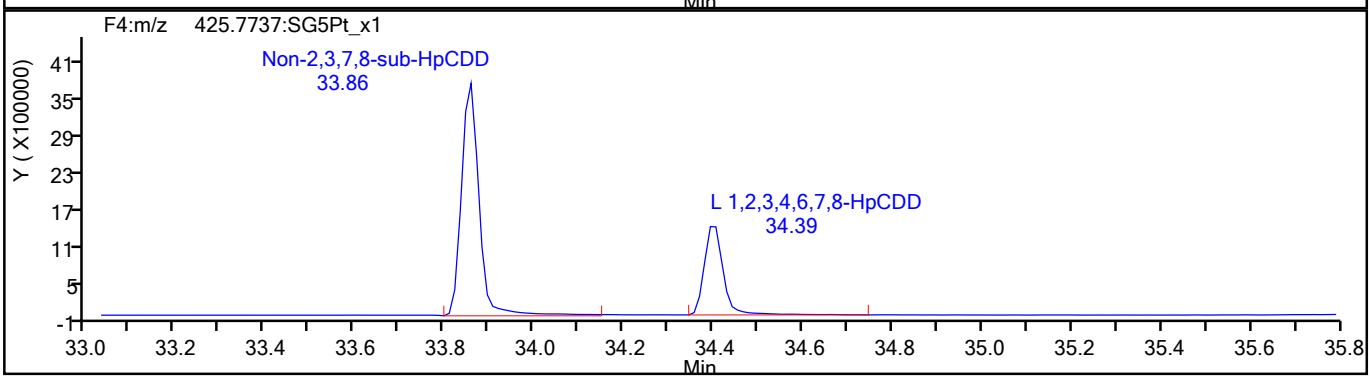

HpCDD Standards

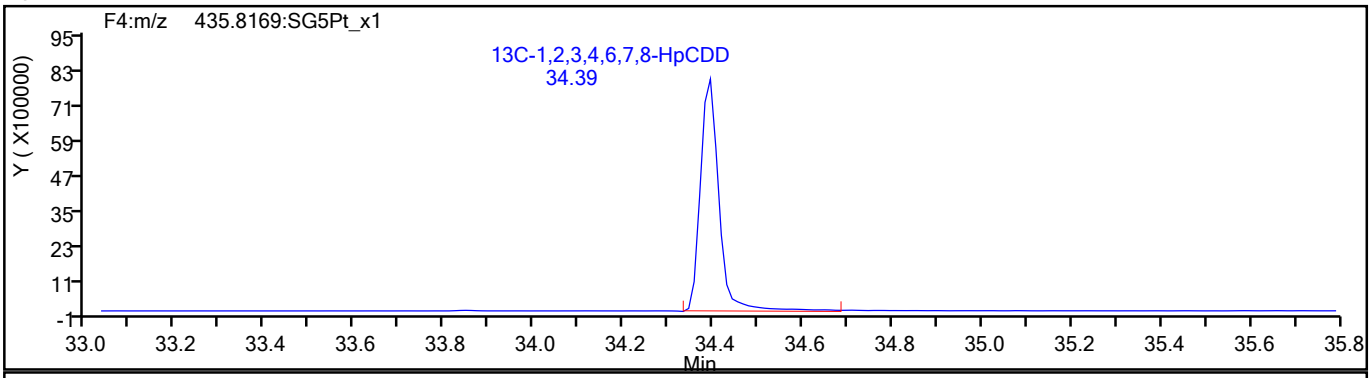

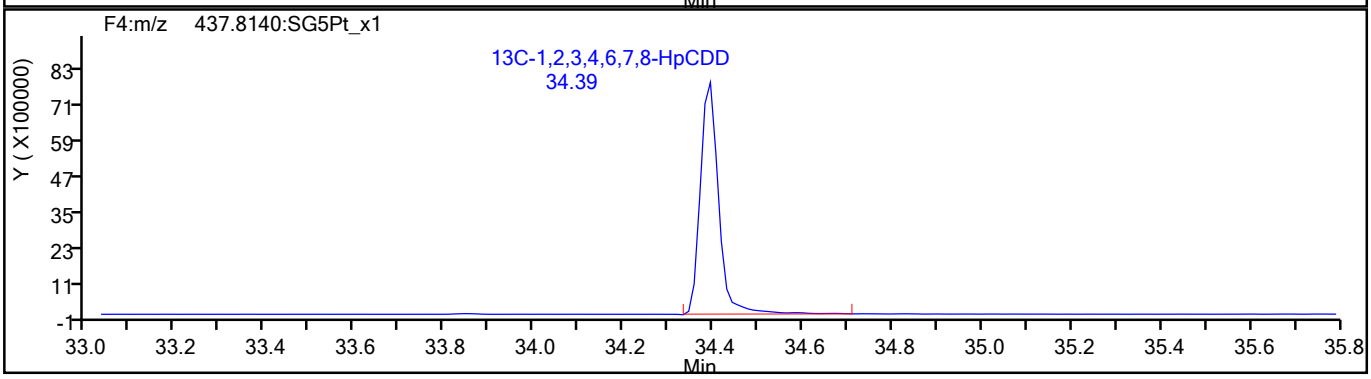

793559

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
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OCDF

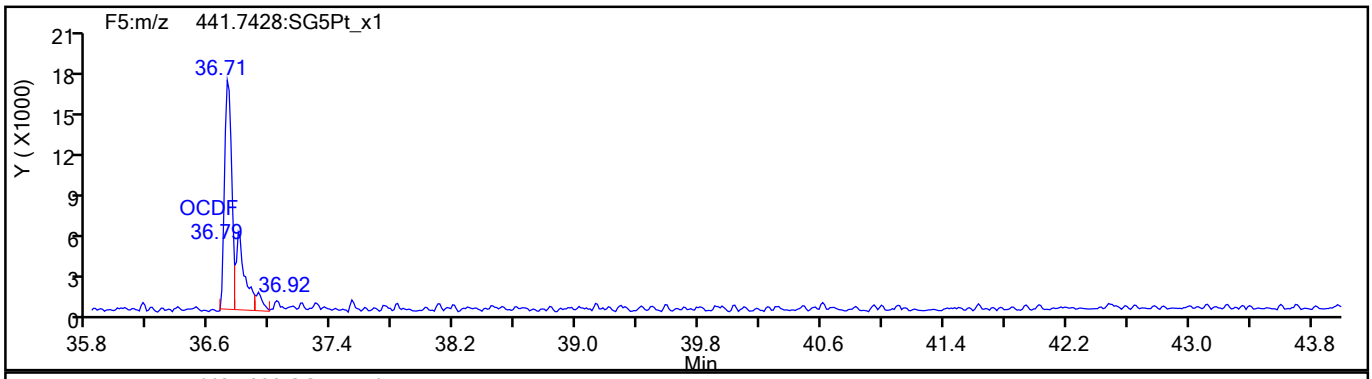

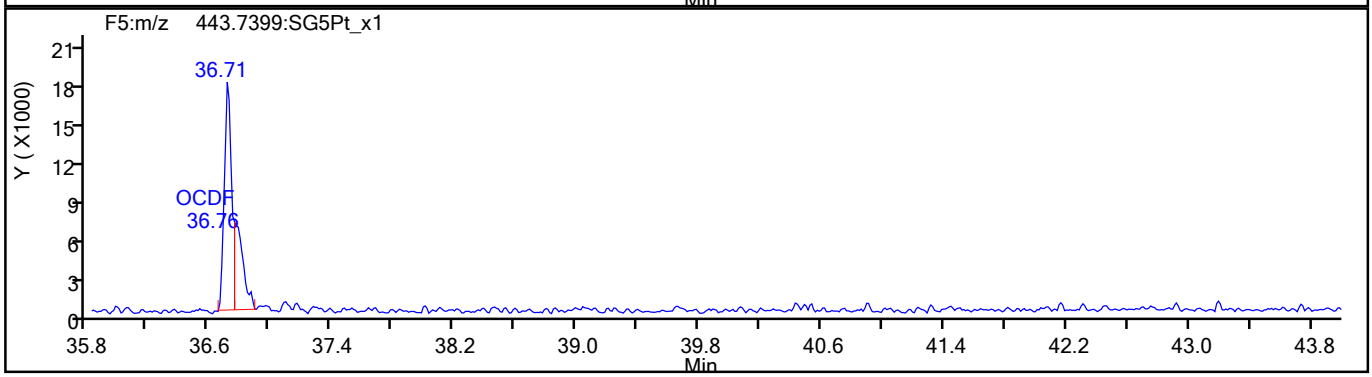

OCDF Standards

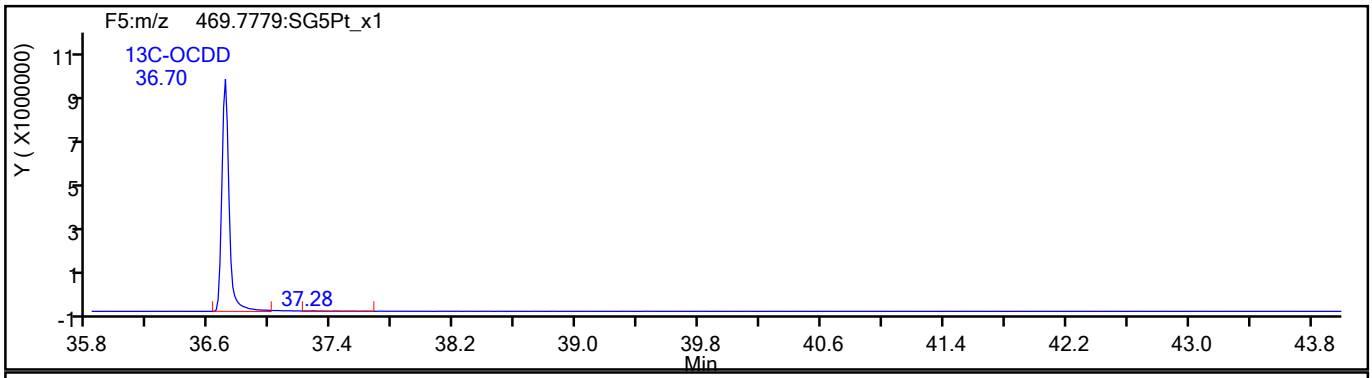

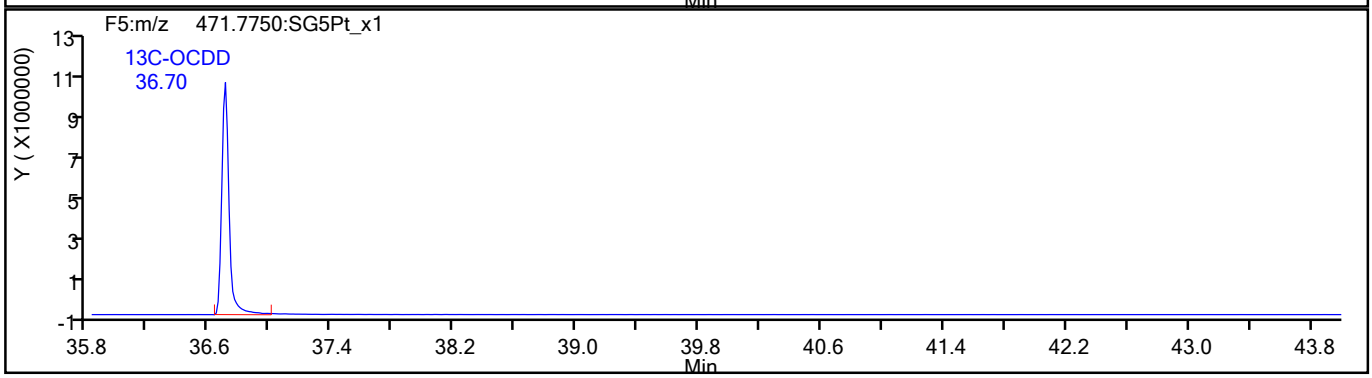

793560

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

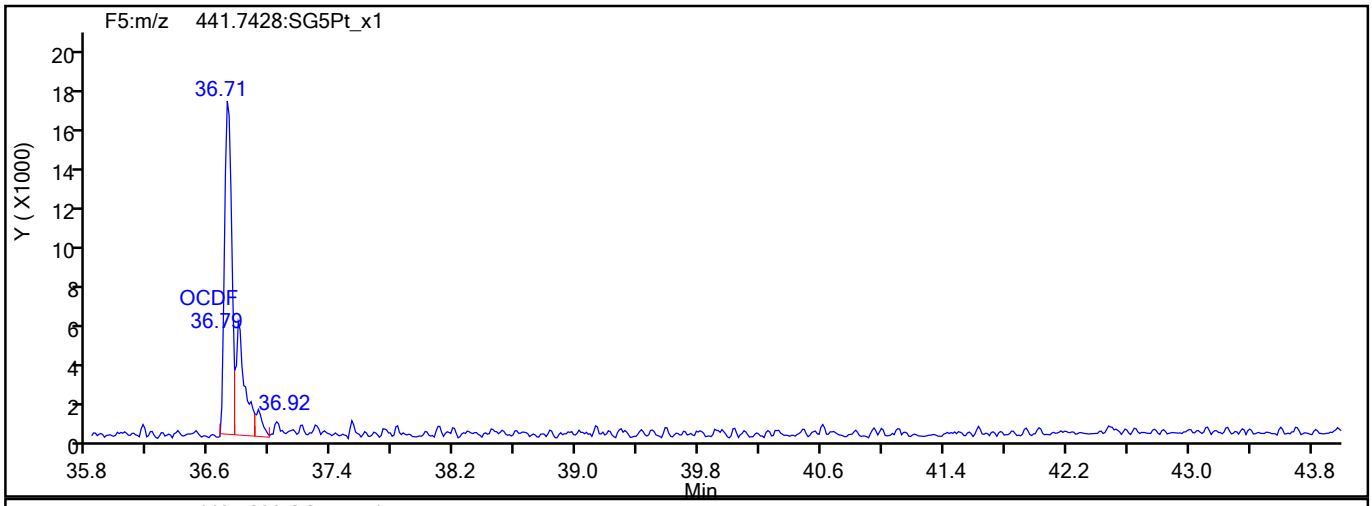

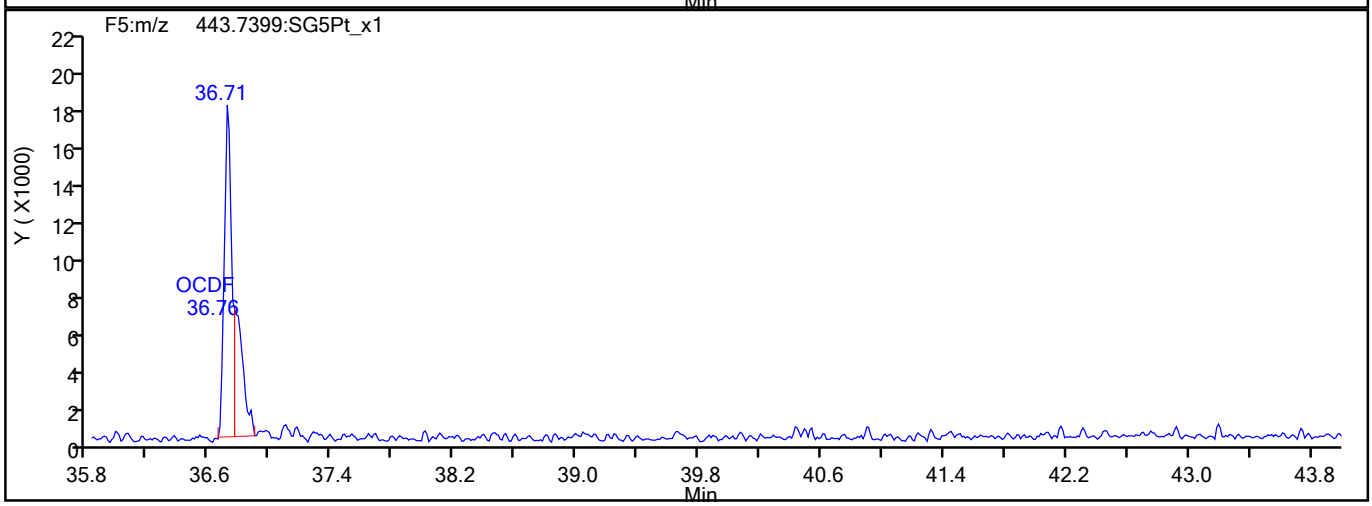

OCDF Interference Mass

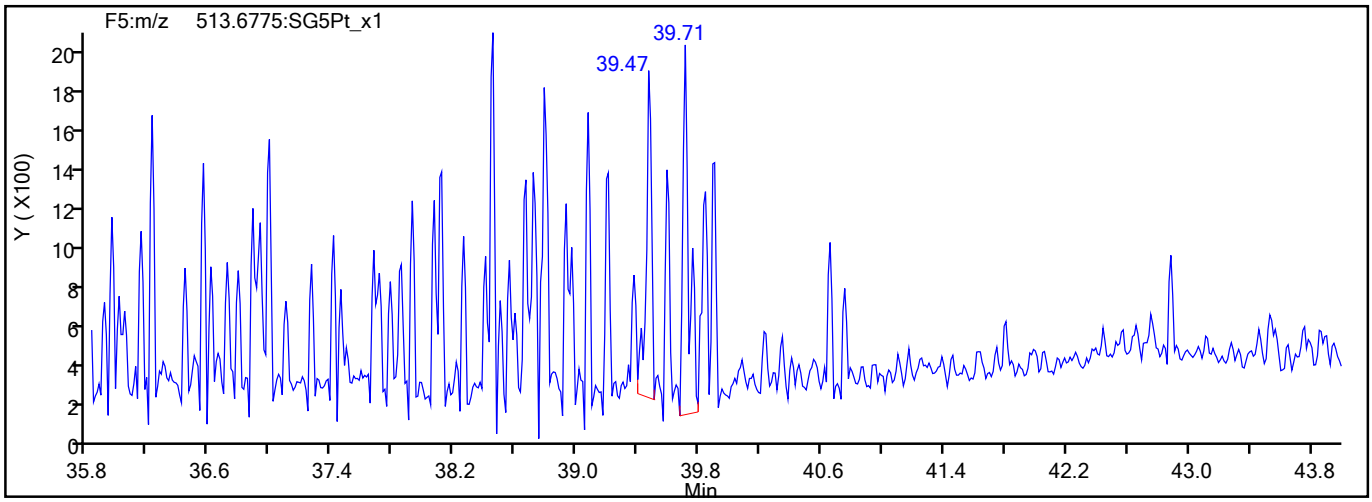

793561

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

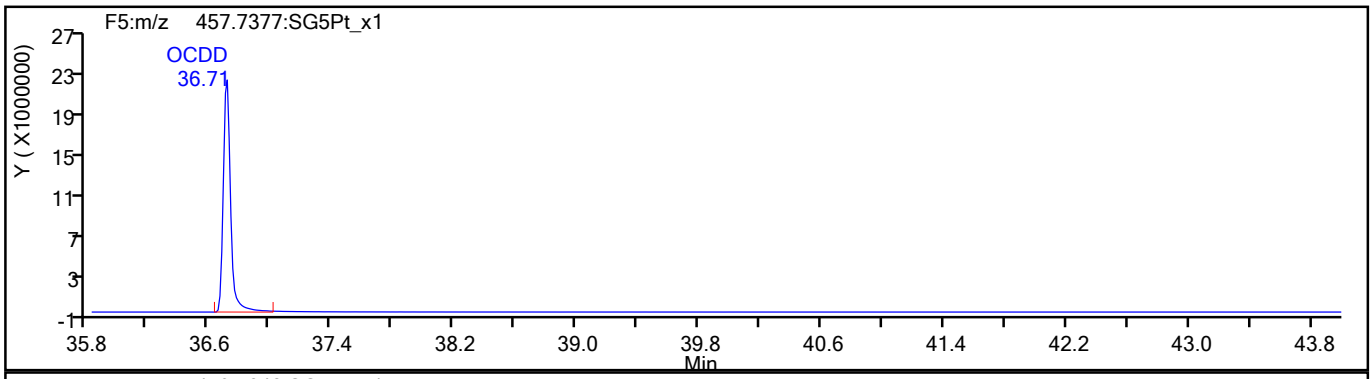

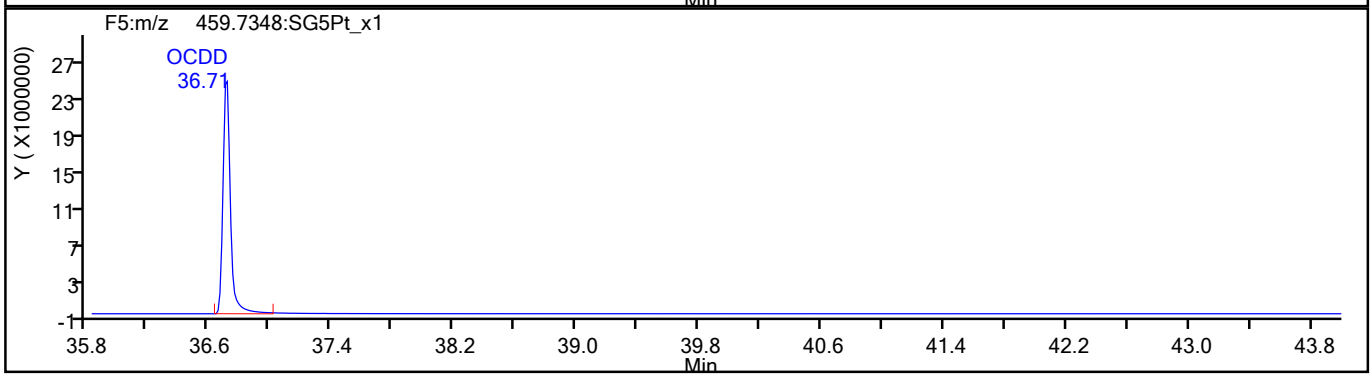

OCDD Standards

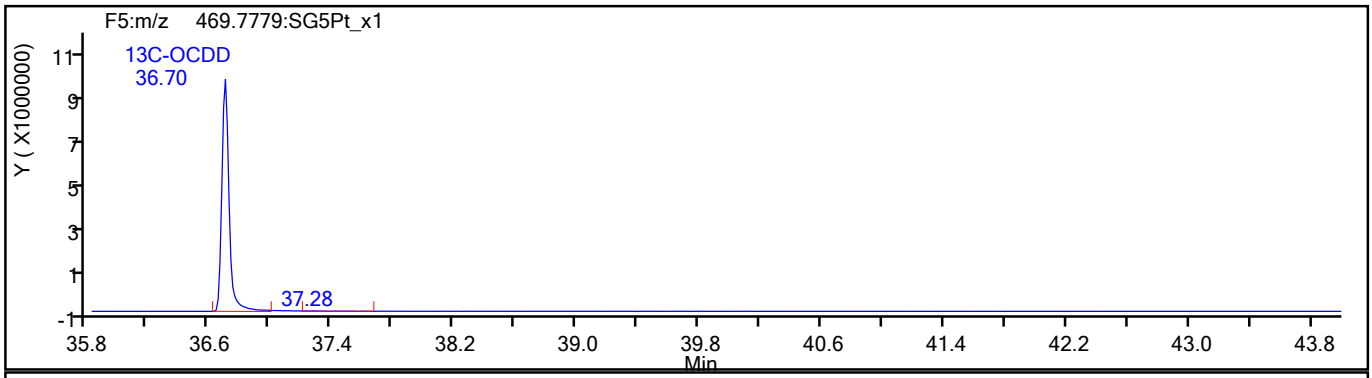

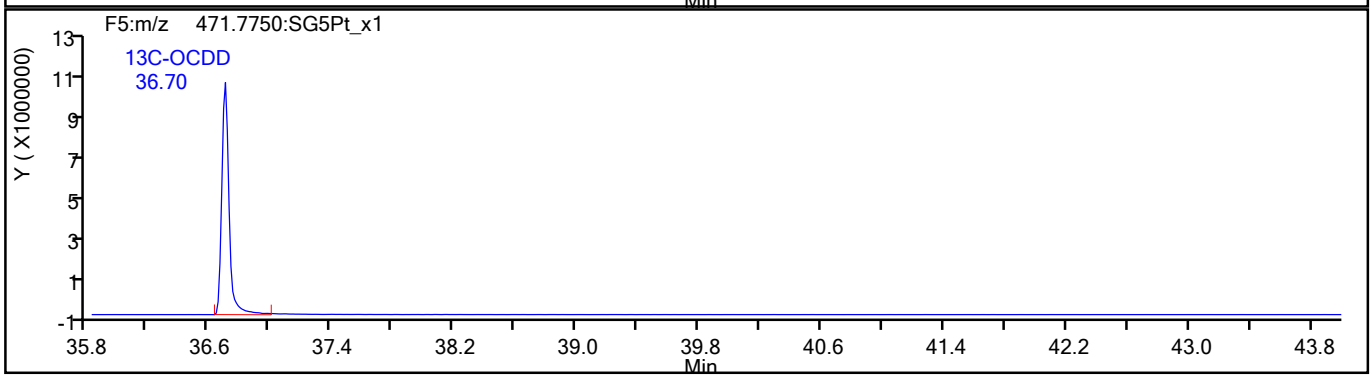

793562

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
Injection Date:	26-Aug-2021 05:50:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

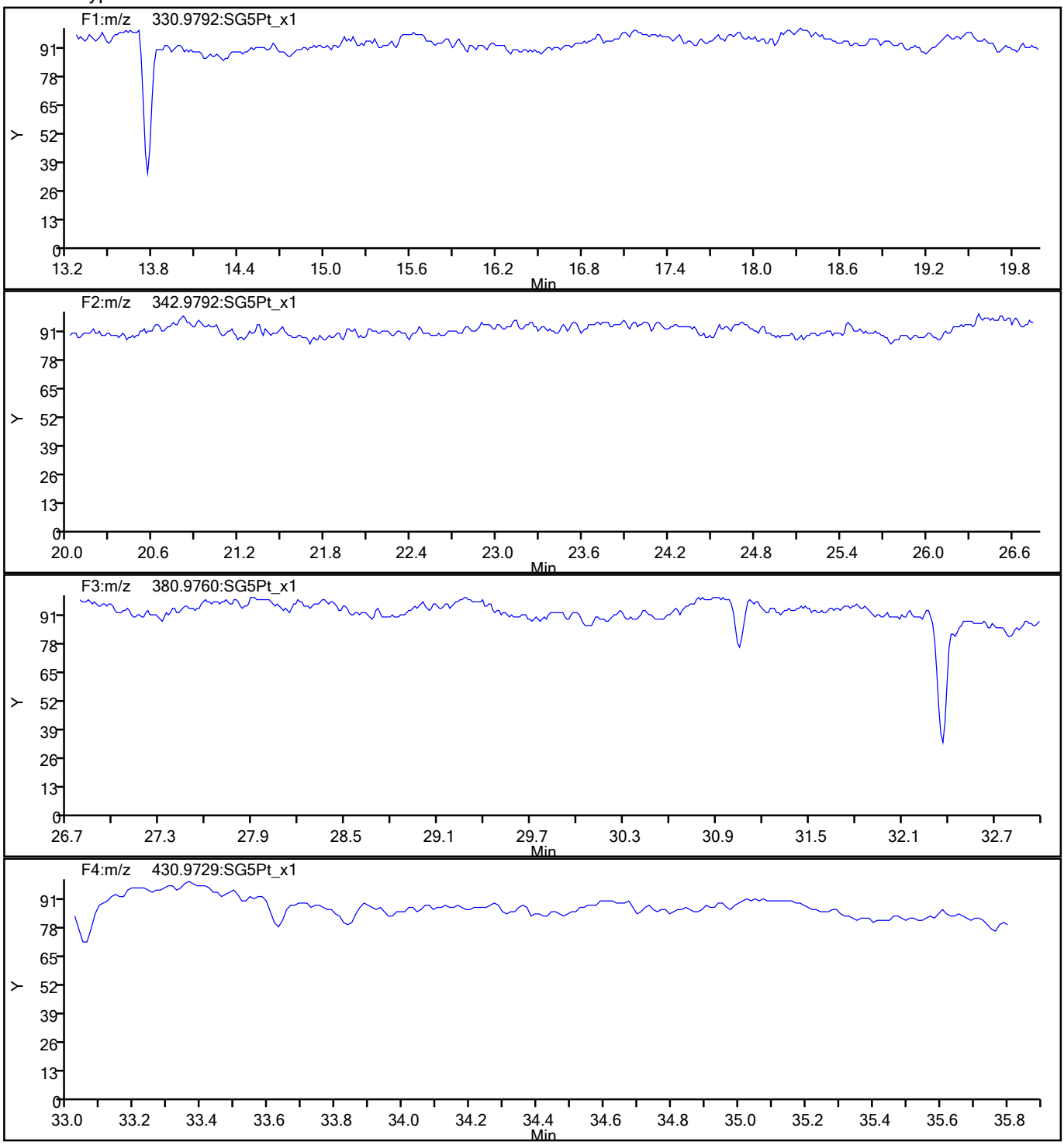

793563

Report Date: 27-Aug-2021 09:24:53 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_27.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (8-10)		
Worklist#:	519955	Sample Line#:	13
Column Type:	DB-5	Column Dia:	0.32 mm

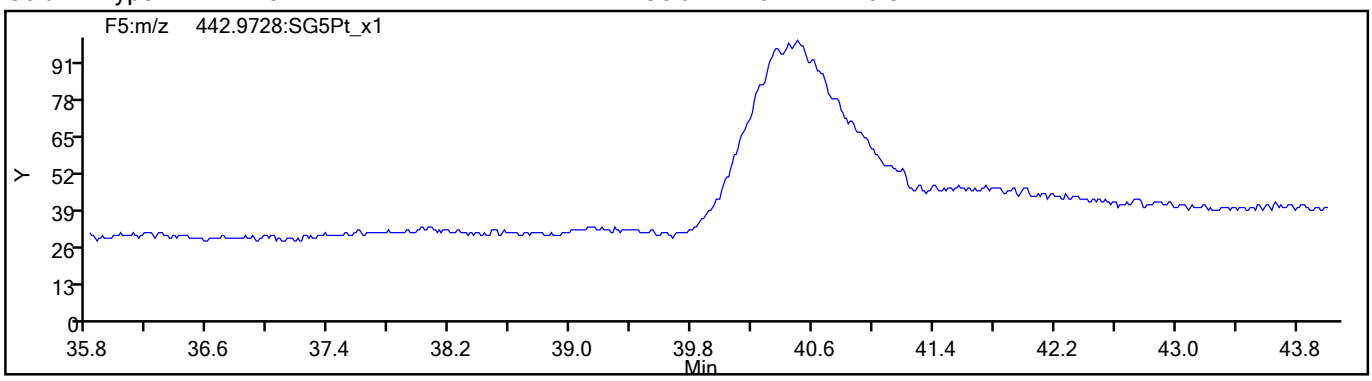

793564

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (10-12)
Lab Sample ID: 320-77292-6
Matrix: Sediment
Lab File ID: 25AU2110D5_32.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:55
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.66(g)
Date Analyzed: 08/26/2021 10:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 42.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519966
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.51	J q	1.8	0.12
51207-31-9	2,3,7,8-TCDF	0.91	J B	1.8	0.059
40321-76-4	1,2,3,7,8-PeCDD	0.27	J q	8.9	0.13
57117-41-6	1,2,3,7,8-PeCDF	ND		8.9	0.058
57117-31-4	2,3,4,7,8-PeCDF	ND		8.9	0.062
39227-28-6	1,2,3,4,7,8-HxCDD	1.0	J	8.9	0.21
57653-85-7	1,2,3,6,7,8-HxCDD	1.7	J	8.9	0.23
19408-74-3	1,2,3,7,8,9-HxCDD	2.4	J	8.9	0.20
70648-26-9	1,2,3,4,7,8-HxCDF	ND		8.9	0.071
57117-44-9	1,2,3,6,7,8-HxCDF	ND		8.9	0.071
72918-21-9	1,2,3,7,8,9-HxCDF	0.14	J q	8.9	0.050
60851-34-5	2,3,4,6,7,8-HxCDF	ND		8.9	0.054
35822-46-9	1,2,3,4,6,7,8-HpCDD	62	B	8.9	0.84
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.20	J	8.9	0.060
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		8.9	0.068
3268-87-9	OCDD	1500	B	18	1.3
39001-02-0	OCDF	0.25	J q B	18	0.059
41903-57-5	Total TCDD	9.0	q	1.8	0.12
30402-14-3	Total TCDF	1.6	J q B	1.8	0.059
36088-22-9	Total PeCDD	9.5	q	8.9	0.13
30402-15-4	Total PeCDF	0.089	J q	8.9	0.060
34465-46-8	Total HxCDD	50	q	8.9	0.21
55684-94-1	Total HxCDF	0.14	J q	8.9	0.061
37871-00-4	Total HpCDD	190	B	8.9	0.84
38998-75-3	Total HpCDF	0.20	J	8.9	0.064

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB091 (10-12)
Lab Sample ID: 320-77292-6
Matrix: Sediment
Lab File ID: 25AU2110D5_32.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:55
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.66(g)
Date Analyzed: 08/26/2021 10:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 42.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519966
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	51		25-164
89059-46-1	13C-2,3,7,8-TCDF	48		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	52		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	52		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	54		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	54		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	47		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	56		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	48		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	48		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	48		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	47		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	41		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	48		26-138
114423-97-1	13C-OCDD	50		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	70		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d
Lims ID: 320-77292-A-6-A
Client ID: 11215702-080321-BN-SJSB091 (10-12)
Sample Type: Client
Inject. Date: 26-Aug-2021 10:05:57 ALS Bottle#: 43 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-6-A 320-77292-A-6-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 16:37:51 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1653

First Level Reviewer: krenns Date: 30-Aug-2021 16:37:51

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	122497022	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	95180765	0.77	1.6249	47.8	47.8	0.0859	0.0859	47.82	
2,3,7,8-TCDF	17.114	246666	0.75	1.0239	0.2531	0.2531	0.0166	0.0166		M
A Non-2,3,7,8-sub-TCDF	17.069	201103	0.77	1.0239	0.2153	0.2064	0.0166	0.1088		RQ
S Total TCDF					0.4684	0.4595	0.0166	0.0166		RQ
D 13C-2,3,7,8-TCDD	17.779	56096489	0.79	0.8993	50.9	50.9	0.1653	0.1653	50.92	
$ 37Cl4-2,3,7,8-TCDD	17.809	38131675		1.1071	28.1	28.1	0.0181	0.0181	70.29	
2,3,7,8-TCDD	17.809	101161	0.77	1.2541	0.1924	0.1438	0.0326	0.0326		RQM
A Non-2,3,7,8-sub-TCDD	17.522	1659104	0.77	1.2541	2.388	2.358	0.0326	0.8374		RQMa
S Total TCDD					2.580	2.502	0.0326	0.0326		RQ
D 13C-1,2,3,7,8-PeCDF	22.006	77025513	1.59	1.2101	52.0	52.0	0.0675	0.0675	51.96	
1,2,3,7,8-PeCDF	22.006						0.0162	0.0162		
D 13C-2,3,4,7,8-PeCDF	23.329	81592441	1.59	1.2395	53.7	53.7	0.0659	0.0659	53.74	
2,3,4,7,8-PeCDF	23.316						0.0172	0.0172		
A F1 PeCDFs	19.851						0.0167	0.0167		
A Non-2,3,7,8-sub-PeCDF	23.067	20495	1.55	1.0398	0.0414	0.0249	0.0167	0.0249		RQ
S Total PeCDF					0.0414	0.0249	0.0167	0.0167		RQ
D 13C-1,2,3,7,8-PeCDD	24.038	48875049	1.62	0.7612	52.4	52.4	0.0400	0.0400	52.41	
1,2,3,7,8-PeCDD	24.052	39338	1.55	1.0484	0.0865	0.0768	0.0364	0.0364		RQ
A Non-2,3,7,8-sub-PeCDD	23.696	1317398	1.55	1.0484	2.608	2.571	0.0364	1.222		RQa
S Total PeCDD					2.695	2.648	0.0364	0.0364		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.159	70833572	0.51	1.0837	55.8	55.8	0.1142	0.1142	55.75	
1,2,3,4,7,8-HxCDF	30.159						0.0198	0.0198		
D 13C-1,2,3,6,7,8-HxCDF	30.372	62880538	0.52	1.1279	47.6	47.6	0.1098	0.1098	47.55	
1,2,3,6,7,8-HxCDF	30.372						0.0200	0.0200		
D 13C-2,3,4,6,7,8-HxCDF	31.291	59673936	0.52	1.0637	47.8	47.8	0.1164	0.1164	47.85	
2,3,4,6,7,8-HxCDF	31.291						0.0150	0.0150		
D 13C-1,2,3,7,8,9-HxCDF	32.129	54137752	0.52	0.9676	47.7	47.7	0.1280	0.1280	47.72	
1,2,3,7,8,9-HxCDF	32.143	24987	1.24	1.1664	0.0466	0.0396	0.0139	0.0139		RQM
A Non-2,3,7,8-sub-HxCDF	30.324						0.0168	0.0168		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.0466	0.0396	0.0172	0.0172		RQ
* 13C-1,2,3,7,8,9-HxCDD	31.943	117241868	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.490	46839241	1.26	0.7334	54.5	54.5	0.1405	0.1405	54.47	
1,2,3,4,7,8-HxCDD	31.504	140919	1.17	1.0640	0.2828	0.2828	0.0576	0.0576		
D 13C-1,2,3,6,7,8-HxCDD	31.610	48794802	1.24	0.8802	47.3	47.3	0.1170	0.1170	47.28	
1,2,3,6,7,8-HxCDD	31.624	225650	1.35	1.0001	0.4624	0.4624	0.0633	0.0633		
1,2,3,7,8,9-HxCDD	31.956	369642	1.25	1.1325	0.6826	0.6826	0.0550	0.0550		M
A Non-2,3,7,8-sub-HxCDD	30.486	6427434	1.24	1.0655	12.6	12.6	0.0584	8.191		RQMa
S Total HxCDD					14.1	14.0	0.0586	0.0586		RQ
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	37515603	0.43	0.7730	41.4	41.4	0.4026	0.4026	41.39	
1,2,3,4,6,7,8-HpCDF	33.615	30690	1.05	1.4413	0.0568	0.0568	0.0166	0.0166		M
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	39763942	0.44	0.7008	48.4	48.4	0.4441	0.4441	48.40	
1,2,3,4,7,8,9-HpCDF	34.673						0.0190	0.0190		
A Non-2,3,7,8-sub-HpCDF	34.138						0.0178	0.0178		
S Total HpCDF					0.0568	0.0568	0.0178	0.0178		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	35542325	1.03	0.6472	46.8	46.8	0.1988	0.1988	46.84	
1,2,3,4,6,7,8-HpCDD	34.405	6767213	1.05	1.0943	17.4	17.4	0.2359	0.2359		
A Non-2,3,7,8-sub-HpCDD	34.223	13444789	1.03	1.0943	34.6	34.6	0.2359	34.6		
S Total HpCDD					52.0	52.0	0.2359	0.2359		
D 13C-OCDD	36.701	52928424	0.88	0.4472	101.0	101.0	0.0941	0.0941	50.48	
OCDF	36.785	26902	0.89	1.4382	0.0831	0.0707	0.0165	0.0165		RQMa
OCDD	36.713	119587121	0.90	1.1070	408.2	408.2	0.3720	0.3720		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d
Lims ID: 320-77292-A-6-A
Client ID: 11215702-080321-BN-SJSB091 (10-12)
Sample Type: Client
Inject. Date: 26-Aug-2021 10:05:57 ALS Bottle#: 43 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-6-A 320-77292-A-6-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 16:37:51 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1653

First Level Reviewer: krenns Date: 30-Aug-2021 16:37:51

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.567	2		54911629	14224663	8082	20205	1760		
333.9339	17.598	17.567	2		67585393	17488710	10772	26930	1624	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.069	2	0.972	41382168	10764996	10152	25380	1060		
317.9389	17.099	17.069	2	0.972	53798597	13845017	7549	18872	1834	0.77(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.114	17.099	1	1.001	106082	25957	653	1632	40		M
305.8987	17.114	17.099	1	1.001	140584	35818	1016	2540	35	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	15.224	17.069	-110	0.890	41729	12490	653	1632	19		
305.8987	15.224	17.069	-110	0.890	53318	16755	1016	2540	16	0.78(0.65-0.89)	
303.9016	16.736	17.069	-20	0.979	54872	15691	653	1632	24		
	Empc Correction				46137	13174	653	1632	20		
305.8987	16.736	17.069	-20	0.979	59919	17110	1016	2540	17	0.92(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.779	17.764	1	1.010	24809590	6027308	8082	20205	746		
333.9339	17.779	17.764	1	1.010	31286899	7613906	10772	26930	707	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.779	2	1.012	38131675	9516053	2543	6357	3742		
2,3,7,8-TCDD											RQM
319.8965	17.809	17.779	2	1.002	44008	12318	1155	2887	11		M
321.8936	17.794	17.779	1	1.001	91330	26241	1079	2697	24	0.48(0.65-0.89)	
	Empc Correction				57153	15997	1079	2697	15		

793569

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	15.904	17.522	-97	0.895	52829	14217	1155	2887	12		
321.8936	15.920	17.522	-96	0.895	64211	17863	1079	2697	17	0.82(0.65-0.89)	
319.8965	16.131	17.522	-83	0.907	35829	10579	1155	2887	9		
321.8936	16.131	17.522	-83	0.907	50408	12521	1079	2697	12	0.71(0.65-0.89)	
319.8965	16.675	17.522	-51	0.938	252458	61143	1155	2887	53		
321.8936	16.691	17.522	-50	0.939	336642	92925	1079	2697	86	0.75(0.65-0.89)	
319.8965	17.295	17.522	-14	0.973	19893	4764	1155	2887	4		
321.8936	17.310	17.522	-13	0.974	30267	6653	1079	2697	6	0.66(0.65-0.89)	
319.8965	17.567	17.522	3	0.988	93332	23662	1155	2887	20		M
321.8936	17.567	17.522	3	0.988	104473	24911	1079	2697	23	0.89(0.65-0.89)	
319.8965	17.688	17.522	10	0.995	228115	57040	1155	2887	49		
321.8936	17.688	17.522	10	0.995	314541	76701	1079	2697	71	0.73(0.65-0.89)	
319.8965	18.157	17.522	38	1.021	21757	4607	1155	2887	4		
	Empc Correction				11793	3058	1155	2887	3		
321.8936	18.157	17.522	38	1.021	15316	3972	1079	2697	4	1.42(0.65-0.89)	
319.8965	18.898	17.522	82	1.063	32225	5900	1155	2887	5		
	Empc Correction				21315	5647	1155	2887	5		
321.8936	18.898	17.522	82	1.063	27682	7335	1079	2697	7	1.16(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.006	21.979	2	1.251	47277297	8845012	6257	15642	1414		
353.8970	22.006	21.979	2	1.251	29748216	5634764	4111	10277	1371	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.006						342	855			
341.8567	22.006						654	1635			
13C-2,3,4,7,8-PeCDF											
351.9000	23.329	23.302	2	1.326	50131263	8681095	6257	15642	1387		
353.8970	23.329	23.302	2	1.326	31461178	5536896	4111	10277	1347	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.316						342	855			
341.8567	23.316						654	1635			
A F1 PeCDFs											
339.8597	19.851						272	680			
341.8567	19.851						722	1805			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.438	23.067	-157	0.929	12458	2344	342	855	7		
341.8567	20.438	23.067	-157	0.929	21697	3718	654	1635	6	0.57(1.32-1.78)	
	Empc Correction				8037	1512	654	1635	2		
13C-1,2,3,7,8-PeCDD											
367.8949	24.038	23.997	2	1.366	30226981	4936151	2251	5627	2193		
369.8919	24.038	23.997	2	1.366	18648068	3027061	1609	4022	1881	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											RQ
355.8546	24.052	24.024	2	1.001	28905	5214	799	1997	7		
	Empc Correction				23911	4105	799	1997	5		
357.8516	24.093	24.024	4	1.002	15427	2649	415	1037	6	1.87(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											RQa
355.8546	20.915	23.696	-167	0.870	118107	20971	799	1997	26		a
357.8516	20.915	23.696	-167	0.870	83956	15342	415	1037	37	1.41(1.32-1.78)	
355.8546	21.638	23.696	-123	0.900	383710	72098	799	1997	90		
357.8516	21.638	23.696	-123	0.900	242700	50742	415	1037	122	1.58(1.32-1.78)	
355.8546	22.306	23.696	-83	0.928	36602	7029	799	1997	9		
	Empc Correction				29496	5496	799	1997	7		
357.8516	22.333	23.696	-82	0.929	19030	3546	415	1037	9	1.92(1.32-1.78)	
355.8546	22.593	23.696	-66	0.940	35242	6698	799	1997	8		
357.8516	22.606	23.696	-65	0.940	26410	5324	415	1037	13	1.33(1.32-1.78)	
355.8546	22.920	23.696	-46	0.953	69307	12676	799	1997	16		
	Empc Correction				57258	10318	799	1997	13		
357.8516	22.906	23.696	-47	0.953	36941	6657	415	1037	16	1.88(1.32-1.78)	
355.8546	23.097	23.696	-36	0.961	152392	21797	799	1997	27		
357.8516	23.097	23.696	-36	0.961	104301	16103	415	1037	39	1.46(1.32-1.78)	
355.8546	24.379	23.696	41	1.014	16585	2966	799	1997	4		
357.8516	24.352	23.696	39	1.013	11270	2585	415	1037	6	1.47(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.159	30.146	1	0.944	24056079	4094087	5853	14632	699		
385.8610	30.159	30.146	1	0.944	46777493	7972800	10851	27127	735	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.159						728	1820			
375.8178	30.159						310	775			
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.372	30.359	1	0.951	21390292	3951851	5853	14632	675		
385.8610	30.372	30.359	1	0.951	41490246	7587816	10851	27127	699	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.372						728	1820			
375.8178	30.372						310	775			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.264	2	0.980	20478948	5126319	5853	14632	876		
385.8610	31.291	31.264	2	0.980	39194988	9706861	10851	27127	895	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.291						728	1820			
375.8178	31.291						310	775			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.116	1	1.006	18459775	5445482	5853	14632	930		
385.8610	32.129	32.116	1	1.006	35677977	10555718	10851	27127	973	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	32.143	32.129	1	1.000	18251	5392	728	1820	7		M
	Empc Correction				13832	3573	728	1820	5		
375.8178	32.143	32.129	1	1.000	11155	2882	310	775	9	1.64(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.324						728	1820			
375.8178	30.324						310	775			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.930	1		65098247	18697322	7594	18985	2462		
403.8529	31.943	31.930	1		52143621	15033044	6306	15765	2384	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.490	31.464	2	0.986	26129916	7286013	7594	18985	959		
403.8529	31.490	31.464	2	0.986	20709325	5868406	6306	15765	931	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.504	31.490	1	1.000	75921	23049	1857	4642	12		
391.8127	31.504	31.490	1	1.000	64998	18303	1369	3422	13	1.17(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.583	2	0.990	27018238	7029994	7594	18985	926		
403.8529	31.597	31.583	1	0.989	21776564	5714646	6306	15765	906	1.24(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.624	31.597	2	1.000	129797	36537	1857	4642	20		
391.8127	31.624	31.597	2	1.000	95853	26655	1369	3422	19	1.35(1.05-1.43)	
1,2,3,7,8,9-HxCDD											M
389.8157	31.956	31.943	1	1.015	205034	61745	1857	4642	33		M
391.8127	31.956	31.943	1	1.015	164608	49921	1369	3422	36	1.25(1.05-1.43)	M
A Non-2,3,7,8-sub-HxCDD											RQMa
389.8157	29.028	30.486	-87	0.918	2330090	310760	1857	4642	167		
391.8127	29.028	30.486	-87	0.918	1843462	230947	1369	3422	169	1.26(1.05-1.43)	
389.8157	30.266	30.486	-13	0.957	92016	17642	1857	4642	10		
	Empc Correction				77898	14876	1857	4642	8		
391.8127	30.253	30.486	-14	0.957	62821	11997	1369	3422	9	1.46(1.05-1.43)	
389.8157	30.678	30.486	12	0.971	988075	189560	1857	4642	102		
391.8127	30.678	30.486	12	0.971	808123	155325	1369	3422	113	1.22(1.05-1.43)	
389.8157	30.905	30.486	25	0.978	84555	17777	1857	4642	10		
391.8127	30.905	30.486	25	0.978	70971	16350	1369	3422	12	1.19(1.05-1.43)	
389.8157	31.930	30.486	86	1.010	83559	44649	1857	4642	24		M
391.8127	31.930	30.486	86	1.010	77880	39223	1369	3422	29	1.07(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.591	1	1.052	11358118	4415915	13913	34782	317		
419.8220	33.603	33.591	1	1.052	26157485	10069997	28078	70195	359	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											M
407.7818	33.615	33.603	1	1.000	15737	5871	1010	2525	6		M
409.7789	33.615	33.603	1	1.000	14953	5890	380	950	16	1.05(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.660	1	1.085	12123076	4285342	13913	34782	308		
419.8220	34.672	34.660	1	1.085	27640866	9569051	28078	70195	341	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673						1010	2525			
409.7789	34.673						380	950			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						1010	2525			
409.7789	34.138						380	950			

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.368	1	1.077	18017658	6376640	10199	25497	625		
437.8140	34.393	34.368	1	1.077	17524667	6174807	7158	17895	863	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.393	1	1.000	3462382	1186150	6615	16537	179		
425.7737	34.393	34.393	0	1.000	3304831	1138728	6348	15870	179	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.858	34.223	-22	0.984	6833420	2502839	6615	16537	378		
425.7737	33.858	34.223	-22	0.984	6611369	2383376	6348	15870	375	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.689	1	1.149	24779438	7527204	2814	7035	2675		
471.7750	36.701	36.689	1	1.149	28148986	8480620	2863	7157	2962	0.88(0.76-1.02)	
OCDF											RQMa
441.7428	36.785	36.785	0	1.002	17379	3620	290	725	12		M
	Empc Correction				12668	3430	290	725	12		
443.7399	36.797	36.785	1	1.003	14234	3855	470	1175	8	1.22(0.76-1.02)	
OCDD											
457.7377	36.713	36.689	1	1.000	56652041	16869917	5683	14207	2968		
459.7348	36.701	36.689	1	1.000	62935080	18690734	7501	18752	2492	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d
Lims ID: 320-77292-A-6-A
Client ID: 11215702-080321-BN-SJSB091 (10-12)
Inject. Date: 26-Aug-2021 10:05:57 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	95180765	24610013

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	95180765	24610013

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.224	41729	12490	53318	16755	0.0975	0.78	
16.736	54872	15691	59919	17110	0.1178	0.92	RQ
16.736	46137	13174	59919	17110	0.1088		Empc Correction
Signal Totals:							
	87866	25664	113237	33865			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	209838	62046				0.85	RQ
	201103	59529					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2153 = (209838 * 100.000) / (95180765 * 1.024)
Empc Amount: 0.2064 = (201103 * 100.000) / (95180765 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d
Lims ID: 320-77292-A-6-A
Client ID: 11215702-080321-BN-SJSB091 (10-12)
Inject. Date: 26-Aug-2021 10:05:57 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDD, RT: 17.522

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	56096489	13641214

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	56096489	13641214

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.904	52829	14217	64211	17863	0.1664	0.82	
16.131	35829	10579	50408	12521	0.1226	0.71	
16.675	252458	61143	336642	92925	0.8374	0.75	
17.295	19893	4764	30267	6653	0.0713	0.66	
17.567	93332	23662	104473	24911	0.2812	0.89	Ma
17.688	228115	57040	314541	76701	0.7713	0.73	
18.157	21757	4607	15316	3972	0.0527	1.42	RQ
18.157	11793	3058	15316	3972	0.0385		Empc Correction
18.898	32225	5900	27682	7335	0.0852	1.16	RQ
18.898	21315	5647	27682	7335	0.0696		Empc Correction
Signal Totals:							
	715564	180110	943540	242881			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1679978	424793				0.78	RQMa
	1659104	422991					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.388 = (1679978 * 100.000) / (56096489 * 1.254)
Empc Amount: 2.358 = (1659104 * 100.000) / (56096489 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Lims ID:	320-77292-A-6-A		
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Inject. Date:	26-Aug-2021 10:05:57	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	77025513	14479776
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	81592441	14217991

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	79308977	14348883

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.438	12458	2344	21697	3718	0.0414	0.57	RQ
20.438	12458	2344	8037	1512	0.0249		Empc Correction
Signal Totals:							
	12458	2344	8037	1512			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	34155	6062				0.57	RQ
	20495	3856					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0414 = (34155 * 100.000) / (79308977 * 1.040)

Empc Amount: 0.0249 = (20495 * 100.000) / (79308977 * 1.040)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Lims ID:	320-77292-A-6-A		
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Inject. Date:	26-Aug-2021 10:05:57	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	4

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	48875049	7963212

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	48875049	7963212

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.915	118107	20971	83956	15342	0.3943	1.41	a
21.638	383710	72098	242700	50742	1.22	1.58	
22.306	36602	7029	19030	3546	0.1086	1.92	RQ
22.306	29496	5496	19030	3546	0.0947		Empc Correction
22.593	35242	6698	26410	5324	0.1203	1.33	
22.920	69307	12676	36941	6657	0.2073	1.88	RQ
22.920	57258	10318	36941	6657	0.1838		Empc Correction
23.097	152392	21797	104301	16103	0.5009	1.46	
24.379	16585	2966	11270	2585	0.0544	1.47	
Signal Totals:							
	792790	140344	524608	100299			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1336553	244534				1.55	RQa
	1317398	240643					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.608 = (1336553 * 100.000) / (48875049 * 1.048)

Empc Amount: 2.571 = (1317398 * 100.000) / (48875049 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Lims ID:	320-77292-A-6-A		
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Inject. Date:	26-Aug-2021 10:05:57	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	4

Non-2,3,7,8-sub-HxCDD, RT: 30.486

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	46839241	13154419
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	48794802	12744640
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	47817021	12949529

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.028	2330090	310760	1843462	230947	8.19	1.26	
30.266	92016	17642	62821	11997	0.3039	1.46	RQ
30.266	77898	14876	62821	11997	0.2762		Empc Correction
30.678	988075	189560	808123	155325	3.53	1.22	
30.905	84555	17777	70971	16350	0.3052	1.19	
31.930	83559	44649	77880	39223	0.3169	1.07	Ma
Signal Totals:							
	3564177	577622	2863257	453842			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6441552	1034230				1.25	RQMa
	6427434	1031464					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 12.643 = (6441552 * 100.000) / (47817021 * 1.066)

Empc Amount: 12.615 = (6427434 * 100.000) / (47817021 * 1.066)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d
Lims ID: 320-77292-A-6-A
Client ID: 11215702-080321-BN-SJSB091 (10-12)
Inject. Date: 26-Aug-2021 10:05:57 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 4

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	35542325	12551447

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	35542325	12551447

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.858	6833420	2502839	6611369	2383376	34.6	1.03	
Signal Totals:							
	6833420	2502839	6611369	2383376			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13444789	4886215				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 34.568 = (13444789 * 100.000) / (35542325 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d				
Injection Date:	26-Aug-2021 10:05:57	Instrument ID:	10D5		
Lims ID:	320-77292-A-6-A	Lab Sample ID:	320-77292-6		
Client ID:	11215702-080321-BN-SJSB091 (10-12)				
Operator ID:	SMA	ALS Bottle#:	43	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.11
Area: 107631
Amount: 0.254693
Amount Units: pg/ul

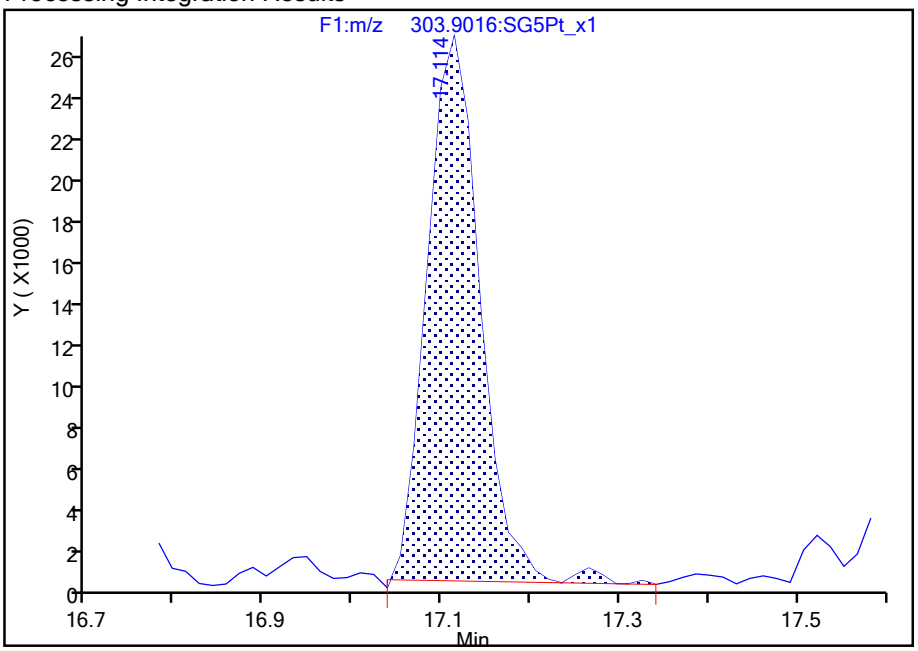

Manual Integration Results

RT: 17.11
Area: 106082
Amount: 0.253103
Amount Units: pg/ul

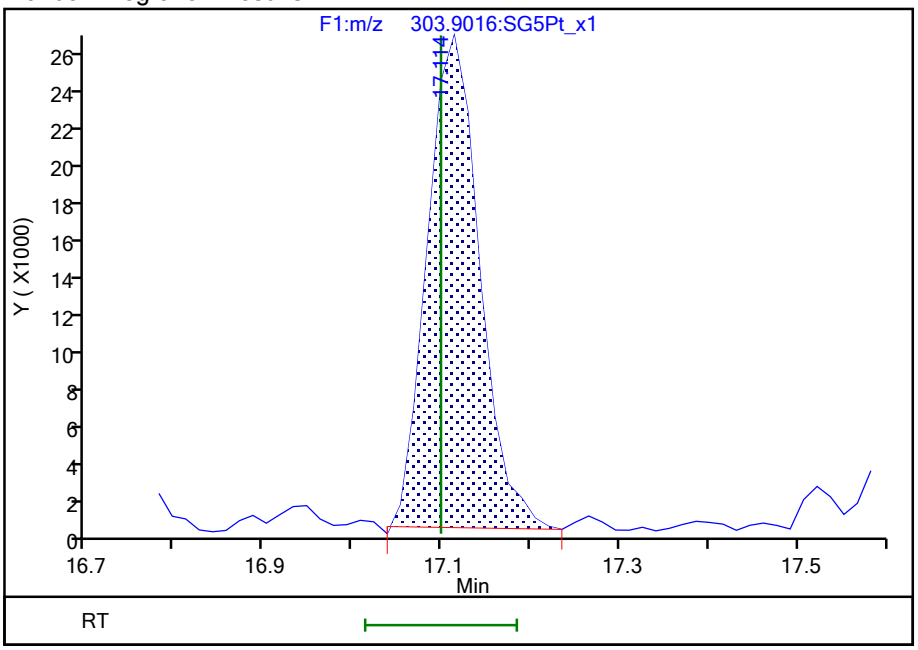

Reviewer: dadunj, 30-Aug-2021 08:32:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793583

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d				
Injection Date:	26-Aug-2021 10:05:57	Instrument ID:	10D5		
Lims ID:	320-77292-A-6-A	Lab Sample ID:	320-77292-6		
Client ID:	11215702-080321-BN-SJSB091 (10-12)				
Operator ID:	SMA	ALS Bottle#:	43	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 17.81
Area: 48567
Amount: 0.198854
Amount Units: pg/ul

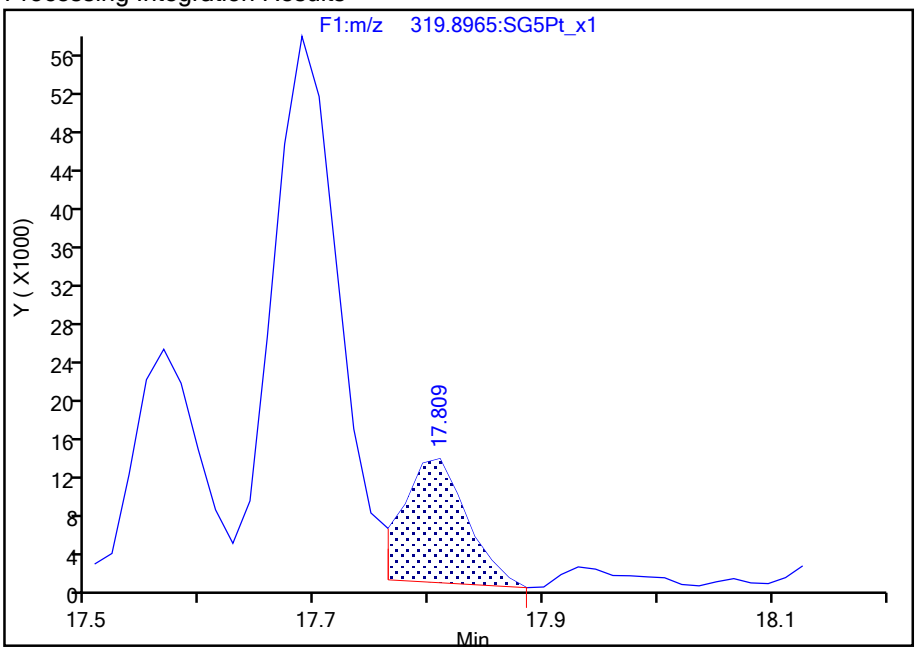

Manual Integration Results

RT: 17.81
Area: 44008
Amount: 0.192373
Amount Units: pg/ul

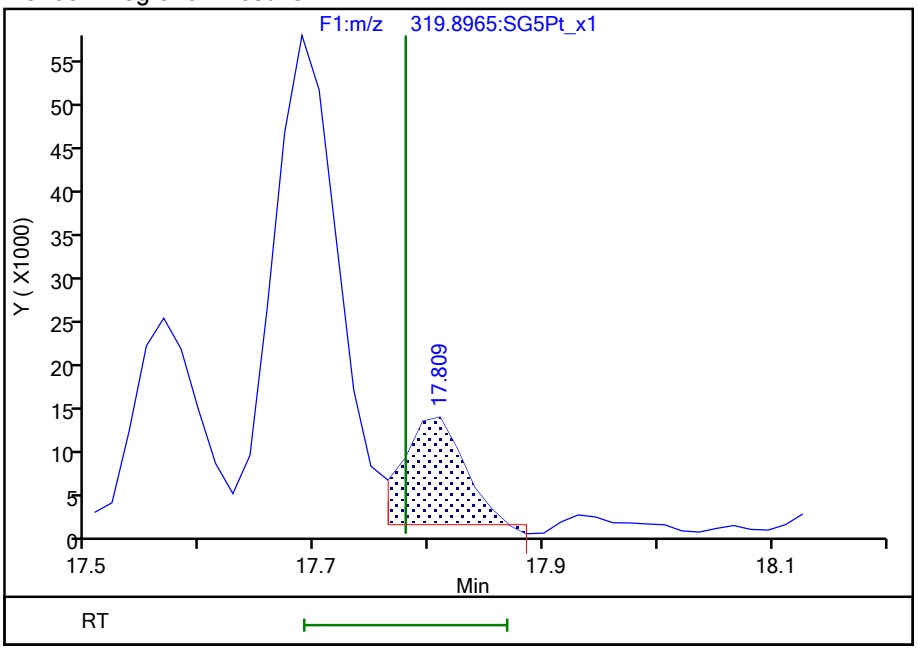

Reviewer: dadunj, 30-Aug-2021 08:33:12

Audit Action: Split an Integrated Peak Audit Reason: Baseline

793584

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d				
Injection Date:	26-Aug-2021 10:05:57	Instrument ID:	10D5		
Lims ID:	320-77292-A-6-A	Lab Sample ID:	320-77292-6		
Client ID:	11215702-080321-BN-SJSB091 (10-12)				
Operator ID:	SMA	ALS Bottle#:	43	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.57- 19.47)

Signal: 1

Processing Integration Results

RT = 17.567 Area = 98139

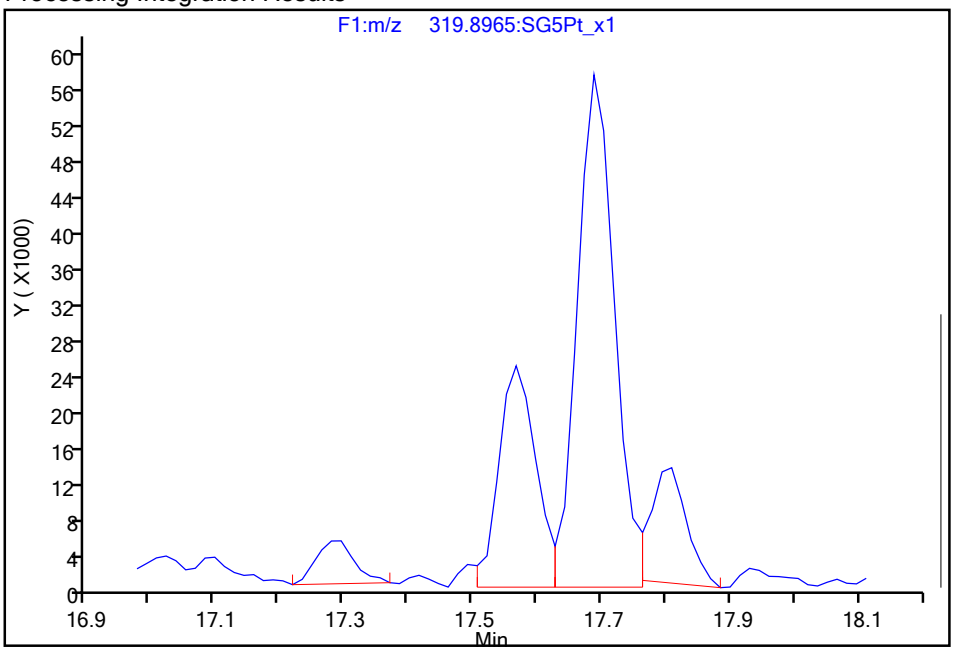

Manual Integration Results

RT = 17.567 Area = 93332 M

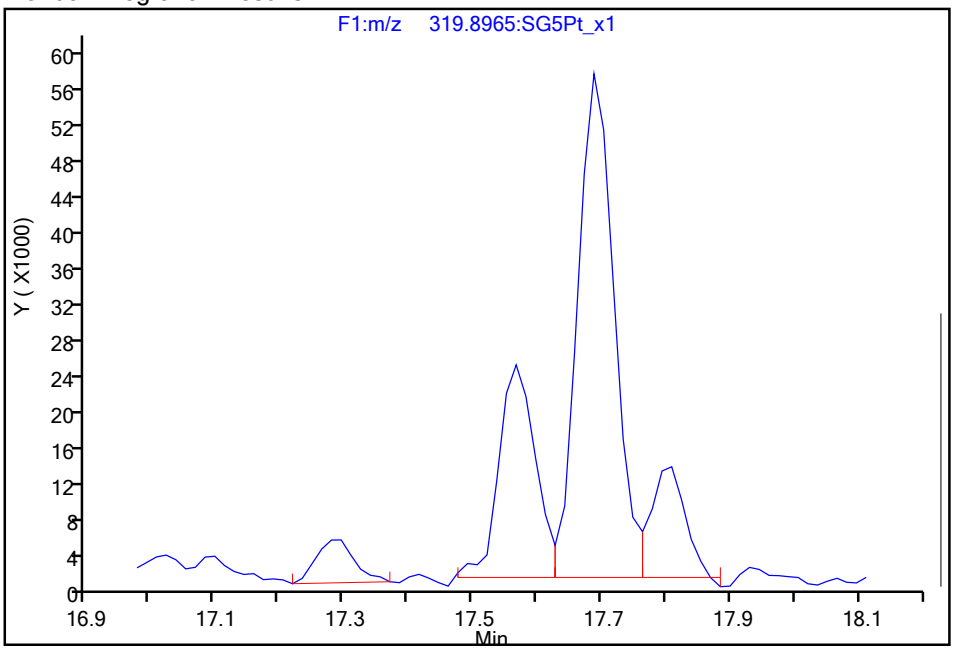

Reviewer: dadunj, 30-Aug-2021 08:33:44

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d				
Injection Date:	26-Aug-2021 10:05:57	Instrument ID:	10D5		
Lims ID:	320-77292-A-6-A	Lab Sample ID:	320-77292-6		
Client ID:	11215702-080321-BN-SJSB091 (10-12)				
Operator ID:	SMA	ALS Bottle#:	43	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.14
Area: 19173
Amount: 0.050700
Amount Units: pg/ul

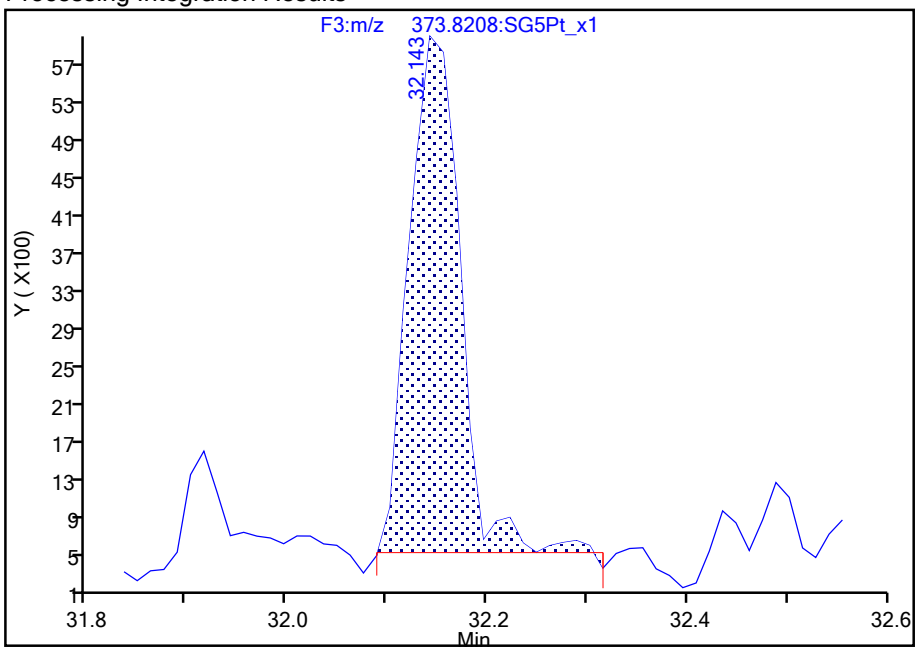

Manual Integration Results

RT: 32.14
Area: 18251
Amount: 0.046570
Amount Units: pg/ul

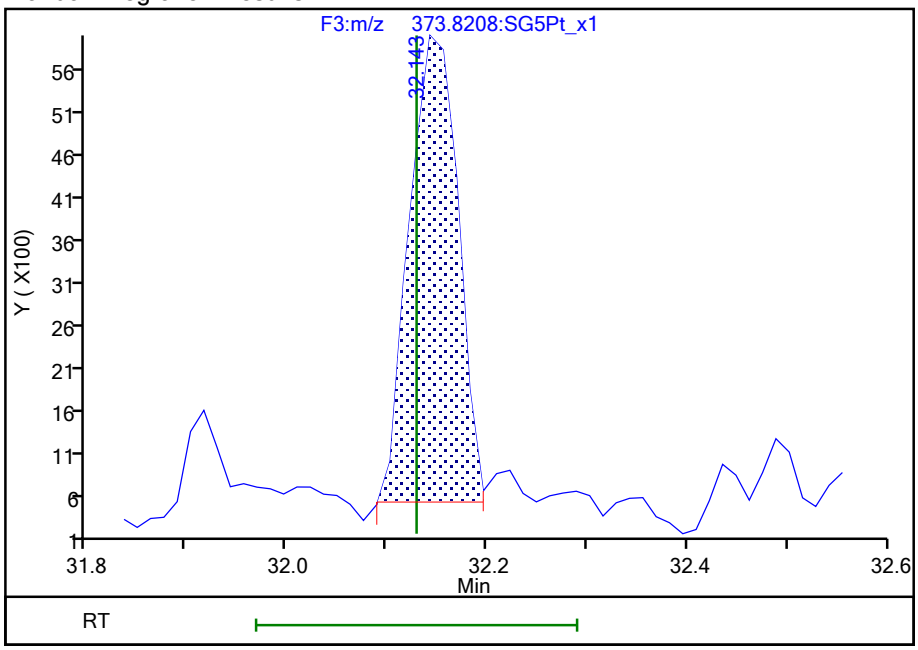

Reviewer: dadunj, 30-Aug-2021 08:34:19

Audit Action: Split an Integrated Peak Audit Reason: Baseline

793586

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d				
Injection Date:	26-Aug-2021 10:05:57	Instrument ID:	10D5		
Lims ID:	320-77292-A-6-A	Lab Sample ID:	320-77292-6		
Client ID:	11215702-080321-BN-SJSB091 (10-12)				
Operator ID:	SMA	ALS Bottle#:	43	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.14
Area: 12841
Amount: 0.050700
Amount Units: pg/ul

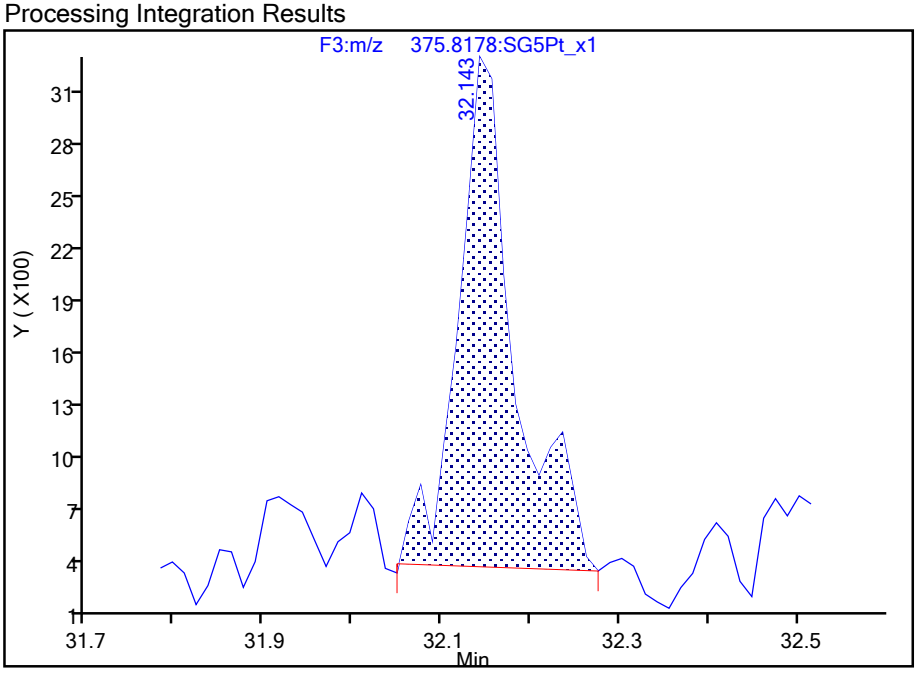

Manual Integration Results

RT: 32.14
Area: 11155
Amount: 0.046570
Amount Units: pg/ul

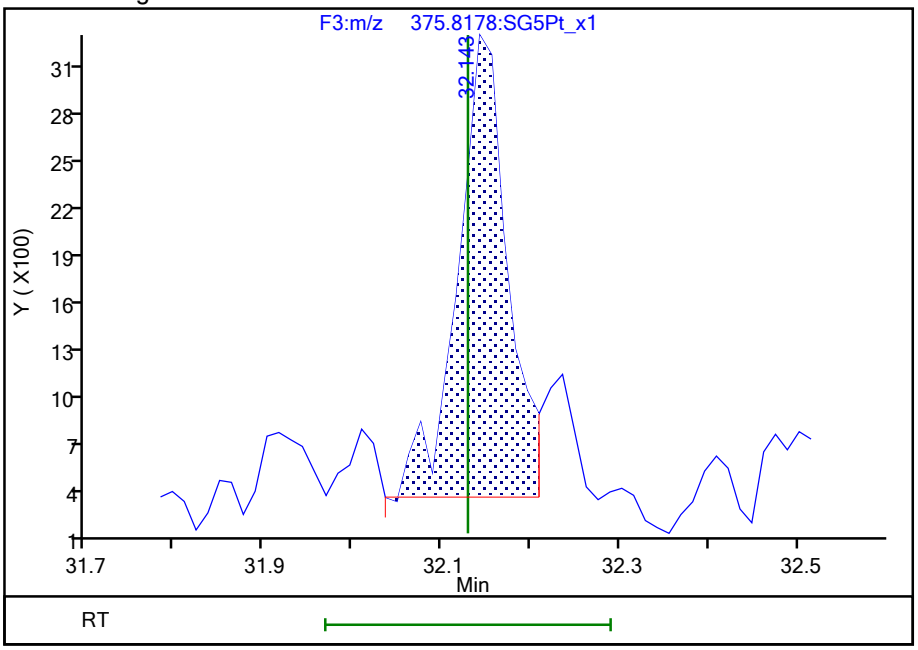

Reviewer: dadunj, 30-Aug-2021 08:34:20
Audit Action: Split an Integrated Peak Audit Reason: Baseline

793587

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d				
Injection Date:	26-Aug-2021 10:05:57	Instrument ID:	10D5		
Lims ID:	320-77292-A-6-A	Lab Sample ID:	320-77292-6		
Client ID:	11215702-080321-BN-SJSB091 (10-12)				
Operator ID:	SMA	ALS Bottle#:	43	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 1

Processing Integration Results

RT: 31.96
Area: 288597
Amount: 0.980739
Amount Units: pg/ul

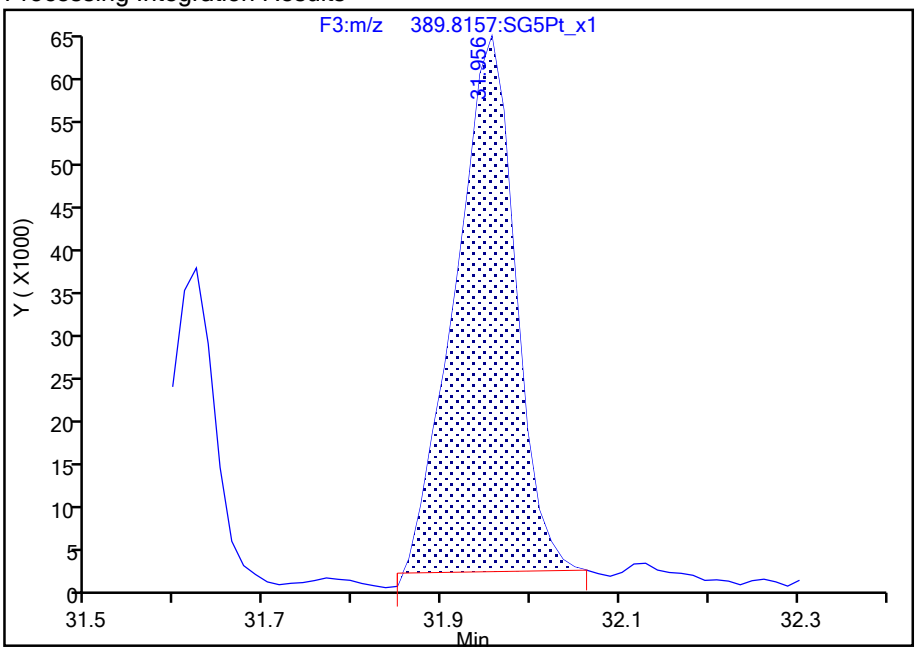

Manual Integration Results

RT: 31.96
Area: 205034
Amount: 0.682577
Amount Units: pg/ul

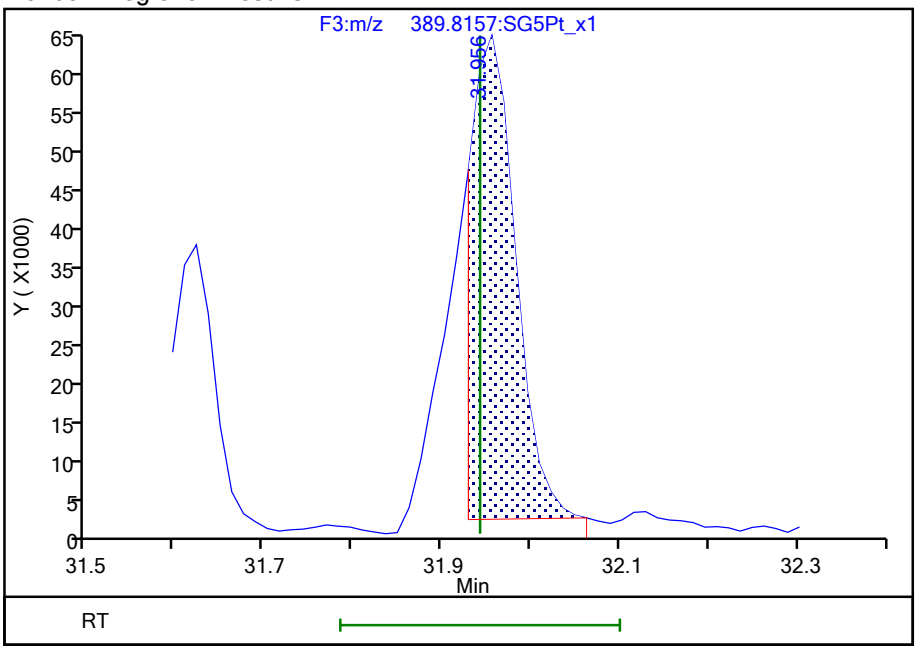

Reviewer: dadunj, 30-Aug-2021 08:34:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793588

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d				
Injection Date:	26-Aug-2021 10:05:57	Instrument ID:	10D5		
Lims ID:	320-77292-A-6-A	Lab Sample ID:	320-77292-6		
Client ID:	11215702-080321-BN-SJSB091 (10-12)				
Operator ID:	SMA	ALS Bottle#:	43	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDD, CAS: 19408-74-3

Signal: 2

Processing Integration Results

RT: 31.96
Area: 242511
Amount: 0.980739
Amount Units: pg/ul

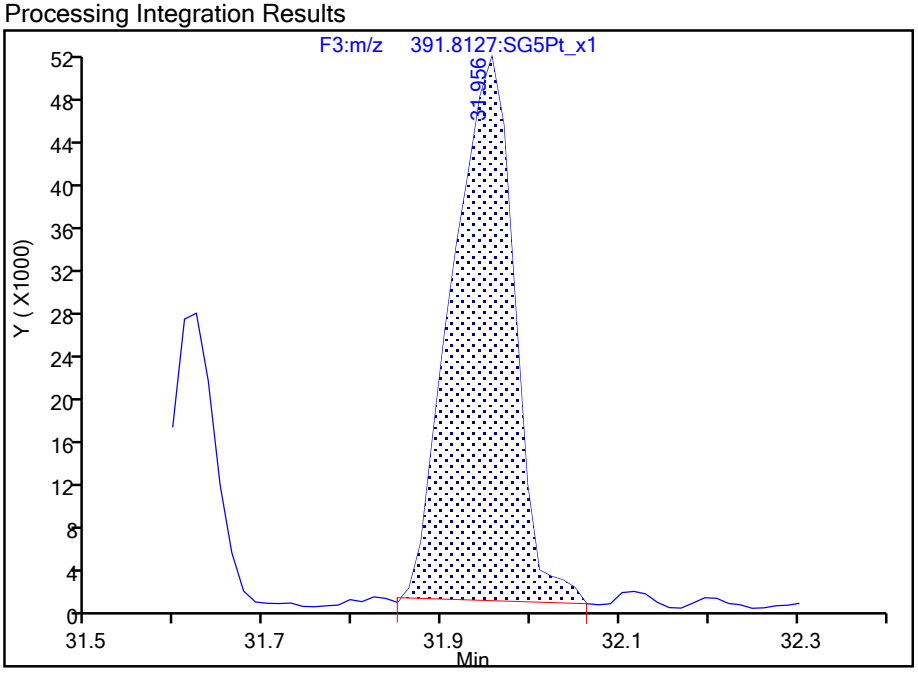

Manual Integration Results

RT: 31.96
Area: 164608
Amount: 0.682577
Amount Units: pg/ul

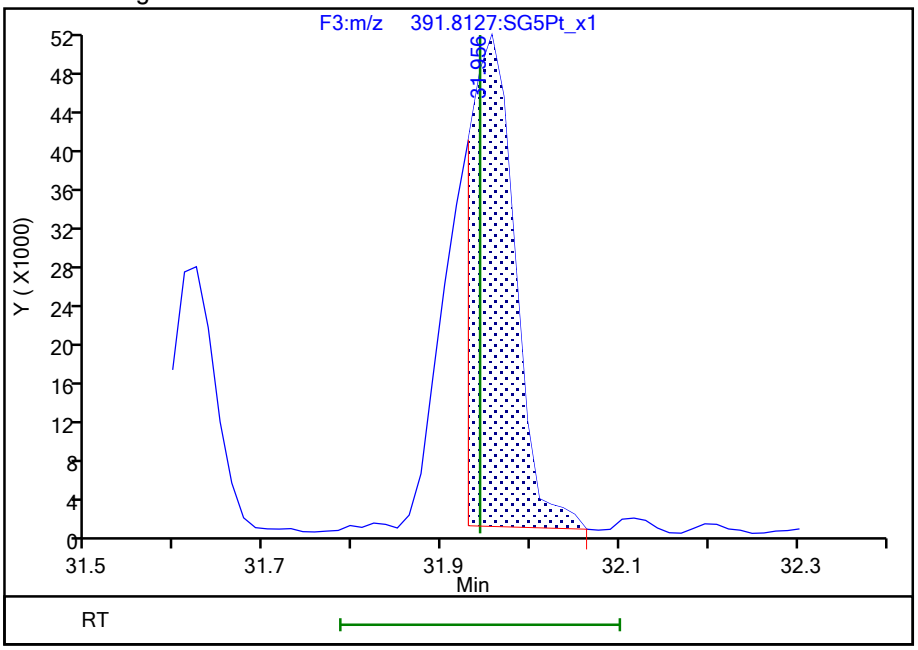

Reviewer: dadunj, 30-Aug-2021 08:34:39
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793589

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d				
Injection Date:	26-Aug-2021 10:05:57	Instrument ID:	10D5		
Lims ID:	320-77292-A-6-A	Lab Sample ID:	320-77292-6		
Client ID:	11215702-080321-BN-SJSB091 (10-12)				
Operator ID:	SMA	ALS Bottle#:	43	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

Non-2,3,7,8-sub-HxCDD, Signal: 1, m/z: 389.8157, RT: (28.79- 32.18)

Signal: 1

Not Detected

RT: 28.79- 32.18

Processing Integration Results

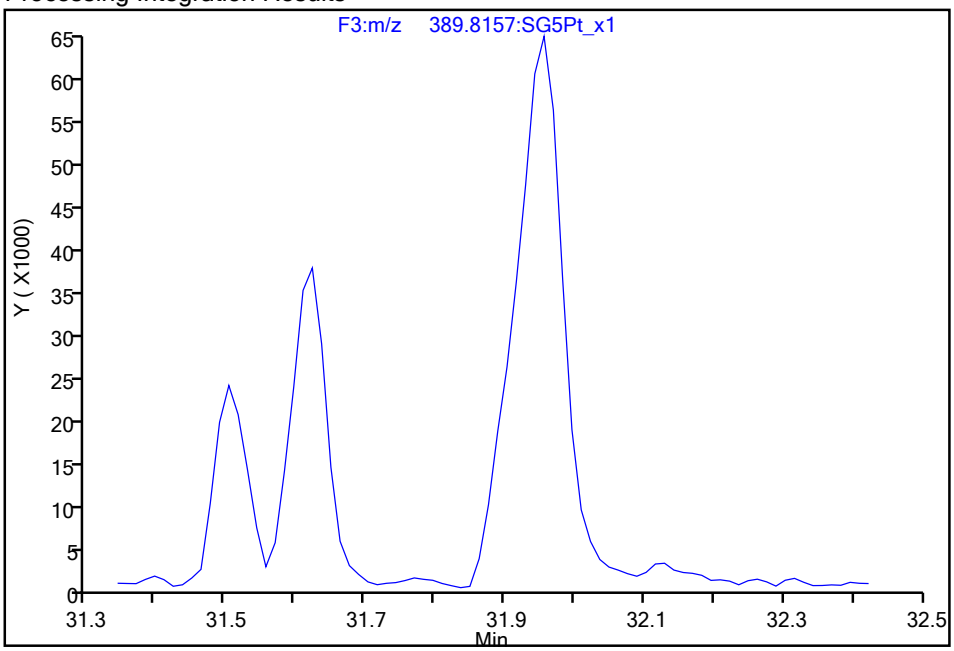

RT = 31.930 Area = 83559 M

Manual Integration Results

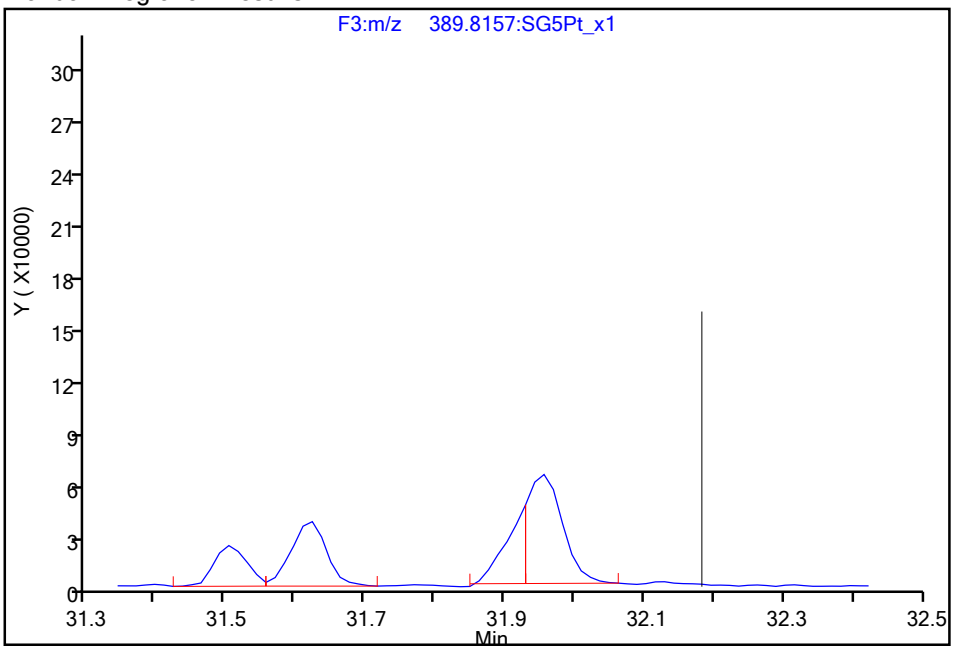

Reviewer: dadunj, 30-Aug-2021 08:34:44

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

793590

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d				
Injection Date:	26-Aug-2021 10:05:57	Instrument ID:	10D5		
Lims ID:	320-77292-A-6-A	Lab Sample ID:	320-77292-6		
Client ID:	11215702-080321-BN-SJSB091 (10-12)				
Operator ID:	SMA	ALS Bottle#:	43	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.62
Area: 17391
Amount: 0.061909
Amount Units: pg/ul

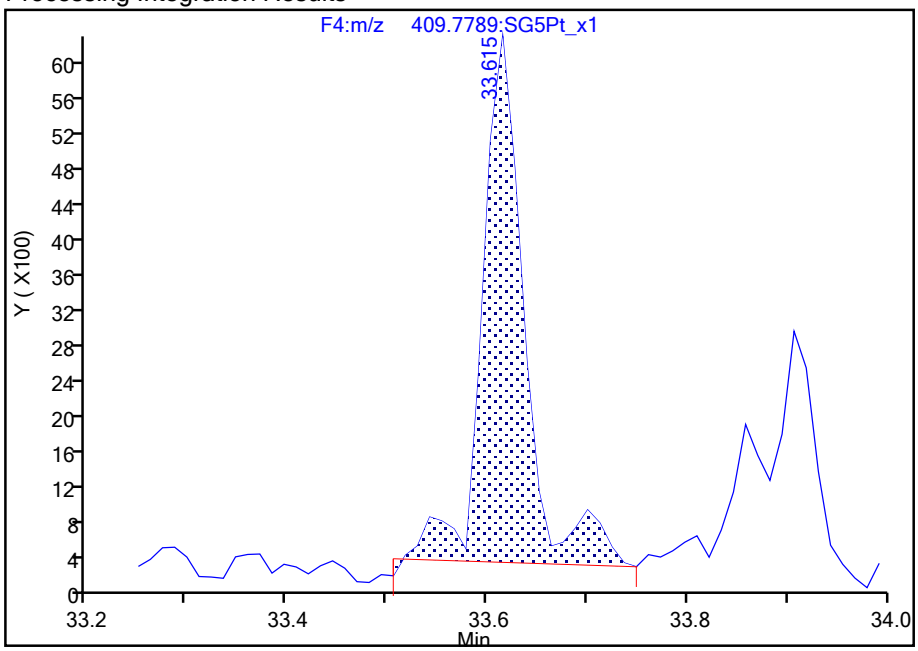

Manual Integration Results

RT: 33.62
Area: 14953
Amount: 0.056759
Amount Units: pg/ul

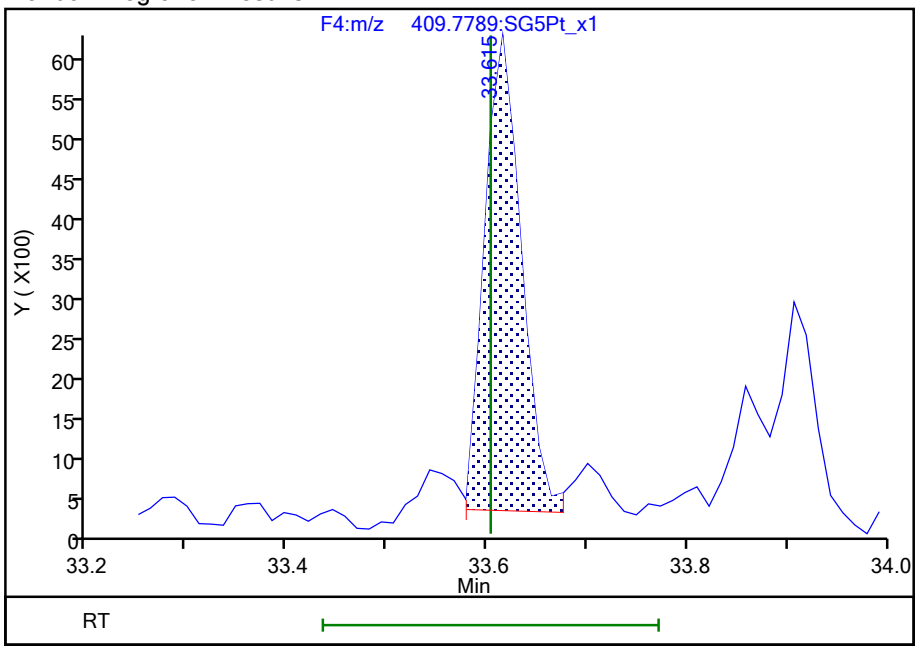

Reviewer: dadunj, 30-Aug-2021 08:35:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d				
Injection Date:	26-Aug-2021 10:05:57	Instrument ID:	10D5		
Lims ID:	320-77292-A-6-A	Lab Sample ID:	320-77292-6		
Client ID:	11215702-080321-BN-SJSB091 (10-12)				
Operator ID:	SMA	ALS Bottle#:	43	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 1

Processing Integration Results

RT: 33.62
Area: 16084
Amount: 0.061909
Amount Units: pg/ul

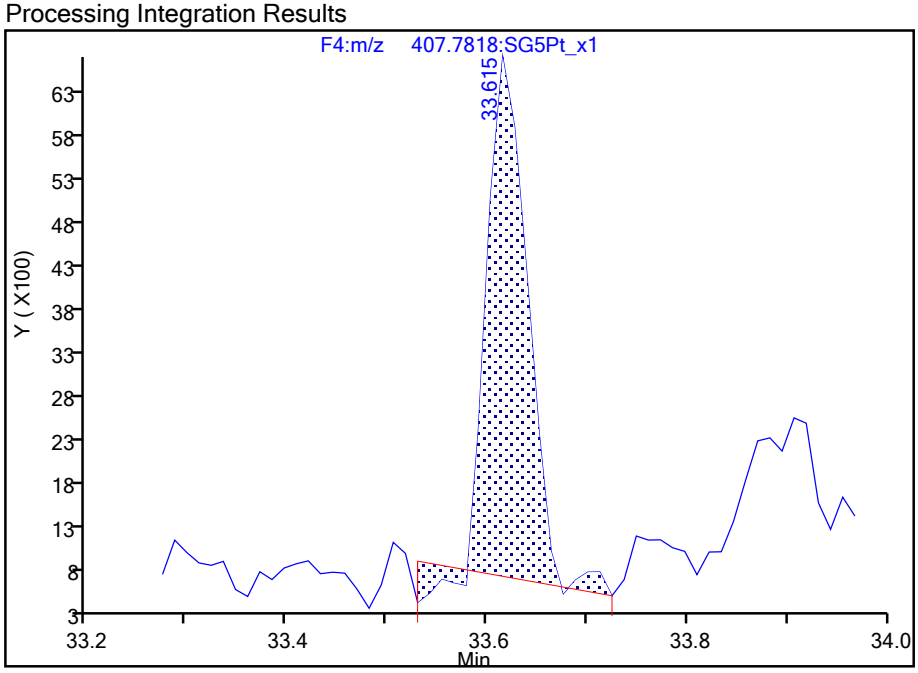

Manual Integration Results

RT: 33.62
Area: 15737
Amount: 0.056759
Amount Units: pg/ul

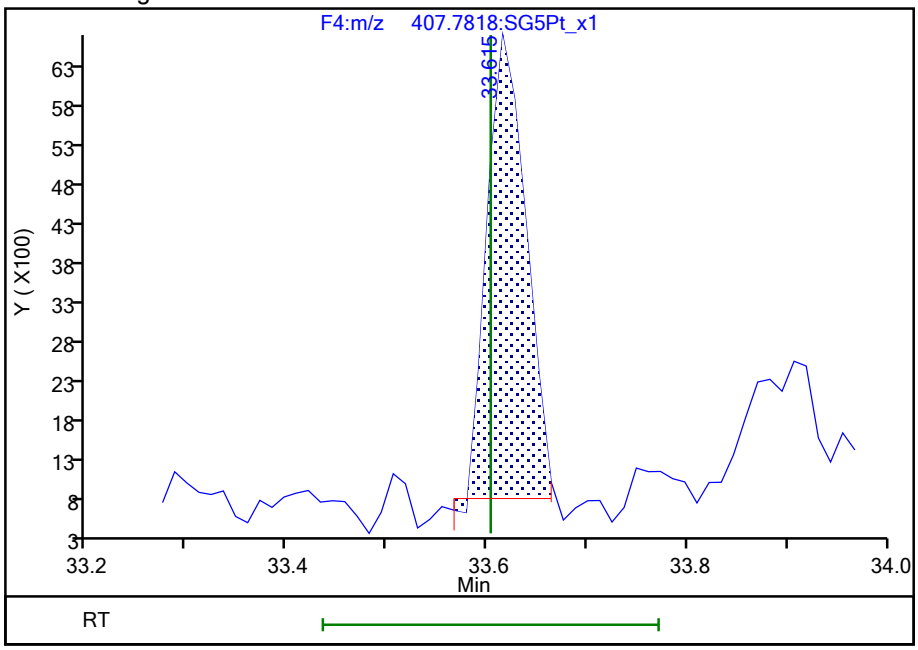

Reviewer: dadunj, 30-Aug-2021 08:35:05

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d				
Injection Date:	26-Aug-2021 10:05:57	Instrument ID:	10D5		
Lims ID:	320-77292-A-6-A	Lab Sample ID:	320-77292-6		
Client ID:	11215702-080321-BN-SJSB091 (10-12)				
Operator ID:	SMA	ALS Bottle#:	43	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.71
Area: 64012
Amount: 0.315354
Amount Units: pg/ul

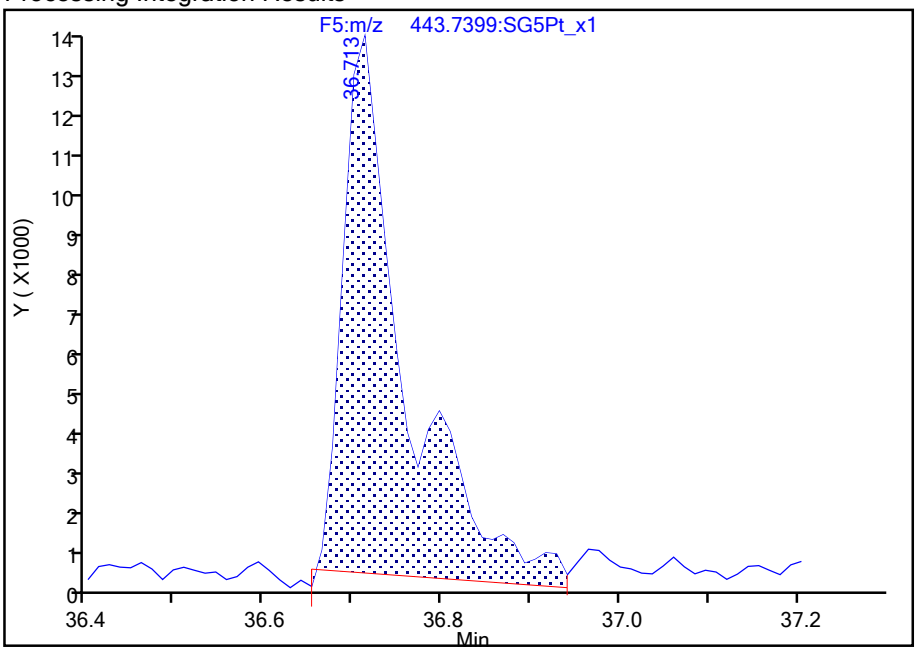

Manual Integration Results

RT: 36.80
Area: 14234
Amount: 0.083061
Amount Units: pg/ul

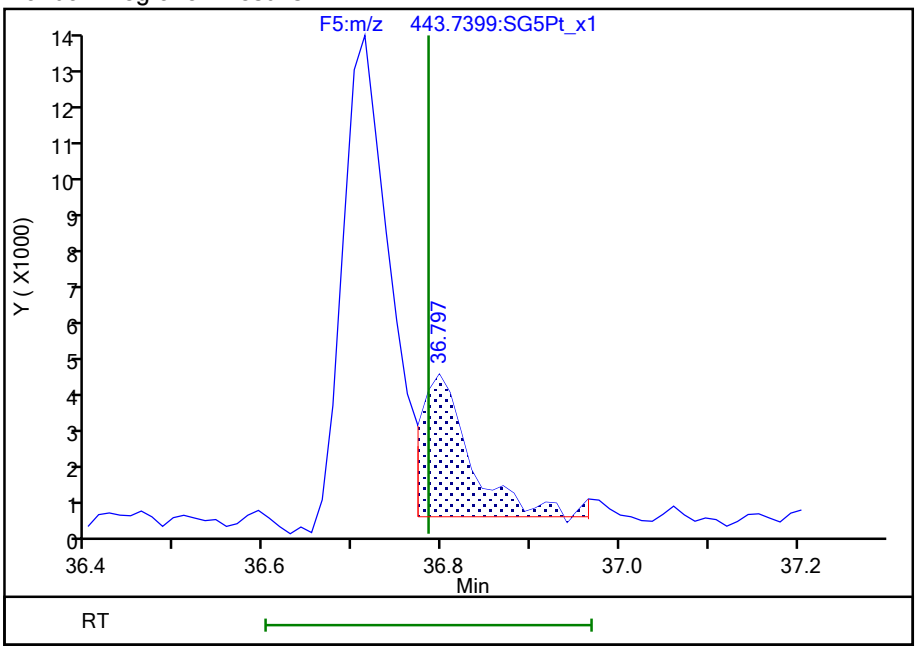

Reviewer: dadunj, 30-Aug-2021 08:35:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793593

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d				
Injection Date:	26-Aug-2021 10:05:57	Instrument ID:	10D5		
Lims ID:	320-77292-A-6-A	Lab Sample ID:	320-77292-6		
Client ID:	11215702-080321-BN-SJSB091 (10-12)				
Operator ID:	SMA	ALS Bottle#:	43	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.73
Area: 56011
Amount: 0.315354
Amount Units: pg/ul

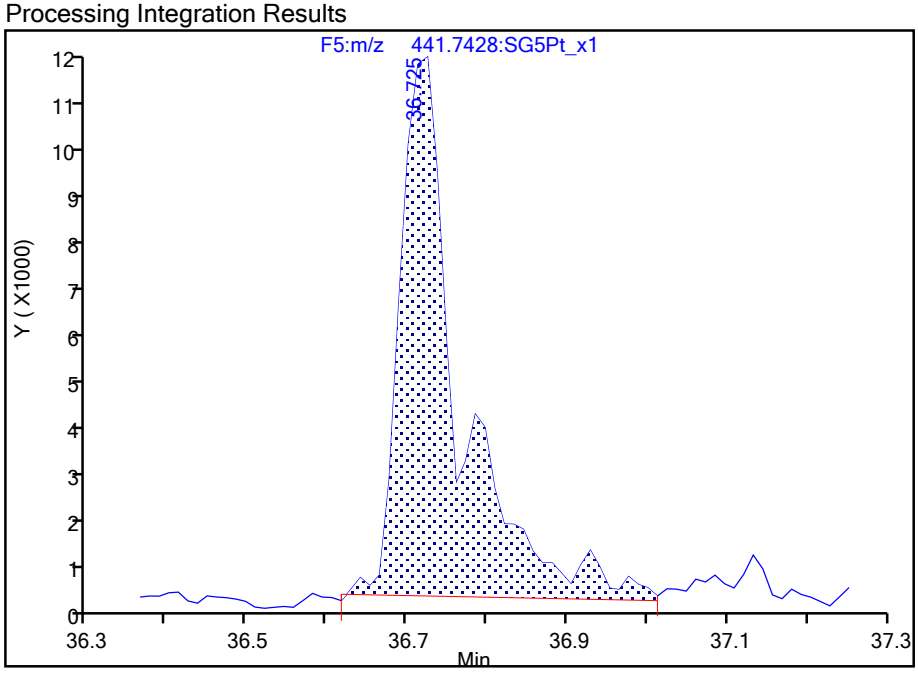

Manual Integration Results

RT: 36.78
Area: 17379
Amount: 0.083061
Amount Units: pg/ul

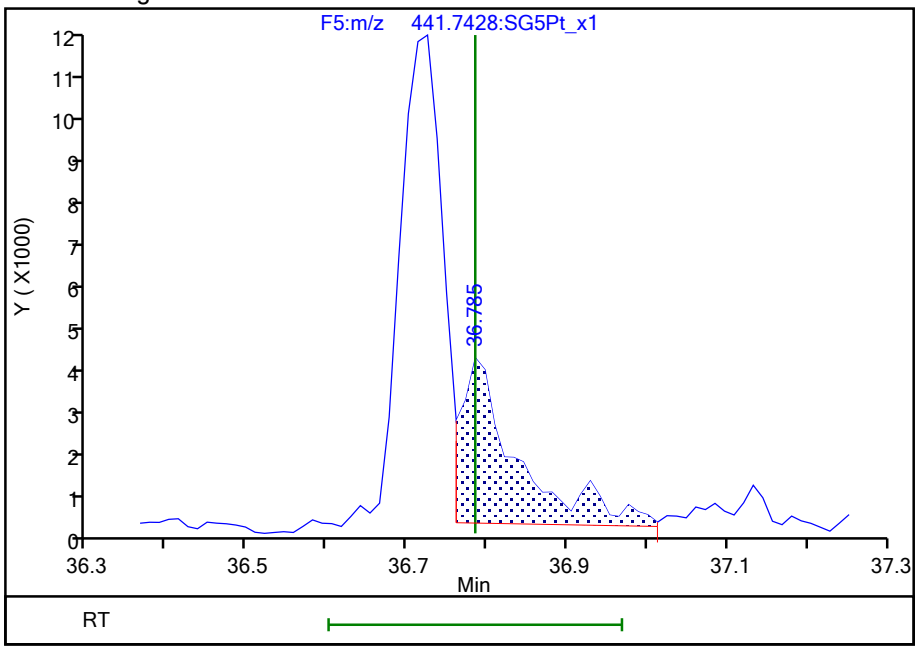

Reviewer: krenns, 30-Aug-2021 16:29:02
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

793594

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

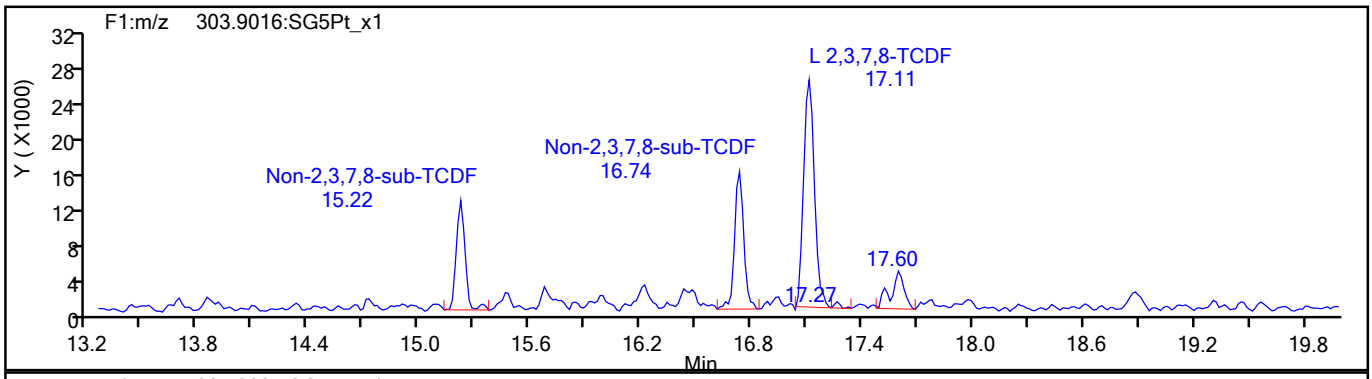

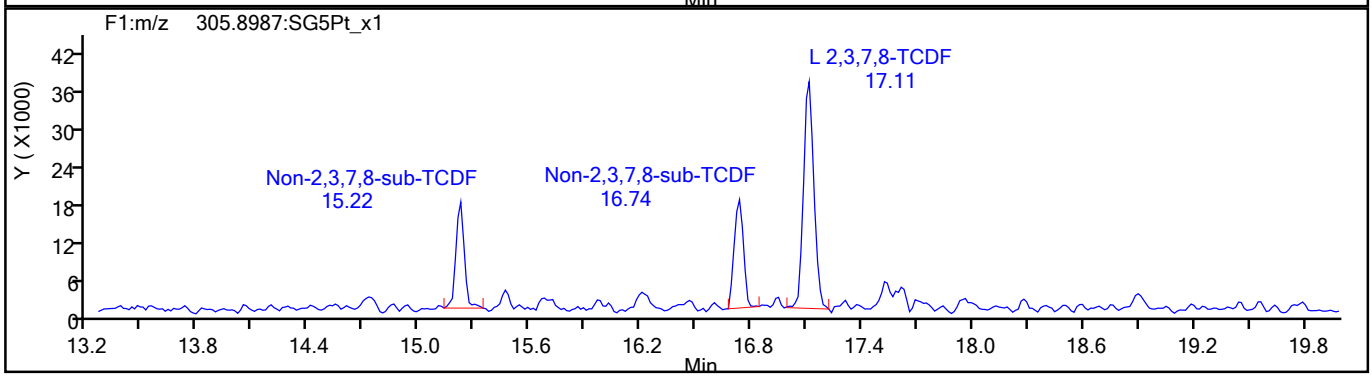

TCDF Standards

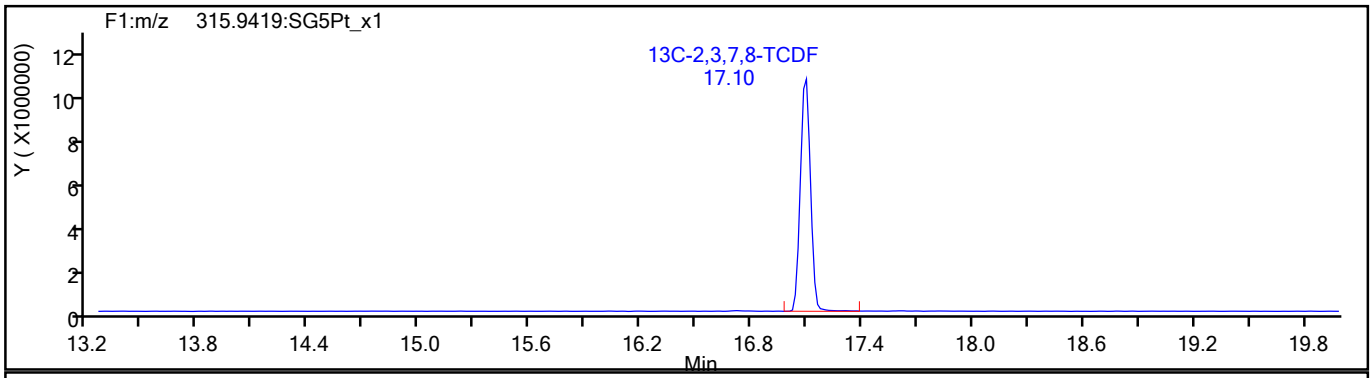

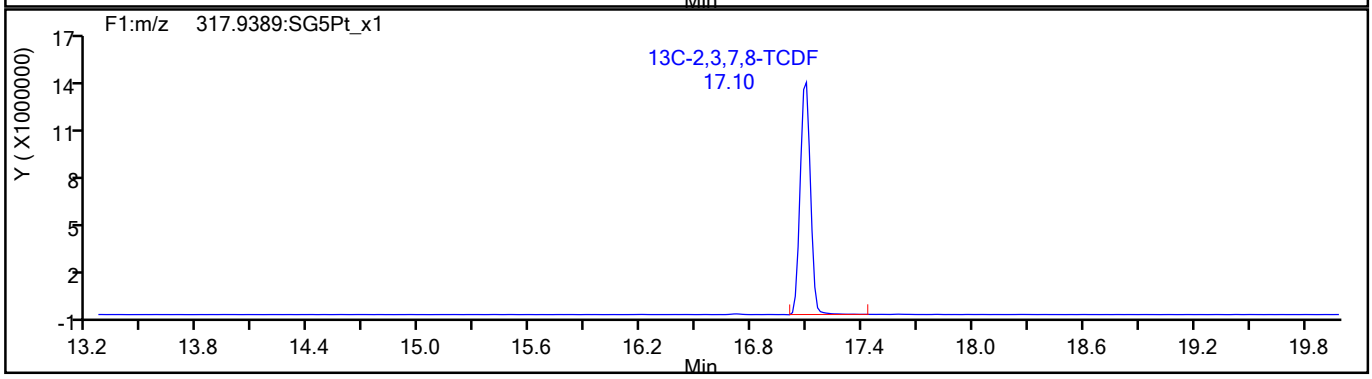

793595

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

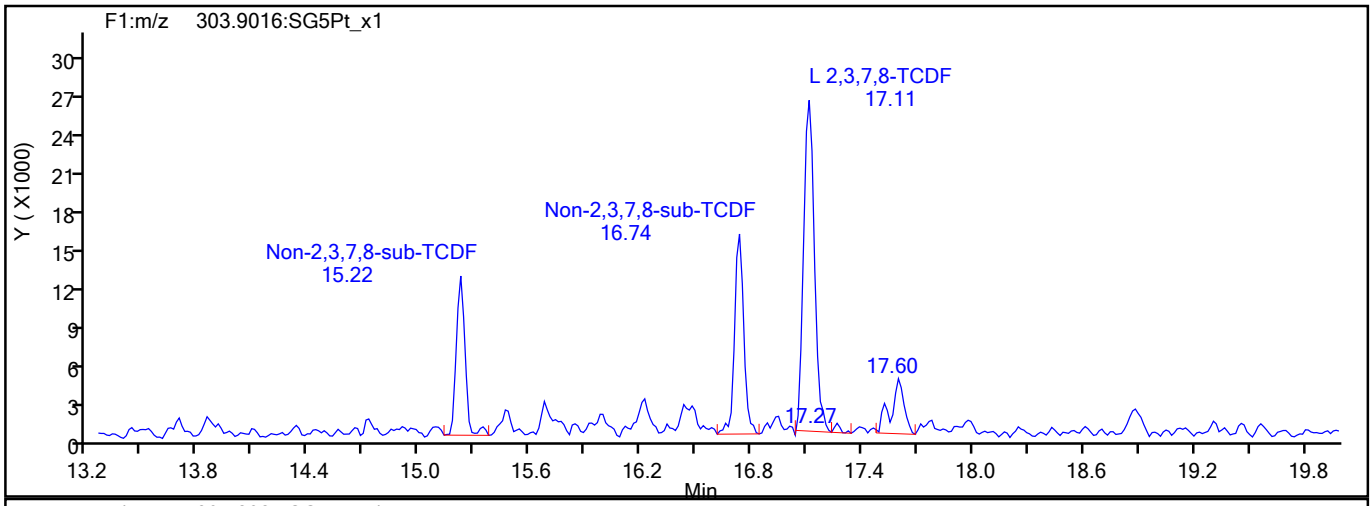

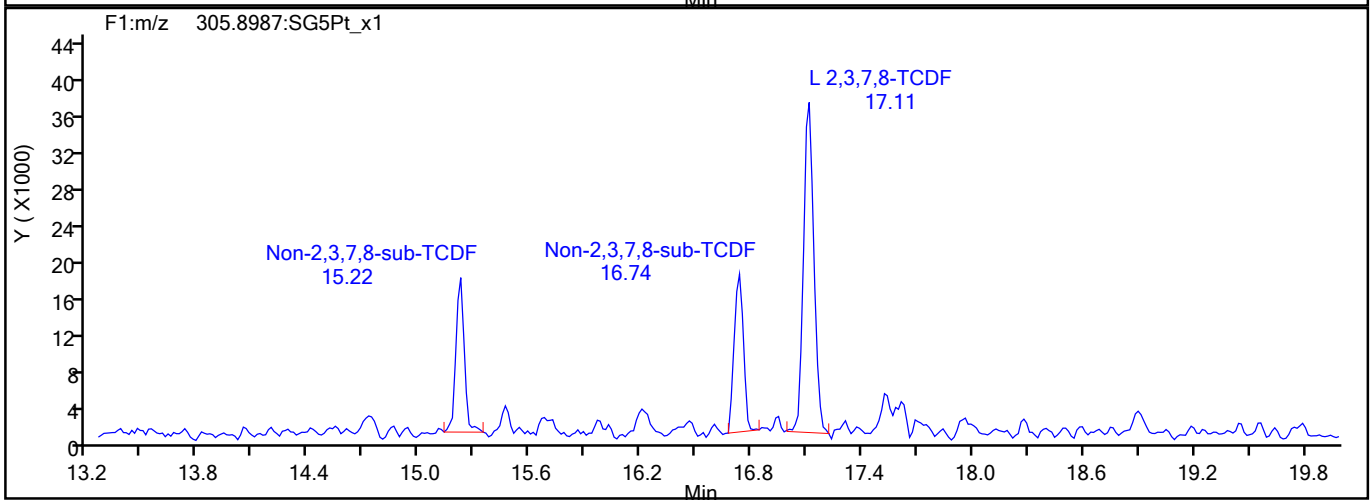

TCDF Interference Mass

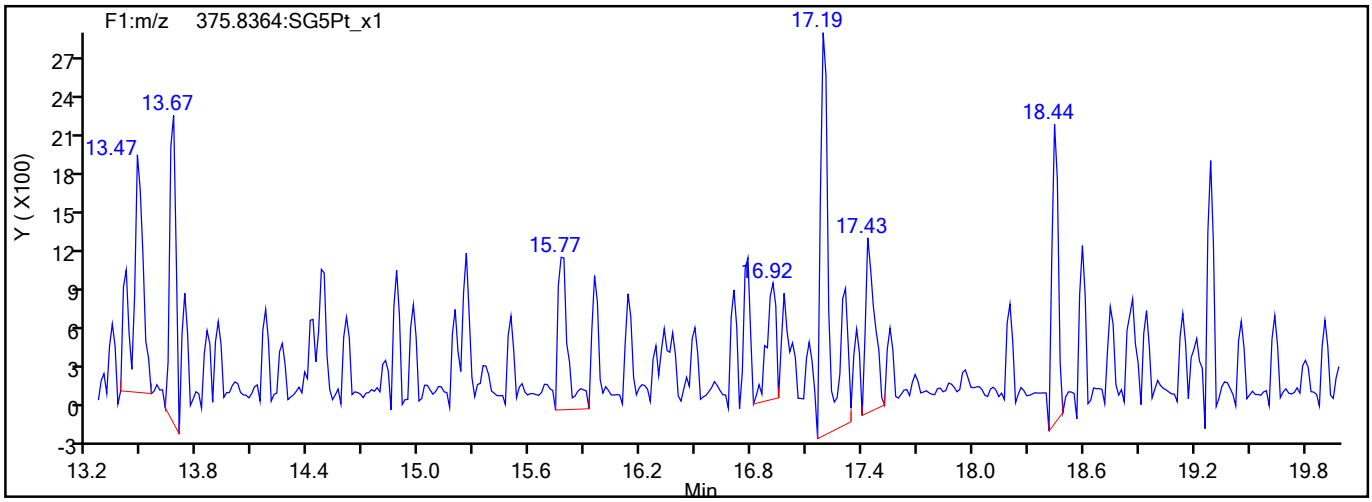

793596

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

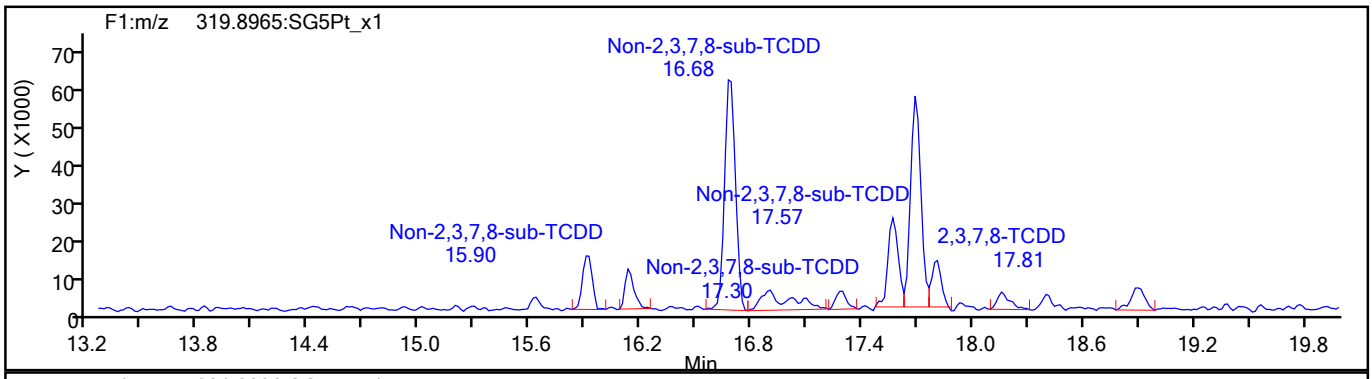

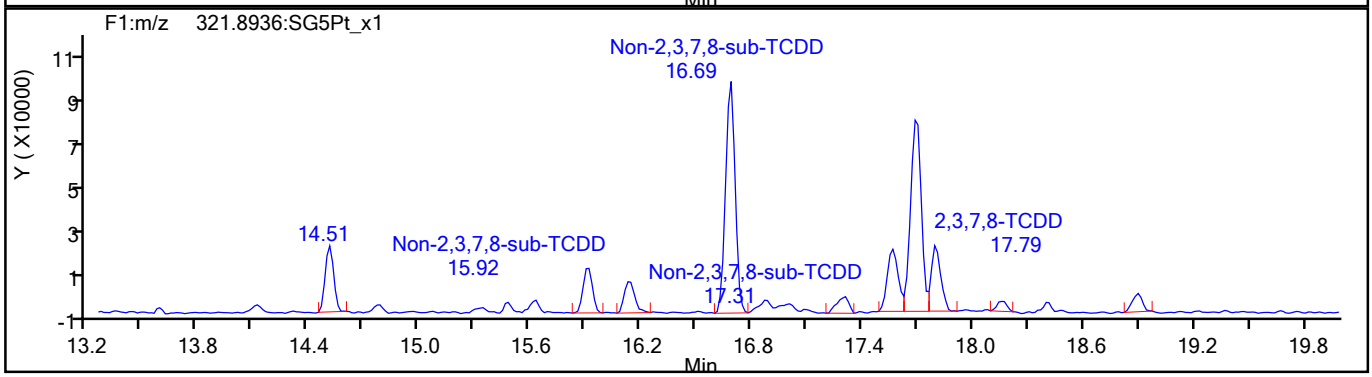

TCDD Standards

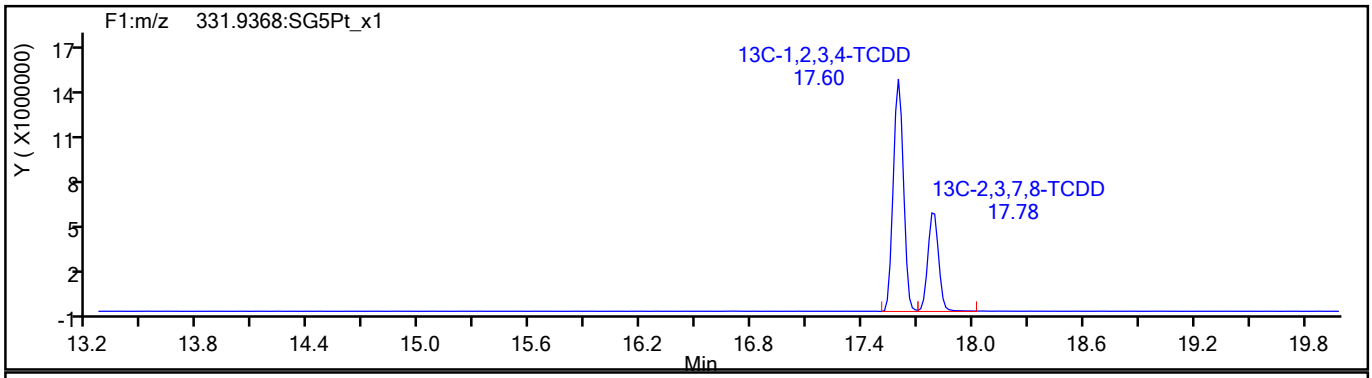

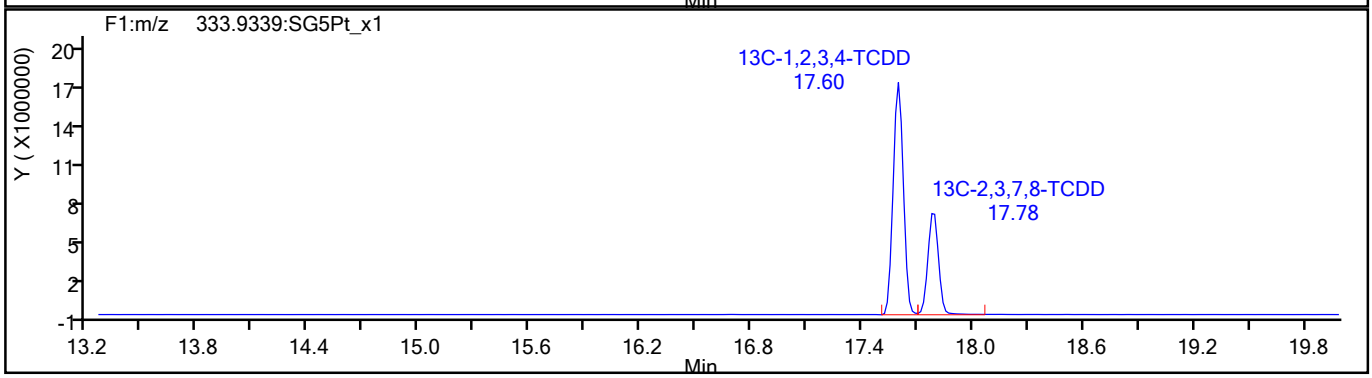

793597

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

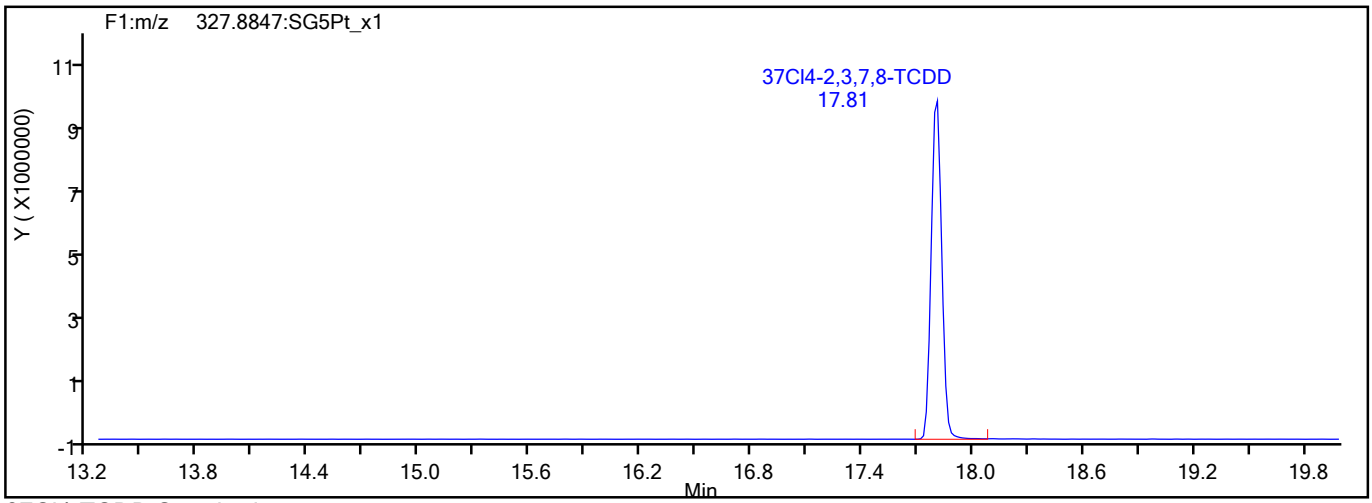

37Cl4-TCDD Standards

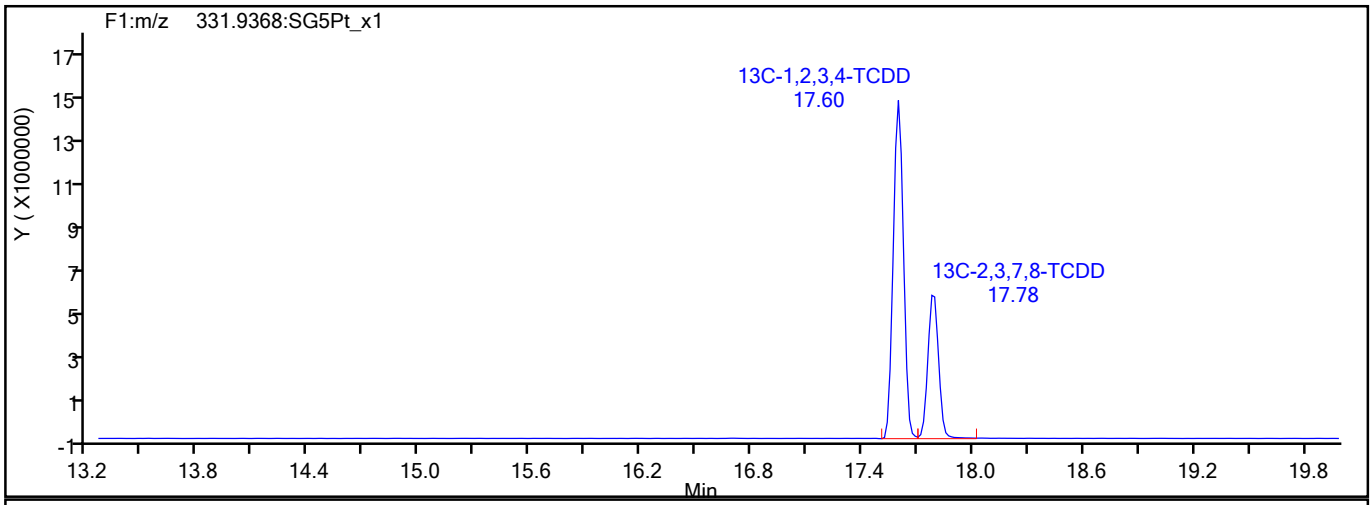

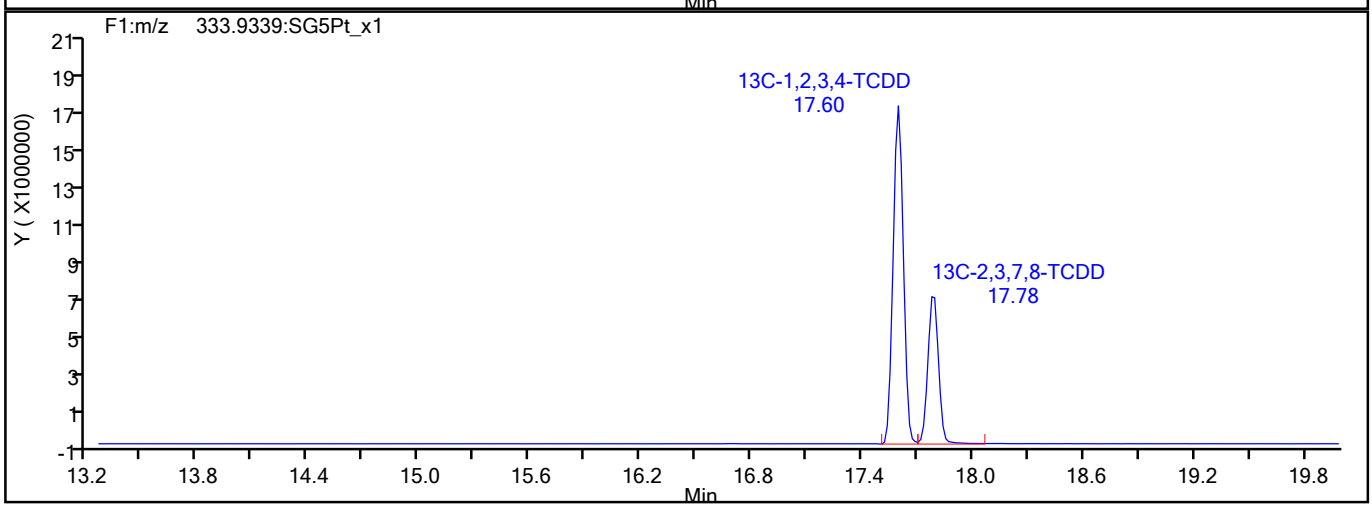

793598

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

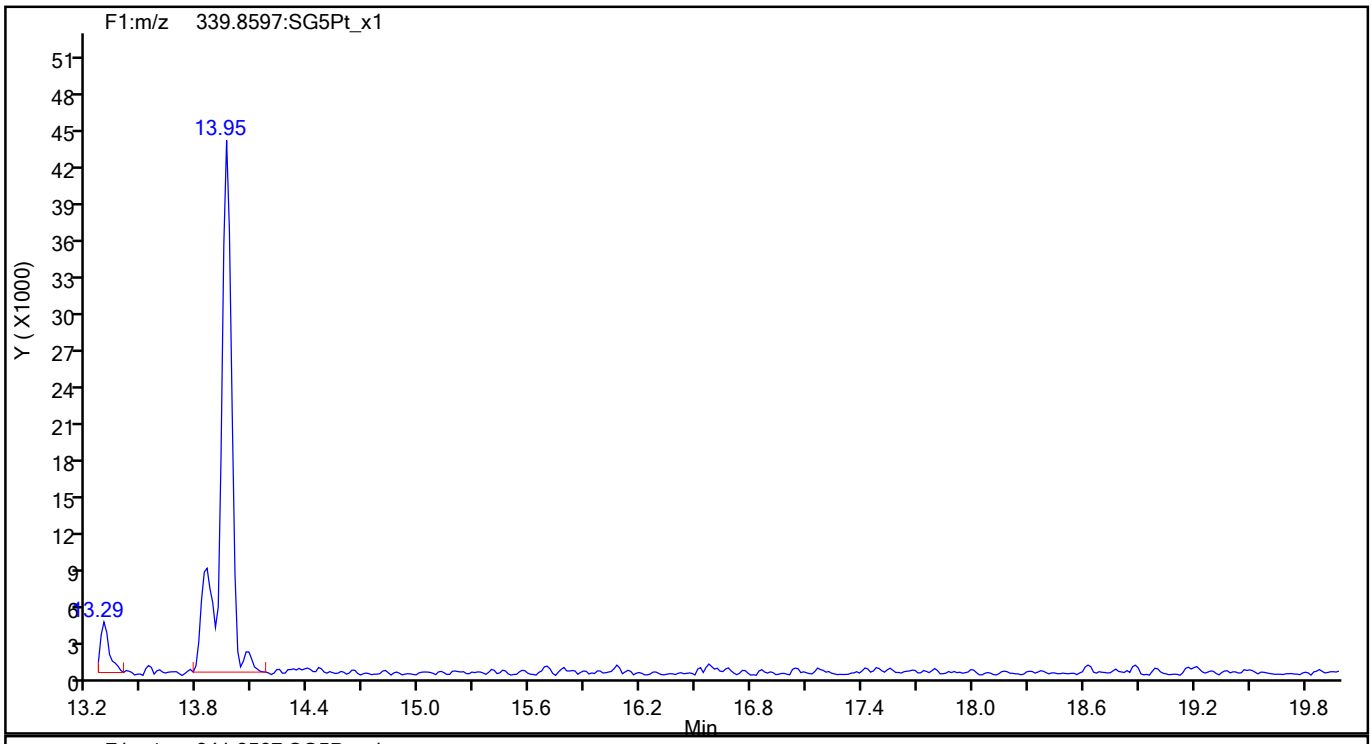

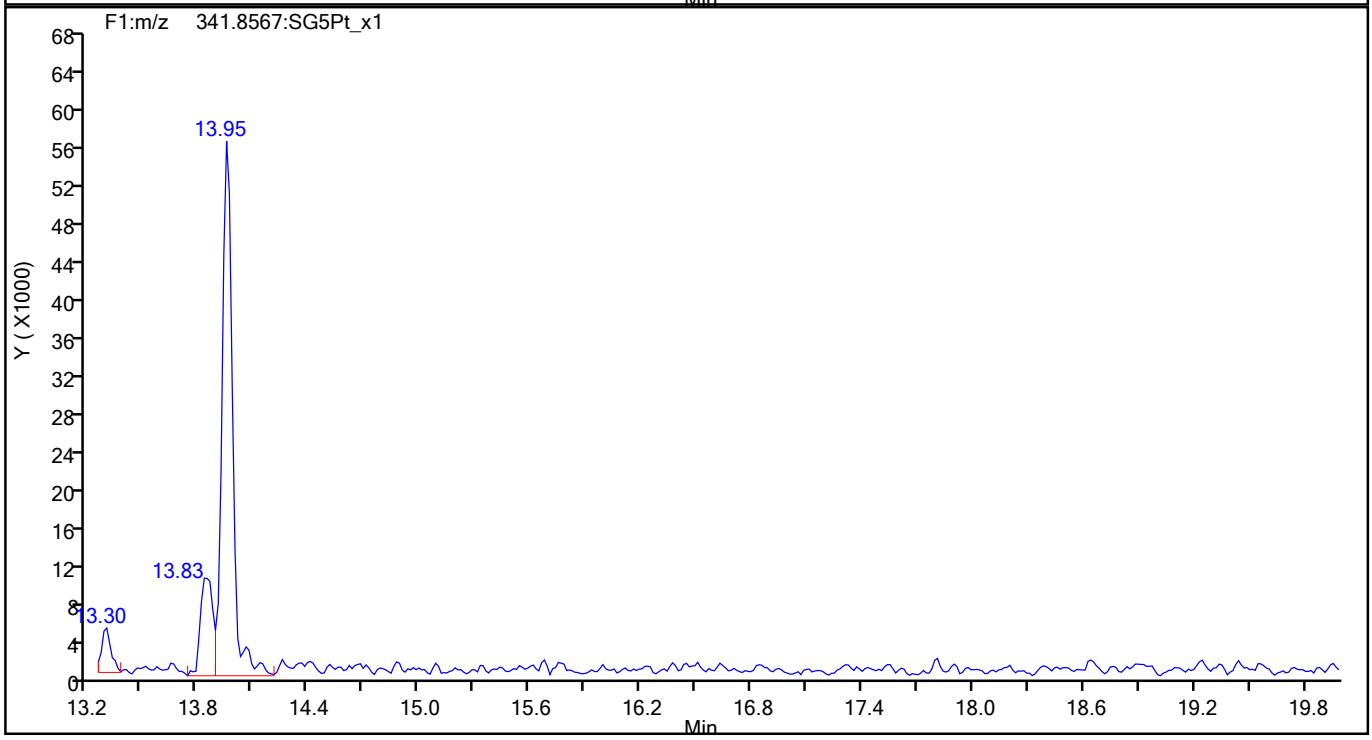

793599

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

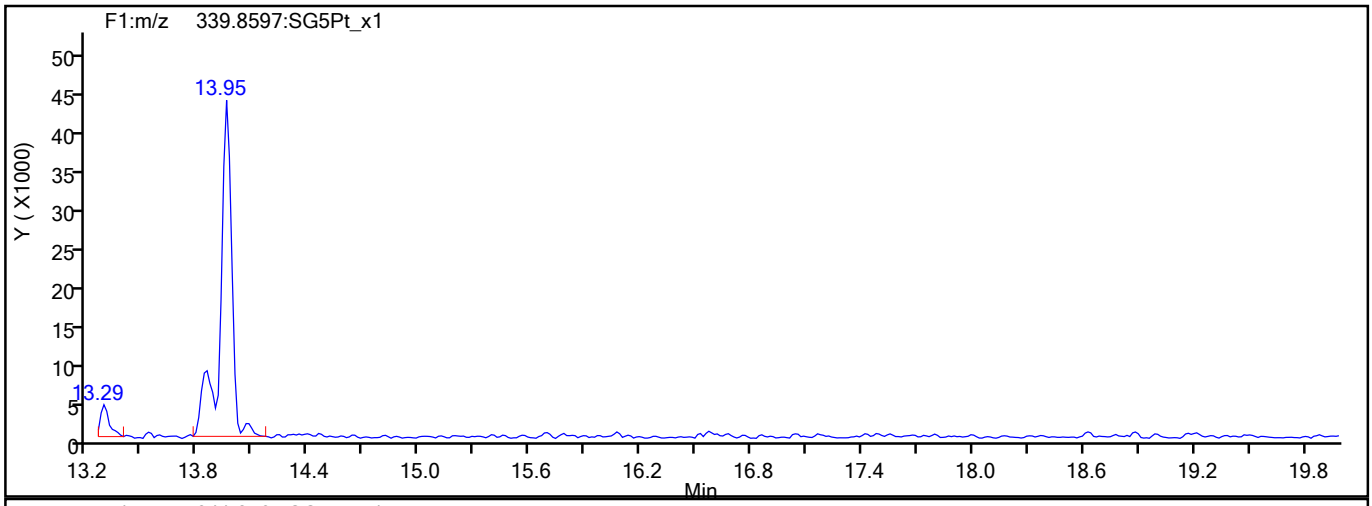

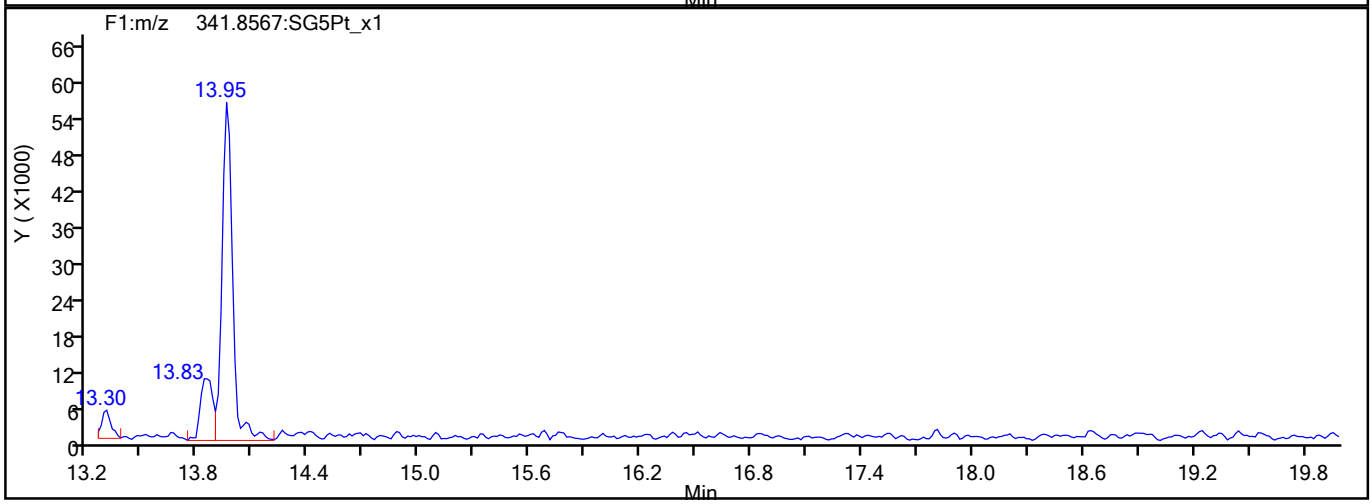

F1 PeCDFs Interference Mass

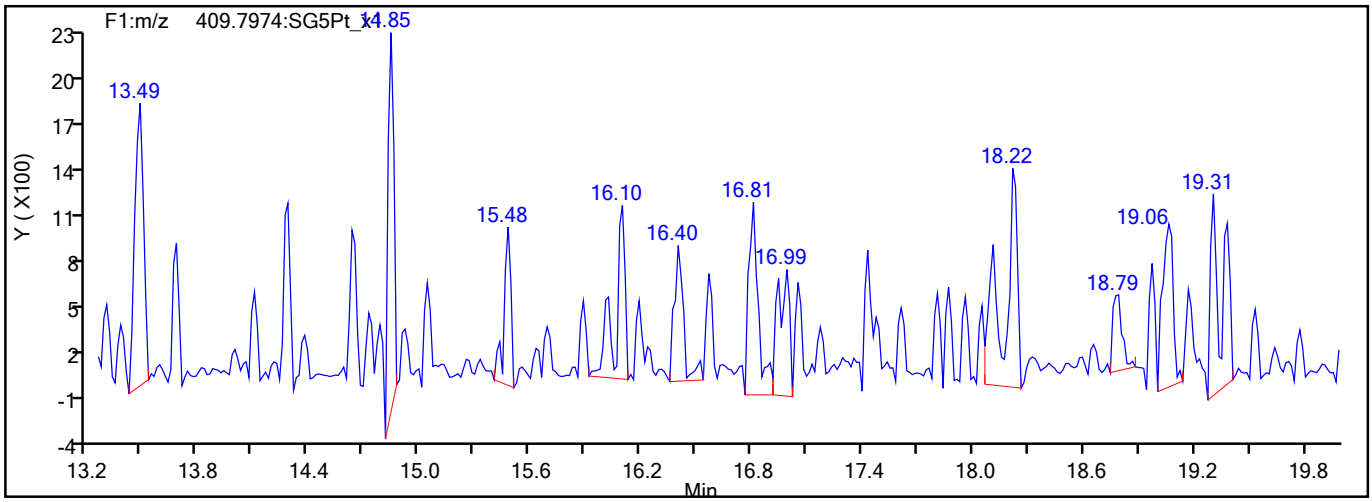

793600

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

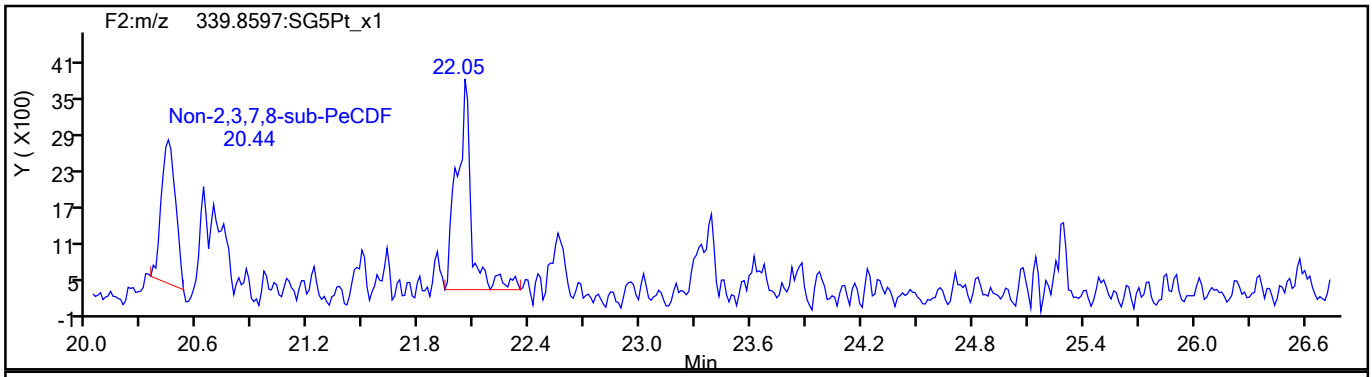

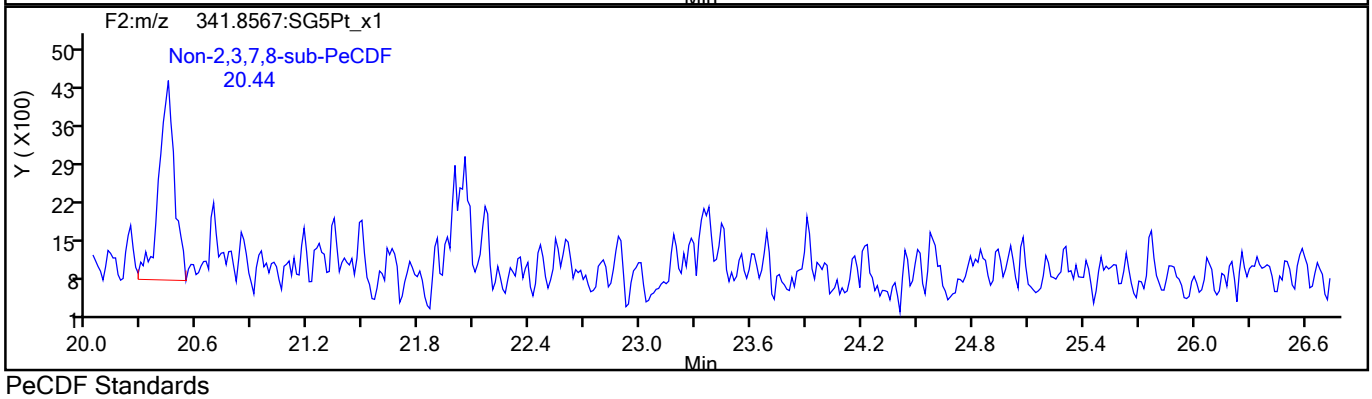

PeCDF Standards

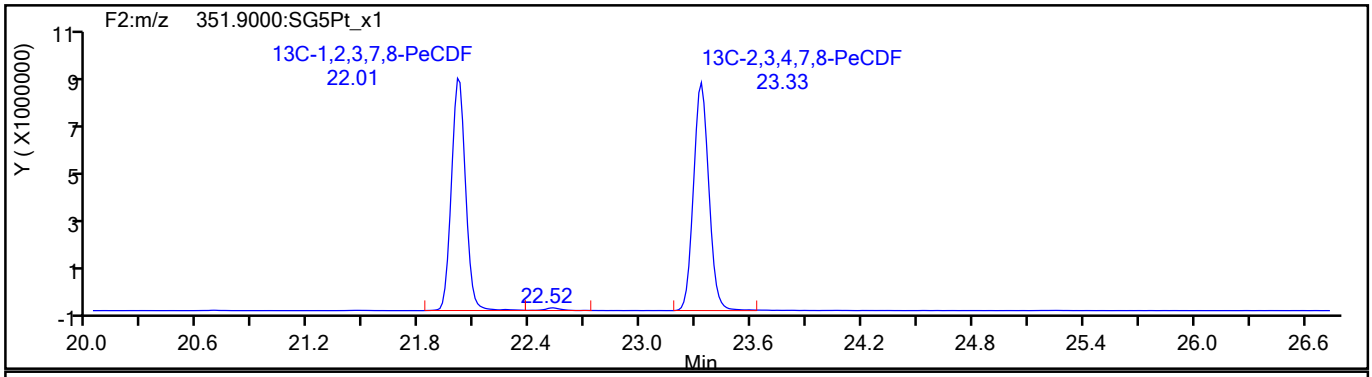

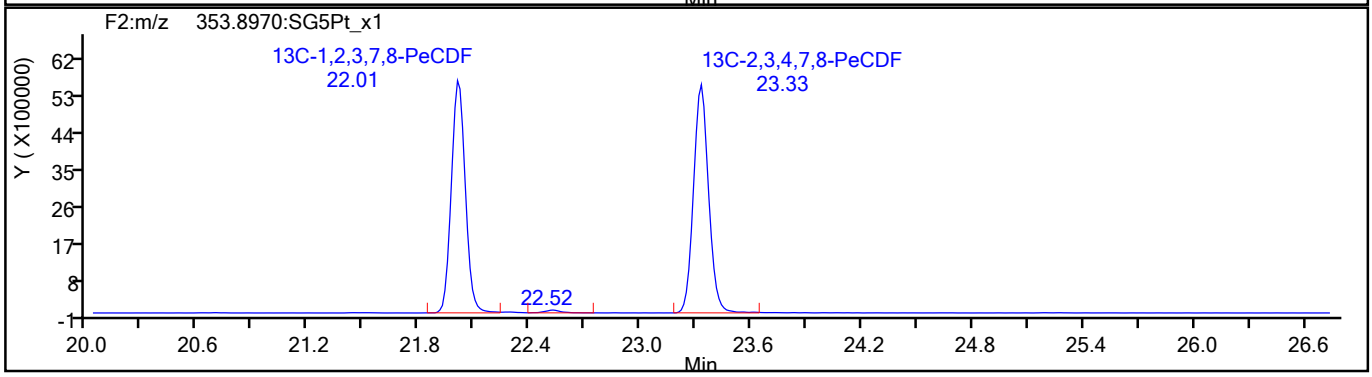

793601

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

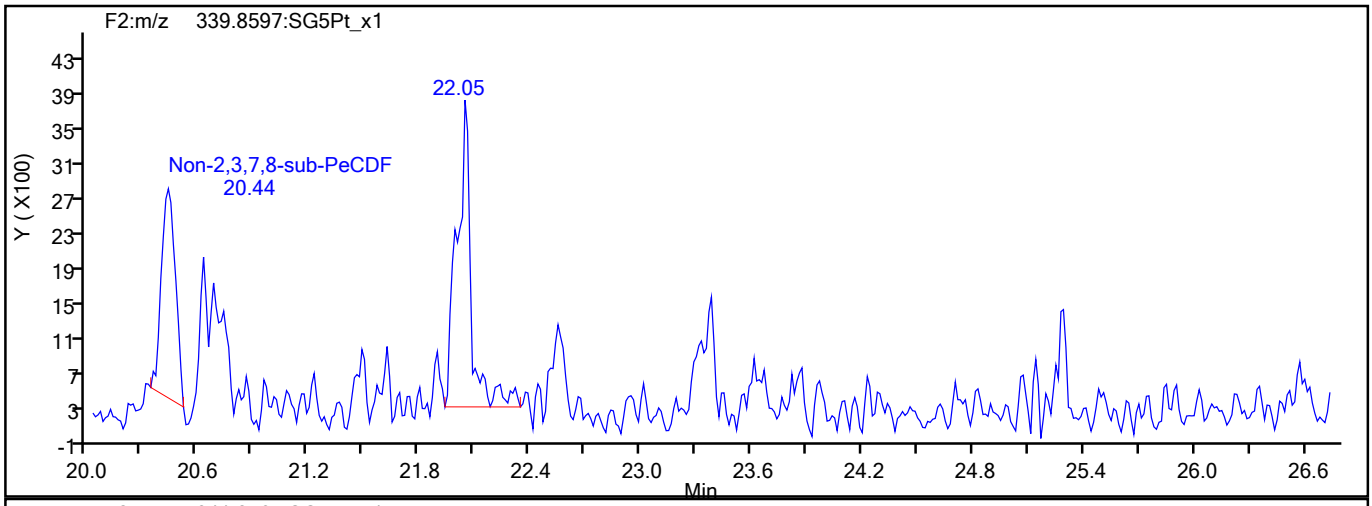

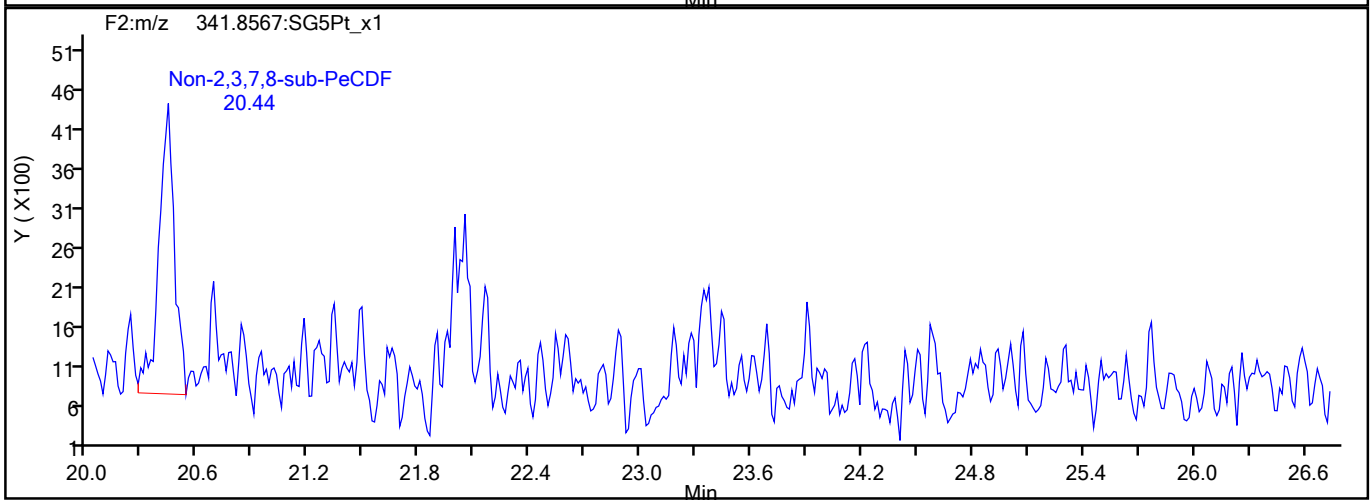

PeCDF Interference Mass

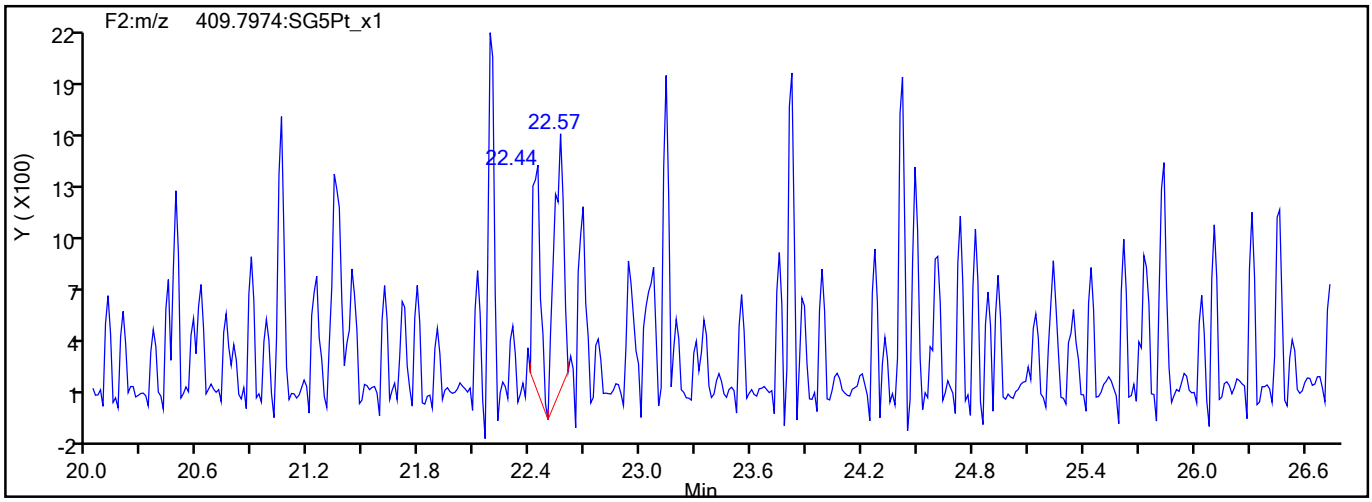

793602

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

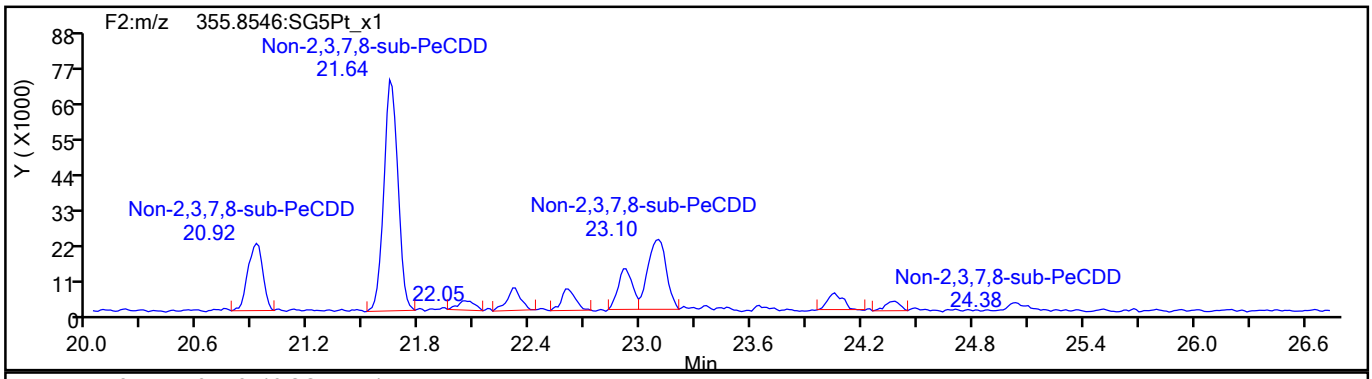

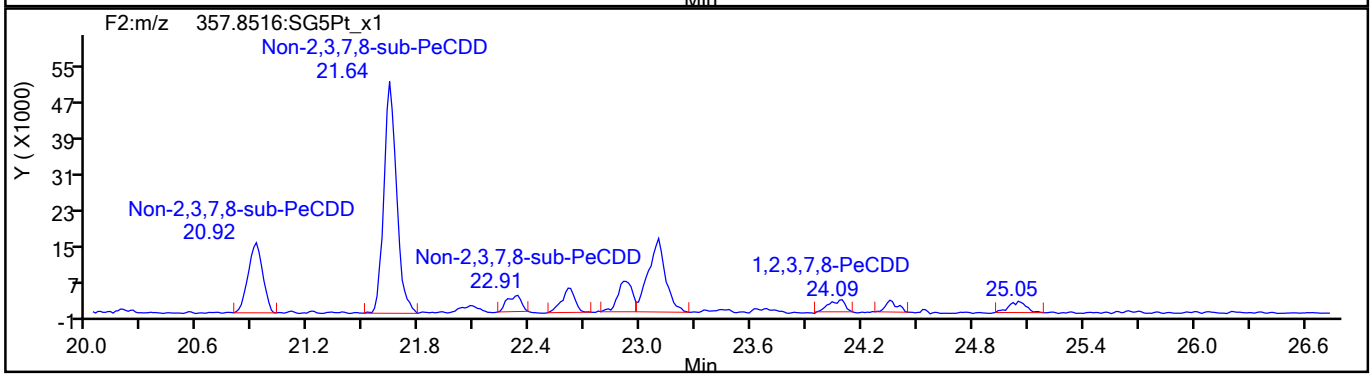

PeCDD Standards

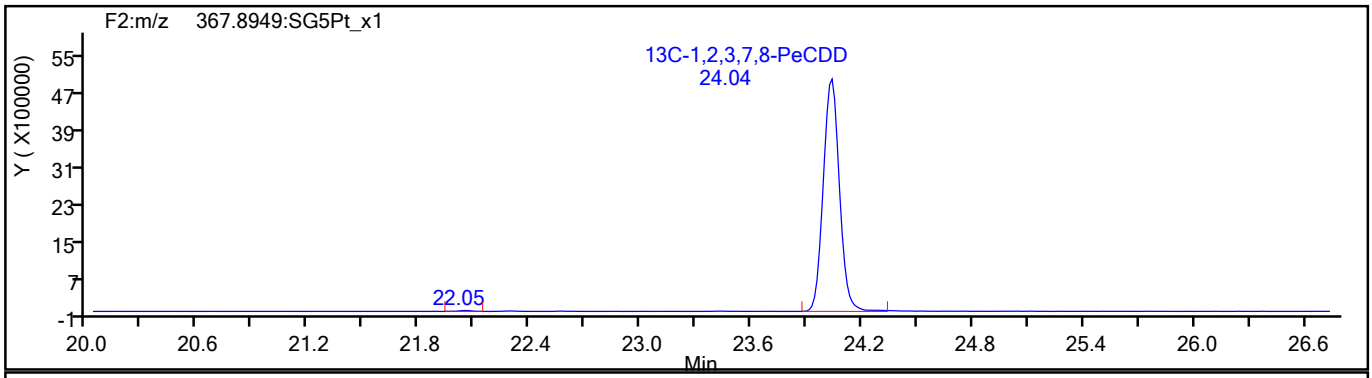

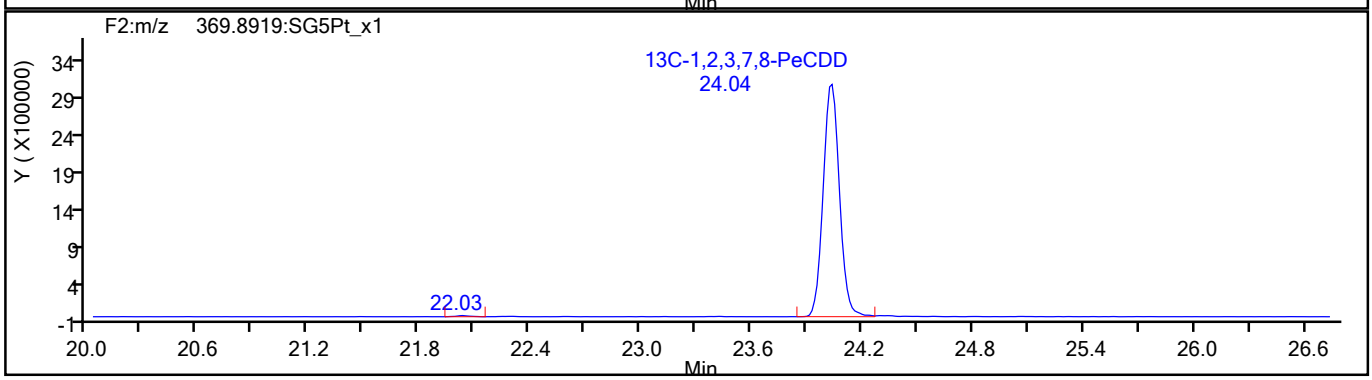

793603

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

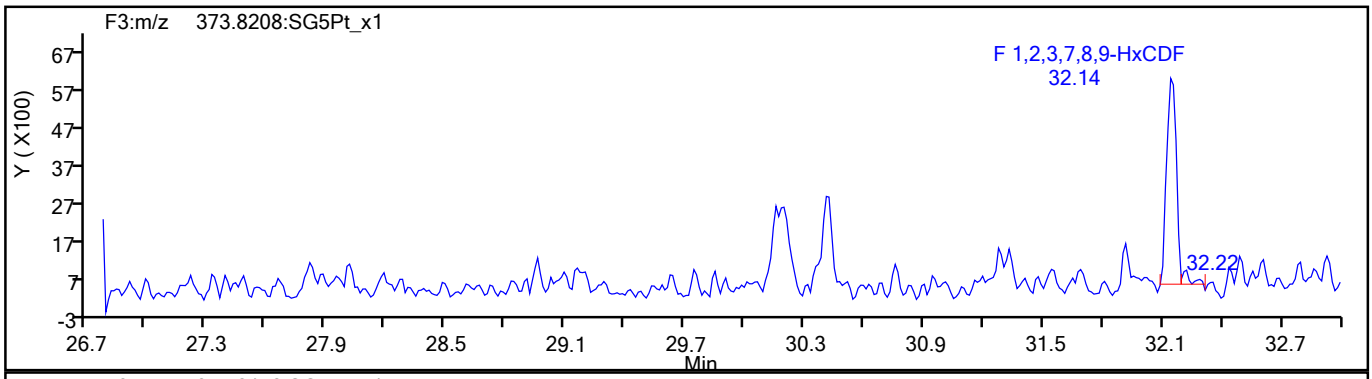

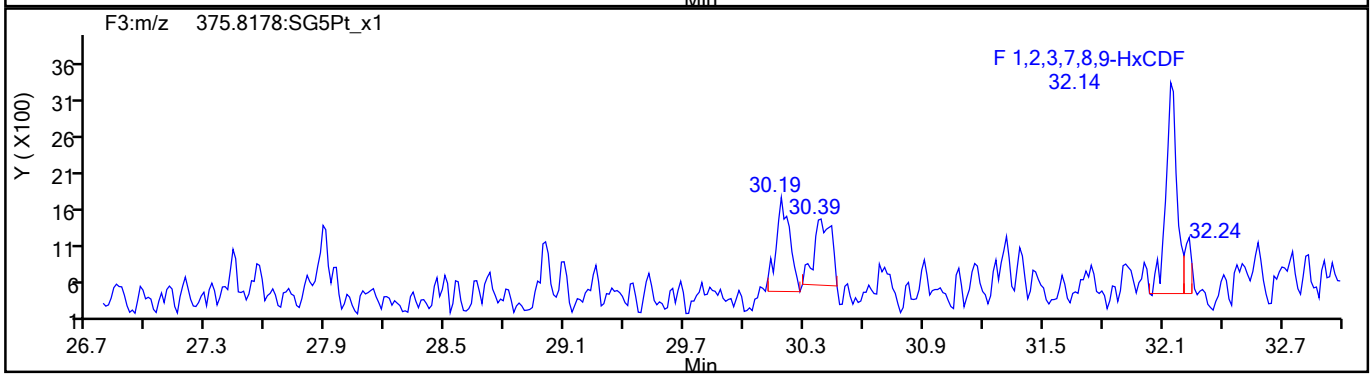

HxCDF Standards

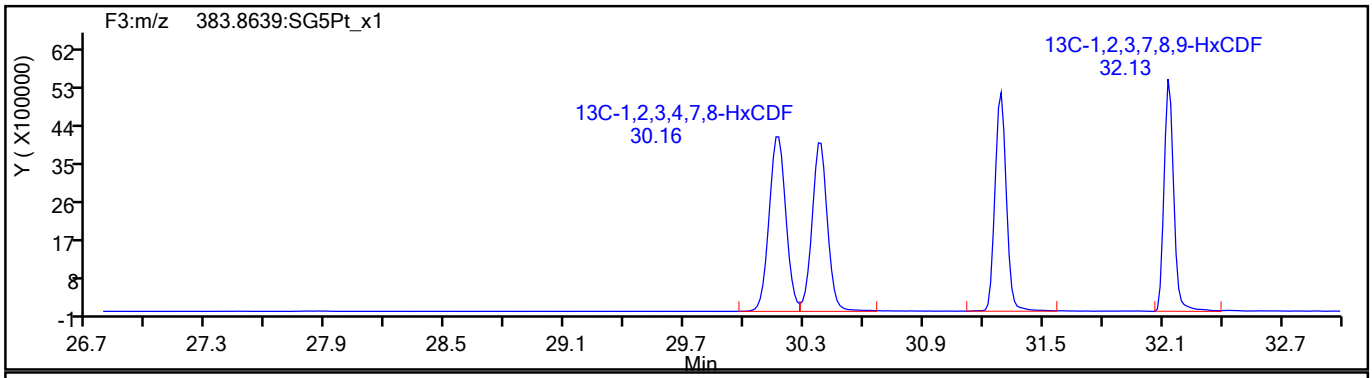

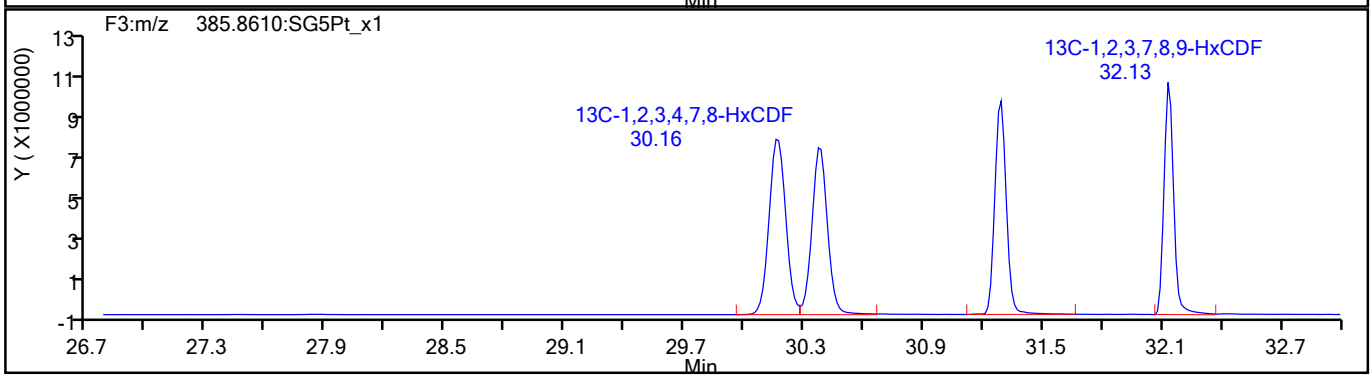

793604

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

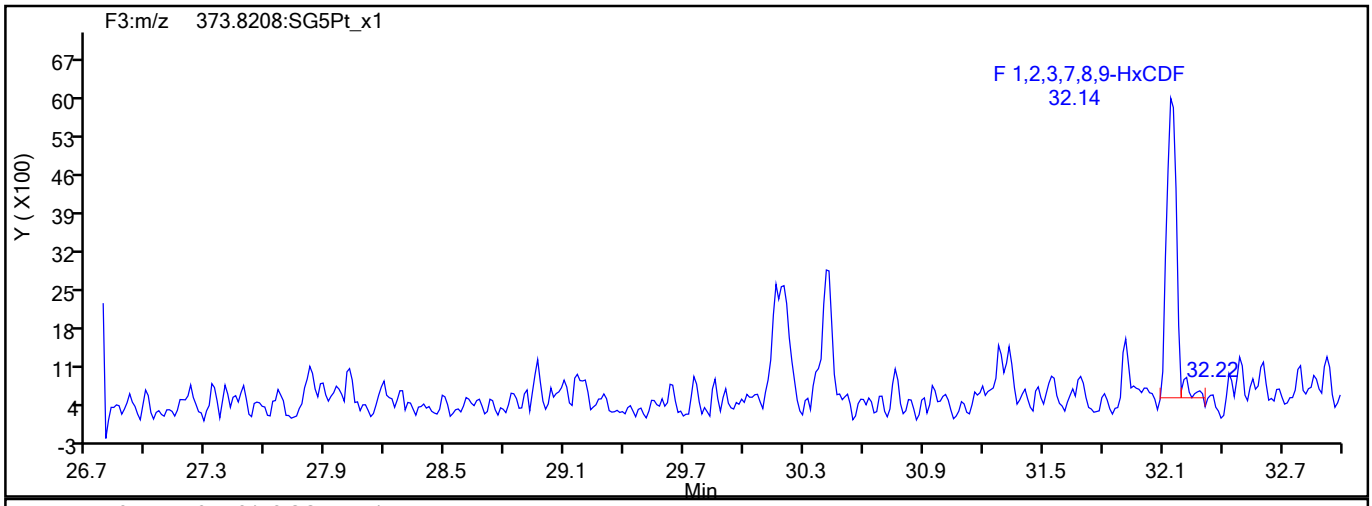

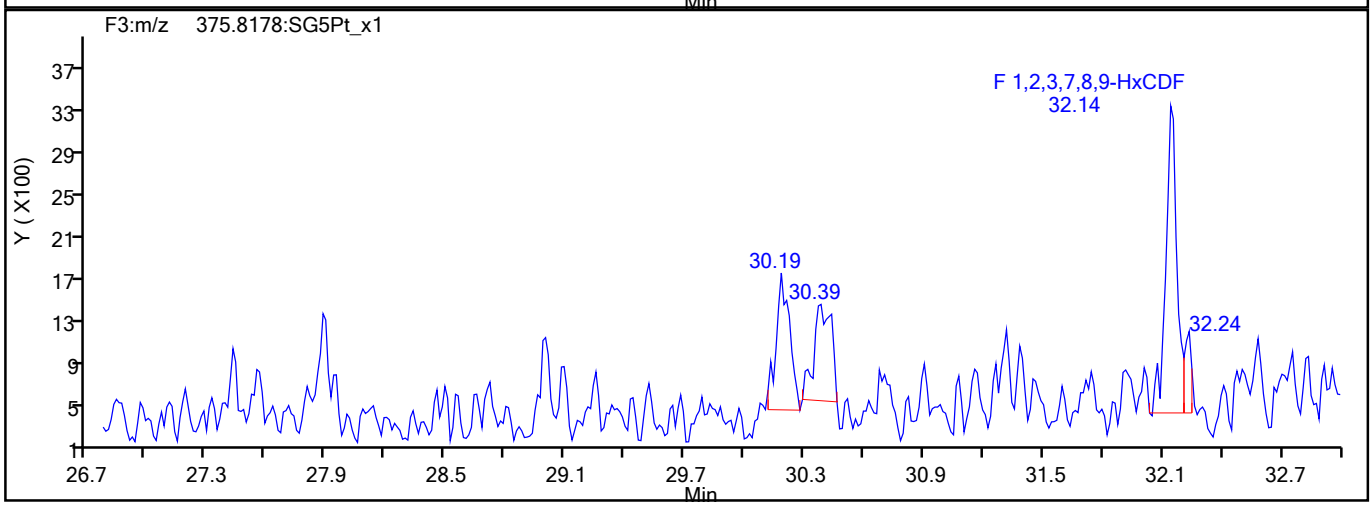

HxCDF Interference Mass

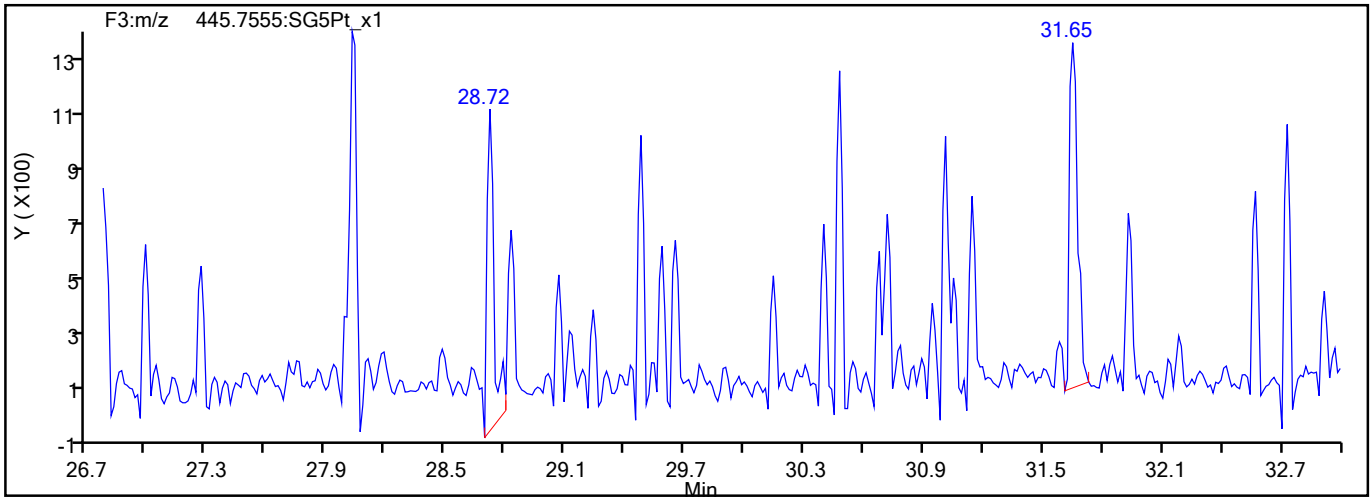

793605

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

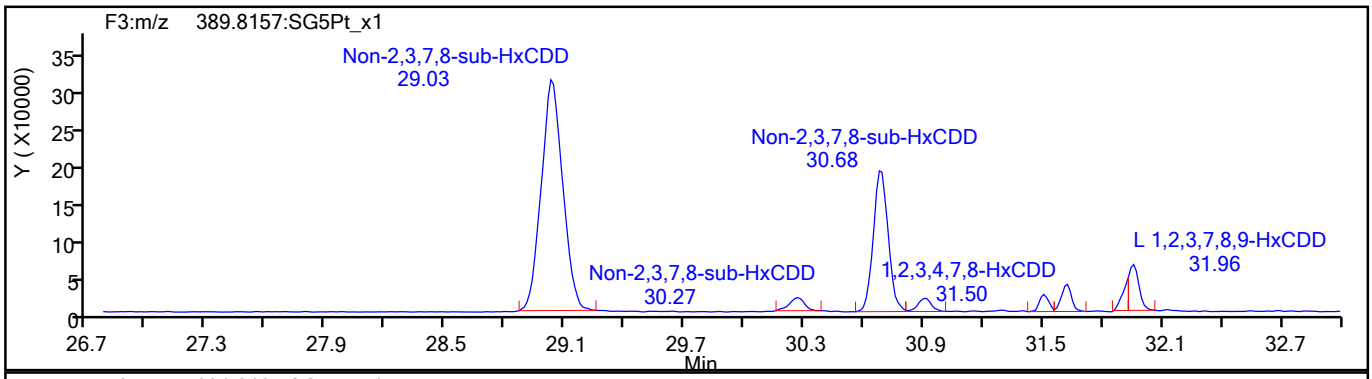

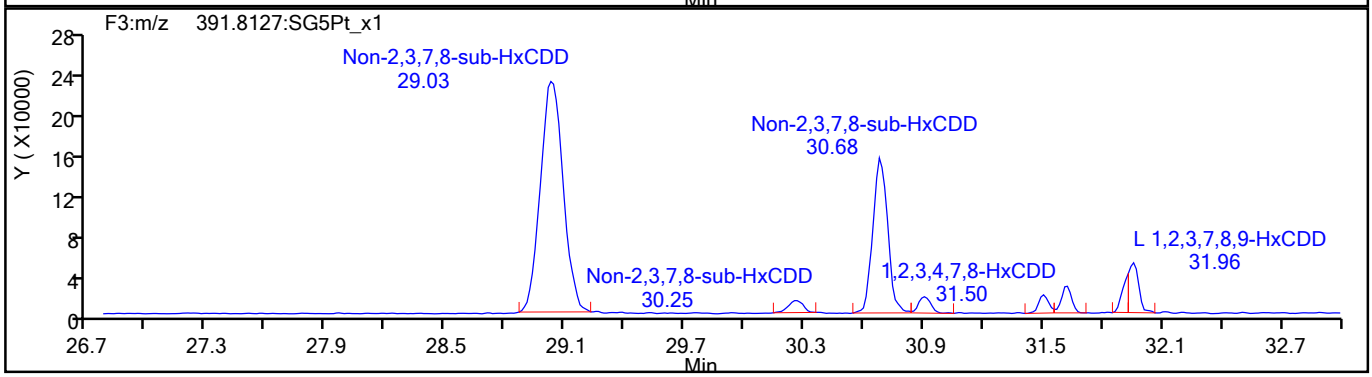

HxCDD Standards

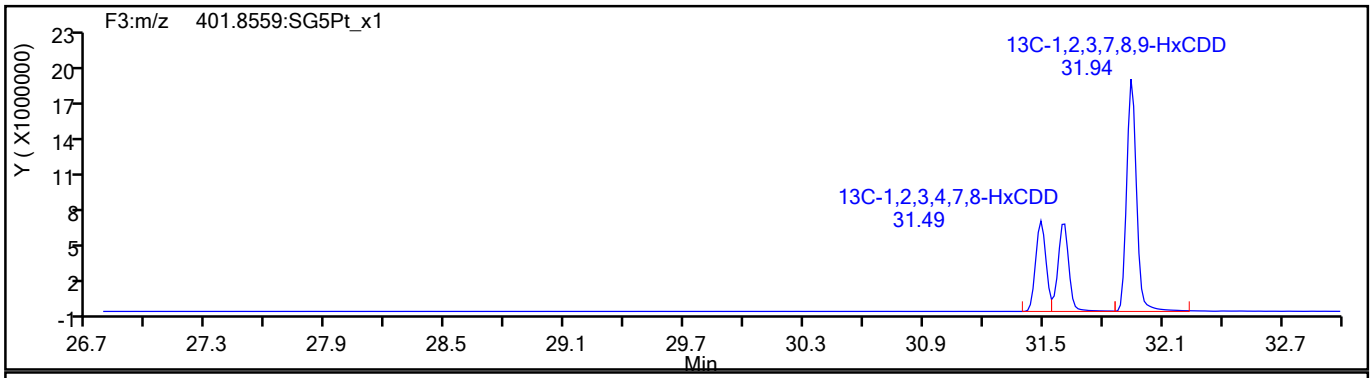

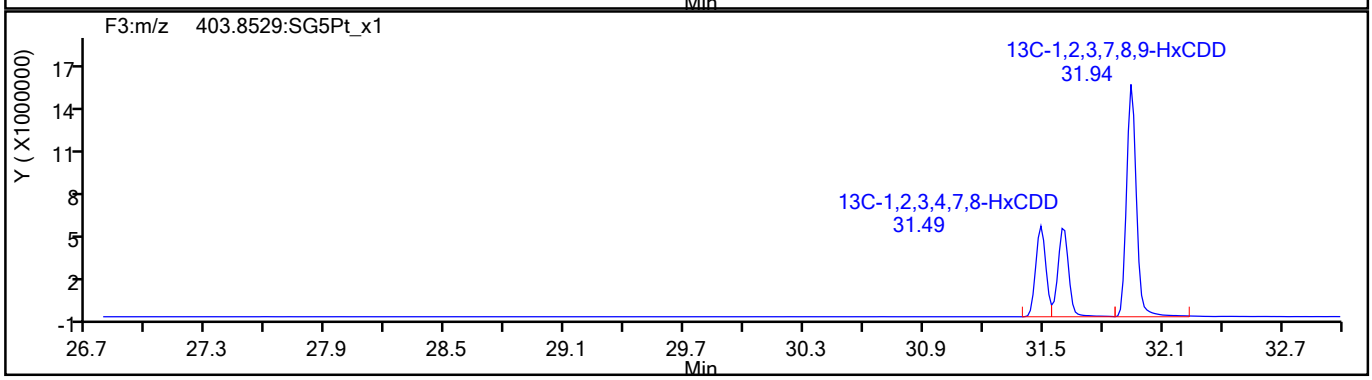

793606

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

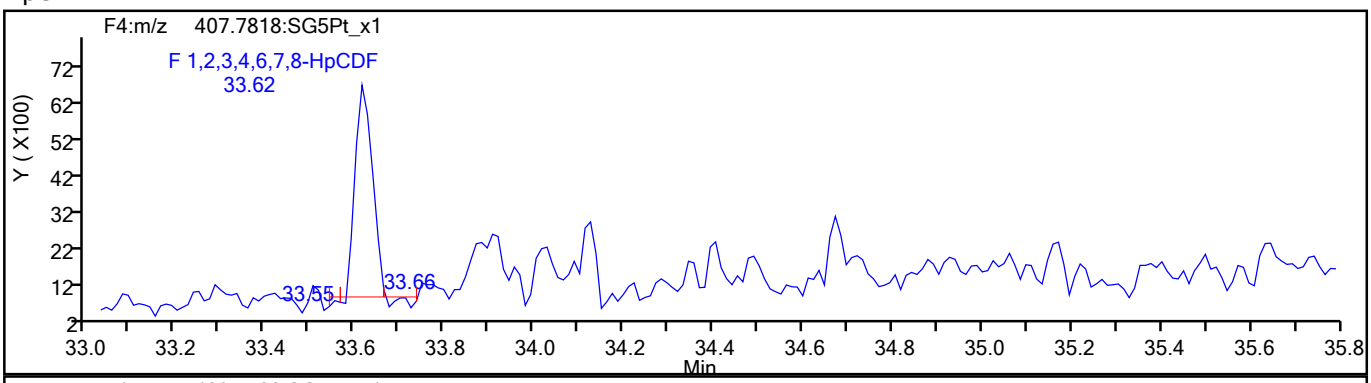

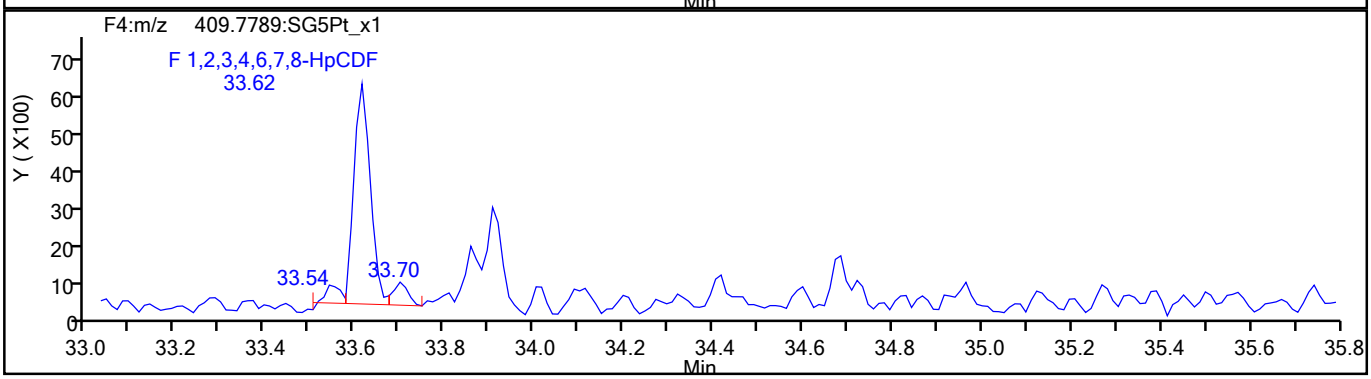

HpCDF Standards

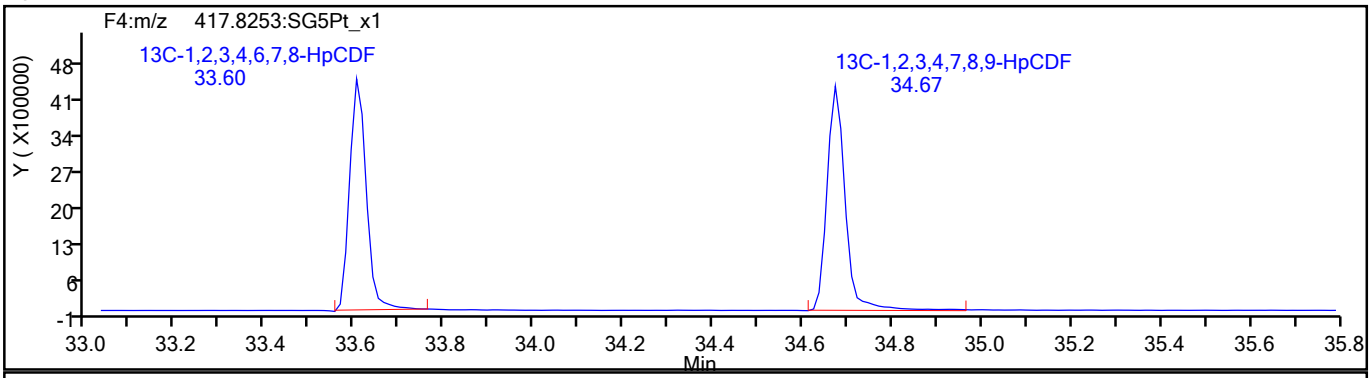

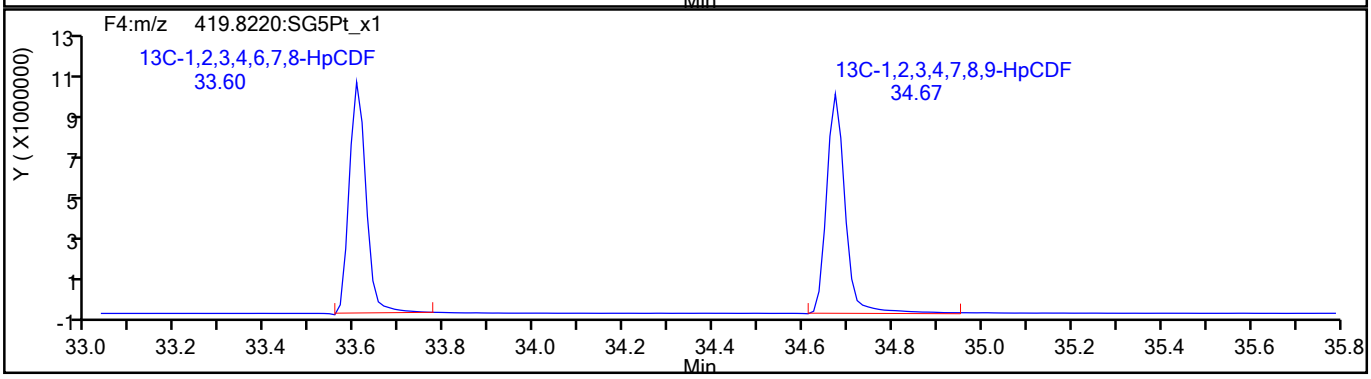

793607

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

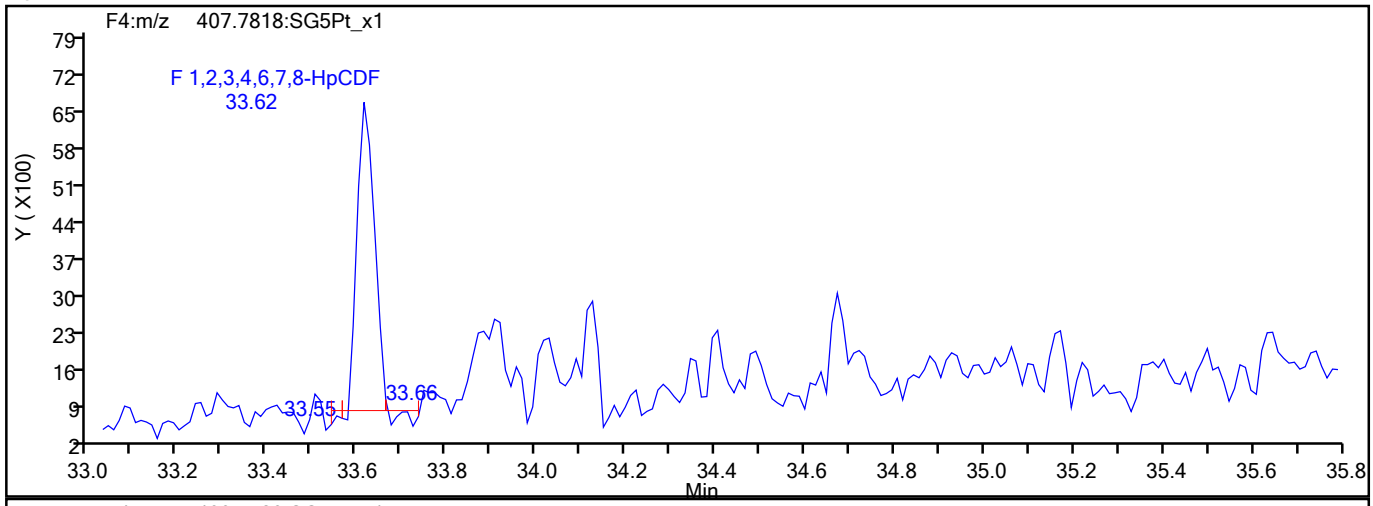

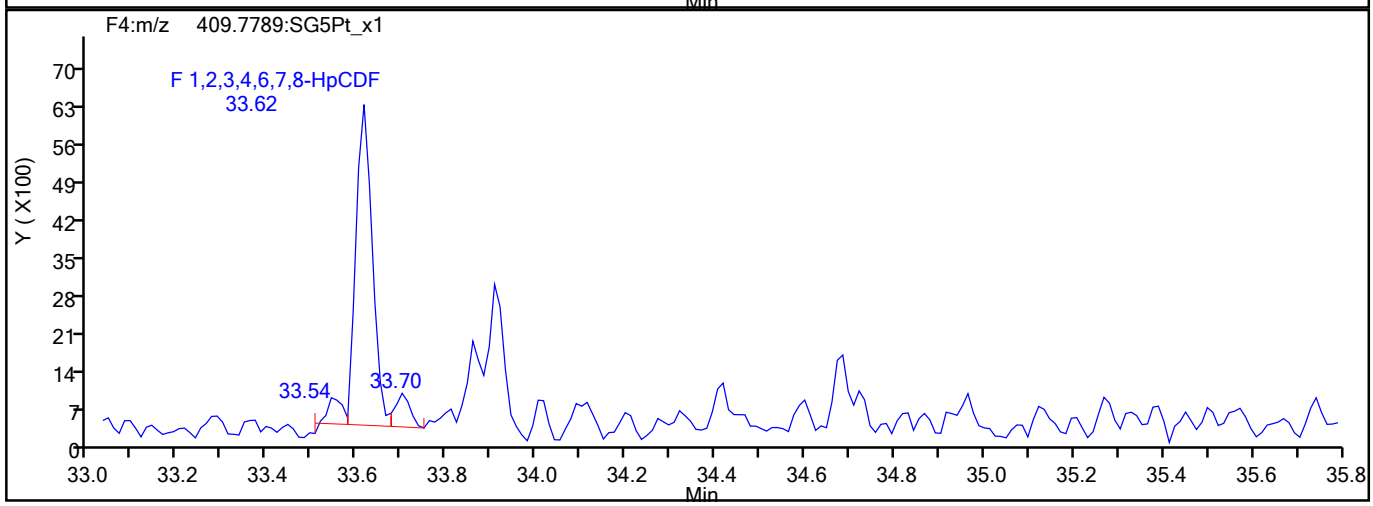

HpCDF Interference Mass

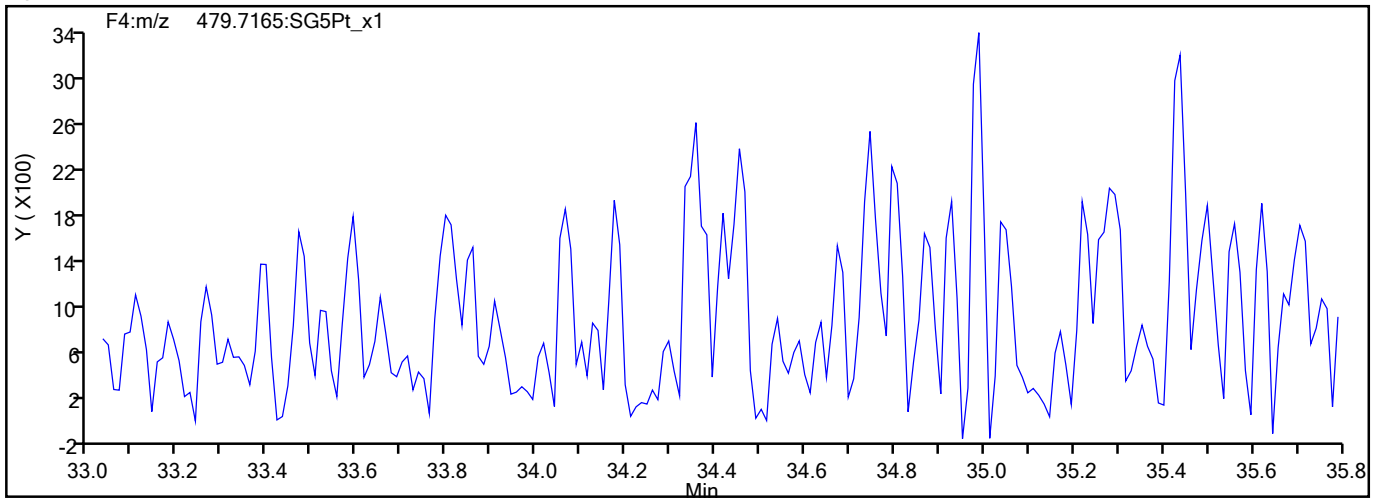

793608

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

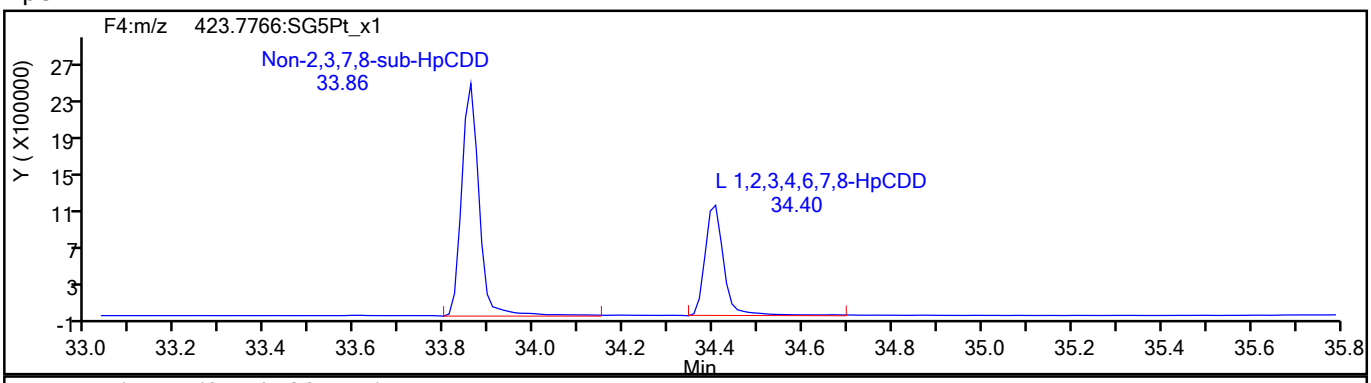

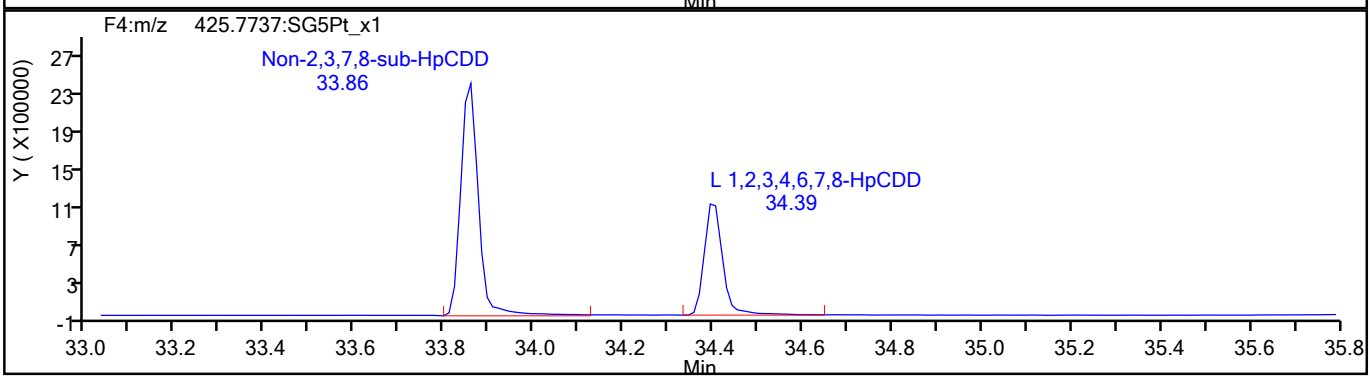

HpCDD Standards

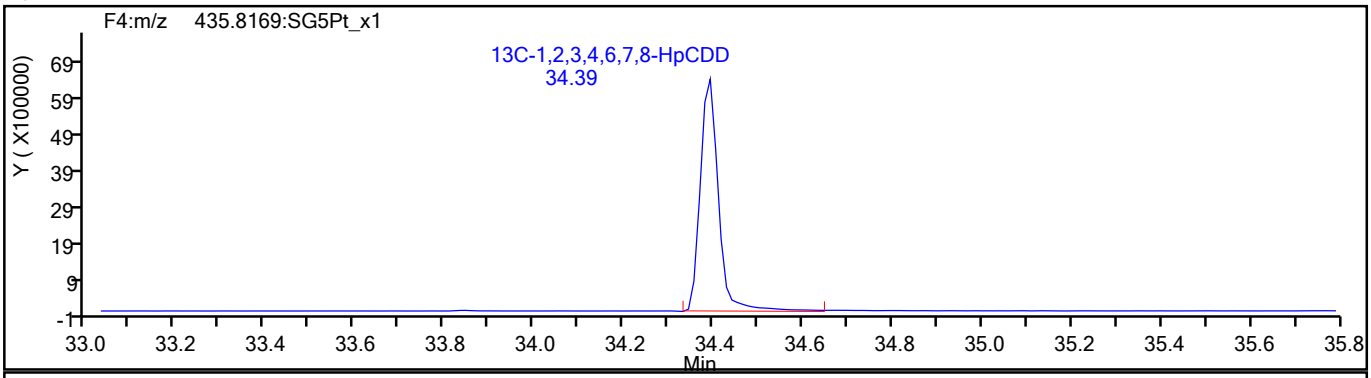

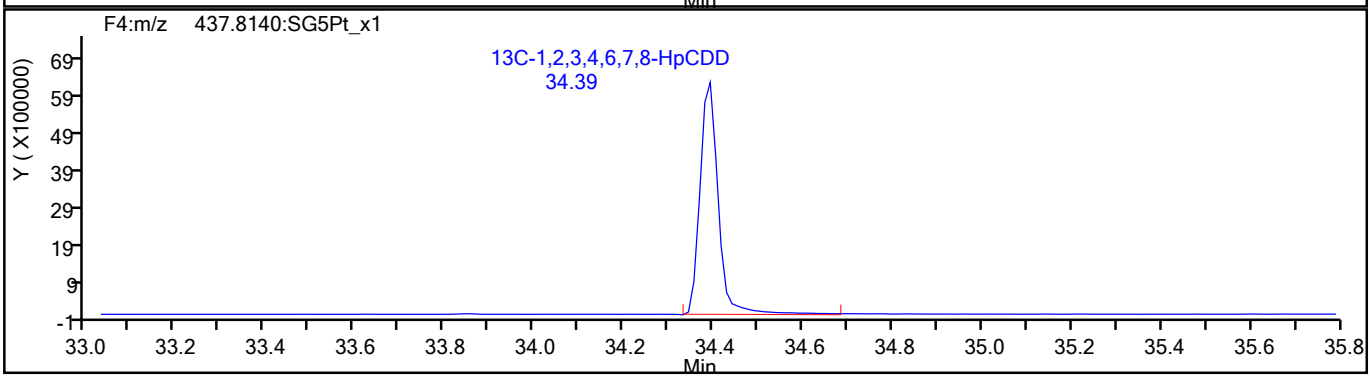

793609

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

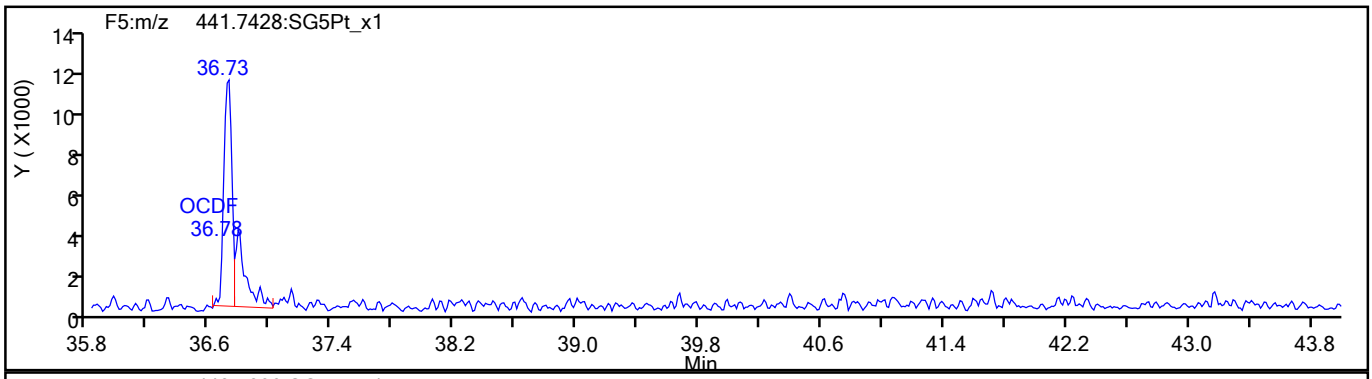

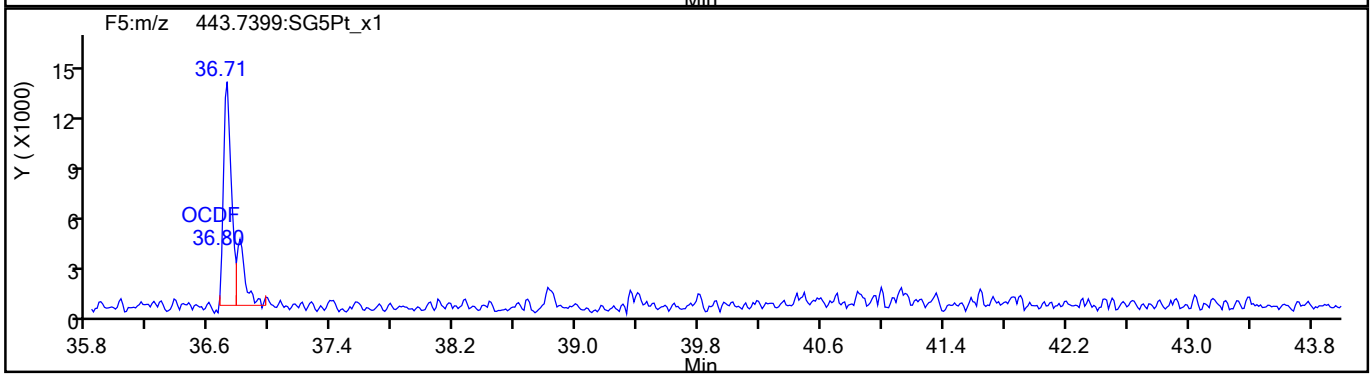

OCDF Standards

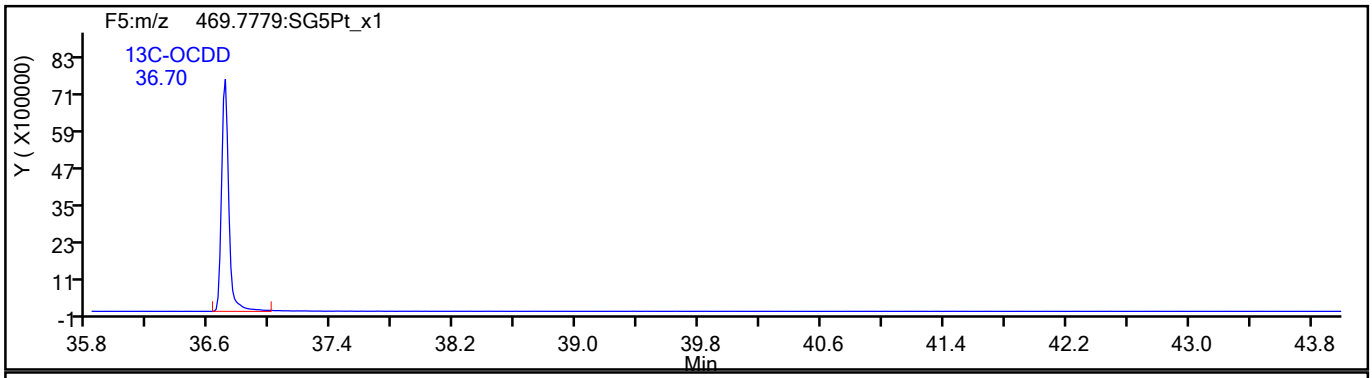

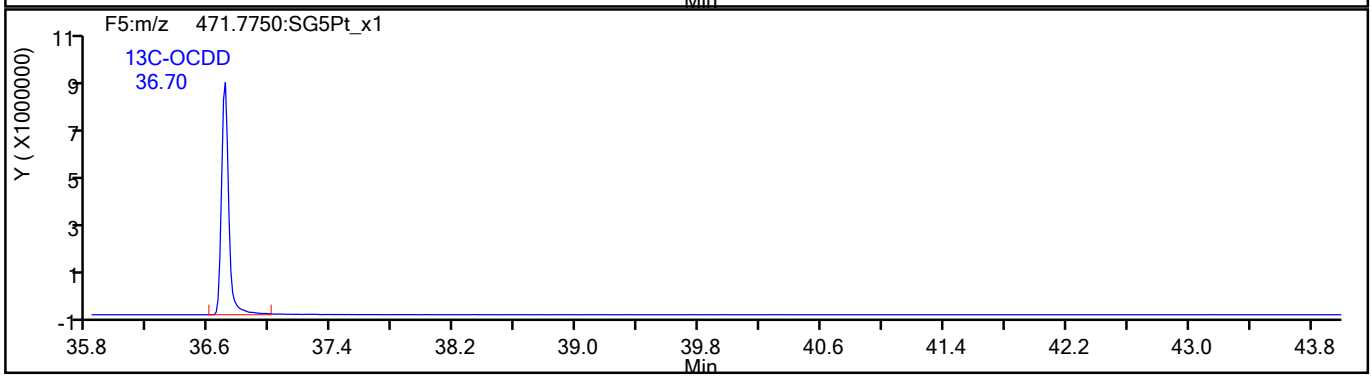

793610

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

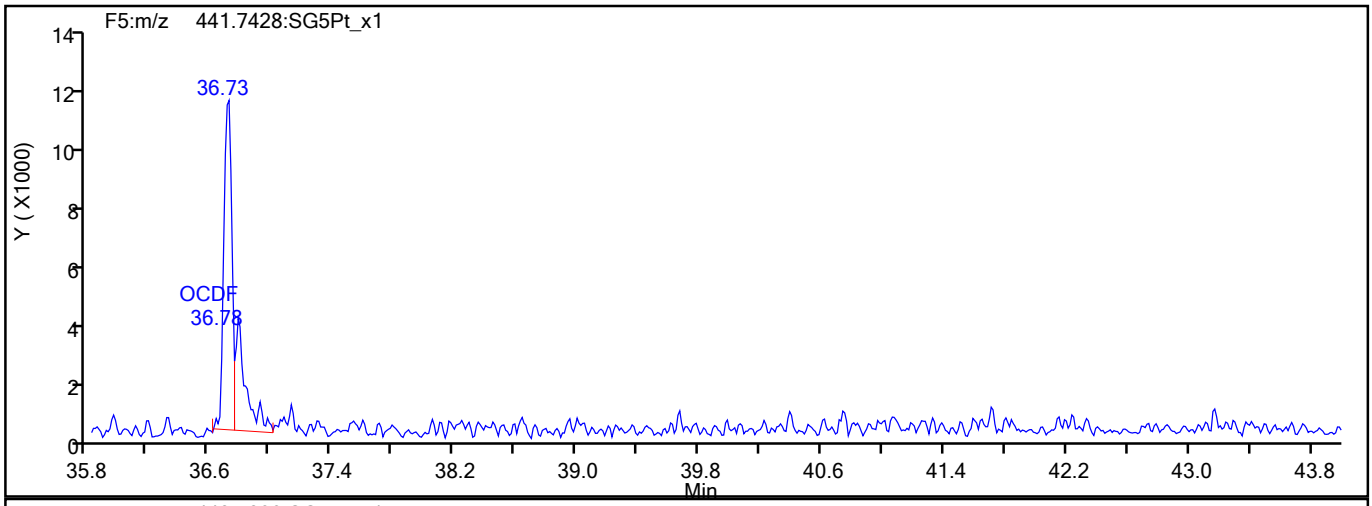

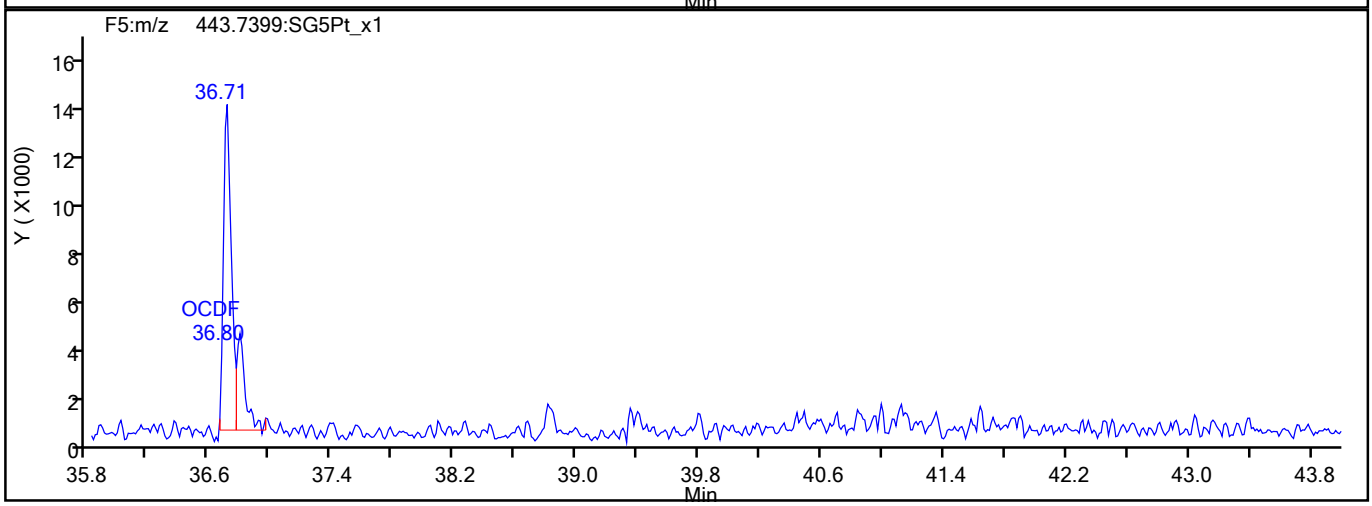

OCDF Interference Mass

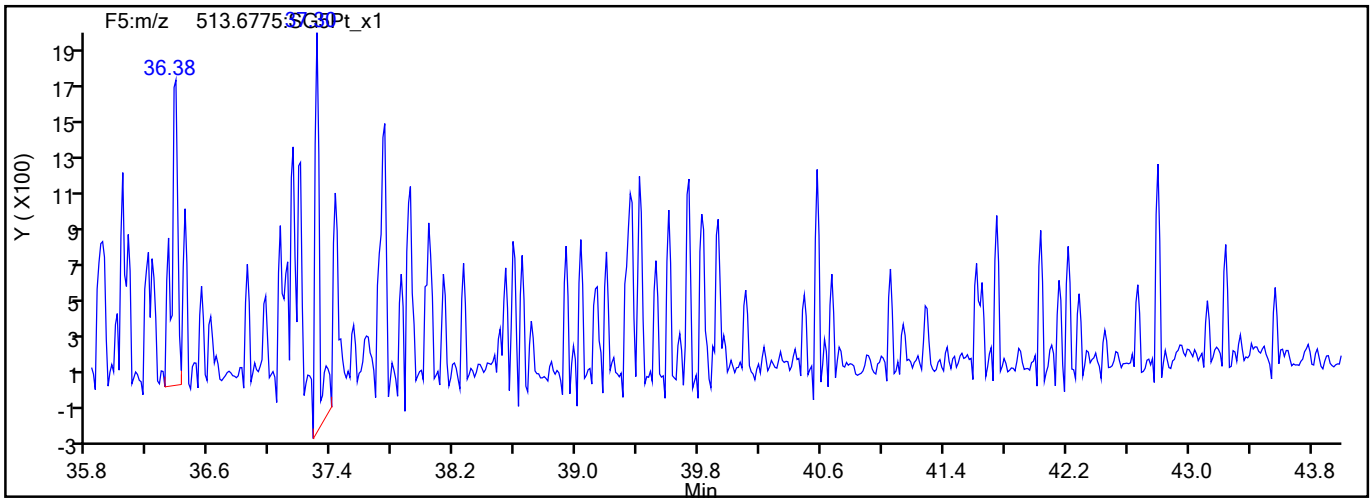

793611

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

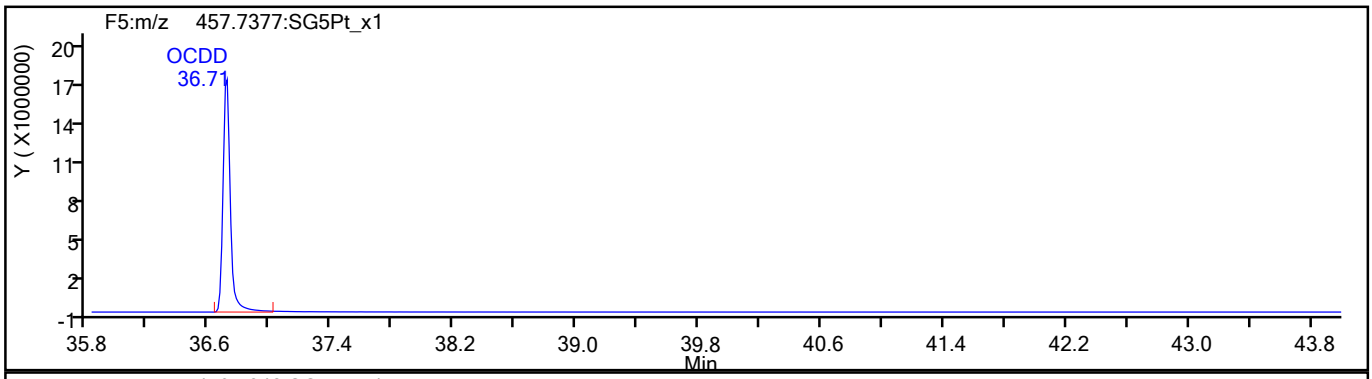

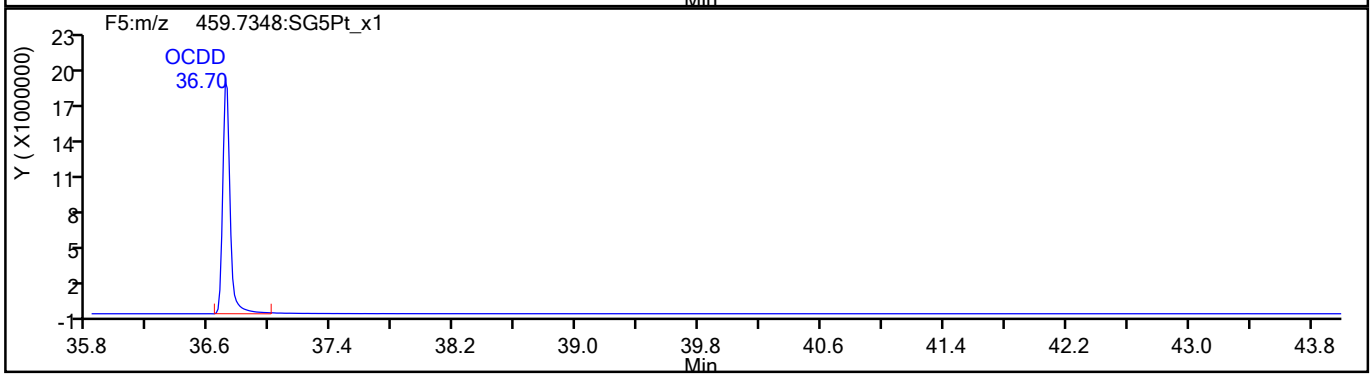

OCDD Standards

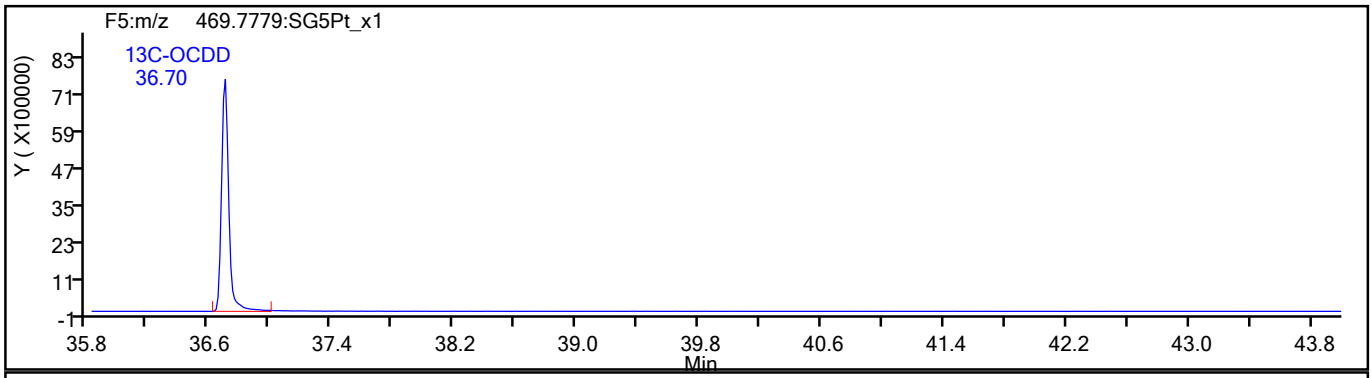

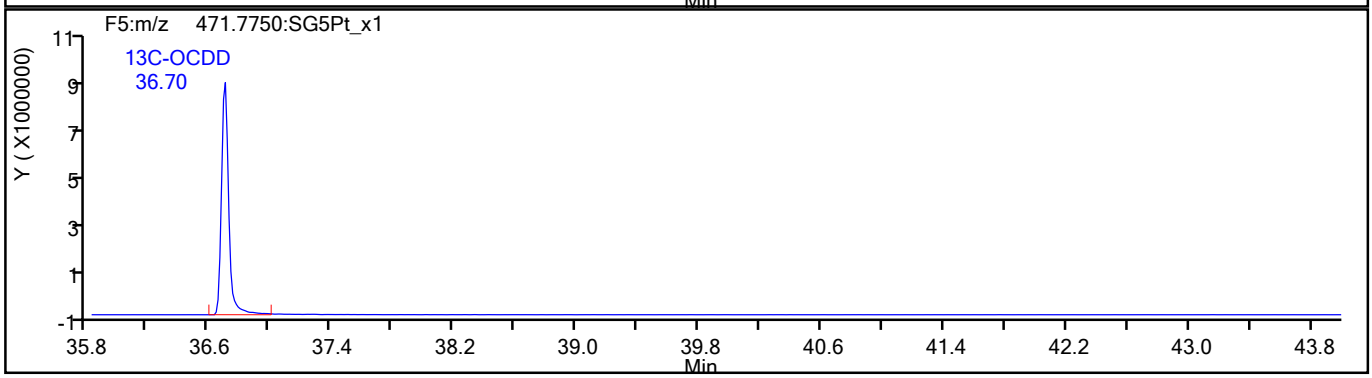

793612

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

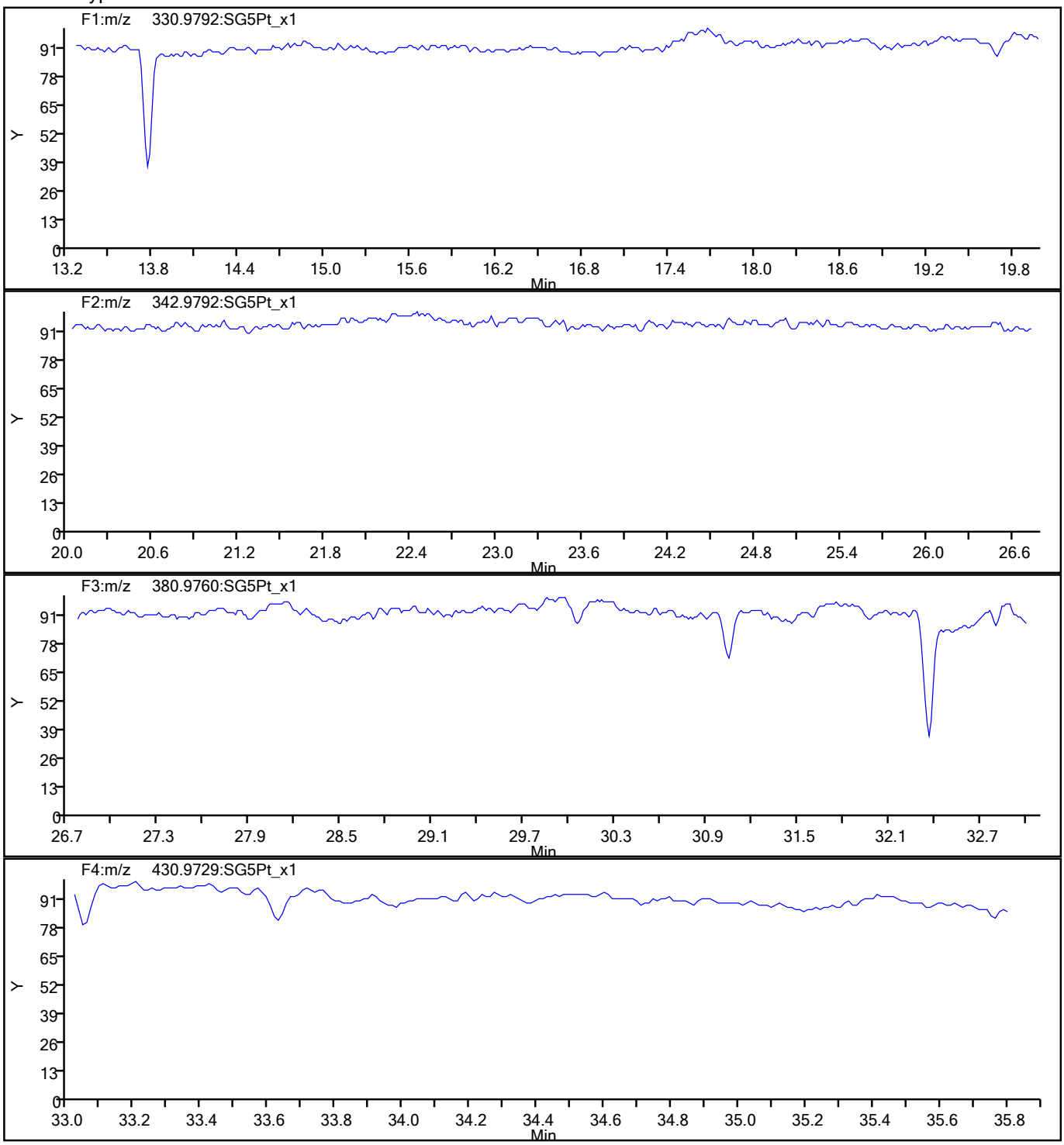

793613

Report Date: 30-Aug-2021 16:37:52 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_32.d		
Injection Date:	26-Aug-2021 10:05:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (10-12)		
Worklist#:	519966	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

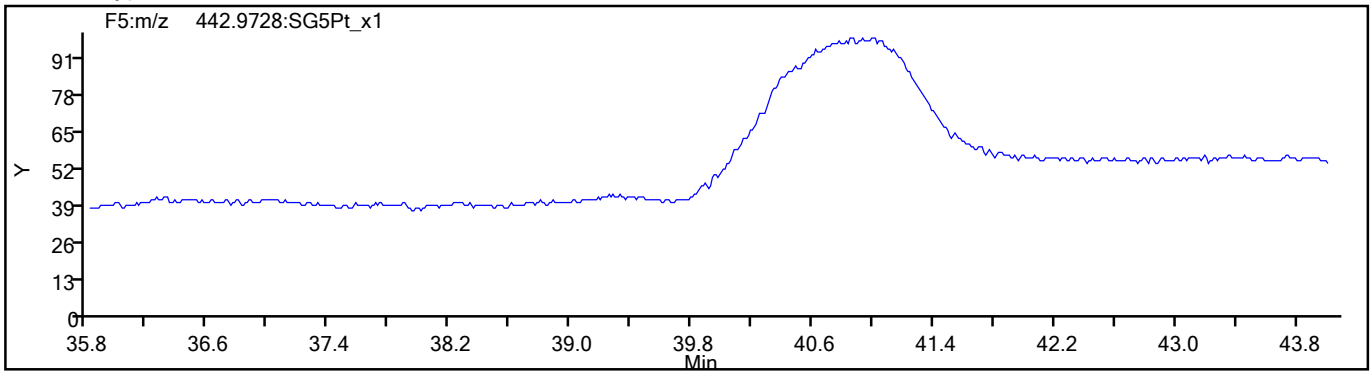

793614

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (12-14)
Lab Sample ID: 320-77292-7
Matrix: Sediment
Lab File ID: 25AU2110D5_33.d
Analysis Method: 1613B
Date Collected: 08/03/2021 14:00
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.98(g)
Date Analyzed: 08/26/2021 10:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 36.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519966
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.74	J q	1.6	0.081
51207-31-9	2,3,7,8-TCDF	1.3	J B	1.6	0.055
40321-76-4	1,2,3,7,8-PeCDD	0.30	J	7.9	0.11
57117-41-6	1,2,3,7,8-PeCDF	ND		7.9	0.057
57117-31-4	2,3,4,7,8-PeCDF	ND		7.9	0.057
39227-28-6	1,2,3,4,7,8-HxCDD	0.75	J	7.9	0.19
57653-85-7	1,2,3,6,7,8-HxCDD	1.3	J	7.9	0.19
19408-74-3	1,2,3,7,8,9-HxCDD	2.6	J	7.9	0.17
70648-26-9	1,2,3,4,7,8-HxCDF	ND		7.9	0.048
57117-44-9	1,2,3,6,7,8-HxCDF	ND		7.9	0.050
72918-21-9	1,2,3,7,8,9-HxCDF	0.086	J q	7.9	0.034
60851-34-5	2,3,4,6,7,8-HxCDF	ND		7.9	0.036
35822-46-9	1,2,3,4,6,7,8-HpCDD	47	B	7.9	0.72
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		7.9	0.049
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		7.9	0.055
3268-87-9	OCDD	1100	B	16	1.4
39001-02-0	OCDF	0.17	J q B	16	0.042
41903-57-5	Total TCDD	7.3	q	1.6	0.081
30402-14-3	Total TCDF	2.9	q B	1.6	0.055
36088-22-9	Total PeCDD	9.2	q	7.9	0.11
30402-15-4	Total PeCDF	0.080	J q	7.9	0.057
34465-46-8	Total HxCDD	36		7.9	0.18
55684-94-1	Total HxCDF	0.086	J q	7.9	0.042
37871-00-4	Total HpCDD	130	B	7.9	0.72
38998-75-3	Total HpCDF	ND		7.9	0.055

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB091 (12-14)
Lab Sample ID: 320-77292-7
Matrix: Sediment
Lab File ID: 25AU2110D5_33.d
Analysis Method: 1613B
Date Collected: 08/03/2021 14:00
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.98(g)
Date Analyzed: 08/26/2021 10:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 36.8
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519966
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	56		25-164
89059-46-1	13C-2,3,7,8-TCDF	52		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	55		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	53		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	57		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	63		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	52		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	61		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	53		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	54		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	54		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	51		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	48		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	54		26-138
114423-97-1	13C-OCDD	57		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d
Lims ID: 320-77292-A-7-A
Client ID: 11215702-080321-BN-SJSB091 (12-14)
Sample Type: Client
Inject. Date: 26-Aug-2021 10:50:55 ALS Bottle#: 44 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-7-A 320-77292-A-7-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 16:39:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1653

First Level Reviewer: krenns Date: 30-Aug-2021 16:39:02

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.583	132219121	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.084	111417709	0.77	1.6249	51.9	51.9	0.0954	0.0954	51.86	
2,3,7,8-TCDF	17.099	477745	0.76	1.0239	0.4188	0.4188	0.0174	0.0174		
A Non-2,3,7,8-sub-TCDF	17.069	551163	0.77	1.0239	0.4928	0.4831	0.0174	0.1877		RQM
S Total TCDF					0.9116	0.9019	0.0174	0.0174		RQ
D 13C-2,3,7,8-TCDD	17.764	66598489	0.79	0.8993	56.0	56.0	0.1210	0.1210	56.01	
$ 37Cl4-2,3,7,8-TCDD	17.794	42138305		1.1071	28.8	28.8	0.0492	0.0492	71.96	
2,3,7,8-TCDD	17.794	194936	0.77	1.2541	0.2767	0.2334	0.0256	0.0256		RQ
A Non-2,3,7,8-sub-TCDD	17.522	1734278	0.77	1.2541	2.088	2.076	0.0256	0.7160		RQ
S Total TCDD					2.364	2.310	0.0256	0.0256		RQ
D 13C-1,2,3,7,8-PeCDF	22.006	84176924	1.57	1.2101	52.6	52.6	0.0730	0.0730	52.61	
1,2,3,7,8-PeCDF	22.006						0.0179	0.0179		
D 13C-2,3,4,7,8-PeCDF	23.315	93590532	1.57	1.2395	57.1	57.1	0.0713	0.0713	57.11	
2,3,4,7,8-PeCDF	23.316						0.0179	0.0179		
A F1 PeCDFs	19.851						0.0196	0.0196		
A Non-2,3,7,8-sub-PeCDF	23.067	23170	1.55	1.0398	0.0333	0.0251	0.0179	0.0251		RQ
S Total PeCDF					0.0333	0.0251	0.0179	0.0179		RQ
D 13C-1,2,3,7,8-PeCDD	24.024	54945806	1.62	0.7612	54.6	54.6	0.0481	0.0481	54.59	
1,2,3,7,8-PeCDD	24.052	54373	1.39	1.0484	0.0944	0.0944	0.0360	0.0360		
A Non-2,3,7,8-sub-PeCDD	23.696	1611114	1.55	1.0484	2.817	2.797	0.0360	1.197		RQMa
S Total PeCDD					2.912	2.891	0.0360	0.0360		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.160	78419635	0.53	1.0837	61.2	61.2	0.1682	0.1682	61.20	
1,2,3,4,7,8-HxCDF	30.159						0.0153	0.0153		
D 13C-1,2,3,6,7,8-HxCDF	30.372	70570028	0.51	1.1279	52.9	52.9	0.1616	0.1616	52.91	
1,2,3,6,7,8-HxCDF	30.372						0.0156	0.0156		
D 13C-2,3,4,6,7,8-HxCDF	31.278	67452928	0.53	1.0637	53.6	53.6	0.1714	0.1714	53.63	
2,3,4,6,7,8-HxCDF	31.291						0.0113	0.0113		
D 13C-1,2,3,7,8,9-HxCDF	32.129	61838442	0.52	0.9676	54.1	54.1	0.1884	0.1884	54.05	
1,2,3,7,8,9-HxCDF	32.129	19565	1.24	1.1664	0.0308	0.0271	0.0108	0.0108		RQM
A Non-2,3,7,8-sub-HxCDF	30.324						0.0129	0.0129		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.0308	0.0271	0.0132	0.0132		RQ
* 13C-1,2,3,7,8,9-HxCDD	31.930	118242298	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.477	54857253	1.26	0.7334	63.3	63.3	0.1734	0.1734	63.26	
1,2,3,4,7,8-HxCDD	31.504	137574	1.25	1.0640	0.2357	0.2357	0.0585	0.0585		
D 13C-1,2,3,6,7,8-HxCDD	31.597	54550600	1.25	0.8802	52.4	52.4	0.1445	0.1445	52.41	
1,2,3,6,7,8-HxCDD	31.610	217003	1.38	1.0001	0.3978	0.3978	0.0609	0.0609		
1,2,3,7,8,9-HxCDD	31.943	501162	1.24	1.1325	0.8089	0.8089	0.0543	0.0543		
A Non-2,3,7,8-sub-HxCDD	30.486	5756535	1.23	1.0655	9.876	9.876	0.0577	6.569		
S Total HxCDD					11.3	11.3	0.0579	0.0579		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	44051565	0.44	0.7730	48.2	48.2	0.4583	0.4583	48.19	
1,2,3,4,6,7,8-HpCDF	33.603						0.0155	0.0155		
D 13C-1,2,3,4,7,8,9-HpCDF	34.660	45103930	0.43	0.7008	54.4	54.4	0.5055	0.5055	54.43	
1,2,3,4,7,8,9-HpCDF	34.673						0.0173	0.0173		
A Non-2,3,7,8-sub-HpCDF	34.138						0.0163	0.0163		
S Total HpCDF							0.0173	0.0173		
D 13C-1,2,3,4,6,7,8-HpCDD	34.381	38927945	1.00	0.6472	50.9	50.9	0.2043	0.2043	50.87	
1,2,3,4,6,7,8-HpCDD	34.393	6359172	1.04	1.0943	14.9	14.9	0.2272	0.2272		
A Non-2,3,7,8-sub-HpCDD	34.223	10678074	1.07	1.0943	25.1	25.1	0.2272	25.1		
S Total HpCDD					40.0	40.0	0.2272	0.2272		
D 13C-OCDD	36.689	60058125	0.87	0.4472	113.6	113.6	0.1419	0.1419	56.80	
OCDF	36.797	23014	0.89	1.4382	0.0576	0.0533	0.0132	0.0132		RQM
OCDD	36.701	111863018	0.89	1.1070	336.5	336.5	0.4485	0.4485		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d
Lims ID: 320-77292-A-7-A
Client ID: 11215702-080321-BN-SJSB091 (12-14)
Sample Type: Client
Inject. Date: 26-Aug-2021 10:50:55 ALS Bottle#: 44 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-7-A 320-77292-A-7-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 16:39:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1653

First Level Reviewer: krenns Date: 30-Aug-2021 16:39:02

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.583	17.567	1		59131851	15239010	6816	17040	2236		
333.9339	17.583	17.567	1		73087270	18751917	7983	19957	2349	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.084	17.069	1	0.972	48391400	12249502	12678	31695	966		
317.9389	17.084	17.069	1	0.972	63026309	15899578	8400	21000	1893	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.099	17.099	0	1.001	206286	48648	815	2037	60		
305.8987	17.099	17.099	0	1.001	271459	68770	1194	2985	58	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	14.710	17.069	-141	0.861	15271	5352	815	2037	7		
305.8987	14.710	17.069	-141	0.861	26765	9392	1194	2985	8	0.57(0.65-0.89)	
	Empc Correction				19832	6950	1194	2985	6		
303.9016	15.209	17.069	-111	0.890	80545	23902	815	2037	29		
305.8987	15.209	17.069	-111	0.890	113394	34494	1194	2985	29	0.71(0.65-0.89)	
303.9016	16.207	17.069	-52	0.949	18017	5020	815	2037	6		
	Empc Correction				13877	3477	815	2037	4		
305.8987	16.207	17.069	-52	0.949	18023	4516	1194	2985	4	1.00(0.65-0.89)	
303.9016	16.721	17.069	-21	0.979	98358	23634	815	2037	29		
305.8987	16.721	17.069	-21	0.979	115729	28993	1194	2985	24	0.85(0.65-0.89)	
303.9016	17.583	17.069	31	1.029	31678	4586	815	2037	6		
305.8987	17.507	17.069	26	1.025	44456	5482	1194	2985	5	0.71(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	17.764	17.764	0	1.010	29455211	6965910	6816	17040	1022		
333.9339	17.764	17.764	0	1.010	37143278	8764163	7983	19957	1098	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.794	17.779	1	1.012	42138305	10324744	7408	18520	1394		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											RQ
319.8965	17.794	17.779	1	1.002	84803	21232	1129	2822	19		
321.8936	17.779	17.779	0	1.001	146331	35079	890	2225	39	0.58(0.65-0.89)	
	Empc Correction				110133	27574	890	2225	31		
A Non-2,3,7,8-sub-TCDD											RQ
319.8965	15.617	17.522	-114	0.879	34385	8642	1129	2822	8		
321.8936	15.617	17.522	-114	0.879	47176	13094	890	2225	15	0.73(0.65-0.89)	
319.8965	15.889	17.522	-98	0.894	82184	24094	1129	2822	21		
321.8936	15.889	17.522	-98	0.894	112622	30485	890	2225	34	0.73(0.65-0.89)	
319.8965	16.131	17.522	-83	0.908	59093	17160	1129	2822	15		
321.8936	16.116	17.522	-84	0.907	72339	19040	890	2225	21	0.82(0.65-0.89)	
319.8965	16.675	17.522	-51	0.939	262323	63595	1129	2822	56		
321.8936	16.675	17.522	-51	0.939	335717	82434	890	2225	93	0.78(0.65-0.89)	
319.8965	17.280	17.522	-14	0.973	31516	8138	1129	2822	7		
321.8936	17.280	17.522	-14	0.973	38859	9886	890	2225	11	0.81(0.65-0.89)	
319.8965	17.552	17.522	2	0.988	110403	25689	1129	2822	23		
321.8936	17.552	17.522	2	0.988	143952	38781	890	2225	44	0.77(0.65-0.89)	
319.8965	17.688	17.522	10	0.996	97363	23331	1129	2822	21		
321.8936	17.673	17.522	9	0.995	111384	26822	890	2225	30	0.87(0.65-0.89)	
319.8965	18.142	17.522	37	1.021	41950	7943	1129	2822	7		
	Empc Correction				32484	8271	1129	2822	7		
321.8936	18.142	17.522	37	1.021	42188	10742	890	2225	12	0.99(0.65-0.89)	
319.8965	18.384	17.522	52	1.035	18828	4609	1129	2822	4		
321.8936	18.399	17.522	53	1.036	25420	5532	890	2225	6	0.74(0.65-0.89)	
319.8965	18.898	17.522	82	1.064	32453	6265	1129	2822	6		
321.8936	18.883	17.522	81	1.063	43589	9526	890	2225	11	0.74(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.006	21.979	2	1.252	51418594	9361051	7163	17907	1307		
353.8970	22.006	21.979	2	1.252	32758330	5978330	4852	12130	1232	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.006						345	862			
341.8567	22.006						818	2045			
13C-2,3,4,7,8-PeCDF											
351.9000	23.315	23.302	1	1.326	57160418	9668589	7163	17907	1350		
353.8970	23.315	23.302	1	1.326	36430114	6235697	4852	12130	1285	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.316						345	862			
341.8567	23.316						818	2045			
A F1 PeCDFs											
339.8597	19.851						367	917			
341.8567	19.851						905	2262			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.397	23.067	-160	0.927	14084	2257	345	862	7		
341.8567	20.424	23.067	-158	0.928	16681	3031	818	2045	4	0.84(1.32-1.78)	
	Empc Correction				9086	1456	818	2045	2		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.024	23.997	2	1.366	33962342	5555694	2868	7170	1937		
369.8919	24.024	23.997	2	1.366	20983464	3466672	2108	5270	1645	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.052	24.024	2	1.001	31582	5480	985	2462	6		
357.8516	24.038	24.024	1	1.001	22791	4027	379	947	11	1.39(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											RQMa
355.8546	20.902	23.696	-167	0.870	191534	35456	985	2462	36		a
357.8516	20.888	23.696	-168	0.869	135188	23887	379	947	63	1.42(1.32-1.78)	
355.8546	21.638	23.696	-123	0.901	415454	82729	985	2462	84		
357.8516	21.638	23.696	-123	0.901	274159	52048	379	947	137	1.52(1.32-1.78)	
355.8546	22.293	23.696	-84	0.928	81506	14175	985	2462	14		
357.8516	22.306	23.696	-83	0.928	46561	7973	379	947	21	1.75(1.32-1.78)	
355.8546	22.593	23.696	-66	0.940	36344	7292	985	2462	7		
357.8516	22.579	23.696	-67	0.940	22464	4021	379	947	11	1.62(1.32-1.78)	
355.8546	22.906	23.696	-47	0.953	61464	13334	985	2462	14		M
	Empc Correction				49638	10415	985	2462	11		
357.8516	22.893	23.696	-48	0.953	32025	6720	379	947	18	1.92(1.32-1.78)	
355.8546	23.097	23.696	-36	0.961	200701	26715	985	2462	27		
357.8516	23.070	23.696	-37	0.960	125540	17414	379	947	46	1.60(1.32-1.78)	M
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.160	30.146	1	0.945	27000924	4756442	11496	28740	414		
385.8610	30.160	30.146	1	0.945	51418711	8878152	12611	31527	704	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.159						550	1375			
375.8178	30.159						353	882			
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.372	30.359	1	0.951	23936733	4393577	11496	28740	382		
385.8610	30.372	30.359	1	0.951	46633295	8433733	12611	31527	669	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.372						550	1375			
375.8178	30.372						353	882			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.278	31.264	1	0.980	23232589	5912092	11496	28740	514		
385.8610	31.278	31.264	1	0.980	44220339	11209203	12611	31527	889	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.291						550	1375			
375.8178	31.291						353	882			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.116	1	1.006	21270887	6223106	11496	28740	541		
385.8610	32.129	32.116	1	1.006	40567555	11753605	12611	31527	932	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	32.129	32.129	0	1.000	10831	4244	550	1375	8		M
375.8178	32.143	32.129	1	1.000	11415	3701	353	882	10	0.95(1.05-1.43)	M
	Empc Correction				8734	3422	353	882	10		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.324						550	1375			
375.8178	30.324						353	882			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.930	31.930	0		65269604	18270373	10204	25510	1791		
403.8529	31.930	31.930	0		52972694	14791779	6617	16542	2235	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.477	31.464	1	0.986	30532847	8192308	10204	25510	803		
403.8529	31.477	31.464	1	0.986	24324406	6482372	6617	16542	980	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.504	31.490	1	1.001	76541	19248	2417	6042	8		
391.8127	31.490	31.490	0	1.000	61033	18338	1234	3085	15	1.25(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.597	31.583	1	0.990	30298294	8300606	10204	25510	813		
403.8529	31.597	31.583	1	0.990	24252306	6694698	6617	16542	1012	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.610	31.597	1	1.000	125947	34762	2417	6042	14		
391.8127	31.610	31.597	1	1.000	91056	27502	1234	3085	22	1.38(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.943	31.943	0	1.015	277792	61130	2417	6042	25		
391.8127	31.943	31.943	0	1.015	223370	45072	1234	3085	37	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.028	30.486	-87	0.919	2106956	267595	2417	6042	111		
391.8127	29.028	30.486	-87	0.919	1722210	225111	1234	3085	182	1.22(1.05-1.43)	
389.8157	30.239	30.486	-15	0.957	88509	16594	2417	6042	7		
391.8127	30.253	30.486	-14	0.957	79910	13504	1234	3085	11	1.11(1.05-1.43)	
389.8157	30.678	30.486	12	0.971	898959	179818	2417	6042	74		
391.8127	30.665	30.486	11	0.971	714125	134293	1234	3085	109	1.26(1.05-1.43)	
389.8157	30.905	30.486	25	0.978	78937	16553	2417	6042	7		
391.8127	30.892	30.486	24	0.978	66929	15809	1234	3085	13	1.18(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.591	1	1.052	13519663	4859520	14405	36012	337		
419.8220	33.591	33.591	0	1.052	30531902	11086532	32445	81112	342	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603						1139	2847			
409.7789	33.603						288	720			
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.660	34.660	0	1.086	13620907	4739932	14405	36012	329		
419.8220	34.660	34.660	0	1.086	31483023	10952610	32445	81112	338	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673						1139	2847			
409.7789	34.673						288	720			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						1139	2847			
409.7789	34.138						288	720			

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.381	34.368	1	1.077	19449620	7026910	8188	20470	858		
437.8140	34.381	34.368	1	1.077	19478325	6875328	9299	23247	739	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	3242636	1162870	7186	17965	162		
425.7737	34.393	34.393	0	1.000	3116536	1082128	6640	16600	163	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.846	34.223	-23	0.984	5508386	1981421	7186	17965	276		
425.7737	33.846	34.223	-23	0.984	5169688	1899960	6640	16600	286	1.07(0.88-1.20)	
13C-OCDD											
469.7779	36.689	36.689	0	1.149	28009041	8539048	5423	13557	1575		
471.7750	36.689	36.689	0	1.149	32049084	9678068	2968	7420	3261	0.87(0.76-1.02)	
OCDF											RQM
441.7428	36.797	36.785	1	1.003	12681	3751	270	675	14		M
	Empc Correction				10837	2790	270	675	10		
443.7399	36.773	36.785	-1	1.002	12177	3135	421	1052	7	1.04(0.76-1.02)	M
OCDD											
457.7377	36.701	36.689	1	1.000	52810348	16077808	8211	20527	1958		
459.7348	36.701	36.689	1	1.000	59052670	17658943	9877	24692	1788	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Lims ID:	320-77292-A-7-A		
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Inject. Date:	26-Aug-2021 10:50:55	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	5

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	111417709	28149080

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	111417709	28149080

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
14.710	15271	5352	26765	9392	0.0368	0.57	RQ
14.710	15271	5352	19832	6950	0.0308		Empc Correction
15.209	80545	23902	113394	34494	0.1700	0.71	
16.207	18017	5020	18023	4516	0.0316	1.00	RQ
16.207	13877	3477	18023	4516	0.0280		Empc Correction
16.721	98358	23634	115729	28993	0.1877	0.85	
17.583	31678	4586	44456	5482	0.0667	0.71	M
Signal Totals:							
	239729	60951	311434	80435			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	562236	145371				0.77	RQM
	551163	141386					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.4928 = (562236 * 100.000) / (111417709 * 1.024)

Empc Amount: 0.4831 = (551163 * 100.000) / (111417709 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Lims ID:	320-77292-A-7-A		
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Inject. Date:	26-Aug-2021 10:50:55	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	5

Non-2,3,7,8-sub-TCDD, RT: 17.522

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	66598489	15730073

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	66598489	15730073

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.617	34385	8642	47176	13094	0.0977	0.73	
15.889	82184	24094	112622	30485	0.2332	0.73	
16.131	59093	17160	72339	19040	0.1574	0.82	
16.675	262323	63595	335717	82434	0.7160	0.78	
17.280	31516	8138	38859	9886	0.0843	0.81	
17.552	110403	25689	143952	38781	0.3045	0.77	
17.688	97363	23331	111384	26822	0.2499	0.87	
18.142	41950	7943	42188	10742	0.1007	0.99	RQ
18.142	32484	8271	42188	10742	0.0894		Empc Correction
18.384	18828	4609	25420	5532	0.0530	0.74	
18.898	32453	6265	43589	9526	0.0910	0.74	
Signal Totals:							
	761032	189794	973246	246342			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1743744	435808				0.79	RQ
	1734278	436136					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.088 = (1743744 * 100.000) / (66598489 * 1.254)

Empc Amount: 2.076 = (1734278 * 100.000) / (66598489 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Lims ID:	320-77292-A-7-A		
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Inject. Date:	26-Aug-2021 10:50:55	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	5

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	84176924	15339381
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	93590532	15904286

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	88883728	15621833

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.397	14084	2257	16681	3031	0.0333	0.84	RQ
20.397	14084	2257	9086	1456	0.0251		Empc Correction
Signal Totals:							
	14084	2257	9086	1456			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	30765	5288				0.84	RQ
	23170	3713					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0333 = (30765 * 100.000) / (88883728 * 1.040)

Empc Amount: 0.0251 = (23170 * 100.000) / (88883728 * 1.040)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Lims ID:	320-77292-A-7-A		
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Inject. Date:	26-Aug-2021 10:50:55	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	5

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	54945806	9022366

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	54945806	9022366

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.902	191534	35456	135188	23887	0.5672	1.42	a
21.638	415454	82729	274159	52048	1.20	1.52	
22.293	81506	14175	46561	7973	0.2223	1.75	
22.593	36344	7292	22464	4021	0.1021	1.62	
22.906	61464	13334	32025	6720	0.1623	1.92	RQMa
22.906	49638	10415	32025	6720	0.1418		Empc Correction
23.097	200701	26715	125540	17414	0.5663	1.60	M
Signal Totals:							
	975177	176782	635937	112063			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1622940	291764				1.55	RQMa
	1611114	288845					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.817 = (1622940 * 100.000) / (54945806 * 1.048)

Empc Amount: 2.797 = (1611114 * 100.000) / (54945806 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Lims ID:	320-77292-A-7-A		
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Inject. Date:	26-Aug-2021 10:50:55	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	5

Non-2,3,7,8-sub-HxCDD, RT: 30.486

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	54857253	14674680
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	54550600	14995304
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	54703926	14834992

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.028	2106956	267595	1722210	225111	6.57	1.22	
30.239	88509	16594	79910	13504	0.2889	1.11	
30.678	898959	179818	714125	134293	2.77	1.26	
30.905	78937	16553	66929	15809	0.2502	1.18	
Signal Totals:							
	3173361	480560	2583174	388717			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	5756535	869277				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 9.876 = (5756535 * 100.000) / (54703926 * 1.066)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d
Lims ID: 320-77292-A-7-A
Client ID: 11215702-080321-BN-SJSB091 (12-14)
Inject. Date: 26-Aug-2021 10:50:55 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 5

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	38927945	13902238

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	38927945	13902238

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.846	5508386	1981421	5169688	1899960	25.1	1.07	
Signal Totals:							
	5508386	1981421	5169688	1899960			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	10678074	3881381				1.07	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 25.067 = (10678074 * 100.000) / (38927945 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d				
Injection Date:	26-Aug-2021 10:50:55	Instrument ID:	10D5		
Lims ID:	320-77292-A-7-A	Lab Sample ID:	320-77292-7		
Client ID:	11215702-080321-BN-SJSB091 (12-14)				
Operator ID:	SMA	ALS Bottle#:	44	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 2, m/z: 305.8987, RT: (14.68- 19.46)

Signal: 2

Processing Integration Results

RT = 17.507 Area = 51784

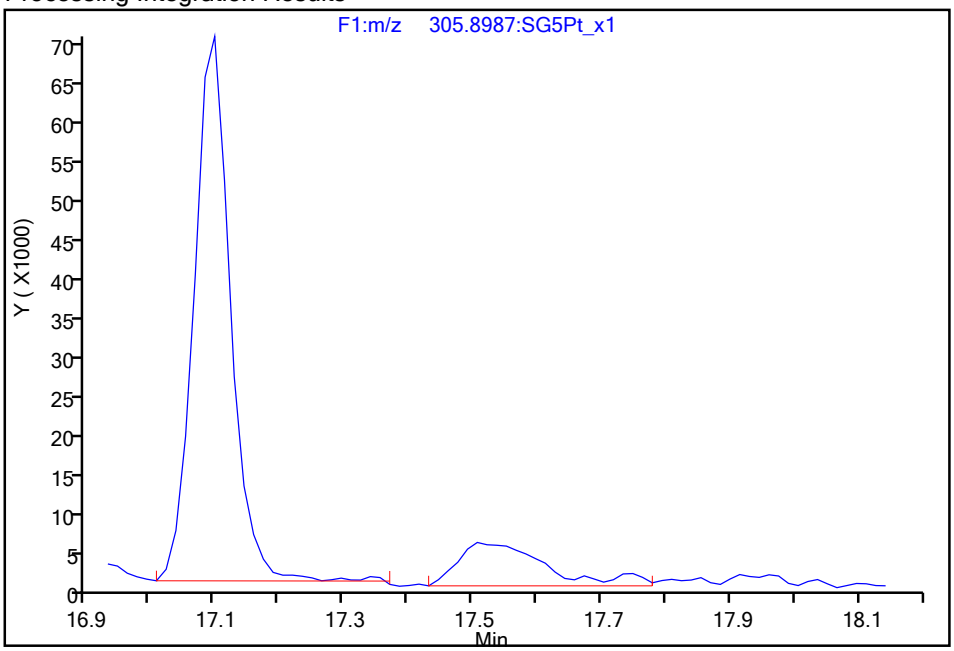

Manual Integration Results

RT = 17.507 Area = 44456 M

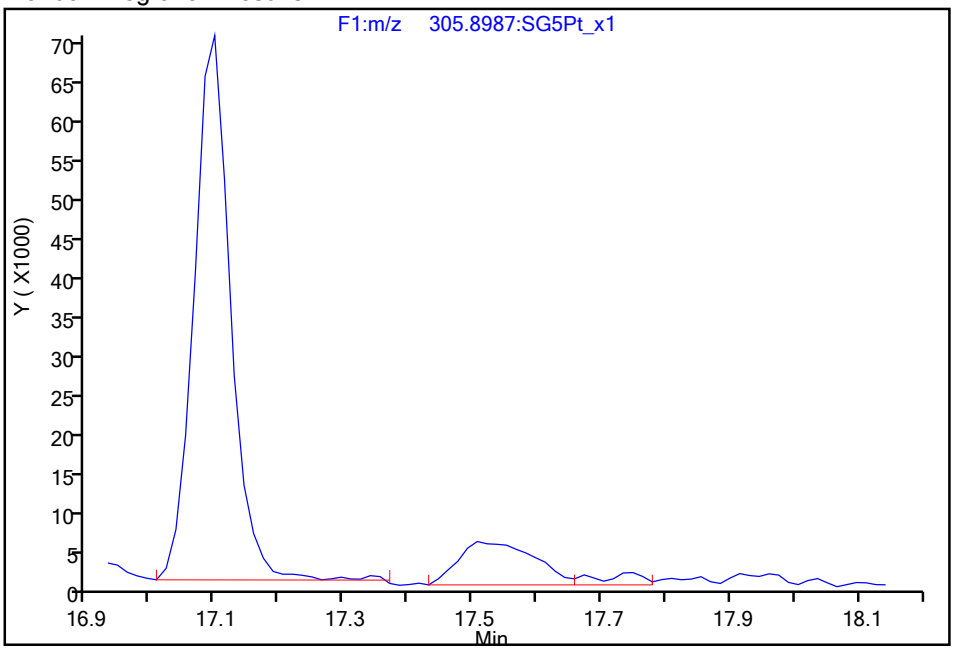

Reviewer: dadunj, 30-Aug-2021 08:39:51

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d				
Injection Date:	26-Aug-2021 10:50:55	Instrument ID:	10D5		
Lims ID:	320-77292-A-7-A	Lab Sample ID:	320-77292-7		
Client ID:	11215702-080321-BN-SJSB091 (12-14)				
Operator ID:	SMA	ALS Bottle#:	44	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 22.906 Area = 61464

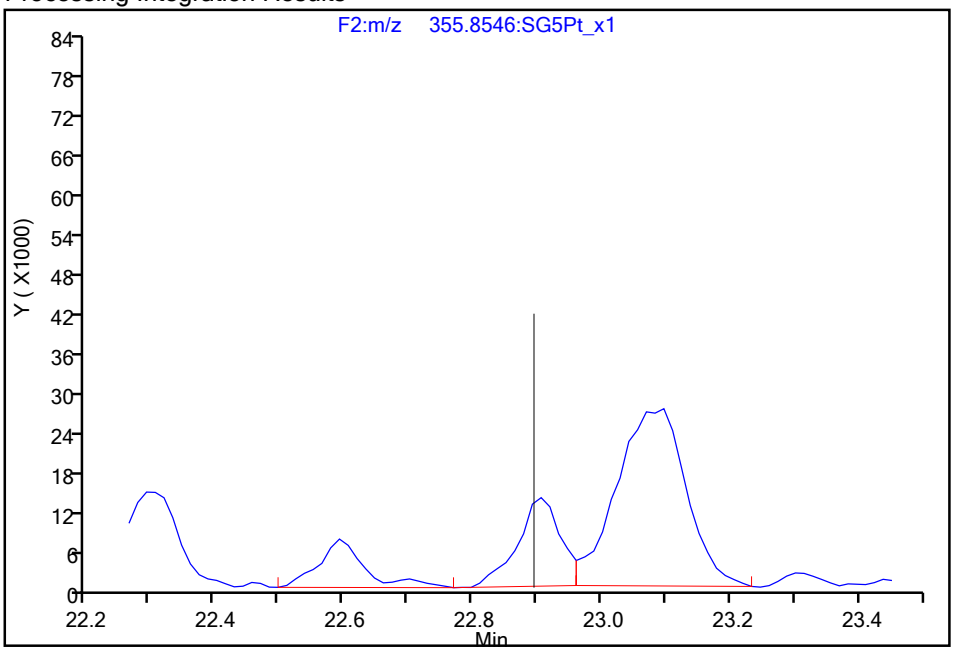

Manual Integration Results

RT = 22.906 Area = 61464

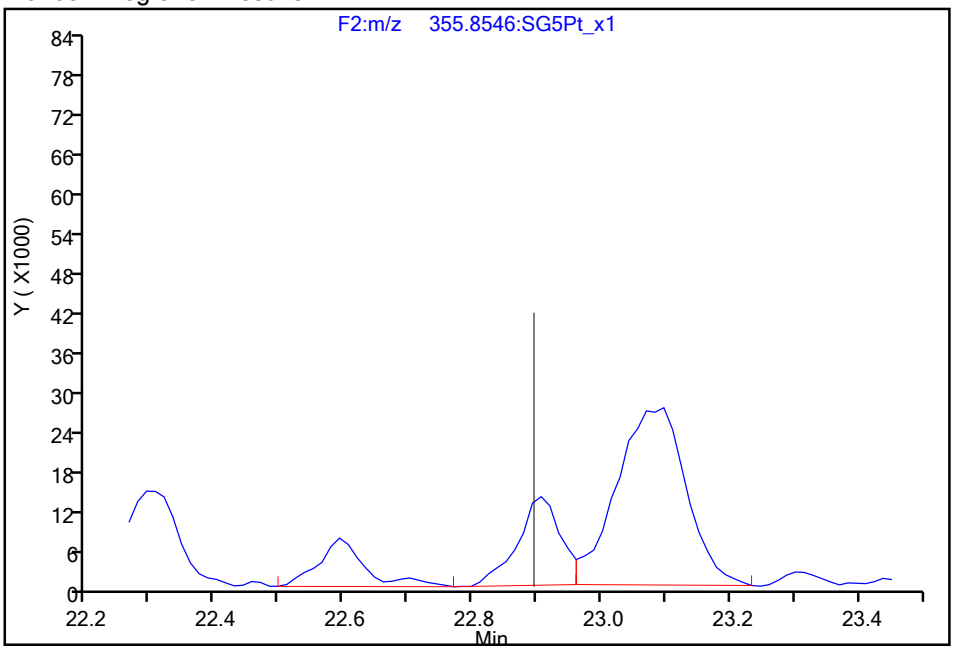

Reviewer: krenns, 30-Aug-2021 16:38:59

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

793634

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d				
Injection Date:	26-Aug-2021 10:50:55	Instrument ID:	10D5		
Lims ID:	320-77292-A-7-A	Lab Sample ID:	320-77292-7		
Client ID:	11215702-080321-BN-SJSB091 (12-14)				
Operator ID:	SMA	ALS Bottle#:	44	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.50- 25.89)

Signal: 2

Processing Integration Results

RT = 23.070 Area = 157551

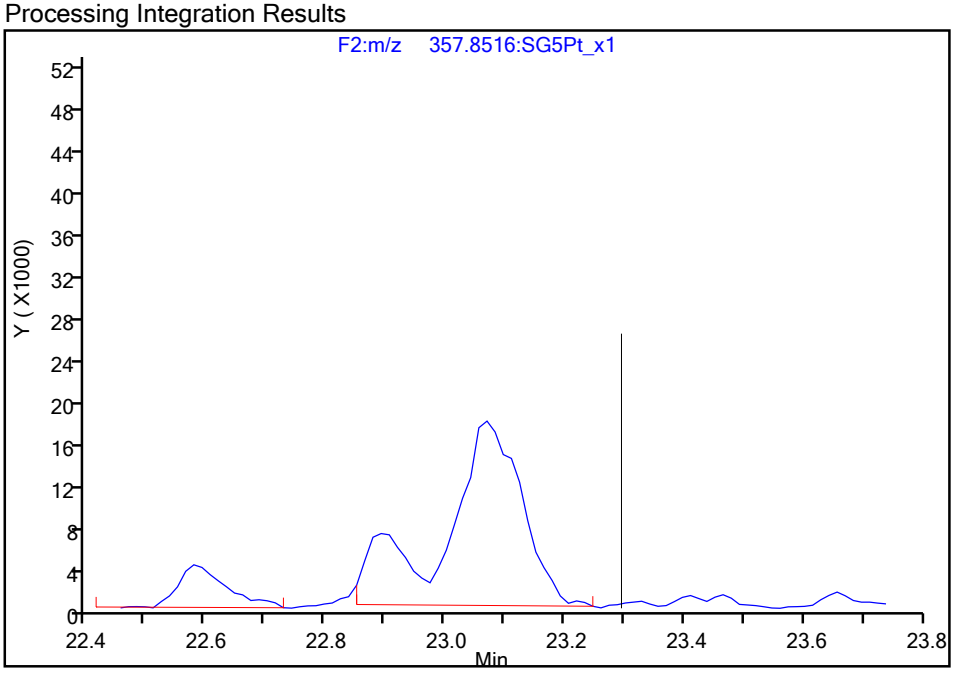

Manual Integration Results

RT = 23.070 Area = 125540 M

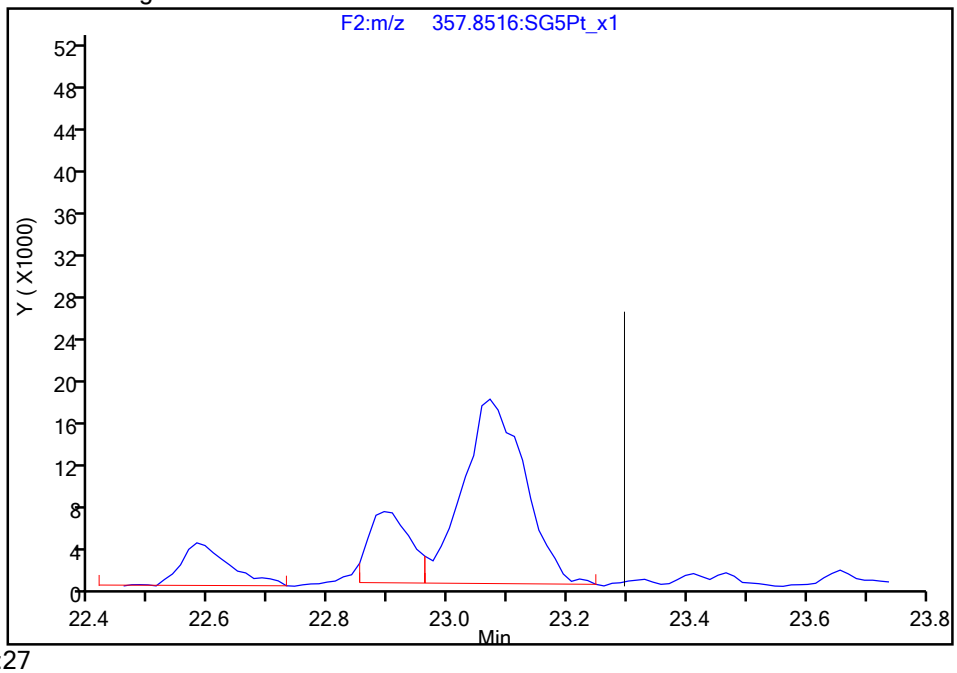

Reviewer: dadunj, 30-Aug-2021 08:38:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d				
Injection Date:	26-Aug-2021 10:50:55	Instrument ID:	10D5		
Lims ID:	320-77292-A-7-A	Lab Sample ID:	320-77292-7		
Client ID:	11215702-080321-BN-SJSB091 (12-14)				
Operator ID:	SMA	ALS Bottle#:	44	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.13
Area: 14332
Amount: 0.040188
Amount Units: pg/ul

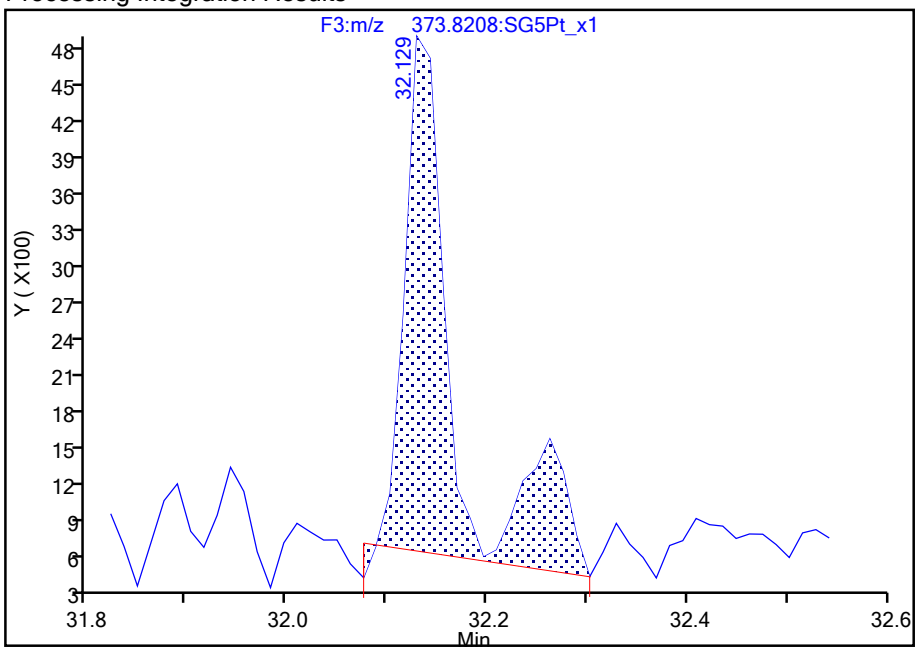

Manual Integration Results

RT: 32.13
Area: 10831
Amount: 0.030844
Amount Units: pg/ul

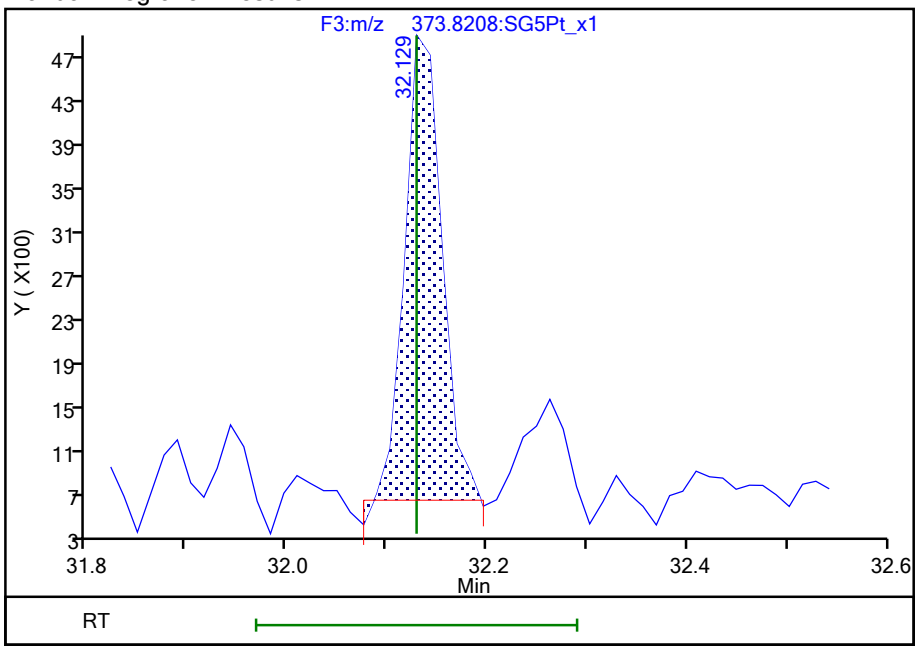

Reviewer: dadunj, 30-Aug-2021 08:38:52

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793636

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d				
Injection Date:	26-Aug-2021 10:50:55	Instrument ID:	10D5		
Lims ID:	320-77292-A-7-A	Lab Sample ID:	320-77292-7		
Client ID:	11215702-080321-BN-SJSB091 (12-14)				
Operator ID:	SMA	ALS Bottle#:	44	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.14
Area: 14654
Amount: 0.040188
Amount Units: pg/ul

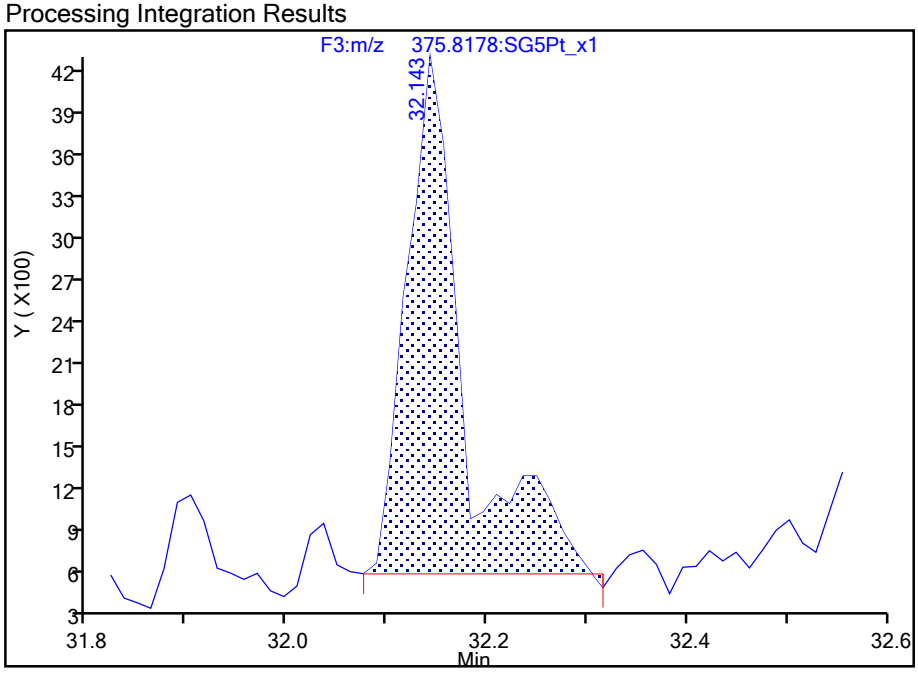

Manual Integration Results

RT: 32.14
Area: 11415
Amount: 0.030844
Amount Units: pg/ul

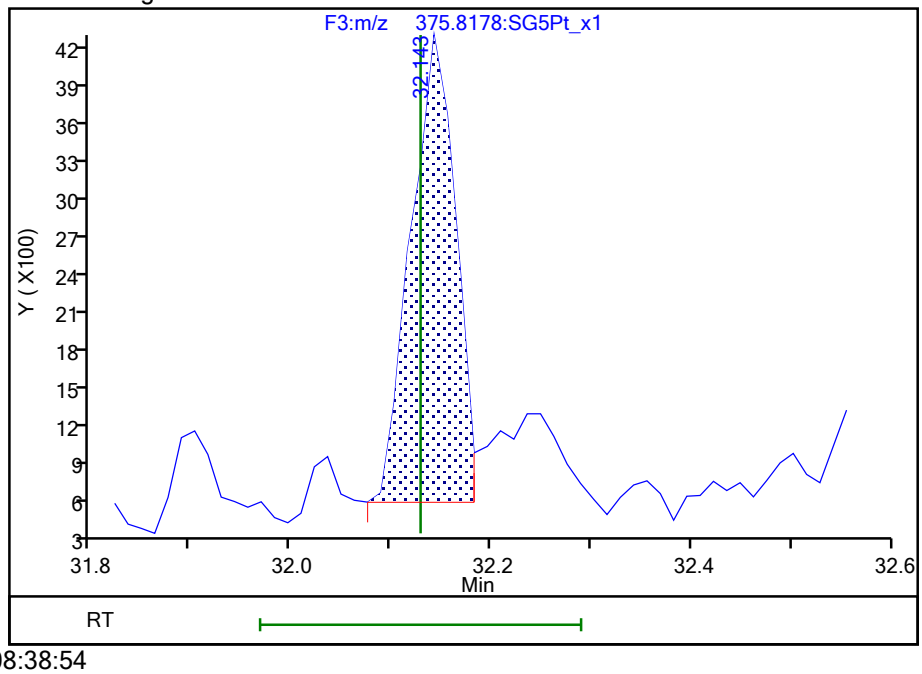

Reviewer: dadunj, 30-Aug-2021 08:38:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d				
Injection Date:	26-Aug-2021 10:50:55	Instrument ID:	10D5		
Lims ID:	320-77292-A-7-A	Lab Sample ID:	320-77292-7		
Client ID:	11215702-080321-BN-SJSB091 (12-14)				
Operator ID:	SMA	ALS Bottle#:	44	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.71
Area: 46346
Amount: 0.227151
Amount Units: pg/ul

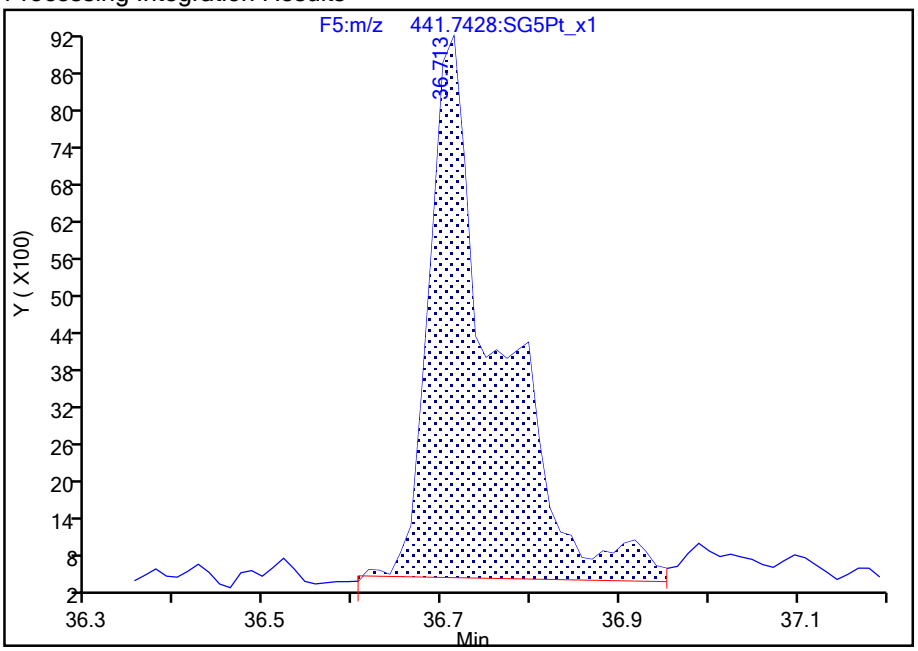

Manual Integration Results

RT: 36.80
Area: 12681
Amount: 0.057559
Amount Units: pg/ul

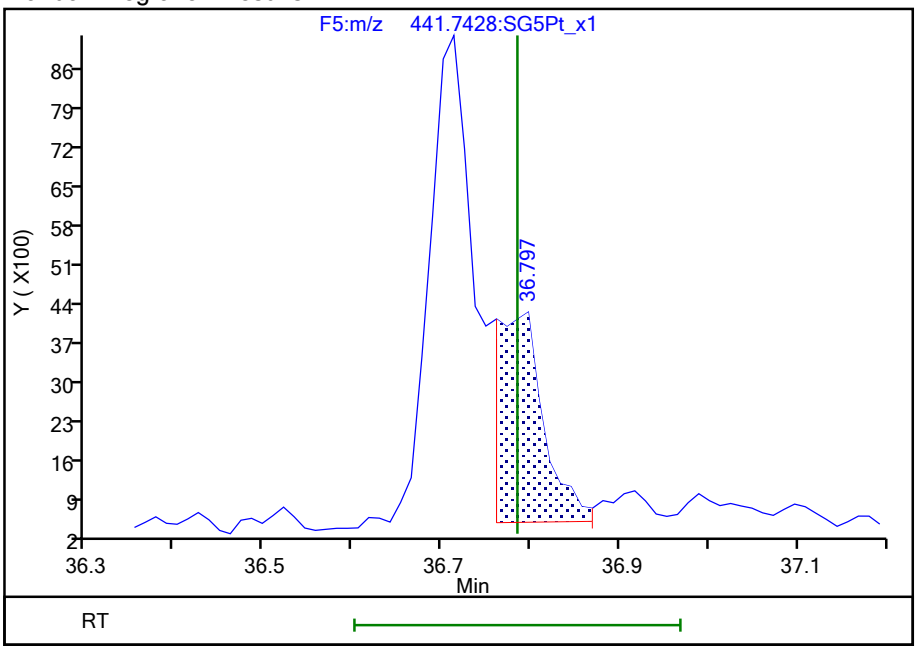

Reviewer: dadunj, 30-Aug-2021 08:39:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d				
Injection Date:	26-Aug-2021 10:50:55	Instrument ID:	10D5		
Lims ID:	320-77292-A-7-A	Lab Sample ID:	320-77292-7		
Client ID:	11215702-080321-BN-SJSB091 (12-14)				
Operator ID:	SMA	ALS Bottle#:	44	Worklist Smp#:	5
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.70
Area: 51753
Amount: 0.227151
Amount Units: pg/ul

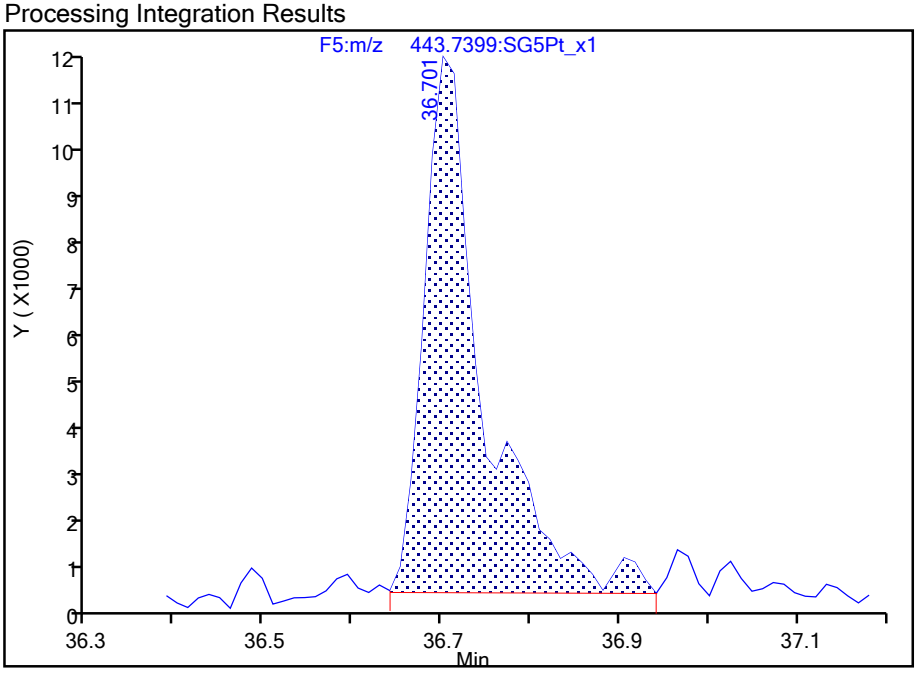

Manual Integration Results

RT: 36.77
Area: 12177
Amount: 0.057559
Amount Units: pg/ul

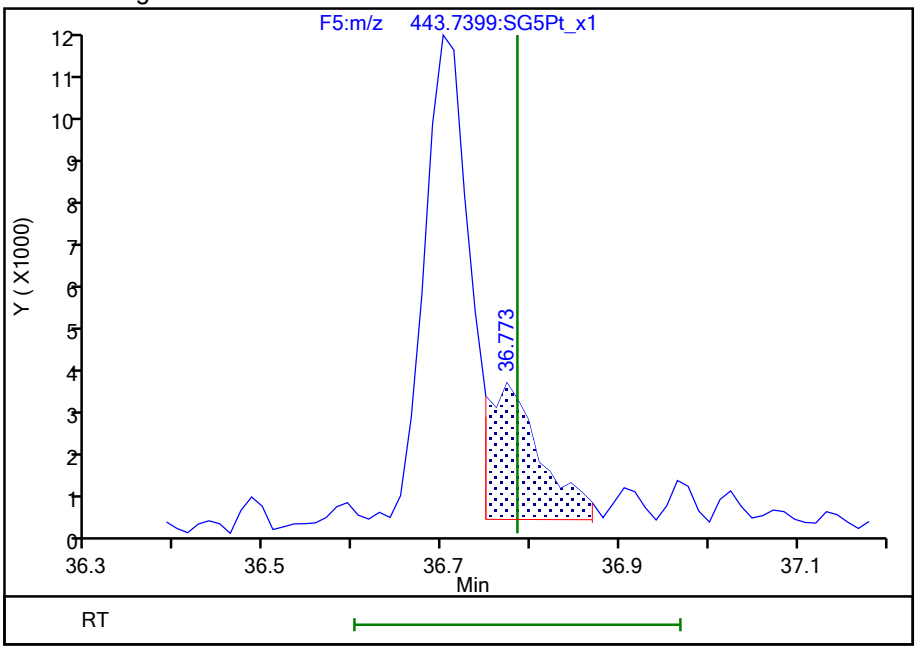

Reviewer: dadunj, 30-Aug-2021 08:39:40
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793639

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

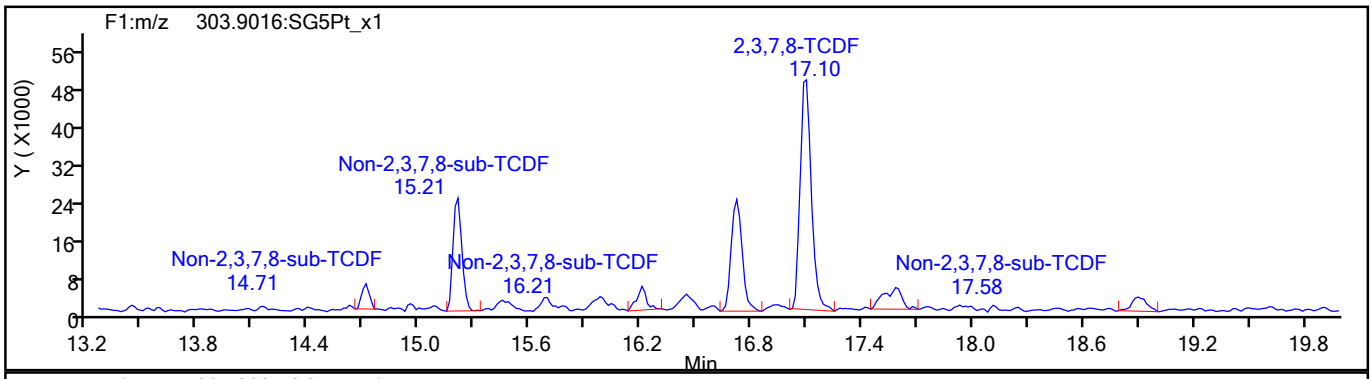

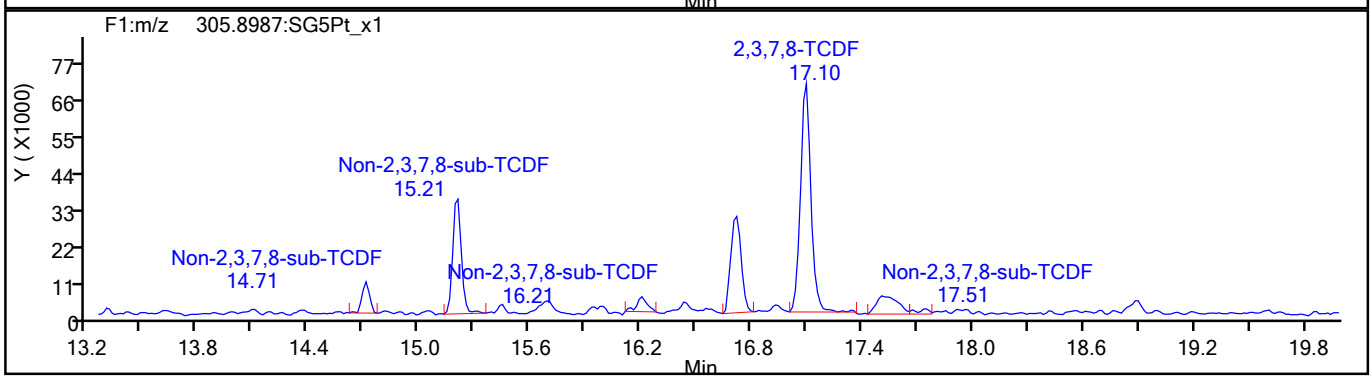

TCDF Standards

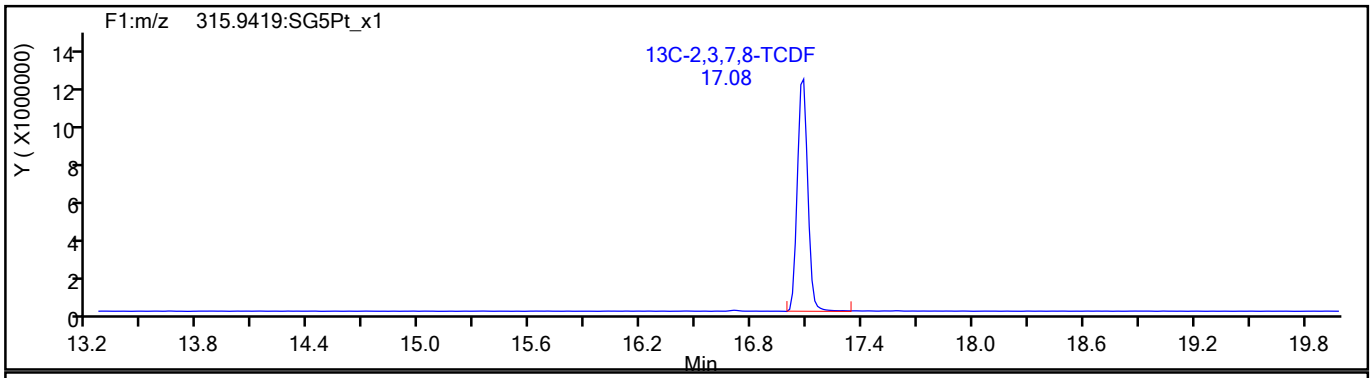

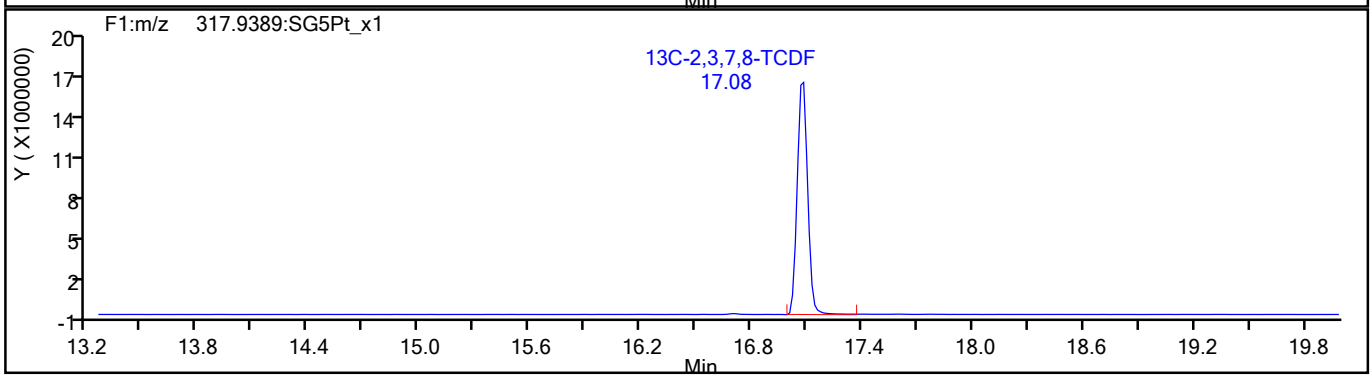

793640

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

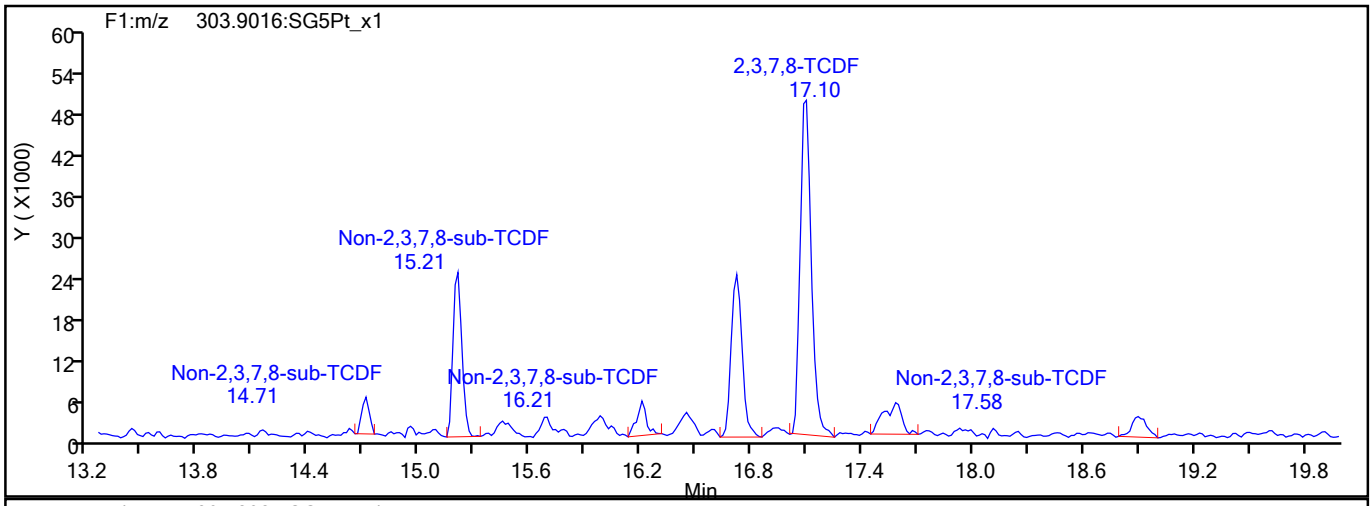

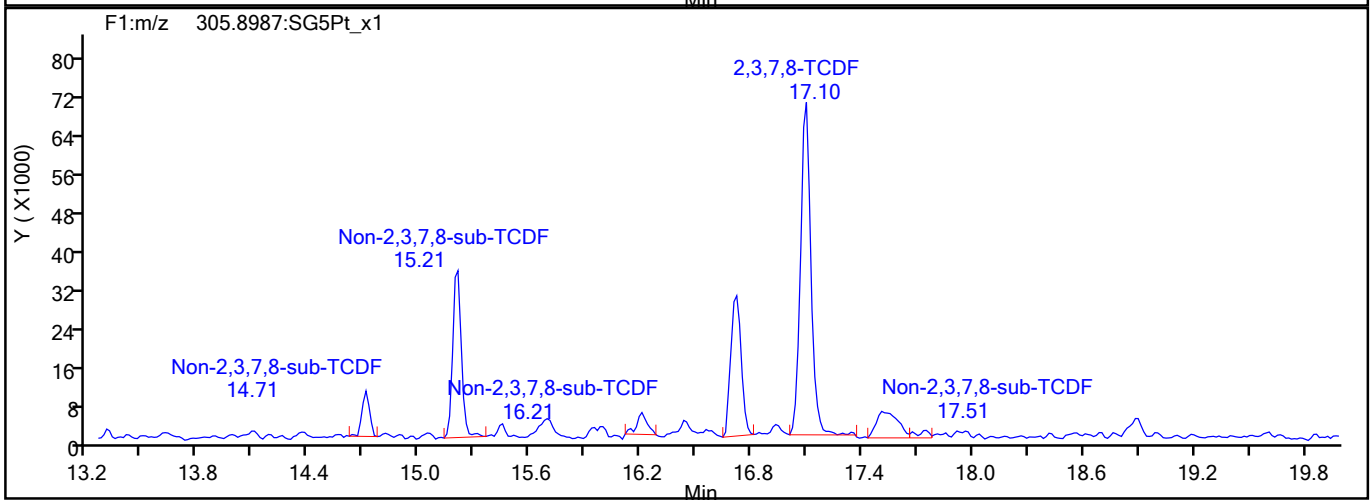

TCDF Interference Mass

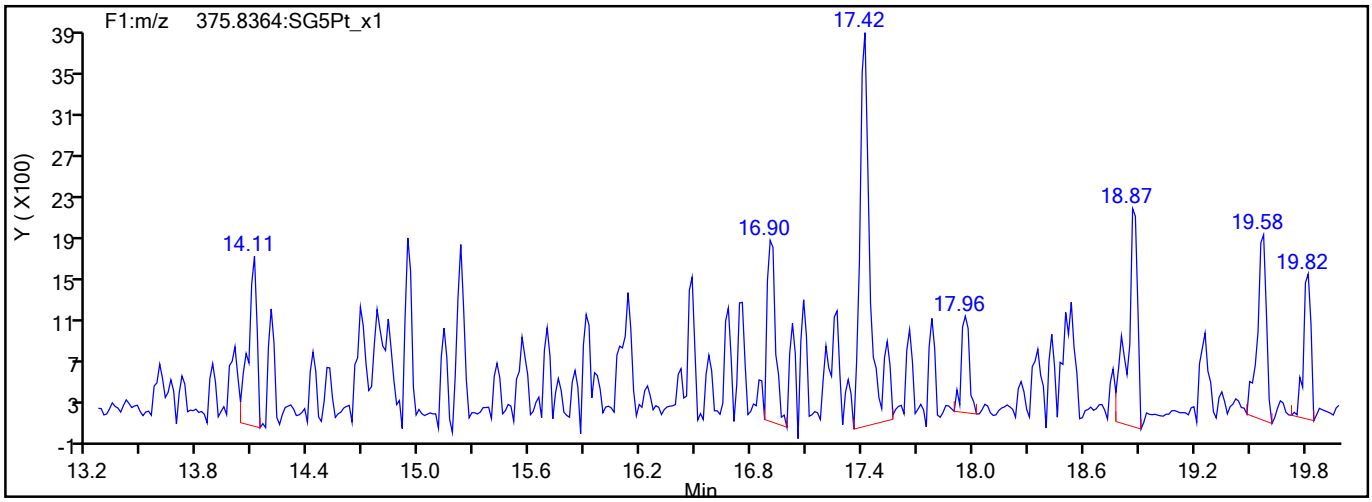

793641

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

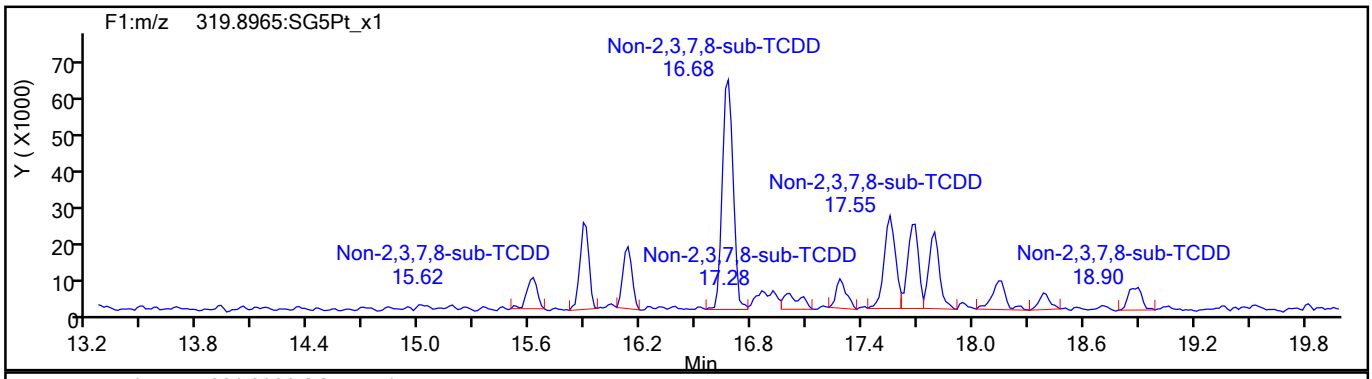

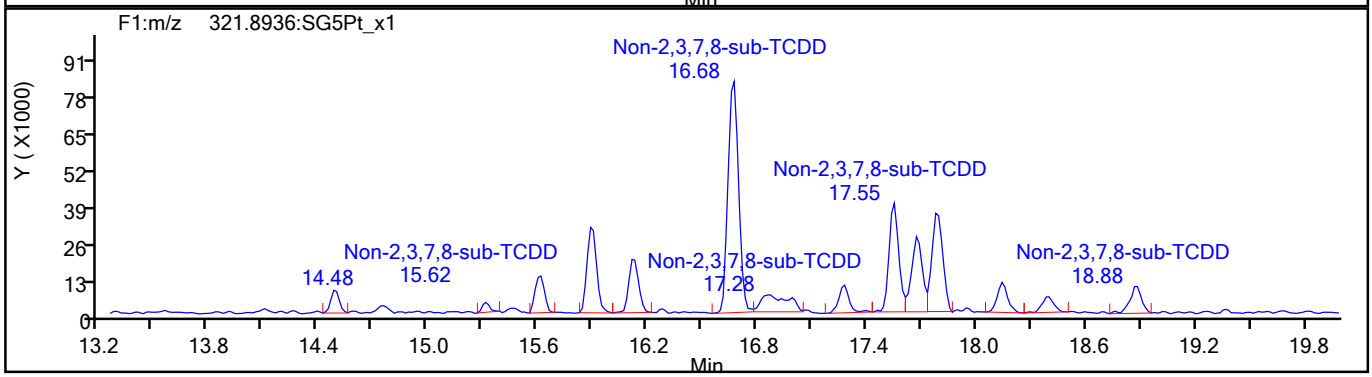

TCDD Standards

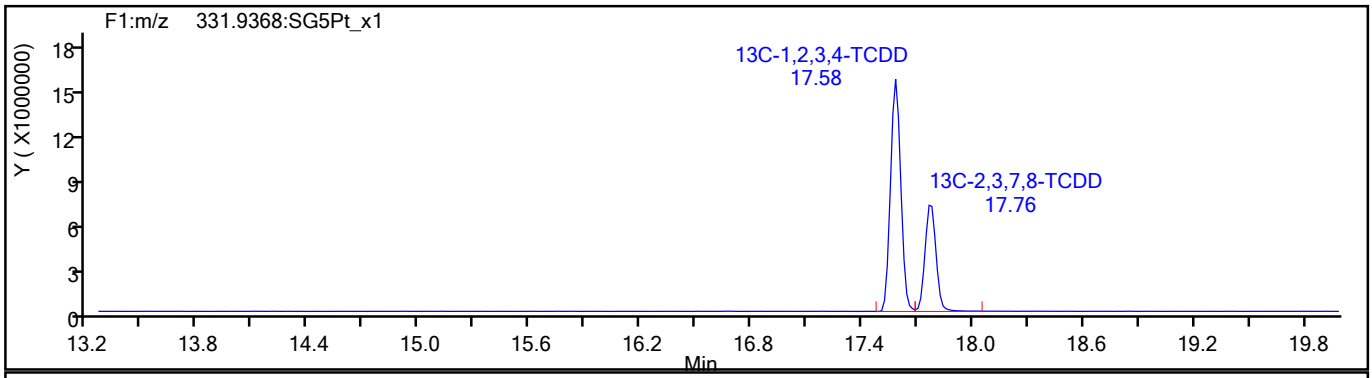

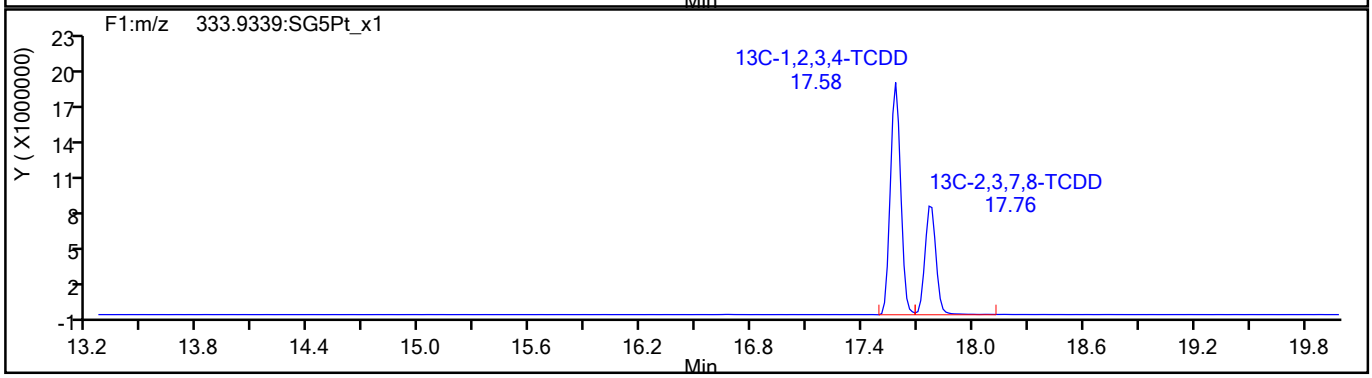

793642

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

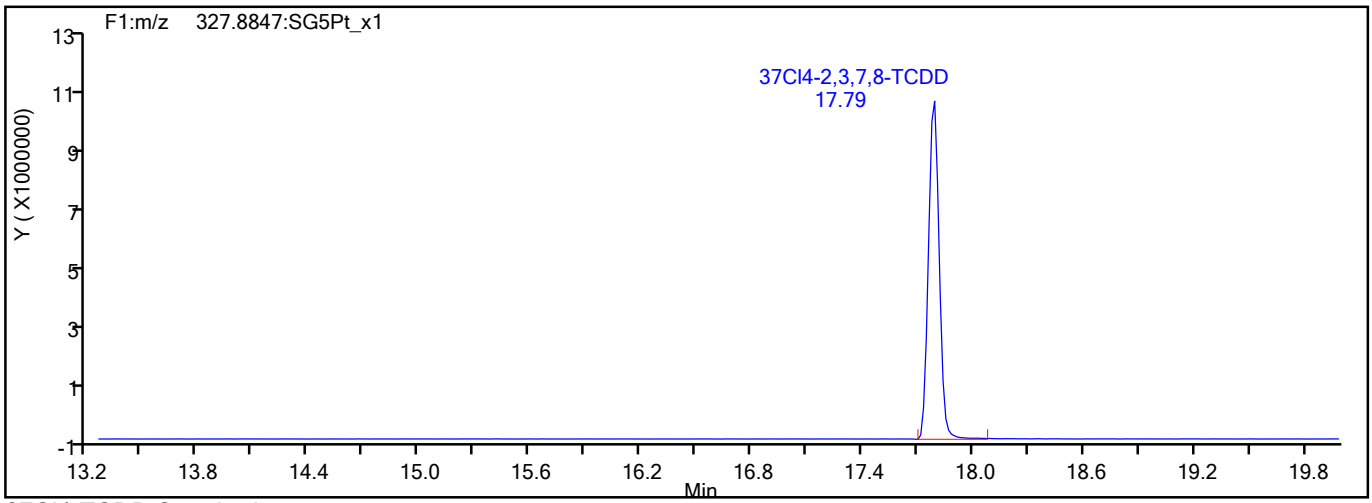

37Cl4-TCDD Standards

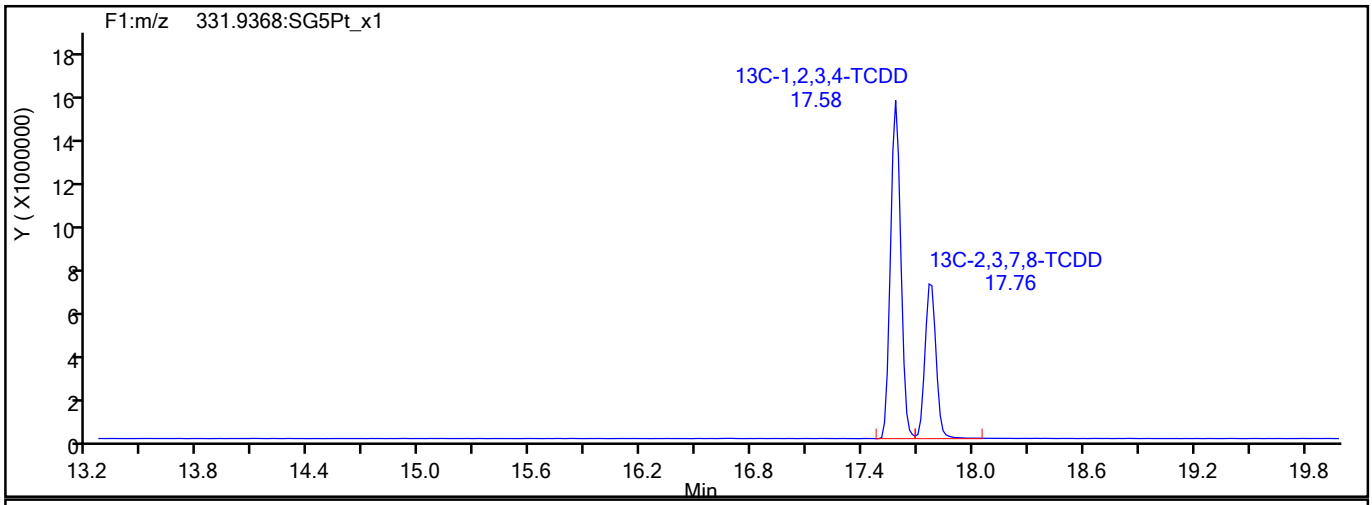

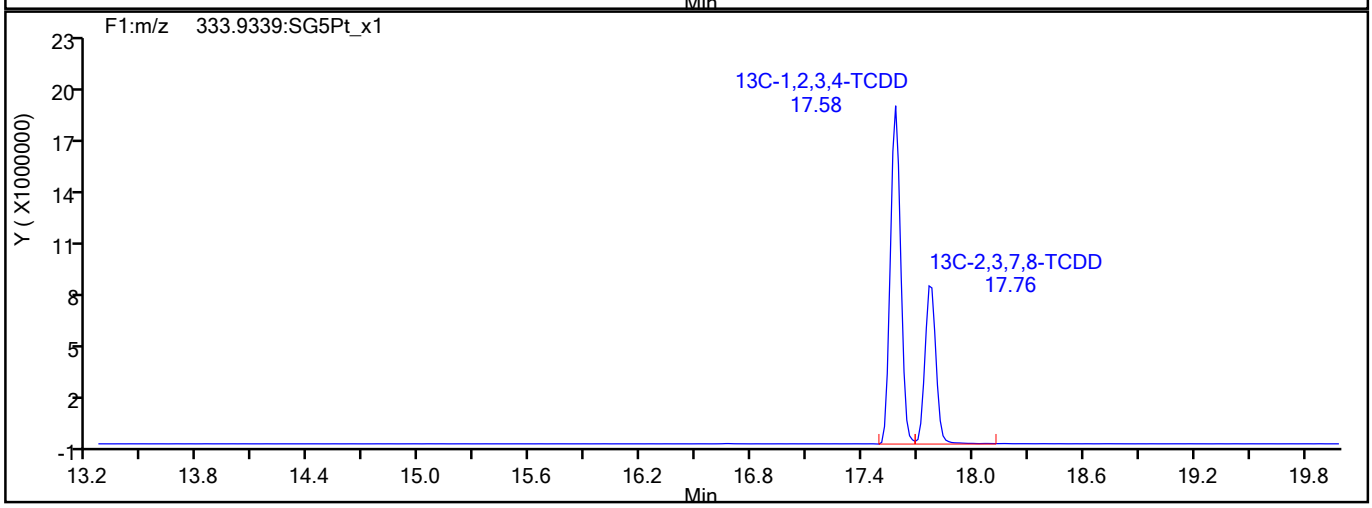

793643

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

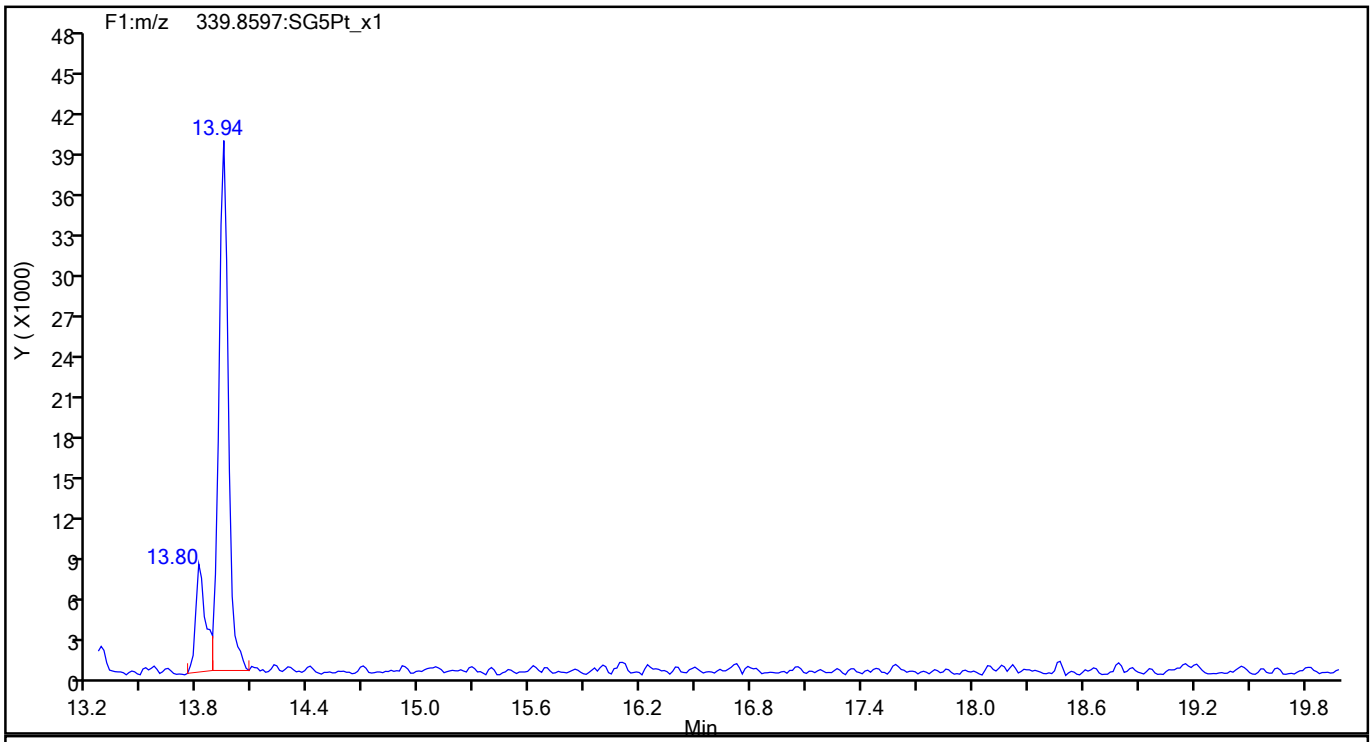

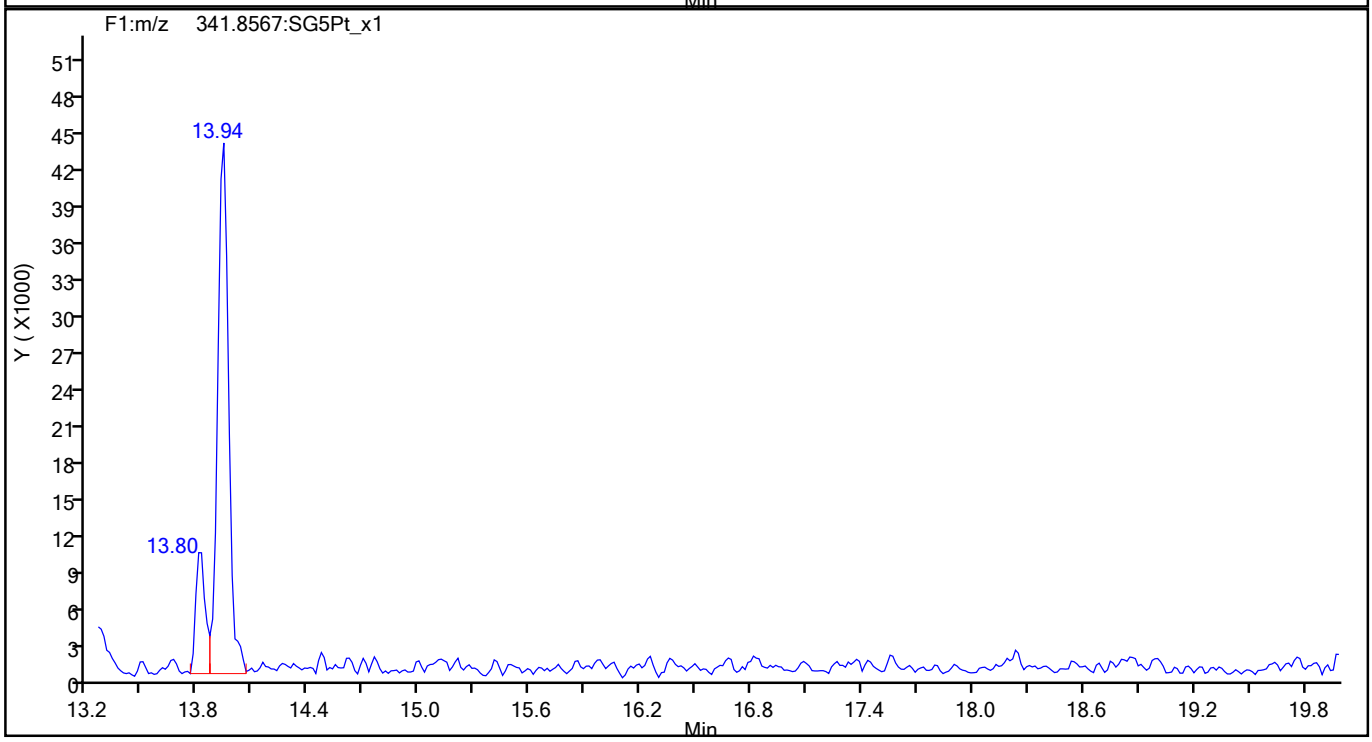

793644

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

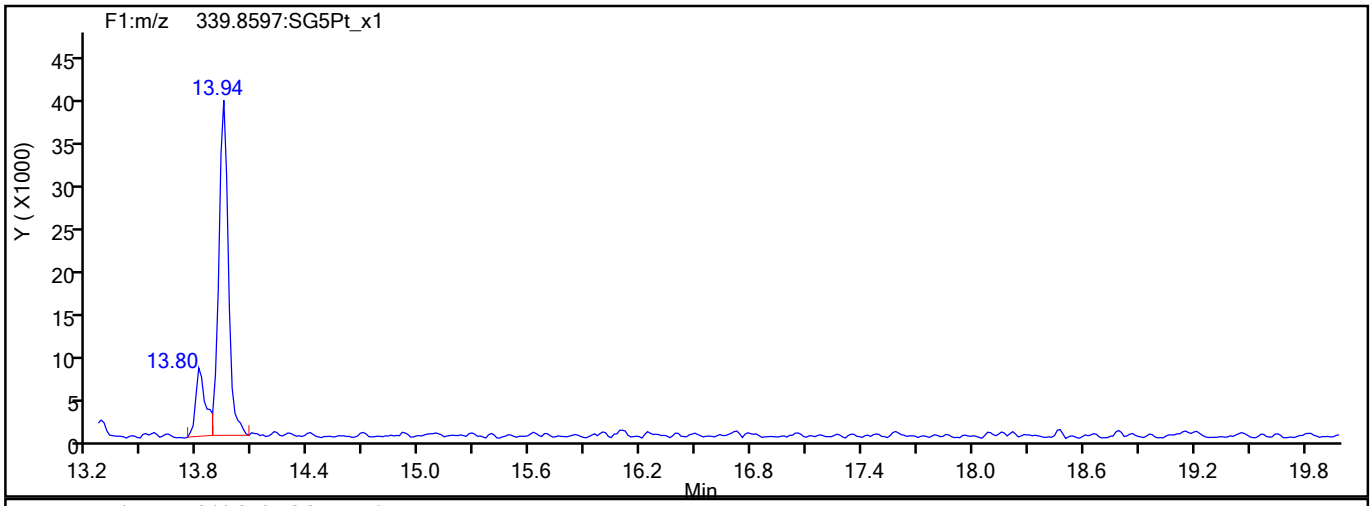

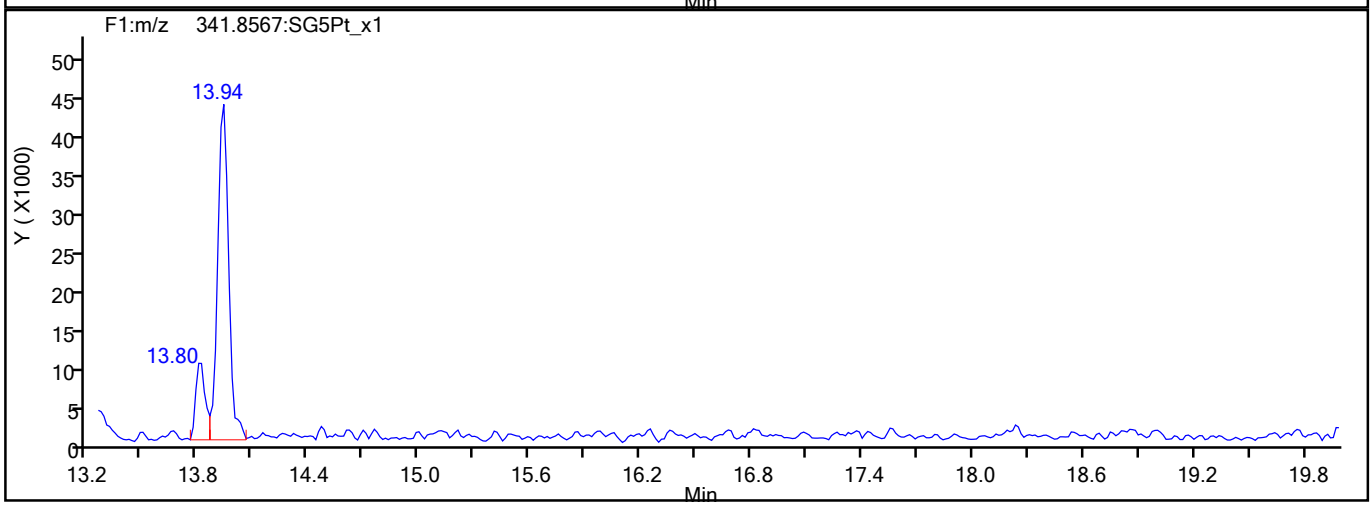

F1 PeCDFs Interference Mass

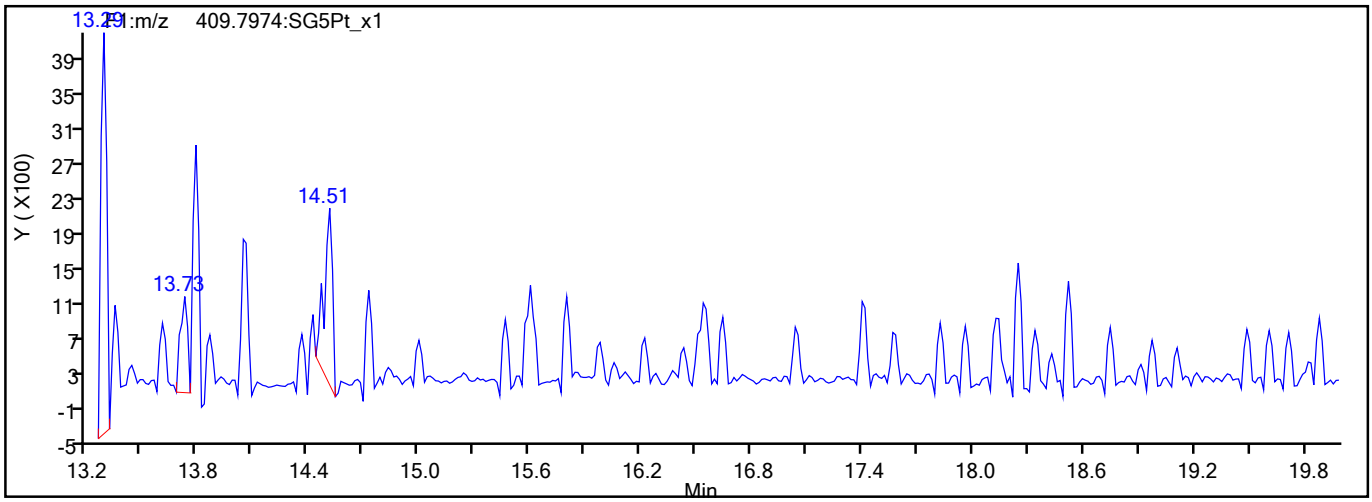

793645

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

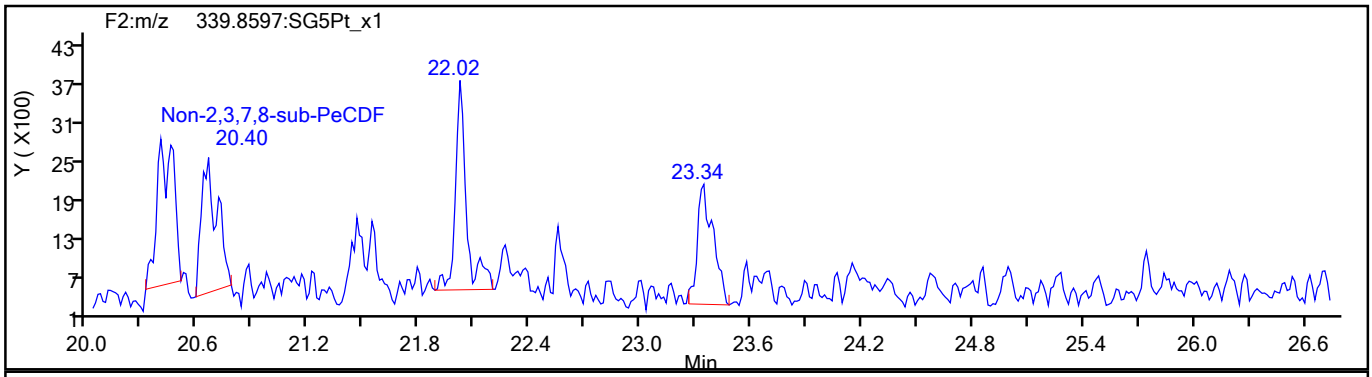

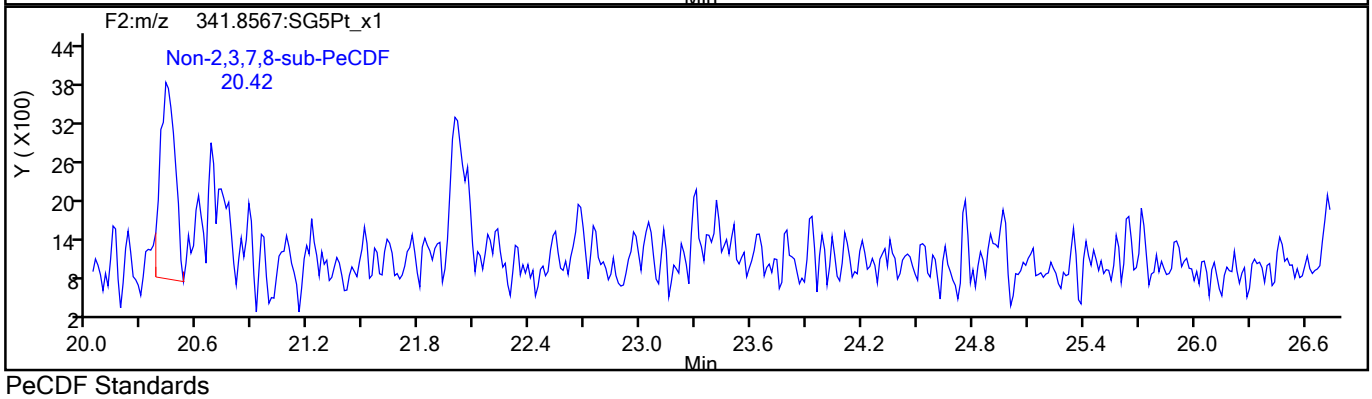

PeCDF Standards

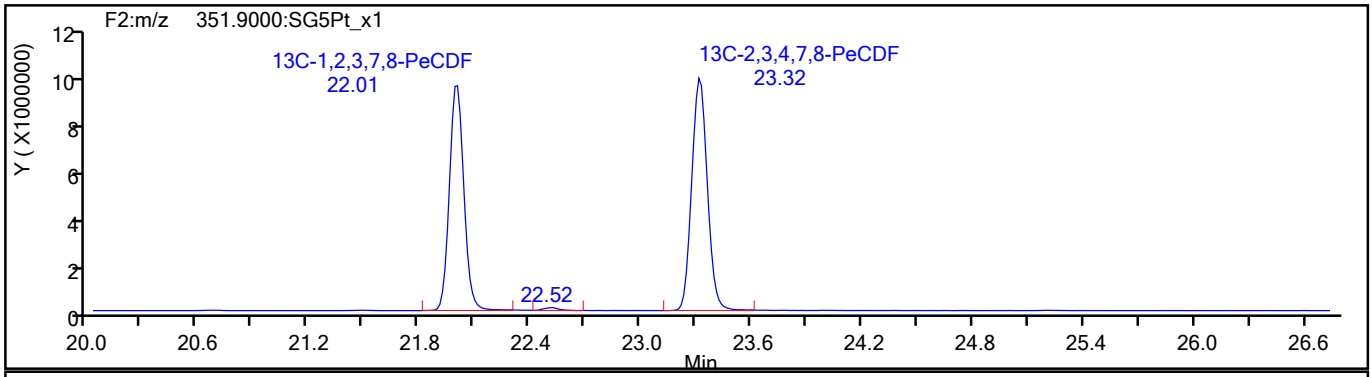

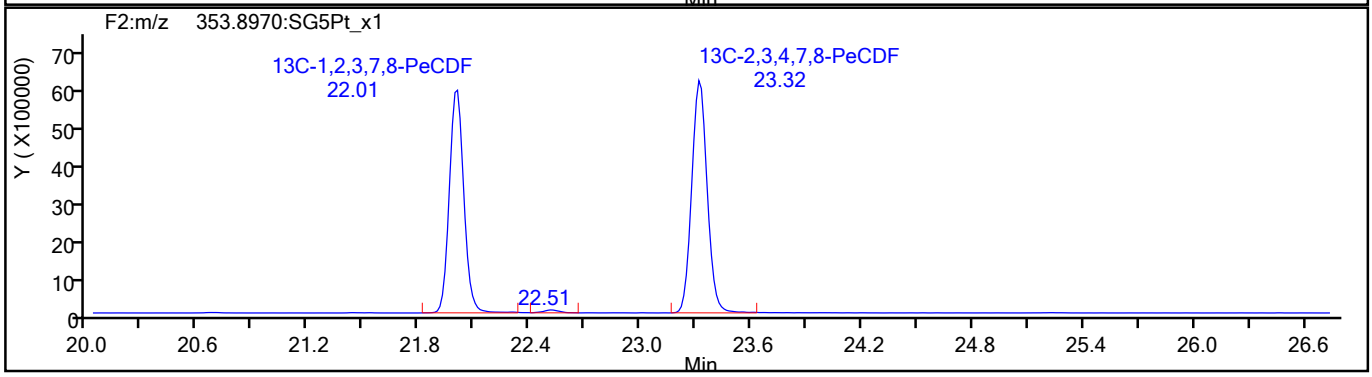

793646

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

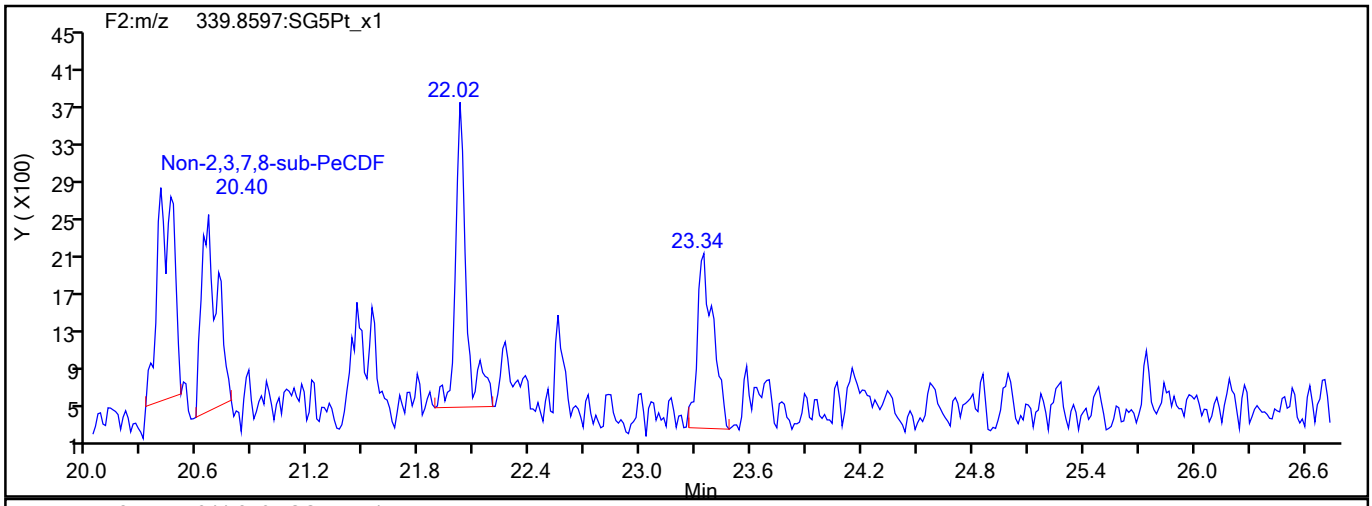

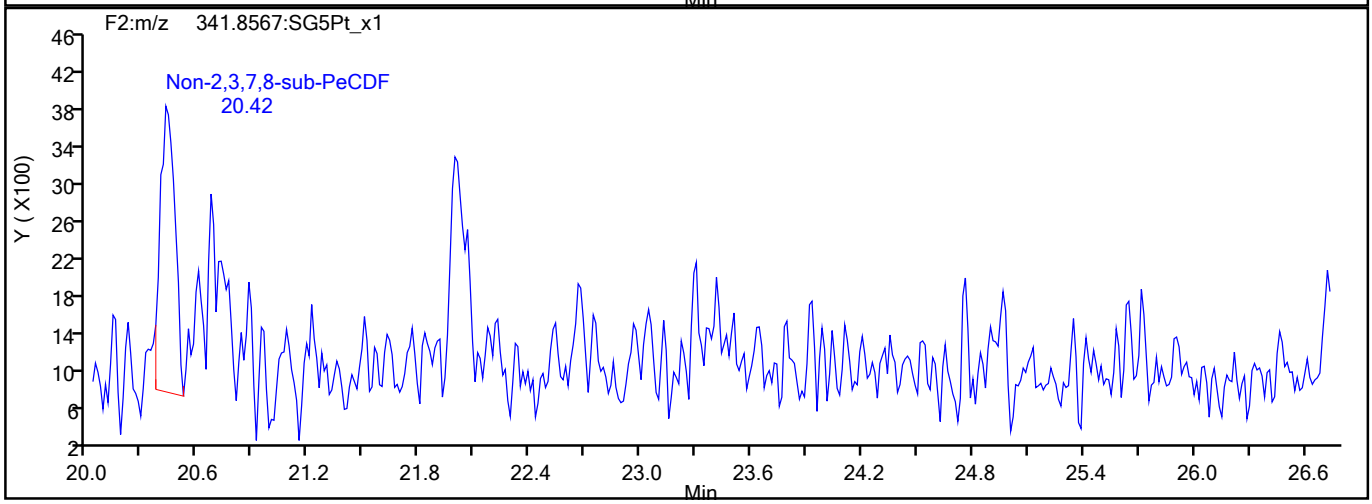

PeCDF Interference Mass

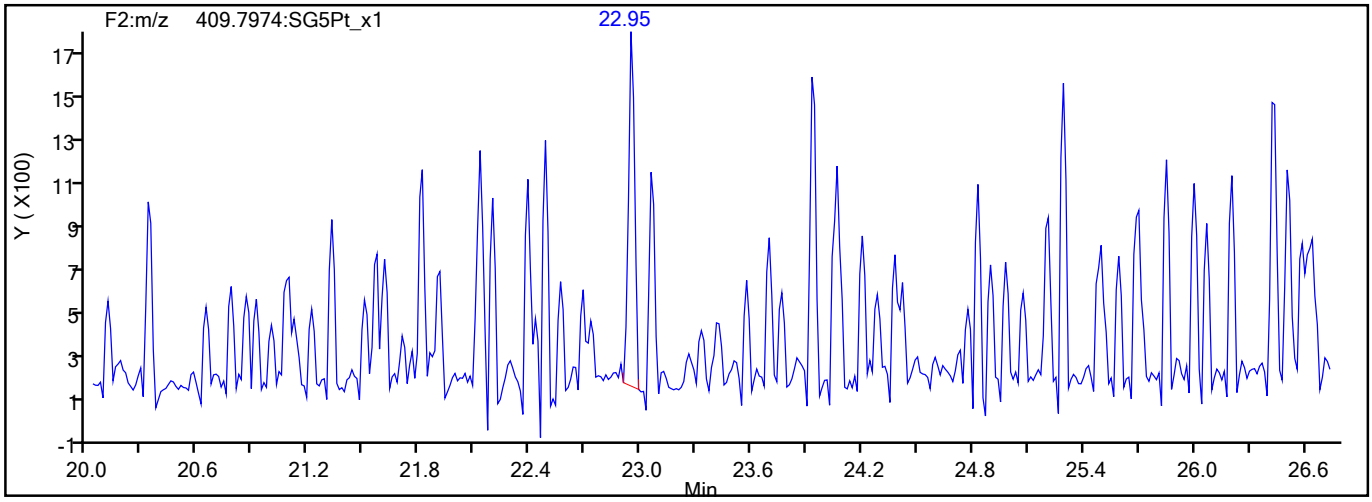

793647

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

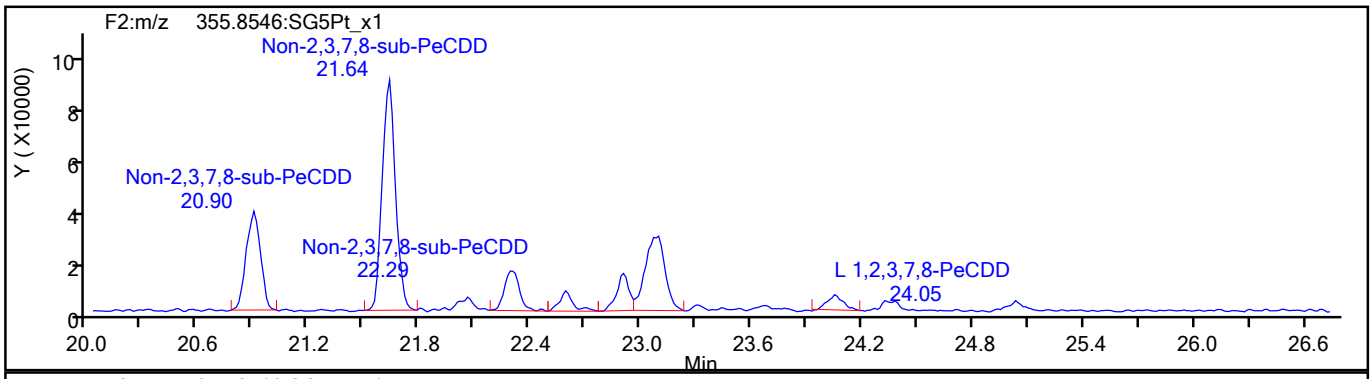

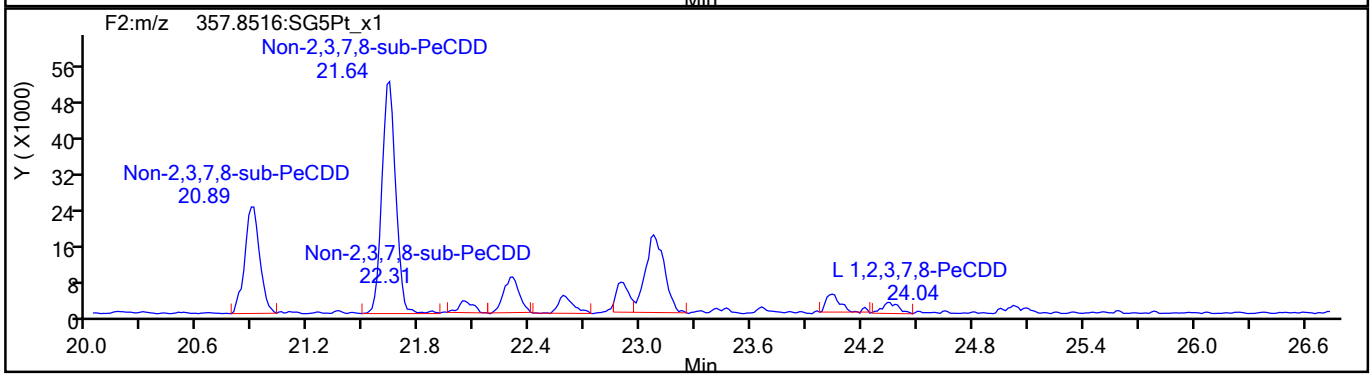

PeCDD Standards

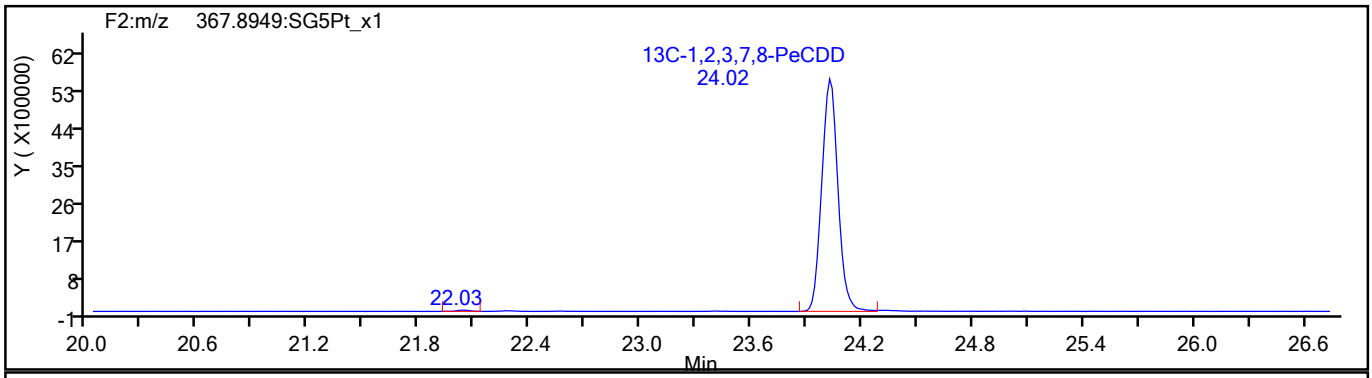

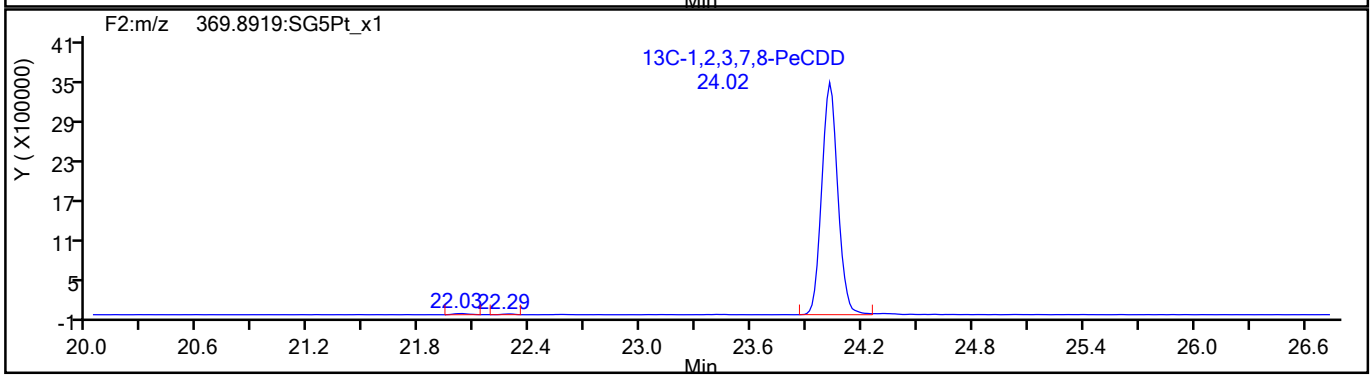

793648

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

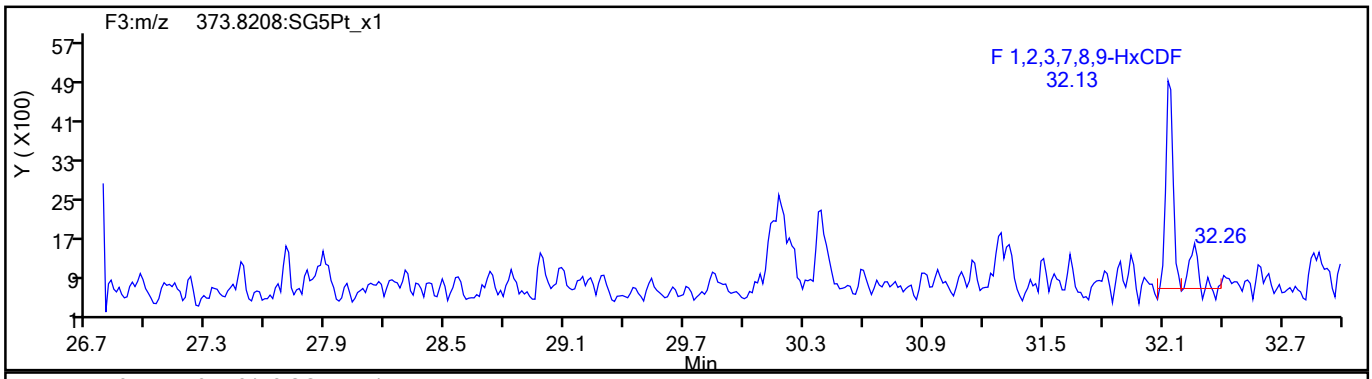

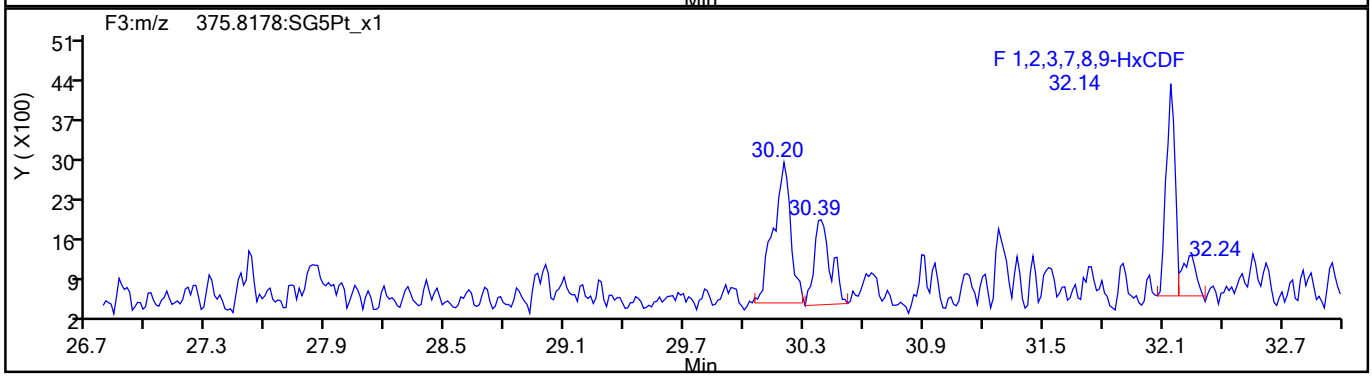

HxCDF Standards

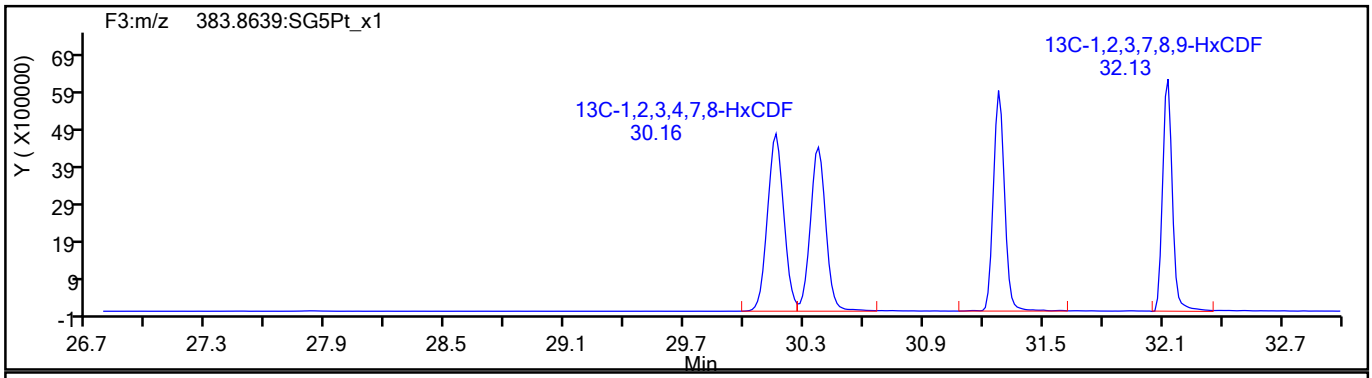

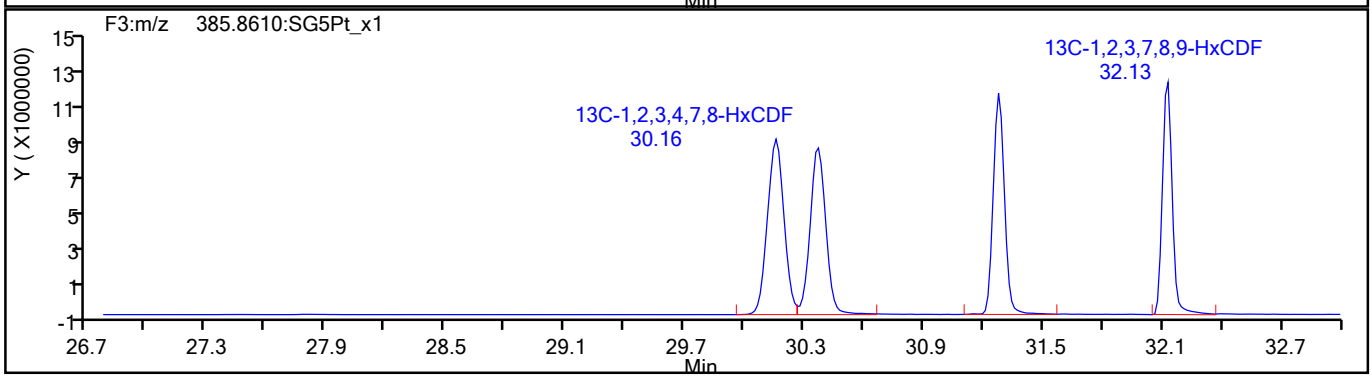

793649

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

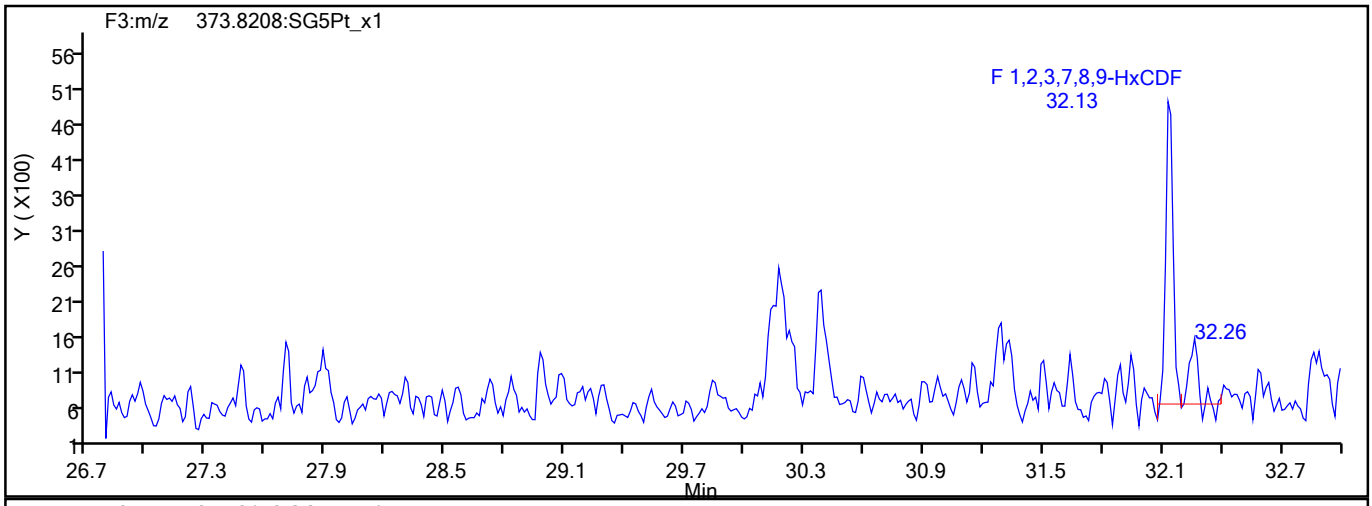

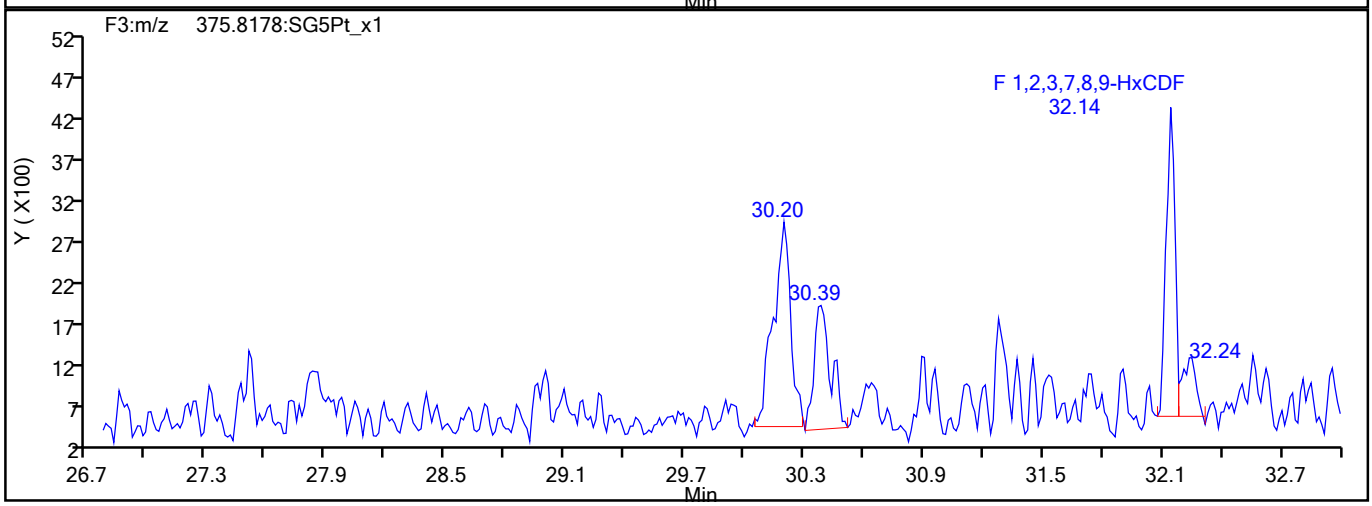

HxCDF Interference Mass

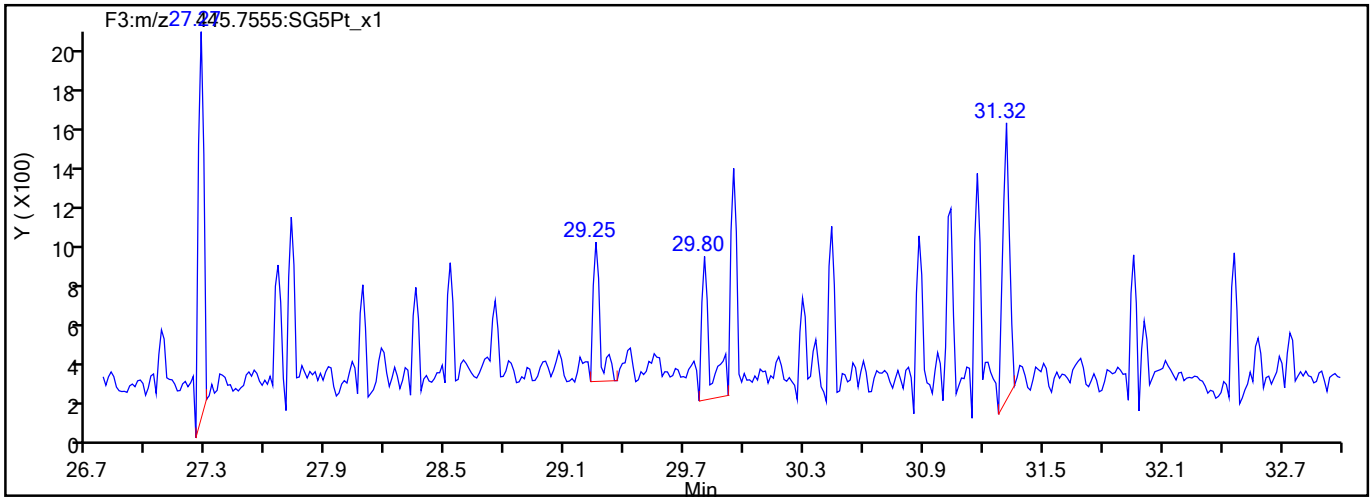

793650

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

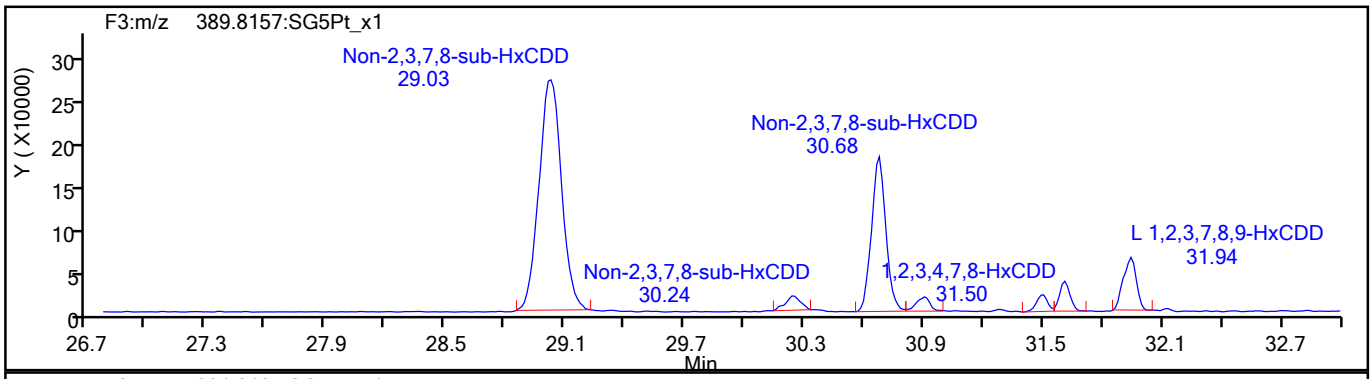

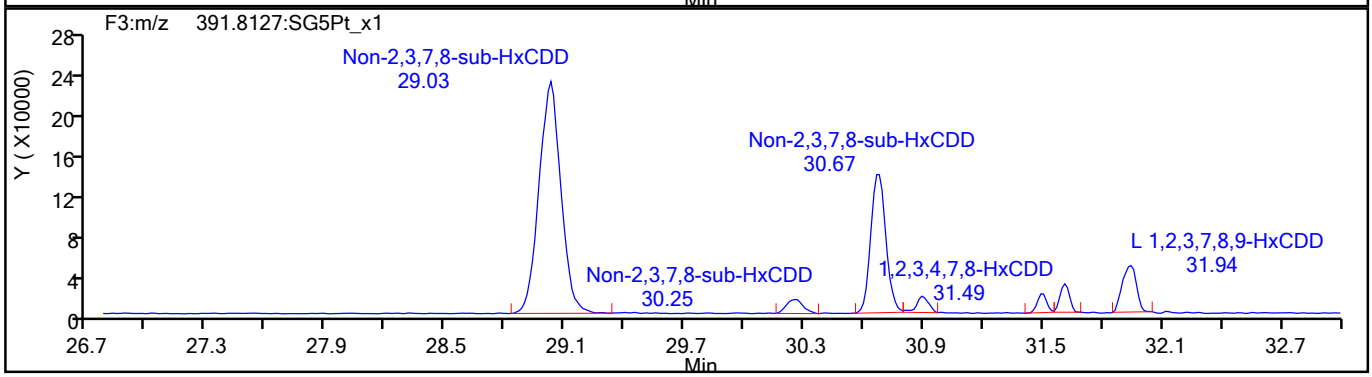

HxCDD Standards

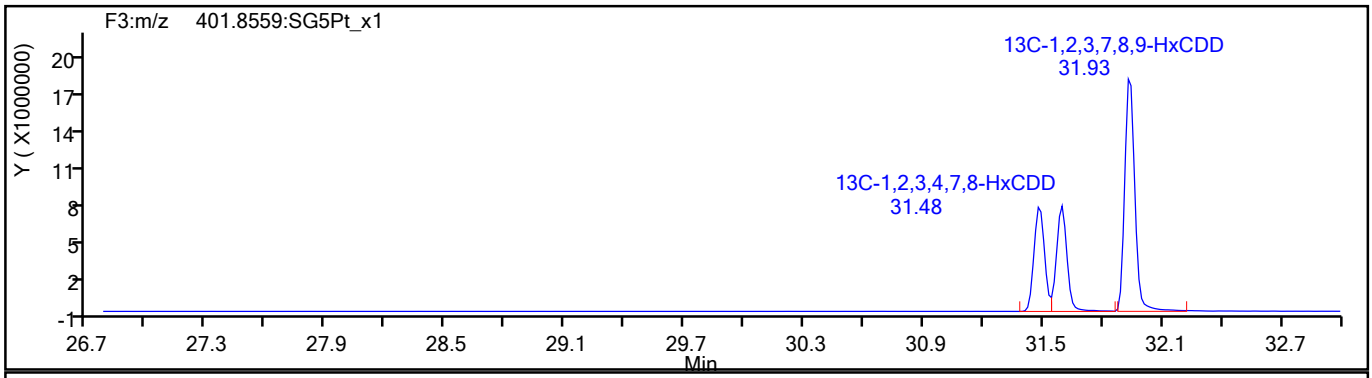

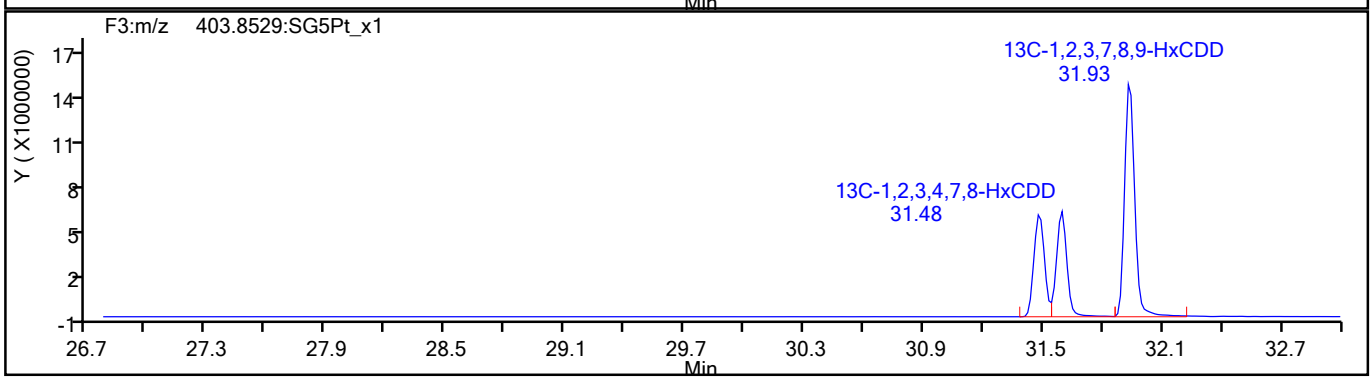

793651

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

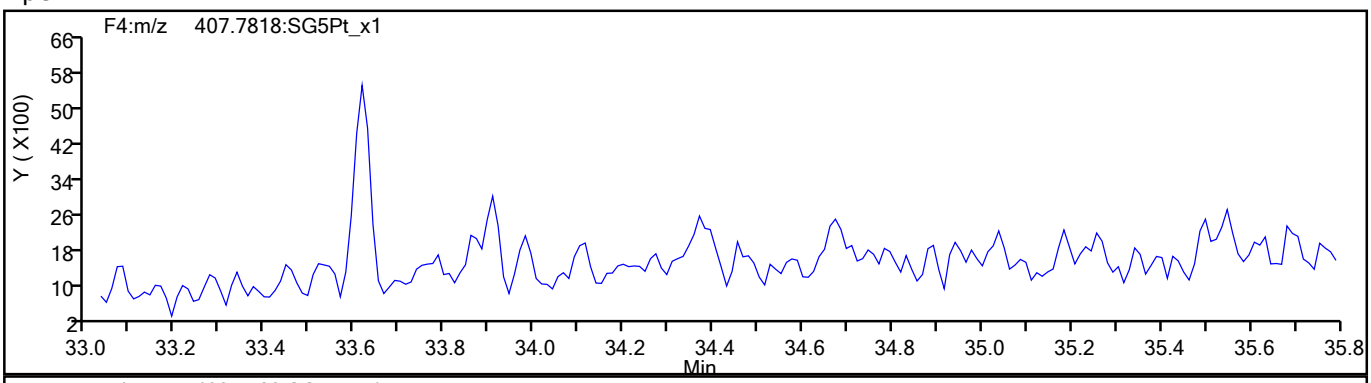

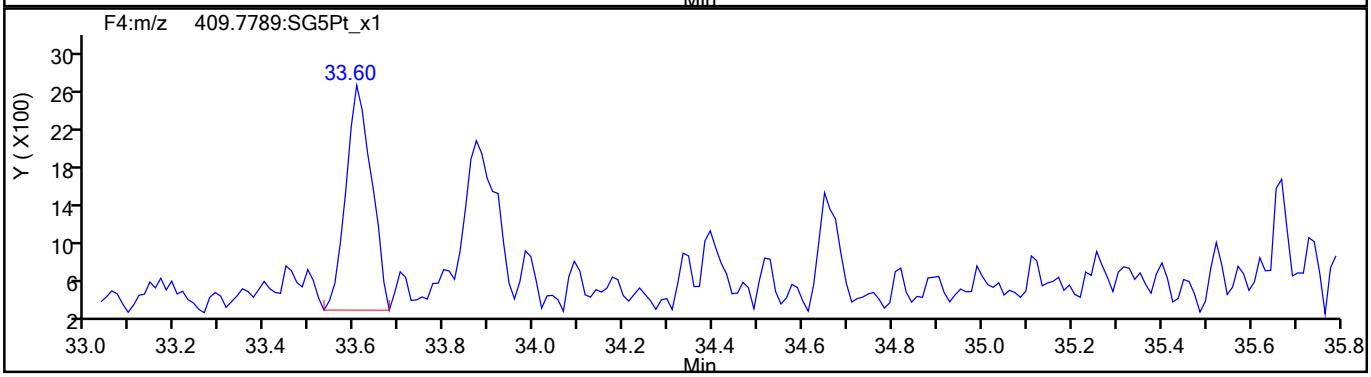

HpCDF Standards

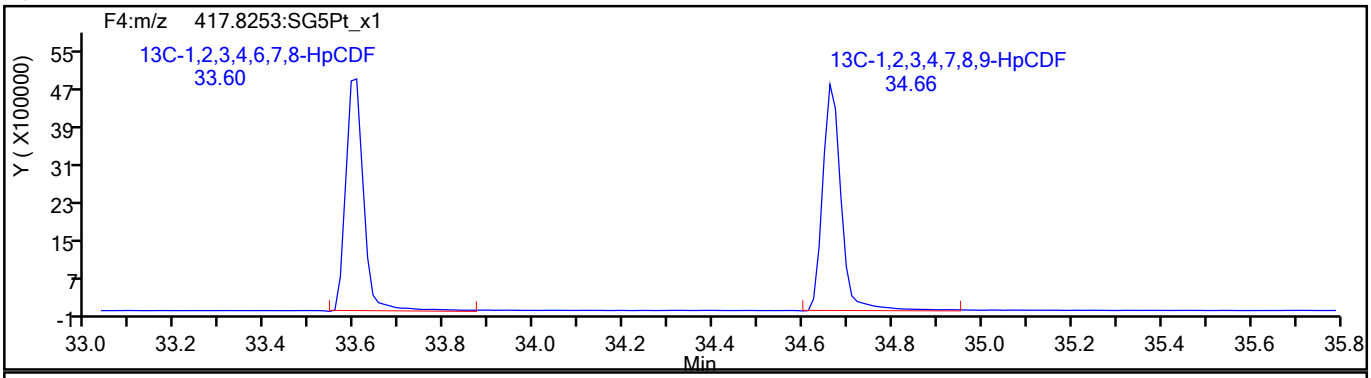

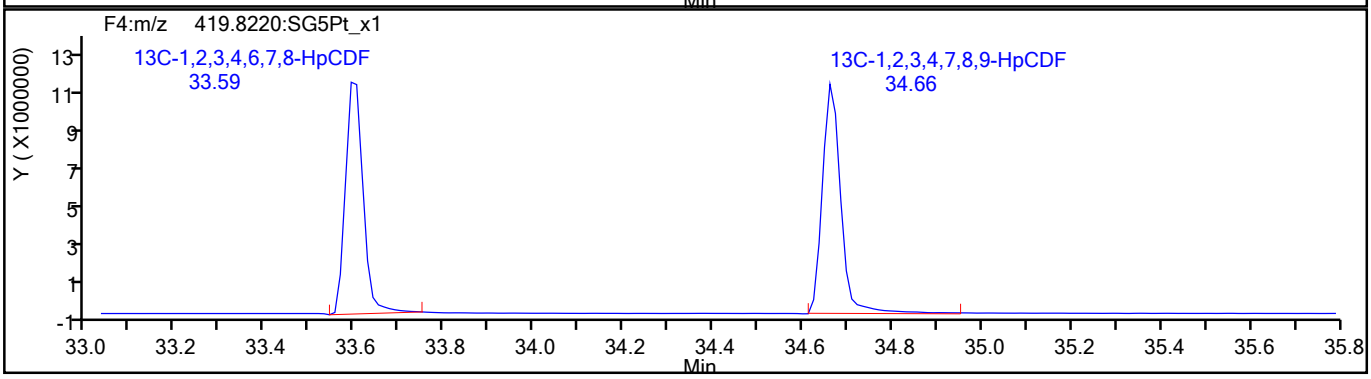

793652

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
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HpCDF

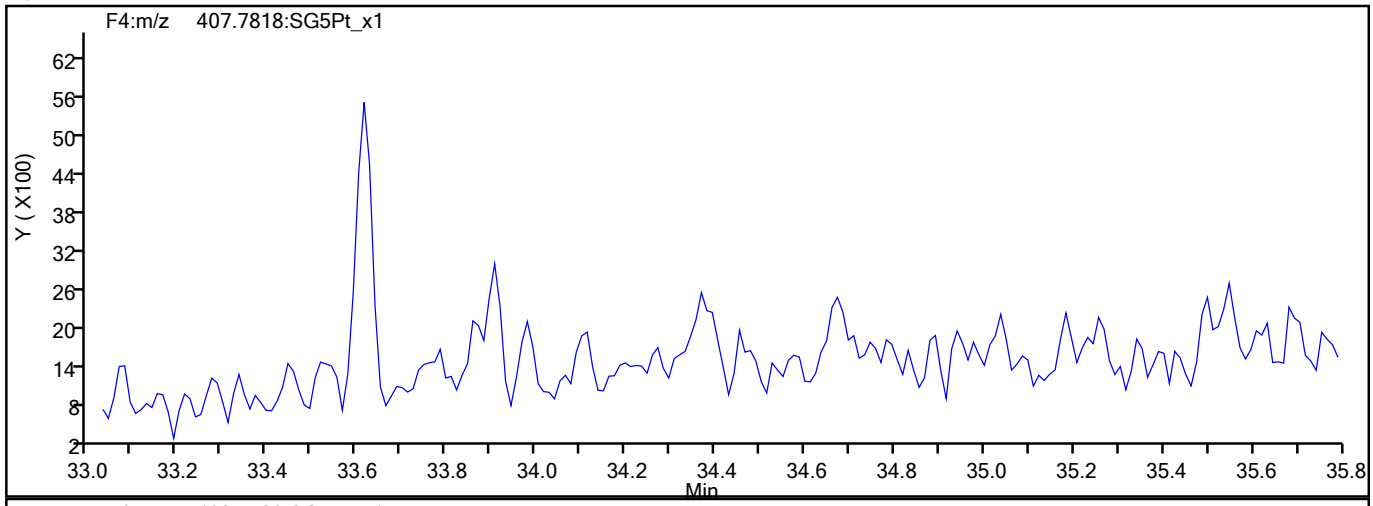

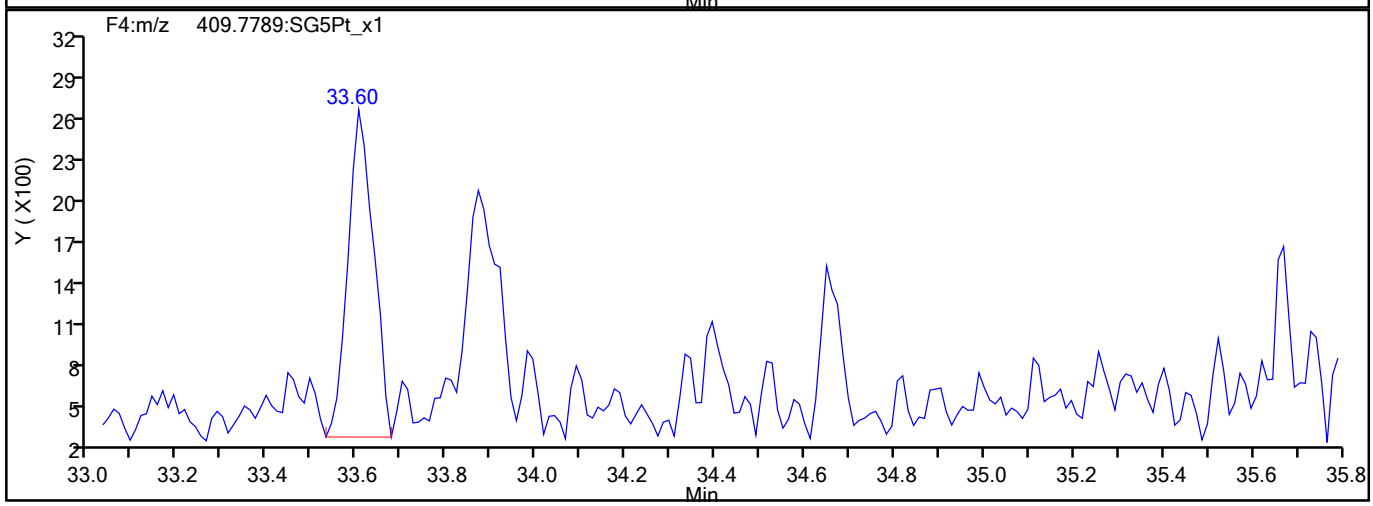

HpCDF Interference Mass

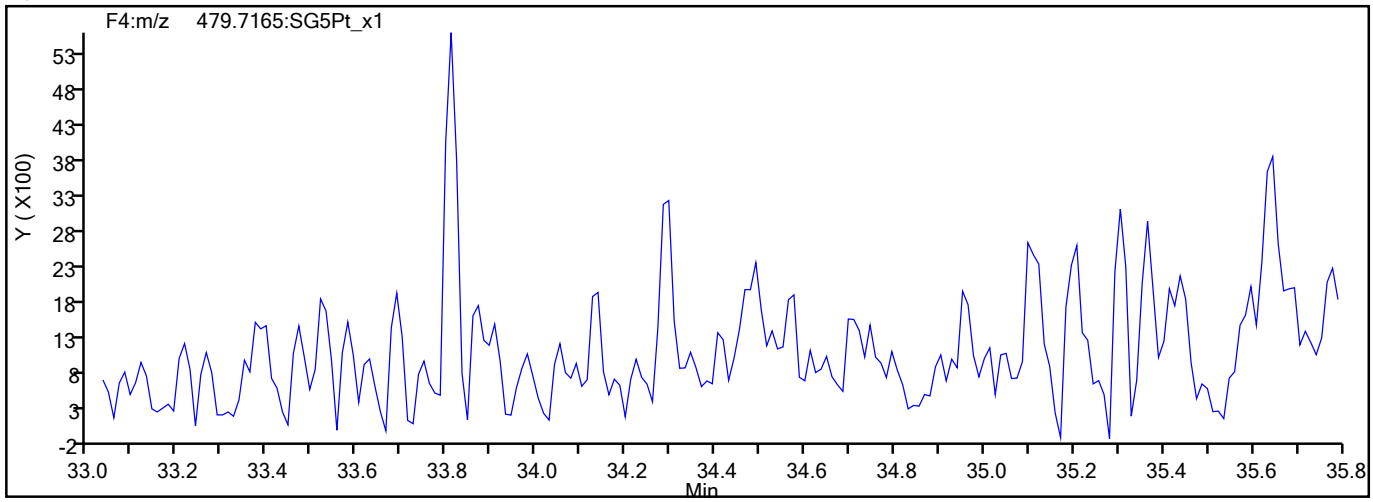

793653

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

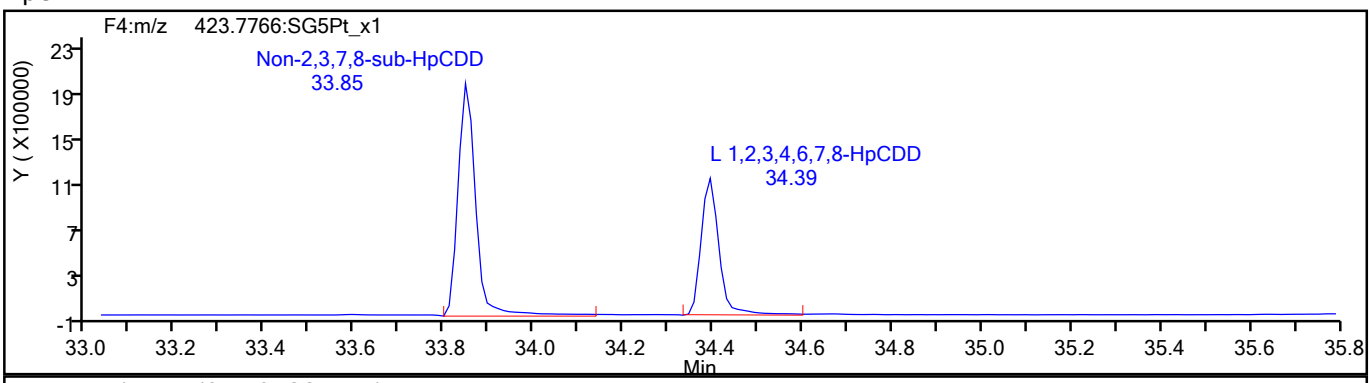

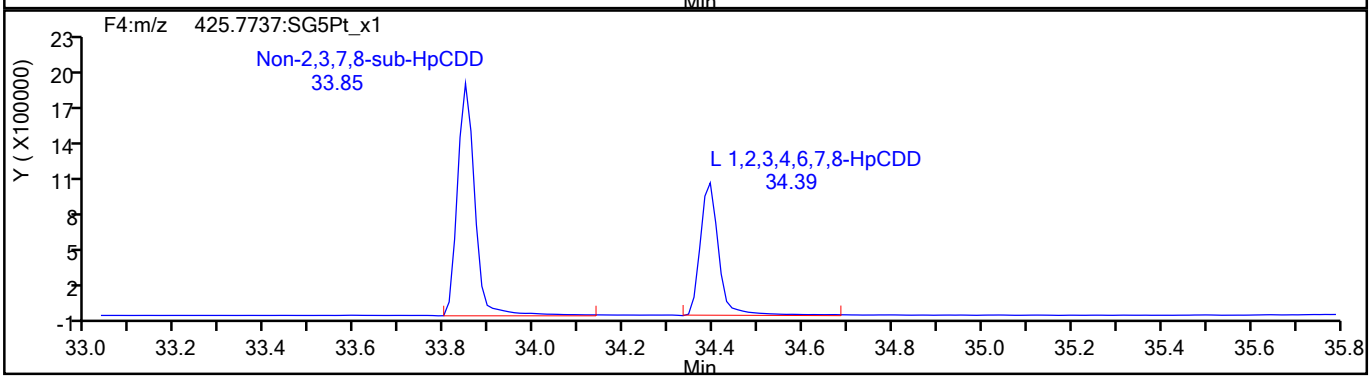

HpCDD Standards

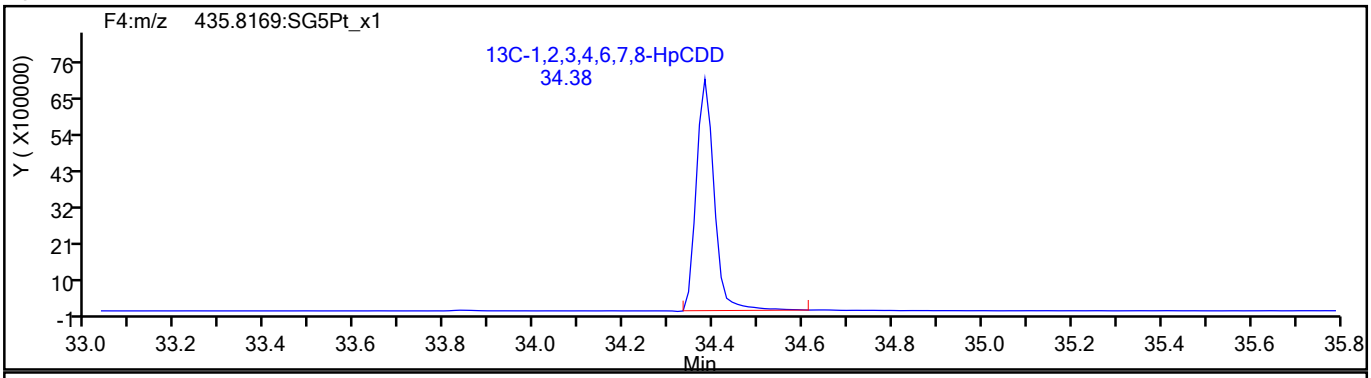

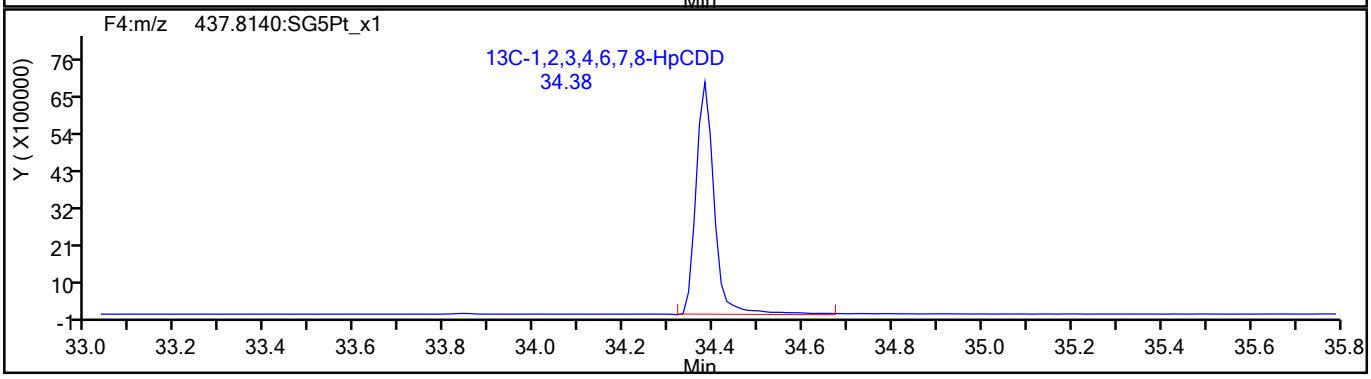

793654

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

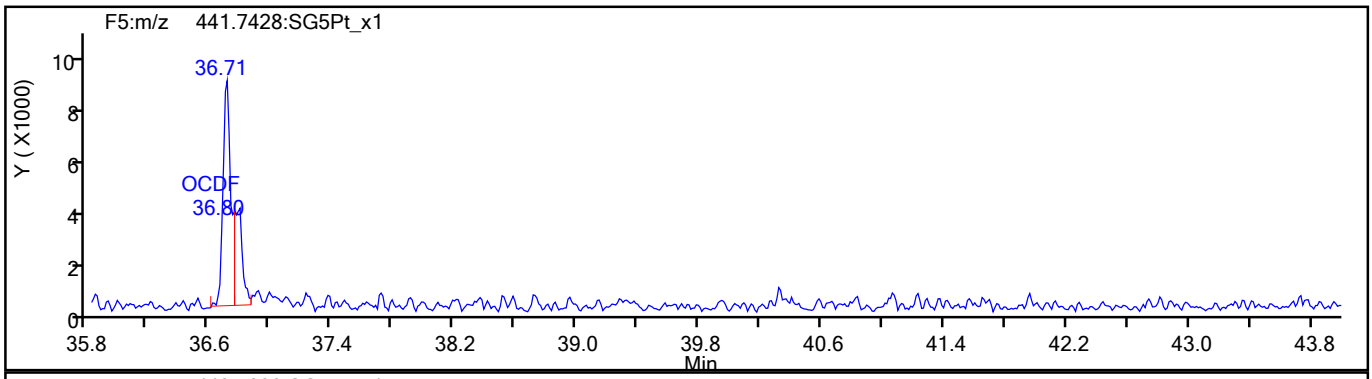

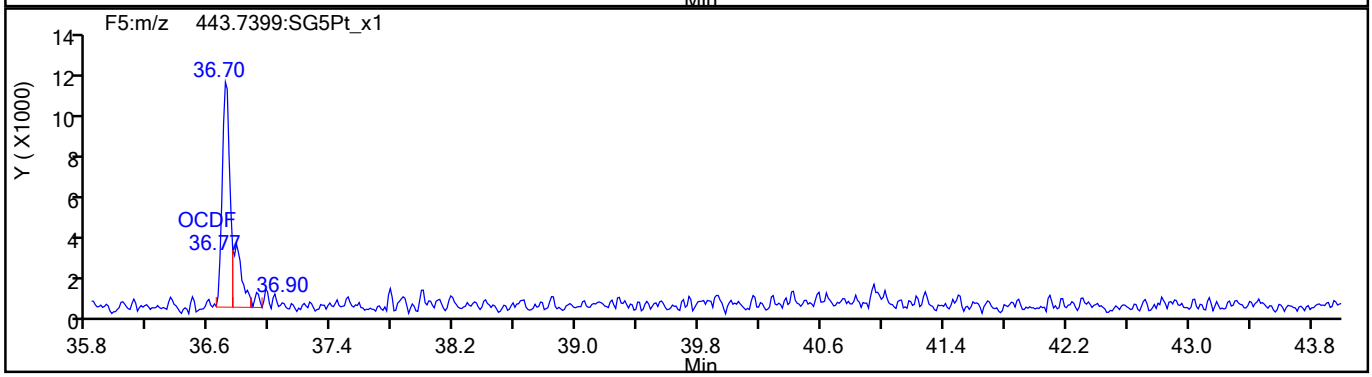

OCDF Standards

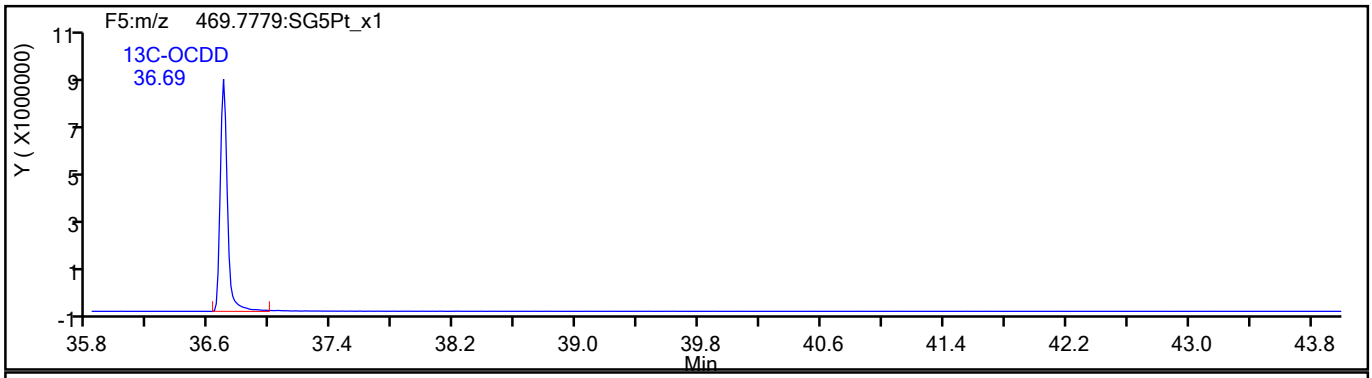

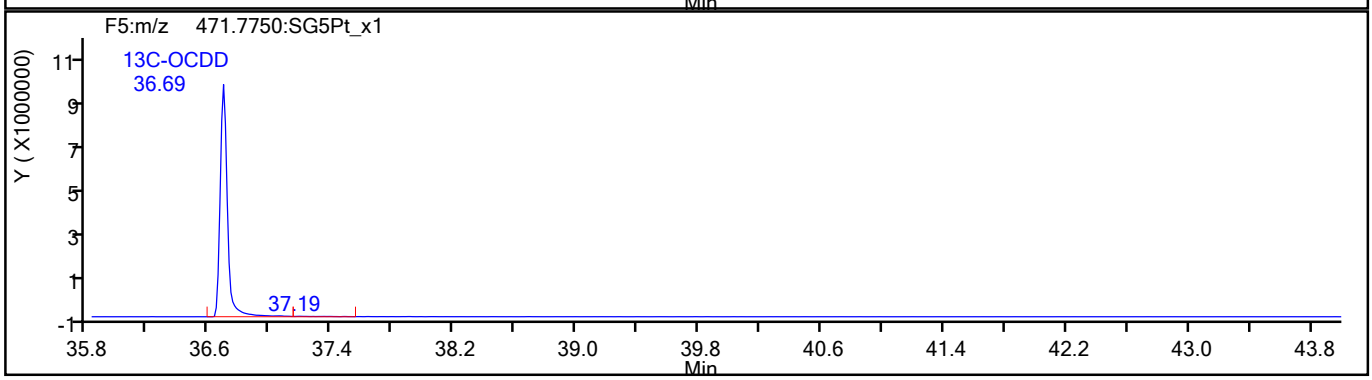

793655

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

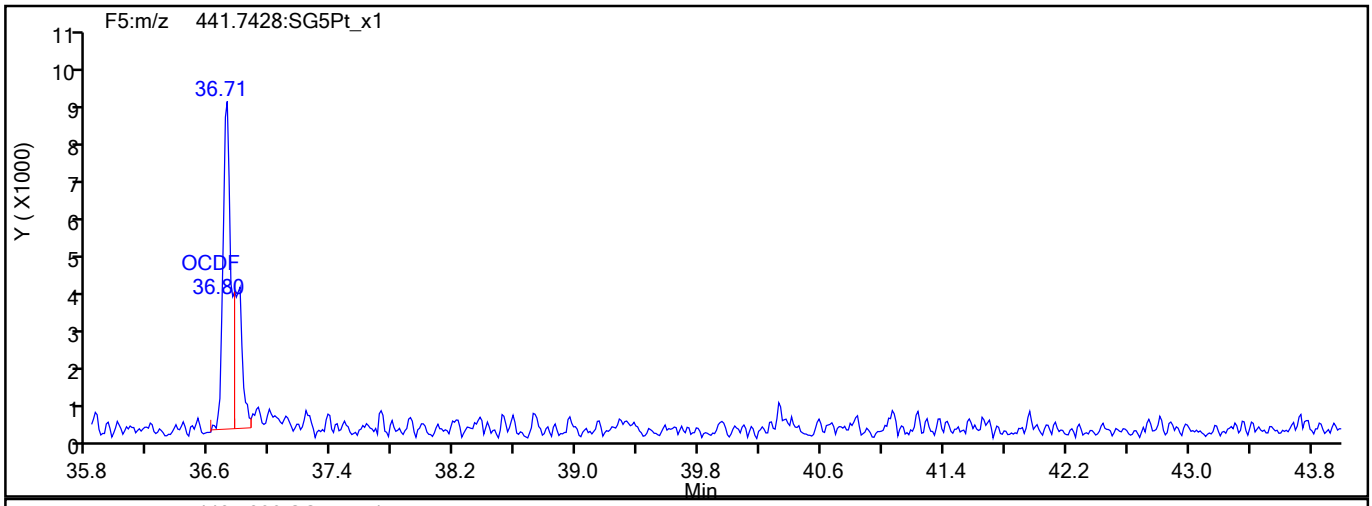

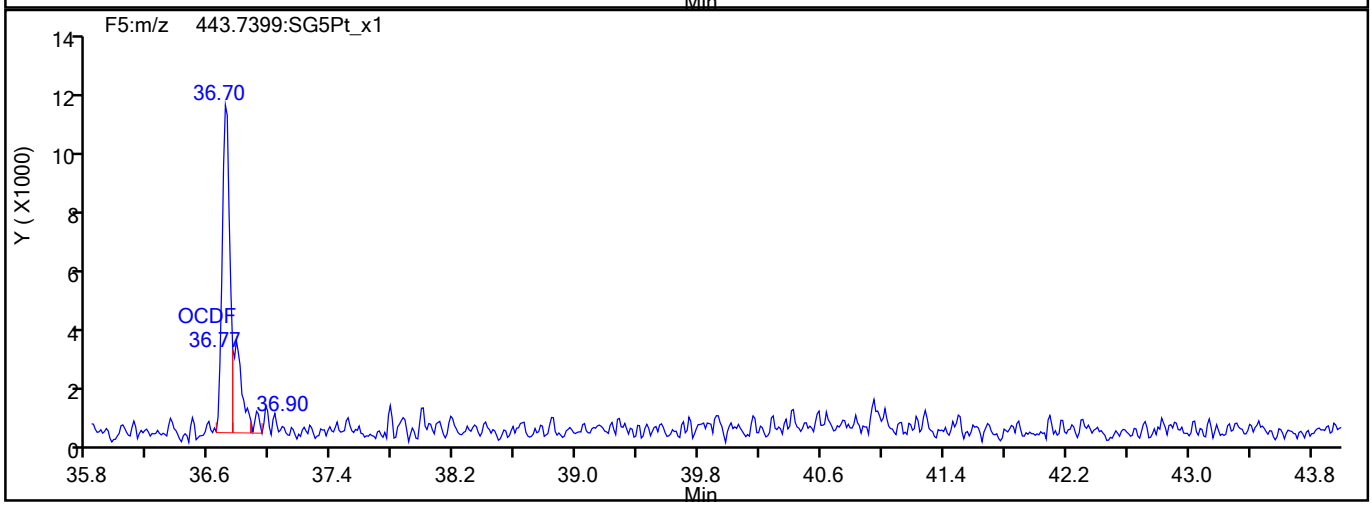

OCDF Interference Mass

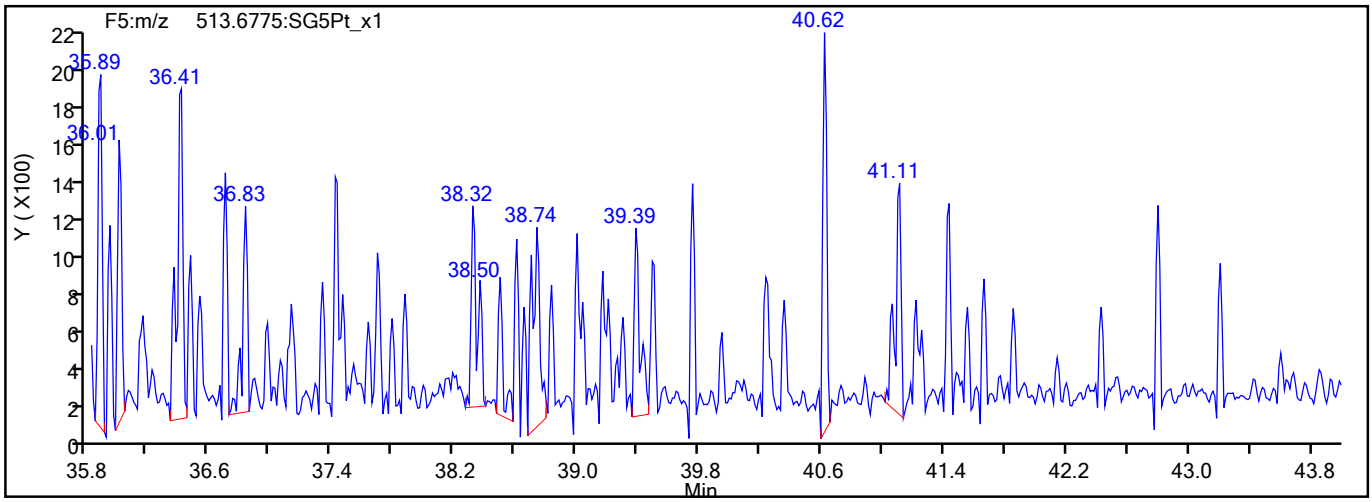

793656

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

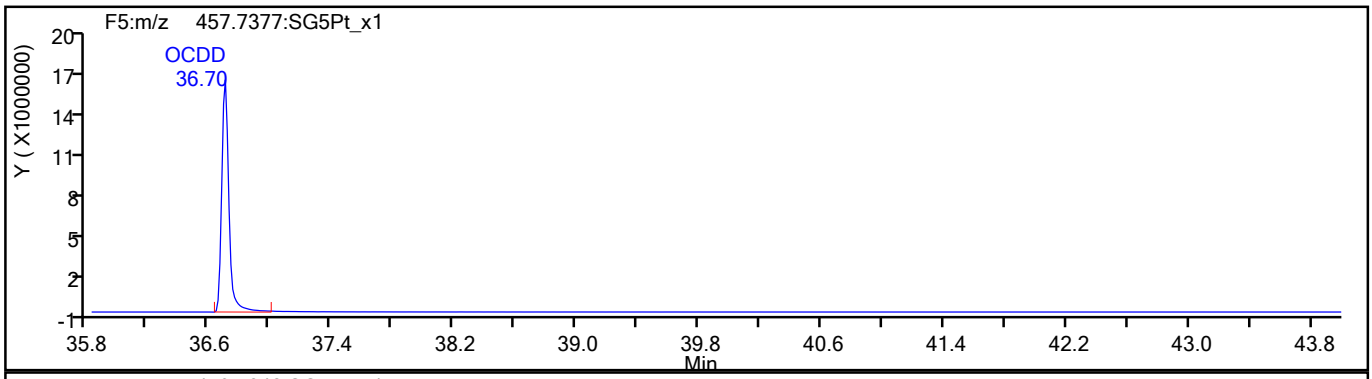

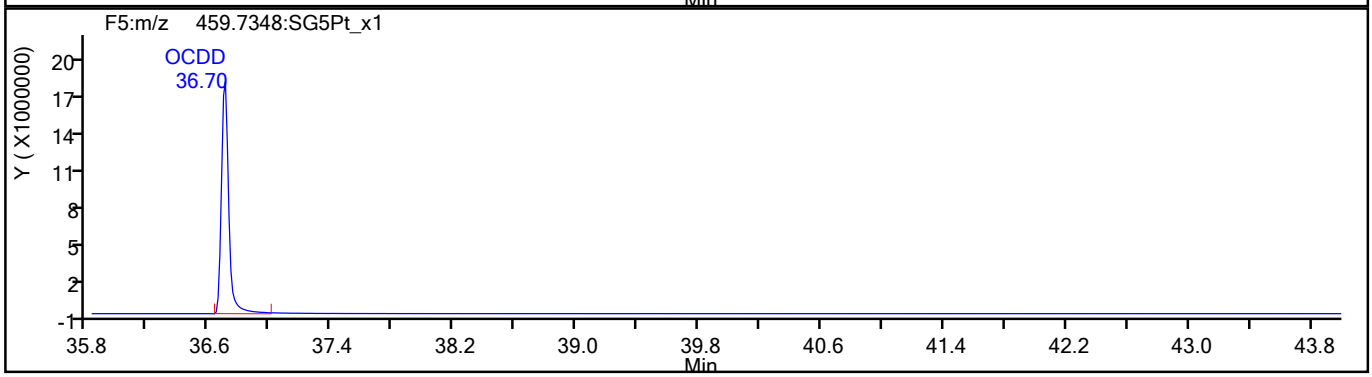

OCDD Standards

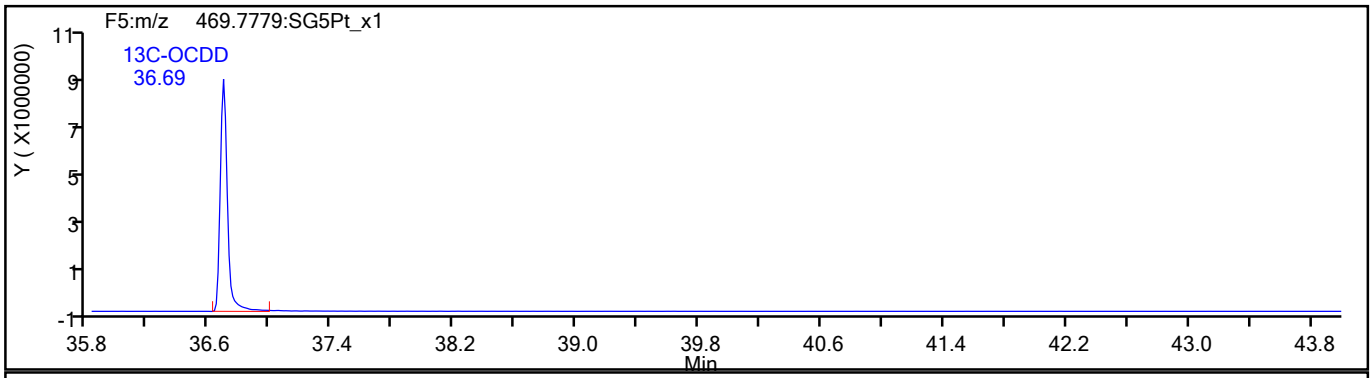

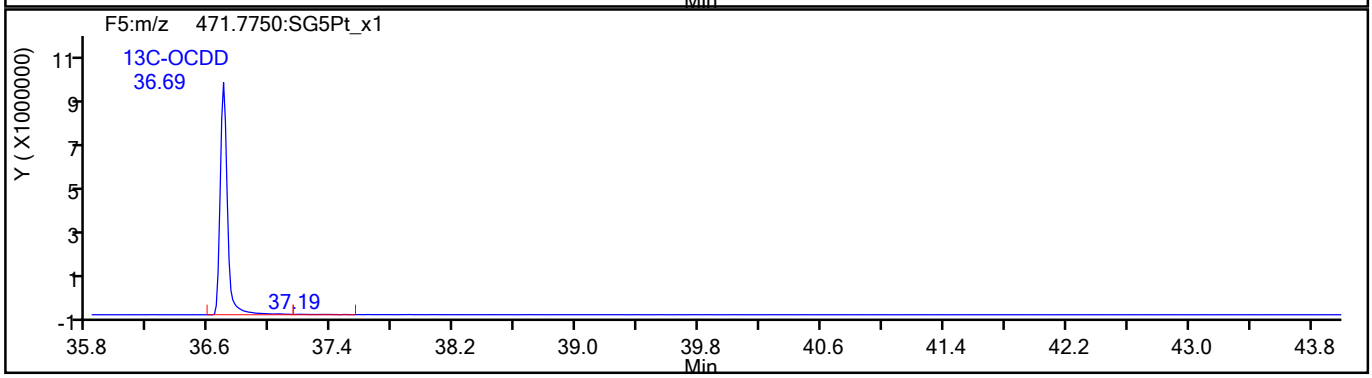

793657

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

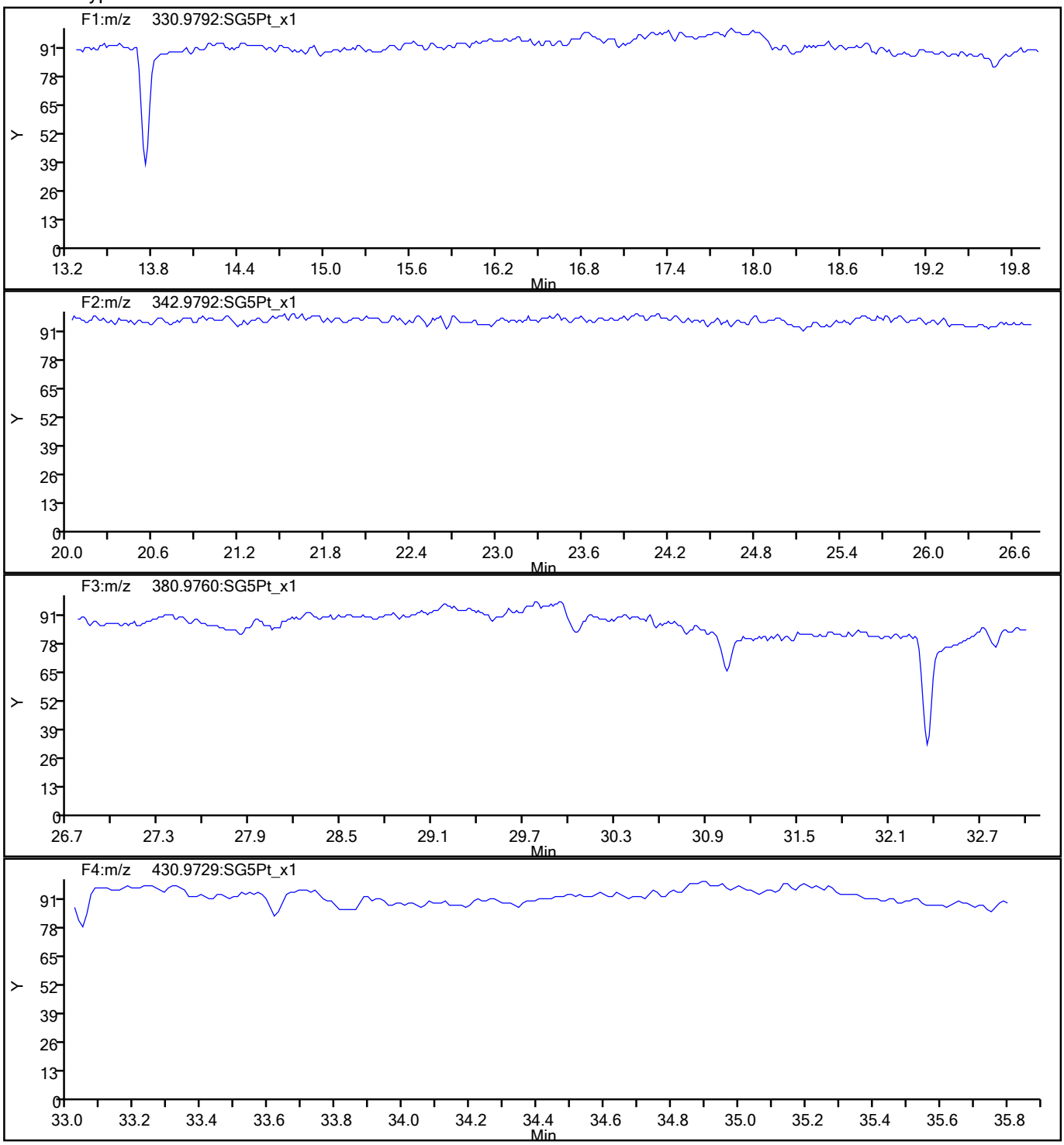

793658

Report Date: 30-Aug-2021 16:39:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_33.d		
Injection Date:	26-Aug-2021 10:50:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (12-14)		
Worklist#:	519966	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

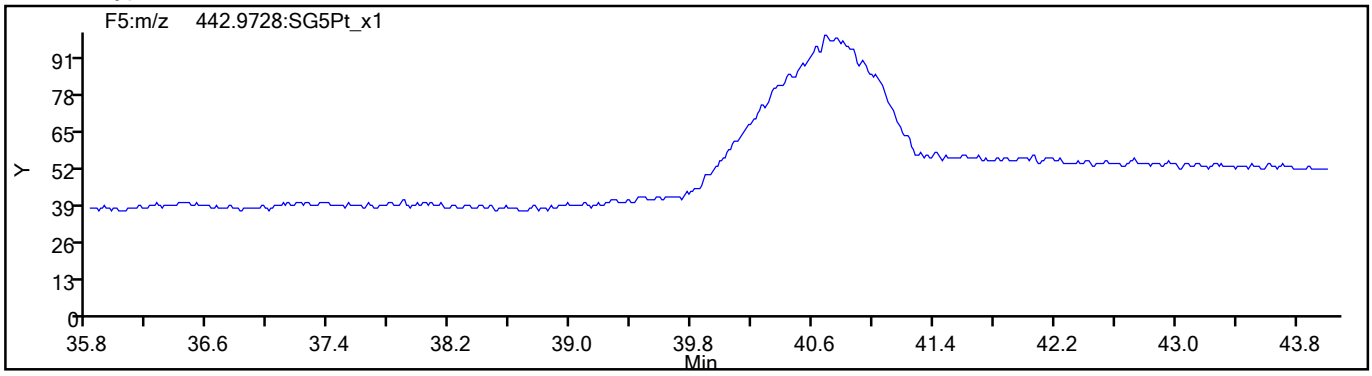

793659

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (14-16)
Lab Sample ID: 320-77292-8
Matrix: Sediment
Lab File ID: 25AU2110D5_34.d
Analysis Method: 1613B
Date Collected: 08/03/2021 14:05
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.53(g)
Date Analyzed: 08/26/2021 11:35
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 40.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519966
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.53	J q	1.8	0.094
51207-31-9	2,3,7,8-TCDF	0.93	J B	1.8	0.038
40321-76-4	1,2,3,7,8-PeCDD	ND		8.8	0.12
57117-41-6	1,2,3,7,8-PeCDF	ND		8.8	0.051
57117-31-4	2,3,4,7,8-PeCDF	ND		8.8	0.054
39227-28-6	1,2,3,4,7,8-HxCDD	0.81	J	8.8	0.22
57653-85-7	1,2,3,6,7,8-HxCDD	1.5	J	8.8	0.23
19408-74-3	1,2,3,7,8,9-HxCDD	3.2	J	8.8	0.20
70648-26-9	1,2,3,4,7,8-HxCDF	ND		8.8	0.048
57117-44-9	1,2,3,6,7,8-HxCDF	ND		8.8	0.049
72918-21-9	1,2,3,7,8,9-HxCDF	0.087	J q	8.8	0.034
60851-34-5	2,3,4,6,7,8-HxCDF	ND		8.8	0.037
35822-46-9	1,2,3,4,6,7,8-HpCDD	59	B	8.8	0.65
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.063	J q	8.8	0.040
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		8.8	0.046
3268-87-9	OCDD	1200	B	18	0.89
39001-02-0	OCDF	0.14	J q B	18	0.048
41903-57-5	Total TCDD	8.6	q	1.8	0.094
30402-14-3	Total TCDF	1.9	q B	1.8	0.038
36088-22-9	Total PeCDD	11	q	8.8	0.12
30402-15-4	Total PeCDF	0.063	J q	8.8	0.052
34465-46-8	Total HxCDD	45		8.8	0.21
55684-94-1	Total HxCDF	0.087	J q	8.8	0.042
37871-00-4	Total HpCDD	150	B	8.8	0.65
38998-75-3	Total HpCDF	0.063	J q	8.8	0.043

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB091 (14-16)
Lab Sample ID: 320-77292-8
Matrix: Sediment
Lab File ID: 25AU2110D5_34.d
Analysis Method: 1613B
Date Collected: 08/03/2021 14:05
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.53(g)
Date Analyzed: 08/26/2021 11:35
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 40.2
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519966
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	59		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	58		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	61		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	65		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	55		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	67		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	56		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	56		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	55		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	55		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	51		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	59		26-138
114423-97-1	13C-OCDD	60		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d
Lims ID: 320-77292-A-8-A
Client ID: 11215702-080321-BN-SJSB091 (14-16)
Sample Type: Client
Inject. Date: 26-Aug-2021 11:35:54 ALS Bottle#: 45 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-8-A 320-77292-A-8-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 16:39:11 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1653

First Level Reviewer: bennettd Date: 26-Aug-2021 12:34:24

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.583	129630893	0.79	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.084	115471927	0.77	1.6249	54.8	54.8	0.1087	0.1087	54.82	
2,3,7,8-TCDF	17.099	314022	0.77	1.0239	0.2656	0.2656	0.0108	0.0108		M
A Non-2,3,7,8-sub-TCDF	17.069	325931	0.77	1.0239	0.2849	0.2757	0.0108	0.1310		RQM
S Total TCDF					0.5505	0.5413	0.0108	0.0108		RQ
D 13C-2,3,7,8-TCDD	17.779	68422987	0.80	0.8993	58.7	58.7	0.0938	0.0938	58.69	
$ 37Cl4-2,3,7,8-TCDD	17.794	41552301		1.1071	29.0	29.0	0.0332	0.0332	72.38	
2,3,7,8-TCDD	17.794	130173	0.77	1.2541	0.2049	0.1517	0.0268	0.0268		RQM
A Non-2,3,7,8-sub-TCDD	17.522	1963691	0.77	1.2541	2.328	2.288	0.0268	0.7757		RQMa
S Total TCDD					2.533	2.440	0.0268	0.0268		RQ
D 13C-1,2,3,7,8-PeCDF	21.993	91425855	1.58	1.2101	58.3	58.3	0.0827	0.0827	58.28	
1,2,3,7,8-PeCDF	22.006						0.0145	0.0145		
D 13C-2,3,4,7,8-PeCDF	23.315	97680981	1.56	1.2395	60.8	60.8	0.0808	0.0808	60.79	
2,3,4,7,8-PeCDF	23.316						0.0154	0.0154		
A F1 PeCDFs	19.851						0.0160	0.0160		
A Non-2,3,7,8-sub-PeCDF	23.067	17604	1.55	1.0398	0.0351	0.0179	0.0149	0.0179		RQ
S Total PeCDF					0.0351	0.0179	0.0149	0.0149		RQ
D 13C-1,2,3,7,8-PeCDD	24.011	58045811	1.62	0.7612	58.8	58.8	0.0489	0.0489	58.82	
1,2,3,7,8-PeCDD	24.024						0.0351	0.0351		
A Non-2,3,7,8-sub-PeCDD	23.696	1917083	1.55	1.0484	3.178	3.150	0.0351	1.301		RQMa
S Total PeCDD					3.178	3.150	0.0351	0.0351		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.146	85862019	0.52	1.0837	66.5	66.5	0.1363	0.1363	66.50	
1,2,3,4,7,8-HxCDF	30.159						0.0136	0.0136		
D 13C-1,2,3,6,7,8-HxCDF	30.372	75642746	0.52	1.1279	56.3	56.3	0.1310	0.1310	56.29	
1,2,3,6,7,8-HxCDF	30.372						0.0140	0.0140		
D 13C-2,3,4,6,7,8-HxCDF	31.277	69800724	0.52	1.0637	55.1	55.1	0.1389	0.1389	55.08	
2,3,4,6,7,8-HxCDF	31.291						0.0105	0.0105		
D 13C-1,2,3,7,8,9-HxCDF	32.129	64992568	0.52	0.9676	56.4	56.4	0.1527	0.1527	56.38	
1,2,3,7,8,9-HxCDF	32.129	18861	1.24	1.1664	0.0308	0.0249	0.009736	0.009736		RQM
A Non-2,3,7,8-sub-HxCDF	30.324						0.0117	0.0117		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.0308	0.0249	0.0120	0.0120		RQ
* 13C-1,2,3,7,8,9-HxCDD	31.943	119141213	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.477	56987909	1.24	0.7334	65.2	65.2	0.1858	0.1858	65.22	
1,2,3,4,7,8-HxCDD	31.490	140413	1.20	1.0640	0.2316	0.2316	0.0615	0.0615		
D 13C-1,2,3,6,7,8-HxCDD	31.597	57370407	1.23	0.8802	54.7	54.7	0.1548	0.1548	54.71	
1,2,3,6,7,8-HxCDD	31.610	243832	1.23	1.0001	0.4250	0.4250	0.0642	0.0642		
1,2,3,7,8,9-HxCDD	31.943	593139	1.23	1.1325	0.9159	0.9159	0.0573	0.0573		
A Non-2,3,7,8-sub-HxCDD	30.486	6885419	1.23	1.0655	11.3	11.3	0.0609	7.351		
S Total HxCDD					12.9	12.9	0.0610	0.0610		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	47310039	0.44	0.7730	51.4	51.4	0.4011	0.4011	51.37	
1,2,3,4,6,7,8-HpCDF	33.628	12260	1.04	1.4413	0.0227	0.0180	0.0115	0.0115		RQ
D 13C-1,2,3,4,7,8,9-HpCDF	34.673	49019972	0.44	0.7008	58.7	58.7	0.4424	0.4424	58.71	
1,2,3,4,7,8,9-HpCDF	34.673						0.0131	0.0131		
A Non-2,3,7,8-sub-HpCDF	34.138						0.0123	0.0123		
S Total HpCDF					0.0227	0.0180	0.0123	0.0123		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.381	42735299	1.02	0.6472	55.4	55.4	0.2922	0.2922	55.42	
1,2,3,4,6,7,8-HpCDD	34.393	7813243	1.05	1.0943	16.7	16.7	0.1846	0.1846		
A Non-2,3,7,8-sub-HpCDD	34.223	12684140	1.03	1.0943	27.1	27.1	0.1846	27.1		
S Total HpCDD					43.8	43.8	0.1846	0.1846		
D 13C-OCDD	36.701	63859098	0.89	0.4472	119.9	119.9	0.1104	0.1104	59.93	
OCDF	36.785	18350	0.89	1.4382	0.0456	0.0400	0.0137	0.0137		RQM
OCDD	36.701	121318653	0.90	1.1070	343.2	343.2	0.2548	0.2548		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d
Lims ID: 320-77292-A-8-A
Client ID: 11215702-080321-BN-SJSB091 (14-16)
Sample Type: Client
Inject. Date: 26-Aug-2021 11:35:54 ALS Bottle#: 45 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-8-A 320-77292-A-8-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 16:39:11 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1653

First Level Reviewer: bennettd Date: 26-Aug-2021 12:34:24

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.583	17.567	1		57410235	14740141	5088	12720	2897		
333.9339	17.583	17.567	1		72220658	18598409	6164	15410	3017	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.084	17.069	1	0.972	50329920	13285679	15525	38812	856		
317.9389	17.084	17.069	1	0.972	65142007	17278900	8035	20087	2150	0.77(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.099	17.099	0	1.001	136863	37211	569	1422	65		M
305.8987	17.099	17.099	0	1.001	177159	42425	783	1957	54	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	15.224	17.069	-110	0.891	34257	10299	569	1422	18		
305.8987	15.209	17.069	-111	0.890	50238	14927	783	1957	19	0.68(0.65-0.89)	
303.9016	16.192	17.069	-53	0.948	18097	4504	569	1422	8		
	Empc Correction				11946	2351	569	1422	4		
305.8987	16.222	17.069	-51	0.950	15515	3054	783	1957	4	1.17(0.65-0.89)	
303.9016	16.721	17.069	-21	0.979	66736	19530	569	1422	34		
305.8987	16.721	17.069	-21	0.979	88153	24004	783	1957	31	0.76(0.65-0.89)	
303.9016	17.598	17.069	32	1.030	30453	4856	569	1422	9		M
	Empc Correction				25704	5115	569	1422	9		
305.8987	17.522	17.069	27	1.026	33382	6644	783	1957	8	0.91(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.779	17.764	1	1.011	30494593	7568667	5088	12720	1488		
333.9339	17.779	17.764	1	1.011	37928394	9520354	6164	15410	1545	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.794	17.779	1	1.012	41552301	10518405	4900	12250	2147		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											RQM
319.8965	17.794	17.779	1	1.001	56629	16757	1159	2897	14		
321.8936	17.794	17.779	1	1.001	119212	34802	1141	2852	31	0.48(0.65-0.89)	M
	Empc Correction				73544	21762	1141	2852	19		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	15.617	17.522	-114	0.878	30654	8331	1159	2897	7		
	Empc Correction				26273	8343	1159	2897	7		
321.8936	15.617	17.522	-114	0.878	34121	10836	1141	2852	9	0.90(0.65-0.89)	
319.8965	15.904	17.522	-97	0.895	68743	18346	1159	2897	16		
321.8936	15.904	17.522	-97	0.895	80031	26325	1141	2852	23	0.86(0.65-0.89)	
319.8965	16.131	17.522	-83	0.907	92081	23925	1159	2897	21		
321.8936	16.131	17.522	-83	0.907	104191	29931	1141	2852	26	0.88(0.65-0.89)	
319.8965	16.676	17.522	-51	0.938	297139	80148	1159	2897	69		
321.8936	16.676	17.522	-51	0.938	368465	101702	1141	2852	89	0.81(0.65-0.89)	
319.8965	17.295	17.522	-14	0.973	34193	9098	1159	2897	8		
321.8936	17.280	17.522	-14	0.972	50029	11372	1141	2852	10	0.68(0.65-0.89)	
319.8965	17.552	17.522	2	0.987	160926	42369	1159	2897	37		
321.8936	17.552	17.522	2	0.987	189467	49223	1141	2852	43	0.85(0.65-0.89)	M
319.8965	17.673	17.522	9	0.994	107032	23079	1159	2897	20		M
321.8936	17.673	17.522	9	0.994	125709	28998	1141	2852	25	0.85(0.65-0.89)	
319.8965	18.142	17.522	37	1.020	47466	11121	1159	2897	10		
321.8936	18.142	17.522	37	1.020	57749	14621	1141	2852	13	0.82(0.65-0.89)	
319.8965	18.384	17.522	52	1.034	19119	5008	1159	2897	4		
321.8936	18.384	17.522	52	1.034	41526	8495	1141	2852	7	0.46(0.65-0.89)	
	Empc Correction				24829	6503	1141	2852	6		
319.8965	18.868	17.522	81	1.061	33118	8272	1159	2897	7		
321.8936	18.883	17.522	81	1.062	56167	12523	1141	2852	11	0.59(0.65-0.89)	
	Empc Correction				43010	10742	1141	2852	9		
13C-1,2,3,7,8-PeCDF											
351.9000	21.993	21.979	1	1.251	56014855	10471299	8026	20065	1305		
353.8970	21.993	21.979	1	1.251	35411000	6648138	5324	13310	1249	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.006						314	785			
341.8567	22.006						743	1857			
13C-2,3,4,7,8-PeCDF											
351.9000	23.315	23.302	1	1.326	59556108	10335484	8026	20065	1288		
353.8970	23.315	23.302	1	1.326	38124873	6561096	5324	13310	1232	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.316						314	785			
341.8567	23.316						743	1857			
A F1 PeCDFs											
339.8597	19.851						310	775			
341.8567	19.851						819	2047			
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.424	23.067	-158	0.929	10701	2181	314	785	7		
341.8567	20.411	23.067	-159	0.928	23788	3835	743	1857	5	0.45(1.32-1.78)	
	Empc Correction				6903	1407	743	1857	2		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDD											
367.8949	24.011	23.997	1	1.366	35930490	5896603	3003	7507	1964		
369.8919	24.011	23.997	1	1.366	22115321	3546854	1963	4907	1807	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.024						849	2122			
357.8516	24.024						543	1357			
A Non-2,3,7,8-sub-PeCDD											RQMa
355.8546	20.888	23.696	-168	0.870	204377	37719	849	2122	44		a
357.8516	20.888	23.696	-168	0.870	134950	25576	543	1357	47	1.51(1.32-1.78)	
355.8546	21.638	23.696	-123	0.901	471884	92433	849	2122	109		
357.8516	21.625	23.696	-124	0.901	319994	61045	543	1357	112	1.47(1.32-1.78)	
355.8546	22.293	23.696	-84	0.928	81559	14898	849	2122	18		M
357.8516	22.279	23.696	-85	0.928	49862	8242	543	1357	15	1.64(1.32-1.78)	
355.8546	22.593	23.696	-66	0.941	40746	7980	849	2122	9		
	Empc Correction				32546	6300	849	2122	7		
357.8516	22.606	23.696	-65	0.941	20998	4065	543	1357	7	1.94(1.32-1.78)	
355.8546	22.892	23.696	-48	0.953	112664	20511	849	2122	24		
357.8516	22.892	23.696	-48	0.953	78182	14126	543	1357	26	1.44(1.32-1.78)	
355.8546	23.070	23.696	-38	0.961	216138	27691	849	2122	33		
357.8516	23.097	23.696	-36	0.962	156328	20945	543	1357	39	1.38(1.32-1.78)	
355.8546	24.338	23.696	38	1.014	22856	4324	849	2122	5		
357.8516	24.338	23.696	38	1.014	23236	3100	543	1357	6	0.98(1.32-1.78)	
	Empc Correction				14745	2789	543	1357	5		
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.146	30.146	0	0.944	29441951	5021700	6336	15840	793		
385.8610	30.146	30.146	0	0.944	56420068	9618275	12849	32122	749	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.159						561	1402			
375.8178	30.159						303	757			
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.372	30.359	1	0.951	25972368	4745773	6336	15840	749		
385.8610	30.372	30.359	1	0.951	49670378	8915715	12849	32122	694	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.372						561	1402			
375.8178	30.372						303	757			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.277	31.264	1	0.979	23925293	6069604	6336	15840	958		
385.8610	31.277	31.264	1	0.979	45875431	11595304	12849	32122	902	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.291						561	1402			
375.8178	31.291						303	757			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.116	1	1.006	22236315	6543856	6336	15840	1033		
385.8610	32.129	32.116	1	1.006	42756253	12476631	12849	32122	971	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	32.129	32.129	0	1.000	10441	3695	561	1402	7		M
375.8178	32.129	32.129	0	1.000	12887	4299	303	757	14	0.81(1.05-1.43)	M
	Empc Correction				8420	2979	303	757	10		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.324						561	1402			
375.8178	30.324						303	757			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.930	1		65811205	17909928	9787	24467	1830		
403.8529	31.930	31.930	0		53330008	14552483	7909	19772	1840	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.477	31.464	1	0.985	31519673	8562623	9787	24467	875		
403.8529	31.477	31.464	1	0.985	25468236	6963423	7909	19772	880	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.490	31.490	0	1.000	76685	22067	2484	6210	9		
391.8127	31.490	31.490	0	1.000	63728	20241	1581	3952	13	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.597	31.583	1	0.989	31586368	8672339	9787	24467	886		
403.8529	31.597	31.583	1	0.989	25784039	7146514	7909	19772	904	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.610	31.597	1	1.000	134694	41671	2484	6210	17		
391.8127	31.610	31.597	1	1.000	109138	33062	1581	3952	21	1.23(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.943	31.943	0	1.015	326861	68860	2484	6210	28		
391.8127	31.943	31.943	0	1.015	266278	56043	1581	3952	35	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.015	30.486	-88	0.918	2472229	323531	2484	6210	130		
391.8127	29.015	30.486	-88	0.918	2006671	249762	1581	3952	158	1.23(1.05-1.43)	
389.8157	30.239	30.486	-15	0.957	92844	17778	2484	6210	7		
391.8127	30.239	30.486	-15	0.957	76955	14611	1581	3952	9	1.21(1.05-1.43)	
389.8157	30.678	30.486	12	0.971	1144958	218372	2484	6210	88		
391.8127	30.678	30.486	12	0.971	926673	173640	1581	3952	110	1.24(1.05-1.43)	
389.8157	30.891	30.486	24	0.978	92858	19047	2484	6210	8		
391.8127	30.905	30.486	25	0.978	72231	15076	1581	3952	10	1.29(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.591	1	1.052	14447265	5395490	12615	31537	428		
419.8220	33.603	33.591	1	1.052	32862774	12039330	27643	69107	436	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQ
407.7818	33.628	33.603	1	1.001	9475	2892	821	2052	4		
	Empc Correction				6250	2384	821	2052	3		
409.7789	33.603	33.603	0	1.000	6010	2293	333	832	7	1.58(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.673	34.660	1	1.085	14875669	5118224	12615	31537	406		
419.8220	34.673	34.660	1	1.085	34144303	11594897	27643	69107	419	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673						821	2052			
409.7789	34.673						333	832			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						821	2052			
409.7789	34.138						333	832			

Report Date: 30-Aug-2021 16:39:11 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.381	34.368	1	1.076	21627906	7418617	16034	40085	463		
437.8140	34.381	34.368	1	1.076	21107393	7353704	8525	21312	863	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	4000785	1400084	5136	12840	273		
425.7737	34.393	34.393	0	1.000	3812458	1360419	6801	17002	200	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.846	34.223	-23	0.984	6430355	2243319	5136	12840	437		
425.7737	33.846	34.223	-23	0.984	6253785	2255602	6801	17002	332	1.03(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.689	1	1.149	29992427	8799924	3021	7552	2913		
471.7750	36.689	36.689	0	1.149	33866671	9975532	3392	8480	2941	0.89(0.76-1.02)	
OCDF											RQM
441.7428	36.785	36.785	0	1.002	11220	3868	284	710	14		M
	Empc Correction				8641	3470	284	710	12		
443.7399	36.785	36.785	0	1.002	9709	3900	457	1142	9	1.16(0.76-1.02)	M
OCDD											
457.7377	36.701	36.689	1	1.000	57309871	17258348	4816	12040	3584		
459.7348	36.701	36.689	1	1.000	64008782	19584781	5777	14442	3390	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- a - User Assigned ID

Report Date: 30-Aug-2021 16:39:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d
Lims ID: 320-77292-A-8-A
Client ID: 11215702-080321-BN-SJSB091 (14-16)
Inject. Date: 26-Aug-2021 11:35:54 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	115471927	30564579

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	115471927	30564579

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.224	34257	10299	50238	14927	0.0715	0.68	
16.192	18097	4504	15515	3054	0.0284	1.17	RQ
16.192	11946	2351	15515	3054	0.0232		Empc Correction
16.721	66736	19530	88153	24004	0.1310	0.76	
17.598	30453	4856	33382	6644	0.0540	0.91	RQM
17.598	25704	5115	33382	6644	0.0500		Empc Correction
Signal Totals:							
	138643	37295	187288	48629			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	336831	87818				0.80	RQM
	325931	85924					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.2849 = (336831 * 100.000) / (115471927 * 1.024)
Empc Amount: 0.2757 = (325931 * 100.000) / (115471927 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 30-Aug-2021 16:39:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d
Lims ID: 320-77292-A-8-A
Client ID: 11215702-080321-BN-SJSB091 (14-16)
Inject. Date: 26-Aug-2021 11:35:54 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 6

Non-2,3,7,8-sub-TCDD, RT: 17.522

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	68422987	17089021

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	68422987	17089021

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.617	30654	8331	34121	10836	0.0755	0.90	RQ
15.617	26273	8343	34121	10836	0.0704		Empc Correction
15.904	68743	18346	80031	26325	0.1734	0.86	
16.131	92081	23925	104191	29931	0.2287	0.88	
16.676	297139	80148	368465	101702	0.7757	0.81	
17.295	34193	9098	50029	11372	0.0981	0.68	
17.552	160926	42369	189467	49223	0.4083	0.85	M
17.673	107032	23079	125709	28998	0.2712	0.85	Ma
18.142	47466	11121	57749	14621	0.1226	0.82	
18.384	19119	5008	41526	8495	0.0707	0.46	RQ
18.384	19119	5008	24829	6503	0.0512		Empc Correction
18.868	33118	8272	56167	12523	0.1040	0.59	RQ
18.868	33118	8272	43010	10742	0.0887		Empc Correction
Signal Totals:							
	886090	229709	1077601	290253			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1997926	523723				0.80	RQMa
	1963691	519962					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 2.328 = (1997926 * 100.000) / (68422987 * 1.254)
Empc Amount: 2.288 = (1963691 * 100.000) / (68422987 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 30-Aug-2021 16:39:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d		
Lims ID:	320-77292-A-8-A		
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Inject. Date:	26-Aug-2021 11:35:54	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	6

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	91425855	17119437
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	97680981	16896580

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	94553418	17008008

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.424	10701	2181	23788	3835	0.0351	0.45	RQ
20.424	10701	2181	6903	1407	0.0179		Empc Correction
Signal Totals:							
	10701	2181	6903	1407			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	34489	6016				0.45	RQ
	17604	3588					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.0351 = (34489 * 100.000) / (94553418 * 1.040)

Empc Amount: 0.0179 = (17604 * 100.000) / (94553418 * 1.040)

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Report Date: 30-Aug-2021 16:39:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d		
Lims ID:	320-77292-A-8-A		
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Inject. Date:	26-Aug-2021 11:35:54	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	6

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	58045811	9443457

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	58045811	9443457

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.888	204377	37719	134950	25576	0.5576	1.51	a
21.638	471884	92433	319994	61045	1.30	1.47	
22.293	81559	14898	49862	8242	0.2160	1.64	M
22.593	40746	7980	20998	4065	0.1015	1.94	RQ
22.593	32546	6300	20998	4065	0.0880		Empc Correction
22.892	112664	20511	78182	14126	0.3136	1.44	
23.070	216138	27691	156328	20945	0.6120	1.38	
24.338	22856	4324	23236	3100	0.0757	0.98	RQ
24.338	22856	4324	14745	2789	0.0618		Empc Correction
Signal Totals:							
	1142024	203876	775059	136788			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1933774	342655				1.47	RQMa
	1917083	340664					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.178 = (1933774 * 100.000) / (58045811 * 1.048)

Empc Amount: 3.150 = (1917083 * 100.000) / (58045811 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d
Lims ID: 320-77292-A-8-A
Client ID: 11215702-080321-BN-SJSB091 (14-16)
Inject. Date: 26-Aug-2021 11:35:54 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 6

Non-2,3,7,8-sub-HxCDD, RT: 30.486

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	56987909	15526046
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	57370407	15818853
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	57179158	15672449

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.015	2472229	323531	2006671	249762	7.35	1.23	
30.239	92844	17778	76955	14611	0.2787	1.21	
30.678	1144958	218372	926673	173640	3.40	1.24	
30.891	92858	19047	72231	15076	0.2710	1.29	
Signal Totals:							
	3802889	578728	3082530	453089			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6885419	1031817				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 11.301 = (6885419 * 100.000) / (57179158 * 1.066)

Report Date: 30-Aug-2021 16:39:11 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d
Lims ID: 320-77292-A-8-A
Client ID: 11215702-080321-BN-SJSB091 (14-16)
Inject. Date: 26-Aug-2021 11:35:54 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 6

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	42735299	14772321

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	42735299	14772321

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.846	6430355	2243319	6253785	2255602	27.1	1.03	
Signal Totals:							
	6430355	2243319	6253785	2255602			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	12684140	4498921				1.03	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 27.123 = (12684140 * 100.000) / (42735299 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d				
Injection Date:	26-Aug-2021 11:35:54	Instrument ID:	10D5		
Lims ID:	320-77292-A-8-A	Lab Sample ID:	320-77292-8		
Client ID:	11215702-080321-BN-SJSB091 (14-16)				
Operator ID:	SMA	ALS Bottle#:	45	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.10
Area: 140851
Amount: 0.268969
Amount Units: pg/ul

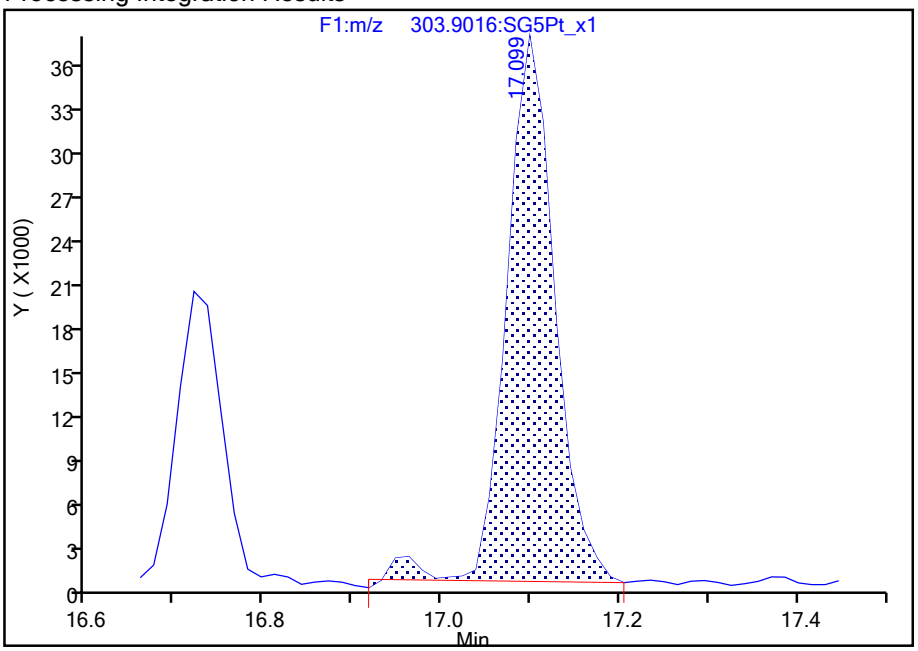

Manual Integration Results

RT: 17.10
Area: 136863
Amount: 0.265596
Amount Units: pg/ul

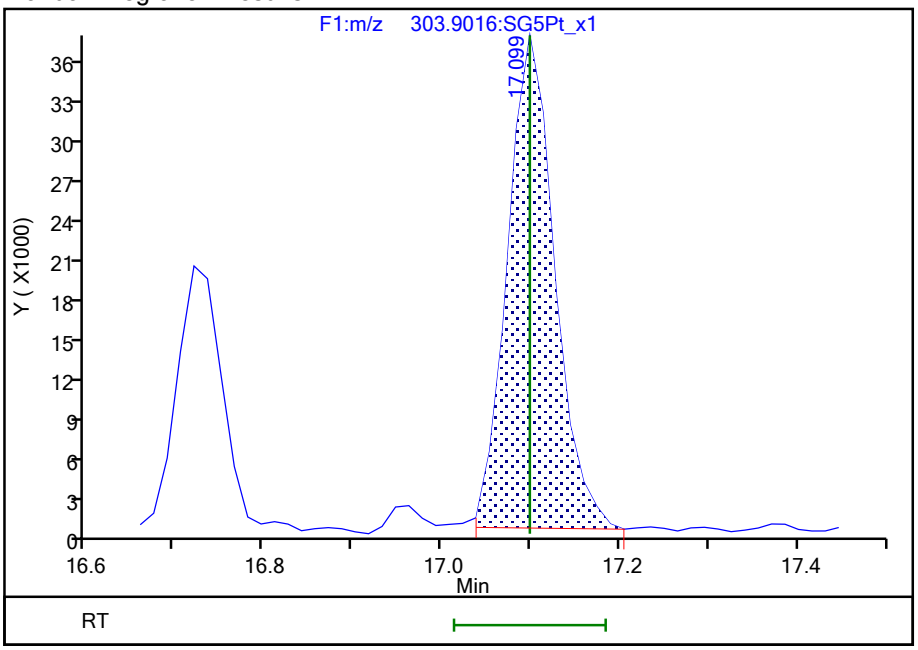

Reviewer: dadunj, 30-Aug-2021 08:52:45

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d				
Injection Date:	26-Aug-2021 11:35:54	Instrument ID:	10D5		
Lims ID:	320-77292-A-8-A	Lab Sample ID:	320-77292-8		
Client ID:	11215702-080321-BN-SJSB091 (14-16)				
Operator ID:	SMA	ALS Bottle#:	45	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.68- 19.46)

Signal: 1

Processing Integration Results

RT = 17.598 Area = 36194

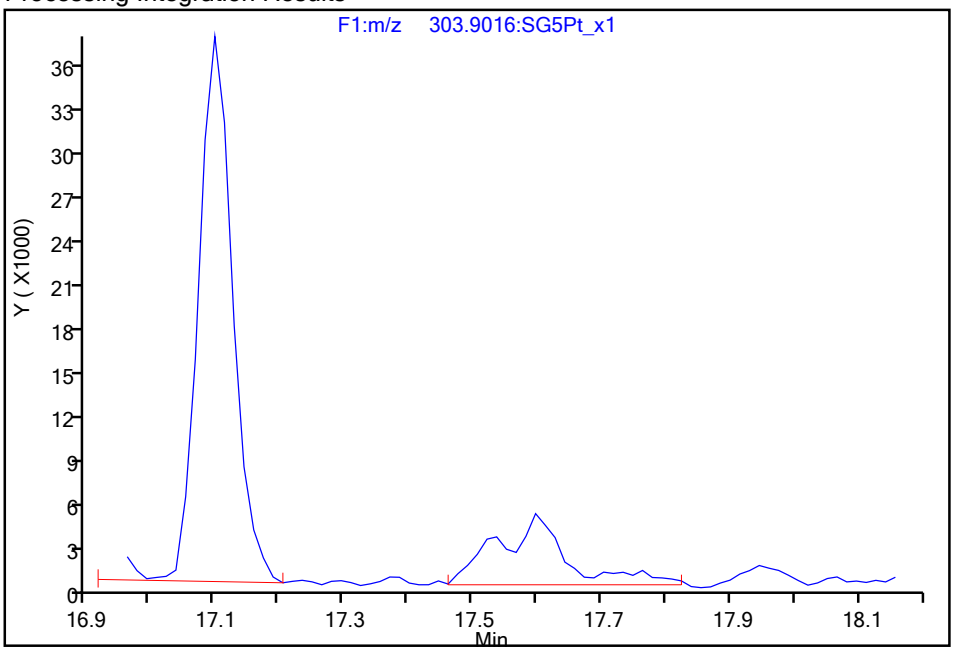

Manual Integration Results

RT = 17.598 Area = 30453 M

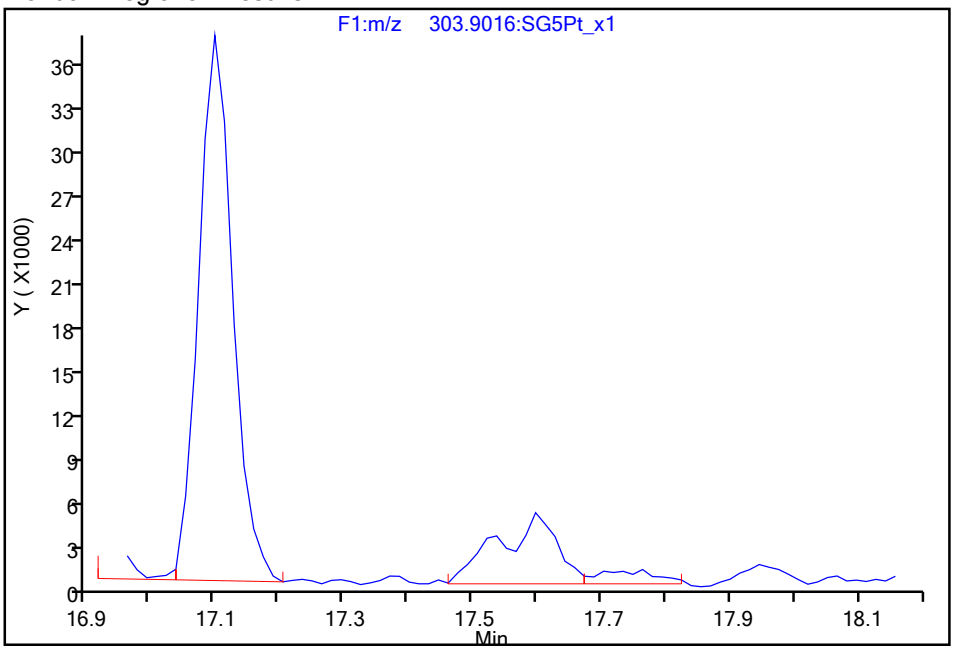

Reviewer: dadunj, 30-Aug-2021 08:52:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d				
Injection Date:	26-Aug-2021 11:35:54	Instrument ID:	10D5		
Lims ID:	320-77292-A-8-A	Lab Sample ID:	320-77292-8		
Client ID:	11215702-080321-BN-SJSB091 (14-16)				
Operator ID:	SMA	ALS Bottle#:	45	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 17.79
Area: 123801
Amount: 0.210265
Amount Units: pg/ul

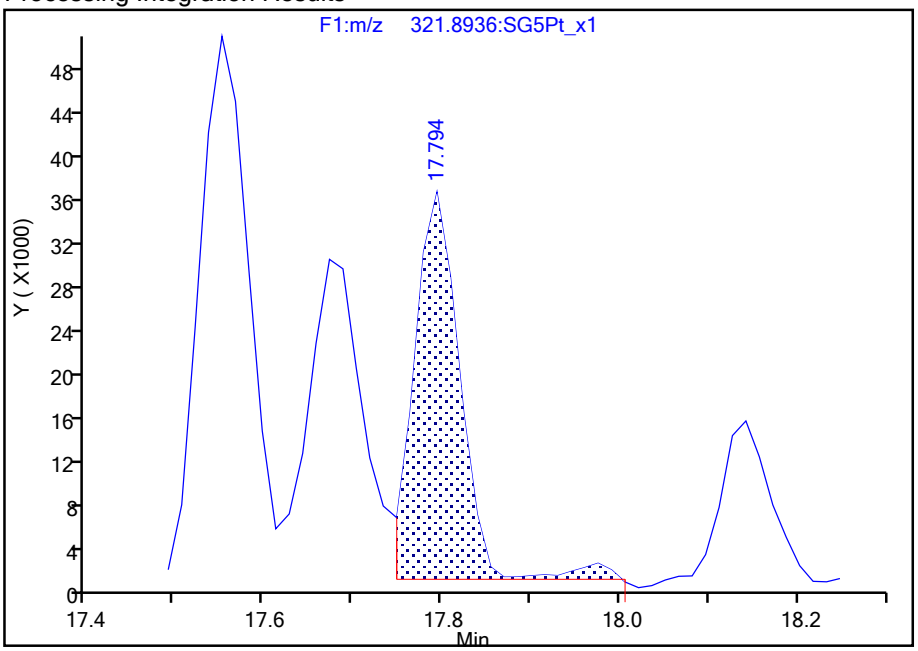

Manual Integration Results

RT: 17.79
Area: 119212
Amount: 0.204918
Amount Units: pg/ul

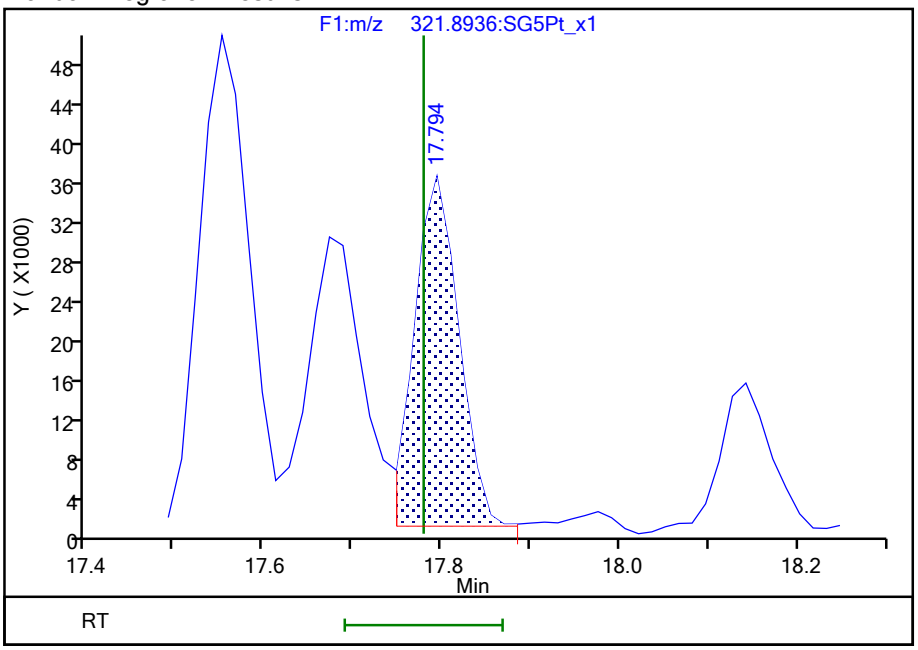

Reviewer: dadunj, 30-Aug-2021 08:53:04

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d				
Injection Date:	26-Aug-2021 11:35:54	Instrument ID:	10D5		
Lims ID:	320-77292-A-8-A	Lab Sample ID:	320-77292-8		
Client ID:	11215702-080321-BN-SJSB091 (14-16)				
Operator ID:	SMA	ALS Bottle#:	45	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 2, m/z: 321.8936, RT: (15.57- 19.47)

Signal: 2

Processing Integration Results

RT = 17.552 Area = 189987

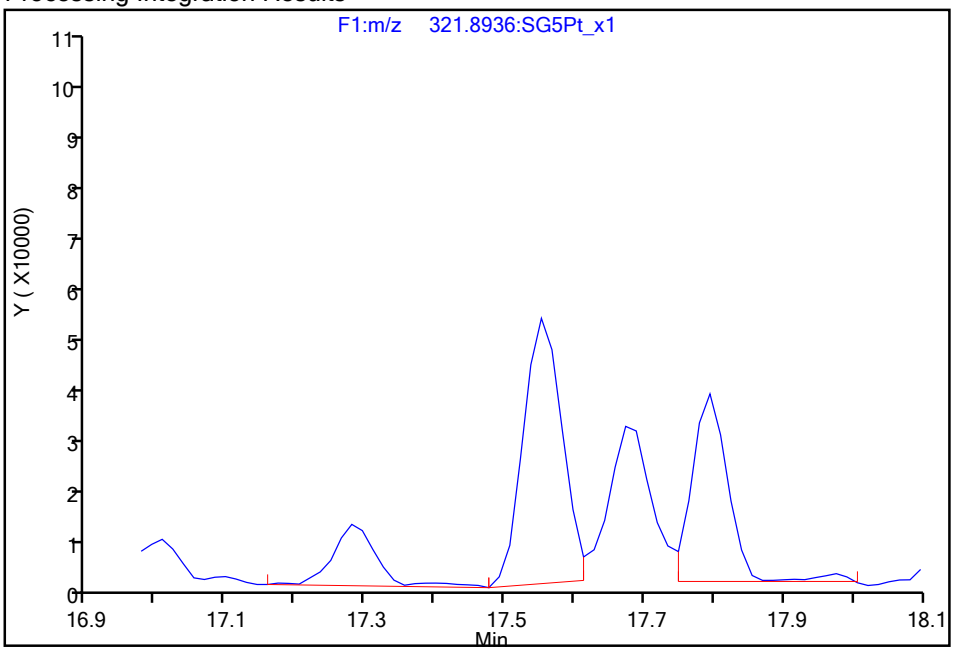

Manual Integration Results

RT = 17.552 Area = 189467 M

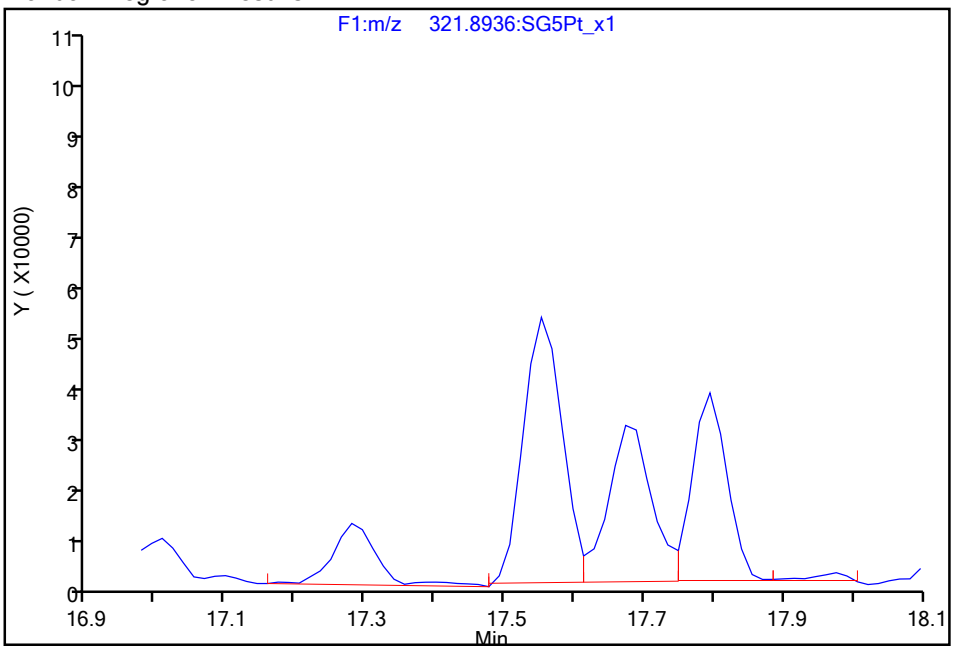

Reviewer: dadunj, 30-Aug-2021 08:53:30

Audit Action: Split an Integrated Peak Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d				
Injection Date:	26-Aug-2021 11:35:54	Instrument ID:	10D5		
Lims ID:	320-77292-A-8-A	Lab Sample ID:	320-77292-8		
Client ID:	11215702-080321-BN-SJSB091 (14-16)				
Operator ID:	SMA	ALS Bottle#:	45	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.57- 19.47)

Signal: 1

Processing Integration Results

RT = 17.673 Area = 107032

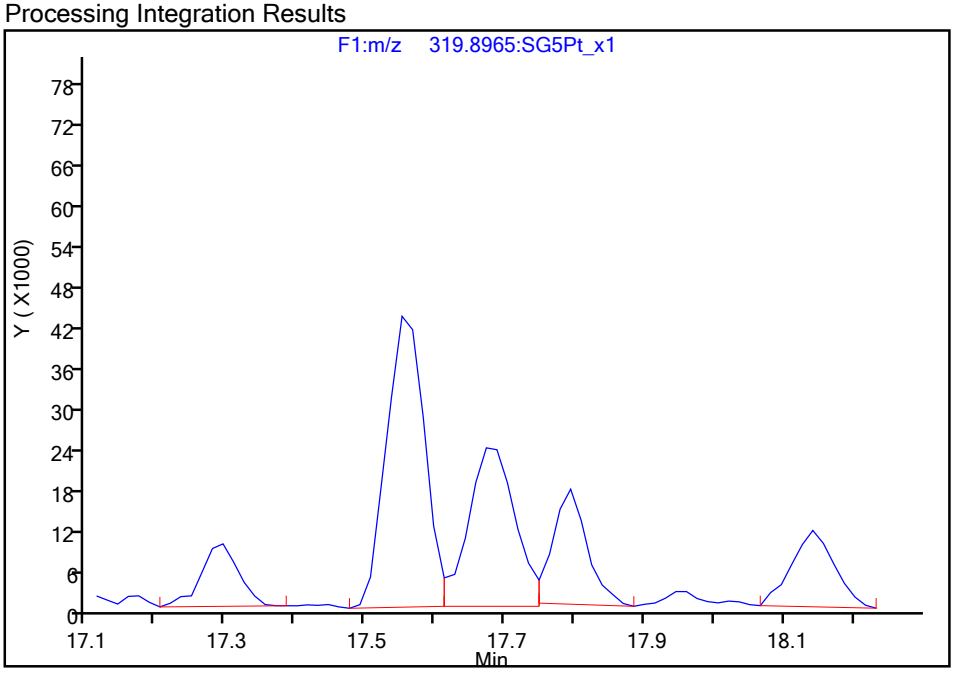

Manual Integration Results

RT = 17.673 Area = 107032

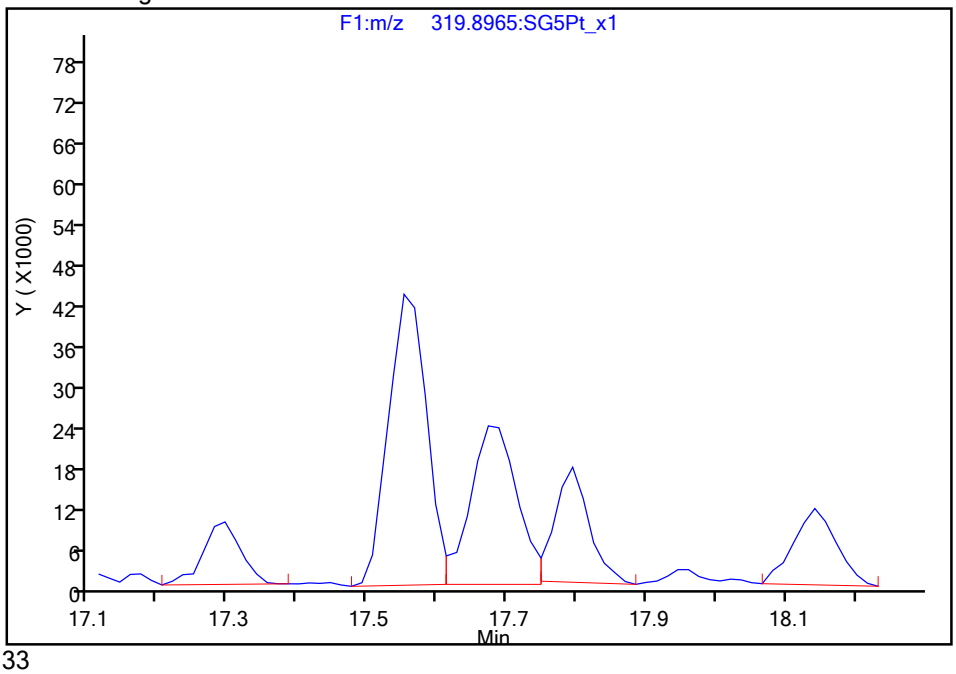

Reviewer: dadunj, 30-Aug-2021 08:53:33

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

793682

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d				
Injection Date:	26-Aug-2021 11:35:54	Instrument ID:	10D5		
Lims ID:	320-77292-A-8-A	Lab Sample ID:	320-77292-8		
Client ID:	11215702-080321-BN-SJSB091 (14-16)				
Operator ID:	SMA	ALS Bottle#:	45	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 22.293 Area = 103681

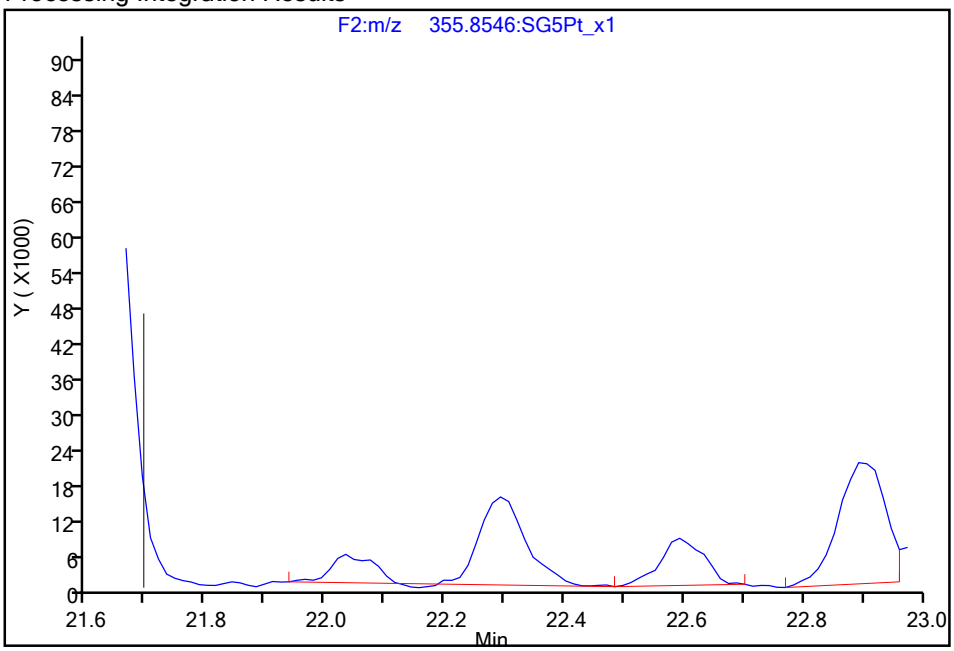

Manual Integration Results

RT = 22.293 Area = 81559 M

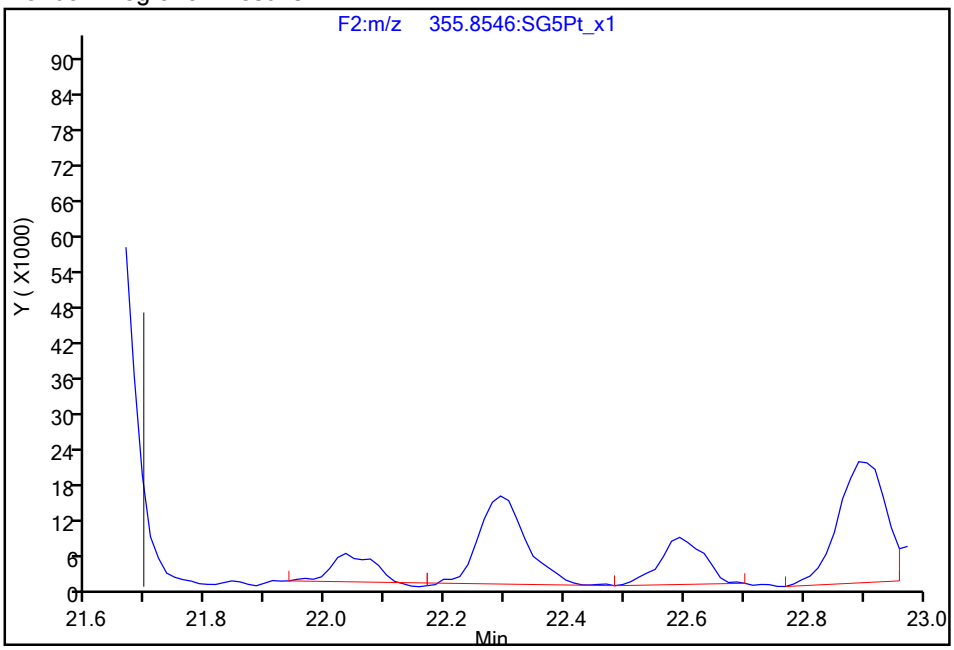

Reviewer: krenns, 30-Aug-2021 16:39:08

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d				
Injection Date:	26-Aug-2021 11:35:54	Instrument ID:	10D5		
Lims ID:	320-77292-A-8-A	Lab Sample ID:	320-77292-8		
Client ID:	11215702-080321-BN-SJSB091 (14-16)				
Operator ID:	SMA	ALS Bottle#:	45	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.13
Area: 15075
Amount: 0.040704
Amount Units: pg/ul

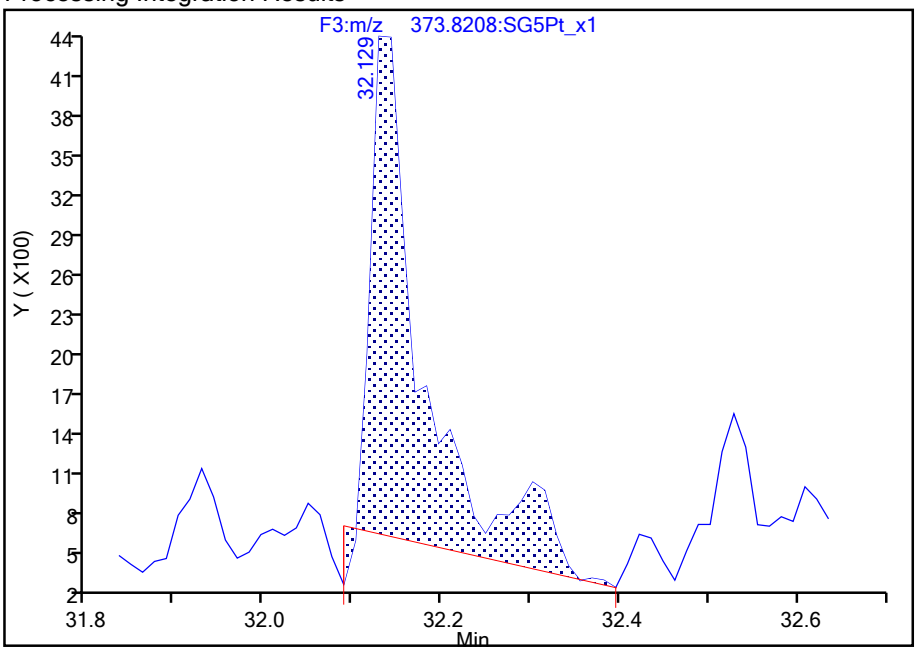

Manual Integration Results

RT: 32.13
Area: 10441
Amount: 0.030774
Amount Units: pg/ul

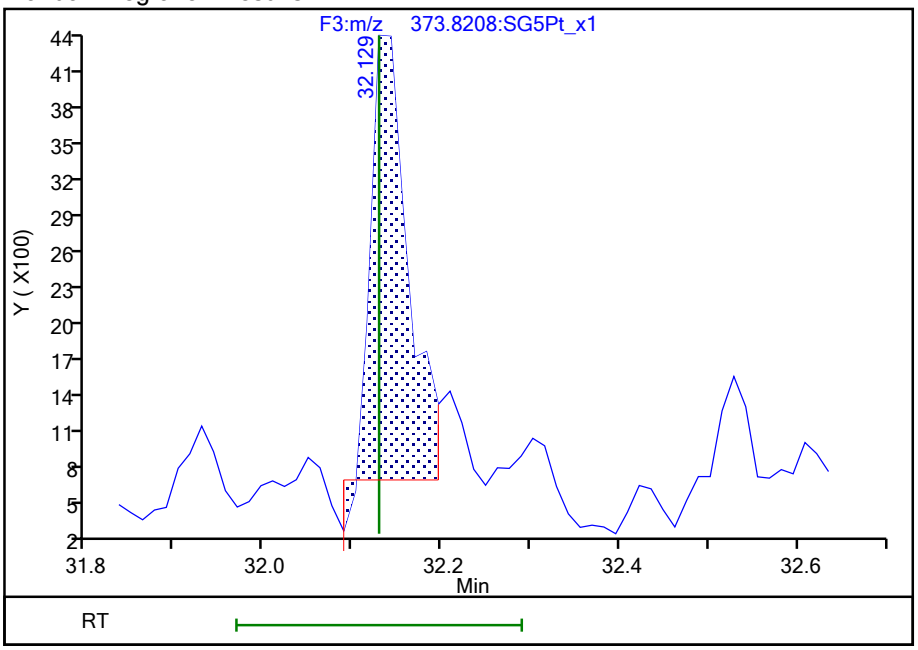

Reviewer: dadunj, 30-Aug-2021 08:54:28

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d				
Injection Date:	26-Aug-2021 11:35:54	Instrument ID:	10D5		
Lims ID:	320-77292-A-8-A	Lab Sample ID:	320-77292-8		
Client ID:	11215702-080321-BN-SJSB091 (14-16)				
Operator ID:	SMA	ALS Bottle#:	45	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.13
Area: 15780
Amount: 0.040704
Amount Units: pg/ul

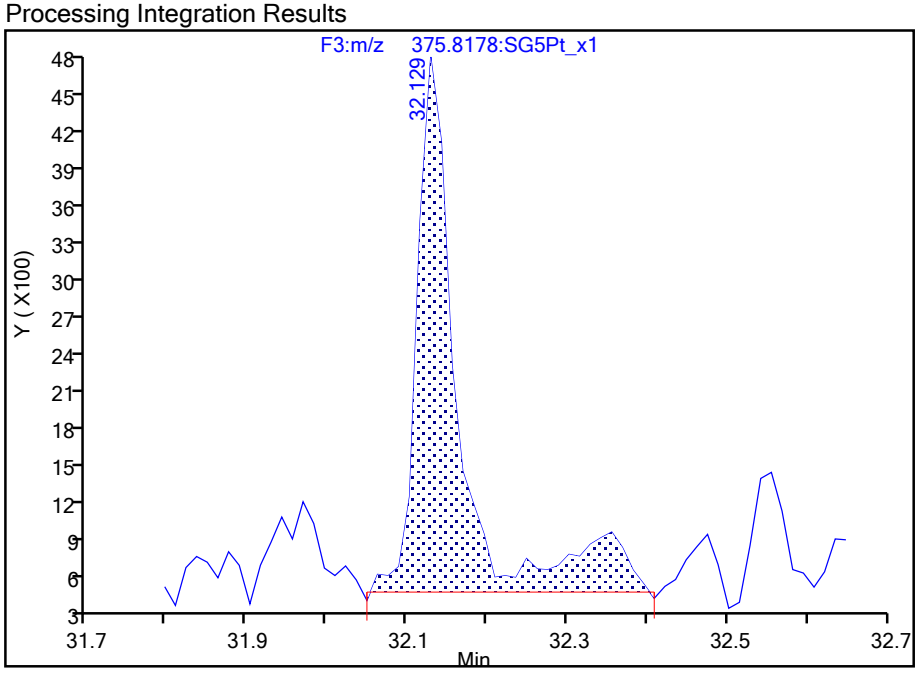

Manual Integration Results

RT: 32.13
Area: 12887
Amount: 0.030774
Amount Units: pg/ul

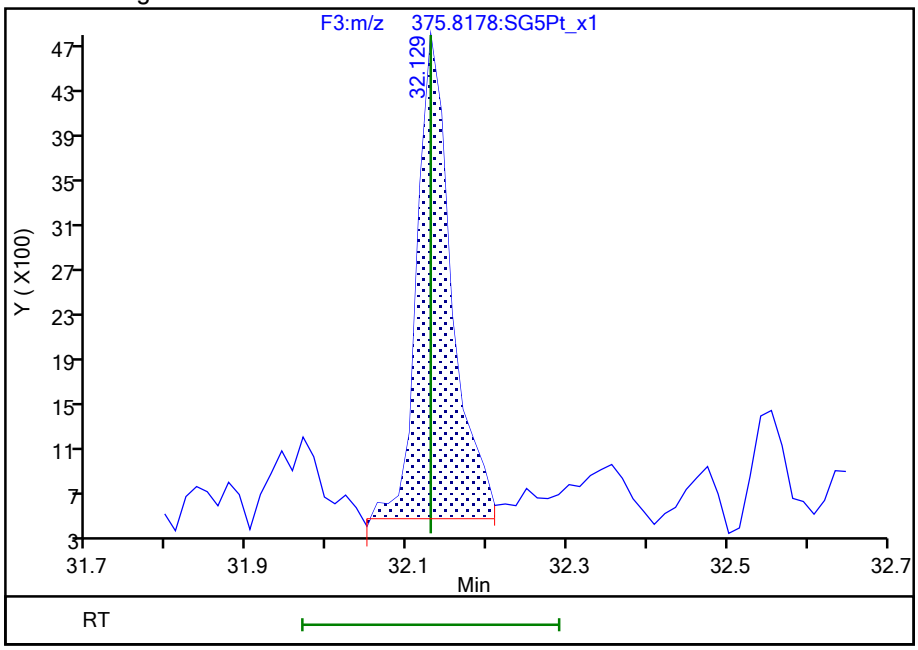

Reviewer: dadunj, 30-Aug-2021 08:54:29

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d				
Injection Date:	26-Aug-2021 11:35:54	Instrument ID:	10D5		
Lims ID:	320-77292-A-8-A	Lab Sample ID:	320-77292-8		
Client ID:	11215702-080321-BN-SJSB091 (14-16)				
Operator ID:	SMA	ALS Bottle#:	45	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.73
Area: 51546
Amount: 0.219528
Amount Units: pg/ul

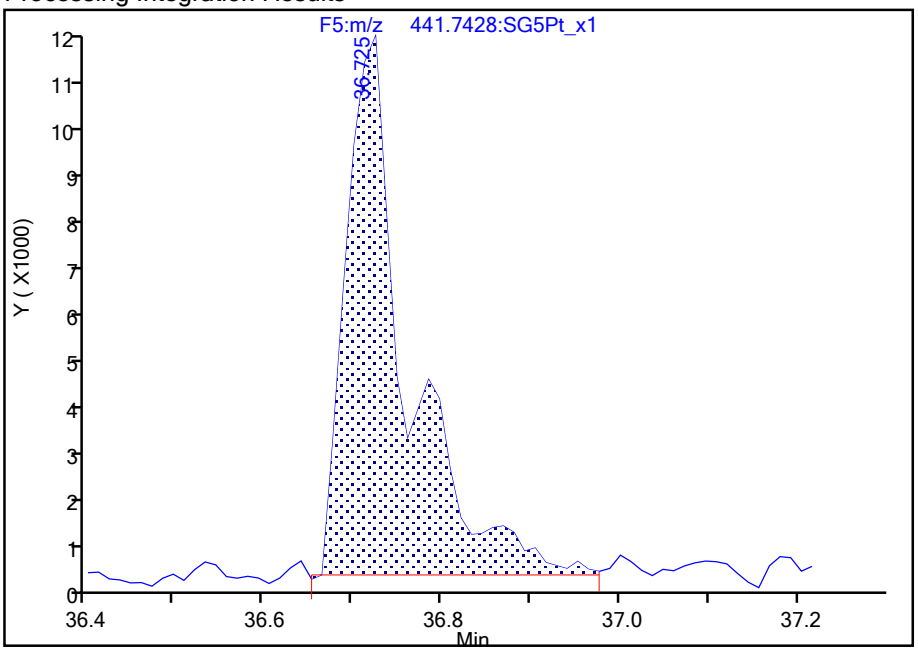

Manual Integration Results

RT: 36.78
Area: 11220
Amount: 0.045577
Amount Units: pg/ul

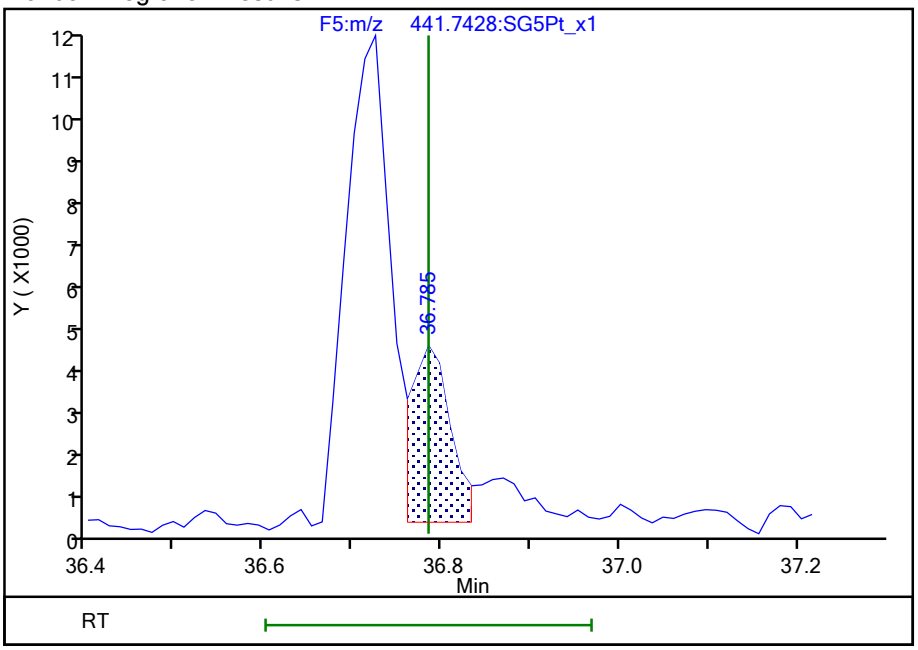

Reviewer: dadunj, 30-Aug-2021 08:55:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d				
Injection Date:	26-Aug-2021 11:35:54	Instrument ID:	10D5		
Lims ID:	320-77292-A-8-A	Lab Sample ID:	320-77292-8		
Client ID:	11215702-080321-BN-SJSB091 (14-16)				
Operator ID:	SMA	ALS Bottle#:	45	Worklist Smp#:	6
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.71
Area: 49261
Amount: 0.219528
Amount Units: pg/ul

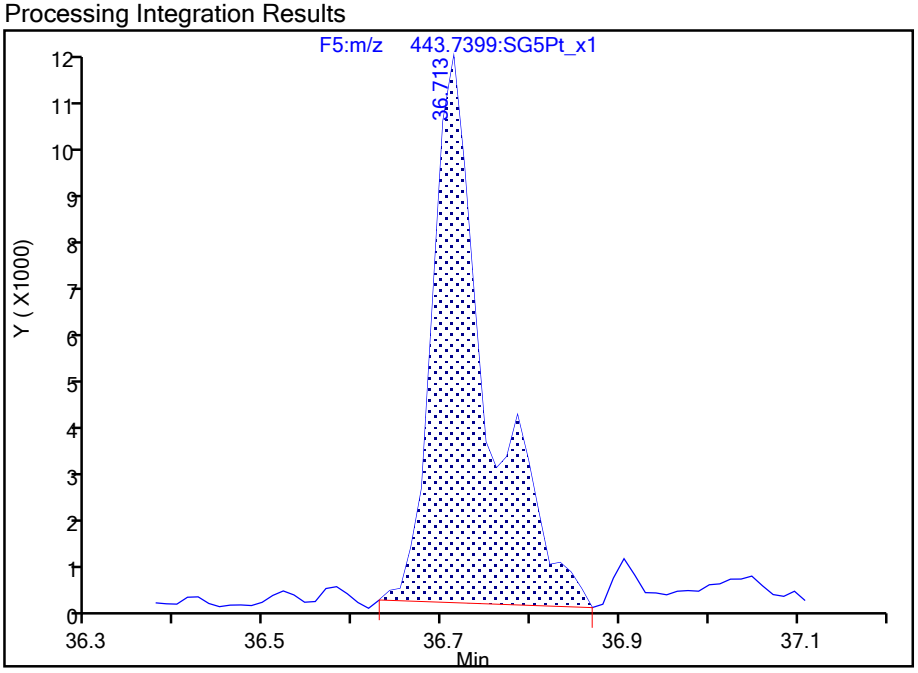

Manual Integration Results

RT: 36.78
Area: 9709
Amount: 0.045577
Amount Units: pg/ul

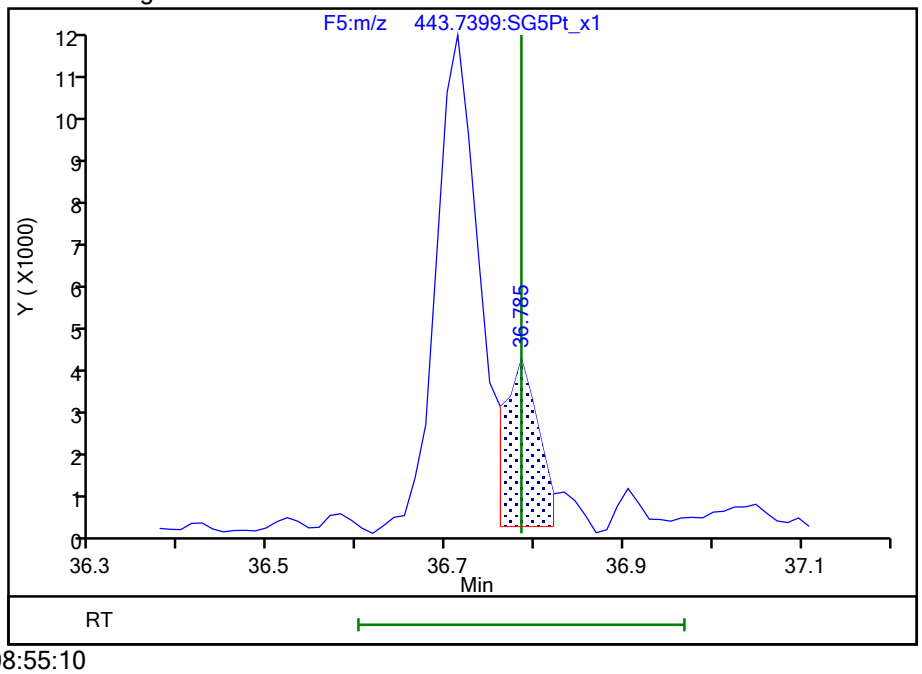

Reviewer: dadunj, 30-Aug-2021 08:55:10

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793687

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d		
Injection Date:	26-Aug-2021 11:35:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Worklist#:	519966	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

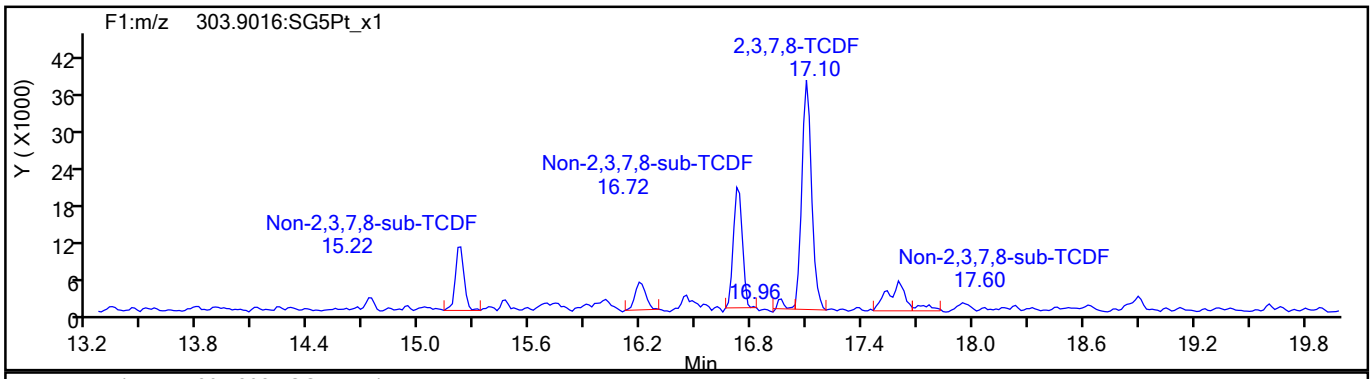

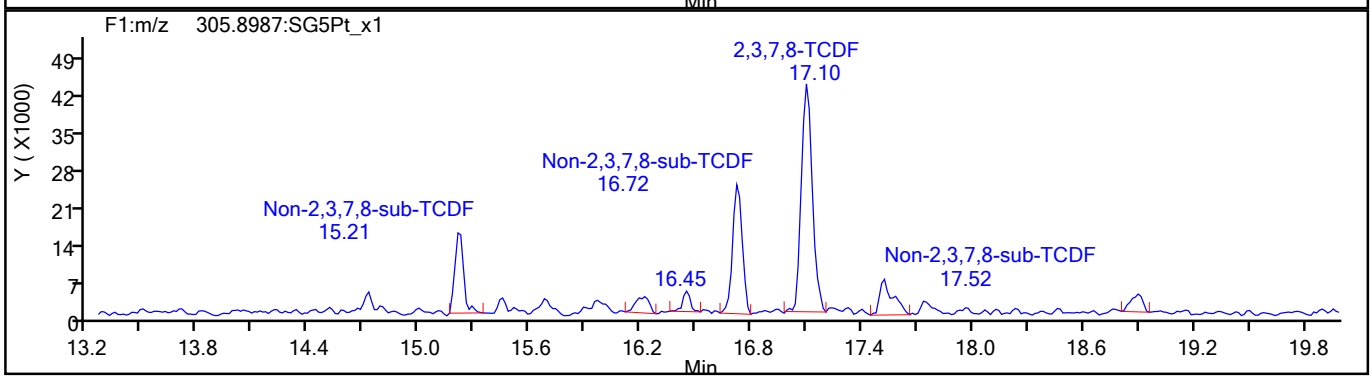

TCDF Standards

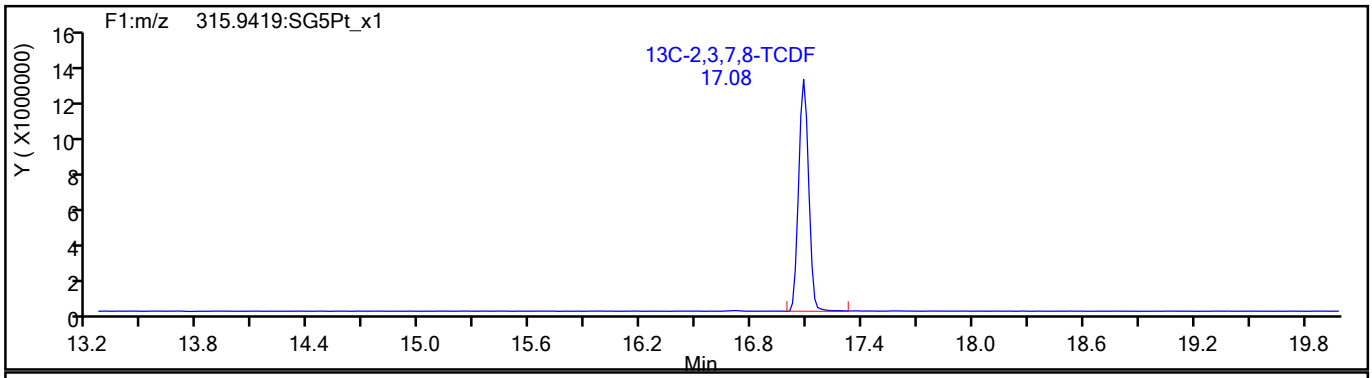

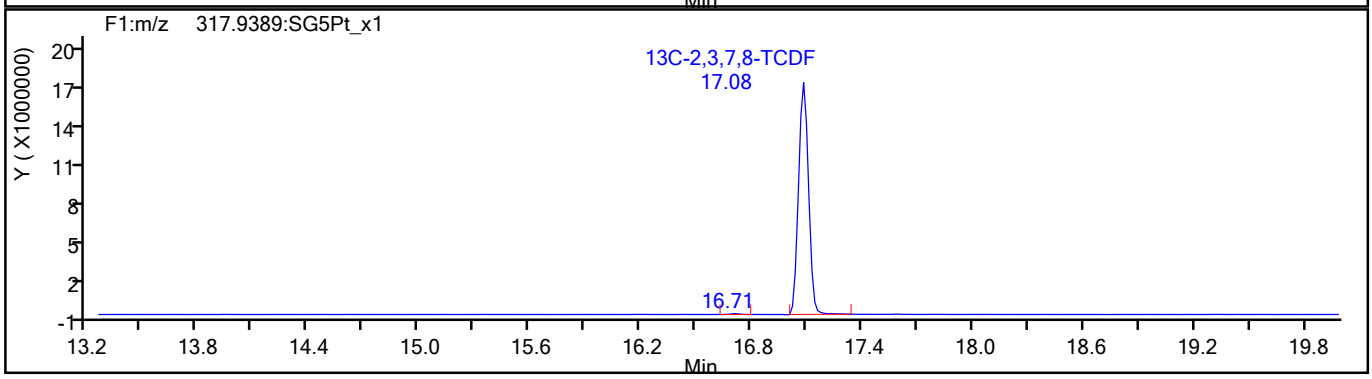

793688

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d		
Injection Date:	26-Aug-2021 11:35:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Worklist#:	519966	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

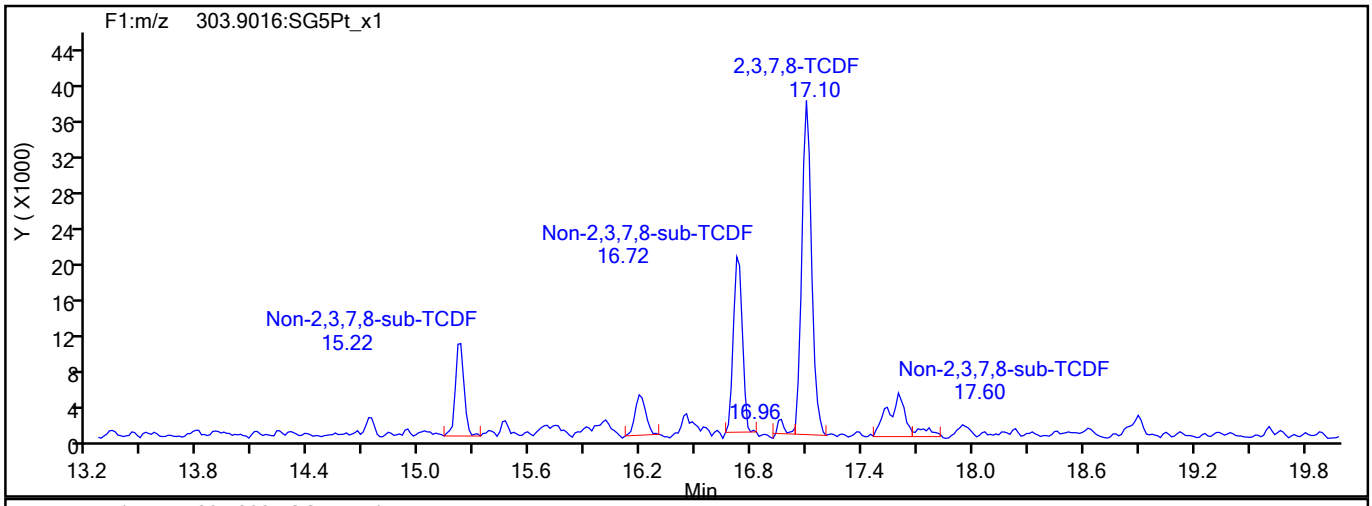

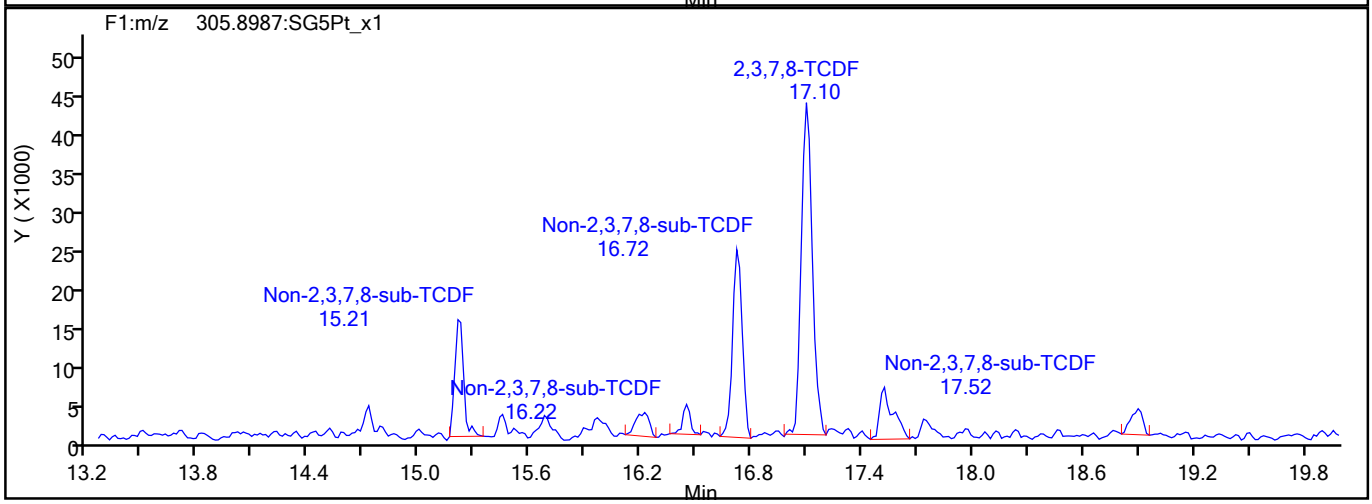

TCDF Interference Mass

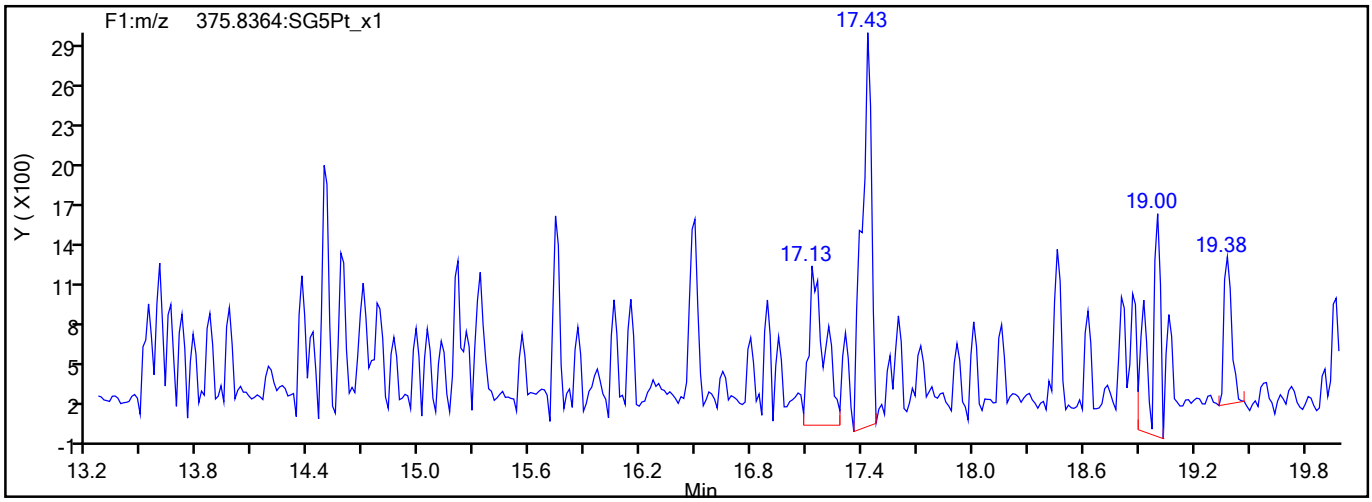

793689

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d		
Injection Date:	26-Aug-2021 11:35:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Worklist#:	519966	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

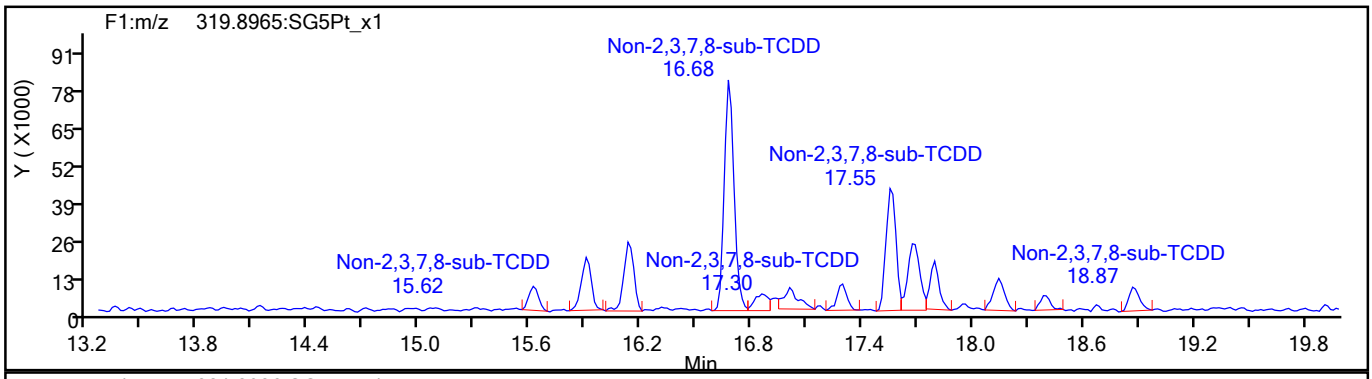

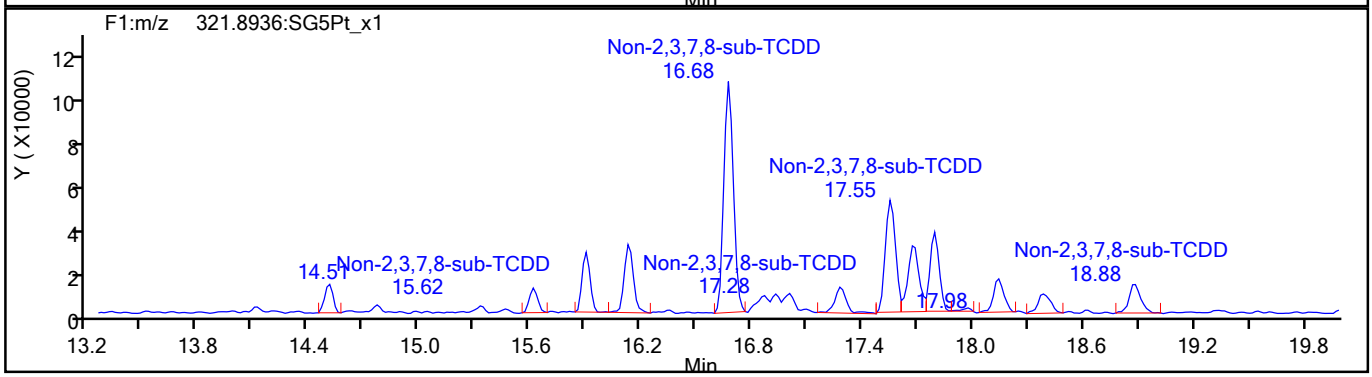

TCDD Standards

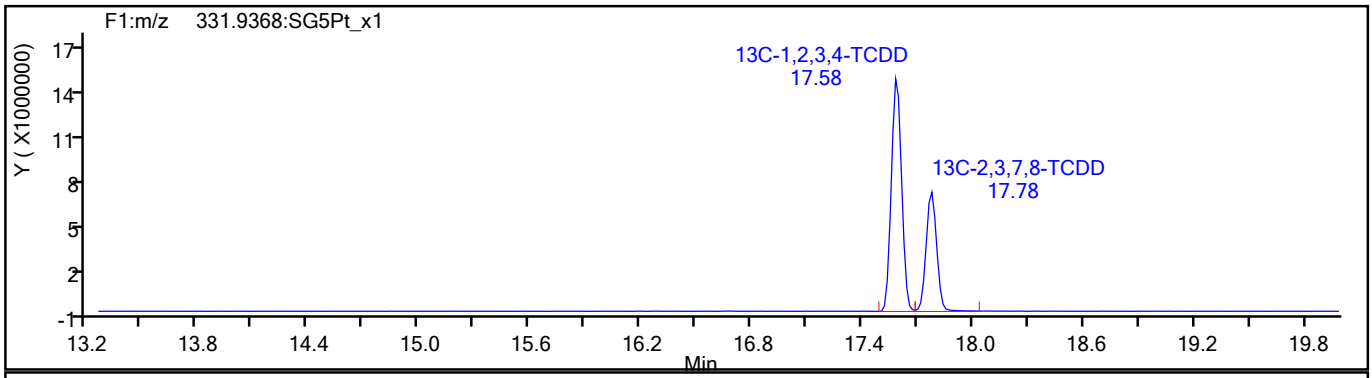

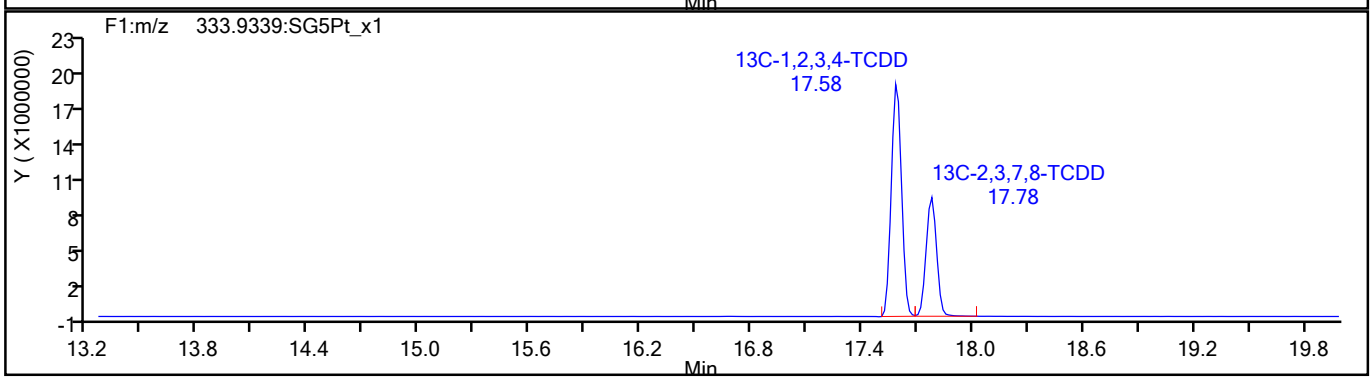

793690

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Worklist#:	519966	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

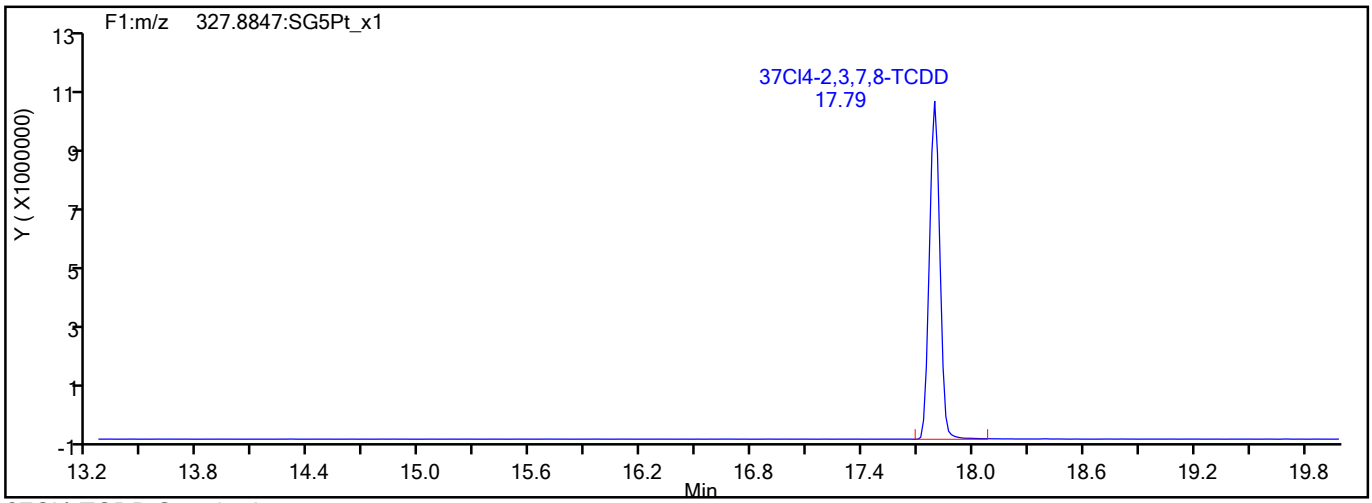

37Cl4-TCDD Standards

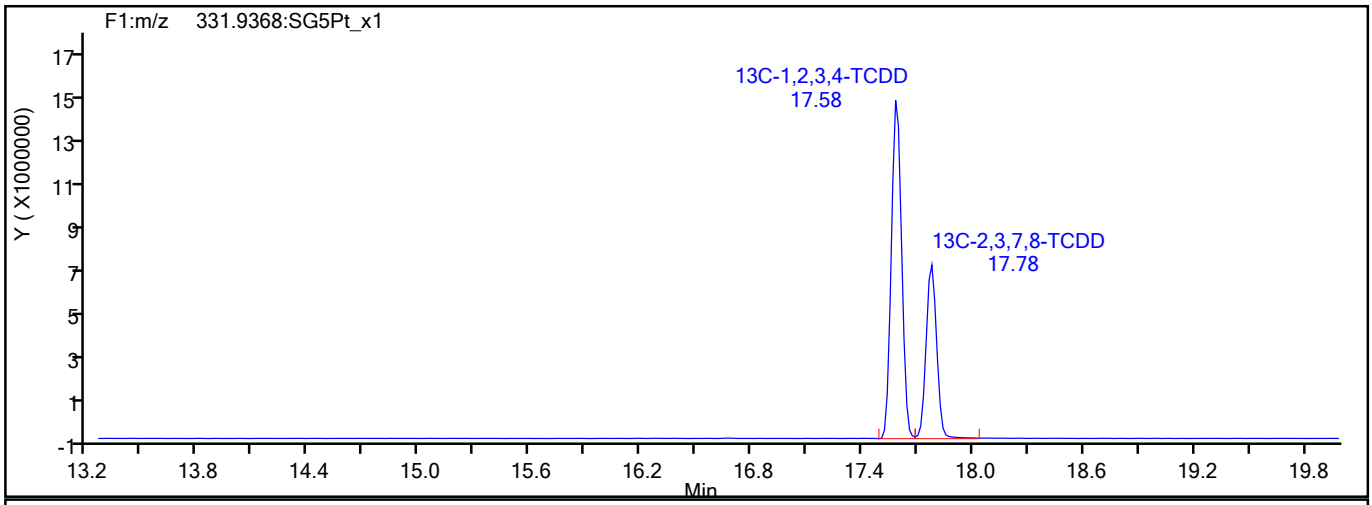

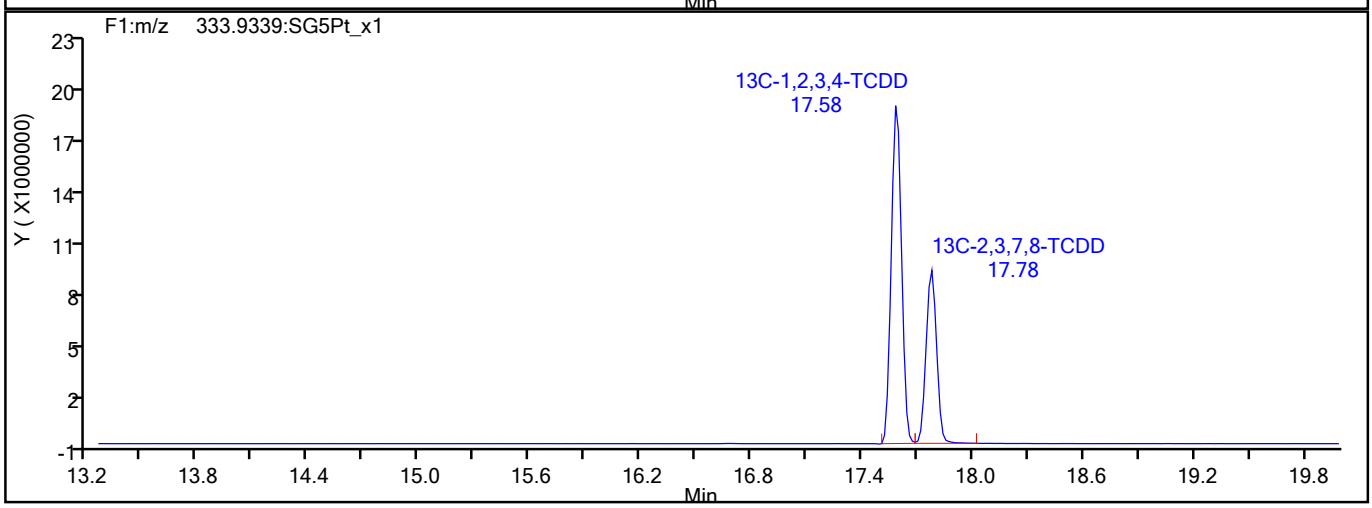

793691

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Worklist#:	519966	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

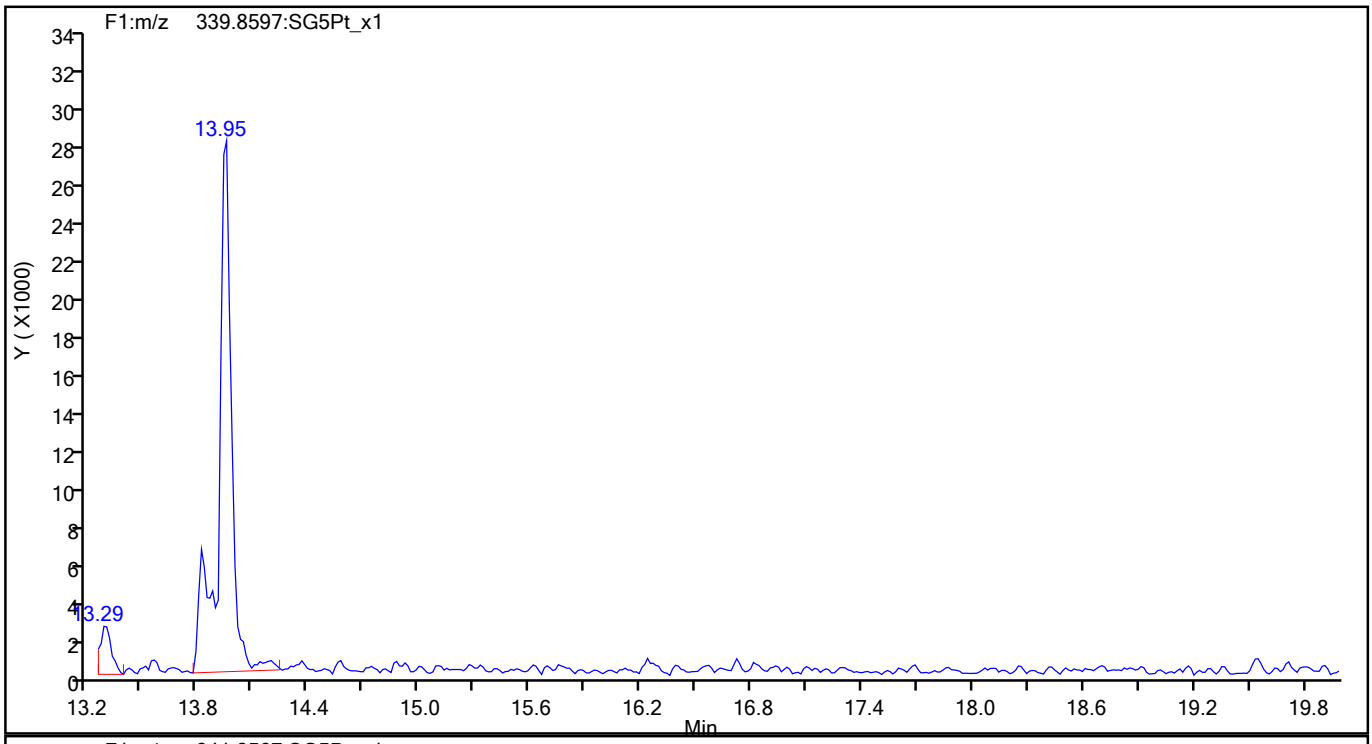

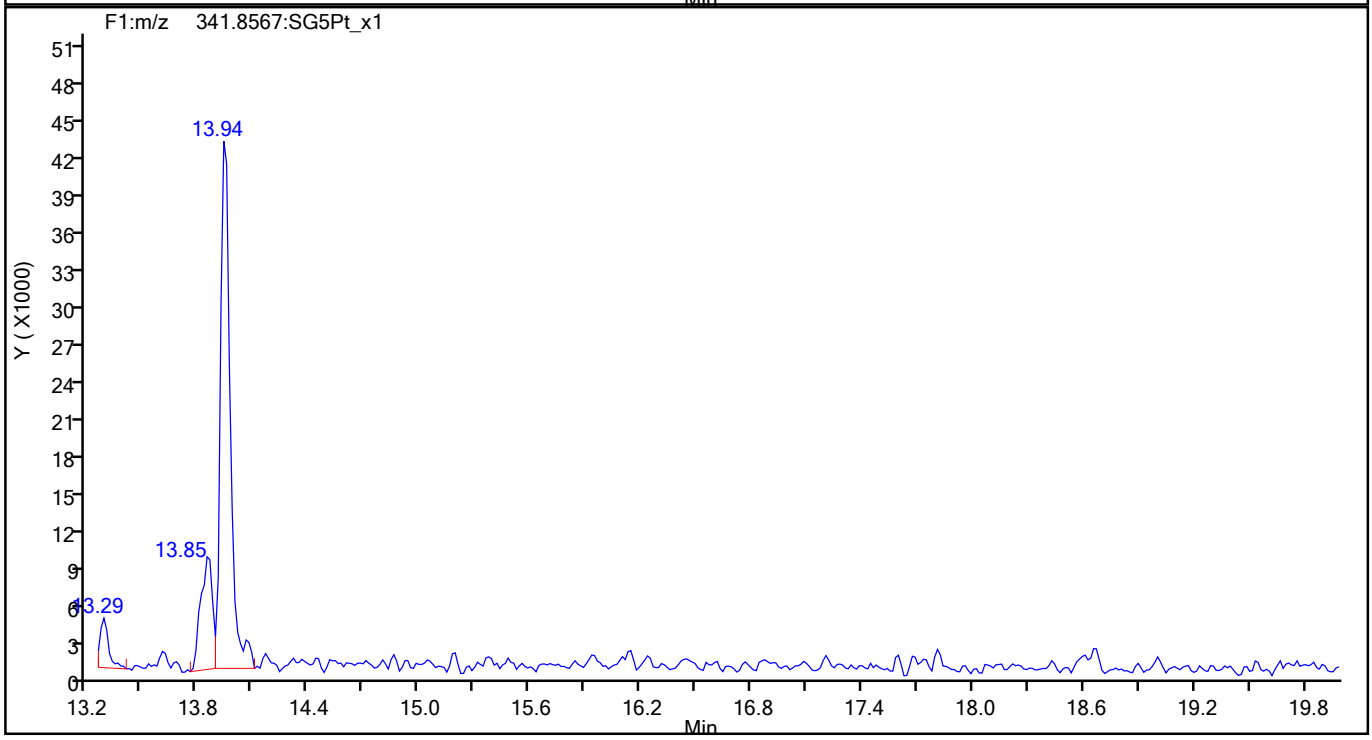

793692

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

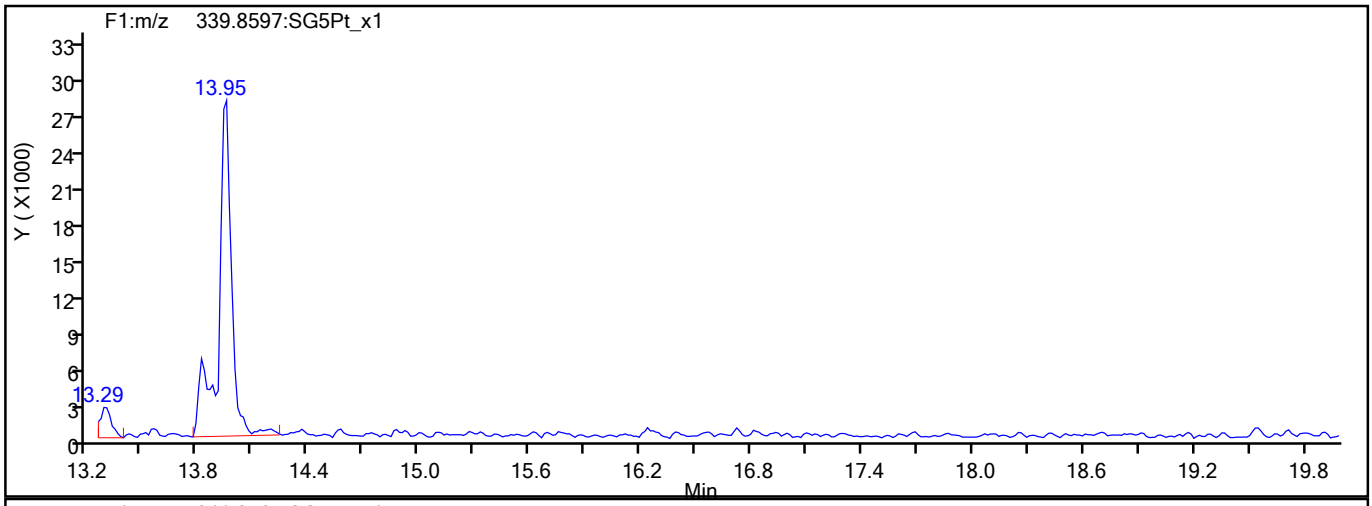

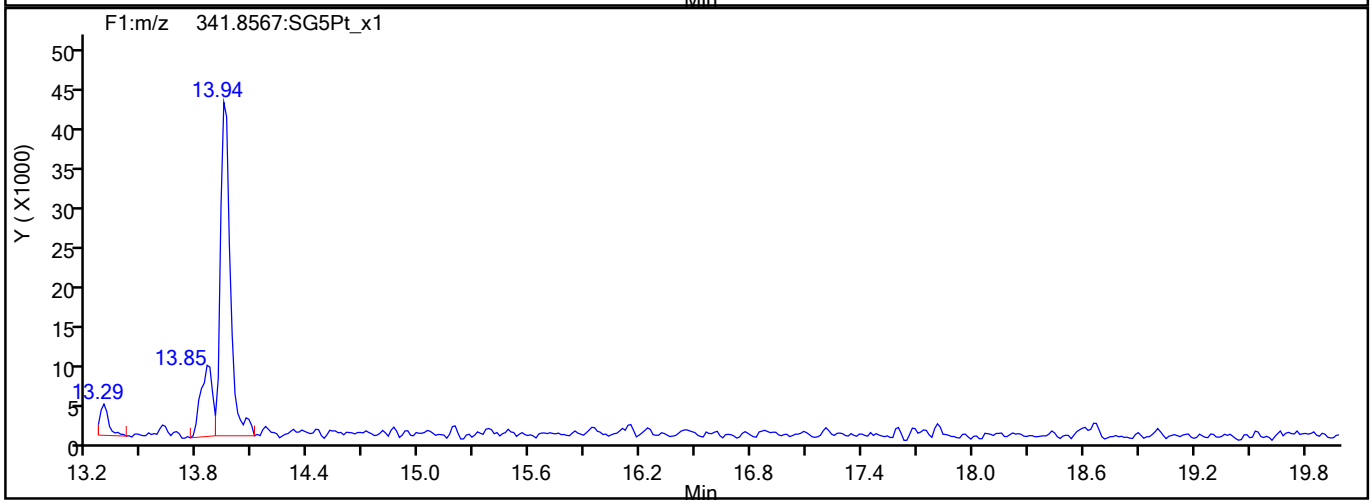

F1 PeCDFs Interference Mass

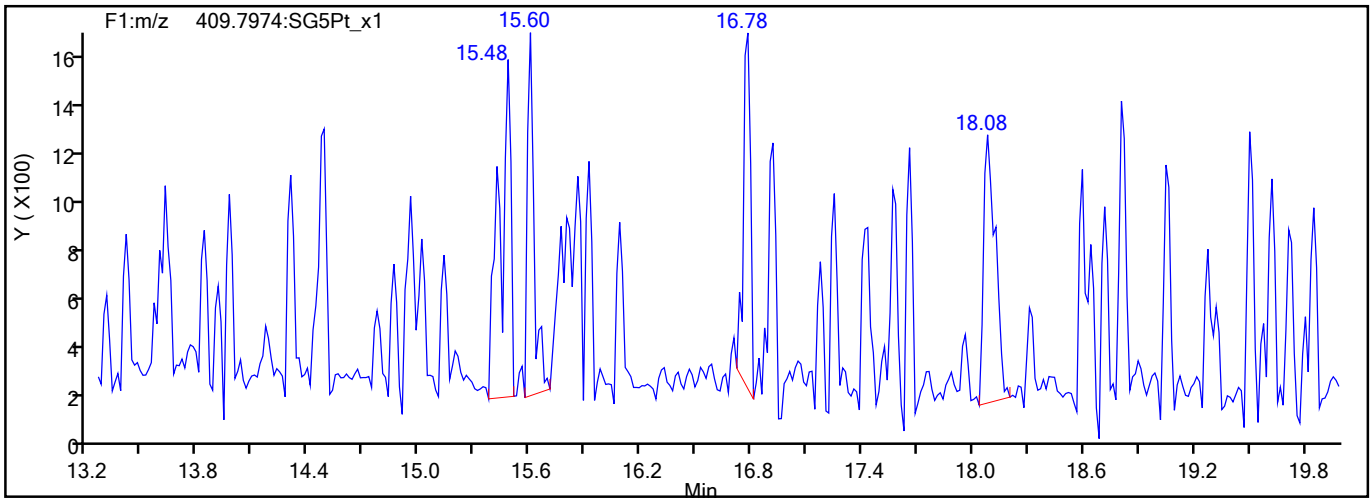

793693

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

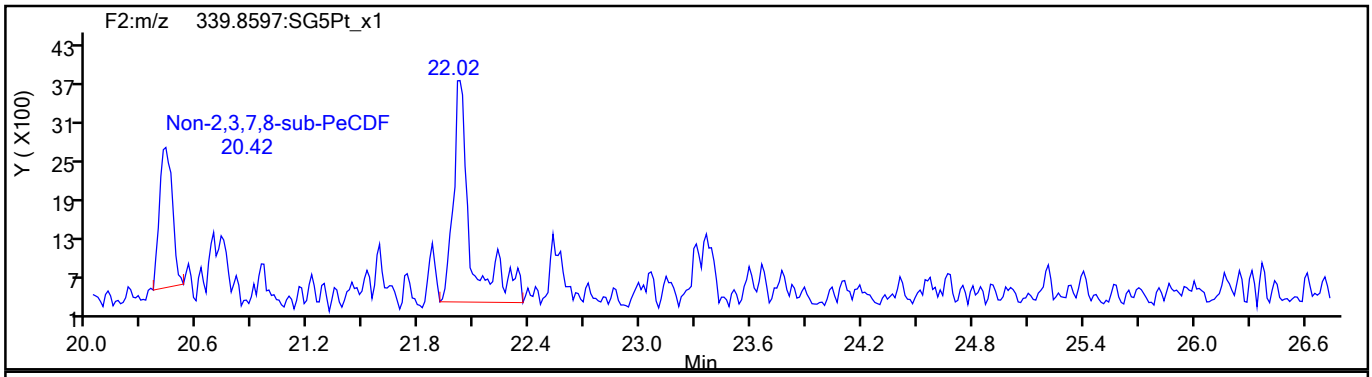

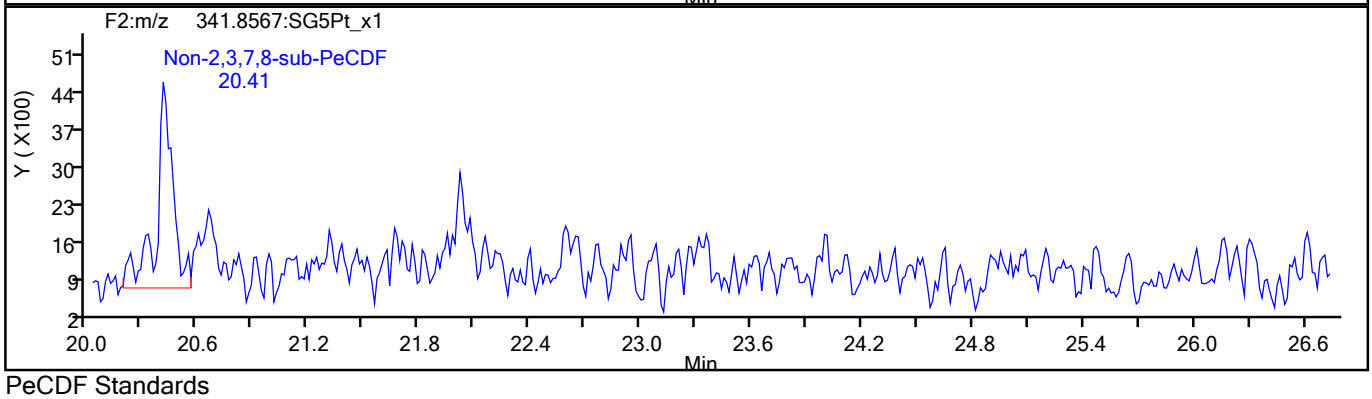

PeCDF Standards

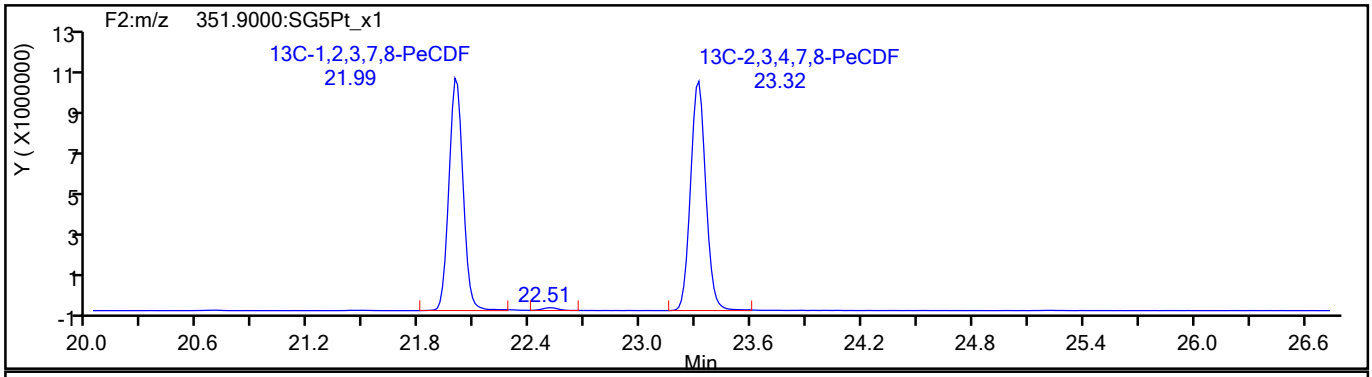

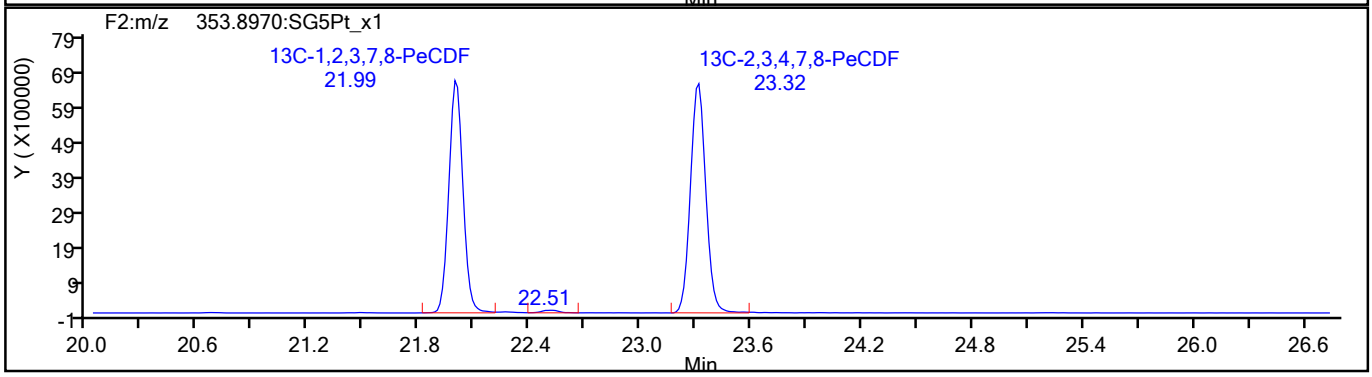

793694

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

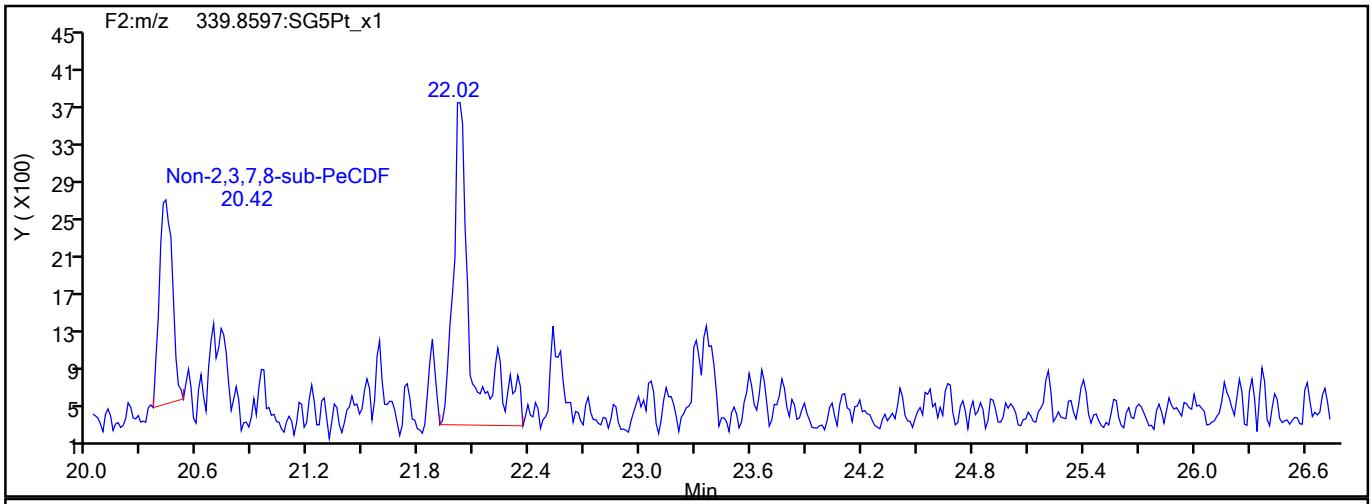

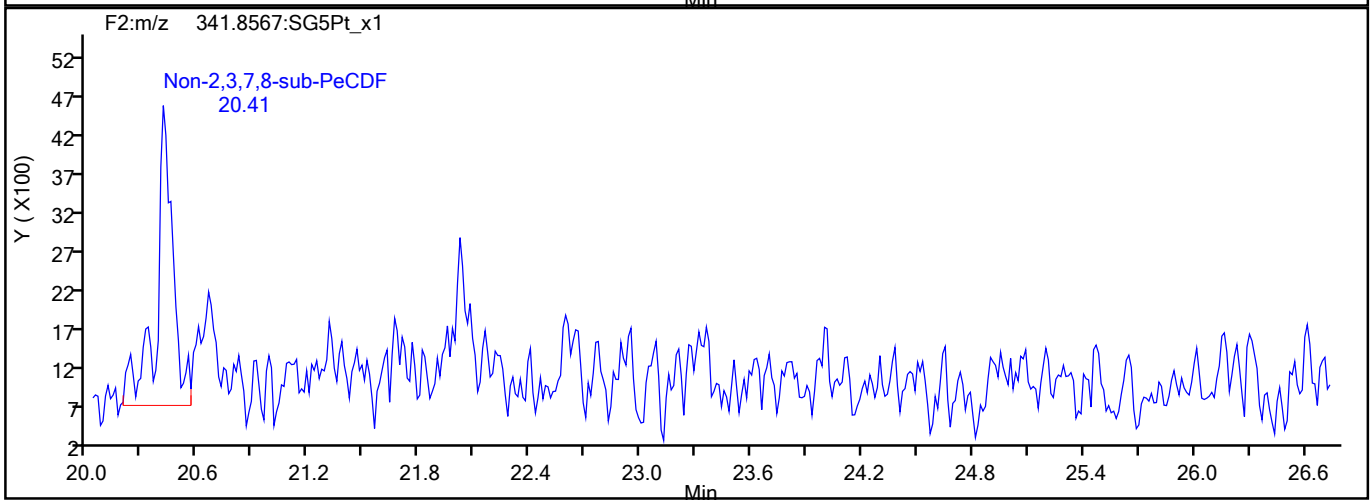

PeCDF Interference Mass

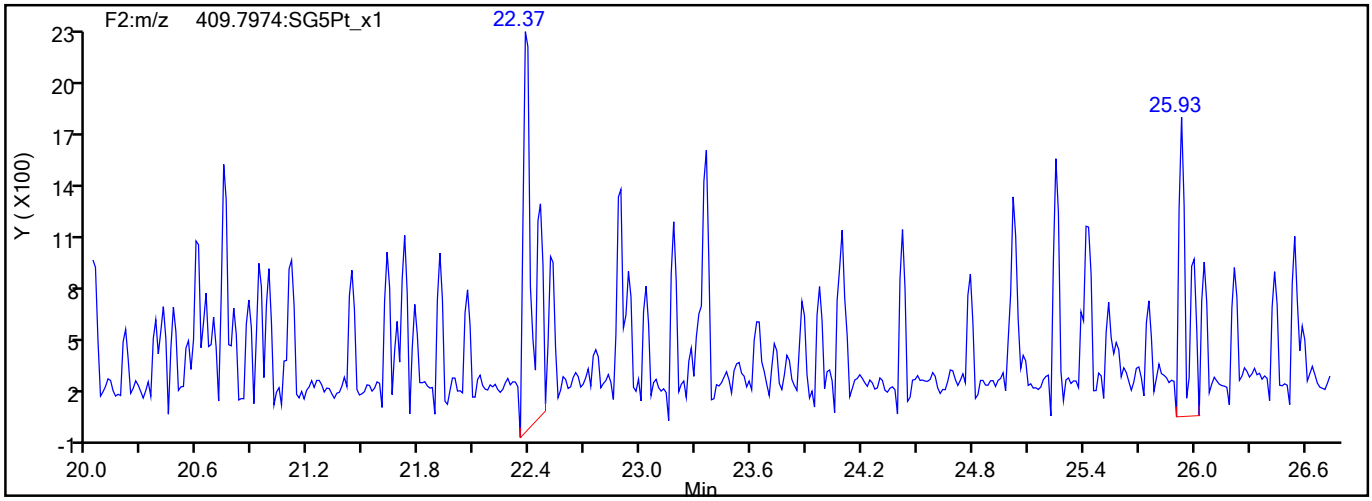

793695

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

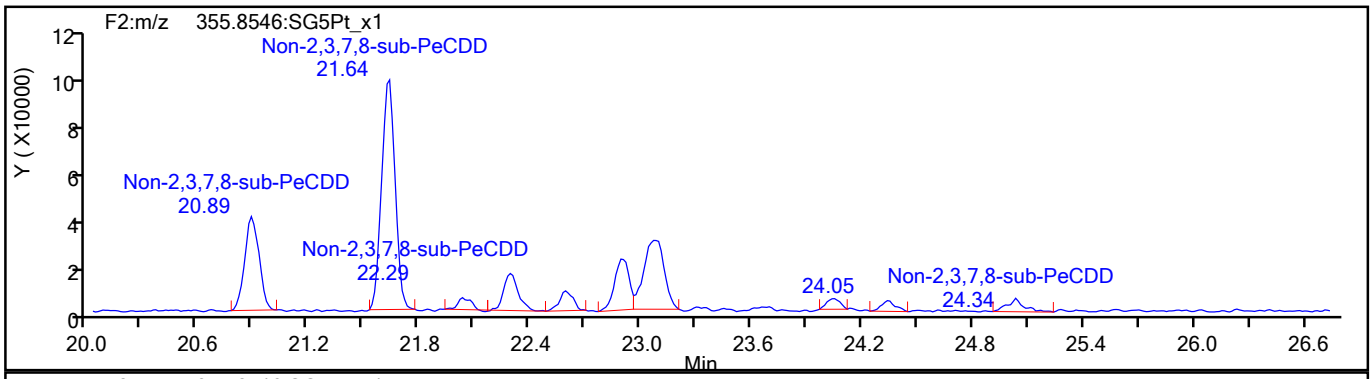

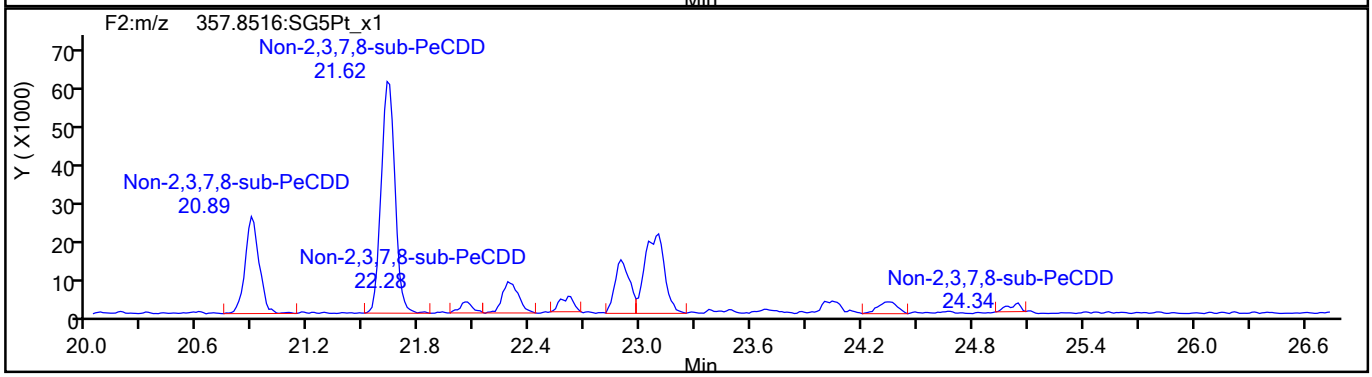

PeCDD Standards

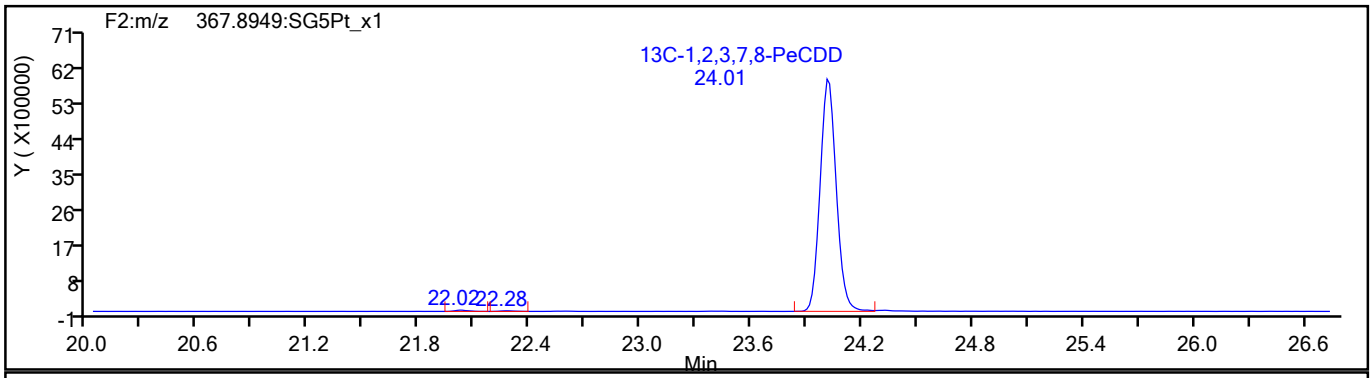

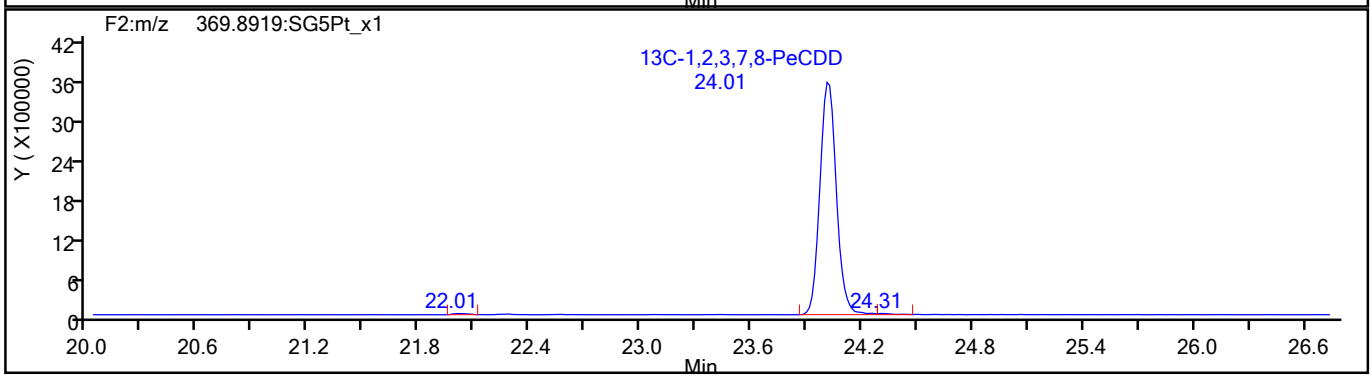

793696

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Eurofins TestAmerica, Sacramento

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Client ID:	11215702-080321-BN-SJSB091 (14-16)		
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HxCDF

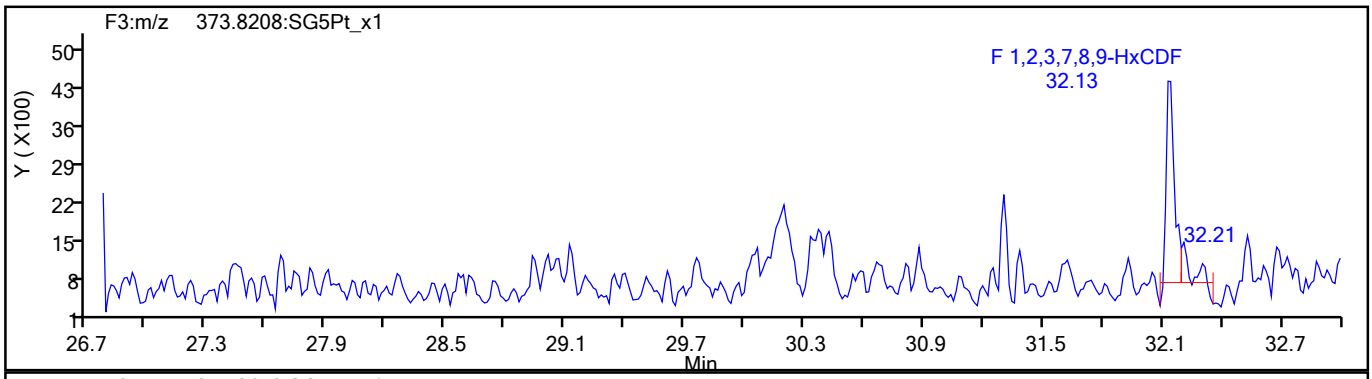

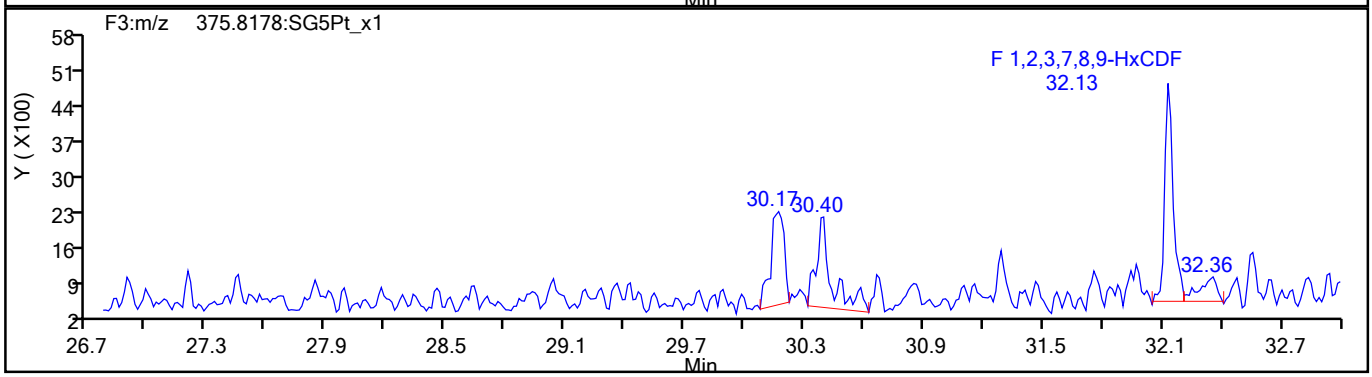

HxCDF Standards

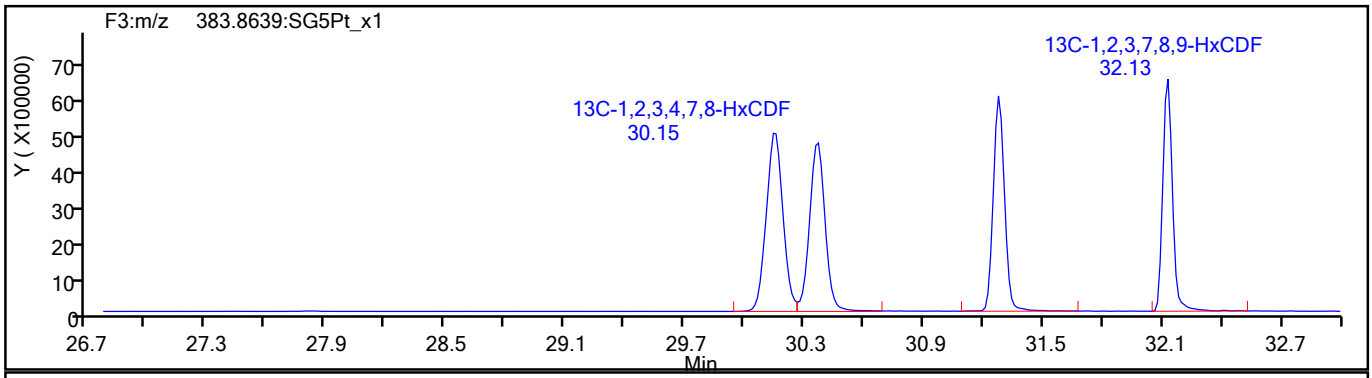

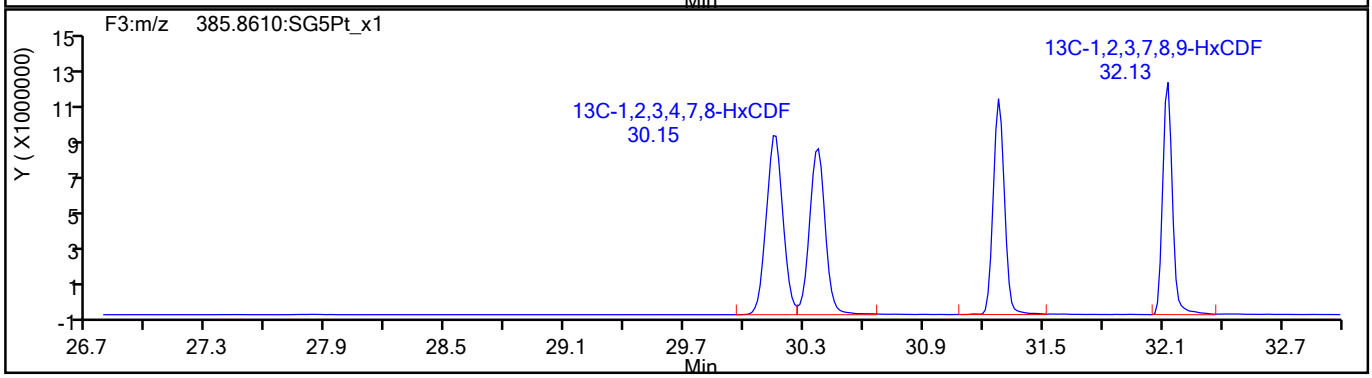

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Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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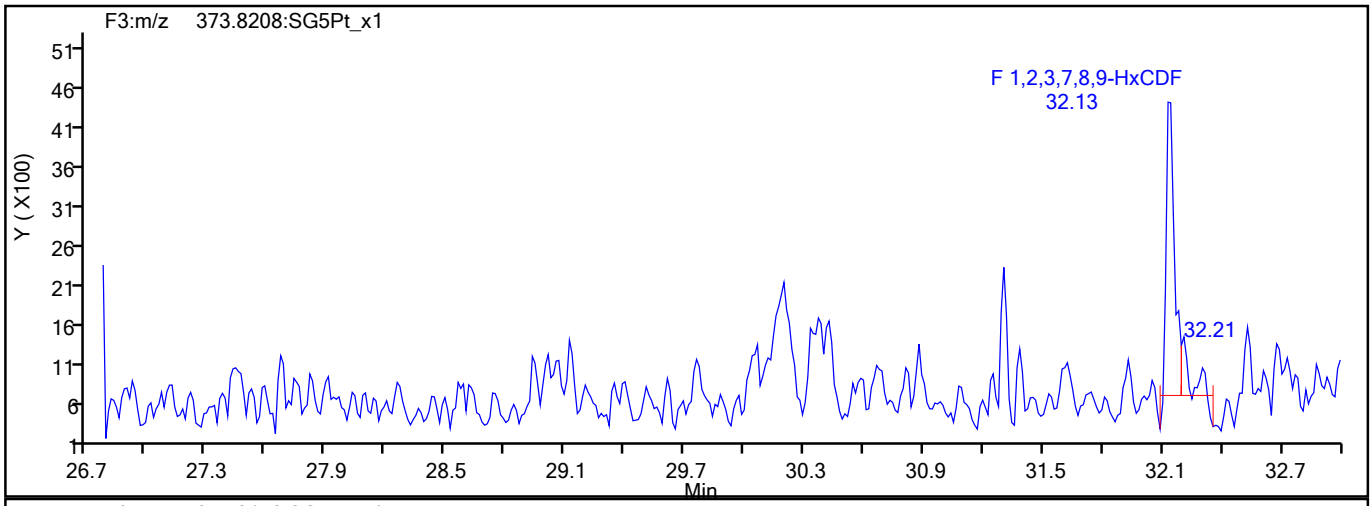

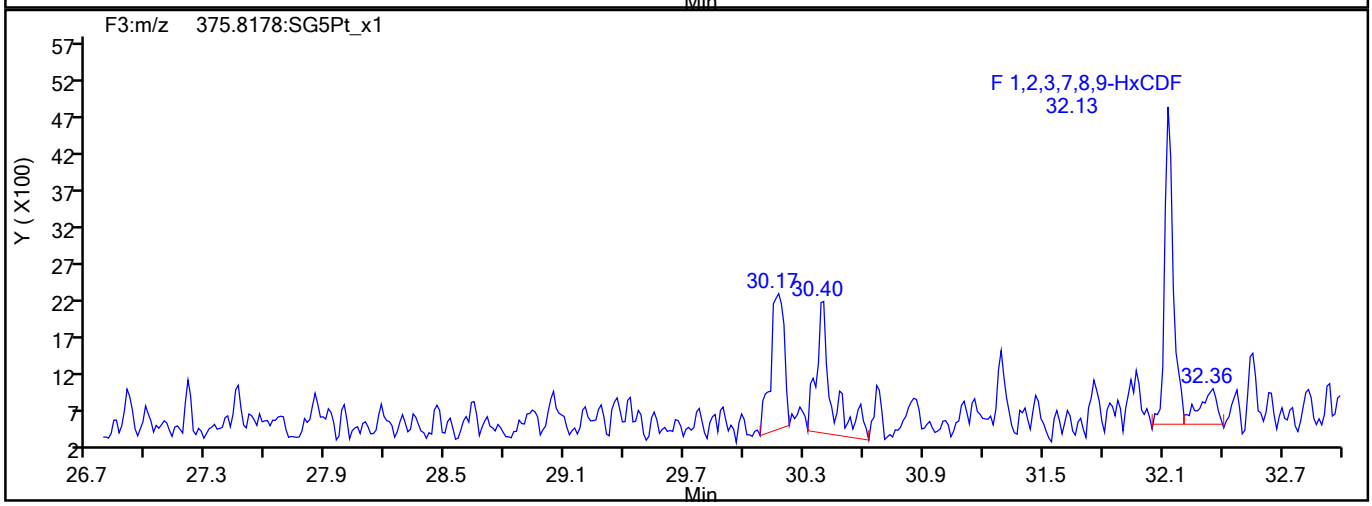

HxCDF Interference Mass

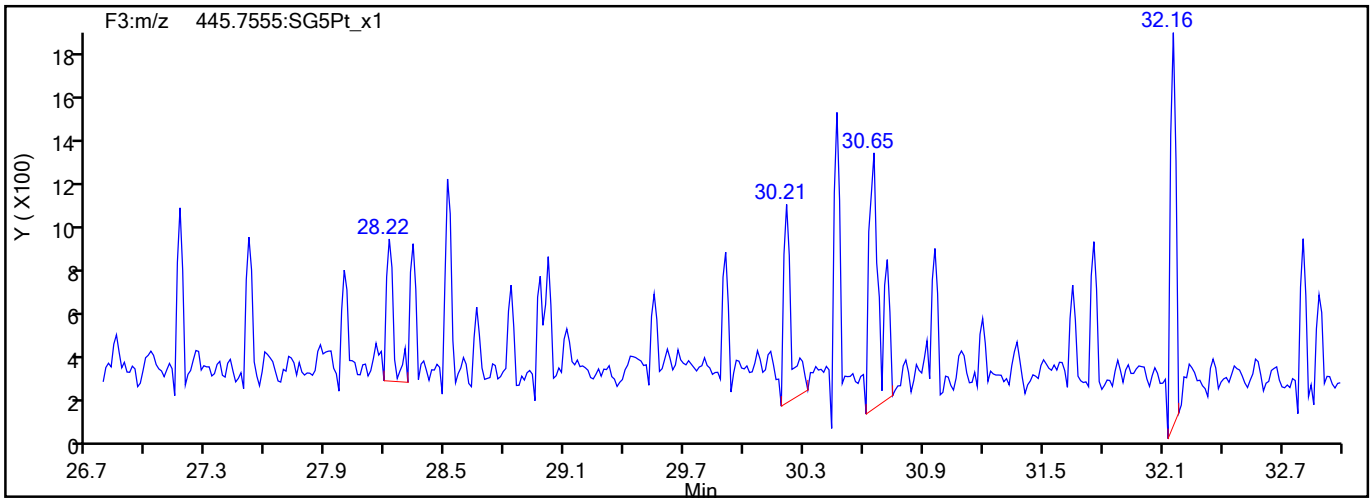

793698

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Worklist#:	519966	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

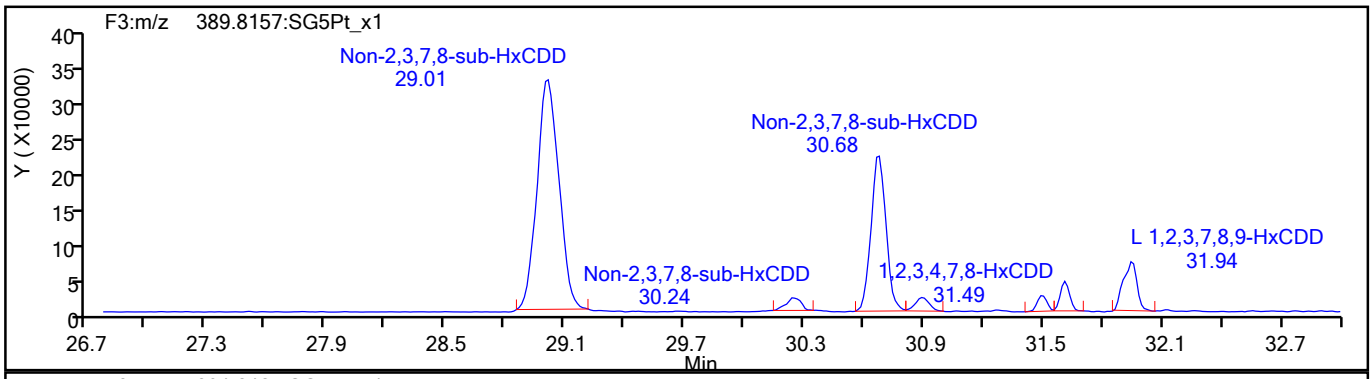

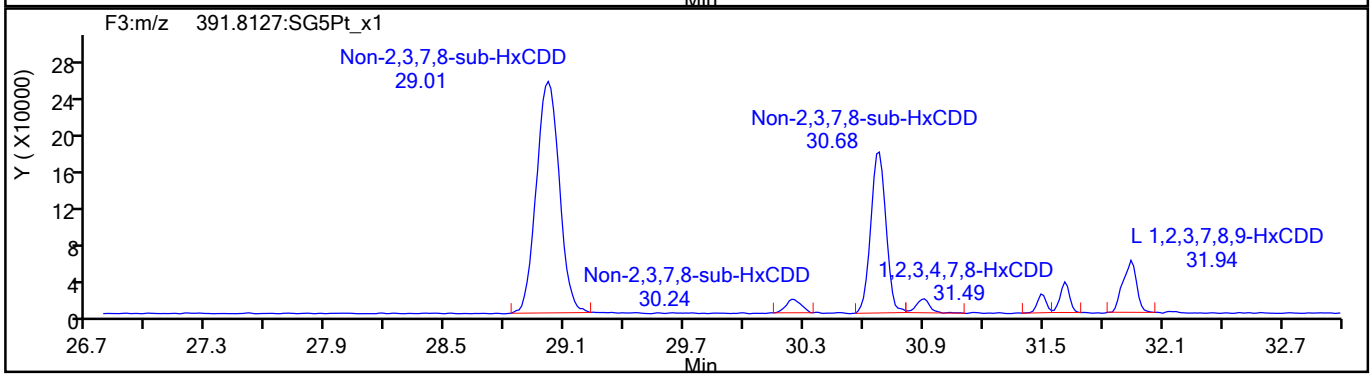

HxCDD Standards

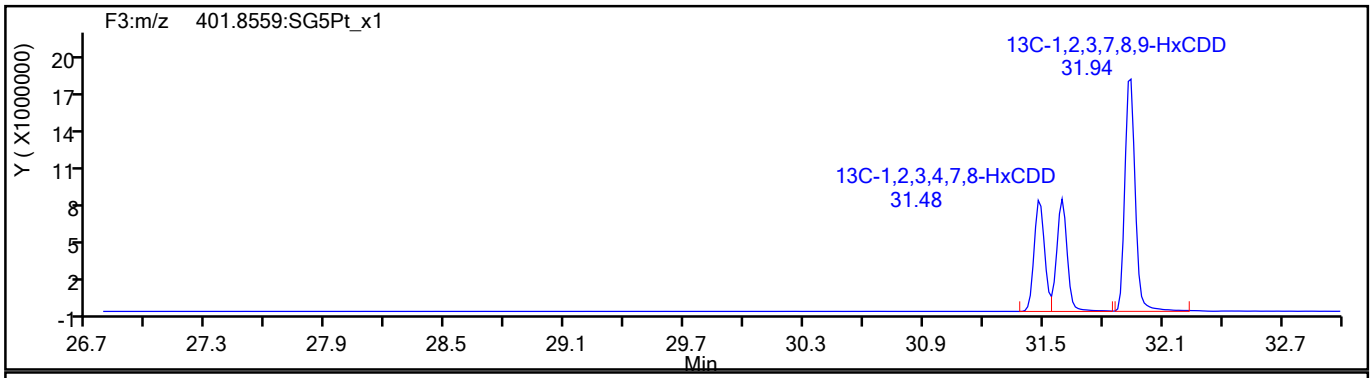

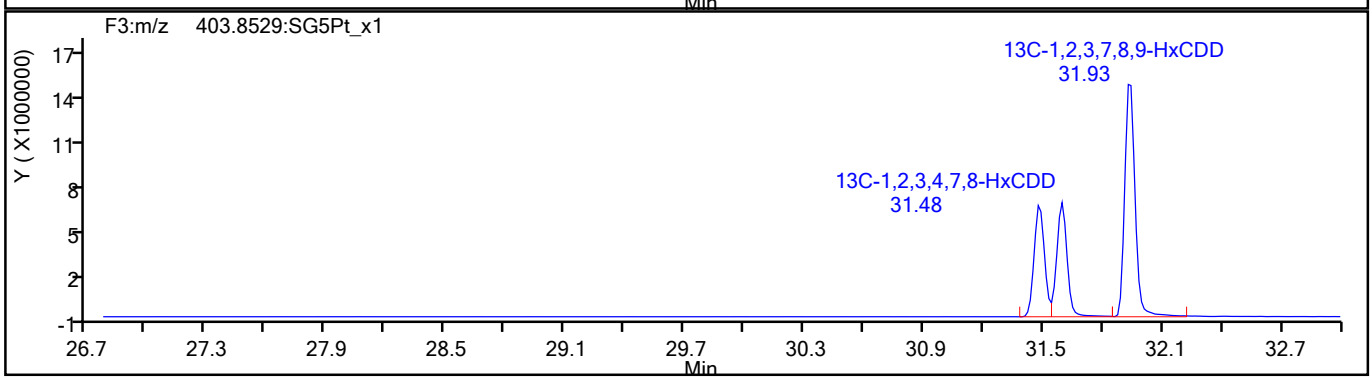

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
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HpCDF

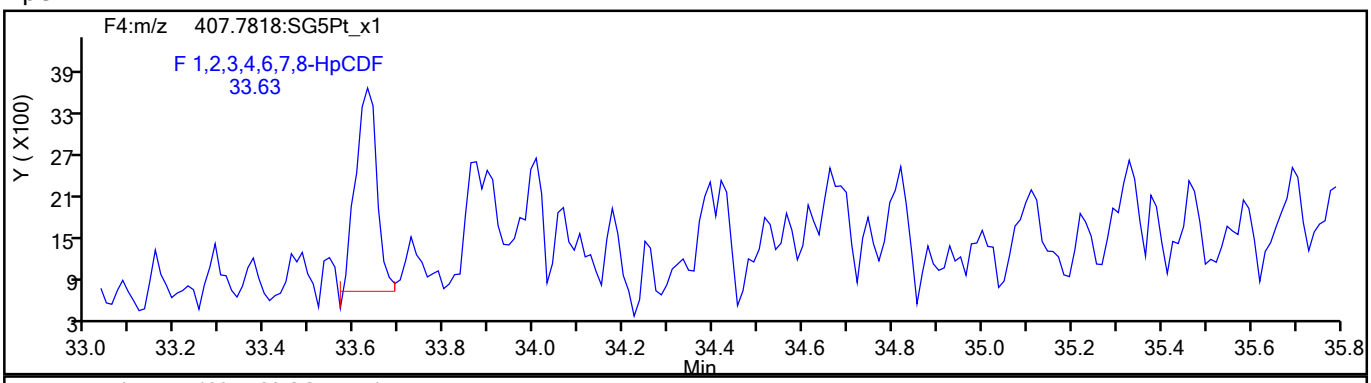

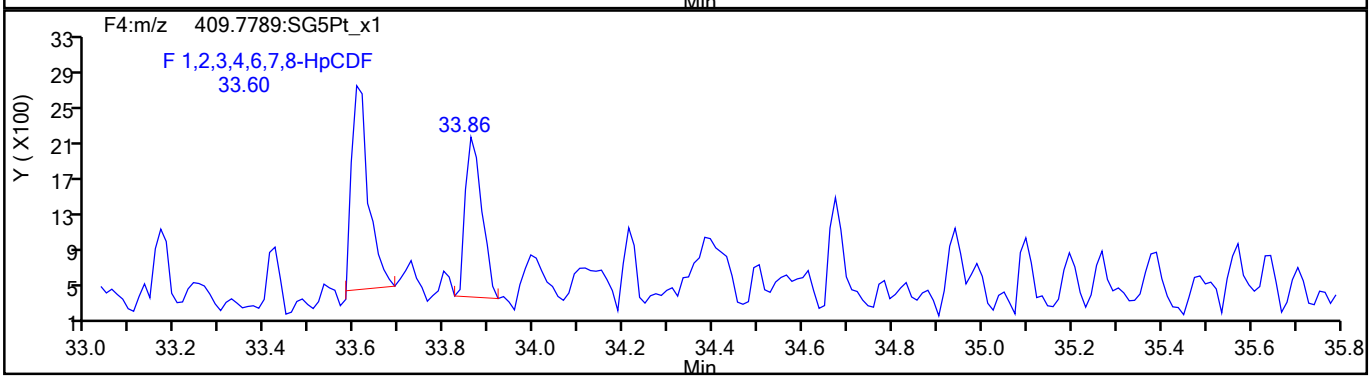

HpCDF Standards

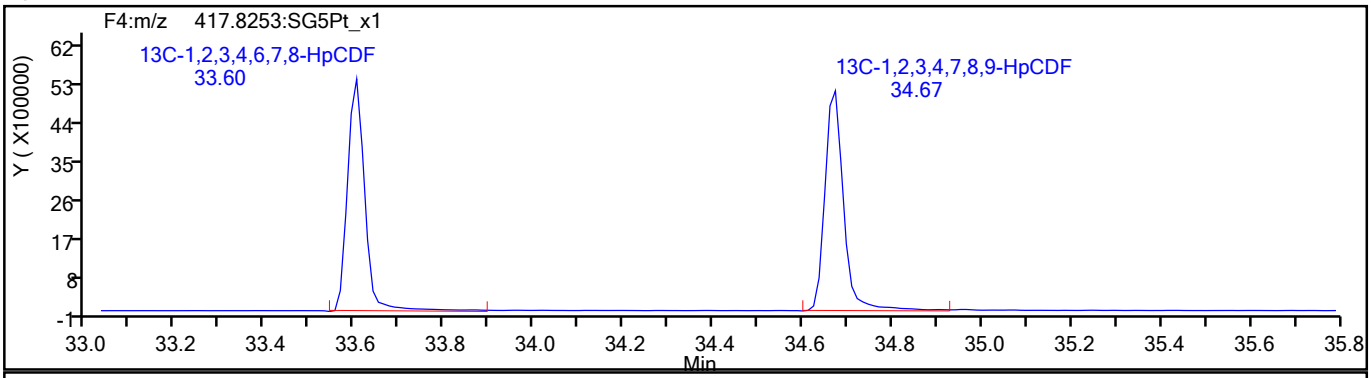

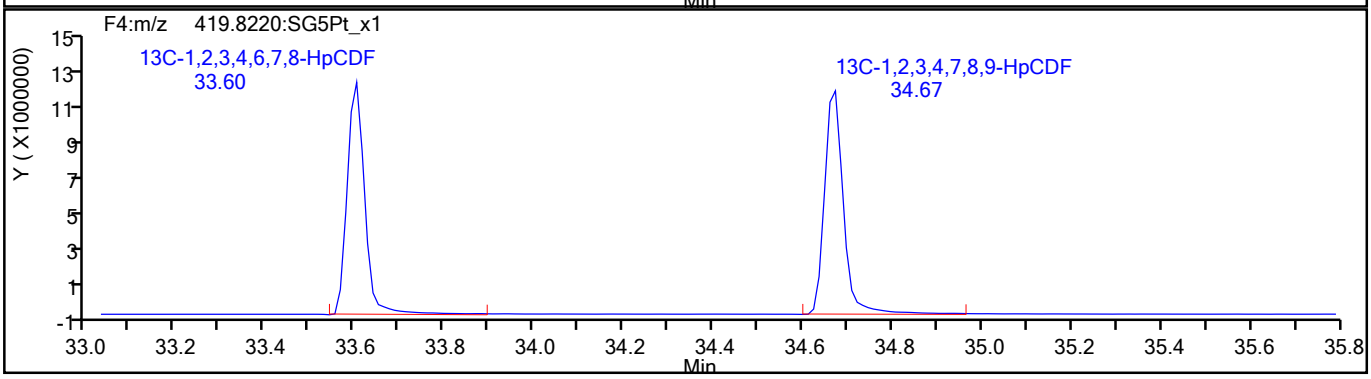

793700

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:	11215702-080321-BN-SJSB091 (14-16)		
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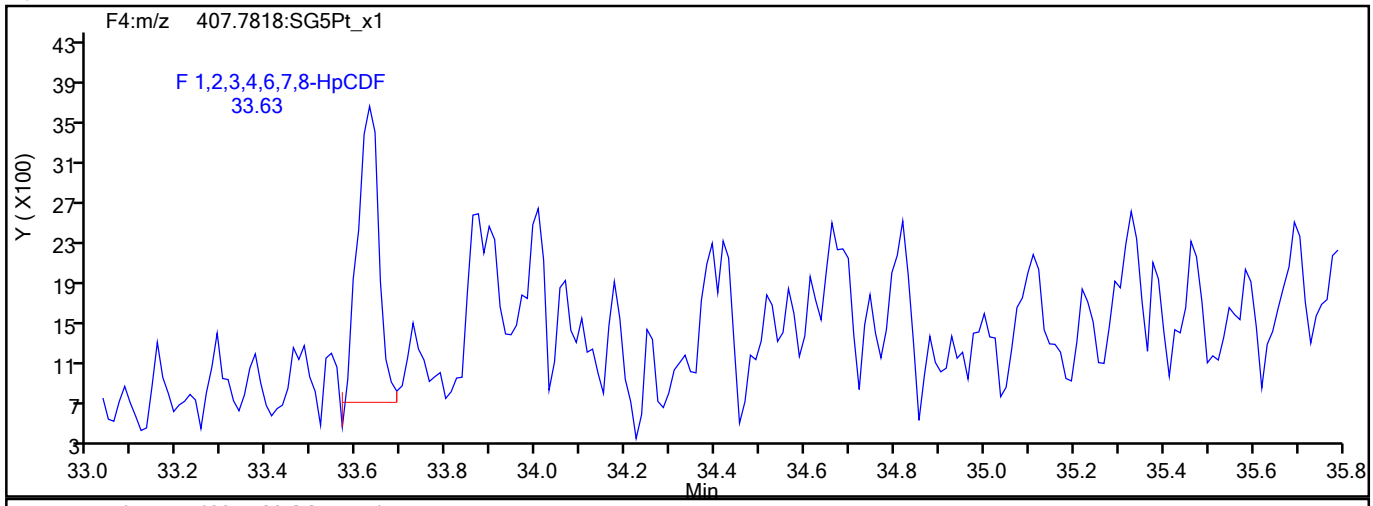

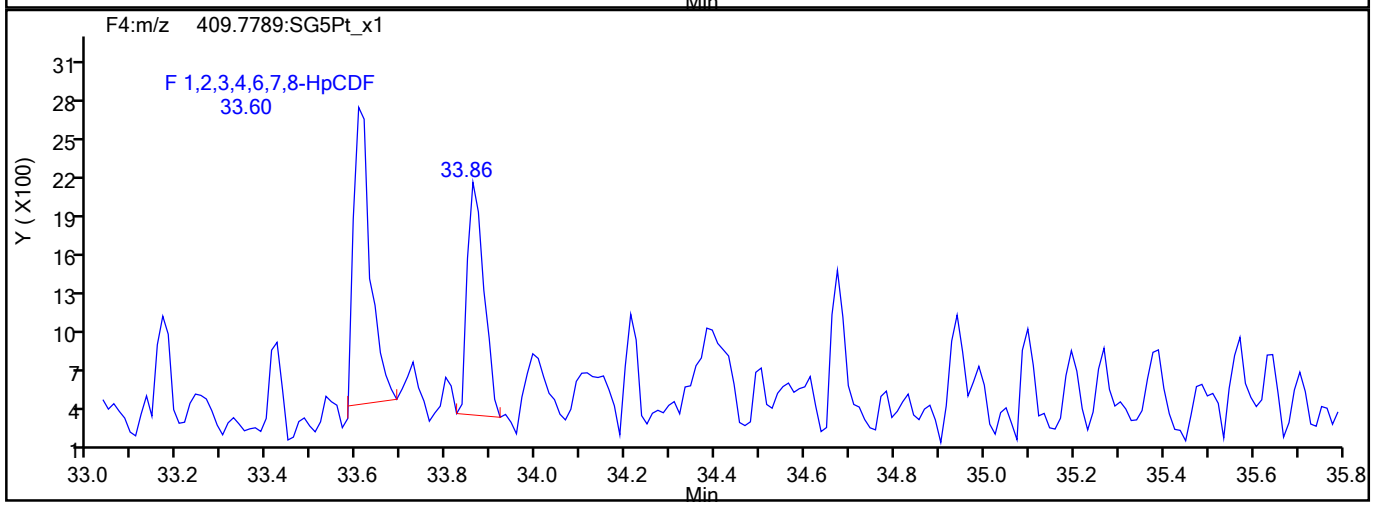

HpCDF Interference Mass

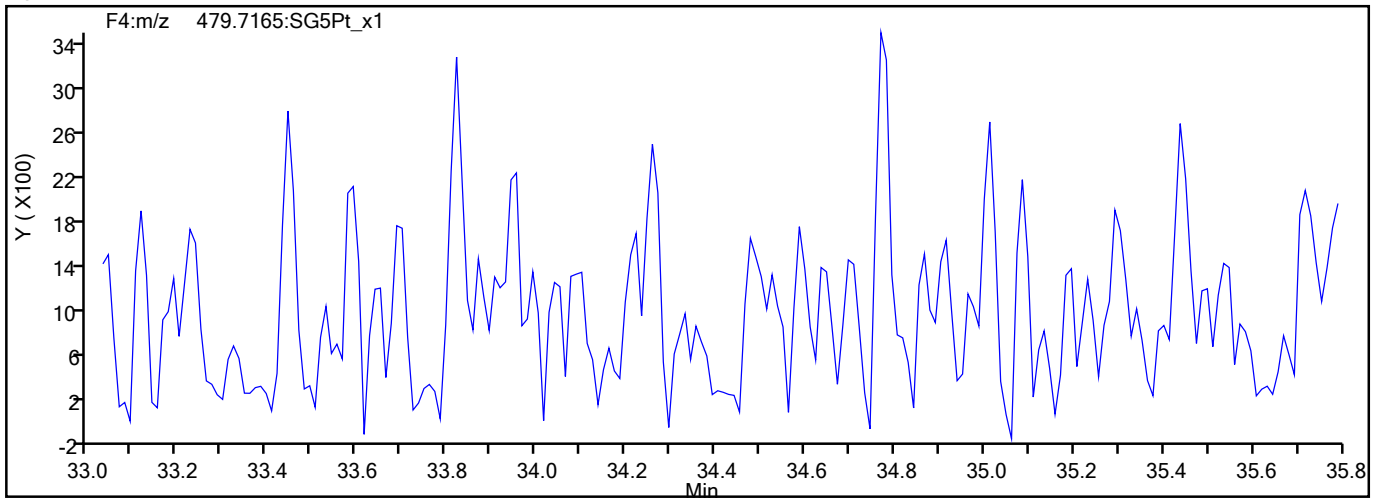

793701

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d		
Injection Date:	26-Aug-2021 11:35:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Worklist#:	519966	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

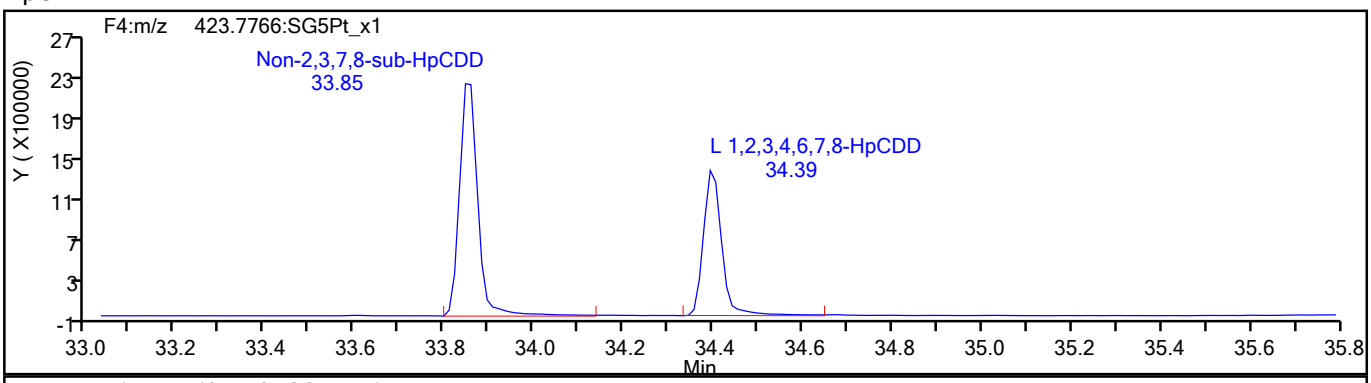

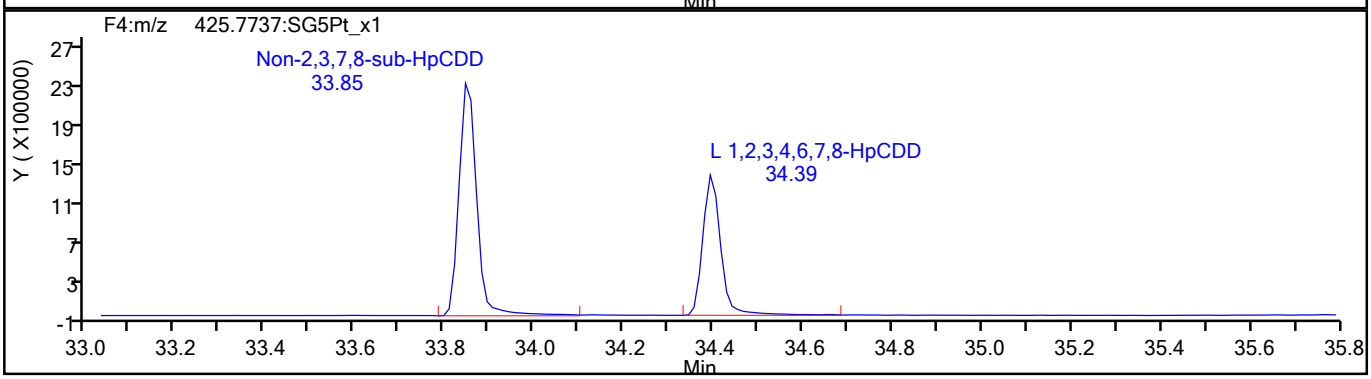

HpCDD Standards

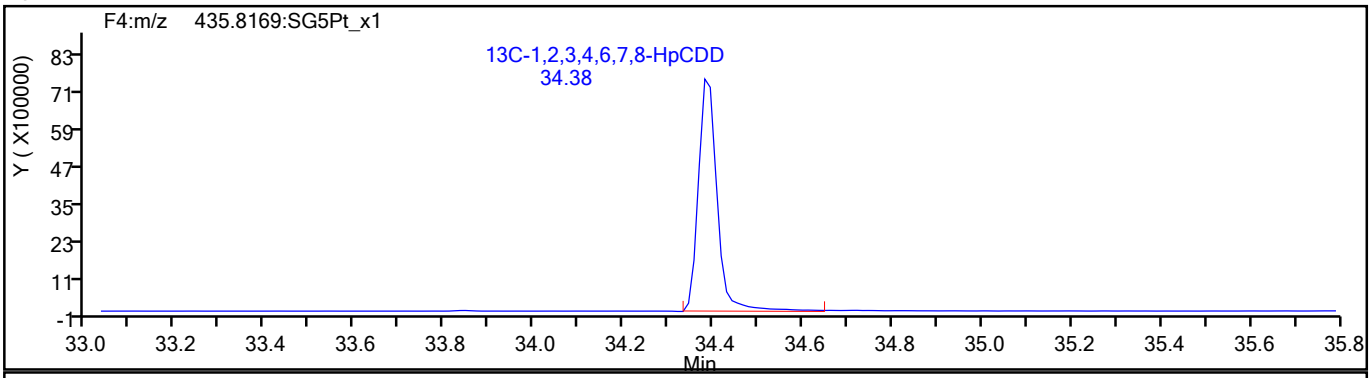

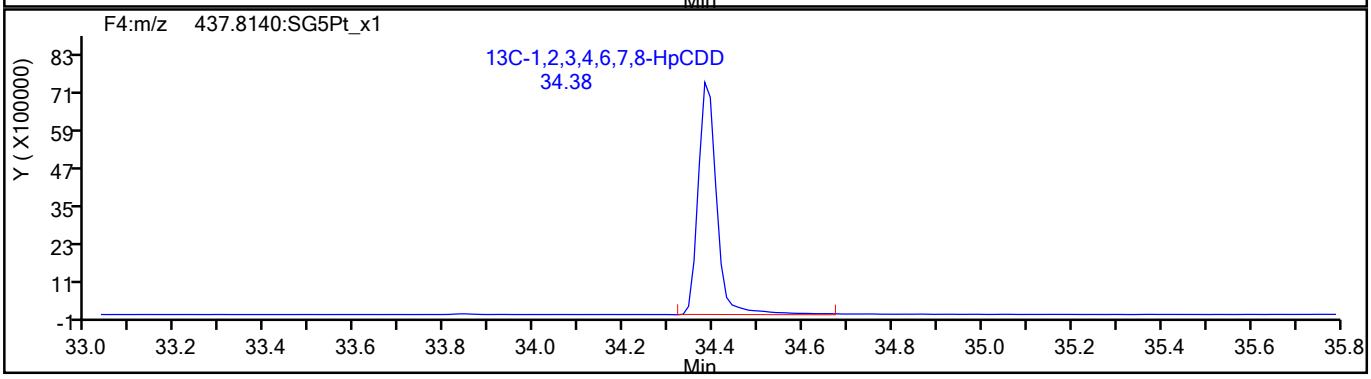

793702

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d		
Injection Date:	26-Aug-2021 11:35:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Worklist#:	519966	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

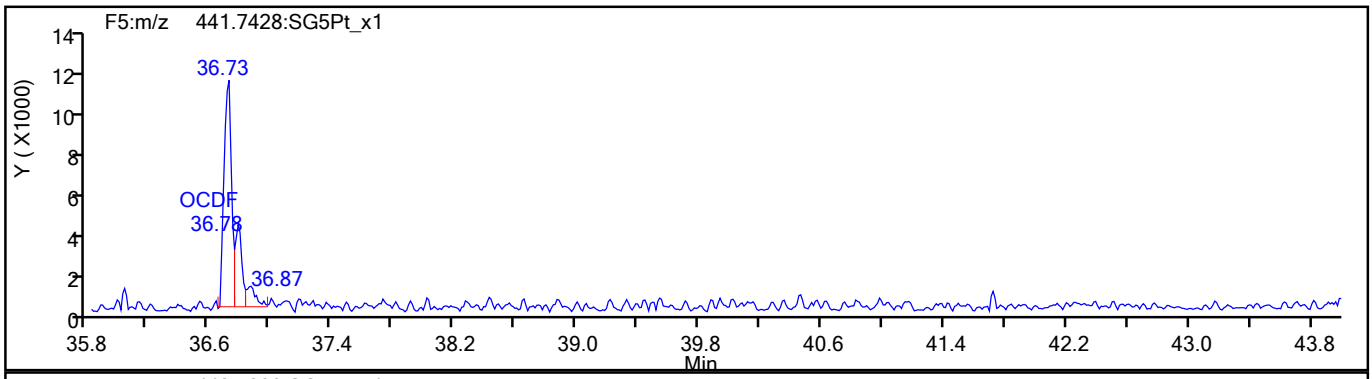

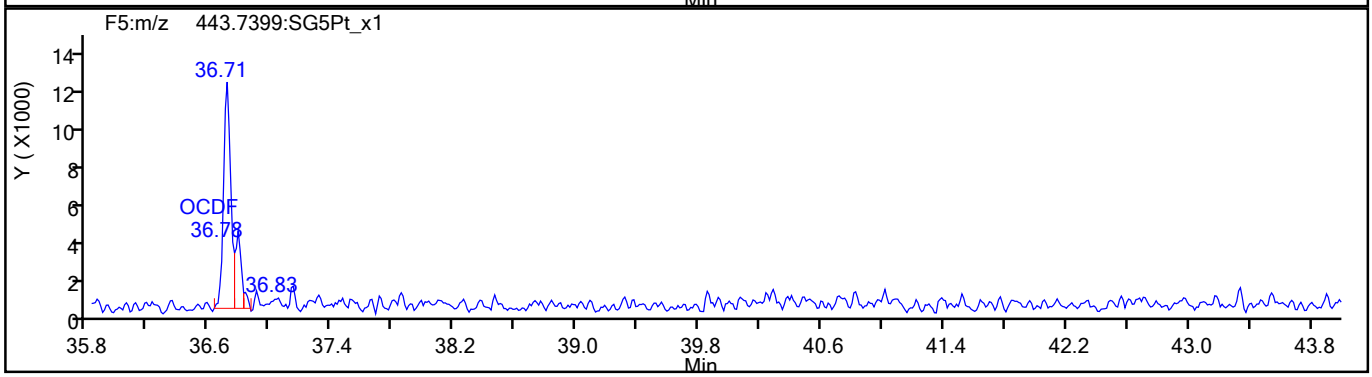

OCDF Standards

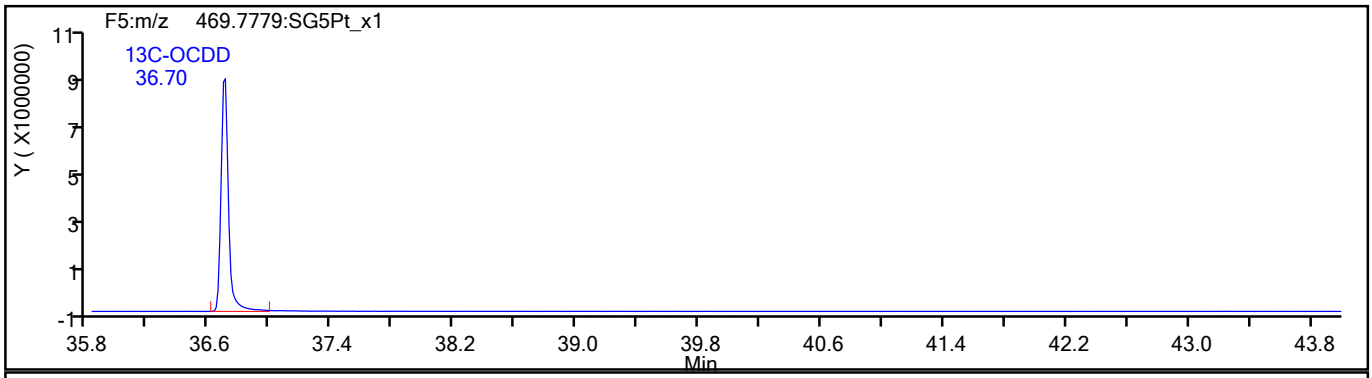

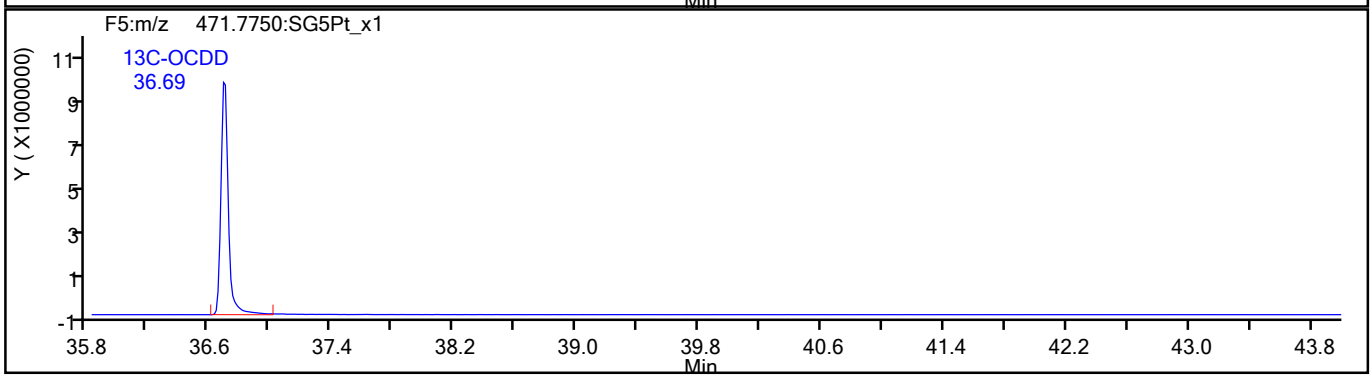

793703

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d		
Injection Date:	26-Aug-2021 11:35:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Worklist#:	519966	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

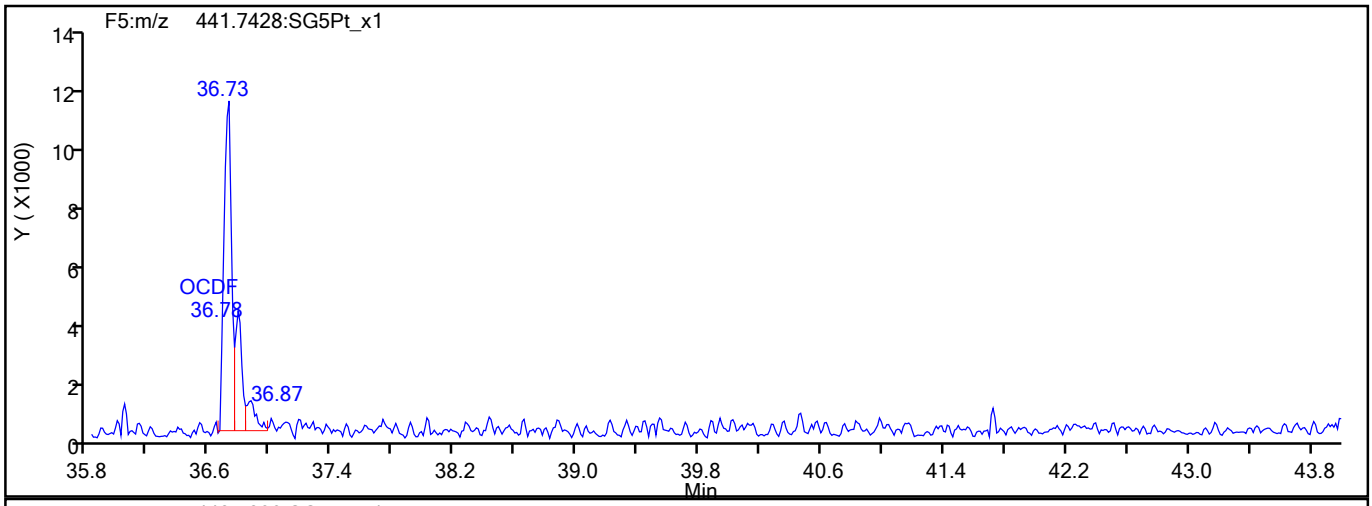

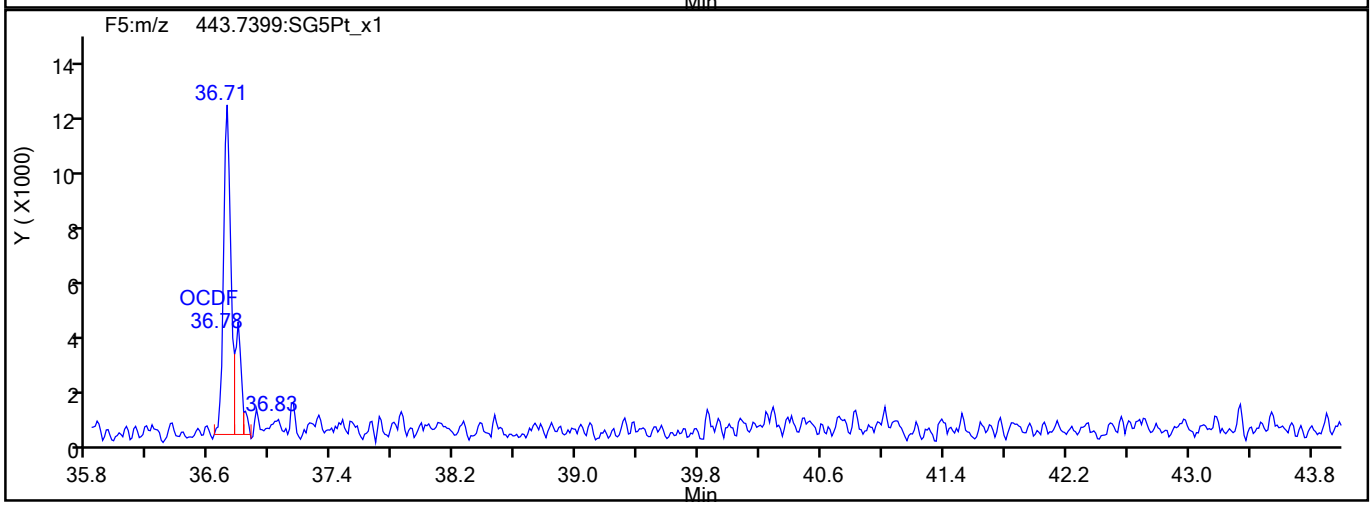

OCDF Interference Mass

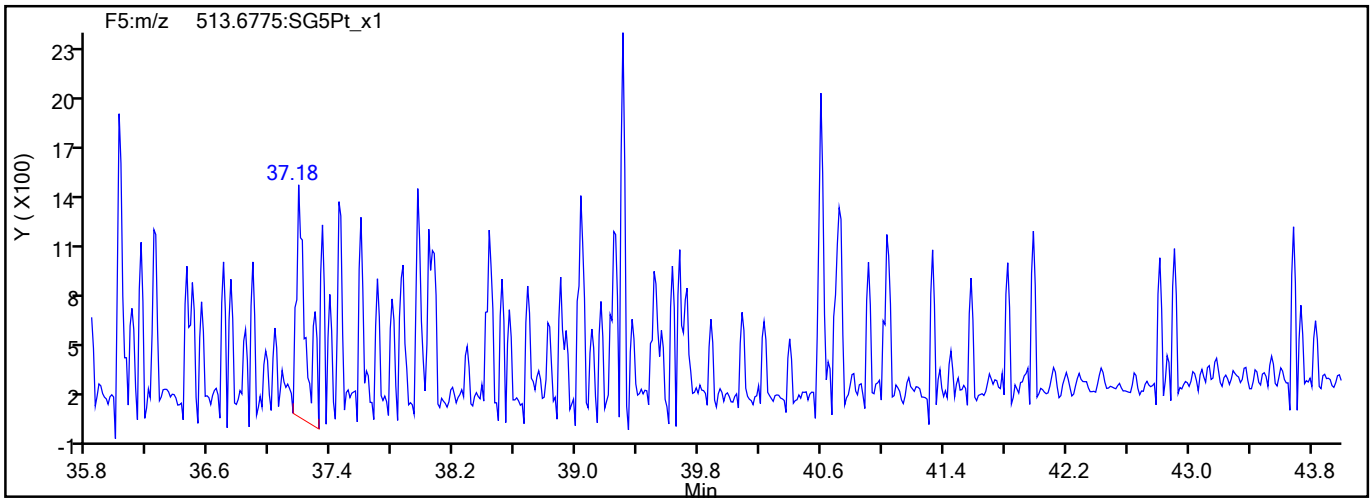

793704

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d		
Injection Date:	26-Aug-2021 11:35:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Worklist#:	519966	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

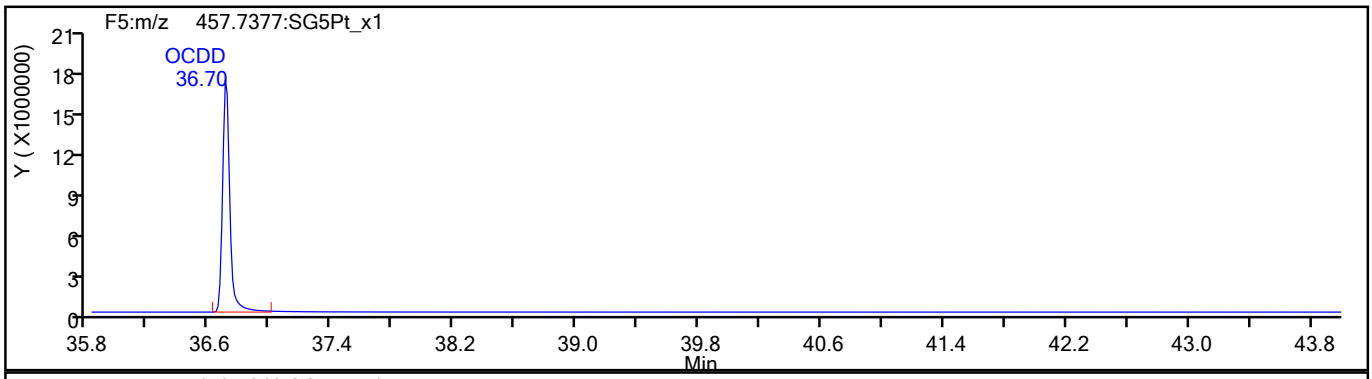

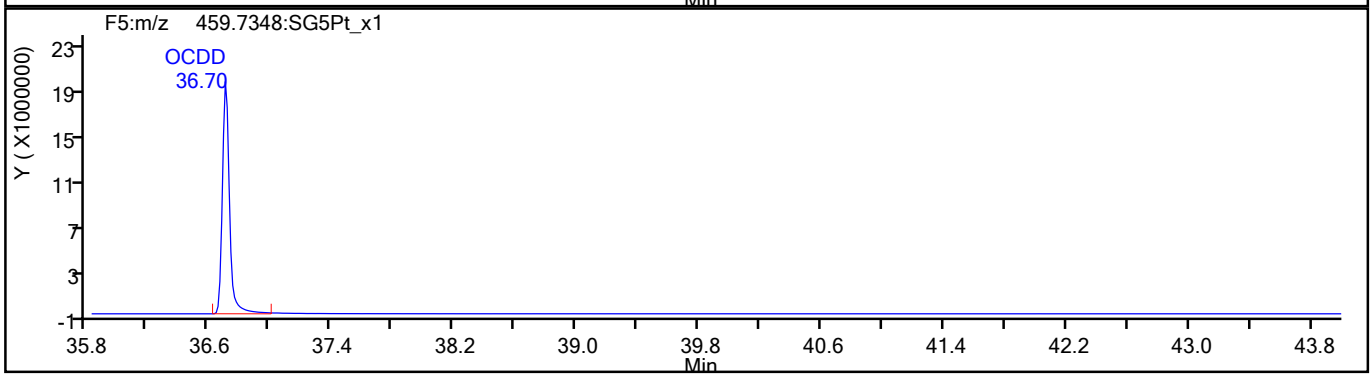

OCDD Standards

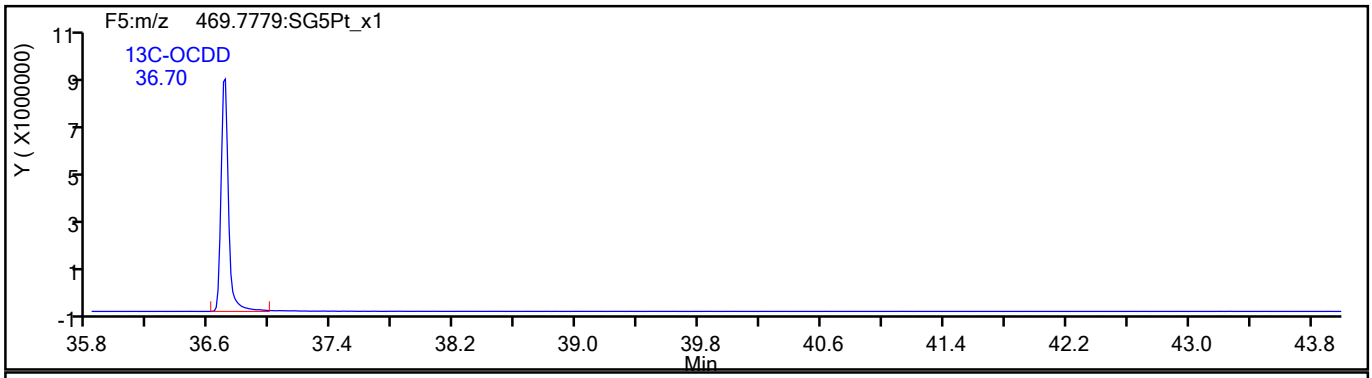

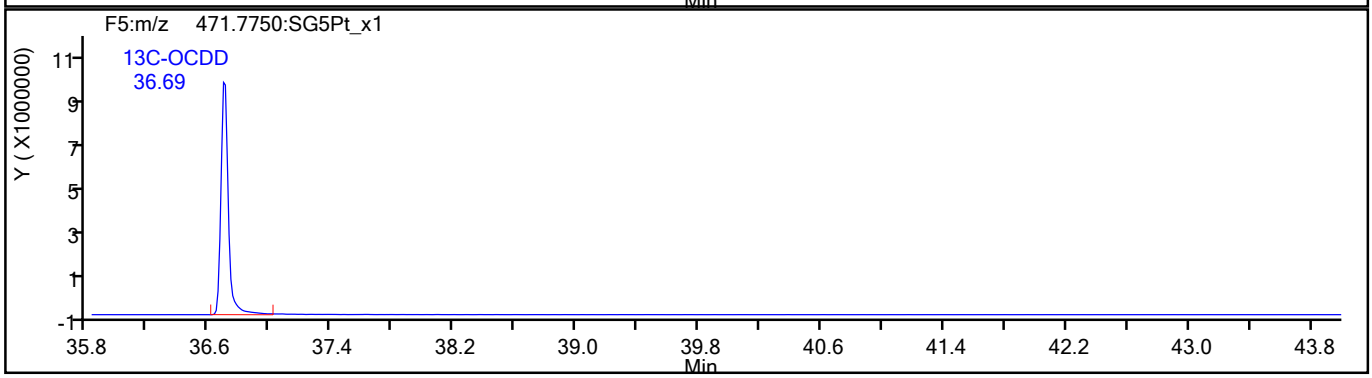

793705

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d		
Injection Date:	26-Aug-2021 11:35:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Worklist#:	519966	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

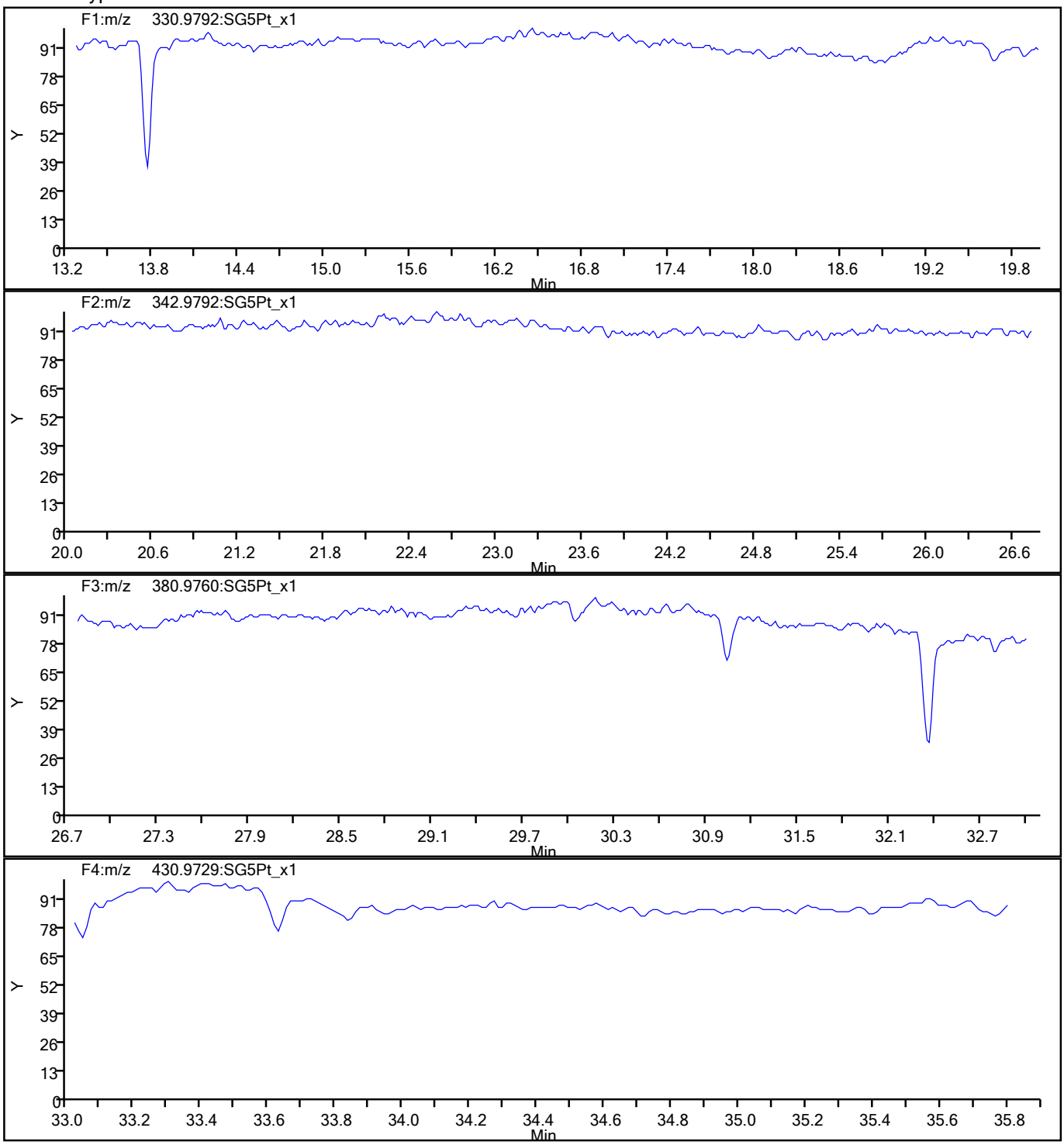

793706

Report Date: 30-Aug-2021 16:39:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_34.d		
Injection Date:	26-Aug-2021 11:35:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (14-16)		
Worklist#:	519966	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

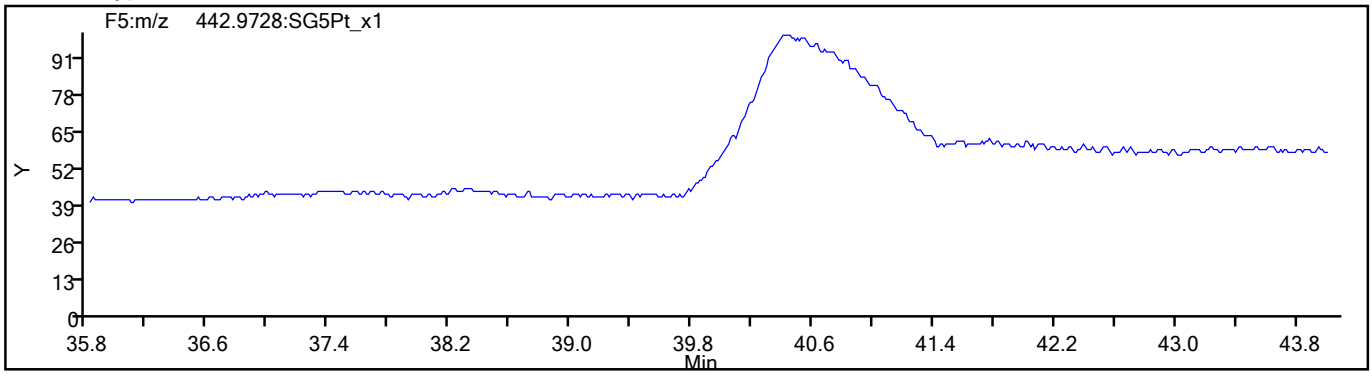

793707

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Client Sample ID: 11215702-080321-BN-DUP-18 Lab Sample ID: 320-77292-13

Matrix: Sediment Lab File ID: 25AU2110D5_36.d

Analysis Method: 1613B Date Collected: 08/03/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/12/2021 05:19

Sample wt/vol: 10.21(g) Date Analyzed: 08/26/2021 13:05

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 38.8 GPC Cleanup:(Y/N) N

Analysis Batch No.: 519966 Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	0.56	J q	1.6	0.090
51207-31-9	2,3,7,8-TCDF	1.3	J B	1.6	0.045
40321-76-4	1,2,3,7,8-PeCDD	0.30	J q	8.0	0.11
57117-41-6	1,2,3,7,8-PeCDF	0.16	J	8.0	0.055
57117-31-4	2,3,4,7,8-PeCDF	ND		8.0	0.059
39227-28-6	1,2,3,4,7,8-HxCDD	0.77	J	8.0	0.13
57653-85-7	1,2,3,6,7,8-HxCDD	1.4	J	8.0	0.14
19408-74-3	1,2,3,7,8,9-HxCDD	3.3	J	8.0	0.12
70648-26-9	1,2,3,4,7,8-HxCDF	0.15	J	8.0	0.046
57117-44-9	1,2,3,6,7,8-HxCDF	ND		8.0	0.047
72918-21-9	1,2,3,7,8,9-HxCDF	0.20	J q	8.0	0.032
60851-34-5	2,3,4,6,7,8-HxCDF	ND		8.0	0.035
35822-46-9	1,2,3,4,6,7,8-HpCDD	63	B	8.0	0.87
67562-39-4	1,2,3,4,6,7,8-HpCDF	0.12	J q	8.0	0.057
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		8.0	0.062
3268-87-9	OCDD	1700	B	16	1.5
39001-02-0	OCDF	0.45	J B	16	0.050
41903-57-5	Total TCDD	7.4	q	1.6	0.090
30402-14-3	Total TCDF	2.5	q B	1.6	0.045
36088-22-9	Total PeCDD	10	q	8.0	0.11
30402-15-4	Total PeCDF	0.16	J	8.0	0.057
34465-46-8	Total HxCDD	54		8.0	0.13
55684-94-1	Total HxCDF	0.34	J q	8.0	0.040
37871-00-4	Total HpCDD	210	B	8.0	0.87
38998-75-3	Total HpCDF	0.27	J q	8.0	0.060

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Client Sample ID: 11215702-080321-BN-DUP-18 Lab Sample ID: 320-77292-13

Matrix: Sediment Lab File ID: 25AU2110D5_36.d

Analysis Method: 1613B Date Collected: 08/03/2021 00:00

Extract. Method: HRMS-Sox Date Extracted: 08/12/2021 05:19

Sample wt/vol: 10.21(g) Date Analyzed: 08/26/2021 13:05

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: 38.8 GPC Cleanup:(Y/N) N

Analysis Batch No.: 519966 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	46		25-164
89059-46-1	13C-2,3,7,8-TCDF	44		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	47		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	46		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	49		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	52		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	45		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	52		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	45		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	45		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	45		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	46		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	42		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	49		26-138
114423-97-1	13C-OCDD	48		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	76		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d
Lims ID: 320-77292-A-13-A
Client ID: 11215702-080321-BN-DUP-18
Sample Type: Client
Inject. Date: 26-Aug-2021 13:05:53 ALS Bottle#: 47 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-13-A 320-77292-A-13-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 16:39:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1653

First Level Reviewer: bennettd Date: 26-Aug-2021 14:44:55

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.583	124960243	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.084	88745560	0.77	1.6249	43.7	43.7	0.0915	0.0915	43.71	
2,3,7,8-TCDF	17.099	367837	0.87	1.0239	0.4048	0.4048	0.0141	0.0141		M
A Non-2,3,7,8-sub-TCDF	17.069	343922	0.77	1.0239	0.3902	0.3785	0.0141	0.1746		RQM
S Total TCDF					0.7950	0.7833	0.0141	0.0141		RQ
D 13C-2,3,7,8-TCDD	17.779	51853692	0.78	0.8993	46.1	46.1	0.1199	0.1199	46.14	
$ 37Cl4-2,3,7,8-TCDD	17.794	41853695		1.1071	30.3	30.3	0.0602	0.0602	75.63	
2,3,7,8-TCDD	17.794	113224	0.77	1.2541	0.2405	0.1741	0.0282	0.0282		RQM
A Non-2,3,7,8-sub-TCDD	17.522	1396487	0.77	1.2541	2.161	2.147	0.0282	0.7812		RQMa
S Total TCDD					2.402	2.322	0.0282	0.0282		RQ
D 13C-1,2,3,7,8-PeCDF	21.993	70002796	1.56	1.2101	46.3	46.3	0.0691	0.0691	46.29	
1,2,3,7,8-PeCDF	22.034	37310	1.39	1.0611	0.0502	0.0502	0.0173	0.0173		M
D 13C-2,3,4,7,8-PeCDF	23.302	75624692	1.57	1.2395	48.8	48.8	0.0674	0.0674	48.83	
2,3,4,7,8-PeCDF	23.316						0.0183	0.0183		
A F1 PeCDFs	19.851						0.0167	0.0167		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0178	0.0178		U
S Total PeCDF					0.0502	0.0502	0.0178	0.0178		
D 13C-1,2,3,7,8-PeCDD	24.011	44643568	1.61	0.7612	46.9	46.9	0.0410	0.0410	46.93	
1,2,3,7,8-PeCDD	24.052	43628	1.55	1.0484	0.1019	0.0932	0.0343	0.0343		RQ
A Non-2,3,7,8-sub-PeCDD	23.696	1479595	1.55	1.0484	3.189	3.161	0.0343	1.610		RQMa
S Total PeCDD					3.291	3.254	0.0343	0.0343		RQ
D 13C-1,2,3,4,7,8-HxCDF	30.146	63444009	0.52	1.0837	52.5	52.5	0.1152	0.1152	52.50	
1,2,3,4,7,8-HxCDF	30.173	31529	1.17	1.0851	0.0458	0.0458	0.0143	0.0143		
D 13C-1,2,3,6,7,8-HxCDF	30.359	56343397	0.52	1.1279	44.8	44.8	0.1107	0.1107	44.79	
1,2,3,6,7,8-HxCDF	30.372						0.0147	0.0147		
D 13C-2,3,4,6,7,8-HxCDF	31.277	53204161	0.53	1.0637	44.8	44.8	0.1173	0.1173	44.85	
2,3,4,6,7,8-HxCDF	31.291						0.0110	0.0110		
D 13C-1,2,3,7,8,9-HxCDF	32.116	48613213	0.51	0.9676	45.1	45.1	0.1290	0.1290	45.05	
1,2,3,7,8,9-HxCDF	32.129	34857	1.24	1.1664	0.0666	0.0615	0.0101	0.0101		RQM
A Non-2,3,7,8-sub-HxCDF	30.324						0.0123	0.0123		U

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					0.1124	0.1073	0.0125	0.0125		RQ
* 13C-1,2,3,7,8,9-HxCDD	31.930	111526371	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.477	42313040	1.26	0.7334	51.7	51.7	0.1434	0.1434	51.73	
1,2,3,4,7,8-HxCDD	31.490	107834	1.20	1.0640	0.2395	0.2395	0.0404	0.0404		
D 13C-1,2,3,6,7,8-HxCDD	31.583	44015419	1.27	0.8802	44.8	44.8	0.1195	0.1195	44.84	
1,2,3,6,7,8-HxCDD	31.610	192496	1.25	1.0001	0.4373	0.4373	0.0443	0.0443		
1,2,3,7,8,9-HxCDD	31.943	499541	1.20	1.1325	1.022	1.022	0.0385	0.0385		
A Non-2,3,7,8-sub-HxCDD	30.486	7030259	1.27	1.0655	15.3	15.3	0.0410	10.9		
S Total HxCDD					17.0	17.0	0.0411	0.0411		
D 13C-1,2,3,4,6,7,8-HpCDF	33.591	35823743	0.42	0.7730	41.6	41.6	0.4569	0.4569	41.55	
1,2,3,4,6,7,8-HpCDF	33.603	19016	1.04	1.4413	0.0595	0.0368	0.0178	0.0178		RQM
D 13C-1,2,3,4,7,8,9-HpCDF	34.660	38030804	0.43	0.7008	48.7	48.7	0.5040	0.5040	48.66	
1,2,3,4,7,8,9-HpCDF	34.673						0.0194	0.0194		
A Non-2,3,7,8-sub-HpCDF	34.138	24875	1.04	1.3793	0.0543	0.0488	0.0186	0.0488		RQM
S Total HpCDF					0.1139	0.0857	0.0186	0.0186		RQ
D 13C-1,2,3,4,6,7,8-HpCDD	34.381	33508557	1.00	0.6472	46.4	46.4	0.2169	0.2169	46.42	
1,2,3,4,6,7,8-HpCDD	34.393	7222631	1.04	1.0943	19.7	19.7	0.2705	0.2705		
A Non-2,3,7,8-sub-HpCDD	34.223	16884638	1.04	1.0943	46.0	46.0	0.2705	46.0		
S Total HpCDD					65.7	65.7	0.2705	0.2705		
D 13C-OCDD	36.689	47539597	0.87	0.4472	95.3	95.3	0.0960	0.0960	47.66	
OCDF	36.785	47899	0.86	1.4382	0.1401	0.1401	0.0156	0.0156		M
OCDD	36.701	138059406	0.90	1.1070	524.7	524.7	0.4753	0.4753		

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d
Lims ID: 320-77292-A-13-A
Client ID: 11215702-080321-BN-DUP-18
Sample Type: Client
Inject. Date: 26-Aug-2021 13:05:53 ALS Bottle#: 47 Worklist Smp#: 8
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-13-A 320-77292-A-13-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 30-Aug-2021 16:39:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1653

First Level Reviewer: bennettd Date: 26-Aug-2021 14:44:55

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.583	17.567	1		55839159	14358475	4989	12472	2878		
333.9339	17.583	17.567	1		69121084	17992418	8967	22417	2007	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.084	17.069	1	0.972	38501468	9999277	12864	32160	777		
317.9389	17.084	17.069	1	0.972	50244092	13101554	6373	15932	2056	0.77(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.099	17.099	0	1.001	171554	42700	561	1402	76		
305.8987	17.099	17.099	0	1.001	196283	51233	769	1922	67	0.87(0.65-0.89)	M
A Non-2,3,7,8-sub-TCDF											RQM
303.9016	15.209	17.069	-111	0.890	34920	9495	561	1402	17		
305.8987	15.209	17.069	-111	0.890	48005	14994	769	1922	19	0.73(0.65-0.89)	
303.9016	16.192	17.069	-53	0.948	15302	5268	561	1402	9		M
305.8987	16.192	17.069	-53	0.948	19129	5140	769	1922	7	0.80(0.65-0.89)	
303.9016	16.721	17.069	-21	0.979	67924	17154	561	1402	31		M
305.8987	16.721	17.069	-21	0.979	90759	21700	769	1922	28	0.75(0.65-0.89)	
303.9016	17.522	17.069	27	1.026	27670	4079	561	1402	7		
	Empc Correction				17016	3683	561	1402	7		
305.8987	17.507	17.069	26	1.025	22100	4784	769	1922	6	1.25(0.65-0.89)	
303.9016	18.898	17.069	110	1.106	12840	3145	561	1402	6		
305.8987	18.898	17.069	110	1.106	15927	3375	769	1922	4	0.81(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.779	17.764	1	1.011	22722657	5479034	4989	12472	1098		
333.9339	17.779	17.764	1	1.011	29131035	6969887	8967	22417	777	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.794	17.779	1	1.012	41853695	10310247	8631	21577	1195		

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											RQM
319.8965	17.794	17.779	1	1.001	49256	12137	1025	2562	12		M
321.8936	17.794	17.779	1	1.001	107174	25348	738	1845	34	0.46(0.65-0.89)	
	Empc Correction				63968	15762	738	1845	21		
A Non-2,3,7,8-sub-TCDD											RQMa
319.8965	15.617	17.522	-114	0.878	18851	4415	1025	2562	4		
321.8936	15.617	17.522	-114	0.878	27811	7091	738	1845	10	0.68(0.65-0.89)	
319.8965	15.904	17.522	-97	0.895	51797	14432	1025	2562	14		
321.8936	15.904	17.522	-97	0.895	59636	18129	738	1845	25	0.87(0.65-0.89)	
319.8965	16.131	17.522	-83	0.907	59316	16967	1025	2562	17		
321.8936	16.131	17.522	-83	0.907	77508	20930	738	1845	28	0.77(0.65-0.89)	
319.8965	16.676	17.522	-51	0.938	210081	58099	1025	2562	57		
321.8936	16.676	17.522	-51	0.938	297960	79892	738	1845	108	0.71(0.65-0.89)	
319.8965	17.280	17.522	-14	0.972	22392	5169	1025	2562	5		
	Empc Correction				19099	4479	1025	2562	4		
321.8936	17.280	17.522	-14	0.972	24805	5818	738	1845	8	0.90(0.65-0.89)	
319.8965	17.552	17.522	2	0.987	87885	21780	1025	2562	21		
321.8936	17.552	17.522	2	0.987	103865	25478	738	1845	35	0.85(0.65-0.89)	
319.8965	17.552	17.522	2	0.987	84506	21380	1025	2562	21		M
321.8936	17.552	17.522	2	0.987	103865	25478	738	1845	35	0.81(0.65-0.89)	
319.8965	17.673	17.522	9	0.994	50661	12514	1025	2562	12		M
321.8936	17.673	17.522	9	0.994	76796	17041	738	1845	23	0.66(0.65-0.89)	
319.8965	18.868	17.522	81	1.061	18291	4119	1025	2562	4		
321.8936	18.883	17.522	81	1.062	29462	6305	738	1845	9	0.62(0.65-0.89)	
	Empc Correction				23754	5349	738	1845	7		
13C-1,2,3,7,8-PeCDF											
351.9000	21.993	21.979	1	1.251	42665899	7926115	6366	15915	1245		
353.8970	21.993	21.979	1	1.251	27336897	5102092	4448	11120	1147	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											M
339.8597	22.034	22.006	2	1.002	21722	3763	294	735	13		M
341.8567	22.020	22.006	1	1.001	15588	3451	660	1650	5	1.39(1.32-1.78)	M
13C-2,3,4,7,8-PeCDF											
351.9000	23.302	23.302	0	1.325	46146444	7773319	6366	15915	1221		
353.8970	23.302	23.302	0	1.325	29478248	5026845	4448	11120	1130	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.316						294	735			
341.8567	23.316						660	1650			
A F1 PeCDFs											
339.8597	19.851						245	612			
341.8567	19.851						654	1635			
A Non-2,3,7,8-sub-PeCDF											U
339.8597	23.067						294	735			
341.8567	23.067						660	1650			
13C-1,2,3,7,8-PeCDD											
367.8949	24.011	23.997	1	1.366	27539300	4566135	2429	6072	1880		
369.8919	24.011	23.997	1	1.366	17104268	2843355	1611	4027	1765	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDD											RQ
355.8546	24.052	24.024	2	1.002	26519	4974	733	1832	7		
357.8516	24.038	24.024	1	1.001	21167	3750	332	830	11	1.25(1.32-1.78)	
	Empc Correction				17109	3209	332	830	10		
A Non-2,3,7,8-sub-PeCDD											RQMa
355.8546	20.888	23.696	-168	0.870	162480	29928	733	1832	41		a
357.8516	20.888	23.696	-168	0.870	111064	20706	332	830	62	1.46(1.32-1.78)	
355.8546	21.625	23.696	-124	0.901	451450	87988	733	1832	120		
357.8516	21.625	23.696	-124	0.901	302221	61111	332	830	184	1.49(1.32-1.78)	
355.8546	22.293	23.696	-84	0.928	24481	4918	733	1832	7		M
357.8516	22.293	23.696	-84	0.928	15563	4045	332	830	12	1.57(1.32-1.78)	
355.8546	22.579	23.696	-67	0.940	32132	6760	733	1832	9		
357.8516	22.565	23.696	-68	0.940	20445	3957	332	830	12	1.57(1.32-1.78)	M
355.8546	22.893	23.696	-48	0.953	78542	14335	733	1832	20		
	Empc Correction				65496	11855	733	1832	16		
357.8516	22.893	23.696	-48	0.953	42256	7649	332	830	23	1.86(1.32-1.78)	
355.8546	23.083	23.696	-37	0.961	153353	21109	733	1832	29		
357.8516	23.056	23.696	-38	0.960	98654	13388	332	830	40	1.55(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.146	30.146	0	0.944	21622491	3694125	6157	15392	600		
385.8610	30.146	30.146	0	0.944	41821518	7237499	9962	24905	727	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.173	30.159	1	1.001	16993	2803	374	935	7		
375.8178	30.173	30.159	1	1.001	14536	2863	307	767	9	1.17(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.359	30.359	0	0.951	19212131	3539069	6157	15392	575		
385.8610	30.359	30.359	0	0.951	37131266	6747336	9962	24905	677	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.372						374	935			
375.8178	30.372						307	767			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.277	31.264	1	0.980	18452804	4602553	6157	15392	748		
385.8610	31.277	31.264	1	0.980	34751357	8602585	9962	24905	864	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.291						374	935			
375.8178	31.291						307	767			
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.116	32.116	0	1.006	16404717	4902364	6157	15392	796		
385.8610	32.116	32.116	0	1.006	32208496	9558744	9962	24905	960	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											RQM
373.8208	32.129	32.129	0	1.000	19296	5734	374	935	15		M
375.8178	32.129	32.129	0	1.000	18491	6523	307	767	21	1.04(1.05-1.43)	M
	Empc Correction				15561	4624	307	767	15		
A Non-2,3,7,8-sub-HxCDF											U
373.8208	30.324						374	935			
375.8178	30.324						307	767			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.930	31.930	0		61929286	17934102	7915	19787	2266		
403.8529	31.930	31.930	0		49597085	14350272	5671	14177	2530	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.477	31.464	1	0.986	23584757	6615527	7915	19787	836		
403.8529	31.477	31.464	1	0.986	18728283	5311125	5671	14177	937	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.490	31.490	0	1.000	58721	16689	1096	2740	15		
391.8127	31.490	31.490	0	1.000	49113	13374	954	2385	14	1.20(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.583	31.583	0	0.989	24634617	6456911	7915	19787	816		
403.8529	31.583	31.583	0	0.989	19380802	5099625	5671	14177	899	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.610	31.597	1	1.001	106868	28113	1096	2740	26		
391.8127	31.597	31.597	0	1.000	85628	21734	954	2385	23	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.943	31.943	0	1.015	272727	58505	1096	2740	53		
391.8127	31.943	31.943	0	1.015	226814	49500	954	2385	52	1.20(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.015	30.486	-88	0.919	2803849	370717	1096	2740	338		
391.8127	29.015	30.486	-88	0.919	2196007	284241	954	2385	298	1.28(1.05-1.43)	
389.8157	30.239	30.486	-15	0.957	103350	17059	1096	2740	16		
391.8127	30.239	30.486	-15	0.957	77945	13405	954	2385	14	1.33(1.05-1.43)	
389.8157	30.665	30.486	11	0.971	925718	174950	1096	2740	160		
391.8127	30.665	30.486	11	0.971	752025	139450	954	2385	146	1.23(1.05-1.43)	
389.8157	30.891	30.486	24	0.978	97732	20283	1096	2740	19		
391.8127	30.891	30.486	24	0.978	73633	15192	954	2385	16	1.33(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.591	33.591	0	1.052	10532568	4014787	11132	27830	361		
419.8220	33.591	33.591	0	1.052	25291175	9366384	34480	86200	272	0.42(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											RQM
407.7818	33.603	33.603	0	1.000	21408	4690	1041	2602	5		
	Empc Correction				9694	3664	1041	2602	4		
409.7789	33.603	33.603	0	1.000	9322	3524	335	837	11	2.30(0.88-1.20)	M
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.660	34.660	0	1.086	11468956	4074847	11132	27830	366		
419.8220	34.660	34.660	0	1.086	26561848	9381532	34480	86200	272	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673						1041	2602			
409.7789	34.673						335	837			
A Non-2,3,7,8-sub-HpCDF											RQM
407.7818	33.895	34.138	-15	1.009	15484	4412	1041	2602	4		M
	Empc Correction				12681	3360	1041	2602	3		
409.7789	33.895	34.138	-15	1.009	12194	3231	335	837	10	1.27(0.88-1.20)	M

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.381	34.368	1	1.077	16729950	5935624	10013	25032	593		
437.8140	34.381	34.368	1	1.077	16778607	5897502	8117	20292	727	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	3690107	1294104	6996	17490	185		
425.7737	34.393	34.393	0	1.000	3532524	1208192	7014	17535	172	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.846	34.223	-23	0.984	8618229	3178192	6996	17490	454		
425.7737	33.846	34.223	-23	0.984	8266409	3023362	7014	17535	431	1.04(0.88-1.20)	
13C-OCDD											
469.7779	36.689	36.689	0	1.149	22152434	6771011	2364	5910	2864		
471.7750	36.689	36.689	0	1.149	25387163	7752660	3180	7950	2438	0.87(0.76-1.02)	
OCDF											M
441.7428	36.785	36.785	0	1.003	22176	7611	258	645	30		M
443.7399	36.785	36.785	0	1.003	25723	7202	393	982	18	0.86(0.76-1.02)	M
OCDD											
457.7377	36.701	36.689	1	1.000	65276283	19610766	8153	20382	2405		
459.7348	36.701	36.689	1	1.000	72783123	21576629	7131	17827	3026	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Lims ID:	320-77292-A-13-A		
Client ID:	11215702-080321-BN-DUP-18		
Inject. Date:	26-Aug-2021 13:05:53	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	8

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	88745560	23100831

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	88745560	23100831

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.209	34920	9495	48005	14994	0.0913	0.73	
16.192	15302	5268	19129	5140	0.0379	0.80	M
16.721	67924	17154	90759	21700	0.1746	0.75	M
17.522	27670	4079	22100	4784	0.0548	1.25	RQ
17.522	17016	3683	22100	4784	0.0430		Empc Correction
18.898	12840	3145	15927	3375	0.0317	0.81	
Signal Totals:							
	148002	38745	195920	49993			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	354576	89134				0.81	RQM
	343922	88738					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.3902 = (354576 * 100.000) / (88745560 * 1.024)

Empc Amount: 0.3785 = (343922 * 100.000) / (88745560 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Lims ID:	320-77292-A-13-A		
Client ID:	11215702-080321-BN-DUP-18		
Inject. Date:	26-Aug-2021 13:05:53	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	8

Non-2,3,7,8-sub-TCDD, RT: 17.522

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	51853692	12448921

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	51853692	12448921

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.617	18851	4415	27811	7091	0.0718	0.68	
15.904	51797	14432	59636	18129	0.1714	0.87	
16.131	59316	16967	77508	20930	0.2104	0.77	
16.676	210081	58099	297960	79892	0.7812	0.71	
17.280	22392	5169	24805	5818	0.0726	0.90	RQ
17.280	19099	4479	24805	5818	0.0675		Empc Correction
17.552	87885	21780	103865	25478	0.2949	0.85	
17.552	84506	21380	103865	25478	0.2897	0.81	Ma
17.673	50661	12514	76796	17041	0.1960	0.66	M
18.868	18291	4119	29462	6305	0.0734	0.62	RQ
18.868	18291	4119	23754	5349	0.0647		Empc Correction
Signal Totals:							
	600487	158185	796000	205206			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1405488	365037				0.75	RQMa
	1396487	363391					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 2.161 = (1405488 * 100.000) / (51853692 * 1.254)

Empc Amount: 2.147 = (1396487 * 100.000) / (51853692 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Lims ID:	320-77292-A-13-A		
Client ID:	11215702-080321-BN-DUP-18		
Inject. Date:	26-Aug-2021 13:05:53	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	70002796	13028207
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	75624692	12800164

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	72813744	12914185

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Lims ID:	320-77292-A-13-A		
Client ID:	11215702-080321-BN-DUP-18		
Inject. Date:	26-Aug-2021 13:05:53	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	8

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	44643568	7409490

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	44643568	7409490

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.888	162480	29928	111064	20706	0.5844	1.46	a
21.625	451450	87988	302221	61111	1.61	1.49	
22.293	24481	4918	15563	4045	0.0856	1.57	Ma
22.579	32132	6760	20445	3957	0.1123	1.57	M
22.893	78542	14335	42256	7649	0.2581	1.86	RQ
22.893	65496	11855	42256	7649	0.2302		Empc Correction
23.083	153353	21109	98654	13388	0.5384	1.55	
Signal Totals:							
	889392	162558	590203	110856			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1492641	275894				1.53	RQMa
	1479595	273414					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.189 = (1492641 * 100.000) / (44643568 * 1.048)

Empc Amount: 3.161 = (1479595 * 100.000) / (44643568 * 1.048)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated
a - User Assigned ID

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Lims ID:	320-77292-A-13-A		
Client ID:	11215702-080321-BN-DUP-18		
Inject. Date:	26-Aug-2021 13:05:53	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	8

Non-2,3,7,8-sub-HxCDF, RT: 30.324

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085	D 13C-1,2,3,4,7,8-HxCDF	100.000	63444009	10931624
1,2,3,6,7,8-HxCDF	1.126	D 13C-1,2,3,6,7,8-HxCDF	100.000	56343397	10286405
2,3,4,6,7,8-HxCDF	1.168	D 13C-2,3,4,6,7,8-HxCDF	100.000	53204161	13205138
1,2,3,7,8,9-HxCDF	1.166	D 13C-1,2,3,7,8,9-HxCDF	100.000	48613213	14461108

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.136		100.000	55401195	12221068

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags

Compound is Marked ND

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d
Lims ID: 320-77292-A-13-A
Client ID: 11215702-080321-BN-DUP-18
Inject. Date: 26-Aug-2021 13:05:53 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 8

Non-2,3,7,8-sub-HxCDD, RT: 30.486

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	42313040	11926652
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	44015419	11556536
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	43164229	11741594

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.015	2803849	370717	2196007	284241	10.9	1.28	
30.239	103350	17059	77945	13405	0.3942	1.33	
30.665	925718	174950	752025	139450	3.65	1.23	
30.891	97732	20283	73633	15192	0.3726	1.33	
Signal Totals:							
	3930649	583009	3099610	452288			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7030259	1035297				1.27	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 15.285 = (7030259 * 100.000) / (43164229 * 1.066)

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Lims ID:	320-77292-A-13-A		
Client ID:	11215702-080321-BN-DUP-18		
Inject. Date:	26-Aug-2021 13:05:53	Dil. Factor:	1.0000
Sample Type:	Client Sample		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519966	Lims Sample ID:	8

Non-2,3,7,8-sub-HpCDF, RT: 34.138

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDF	1.441	D 13C-1,2,3,4,6,7,8-HpCDF	100.000	35823743	13381171
1,2,3,4,7,8,9-HpCDF	1.317	D 13C-1,2,3,4,7,8,9-HpCDF	100.000	38030804	13456379

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.379		100.000	36927273	13418775

Sum the Uncalibrated Results

RT	407.7818 Area	407.7818 Height	409.7789 Area	409.7789 Height	Amount	Ratio	Flags
33.895	15484	4412	12194	3231	0.0543	1.27	RQM
33.895	12681	3360	12194	3231	0.0488		Empc Correction
Signal Totals:							
	12681	3360	12194	3231			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	27678	7643				1.27	RQM
	24875	6591					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0543 = (27678 * 100.000) / (36927273 * 1.379)
Empc Amount: 0.0488 = (24875 * 100.000) / (36927273 * 1.379)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d
Lims ID: 320-77292-A-13-A
Client ID: 11215702-080321-BN-DUP-18
Inject. Date: 26-Aug-2021 13:05:53 Dil. Factor: 1.0000
Sample Type: Client Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 8

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	33508557	11833126

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	33508557	11833126

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.846	8618229	3178192	8266409	3023362	46.0	1.04	
Signal Totals:							
	8618229	3178192	8266409	3023362			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	16884638	6201554				1.04	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 46.047 = (16884638 * 100.000) / (33508557 * 1.094)

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.10
Area: 202037
Amount: 0.411138
Amount Units: pg/ul

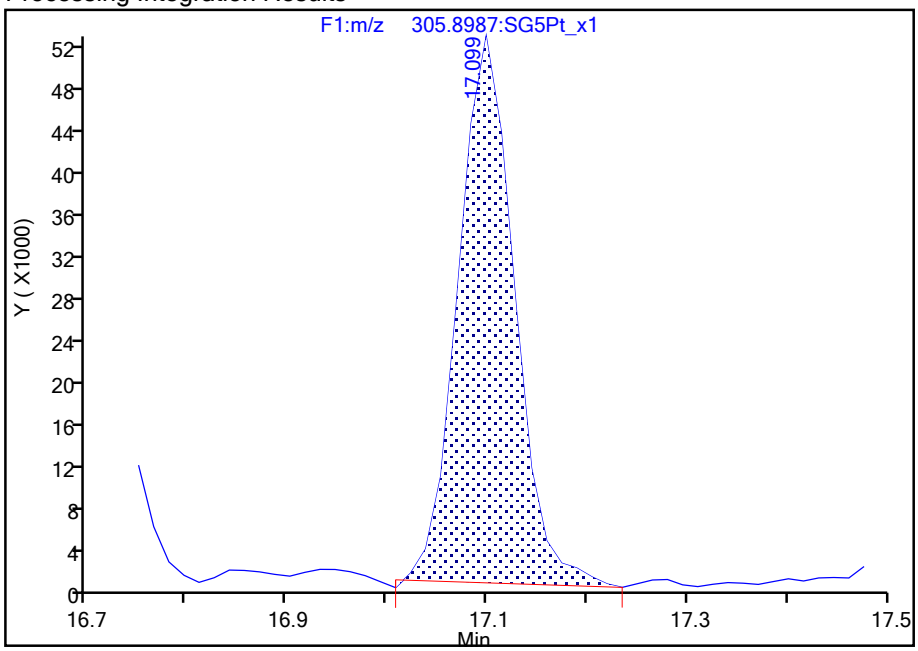

Manual Integration Results

RT: 17.10
Area: 196283
Amount: 0.404806
Amount Units: pg/ul

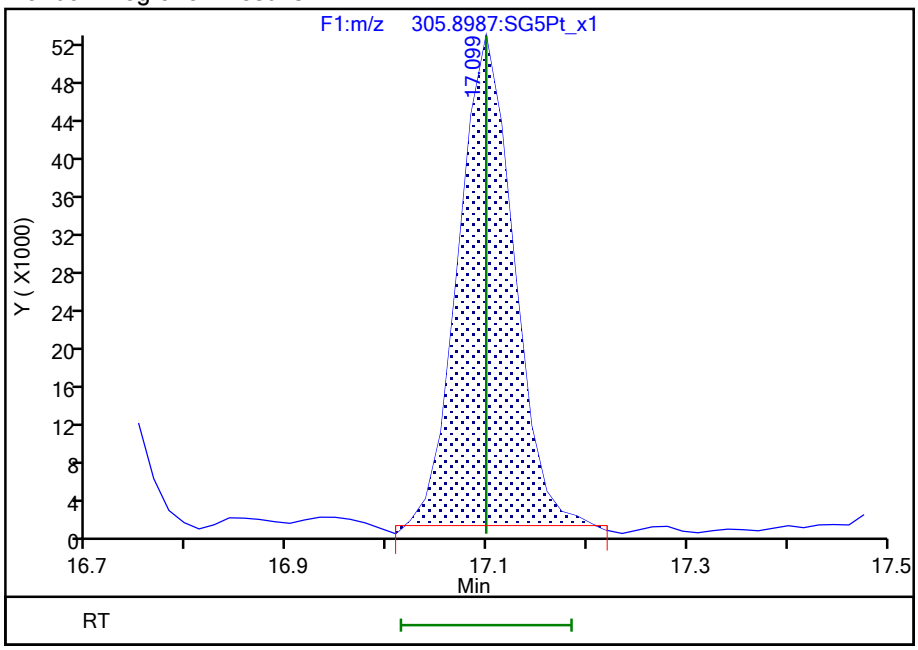

Reviewer: dadunj, 30-Aug-2021 09:08:53

Audit Action: Manually Integrated Audit Reason: Baseline

793728

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.68- 19.46)

Signal: 1

Processing Integration Results

RT = 16.192 Area = 17367

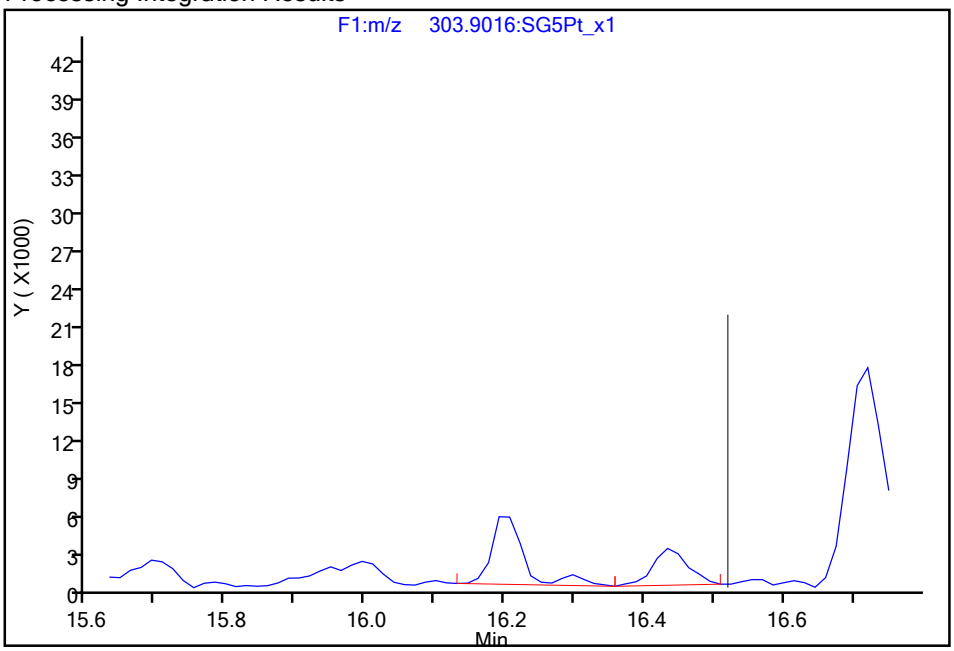

Manual Integration Results

RT = 16.192 Area = 15302 M

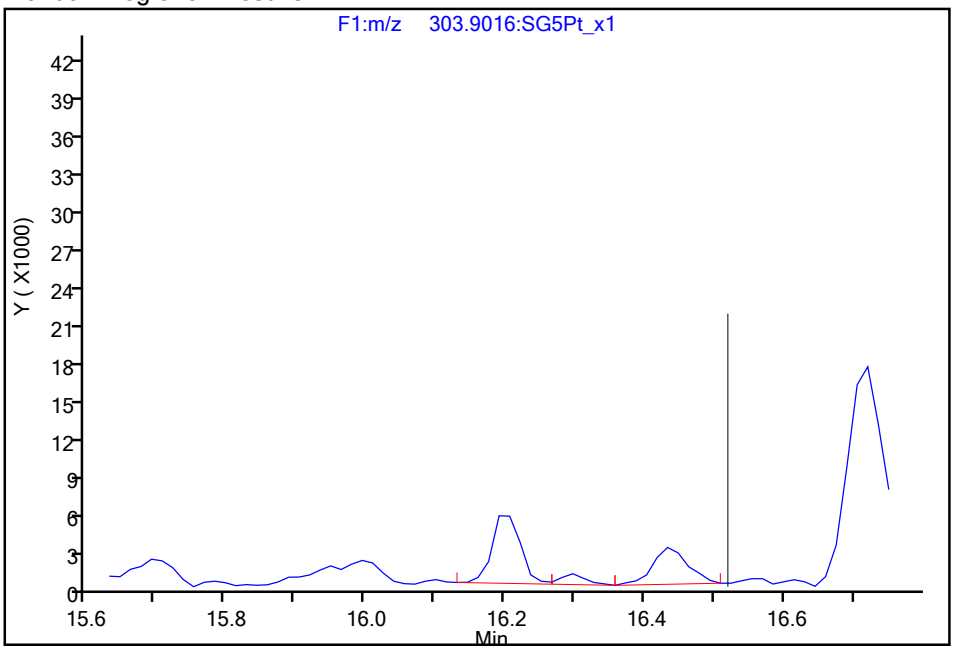

Reviewer: dadunj, 30-Aug-2021 09:09:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDF, Signal: 1, m/z: 303.9016, RT: (14.68- 19.46)

Signal: 1

Processing Integration Results

RT = 16.721 Area = 73268

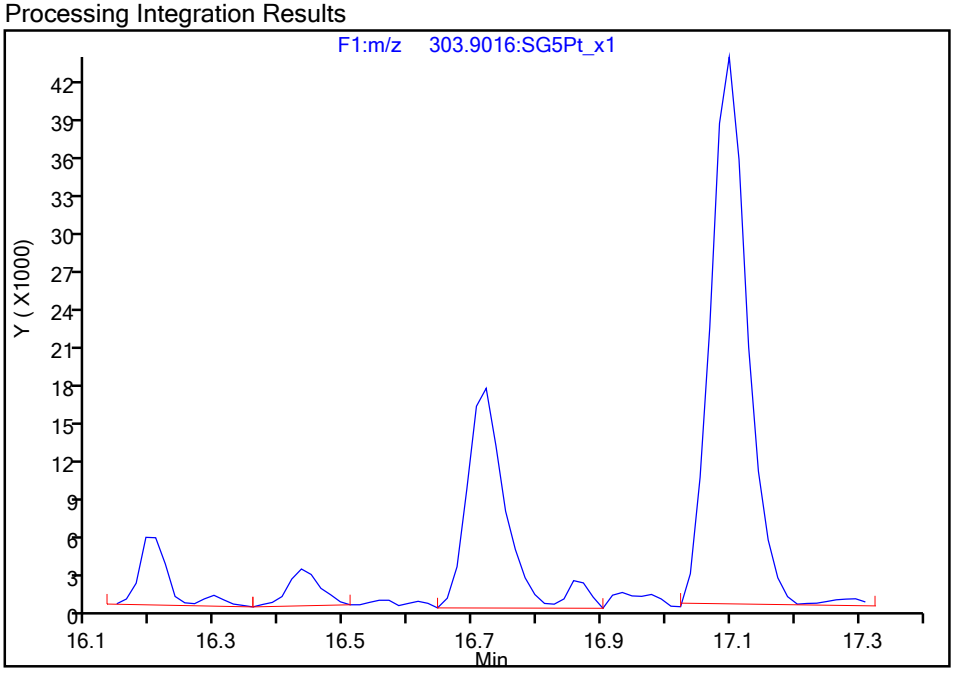

Manual Integration Results

RT = 16.721 Area = 67924 M

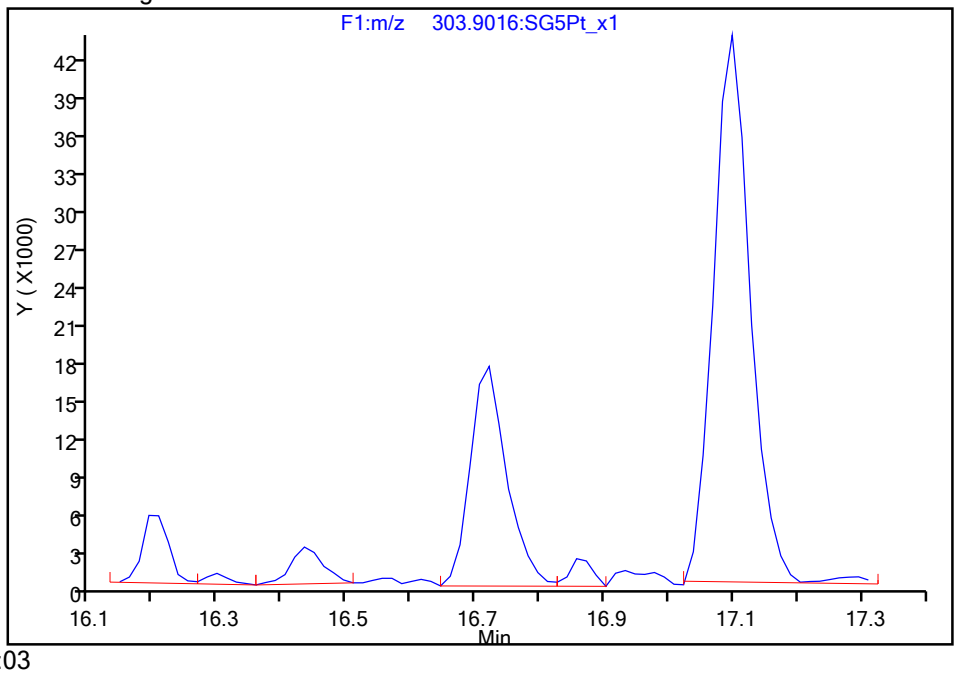

Reviewer: dadunj, 30-Aug-2021 09:09:03

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793730

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 17.79
Area: 57382
Amount: 0.253043
Amount Units: pg/ul

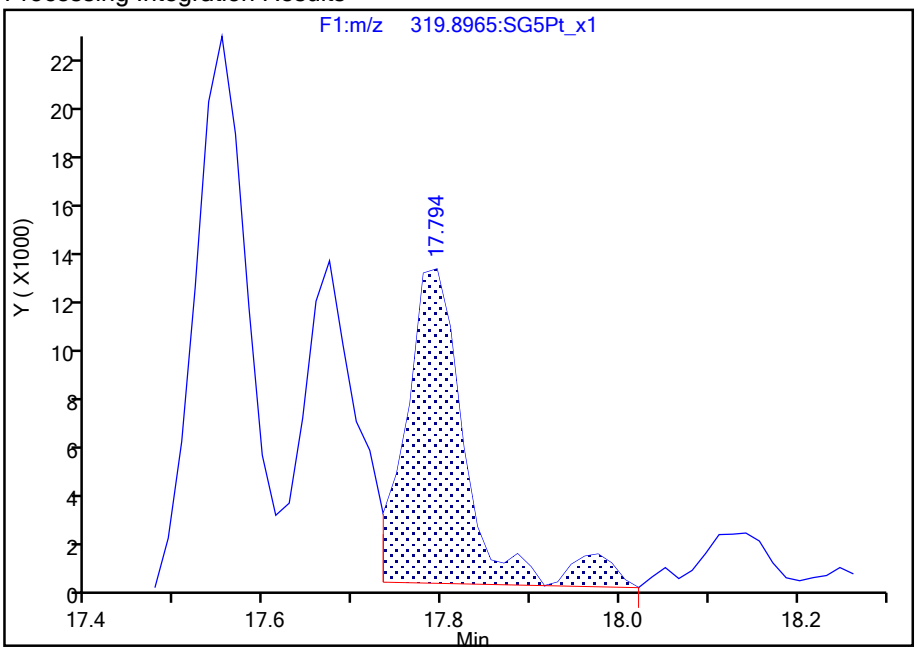

Manual Integration Results

RT: 17.79
Area: 49256
Amount: 0.240548
Amount Units: pg/ul

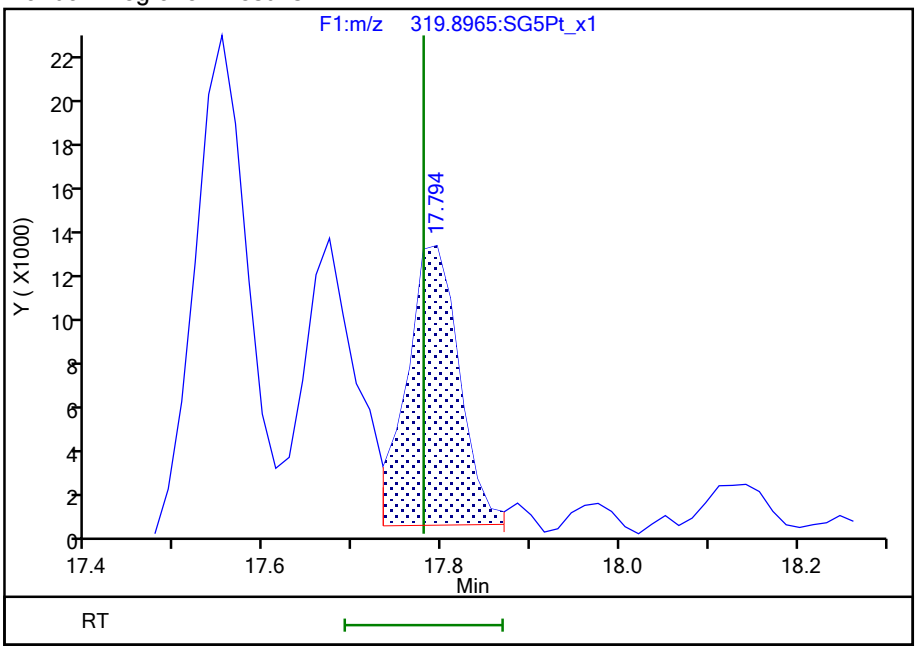

Reviewer: dadunj, 30-Aug-2021 09:09:21

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.57- 19.47)

Signal: 1

Processing Integration Results

RT = 17.552 Area = 87885

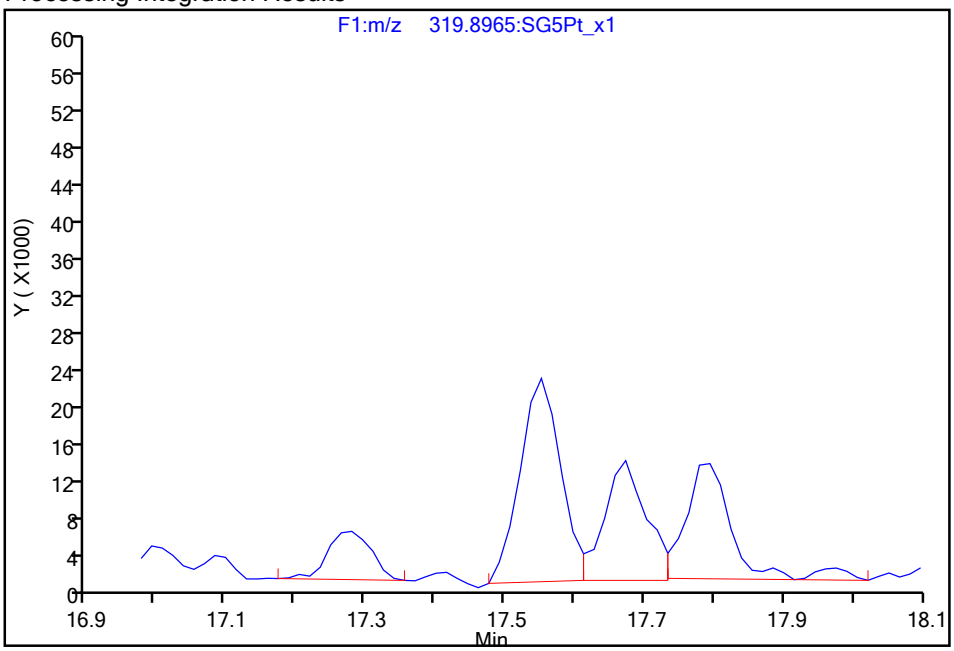

Manual Integration Results

RT = 17.552 Area = 84506 M

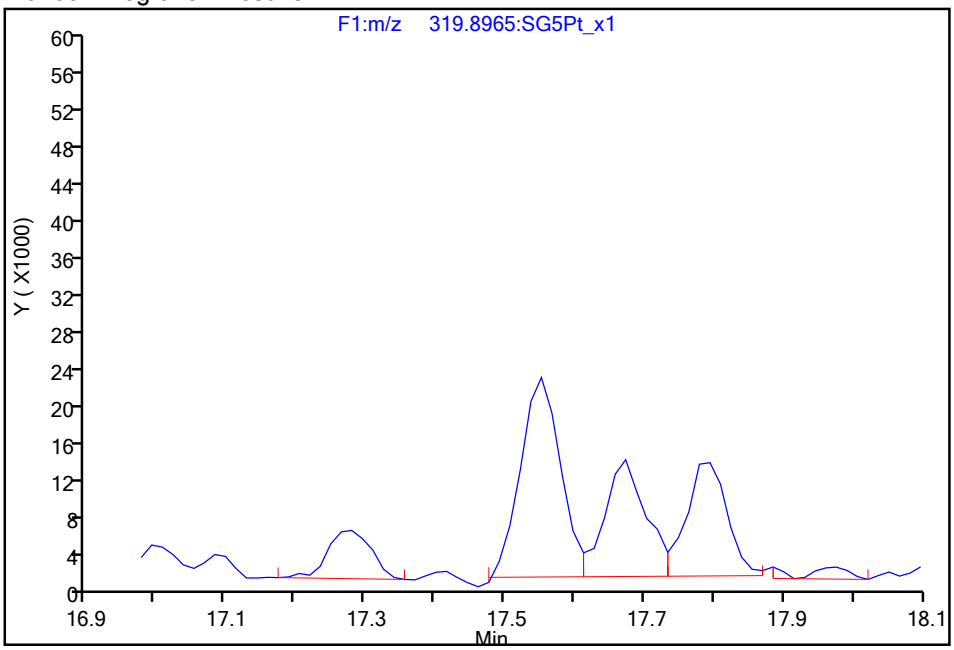

Reviewer: dadunj, 30-Aug-2021 09:09:30

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

Non-2,3,7,8-sub-TCDD, Signal: 1, m/z: 319.8965, RT: (15.57- 19.47)

Signal: 1

Processing Integration Results

RT = 17.673 Area = 52937

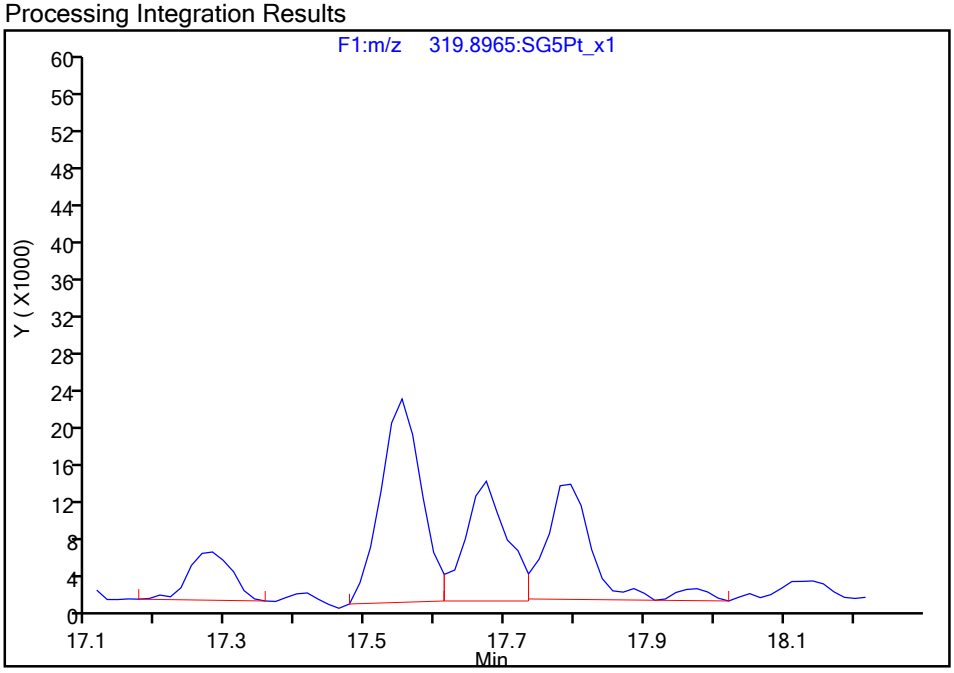

Manual Integration Results

RT = 17.673 Area = 50661 M

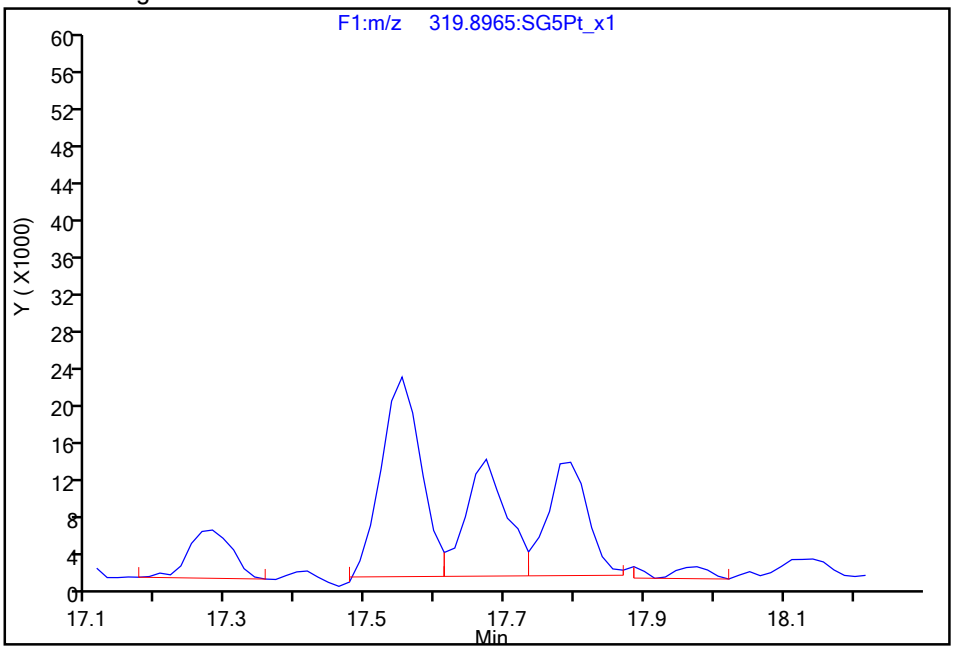

Reviewer: dadunj, 30-Aug-2021 09:09:30

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Split Peak

793733

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 1

Processing Integration Results

RT: 22.03
Area: 25608
Amount: 0.058299
Amount Units: pg/ul

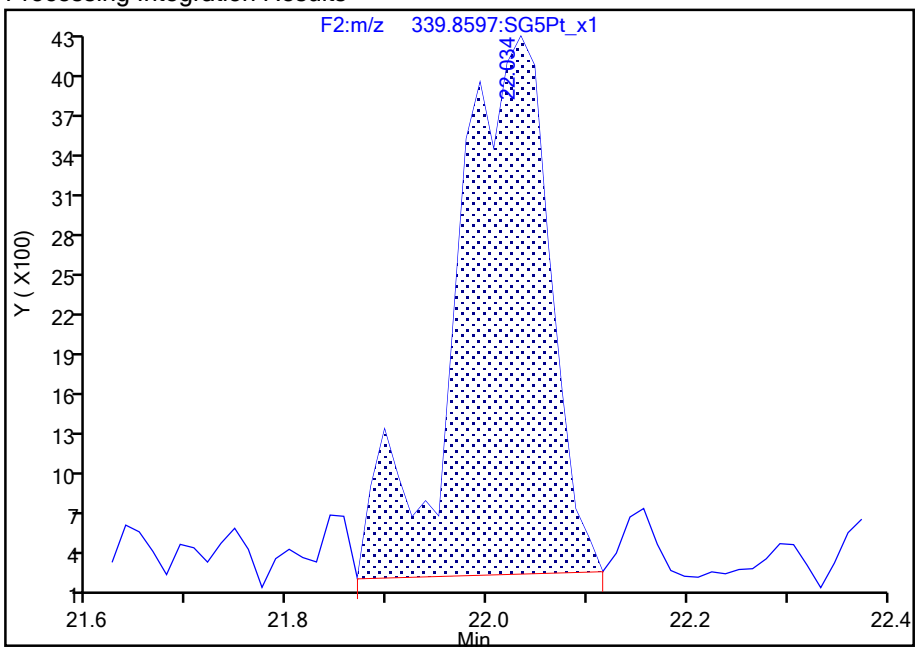

Manual Integration Results

RT: 22.03
Area: 21722
Amount: 0.050227
Amount Units: pg/ul

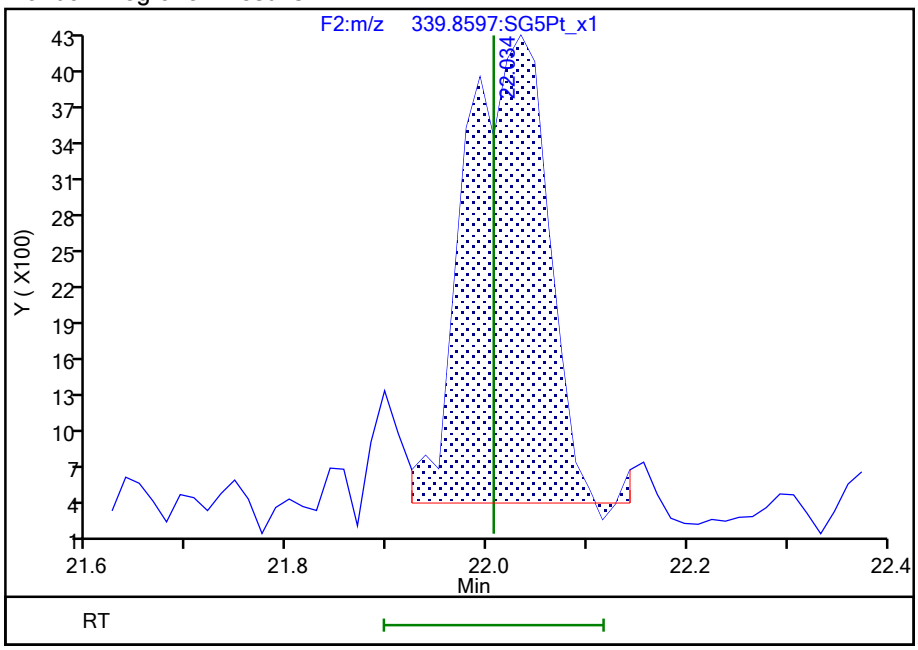

Reviewer: dadunj, 30-Aug-2021 09:01:14

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

1,2,3,7,8-PeCDF, CAS: 57117-41-6

Signal: 2

Processing Integration Results

RT: 22.02
Area: 17698
Amount: 0.058299
Amount Units: pg/ul

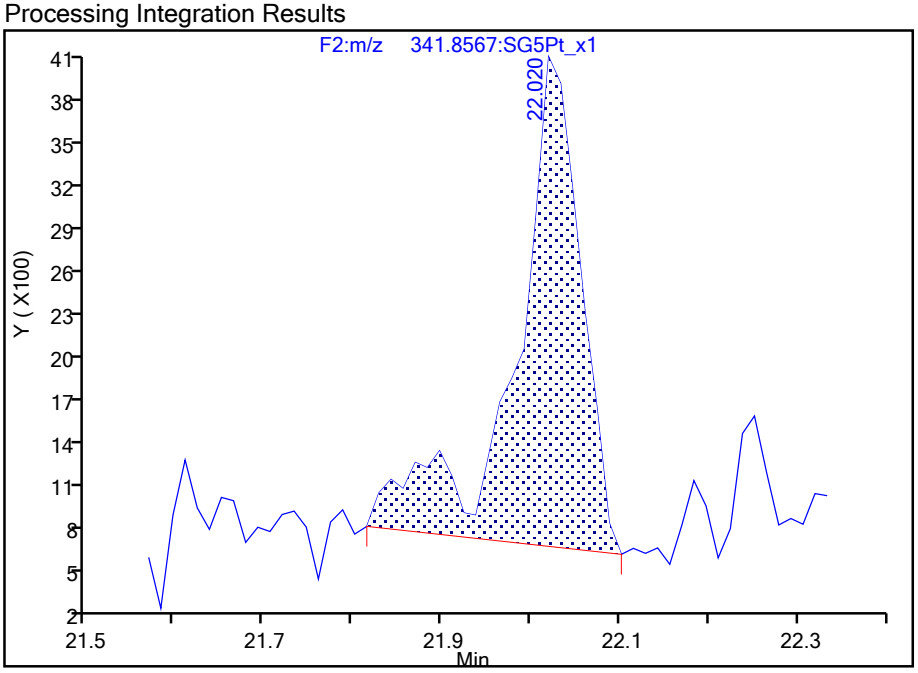

Manual Integration Results

RT: 22.02
Area: 15588
Amount: 0.050227
Amount Units: pg/ul

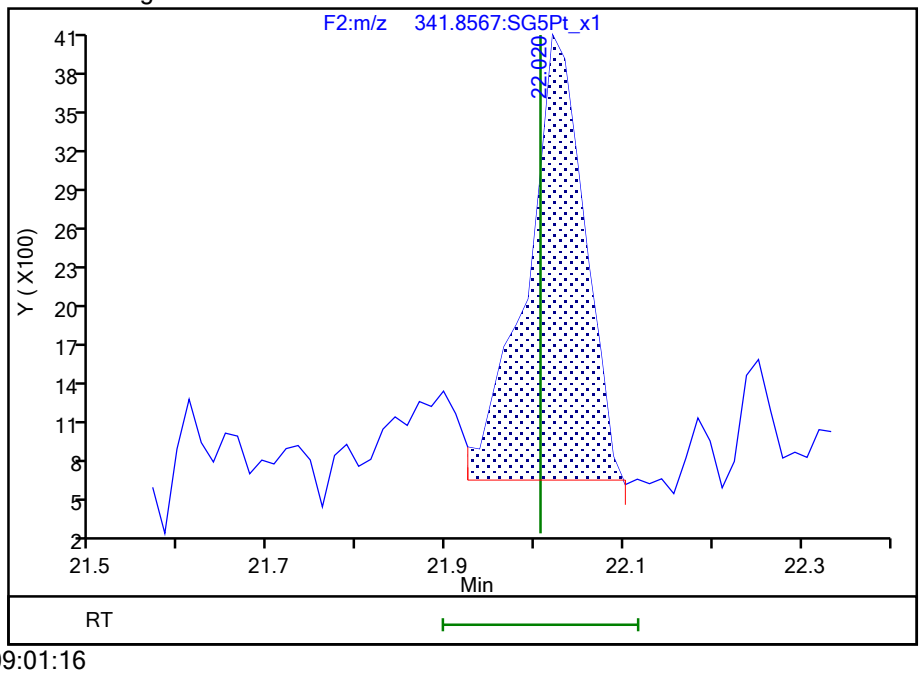

Reviewer: dadunj, 30-Aug-2021 09:01:16

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793735

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 1, m/z: 355.8546, RT: (21.50- 25.89)

Signal: 1

Processing Integration Results

RT = 22.293 Area = 24481

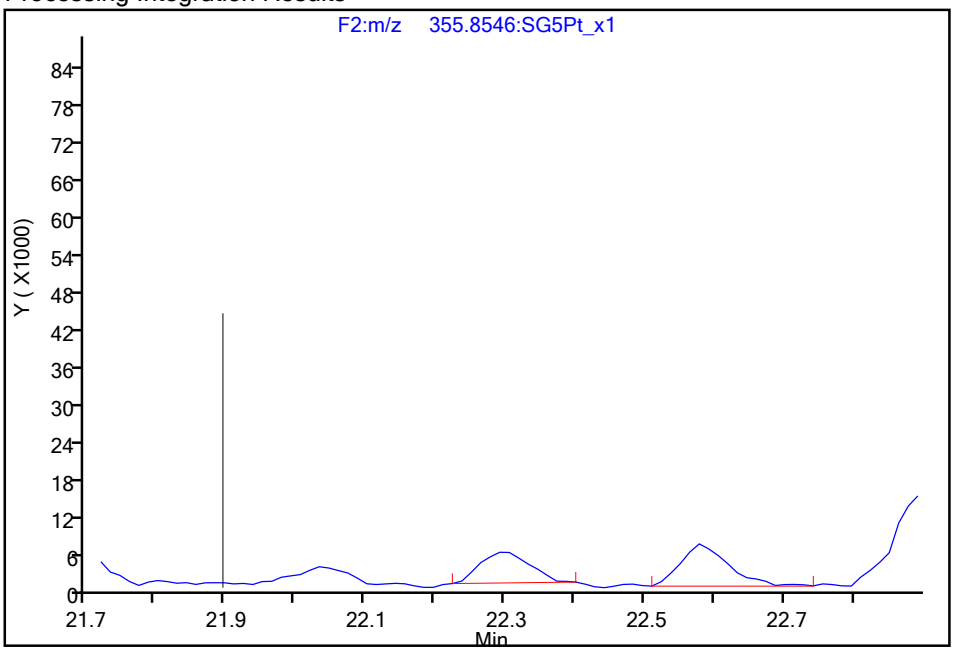

Manual Integration Results

RT = 22.293 Area = 24481

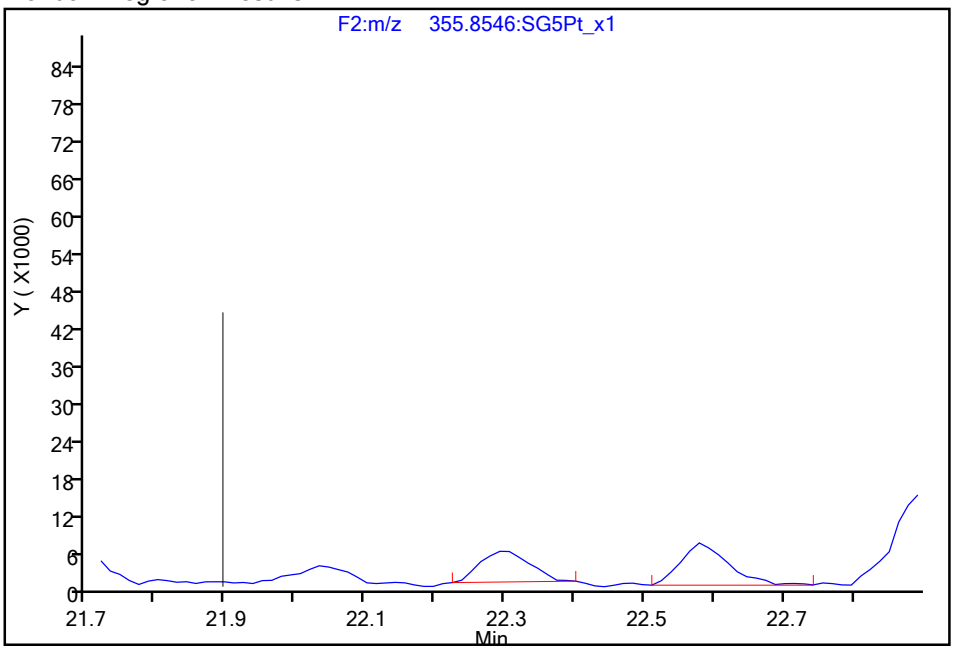

Reviewer: krenns, 30-Aug-2021 16:39:31

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

Non-2,3,7,8-sub-PeCDD, Signal: 2, m/z: 357.8516, RT: (21.50- 25.89)

Signal: 2

Processing Integration Results

RT = 22.552 Area = 7344

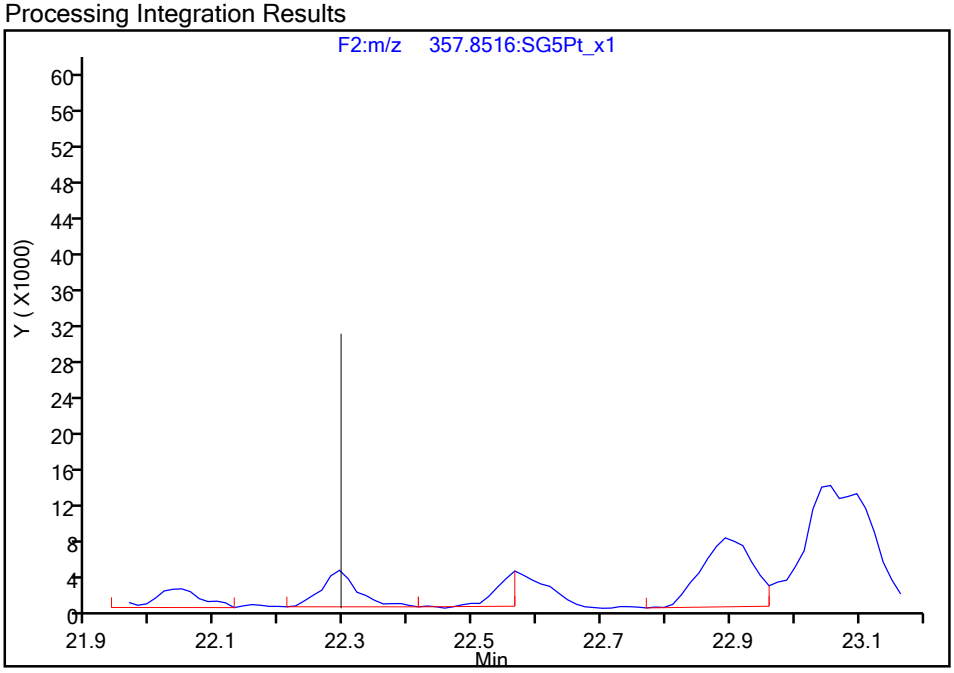

Manual Integration Results

RT = 22.565 Area = 20445 M

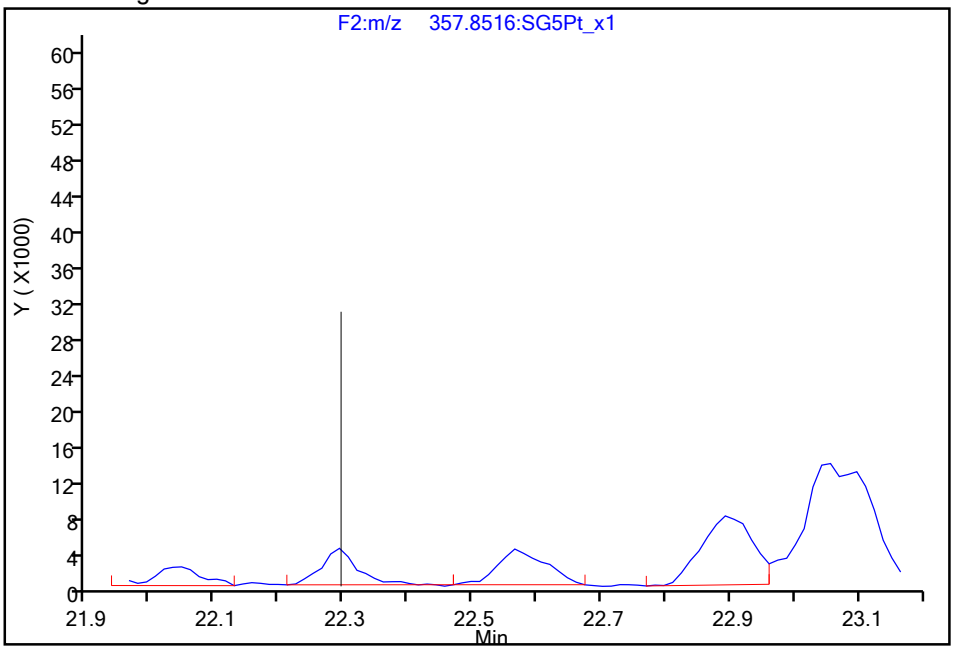

Reviewer: dadunj, 30-Aug-2021 09:01:34

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 1

Processing Integration Results

RT: 32.13
Area: 23871
Amount: 0.079760
Amount Units: pg/ul

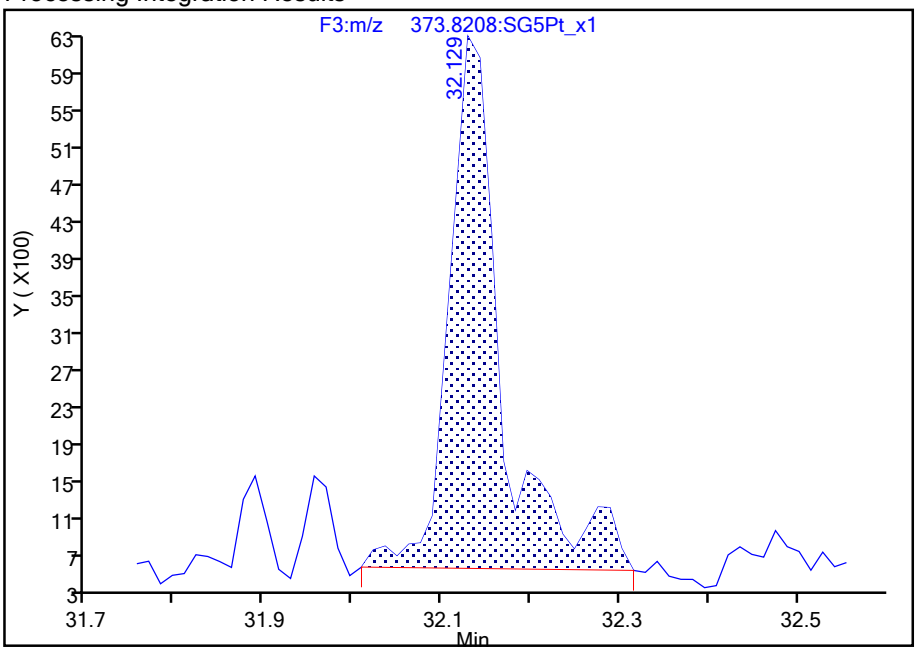

Manual Integration Results

RT: 32.13
Area: 19296
Amount: 0.066644
Amount Units: pg/ul

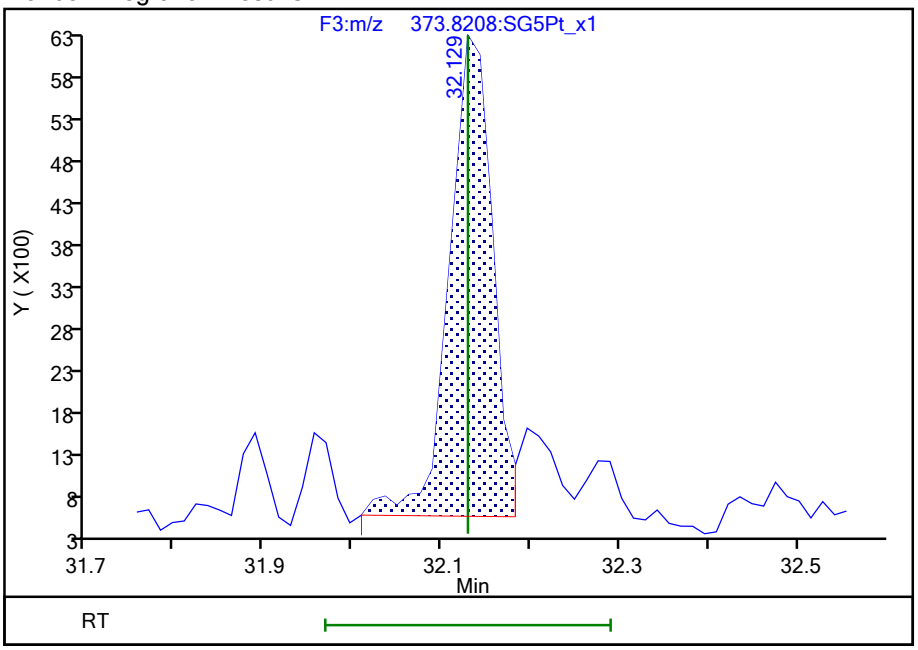

Reviewer: dadunj, 30-Aug-2021 09:02:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

1,2,3,7,8,9-HxCDF, CAS: 72918-21-9

Signal: 2

Processing Integration Results

RT: 32.13
Area: 21353
Amount: 0.079760
Amount Units: pg/ul

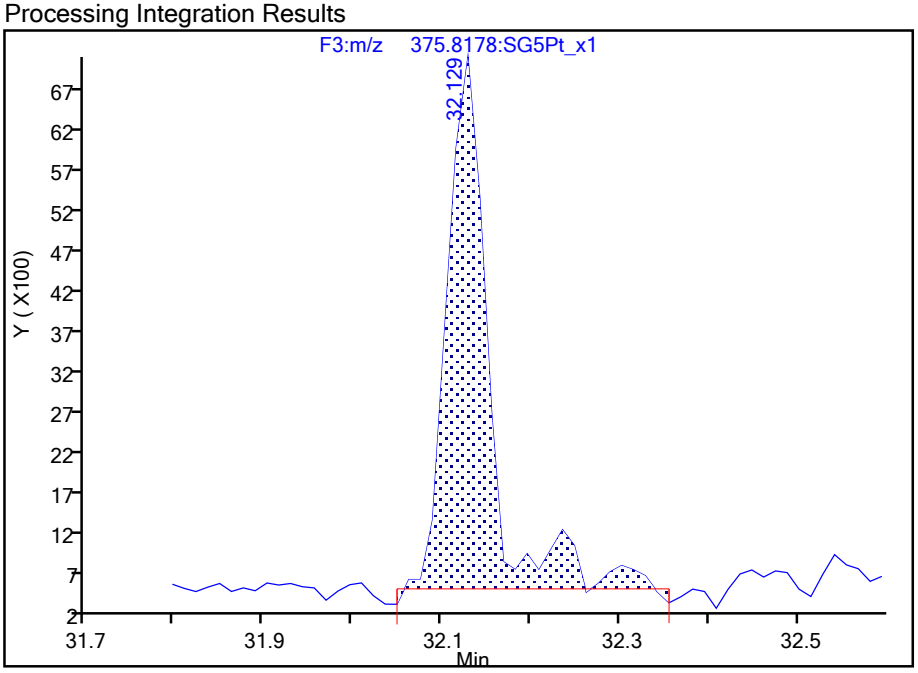

Manual Integration Results

RT: 32.13
Area: 18491
Amount: 0.066644
Amount Units: pg/ul

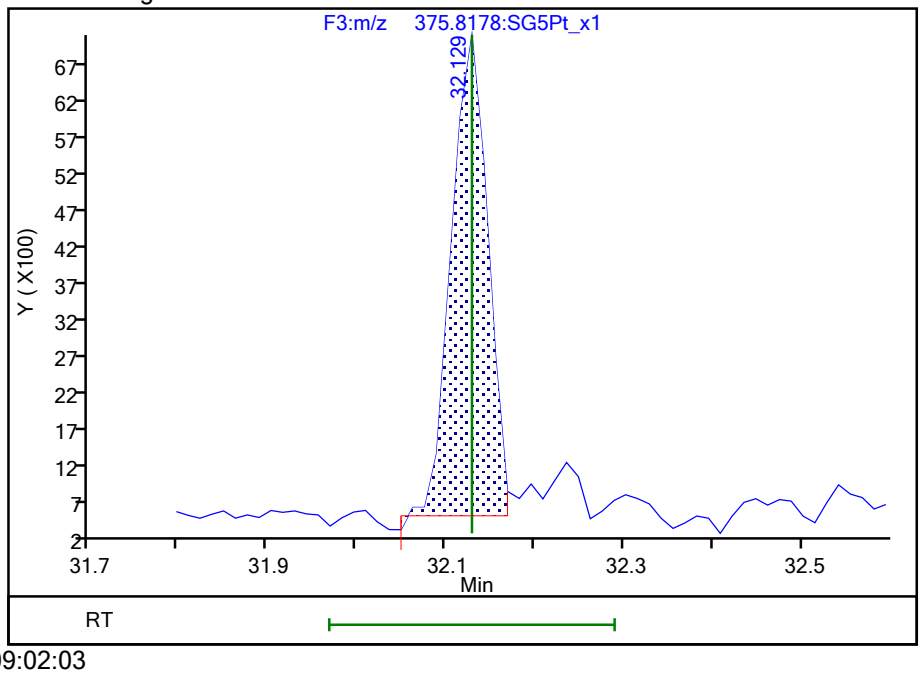

Reviewer: dadunj, 30-Aug-2021 09:02:03
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793739

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDF, CAS: 67562-39-4

Signal: 2

Processing Integration Results

RT: 33.60
Area: 10565
Amount: 0.061924
Amount Units: pg/ul

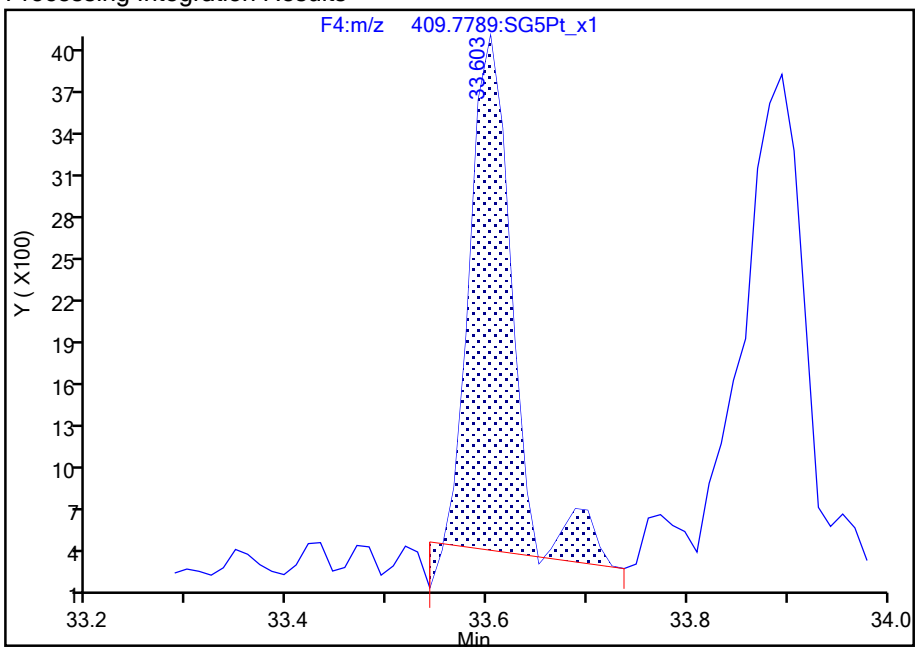

Manual Integration Results

RT: 33.60
Area: 9322
Amount: 0.059517
Amount Units: pg/ul

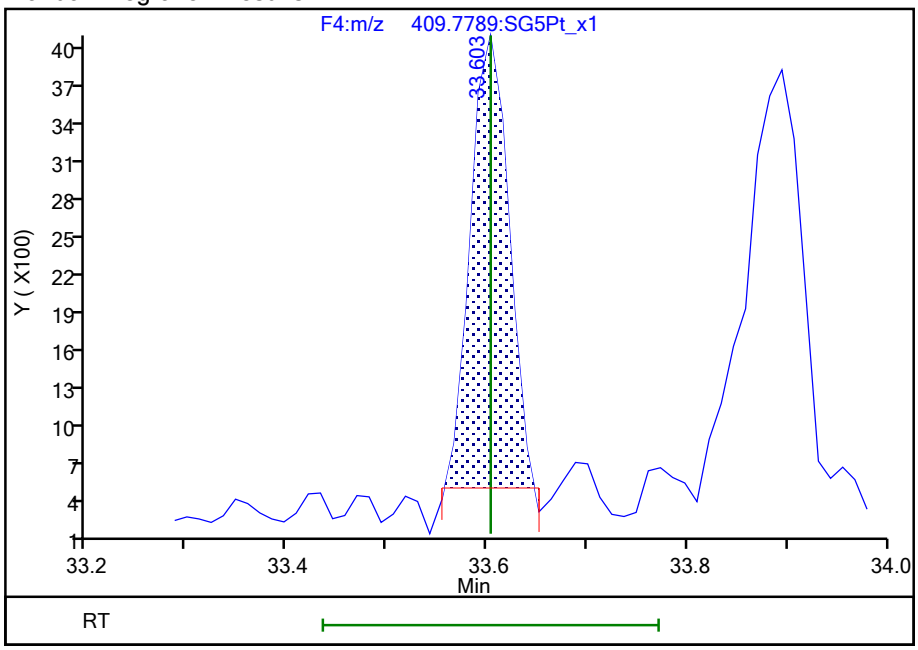

Reviewer: dadunj, 30-Aug-2021 09:02:34

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 1, m/z: 407.7818, RT: (33.57- 34.70)

Signal: 1

Processing Integration Results

RT = 33.895 Area = 15621

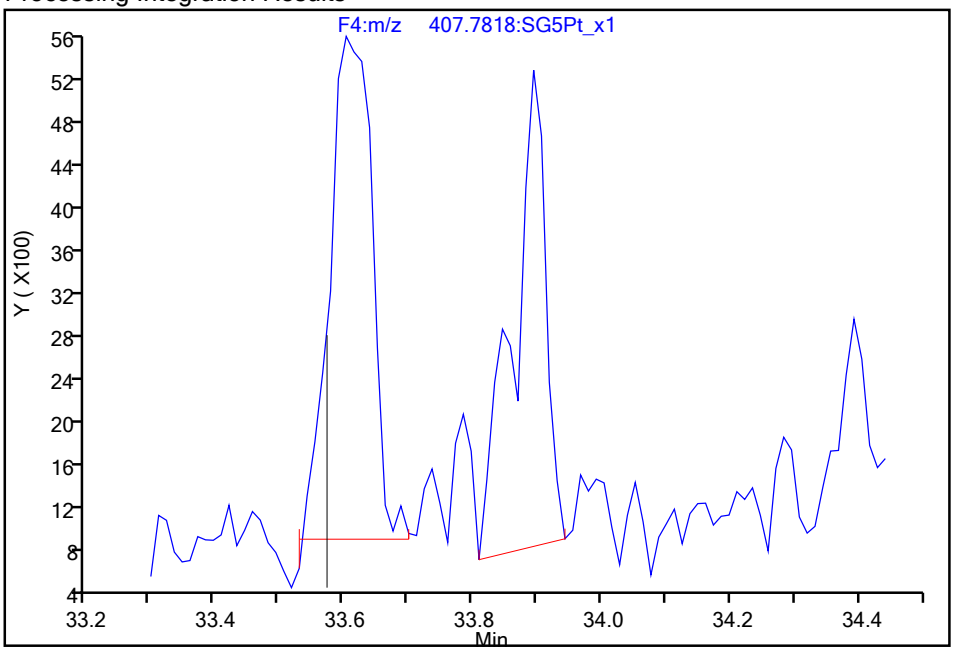

Manual Integration Results

RT = 33.895 Area = 15484 M

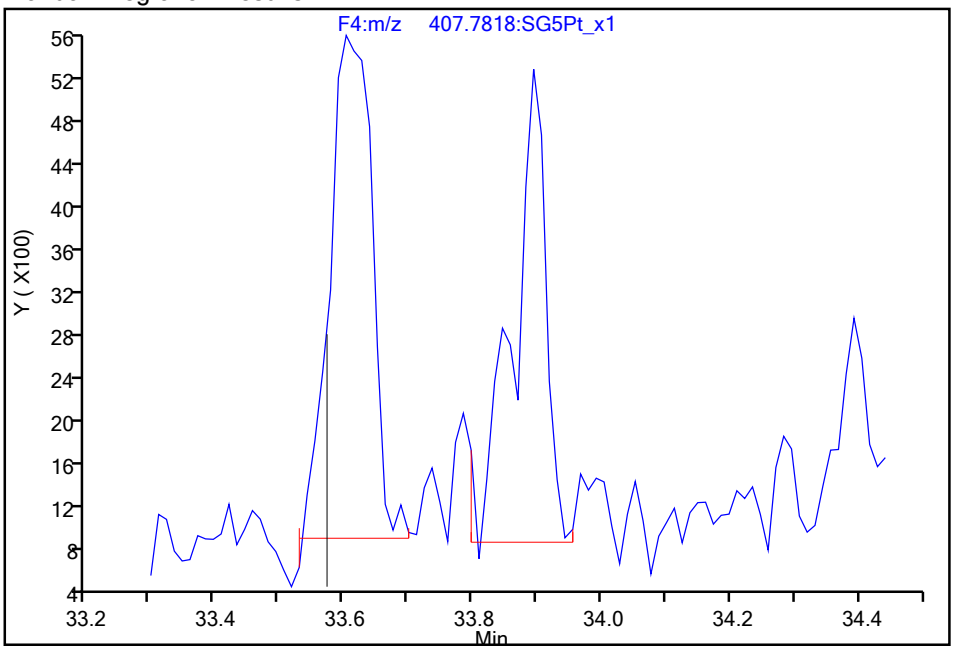

Reviewer: dadunj, 30-Aug-2021 09:03:09

Audit Action: Manually Integrated Audit Reason: Split Peak

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDF, Signal: 2, m/z: 409.7789, RT: (33.57- 34.70)

Signal: 2

Processing Integration Results

RT = 33.895 Area = 13778

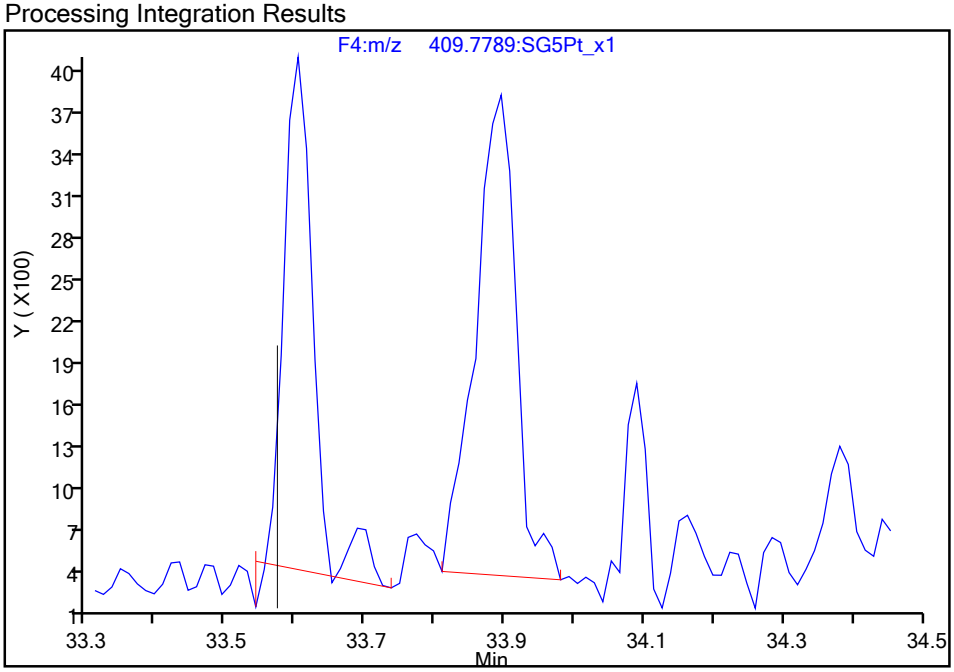

Manual Integration Results

RT = 33.895 Area = 12194 M

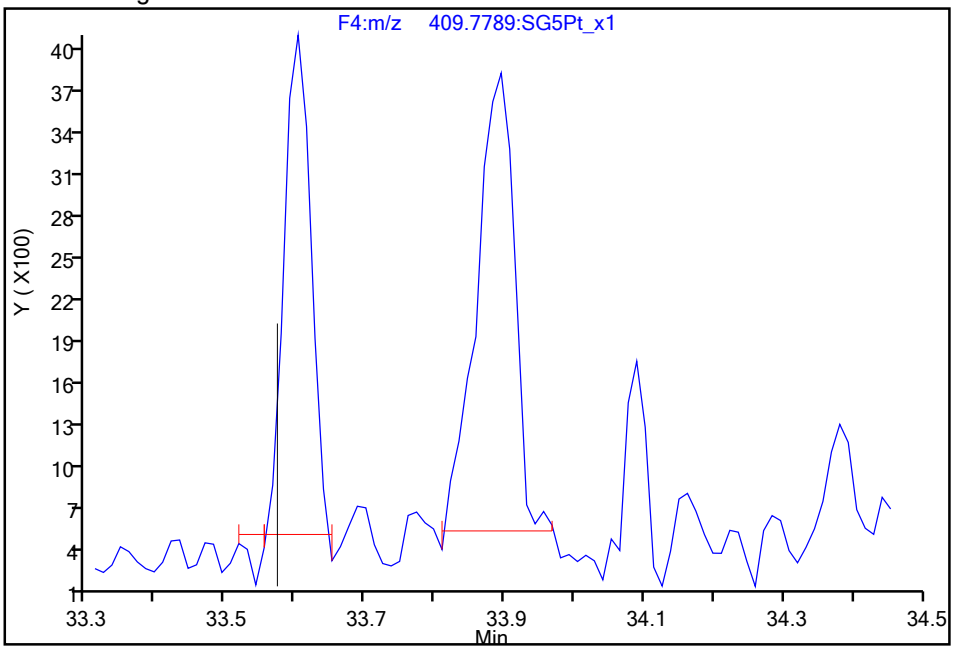

Reviewer: dadunj, 30-Aug-2021 09:03:13

Audit Action: Manually Integrated Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.78
Area: 31429
Amount: 0.191456
Amount Units: pg/ul

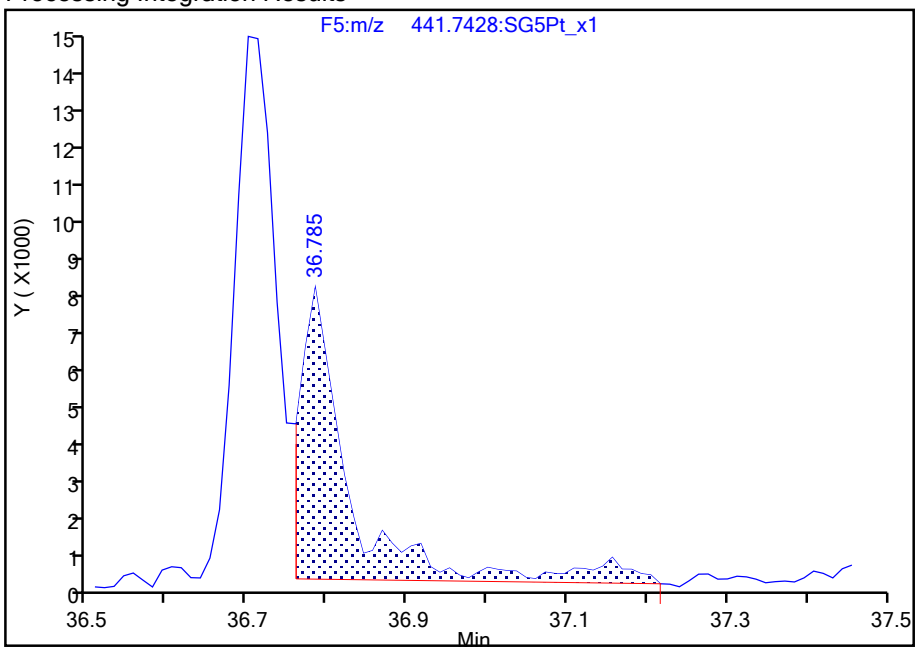

Manual Integration Results

RT: 36.78
Area: 22176
Amount: 0.140118
Amount Units: pg/ul

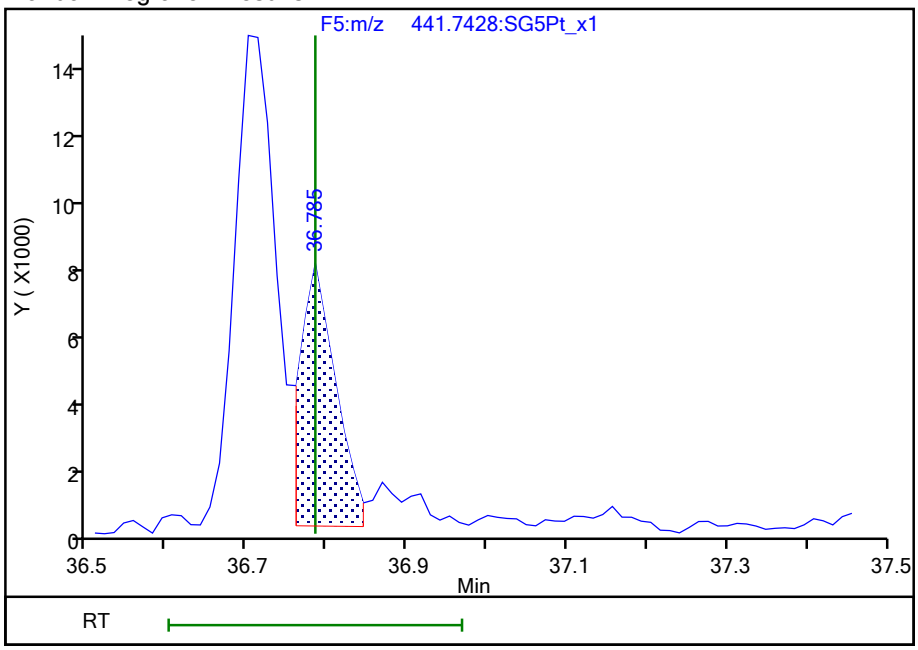

Reviewer: dadunj, 30-Aug-2021 09:03:24

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793743

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d				
Injection Date:	26-Aug-2021 13:05:53	Instrument ID:	10D5		
Lims ID:	320-77292-A-13-A	Lab Sample ID:	320-77292-13		
Client ID:	11215702-080321-BN-DUP-18				
Operator ID:	SMA	ALS Bottle#:	47	Worklist Smp#:	8
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 2

Processing Integration Results

RT: 36.78
Area: 34020
Amount: 0.191456
Amount Units: pg/ul

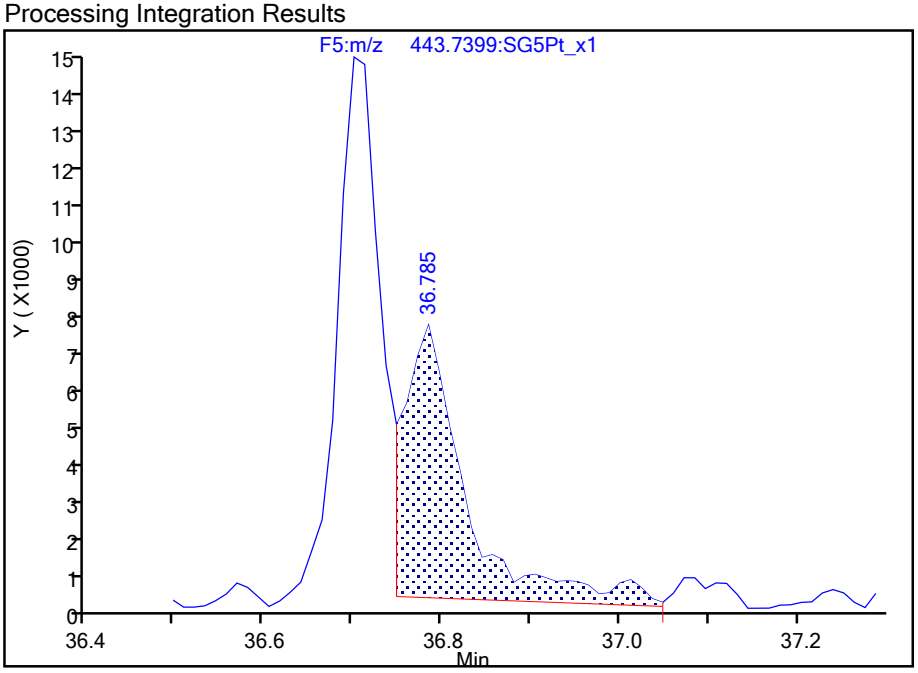

Manual Integration Results

RT: 36.78
Area: 25723
Amount: 0.140118
Amount Units: pg/ul

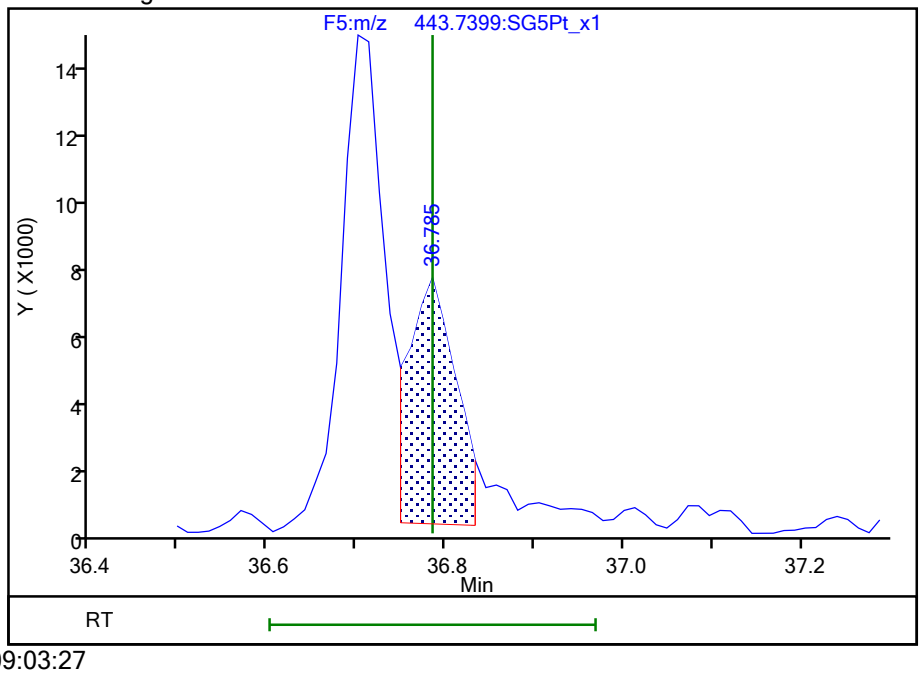

Reviewer: dadunj, 30-Aug-2021 09:03:27

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

793744

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

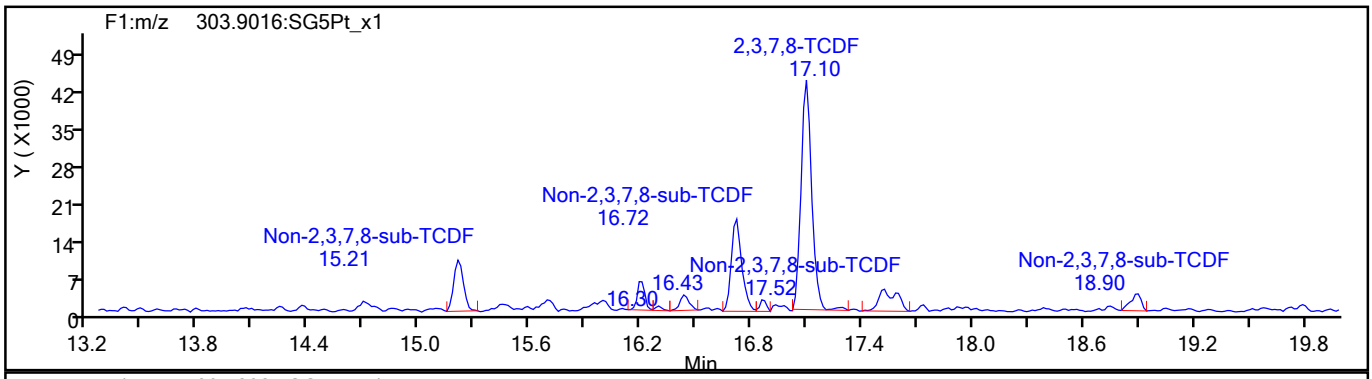

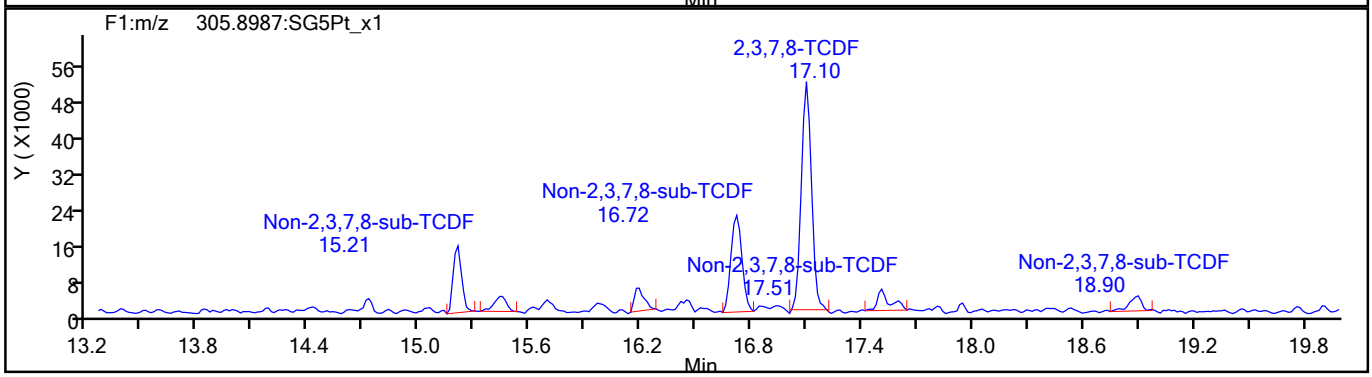

TCDF Standards

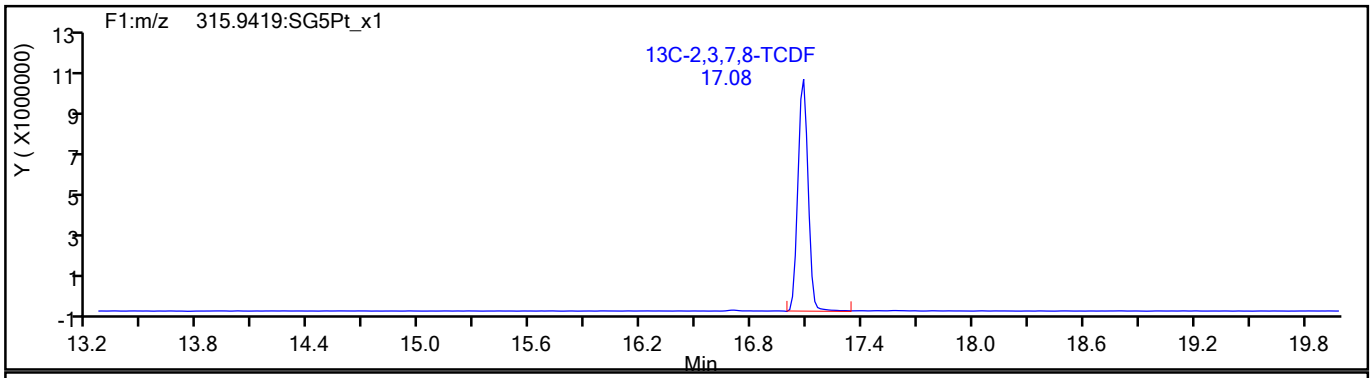

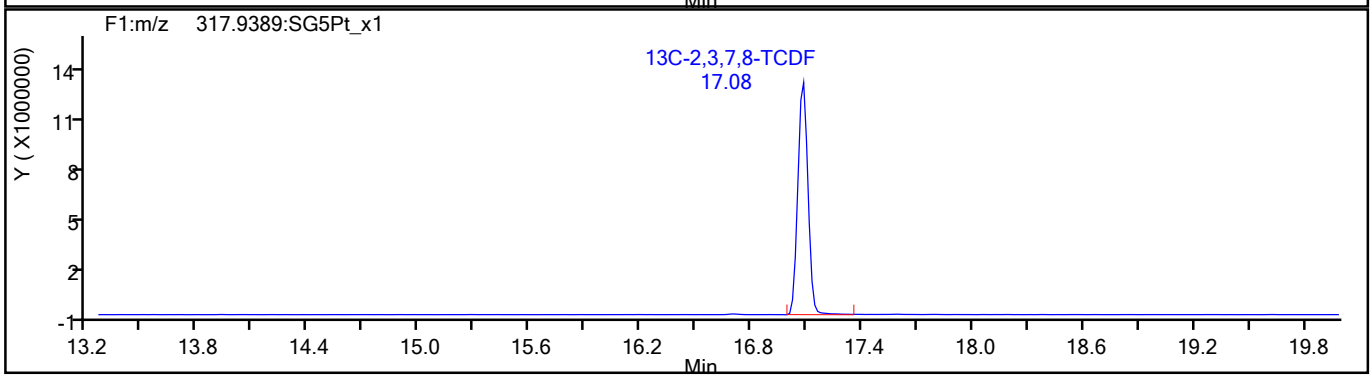

793745

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

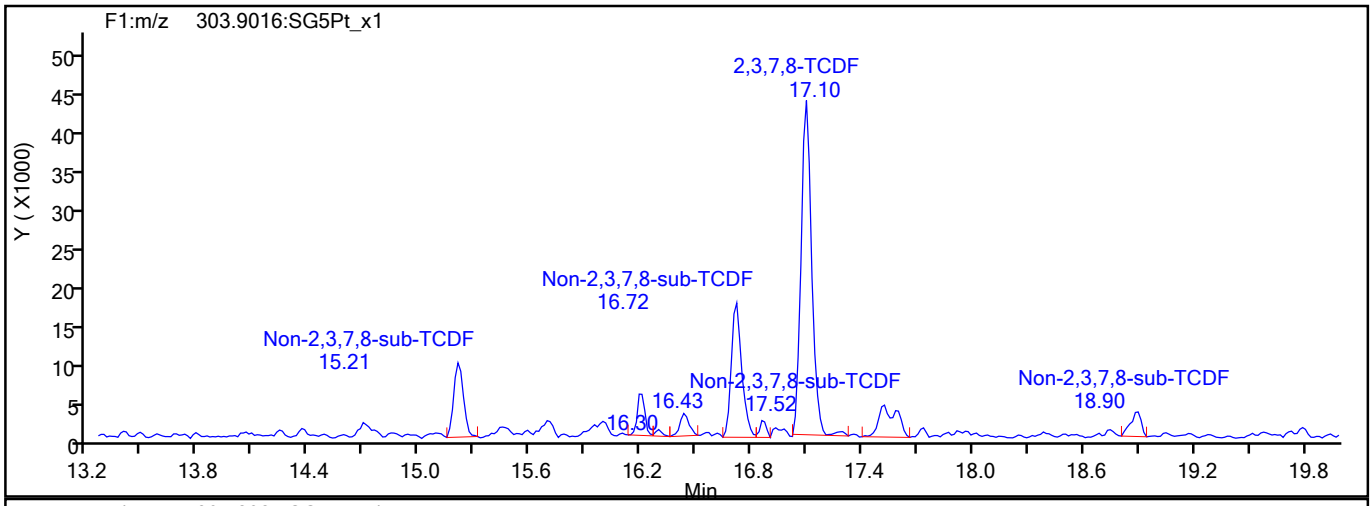

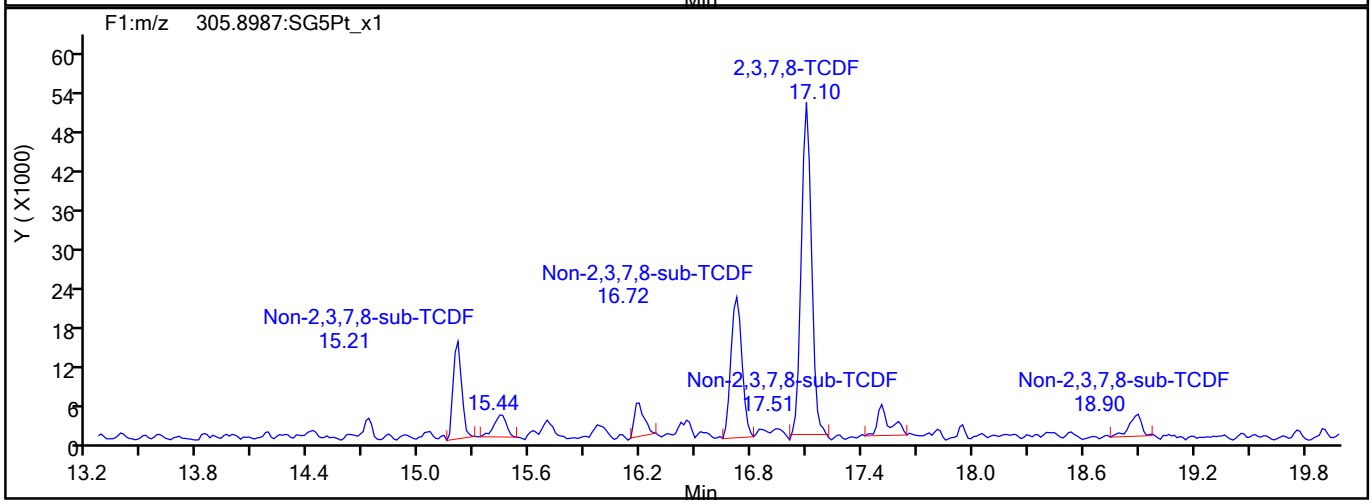

TCDF Interference Mass

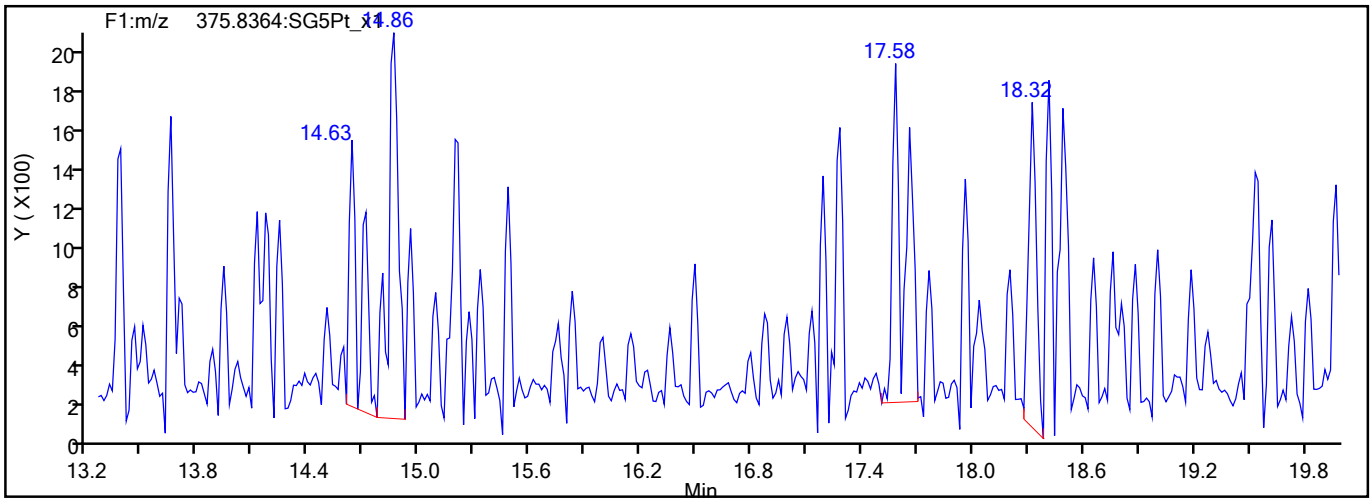

793746

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

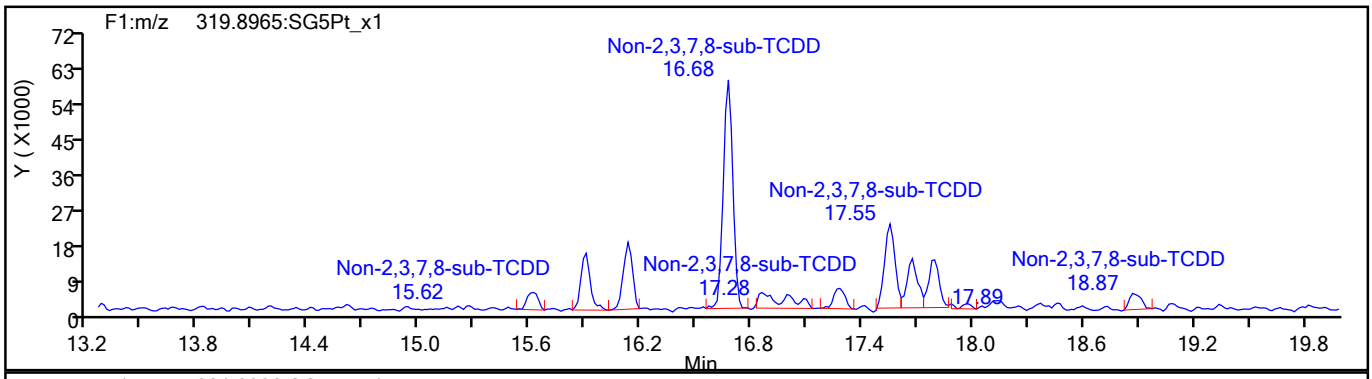

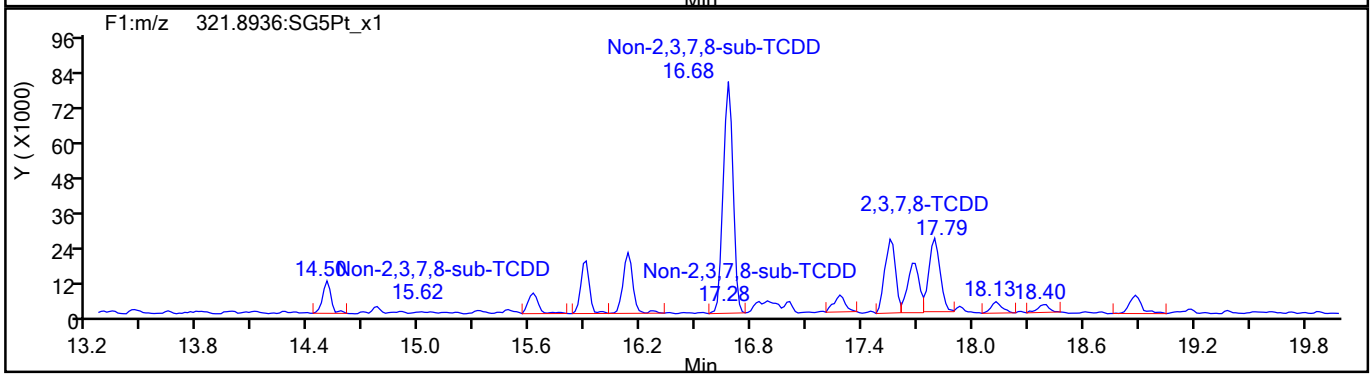

TCDD Standards

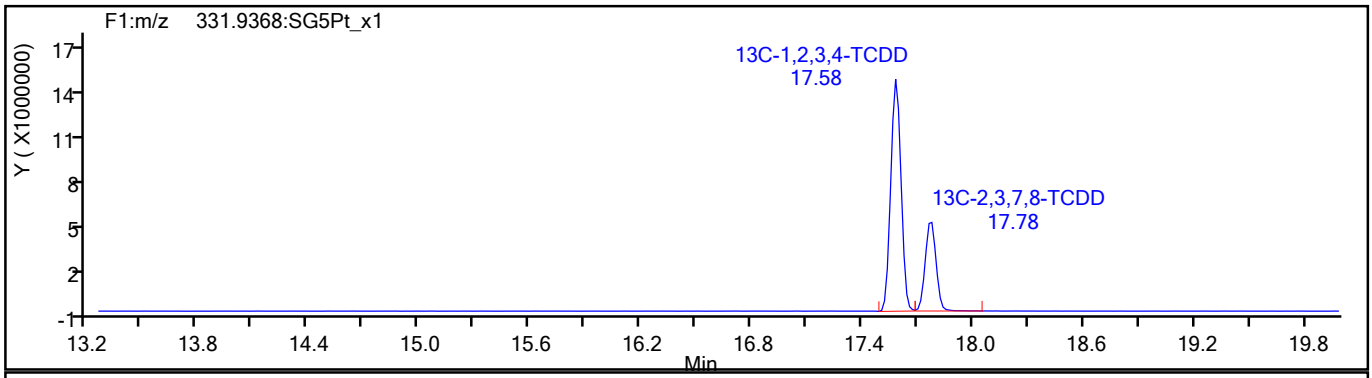

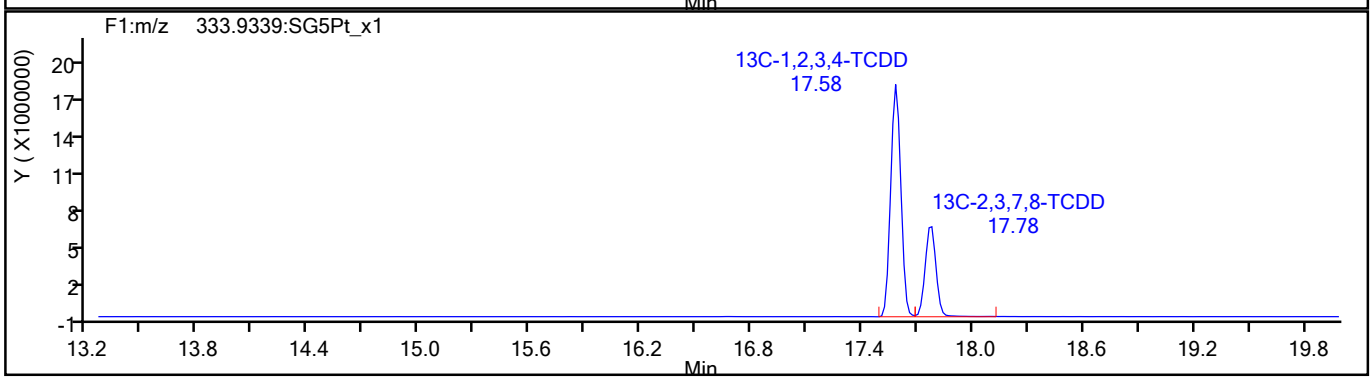

793747

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

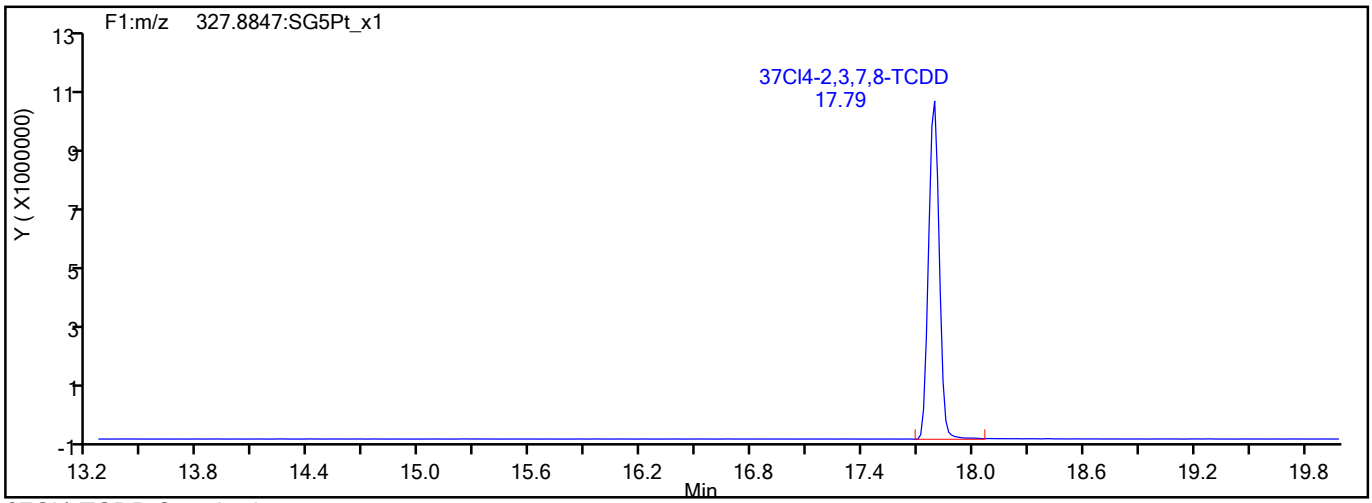

37Cl4-TCDD Standards

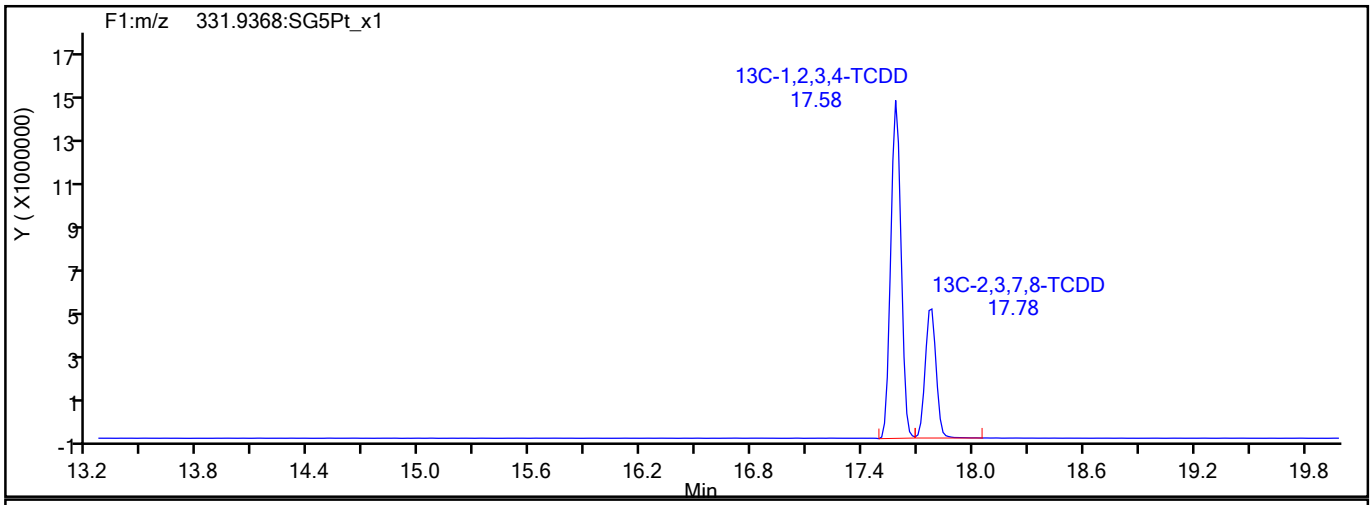

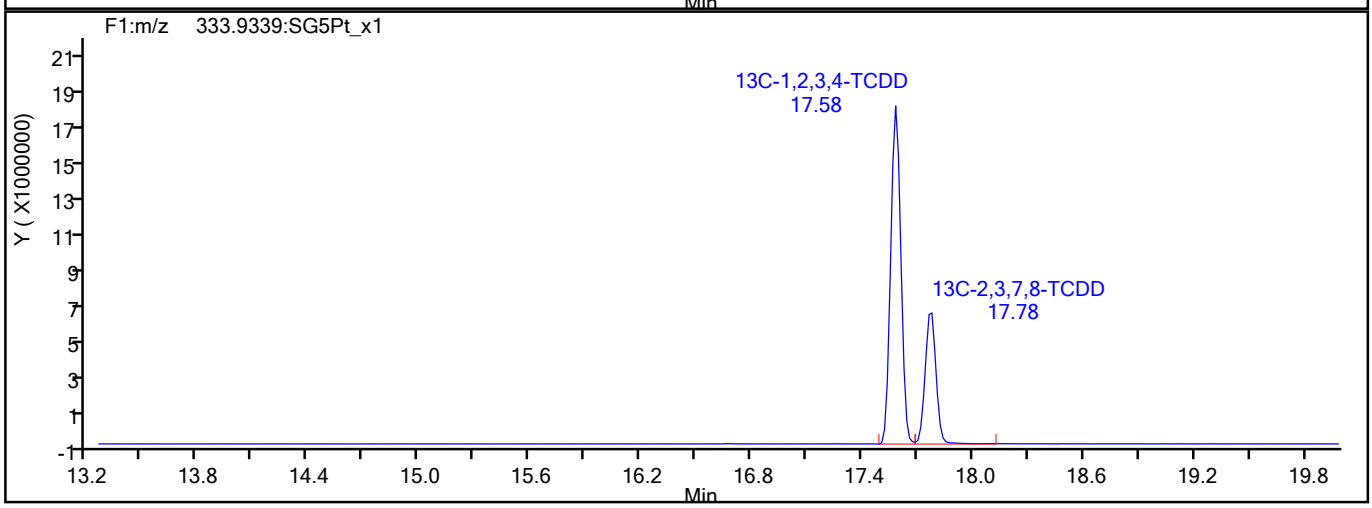

793748

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

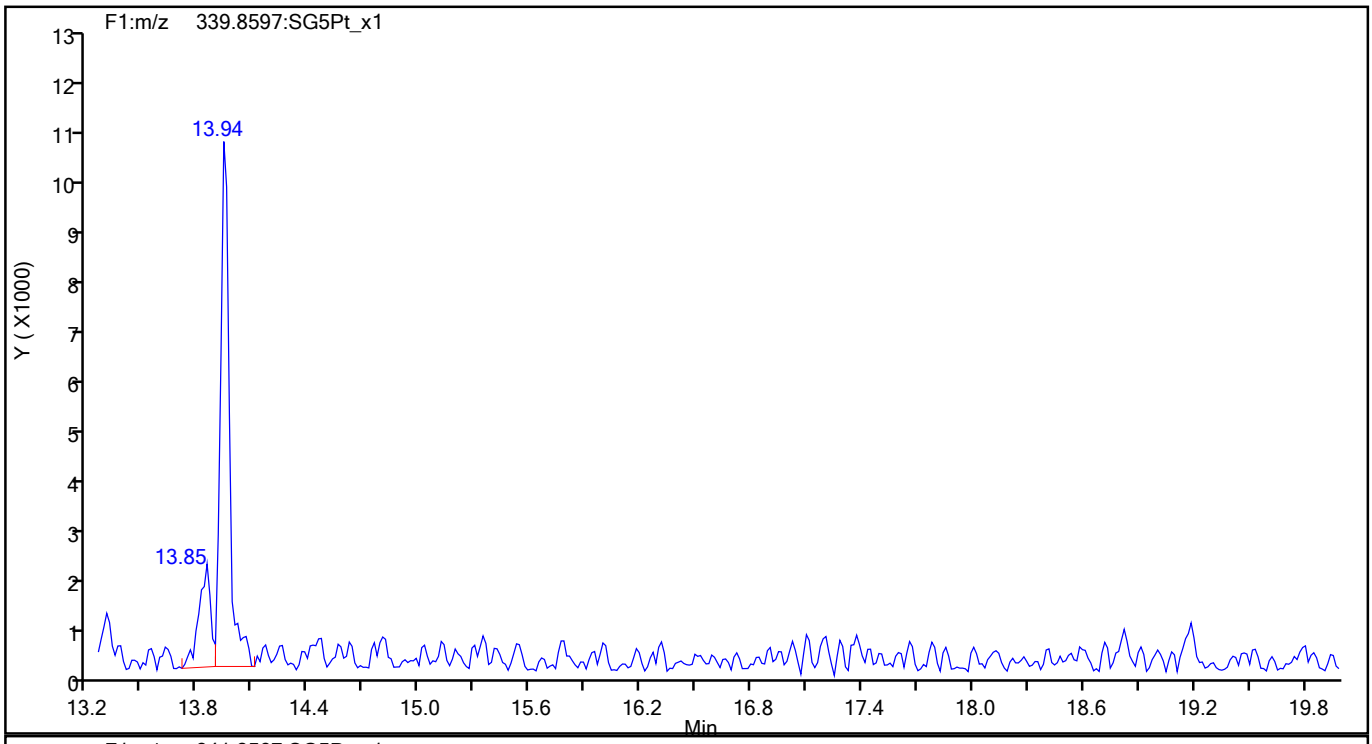

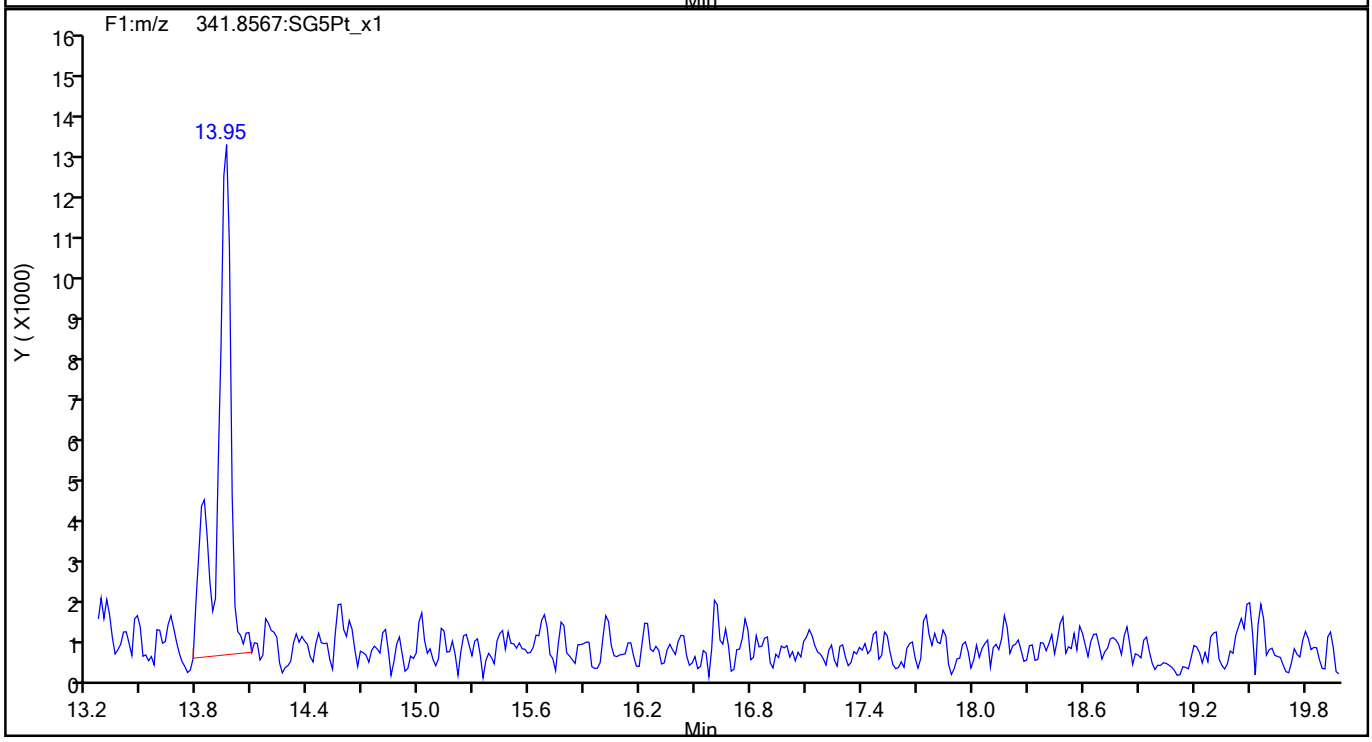

793749

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

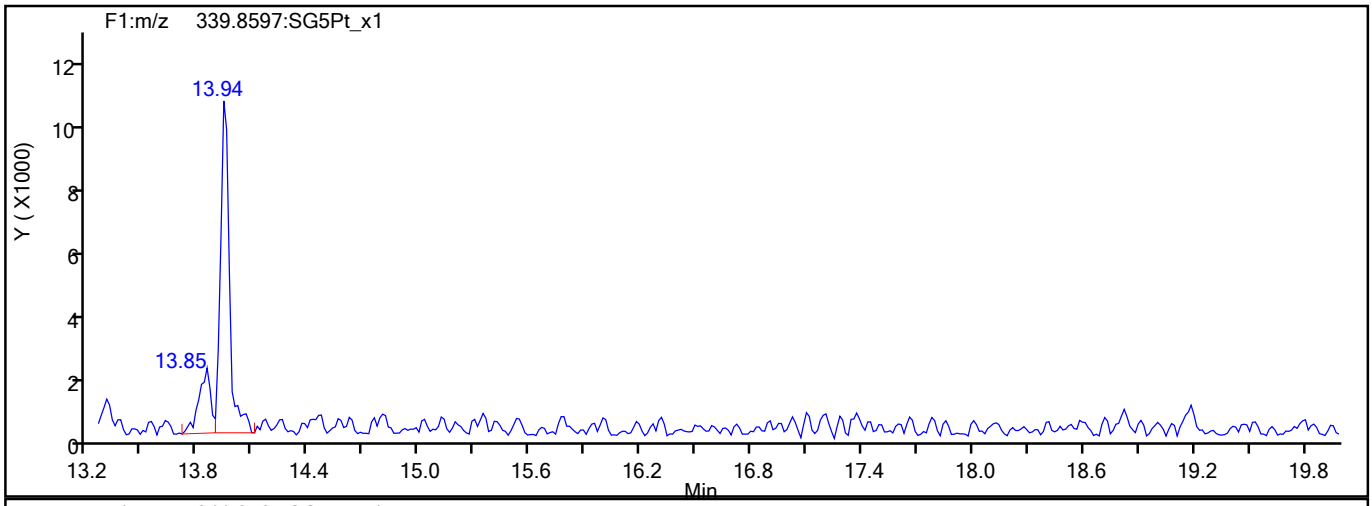

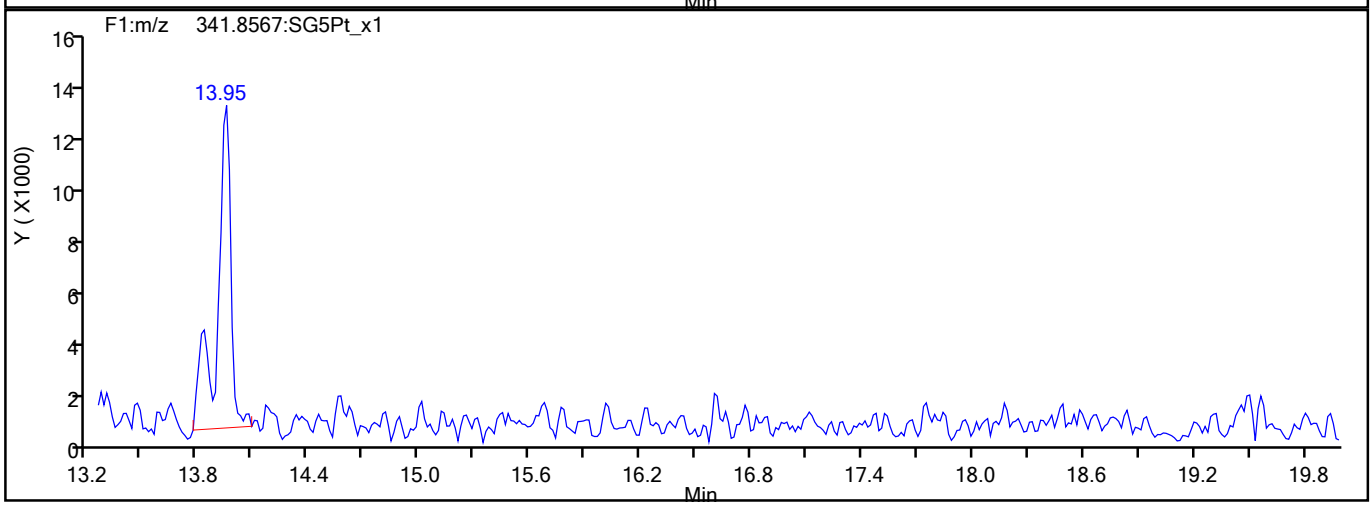

F1 PeCDFs Interference Mass

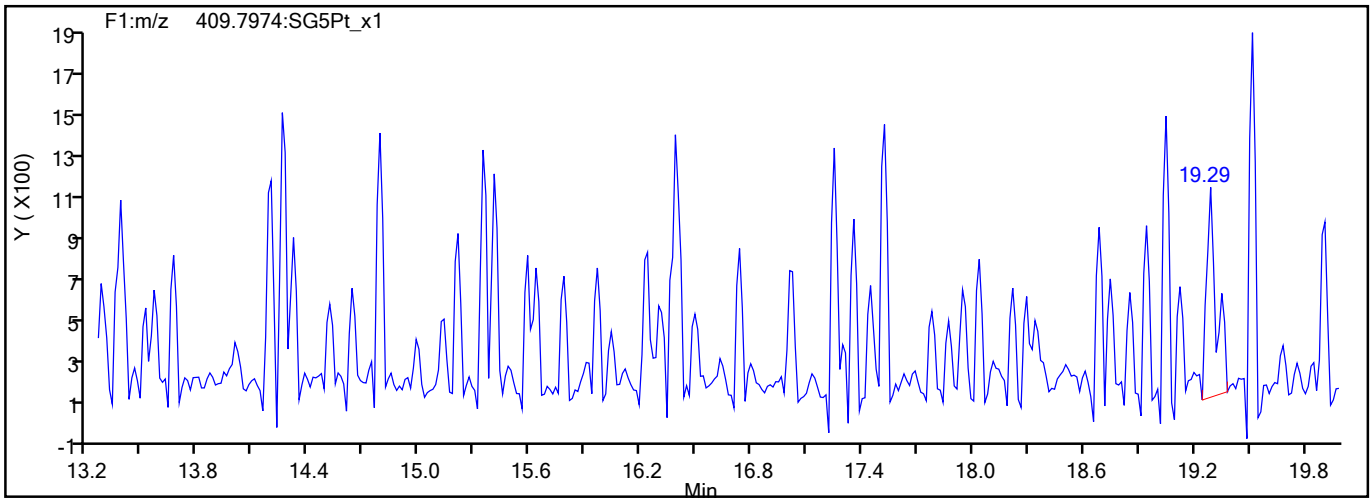

793750

Report Date: 30-Aug-2021 16:39:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

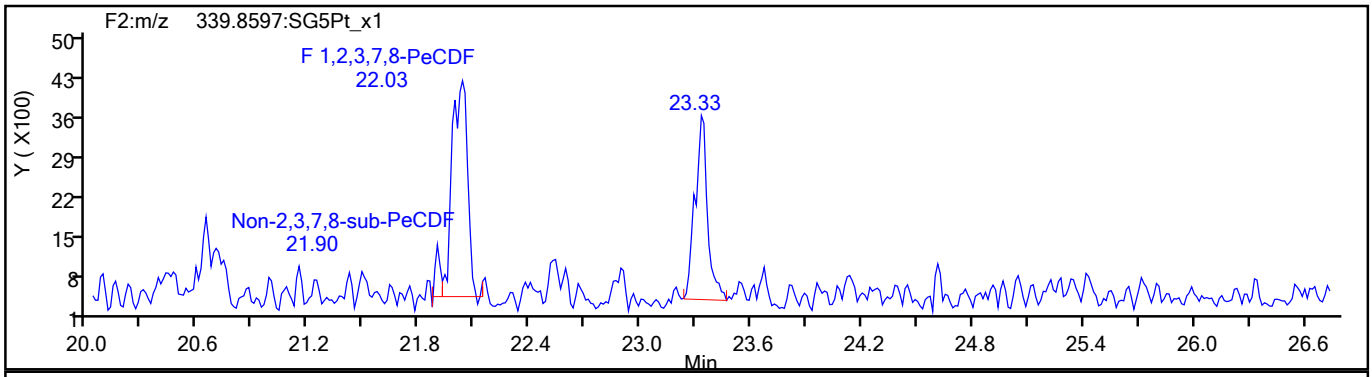

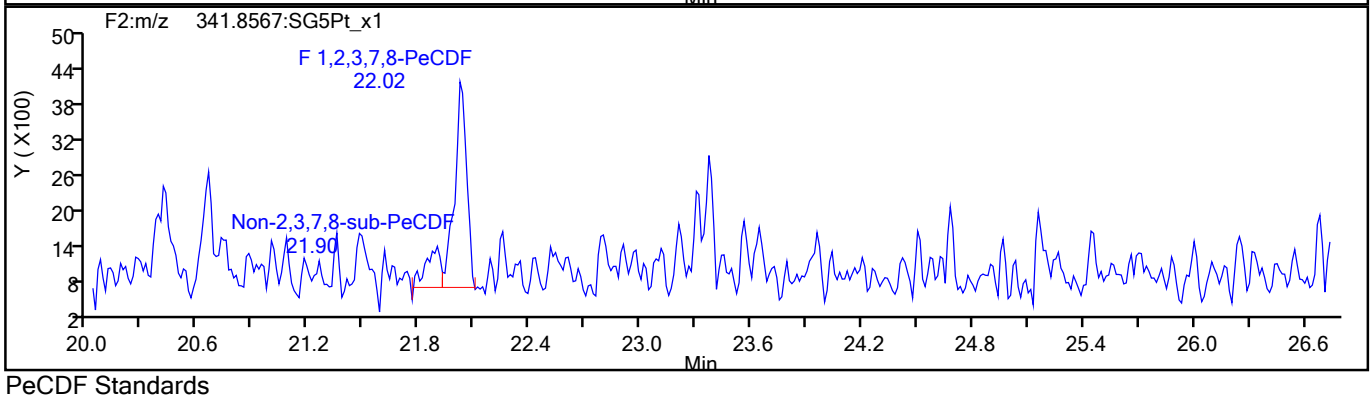

PeCDF Standards

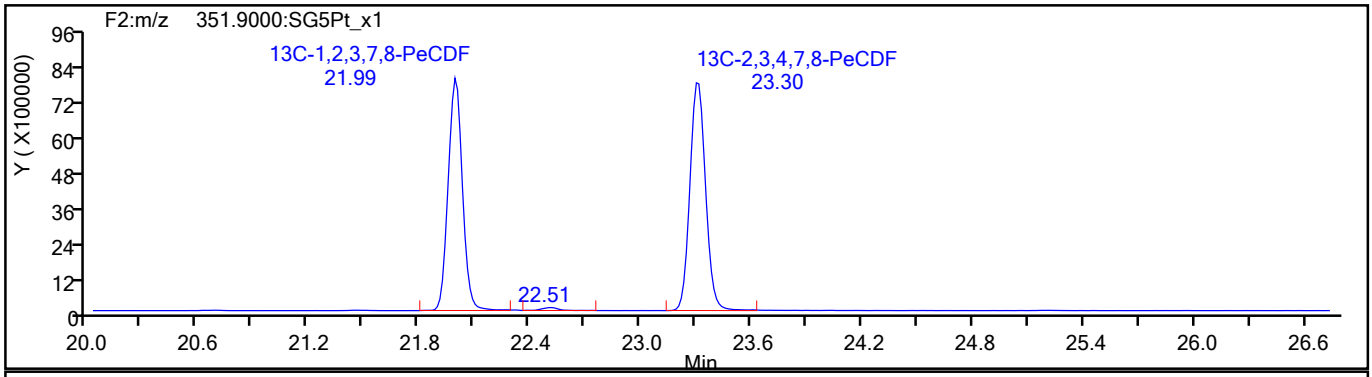

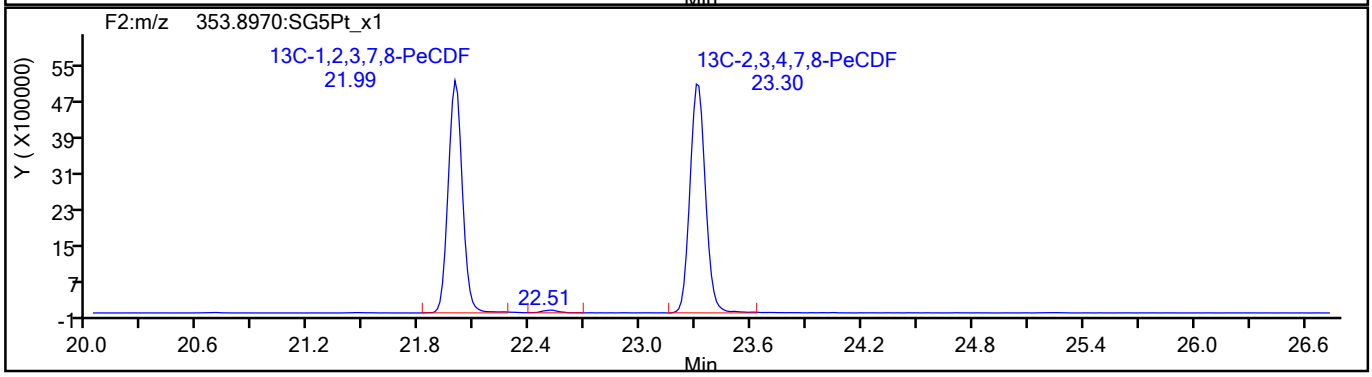

793751

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

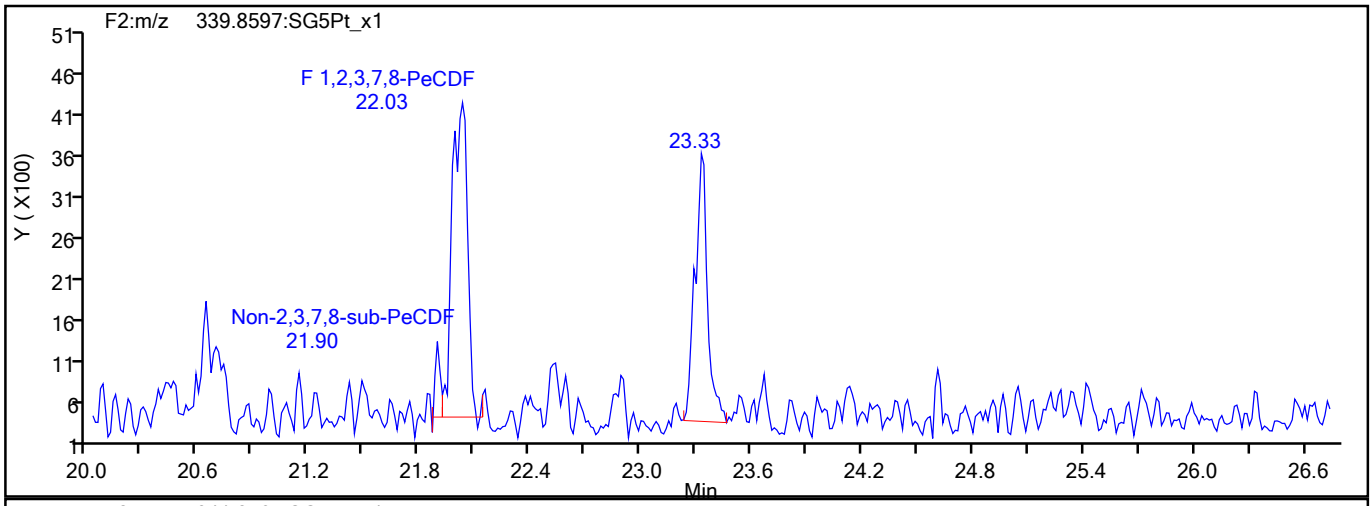

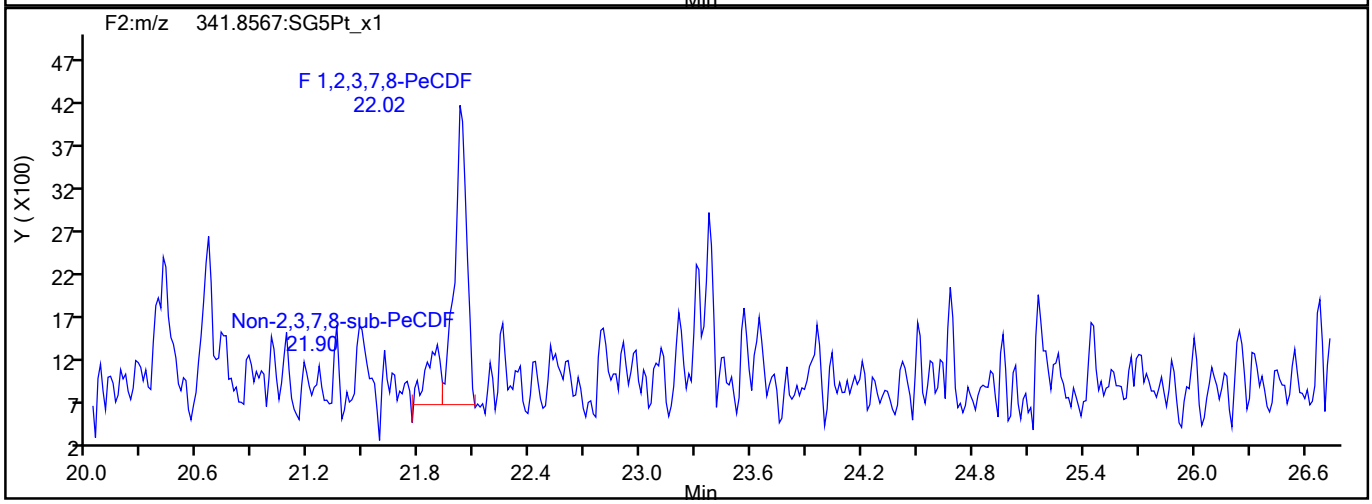

PeCDF Interference Mass

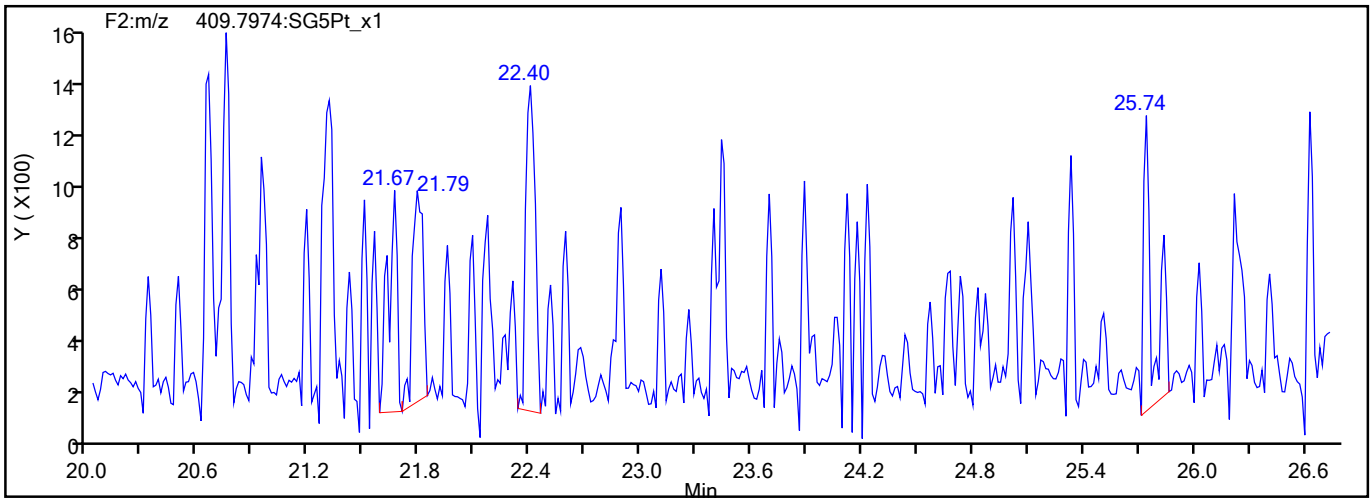

793752

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

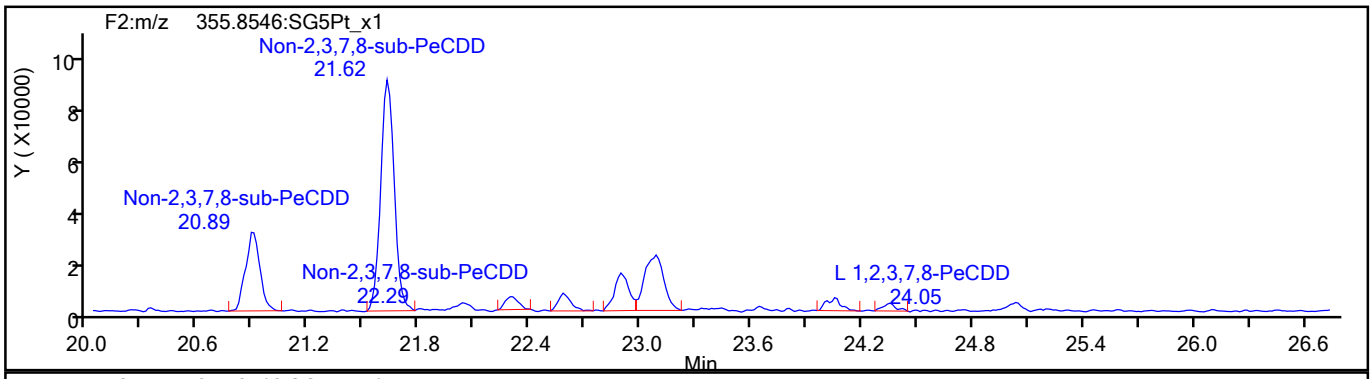

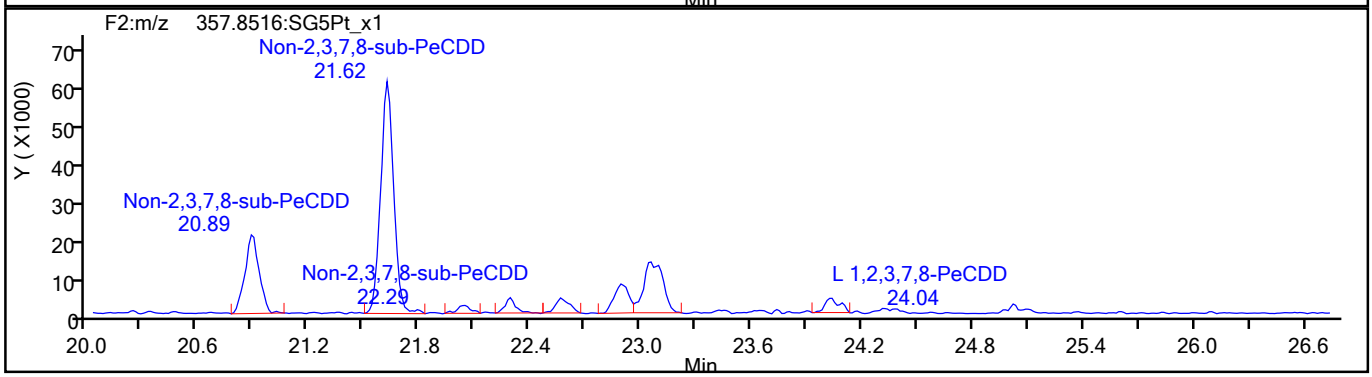

PeCDD Standards

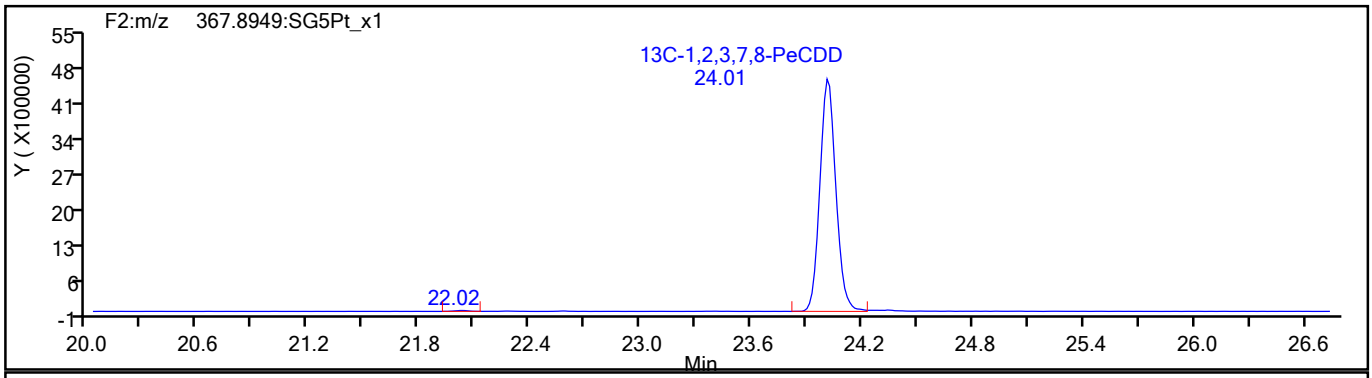

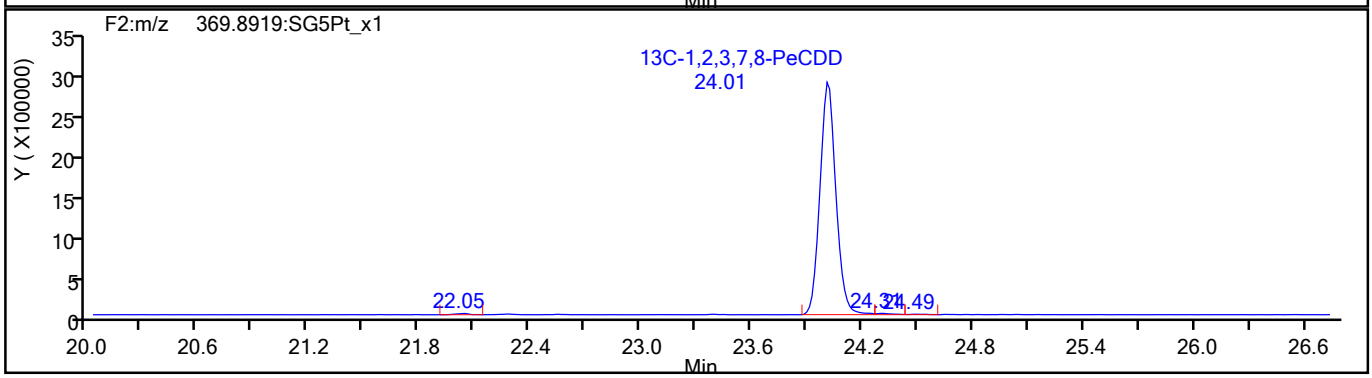

793753

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

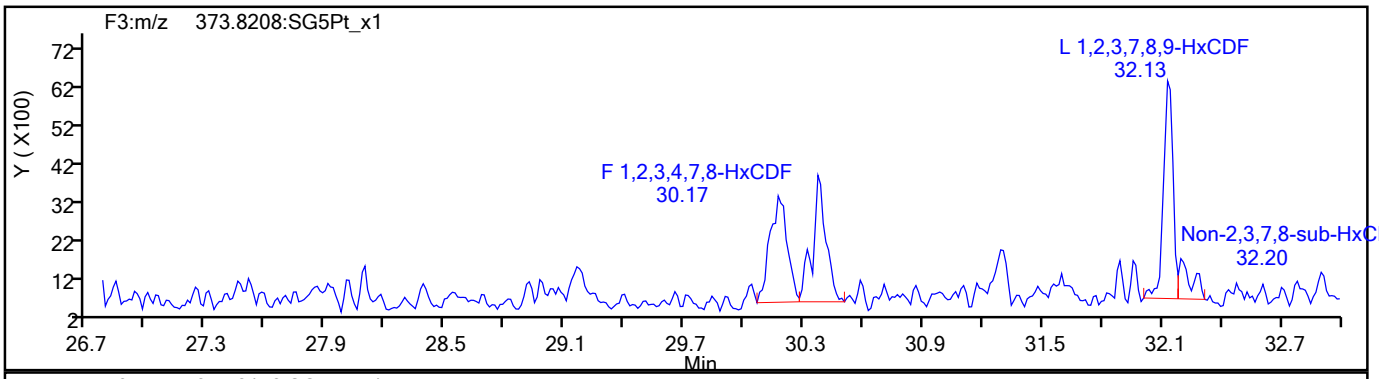

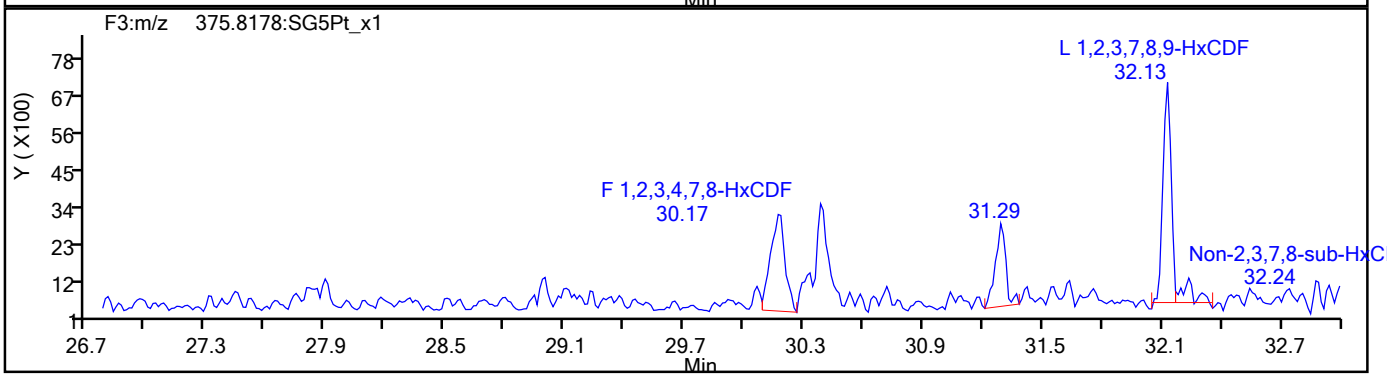

HxCDF Standards

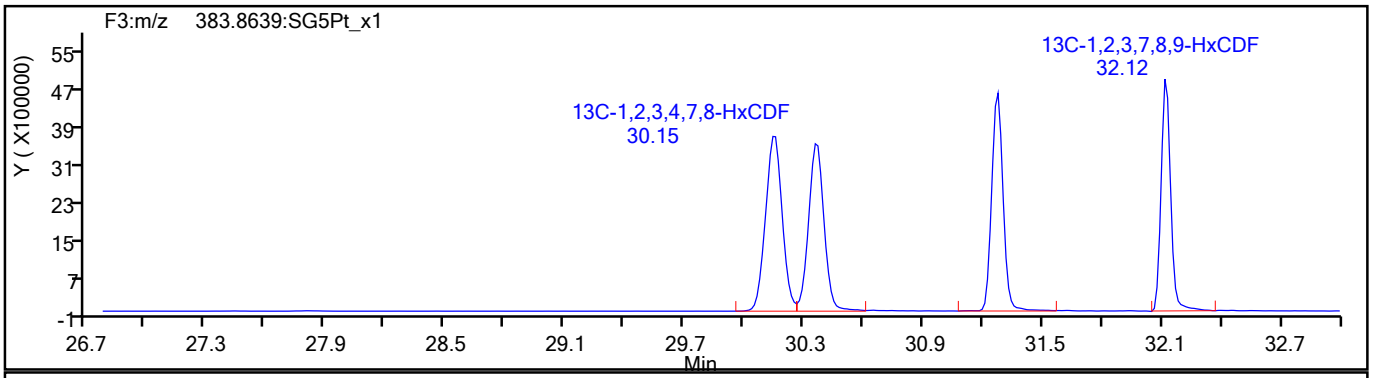

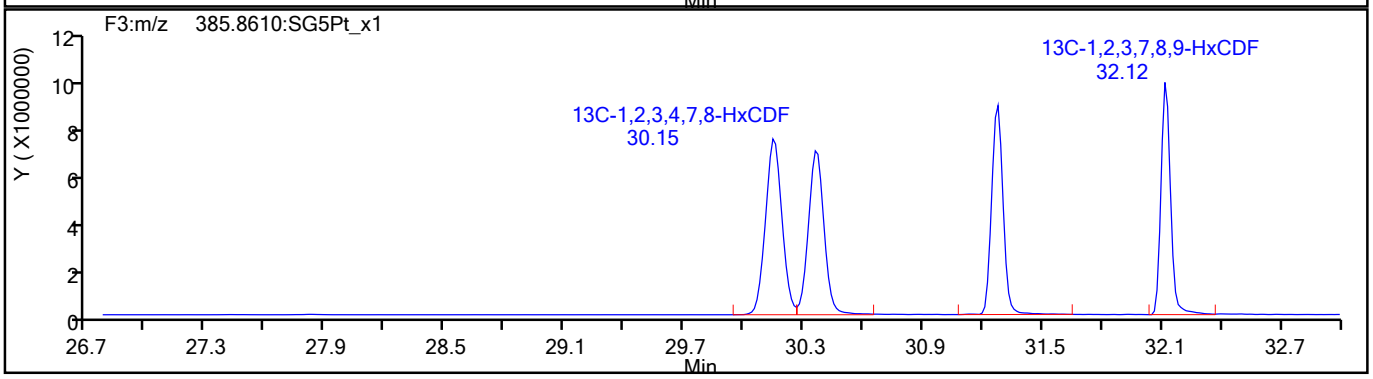

793754

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

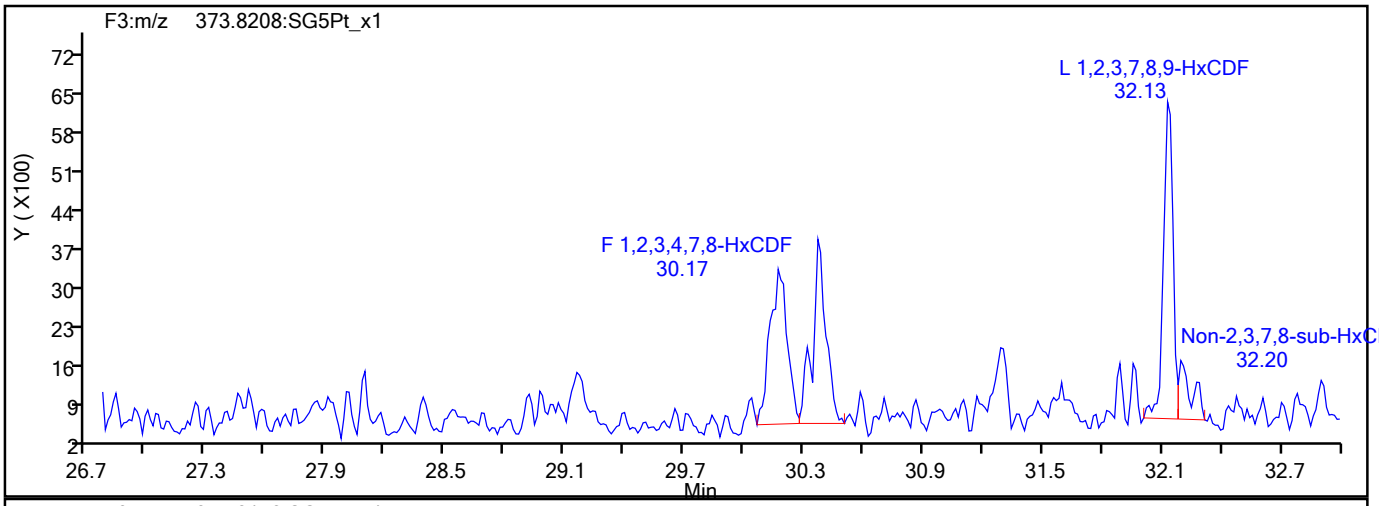

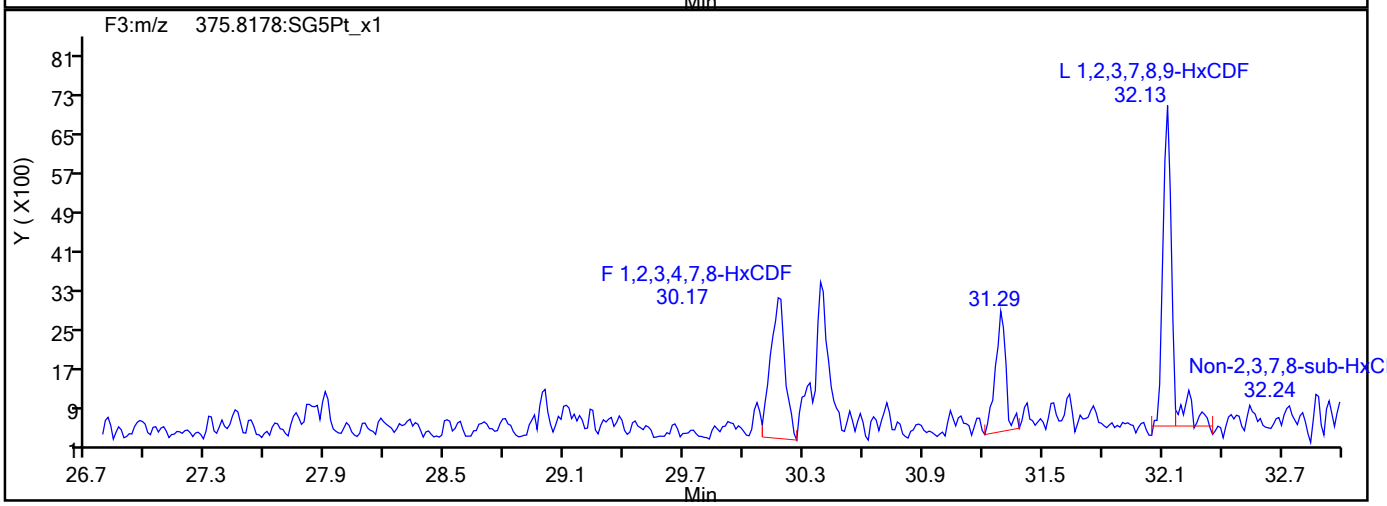

HxCDF Interference Mass

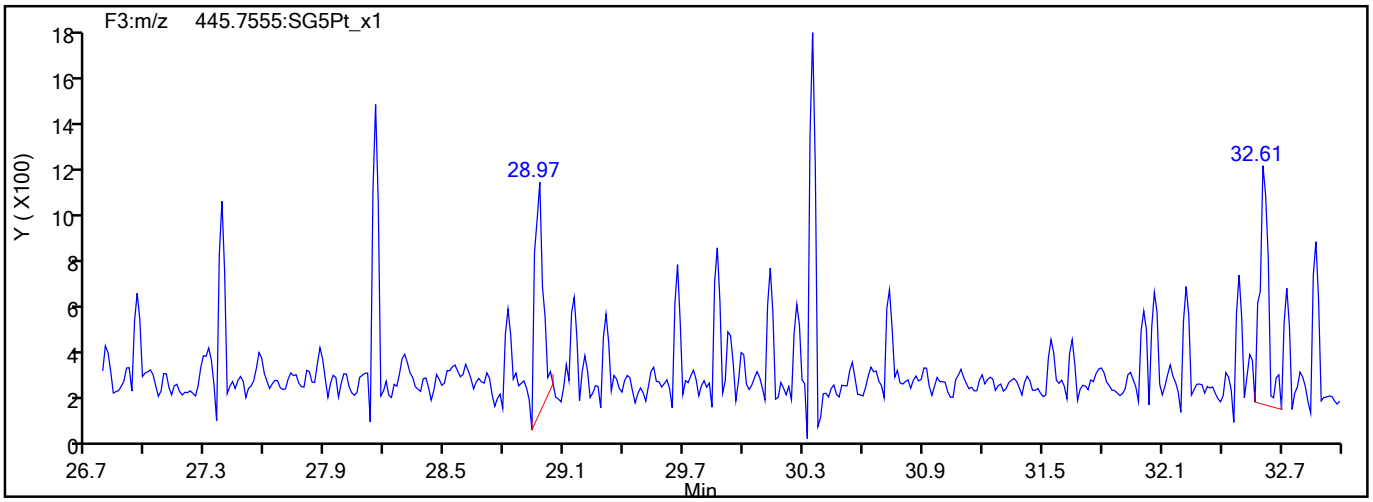

793755

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

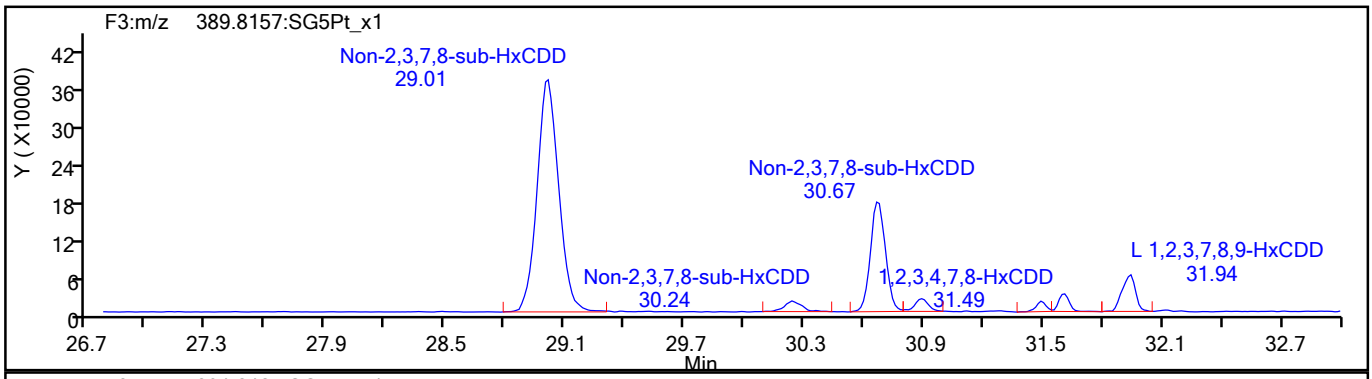

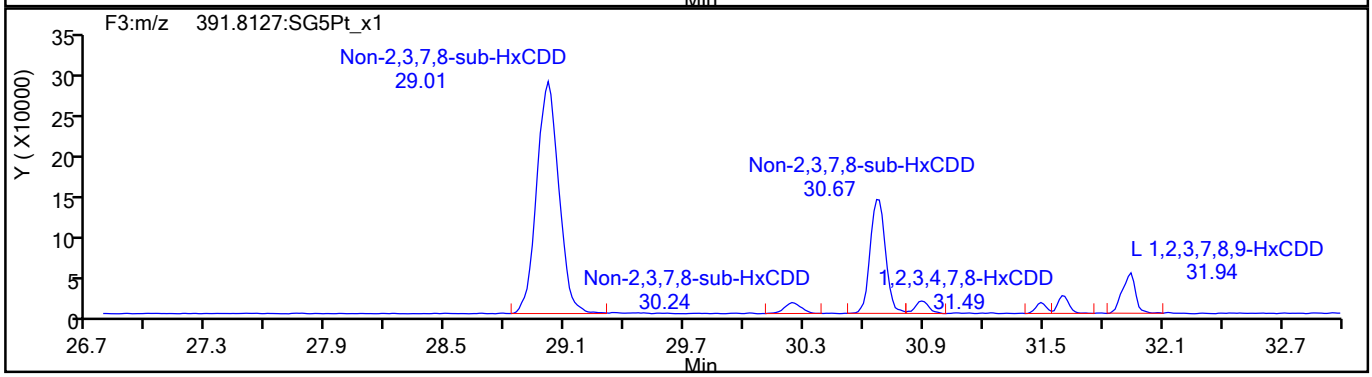

HxCDD Standards

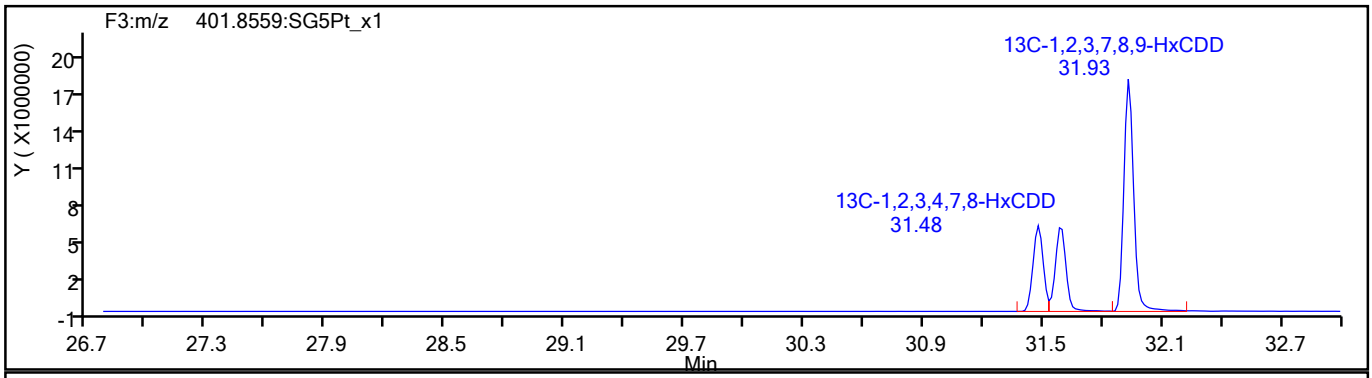

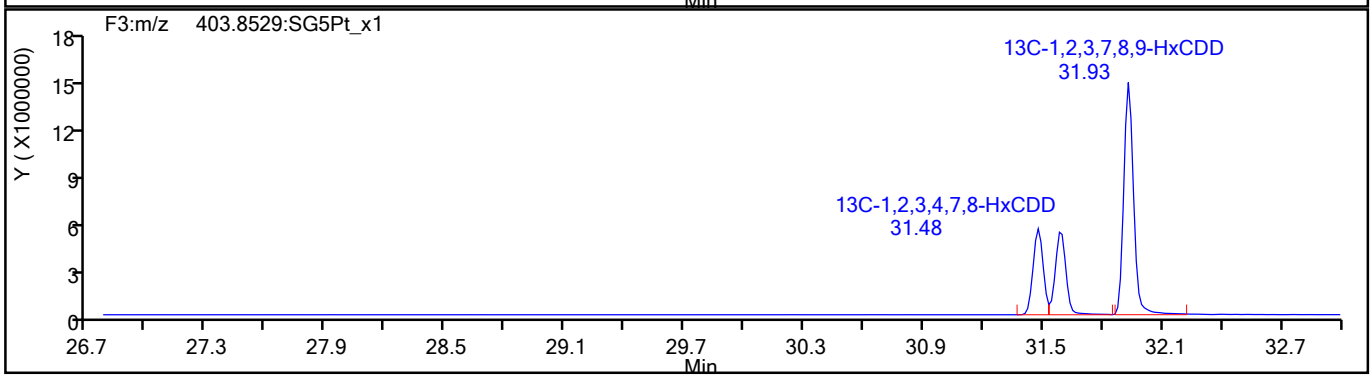

793756

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

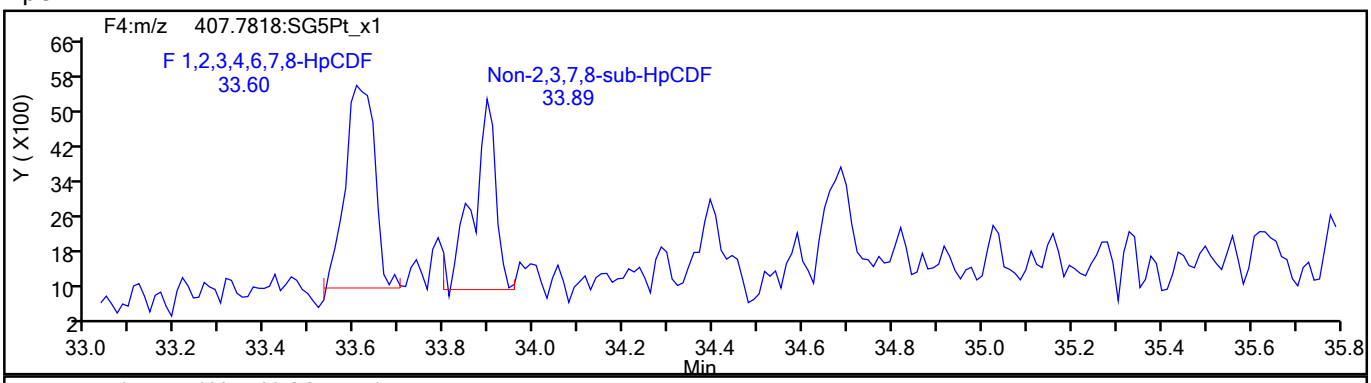

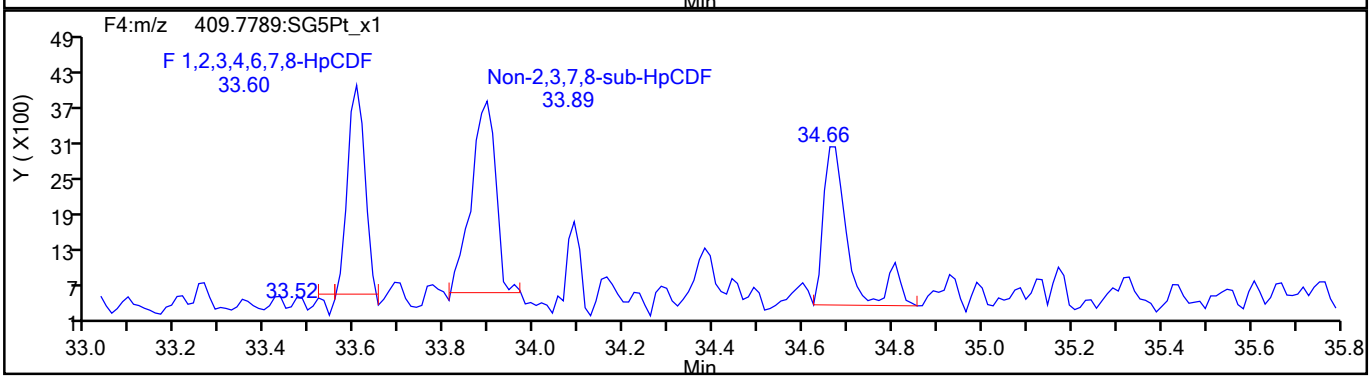

HpCDF Standards

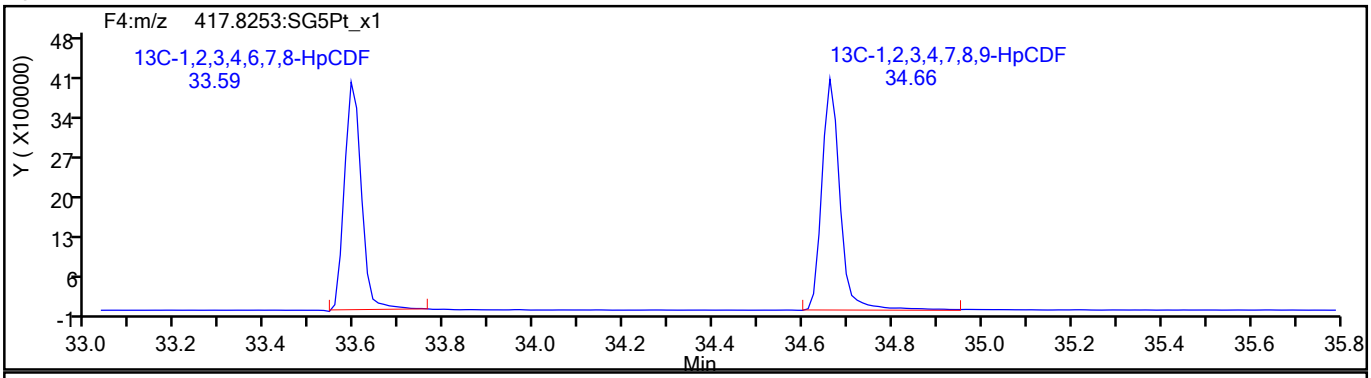

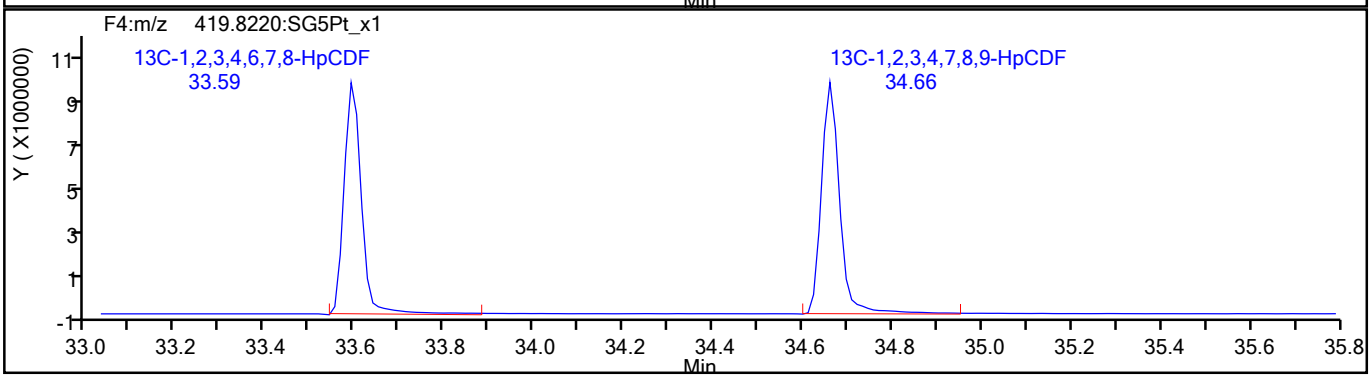

793757

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

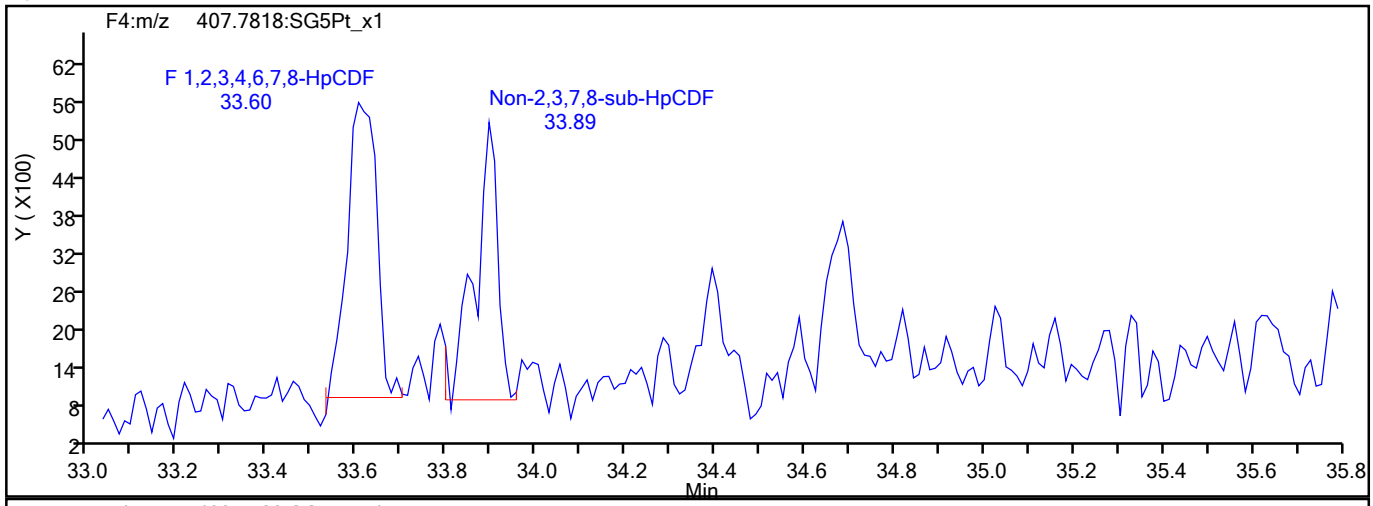

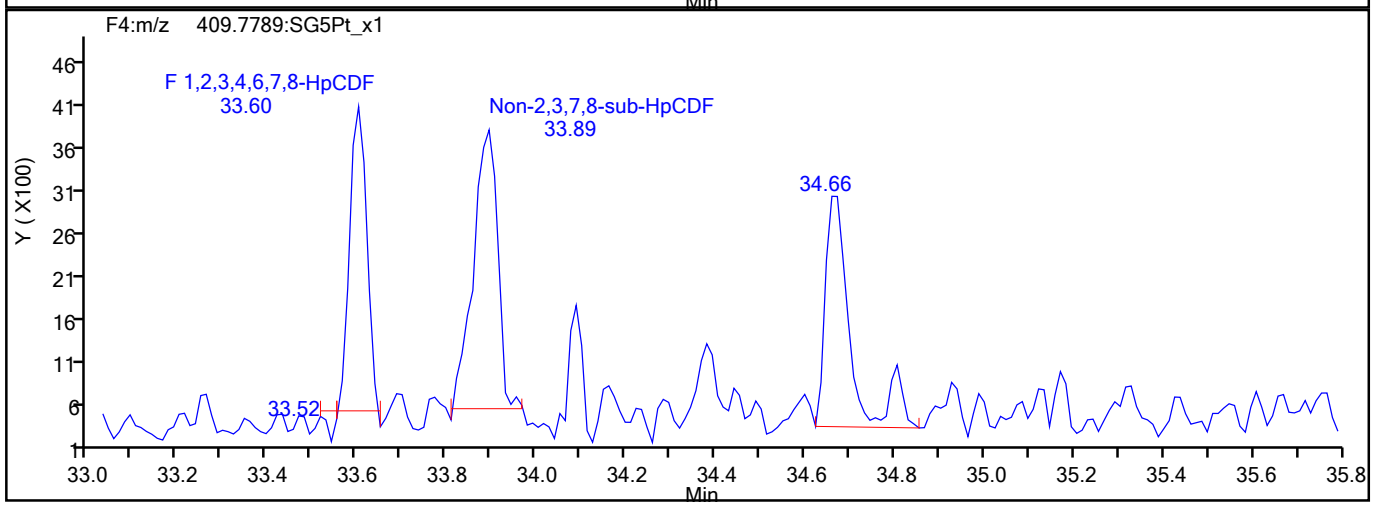

HpCDF Interference Mass

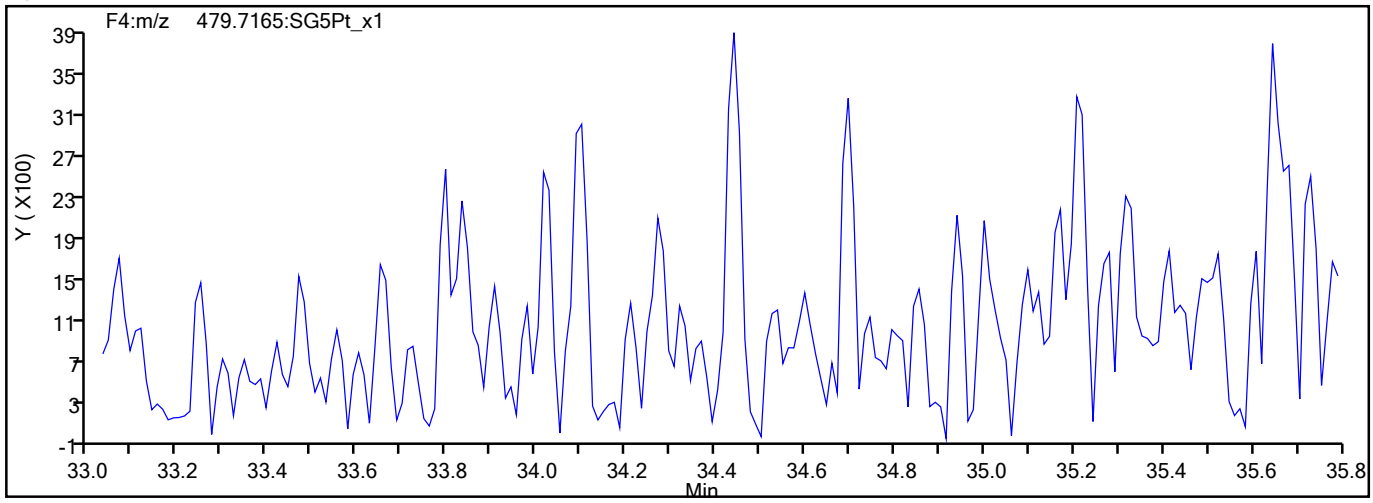

793758

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

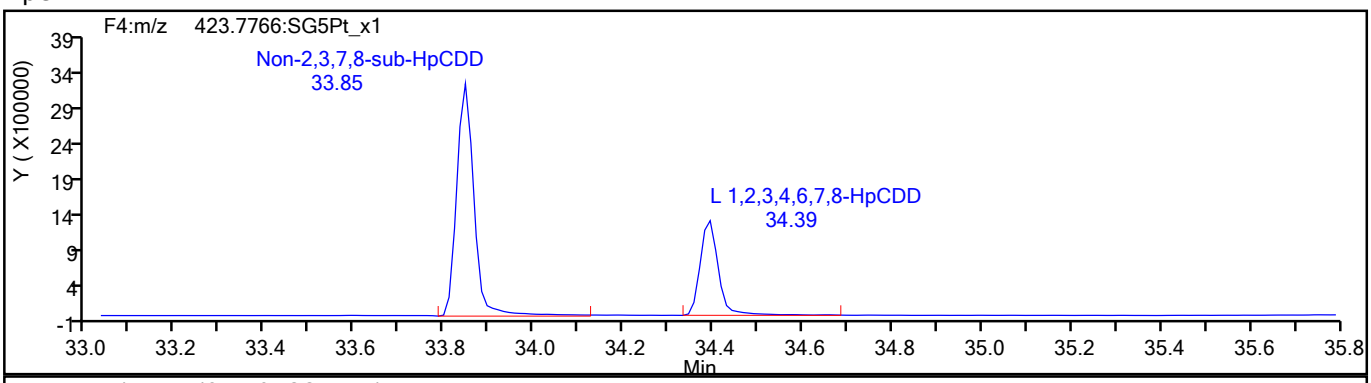

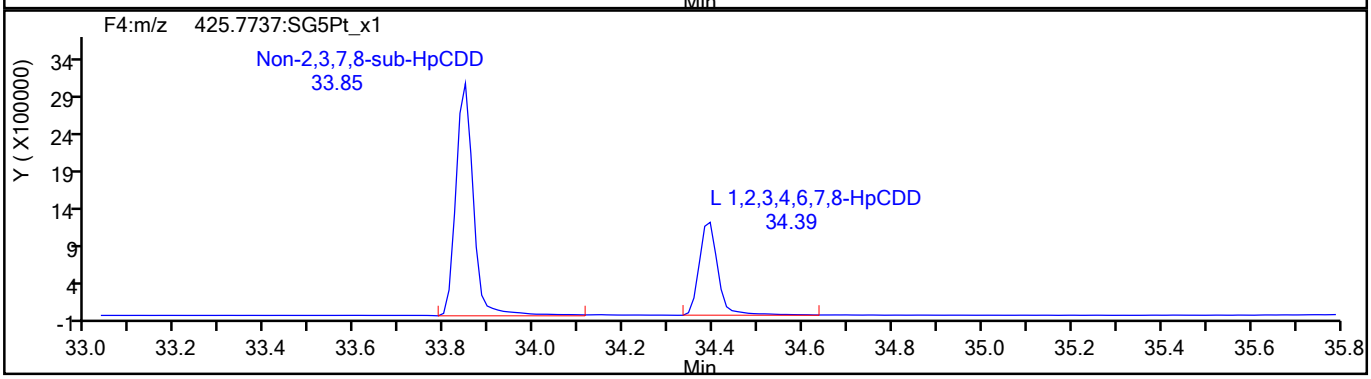

HpCDD Standards

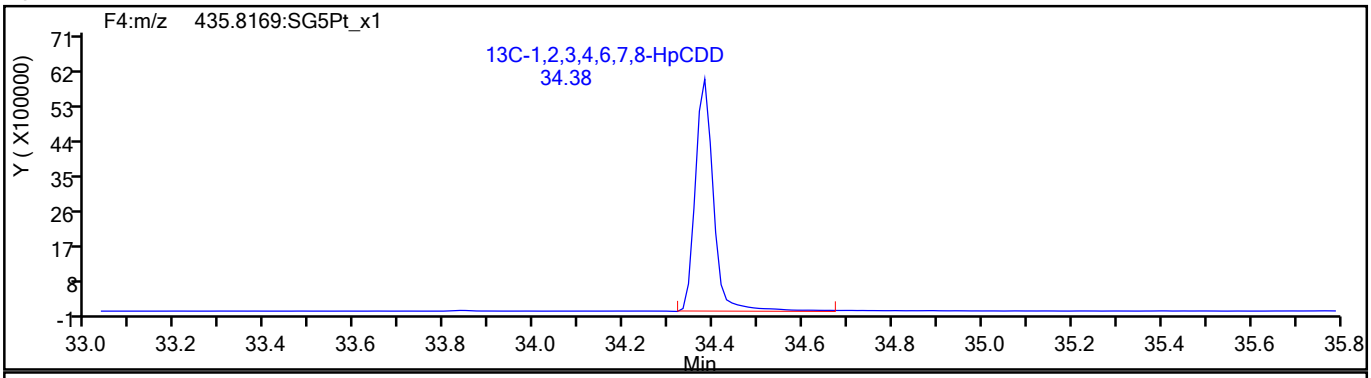

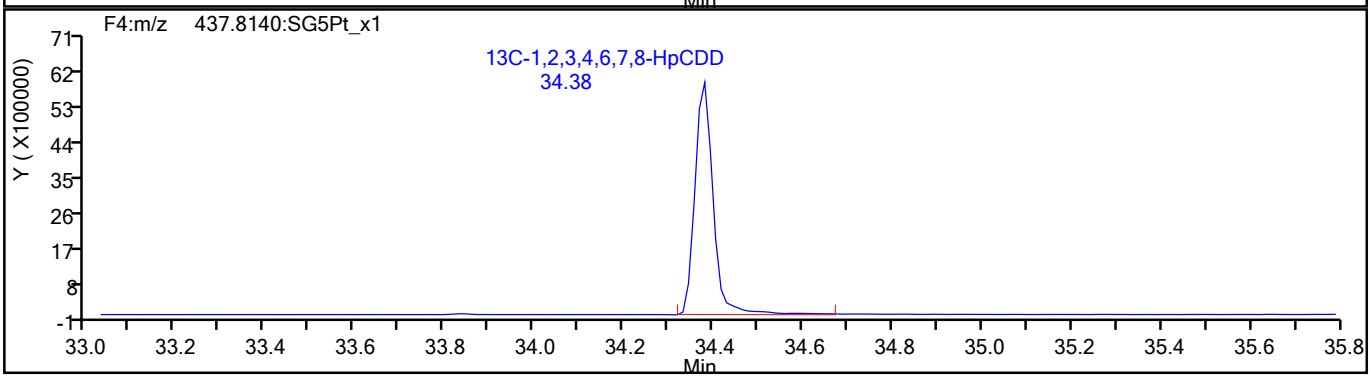

793759

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

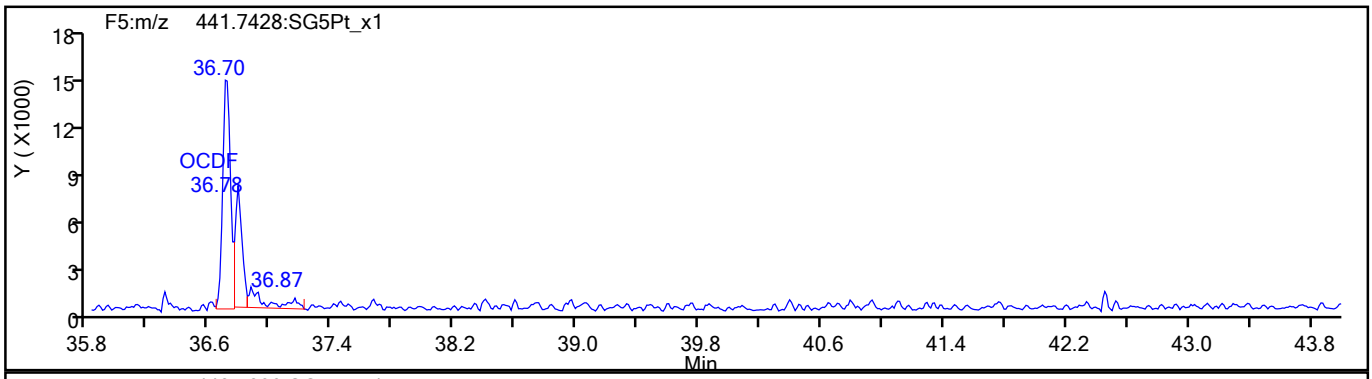

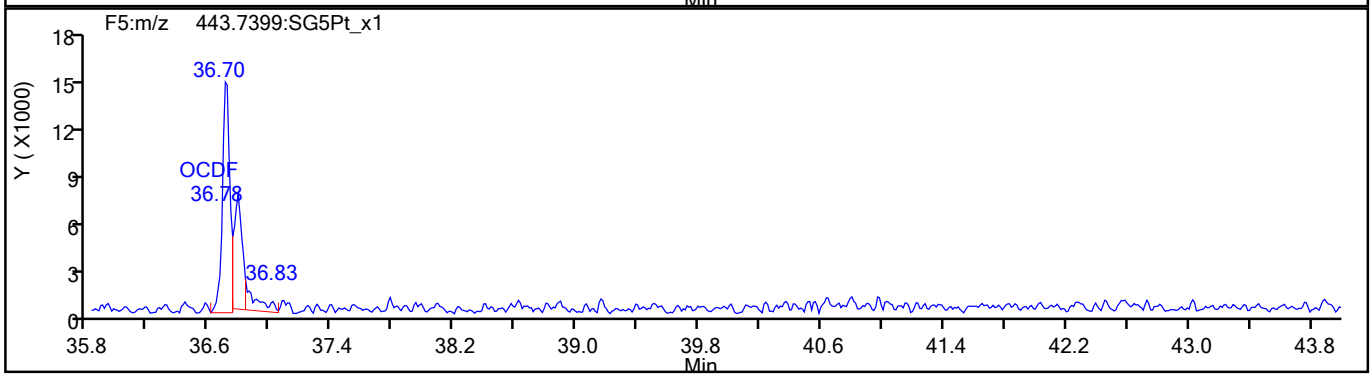

OCDF Standards

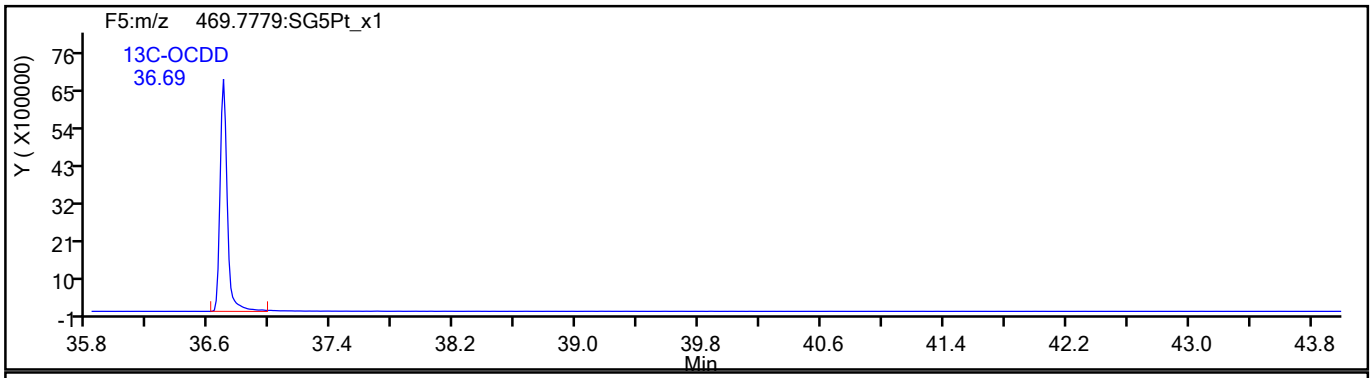

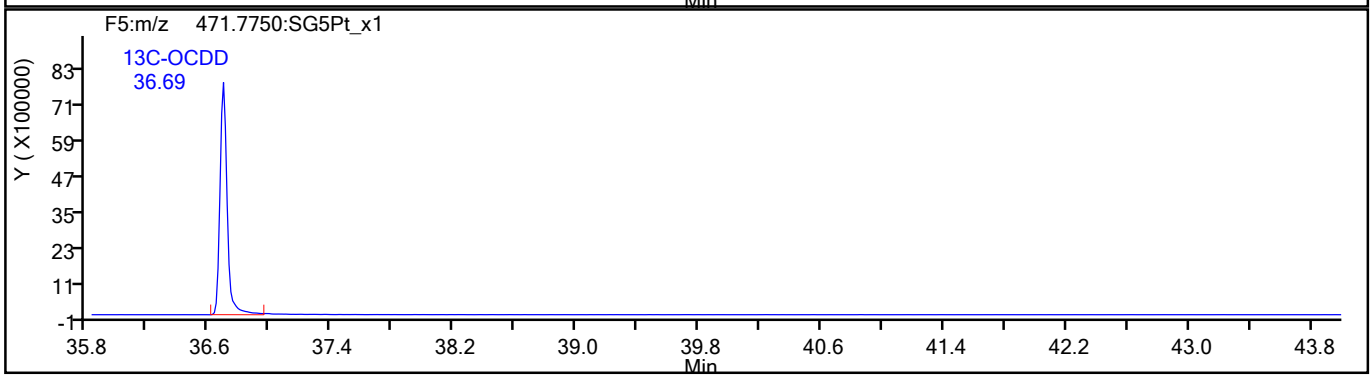

793760

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

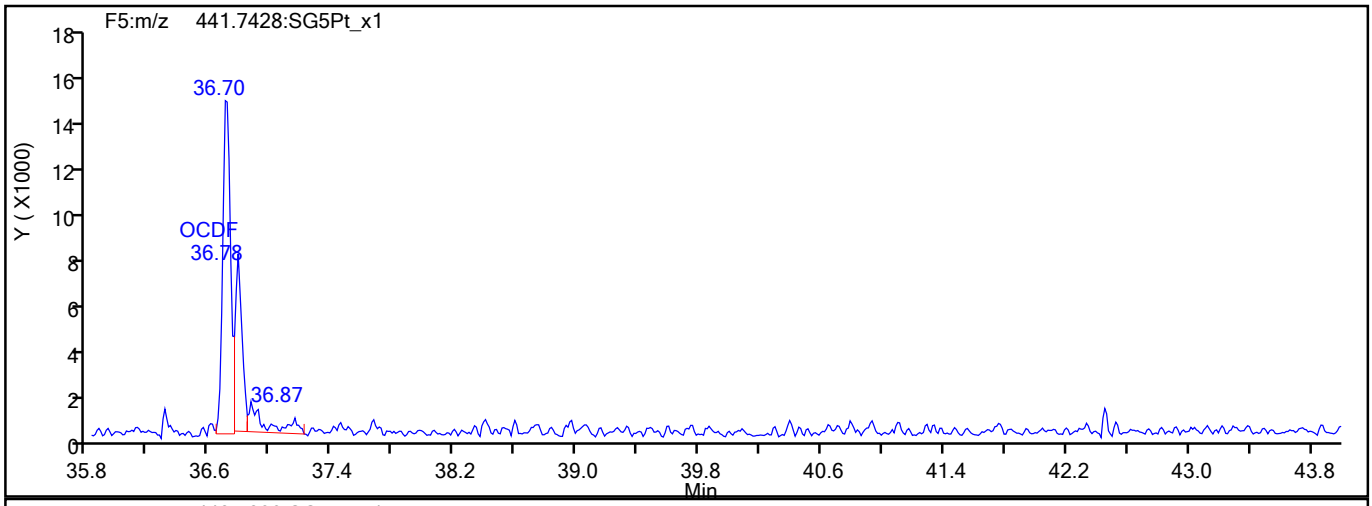

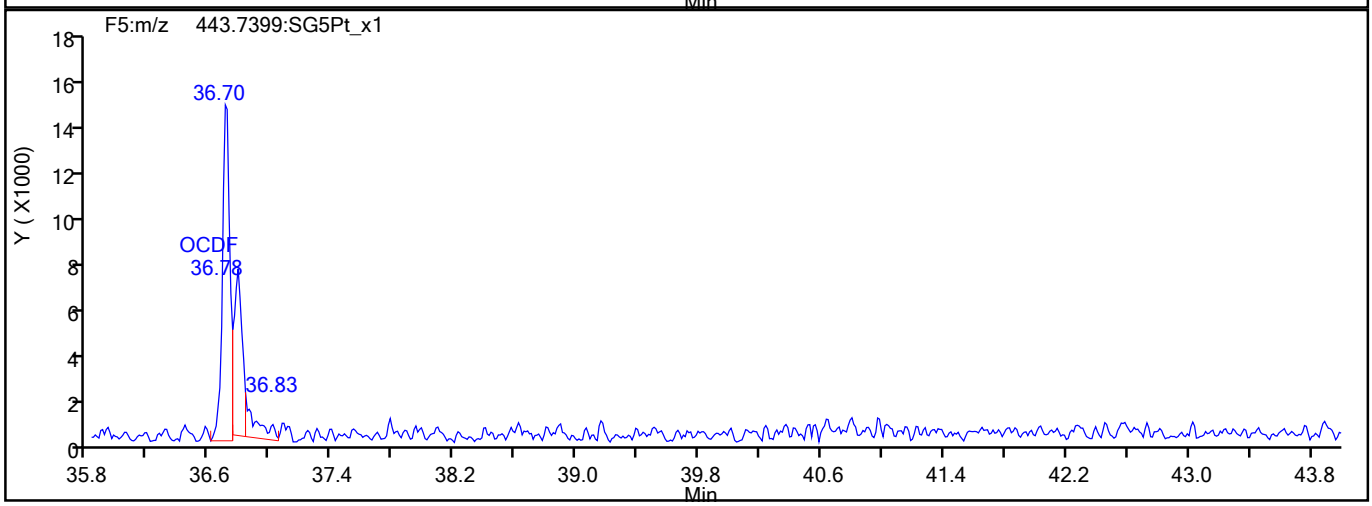

OCDF Interference Mass

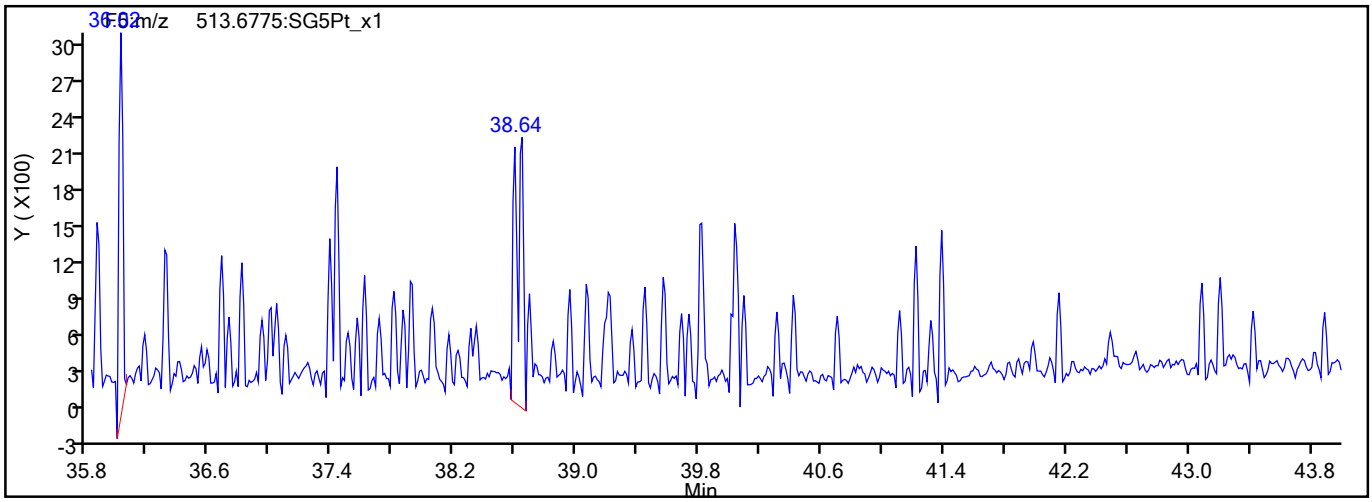

793761

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

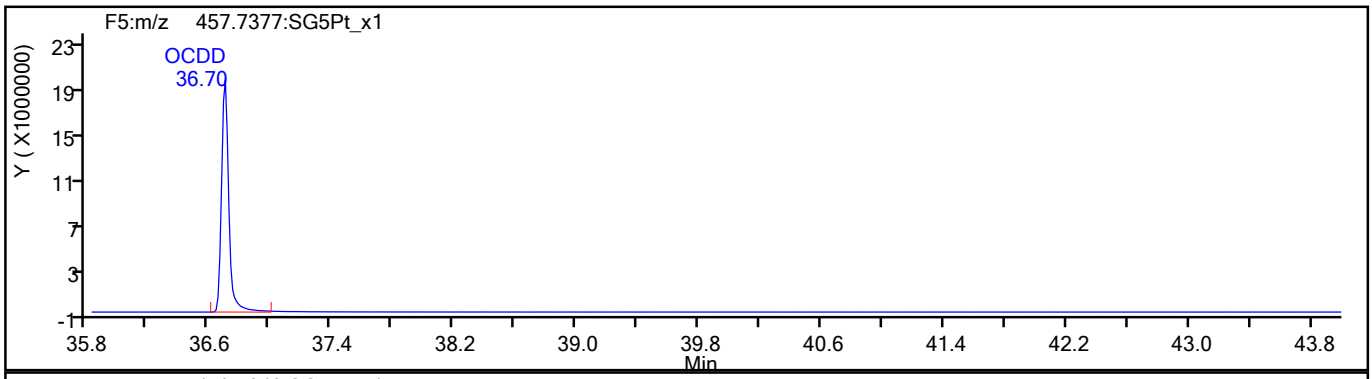

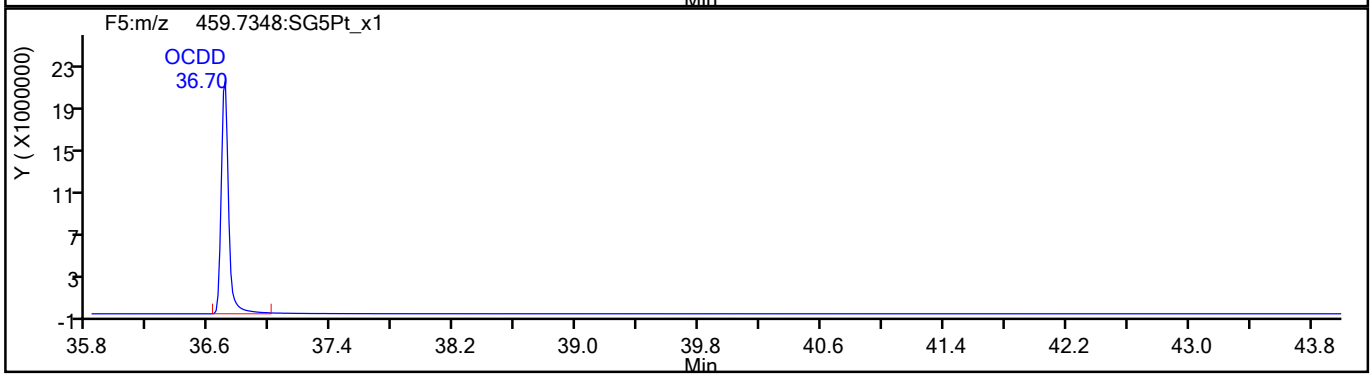

OCDD Standards

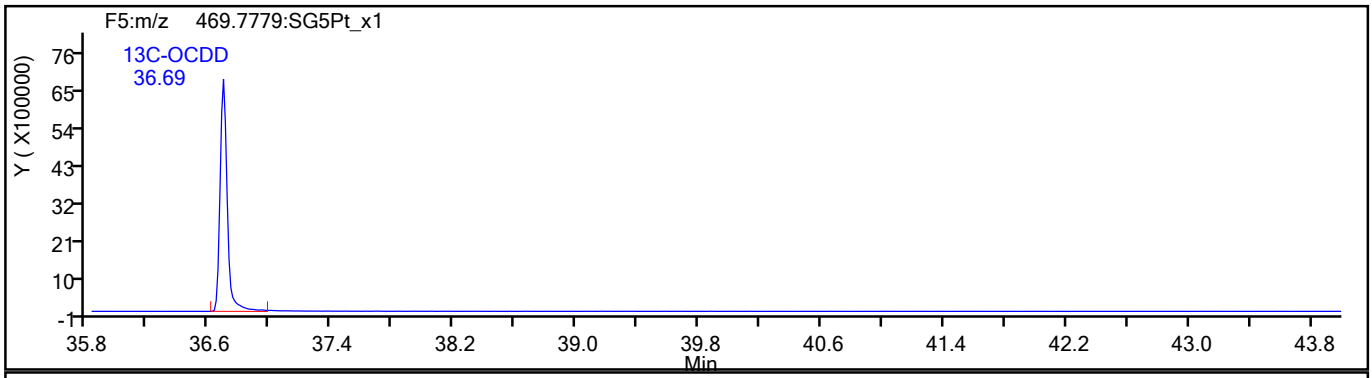

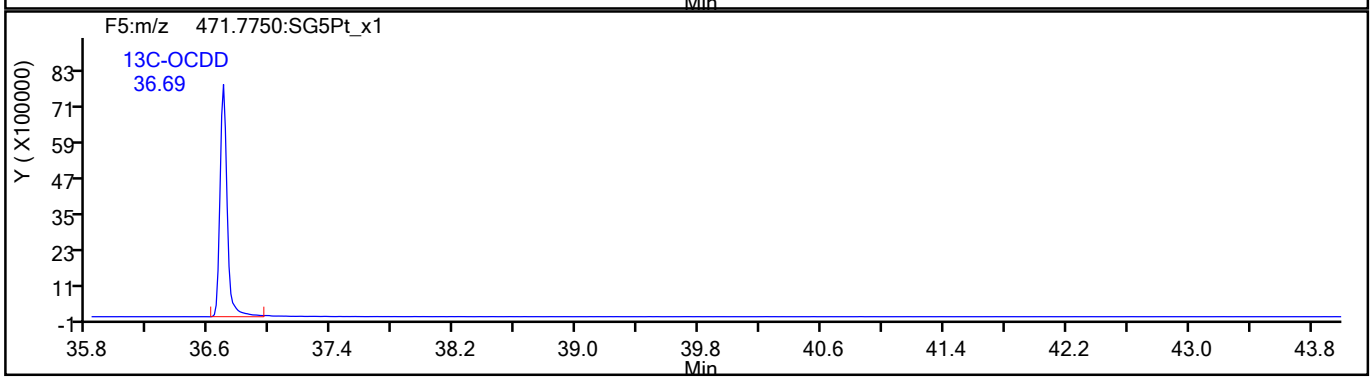

793762

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

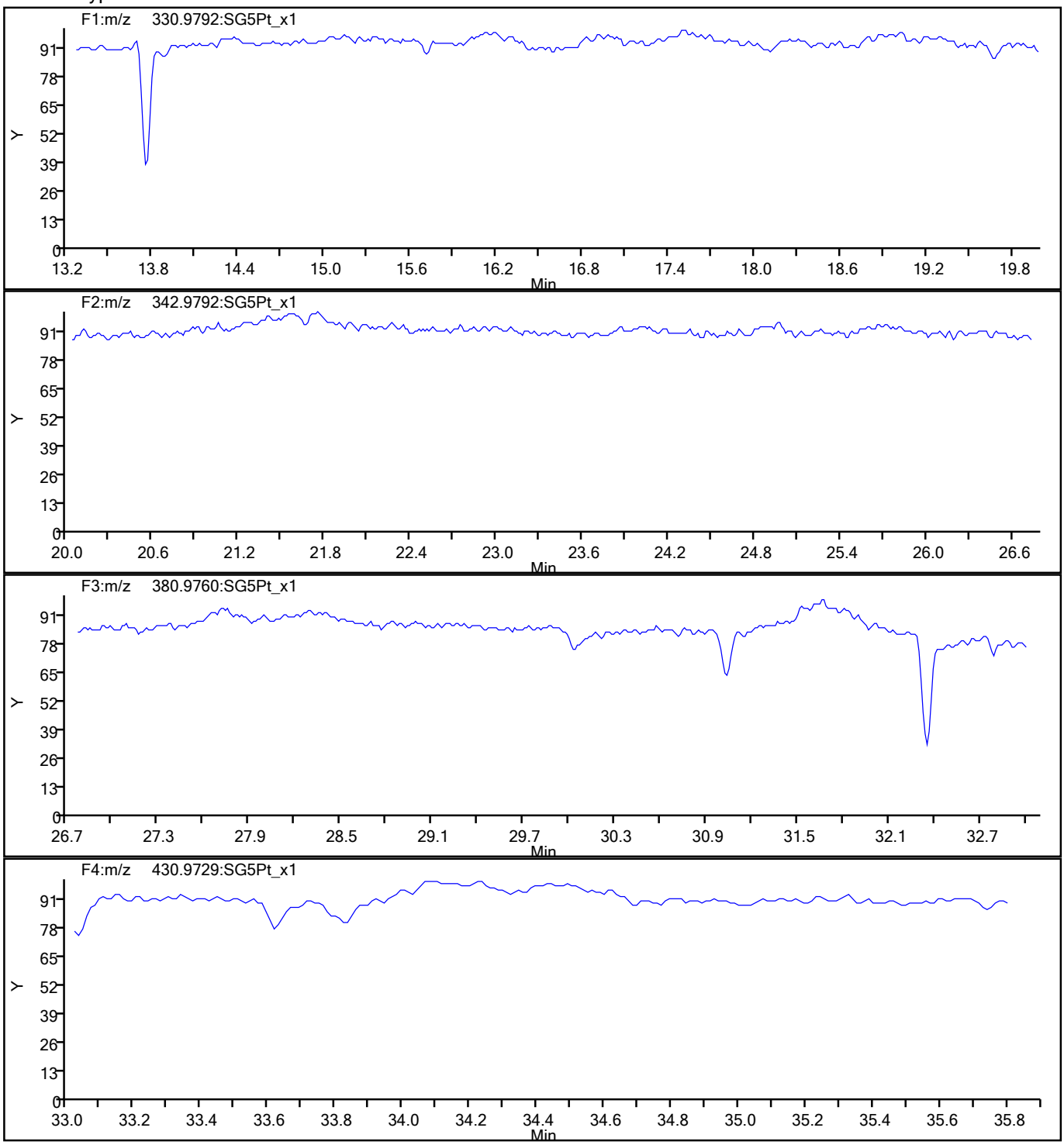

793763

Report Date: 30-Aug-2021 16:39:36 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_36.d		
Injection Date:	26-Aug-2021 13:05:53	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-DUP-18		
Worklist#:	519966	Sample Line#:	8
Column Type:	DB-5	Column Dia:	0.32 mm

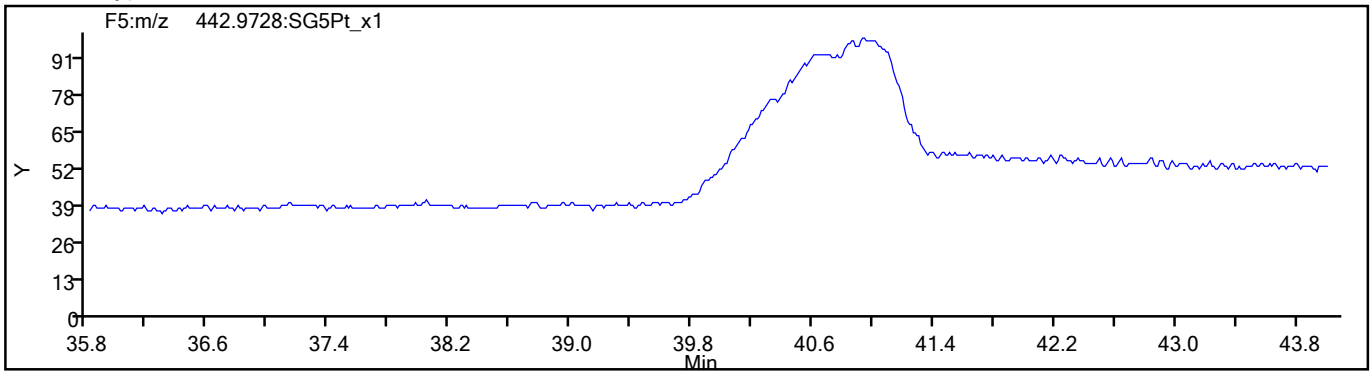

793764

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDF	1.0287	0.8698	1.0458	1.1094	1.0657	AveID		1.0239				8.9		20.0			
2,3,7,8-TCDD	1.2575	1.0971	1.2651	1.3434	1.3075	AveID		1.2541				7.5		20.0			
1,2,3,7,8-PeCDF	1.0739	0.9128	1.0891	1.1370	1.0928	AveID		1.0611				8.1		20.0			
2,3,4,7,8-PeCDF	1.0408	0.8610	1.0466	1.1082	1.0356	AveID		1.0184				9.1		20.0			
1,2,3,7,8-PeCDD	1.0578	0.9031	1.0680	1.1310	1.0823	AveID		1.0484				8.2		20.0			
1,2,3,4,7,8-HxCDF	1.1222	0.9192	1.1025	1.1936	1.0881	AveID		1.0851				9.3		20.0			
1,2,3,6,7,8-HxCDF	1.1488	0.9637	1.1546	1.1966	1.1664	AveID		1.1260				8.2		20.0			
2,3,4,6,7,8-HxCDF	1.2223	0.9863	1.1858	1.2415	1.2018	AveID		1.1675				8.9		20.0			
1,2,3,4,7,8-HxCDD	1.0979	0.8906	1.1304	1.1671	1.0341	AveID		1.0640				10.2		20.0			
1,2,3,6,7,8-HxCDD	1.0294	0.8529	1.0113	1.0930	1.0138	AveID		1.0001				8.9		20.0			
1,2,3,7,8,9-HxCDD	1.1551	0.9428	1.1999	1.2421	1.1227	AveID		1.1325				10.2		20.0			
1,2,3,7,8,9-HxCDF	1.1733	1.0136	1.1898	1.2479	1.2072	AveID		1.1664				7.7		20.0			
1,2,3,4,6,7,8-HpCDF	1.4474	1.2413	1.4986	1.5485	1.4706	AveID		1.4413				8.2		20.0			
1,2,3,4,6,7,8-HpCDD	1.1119	0.9539	1.1176	1.1675	1.1205	AveID		1.0943				7.5		20.0			
1,2,3,4,7,8,9-HpCDF	1.3136	1.1269	1.3622	1.4520	1.3321	AveID		1.3174				9.0		20.0			
OCDD	1.1009	0.9635	1.1652	1.1829	1.1226	AveID		1.1070				7.8		20.0			
OCDF	1.3863	1.1912	1.5145	1.5858	1.5129	AveID		1.4382				10.8		20.0			
13C-2,3,7,8-TCDF	1.6500	1.5631	1.6241	1.6170	1.6703	Ave		1.6249				2.5		35.0			
13C-2,3,7,8-TCDD	0.9128	0.8588	0.8965	0.8940	0.9345	Ave		0.8993				3.1		35.0			
13C-1,2,3,7,8-PeCDF	1.1977	1.1539	1.2193	1.2121	1.2674	Ave		1.2101				3.4		35.0			
13C-2,3,4,7,8-PeCDF	1.2269	1.1924	1.2487	1.2129	1.3165	Ave		1.2395				3.8		35.0			
13C-1,2,3,7,8-PeCDD	0.7558	0.7433	0.7524	0.7498	0.8049	Ave		0.7612				3.3		35.0			
13C-1,2,3,4,7,8-HxCDF	1.0875	1.1006	1.0706	1.0371	1.1225	Ave		1.0837				3.0		35.0			
13C-1,2,3,6,7,8-HxCDF	1.1466	1.1401	1.1115	1.1251	1.1163	Ave		1.1279				1.3		35.0			
13C-2,3,4,6,7,8-HxCDF	1.0781	1.0785	1.0541	1.0562	1.0518	Ave		1.0637				1.3		35.0			
13C-1,2,3,4,7,8-HxCDD	0.7413	0.7515	0.6926	0.7049	0.7769	Ave		0.7334				4.7		35.0			
13C-1,2,3,6,7,8-HxCDD	0.8884	0.8870	0.8694	0.8685	0.8876	Ave		0.8802				1.2		35.0			
13C-1,2,3,7,8,9-HxCDF	0.9787	0.9851	0.9497	0.9522	0.9722	Ave		0.9676				1.6		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C-1,2,3,4,6,7,8-HpCDF	0.8030	0.7818	0.7501	0.7625	0.7677	Ave		0.7730				2.6		35.0			
13C-1,2,3,4,6,7,8-HpCDD	0.6554	0.6478	0.6343	0.6458	0.6528	Ave		0.6472				1.3		35.0			
13C-1,2,3,4,7,8,9-HpCDF	0.6985	0.7093	0.6800	0.6816	0.7346	Ave		0.7008				3.2		35.0			
13C-OCDD	0.4462	0.4357	0.4273	0.4575	0.4691	Ave		0.4472				3.7		35.0			
37Cl4-2,3,7,8-TCDD	0.9705	0.9794	1.1718	1.1876	1.2264	Ave		1.1071				11.1					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-510264/3	26JL2110D5_3.d
Level 2	IC 320-510264/4	26JL2110D5_4.d
Level 3	IC 320-510264/5	26JL2110D5_5.d
Level 4	IC 320-510264/6	26JL2110D5_6.d
Level 5	IC 320-510264/7	26JL2110D5_7.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDF		AveID	557485	1709191	10638776	44524782	204575642	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDD		AveID	376984	1184284	7104238	29808948	140421448	0.500	2.00	10.0	40.0	200
1,2,3,7,8-PeCDF		AveID	2112140	6620354	41588176	171023920	795873691	2.50	10.0	50.0	200	1000
2,3,4,7,8-PeCDF		AveID	2096967	6452410	40928436	166805723	783403837	2.50	10.0	50.0	200	1000
1,2,3,7,8-PeCDD		AveID	1312779	4219570	25165054	105236005	500555284	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDF		AveID	1949462	6041767	37525146	155057762	737075796	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDF		AveID	2104086	6561860	40802767	168618976	785709889	2.50	10.0	50.0	200	1000
2,3,4,6,7,8-HxCDF		AveID	2104896	6352404	39741365	164241378	762810877	2.50	10.0	50.0	200	1000
1,2,3,4,7,8-HxCDD		AveID	1300030	3996910	24891170	103044220	484857042	2.50	10.0	50.0	200	1000
1,2,3,6,7,8-HxCDD		AveID	1460747	4517909	27953752	118900298	543061818	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDD		AveID	1503407	4612548	29794954	122394998	563888565	2.50	10.0	50.0	200	1000
1,2,3,7,8,9-HxCDF		AveID	1834100	5963032	35924190	148834491	708280047	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDF		AveID	1856599	5795616	35740964	147892240	681312007	2.50	10.0	50.0	200	1000
1,2,3,4,6,7,8-HpCDD		AveID	1164074	3690749	22538791	94435922	441437476	2.50	10.0	50.0	200	1000

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3,4,7,8,9-HpCDF		AveID	1465634	4773949	29450636	123968724	590555312	2.50	10.0	50.0	200	1000
OCDD		AveID	1569338	5013385	31656667	135570174	635652839	5.00	20.0	100	400	2000
OCDF		AveID	1976175	6198469	41147202	181747068	856685987	5.00	20.0	100	400	2000
13C-2,3,7,8-TCDF	13CTCDD	Ave	108384725	98246522	101724636	100332269	95980421	100	100	100	100	100
13C-2,3,7,8-TCDD	13CTCDD	Ave	59957723	53975587	56155483	55471422	53698206	100	100	100	100	100
13C-1,2,3,7,8-PeCDF	13CTCDD	Ave	78674290	72525655	76368219	75205597	72829681	100	100	100	100	100
13C-2,3,4,7,8-PeCDF	13CTCDD	Ave	80591659	74944110	78214582	75259591	75649463	100	100	100	100	100
13C-1,2,3,7,8-PeCDD	13CTCDD	Ave	49643581	46721712	47124414	46524396	46251010	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDF	13CHxCD	Ave	69484482	65726932	68075509	64951889	67741189	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDF	13CHxCD	Ave	73262388	68089005	70677463	70459920	67363664	100	100	100	100	100
13C-2,3,4,6,7,8-HxCDF	13CHxCD	Ave	68885161	64406928	67028498	66145684	63471184	100	100	100	100	100
13C-1,2,3,4,7,8-HxCDD	13CHxCD	Ave	47363504	44877133	44039927	44144841	46886171	100	100	100	100	100
13C-1,2,3,6,7,8-HxCDD	13CHxCD	Ave	56759108	52974056	55284532	54392394	53564396	100	100	100	100	100
13C-1,2,3,7,8,9-HxCDF	13CHxCD	Ave	62528954	58828058	60389284	59636084	58669892	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDF	13CHxCD	Ave	51308225	46691158	47697671	47752972	46328151	100	100	100	100	100
13C-1,2,3,4,6,7,8-HpCDD	13CHxCD	Ave	41876556	38689128	40333717	40442950	39395832	100	100	100	100	100
13C-1,2,3,4,7,8,9-HpCDF	13CHxCD	Ave	44628352	42362179	43238622	42687625	44333848	100	100	100	100	100
13C-OCDD	13CHxCD	Ave	57018462	52034518	54338243	57303880	56623863	200	200	200	200	200

FORM VI
DIOXIN BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1 Analy Batch No.: 510264

SDG No.:

Instrument ID: 10D5 GC Column: DB-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/26/2021 10:51 Calibration End Date: 07/26/2021 13:51 Calibration ID: 56137

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
37Cl4-2,3,7,8-TCDD	13CT CDD	Ave	318727	1231219	7339670	29474361	140953034	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\26JL2110D5.SPL
Last Modified: Monday, July 26, 2021 16:58:03 Pacific Daylight Time
Printed: Tuesday, July 27, 2021 07:40:45 Pacific Daylight Time

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	26JL2110D5_1	WDM HRDXNCP_00042	WDM 072621	Tray01:1	Dioxin		SMA
2	26JL2110D5_2	SB Solvent Blank C-14	SB 072621	Tray01:3			SMA
3	26JL2110D5_3	CS-2 HRDXNL2_00032	IC 072621	Tray01:4	Dioxin		SMA
4	26JL2110D5_4	CS-3 HRDXNL3_00029	IC 072621A	Tray01:5	Dioxin		SMA
5	26JL2110D5_5	CS-4 HRDXNL4_00099	IC 072621B	Tray01:2	Dioxin		SMA
6	26JL2110D5_6	CS-5 HRDXNL5_00032	IC 072621C	Tray01:6	Dioxin		SMA
7	26JL2110D5_7	CS-6 HRDXNL6_00028	IC 072621D	Tray01:7	Dioxin		SMA
8	26JL2110D5_8	SB Solvent Blank C-14	SB 072621A	Tray01:3			SMA
9	26JL2110D5_9	ICV HRDXNIC_00047	ICV 072621	Tray01:8	Dioxin		SMA
10	26JL2110D5_10	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS
11	26JL2110D5_11	WDM HRDXNCP_00042	WDM 031621C	Tray01:1	Dioxin		KSS
12	26JL2110D5_12	SB Solvent Blank C-14	SB 072621B	Tray01:3			KSS
13	26JL2110D5_13	mb 320-508015/1-a	mb 320-508015/1-a	Tray01:9	1613B/8290/Water	D255	KSS
14	26JL2110D5_14	lcs 320-508015/2-a	lcs 320-508015/2-a	Tray01:10	1613B/8290/Water		KSS
15	26JL2110D5_15	lcsd 320-508015/3-a	lcsd 320-508015/3-a	Tray01:11	1613B/8290/Water		KSS
16	26JL2110D5_16	320-76081-a-3-c	320-76081-a-3-c	Tray01:12	1613B/8290/Water		KSS
17	26JL2110D5_17	SB Solvent Blank C-14	SB 072621C	Tray01:3			KSS
18	26JL2110D5_18	CS-4 HRDXNL4_00099	CCV 031621E	Tray01:2	Dioxin		KSS

LOGFILE CHECKED
DB 7/27/21

793770

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:18:21 Pacific Daylight Time

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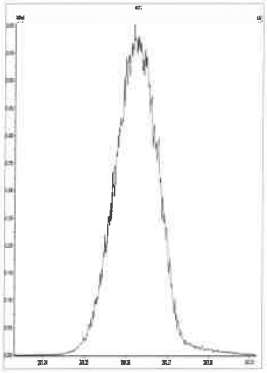

M 304.9824 R 12752

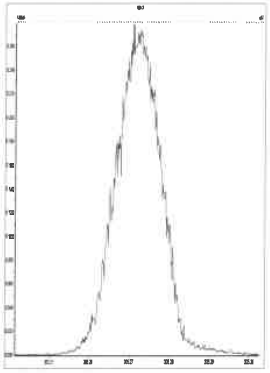

M 318.9792 R 13230

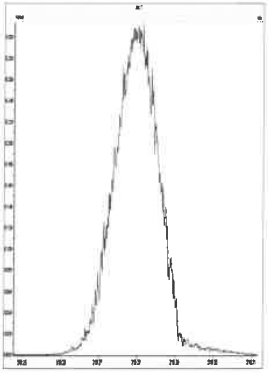

M 330.9792 R 12691

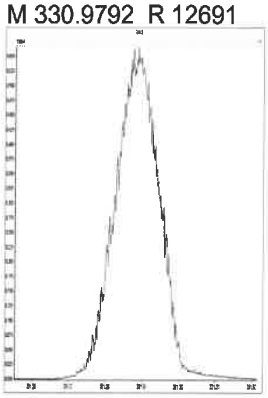

M 342.9792 R 12885

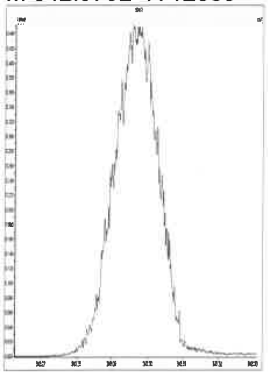

M 354.9792 R 12138

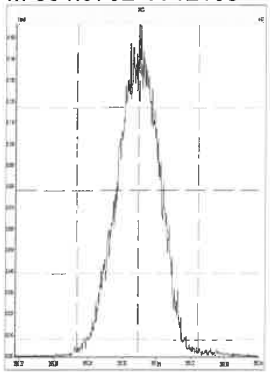

M 366.9792 R 13090

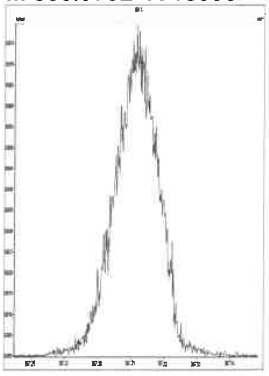

M 380.9760 R 12562

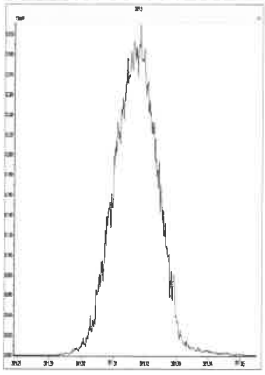

M 392.9760 R 12753

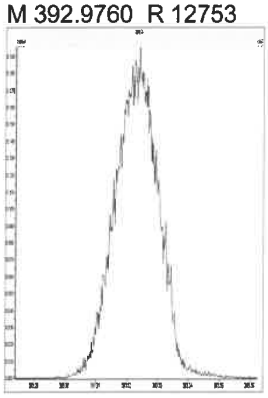

M 404.9760 R 12137

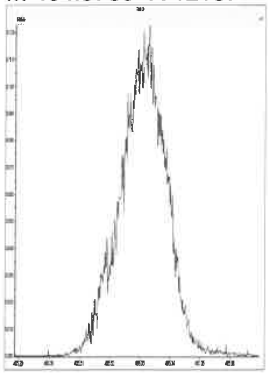

M 416.9760 R 12563

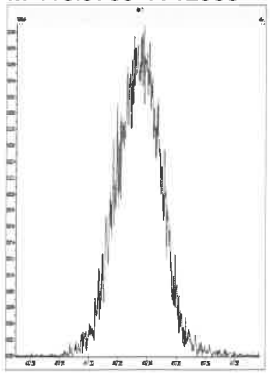

793771

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:04 Pacific Daylight Time

M 318.9792 R 13300

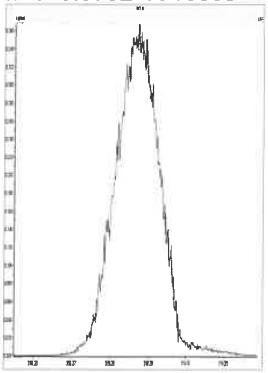

M 330.9792 R 12691

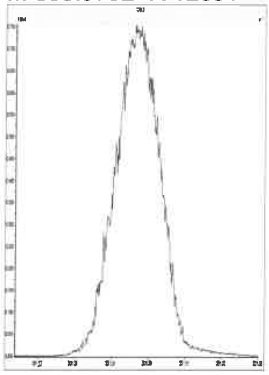

M 342.9792 R 12499

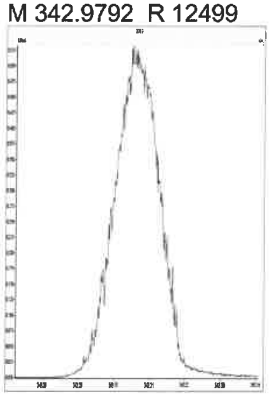

M 354.9792 R 12374

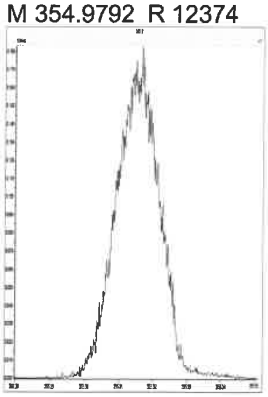

M 366.9792 R 12691

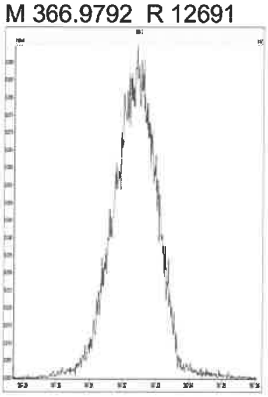

M 380.9760 R 12690

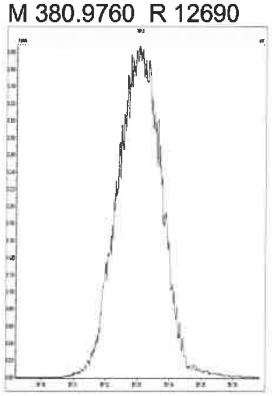

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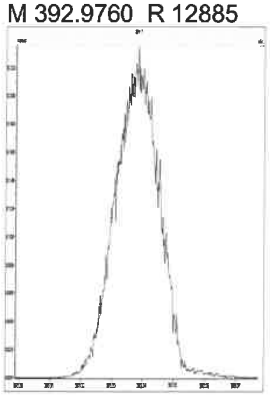

M 404.9760 R 12817

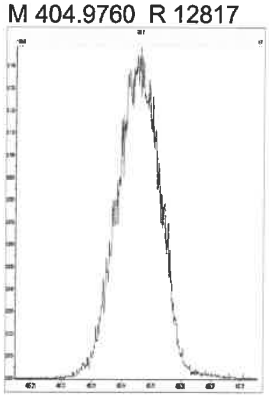

M 416.9760 R 12954

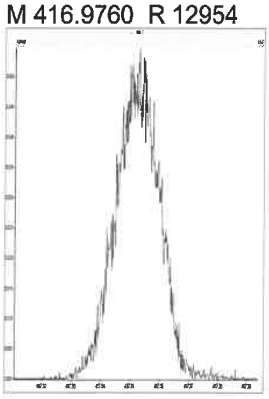

793772

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Monday, July 26, 2021 09:19:43 Pacific Daylight Time

M 366.9792 R 12440

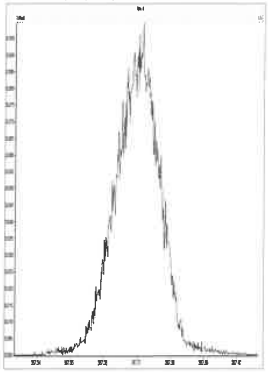

M 380.9760 R 12955

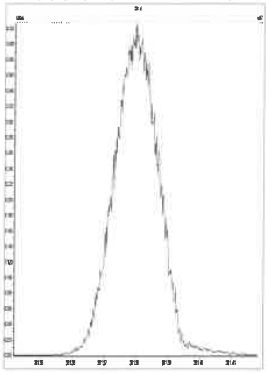

M 392.9760 R 12690

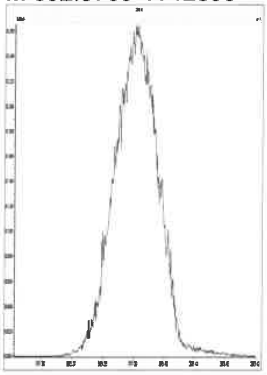

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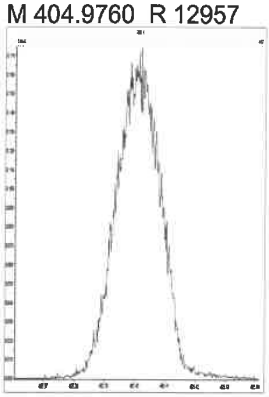

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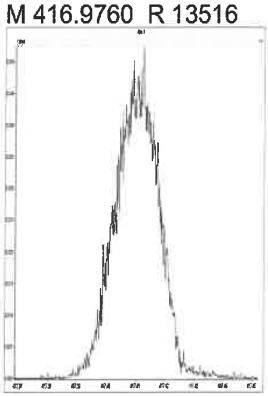

M 430.9728 R 12564

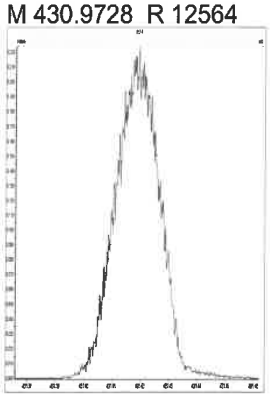

M 442.9728 R 12953

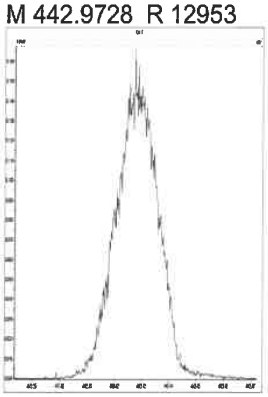

M 454.9728 R 13226

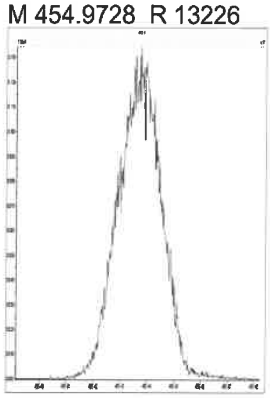

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File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

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M 380.9760 R 12885

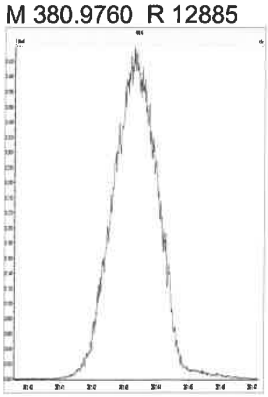

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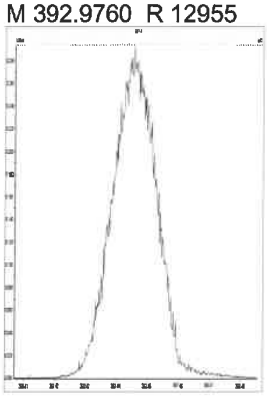

M 404.9760 R 12756

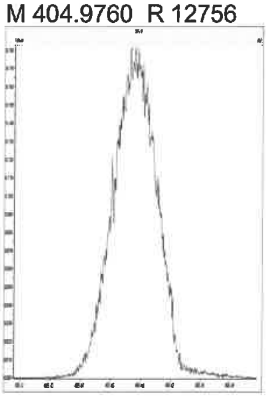

M 416.9760 R 13368

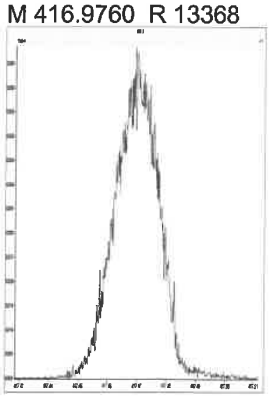

M 430.9728 R 12758

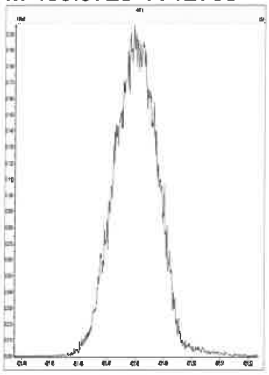

M 442.9728 R 13229

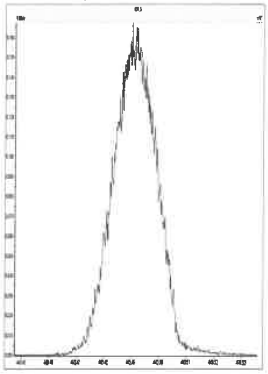

M 454.9728 R 13737

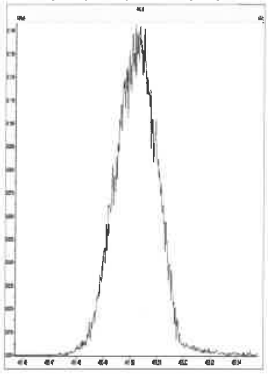

M 466.9728 R 12952

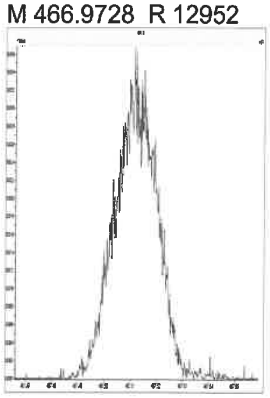

M 480.9696 R 12819

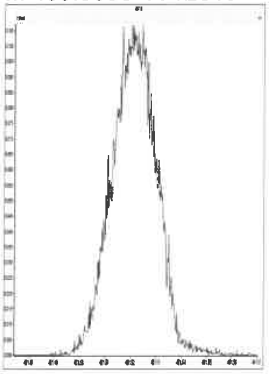

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

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M 380.9760 R 12630

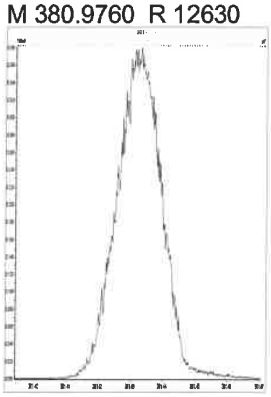

M 392.9760 R 12687

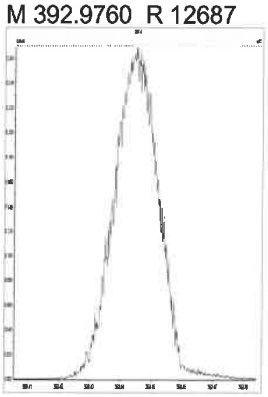

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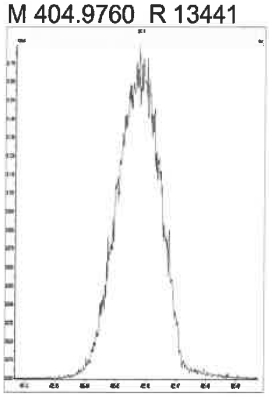

M 416.9760 R 12886

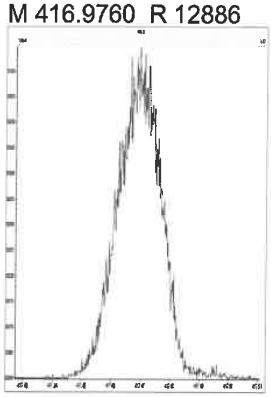

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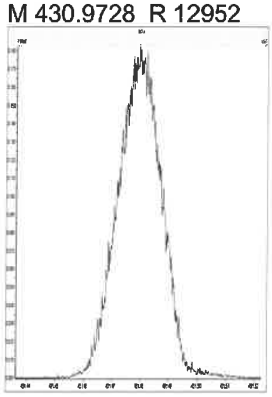

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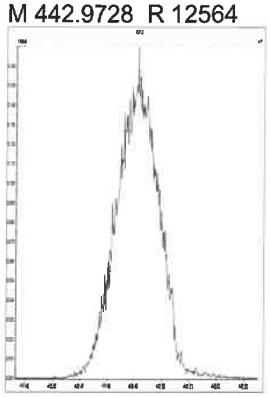

M 454.9728 R 13228

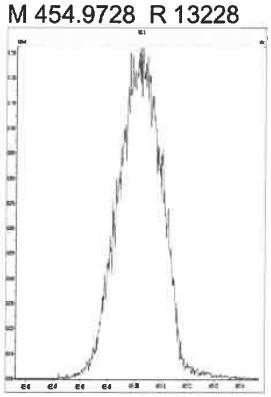

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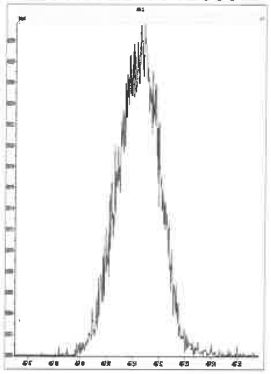

M 480.9696 R 13226

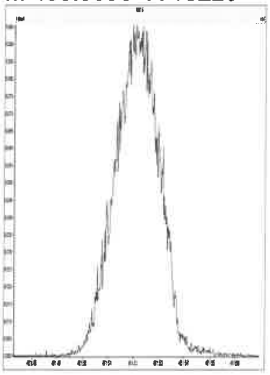

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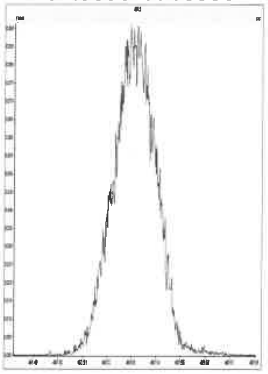

M 504.9696 R 13021

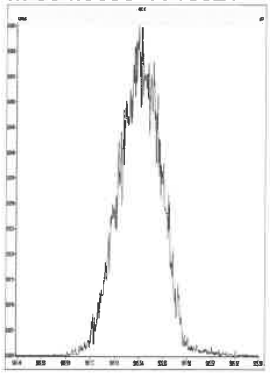

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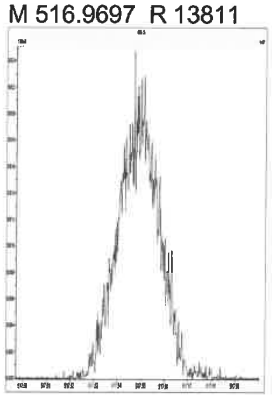

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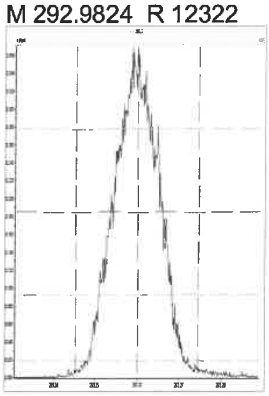

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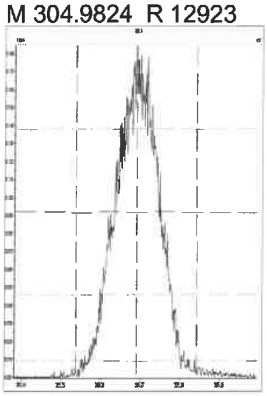

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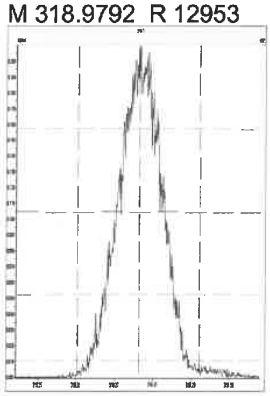

M 330.9792 R 12791

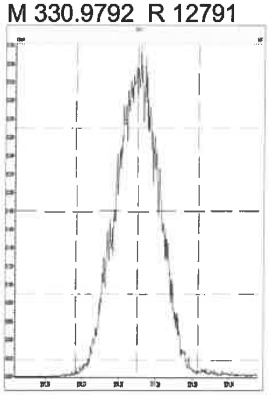

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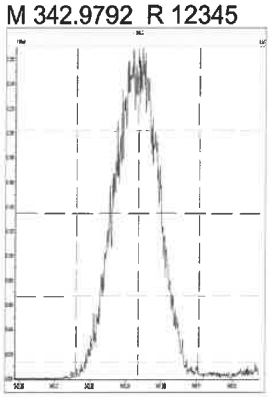

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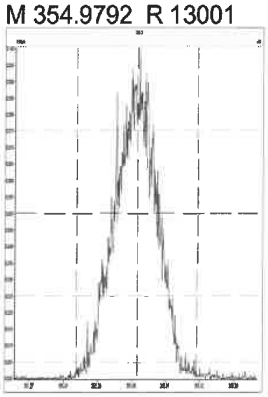

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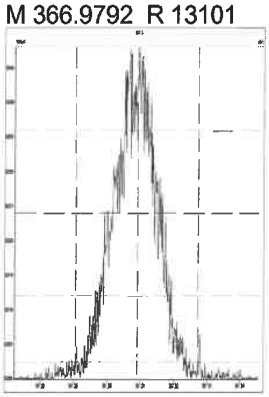

M 380.9760 R 13055

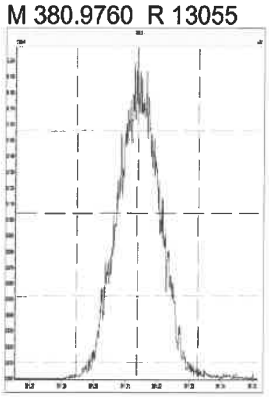

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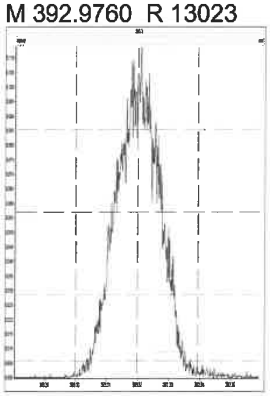

M 404.9760 R 13233

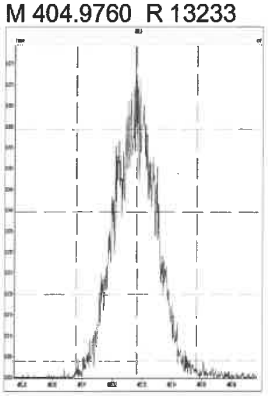

M 416.9760 R 14086

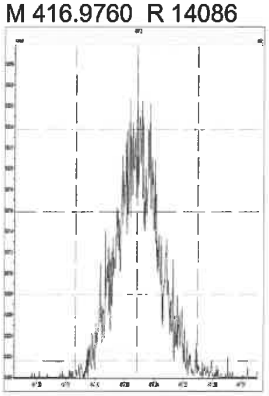

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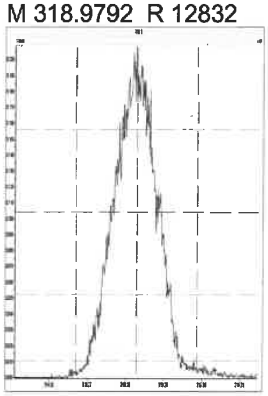

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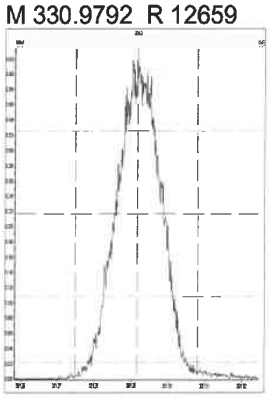

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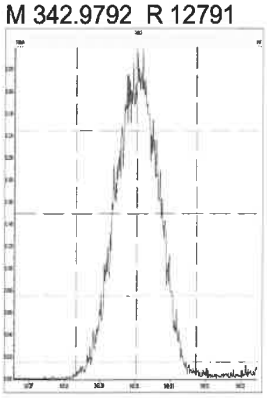

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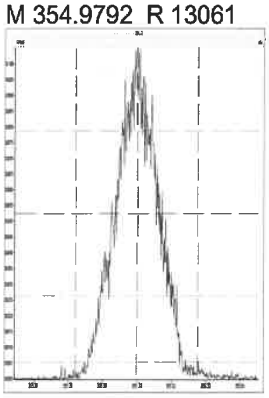

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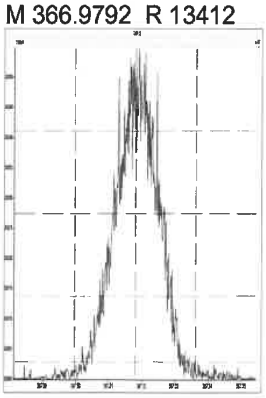

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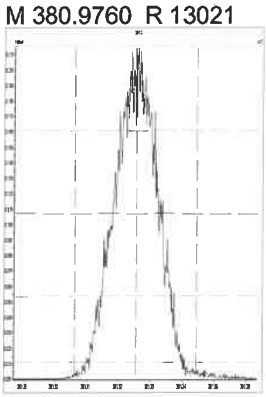

M 392.9760 R 13262

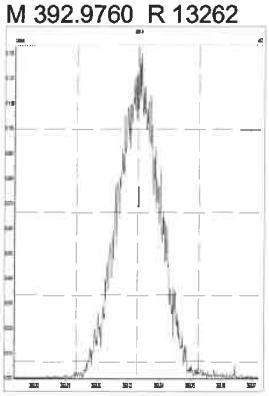

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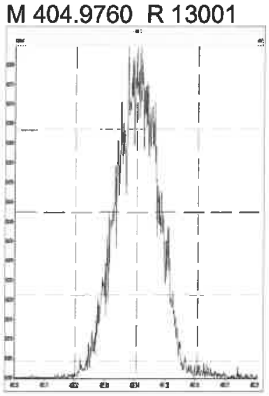

M 416.9760 R 13664

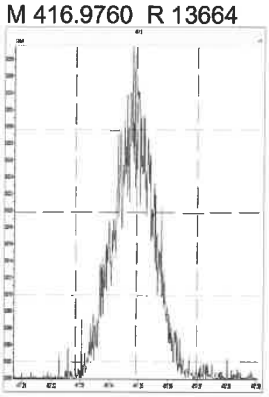

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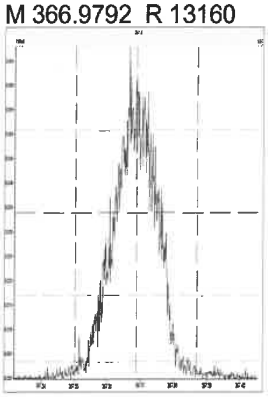

M 380.9760 R 12836

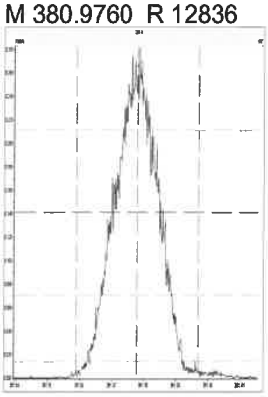

M 392.9760 R 12820

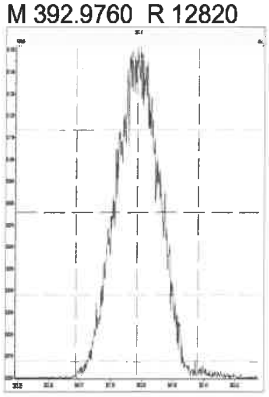

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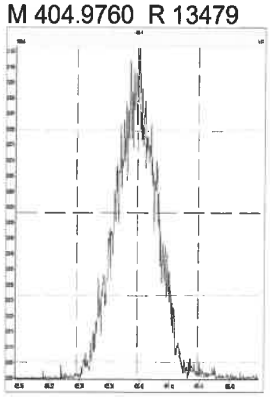

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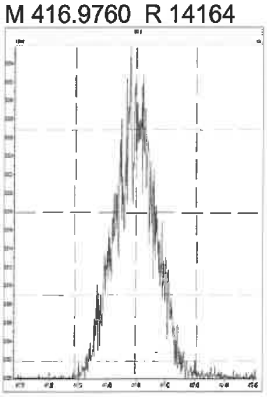

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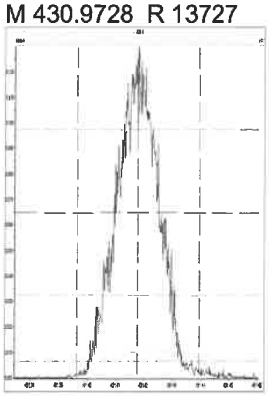

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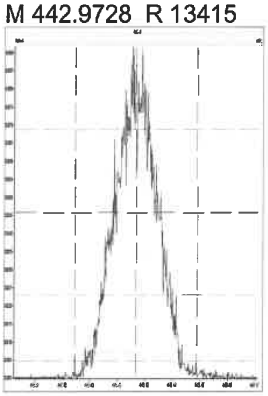

M 454.9728 R 13335

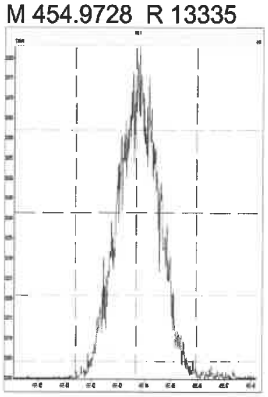

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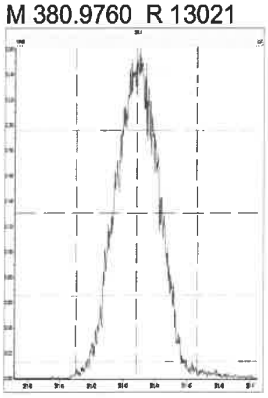

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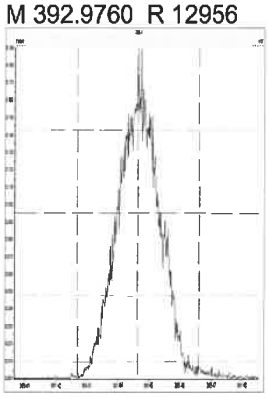

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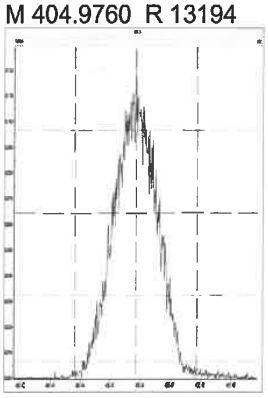

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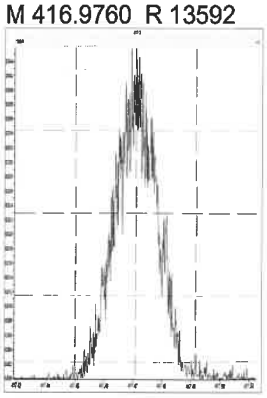

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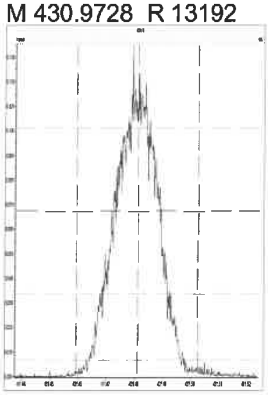

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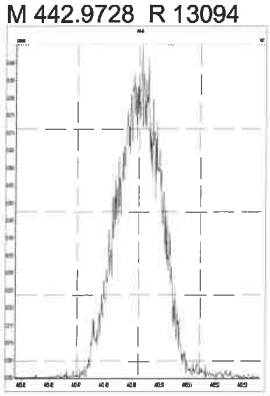

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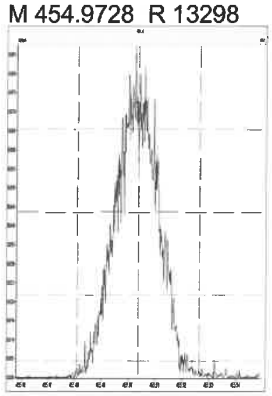

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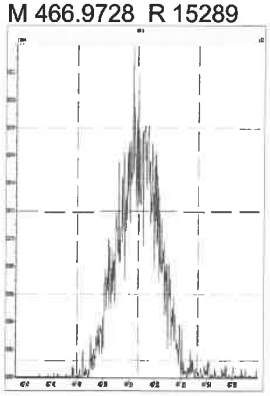

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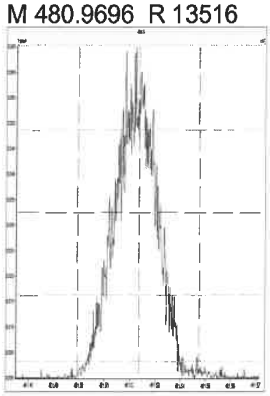

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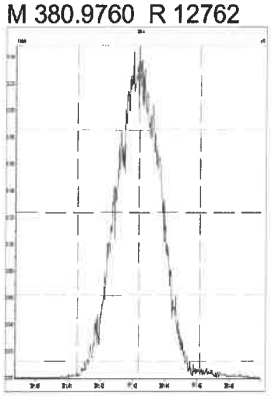

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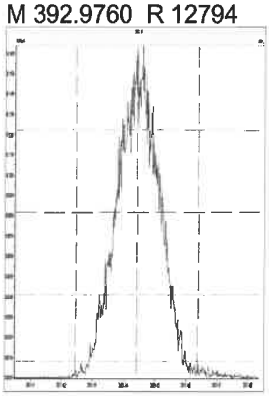

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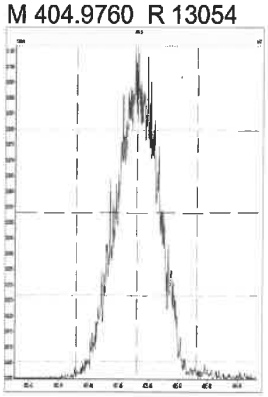

M 416.9760 R 13966

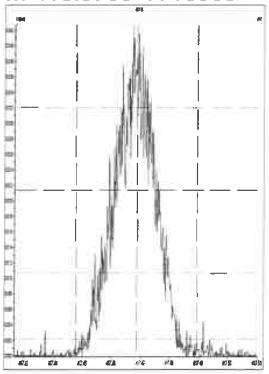

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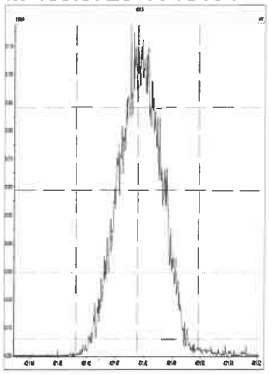

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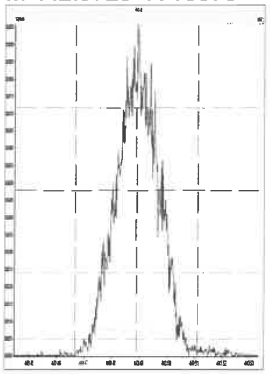

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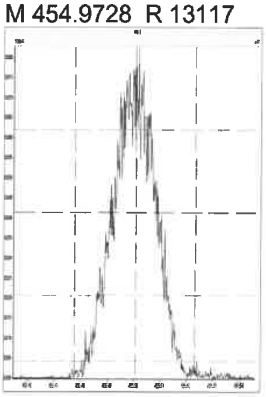

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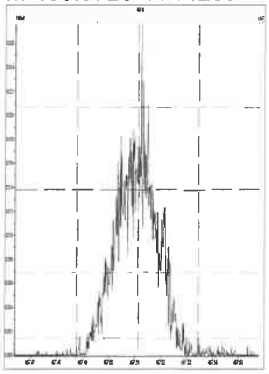

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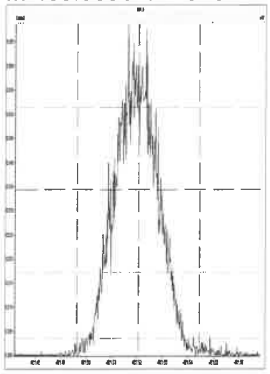

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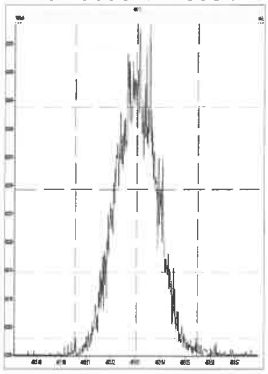

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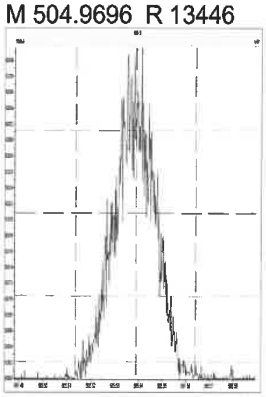

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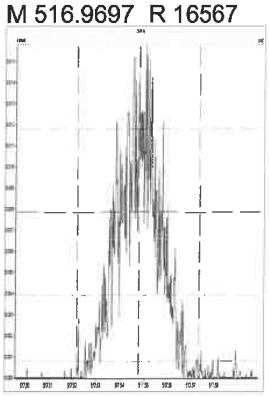

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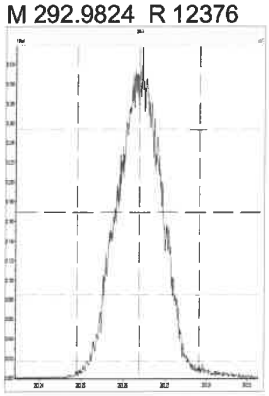

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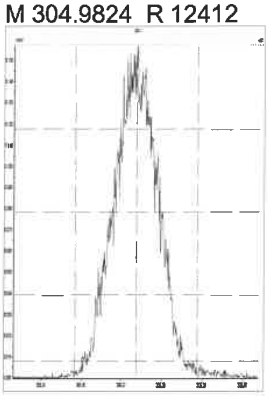

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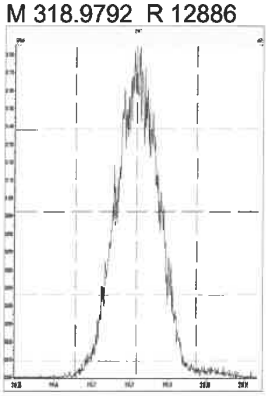

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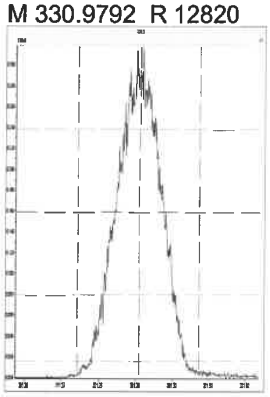

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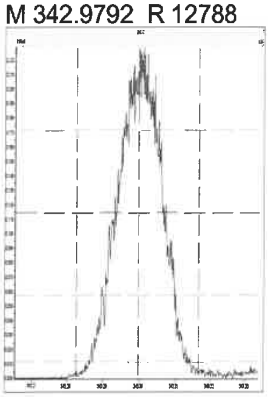

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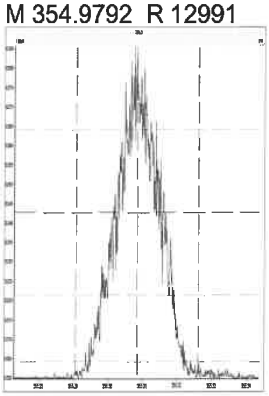

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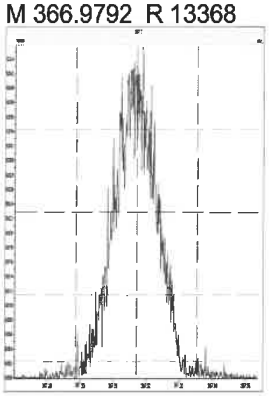

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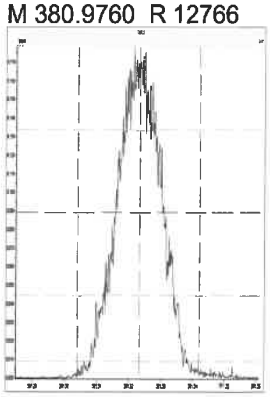

M 392.9760 R 13080

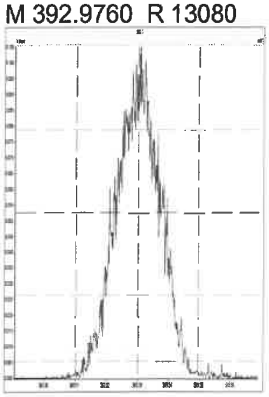

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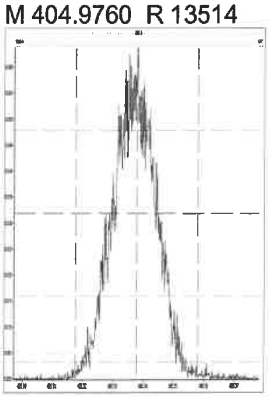

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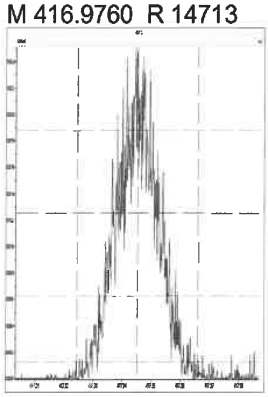

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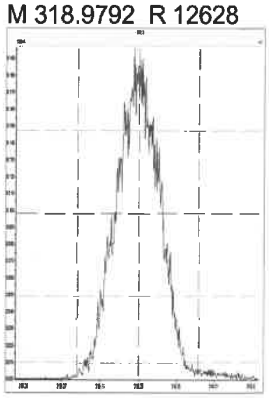

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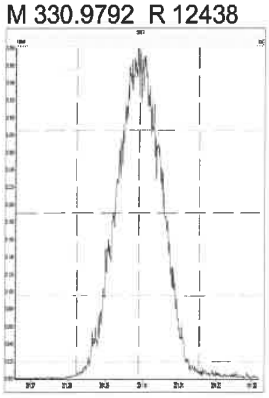

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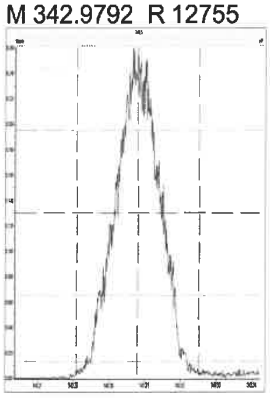

M 354.9792 R 12755

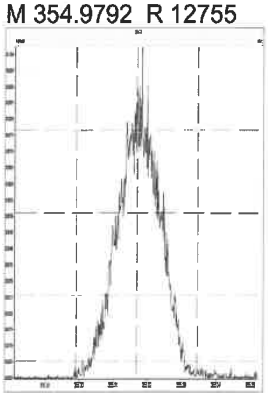

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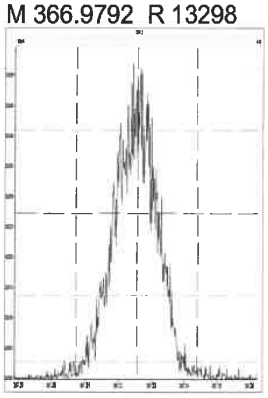

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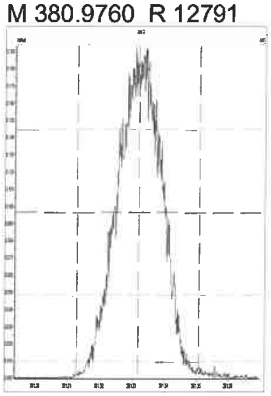

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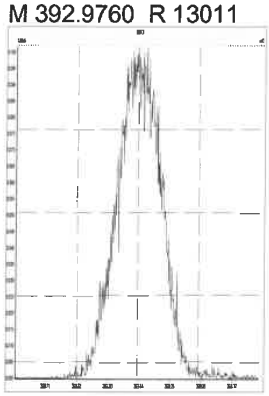

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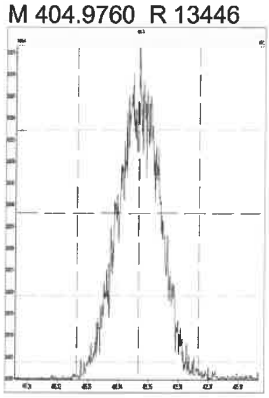

M 416.9760 R 13368

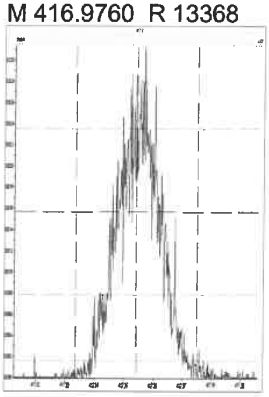

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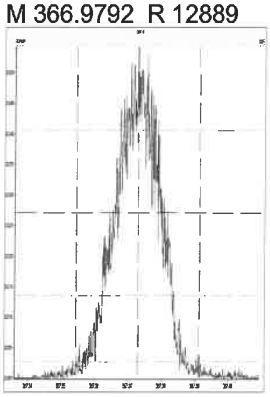

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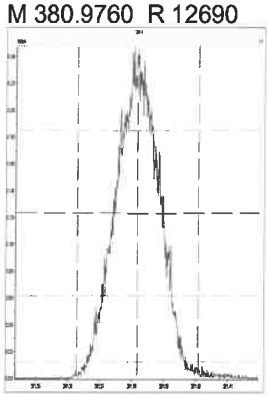

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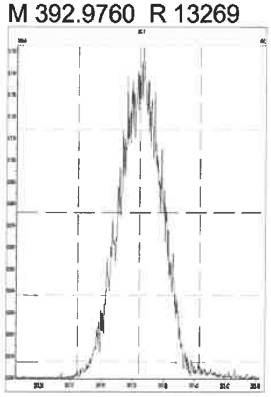

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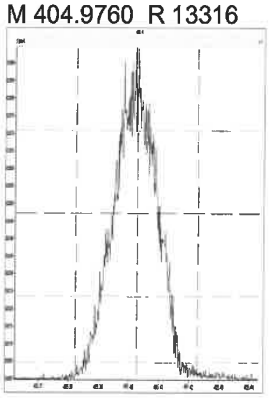

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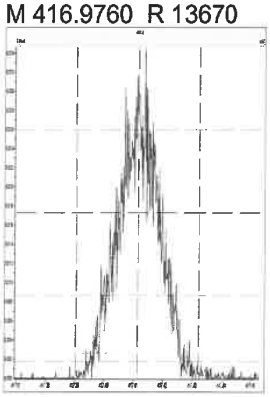

M 430.9728 R 13055

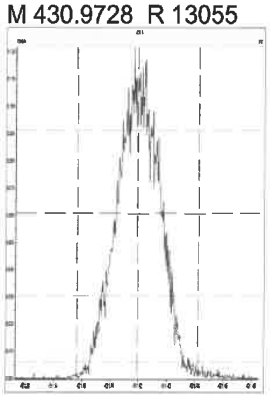

M 442.9728 R 13227

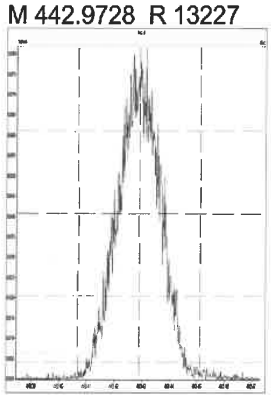

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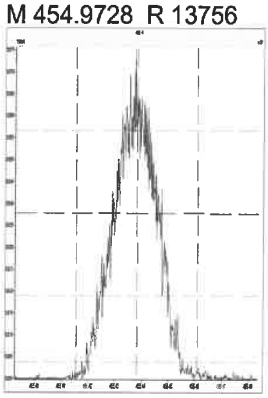

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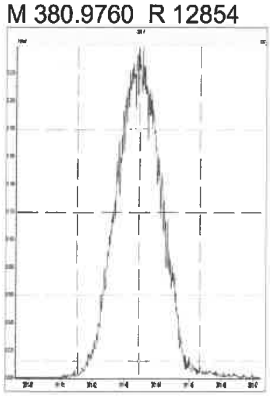

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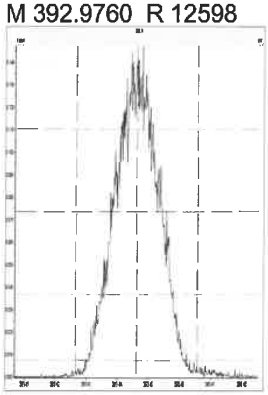

M 404.9760 R 12853

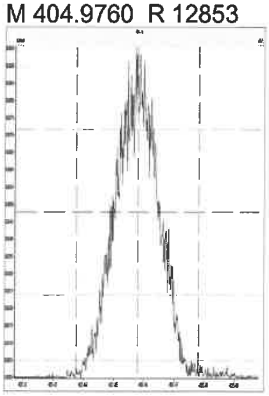

M 416.9760 R 13928

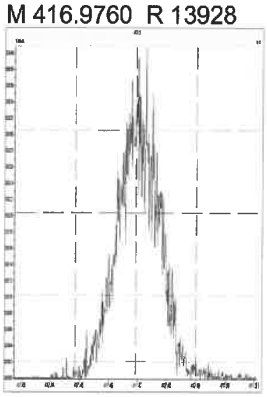

Printed: Monday, July 26, 2021 16:26:55 Pacific Daylight Time

M 430.9728 R 13266

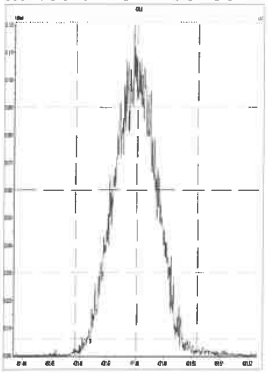

M 442.9728 R 13264

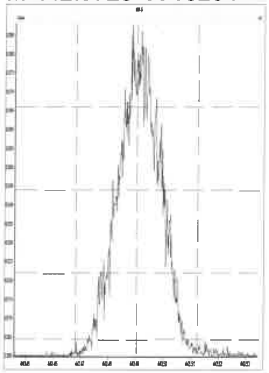

M 454.9728 R 13652

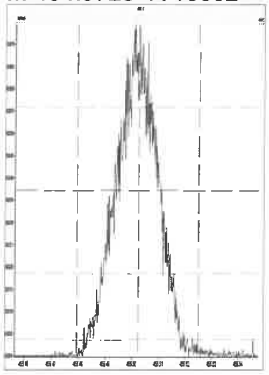

M 466.9728 R 14749

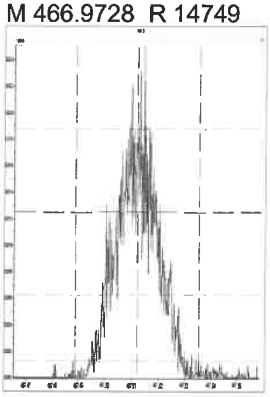

M 480.9696 R 13412

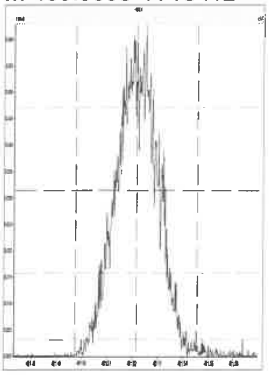

M 380.9760 R 12692

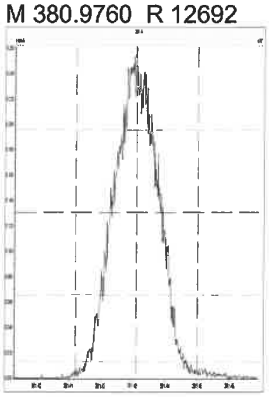

M 392.9760 R 13061

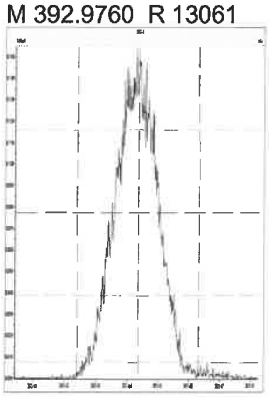

M 404.9760 R 12887

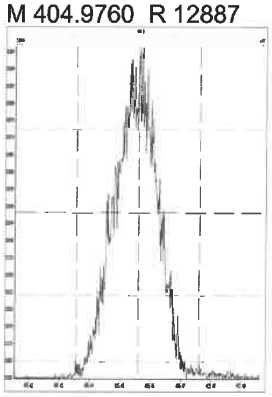

M 416.9760 R 13706

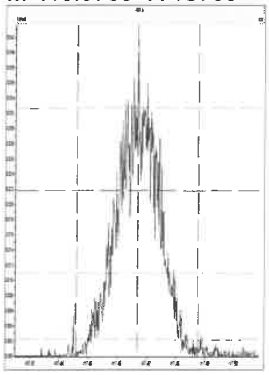

M 430.9728 R 12760

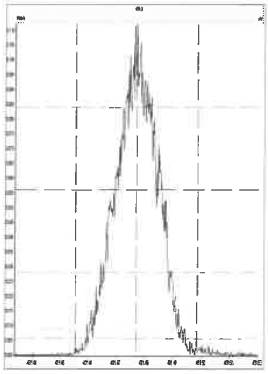

M 442.9728 R 13122

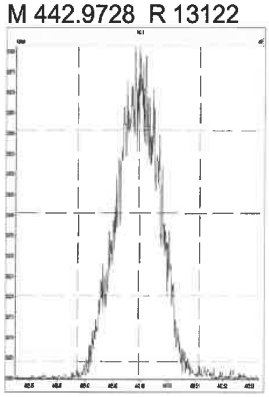

M 454.9728 R 13710

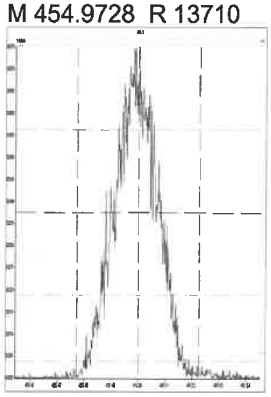

M 466.9728 R 14205

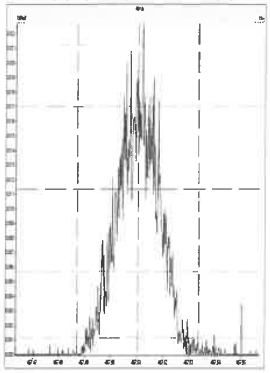

M 480.9696 R 13298

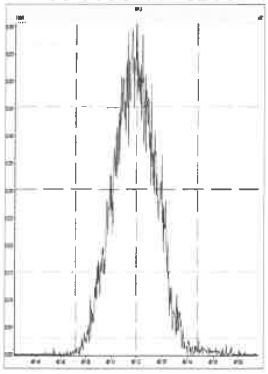

M 492.9696 R 12886

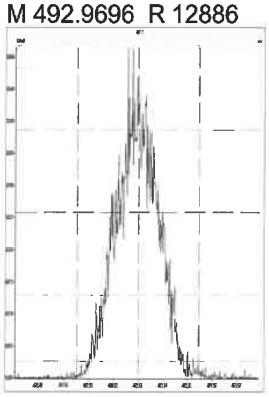

M 504.9696 R 13600

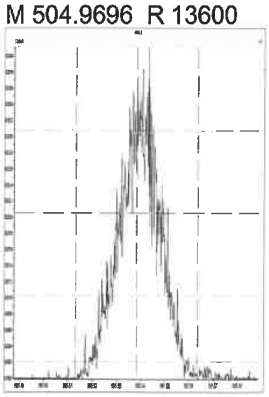

Printed: Monday, July 26, 2021 16:26:55 Pacific Daylight Time

M 516.9697 R 15872

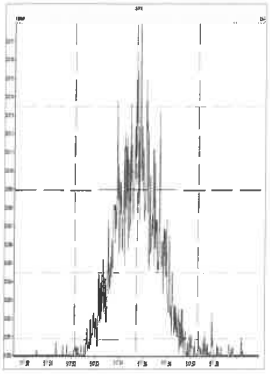

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	65685883	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	108384725	0.78	1.6249	101.5	101.5	0.1385	0.1385	102	
2,3,7,8-TCDF	17.628	557485	0.78	1.0239	0.5023	0.5023	0.009259	0.009259	100	
S Total TCDF					0.5023	0.5023	0.009259	0.009259		
D 13C-2,3,7,8-TCDD	18.338	59957723	0.80	0.8993	101.5	101.5	0.1222	0.1222	101	
$ 37Cl4-2,3,7,8-TCDD	18.338	318727		1.1071	0.4383	0.4383	0.006072	0.006072	87.65	
2,3,7,8-TCDD	18.354	376984	0.89	1.2541	0.5013	0.5013	0.0150	0.0150	100	M
S Total TCDD					0.5013	0.5013	0.0150	0.0150		
D 13C-1,2,3,7,8-PeCDF	22.749	78674290	1.60	1.2101	99.0	99.0	0.2282	0.2282	98.98	
1,2,3,7,8-PeCDF	22.776	2112140	1.63	1.0611	2.530	2.530	0.0220	0.0220	101	
D 13C-2,3,4,7,8-PeCDF	24.126	80591659	1.57	1.2395	99.0	99.0	0.2228	0.2228	98.99	
2,3,4,7,8-PeCDF	24.153	2096967	1.56	1.0184	2.555	2.555	0.0245	0.0245	102	
S Total PeCDF					5.085	5.085	0.0233	0.0233		
D 13C-1,2,3,7,8-PeCDD	24.862	49643581	1.62	0.7612	99.3	99.3	0.1197	0.1197	99.28	
1,2,3,7,8-PeCDD	24.889	1312779	1.42	1.0484	2.522	2.522	0.0218	0.0218	101	
S Total PeCDD					2.522	2.522	0.0218	0.0218		
D 13C-1,2,3,4,7,8-HxCDF	30.835	69484482	0.52	1.0837	100.4	100.4	0.5299	0.5299	100	
1,2,3,4,7,8-HxCDF	30.849	1949462	1.23	1.0851	2.586	2.586	0.0289	0.0289	103	
D 13C-1,2,3,6,7,8-HxCDF	30.995	73262388	0.52	1.1279	101.7	101.7	0.5091	0.5091	102	
1,2,3,6,7,8-HxCDF	31.022	2104086	1.18	1.1260	2.551	2.551	0.0273	0.0273	102	
D 13C-2,3,4,6,7,8-HxCDF	31.754	68885161	0.52	1.0637	101.4	101.4	0.5398	0.5398	101	
2,3,4,6,7,8-HxCDF	31.767	2104896	1.20	1.1675	2.617	2.617	0.0225	0.0225	105	
D 13C-1,2,3,7,8,9-HxCDF	32.512	62528954	0.51	0.9676	101.1	101.1	0.5935	0.5935	101	
1,2,3,7,8,9-HxCDF	32.526	1834100	1.21	1.1664	2.515	2.515	0.0244	0.0244	101	
S Total HxCDF					10.3	10.3	0.0258	0.0258		
* 13C-1,2,3,7,8,9-HxCDD	32.339	63892665	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	47363504	1.27	0.7334	101.1	101.1	0.5001	0.5001	101	
1,2,3,4,7,8-HxCDD	31.940	1300030	1.26	1.0640	2.580	2.580	0.0268	0.0268	103	
D 13C-1,2,3,6,7,8-HxCDD	32.033	56759108	1.25	0.8802	100.9	100.9	0.4167	0.4167	101	

793784

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	1460747	1.28	1.0001	2.573	2.573	0.0268	0.0268	103	
1,2,3,7,8,9-HxCDD	32.353	1503407	1.26	1.1325	2.550	2.550	0.0244	0.0244	102	
S Total HxCDD					7.703	7.703	0.0260	0.0260		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	51308225	0.44	0.7730	103.9	103.9	1.147	1.147	104	
1,2,3,4,6,7,8-HpCDF	33.924	1856599	1.05	1.4413	2.511	2.511	0.0321	0.0321	100	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44628352	0.44	0.7008	99.7	99.7	1.266	1.266	99.67	
1,2,3,4,7,8,9-HpCDF	35.017	1465634	1.06	1.3174	2.493	2.493	0.0442	0.0442	99.72	
S Total HpCDF					5.003	5.003	0.0381	0.0381		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	41876556	1.01	0.6472	101.3	101.3	0.6709	0.6709	101	
1,2,3,4,6,7,8-HpCDD	34.726	1164074	1.06	1.0943	2.540	2.540	0.0284	0.0284	102	
S Total HpCDD					2.540	2.540	0.0284	0.0284		
D 13C-OCDD	37.093	57018462	0.89	0.4472	199.6	199.6	0.2479	0.2479	99.79	
OCDF	37.201	1976175	0.91	1.4382	4.820	4.820	0.0196	0.0196	96.40	
OCDD	37.105	1569338	0.92	1.1070	4.973	4.973	0.0246	0.0246	99.45	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Jul-2021 10:51:57 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621 CS-2 HRDXNL2_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:34 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:29:46

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		29725607	7464659	4167	10417	1791		
333.9339	18.142	18.142	0		35960276	9003139	3074	7685	2929	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	47438761	11992473	9243	23107	1297		
317.9389	17.613	17.616	0	0.971	60945964	15328013	5578	13945	2748	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	244966	62557	418	1045	150		
305.8987	17.628	17.631	0	1.001	312519	74119	618	1545	120	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	26677109	6242710	4167	10417	1498		
333.9339	18.338	18.338	0	1.011	33280614	7789380	3074	7685	2534	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.011	318727	66577	443	1107	150		
2,3,7,8-TCDD											M
319.8965	18.354	18.357	0	1.001	177891	43427	698	1745	62		M
321.8936	18.354	18.357	0	1.001	199093	47894	356	890	135	0.89(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	48367116	8680931	10780	26950	805		
353.8970	22.749	22.754	0	1.254	30307174	5346402	7413	18532	721	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	1307686	232308	692	1730	336		
341.8567	22.762	22.779	-1	1.001	804454	137466	619	1547	222	1.63(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	49186157	7929286	10780	26950	736		
353.8970	24.126	24.129	0	1.330	31405502	5197836	7413	18532	701	1.57(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	1276283	202864	692	1730	293		
341.8567	24.153	24.156	0	1.001	820684	134634	619	1547	218	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	30684379	4744795	3870	9675	1226		
369.8919	24.862	24.865	0	1.370	18959202	2913489	2133	5332	1366	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	770345	123302	470	1175	262		
357.8516	24.889	24.892	0	1.001	542434	83964	231	577	363	1.42(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23885791	5080702	12413	31032	409		
385.8610	30.835	30.838	0	0.953	45598691	9653525	24179	60447	399	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.857	0	1.000	1073816	228005	1130	2825	202		
375.8178	30.849	30.857	0	1.000	875646	183719	720	1800	255	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	25163610	5186426	12413	31032	418		
385.8610	30.995	31.003	0	0.958	48098778	9847658	24179	60447	407	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.001	1138605	230252	1130	2825	204		
375.8178	31.008	31.022	-1	1.000	965481	194261	720	1800	270	1.18(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	23545536	6005512	12413	31032	484		
385.8610	31.754	31.756	0	0.982	45339625	11622590	24179	60447	481	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	1148495	290976	1130	2825	258		
375.8178	31.767	31.772	0	1.000	956401	245408	720	1800	341	1.20(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.512	32.523	-1	1.005	21115296	5525344	12413	31032	445		
385.8610	32.512	32.523	-1	1.005	41413658	10740911	24179	60447	444	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	1004237	260741	1130	2825	231		
375.8178	32.526	32.534	0	1.000	829863	215930	720	1800	300	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		35492157	8840472	14115	35287	626		
403.8529	32.339	32.342	0		28400508	7090007	9259	23147	766	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	26497467	7547113	14115	35287	535		
403.8529	31.927	31.929	0	0.987	20866037	5954906	9259	23147	643	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	725563	201392	885	2212	228		
391.8127	31.940	31.945	0	1.000	574467	160999	657	1642	245	1.26(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	31586686	7983088	14115	35287	566		
403.8529	32.033	32.033	0	0.991	25172422	6406461	9259	23147	692	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	819435	207367	885	2212	234		
391.8127	32.047	32.047	0	1.000	641312	163363	657	1642	249	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	837706	208716	885	2212	236		
391.8127	32.353	32.355	0	1.013	665701	168193	657	1642	256	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	15666898	4905580	16994	42485	289		
419.8220	33.912	33.914	0	1.049	35641327	11012481	39521	98802	279	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	949994	280926	1603	4007	175		
409.7789	33.924	33.926	0	1.000	906605	280503	1346	3365	208	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13532847	3927195	16994	42485	231		
419.8220	35.005	35.010	0	1.082	31095505	8744356	39521	98802	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	755406	231092	1603	4007	144		
409.7789	35.017	35.020	0	1.000	710228	201627	1346	3365	150	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	21029381	6108519	13979	34947	437		
437.8140	34.714	34.716	0	1.073	20847175	6052425	13690	34225	442	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	599401	178801	821	2052	218		
425.7737	34.726	34.726	0	1.000	564673	160703	693	1732	232	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26904388	6653832	3548	8870	1875		
471.7750	37.093	37.094	0	1.147	30114074	7334467	3515	8787	2087	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	941996	224700	300	750	749		
443.7399	37.189	37.199	-1	1.003	1034179	253612	487	1217	521	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	750544	177364	389	972	456		
459.7348	37.105	37.106	0	1.000	818794	206090	374	935	551	0.92(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 18.35
Area: 201476
Amount: 0.545465
Amount Units: pg/ul

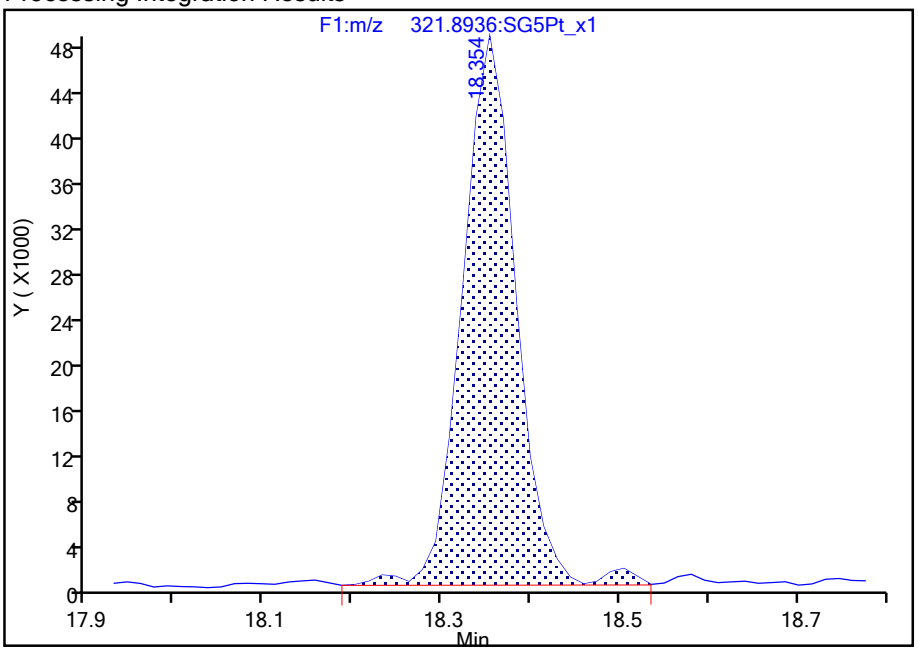

Manual Integration Results

RT: 18.35
Area: 199093
Amount: 0.501347
Amount Units: pg/ul

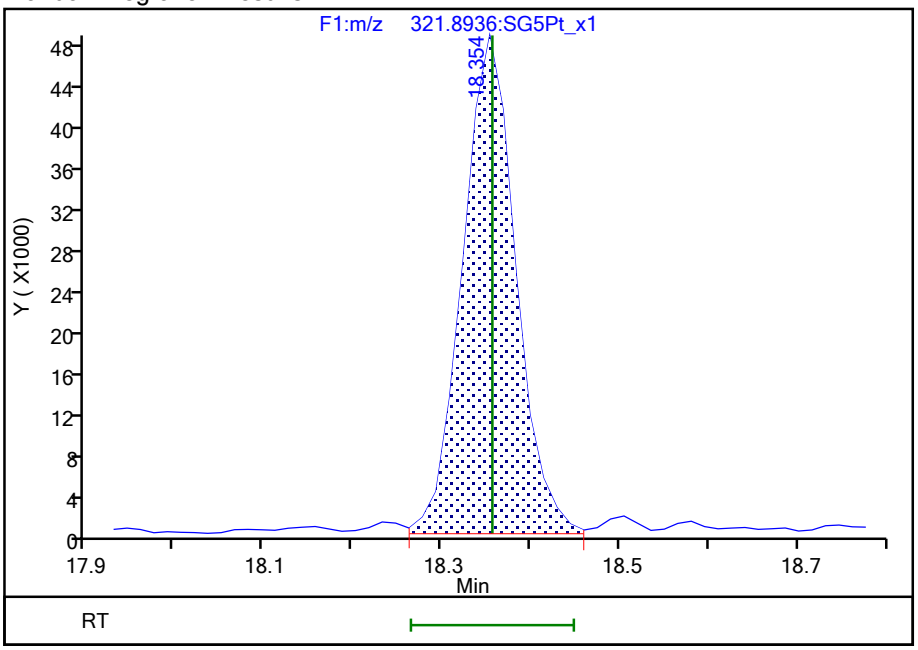

Reviewer: stephensk, 27-Jul-2021 08:15:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

793789

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d				
Injection Date:	26-Jul-2021 10:51:57	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 3

Processing Integration Results

RT: 18.35
Area: 394678
Amount: 0.545465
Amount Units: pg/ul

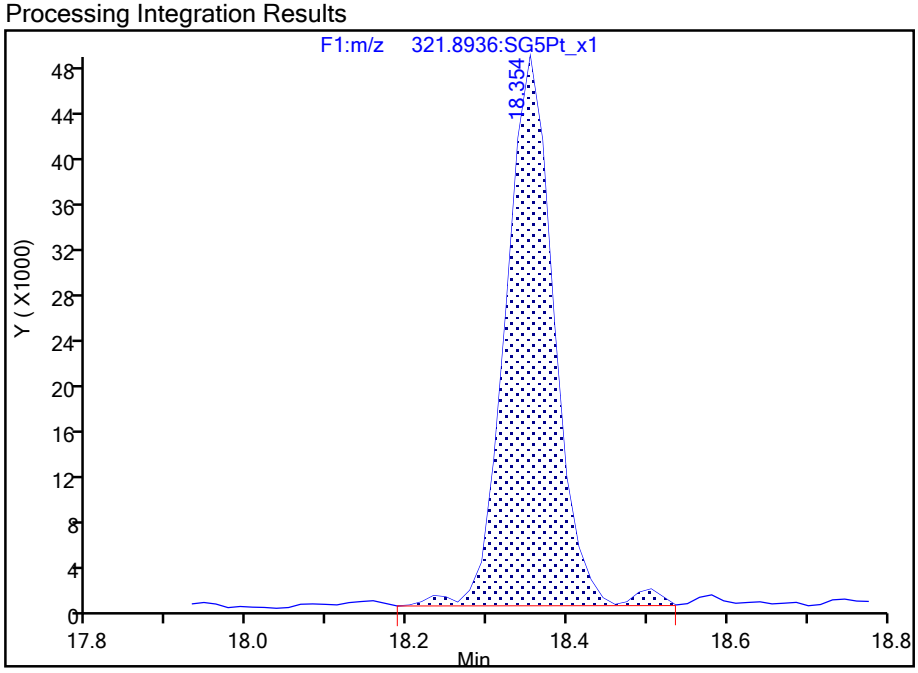

Manual Integration Results

RT: 18.35
Area: 376984
Amount: 0.501347
Amount Units: pg/ul
Reviewer: stephensk, 27-Jul-2021 08:15:03
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

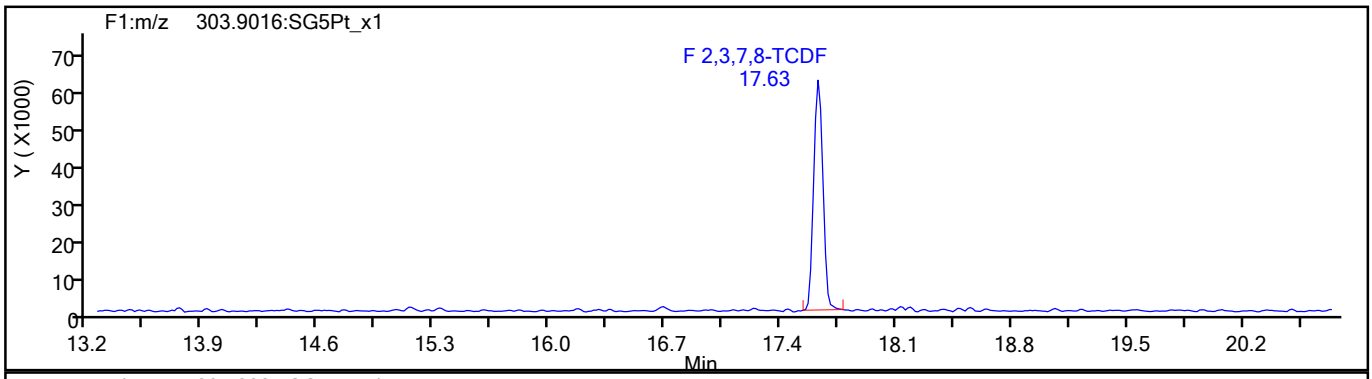

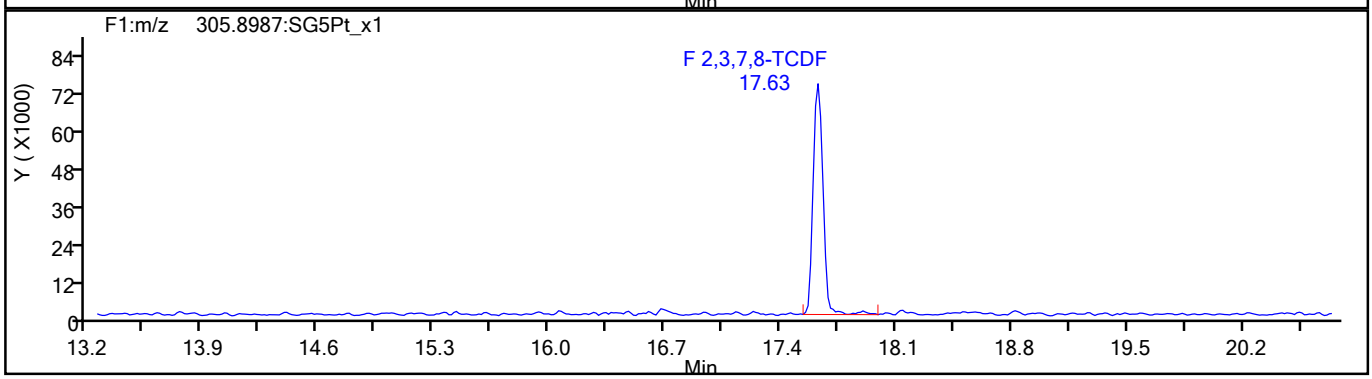

TCDF Standards

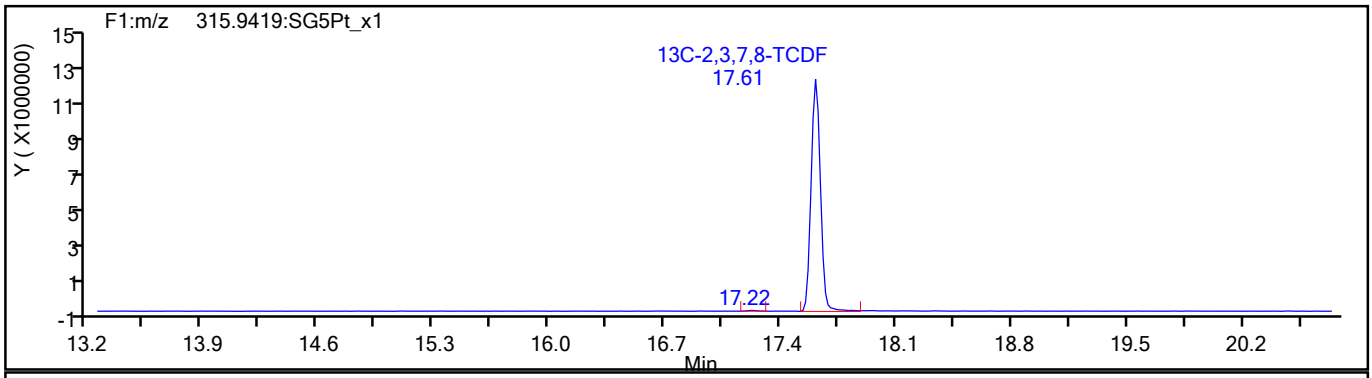

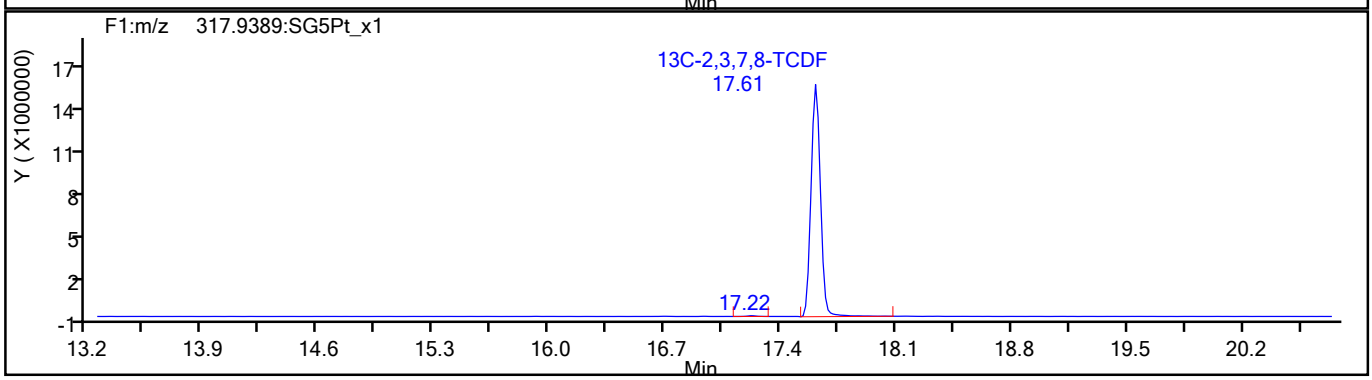

793791

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

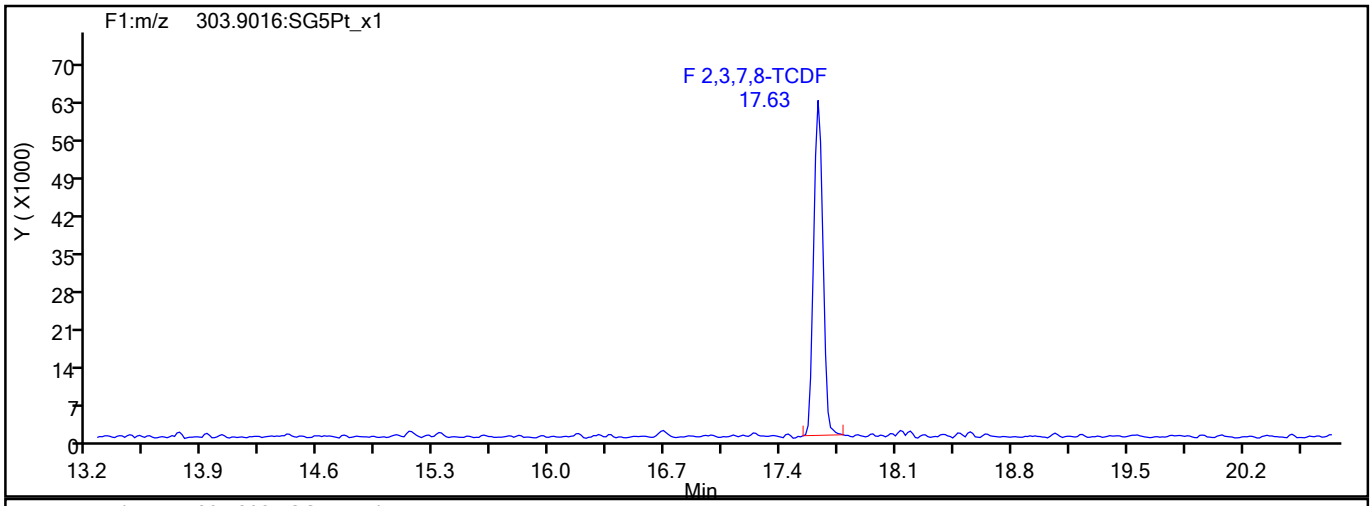

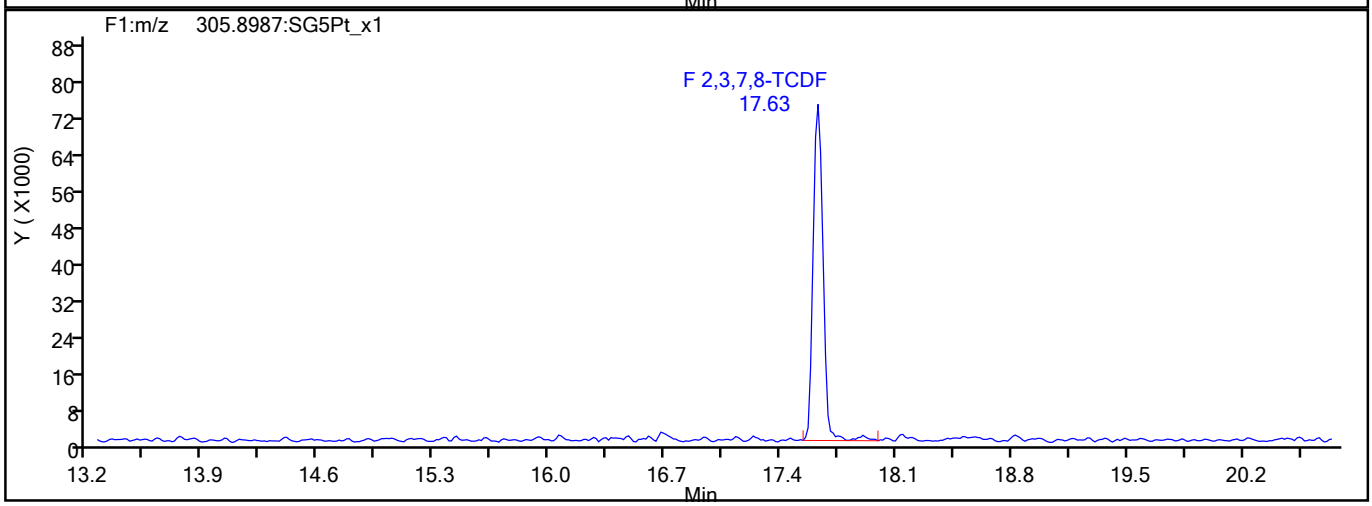

TCDF Interference Mass

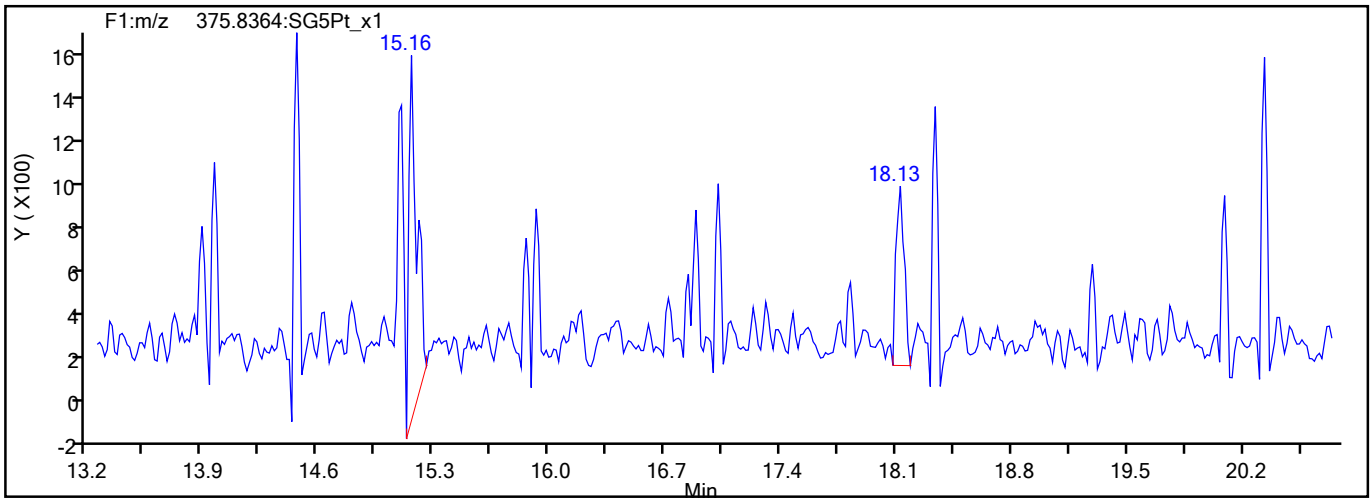

793792

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

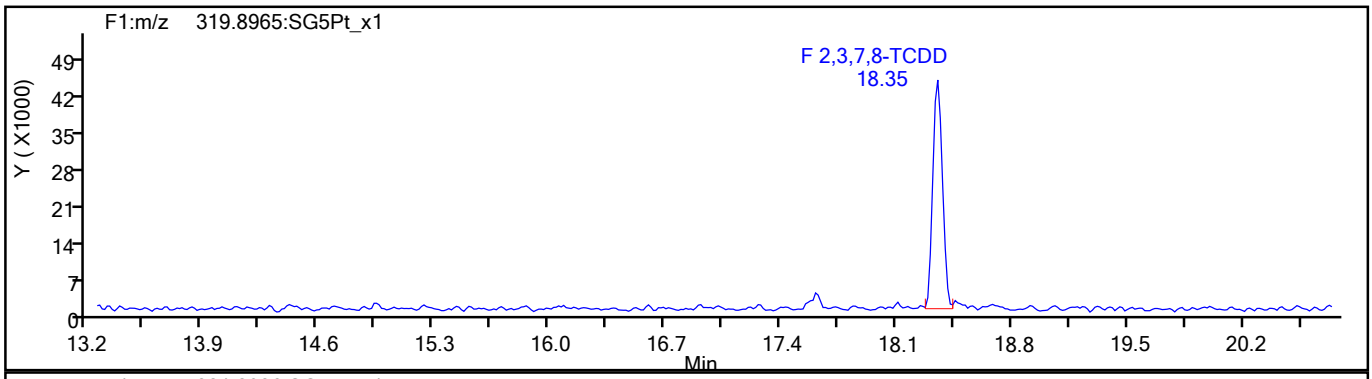

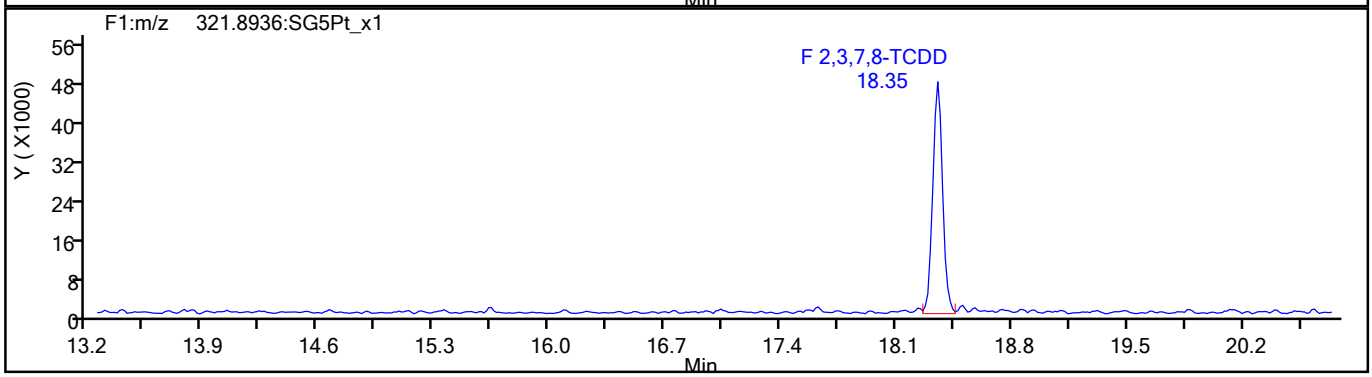

TCDD Standards

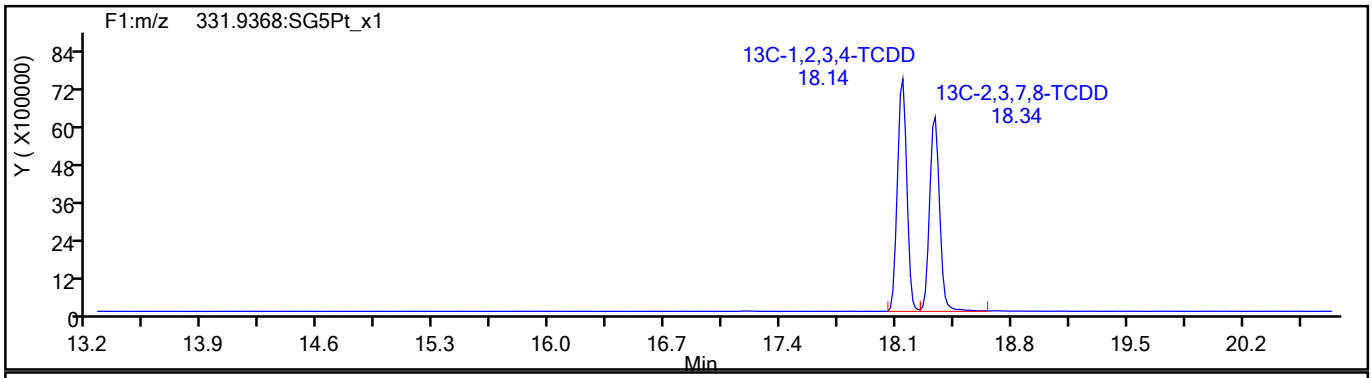

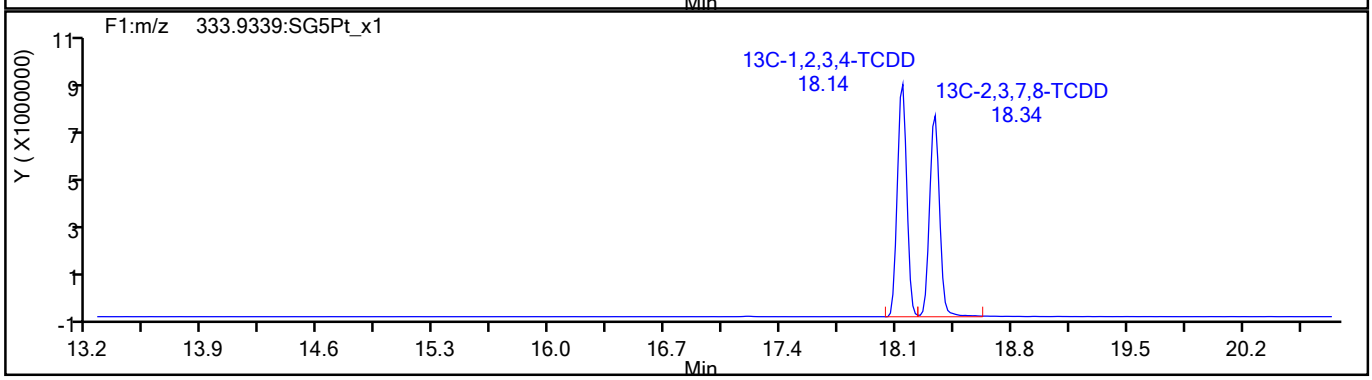

793793

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

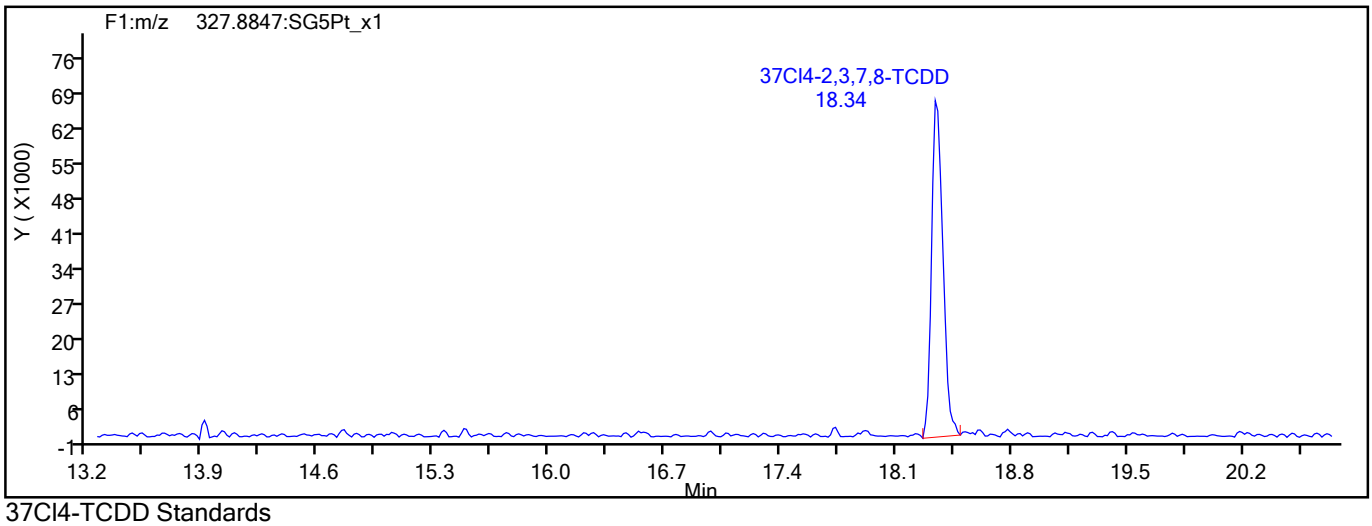

37Cl4-TCDD Standards

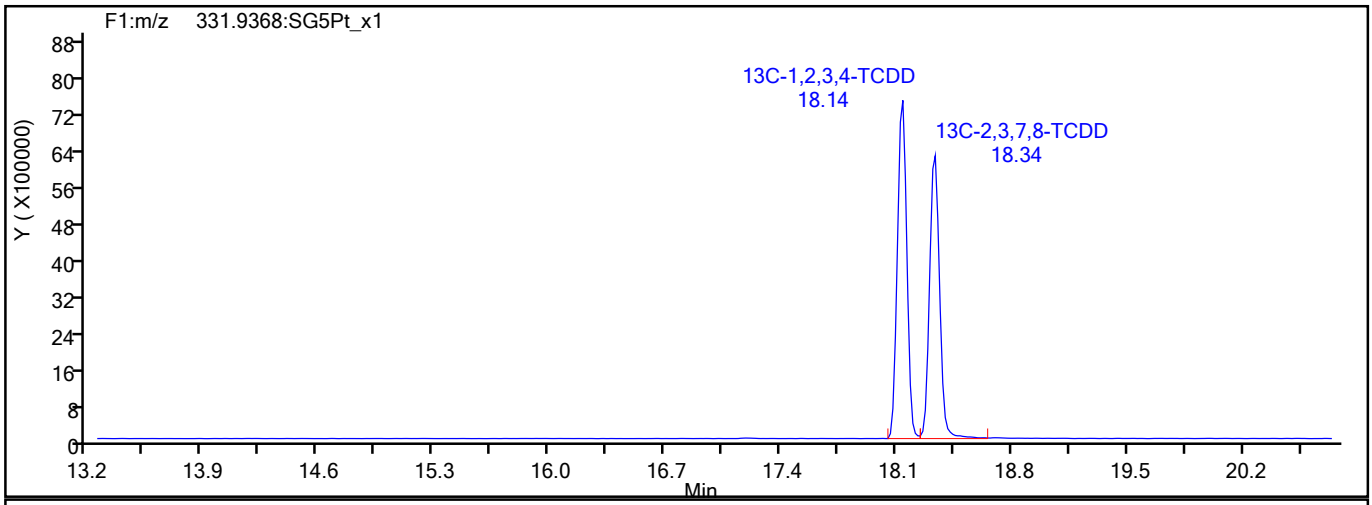

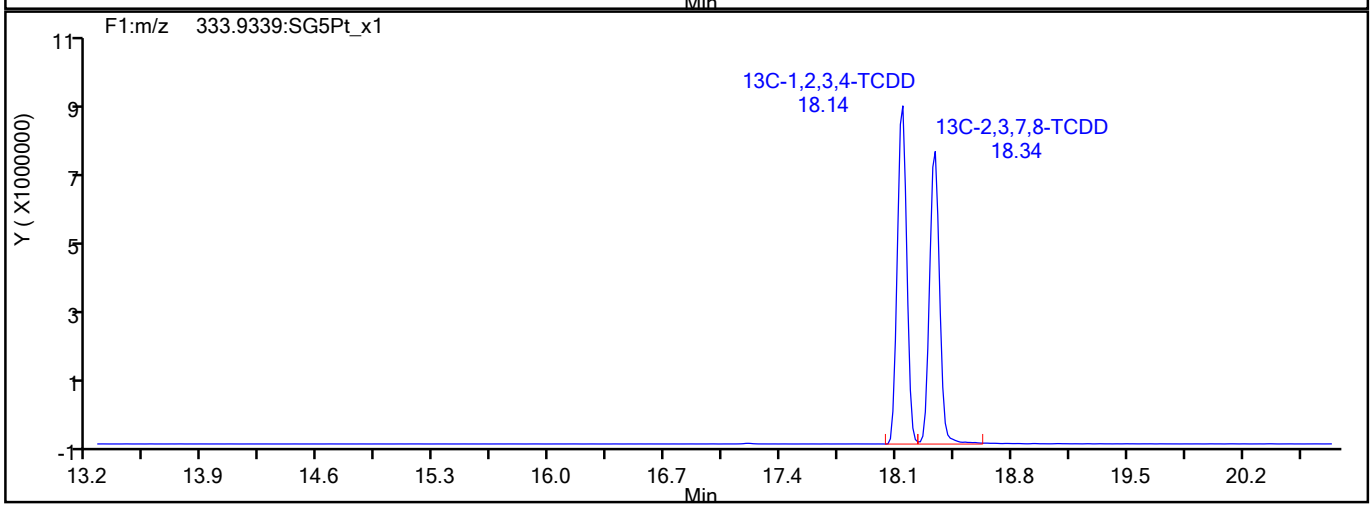

793794

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

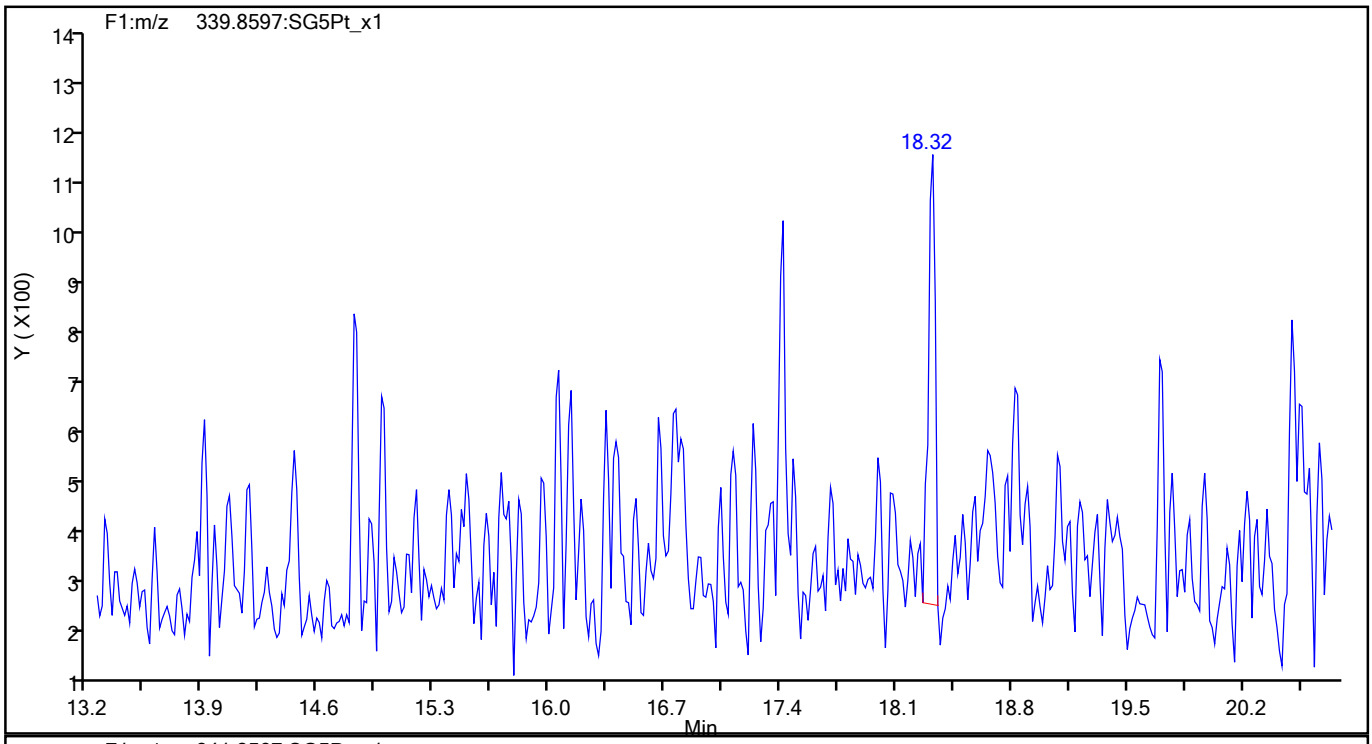

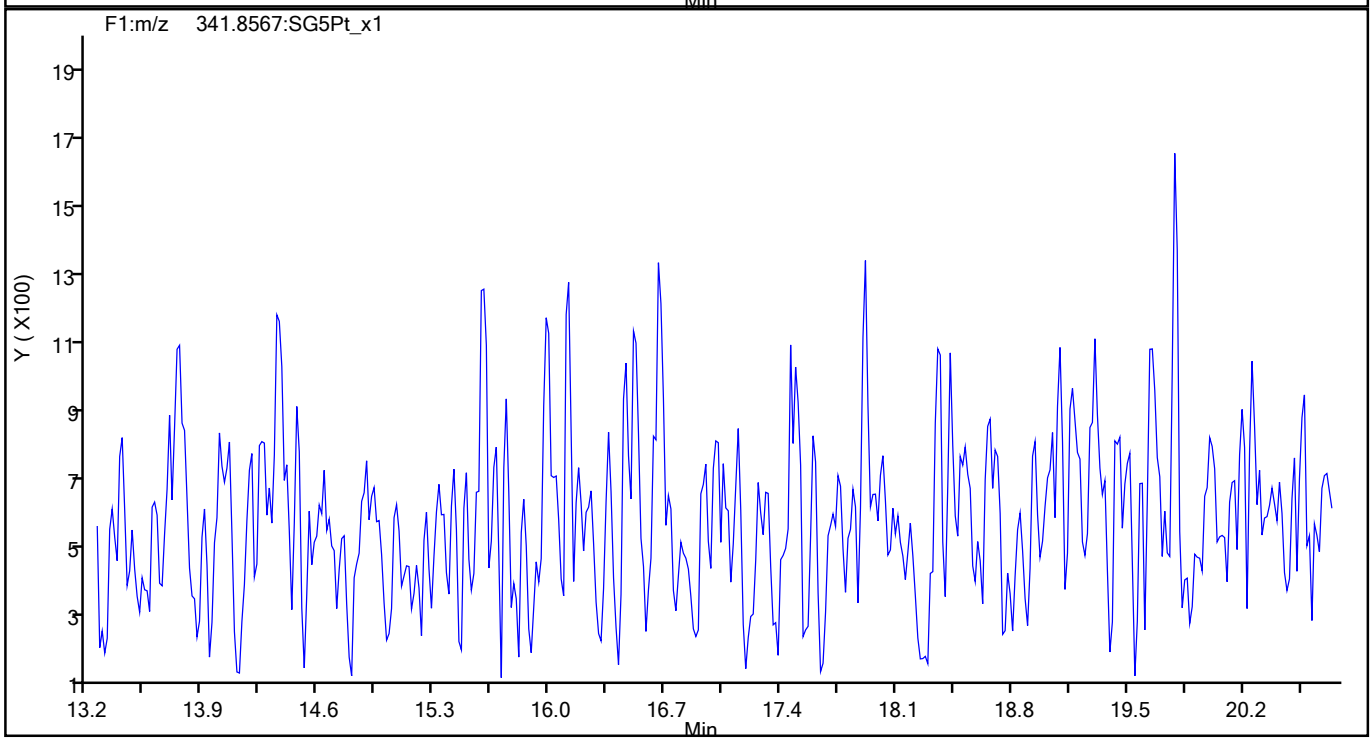

793795

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

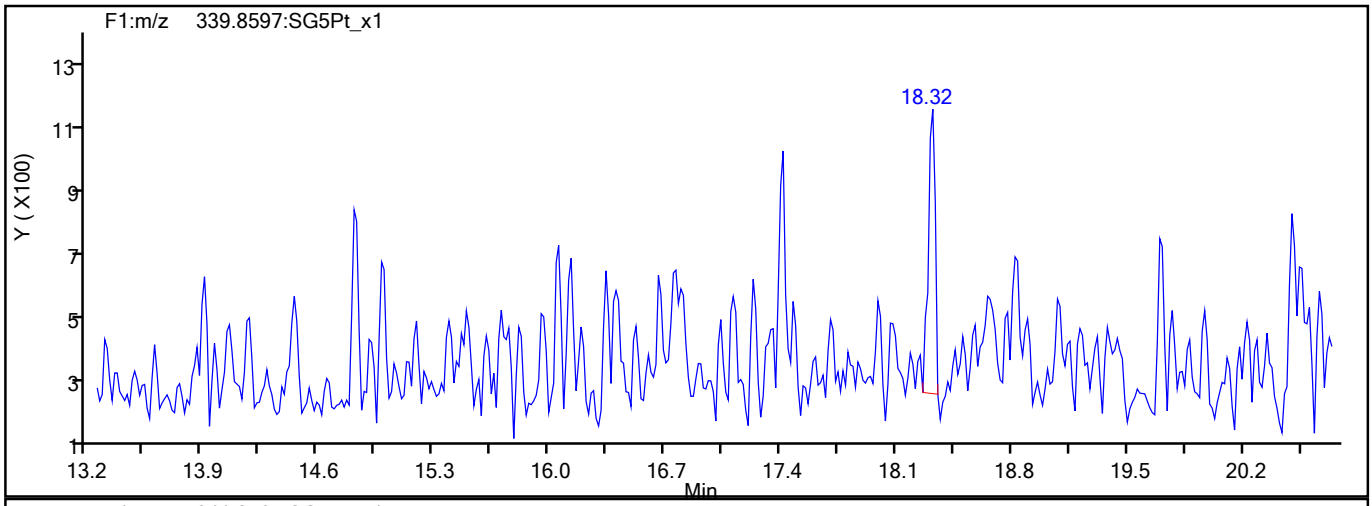

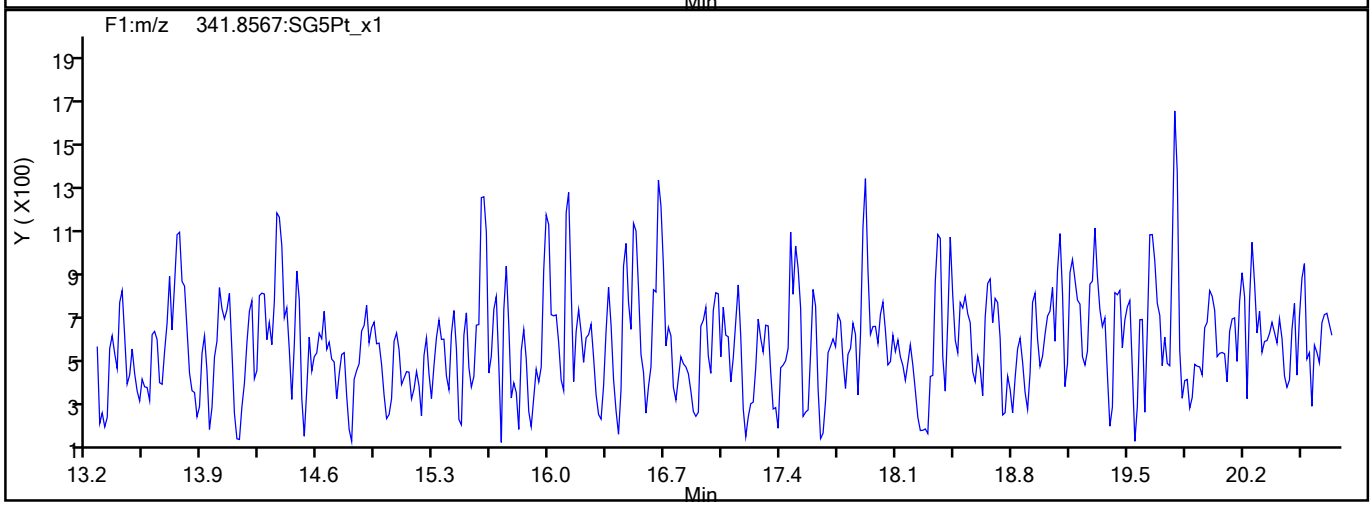

F1 PeCDFs Interference Mass

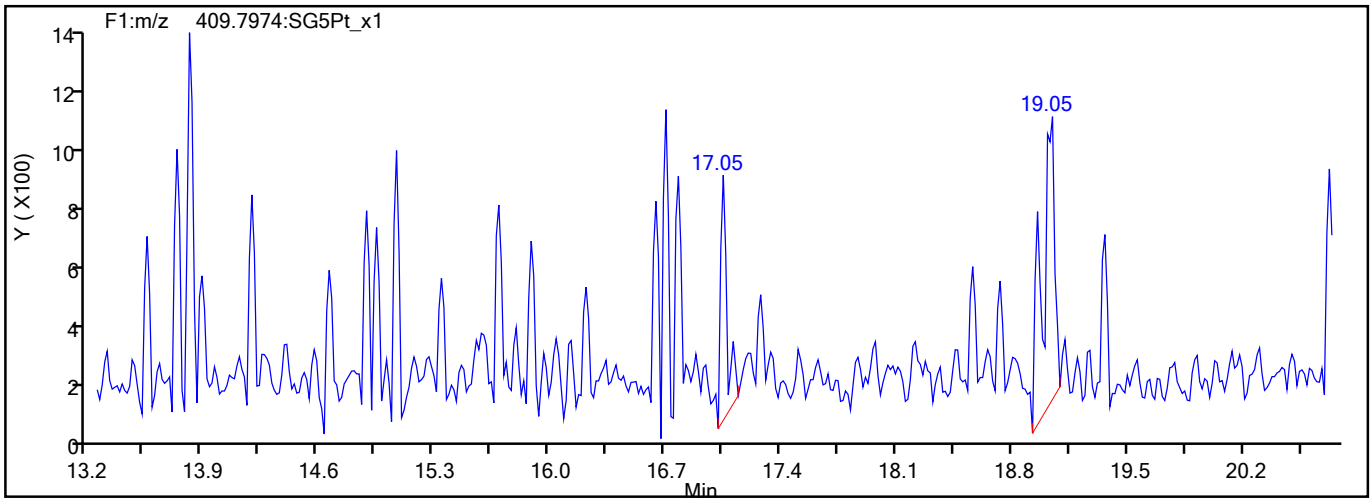

793796

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

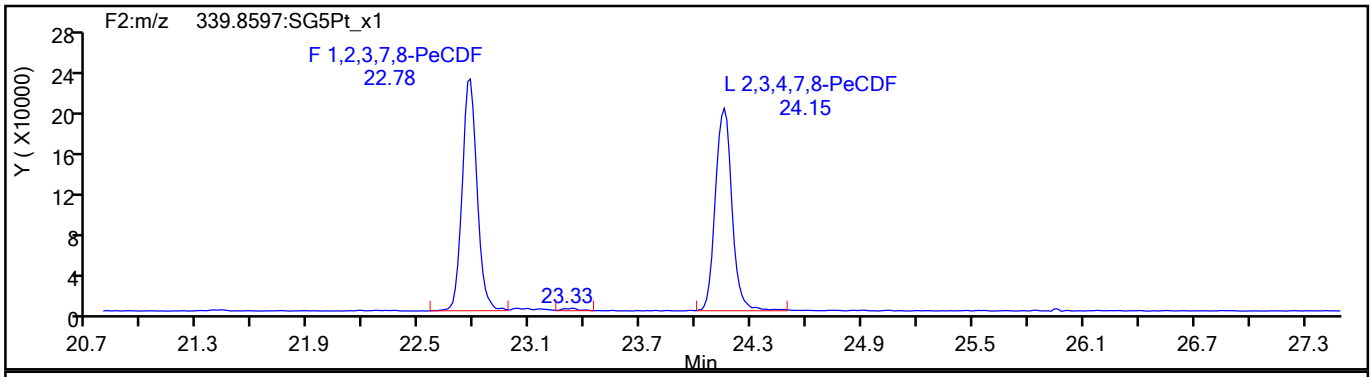

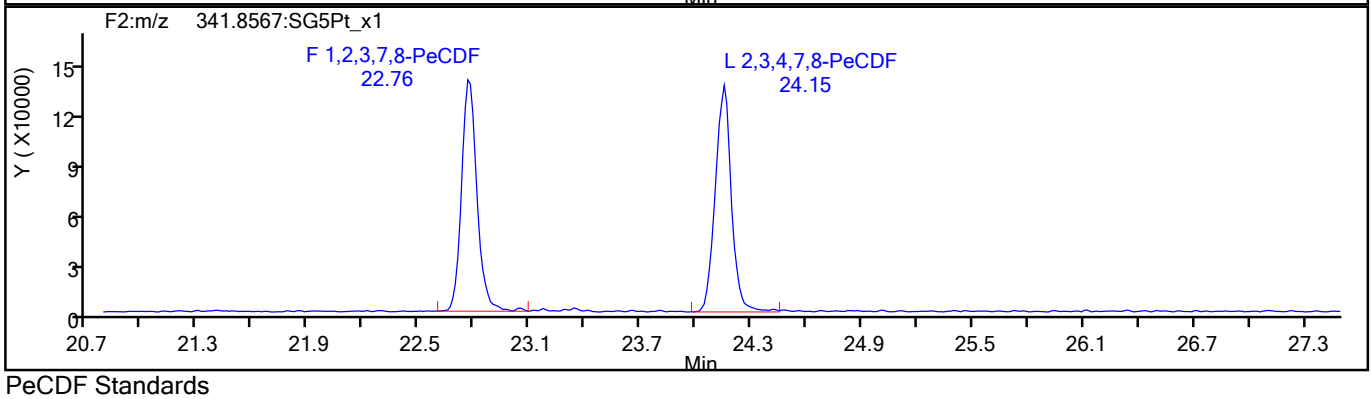

PeCDF Standards

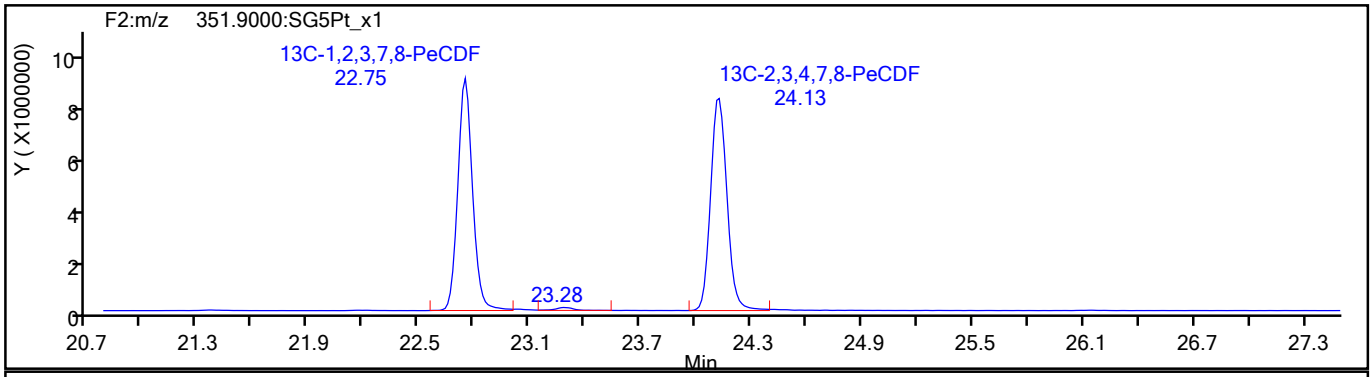

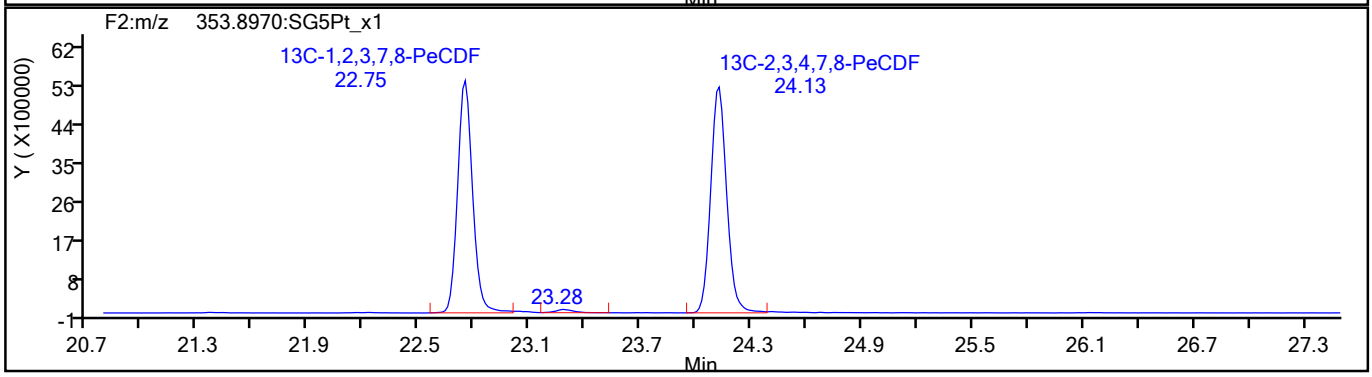

793797

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

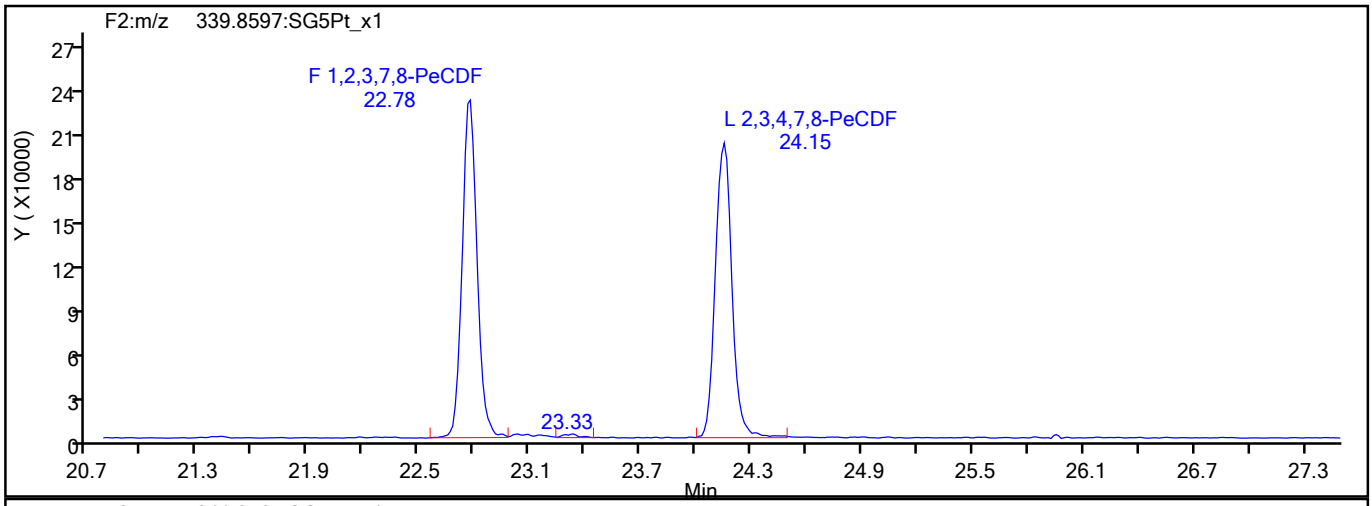

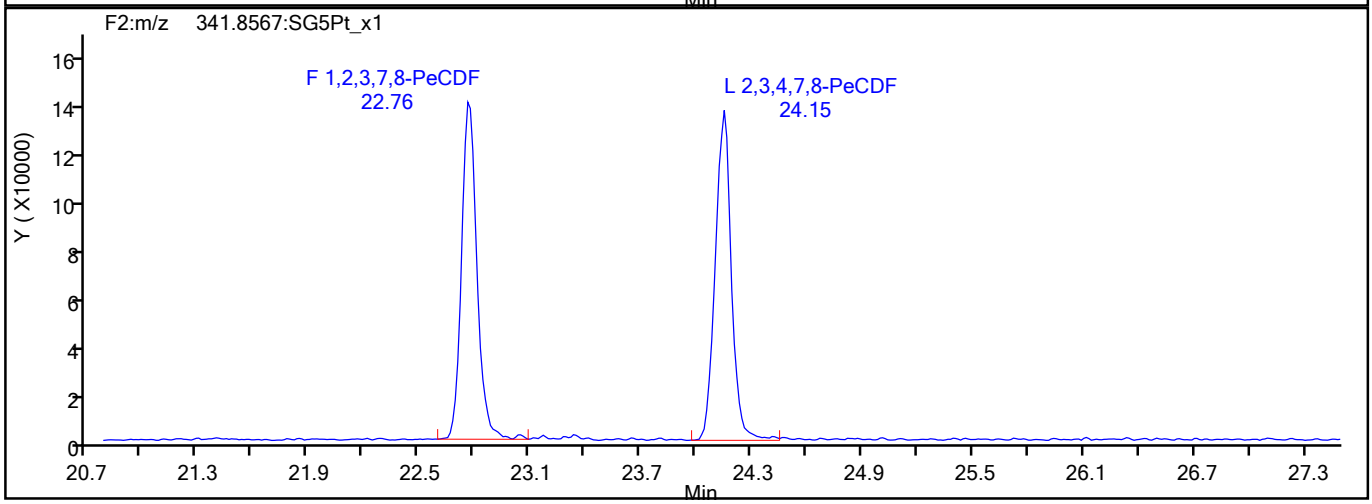

PeCDF Interference Mass

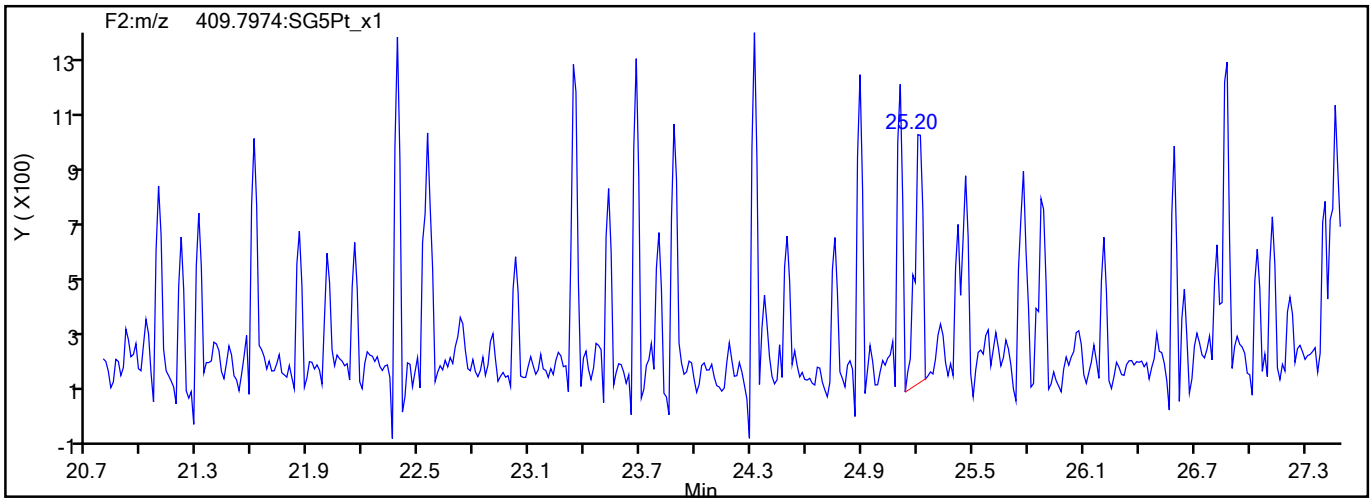

793798

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

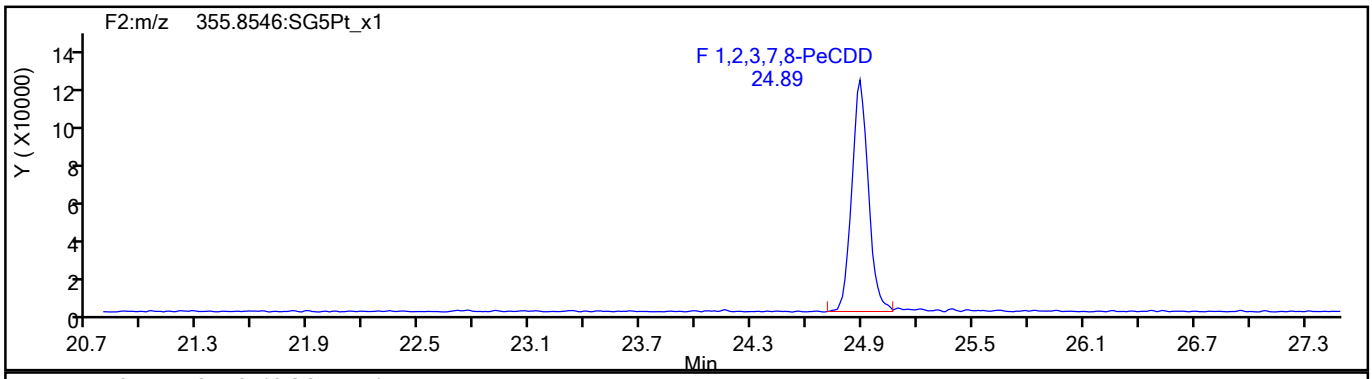

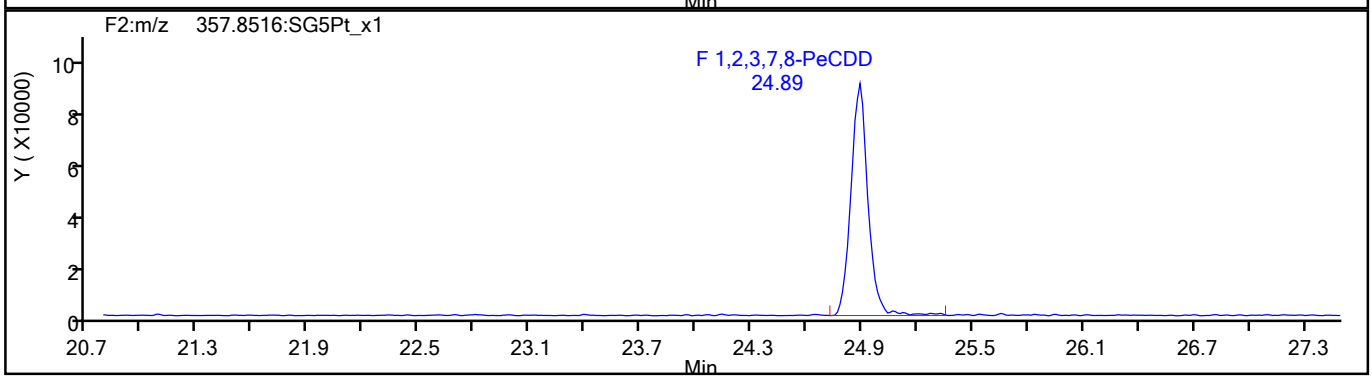

PeCDD Standards

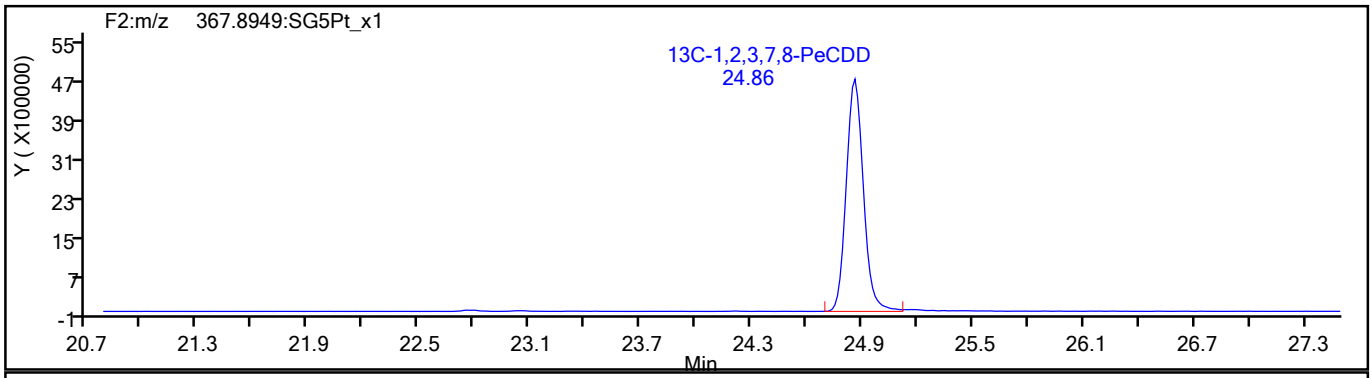

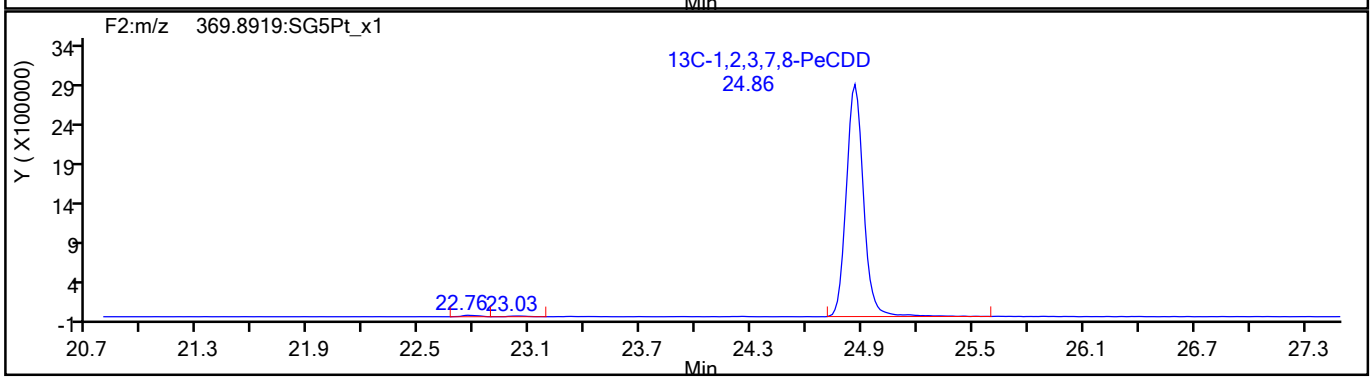

793799

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

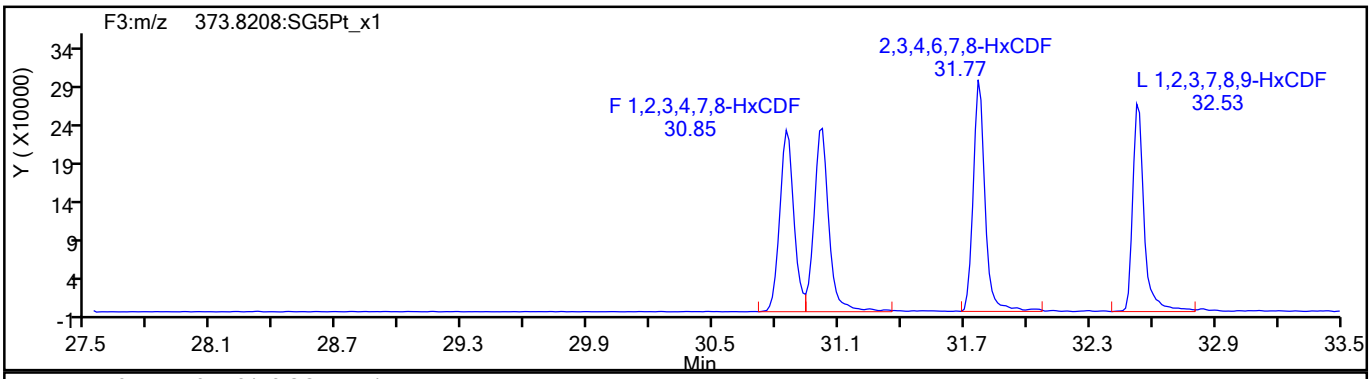

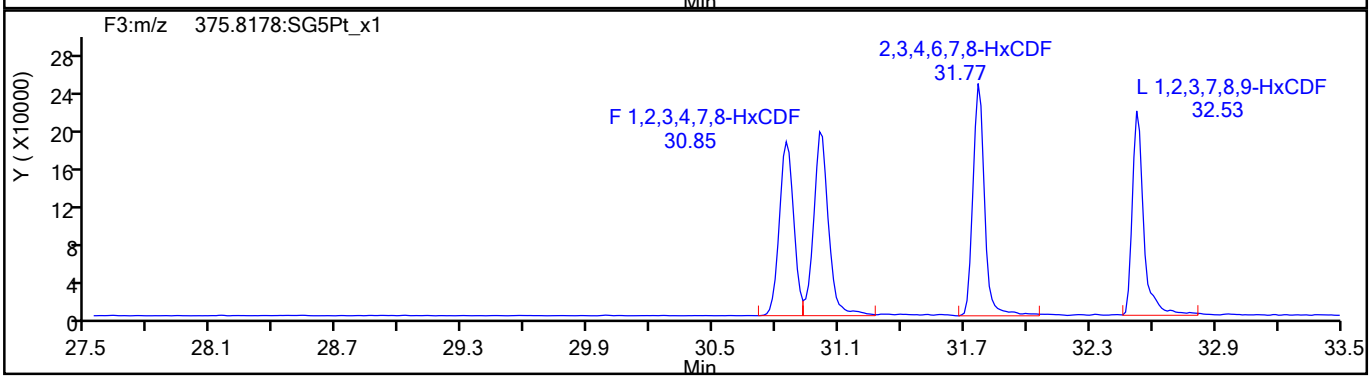

HxCDF Standards

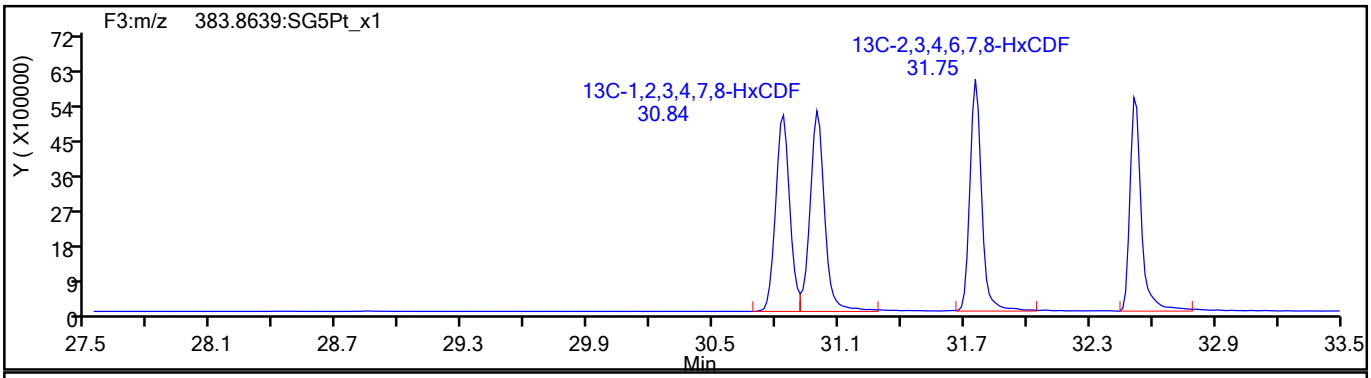

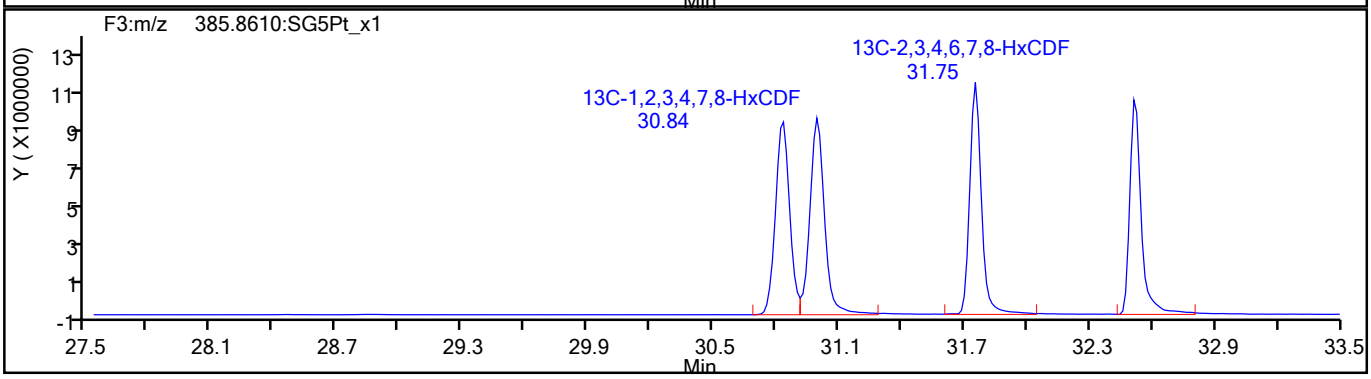

793800

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

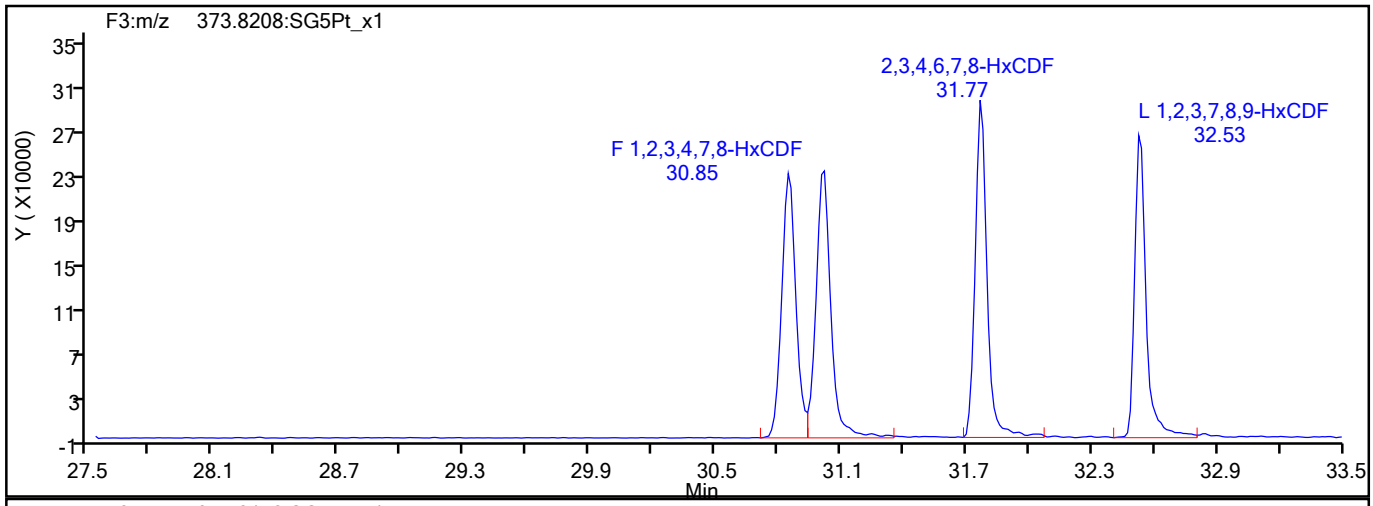

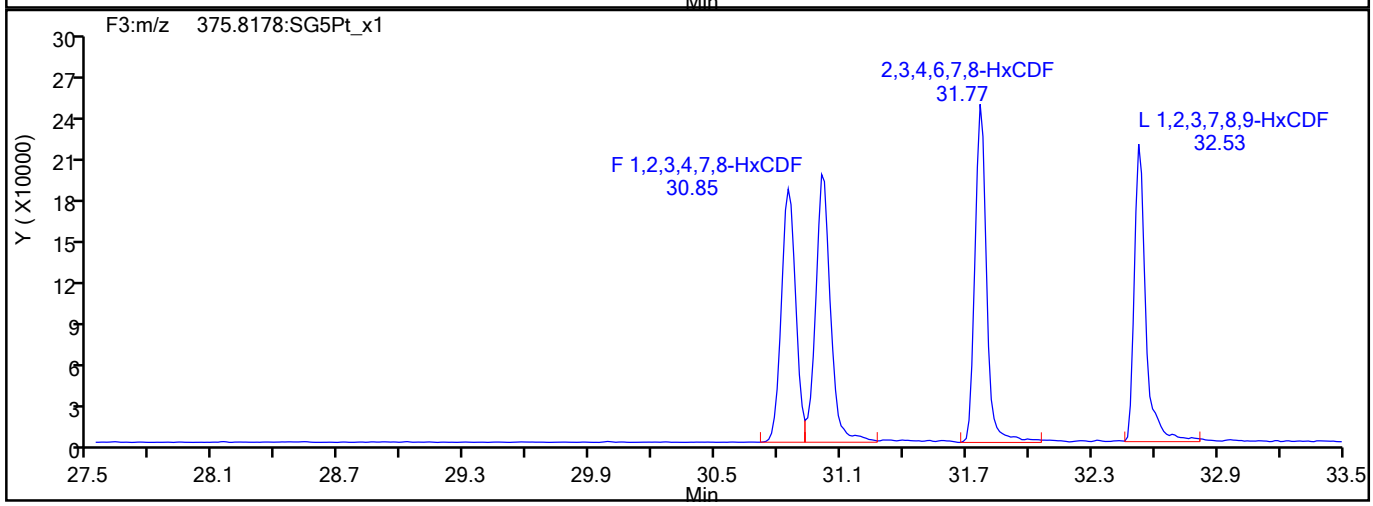

HxCDF Interference Mass

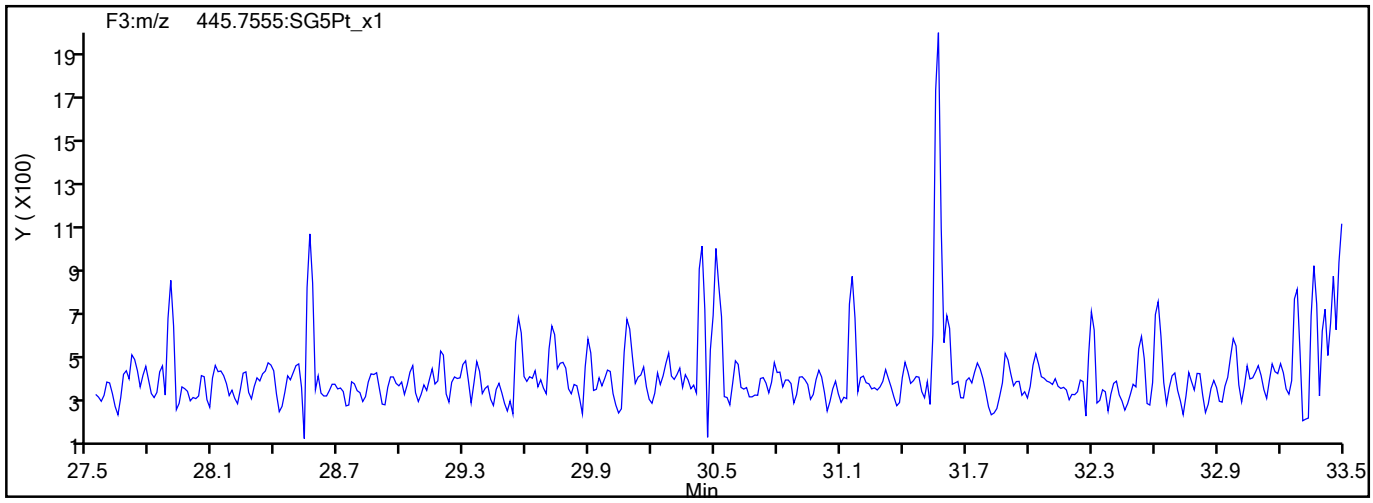

793801

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

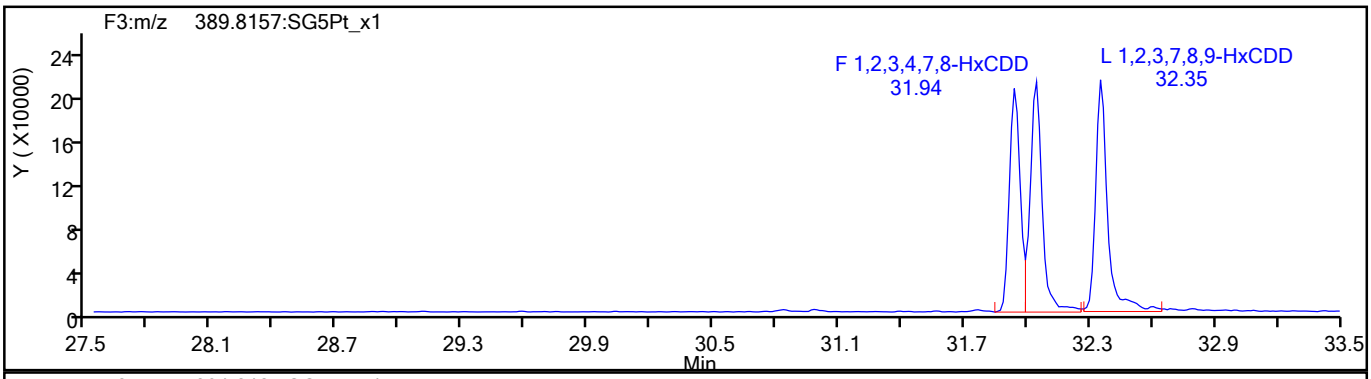

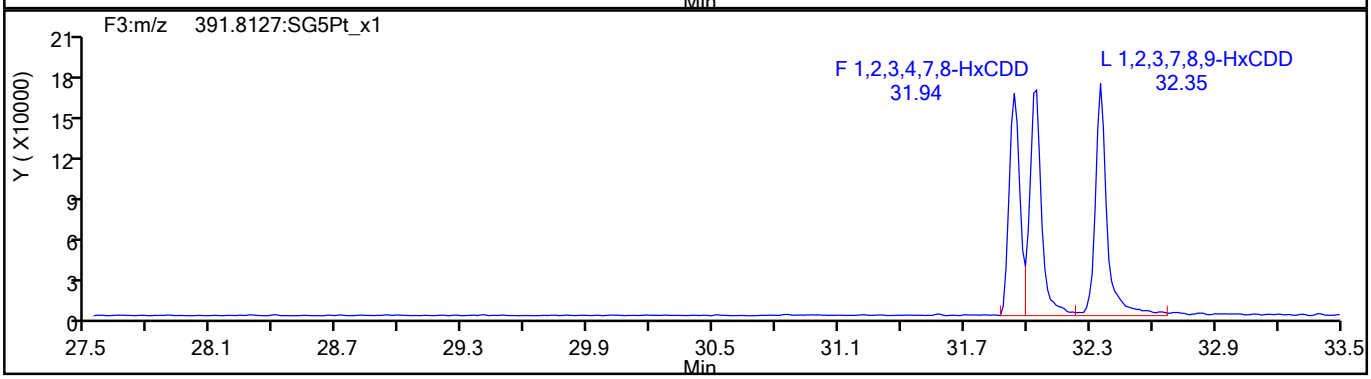

HxCDD Standards

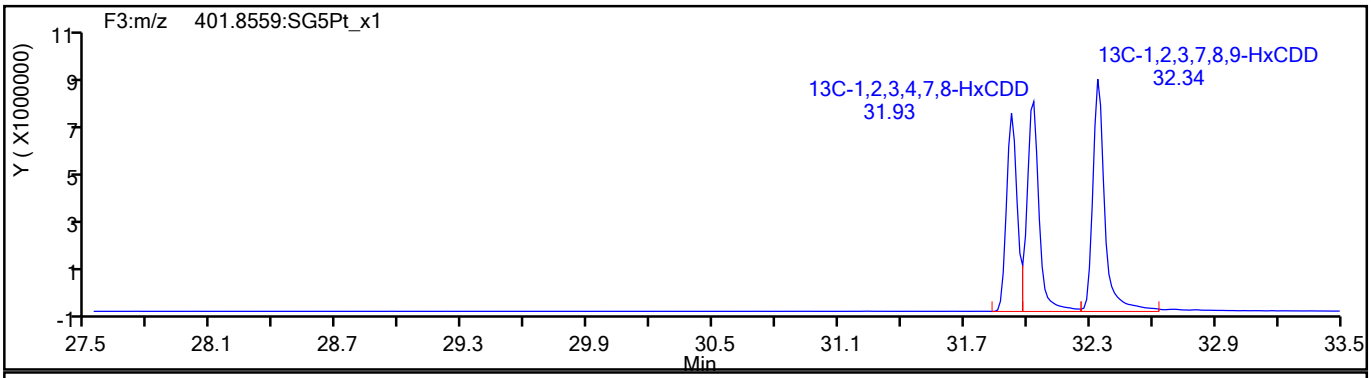

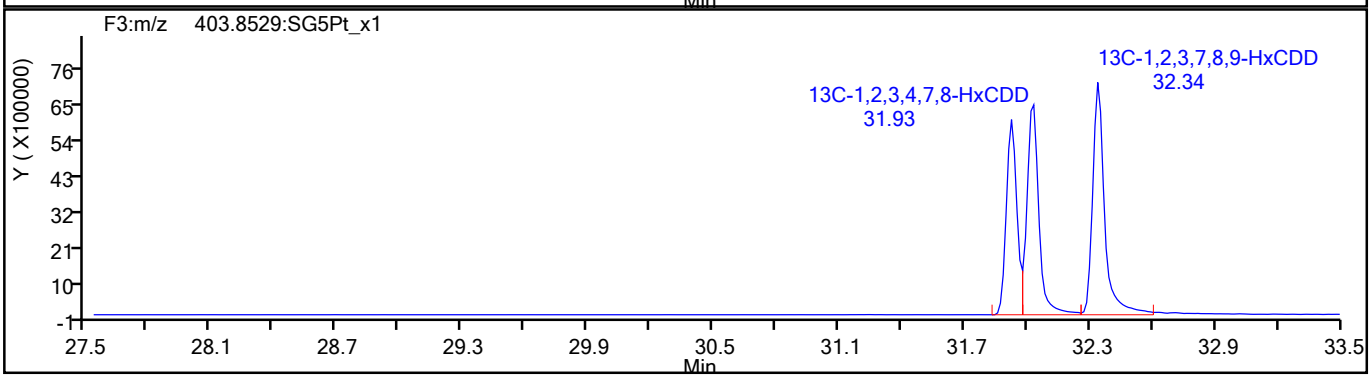

793802

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

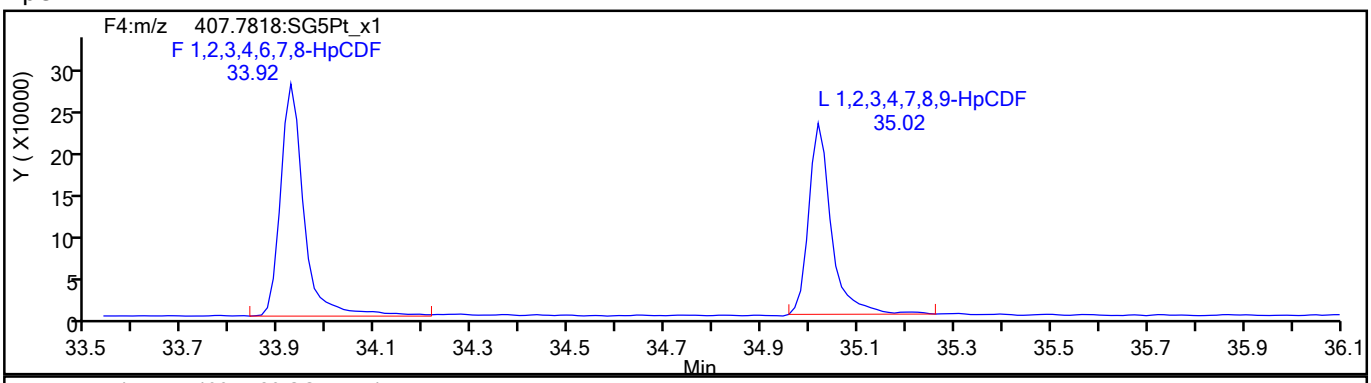

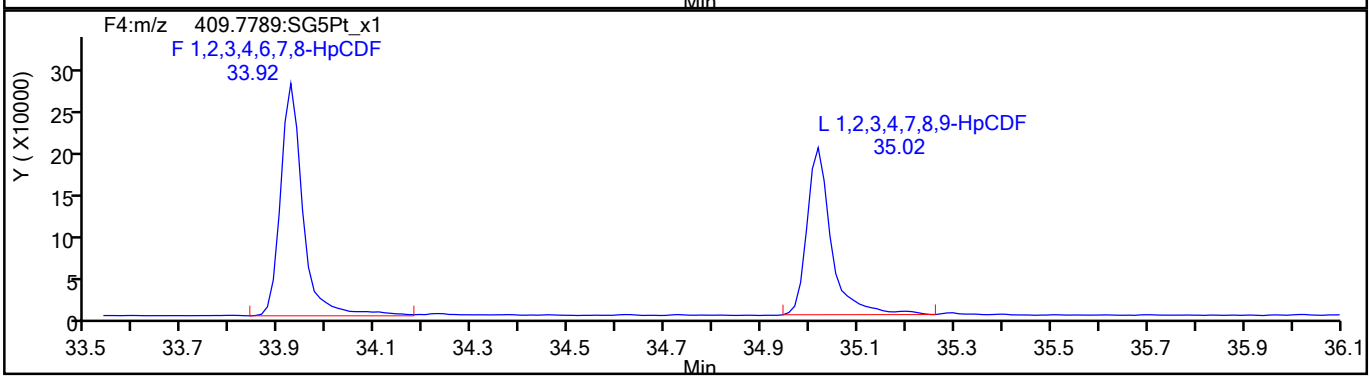

HpCDF Standards

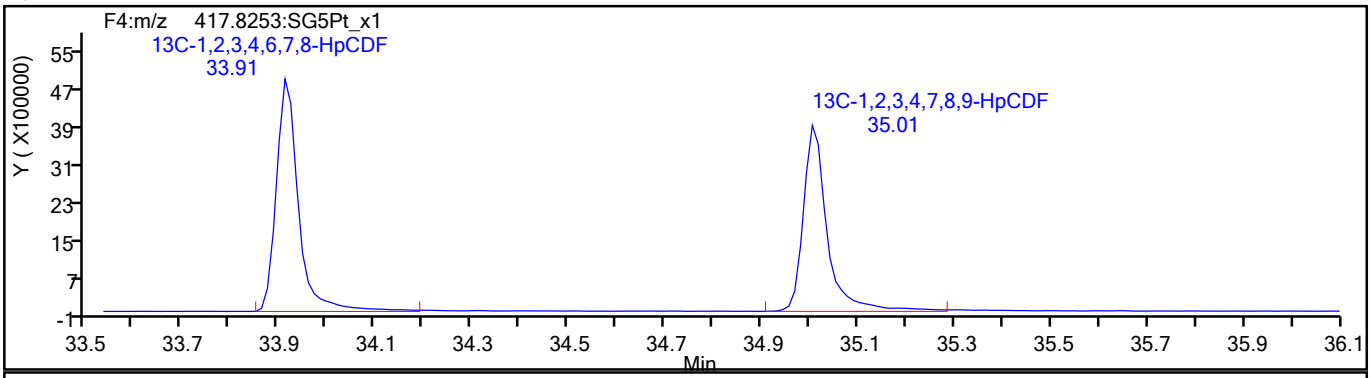

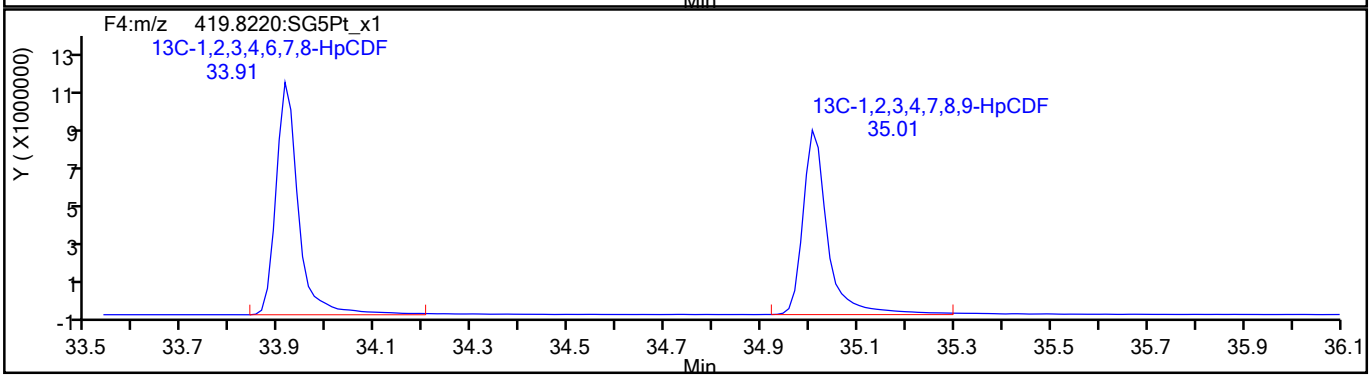

793803

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

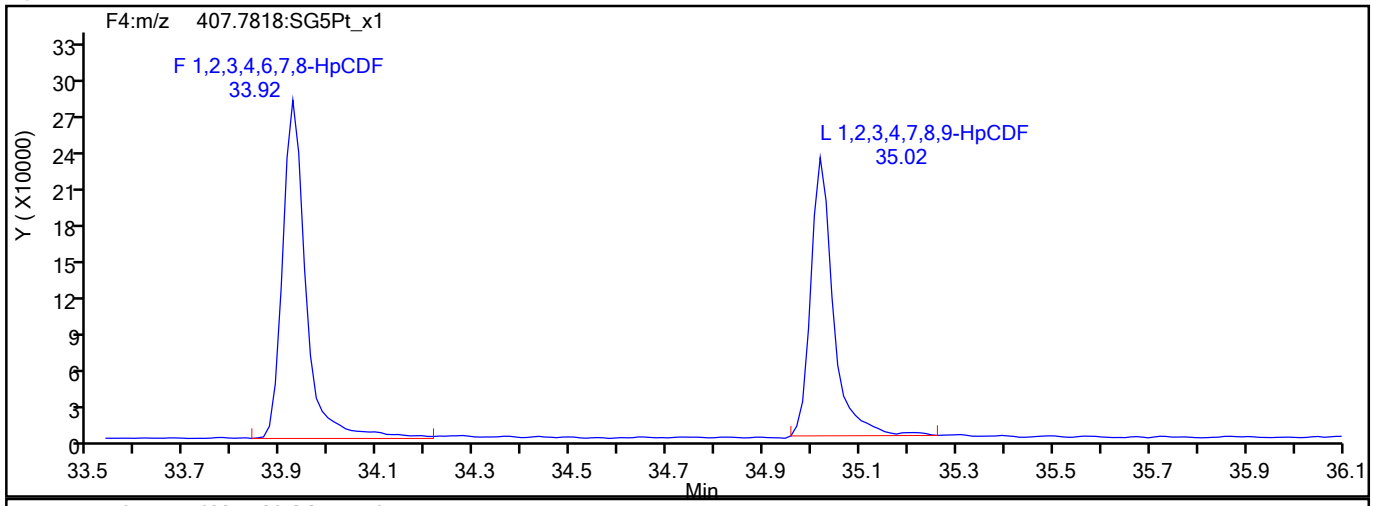

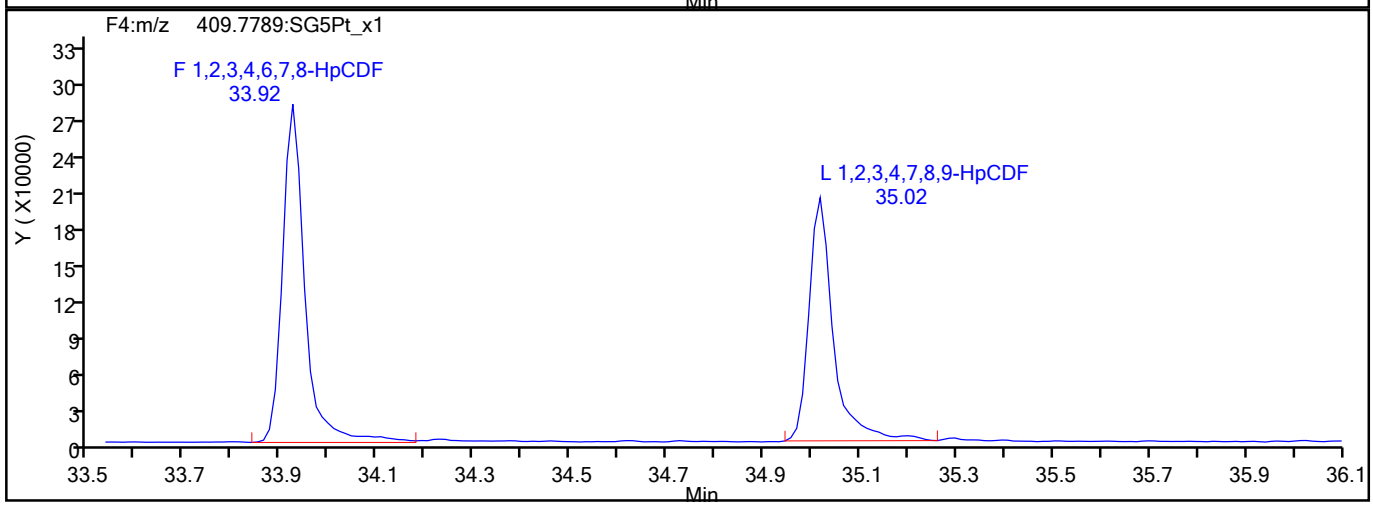

HpCDF Interference Mass

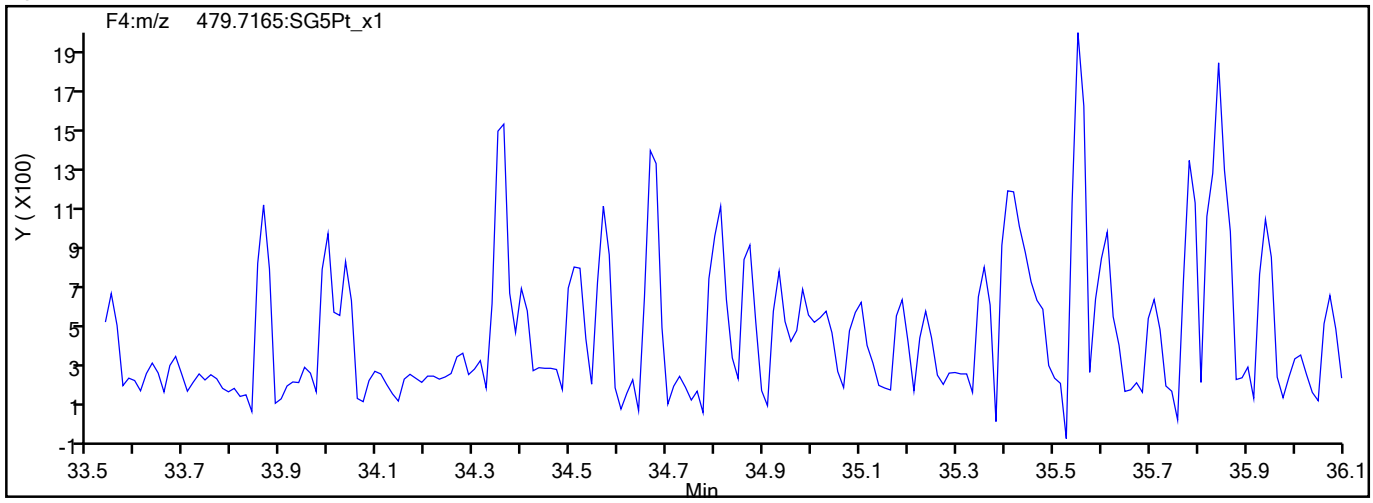

793804

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

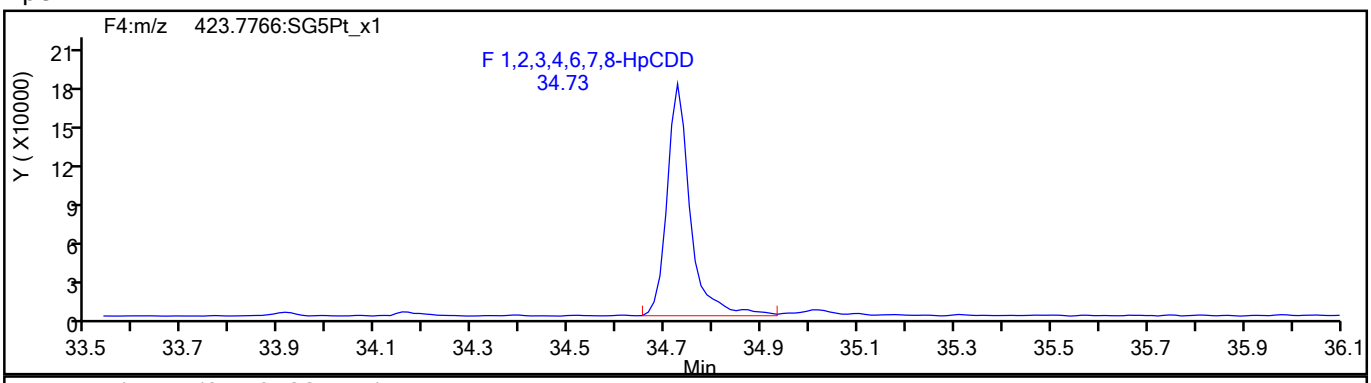

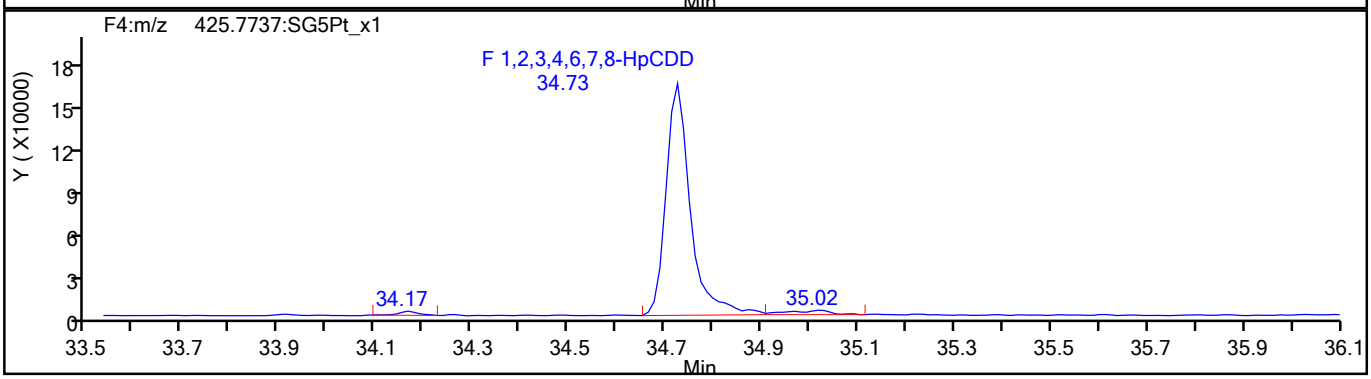

HpCDD Standards

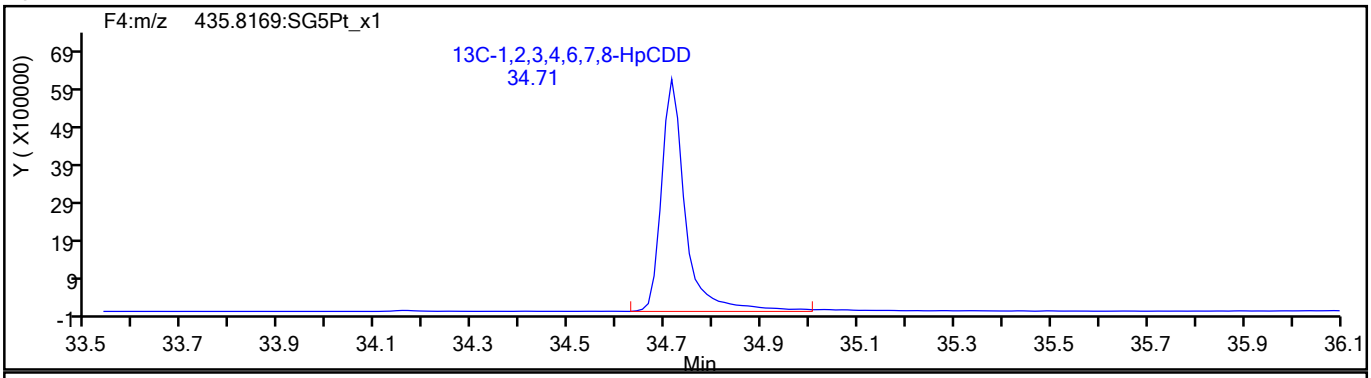

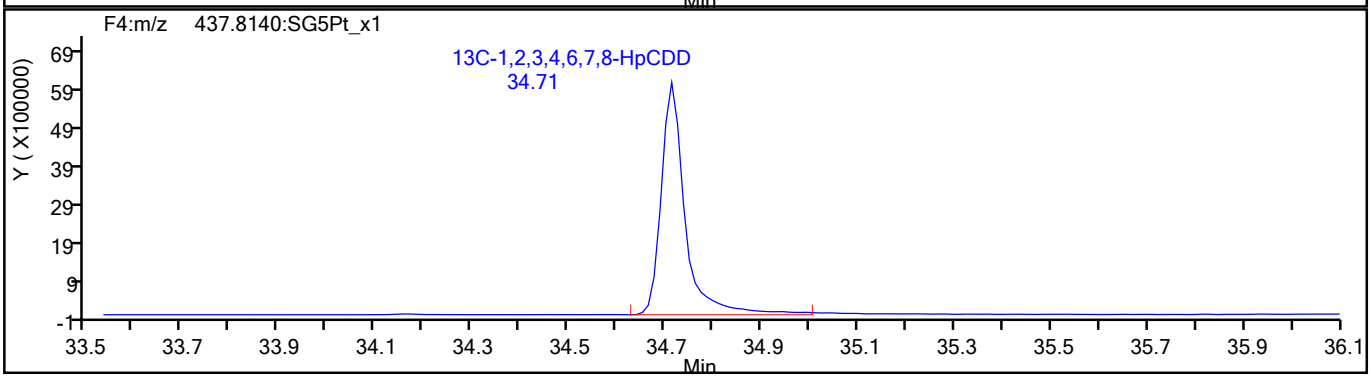

793805

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

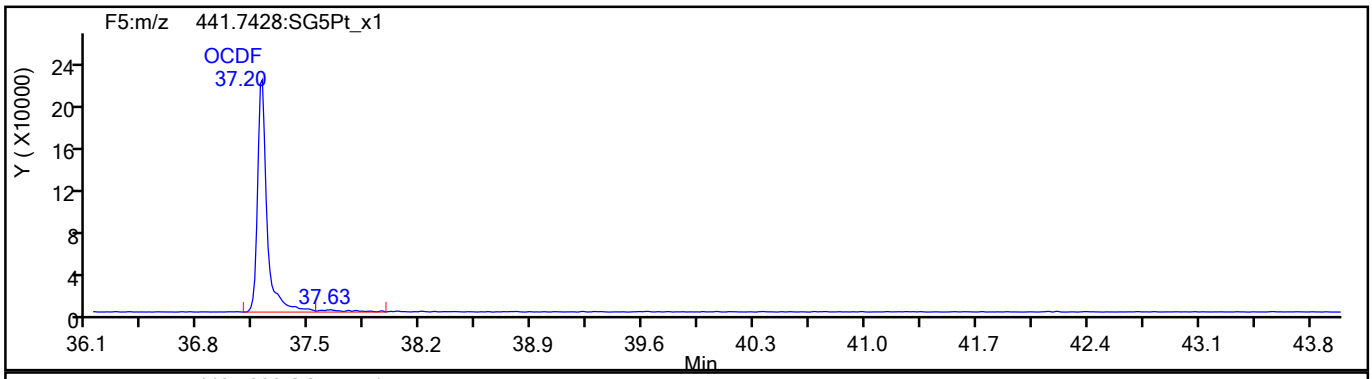

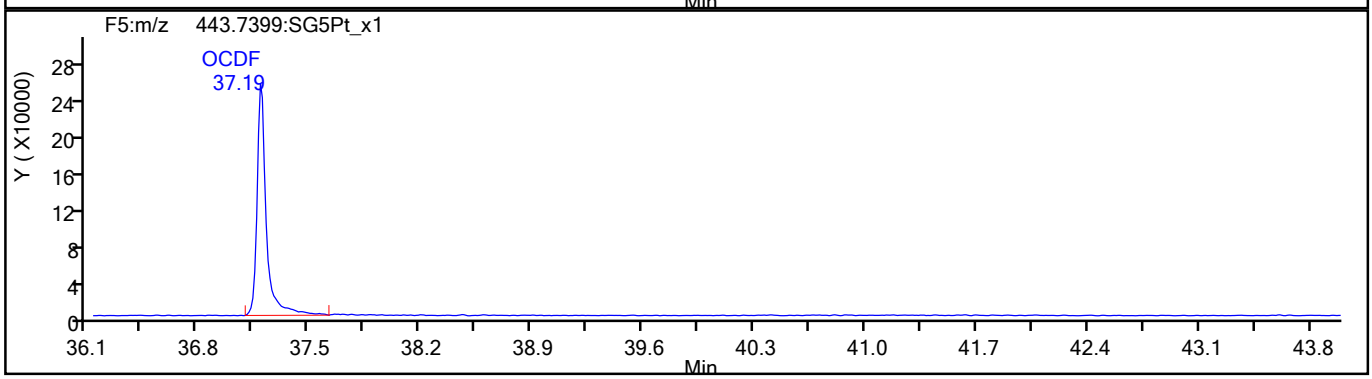

OCDF Standards

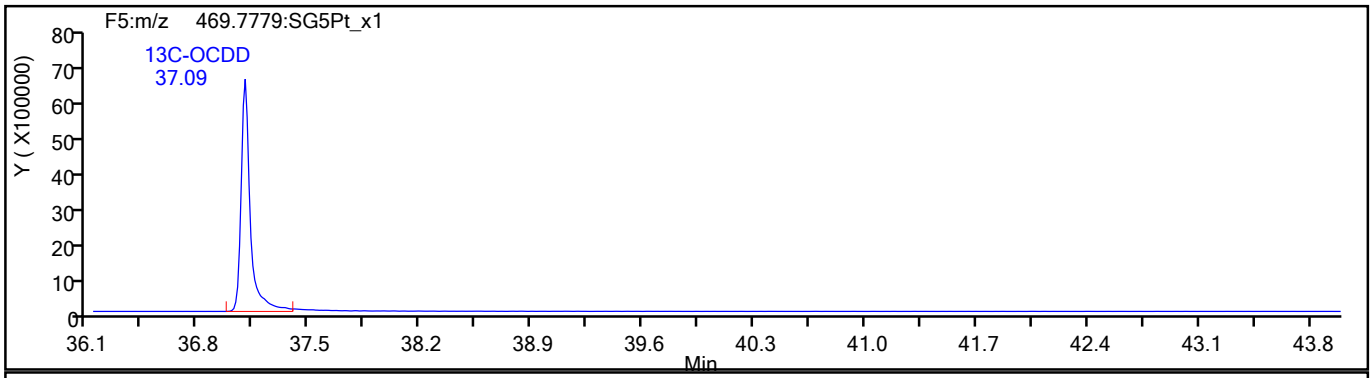

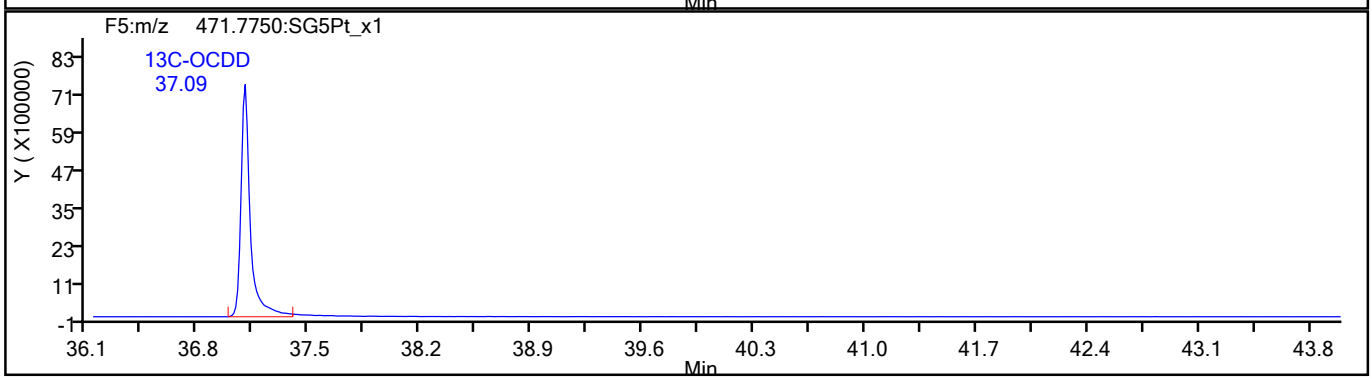

793806

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

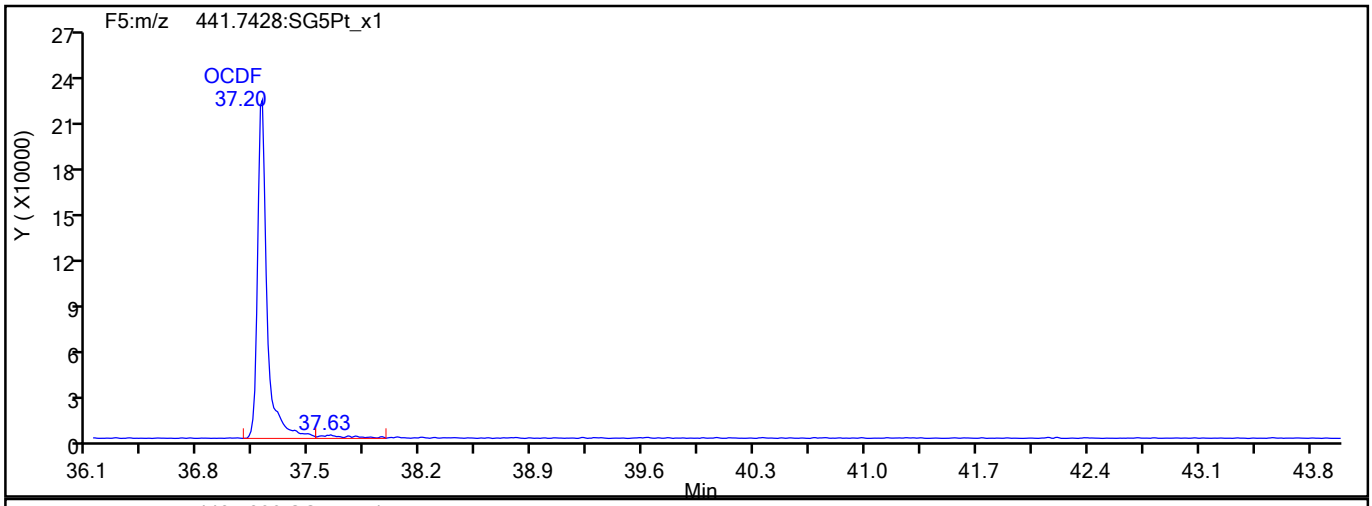

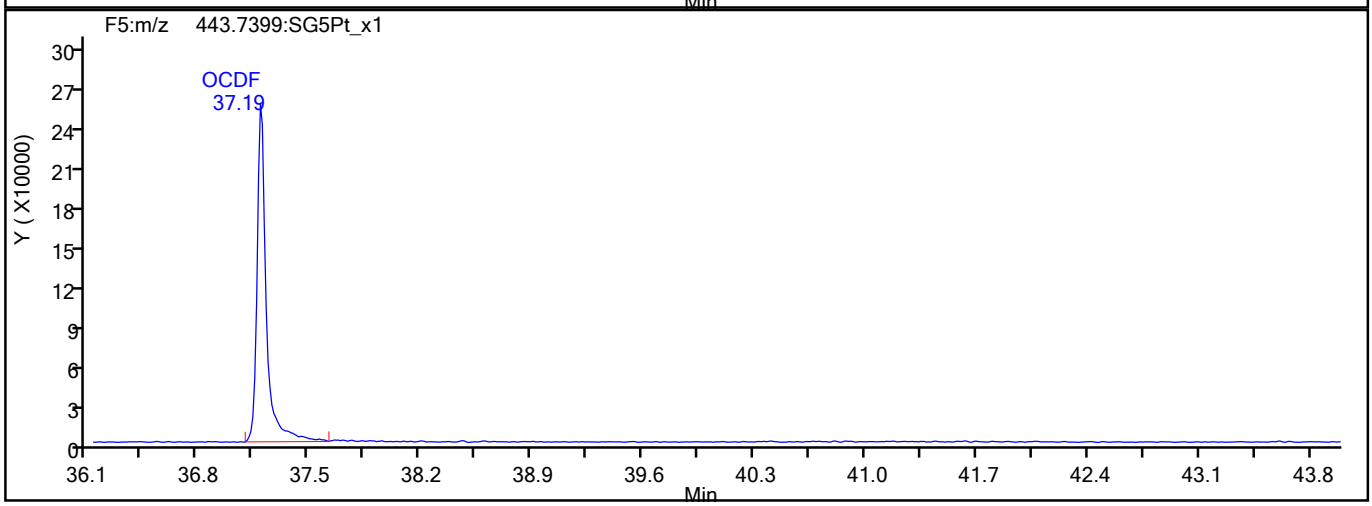

OCDF Interference Mass

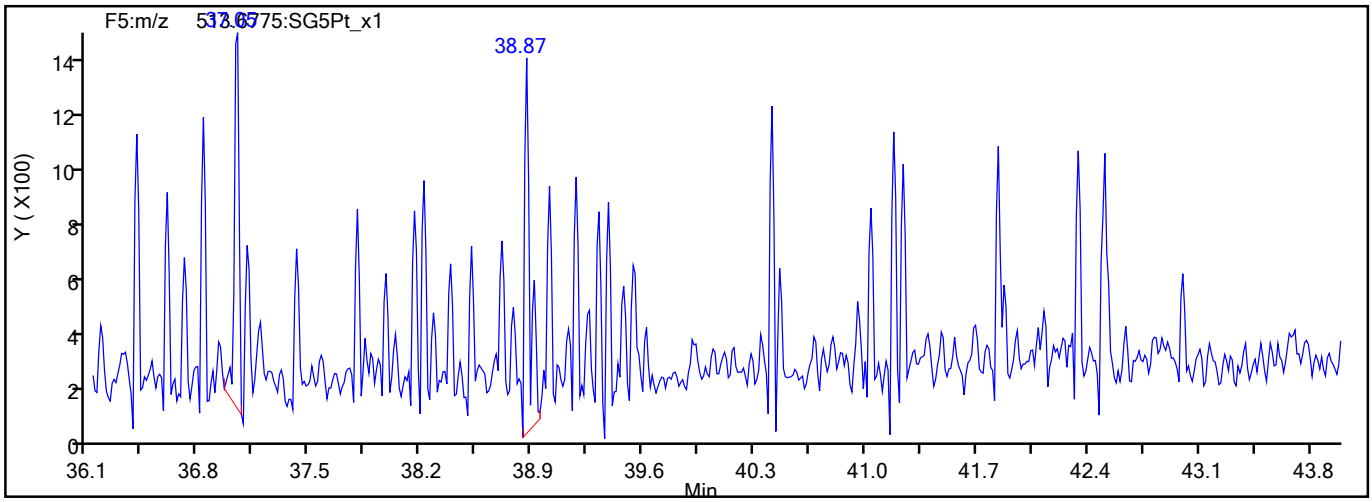

793807

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

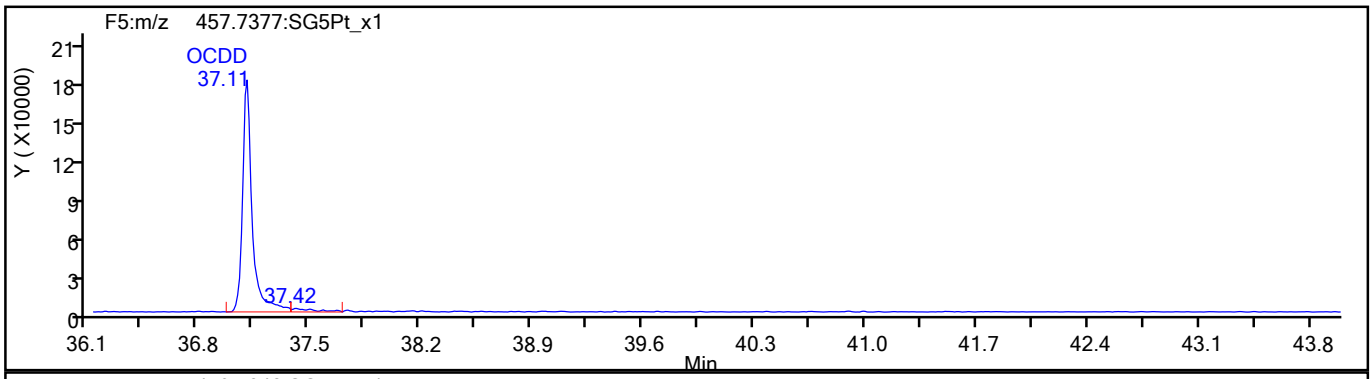

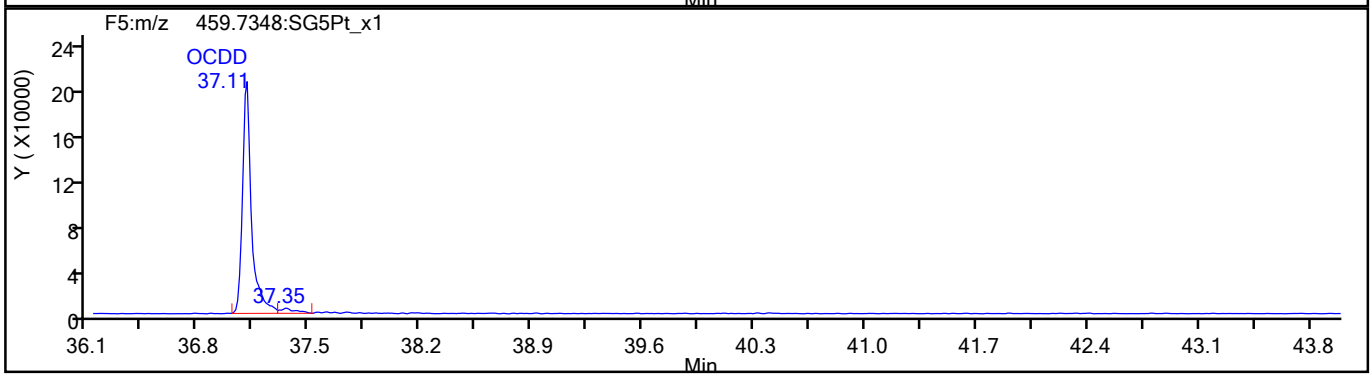

OCDD Standards

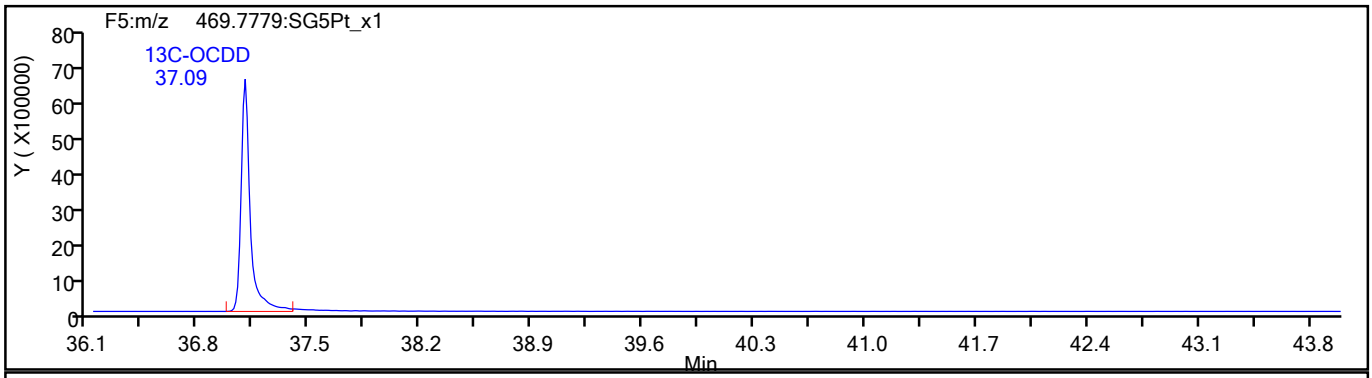

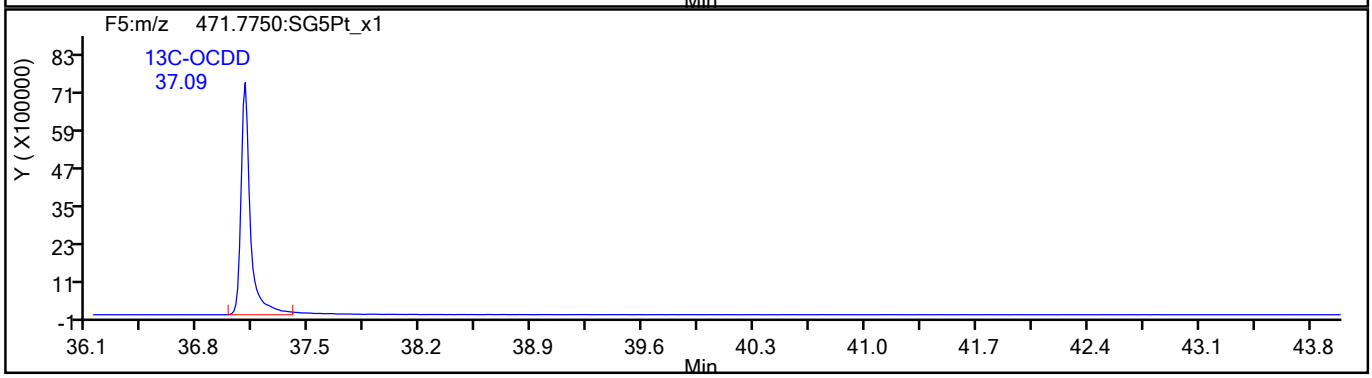

793808

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

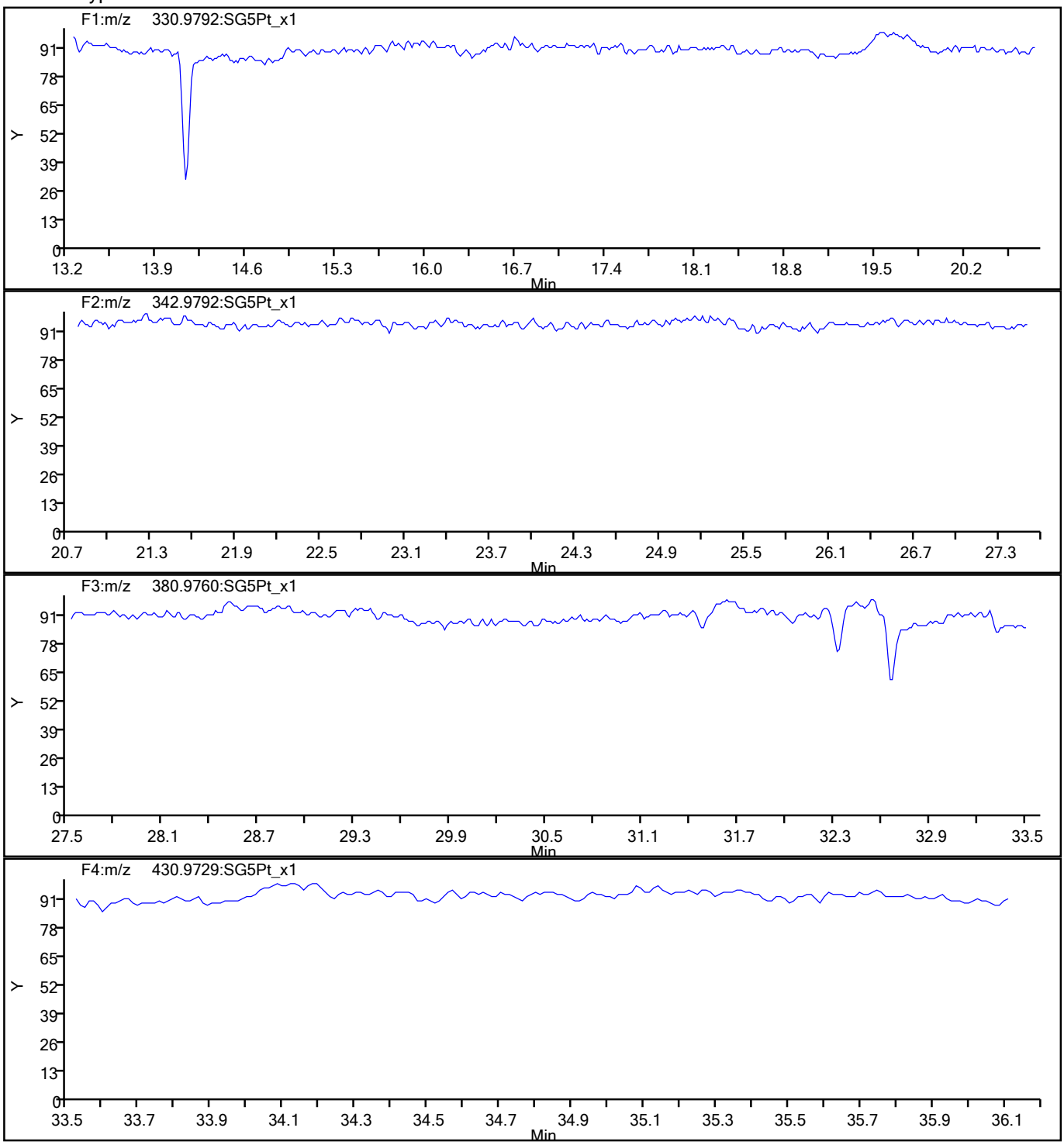

793809

Report Date: 27-Jul-2021 15:16:39 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_3.d		
Injection Date:	26-Jul-2021 10:51:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

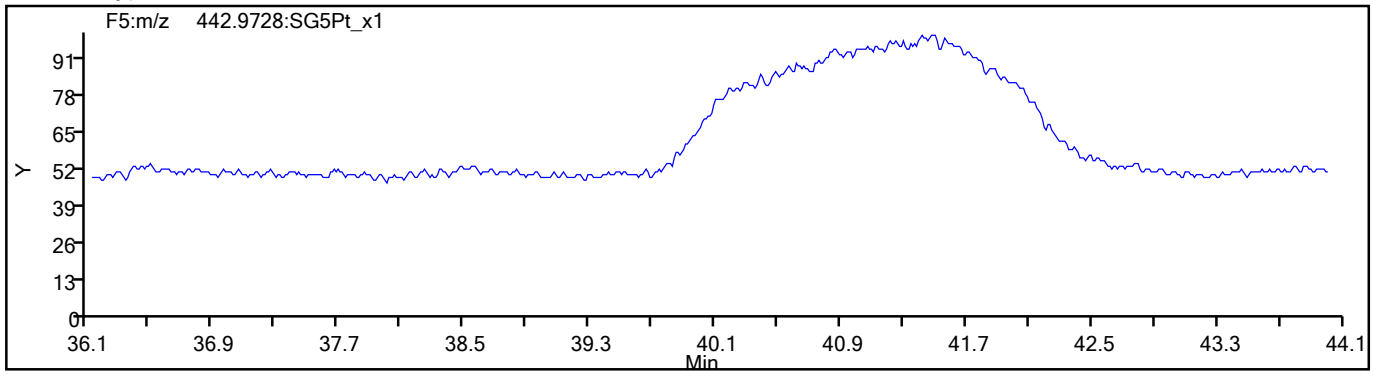

793810

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62853211	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	98246522	0.78	1.6249	96.2	96.2	0.1370	0.1370	96.20	
2,3,7,8-TCDF	17.628	1709191	0.74	1.0239	1.699	1.699	0.0115	0.0115	84.95	
S Total TCDF					1.699	1.699	0.0115	0.0115		
D 13C-2,3,7,8-TCDD	18.338	53975587	0.81	0.8993	95.5	95.5	0.1627	0.1627	95.49	
$ 37Cl4-2,3,7,8-TCDD	18.354	1231219		1.1071	1.769	1.769	0.009070	0.009070	88.47	
2,3,7,8-TCDD	18.354	1184284	0.77	1.2541	1.750	1.750	0.0187	0.0187	87.48	
S Total TCDD					1.750	1.750	0.0187	0.0187		
D 13C-1,2,3,7,8-PeCDF	22.749	72525655	1.59	1.2101	95.4	95.4	0.2163	0.2163	95.36	
1,2,3,7,8-PeCDF	22.776	6620354	1.62	1.0611	8.602	8.602	0.0369	0.0369	86.02	
D 13C-2,3,4,7,8-PeCDF	24.126	74944110	1.59	1.2395	96.2	96.2	0.2111	0.2111	96.20	a
2,3,4,7,8-PeCDF	24.153	6452410	1.61	1.0184	8.454	8.454	0.0398	0.0398	84.54	
S Total PeCDF					17.1	17.1	0.0383	0.0383		
D 13C-1,2,3,7,8-PeCDD	24.862	46721712	1.62	0.7612	97.7	97.7	0.1174	0.1174	97.65	
1,2,3,7,8-PeCDD	24.889	4219570	1.58	1.0484	8.614	8.614	0.0282	0.0282	86.14	
S Total PeCDD					8.614	8.614	0.0282	0.0282		
D 13C-1,2,3,4,7,8-HxCDF	30.835	65726932	0.51	1.0837	101.6	101.6	0.5284	0.5284	102	a
1,2,3,4,7,8-HxCDF	30.848	6041767	1.22	1.0851	8.471	8.471	0.0611	0.0611	84.71	
D 13C-1,2,3,6,7,8-HxCDF	30.995	68089005	0.53	1.1279	101.1	101.1	0.5077	0.5077	101	
1,2,3,6,7,8-HxCDF	31.021	6561860	1.24	1.1260	8.559	8.559	0.0596	0.0596	85.59	
D 13C-2,3,4,6,7,8-HxCDF	31.753	64406928	0.52	1.0637	101.4	101.4	0.5383	0.5383	101	
2,3,4,6,7,8-HxCDF	31.767	6352404	1.21	1.1675	8.448	8.448	0.0492	0.0492	84.48	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58828058	0.51	0.9676	101.8	101.8	0.5918	0.5918	102	
1,2,3,7,8,9-HxCDF	32.526	5963032	1.22	1.1664	8.691	8.691	0.0536	0.0536	86.91	
S Total HxCDF					34.2	34.2	0.0559	0.0559		
* 13C-1,2,3,7,8,9-HxCDD	32.339	59719891	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44877133	1.26	0.7334	102.5	102.5	0.4904	0.4904	102	a
1,2,3,4,7,8-HxCDD	31.940	3996910	1.25	1.0640	8.370	8.370	0.0541	0.0541	83.70	
D 13C-1,2,3,6,7,8-HxCDD	32.033	52974056	1.27	0.8802	100.8	100.8	0.4087	0.4087	101	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.046	4517909	1.28	1.0001	8.528	8.528	0.0541	0.0541	85.28	
1,2,3,7,8,9-HxCDD	32.353	4612548	1.27	1.1325	8.324	8.324	0.0492	0.0492	83.24	
S Total HxCDD					25.2	25.2	0.0525	0.0525		
D 13C-1,2,3,4,6,7,8-HpCDF	33.911	46691158	0.44	0.7730	101.1	101.1	1.219	1.219	101	
1,2,3,4,6,7,8-HpCDF	33.924	5795616	1.06	1.4413	8.612	8.612	0.0908	0.0908	86.12	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	42362179	0.44	0.7008	101.2	101.2	1.344	1.344	101	a
1,2,3,4,7,8,9-HpCDF	35.017	4773949	1.04	1.3174	8.554	8.554	0.1198	0.1198	85.54	
S Total HpCDF					17.2	17.2	0.1053	0.1053		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	38689128	1.01	0.6472	100.1	100.1	0.6644	0.6644	100	
1,2,3,4,6,7,8-HpCDD	34.725	3690749	1.06	1.0943	8.717	8.717	0.0588	0.0588	87.17	
S Total HpCDD					8.717	8.717	0.0588	0.0588		
D 13C-OCDD	37.093	52034518	0.88	0.4472	194.9	194.9	0.3057	0.3057	97.43	
OCDF	37.189	6198469	0.89	1.4382	16.6	16.6	0.0331	0.0331	82.83	
OCDD	37.105	5013385	0.90	1.1070	17.4	17.4	0.0477	0.0477	87.03	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Jul-2021 11:36:54 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621A CS-3 HRDXNL3_00029
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:16:43 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:31:17

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28386456	7046087	6003	15007	1174		
333.9339	18.142	18.142	0		34466755	8558284	3128	7820	2736	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42972486	10763336	8679	21697	1240		
317.9389	17.613	17.616	0	0.971	55274036	13878642	5218	13045	2660	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	725190	178427	386	965	462		
305.8987	17.628	17.631	0	1.001	984001	248871	771	1927	323	0.74(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24153490	5697854	6003	15007	949		
333.9339	18.338	18.338	0	1.011	29822097	7031837	3128	7820	2248	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	1231219	295748	627	1567	472		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	516509	120344	727	1817	166		
321.8936	18.354	18.357	0	1.001	667775	162973	470	1175	347	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44514928	7853181	9659	24147	813		
353.8970	22.749	22.754	0	1.254	28010727	4960984	6675	16687	743	1.59(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	4089215	716349	1056	2640	678		
341.8567	22.776	22.779	0	1.001	2531139	446464	949	2372	470	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											a
351.9000	24.126	24.129	0	1.330	46033296	7621284	9659	24147	789		a
353.8970	24.126	24.129	0	1.330	28910814	4739818	6675	16687	710	1.59(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	3984657	653372	1056	2640	619		
341.8567	24.153	24.156	0	1.001	2467753	411895	949	2372	434	1.61(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28869986	4442492	3510	8775	1266		
369.8919	24.862	24.865	0	1.370	17851726	2719251	2068	5170	1315	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	2584600	398905	491	1227	812		
357.8516	24.889	24.892	0	1.001	1634970	246537	355	887	694	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											a
383.8639	30.835	30.838	0	0.953	22324815	4908430	11721	29302	419		a
385.8610	30.835	30.838	0	0.953	43402117	9487505	22146	55365	428	0.51(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.848	30.857	0	1.000	3322045	734549	2125	5312	346		
375.8178	30.848	30.857	0	1.000	2719722	584076	1696	4240	344	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.003	0	0.958	23443638	4852452	11721	29302	414		
385.8610	30.995	31.003	0	0.958	44645367	9390378	22146	55365	424	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.001	3628802	774738	2125	5312	365		
375.8178	31.021	31.022	0	1.001	2933058	621989	1696	4240	367	1.24(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.753	31.756	0	0.982	22116278	5724833	11721	29302	488		
385.8610	31.753	31.756	0	0.982	42290650	10891641	22146	55365	492	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	3476984	900887	2125	5312	424		
375.8178	31.767	31.772	0	1.000	2875420	748664	1696	4240	441	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	19952155	5224965	11721	29302	446		
385.8610	32.512	32.523	-1	1.005	38875903	10047992	22146	55365	454	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.534	0	1.000	3272570	870864	2125	5312	410		
375.8178	32.526	32.534	0	1.000	2690462	702575	1696	4240	414	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33208186	8207924	11753	29382	698		
403.8529	32.339	32.342	0		26511705	6578059	9521	23802	691	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											a
401.8559	31.927	31.929	0	0.987	24991401	7247079	11753	29382	617		a
403.8529	31.927	31.929	0	0.987	19885732	5749736	9521	23802	604	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	2220855	634454	1798	4495	353		
391.8127	31.940	31.945	0	1.000	1776055	520388	1195	2987	435	1.25(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29637474	7731021	11753	29382	658		
403.8529	32.033	32.033	0	0.991	23336582	6105317	9521	23802	641	1.27(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.046	32.047	0	1.000	2539756	681391	1798	4495	379		
391.8127	32.046	32.047	0	1.000	1978153	525440	1195	2987	440	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	2578931	681238	1798	4495	379		
391.8127	32.353	32.355	0	1.013	2033617	530890	1195	2987	444	1.27(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.911	33.914	0	1.049	14324046	4548819	17096	42740	266		
419.8220	33.911	33.914	0	1.049	32367112	10373412	38619	96547	269	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	2984390	989226	3939	9847	251		
409.7789	33.924	33.926	0	1.000	2811226	912647	3871	9677	236	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											a
417.8253	35.005	35.010	0	1.082	12913204	3817815	17096	42740	223		a
419.8220	35.005	35.010	0	1.082	29448975	8551787	38619	96547	221	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	2430692	699814	3939	9847	178		
409.7789	35.017	35.020	0	1.000	2343257	686031	3871	9677	177	1.04(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19472945	5796031	12697	31742	456		
437.8140	34.714	34.716	0	1.073	19216183	5692167	12738	31845	447	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.725	34.726	0	1.000	1901971	557241	1605	4012	347		
425.7737	34.725	34.726	0	1.000	1788778	518346	1352	3380	383	1.06(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	24422535	6155132	2912	7280	2114		
471.7750	37.093	37.094	0	1.147	27611983	6845350	5172	12930	1324	0.88(0.76-1.02)	
OCDF											
441.7428	37.189	37.199	-1	1.003	2921445	715883	635	1587	1127		
443.7399	37.189	37.199	-1	1.003	3277024	845078	603	1507	1401	0.89(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	2373314	577341	633	1582	912		
459.7348	37.105	37.106	0	1.000	2640071	638330	739	1847	864	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F2:HRSIR		

13C-2,3,4,7,8-PeCDF, CAS: 116843-02-8

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 24.13

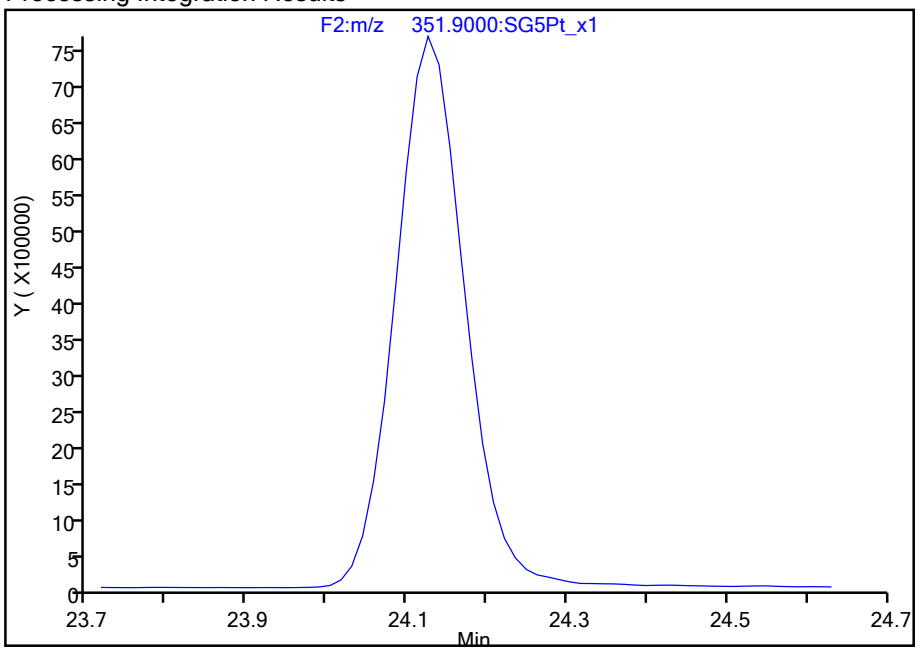

Manual Integration Results

RT: 24.13
Area: 46033296
Amount: 96.198549
Amount Units: pg/ul

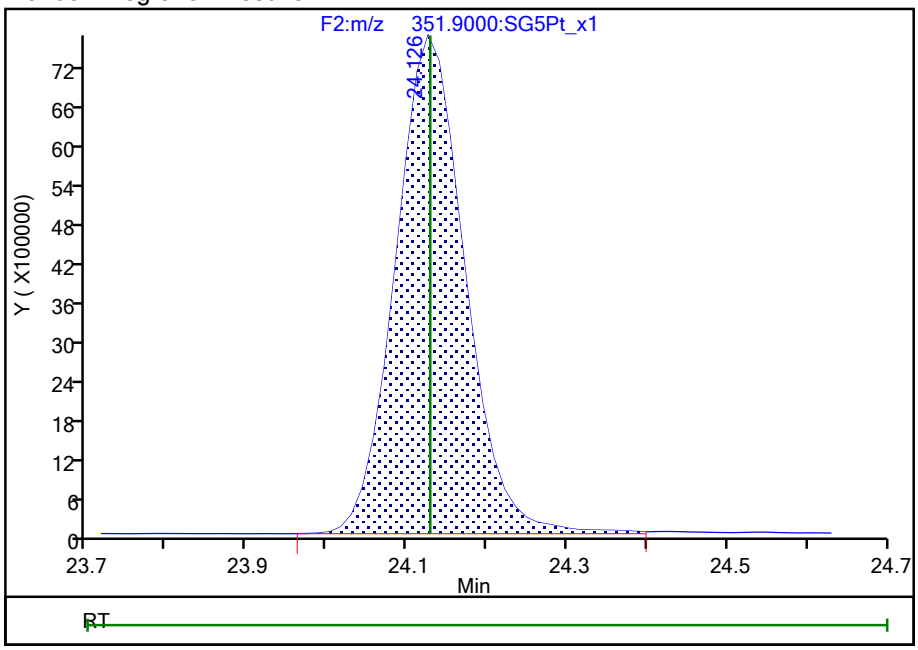

Reviewer: arghestanis, 26-Jul-2021 12:30:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

793816

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDF, CAS: 114423-98-2

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 30.84

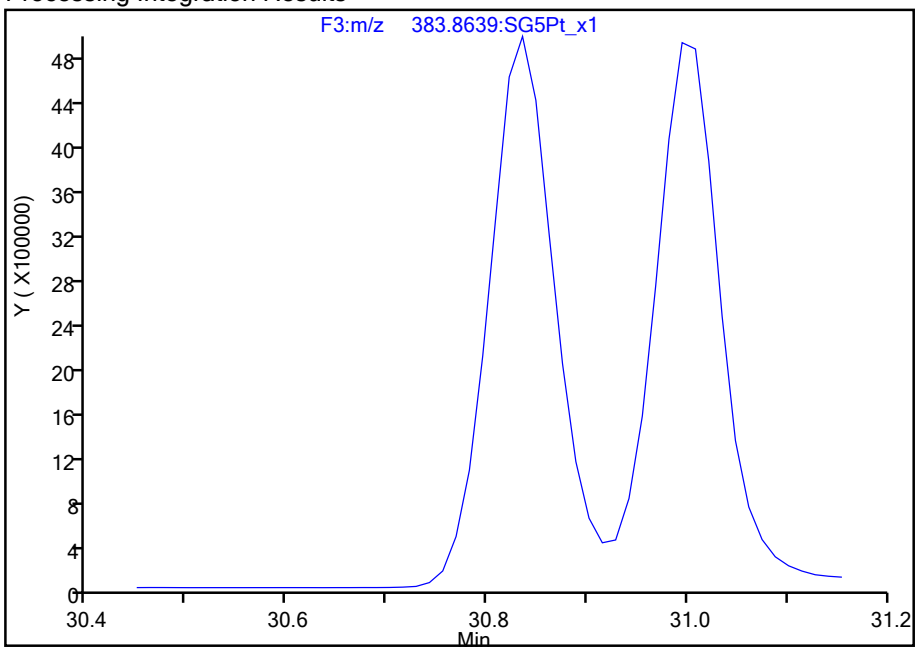

Manual Integration Results

RT: 30.84
Area: 22324815
Amount: 101.5622
Amount Units: pg/ul

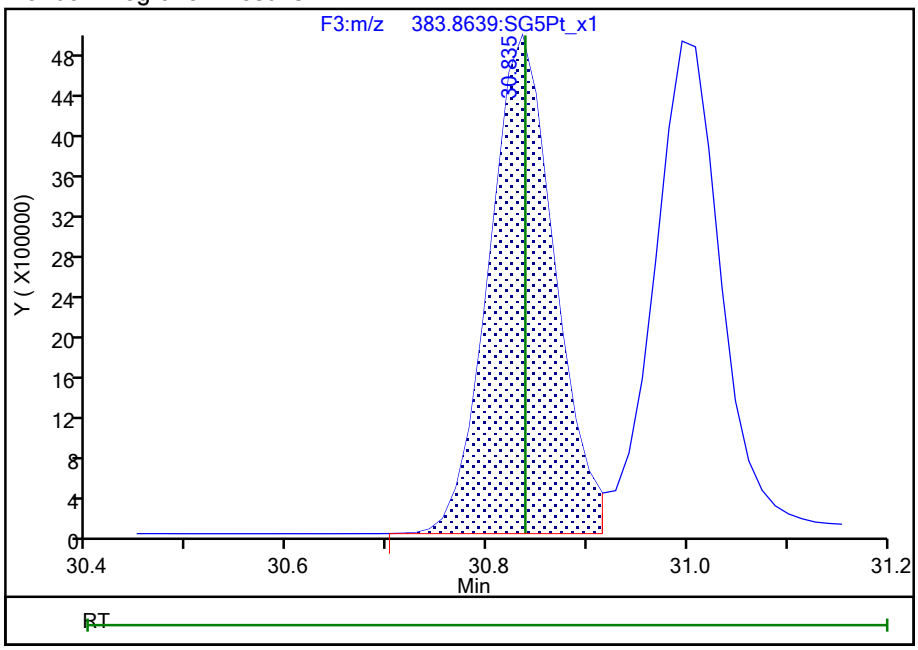

Reviewer: arghestanis, 26-Jul-2021 12:30:40
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

793817

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F3:HRSIR		

13C-1,2,3,4,7,8-HxCDD, CAS: 109719-80-4

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 31.93

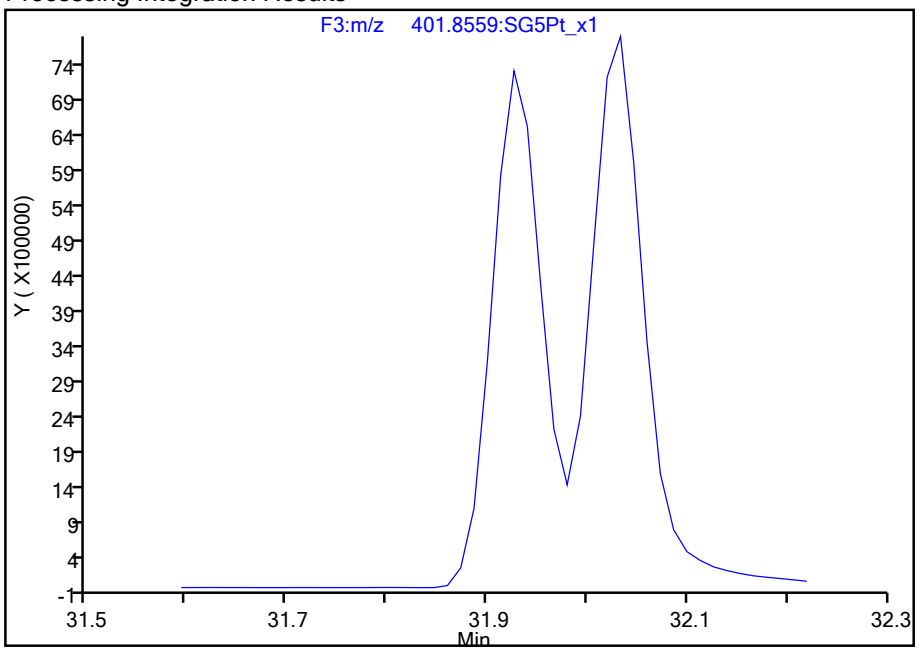

Manual Integration Results

RT: 31.93
Area: 24991401
Amount: 102.4585
Amount Units: pg/ul

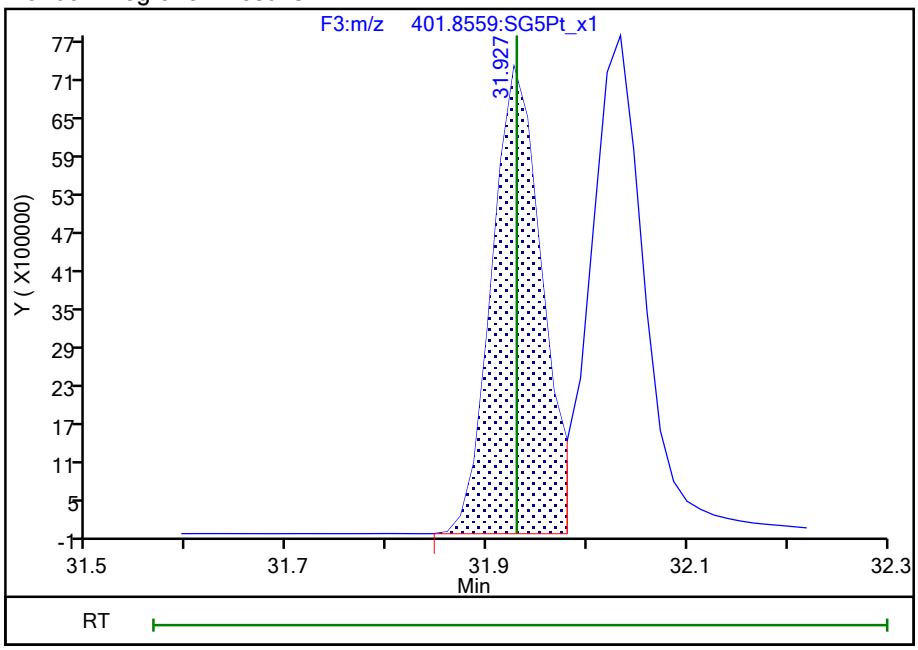

Reviewer: arghestanis, 26-Jul-2021 12:30:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d				
Injection Date:	26-Jul-2021 11:36:54	Instrument ID:	10D5		
Lims ID:	IC				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	5	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

13C-1,2,3,4,7,8,9-HpCDF, CAS: 109719-94-0

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 35.01

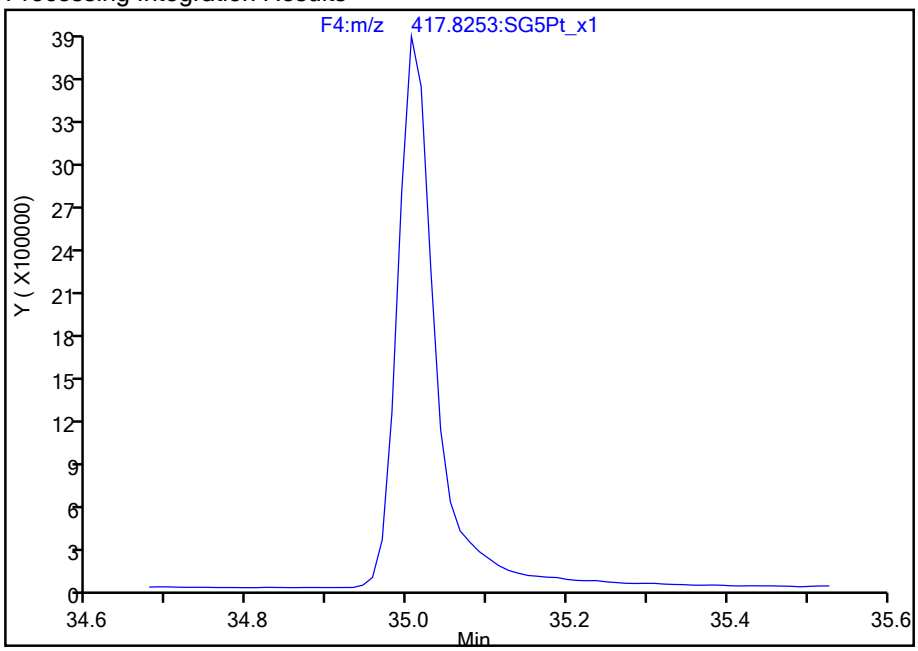

Manual Integration Results

RT: 35.01
Area: 12913204
Amount: 101.2180
Amount Units: pg/ul

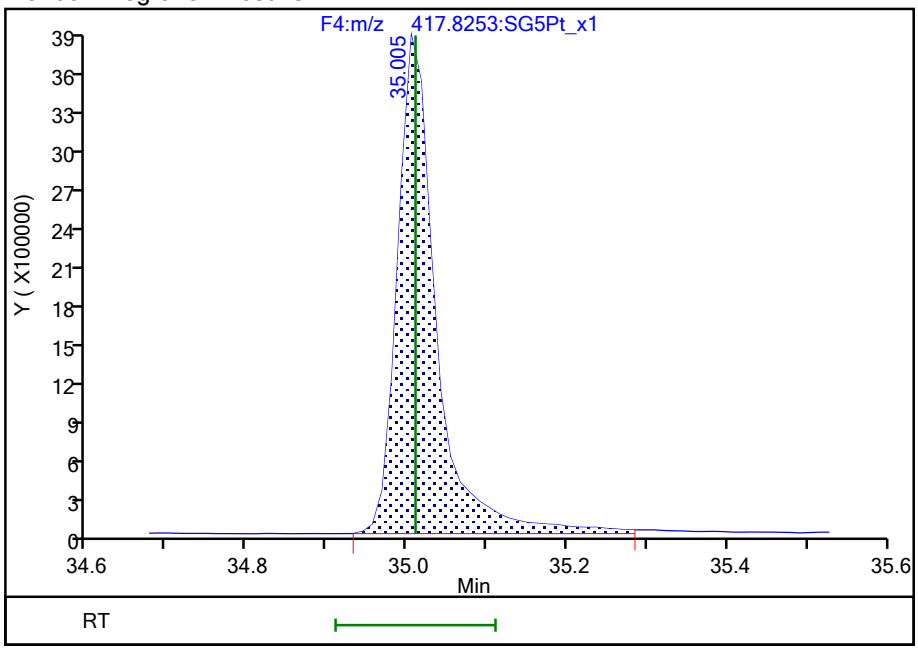

Reviewer: arghestanis, 26-Jul-2021 12:31:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

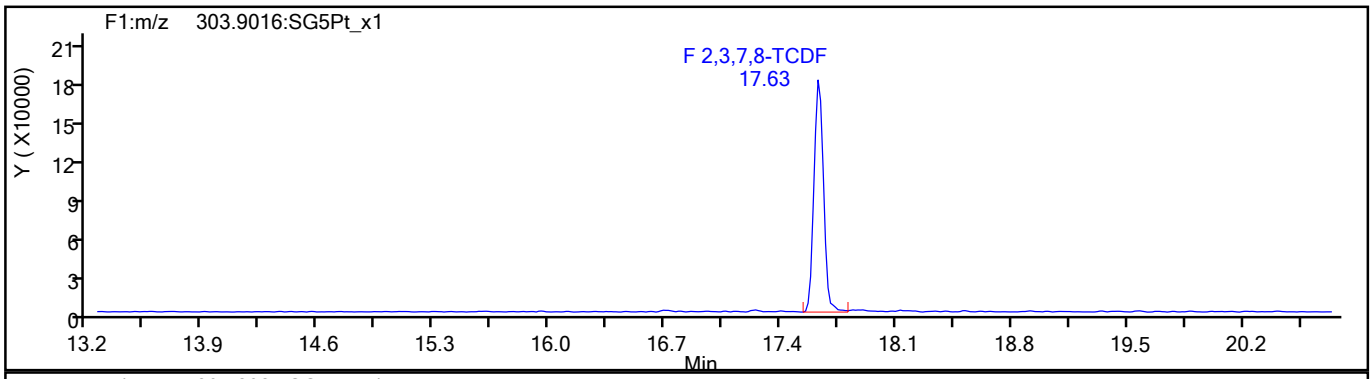

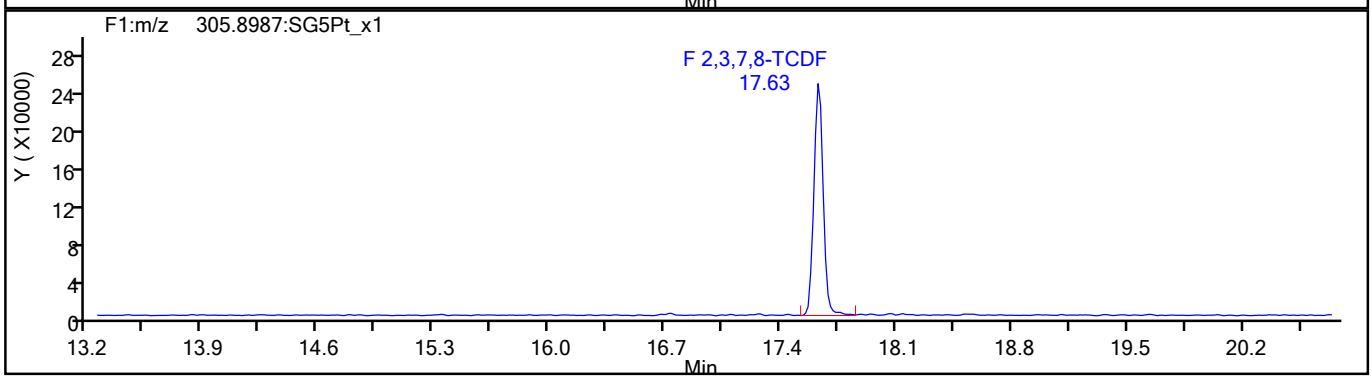

TCDF Standards

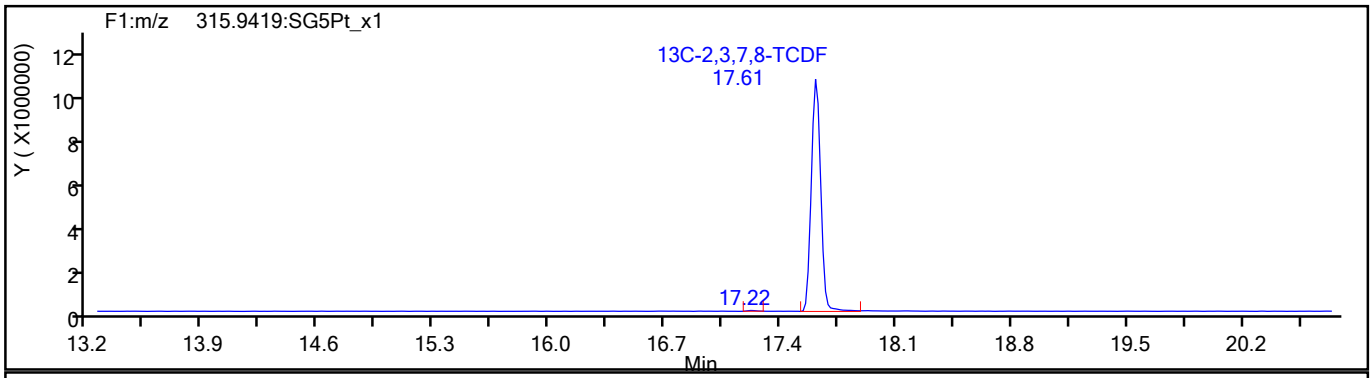

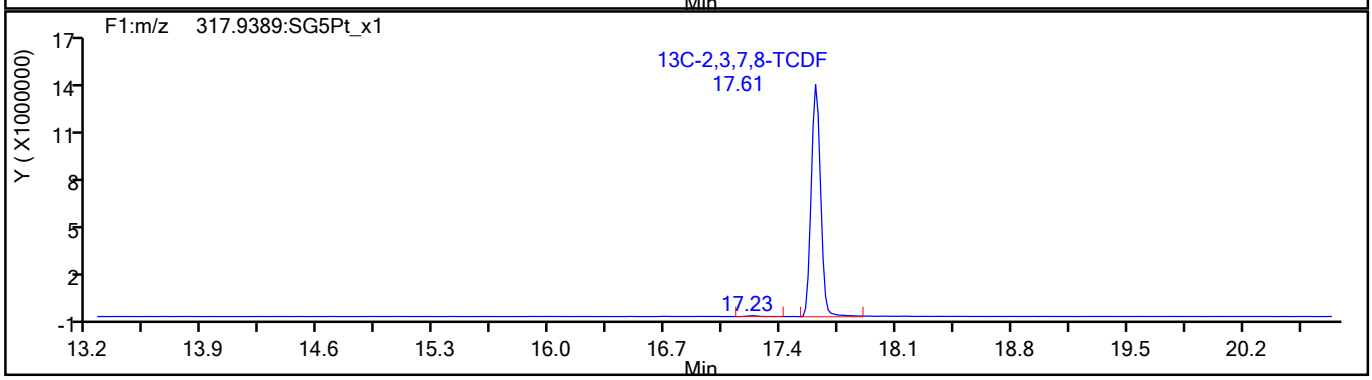

793820

Report Date: 27-Jul-2021 15:16:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

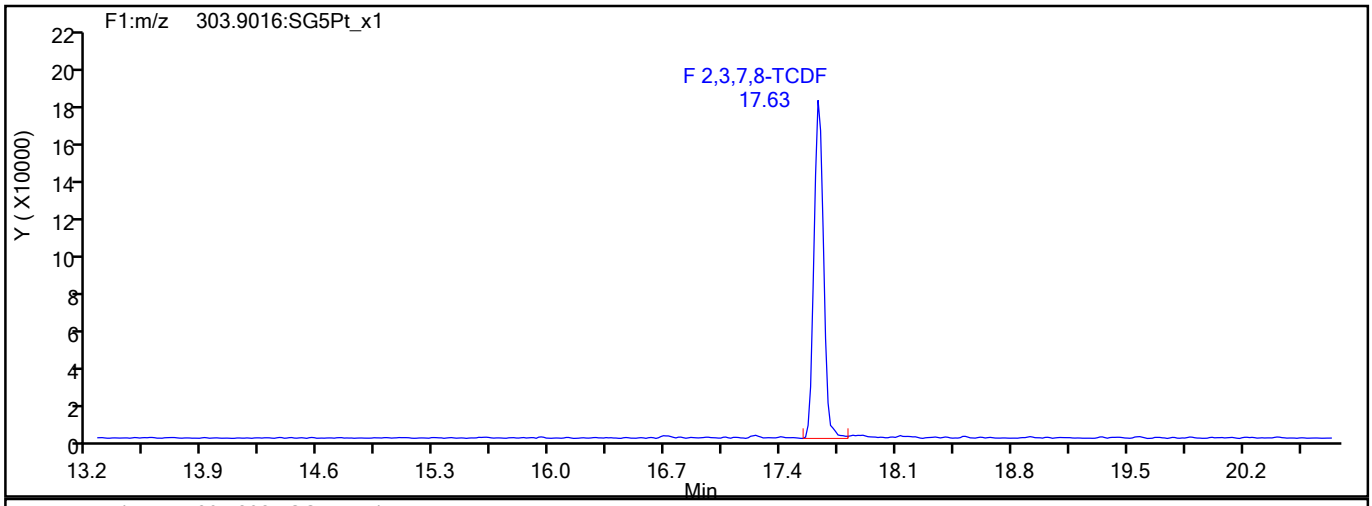

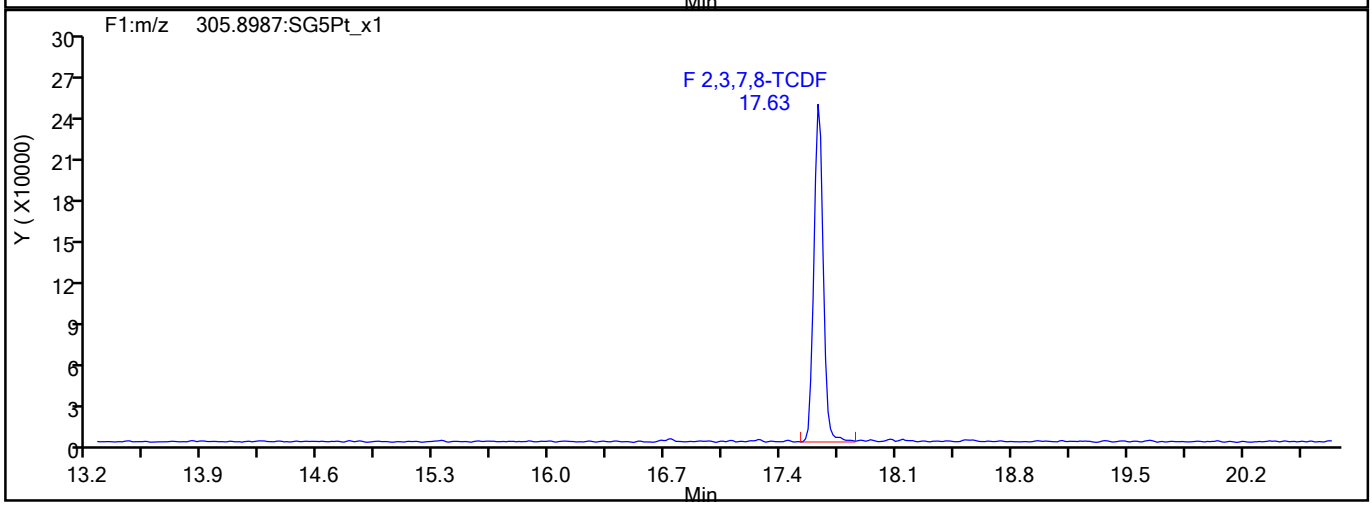

TCDF Interference Mass

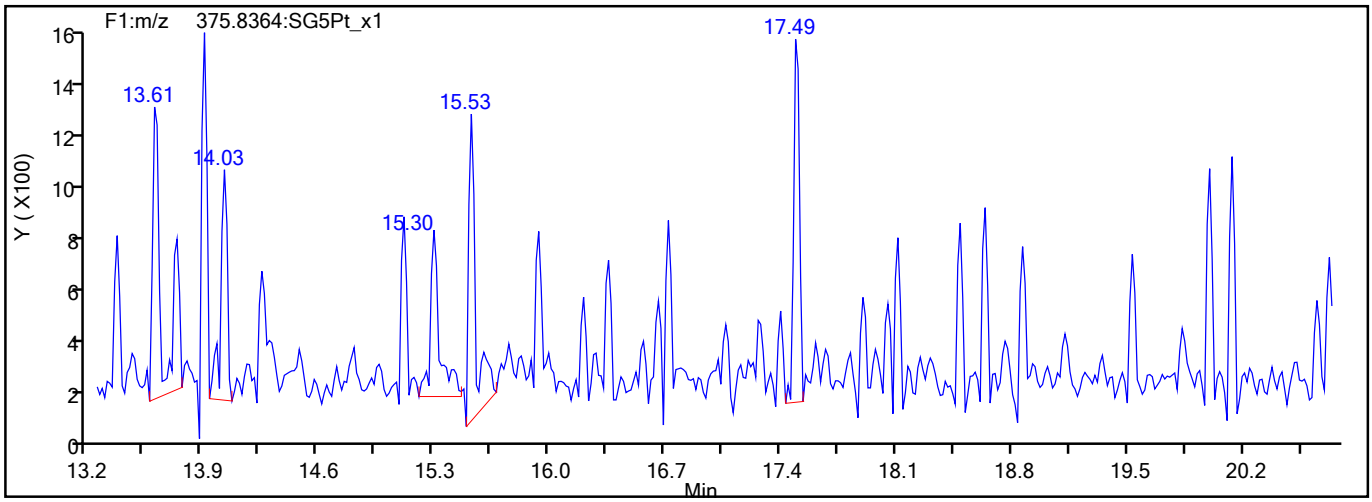

793821

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

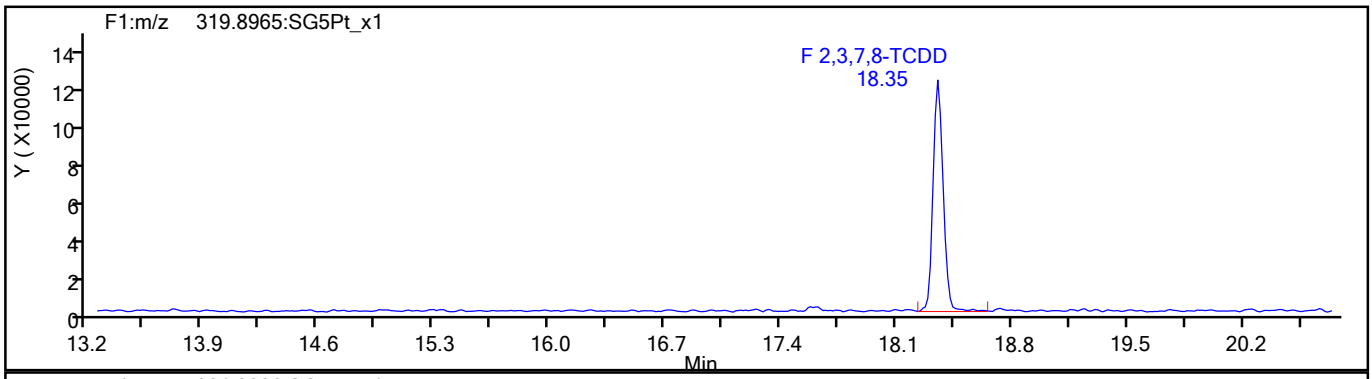

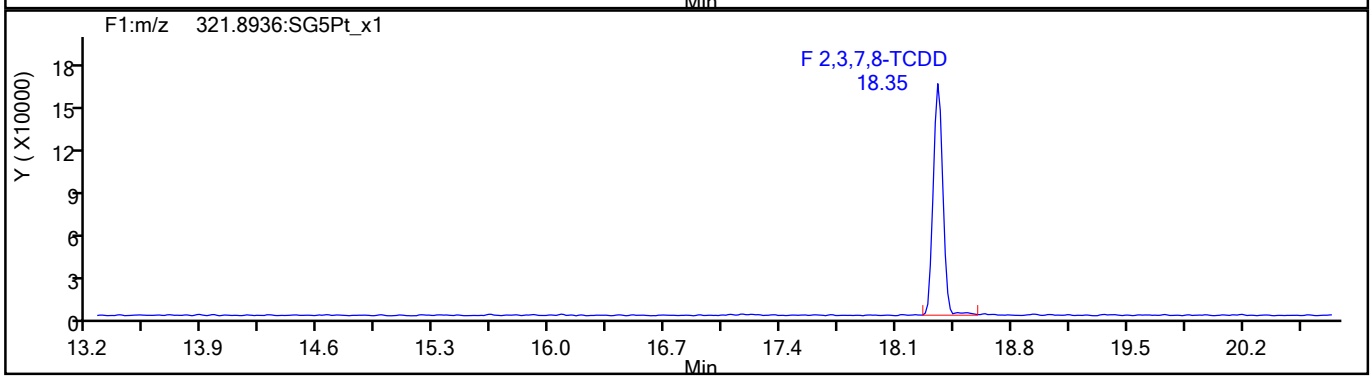

TCDD Standards

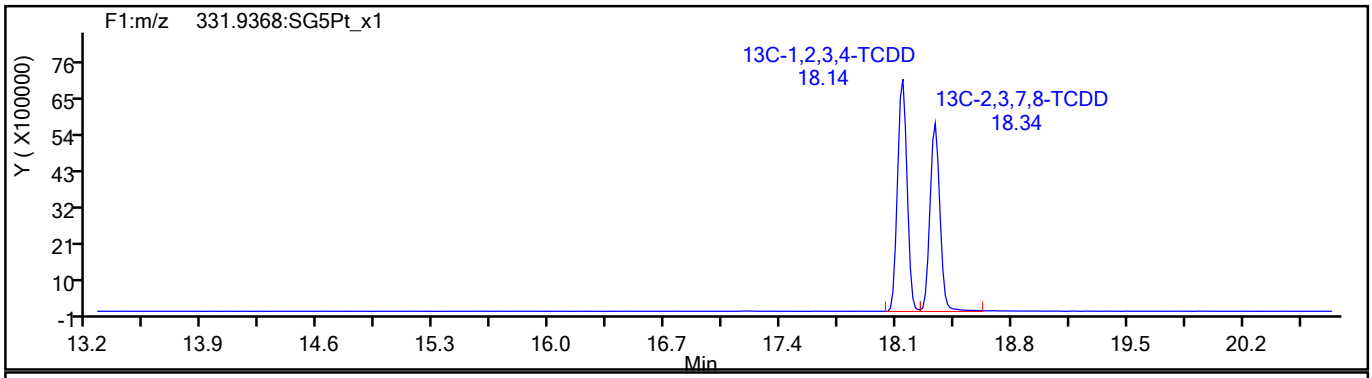

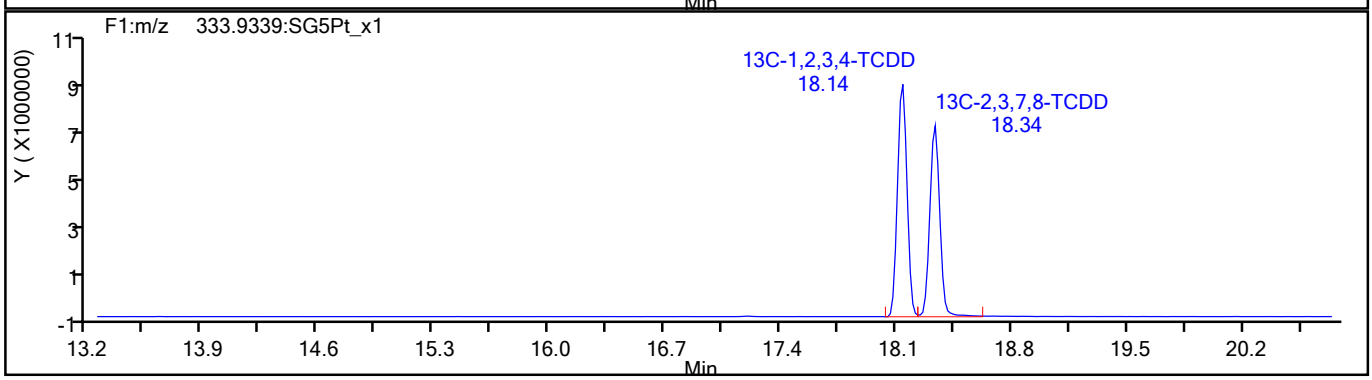

793822

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

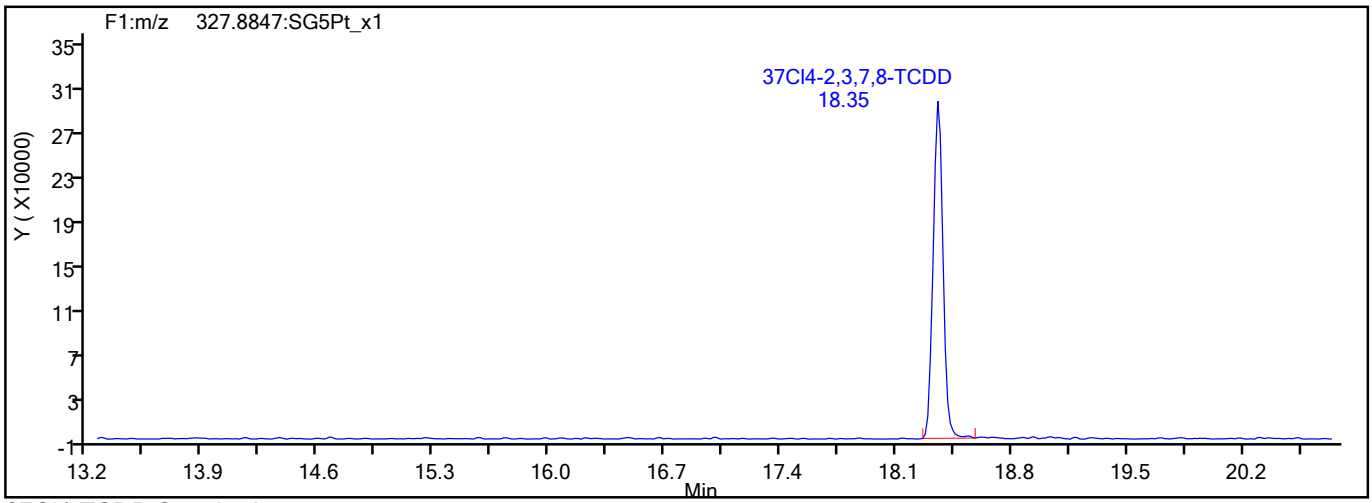

37Cl4-TCDD Standards

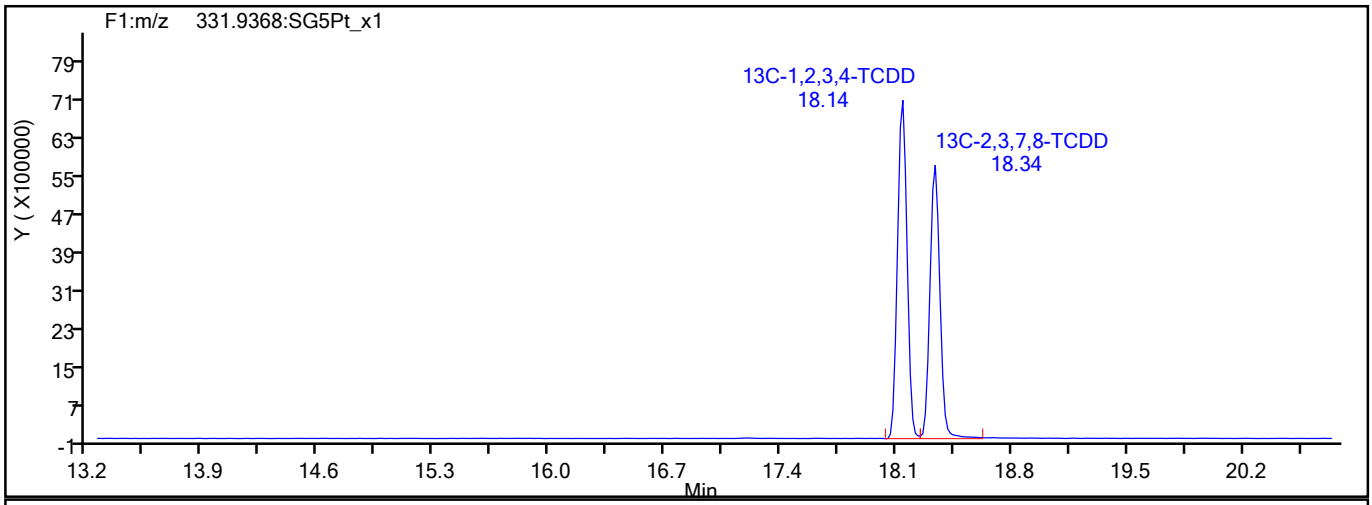

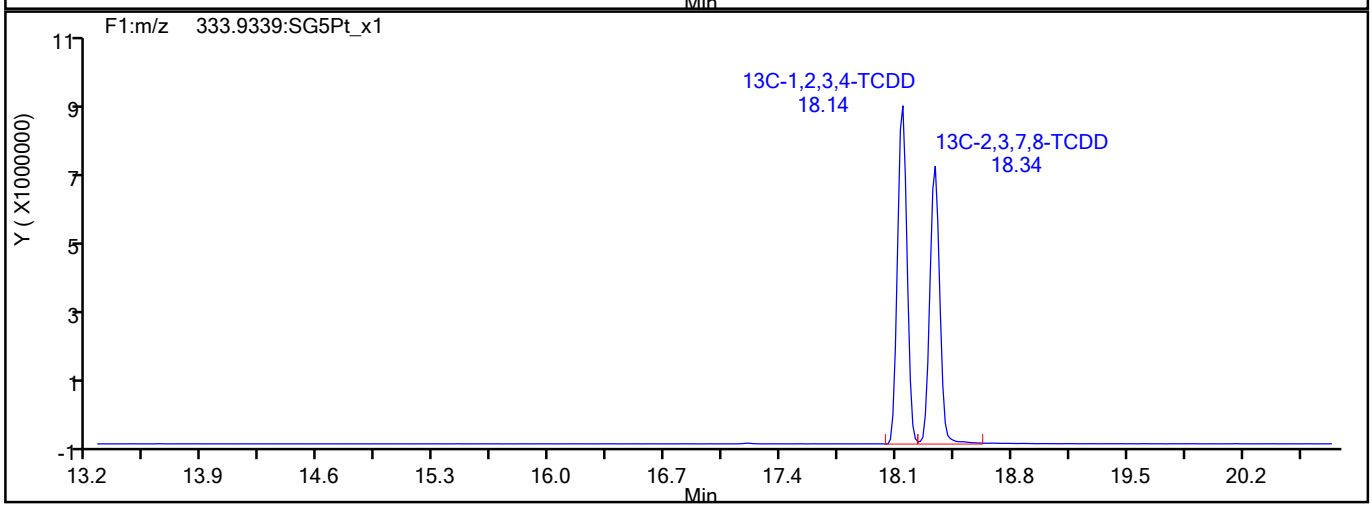

793823

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

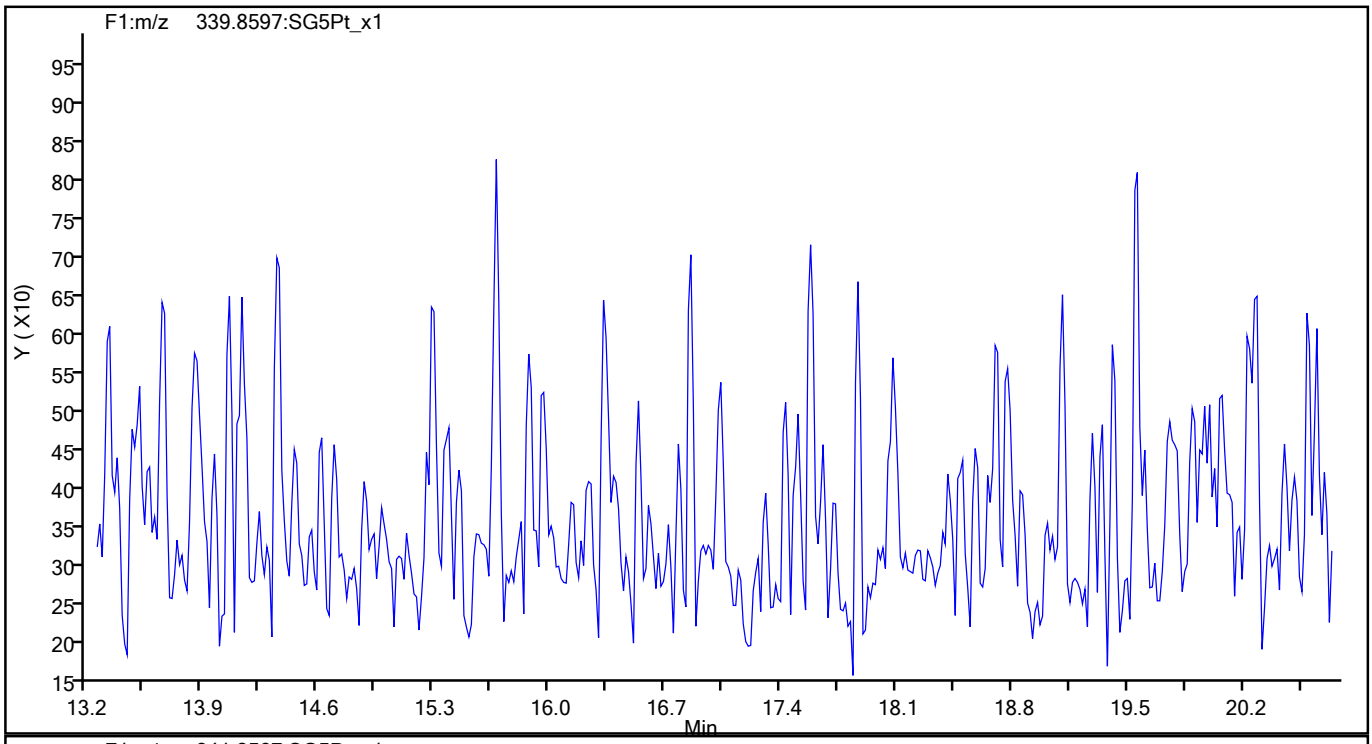

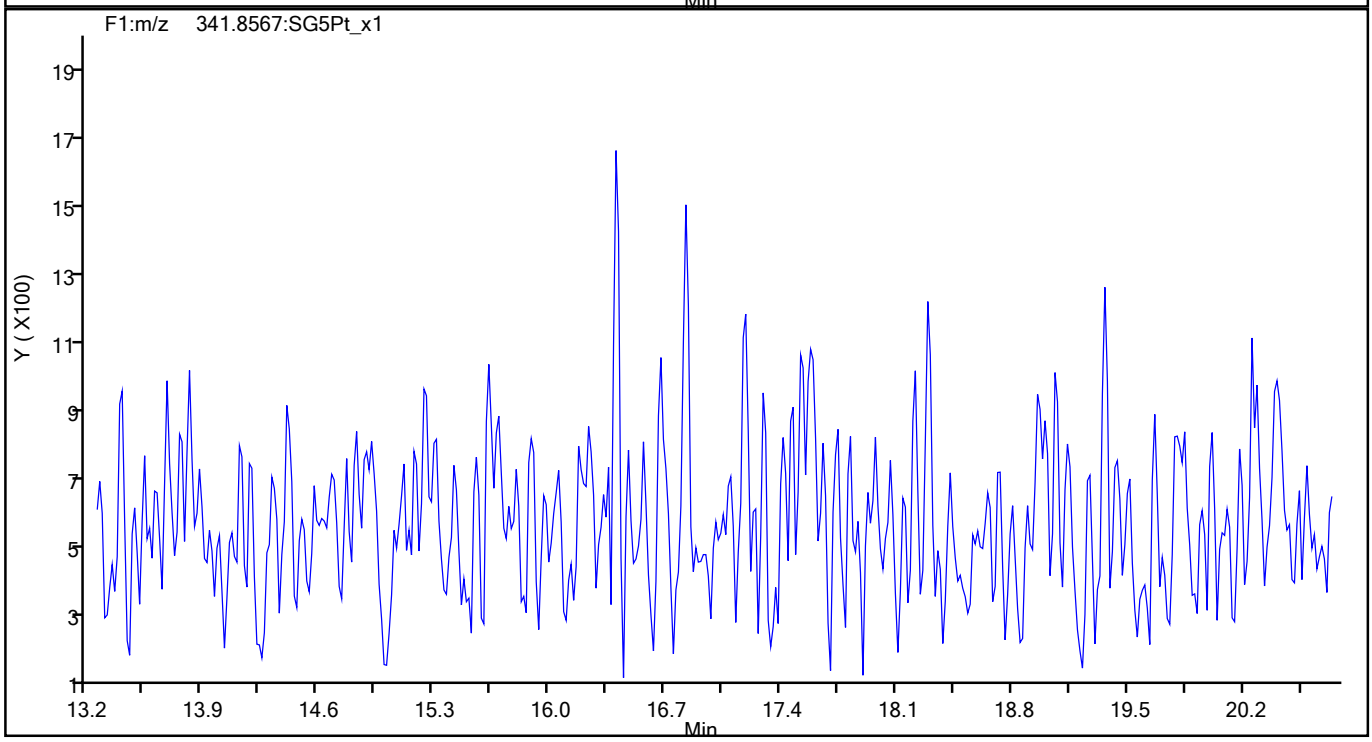

793824

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

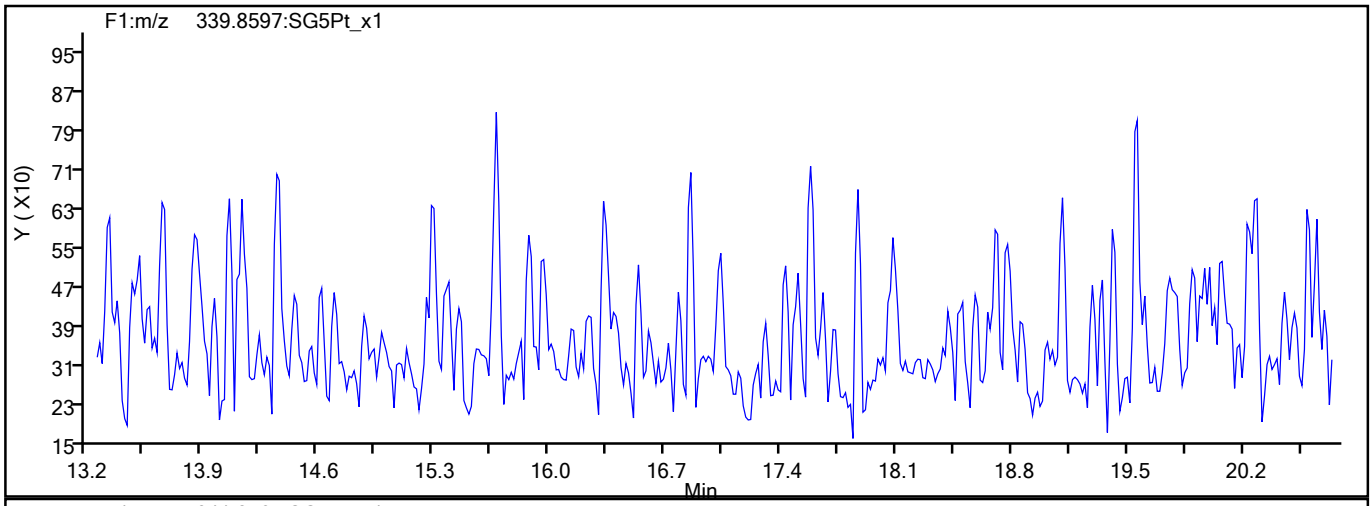

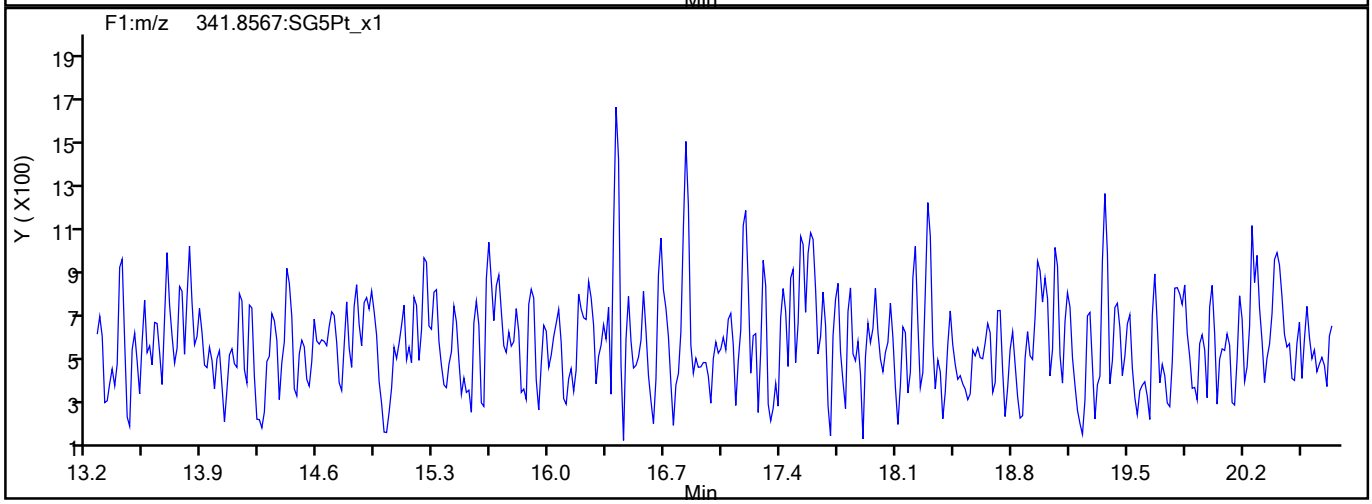

F1 PeCDFs Interference Mass

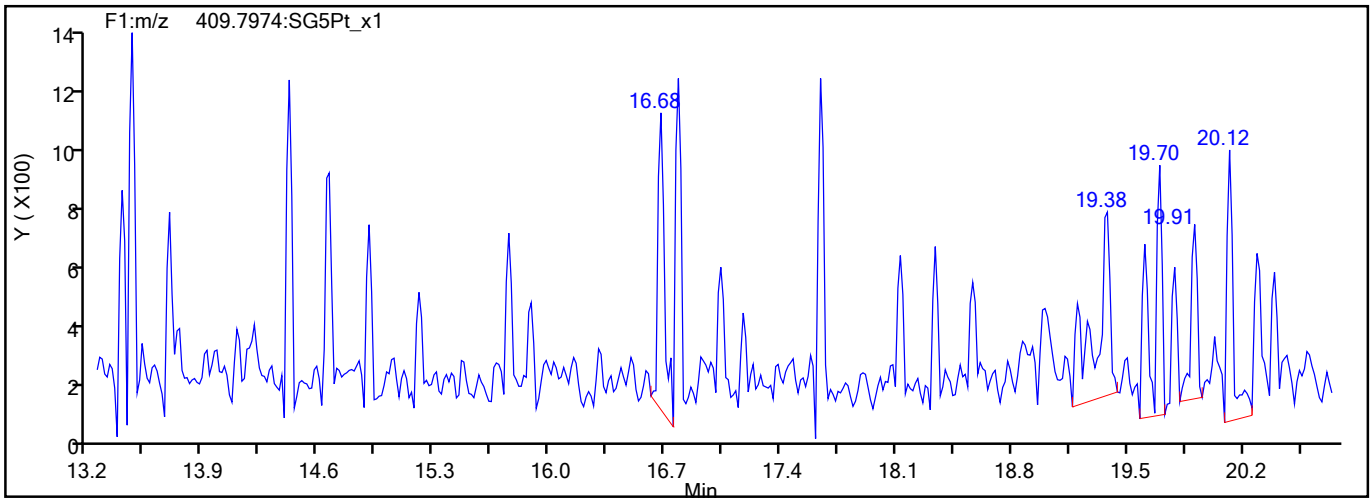

793825

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

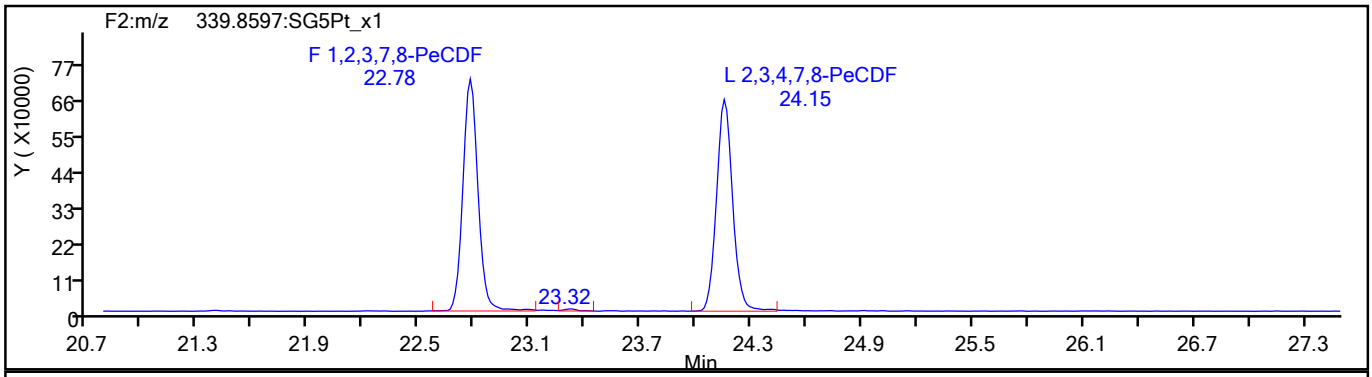

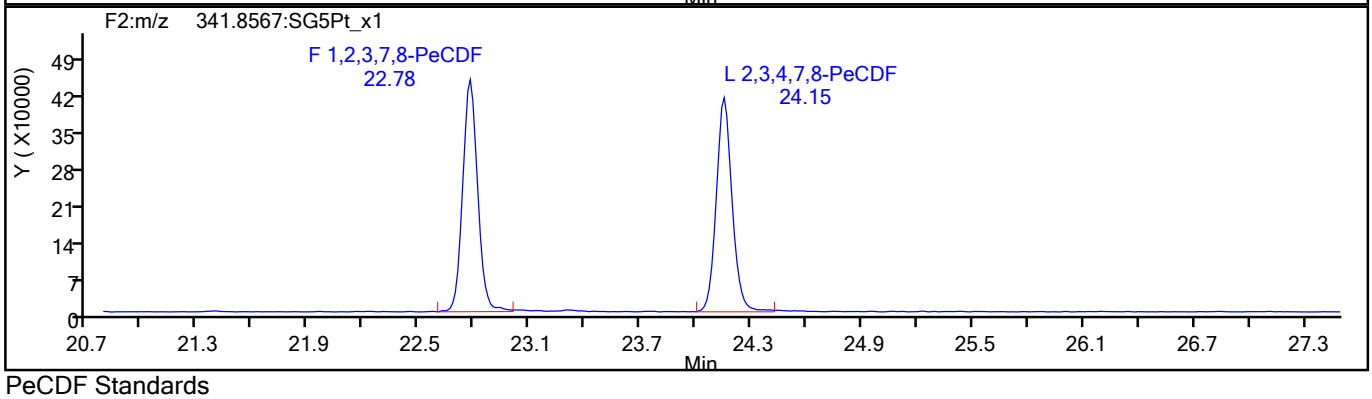

PeCDF Standards

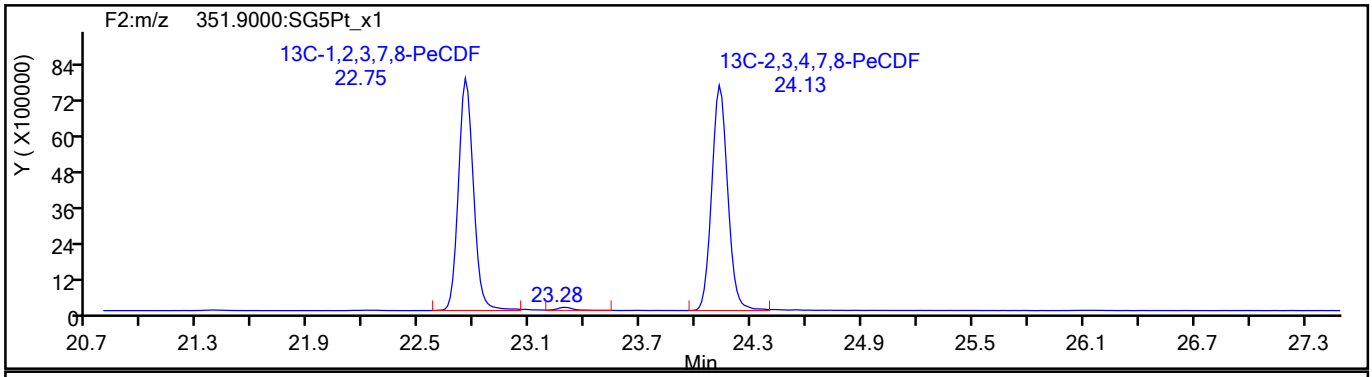

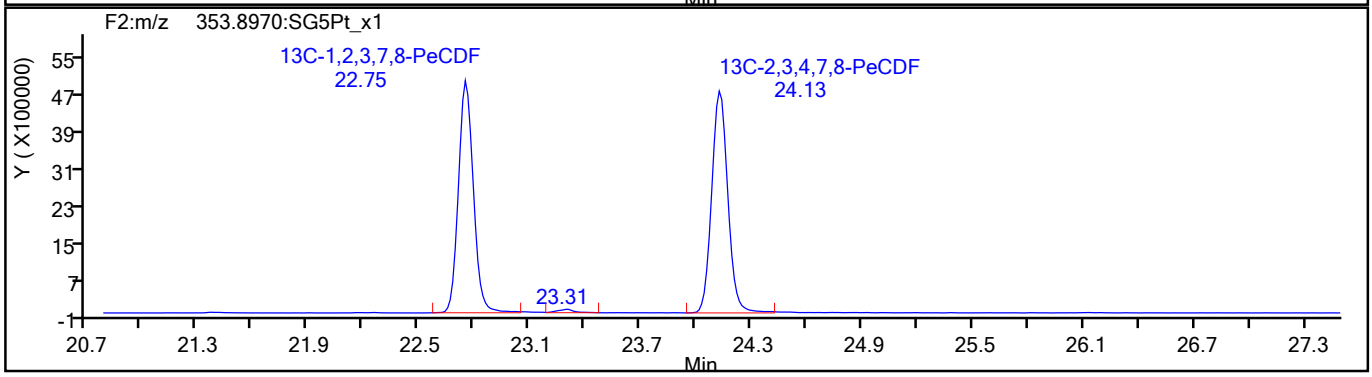

793826

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

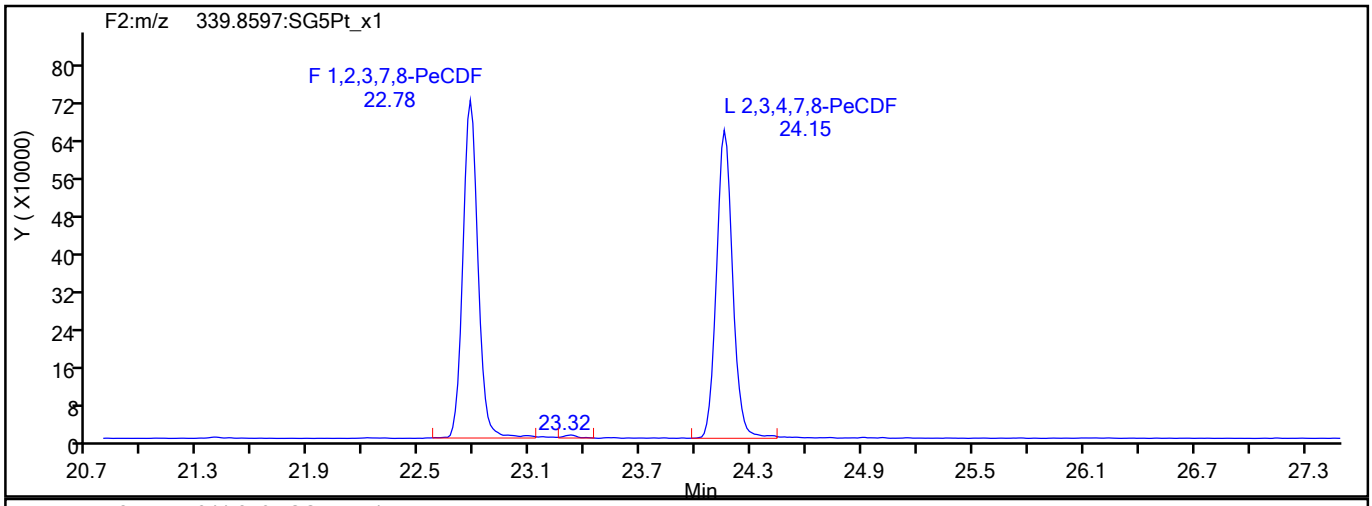

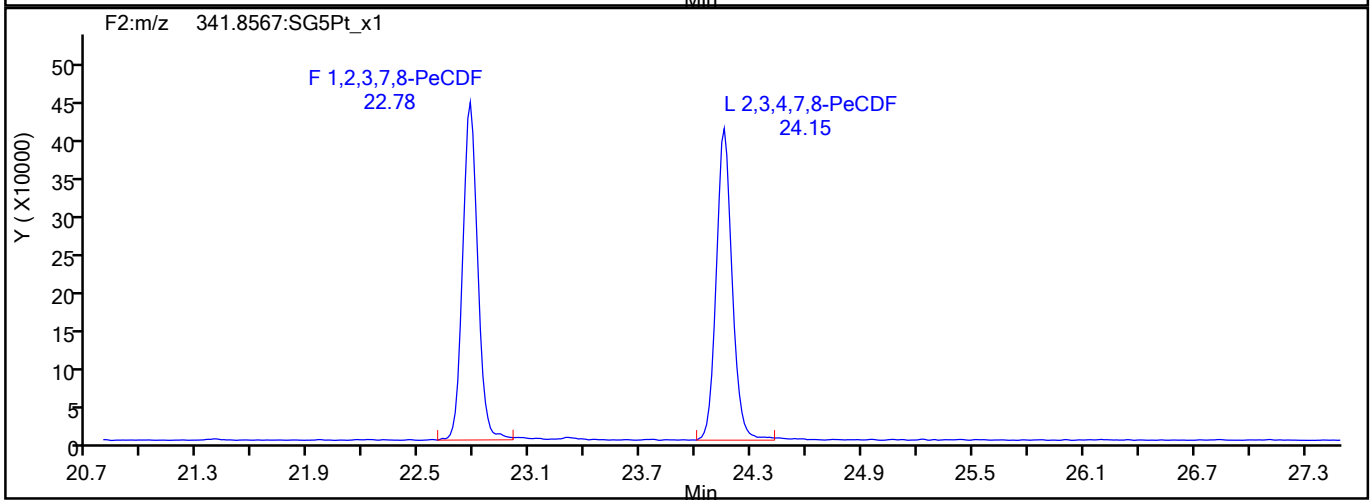

PeCDF Interference Mass

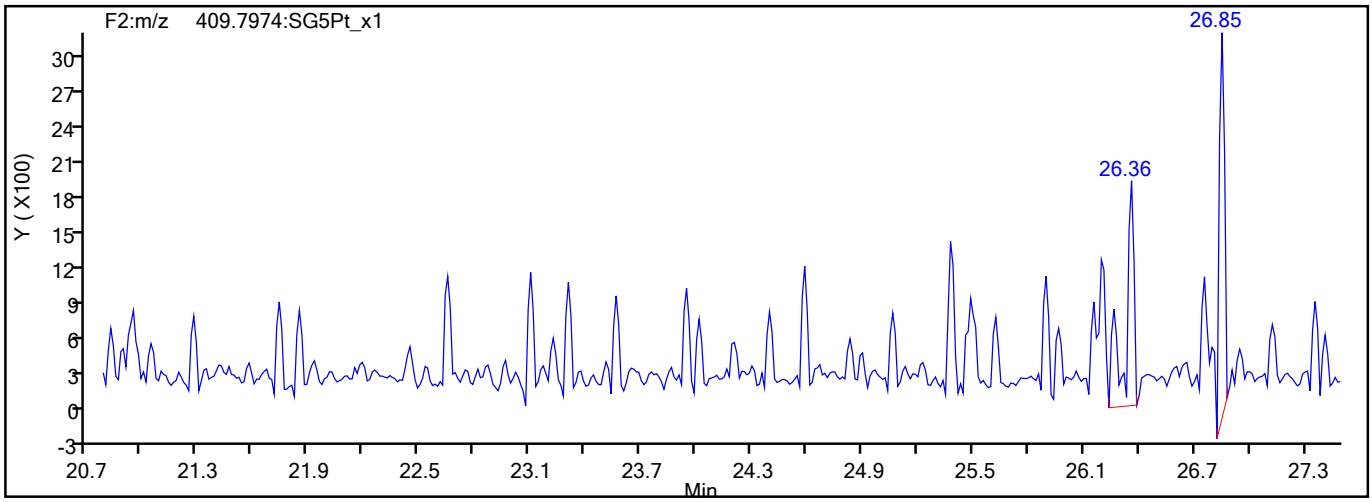

793827

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

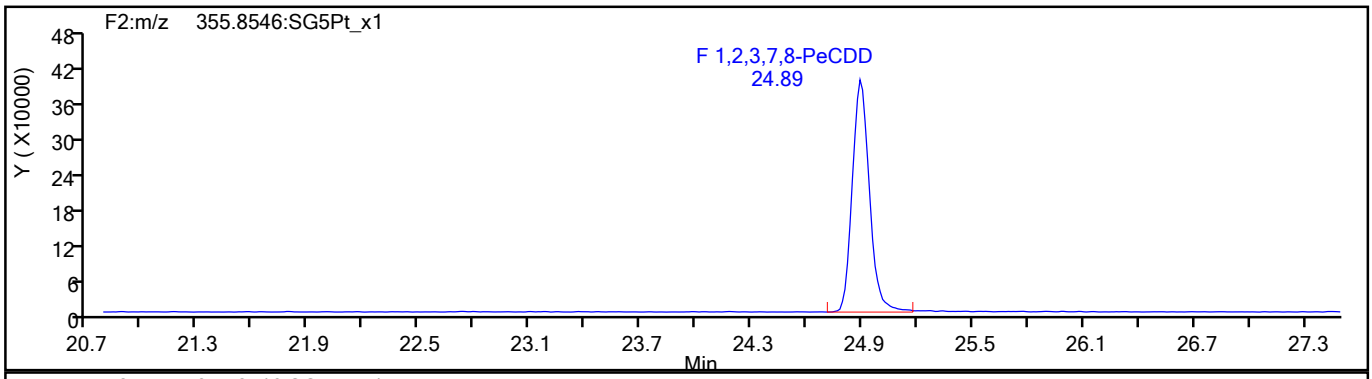

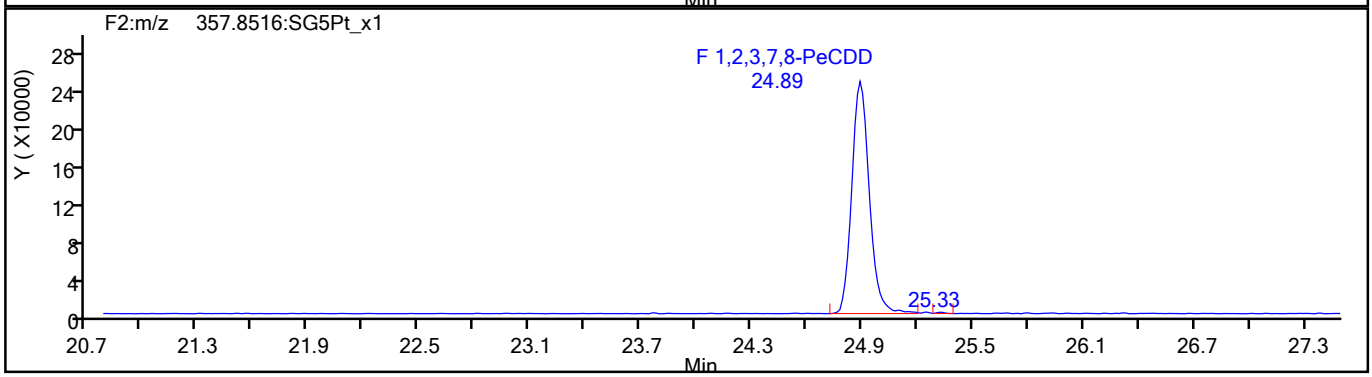

PeCDD Standards

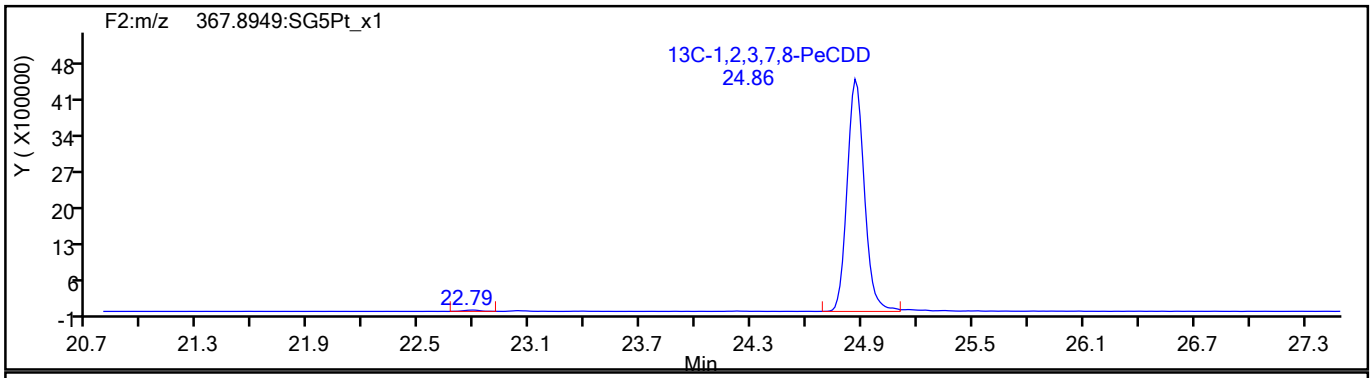

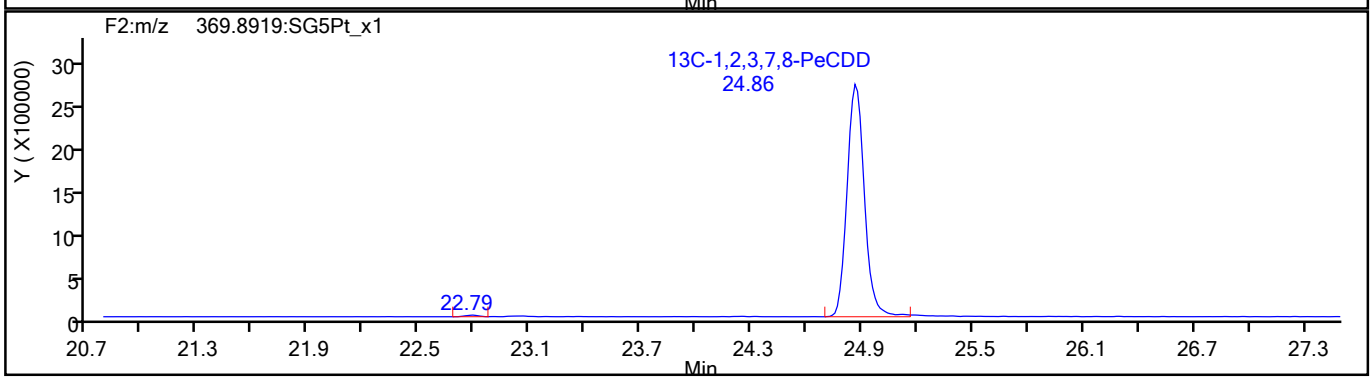

793828

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

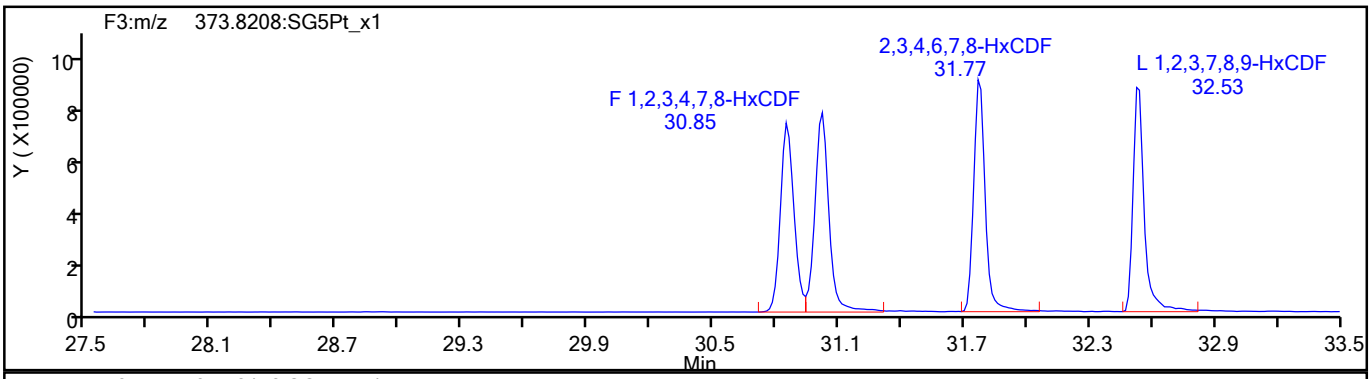

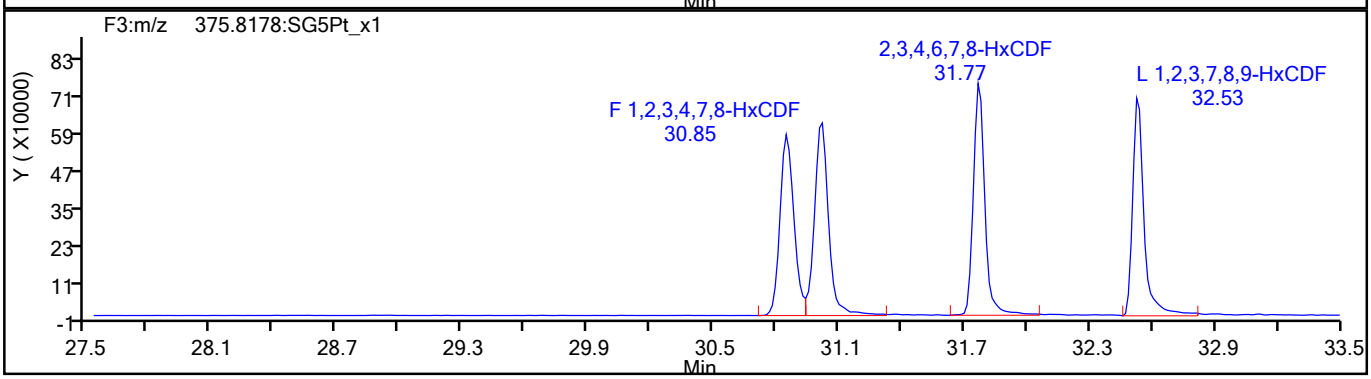

HxCDF Standards

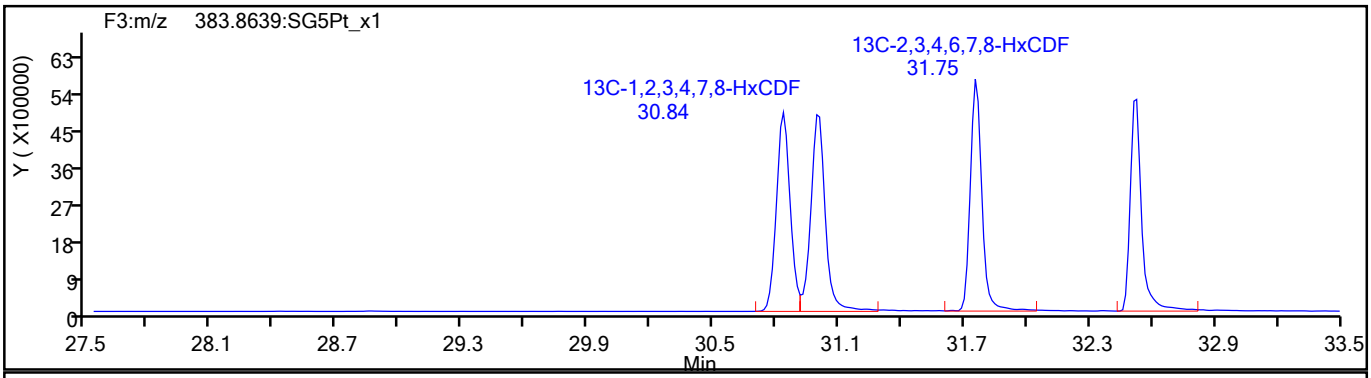

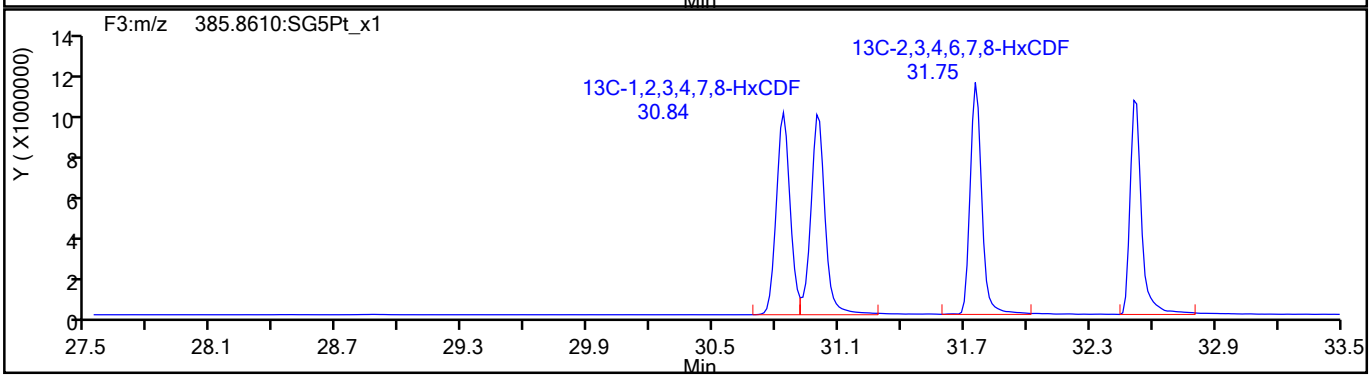

793829

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

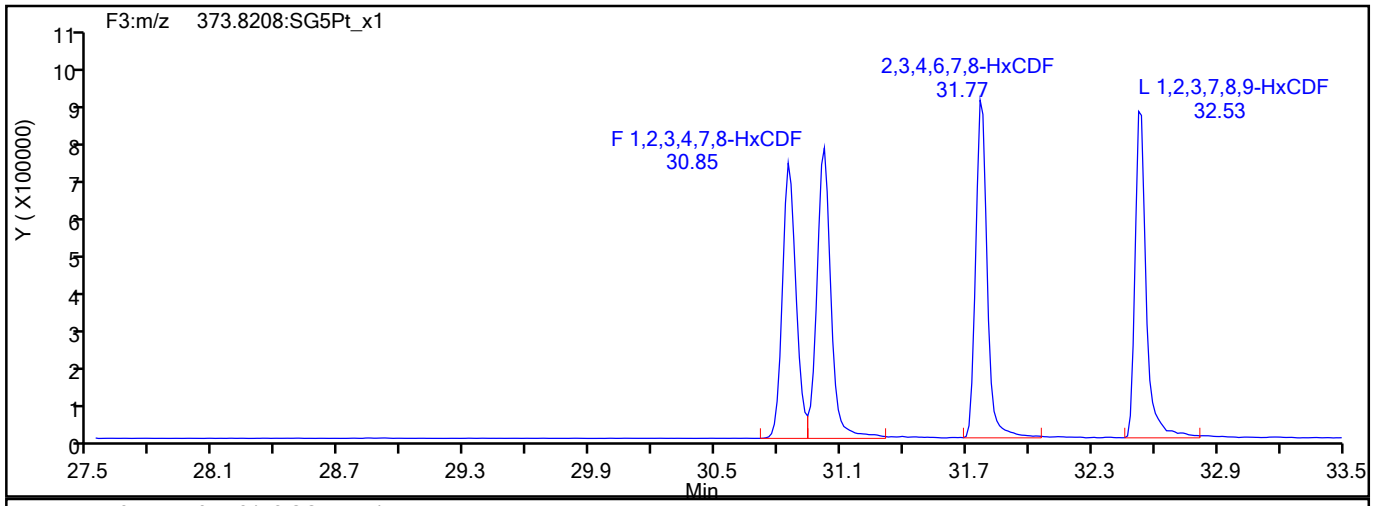

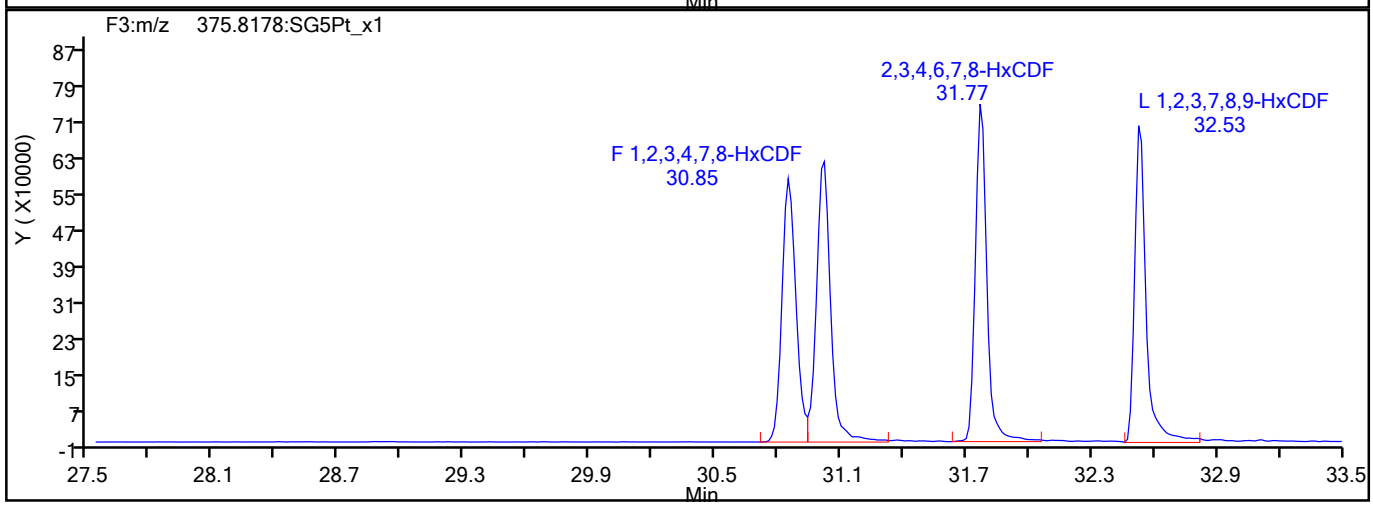

HxCDF Interference Mass

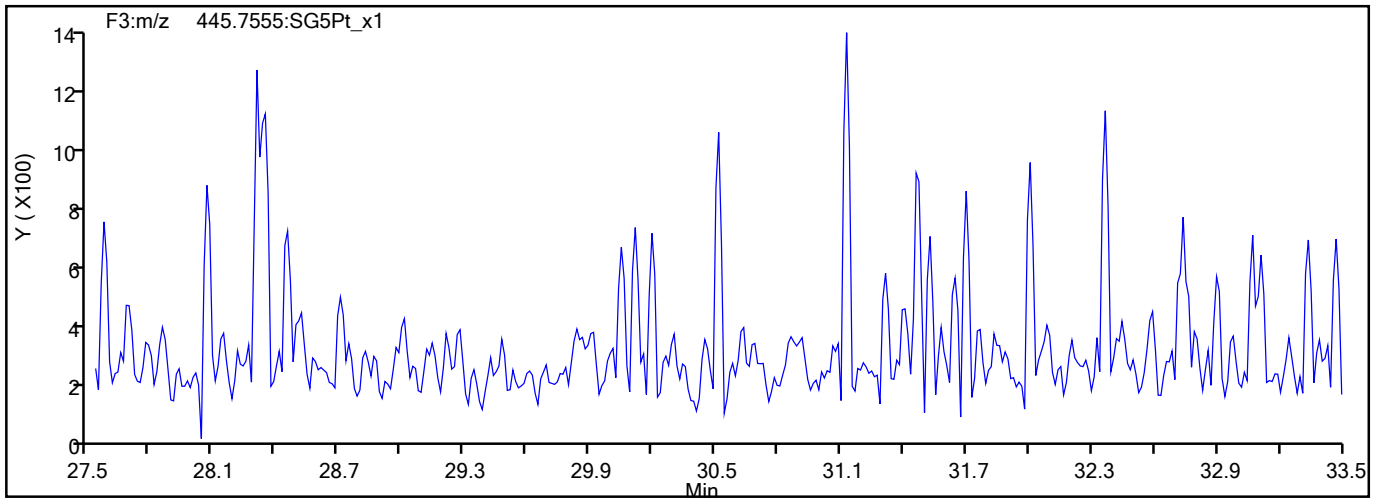

793830

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

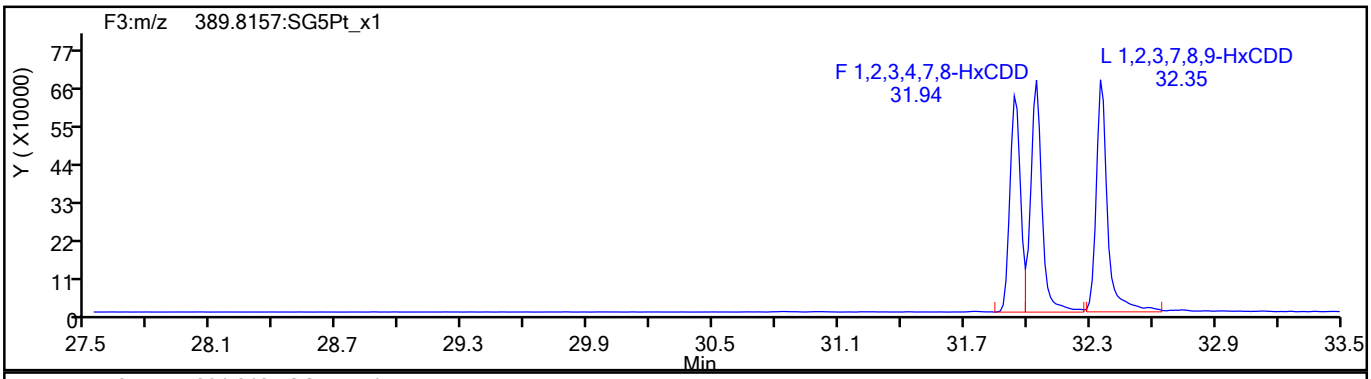

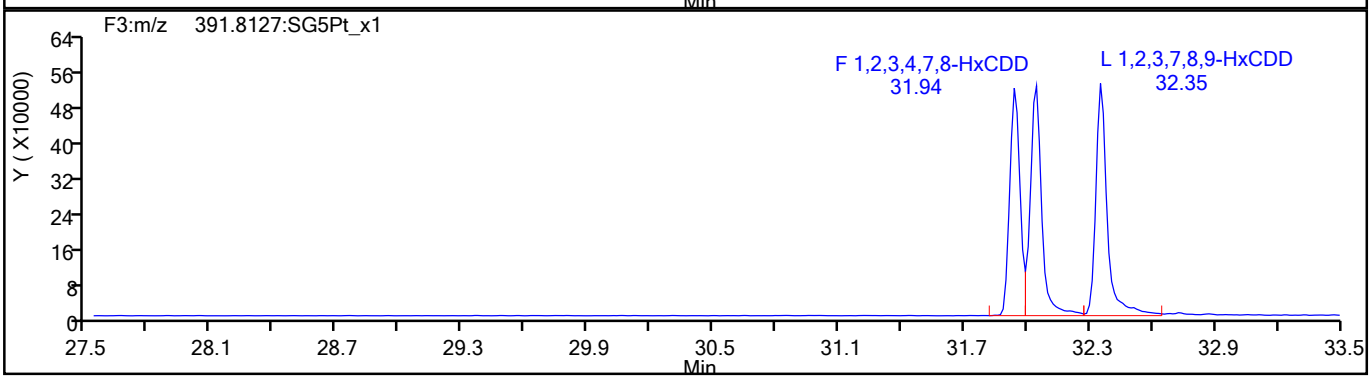

HxCDD Standards

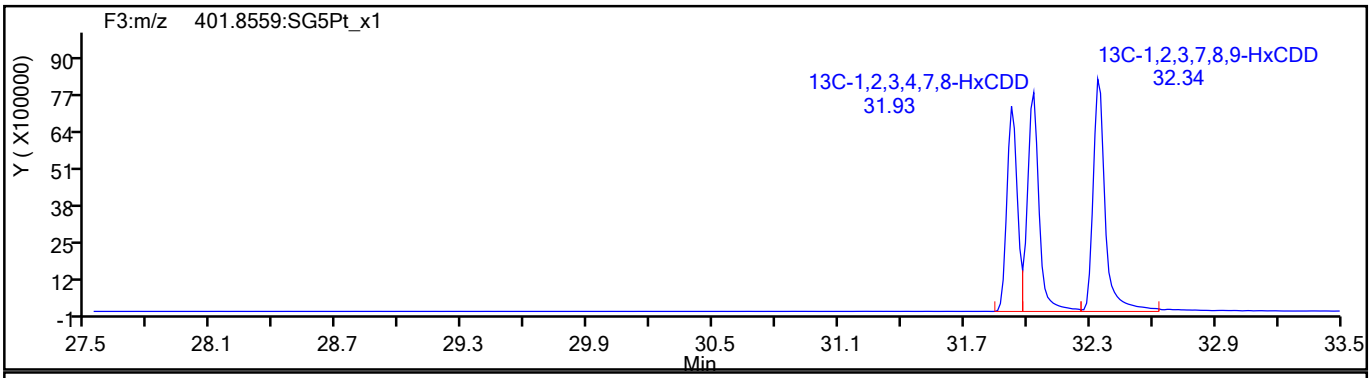

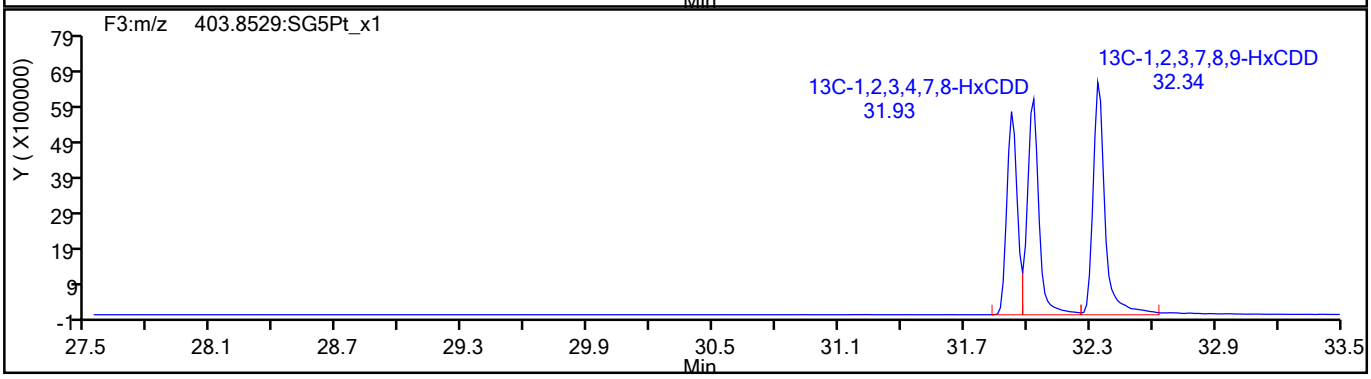

793831

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

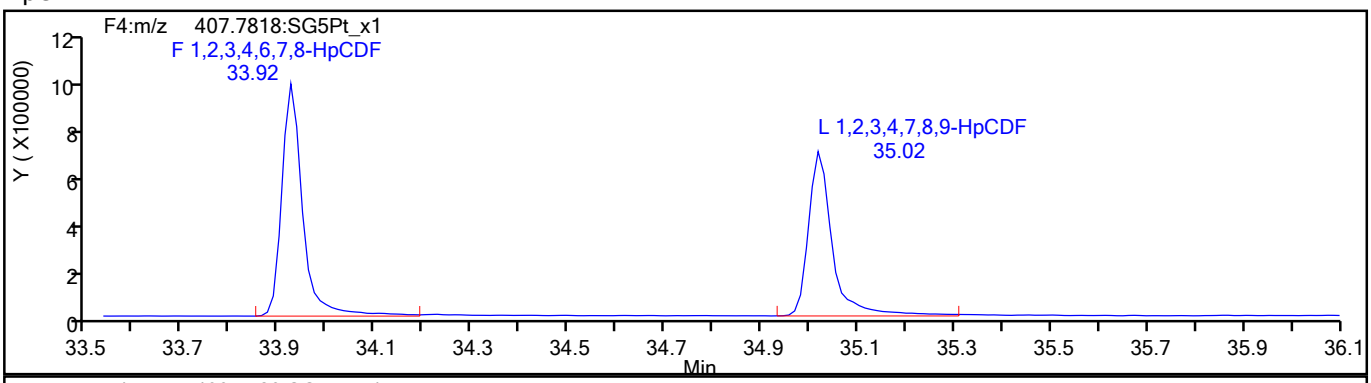

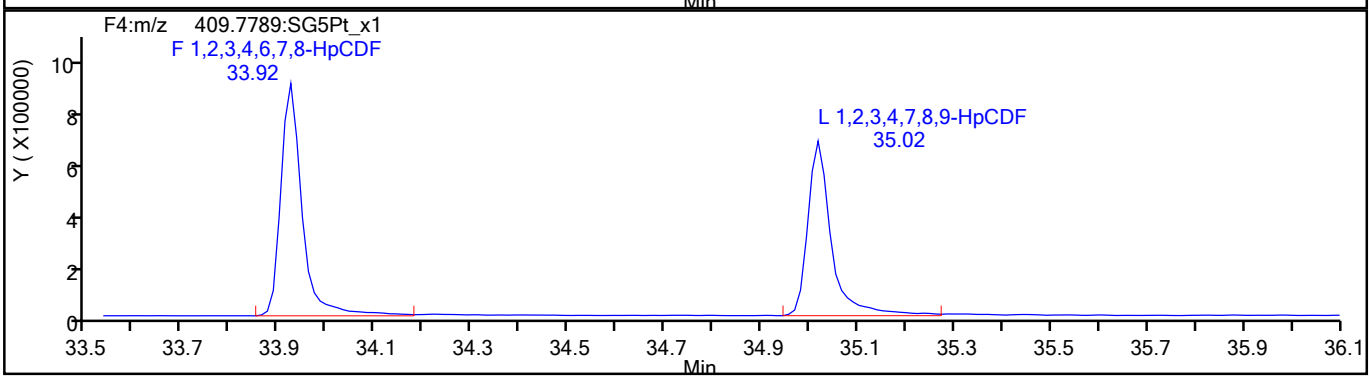

HpCDF Standards

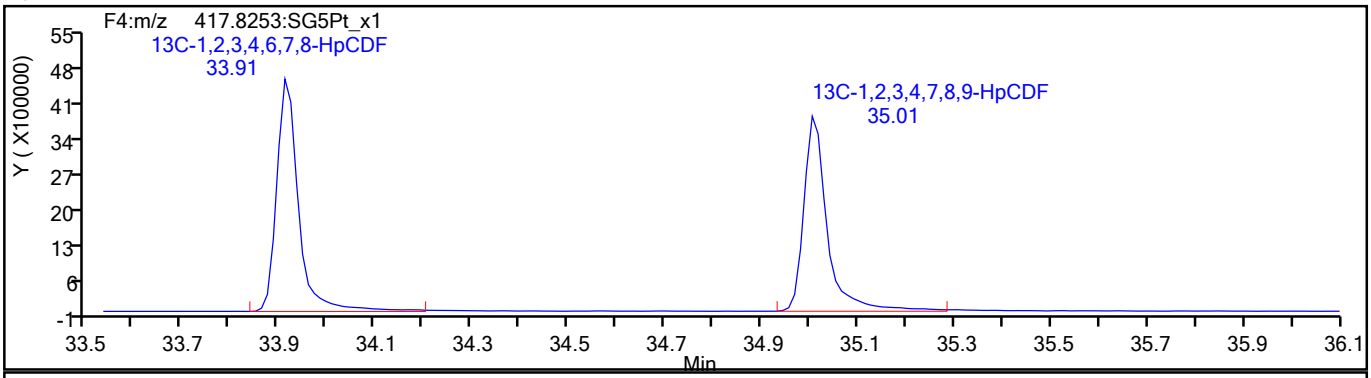

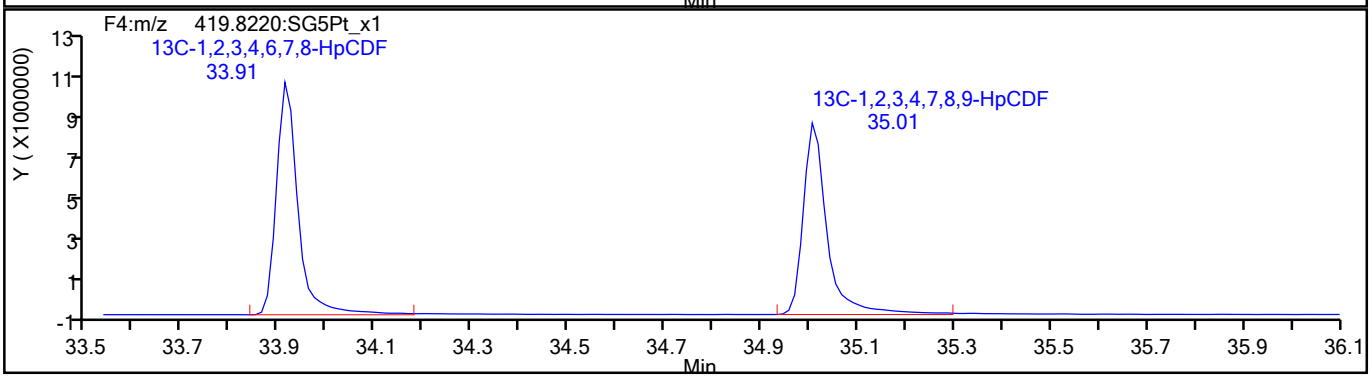

793832

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

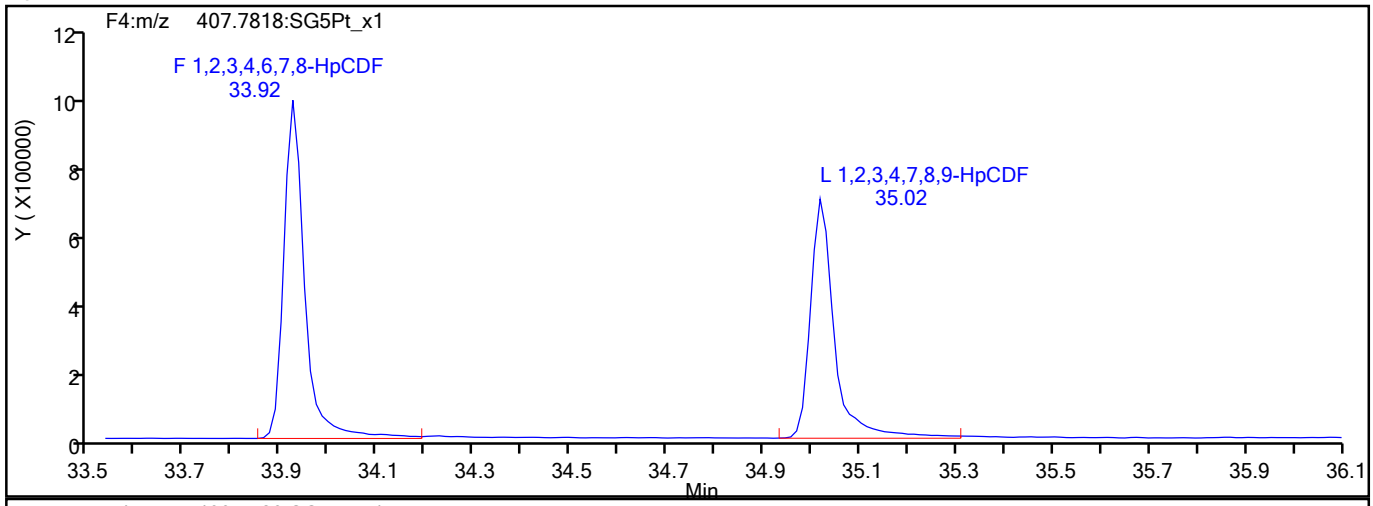

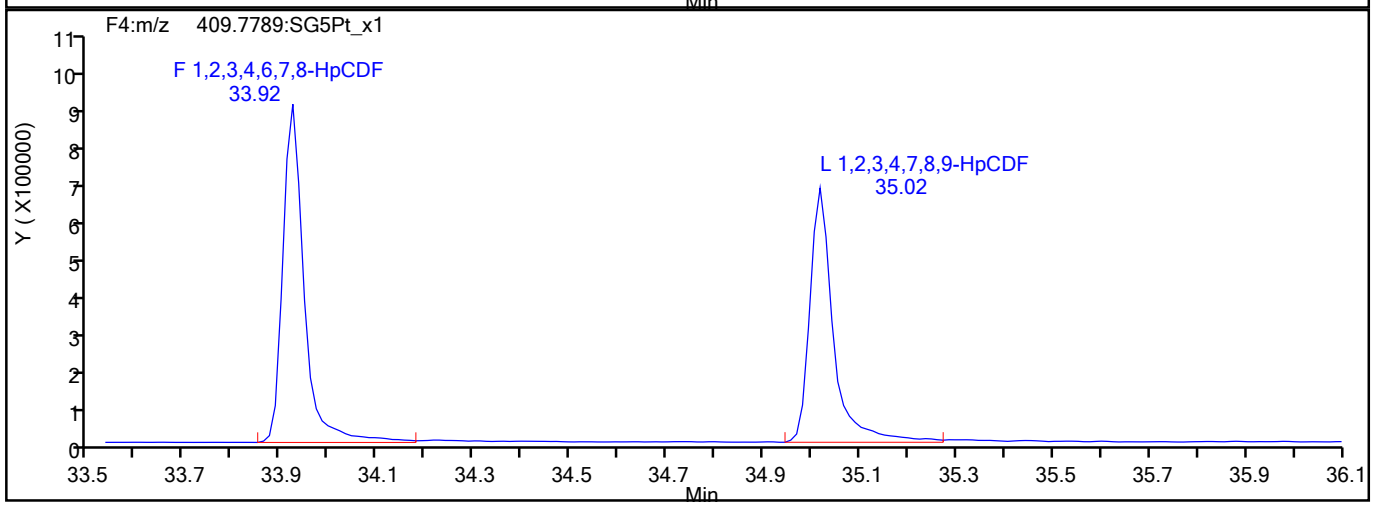

HpCDF Interference Mass

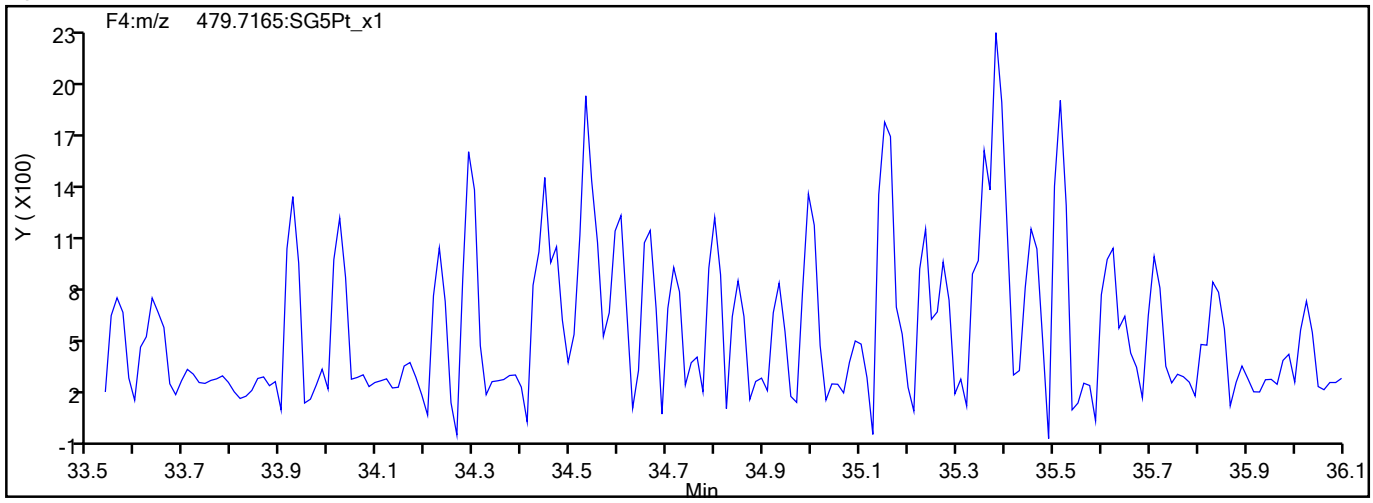

793833

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

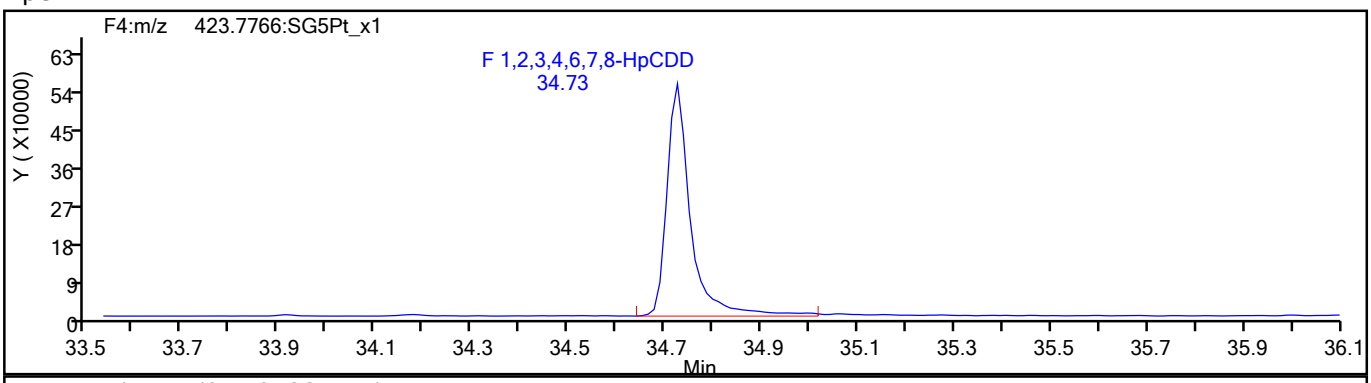

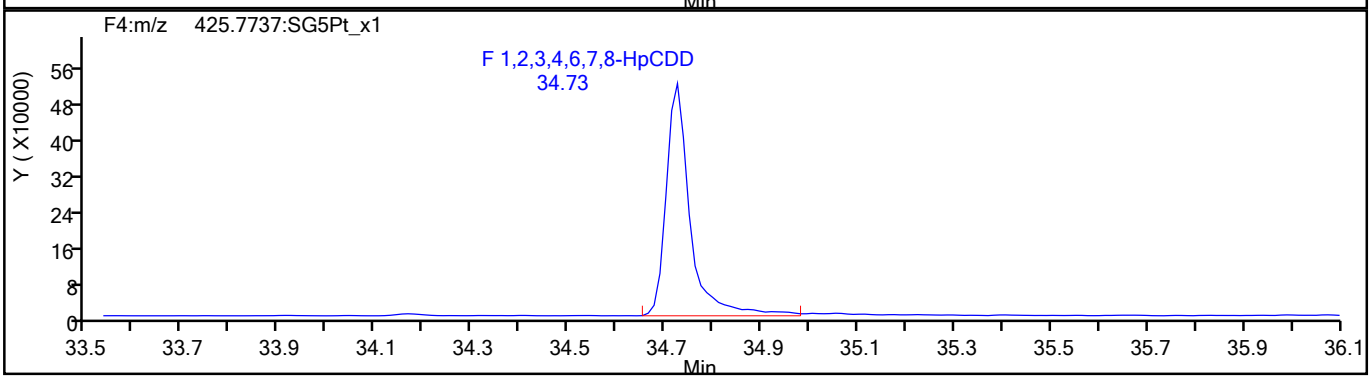

HpCDD Standards

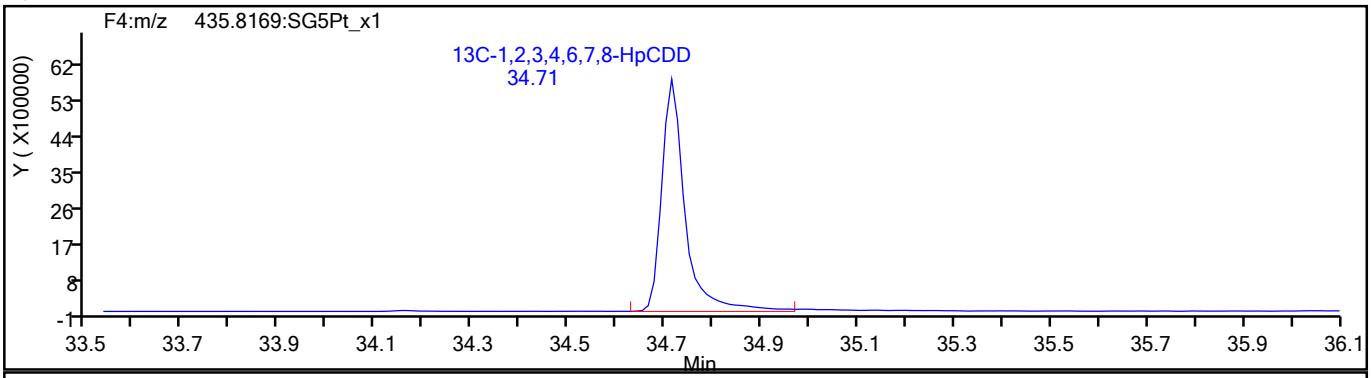

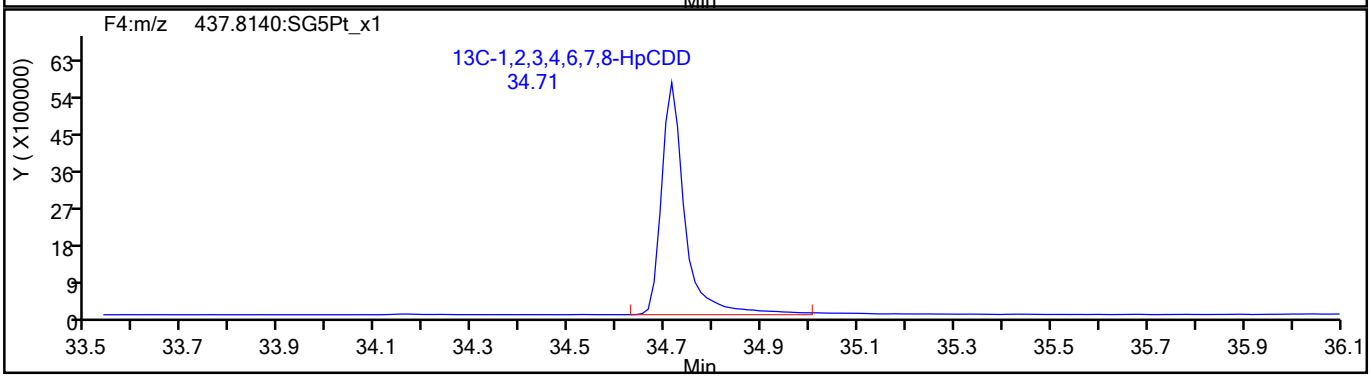

793834

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

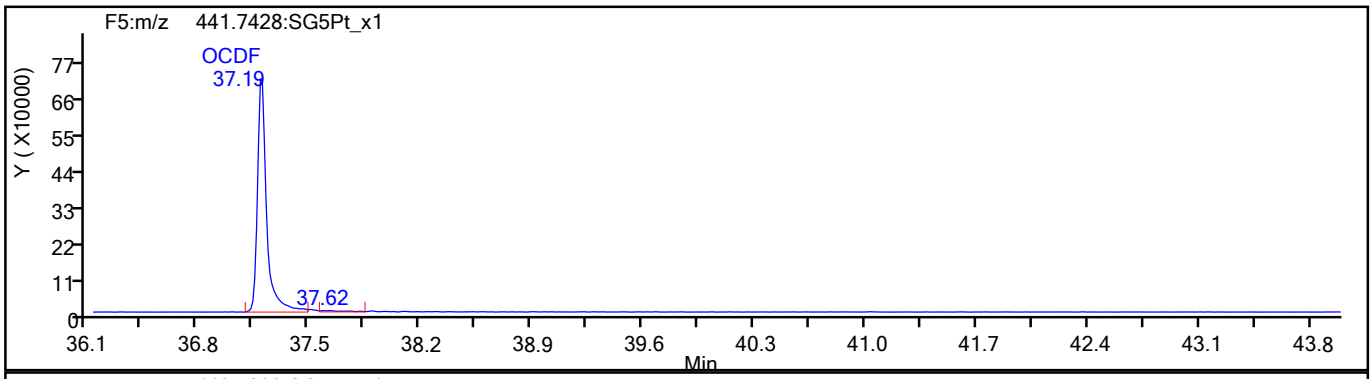

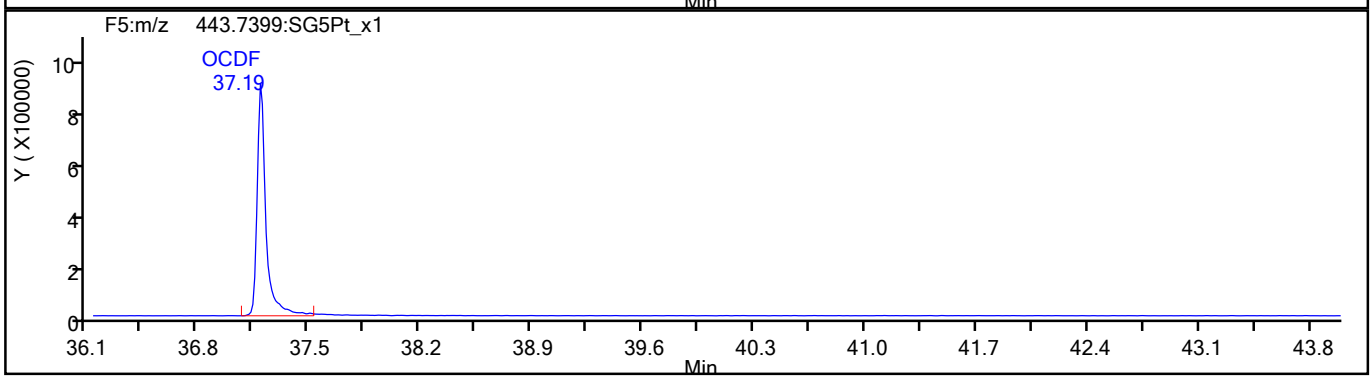

OCDF Standards

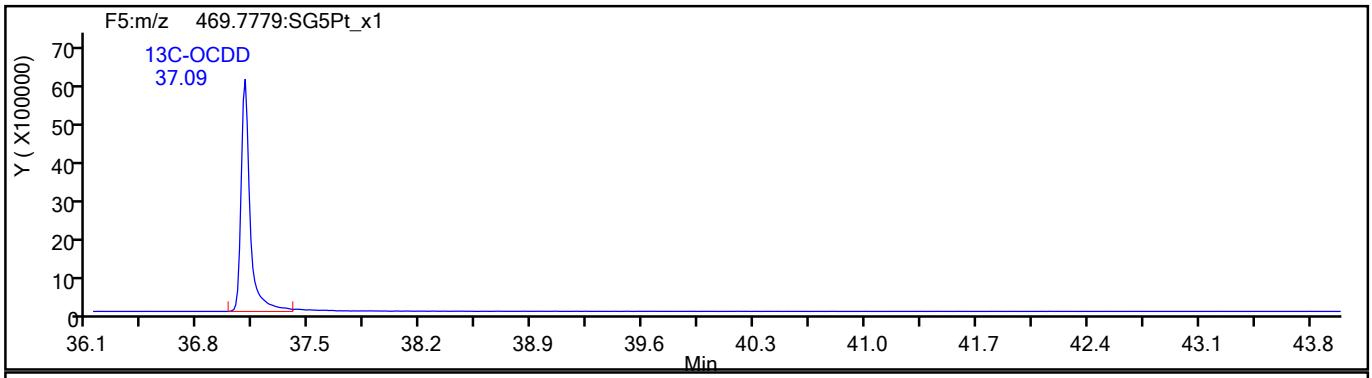

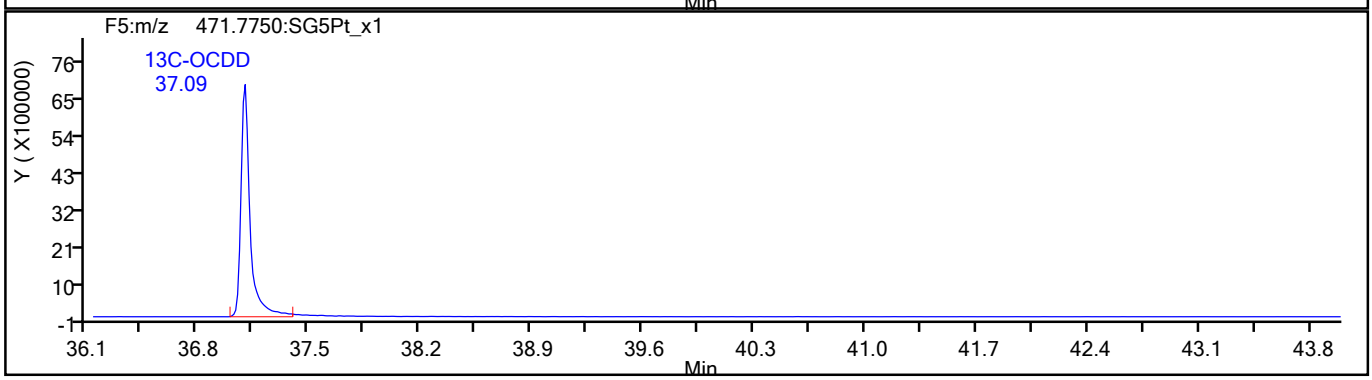

793835

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

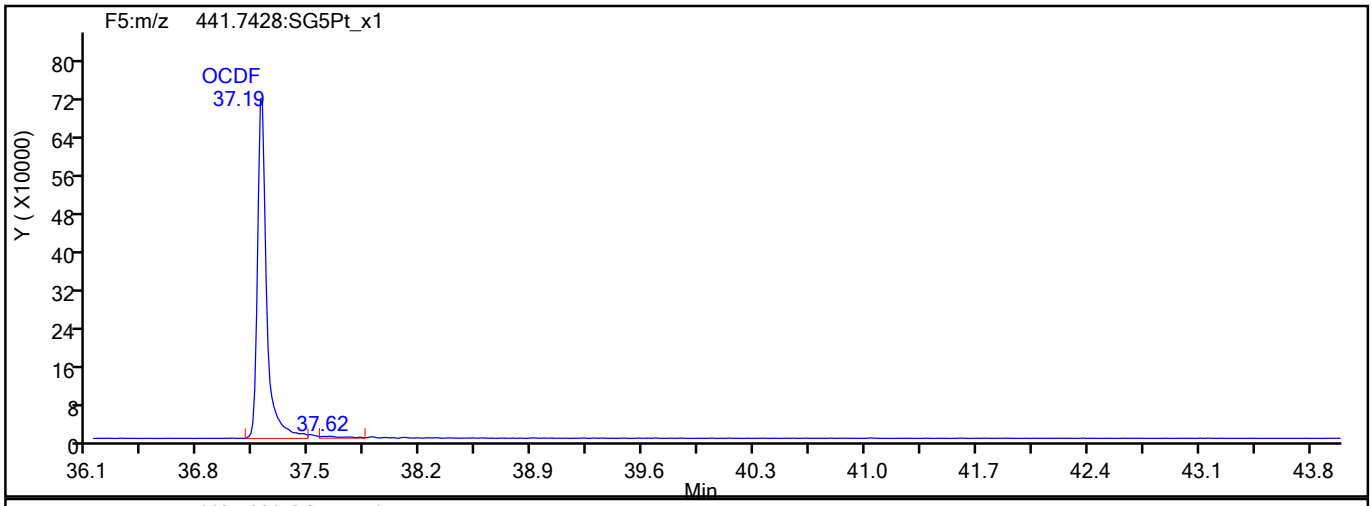

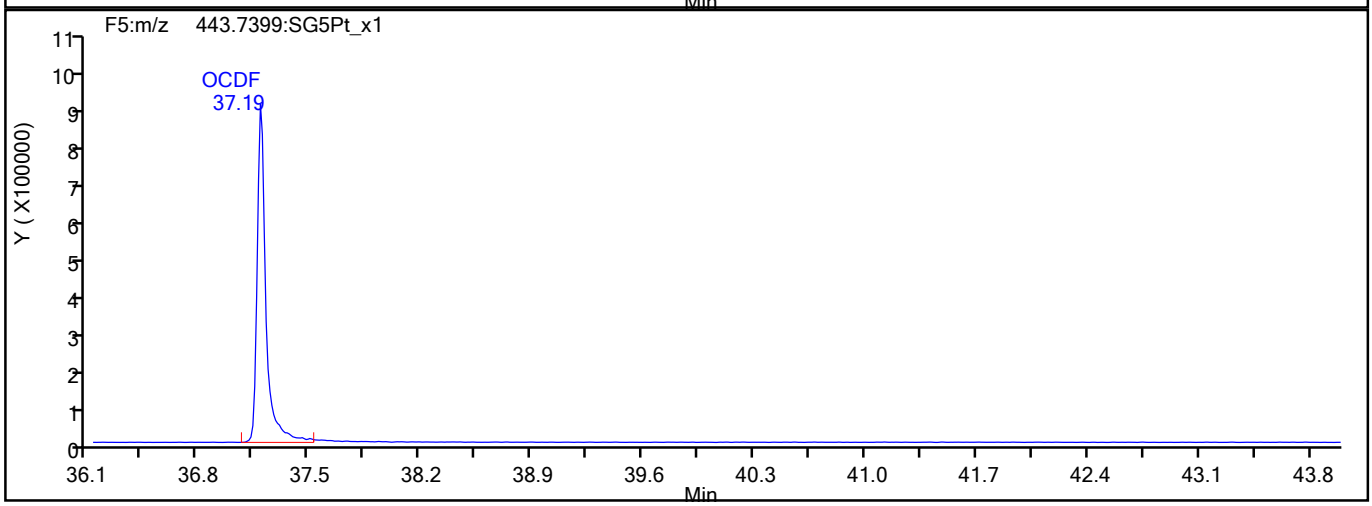

OCDF Interference Mass

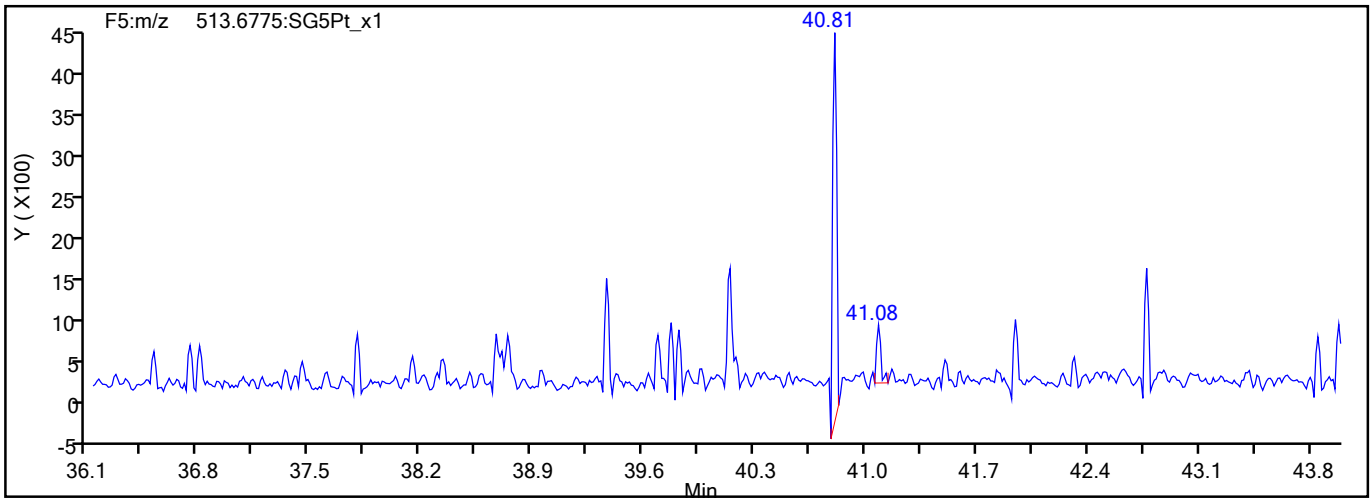

793836

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

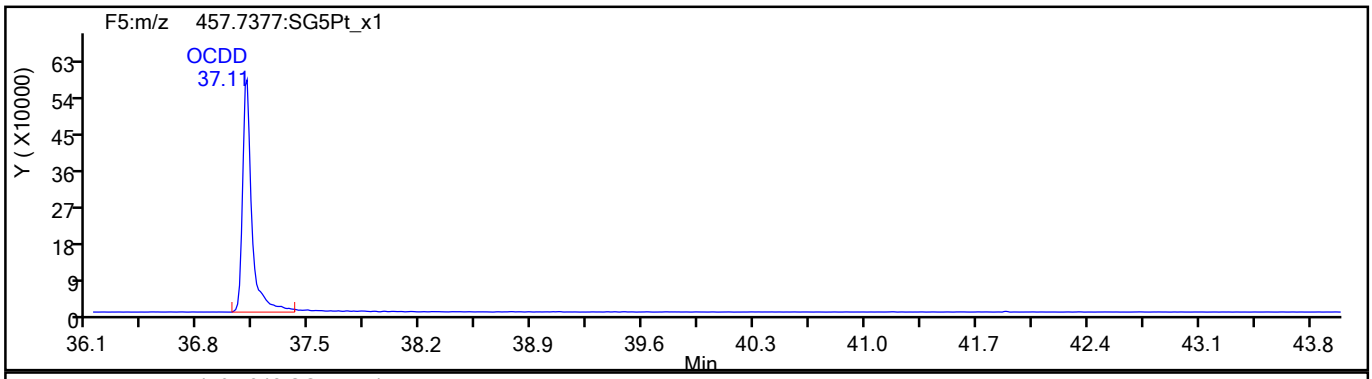

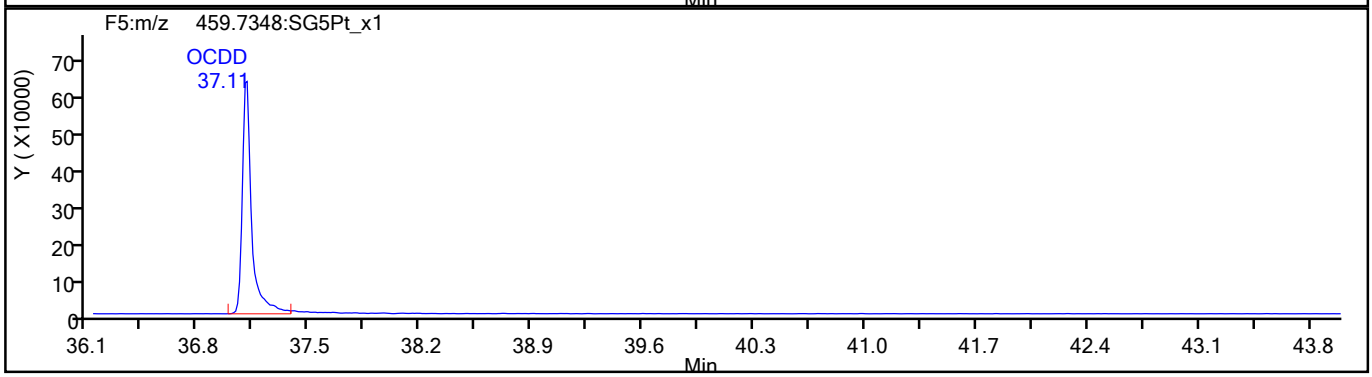

OCDD Standards

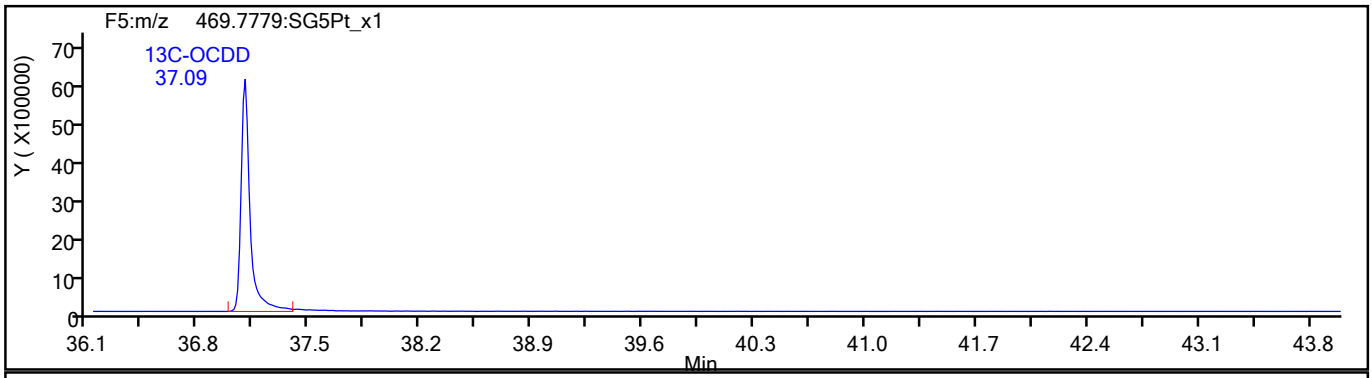

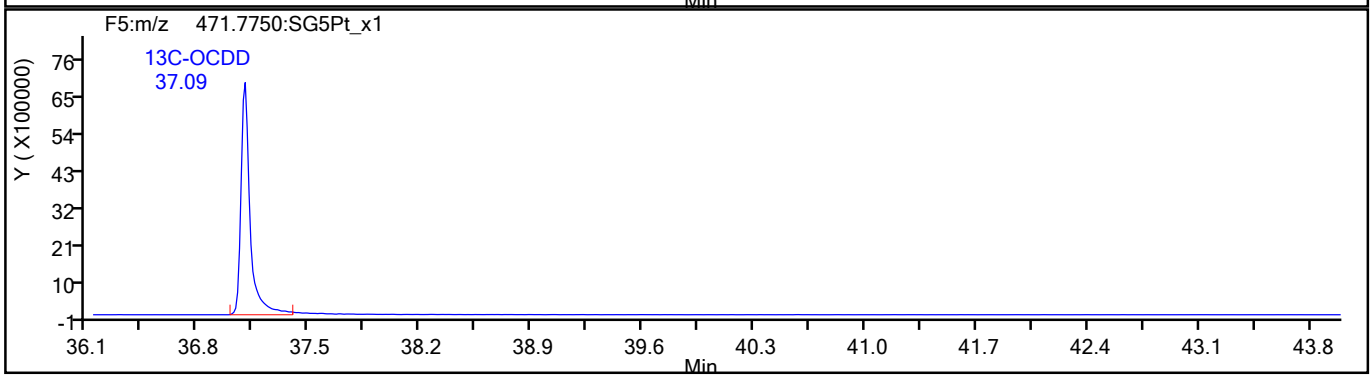

793837

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

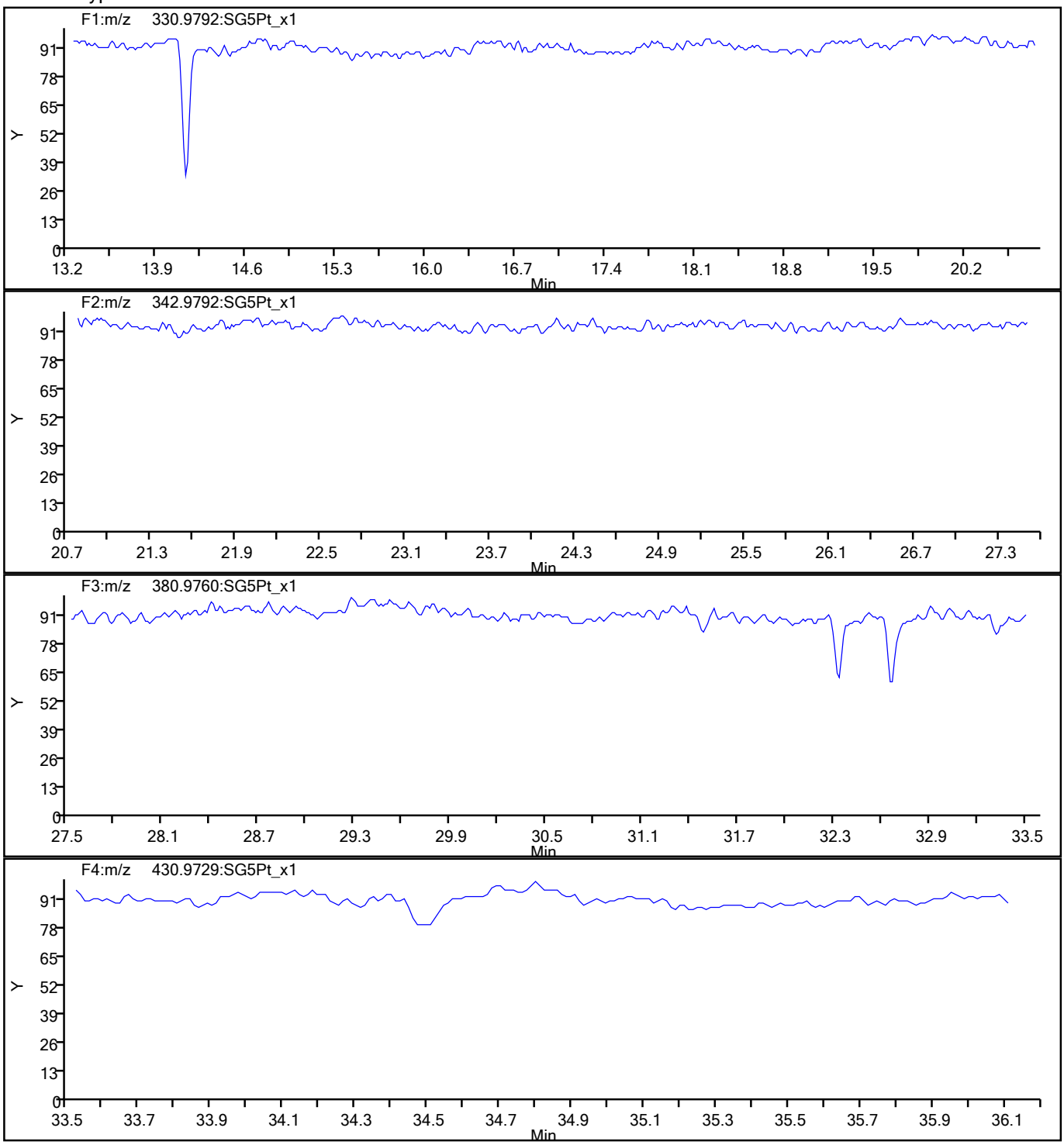

793838

Report Date: 27-Jul-2021 15:16:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_4.d		
Injection Date:	26-Jul-2021 11:36:54	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

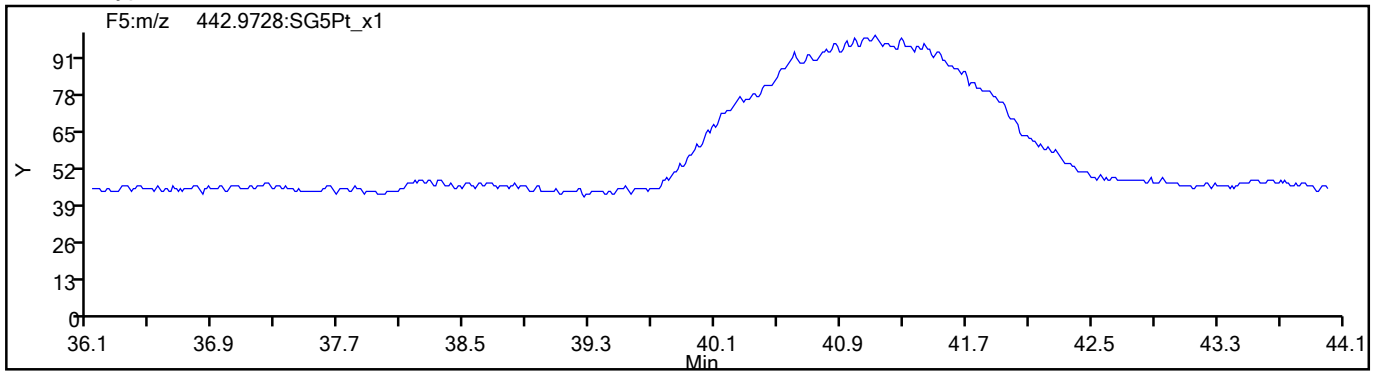

793839

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62635225	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.628	101724636	0.78	1.6249	99.9	99.9	0.2242	0.2242	99.95	
2,3,7,8-TCDF	17.643	10638776	0.78	1.0239	10.2	10.2	0.0283	0.0283	102	
S Total TCDF					10.2	10.2	0.0283	0.0283		
D 13C-2,3,7,8-TCDD	18.338	56155483	0.81	0.8993	99.7	99.7	0.1510	0.1510	99.69	
$ 37Cl4-2,3,7,8-TCDD	18.369	7339670		1.1071	10.6	10.6	0.0132	0.0132	106	
2,3,7,8-TCDD	18.369	7104238	0.76	1.2541	10.1	10.1	0.0224	0.0224	101	
S Total TCDD					10.1	10.1	0.0224	0.0224		
D 13C-1,2,3,7,8-PeCDF	22.762	76368219	1.58	1.2101	100.8	100.8	0.2109	0.2109	101	
1,2,3,7,8-PeCDF	22.789	41588176	1.62	1.0611	51.3	51.3	0.1508	0.1508	103	
D 13C-2,3,4,7,8-PeCDF	24.139	78214582	1.58	1.2395	100.7	100.7	0.2059	0.2059	101	
2,3,4,7,8-PeCDF	24.167	40928436	1.60	1.0184	51.4	51.4	0.1656	0.1656	103	
S Total PeCDF					102.7	102.7	0.1582	0.1582		
D 13C-1,2,3,7,8-PeCDD	24.876	47124414	1.60	0.7612	98.8	98.8	0.1214	0.1214	98.83	
1,2,3,7,8-PeCDD	24.903	25165054	1.62	1.0484	50.9	50.9	0.0669	0.0669	102	
S Total PeCDD					50.9	50.9	0.0669	0.0669		
D 13C-1,2,3,4,7,8-HxCDF	30.849	68075509	0.52	1.0837	98.8	98.8	0.4389	0.4389	98.79	
1,2,3,4,7,8-HxCDF	30.862	37525146	1.24	1.0851	50.8	50.8	0.2914	0.2914	102	
D 13C-1,2,3,6,7,8-HxCDF	31.009	70677463	0.52	1.1279	98.5	98.5	0.4217	0.4217	98.54	
1,2,3,6,7,8-HxCDF	31.022	40802767	1.21	1.1260	51.3	51.3	0.2729	0.2729	103	
D 13C-2,3,4,6,7,8-HxCDF	31.767	67028498	0.52	1.0637	99.1	99.1	0.4471	0.4471	99.10	
2,3,4,6,7,8-HxCDF	31.781	39741365	1.22	1.1675	50.8	50.8	0.2260	0.2260	102	
D 13C-1,2,3,7,8,9-HxCDF	32.526	60389284	0.52	0.9676	98.2	98.2	0.4916	0.4916	98.15	
1,2,3,7,8,9-HxCDF	32.540	35924190	1.21	1.1664	51.0	51.0	0.2363	0.2363	102	
S Total HxCDF					203.9	203.9	0.2566	0.2566		
* 13C-1,2,3,7,8,9-HxCDD	32.353	63588089	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.941	44039927	1.25	0.7334	94.4	94.4	0.3731	0.3731	94.43	
1,2,3,4,7,8-HxCDD	31.954	24891170	1.33	1.0640	53.1	53.1	0.1747	0.1747	106	
D 13C-1,2,3,6,7,8-HxCDD	32.034	55284532	1.26	0.8802	98.8	98.8	0.3109	0.3109	98.78	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	27953752	1.21	1.0001	50.6	50.6	0.1666	0.1666	101	
1,2,3,7,8,9-HxCDD	32.367	29794954	1.26	1.1325	53.0	53.0	0.1552	0.1552	106	
S Total HxCDD					156.7	156.7	0.1655	0.1655		
D 13C-1,2,3,4,6,7,8-HpCDF	33.924	47697671	0.44	0.7730	97.0	97.0	1.328	1.328	97.03	
1,2,3,4,6,7,8-HpCDF	33.937	35740964	1.05	1.4413	52.0	52.0	0.5190	0.5190	104	
D 13C-1,2,3,4,7,8,9-HpCDF	35.018	43238622	0.44	0.7008	97.0	97.0	1.465	1.465	97.03	
1,2,3,4,7,8,9-HpCDF	35.030	29450636	1.07	1.3174	51.7	51.7	0.6741	0.6741	103	
S Total HpCDF					103.7	103.7	0.5966	0.5966		
D 13C-1,2,3,4,6,7,8-HpCDD	34.726	40333717	1.03	0.6472	98.0	98.0	0.5563	0.5563	98.00	
1,2,3,4,6,7,8-HpCDD	34.726	22538791	1.03	1.0943	51.1	51.1	0.2539	0.2539	102	
S Total HpCDD					51.1	51.1	0.2539	0.2539		
D 13C-OCDD	37.094	54338243	0.87	0.4472	191.1	191.1	0.2612	0.2612	95.55	
OCDF	37.202	41147202	0.91	1.4382	105.3	105.3	0.1155	0.1155	105	
OCDD	37.106	31656667	0.89	1.1070	105.3	105.3	0.1572	0.1572	105	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Jul-2021 12:21:52 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621B CS-4 HRDXNL4_00099
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:09 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 15:35:45

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		28287778	7074314	3903	9757	1813		
333.9339	18.142	18.142	0		34347447	8672273	4653	11632	1864	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.628	17.616	1	0.972	44652675	10978931	8756	21890	1254		
317.9389	17.628	17.616	1	0.972	57071961	13787474	14192	35480	971	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.631	1	1.001	4665898	1145703	1759	4397	651		
305.8987	17.643	17.631	1	1.001	5972878	1458593	1111	2777	1313	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	25132336	5946858	3903	9757	1524		
333.9339	18.338	18.338	0	1.011	31023147	7337223	4653	11632	1577	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.369	18.354	1	1.012	7339670	1703834	921	2302	1850		
2,3,7,8-TCDD											
319.8965	18.369	18.357	1	1.002	3077636	720367	906	2265	795		
321.8936	18.369	18.357	1	1.002	4026602	947792	588	1470	1612	0.76(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46742521	8181774	9794	24485	835		
353.8970	22.762	22.754	0	1.255	29625698	5225925	6278	15695	832	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.789	22.779	1	1.001	25738852	4452039	5088	12720	875		
341.8567	22.789	22.779	1	1.001	15849324	2731041	3494	8735	782	1.62(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.139	24.129	1	1.331	47906018	7878060	9794	24485	804		
353.8970	24.139	24.129	1	1.331	30308564	4845446	6278	15695	772	1.58(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.167	24.156	1	1.001	25185293	4111601	5088	12720	808		
341.8567	24.167	24.156	1	1.001	15743143	2618923	3494	8735	750	1.60(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.876	24.865	1	1.371	29023498	4508866	3701	9252	1218		
369.8919	24.876	24.865	1	1.371	18100916	2812844	2121	5302	1326	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.903	24.892	1	1.001	15548746	2422000	1286	3215	1883		
357.8516	24.903	24.892	1	1.001	9616308	1489099	768	1920	1939	1.62(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.849	30.838	1	0.954	23323404	5008910	10853	27132	462		
385.8610	30.849	30.838	1	0.954	44752105	9511743	20971	52427	454	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.000	20753403	4584464	10058	25145	456		
375.8178	30.862	30.857	0	1.000	16771743	3729681	8311	20777	449	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.009	31.003	0	0.958	24213048	5206646	10853	27132	480		
385.8610	31.009	31.003	0	0.958	46464415	9739576	20971	52427	464	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	22352739	4771379	10058	25145	474		
375.8178	31.022	31.022	0	1.000	18450028	3943683	8311	20777	475	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.767	31.756	1	0.982	22835025	6015846	10853	27132	554		
385.8610	31.767	31.756	1	0.982	44193473	11391437	20971	52427	543	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.781	31.772	1	1.000	21800962	5788708	10058	25145	576		
375.8178	31.781	31.772	1	1.000	17940403	4765095	8311	20777	573	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.005	20681548	5801162	10853	27132	535		
385.8610	32.526	32.523	0	1.005	39707736	10862121	20971	52427	518	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.540	32.534	0	1.000	19691436	5514300	10058	25145	548		
375.8178	32.540	32.534	0	1.000	16232754	4594829	8311	20777	553	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.353	32.342	1		35642869	9349119	10403	26007	899		
403.8529	32.353	32.342	1		27945220	7378163	7908	19770	933	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.941	31.929	1	0.987	24473480	7240164	10403	26007	696		
403.8529	31.941	31.929	1	0.987	19566447	5775722	7908	19770	730	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.954	31.945	1	1.000	14220855	4121905	5566	13915	741		
391.8127	31.954	31.945	1	1.000	10670315	3199272	4114	10285	778	1.33(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.034	32.033	0	0.990	30876044	8117648	10403	26007	780		
403.8529	32.034	32.033	0	0.990	24408488	6404371	7908	19770	810	1.26(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	15327109	4211681	5566	13915	757		
391.8127	32.047	32.047	0	1.000	12626643	3343117	4114	10285	813	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.367	32.355	1	1.013	16583478	4368640	5566	13915	785		
391.8127	32.353	32.355	0	1.013	13211476	3519862	4114	10285	856	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.924	33.914	1	1.049	14460337	4683854	18083	45207	259		
419.8220	33.924	33.914	1	1.049	33237334	10568693	50629	126572	209	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.937	33.926	1	1.000	18301949	5790856	23497	58742	246		
409.7789	33.924	33.926	0	1.000	17439015	5585138	22139	55347	252	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.018	35.010	0	1.082	13111896	3936331	18083	45207	218		
419.8220	35.018	35.010	0	1.082	30126726	8910423	50629	126572	176	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.030	35.020	1	1.000	15206712	4448229	23497	58742	189		
409.7789	35.018	35.020	0	1.000	14243924	4117019	22139	55347	186	1.07(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.726	34.716	1	1.073	20474082	5927612	12552	31380	472		
437.8140	34.714	34.716	0	1.073	19859635	5735510	11540	28850	497	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	11412485	3410093	6511	16277	524		
425.7737	34.726	34.726	0	1.000	11126306	3358586	6451	16127	521	1.03(0.88-1.20)	
13C-OCDD											
469.7779	37.094	37.094	0	1.147	25234291	6398501	3020	7550	2119		
471.7750	37.094	37.094	0	1.147	29103952	7389026	4794	11985	1541	0.87(0.76-1.02)	
OCDF											
441.7428	37.202	37.199	0	1.003	19626693	5149784	2565	6412	2008		
443.7399	37.202	37.199	0	1.003	21520509	5563126	2015	5037	2761	0.91(0.76-1.02)	
OCDD											
457.7377	37.106	37.106	0	1.000	14916504	3846231	2276	5690	1690		
459.7348	37.106	37.106	0	1.000	16740163	4277323	2524	6310	1695	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

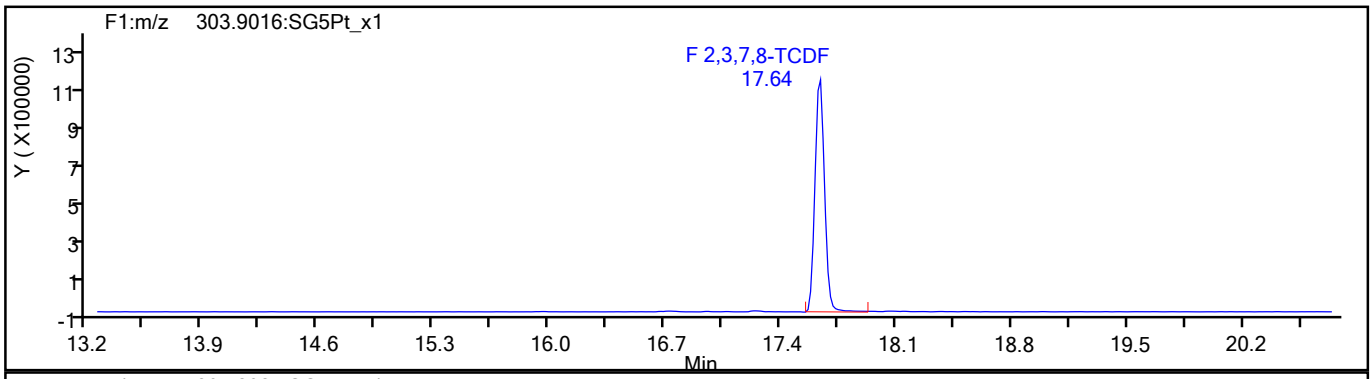

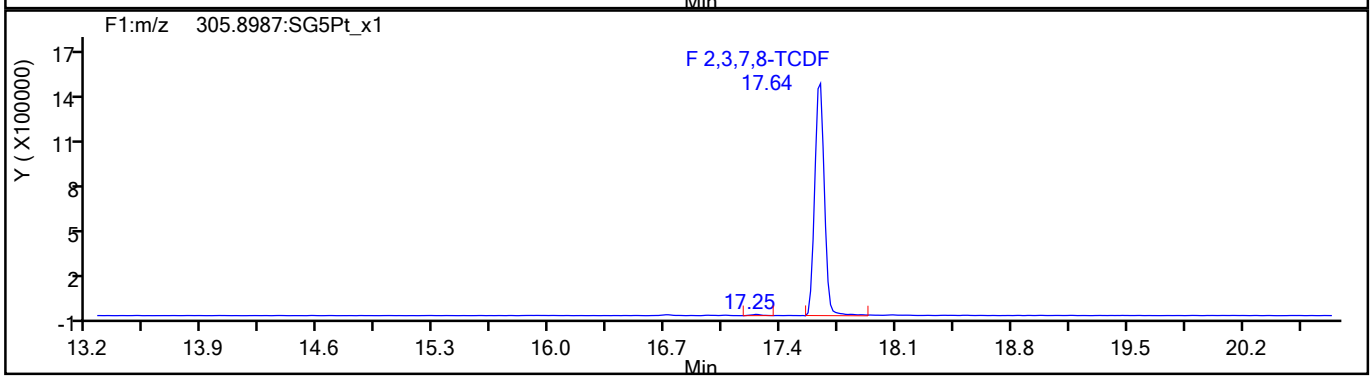

TCDF Standards

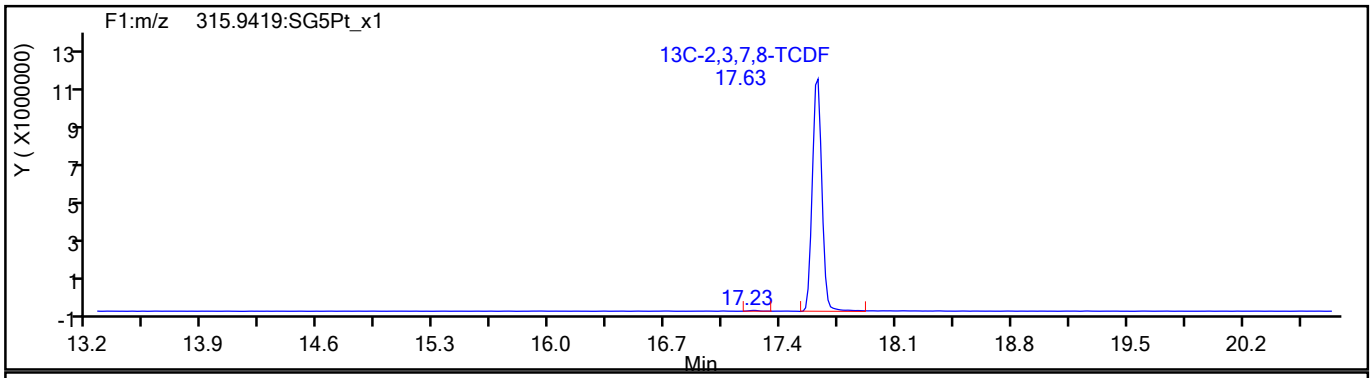

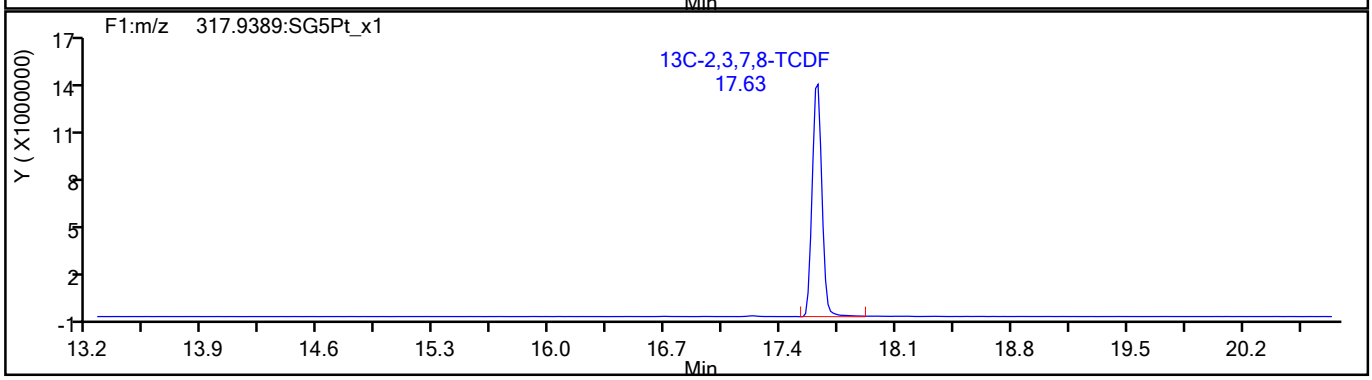

793845

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

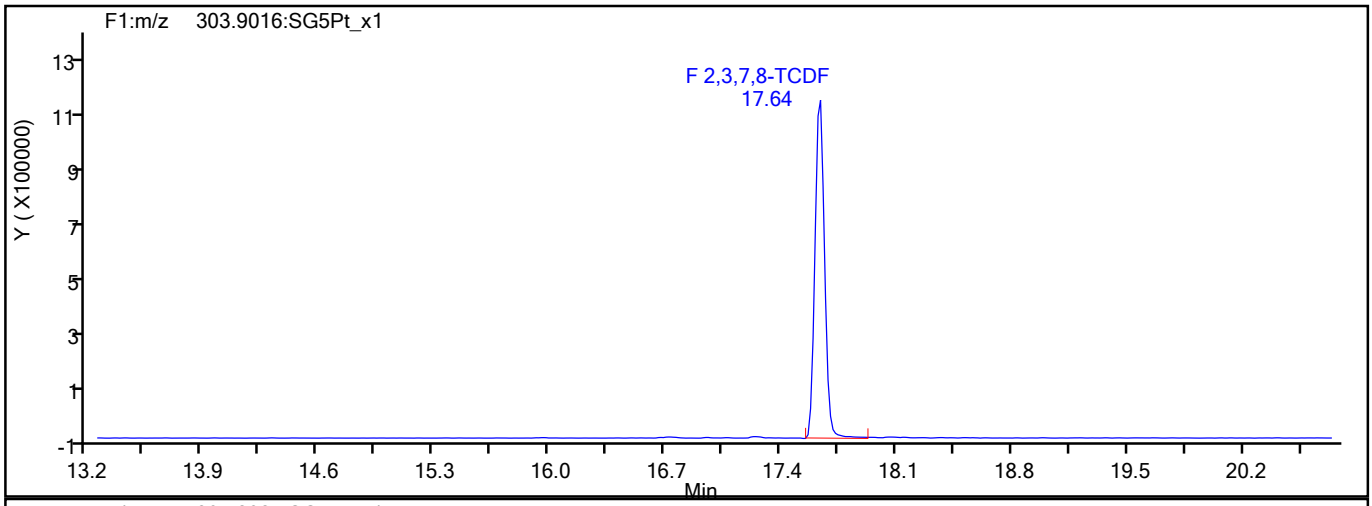

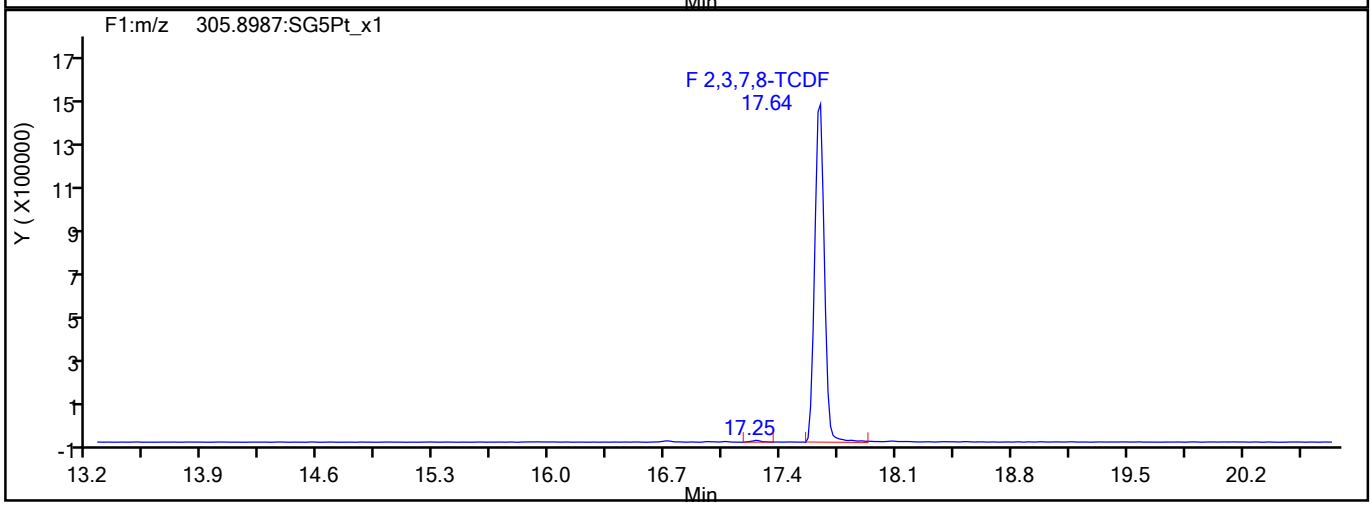

TCDF Interference Mass

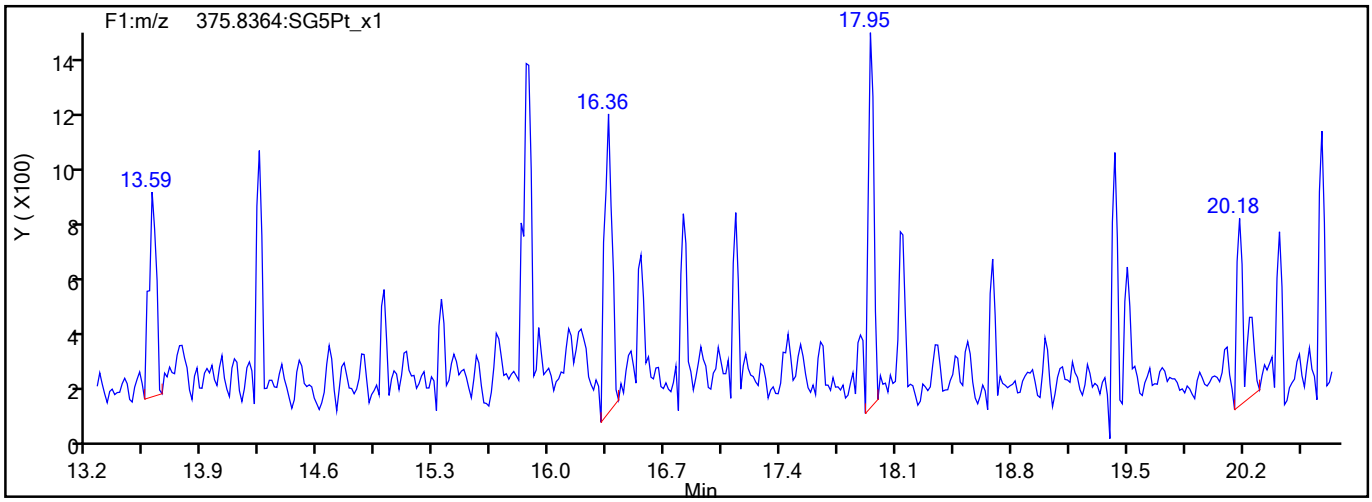

793846

Report Date: 27-Jul-2021 15:17:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

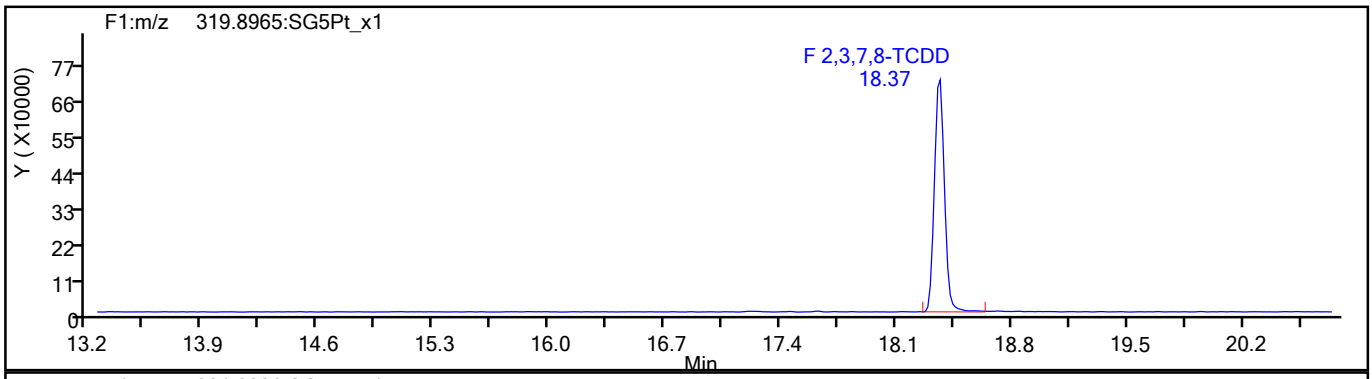

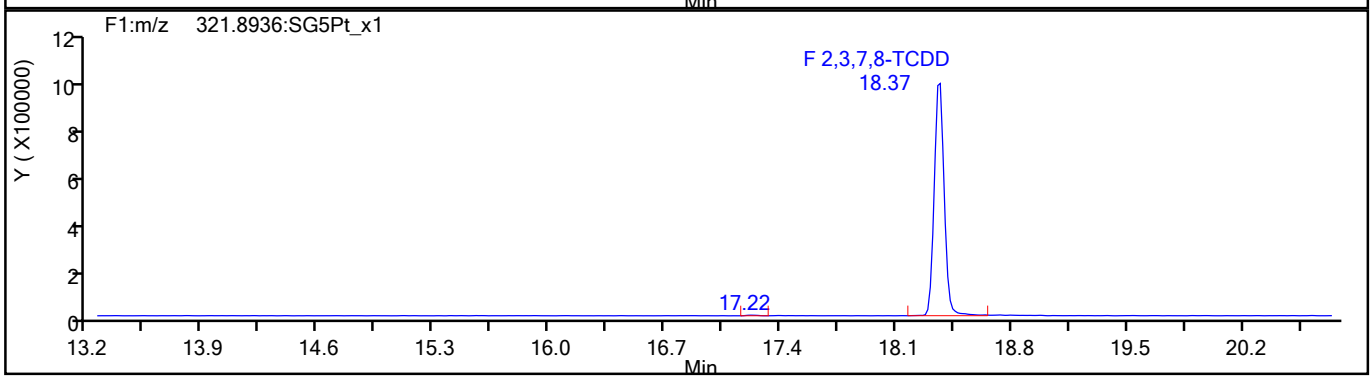

TCDD Standards

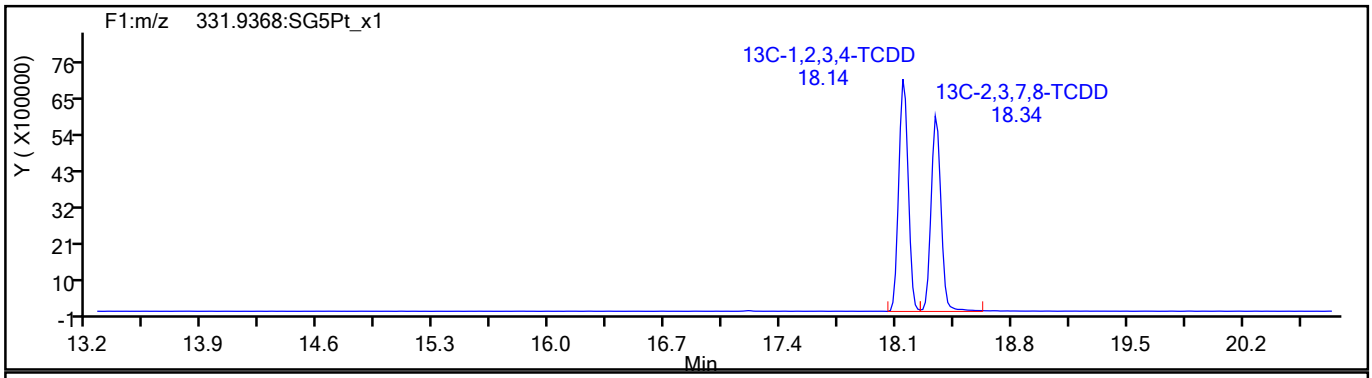

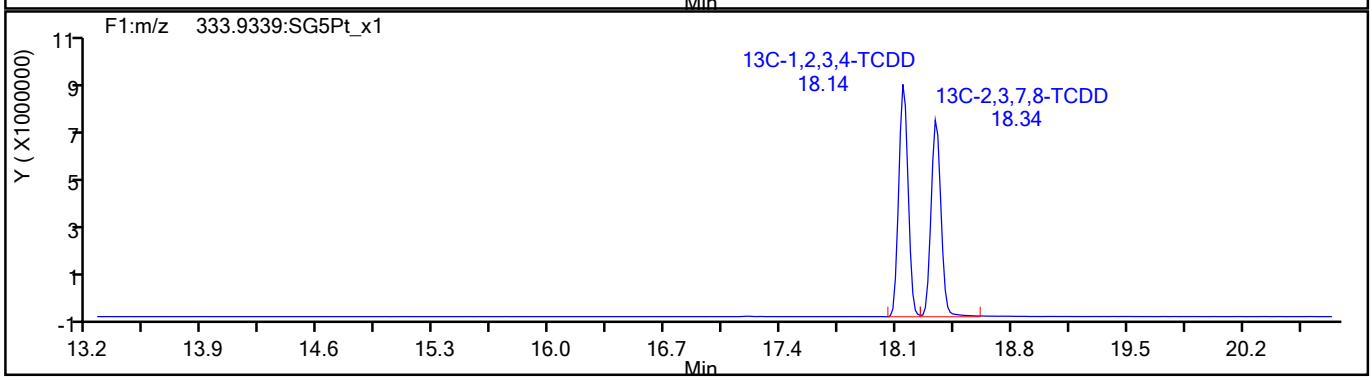

793847

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

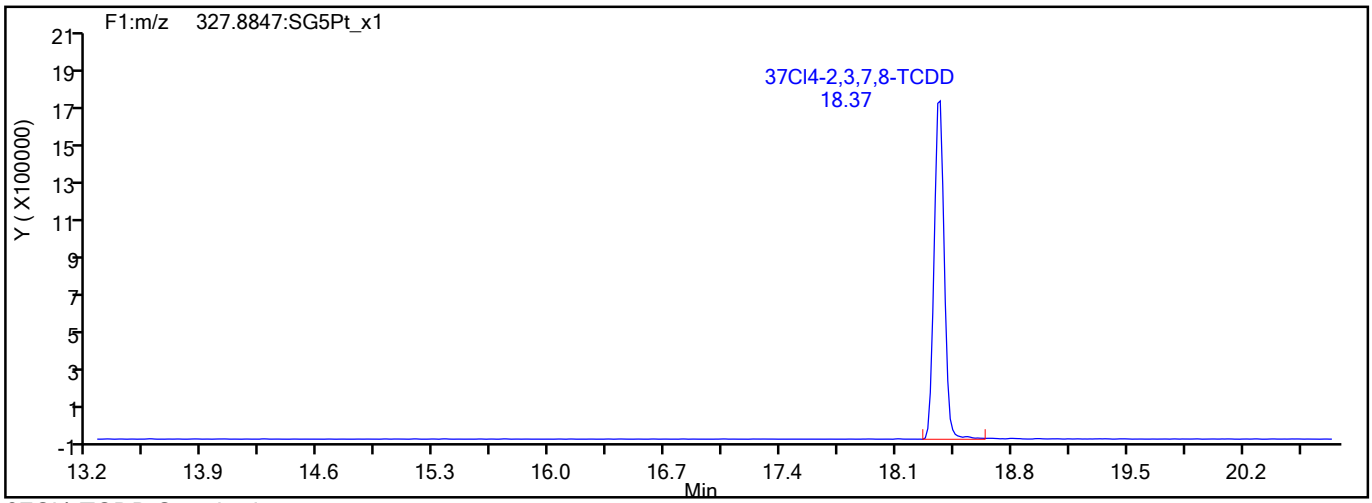

37Cl4-TCDD Standards

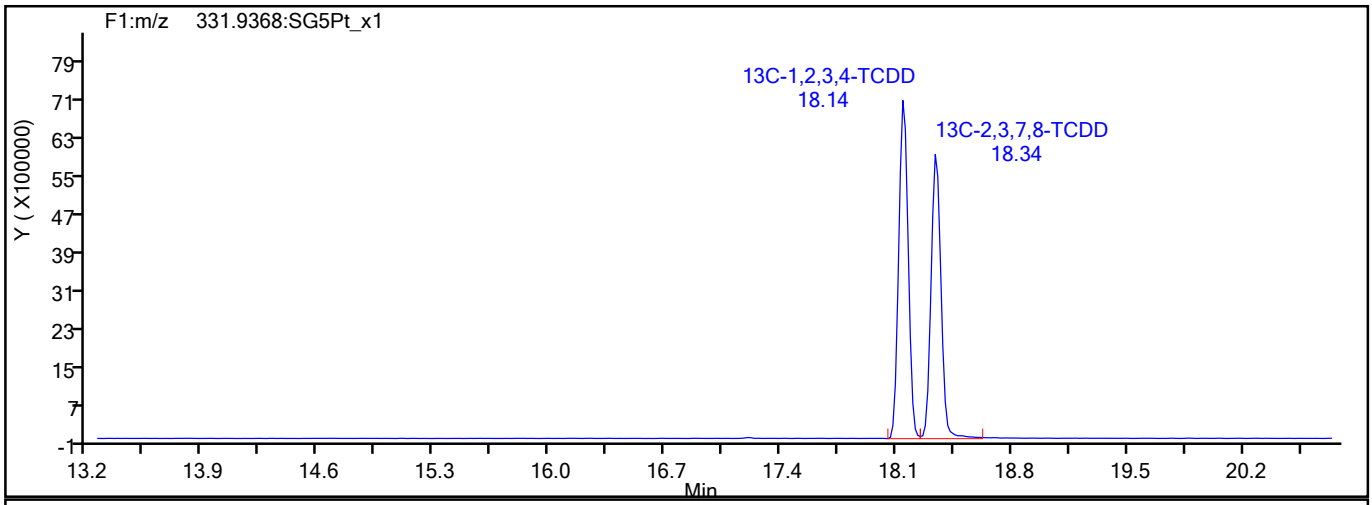

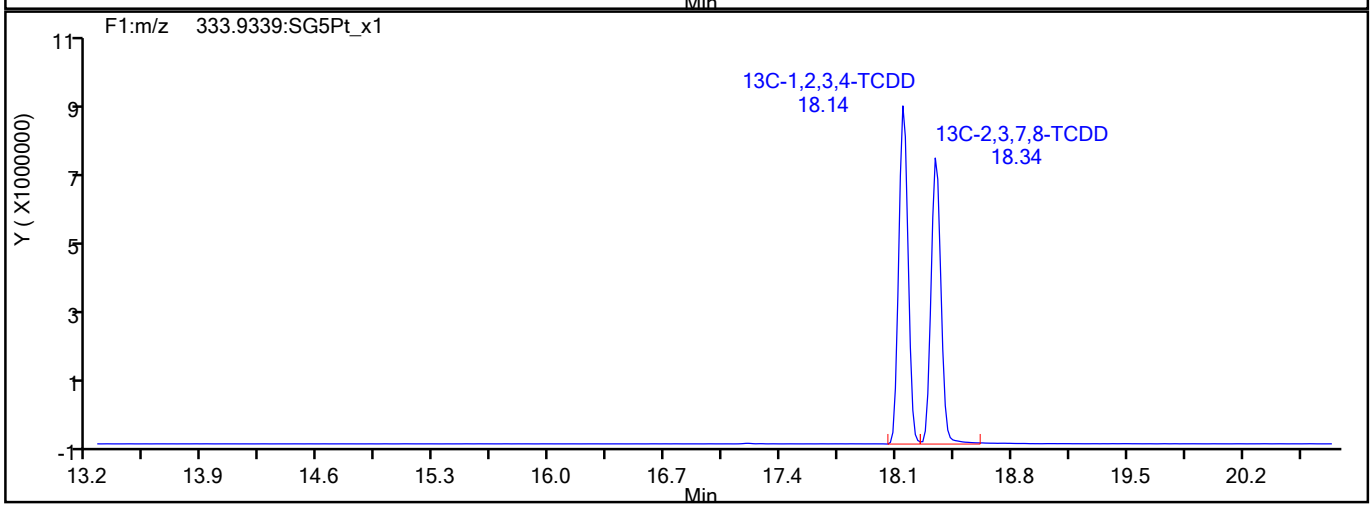

793848

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

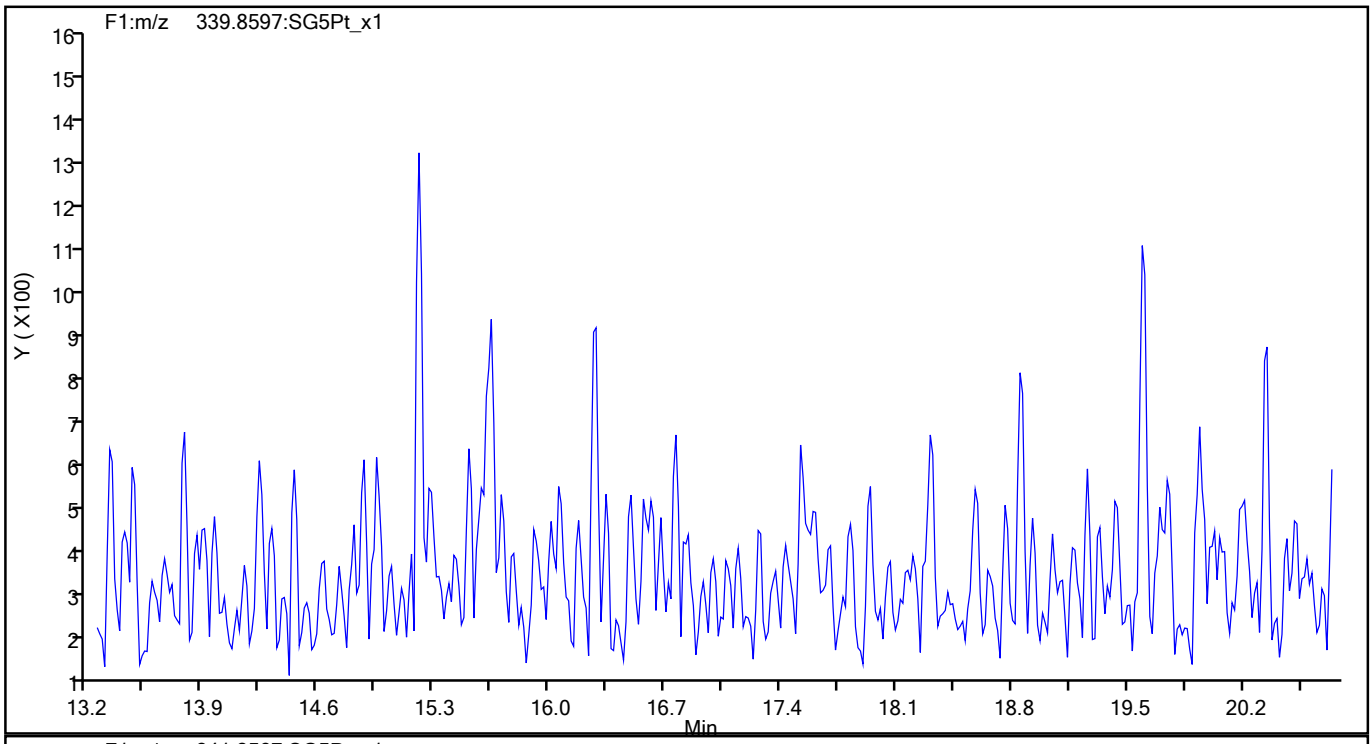

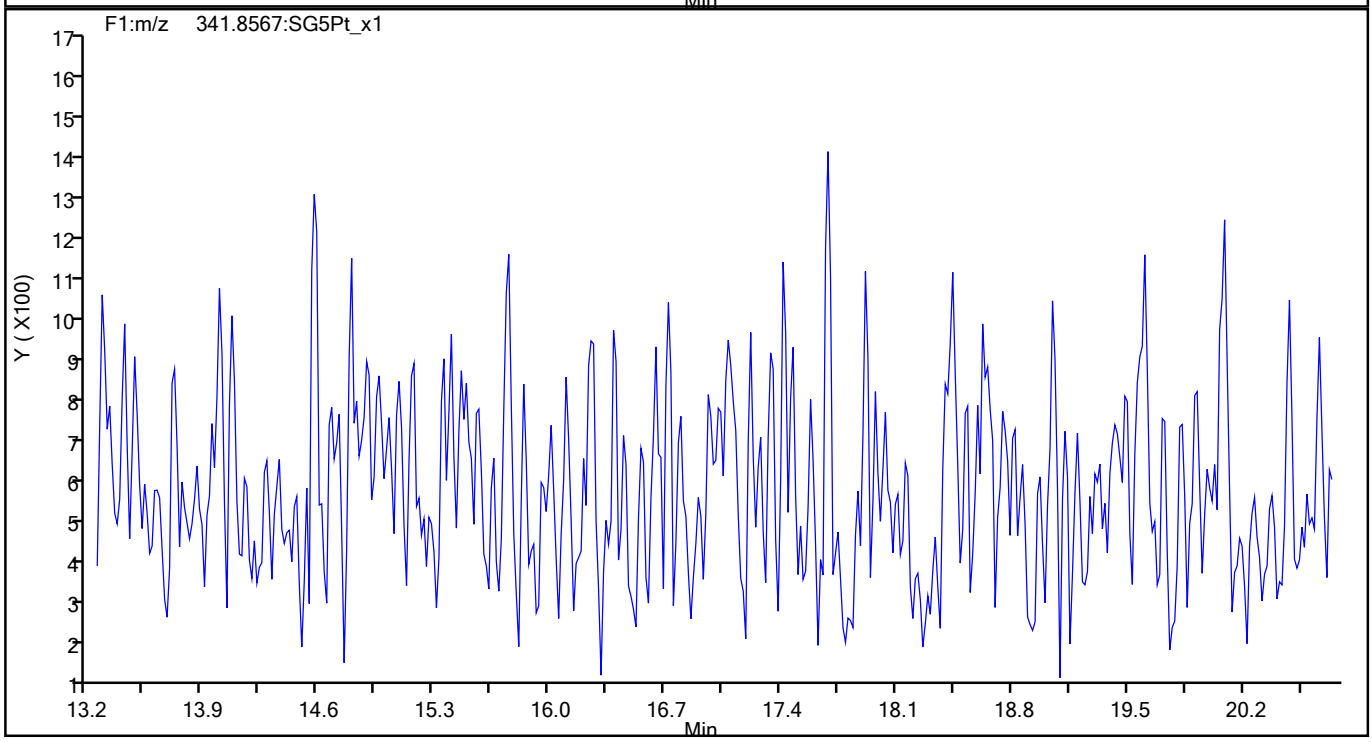

793849

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

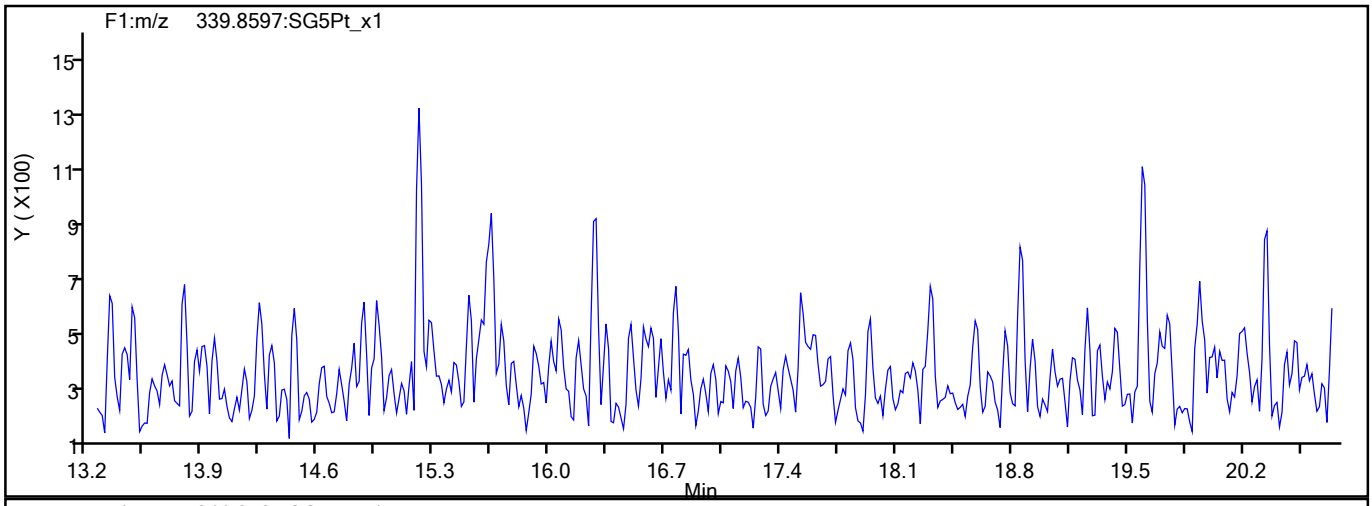

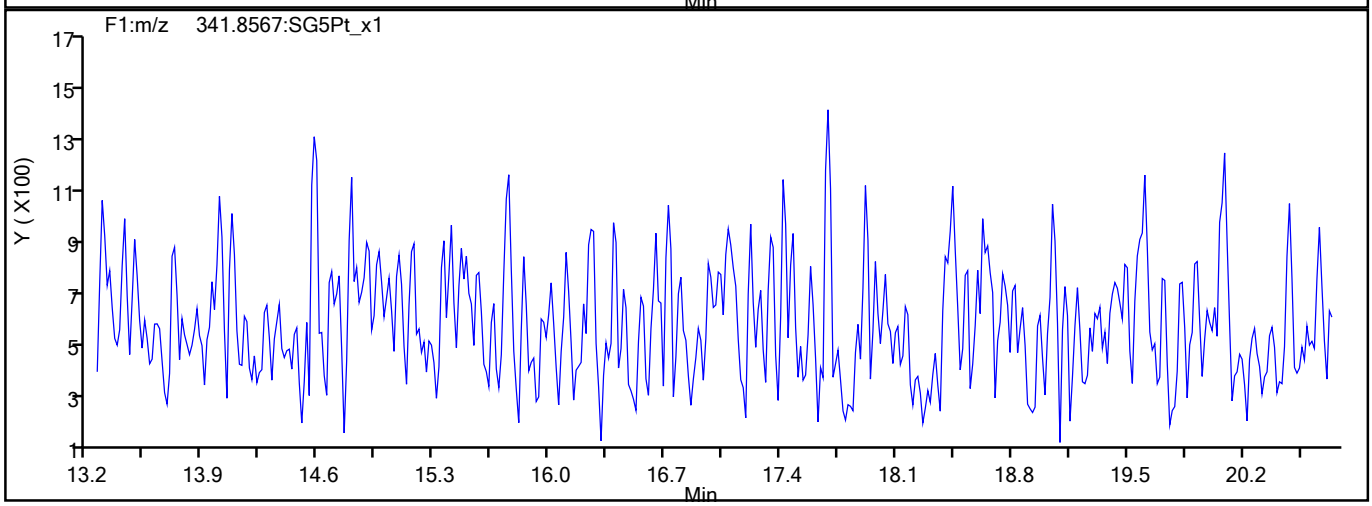

F1 PeCDFs Interference Mass

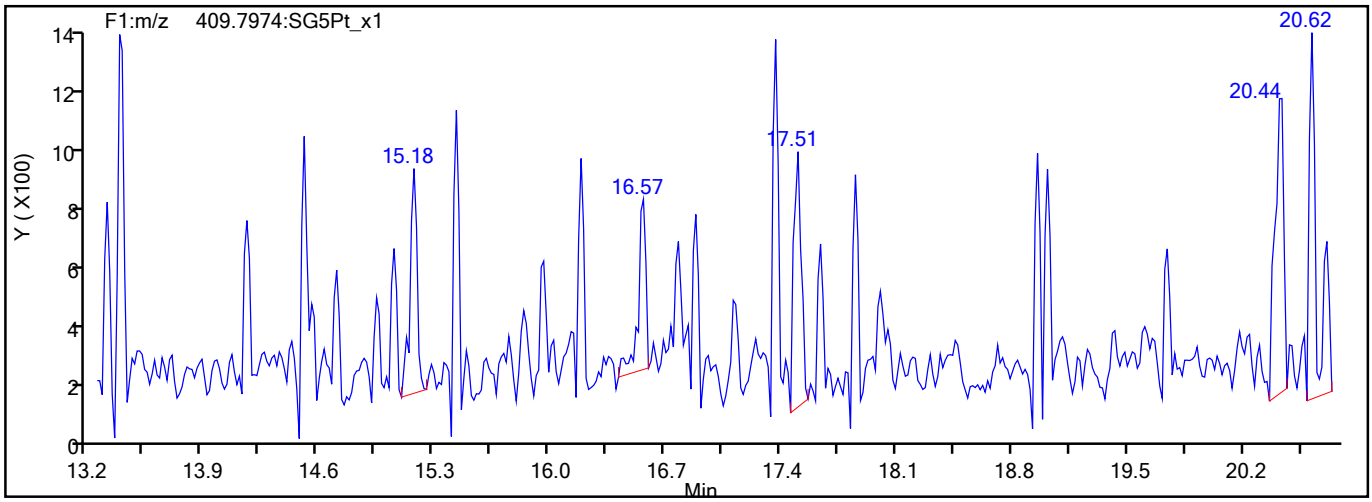

793850

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

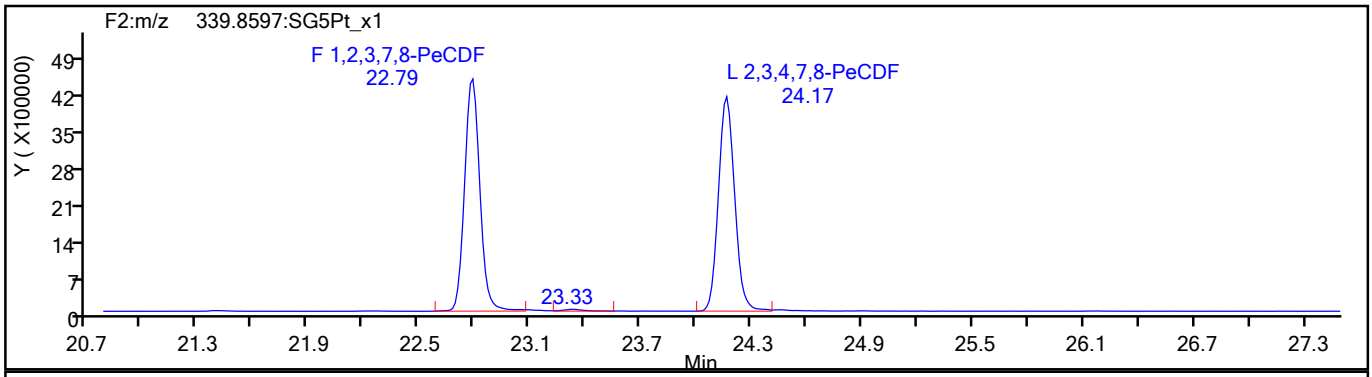

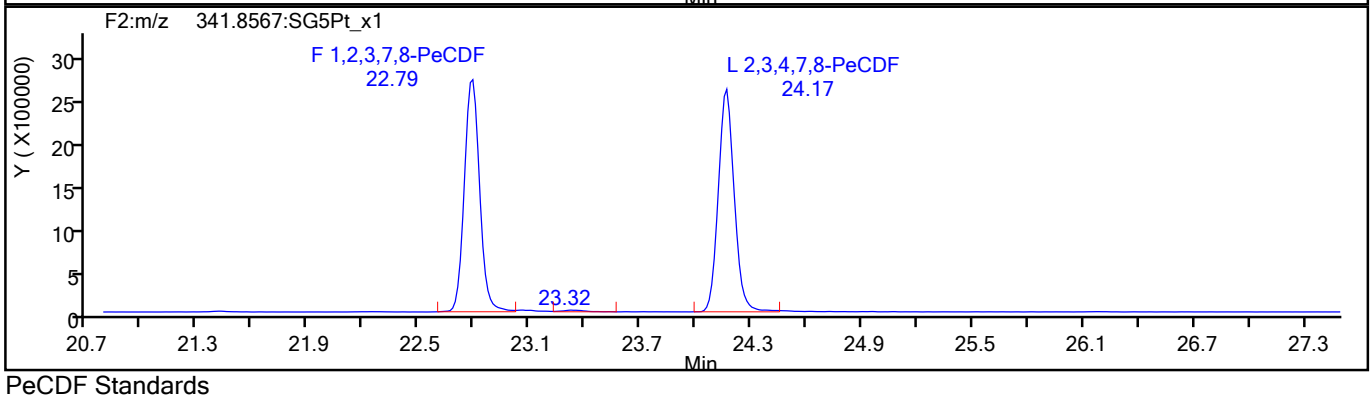

PeCDF Standards

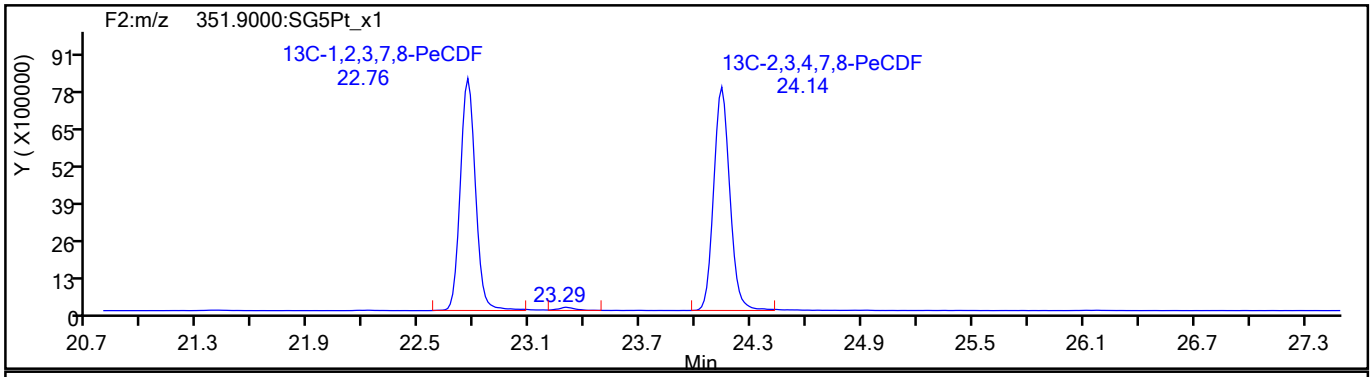

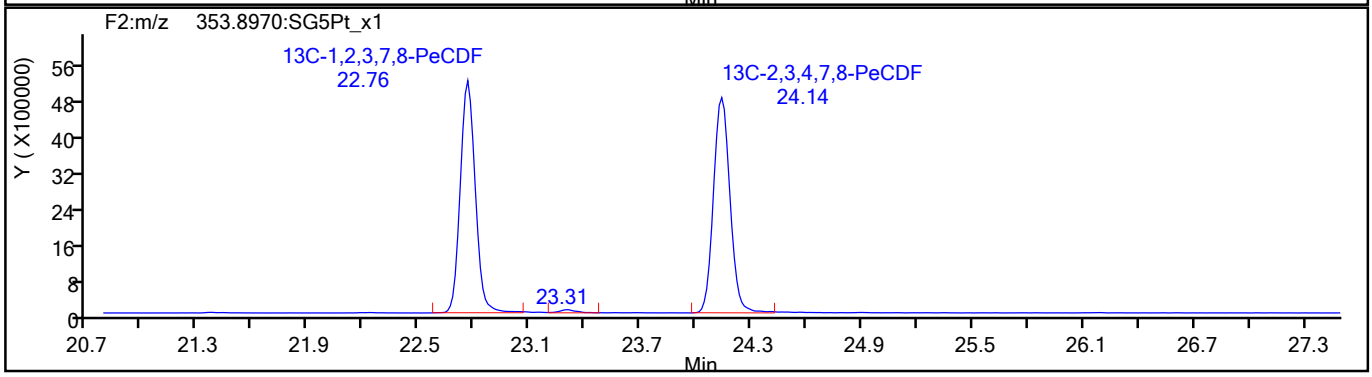

793851

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

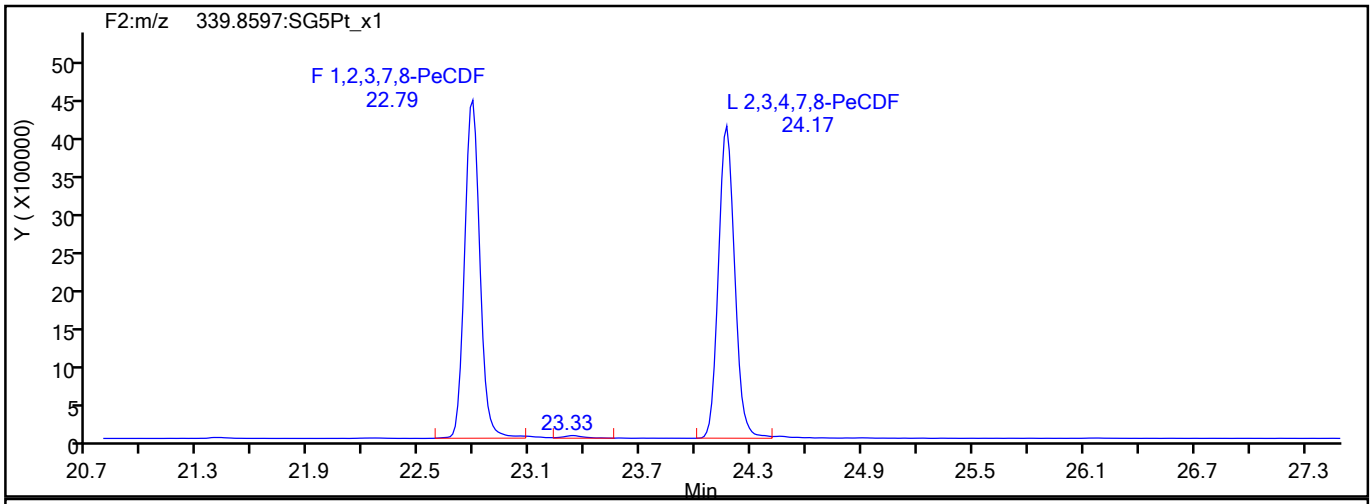

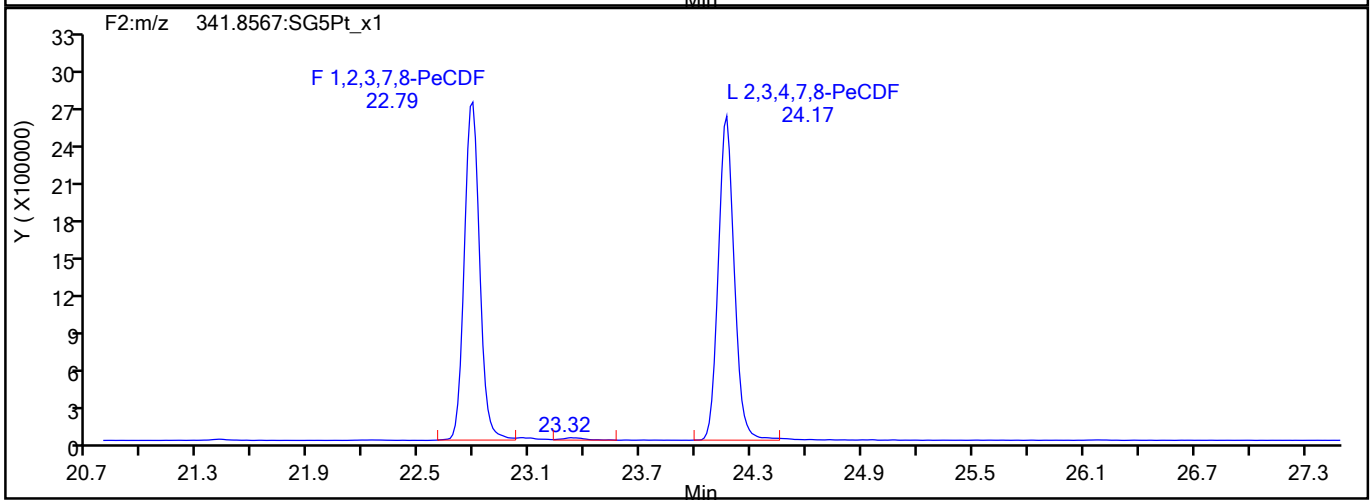

PeCDF Interference Mass

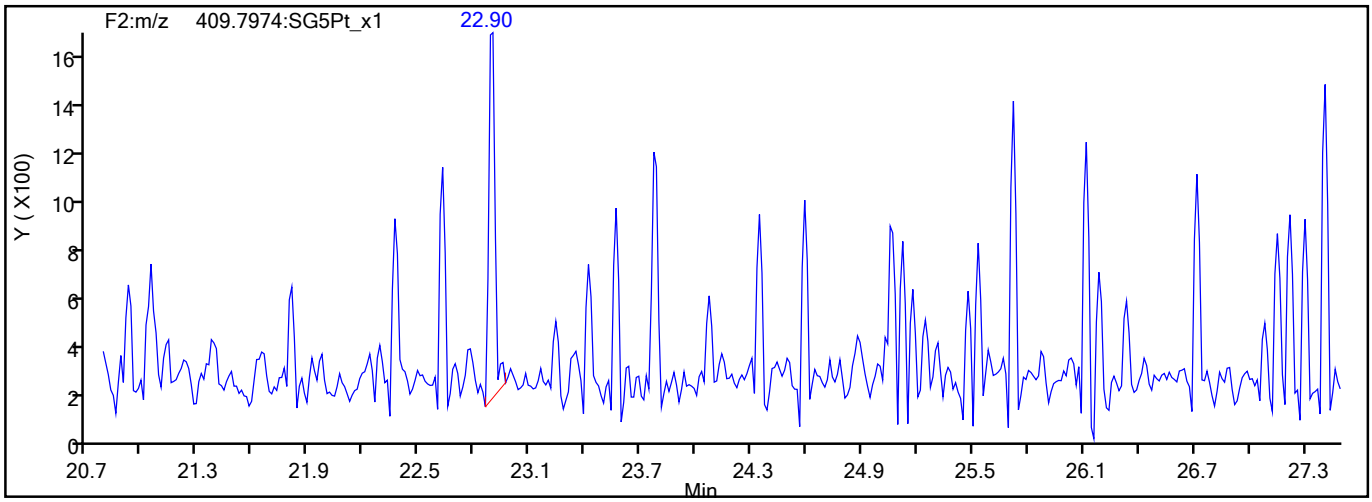

793852

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

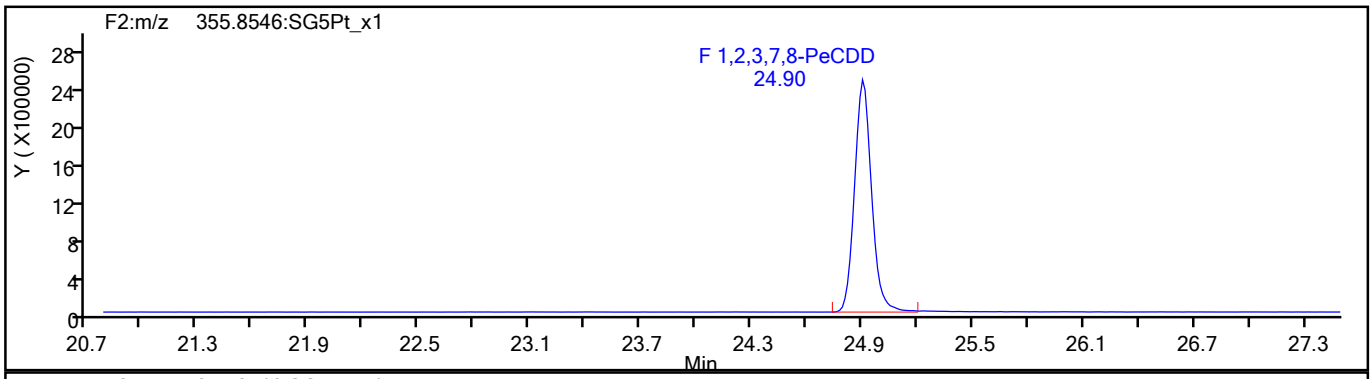

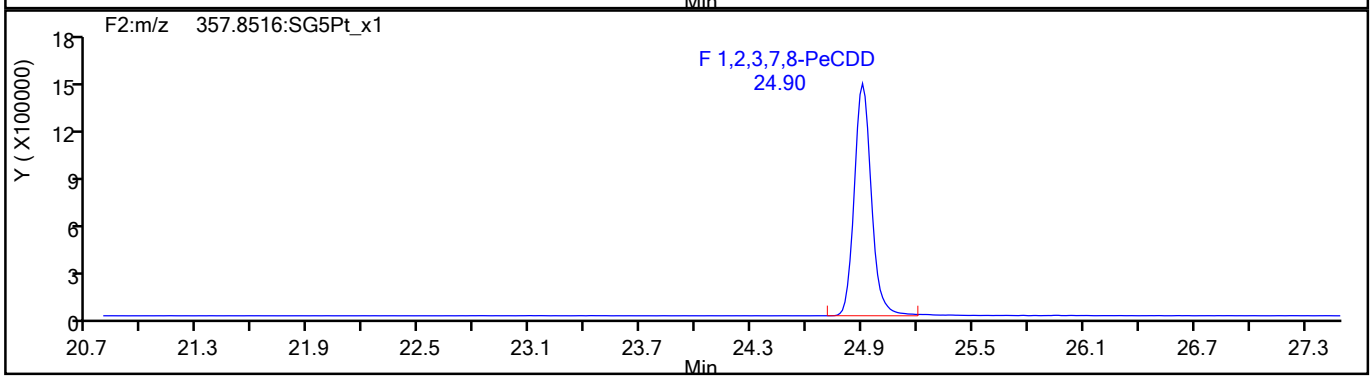

PeCDD Standards

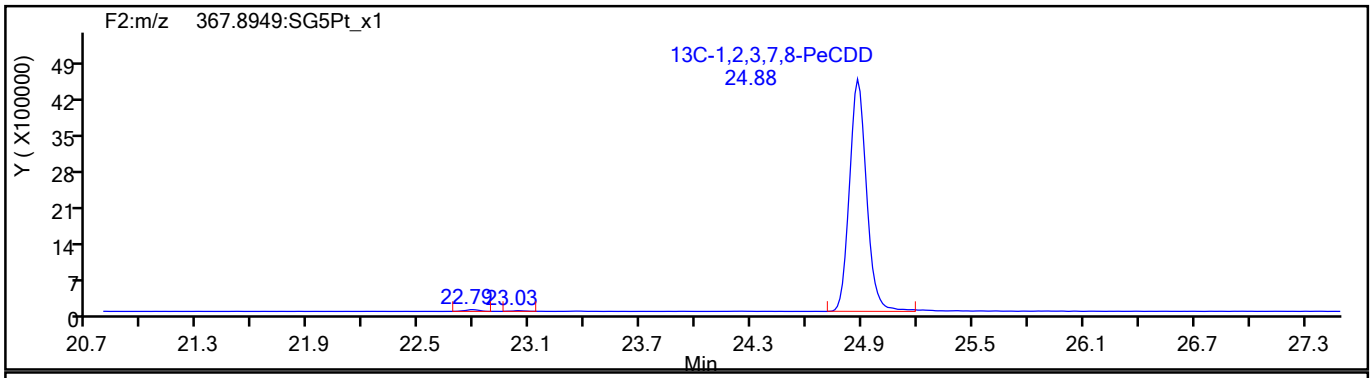

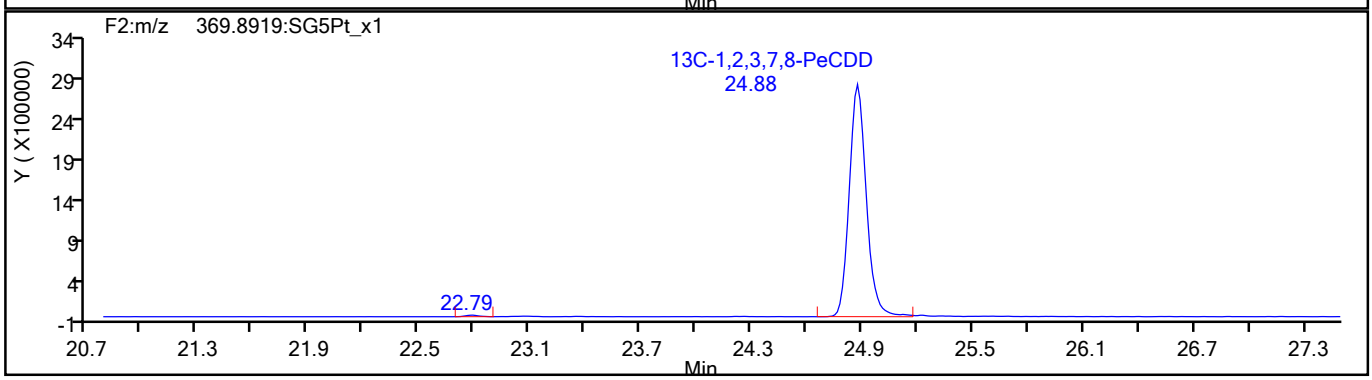

793853

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

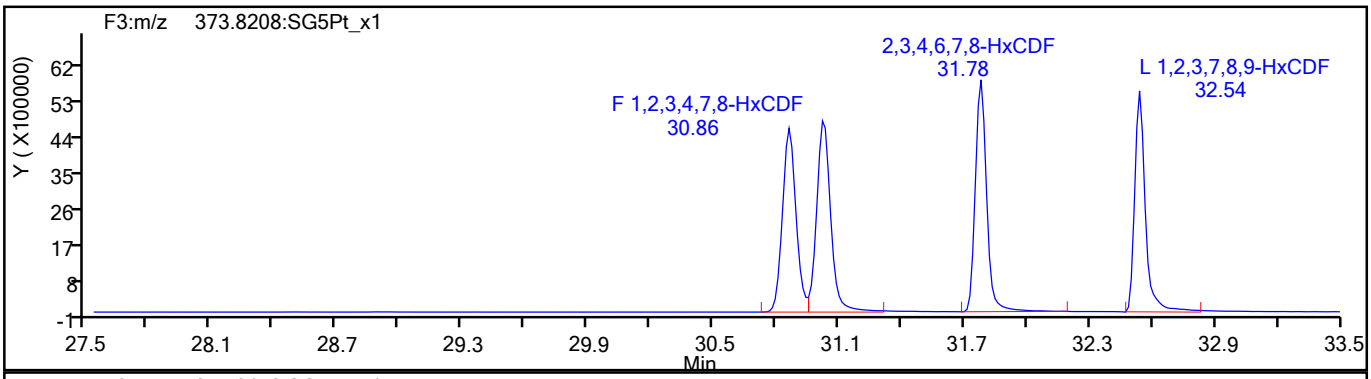

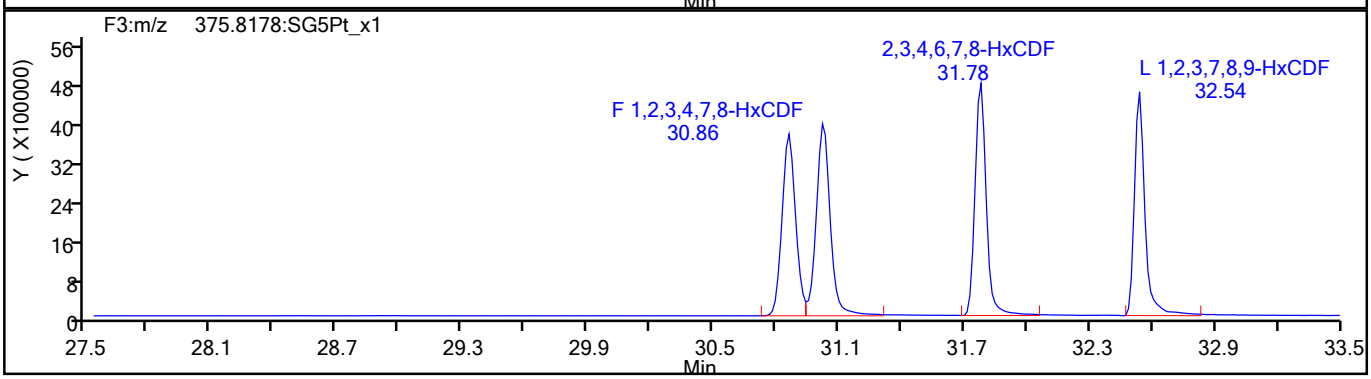

HxCDF Standards

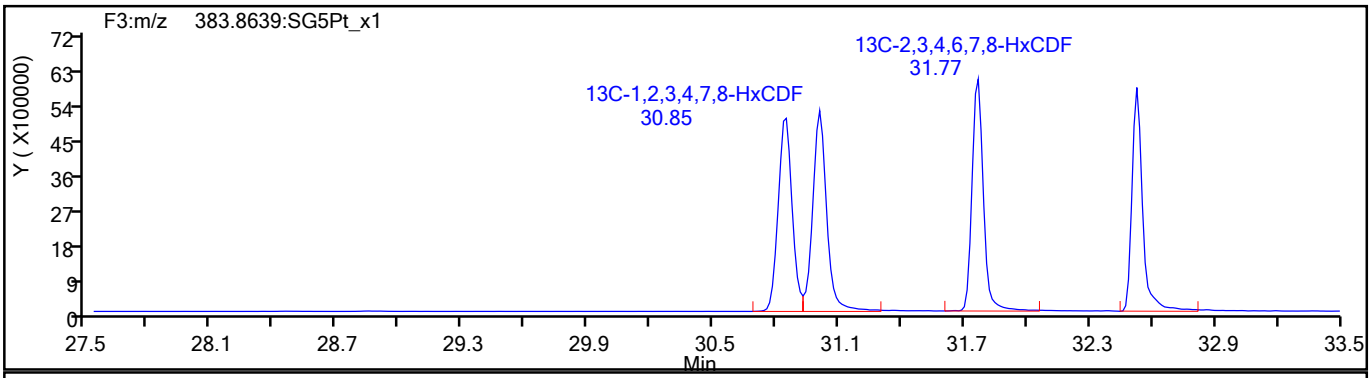

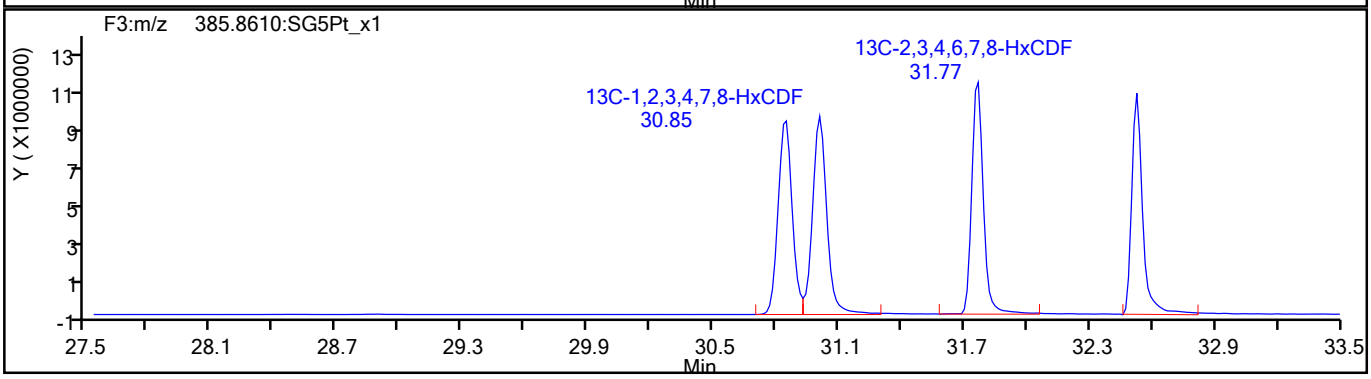

793854

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

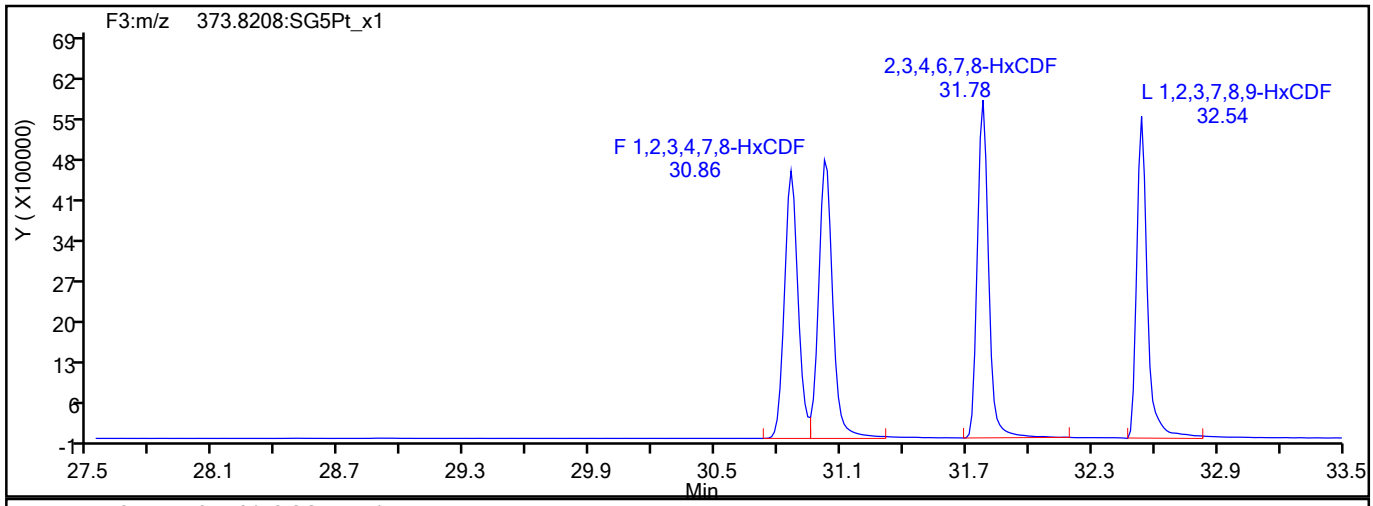

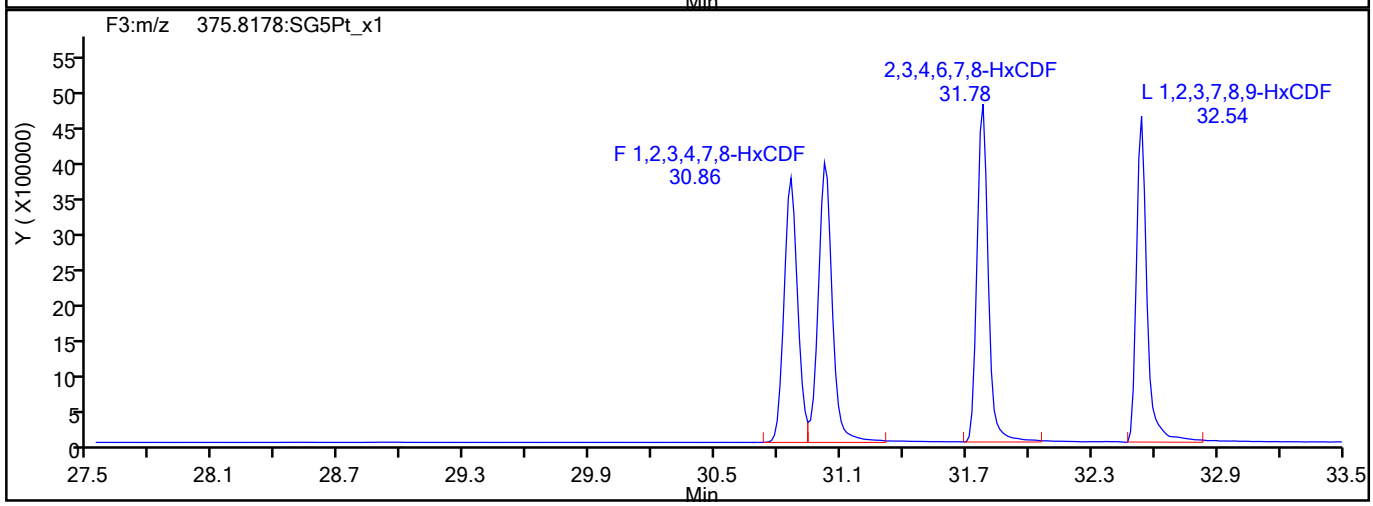

HxCDF Interference Mass

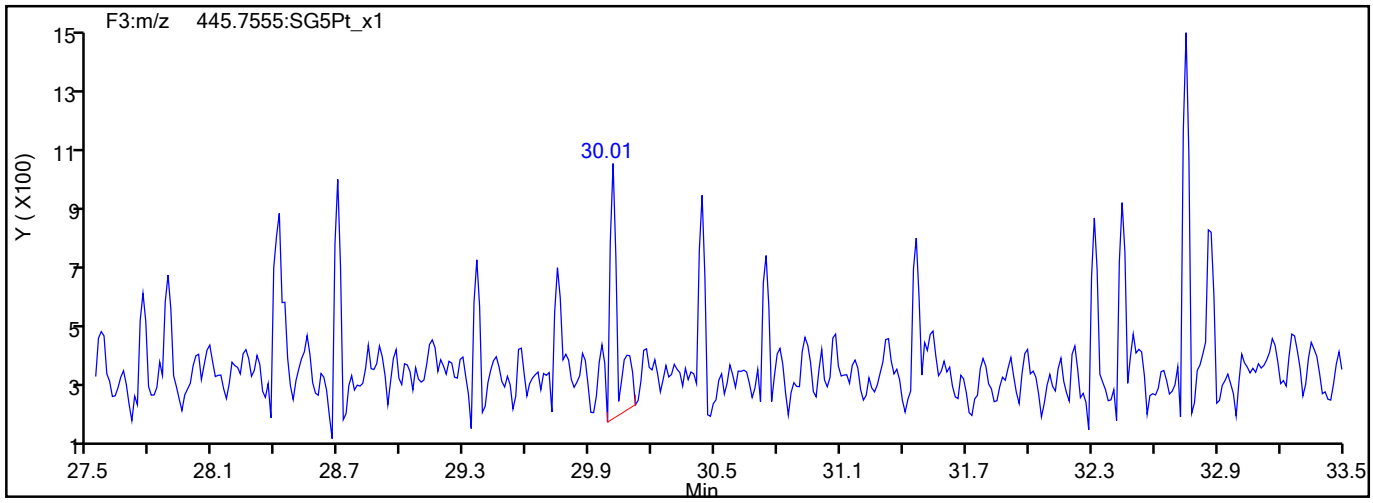

793855

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

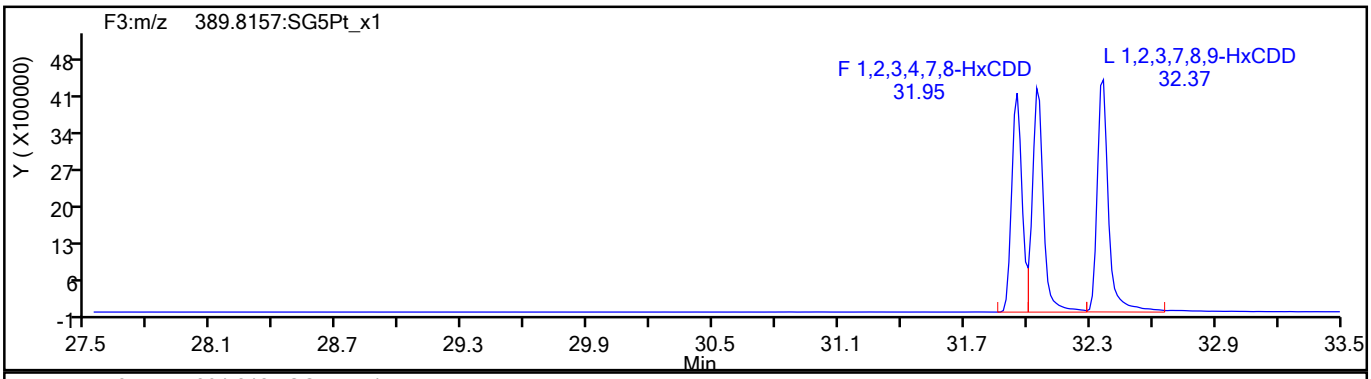

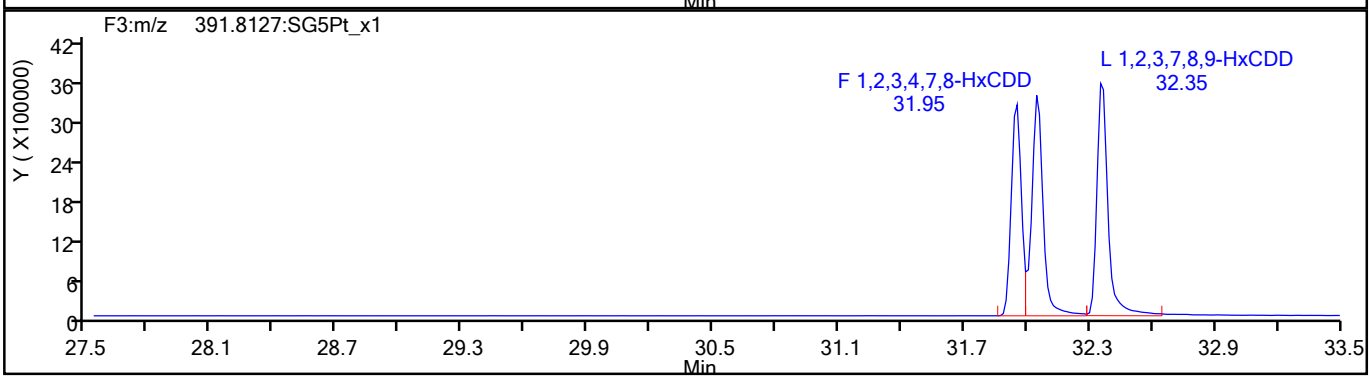

HxCDD Standards

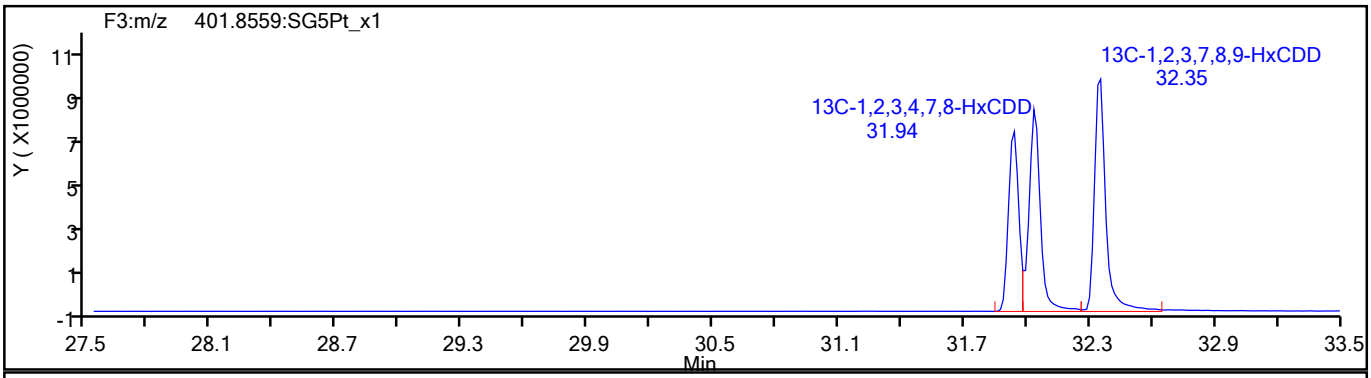

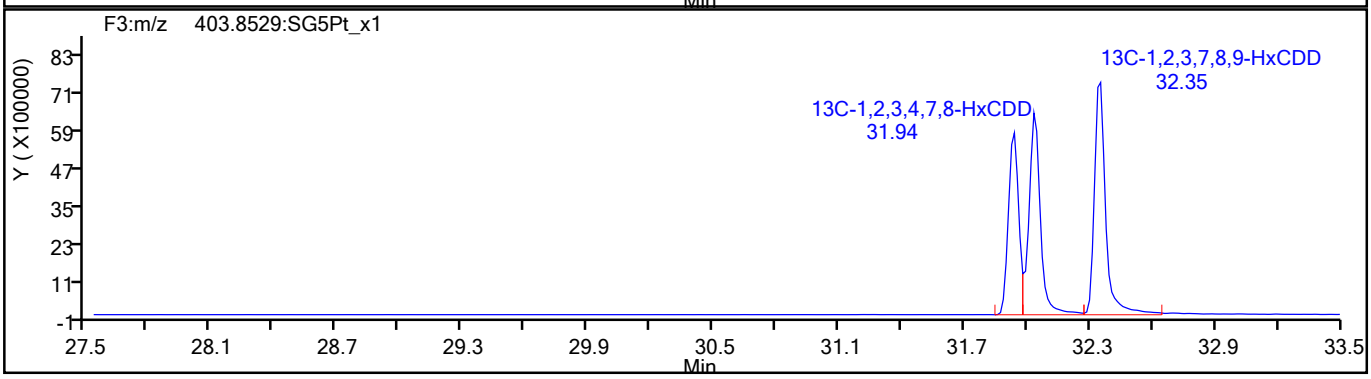

793856

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

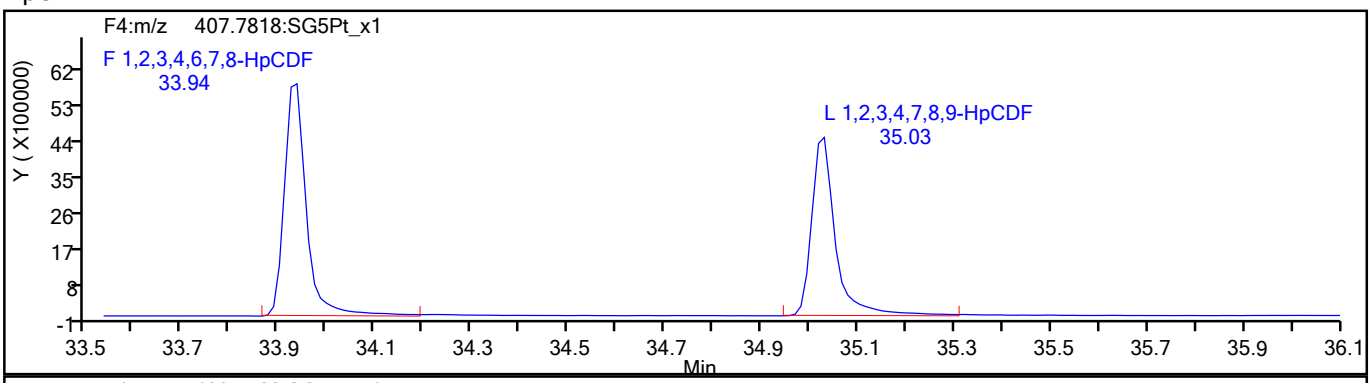

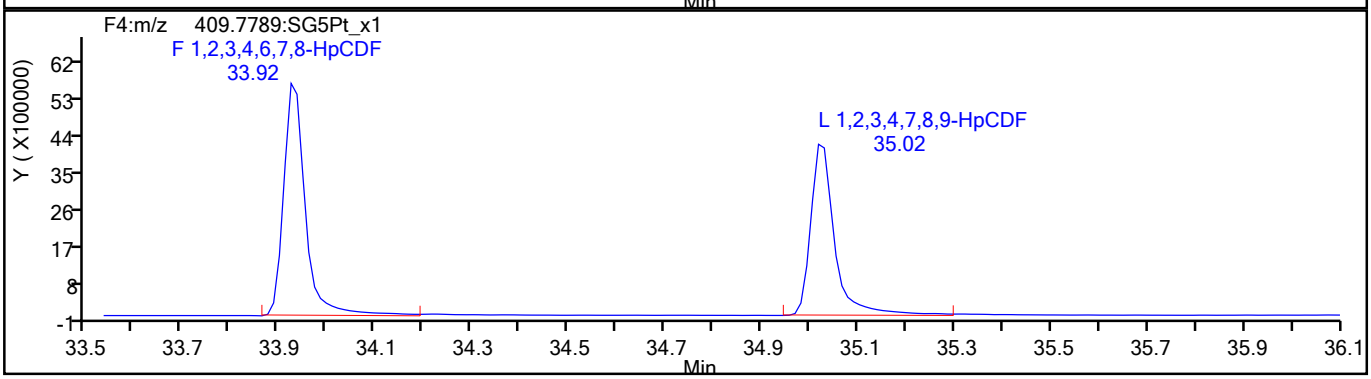

HpCDF Standards

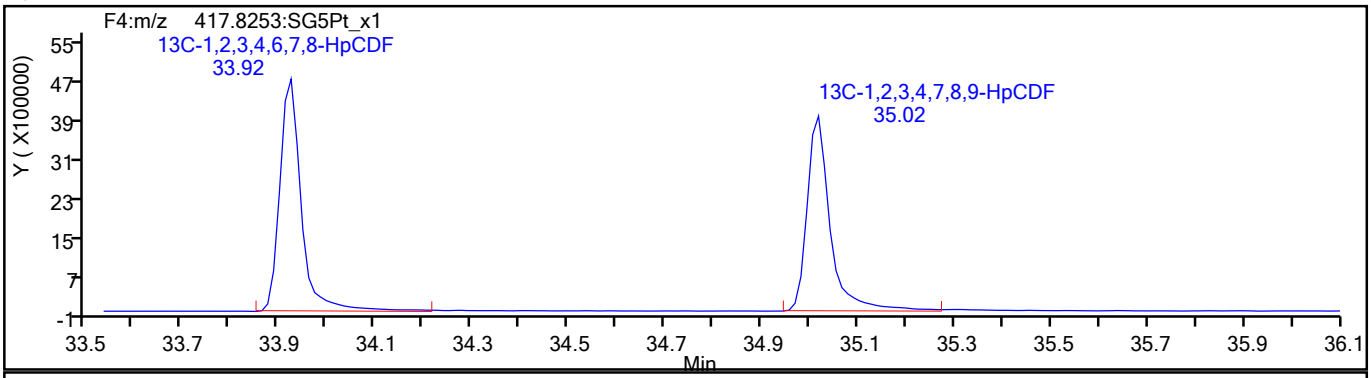

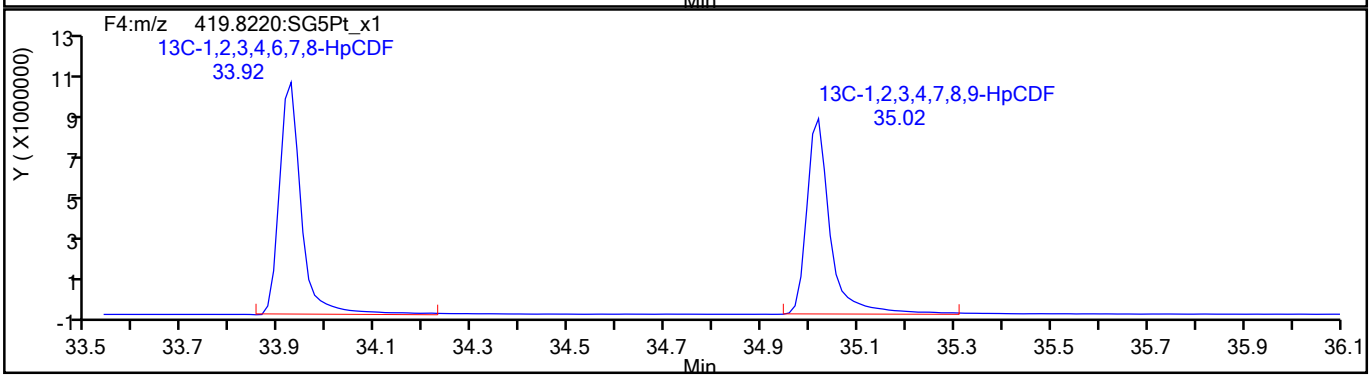

793857

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

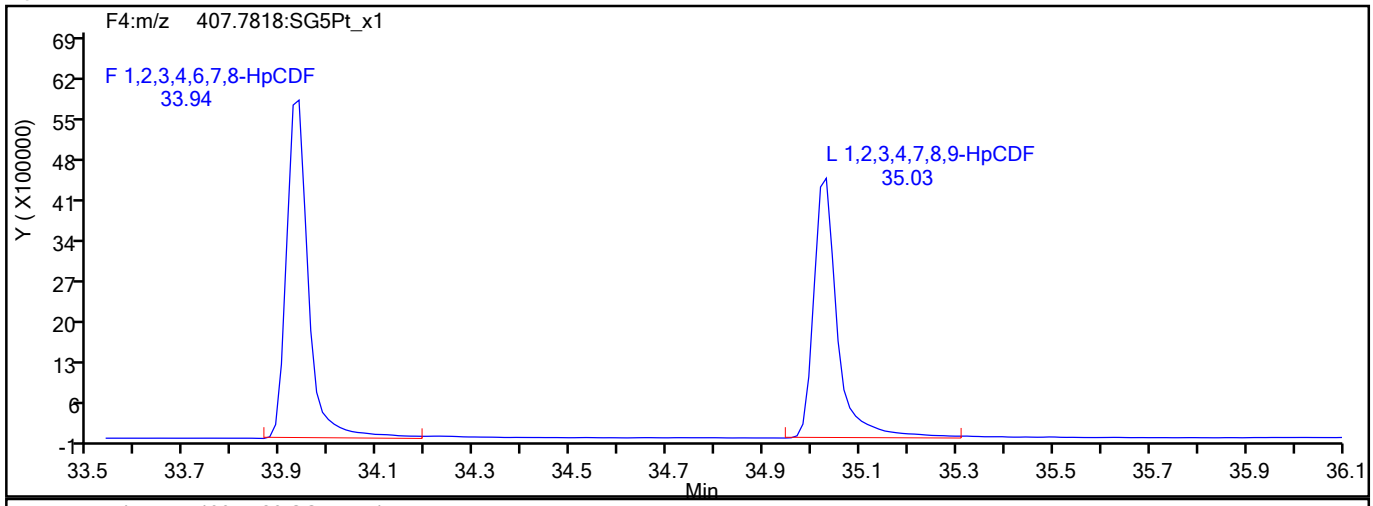

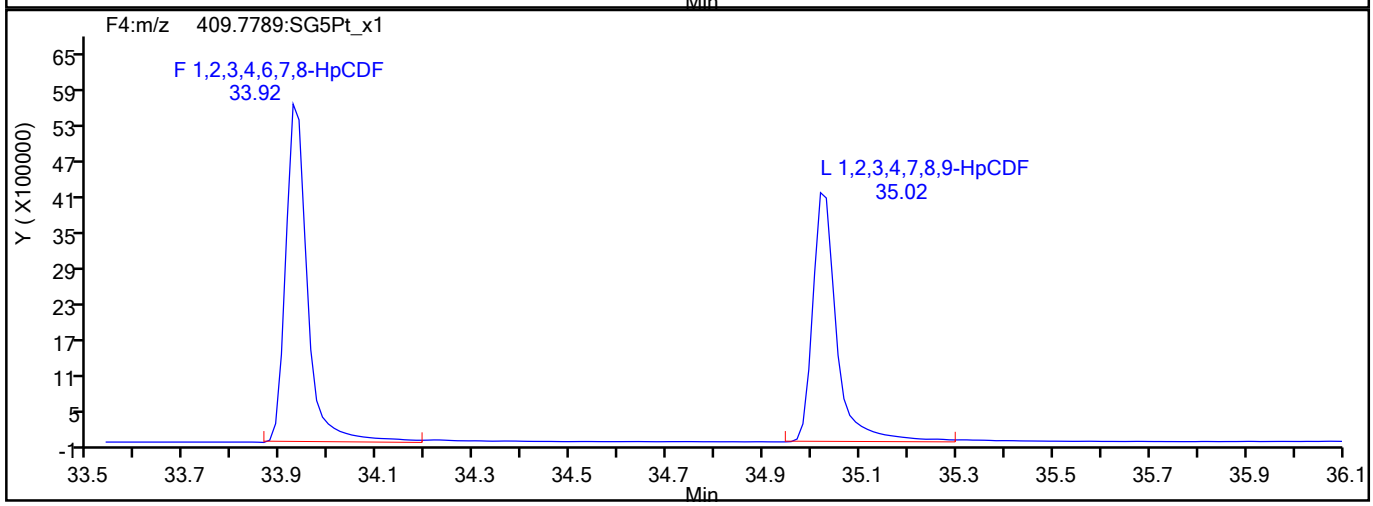

HpCDF Interference Mass

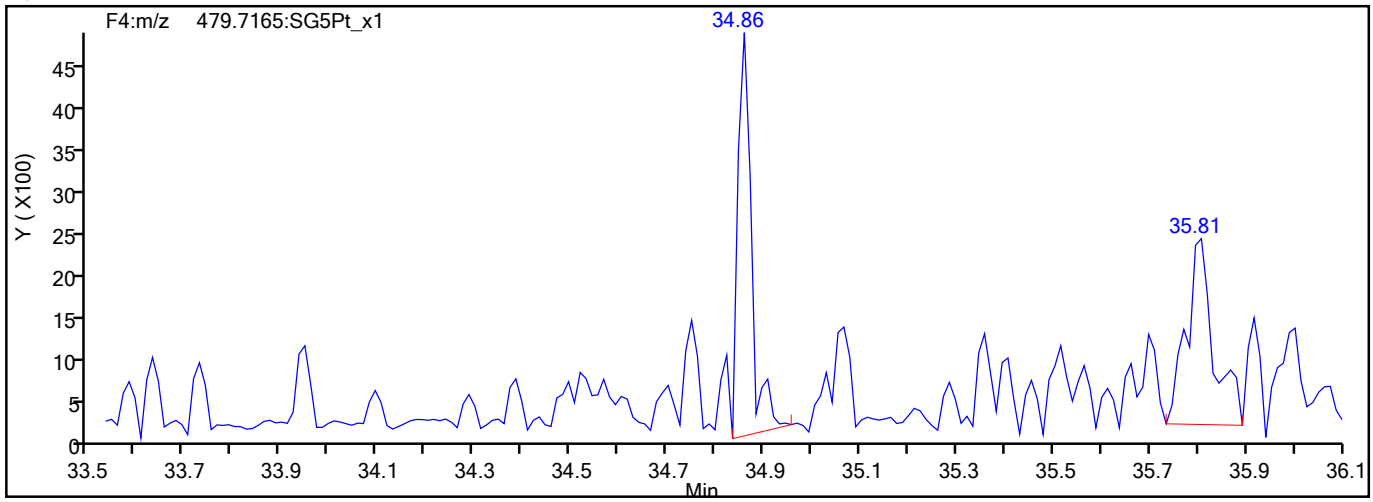

793858

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

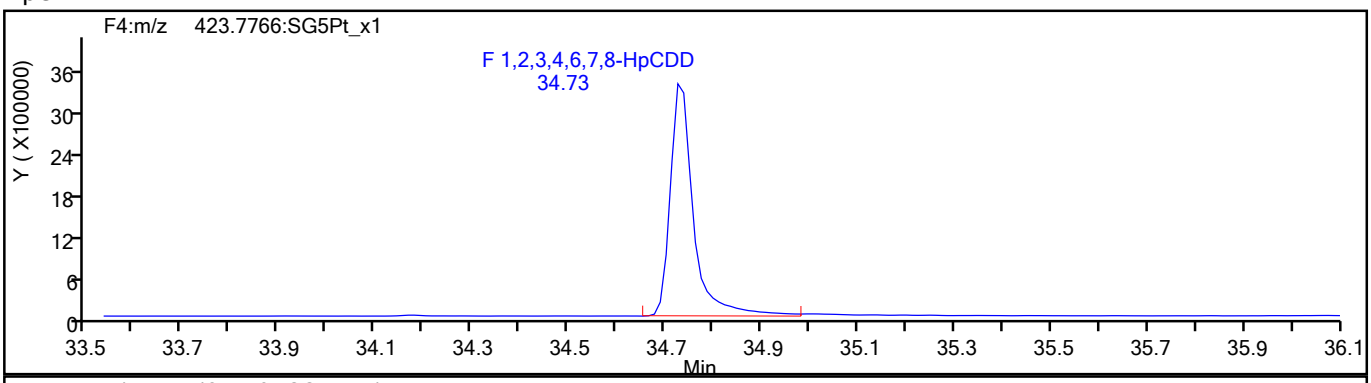

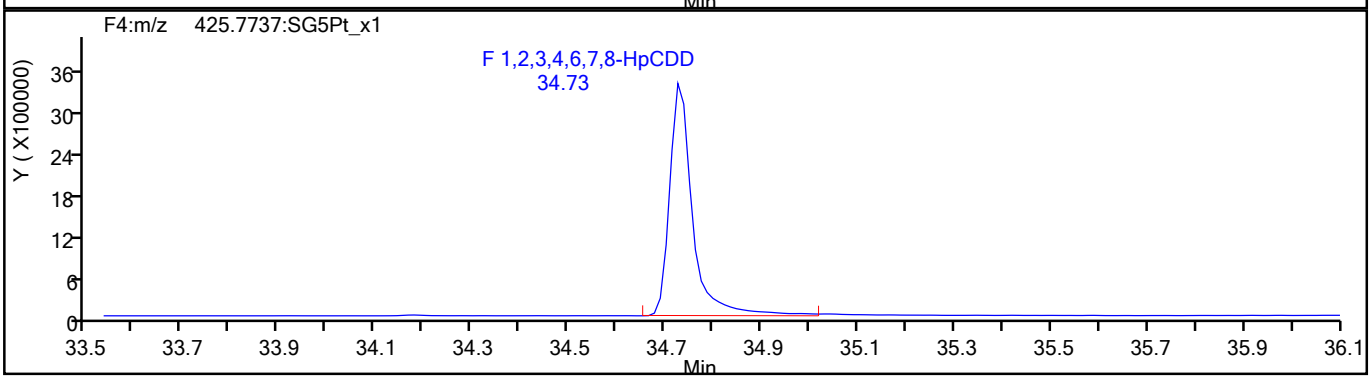

HpCDD Standards

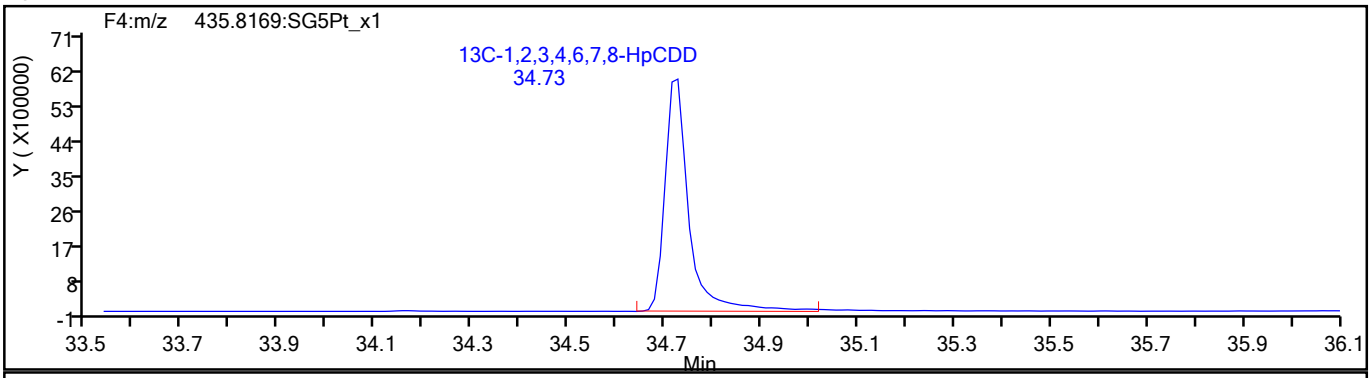

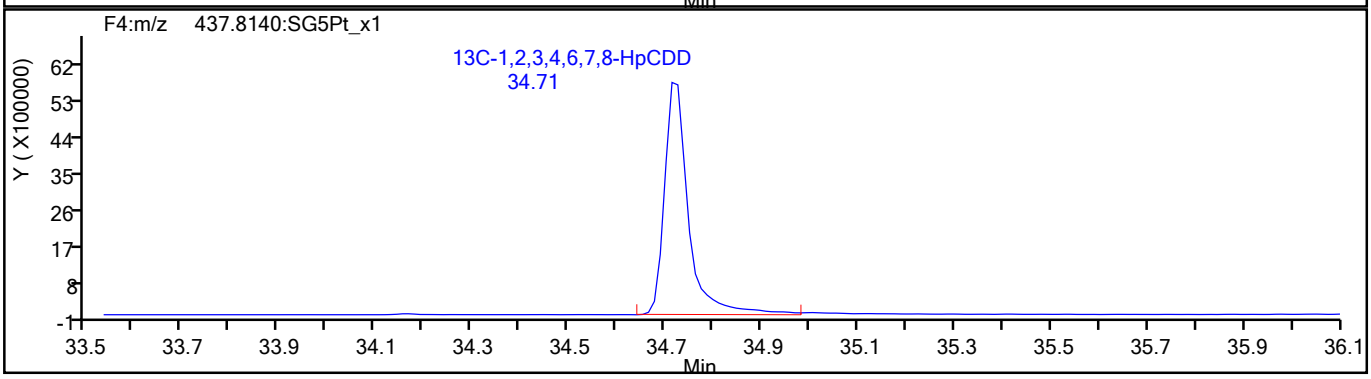

793859

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

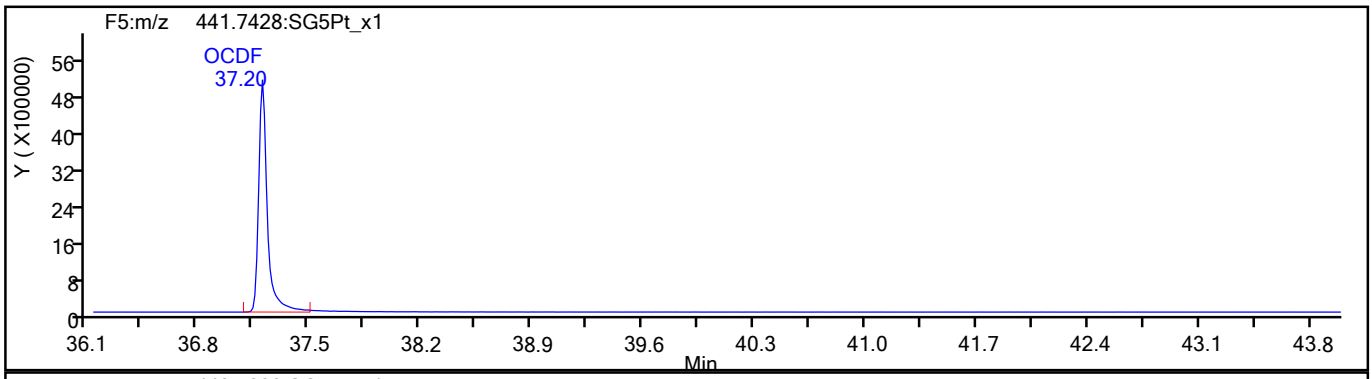

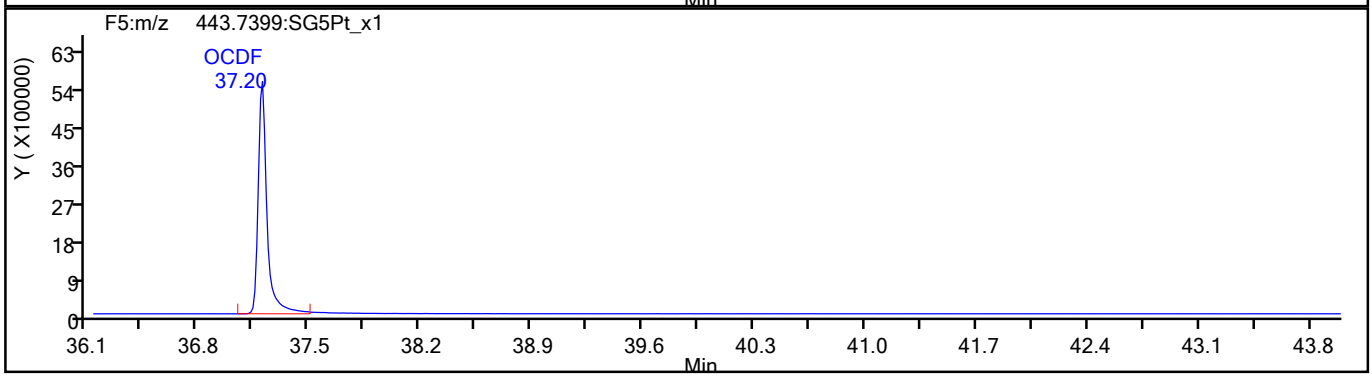

OCDF Standards

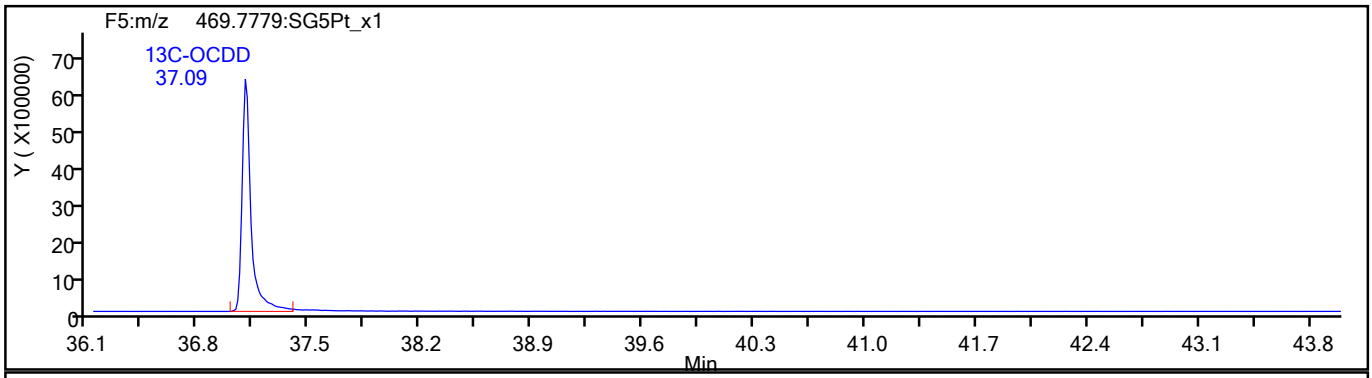

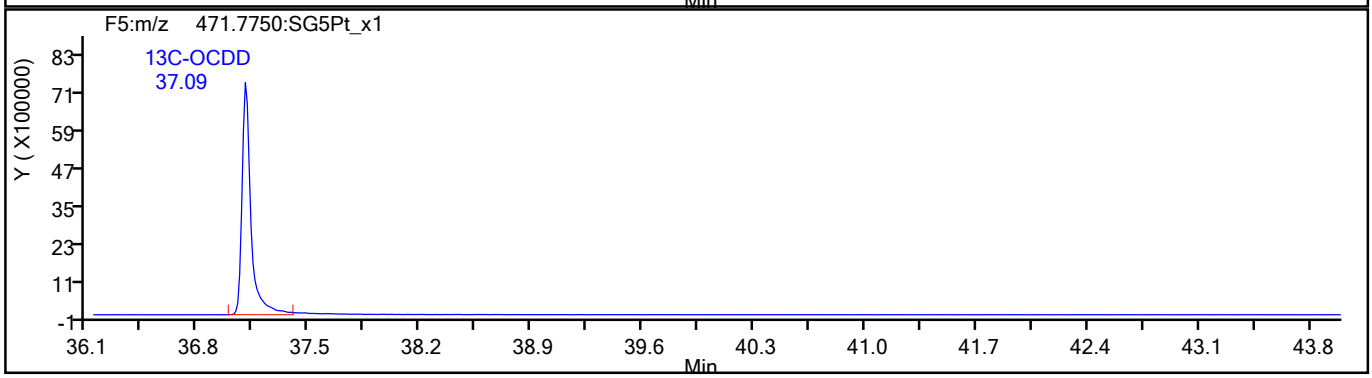

793860

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

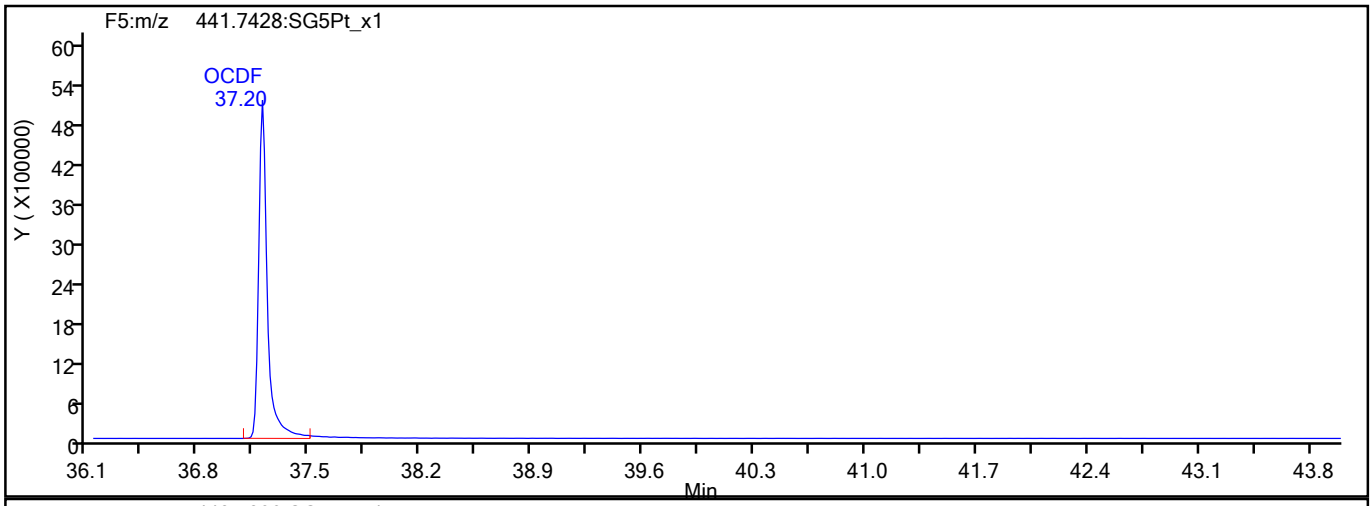

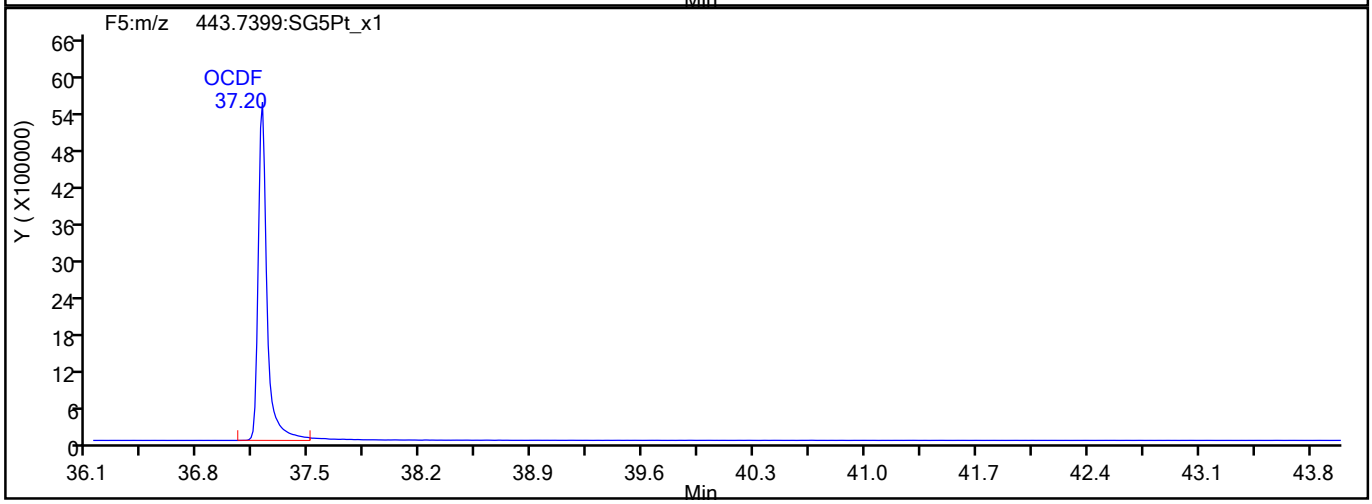

OCDF Interference Mass

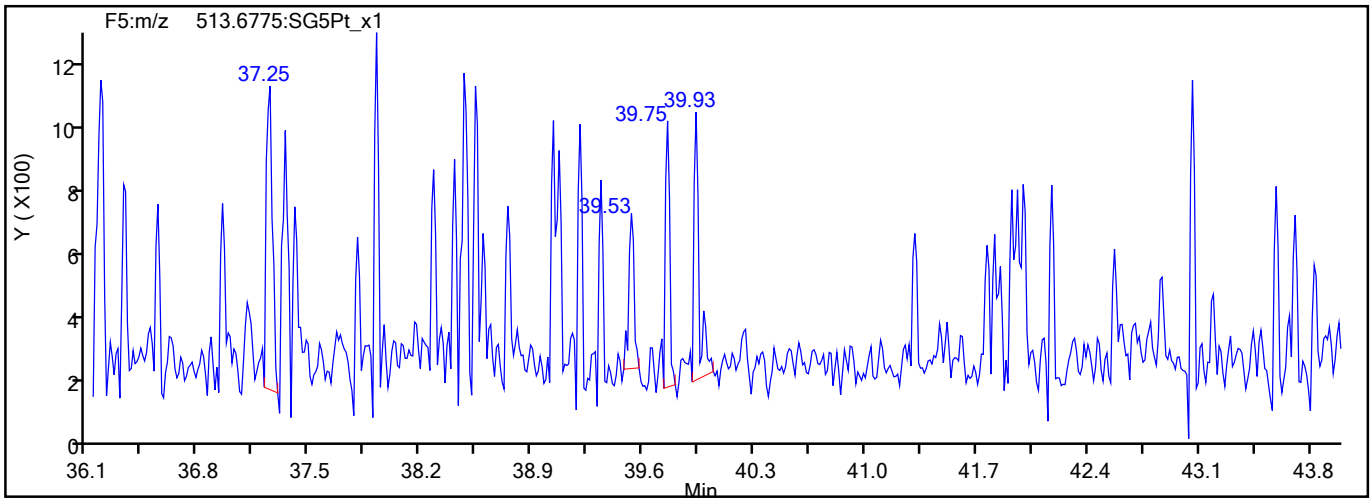

793861

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

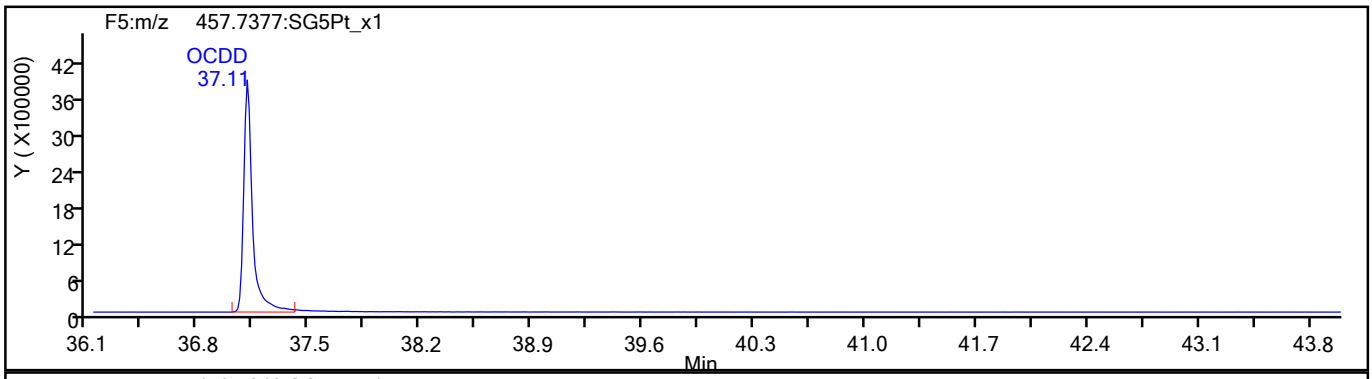

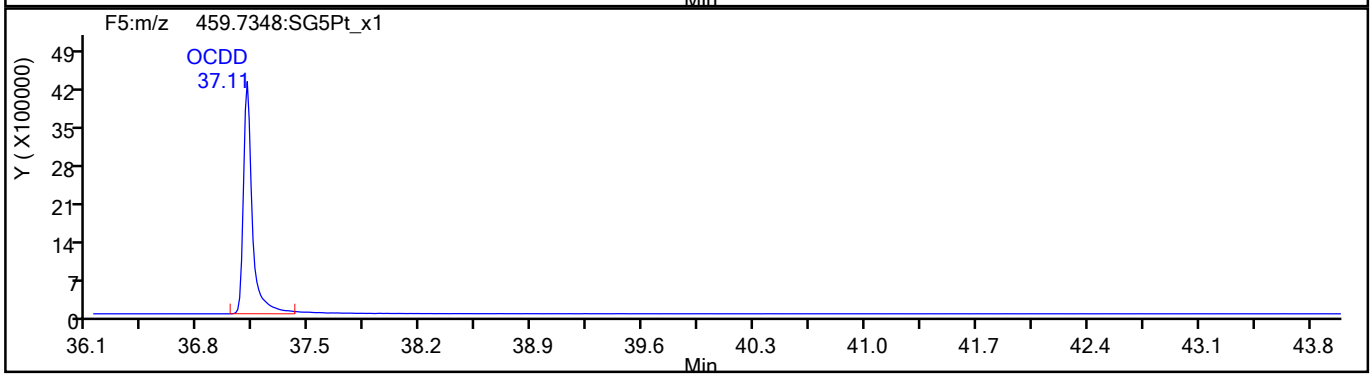

OCDD Standards

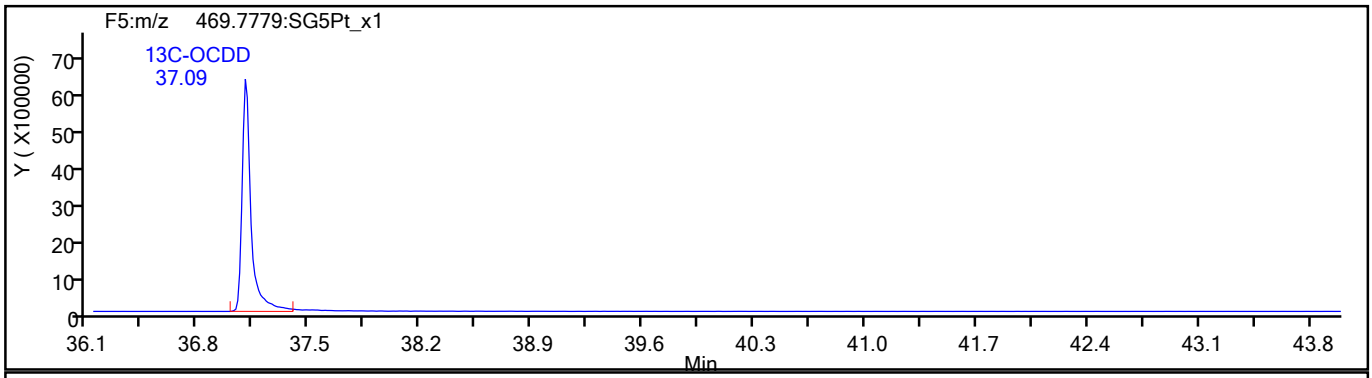

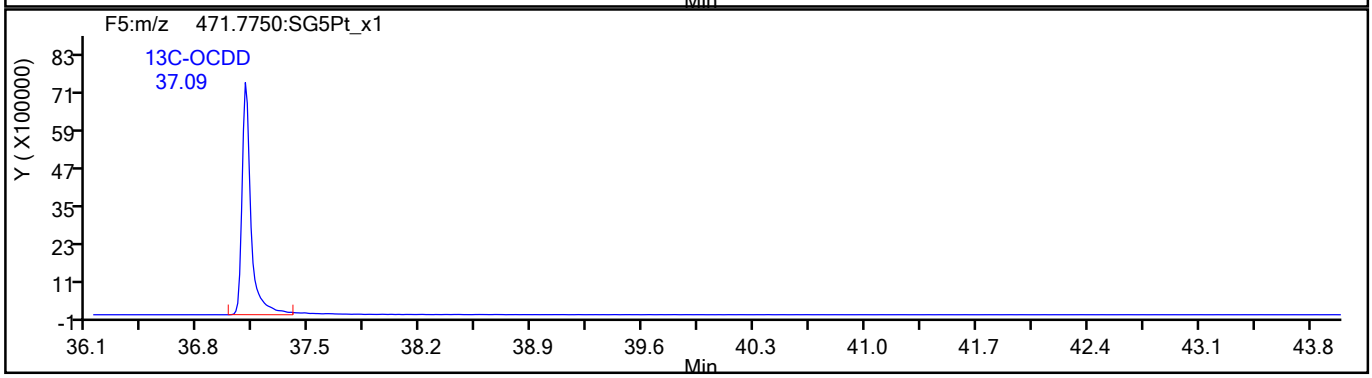

793862

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

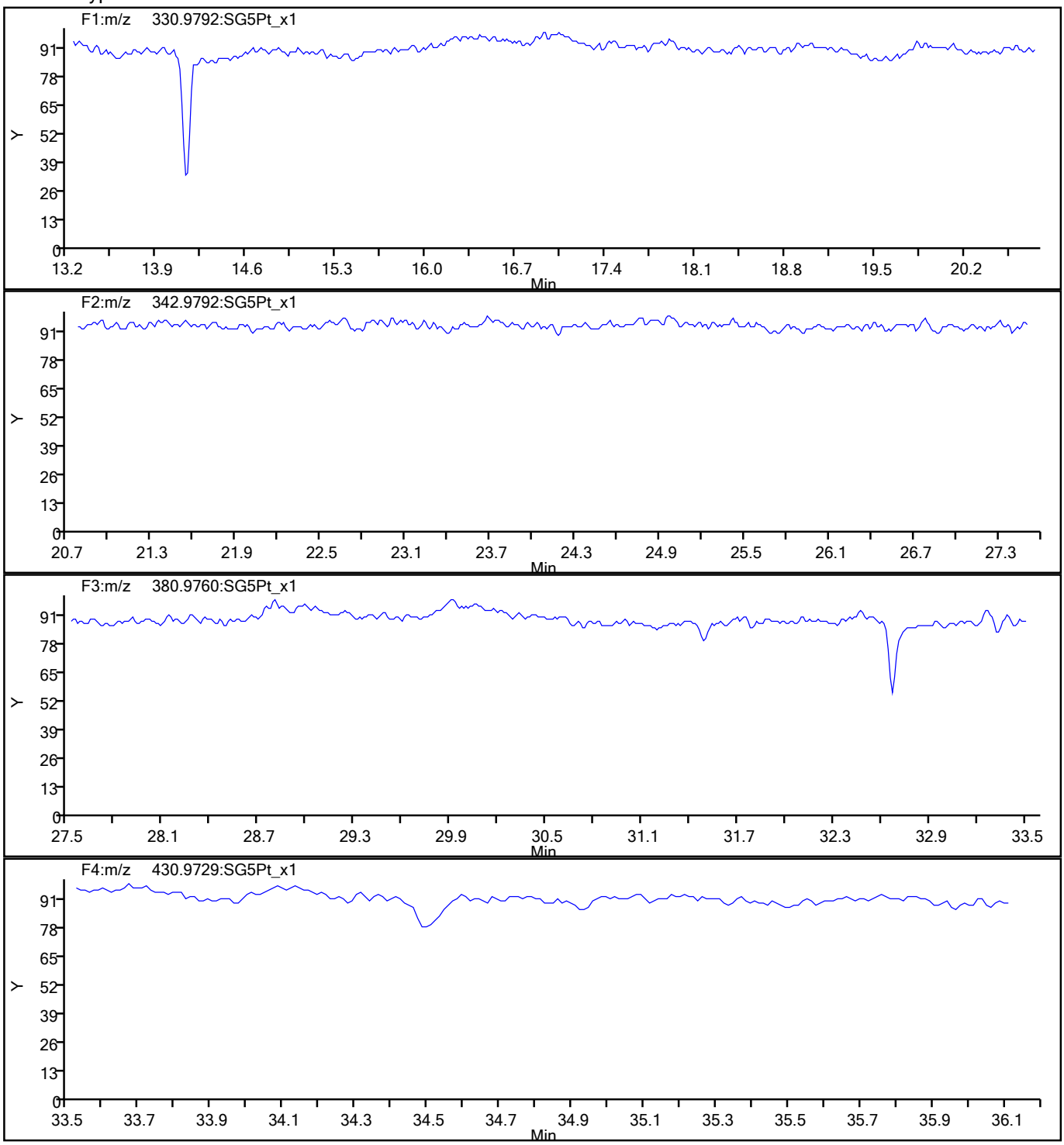

793863

Report Date: 27-Jul-2021 15:17:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_5.d		
Injection Date:	26-Jul-2021 12:21:52	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	5
Column Type:	DB-5	Column Dia:	0.32 mm

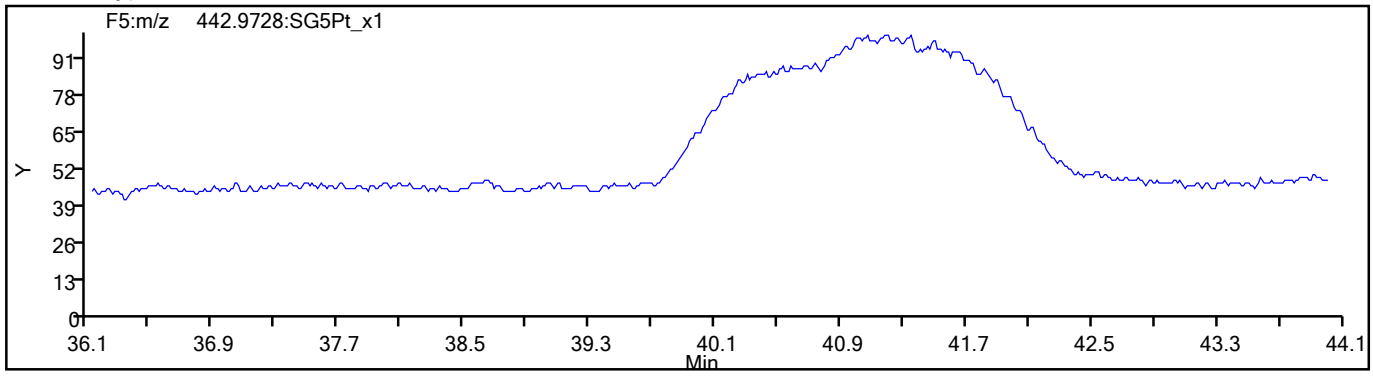

793864

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	62046988	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	100332269	0.78	1.6249	99.5	99.5	0.1367	0.1367	99.52	
2,3,7,8-TCDF	17.628	44524782	0.76	1.0239	43.3	43.3	0.0503	0.0503	108	
S Total TCDF					43.3	43.3	0.0503	0.0503		
D 13C-2,3,7,8-TCDD	18.338	55471422	0.81	0.8993	99.4	99.4	0.1780	0.1780	99.41	
$ 37Cl4-2,3,7,8-TCDD	18.354	29474361		1.1071	42.9	42.9	0.0363	0.0363	107	
2,3,7,8-TCDD	18.354	29808948	0.78	1.2541	42.8	42.8	0.0471	0.0471	107	
S Total TCDD					42.8	42.8	0.0471	0.0471		
D 13C-1,2,3,7,8-PeCDF	22.762	75205597	1.60	1.2101	100.2	100.2	0.2087	0.2087	100	
1,2,3,7,8-PeCDF	22.776	171023920	1.60	1.0611	214.3	214.3	0.5904	0.5904	107	
D 13C-2,3,4,7,8-PeCDF	24.126	75259591	1.60	1.2395	97.9	97.9	0.2038	0.2038	97.86	
2,3,4,7,8-PeCDF	24.153	166805723	1.58	1.0184	217.6	217.6	0.6563	0.6563	109	
S Total PeCDF					431.9	431.9	0.6233	0.6233		
D 13C-1,2,3,7,8-PeCDD	24.862	46524396	1.64	0.7612	98.5	98.5	0.1093	0.1093	98.50	
1,2,3,7,8-PeCDD	24.889	105236005	1.57	1.0484	215.7	215.7	0.2317	0.2317	108	
S Total PeCDD					215.7	215.7	0.2317	0.2317		
D 13C-1,2,3,4,7,8-HxCDF	30.835	64951889	0.52	1.0837	95.7	95.7	0.4366	0.4366	95.70	
1,2,3,4,7,8-HxCDF	30.862	155057762	1.22	1.0851	220.0	220.0	1.165	1.165	110	
D 13C-1,2,3,6,7,8-HxCDF	31.008	70459920	0.52	1.1279	99.7	99.7	0.4194	0.4194	99.75	
1,2,3,6,7,8-HxCDF	31.022	168618976	1.23	1.1260	212.5	212.5	1.081	1.081	106	
D 13C-2,3,4,6,7,8-HxCDF	31.754	66145684	0.53	1.0637	99.3	99.3	0.4448	0.4448	99.29	
2,3,4,6,7,8-HxCDF	31.780	164241378	1.21	1.1675	212.7	212.7	0.8912	0.8912	106	
D 13C-1,2,3,7,8,9-HxCDF	32.526	59636084	0.52	0.9676	98.4	98.4	0.4890	0.4890	98.41	
1,2,3,7,8,9-HxCDF	32.539	148834491	1.23	1.1664	214.0	214.0	0.9364	0.9364	107	
S Total HxCDF					859.2	859.2	1.018	1.018		
* 13C-1,2,3,7,8,9-HxCDD	32.339	62627787	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	44144841	1.25	0.7334	96.1	96.1	0.3745	0.3745	96.11	
1,2,3,4,7,8-HxCDD	31.953	103044220	1.27	1.0640	219.4	219.4	0.6488	0.6488	110	
D 13C-1,2,3,6,7,8-HxCDD	32.033	54392394	1.25	0.8802	98.7	98.7	0.3120	0.3120	98.67	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,6,7,8-HxCDD	32.047	118900298	1.28	1.0001	218.6	218.6	0.5965	0.5965	109	
1,2,3,7,8,9-HxCDD	32.353	122394998	1.26	1.1325	219.4	219.4	0.5651	0.5651	110	
S Total HxCDD					657.3	657.3	0.6034	0.6034		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	47752972	0.44	0.7730	98.6	98.6	1.001	1.001	98.64	
1,2,3,4,6,7,8-HpCDF	33.924	147892240	1.06	1.4413	214.9	214.9	2.024	2.024	107	
D 13C-1,2,3,4,7,8,9-HpCDF	35.017	42687625	0.44	0.7008	97.3	97.3	1.104	1.104	97.26	
1,2,3,4,7,8,9-HpCDF	35.017	123968724	1.06	1.3174	220.4	220.4	2.743	2.743	110	
S Total HpCDF					435.3	435.3	2.383	2.383		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	40442950	1.02	0.6472	99.8	99.8	0.5241	0.5241	99.77	
1,2,3,4,6,7,8-HpCDD	34.726	94435922	1.04	1.0943	213.4	213.4	0.9683	0.9683	107	
S Total HpCDD					213.4	213.4	0.9683	0.9683		
D 13C-OCDD	37.093	57303880	0.88	0.4472	204.6	204.6	0.2753	0.2753	102	
OCDF	37.201	181747068	0.91	1.4382	441.1	441.1	0.4159	0.4159	110	
OCDD	37.105	135570174	0.90	1.1070	427.4	427.4	0.4029	0.4029	107	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Jul-2021 13:06:50 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621C CS-5 HRDXNL5_00032
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:35 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 14:02:52

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		27754917	7076779	4201	10502	1685		
333.9339	18.142	18.142	0		34292071	8691565	5896	14740	1474	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	43967601	10754823	8470	21175	1270		
317.9389	17.613	17.616	0	0.971	56364668	13840834	5538	13845	2499	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	19278962	4714580	2218	5545	2126		
305.8987	17.628	17.631	0	1.001	25245820	6261705	2854	7135	2194	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24807018	5848000	4201	10502	1392		
333.9339	18.338	18.338	0	1.011	30664404	7186127	5896	14740	1219	0.81(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	29474361	7040079	2537	6342	2775		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	13088265	3099418	1571	3927	1973		
321.8936	18.354	18.357	0	1.001	16720683	3961925	1508	3770	2627	0.78(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.762	22.754	0	1.255	46265218	8069932	9479	23697	851		
353.8970	22.749	22.754	0	1.254	28940379	5072009	6452	16130	786	1.60(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	105236981	18677381	20013	50032	933		
341.8567	22.776	22.779	0	1.001	65786939	11693027	12919	32297	905	1.60(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46298187	7561650	9479	23697	798		
353.8970	24.126	24.129	0	1.330	28961404	4756017	6452	16130	737	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	102234081	17002363	20013	50032	850		
341.8567	24.153	24.156	0	1.001	64571642	10773383	12919	32297	834	1.58(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28884955	4397104	3175	7937	1385		
369.8919	24.862	24.865	0	1.370	17639441	2717935	2071	5177	1312	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	64347111	9837651	3945	9862	2494		
357.8516	24.889	24.892	0	1.001	40888894	6265054	2969	7422	2110	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	22237957	4900100	10775	26937	455		
385.8610	30.835	30.838	0	0.953	42713932	9213265	21190	52975	435	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	85201859	18424877	39257	98142	469		
375.8178	30.849	30.857	0	1.000	69855903	15011303	32096	80240	468	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	23996455	5001651	10775	26937	464		
385.8610	31.008	31.003	0	0.959	46463465	9659865	21190	52975	456	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.022	31.022	0	1.000	92842545	20075526	39257	98142	511		
375.8178	31.022	31.022	0	1.000	75776431	16178695	32096	80240	504	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	22792396	5861290	10775	26937	544		
385.8610	31.754	31.756	0	0.982	43353288	11282982	21190	52975	532	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.780	31.772	0	1.001	89865159	23412461	39257	98142	596		
375.8178	31.767	31.772	0	1.000	74376219	19191516	32096	80240	598	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20506438	5659225	10775	26937	525		
385.8610	32.526	32.523	0	1.006	39129646	10674002	21190	52975	504	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	82057134	22664755	39257	98142	577		
375.8178	32.539	32.534	0	1.000	66777357	17875439	32096	80240	557	1.23(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		34509982	9306847	9505	23762	979		
403.8529	32.339	32.342	0		28117805	7584182	9052	22630	838	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	24560847	6976899	9505	23762	734		
403.8529	31.927	31.929	0	0.987	19583994	5667072	9052	22630	626	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.953	31.945	0	1.001	57595942	16510469	19316	48290	855		
391.8127	31.940	31.945	0	1.000	45448278	13107381	15598	38995	840	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	30198617	8138784	9505	23762	856		
403.8529	32.033	32.033	0	0.991	24193777	6493948	9052	22630	717	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	66690137	17959920	19316	48290	930		
391.8127	32.047	32.047	0	1.000	52210161	14135061	15598	38995	906	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	68169382	18483699	19316	48290	957		
391.8127	32.353	32.355	0	1.013	54225616	14872863	15598	38995	954	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14610497	4589210	16388	40970	280		
419.8220	33.912	33.914	0	1.049	33142475	10497182	35883	89707	293	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	75936953	24520194	90693	226732	270		
409.7789	33.924	33.926	0	1.000	71955287	23549459	85368	213420	276	1.06(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.017	35.010	0	1.083	12971814	3739945	16388	40970	228		
419.8220	35.017	35.010	0	1.083	29715811	8442322	35883	89707	235	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	63647403	18553677	90693	226732	205		
409.7789	35.017	35.020	0	1.000	60321321	17850429	85368	213420	209	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	20381379	6053926	11567	28917	523		
437.8140	34.714	34.716	0	1.073	20061571	5957434	11351	28377	525	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	48165795	14539111	26079	65197	558		
425.7737	34.726	34.726	0	1.000	46270127	14041663	24831	62077	565	1.04(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26901378	6693523	3896	9740	1718		
471.7750	37.093	37.094	0	1.147	30402502	7661603	4420	11050	1733	0.88(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	86562223	22814939	9244	23110	2468		
443.7399	37.201	37.199	0	1.003	95184845	24785143	7929	19822	3126	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	64116469	16176091	6061	15152	2669		
459.7348	37.105	37.106	0	1.000	71453705	17977820	6746	16865	2665	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

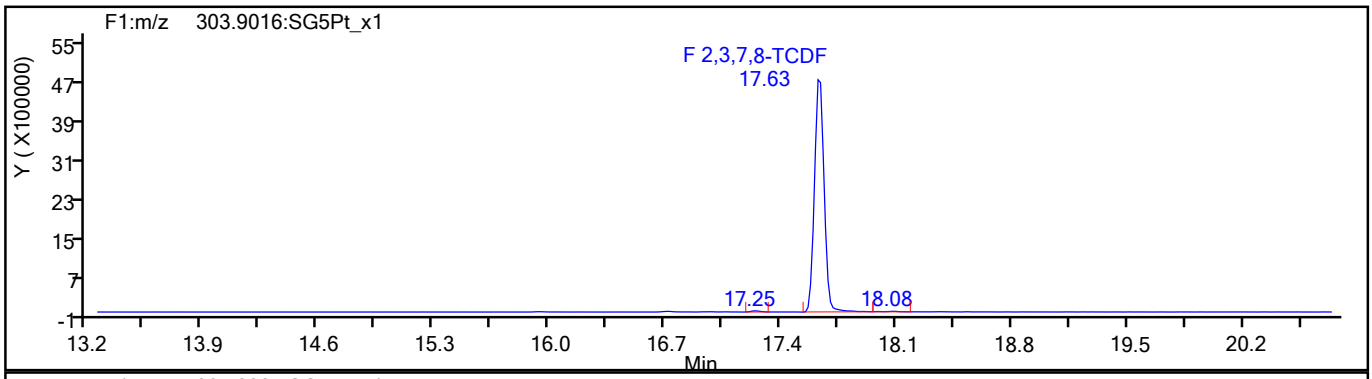

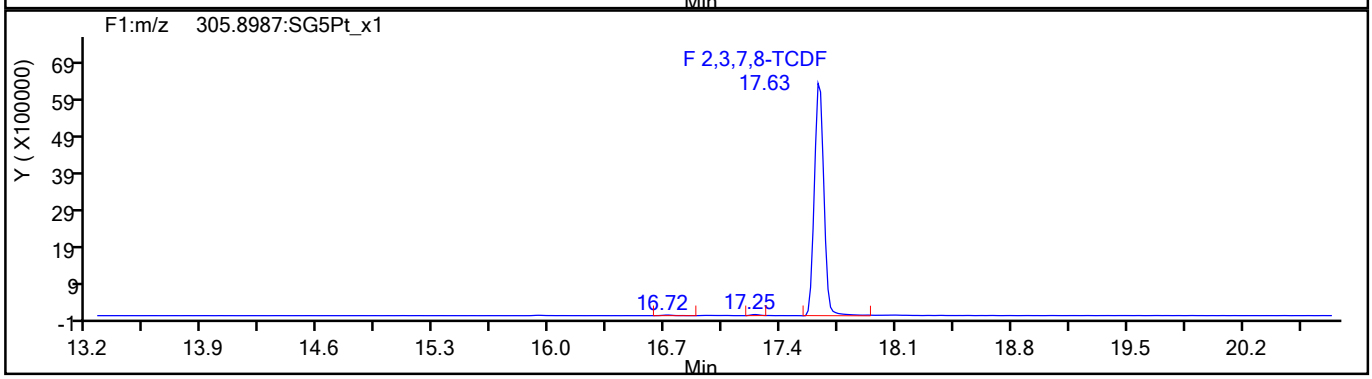

TCDF Standards

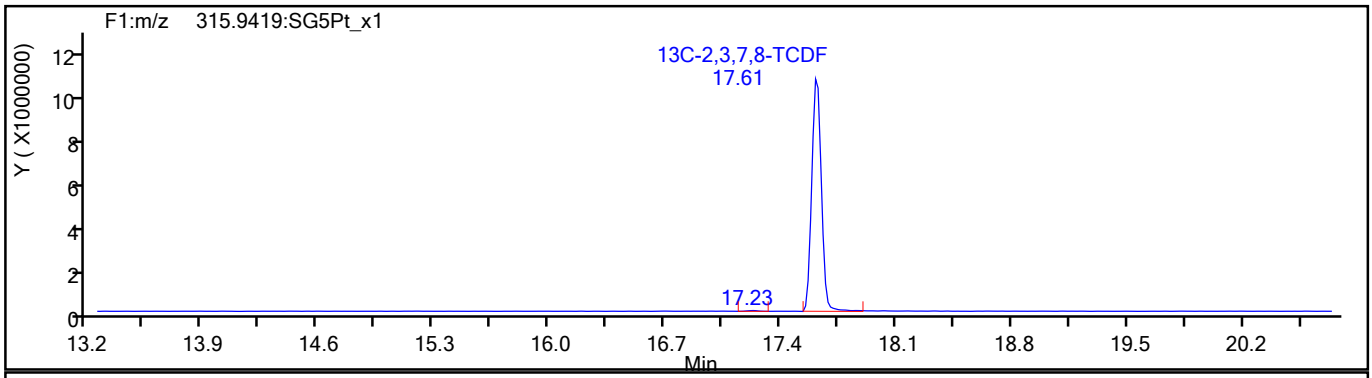

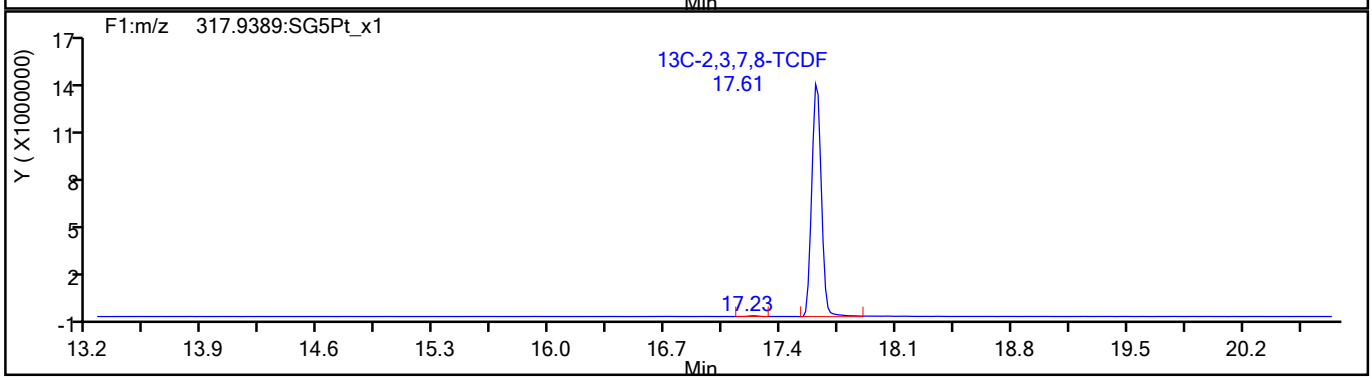

793870

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

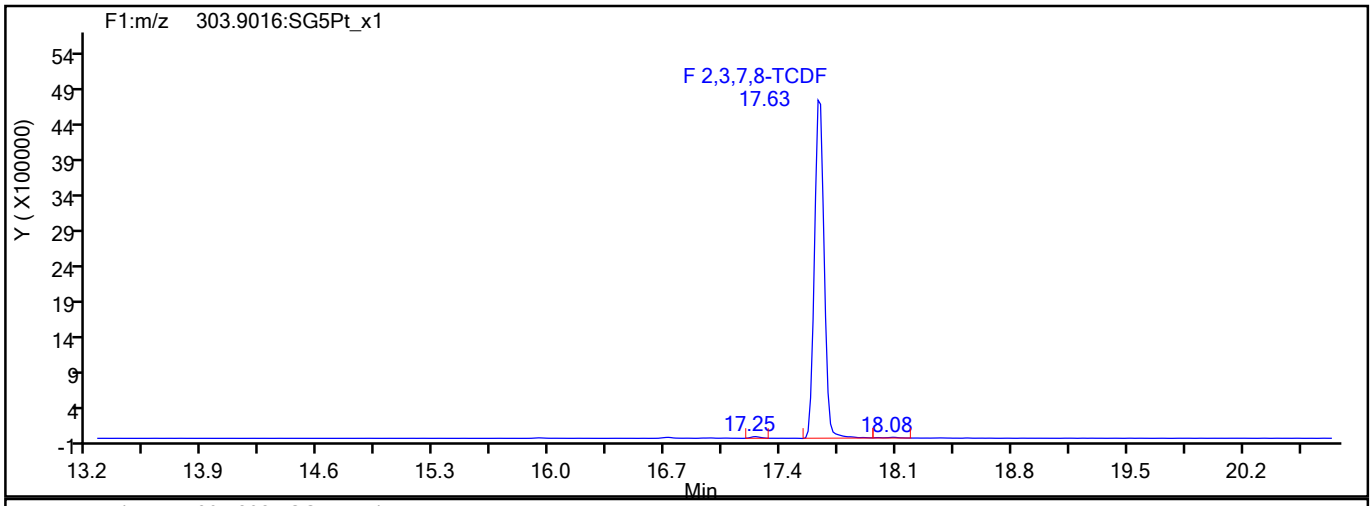

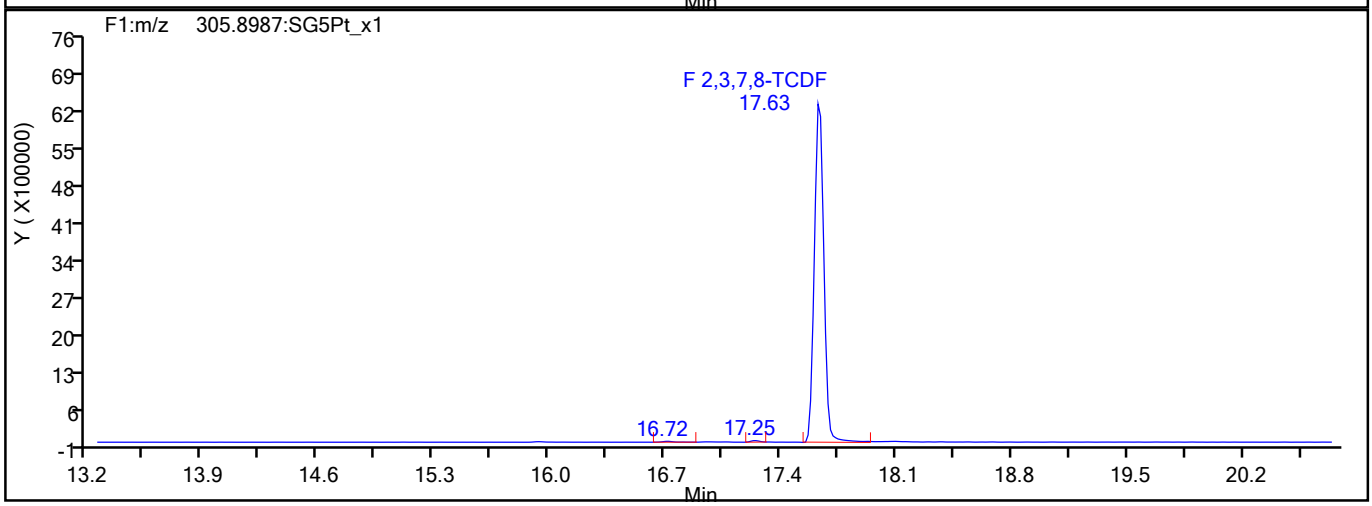

TCDF Interference Mass

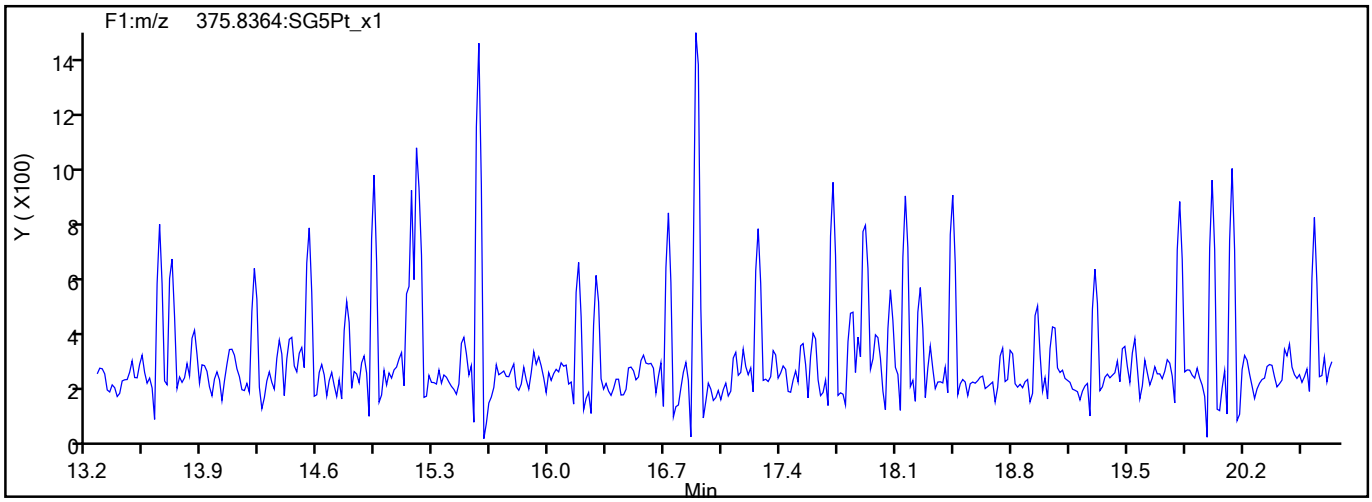

793871

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

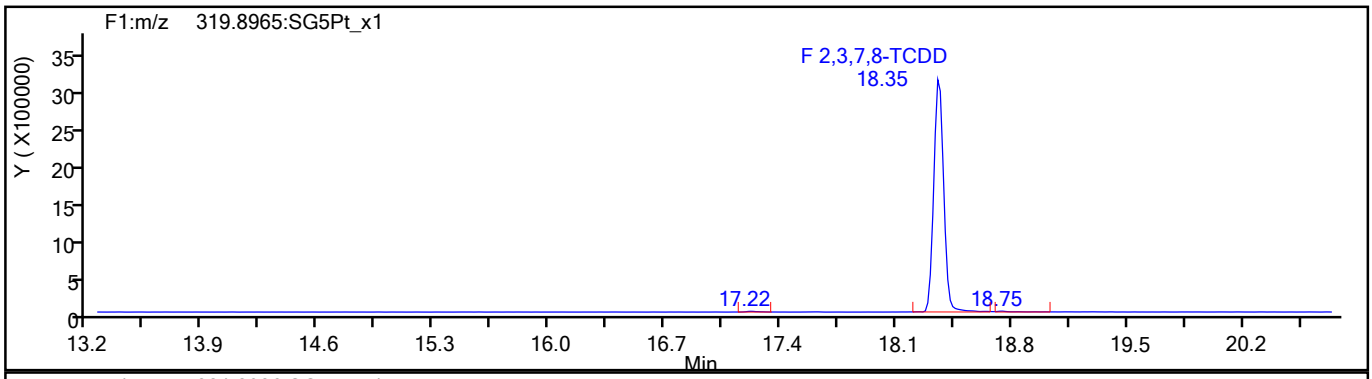

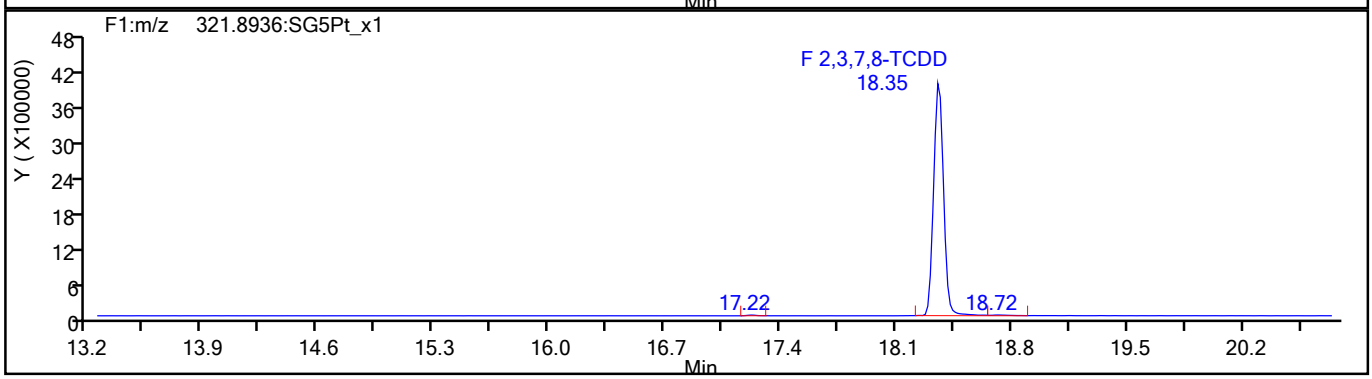

TCDD Standards

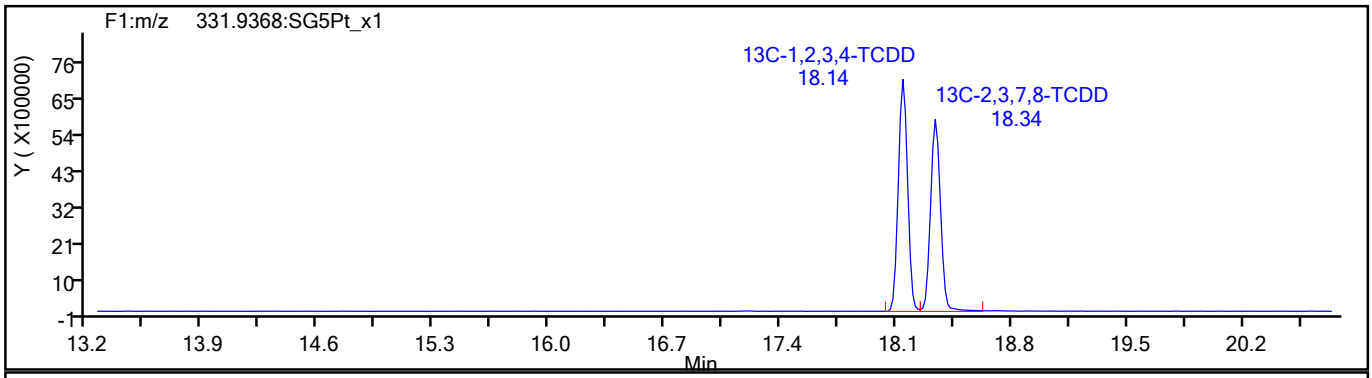

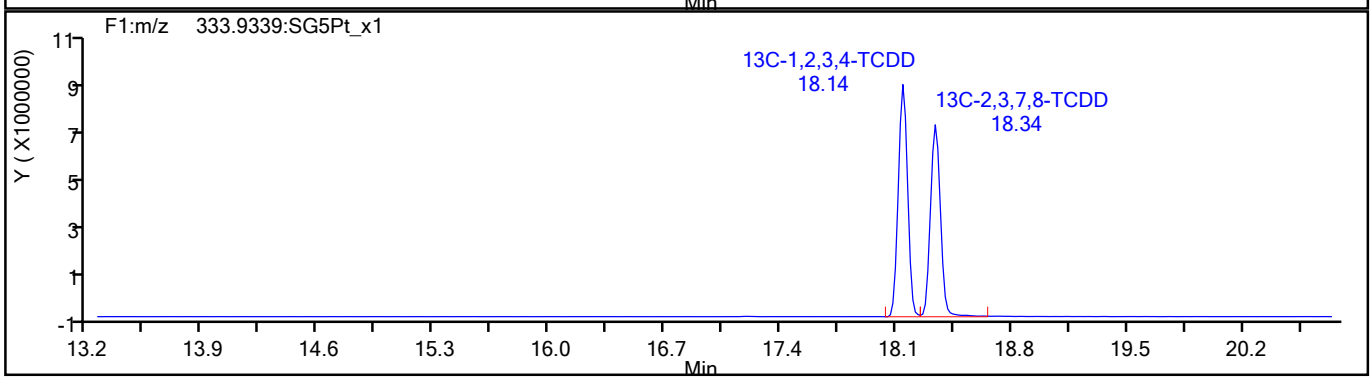

793872

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

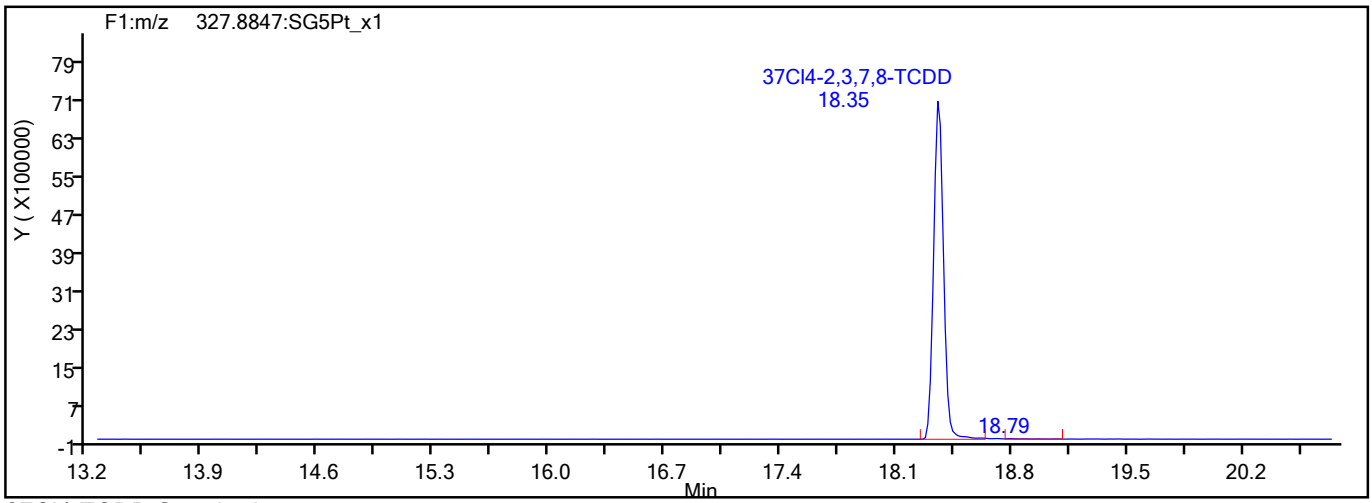

37Cl4-TCDD Standards

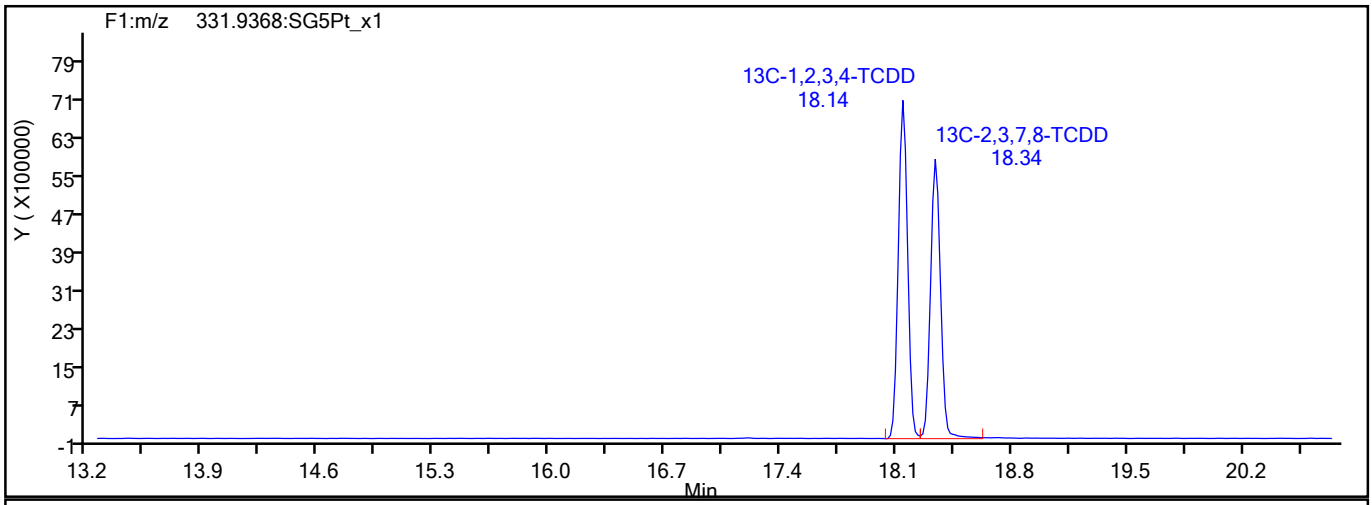

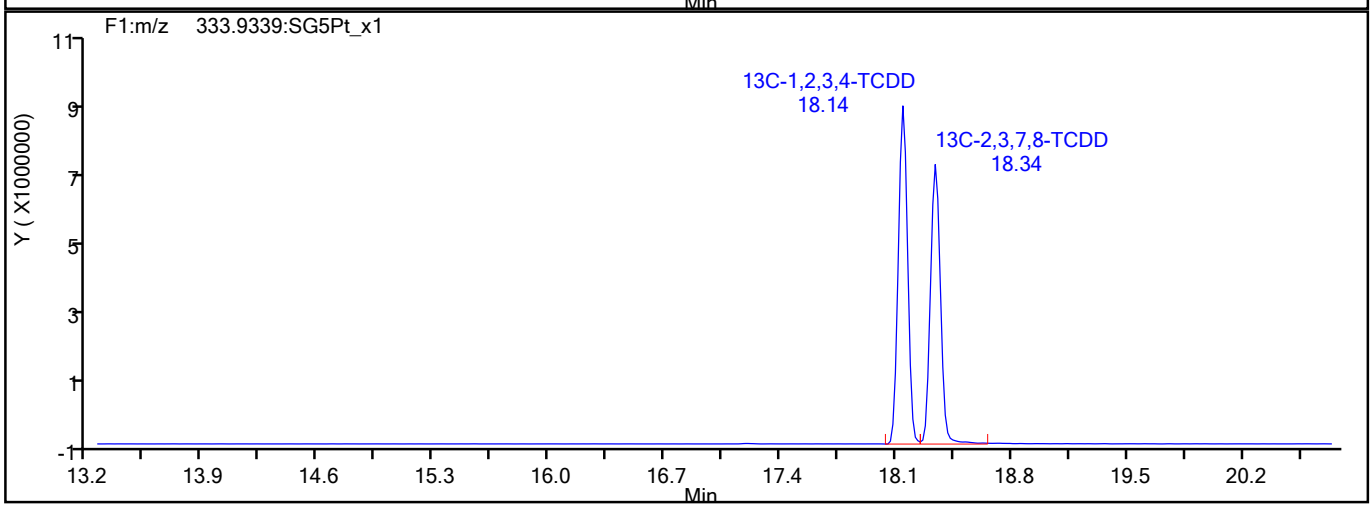

793873

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

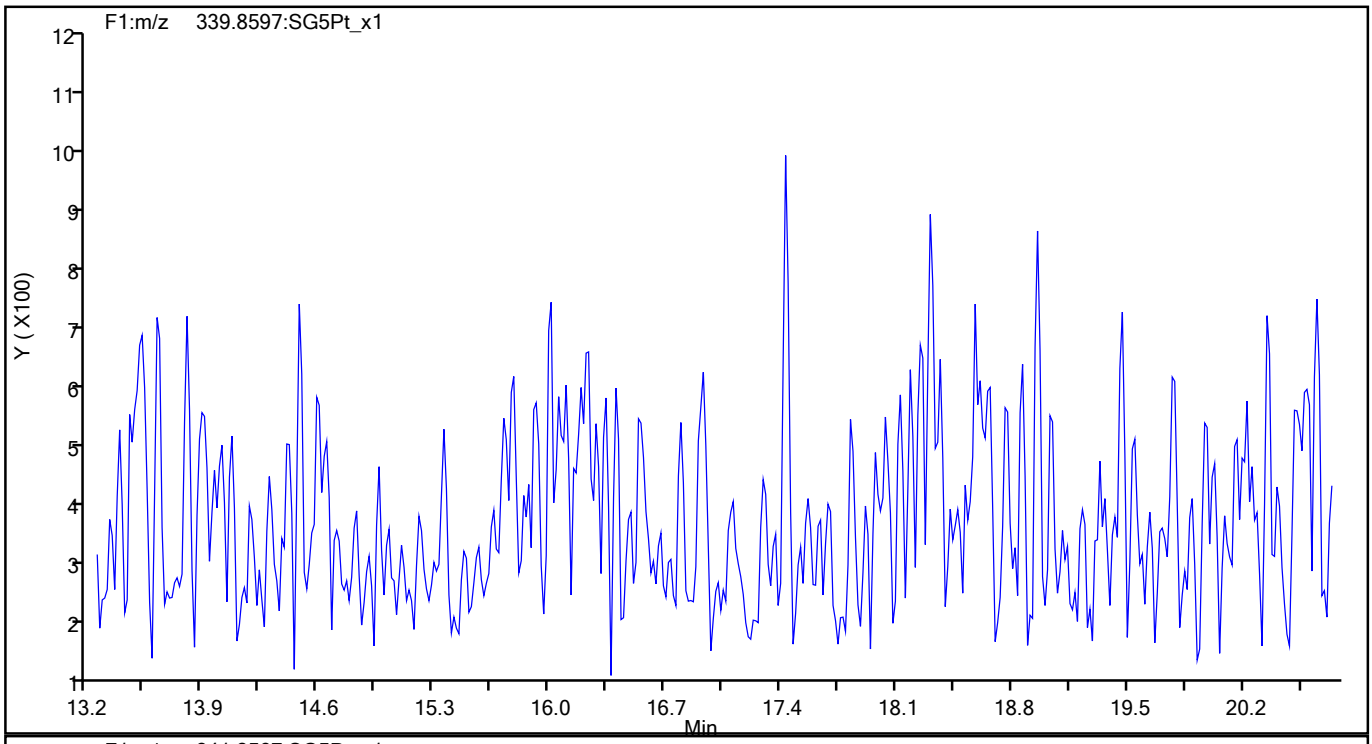

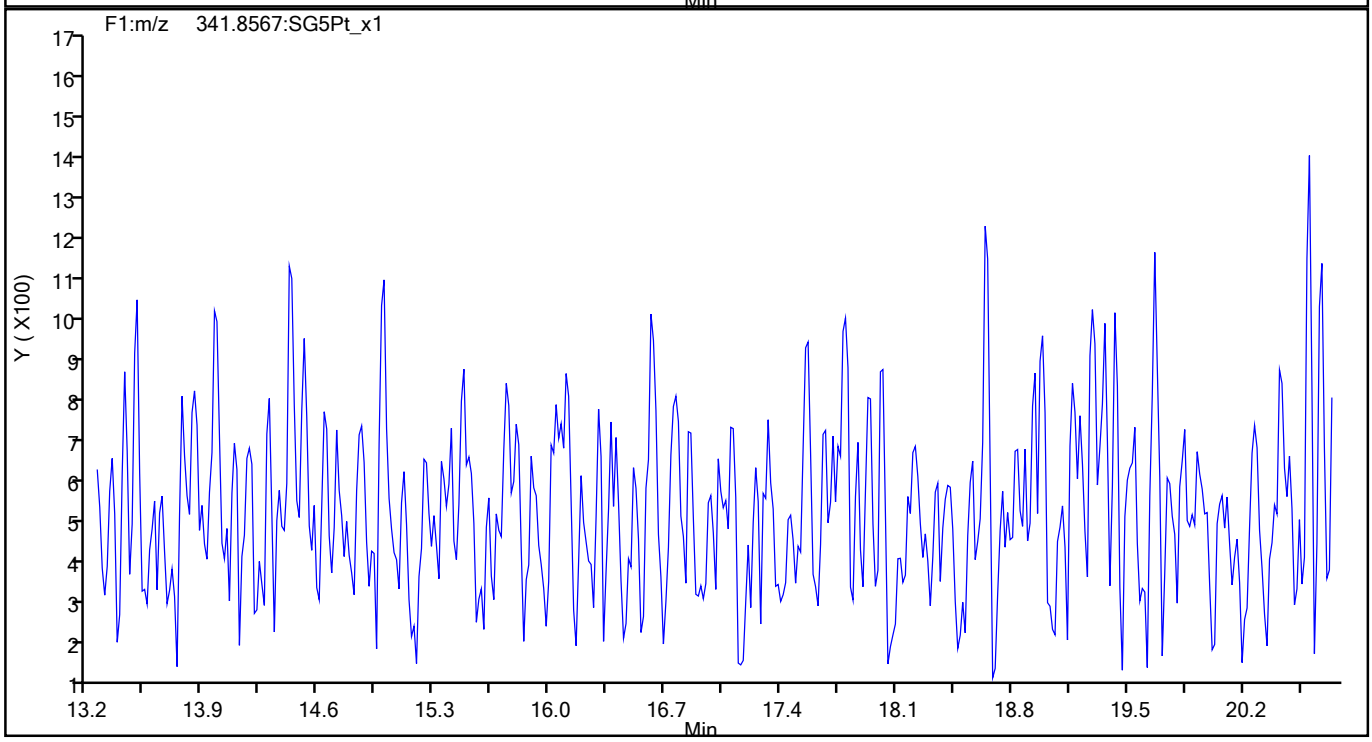

793874

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

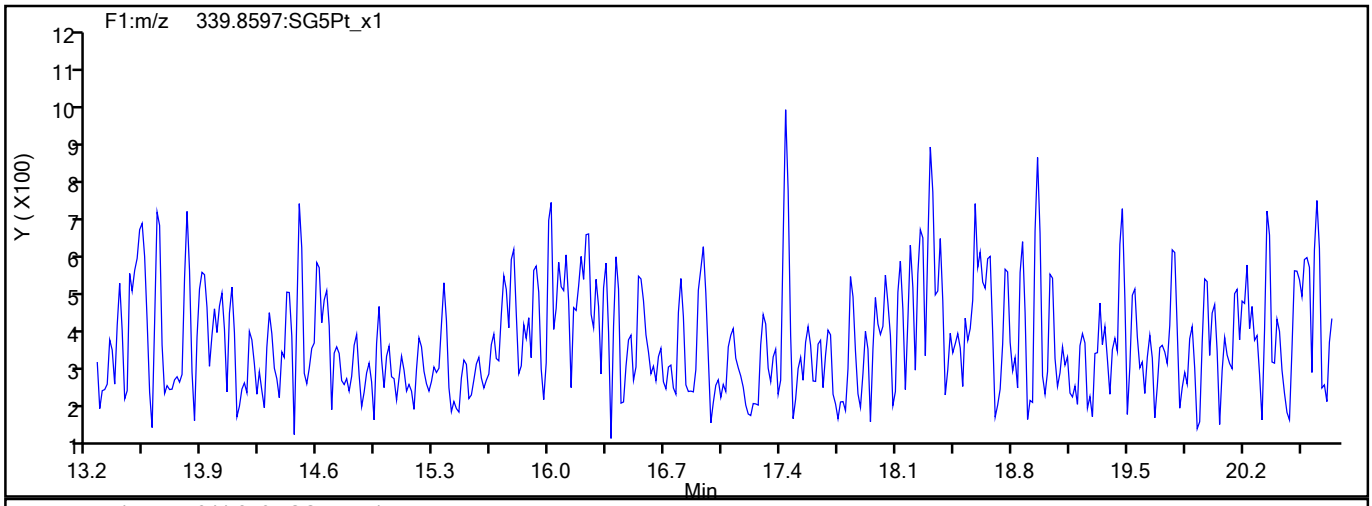

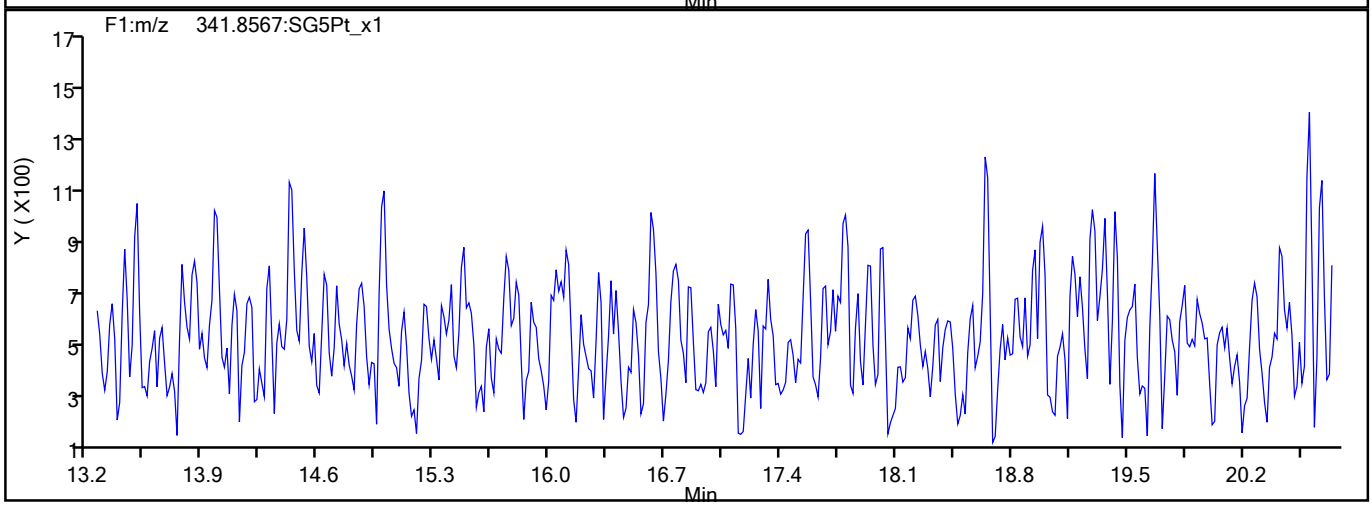

F1 PeCDFs Interference Mass

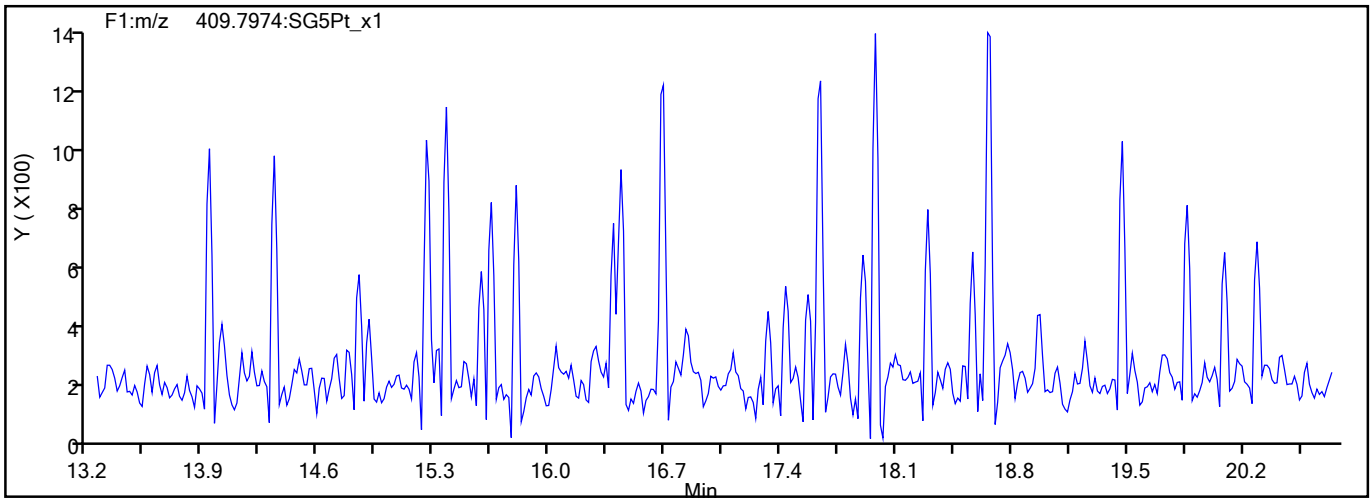

793875

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

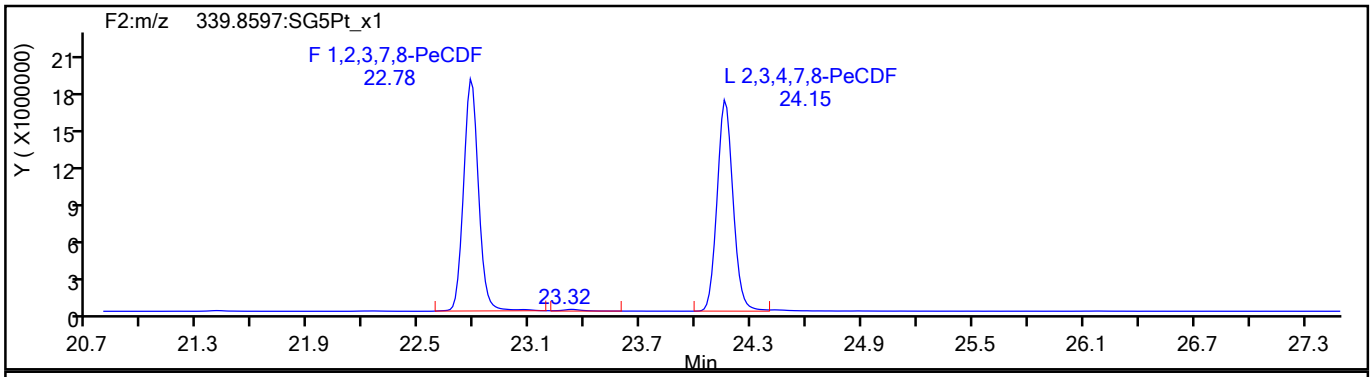

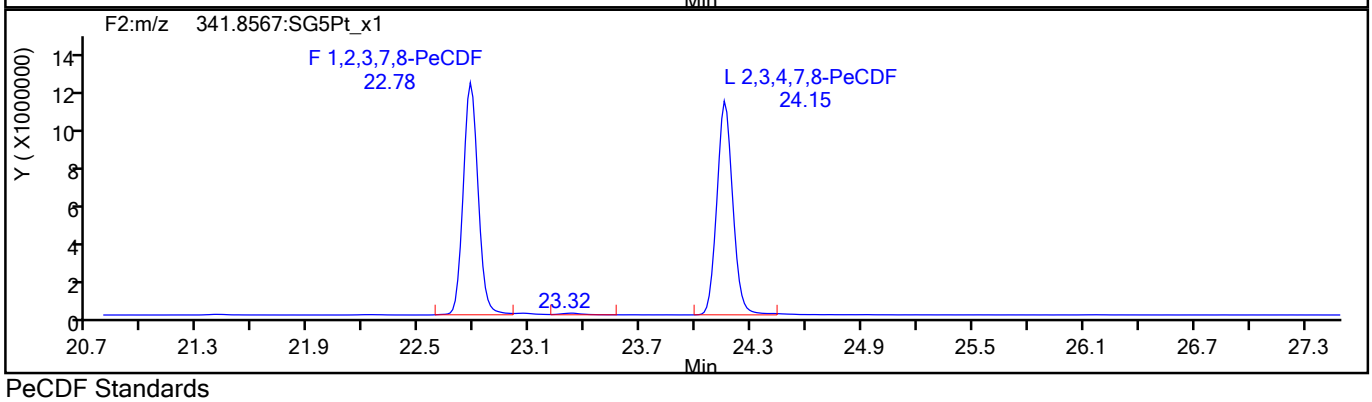

PeCDF Standards

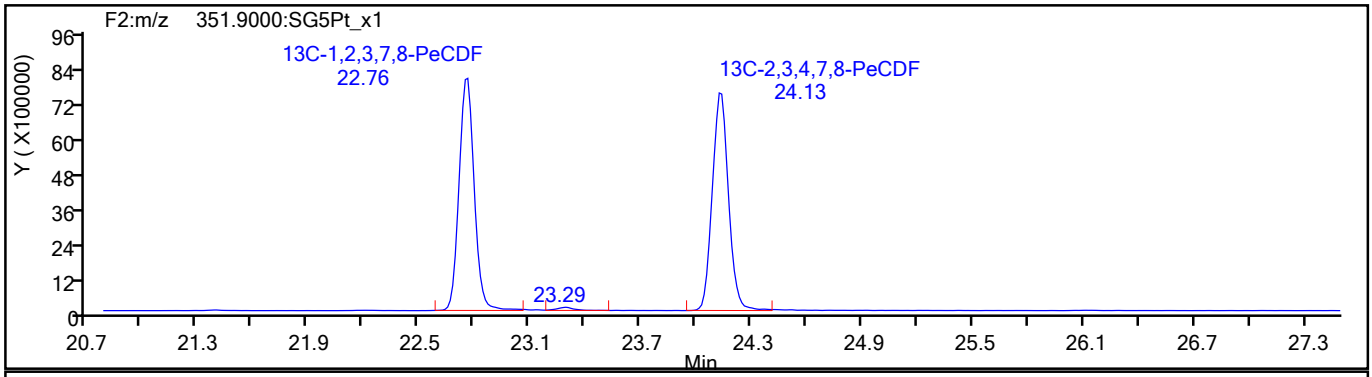

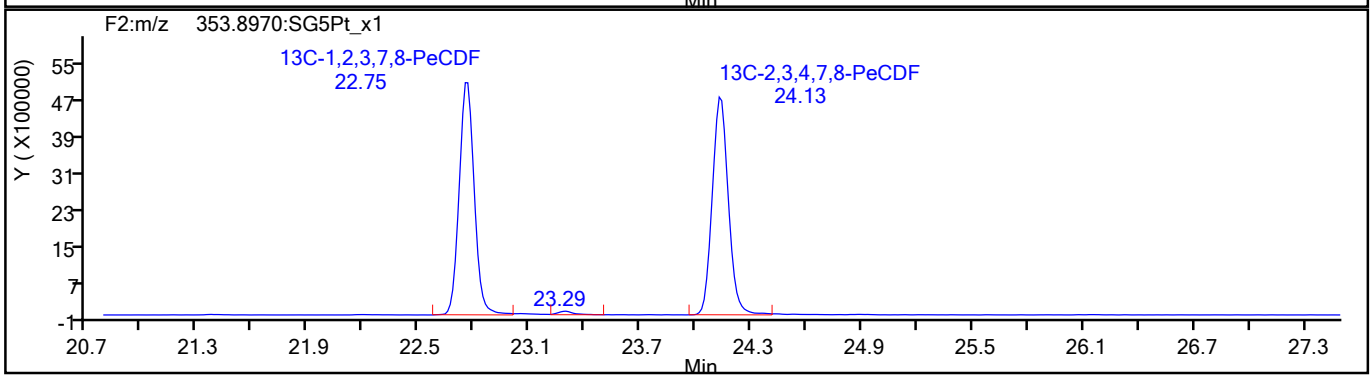

793876

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

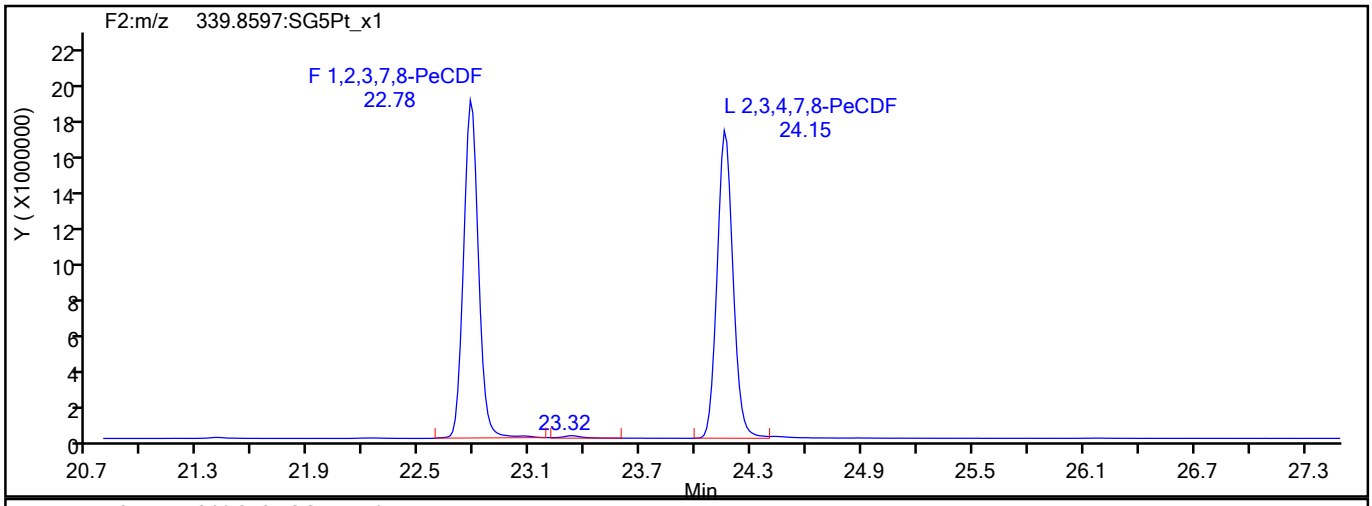

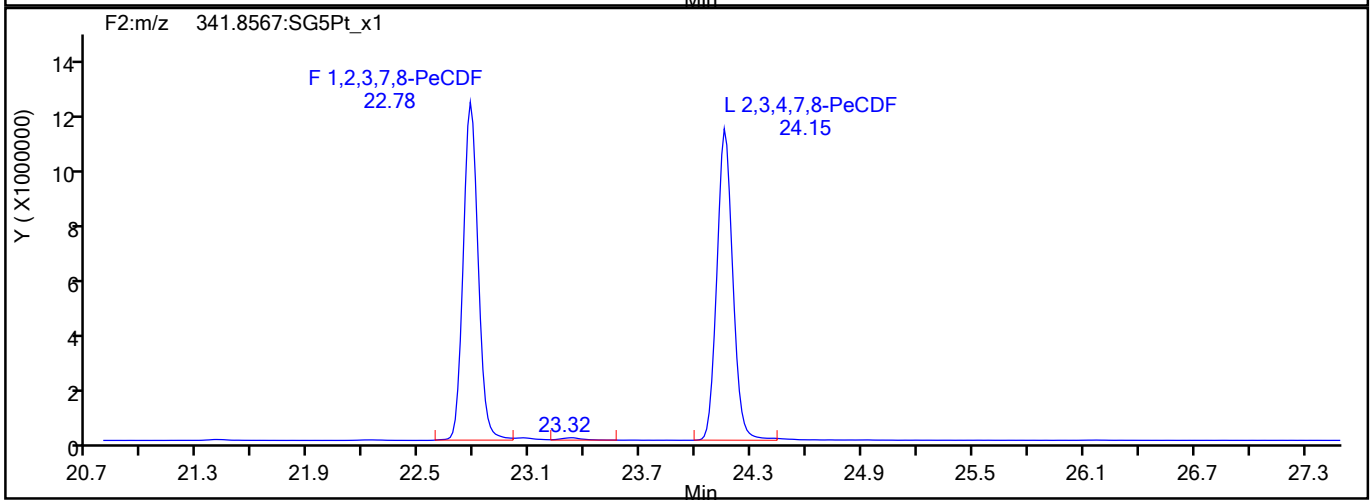

PeCDF Interference Mass

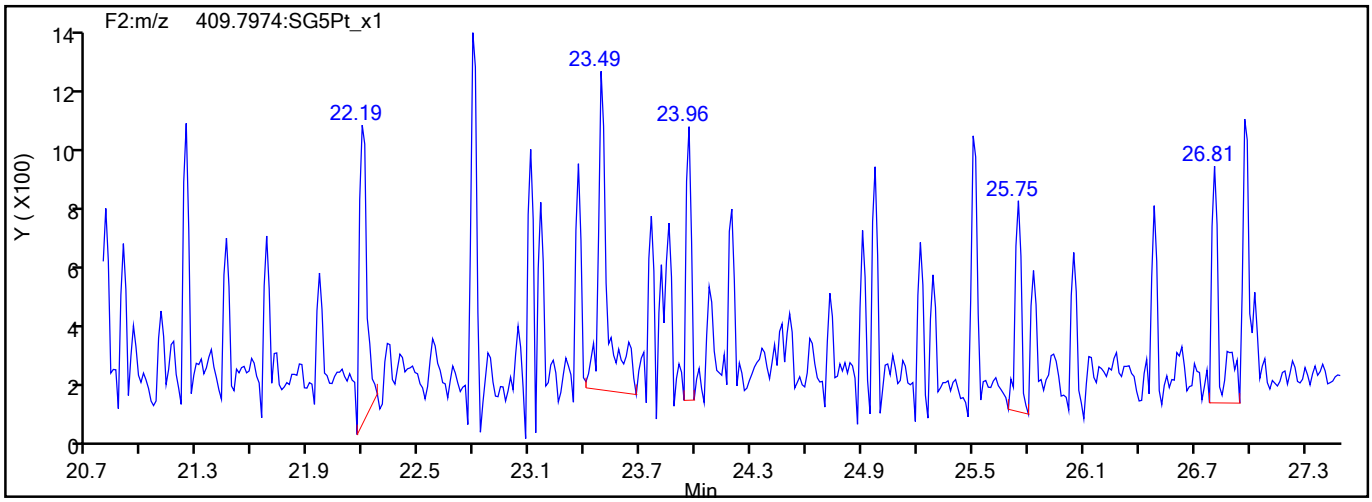

793877

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

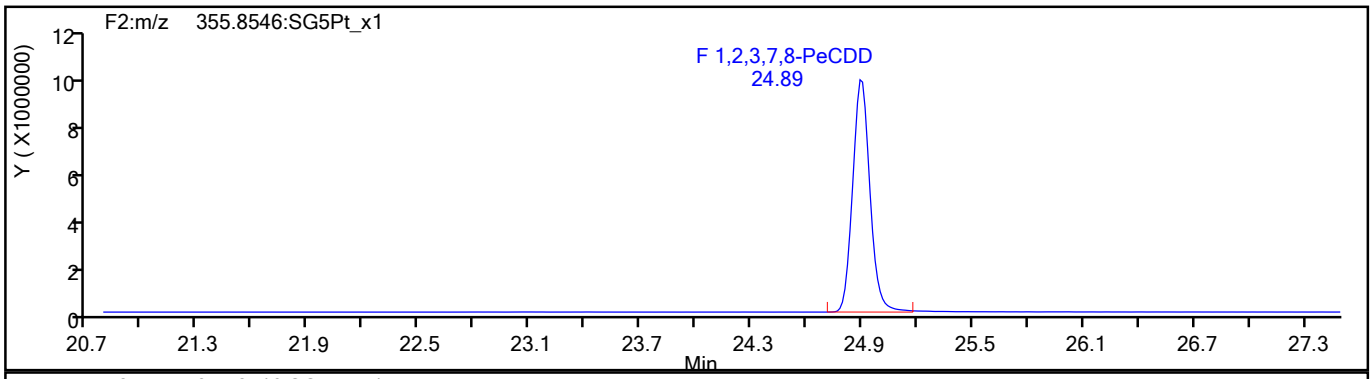

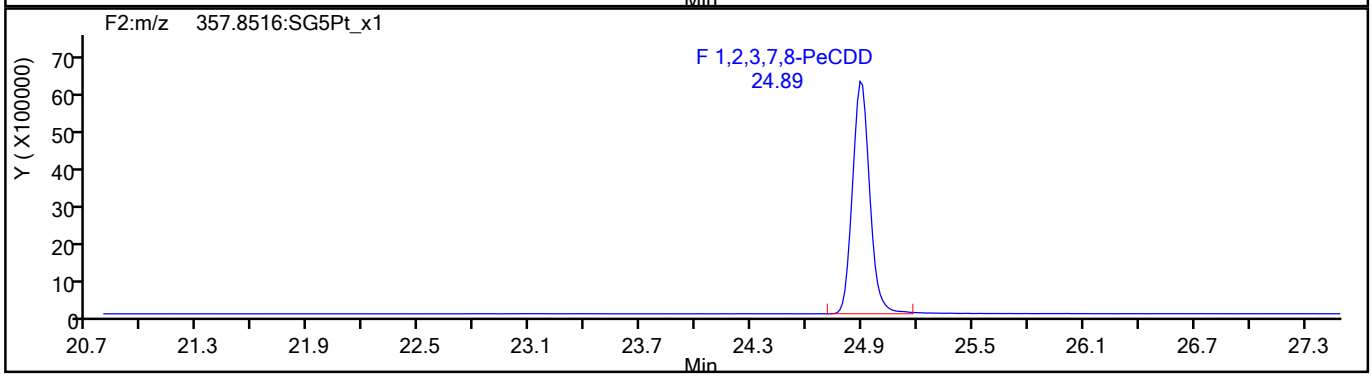

PeCDD Standards

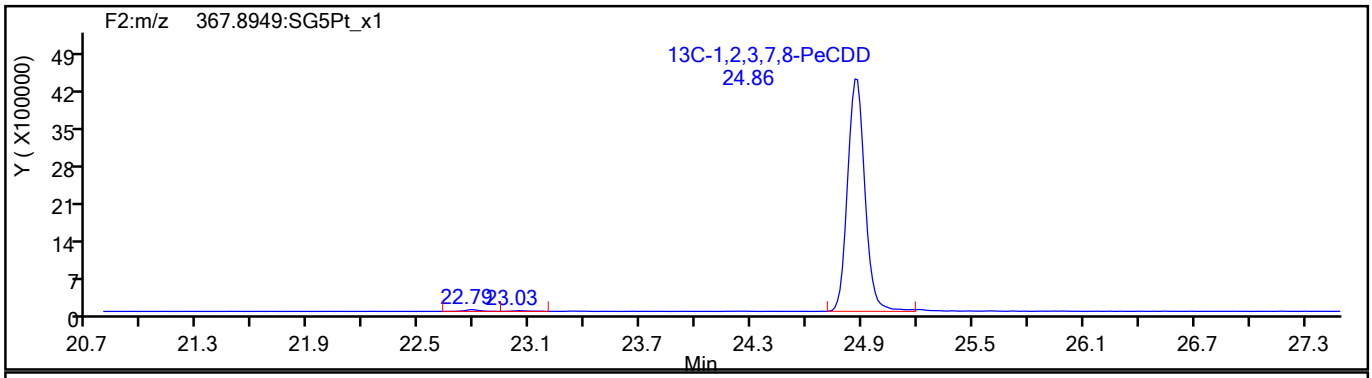

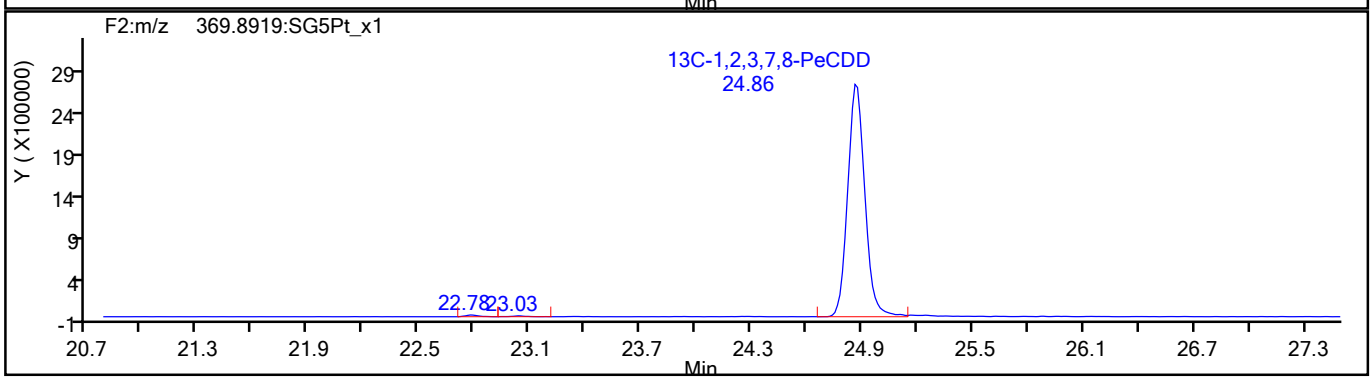

793878

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

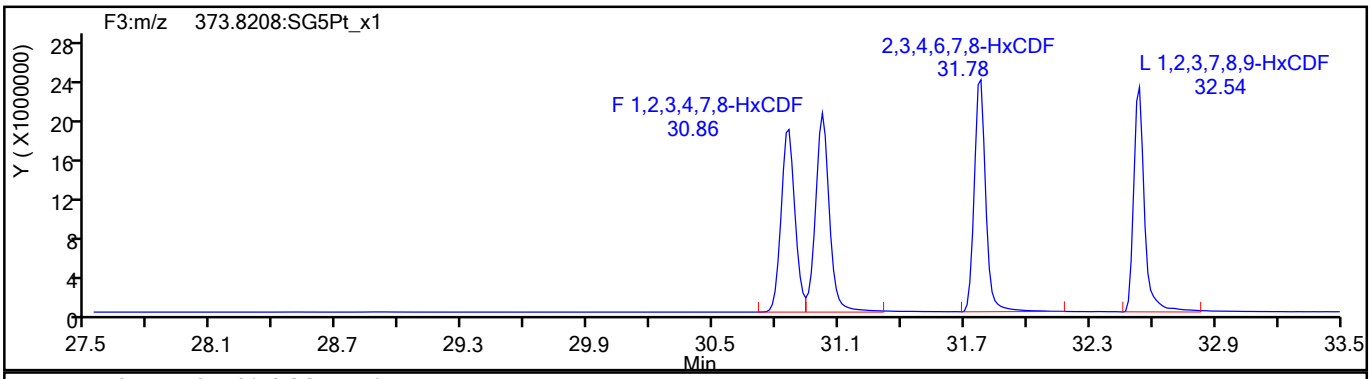

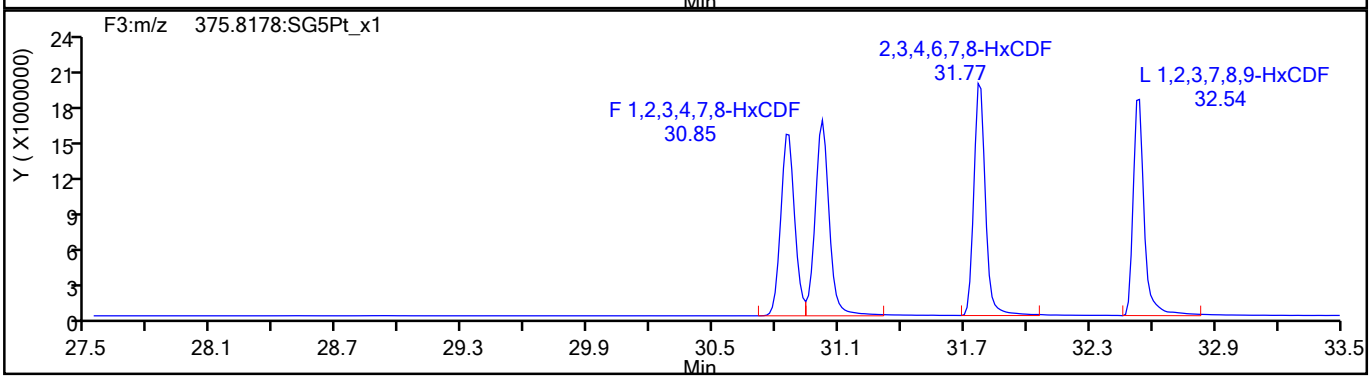

HxCDF Standards

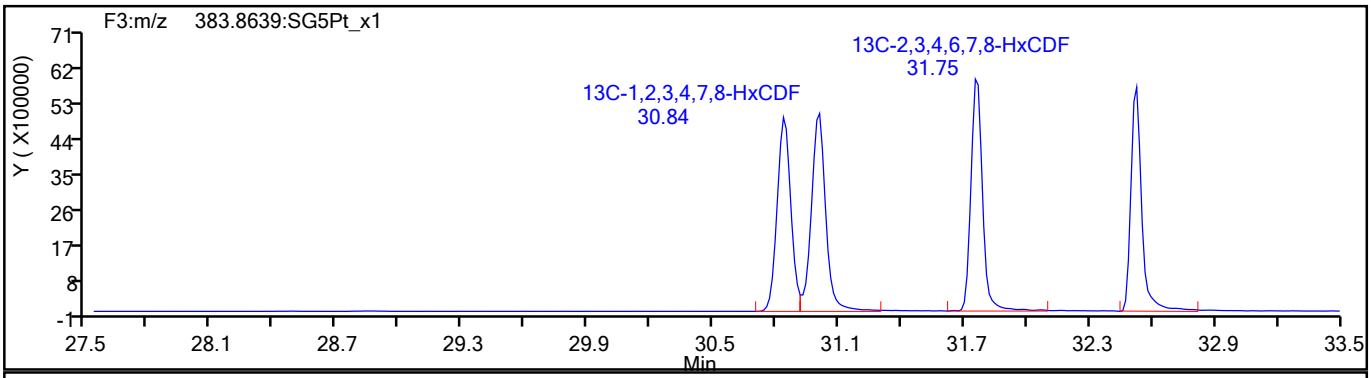

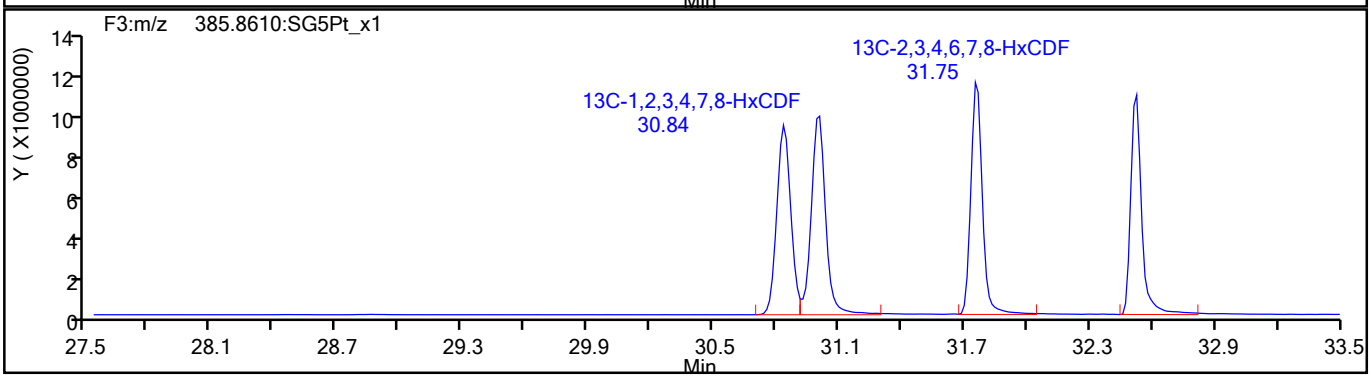

793879

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

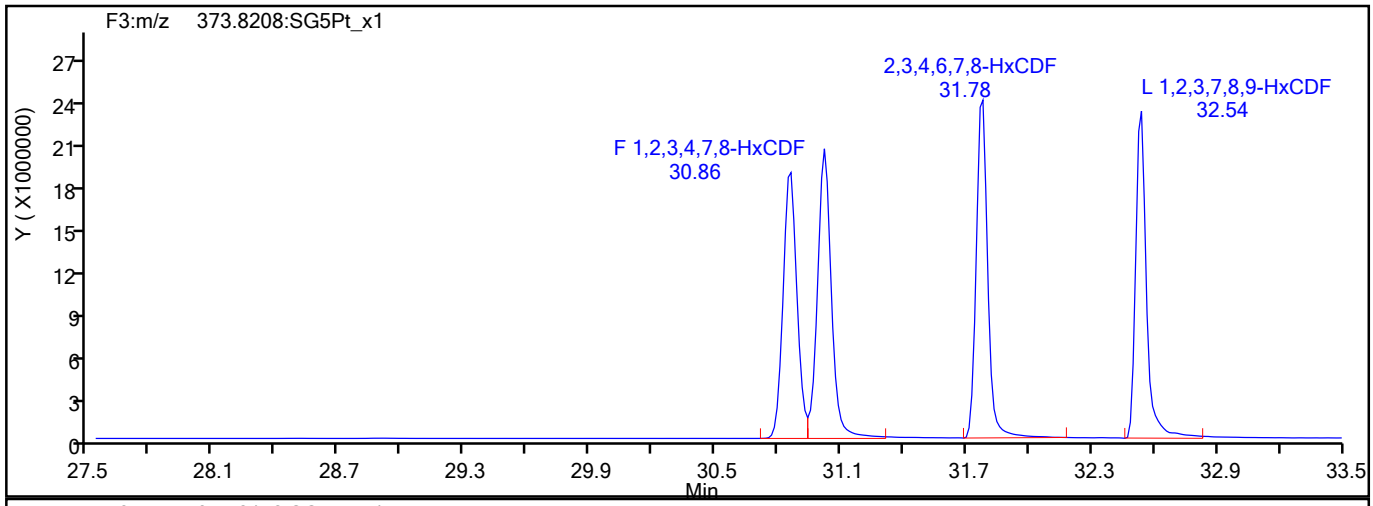

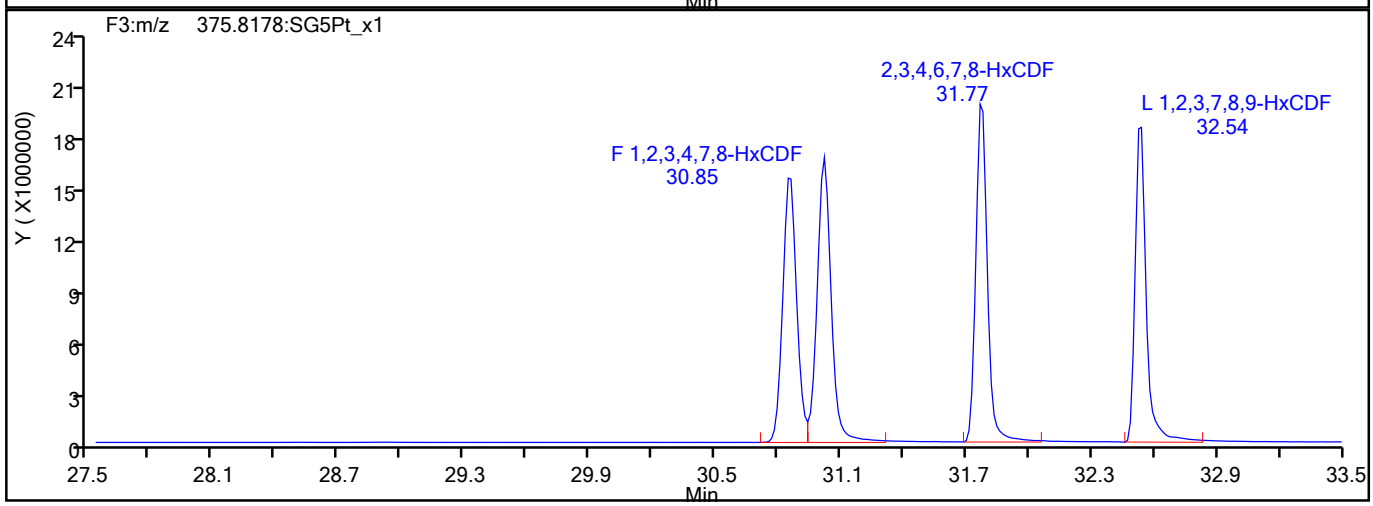

HxCDF Interference Mass

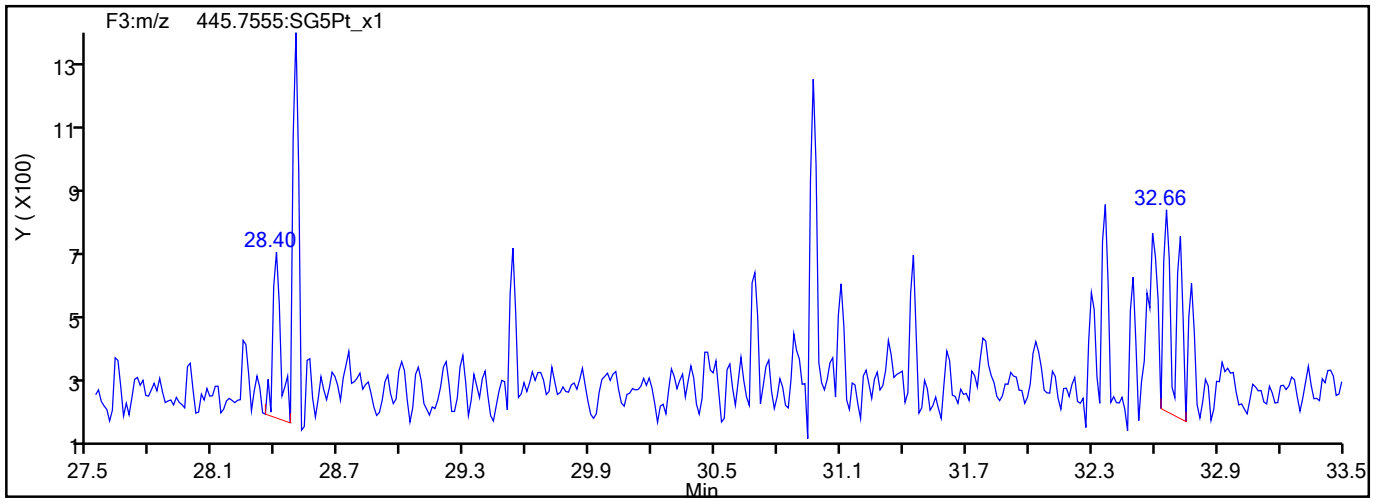

793880

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

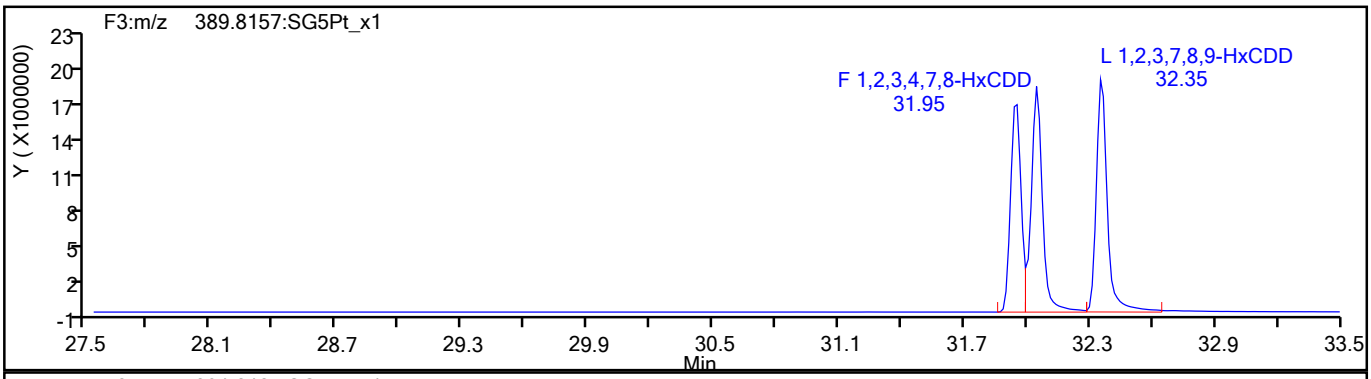

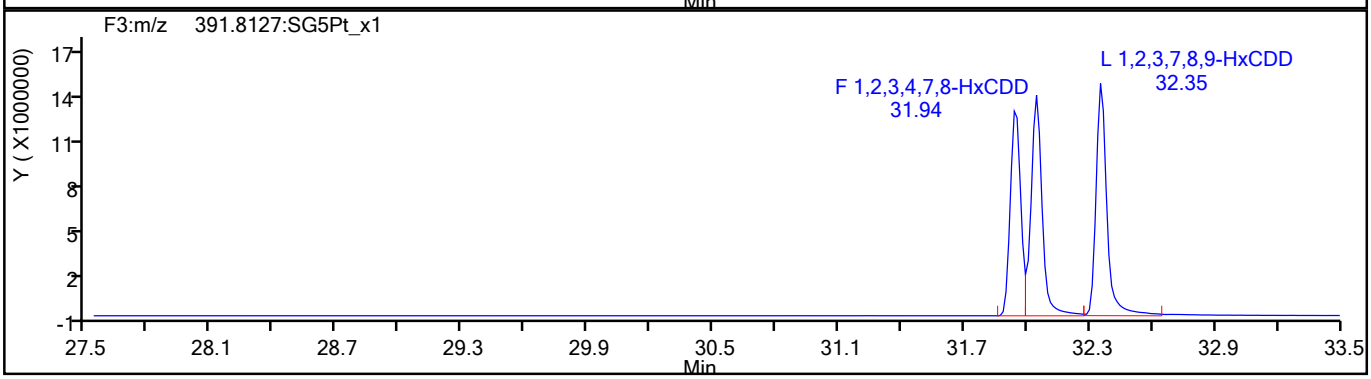

HxCDD Standards

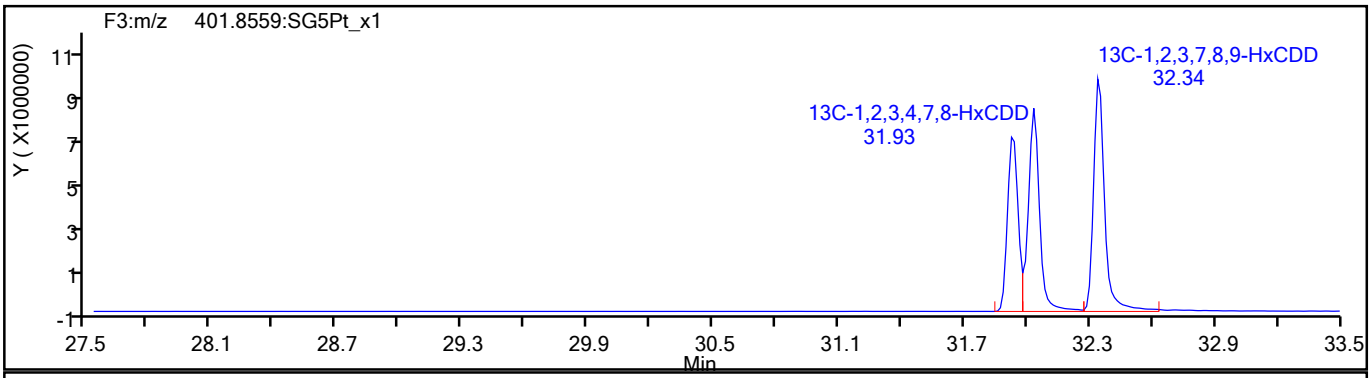

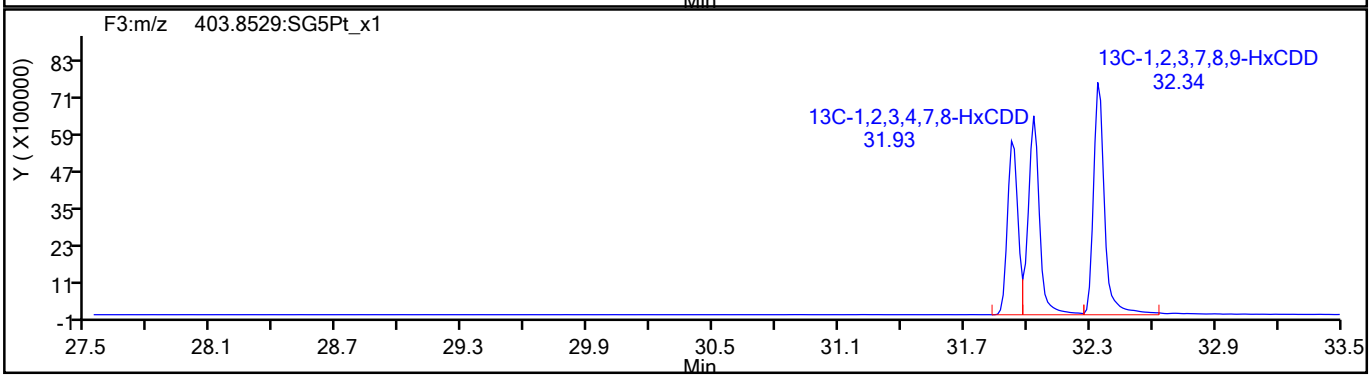

793881

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

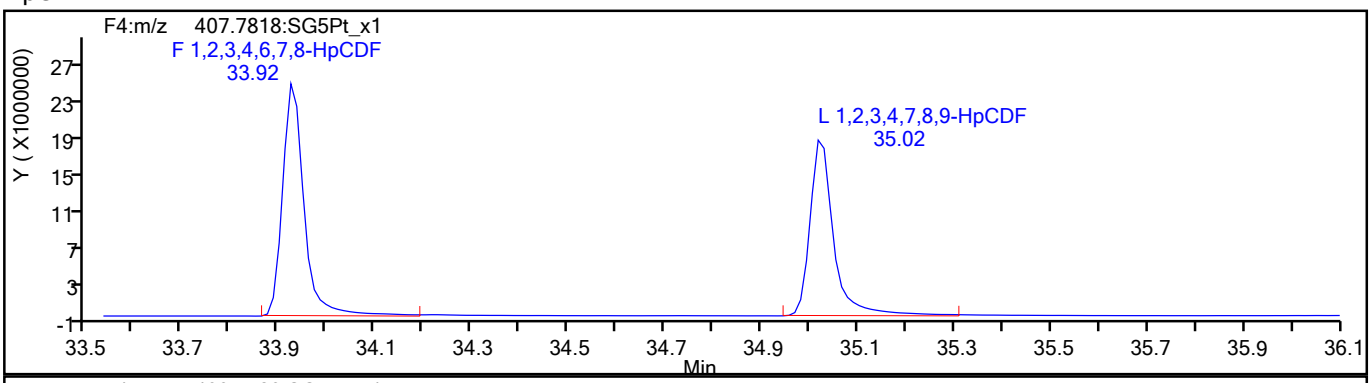

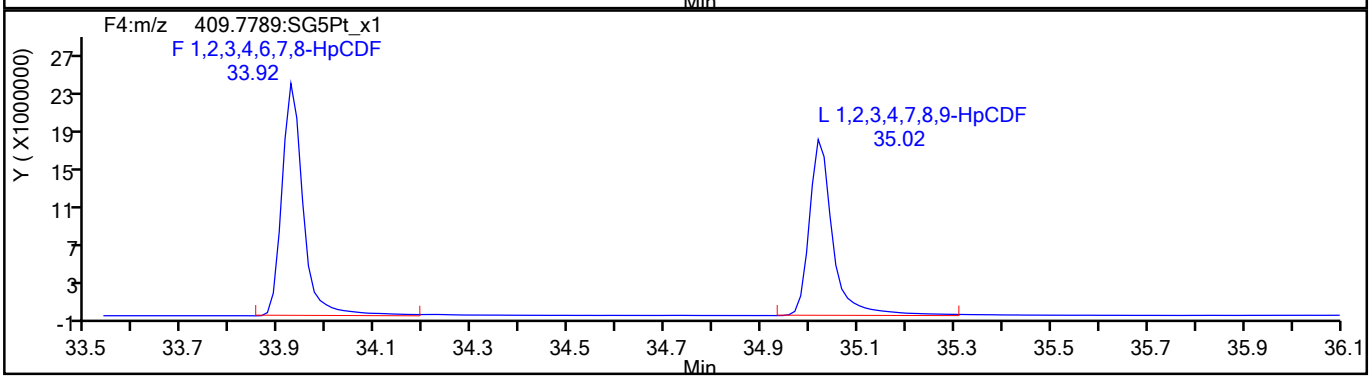

HpCDF Standards

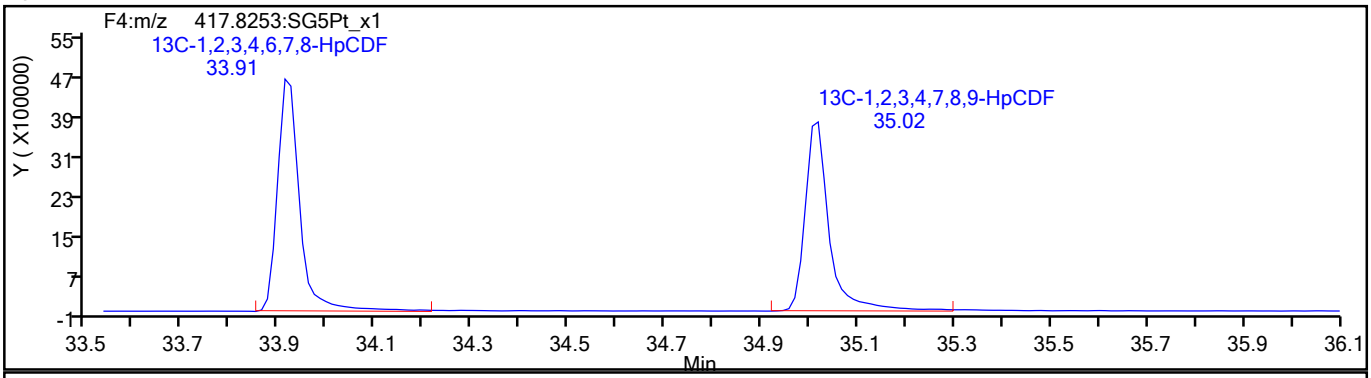

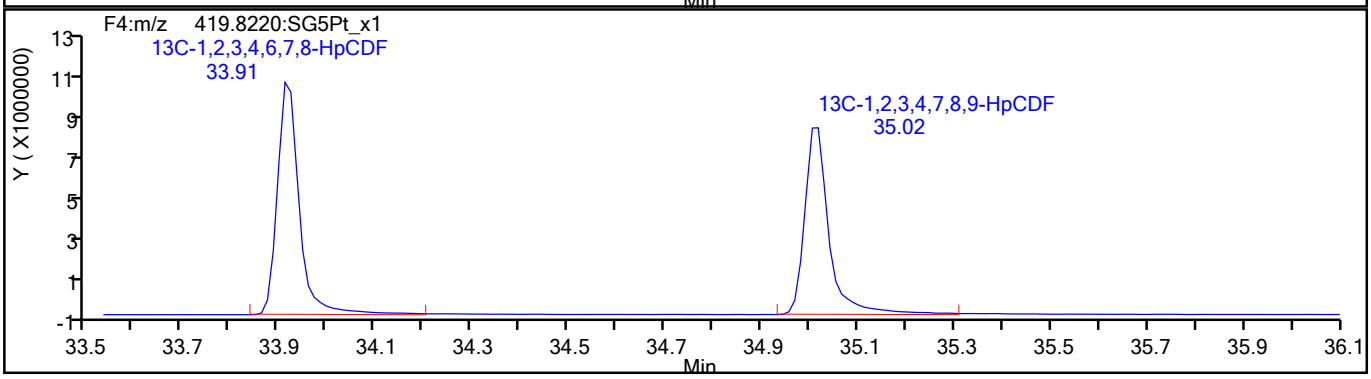

793882

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

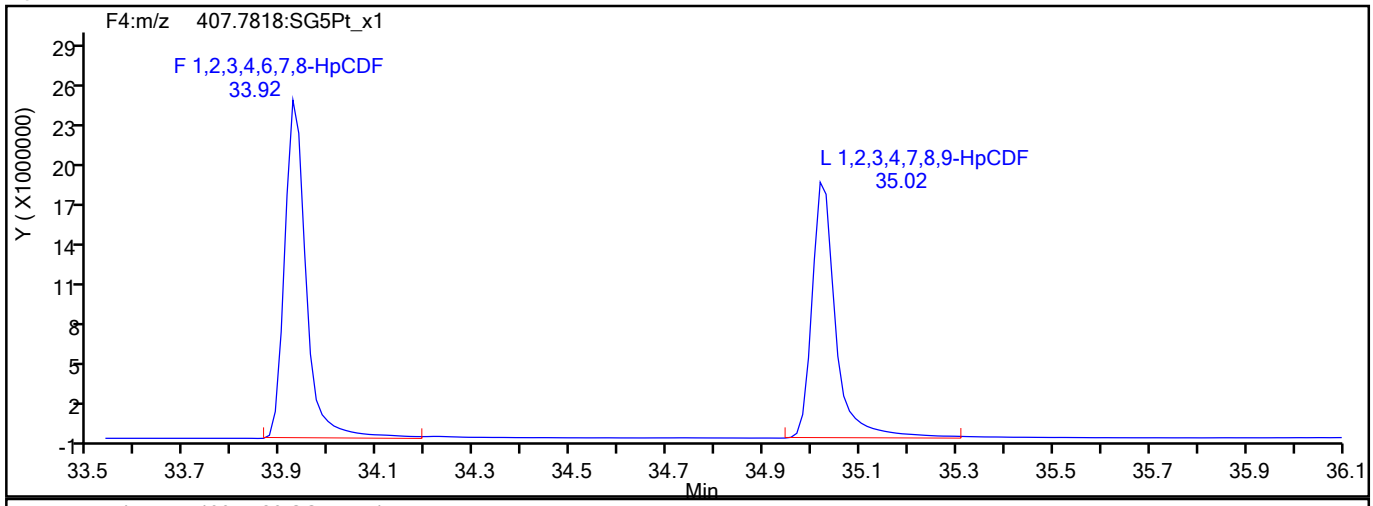

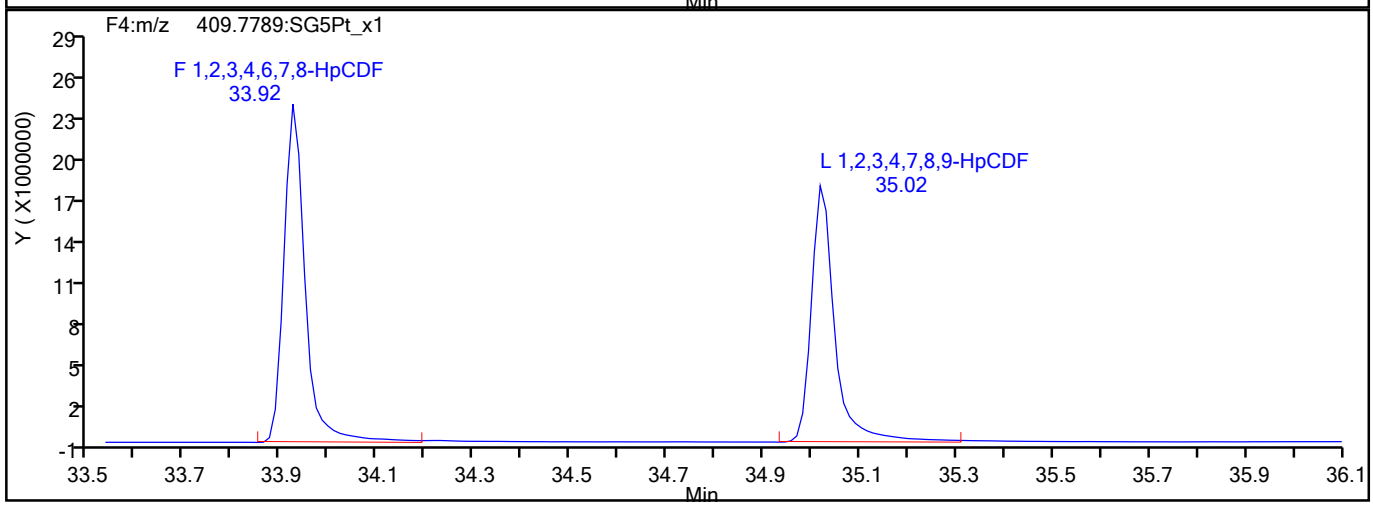

HpCDF Interference Mass

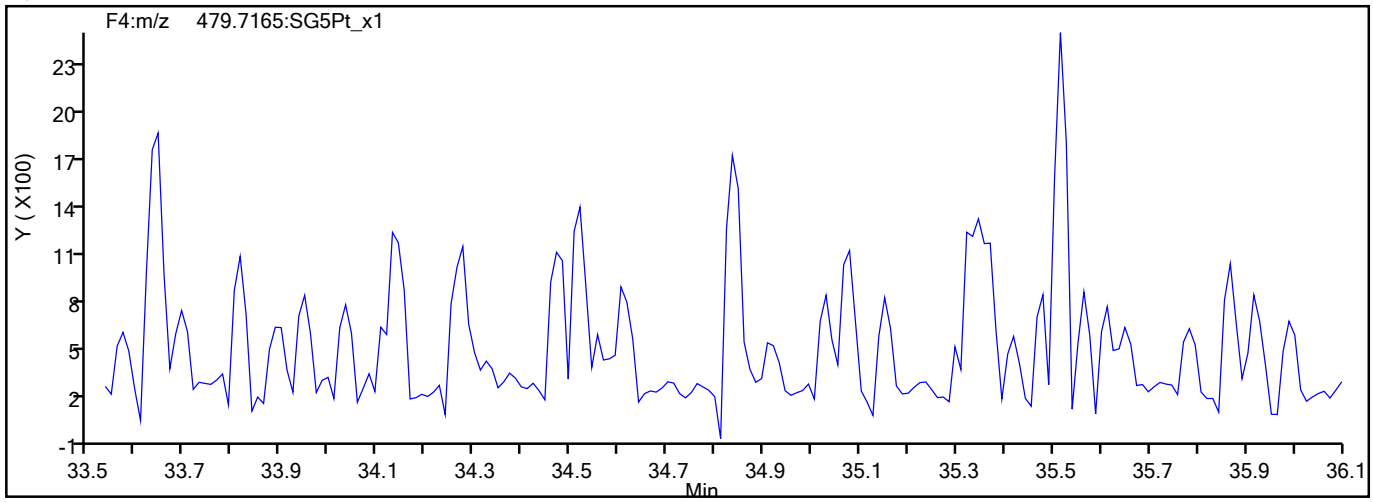

793883

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDD

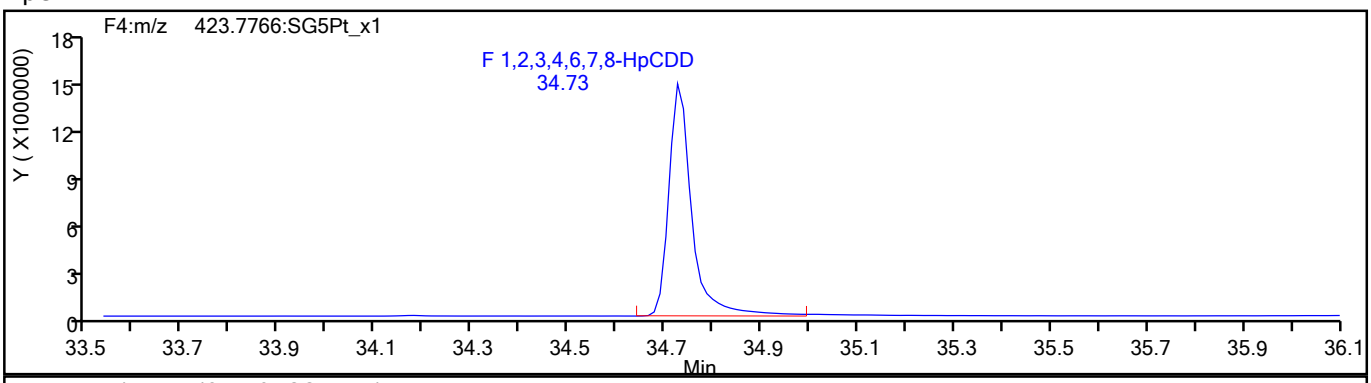

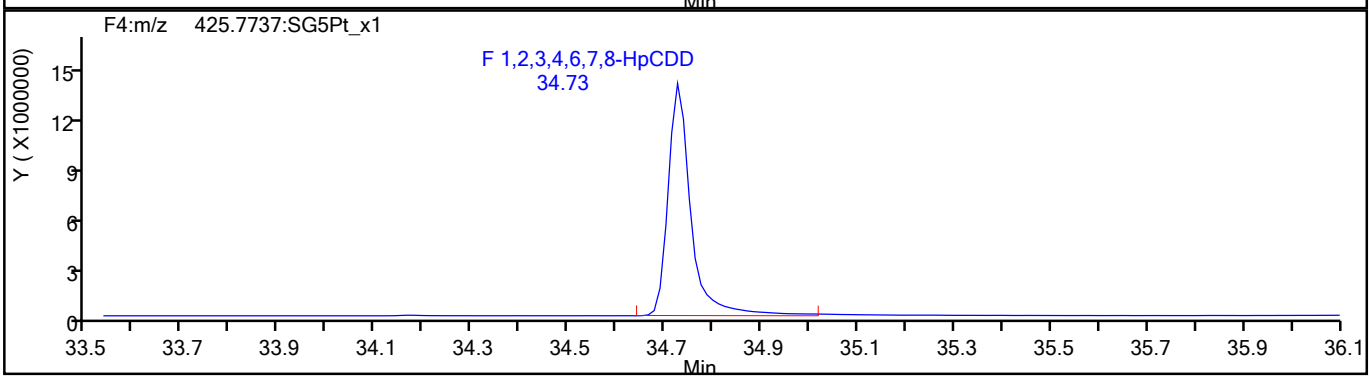

HpCDD Standards

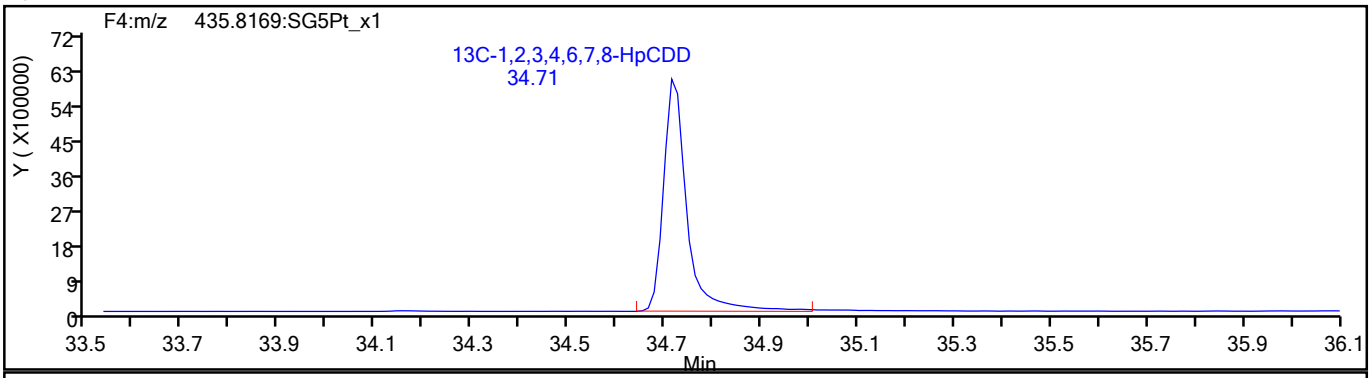

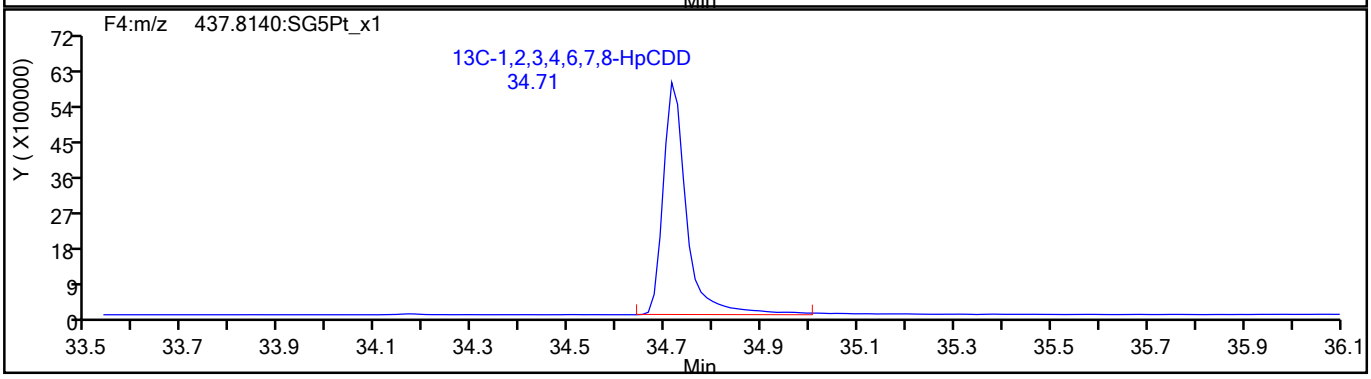

793884

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

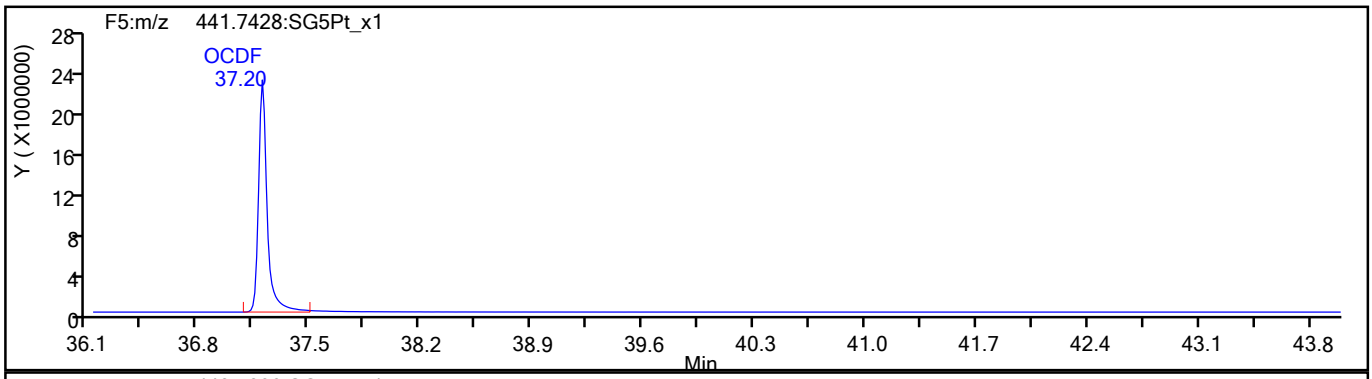

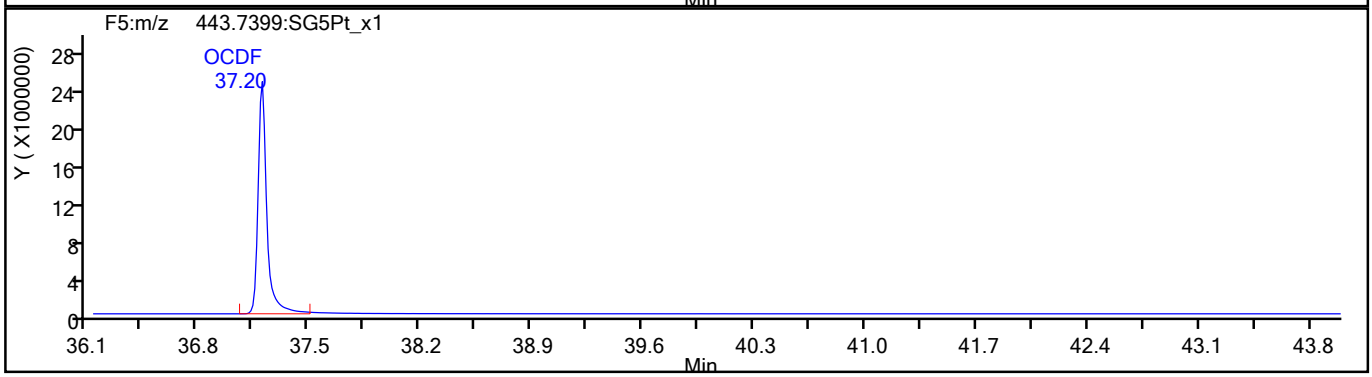

OCDF Standards

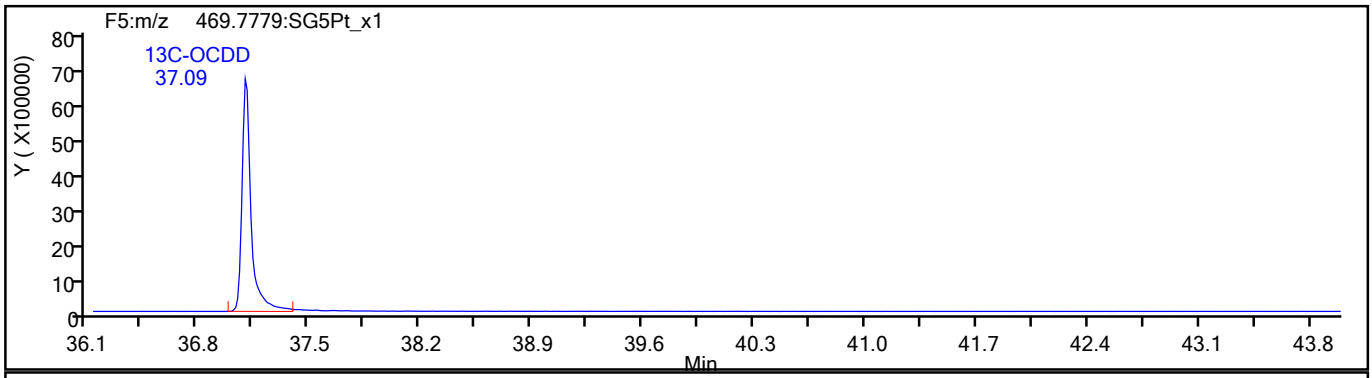

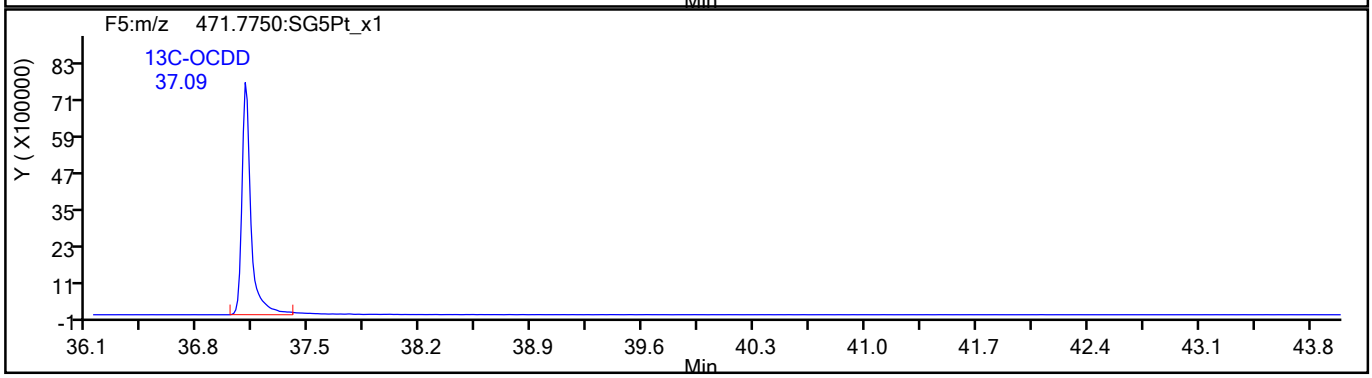

793885

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

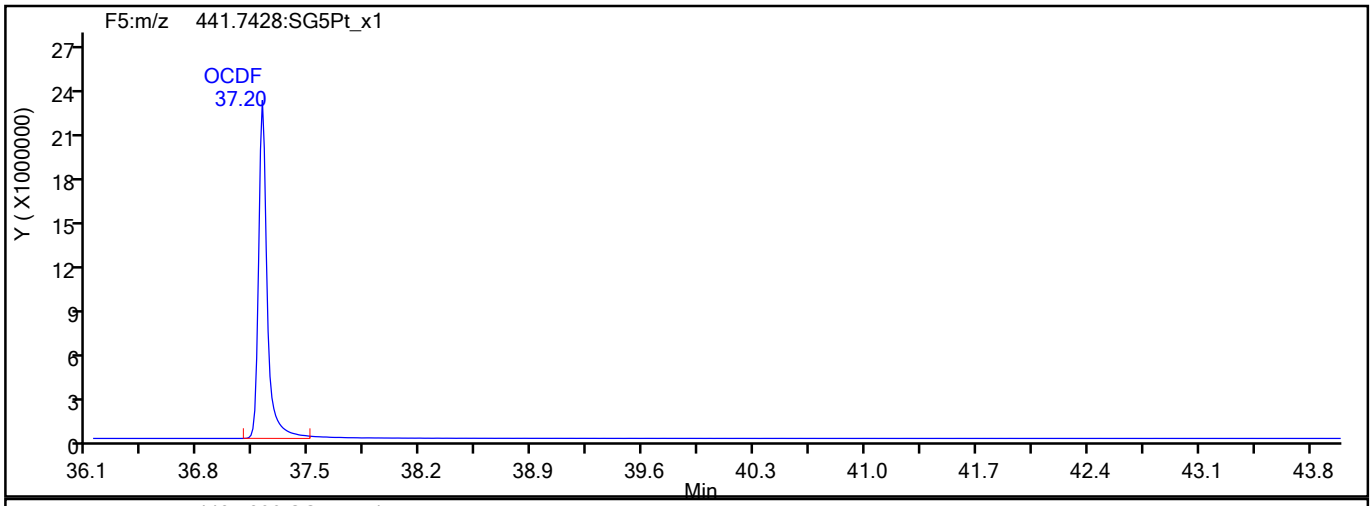

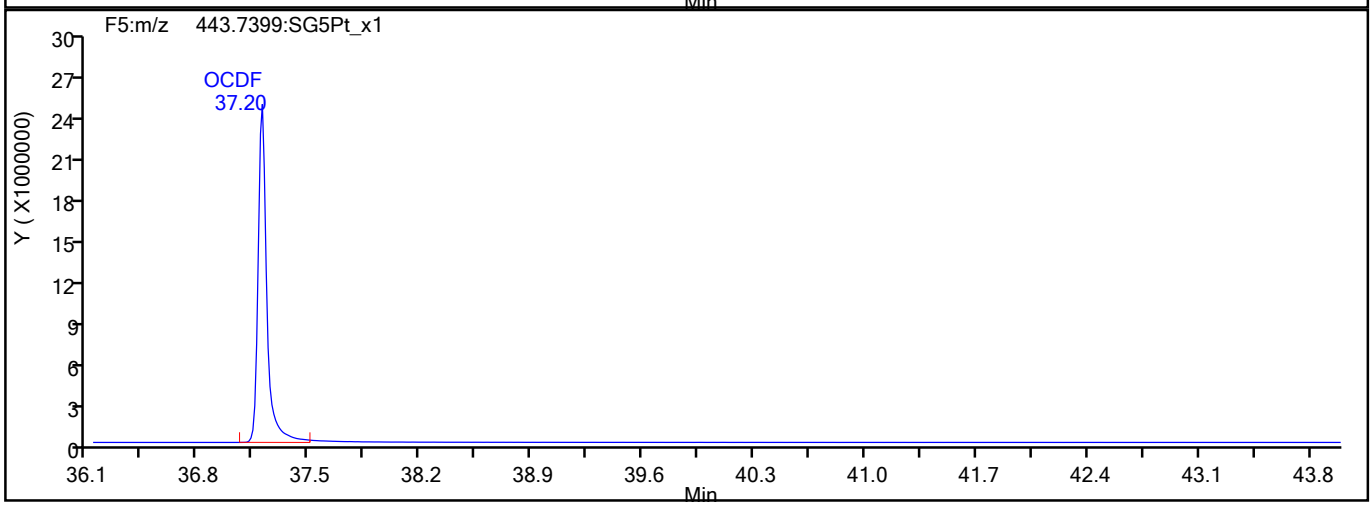

OCDF Interference Mass

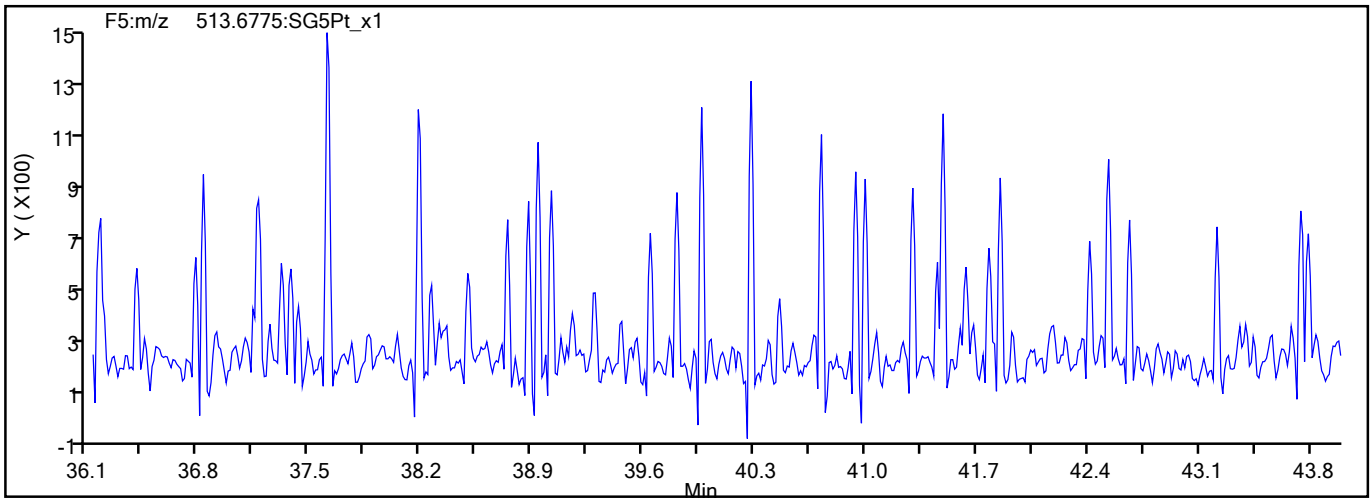

793886

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

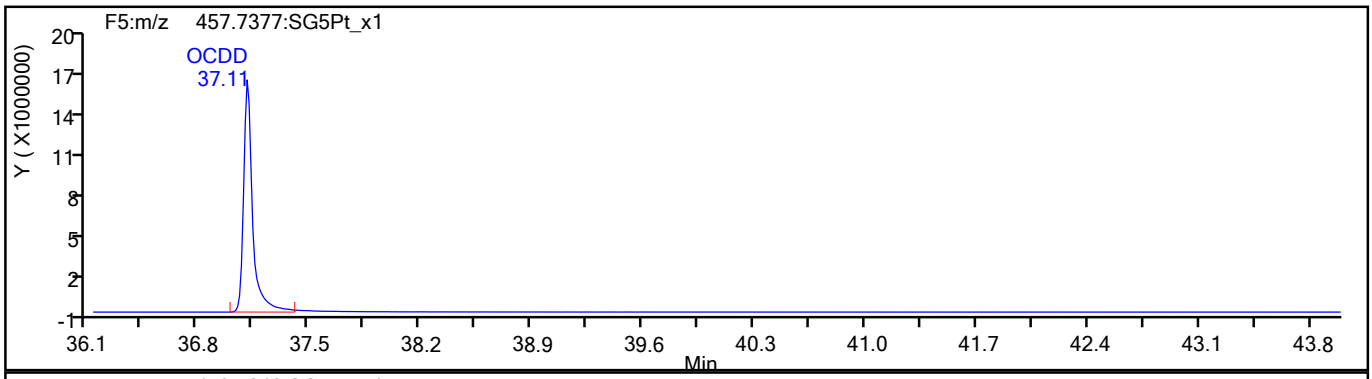

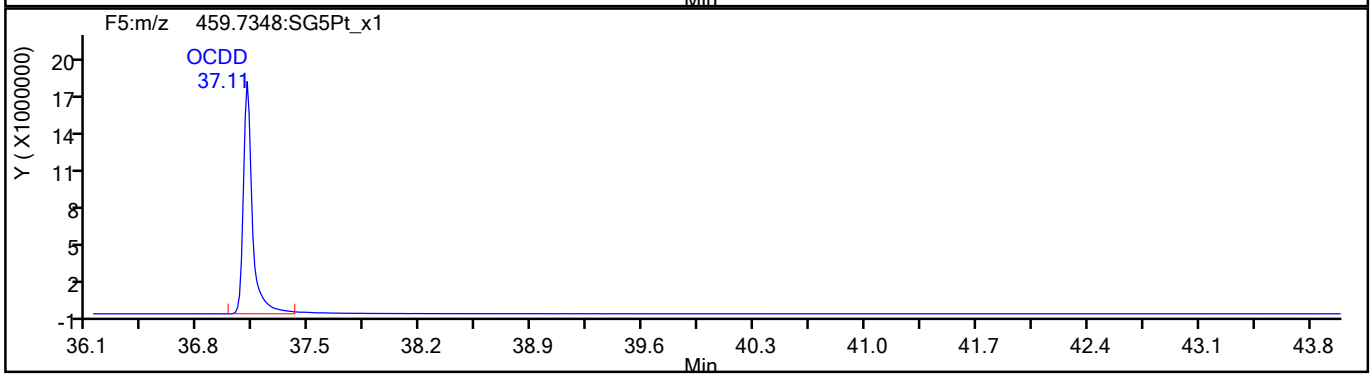

OCDD Standards

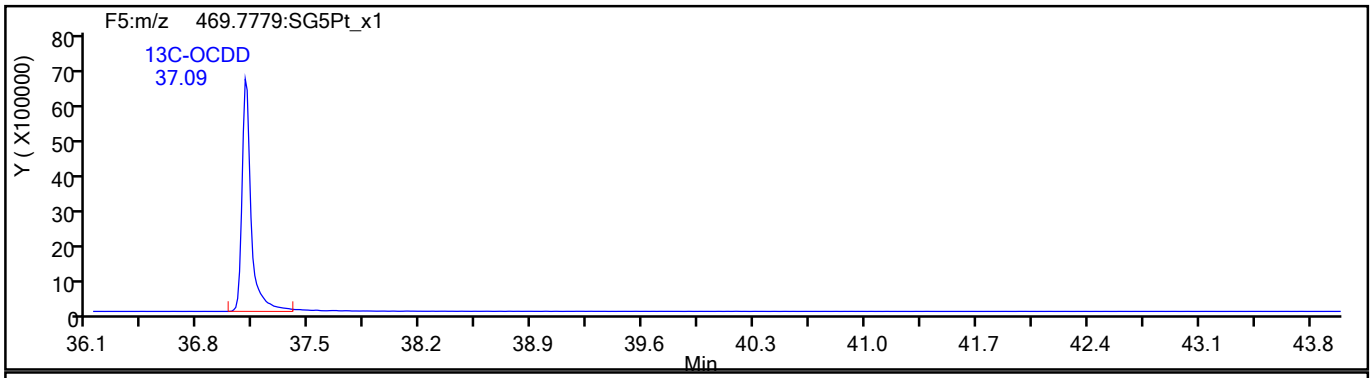

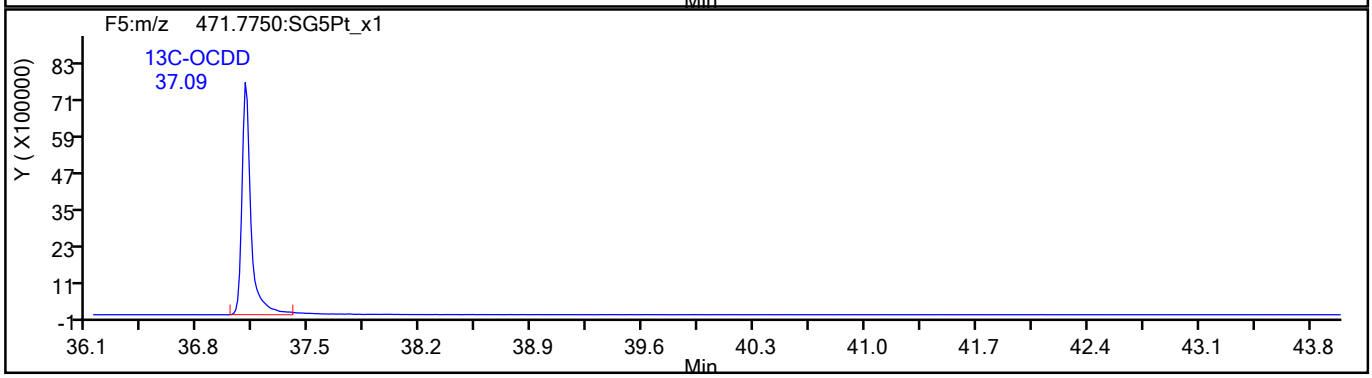

793887

Report Date: 27-Jul-2021 15:17:40 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

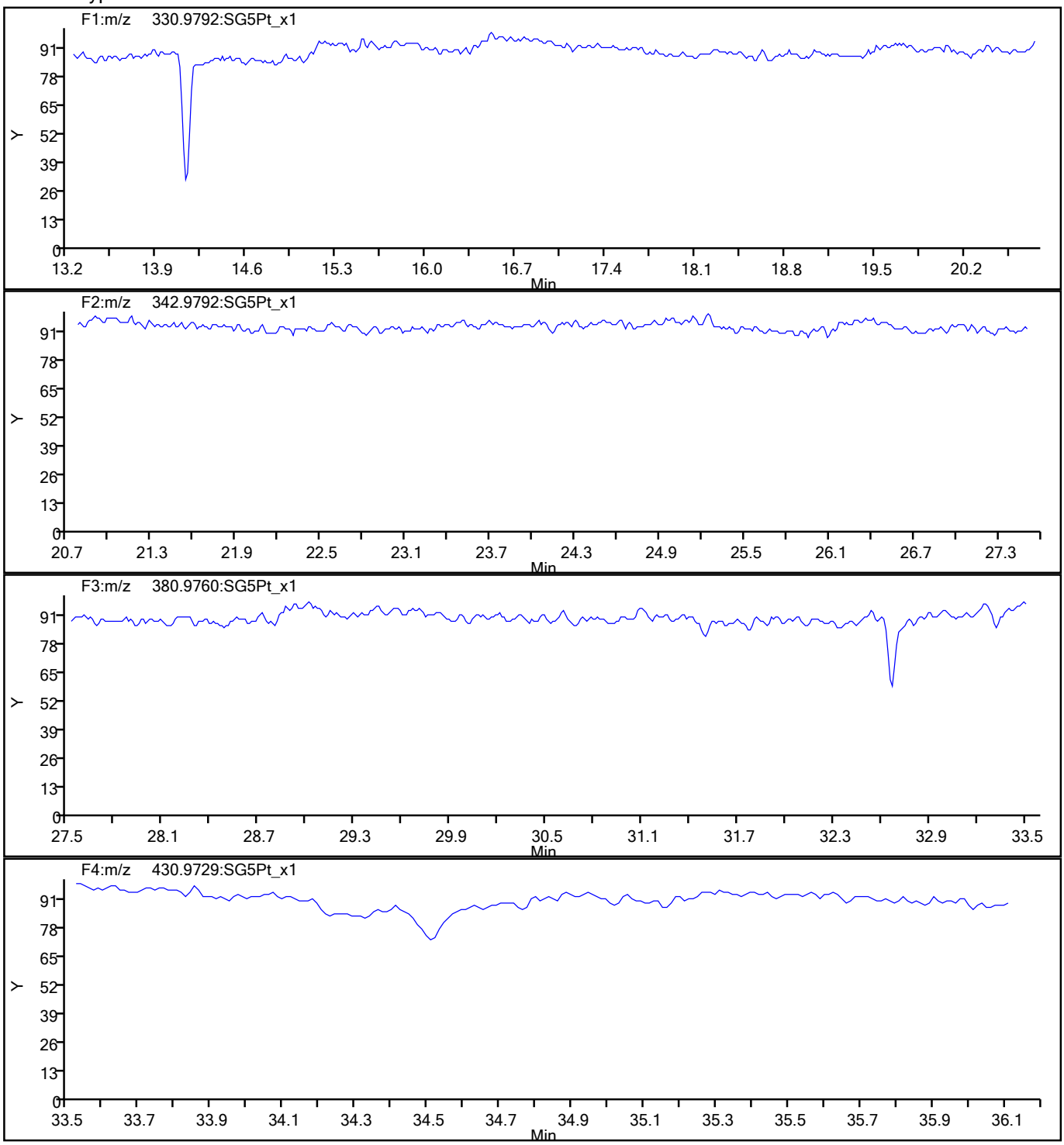

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Report Date: 27-Jul-2021 15:17:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_6.d		
Injection Date:	26-Jul-2021 13:06:50	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	6
Column Type:	DB-5	Column Dia:	0.32 mm

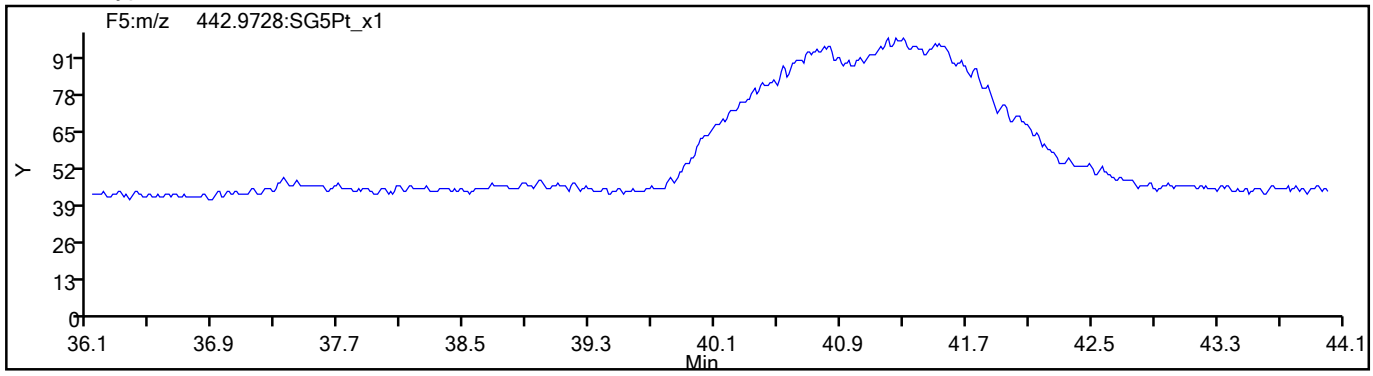

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Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.142	57464333	0.83	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.613	95980421	0.79	1.6249	102.8	102.8	0.1660	0.1660	103	
2,3,7,8-TCDF	17.628	204575642	0.78	1.0239	208.2	208.2	0.2336	0.2336	104	
S Total TCDF					208.2	208.2	0.2336	0.2336		
D 13C-2,3,7,8-TCDD	18.338	53698206	0.83	0.8993	103.9	103.9	0.1396	0.1396	104	
$ 37Cl4-2,3,7,8-TCDD	18.354	140953034		1.1071	221.5	221.5	0.1318	0.1318	111	
2,3,7,8-TCDD	18.354	140421448	0.79	1.2541	208.5	208.5	0.1362	0.1362	104	
S Total TCDD					208.5	208.5	0.1362	0.1362		
D 13C-1,2,3,7,8-PeCDF	22.749	72829681	1.58	1.2101	104.7	104.7	0.2112	0.2112	105	
1,2,3,7,8-PeCDF	22.776	795873691	1.61	1.0611	1029.8	1029.8	2.482	2.482	103	
D 13C-2,3,4,7,8-PeCDF	24.126	75649463	1.61	1.2395	106.2	106.2	0.2062	0.2062	106	
2,3,4,7,8-PeCDF	24.153	783403837	1.59	1.0184	1016.8	1016.8	2.723	2.723	102	
S Total PeCDF					2046.7	2046.7	2.602	2.602		
D 13C-1,2,3,7,8-PeCDD	24.862	46251010	1.64	0.7612	105.7	105.7	0.1196	0.1196	106	
1,2,3,7,8-PeCDD	24.889	500555284	1.58	1.0484	1032.3	1032.3	0.8910	0.8910	103	
S Total PeCDD					1032.3	1032.3	0.8910	0.8910		
D 13C-1,2,3,4,7,8-HxCDF	30.835	67741189	0.53	1.0837	103.6	103.6	0.3784	0.3784	104	
1,2,3,4,7,8-HxCDF	30.862	737075796	1.21	1.0851	1002.7	1002.7	4.903	4.903	100	
D 13C-1,2,3,6,7,8-HxCDF	31.008	67363664	0.51	1.1279	99.0	99.0	0.3636	0.3636	98.97	
1,2,3,6,7,8-HxCDF	31.021	785709889	1.22	1.1260	1035.8	1035.8	4.873	4.873	104	
D 13C-2,3,4,6,7,8-HxCDF	31.754	63471184	0.52	1.0637	98.9	98.9	0.3855	0.3855	98.87	
2,3,4,6,7,8-HxCDF	31.767	762810877	1.21	1.1675	1029.4	1029.4	3.909	3.909	103	
D 13C-1,2,3,7,8,9-HxCDF	32.526	58669892	0.52	0.9676	100.5	100.5	0.4238	0.4238	100	
1,2,3,7,8,9-HxCDF	32.539	708280047	1.22	1.1664	1035.0	1035.0	4.123	4.123	104	
S Total HxCDF					4103.0	4103.0	4.452	4.452		
* 13C-1,2,3,7,8,9-HxCDD	32.339	60348148	1.25	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	46886171	1.24	0.7334	105.9	105.9	0.3391	0.3391	106	
1,2,3,4,7,8-HxCDD	31.940	484857042	1.26	1.0640	971.9	971.9	2.786	2.786	97.19	
D 13C-1,2,3,6,7,8-HxCDD	32.033	53564396	1.27	0.8802	100.8	100.8	0.2826	0.2826	101	
1,2,3,6,7,8-HxCDD	32.047	543061818	1.27	1.0001	1013.8	1013.8	2.795	2.795	101	
1,2,3,7,8,9-HxCDD	32.353	563888565	1.26	1.1325	991.3	991.3	2.541	2.541	99.13	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDD					2977.0	2977.0	2.707	2.707		
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	46328151	0.45	0.7730	99.3	99.3	0.9693	0.9693	99.31	
1,2,3,4,6,7,8-HpCDF	33.924	681312007	1.05	1.4413	1020.4	1020.4	8.187	8.187	102	
D 13C-1,2,3,4,7,8,9-HpCDF	35.005	44333848	0.44	0.7008	104.8	104.8	1.069	1.069	105	
1,2,3,4,7,8,9-HpCDF	35.017	590555312	1.06	1.3174	1011.1	1011.1	10.5	10.5	101	
S Total HpCDF					2031.5	2031.5	9.356	9.356		
D 13C-1,2,3,4,6,7,8-HpCDD	34.714	39395832	1.02	0.6472	100.9	100.9	0.4739	0.4739	101	
1,2,3,4,6,7,8-HpCDD	34.726	441437476	1.05	1.0943	1024.0	1024.0	3.855	3.855	102	
S Total HpCDD					1024.0	1024.0	3.855	3.855		
D 13C-OCDD	37.093	56623863	0.89	0.4472	209.8	209.8	0.2327	0.2327	105	
OCDF	37.201	856685987	0.91	1.4382	2104.0	2104.0	1.905	1.905	105	
OCDD	37.105	635652839	0.90	1.1070	2028.1	2028.1	1.855	1.855	101	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Jul-2021 13:51:48 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: IC 072621D CS-6 HRDXNL6_00028
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:17:52 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.142	18.142	0		26125466	6597193	4577	11442	1441		
333.9339	18.142	18.142	0		31338867	7893522	2702	6755	2921	0.83(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.613	17.616	0	0.971	42243137	10877420	7832	19580	1389		
317.9389	17.613	17.616	0	0.971	53737284	13863668	7802	19505	1777	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.001	89710432	22799700	10338	25845	2205		
305.8987	17.628	17.631	0	1.001	114865210	29189675	13335	33337	2189	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.338	18.338	0	1.011	24360997	5757558	4577	11442	1258		
333.9339	18.338	18.338	0	1.011	29337209	6914283	2702	6755	2559	0.83(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.354	18.354	0	1.012	140953034	33738158	8459	21147	3988		
2,3,7,8-TCDD											
319.8965	18.354	18.357	0	1.001	62065087	14965631	3913	9782	3825		
321.8936	18.354	18.357	0	1.001	78356361	18744482	4747	11867	3949	0.79(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.754	0	1.254	44649559	7939527	8573	21432	926		
353.8970	22.749	22.754	0	1.254	28180122	5062354	6242	15605	811	1.58(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.776	22.779	0	1.001	490871580	87021007	84135	210337	1034		
341.8567	22.776	22.779	0	1.001	305002111	54503599	52854	132135	1031	1.61(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.129	0	1.330	46717935	7613965	8573	21432	888		
353.8970	24.126	24.129	0	1.330	28931528	4737188	6242	15605	759	1.61(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,7,8-PeCDF											
339.8597	24.153	24.156	0	1.001	480352978	79104825	84135	210337	940		
341.8567	24.153	24.156	0	1.001	303050859	50060127	52854	132135	947	1.59(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.865	0	1.370	28720712	4433240	3087	7717	1436		
369.8919	24.862	24.865	0	1.370	17530298	2751802	2189	5472	1257	1.64(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.892	0	1.001	306292917	47311146	15348	38370	3083		
357.8516	24.889	24.892	0	1.001	194262367	30133208	11499	28747	2621	1.58(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.835	30.838	0	0.953	23491874	5084915	9674	24185	526		
385.8610	30.835	30.838	0	0.953	44249315	9441190	17790	44475	531	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.862	30.857	0	1.001	404173144	87133654	170642	426605	511		
375.8178	30.848	30.857	0	1.000	332902652	71216591	138478	346195	514	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	31.008	31.003	0	0.959	22854682	4877346	9674	24185	504		
385.8610	31.008	31.003	0	0.959	44508982	9206926	17790	44475	518	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.021	31.022	0	1.000	431948071	93438031	170642	426605	548		
375.8178	31.021	31.022	0	1.000	353761818	76246532	138478	346195	551	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.756	0	0.982	21747421	5871662	9674	24185	607		
385.8610	31.754	31.756	0	0.982	41723763	11062051	17790	44475	622	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.772	0	1.000	417841952	110026703	170642	426605	645		
375.8178	31.767	31.772	0	1.000	344968925	92108448	138478	346195	665	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.526	32.523	0	1.006	20172563	5575575	9674	24185	576		
385.8610	32.512	32.523	-1	1.005	38497329	10495423	17790	44475	590	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.539	32.534	0	1.000	388834443	107441652	170642	426605	630		
375.8178	32.526	32.534	0	1.000	319445604	89819128	138478	346195	649	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.339	32.342	0		33485933	9289499	8951	22377	1038		
403.8529	32.339	32.342	0		26862215	7454274	7708	19270	967	1.25(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.929	0	0.987	25994948	7598983	8951	22377	849		
403.8529	31.927	31.929	0	0.987	20891223	6054958	7708	19270	786	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.945	0	1.000	270288224	77533273	86149	215372	900		
391.8127	31.940	31.945	0	1.000	214568818	61952830	75747	189367	818	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.033	32.033	0	0.991	29946566	8106259	8951	22377	906		
403.8529	32.033	32.033	0	0.991	23617830	6373294	7708	19270	827	1.27(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	32.047	32.047	0	1.000	303387935	83103965	86149	215372	965		
391.8127	32.047	32.047	0	1.000	239673883	65565020	75747	189367	866	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.353	32.355	0	1.013	314172702	87971106	86149	215372	1021		
391.8127	32.353	32.355	0	1.013	249715863	70210414	75747	189367	927	1.26(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.914	0	1.049	14282220	4787635	15981	39952	300		
419.8220	33.912	33.914	0	1.049	32045931	10687518	34202	85505	312	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.924	33.926	0	1.000	349397605	118035783	389676	974190	303		
409.7789	33.924	33.926	0	1.000	331914402	111658032	340706	851765	328	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.005	35.010	0	1.082	13509696	4047534	15981	39952	253		
419.8220	35.005	35.010	0	1.082	30824152	9120201	34202	85505	267	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.017	35.020	0	1.000	303260617	91538482	389676	974190	235		
409.7789	35.017	35.020	0	1.000	287294695	87143866	340706	851765	256	1.06(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.714	34.716	0	1.073	19890119	6131671	10444	26110	587		
437.8140	34.714	34.716	0	1.073	19505713	6051375	10100	25250	599	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.726	34.726	0	1.000	225857690	69087451	102453	256132	674		
425.7737	34.726	34.726	0	1.000	215579786	65898474	103127	257817	639	1.05(0.88-1.20)	
13C-OCDD											
469.7779	37.093	37.094	0	1.147	26710485	6689918	2659	6647	2516		
471.7750	37.093	37.094	0	1.147	29913378	7452640	4311	10777	1729	0.89(0.76-1.02)	
OCDF											
441.7428	37.201	37.199	0	1.003	409115360	108366645	37076	92690	2923		
443.7399	37.201	37.199	0	1.003	447570627	117808946	40434	101085	2914	0.91(0.76-1.02)	
OCDD											
457.7377	37.105	37.106	0	1.000	300559615	76562352	27801	69502	2754		
459.7348	37.105	37.106	0	1.000	335093224	85854399	30277	75692	2836	0.90(0.76-1.02)	

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

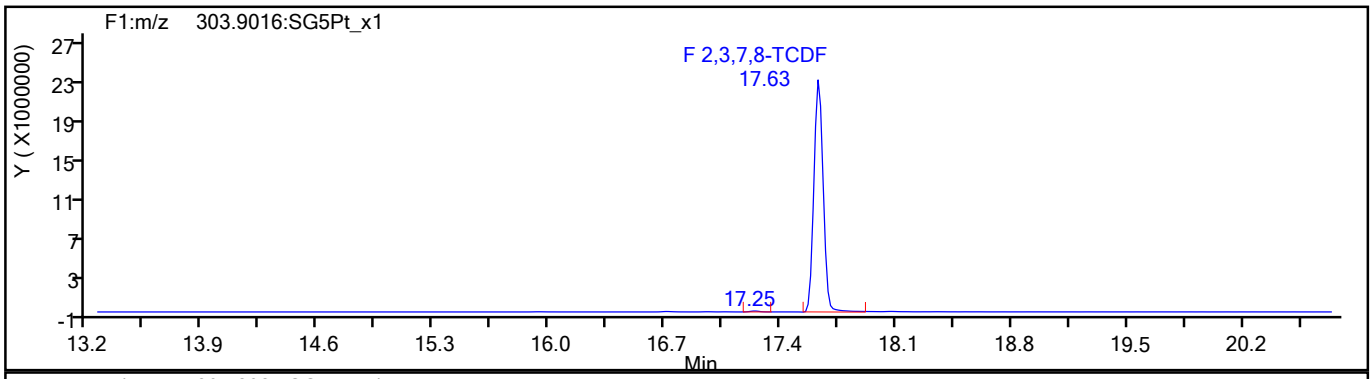

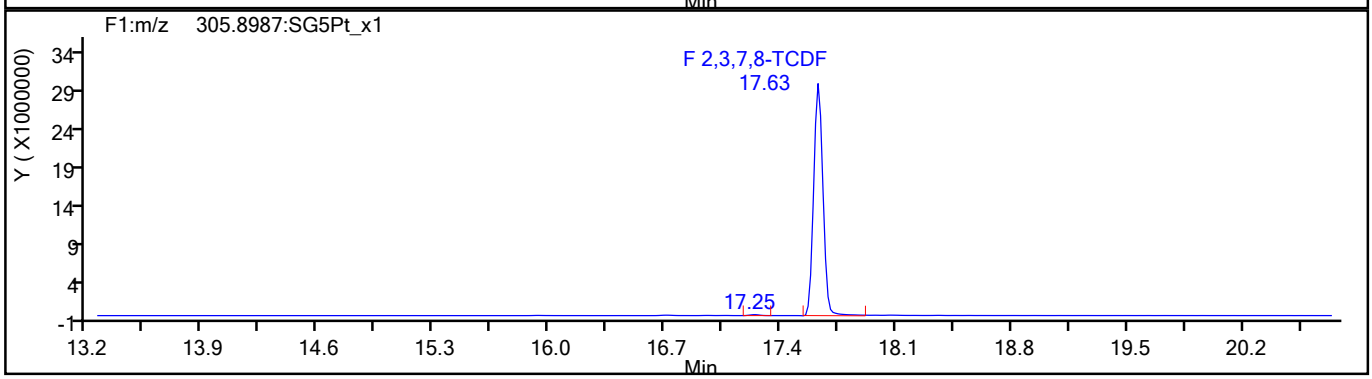

TCDF Standards

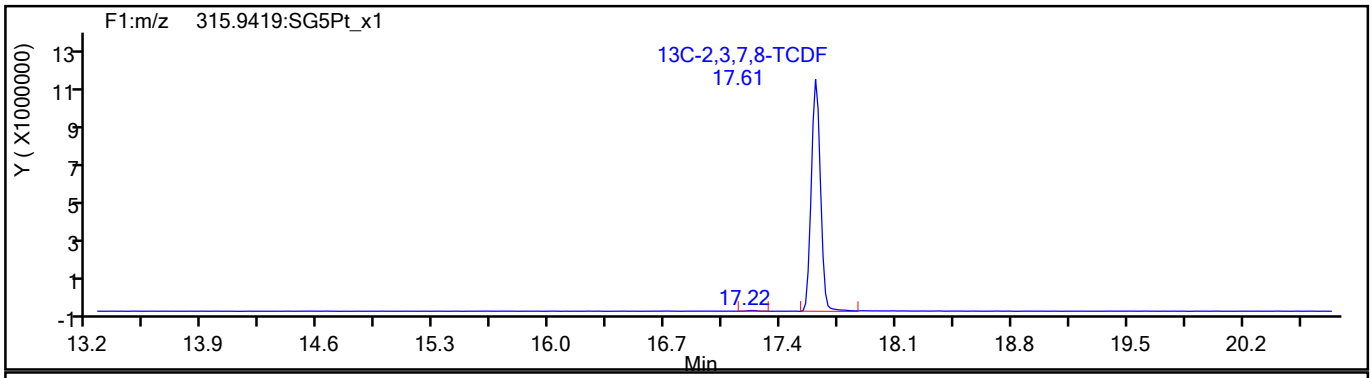

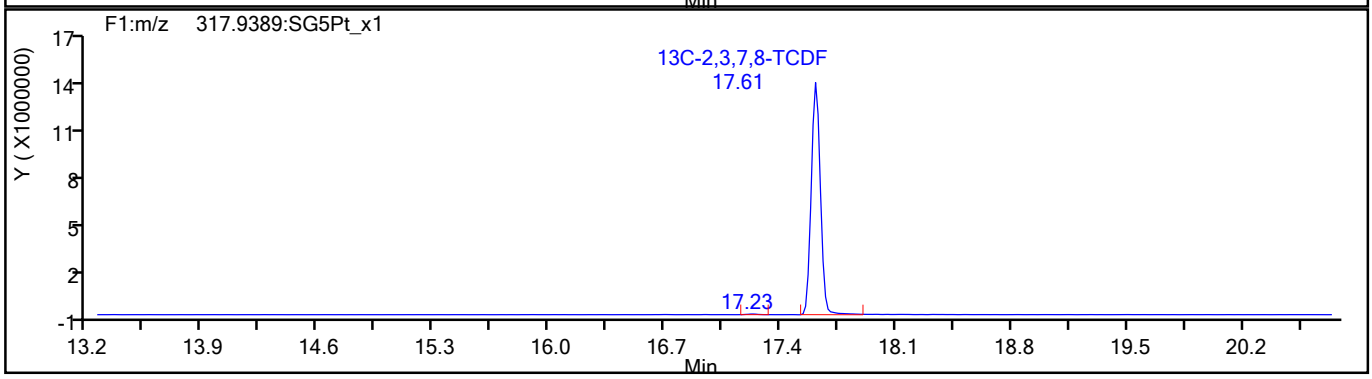

793895

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

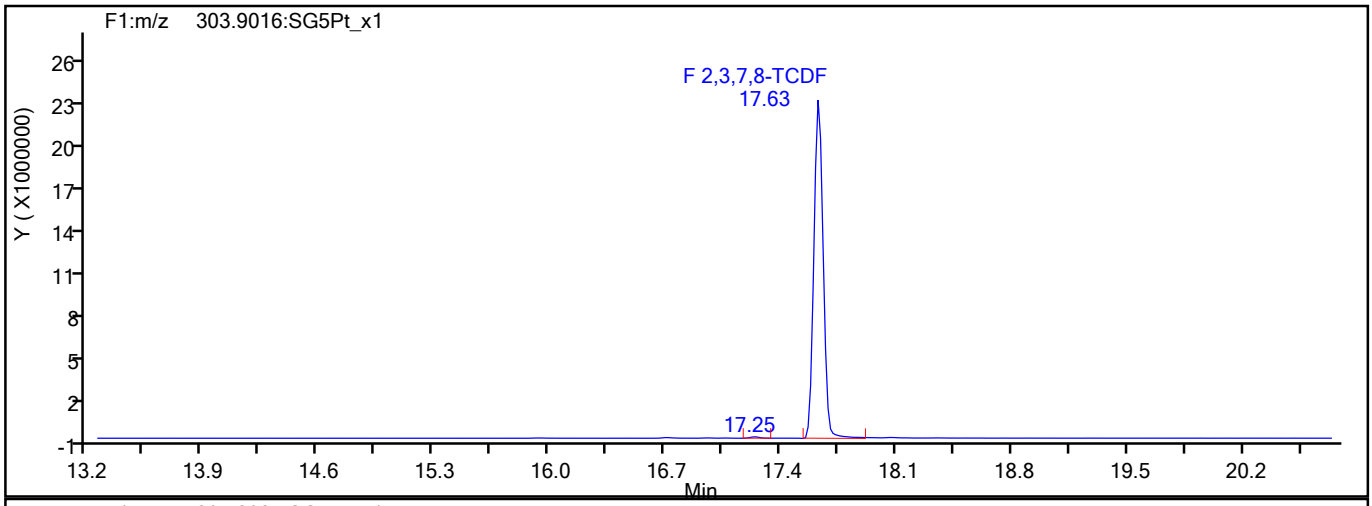

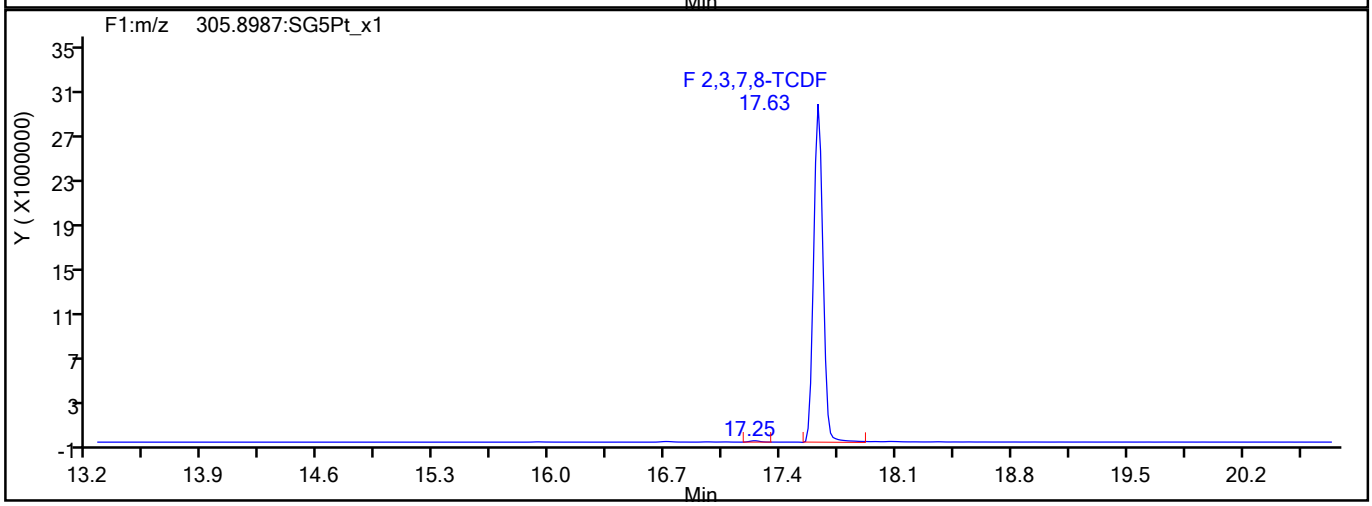

TCDF Interference Mass

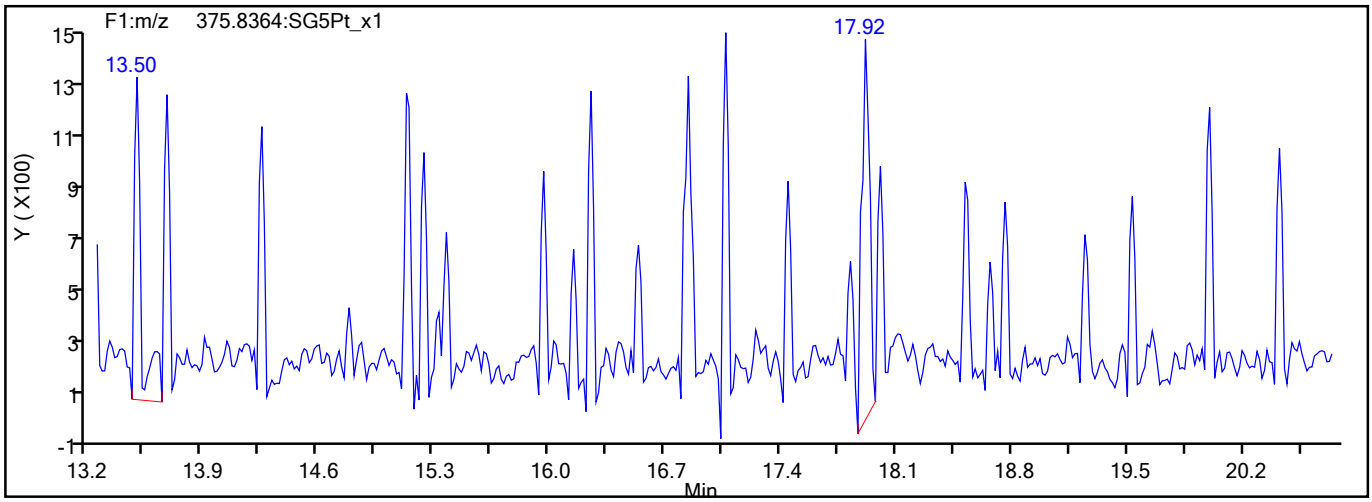

793896

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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TCDD

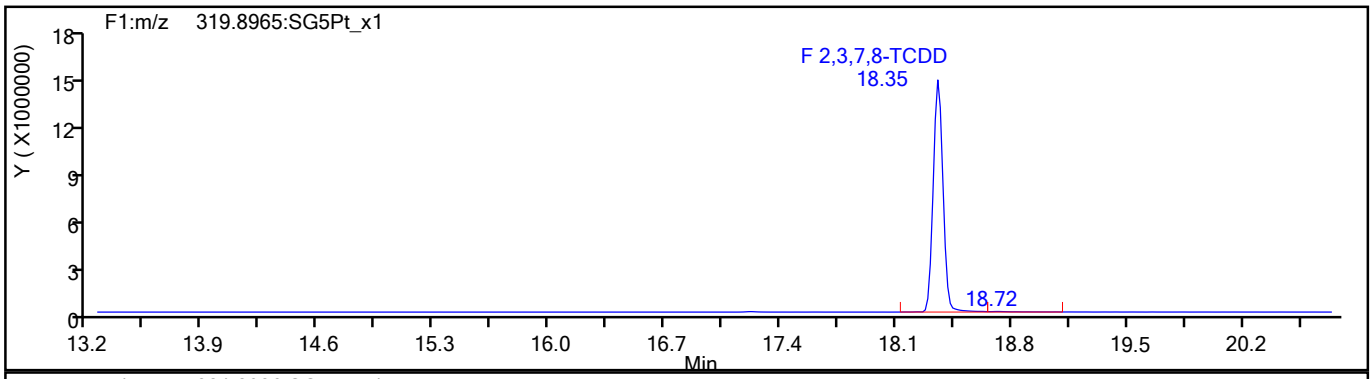

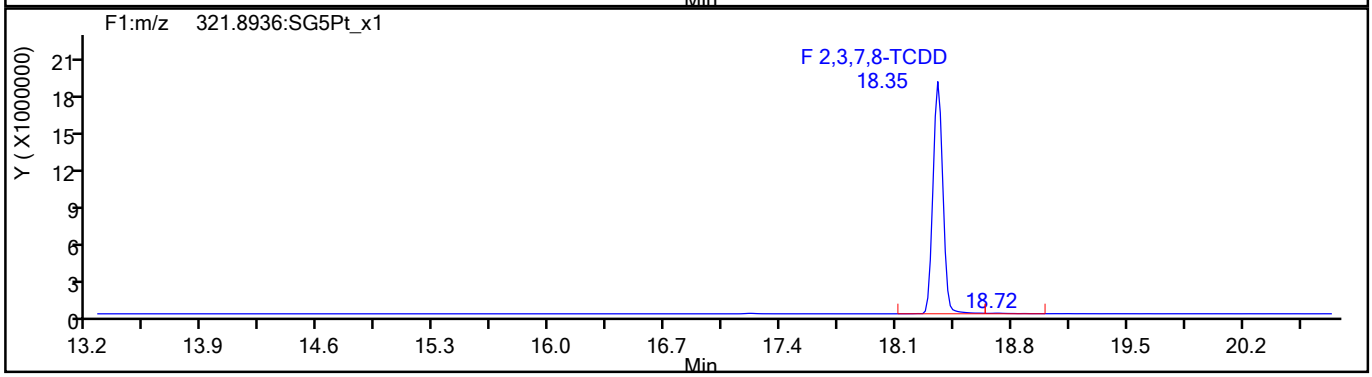

TCDD Standards

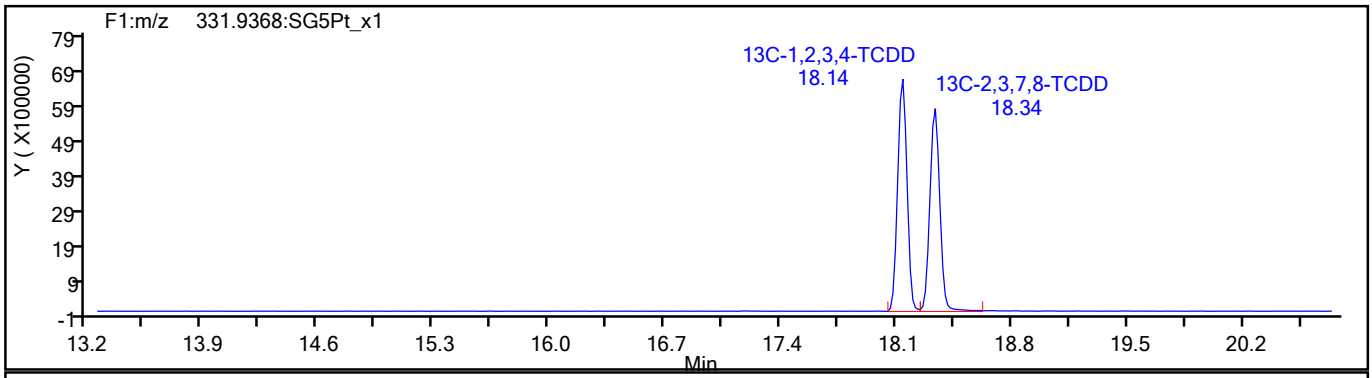

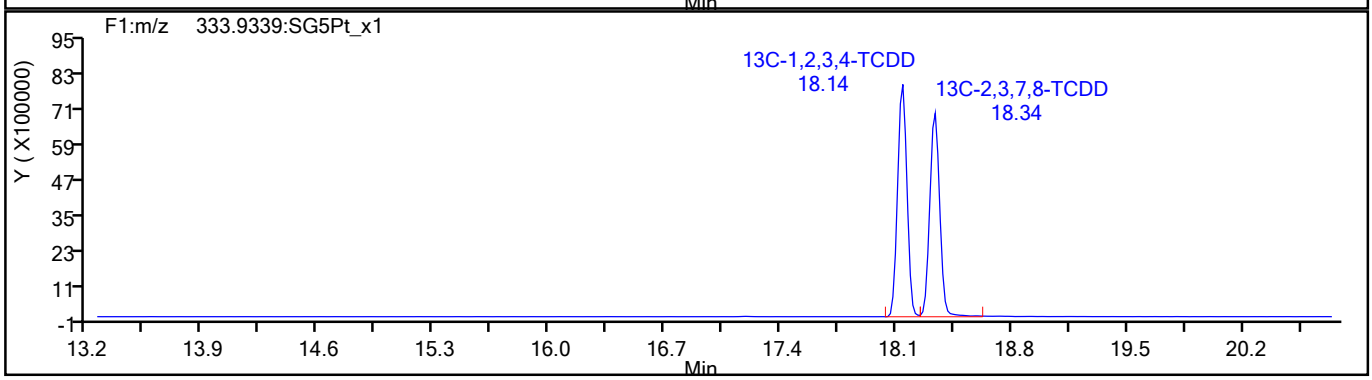

793897

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

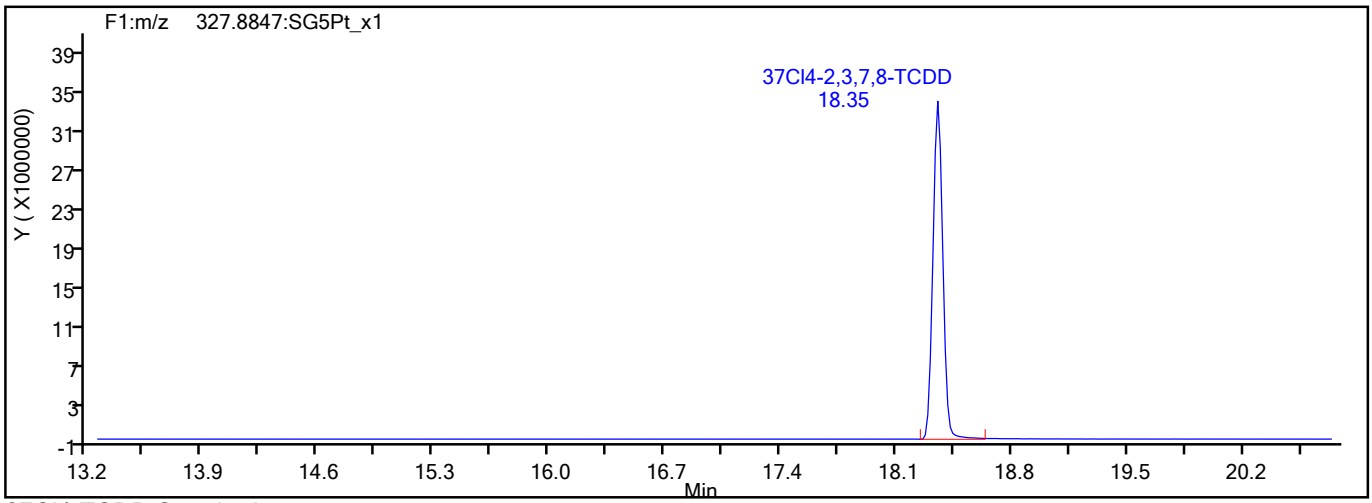

37Cl4-TCDD Standards

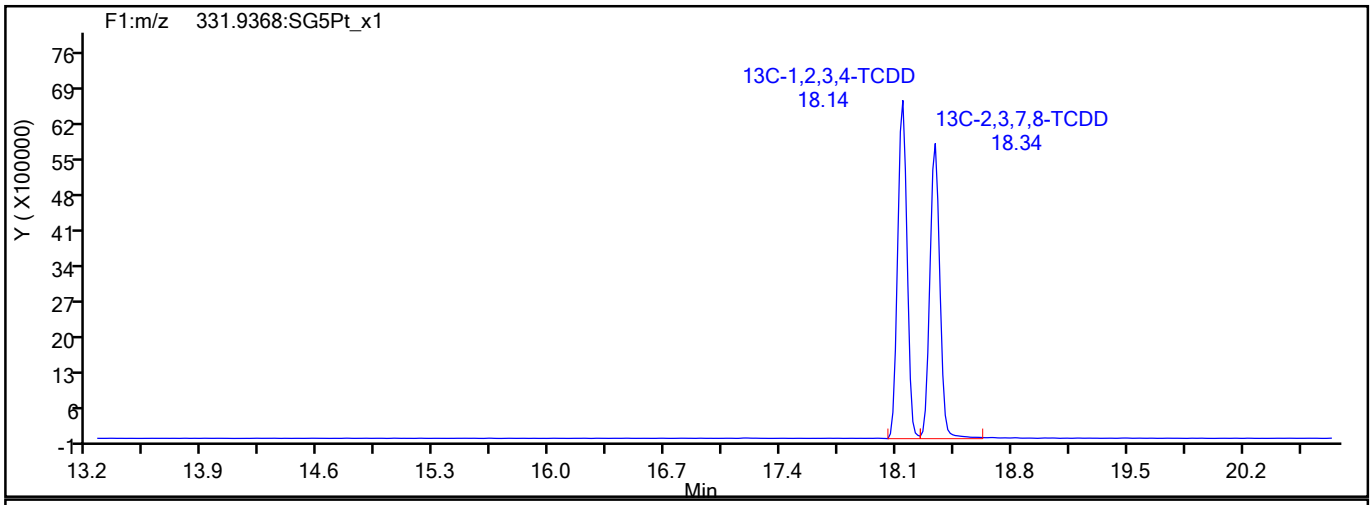

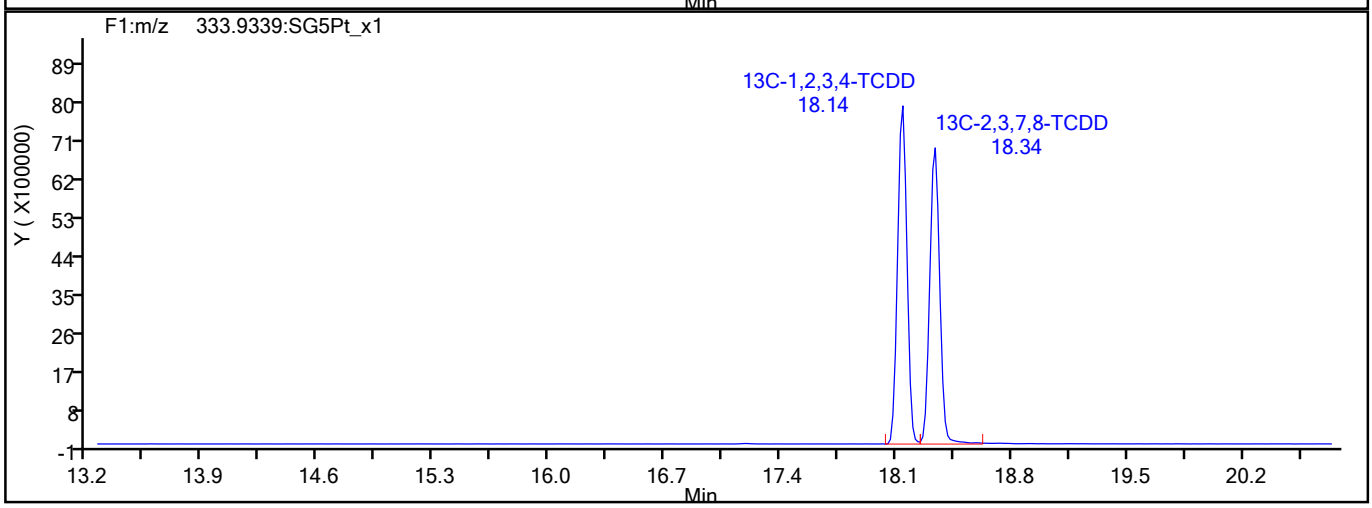

793898

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

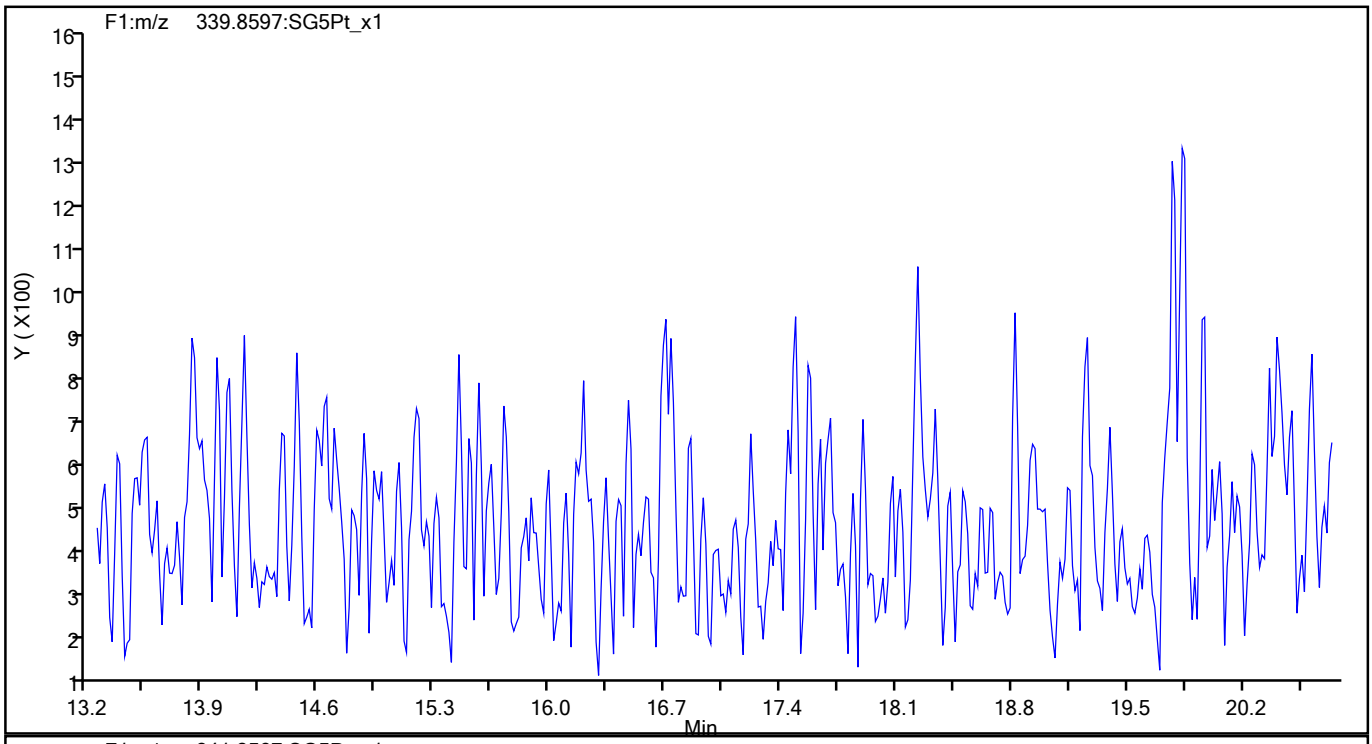

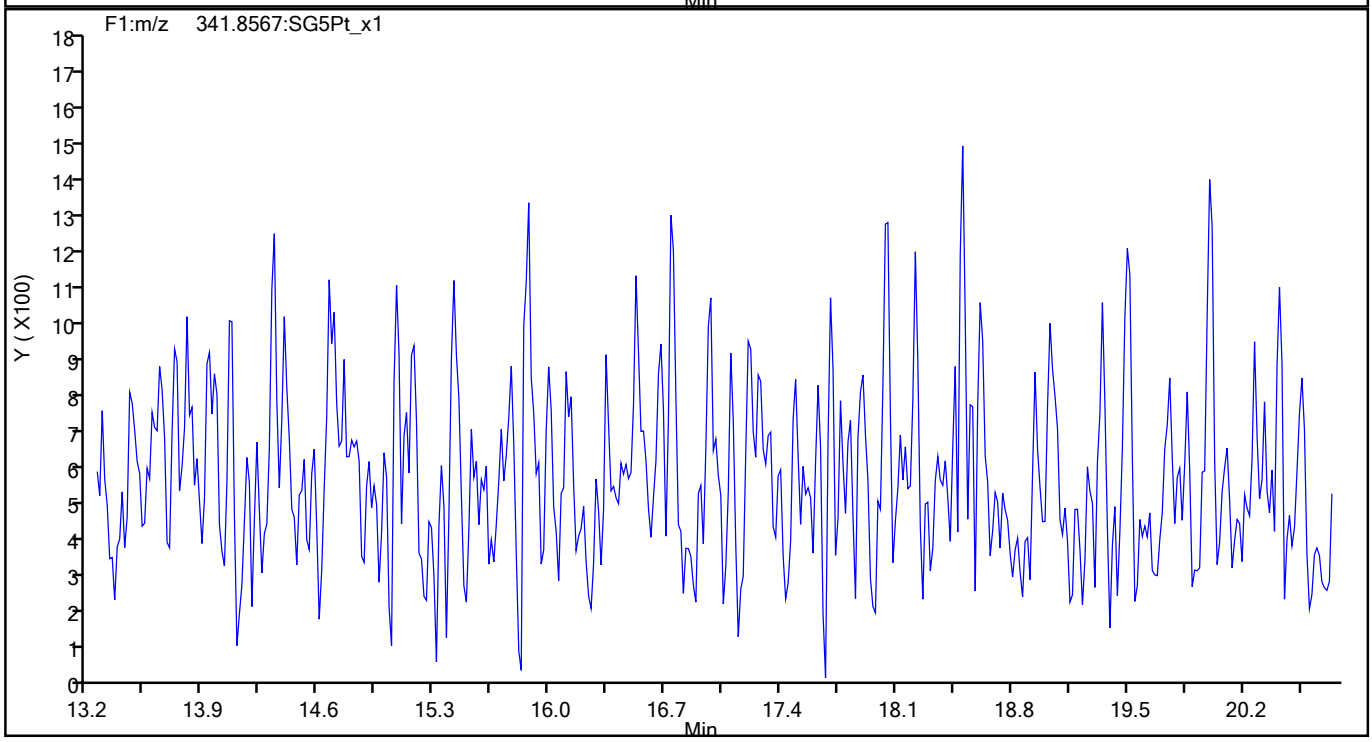

793899

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Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

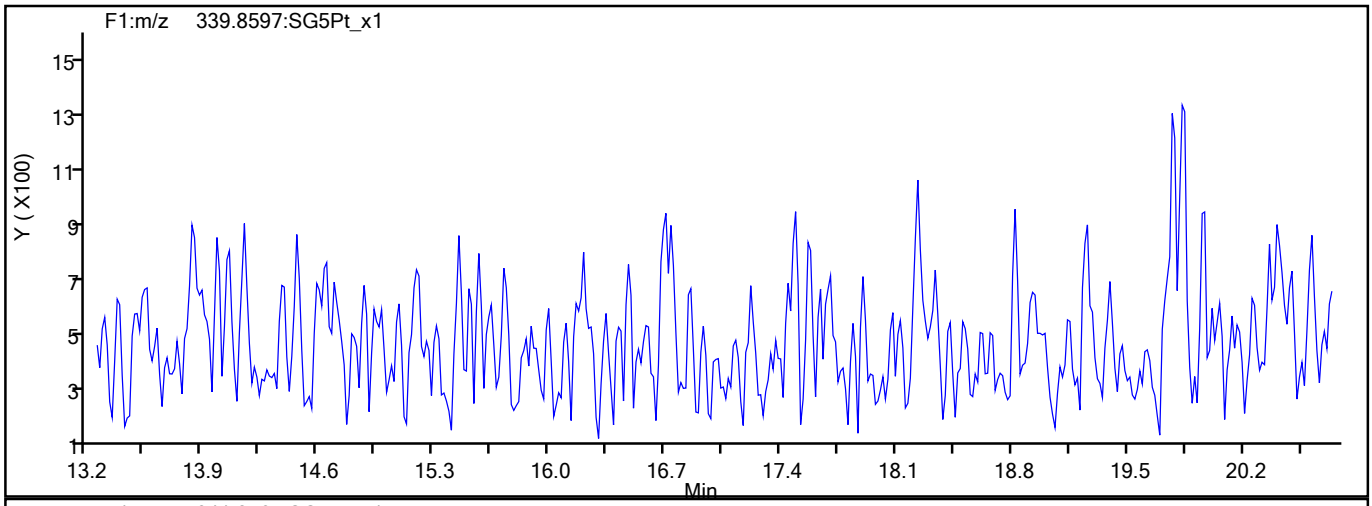

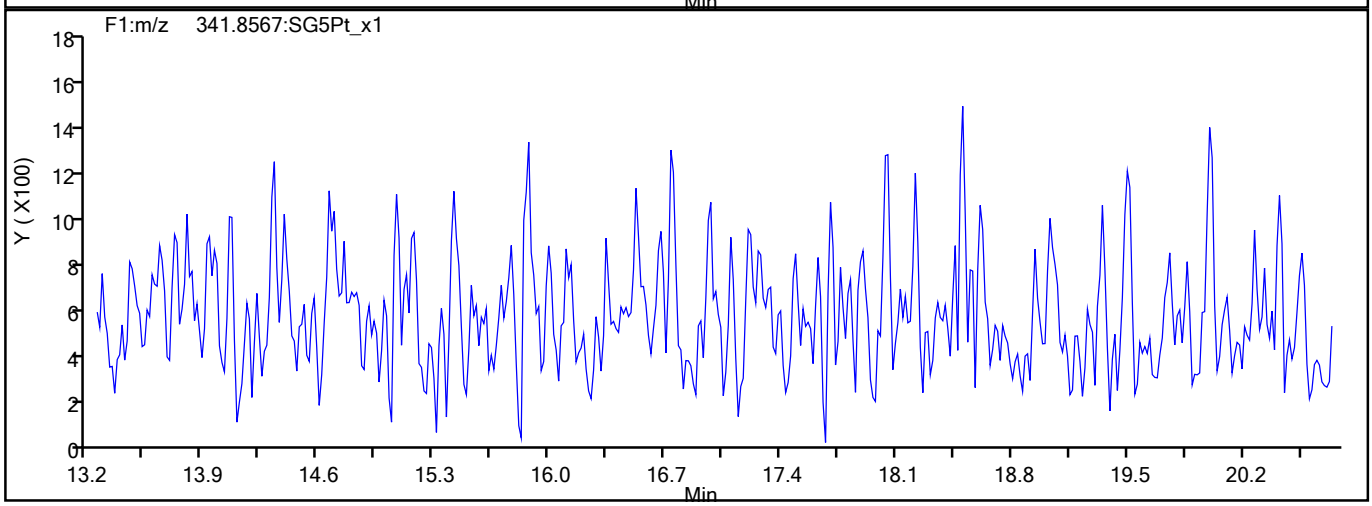

F1 PeCDFs Interference Mass

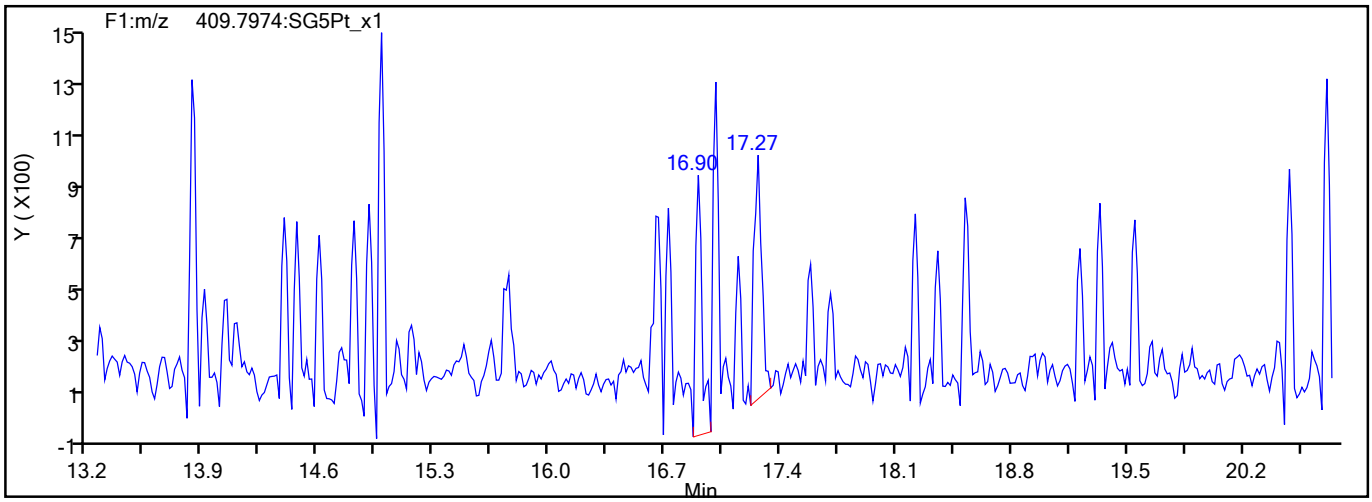

793900

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

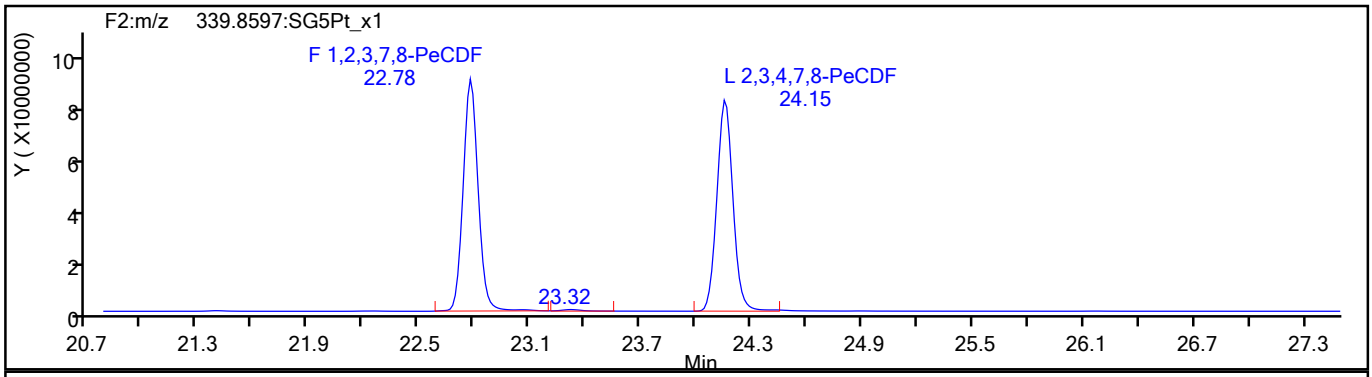

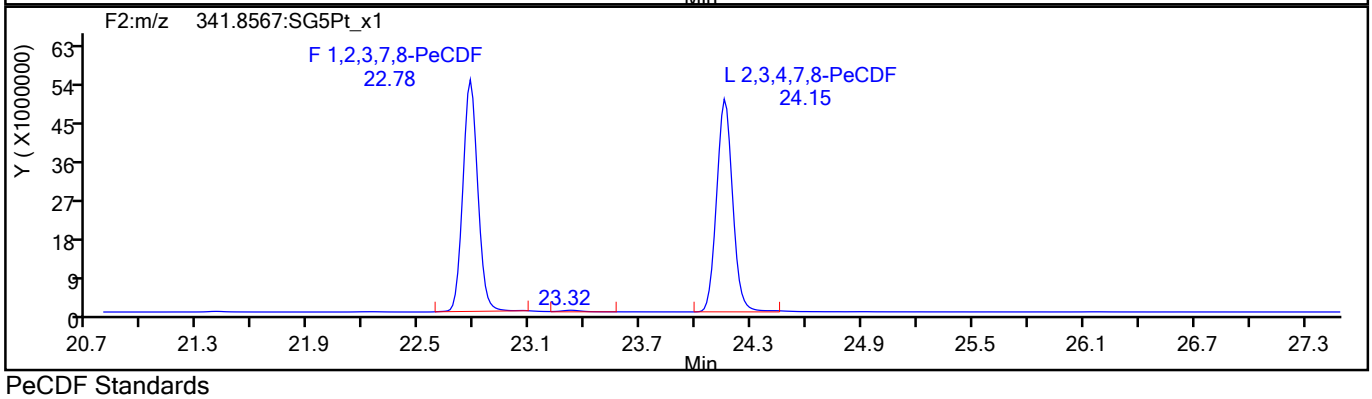

PeCDF Standards

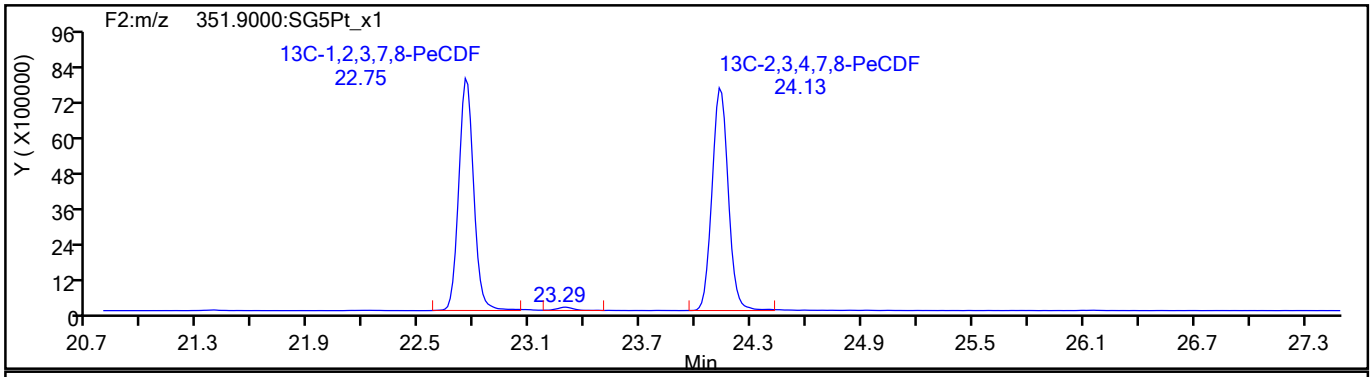

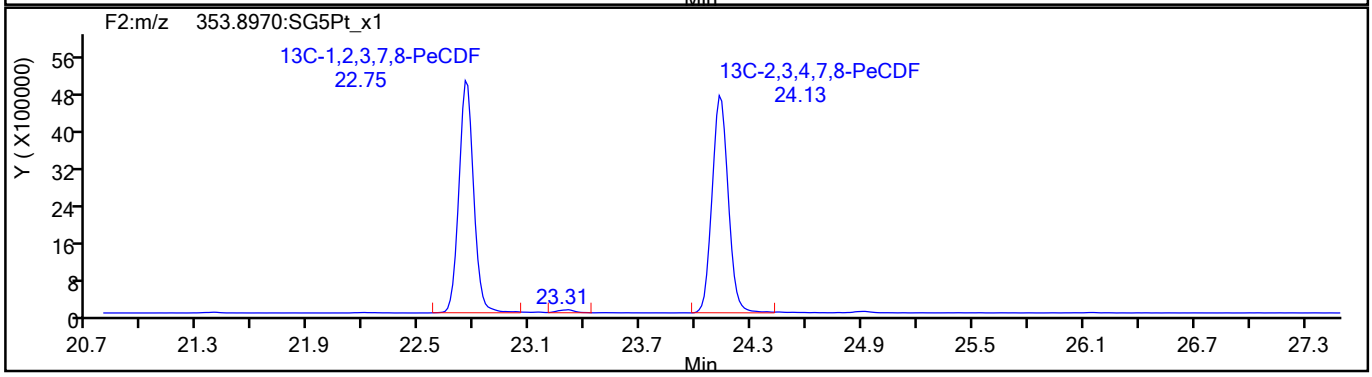

793901

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

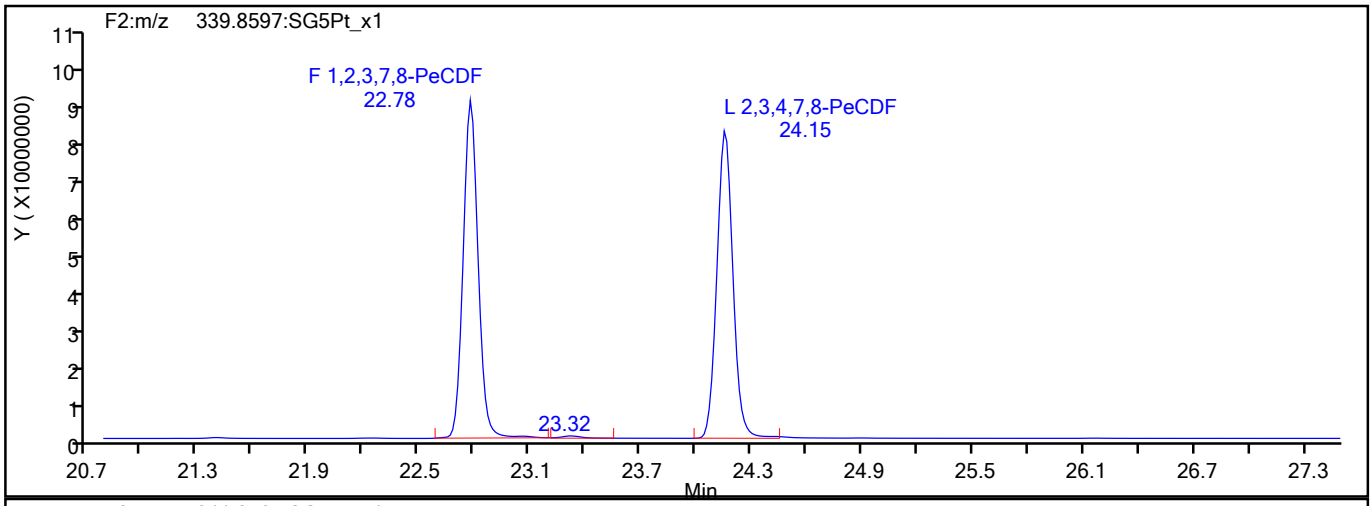

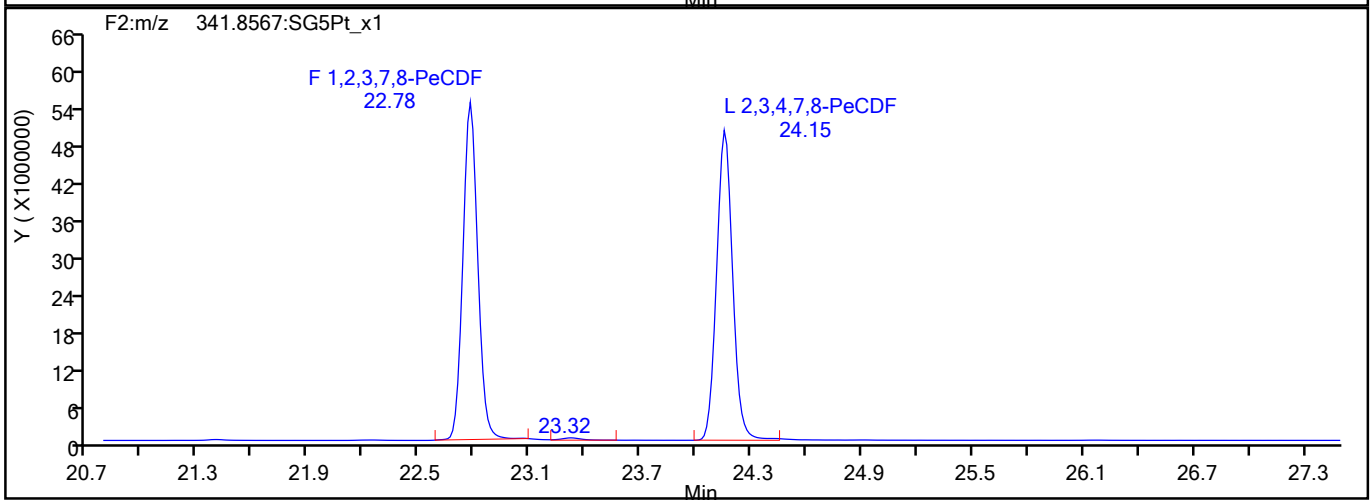

PeCDF Interference Mass

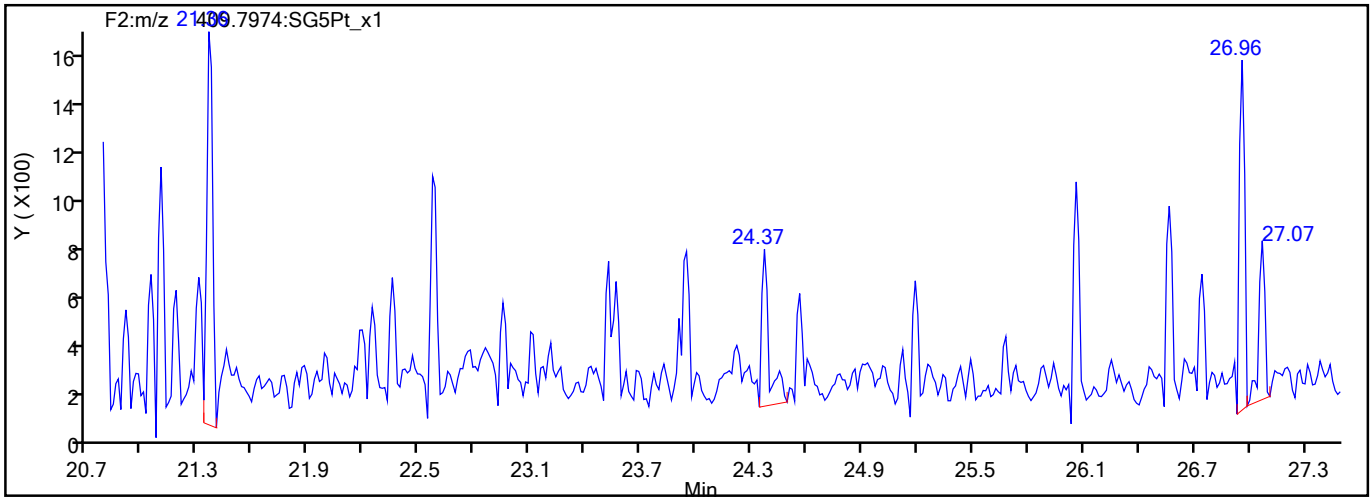

793902

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDD

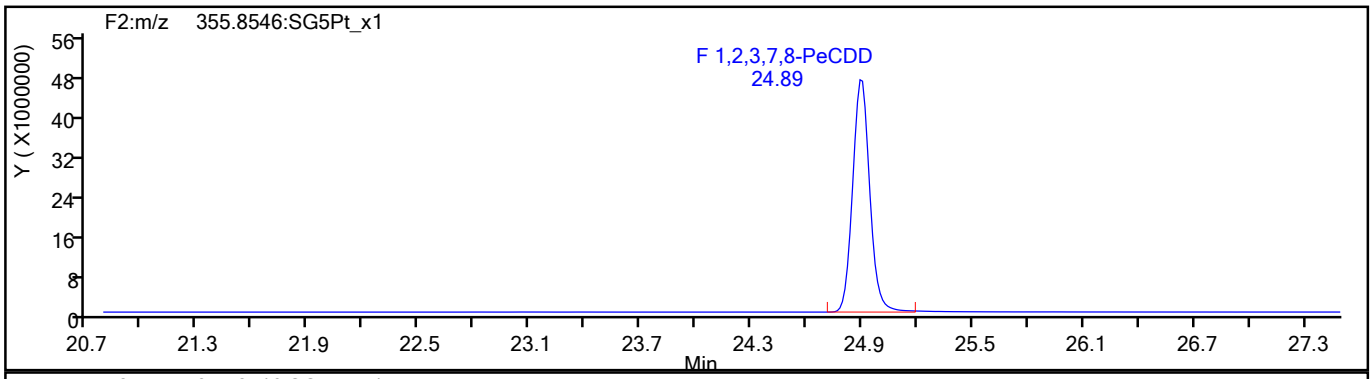

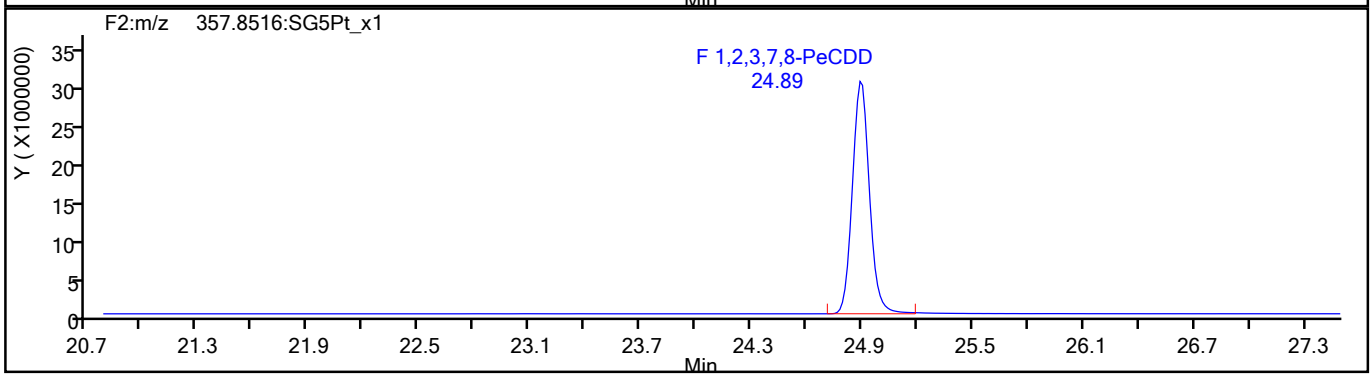

PeCDD Standards

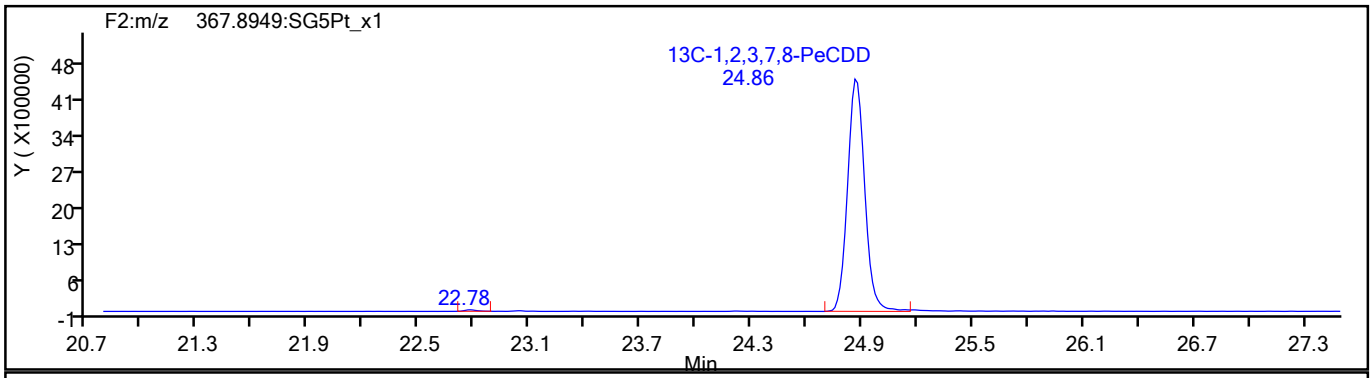

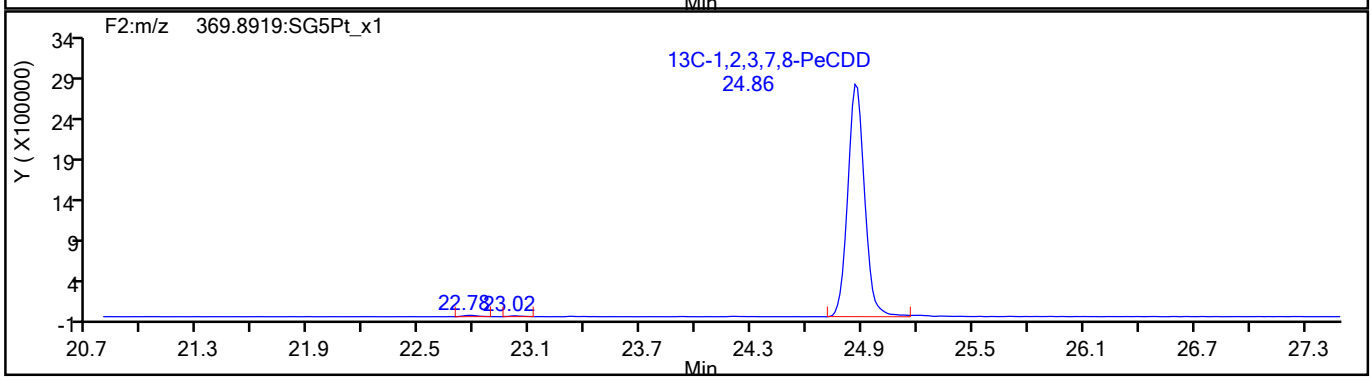

793903

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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HxCDF

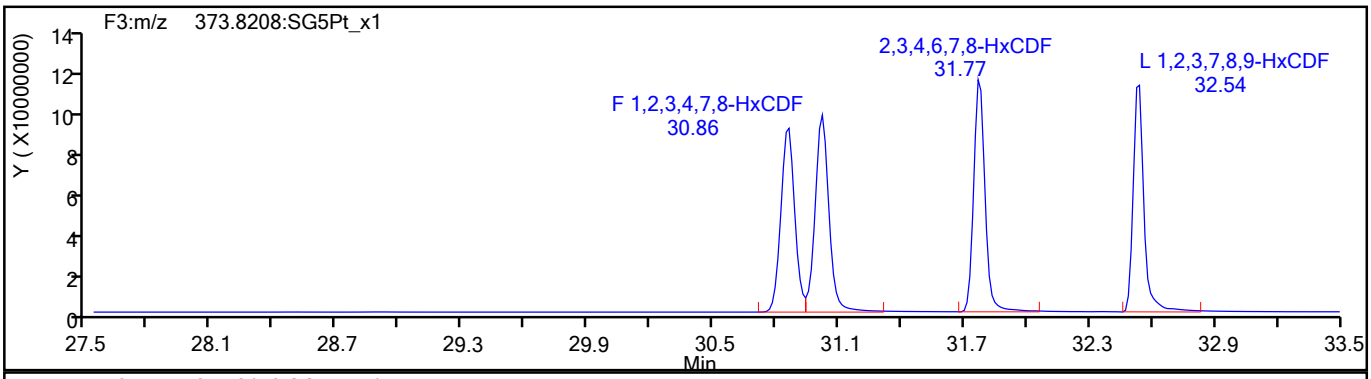

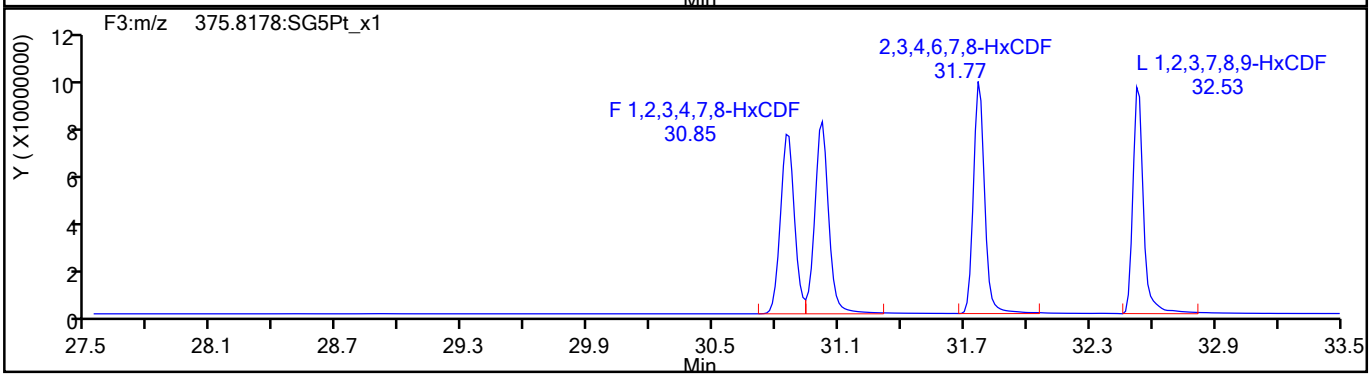

HxCDF Standards

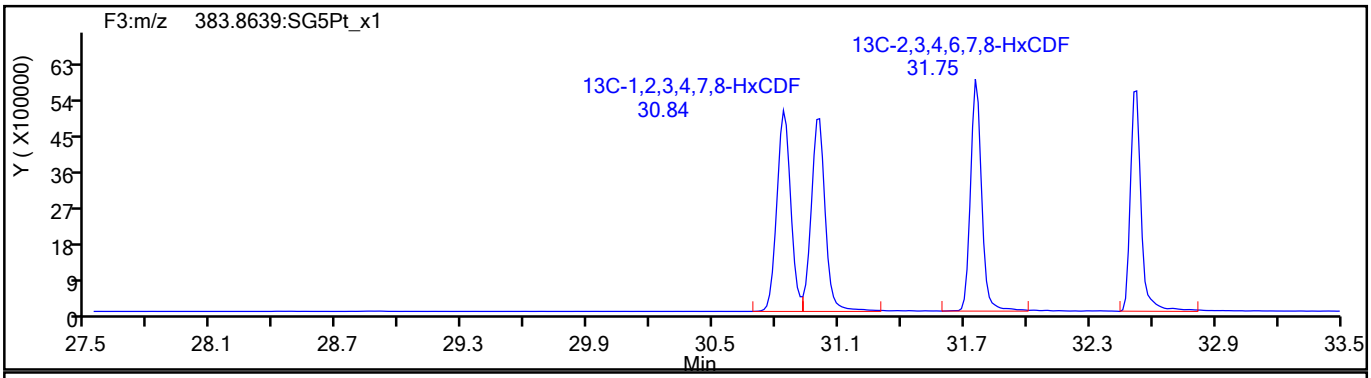

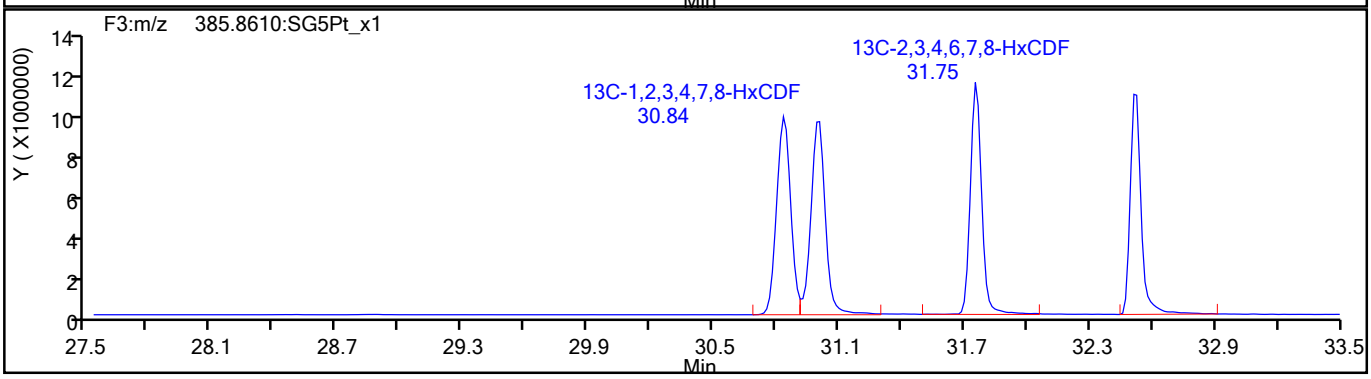

793904

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

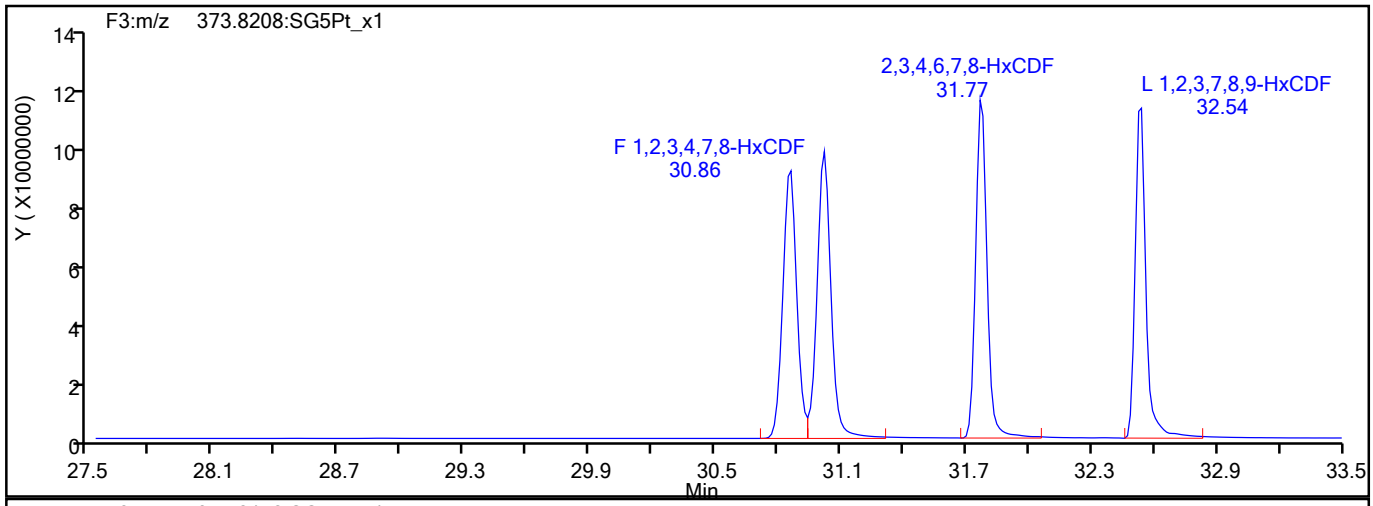

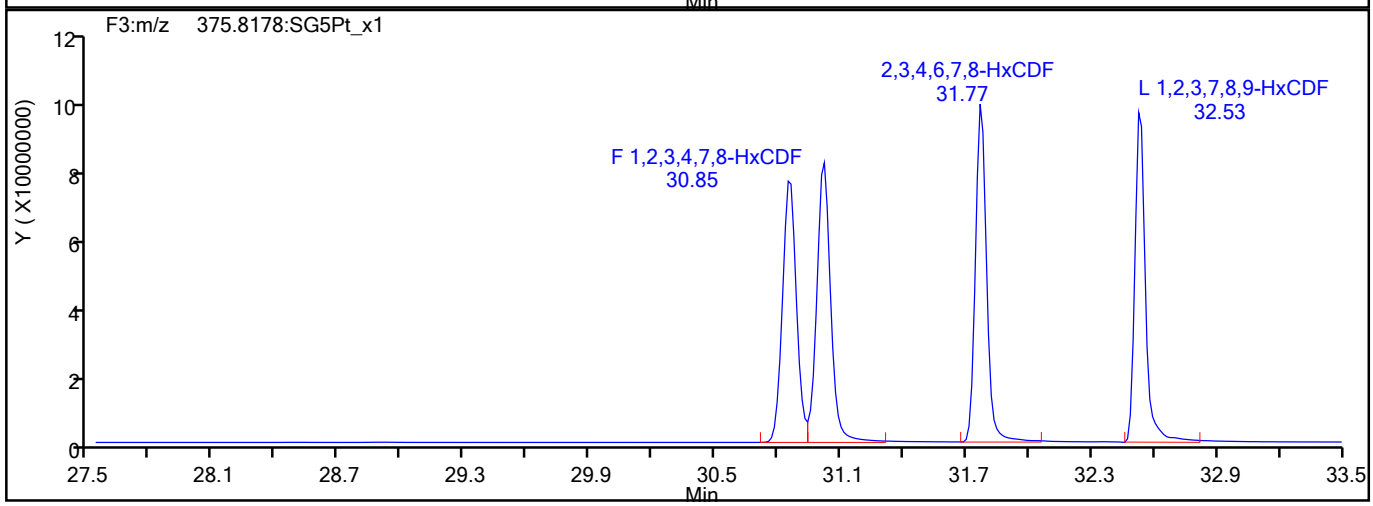

HxCDF Interference Mass

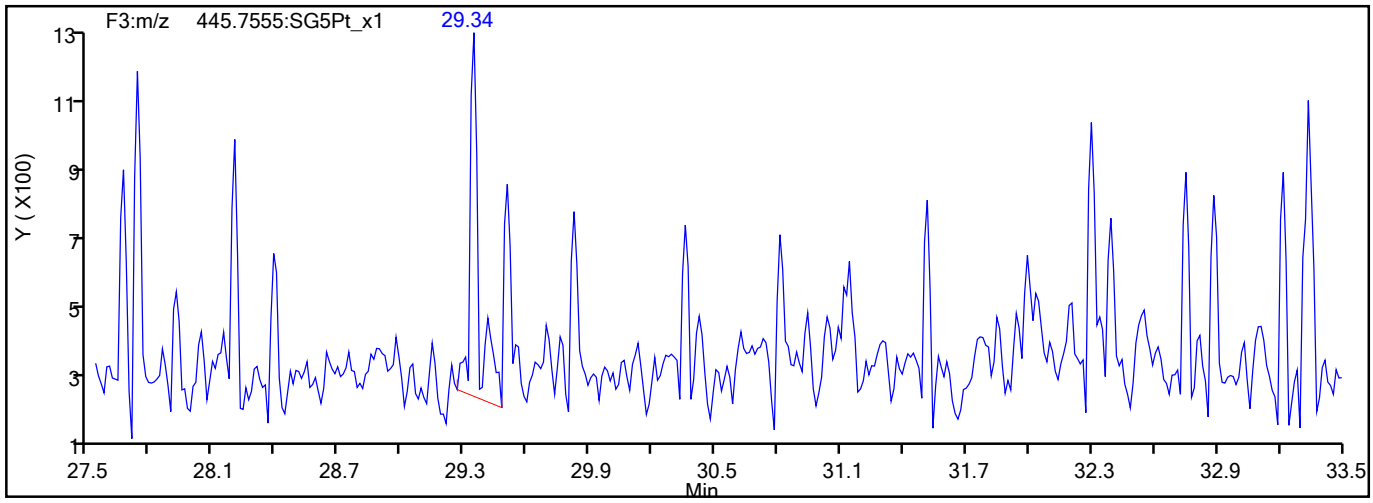

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Eurofins TestAmerica, Sacramento

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HxCDD

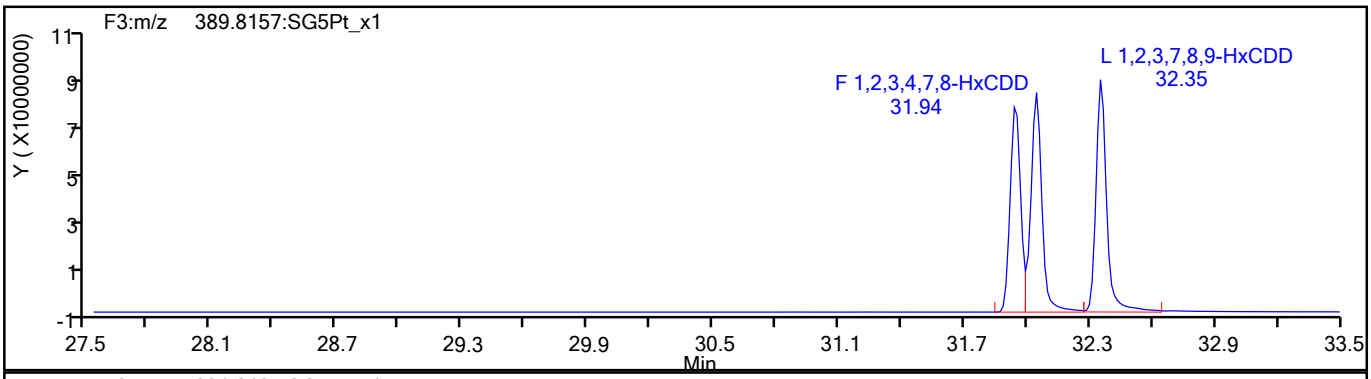

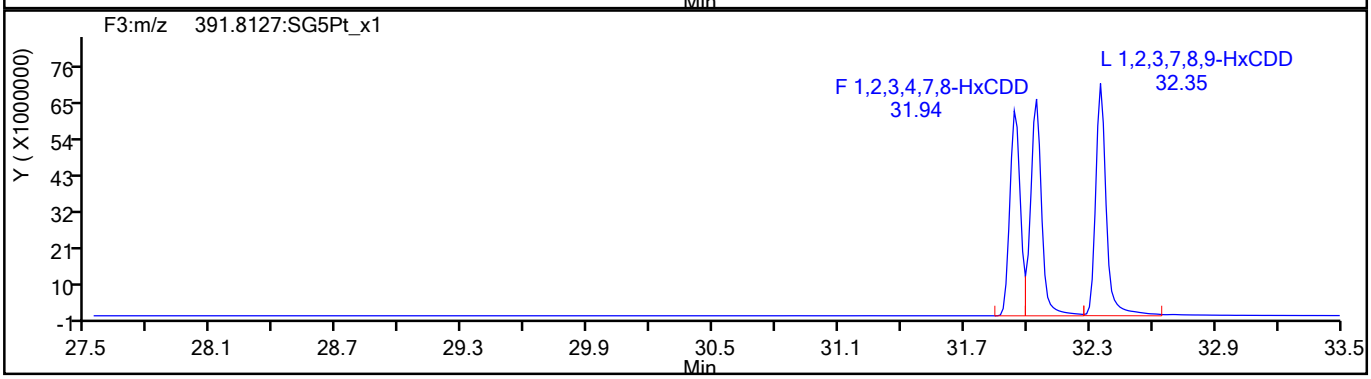

HxCDD Standards

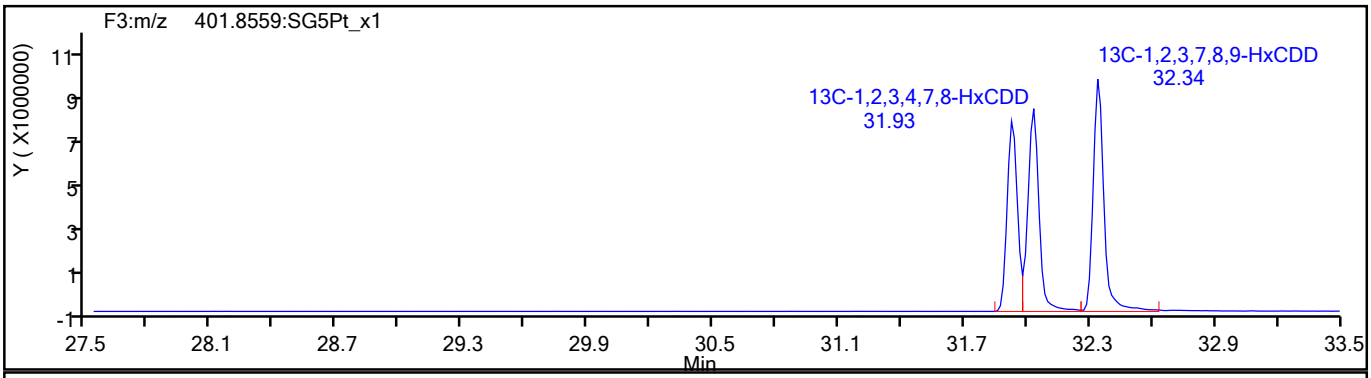

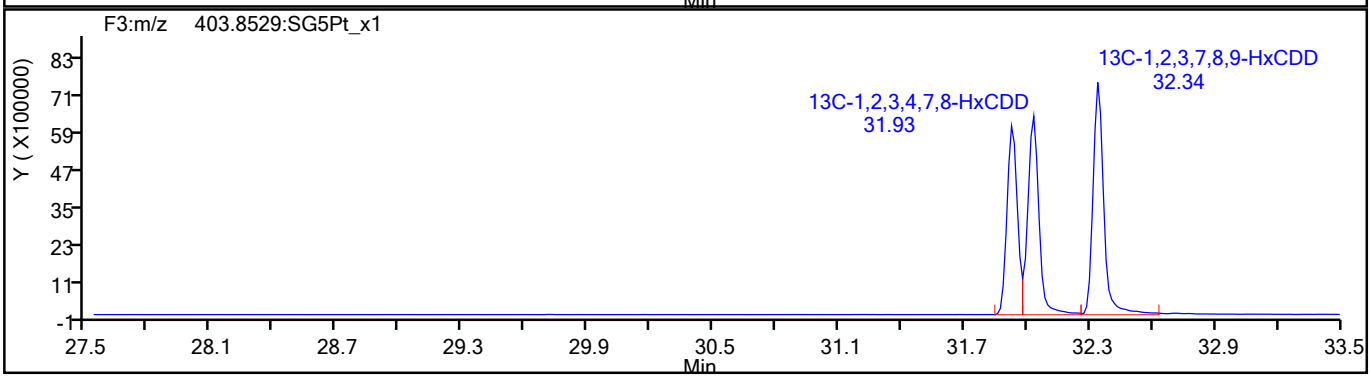

793906

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

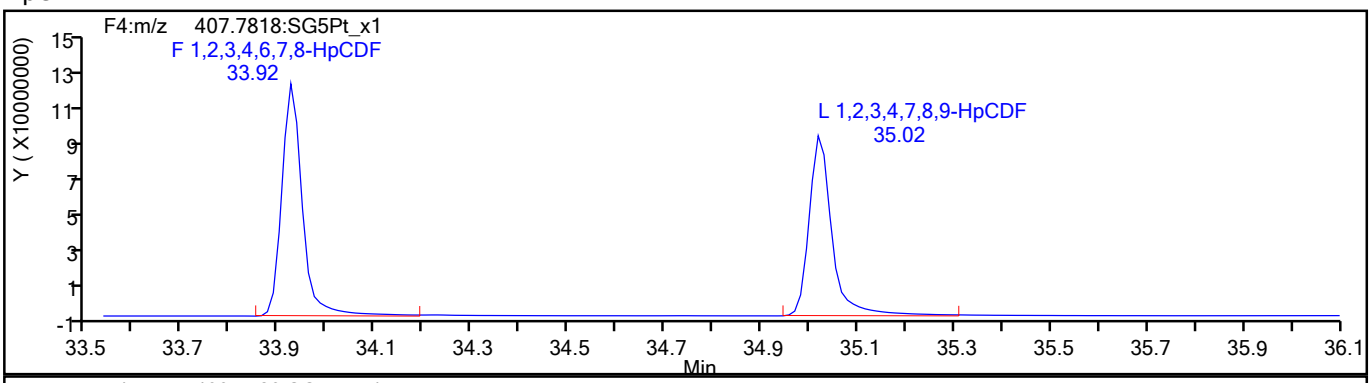

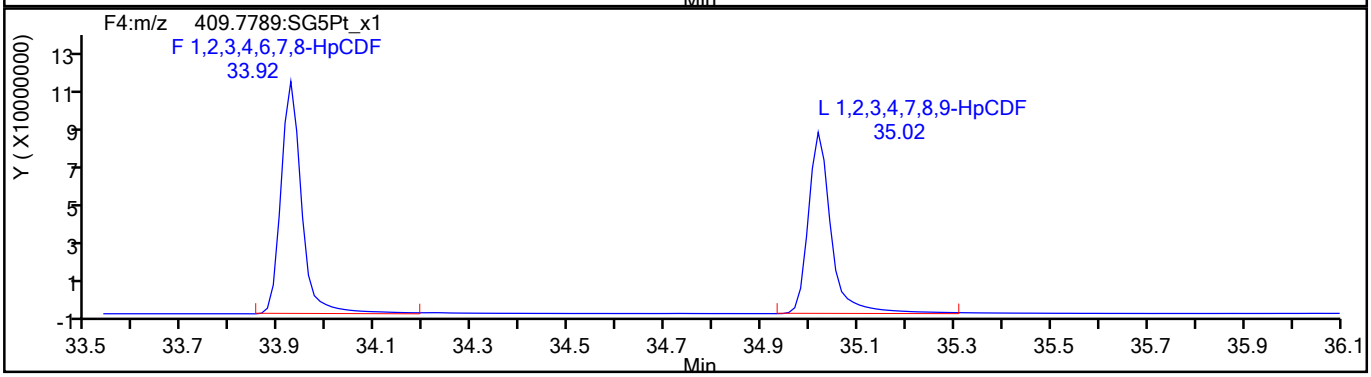

HpCDF Standards

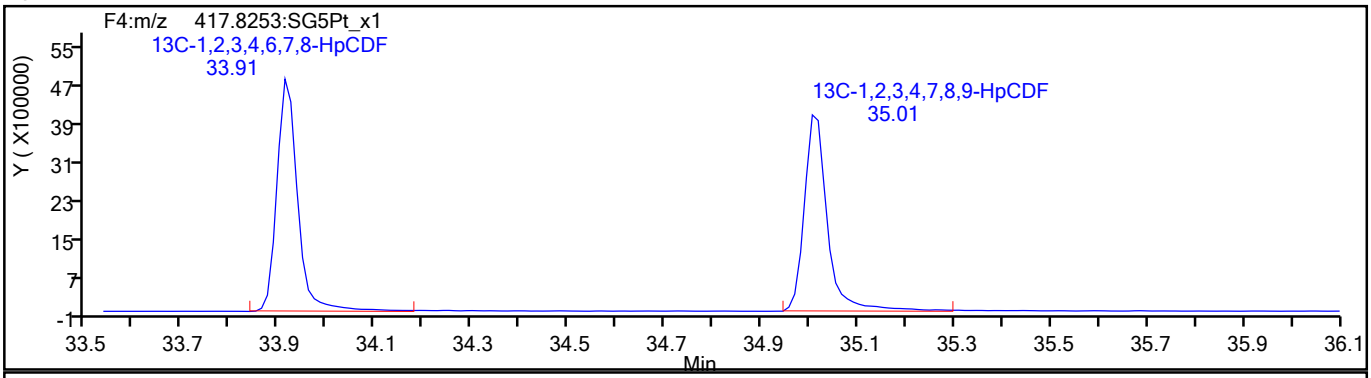

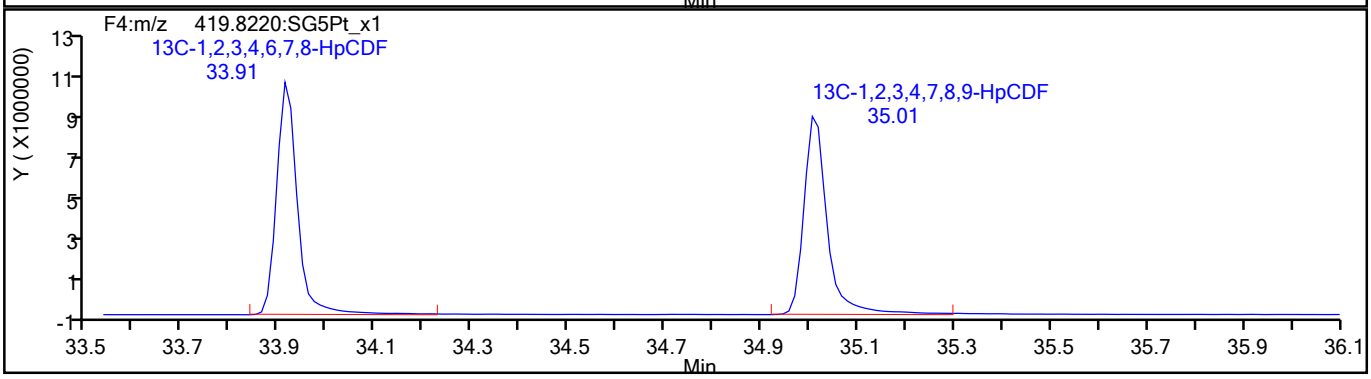

793907

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

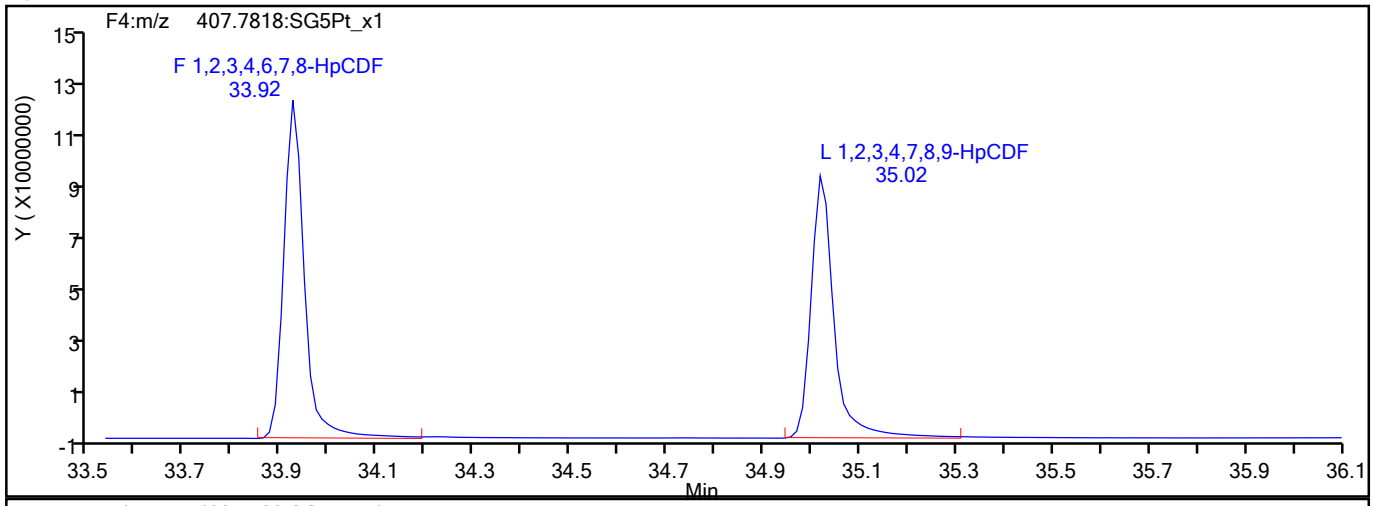

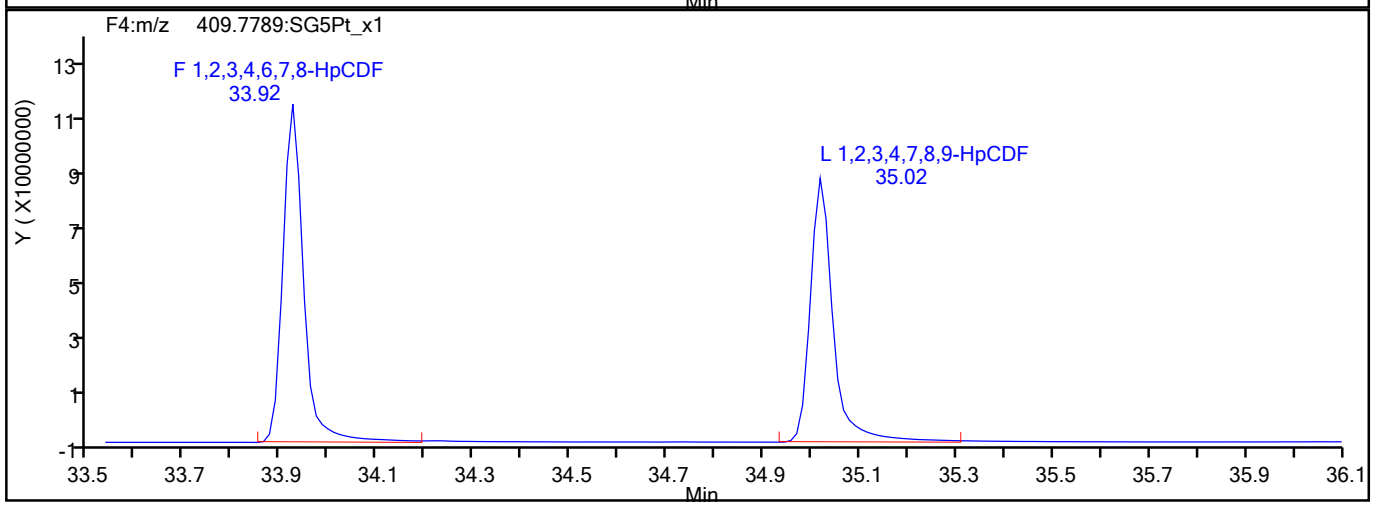

HpCDF Interference Mass

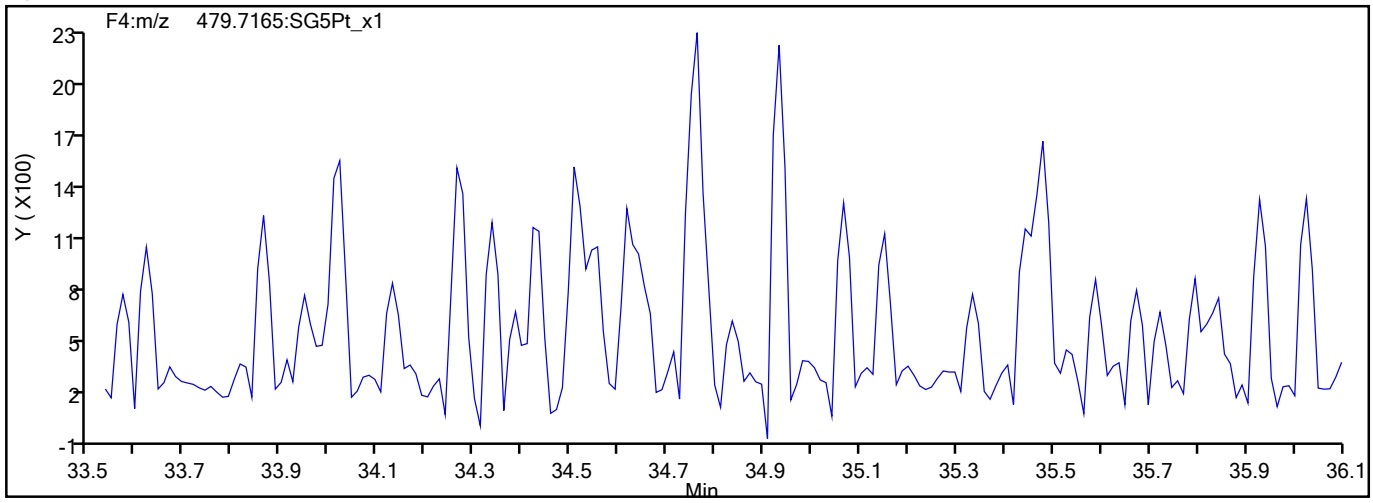

793908

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

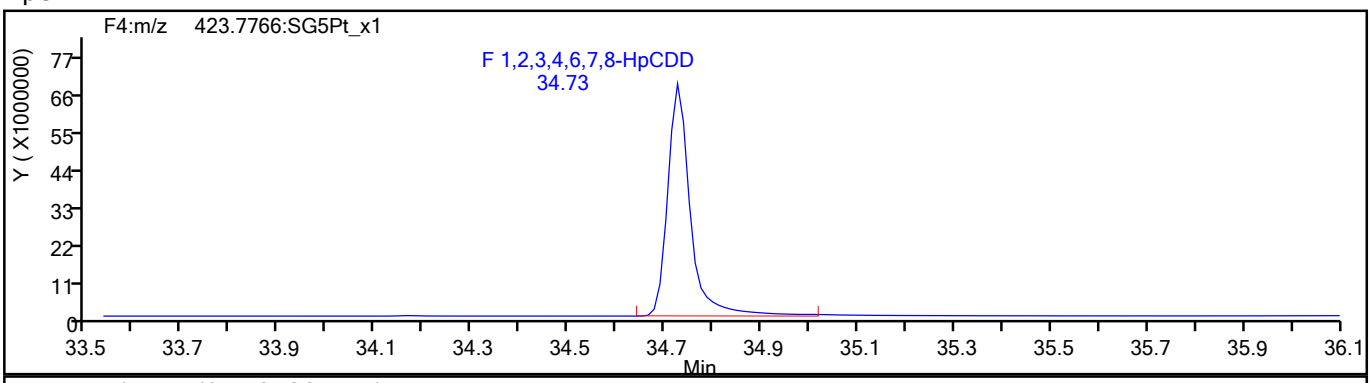

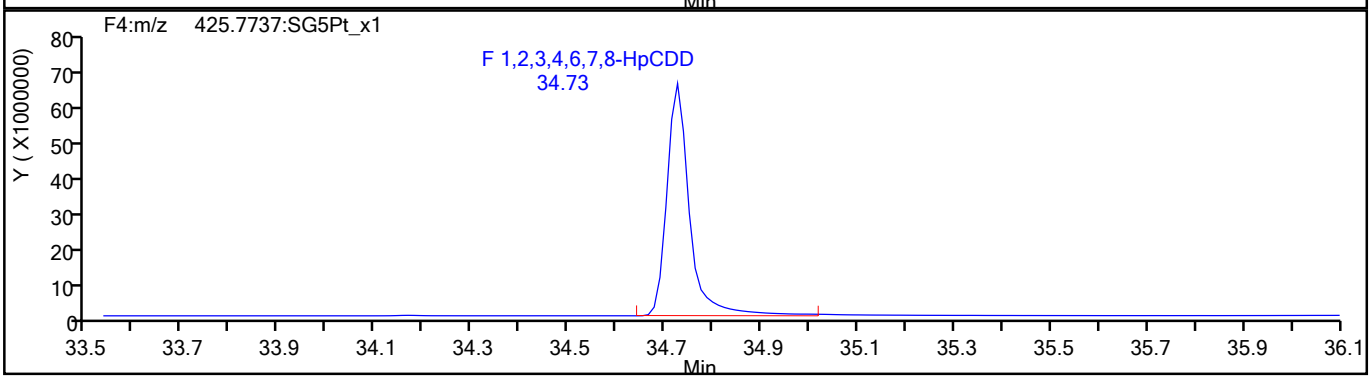

HpCDD Standards

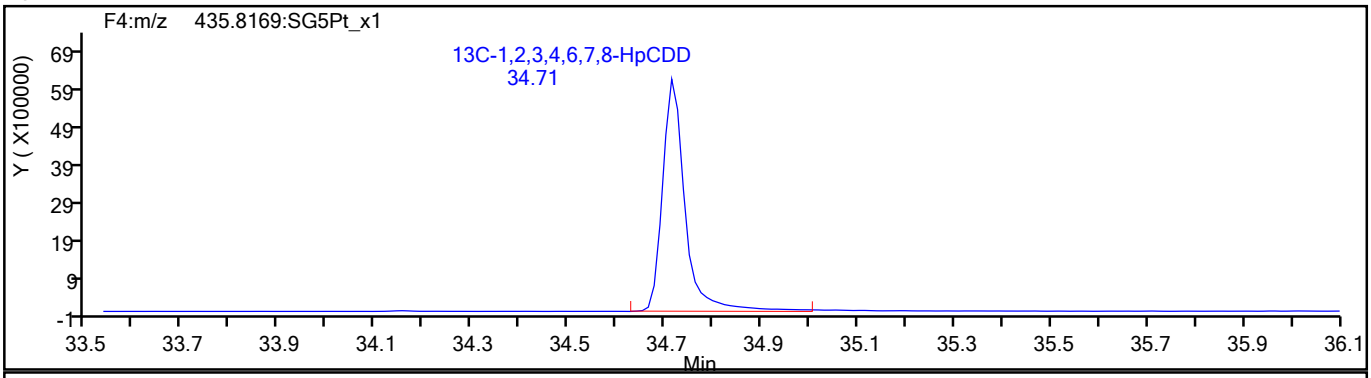

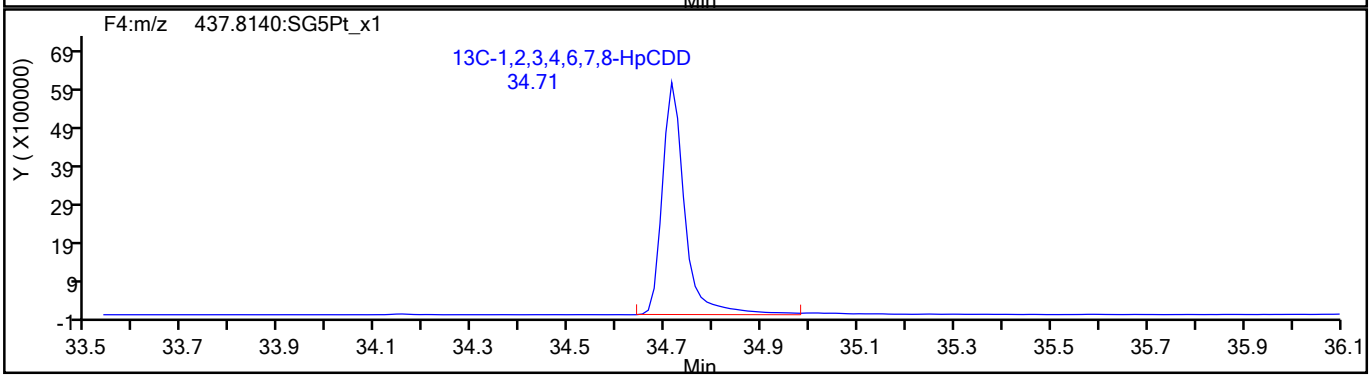

793909

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

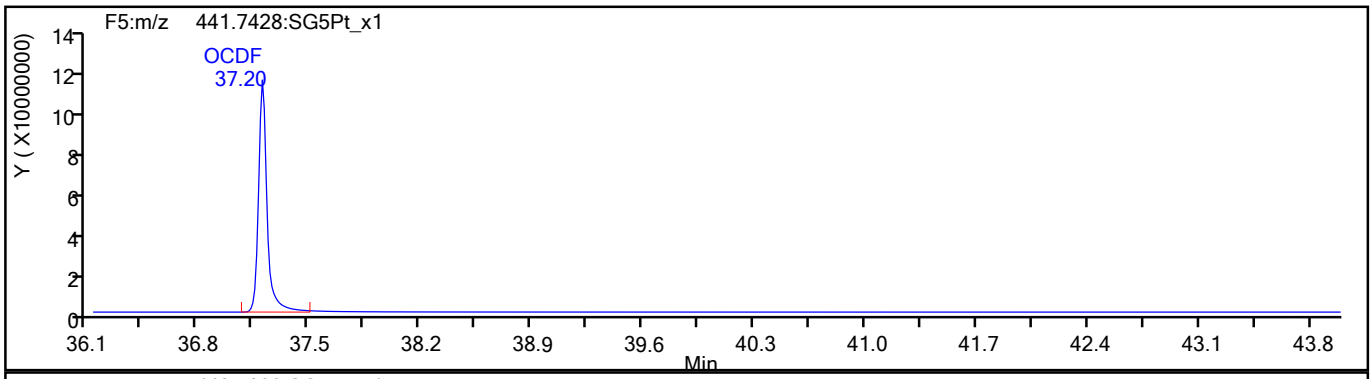

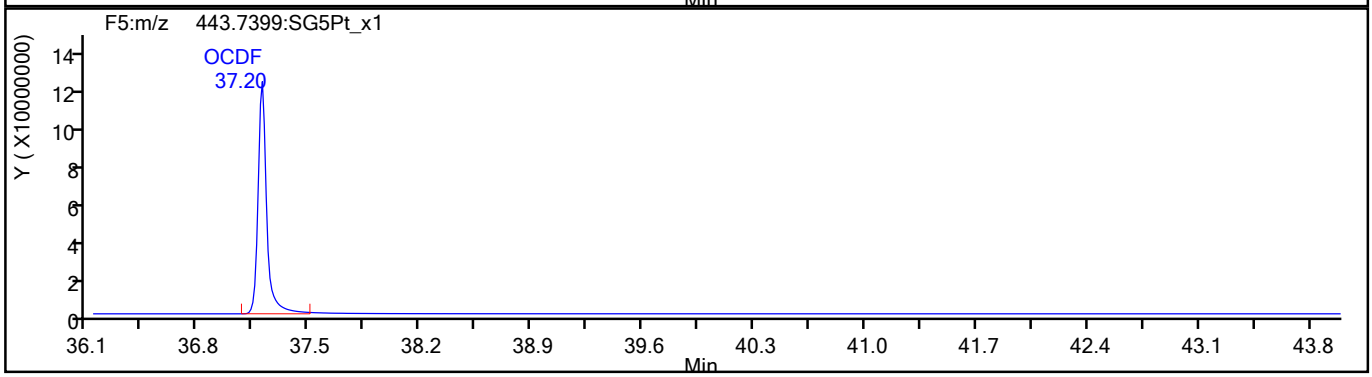

OCDF Standards

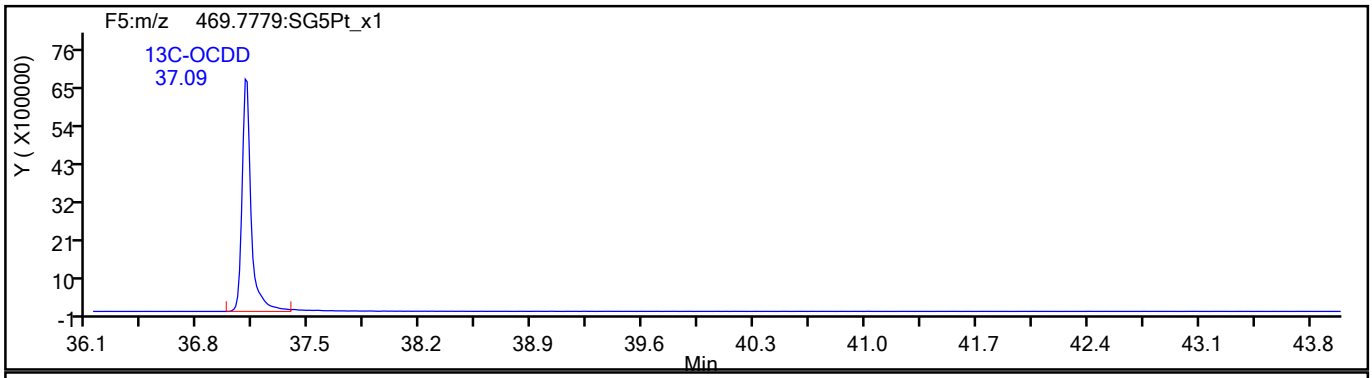

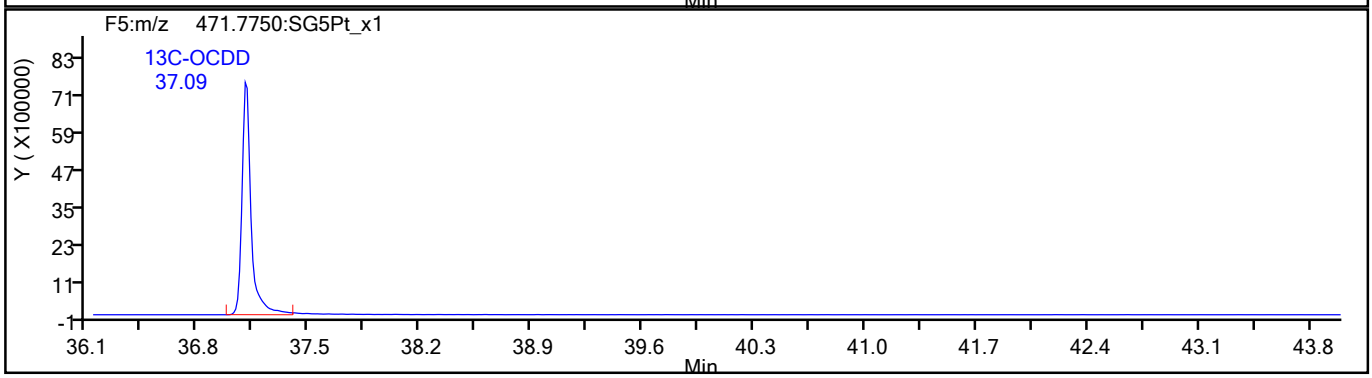

793910

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

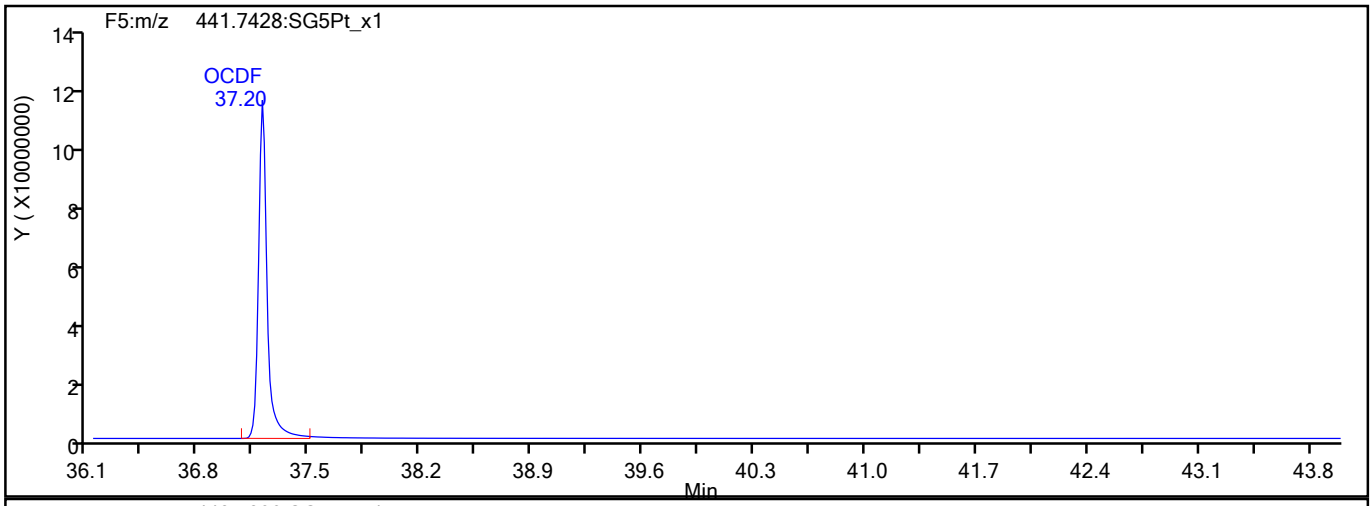

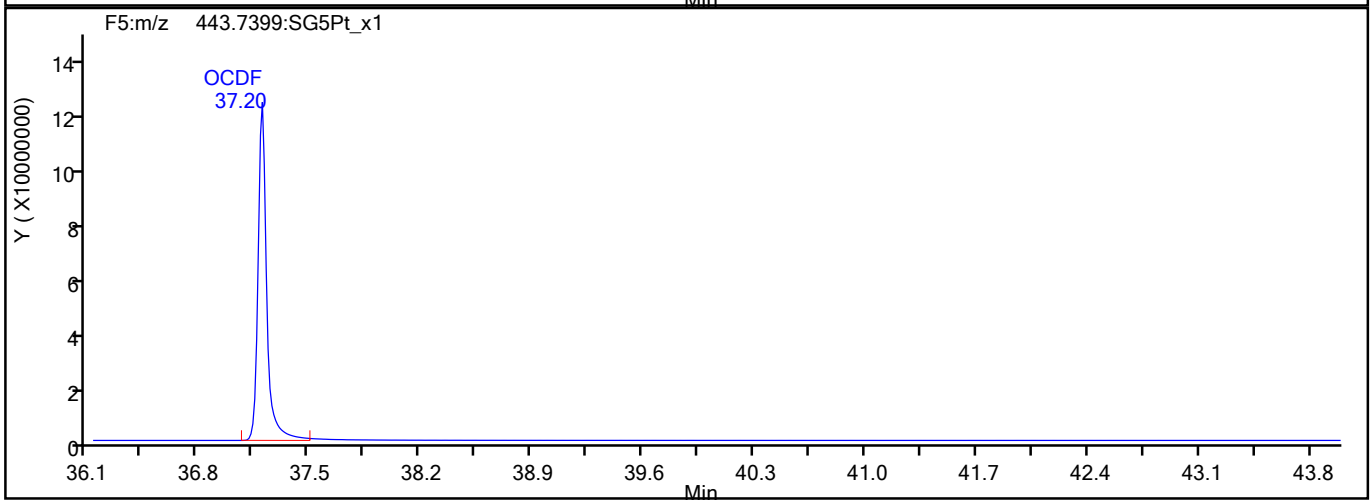

OCDF Interference Mass

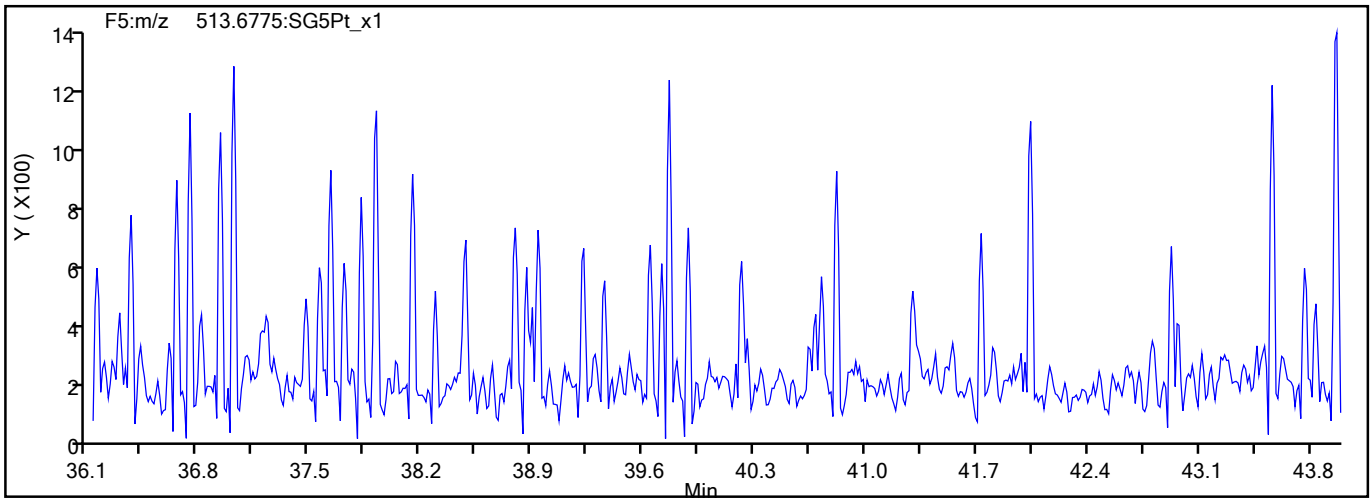

793911

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

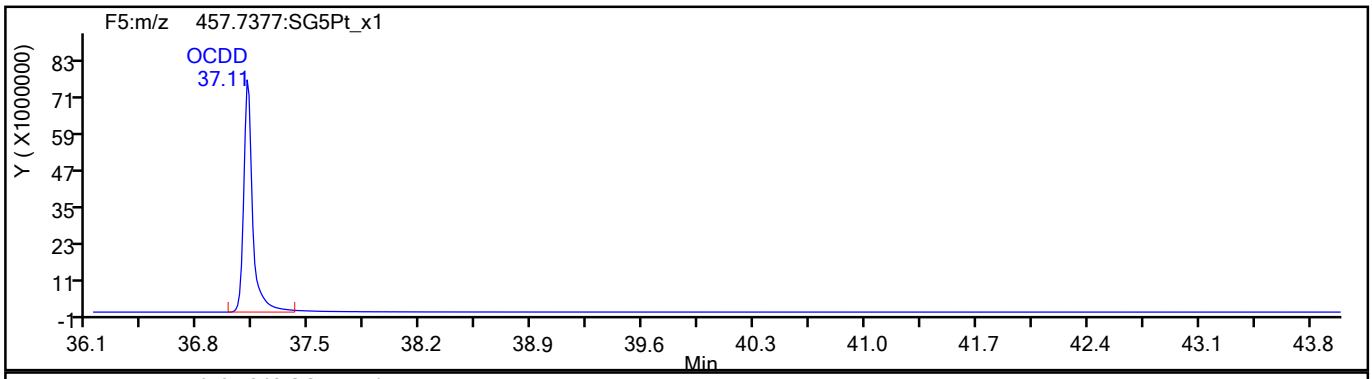

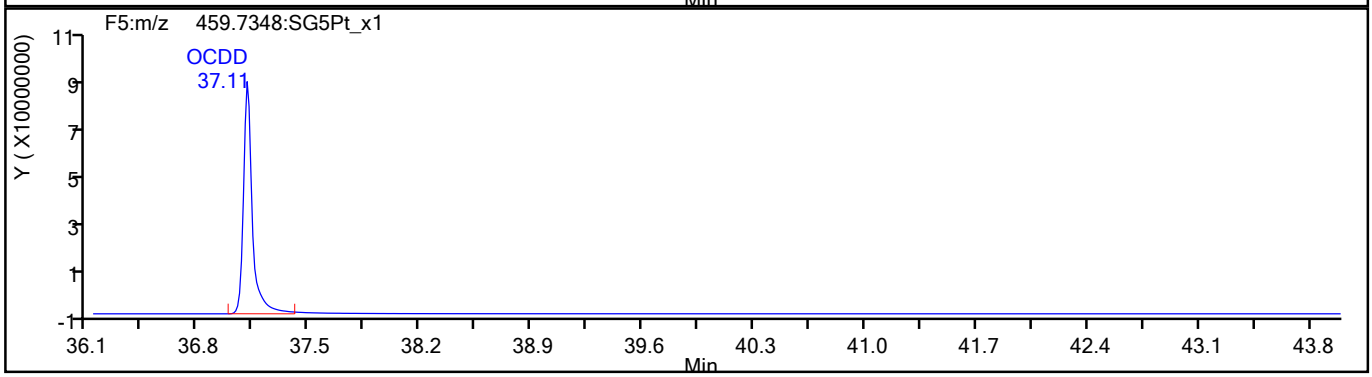

OCDD Standards

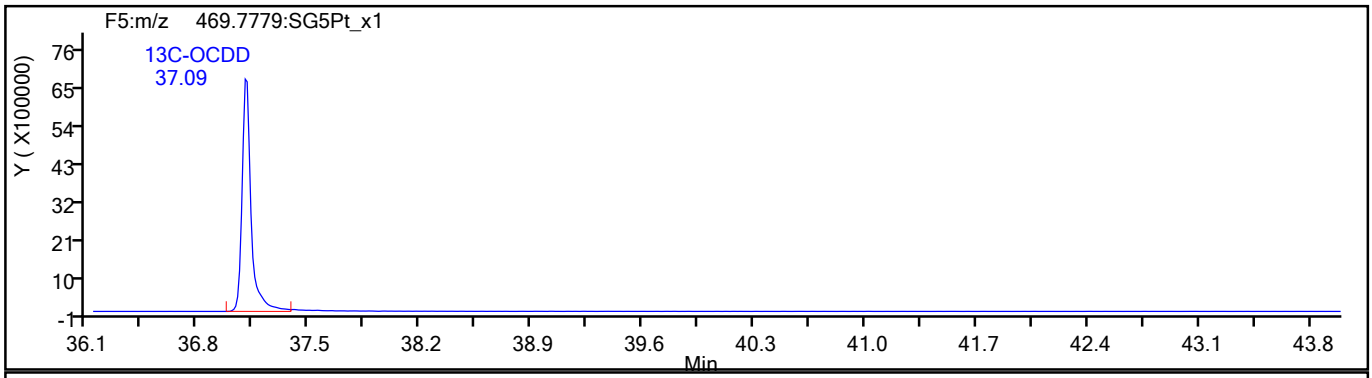

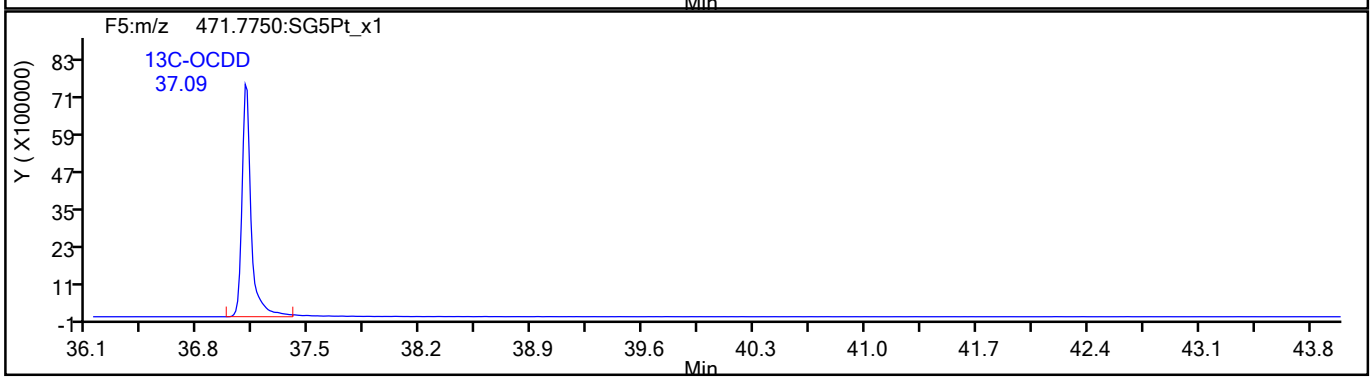

793912

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

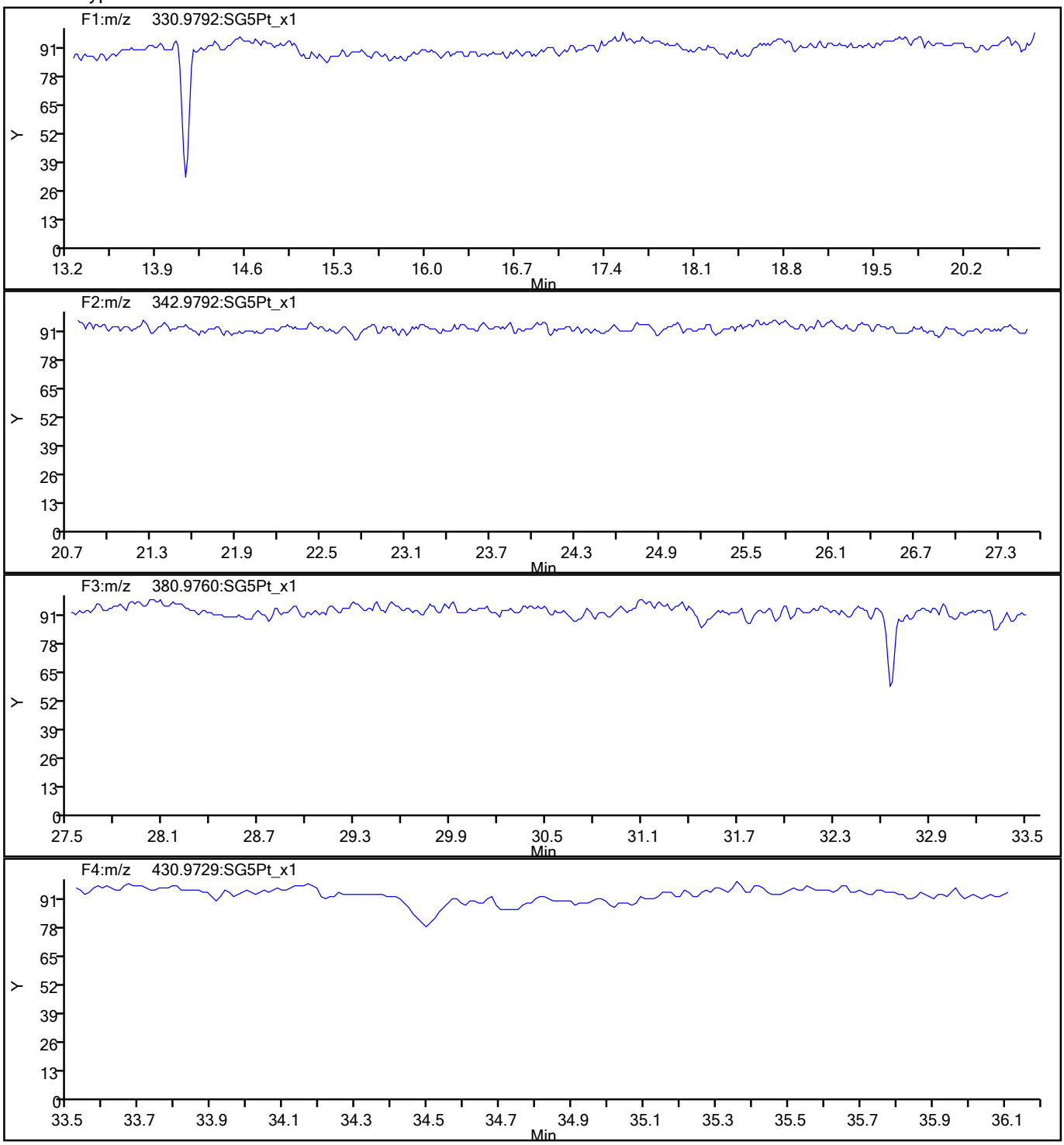

793913

Report Date: 27-Jul-2021 15:17:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d		
Injection Date:	26-Jul-2021 13:51:48	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	7
Column Type:	DB-5	Column Dia:	0.32 mm

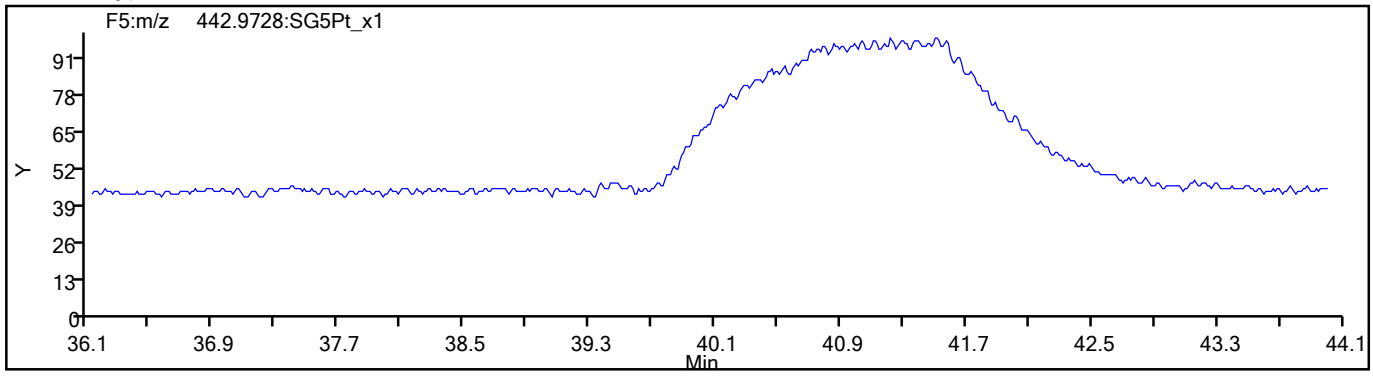

793914

Calibration / 1,2,3,4,6,7,8-HpCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.094

Error Coefficients

Standard Error:	226000000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.779775	100.0	41876556.0	1.11191	Y
2	IC 320-510264/4	10.0	9.539499	100.0	38689128.0	0.95395	Y
3	IC 320-510264/5	50.0	55.880768	100.0	40333717.0	1.117615	Y
4	IC 320-510264/6	200.0	233.50404	100.0	40442950.0	1.16752	Y
5	IC 320-510264/7	1000.0	1120.518221	100.0	39395832.0	1.120518	Y

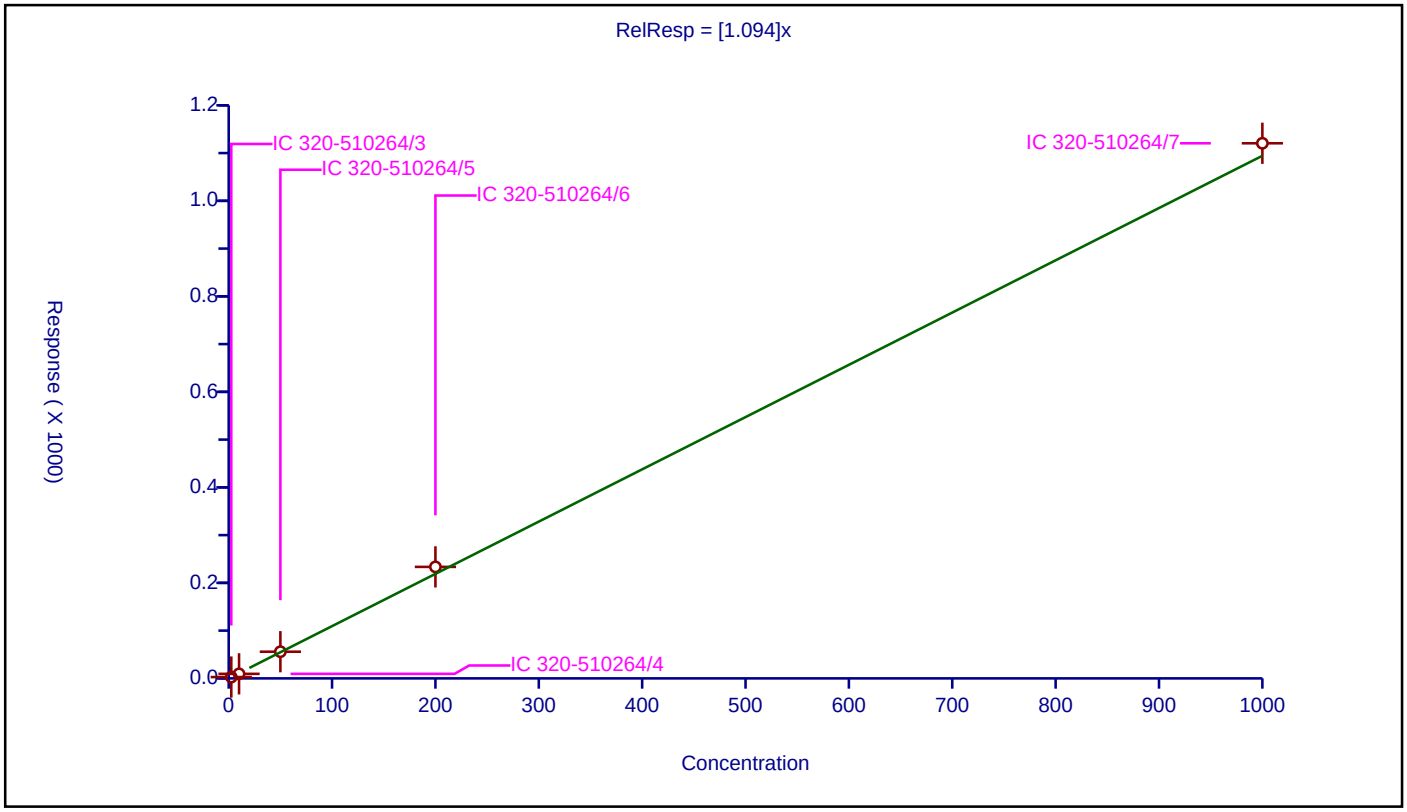

793915

Calibration / 1,2,3,4,6,7,8-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.441

Error Coefficients

Standard Error:	349000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.618521	100.0	51308225.0	1.447408	Y
2	IC 320-510264/4	10.0	12.412663	100.0	46691158.0	1.241266	Y
3	IC 320-510264/5	50.0	74.932304	100.0	47697671.0	1.498646	Y
4	IC 320-510264/6	200.0	309.702692	100.0	47752972.0	1.548513	Y
5	IC 320-510264/7	1000.0	1470.622057	100.0	46328151.0	1.470622	Y

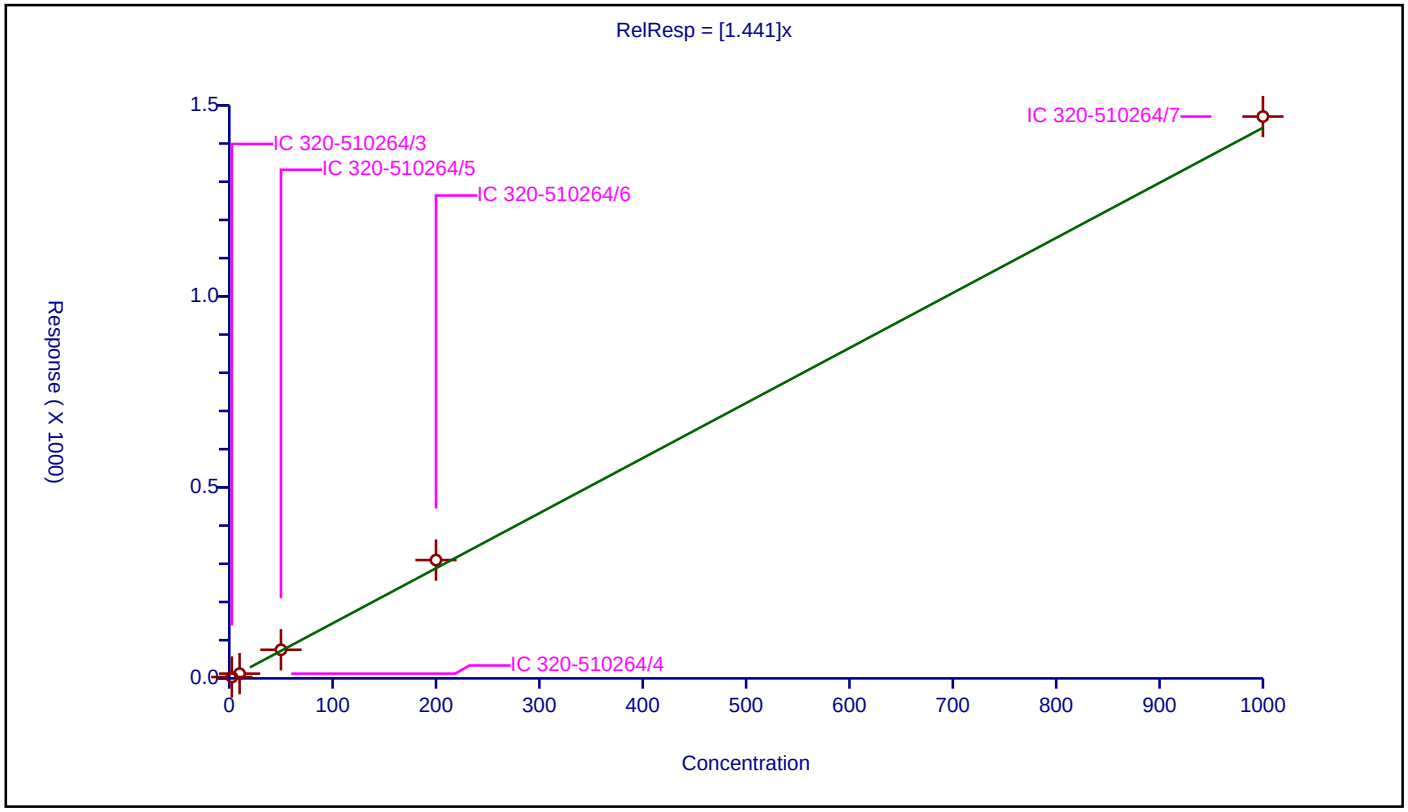

793916

Calibration / 1,2,3,4,7,8,9-HpCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.317

Error Coefficients

Standard Error:	302000000
Relative Standard Error:	9.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.284087	100.0	44628352.0	1.313635	Y
2	IC 320-510264/4	10.0	11.269366	100.0	42362179.0	1.126937	Y
3	IC 320-510264/5	50.0	68.111875	100.0	43238622.0	1.362237	Y
4	IC 320-510264/6	200.0	290.409045	100.0	42687625.0	1.452045	Y
5	IC 320-510264/7	1000.0	1332.064187	100.0	44333848.0	1.332064	Y

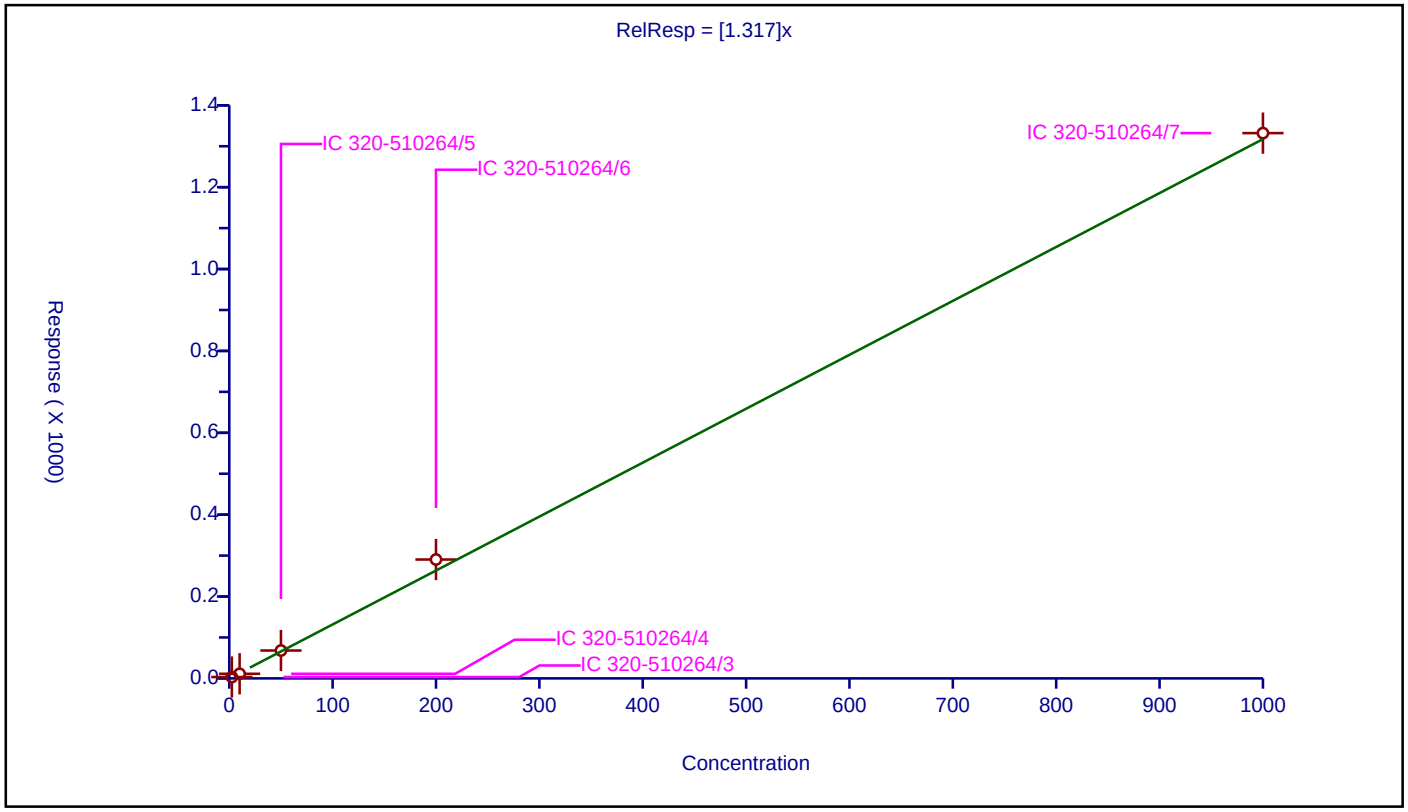

793917

Calibration / 1,2,3,4,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.064

Error Coefficients

Standard Error:	248000000
Relative Standard Error:	10.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.744793	100.0	47363504.0	1.097917	Y
2	IC 320-510264/4	10.0	8.90634	100.0	44877133.0	0.890634	Y
3	IC 320-510264/5	50.0	56.519553	100.0	44039927.0	1.130391	Y
4	IC 320-510264/6	200.0	233.423018	100.0	44144841.0	1.167115	Y
5	IC 320-510264/7	1000.0	1034.115245	100.0	46886171.0	1.034115	Y

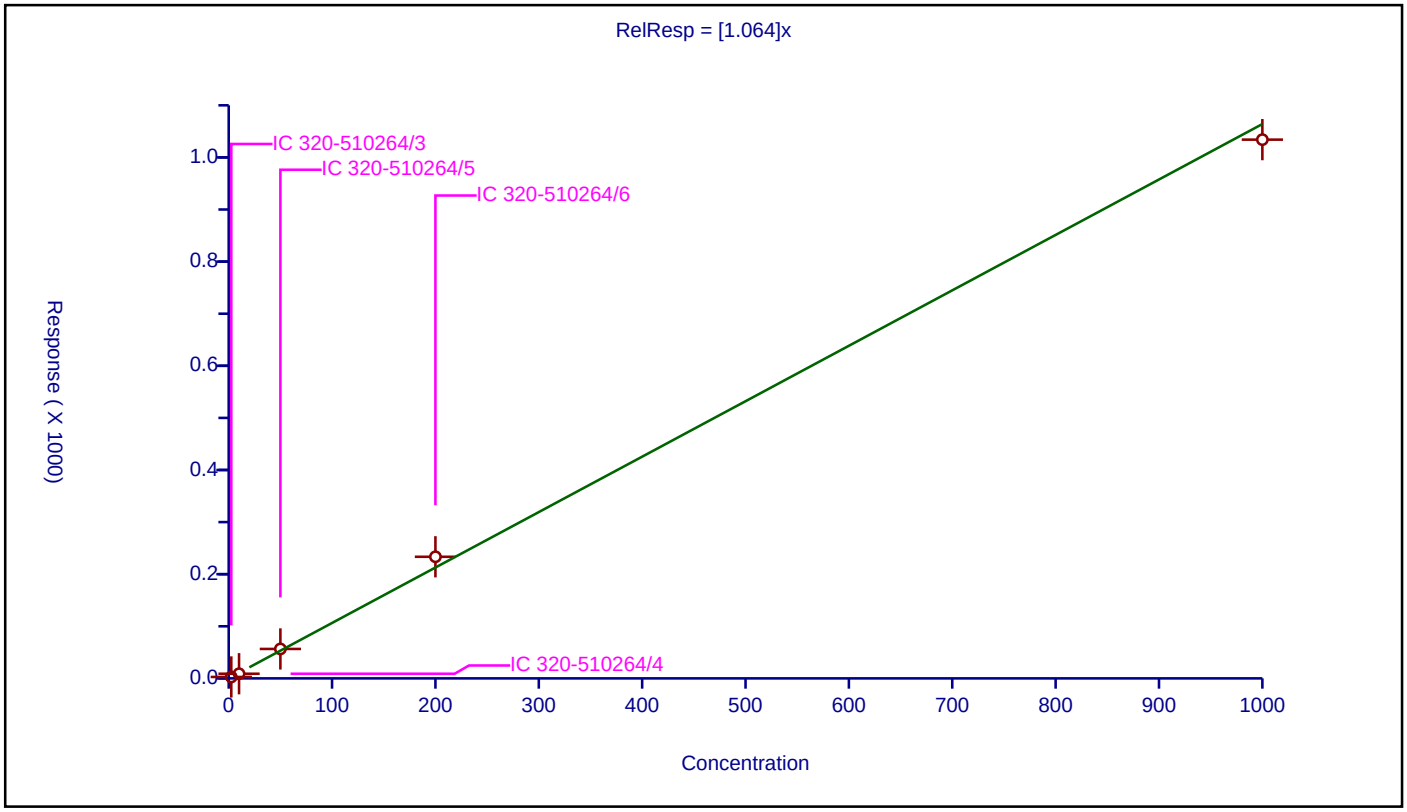

793918

Calibration / 1,2,3,4,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.085

Error Coefficients

Standard Error:	377000000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.805608	100.0	69484482.0	1.122243	Y
2	IC 320-510264/4	10.0	9.192224	100.0	65726932.0	0.919222	Y
3	IC 320-510264/5	50.0	55.122828	100.0	68075509.0	1.102457	Y
4	IC 320-510264/6	200.0	238.727102	100.0	64951889.0	1.193636	Y
5	IC 320-510264/7	1000.0	1088.07626	100.0	67741189.0	1.088076	Y

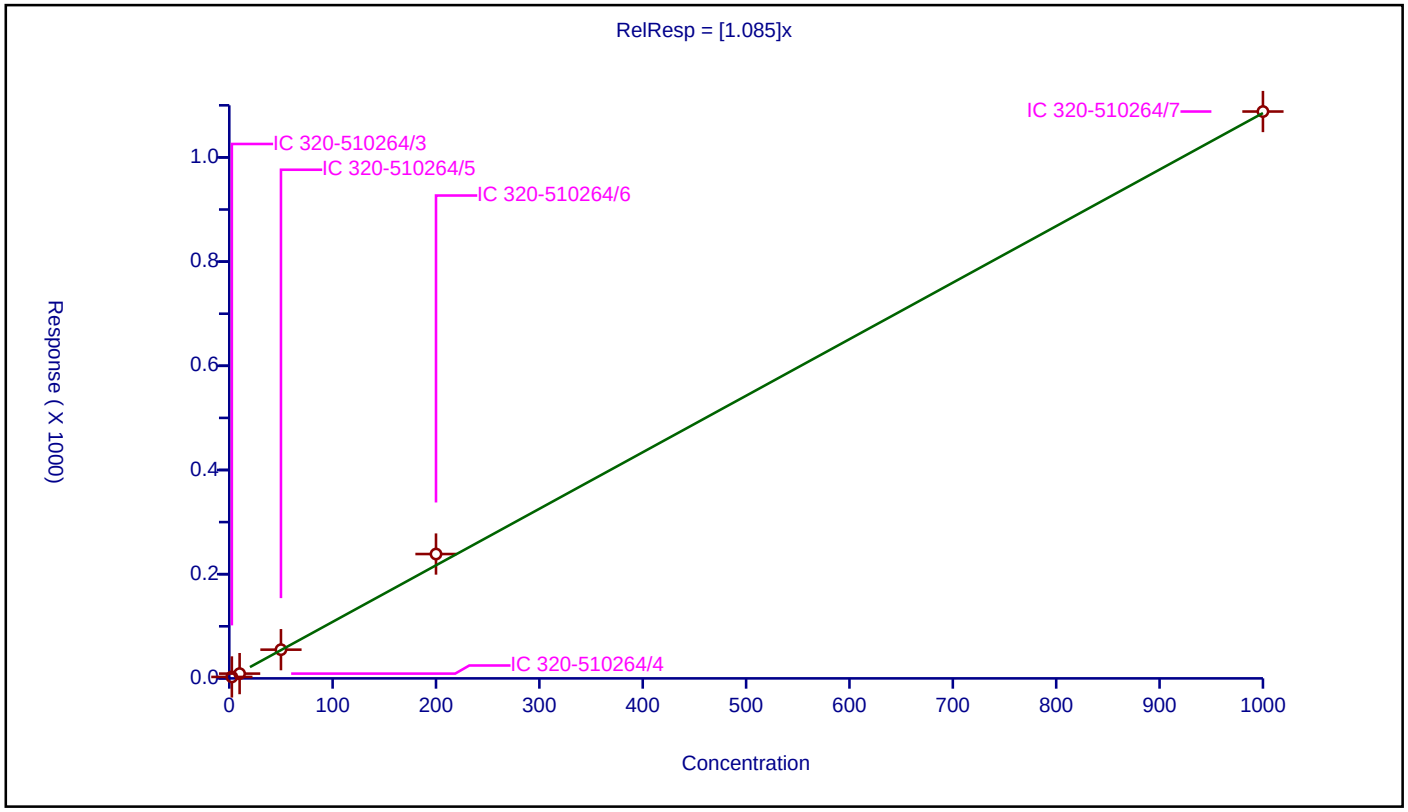

793919

Calibration / 1,2,3,6,7,8-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1

Error Coefficients

Standard Error:	278000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.57359	100.0	56759108.0	1.029436	Y
2	IC 320-510264/4	10.0	8.528531	100.0	52974056.0	0.852853	Y
3	IC 320-510264/5	50.0	50.563423	100.0	55284532.0	1.011268	Y
4	IC 320-510264/6	200.0	218.597288	100.0	54392394.0	1.092986	Y
5	IC 320-510264/7	1000.0	1013.848486	100.0	53564396.0	1.013848	Y

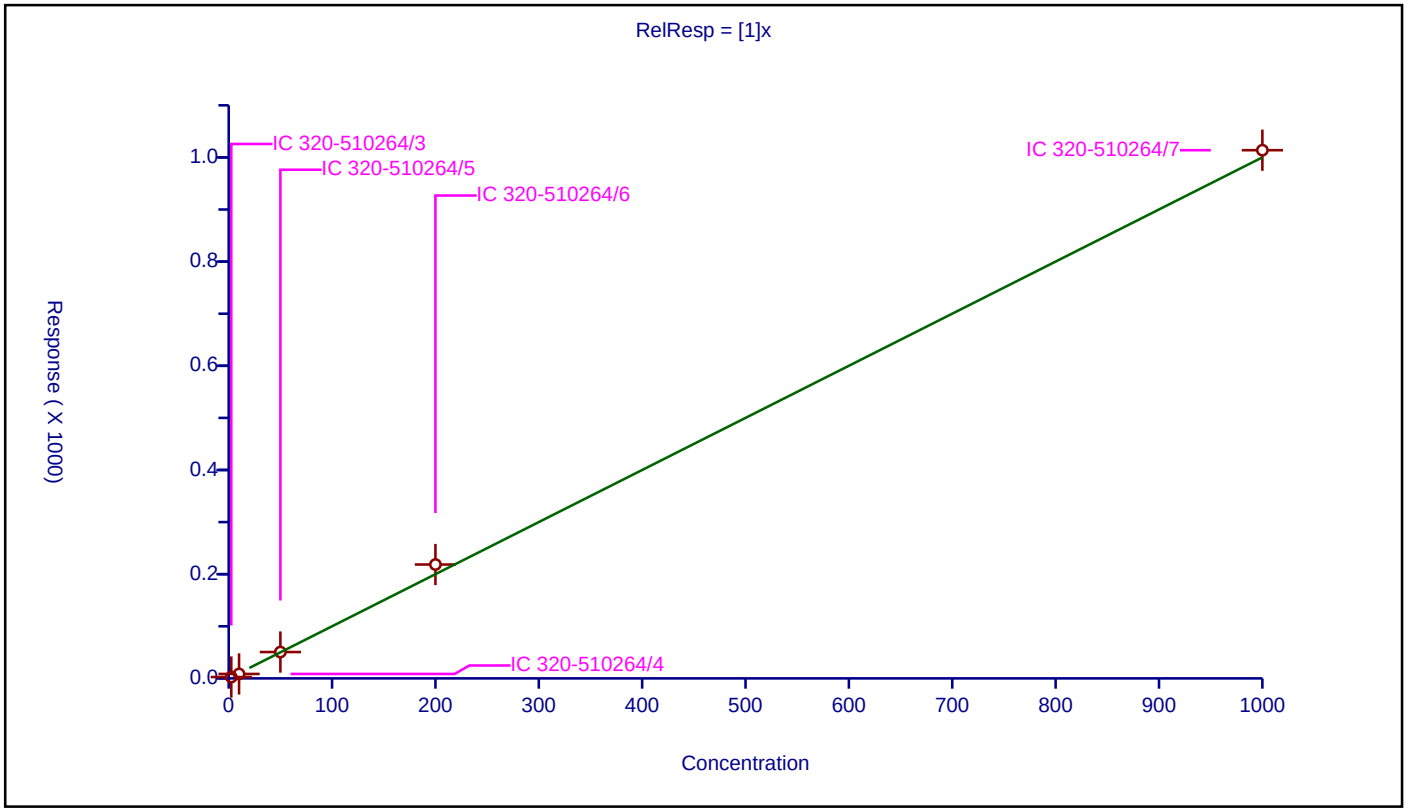

793920

Calibration / 1,2,3,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.126

Error Coefficients

Standard Error:	402000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.871987	100.0	73262388.0	1.148795	Y
2	IC 320-510264/4	10.0	9.63718	100.0	68089005.0	0.963718	Y
3	IC 320-510264/5	50.0	57.730945	100.0	70677463.0	1.154619	Y
4	IC 320-510264/6	200.0	239.311904	100.0	70459920.0	1.19656	Y
5	IC 320-510264/7	1000.0	1166.370477	100.0	67363664.0	1.16637	Y

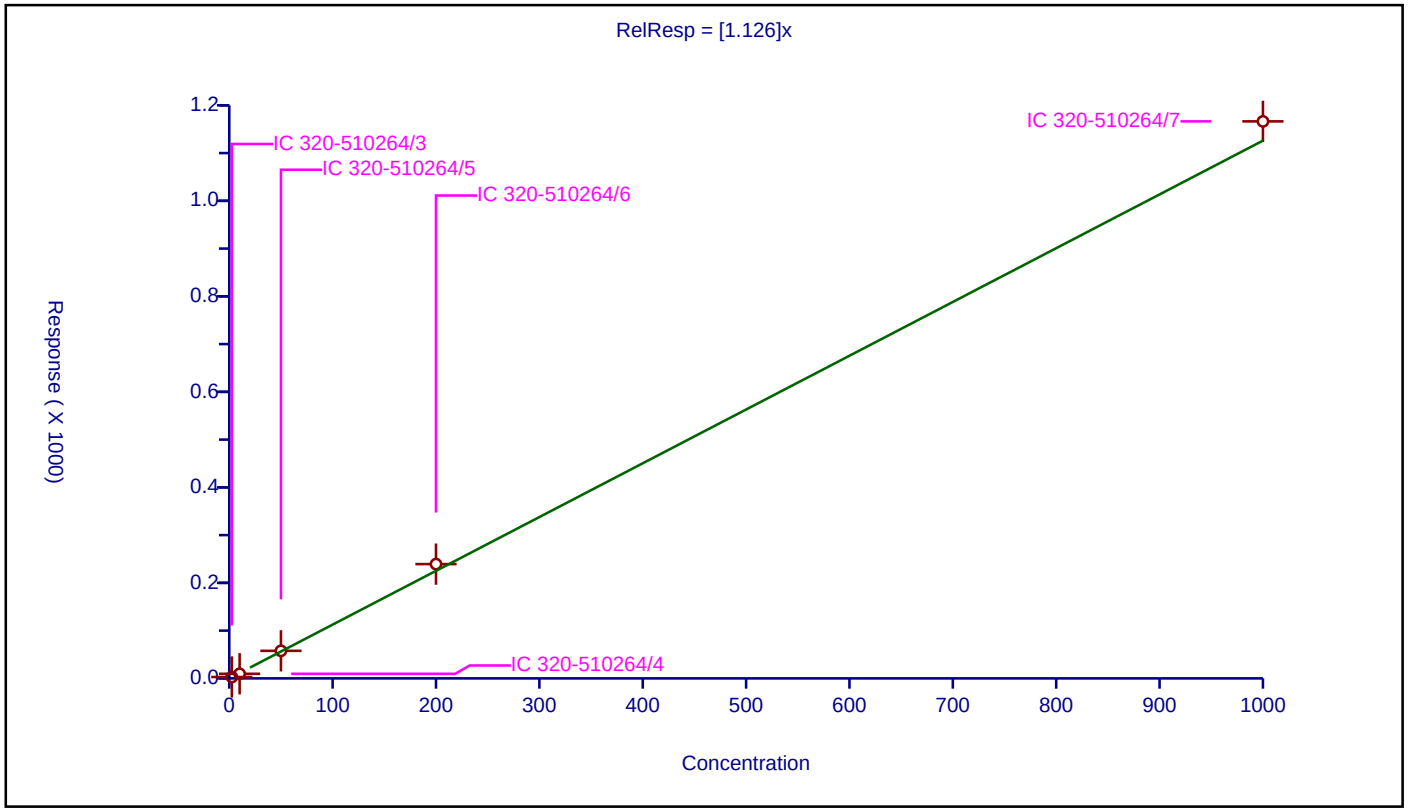

793921

Calibration / 1,2,3,7,8,9-HxCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.248

Error Coefficients

Standard Error:	289000000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.174189	100.0	47363504.0	1.269675	Y
2	IC 320-510264/4	10.0	10.27817	100.0	44877133.0	1.027817	Y
3	IC 320-510264/5	50.0	67.654413	100.0	44039927.0	1.353088	Y
4	IC 320-510264/6	200.0	277.257762	100.0	44144841.0	1.386289	Y
5	IC 320-510264/7	1000.0	1202.675657	100.0	46886171.0	1.202676	Y

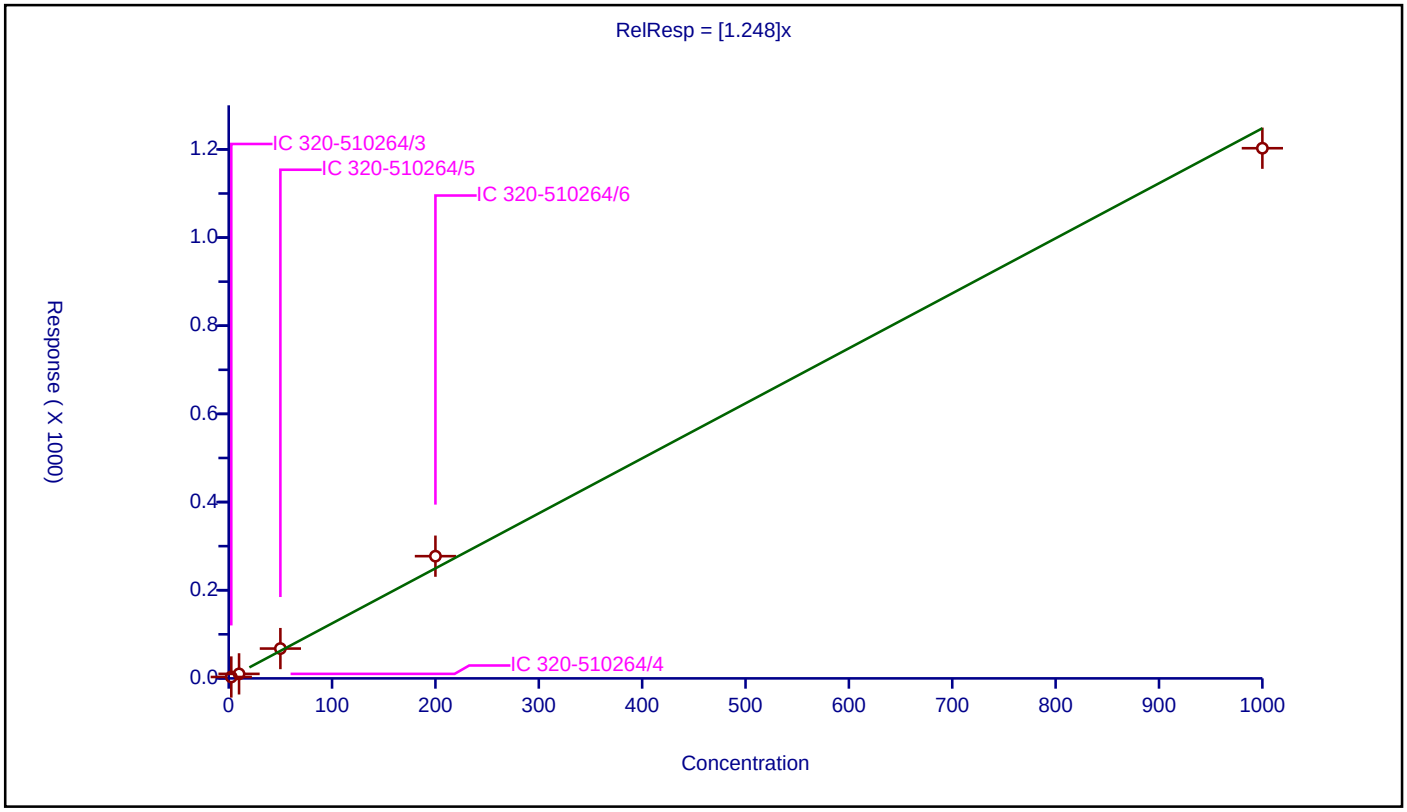

793922

Calibration / 1,2,3,7,8,9-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.166

Error Coefficients

Standard Error:	362000000
Relative Standard Error:	7.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.933201	100.0	62528954.0	1.17328	Y
2	IC 320-510264/4	10.0	10.136374	100.0	58828058.0	1.013637	Y
3	IC 320-510264/5	50.0	59.48769	100.0	60389284.0	1.189754	Y
4	IC 320-510264/6	200.0	249.571201	100.0	59636084.0	1.247856	Y
5	IC 320-510264/7	1000.0	1207.229164	100.0	58669892.0	1.207229	Y

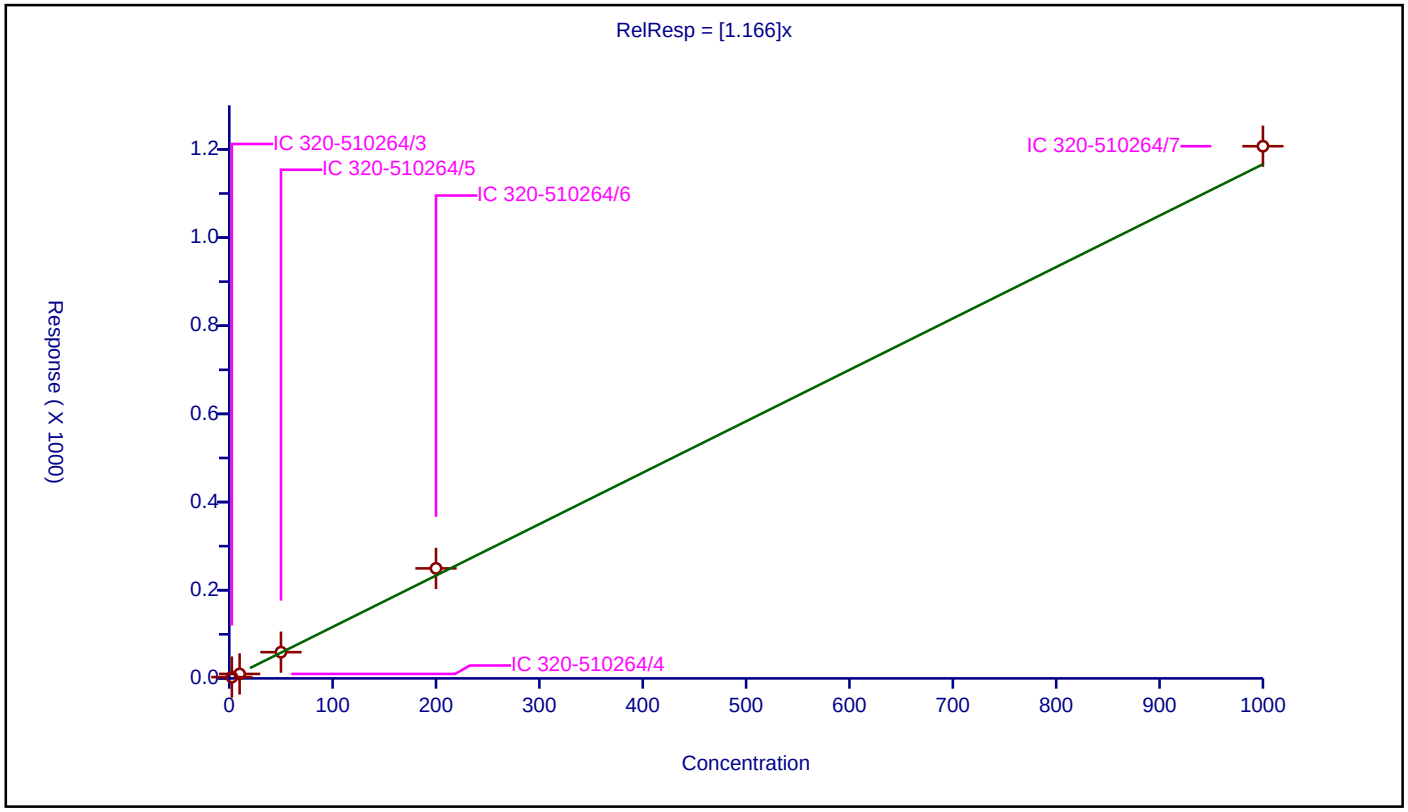

793923

Calibration / 1,2,3,7,8-PeCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.048

Error Coefficients

Standard Error:	256000000
Relative Standard Error:	8.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.644408	100.0	49643581.0	1.057763	Y
2	IC 320-510264/4	10.0	9.031283	100.0	46721712.0	0.903128	Y
3	IC 320-510264/5	50.0	53.401309	100.0	47124414.0	1.068026	Y
4	IC 320-510264/6	200.0	226.195317	100.0	46524396.0	1.130977	Y
5	IC 320-510264/7	1000.0	1082.258061	100.0	46251010.0	1.082258	Y

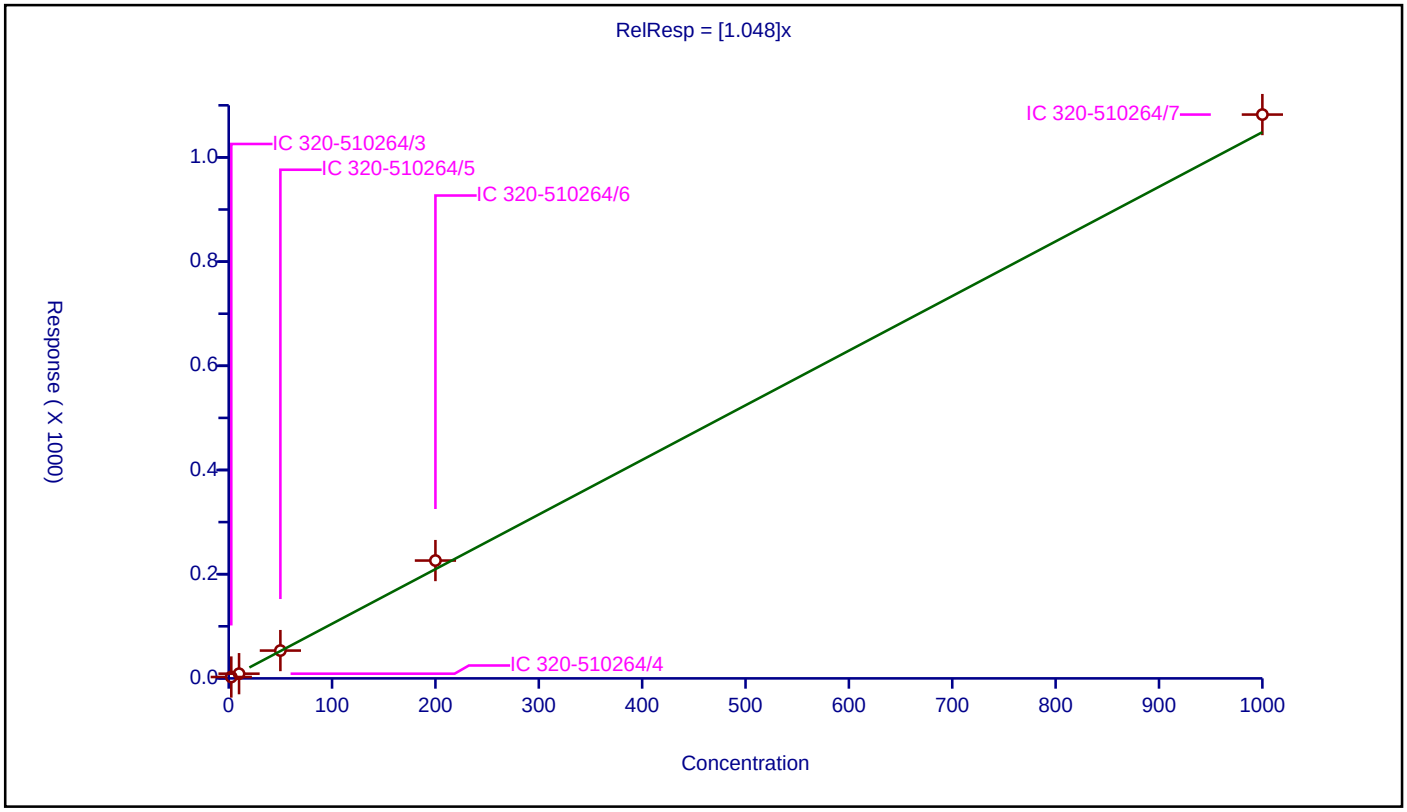

793924

Calibration / 1,2,3,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.061

Error Coefficients

Standard Error:	408000000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.684664	100.0	78674290.0	1.073865	Y
2	IC 320-510264/4	10.0	9.128293	100.0	72525655.0	0.912829	Y
3	IC 320-510264/5	50.0	54.457439	100.0	76368219.0	1.089149	Y
4	IC 320-510264/6	200.0	227.4085	100.0	75205597.0	1.137042	Y
5	IC 320-510264/7	1000.0	1092.787556	100.0	72829681.0	1.092788	Y

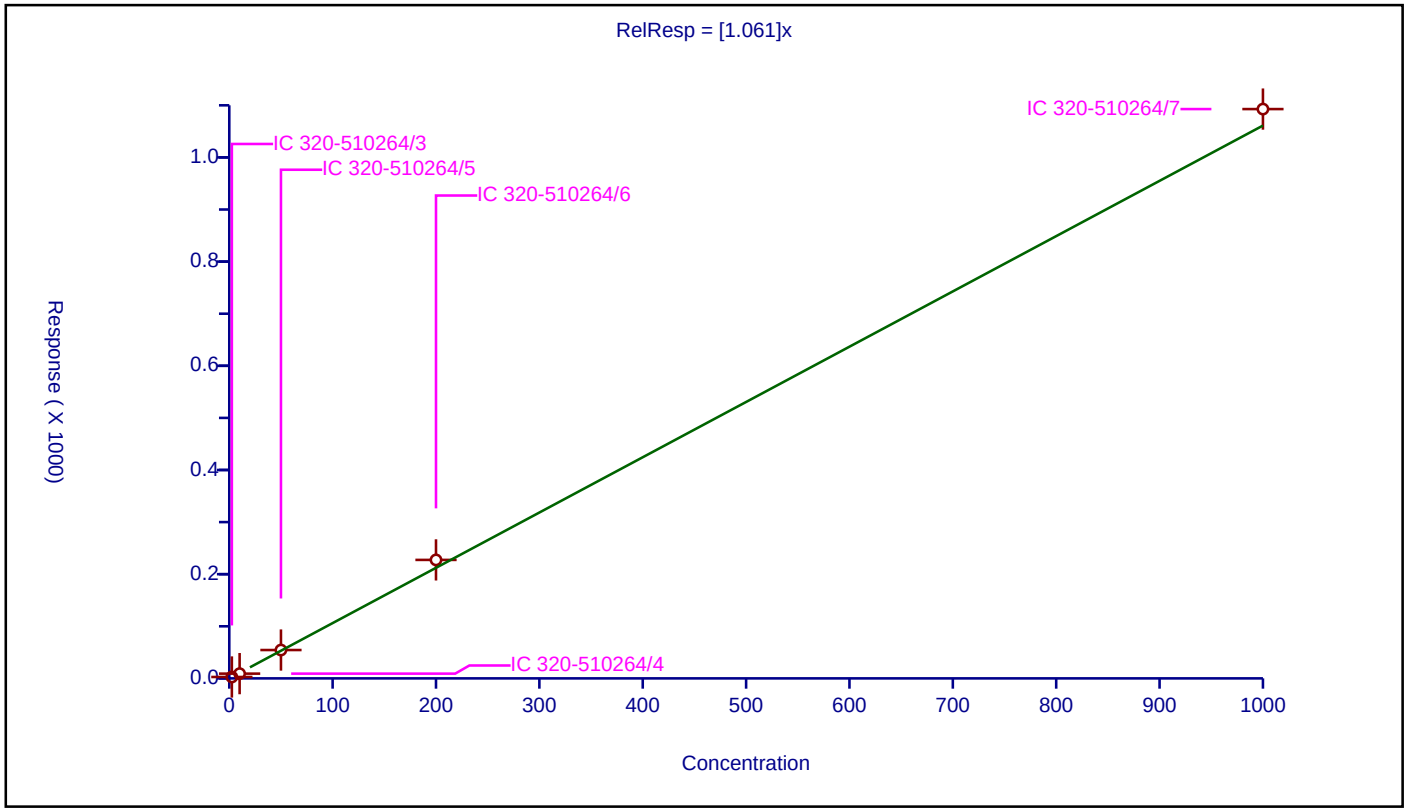

793925

Calibration / 2,3,4,6,7,8-HxCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.168

Error Coefficients

Standard Error:	391000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	3.05566	100.0	68885161.0	1.222264	Y
2	IC 320-510264/4	10.0	9.86292	100.0	64406928.0	0.986292	Y
3	IC 320-510264/5	50.0	59.290251	100.0	67028498.0	1.185805	Y
4	IC 320-510264/6	200.0	248.302486	100.0	66145684.0	1.241512	Y
5	IC 320-510264/7	1000.0	1201.822353	100.0	63471184.0	1.201822	Y

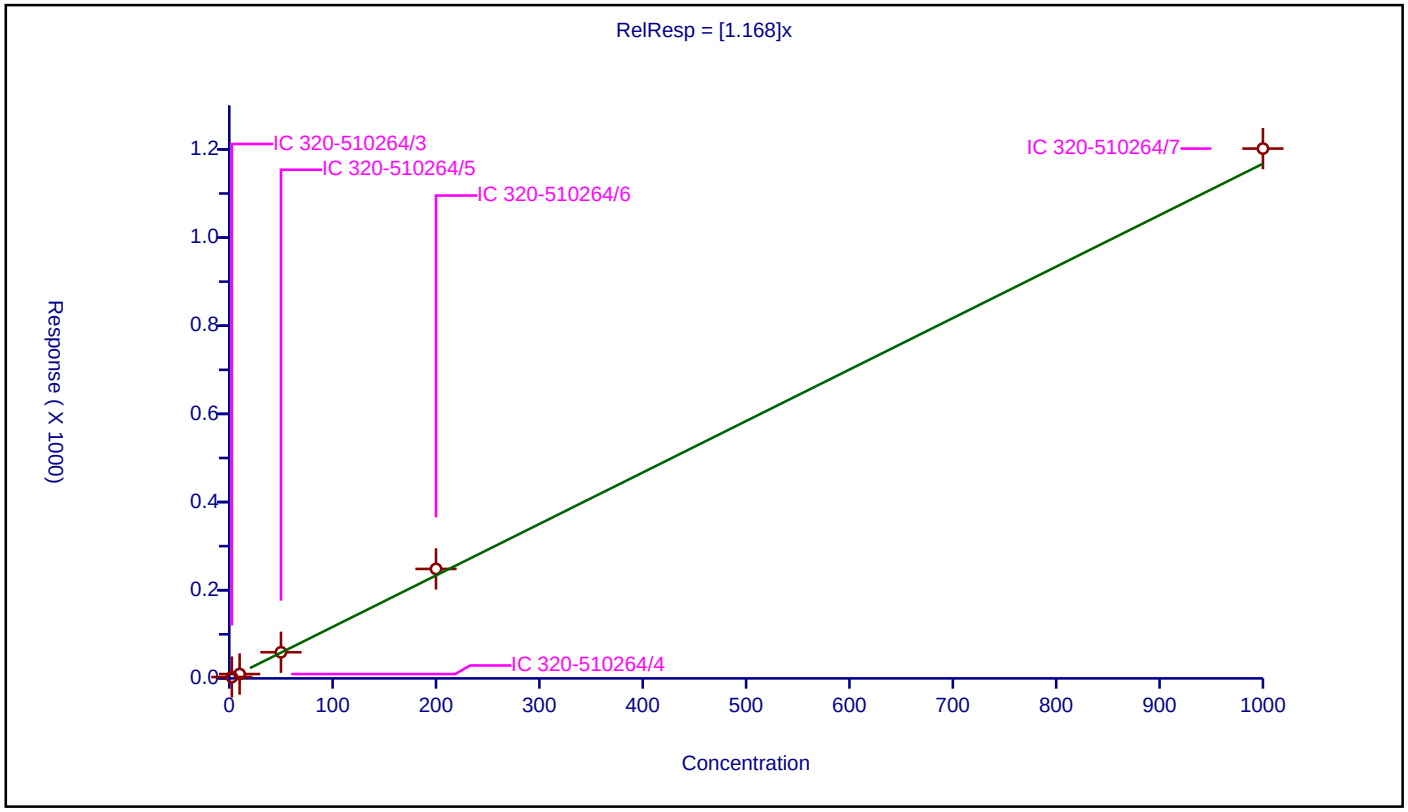

793926

Calibration / 2,3,4,7,8-PeCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.018

Error Coefficients

Standard Error:	401000000
Relative Standard Error:	9.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	2.5	2.601965	100.0	80591659.0	1.040786	Y
2	IC 320-510264/4	10.0	8.609629	100.0	74944110.0	0.860963	Y
3	IC 320-510264/5	50.0	52.328396	100.0	78214582.0	1.046568	Y
4	IC 320-510264/6	200.0	221.640486	100.0	75259591.0	1.108202	Y
5	IC 320-510264/7	1000.0	1035.570916	100.0	75649463.0	1.035571	Y

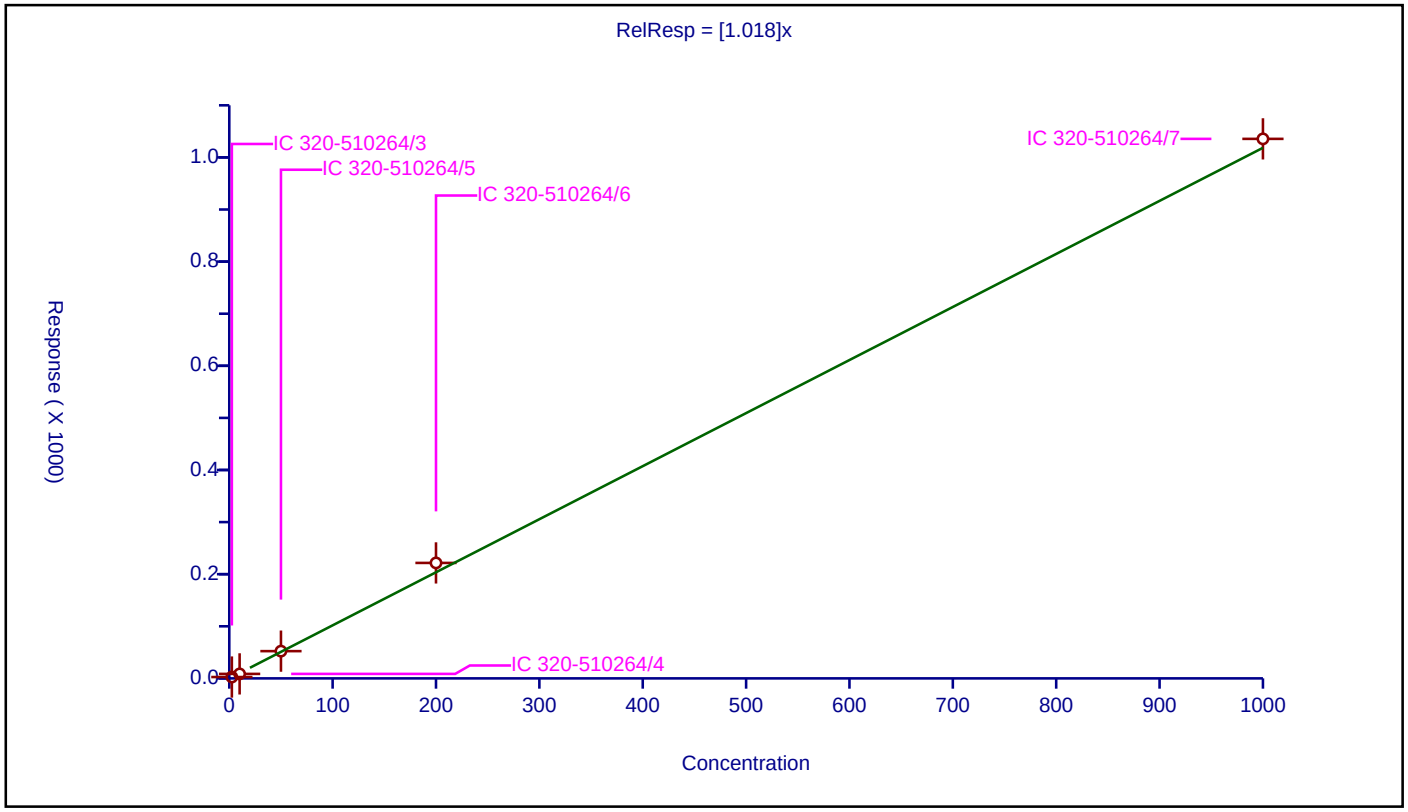

793927

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.254

Error Coefficients

Standard Error:	71900000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.62875	100.0	59957723.0	1.257499	Y
2	IC 320-510264/4	2.0	2.19411	100.0	53975587.0	1.097055	Y
3	IC 320-510264/5	10.0	12.651014	100.0	56155483.0	1.265101	Y
4	IC 320-510264/6	40.0	53.737487	100.0	55471422.0	1.343437	Y
5	IC 320-510264/7	200.0	261.501191	100.0	53698206.0	1.307506	Y

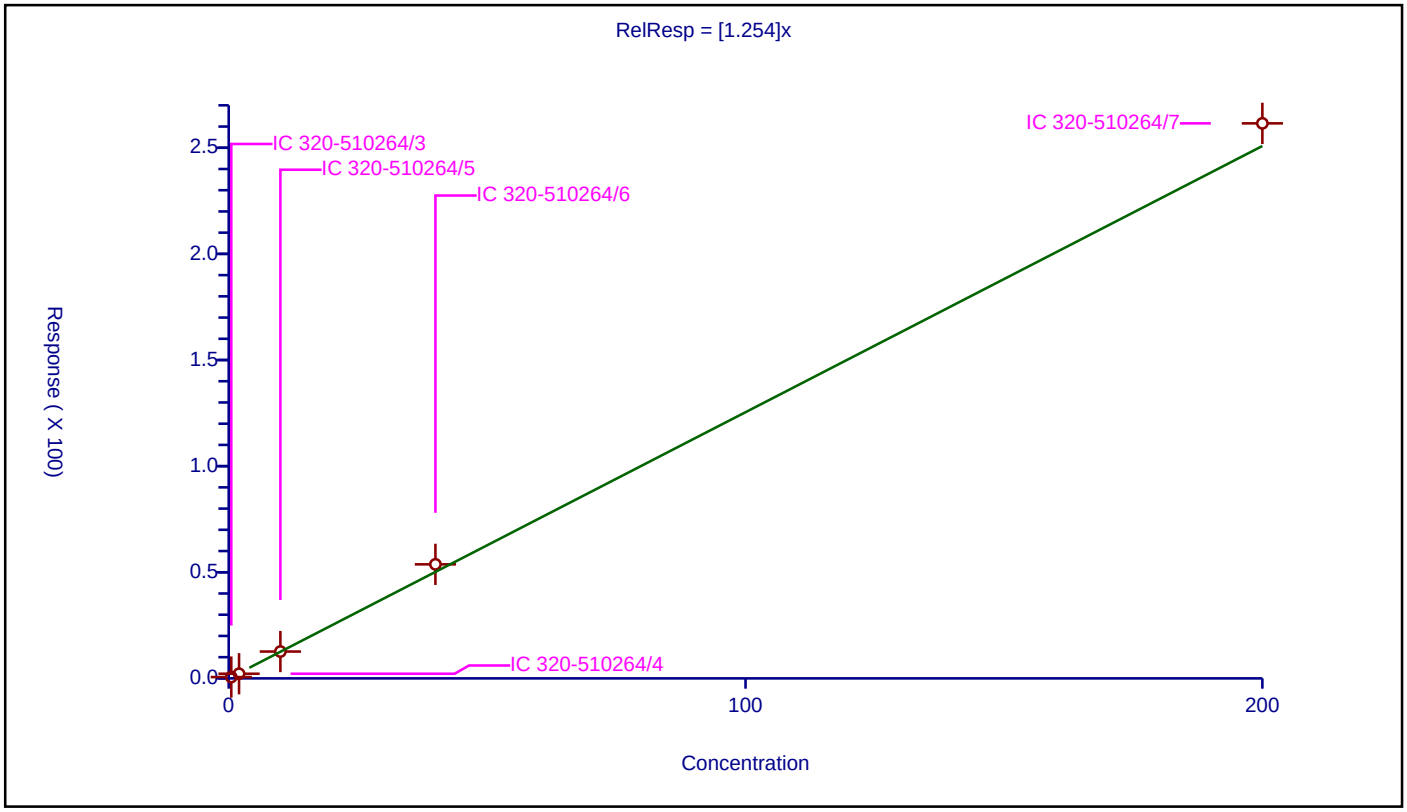

793928

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.024

Error Coefficients

Standard Error:	105000000
Relative Standard Error:	8.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.514358	100.0	108384725.0	1.028715	Y
2	IC 320-510264/4	2.0	1.739696	100.0	98246522.0	0.869848	Y
3	IC 320-510264/5	10.0	10.458407	100.0	101724636.0	1.045841	Y
4	IC 320-510264/6	40.0	44.37733	100.0	100332269.0	1.109433	Y
5	IC 320-510264/7	200.0	213.143097	100.0	95980421.0	1.065715	Y

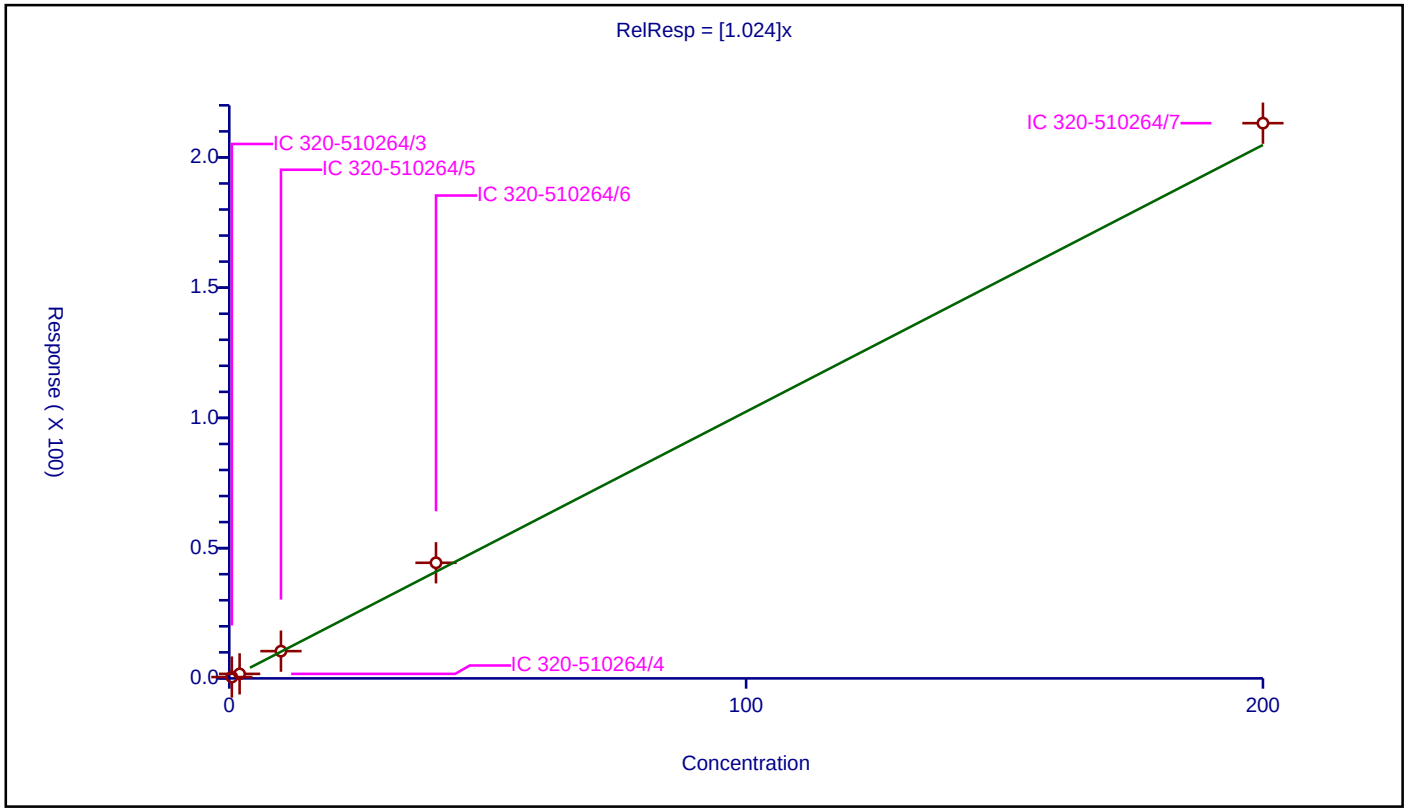

793929

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	72100000
Relative Standard Error:	11.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	0.5	0.485229	100.0	65685883.0	0.970458	Y
2	IC 320-510264/4	2.0	1.95888	100.0	62853211.0	0.97944	Y
3	IC 320-510264/5	10.0	11.718119	100.0	62635225.0	1.171812	Y
4	IC 320-510264/6	40.0	47.503291	100.0	62046988.0	1.187582	Y
5	IC 320-510264/7	200.0	245.287862	100.0	57464333.0	1.226439	Y

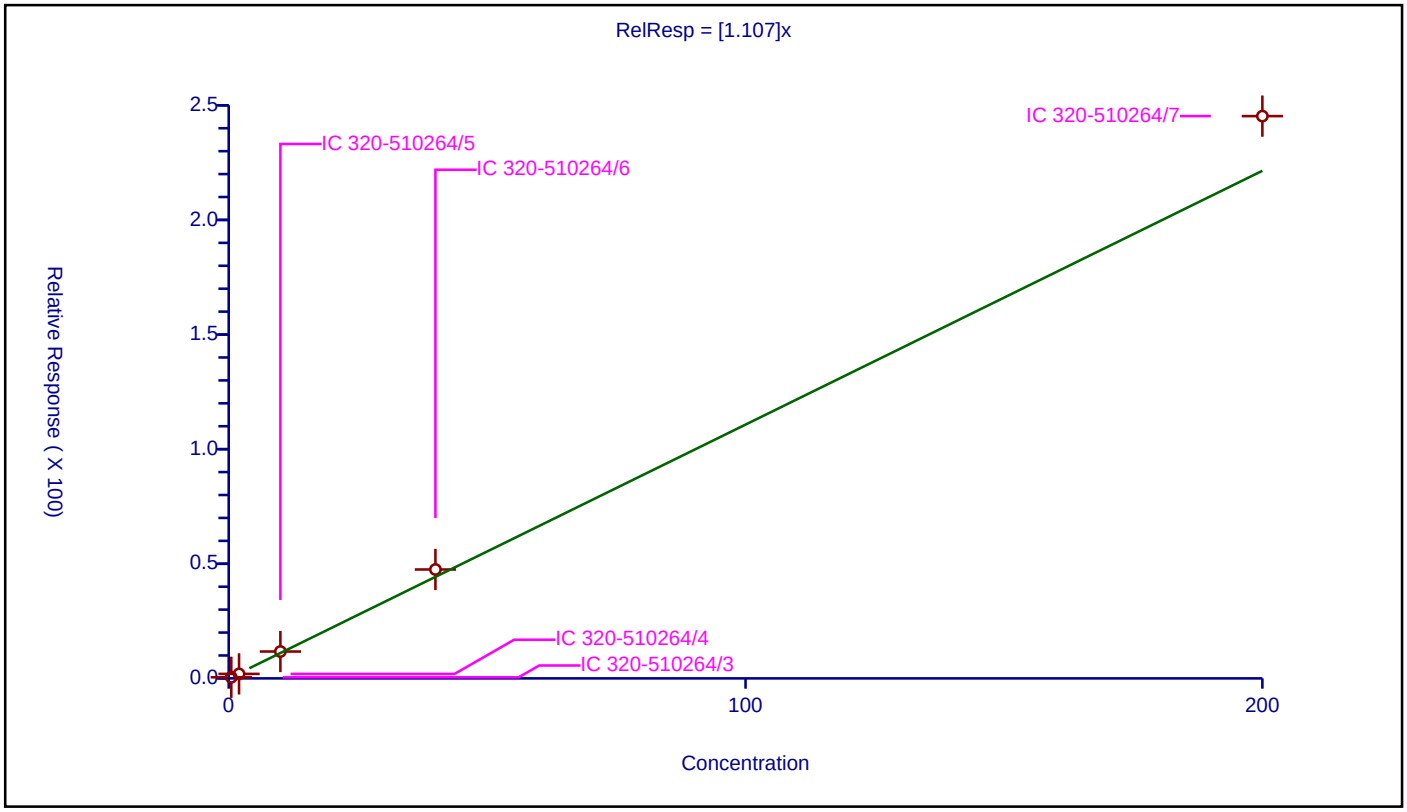

793930

Calibration / OCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.107

Error Coefficients

Standard Error:	325000000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	5.504666	200.0	57018462.0	1.100933	Y
2	IC 320-510264/4	20.0	19.269459	200.0	52034518.0	0.963473	Y
3	IC 320-510264/5	100.0	116.51708	200.0	54338243.0	1.165171	Y
4	IC 320-510264/6	400.0	473.162285	200.0	57303880.0	1.182906	Y
5	IC 320-510264/7	2000.0	2245.176522	200.0	56623863.0	1.122588	Y

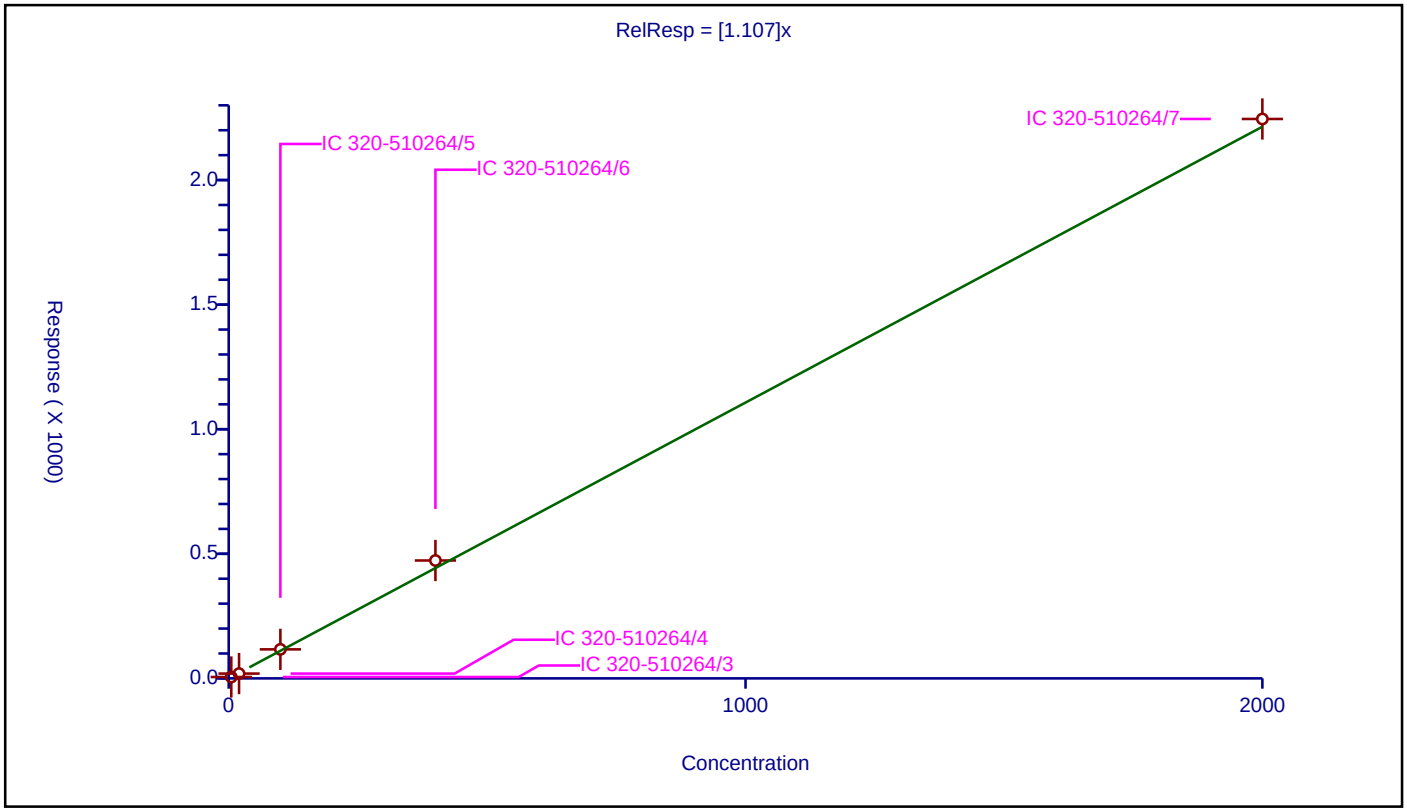

793931

Calibration / OCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.438

Error Coefficients

Standard Error:	438000000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-510264/3	5.0	6.931702	200.0	57018462.0	1.38634	Y
2	IC 320-510264/4	20.0	23.824451	200.0	52034518.0	1.191223	Y
3	IC 320-510264/5	100.0	151.448408	200.0	54338243.0	1.514484	Y
4	IC 320-510264/6	400.0	634.327267	200.0	57303880.0	1.585818	Y
5	IC 320-510264/7	2000.0	3025.883229	200.0	56623863.0	1.512942	Y

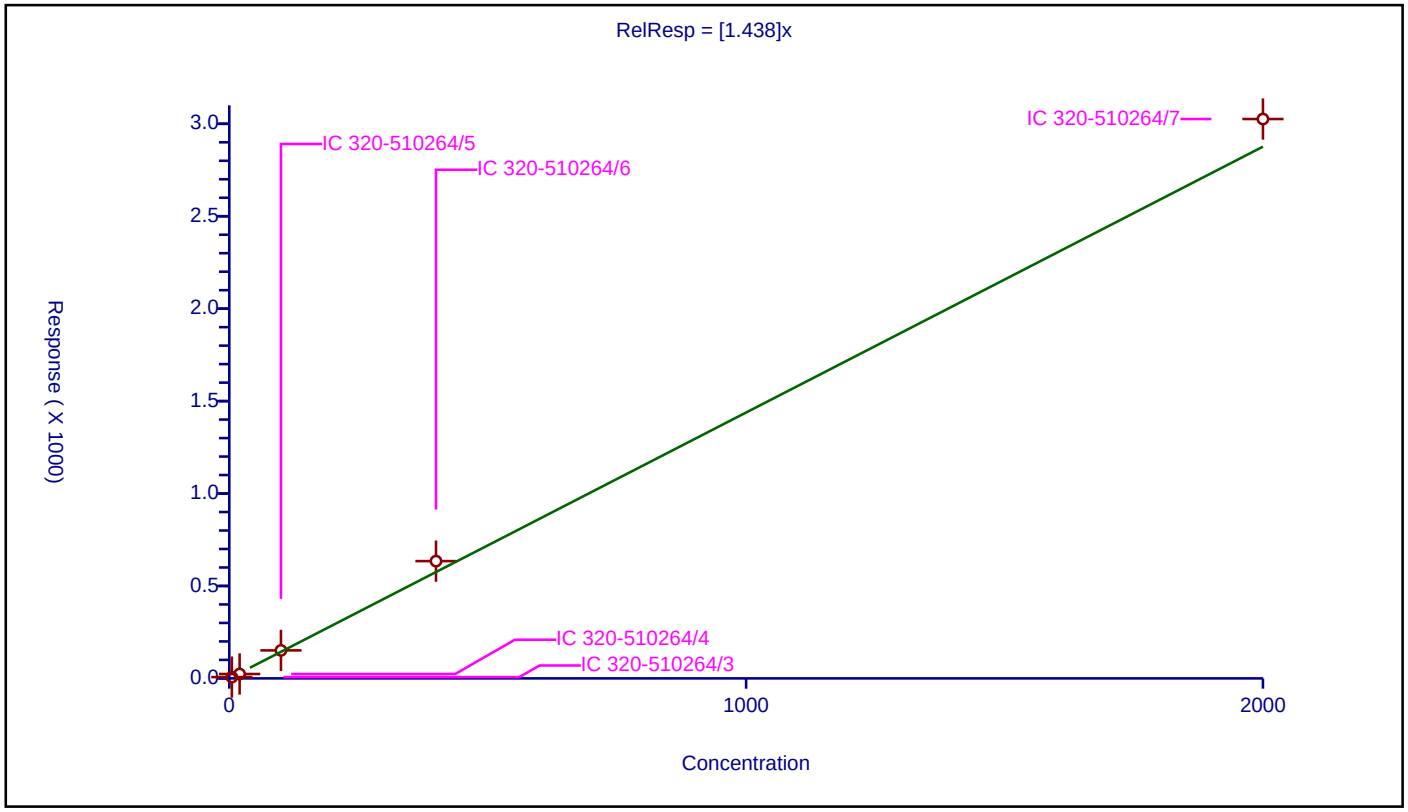

793932

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,3,7,8-TCDD	1.1577	0.8943	0.9564	1.1510	1.1256	AveID		1.0570				11.6		20.0			
2,3,7,8-TCDF	1.0311	0.8711	0.9582	1.0643	1.0644	AveID		0.9978				8.3		20.0			
13C-2,3,7,8-TCDD	0.8825	0.8143	0.8986	0.8738	0.9054	Ave		0.8749				4.1		35.0			
13C-2,3,7,8-TCDF	1.3673	1.2508	1.3309	1.3673	1.3472	Ave		1.3327				3.6		35.0			
37Cl4-2,3,7,8-TCDD	0.8368	0.7648	0.8394	0.9109	0.9721	Ave		0.8648				9.2					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
DIOXIN BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1 Analy Batch No.: 506541

SDG No.:

Instrument ID: 11D2 GC Column: DB-225 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/14/2021 12:14 Calibration End Date: 07/14/2021 14:47 Calibration ID: 56021

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 320-506541/3	14JL2111D2_003.d
Level 2	IC 320-506541/4	14JL2111D2_004.d
Level 3	IC 320-506541/5	14JL2111D2_005.d
Level 4	IC 320-506541/6	14JL2111D2_006.d
Level 5	IC 320-506541/7	14JL2111D2_007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PG/UL)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
2,3,7,8-TCDD		AveID	355740	1221661	5472302	29543235	141238951	0.500	2.00	10.0	40.0	200
2,3,7,8-TCDF		AveID	490890	1827830	8119940	42745688	198728073	0.500	2.00	10.0	40.0	200
13C-2,3,7,8-TCDD	13CTCDD	Ave	61458050	68303138	57218335	64169475	62738057	100	100	100	100	100
13C-2,3,7,8-TCDF	13CTCDD	Ave	95217322	104913800	84741646	100411399	93355112	100	100	100	100	100
37Cl4-2,3,7,8-TCDD	13CTCDD	Ave	291376	1283086	5344814	26758288	134725425	0.500	2.00	10.0	40.0	200

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
14JL2111D2	1	CPS 071421	CPS HRDXNCP_00042		Dioxin		1.00000	
14JL2111D2	2	SB 071421	SB Solvent Blank				1.00000	
14JL2111D2	3	IC 071421	CS-2 HRDXNL2_00032		Dioxin		1.00000	
14JL2111D2	4	IC 071421A	CS-3 HRDXNL3_00029		Dioxin		1.00000	
14JL2111D2	5	IC 071421B	CS-4 HRDXNL4_00100		Dioxin		1.00000	
14JL2111D2	6	IC 0714S1C	CS-5 HRDXNL5_00032		Dioxin		1.00000	
14JL2111D2	7	IC 071421D	CS-6 HRDXNL6_00028		Dioxin		1.00000	
14JL2111D2	8	SB 071421A	SB Solvent Blank				1.00000	
14JL2111D2	9	ICV 071421	ICV HRDXNIC_00047		Dioxin		1.00000	
14JL2111D2	10						1.00000	
14JL2111D2	11						1.00000	
14JL2111D2	12						1.00000	
14JL2111D2	13						1.00000	
14JL2111D2	14		DB 07-14-21				1.00000	
14JL2111D2	15						1.00000	
14JL2111D2	16						1.00000	
14JL2111D2	17						1.00000	
14JL2111D2	18						1.00000	
14JL2111D2	19						1.00000	

LOGFILE CHECKED
DB 7/15/21

Peak Locate Examination:14-JUL-2021:10:56 File:14JL2111D2
Experiment:DB225RES Function:1 Reference:PFK

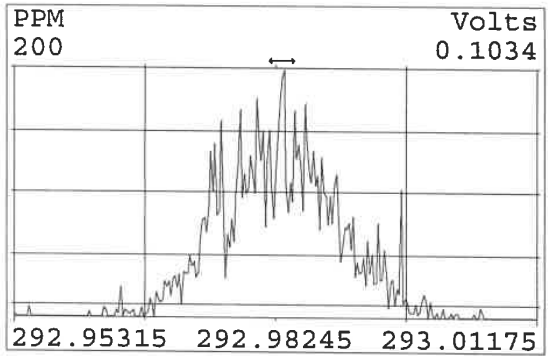

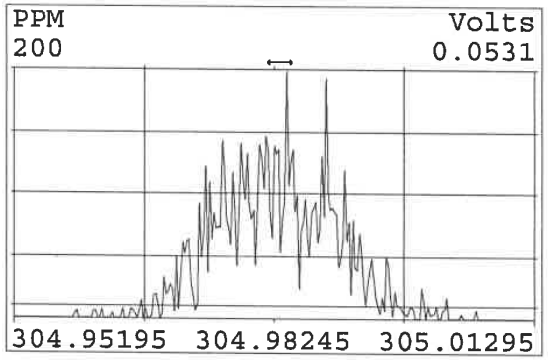

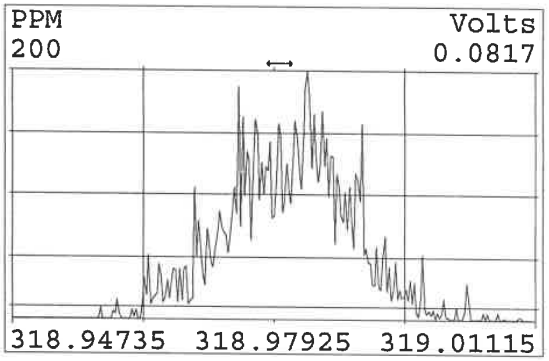

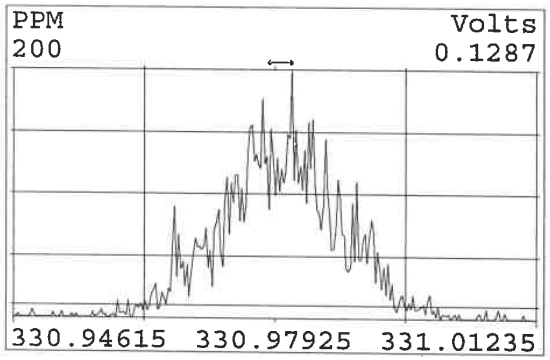

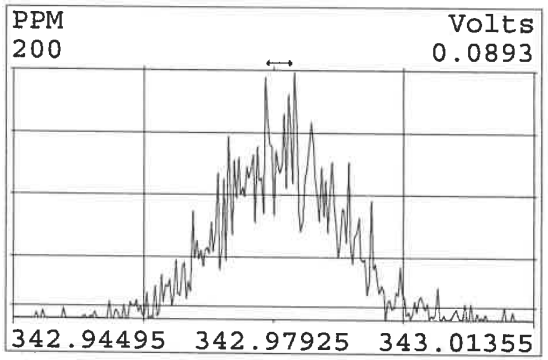

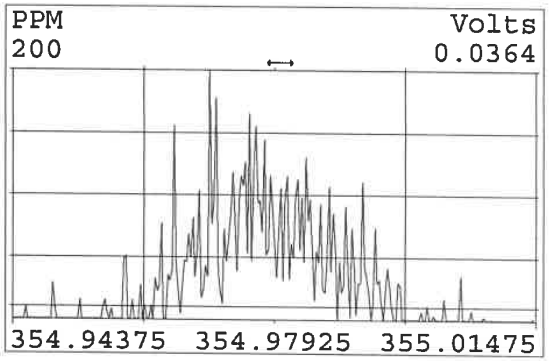

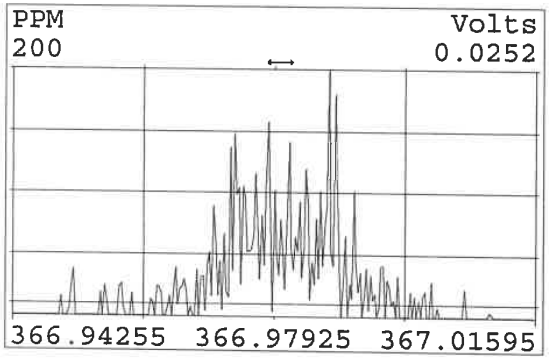

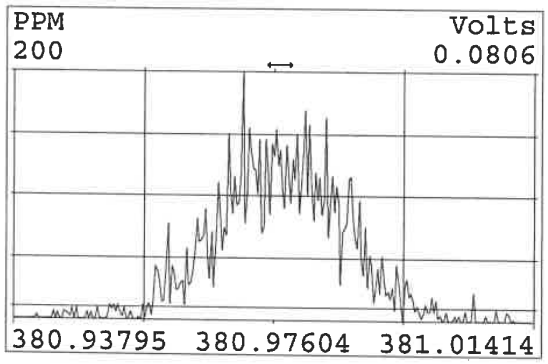

793936

Peak Locate Examination:14-JUL-2021:16:48 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

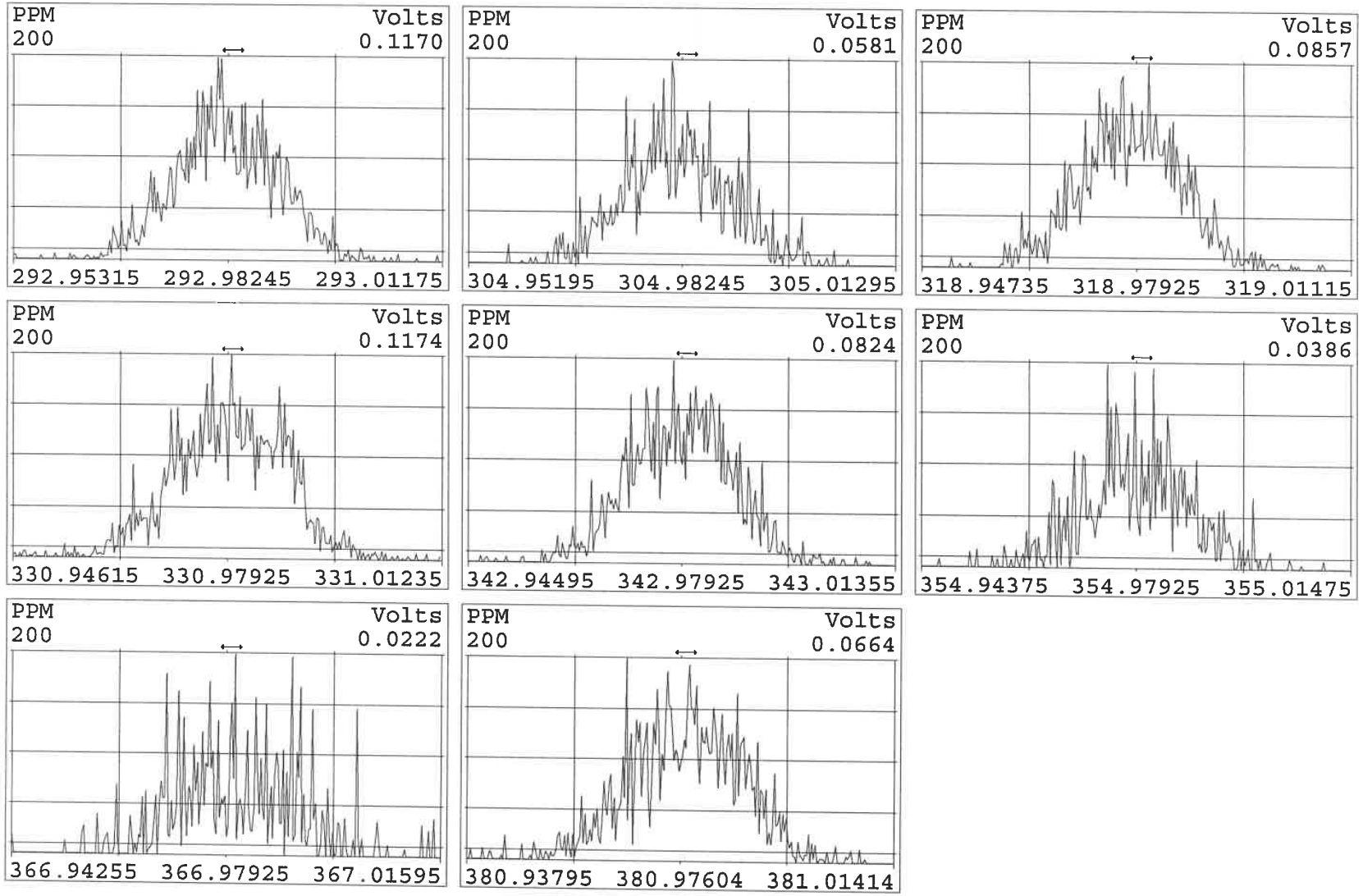

793937

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.325	69639857	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.655	95217322	0.79	1.3327	102.6	102.6	0.2145	0.2145	103	
2,3,7,8-TCDF	17.669	490890	0.73	0.9978	0.5167	0.5167	0.0331	0.0331	103	
D 13C-2,3,7,8-TCDD	16.064	61458050	0.80	0.8749	100.9	100.9	0.1726	0.1726	101	
$ 37Cl4-2,3,7,8-TCDD	16.092	291376		0.8648	0.4838	0.4838	0.0285	0.0285	96.76	
2,3,7,8-TCDD	16.092	355740	0.86	1.0570	0.5476	0.5476	0.0537	0.0537	110	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL2_00032 Amount Added: 2.00 Units: uL

793938

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d
Lims ID: IC 2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 14-Jul-2021 12:14:03 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:11 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:02:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.325	16.329	0		30591068	6667413	4543	11357	1468		
333.9339	16.325	16.329	0		39048789	8612981	4687	11717	1838	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.655	17.651	0	1.082	42141841	7700783	11144	27860	691		
317.9389	17.642	17.651	-1	1.081	53075481	9792687	6329	15822	1547	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.001	206323	36906	1181	2952	31		
305.8987	17.683	17.670	1	1.002	284567	53740	1129	2822	48	0.73(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	27282846	6177402	4543	11357	1360		
333.9339	16.064	16.068	0	0.984	34175204	7605123	4687	11717	1623	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.092	16.090	0	0.986	291376	78915	1508	3770	52		
2,3,7,8-TCDD											
319.8965	16.092	16.093	0	1.002	164014	35816	1374	3435	26		
321.8936	16.105	16.093	1	1.003	191726	38340	1757	4392	22	0.86(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL2_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

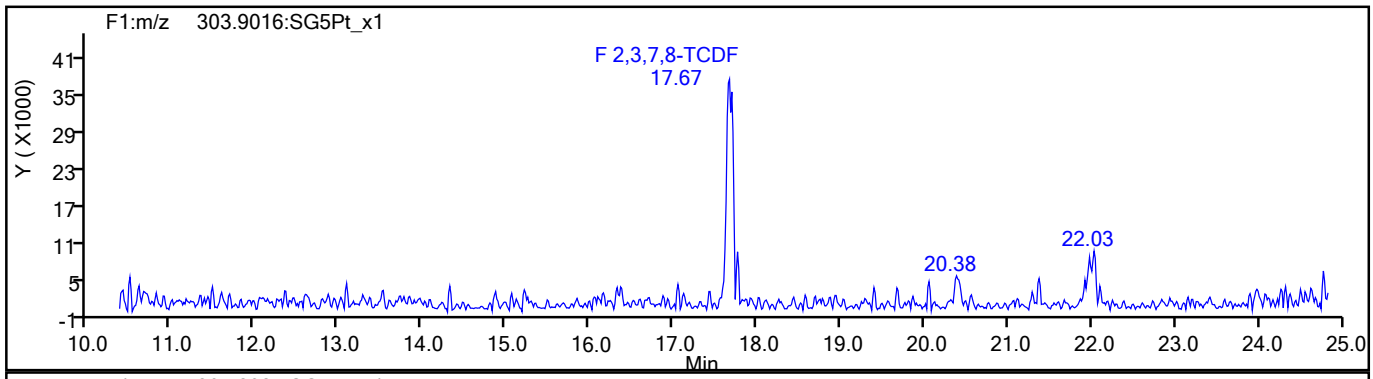

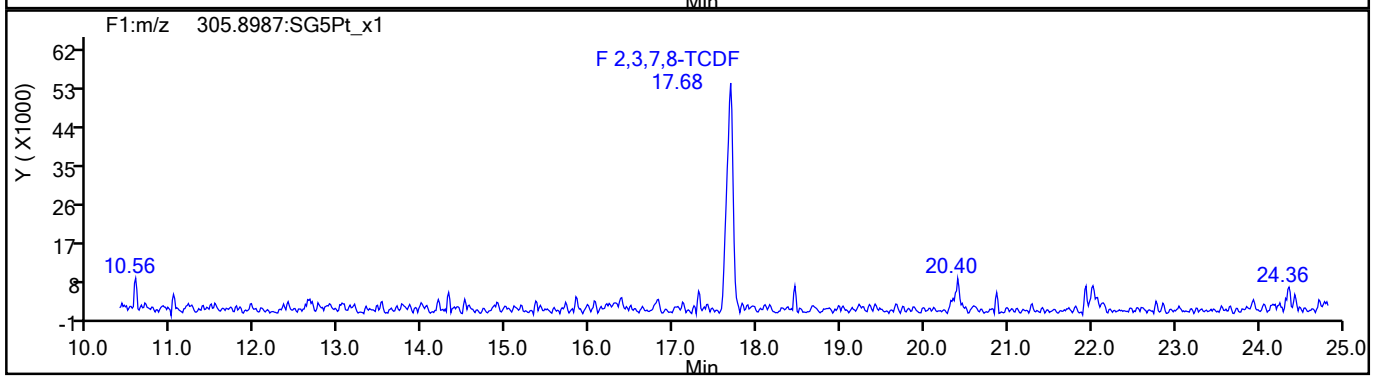

TCDF Standards

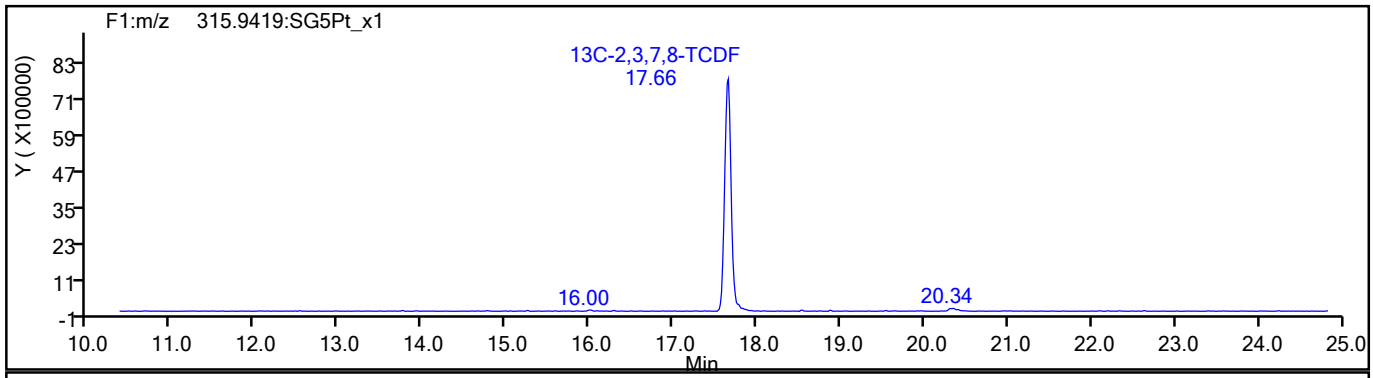

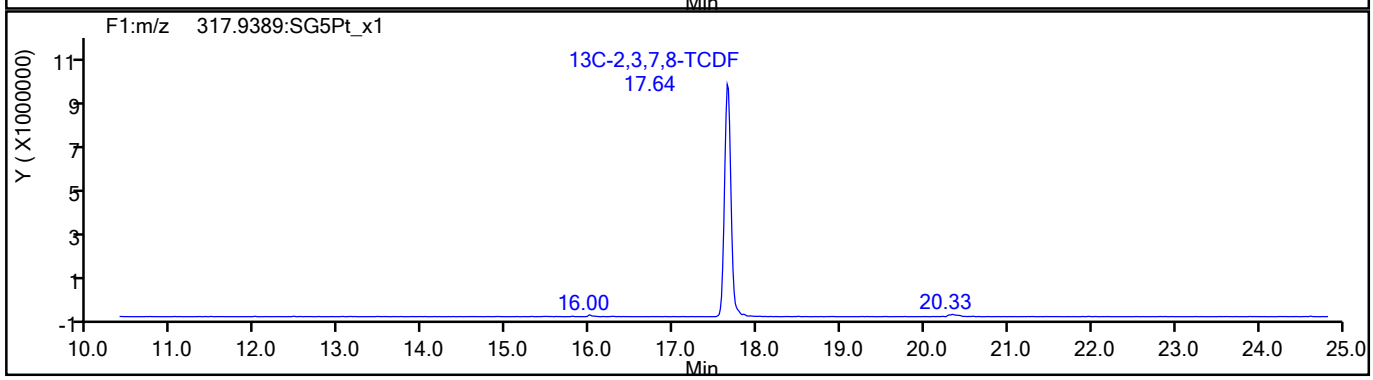

793940

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

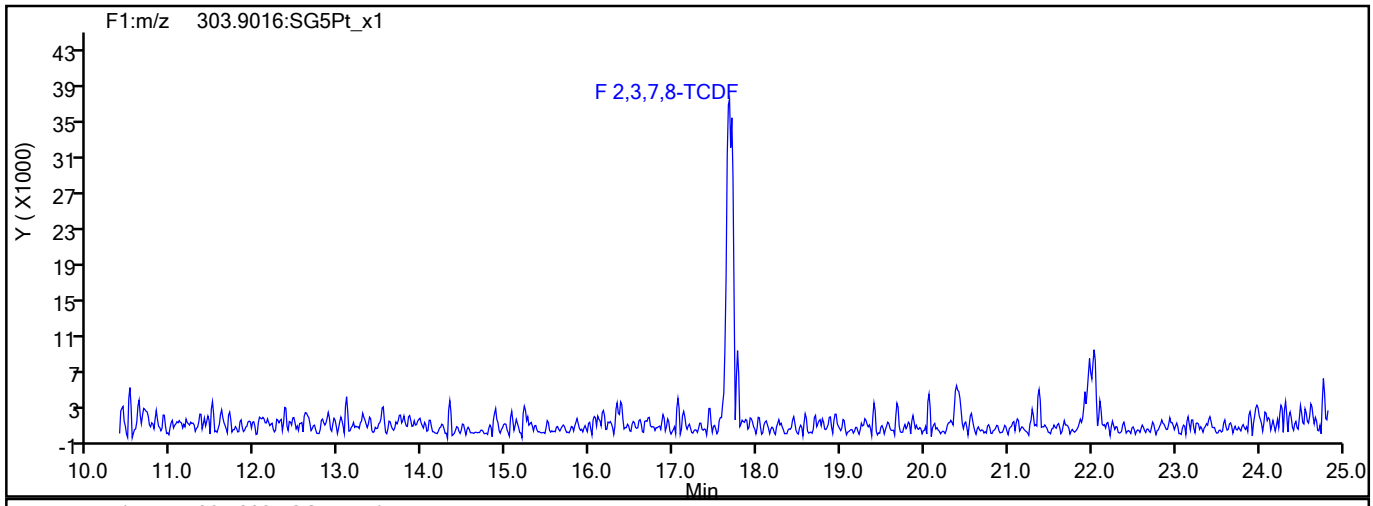

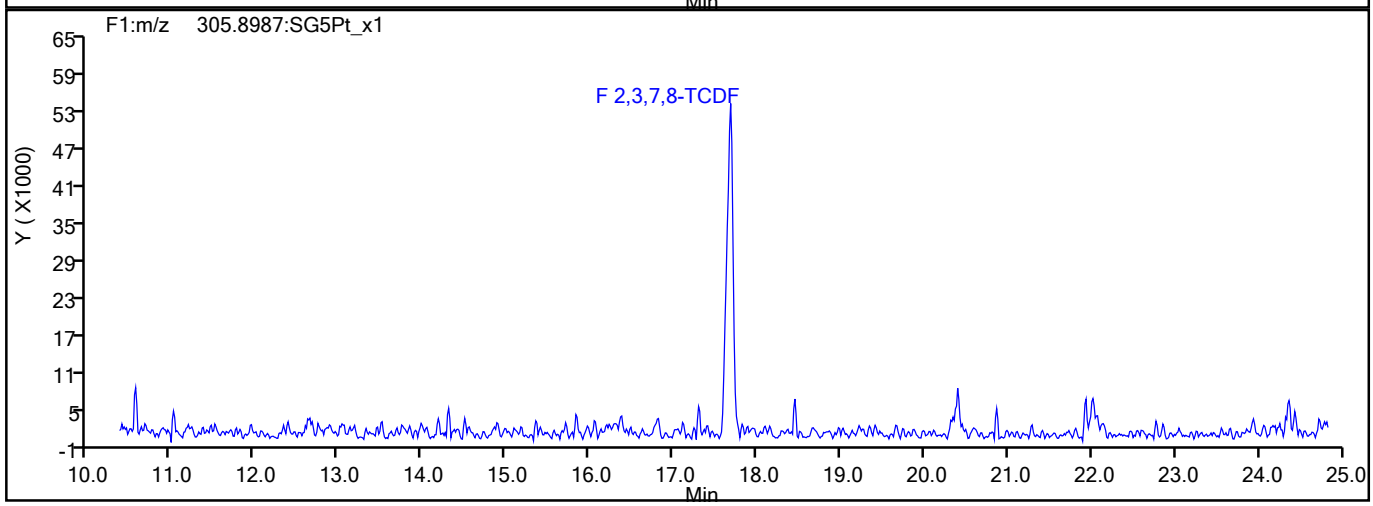

TCDF Interference Mass

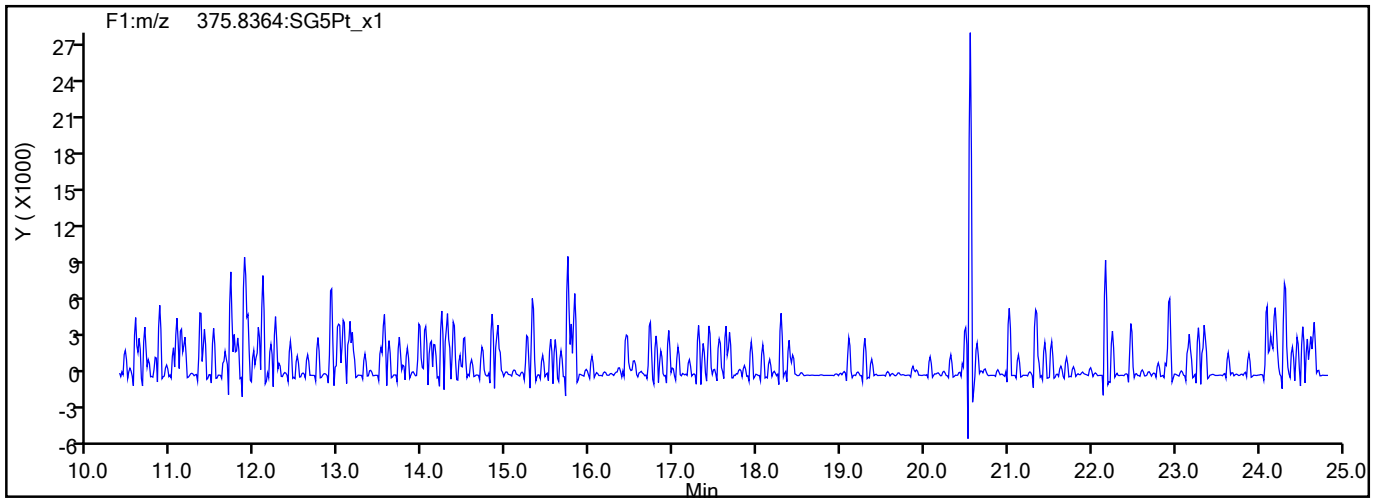

793941

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

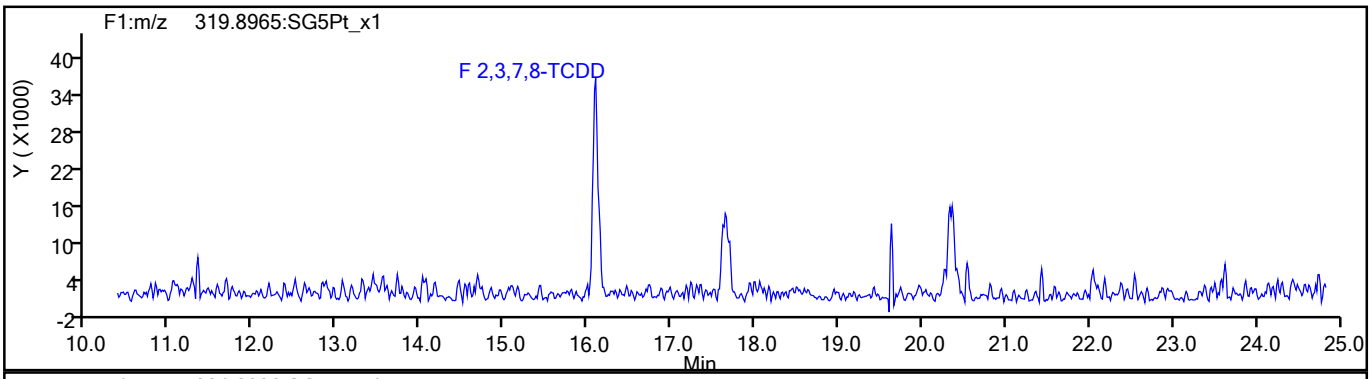

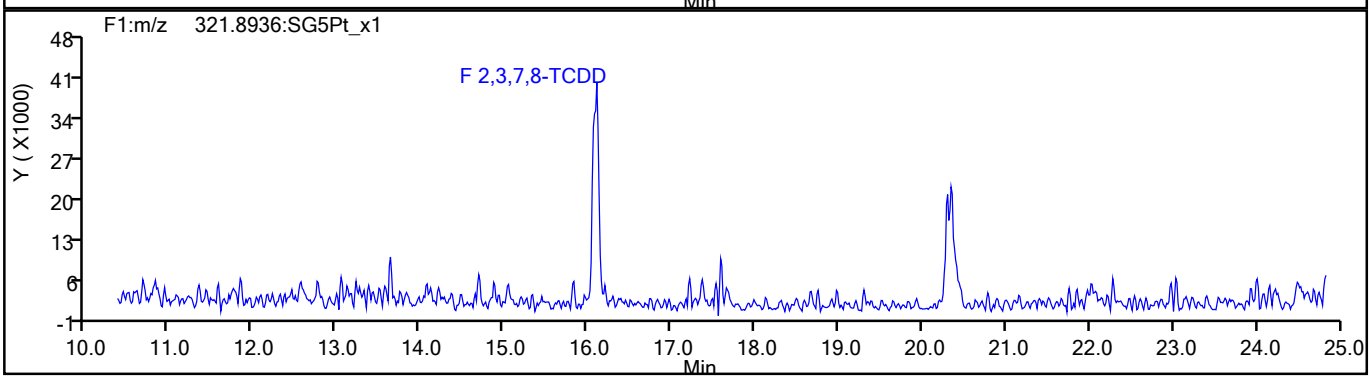

TCDD Standards

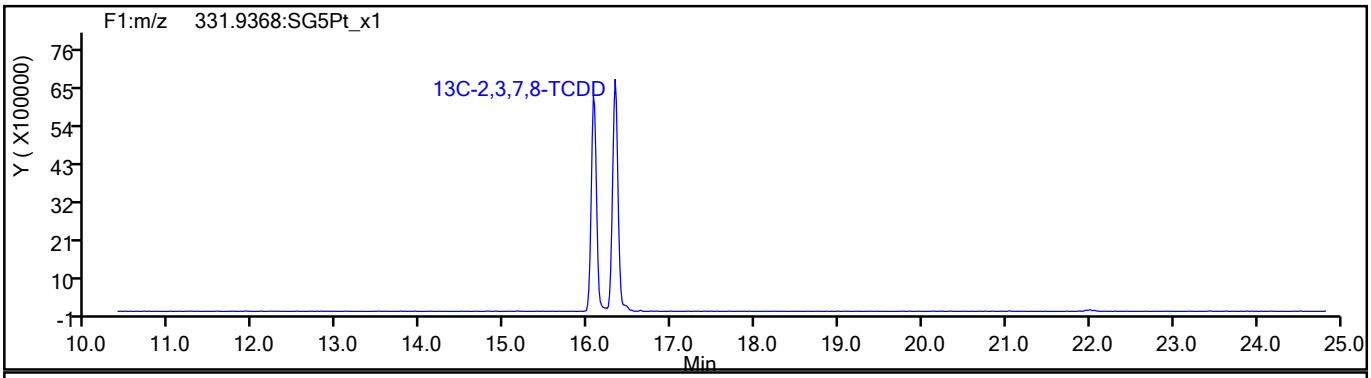

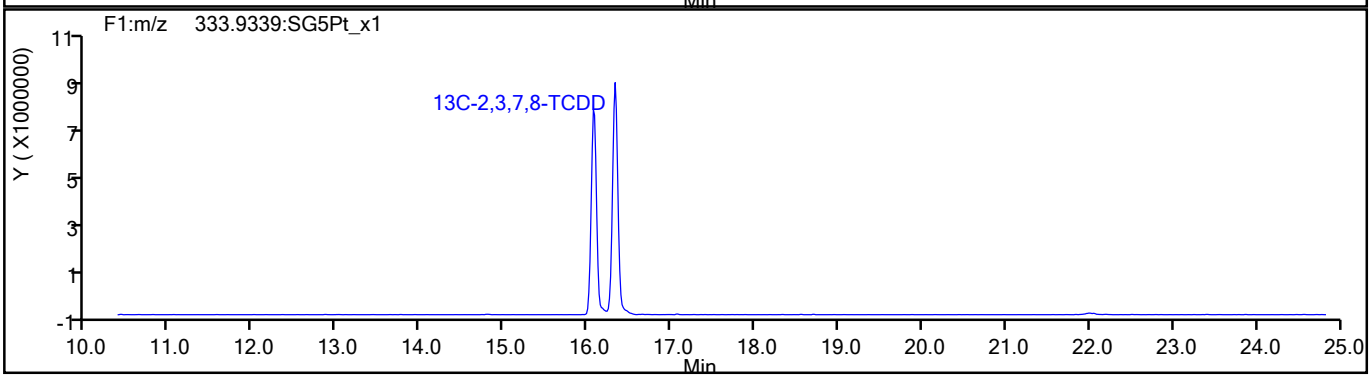

793942

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

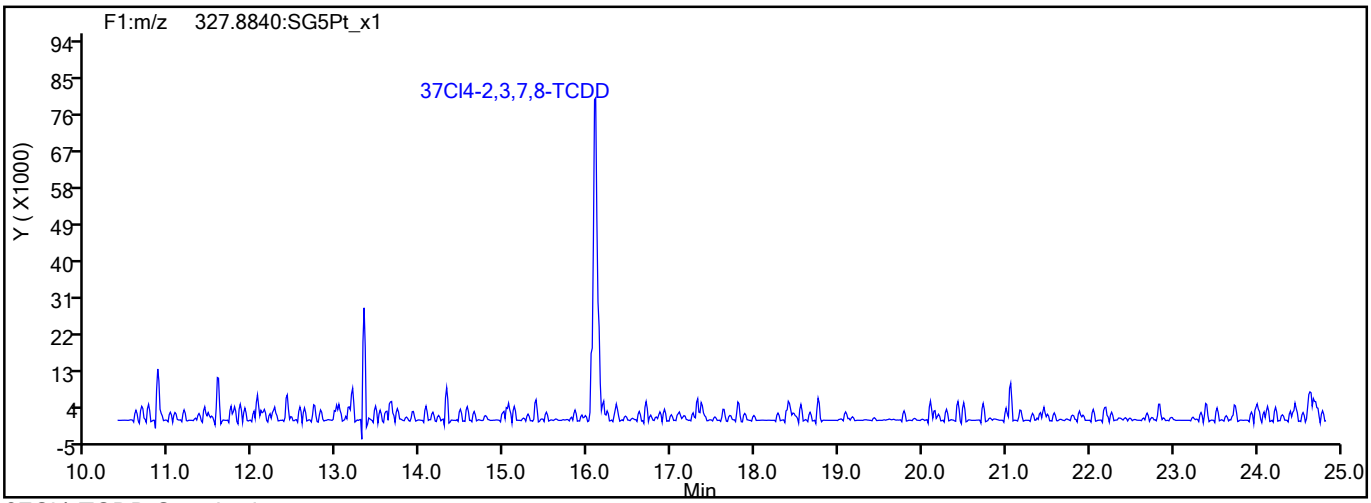

37Cl4-TCDD Standards

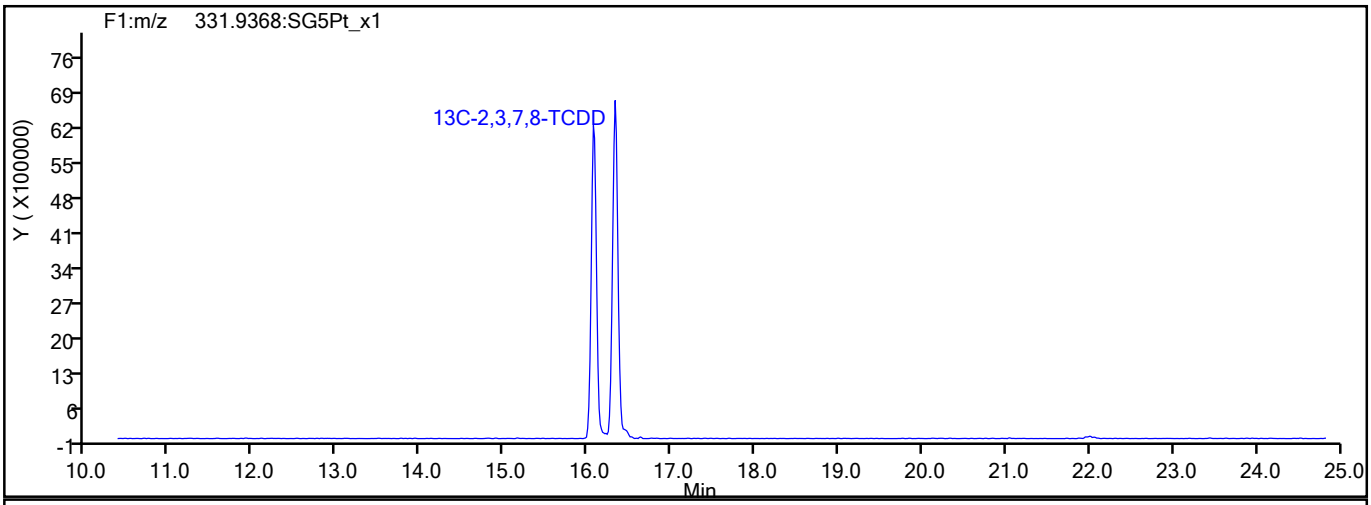

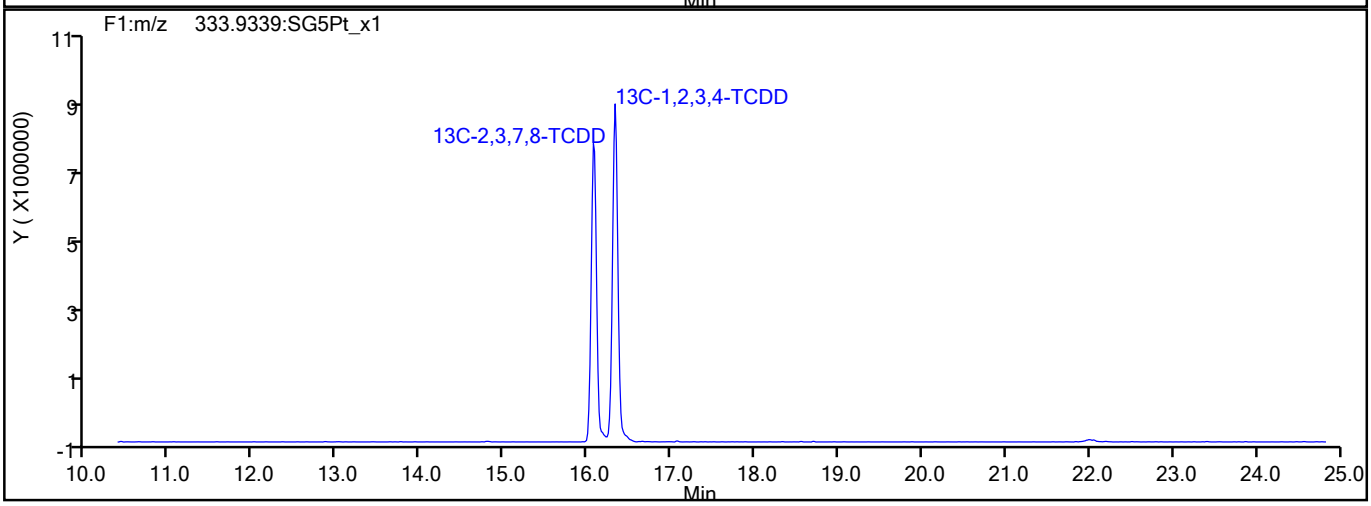

793943

Report Date: 15-Jul-2021 09:35:14 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_003.d		
Injection Date:	14-Jul-2021 12:14:03	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	3
Column Type:	DB-225	Column Dia:	0.32 mm

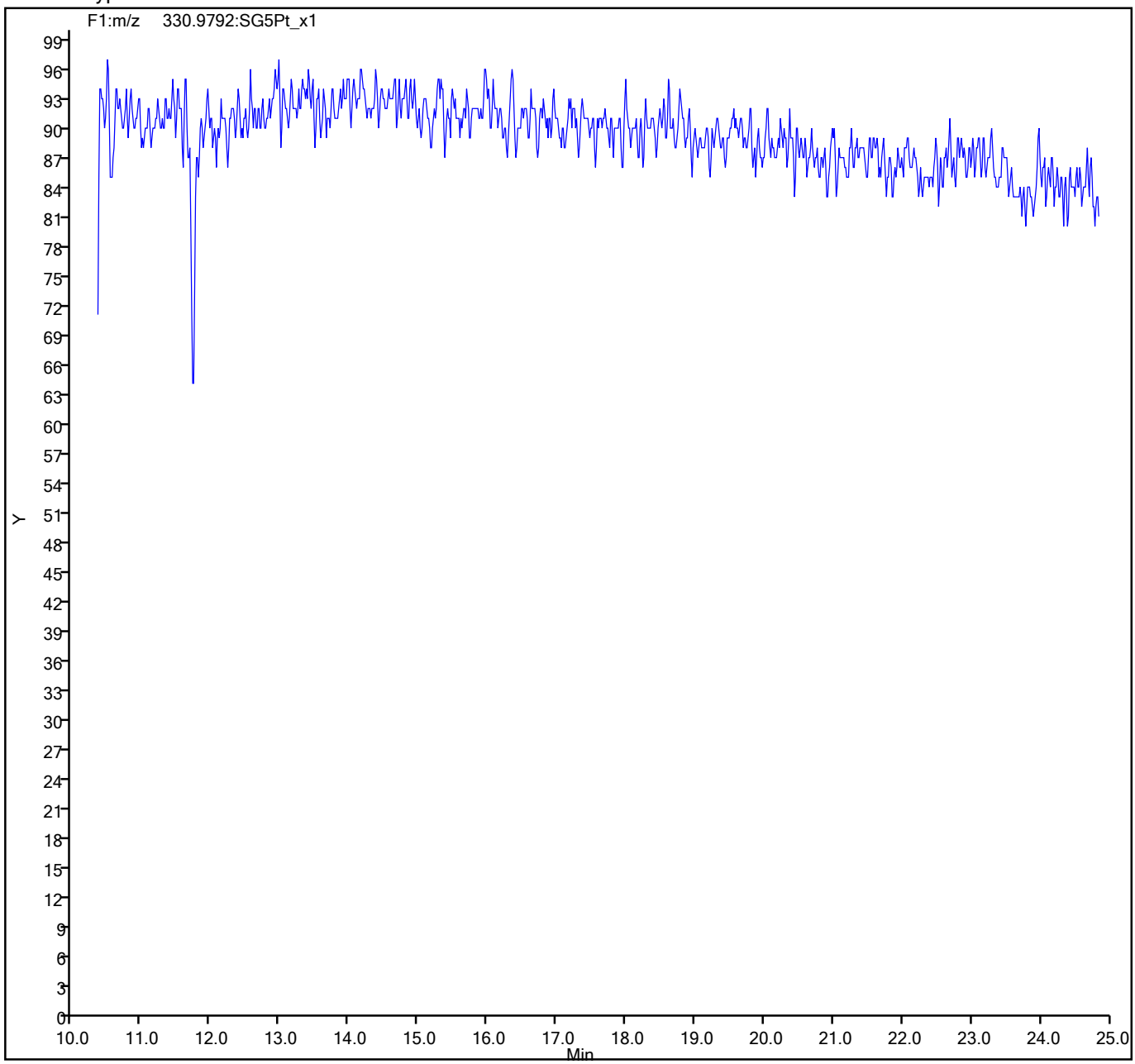

793944

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	83878670	0.77	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	104913800	0.81	1.3327	93.9	93.9	0.1635	0.1635	93.85	
2,3,7,8-TCDF	17.673	1827830	0.78	0.9978	1.746	1.746	0.0404	0.0404	87.30	
D 13C-2,3,7,8-TCDD	16.068	68303138	0.80	0.8749	93.1	93.1	0.1986	0.1986	93.07	
$ 37Cl4-2,3,7,8-TCDD	16.095	1283086		0.8648	1.769	1.769	0.0332	0.0332	88.44	
2,3,7,8-TCDD	16.082	1221661	0.88	1.0570	1.692	1.692	0.0707	0.0707	84.61	M
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags
Review Flags
M - Manually Integrated

Reagents:
HRDXNL3_00029 Amount Added: 2.00 Units: uL

793945

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d
Lims ID: IC 3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 14-Jul-2021 12:52:25 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:16 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.329	0		36622875	7456322	7274	18185	1025		
333.9339	16.329	16.329	0		47255795	9666844	4629	11572	2088	0.77(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.651	0	1.081	46900639	8499458	7887	19717	1078		
317.9389	17.659	17.651	0	1.081	58013161	10992077	7033	17582	1563	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.670	0	1.001	799954	135895	1552	3880	88		
305.8987	17.673	17.670	0	1.001	1027876	168452	1593	3982	106	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.068	16.068	0	0.984	30335371	6386184	7274	18185	878		
333.9339	16.068	16.068	0	0.984	37967767	8157012	4629	11572	1762	0.80(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.090	0	0.986	1283086	320195	1969	4922	163		
2,3,7,8-TCDD											M
319.8965	16.082	16.093	-1	1.001	572786	120868	2012	5030	60		M
321.8936	16.095	16.093	0	1.002	648875	140184	2338	5845	60	0.88(0.65-0.89)	M

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Reagents:

HRDXNL3_00029 Amount Added: 2.00 Units: uL

793946

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 1

Processing Integration Results

RT: 16.08
Area: 606289
Amount: 1.764853
Amount Units: pg/ul

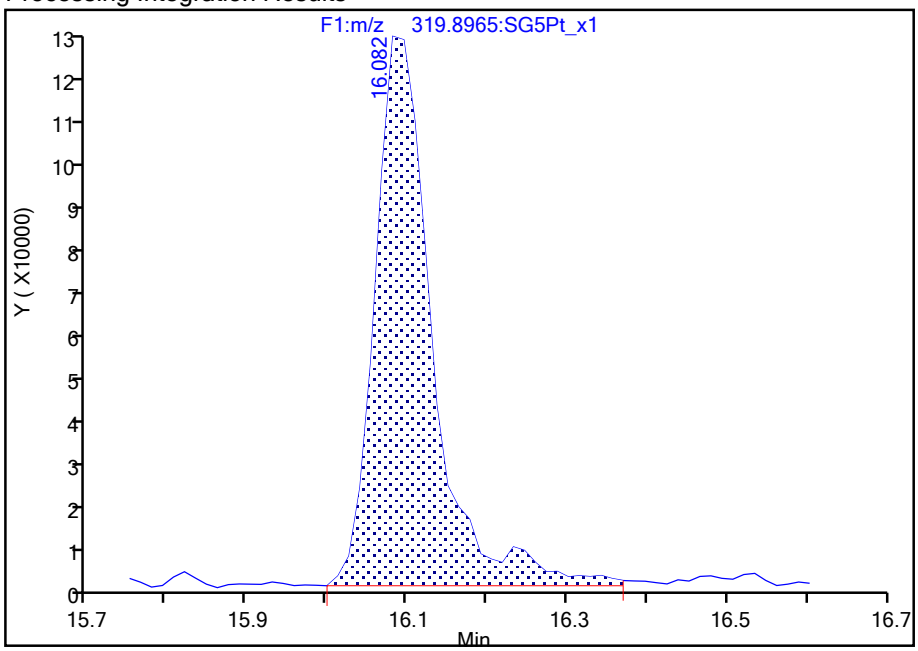

Manual Integration Results

RT: 16.08
Area: 572786
Amount: 1.692148
Amount Units: pg/ul

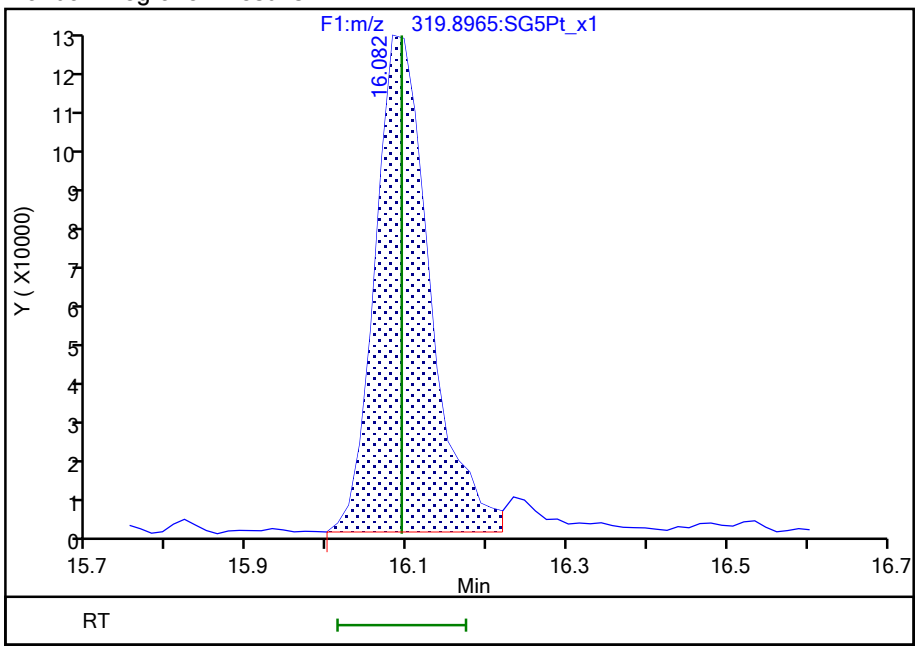

Reviewer: bennettd, 15-Jul-2021 09:06:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d				
Injection Date:	14-Jul-2021 12:52:25	Instrument ID:	11D2		
Lims ID:	IC 3				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDD, CAS: 1746-01-6

Signal: 2

Processing Integration Results

RT: 16.10
Area: 679111
Amount: 1.764853
Amount Units: pg/ul

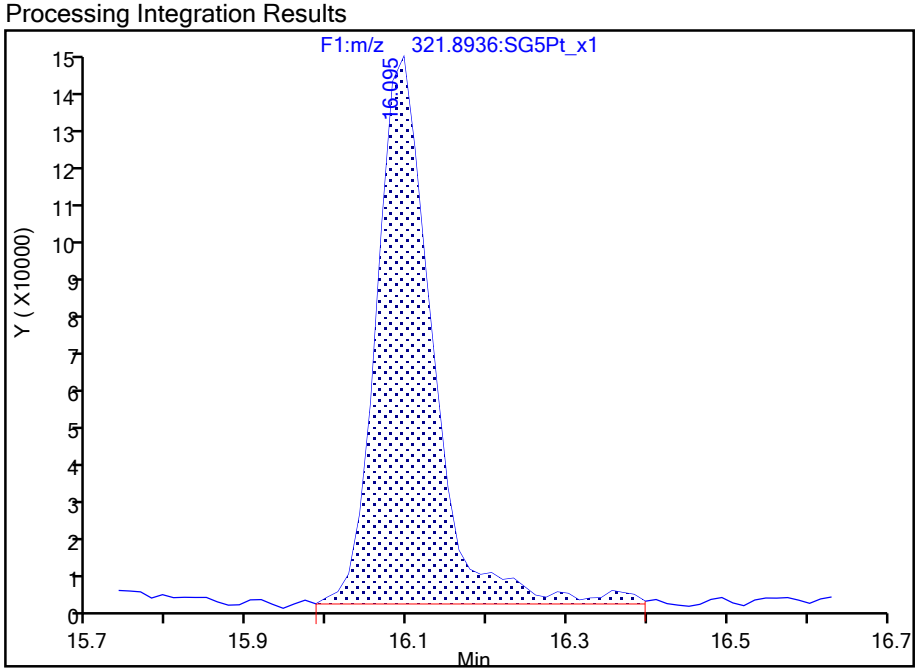

Manual Integration Results

RT: 16.10
Area: 648875
Amount: 1.692148
Amount Units: pg/ul

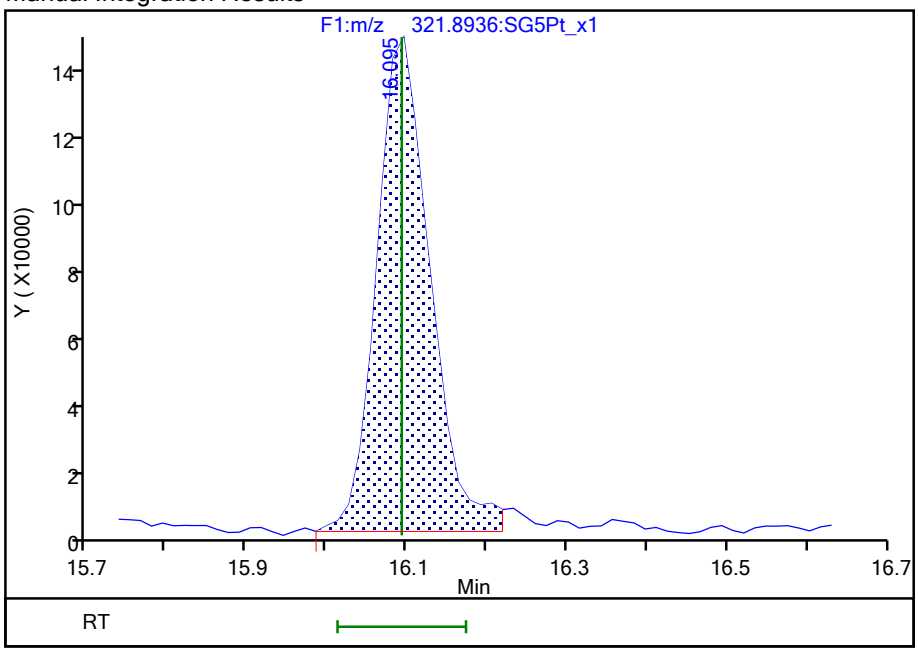

Reviewer: bennettd, 15-Jul-2021 09:06:13
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

793948

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

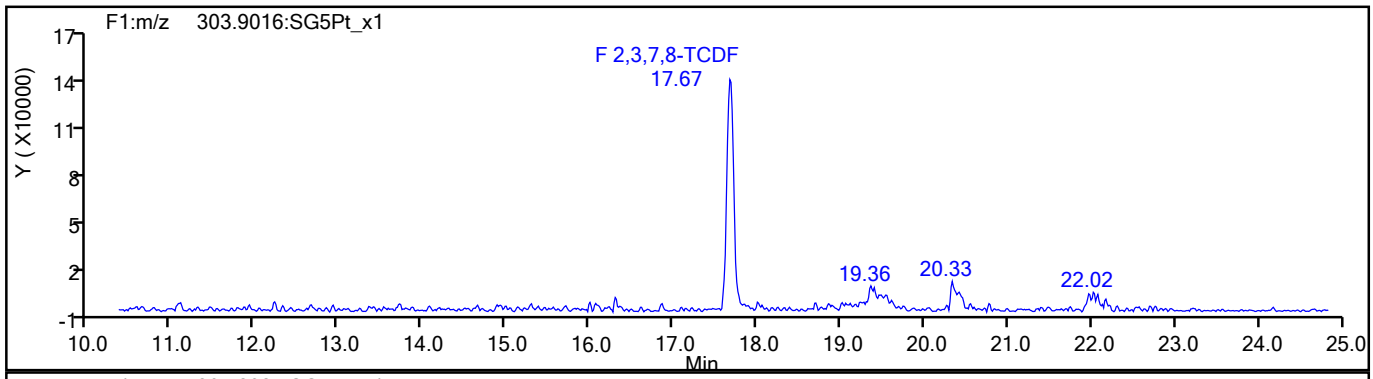

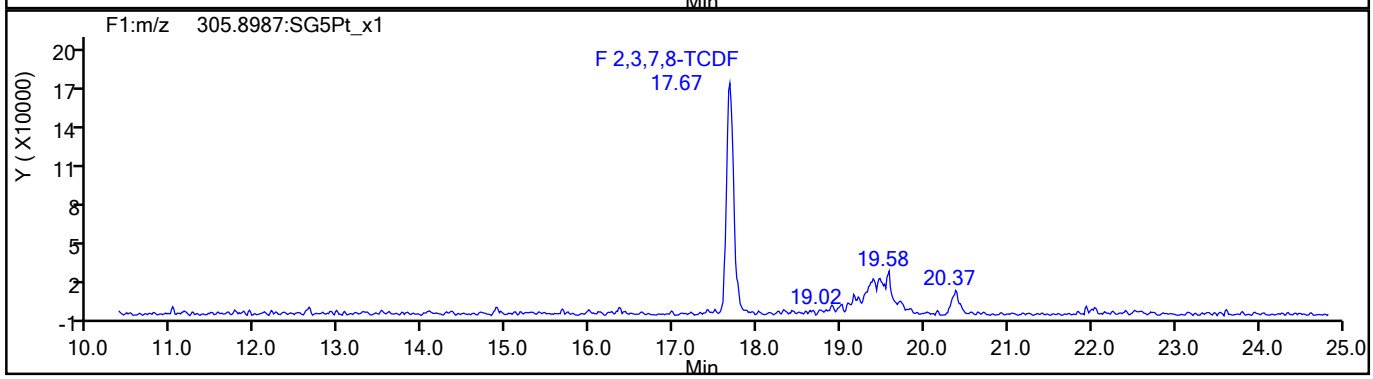

TCDF Standards

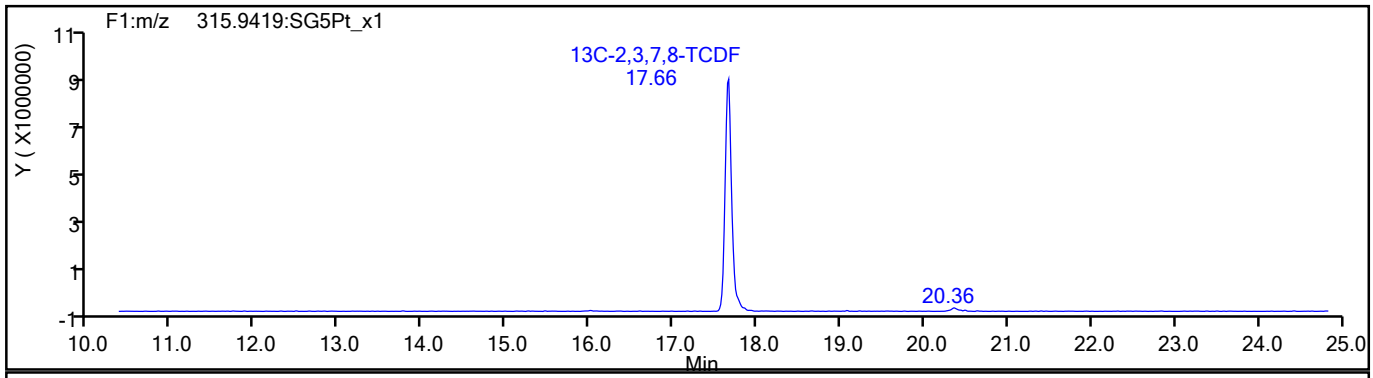

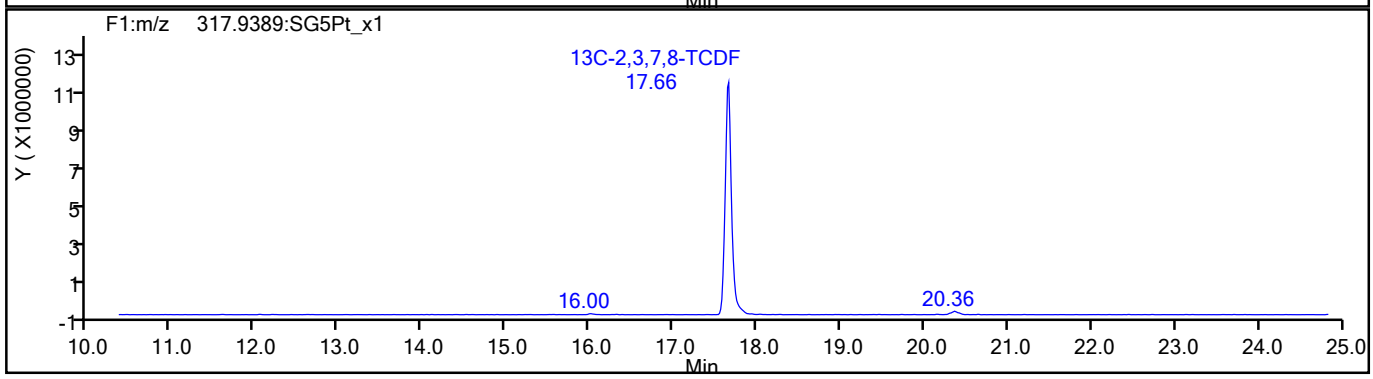

793949

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

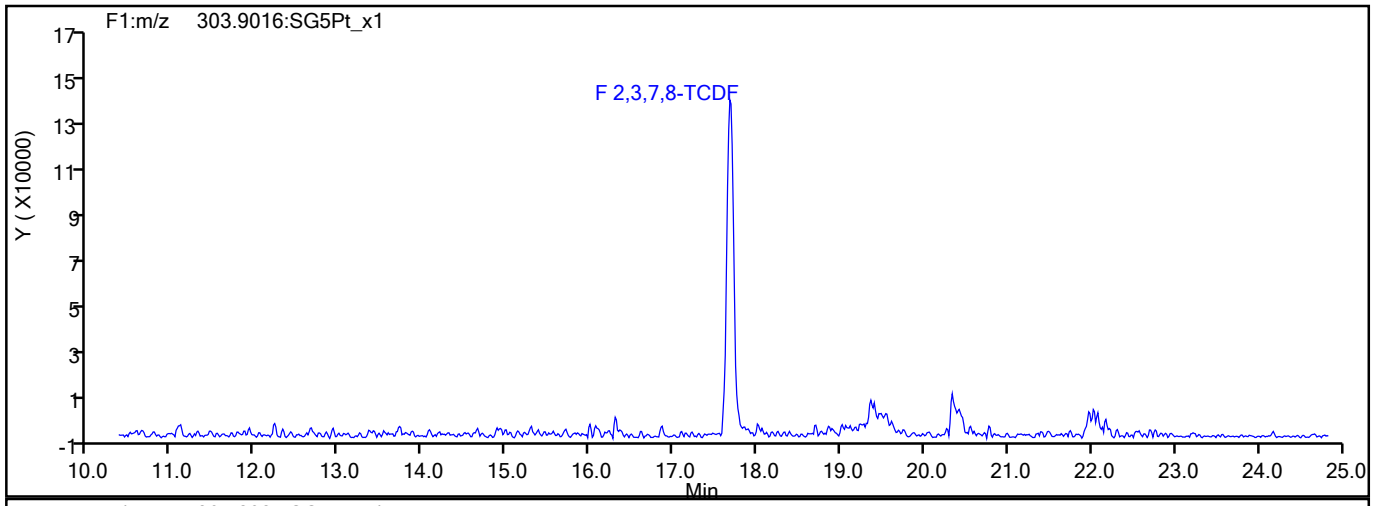

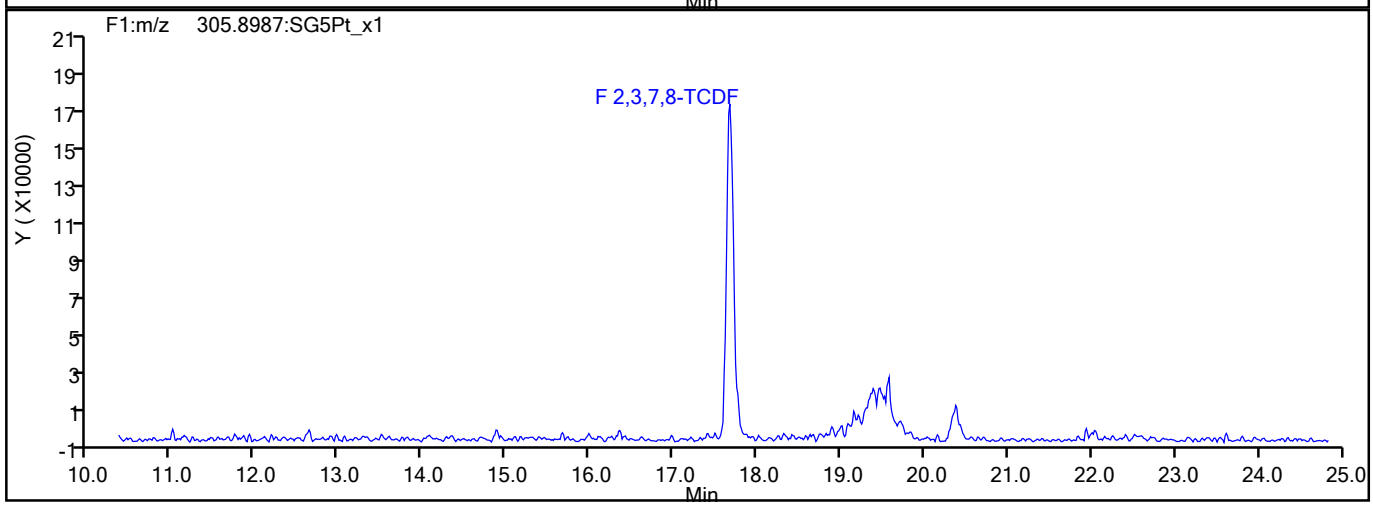

TCDF Interference Mass

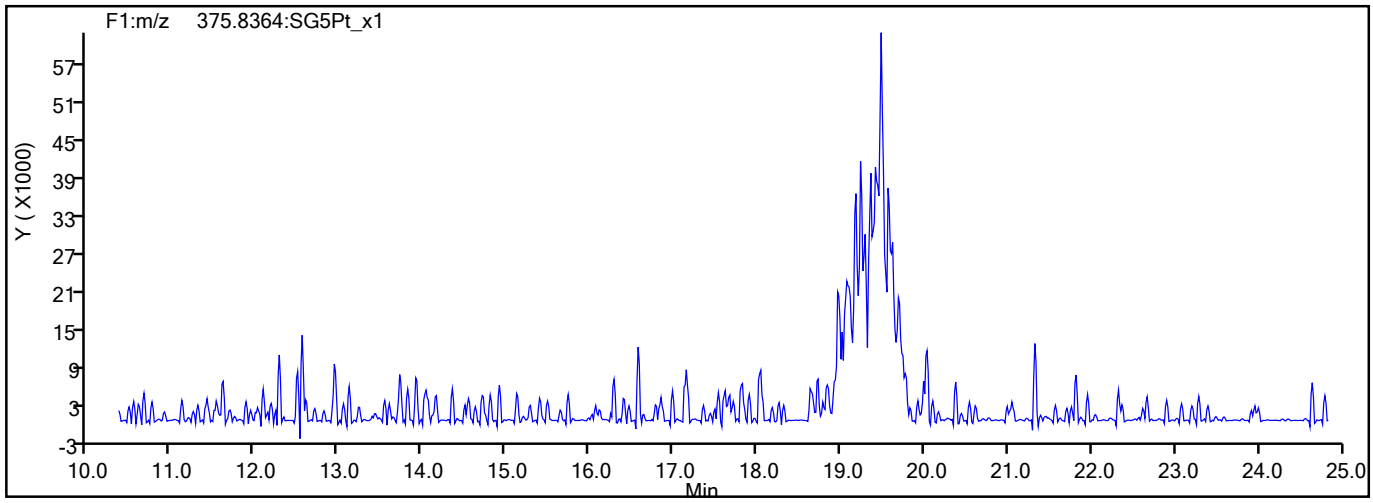

793950

Report Date: 15-Jul-2021 09:35:19 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

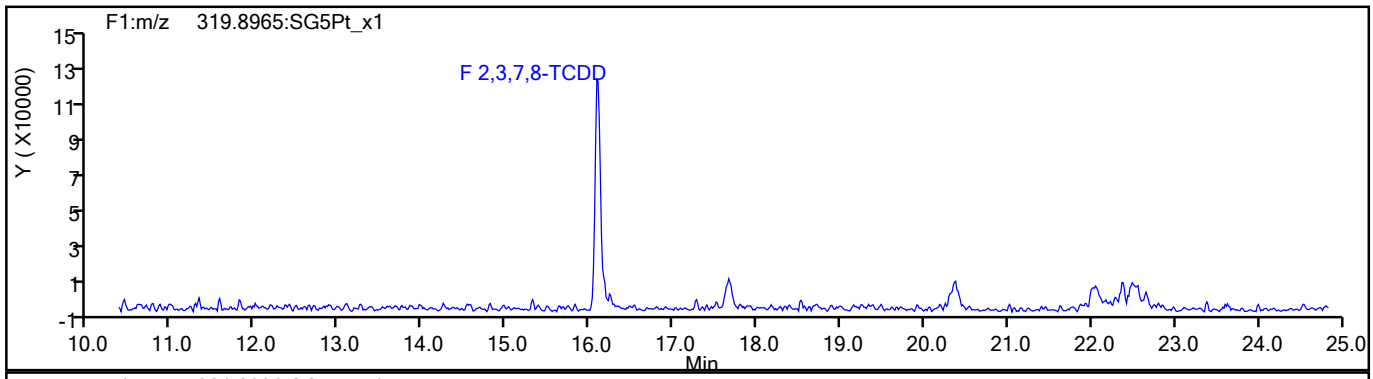

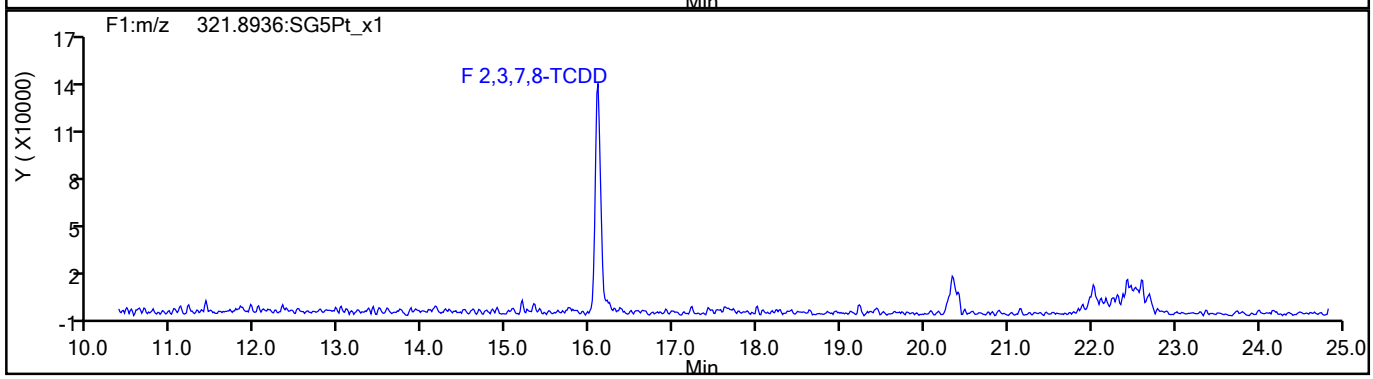

TCDD Standards

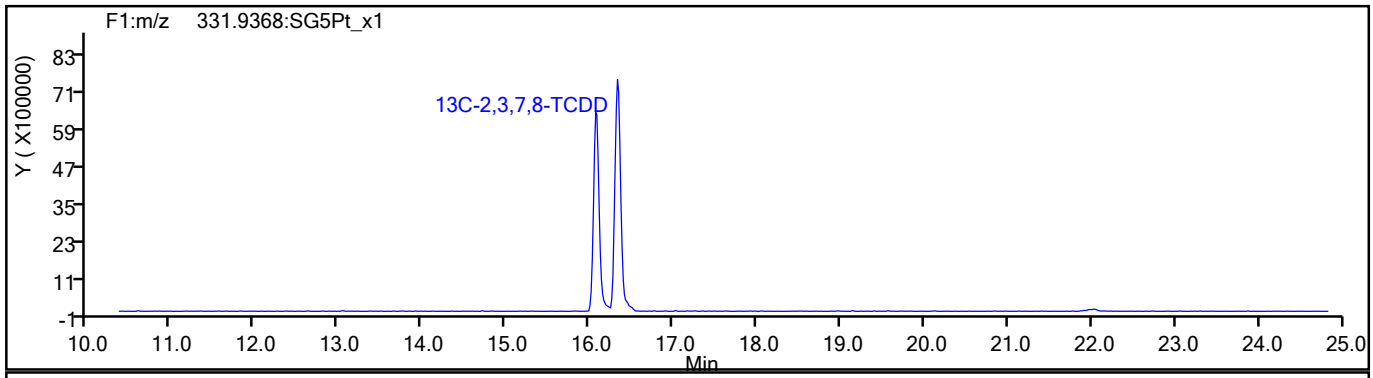

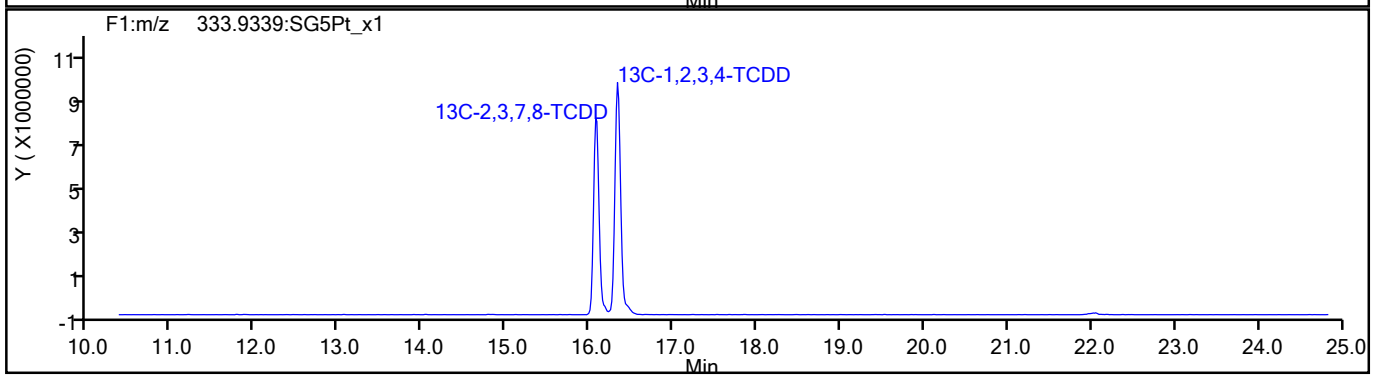

793951

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

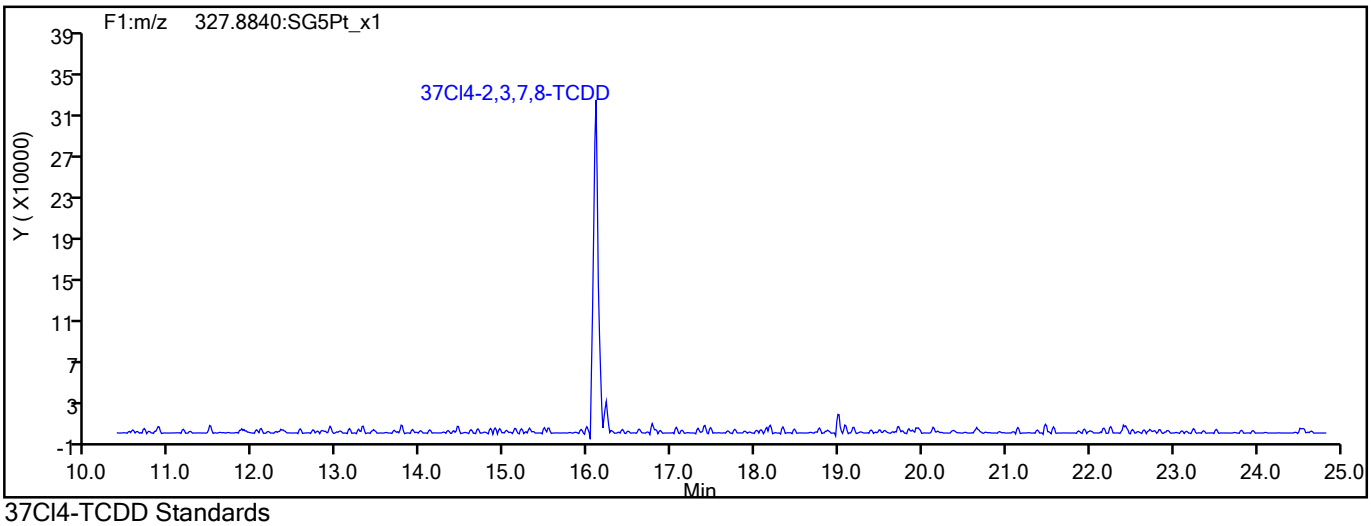

37Cl4-TCDD Standards

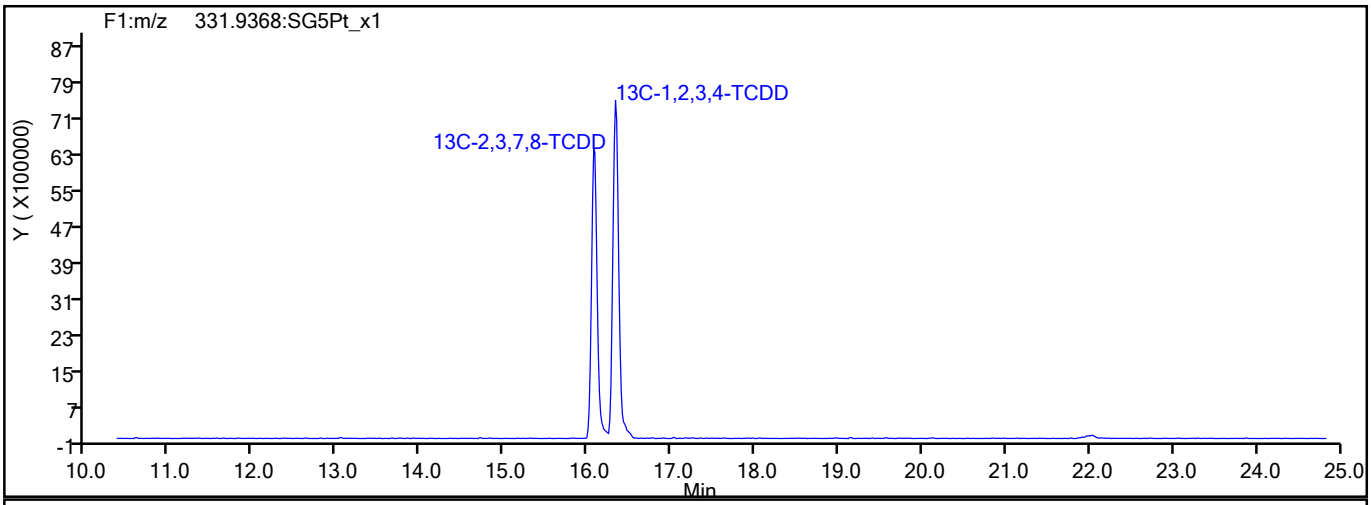

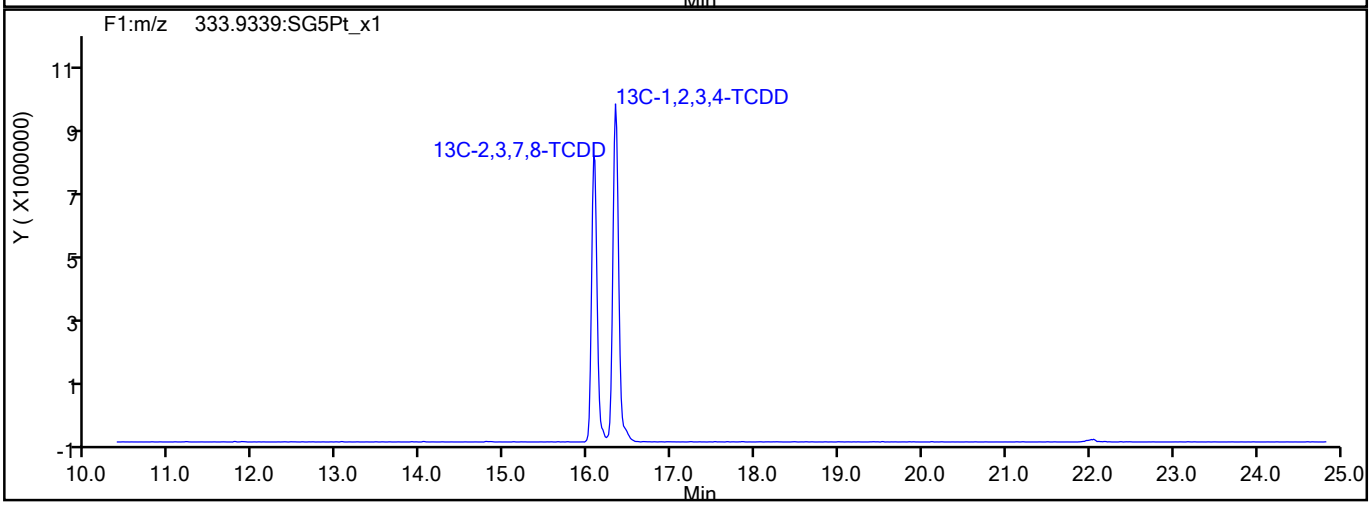

793952

Report Date: 15-Jul-2021 09:35:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_004.d		
Injection Date:	14-Jul-2021 12:52:25	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	4
Column Type:	DB-225	Column Dia:	0.32 mm

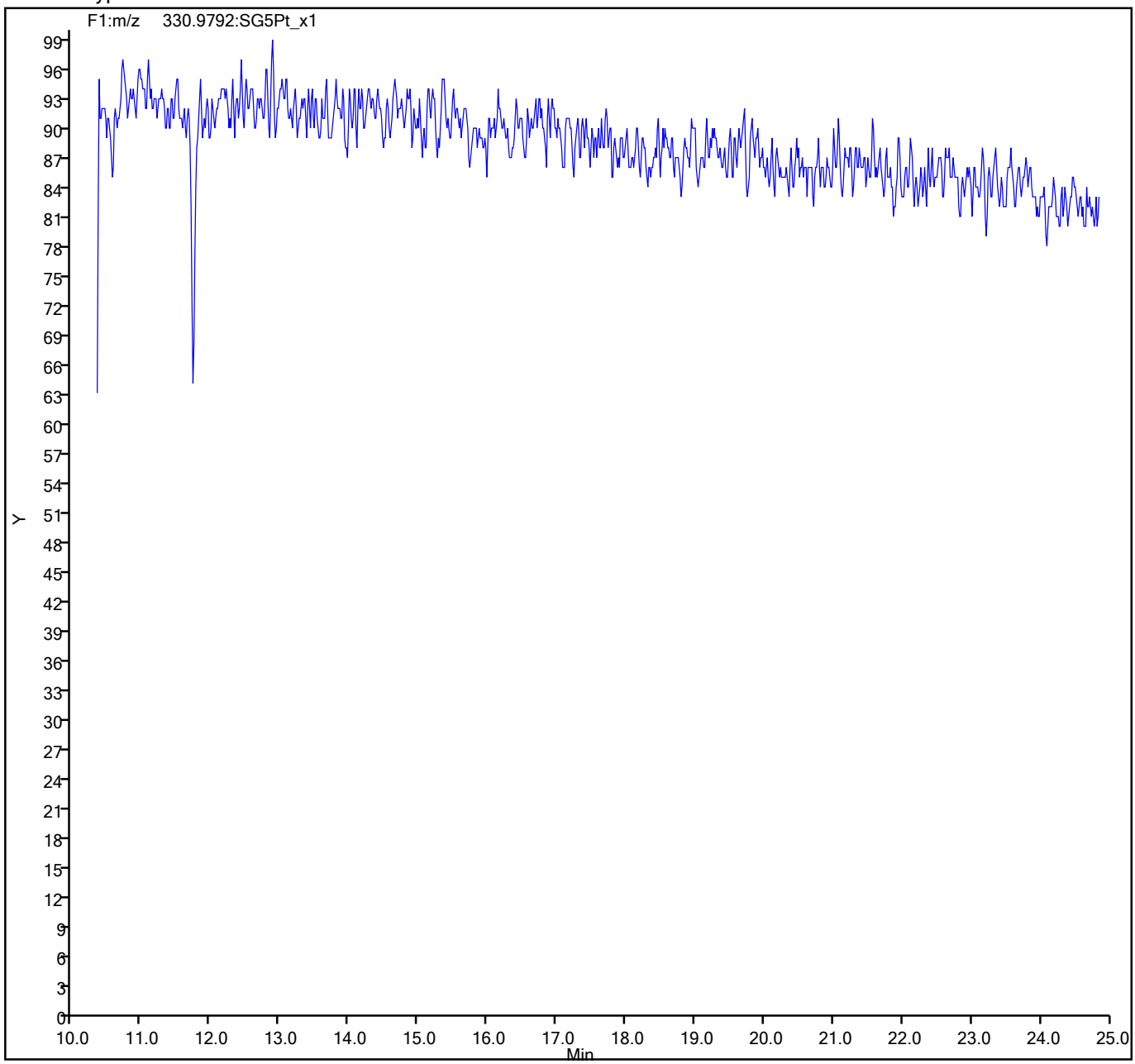

793953

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.324	63673477	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.641	84741646	0.82	1.3327	99.9	99.9	0.2656	0.2656	99.86	
2,3,7,8-TCDF	17.669	8119940	0.79	0.9978	9.603	9.603	0.0818	0.0818	96.03	
D 13C-2,3,7,8-TCDD	16.064	57218335	0.78	0.8749	102.7	102.7	0.2456	0.2456	103	
$ 37Cl4-2,3,7,8-TCDD	16.078	5344814		0.8648	9.706	9.706	0.0504	0.0504	97.06	
2,3,7,8-TCDD	16.091	5472302	0.80	1.0570	9.048	9.048	0.0899	0.0899	90.48	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

793954

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d
Lims ID: IC 4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 14-Jul-2021 13:30:48 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:22 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:06:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.324	16.329	0		27313017	5849720	4883	12207	1198		
333.9339	16.324	16.329	0		36360460	7604548	6682	16705	1138	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.641	17.651	-1	1.081	38102626	7015437	10495	26237	668		
317.9389	17.641	17.651	-1	1.081	46639020	8349802	8556	21390	976	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.669	17.670	0	1.002	3575331	614523	2078	5195	296		
305.8987	17.669	17.670	0	1.002	4544609	794338	2939	7347	270	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.064	16.068	0	0.984	25057624	5615136	4883	12207	1150		
333.9339	16.064	16.068	0	0.984	32160711	7185312	6682	16705	1075	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.078	16.090	-1	0.985	5344814	1154871	2345	5862	492		
2,3,7,8-TCDD											
319.8965	16.091	16.093	0	1.002	2423807	506258	1957	4892	259		
321.8936	16.078	16.093	-1	1.001	3048495	636409	2909	7272	219	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

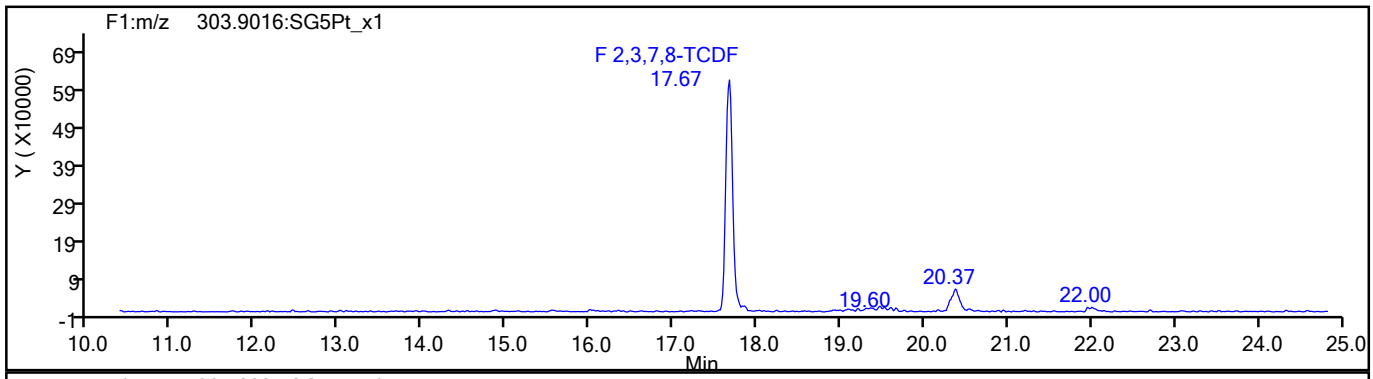

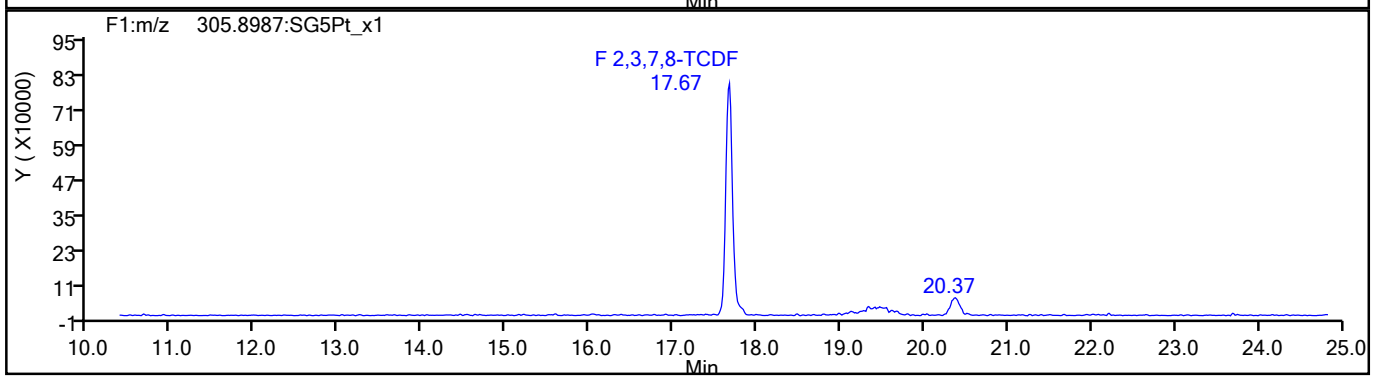

TCDF Standards

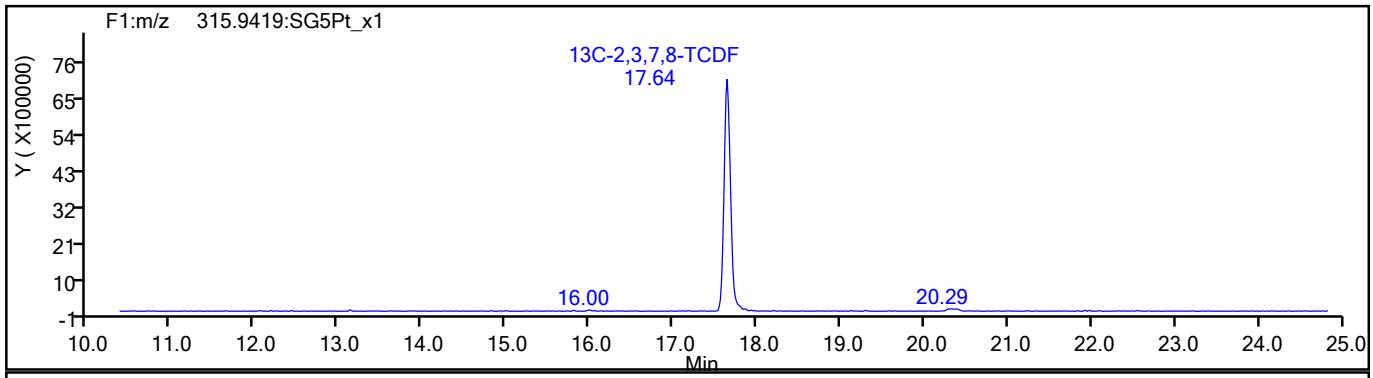

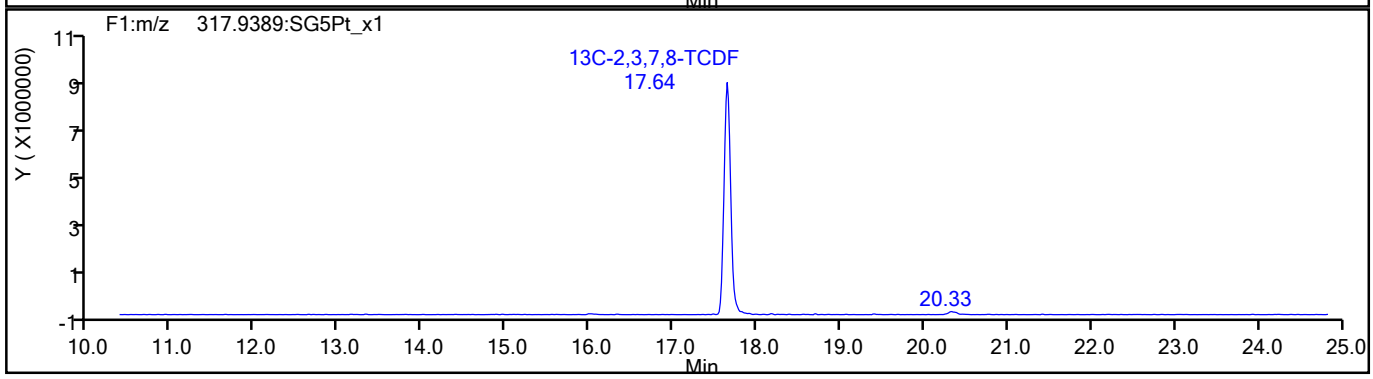

793956

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

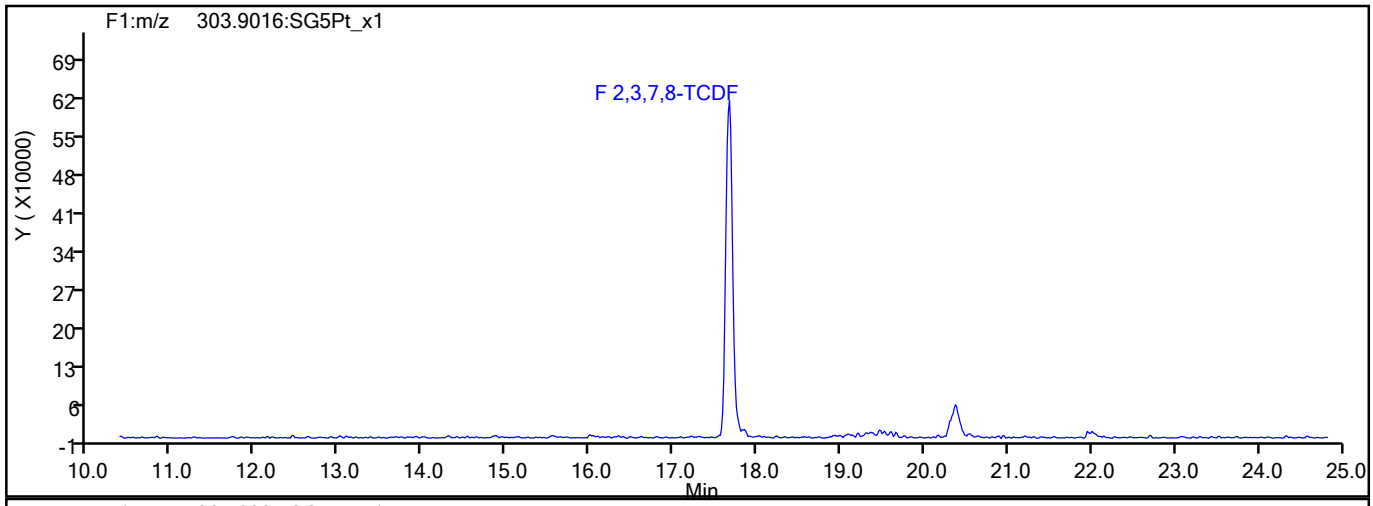

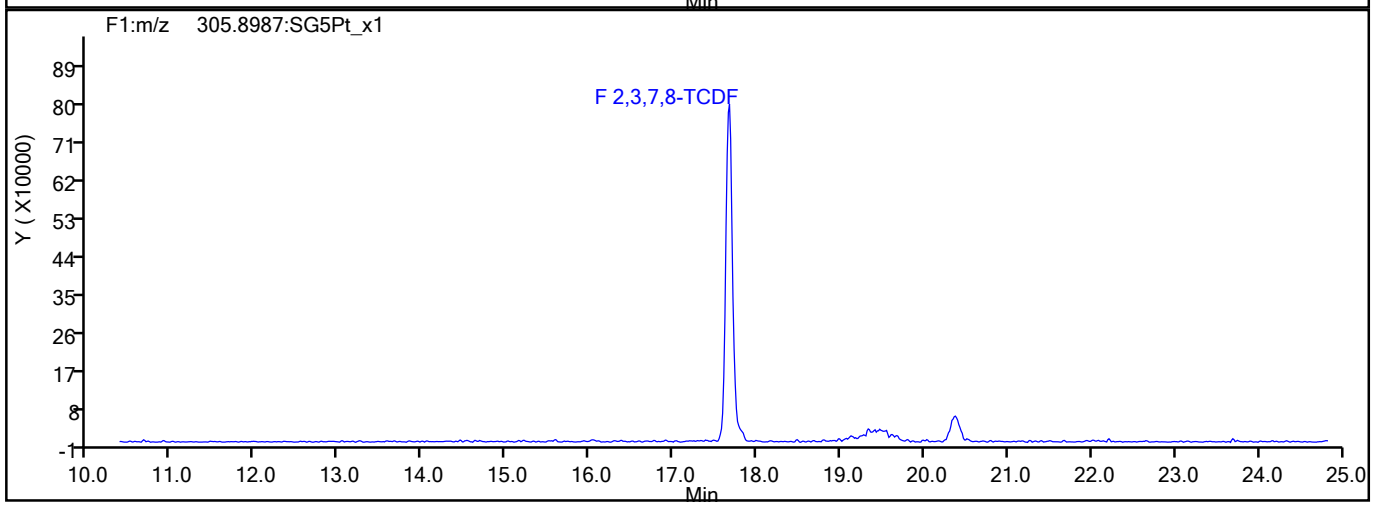

TCDF Interference Mass

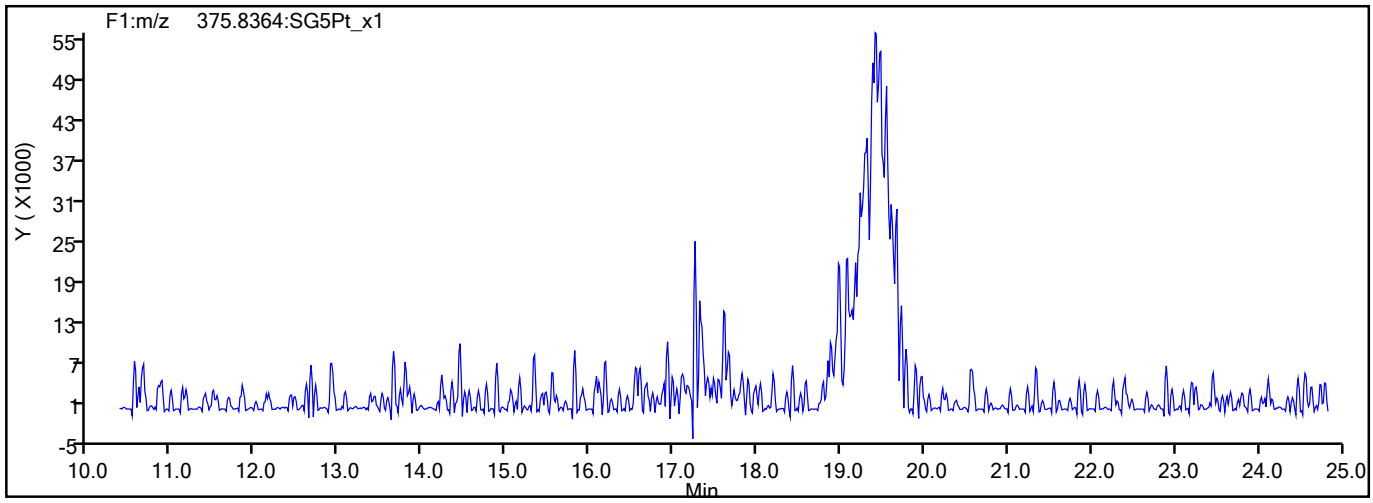

793957

Report Date: 15-Jul-2021 09:35:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

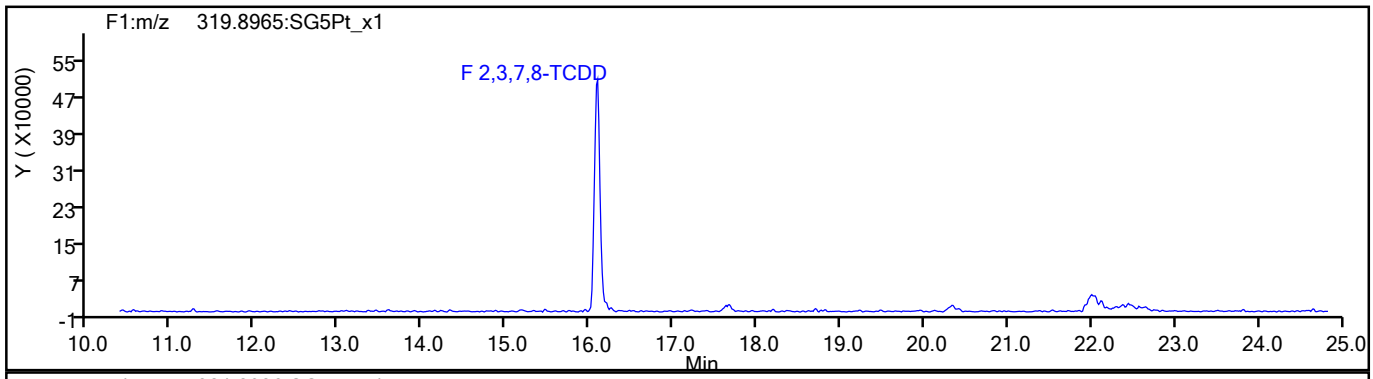

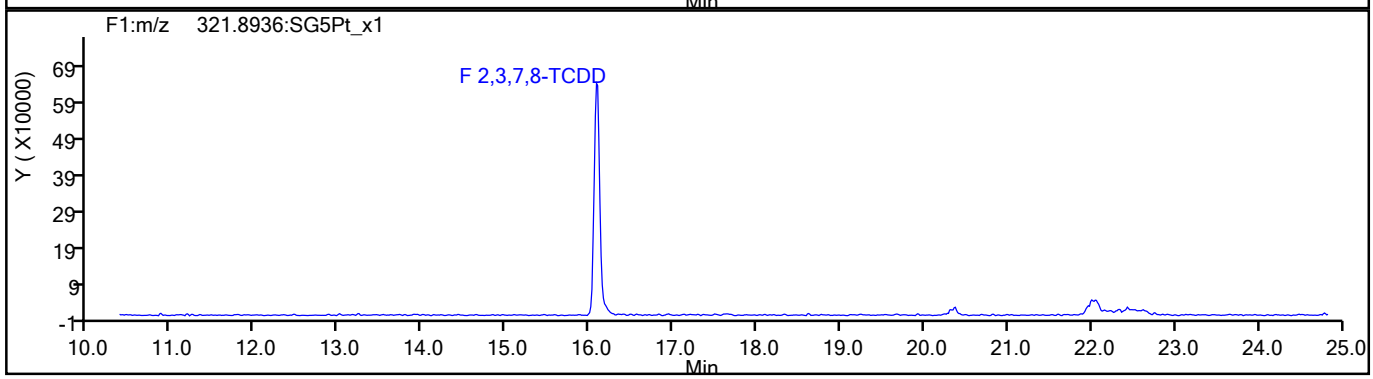

TCDD Standards

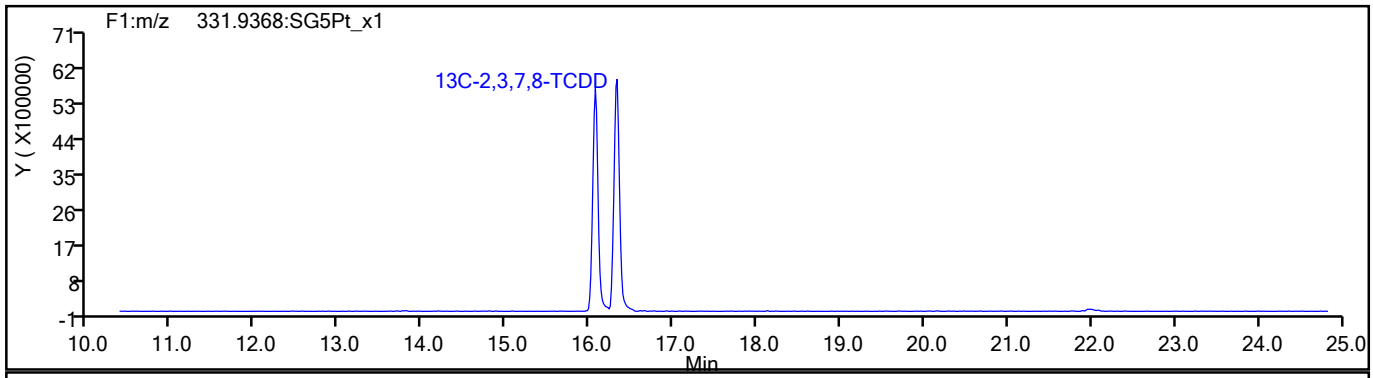

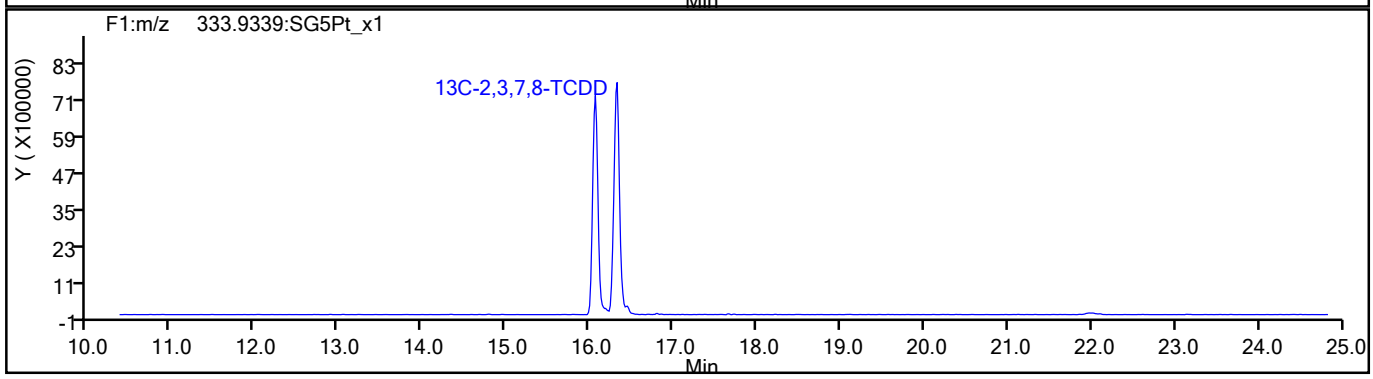

793958

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

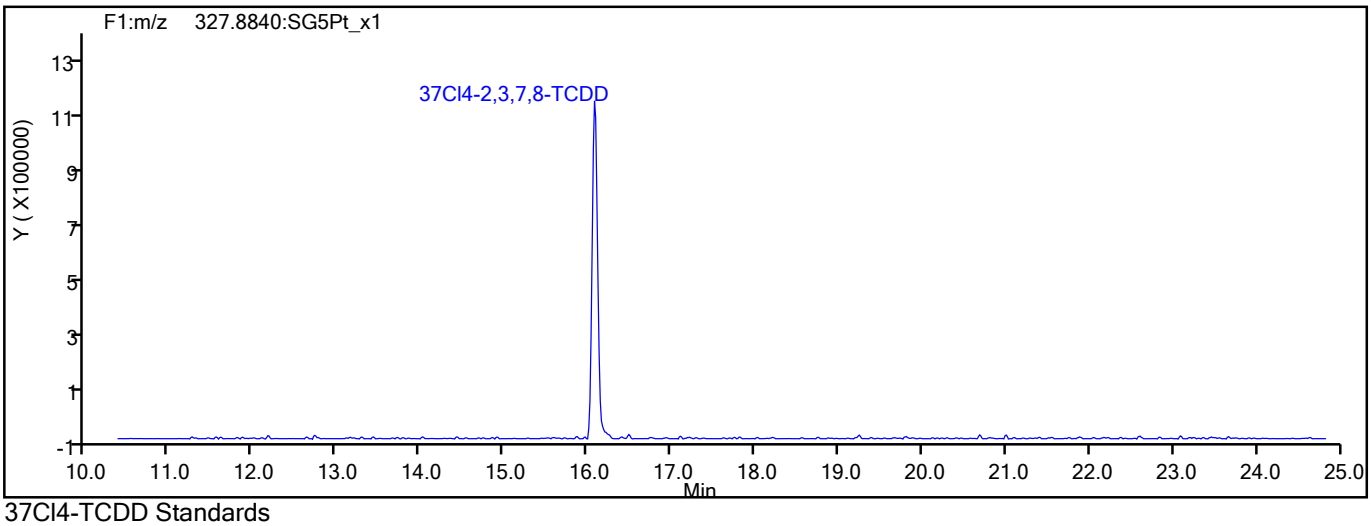

37Cl4-TCDD Standards

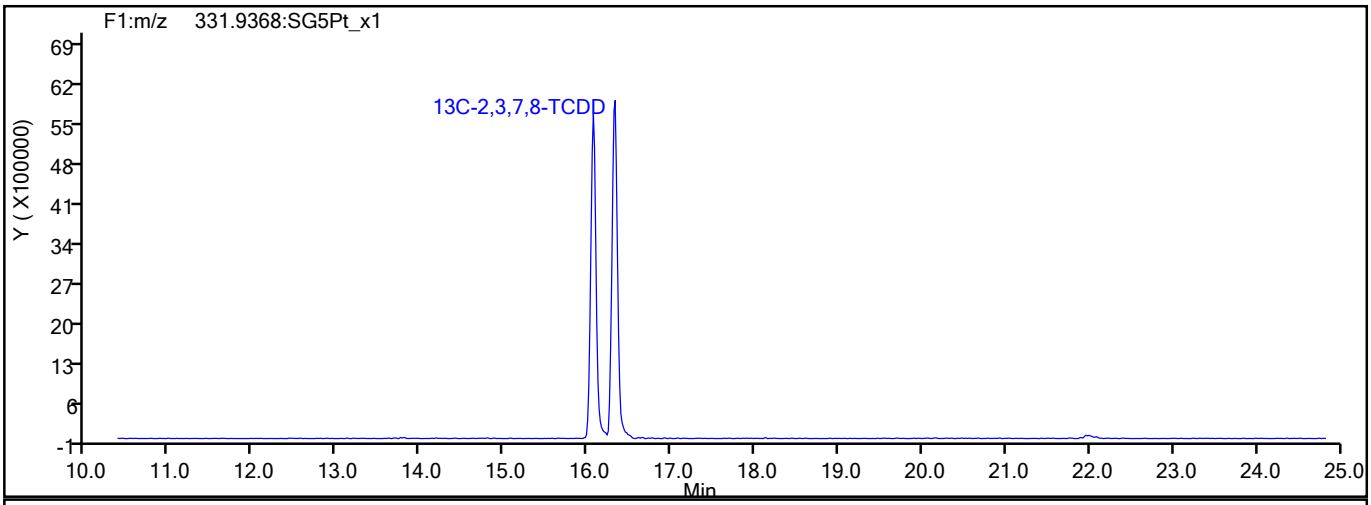

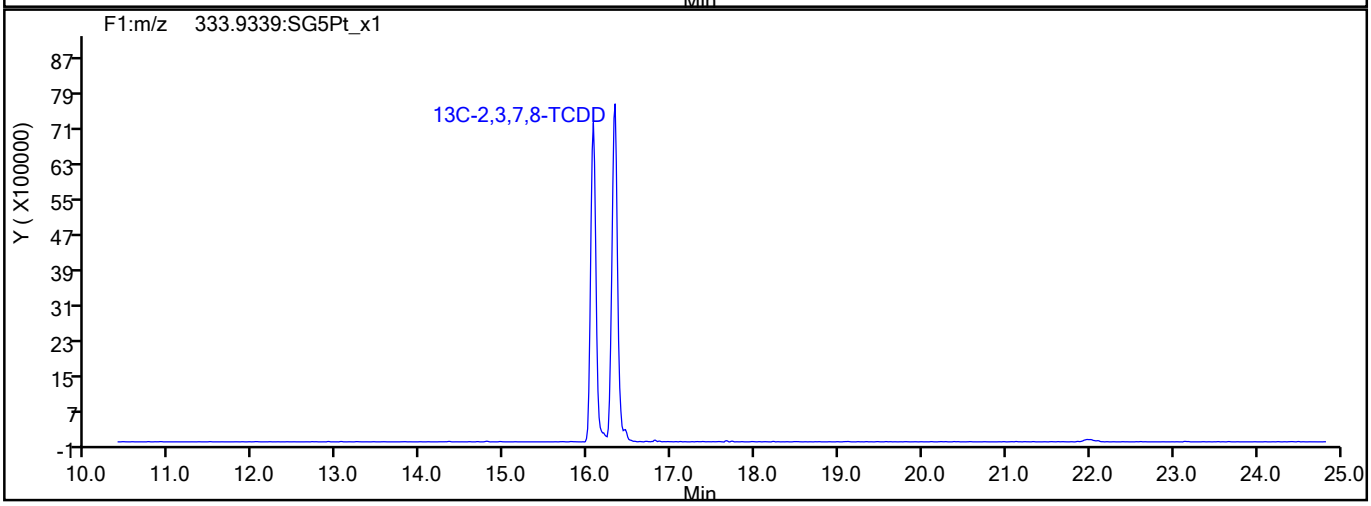

793959

Report Date: 15-Jul-2021 09:35:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_005.d		
Injection Date:	14-Jul-2021 13:30:48	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	5
Column Type:	DB-225	Column Dia:	0.32 mm

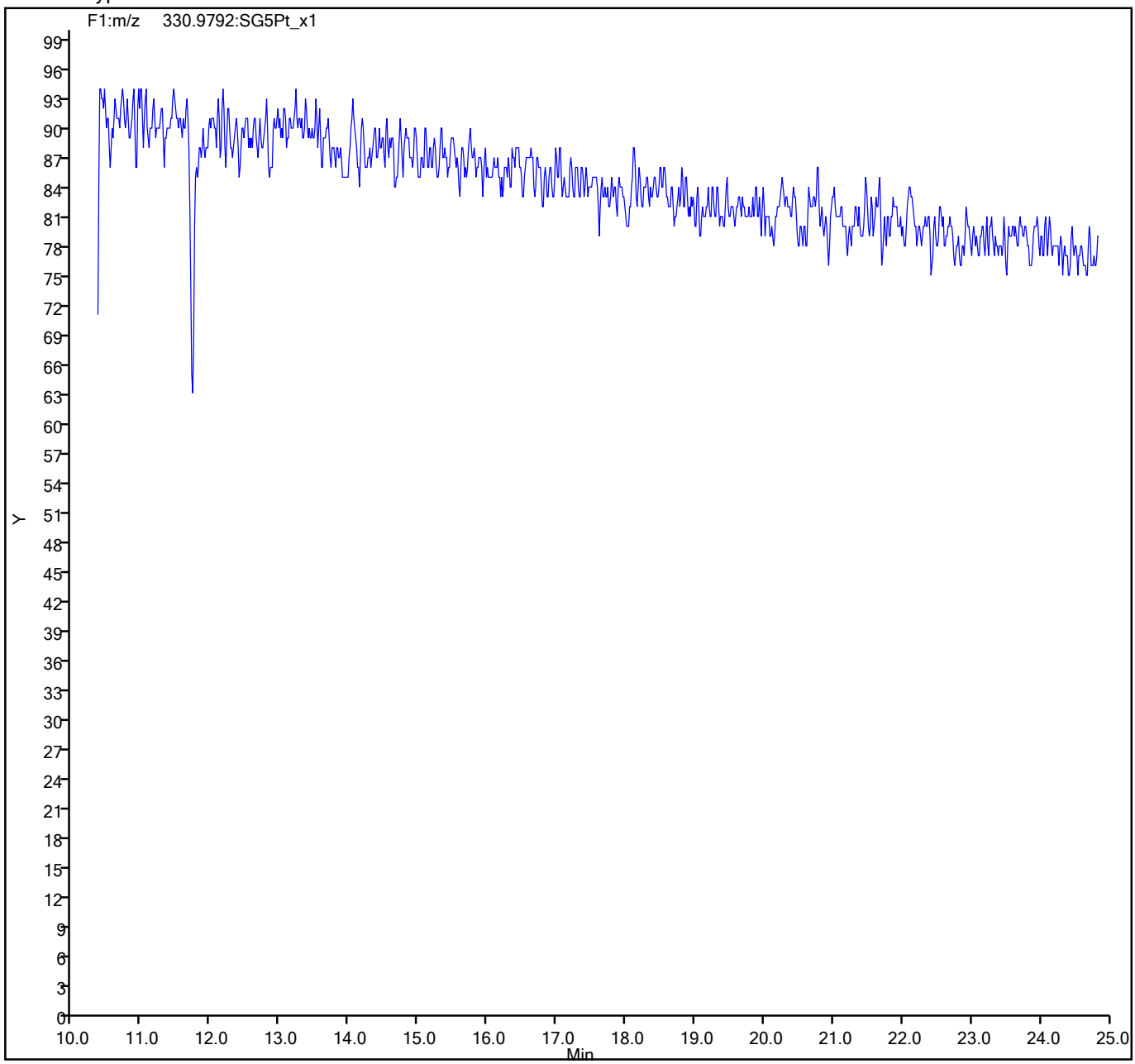

793960

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.339	73438437	0.78	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.656	100411399	0.81	1.3327	102.6	102.6	0.1894	0.1894	103	
2,3,7,8-TCDF	17.683	42745688	0.77	0.9978	42.7	42.7	0.0870	0.0870	107	
D 13C-2,3,7,8-TCDD	16.078	64169475	0.77	0.8749	99.9	99.9	0.2288	0.2288	99.87	
$ 37Cl4-2,3,7,8-TCDD	16.106	26758288		0.8648	42.1	42.1	0.0691	0.0691	105	
2,3,7,8-TCDD	16.106	29543235	0.80	1.0570	43.6	43.6	0.1010	0.1010	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL5_00032 Amount Added: 2.00 Units: uL

793961

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d
Lims ID: IC 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 14-Jul-2021 14:09:10 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:26 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:07:57

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.339	16.329	1		32107353	6599738	8158	20395	809		
333.9339	16.339	16.329	1		41331084	8695648	4092	10230	2125	0.78(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.656	17.651	0	1.081	45010267	8401658	7025	17562	1196		
317.9389	17.656	17.651	0	1.081	55401132	10305155	8416	21040	1224	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.683	17.670	1	1.002	18585432	3426099	3036	7590	1128		
305.8987	17.683	17.670	1	1.002	24160256	4459168	3458	8645	1290	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.078	16.068	1	0.984	27943066	6069213	8158	20395	744		
333.9339	16.078	16.068	1	0.984	36226409	7944603	4092	10230	1941	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.106	16.090	1	0.986	26758288	5882947	3655	9137	1610		
2,3,7,8-TCDD											
319.8965	16.106	16.093	1	1.002	13164163	2903802	2921	7302	994		
321.8936	16.106	16.093	1	1.002	16379072	3535904	3065	7662	1154	0.80(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL5_00032 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

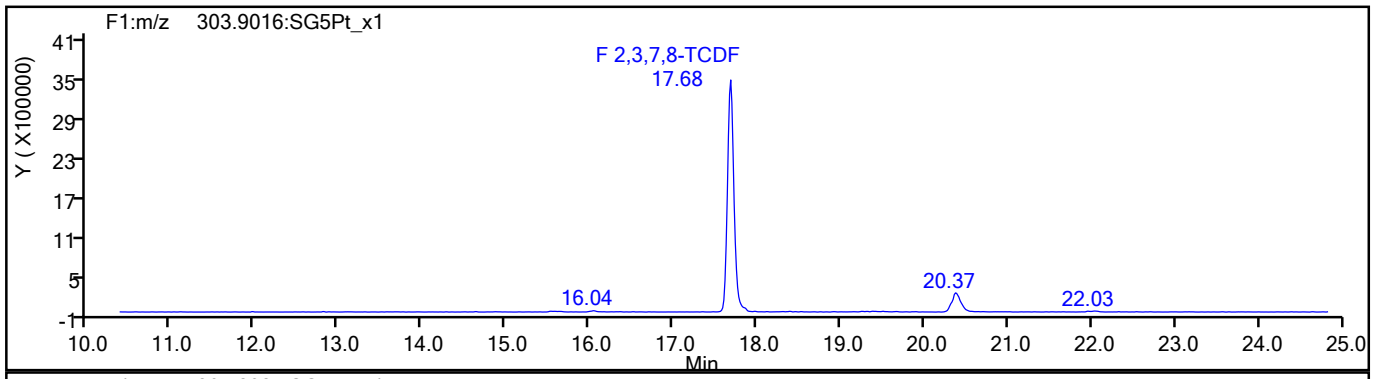

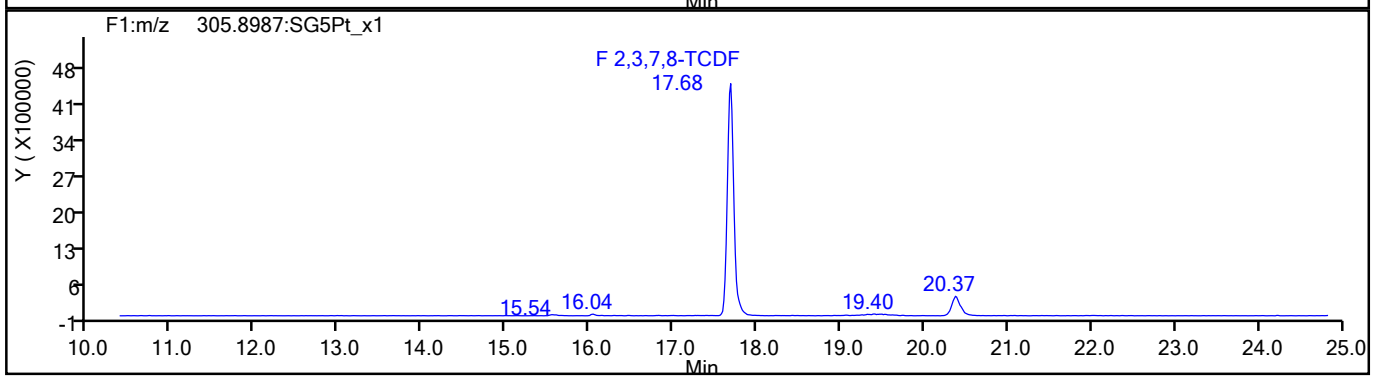

TCDF Standards

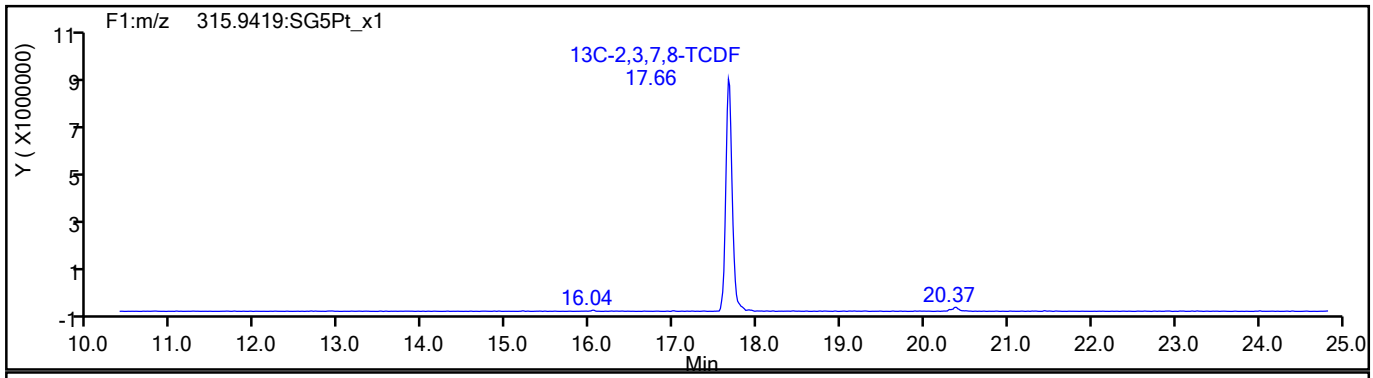

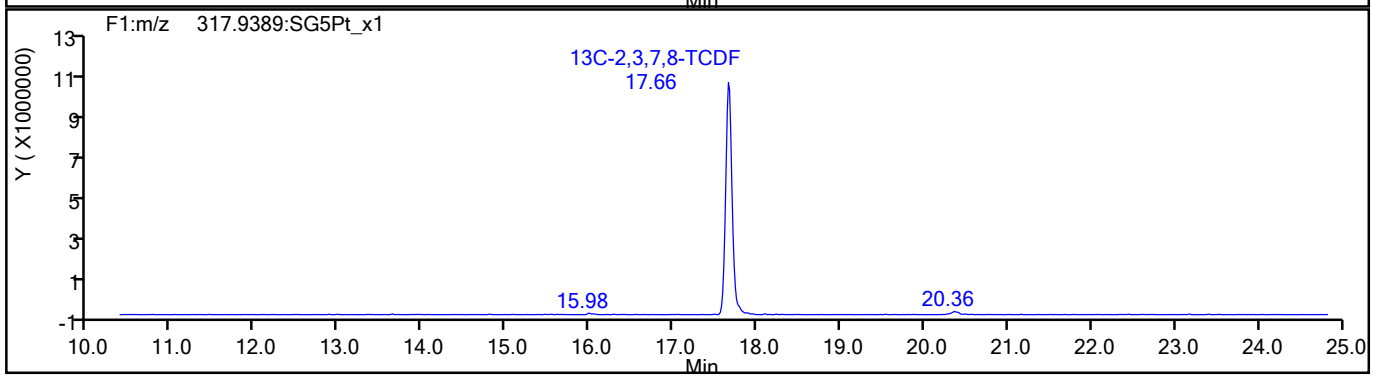

793963

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

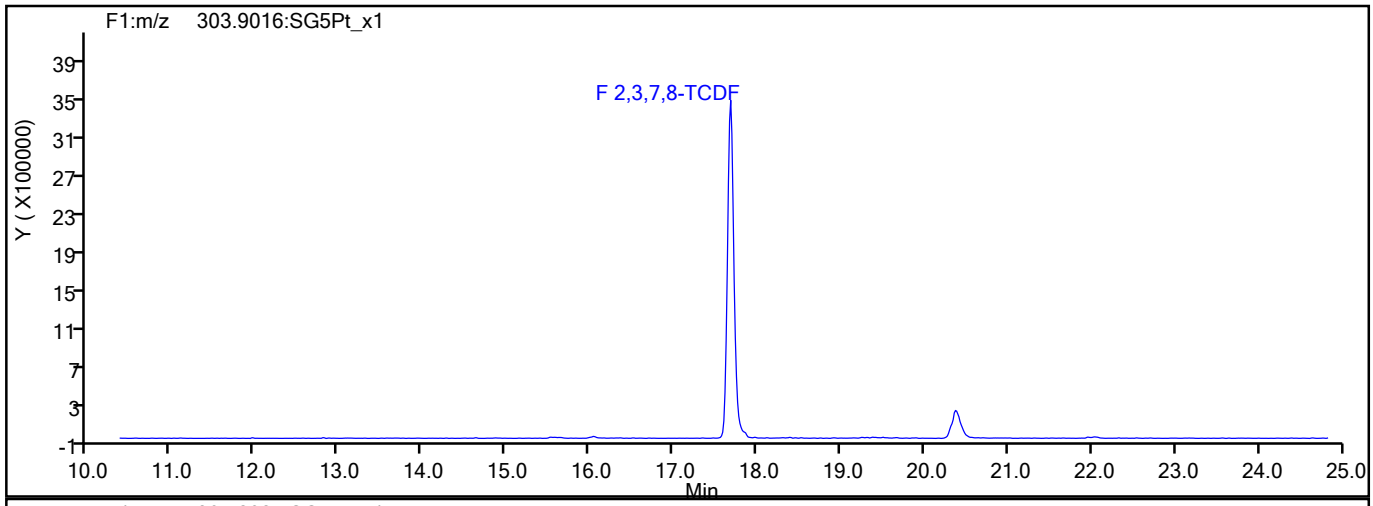

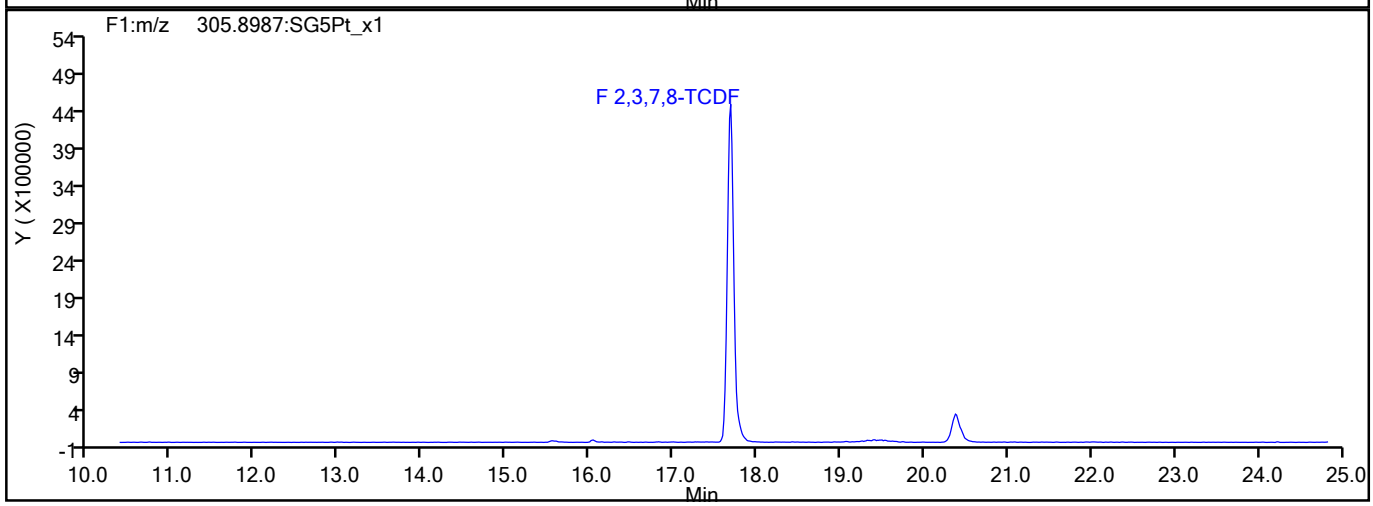

TCDF Interference Mass

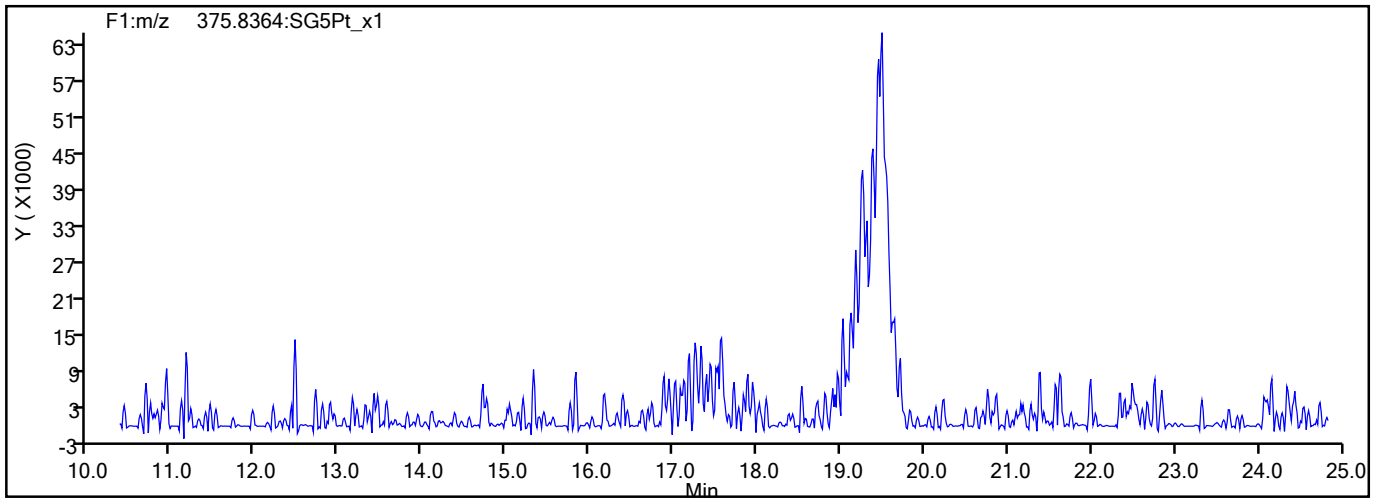

793964

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

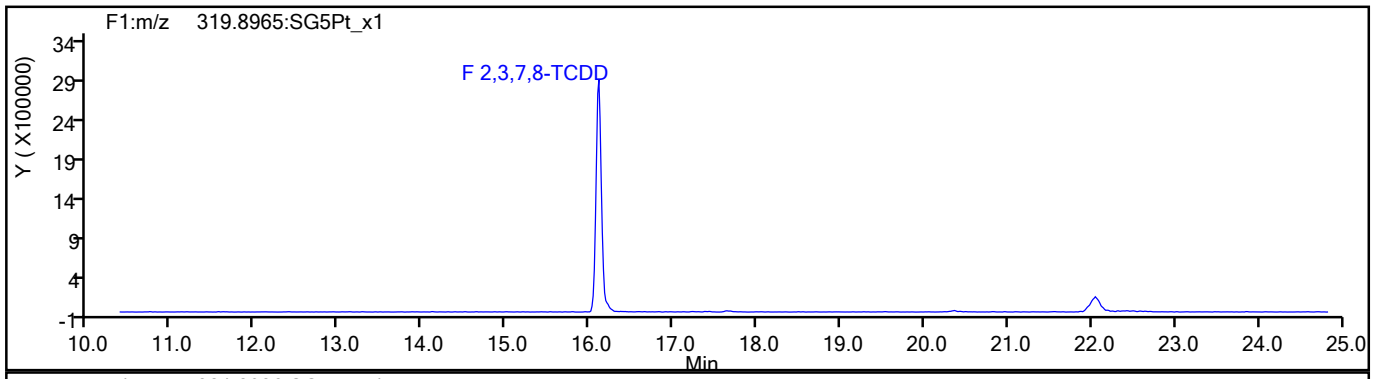

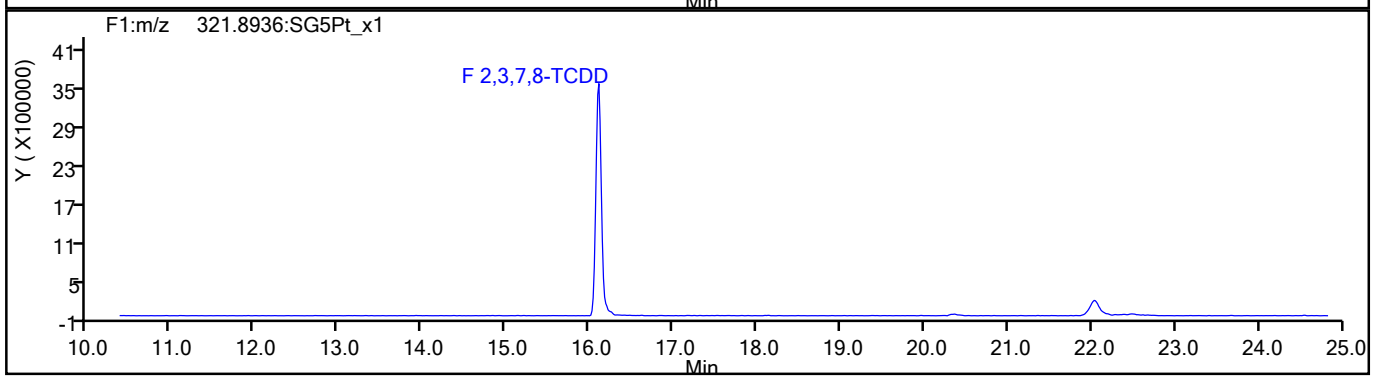

TCDD Standards

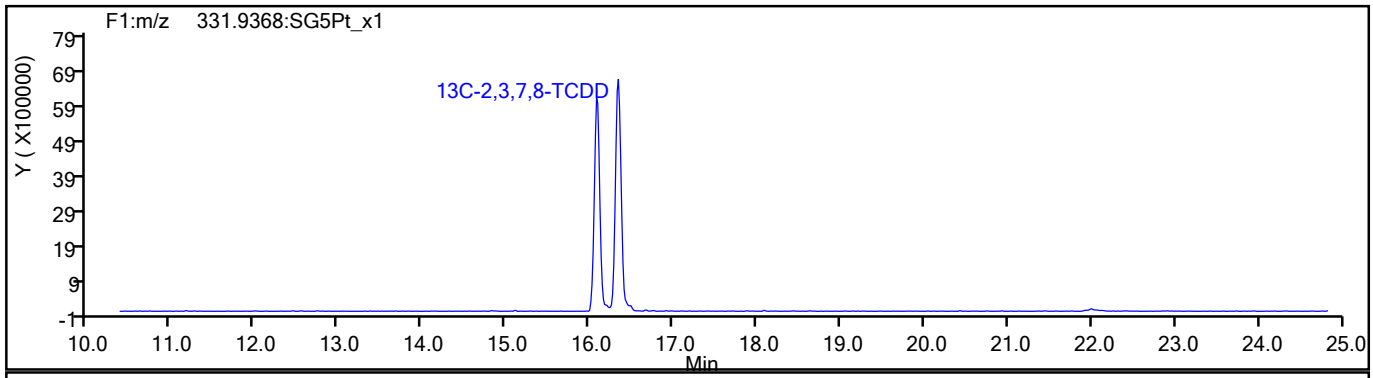

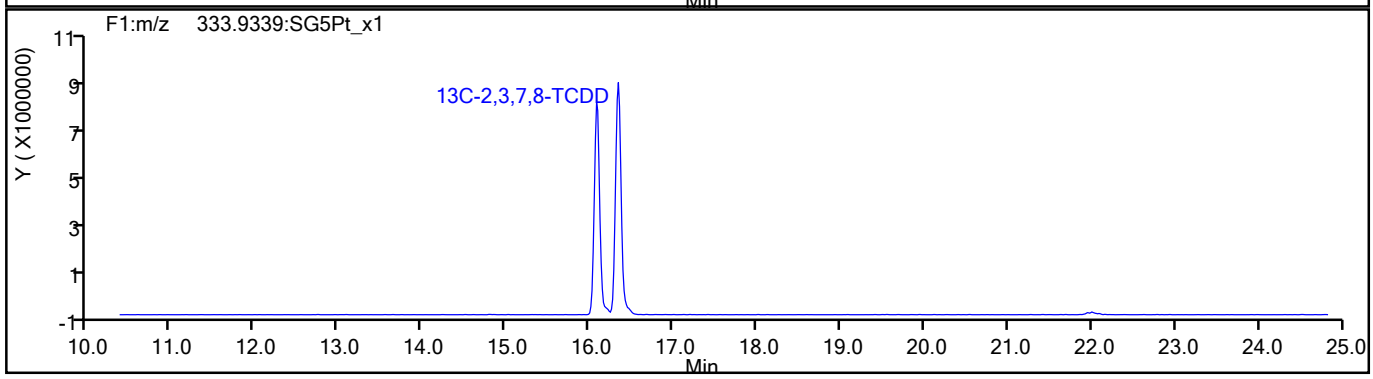

793965

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

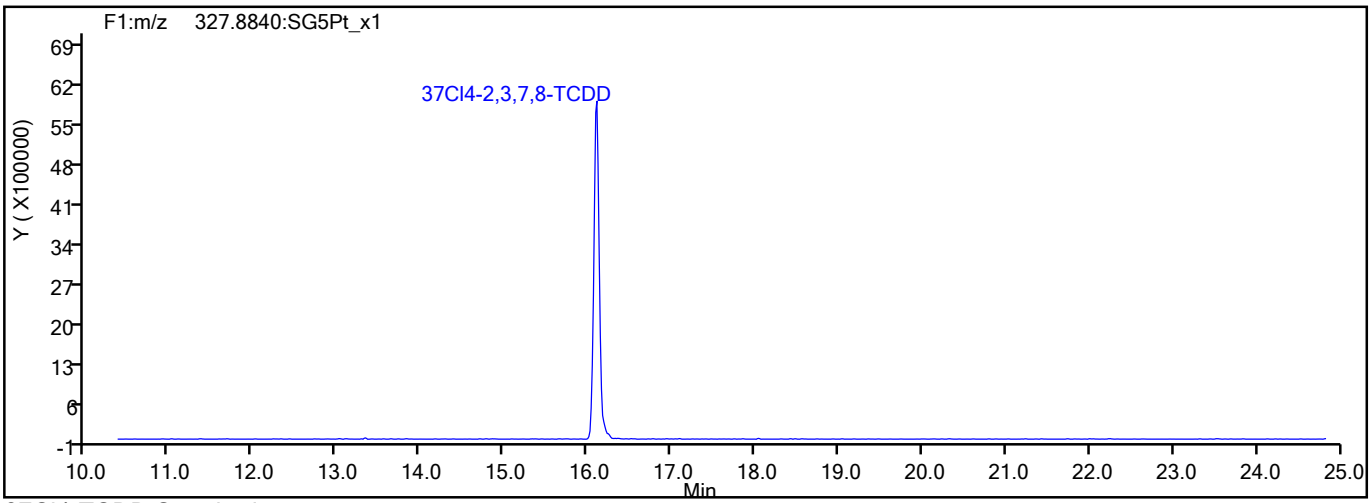

37Cl4-TCDD Standards

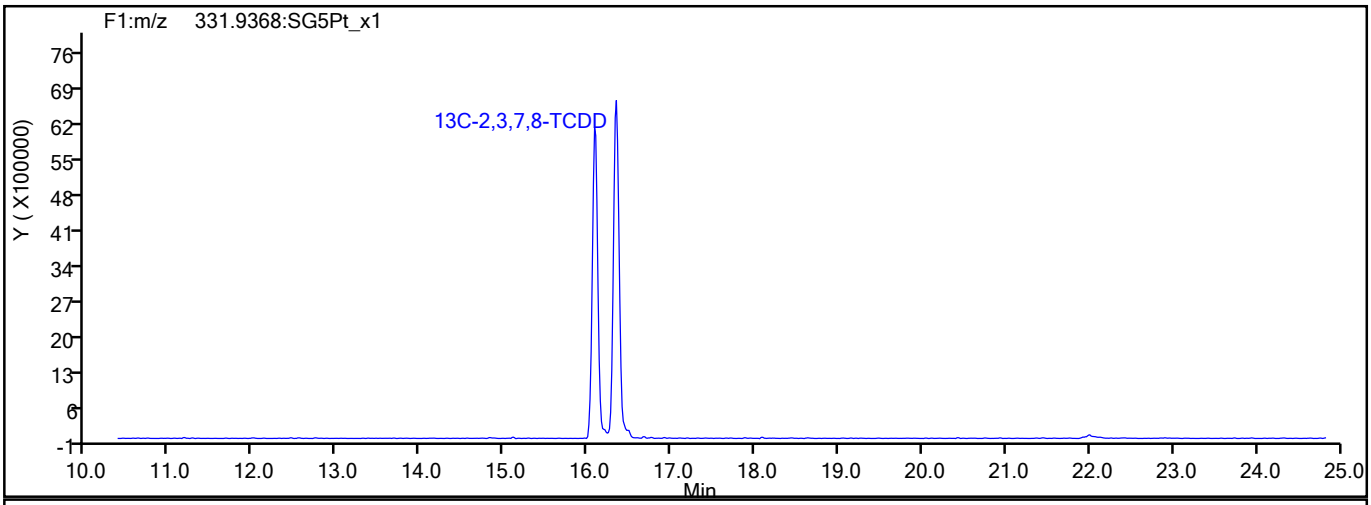

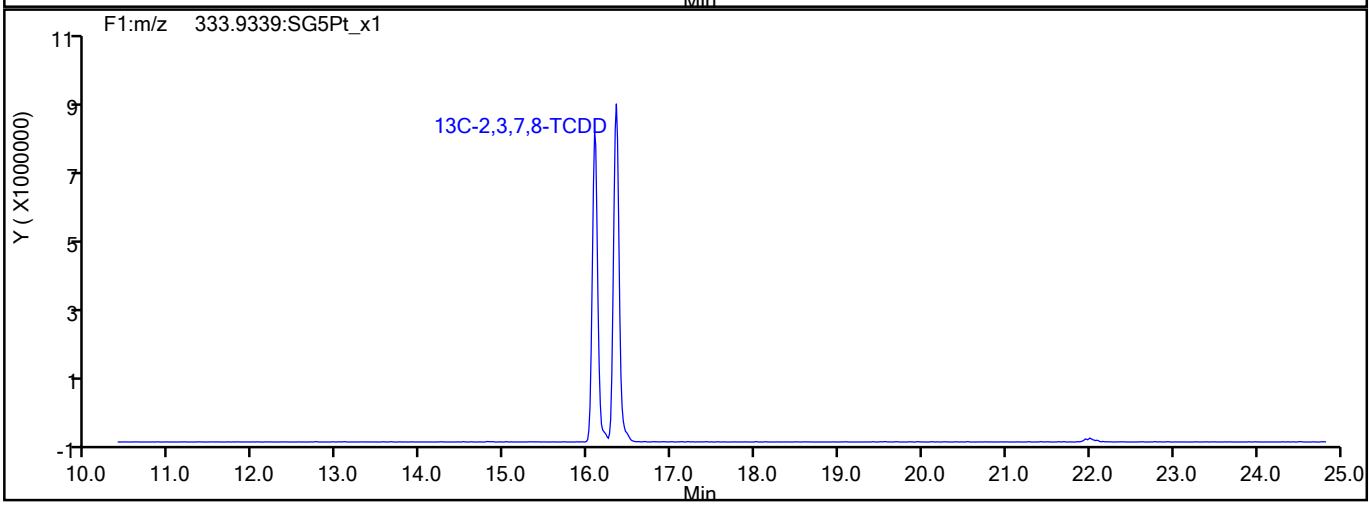

793966

Report Date: 15-Jul-2021 09:35:29 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_006.d		
Injection Date:	14-Jul-2021 14:09:10	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	6
Column Type:	DB-225	Column Dia:	0.32 mm

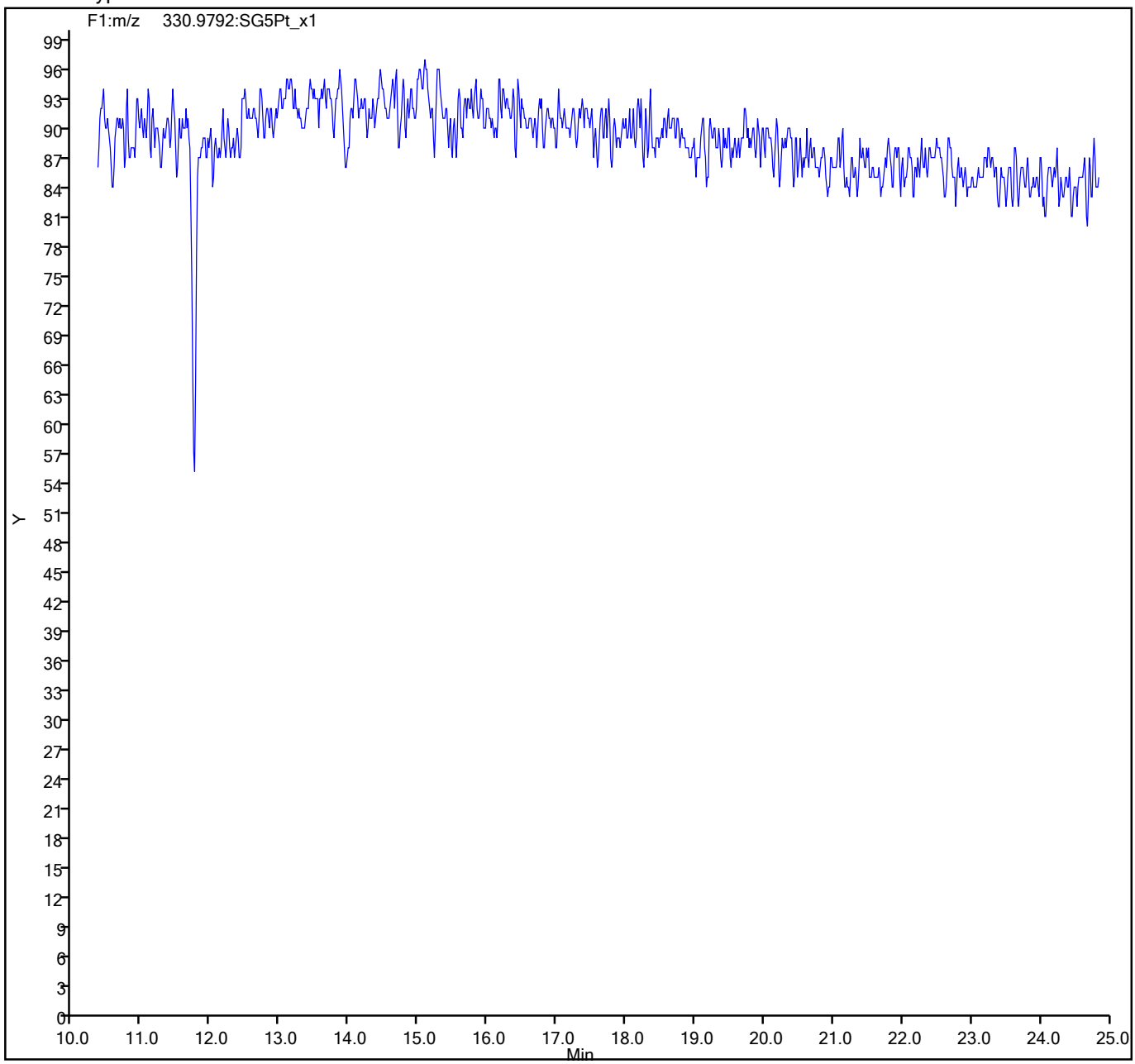

793967

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.327	69295523	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.644	93355112	0.83	1.3327	101.1	101.1	0.2006	0.2006	101	
2,3,7,8-TCDF	17.658	198728073	0.78	0.9978	213.3	213.3	0.1602	0.1602	107	
D 13C-2,3,7,8-TCDD	16.067	62738057	0.76	0.8749	103.5	103.5	0.2372	0.2372	103	
$ 37Cl4-2,3,7,8-TCDD	16.080	134725425		0.8648	224.8	224.8	0.0869	0.0869	112	
2,3,7,8-TCDD	16.094	141238951	0.79	1.0570	213.0	213.0	0.1224	0.1224	106	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL6_00028 Amount Added: 2.00 Units: uL

793968

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d
Lims ID: IC 6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 14-Jul-2021 14:47:36 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 09:35:32 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:18

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.327	16.329	0		30505175	6392729	6282	15705	1018		
333.9339	16.327	16.329	0		38790348	8034794	5696	14240	1411	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.644	17.651	0	1.081	42208994	8008860	8684	21710	922		
317.9389	17.644	17.651	0	1.081	51146118	9856666	6744	16860	1462	0.83(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.658	17.670	-1	1.001	87107186	16210521	4816	12040	3366		
305.8987	17.658	17.670	-1	1.001	111620887	20597090	6608	16520	3117	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067	16.068	0	0.984	27038260	6011970	6282	15705	957		
333.9339	16.067	16.068	0	0.984	35699797	8012090	5696	14240	1407	0.76(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.090	-1	0.985	134725425	28988195	4337	10842	6684		
2,3,7,8-TCDD											
319.8965	16.094	16.093	0	1.002	62516738	13656834	3503	8757	3899		
321.8936	16.094	16.093	0	1.002	78722213	17011191	3754	9385	4531	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL6_00028 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 09:35:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

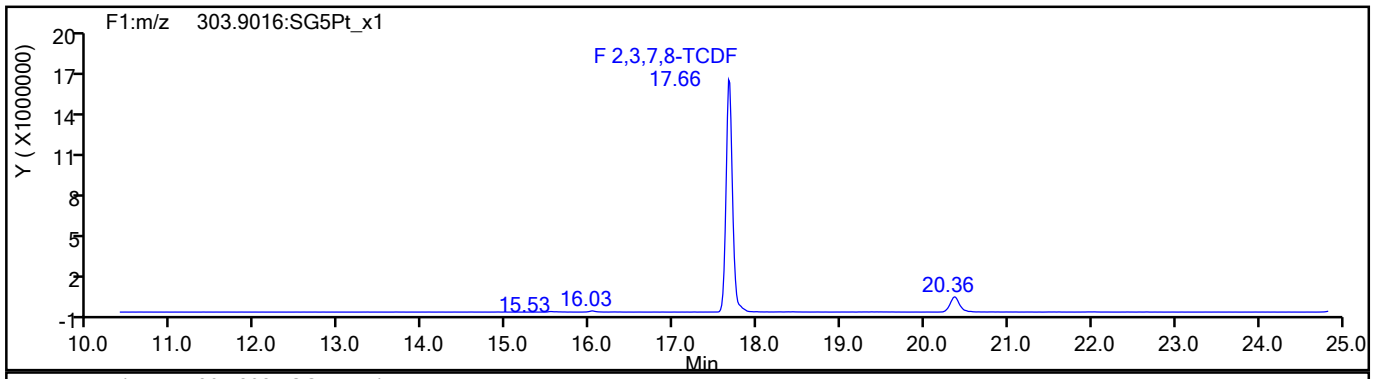

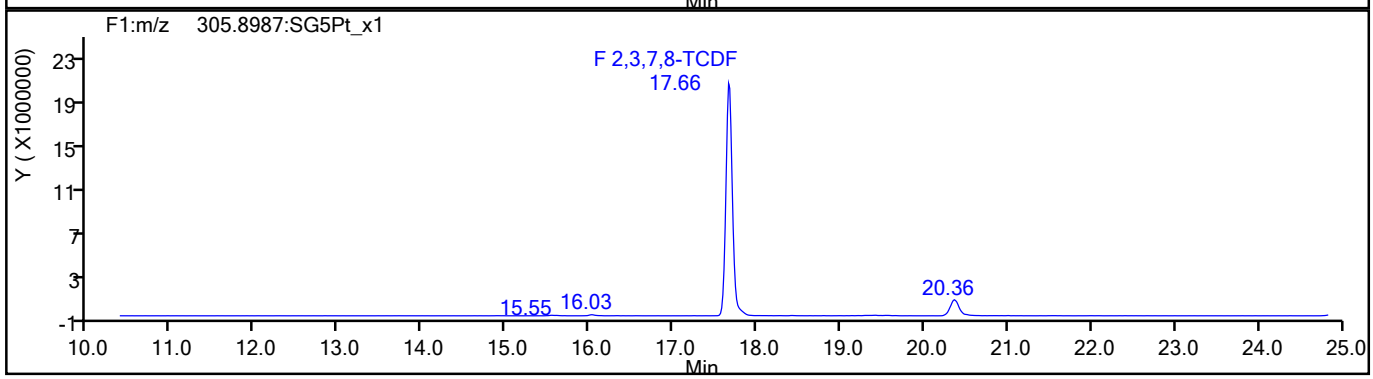

TCDF Standards

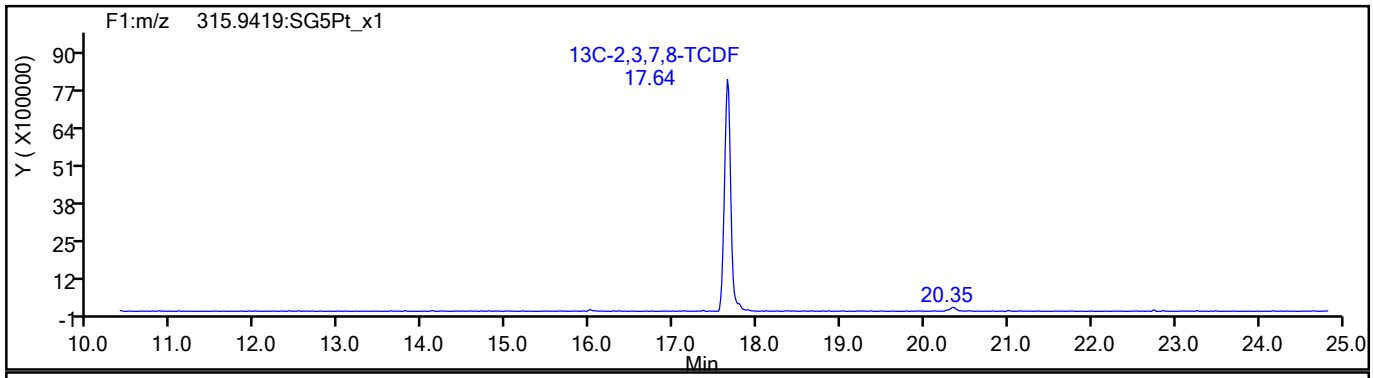

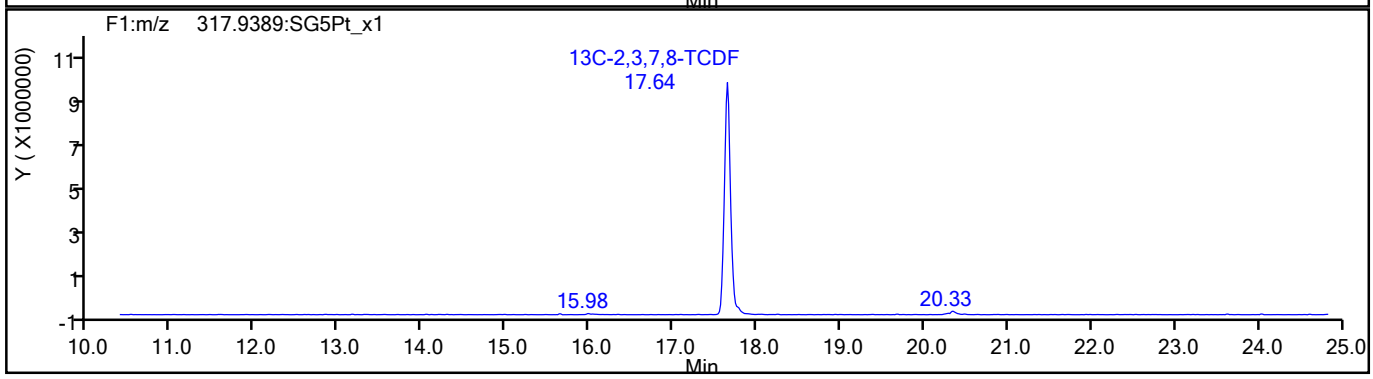

793970

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

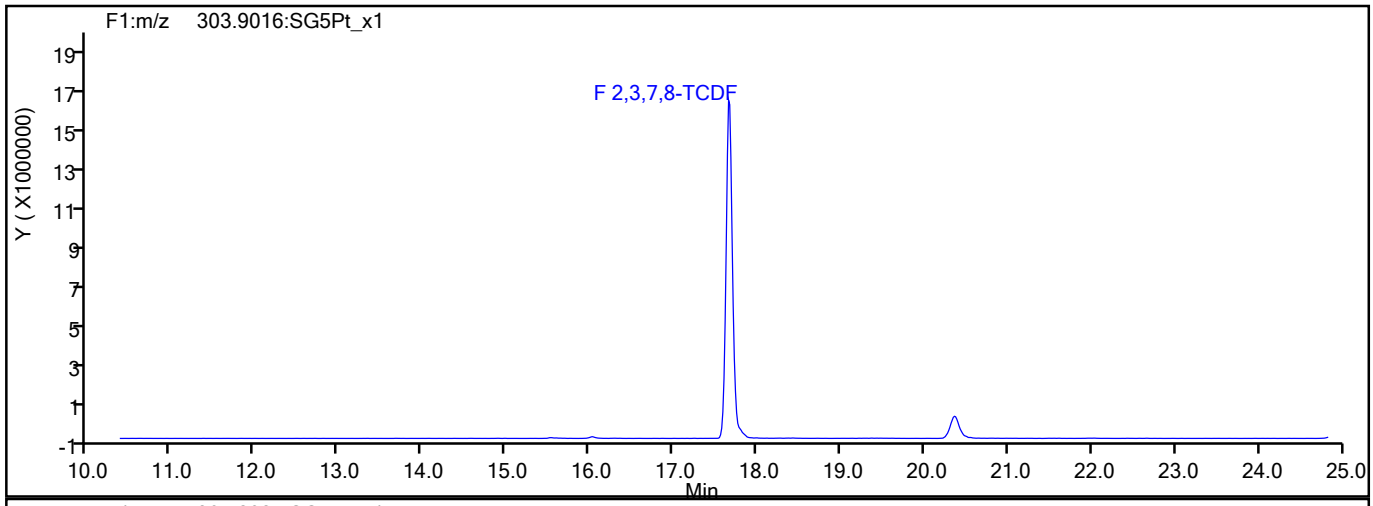

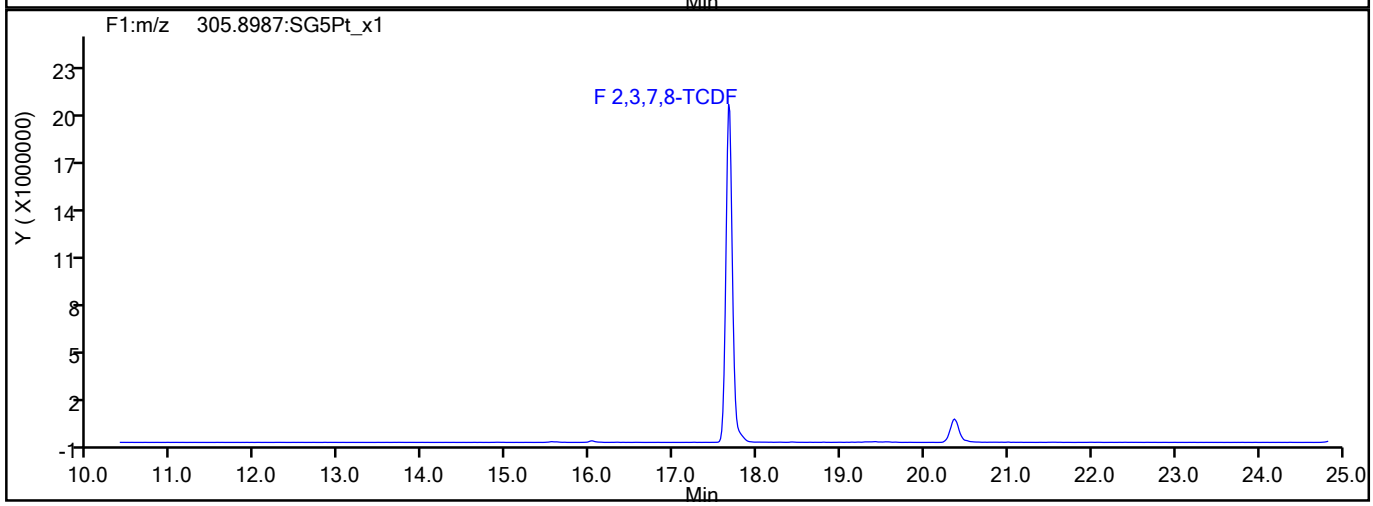

TCDF Interference Mass

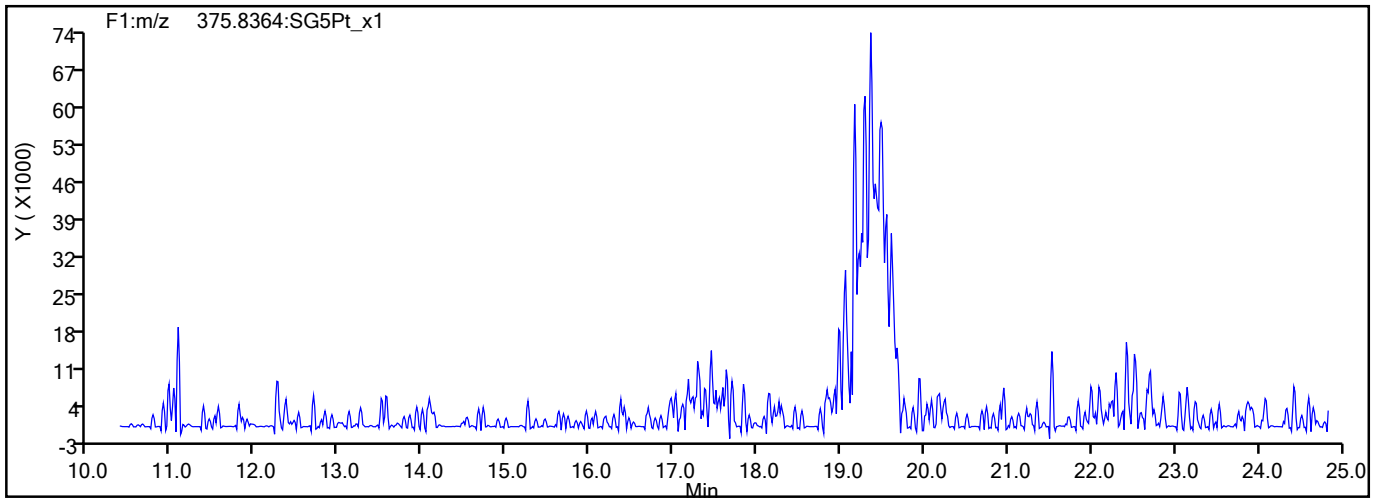

793971

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

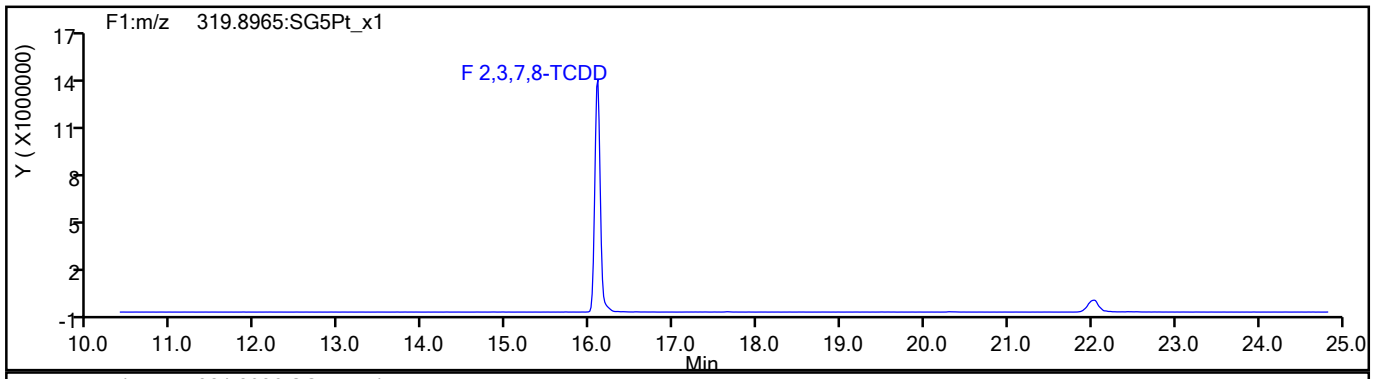

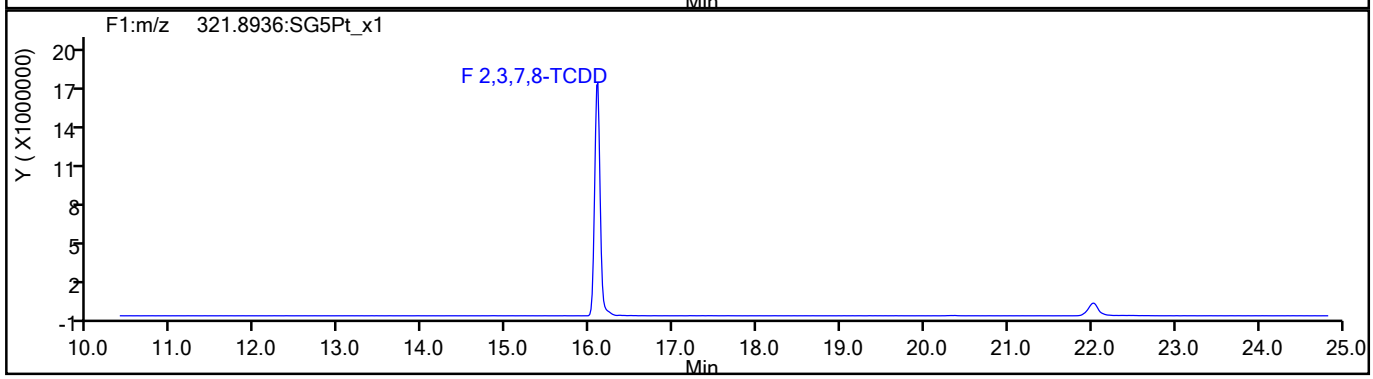

TCDD Standards

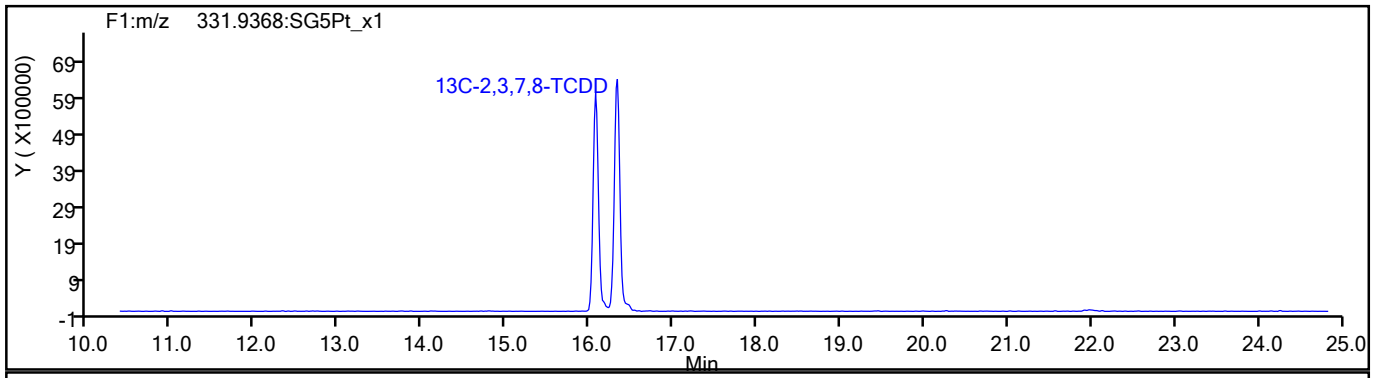

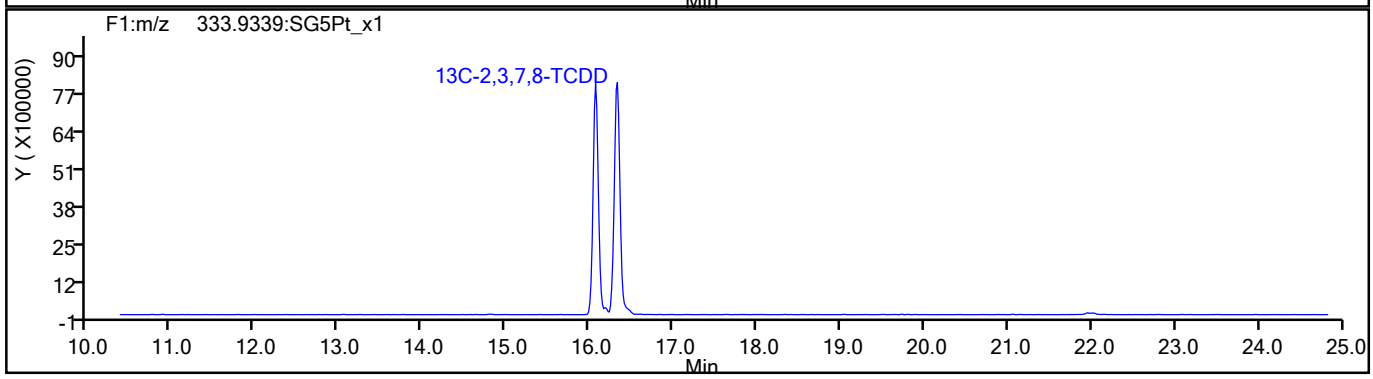

793972

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

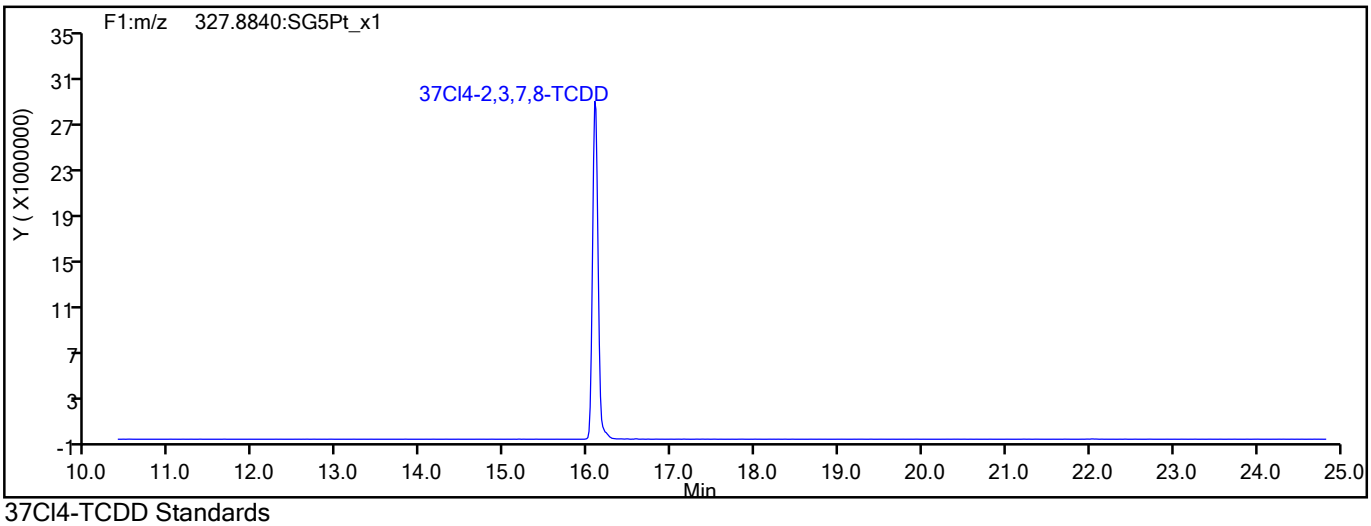

37Cl4-TCDD Standards

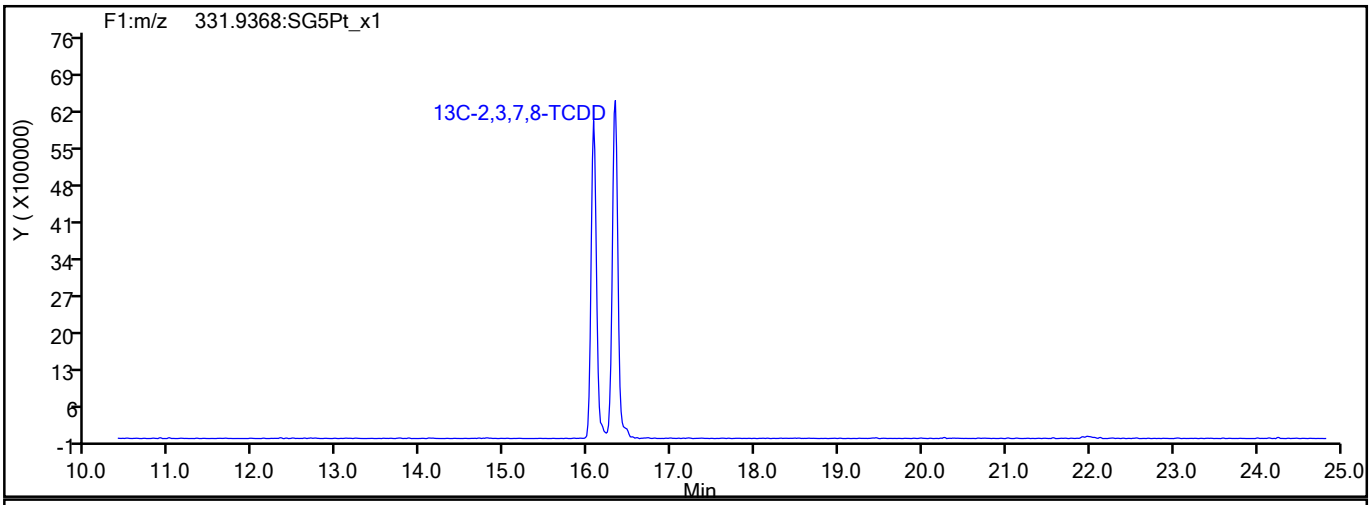

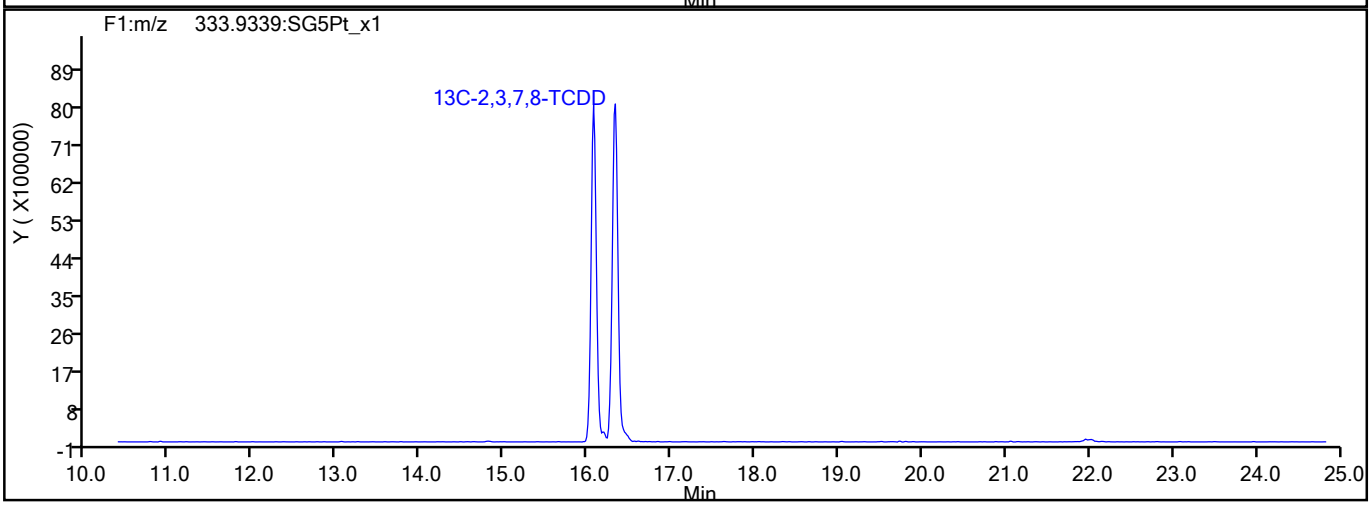

793973

Report Date: 15-Jul-2021 09:35:35 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d		
Injection Date:	14-Jul-2021 14:47:36	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	7
Column Type:	DB-225	Column Dia:	0.32 mm

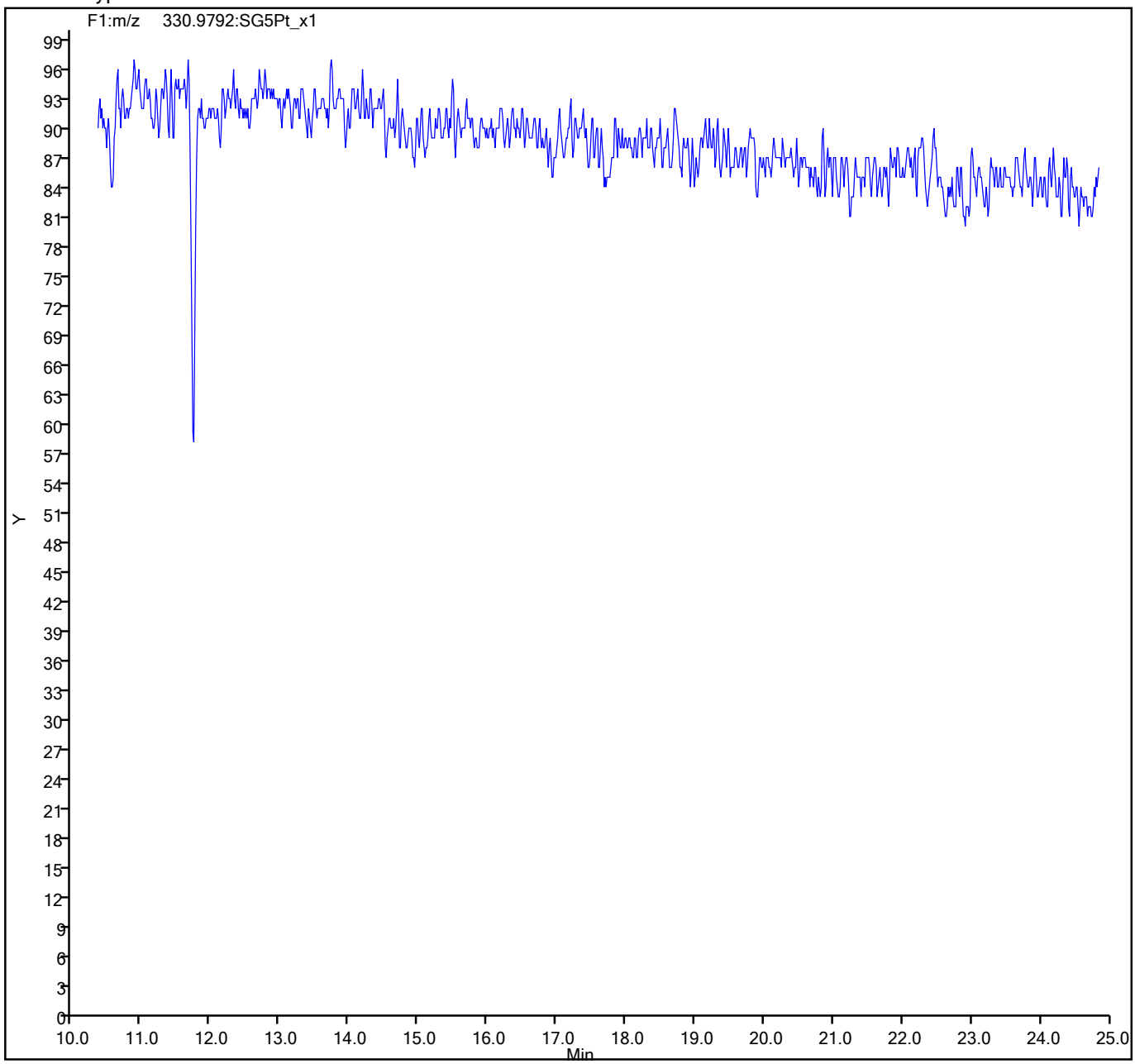

793974

Calibration / 2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	1.057

Error Coefficients

Standard Error:	72200000
Relative Standard Error:	11.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.578834	100.0	61458050.0	1.157668	Y
2	IC 320-506541/4	2.0	1.788587	100.0	68303138.0	0.894293	Y
3	IC 320-506541/5	10.0	9.563896	100.0	57218335.0	0.95639	Y
4	IC 320-506541/6	40.0	46.03939	100.0	64169475.0	1.150985	Y
5	IC 320-506541/7	200.0	225.124841	100.0	62738057.0	1.125624	Y

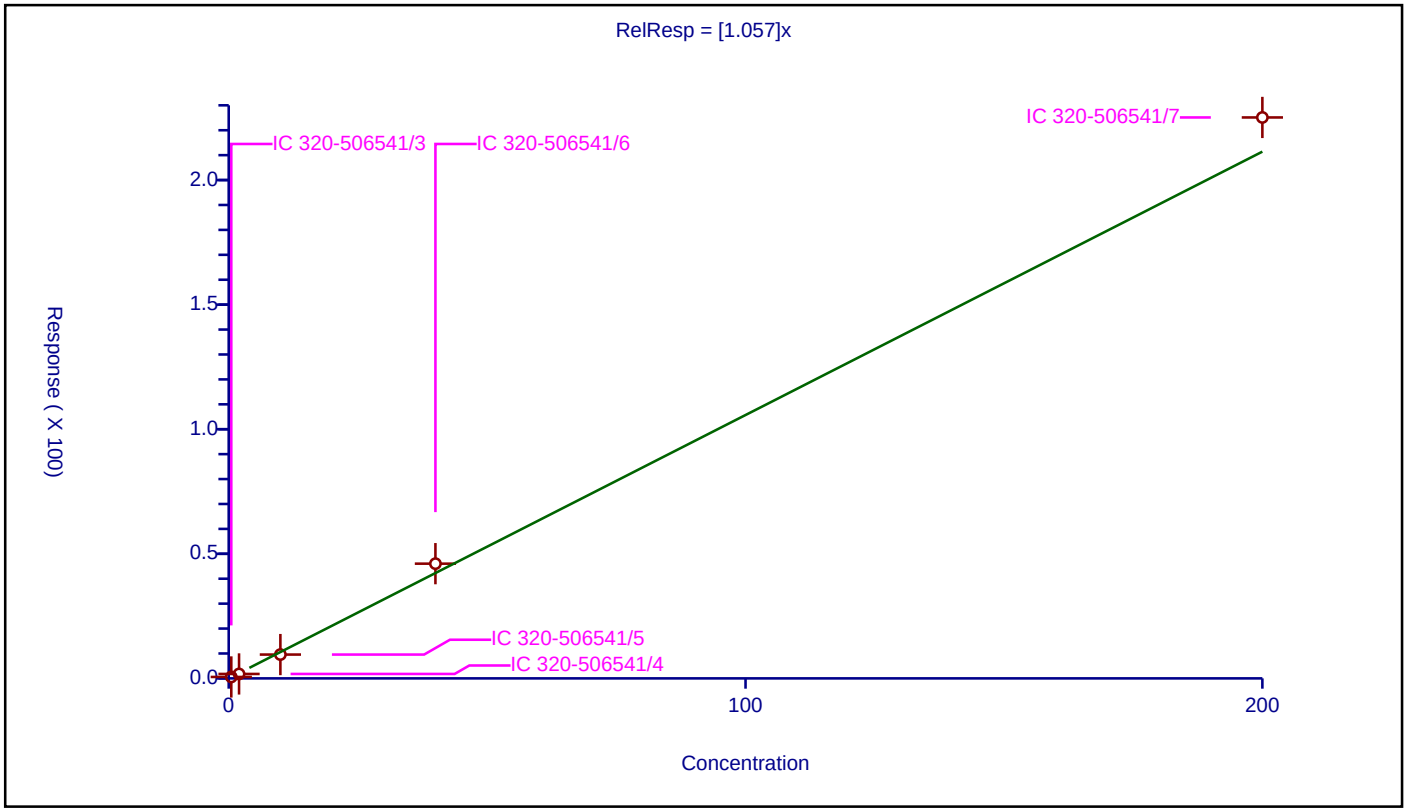

793975

Calibration / 2,3,7,8-TCDF

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	IsoDil
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.9978

Error Coefficients

Standard Error:	102000000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.515547	100.0	95217322.0	1.031094	Y
2	IC 320-506541/4	2.0	1.742221	100.0	104913800.0	0.87111	Y
3	IC 320-506541/5	10.0	9.581995	100.0	84741646.0	0.958199	Y
4	IC 320-506541/6	40.0	42.570553	100.0	100411399.0	1.064264	Y
5	IC 320-506541/7	200.0	212.873263	100.0	93355112.0	1.064366	Y

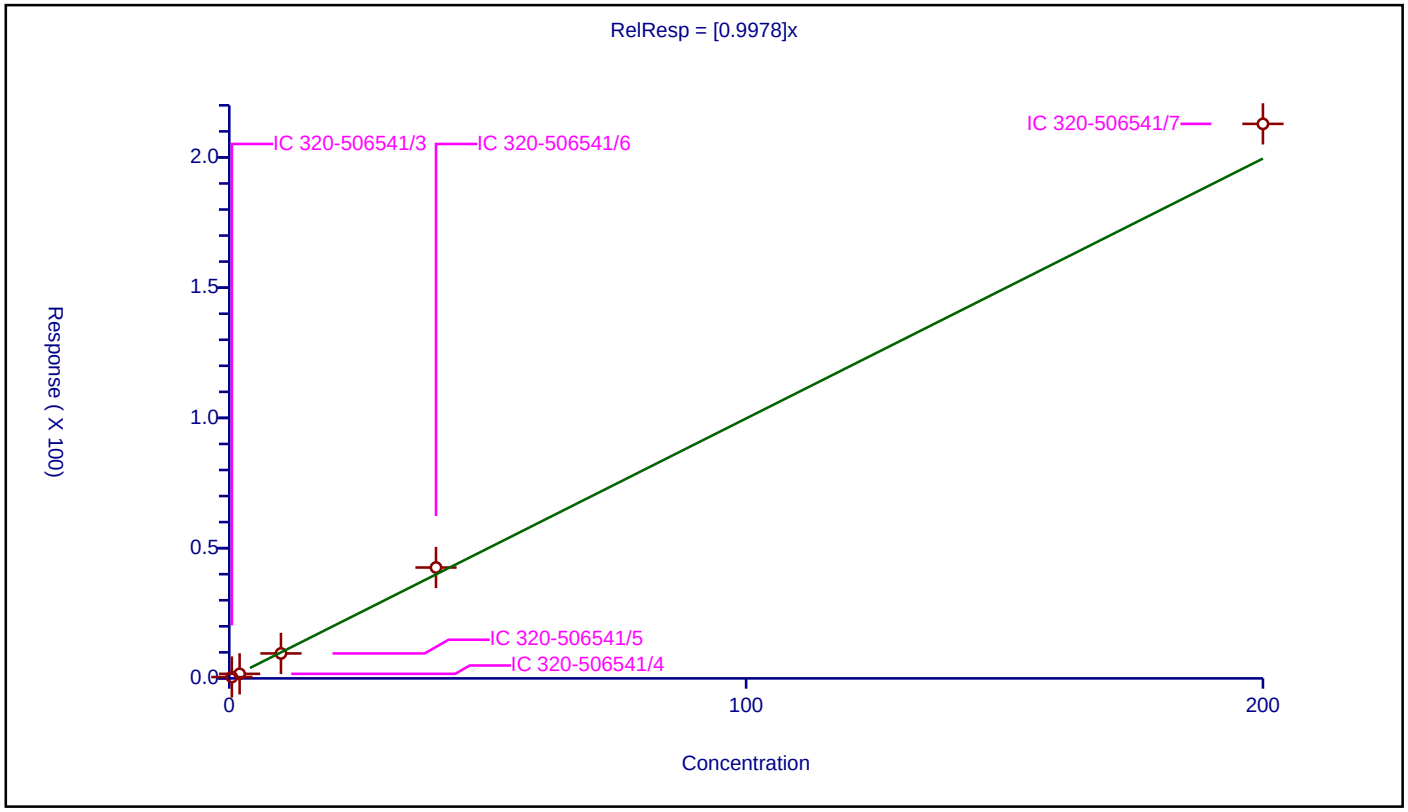

793976

Calibration / 37Cl4-2,3,7,8-TCDD

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

Curve Coefficients

Intercept:	0
Slope:	0.8648

Error Coefficients

Standard Error:	68700000
Relative Standard Error:	9.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 320-506541/3	0.5	0.418404	100.0	69639857.0	0.836808	Y
2	IC 320-506541/4	2.0	1.529693	100.0	83878670.0	0.764846	Y
3	IC 320-506541/5	10.0	8.394098	100.0	63673477.0	0.83941	Y
4	IC 320-506541/6	40.0	36.436353	100.0	73438437.0	0.910909	Y
5	IC 320-506541/7	200.0	194.421543	100.0	69295523.0	0.972108	Y

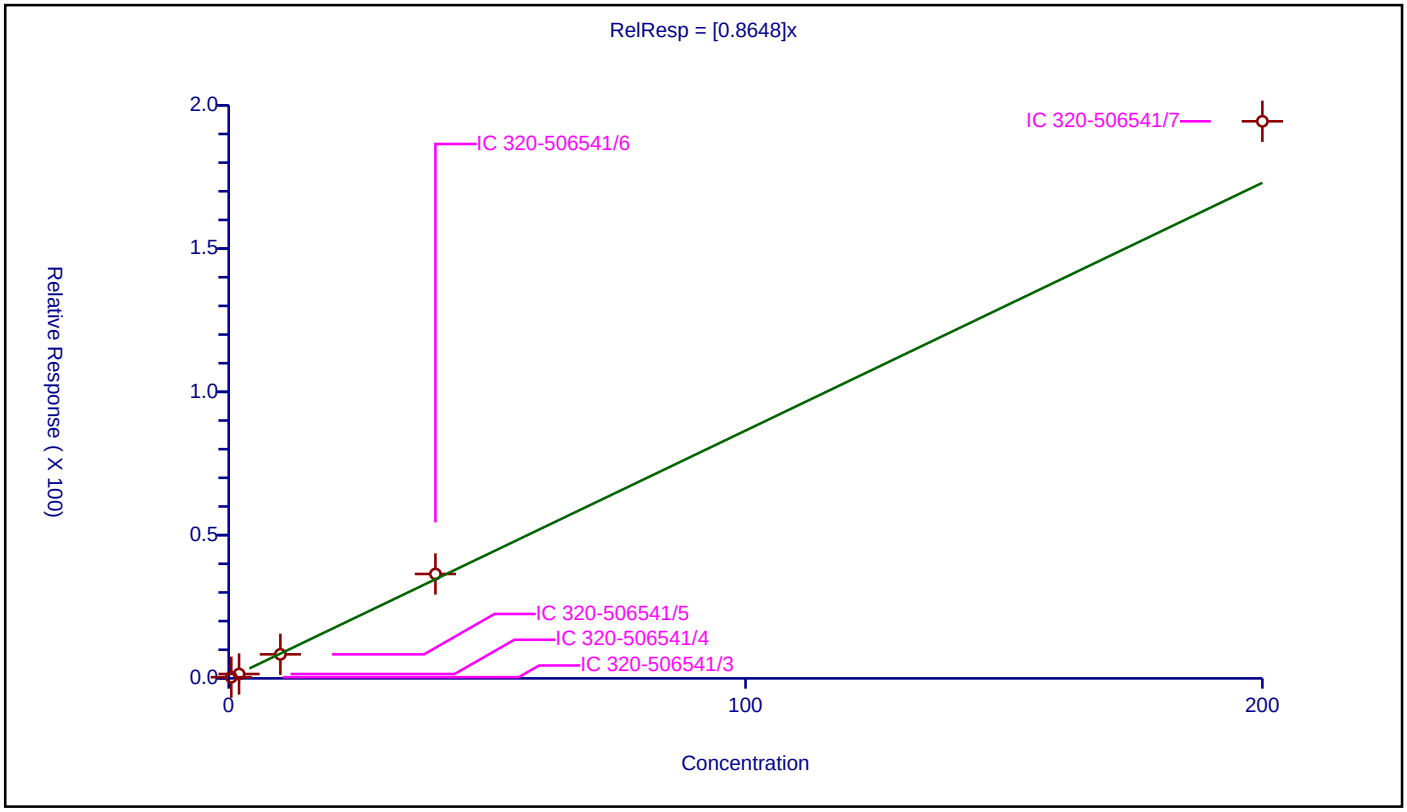

793977

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab Sample ID (1): CPS 320-506541/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 07/14/2021 10:57

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	11

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d				
Injection Date:	14-Jul-2021 10:57:20	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 544911
H (Peak Height) = 5043177

%R = 11 <= 25
Passed

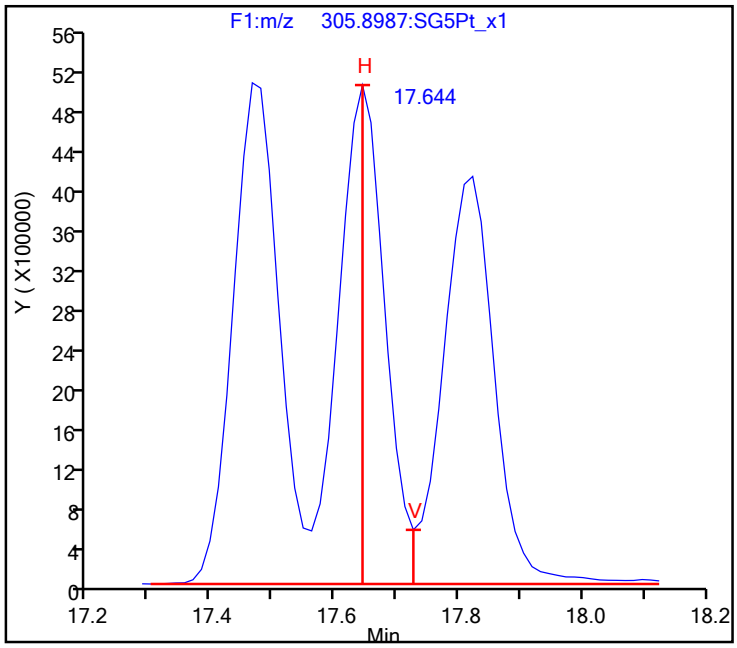

793979

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab Sample ID (1): WDM 320-510264/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 07/26/2021 09:21

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	18.34	18

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d				
Injection Date:	26-Jul-2021 09:21:58	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 725696
H (Peak Height) = 4136533

%R = 18 <= 25
Passed

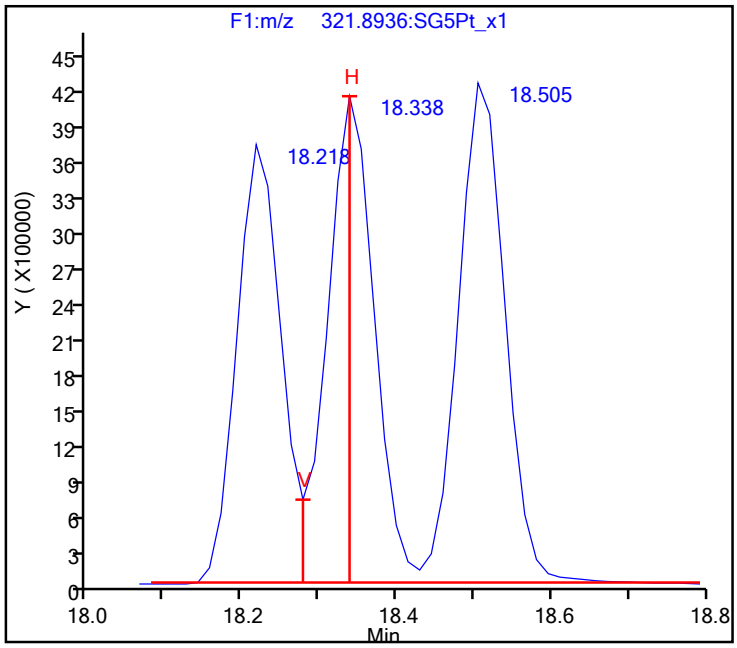

793981

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab Sample ID (1): WDM 320-519953/1 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 09:38

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	17.81	17

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d				
Injection Date:	25-Aug-2021 09:38:15	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 977605
H (Peak Height) = 5811153

%R = 17 <= 25
Passed

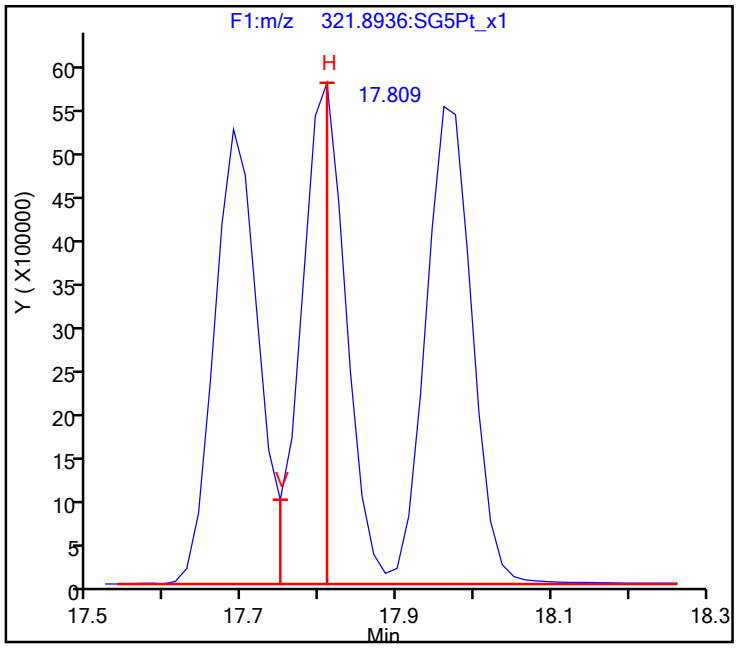

793983

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab Sample ID (1): WDM 320-519955/2 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/25/2021 21:35

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	17.79	17

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d				
Injection Date:	25-Aug-2021 21:35:49	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	2
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1298157
H (Peak Height) = 7642383

%R = 17 <= 25
Passed

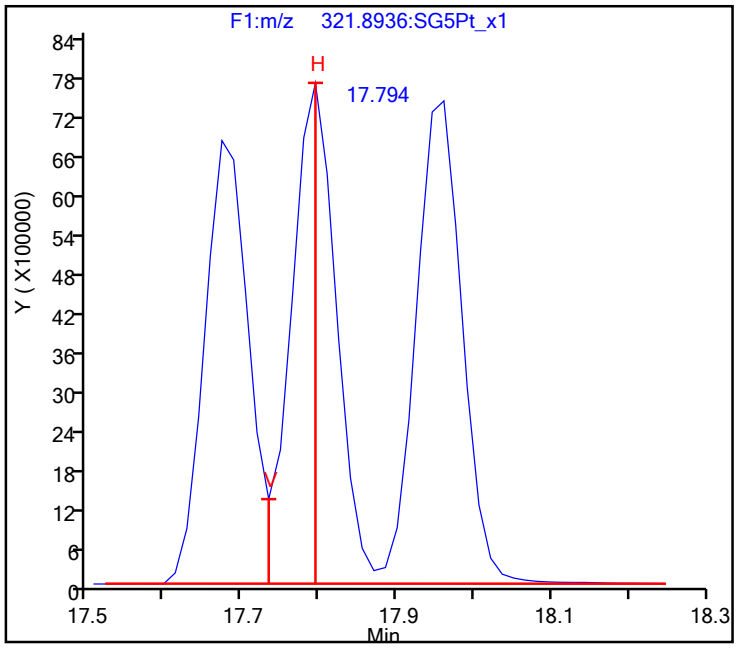

793985

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab Sample ID (1): WDM 320-519966/2 Instrument ID (1): 10D5

GC Column (1): DB-5 ID: 0.32(mm) Date Analyzed (1): 08/26/2021 08:35

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDD	17.78	17

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d				
Injection Date:	26-Aug-2021 08:35:55	Instrument ID:	10D5		
Lims ID:	WDM				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	1	Worklist Smp#:	2
Injection Vol:	2.0 ul	Column:	DB-5 (0.32 mm)		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDD

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 1220937
H (Peak Height) = 7143678

%R = 17 <= 25
Passed

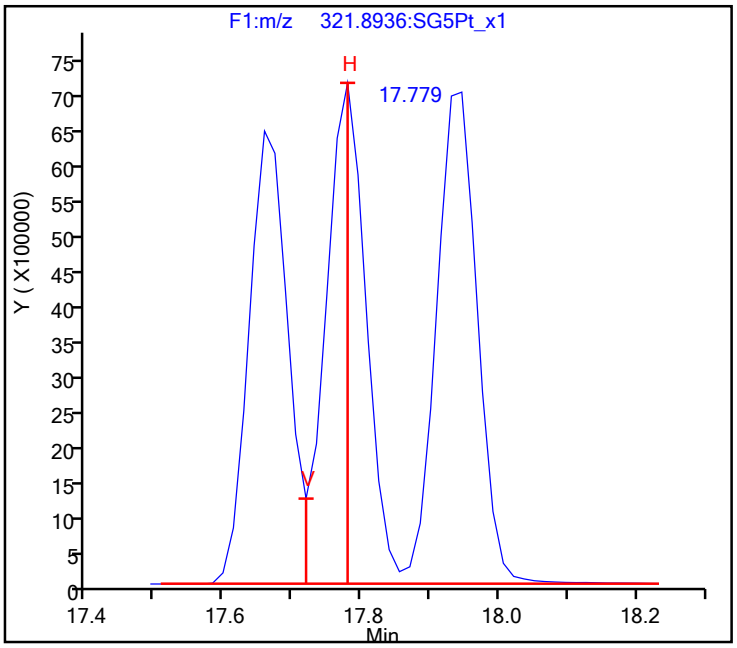

793987

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab Sample ID (1): CPS 320-520997/1 Instrument ID (1): 11D2

GC Column (1): DB-225 ID: 0.32(mm) Date Analyzed (1): 08/31/2021 13:13

ANALYTE	RT	RESOLUTION (%)
2,3,7,8-TCDF	17.64	10

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Resolution Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d				
Injection Date:	31-Aug-2021 13:13:23	Instrument ID:	11D2		
Lims ID:	CPS				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	2.0 ul	Column:	DB-225 (0.32 mm)		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		

2,3,7,8-TCDF

Isotopic Dilution Dioxin Method

%R = (V / H) * 100

V (Valley Height) = 264074
H (Peak Height) = 2622042

%R = 10 <= 25
Passed

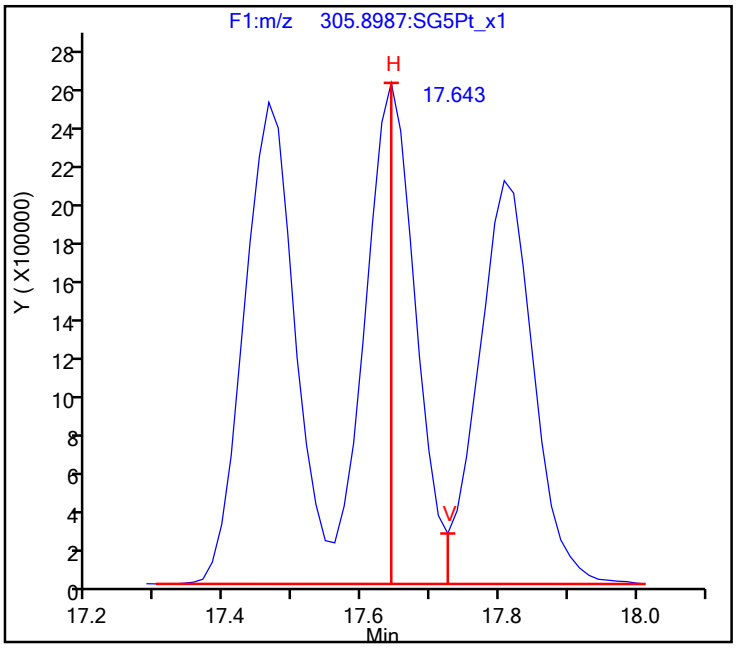

793989

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab Sample ID: ICV 320-510264/9 Calibration Date: 07/26/2021 15:31

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 26JL2110D5_9.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.105		43.2	40.0	108	70-130
2,3,7,8-TCDD	AveID	1.254	1.380		44.0	40.0	110	70-130
1,2,3,7,8-PeCDF	AveID	1.061	1.081		204	200	102	70-130
2,3,4,7,8-PeCDF	AveID	1.018	1.151		226	200	113	70-130
1,2,3,7,8-PeCDD	AveID	1.048	1.044		199	200	100	70-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.128		208	200	104	70-130
1,2,3,6,7,8-HxCDF	AveID	1.126	1.227		218	200	109	70-130
2,3,4,6,7,8-HxCDF	AveID	1.168	1.283		220	200	110	70-130
1,2,3,4,7,8-HxCDD	AveID	1.064	1.151		216	200	108	70-130
1,2,3,6,7,8-HxCDD	AveID	1.000	1.082		216	200	108	70-130
1,2,3,7,8,9-HxCDD	AveID	1.133	1.182		209	200	104	70-130
1,2,3,7,8,9-HxCDF	AveID	1.166	1.200		206	200	103	70-130
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.576		219	200	109	70-130
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.167		213	200	107	70-130
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.373		209	200	104	70-130
OCDD	AveID	1.107	1.211		438	400	109	70-130
OCDF	AveID	1.438	1.574		438	400	109	70-130
13C-2,3,7,8-TCDF	Ave	1.625	1.611		99.2	100	99	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9123		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.236		102	100	102	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.300		105	100	105	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.7764		102	100	102	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.089		101	100	101	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.093		96.9	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.036		97.4	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7216		98.4	100	98	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8697		98.8	100	99	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9447		97.6	100	98	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7492		96.9	100	97	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6354		98.2	100	98	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.7065		101	100	101	77-129
13C-OCDD	Ave	0.4472	0.4464		200	200	100	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.177		42.5	40.0	106	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	18.127	55225241	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.598	88976883	0.79	1.6249	99.2	99.2	0.1479	0.1479	99.15	
2,3,7,8-TCDF	17.613	39324874	0.78	1.0239	43.2	43.2	0.0666	0.0666	108	
A Non-2,3,7,8-sub-TCDF	17.311	524958	0.77	1.0239	0.6411	0.5762	0.0666	0.3057		RQ
S Total TCDF					43.8	43.7	0.0666	0.0666		RQ
D 13C-2,3,7,8-TCDD	18.323	50383801	0.80	0.8993	101.4	101.4	0.1314	0.1314	101	
2,3,7,8-TCDD	18.338	27801852	0.78	1.2541	44.0	44.0	0.0443	0.0443	110	
$ 37Cl4-2,3,7,8-TCDD	18.338	26006351		1.1071	42.5	42.5	0.0388	0.0388	106	
A Non-2,3,7,8-sub-TCDD	17.772	551726	0.77	1.2541	0.8732	0.8732	0.0443	0.8732		
S Total TCDD					44.9	44.9	0.0443	0.0443		
D 13C-1,2,3,7,8-PeCDF	22.749	68252478	1.57	1.2101	102.1	102.1	0.2097	0.2097	102	
1,2,3,7,8-PeCDF	22.762	147560573	1.57	1.0611	203.7	203.7	0.7454	0.7454	102	
D 13C-2,3,4,7,8-PeCDF	24.126	71797373	1.60	1.2395	104.9	104.9	0.2047	0.2047	105	
2,3,4,7,8-PeCDF	24.153	165293469	1.59	1.0184	226.1	226.1	0.7930	0.7930	113	
A F1 PeCDFs	20.244						0.0162	0.0162		
A Non-2,3,7,8-sub-PeCDF	23.473	3443801	1.55	1.0398	4.730	4.730	0.7686	4.730		
S Total PeCDF					434.5	434.5	0.7692	0.7692		
D 13C-1,2,3,7,8-PeCDD	24.862	42878117	1.62	0.7612	102.0	102.0	0.1090	0.1090	102	
1,2,3,7,8-PeCDD	24.889	89555111	1.58	1.0484	199.2	199.2	0.2271	0.2271	99.61	
A Non-2,3,7,8-sub-PeCDD	23.744						0.2271	0.2271		
S Total PeCDD					199.2	199.2	0.2271	0.2271		
D 13C-1,2,3,4,7,8-HxCDF	30.836	62488487	0.52	1.0837	100.5	100.5	0.4386	0.4386	101	
1,2,3,4,7,8-HxCDF	30.849	141029922	1.22	1.0851	208.0	208.0	1.073	1.073	104	
D 13C-1,2,3,6,7,8-HxCDF	30.995	62719524	0.52	1.1279	96.9	96.9	0.4214	0.4214	96.91	
1,2,3,6,7,8-HxCDF	31.008	153925065	1.22	1.1260	218.0	218.0	1.035	1.035	109	
D 13C-2,3,4,6,7,8-HxCDF	31.754	59440166	0.52	1.0637	97.4	97.4	0.4468	0.4468	97.39	
2,3,4,6,7,8-HxCDF	31.767	152499923	1.22	1.1675	219.7	219.7	0.8510	0.8510	110	
D 13C-1,2,3,7,8,9-HxCDF	32.513	54205090	0.51	0.9676	97.6	97.6	0.4912	0.4912	97.64	
1,2,3,7,8,9-HxCDF	32.526	130040433	1.23	1.1664	205.7	205.7	0.8755	0.8755	103	

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
A Non-2,3,7,8-sub-HxCDF	30.542						0.9509	0.9509		
S Total HxCDF					851.4	851.4	0.9587	0.9587		
* 13C-1,2,3,7,8,9-HxCDD	32.340	57376962	1.28	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.927	41405543	1.26	0.7334	98.4	98.4	0.3599	0.3599	98.39	
1,2,3,4,7,8-HxCDD	31.940	95311816	1.31	1.0640	216.3	216.3	0.7396	0.7396	108	
D 13C-1,2,3,6,7,8-HxCDD	32.020	49899921	1.25	0.8802	98.8	98.8	0.2999	0.2999	98.81	
1,2,3,6,7,8-HxCDD	32.034	107959577	1.21	1.0001	216.3	216.3	0.7456	0.7456	108	
1,2,3,7,8,9-HxCDD	32.340	107964188	1.26	1.1325	208.8	208.8	0.6762	0.6762	104	
A Non-2,3,7,8-sub-HxCDD	31.215						0.7187	0.7187		
S Total HxCDD					641.5	641.5	0.7205	0.7205		
1,2,3,4,6,7,8-HpCDF	33.912	135529943	1.05	1.4413	218.8	218.8	2.088	2.088	109	
D 13C-1,2,3,4,6,7,8-HpCDF	33.912	42985413	0.44	0.7730	96.9	96.9	0.9749	0.9749	96.91	
D 13C-1,2,3,4,7,8,9-HpCDF	35.006	40537577	0.44	0.7008	100.8	100.8	1.075	1.075	101	
1,2,3,4,7,8,9-HpCDF	35.018	111348980	1.06	1.3174	208.5	208.5	2.580	2.580	104	
A Non-2,3,7,8-sub-HpCDF	34.458						2.314	2.314		
S Total HpCDF					427.3	427.3	2.334	2.334		
D 13C-1,2,3,4,6,7,8-HpCDD	34.702	36455330	1.02	0.6472	98.2	98.2	0.5132	0.5132	98.17	
1,2,3,4,6,7,8-HpCDD	34.714	85115851	1.05	1.0943	213.4	213.4	1.044	1.044	107	
A Non-2,3,7,8-sub-HpCDD	33.504						1.044	1.044		
S Total HpCDD					213.4	213.4	1.044	1.044		
D 13C-OCDD	37.082	51228940	0.89	0.4472	199.7	199.7	0.2232	0.2232	99.84	
OCDF	37.189	161294219	0.91	1.4382	437.9	437.9	0.4409	0.4409	109	
OCDD	37.094	124067491	0.90	1.1070	437.5	437.5	0.5859	0.5859	109	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Jul-2021 15:31:57 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: ICV 072621 ICV HRDXNIC_00047
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:10:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: stephensk Date: 27-Jul-2021 08:50:13

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	18.127	18.142	-1		24811260	6334063	3297	8242	1921		
333.9339	18.127	18.142	-1		30413981	7612051	3296	8240	2309	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	0.971	39276583	9941961	7868	19670	1264		
317.9389	17.598	17.598	0	0.971	49700300	12596795	5536	13840	2275	0.79(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.613	17.628	-1	1.001	17265923	4373947	2358	5895	1855		
305.8987	17.613	17.628	-1	1.001	22058951	5573170	3788	9470	1471	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQ
303.9016	16.933	17.311	-23	0.962	161517	37808	2358	5895	16		
	Empc Correction				121157	34090	2358	5895	14		
305.8987	16.933	17.311	-23	0.962	157347	44274	3788	9470	12	1.03(0.65-0.89)	
303.9016	17.235	17.311	-5	0.979	125955	28258	2358	5895	12		
	Empc Correction				107214	28155	2358	5895	12		
305.8987	17.220	17.311	-5	0.979	139240	36566	3788	9470	10	0.90(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.011	22418240	5434734	3297	8242	1648		
333.9339	18.323	18.323	0	1.011	27965561	6697610	3296	8240	2032	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.338	0	1.001	12170563	2933733	1303	3257	2252		
321.8936	18.338	18.338	0	1.001	15631289	3775919	1394	3485	2709	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	18.338	18.354	-1	1.012	26006351	6295077	2398	5995	2625		

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Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-TCDD											
319.8965	18.233	17.772	28	0.995	239239	60004	1303	3257	46		
321.8936	18.233	17.772	28	0.995	312487	80578	1394	3485	58	0.77(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.749	22.749	0	1.255	41668599	7333690	8485	21212	864		
353.8970	22.749	22.749	0	1.255	26583879	4652625	5670	14175	821	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.762	22.776	-1	1.001	90206138	15696498	23147	57867	678		
341.8567	22.762	22.776	-1	1.001	57354435	10012296	14777	36942	678	1.57(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	24.126	24.126	0	1.331	44217600	7271382	8485	21212	857		
353.8970	24.126	24.126	0	1.331	27579773	4468756	5670	14175	788	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	24.153	24.153	0	1.001	101392394	16526277	23147	57867	714		
341.8567	24.153	24.153	0	1.001	63901075	10428415	14777	36942	706	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	20.244						338	845			
341.8567	20.244						462	1155			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.308	23.473	-10	1.025	2092429	352488	23147	57867	15		
341.8567	23.308	23.473	-10	1.025	1351372	223195	14777	36942	15	1.55(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.862	24.862	0	1.372	26514155	4045355	2631	6577	1538		
369.8919	24.862	24.862	0	1.372	16363962	2537743	2000	5000	1269	1.62(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.889	24.889	0	1.001	54803563	8416527	3860	9650	2180		
357.8516	24.889	24.889	0	1.001	34751548	5423049	2410	6025	2250	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.744						3860	9650			
357.8516	23.744						2410	6025			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.836	30.835	0	0.953	21423741	4602993	10138	25345	454		
385.8610	30.836	30.835	0	0.953	41064746	8805011	18904	47260	466	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.849	30.862	-1	1.000	77446041	17056861	34028	85070	501		
375.8178	30.849	30.862	-1	1.000	63583881	14029731	28421	71052	494	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.995	31.008	-1	0.958	21527343	4645676	10138	25345	458		
385.8610	30.995	31.008	-1	0.958	41192181	8744916	18904	47260	463	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	31.008	31.021	-1	1.000	84458486	18178004	34028	85070	534		
375.8178	31.008	31.021	-1	1.000	69466579	15063201	28421	71052	530	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.754	31.754	0	0.982	20418672	5425134	10138	25345	535		
385.8610	31.754	31.754	0	0.982	39021494	10287607	18904	47260	544	0.52(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,4,6,7,8-HxCDF											
373.8208	31.767	31.767	0	1.000	83657687	22340712	34028	85070	657		
375.8178	31.767	31.767	0	1.000	68842236	18269489	28421	71052	643	1.22(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.513	32.526	-1	1.005	18351639	5227320	10138	25345	516		
385.8610	32.513	32.526	-1	1.005	35853451	10061715	18904	47260	532	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.526	32.539	-1	1.000	71665418	20282625	34028	85070	596		
375.8178	32.526	32.539	-1	1.000	58375015	16239209	28421	71052	571	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.542						34028	85070			
375.8178	30.542						28421	71052			
13C-1,2,3,7,8,9-HxCDD											
401.8559	32.340	32.339	0		32156760	8544429	8352	20880	1023		
403.8529	32.326	32.339	-1		25220202	6731682	7778	19445	865	1.28(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.927	31.927	0	0.987	23052563	6987052	8352	20880	837		
403.8529	31.927	31.927	0	0.987	18352980	5468630	7778	19445	703	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.940	31.940	0	1.000	54057818	15589077	22398	55995	696		
391.8127	31.940	31.940	0	1.000	41253998	12285721	16811	42027	731	1.31(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	32.020	32.033	-1	0.990	27736555	7273068	8352	20880	871		
403.8529	32.020	32.033	-1	0.990	22163366	5871752	7778	19445	755	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	32.034	32.047	-1	1.000	59116629	16185483	22398	55995	723		
391.8127	32.034	32.047	-1	1.000	48842948	13061351	16811	42027	777	1.21(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	32.340	32.353	-1	1.013	60106510	15800454	22398	55995	705		
391.8127	32.340	32.353	-1	1.013	47857678	12979231	16811	42027	772	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	31.215						22398	55995			
391.8127	31.215						16811	42027			
1,2,3,4,6,7,8-HpCDF											
407.7818	33.912	33.911	0	1.000	69518297	21985720	82461	206152	267		
409.7789	33.912	33.911	0	1.000	66011646	21358881	78734	196835	271	1.05(0.88-1.20)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.912	33.912	0	1.049	13138473	4149229	14216	35540	292		
419.8220	33.900	33.912	-1	1.048	29846940	9243997	31835	79587	290	0.44(0.37-0.51)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	35.006	35.005	0	1.082	12375038	3705586	14216	35540	261		
419.8220	35.006	35.005	0	1.082	28162539	8151296	31835	79587	256	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.018	35.005	1	1.000	57298984	16523888	82461	206152	200		
409.7789	35.006	35.005	0	1.000	54049996	15559126	78734	196835	198	1.06(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						82461	206152			
409.7789	34.458						78734	196835			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.702	34.714	-1	1.073	18400619	5331850	10315	25787	517		
437.8140	34.702	34.714	-1	1.073	18054711	5313047	9982	24955	532	1.02(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.714	0	1.000	43603241	12970820	24860	62150	522		
425.7737	34.714	34.714	0	1.000	41512610	12528364	23796	59490	526	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						24860	62150			
425.7737	33.504						23796	59490			
13C-OCDD											
469.7779	37.082	37.093	-1	1.147	24118371	6015882	2552	6380	2357		
471.7750	37.082	37.093	-1	1.147	27110569	6692443	3547	8867	1887	0.89(0.76-1.02)	
OCDF											
441.7428	37.189	37.201	-1	1.003	76746145	20468133	7616	19040	2688		
443.7399	37.189	37.201	-1	1.003	84548074	22394214	8501	21252	2634	0.91(0.76-1.02)	
OCDD											
457.7377	37.094	37.105	-1	1.000	58682484	14688537	7599	18997	1933		
459.7348	37.094	37.105	-1	1.000	65385007	16510536	8885	22212	1858	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

n - Failed Sig-To-Noise Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	88976883	22538756

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	88976883	22538756

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.933	161517	37808	157347	44274	0.3500	1.03	RQ
16.933	121157	34090	157347	44274	0.3057		Empc Correction
17.235	125955	28258	139240	36566	0.2911	0.90	RnQ
17.235	107214	28155	139240	36566	0.2705		Empc Correction
Signal Totals:							
	228371	62245	296587	80840			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	584059	146906				0.97	RQ
	524958	143085					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.6411 = (584059 * 100.000) / (88976883 * 1.024)
Empc Amount: 0.5762 = (524958 * 100.000) / (88976883 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
n - Failed Sig-To-Noise Test
Q - EMPC-Estimated Max. Possible Conc.

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	50383801	12132344

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	50383801	12132344

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
18.233	239239	60004	312487	80578	0.8732	0.77	
Signal Totals:							
	239239	60004	312487	80578			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	551726	140582				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.8732 = (551726 * 100.000) / (50383801 * 1.254)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d
Lims ID: ICV
Client ID:
Inject. Date: 26-Jul-2021 15:31:57 Dil. Factor: 1.0000
Sample Type: ICV, ICal Verification
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 9
Sublist: chrom-Dioxin_10D5*sub1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	68252478	11986315
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71797373	11740138

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	70024925	11863226

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
23.308	2092429	352488	1351372	223195	4.73	1.55	
Signal Totals:							
	2092429	352488	1351372	223195			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	3443801	575683				1.55	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 4.730 = (3443801 * 100.000) / (70024925 * 1.040)

Report Date: 27-Jul-2021 15:10:06 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

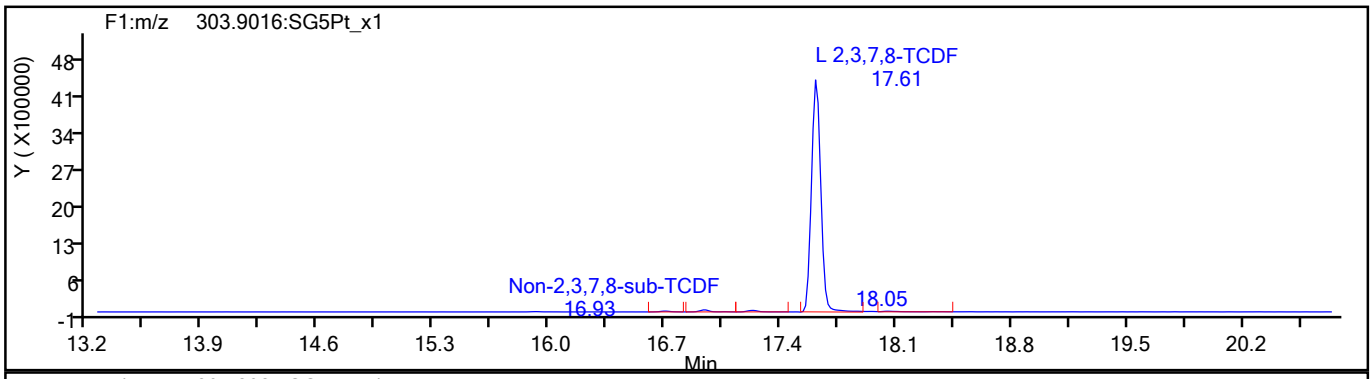

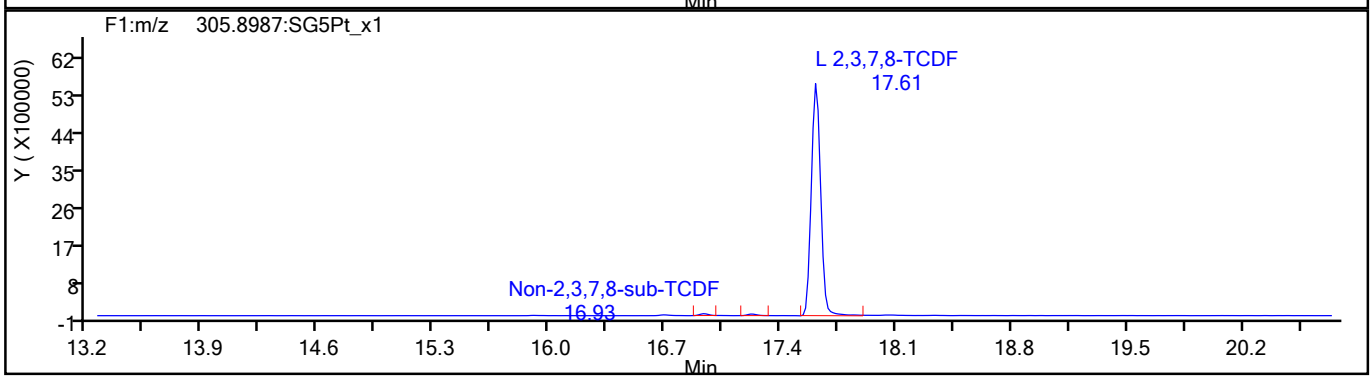

TCDF Standards

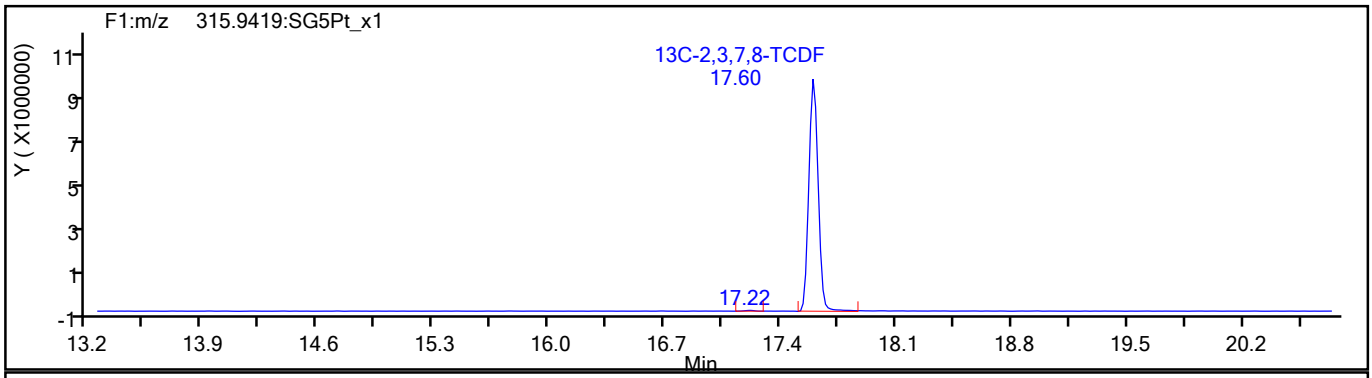

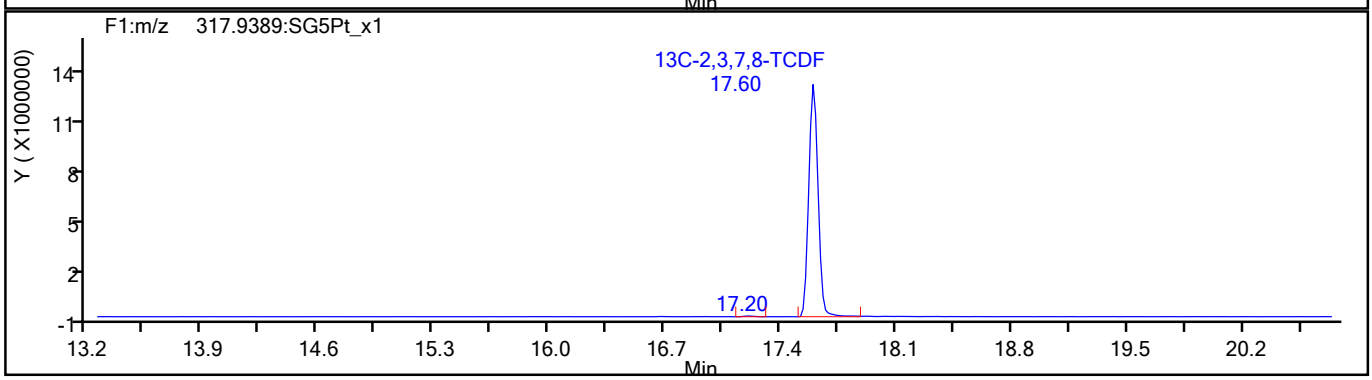

794000

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

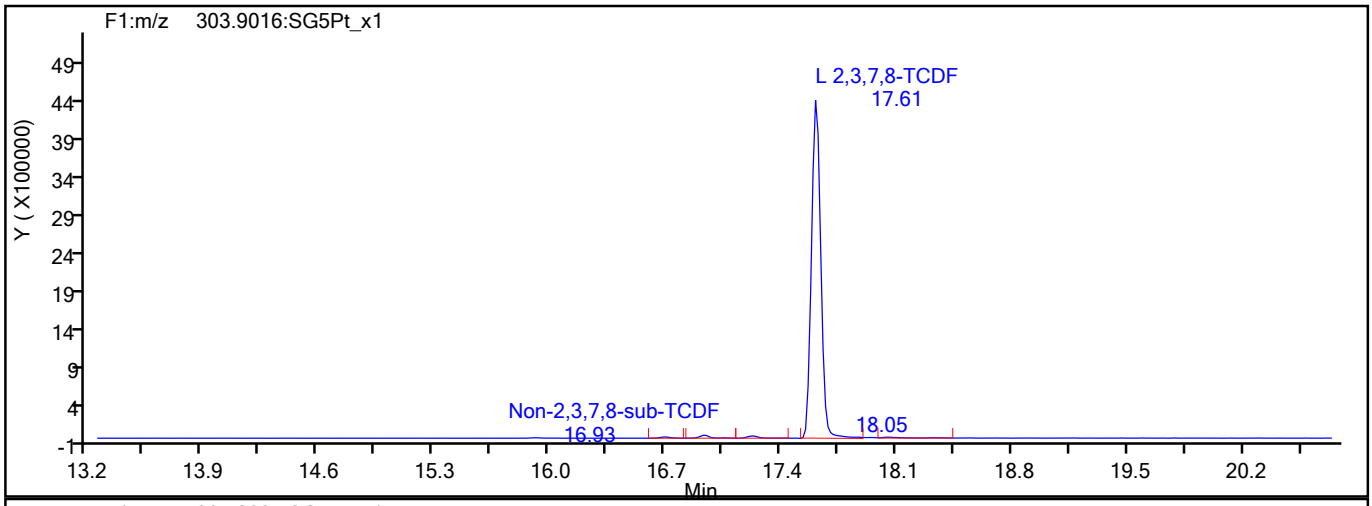

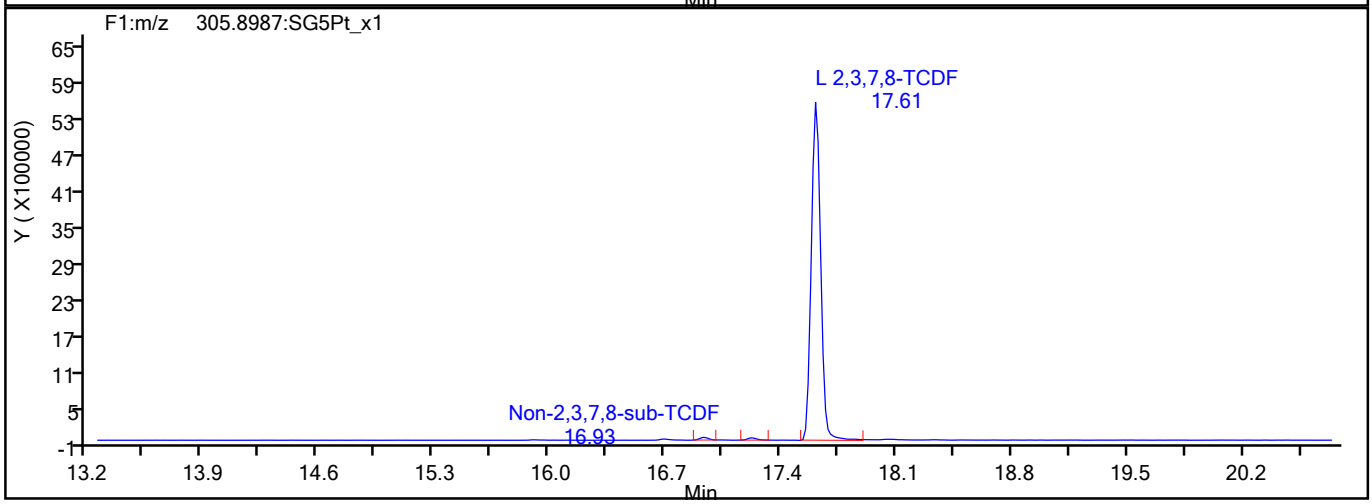

TCDF Interference Mass

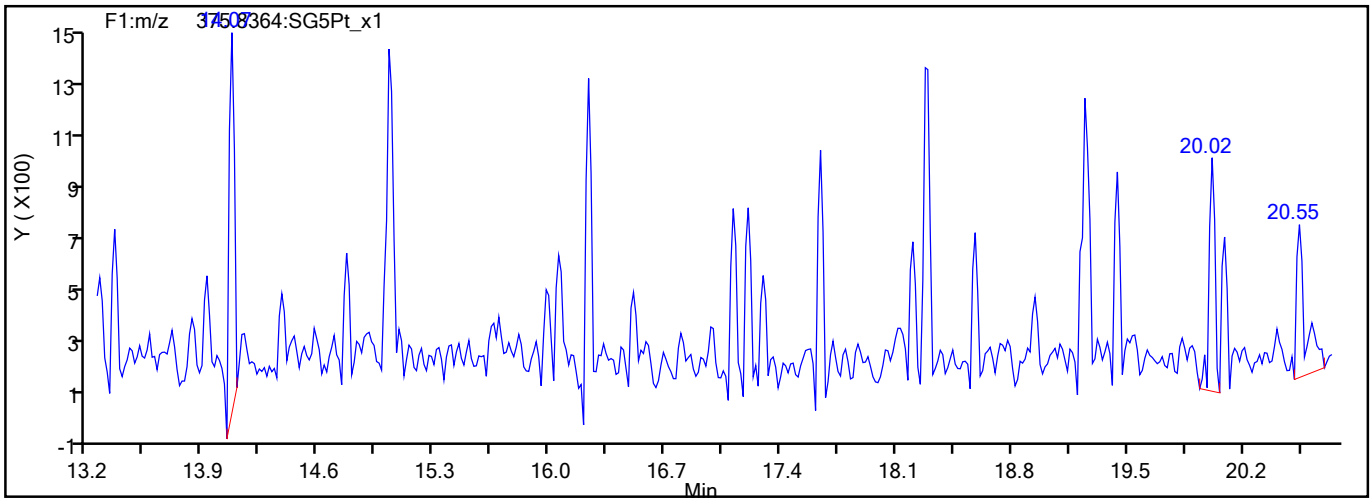

794001

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

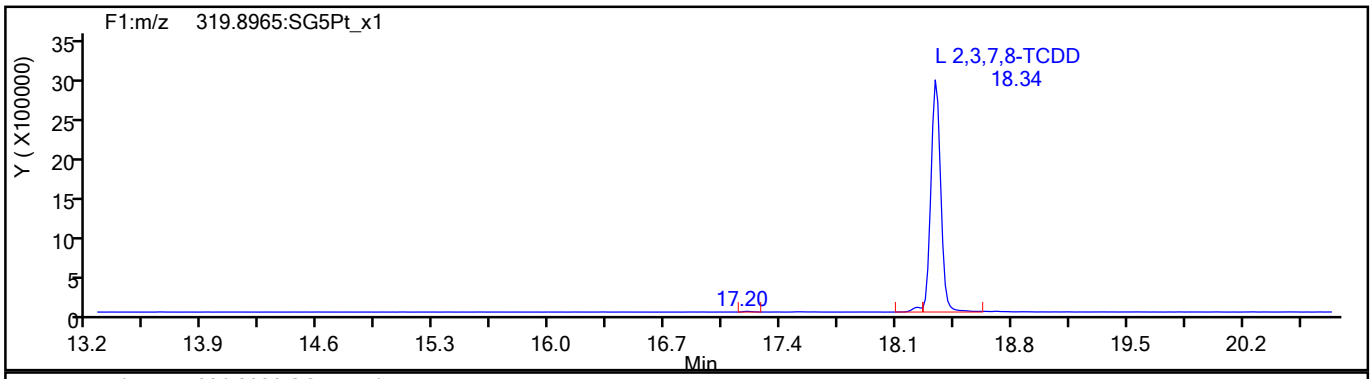

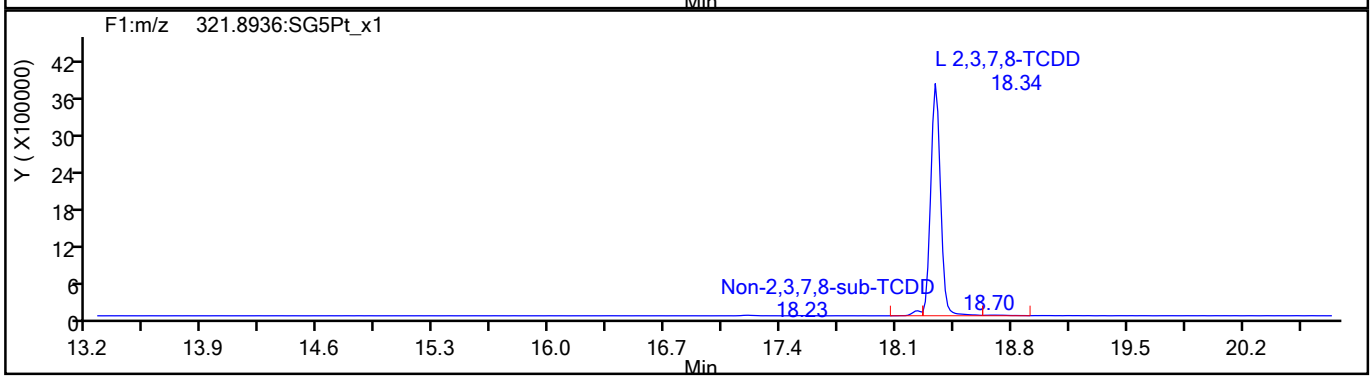

TCDD Standards

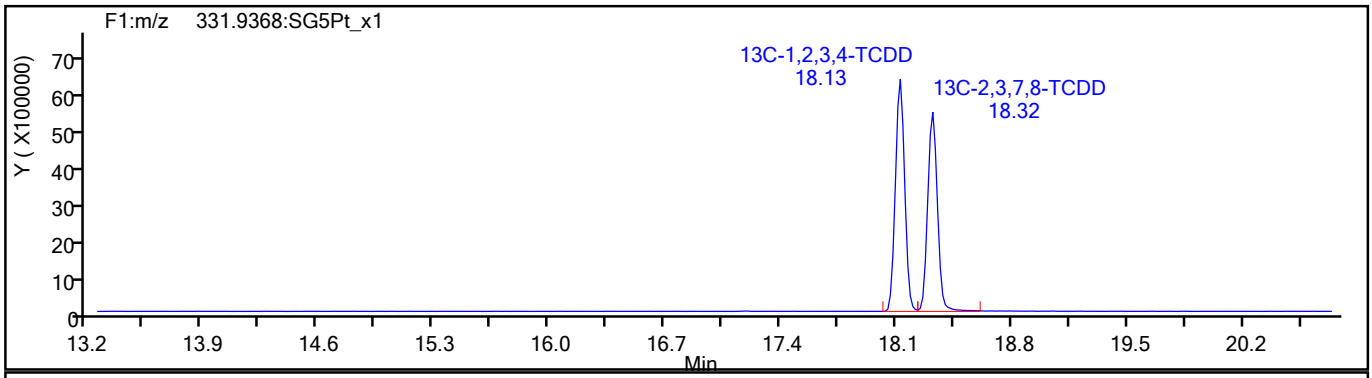

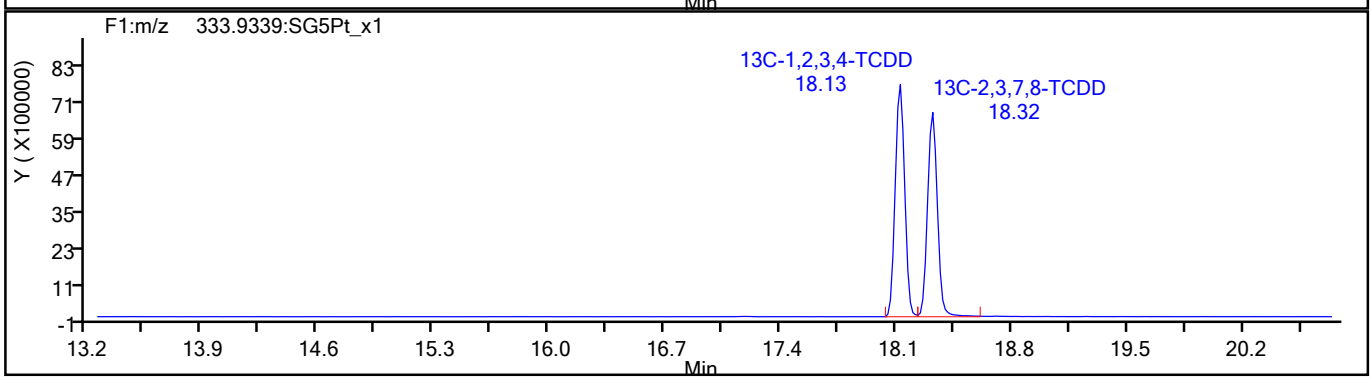

794002

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

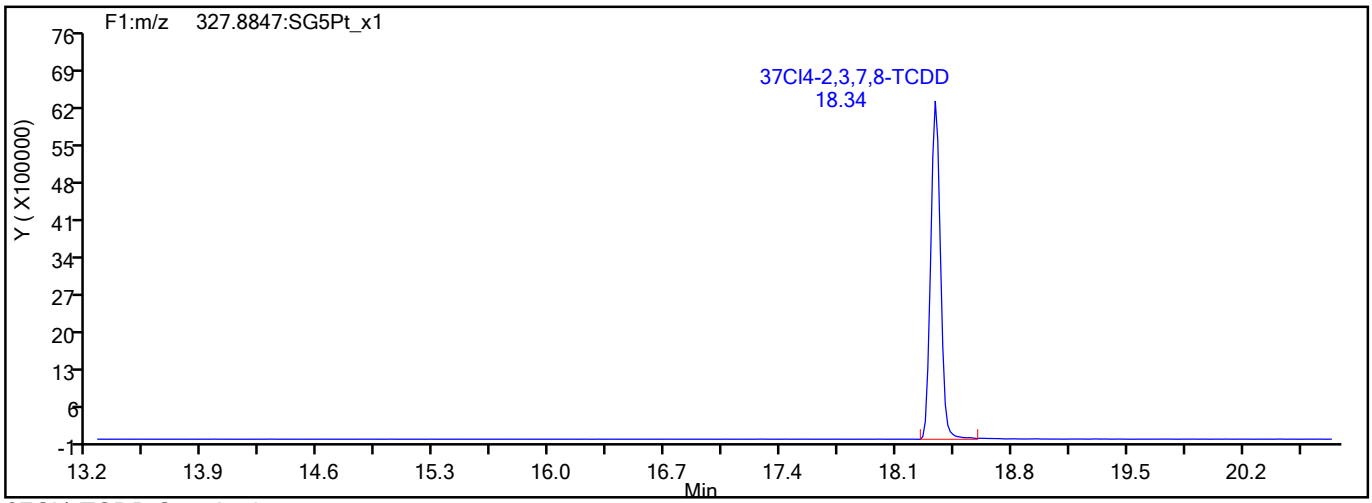

37Cl4-TCDD Standards

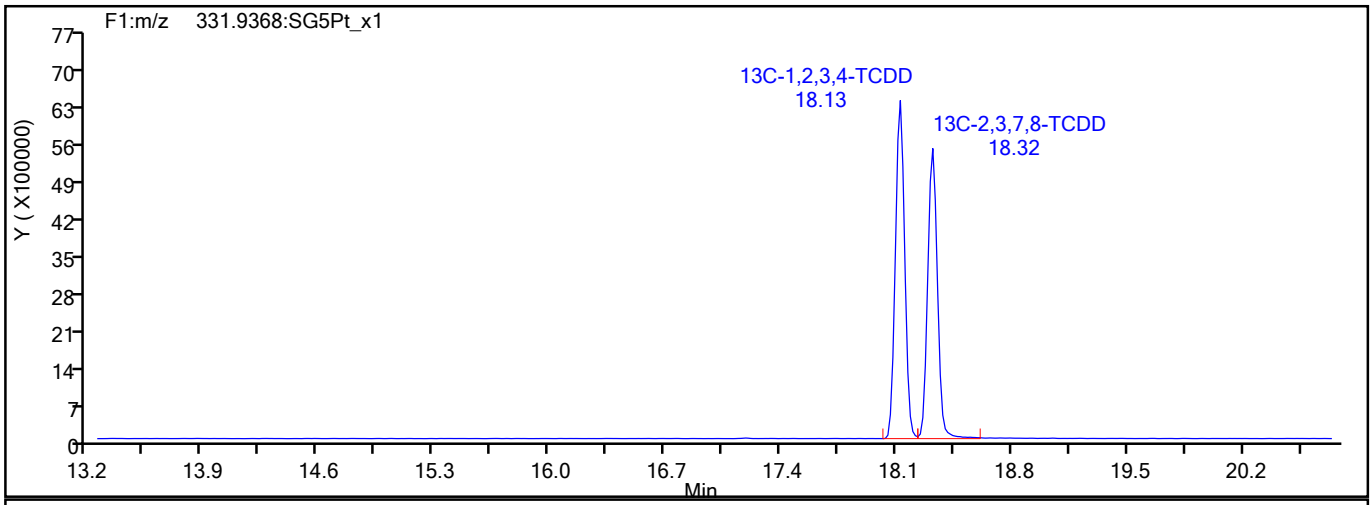

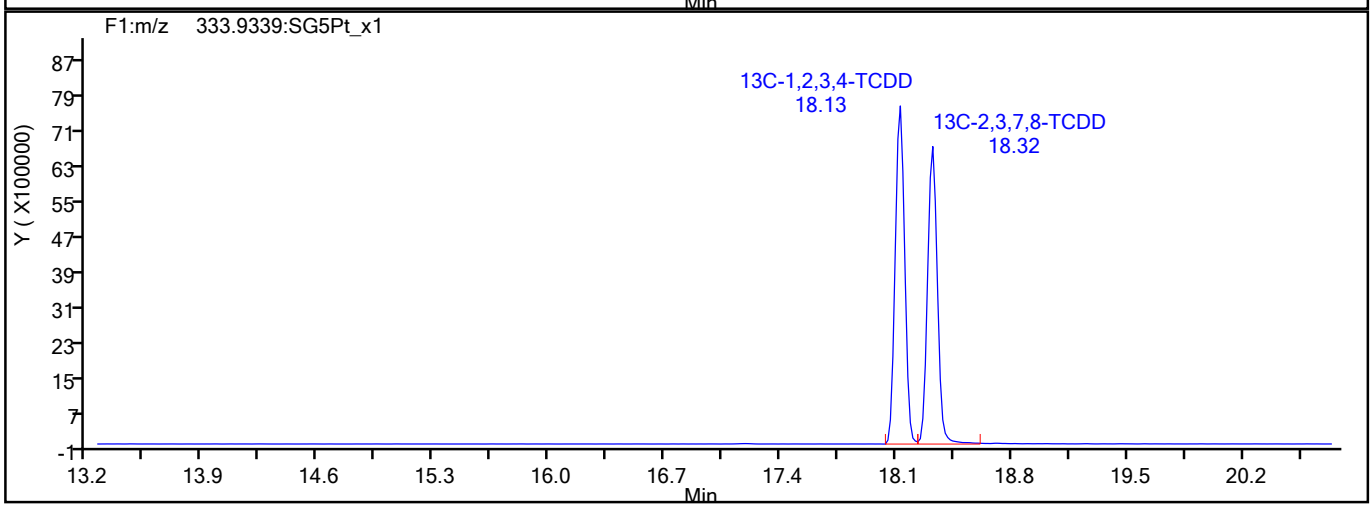

794003

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

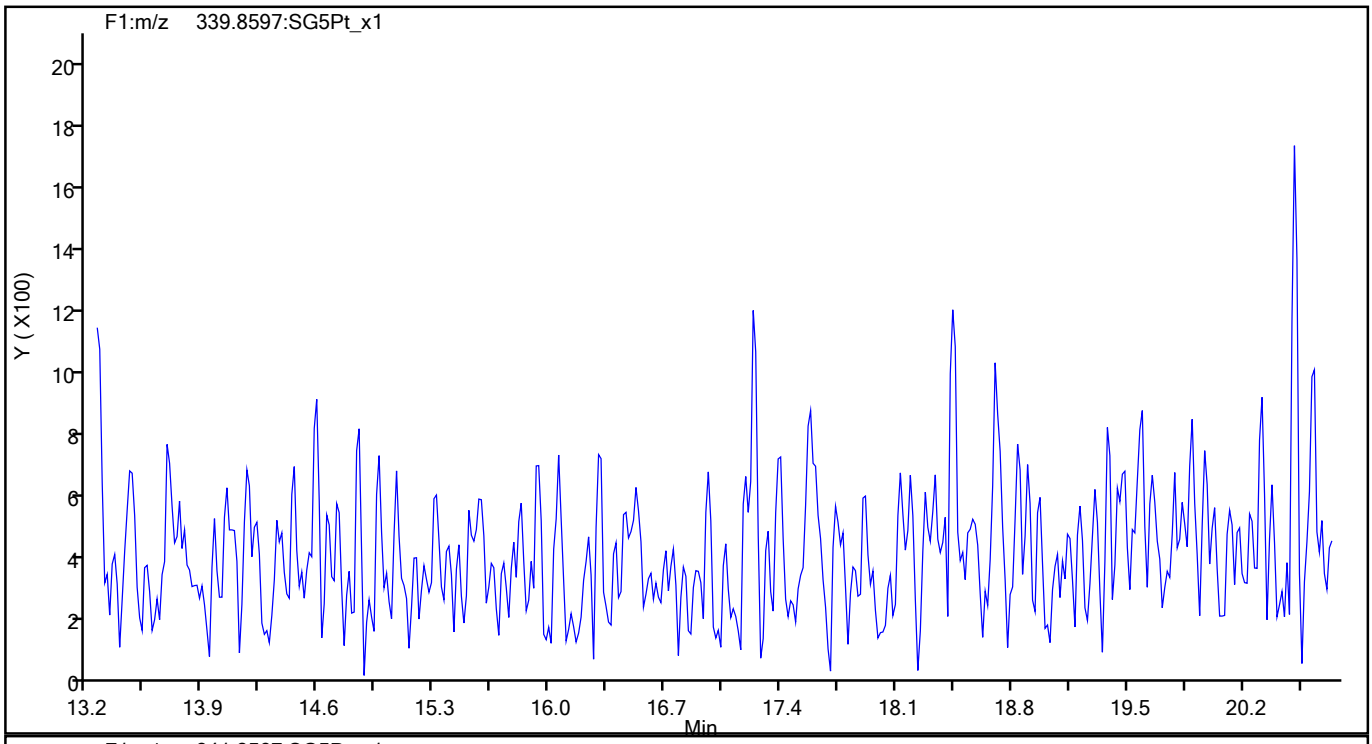

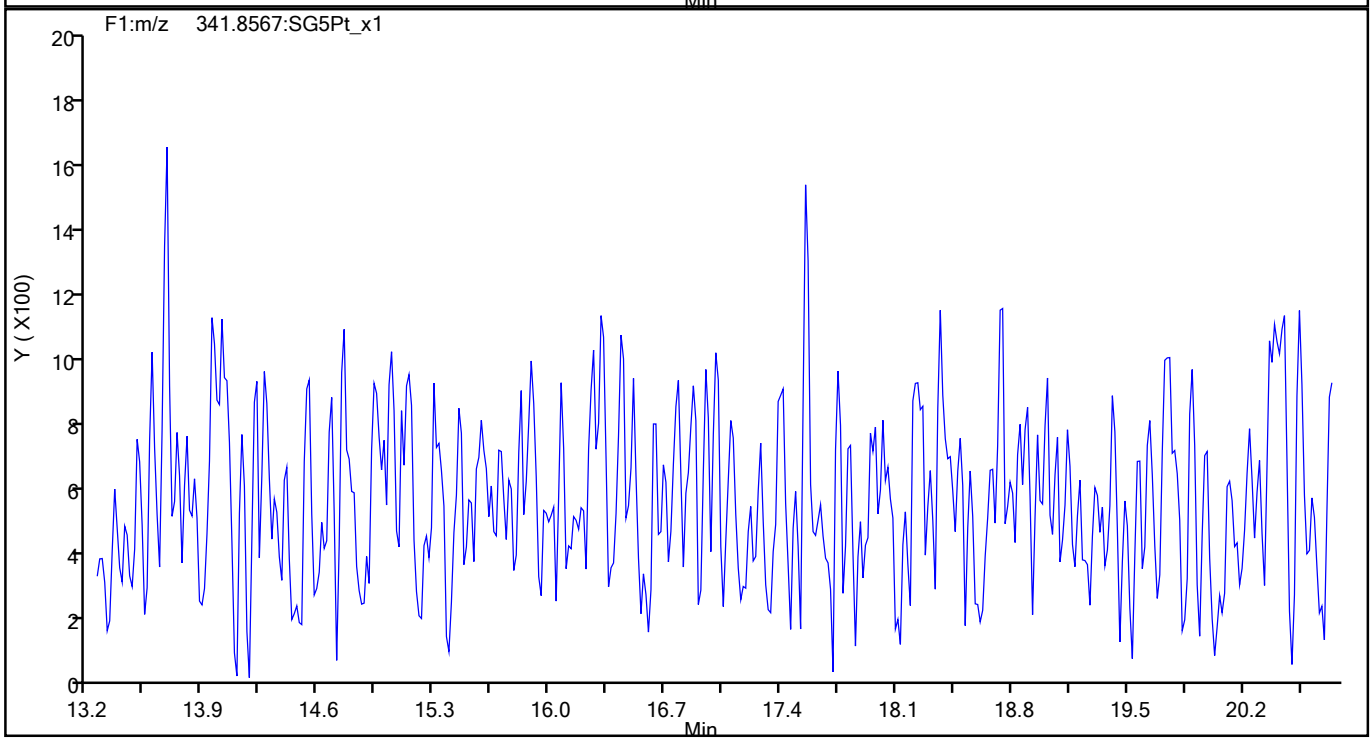

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

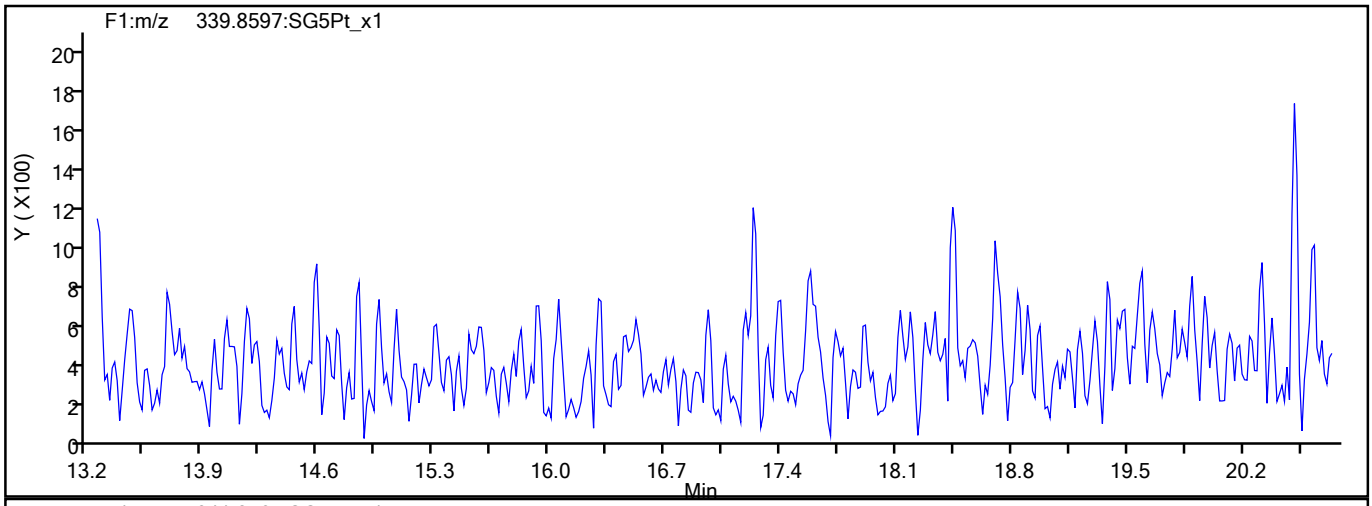

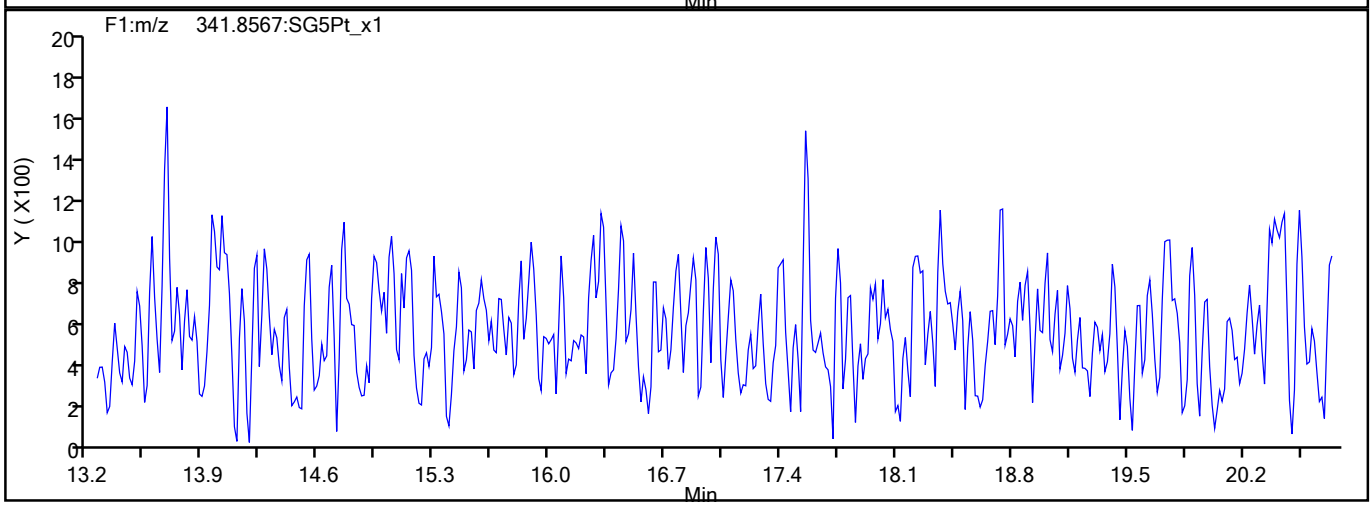

F1 PeCDFs Interference Mass

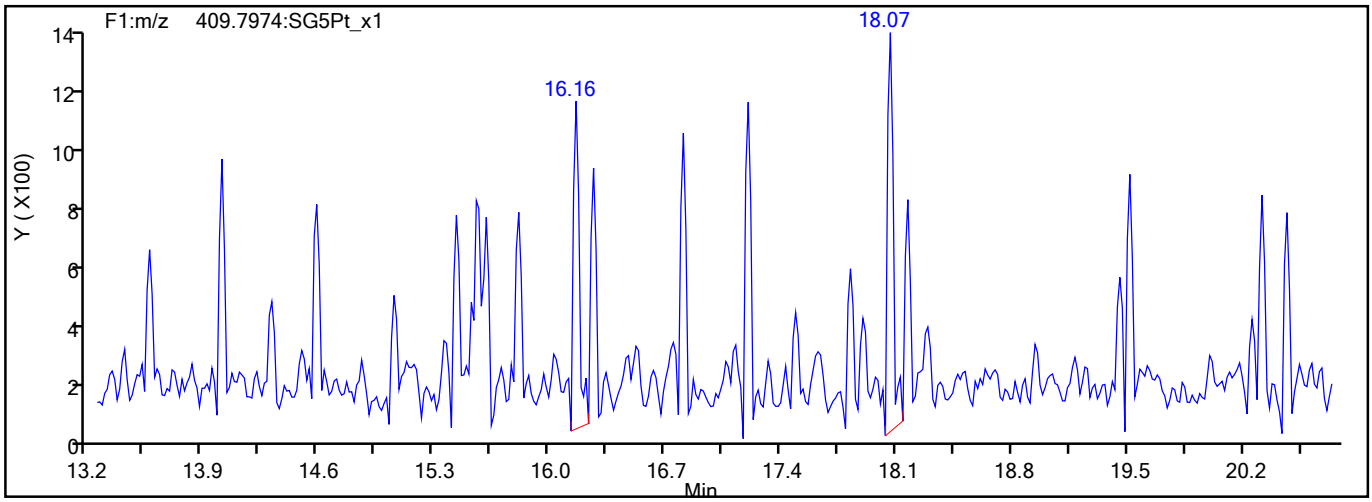

794005

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

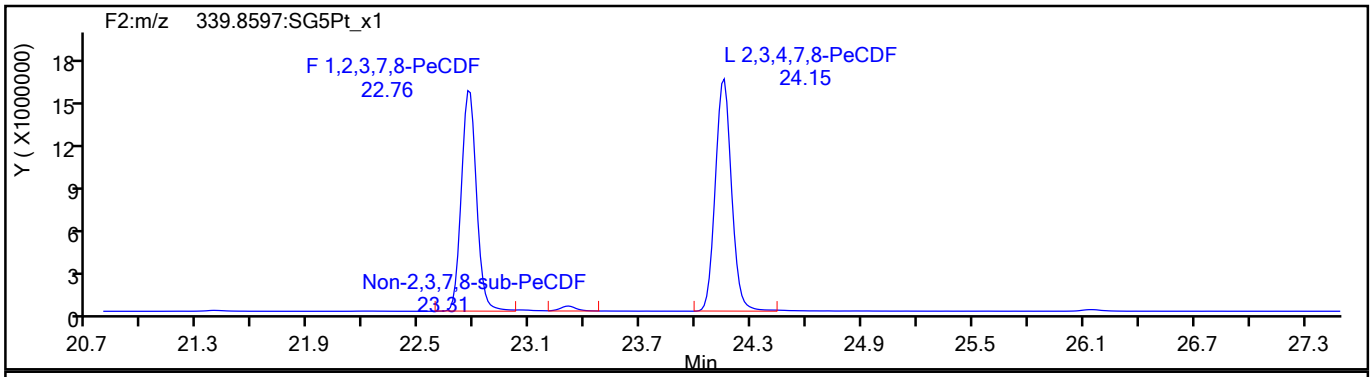

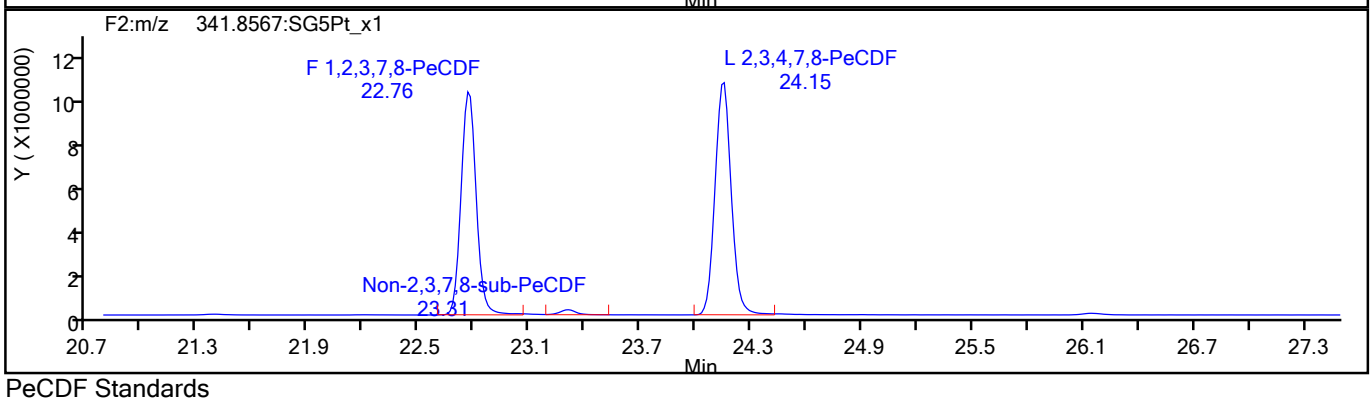

PeCDF Standards

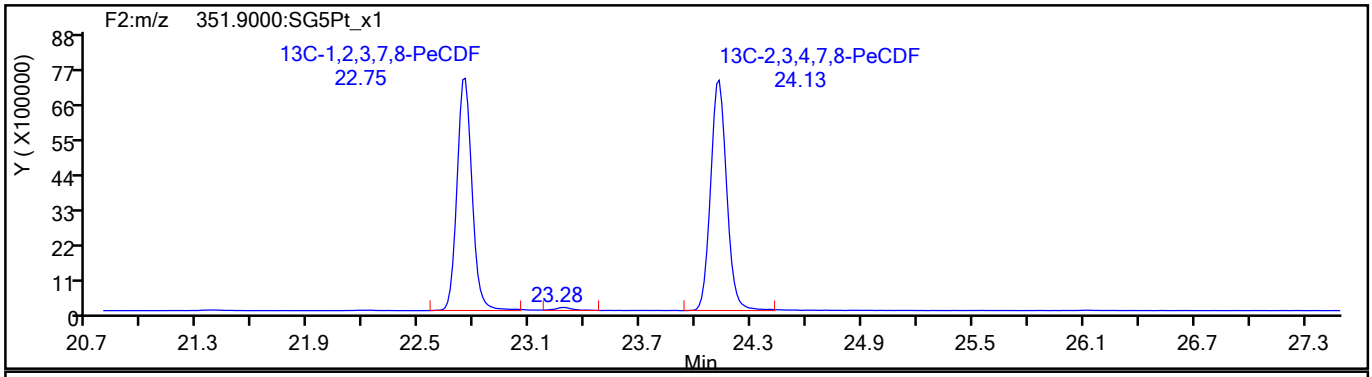

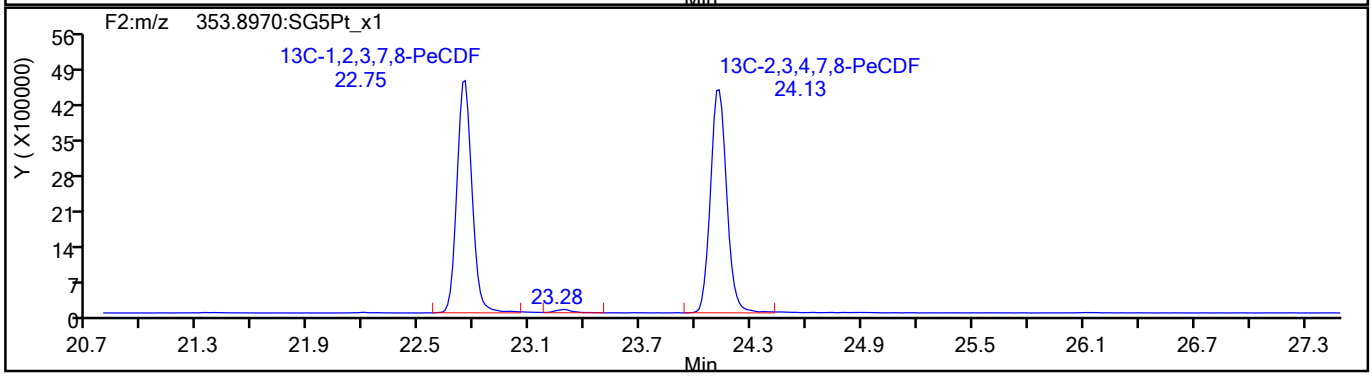

794006

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

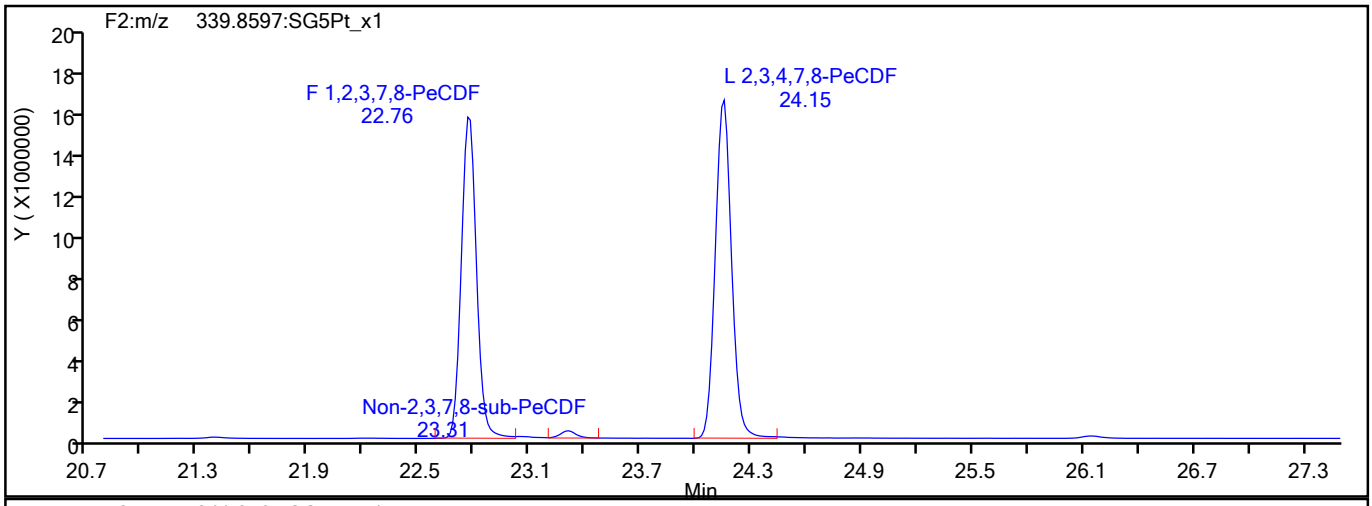

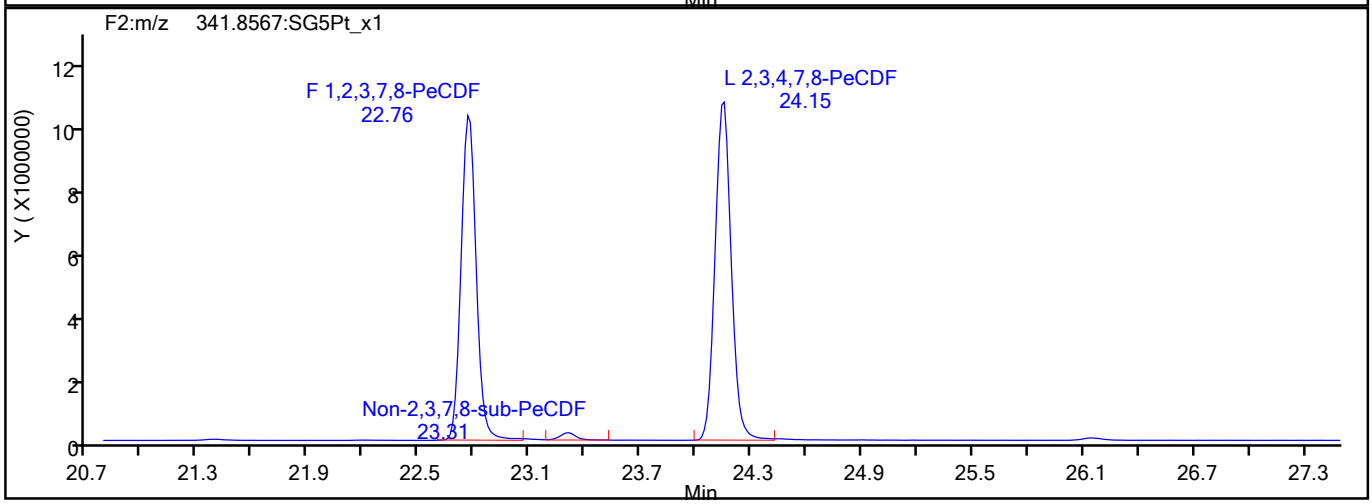

PeCDF Interference Mass

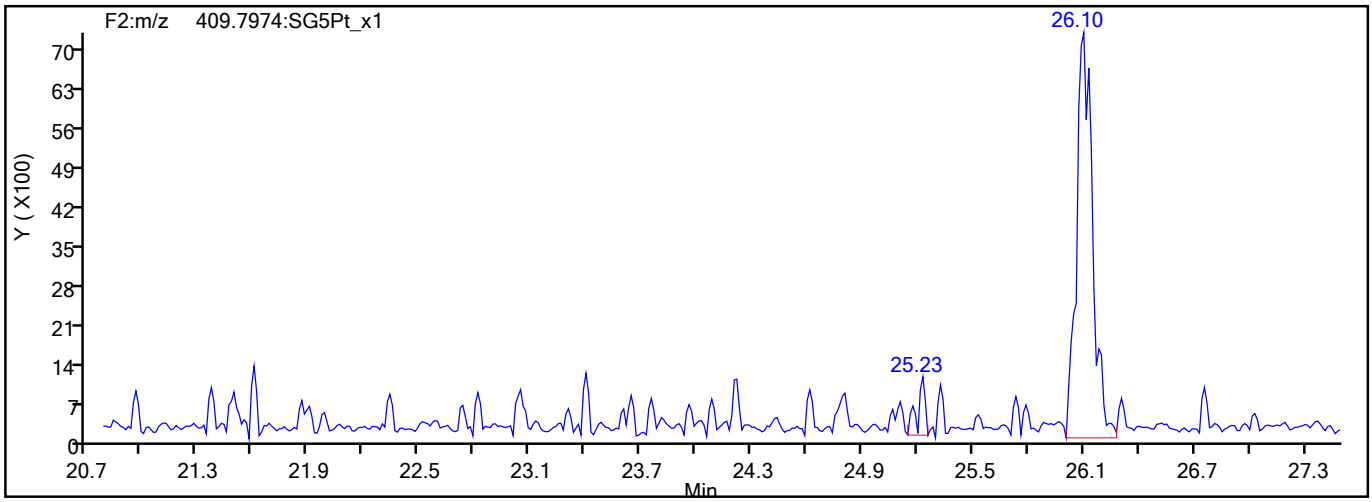

794007

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

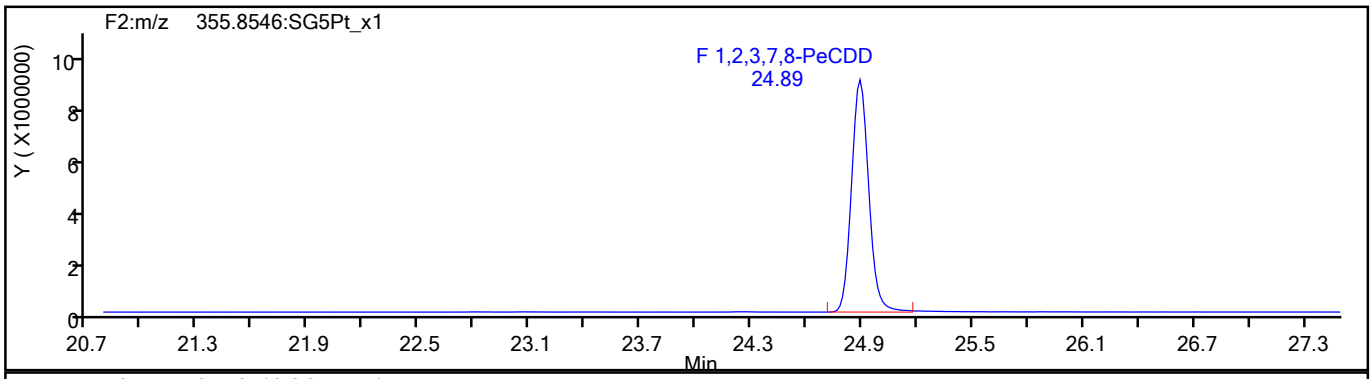

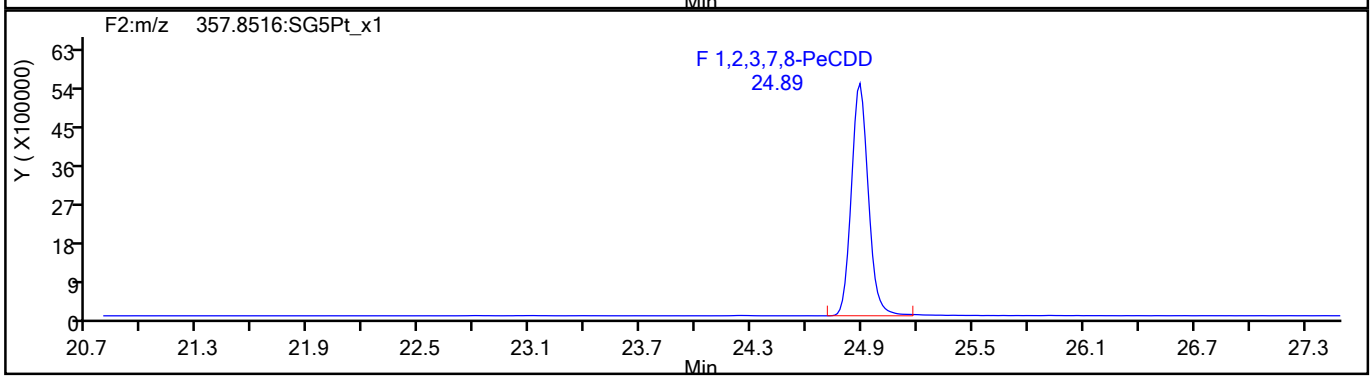

PeCDD Standards

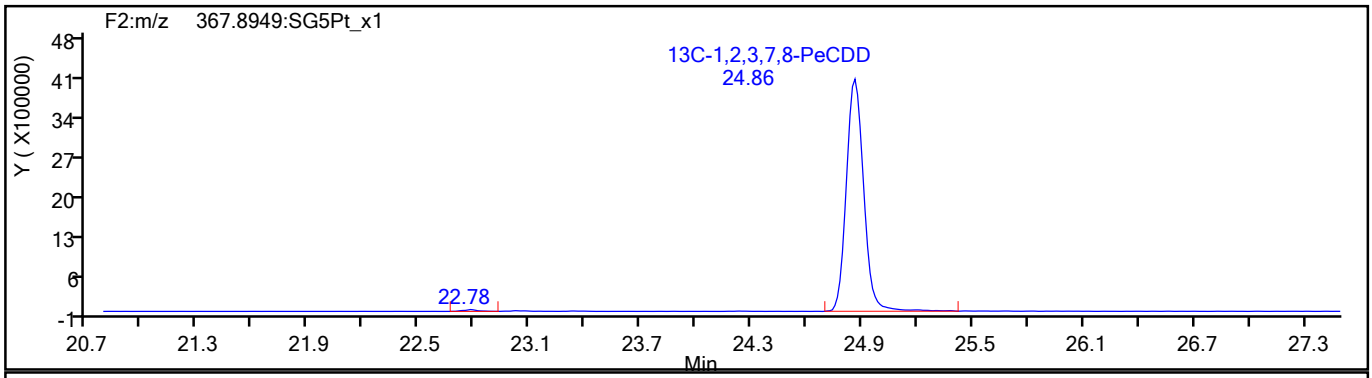

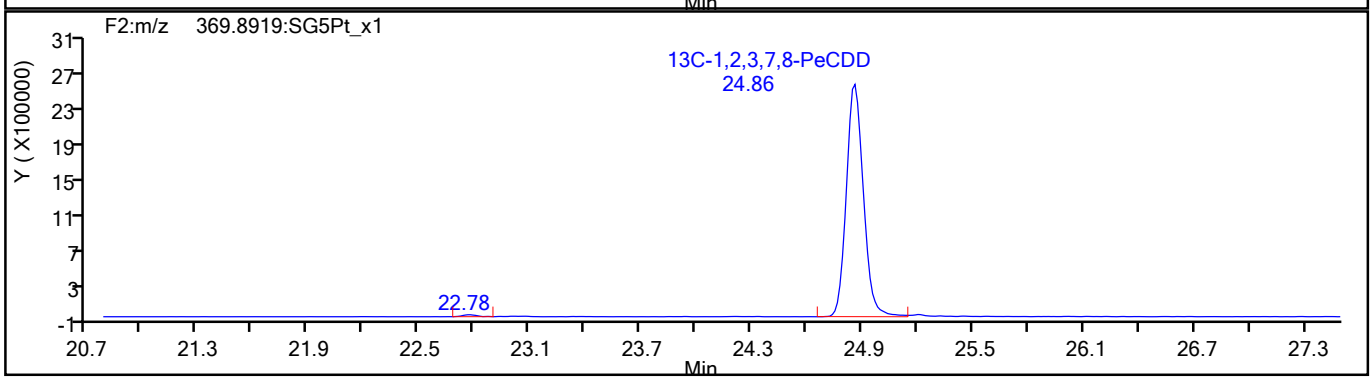

794008

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

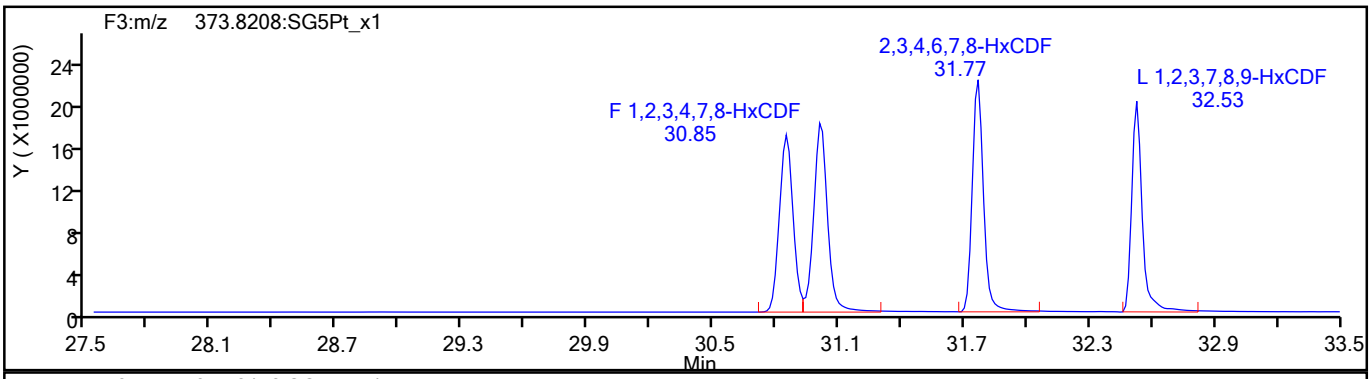

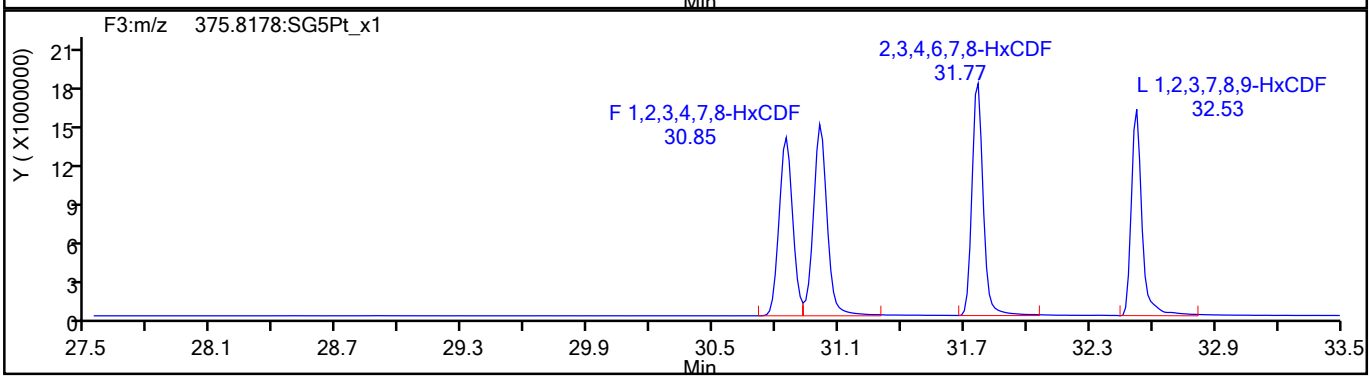

HxCDF Standards

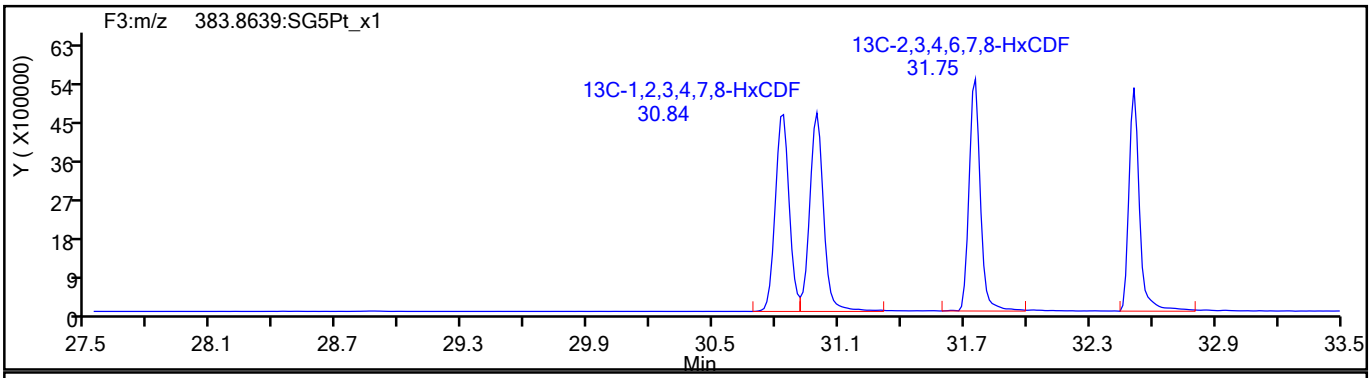

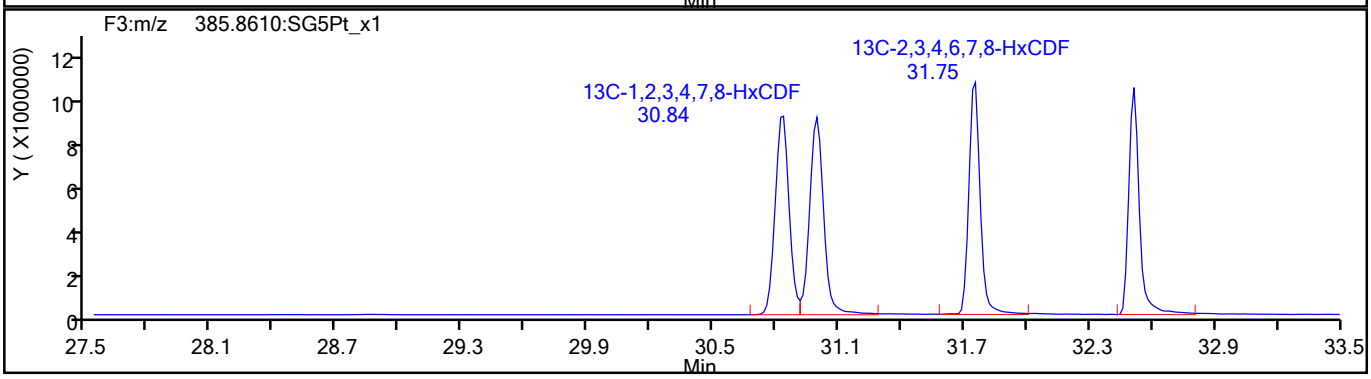

794009

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

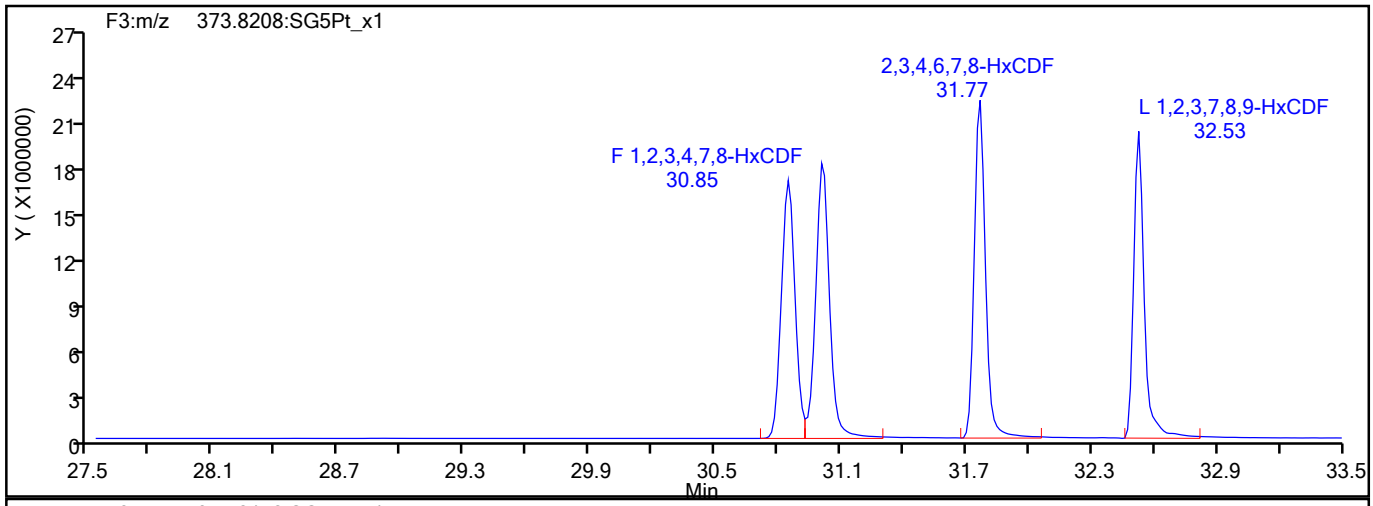

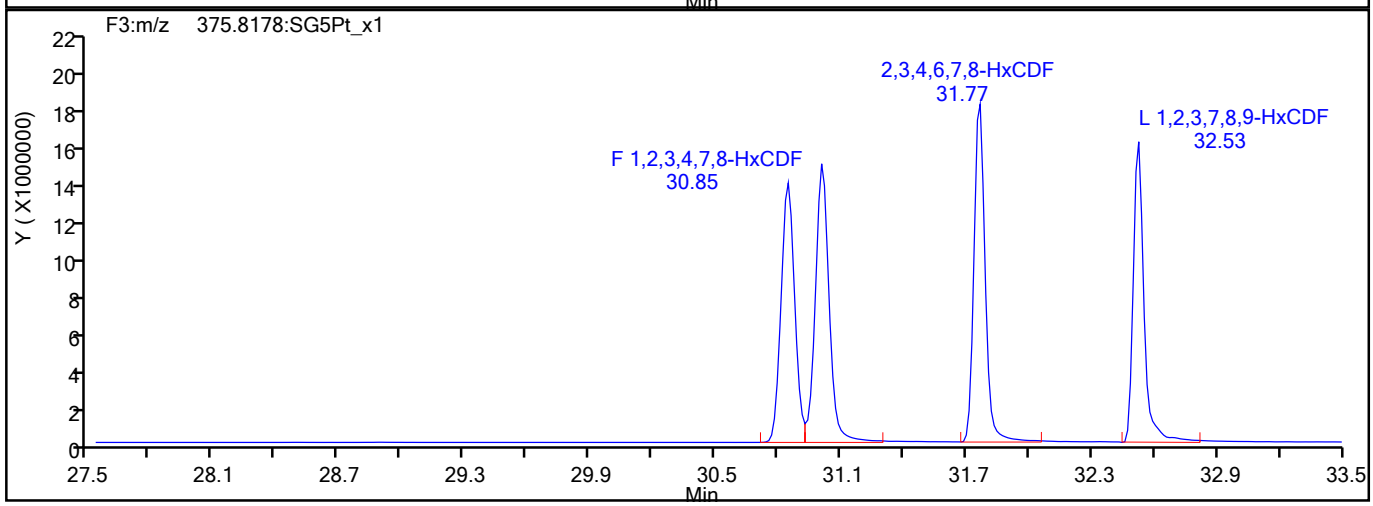

HxCDF Interference Mass

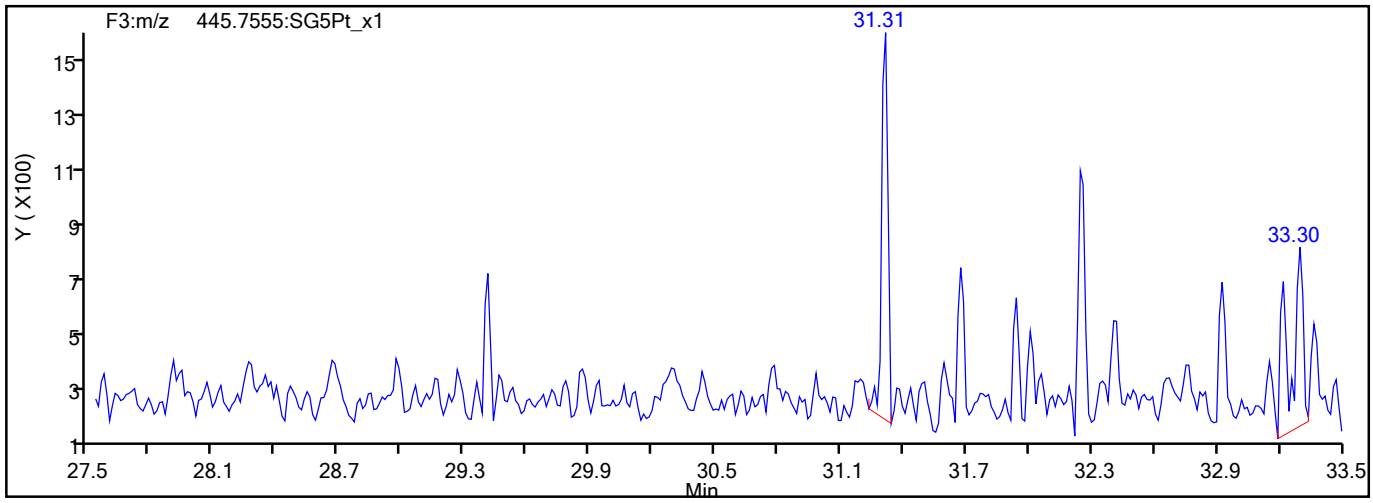

794010

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

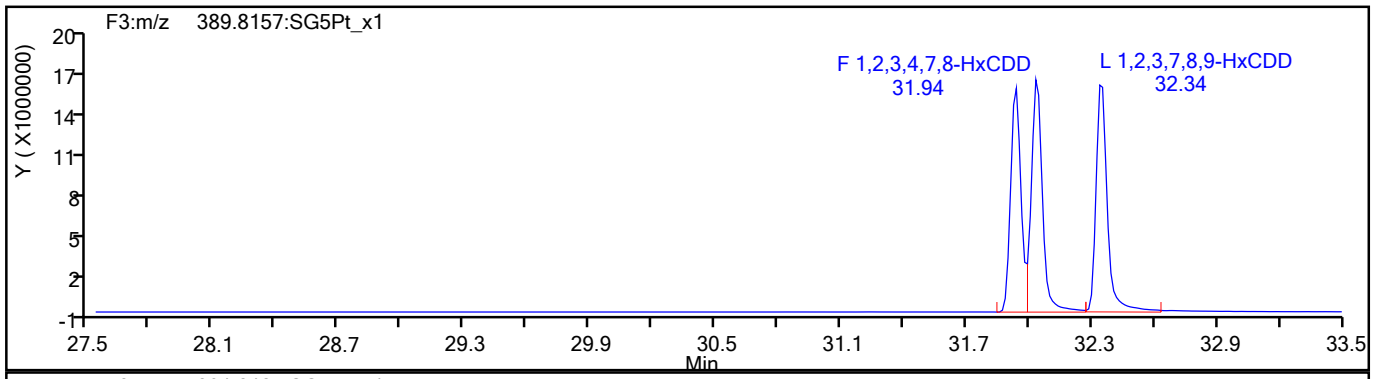

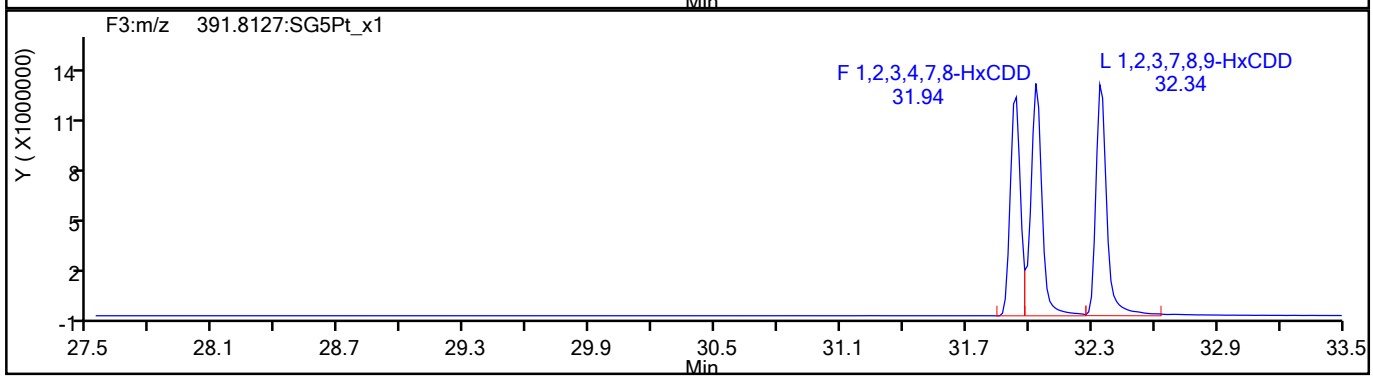

HxCDD Standards

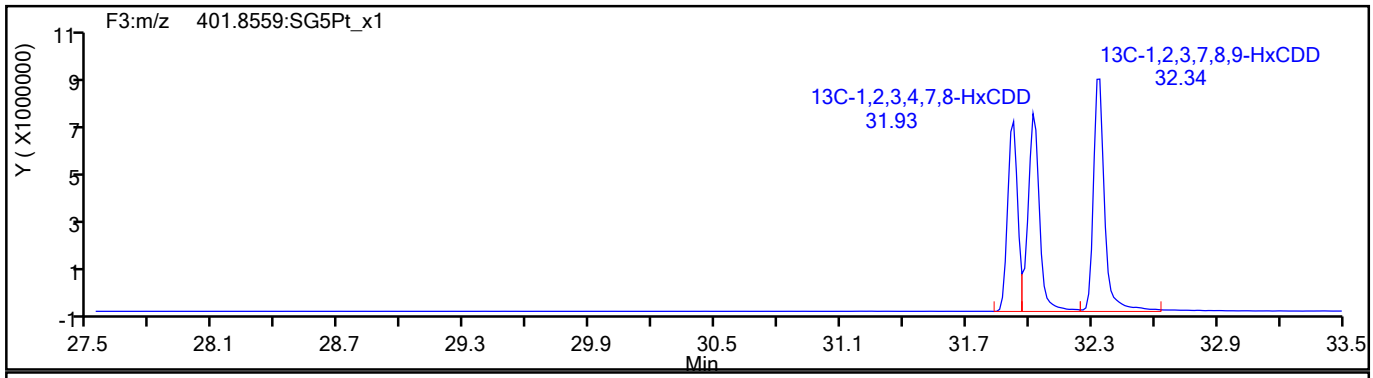

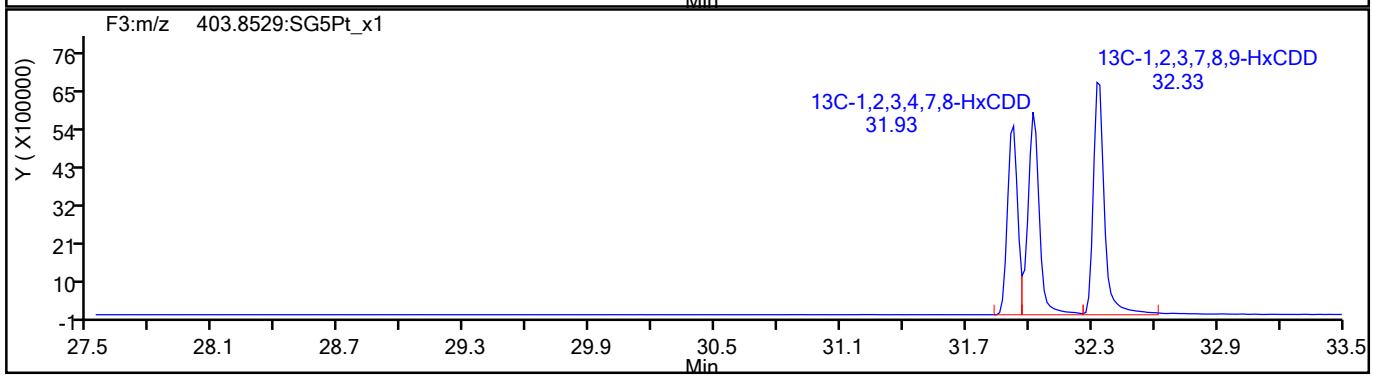

794011

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

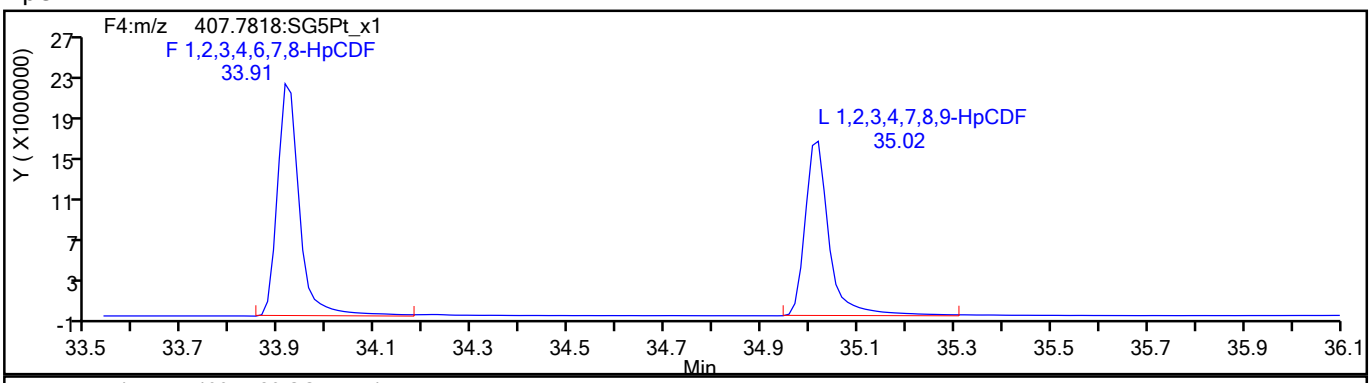

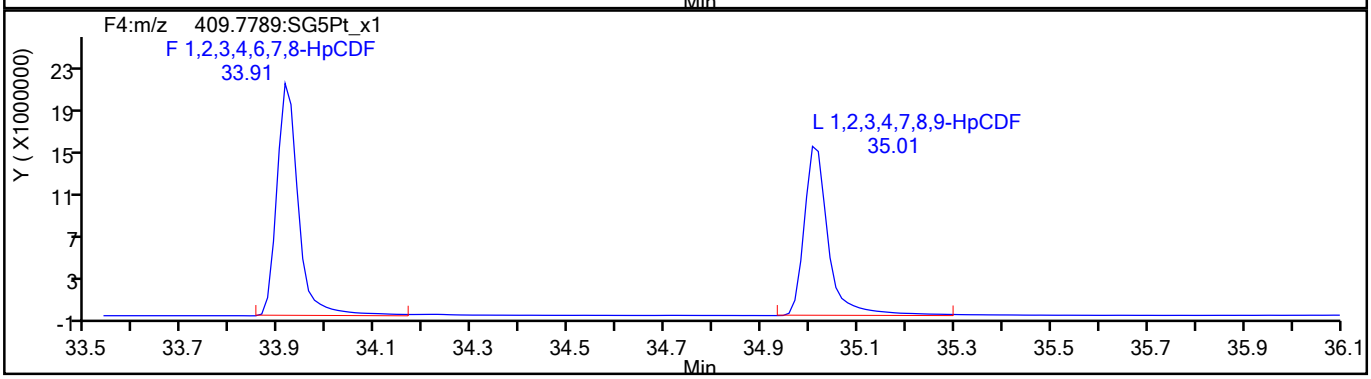

HpCDF Standards

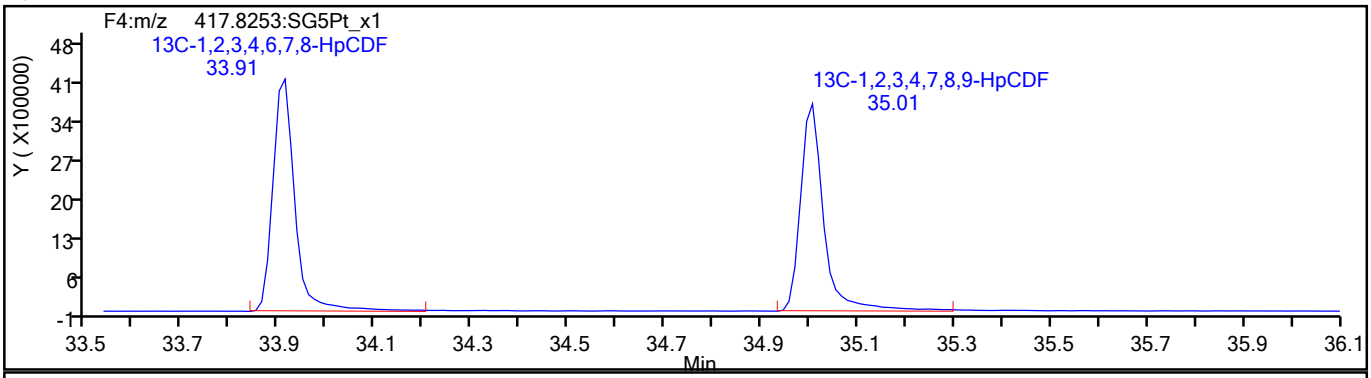

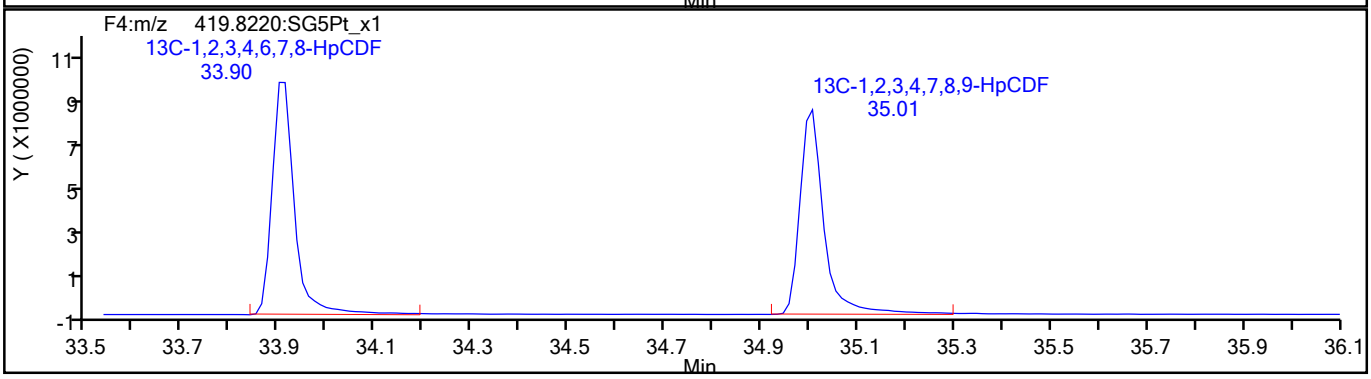

794012

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

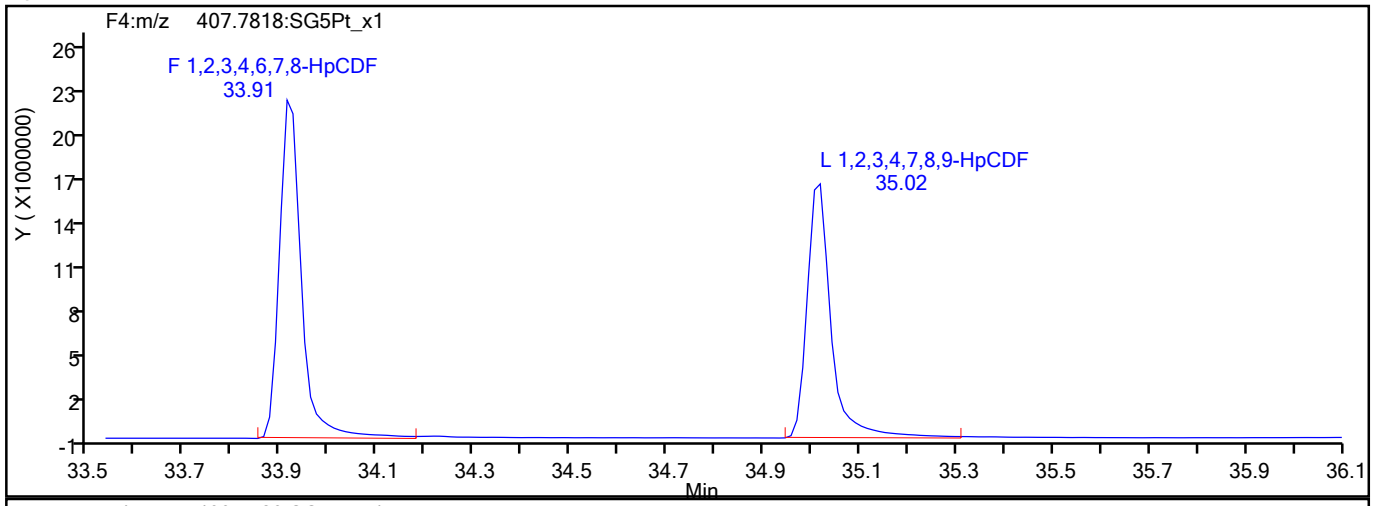

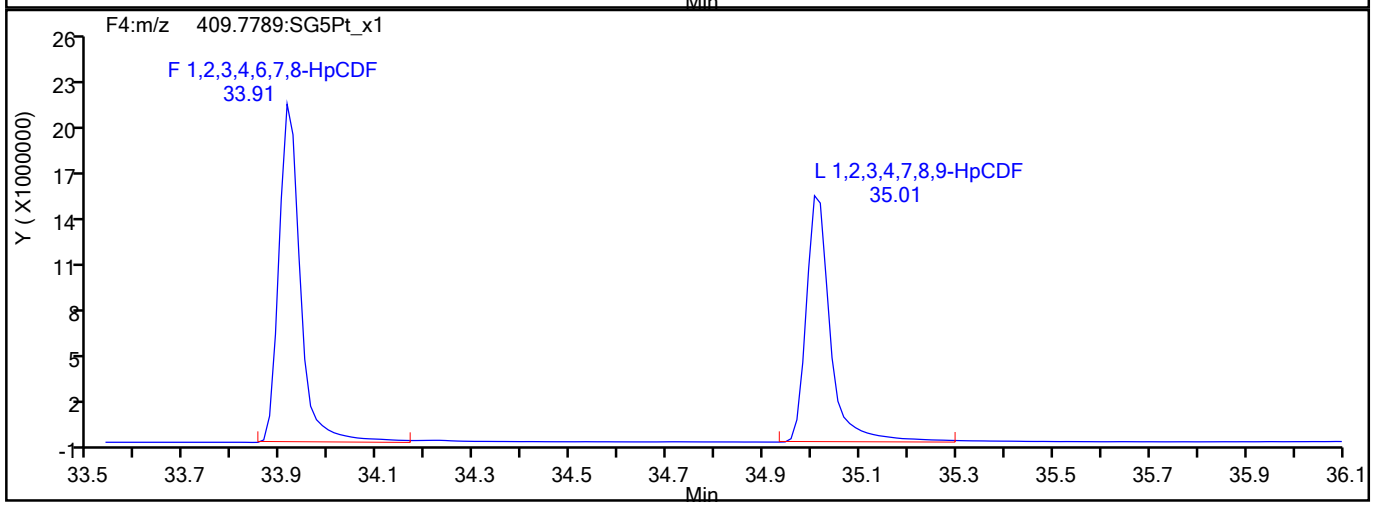

HpCDF Interference Mass

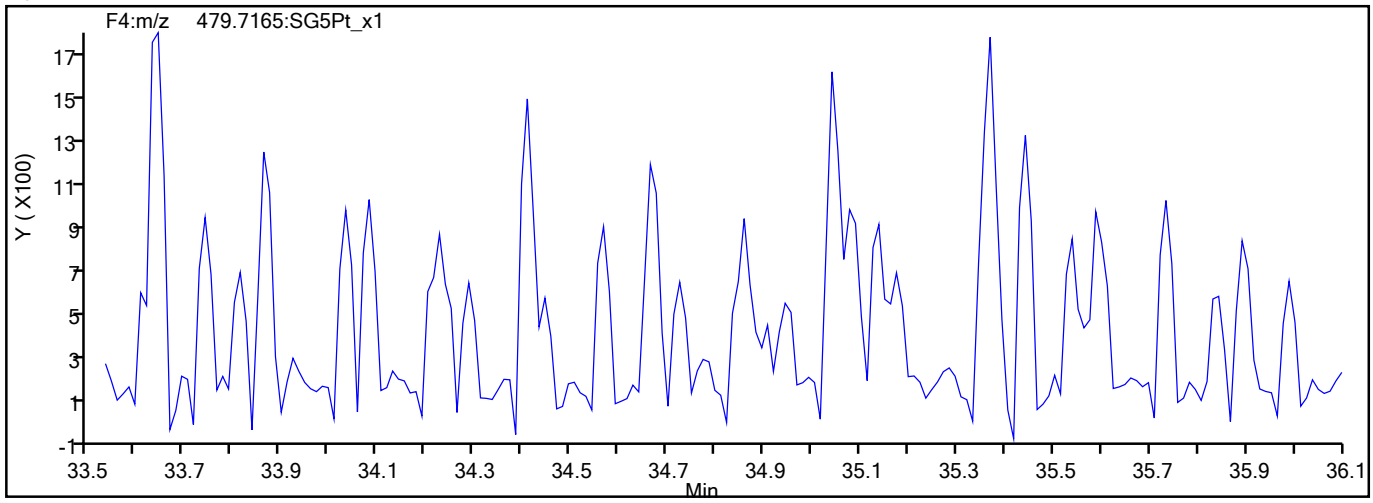

794013

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

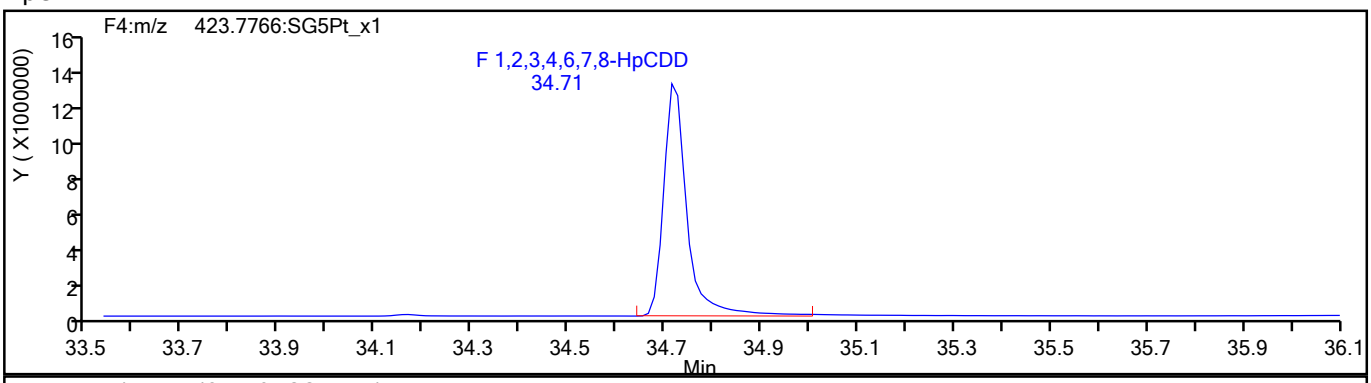

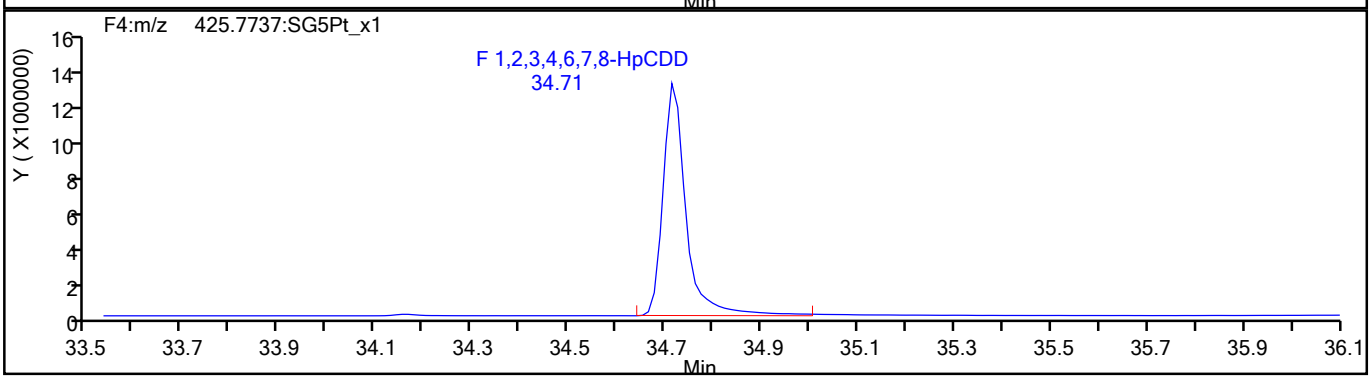

HpCDD Standards

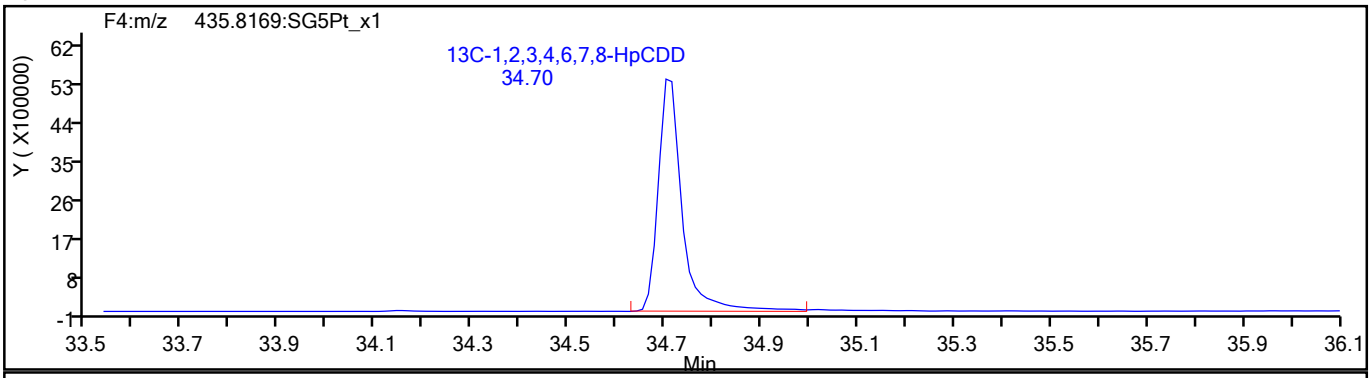

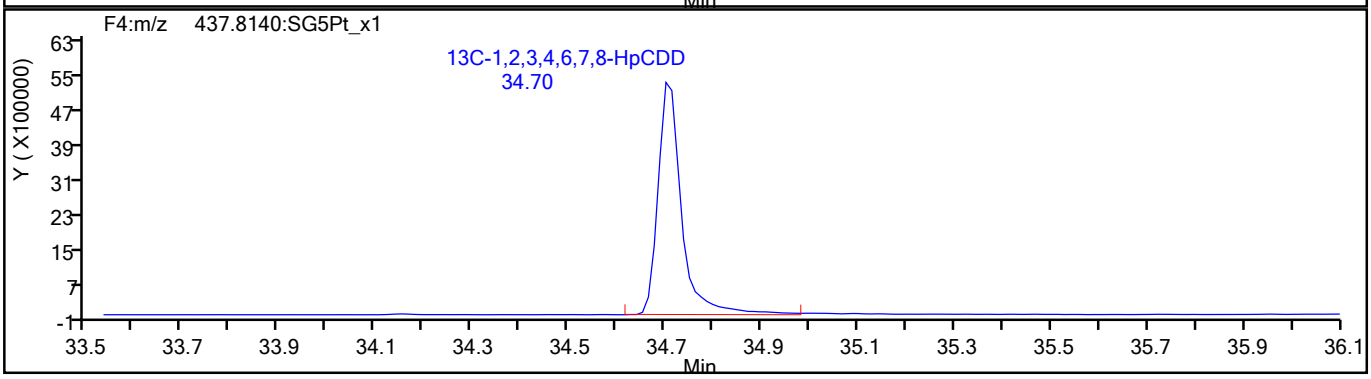

794014

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

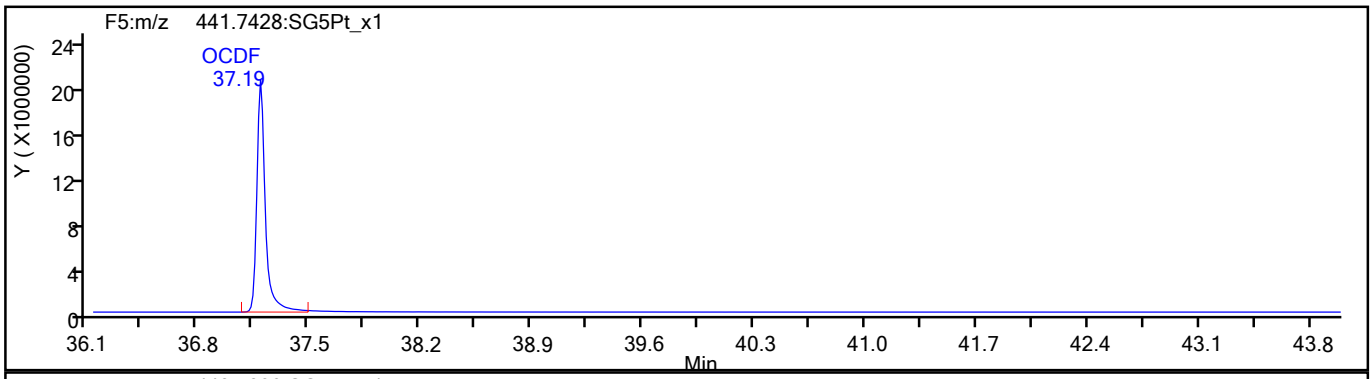

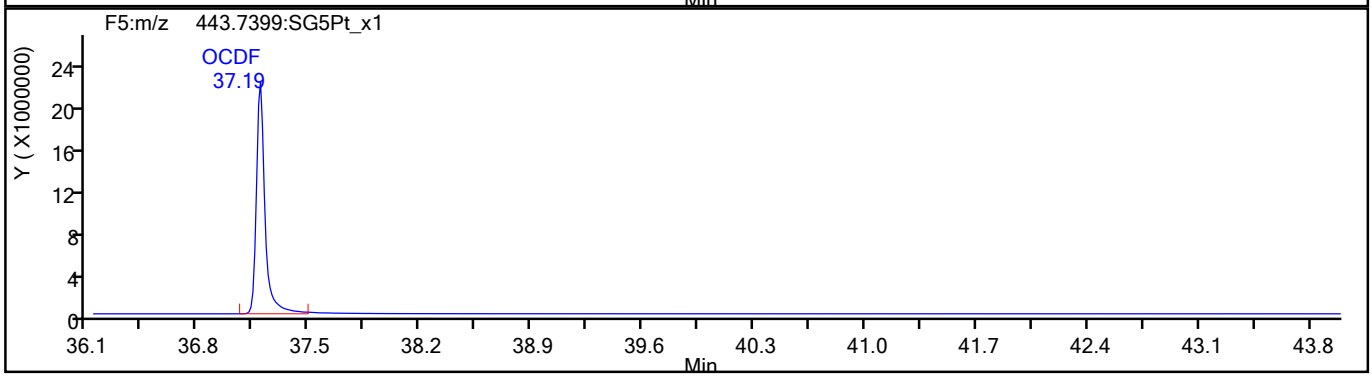

OCDF Standards

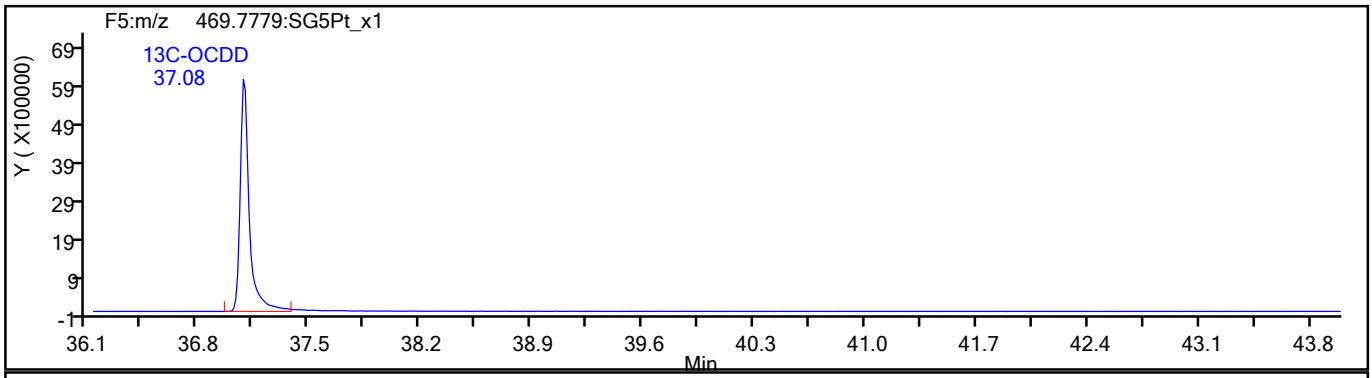

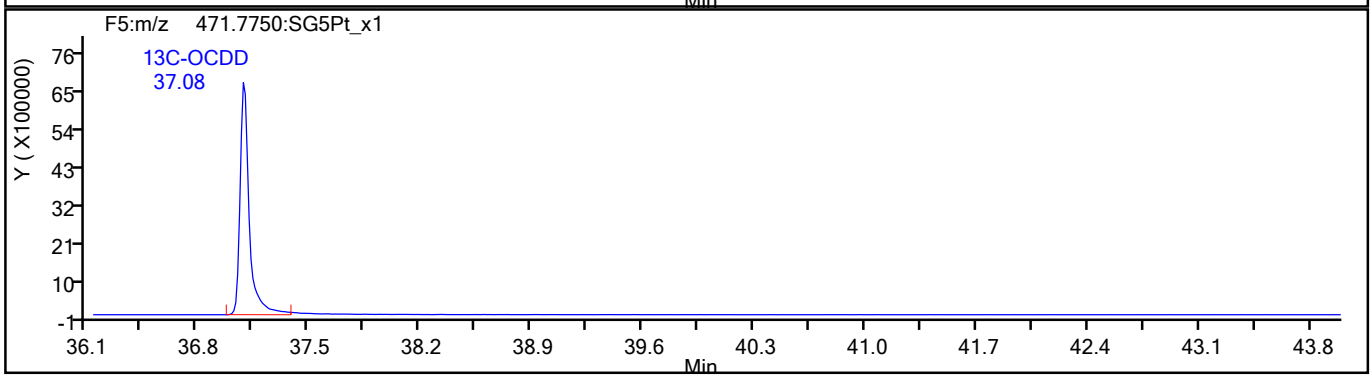

794015

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

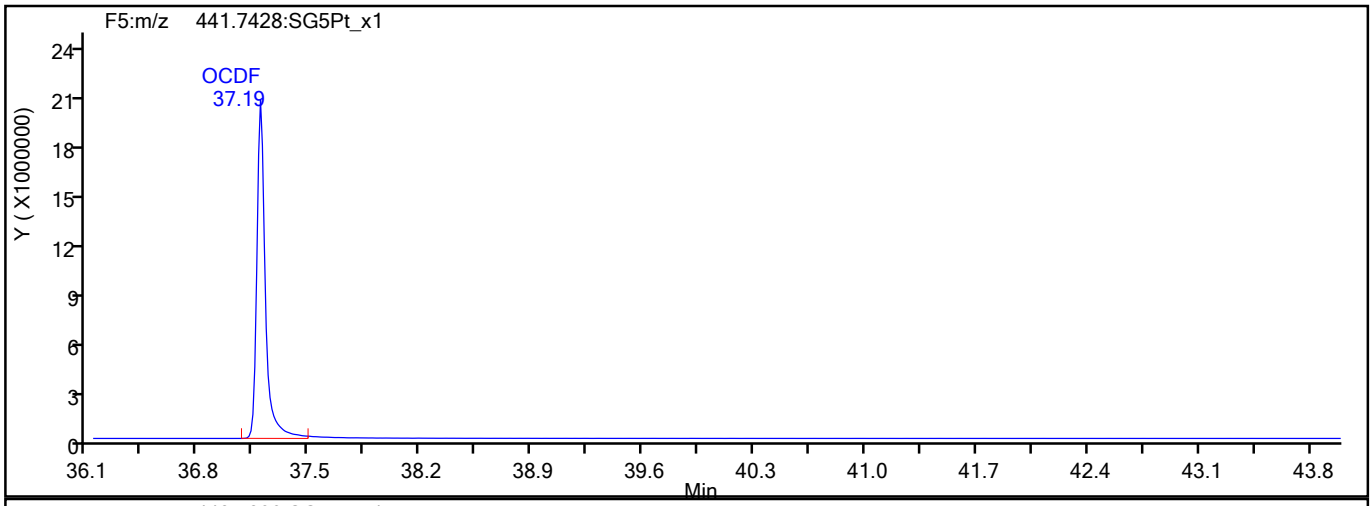

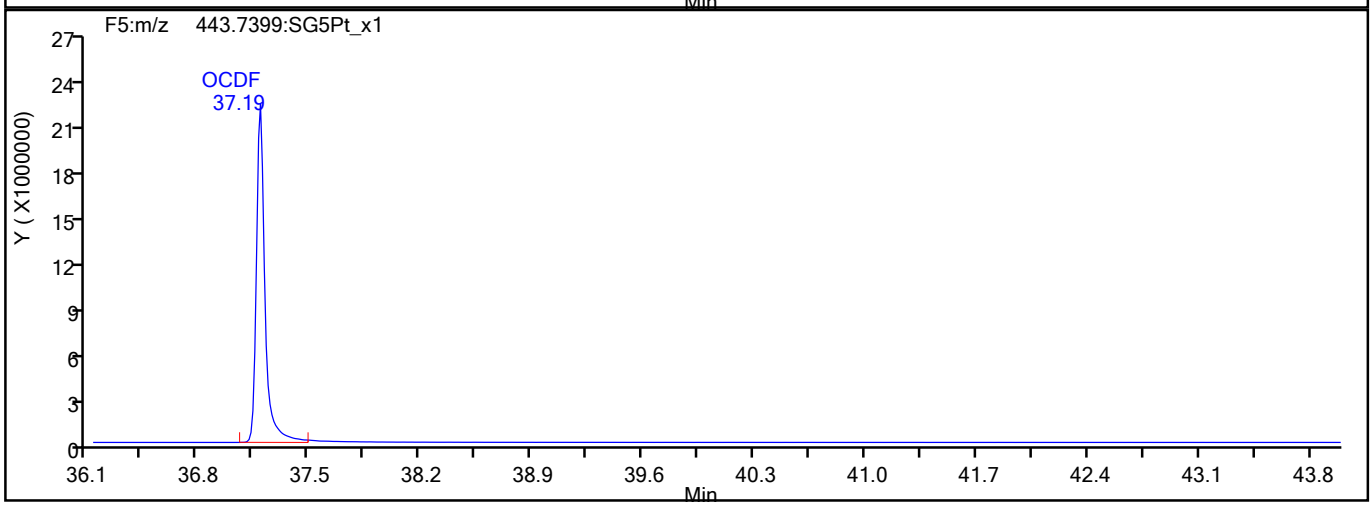

OCDF Interference Mass

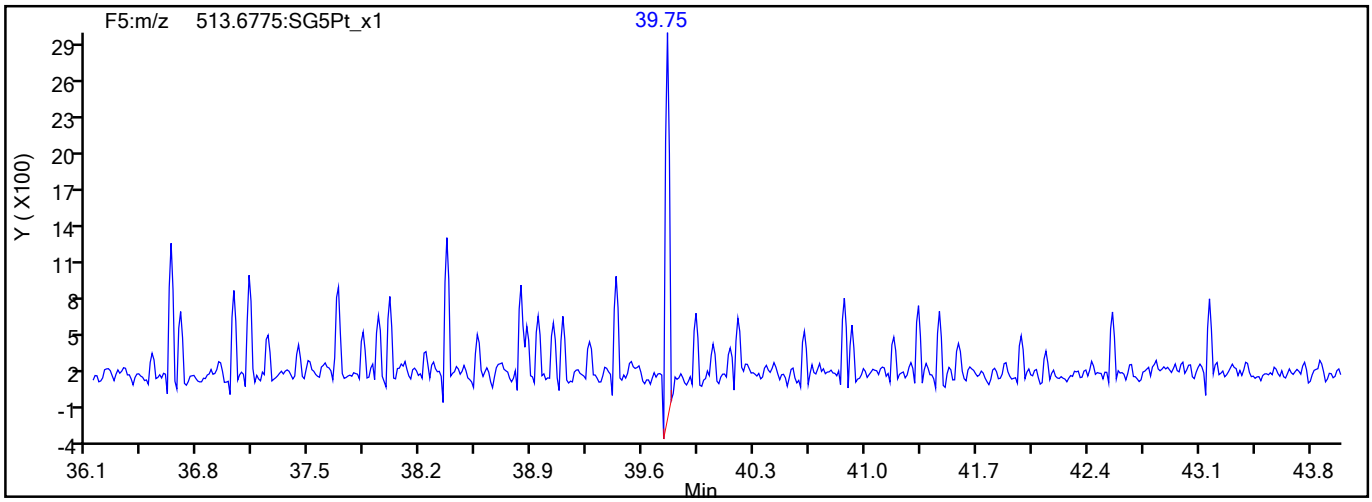

794016

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

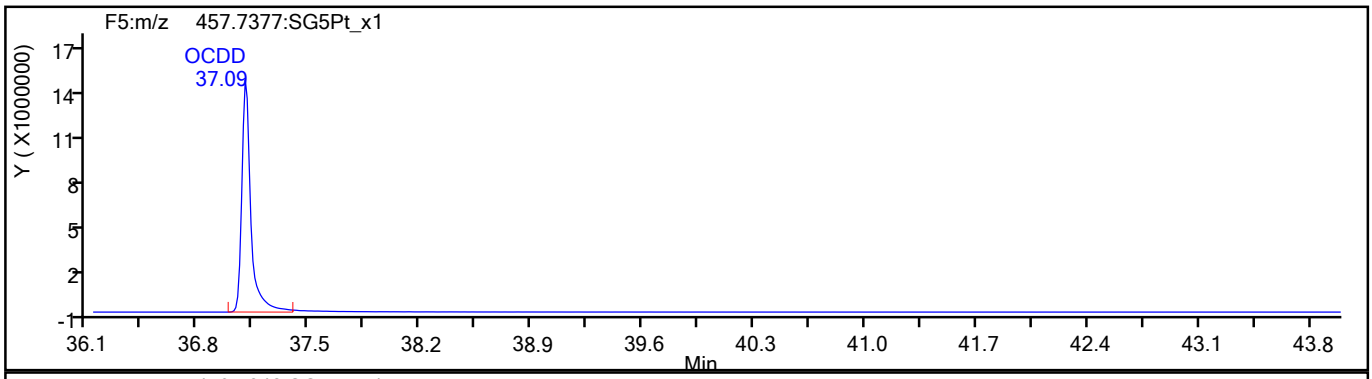

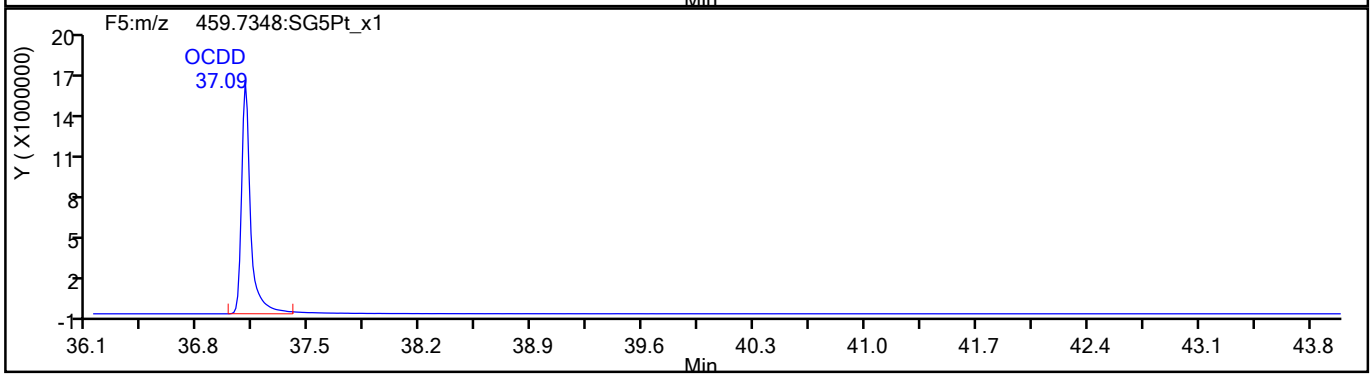

OCDD Standards

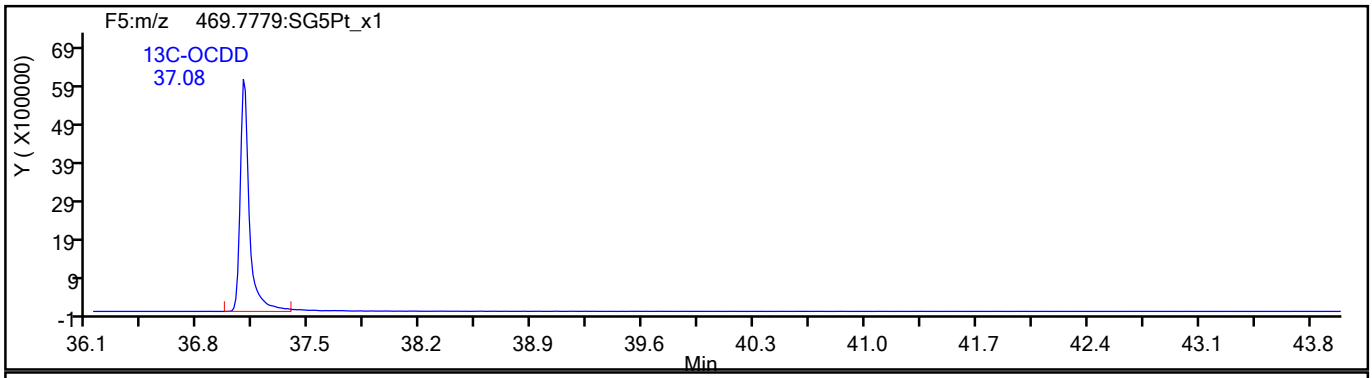

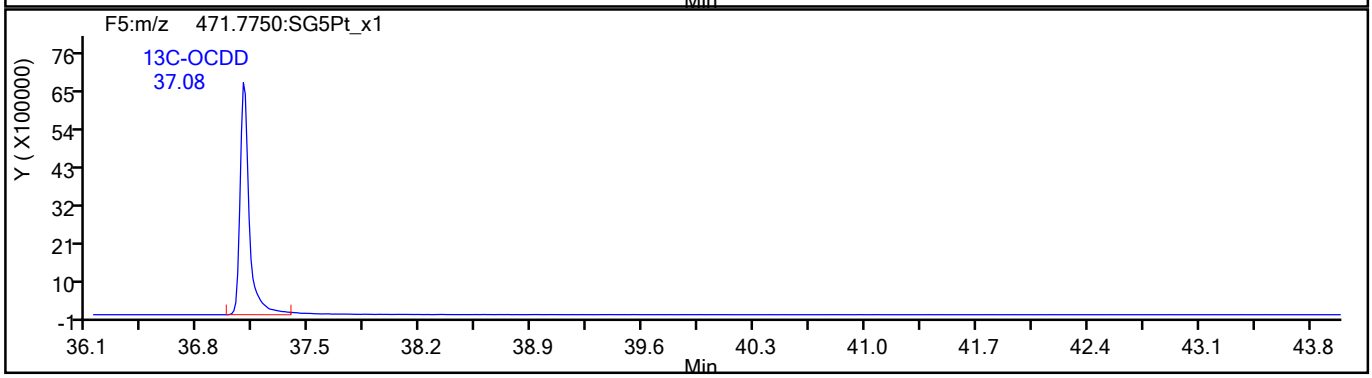

794017

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

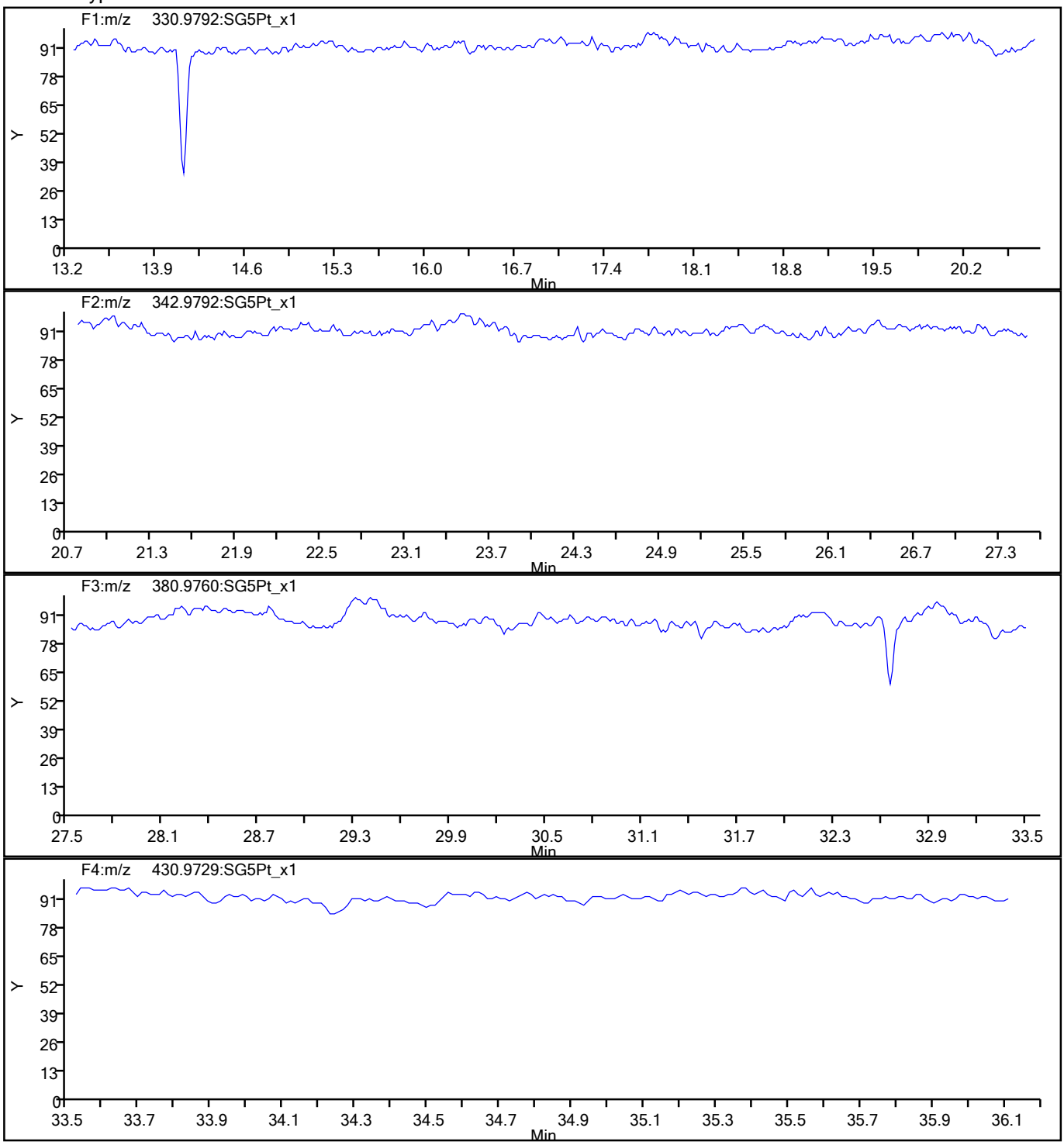

794018

Report Date: 27-Jul-2021 15:10:07 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_9.d		
Injection Date:	26-Jul-2021 15:31:57	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

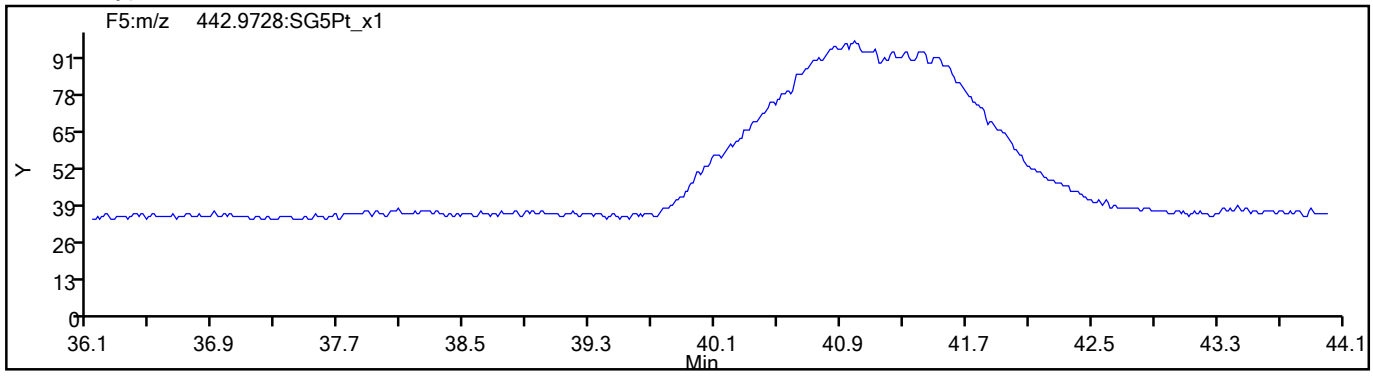

794019

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab Sample ID: CCV 320-519953/2 Calibration Date: 08/25/2021 10:23

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 25AU2110D5_2.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.033		10.1	10.0	101	84-120
2,3,7,8-TCDD	AveID	1.254	1.264		10.1	10.0	101	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.071		50.5	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.030		50.6	50.0	101	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.040		49.6	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.065		49.1	50.0	98	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.133		50.3	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.164		49.9	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.081		50.8	50.0	102	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.035		51.7	50.0	103	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.162		51.3	50.0	103	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.174		50.3	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.492		51.8	50.0	104	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.112		50.8	50.0	102	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.336		50.7	50.0	101	86-116
OCDD	AveID	1.107	1.127		102	100	102	79-126
OCDF	AveID	1.438	1.437		99.9	100	100	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.567		96.5	100	96	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9108		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.224		101	100	101	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.259		102	100	102	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8158		107	100	107	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.143		105	100	105	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.110		98.4	100	98	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.054		99.1	100	99	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7889		108	100	108	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8458		96.1	100	96	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9641		99.6	100	100	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7122		92.1	100	92	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6224		96.2	100	96	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6382		91.1	100	91	77-129
13C-OCDD	Ave	0.4472	0.4538		203	200	101	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.183		10.7	10.0	107	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\25AU2110D5.SPL
Last Modified: Thursday, August 26, 2021 09:49:48 Pacific Daylight Time
Printed: Thursday, August 26, 2021 09:49:53 Pacific Daylight Time

Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	25AU2110D5_1	WDM HRDXNCP_00044	WDM 082521B	Tray01:1	Dioxin		SMA
2	25AU2110D5_2	CS-4 HRDXNL4_00099	CCV 082521	Tray01:2	Dioxin		SMA
3	25AU2110D5_3	MB 320-515492/1-A	MB 320-515492/1-A	Tray01:4	1613B/Solid	D270	SMA
4	25AU2110D5_4	LCS 320-515492/2-A	LCS 320-515492/2-A	Tray01:5	1613B/Solid	---	SMA
5	25AU2110D5_5	320-77214-A-1-A	320-77214-A-1-A	Tray01:6	1613B/Solid	---	SMA
6	25AU2110D5_6	320-77214-A-2-A	320-77214-A-2-A	Tray01:7	1613B/Solid		SMA
7	25AU2110D5_7	320-77214-A-2-B MS	320-77214-A-2-B MS	Tray01:8	1613B/Solid		SMA
8	25AU2110D5_8	320-77214-A-2-C MSD	320-77214-A-2-C MSD	Tray01:9	1613B/Solid	---	SMA
9	25AU2110D5_9	320-77214-A-3-A	320-77214-A-3-A	Tray01:10	1613B/Solid	---	SMA
10	25AU2110D5_10	320-77214-A-4-A	320-77214-A-4-A	Tray01:11	1613B/Solid		SMA
11	25AU2110D5_11	320-77214-A-5-A	320-77214-A-5-A	Tray01:15	1613B/Solid		SMA
12	25AU2110D5_12	320-77214-A-6-A	320-77214-A-6-A	Tray01:16	1613B/Solid		SMA
13	25AU2110D5_13	320-77214-A-7-A	320-77214-A-7-A	Tray01:17	1613B/Solid	---	SMA
14	25AU2110D5_14	SB Solvent Blank C-14	SB 082521	Tray01:3			SMA
15	25AU2110D5_15	CS-4 HRDXNL4_00099	CCV 082521A	Tray01:2	Dioxin		SMA
16	25AU2110D5_16	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
17	25AU2110D5_17	SB Solvent Blank C-14	SB 082521A	Tray01:3			SMA
18	25AU2110D5_18	320-77214-A-8-A	320-77214-A-8-A	Tray01:29	1613B/Solid	D270	SMA
19	25AU2110D5_19	320-77214-A-9-A	320-77214-A-9-A	Tray01:30	1613B/Solid		SMA
20	25AU2110D5_20	320-77214-A-13-A	320-77214-A-13-A	Tray01:31	1613B/Solid		SMA
21	25AU2110D5_21	320-77292-A-1-A	320-77292-A-1-A	Tray01:32	1613B/Solid		SMA
22	25AU2110D5_22	320-77292-A-2-A	320-77292-A-2-A	Tray01:33	1613B/Solid		SMA
23	25AU2110D5_23	320-77292-A-2-B MS	320-77292-A-2-B MS	Tray01:34	1613B/Solid		SMA
24	25AU2110D5_24	320-77292-A-2-C MSD	320-77292-A-2-C MSD	Tray01:35	1613B/Solid		SMA
25	25AU2110D5_25	320-77292-A-3-A	320-77292-A-3-A	Tray01:36	1613B/Solid		SMA
26	25AU2110D5_26	320-77292-A-4-A	320-77292-A-4-A	Tray01:37	1613B/Solid		SMA
27	25AU2110D5_27	320-77292-A-5-A	320-77292-A-5-A	Tray01:38	1613B/Solid		SMA
28	25AU2110D5_28	SB Solvent Blank C-14	SB 082521B	Tray01:3			SMA
29	25AU2110D5_29	CS-4 HRDXNL4_00099	CCV 082521B	Tray01:2	Dioxin		SMA
30	25AU2110D5_30	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
31	25AU2110D5_31	SB Solvent Blank C-14	SB 082521C	Tray01:3			SMA
32	25AU2110D5_32	320-77292-A-6-A	320-77292-A-6-A	Tray01:43	1613B/Solid	D270	SMA
33	25AU2110D5_33	320-77292-A-7-A	320-77292-A-7-A	Tray01:44	1613B/Solid		SMA
34	25AU2110D5_34	320-77292-A-8-A	320-77292-A-8-A	Tray01:45	1613B/Solid		SMA
35	25AU2110D5_35	320-77292-A-9-A	320-77292-A-9-A	Tray01:46	1613B/Solid		SMA
36	25AU2110D5_36	320-77292-A-13-A	320-77292-A-13-A	Tray01:47	1613B/Solid		SMA
37	25AU2110D5_37	400-206693-C-22-A	400-206693-C-22-A	Tray01:48	1613B/Solid		SMA
38	25AU2110D5_38	400-206693-C-36-A	400-206693-C-36-A	Tray01:49	1613B/Solid		SMA
39	25AU2110D5_39	400-206693-C-37-A	400-206693-C-37-A	Tray01:50	1613B/Solid		SMA
40	25AU2110D5_40	400-206693-C-38-A	400-206693-C-38-A	Tray01:51	1613B/Solid		SMA
41	25AU2110D5_41	400-206693-C-39-A	400-206693-C-39-A	Tray01:52	1613B/Solid		SMA
42	25AU2110D5_42	SB Solvent Blank C-14	SB 082521D	Tray01:3			SMA
43	25AU2110D5_43	CS-4 HRDXNL4_00099	CCV 082521C	Tray01:2	Dioxin		SMA
44	25AU2110D5_44	WDM HRDXNCP_00044	WDM 082521C	Tray01:1	Dioxin	---	SMA
45	25AU2110D5_45	SB Solvent Blank C-14	SB 082521E	Tray01:3			SMA

LOGFILE CHECKED
DB 8/26/21

794021

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
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Process Options	Action On Error	s5
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---	---	C:\CHROM
---	---	C:\CHROM

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Wednesday, August 25, 2021 09:34:25 Pacific Daylight Time

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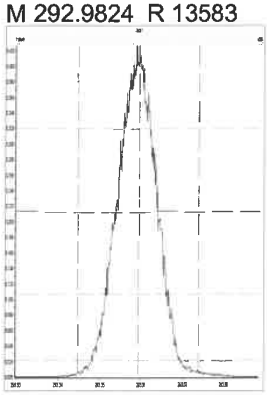

M 304.9824 R 13961

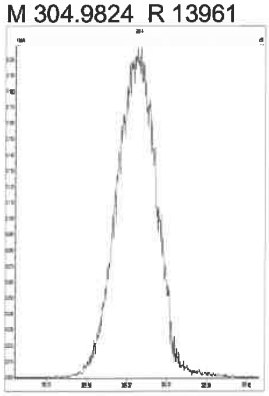

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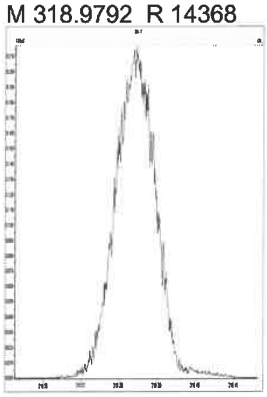

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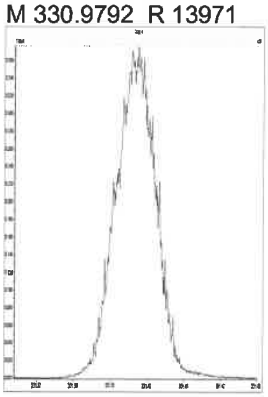

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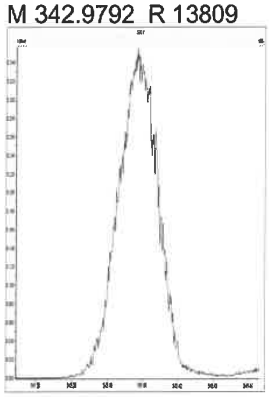

M 354.9792 R 14200

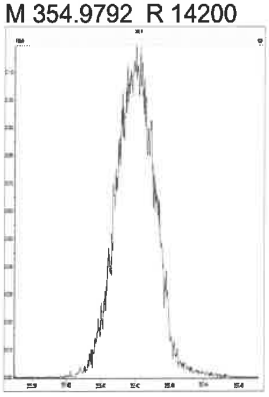

M 366.9792 R 13736

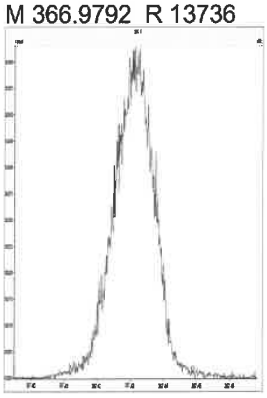

M 380.9760 R 14449

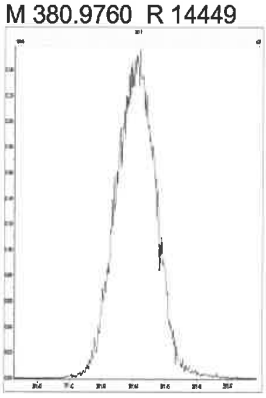

M 392.9760 R 13809

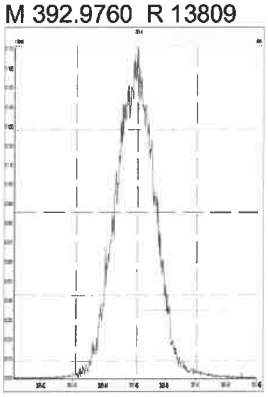

M 404.9760 R 13370

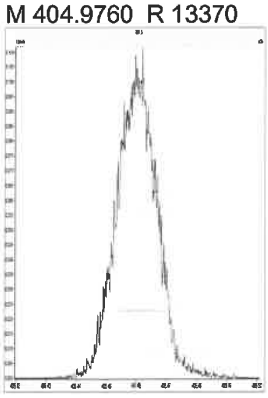

M 416.9760 R 13735

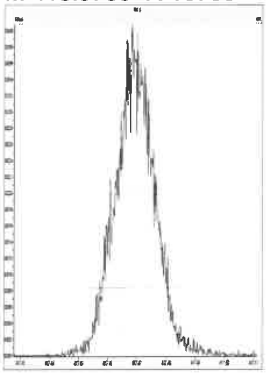

794024

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

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M 318.9792 R 14045

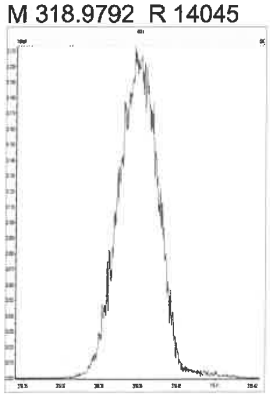

M 330.9792 R 14284

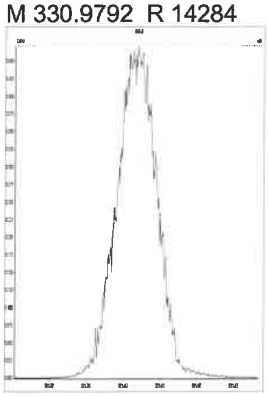

M 342.9792 R 13733

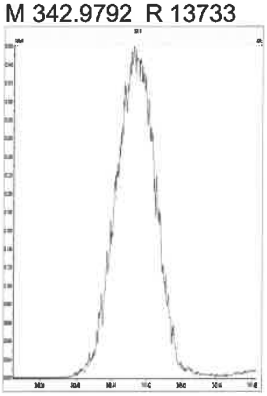

M 354.9792 R 14200

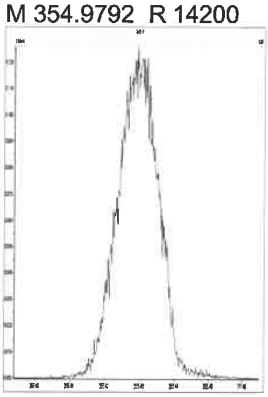

M 366.9792 R 14124

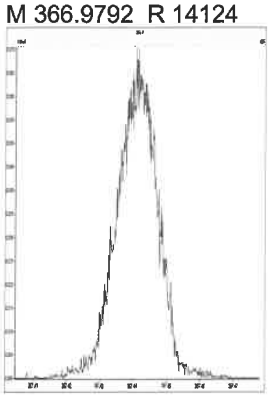

M 380.9760 R 13586

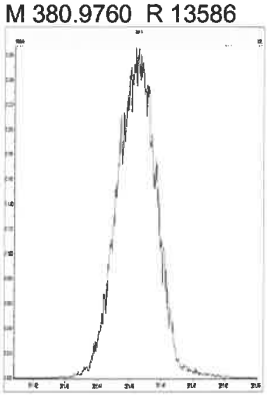

M 392.9760 R 14127

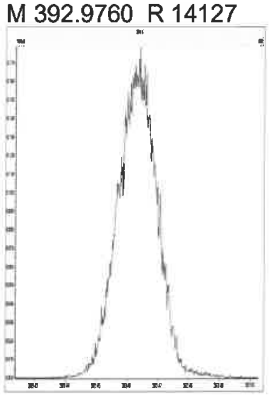

M 404.9760 R 13442

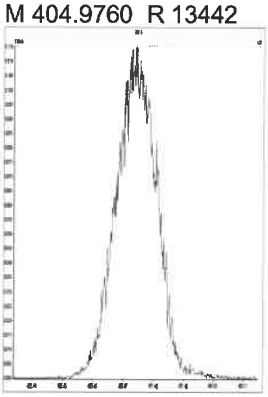

M 416.9760 R 13736

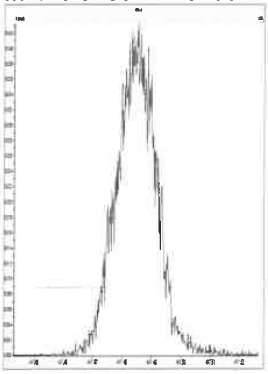

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

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M 366.9792 R 14622

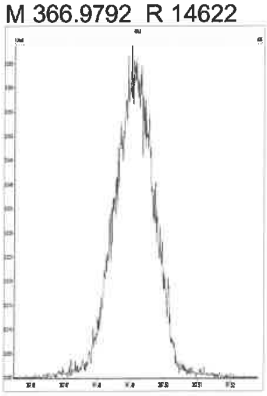

M 380.9760 R 13813

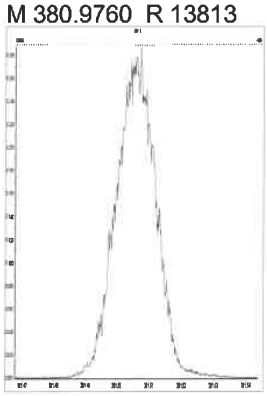

M 392.9760 R 13736

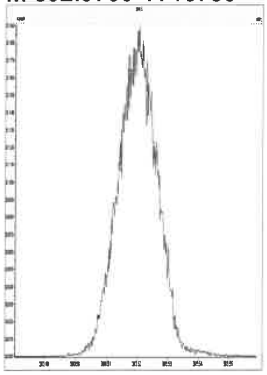

M 404.9760 R 14284

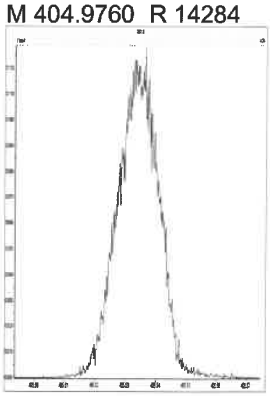

M 416.9760 R 13738

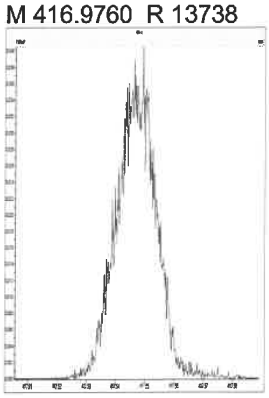

M 430.9728 R 13808

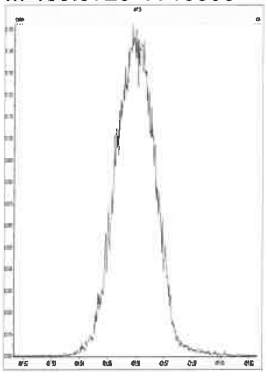

M 442.9728 R 14367

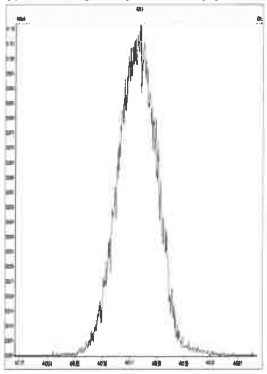

M 454.9728 R 13965

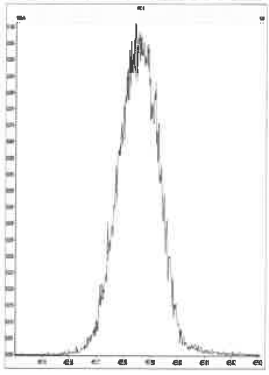

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

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M 380.9760 R 14448

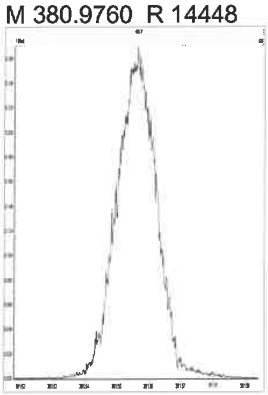

M 392.9760 R 14206

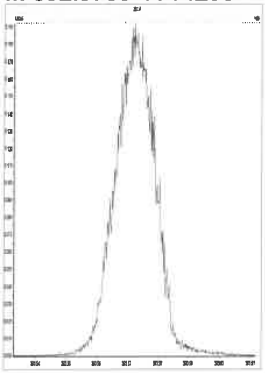

M 404.9760 R 13736

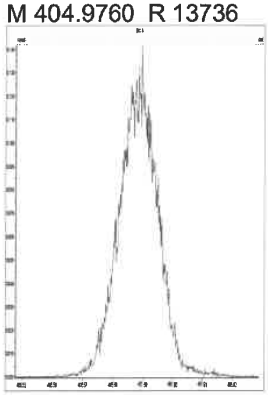

M 416.9760 R 14449

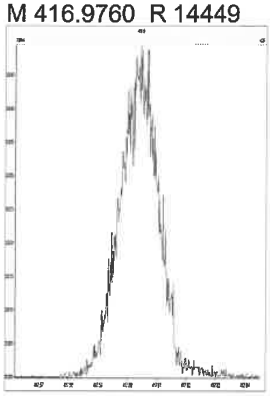

M 430.9728 R 13815

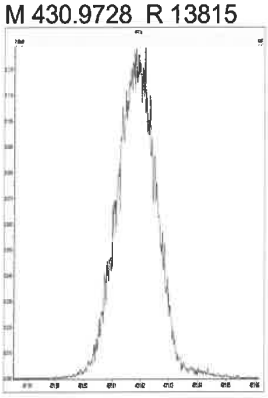

M 442.9728 R 14126

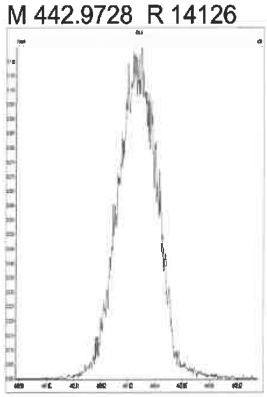

M 454.9728 R 13812

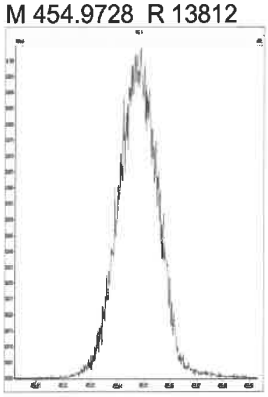

M 466.9728 R 13735

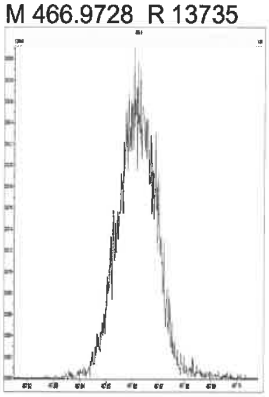

M 480.9696 R 13659

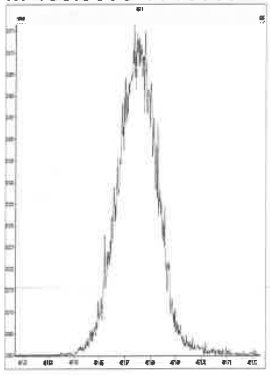

Experiment Calibration Report **MassLynx 4.1** Page 1 of 1

File: Experiment: DIOXIN10D5NEW.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

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M 380.9760 R 13815

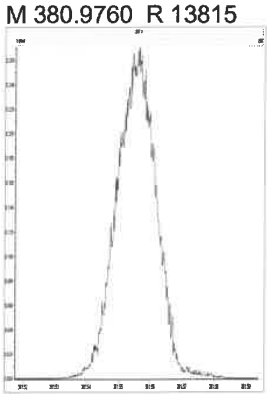

M 392.9760 R 13962

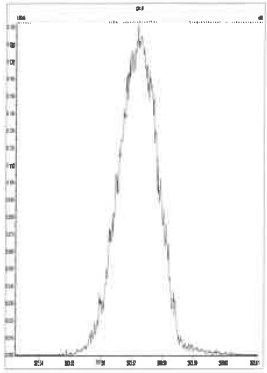

M 404.9760 R 13889

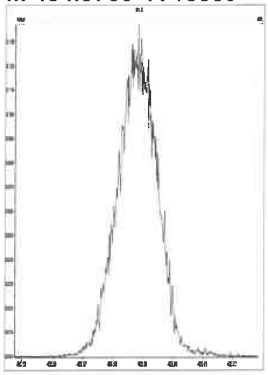

M 416.9760 R 14123

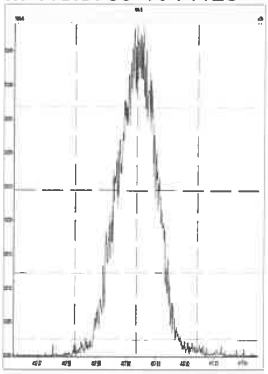

M 430.9728 R 14371

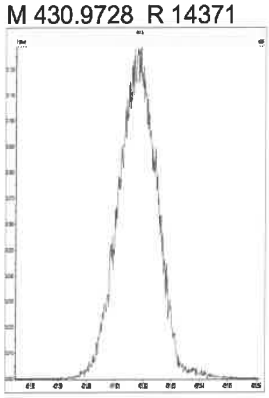

M 442.9728 R 14282

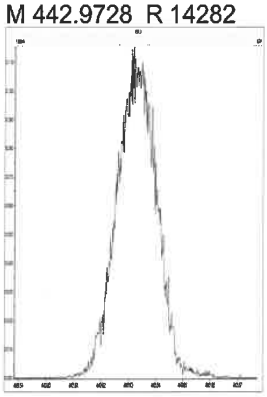

M 454.9728 R 13736

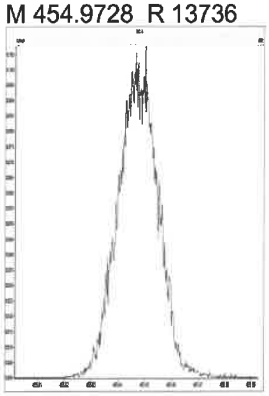

M 466.9728 R 14880

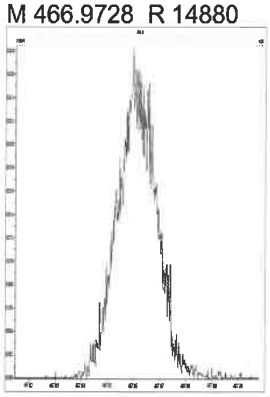

M 480.9696 R 14449

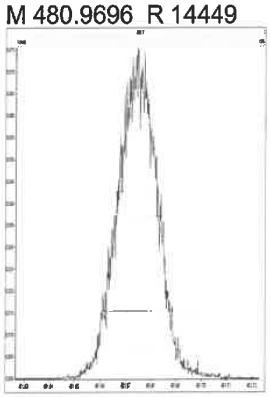

M 492.9696 R 13964

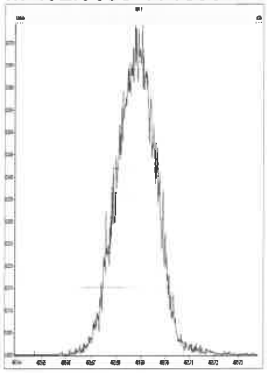

M 504.9696 R 13889

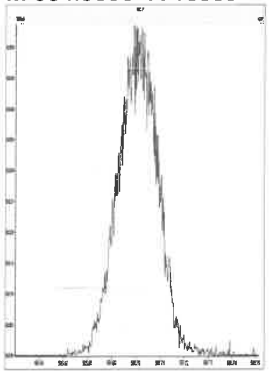

M 516.9697 R 13961

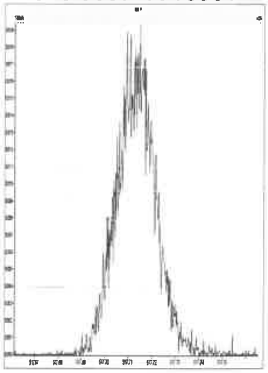

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M 292.9824 R 11469

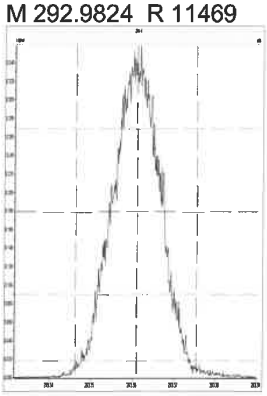

M 304.9824 R 11968

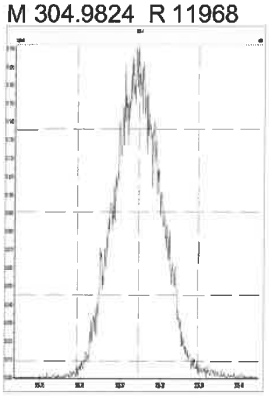

M 318.9792 R 12138

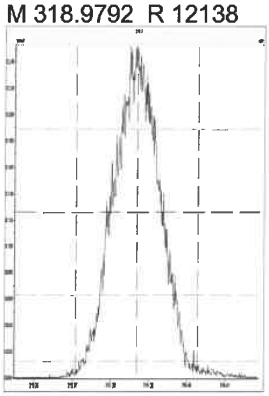

M 330.9792 R 11737

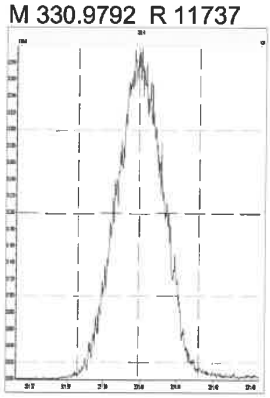

M 342.9792 R 11337

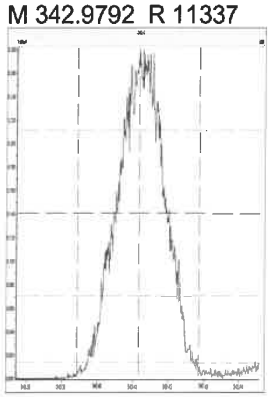

M 354.9792 R 12005

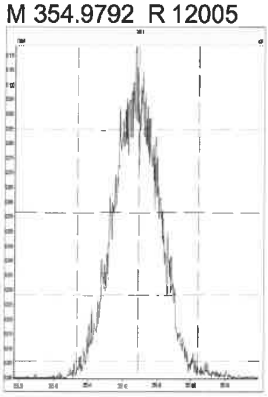

M 366.9792 R 12154

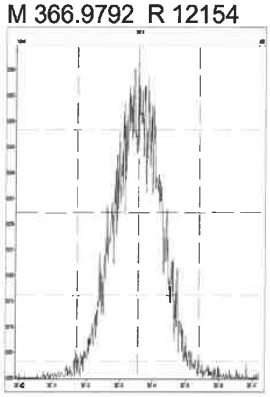

M 380.9760 R 11236

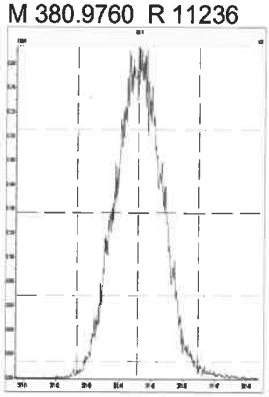

M 392.9760 R 11765

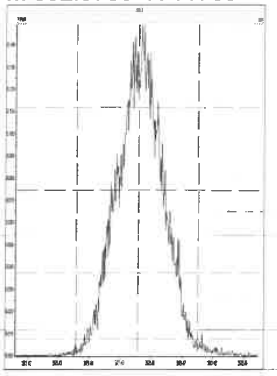

M 404.9760 R 12452

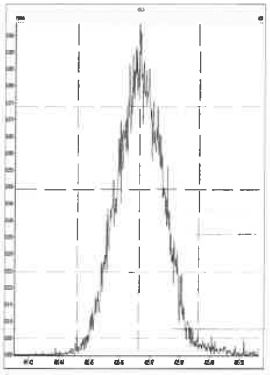

M 416.9760 R 12315

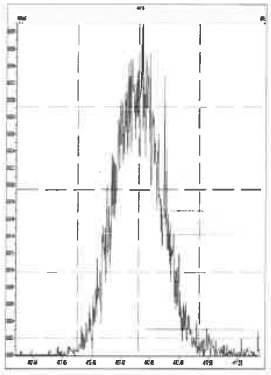

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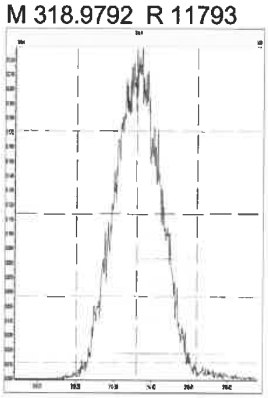

M 330.9792 R 11683

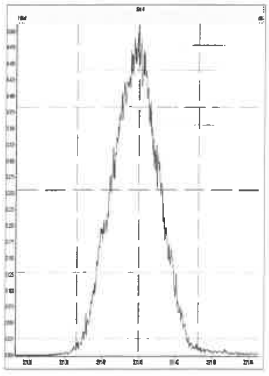

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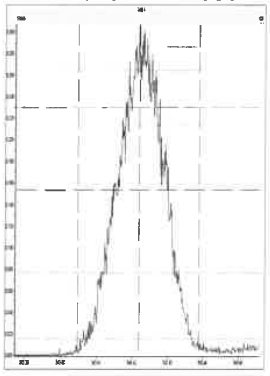

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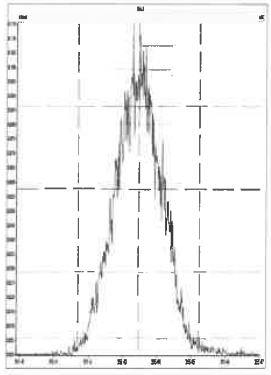

M 366.9792 R 12953

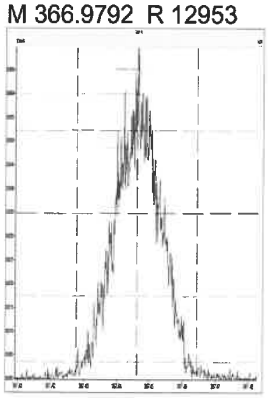

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M 380.9760 R 11709

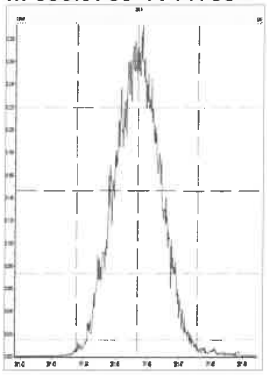

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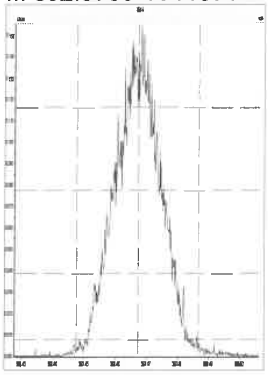

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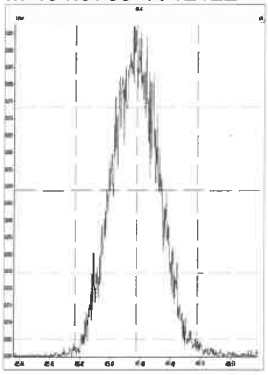

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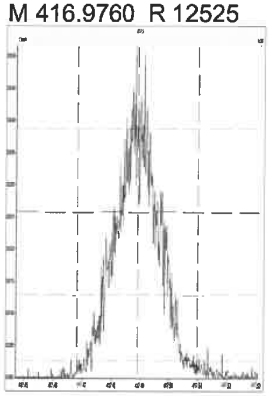

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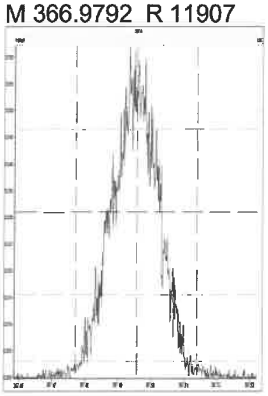

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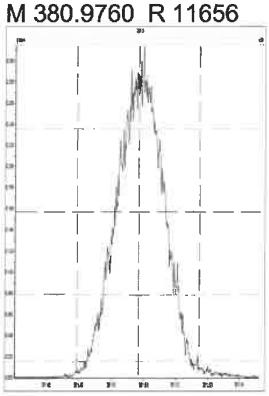

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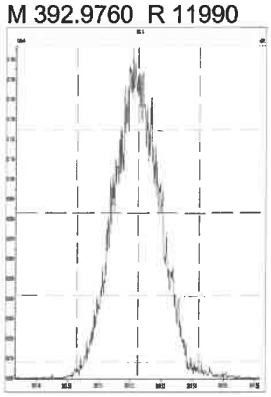

M 404.9760 R 11933

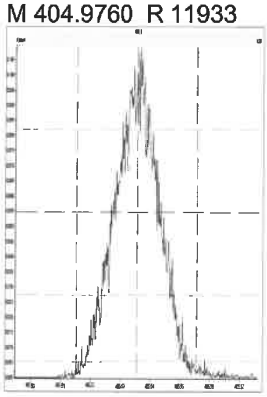

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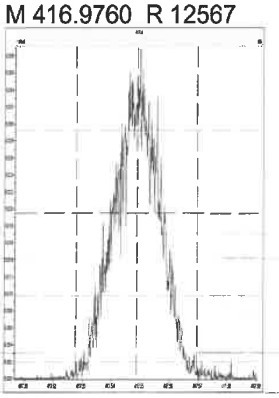

M 430.9728 R 11765

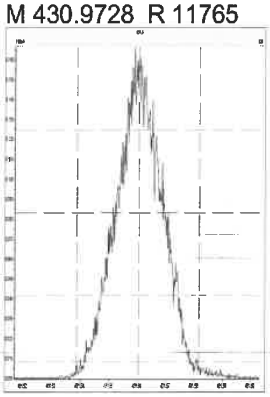

M 442.9728 R 12165

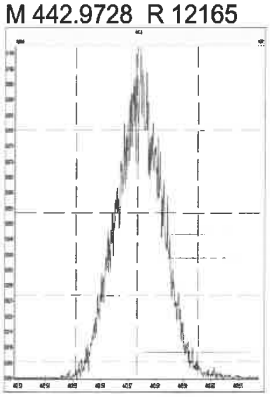

M 454.9728 R 11971

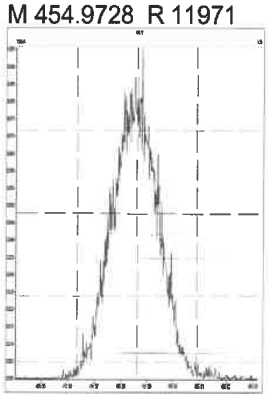

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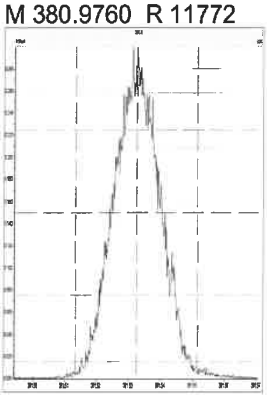

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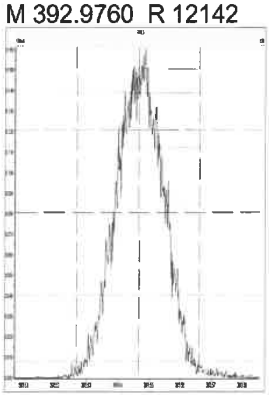

M 404.9760 R 12165

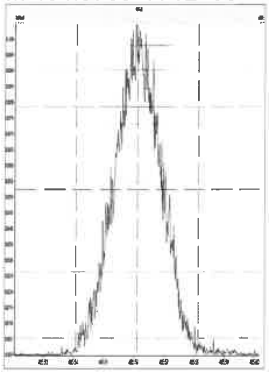

M 416.9760 R 12470

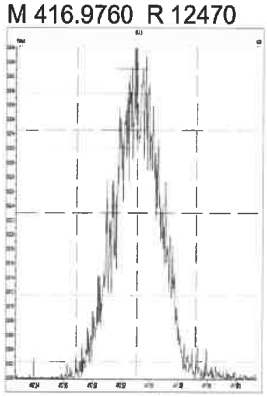

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M 430.9728 R 11682

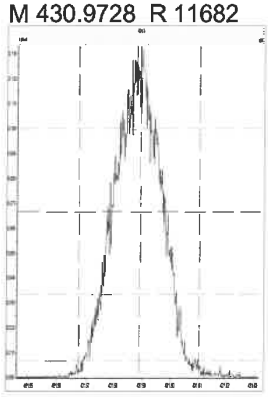

M 442.9728 R 12317

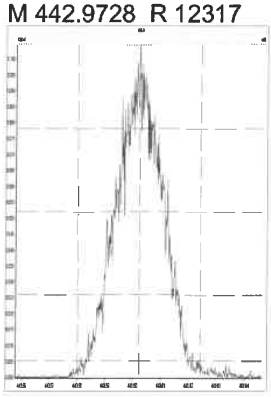

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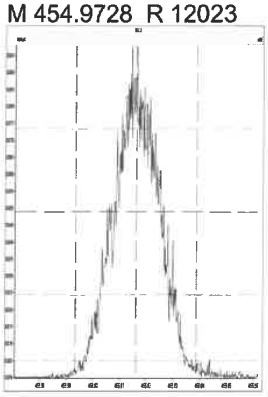

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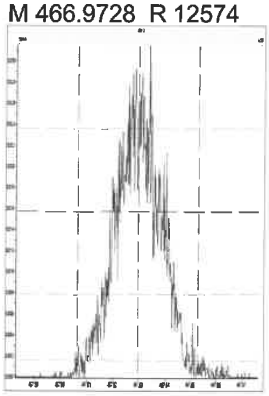

M 480.9696 R 11993

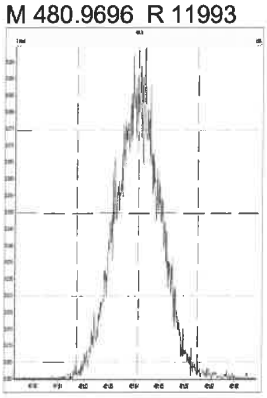

M 380.9760 R 11966

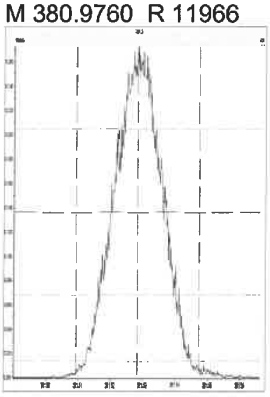

M 392.9760 R 11990

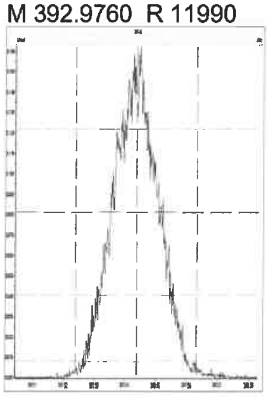

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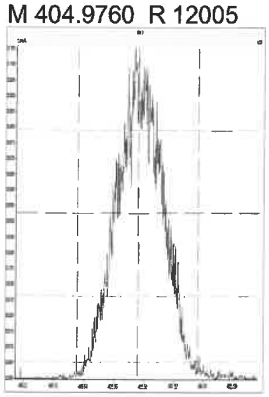

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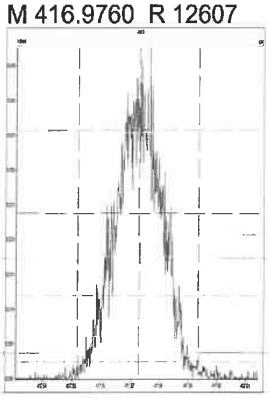

M 430.9728 R 11852

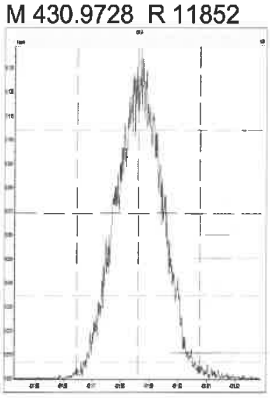

M 442.9728 R 12468

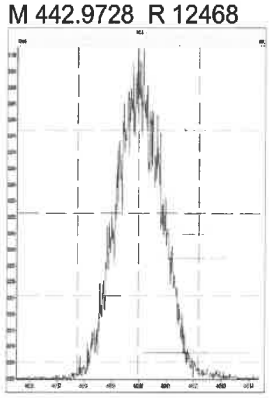

M 454.9728 R 11711

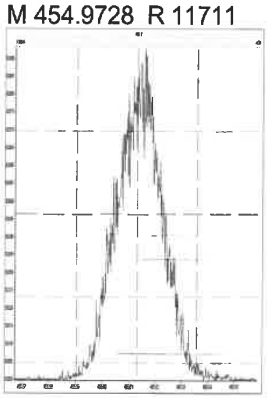

M 466.9728 R 12782

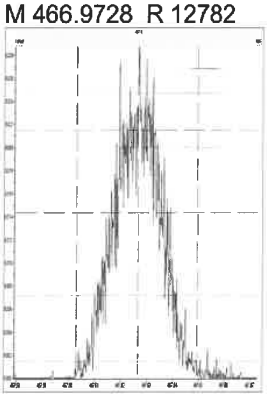

M 480.9696 R 12019

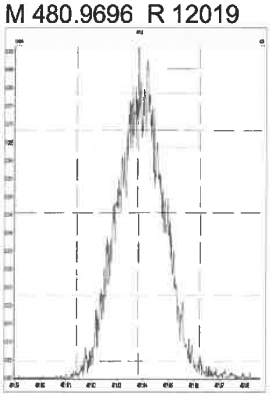

M 492.9696 R 12345

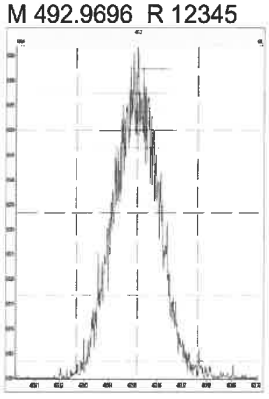

M 504.9696 R 11934

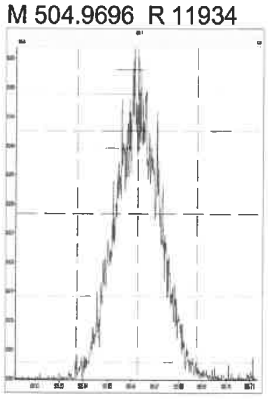

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M 516.9697 R 12181

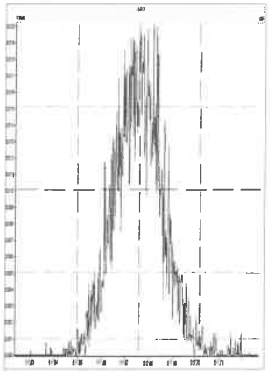

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 10:23:18 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521 CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:07:33 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 09:53:05

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	95426706	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	149558042	0.77	1.6249	96.5	96.5	0.1278	0.1278	96.45	
2,3,7,8-TCDF	17.114	15442033	0.76	1.0239	10.1	10.1	0.0119	0.0119	101	
A Non-2,3,7,8-sub-TCDF	17.076						0.0119	0.0119		n
S Total TCDF					10.1	10.1	0.0119	0.0119		
D 13C-2,3,7,8-TCDD	17.794	86917847	0.80	0.8993	101.3	101.3	0.1056	0.1056	101	
2,3,7,8-TCDD	17.809	10985356	0.77	1.2541	10.1	10.1	0.0146	0.0146	101	
$ 37Cl4-2,3,7,8-TCDD	17.809	11292579		1.1071	10.7	10.7	0.0131	0.0131	107	
A Non-2,3,7,8-sub-TCDD	17.537						0.0146	0.0146		
S Total TCDD					10.1	10.1	0.0146	0.0146		
D 13C-1,2,3,7,8-PeCDF	22.020	116756186	1.57	1.2101	101.1	101.1	0.1265	0.1265	101	
1,2,3,7,8-PeCDF	22.047	62539011	1.59	1.0611	50.5	50.5	0.0855	0.0855	101	
D 13C-2,3,4,7,8-PeCDF	23.343	120116302	1.55	1.2395	101.6	101.6	0.1235	0.1235	102	
2,3,4,7,8-PeCDF	23.370	61838250	1.60	1.0184	50.6	50.6	0.0923	0.0923	101	
A F1 PeCDFs	19.851						0.009352	0.009352		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0888	0.0888		n
S Total PeCDF					101.0	101.0	0.0889	0.0889		
D 13C-1,2,3,7,8-PeCDD	24.052	77848987	1.59	0.7612	107.2	107.2	0.0785	0.0785	107	
1,2,3,7,8-PeCDD	24.079	40474436	1.58	1.0484	49.6	49.6	0.0357	0.0357	99.18	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0357	0.0357		
S Total PeCDD					49.6	49.6	0.0357	0.0357		
D 13C-1,2,3,4,7,8-HxCDF	30.186	99336191	0.53	1.0837	105.5	105.5	0.1987	0.1987	105	
1,2,3,4,7,8-HxCDF	30.213	52900636	1.23	1.0851	49.1	49.1	0.1545	0.1545	98.15	
D 13C-1,2,3,6,7,8-HxCDF	30.399	96483405	0.51	1.1279	98.4	98.4	0.1909	0.1909	98.42	
1,2,3,6,7,8-HxCDF	30.412	54659951	1.21	1.1260	50.3	50.3	0.1450	0.1450	101	
D 13C-2,3,4,6,7,8-HxCDF	31.291	91593699	0.52	1.0637	99.1	99.1	0.2024	0.2024	99.07	
2,3,4,6,7,8-HxCDF	31.317	53318614	1.22	1.1675	49.9	49.9	0.1090	0.1090	99.72	
D 13C-1,2,3,7,8,9-HxCDF	32.143	83790666	0.51	0.9676	99.6	99.6	0.2225	0.2225	99.64	
1,2,3,7,8,9-HxCDF	32.156	49172613	1.22	1.1664	50.3	50.3	0.1004	0.1004	101	
A Non-2,3,7,8-sub-HxCDF	30.338						0.1236	0.1236		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					199.6	199.6	0.1272	0.1272		
* 13C-1,2,3,7,8,9-HxCDD	31.956	86914319	1.20	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.504	68569558	1.23	0.7334	107.6	107.6	0.1931	0.1931	108	
1,2,3,4,7,8-HxCDD	31.517	37045049	1.27	1.0640	50.8	50.8	0.1077	0.1077	102	
D 13C-1,2,3,6,7,8-HxCDD	31.610	73508450	1.21	0.8802	96.1	96.1	0.1609	0.1609	96.09	
1,2,3,6,7,8-HxCDD	31.624	38037775	1.27	1.0001	51.7	51.7	0.1038	0.1038	103	
1,2,3,7,8,9-HxCDD	31.969	41264327	1.28	1.1325	51.3	51.3	0.0962	0.0962	103	
A Non-2,3,7,8-sub-HxCDD	30.525						0.1023	0.1023		
S Total HxCDD					153.8	153.8	0.1026	0.1026		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	61903063	0.45	0.7730	92.1	92.1	0.7607	0.7607	92.14	
1,2,3,4,6,7,8-HpCDF	33.615	46189366	1.04	1.4413	51.8	51.8	0.3832	0.3832	104	
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	55466008	0.44	0.7008	91.1	91.1	0.8391	0.8391	91.06	
1,2,3,4,7,8,9-HpCDF	34.685	37045047	1.05	1.3174	50.7	50.7	0.5046	0.5046	101	
A Non-2,3,7,8-sub-HpCDF	34.150						0.4374	0.4374		
S Total HpCDF					102.5	102.5	0.4439	0.4439		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	54097651	1.03	0.6472	96.2	96.2	0.3643	0.3643	96.17	
1,2,3,4,6,7,8-HpCDD	34.405	30069728	1.04	1.0943	50.8	50.8	0.1121	0.1121	102	
A Non-2,3,7,8-sub-HpCDD	34.223						0.1121	0.1121		
S Total HpCDD					50.8	50.8	0.1121	0.1121		
D 13C-OCDD	36.701	78890798	0.88	0.4472	203.0	203.0	0.1367	0.1367	101	
OCDF	36.797	56664152	0.90	1.4382	99.9	99.9	0.0518	0.0518	99.89	
OCDD	36.713	44448060	0.90	1.1070	101.8	101.8	0.0691	0.0691	102	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 10:23:18 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521 CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:07:33 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 09:53:05

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		42636469	10783942	4601	11502	2344		
333.9339	17.598	17.598	0		52790237	13523329	4632	11580	2920	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	0.972	64979120	17289325	11211	28027	1542		
317.9389	17.099	17.099	0	0.972	84578922	22501260	8979	22447	2506	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	6673154	1784472	819	2047	2179		
305.8987	17.114	17.114	0	1.001	8768879	2378418	1117	2792	2129	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.751	17.076	-19	0.980	28277	7073	819	2047	9		
305.8987	16.736	17.076	-20	0.979	33568	9535	1117	2792	9	0.84(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.011	38757049	9780640	4601	11502	2126		
333.9339	17.794	17.794	0	1.011	48160798	12185649	4632	11580	2631	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	4796214	1216842	916	2290	1328		
321.8936	17.809	17.809	0	1.001	6189142	1616489	696	1740	2323	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	11292579	2874252	1415	3537	2031		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.537						916	2290			
321.8936	17.537						696	1740			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	71302934	13323114	9020	22550	1477		
353.8970	22.020	22.020	0	1.251	45453252	8492167	5867	14667	1447	1.57(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.047	22.047	0	1.001	38375584	7269250	4572	11430	1590		
341.8567	22.047	22.047	0	1.001	24163427	4582774	3346	8365	1370	1.59(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.326	73058694	12781407	9020	22550	1417		
353.8970	23.343	23.343	0	1.326	47057608	8285675	5867	14667	1412	1.55(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370	23.370	0	1.001	38046727	6684330	4572	11430	1462		
341.8567	23.370	23.370	0	1.001	23791523	4200844	3346	8365	1255	1.60(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						225	562			
341.8567	19.851						609	1522			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.566	23.067	-30	1.025	288822	45293	4572	11430	10		
341.8567	22.566	23.067	-30	1.025	210196	29709	3346	8365	9	1.37(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.367	47825839	7773639	3395	8487	2290		
369.8919	24.052	24.052	0	1.367	30023148	4919671	2412	6030	2040	1.59(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079	24.079	0	1.001	24767137	4107038	1194	2985	3440		
357.8516	24.079	24.079	0	1.001	15707299	2563400	707	1767	3626	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1194	2985			
357.8516	23.696						707	1767			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.186	30.186	0	0.945	34233266	6021161	7305	18262	824		
385.8610	30.186	30.186	0	0.945	65102925	11323547	13504	33760	839	0.53(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.213	30.213	0	1.001	29168092	5093723	6383	15957	798		
375.8178	30.213	30.213	0	1.001	23732544	4088073	5250	13125	779	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	32782818	6104406	7305	18262	836		
385.8610	30.399	30.399	0	0.951	63700587	11709167	13504	33760	867	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.000	29925349	5641728	6383	15957	884		
375.8178	30.412	30.412	0	1.000	24734602	4662932	5250	13125	888	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.979	31290006	7903080	7305	18262	1082		
385.8610	31.291	31.291	0	0.979	60303693	14959211	13504	33760	1108	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317	31.317	0	1.001	29303955	7574478	6383	15957	1187		
375.8178	31.317	31.317	0	1.001	24014659	6161019	5250	13125	1174	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.143	0	1.006	28350597	8369834	7305	18262	1146		
385.8610	32.143	32.143	0	1.006	55440069	16459604	13504	33760	1219	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.156	32.156	0	1.000	26995736	8080479	6383	15957	1266		
375.8178	32.156	32.156	0	1.000	22176877	6632348	5250	13125	1263	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.338						6383	15957			
375.8178	30.338						5250	13125			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		47393034	13105507	8114	20285	1615		
403.8529	31.956	31.956	0		39521285	11057140	5572	13930	1984	1.20(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.504	31.504	0	0.986	37757708	10075244	8114	20285	1242		
403.8529	31.504	31.504	0	0.986	30811850	8262027	5572	13930	1483	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.517	31.517	0	1.000	20757104	5832636	4864	12160	1199		
391.8127	31.517	31.517	0	1.000	16287945	4484323	3543	8857	1266	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	40252330	11084473	8114	20285	1366		
403.8529	31.610	31.610	0	0.989	33256120	9155930	5572	13930	1643	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.624	31.624	0	1.000	21259538	5857482	4864	12160	1204		
391.8127	31.624	31.624	0	1.000	16778237	4665965	3543	8857	1317	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.969	31.969	0	1.015	23177969	6599118	4864	12160	1357		
391.8127	31.969	31.969	0	1.015	18086358	5109007	3543	8857	1442	1.28(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.525						4864	12160			
391.8127	30.525						3543	8857			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	19122193	7025458	16900	42250	416		
419.8220	33.603	33.603	0	1.052	42780870	15997374	39934	99835	401	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.615	0	1.000	23554347	8851066	24046	60115	368		
409.7789	33.615	33.615	0	1.000	22635019	8606504	26821	67052	321	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.672	0	1.085	16855088	5868781	16900	42250	347		
419.8220	34.672	34.672	0	1.085	38610920	13260503	39934	99835	332	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685	34.685	0	1.000	18976375	6679062	24046	60115	278		
409.7789	34.685	34.685	0	1.000	18068672	6337781	26821	67052	236	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						24046	60115			
409.7789	34.150						26821	67052			

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	27397468	9930820	12548	31370	791		
437.8140	34.393	34.393	0	1.076	26700183	9787811	10240	25600	956	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	15298599	5518182	5713	14282	966		
425.7737	34.405	34.405	0	1.000	14771129	5248913	3965	9912	1324	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						5713	14282			
425.7737	34.223						3965	9912			
13C-OCDD											
469.7779	36.701	36.701	0	1.148	36914421	11312043	2832	7080	3994		
471.7750	36.701	36.701	0	1.148	41976377	12923885	3077	7692	4200	0.88(0.76-1.02)	
OCDF											
441.7428	36.797	36.797	0	1.003	26790568	8306782	1686	4215	4927		
443.7399	36.797	36.797	0	1.003	29873584	9434250	1922	4805	4909	0.90(0.76-1.02)	
OCDD											
457.7377	36.713	36.713	0	1.000	21012564	6604645	1431	3577	4615		
459.7348	36.713	36.713	0	1.000	23435496	7392070	2276	5690	3248	0.90(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

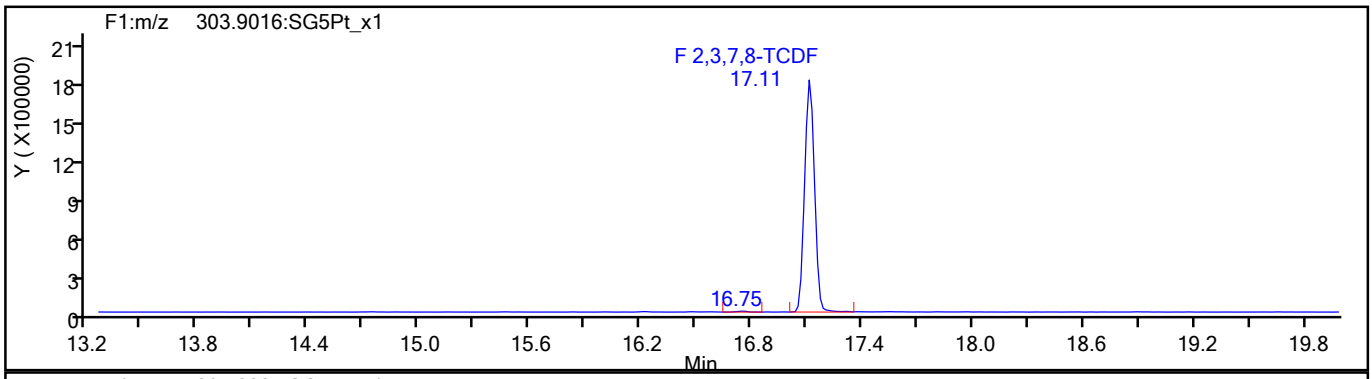

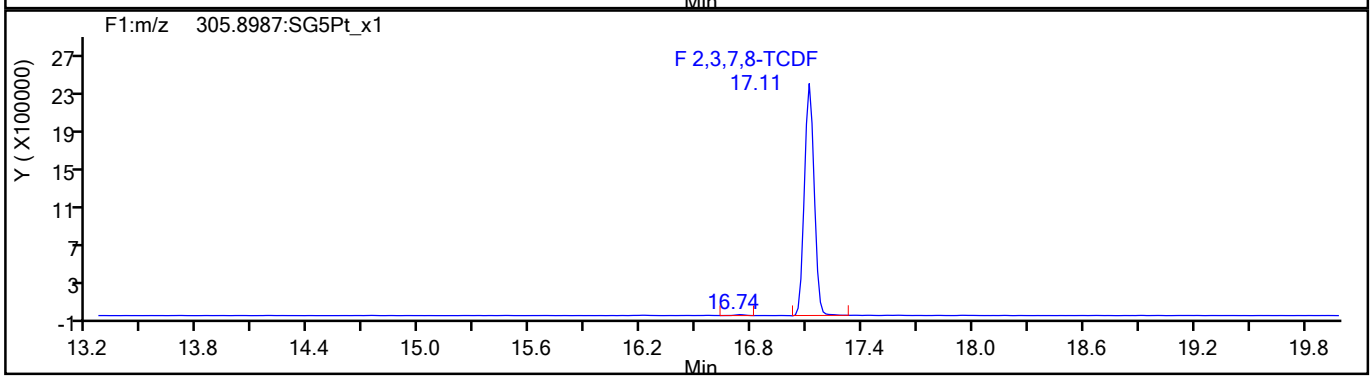

TCDF Standards

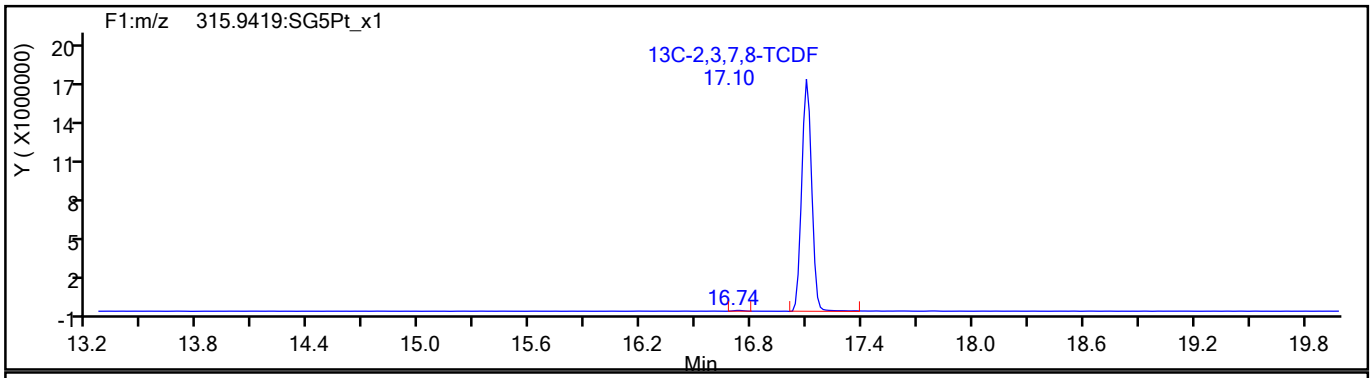

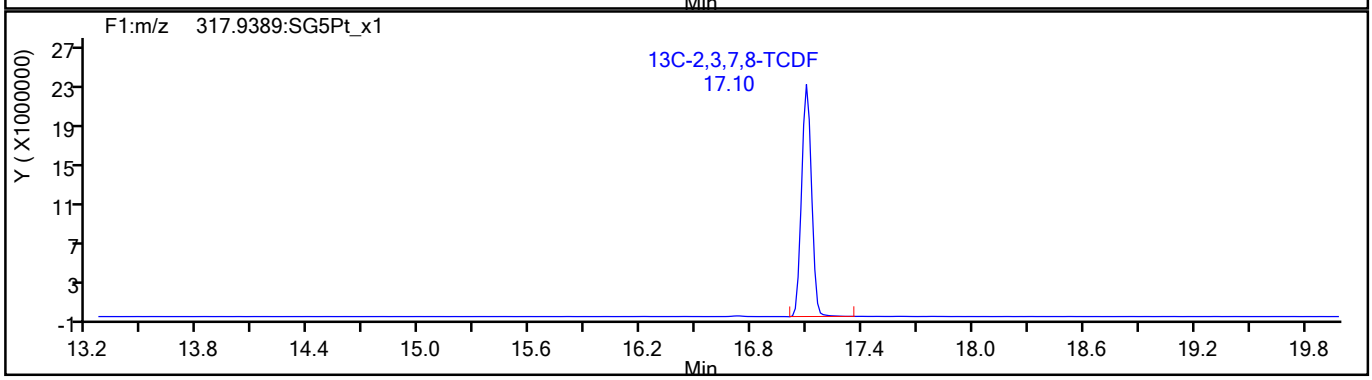

794039

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

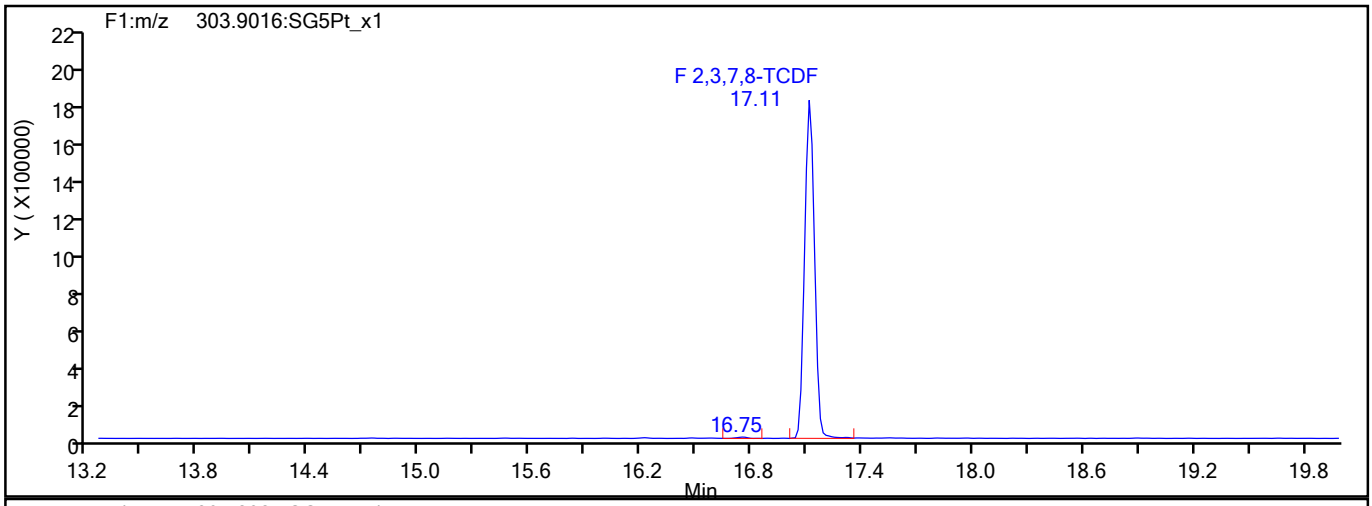

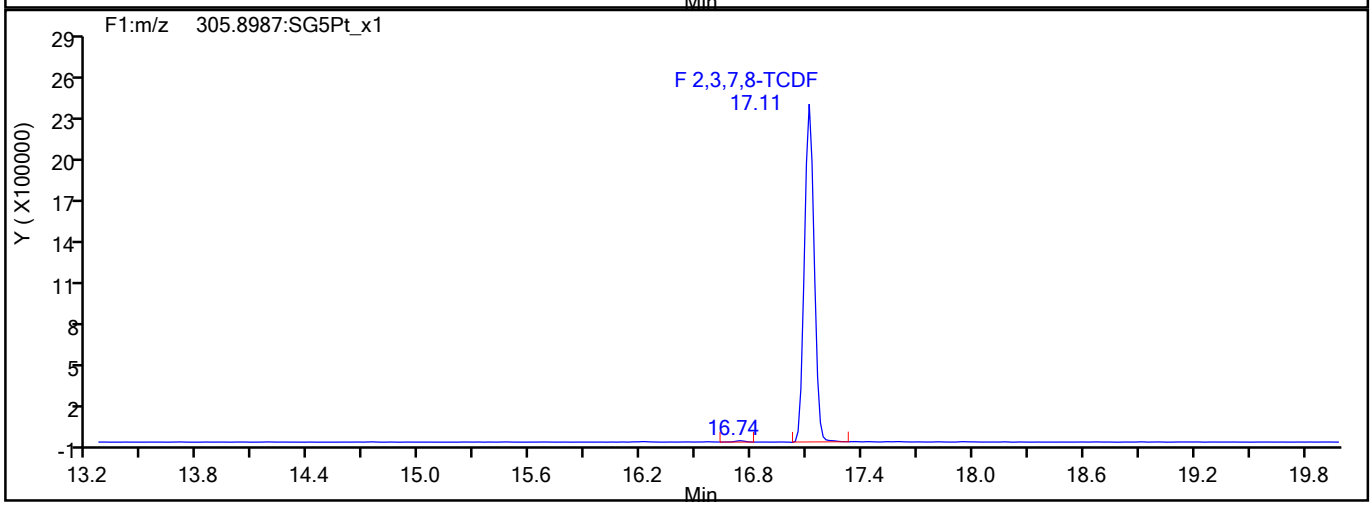

TCDF Interference Mass

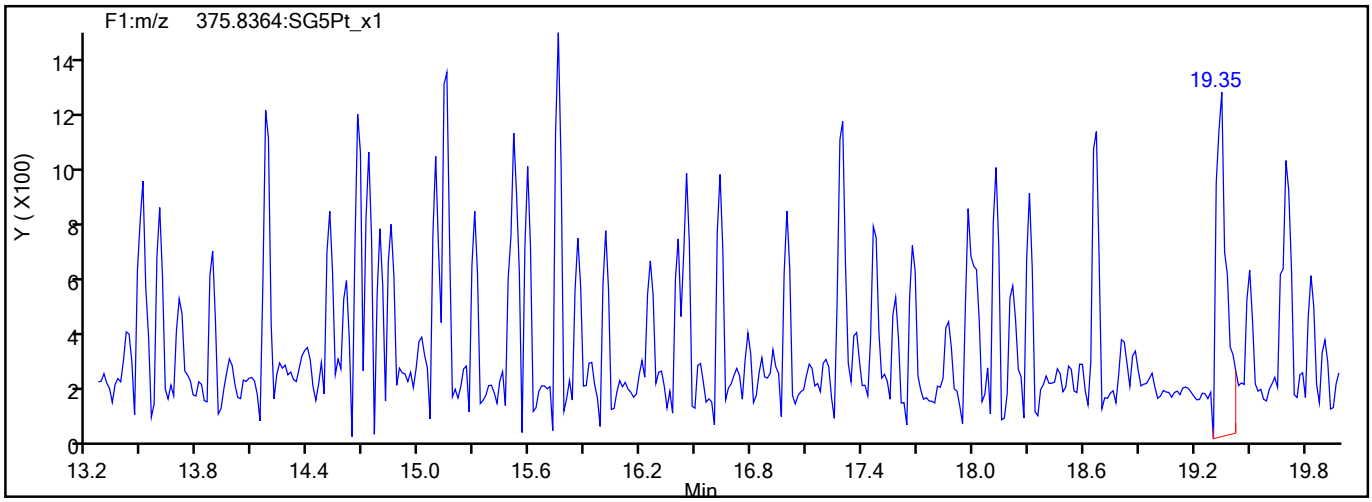

794040

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

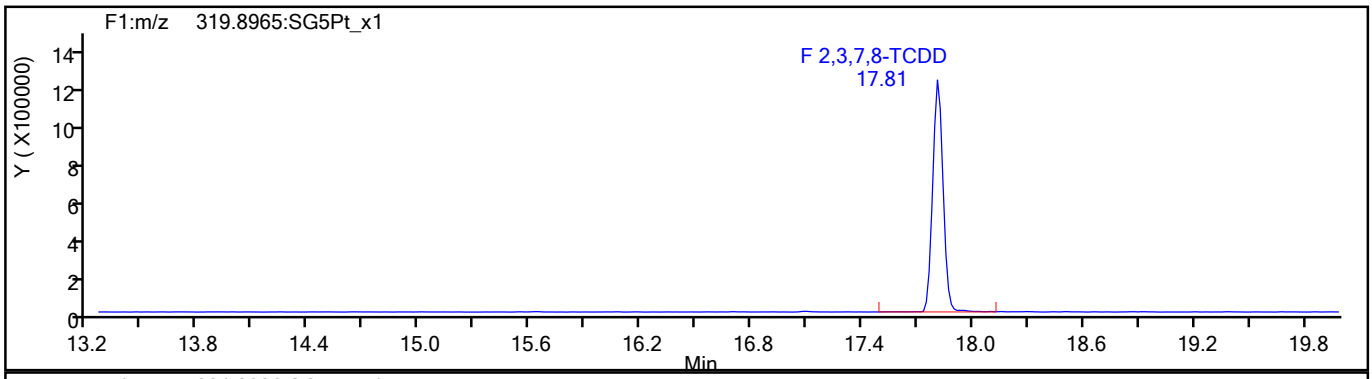

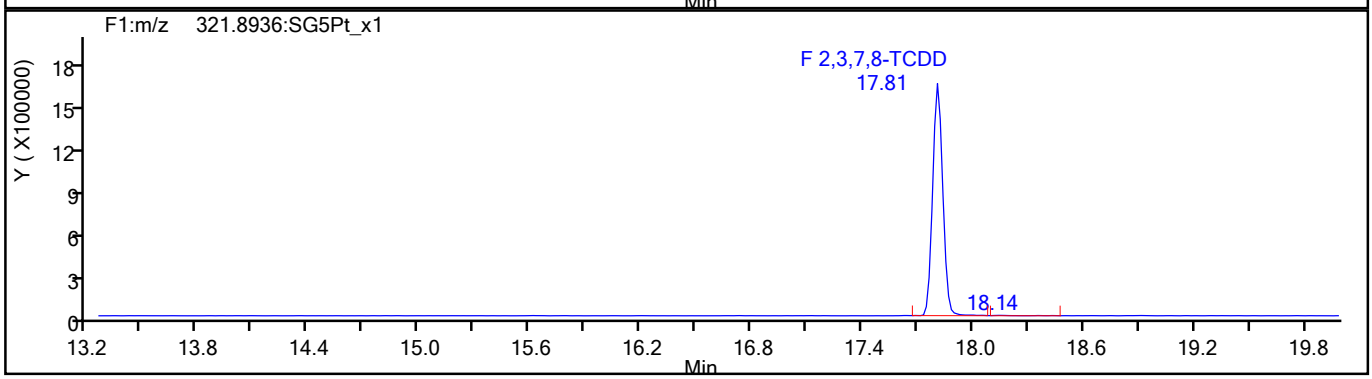

TCDD Standards

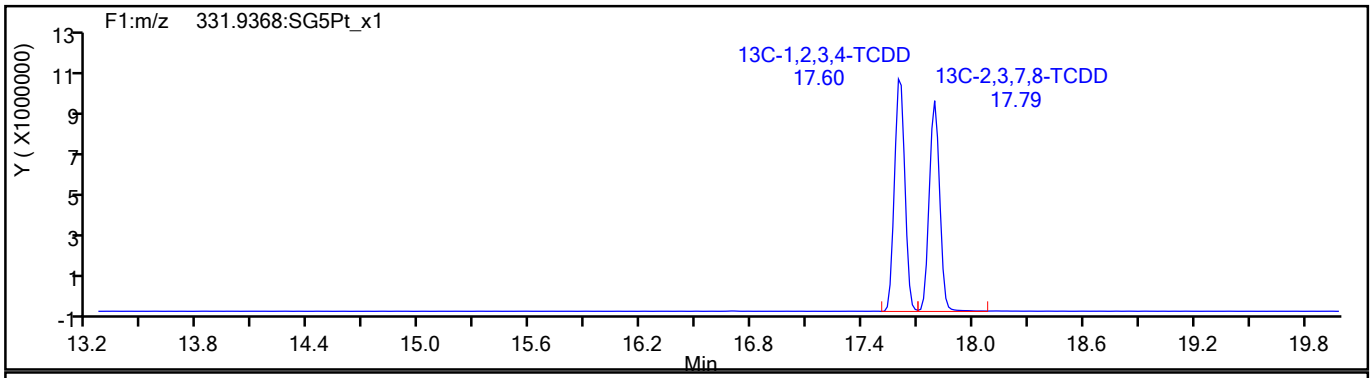

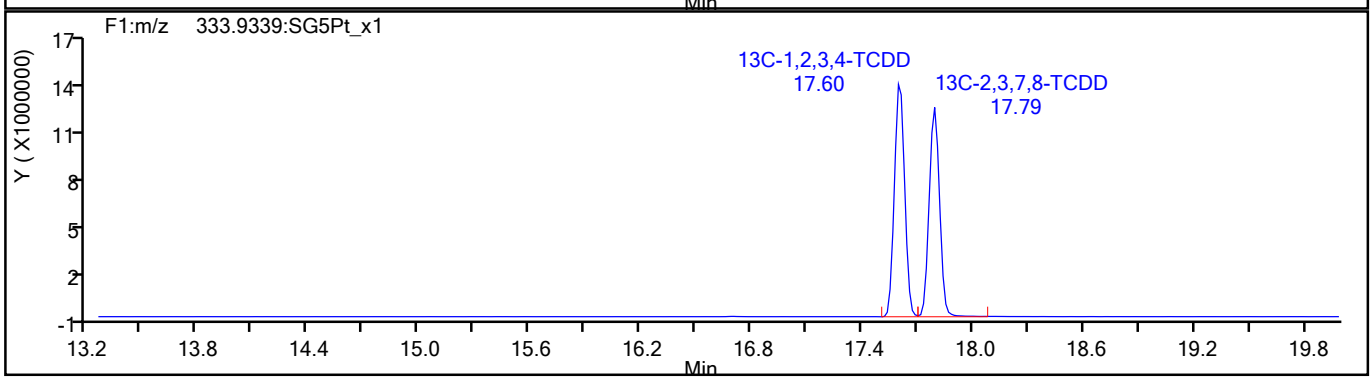

794041

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

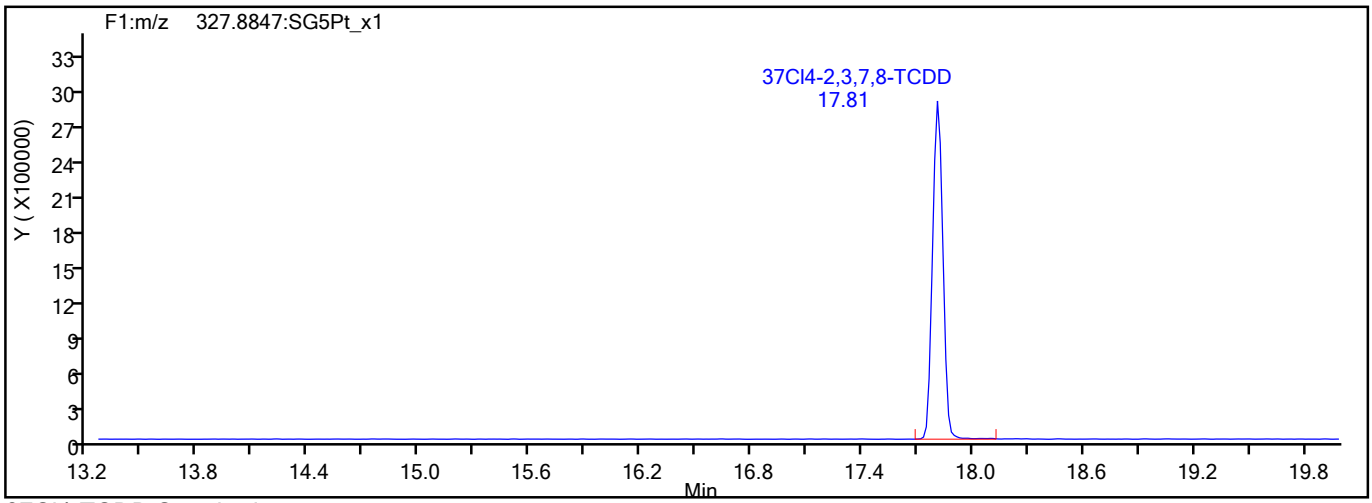

37Cl4-TCDD Standards

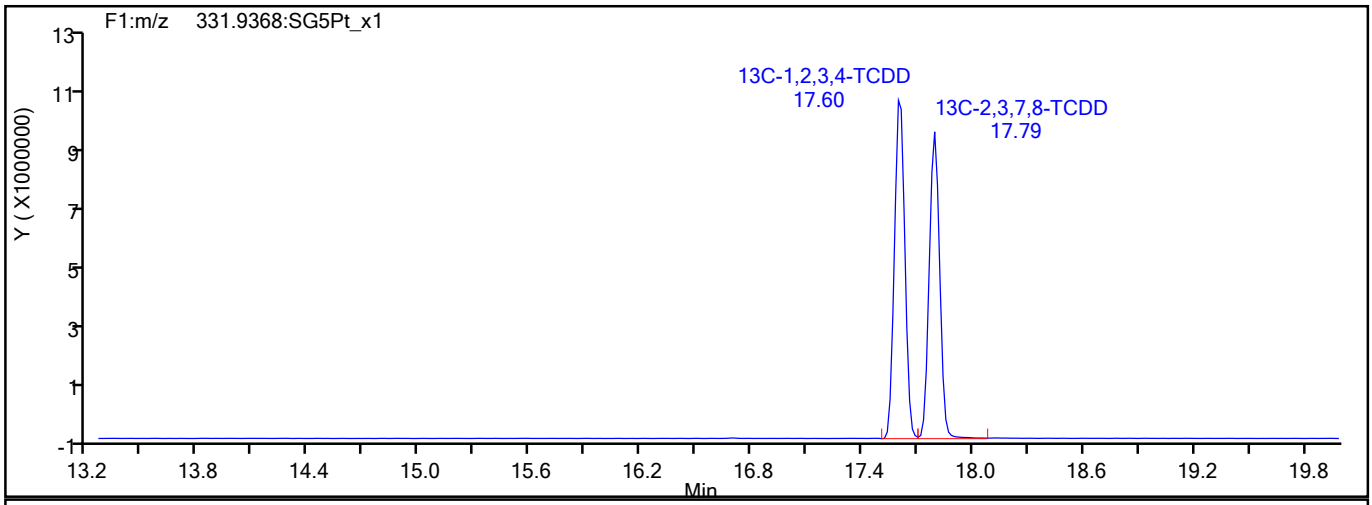

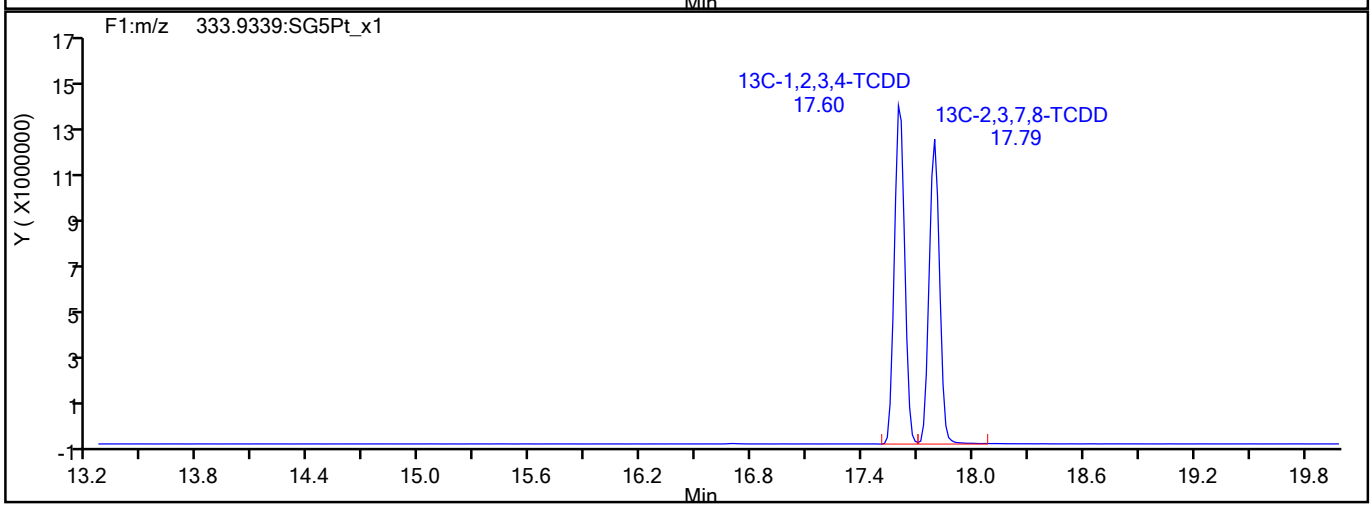

794042

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

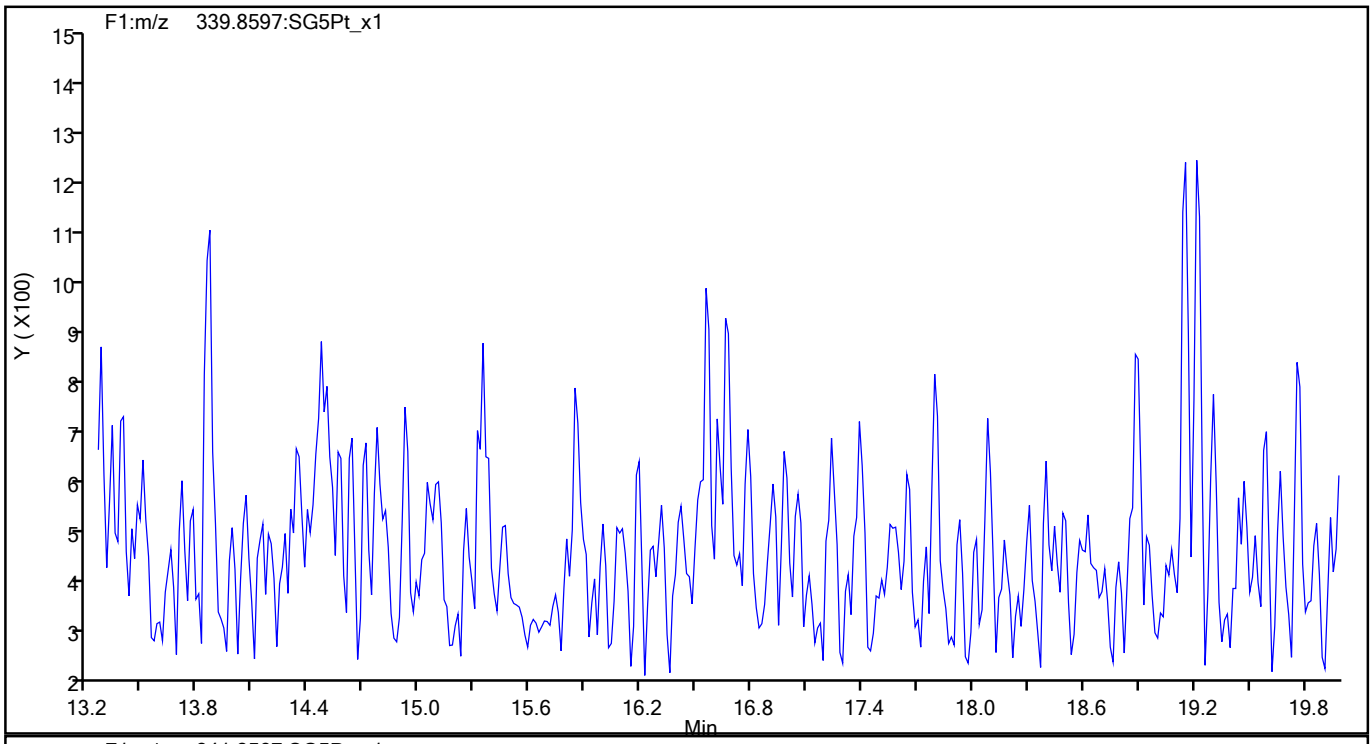

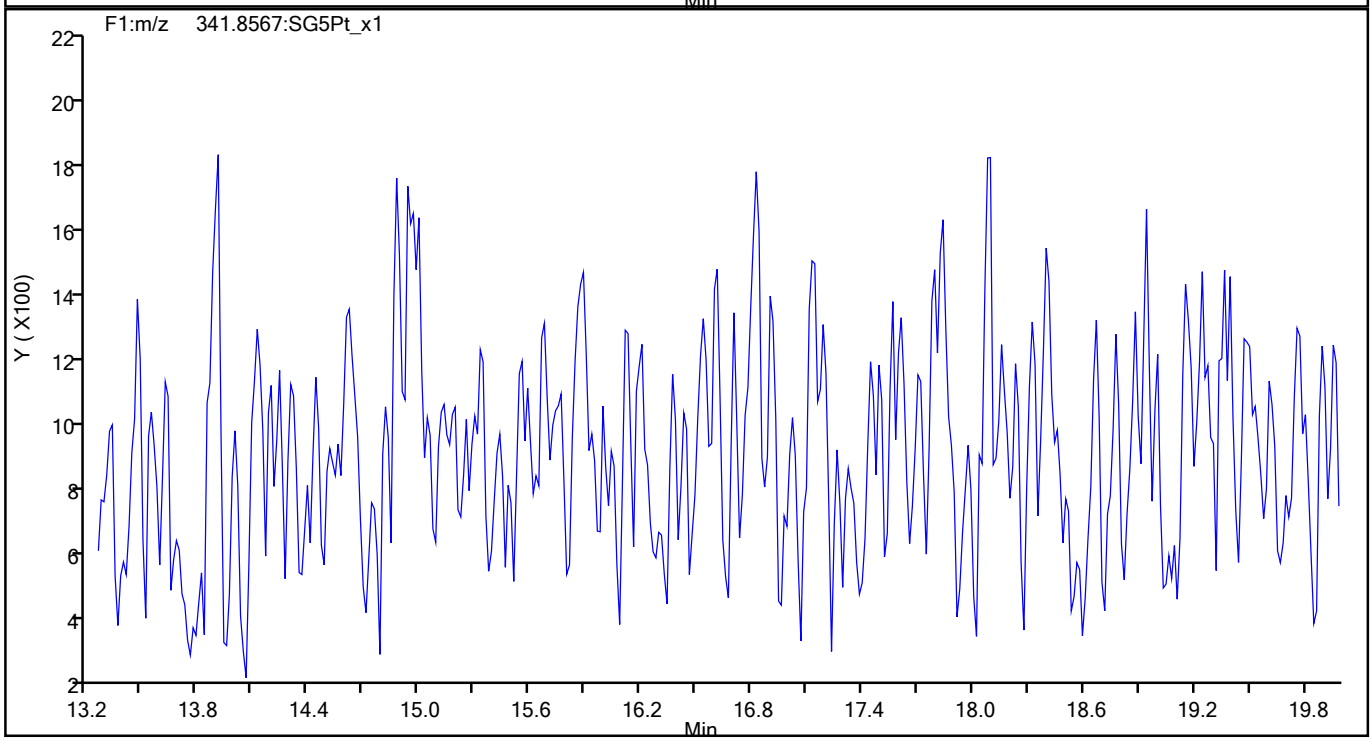

794043

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

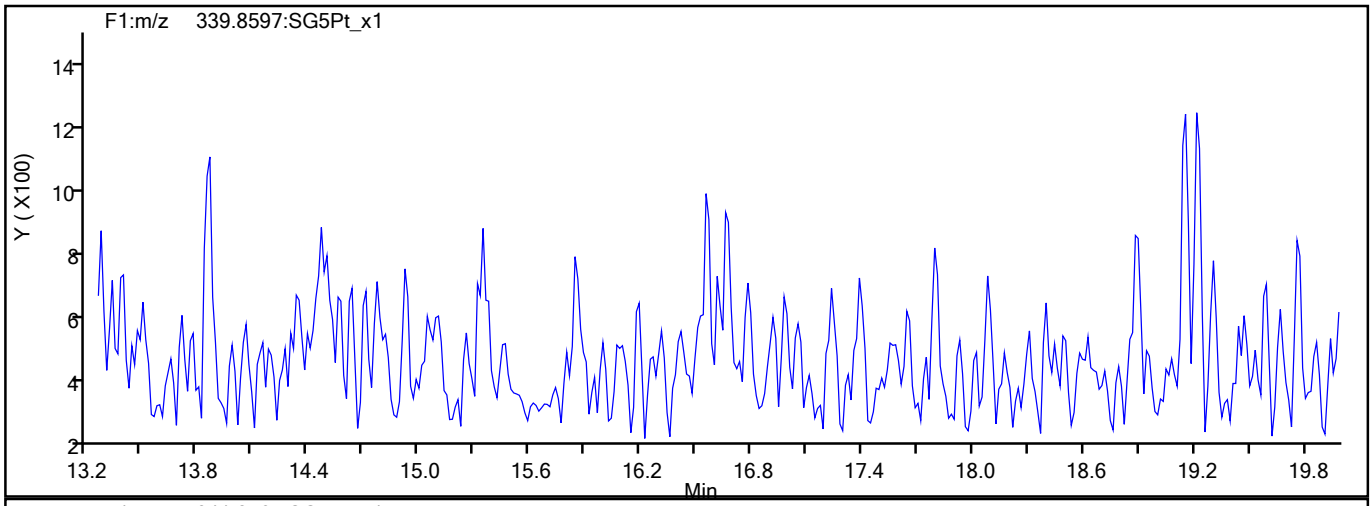

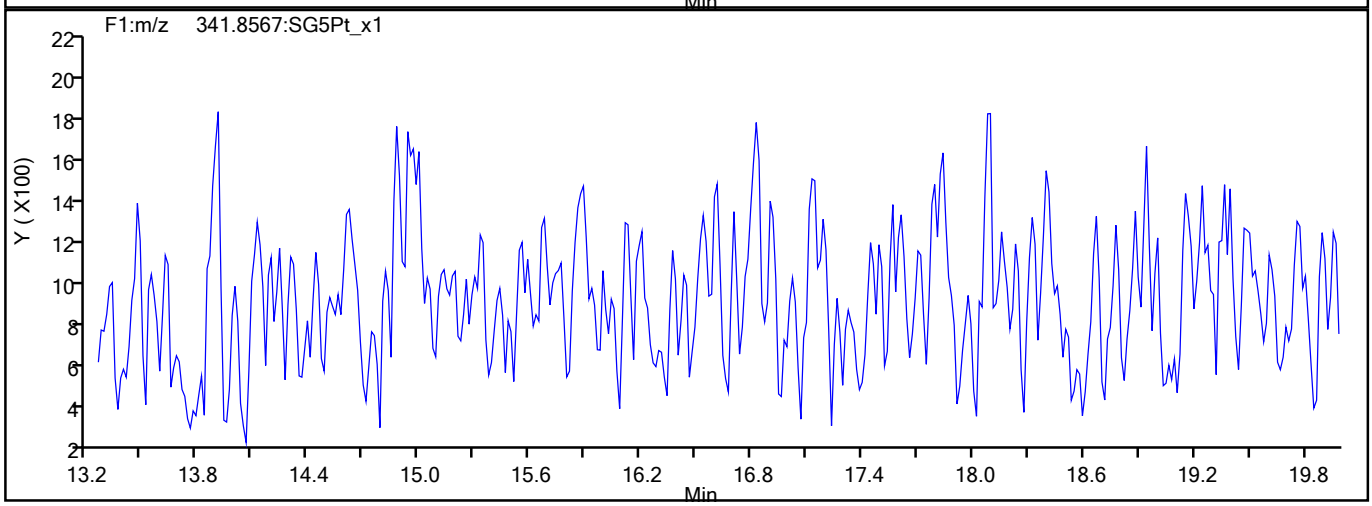

F1 PeCDFs Interference Mass

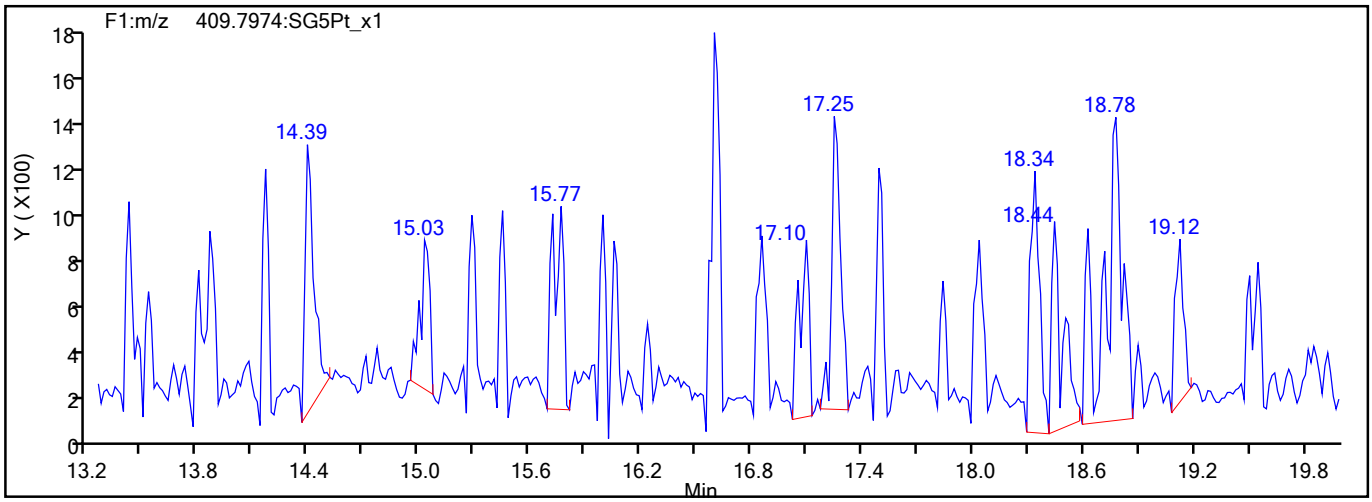

794044

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

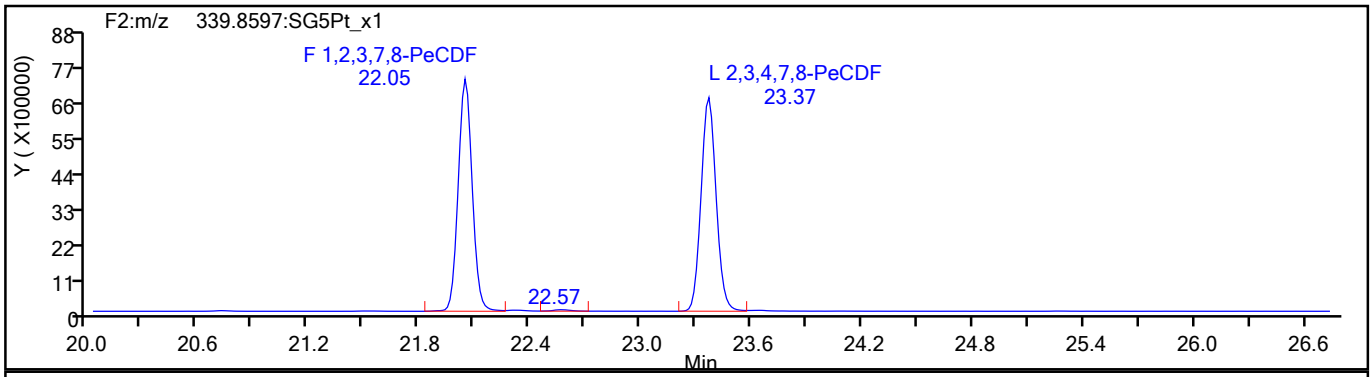

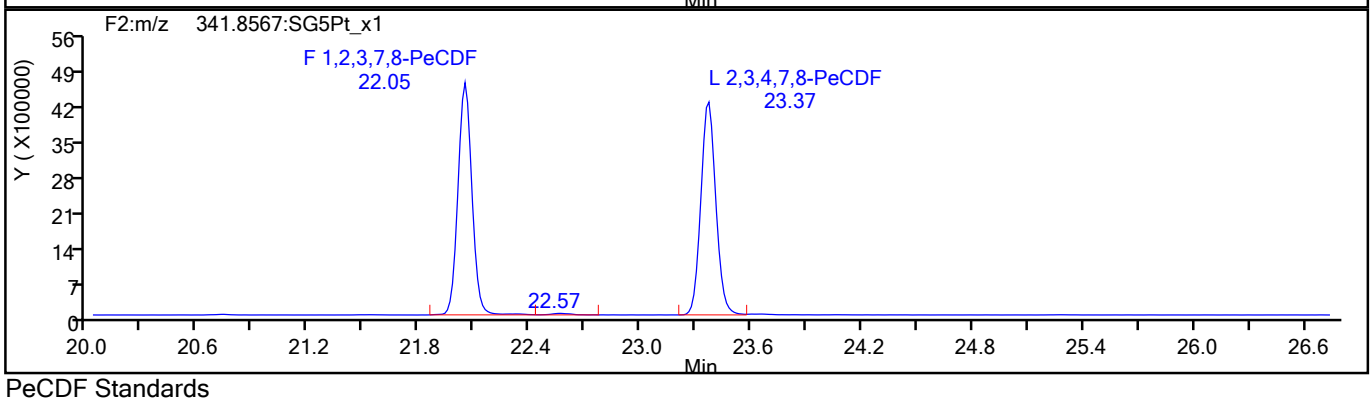

PeCDF Standards

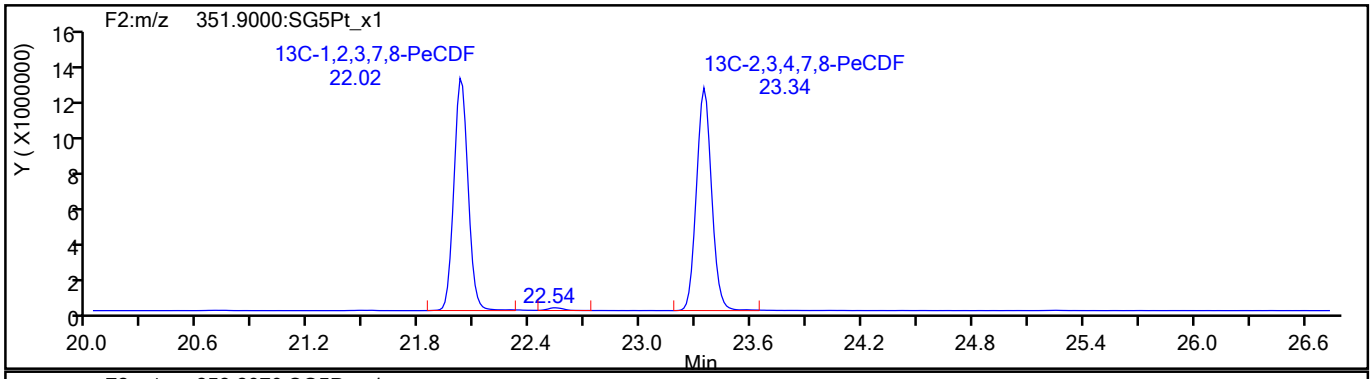

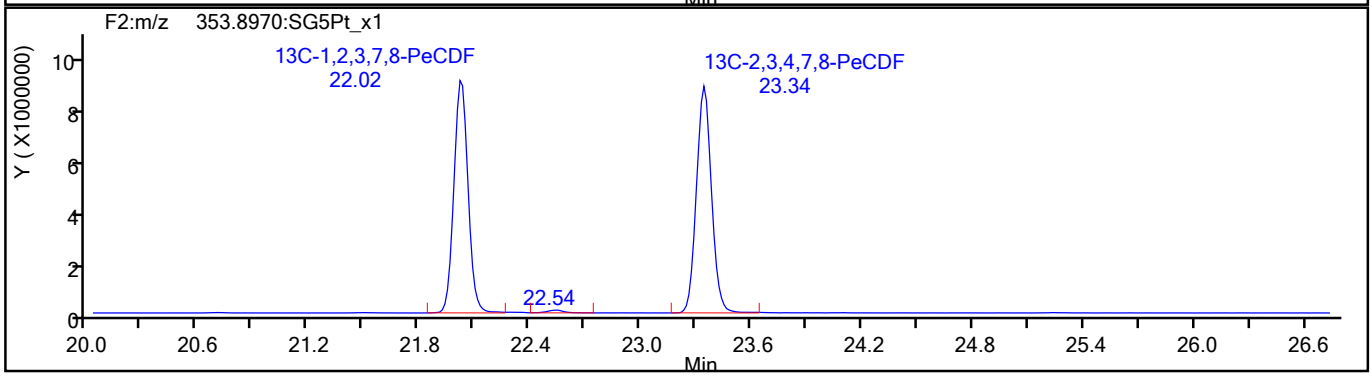

794045

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

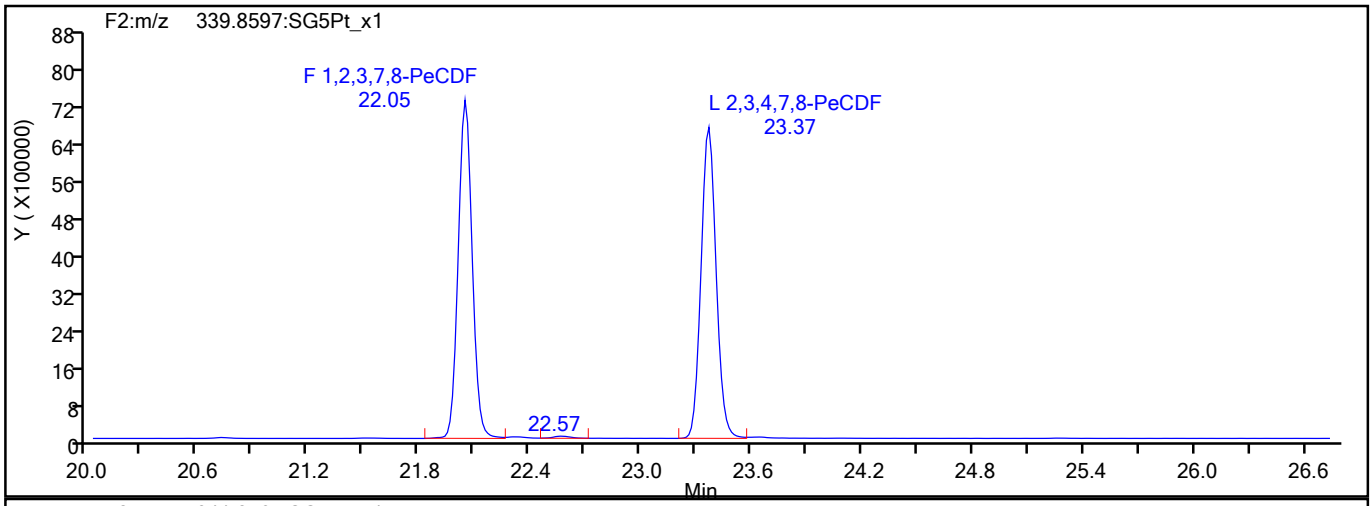

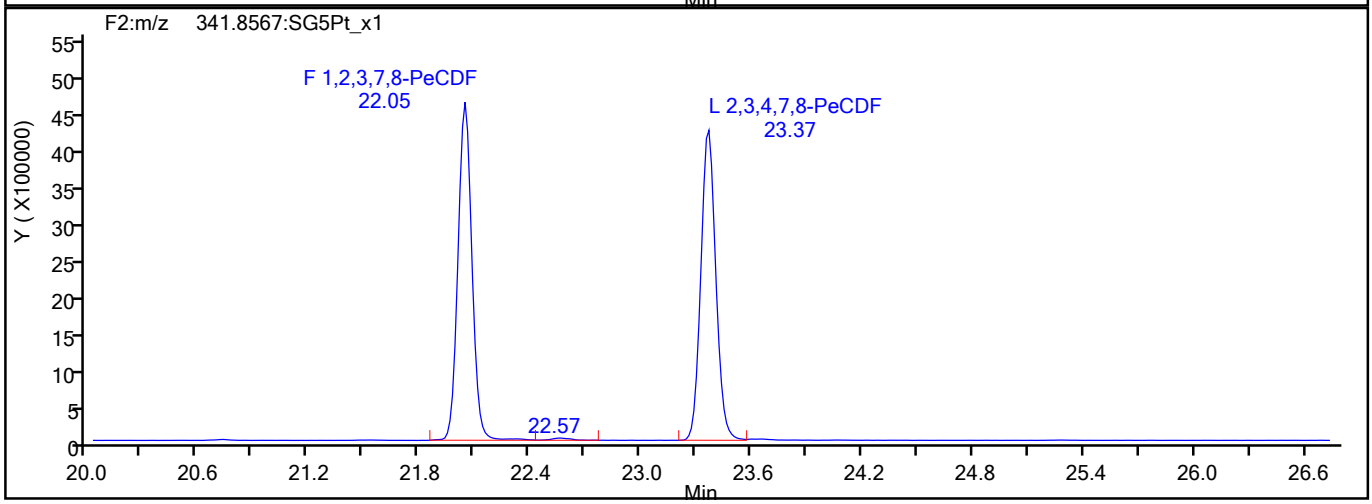

PeCDF Interference Mass

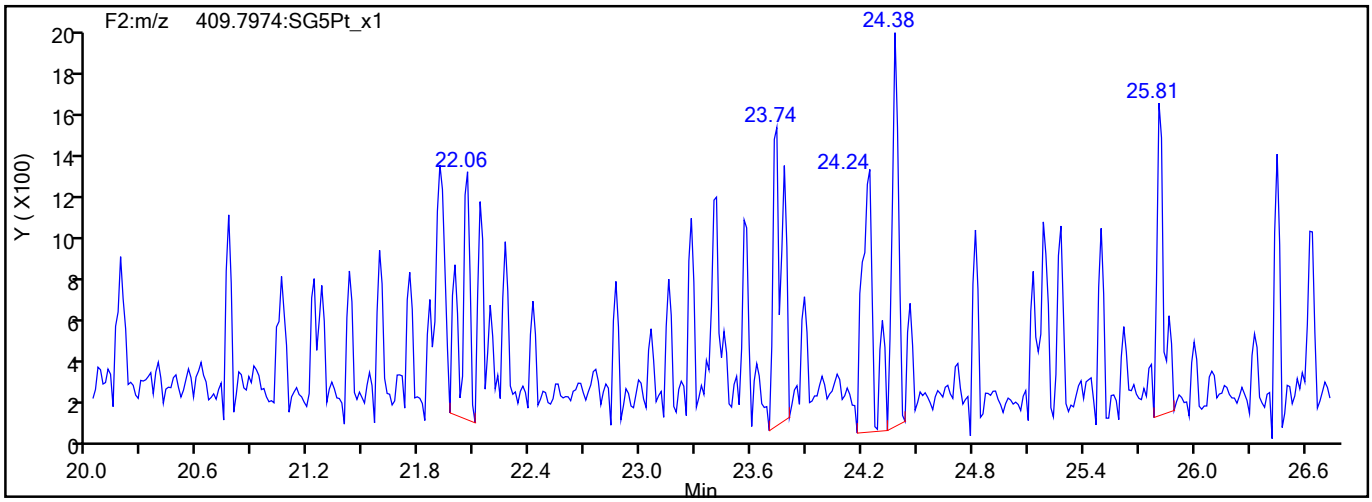

794046

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

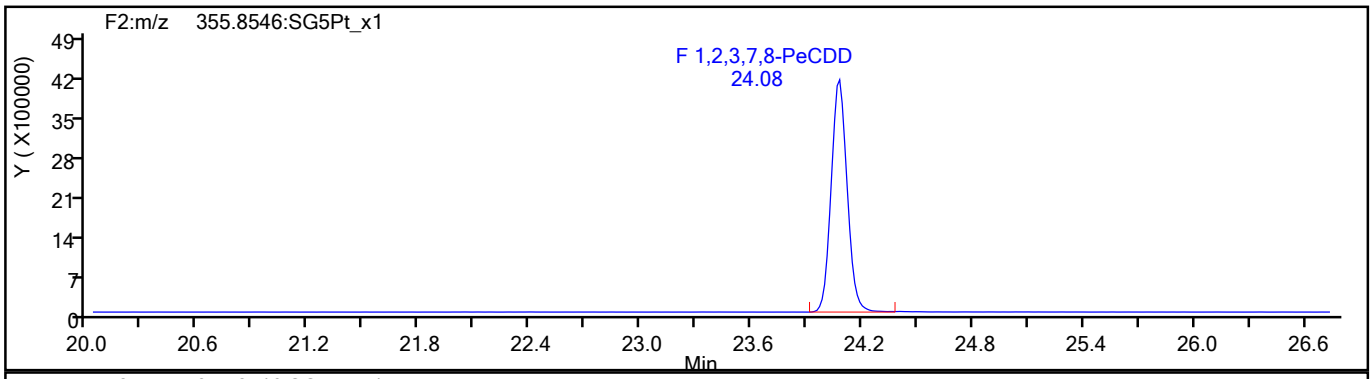

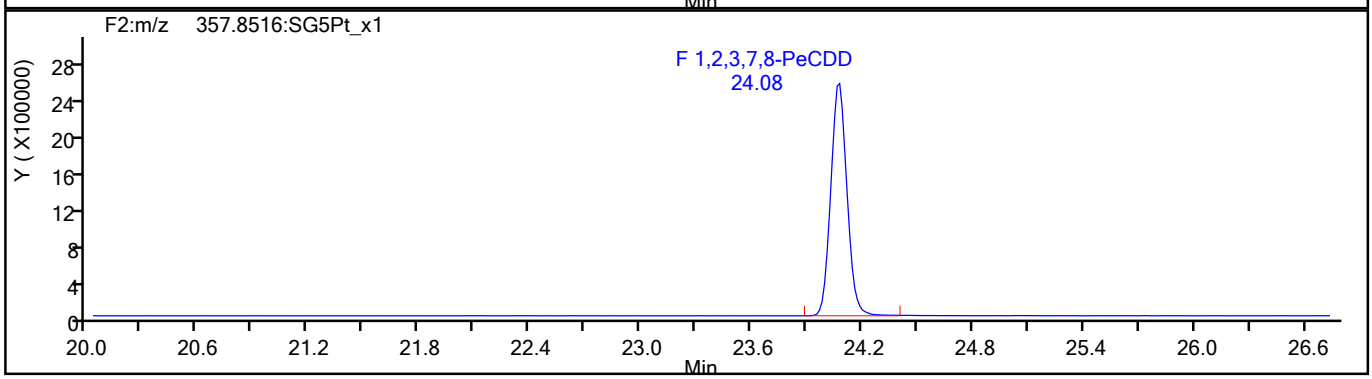

PeCDD Standards

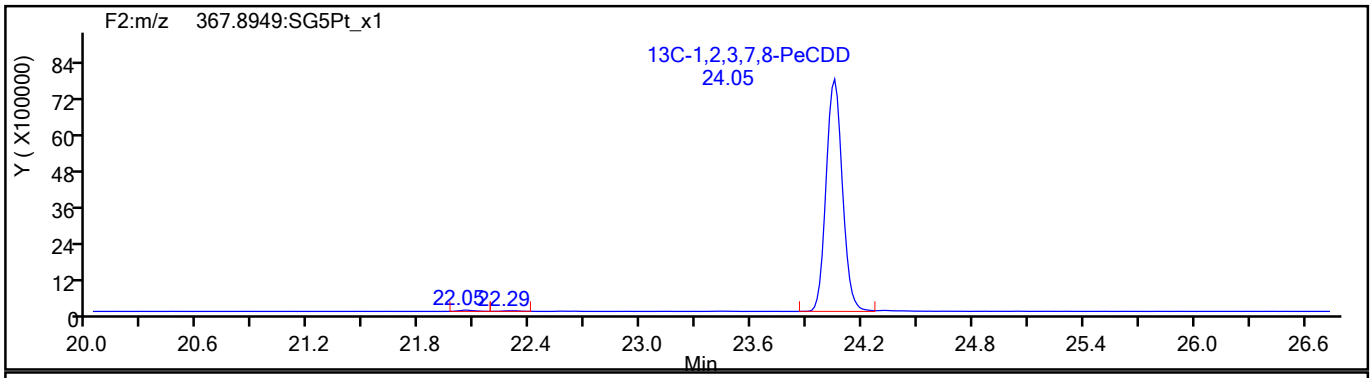

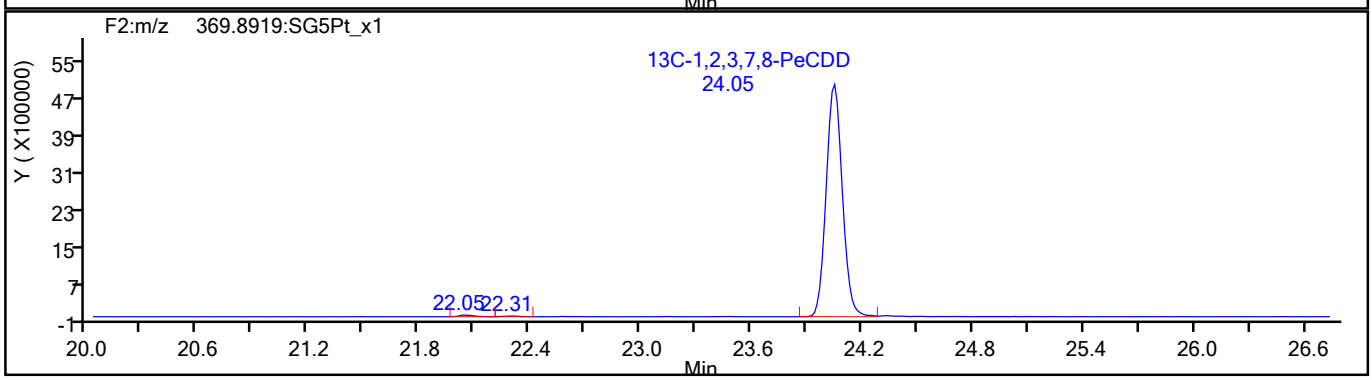

794047

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

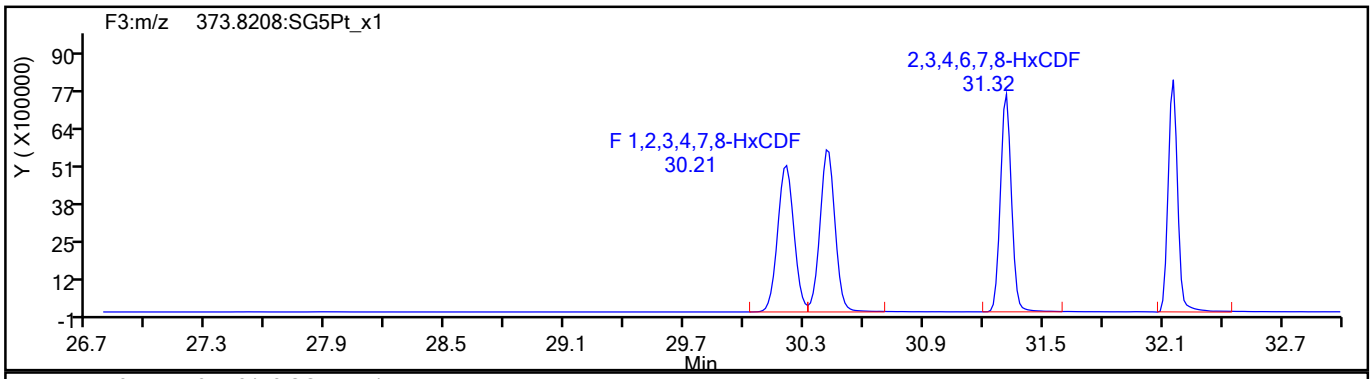

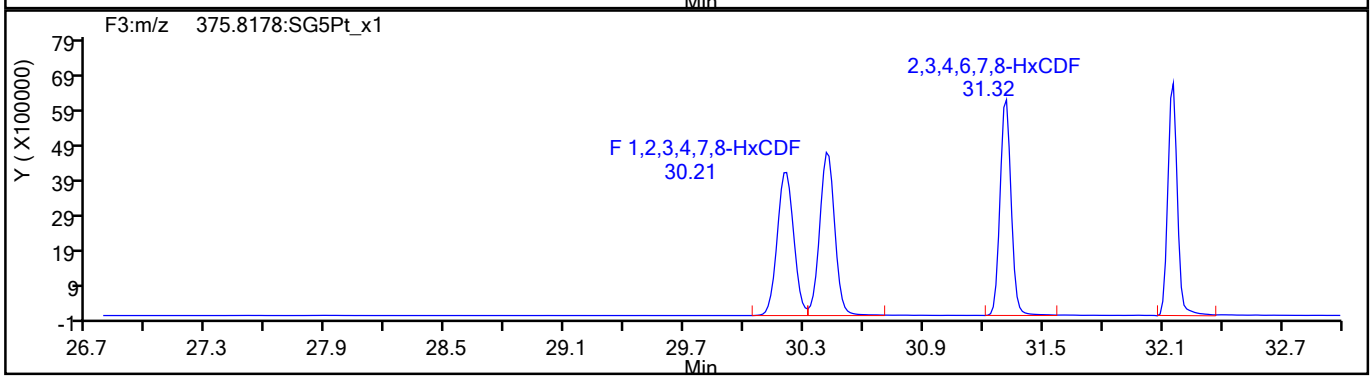

HxCDF Standards

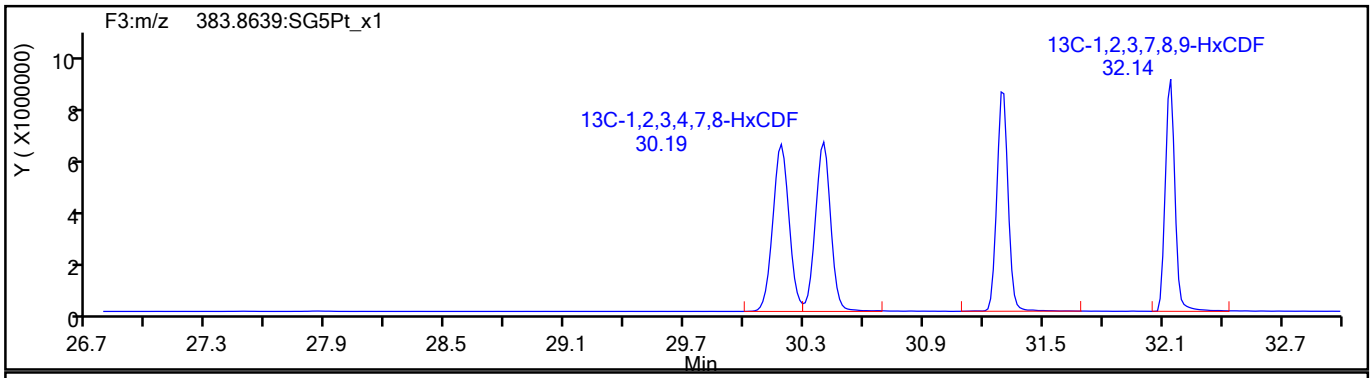

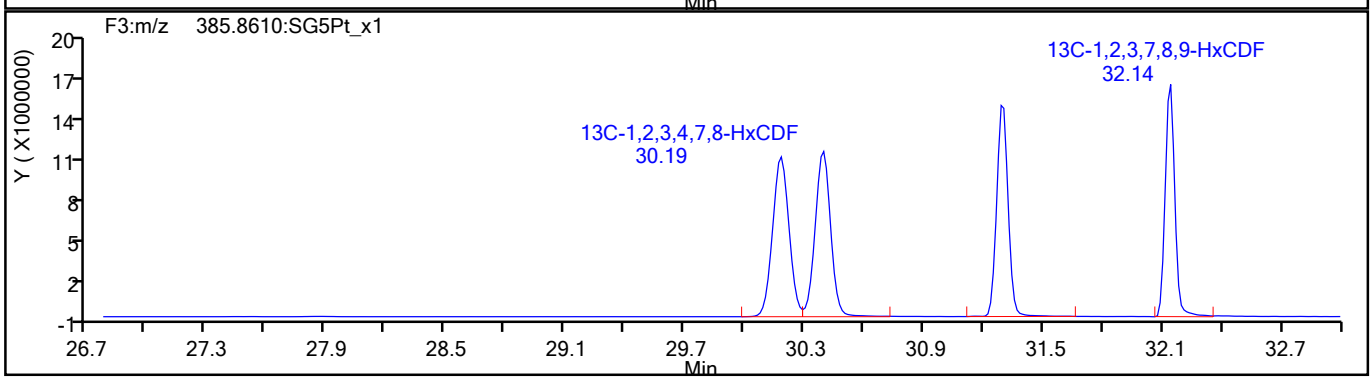

794048

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

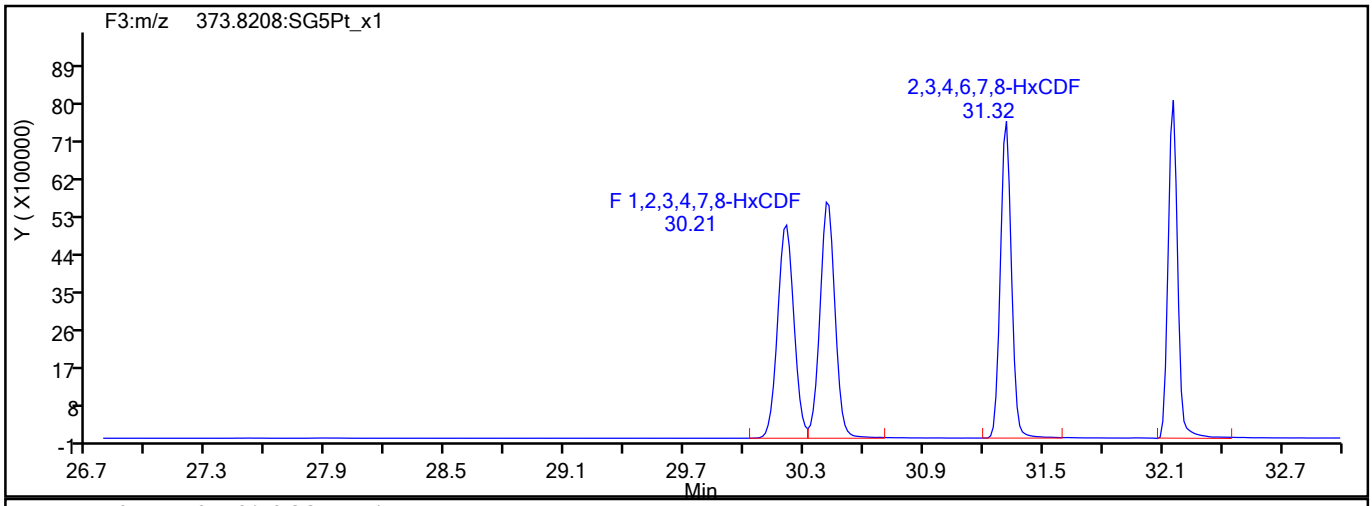

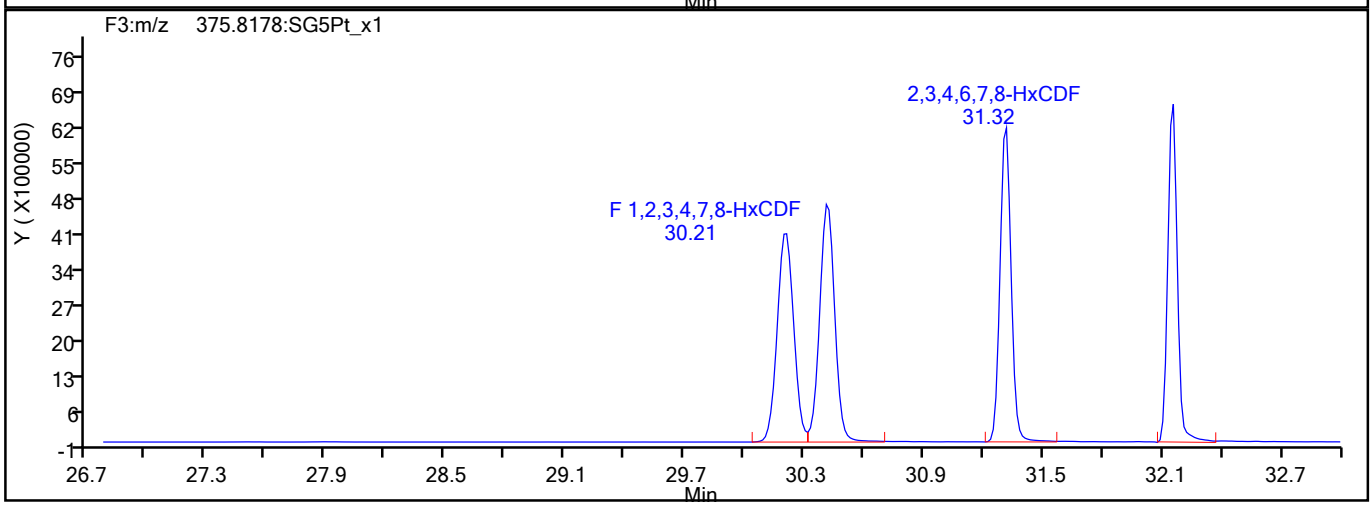

HxCDF Interference Mass

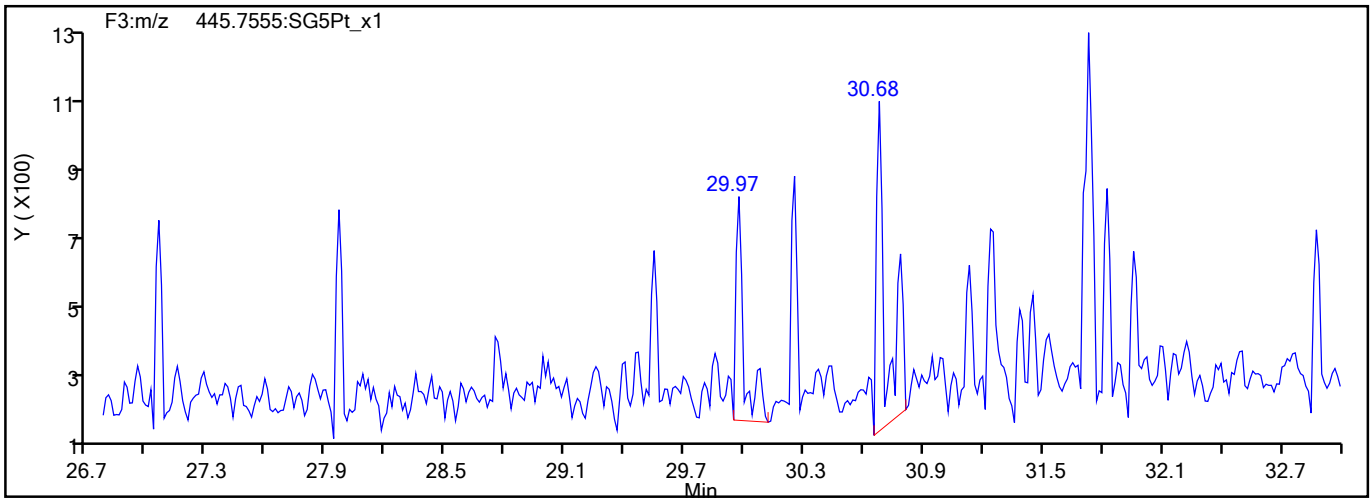

794049

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

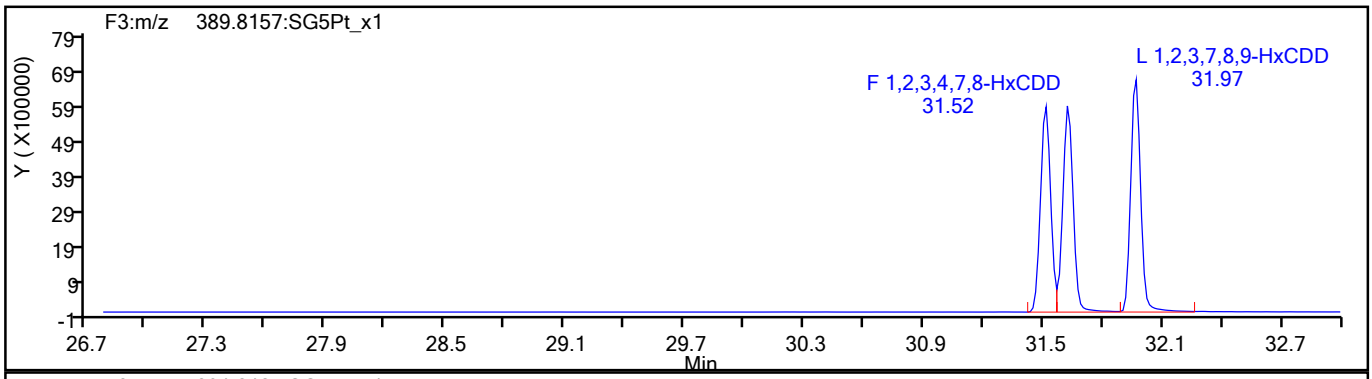

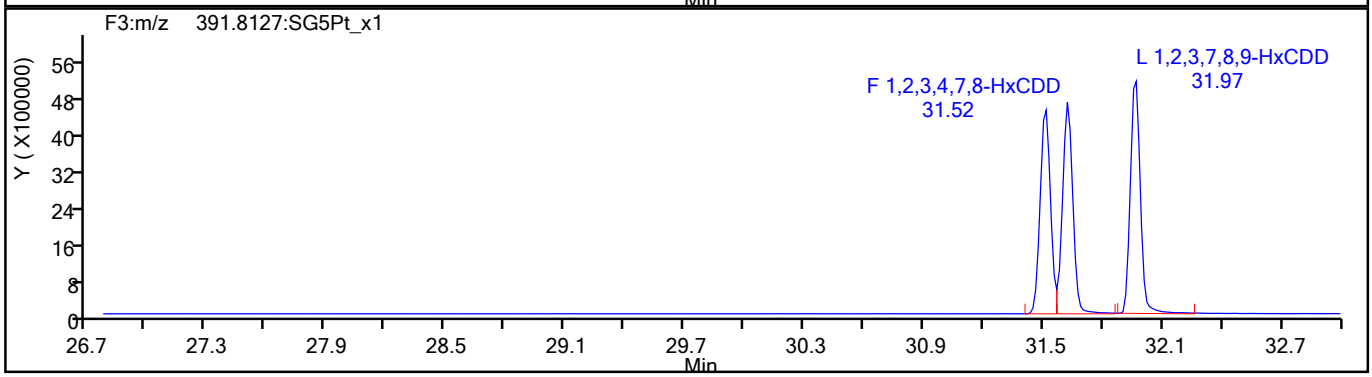

HxCDD Standards

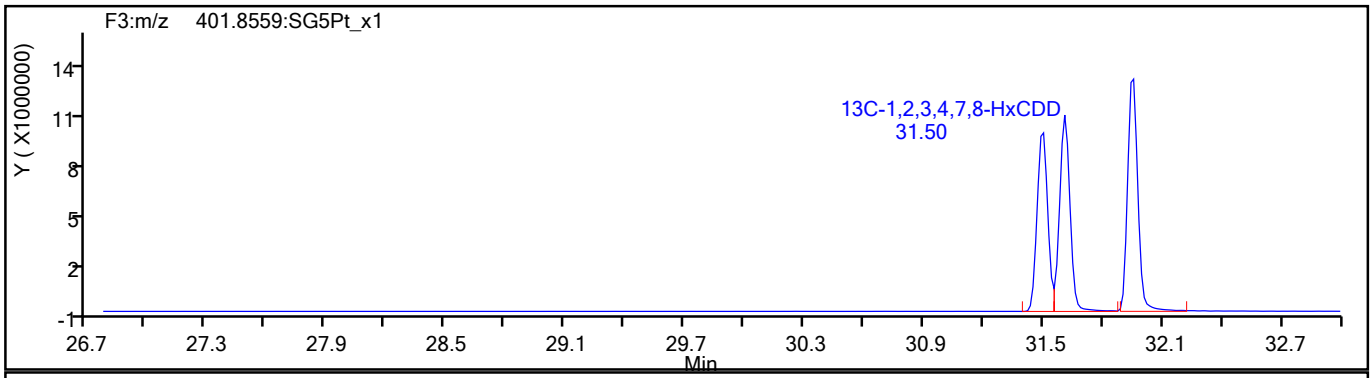

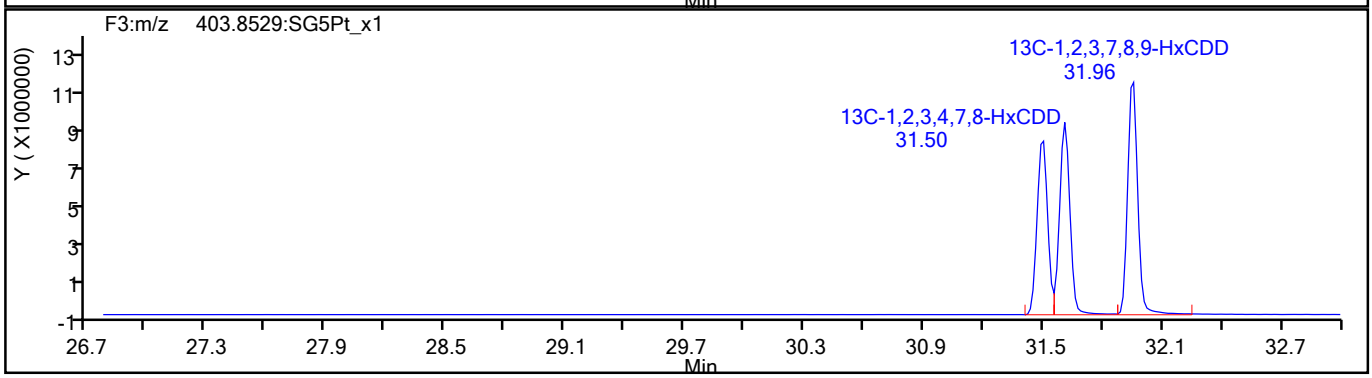

794050

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

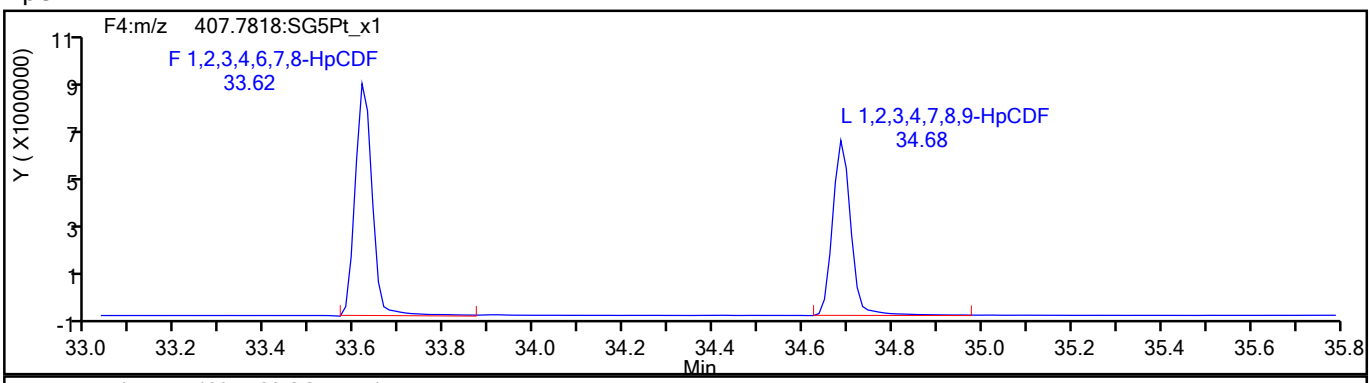

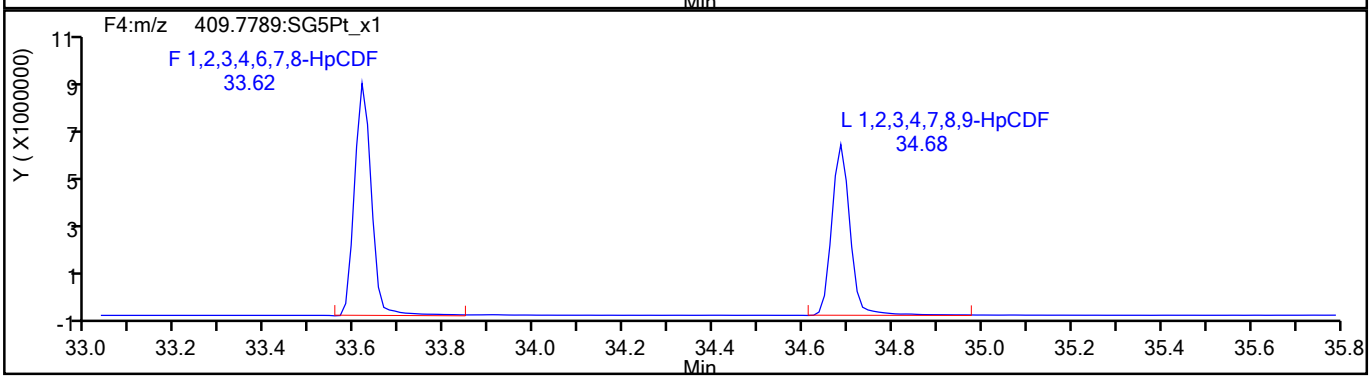

HpCDF Standards

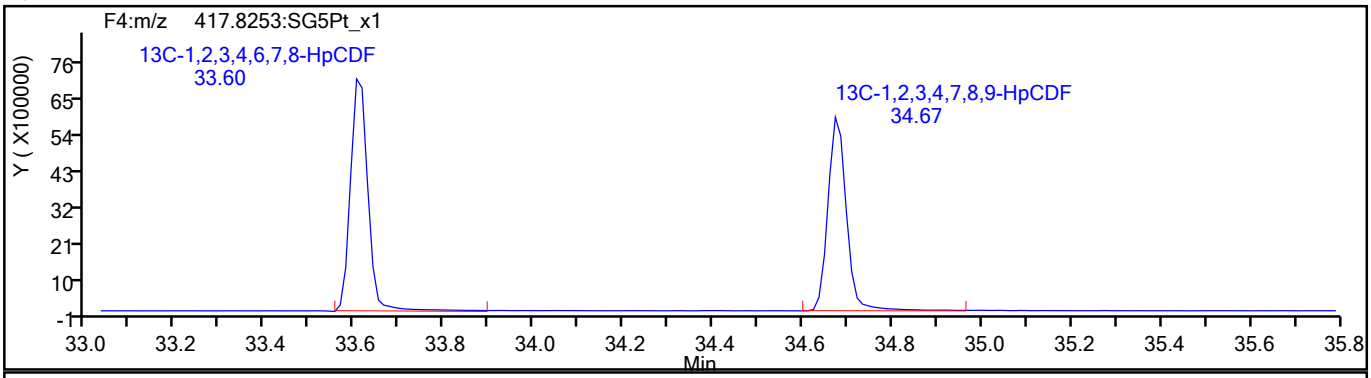

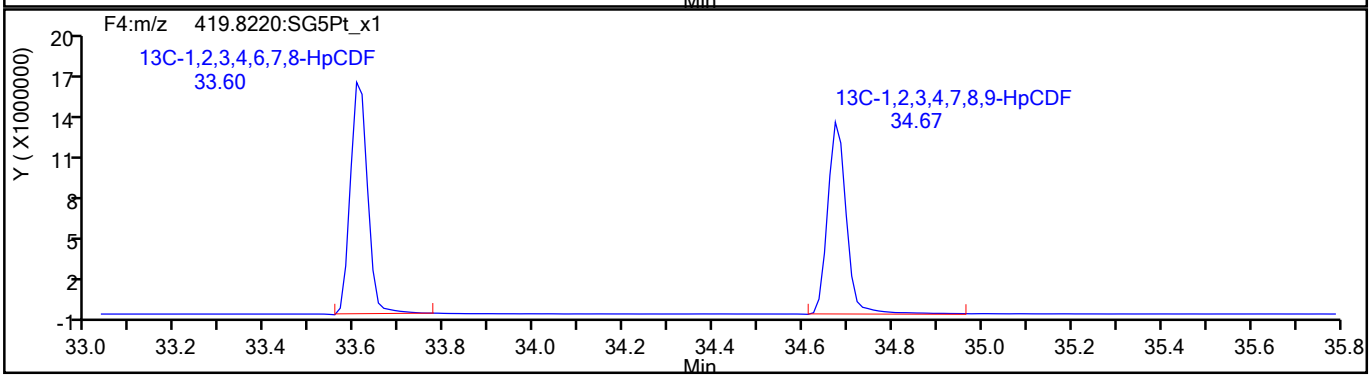

794051

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

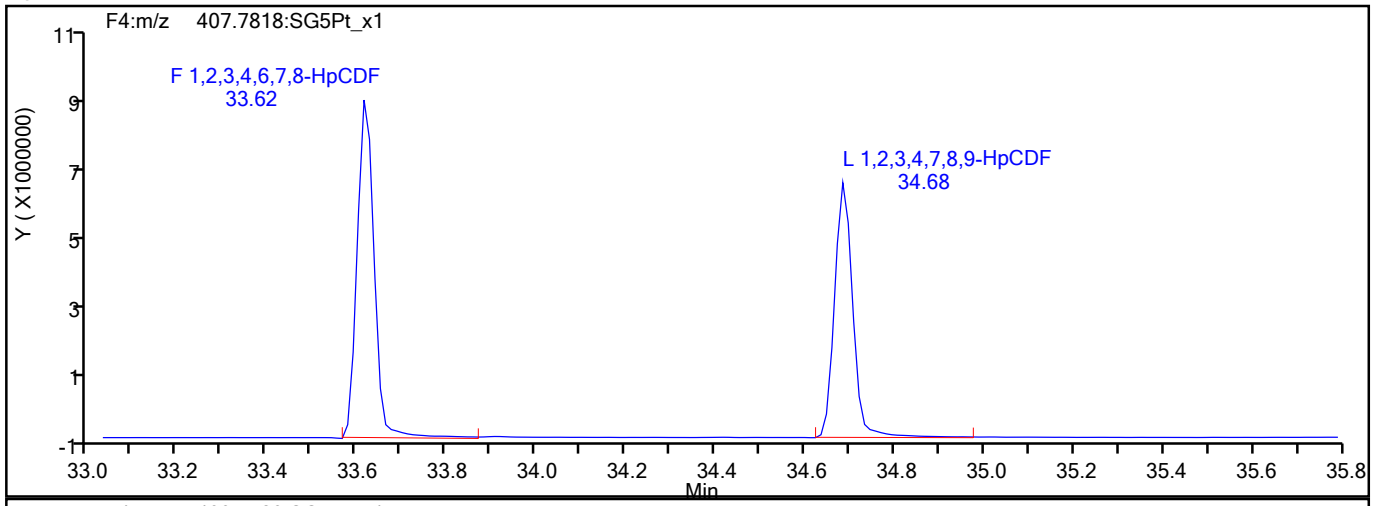

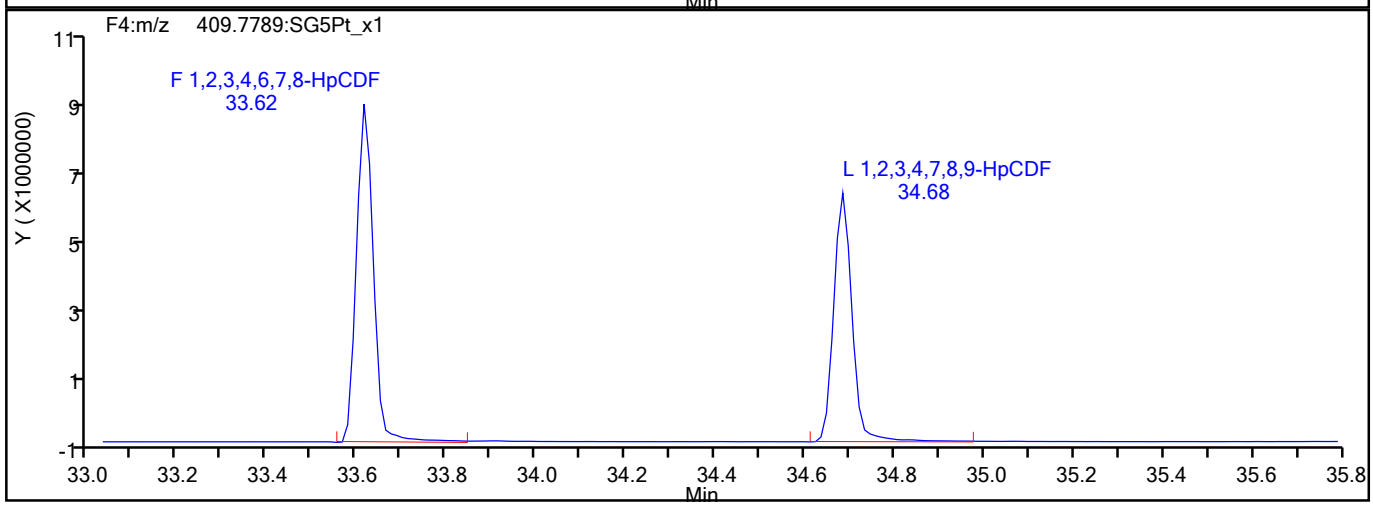

HpCDF Interference Mass

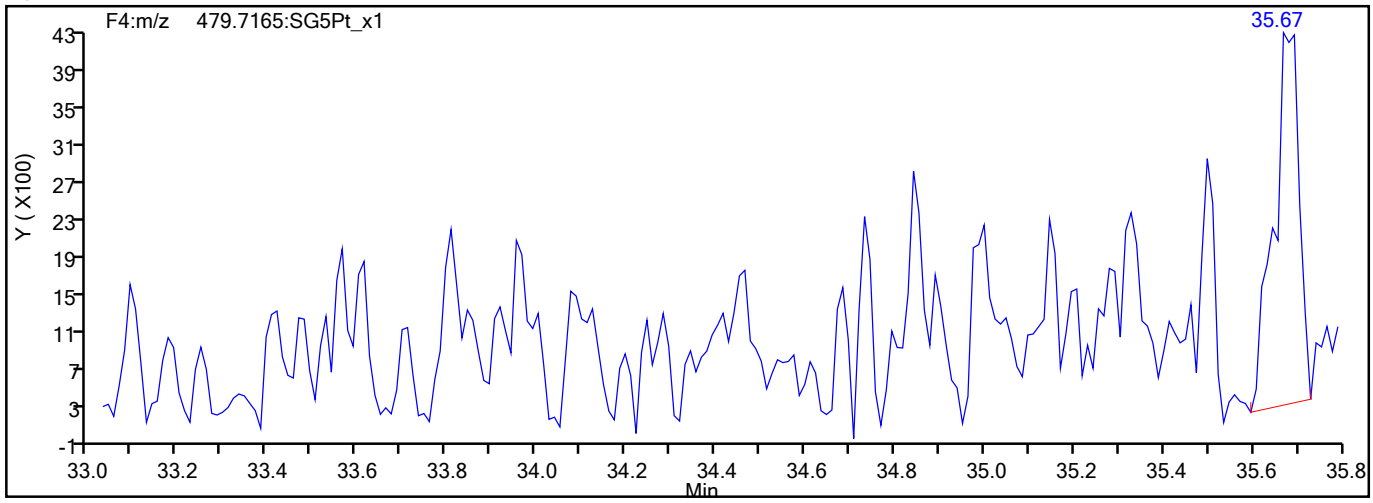

794052

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

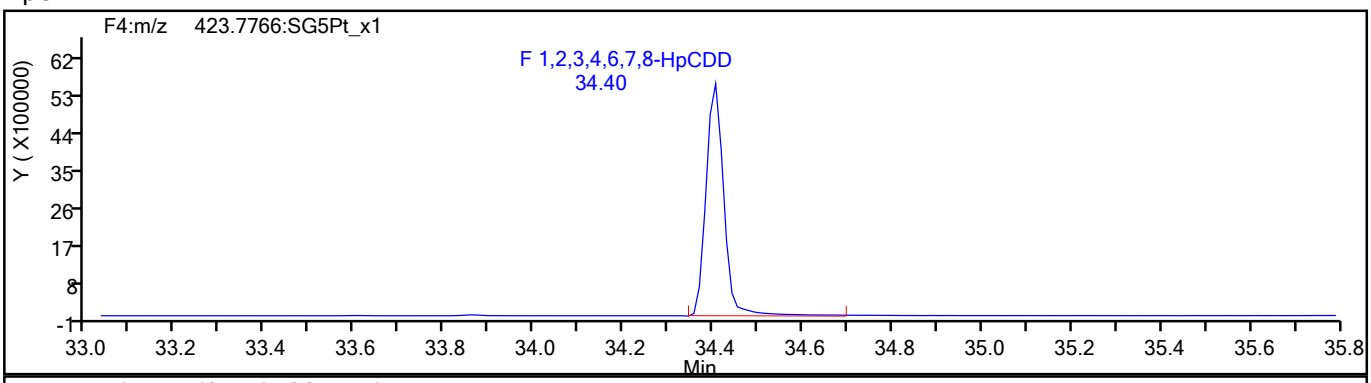

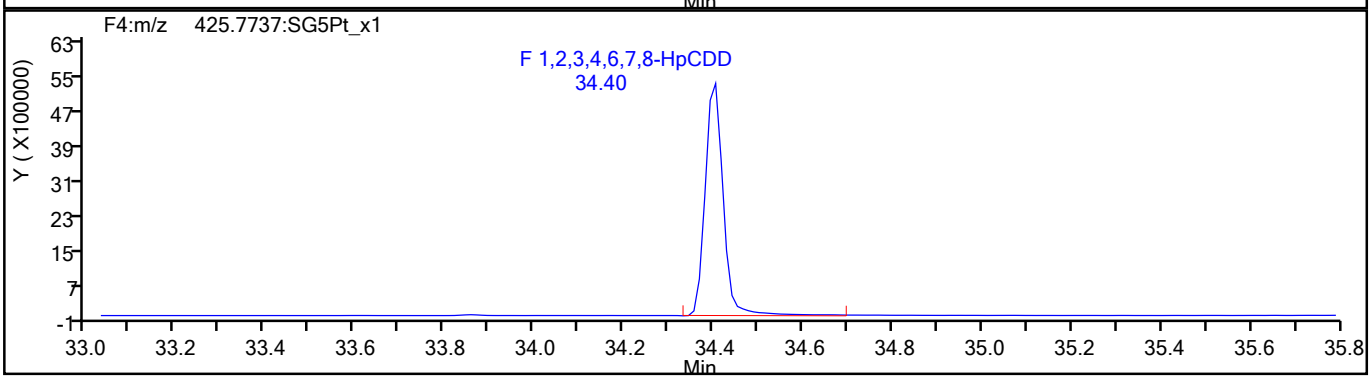

HpCDD Standards

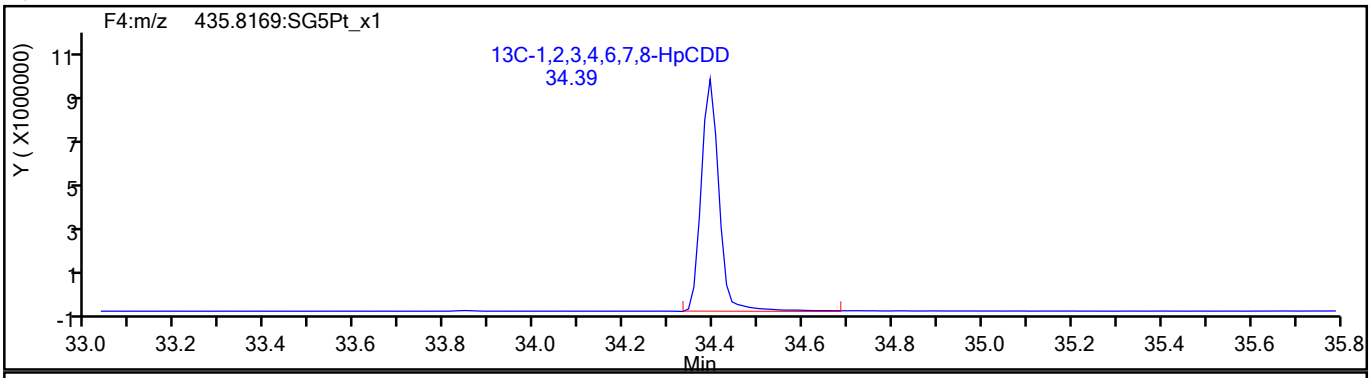

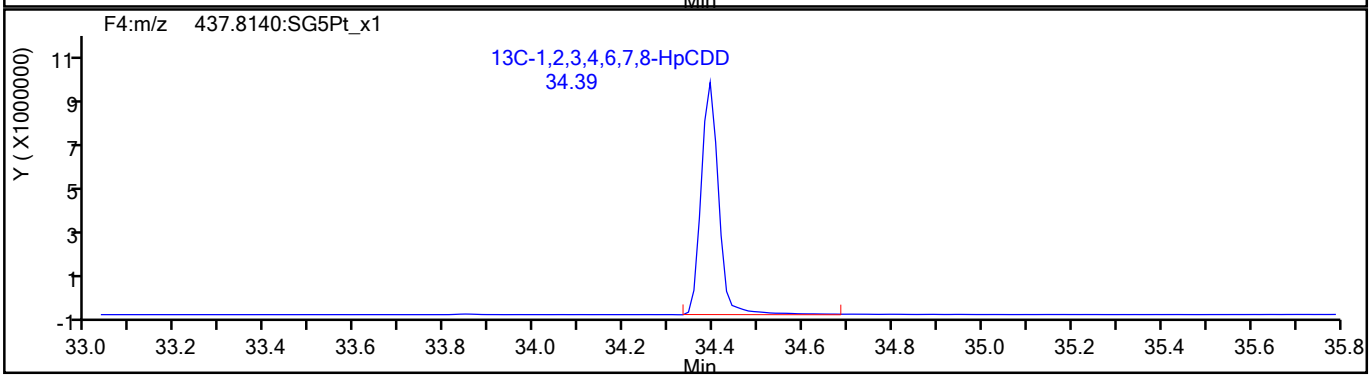

794053

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

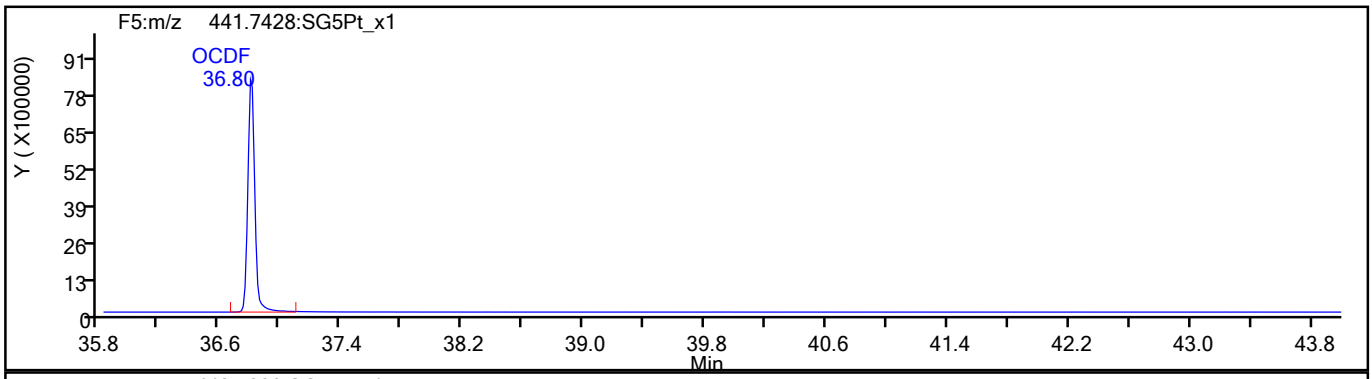

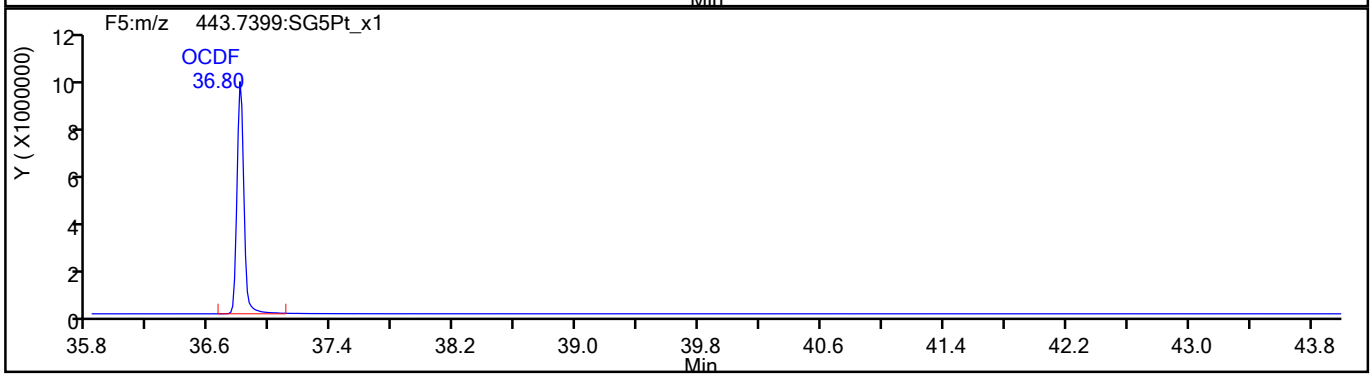

OCDF Standards

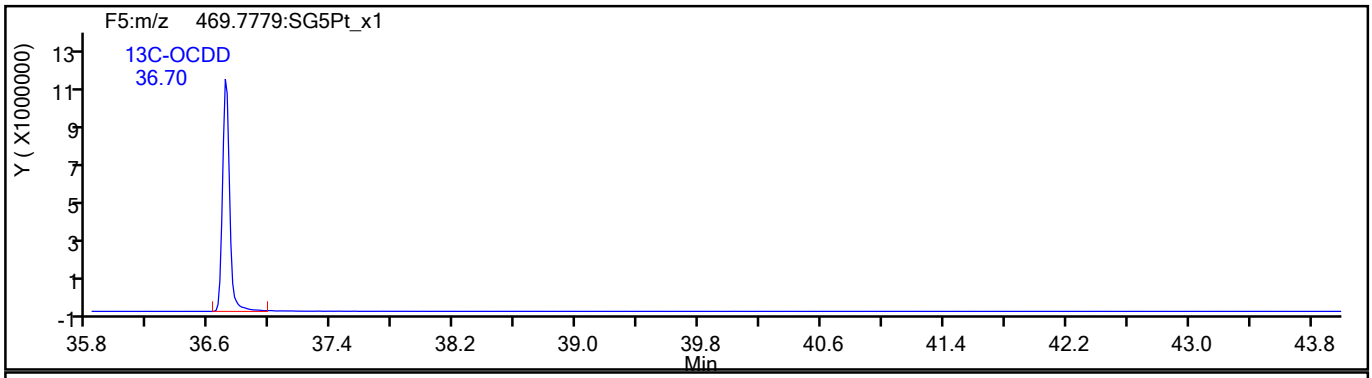

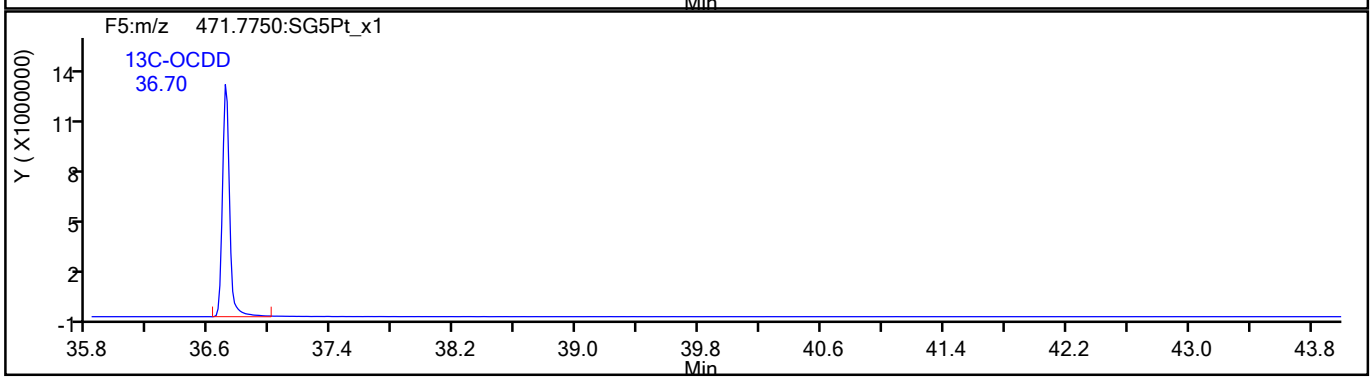

794054

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

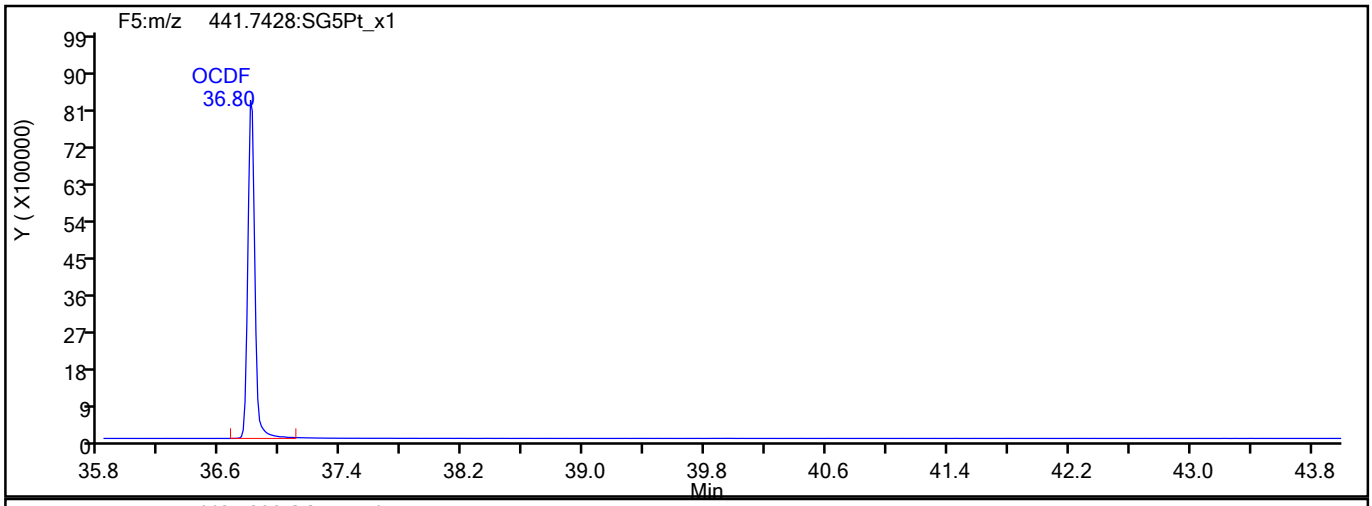

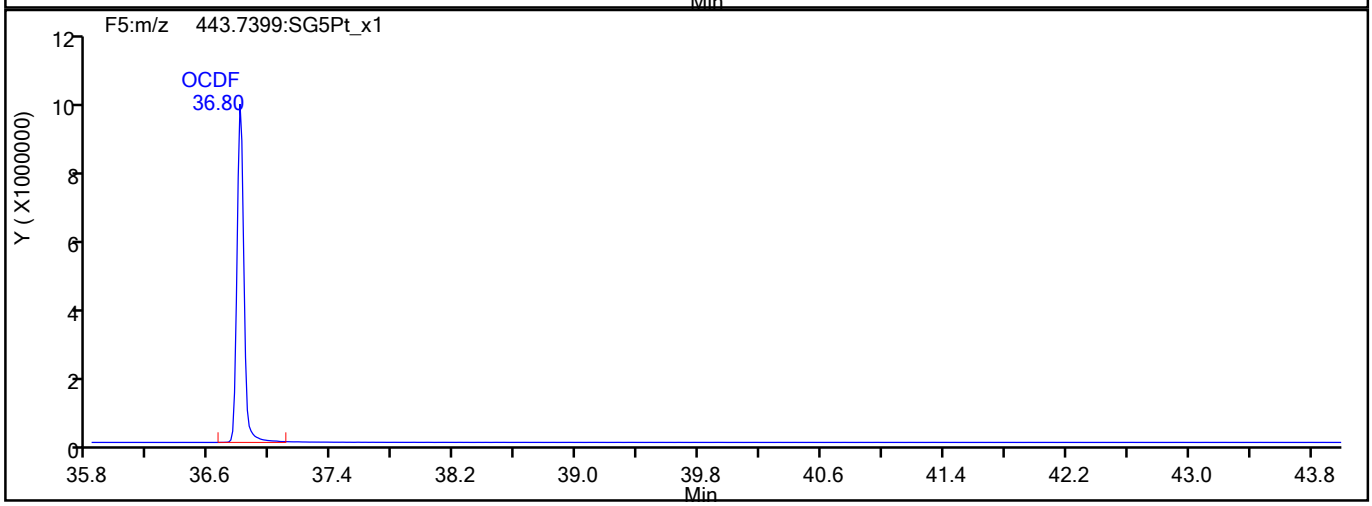

OCDF Interference Mass

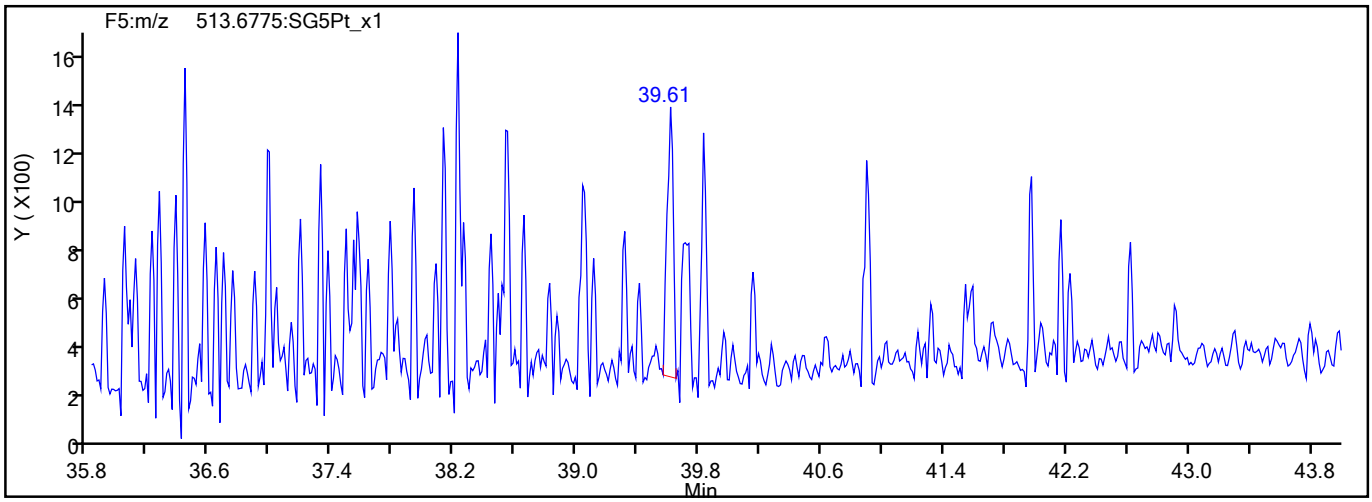

794055

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

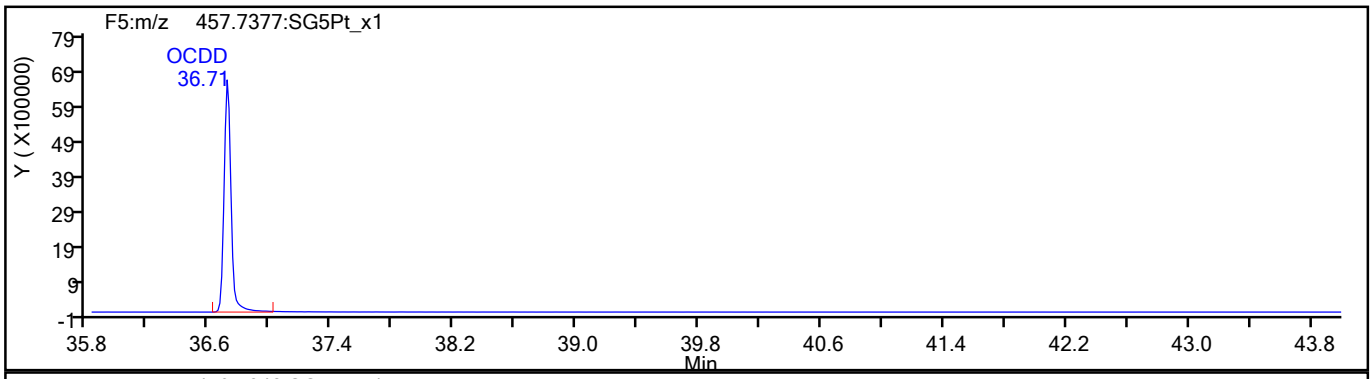

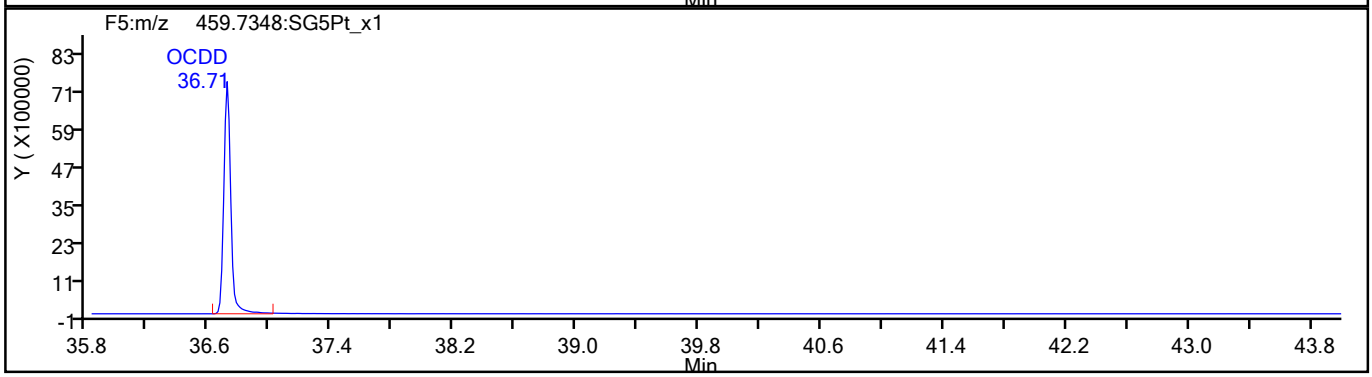

OCDD Standards

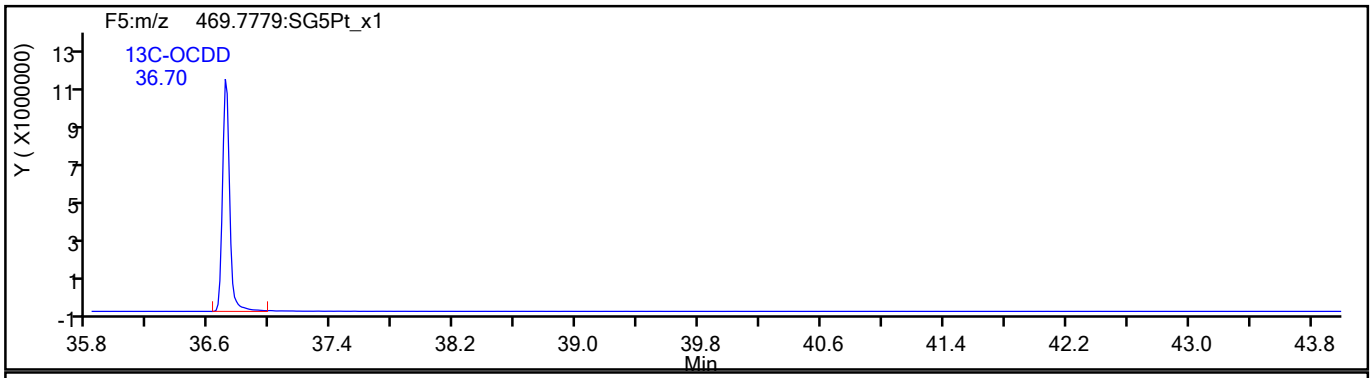

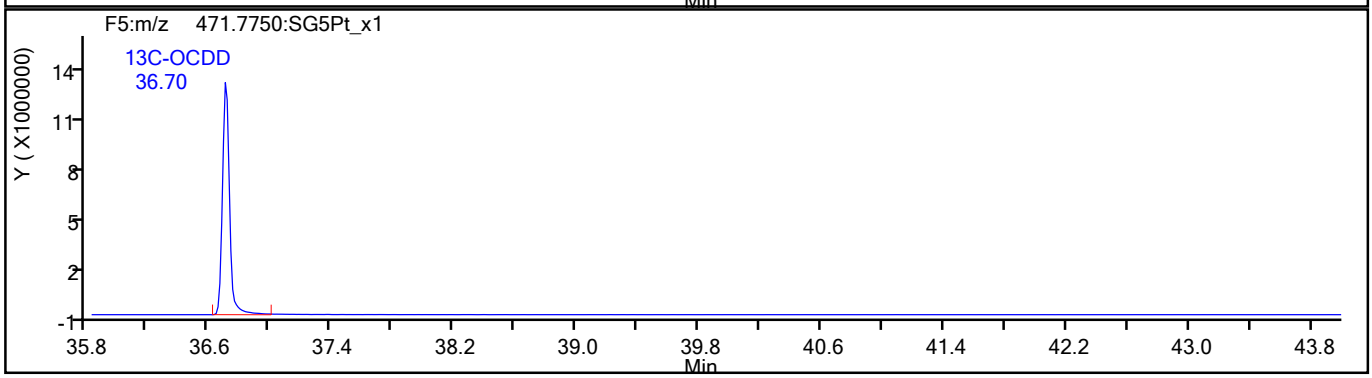

794056

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_2.d		
Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

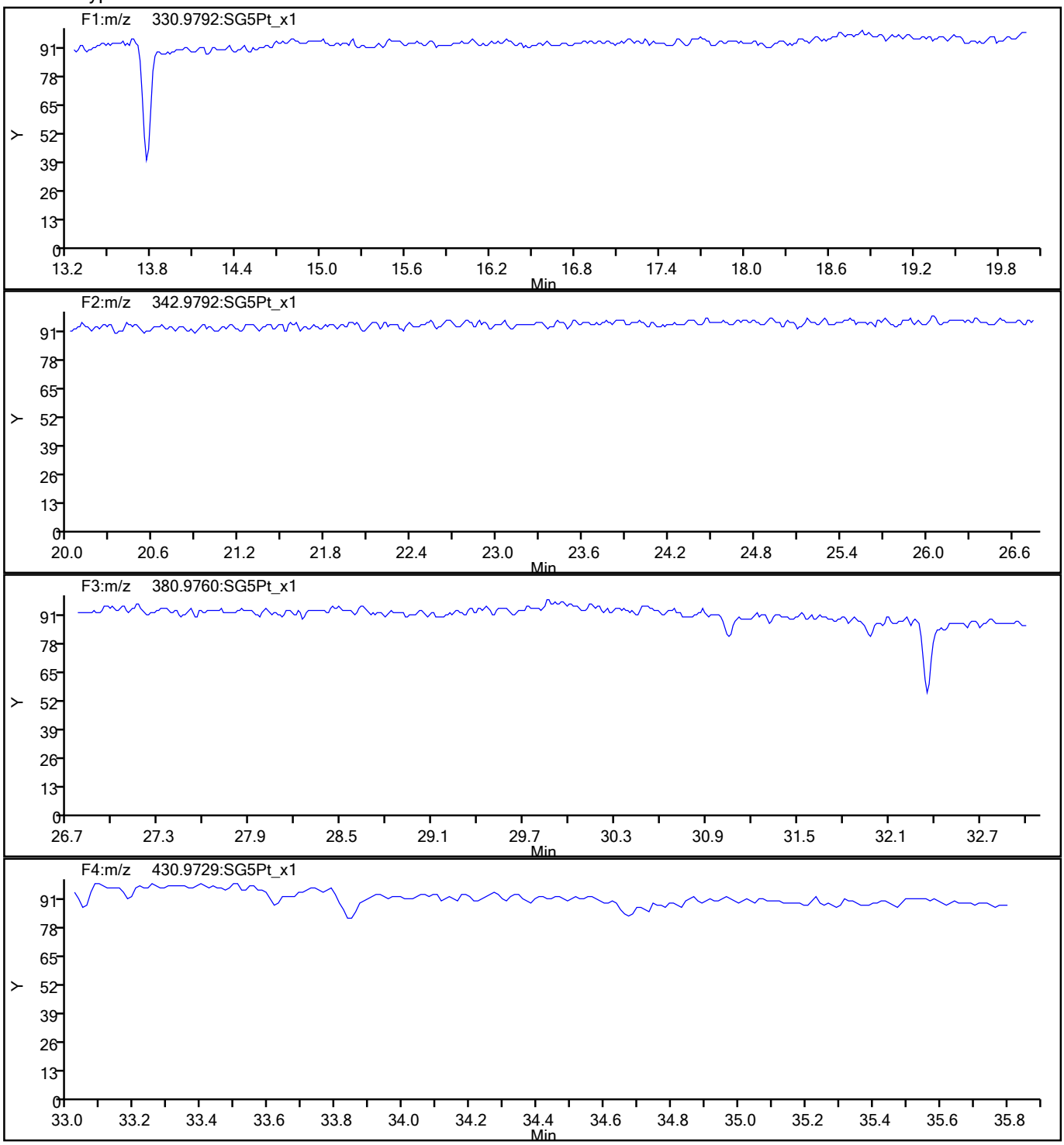

794057

Report Date: 26-Aug-2021 10:07:34 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 10:23:18	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

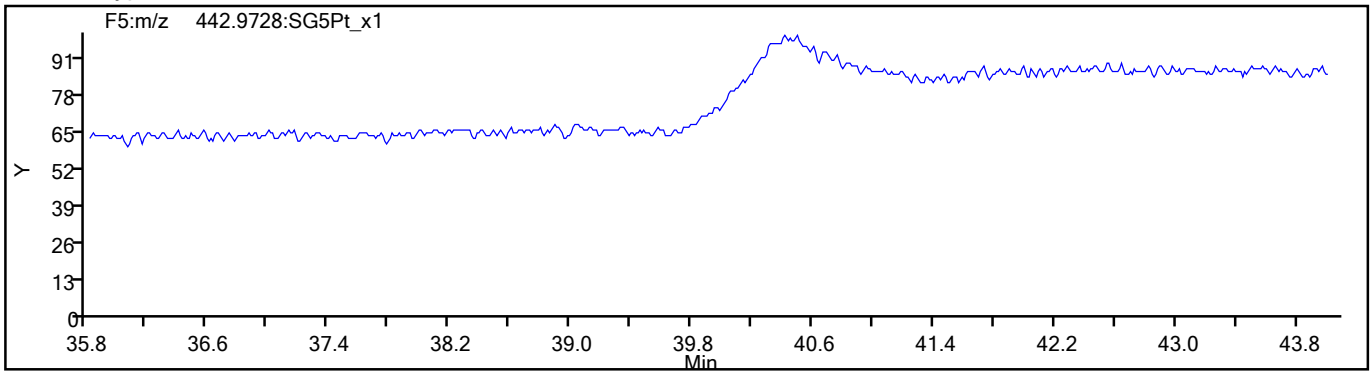

794058

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab Sample ID: CCV 320-519955/1 Calibration Date: 08/25/2021 20:40

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 25AU2110D5_15.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.028		10.0	10.0	100	84-120
2,3,7,8-TCDD	AveID	1.254	1.237		9.86	10.0	99	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.078		50.8	50.0	102	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.036		50.9	50.0	102	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.041		49.7	50.0	99	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.080		49.8	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.141		50.7	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.170		50.1	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.093		51.3	50.0	103	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.048		52.4	50.0	105	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.192		52.6	50.0	105	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.175		50.4	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.481		51.4	50.0	103	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.077		49.2	50.0	98	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.344		51.0	50.0	102	86-116
OCDD	AveID	1.107	1.116		101	100	101	79-126
OCDF	AveID	1.438	1.422		98.9	100	99	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.569		96.6	100	97	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9113		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.218		101	100	101	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.234		99.6	100	100	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8056		106	100	106	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.122		104	100	104	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.094		97.0	100	97	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.035		97.3	100	97	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.7668		105	100	105	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8242		93.6	100	94	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9731		101	100	101	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7189		93.0	100	93	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6450		99.6	100	100	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6363		90.8	100	91	77-129
13C-OCDD	Ave	0.4472	0.4804		215	200	107	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.184		10.7	10.0	107	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\25AU2110D5.SPL
Last Modified: Thursday, August 26, 2021 09:49:48 Pacific Daylight Time
Printed: Thursday, August 26, 2021 09:49:53 Pacific Daylight Time

Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	25AU2110D5_1	WDM HRDXNCP_00044	WDM 082521B	Tray01:1	Dioxin		SMA
2	25AU2110D5_2	CS-4 HRDXNL4_00099	CCV 082521	Tray01:2	Dioxin		SMA
3	25AU2110D5_3	MB 320-515492/1-A	MB 320-515492/1-A	Tray01:4	1613B/Solid	D270	SMA
4	25AU2110D5_4	LCS 320-515492/2-A	LCS 320-515492/2-A	Tray01:5	1613B/Solid	---	SMA
5	25AU2110D5_5	320-77214-A-1-A	320-77214-A-1-A	Tray01:6	1613B/Solid	---	SMA
6	25AU2110D5_6	320-77214-A-2-A	320-77214-A-2-A	Tray01:7	1613B/Solid		SMA
7	25AU2110D5_7	320-77214-A-2-B MS	320-77214-A-2-B MS	Tray01:8	1613B/Solid		SMA
8	25AU2110D5_8	320-77214-A-2-C MSD	320-77214-A-2-C MSD	Tray01:9	1613B/Solid	---	SMA
9	25AU2110D5_9	320-77214-A-3-A	320-77214-A-3-A	Tray01:10	1613B/Solid	---	SMA
10	25AU2110D5_10	320-77214-A-4-A	320-77214-A-4-A	Tray01:11	1613B/Solid		SMA
11	25AU2110D5_11	320-77214-A-5-A	320-77214-A-5-A	Tray01:15	1613B/Solid		SMA
12	25AU2110D5_12	320-77214-A-6-A	320-77214-A-6-A	Tray01:16	1613B/Solid		SMA
13	25AU2110D5_13	320-77214-A-7-A	320-77214-A-7-A	Tray01:17	1613B/Solid	---	SMA
14	25AU2110D5_14	SB Solvent Blank C-14	SB 082521	Tray01:3			SMA
15	25AU2110D5_15	CS-4 HRDXNL4_00099	CCV 082521A	Tray01:2	Dioxin		SMA
16	25AU2110D5_16	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
17	25AU2110D5_17	SB Solvent Blank C-14	SB 082521A	Tray01:3			SMA
18	25AU2110D5_18	320-77214-A-8-A	320-77214-A-8-A	Tray01:29	1613B/Solid	D270	SMA
19	25AU2110D5_19	320-77214-A-9-A	320-77214-A-9-A	Tray01:30	1613B/Solid		SMA
20	25AU2110D5_20	320-77214-A-13-A	320-77214-A-13-A	Tray01:31	1613B/Solid		SMA
21	25AU2110D5_21	320-77292-A-1-A	320-77292-A-1-A	Tray01:32	1613B/Solid		SMA
22	25AU2110D5_22	320-77292-A-2-A	320-77292-A-2-A	Tray01:33	1613B/Solid		SMA
23	25AU2110D5_23	320-77292-A-2-B MS	320-77292-A-2-B MS	Tray01:34	1613B/Solid		SMA
24	25AU2110D5_24	320-77292-A-2-C MSD	320-77292-A-2-C MSD	Tray01:35	1613B/Solid		SMA
25	25AU2110D5_25	320-77292-A-3-A	320-77292-A-3-A	Tray01:36	1613B/Solid		SMA
26	25AU2110D5_26	320-77292-A-4-A	320-77292-A-4-A	Tray01:37	1613B/Solid		SMA
27	25AU2110D5_27	320-77292-A-5-A	320-77292-A-5-A	Tray01:38	1613B/Solid		SMA
28	25AU2110D5_28	SB Solvent Blank C-14	SB 082521B	Tray01:3			SMA
29	25AU2110D5_29	CS-4 HRDXNL4_00099	CCV 082521B	Tray01:2	Dioxin		SMA
30	25AU2110D5_30	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
31	25AU2110D5_31	SB Solvent Blank C-14	SB 082521C	Tray01:3			SMA
32	25AU2110D5_32	320-77292-A-6-A	320-77292-A-6-A	Tray01:43	1613B/Solid	D270	SMA
33	25AU2110D5_33	320-77292-A-7-A	320-77292-A-7-A	Tray01:44	1613B/Solid		SMA
34	25AU2110D5_34	320-77292-A-8-A	320-77292-A-8-A	Tray01:45	1613B/Solid		SMA
35	25AU2110D5_35	320-77292-A-9-A	320-77292-A-9-A	Tray01:46	1613B/Solid		SMA
36	25AU2110D5_36	320-77292-A-13-A	320-77292-A-13-A	Tray01:47	1613B/Solid		SMA
37	25AU2110D5_37	400-206693-C-22-A	400-206693-C-22-A	Tray01:48	1613B/Solid		SMA
38	25AU2110D5_38	400-206693-C-36-A	400-206693-C-36-A	Tray01:49	1613B/Solid		SMA
39	25AU2110D5_39	400-206693-C-37-A	400-206693-C-37-A	Tray01:50	1613B/Solid		SMA
40	25AU2110D5_40	400-206693-C-38-A	400-206693-C-38-A	Tray01:51	1613B/Solid		SMA
41	25AU2110D5_41	400-206693-C-39-A	400-206693-C-39-A	Tray01:52	1613B/Solid		SMA
42	25AU2110D5_42	SB Solvent Blank C-14	SB 082521D	Tray01:3			SMA
43	25AU2110D5_43	CS-4 HRDXNL4_00099	CCV 082521C	Tray01:2	Dioxin		SMA
44	25AU2110D5_44	WDM HRDXNCP_00044	WDM 082521C	Tray01:1	Dioxin	---	SMA
45	25AU2110D5_45	SB Solvent Blank C-14	SB 082521E	Tray01:3			SMA

LOGFILE CHECKED
DB 8/26/21

794060

Sample Size	Units	MS File	Inlet File	Inject Volume	Process
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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10.000000	g	DIOXIN10D5NEW	DIOXINNOGC	2.000000	FBAT_ML_FileMover
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1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
1.000000		DIOXIN10D5NEW	DIOXINNOGC	2.000000	ResolutionCheck
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---	---	C:\CHROM
---	---	C:\CHROM
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
C:\Masslynx\Autospec\dioxinrescheck.dat	Ignore Error	---
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M 292.9824_R 11547

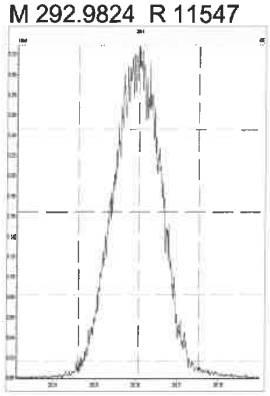

M 304.9824_R 11798

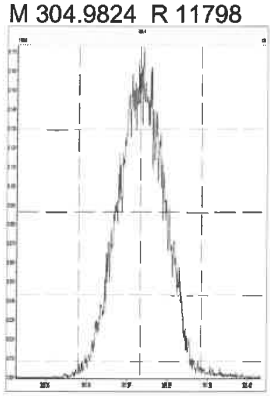

M 318.9792_R 11792

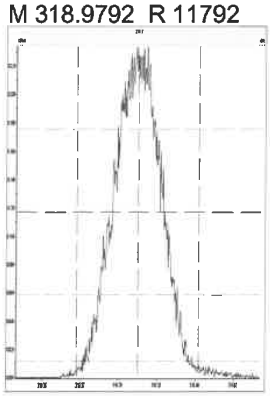

M 330.9792_R 11497

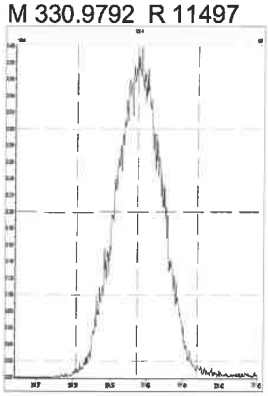

M 342.9792_R 11767

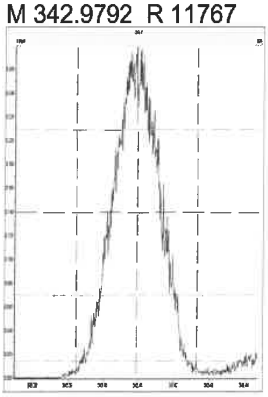

M 354.9792_R 11852

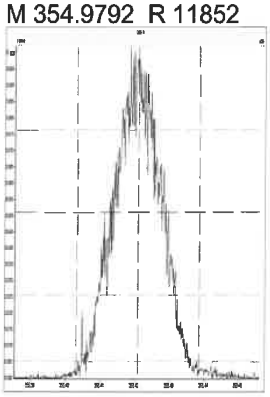

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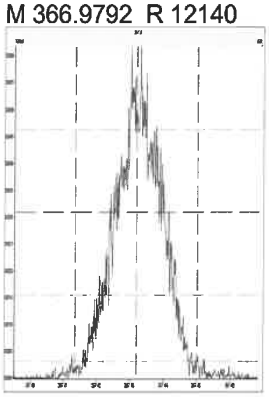

M 380.9760_R 11995

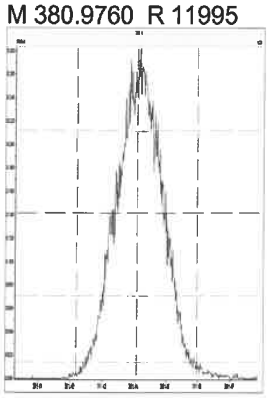

M 392.9760_R 11657

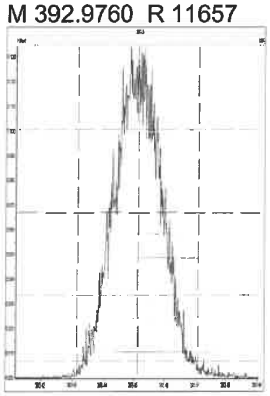

M 404.9760_R 11934

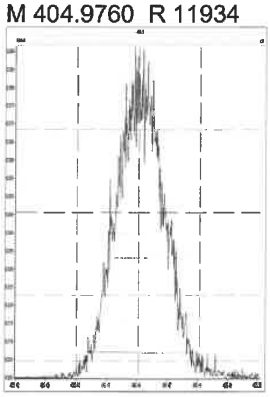

M 416.9760_R 12724

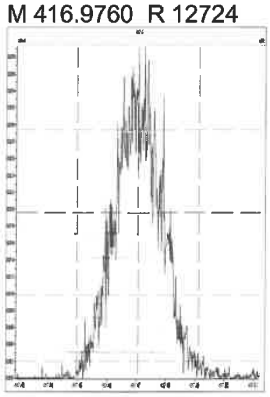

M 318.9792_R 12048

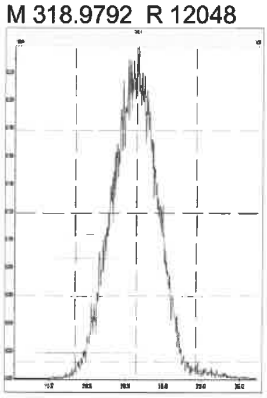

M 330.9792_R 11709

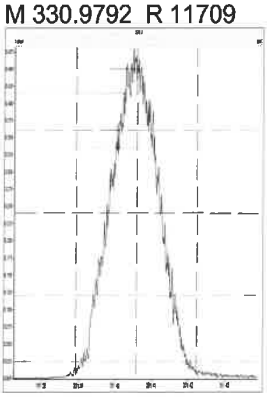

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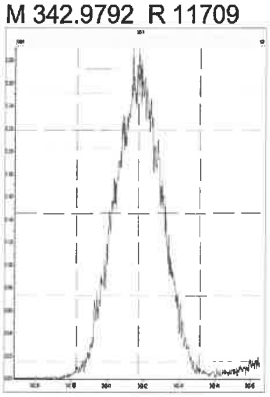

M 354.9792_R 12107

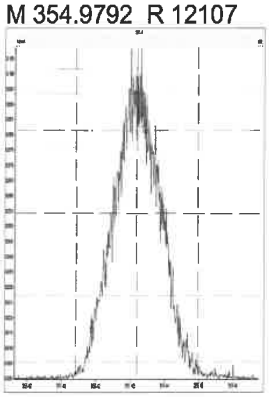

M 366.9792_R 12315

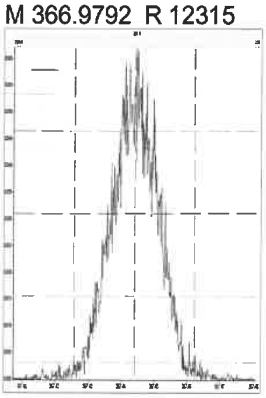

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M 380.9760 R 11848

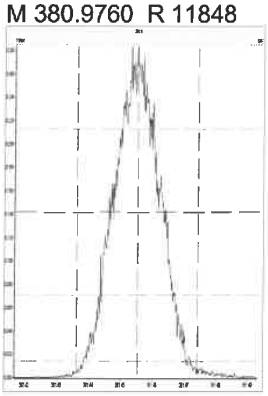

M 392.9760 R 11536

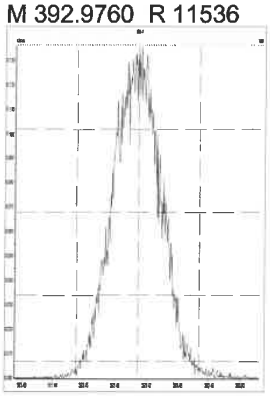

M 404.9760 R 12029

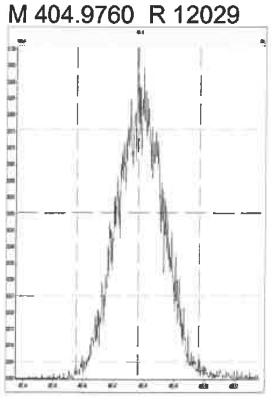

M 416.9760 R 12452

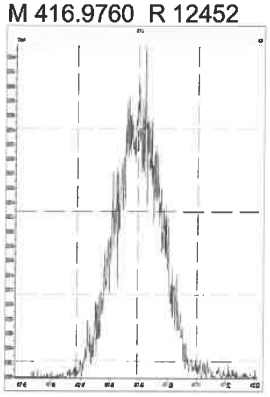

M 366.9792 R 11494

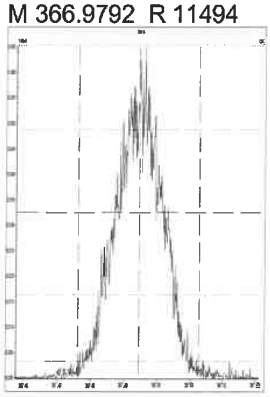

M 380.9760 R 11848

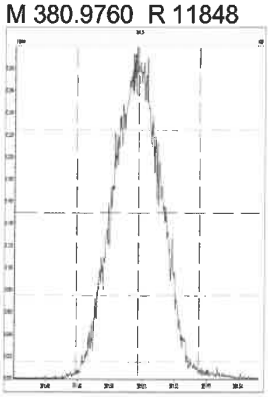

M 392.9760 R 12081

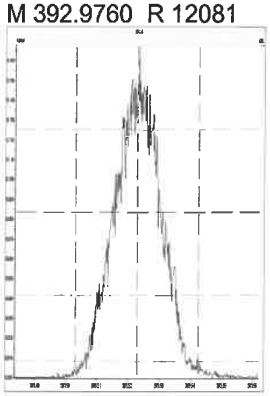

M 404.9760 R 11950

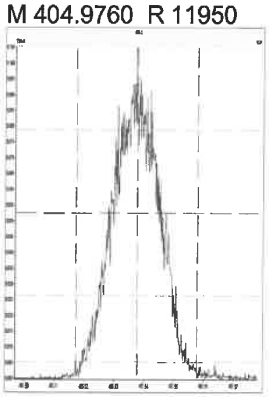

M 416.9760 R 13340

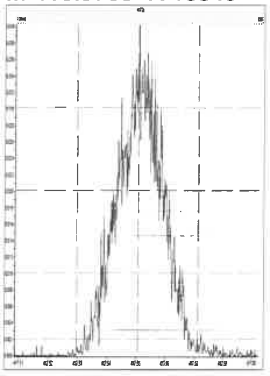

M 430.9728 R 11684

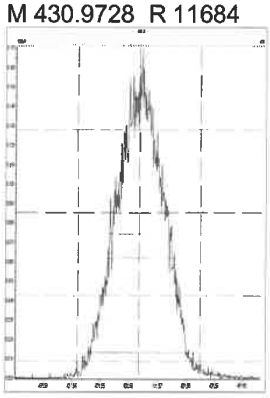

M 442.9728 R 12170

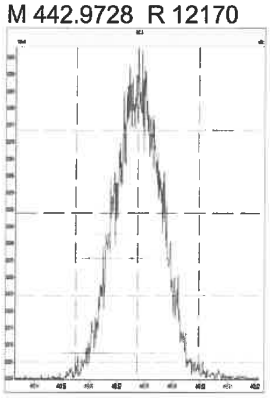

M 454.9728 R 11848

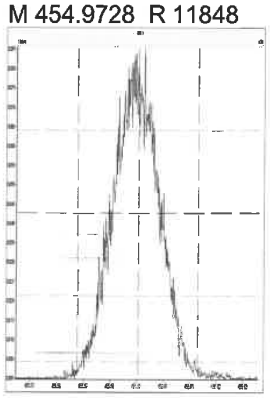

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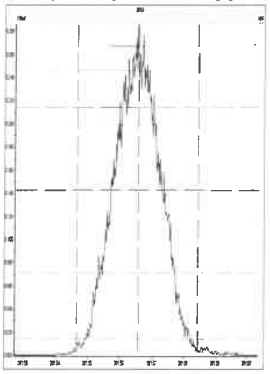

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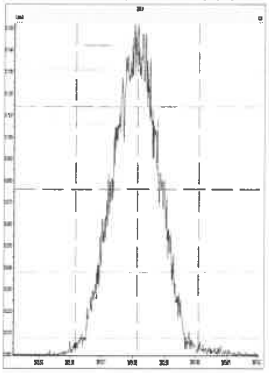

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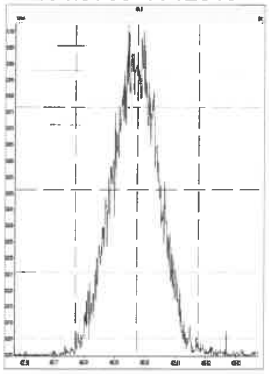

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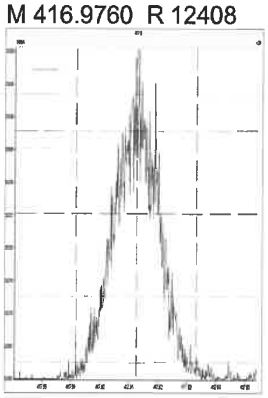

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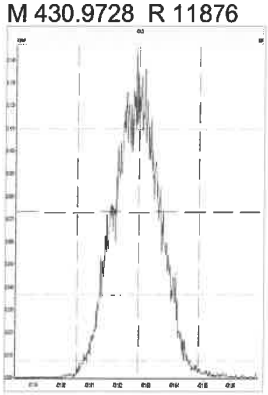

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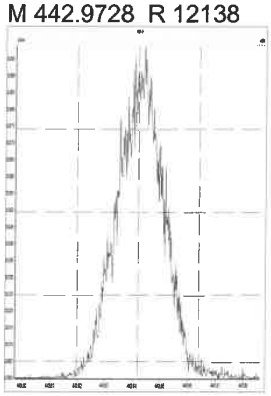

M 454.9728_R 12077

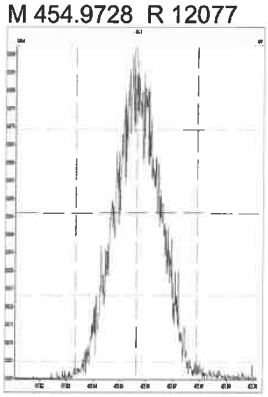

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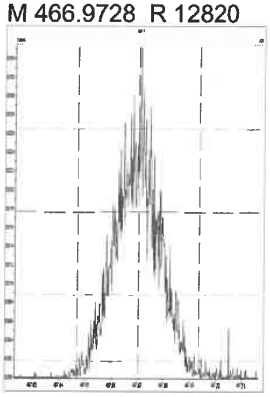

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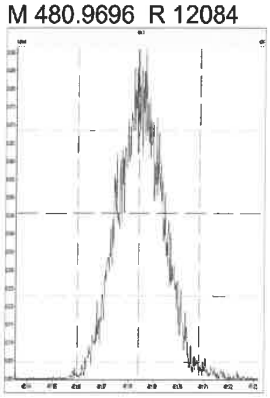

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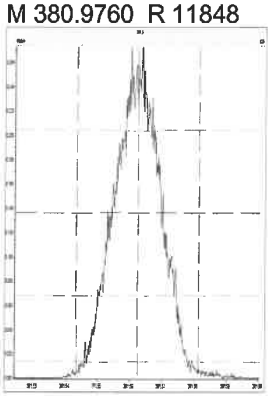

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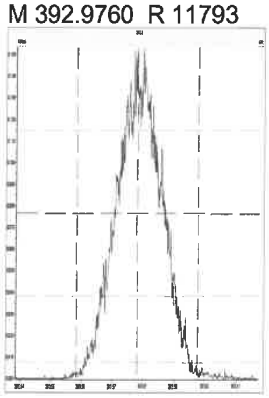

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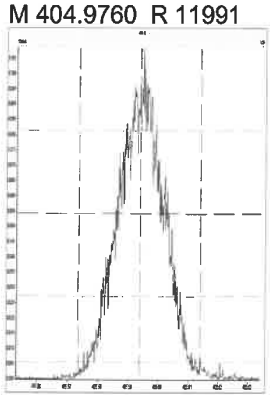

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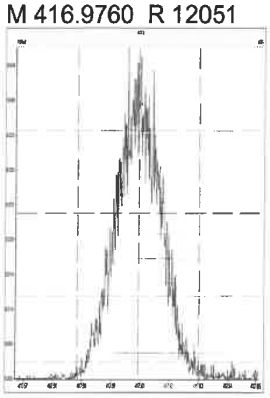

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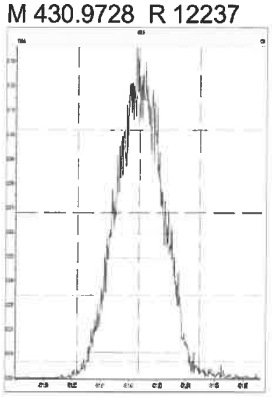

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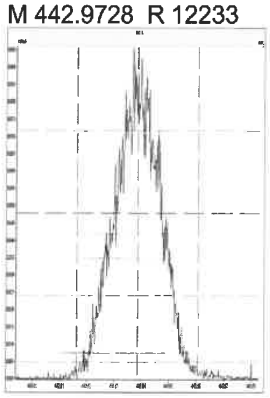

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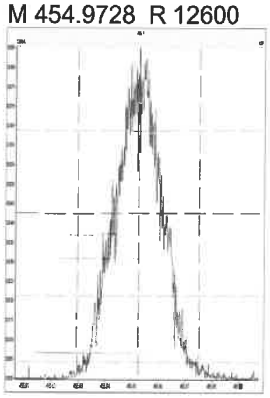

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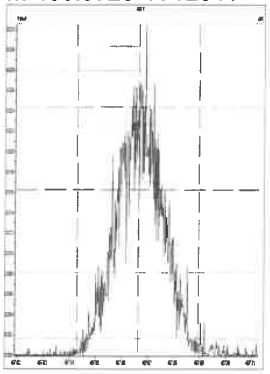

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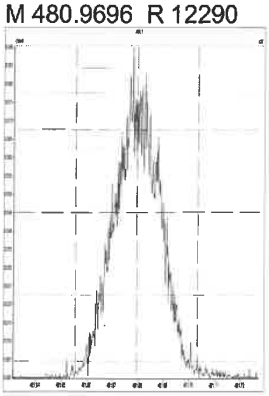

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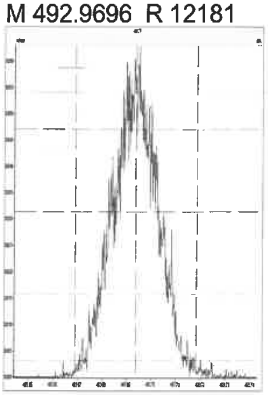

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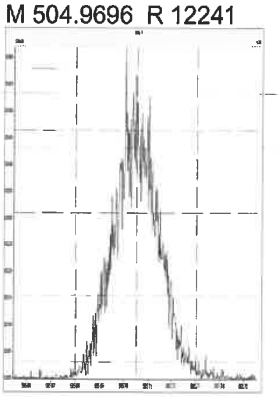

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M 516.9697_R 13409

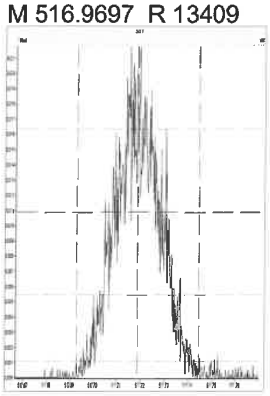

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M 292.9824 R 11393

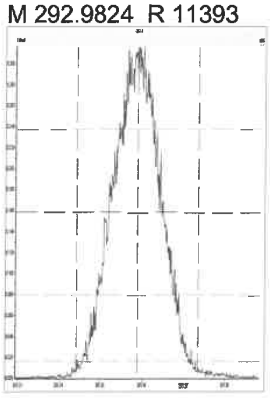

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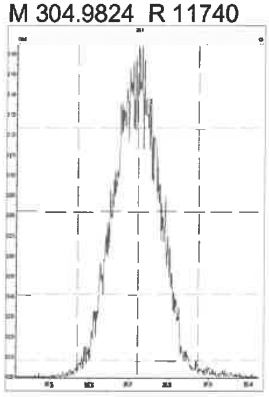

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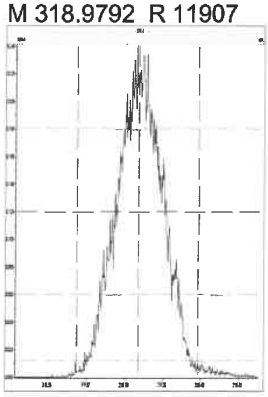

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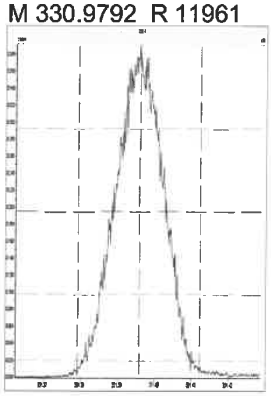

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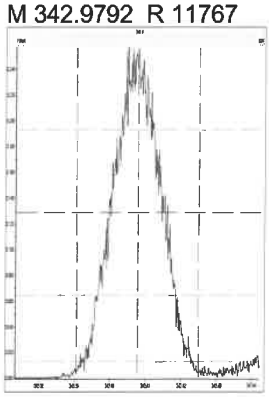

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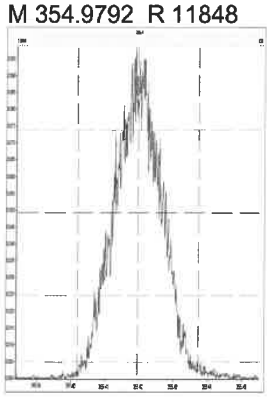

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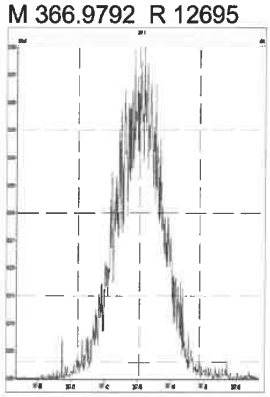

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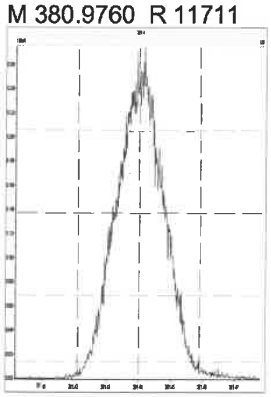

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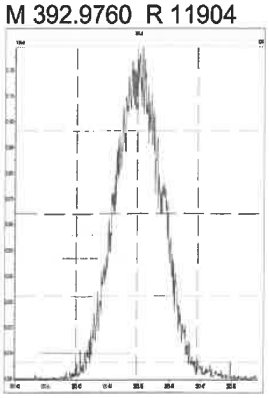

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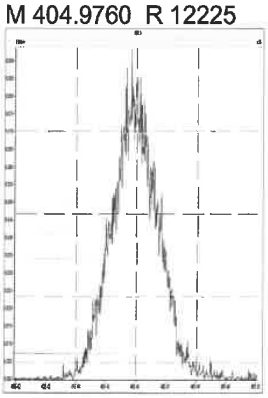

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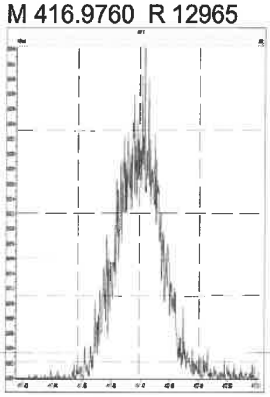

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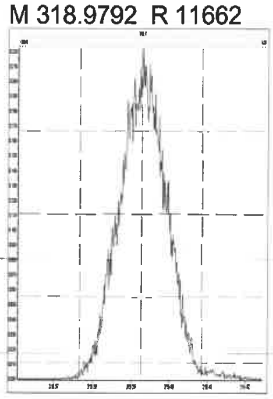

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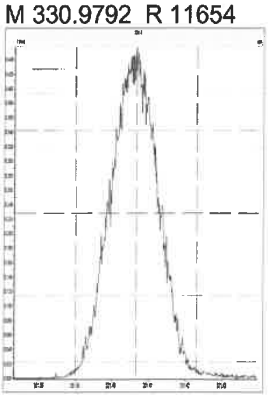

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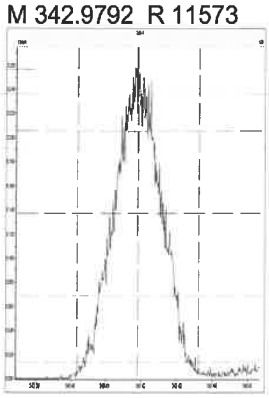

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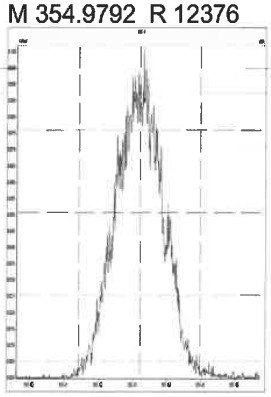

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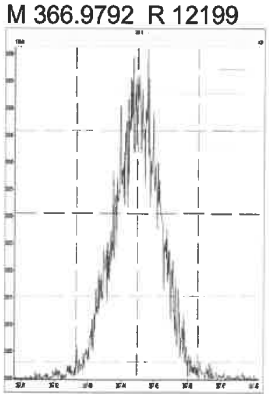

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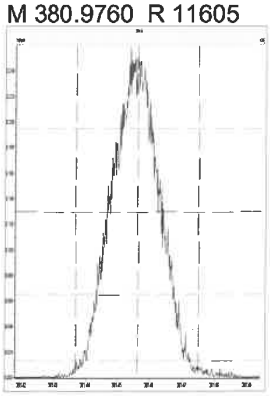

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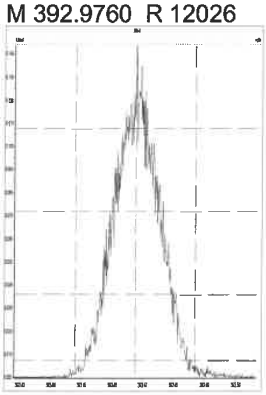

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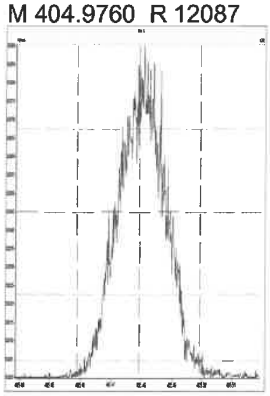

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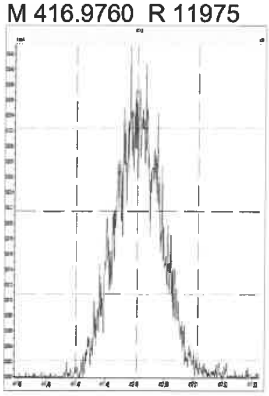

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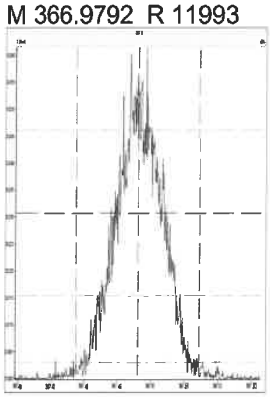

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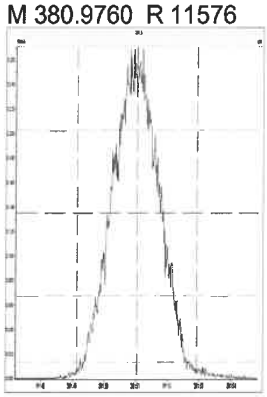

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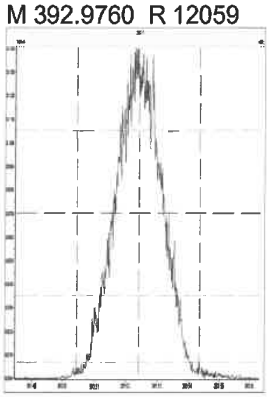

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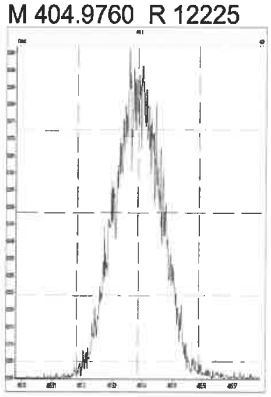

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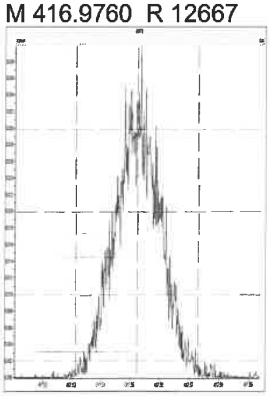

M 430.9728 R 11737

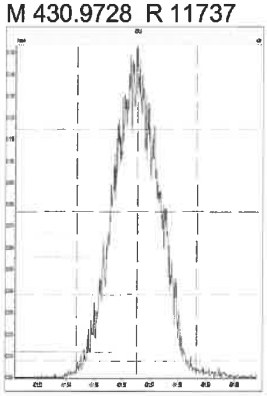

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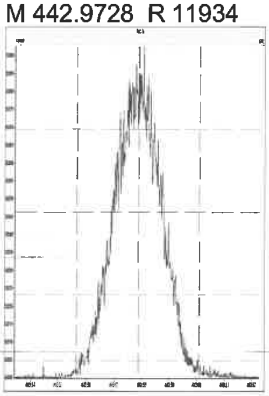

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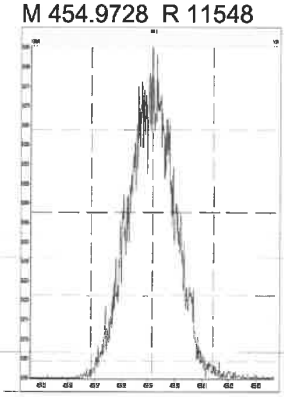

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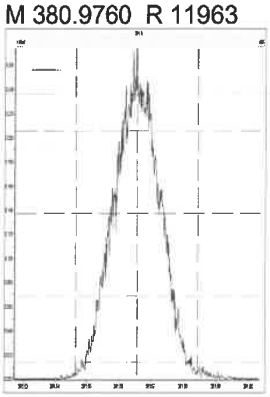

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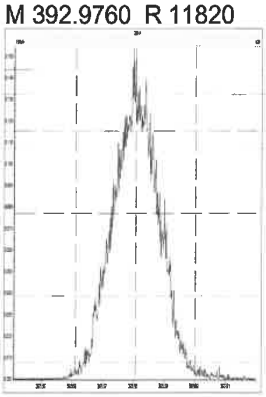

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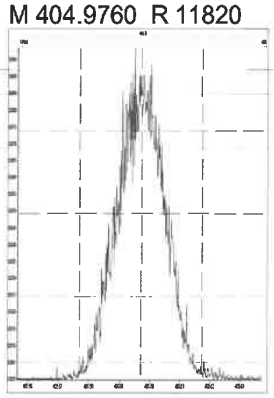

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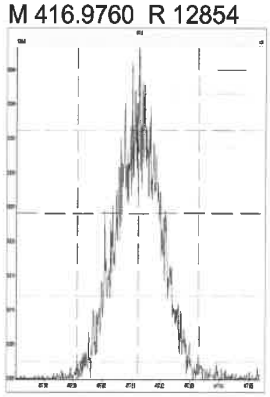

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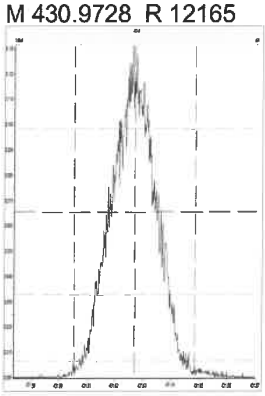

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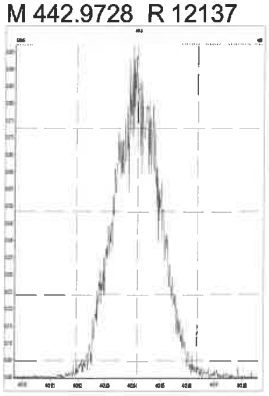

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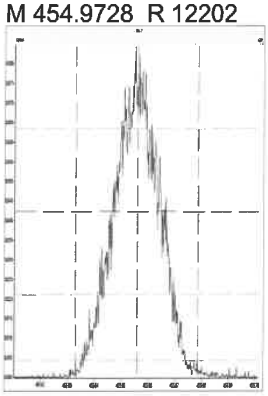

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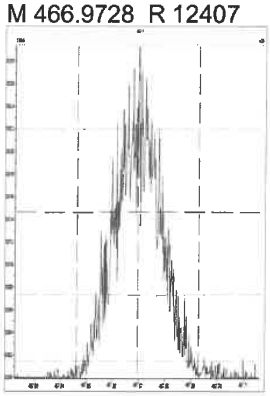

M 480.9696 R 11794

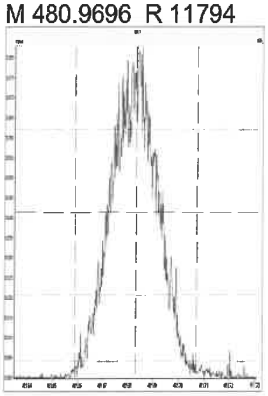

M 380.9760 R 11764

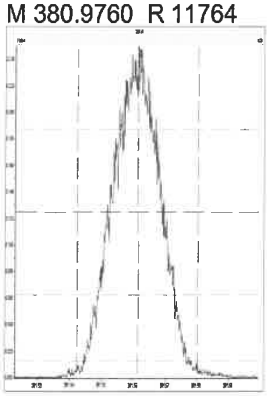

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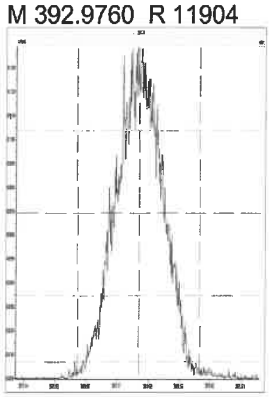

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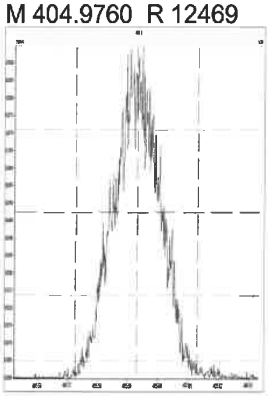

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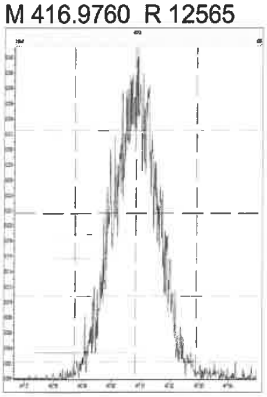

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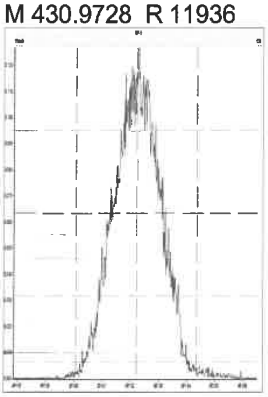

M 442.9728 R 12142

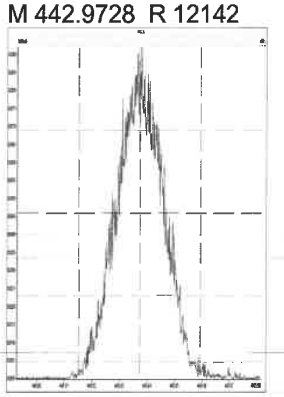

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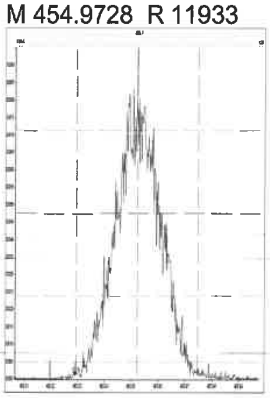

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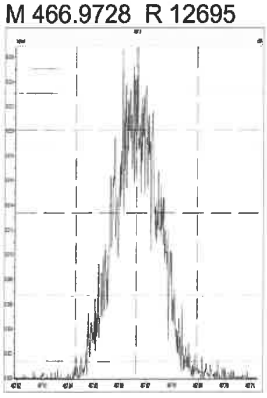

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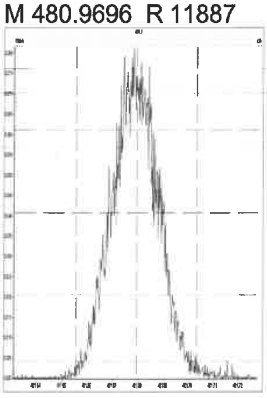

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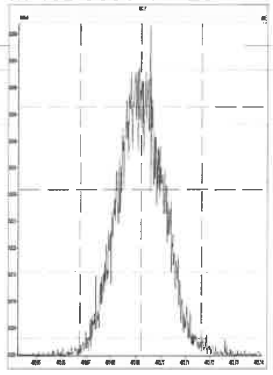

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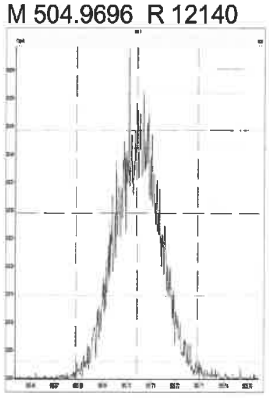

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M 516.9697_R 13782

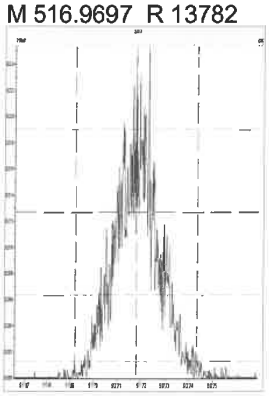

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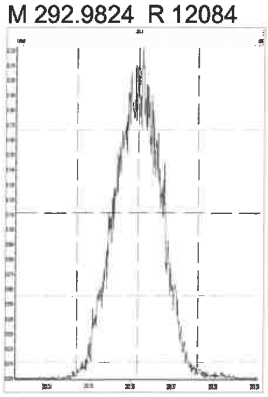

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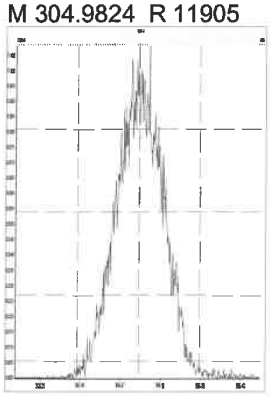

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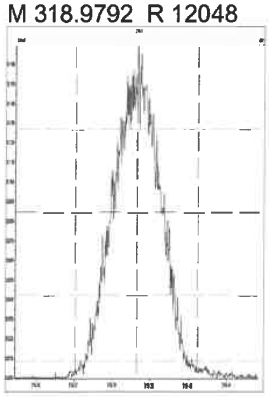

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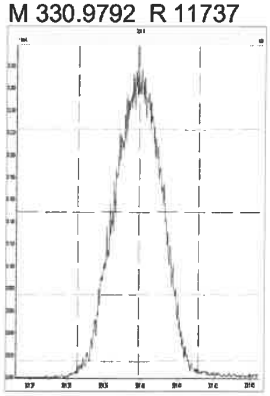

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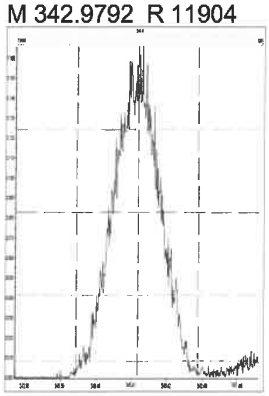

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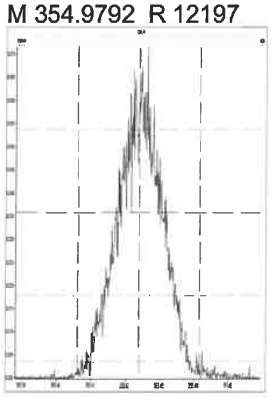

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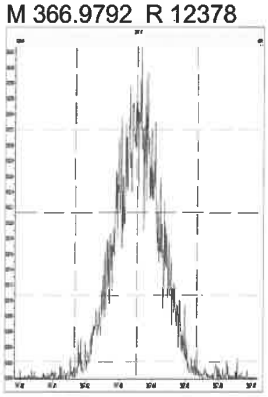

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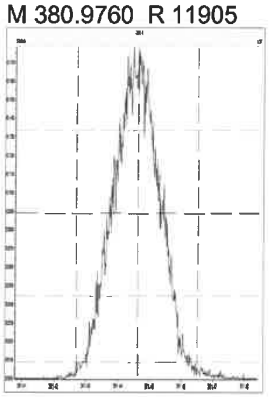

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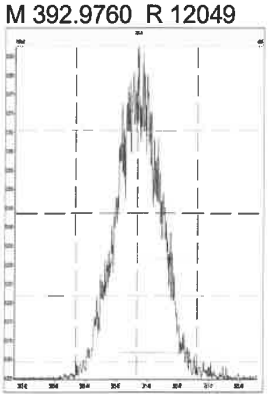

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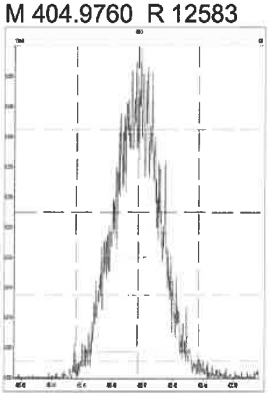

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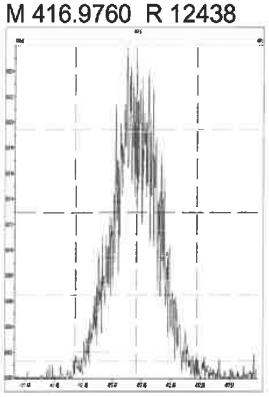

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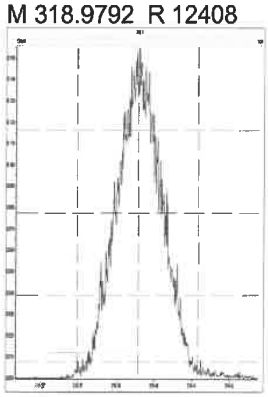

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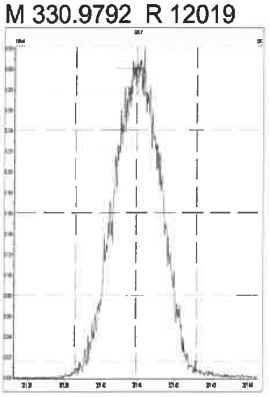

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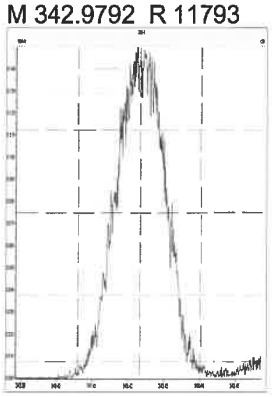

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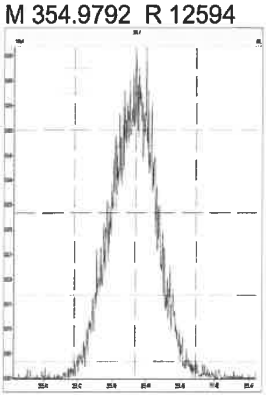

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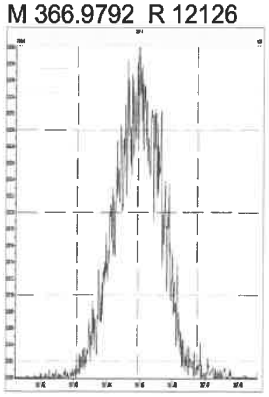

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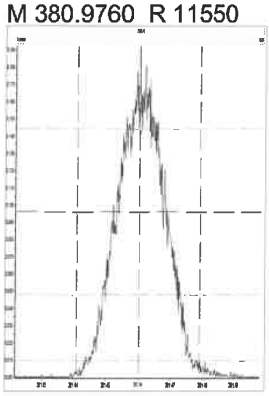

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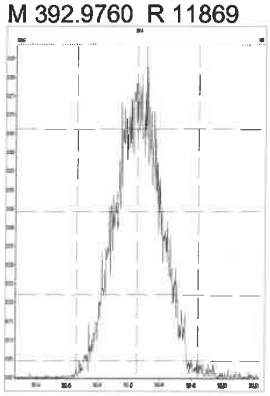

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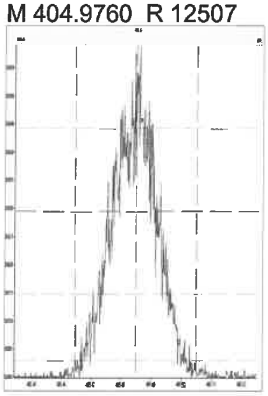

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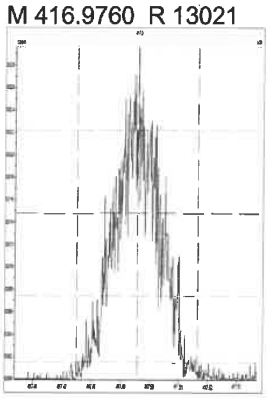

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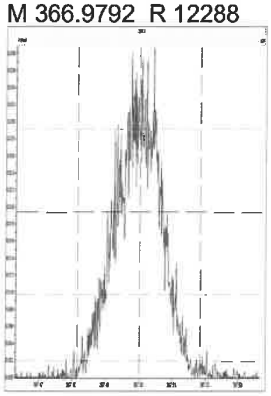

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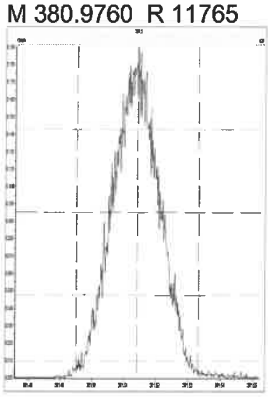

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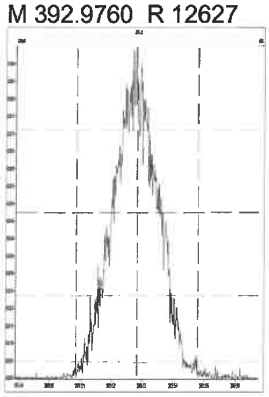

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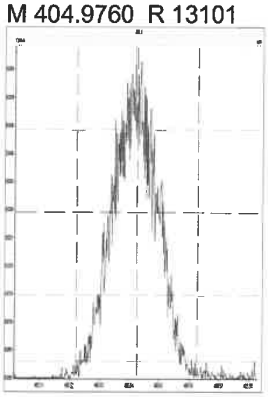

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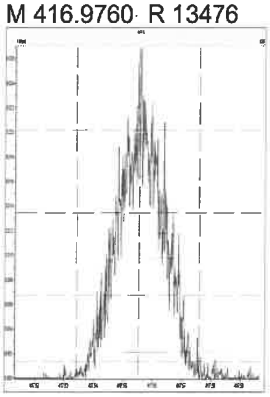

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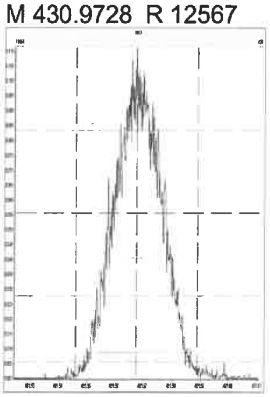

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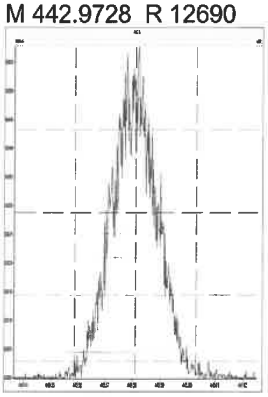

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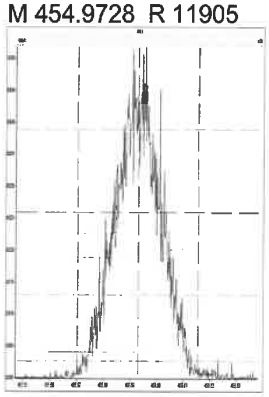

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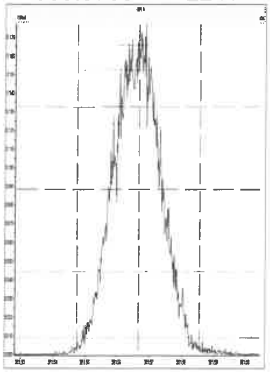

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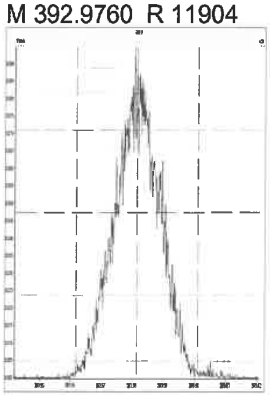

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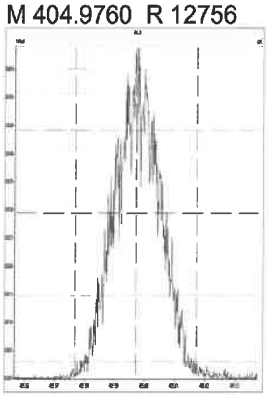

M 416.9760 R 12019

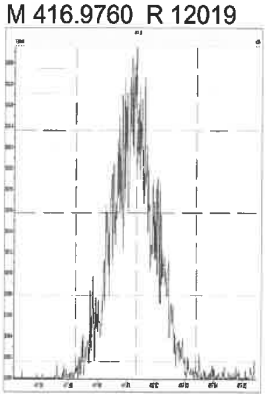

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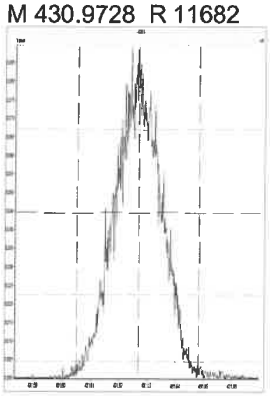

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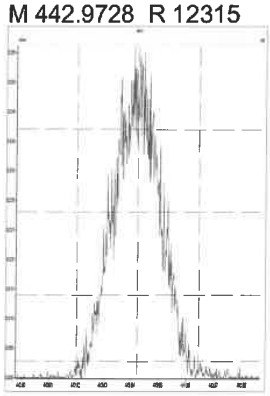

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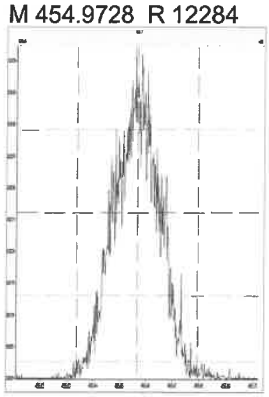

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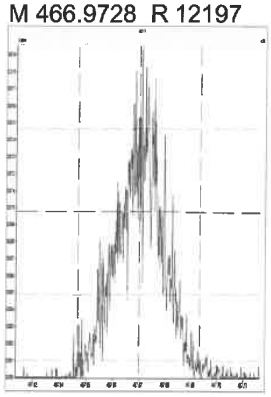

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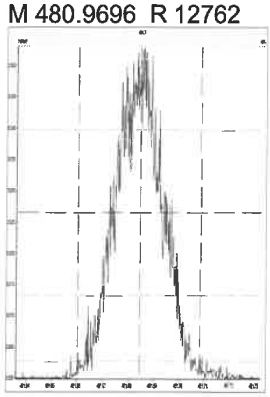

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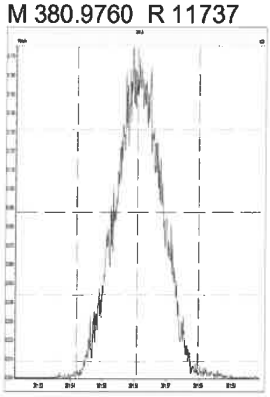

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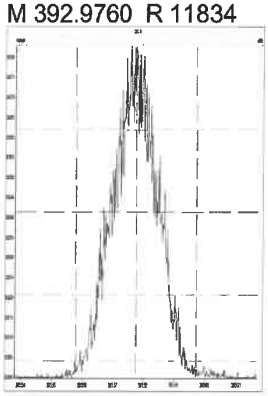

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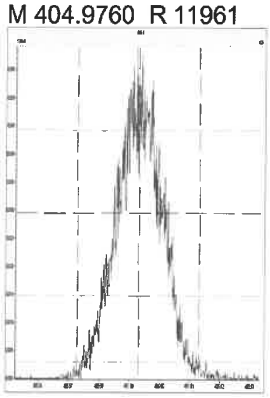

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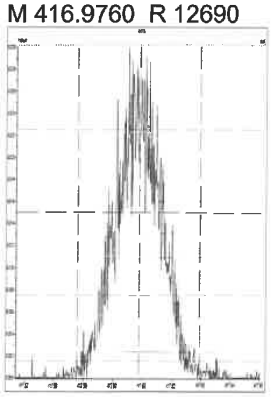

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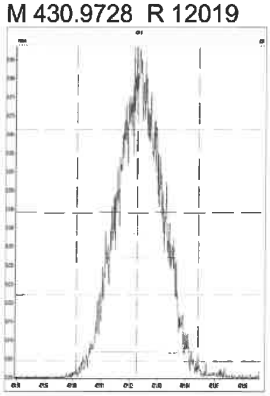

M 442.9728 R 12665

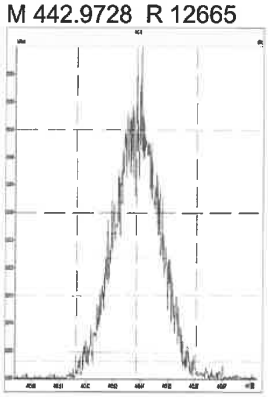

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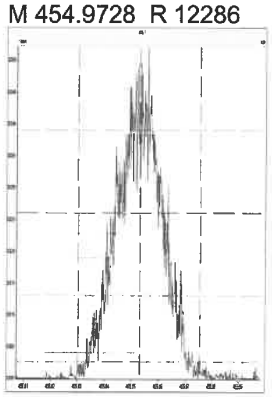

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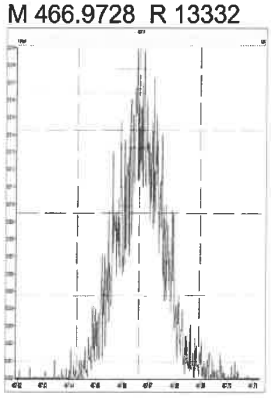

M 480.9696 R 12938

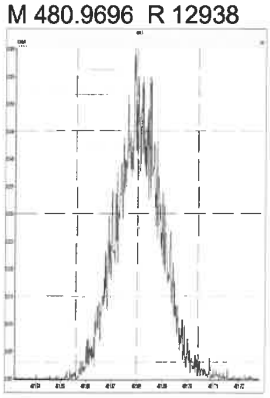

M 492.9696 R 12854

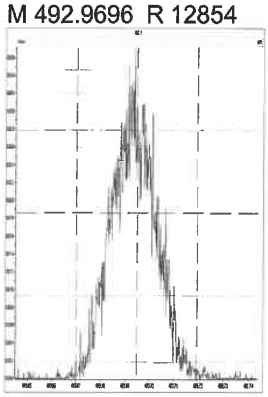

M 504.9696 R 12255

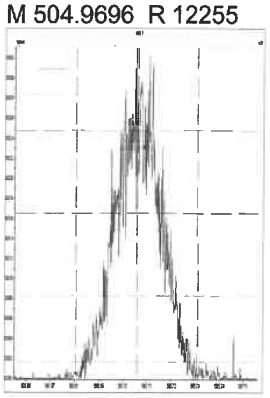

Printed: Thursday, August 26, 2021 06:45:41 Pacific Daylight Time

M 516.9697 R 14214

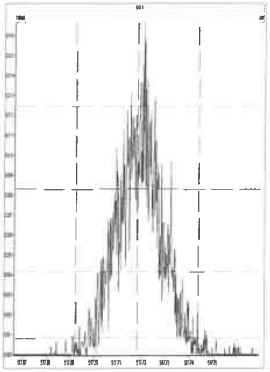

794074

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 20:40:41 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521A CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:47:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 10:34:44

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	114162124	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	179170031	0.77	1.6249	96.6	96.6	0.1661	0.1661	96.59	
2,3,7,8-TCDF	17.114	18424700	0.76	1.0239	10.0	10.0	0.0163	0.0163	100	
A Non-2,3,7,8-sub-TCDF	17.076						0.0163	0.0163		Rn
S Total TCDF					10.0	10.0	0.0163	0.0163		
D 13C-2,3,7,8-TCDD	17.794	104038414	0.79	0.8993	101.3	101.3	0.1008	0.1008	101	
2,3,7,8-TCDD	17.809	12869222	0.79	1.2541	9.863	9.863	0.0130	0.0130	98.63	
$ 37Cl4-2,3,7,8-TCDD	17.809	13512459		1.1071	10.7	10.7	0.0128	0.0128	107	
A Non-2,3,7,8-sub-TCDD	17.530						0.0130	0.0130		
S Total TCDD					9.863	9.863	0.0130	0.0130		
D 13C-1,2,3,7,8-PeCDF	22.020	139045231	1.55	1.2101	100.7	100.7	0.1276	0.1276	101	
1,2,3,7,8-PeCDF	22.047	74923542	1.58	1.0611	50.8	50.8	0.0907	0.0907	102	
D 13C-2,3,4,7,8-PeCDF	23.343	140922707	1.54	1.2395	99.6	99.6	0.1246	0.1246	99.59	
2,3,4,7,8-PeCDF	23.370	73012473	1.57	1.0184	50.9	50.9	0.1016	0.1016	102	
A F1 PeCDFs	19.851						0.009195	0.009195		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0959	0.0959		n
S Total PeCDF					101.7	101.7	0.0962	0.0962		
D 13C-1,2,3,7,8-PeCDD	24.052	91963618	1.60	0.7612	105.8	105.8	0.0778	0.0778	106	
1,2,3,7,8-PeCDD	24.079	47886998	1.59	1.0484	49.7	49.7	0.0368	0.0368	99.33	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0368	0.0368		
S Total PeCDD					49.7	49.7	0.0368	0.0368		
D 13C-1,2,3,4,7,8-HxCDF	30.186	119996593	0.52	1.0837	103.5	103.5	0.2311	0.2311	104	
1,2,3,4,7,8-HxCDF	30.212	64814583	1.21	1.0851	49.8	49.8	0.1720	0.1720	99.55	
D 13C-1,2,3,6,7,8-HxCDF	30.399	117007399	0.53	1.1279	97.0	97.0	0.2220	0.2220	96.99	
1,2,3,6,7,8-HxCDF	30.412	66745854	1.21	1.1260	50.7	50.7	0.1618	0.1618	101	
D 13C-2,3,4,6,7,8-HxCDF	31.291	110727855	0.53	1.0637	97.3	97.3	0.2354	0.2354	97.32	
2,3,4,6,7,8-HxCDF	31.317	64797217	1.22	1.1675	50.1	50.1	0.1207	0.1207	100	
D 13C-1,2,3,7,8,9-HxCDF	32.142	104082078	0.52	0.9676	100.6	100.6	0.2588	0.2588	101	
1,2,3,7,8,9-HxCDF	32.156	61173374	1.21	1.1664	50.4	50.4	0.1129	0.1129	101	
A Non-2,3,7,8-sub-HxCDF	30.331						0.1379	0.1379		

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					201.0	201.0	0.1419	0.1419		
* 13C-1,2,3,7,8,9-HxCDD	31.956	106956569	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.503	82011748	1.25	0.7334	104.5	104.5	0.2299	0.2299	105	
1,2,3,4,7,8-HxCDD	31.517	44803827	1.27	1.0640	51.3	51.3	0.1165	0.1165	103	
D 13C-1,2,3,6,7,8-HxCDD	31.610	88158641	1.23	0.8802	93.6	93.6	0.1915	0.1915	93.65	
1,2,3,6,7,8-HxCDD	31.623	46192612	1.26	1.0001	52.4	52.4	0.1143	0.1143	105	
1,2,3,7,8,9-HxCDD	31.969	50727870	1.26	1.1325	52.6	52.6	0.1050	0.1050	105	
A Non-2,3,7,8-sub-HxCDD	30.519						0.1116	0.1116		
S Total HxCDD					156.4	156.4	0.1119	0.1119		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	76892142	0.44	0.7730	93.0	93.0	0.9442	0.9442	93.00	
1,2,3,4,6,7,8-HpCDF	33.615	56931307	1.04	1.4413	51.4	51.4	0.3136	0.3136	103	
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	68051725	0.45	0.7008	90.8	90.8	1.041	1.041	90.79	
1,2,3,4,7,8,9-HpCDF	34.684	45731591	1.04	1.3174	51.0	51.0	0.4110	0.4110	102	
A Non-2,3,7,8-sub-HpCDF	34.138						0.3572	0.3572		
S Total HpCDF					102.4	102.4	0.3623	0.3623		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	68981955	1.03	0.6472	99.6	99.6	0.5318	0.5318	99.65	
1,2,3,4,6,7,8-HpCDD	34.405	37129661	1.05	1.0943	49.2	49.2	0.2136	0.2136	98.37	
A Non-2,3,7,8-sub-HpCDD	34.223						0.2136	0.2136		
S Total HpCDD					49.2	49.2	0.2136	0.2136		
D 13C-OCDD	36.701	102754035	0.88	0.4472	214.8	214.8	0.1820	0.1820	107	
OCDF	36.797	73073478	0.90	1.4382	98.9	98.9	0.0580	0.0580	98.90	
OCDD	36.713	57319561	0.89	1.1070	100.8	100.8	0.0889	0.0889	101	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 25-Aug-2021 20:40:41 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521A CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:47:02 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 10:34:44

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		50863464	13175107	4799	11997	2745		
333.9339	17.598	17.598	0		63298660	16424626	5937	14842	2766	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	0.972	78087026	20629866	12788	31970	1613		
317.9389	17.099	17.099	0	0.972	101083005	26486866	19167	47917	1382	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	7965523	2111252	1622	4055	1302		
305.8987	17.114	17.114	0	1.001	10459177	2754776	1531	3827	1799	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.736	17.069	-20	0.979	32665	8844	1622	4055	5		
305.8987	16.736	17.069	-20	0.979	57871	15057	1531	3827	10	0.56(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.011	45918108	11183544	4799	11997	2330		
333.9339	17.794	17.794	0	1.011	58120306	14151695	5937	14842	2384	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	5674510	1471774	848	2120	1736		
321.8936	17.809	17.809	0	1.001	7194712	1842625	803	2007	2295	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	13512459	3426543	1675	4187	2046		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.530						848	2120			
321.8936	17.530						803	2007			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	84597034	15895976	10902	27255	1458		
353.8970	22.020	22.020	0	1.251	54448197	10109172	7383	18457	1369	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.047	22.047	0	1.001	45912931	8636444	5920	14800	1459		
341.8567	22.047	22.047	0	1.001	29010611	5460850	4095	10237	1334	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.326	85516036	14699684	10902	27255	1348		
353.8970	23.343	23.343	0	1.326	55406671	9501142	7383	18457	1287	1.54(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370	23.370	0	1.001	44637834	7805502	5920	14800	1318		
341.8567	23.370	23.370	0	1.001	28374639	4948946	4095	10237	1209	1.57(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						257	642			
341.8567	19.851						703	1757			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.565	23.067	-30	1.025	339228	53393	5920	14800	9		
341.8567	22.579	23.067	-29	1.025	227009	34407	4095	10237	8	1.49(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.367	56560329	9299645	4456	11140	2087		
369.8919	24.052	24.052	0	1.367	35403289	5807455	2554	6385	2274	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079	24.079	0	1.001	29373234	4749938	1435	3587	3310		
357.8516	24.079	24.079	0	1.001	18513764	3004789	895	2237	3357	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1435	3587			
357.8516	23.696						895	2237			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.186	30.186	0	0.945	41066942	7264634	10299	25747	705		
385.8610	30.186	30.186	0	0.945	78929651	13693087	18963	47407	722	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.212	30.212	0	1.001	35478856	6175709	8558	21395	722		
375.8178	30.199	30.212	-1	1.000	29335727	5099983	7084	17710	720	1.21(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	40285825	7410201	10299	25747	720		
385.8610	30.399	30.399	0	0.951	76721574	14049318	18963	47407	741	0.53(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.000	36612207	6905037	8558	21395	807		
375.8178	30.412	30.412	0	1.000	30133647	5689393	7084	17710	803	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.979	38142735	9507771	10299	25747	923		
385.8610	31.291	31.291	0	0.979	72585120	18240793	18963	47407	962	0.53(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317	31.317	0	1.001	35582042	8886351	8558	21395	1038		
375.8178	31.317	31.317	0	1.001	29215175	7234440	7084	17710	1021	1.22(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.142	32.142	0	1.006	35430450	10130665	10299	25747	984		
385.8610	32.142	32.142	0	1.006	68651628	19563080	18963	47407	1032	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.156	32.156	0	1.000	33506085	9715818	8558	21395	1135		
375.8178	32.156	32.156	0	1.000	27667289	7970936	7084	17710	1125	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.331						8558	21395			
375.8178	30.331						7084	17710			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		59252149	16215250	11953	29882	1357		
403.8529	31.956	31.956	0		47704420	13000000	7749	19372	1678	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.503	31.503	0	0.986	45517975	12210716	11953	29882	1022		
403.8529	31.503	31.503	0	0.986	36493773	9612147	7749	19372	1240	1.25(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.517	31.517	0	1.000	25058438	7024579	6198	15495	1133		
391.8127	31.517	31.517	0	1.000	19745389	5425696	4626	11565	1173	1.27(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	48572591	12959093	11953	29882	1084		
403.8529	31.610	31.610	0	0.989	39586050	10720245	7749	19372	1383	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.623	31.623	0	1.000	25734187	7002716	6198	15495	1130		
391.8127	31.623	31.623	0	1.000	20458425	5628580	4626	11565	1217	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.969	31.969	0	1.015	28234466	7888248	6198	15495	1273		
391.8127	31.969	31.969	0	1.015	22493404	6176601	4626	11565	1335	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.519						6198	15495			
391.8127	30.519						4626	11565			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	23396914	8543068	25720	64300	332		
419.8220	33.603	33.603	0	1.052	53495228	19371914	59576	148940	325	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.615	0	1.000	29017911	10689336	31624	79060	338		
409.7789	33.615	33.615	0	1.000	27913396	10346614	18846	47115	549	1.04(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.672	0	1.085	21016576	7228327	25720	64300	281		
419.8220	34.672	34.672	0	1.085	47035149	16074631	59576	148940	270	0.45(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.684	34.684	0	1.000	23341165	7997286	31624	79060	253		
409.7789	34.684	34.684	0	1.000	22390426	7671807	18846	47115	407	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						31624	79060			
409.7789	34.138						18846	47115			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	35078619	12246728	21462	53655	571		
437.8140	34.393	34.393	0	1.076	33903336	11866878	18762	46905	632	1.03(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	18991502	6650843	11799	29497	564		
425.7737	34.405	34.405	0	1.000	18138159	6220787	10748	26870	579	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						11799	29497			
425.7737	34.223						10748	26870			
13C-OCDD											
469.7779	36.701	36.701	0	1.148	48147302	14377153	4707	11767	3054		
471.7750	36.701	36.701	0	1.148	54606733	16330577	4802	12005	3401	0.88(0.76-1.02)	
OCDF											
441.7428	36.797	36.797	0	1.003	34657650	10433120	2456	6140	4248		
443.7399	36.797	36.797	0	1.003	38415828	11689295	2668	6670	4381	0.90(0.76-1.02)	
OCDD											
457.7377	36.713	36.713	0	1.000	26999141	8235432	2787	6967	2955		
459.7348	36.713	36.713	0	1.000	30320420	9177910	3259	8147	2816	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

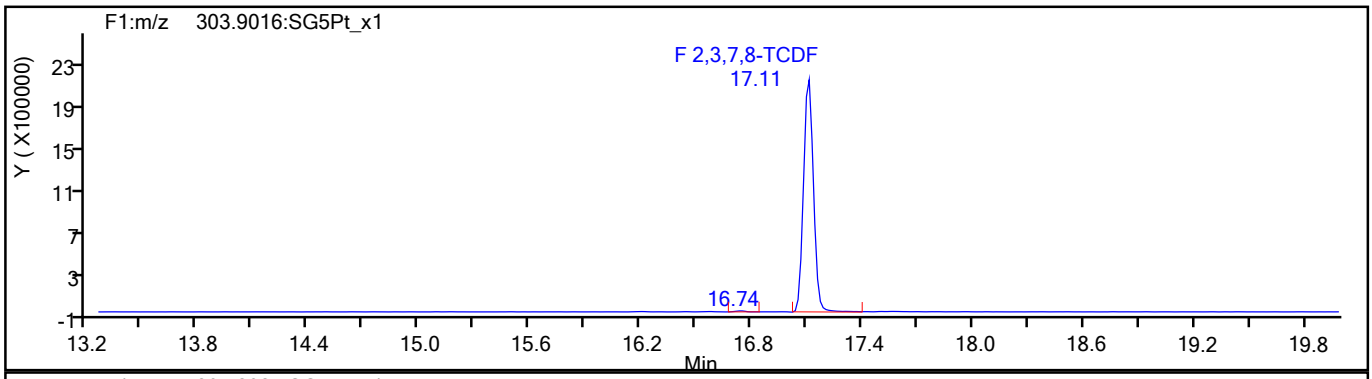

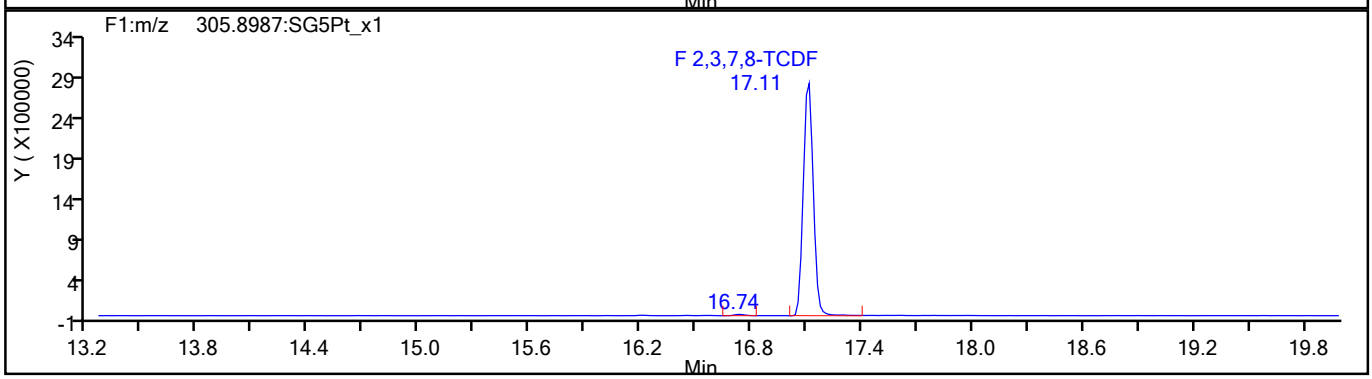

TCDF Standards

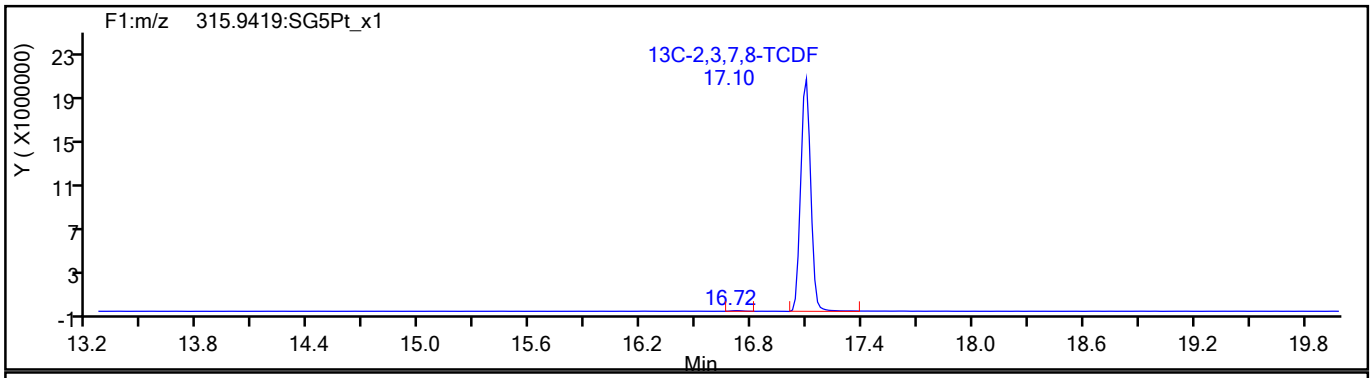

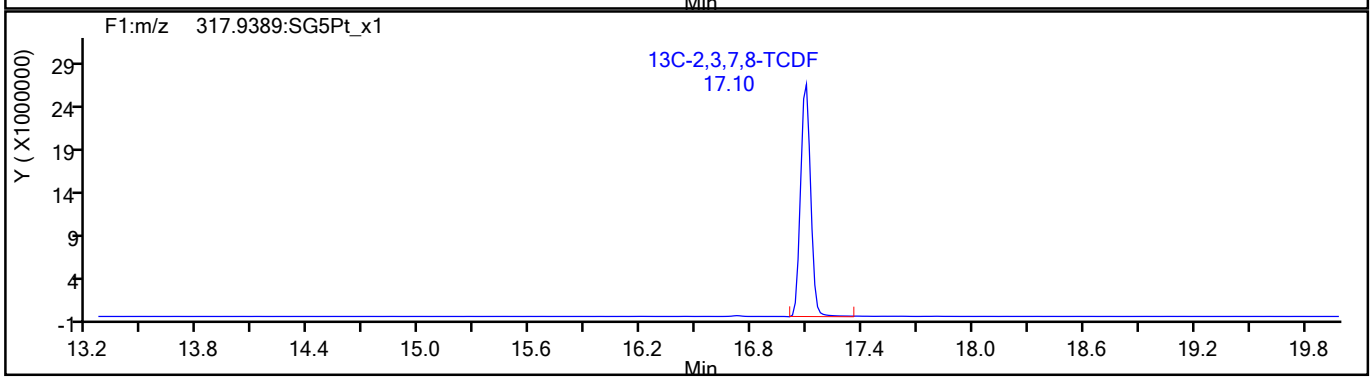

794081

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

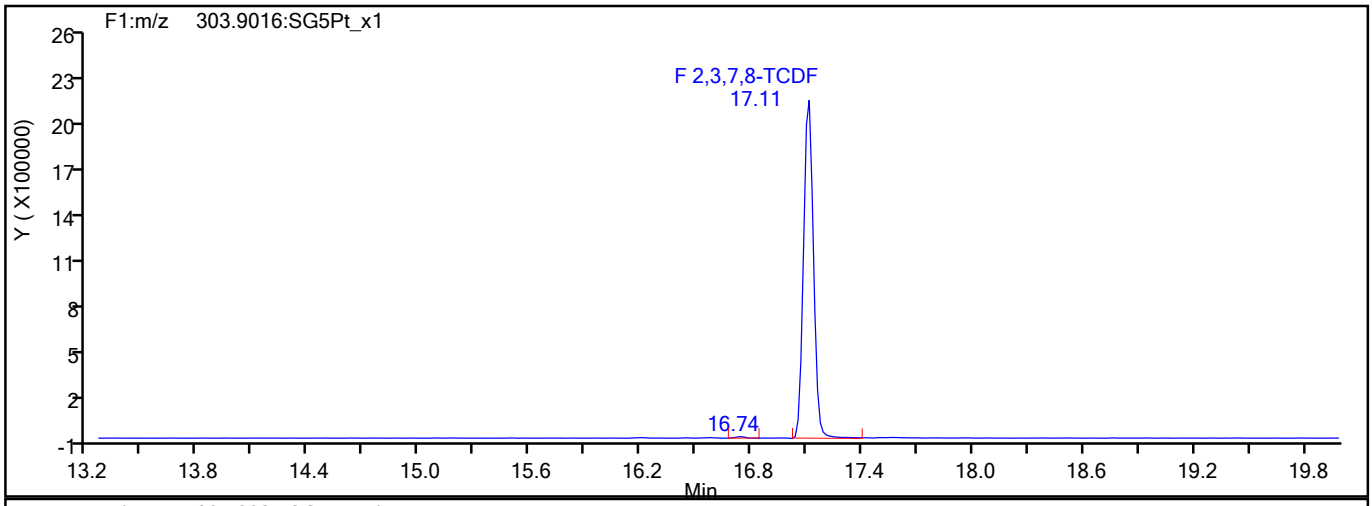

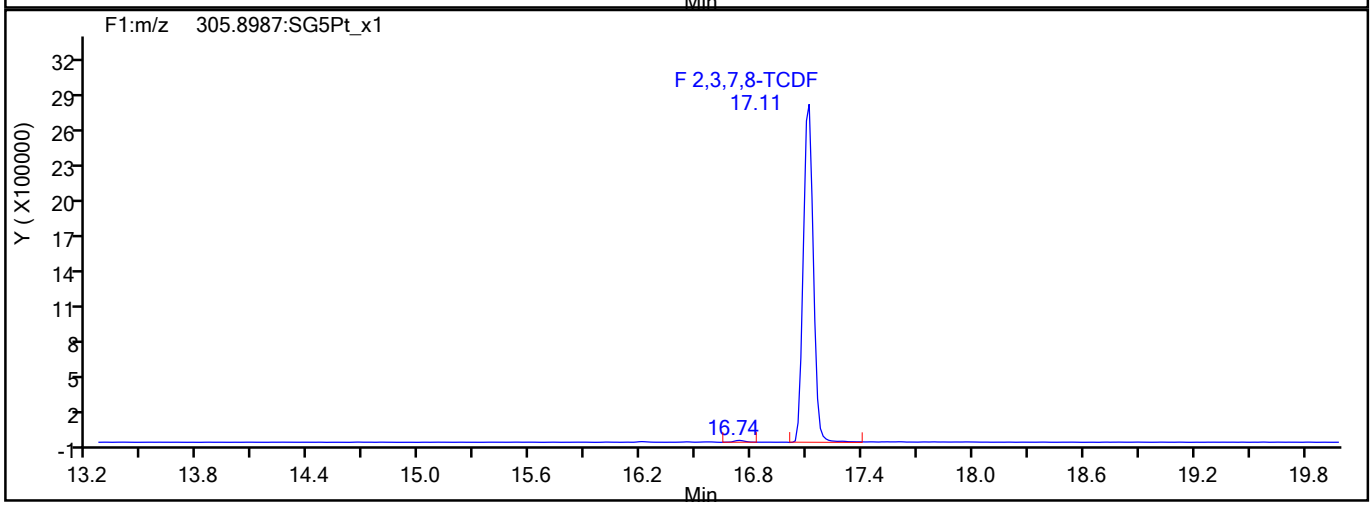

TCDF Interference Mass

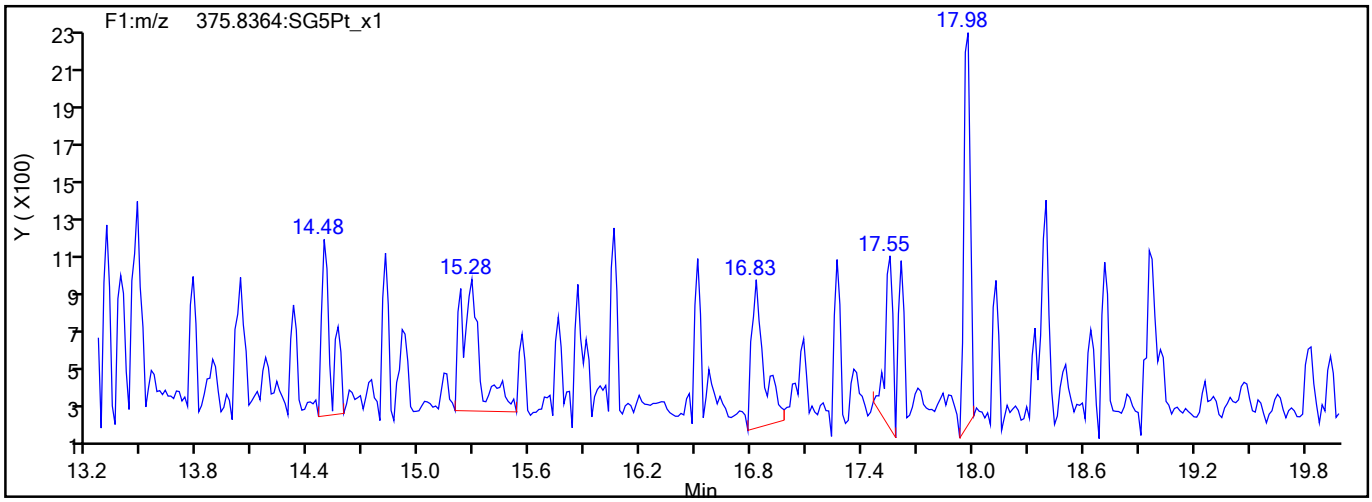

794082

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

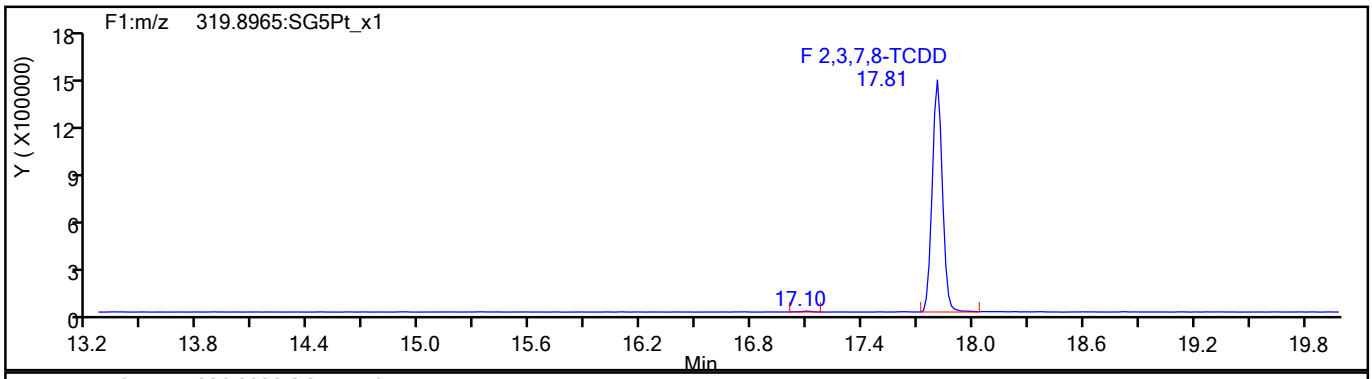

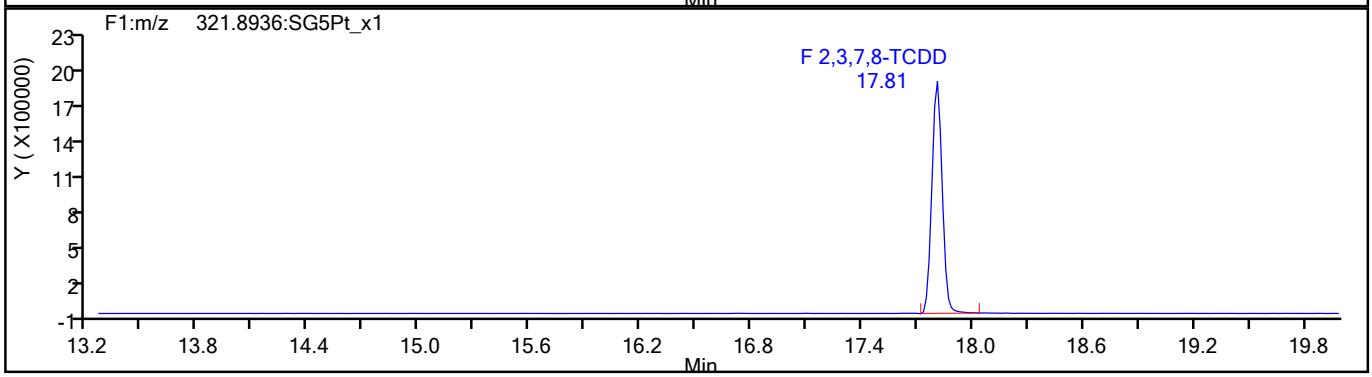

TCDD Standards

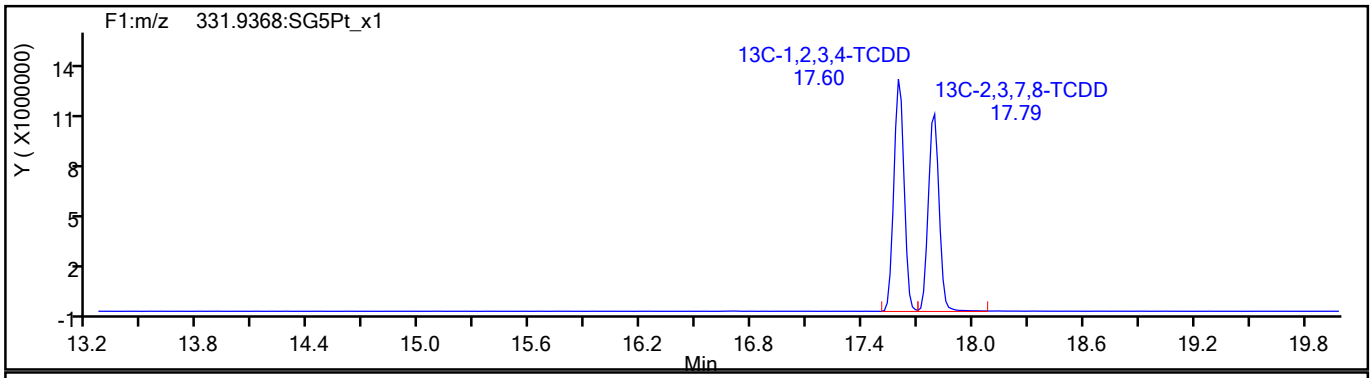

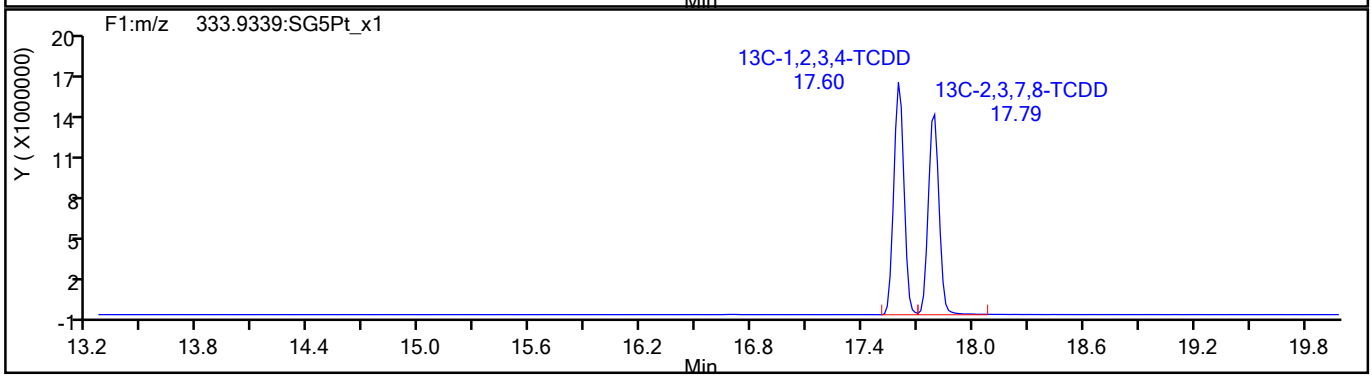

794083

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

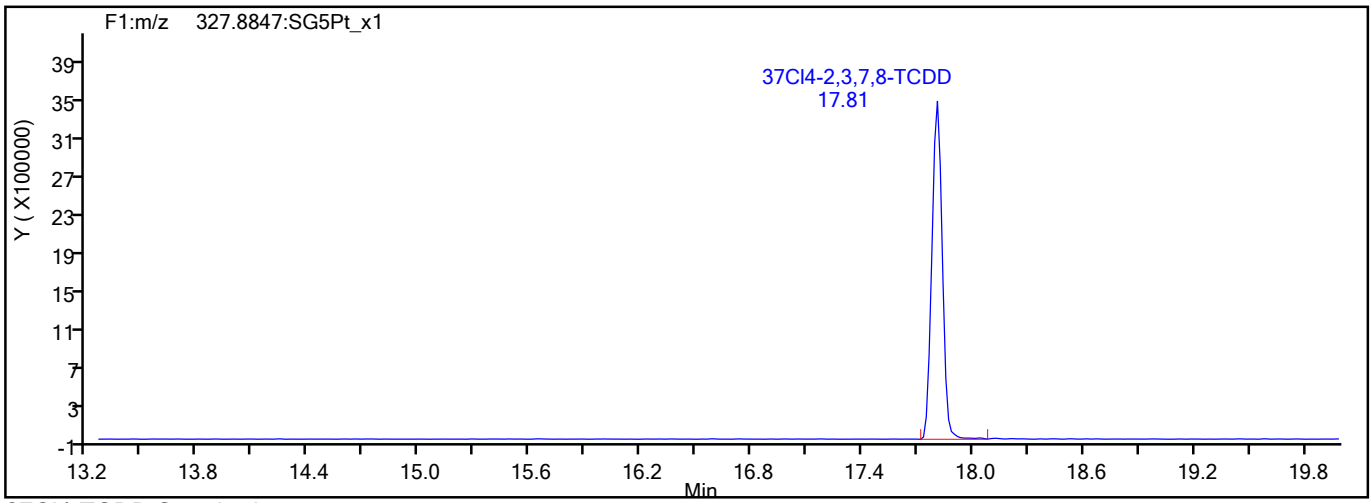

37Cl4-TCDD Standards

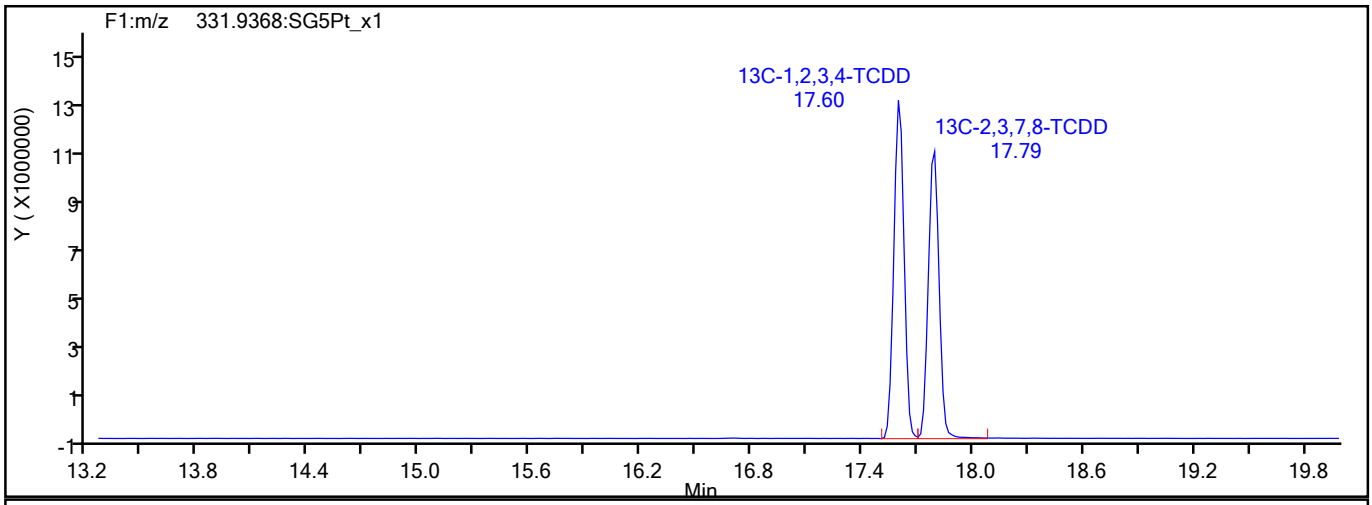

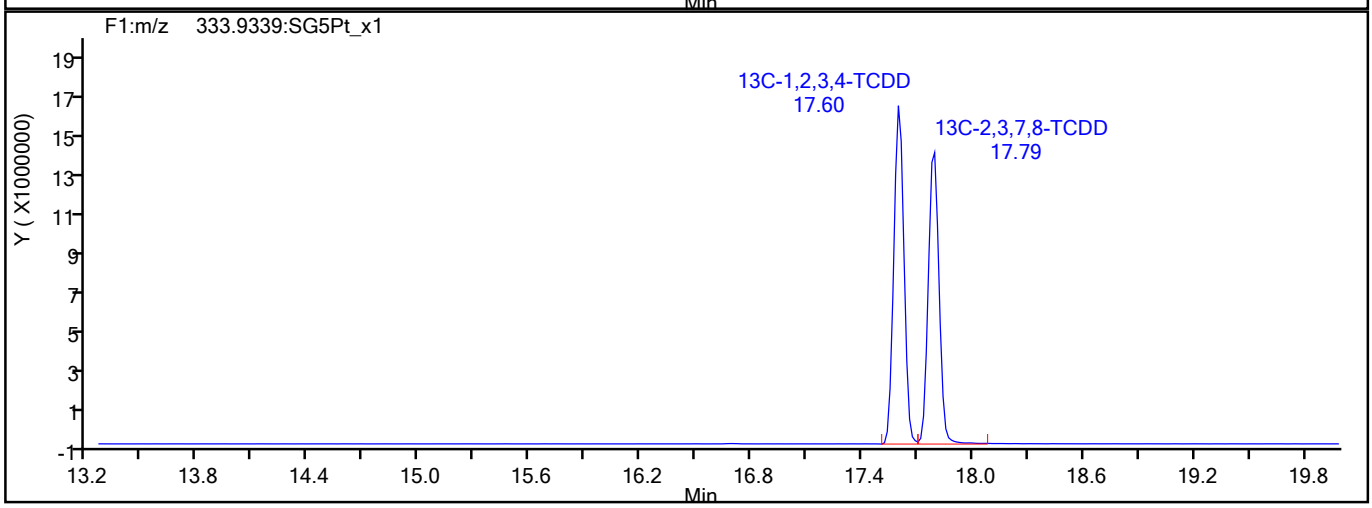

794084

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

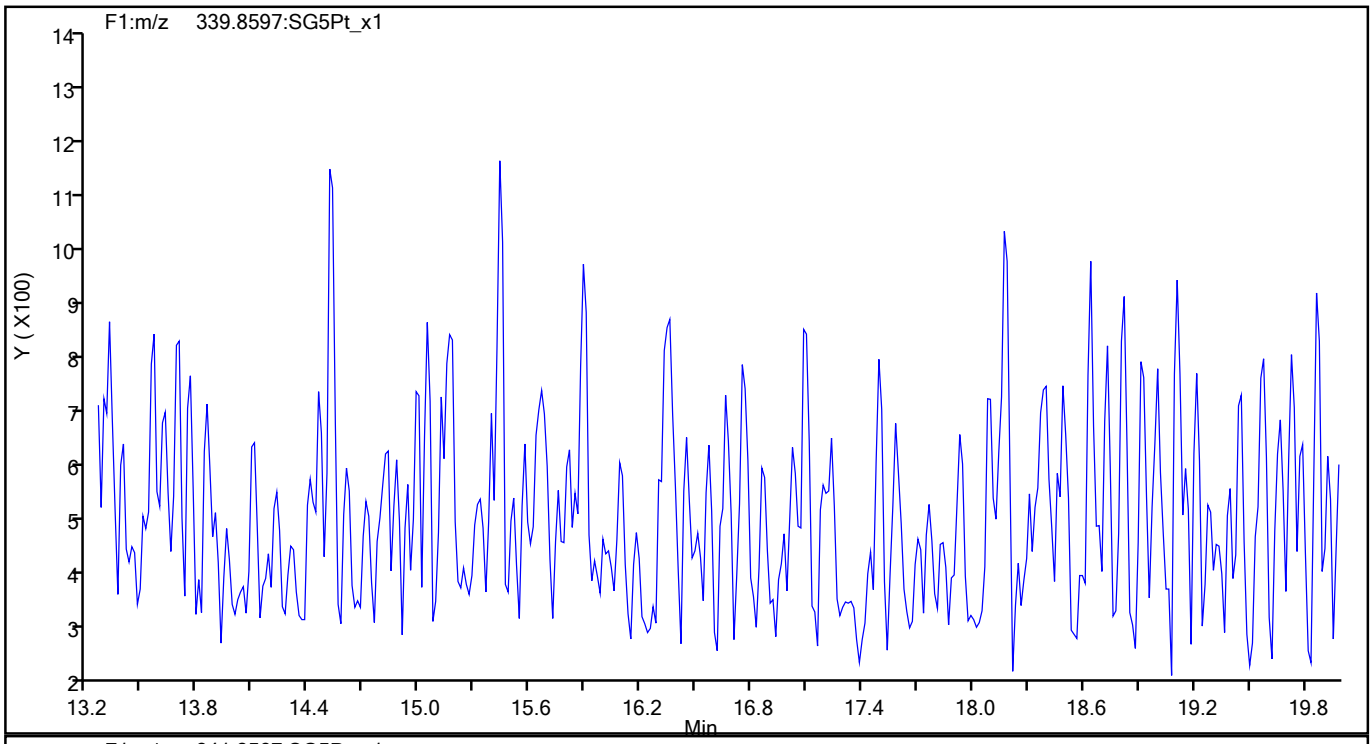

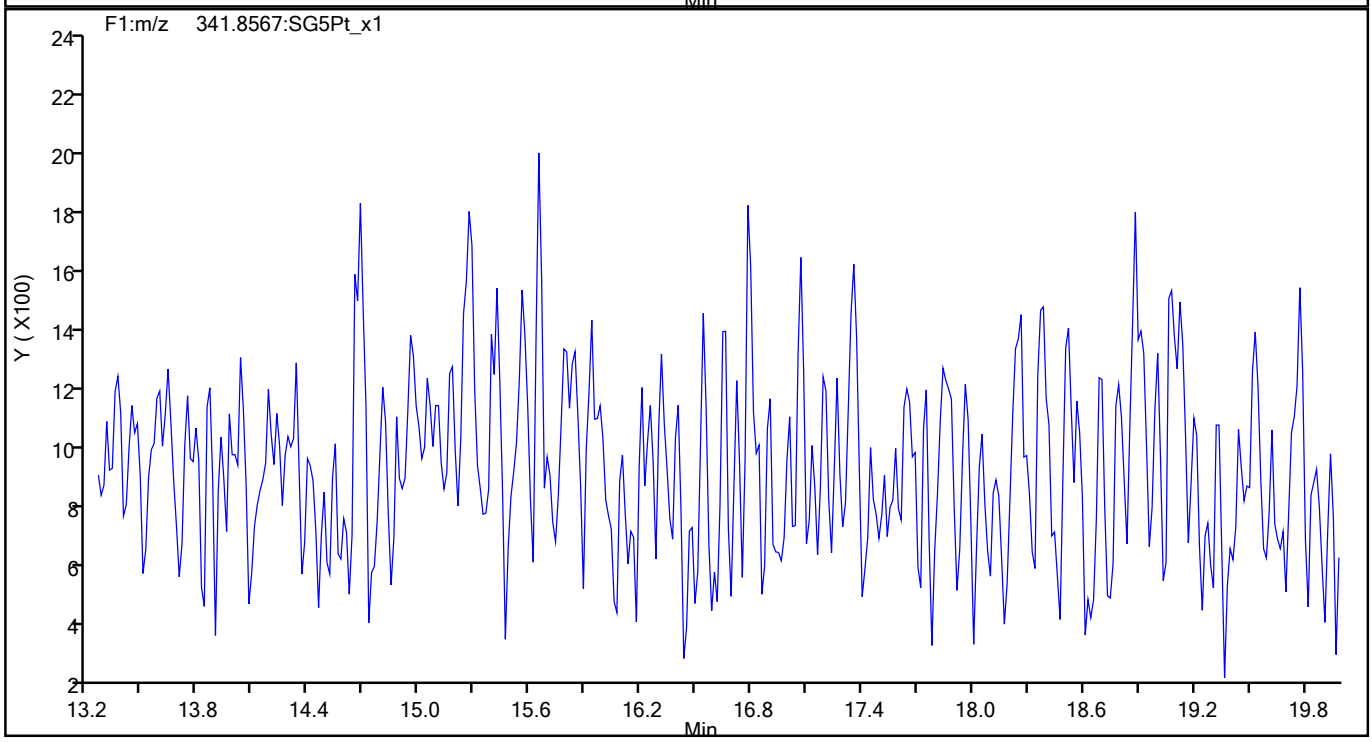

794085

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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Client ID:			
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F1 PeCDFs

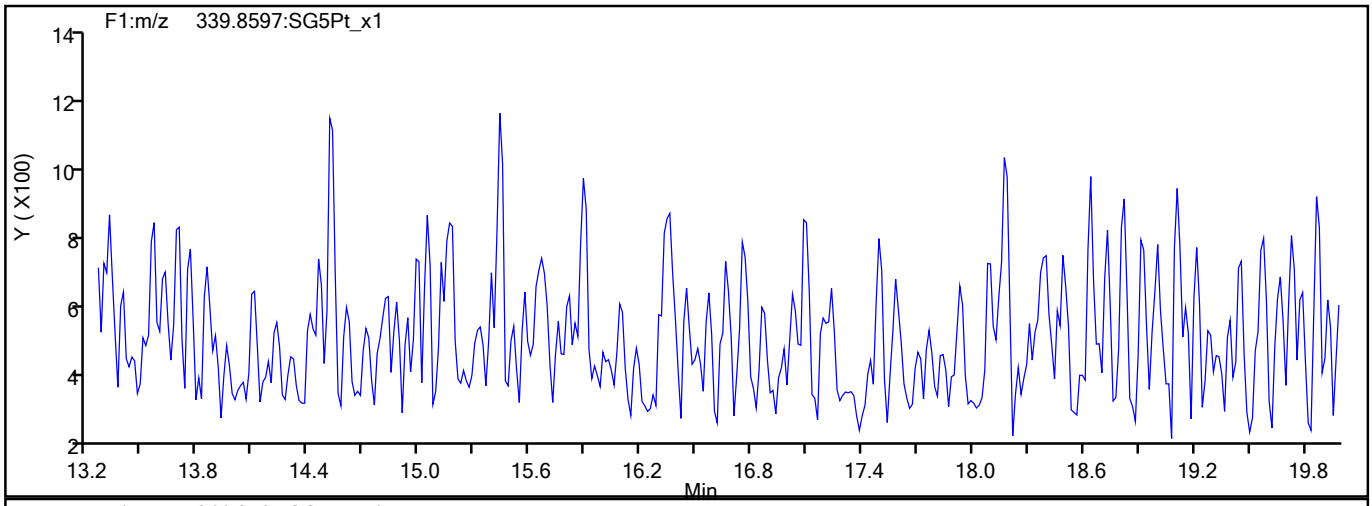

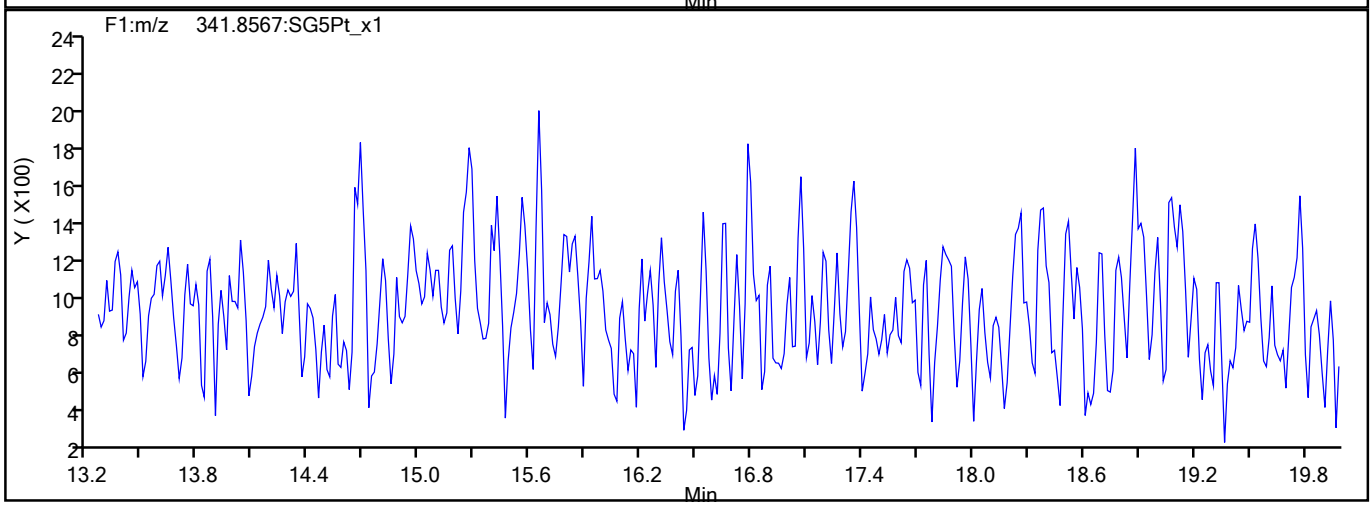

F1 PeCDFs Interference Mass

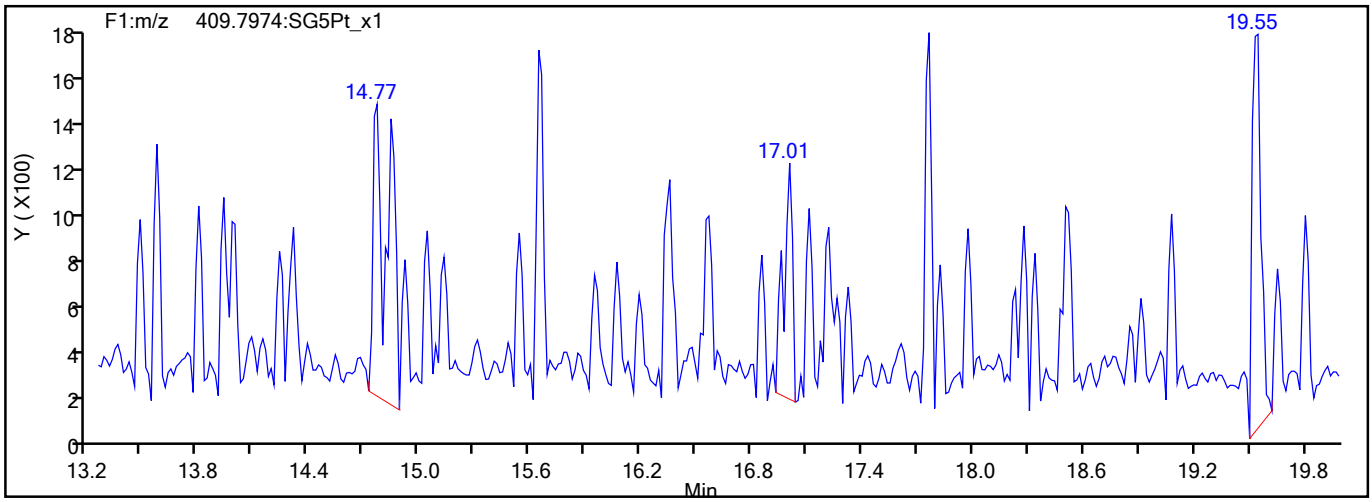

794086

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

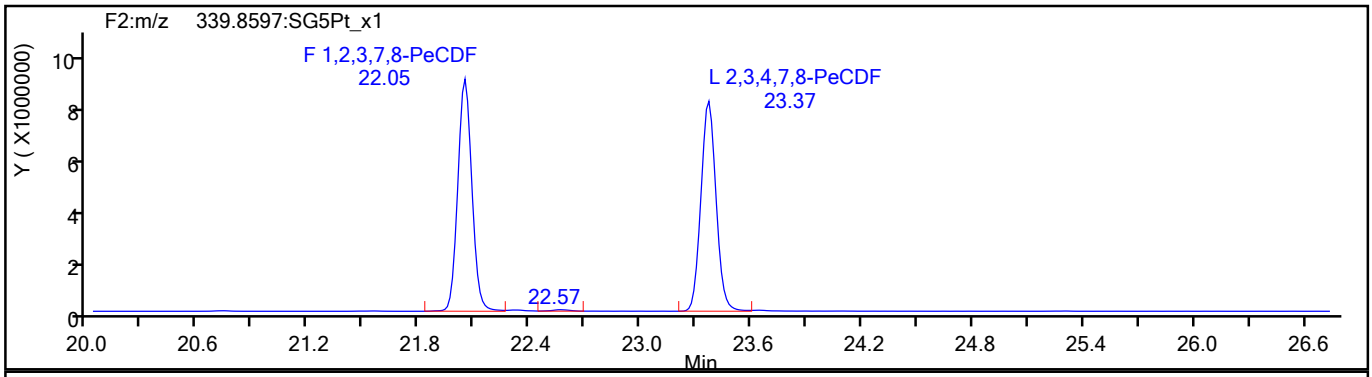

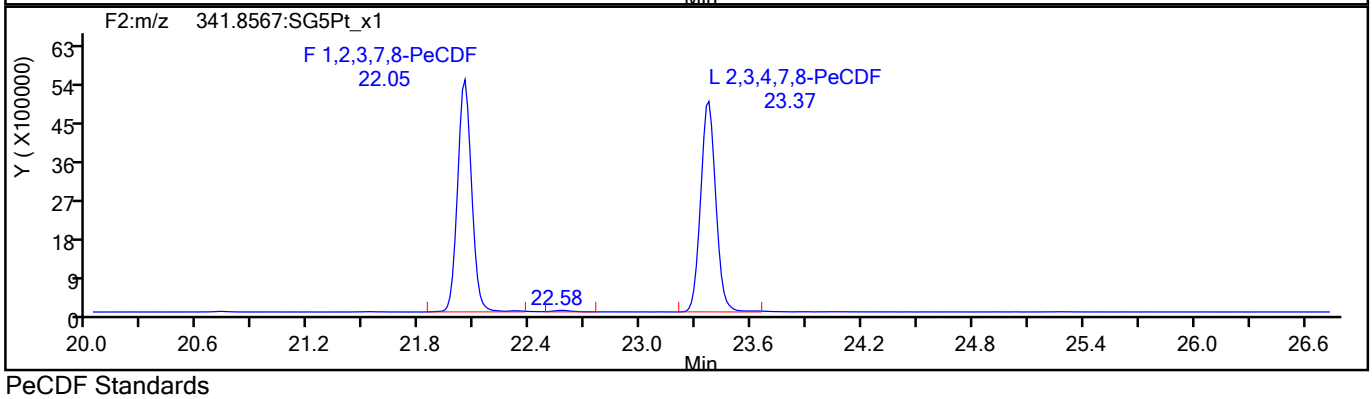

PeCDF Standards

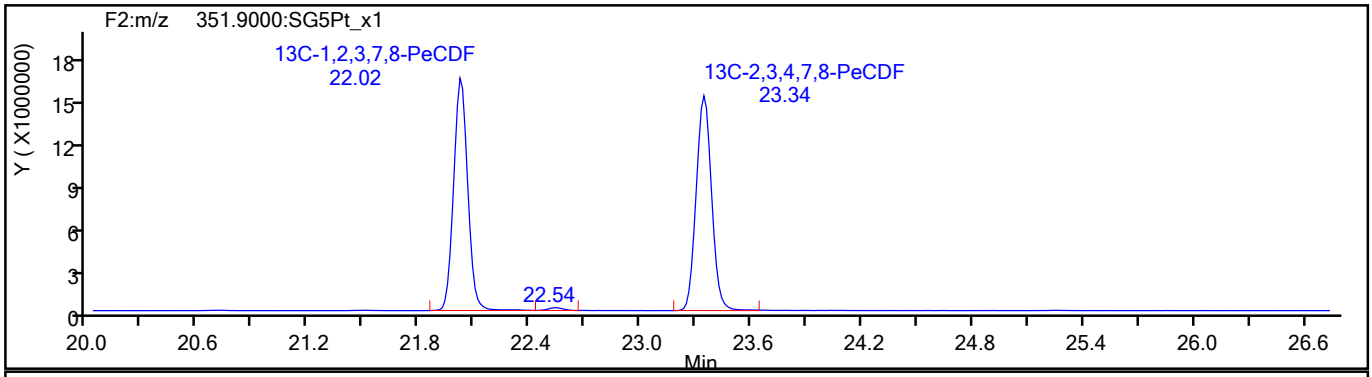

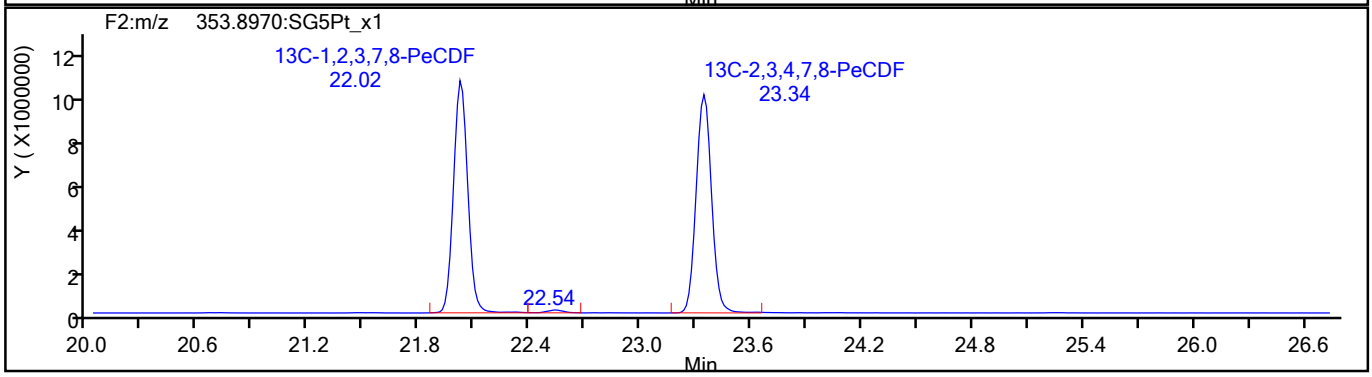

794087

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

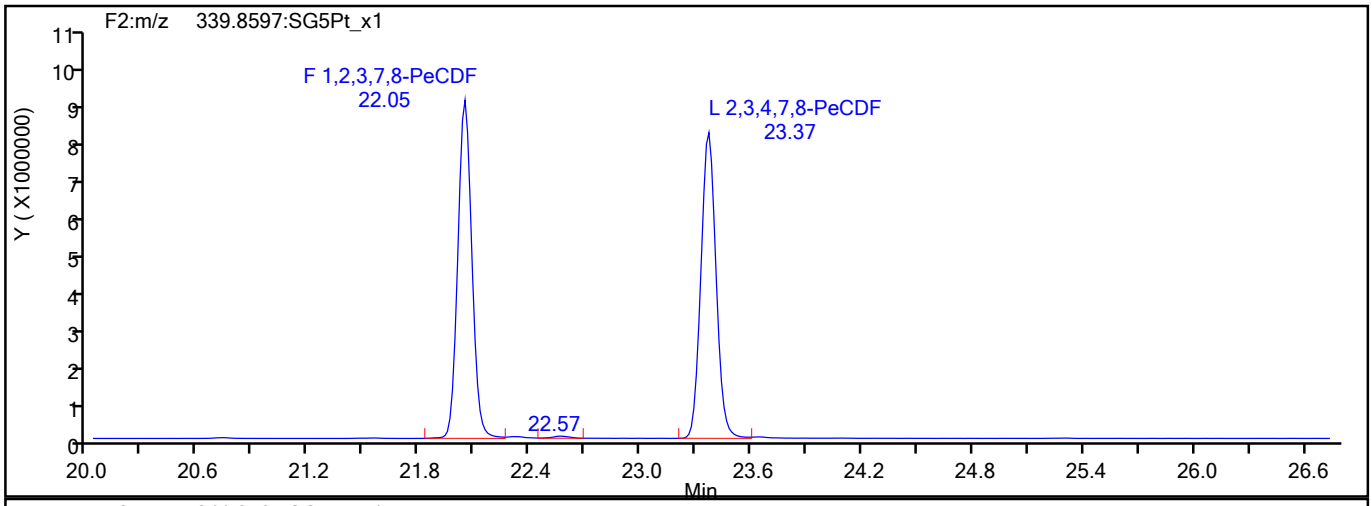

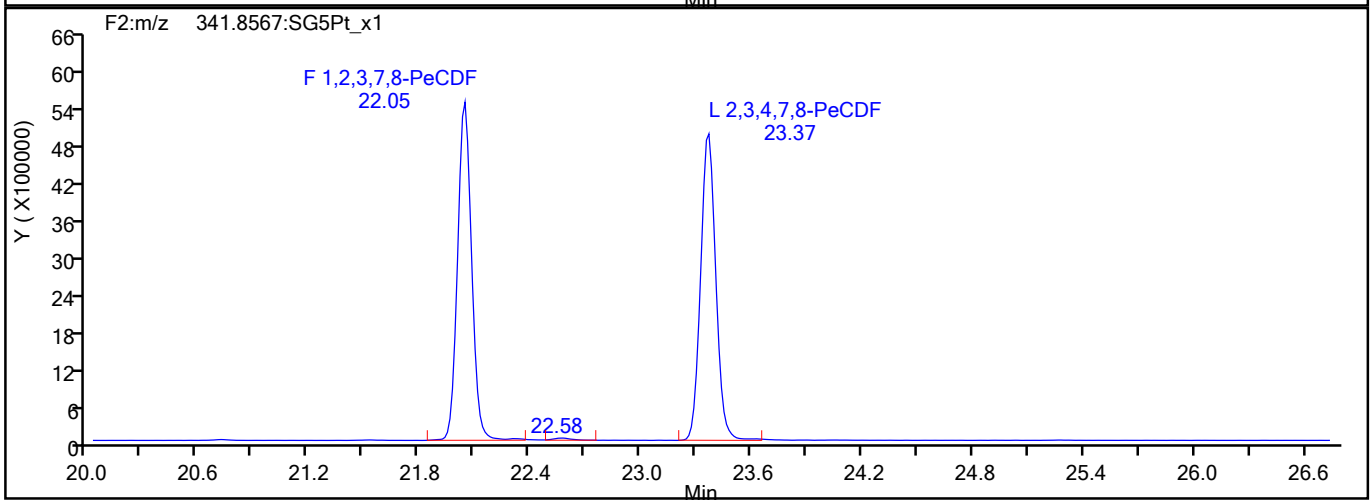

PeCDF Interference Mass

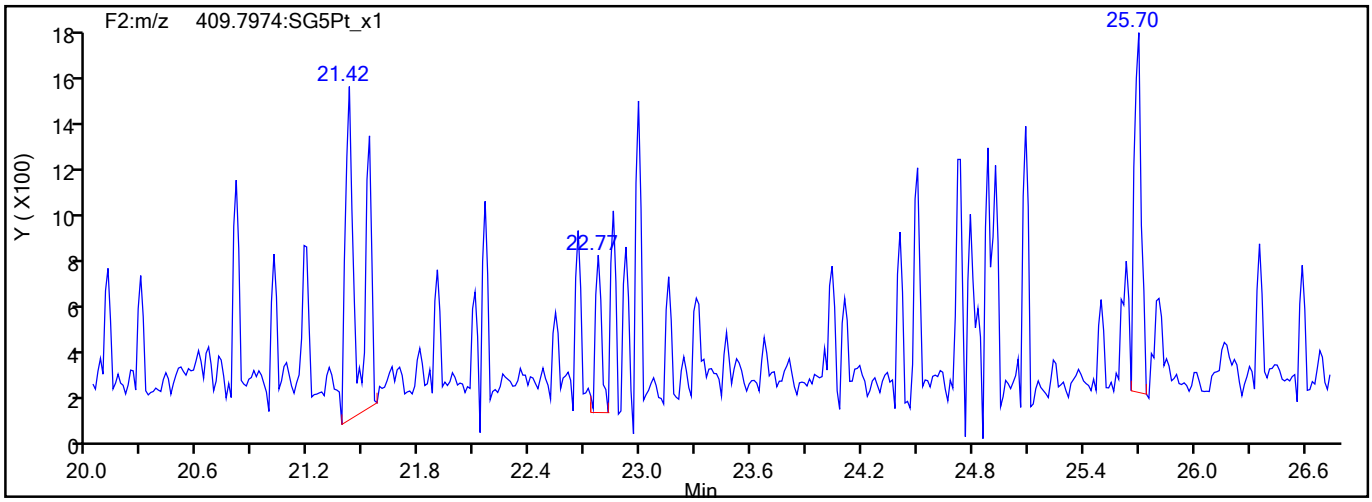

794088

Report Date: 26-Aug-2021 10:47:02 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

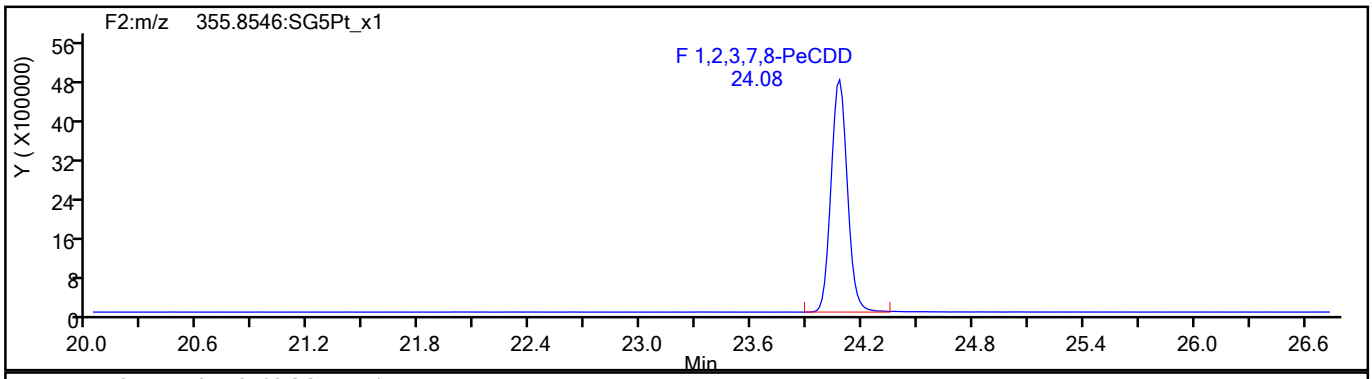

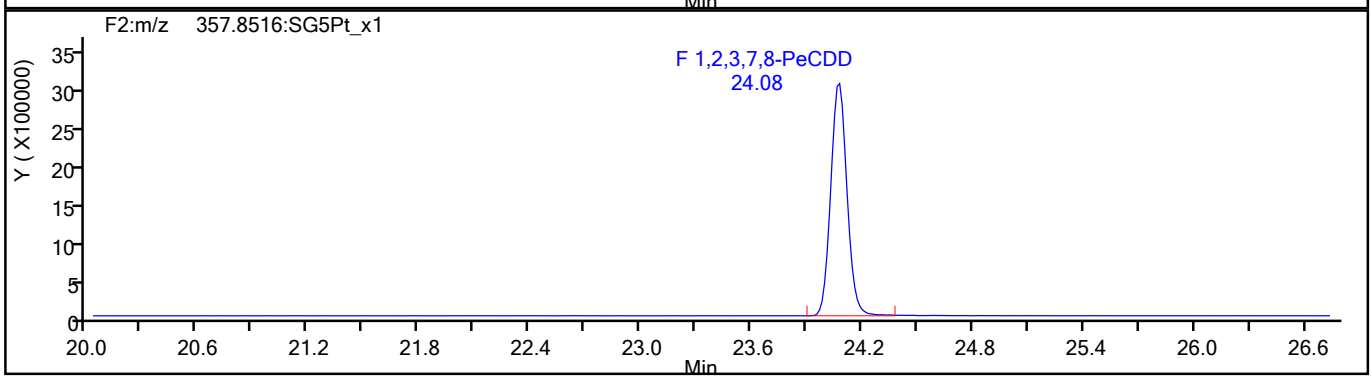

PeCDD Standards

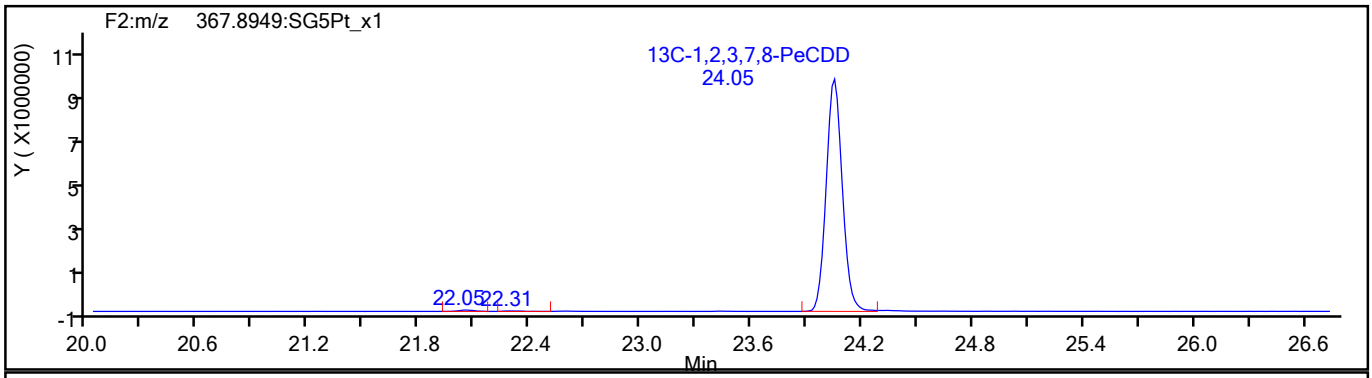

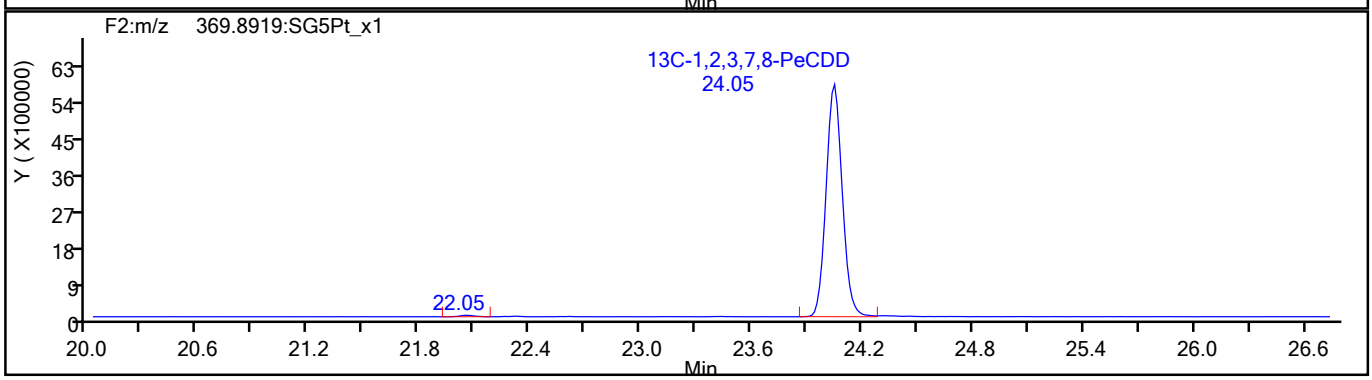

794089

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

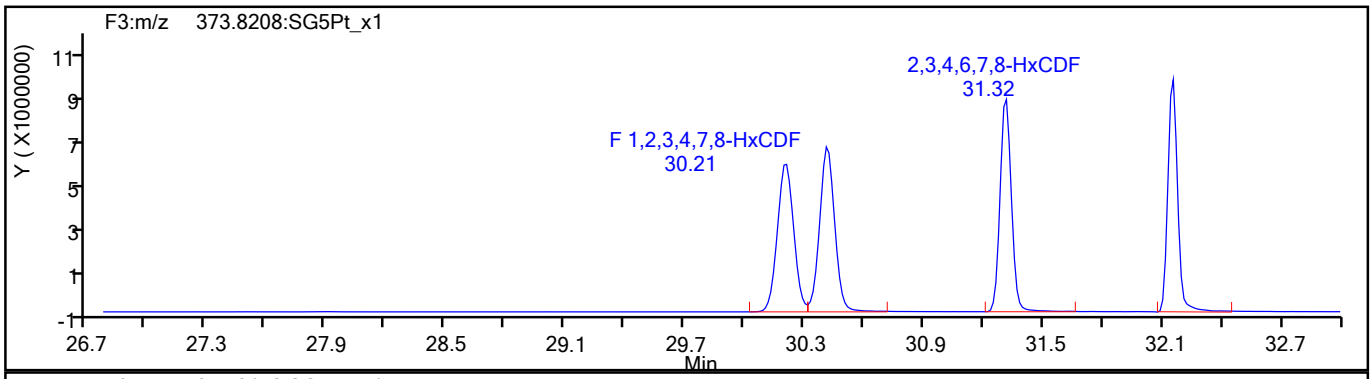

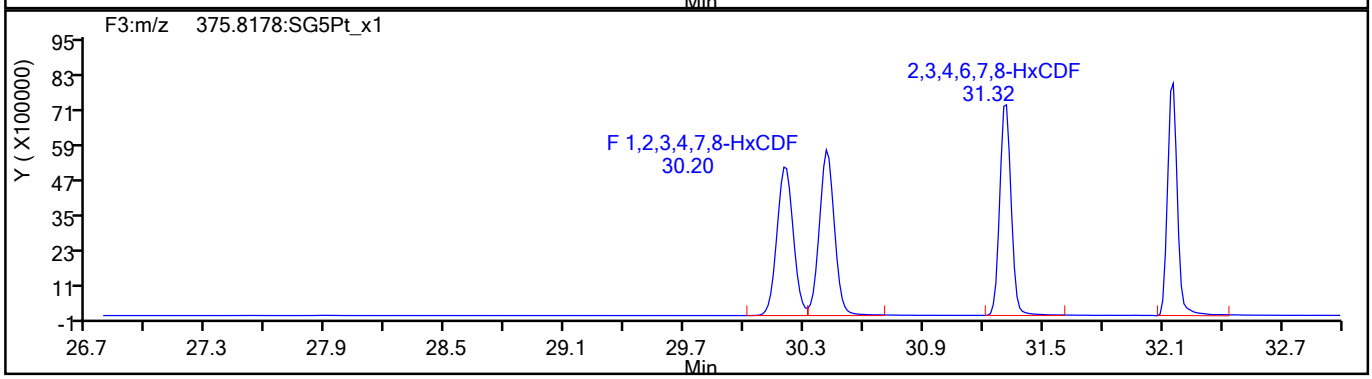

HxCDF Standards

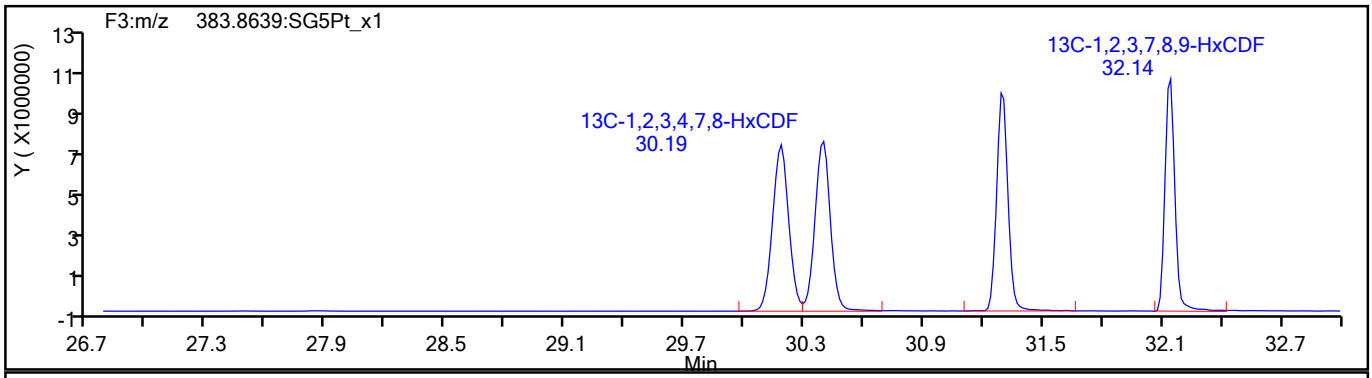

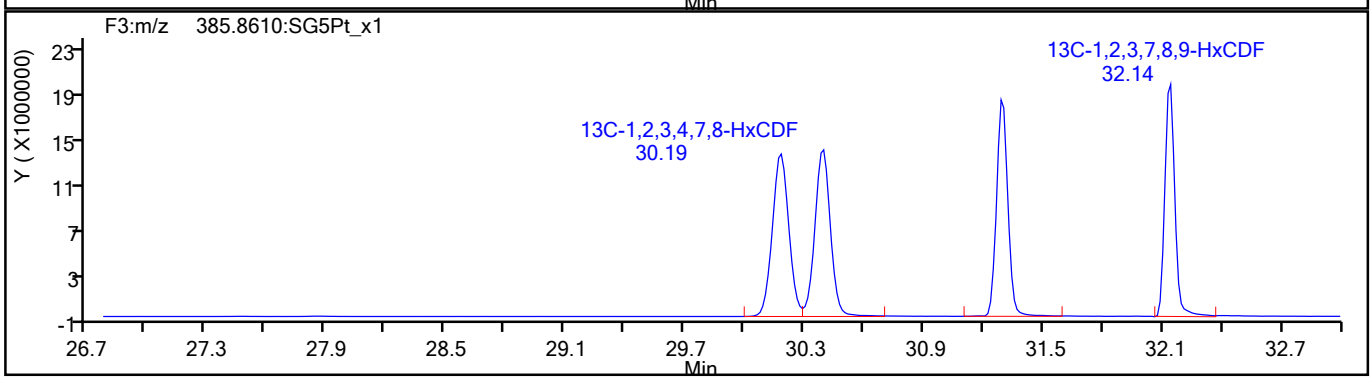

794090

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

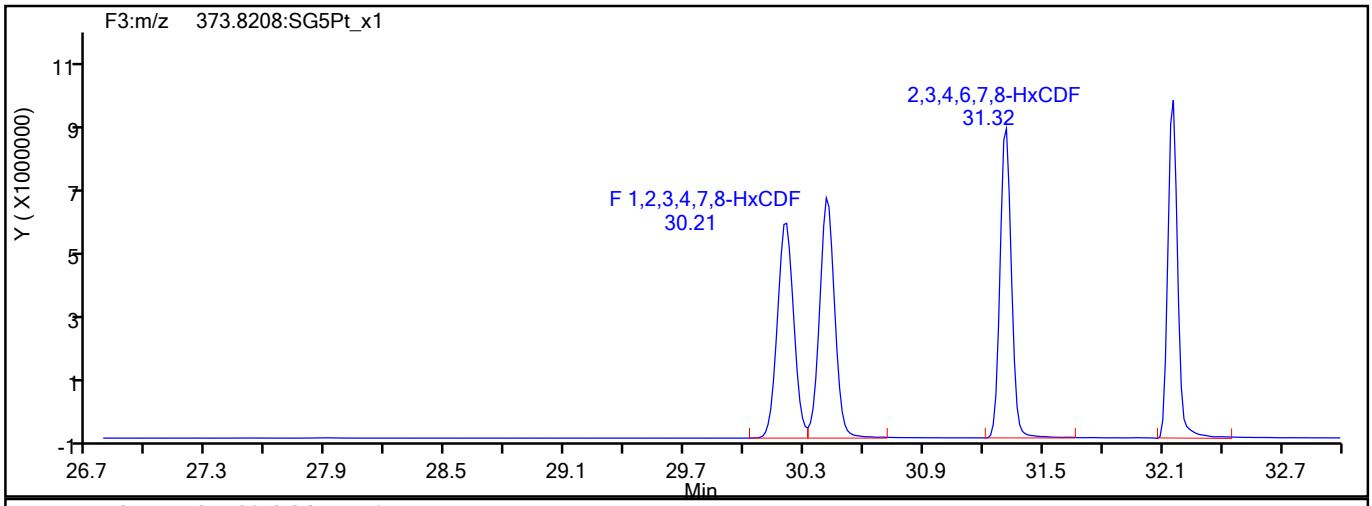

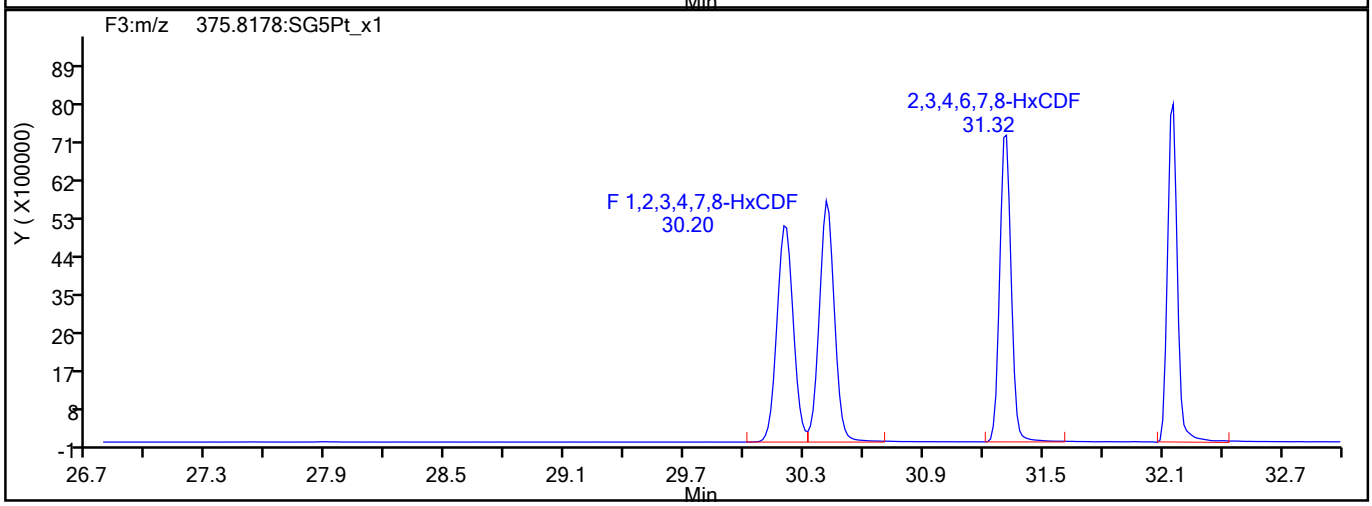

HxCDF Interference Mass

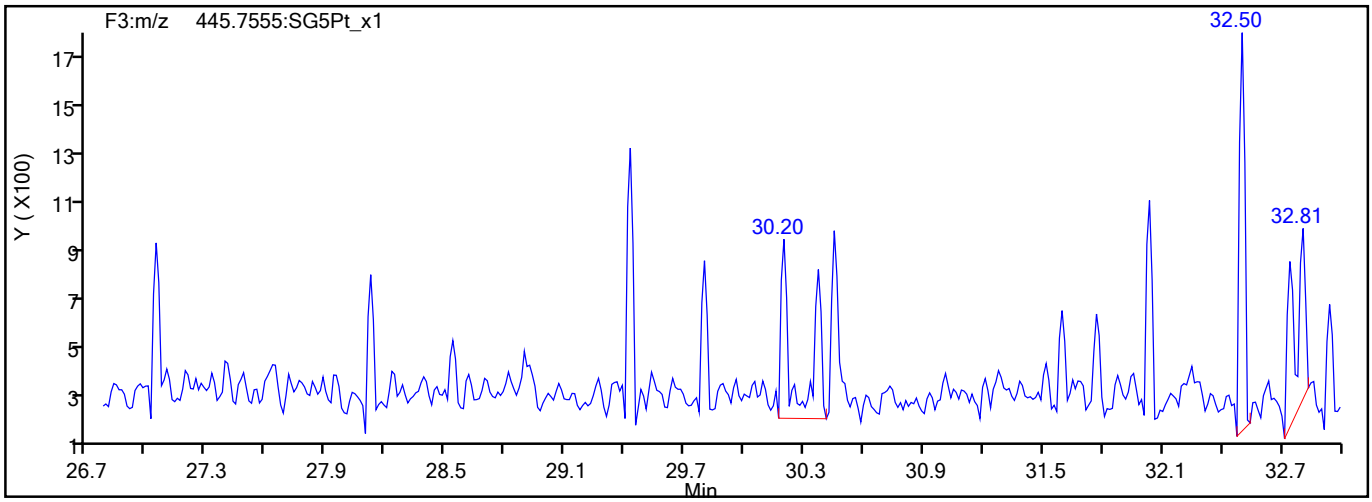

794091

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

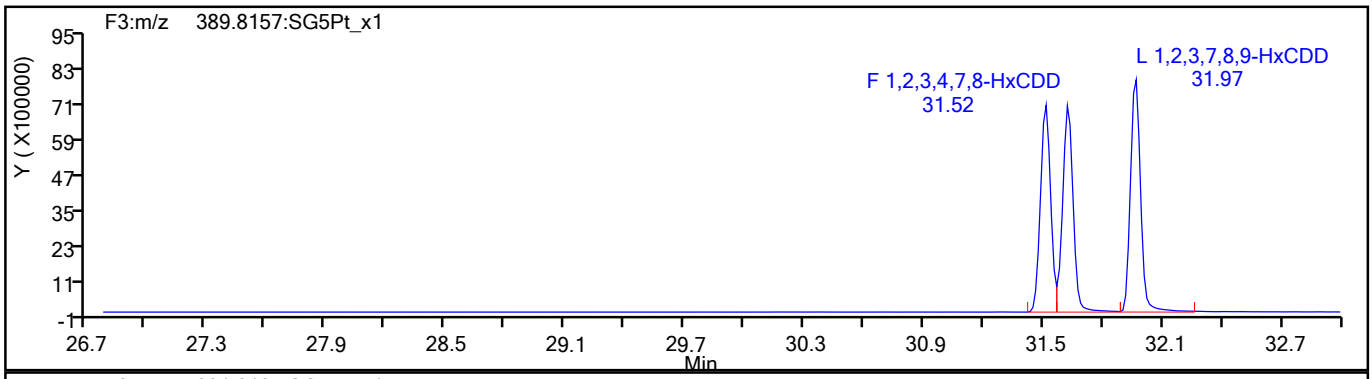

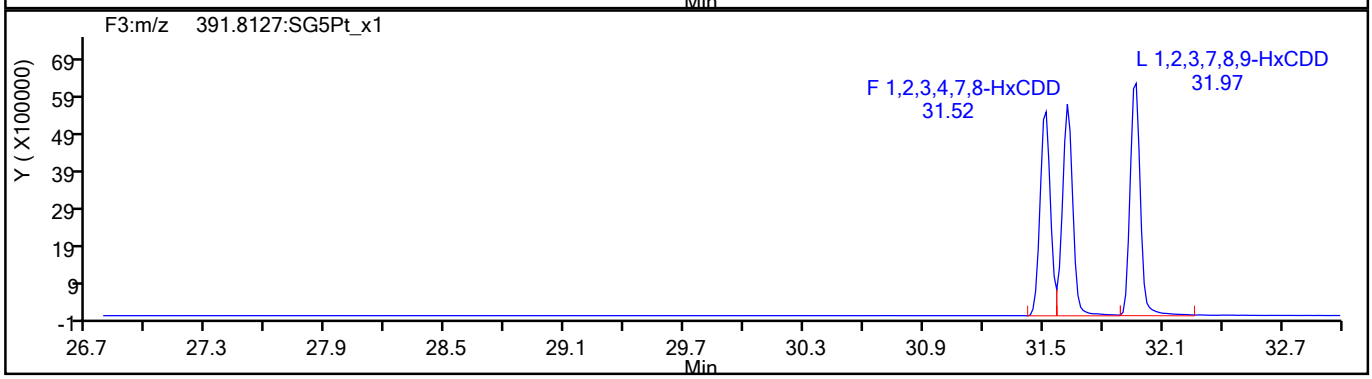

HxCDD Standards

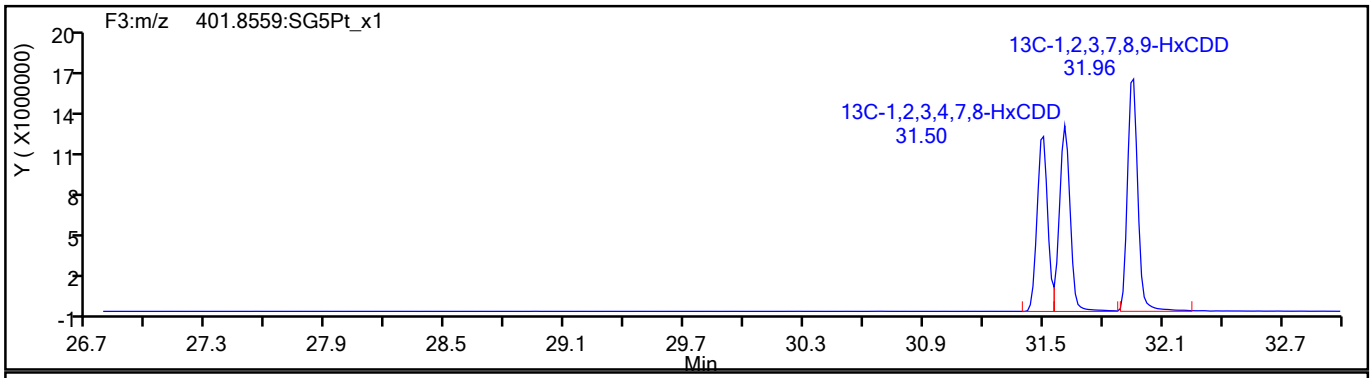

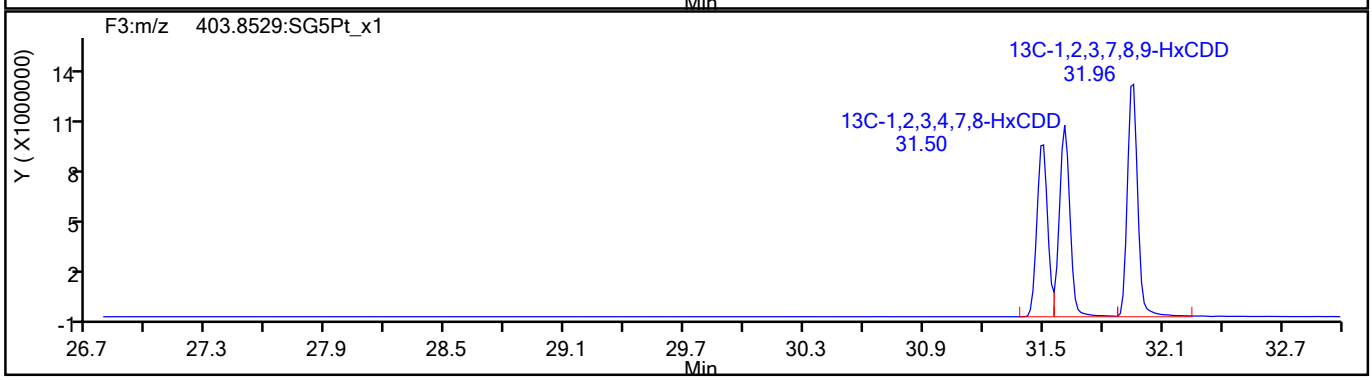

794092

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

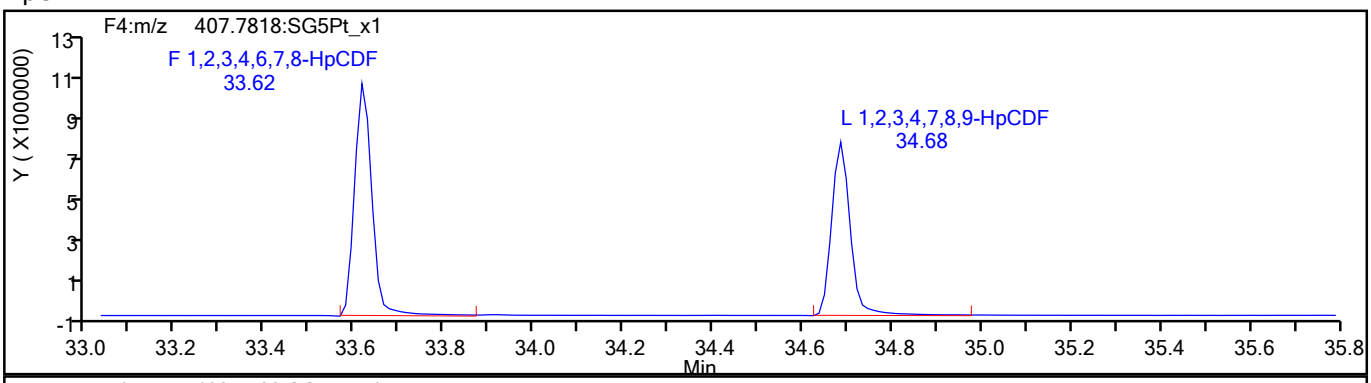

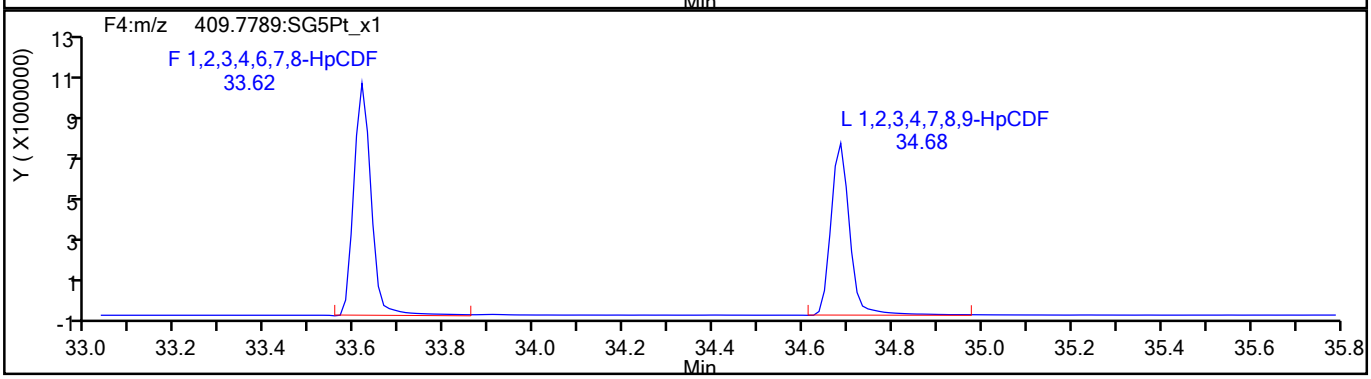

HpCDF Standards

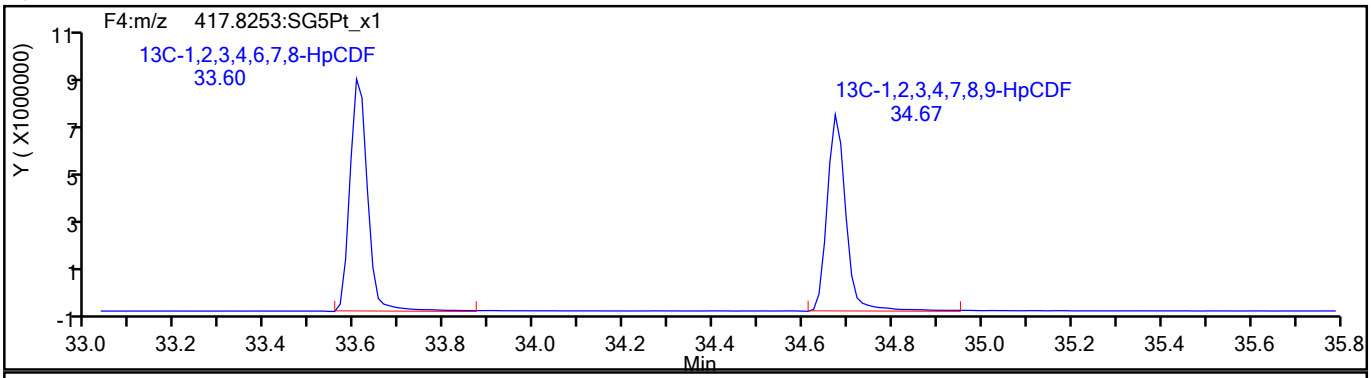

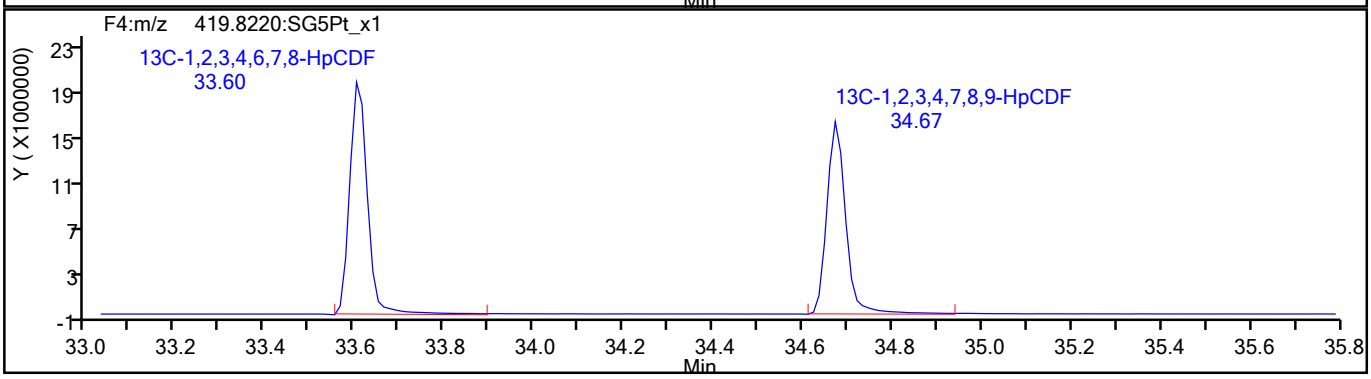

794093

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

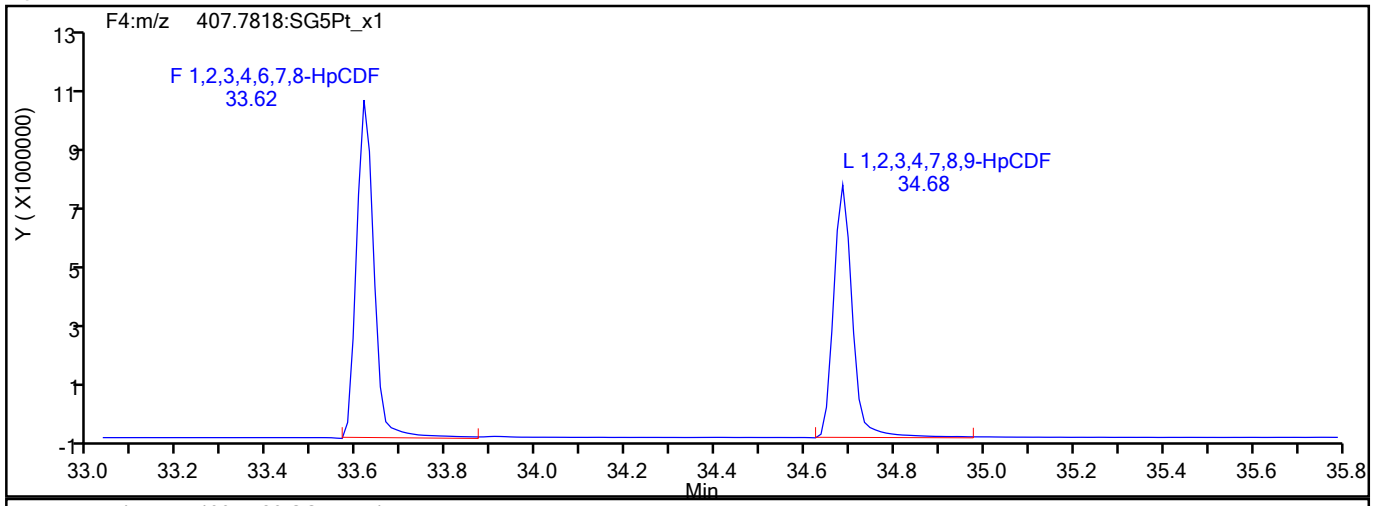

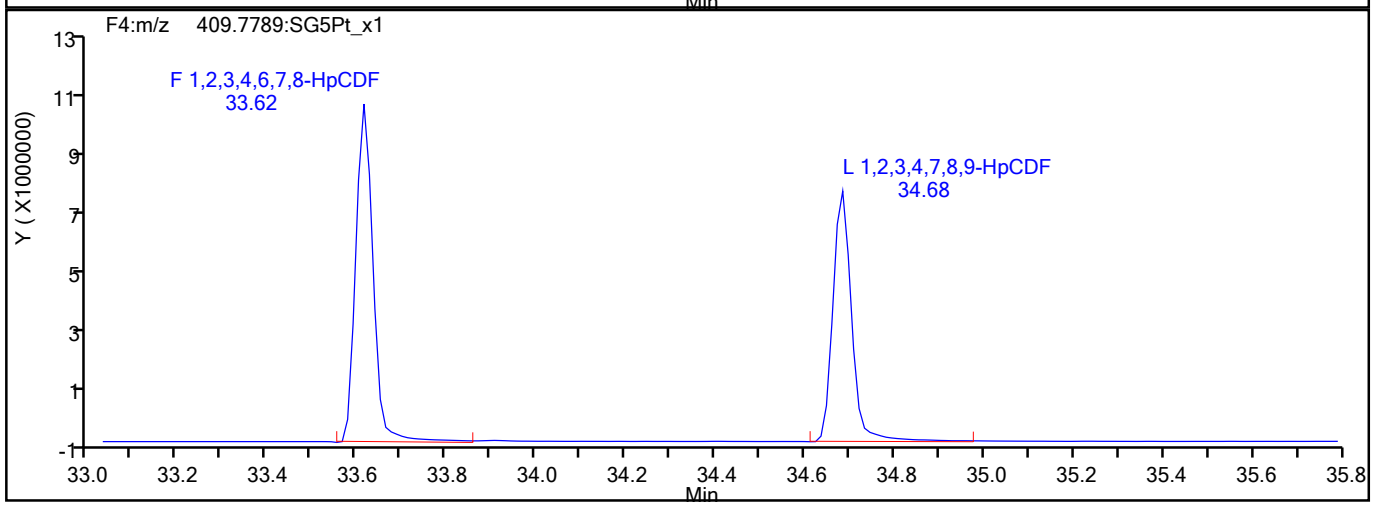

HpCDF Interference Mass

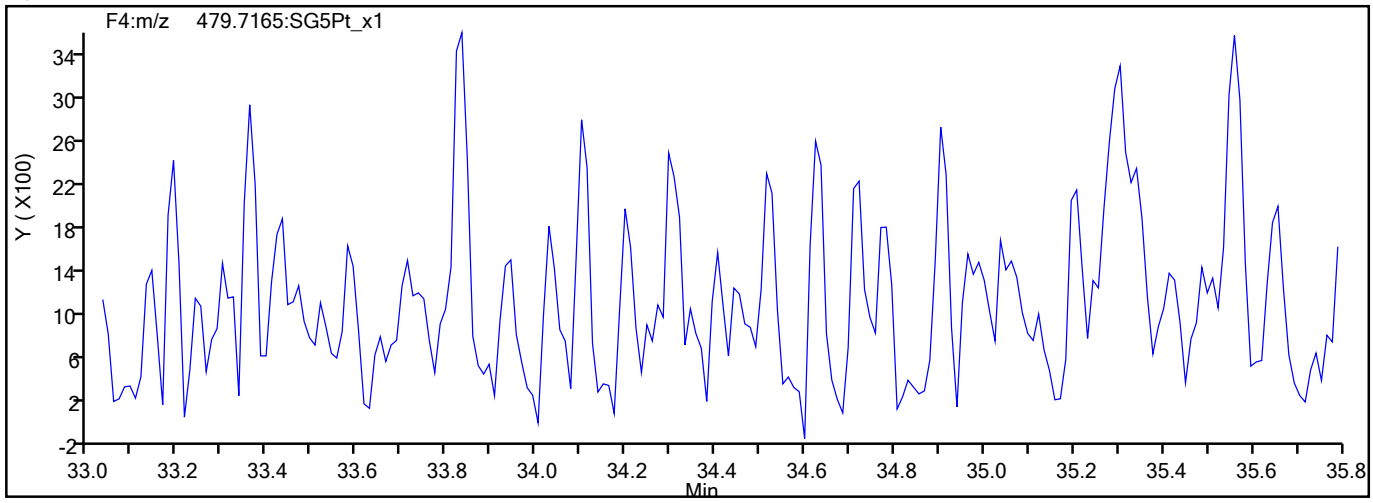

794094

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

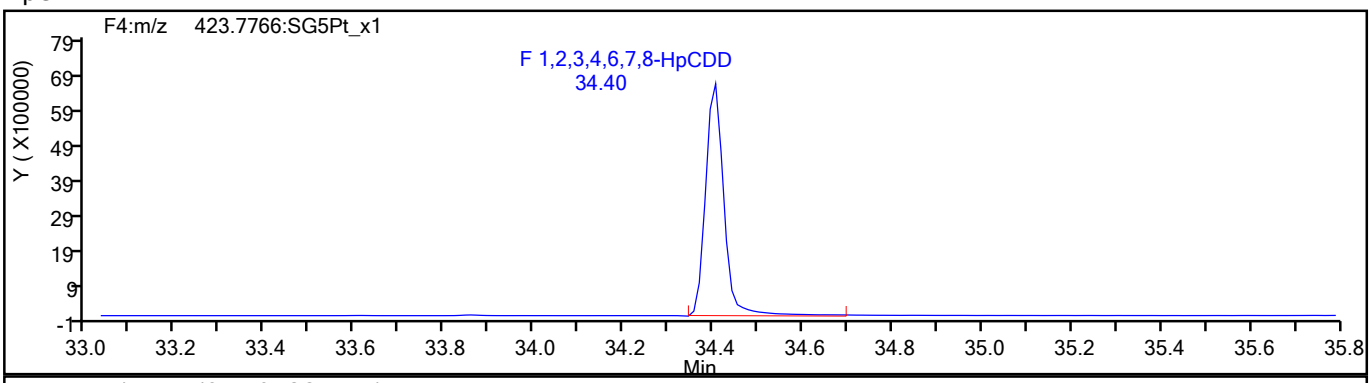

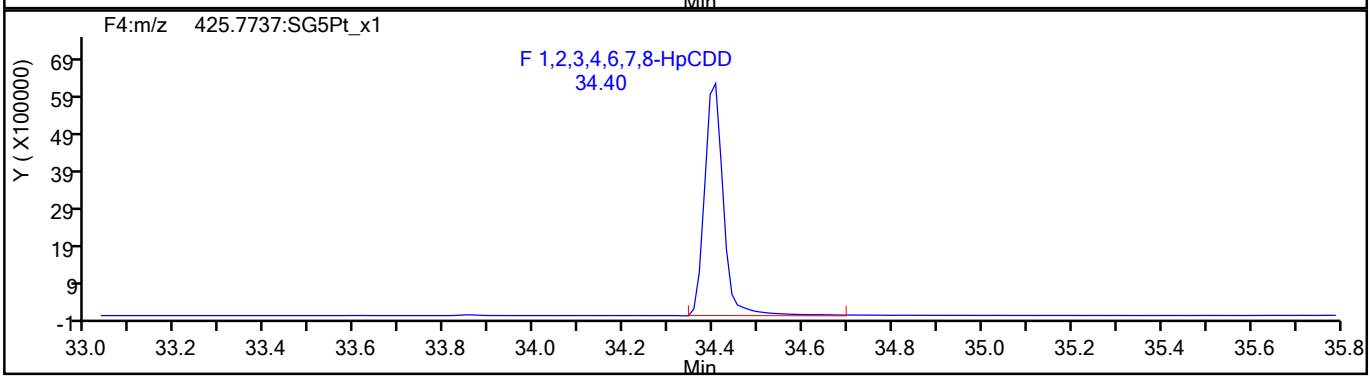

HpCDD Standards

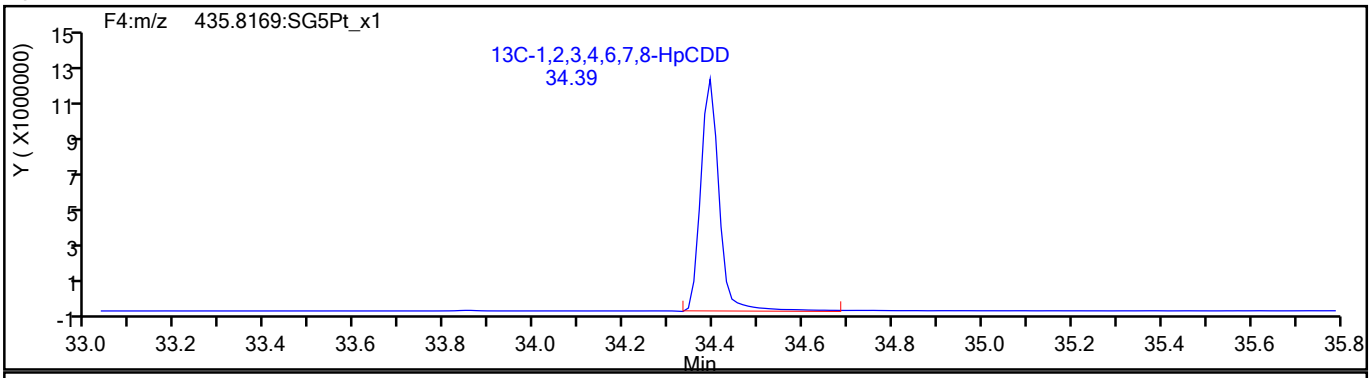

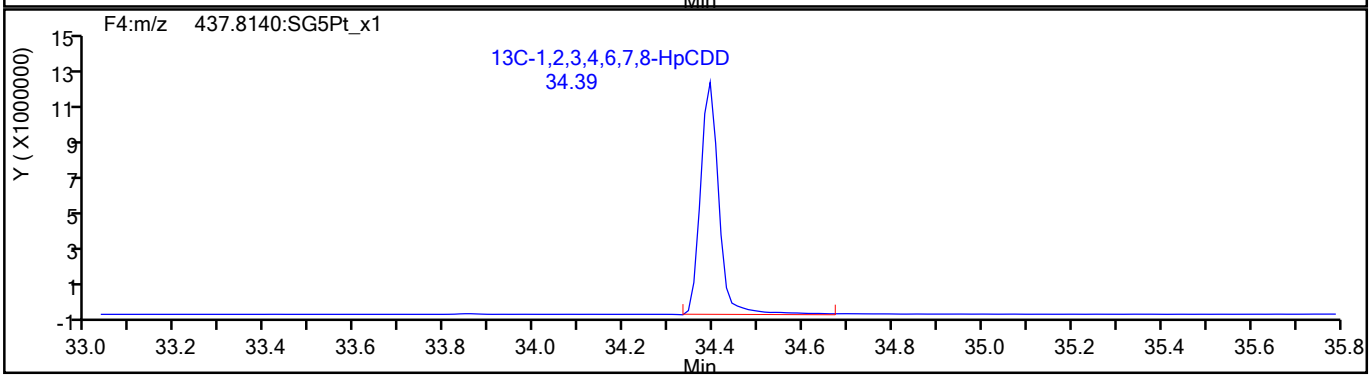

794095

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_15.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

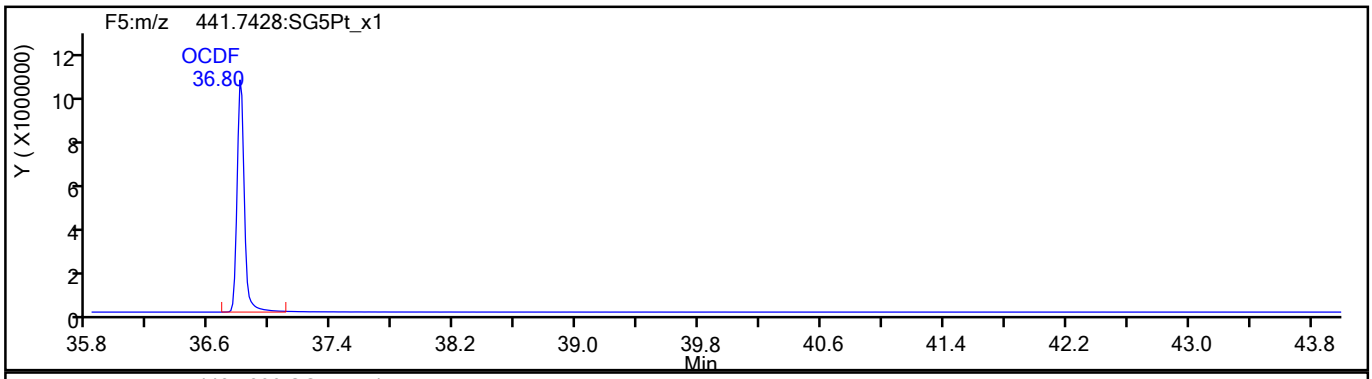

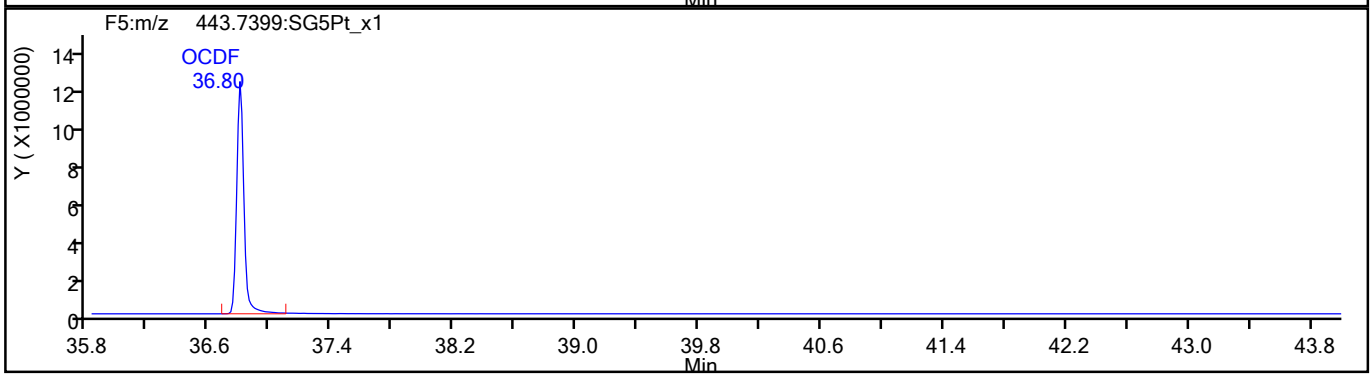

OCDF Standards

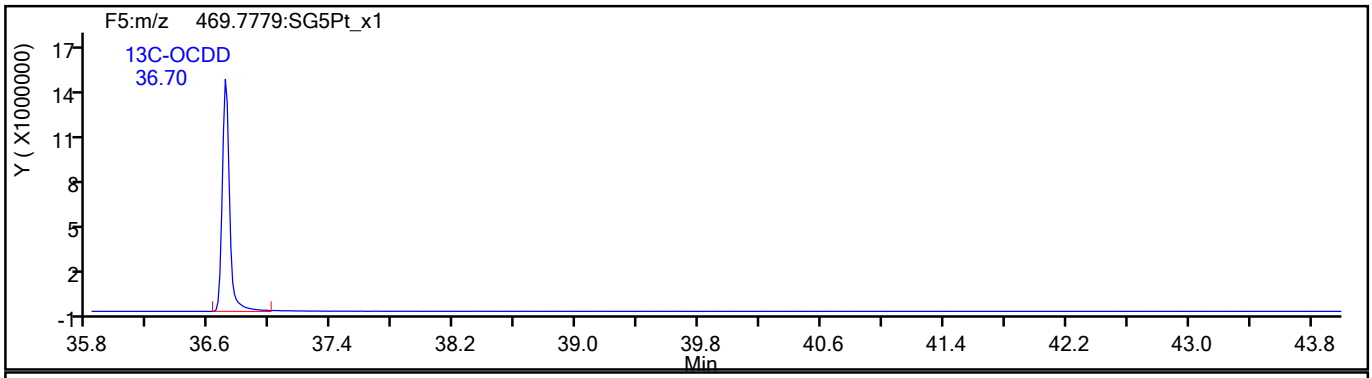

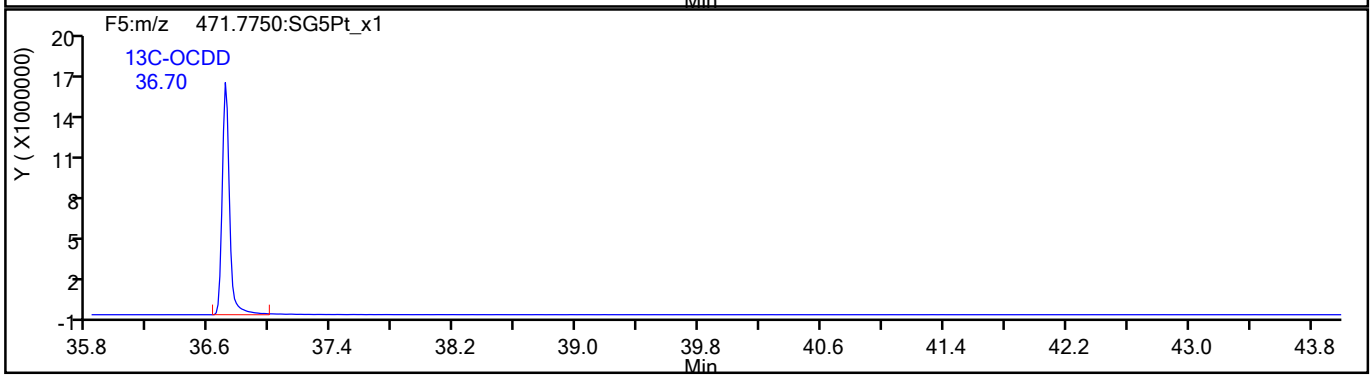

794096

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

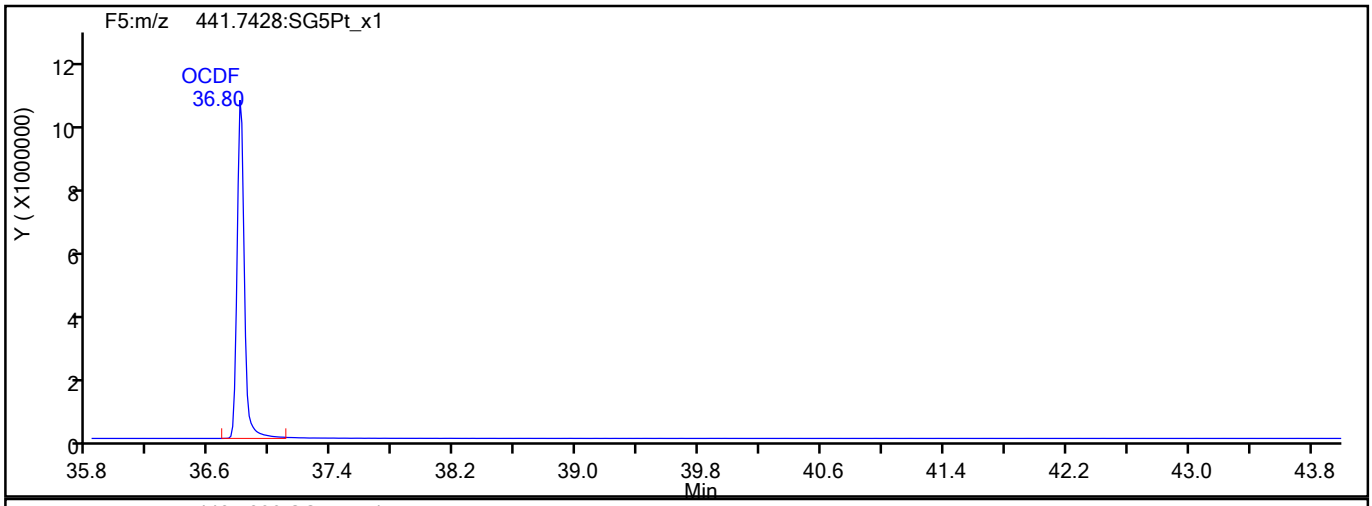

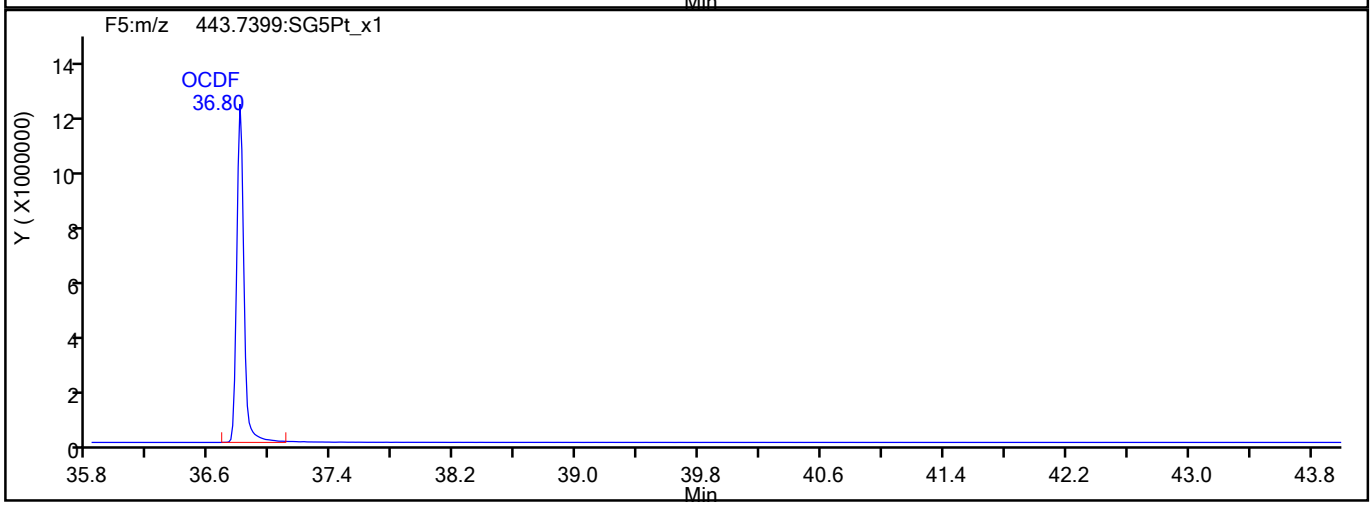

OCDF Interference Mass

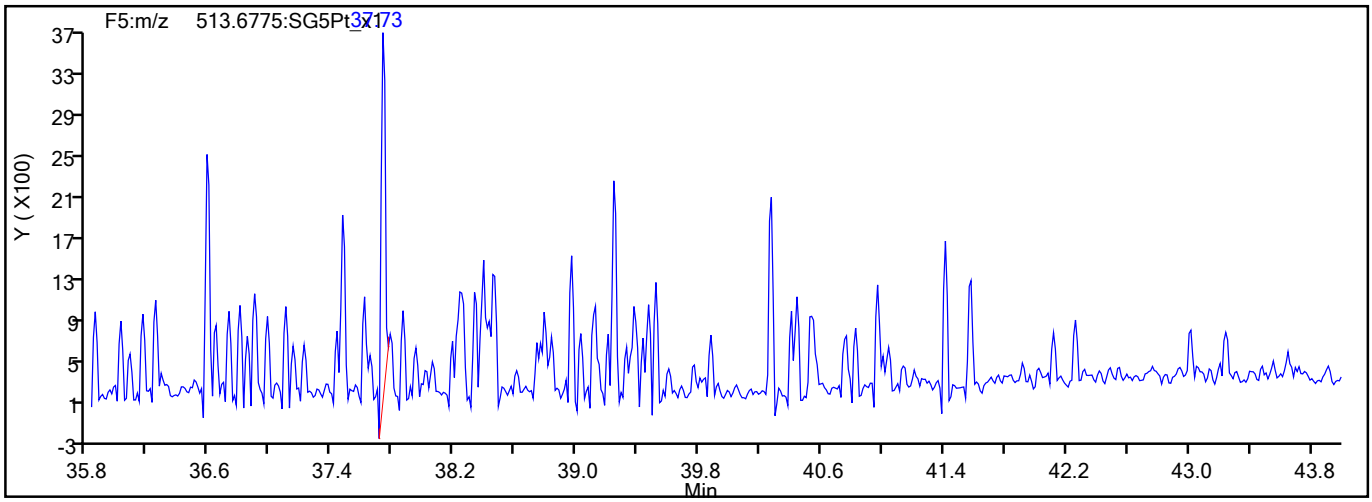

794097

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

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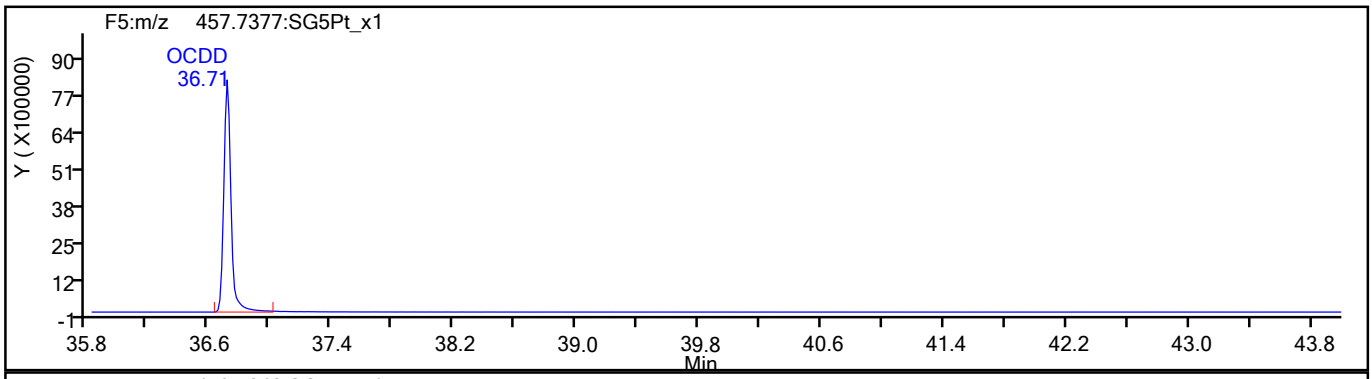

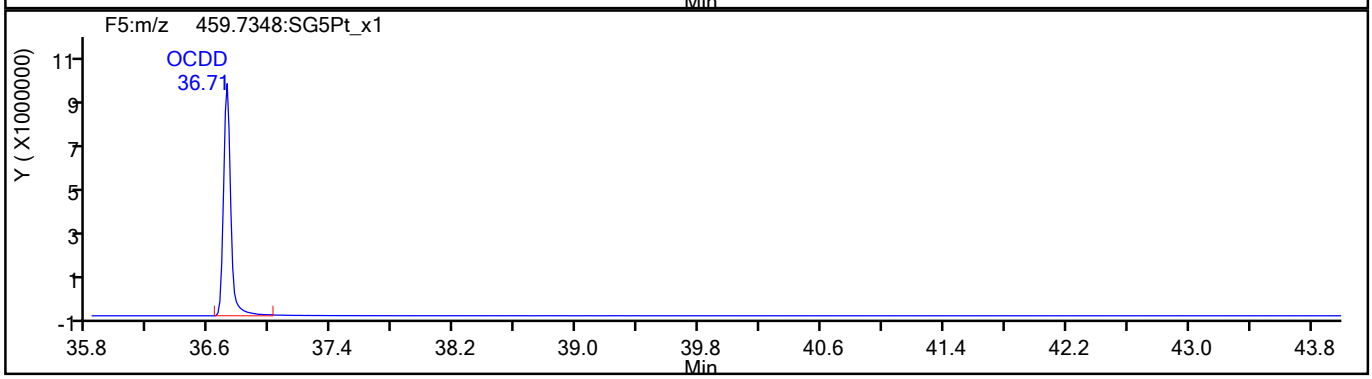

OCDD Standards

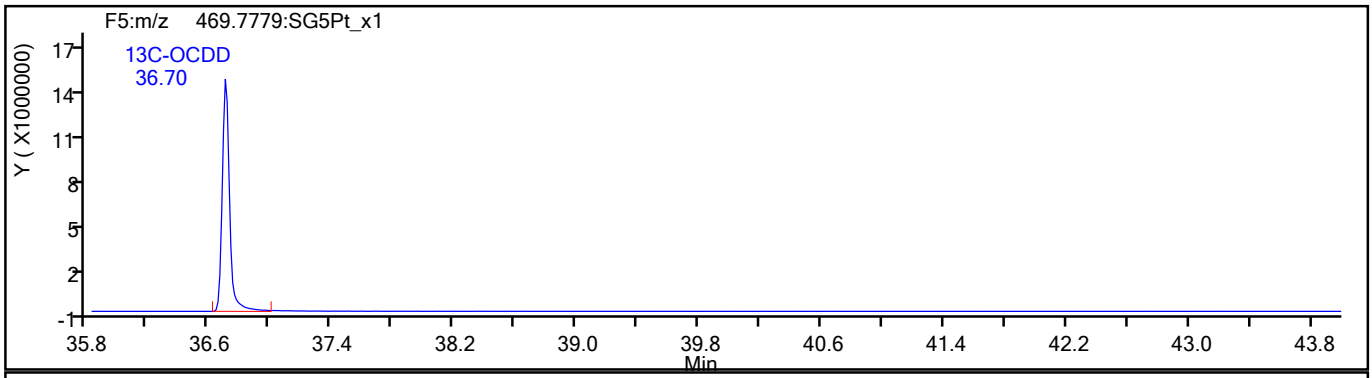

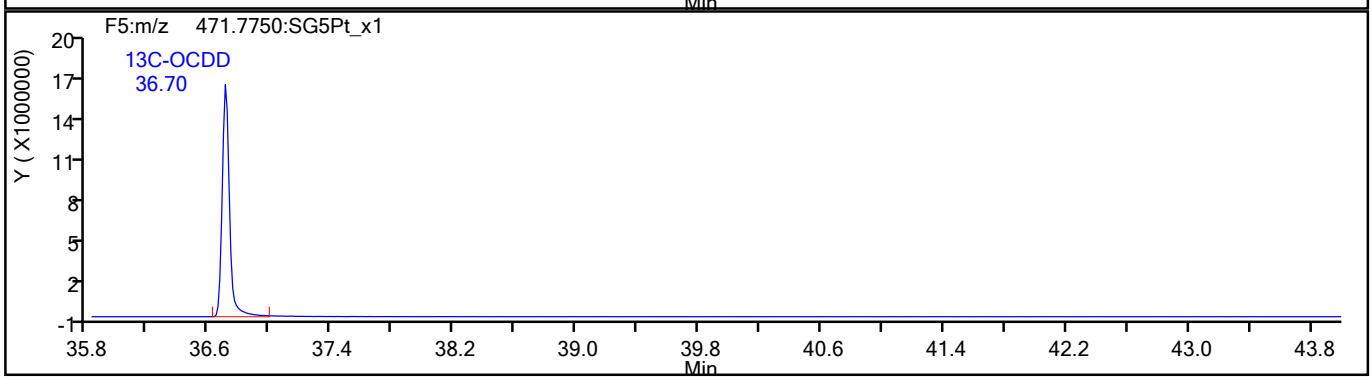

794098

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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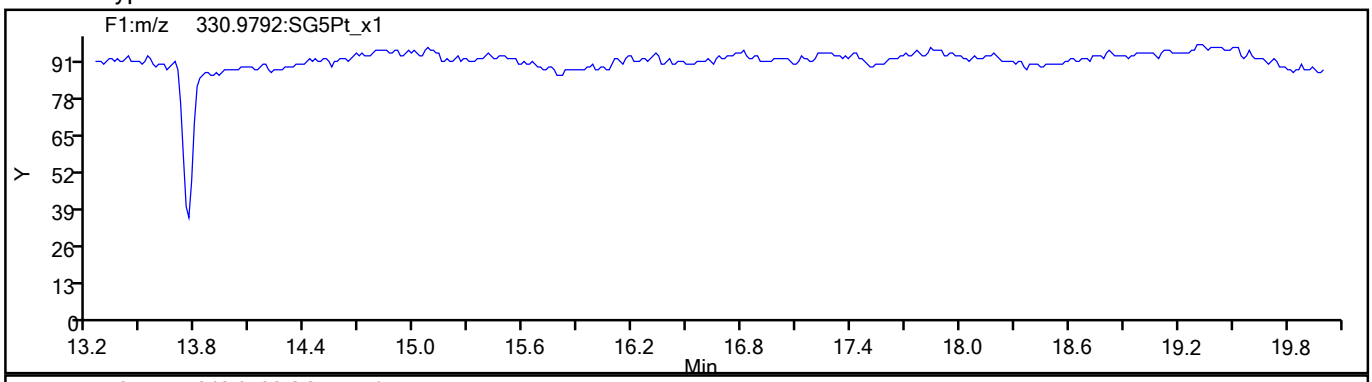

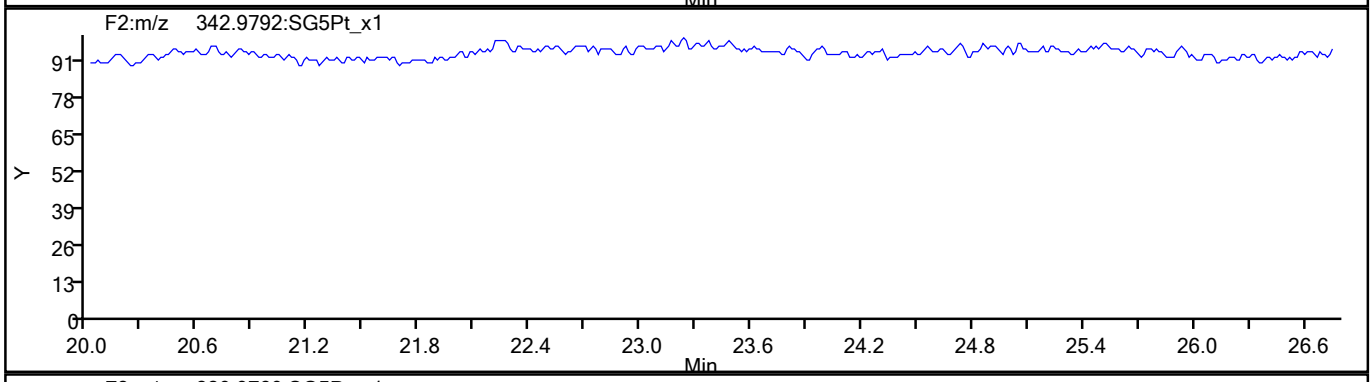

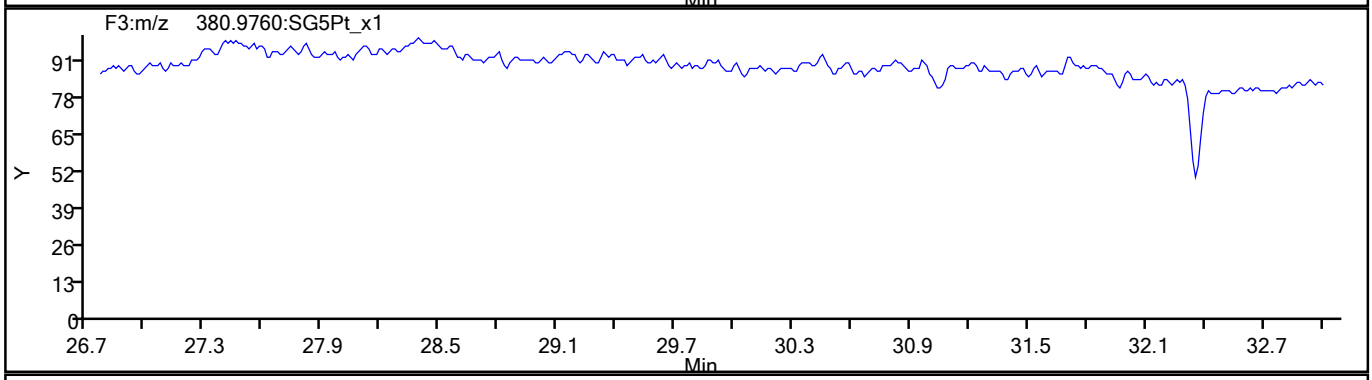

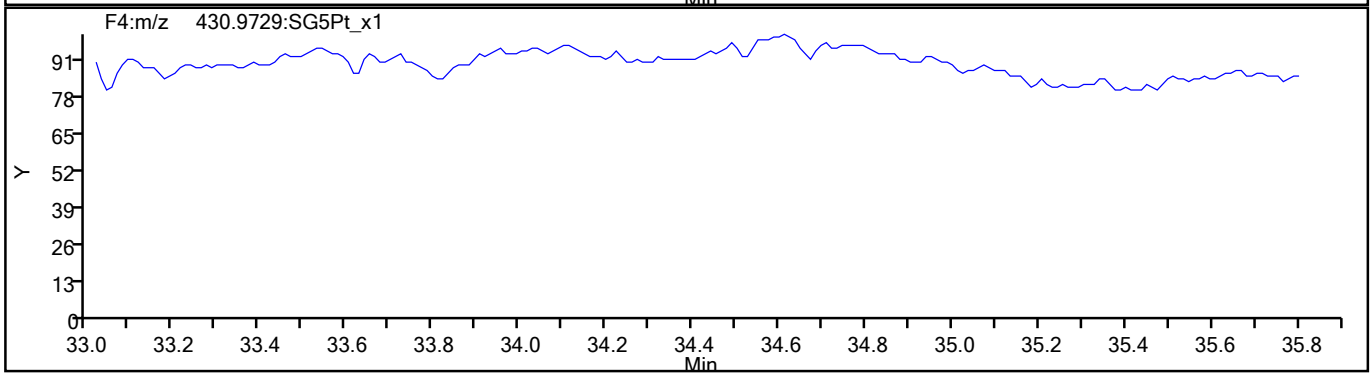

794099

Report Date: 26-Aug-2021 10:47:03 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 20:40:41	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

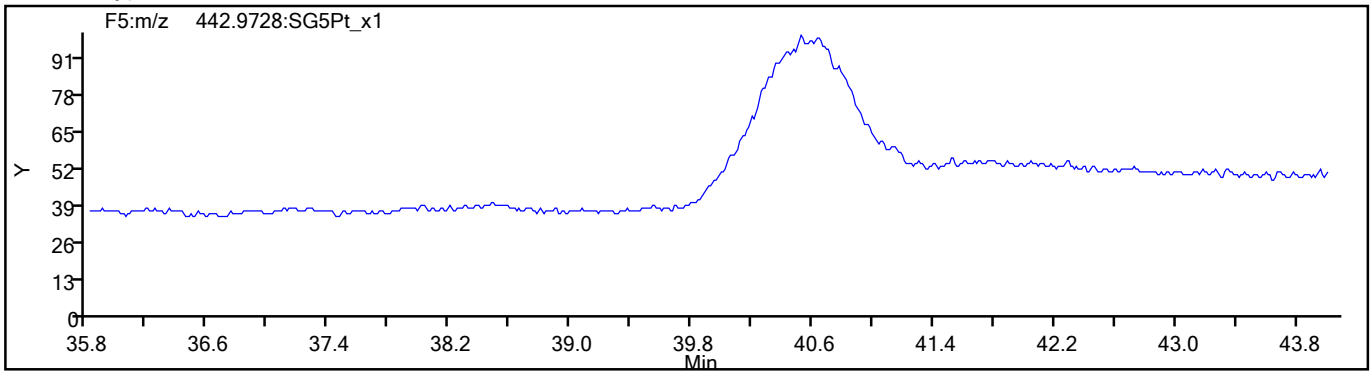

794100

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab Sample ID: CCV 320-519966/1 Calibration Date: 08/26/2021 07:40

Instrument ID: 10D5 Calib Start Date: 07/26/2021 10:51

GC Column: DB-5 ID: 0.32(mm) Calib End Date: 07/26/2021 13:51

Lab File ID: 25AU2110D5_29.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDF	AveID	1.024	1.029		10.0	10.0	100	84-120
2,3,7,8-TCDD	AveID	1.254	1.262		10.1	10.0	101	78-129
1,2,3,7,8-PeCDF	AveID	1.061	1.076		50.7	50.0	101	82-120
2,3,4,7,8-PeCDF	AveID	1.018	1.033		50.7	50.0	101	82-122
1,2,3,7,8-PeCDD	AveID	1.048	1.050		50.1	50.0	100	78-130
1,2,3,4,7,8-HxCDF	AveID	1.085	1.088		50.1	50.0	100	90-112
1,2,3,6,7,8-HxCDF	AveID	1.126	1.133		50.3	50.0	101	88-114
2,3,4,6,7,8-HxCDF	AveID	1.168	1.163		49.8	50.0	100	88-114
1,2,3,4,7,8-HxCDD	AveID	1.064	1.073		50.4	50.0	101	78-128
1,2,3,6,7,8-HxCDD	AveID	1.000	1.046		52.3	50.0	105	78-128
1,2,3,7,8,9-HxCDD	AveID	1.133	1.131		49.9	50.0	100	82-122
1,2,3,7,8,9-HxCDF	AveID	1.166	1.173		50.3	50.0	101	90-112
1,2,3,4,6,7,8-HpCDF	AveID	1.441	1.453		50.4	50.0	101	90-110
1,2,3,4,6,7,8-HpCDD	AveID	1.094	1.092		49.9	50.0	100	86-116
1,2,3,4,7,8,9-HpCDF	AveID	1.317	1.353		51.4	50.0	103	86-116
OCDD	AveID	1.107	1.120		101	100	101	79-126
OCDF	AveID	1.438	1.430		99.4	100	99	63-159
13C-2,3,7,8-TCDF	Ave	1.625	1.541		94.9	100	95	71-140
13C-2,3,7,8-TCDD	Ave	0.8993	0.9040		101	100	101	82-121
13C-1,2,3,7,8-PeCDF	Ave	1.210	1.251		103	100	103	76-130
13C-2,3,4,7,8-PeCDF	Ave	1.239	1.362		110	100	110	77-130
13C-1,2,3,7,8-PeCDD	Ave	0.7612	0.8475		111	100	111	62-160
13C-1,2,3,4,7,8-HxCDF	Ave	1.084	1.097		101	100	101	76-131
13C-1,2,3,6,7,8-HxCDF	Ave	1.128	1.087		96.4	100	96	70-143
13C-2,3,4,6,7,8-HxCDF	Ave	1.064	1.081		102	100	102	73-137
13C-1,2,3,4,7,8-HxCDD	Ave	0.7334	0.8089		110	100	110	85-117
13C-1,2,3,6,7,8-HxCDD	Ave	0.8802	0.8648		98.3	100	98	85-118
13C-1,2,3,7,8,9-HxCDF	Ave	0.9676	0.9759		101	100	101	74-135
13C-1,2,3,4,6,7,8-HpCDF	Ave	0.7730	0.7068		91.4	100	91	78-129
13C-1,2,3,4,6,7,8-HpCDD	Ave	0.6472	0.6383		98.6	100	99	72-138
13C-1,2,3,4,7,8,9-HpCDF	Ave	0.7008	0.6345		90.5	100	91	77-129
13C-OCDD	Ave	0.4472	0.4785		214	200	107	48-208
37Cl4-2,3,7,8-TCDD	Ave	1.107	1.172		10.6	10.0	106	79-127

Sample List Report **MassLynx 4.1**

Sample List: C:\MassLynx\Data 2020.PRO\SampleDB\25AU2110D5.SPL
Last Modified: Thursday, August 26, 2021 09:49:48 Pacific Daylight Time
Printed: Thursday, August 26, 2021 09:49:53 Pacific Daylight Time

Page Position (1, 1)

	File Name	File Text	Sample ID	Bottle	Method/Matrix	Box #	User
1	25AU2110D5_1	WDM HRDXNCP_00044	WDM 082521B	Tray01:1	Dioxin		SMA
2	25AU2110D5_2	CS-4 HRDXNL4_00099	CCV 082521	Tray01:2	Dioxin		SMA
3	25AU2110D5_3	MB 320-515492/1-A	MB 320-515492/1-A	Tray01:4	1613B/Solid	D270	SMA
4	25AU2110D5_4	LCS 320-515492/2-A	LCS 320-515492/2-A	Tray01:5	1613B/Solid	---	SMA
5	25AU2110D5_5	320-77214-A-1-A	320-77214-A-1-A	Tray01:6	1613B/Solid	---	SMA
6	25AU2110D5_6	320-77214-A-2-A	320-77214-A-2-A	Tray01:7	1613B/Solid		SMA
7	25AU2110D5_7	320-77214-A-2-B MS	320-77214-A-2-B MS	Tray01:8	1613B/Solid		SMA
8	25AU2110D5_8	320-77214-A-2-C MSD	320-77214-A-2-C MSD	Tray01:9	1613B/Solid	---	SMA
9	25AU2110D5_9	320-77214-A-3-A	320-77214-A-3-A	Tray01:10	1613B/Solid	---	SMA
10	25AU2110D5_10	320-77214-A-4-A	320-77214-A-4-A	Tray01:11	1613B/Solid		SMA
11	25AU2110D5_11	320-77214-A-5-A	320-77214-A-5-A	Tray01:15	1613B/Solid		SMA
12	25AU2110D5_12	320-77214-A-6-A	320-77214-A-6-A	Tray01:16	1613B/Solid		SMA
13	25AU2110D5_13	320-77214-A-7-A	320-77214-A-7-A	Tray01:17	1613B/Solid	---	SMA
14	25AU2110D5_14	SB Solvent Blank C-14	SB 082521	Tray01:3			SMA
15	25AU2110D5_15	CS-4 HRDXNL4_00099	CCV 082521A	Tray01:2	Dioxin		SMA
16	25AU2110D5_16	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
17	25AU2110D5_17	SB Solvent Blank C-14	SB 082521A	Tray01:3			SMA
18	25AU2110D5_18	320-77214-A-8-A	320-77214-A-8-A	Tray01:29	1613B/Solid	D270	SMA
19	25AU2110D5_19	320-77214-A-9-A	320-77214-A-9-A	Tray01:30	1613B/Solid		SMA
20	25AU2110D5_20	320-77214-A-13-A	320-77214-A-13-A	Tray01:31	1613B/Solid		SMA
21	25AU2110D5_21	320-77292-A-1-A	320-77292-A-1-A	Tray01:32	1613B/Solid		SMA
22	25AU2110D5_22	320-77292-A-2-A	320-77292-A-2-A	Tray01:33	1613B/Solid		SMA
23	25AU2110D5_23	320-77292-A-2-B MS	320-77292-A-2-B MS	Tray01:34	1613B/Solid		SMA
24	25AU2110D5_24	320-77292-A-2-C MSD	320-77292-A-2-C MSD	Tray01:35	1613B/Solid		SMA
25	25AU2110D5_25	320-77292-A-3-A	320-77292-A-3-A	Tray01:36	1613B/Solid		SMA
26	25AU2110D5_26	320-77292-A-4-A	320-77292-A-4-A	Tray01:37	1613B/Solid		SMA
27	25AU2110D5_27	320-77292-A-5-A	320-77292-A-5-A	Tray01:38	1613B/Solid		SMA
28	25AU2110D5_28	SB Solvent Blank C-14	SB 082521B	Tray01:3			SMA
29	25AU2110D5_29	CS-4 HRDXNL4_00099	CCV 082521B	Tray01:2	Dioxin		SMA
30	25AU2110D5_30	WDM HRDXNCP_00044	WDM 082521A	Tray01:1	Dioxin	---	SMA
31	25AU2110D5_31	SB Solvent Blank C-14	SB 082521C	Tray01:3			SMA
32	25AU2110D5_32	320-77292-A-6-A	320-77292-A-6-A	Tray01:43	1613B/Solid	D270	SMA
33	25AU2110D5_33	320-77292-A-7-A	320-77292-A-7-A	Tray01:44	1613B/Solid		SMA
34	25AU2110D5_34	320-77292-A-8-A	320-77292-A-8-A	Tray01:45	1613B/Solid		SMA
35	25AU2110D5_35	320-77292-A-9-A	320-77292-A-9-A	Tray01:46	1613B/Solid		SMA
36	25AU2110D5_36	320-77292-A-13-A	320-77292-A-13-A	Tray01:47	1613B/Solid		SMA
37	25AU2110D5_37	400-206693-C-22-A	400-206693-C-22-A	Tray01:48	1613B/Solid		SMA
38	25AU2110D5_38	400-206693-C-36-A	400-206693-C-36-A	Tray01:49	1613B/Solid		SMA
39	25AU2110D5_39	400-206693-C-37-A	400-206693-C-37-A	Tray01:50	1613B/Solid		SMA
40	25AU2110D5_40	400-206693-C-38-A	400-206693-C-38-A	Tray01:51	1613B/Solid		SMA
41	25AU2110D5_41	400-206693-C-39-A	400-206693-C-39-A	Tray01:52	1613B/Solid		SMA
42	25AU2110D5_42	SB Solvent Blank C-14	SB 082521D	Tray01:3			SMA
43	25AU2110D5_43	CS-4 HRDXNL4_00099	CCV 082521C	Tray01:2	Dioxin		SMA
44	25AU2110D5_44	WDM HRDXNCP_00044	WDM 082521C	Tray01:1	Dioxin	---	SMA
45	25AU2110D5_45	SB Solvent Blank C-14	SB 082521E	Tray01:3			SMA

LOGFILE CHECKED
DB 8/26/21

794102

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M 292.9824 R 11211

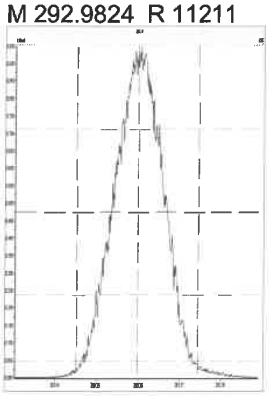

M 304.9824 R 11186

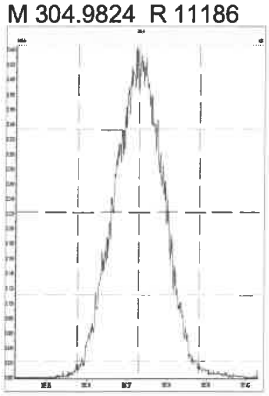

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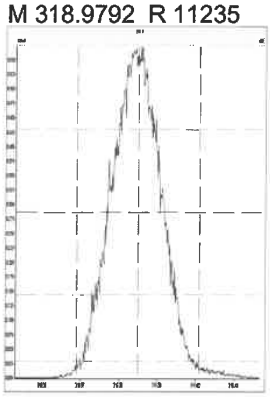

M 330.9792 R 11293

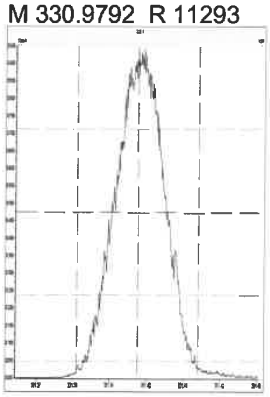

M 342.9792 R 10989

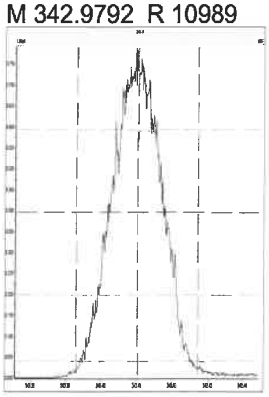

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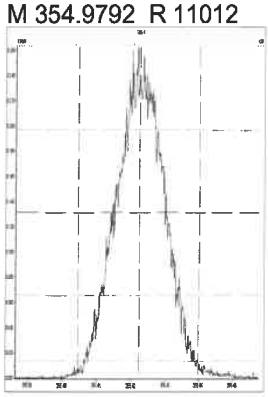

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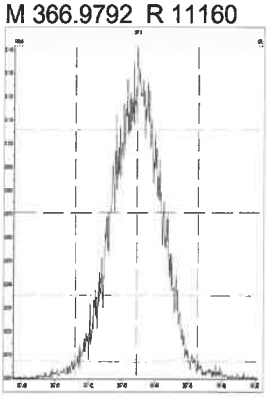

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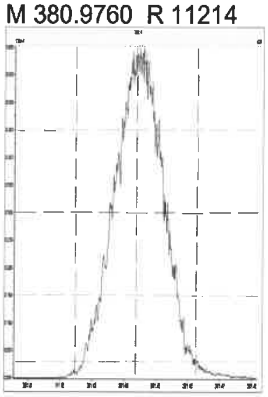

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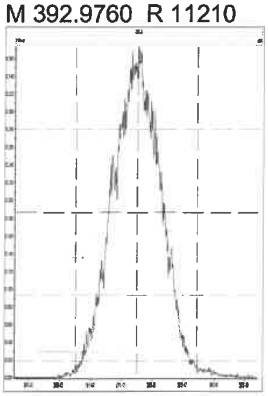

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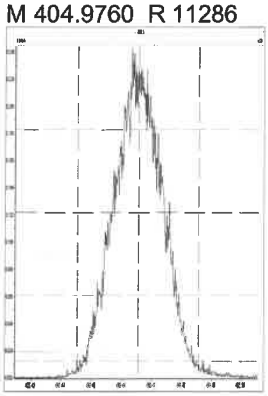

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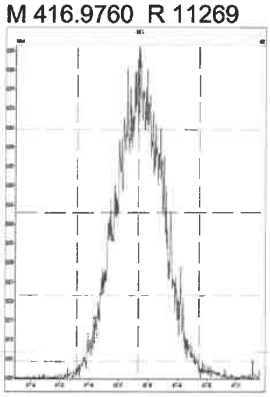

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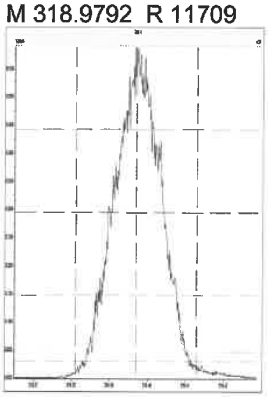

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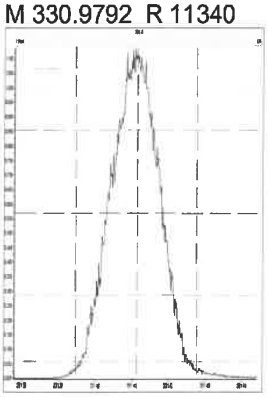

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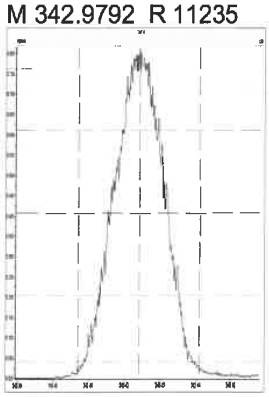

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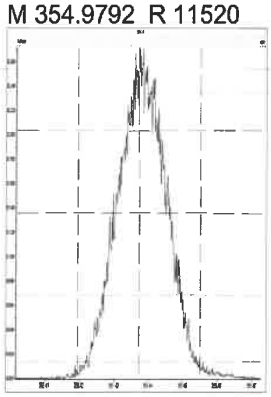

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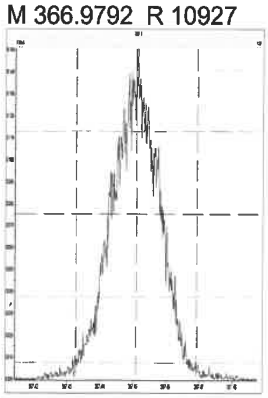

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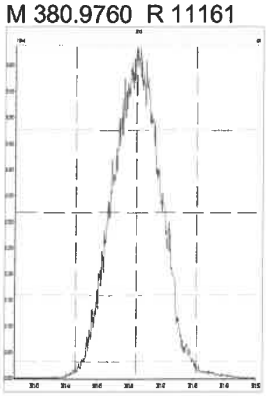

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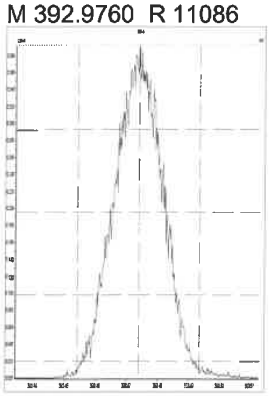

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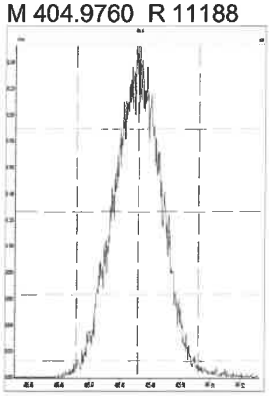

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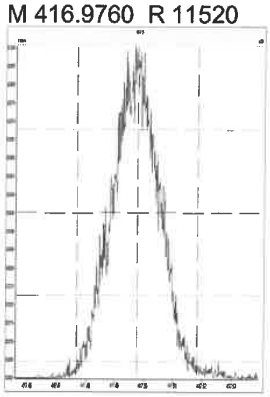

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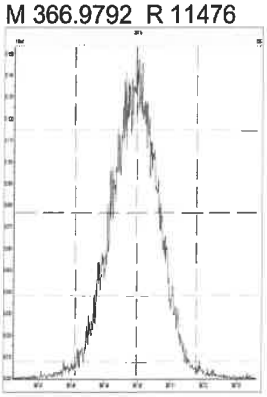

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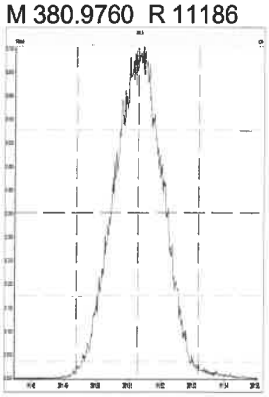

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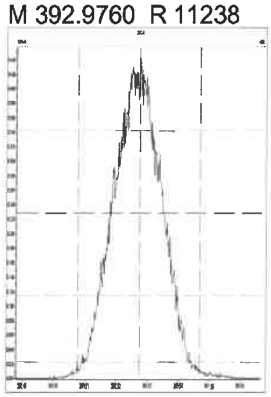

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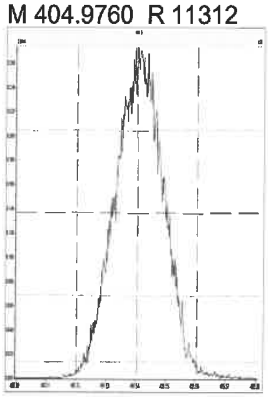

M 416.9760 R 11792

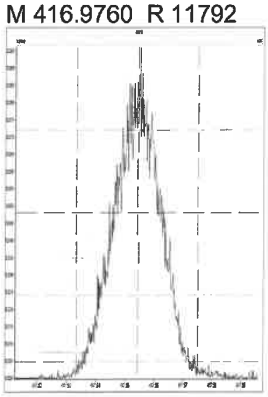

M 430.9728 R 11340

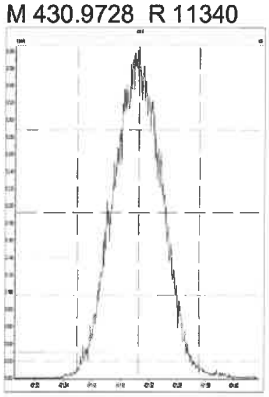

M 442.9728 R 11342

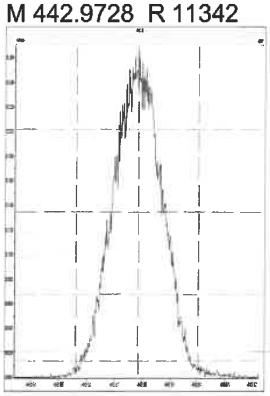

M 454.9728 R 11312

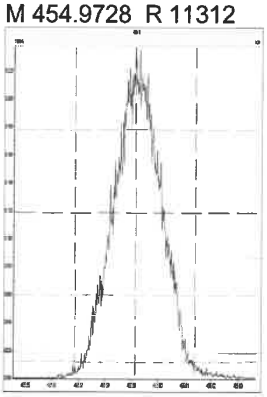

M 380.9760 R 11493

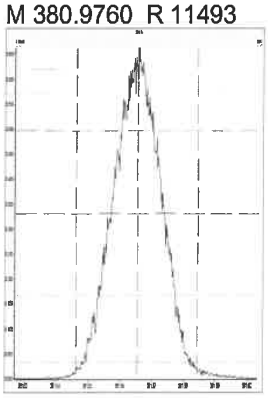

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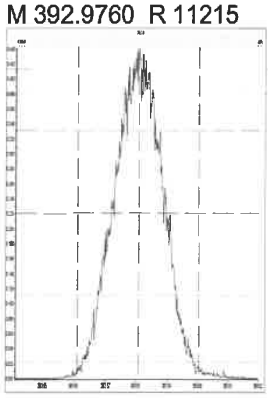

M 404.9760 R 11160

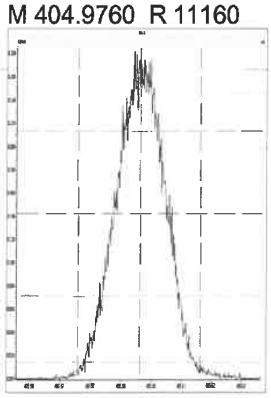

M 416.9760 R 11765

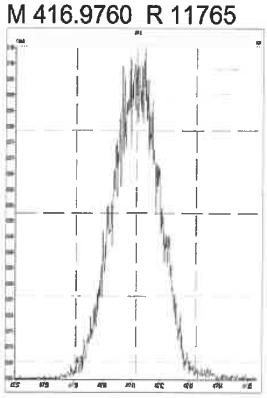

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M 430.9728_R 11313

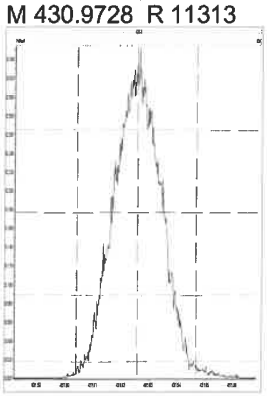

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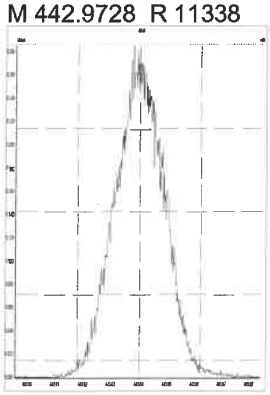

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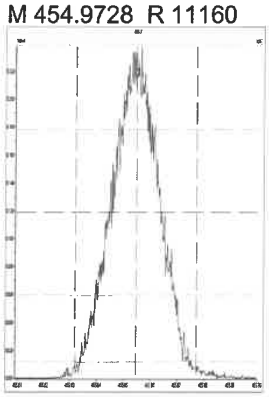

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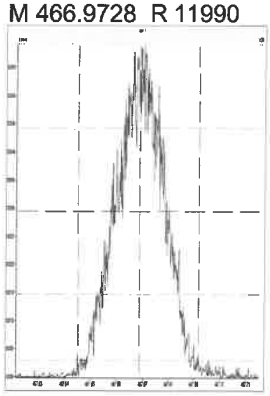

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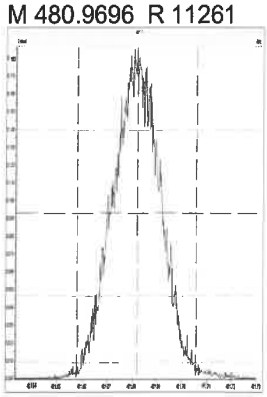

M 380.9760_R 11312

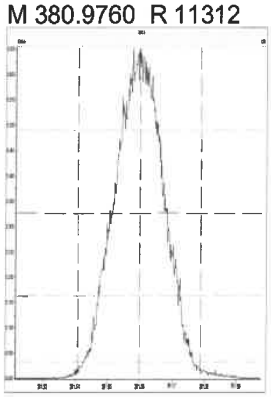

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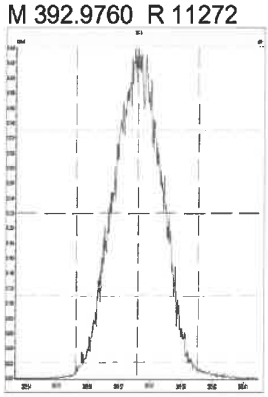

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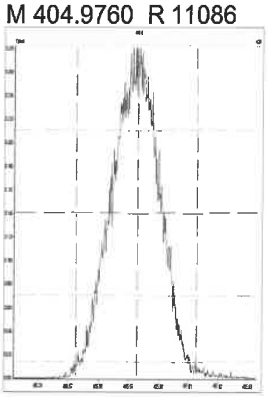

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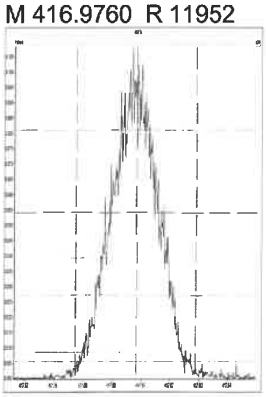

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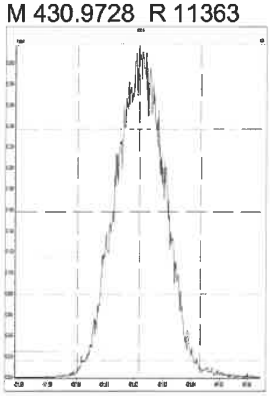

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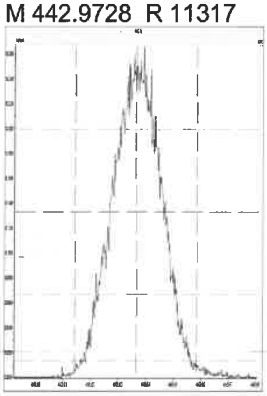

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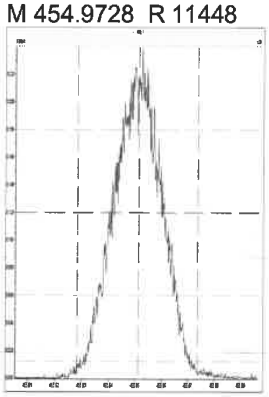

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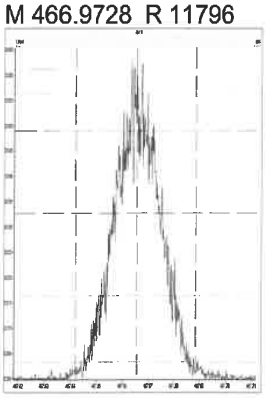

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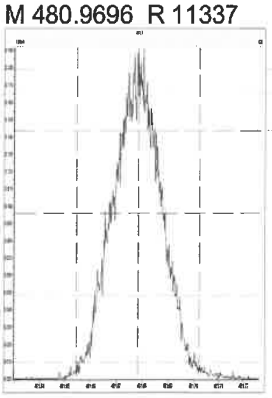

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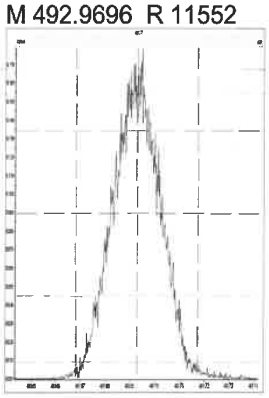

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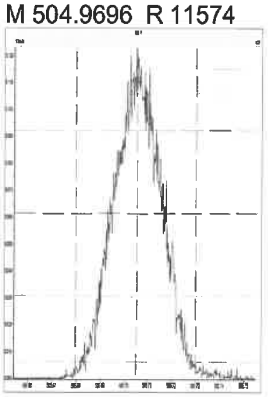

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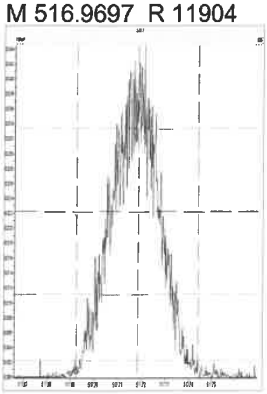

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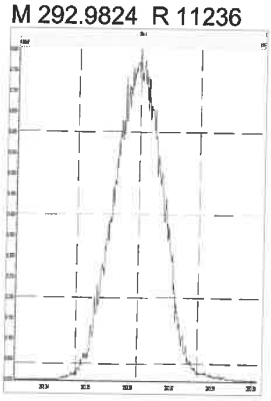

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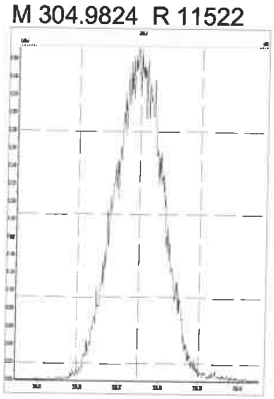

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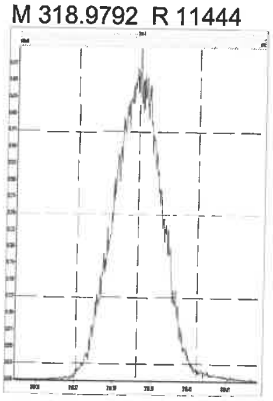

M 330.9792 R 11467

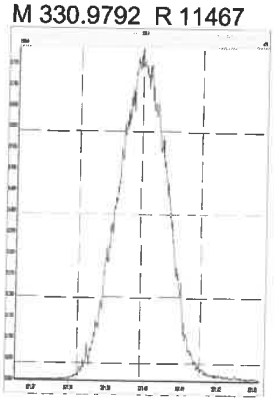

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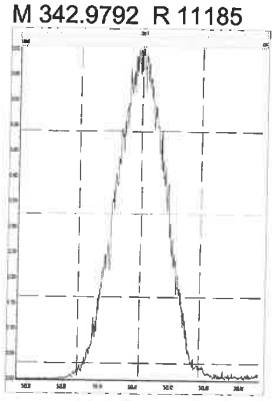

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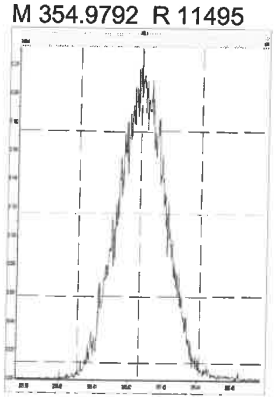

M 366.9792 R 11340

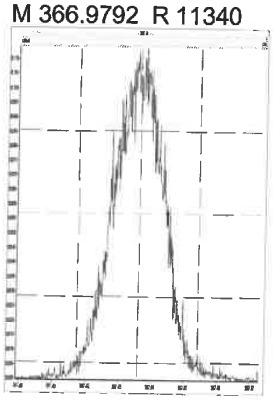

M 380.9760 R 11312

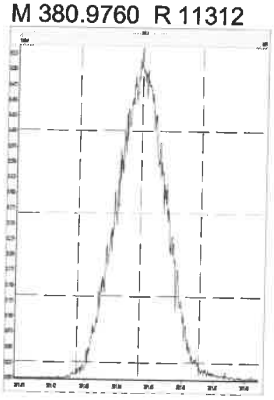

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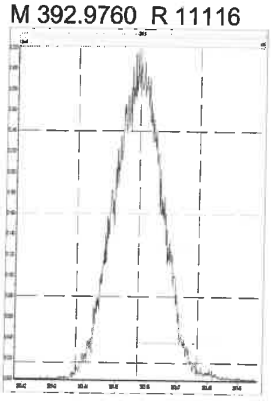

M 404.9760 R 11363

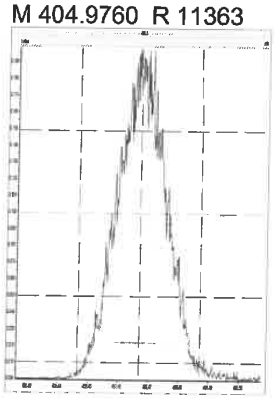

M 416.9760 R 11636

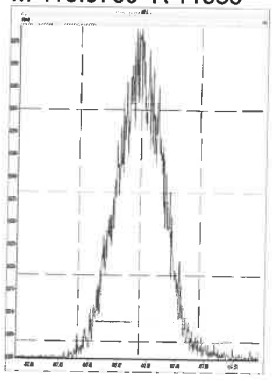

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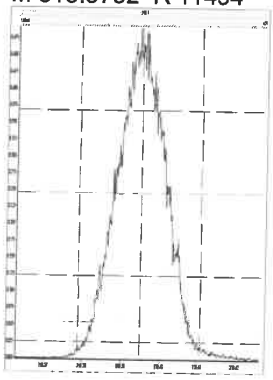

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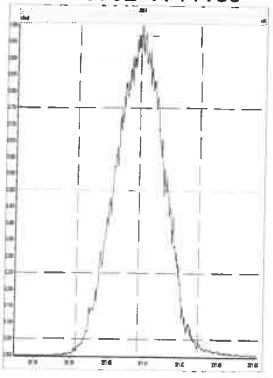

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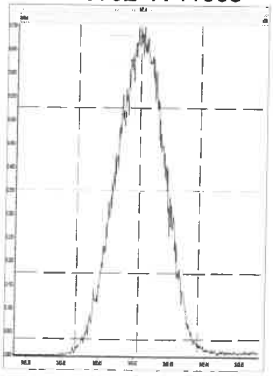

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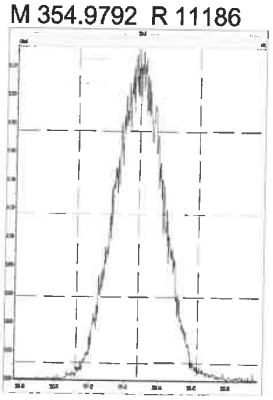

M 366.9792 R 11072

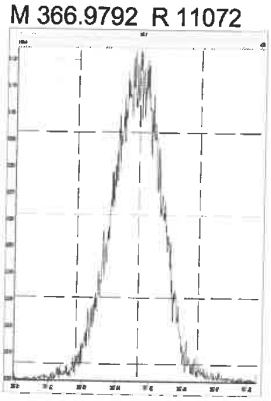

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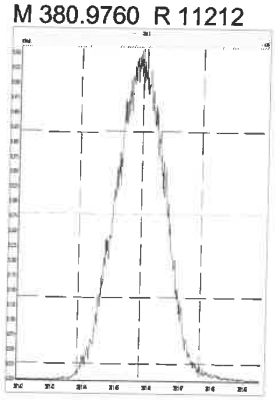

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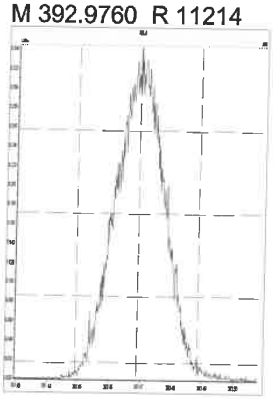

M 404.9760 R 11236

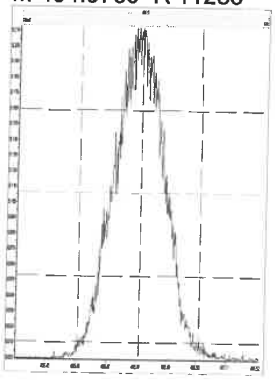

M 416.9760 R 11476

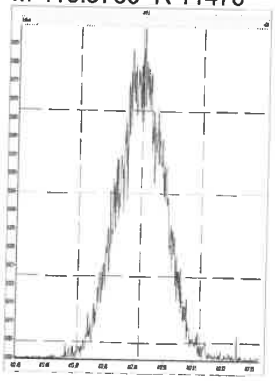

M 366.9792 R 11608

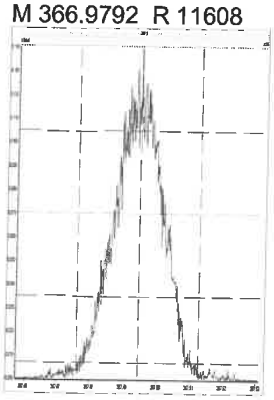

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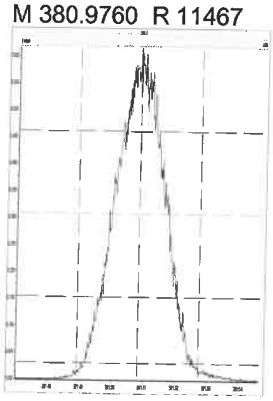

M 392.9760 R 11140

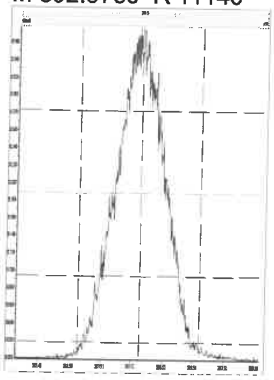

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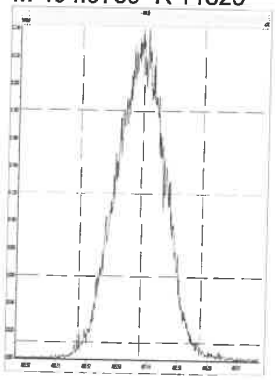

M 416.9760 R 11497

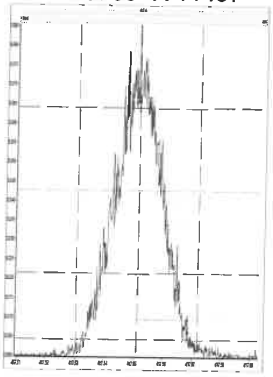

M 430.9728 R 11580

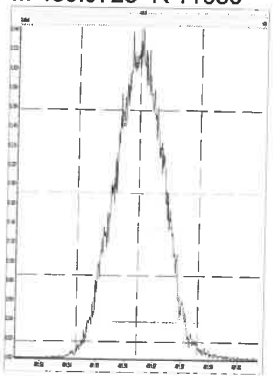

M 442.9728 R 11565

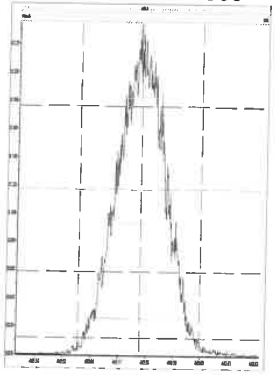

M 454.9728 R 11338

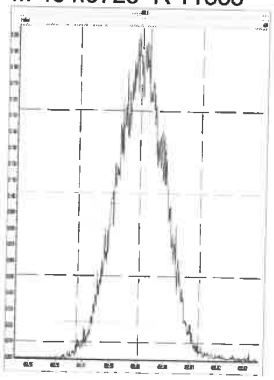

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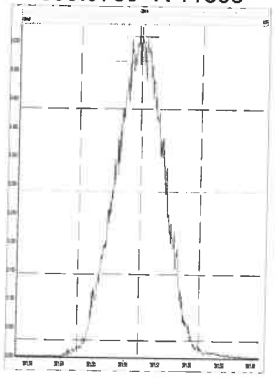

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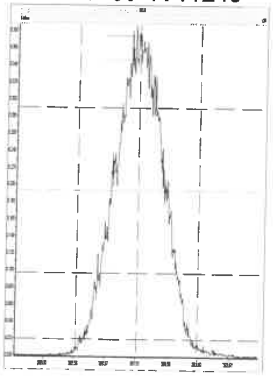

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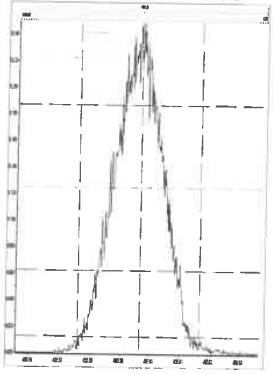

M 416.9760 R 11682

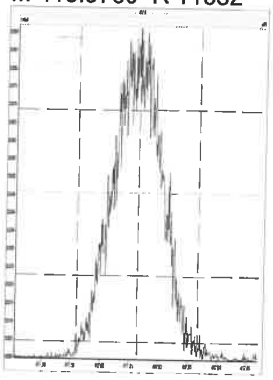

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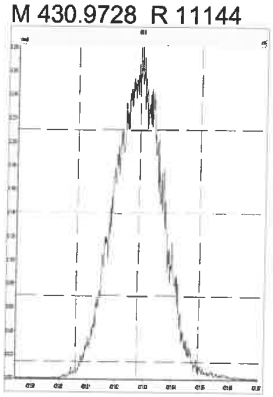

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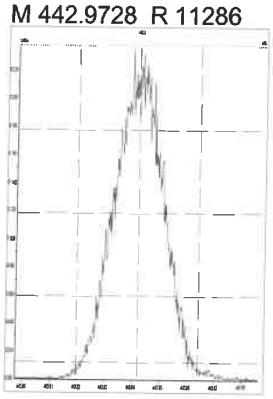

M 454.9728 R 11879

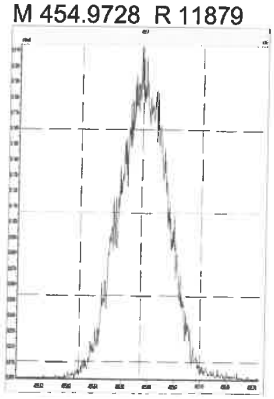

M 466.9728 R 11775

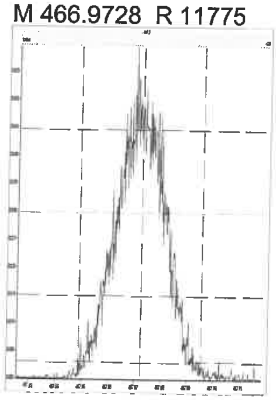

M 480.9696 R 11162

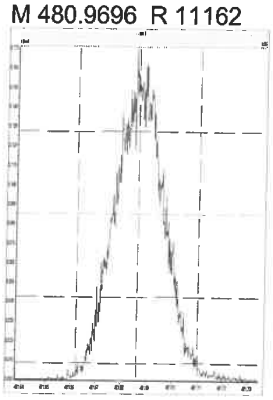

M 380.9760 R 11389

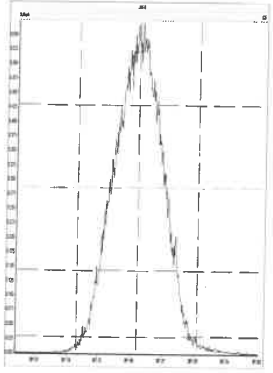

M 392.9760 R 11261

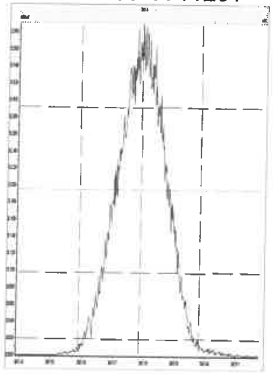

M 404.9760 R 11521

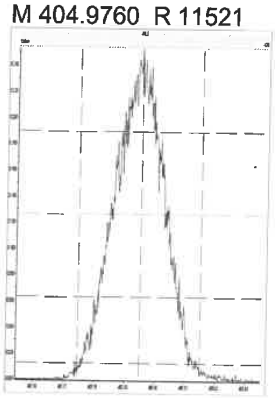

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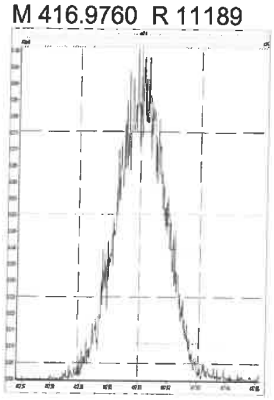

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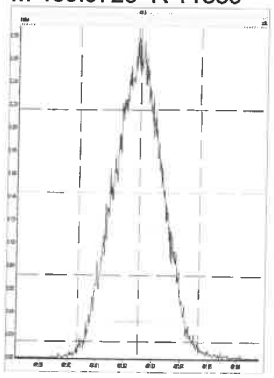

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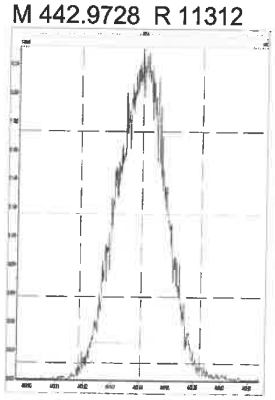

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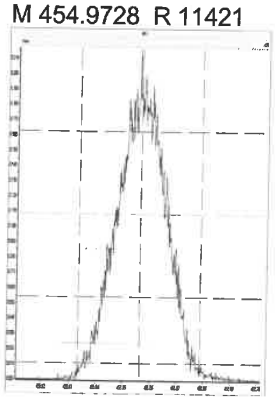

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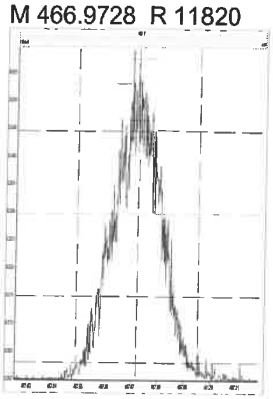

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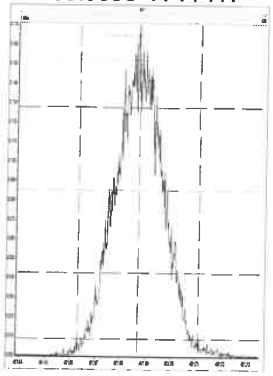

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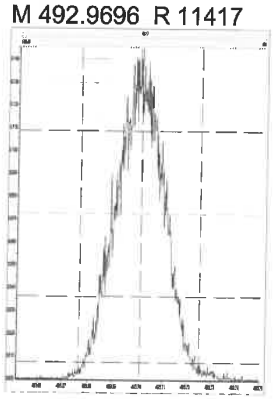

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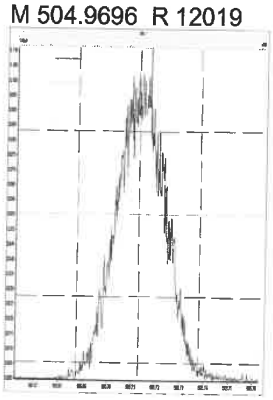

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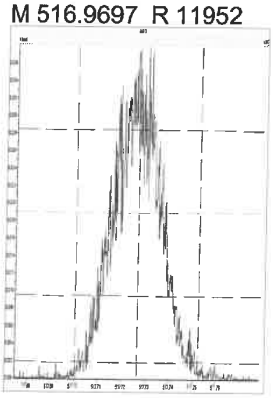

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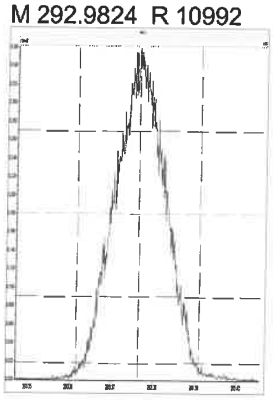

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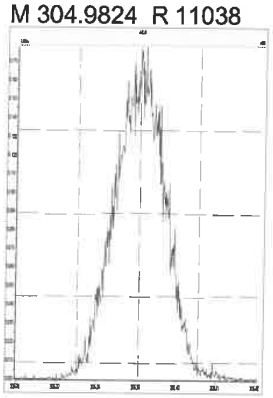

M 318.9792 R 11092

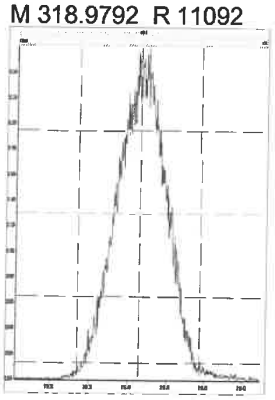

M 330.9792 R 10916

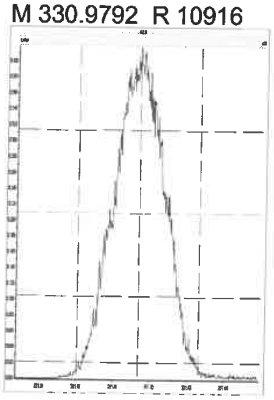

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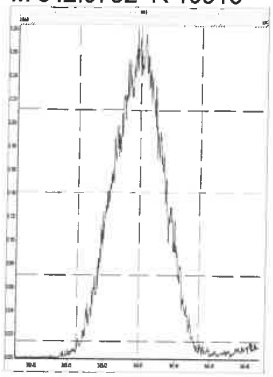

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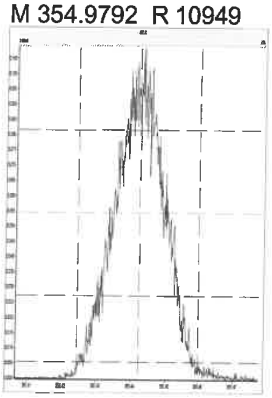

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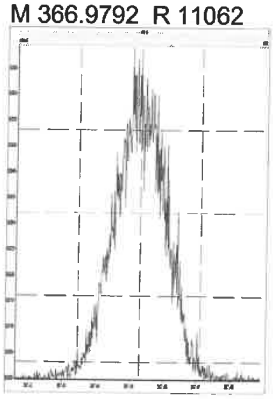

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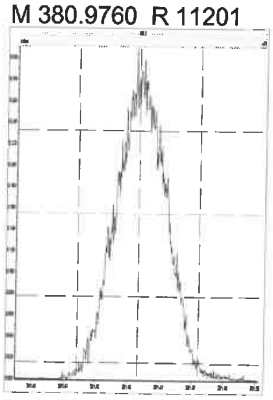

M 392.9760 R 10940

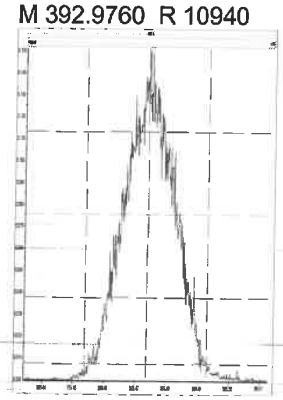

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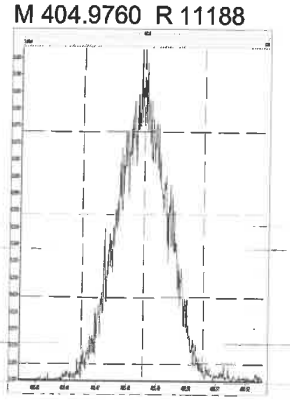

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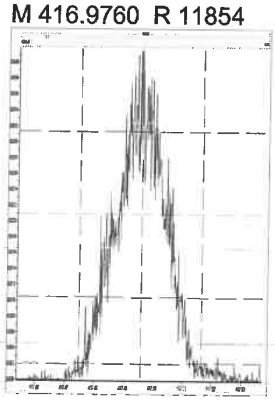

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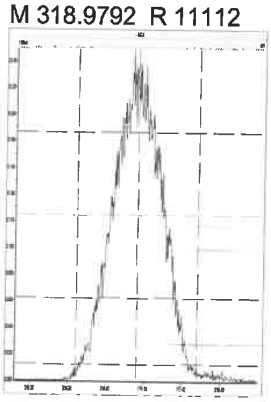

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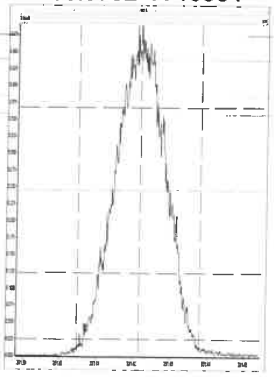

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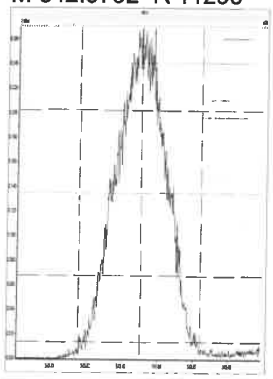

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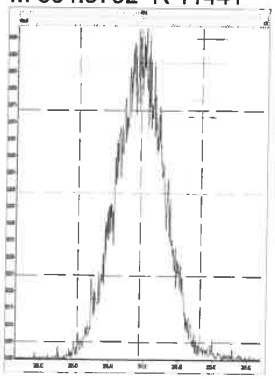

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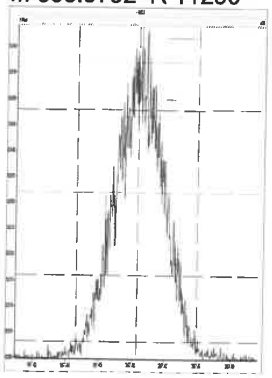

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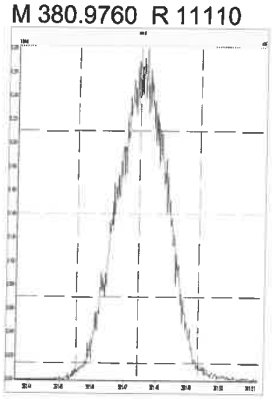

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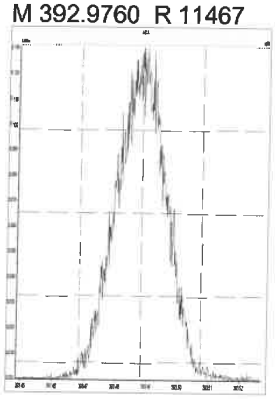

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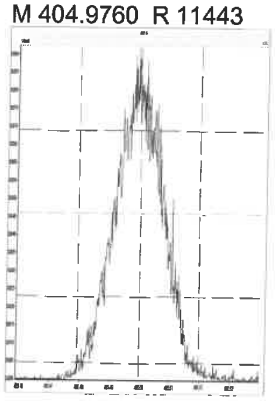

M 416.9760 R 11823

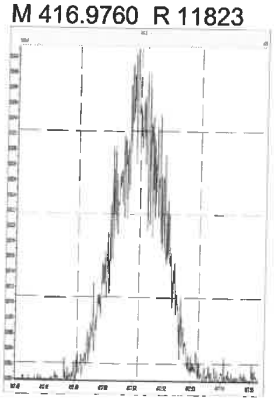

M 366.9792 R 11749

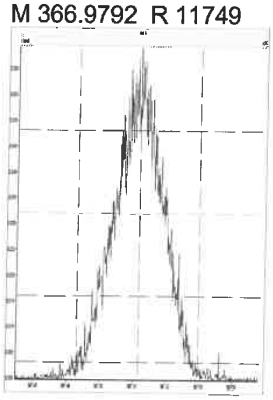

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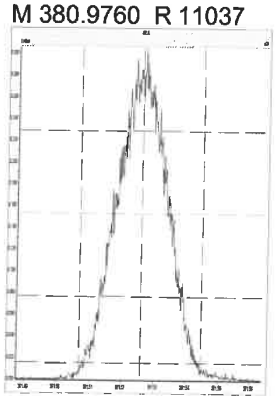

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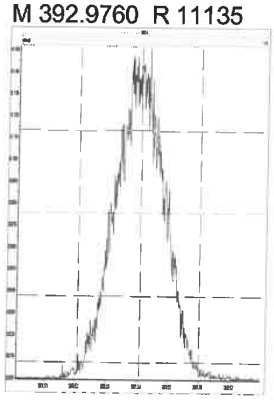

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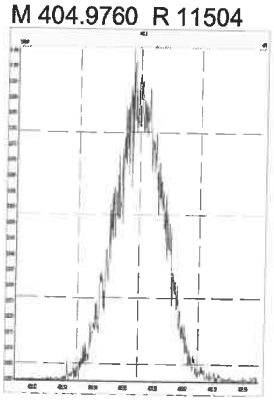

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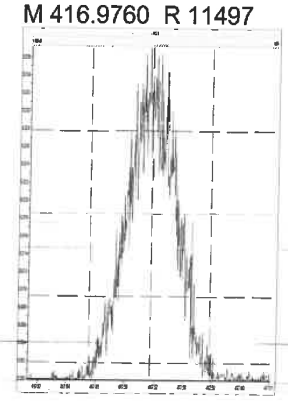

M 430.9728 R 11261

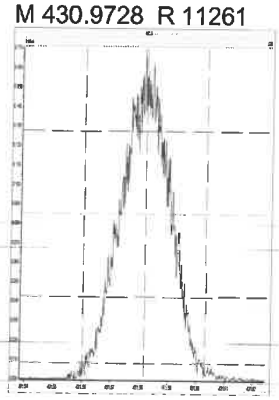

M 442.9728 R 11338

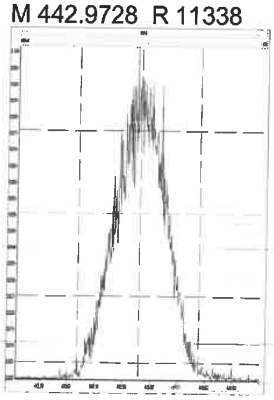

M 454.9728 R 11261

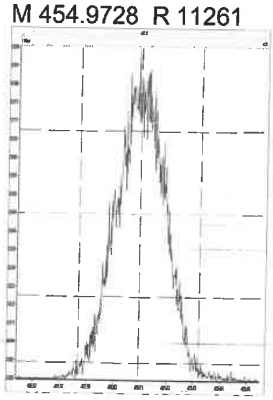

M 380.9760 R 11312

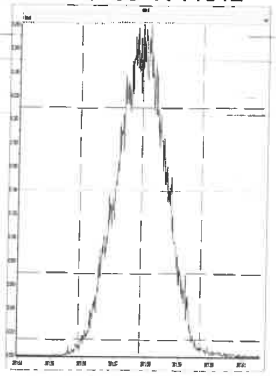

M 392.9760 R 11061

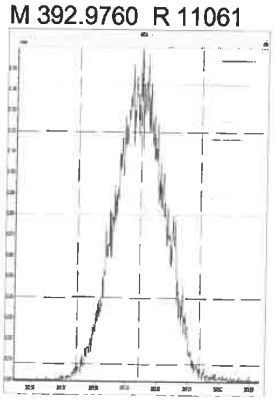

M 404.9760 R 11547

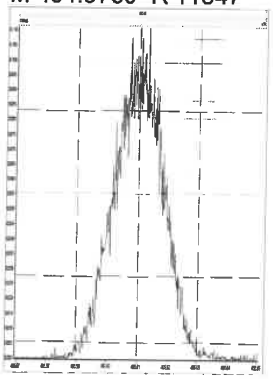

M 416.9760 R 11887

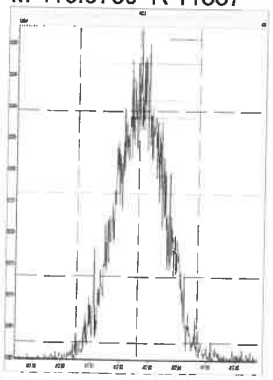

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Printed: Thursday, August 26, 2021 17:45:49 Pacific Daylight Time

M 430.9728 R 11014

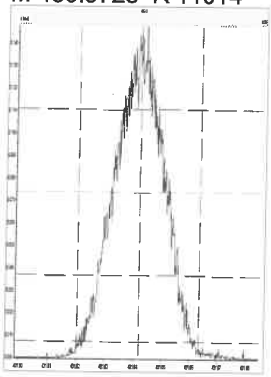

M 442.9728 R 11655

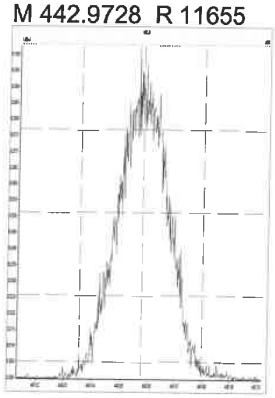

M 454.9728 R 10894

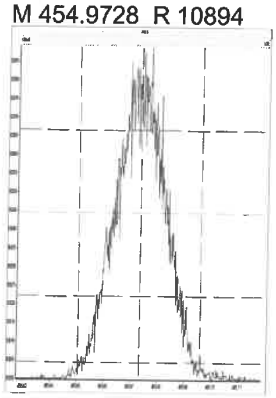

M 466.9728 R 11446

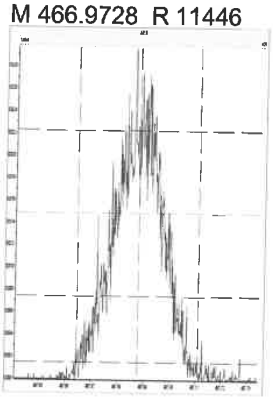

M 480.9696 R 10920

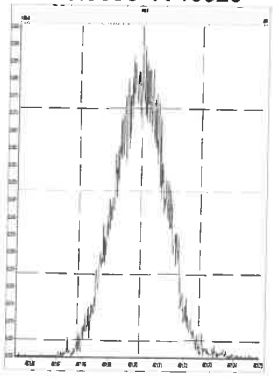

M 380.9760 R 11185

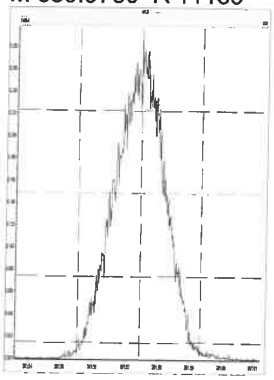

M 392.9760 R 11711

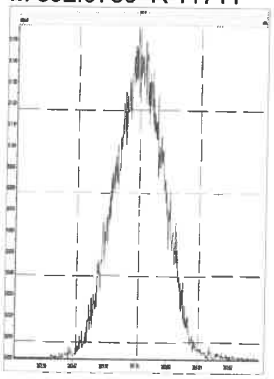

M 404.9760 R 11214

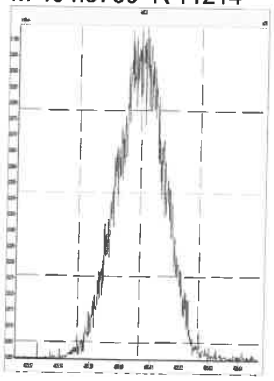

M 416.9760 R 12241

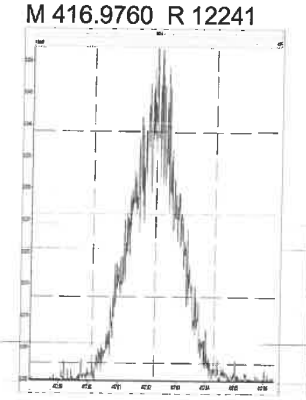

M 430.9728 R 10752

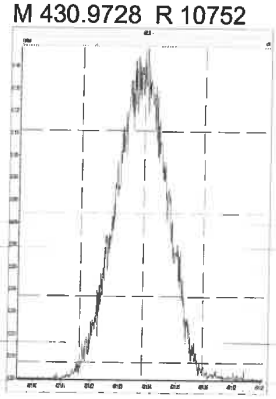

M 442.9728 R 11079

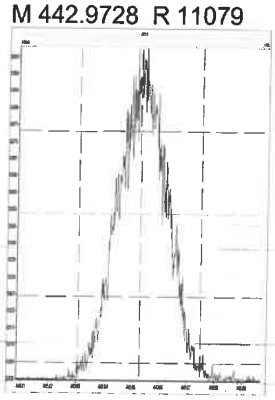

M 454.9728 R 11418

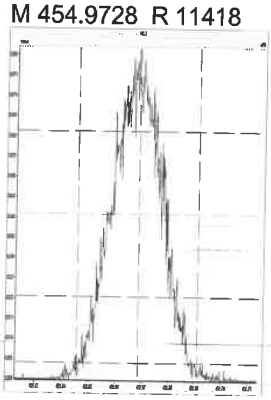

M 466.9728 R 12237

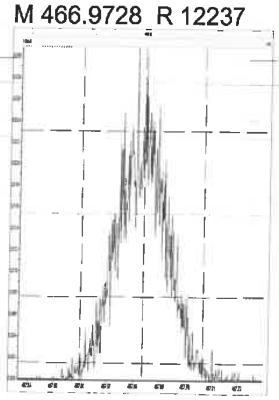

M 480.9696 R 10990

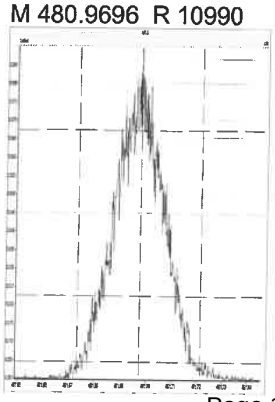

M 492.9696 R 11426

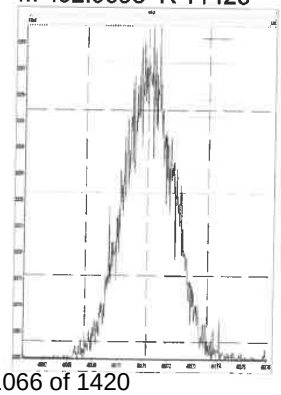

M 504.9696 R 11337

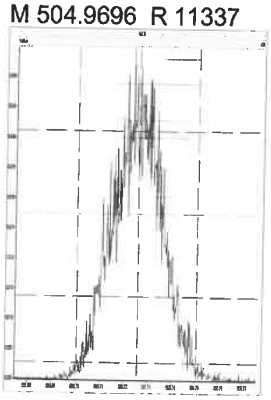

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M 516.9697 R 12627

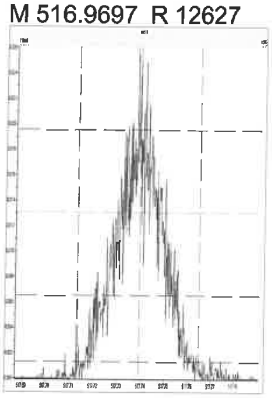

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_29.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Aug-2021 07:40:51 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521B CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:39:48 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1613

First Level Reviewer: bennettd Date: 26-Aug-2021 11:48:51

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.567	94437069	0.81	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.069	145556084	0.76	1.6249	94.9	94.9	0.2098	0.2098	94.85	
2,3,7,8-TCDF	17.084	14977821	0.76	1.0239	10.0	10.0	0.0161	0.0161	100	
A Non-2,3,7,8-sub-TCDF	17.069						0.0161	0.0161		Rn
S Total TCDF					10.0	10.0	0.0161	0.0161		
D 13C-2,3,7,8-TCDD	17.764	85373547	0.80	0.8993	100.5	100.5	0.1408	0.1408	101	
2,3,7,8-TCDD	17.779	10770107	0.78	1.2541	10.1	10.1	0.0215	0.0215	101	
$ 37Cl4-2,3,7,8-TCDD	17.779	11063827		1.1071	10.6	10.6	0.0240	0.0240	106	
A Non-2,3,7,8-sub-TCDD	17.522						0.0215	0.0215		
S Total TCDD					10.1	10.1	0.0215	0.0215		
D 13C-1,2,3,7,8-PeCDF	21.979	118148410	1.56	1.2101	103.4	103.4	0.1438	0.1438	103	
1,2,3,7,8-PeCDF	22.006	63577260	1.58	1.0611	50.7	50.7	0.0985	0.0985	101	
D 13C-2,3,4,7,8-PeCDF	23.302	128644478	1.56	1.2395	109.9	109.9	0.1404	0.1404	110	
2,3,4,7,8-PeCDF	23.316	66459632	1.58	1.0184	50.7	50.7	0.1045	0.1045	101	
A F1 PeCDFs	19.851						0.009500	0.009500		
A Non-2,3,7,8-sub-PeCDF	23.067						0.1014	0.1014		n
S Total PeCDF					101.4	101.4	0.1015	0.1015		
D 13C-1,2,3,7,8-PeCDD	23.997	80031952	1.61	0.7612	111.3	111.3	0.0827	0.0827	111	
1,2,3,7,8-PeCDD	24.024	42010125	1.58	1.0484	50.1	50.1	0.0438	0.0438	100	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0438	0.0438		
S Total PeCDD					50.1	50.1	0.0438	0.0438		
D 13C-1,2,3,4,7,8-HxCDF	30.146	104374384	0.52	1.0837	101.3	101.3	0.2401	0.2401	101	
1,2,3,4,7,8-HxCDF	30.159	56785117	1.22	1.0851	50.1	50.1	0.1956	0.1956	100	
D 13C-1,2,3,6,7,8-HxCDF	30.359	103401129	0.52	1.1279	96.4	96.4	0.2307	0.2307	96.37	
1,2,3,6,7,8-HxCDF	30.372	58561983	1.21	1.1260	50.3	50.3	0.1816	0.1816	101	
D 13C-2,3,4,6,7,8-HxCDF	31.264	102867443	0.52	1.0637	101.7	101.7	0.2446	0.2446	102	
2,3,4,6,7,8-HxCDF	31.291	59813276	1.21	1.1675	49.8	49.8	0.1288	0.1288	99.60	
D 13C-1,2,3,7,8,9-HxCDF	32.116	92827250	0.52	0.9676	100.9	100.9	0.2689	0.2689	101	
1,2,3,7,8,9-HxCDF	32.129	54463635	1.22	1.1664	50.3	50.3	0.1217	0.1217	101	
A Non-2,3,7,8-sub-HxCDF	30.324						0.1511	0.1511		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					200.5	200.5	0.1569	0.1569		
* 13C-1,2,3,7,8,9-HxCDD	31.930	95124442	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.464	76944476	1.23	0.7334	110.3	110.3	0.2251	0.2251	110	
1,2,3,4,7,8-HxCDD	31.490	41296738	1.26	1.0640	50.4	50.4	0.0966	0.0966	101	
D 13C-1,2,3,6,7,8-HxCDD	31.583	82266070	1.23	0.8802	98.3	98.3	0.1876	0.1876	98.26	
1,2,3,6,7,8-HxCDD	31.597	43006596	1.27	1.0001	52.3	52.3	0.0948	0.0948	105	
1,2,3,7,8,9-HxCDD	31.943	44997258	1.27	1.1325	49.9	49.9	0.0871	0.0871	99.82	
A Non-2,3,7,8-sub-HxCDD	30.486						0.0926	0.0926		
S Total HxCDD					152.6	152.6	0.0929	0.0929		
D 13C-1,2,3,4,6,7,8-HpCDF	33.591	67237249	0.44	0.7730	91.4	91.4	0.7248	0.7248	91.44	
1,2,3,4,6,7,8-HpCDF	33.603	48842832	1.07	1.4413	50.4	50.4	0.3104	0.3104	101	
D 13C-1,2,3,4,7,8,9-HpCDF	34.660	60361134	0.43	0.7008	90.5	90.5	0.7995	0.7995	90.54	
1,2,3,4,7,8,9-HpCDF	34.672	40848450	1.05	1.3174	51.4	51.4	0.4287	0.4287	103	
A Non-2,3,7,8-sub-HpCDF	34.138						0.3619	0.3619		
S Total HpCDF					101.8	101.8	0.3695	0.3695		
D 13C-1,2,3,4,6,7,8-HpCDD	34.368	60721987	1.01	0.6472	98.6	98.6	0.6283	0.6283	98.63	
1,2,3,4,6,7,8-HpCDD	34.381	33141932	1.03	1.0943	49.9	49.9	0.1639	0.1639	99.75	
A Non-2,3,7,8-sub-HpCDD	34.223						0.1639	0.1639		
S Total HpCDD					49.9	49.9	0.1639	0.1639		
D 13C-OCDD	36.689	91037472	0.88	0.4472	214.0	214.0	0.2496	0.2496	107	
OCDF	36.785	65102119	0.90	1.4382	99.4	99.4	0.0744	0.0744	99.45	
OCDD	36.689	50969493	0.89	1.1070	101.2	101.2	0.1060	0.1060	101	

QC Flag Legend

Processing Flags
Review Flags
a - User Assigned ID

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Report Date: 27-Aug-2021 08:39:48 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_29.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 26-Aug-2021 07:40:51 ALS Bottle#: 2 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV 082521B CS-4 HRDXNL4_00099
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5
Sublist: chrom-Dioxin_10D5*sub1

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:39:48 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1613

First Level Reviewer: bennettd Date: 26-Aug-2021 11:48:51

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.567	17.567	0		42171196	10881741	6638	16595	1639		a
333.9339	17.567	17.567	0		52265873	13495900	5709	14272	2364	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.069	17.069	0	0.972	62896684	16426636	17998	44995	913		
317.9389	17.069	17.069	0	0.972	82659400	21536037	15243	38107	1413	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.084	17.084	0	1.001	6466295	1722564	938	2345	1836		
305.8987	17.084	17.084	0	1.001	8511526	2241335	1568	3920	1429	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.721	17.069	-21	0.980	30454	7705	938	2345	8		
305.8987	16.706	17.069	-22	0.979	28930	7161	1568	3920	5	1.05(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.764	17.764	0	1.011	37843856	9119044	6638	16595	1374		
333.9339	17.764	17.764	0	1.011	47529691	11451708	5709	14272	2006	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.779	17.779	0	1.001	4716758	1190533	1427	3567	834		
321.8936	17.779	17.779	0	1.001	6053349	1521700	796	1990	1912	0.78(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.779	17.779	0	1.012	11063827	2767885	2588	6470	1070		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.522						1427	3567			
321.8936	17.522						796	1990			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	21.979	21.979	0	1.251	72070377	13562929	10336	25840	1312		
353.8970	21.979	21.979	0	1.251	46078033	8495362	6630	16575	1281	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.006	22.006	0	1.001	38931364	7248247	5382	13455	1347		
341.8567	22.006	22.006	0	1.001	24645896	4560904	3844	9610	1187	1.58(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.302	23.302	0	1.326	78327869	13166531	10336	25840	1274		
353.8970	23.302	23.302	0	1.326	50316609	8508344	6630	16575	1283	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.316	23.316	0	1.001	40725230	6863429	5382	13455	1275		
341.8567	23.329	23.316	1	1.001	25734402	4316402	3844	9610	1123	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						209	522			
341.8567	19.851						655	1637			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.524	23.067	-33	1.025	319186	46033	5382	13455	9		
341.8567	22.524	23.067	-33	1.025	226488	32545	3844	9610	8	1.41(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	23.997	23.997	0	1.366	49365120	7905366	3737	9342	2115		
369.8919	23.997	23.997	0	1.366	30666832	4935515	2403	6007	2054	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.024	24.024	0	1.001	25753274	4254978	1569	3922	2712		
357.8516	24.024	24.024	0	1.001	16256851	2684425	790	1975	3398	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1569	3922			
357.8516	23.696						790	1975			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.146	30.146	0	0.944	35665806	6170078	9687	24217	637		
385.8610	30.133	30.146	-1	0.944	68708578	11744385	18084	45210	649	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.159	30.159	0	1.000	31250737	5409679	8326	20815	650		
375.8178	30.159	30.159	0	1.000	25534380	4421587	6885	17212	642	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.359	30.359	0	0.951	35451595	6418038	9687	24217	663		
385.8610	30.359	30.359	0	0.951	67949534	12181165	18084	45210	674	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.372	30.372	0	1.000	32076374	5932590	8326	20815	713		
375.8178	30.372	30.372	0	1.000	26485609	4912389	6885	17212	713	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.264	31.264	0	0.979	35327284	8667043	9687	24217	895		
385.8610	31.264	31.264	0	0.979	67540159	16613975	18084	45210	919	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.291	31.291	0	1.001	32763853	8206369	8326	20815	986		
375.8178	31.277	31.291	-1	1.000	27049423	6804029	6885	17212	988	1.21(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.116	32.116	0	1.006	31605208	9236110	9687	24217	953		
385.8610	32.116	32.116	0	1.006	61222042	17546141	18084	45210	970	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.129	32.129	0	1.000	29983138	8749345	8326	20815	1051		
375.8178	32.129	32.129	0	1.000	24480497	7098146	6885	17212	1031	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.324						8326	20815			
375.8178	30.324						6885	17212			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.930	31.930	0		52655578	14761693	9830	24575	1502		
403.8529	31.930	31.930	0		42468864	11923618	7793	19482	1530	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.464	31.464	0	0.985	42496901	11234318	9830	24575	1143		
403.8529	31.464	31.464	0	0.985	34447575	9122403	7793	19482	1171	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.490	31.490	0	1.001	23013959	6285328	4677	11692	1344		
391.8127	31.490	31.490	0	1.001	18282779	4861704	3695	9237	1316	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.583	31.583	0	0.989	45375077	12125903	9830	24575	1234		
403.8529	31.583	31.583	0	0.989	36890993	9943054	7793	19482	1276	1.23(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.597	31.597	0	1.000	24035802	6474552	4677	11692	1384		
391.8127	31.597	31.597	0	1.000	18970794	5185021	3695	9237	1403	1.27(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.943	31.943	0	1.015	25141809	7108163	4677	11692	1520		
391.8127	31.943	31.943	0	1.015	19855449	5592828	3695	9237	1514	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.486						4677	11692			
391.8127	30.486						3695	9237			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.591	33.591	0	1.052	20669173	7681331	23222	58055	331		
419.8220	33.591	33.591	0	1.052	46568076	17340372	36584	91460	474	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603	33.603	0	1.000	25207853	9500331	21718	54295	437		
409.7789	33.603	33.603	0	1.000	23634979	8706158	23052	57630	378	1.07(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.660	34.660	0	1.086	18270852	5991799	23222	58055	258		
419.8220	34.660	34.660	0	1.086	42090282	13824674	36584	91460	378	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.672	34.672	0	1.000	20883332	6768410	21718	54295	312		
409.7789	34.660	34.672	-1	1.000	19965118	6594837	23052	57630	286	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						21718	54295			
409.7789	34.138						23052	57630			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.368	34.368	0	1.076	30494976	10366749	22267	55667	466		
437.8140	34.368	34.368	0	1.076	30227011	10281507	21137	52842	486	1.01(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.381	34.381	0	1.000	16808062	5902956	7392	18480	799		
425.7737	34.381	34.381	0	1.000	16333870	5798656	7419	18547	782	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						7392	18480			
425.7737	34.223						7419	18547			
13C-OCDD											
469.7779	36.689	36.689	0	1.149	42663568	12431909	4279	10697	2905		
471.7750	36.689	36.689	0	1.149	48373904	14023912	7635	19087	1837	0.88(0.76-1.02)	
OCDF											
441.7428	36.785	36.785	0	1.003	30834643	9266591	2662	6655	3481		
443.7399	36.773	36.785	-1	1.002	34267476	10137392	3000	7500	3379	0.90(0.76-1.02)	
OCDD											
457.7377	36.689	36.689	0	1.000	23979444	6947347	2782	6955	2497		
459.7348	36.689	36.689	0	1.000	26990049	7998303	3427	8567	2334	0.89(0.76-1.02)	

QC Flag Legend

Processing Flags

Review Flags

a - User Assigned ID

Reagents:

HRDXNL4_00099 Amount Added: 2.00 Units: uL

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_29.d				
Injection Date:	26-Aug-2021 07:40:51	Instrument ID:	10D5		
Lims ID:	CCV				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	2	Worklist Smp#:	1
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

13C-1,2,3,4-TCDD, CAS: 114423-99-3

Signal: 1

Processing Integration Results

Not Detected
Expected RT: 17.57

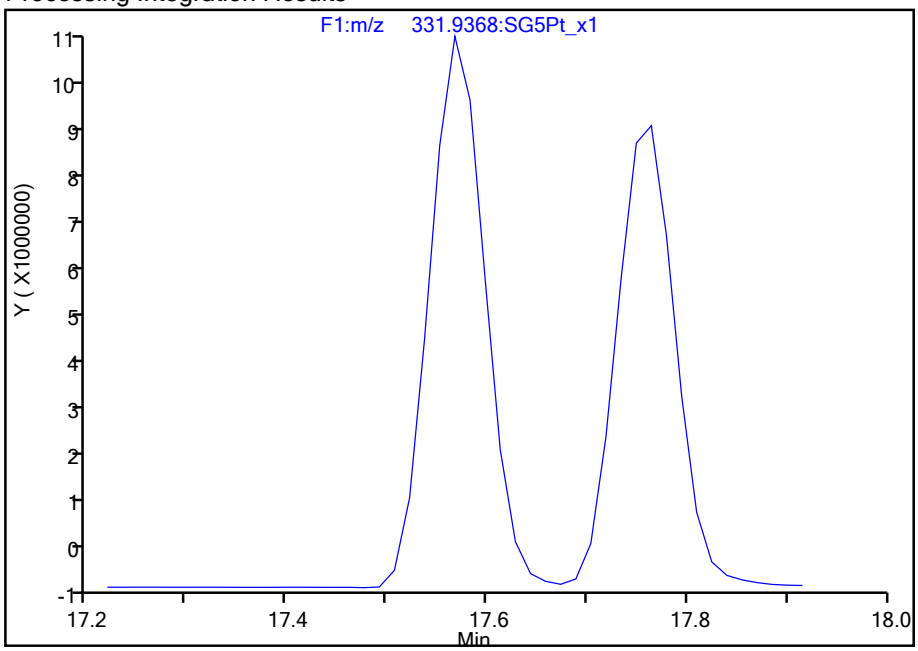

Manual Integration Results

RT: 17.57
Area: 42171196
Amount: 100.0000
Amount Units: pg/ul

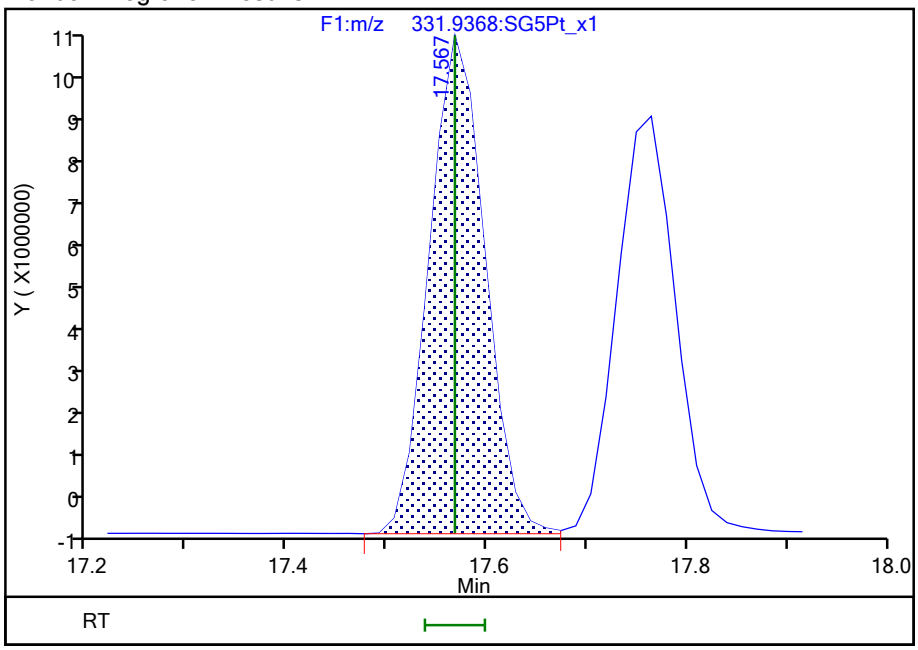

Reviewer: bennettd, 26-Aug-2021 11:48:02
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

794123

Report Date: 27-Aug-2021 08:39:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_29.d		
Injection Date:	26-Aug-2021 07:40:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

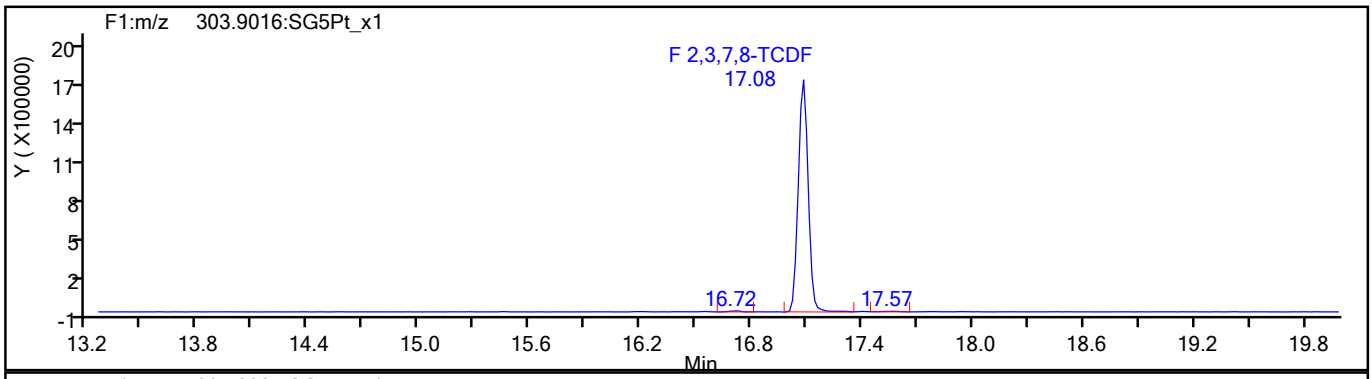

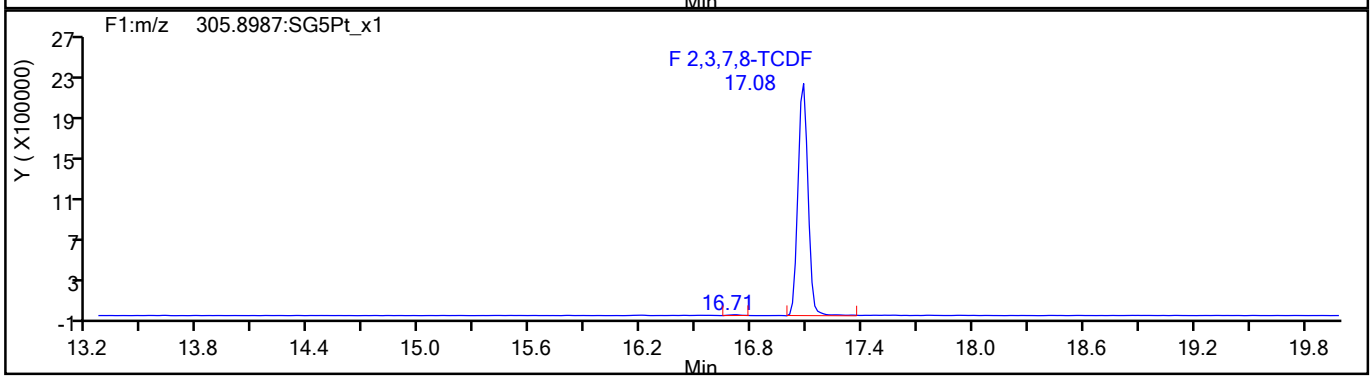

TCDF Standards

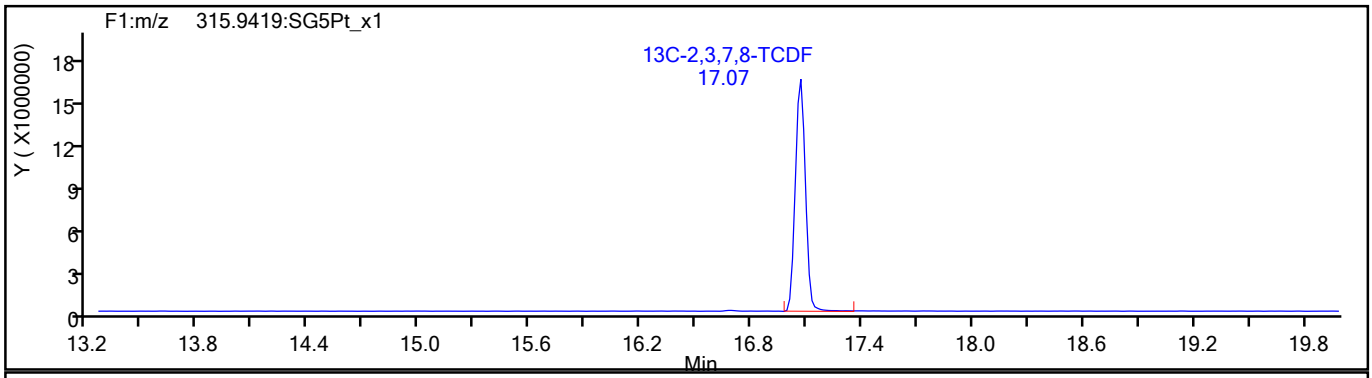

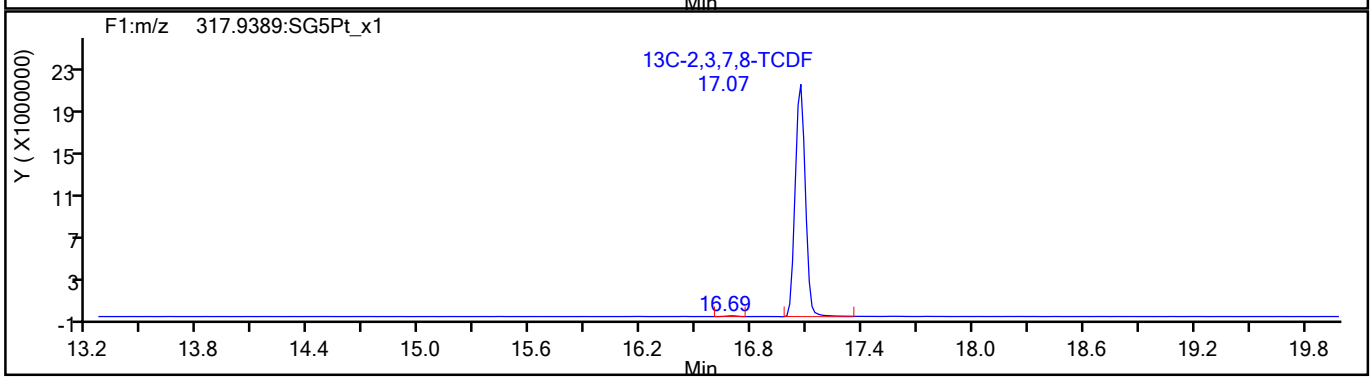

794124

Report Date: 27-Aug-2021 08:39:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_29.d		
Injection Date:	26-Aug-2021 07:40:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

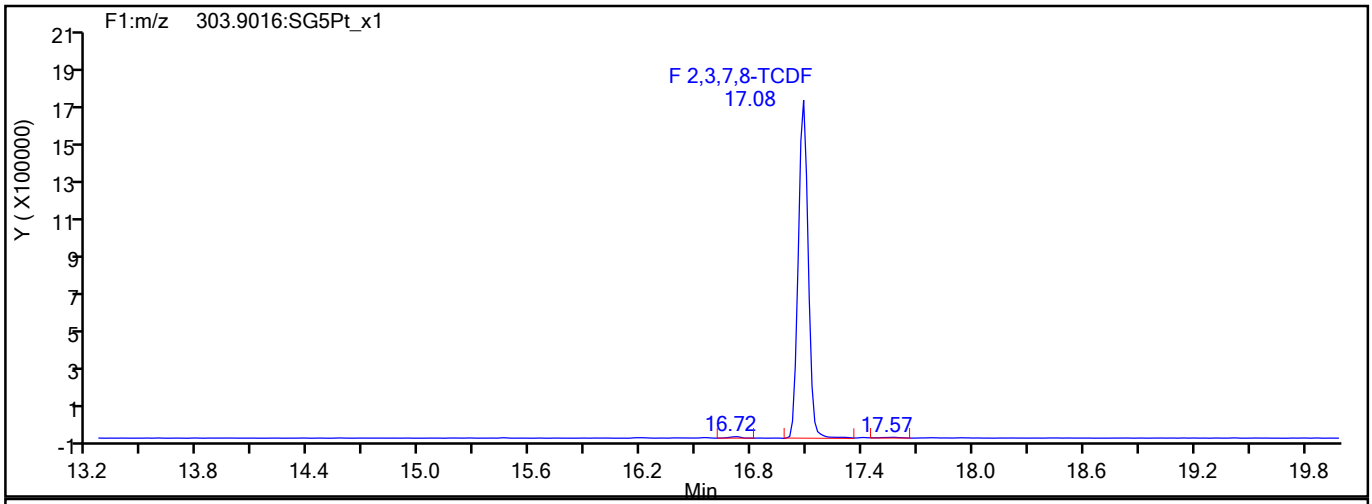

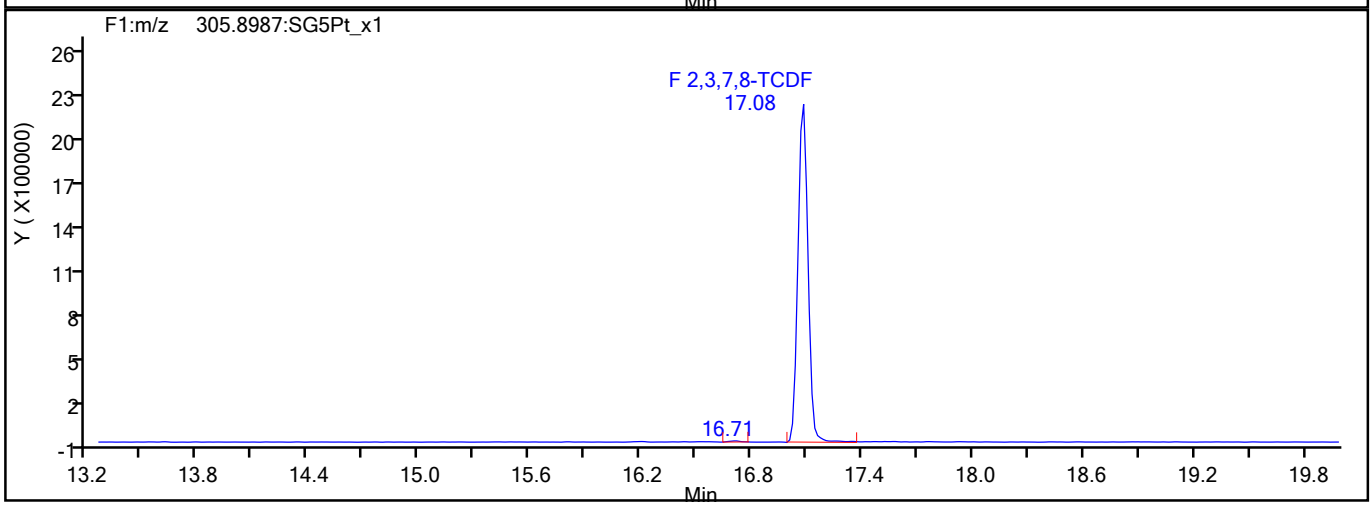

TCDF Interference Mass

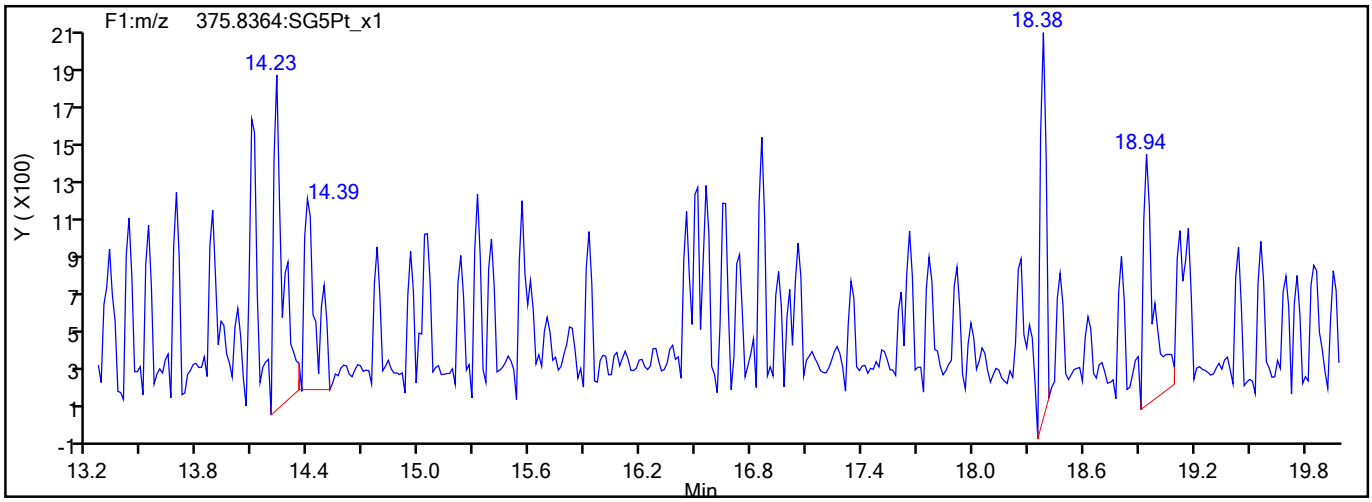

794125

Report Date: 27-Aug-2021 08:39:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_29.d		
Injection Date:	26-Aug-2021 07:40:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

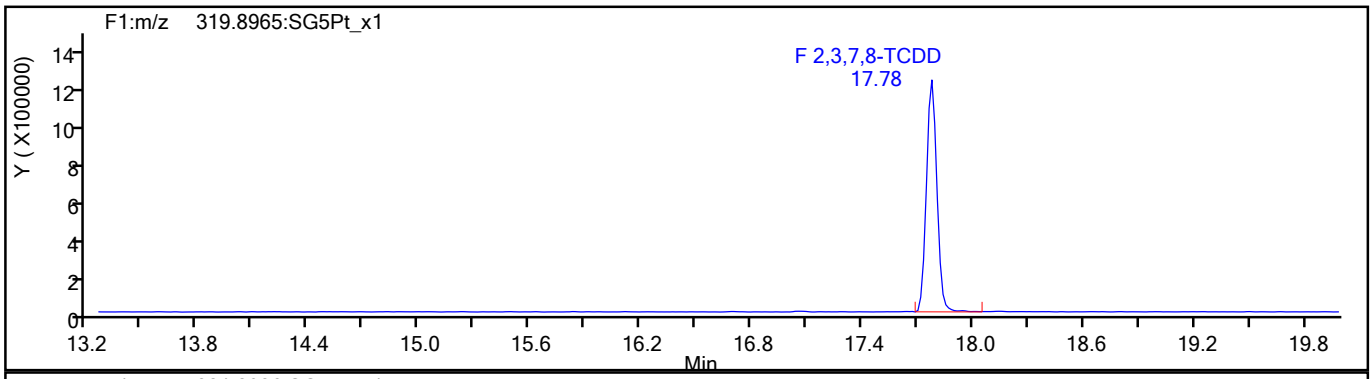

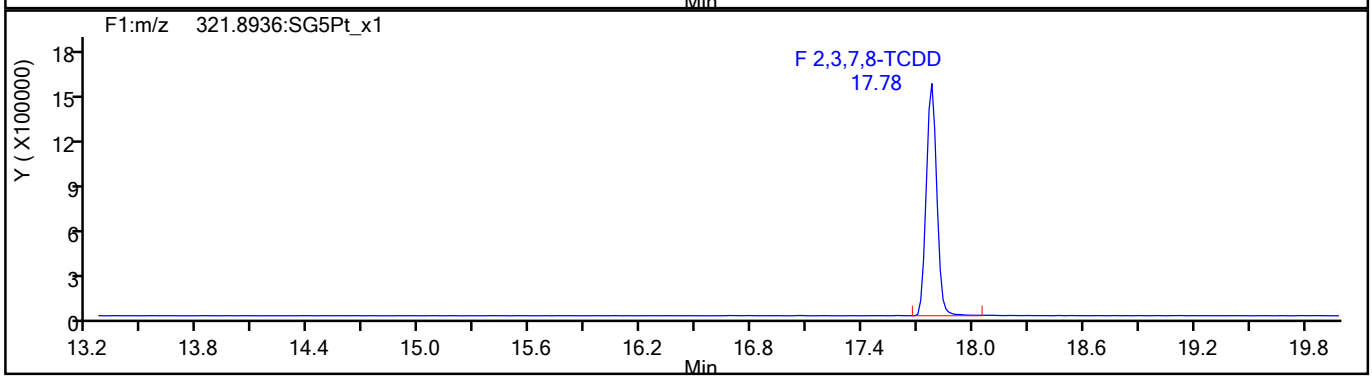

TCDD Standards

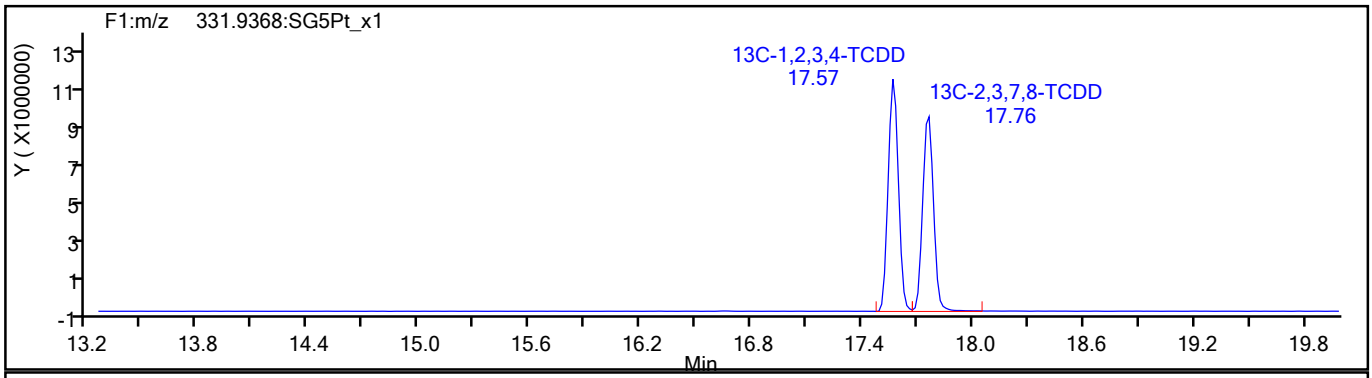

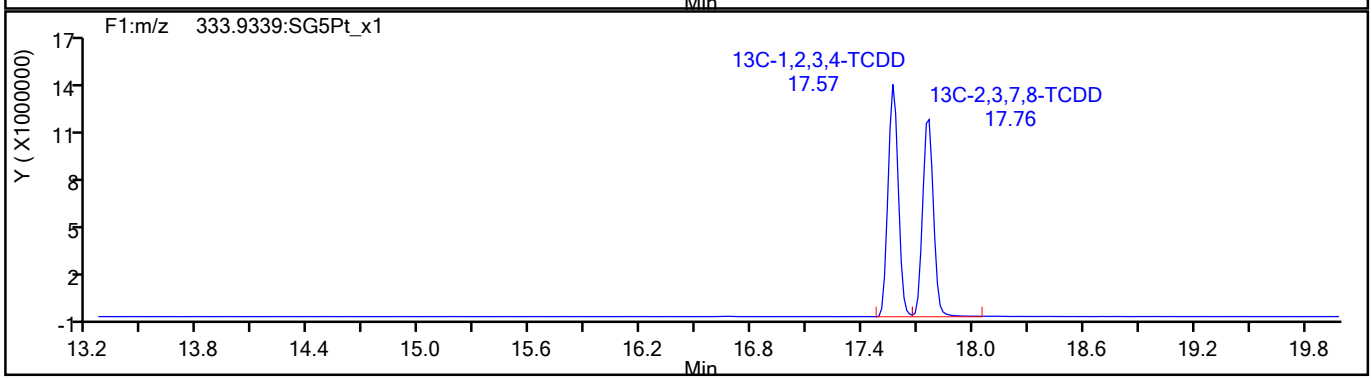

794126

Report Date: 27-Aug-2021 08:39:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_29.d		
Injection Date:	26-Aug-2021 07:40:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

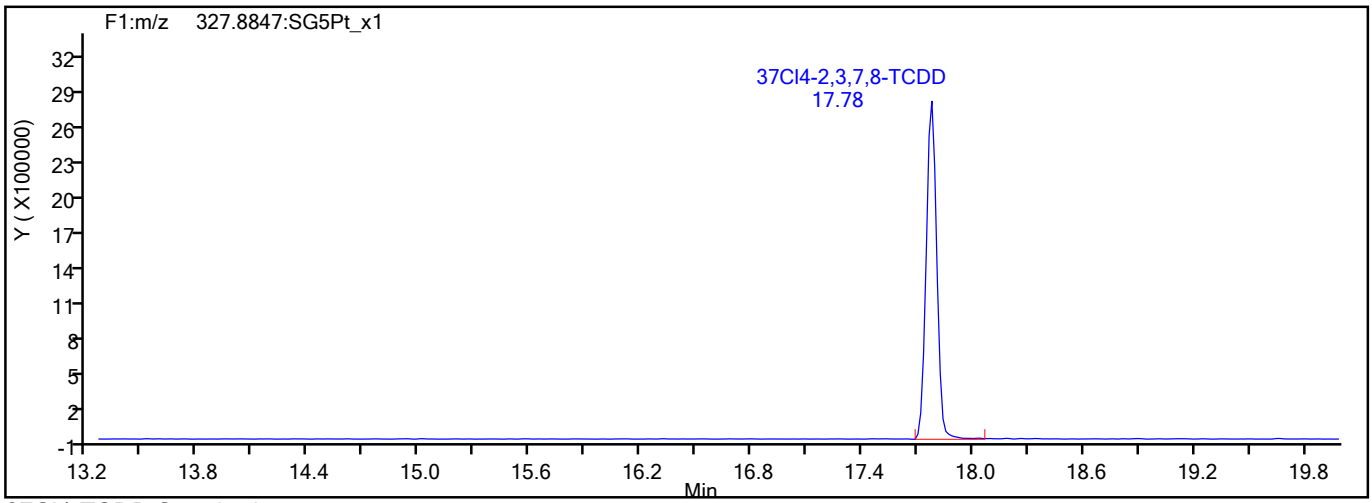

37Cl4-TCDD Standards

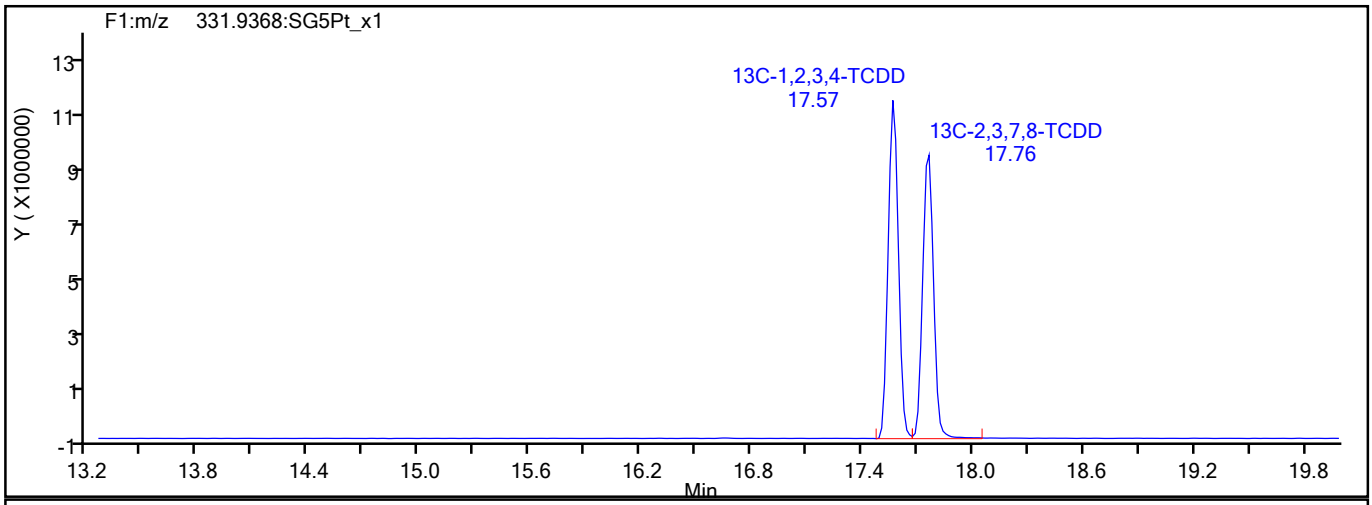

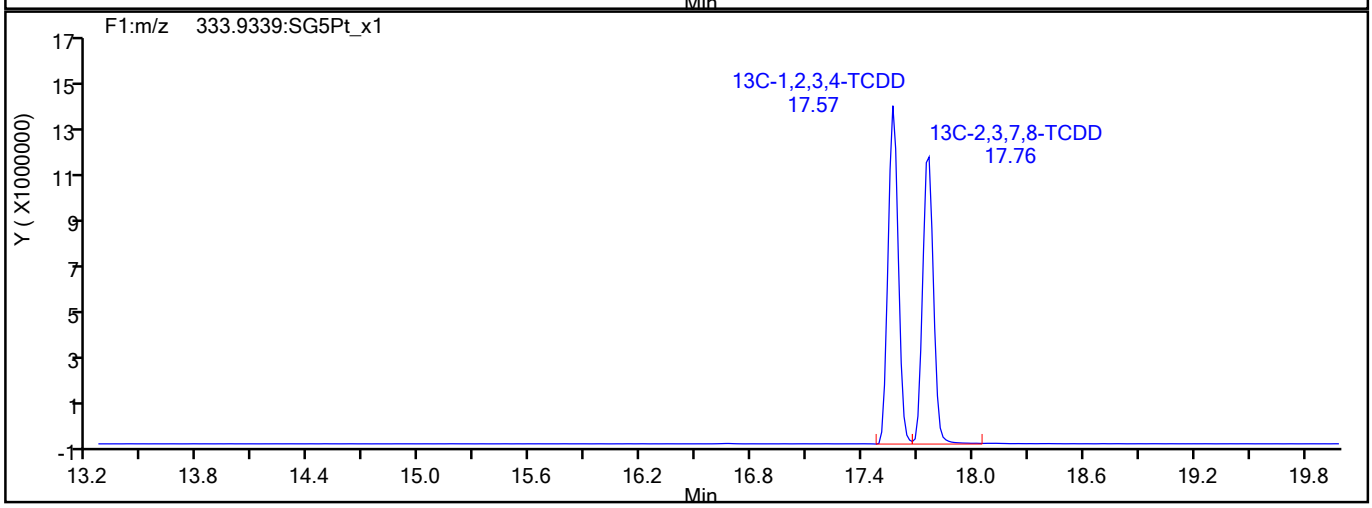

794127

Report Date: 27-Aug-2021 08:39:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_29.d		
Injection Date:	26-Aug-2021 07:40:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

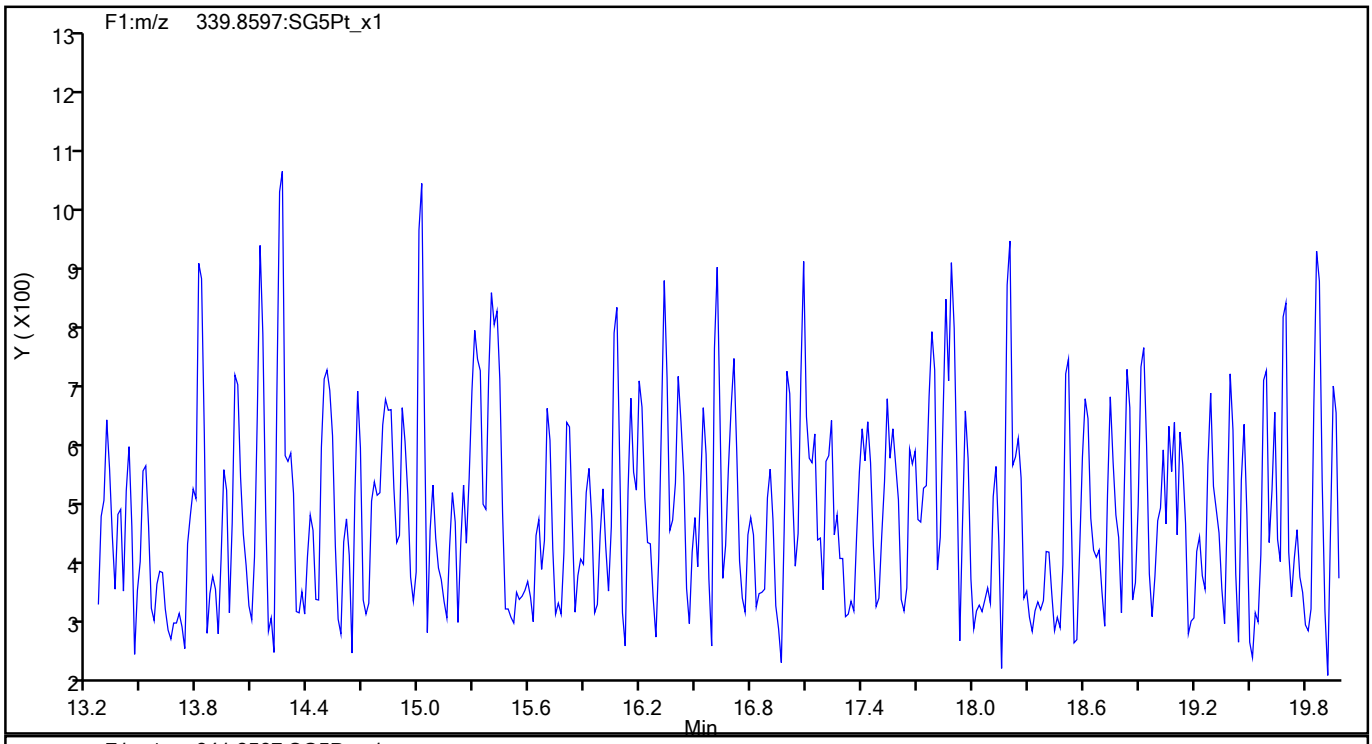

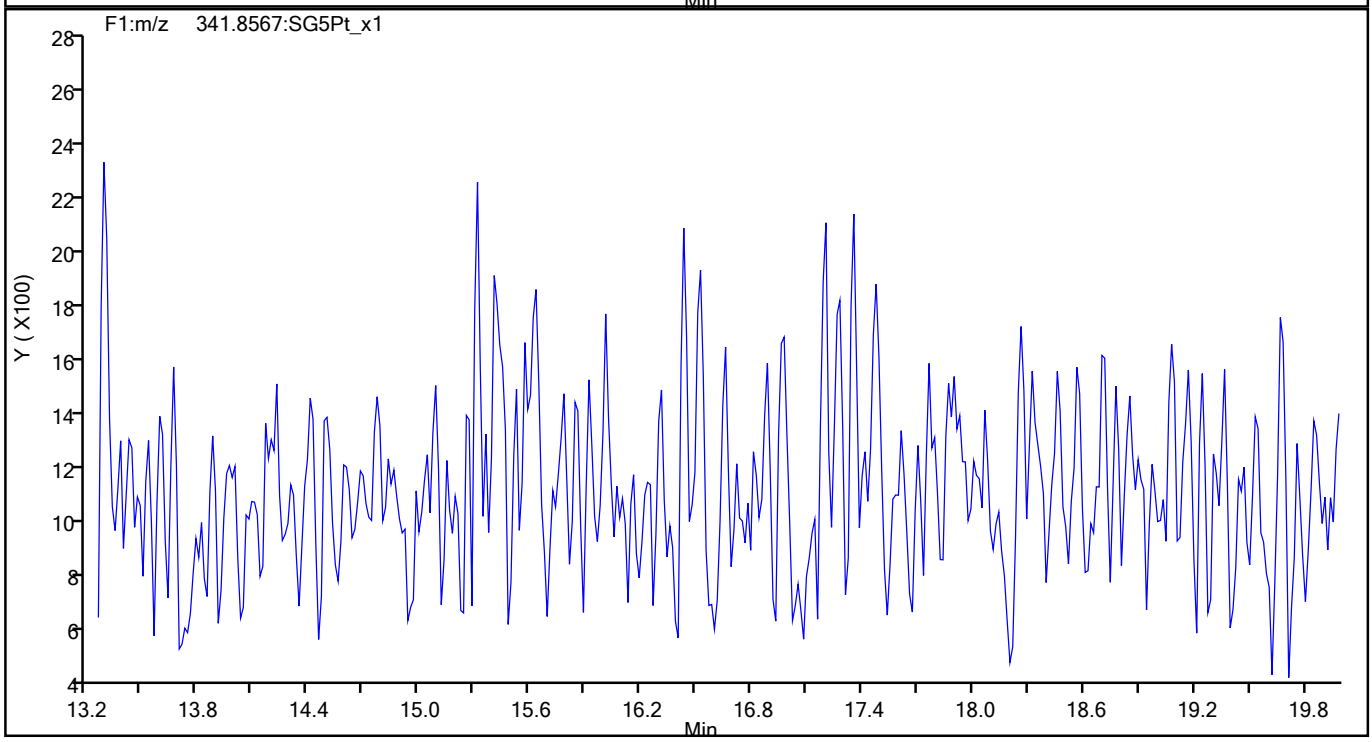

794128

Report Date: 27-Aug-2021 08:39:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_29.d		
Injection Date:	26-Aug-2021 07:40:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

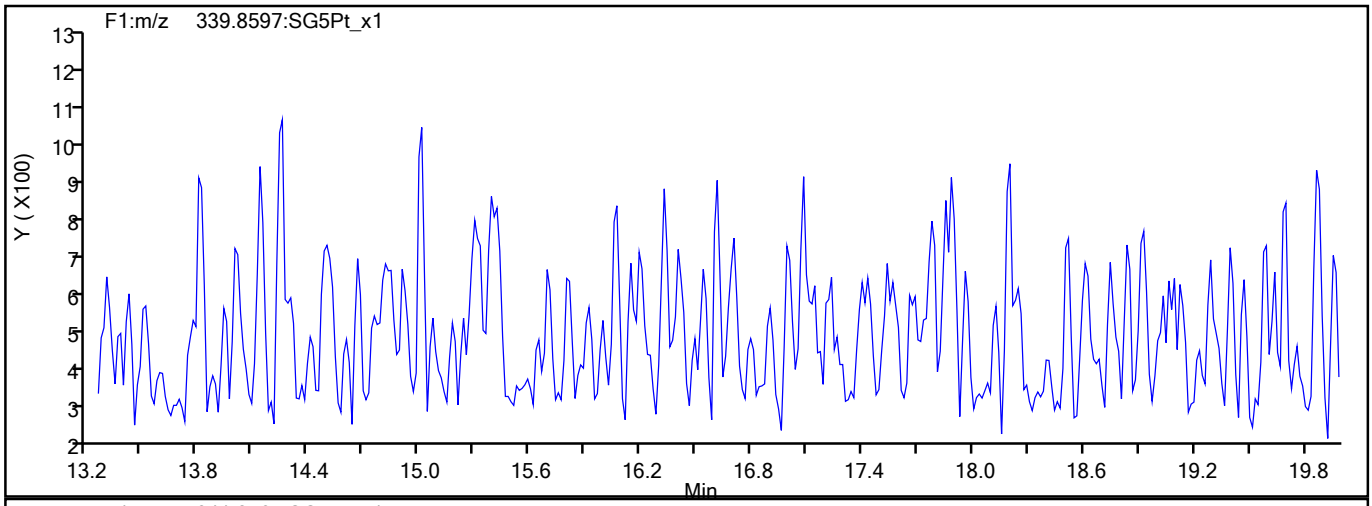

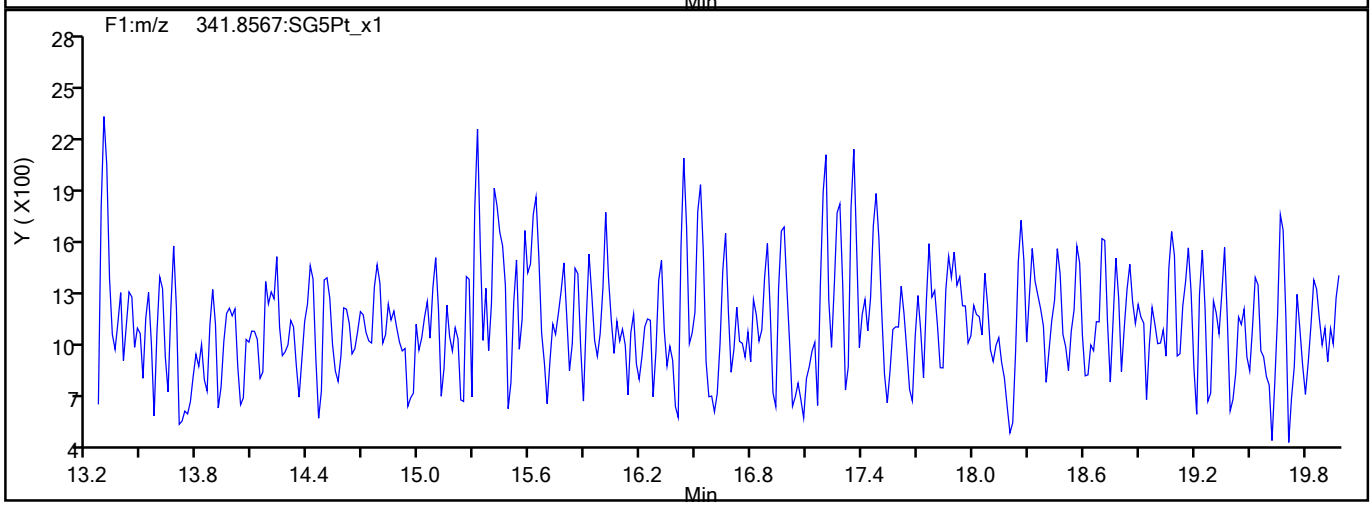

F1 PeCDFs Interference Mass

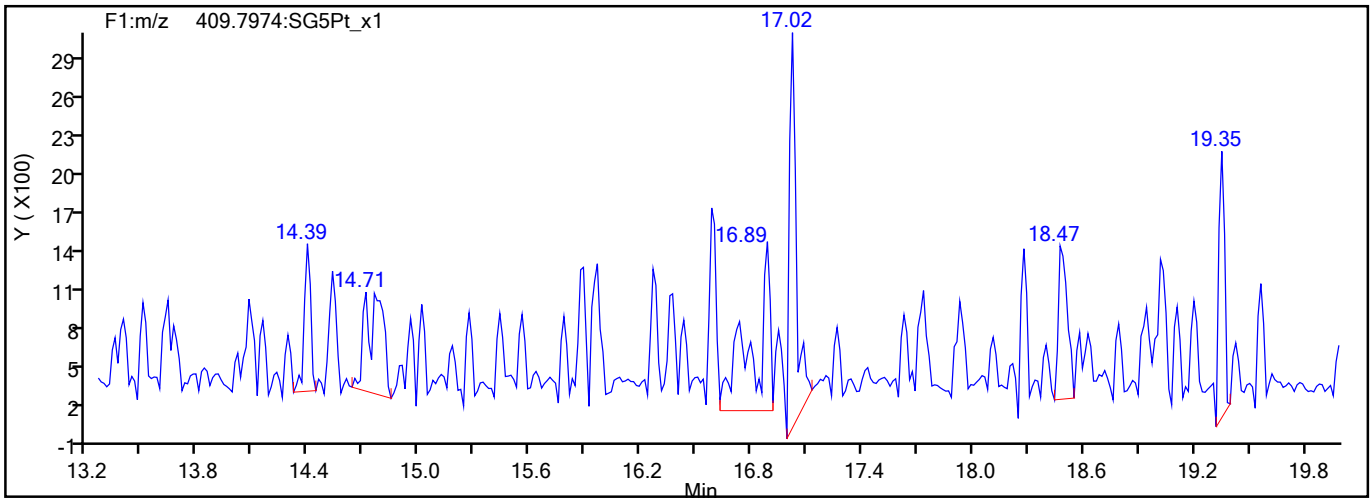

794129

Report Date: 27-Aug-2021 08:39:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_29.d		
Injection Date:	26-Aug-2021 07:40:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

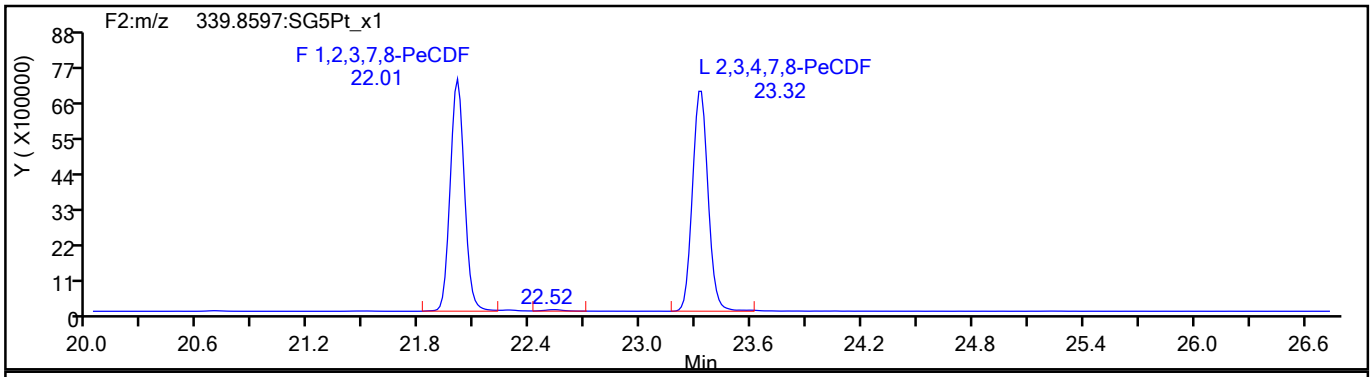

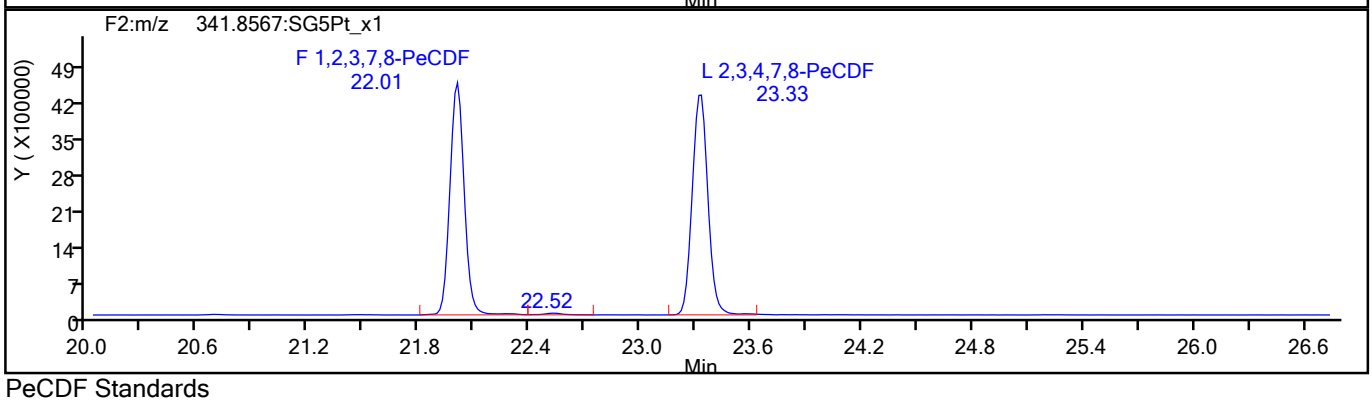

PeCDF Standards

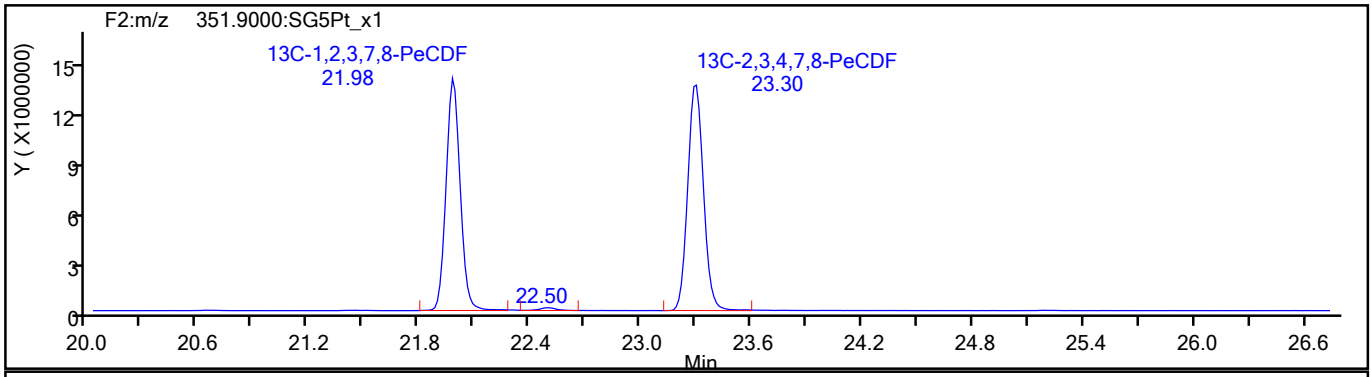

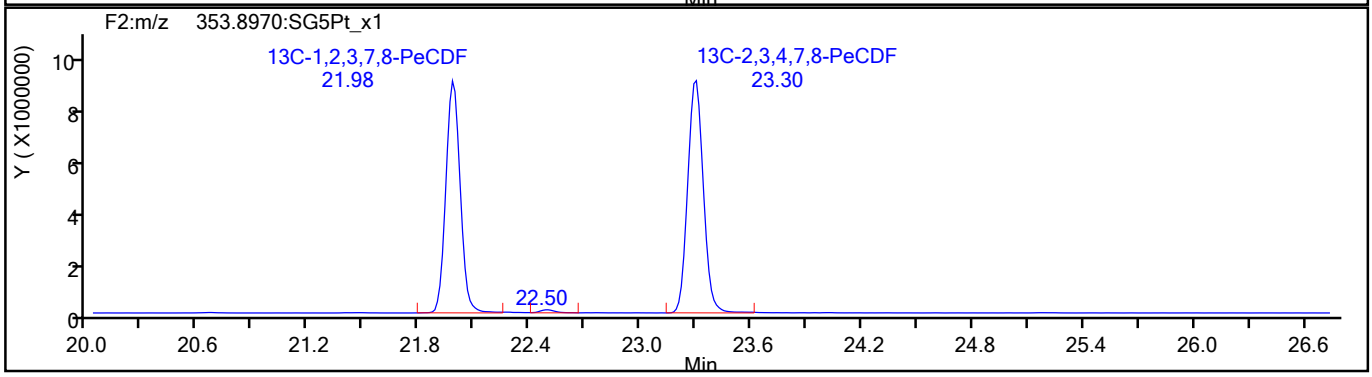

794130

Report Date: 27-Aug-2021 08:39:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

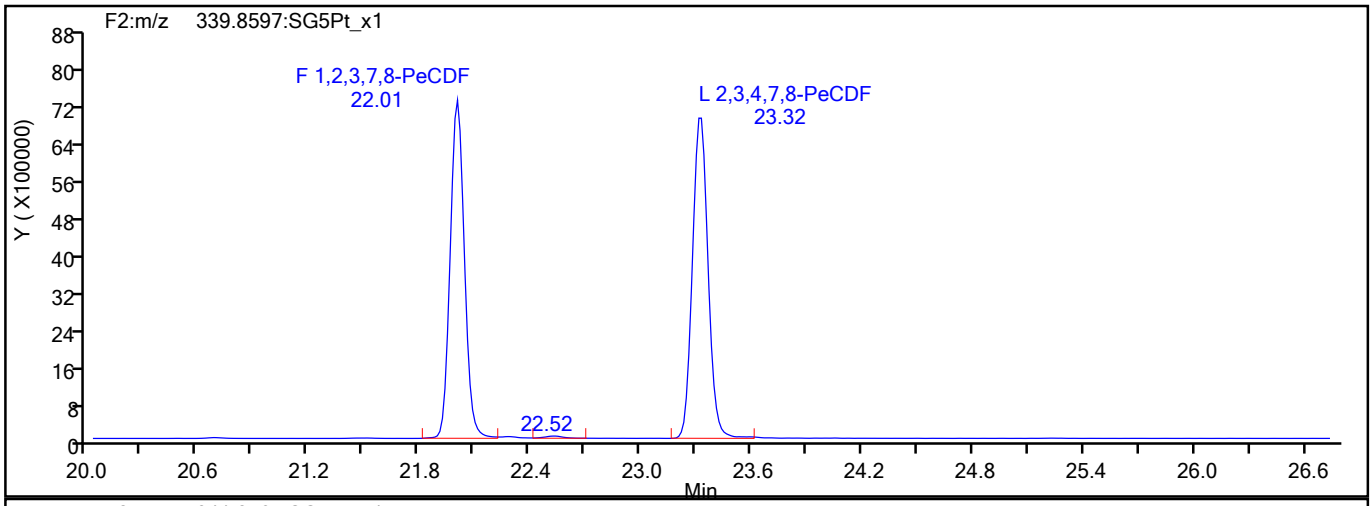

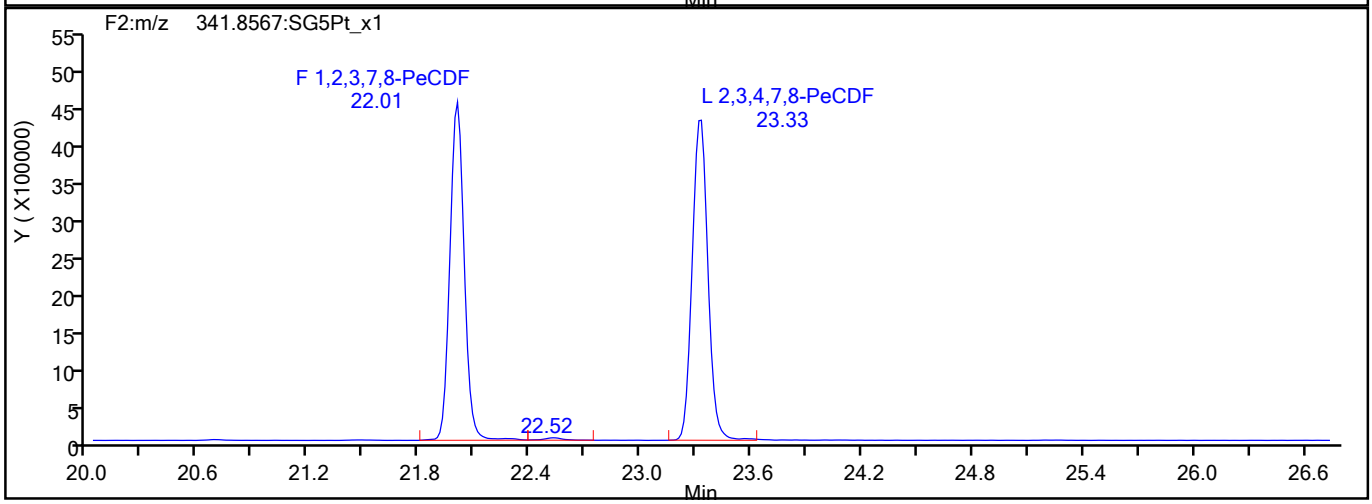

PeCDF Interference Mass

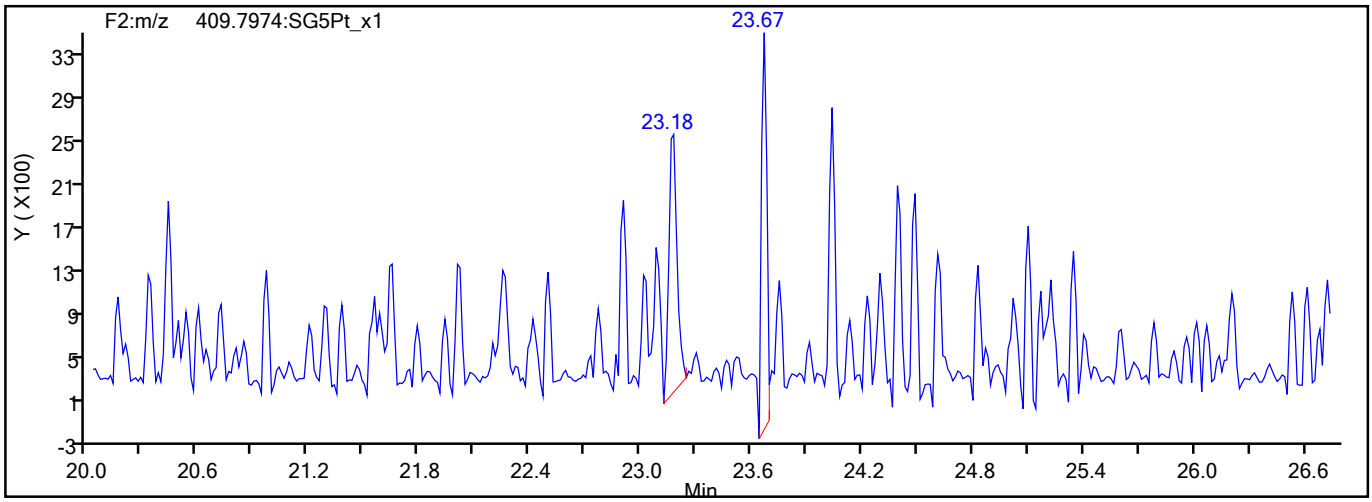

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Eurofins TestAmerica, Sacramento

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PeCDD

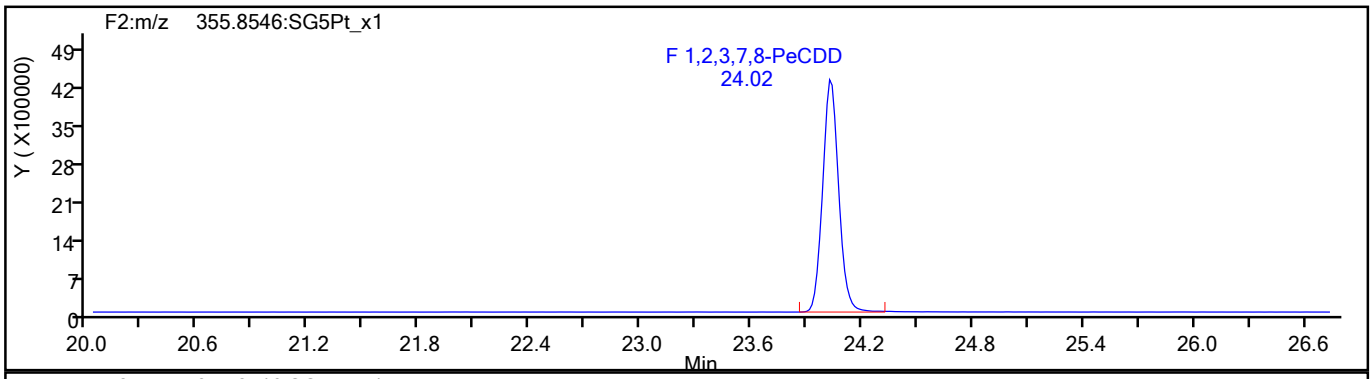

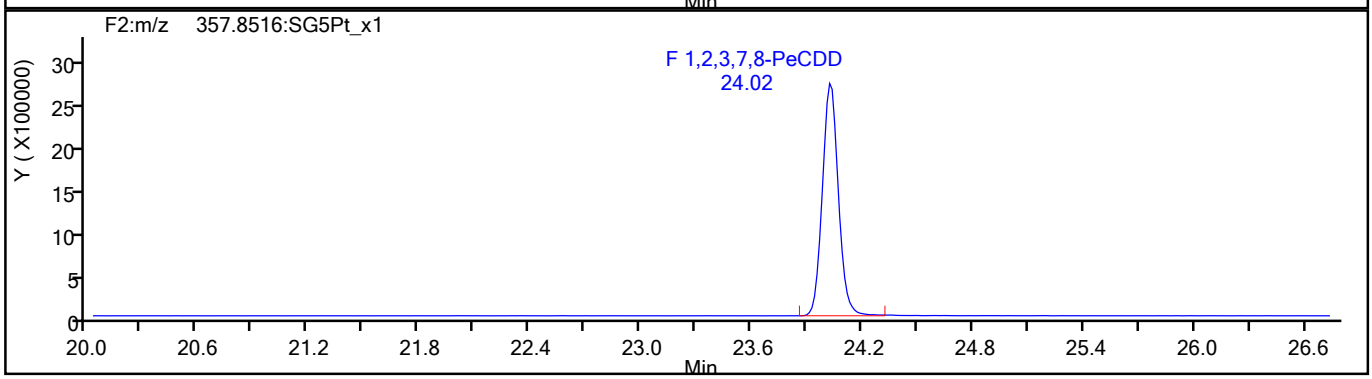

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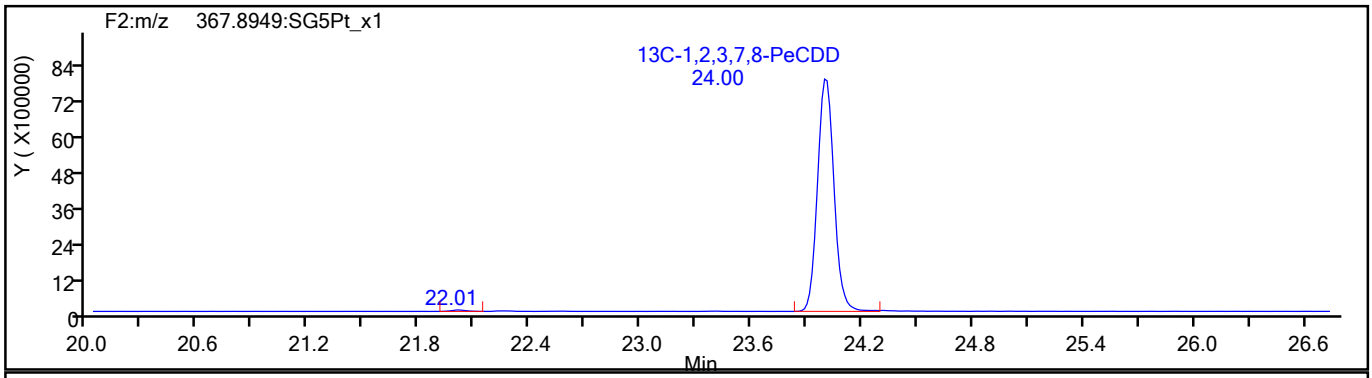

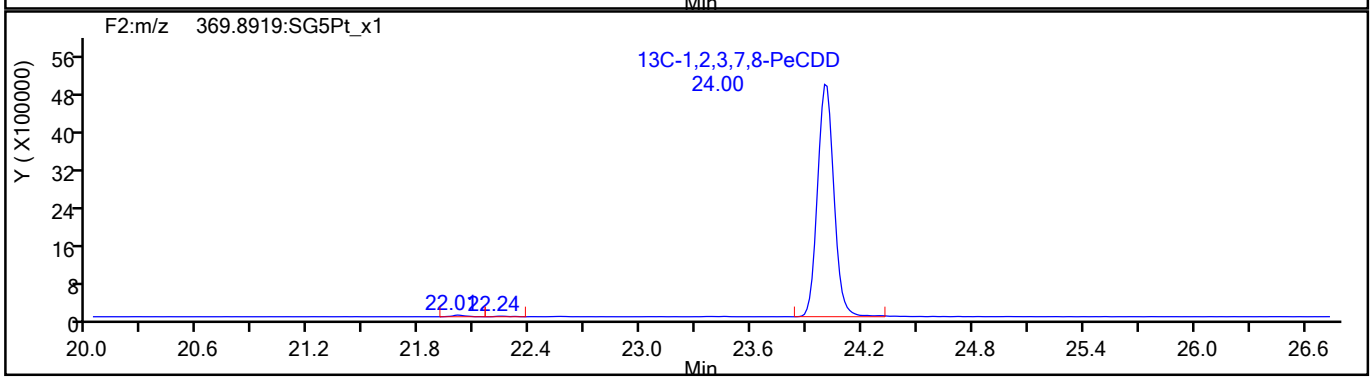

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Eurofins TestAmerica, Sacramento

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HxCDF

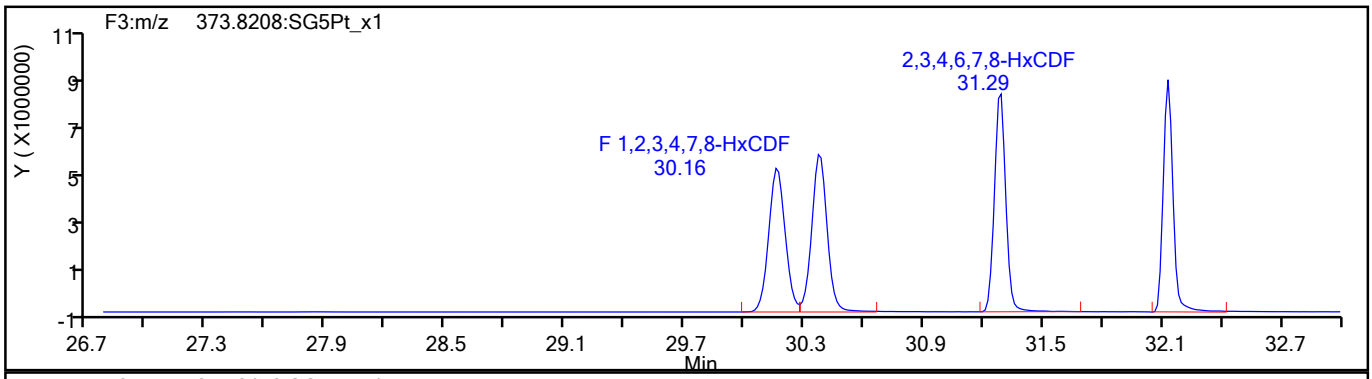

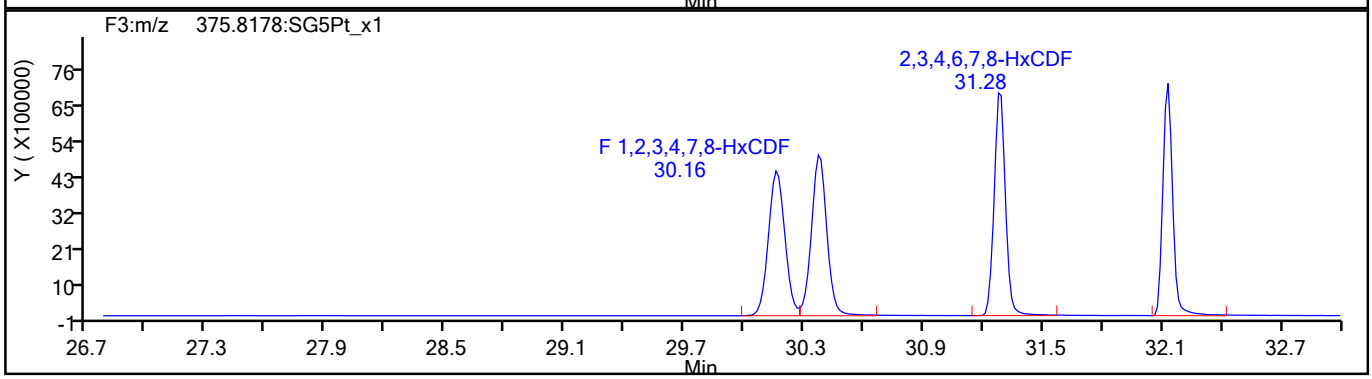

HxCDF Standards

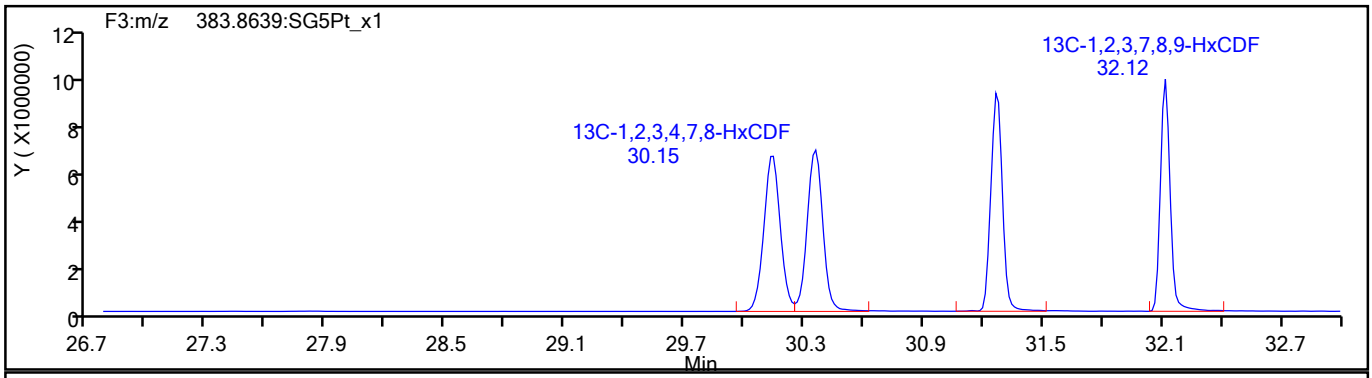

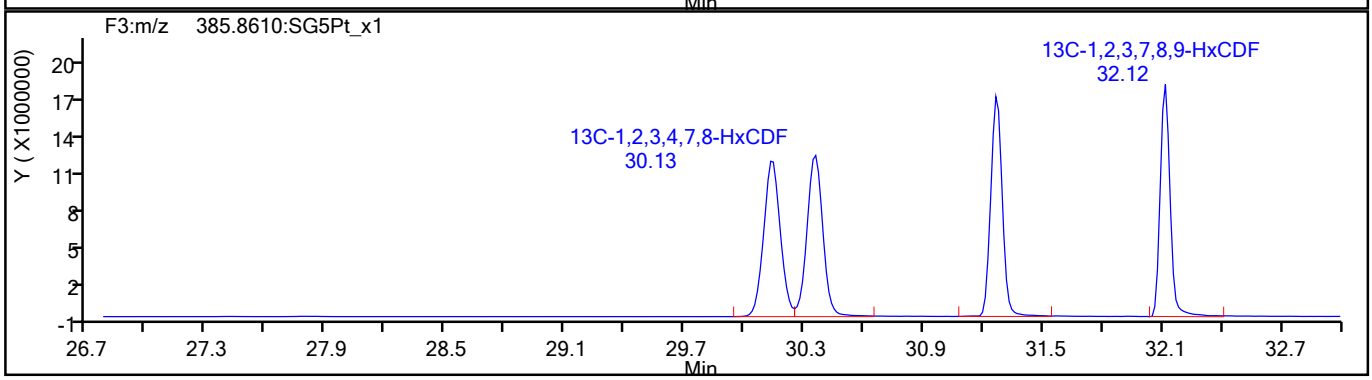

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Report Date: 27-Aug-2021 08:39:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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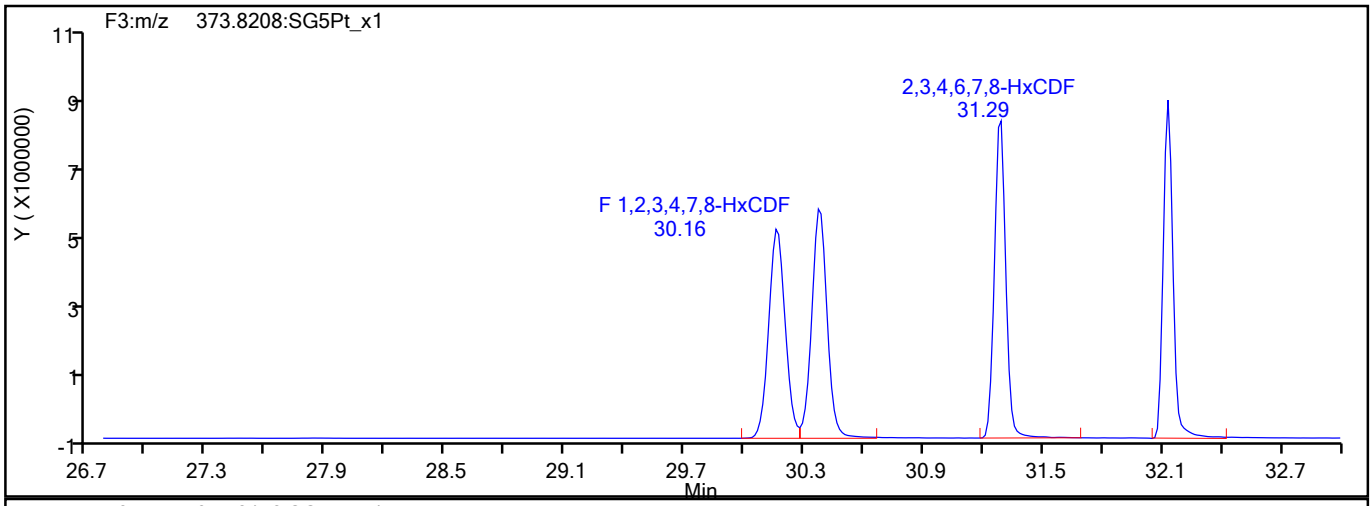

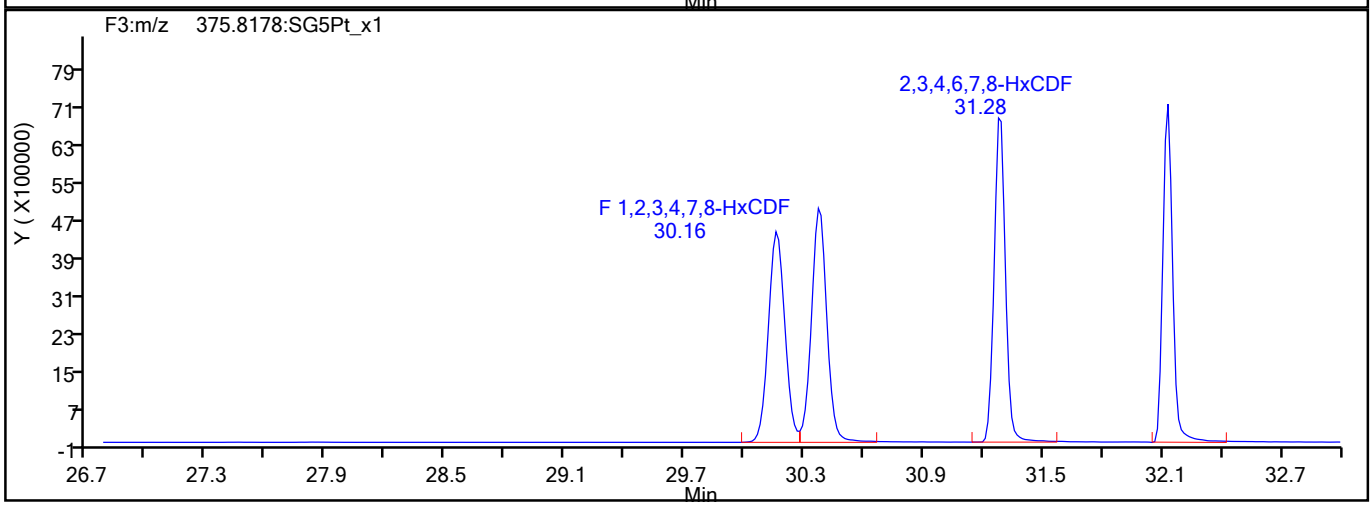

HxCDF Interference Mass

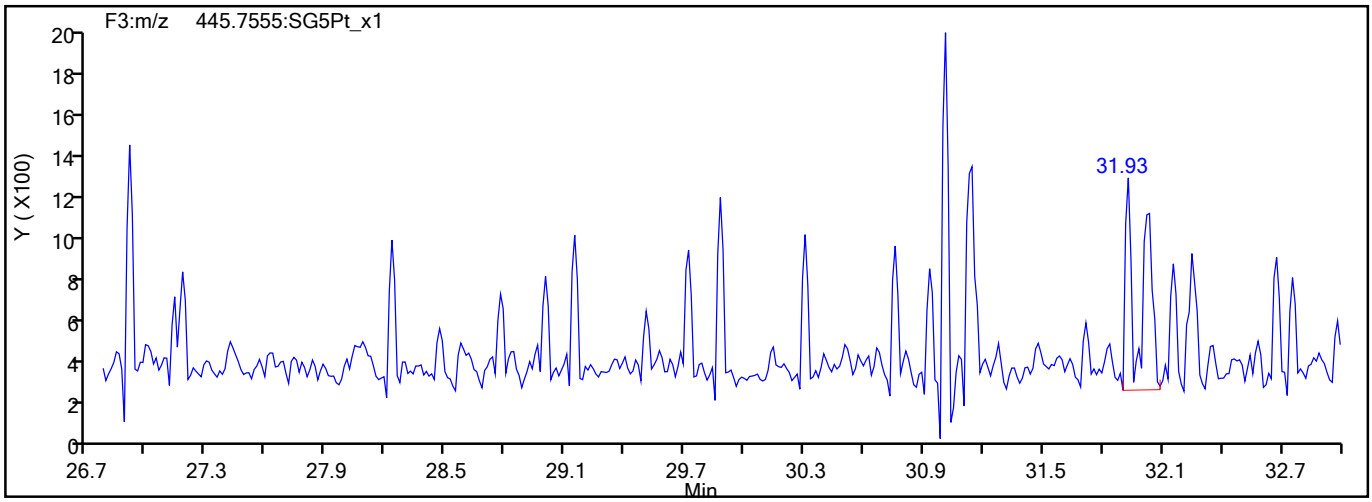

794134

Report Date: 27-Aug-2021 08:39:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDD

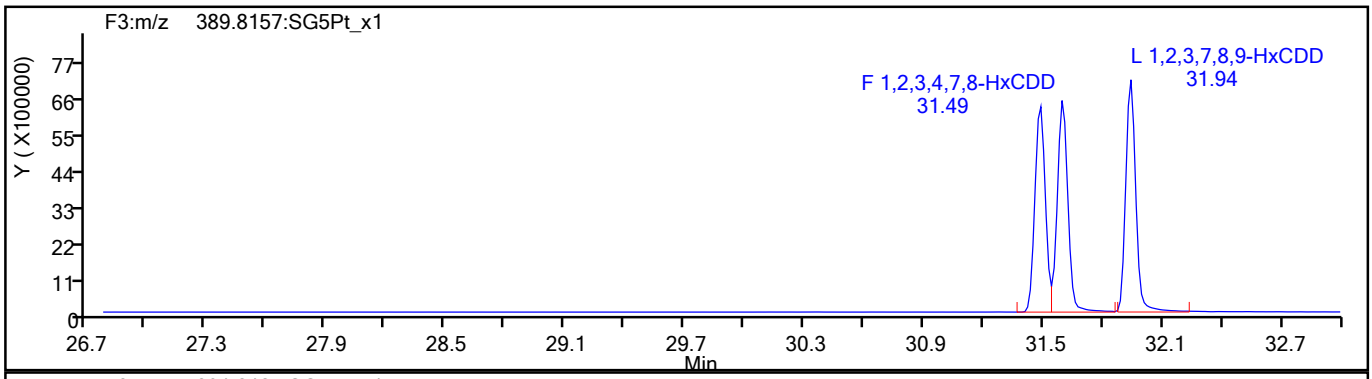

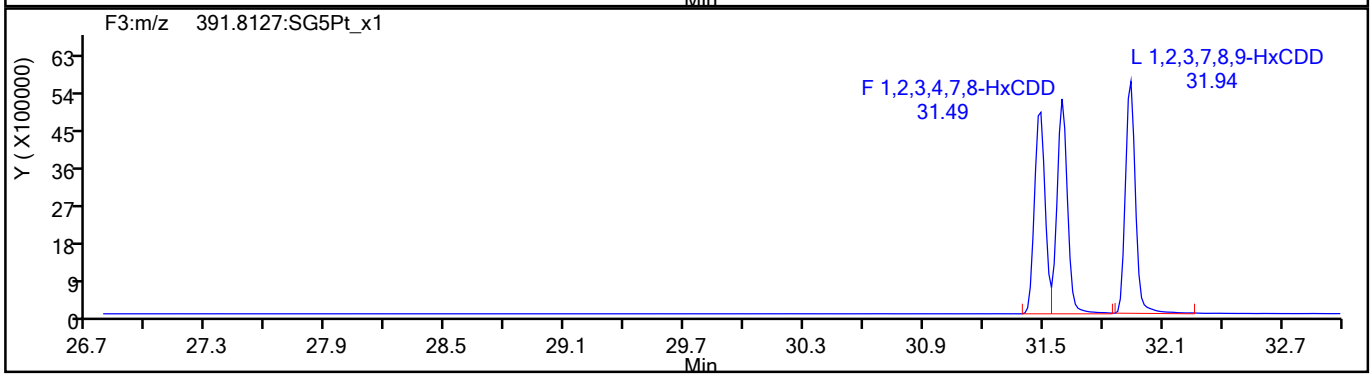

HxCDD Standards

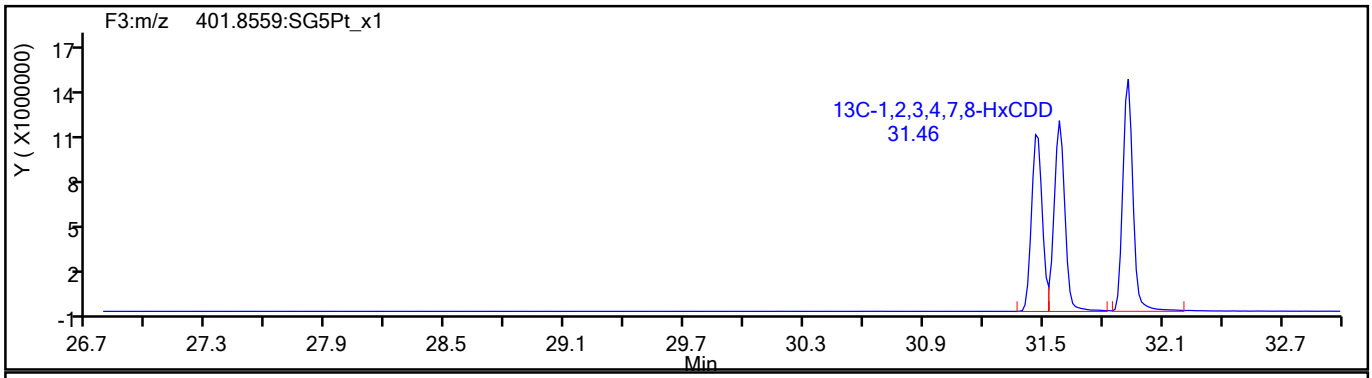

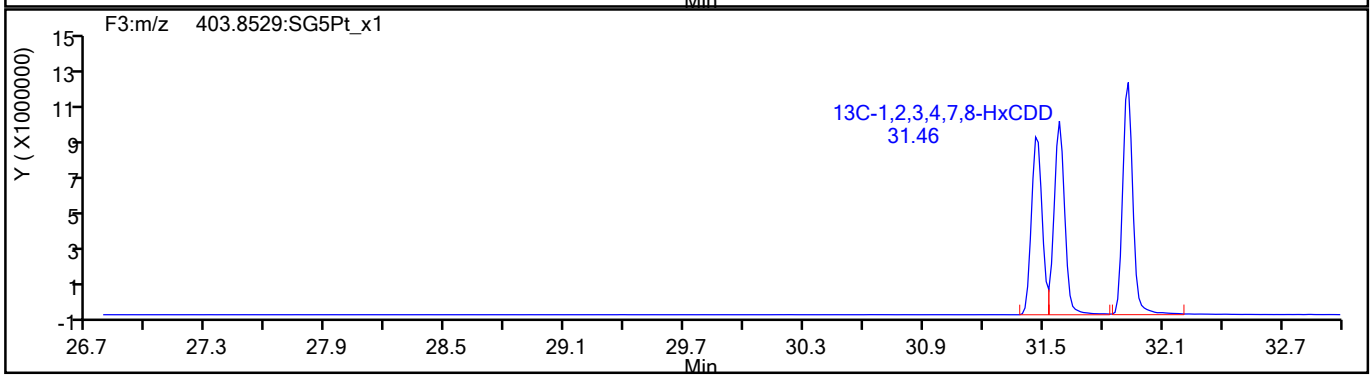

794135

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Eurofins TestAmerica, Sacramento

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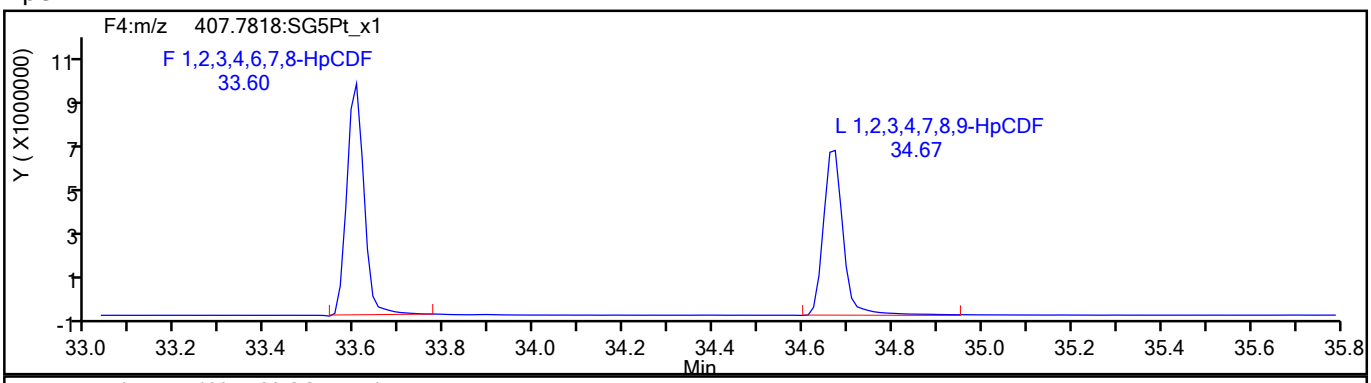

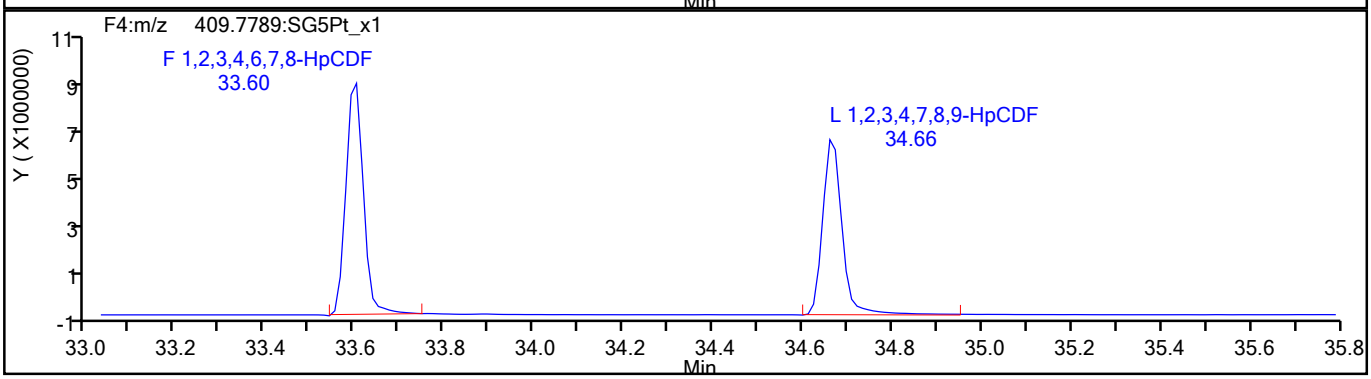

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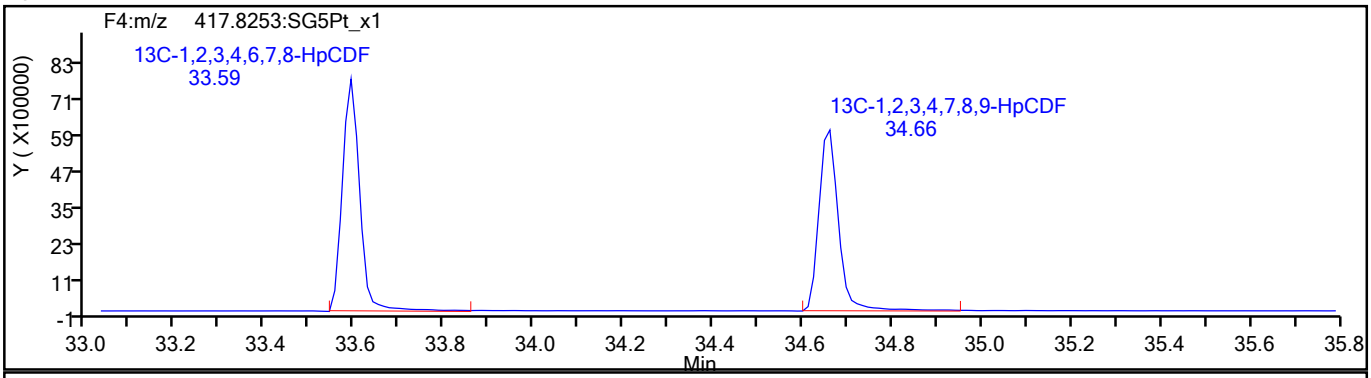

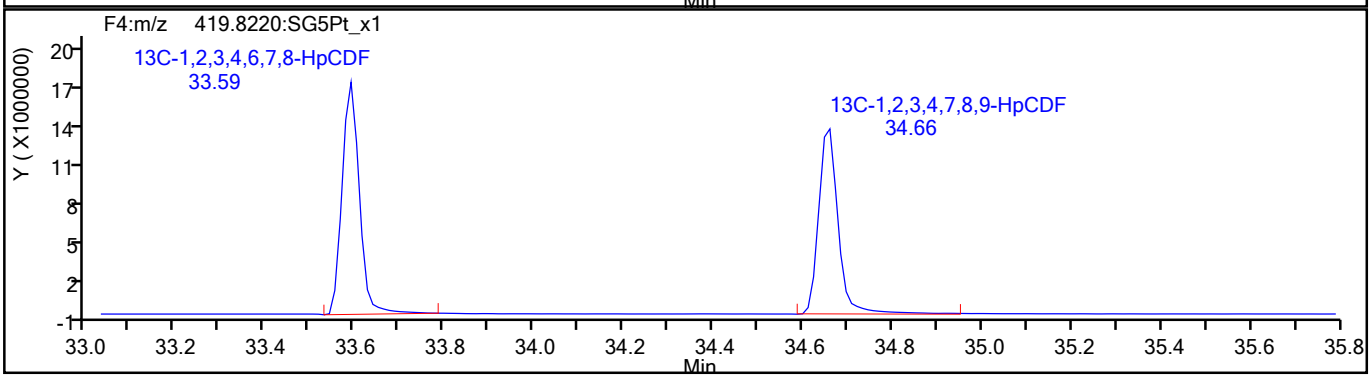

794136

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Eurofins TestAmerica, Sacramento

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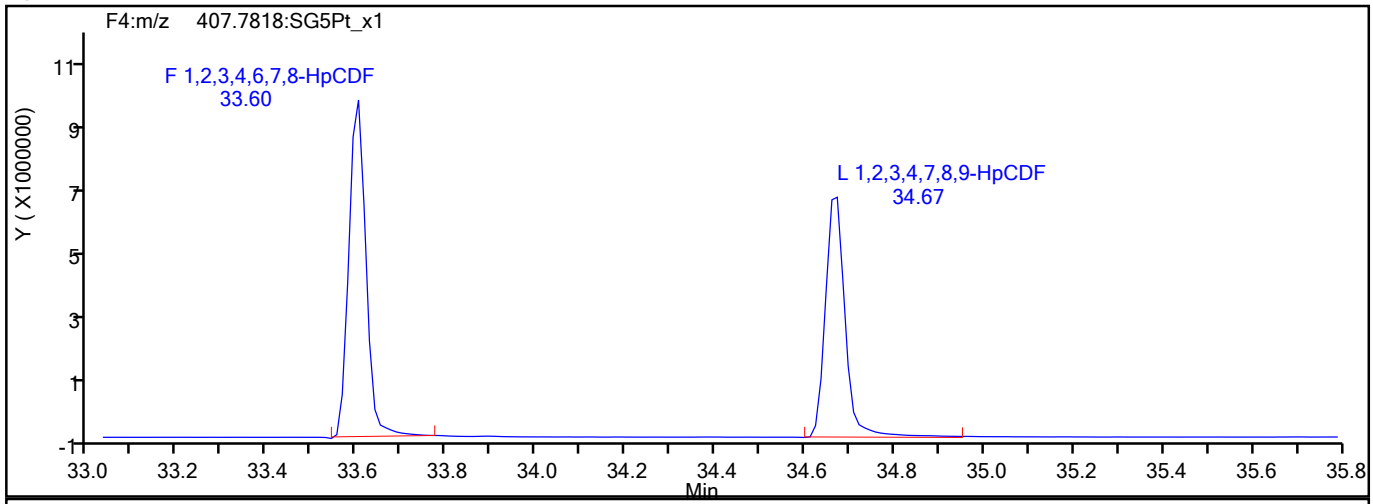

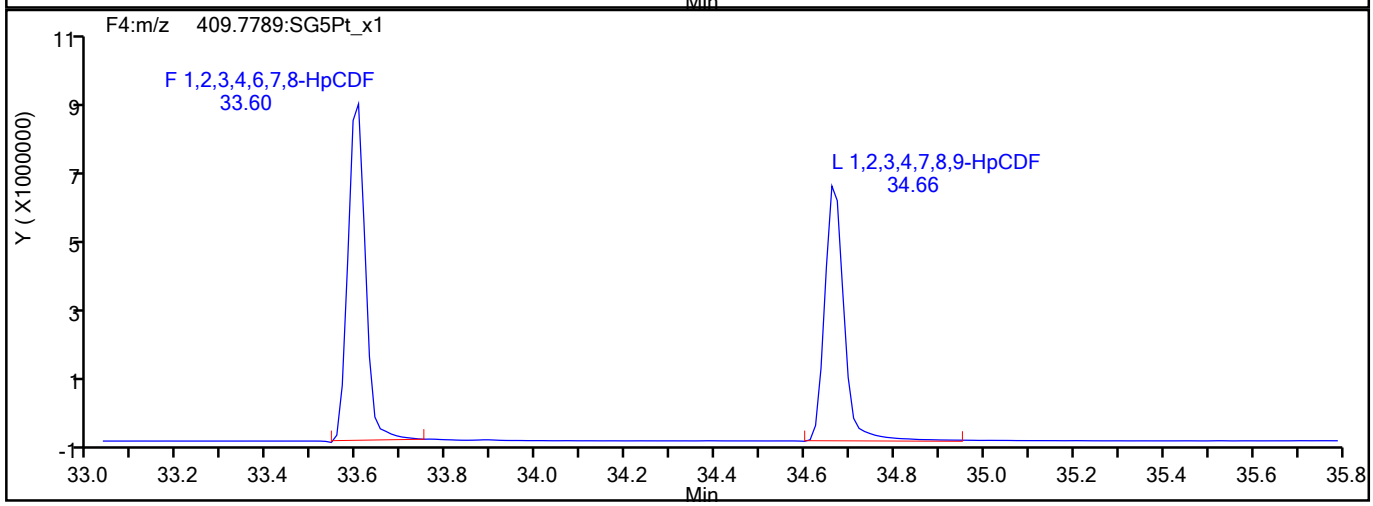

HpCDF Interference Mass

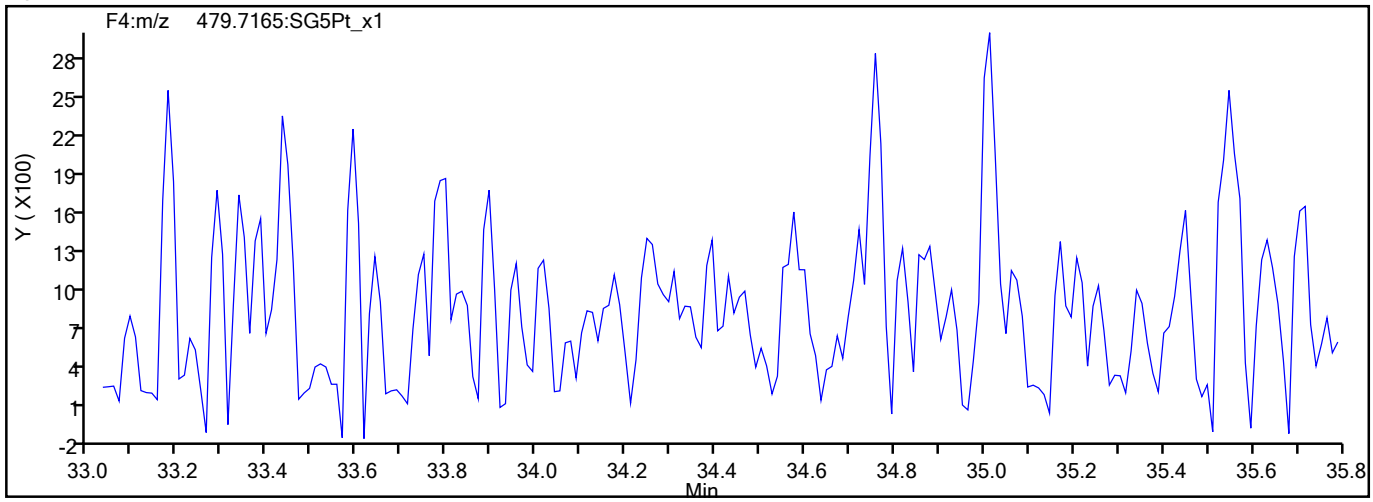

794137

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Eurofins TestAmerica, Sacramento

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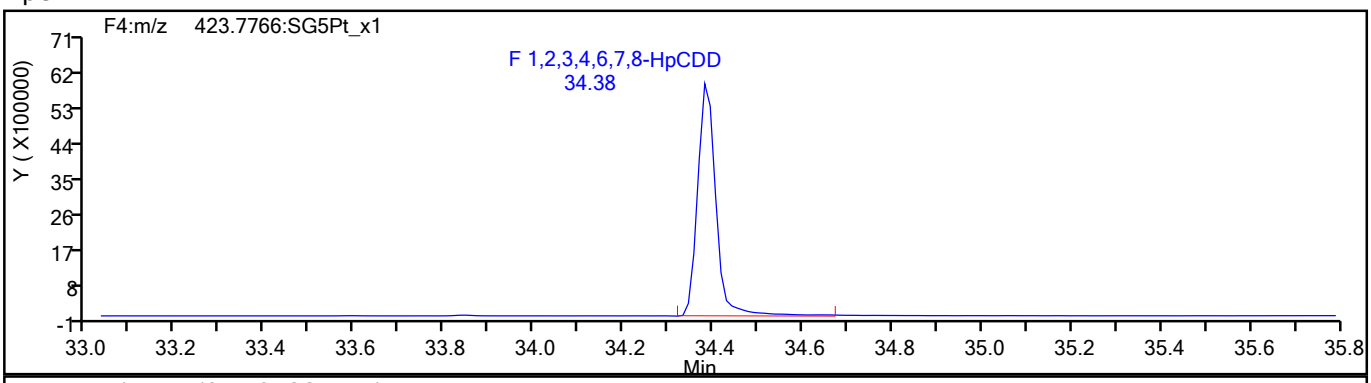

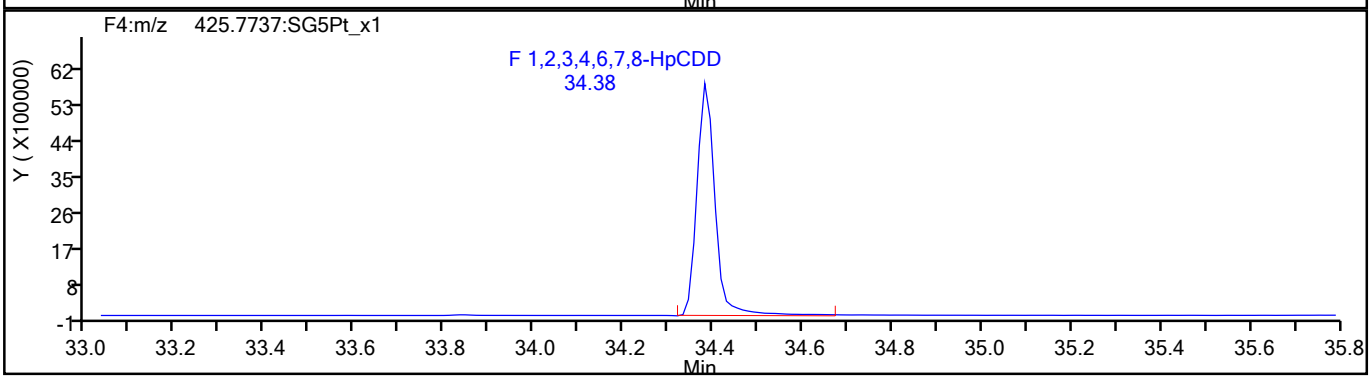

HpCDD Standards

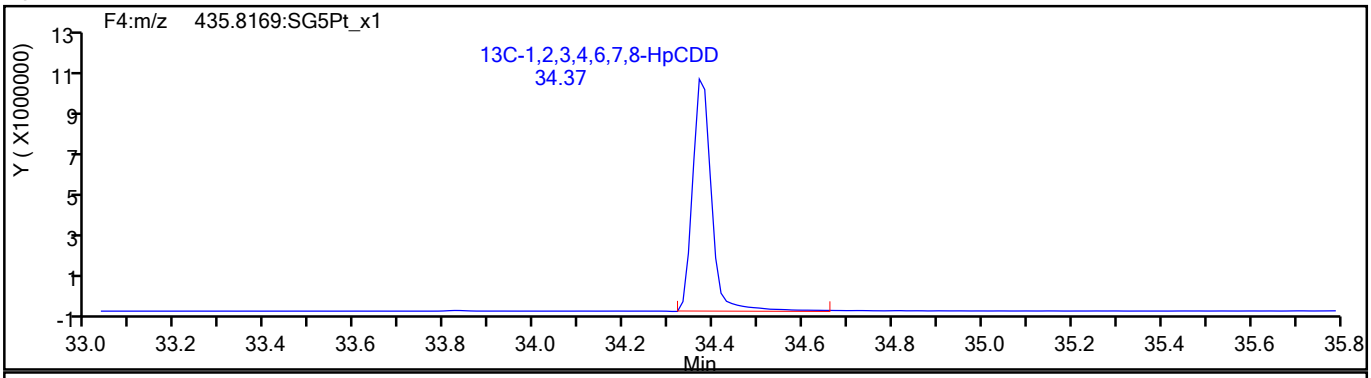

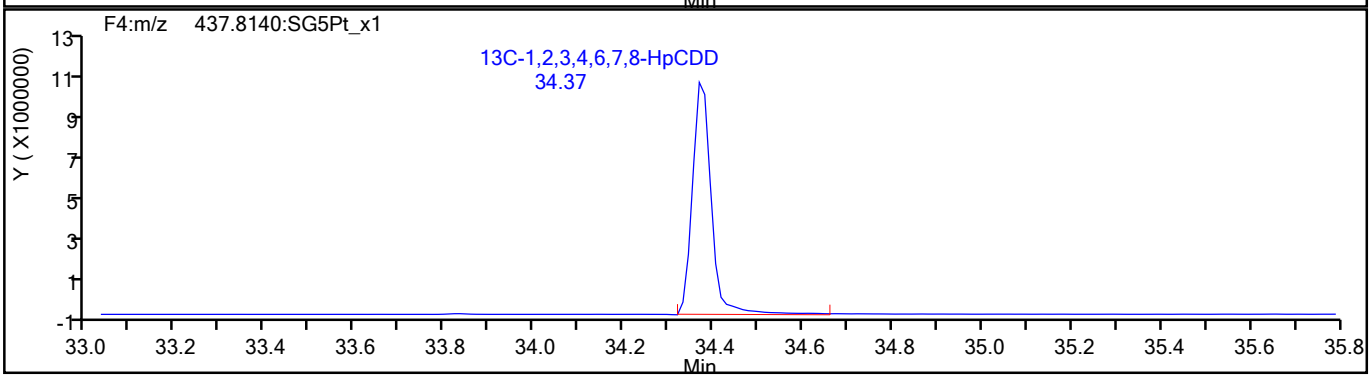

794138

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OCDF

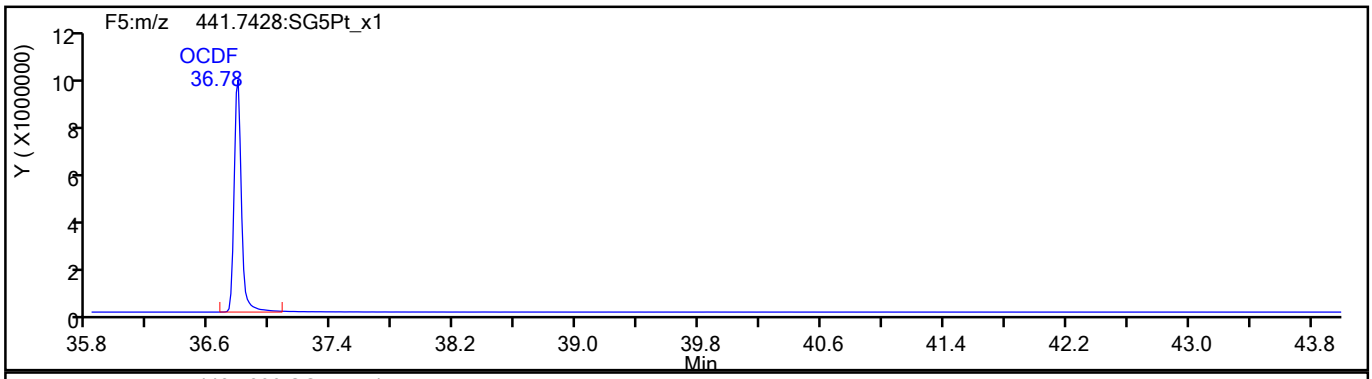

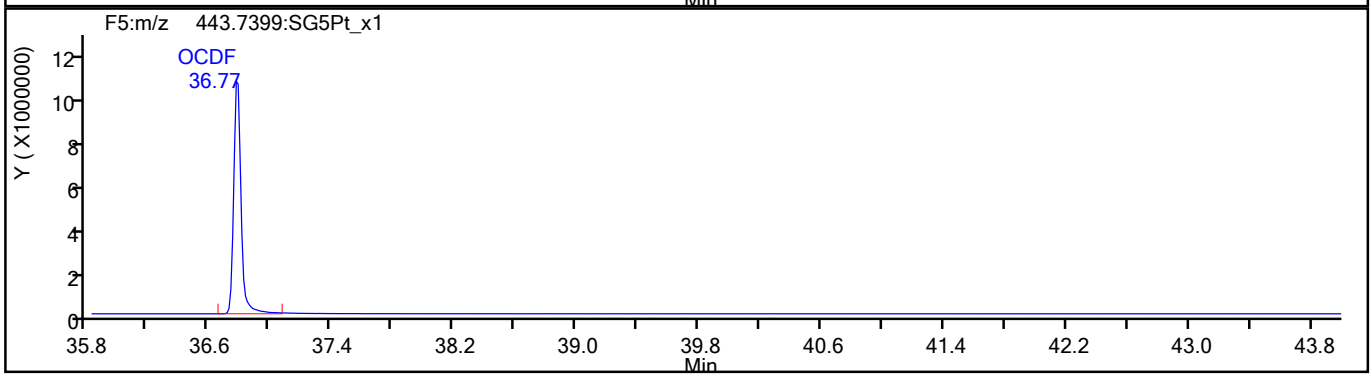

OCDF Standards

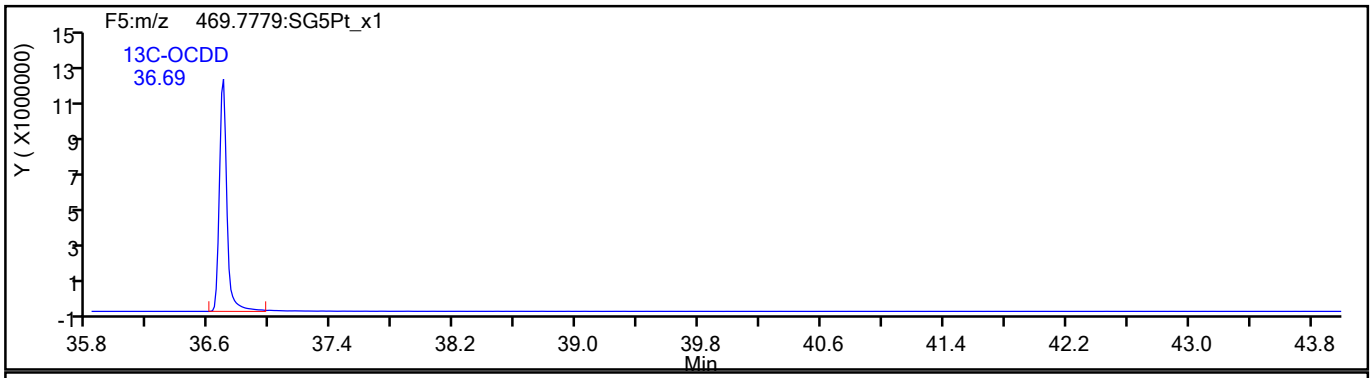

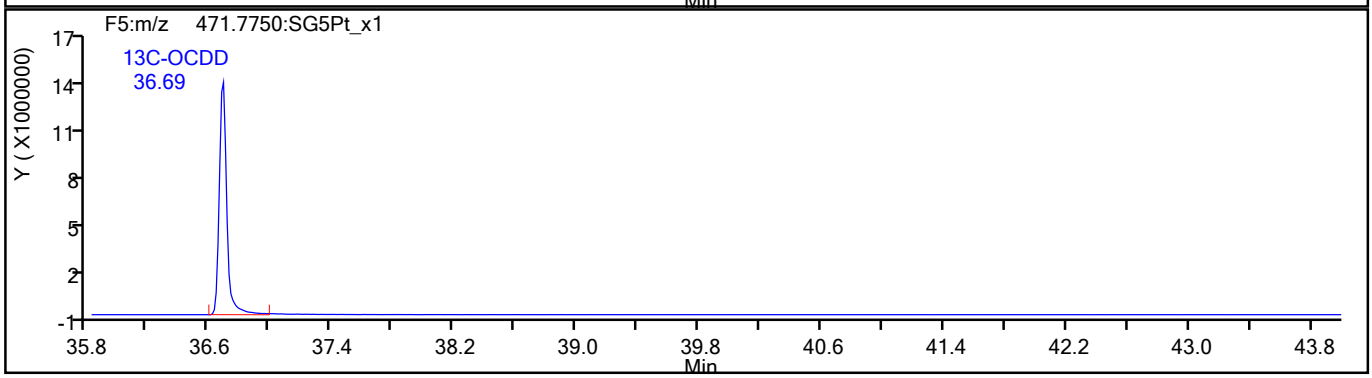

794139

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Eurofins TestAmerica, Sacramento

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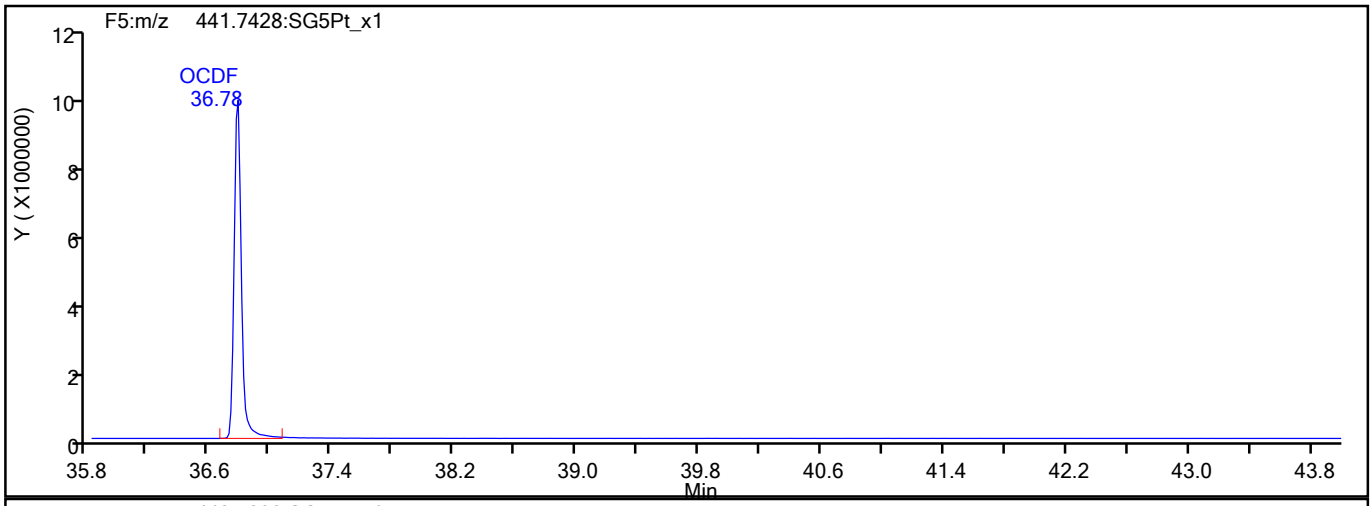

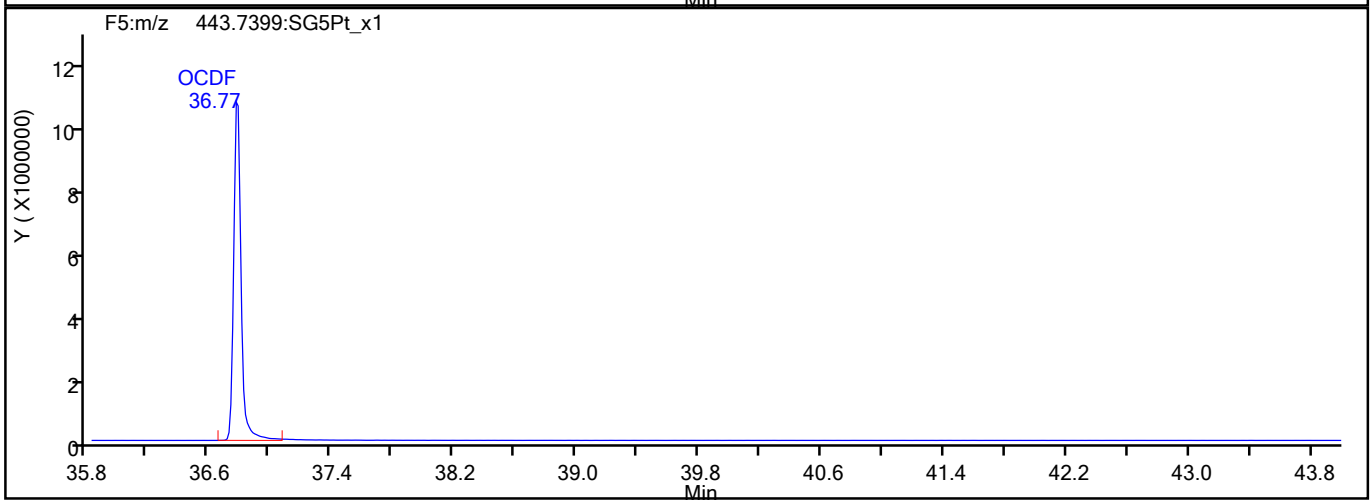

OCDF Interference Mass

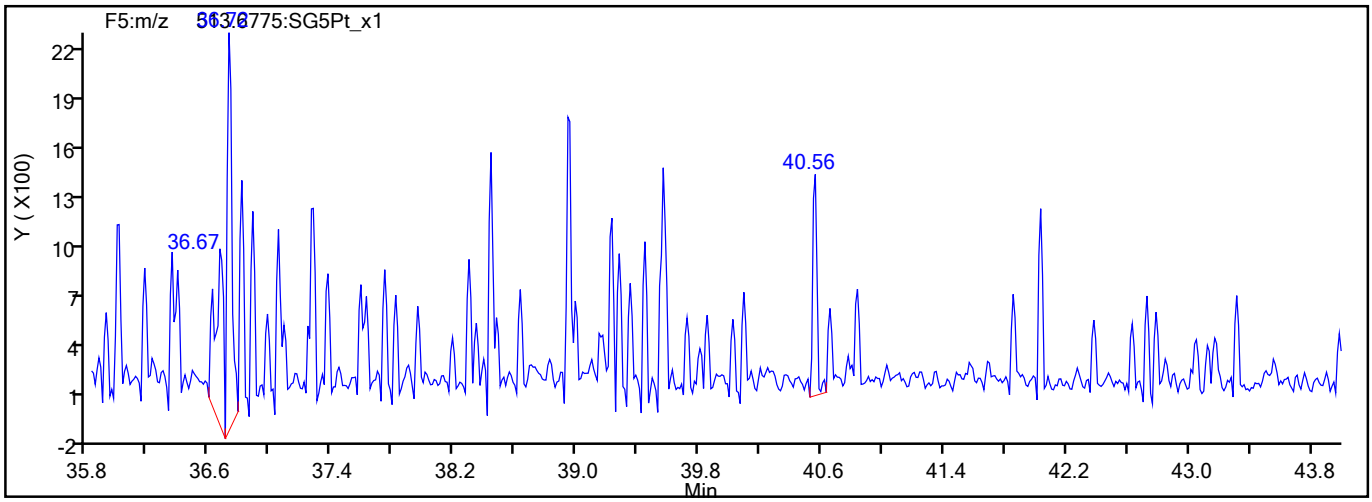

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Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

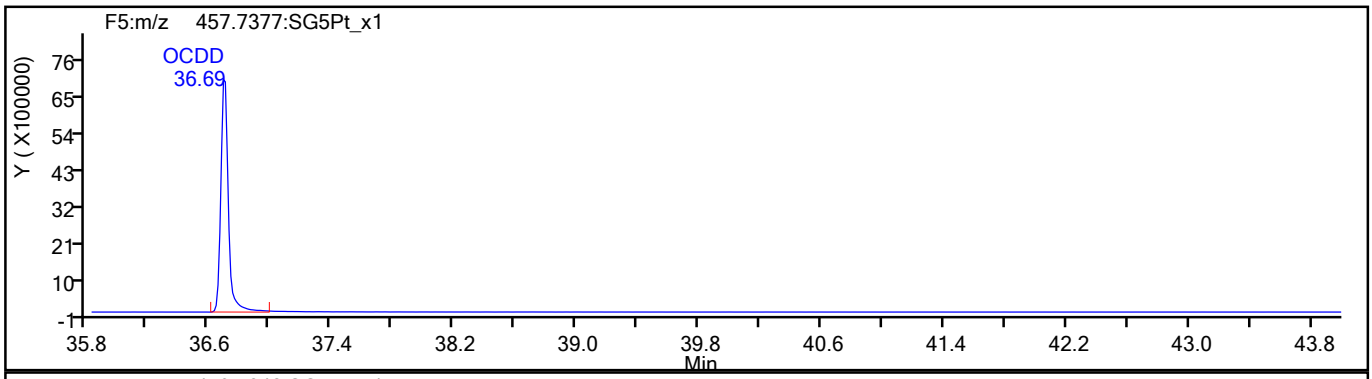

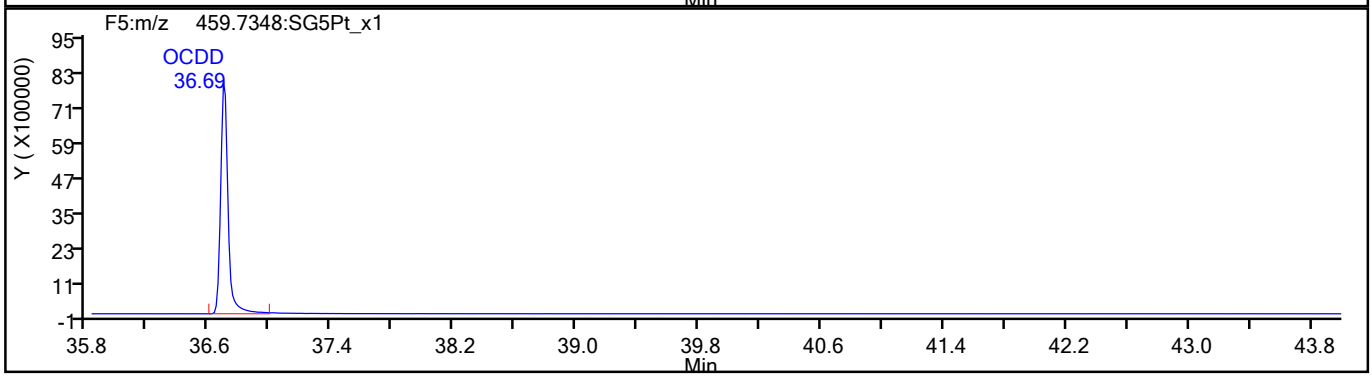

OCDD Standards

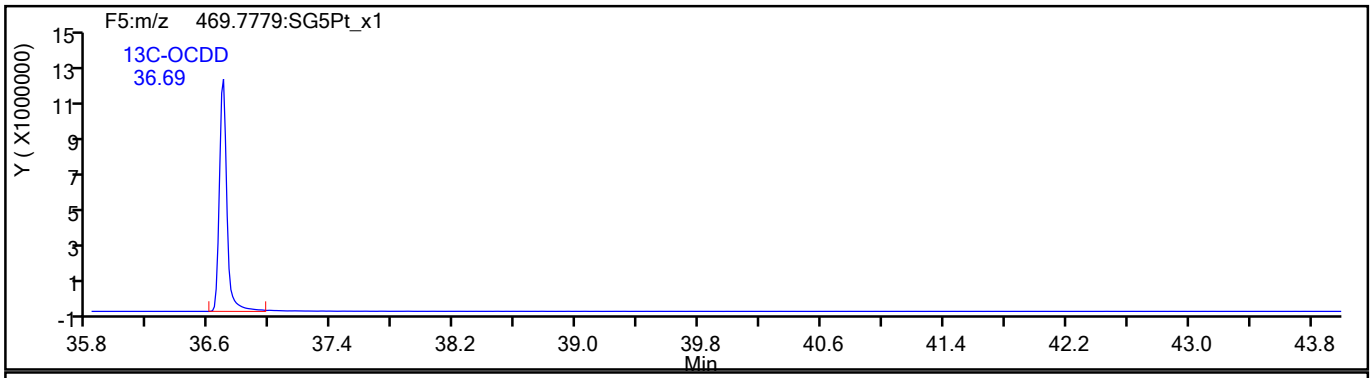

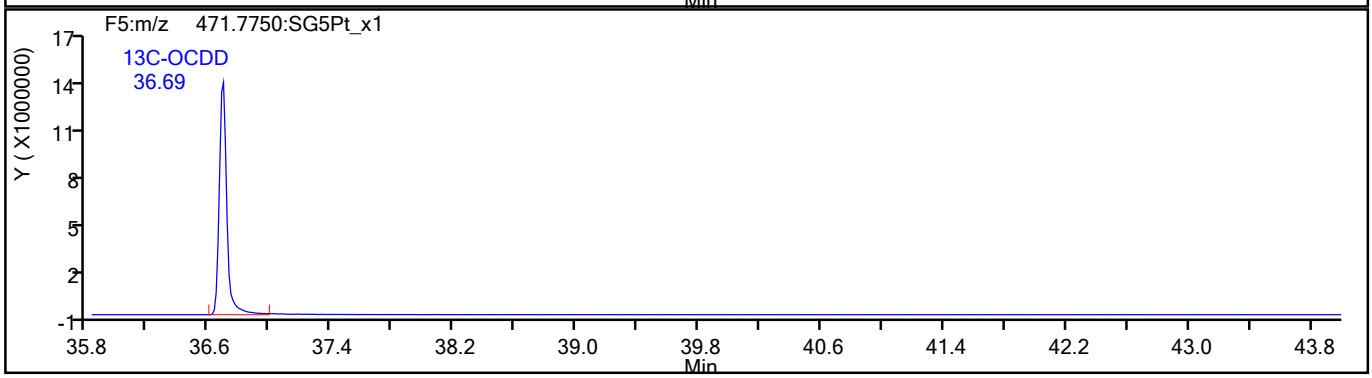

794141

Report Date: 27-Aug-2021 08:39:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_29.d		
Injection Date:	26-Aug-2021 07:40:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

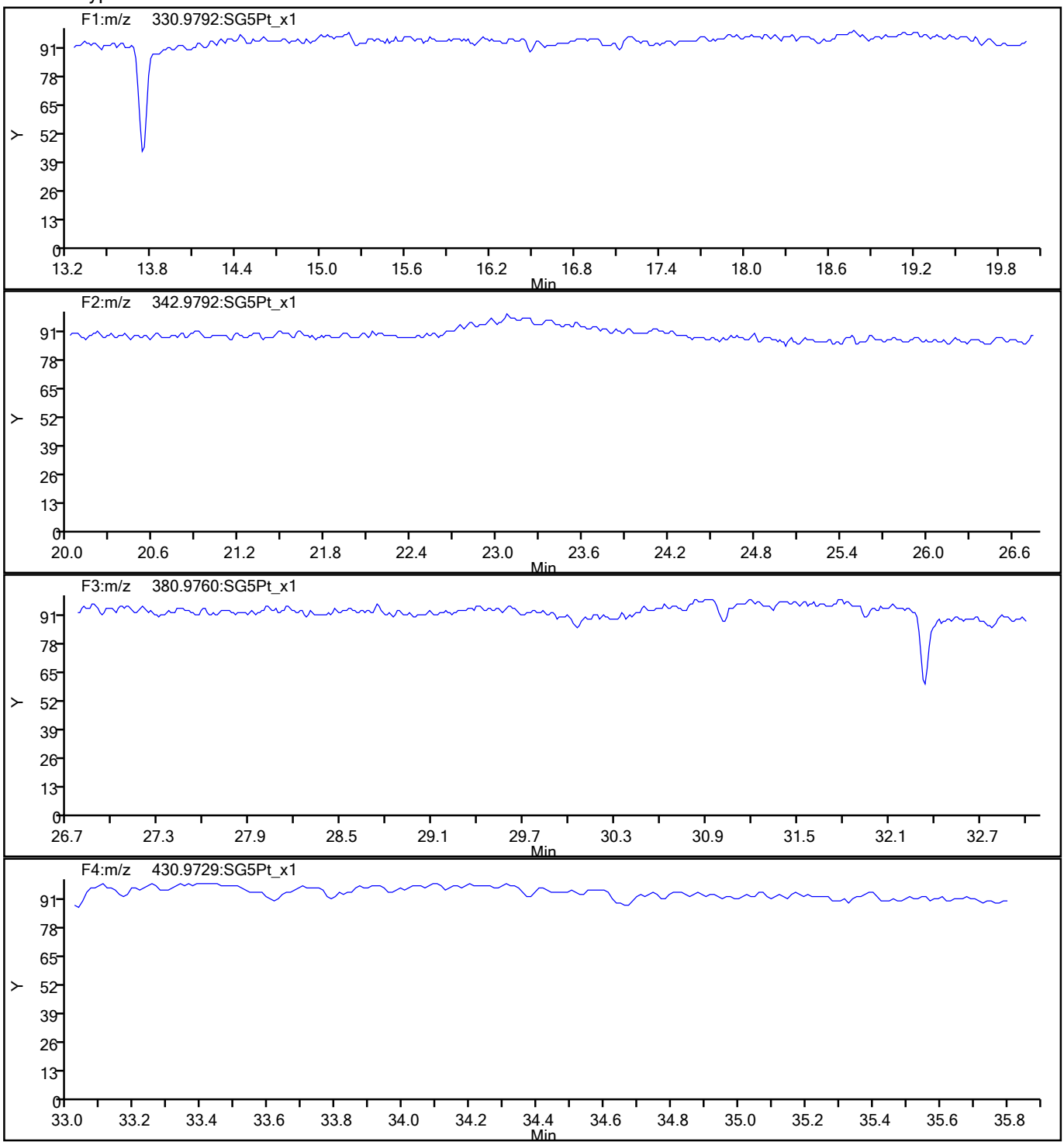

794142

Report Date: 27-Aug-2021 08:39:49 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_29.d		
Injection Date:	26-Aug-2021 07:40:51	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

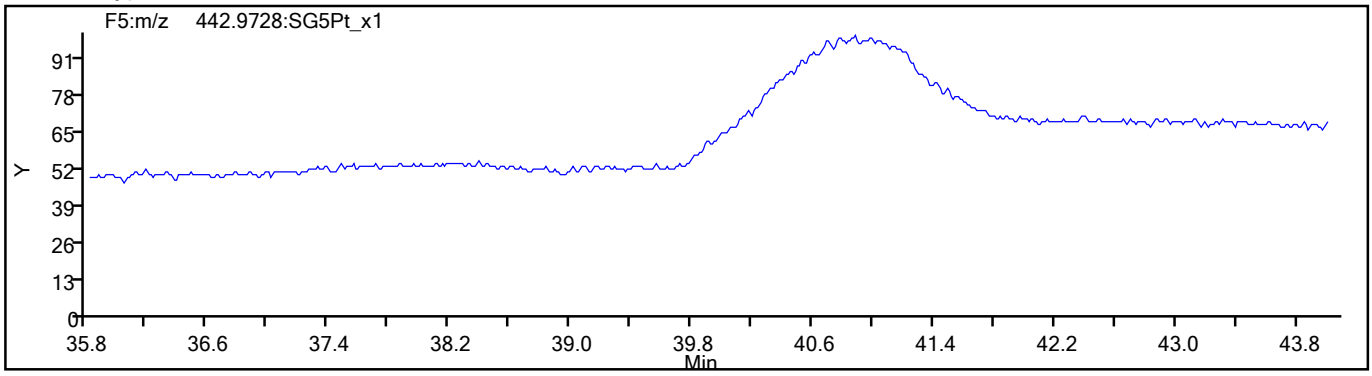

794143

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab Sample ID: ICV 320-506541/9 Calibration Date: 07/14/2021 16:04

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 14JL2111D2_009.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	1.147		43.4	40.0	109	70-130
2,3,7,8-TCDF	AveID	0.998	1.057		42.4	40.0	106	70-130
13C-2,3,7,8-TCDD	Ave	0.8749	0.8537		97.6	100	98	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.316		98.7	100	99	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.8409		38.9	40.0	97	79-127

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.329	76109456	0.75	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.659	100154201	0.78	1.3327	98.7	98.7	0.2019	0.2019	98.74	
2,3,7,8-TCDF	17.673	42329248	0.78	0.9978	42.4	42.4	0.0780	0.0780	106	
D 13C-2,3,7,8-TCDD	16.082	64977627	0.75	0.8749	97.6	97.6	0.2089	0.2089	97.58	
$ 37Cl4-2,3,7,8-TCDD	16.095	25599869		0.8648	38.9	38.9	0.0961	0.0961	97.23	
2,3,7,8-TCDD	16.095	29821925	0.81	1.0570	43.4	43.4	0.0769	0.0769	109	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNIC_00047 Amount Added: 2.00 Units: uL

794145

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 14-Jul-2021 16:04:20 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: T09
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist:

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:43 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 09:08:40

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.329	16.327	0		32741526	6976567	7924	19810	880		
333.9339	16.329	16.327	0		43367930	9220456	3917	9792	2354	0.75(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.659	17.617	3	1.081	43900954	7835287	8250	20625	950		
317.9389	17.659	17.617	3	1.081	56253247	10258096	9186	22965	1117	0.78(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.673	17.644	2	1.001	18567247	3384307	2321	5802	1458		
305.8987	17.673	17.644	2	1.001	23762001	4400066	3312	8280	1329	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.082	16.067	1	0.985	27747114	6168785	7924	19810	778		
333.9339	16.082	16.067	1	0.985	37230513	8166734	3917	9792	2085	0.75(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.095	16.080	1	0.986	25599869	5691654	5385	13462	1057		
2,3,7,8-TCDD											
319.8965	16.095	16.094	0	1.001	13302373	2864950	2365	5912	1211		
321.8936	16.095	16.094	0	1.001	16519552	3585671	2294	5735	1563	0.81(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNIC_00047 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

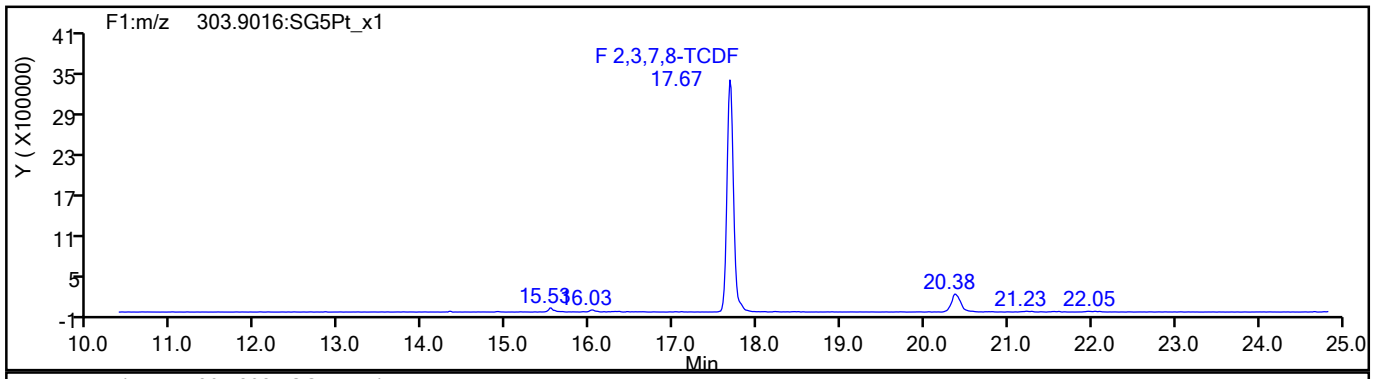

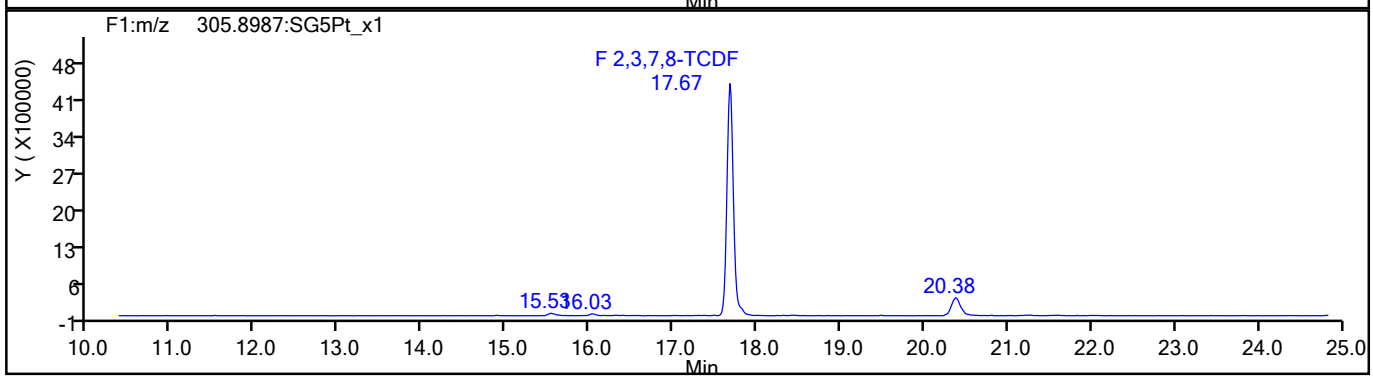

TCDF Standards

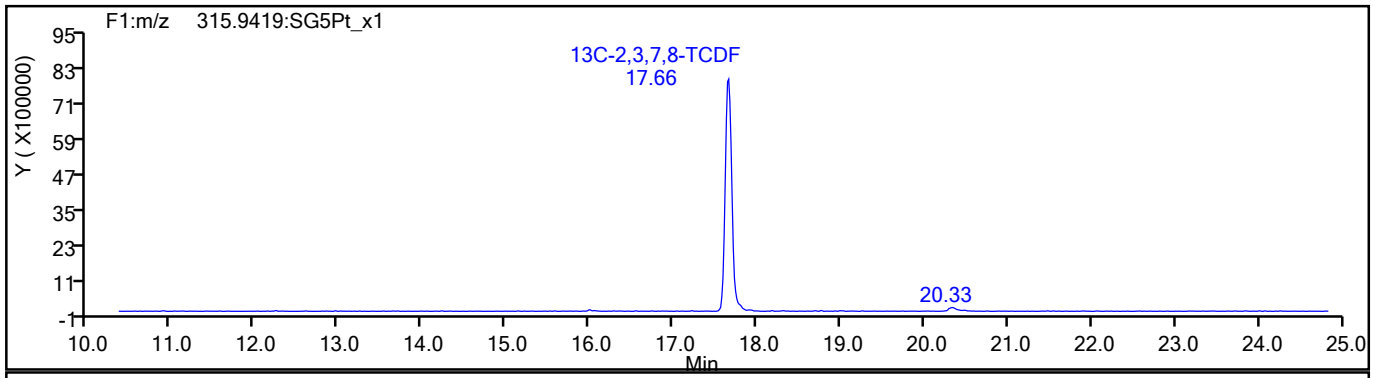

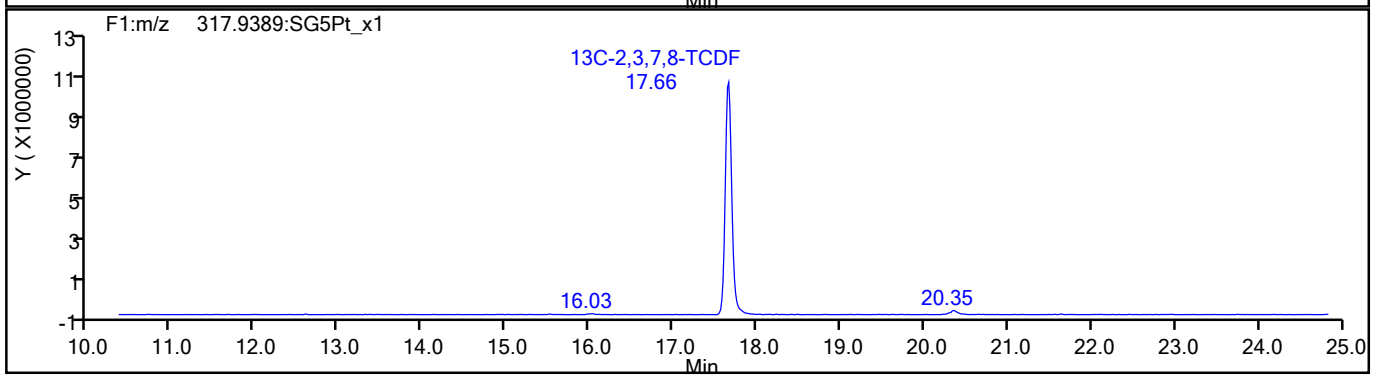

794147

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

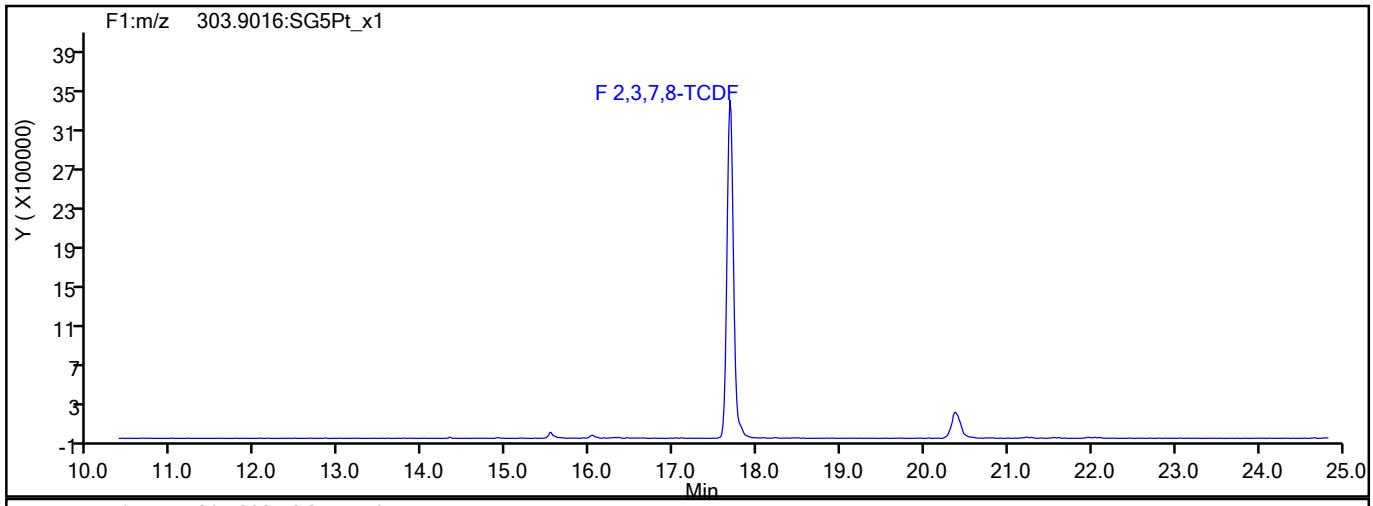

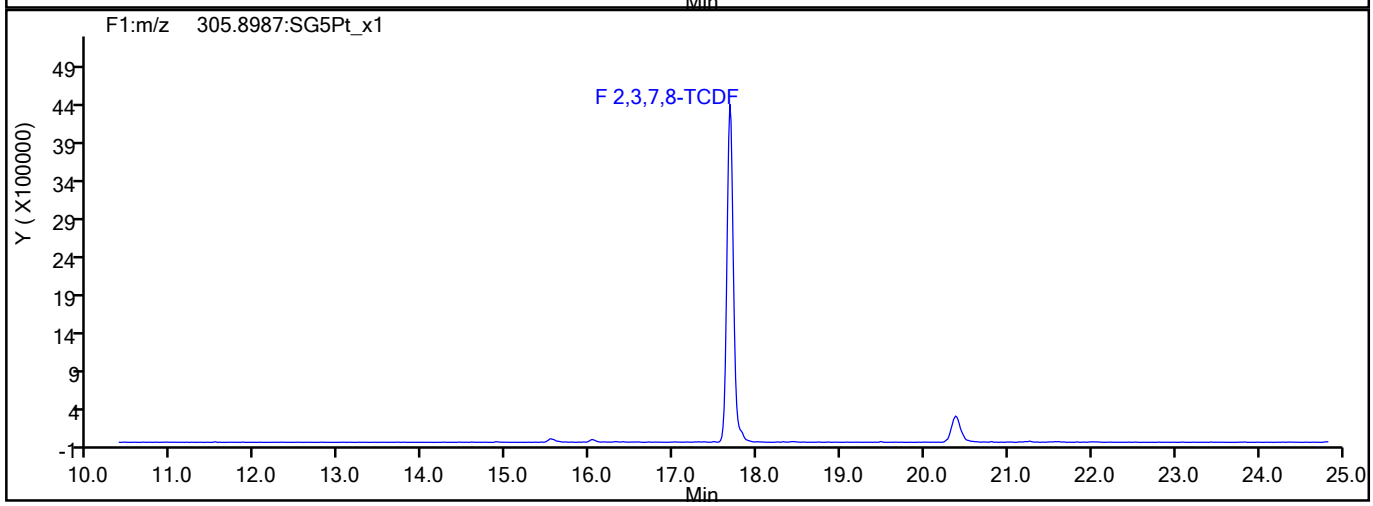

TCDF Interference Mass

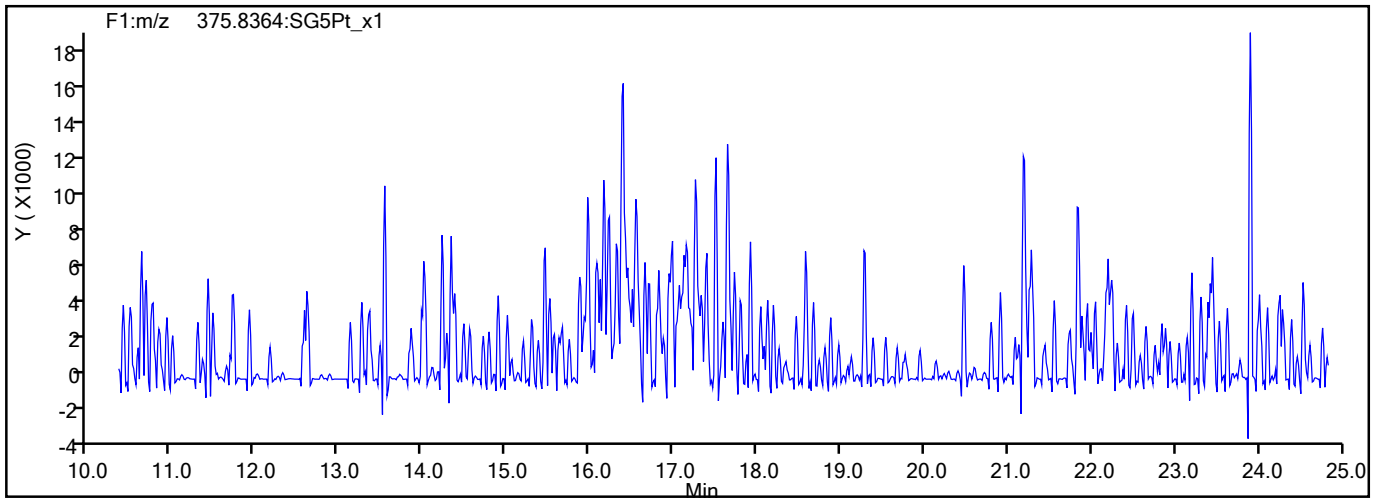

794148

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

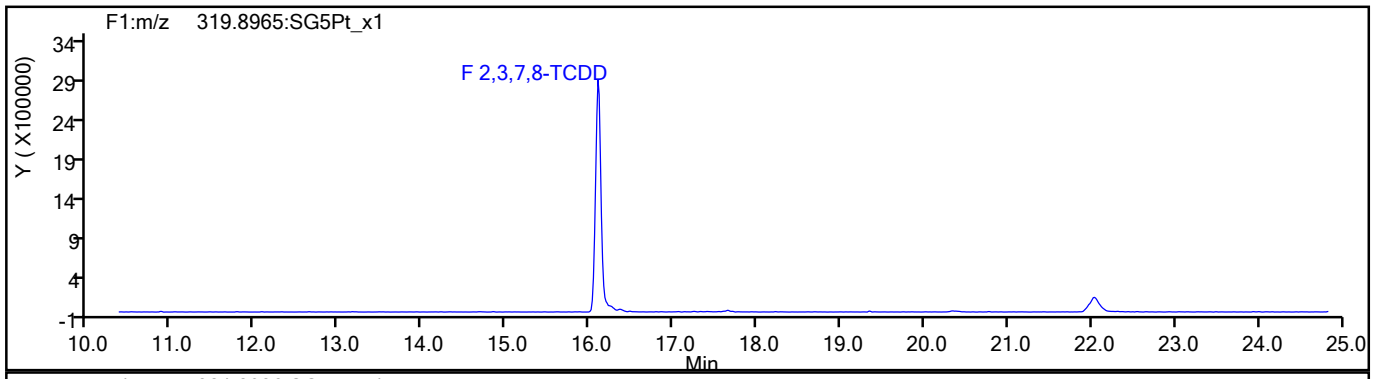

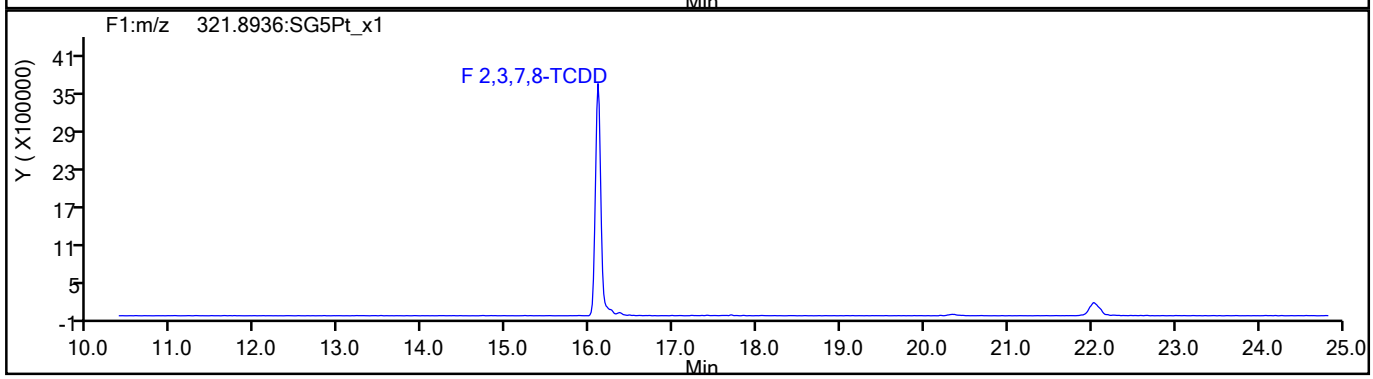

TCDD Standards

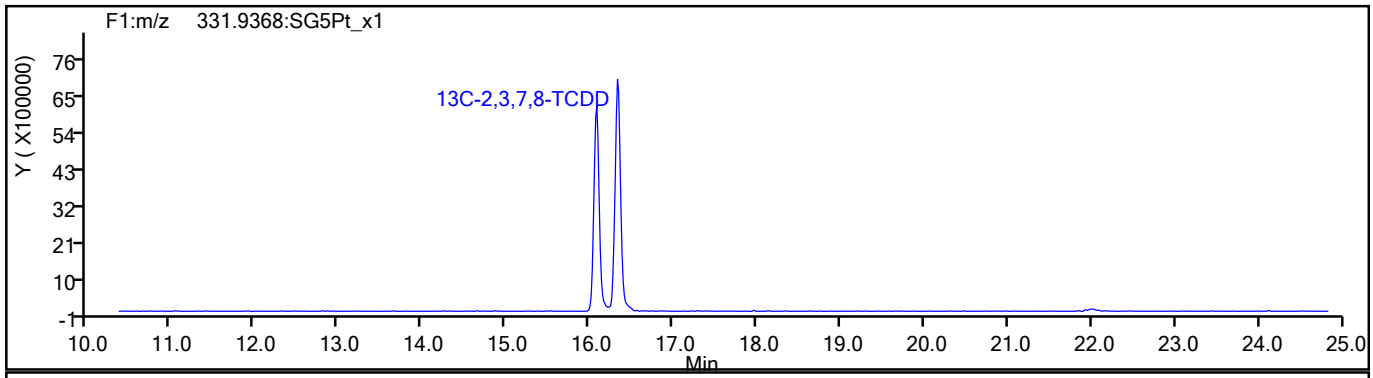

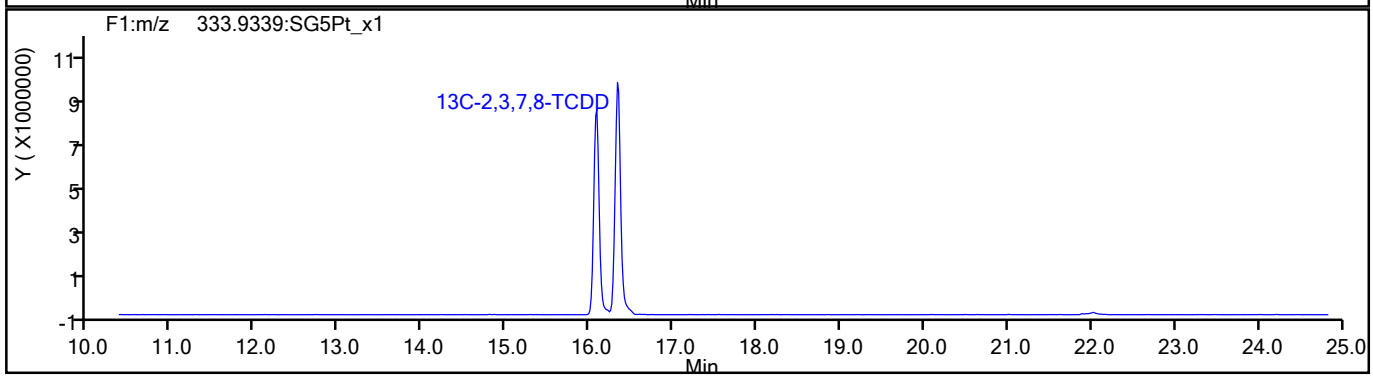

794149

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

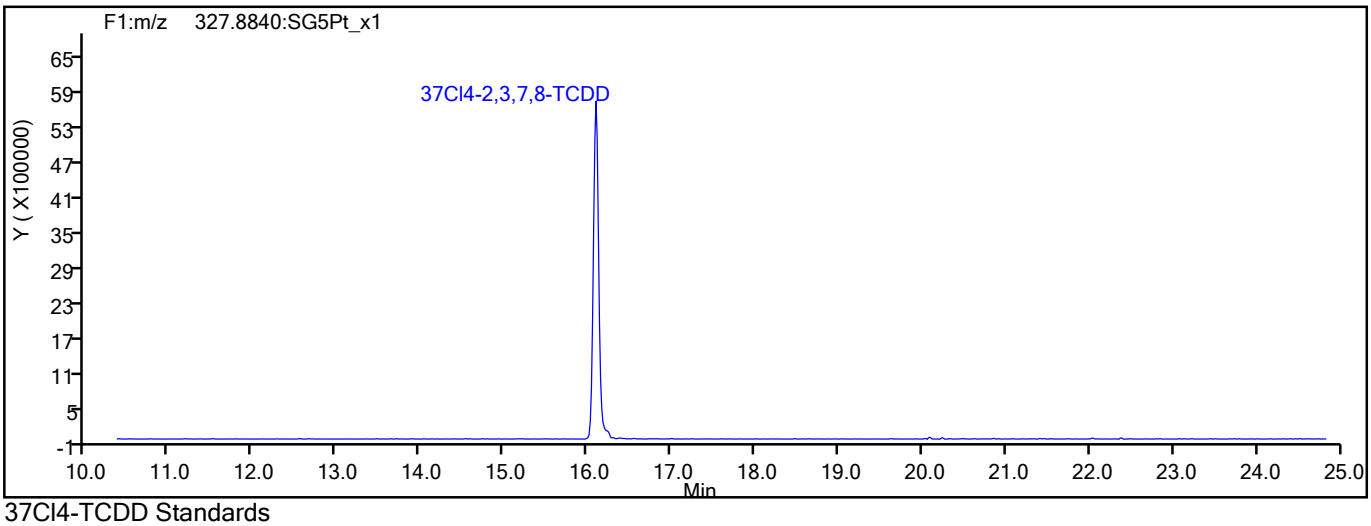

37Cl4-TCDD Standards

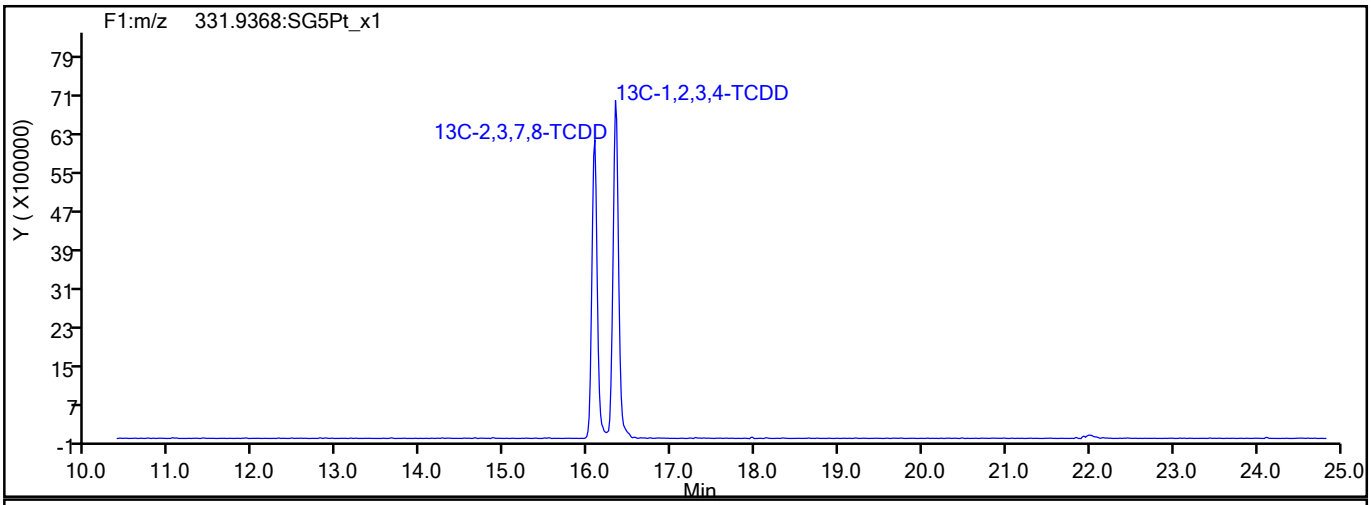

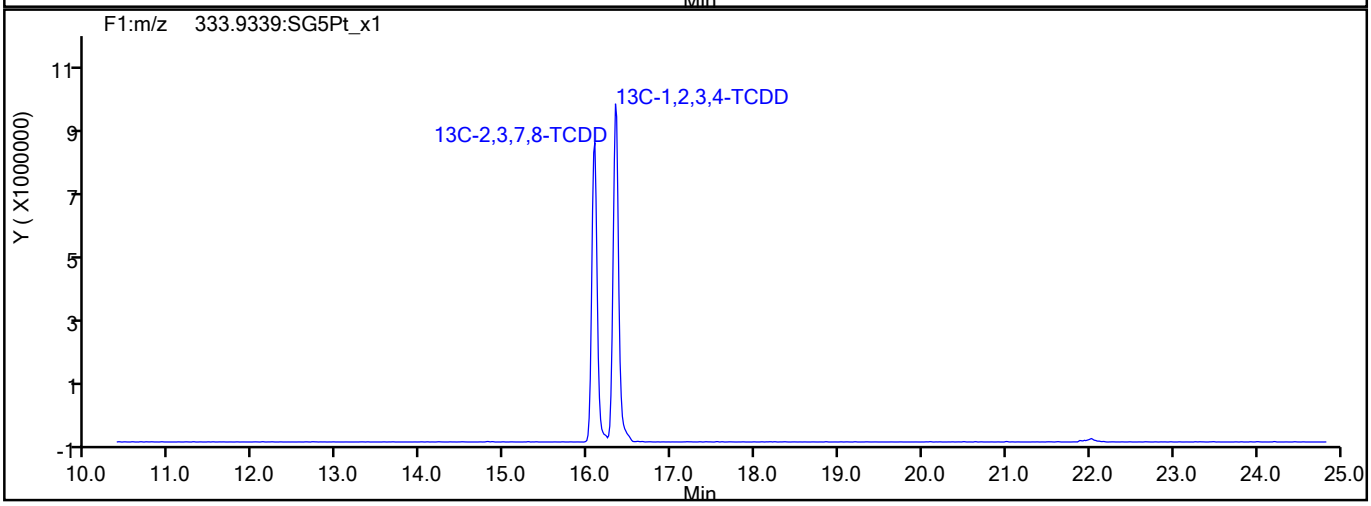

794150

Report Date: 15-Jul-2021 10:44:45 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_009.d		
Injection Date:	14-Jul-2021 16:04:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	9
Column Type:	DB-225	Column Dia:	0.32 mm

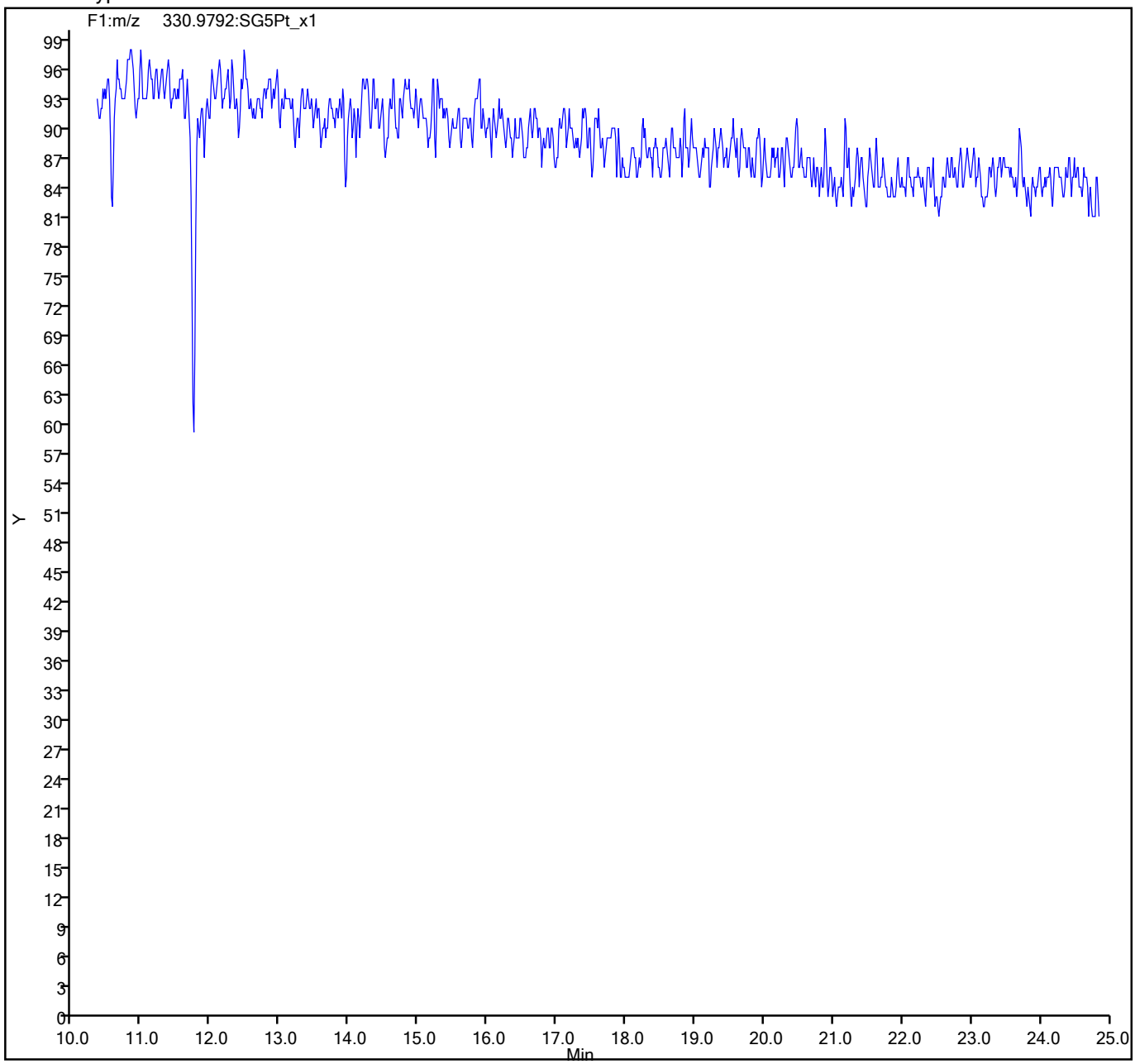

794151

FORM VII
DIOXIN CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Lab Sample ID: CCV 320-520997/2 Calibration Date: 08/31/2021 13:51

Instrument ID: 11D2 Calib Start Date: 07/14/2021 12:14

GC Column: DB-225 ID: 0.32(mm) Calib End Date: 07/14/2021 14:47

Lab File ID: 31AU2111D2_002.d Conc. Units: pg/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%REC	%REC LIMITS
2,3,7,8-TCDD	AveID	1.057	0.9829		9.30	10.0	93	78-129
2,3,7,8-TCDF	AveID	0.998	0.9159		9.18	10.0	92	84-120
13C-2,3,7,8-TCDD	Ave	0.8749	0.9120		104	100	104	82-121
13C-2,3,7,8-TCDF	Ave	1.333	1.391		104	100	104	71-140
37Cl4-2,3,7,8-TCDD	Ave	0.8648	0.9746		11.3	10.0	113	79-127

Data file	Smp	Work Order	Sample ID	FV-uL	Method/Matrix	Box	Size	U
31AU2111D2	1	CPS 083121	CPS HRDXNCP_00044				1.00000	
31AU2111D2	2	CCV 083121	CCV CS-4 HRDXNL4_00100				1.00000	
31AU2111D2	3	SB 083121	Solvent Blank C-14				1.00000	
31AU2111D2	4	320-514809	400-206693-C-19-A	20	1613B/Solid	D268	10.00000	g
31AU2111D2	5	320-514809	400-206693-C-20-A	20	1613B/Solid		10.00000	g
31AU2111D2	6	320-514809	400-206693-C-36-A	20	1613B/Solid		10.00000	g
31AU2111D2	7	320-514809	400-206693-C-39-A	20	1613B/Solid		10.00000	g
31AU2111D2	8	320-515138	400-206693-C-42-A	20	1613B/Solid	D267	10.00000	g
31AU2111D2	9	320-515492	320-77292-A-1-A	20	1613B/Solid	D270	10.00000	g
31AU2111D2	10	320-515492	320-77292-A-2-A	20	1613B/Solid		10.00000	g
31AU2111D2	11	320-515492	320-77292-A-2-B MS	20	1613B/Solid		10.00000	g
31AU2111D2	12	320-515492	320-77292-A-2-C MSD	20	1613B/Solid		10.00000	g
31AU2111D2	13	320-515492	320-77292-A-3-A	20	1613B/Solid		10.00000	g
31AU2111D2	14	320-515492	320-77292-A-4-A	20	1613B/Solid		10.00000	g
31AU2111D2	15	320-515492	320-77214-A-2-A	20	1613B/Solid		10.00000	g
31AU2111D2	16	320-515492	320-77214-A-2-B MS	20	1613B/Solid		10.00000	g
31AU2111D2	17	320-515492	320-77214-A-2-C MSD	20	1613B/Solid		10.00000	g
31AU2111D2	18	320-515492	320-76901-A-1-A X10	20	1613B/Solid	D267	10.00000	g
31AU2111D2	19						1.00000	
31AU2111D2	20						1.00000	
31AU2111D2	21						1.00000	
31AU2111D2	22		DB 08-31-21				1.00000	
31AU2111D2	23						1.00000	

LOGFILE CHECKED
DB 9/1/21

Peak Locate Examination:31-AUG-2021:13:11 File:31AU2111D2
Experiment:DB225RES Function:1 Reference:PFK

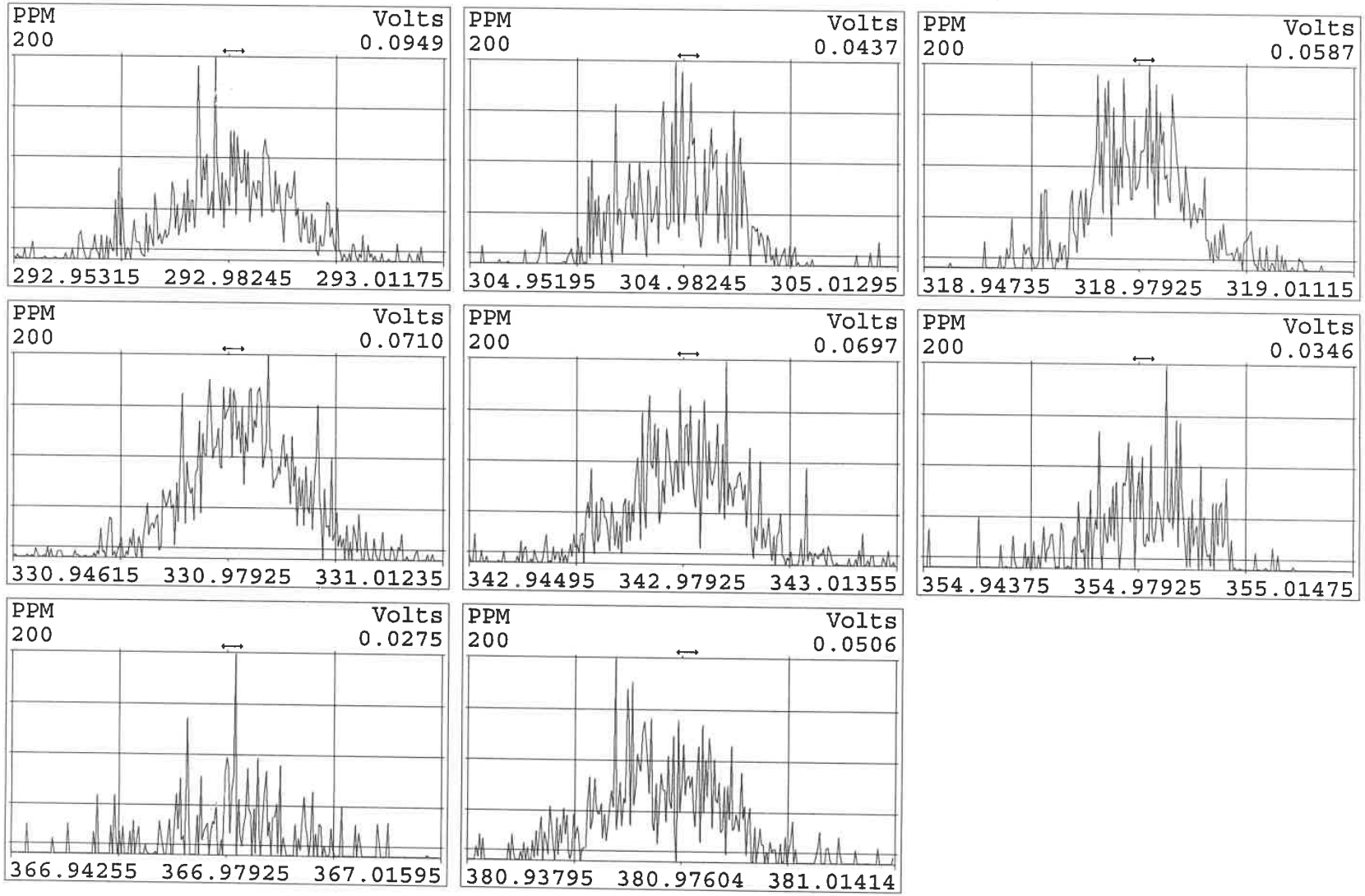

Peak Locate Examination: 1-SEP-2021:01:07 File:RESCHECK11D2
Experiment:DB225RES Function:1 Reference:PFK

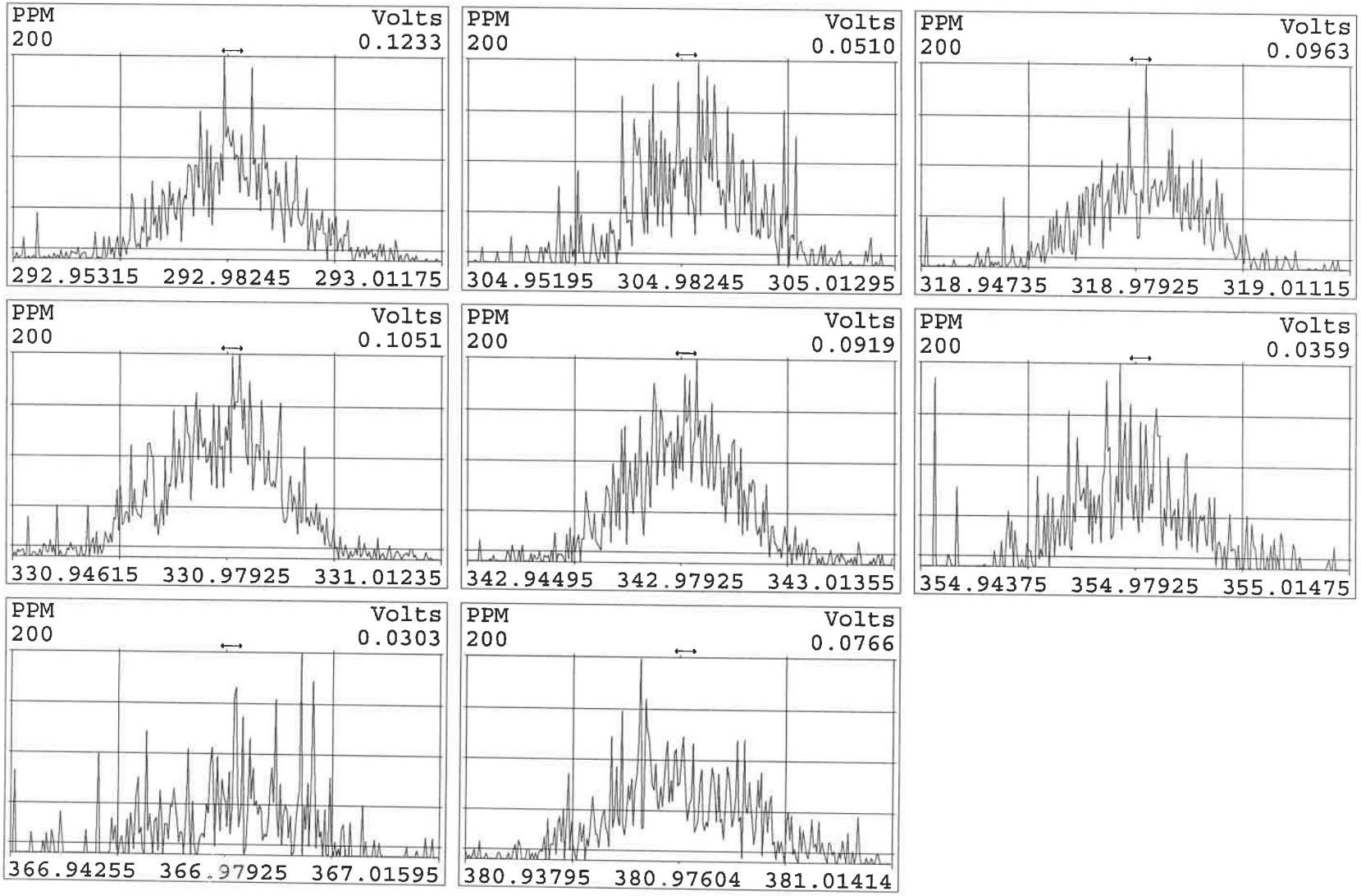

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 31-Aug-2021 13:51:44 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:32:30

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.275	36409593	0.80	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.605	50660828	0.76	1.3327	104.4	104.4	0.4579	0.4579	104	
2,3,7,8-TCDF	17.619	4640207	0.78	0.9978	9.179	9.179	0.1321	0.1321	91.79	
D 13C-2,3,7,8-TCDD	16.055	33207325	0.74	0.8749	104.2	104.2	0.6983	0.6983	104	
2,3,7,8-TCDD	16.069	3263875	0.86	1.0570	9.299	9.299	0.1532	0.1532	92.99	
$ 37Cl4-2,3,7,8-TCDD	16.069	3548395		0.8648	11.3	11.3	0.1017	0.1017	113	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNL4_00100 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 31-Aug-2021 13:51:44 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: CCV CS-4 HRDXNL4_00100
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2
Sublist: chrom-DXN_DB225_11D2*sub1

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:32:30

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.275	16.275	0		16219970	3519442	11993	29982	293		
333.9339	16.275	16.275	0		20189623	4540712	7706	19265	589	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.605	17.605	0	1.082	21896549	4215589	10001	25002	422		
317.9389	17.605	17.605	0	1.082	28764279	5472152	9674	24185	566	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.619	17.619	0	1.001	2040587	388832	1840	4600	211		
305.8987	17.619	17.619	0	1.001	2599620	526255	3269	8172	161	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.055	16.055	0	0.987	14138429	3126695	11993	29982	261		
333.9339	16.055	16.055	0	0.987	19068896	4455590	7706	19265	578	0.74(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.069	16.069	0	1.001	1505976	324568	2564	6410	127		
321.8936	16.069	16.069	0	1.001	1757899	372701	2349	5872	159	0.86(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.069	16.069	0	0.987	3548395	729773	2835	7087	257		

QC Flag Legend

Processing Flags

Reagents:

HRDXNL4_00100 Amount Added: 2.00 Units: uL

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

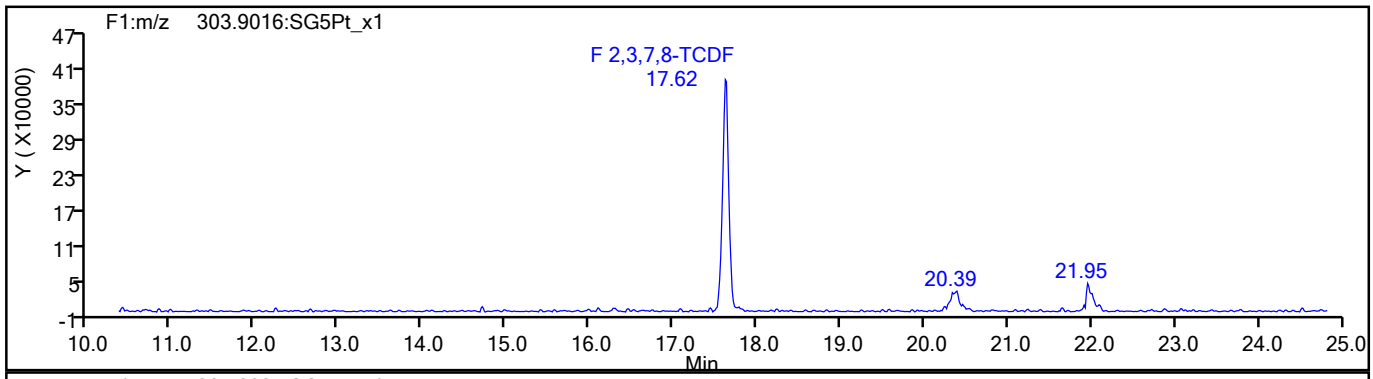

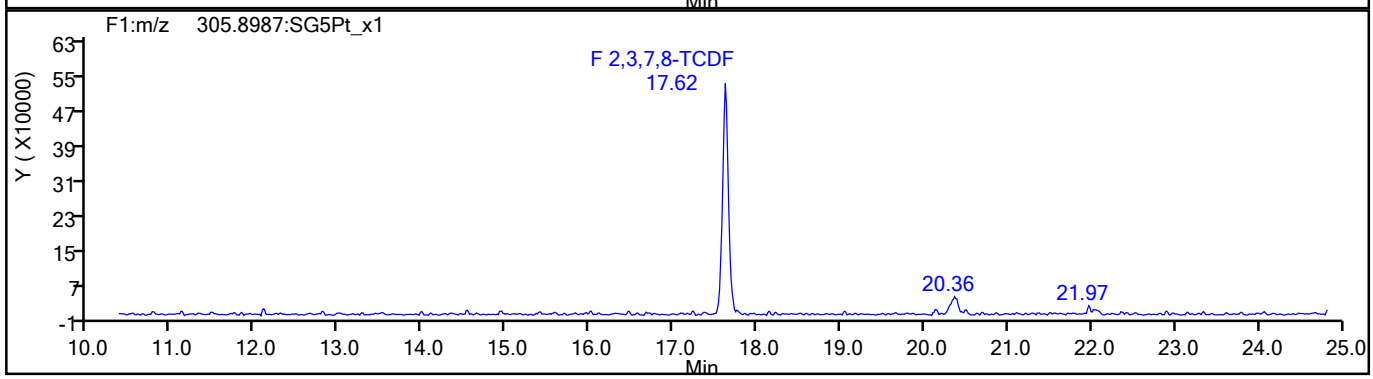

TCDF Standards

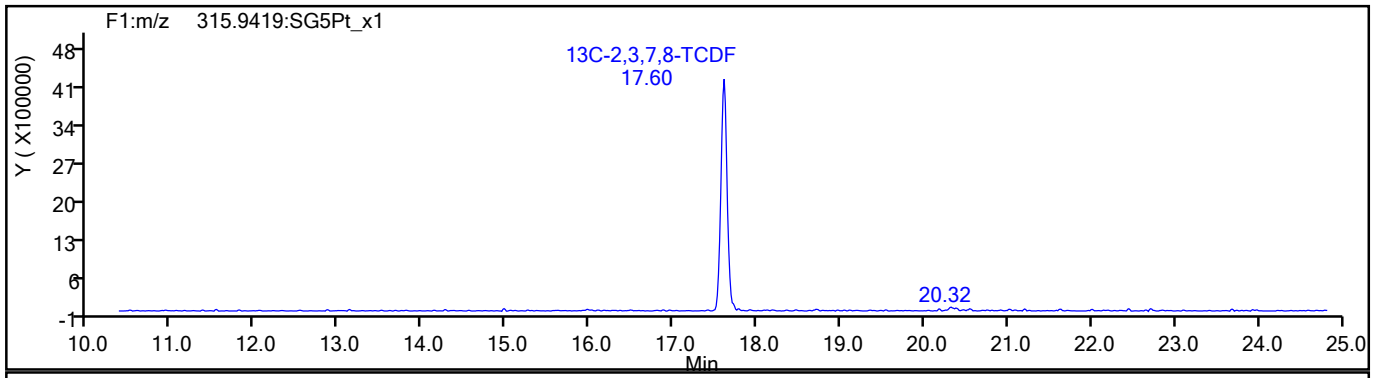

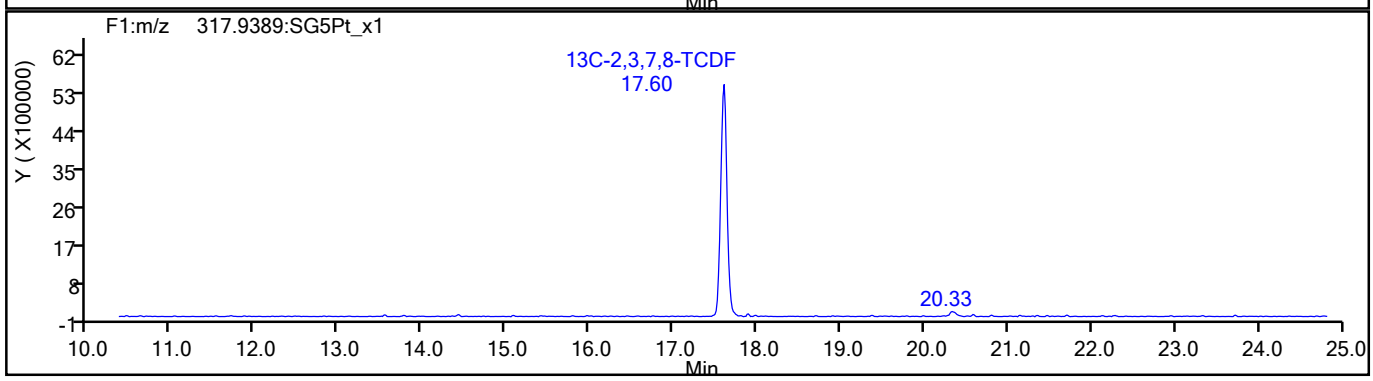

794158

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

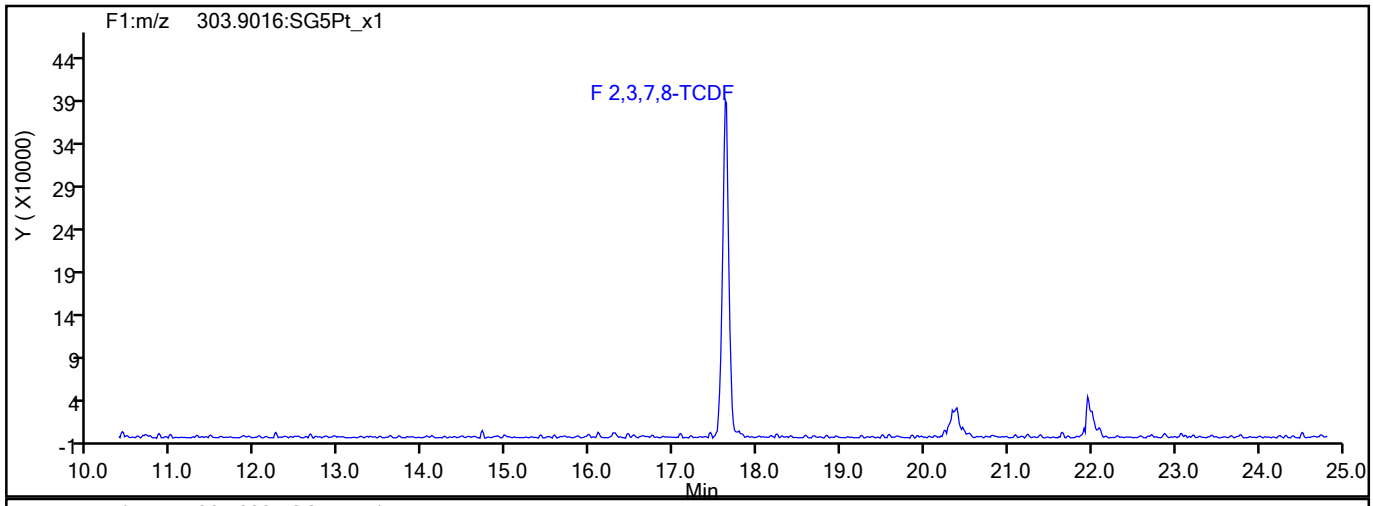

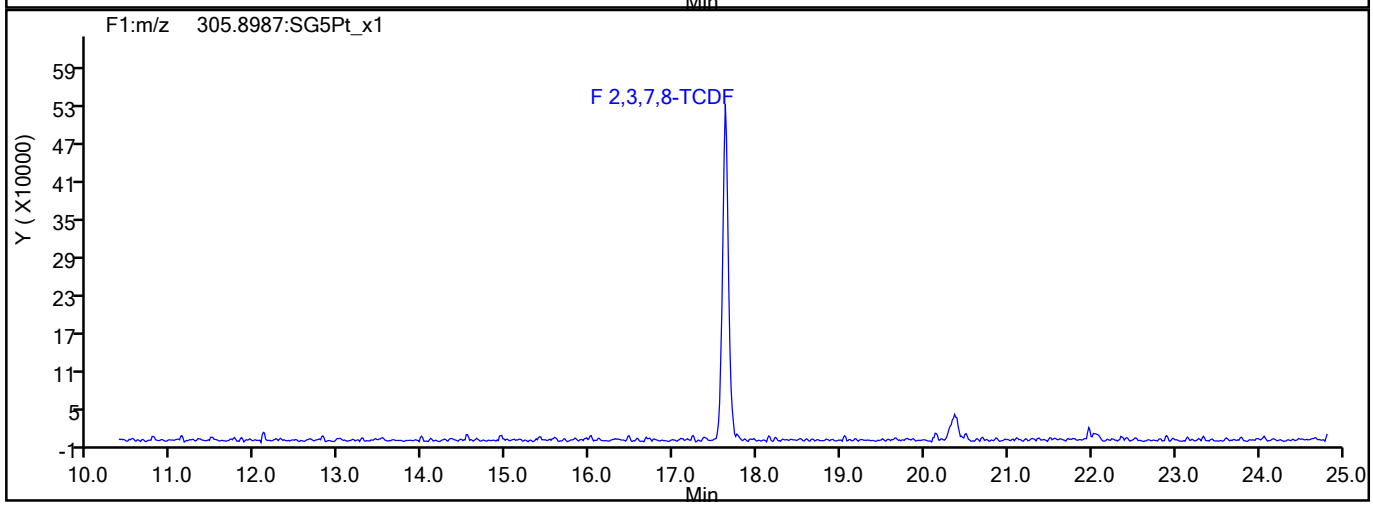

TCDF Interference Mass

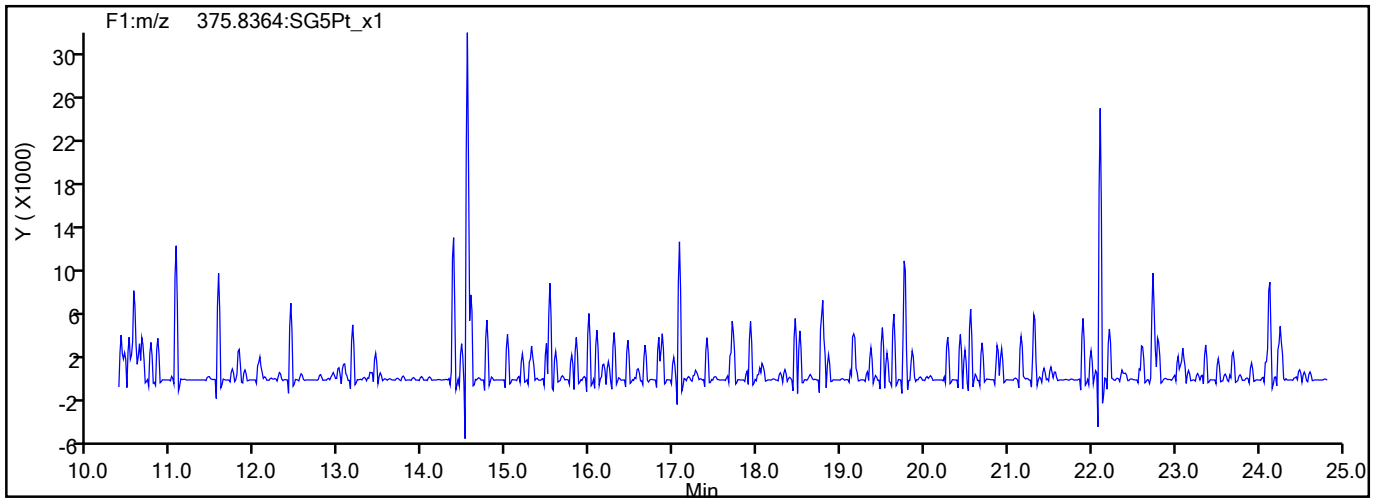

794159

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

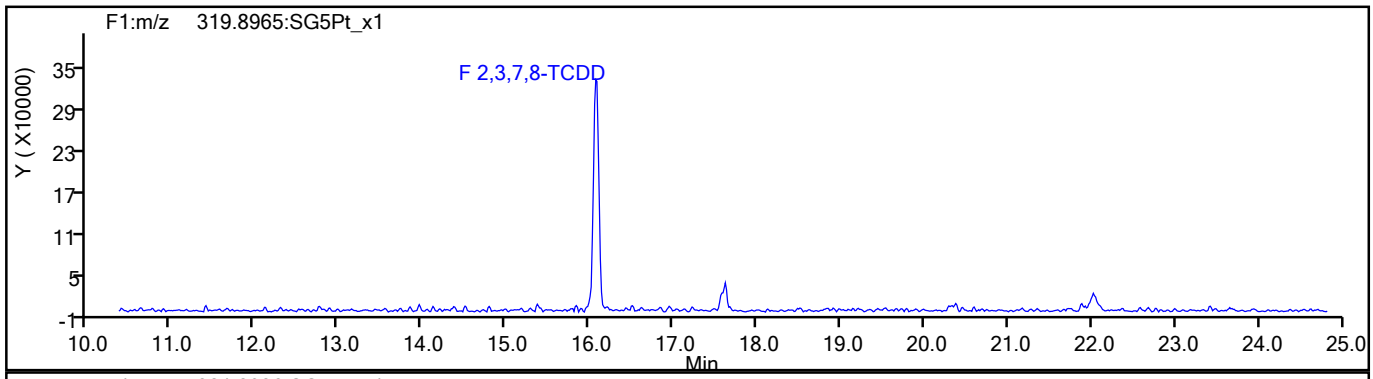

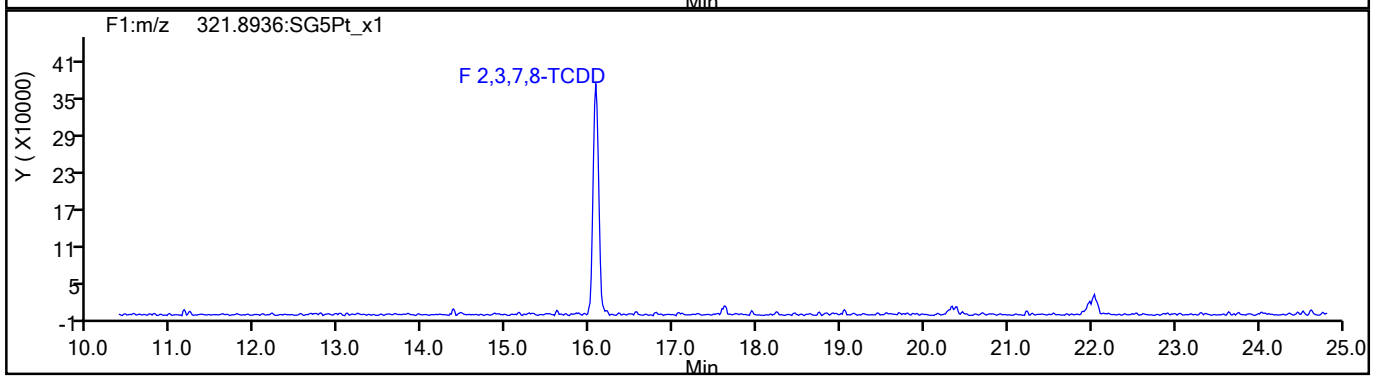

TCDD Standards

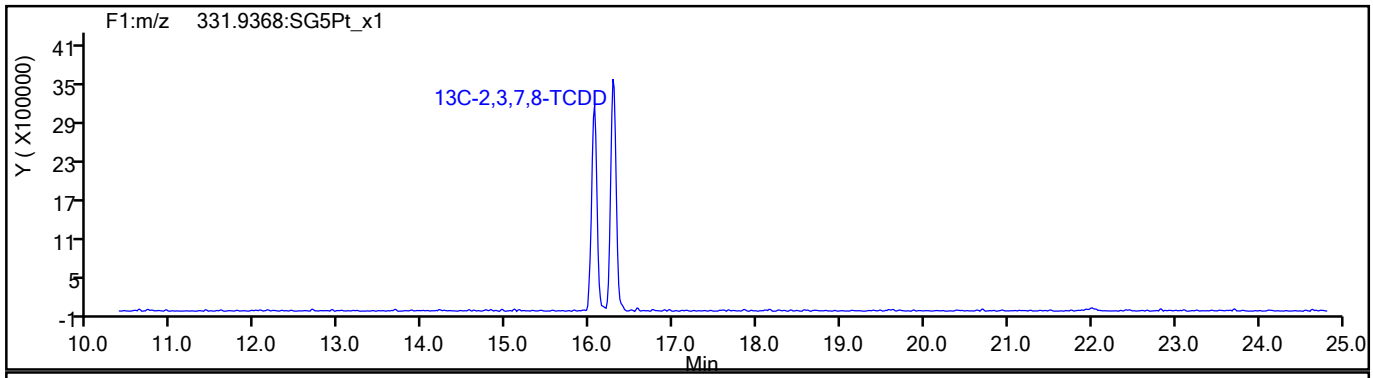

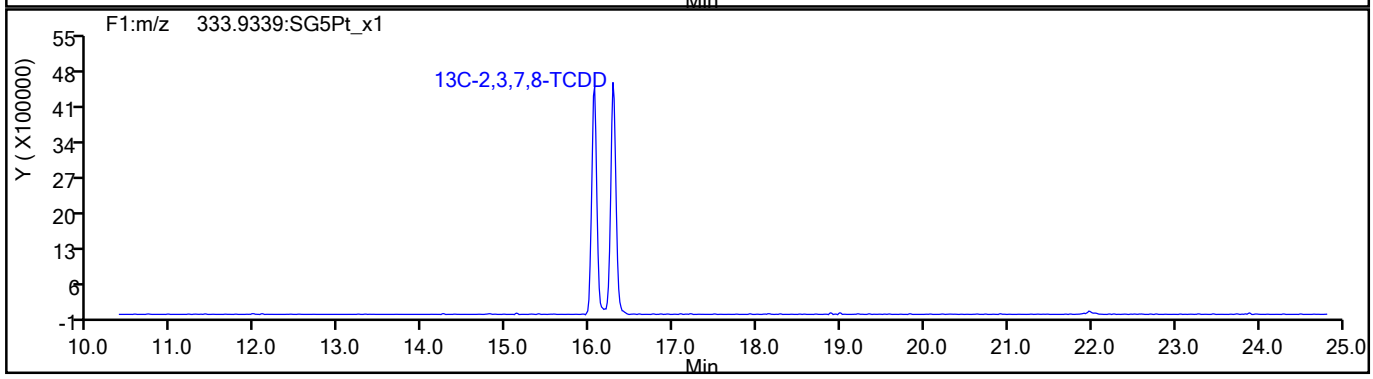

794160

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

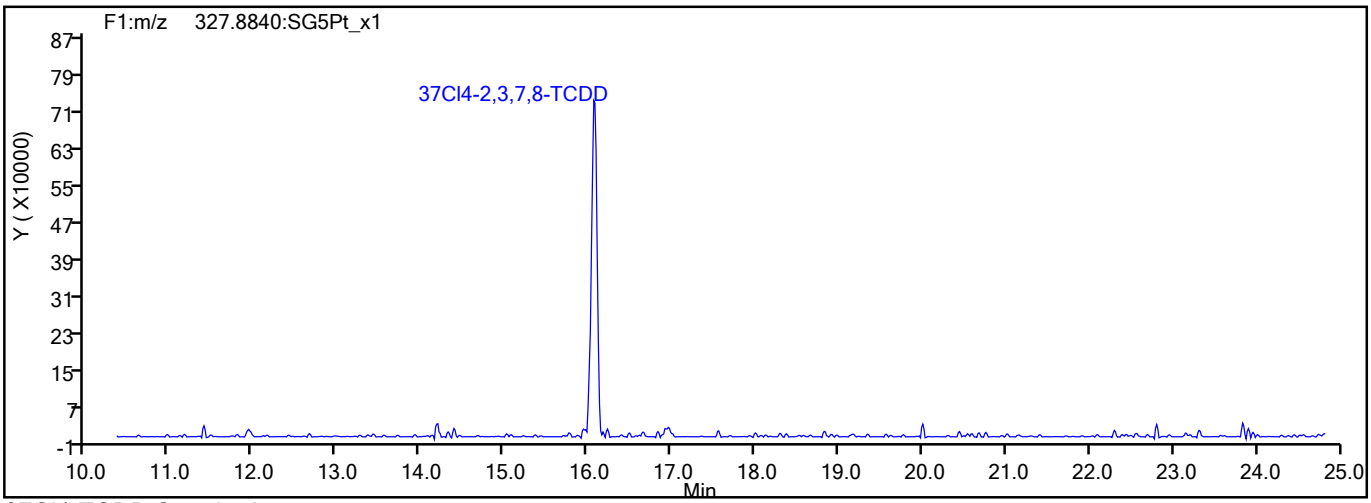

37Cl4-TCDD Standards

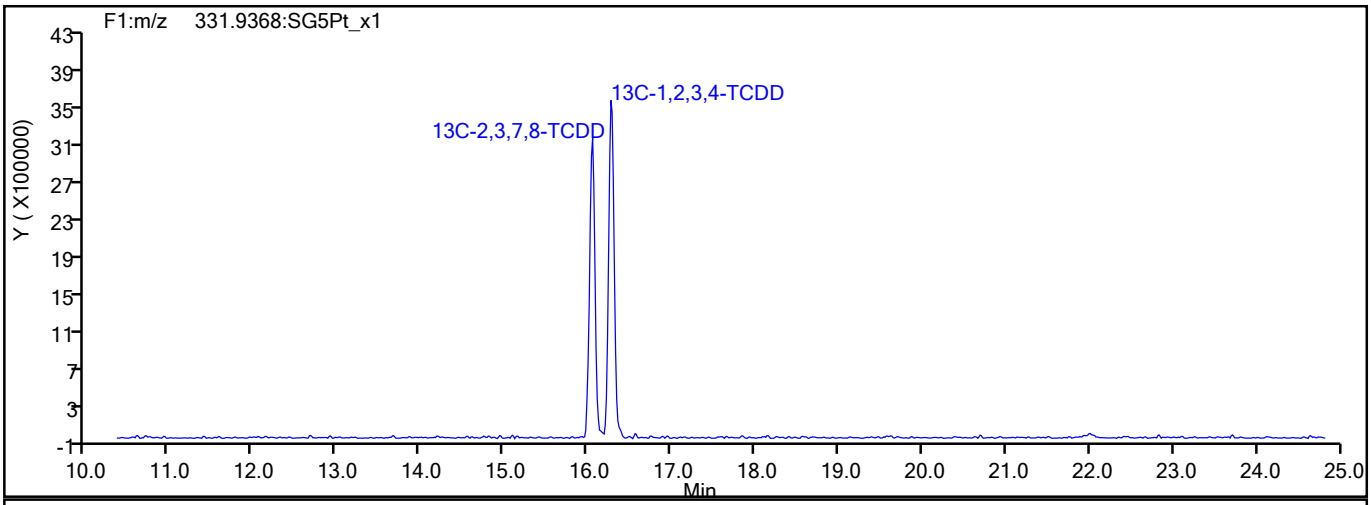

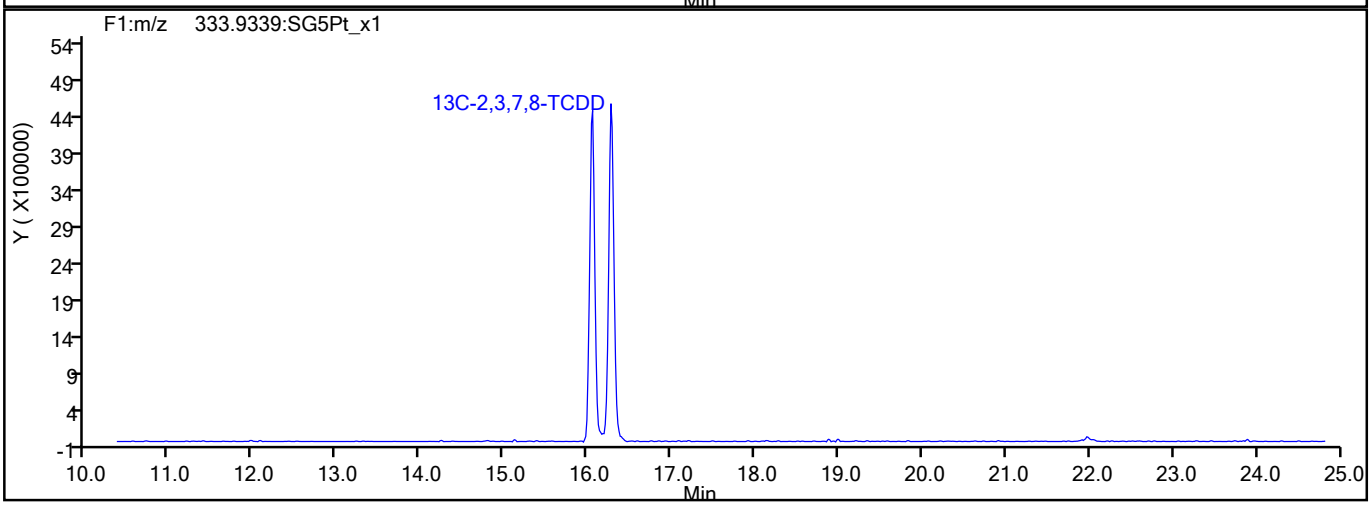

794161

Report Date: 01-Sep-2021 09:57:13 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_002.d		
Injection Date:	31-Aug-2021 13:51:44	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	2
Column Type:	DB-225	Column Dia:	0.32 mm

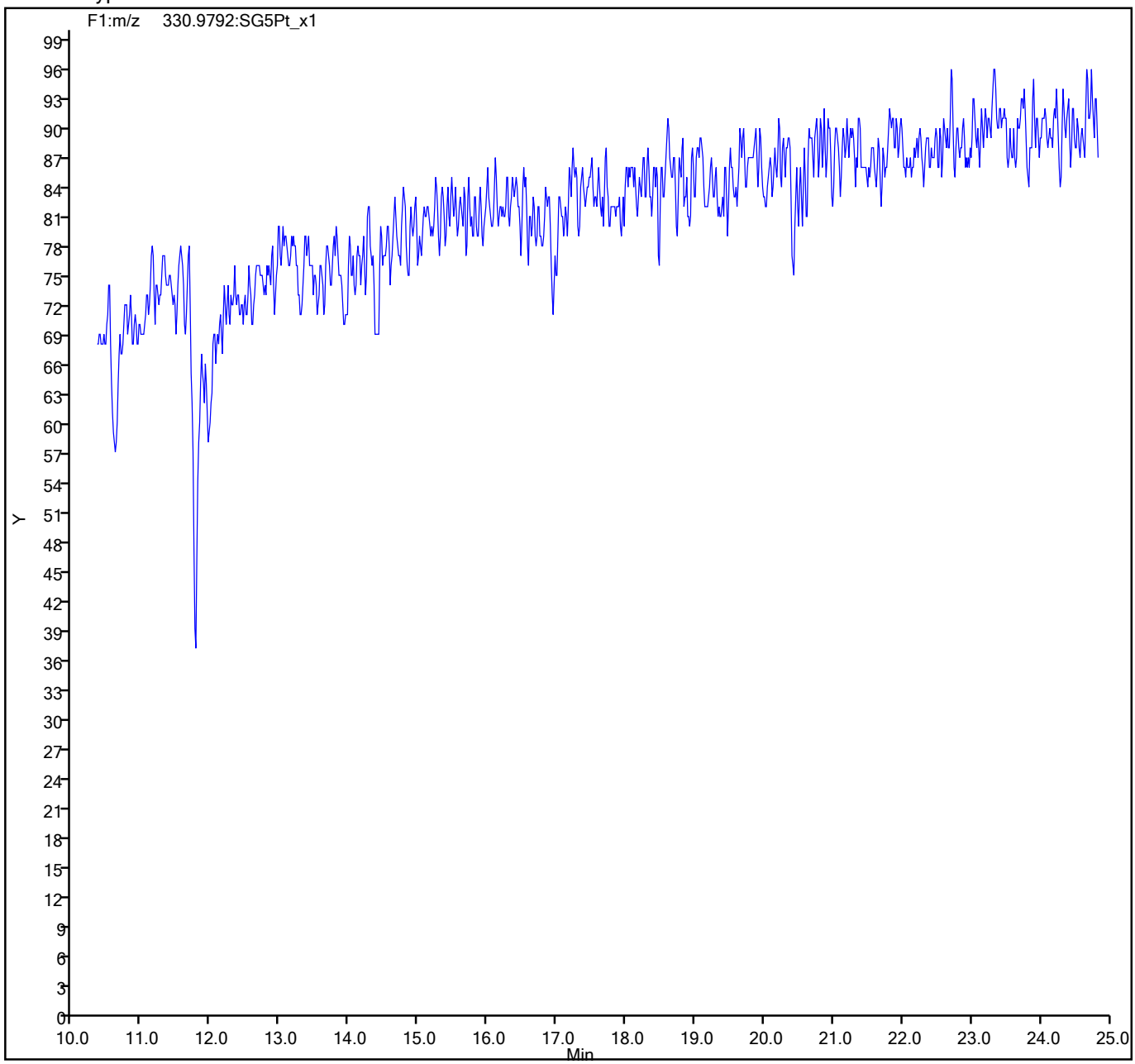

794162

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.598	43192451	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.628	95812265	0.77	1.0239	86.7	86.7	0.4368	0.4368		
A Non-2,3,7,8-sub-TCDF	17.311	141340622	0.77	1.0239	127.8	127.8	0.4368	50.4		
S Total TCDF					214.5	214.5	0.4368	0.4368		
D 13C-2,3,7,8-TCDD	18.323	22643725	0.80	0.8993					0.00	
2,3,7,8-TCDD	18.338	31002300	0.78	1.2541	43.7	43.7	0.2199	0.2199		
A Non-2,3,7,8-sub-TCDD	17.772	120319254	0.78	1.2541	169.5	169.5	0.2199	46.0		
S Total TCDD					213.1	213.1	0.2199	0.2199		
A F1 PeCDFs	20.244	36548211	1.59	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.473	28699153	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.744	44367204	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.542	988216341	1.23	0.0000						
A Non-2,3,7,8-sub-HxCDF	30.542	1016402527	1.23	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	31.215	43254937	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.911	28490431	1.05	1.4413						
1,2,3,4,7,8,9-HpCDF	35.005	21744380	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.458						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.714	17168827	1.05	1.0943						
A Non-2,3,7,8-sub-HpCDD	33.504						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	15.133	55744963	0.78							a
1,3,6,8-TCDD	16.071	32157911	0.78							a
2,3,4,7-TCDF	17.628	95812265	0.77							a
1,2,3,7-TCDD	18.218	26254918	0.77							a
1,2,3,9-TCDF	18.505	41465019	0.77							a

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,3,9-TCDD	18.505	32677146	0.79							a
1,2,8,9-TCDD	19.472	12707183								a
1,2,8,9-TCDF	19.488	41982512	0.76							a
1,3,4,6,8-PeCDF	19.760	36548211	1.59							a
1,2,4,7,9-PeCDD	21.576	23369968	1.58							a
1,2,3,8,9-PeCDD	25.912	20997236	1.59							a
1,2,3,8,9-PeCDF	26.144	28026312	1.61							a
1,2,3,4,6,8-HxCDF	28.479	29886017	1.22							a
1,2,4,6,7,9-HxCDD	30.023	21768457	1.27							a
1,2,3,4,6,7-HxCDD	32.299	21486480	1.24							a
1,2,3,4,8,9-HxCDF	32.605	28186186	1.23							a
1,2,3,4,6,7,9-HpCDD	34.154						0.0	0.0		U

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- U - Marked Undetected
- a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Jul-2021 09:21:58 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 072621 WDM HRDXNCP_00042
Misc. Info.: 26JL2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Jul-2021 15:09:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1616

First Level Reviewer: arghestanis Date: 26-Jul-2021 12:27:23

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.598	17.598	0	1.000	18796968	4666881	8168	20420	571		
317.9389	17.598	17.598	0	1.000	24395483	6066397	3473	8682	1747	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.628	17.631	0	1.002	41629702	9682578	19585	48962	494		
305.8987	17.628	17.631	0	1.002	54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	15.133	17.311	-130	0.860	24509538	7569037	19585	48962	386		
305.8987	15.133	17.311	-130	0.860	31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
303.9016	18.505	17.311	72	1.052	18061189	4195885	19585	48962	214		
305.8987	18.505	17.311	72	1.052	23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
303.9016	19.488	17.311	130	1.107	18098944	4035450	19585	48962	206		
305.8987	19.488	17.311	130	1.107	23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
303.9016	19.775	17.311	148	1.124	944774	152570	19585	48962	8		
305.8987	19.775	17.311	148	1.124	1203354	204203	28414	71035	7	0.79(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	18.323	18.323	0	1.000	10063481	2396990	3086	7715	777		
333.9339	18.323	18.323	0	1.000	12580244	3018588	1527	3817	1977	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	18.338	18.357	-1	1.001	13597515	3193209	6116	15290	522		
321.8936	18.338	18.357	-1	1.001	17404785	4135946	8817	22042	469	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	16.071	17.772	-102	0.877	14103074	4061475	6116	15290	664		
321.8936	16.071	17.772	-102	0.877	18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
319.8965	18.218	17.772	27	0.994	11446127	2829889	6116	15290	463		
321.8936	18.218	17.772	27	0.994	14808791	3726958	8817	22042	423	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
319.8965	18.505	17.772	44	1.010	14439496	3301963	6116	15290	540		
321.8936	18.505	17.772	44	1.010	18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
319.8965	19.472	17.772	102	1.063	12707183	2751784	6116	15290	450		
321.8936	19.472	17.772	102	1.063	16522096	3661962	8817	22042	415	0.77(0.65-0.89)	
A F1 PeCDFs											
339.8597	19.760	20.244	-29	1.000	22414023	4920048	649	1622	7581		
341.8567	19.760	20.244	-29	1.000	14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	21.344	23.473	-127	1.000	84191	14080	2633	6582	5		
341.8567	21.344	23.473	-127	1.000	53909	7615	1950	4875	4	1.56(1.32-1.78)	
339.8597	22.176	23.473	-78	1.000	88076	13805	2633	6582	5		
341.8567	22.190	23.473	-77	1.000	48170	9635	1950	4875	5	1.83(1.32-1.78)	
339.8597	22.749	23.473	-43	1.000	168309	20506	2633	6582	8		
341.8567	22.762	23.473	-43	1.000	82177	12827	1950	4875	7	2.05(1.32-1.78)	
339.8597	23.321	23.473	-9	1.000	142716	22963	2633	6582	9		
341.8567	23.321	23.473	-9	1.000	79356	11480	1950	4875	6	1.80(1.32-1.78)	
339.8597	26.144	23.473	160	1.000	17301746	2425915	2633	6582	921		
341.8567	26.144	23.473	160	1.000	10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.576	23.744	-130	1.000	14314296	2552271	2414	6035	1057		
357.8516	21.576	23.744	-130	1.000	9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
355.8546	25.912	23.744	130	1.000	12881489	1801570	2414	6035	746		
357.8516	25.912	23.744	130	1.000	8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	32.605	30.542	124	1.000	15534015	4607321	4603	11507	1001		
375.8178	32.605	30.542	124	1.000	12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.023	31.215	-71	1.000	12175655	1922535	6506	16265	296		
391.8127	30.023	31.215	-71	1.000	9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
389.8157	32.299	31.215	65	1.000	11903453	3254284	6506	16265	500		
391.8127	32.299	31.215	65	1.000	9583027	2649988	5715	14287	464	1.24(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.911	33.926	-1	1.000	14581587	4505694	20273	50682	222		
409.7789	33.911	33.926	-1	1.000	13908844	4348275	17441	43602	249	1.05(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	35.005	35.020	-1	1.000	11106344	3153936	20273	50682	156		
409.7789	35.005	35.020	-1	1.000	10638036	3040493	17441	43602	174	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.458						20273	50682			
409.7789	34.458						17441	43602			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.714	34.726	-1	1.000	8809155	2526480	13831	34577	183		
425.7737	34.714	34.726	-1	1.000	8359672	2427581	13744	34360	177	1.05(0.88-1.20)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-HpCDD											
423.7766	33.504						13831	34577			
425.7737	33.504						13744	34360			
1,3,6,8-TCDF											a
303.9016	15.133	15.133	0		24509538	7569037	19585	48962	386		a
305.8987	15.133	15.133	0		31235425	9722736	28414	71035	342	0.78(0.65-0.89)	
1,3,6,8-TCDD											a
319.8965	16.071	16.071	0		14103074	4061475	6116	15290	664		a
321.8936	16.071	16.071	0		18054837	5166402	8817	22042	586	0.78(0.65-0.89)	
2,3,4,7-TCDF											a
303.9016	17.628	17.628	0		41629702	9682578	19585	48962	494		a
305.8987	17.628	17.628	0		54182563	12591453	28414	71035	443	0.77(0.65-0.89)	
1,2,3,7-TCDD											a
319.8965	18.218	18.218	0		11446127	2829889	6116	15290	463		a
321.8936	18.218	18.218	0		14808791	3726958	8817	22042	423	0.77(0.65-0.89)	
1,2,3,9-TCDF											a
303.9016	18.505	18.505	0		18061189	4195885	19585	48962	214		a
305.8987	18.505	18.505	0		23403830	5509968	28414	71035	194	0.77(0.65-0.89)	
1,2,3,9-TCDD											a
319.8965	18.505	18.505	0		14439496	3301963	6116	15290	540		a
321.8936	18.505	18.505	0		18237650	4248308	8817	22042	482	0.79(0.65-0.89)	
1,2,8,9-TCDD											a
319.8965	19.472	19.472	0		12707183	2751784	6116	15290	450		a
1,2,8,9-TCDF											a
303.9016	19.488	19.488	0		18098944	4035450	19585	48962	206		a
305.8987	19.488	19.488	0		23883568	5304928	28414	71035	187	0.76(0.65-0.89)	
1,3,4,6,8-PeCDF											a
339.8597	19.760	19.760	0		22414023	4920048	649	1622	7581		a
341.8567	19.760	19.760	0		14134188	3116108	779	1947	4000	1.59(1.32-1.78)	
1,2,4,7,9-PeCDD											a
355.8546	21.576	21.576	0		14314296	2552271	2414	6035	1057		a
357.8516	21.576	21.576	0		9055672	1599456	1552	3880	1031	1.58(1.32-1.78)	
1,2,3,8,9-PeCDD											a
355.8546	25.912	25.912	0		12881489	1801570	2414	6035	746		a
357.8516	25.912	25.912	0		8115747	1169053	1552	3880	753	1.59(1.32-1.78)	
1,2,3,8,9-PeCDF											a
339.8597	26.144	26.144	0		17301746	2425915	2633	6582	921		a
341.8567	26.144	26.144	0		10724566	1530575	1950	4875	785	1.61(1.32-1.78)	
1,2,3,4,6,8-HxCDF											a
373.8208	28.479	28.479	0		16406487	2121744	4603	11507	461		a
375.8178	28.479	28.479	0		13479530	1752621	3729	9322	470	1.22(1.05-1.43)	
1,2,4,6,7,9-HxCDD											a
389.8157	30.023	30.023	0		12175655	1922535	6506	16265	296		a
391.8127	30.023	30.023	0		9592802	1497827	5715	14287	262	1.27(1.05-1.43)	
1,2,3,4,6,7-HxCDD											a
389.8157	32.299	32.299	0		11903453	3254284	6506	16265	500		a
391.8127	32.299	32.299	0		9583027	2649988	5715	14287	464	1.24(1.05-1.43)	

Report Date: 27-Jul-2021 15:09:55 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,8,9-HxCDF											a
373.8208	32.605	32.605	0		15534015	4607321	4603	11507	1001		a
375.8178	32.605	32.605	0		12652171	3734547	3729	9322	1001	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											U
423.7766	34.154						13831	34577			
425.7737	34.154						13744	34360			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.311

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	43192451	10733278

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	43192451	10733278

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.133	24509538	7569037	31235425	9722736	50.4	0.78	
18.505	18061189	4195885	23403830	5509968	37.5	0.77	
19.488	18098944	4035450	23883568	5304928	38.0	0.76	
19.775	944774	152570	1203354	204203	1.94	0.79	
Signal Totals:	61614445	15952942	79726177	20741835			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	141340622	36694777				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 127.837 = (141340622 * 40.000) / (43192451 * 1.024)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.772

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	22643725	5415578

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	22643725	5415578

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
16.071	14103074	4061475	18054837	5166402	45.3	0.78	
18.218	11446127	2829889	14808791	3726958	37.0	0.77	
18.505	14439496	3301963	18237650	4248308	46.0	0.79	
19.472	12707183	2751784	16522096	3661962	41.2	0.77	
Signal Totals:							
	52695880	12945111	67623374	16803630			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	120319254	29748741				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 169.476 = (120319254 * 40.000) / (22643725 * 1.254)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

F1 PeCDFs, RT: 20.244

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.760	22414023	4920048	14134188	3116108		1.59	
Signal Totals:							
	22414023	4920048	14134188	3116108			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	36548211	8036156				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (36548211 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.473

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
21.344	84191	14080	53909	7615		1.56	
22.176	88076	13805	48170	9635		1.83	R
22.749	168309	20506	82177	12827		2.05	R
23.321	142716	22963	79356	11480		1.80	R
26.144	17301746	2425915	10724566	1530575		1.61	
Signal Totals:							
	17785038	2497269	10988178	1572132			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	28773216	4069401				1.62	RQ
	28699153	4064735					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (28773216 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (28699153 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.744

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.576	14314296	2552271	9055672	1599456		1.58	
25.912	12881489	1801570	8115747	1169053		1.59	
Signal Totals:							
	27195785	4353841	17171419	2768509			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	44367204	7122350				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (44367204 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.542

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
32.605	15534015	4607321	12652171	3734547		1.23	
Signal Totals:							
	15534015	4607321	12652171	3734547			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	988216341	287497877				1.23	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (988216341 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 31.215

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
30.023	12175655	1922535	9592802	1497827		1.27	
32.299	11903453	3254284	9583027	2649988		1.24	
Signal Totals:							
	24079108	5176819	19175829	4147815			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	43254937	9324634				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (43254937 * 0.0) / (0 * 0.000)

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Jul-2021 09:21:58 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 510264 Lims Sample ID: 1

Non-2,3,7,8-sub-HpCDD, RT: 33.504

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
Signal Totals:	0	0	0	0			

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

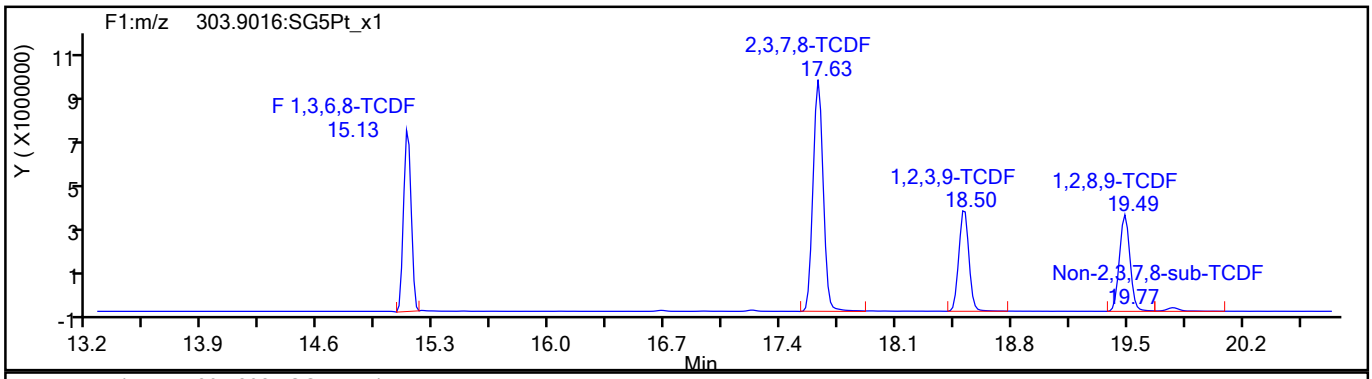

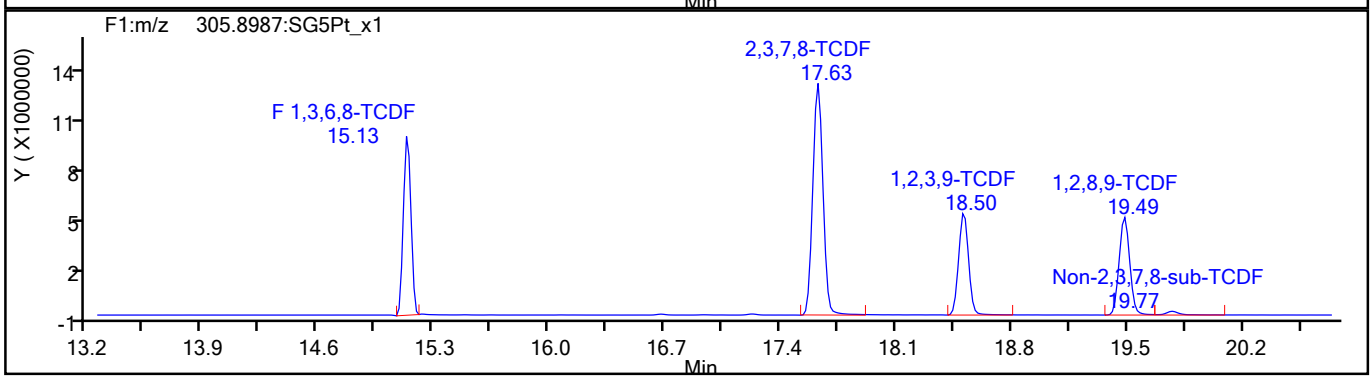

TCDF Standards

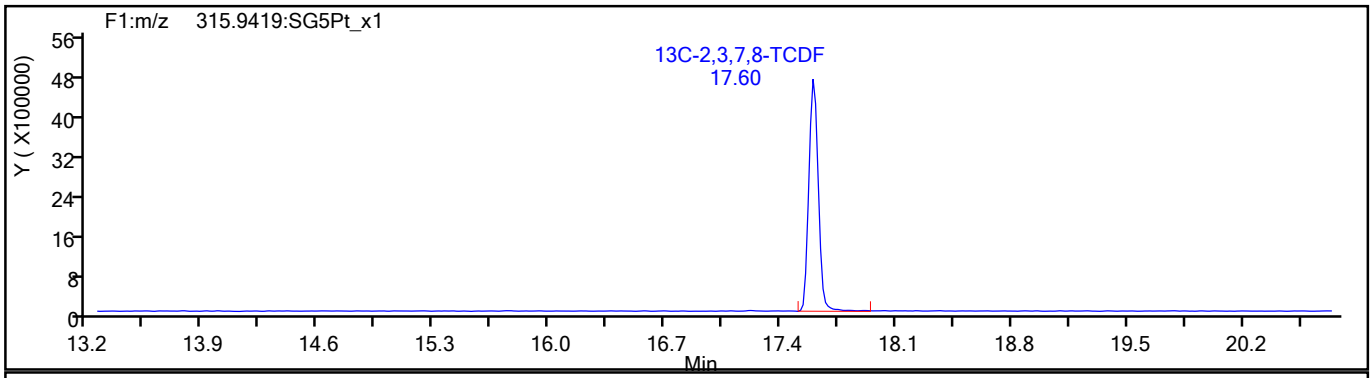

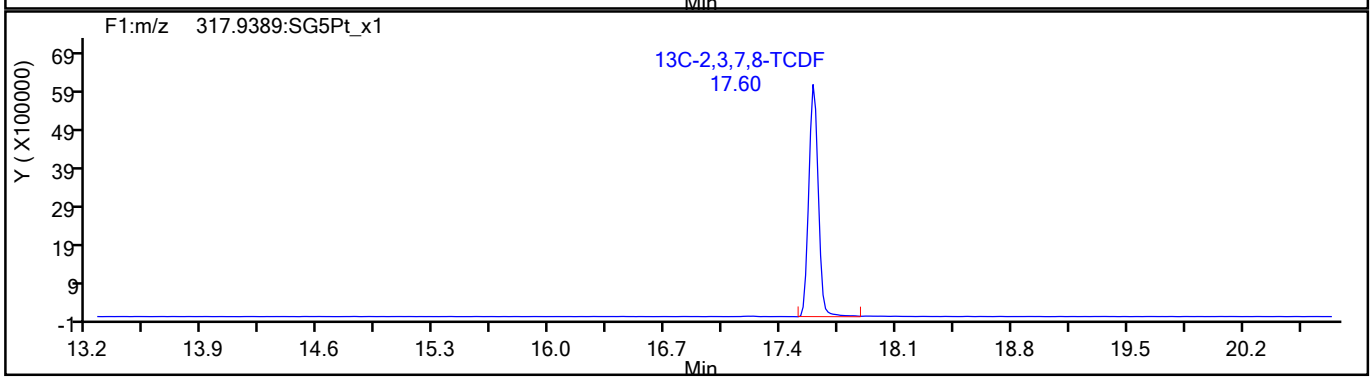

794177

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

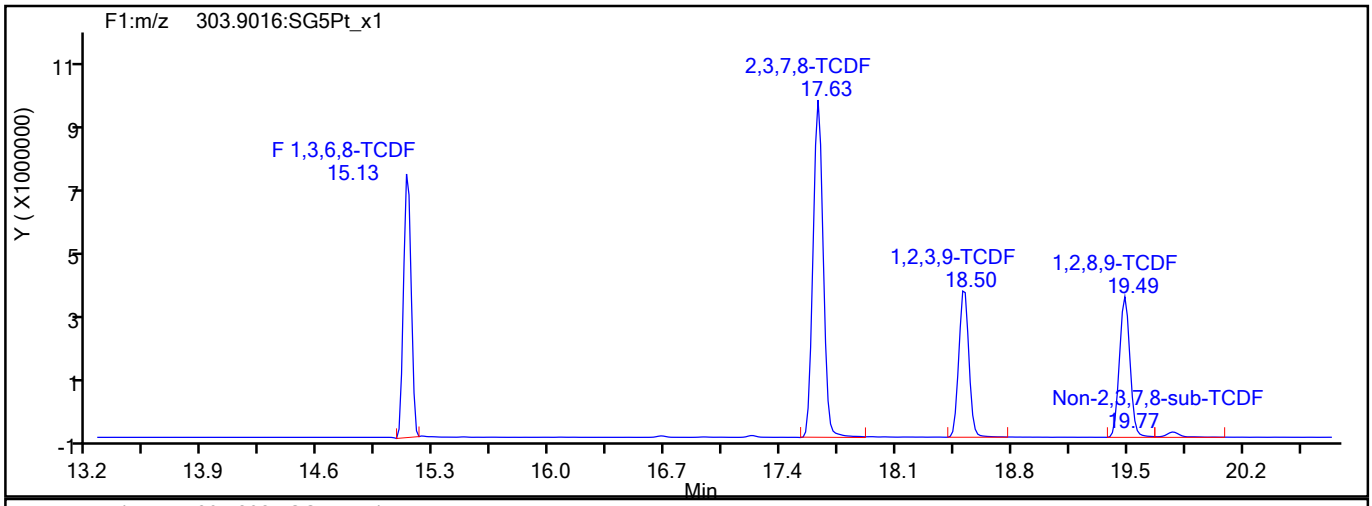

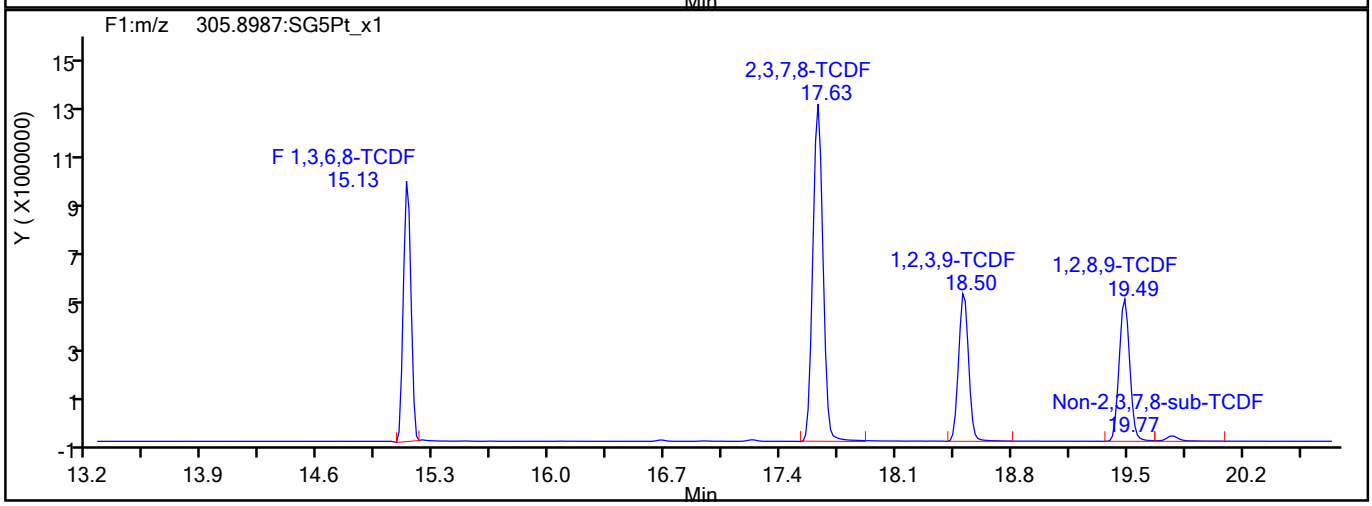

TCDF Interference Mass

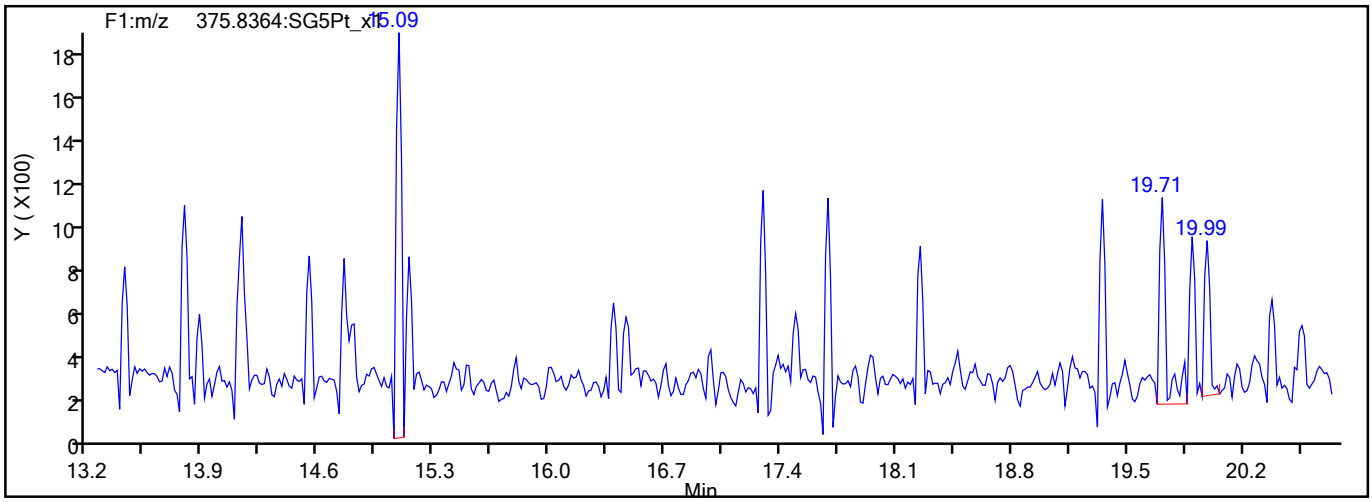

794178

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

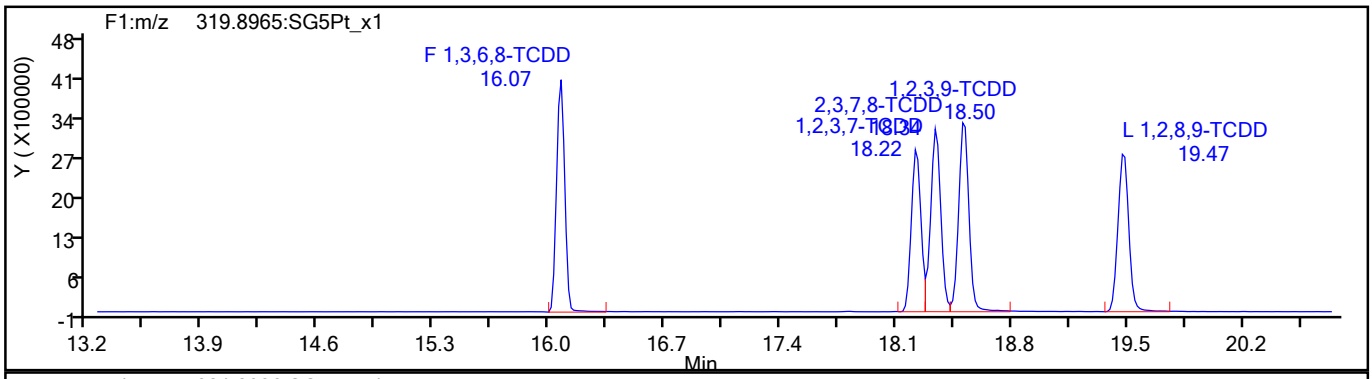

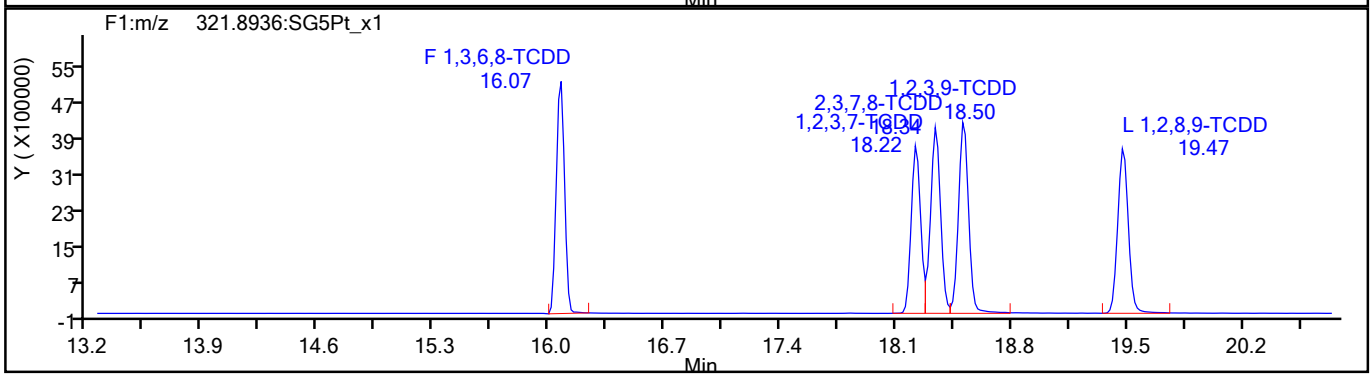

TCDD Standards

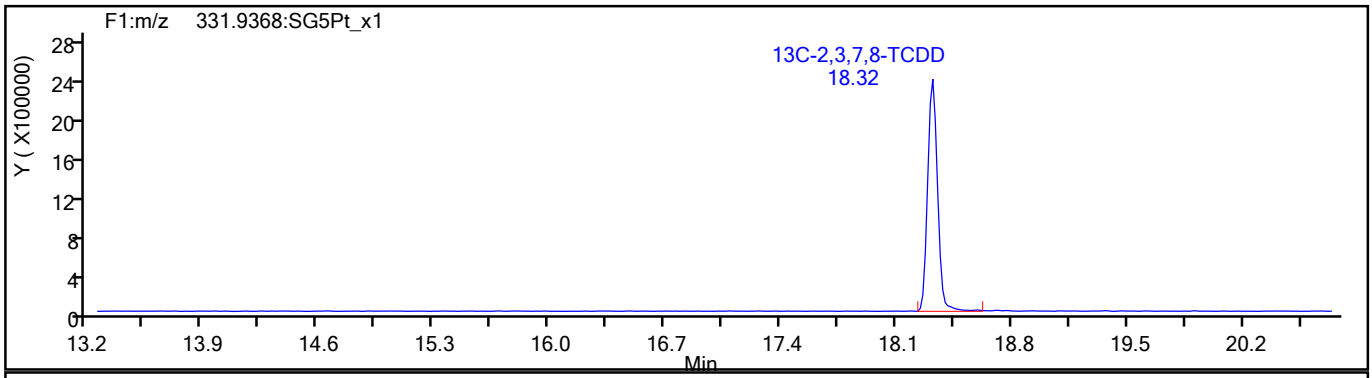

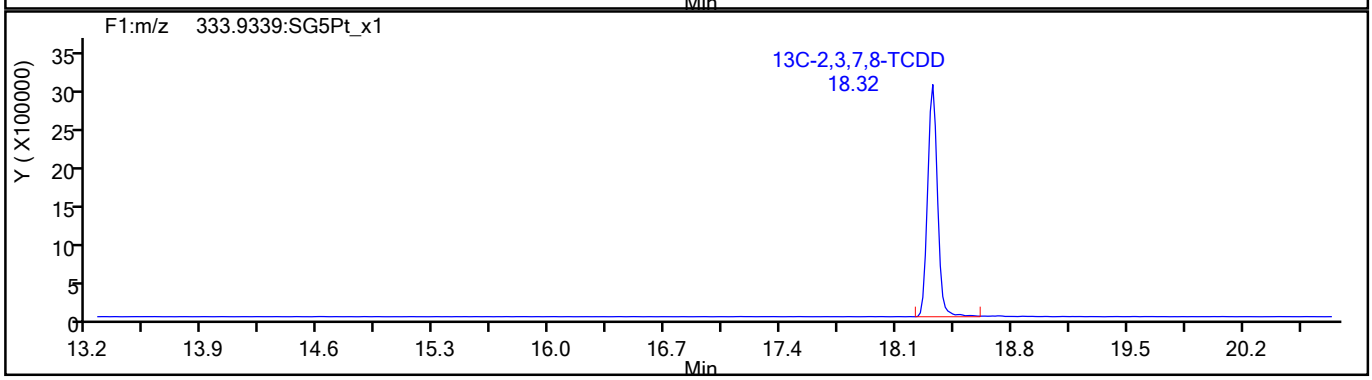

794179

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

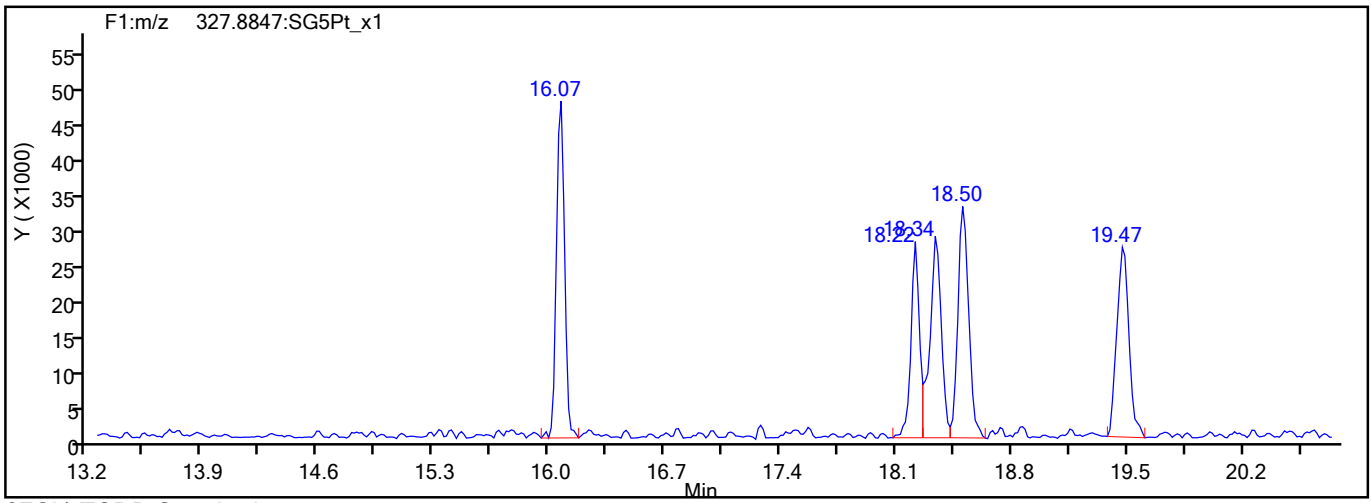

37Cl4-TCDD Standards

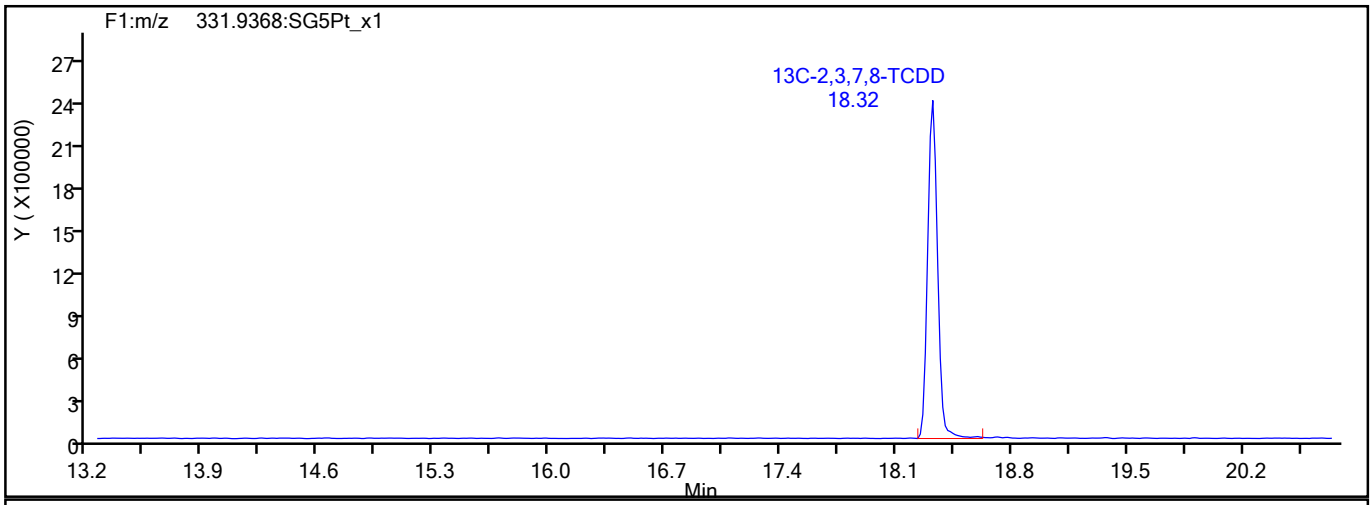

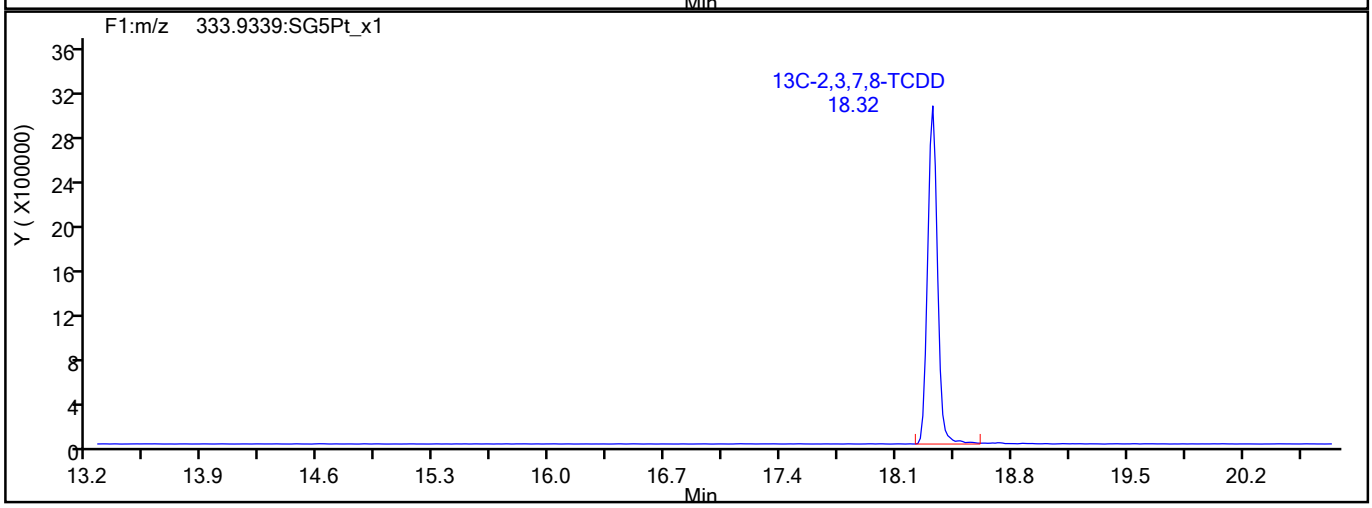

794180

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

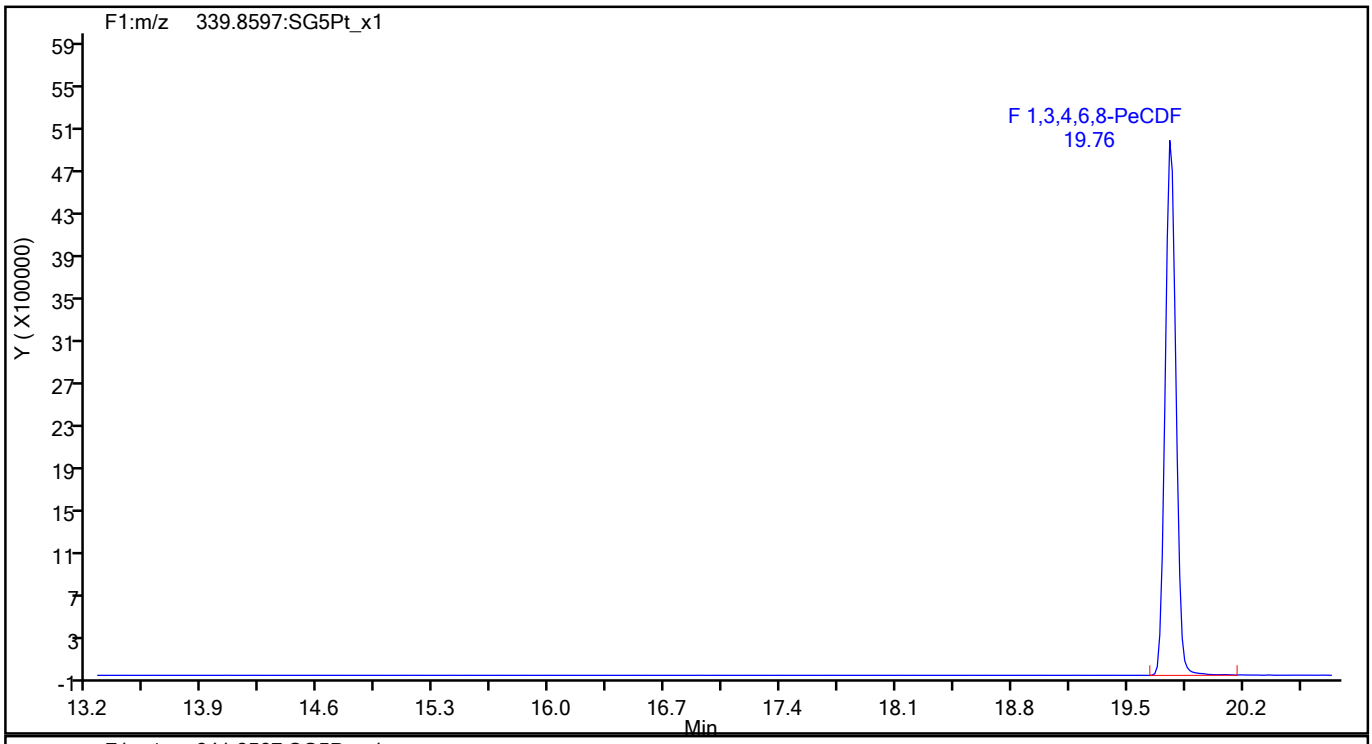

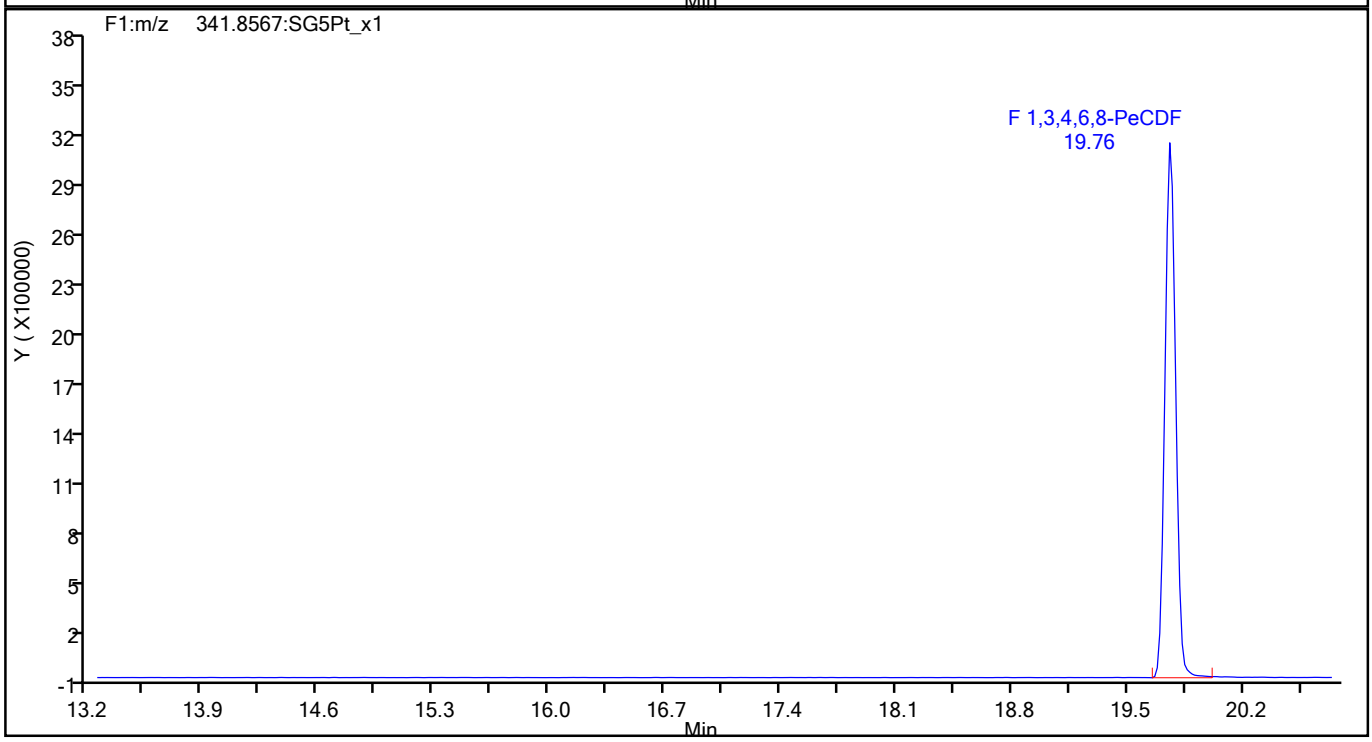

794181

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

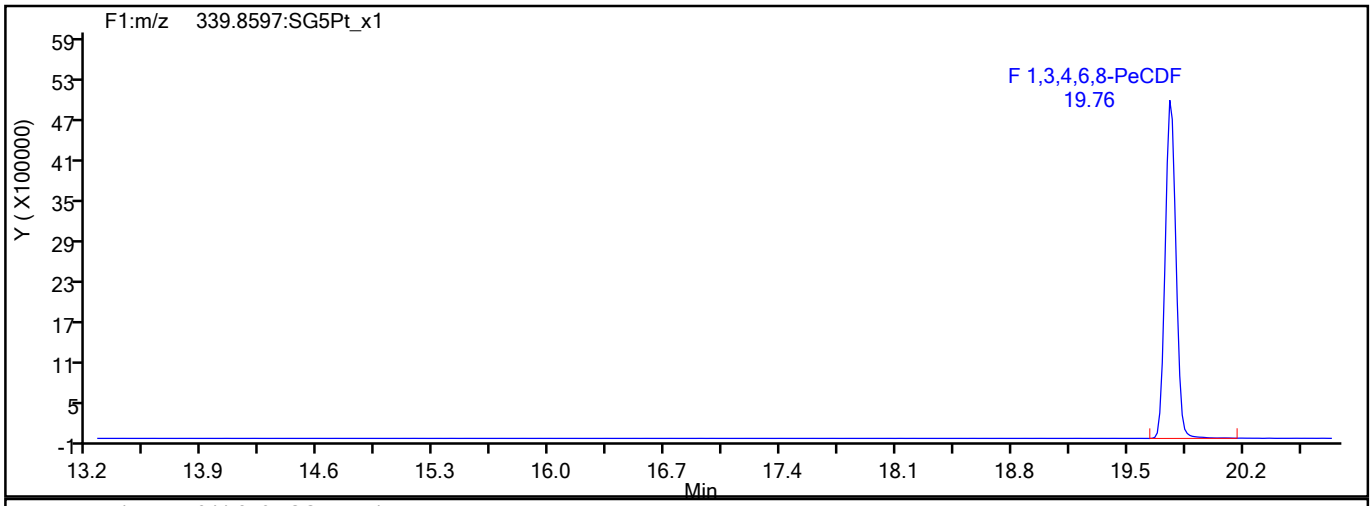

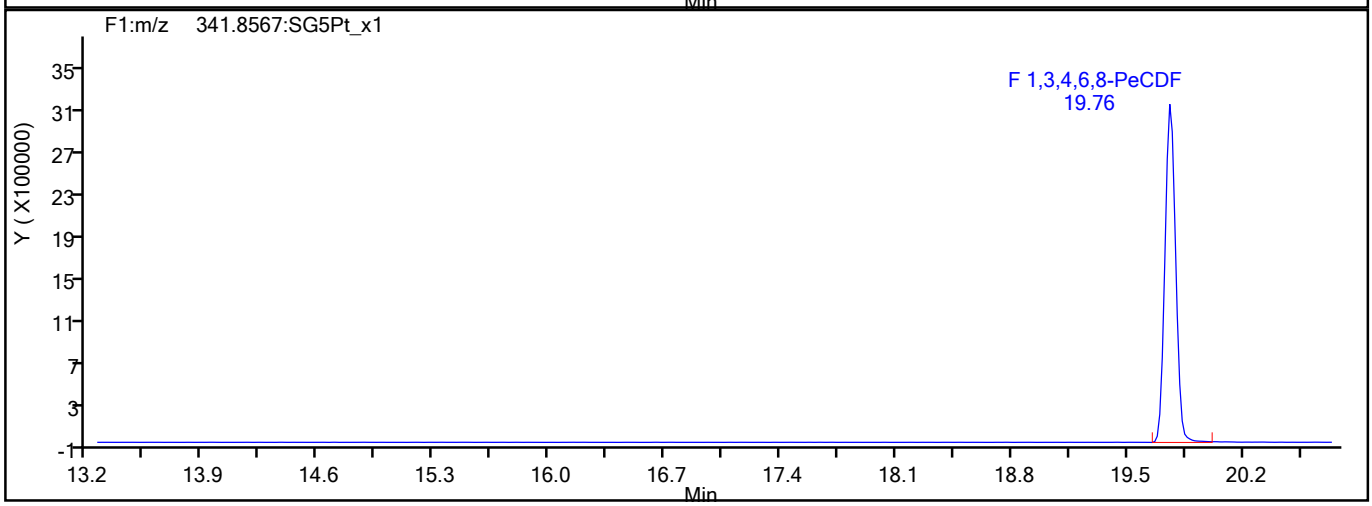

F1 PeCDFs Interference Mass

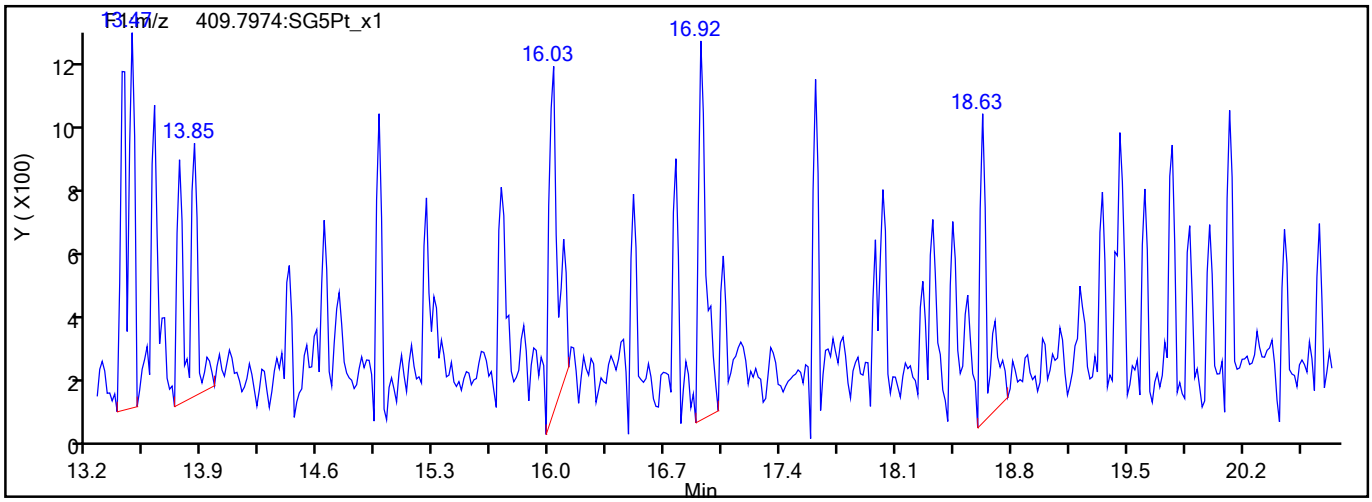

794182

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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PeCDF

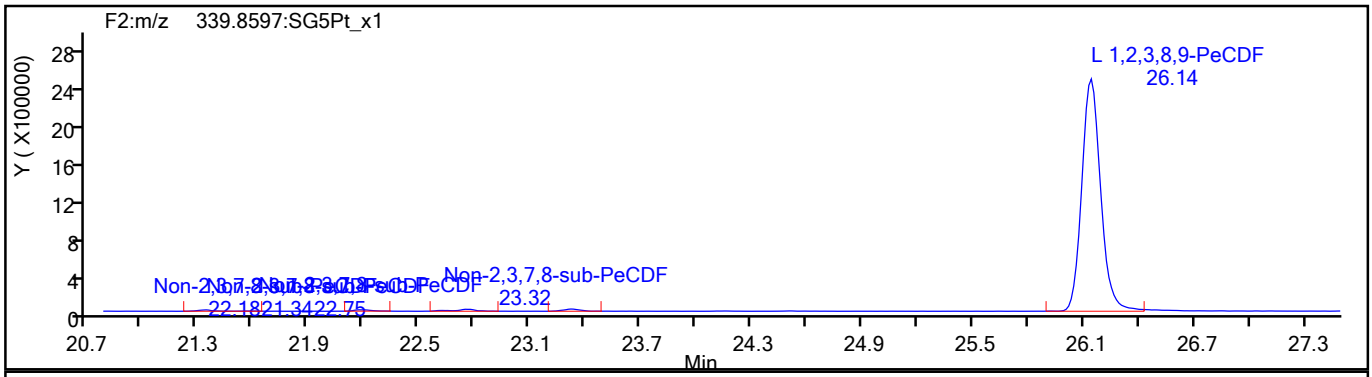

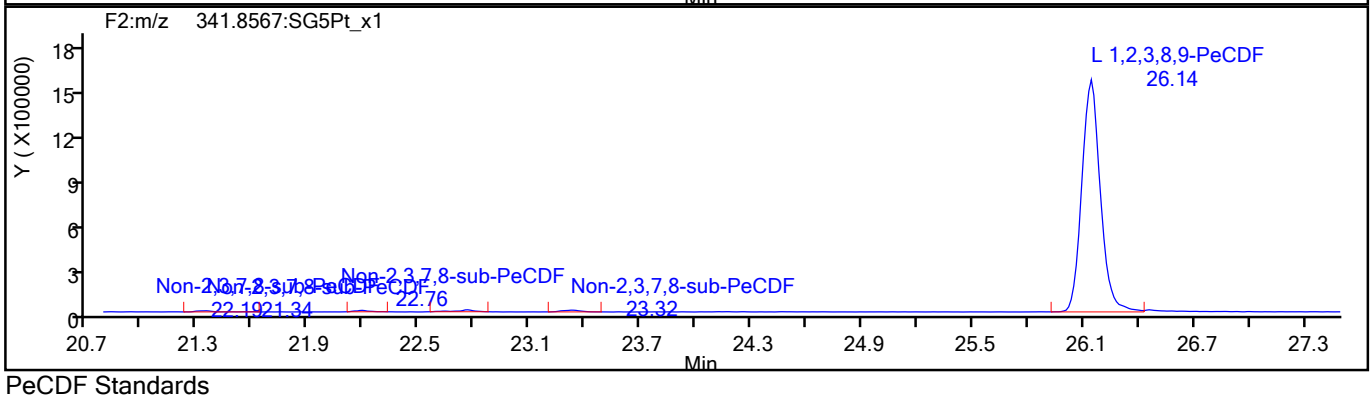

PeCDF Standards

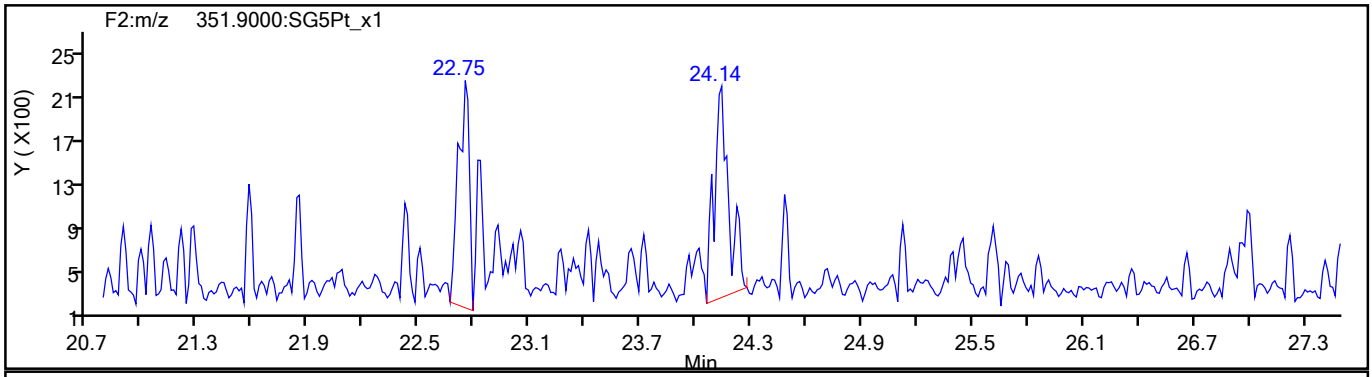

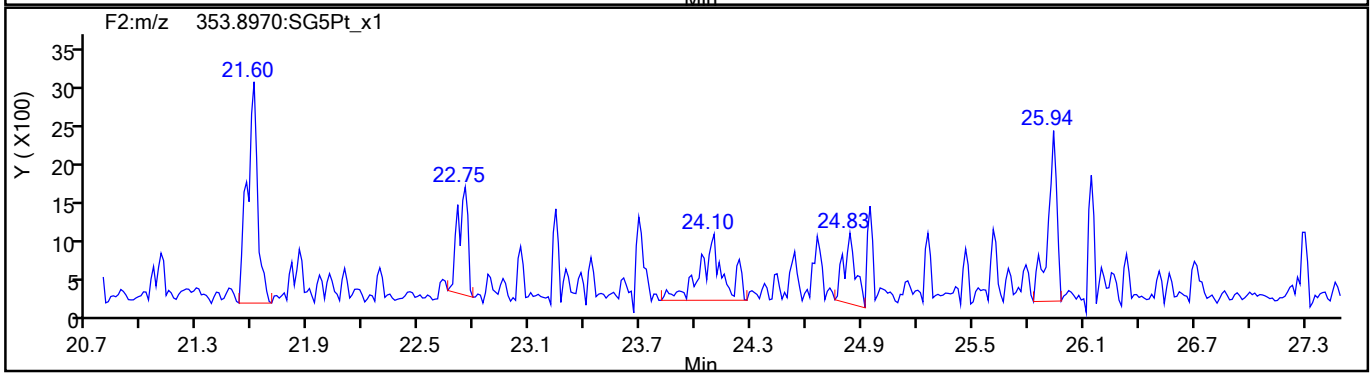

794183

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
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Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

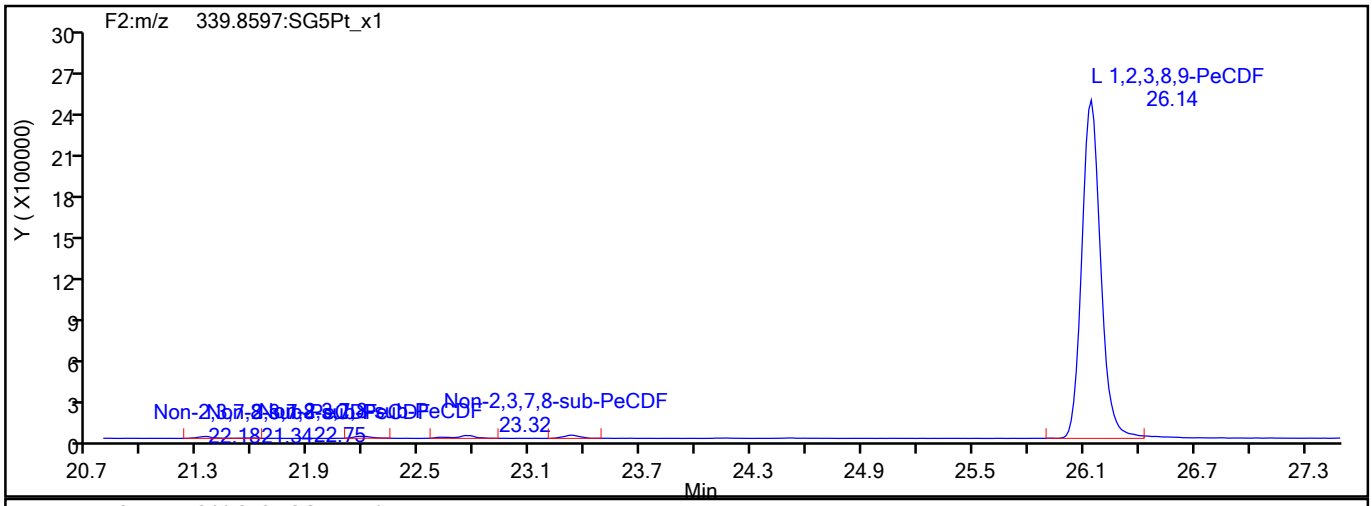

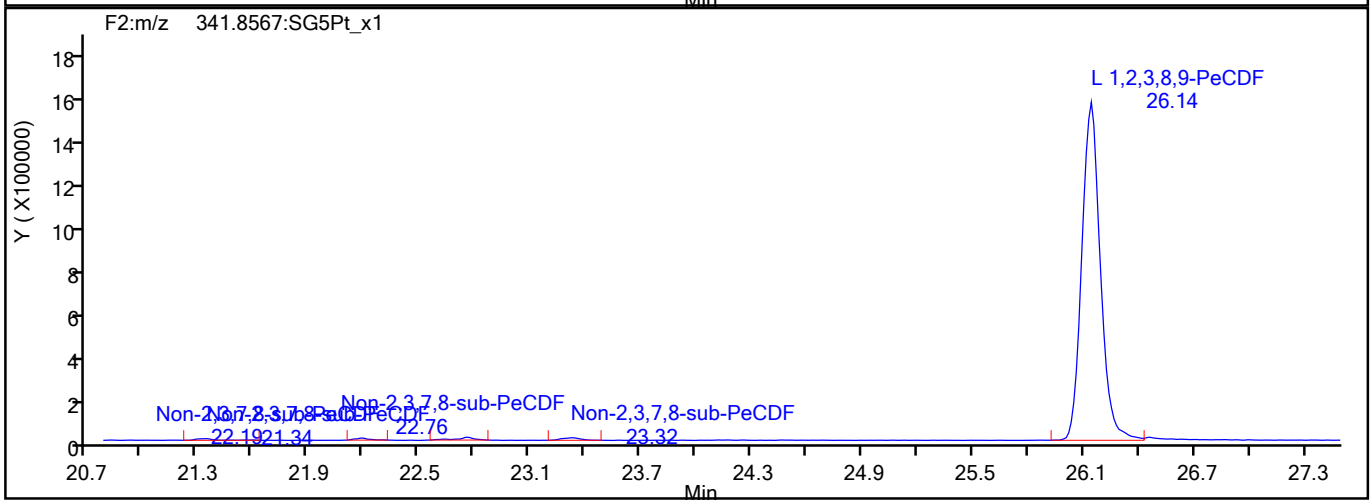

PeCDF Interference Mass

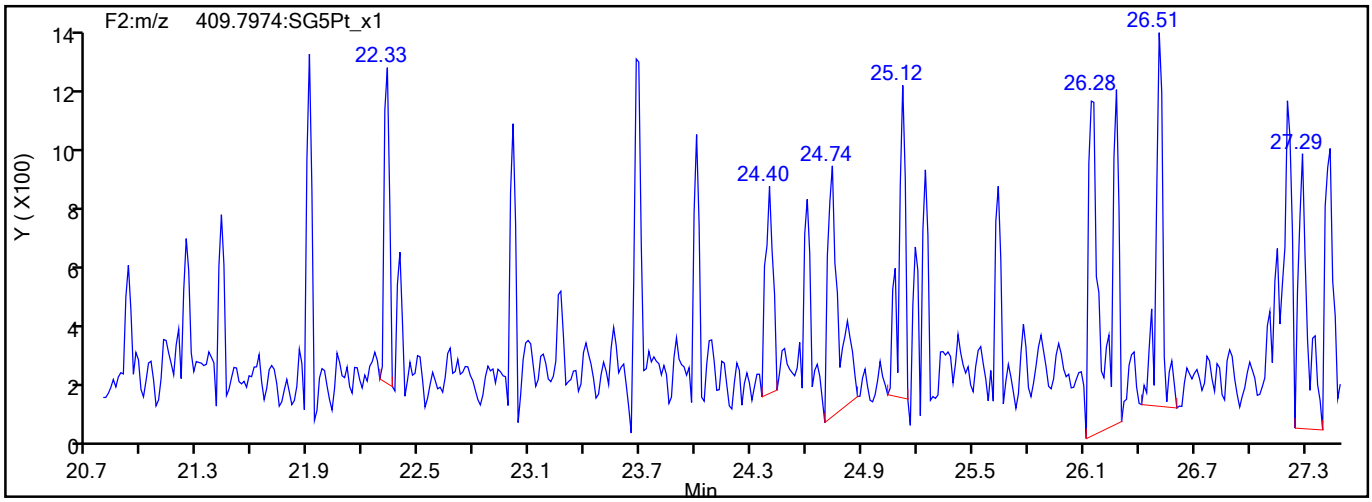

794184

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

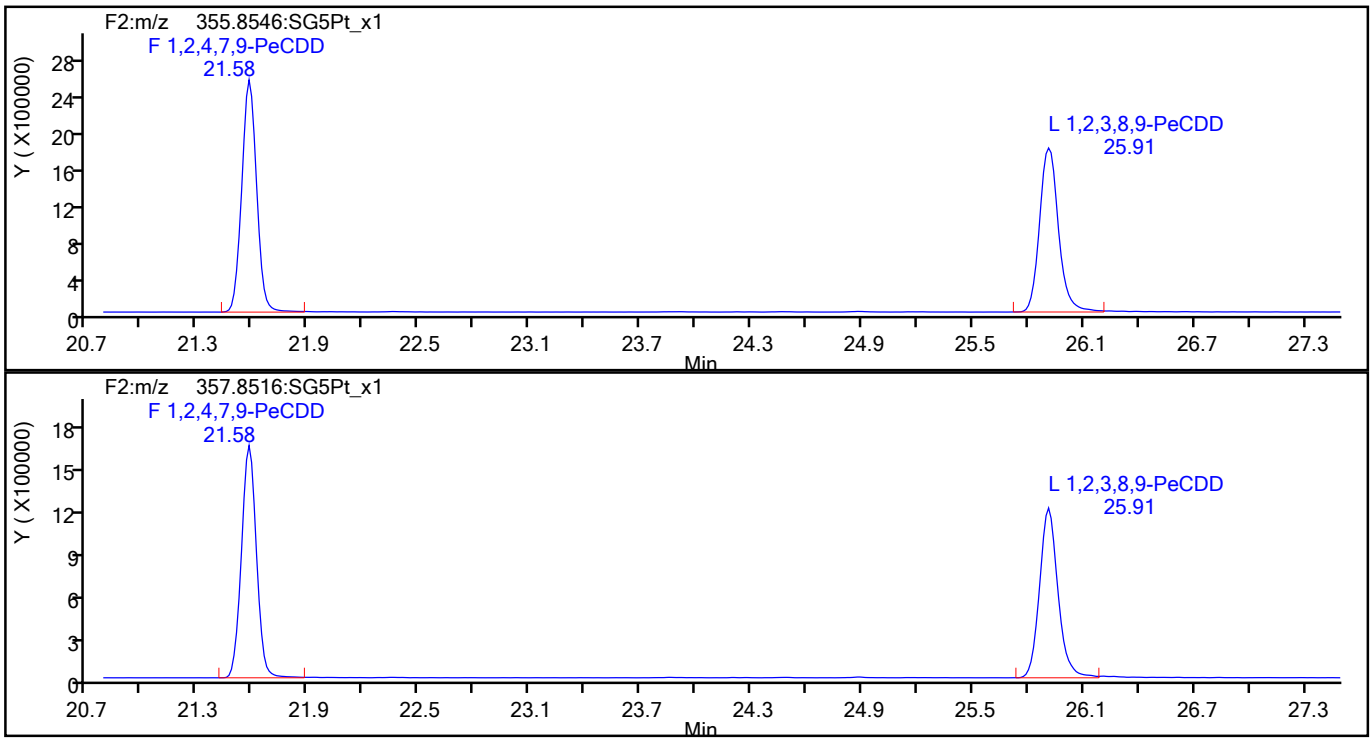

PeCDD Standards

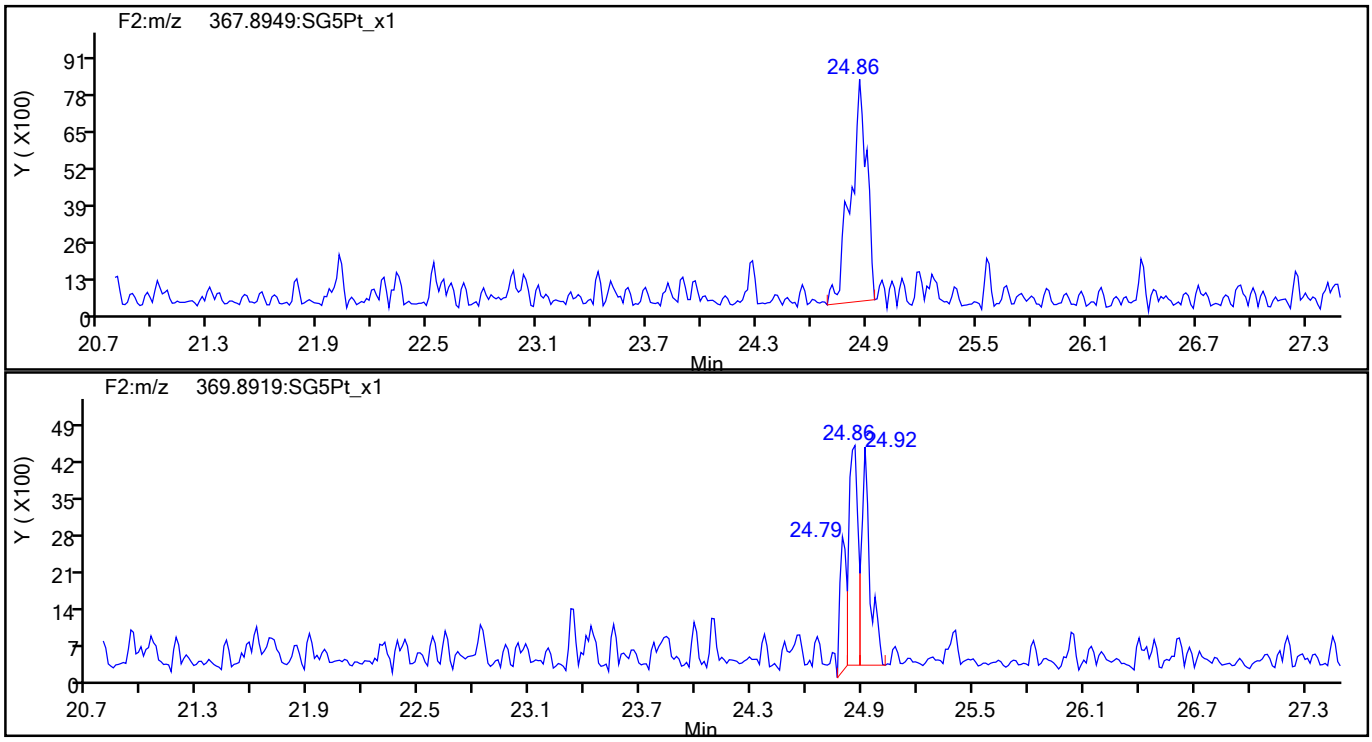

794185

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Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HxCDF

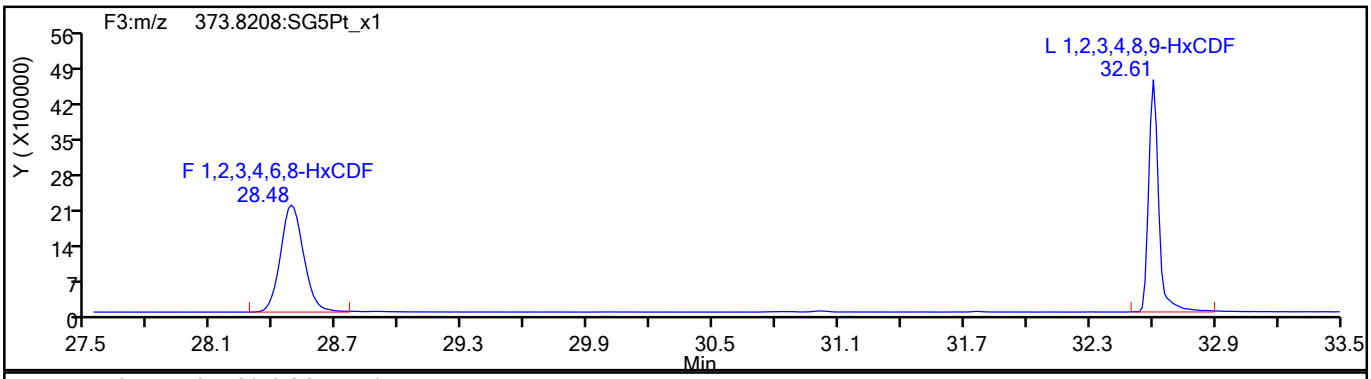

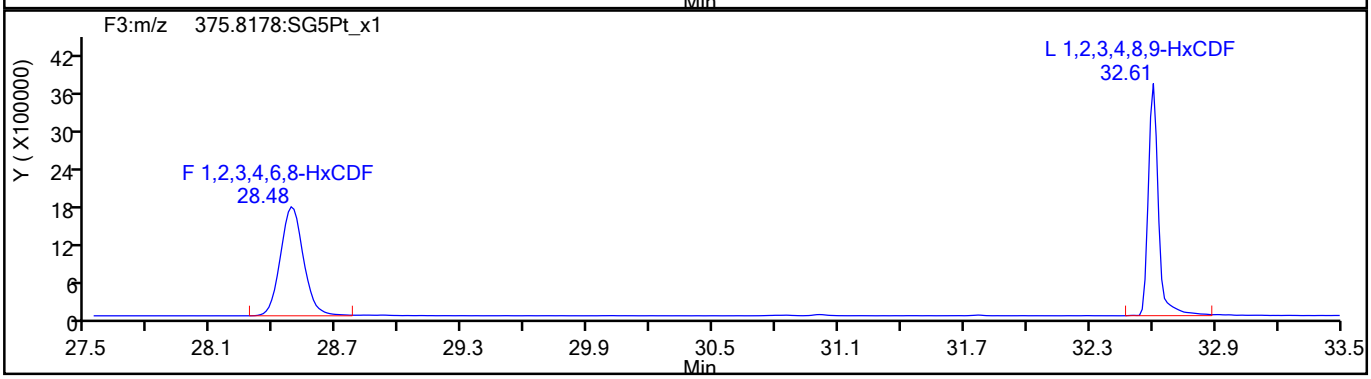

HxCDF Standards

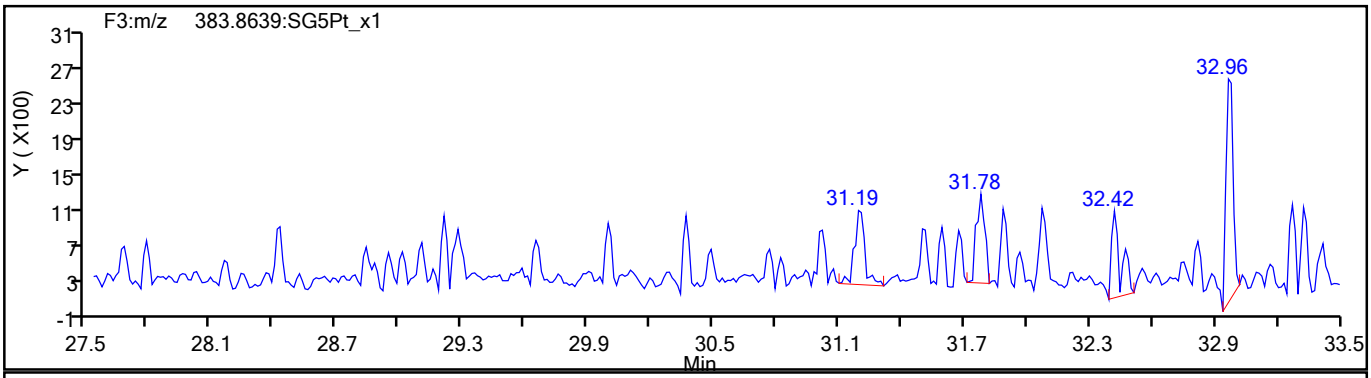

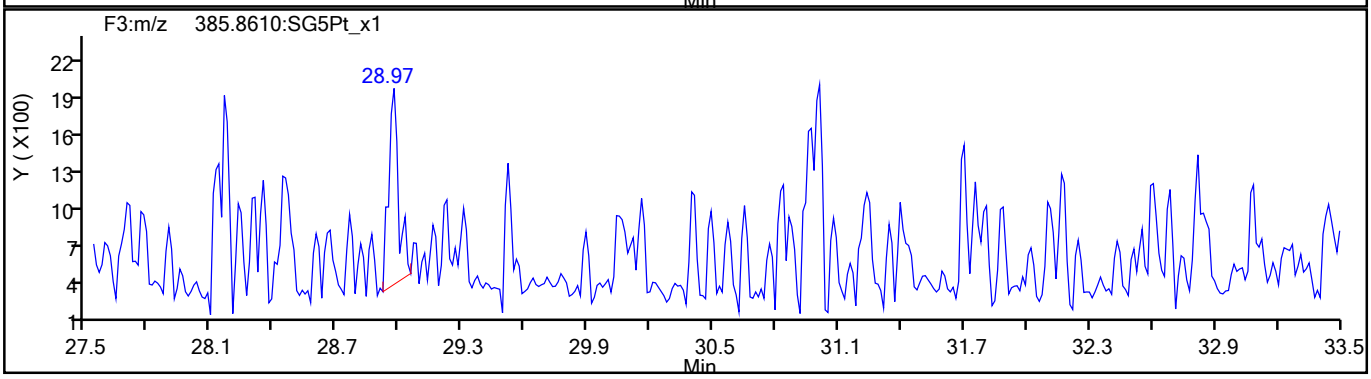

794186

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

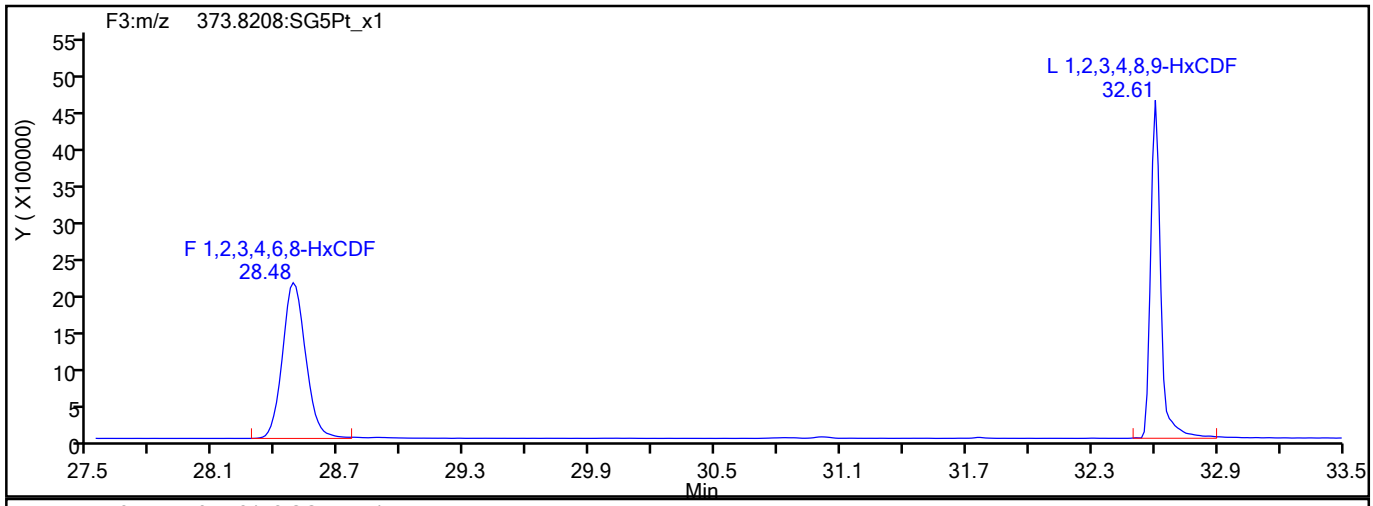

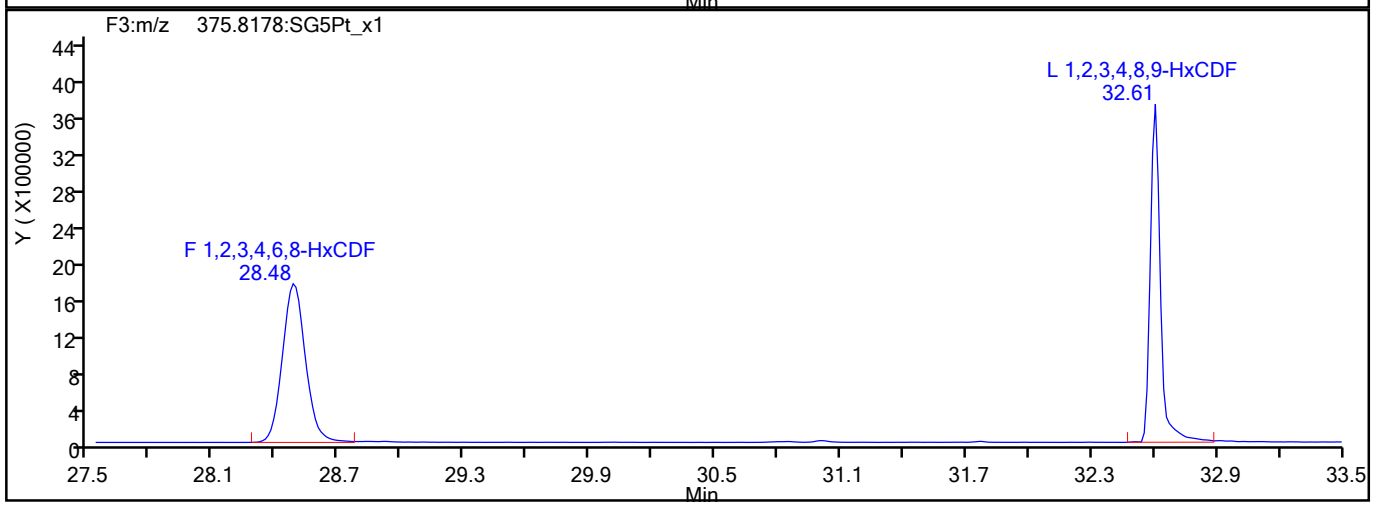

HxCDF Interference Mass

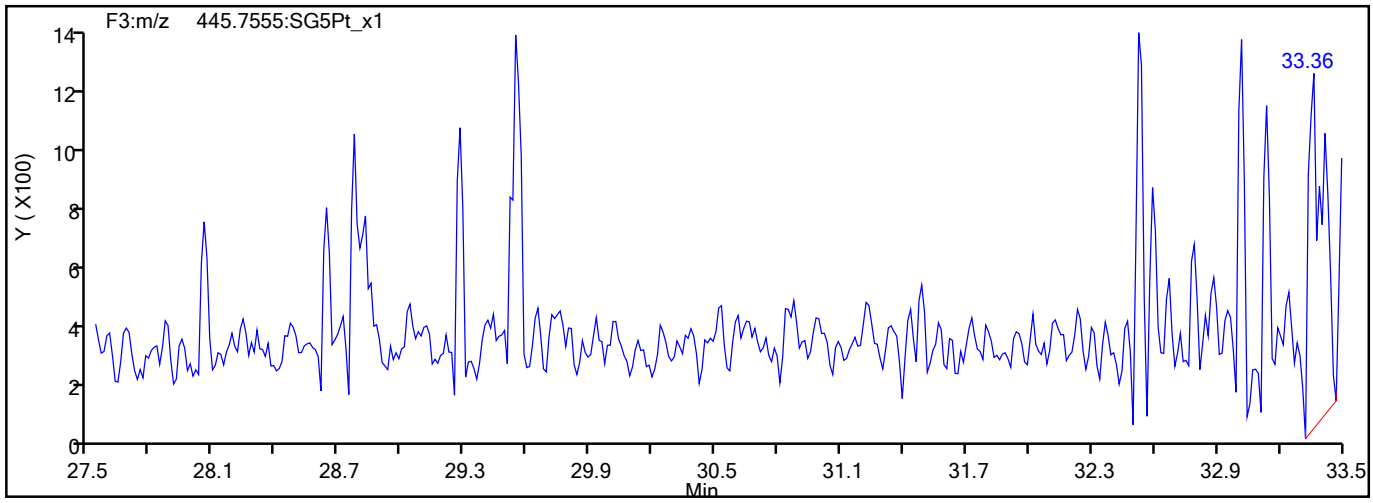

794187

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

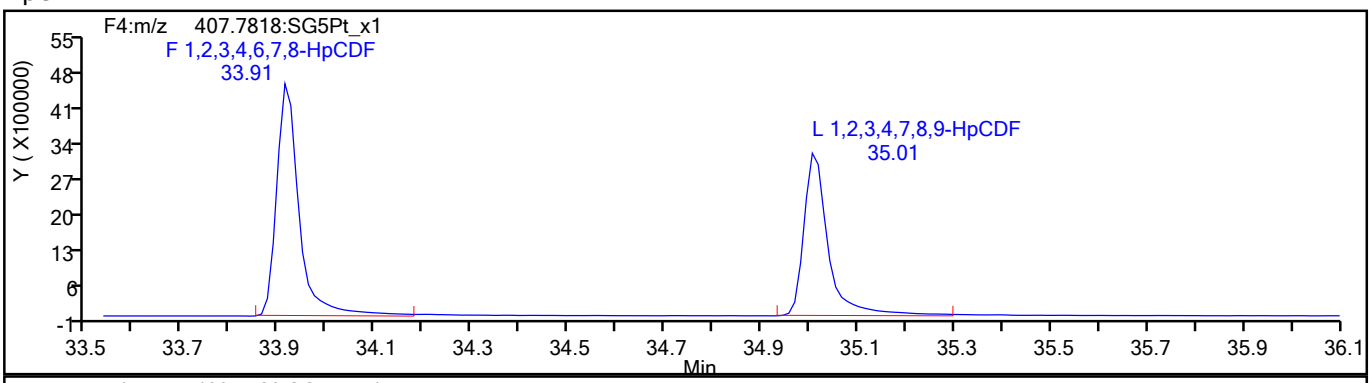

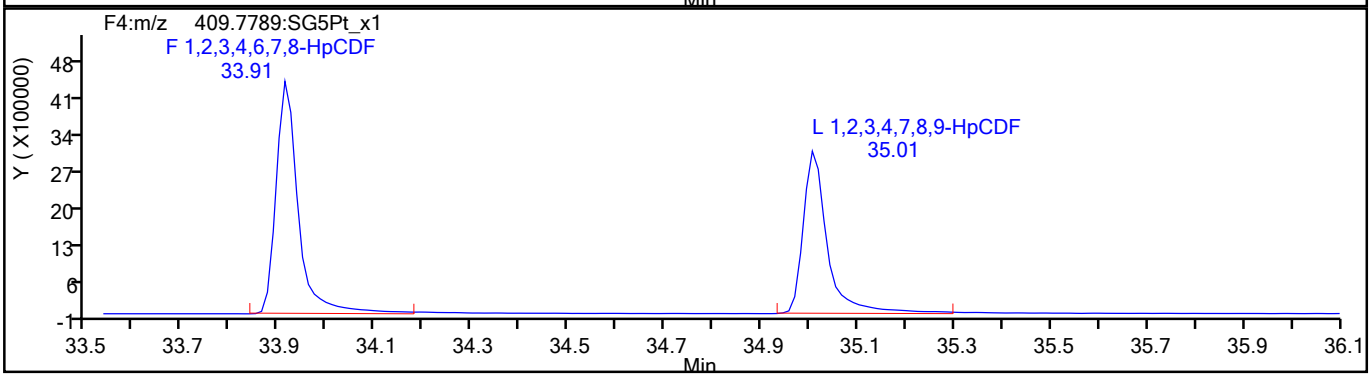

HpCDF Standards

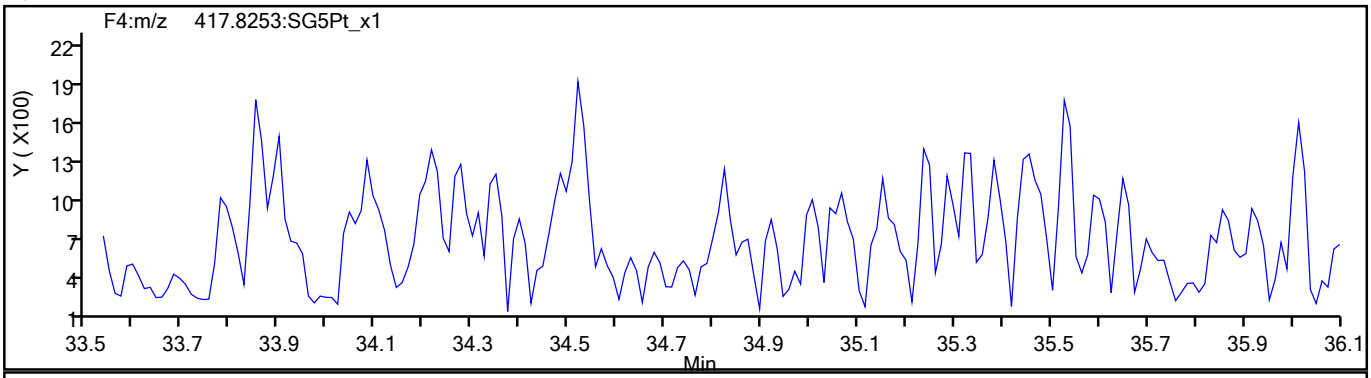

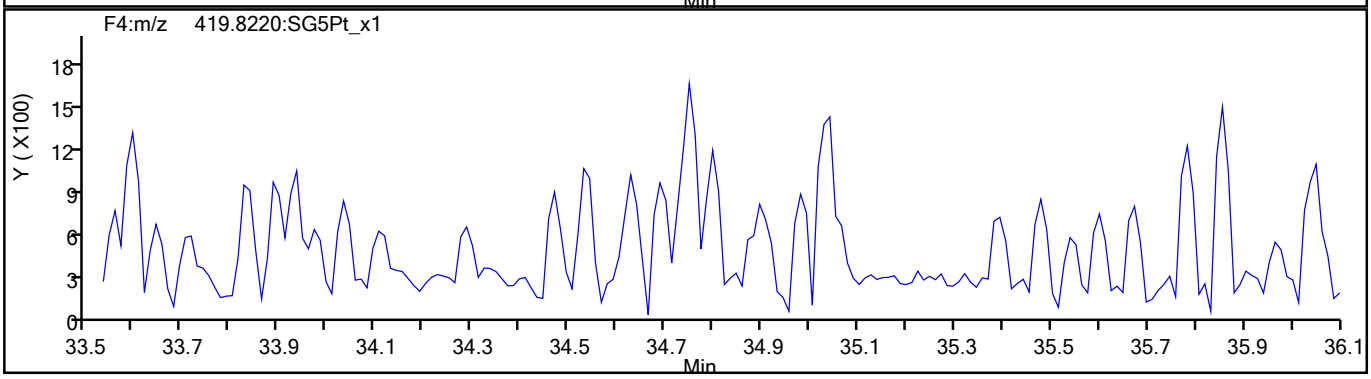

794188

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

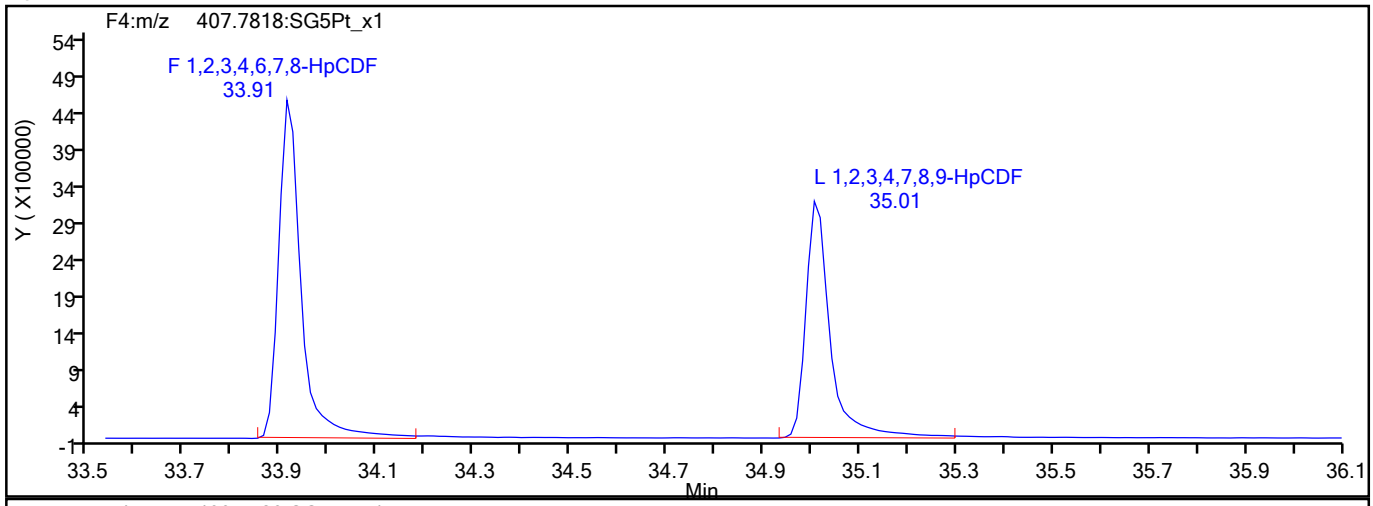

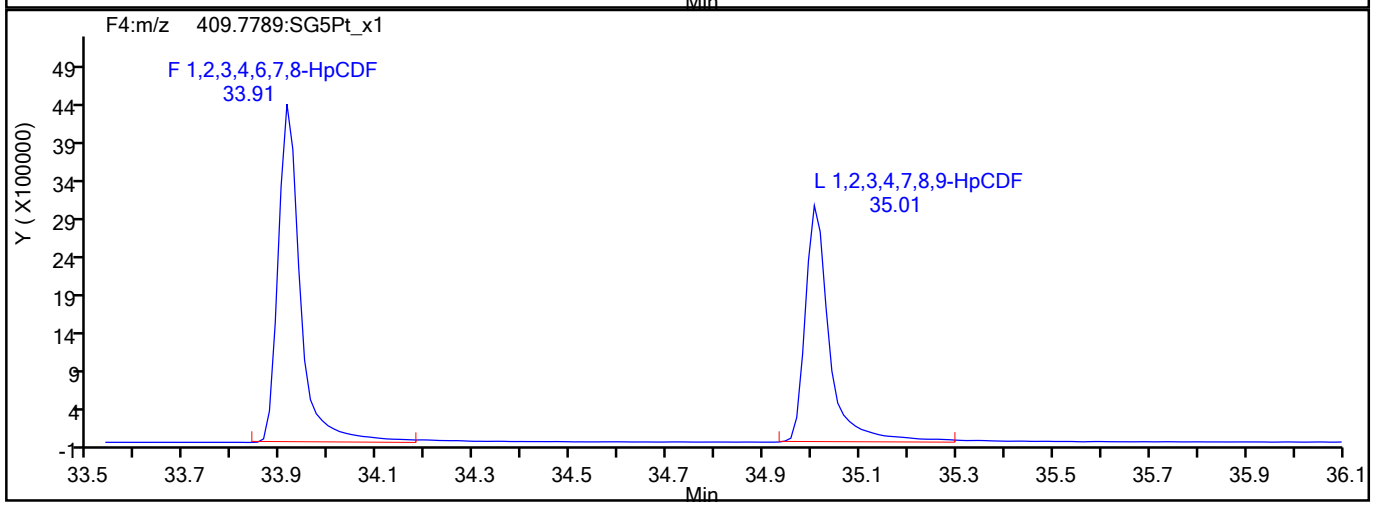

HpCDF Interference Mass

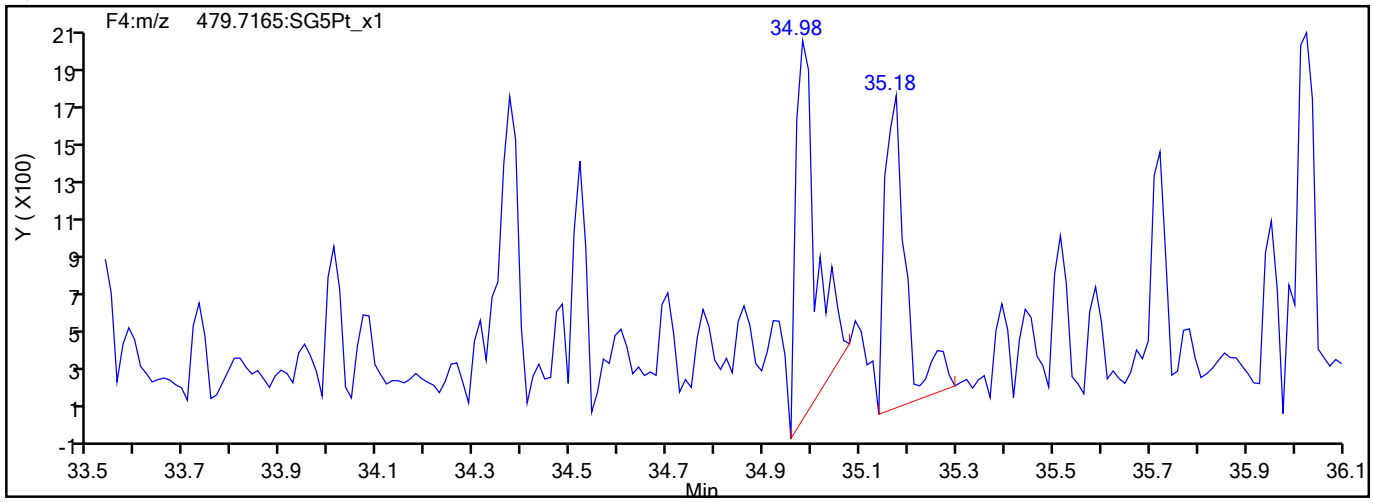

794189

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

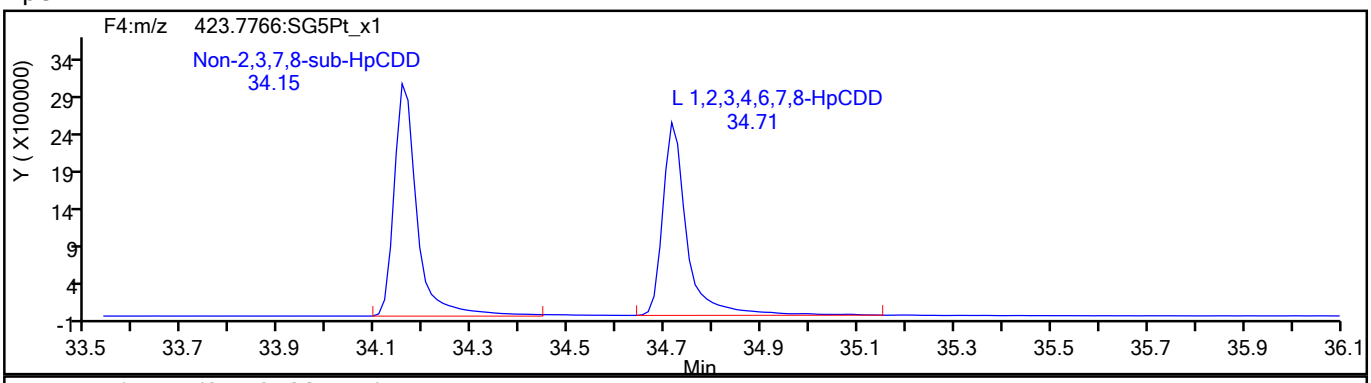

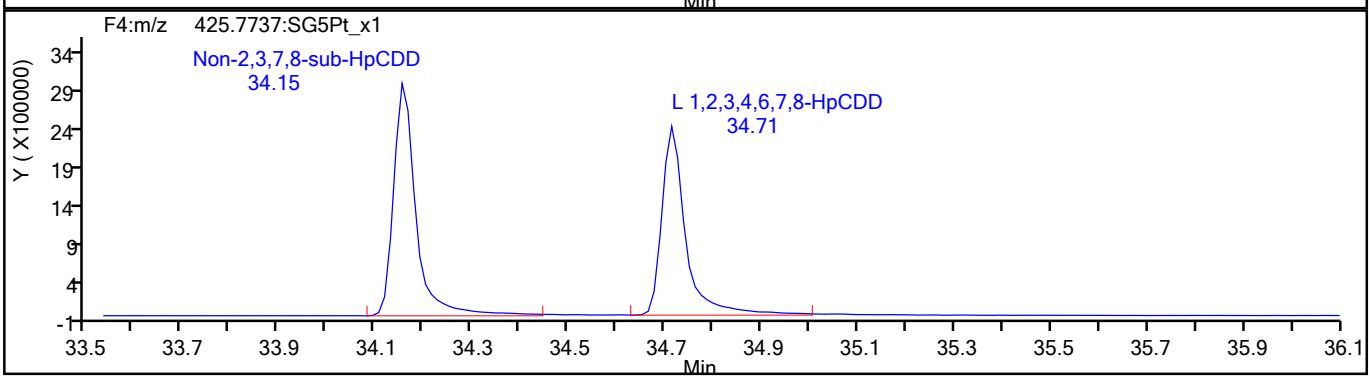

HpCDD Standards

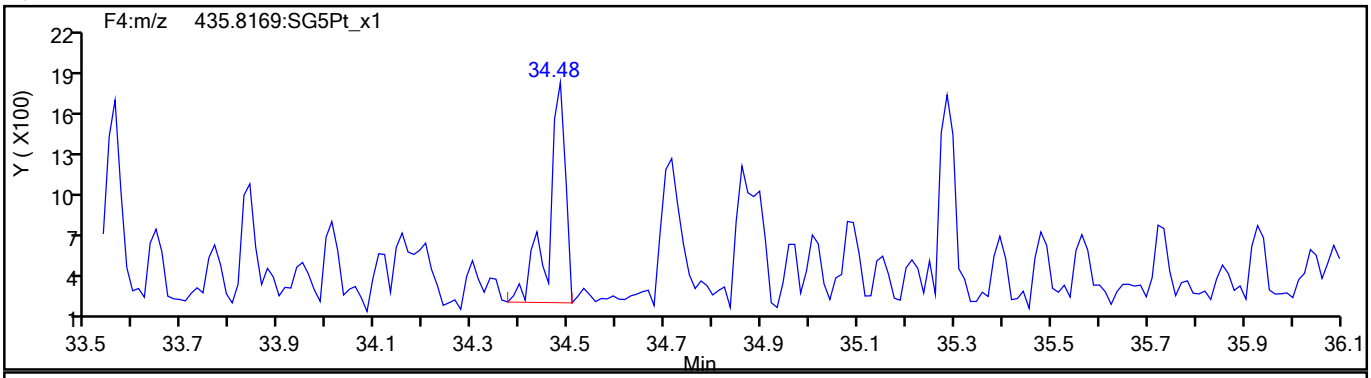

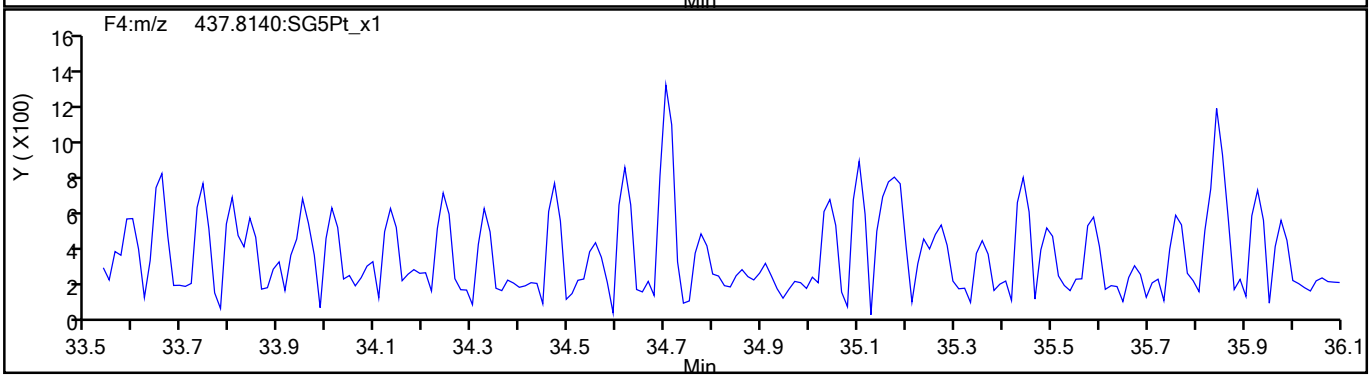

794190

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

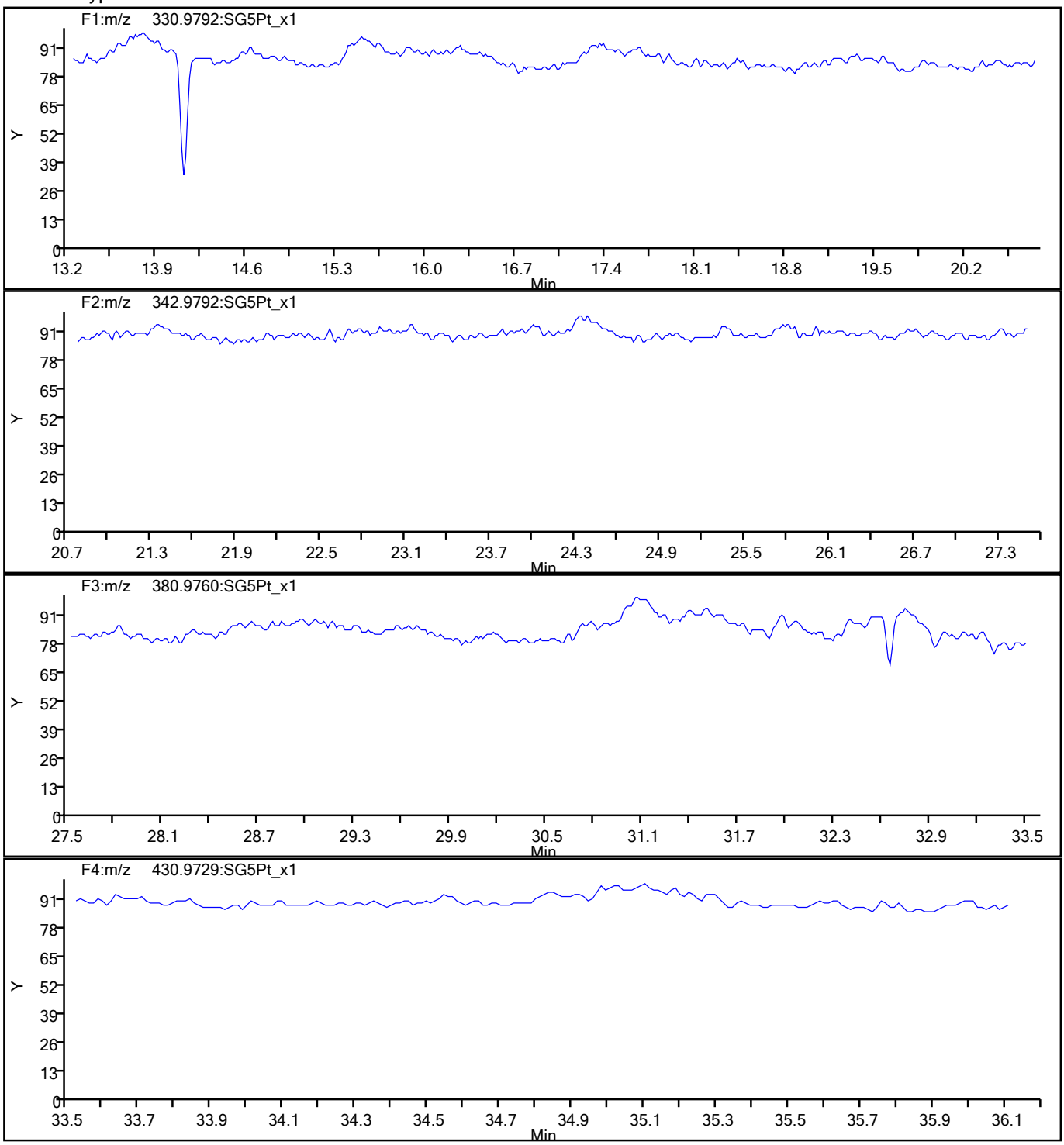

794191

Report Date: 27-Jul-2021 15:09:56 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_1.d		
Injection Date:	26-Jul-2021 09:21:58	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	510264	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

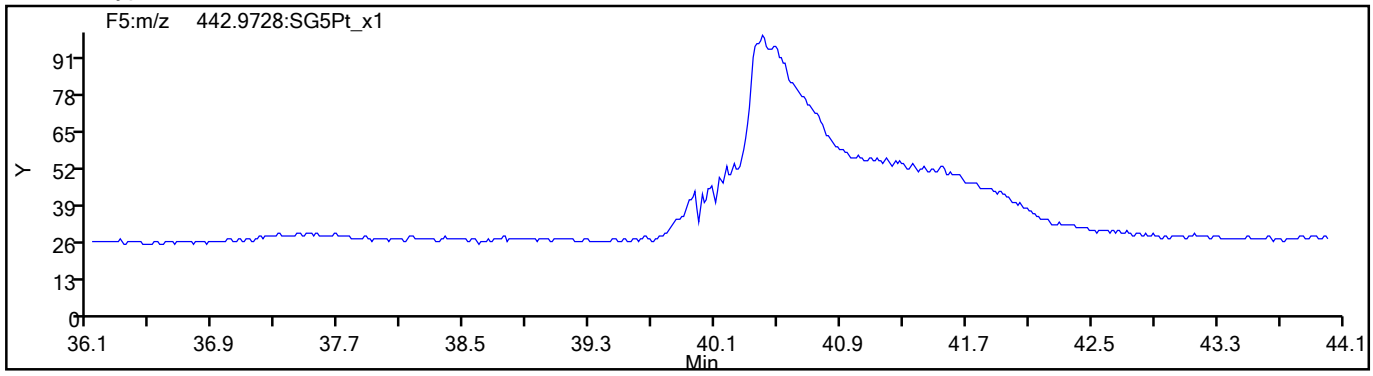

794192

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 25-Aug-2021 09:38:15 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521 WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:07:31 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 09:52:09

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.099	56999943	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.114	121813715	0.77	1.0239	83.5	83.5	0.4017	0.4017		
A Non-2,3,7,8-sub-TCDF	17.076	102998627	0.76	1.0239	70.6	70.6	0.4017	35.9		
S Total TCDF					154.1	154.1	0.4017	0.4017		
D 13C-2,3,7,8-TCDD	17.794	30493136	0.80	0.8993					0.00	
2,3,7,8-TCDD	17.809	41147298	0.79	1.2541	43.0	43.0	0.2473	0.2473		
A Non-2,3,7,8-sub-TCDD	17.537	115649881	0.78	1.2541	121.0	121.0	0.2473	43.6		
S Total TCDD					164.0	164.0	0.2473	0.2473		
A F1 PeCDFs	19.851	48902269	1.56	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.067	41048828	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.696	62925921	1.59	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.338	39643438	1.24	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.525	29683302	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.615	33959149	1.04	1.4413						
1,2,3,4,7,8,9-HpCDF	34.685	27411005	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.150						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.405	21912703	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.223						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.725	69566921	0.76							
1,3,6,8-TCDD	15.632	41513030	0.79							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.172						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.916	29394237	1.28							
1,2,3,4,8,9-HxCDF	32.249	35970266	1.23							
1,2,3,4,6,7,9-HpCDD	33.858	24693234	1.04							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 25-Aug-2021 09:38:15 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521 WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:07:31 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 09:52:09

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	1.000	24801764	6462524	8874	22185	728		
317.9389	17.099	17.099	0	1.000	32198179	8393715	2966	7415	2830	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	52987478	12648552	25565	63912	495		
305.8987	17.114	17.114	0	1.001	68826237	16701152	35540	88850	470	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.961	17.076	53	1.050	22725406	5605407	25565	63912	219		
305.8987	17.961	17.076	53	1.050	29653618	7394635	35540	88850	208	0.77(0.65-0.89)	
303.9016	18.898	17.076	109	1.105	21740344	5423885	25565	63912	212		
305.8987	18.898	17.076	109	1.105	28879259	7337257	35540	88850	206	0.75(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.000	13507639	3316471	3805	9512	872		
333.9339	17.779	17.794	-1	1.000	16985497	4194973	1666	4165	2518	0.80(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	18197690	4594417	9728	24320	472		
321.8936	17.809	17.809	0	1.001	22949608	5811153	13572	33930	428	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.688	17.537	9	0.994	15882832	4027250	9728	24320	414		
321.8936	17.688	17.537	9	0.994	20635820	5271227	13572	33930	388	0.77(0.65-0.89)	
319.8965	17.961	17.537	25	1.009	18541382	4424461	9728	24320	455		
321.8936	17.961	17.537	25	1.009	23123978	5536133	13572	33930	408	0.80(0.65-0.89)	
319.8965	18.898	17.537	81	1.062	16399748	3990548	9728	24320	410		
321.8936	18.898	17.537	81	1.062	21066121	5048394	13572	33930	372	0.78(0.65-0.89)	
A F1 PeCDFs											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	19.170	19.851	-41	1.000	29822641	6875070	703	1757	9780		
341.8567	19.170	19.851	-41	1.000	19079628	4407459	787	1967	5600	1.56(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.670	23.067	-144	1.000	63648	12949	2558	6395	5		
341.8567	20.656	23.067	-144	1.000	51100	8959	1912	4780	5	1.25(1.32-1.78)	
339.8597	21.502	23.067	-94	1.000	82054	15477	2558	6395	6		
341.8567	21.475	23.067	-95	1.000	54055	10866	1912	4780	6	1.52(1.32-1.78)	
339.8597	22.034	23.067	-62	1.000	164889	28723	2558	6395	11		
341.8567	22.047	23.067	-61	1.000	126764	17242	1912	4780	9	1.30(1.32-1.78)	
339.8597	22.593	23.067	-28	1.000	115456	21902	2558	6395	9		
341.8567	22.593	23.067	-28	1.000	73199	13388	1912	4780	7	1.58(1.32-1.78)	
339.8597	25.265	23.067	132	1.000	24768733	3816175	2558	6395	1492		
341.8567	25.265	23.067	132	1.000	15579351	2357781	1912	4780	1233	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	20.915	23.696	-167	1.000	19723040	3659182	1691	4227	2164		
357.8516	20.915	23.696	-167	1.000	12468740	2303816	1095	2737	2104	1.58(1.32-1.78)	
355.8546	25.047	23.696	81	1.000	18872463	2910605	1691	4227	1721		
357.8516	25.047	23.696	81	1.000	11861678	1823378	1095	2737	1665	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.497	30.338	-170	1.000	21929812	3061580	2814	7035	1088		
375.8178	27.497	30.338	-170	1.000	17713626	2458642	2374	5935	1036	1.24(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.055	30.525	-88	1.000	16402622	2093195	3527	8817	593		
391.8127	29.041	30.525	-89	1.000	12994498	1666525	3229	8072	516	1.26(1.05-1.43)	
389.8157	30.692	30.525	10	1.000	167749	33291	3527	8817	9		
391.8127	30.692	30.525	10	1.000	118433	25865	3229	8072	8	1.42(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.615	0	1.000	17272270	6330880	18063	45157	350		
409.7789	33.615	33.615	0	1.000	16686879	6288813	17997	44992	349	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685	34.685	0	1.000	13991806	4967325	18063	45157	275		
409.7789	34.685	34.685	0	1.000	13419199	4804516	17997	44992	267	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						18063	45157			
409.7789	34.150						17997	44992			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	11171874	4042998	7125	17812	567		
425.7737	34.405	34.405	0	1.000	10740829	3846884	7315	18287	526	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						7125	17812			
425.7737	34.223						7315	18287			
1,3,6,8-TCDF											
303.9016	14.725	14.725	0		29981572	9719502	25565	63912	380		
305.8987	14.725	14.725	0		39585349	12860810	35540	88850	362	0.76(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,3,6,8-TCDD											
319.8965	15.632	15.632	0		18262945	5320953	9728	24320	547		
321.8936	15.617	15.632	-1		23250085	6693712	13572	33930	493	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.537						25565	63912			
305.8987	17.537						35540	88850			
1,2,3,7-TCDD											
319.8965	18.172						9728	24320			
321.8936	18.172						13572	33930			
1,2,3,9-TCDD											
319.8965	18.414						9728	24320			
321.8936	18.414						13572	33930			
1,2,3,9-TCDF											
303.9016	18.414						25565	63912			
305.8987	18.414						35540	88850			
1,2,8,9-TCDD											
319.8965	19.382						9728	24320			
1,2,8,9-TCDF											
303.9016	19.427						25565	63912			
305.8987	19.427						35540	88850			
1,3,4,6,8-PeCDF											
339.8597	19.669						703	1757			
341.8567	19.669						787	1967			
1,2,4,7,9-PeCDD											
355.8546	21.480						1691	4227			
357.8516	21.480						1095	2737			
1,2,3,8,9-PeCDD											
355.8546	25.790						1691	4227			
357.8516	25.790						1095	2737			
1,2,3,8,9-PeCDF											
339.8597	26.021						2558	6395			
341.8567	26.021						1912	4780			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						2814	7035			
375.8178	28.333						2374	5935			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						3527	8817			
391.8127	29.890						3229	8072			
1,2,3,4,6,7-HxCDD											
389.8157	31.916	31.916	0		16480209	4865015	3527	8817	1379		
391.8127	31.916	31.916	0		12914028	3813170	3229	8072	1181	1.28(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.249	32.249	0		19818636	6110382	2814	7035	2171		
375.8178	32.236	32.249	-1		16151630	5000661	2374	5935	2106	1.23(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.858	33.858	0		12582438	4717571	7125	17812	662		
425.7737	33.858	33.858	0		12110796	4483963	7315	18287	613	1.04(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	56999943	14856239

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	56999943	14856239

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.961	22725406	5605407	29653618	7394635	35.9	0.77	
18.898	21740344	5423885	28879259	7337257	34.7	0.75	
Signal Totals:							
	44465750	11029292	58532877	14731892			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	102998627	25761184				0.76	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 70.592 = (102998627 * 40.000) / (56999943 * 1.024)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-TCDD, RT: 17.537

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	30493136	7511444

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	30493136	7511444

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.688	15882832	4027250	20635820	5271227	38.2	0.77	
17.961	18541382	4424461	23123978	5536133	43.6	0.80	
18.898	16399748	3990548	21066121	5048394	39.2	0.78	
Signal Totals:							
	50823962	12442259	64825919	15855754			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	115649881	28298013				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 120.966 = (115649881 * 40.000) / (30493136 * 1.254)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.170	29822641	6875070	19079628	4407459		1.56	
Signal Totals:							
	29822641	6875070	19079628	4407459			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	48902269	11282529				1.56	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (48902269 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.670	63648	12949	51100	8959		1.25	R
21.502	82054	15477	54055	10866		1.52	
22.034	164889	28723	126764	17242		1.30	R
22.593	115456	21902	73199	13388		1.58	
25.265	24768733	3816175	15579351	2357781		1.59	
Signal Totals:							
	25194780	3895226	15884469	2408236			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	41079249	6303462				1.59	RQ
	41048828	6304145					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (41079249 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (41048828 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.915	19723040	3659182	12468740	2303816		1.58	
25.047	18872463	2910605	11861678	1823378		1.59	
Signal Totals:							
	38595503	6569787	24330418	4127194			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	62925921	10696981				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (62925921 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDF, RT: 30.338

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.497	21929812	3061580	17713626	2458642		1.24	
Signal Totals:							
	21929812	3061580	17713626	2458642			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	39643438	5520222				1.24	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (39643438 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 09:38:15 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 1

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.055	16402622	2093195	12994498	1666525		1.26	
30.692	167749	33291	118433	25865		1.42	
Signal Totals:							
	16570371	2126486	13112931	1692390			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	29683302	3818876				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (29683302 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

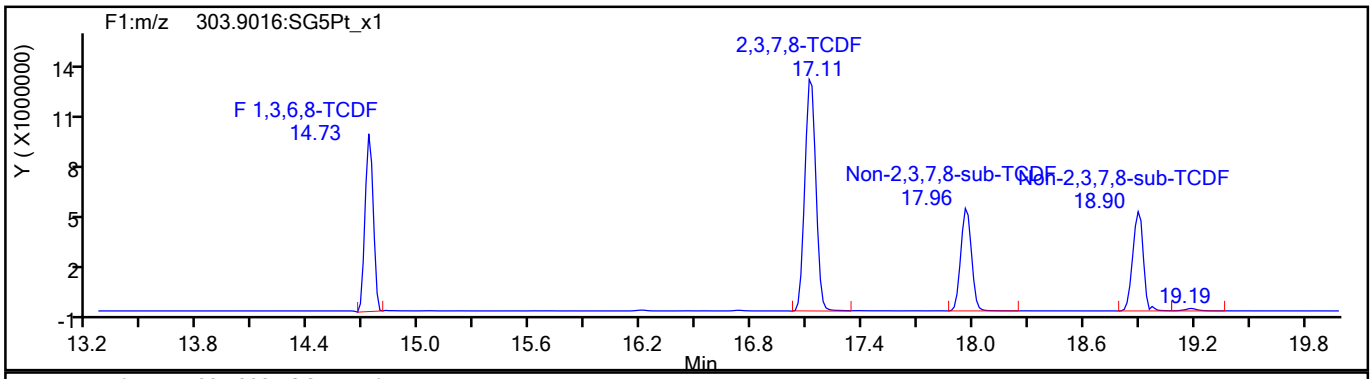

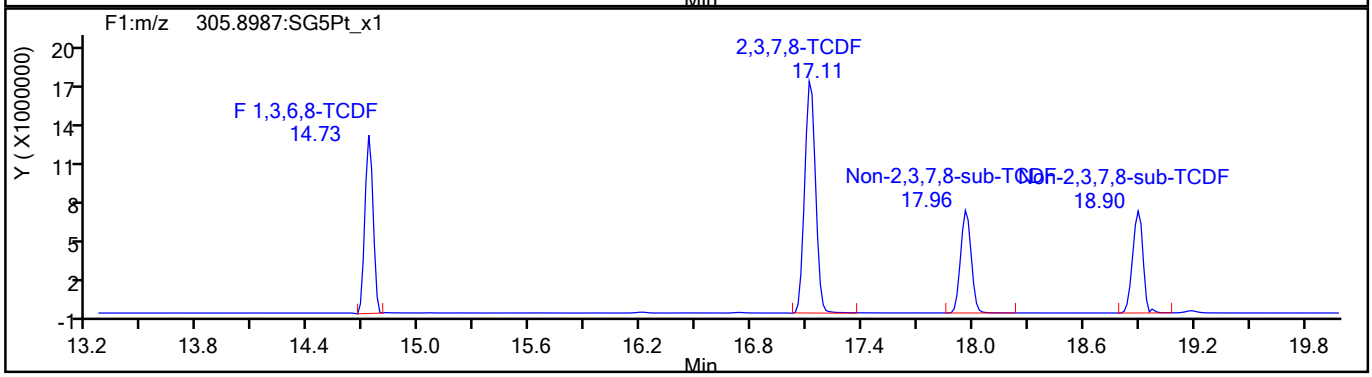

TCDF Standards

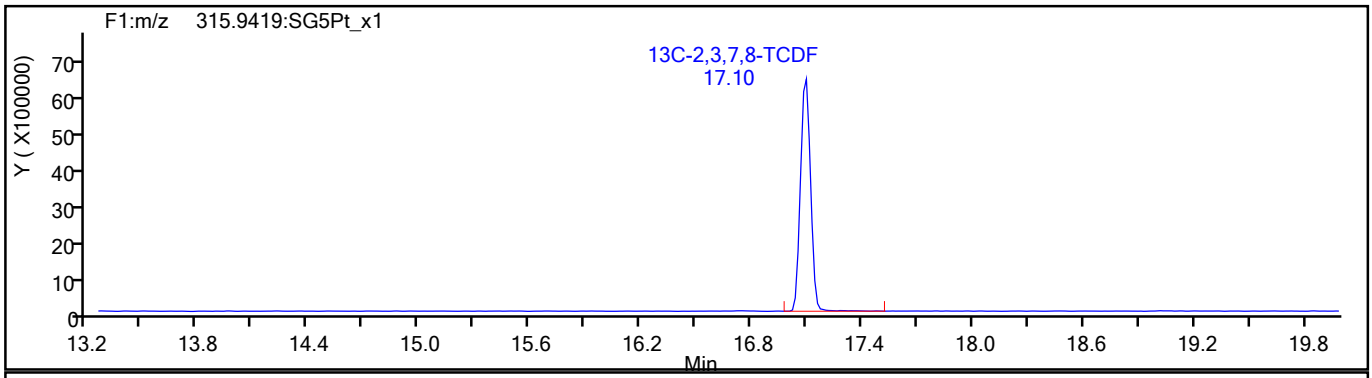

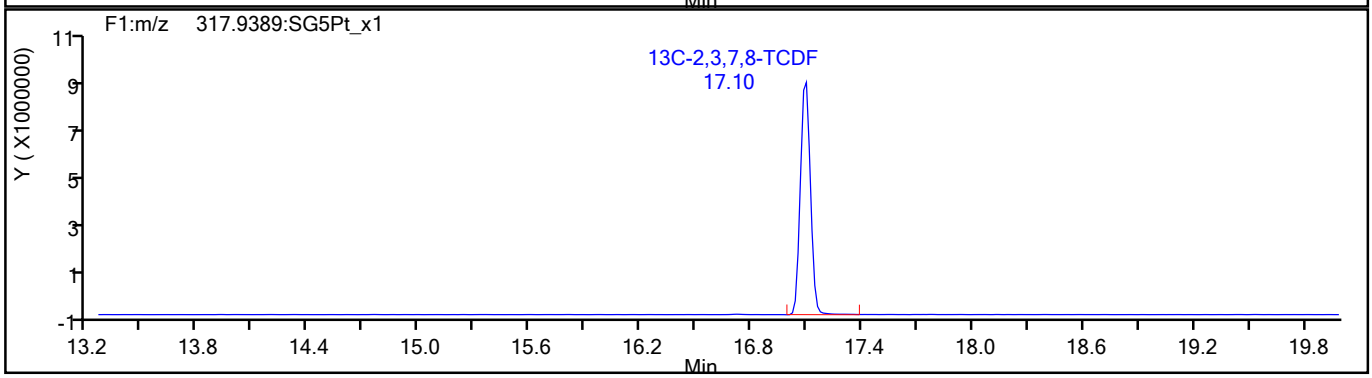

794206

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

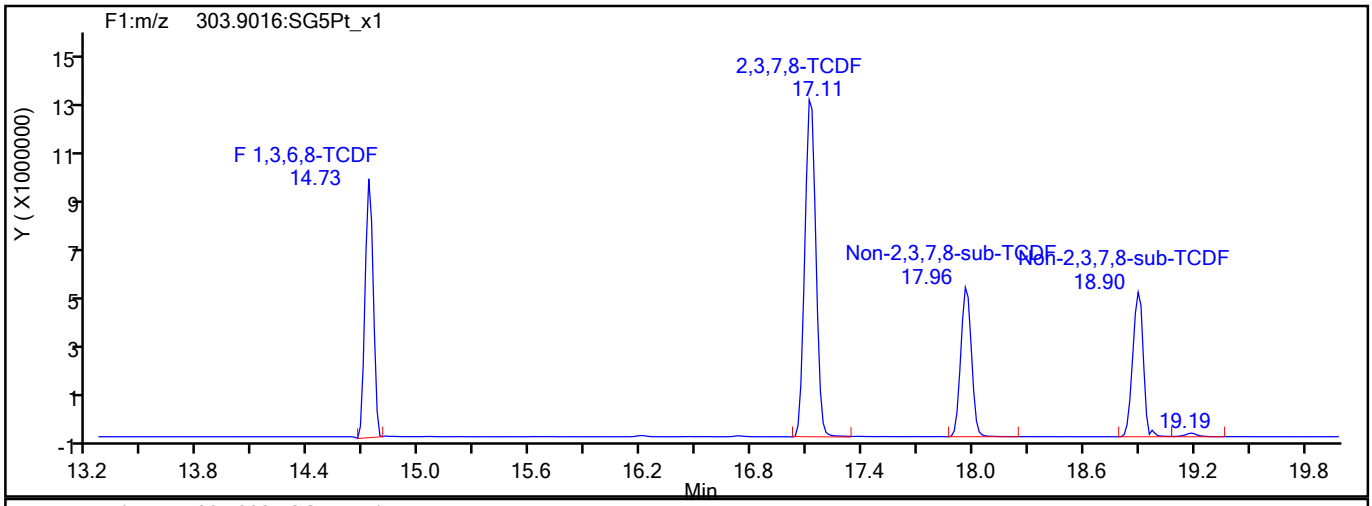

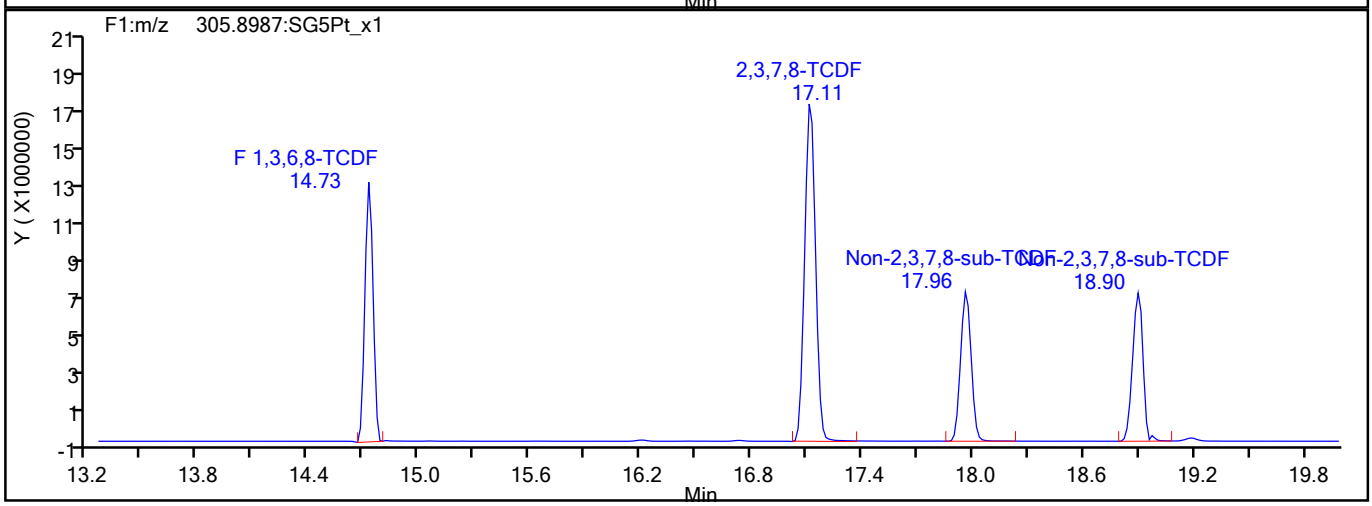

TCDF Interference Mass

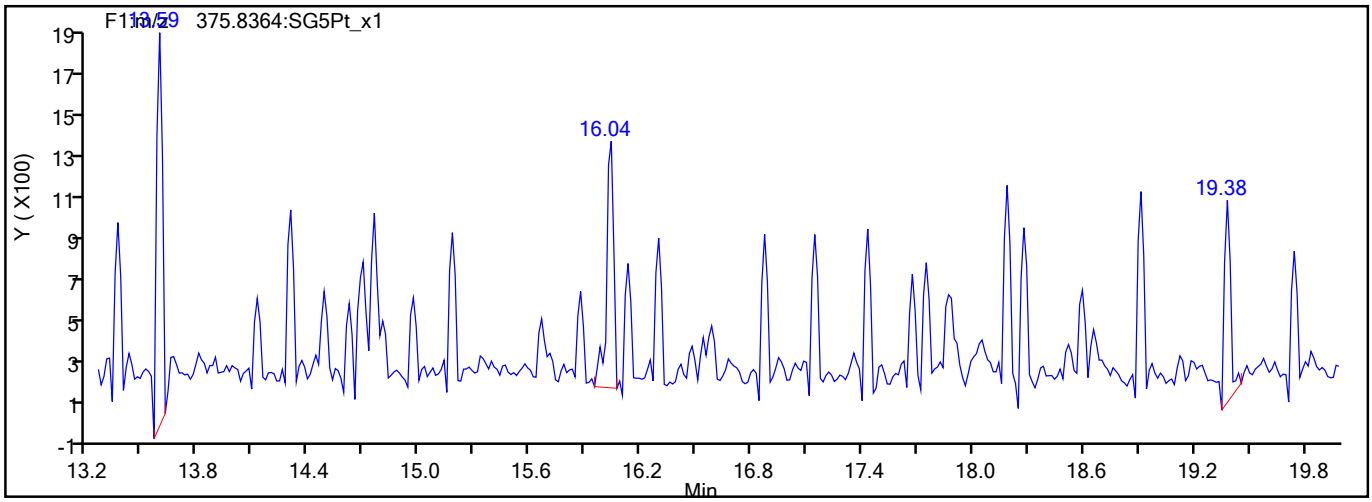

794207

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

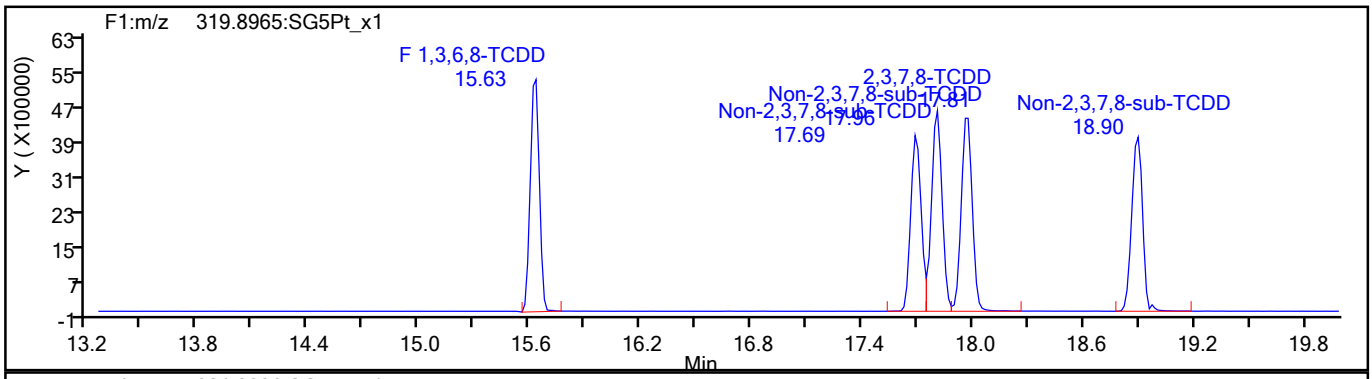

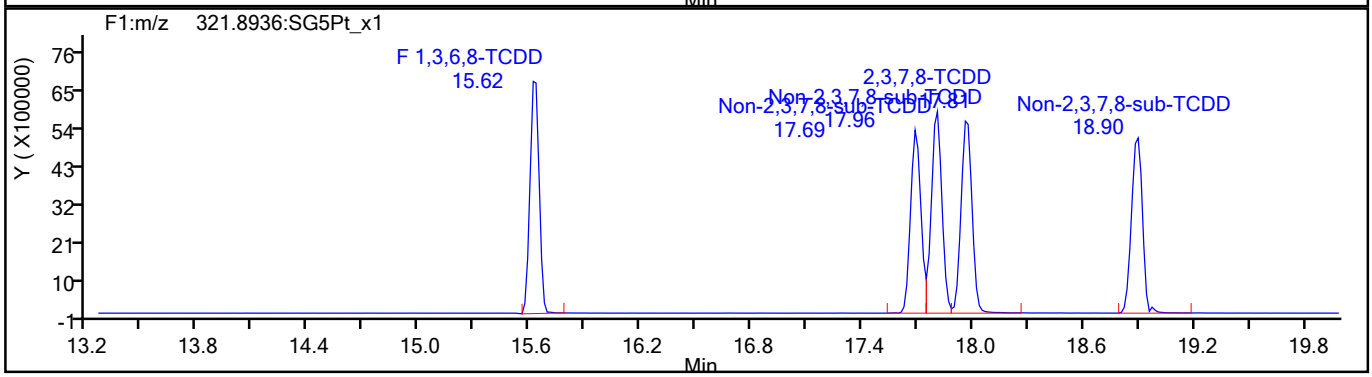

TCDD Standards

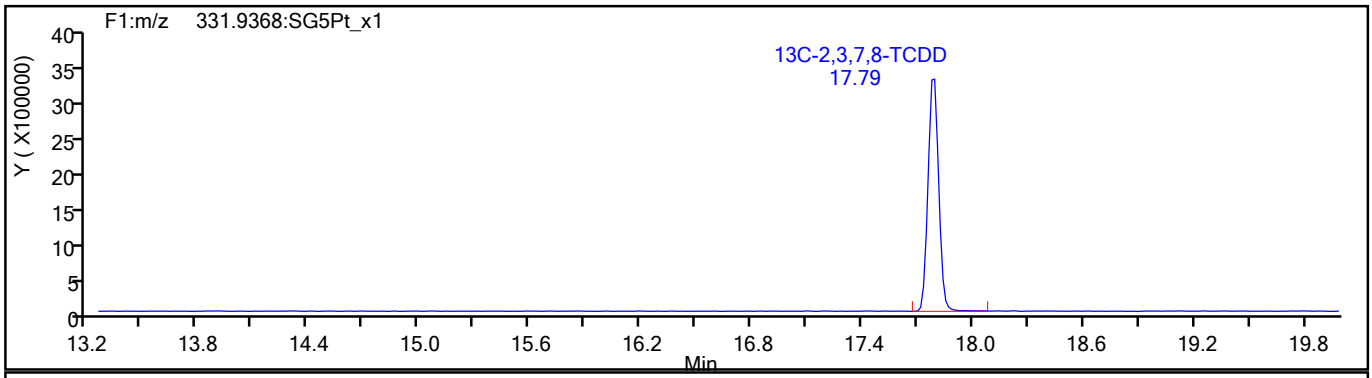

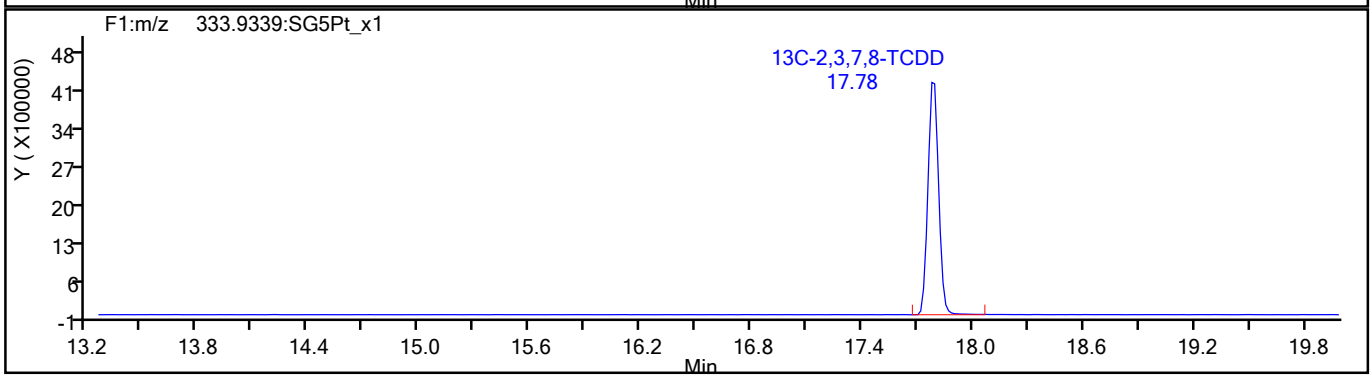

794208

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

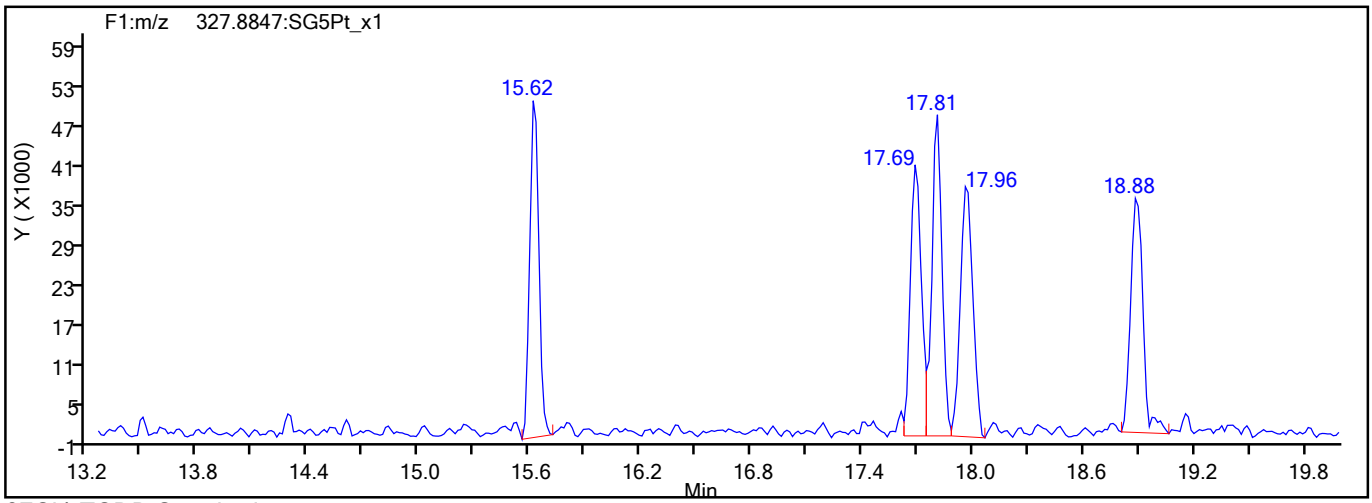

37Cl4-TCDD Standards

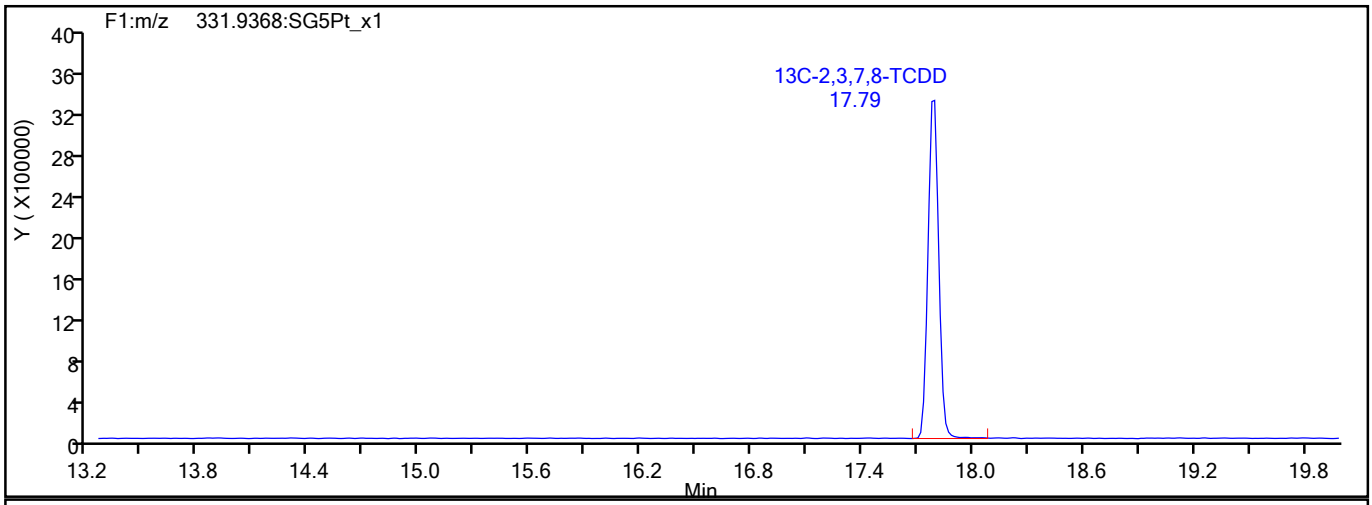

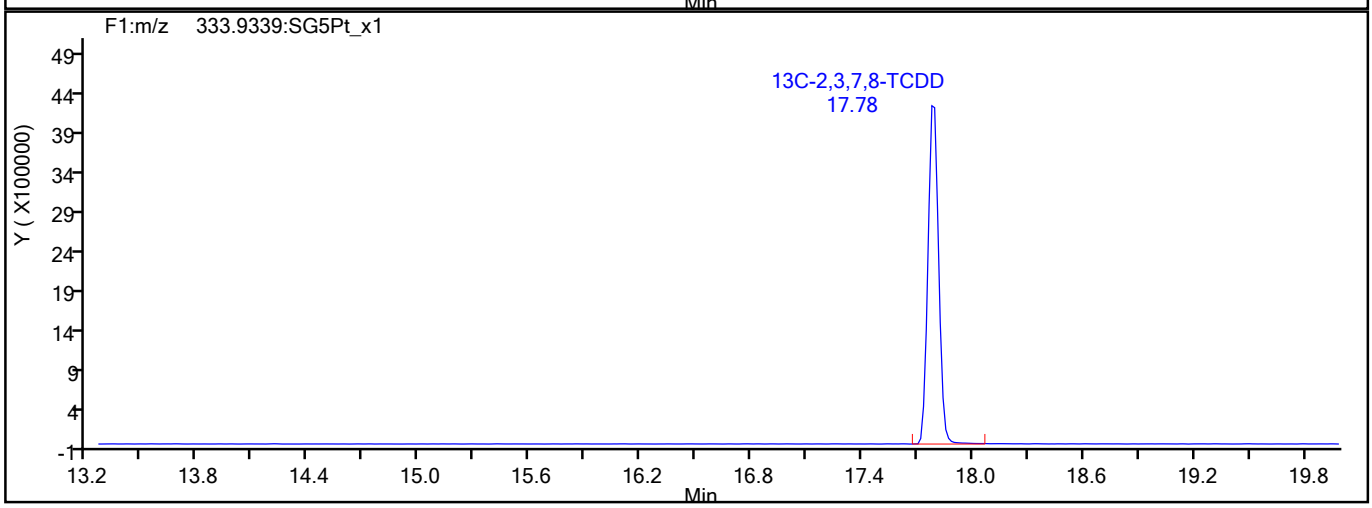

794209

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

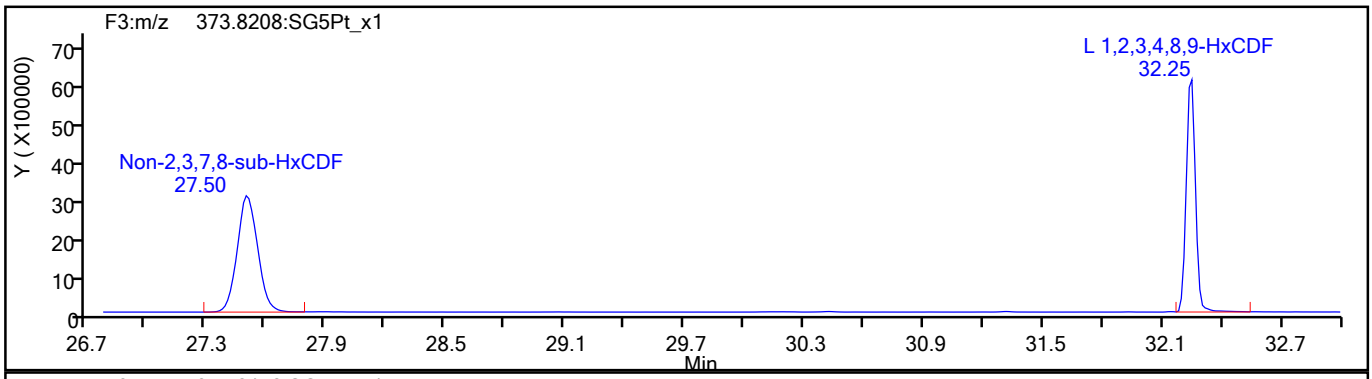

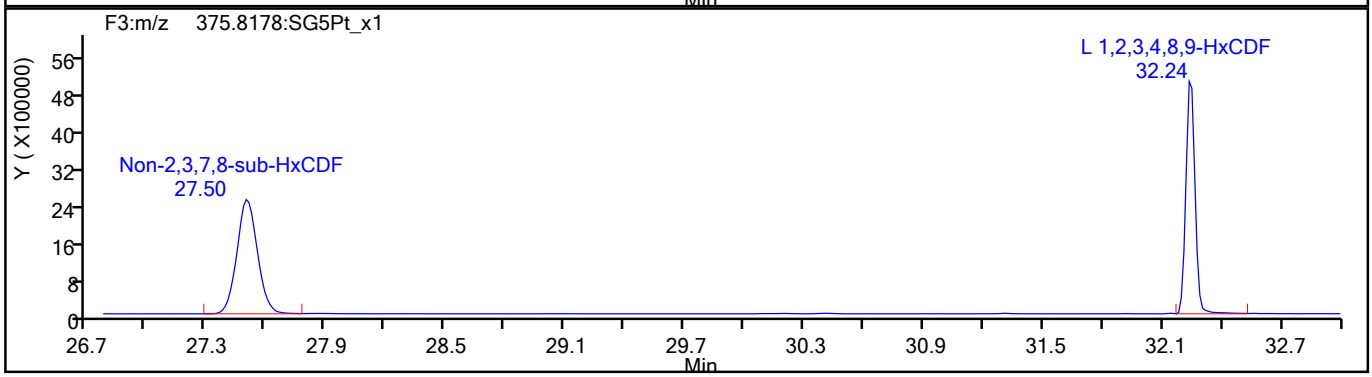

HxCDF Standards

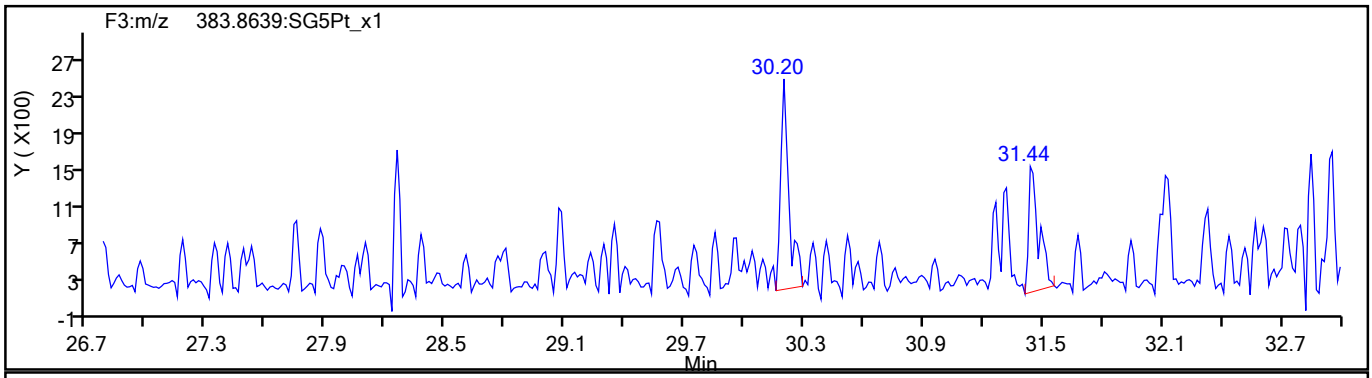

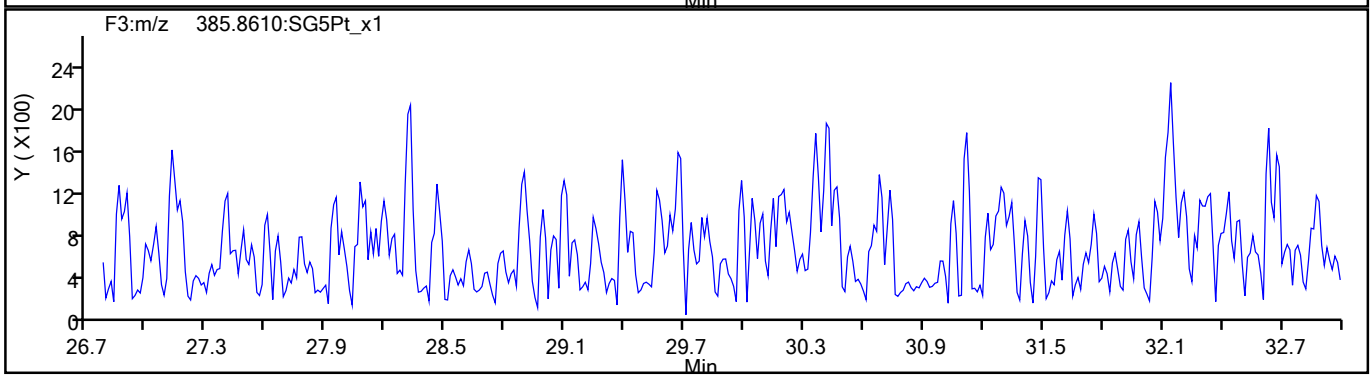

794210

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

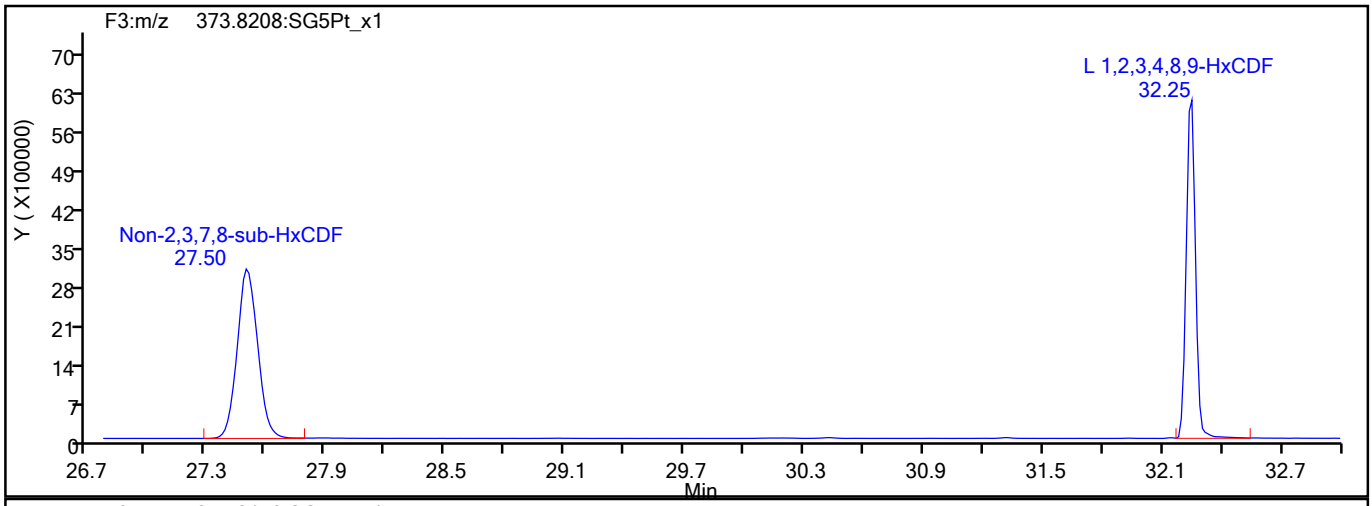

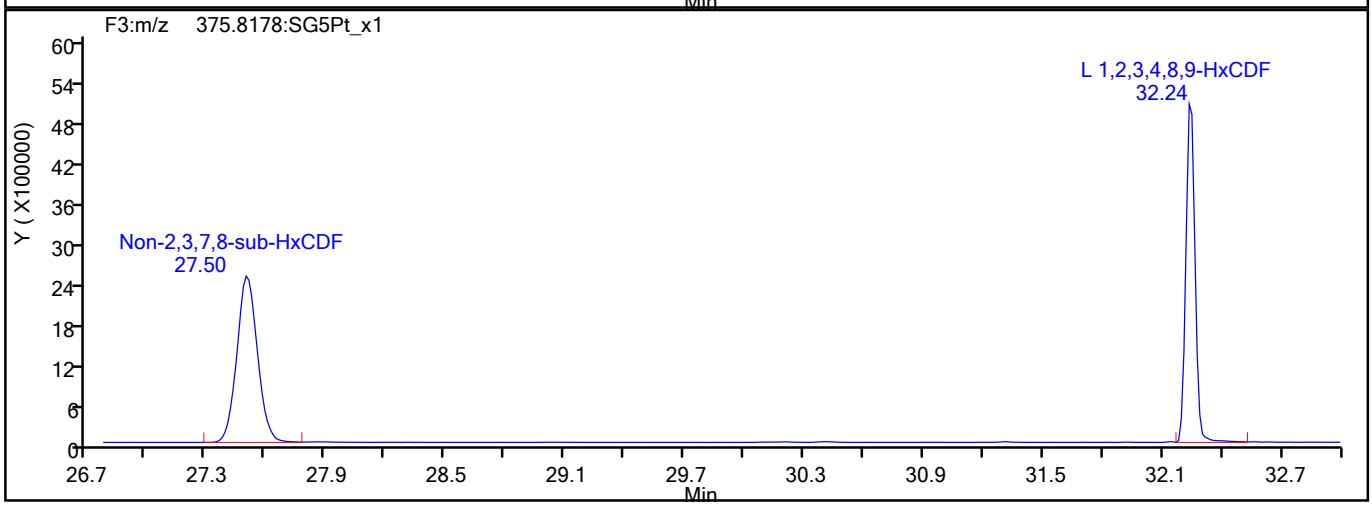

HxCDF Interference Mass

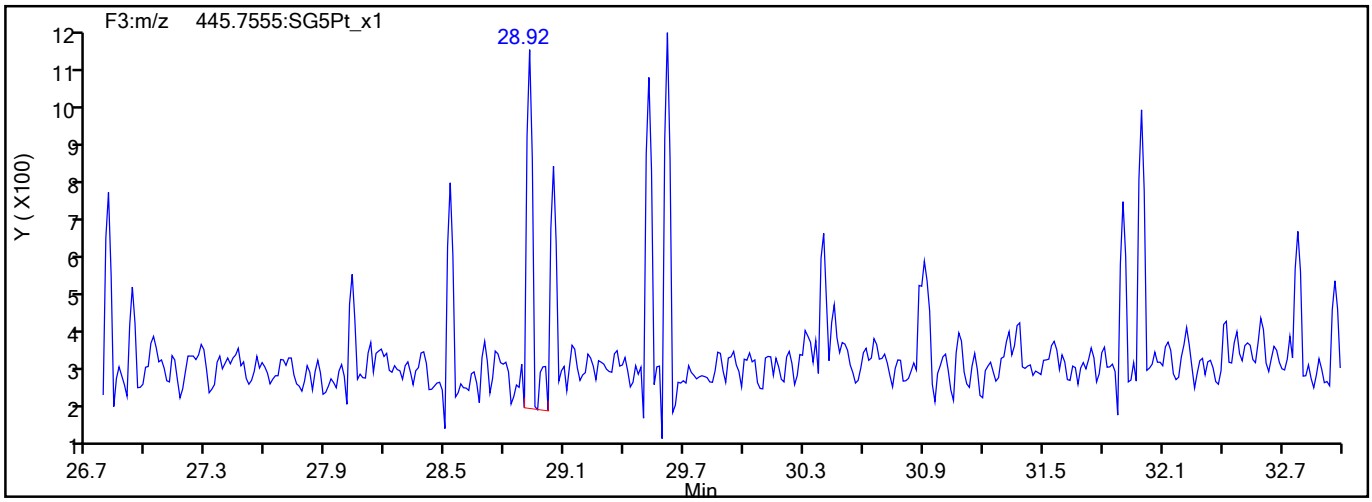

794211

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

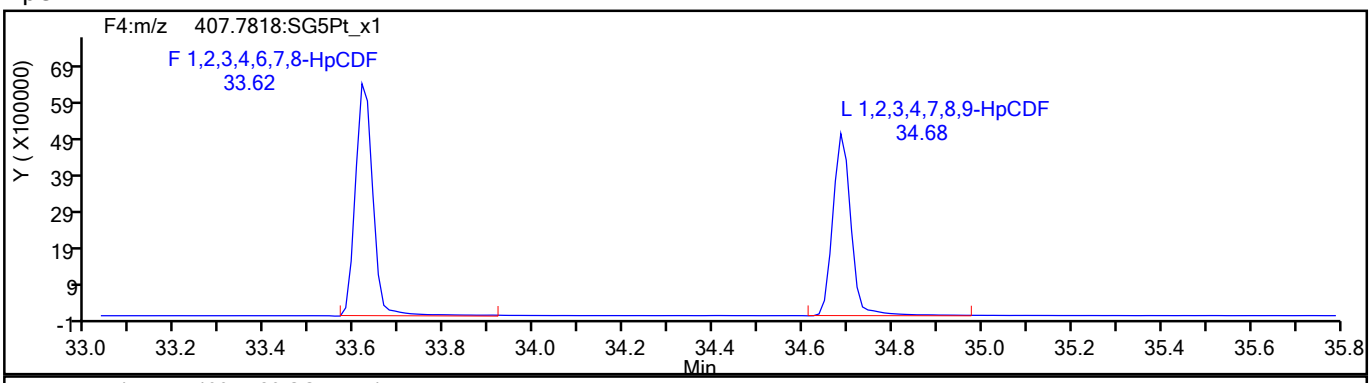

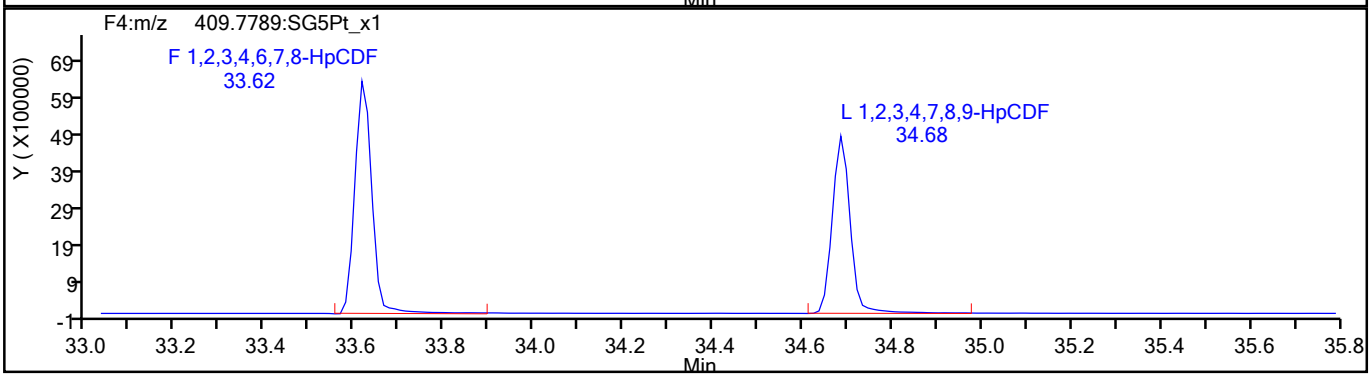

HpCDF Standards

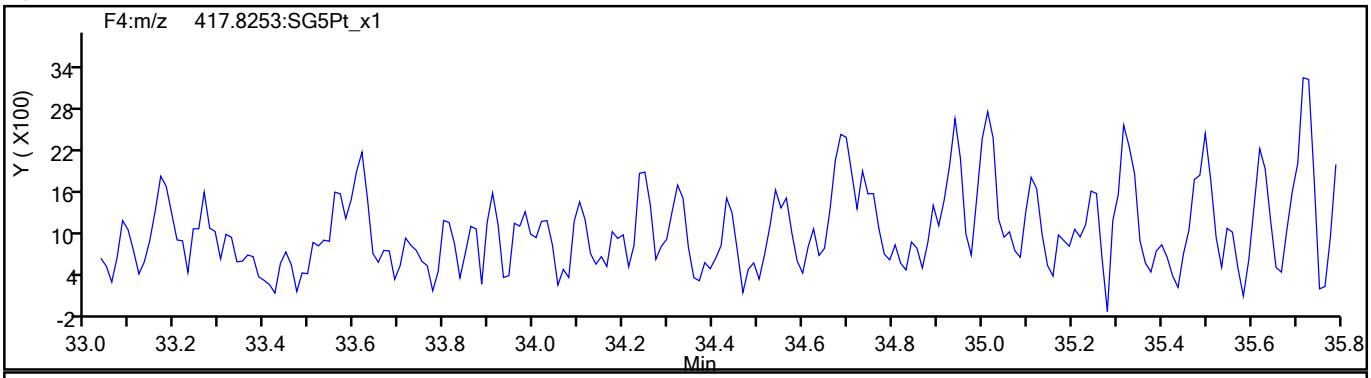

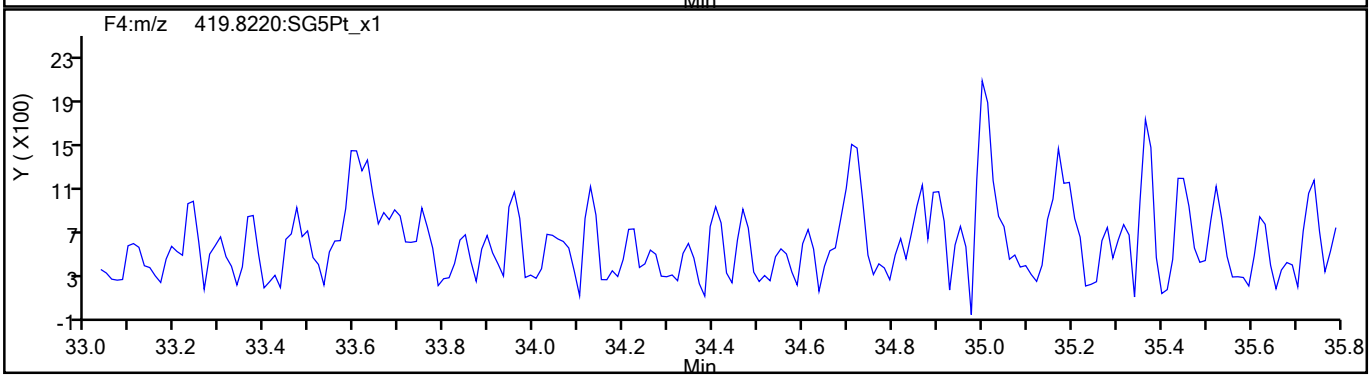

794212

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

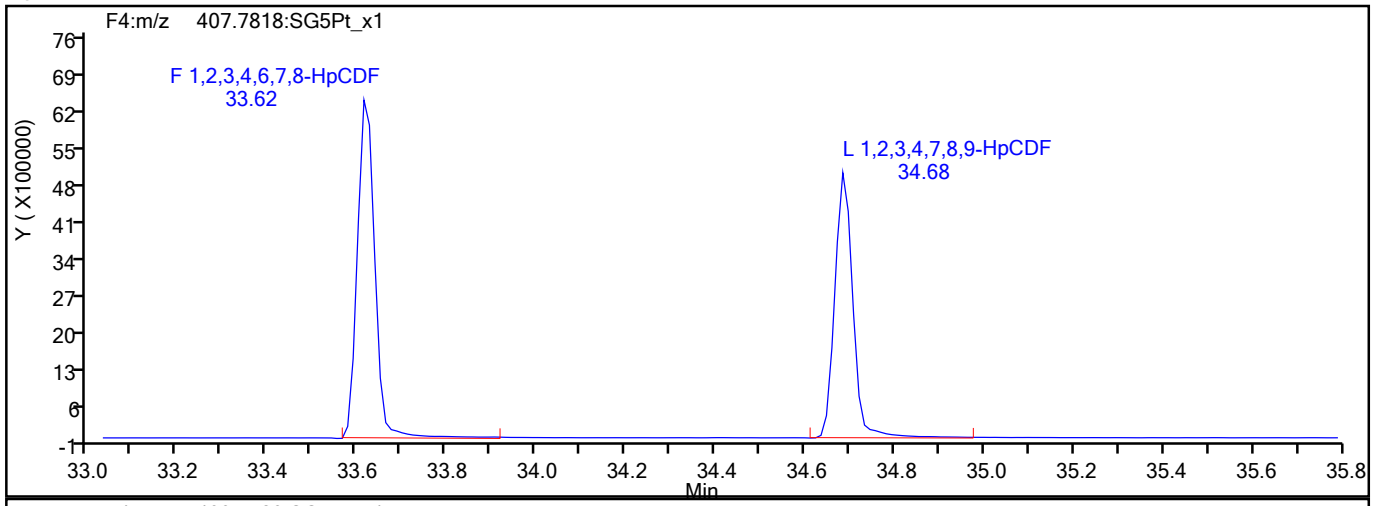

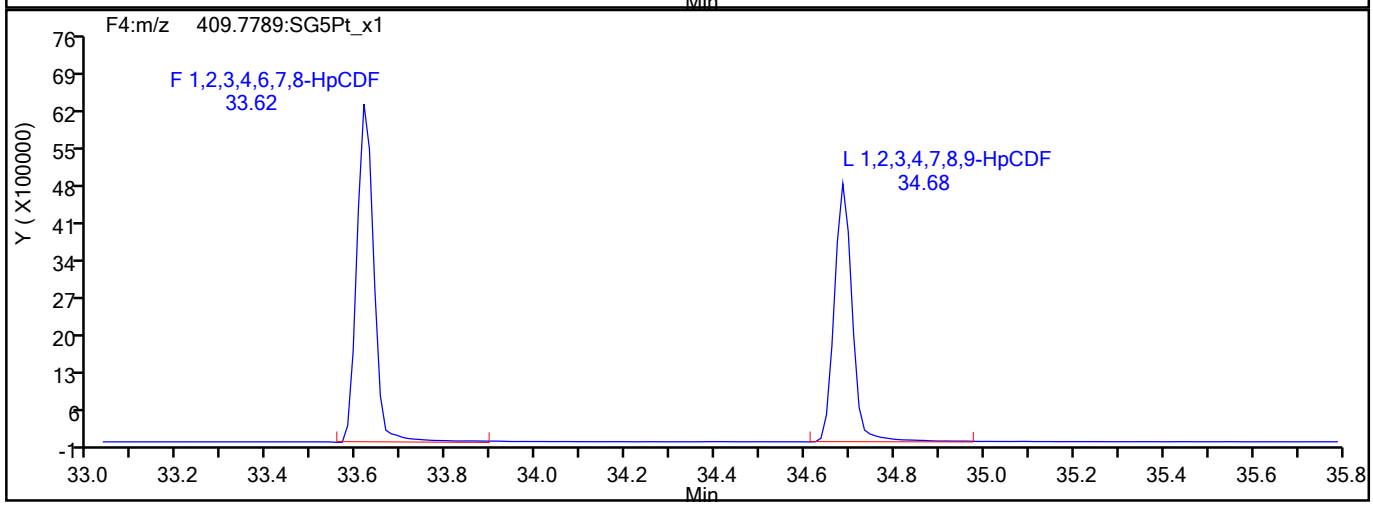

HpCDF Interference Mass

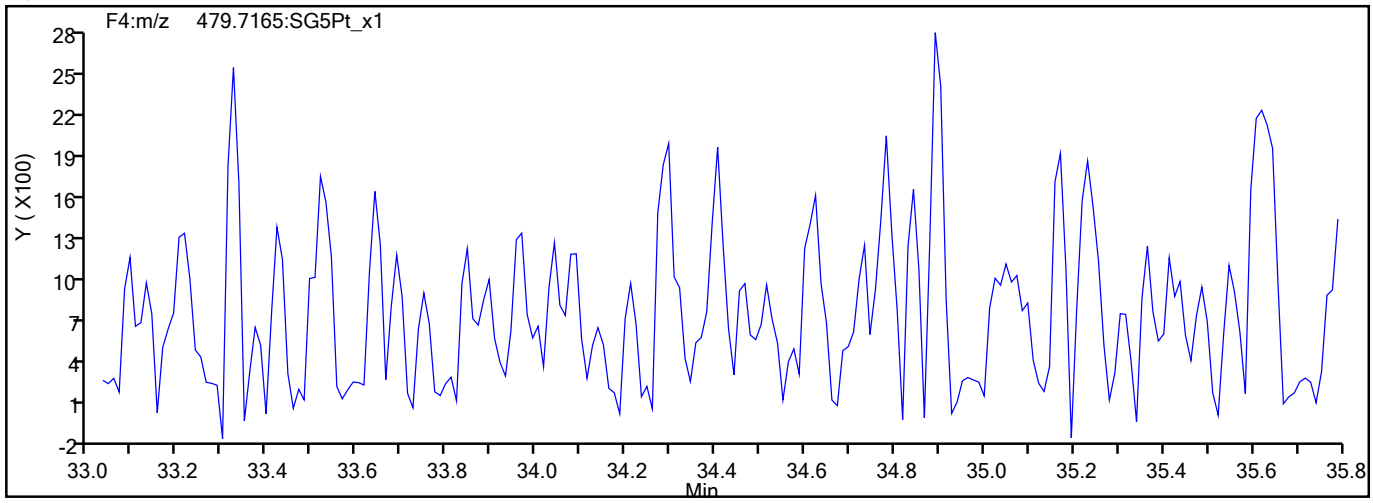

794213

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

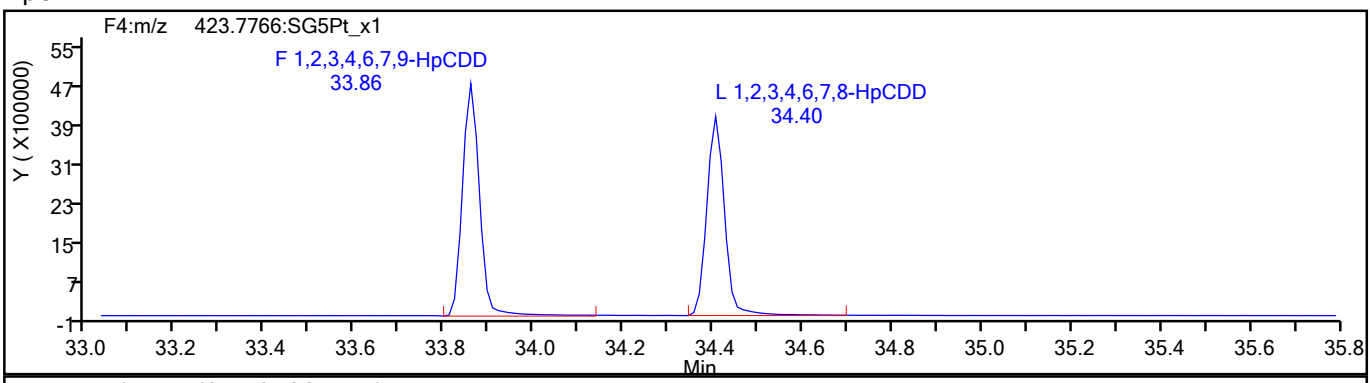

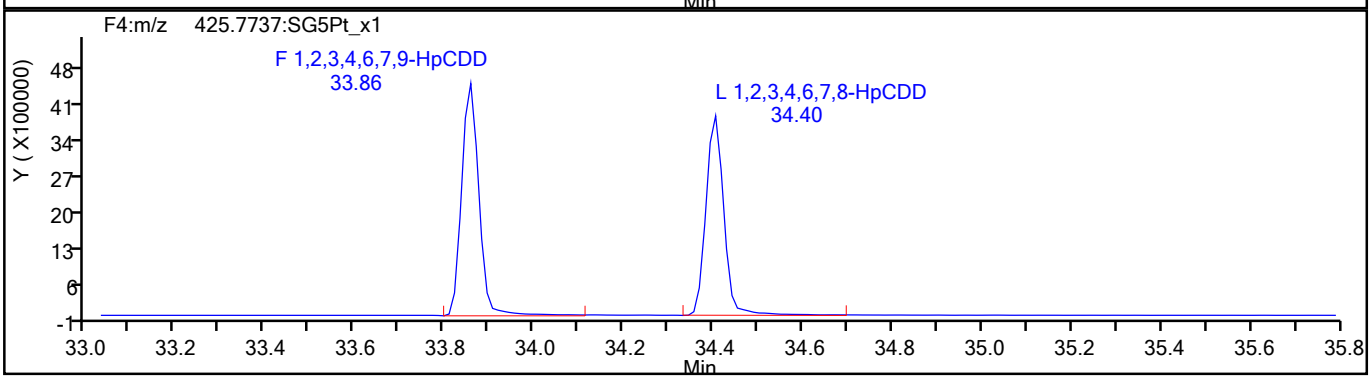

HpCDD Standards

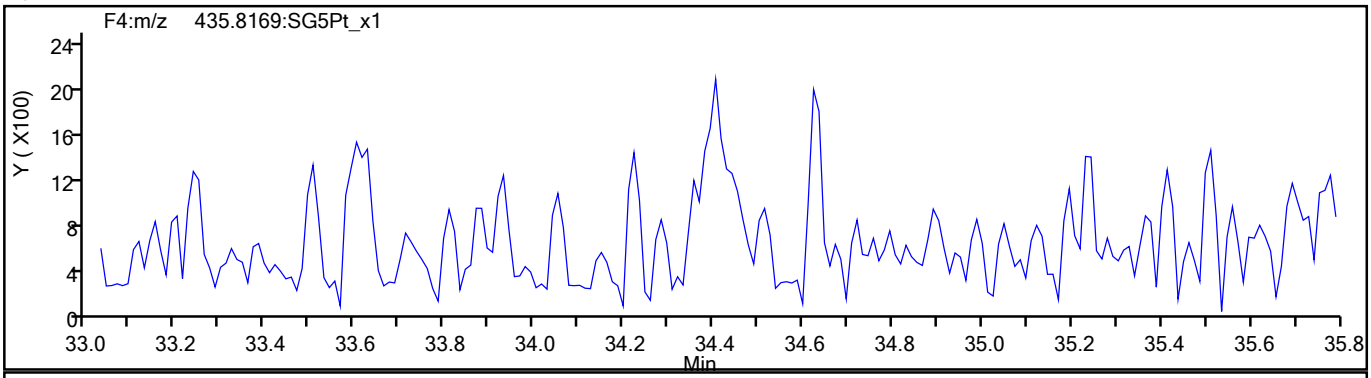

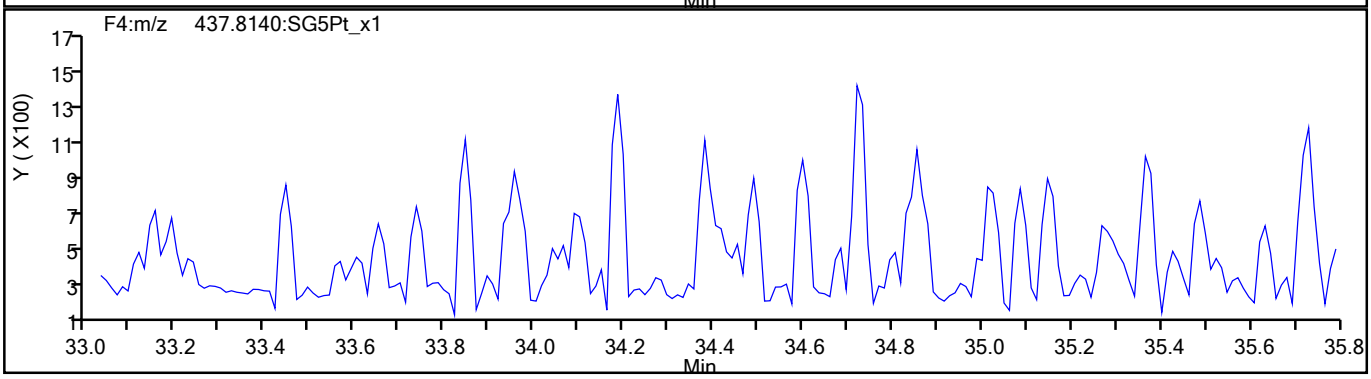

794214

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

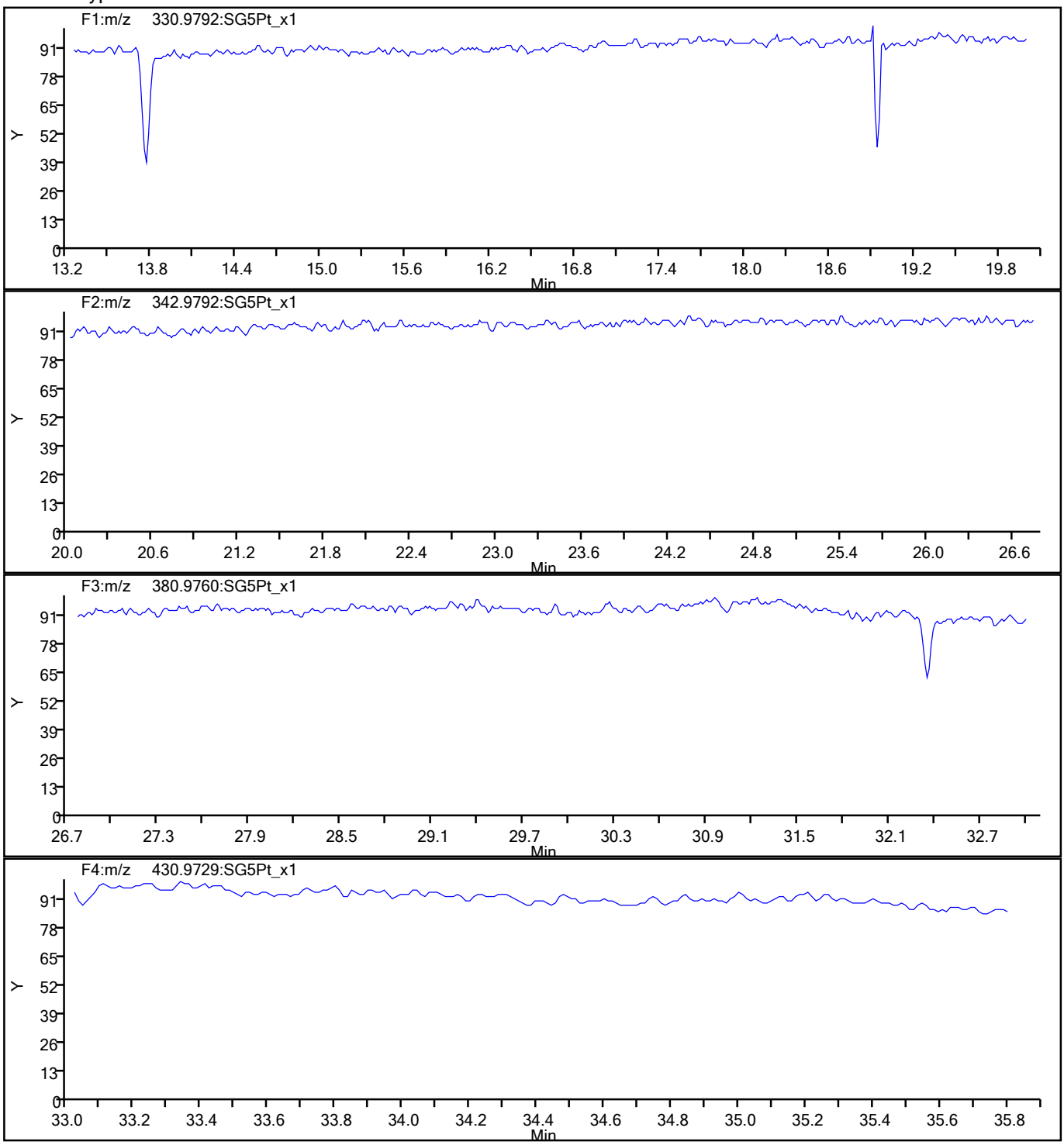

794215

Report Date: 26-Aug-2021 10:07:32 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_1.d		
Injection Date:	25-Aug-2021 09:38:15	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	1
Column Type:	DB-5	Column Dia:	0.32 mm

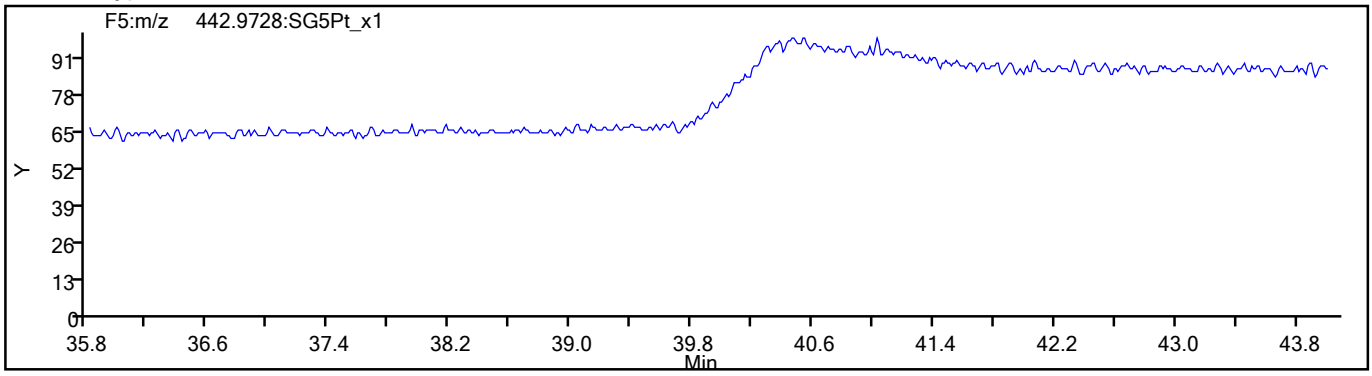

794216

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 25-Aug-2021 21:35:49 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521A WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:47:04 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 10:35:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.084	74388120	0.77	1.6249					0.00	
2,3,7,8-TCDF	17.099	159997258	0.76	1.0239	84.0	84.0	0.3627	0.3627		
A Non-2,3,7,8-sub-TCDF	17.069	140883117	0.77	1.0239	74.0	74.0	0.3627	37.6		
S Total TCDF					158.0	158.0	0.3627	0.3627		
D 13C-2,3,7,8-TCDD	17.779	40521919	0.78	0.8993					0.00	
2,3,7,8-TCDD	17.794	54572596	0.78	1.2541	43.0	43.0	0.2594	0.2594		
A Non-2,3,7,8-sub-TCDD	17.530	153892625	0.78	1.2541	121.1	121.1	0.2594	43.5		
S Total TCDD					164.1	164.1	0.2594	0.2594		
A F1 PeCDFs	19.851	65266147	1.58	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.067	54189309	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.696	82705634	1.58	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.331	53586347	1.22	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.519	39695684	1.26	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.603	43294157	1.04	1.4413						
1,2,3,4,7,8,9-HpCDF	34.673	36211070	1.05	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.138						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.393	28640279	1.03	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.223						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.710	89743358	0.77							
1,3,6,8-TCDD	15.617	54255255	0.78							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.172						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.917	38883880	1.26							
1,2,3,4,8,9-HxCDF	32.236	47807565	1.22							
1,2,3,4,6,7,9-HpCDD	33.846	31570188	1.03							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 25-Aug-2021 21:35:49 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521A WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 26-Aug-2021 10:47:04 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1604

First Level Reviewer: bennettd Date: 26-Aug-2021 10:35:11

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.084	17.084	0	1.000	32323167	8621543	6628	16570	1301		
317.9389	17.084	17.084	0	1.000	42064953	11085793	5116	12790	2167	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.099	17.099	0	1.001	69319978	16365691	28593	71482	572		
305.8987	17.099	17.099	0	1.001	90677280	21385185	44592	111480	480	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.945	17.069	53	1.050	30052123	7209328	28593	71482	252		
305.8987	17.945	17.069	53	1.050	39165578	9496018	44592	111480	213	0.77(0.65-0.89)	
303.9016	18.883	17.069	109	1.105	31094339	7154782	28593	71482	250		
305.8987	18.883	17.069	109	1.105	40571077	9344405	44592	111480	210	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.779	17.779	0	1.000	17742401	4421826	3384	8460	1307		
333.9339	17.779	17.779	0	1.000	22779518	5620867	2334	5835	2408	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.794	17.794	0	1.001	23998282	5996302	12780	31950	469		
321.8936	17.794	17.794	0	1.001	30574314	7642168	19893	49732	384	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.673	17.530	9	0.994	20564539	5151481	12780	31950	403		
321.8936	17.673	17.530	9	0.994	26572656	6761809	19893	49732	340	0.77(0.65-0.89)	
319.8965	17.961	17.530	26	1.010	24367217	5909696	12780	31950	462		
321.8936	17.961	17.530	26	1.010	30884604	7367861	19893	49732	370	0.79(0.65-0.89)	
319.8965	18.883	17.530	81	1.062	22563336	5247375	12780	31950	411		
321.8936	18.883	17.530	81	1.062	28940273	6736130	19893	49732	339	0.78(0.65-0.89)	
A F1 PeCDFs											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	19.155	19.851	-42	1.000	39966213	8908855	665	1662	13397		
341.8567	19.155	19.851	-42	1.000	25299934	5733839	983	2457	5833	1.58(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.656	23.067	-144	1.000	97574	17131	3361	8402	5		
341.8567	20.656	23.067	-144	1.000	54775	11836	2646	6615	4	1.78(1.32-1.78)	
339.8597	21.475	23.067	-95	1.000	127261	24792	3361	8402	7		
341.8567	21.475	23.067	-95	1.000	58432	13401	2646	6615	5	2.18(1.32-1.78)	
339.8597	22.034	23.067	-62	1.000	241269	41075	3361	8402	12		
341.8567	22.034	23.067	-62	1.000	188461	25346	2646	6615	10	1.28(1.32-1.78)	
339.8597	22.579	23.067	-29	1.000	168384	27442	3361	8402	8		
341.8567	22.566	23.067	-30	1.000	97299	18101	2646	6615	7	1.73(1.32-1.78)	
339.8597	25.252	23.067	131	1.000	32805798	5042919	3361	8402	1500		
341.8567	25.252	23.067	131	1.000	20419552	3191833	2646	6615	1206	1.61(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	20.902	23.696	-167	1.000	26002082	4742565	2517	6292	1884		
357.8516	20.902	23.696	-167	1.000	16527788	3016560	1584	3960	1904	1.57(1.32-1.78)	
355.8546	25.034	23.696	80	1.000	24642898	3723681	2517	6292	1479		
357.8516	25.034	23.696	80	1.000	15532866	2363453	1584	3960	1492	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.497	30.331	-170	1.000	29496594	4050629	4076	10190	994		
375.8178	27.484	30.331	-170	1.000	24089753	3299313	3201	8002	1031	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.042	30.519	-88	1.000	21909983	2755605	7443	18607	370		
391.8127	29.028	30.519	-89	1.000	17417167	2167101	5856	14640	370	1.26(1.05-1.43)	
389.8157	30.678	30.519	10	1.000	199387	39528	7443	18607	5		
391.8127	30.692	30.519	10	1.000	169147	31524	5856	14640	5	1.18(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603	33.603	0	1.000	22072838	8057659	19102	47755	422		
409.7789	33.603	33.603	0	1.000	21221319	8000430	19548	48870	409	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673	34.673	0	1.000	18558826	6373334	19102	47755	334		
409.7789	34.673	34.673	0	1.000	17652244	6113772	19548	48870	313	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						19102	47755			
409.7789	34.138						19548	48870			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	14534486	5108509	16615	41537	307		
425.7737	34.393	34.393	0	1.000	14105793	5035439	20282	50705	248	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						16615	41537			
425.7737	34.223						20282	50705			
1,3,6,8-TCDF											
303.9016	14.710	14.710	0		39075114	12523325	28593	71482	438		
305.8987	14.710	14.710	0		50668244	16274864	44592	111480	365	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,3,6,8-TCDD											
319.8965	15.617	15.617	0		23811446	6916572	12780	31950	541		
321.8936	15.617	15.617	0		30443809	8702675	19893	49732	437	0.78(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.537						28593	71482			
305.8987	17.537						44592	111480			
1,2,3,7-TCDD											
319.8965	18.172						12780	31950			
321.8936	18.172						19893	49732			
1,2,3,9-TCDD											
319.8965	18.414						12780	31950			
321.8936	18.414						19893	49732			
1,2,3,9-TCDF											
303.9016	18.414						28593	71482			
305.8987	18.414						44592	111480			
1,2,8,9-TCDD											
319.8965	19.382						12780	31950			
1,2,8,9-TCDF											
303.9016	19.427						28593	71482			
305.8987	19.427						44592	111480			
1,3,4,6,8-PeCDF											
339.8597	19.669						665	1662			
341.8567	19.669						983	2457			
1,2,4,7,9-PeCDD											
355.8546	21.480						2517	6292			
357.8516	21.480						1584	3960			
1,2,3,8,9-PeCDD											
355.8546	25.790						2517	6292			
357.8516	25.790						1584	3960			
1,2,3,8,9-PeCDF											
339.8597	26.021						3361	8402			
341.8567	26.021						2646	6615			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						4076	10190			
375.8178	28.333						3201	8002			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						7443	18607			
391.8127	29.890						5856	14640			
1,2,3,4,6,7-HxCDD											
389.8157	31.917	31.917	0		21657242	6174171	7443	18607	830		
391.8127	31.903	31.917	-1		17226638	4945369	5856	14640	844	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.236	32.236	0		26293189	8356423	4076	10190	2050		
375.8178	32.236	32.236	0		21514376	6764058	3201	8002	2113	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.846	33.846	0		16052996	5838798	16615	41537	351		
425.7737	33.846	33.846	0		15517192	5735924	20282	50705	283	1.03(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	74388120	19707336

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	74388120	19707336

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.945	30052123	7209328	39165578	9496018	36.4	0.77	
18.883	31094339	7154782	40571077	9344405	37.6	0.77	
Signal Totals:							
	61146462	14364110	79736655	18840423			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	140883117	33204533				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 73.987 = (140883117 * 40.000) / (74388120 * 1.024)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	40521919	10042693

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	40521919	10042693

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.673	20564539	5151481	26572656	6761809	37.1	0.77	
17.961	24367217	5909696	30884604	7367861	43.5	0.79	
18.883	22563336	5247375	28940273	6736130	40.5	0.78	
Signal Totals:							
	67495092	16308552	86397533	20865800			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	153892625	37174352				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 121.129 = (153892625 * 40.000) / (40521919 * 1.254)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.155	39966213	8908855	25299934	5733839		1.58	
Signal Totals:							
	39966213	8908855	25299934	5733839			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	65266147	14642694				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (65266147 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.656	97574	17131	54775	11836		1.78	
21.475	127261	24792	58432	13401		2.18	R
22.034	241269	41075	188461	25346		1.28	R
22.579	168384	27442	97299	18101		1.73	
25.252	32805798	5042919	20419552	3191833		1.61	
Signal Totals:							
	33440286	5153359	20818519	3260517			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	54258805	8413876				1.61	RQ
	54189309	8411009					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (54258805 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (54189309 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.902	26002082	4742565	16527788	3016560		1.57	
25.034	24642898	3723681	15532866	2363453		1.59	
Signal Totals:							
	50644980	8466246	32060654	5380013			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	82705634	13846259				1.58	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (82705634 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-HxCDF, RT: 30.331

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.497	29496594	4050629	24089753	3299313		1.22	
Signal Totals:							
	29496594	4050629	24089753	3299313			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	53586347	7349942				1.22	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (53586347 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d
Lims ID: WDM
Client ID:
Inject. Date: 25-Aug-2021 21:35:49 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 2

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.042	21909983	2755605	17417167	2167101		1.26	
30.678	199387	39528	169147	31524		1.18	
Signal Totals:							
	22109370	2795133	17586314	2198625			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	39695684	4993758				1.26	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (39695684 * 0.0) / (0 * 0.000)

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

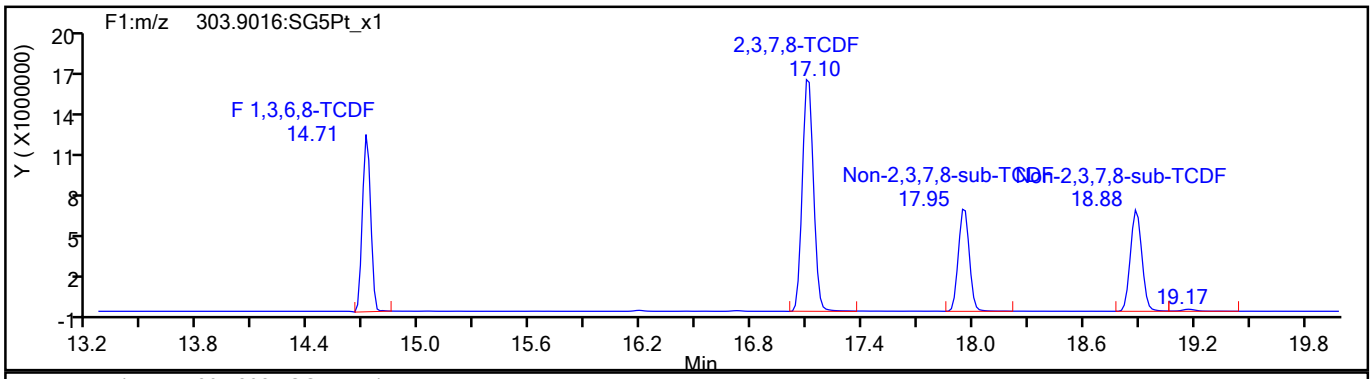

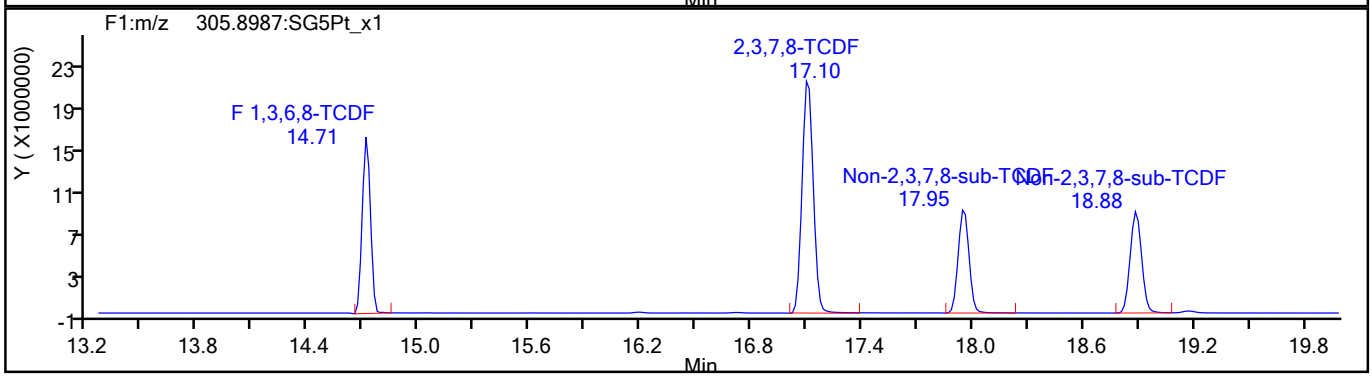

TCDF Standards

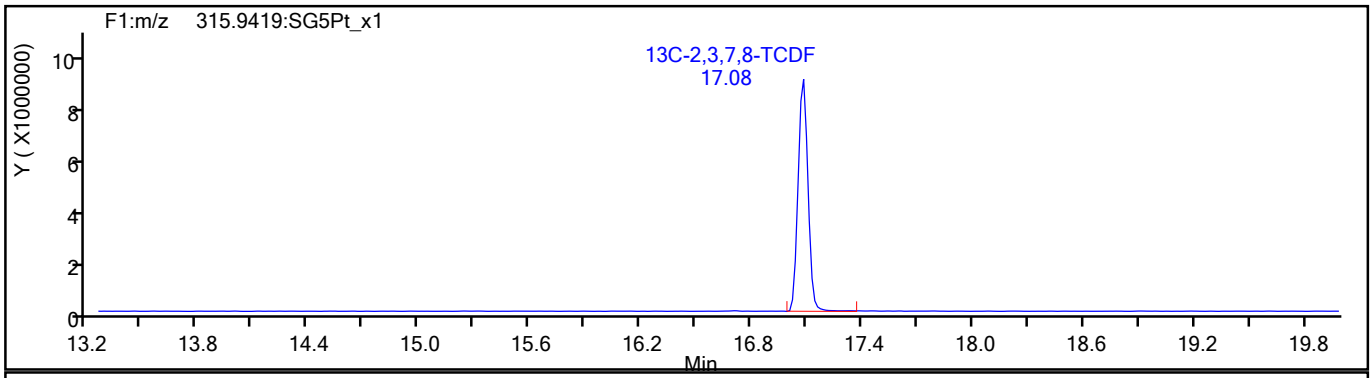

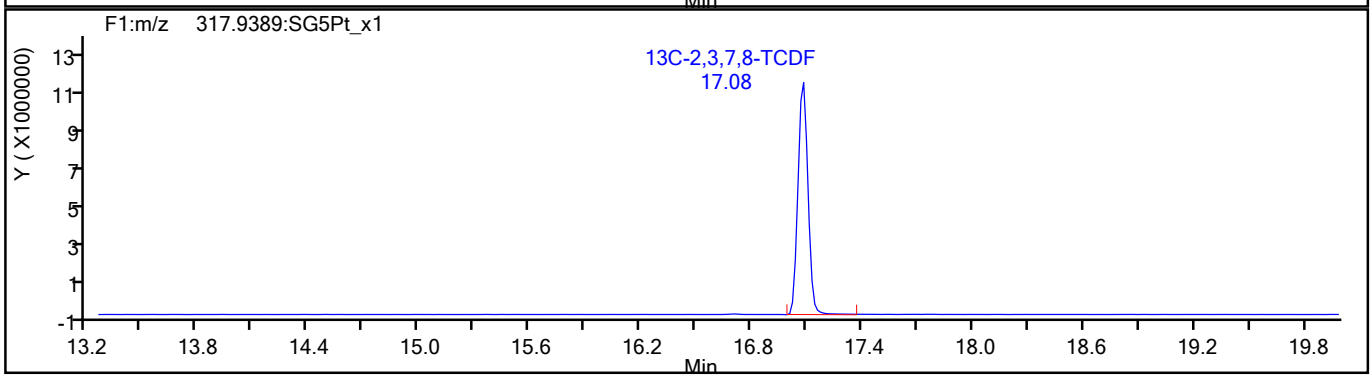

794230

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

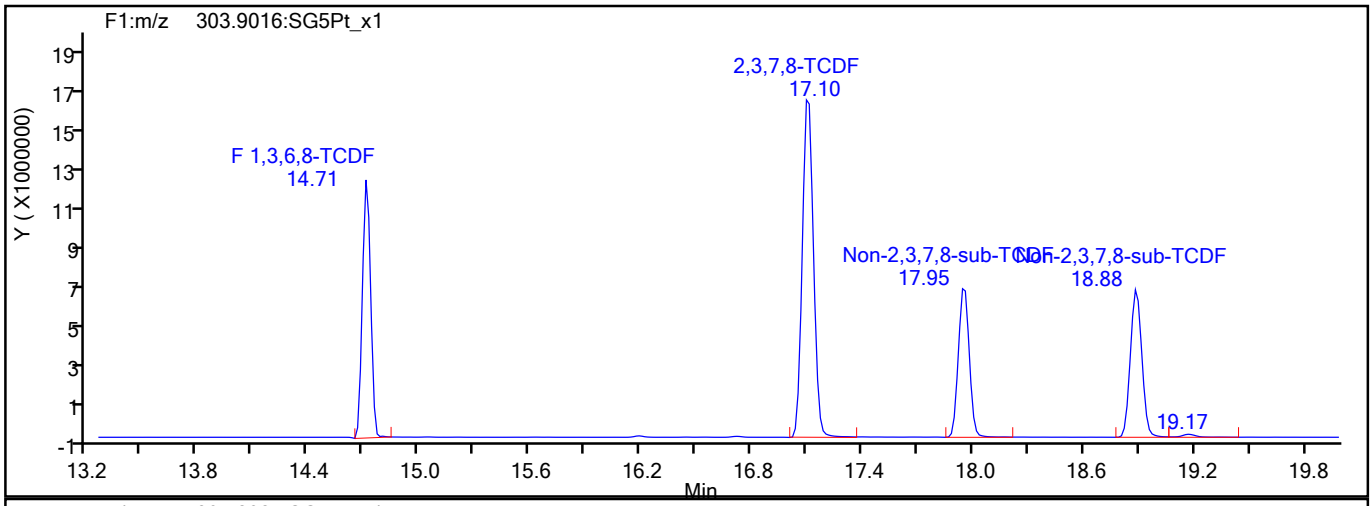

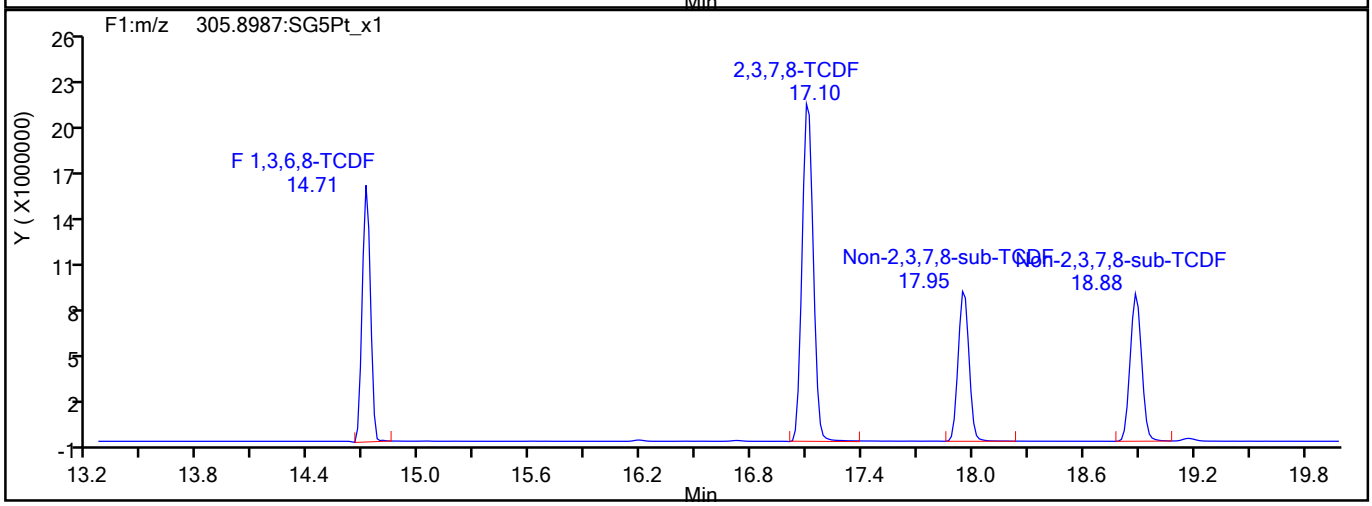

TCDF Interference Mass

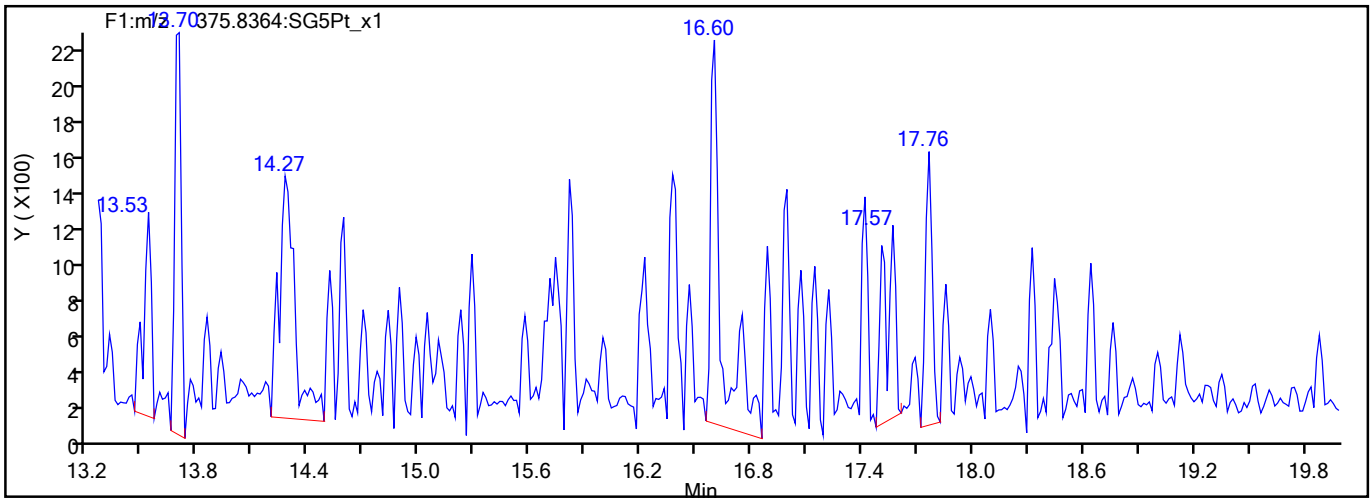

794231

Report Date: 26-Aug-2021 10:47:04 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

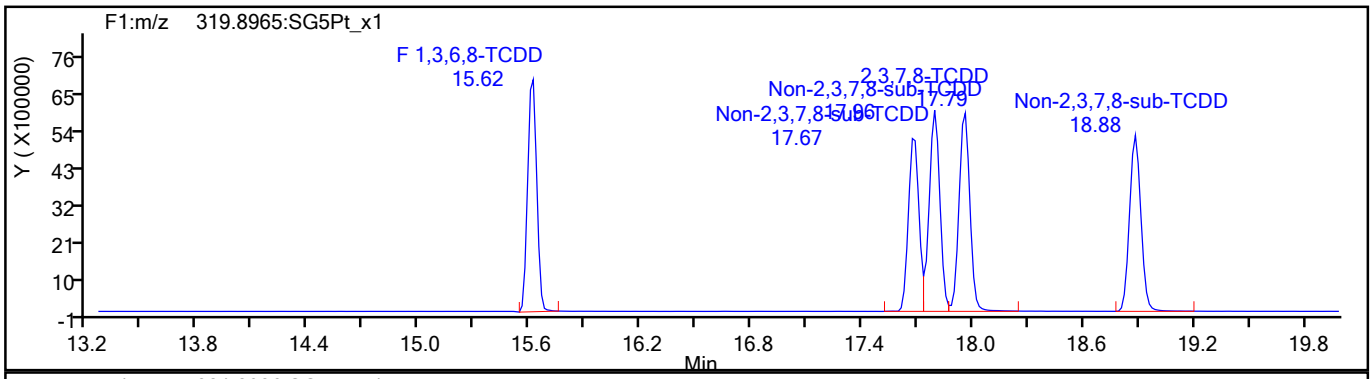

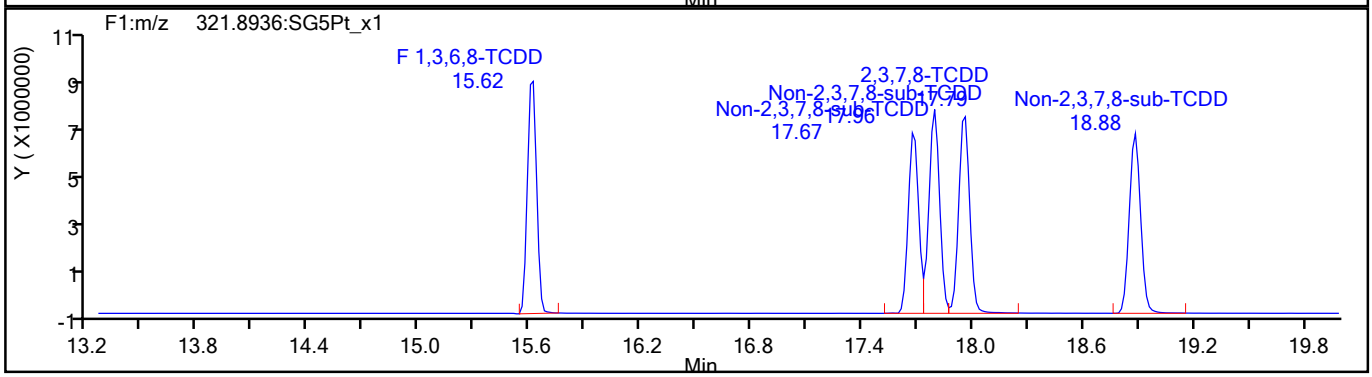

TCDD Standards

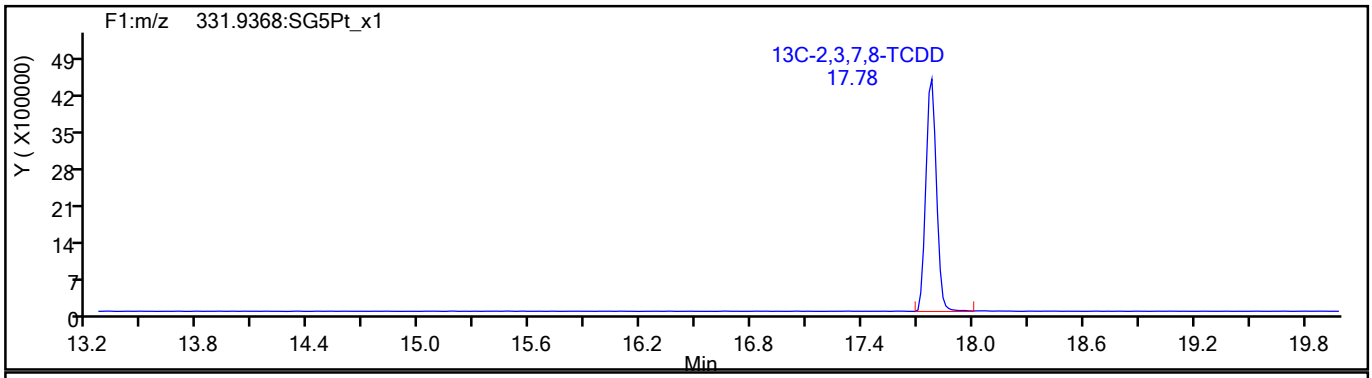

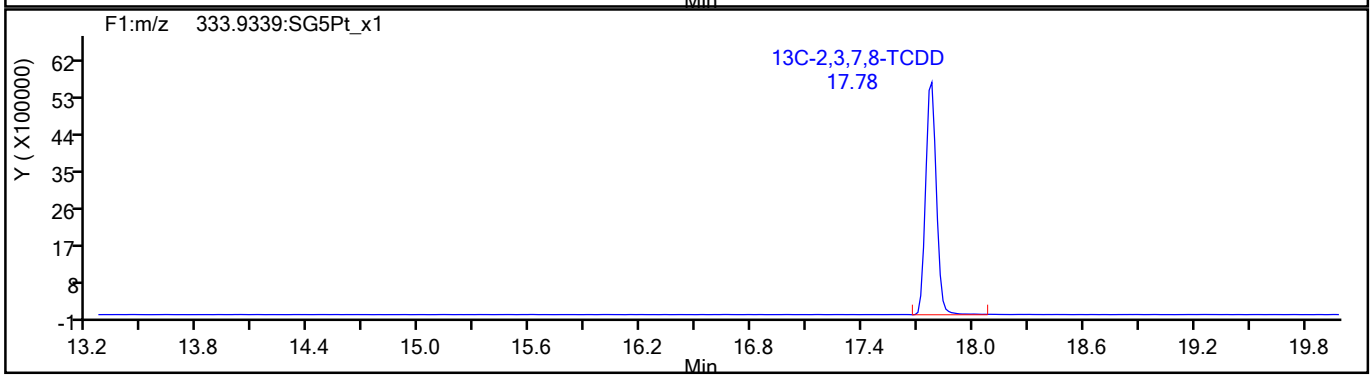

794232

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

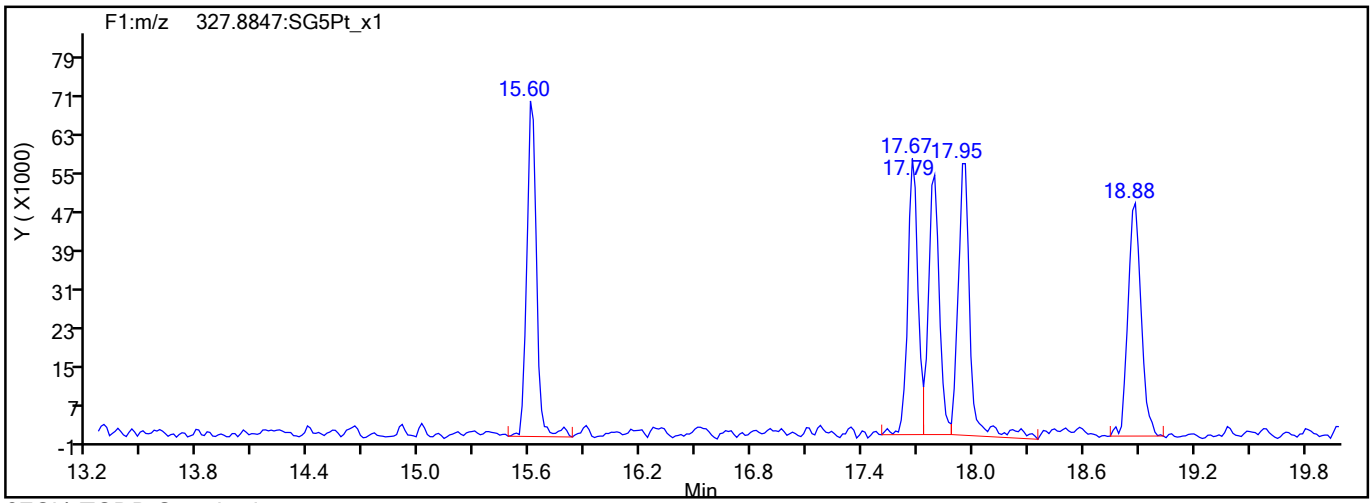

37Cl4-TCDD Standards

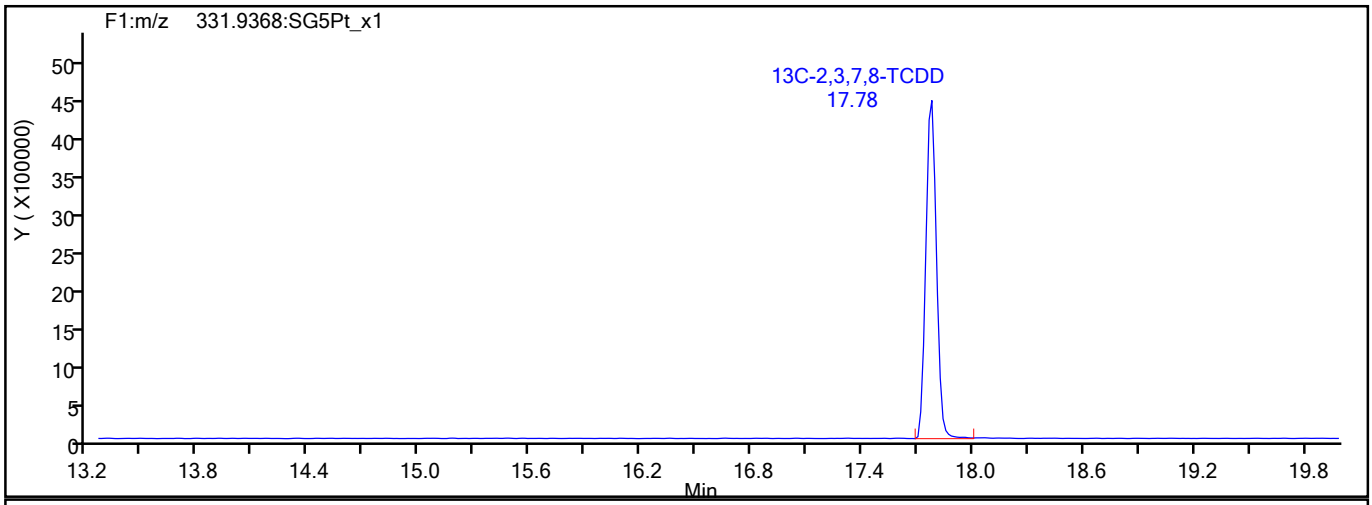

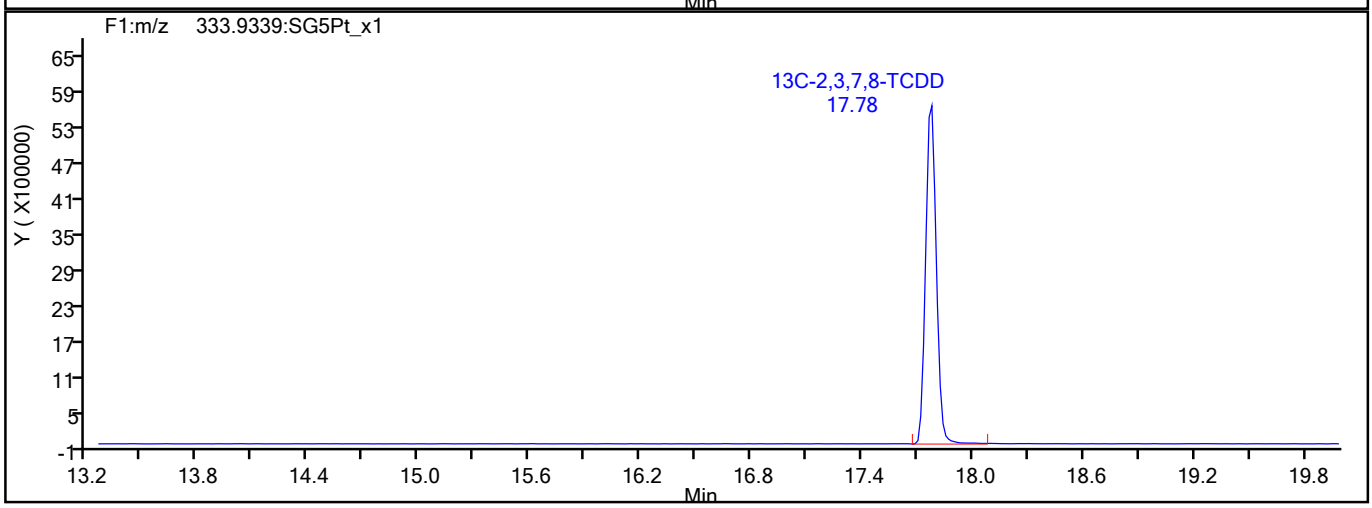

794233

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

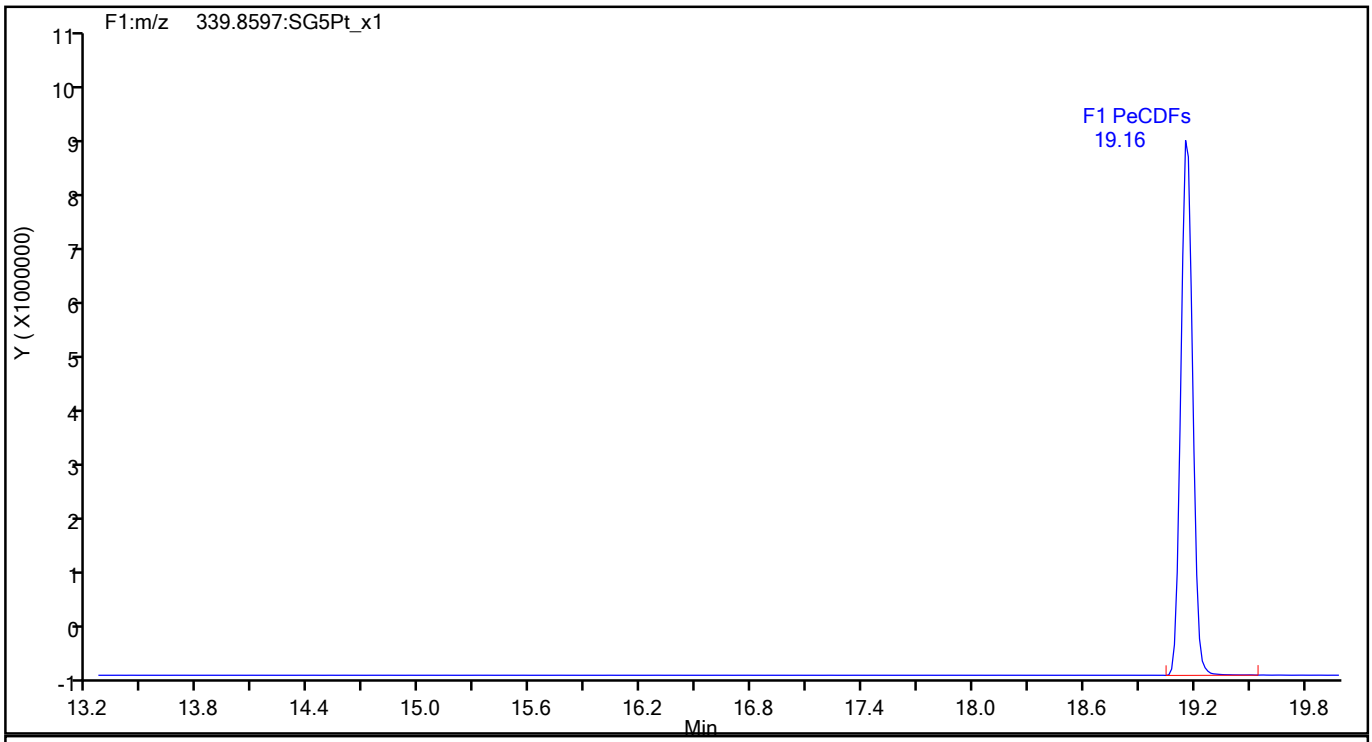

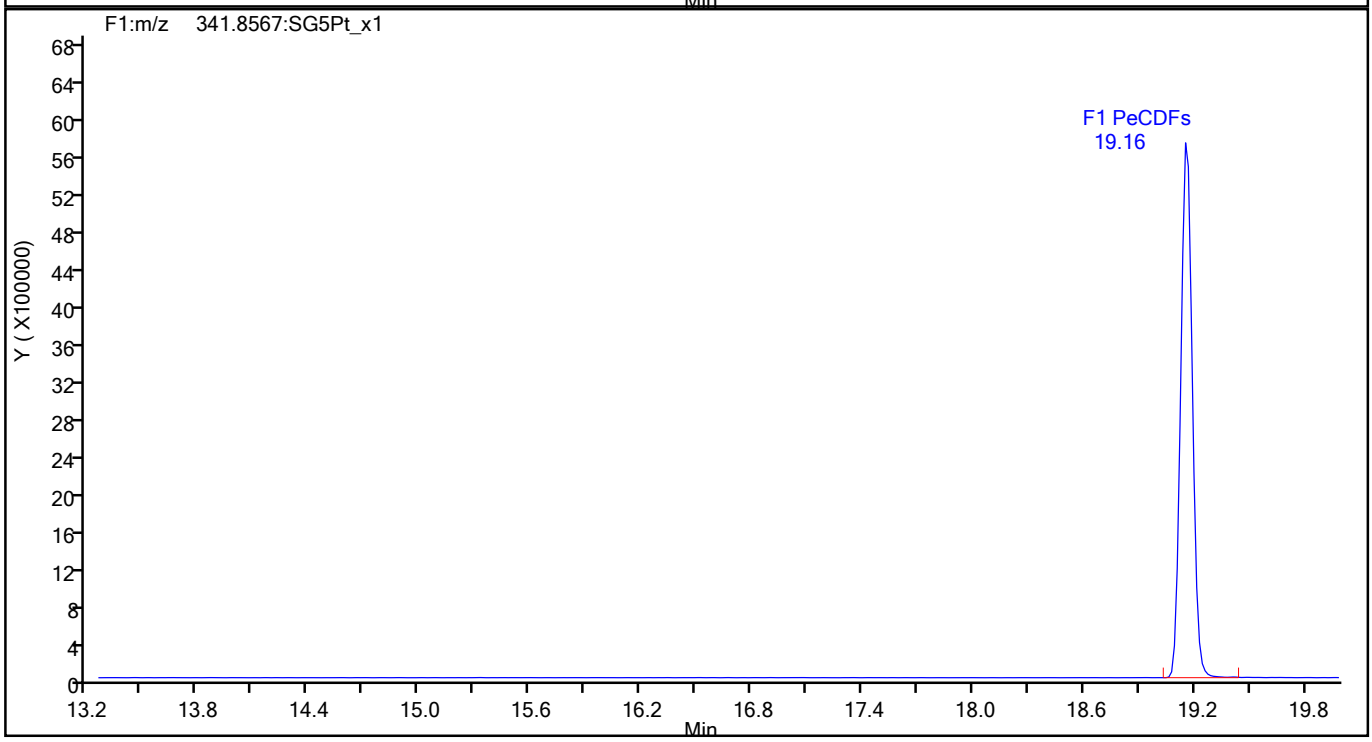

794234

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

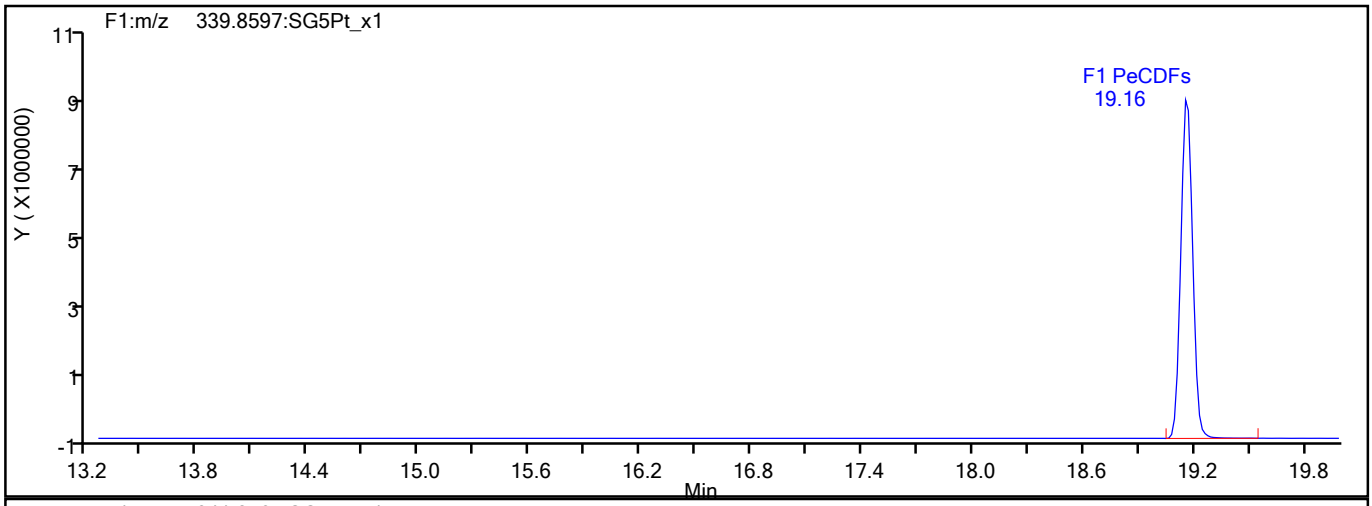

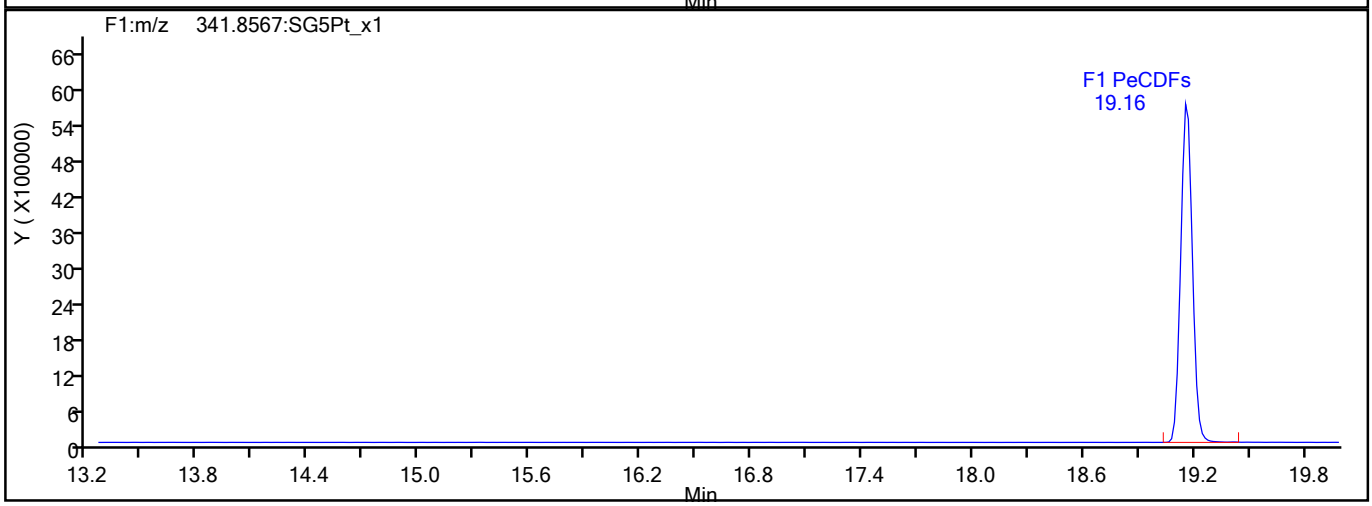

F1 PeCDFs Interference Mass

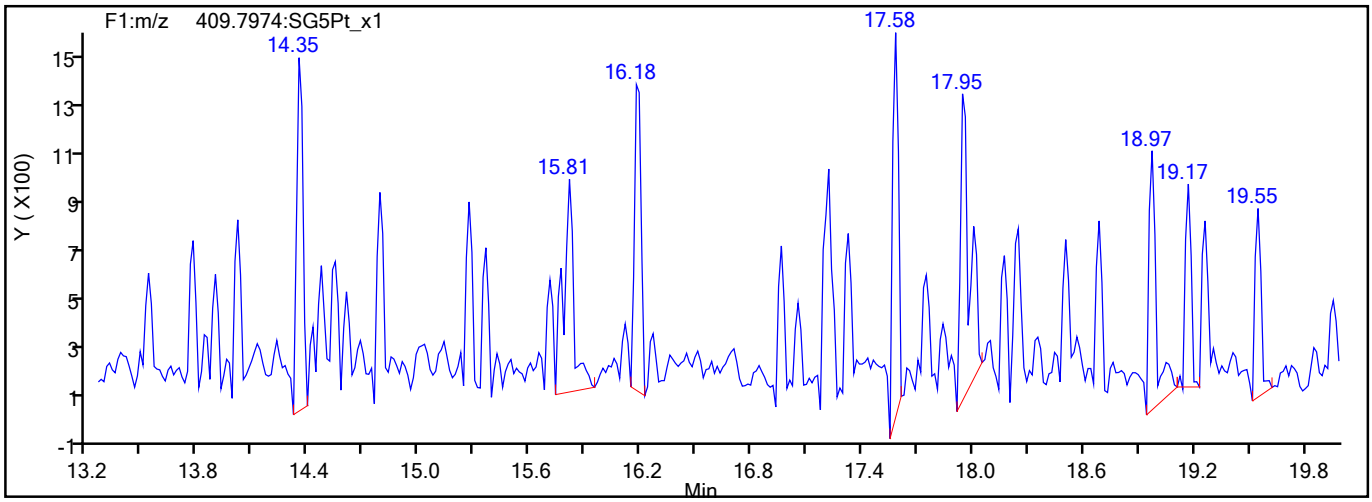

794235

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

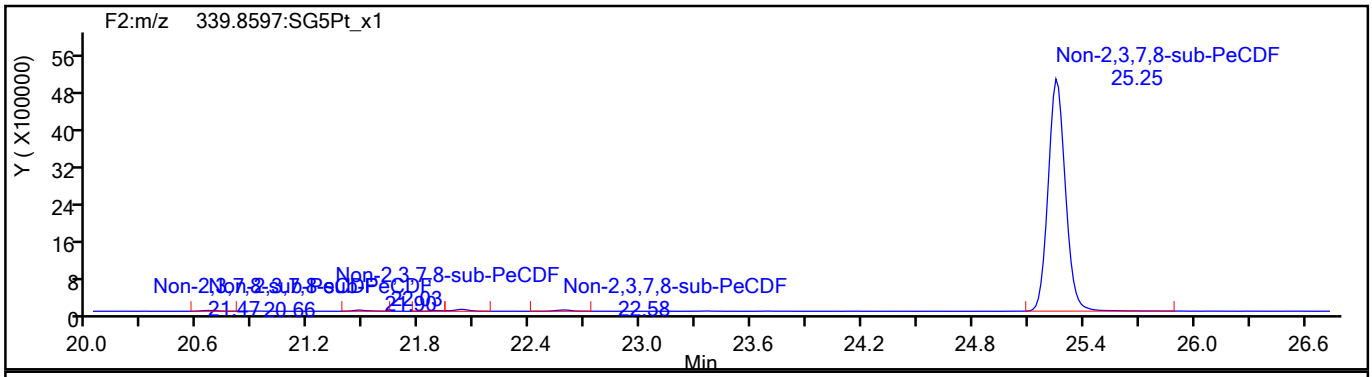

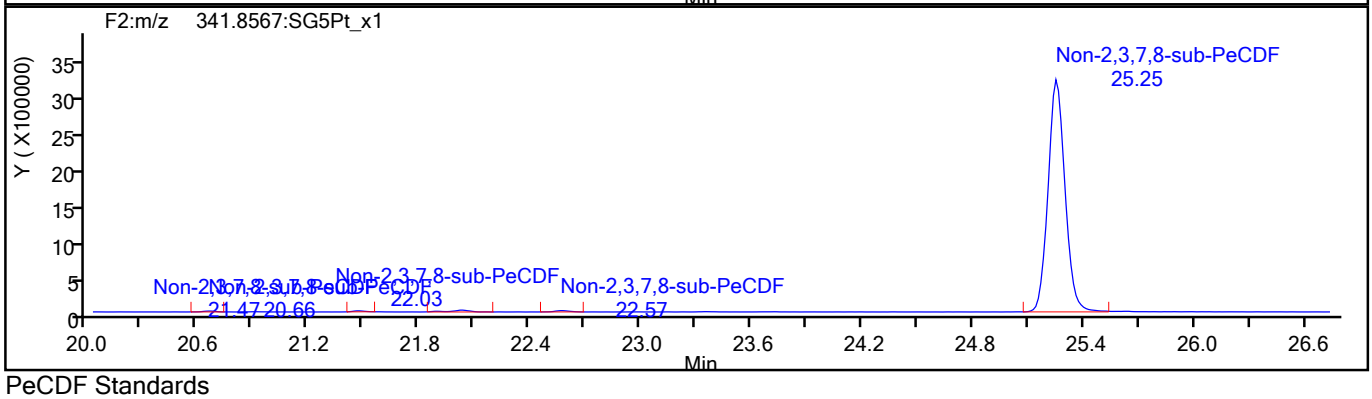

PeCDF Standards

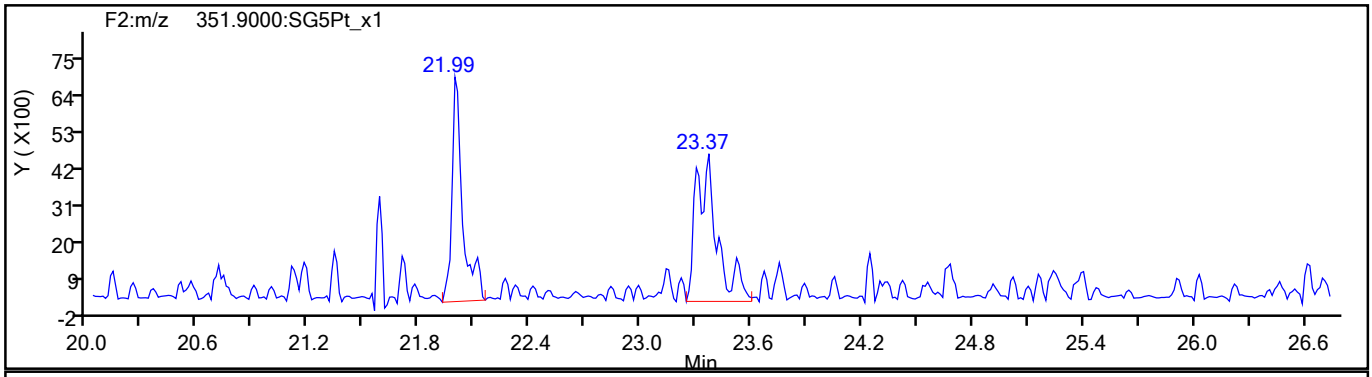

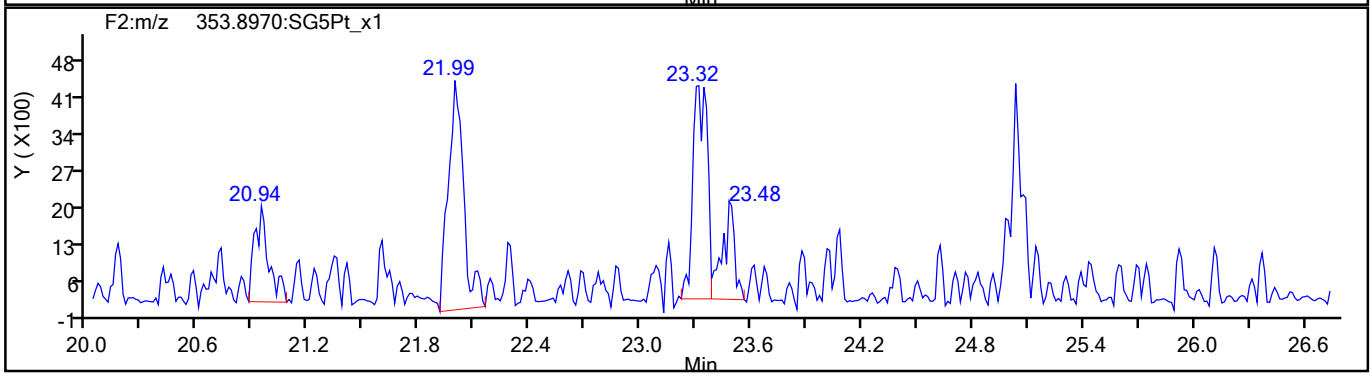

794236

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

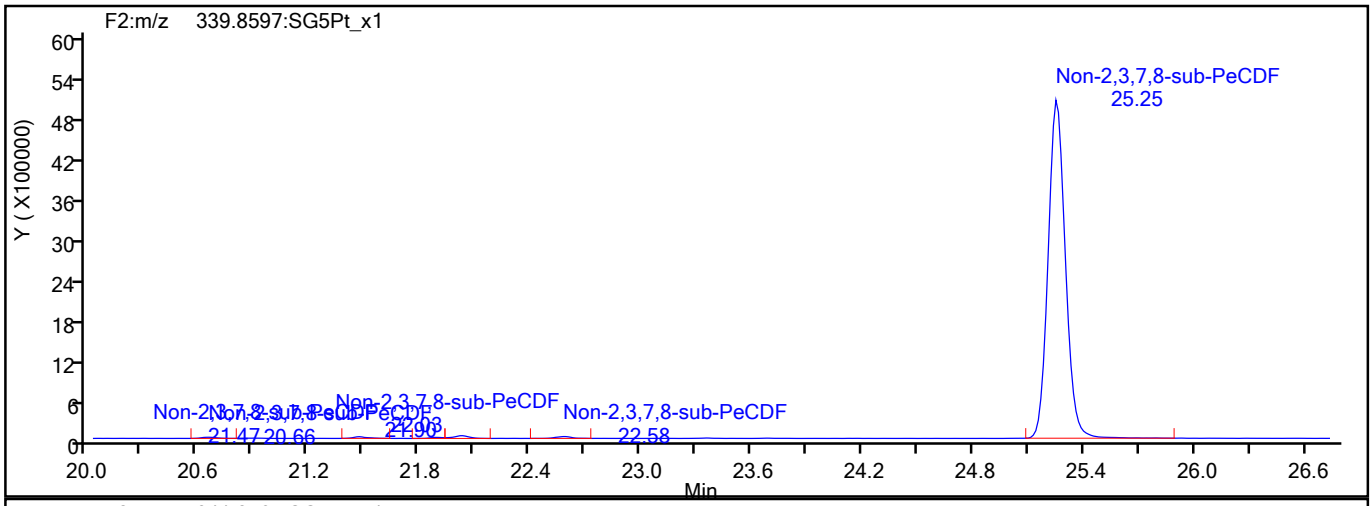

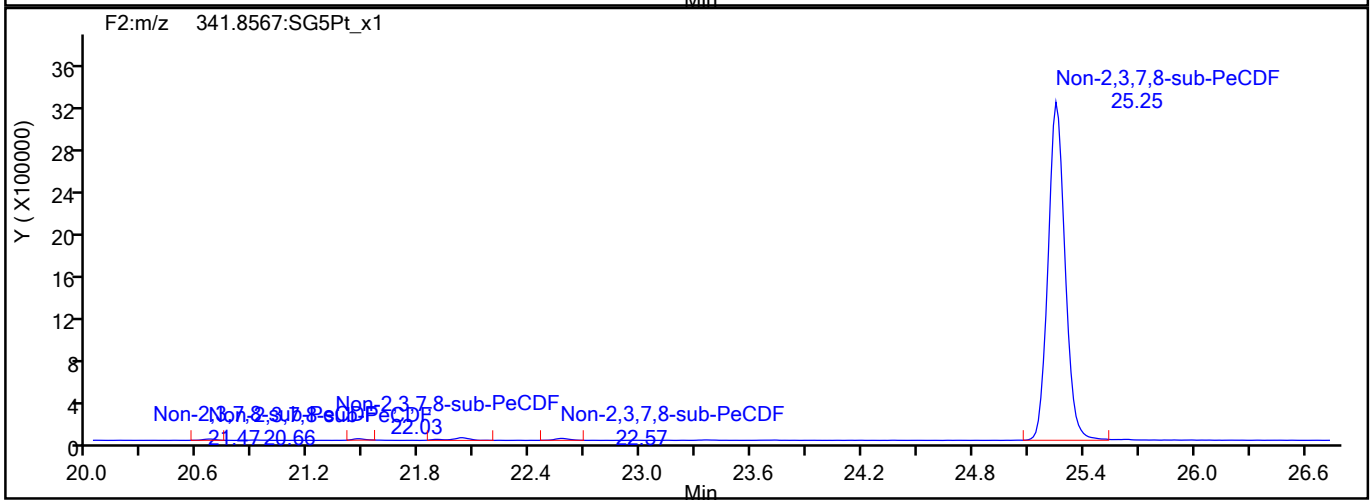

PeCDF Interference Mass

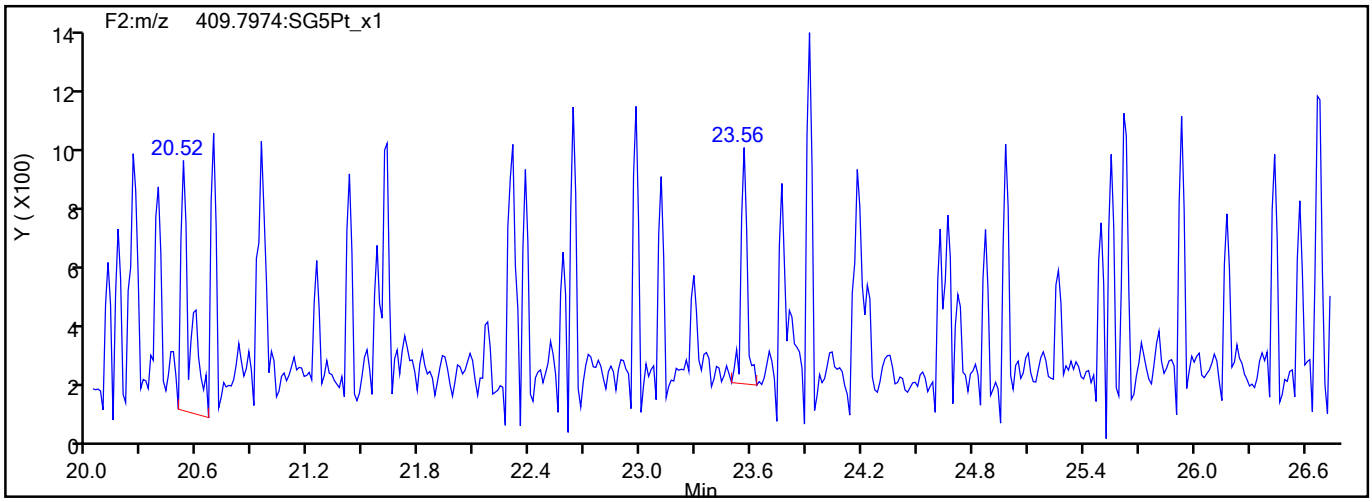

794237

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

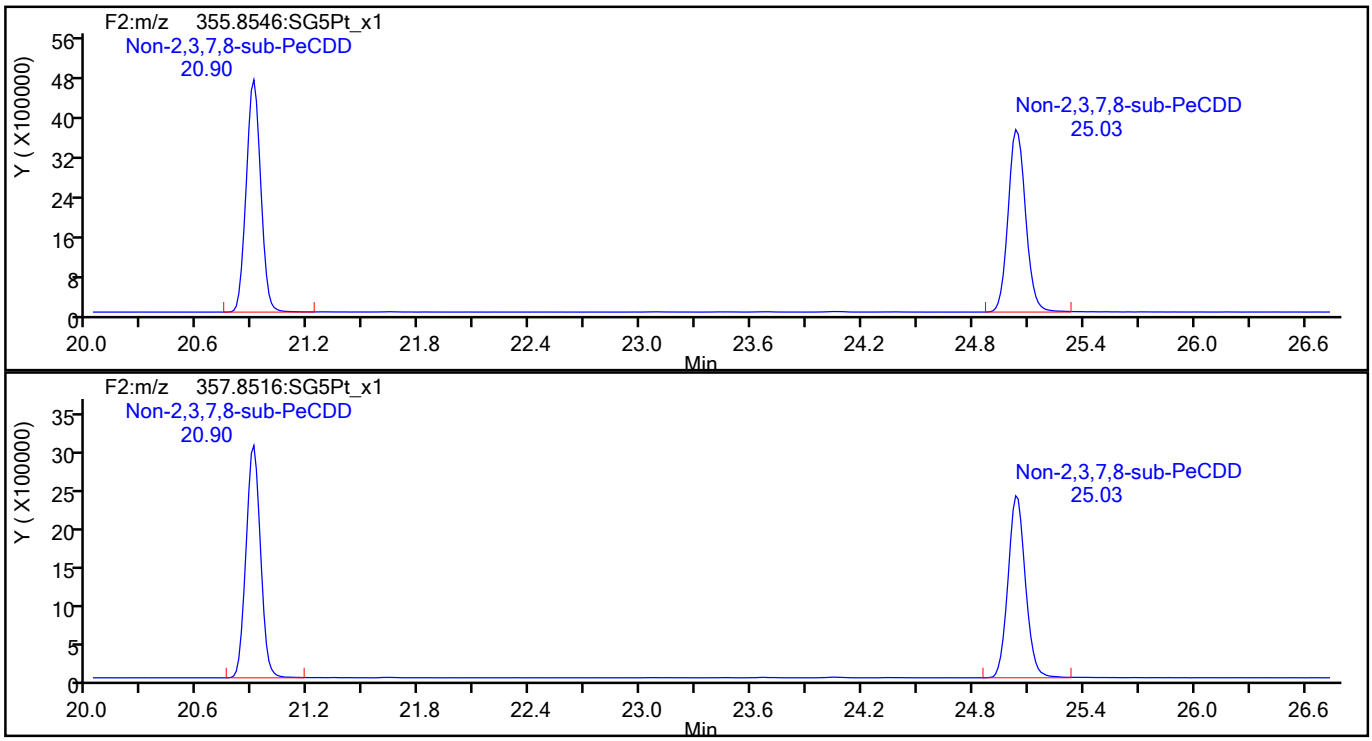

PeCDD Standards

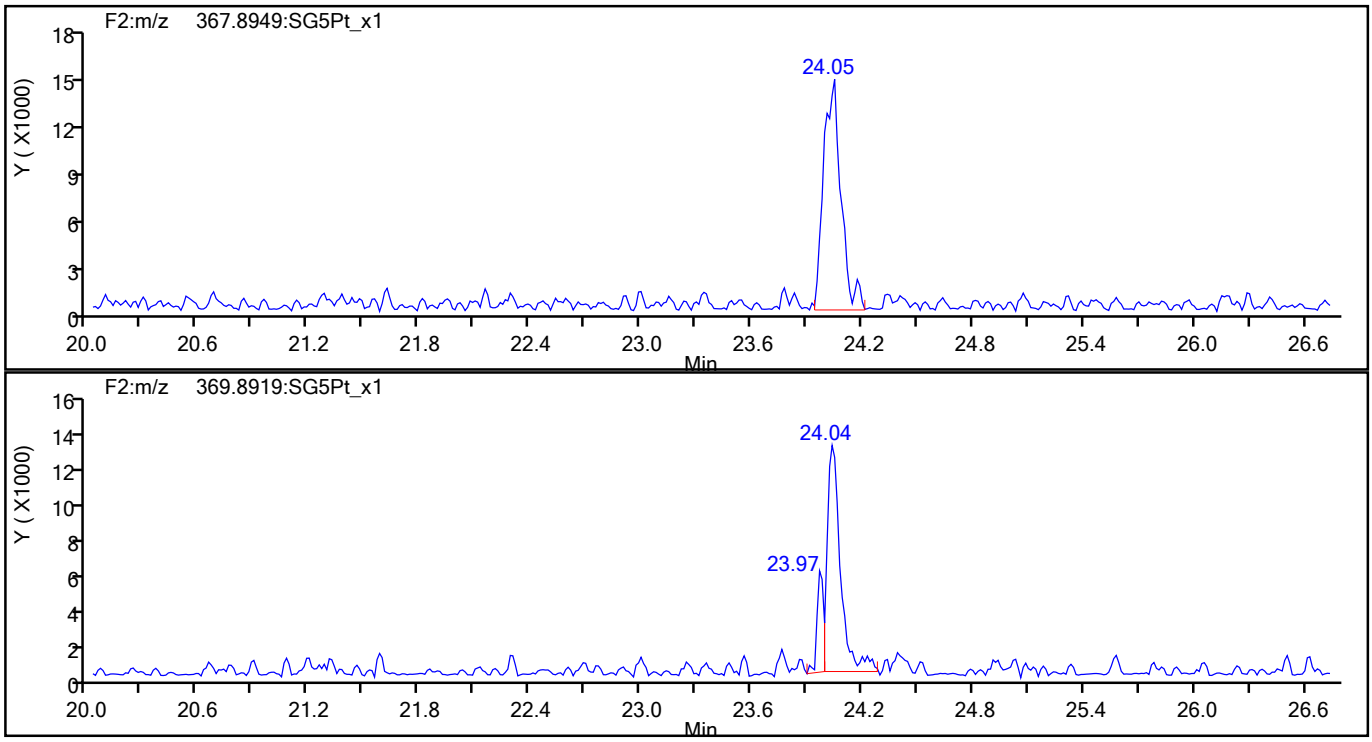

794238

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

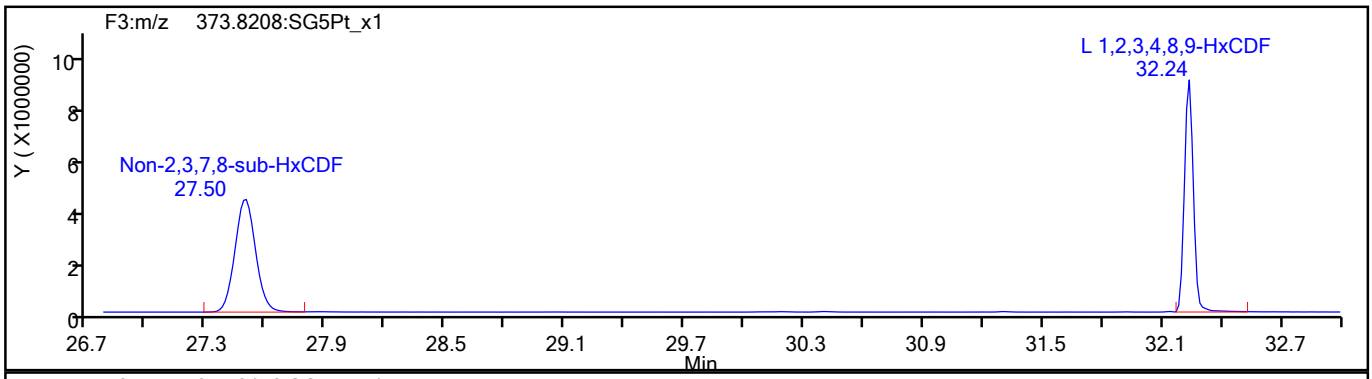

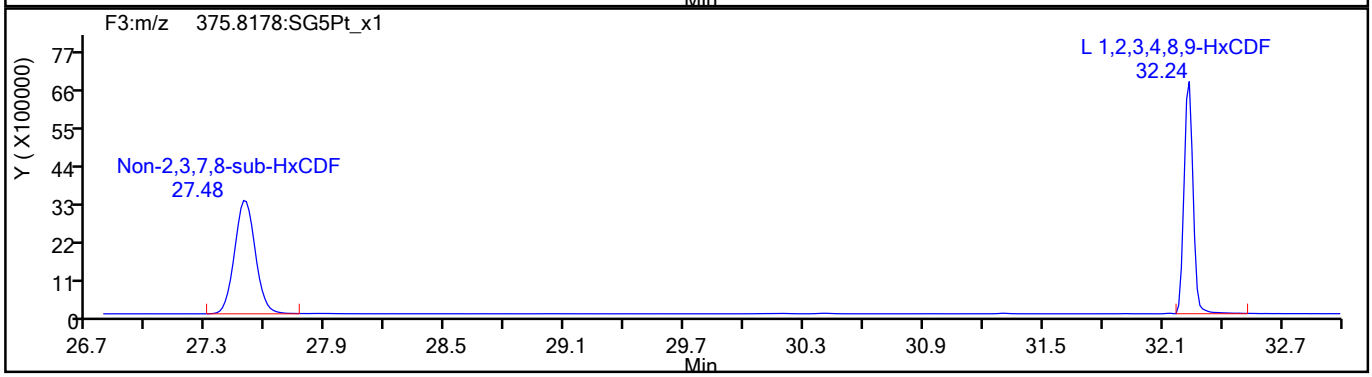

HxCDF Standards

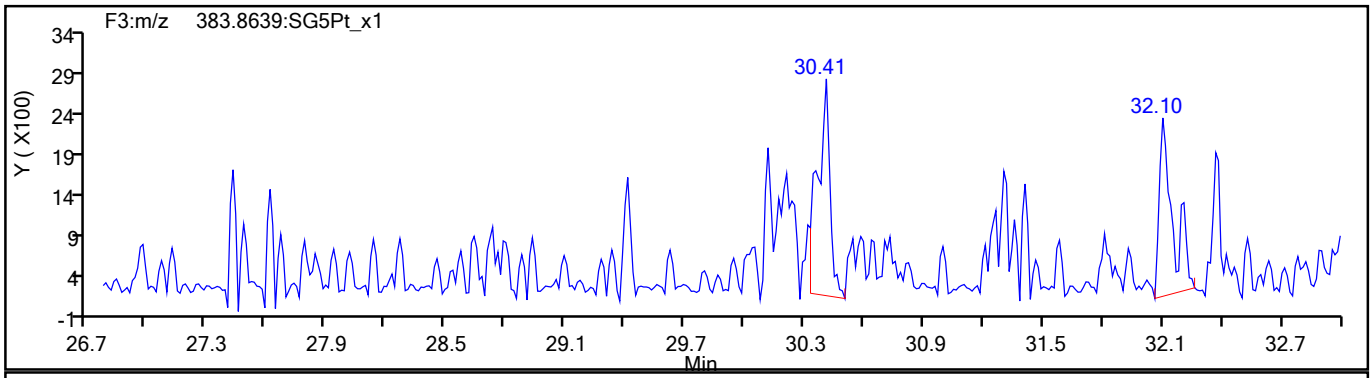

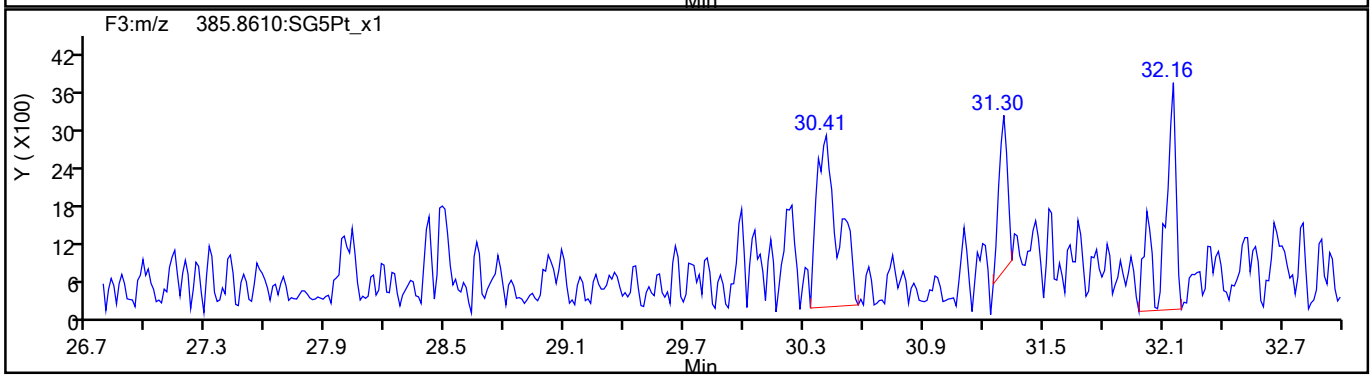

794239

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_16.d		
Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDF

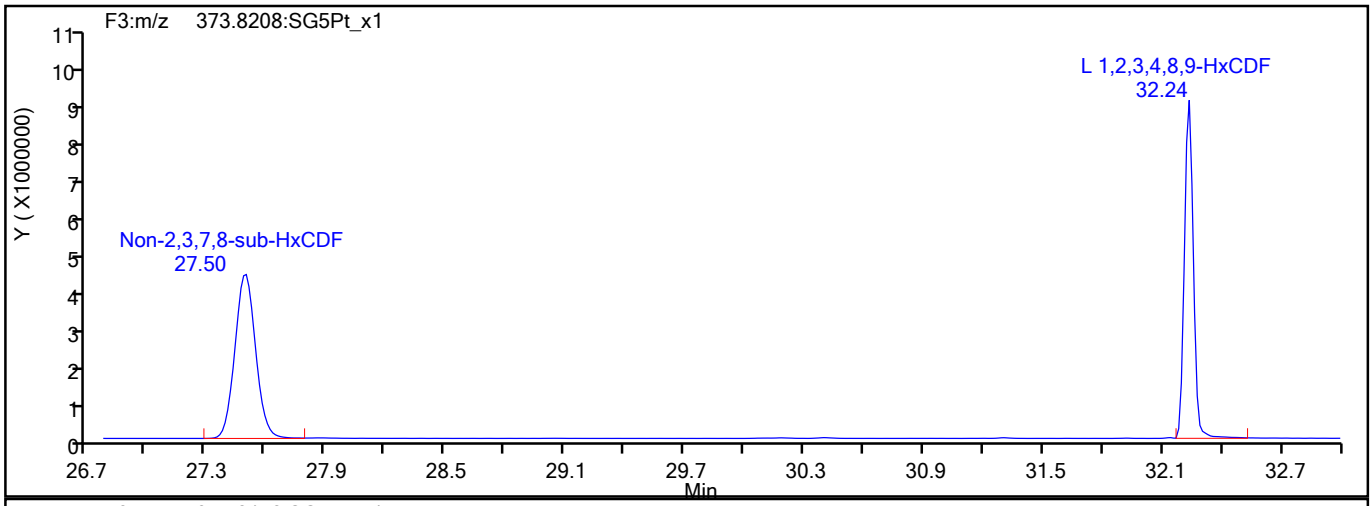

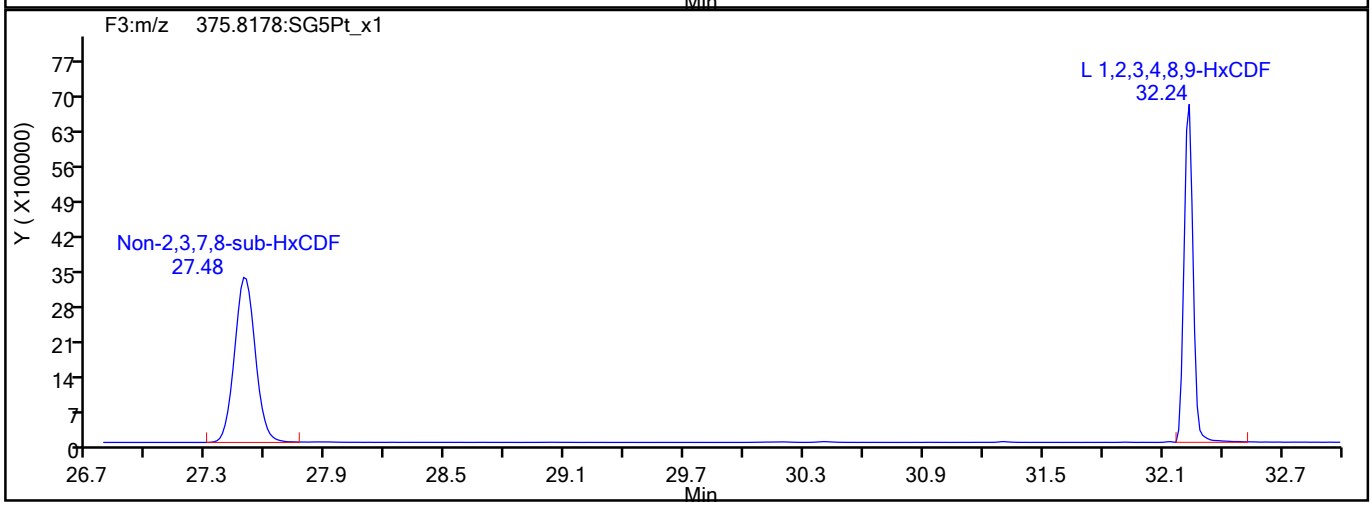

HxCDF Interference Mass

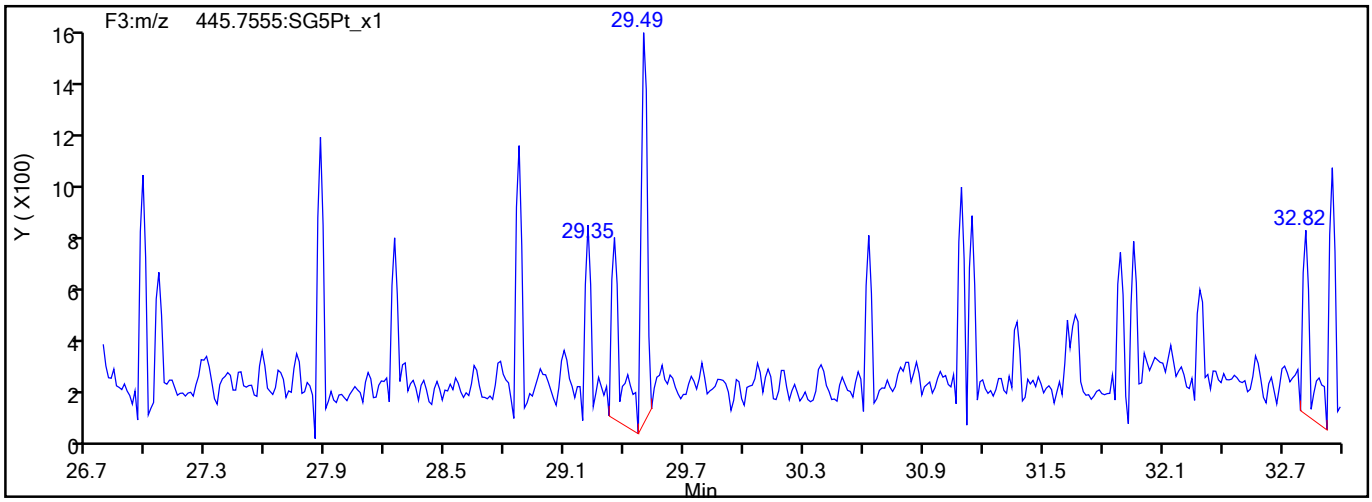

794240

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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HxCDD

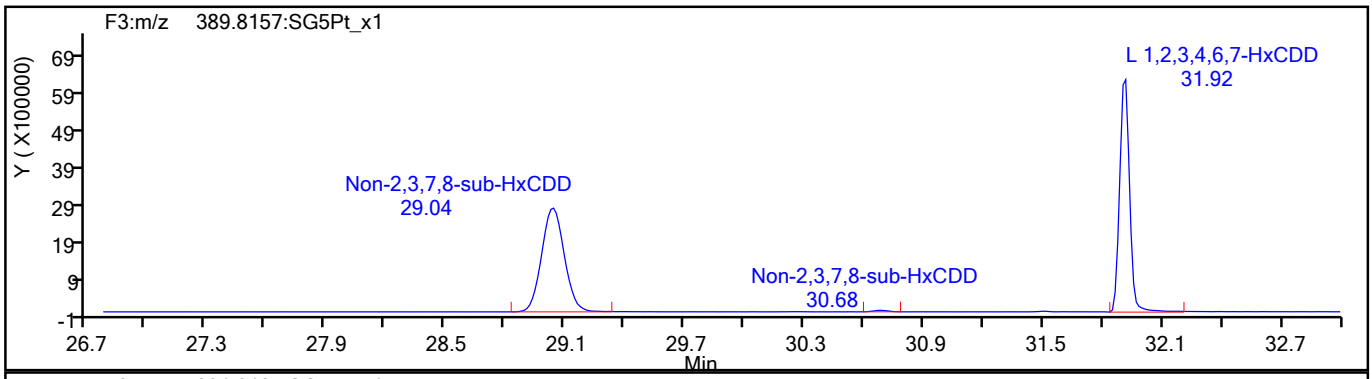

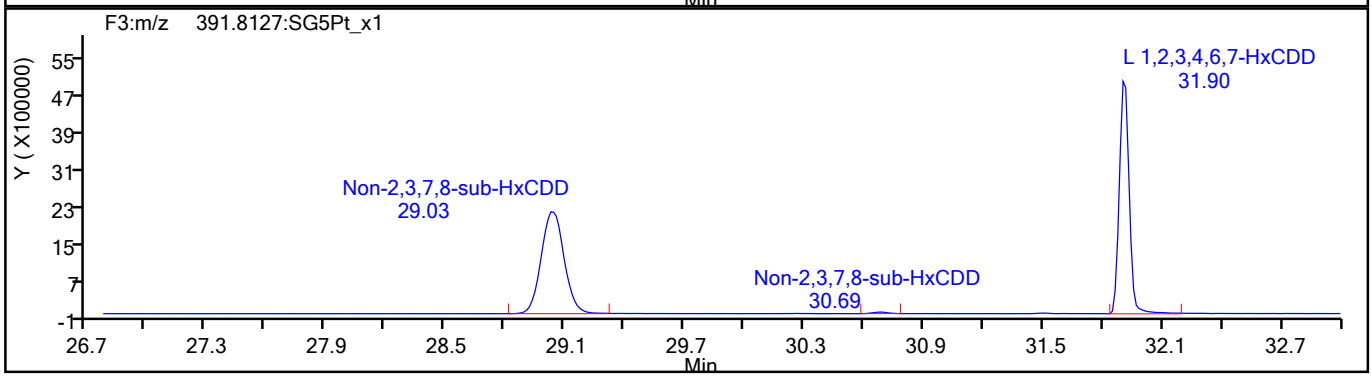

HxCDD Standards

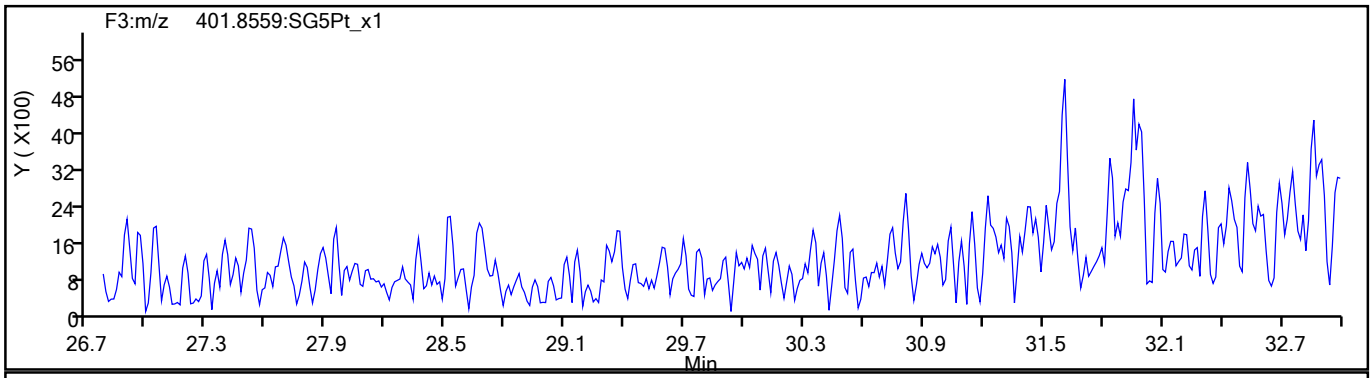

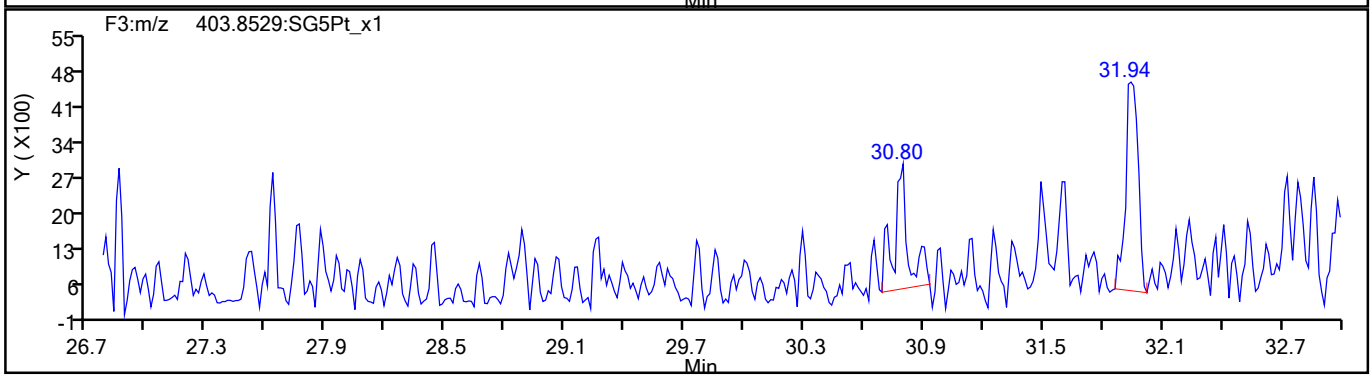

794241

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
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HpCDF

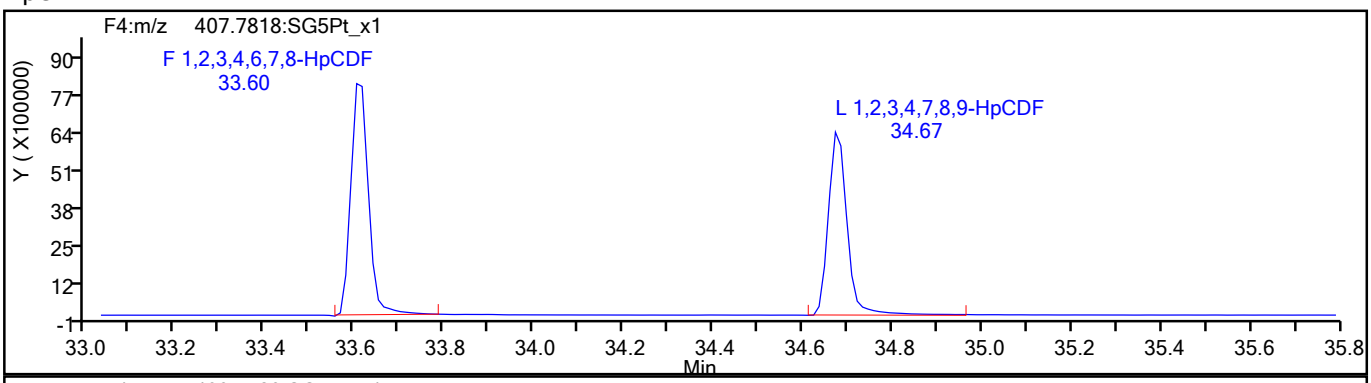

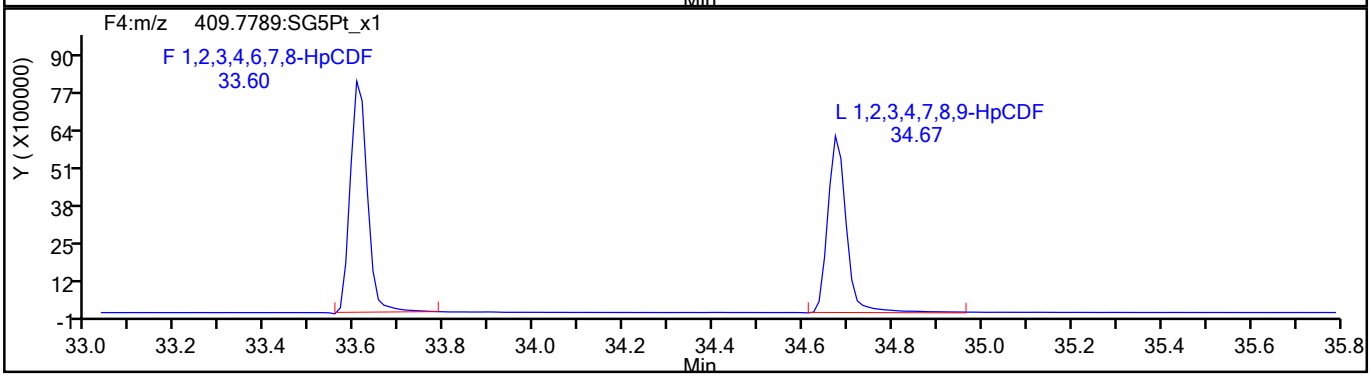

HpCDF Standards

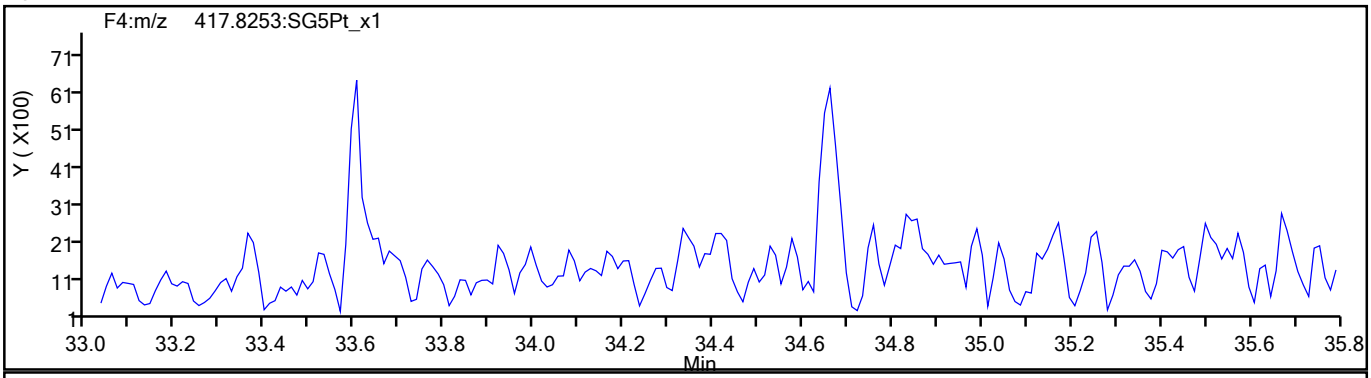

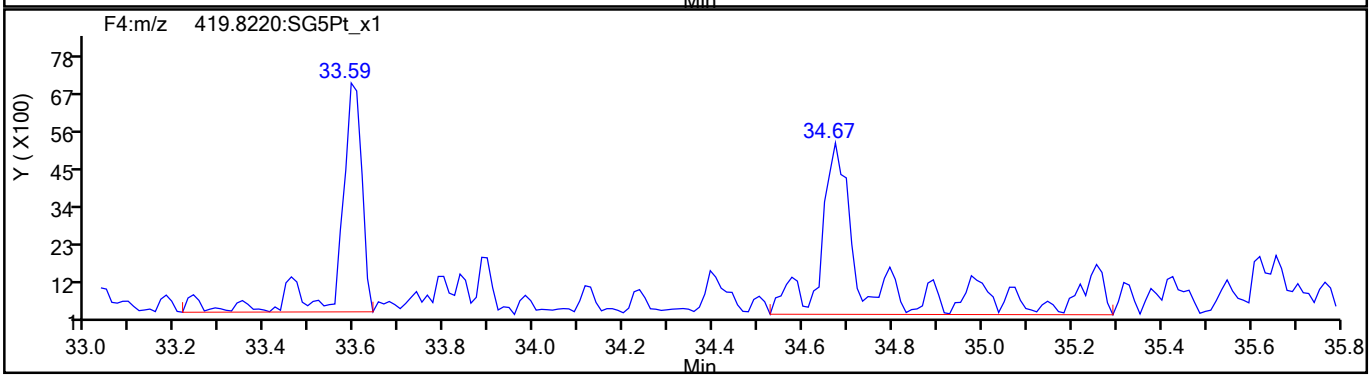

794242

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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HpCDF

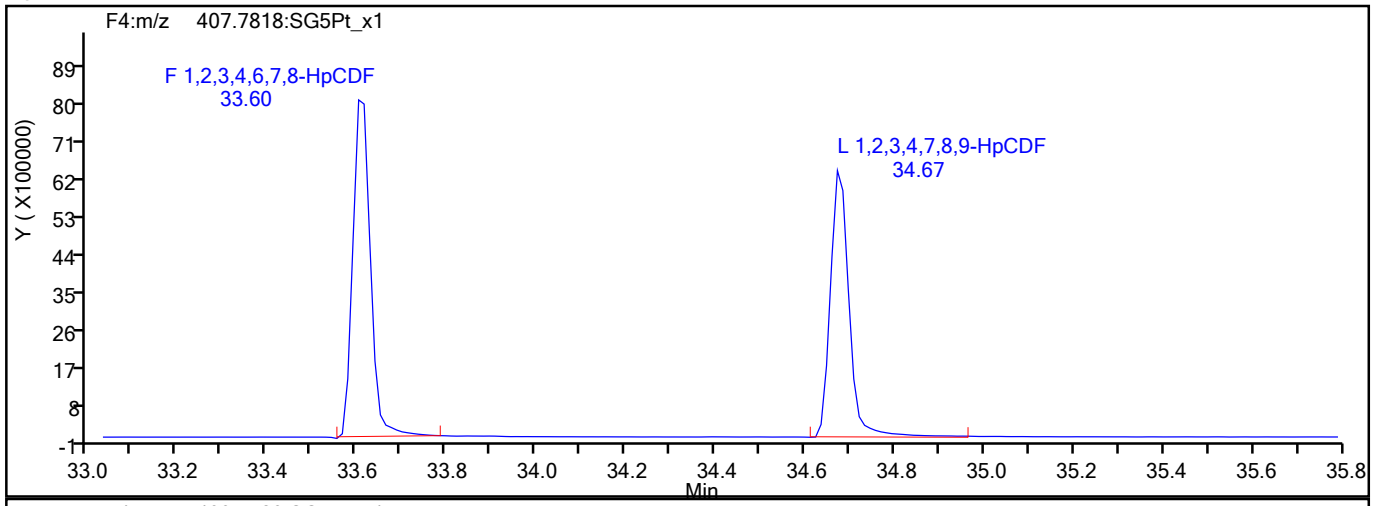

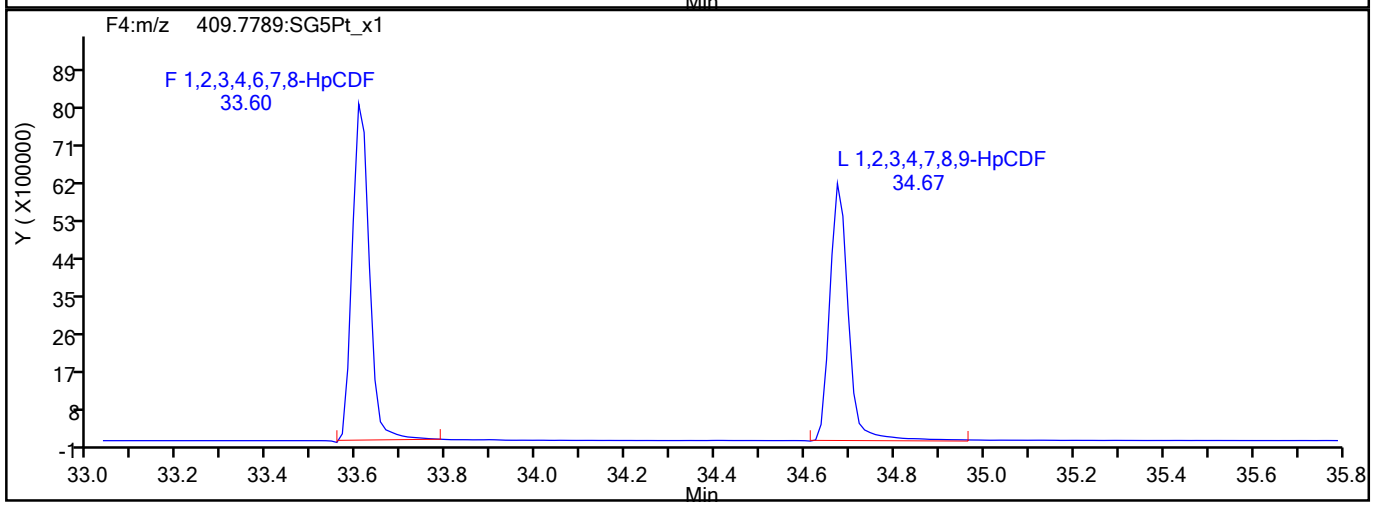

HpCDF Interference Mass

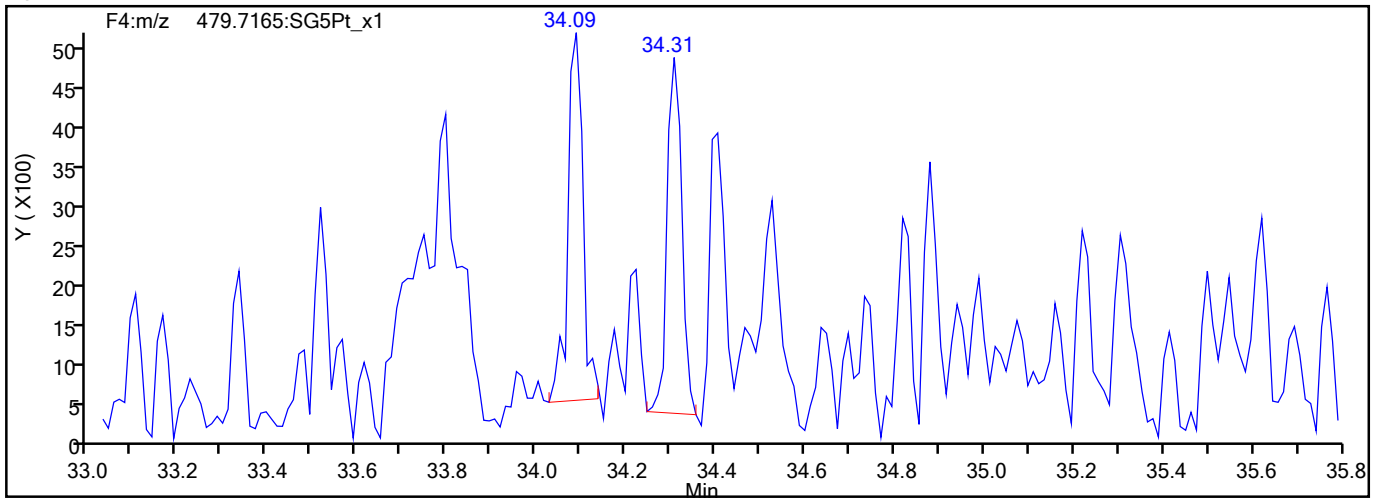

794243

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519955	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

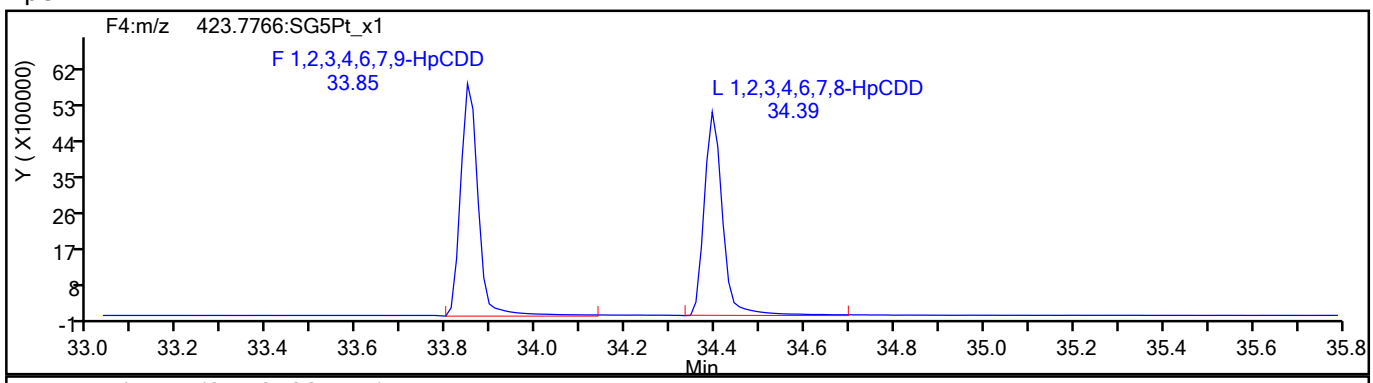

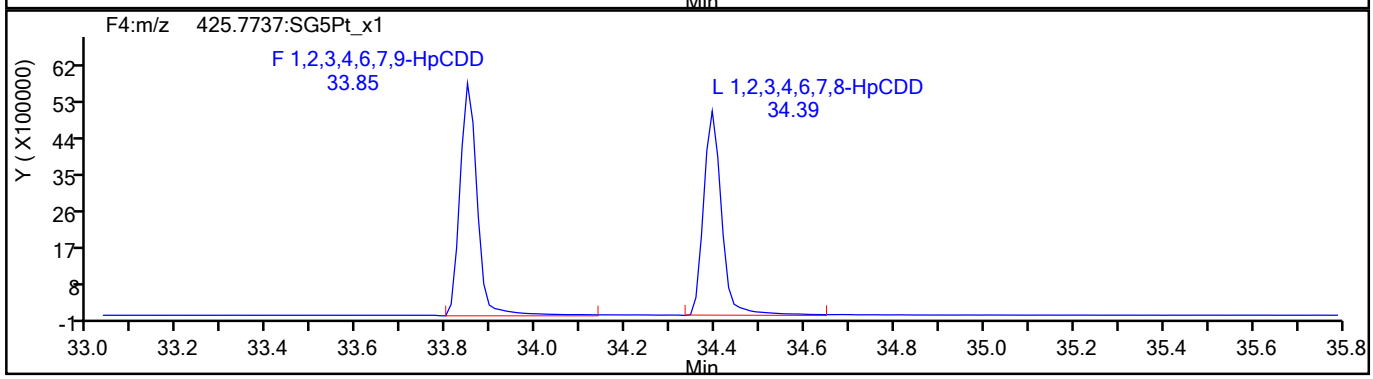

HpCDD Standards

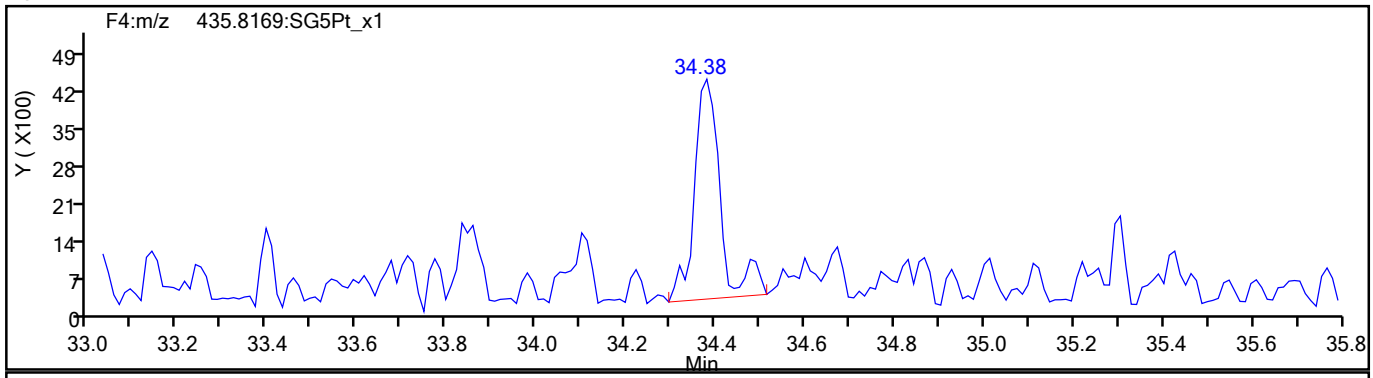

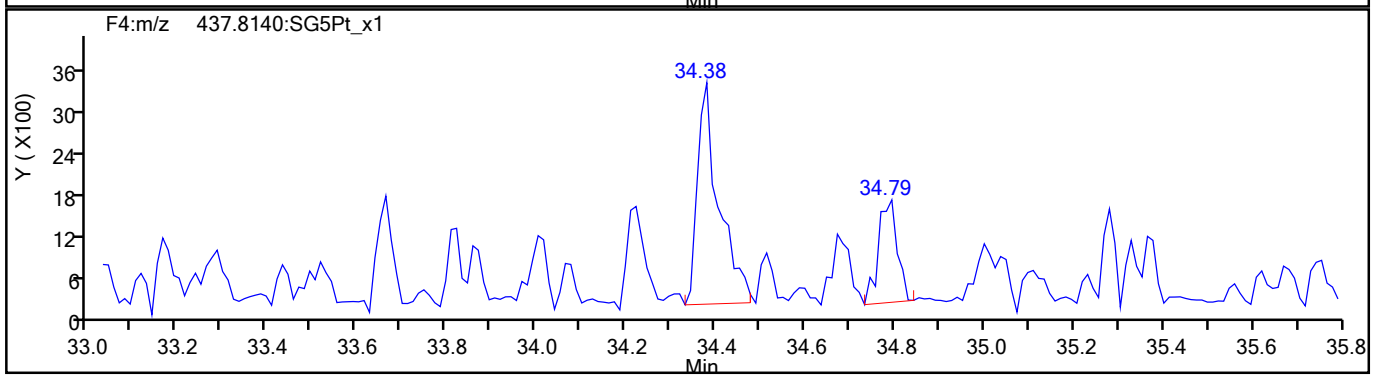

794244

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 21:35:49	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

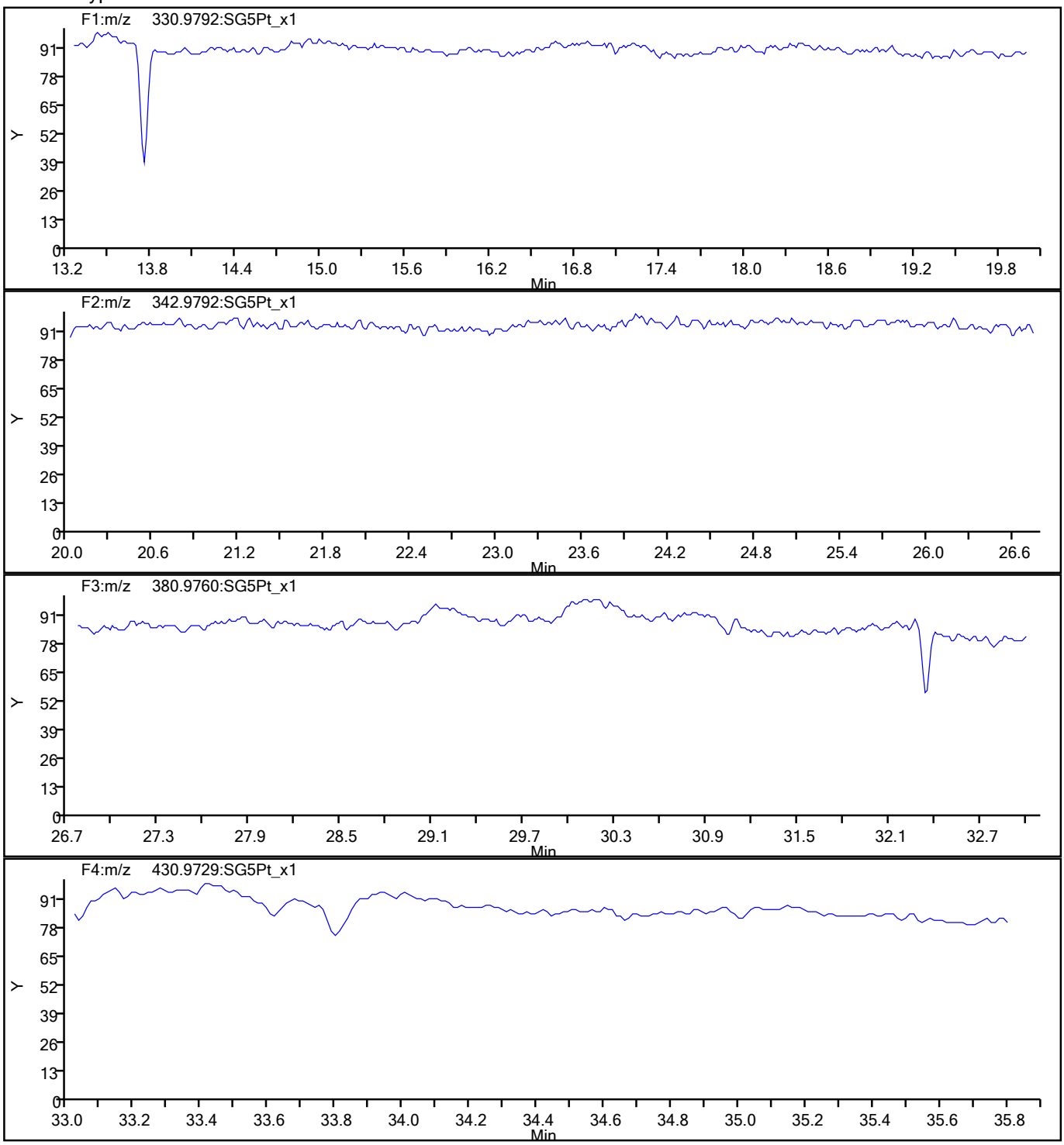

794245

Report Date: 26-Aug-2021 10:47:05 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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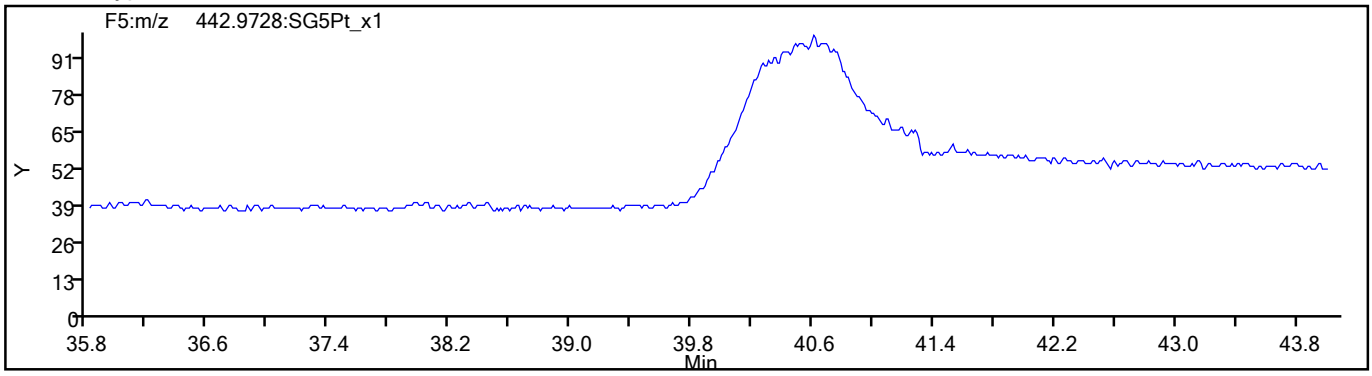

794246

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Aug-2021 08:35:55 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521A WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:39:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1613

First Level Reviewer: bennettd Date: 26-Aug-2021 11:49:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.069	65895180	0.75	1.6249					0.00	
2,3,7,8-TCDF	17.099	143073267	0.76	1.0239	84.8	84.8	0.2019	0.2019		
A Non-2,3,7,8-sub-TCDF	17.069	128749646	0.76	1.0239	76.3	76.3	0.2019	38.2		
S Total TCDF					161.2	161.2	0.2019	0.2019		
D 13C-2,3,7,8-TCDD	17.764	38075382	0.79	0.8993					0.00	
2,3,7,8-TCDD	17.779	51211810	0.79	1.2541	42.9	42.9	0.1530	0.1530		
A Non-2,3,7,8-sub-TCDD	17.522	144278172	0.78	1.2541	120.9	120.9	0.1530	43.7		
S Total TCDD					163.8	163.8	0.1530	0.1530		
A F1 PeCDFs	19.851	58594255	1.57	0.0000						
A Non-2,3,7,8-sub-PeCDF	23.067	51425800	1.55	0.0000						RQ
S Total PeCDF										RQ
A Non-2,3,7,8-sub-PeCDD	23.696	76271014	1.59	0.0000						
S Total PeCDD										
A Non-2,3,7,8-sub-HxCDF	30.324	49150010	1.21	0.0000						
S Total HxCDF										
A Non-2,3,7,8-sub-HxCDD	30.486	37036176	1.28	0.0000						
S Total HxCDD										
1,2,3,4,6,7,8-HpCDF	33.603	40295965	1.04	1.4413						
1,2,3,4,7,8,9-HpCDF	34.673	31969067	1.04	1.3174						
A Non-2,3,7,8-sub-HpCDF	34.138						0.0	0.0		
S Total HpCDF										
1,2,3,4,6,7,8-HpCDD	34.393	25544064	1.04	1.0943						
A Non-2,3,7,8-sub-HpCDD	34.223						0.0	0.0		
S Total HpCDD										
1,3,6,8-TCDF	14.710	78975495	0.77							
1,3,6,8-TCDD	15.602	48734187	0.79							
2,3,4,7-TCDF	17.537						0.0	0.0		
1,2,3,7-TCDD	18.172						0.0	0.0		
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.903	35229678	1.26							
1,2,3,4,8,9-HxCDF	32.222	43933470	1.22							
1,2,3,4,6,7,9-HpCDD	33.846	28255263	1.03							

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d
Lims ID: WDM
Client ID:
Sample Type: WDM
Inject. Date: 26-Aug-2021 08:35:55 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: WDM 082521A WDM HRDXNCP_00044
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 08:39:50 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1613

First Level Reviewer: bennettd Date: 26-Aug-2021 11:49:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.069	17.069	0	1.000	28318797	7445241	9506	23765	783		
317.9389	17.069	17.069	0	1.000	37576383	9905867	4845	12112	2045	0.75(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.099	17.099	0	1.002	61987877	14758315	15081	37702	979		
305.8987	17.099	17.099	0	1.002	81085390	18970994	20780	51950	913	0.76(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	17.931	17.069	52	1.050	27788541	6860746	15081	37702	455		
305.8987	17.931	17.069	52	1.050	36713211	9104632	20780	51950	438	0.76(0.65-0.89)	
303.9016	18.868	17.069	108	1.105	27661759	6426352	15081	37702	426		
305.8987	18.868	17.069	108	1.105	36586135	8541720	20780	51950	411	0.76(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.764	17.764	0	1.000	16826779	4181003	3888	9720	1075		
333.9339	17.764	17.764	0	1.000	21248603	5270664	2337	5842	2255	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.779	17.779	0	1.001	22579498	5699647	7281	18202	783		
321.8936	17.779	17.779	0	1.001	28632312	7142976	10859	27147	658	0.79(0.65-0.89)	
A Non-2,3,7,8-sub-TCDD											
319.8965	17.658	17.522	8	0.994	19569969	4991260	7281	18202	686		
321.8936	17.658	17.522	8	0.994	25272160	6456903	10859	27147	595	0.77(0.65-0.89)	
319.8965	17.946	17.522	25	1.010	22830359	5467096	7281	18202	751		
321.8936	17.946	17.522	25	1.010	29345471	7011956	10859	27147	646	0.78(0.65-0.89)	
319.8965	18.868	17.522	81	1.062	20835320	4771200	7281	18202	655		
321.8936	18.868	17.522	81	1.062	26424893	5940504	10859	27147	547	0.79(0.65-0.89)	
A F1 PeCDFs											

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
339.8597	19.140	19.851	-43	1.000	35822707	8170404	639	1597	12786		
341.8567	19.140	19.851	-43	1.000	22771548	5241742	1593	3982	3290	1.57(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDF											RQ
339.8597	20.643	23.067	-145	1.000	62425	12858	3358	8395	4		
341.8567	20.629	23.067	-146	1.000	51043	10836	2421	6052	4	1.22(1.32-1.78)	
339.8597	21.461	23.067	-96	1.000	92997	18544	3358	8395	6		
341.8567	21.461	23.067	-96	1.000	70773	14227	2421	6052	6	1.31(1.32-1.78)	
339.8597	22.006	23.067	-64	1.000	250671	31359	3358	8395	9		
341.8567	21.993	23.067	-64	1.000	162399	21398	2421	6052	9	1.54(1.32-1.78)	
339.8597	22.552	23.067	-31	1.000	127525	24798	3358	8395	7		
341.8567	22.538	23.067	-32	1.000	98559	16932	2421	6052	7	1.29(1.32-1.78)	
339.8597	25.225	23.067	129	1.000	31007372	4791718	3358	8395	1427		
341.8567	25.225	23.067	129	1.000	19539865	3006439	2421	6052	1242	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	20.875	23.696	-169	1.000	23487205	4295397	2447	6117	1755		
357.8516	20.875	23.696	-169	1.000	14849085	2719505	1422	3555	1912	1.58(1.32-1.78)	
355.8546	25.006	23.696	78	1.000	23311872	3661419	2447	6117	1496		
357.8516	25.006	23.696	78	1.000	14622852	2308864	1422	3555	1624	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	27.444	30.324	-172	1.000	26927381	3676393	3790	9475	970		
375.8178	27.457	30.324	-172	1.000	22222629	2999053	3037	7592	988	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.001	30.486	-89	1.000	20586529	2629098	7250	18125	363		
391.8127	29.001	30.486	-89	1.000	16091897	2038970	4488	11220	454	1.28(1.05-1.43)	
389.8157	30.665	30.486	11	1.000	193638	39105	7250	18125	5		
391.8127	30.665	30.486	11	1.000	164112	32021	4488	11220	7	1.18(1.05-1.43)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.603	33.603	0	1.000	20528274	7699668	15370	38425	501		
409.7789	33.603	33.603	0	1.000	19767691	7378405	15711	39277	470	1.04(0.88-1.20)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.673	34.673	0	1.000	16283777	5709285	15370	38425	371		
409.7789	34.673	34.673	0	1.000	15685290	5412551	15711	39277	345	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						15370	38425			
409.7789	34.138						15711	39277			
1,2,3,4,6,7,8-HpCDD											
423.7766	34.393	34.393	0	1.000	13039777	4468208	10470	26175	427		
425.7737	34.381	34.393	-1	1.000	12504287	4317256	10619	26547	407	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						10470	26175			
425.7737	34.223						10619	26547			
1,3,6,8-TCDF											
303.9016	14.710	14.710	0		34295523	10951367	15081	37702	726		
305.8987	14.710	14.710	0		44679972	14057305	20780	51950	676	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,3,6,8-TCDD											
319.8965	15.602	15.602	0		21438833	6489899	7281	18202	891		
321.8936	15.602	15.602	0		27295354	8230538	10859	27147	758	0.79(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.537						15081	37702			
305.8987	17.537						20780	51950			
1,2,3,7-TCDD											
319.8965	18.172						7281	18202			
321.8936	18.172						10859	27147			
1,2,3,9-TCDD											
319.8965	18.414						7281	18202			
321.8936	18.414						10859	27147			
1,2,3,9-TCDF											
303.9016	18.414						15081	37702			
305.8987	18.414						20780	51950			
1,2,8,9-TCDD											
319.8965	19.382						7281	18202			
1,2,8,9-TCDF											
303.9016	19.427						15081	37702			
305.8987	19.427						20780	51950			
1,3,4,6,8-PeCDF											
339.8597	19.669						639	1597			
341.8567	19.669						1593	3982			
1,2,4,7,9-PeCDD											
355.8546	21.480						2447	6117			
357.8516	21.480						1422	3555			
1,2,3,8,9-PeCDD											
355.8546	25.790						2447	6117			
357.8516	25.790						1422	3555			
1,2,3,8,9-PeCDF											
339.8597	26.021						3358	8395			
341.8567	26.021						2421	6052			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						3790	9475			
375.8178	28.333						3037	7592			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						7250	18125			
391.8127	29.890						4488	11220			
1,2,3,4,6,7-HxCDD											
389.8157	31.903	31.903	0		19675683	5653757	7250	18125	780		
391.8127	31.890	31.903	-1		15553995	4386484	4488	11220	977	1.26(1.05-1.43)	
1,2,3,4,8,9-HxCDF											
373.8208	32.222	32.222	0		24186564	7615744	3790	9475	2009		
375.8178	32.222	32.222	0		19746906	6240751	3037	7592	2055	1.22(1.05-1.43)	
1,2,3,4,6,7,9-HpCDD											
423.7766	33.846	33.846	0		14343633	5261275	10470	26175	503		
425.7737	33.846	33.846	0		13911630	5033194	10619	26547	474	1.03(0.88-1.20)	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Reagents:

HRDXNCP_00044 Amount Added: 2.00 Units: uL

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 08:35:55 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	40.000	65895180	17351108

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		40.000	65895180	17351108

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
17.931	27788541	6860746	36713211	9104632	38.2	0.76	
18.868	27661759	6426352	36586135	8541720	38.1	0.76	
Signal Totals:							
	55450300	13287098	73299346	17646352			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	128749646	30933450				0.76	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 76.329 = (128749646 * 40.000) / (65895180 * 1.024)

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 08:35:55 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 2

Non-2,3,7,8-sub-TCDD, RT: 17.522

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	40.000	38075382	9451667

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		40.000	38075382	9451667

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
17.658	19569969	4991260	25272160	6456903	37.6	0.77	
17.946	22830359	5467096	29345471	7011956	43.7	0.78	
18.868	20835320	4771200	26424893	5940504	39.6	0.79	
Signal Totals:							
	63235648	15229556	81042524	19409363			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	144278172	34638919				0.78	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 120.859 = (144278172 * 40.000) / (38075382 * 1.254)

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 08:35:55 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 2

F1 PeCDFs, RT: 19.851

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
19.140	35822707	8170404	22771548	5241742		1.57	
Signal Totals:							
	35822707	8170404	22771548	5241742			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	58594255	13412146				1.57	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (58594255 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 08:35:55 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061				
2,3,4,7,8-PeCDF	1.018				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
20.643	62425	12858	51043	10836		1.22	R
21.461	92997	18544	70773	14227		1.31	R
22.006	250671	31359	162399	21398		1.54	
22.552	127525	24798	98559	16932		1.29	R
25.225	31007372	4791718	19539865	3006439		1.59	
Signal Totals:							
	31540990	4879277	19922639	3069832			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	51463629	7949109				1.58	RQ
	51425800	7943370					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (51463629 * 0.0) / (0 * 0.000)
Empc Amount: 0.0 = (51425800 * 0.0) / (0 * 0.000)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 08:35:55 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 2

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
20.875	23487205	4295397	14849085	2719505		1.58	
25.006	23311872	3661419	14622852	2308864		1.59	
Signal Totals:							
	46799077	7956816	29471937	5028369			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	76271014	12985185				1.59	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (76271014 * 0.0) / (0 * 0.000)

Eurofins TestAmerica, Sacramento
AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 08:35:55 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 2

Non-2,3,7,8-sub-HxCDF, RT: 30.324

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDF	1.085				
1,2,3,6,7,8-HxCDF	1.126				
2,3,4,6,7,8-HxCDF	1.168				
1,2,3,7,8,9-HxCDF	1.166				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	373.8208 Area	373.8208 Height	375.8178 Area	375.8178 Height	Amount	Ratio	Flags
27.444	26927381	3676393	22222629	2999053		1.21	
Signal Totals:							
	26927381	3676393	22222629	2999053			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	49150010	6675446				1.21	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (49150010 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d
Lims ID: WDM
Client ID:
Inject. Date: 26-Aug-2021 08:35:55 Dil. Factor: 1.0000
Sample Type: WDM, Window Defining Mix
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519966 Lims Sample ID: 2

Non-2,3,7,8-sub-HxCDD, RT: 30.486

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064				
1,2,3,6,7,8-HxCDD	1.000				
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	0.000		0.0	0	0

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.001	20586529	2629098	16091897	2038970		1.28	
30.665	193638	39105	164112	32021		1.18	
Signal Totals:							
	20780167	2668203	16256009	2070991			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	37036176	4739194				1.28	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0 = (37036176 * 0.0) / (0 * 0.000)

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d		
Injection Date:	26-Aug-2021 08:35:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

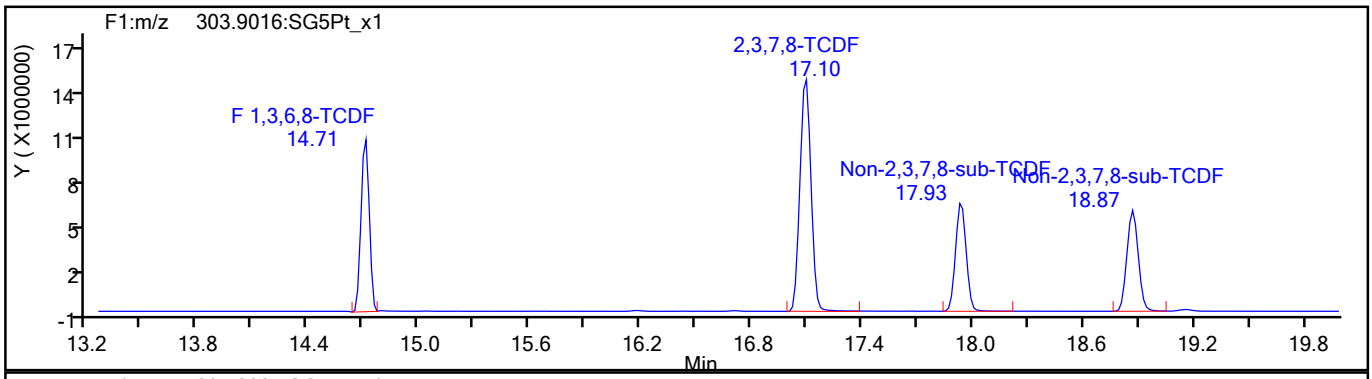

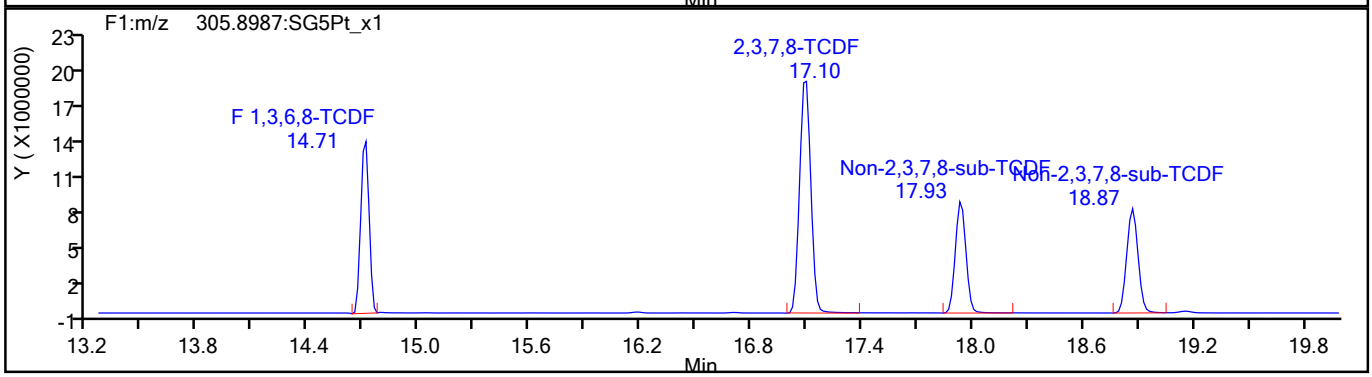

TCDF Standards

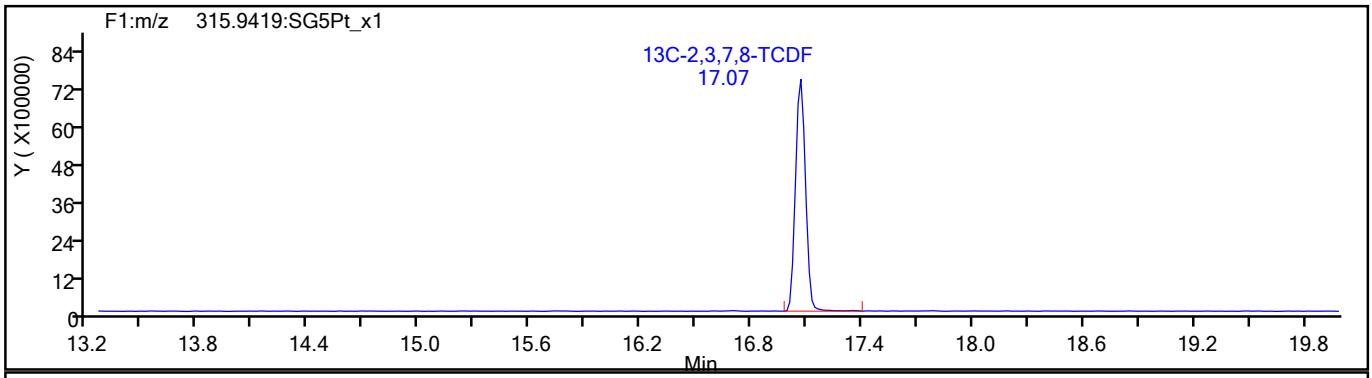

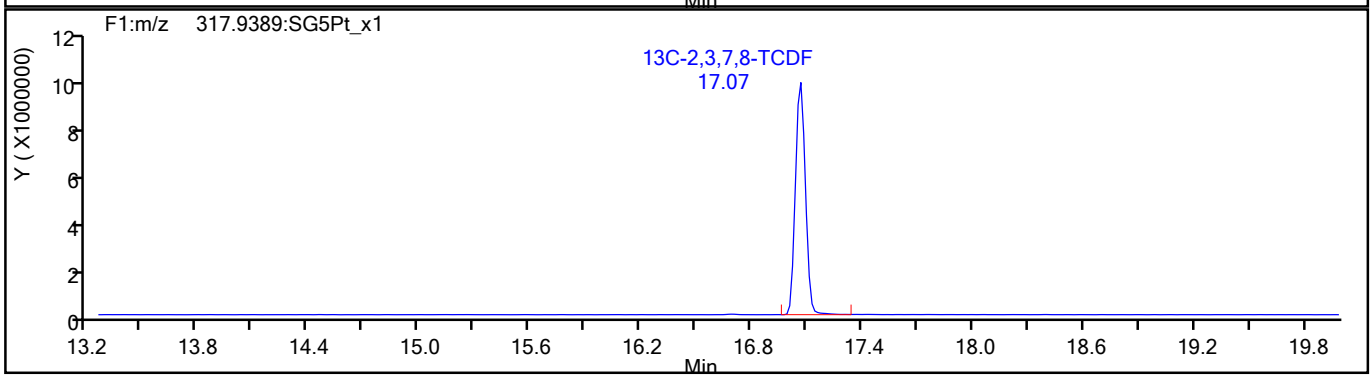

794260

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d		
Injection Date:	26-Aug-2021 08:35:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

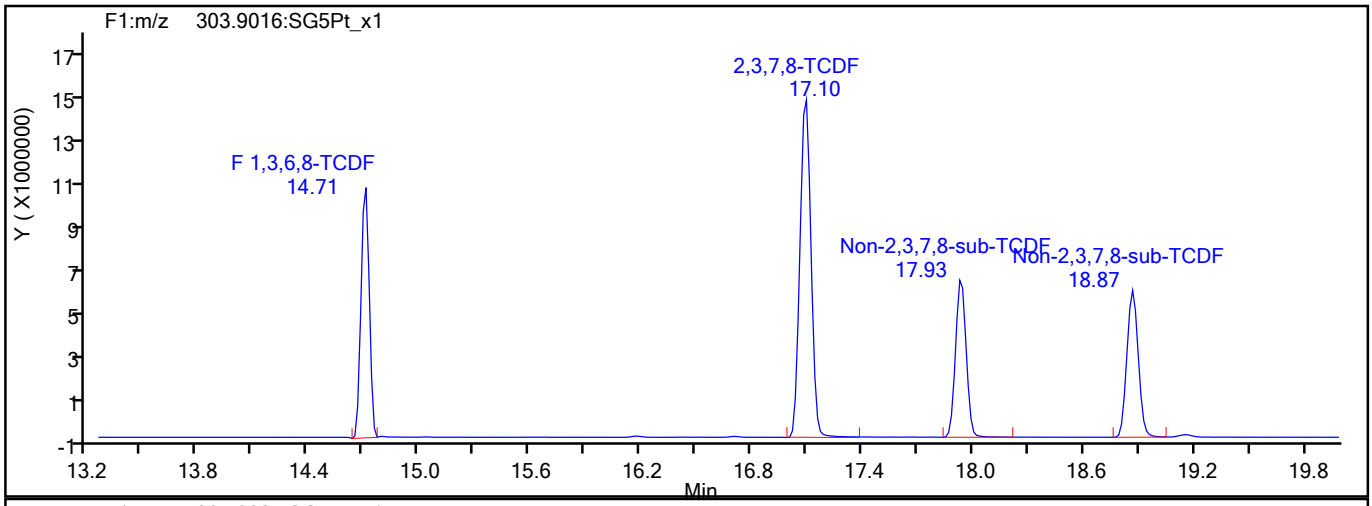

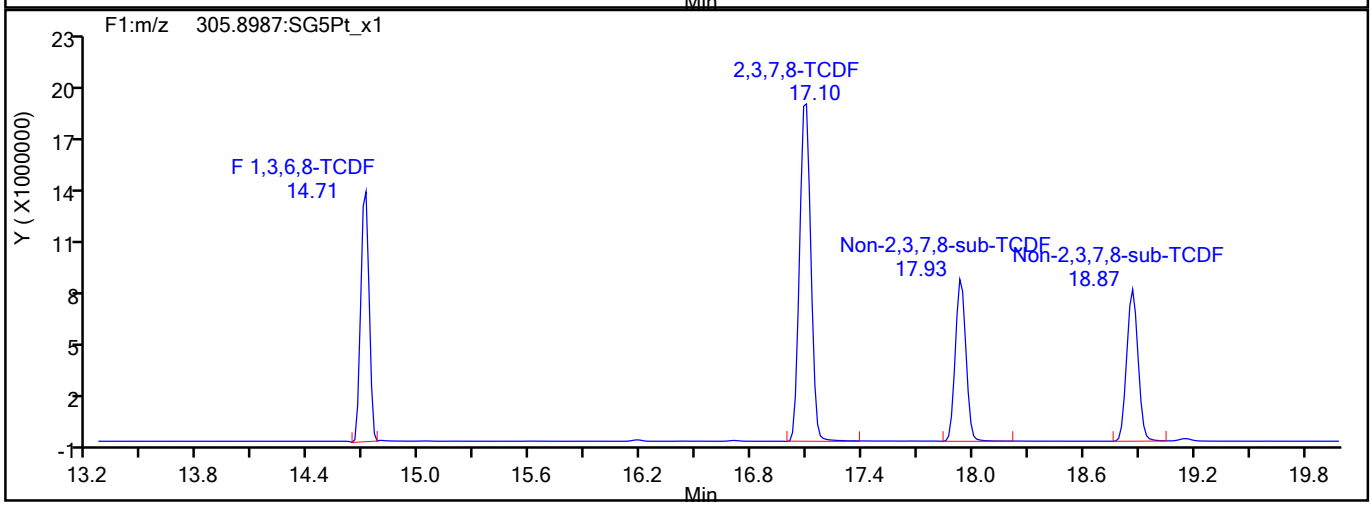

TCDF Interference Mass

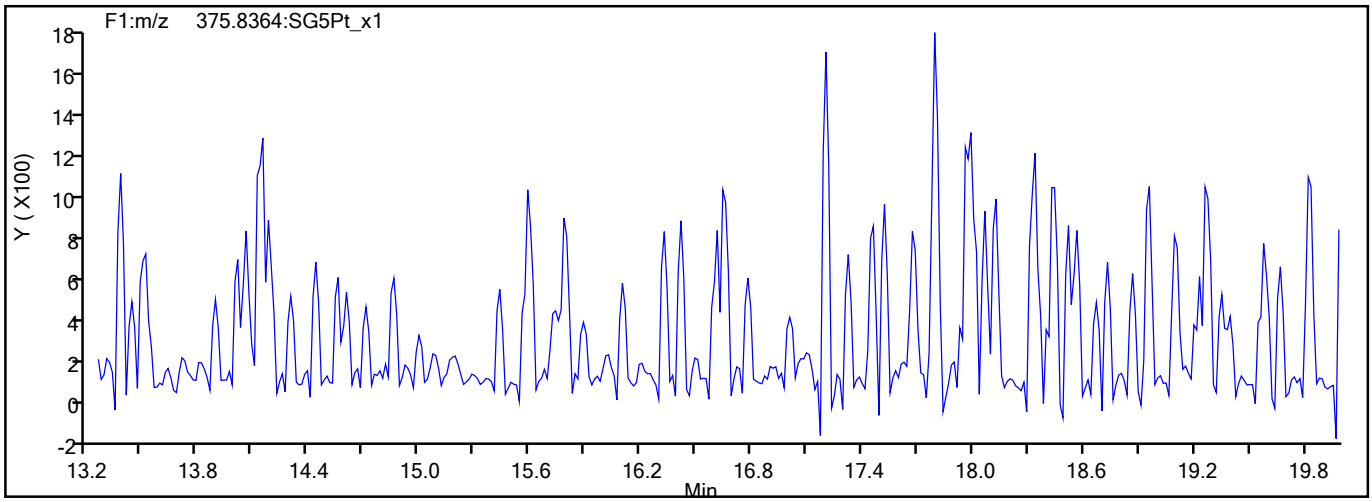

794261

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d		
Injection Date:	26-Aug-2021 08:35:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

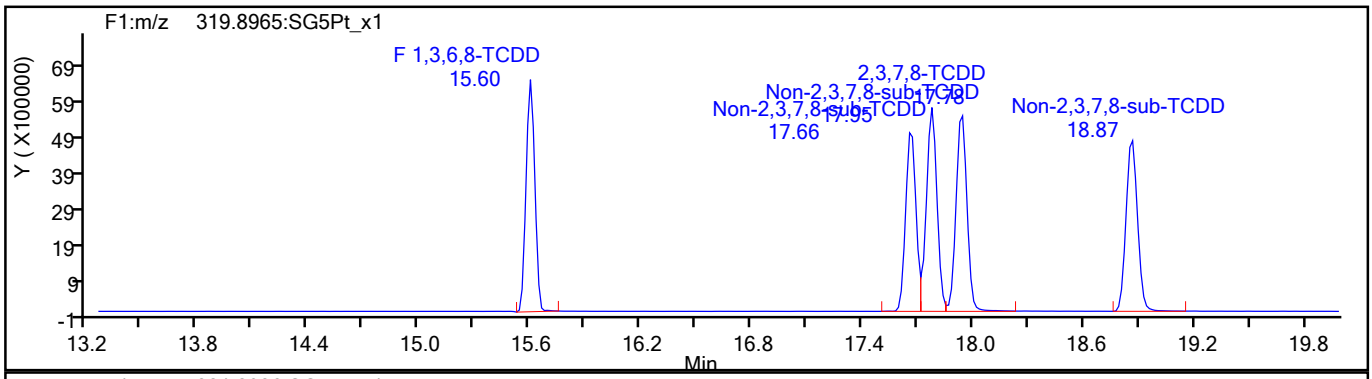

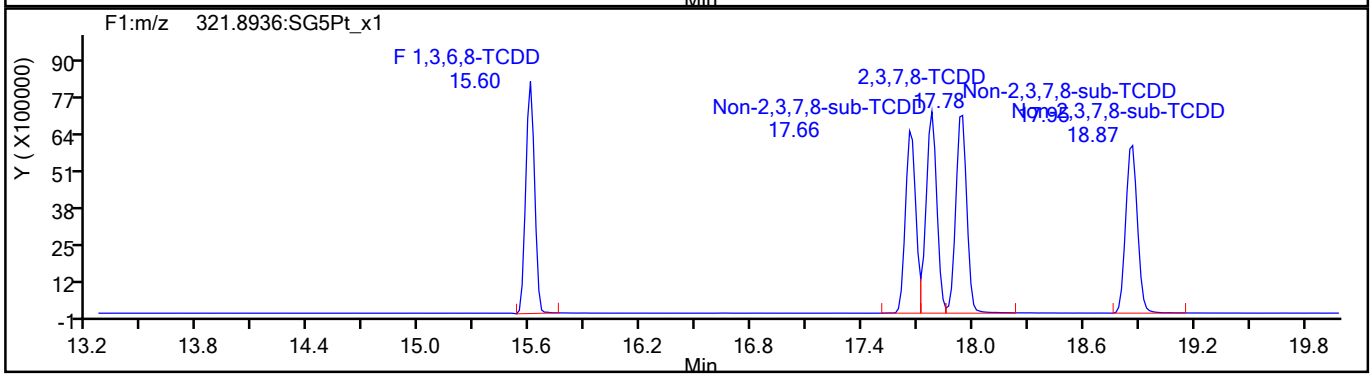

TCDD Standards

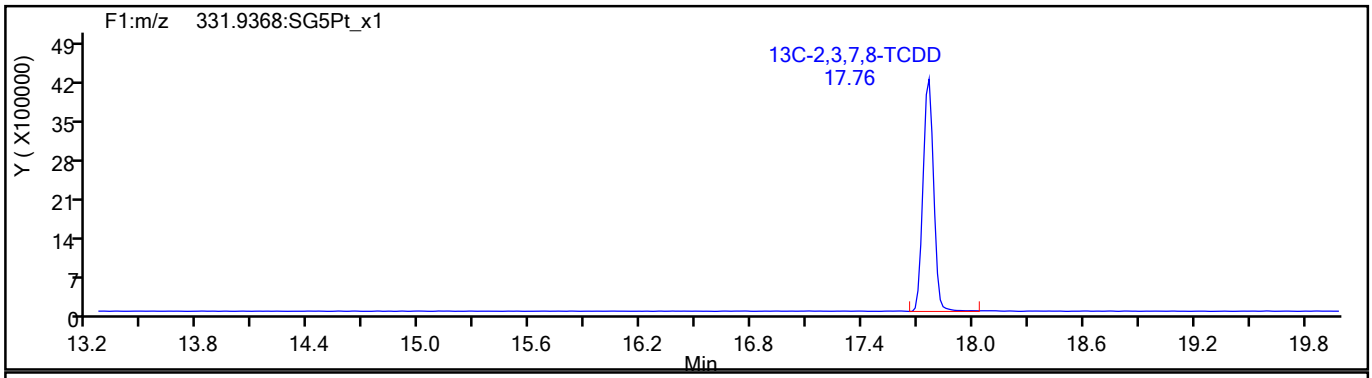

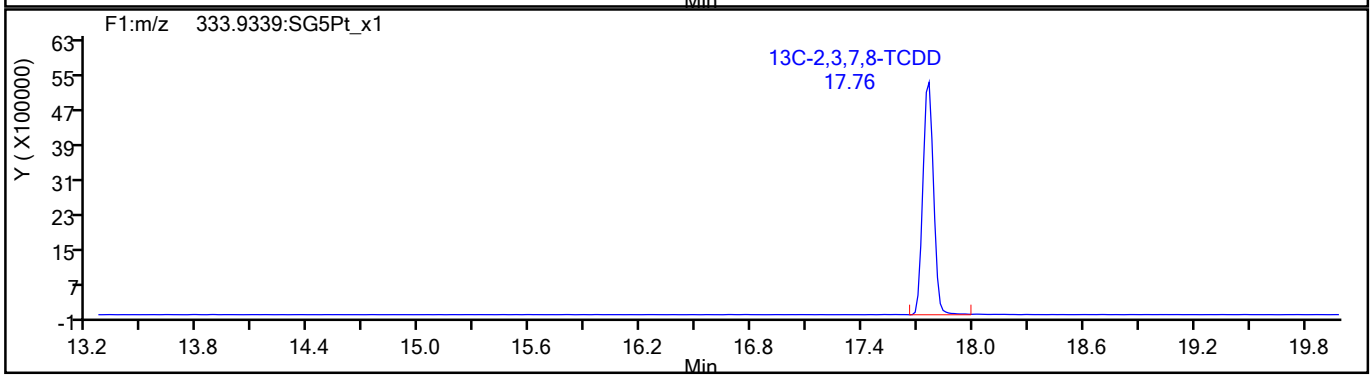

794262

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

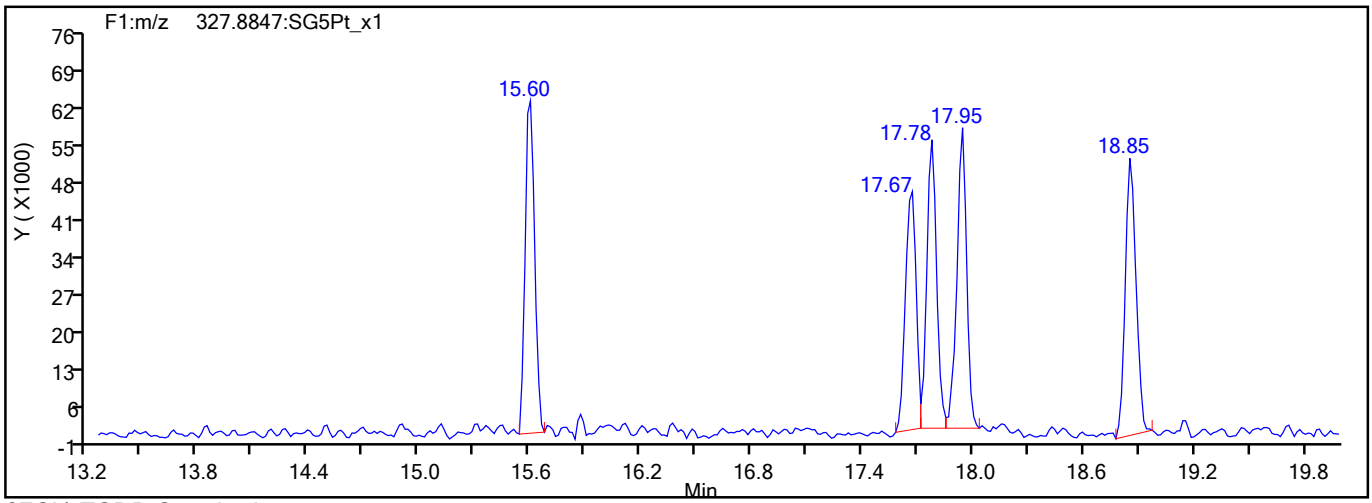

37Cl4-TCDD Standards

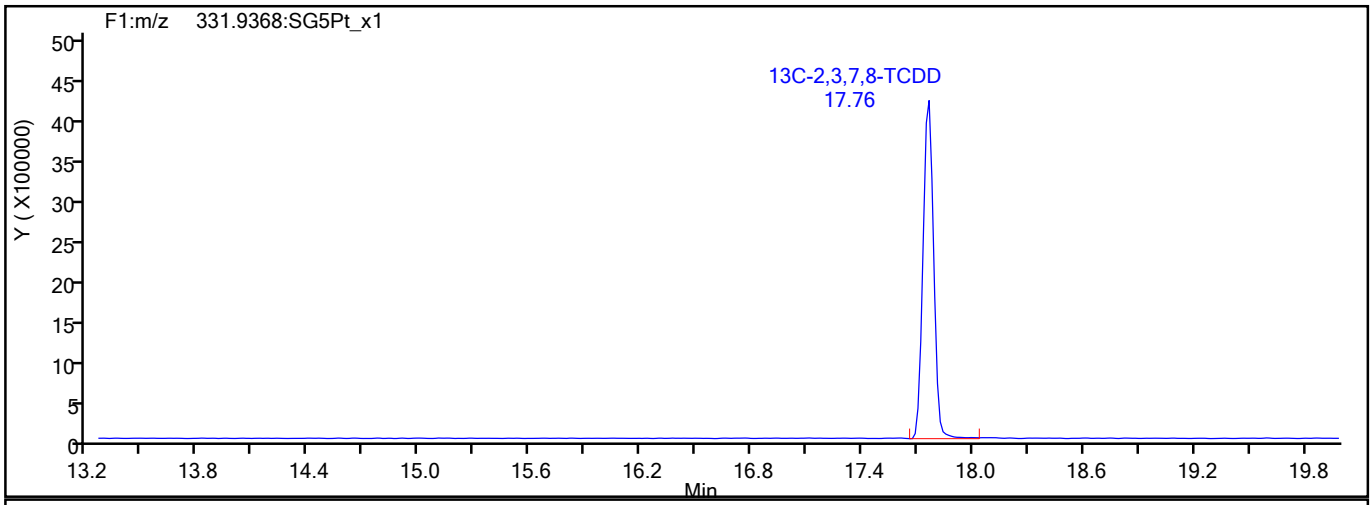

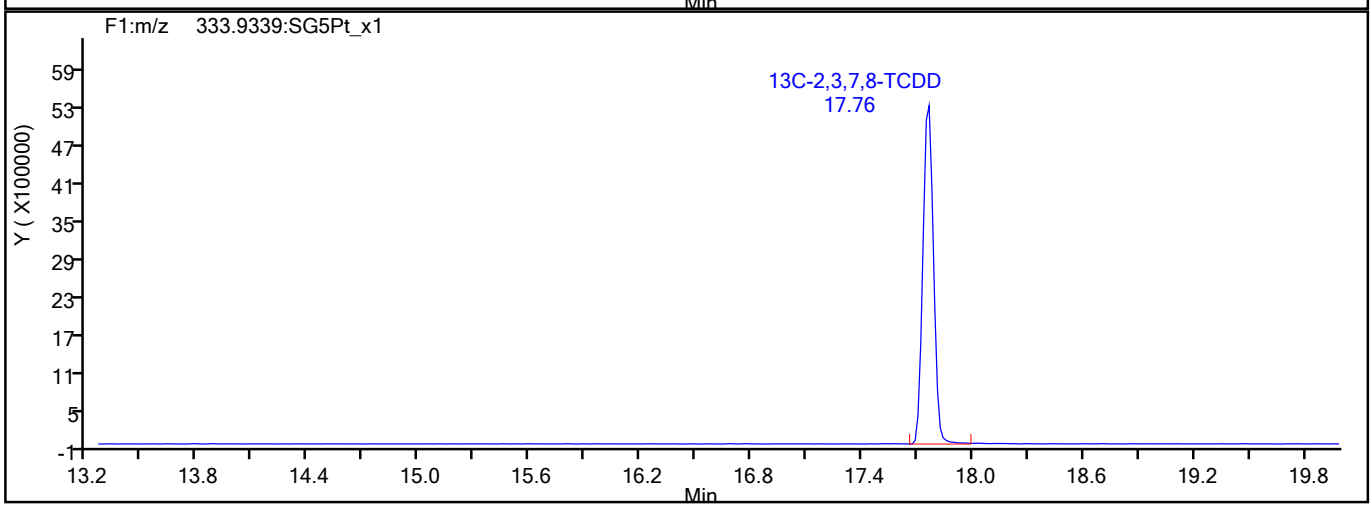

794263

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d		
Injection Date:	26-Aug-2021 08:35:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

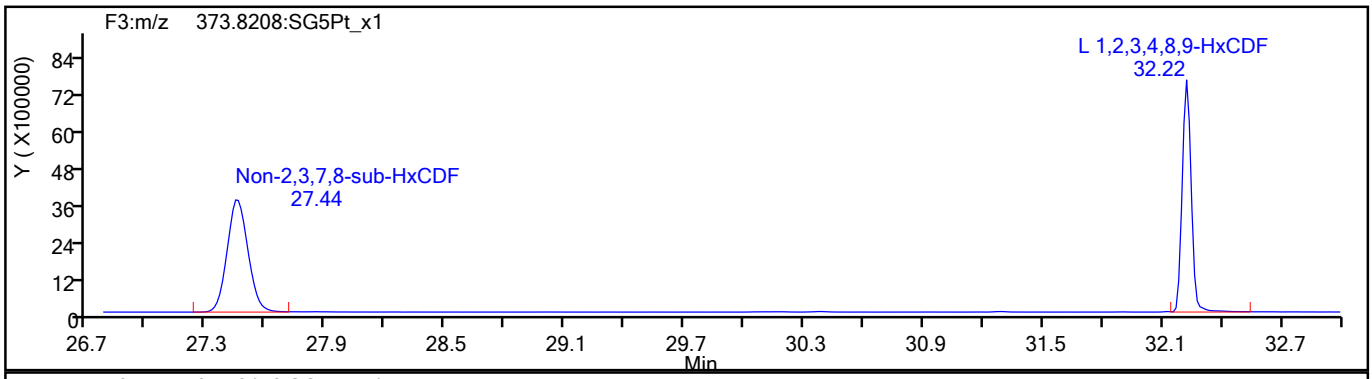

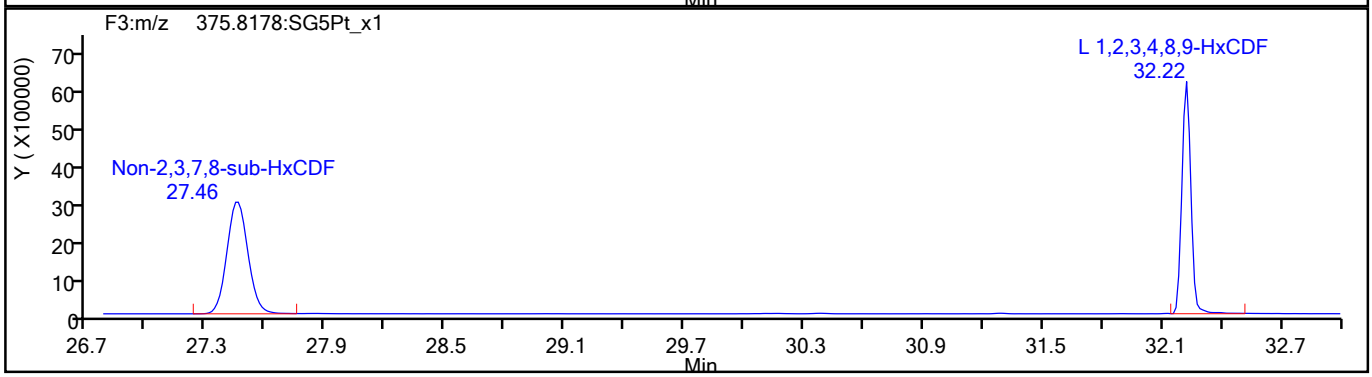

HxCDF Standards

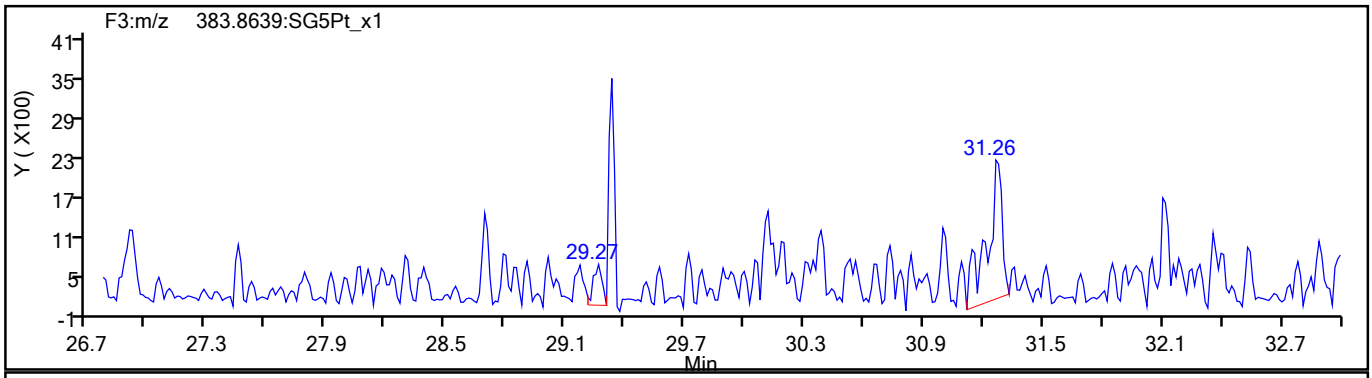

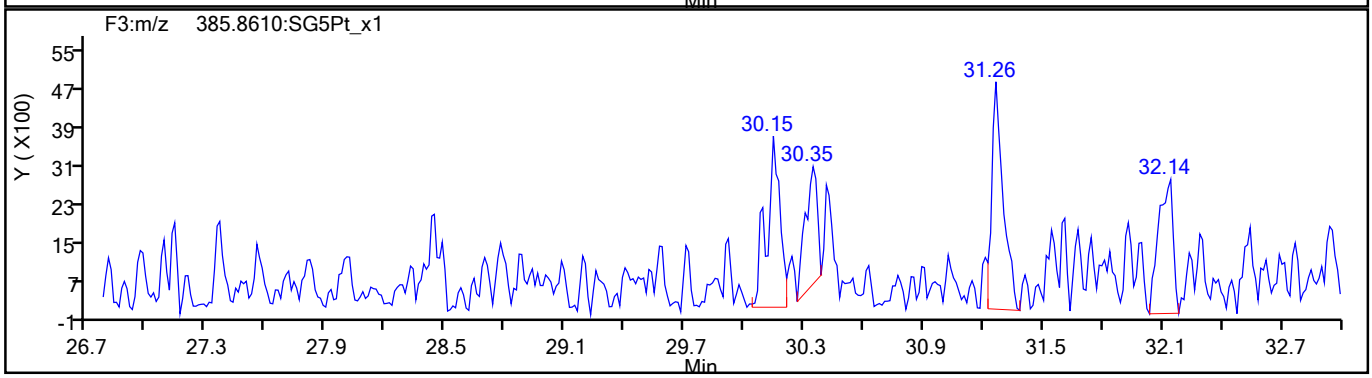

794264

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d		
Injection Date:	26-Aug-2021 08:35:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

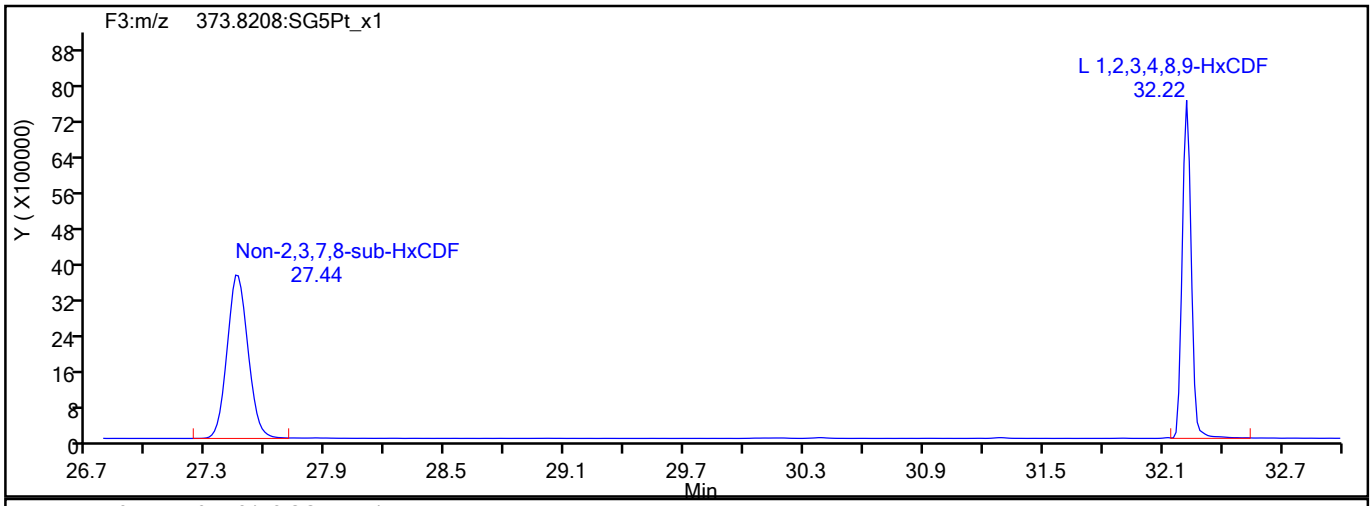

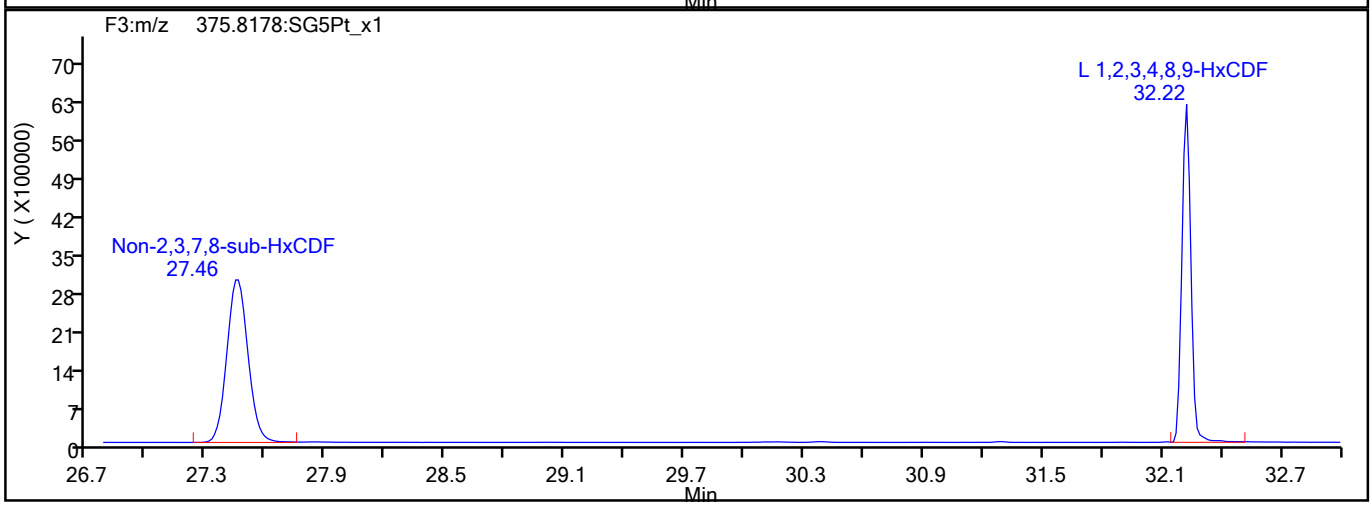

HxCDF Interference Mass

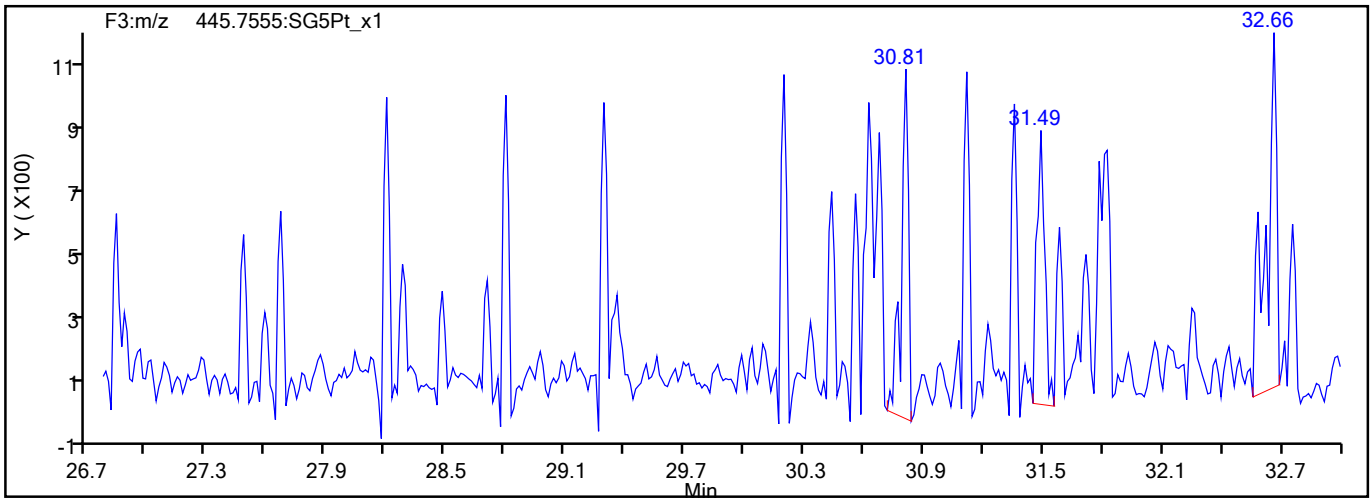

794265

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 08:35:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

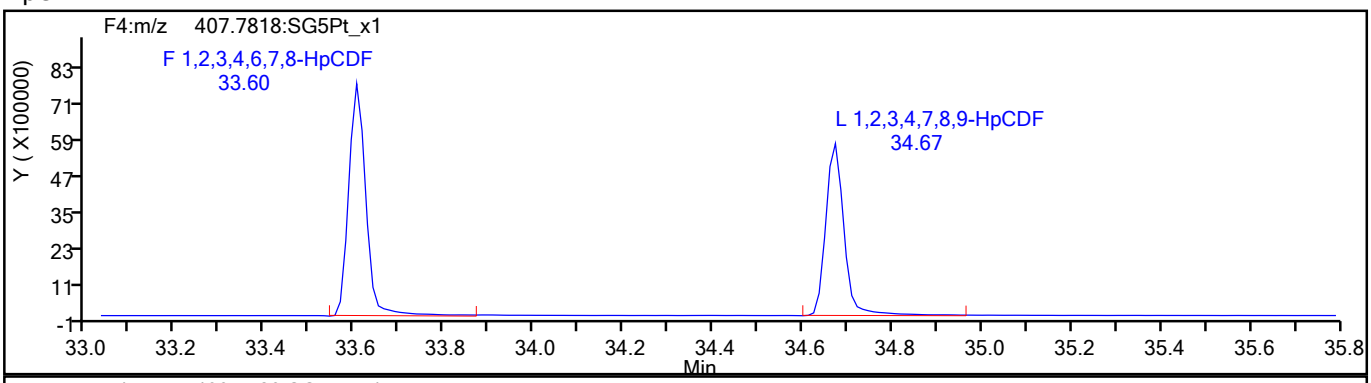

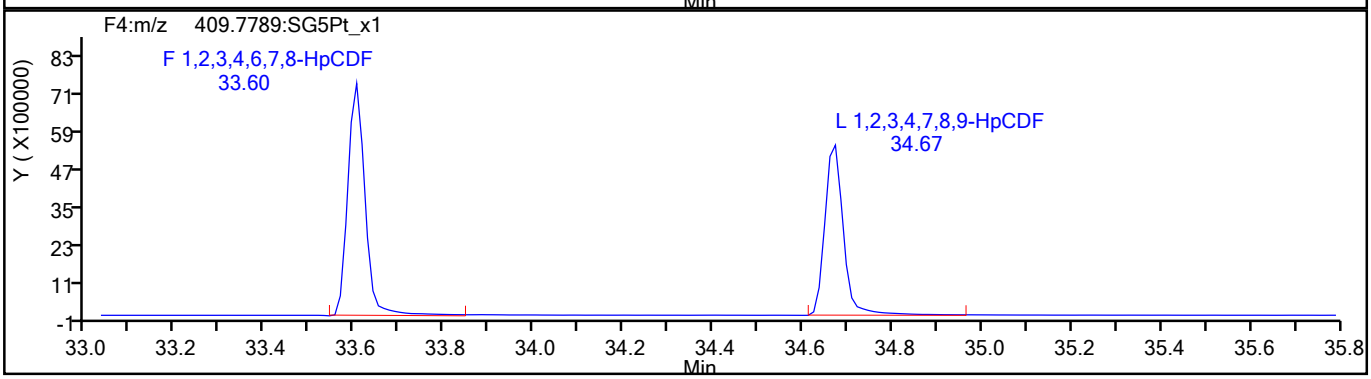

HpCDF Standards

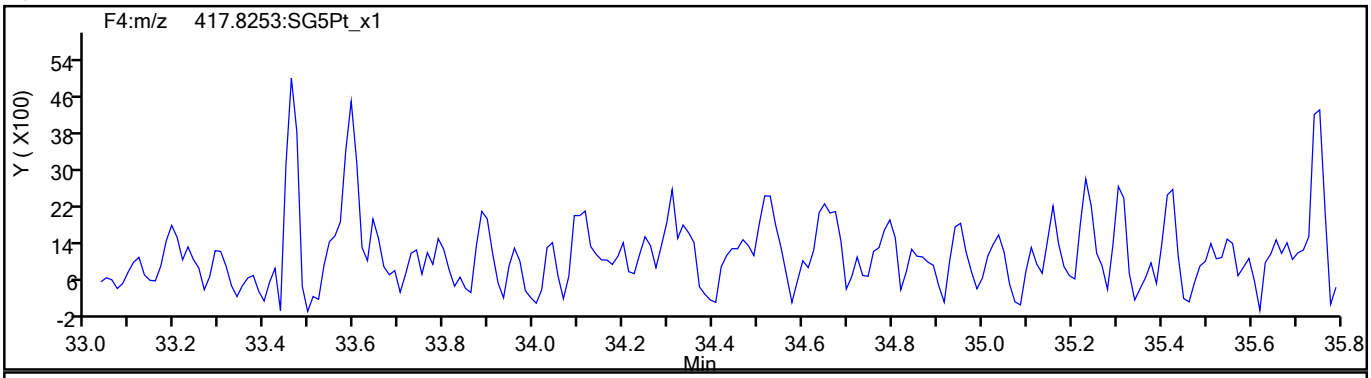

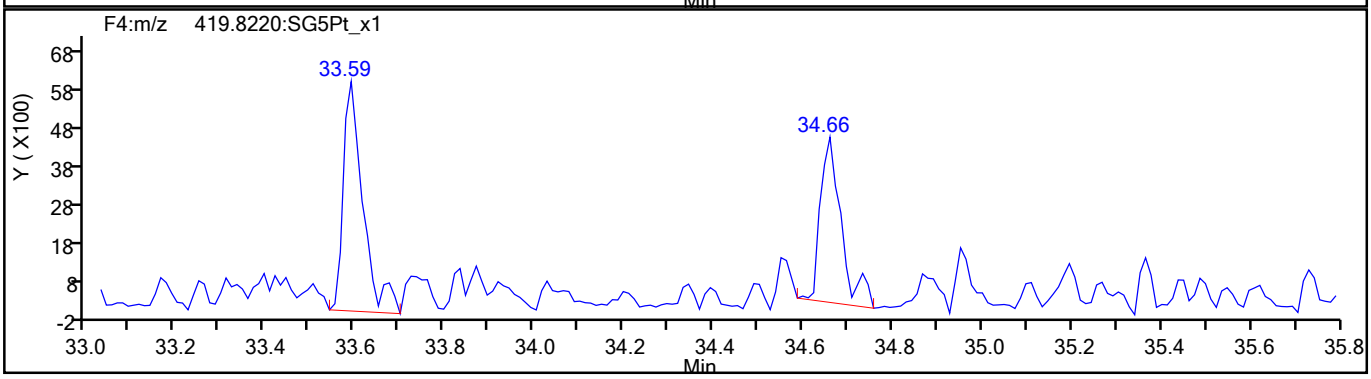

794266

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

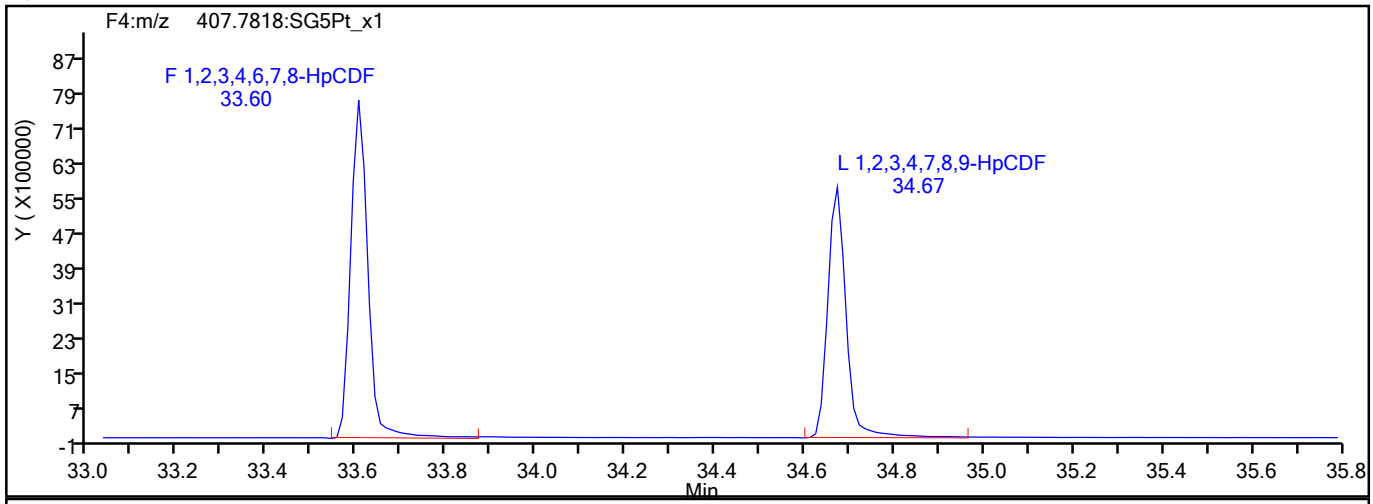

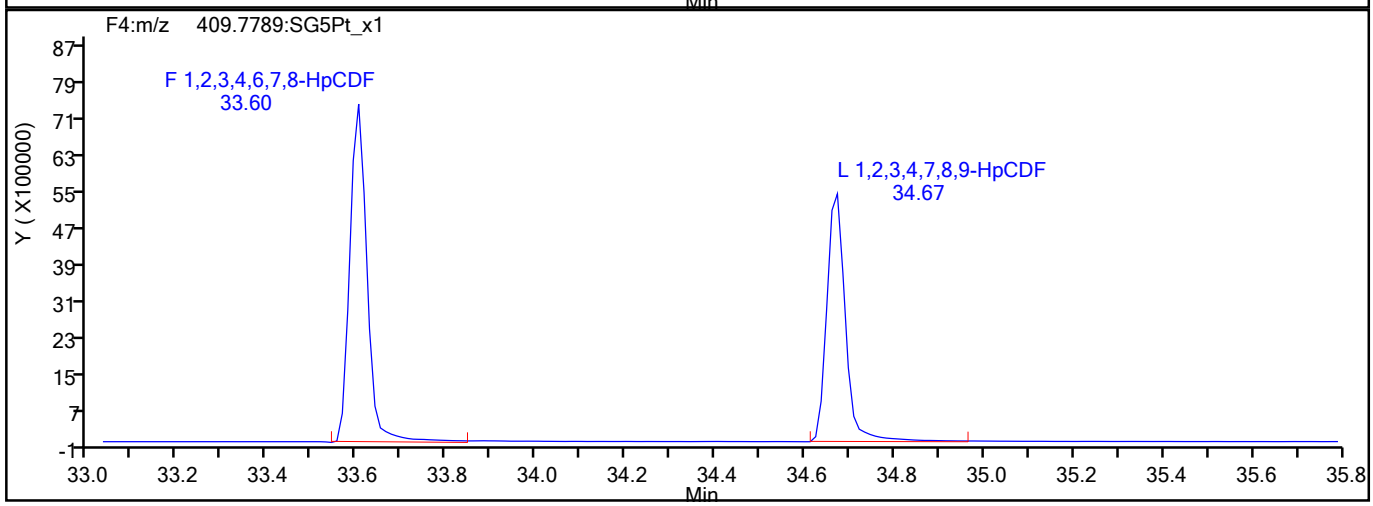

HpCDF Interference Mass

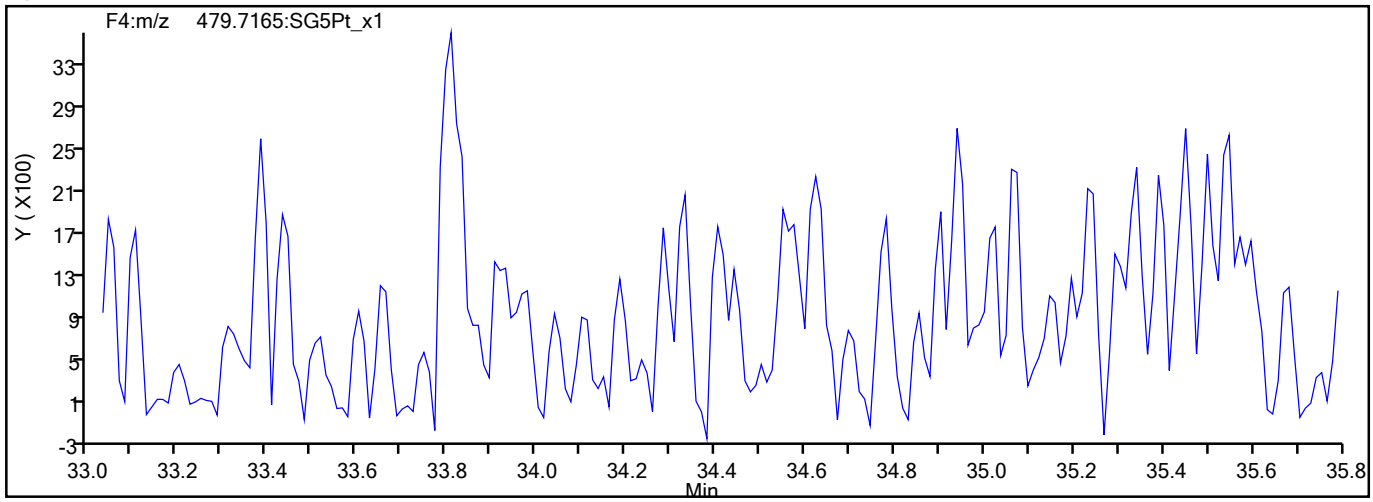

794267

Report Date: 27-Aug-2021 08:39:50 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d		
Injection Date:	26-Aug-2021 08:35:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

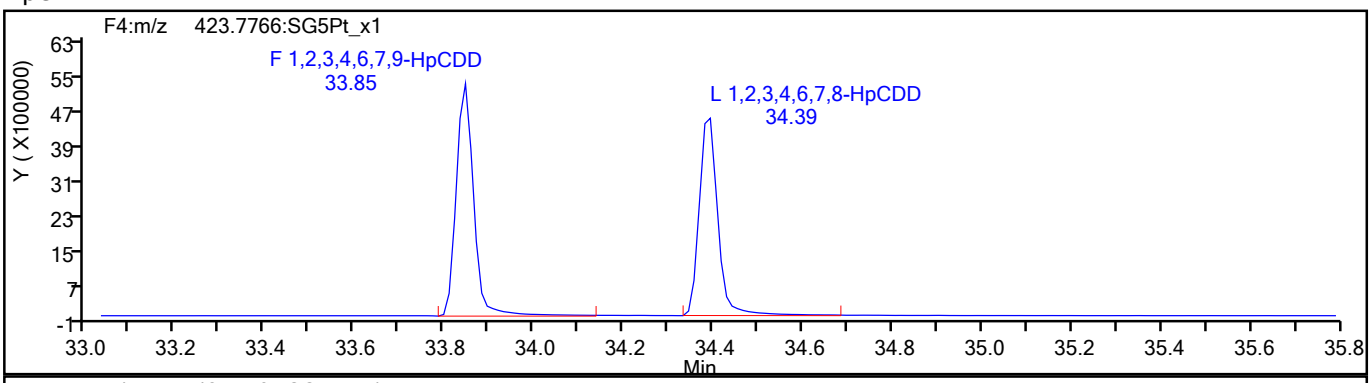

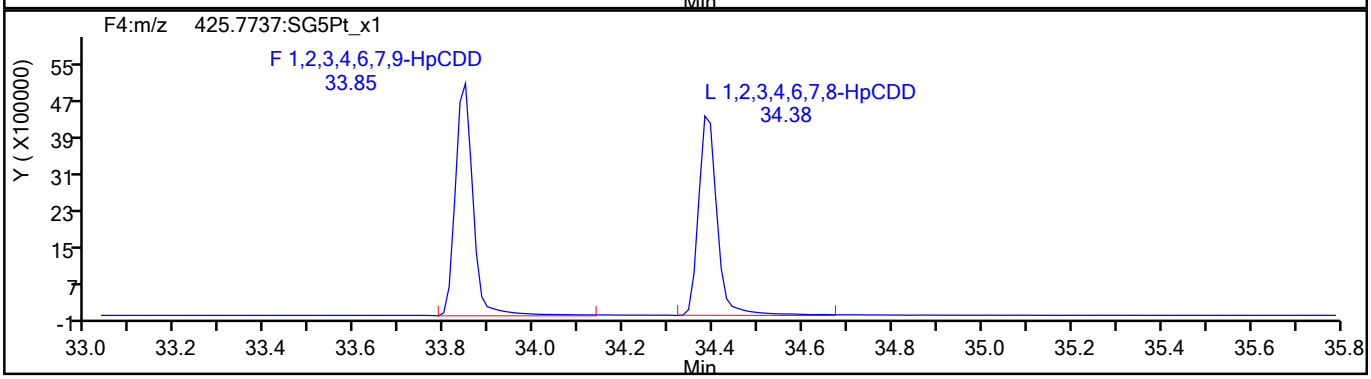

HpCDD Standards

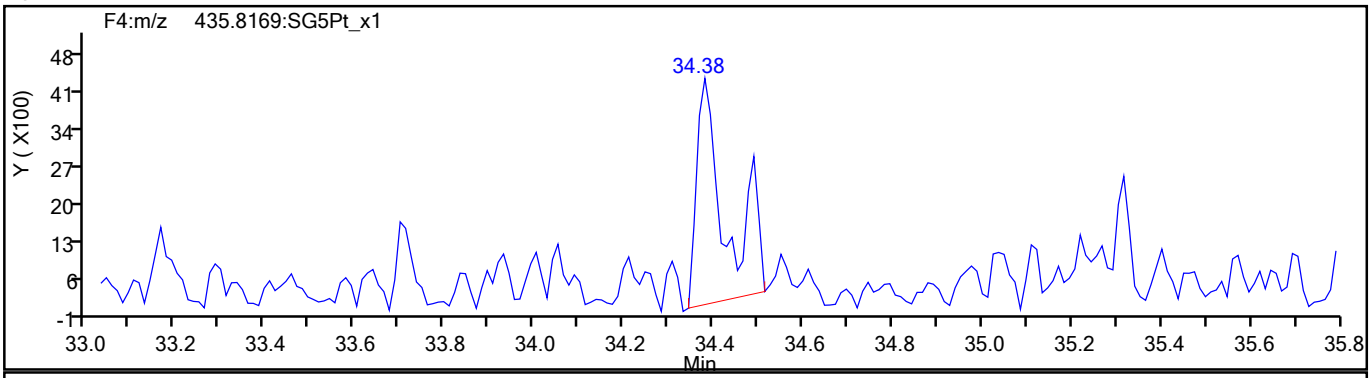

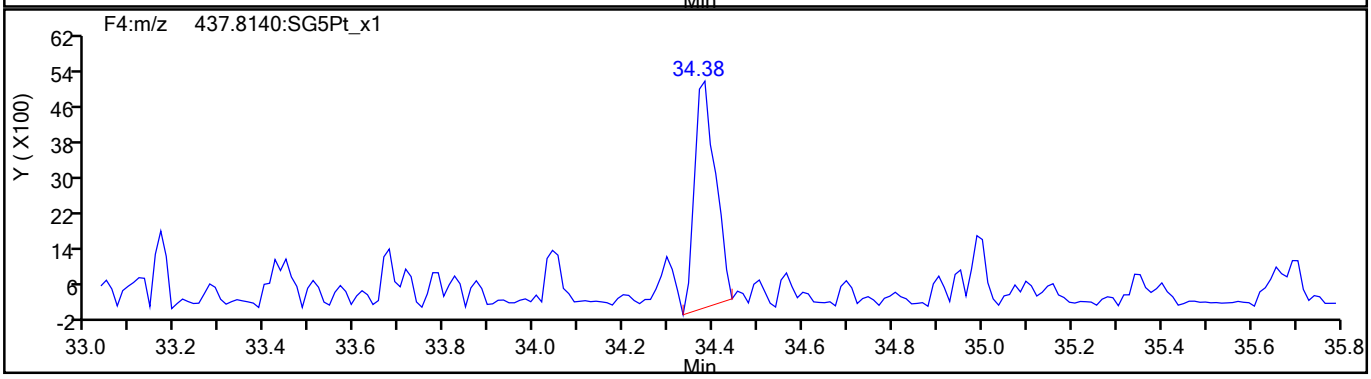

794268

Report Date: 27-Aug-2021 08:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d		
Injection Date:	26-Aug-2021 08:35:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

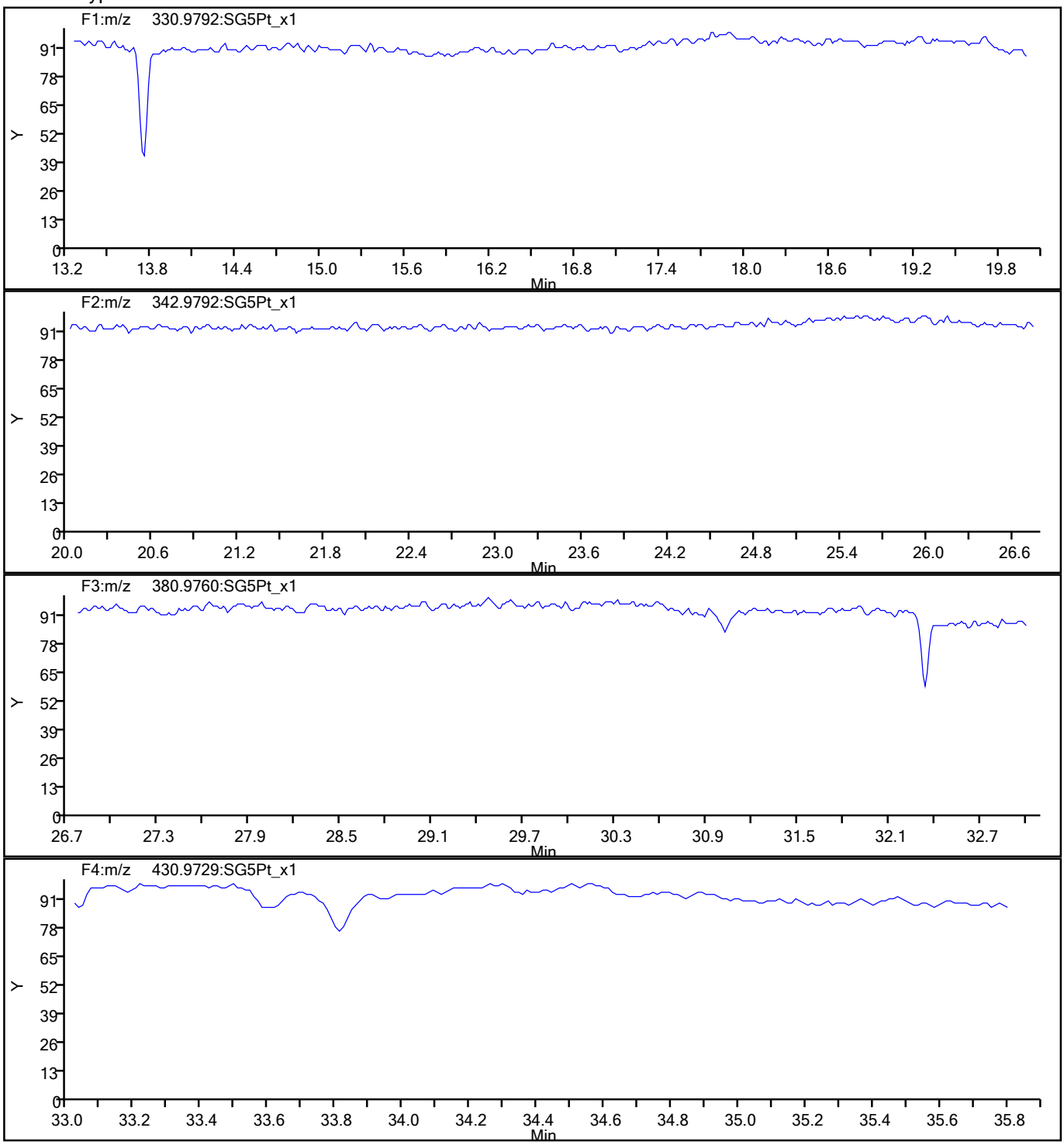

794269

Report Date: 27-Aug-2021 08:39:51 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125764.b\25AU2110D5_30.d		
Injection Date:	26-Aug-2021 08:35:55	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519966	Sample Line#:	2
Column Type:	DB-5	Column Dia:	0.32 mm

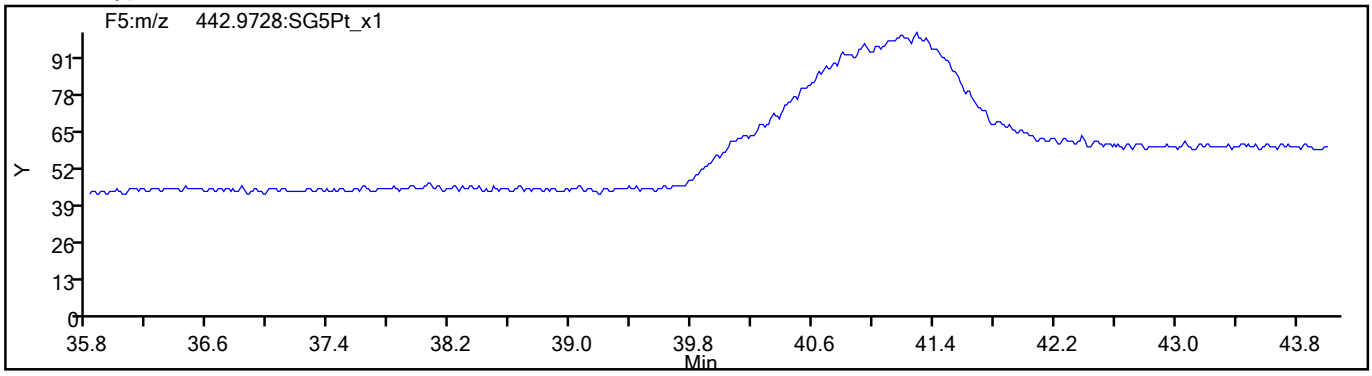

794270

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.617	42972048	0.82	1.3327					0.00	
2,3,7,8-TCDF	17.644	46182380	0.78	0.9978	43.1	43.1	0.1106	0.1106		
D 13C-2,3,7,8-TCDD	16.725						0.0	0.0		
2,3,7,8-TCDD	16.094						0.0	0.0		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 14-Jul-2021 10:57:20 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: HRDXNL2_00019
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 15-Jul-2021 10:44:38 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1652

First Level Reviewer: bennettd Date: 15-Jul-2021 10:44:26

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.617	17.617	0	1.000	19363923	3558221	6651	16627	535		
317.9389	17.617	17.617	0	1.000	23608125	4424449	9201	23002	481	0.82(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.644	17.670	-2	1.002	20222189	3961485	3775	9437	1049		
305.8987	17.644	17.670	-2	1.002	25960191	5044467	5031	12577	1003	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.067						5104	12760			
333.9339	16.067						3197	7992			
2,3,7,8-TCDD											
319.8965	16.094						3362	8405			
321.8936	16.094						4014	10035			

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00042 Amount Added: 2.00 Units: uL

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

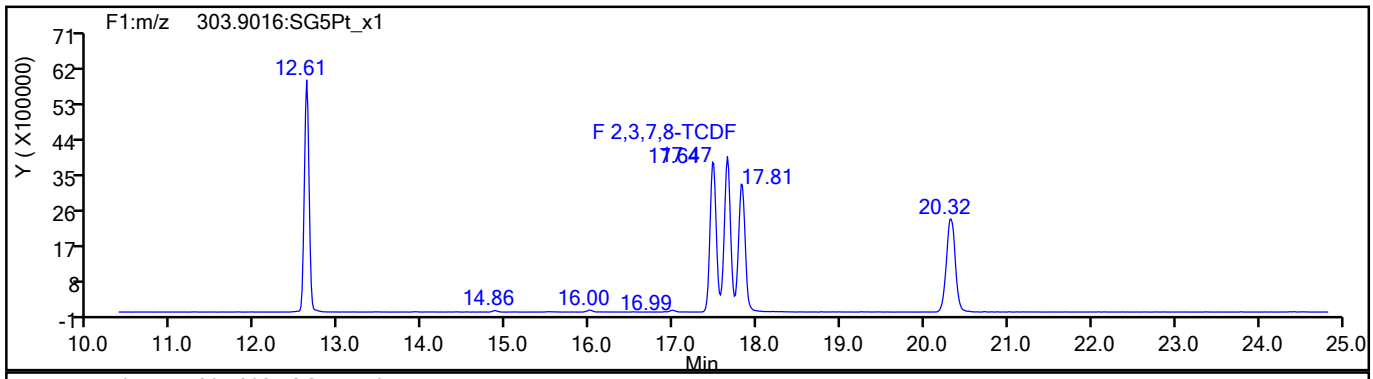

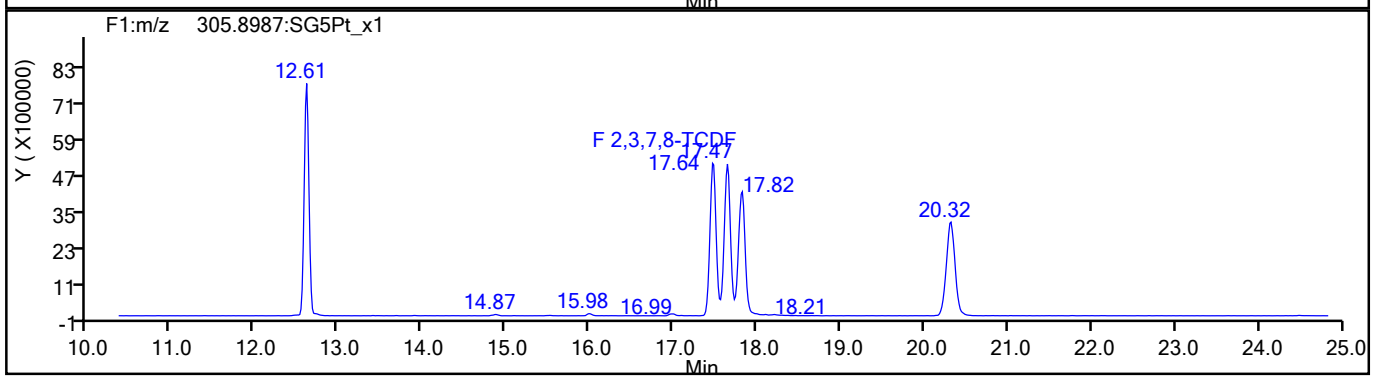

TCDF Standards

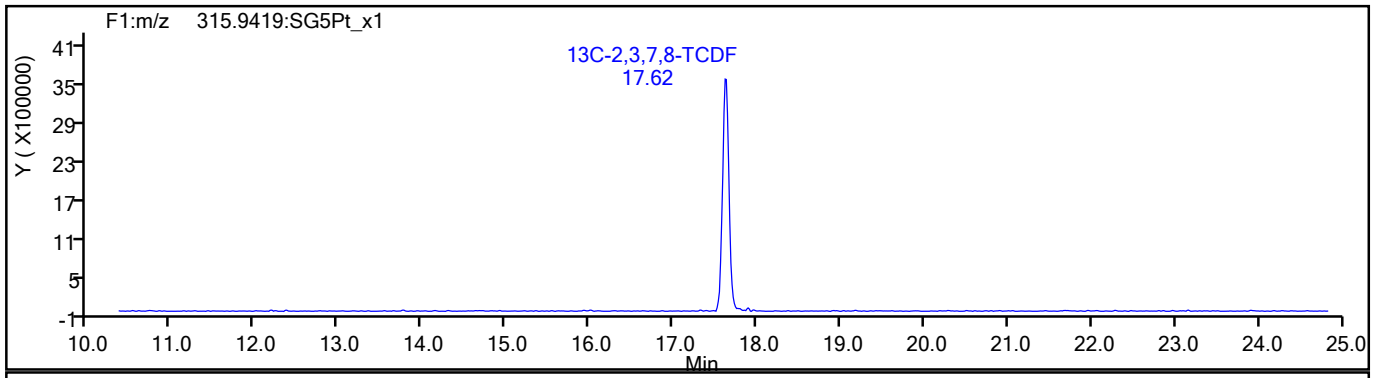

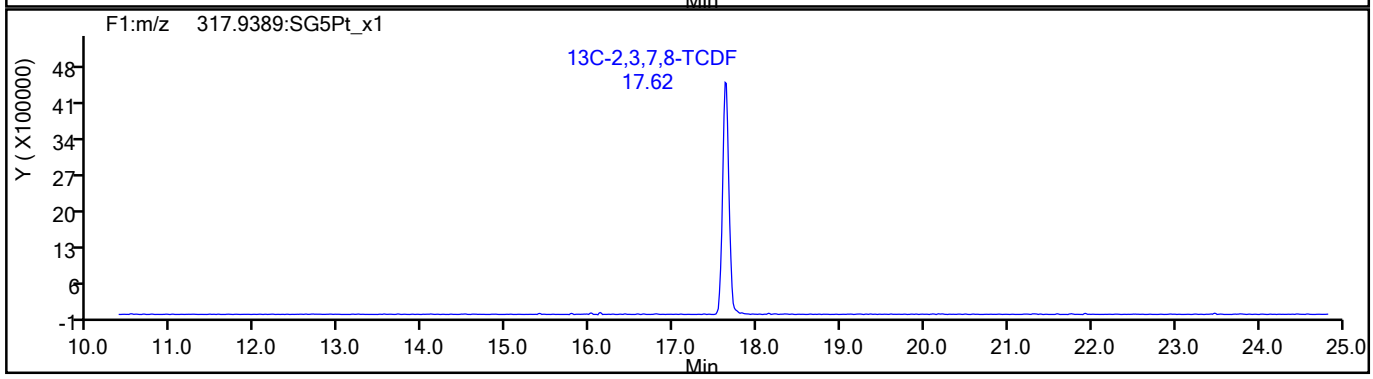

794273

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

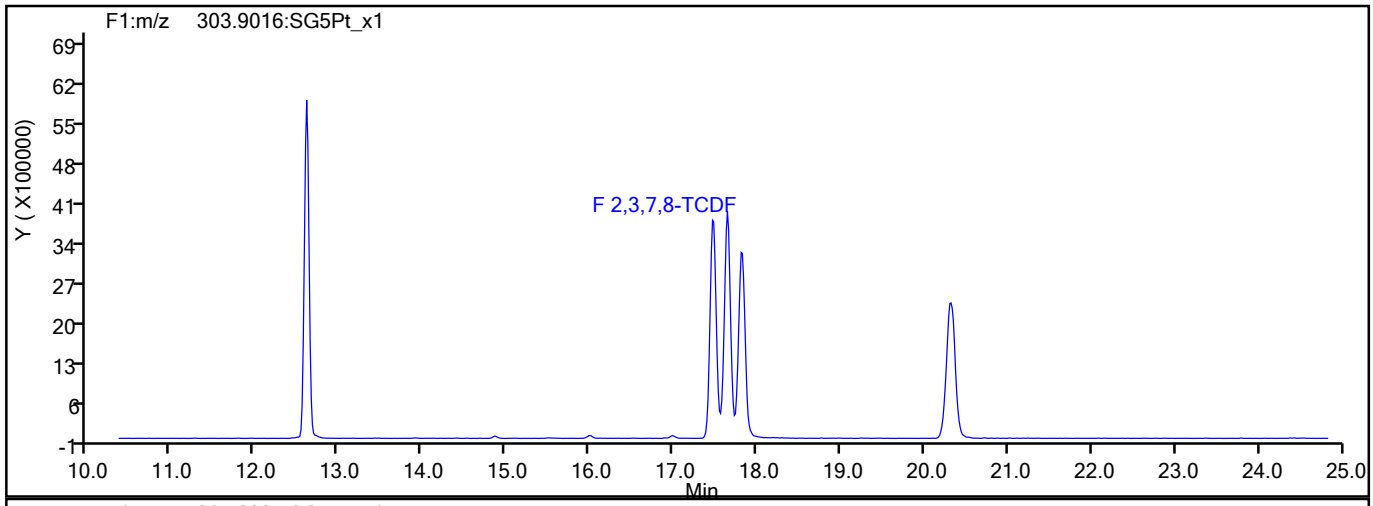

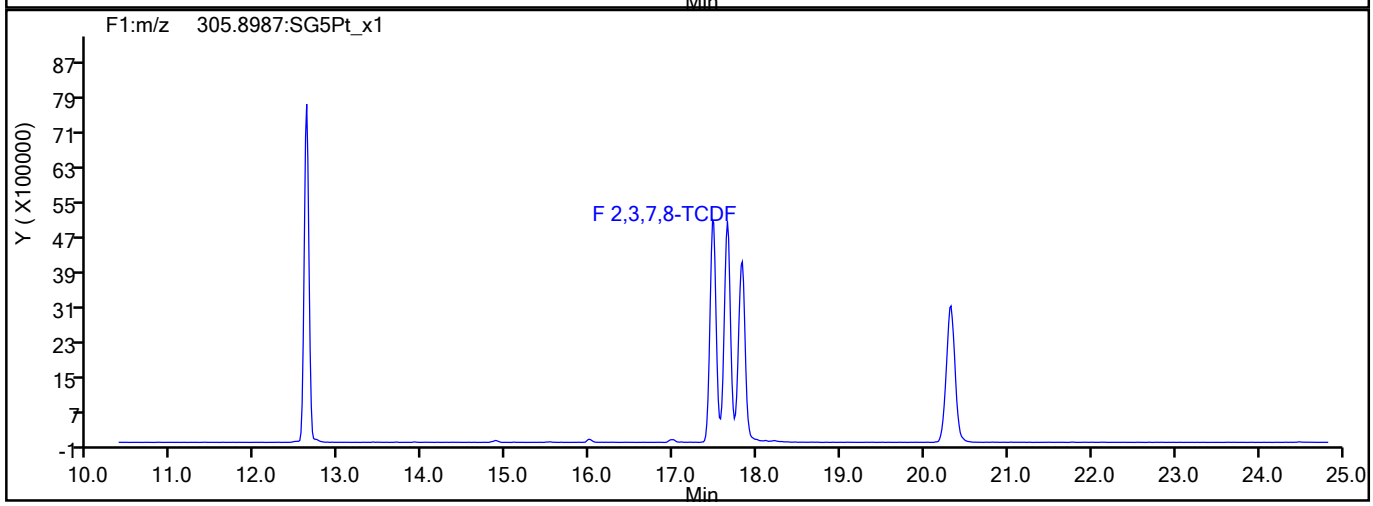

TCDF Interference Mass

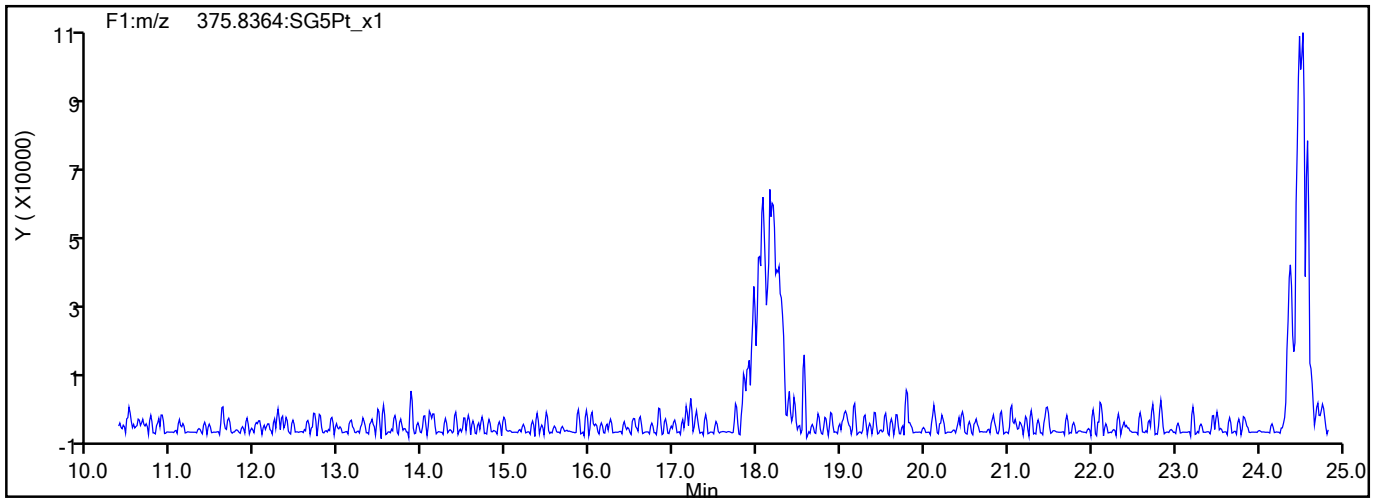

794274

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDD

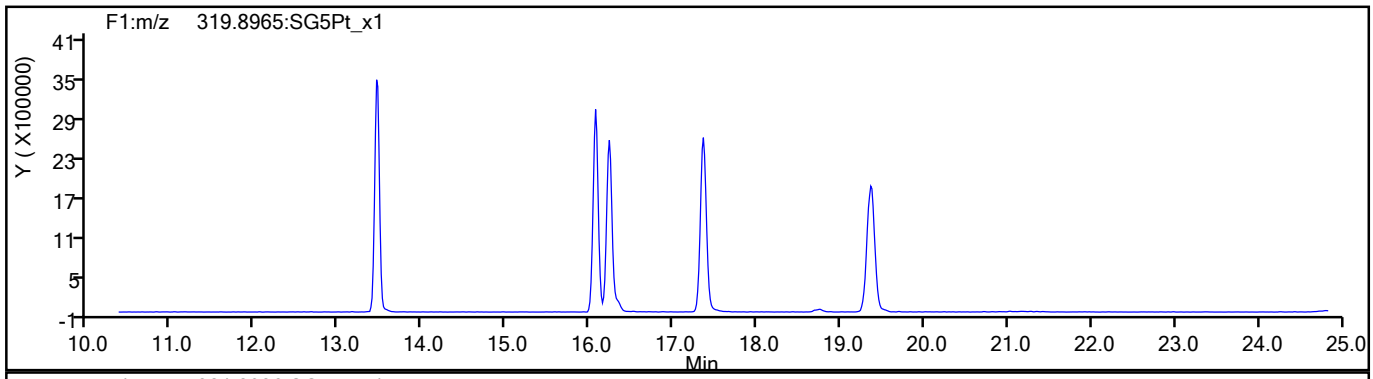

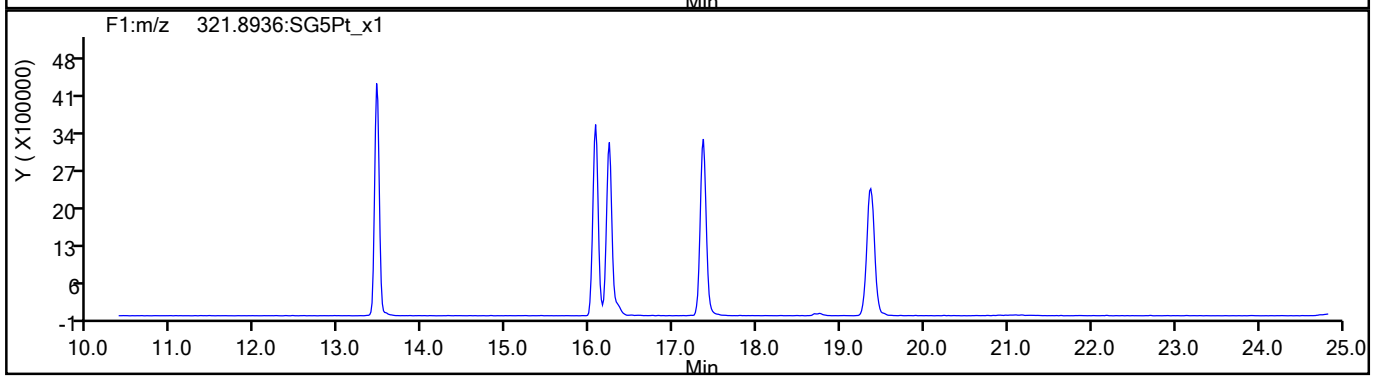

TCDD Standards

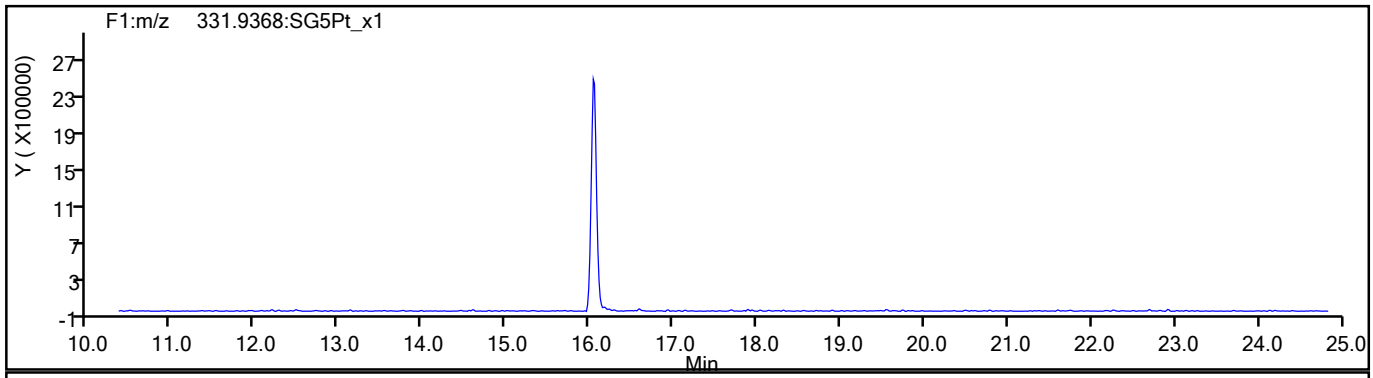

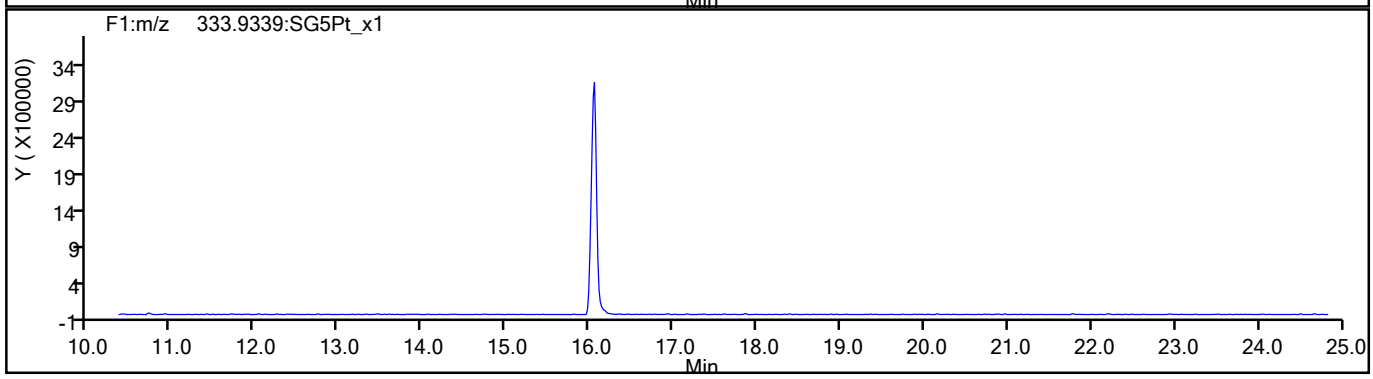

794275

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

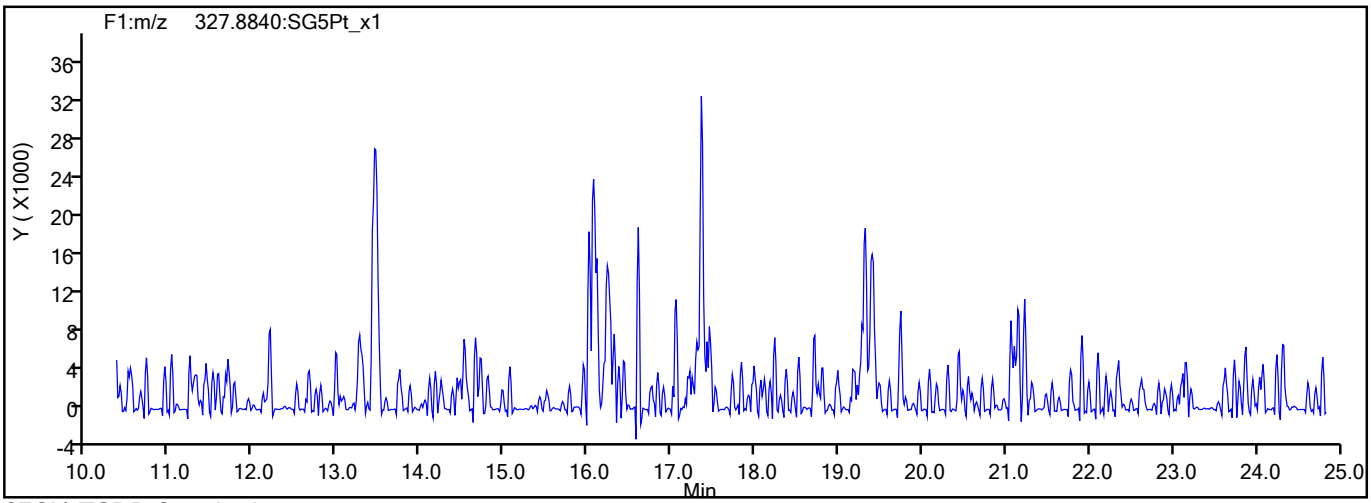

37Cl4-TCDD Standards

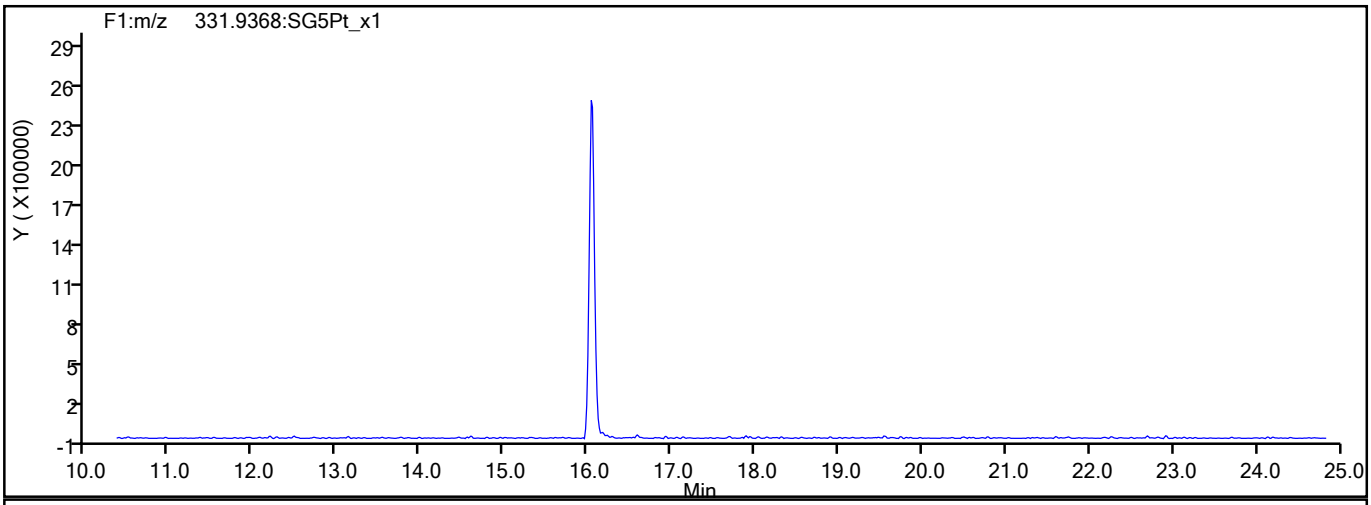

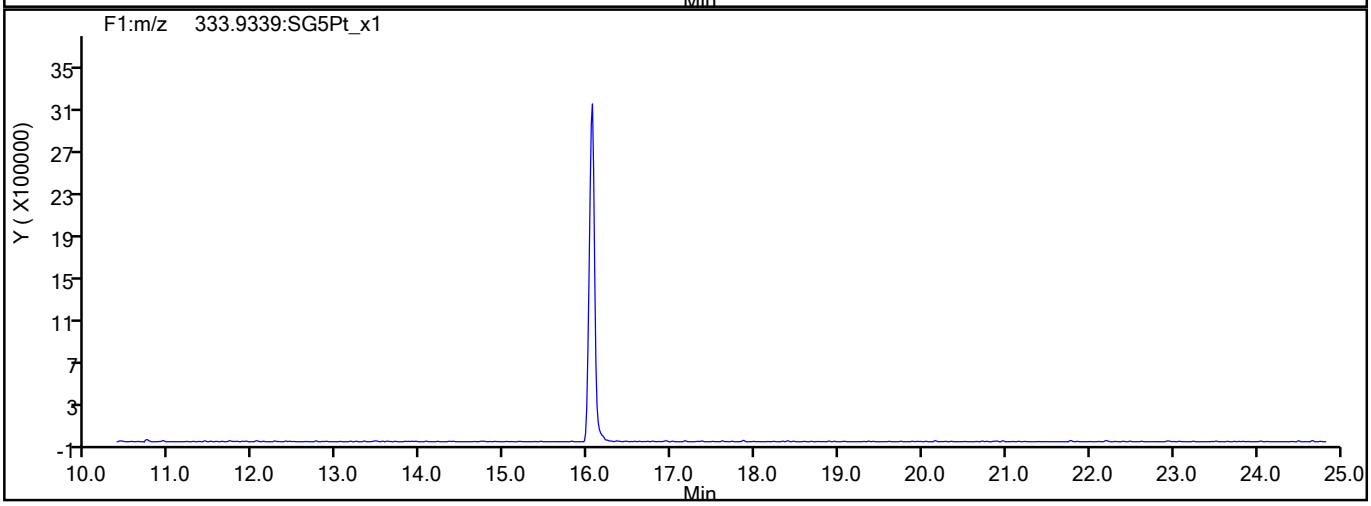

794276

Report Date: 15-Jul-2021 10:44:41 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_001.d		
Injection Date:	14-Jul-2021 10:57:20	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	506541	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

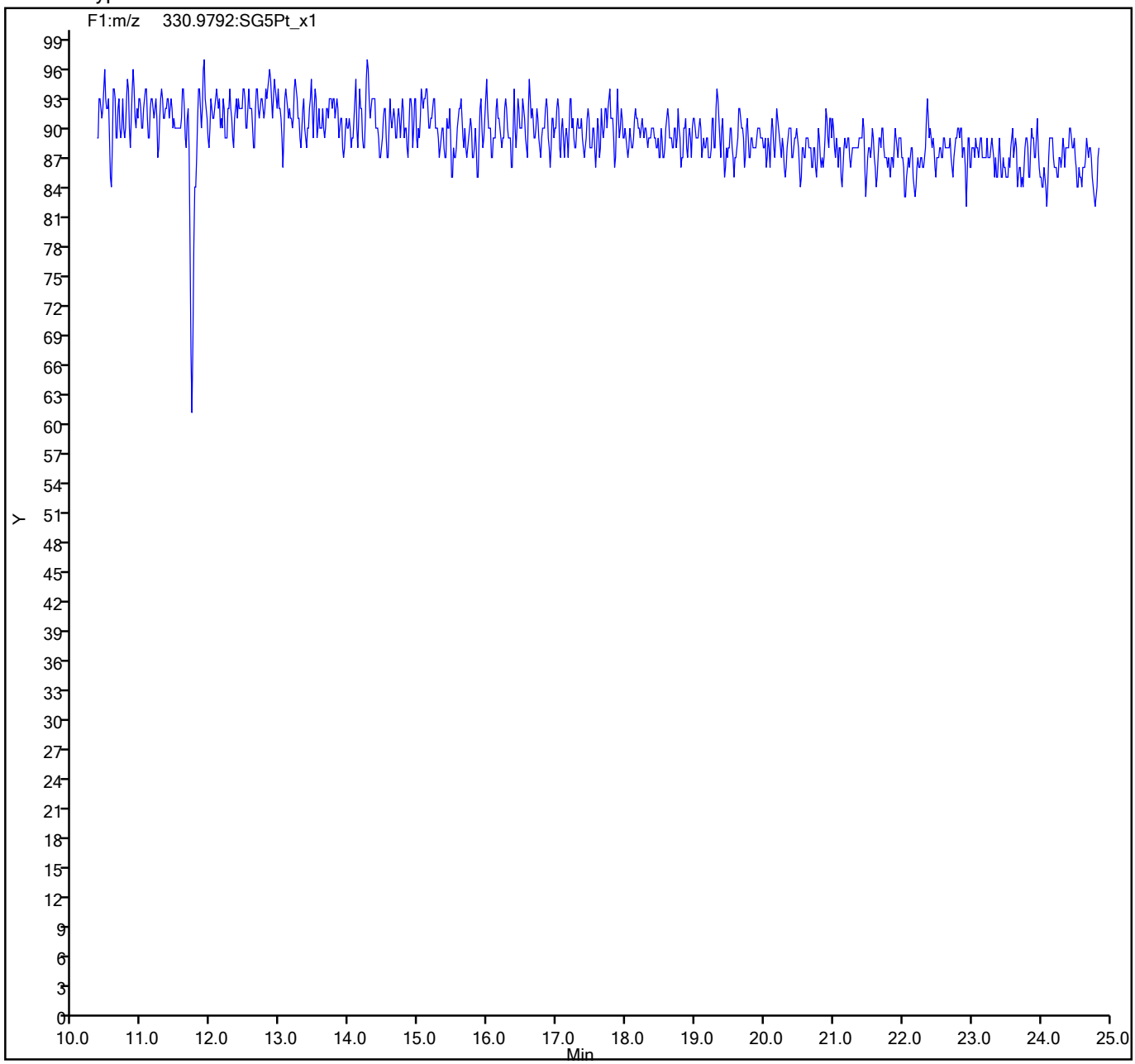

794277

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 31-Aug-2021 13:13:23 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:23:20

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
D 13C-2,3,7,8-TCDF	17.615	22417948	0.81	1.3327					0.00	
2,3,7,8-TCDF	17.643	23342457	0.77	0.9978	41.7	41.7	0.1627	0.1627		
D 13C-2,3,7,8-TCDD	16.066	12921619	0.78	0.8749					0.00	
2,3,7,8-TCDD	16.093	15061406	0.79	1.0570	44.1	44.1	0.1717	0.1717		
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend
Processing Flags

Reagents:
HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d
Lims ID: CPS
Client ID:
Sample Type: CPS
Inject. Date: 31-Aug-2021 13:13:23 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info:
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:12 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:23:20

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-2,3,7,8-TCDF											
315.9419	17.615	17.615	0	1.000	10066028	1874406	7328	18320	256		
317.9389	17.615	17.615	0	1.000	12351920	2267129	6374	15935	356	0.81(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.643	17.643	0	1.002	10180224	1970531	2750	6875	717		
305.8987	17.643	17.643	0	1.002	13162233	2621871	3972	9930	660	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	16.066	16.066	0	1.000	5662824	1377022	8352	20880	165		
333.9339	16.066	16.066	0	1.000	7258795	1574336	3193	7982	493	0.78(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.093	16.093	0	1.002	6664374	1524555	3063	7657	498		
321.8936	16.093	16.093	0	1.002	8397032	1845328	2293	5732	805	0.79(0.65-0.89)	

QC Flag Legend

Processing Flags

Reagents:

HRDXNCP_00044 Amount Added: 20.00 Units: uL

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d		
Injection Date:	31-Aug-2021 13:13:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

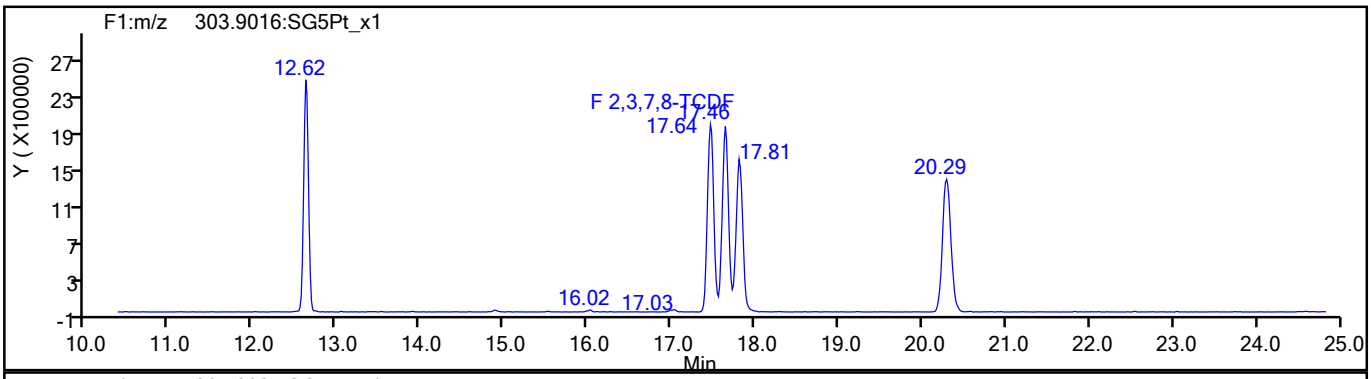

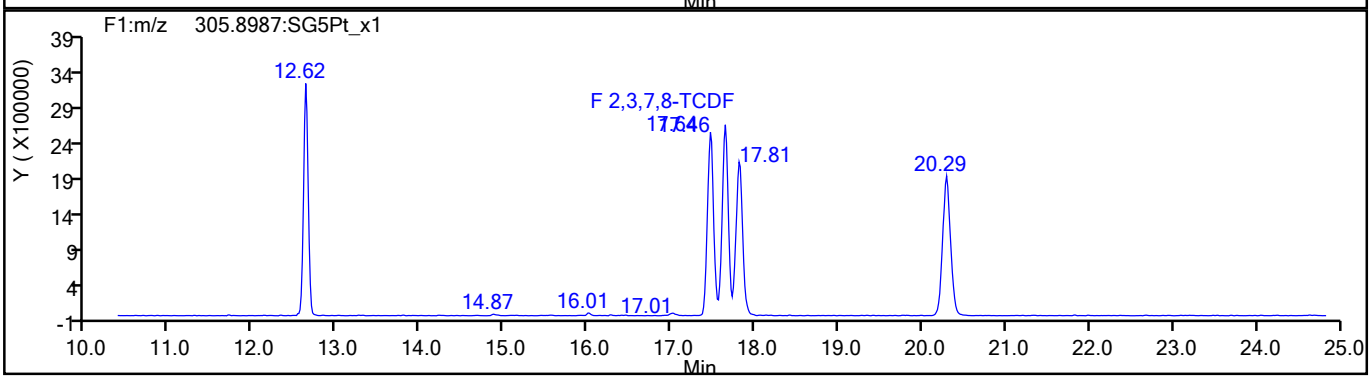

TCDF Standards

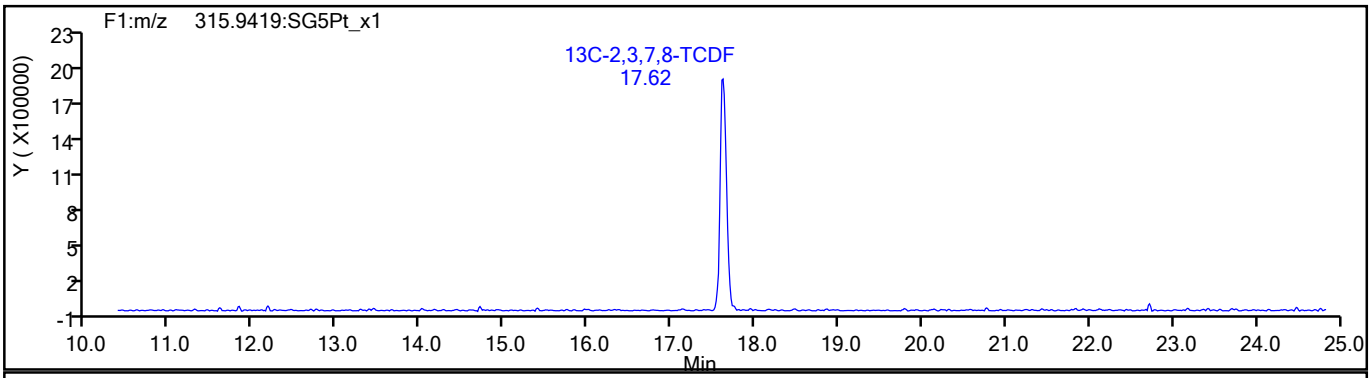

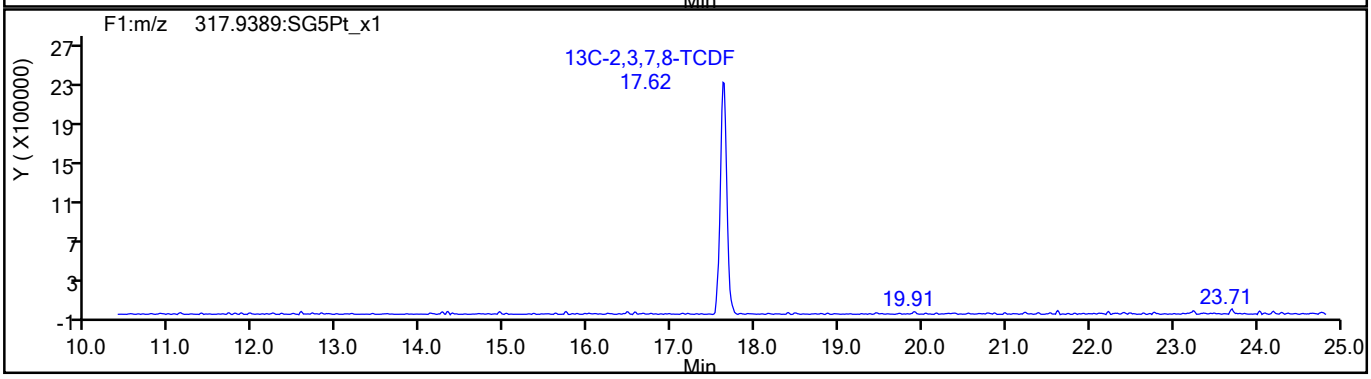

794280

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d		
Injection Date:	31-Aug-2021 13:13:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

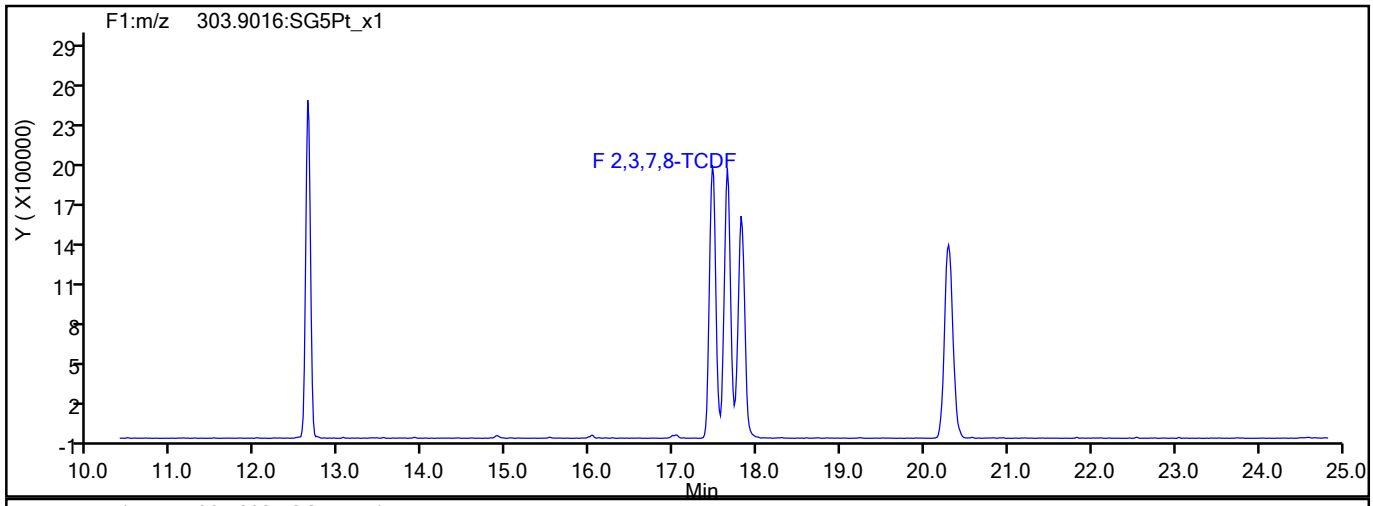

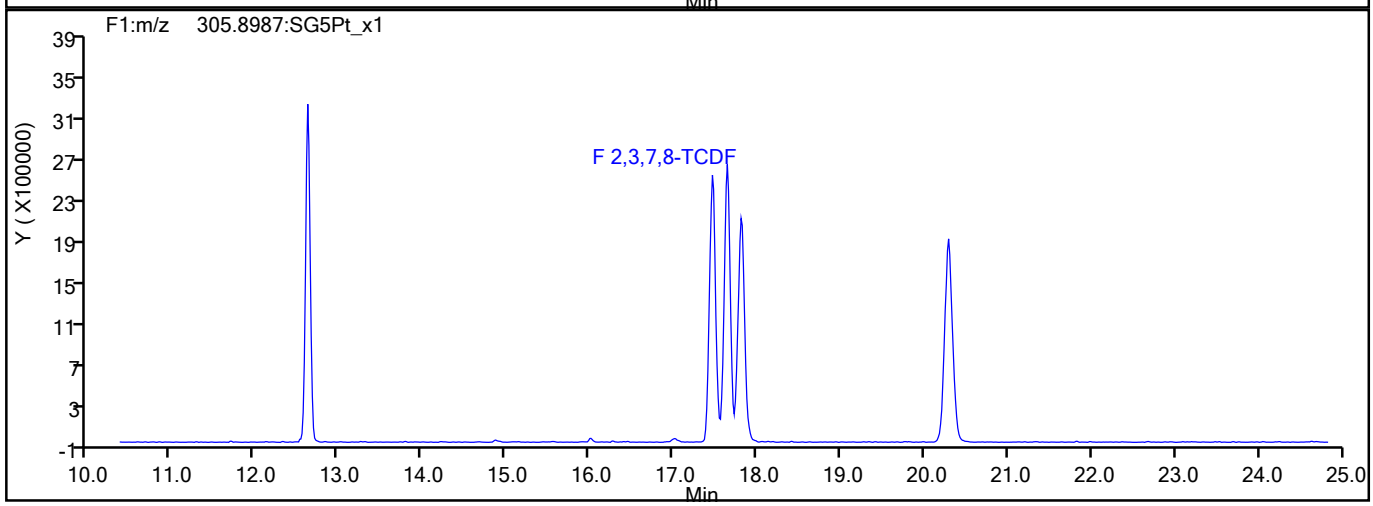

TCDF Interference Mass

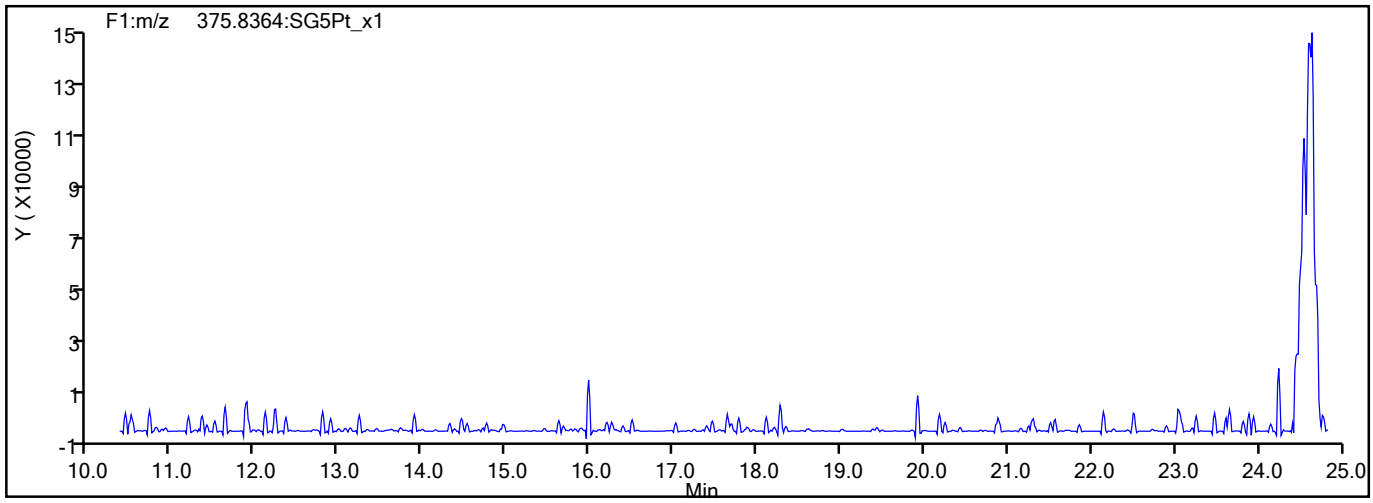

794281

Report Date: 01-Sep-2021 09:57:12 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_001.d		
Injection Date:	31-Aug-2021 13:13:23	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	520997	Sample Line#:	1
Column Type:	DB-225	Column Dia:	0.32 mm

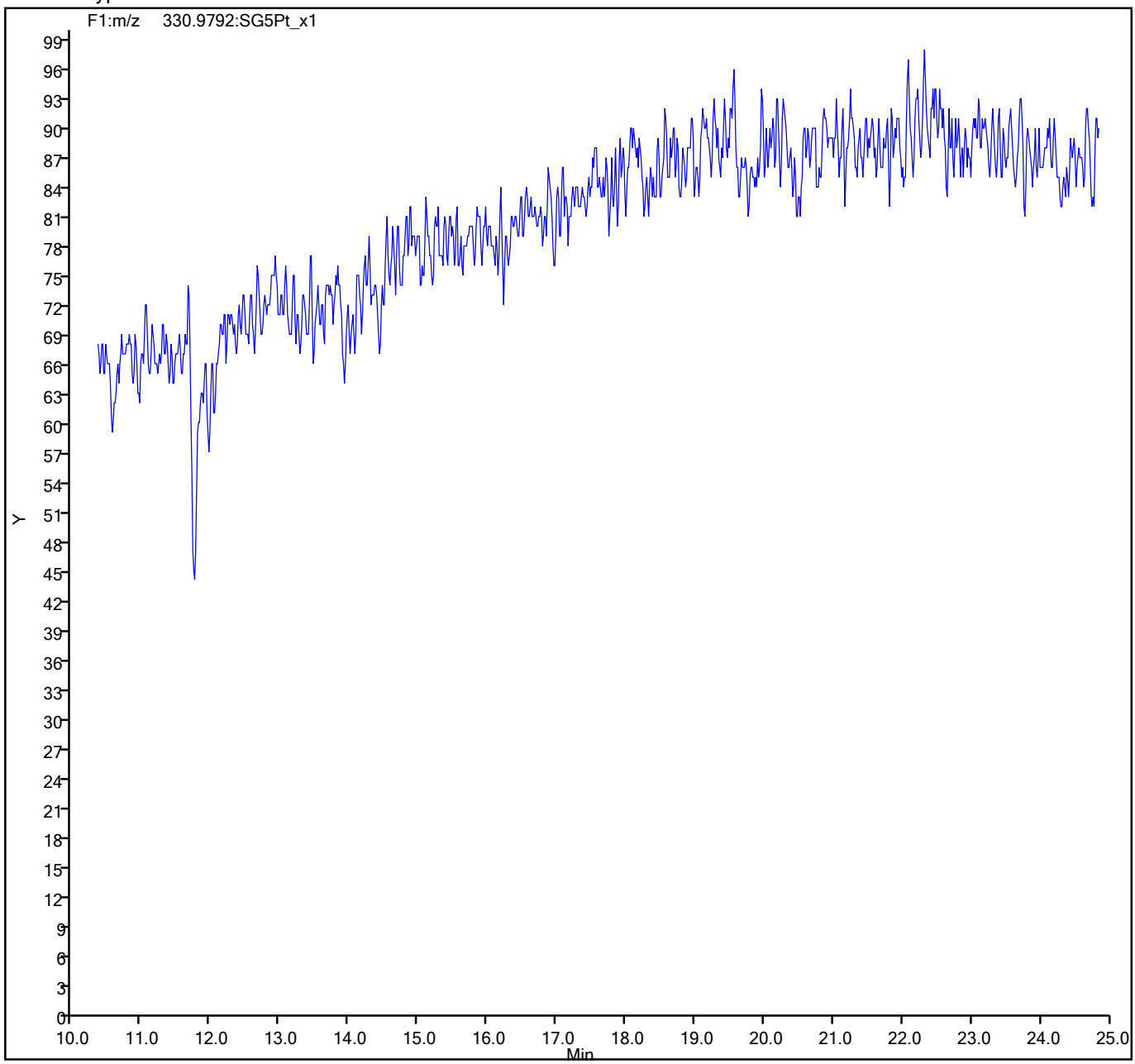

794282

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-515492/1-A
Matrix: Sediment
Lab File ID: 25AU2110D5_3.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10(g)
Date Analyzed: 08/25/2021 11:20
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	ND		1.0	0.14
51207-31-9	2,3,7,8-TCDF	0.190	J	1.0	0.073
40321-76-4	1,2,3,7,8-PeCDD	ND		5.0	0.16
57117-41-6	1,2,3,7,8-PeCDF	ND		5.0	0.13
57117-31-4	2,3,4,7,8-PeCDF	ND		5.0	0.13
39227-28-6	1,2,3,4,7,8-HxCDD	ND		5.0	0.10
57653-85-7	1,2,3,6,7,8-HxCDD	ND		5.0	0.11
19408-74-3	1,2,3,7,8,9-HxCDD	ND		5.0	0.099
70648-26-9	1,2,3,4,7,8-HxCDF	ND		5.0	0.093
57117-44-9	1,2,3,6,7,8-HxCDF	ND		5.0	0.093
72918-21-9	1,2,3,7,8,9-HxCDF	ND		5.0	0.061
60851-34-5	2,3,4,6,7,8-HxCDF	ND		5.0	0.065
35822-46-9	1,2,3,4,6,7,8-HpCDD	0.227	J	5.0	0.055
67562-39-4	1,2,3,4,6,7,8-HpCDF	ND		5.0	0.092
55673-89-7	1,2,3,4,7,8,9-HpCDF	ND		5.0	0.11
3268-87-9	OCDD	1.16	J	10	0.10
39001-02-0	OCDF	0.668	J	10	0.095
41903-57-5	Total TCDD	ND		1.0	0.14
30402-14-3	Total TCDF	0.190	J	1.0	0.073
36088-22-9	Total PeCDD	ND		5.0	0.16
30402-15-4	Total PeCDF	ND		5.0	0.13
34465-46-8	Total HxCDD	ND		5.0	0.11
55684-94-1	Total HxCDF	ND		5.0	0.093
37871-00-4	Total HpCDD	0.423	J	5.0	0.055
38998-75-3	Total HpCDF	ND		5.0	0.11

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-515492/1-A

Matrix: Sediment Lab File ID: 25AU2110D5_3.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/12/2021 05:19

Sample wt/vol: 10(g) Date Analyzed: 08/25/2021 11:20

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 519953 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	54		25-164
89059-46-1	13C-2,3,7,8-TCDF	52		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	57		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	54		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	59		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	58		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	49		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	58		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	49		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	52		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	51		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	51		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	49		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	54		26-138
114423-97-1	13C-OCDD	59		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	66		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d
Lims ID: MB 320-515492/1-A
Client ID:
Sample Type: MB
Inject. Date: 25-Aug-2021 11:20:44 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-515492/1-A MB 320-515492/1-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:26:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:54:26

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.567	29883312	0.79	6.2E+05	100.0	100.0				a
D 13C-2,3,7,8-TCDF	17.053	25142269	0.74	1.6249	51.8	51.8	0.2140	0.2140	51.78	
2,3,7,8-TCDF	17.069	24444	0.77	1.0239	0.1217	0.0950	0.0366	0.0366		RQM
A Non-2,3,7,8-sub-TCDF	17.076						0.0366	0.0366		
S Total TCDF					0.1217	0.0950	0.0366	0.0366		RQ
D 13C-2,3,7,8-TCDD	17.764	14568724	0.79	0.8993	54.2	54.2	0.2072	0.2072	54.21	
2,3,7,8-TCDD	17.809						0.0716	0.0716		
$ 37Cl4-2,3,7,8-TCDD	17.779	8751472		1.1071	26.5	26.5	0.0605	0.0605	66.13	
A Non-2,3,7,8-sub-TCDD	17.537						0.0716	0.0716		
S Total TCDD							0.0716	0.0716		
D 13C-1,2,3,7,8-PeCDF	22.020	19603570	1.55	1.2101	54.2	54.2	0.1045	0.1045	54.21	
1,2,3,7,8-PeCDF	22.047						0.0636	0.0636		
D 13C-2,3,4,7,8-PeCDF	23.343	22023538	1.60	1.2395	59.5	59.5	0.1020	0.1020	59.46	
2,3,4,7,8-PeCDF	23.370						0.0633	0.0633		
A F1 PeCDFs	19.851						0.0570	0.0570		
A Non-2,3,7,8-sub-PeCDF	23.067						0.0634	0.0634		
S Total PeCDF							0.0636	0.0636		
D 13C-1,2,3,7,8-PeCDD	24.052	12936475	1.63	0.7612	56.9	56.9	0.0766	0.0766	56.87	
1,2,3,7,8-PeCDD	24.079						0.0794	0.0794		
A Non-2,3,7,8-sub-PeCDD	23.696						0.0794	0.0794		
S Total PeCDD							0.0794	0.0794		
D 13C-1,2,3,4,7,8-HxCDF	30.199	18899674	0.52	1.0837	57.6	57.6	0.1758	0.1758	57.61	
1,2,3,4,7,8-HxCDF	30.213						0.0464	0.0464		
D 13C-1,2,3,6,7,8-HxCDF	30.399	16749571	0.52	1.1279	49.1	49.1	0.1689	0.1689	49.06	
1,2,3,6,7,8-HxCDF	30.412						0.0464	0.0464		
D 13C-2,3,4,6,7,8-HxCDF	31.304	16549499	0.51	1.0637	51.4	51.4	0.1791	0.1791	51.39	
2,3,4,6,7,8-HxCDF	31.317						0.0324	0.0324		
D 13C-1,2,3,7,8,9-HxCDF	32.143	15217541	0.51	0.9676	52.0	52.0	0.1969	0.1969	51.95	
1,2,3,7,8,9-HxCDF	32.156						0.0307	0.0307		
A Non-2,3,7,8-sub-HxCDF	30.338						0.0377	0.0377		
S Total HxCDF							0.0464	0.0464		

Report Date: 27-Aug-2021 09:26:56 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	31.956	30271630	1.27	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.504	12800681	1.23	0.7334	57.7	57.7	0.1950	0.1950	57.66	
1,2,3,4,7,8-HxCDD	31.517						0.0524	0.0524		RQU
D 13C-1,2,3,6,7,8-HxCDD	31.610	12948793	1.21	0.8802	48.6	48.6	0.1625	0.1625	48.60	
1,2,3,6,7,8-HxCDD	31.517						0.0567	0.0567		RQU
1,2,3,7,8,9-HxCDD	31.969						0.0497	0.0497		
A Non-2,3,7,8-sub-HxCDD	30.525						0.0528	0.0528		U
S Total HxCDD							0.0567	0.0567		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	11519496	0.45	0.7730	49.2	49.2	0.5788	0.5788	49.23	
1,2,3,4,6,7,8-HpCDF	33.615						0.0461	0.0461		
D 13C-1,2,3,4,7,8,9-HpCDF	34.673	11506086	0.42	0.7008	54.2	54.2	0.6384	0.6384	54.24	
1,2,3,4,7,8,9-HpCDF	34.685						0.0535	0.0535		
A Non-2,3,7,8-sub-HpCDF	34.150						0.0496	0.0496		
S Total HpCDF							0.0535	0.0535		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	9959429	1.00	0.6472	50.8	50.8	0.4600	0.4600	50.83	
1,2,3,4,6,7,8-HpCDD	34.405	12349	1.04	1.0943	0.1466	0.1133	0.0273	0.0273		RQM
A Non-2,3,7,8-sub-HpCDD	34.223	10693	1.04	1.0943	0.1265	0.0981	0.0273	0.0981		RQM
S Total HpCDD					0.2731	0.2114	0.0273	0.0273		RQ
D 13C-OCDD	36.701	15843349	0.88	0.4472	117.0	117.0	0.3238	0.3238	58.52	
OCDF	36.797	38074	0.89	1.4382	0.3727	0.3342	0.0475	0.0475		RQM
OCDD	36.713	50874	0.92	1.1070	0.5801	0.5801	0.0513	0.0513		M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d
Lims ID: MB 320-515492/1-A
Client ID:
Sample Type: MB
Inject. Date: 25-Aug-2021 11:20:44 ALS Bottle#: 4 Worklist Smp#: 3
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: MB 320-515492/1-A MB 320-515492/1-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:26:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:54:26

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											a
331.9368	17.567	17.598	-2		13169191	3437394	4069	10172	845		a
333.9339	17.567	17.598	-2		16714121	4346740	1734	4335	2507	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.053	17.099	-3	0.971	10706570	2704495	7372	18430	367		
317.9389	17.053	17.099	-3	0.971	14435699	3713861	3456	8640	1075	0.74(0.65-0.89)	
2,3,7,8-TCDF											RQM
303.9016	17.069	17.114	-3	1.001	10634	2780	339	847	8		M
305.8987	17.084	17.114	-2	1.002	20697	4646	623	1557	7	0.51(0.65-0.89)	
	Empc Correction				13810	3610	623	1557	6		
A Non-2,3,7,8-sub-TCDF											
303.9016	17.076						339	847			
305.8987	17.076						623	1557			
13C-2,3,7,8-TCDD											
331.9368	17.764	17.794	-2	1.011	6436642	1562061	4069	10172	384		
333.9339	17.764	17.794	-2	1.011	8132082	1966432	1734	4335	1134	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809						836	2090			
321.8936	17.809						432	1080			
37Cl4-2,3,7,8-TCDD											
327.8847	17.779	17.809	-2	1.012	8751472	2145464	2087	5217	1028		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.537						836	2090			
321.8936	17.537						432	1080			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.253	11929209	2253060	2205	5512	1022		
353.8970	22.020	22.020	0	1.253	7674361	1454588	1732	4330	840	1.55(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.047						237	592			
341.8567	22.047						764	1910			
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.329	13547656	2391698	2205	5512	1085		
353.8970	23.343	23.343	0	1.329	8475882	1486861	1732	4330	858	1.60(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370						237	592			
341.8567	23.370						764	1910			
A F1 PeCDFs											
339.8597	19.851						232	580			
341.8567	19.851						668	1670			
A Non-2,3,7,8-sub-PeCDF											
339.8597	23.067						237	592			
341.8567	23.067						764	1910			
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.369	8022940	1343012	1068	2670	1258		
369.8919	24.052	24.052	0	1.369	4913535	794351	748	1870	1062	1.63(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079						515	1287			
357.8516	24.079						197	492			
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						515	1287			
357.8516	23.696						197	492			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.199	30.186	1	0.945	6465926	1148968	3389	8472	339		
385.8610	30.186	30.186	0	0.945	12433748	2208690	3402	8505	649	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.213						398	995			
375.8178	30.213						279	697			
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	5713520	1127867	3389	8472	333		
385.8610	30.399	30.399	0	0.951	11036051	2108760	3402	8505	620	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412						398	995			
375.8178	30.412						279	697			
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.304	31.291	1	0.980	5558725	1512399	3389	8472	446		
385.8610	31.304	31.291	1	0.980	10990774	2954889	3402	8505	869	0.51(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317						398	995			
375.8178	31.317						279	697			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.143	0	1.006	5118427	1606580	3389	8472	474		
385.8610	32.143	32.143	0	1.006	10099114	3116314	3402	8505	916	0.51(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.156						398	995			
375.8178	32.156						279	697			
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.338						398	995			
375.8178	30.338						279	697			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		16912518	4980246	2870	7175	1735		
403.8529	31.956	31.956	0		13359112	3929684	2226	5565	1765	1.27(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.504	31.504	0	0.986	7056039	2029906	2870	7175	707		
403.8529	31.504	31.504	0	0.986	5744642	1633767	2226	5565	734	1.23(1.05-1.43)	
1,2,3,4,7,8-HxCDD											RQU
389.8157	31.517						432	1080			
391.8127	31.517						385	962			
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	7094657	1989733	2870	7175	693		
403.8529	31.610	31.610	0	0.989	5854136	1609259	2226	5565	723	1.21(1.05-1.43)	
1,2,3,6,7,8-HxCDD											RQU
389.8157	31.624						432	1080			
391.8127	31.624						385	962			
1,2,3,7,8,9-HxCDD											
389.8157	31.969						432	1080			
391.8127	31.969						385	962			
A Non-2,3,7,8-sub-HxCDD											U
389.8157	30.525						432	1080			
391.8127	30.525						385	962			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	3578307	1319781	4391	10977	301		
419.8220	33.603	33.603	0	1.052	7941189	3120604	11555	28887	270	0.45(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615						901	2252			
409.7789	33.615						279	697			
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.673	34.672	0	1.085	3388005	1248206	4391	10977	284		
419.8220	34.673	34.672	0	1.085	8118081	2934164	11555	28887	254	0.42(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685						901	2252			
409.7789	34.685						279	697			
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						901	2252			
409.7789	34.150						279	697			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	4968890	1847092	8092	20230	228		
437.8140	34.393	34.393	0	1.076	4990539	1826875	2519	6297	725	1.00(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											RQM
423.7766	34.405	34.405	0	1.000	6296	2257	263	657	9		M
425.7737	34.405	34.405	0	1.000	9677	3475	176	440	20	0.65(0.88-1.20)	M
	Empc Correction				6053	2170	176	440	12		
A Non-2,3,7,8-sub-HpCDD											RQM
423.7766	33.858	34.223	-22	0.984	8547	2277	263	657	9		M
	Empc Correction				5451	1860	263	657	7		
425.7737	33.858	34.223	-22	0.984	5242	1789	176	440	10	1.63(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.701	0	1.148	7431427	2403818	3595	8987	669		
471.7750	36.701	36.701	0	1.148	8411922	2748839	1565	3912	1756	0.88(0.76-1.02)	
OCDF											RQM
441.7428	36.797	36.797	0	1.003	22310	6605	281	702	24		M
	Empc Correction				17929	5201	281	702	19		
443.7399	36.797	36.797	0	1.003	20145	5844	423	1057	14	1.11(0.76-1.02)	
OCDD											M
457.7377	36.713	36.713	0	1.000	24319	7562	318	795	24		M
459.7348	36.713	36.713	0	1.000	26555	8005	267	667	30	0.92(0.76-1.02)	M

QC Flag Legend

Processing Flags
- R - Failed Signal Ratio Test
- Q - EMPC-Estimated Max. Possible Conc.

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d
Lims ID: MB 320-515492/1-A
Client ID:
Inject. Date: 25-Aug-2021 11:20:44 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 3

Non-2,3,7,8-sub-HxCDD, RT: 30.525

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	12800681	3663673
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	12948793	3598992
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	12874737	3631332

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags

Compound is Marked ND

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d
Lims ID: MB 320-515492/1-A
Client ID:
Inject. Date: 25-Aug-2021 11:20:44 Dil. Factor: 1.0000
Sample Type: MB, Method Blank
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 3

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	9959429	3673967

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	9959429	3673967

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.858	8547	2277	5242	1789	0.1265	1.63	RQM
33.858	5451	1860	5242	1789	0.0981		Empc Correction
Signal Totals:							
	5451	1860	5242	1789			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	13789	4066				1.63	RQM
	10693	3649					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.1265 = (13789 * 100.000) / (9959429 * 1.094)
Empc Amount: 0.0981 = (10693 * 100.000) / (9959429 * 1.094)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.07
Area: 11266
Amount: 0.124160
Amount Units: pg/ul

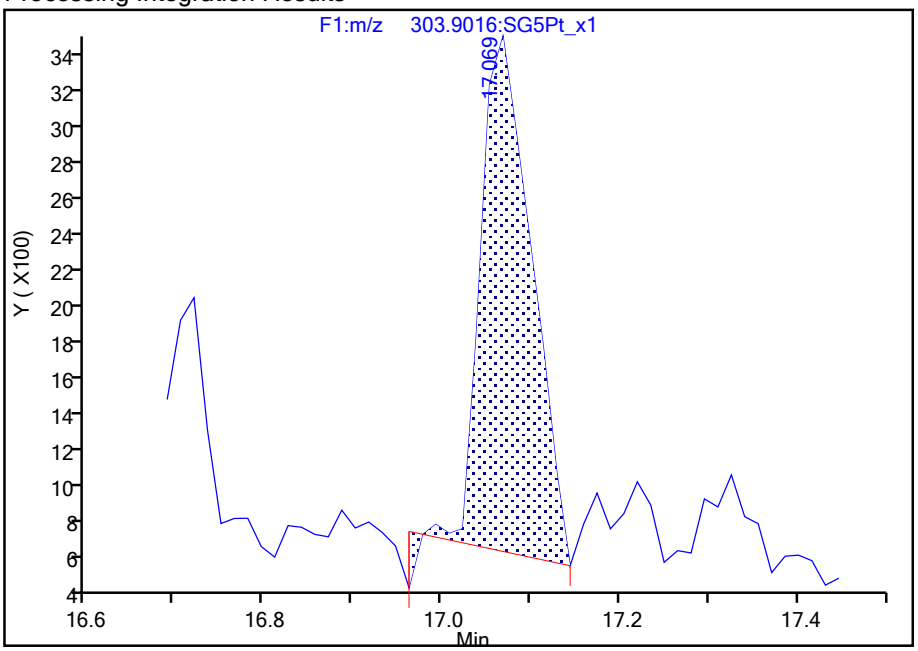

Manual Integration Results

RT: 17.07
Area: 10634
Amount: 0.121705
Amount Units: pg/ul

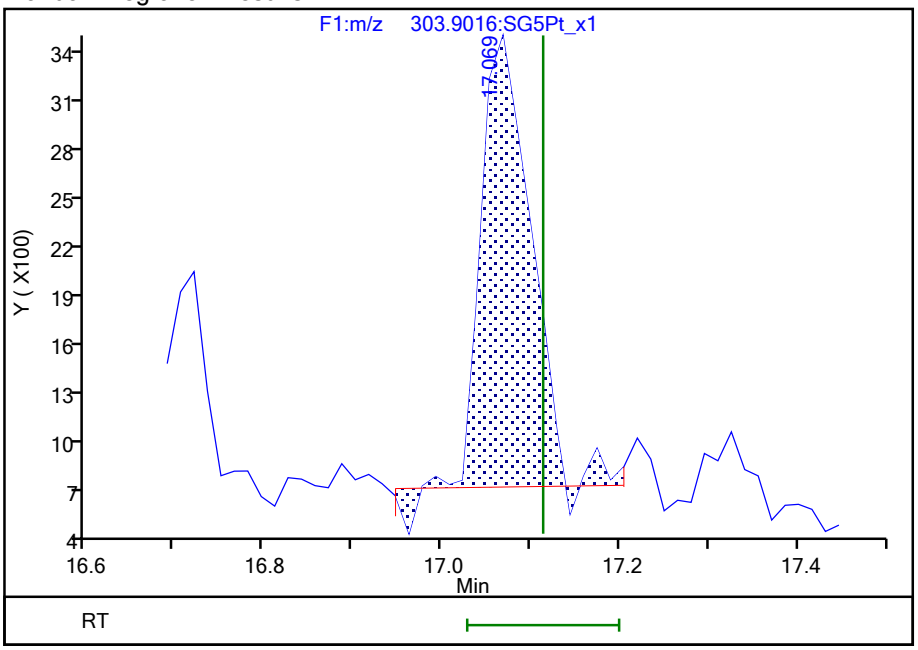

Reviewer: dadunj, 27-Aug-2021 09:25:06

Audit Action: Manually Integrated Audit Reason: Baseline

794293

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 1

Processing Integration Results

RT: 34.41
Area: 9682
Amount: 0.189629
Amount Units: pg/ul

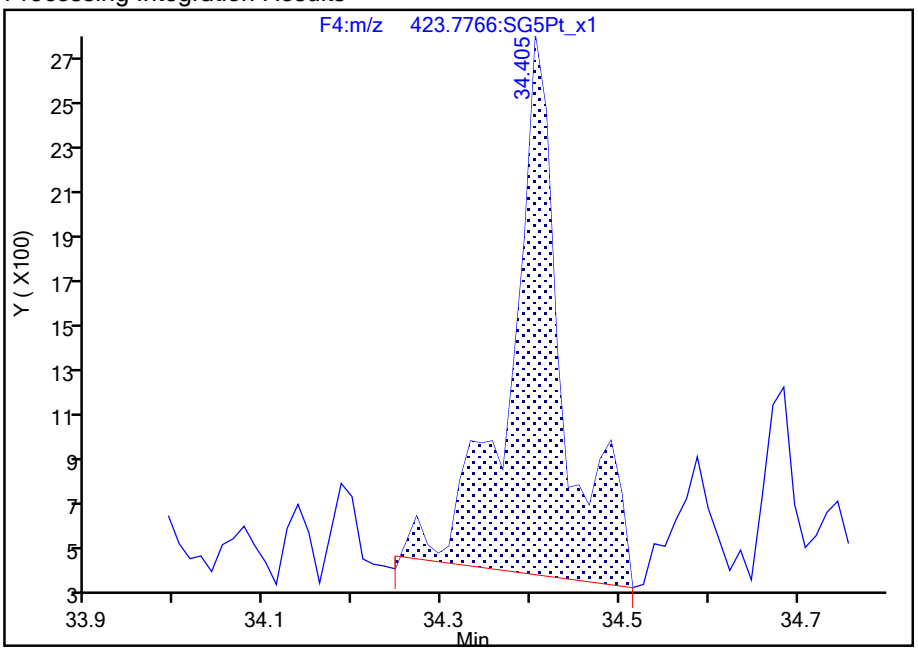

Manual Integration Results

RT: 34.41
Area: 6296
Amount: 0.146560
Amount Units: pg/ul

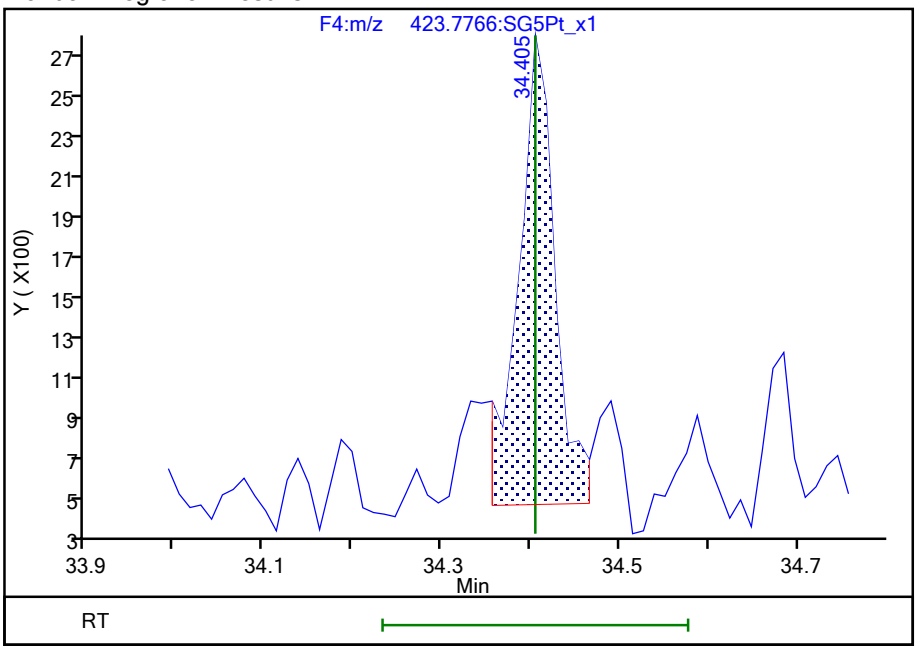

Reviewer: dadunj, 27-Aug-2021 09:25:56

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

794294

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

1,2,3,4,6,7,8-HpCDD, CAS: 35822-46-9

Signal: 2

Processing Integration Results

RT: 34.41
Area: 10985
Amount: 0.189629
Amount Units: pg/ul

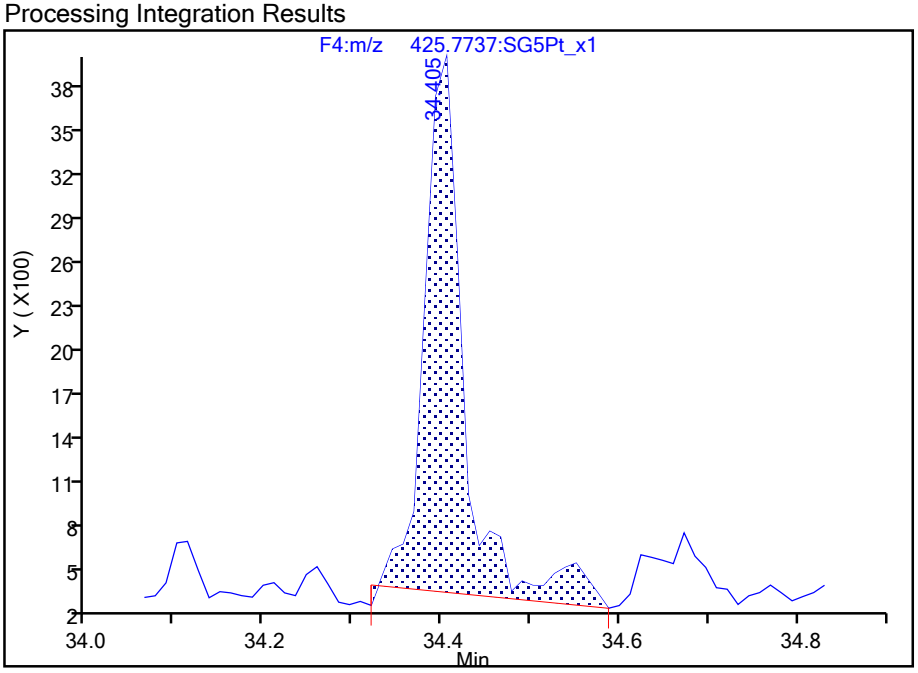

Manual Integration Results

RT: 34.41
Area: 9677
Amount: 0.146560
Amount Units: pg/ul

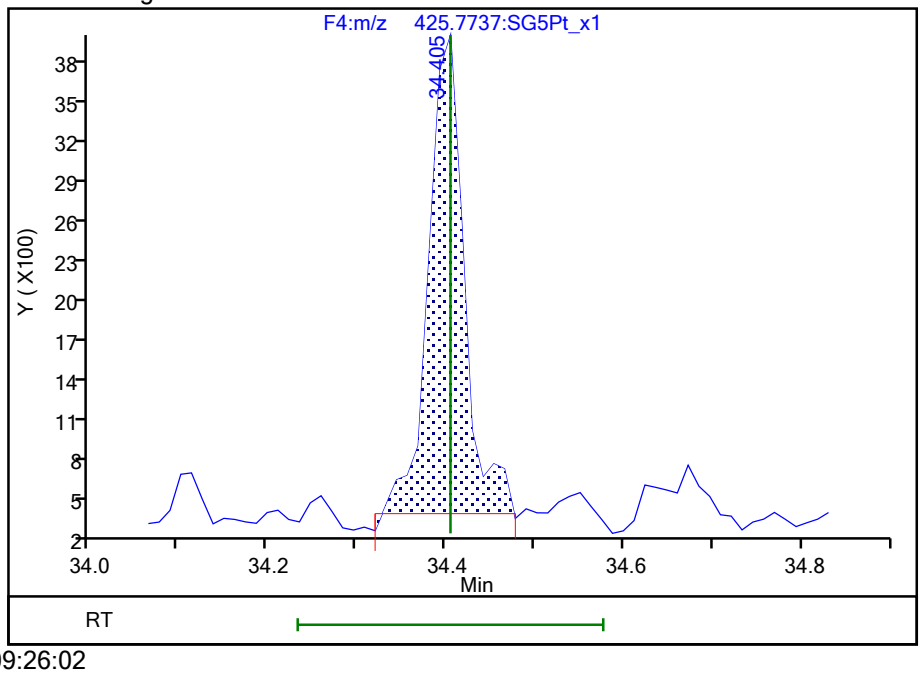

Reviewer: dadunj, 27-Aug-2021 09:26:02

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

794295

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F4:HRSIR		

Non-2,3,7,8-sub-HpCDD, Signal: 1, m/z: 423.7766, RT: (33.85- 34.60)

Signal: 1

Processing Integration Results

RT = 33.858 Area = 10488

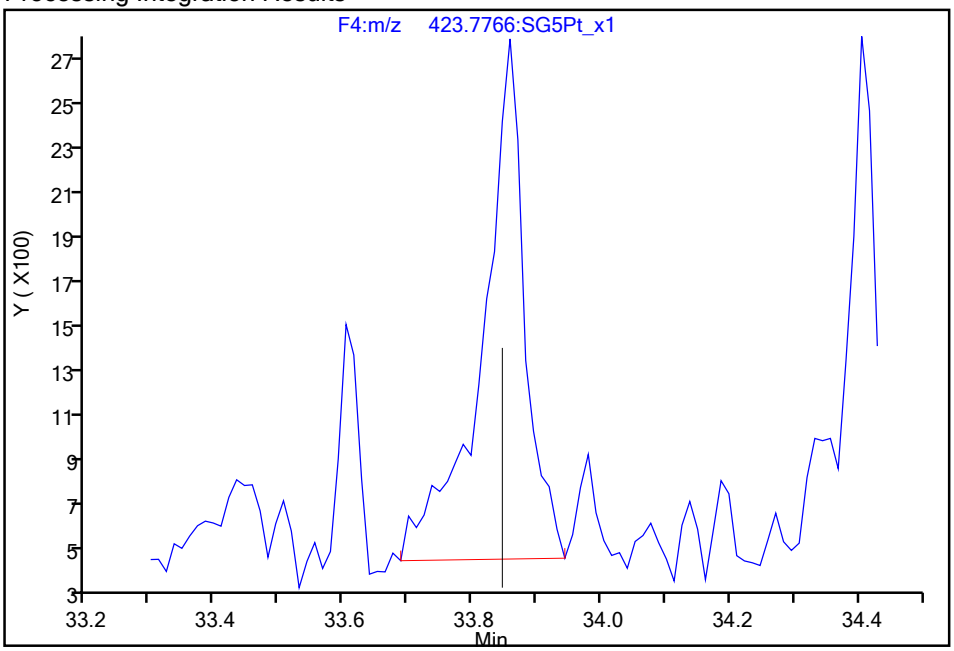

Manual Integration Results

RT = 33.858 Area = 8547 M

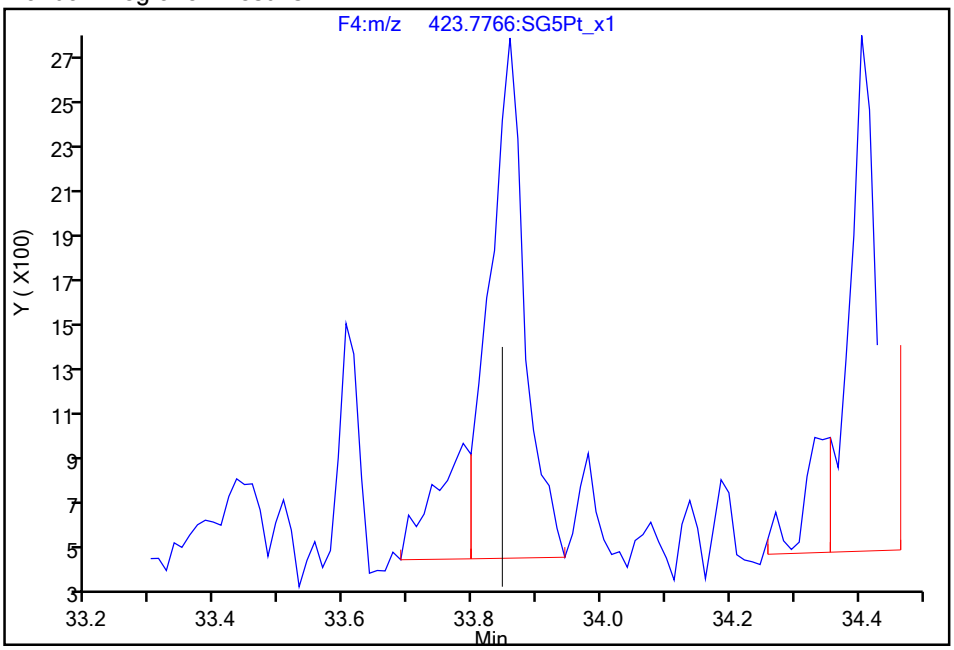

Reviewer: dadunj, 27-Aug-2021 09:26:05

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDF, CAS: 39001-02-0

Signal: 1

Processing Integration Results

RT: 36.80
Area: 23576
Amount: 0.383765
Amount Units: pg/ul

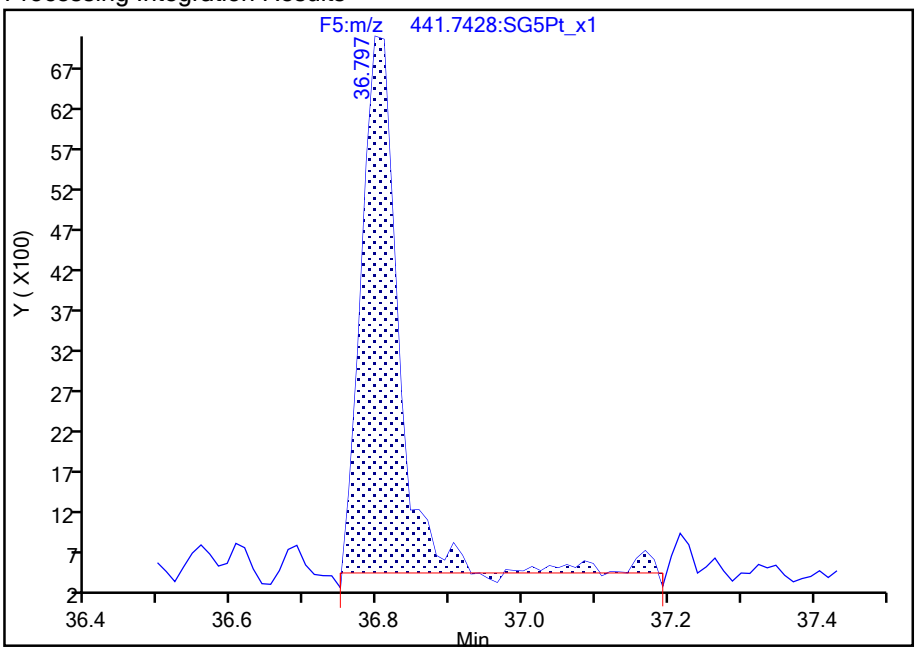

Manual Integration Results

RT: 36.80
Area: 22310
Amount: 0.372653
Amount Units: pg/ul

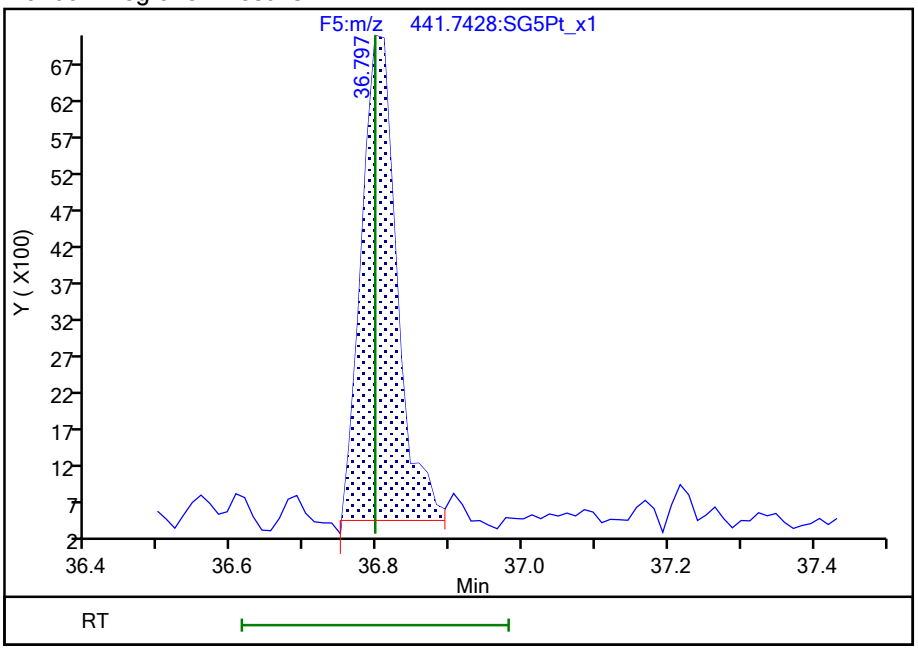

Reviewer: dadunj, 27-Aug-2021 09:26:11

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 1

Processing Integration Results

RT: 36.71
Area: 27894
Amount: 0.631924
Amount Units: pg/ul

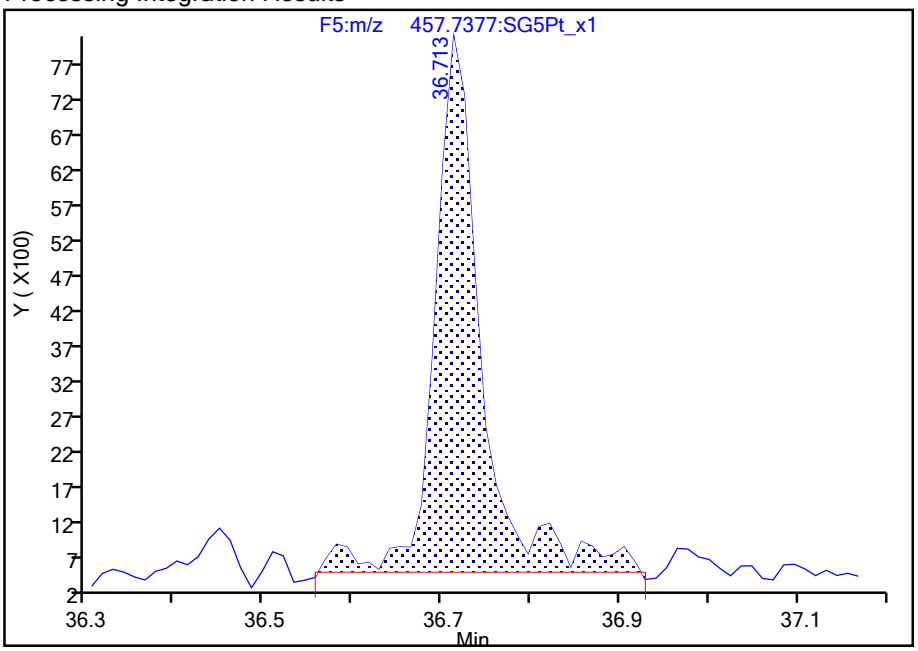

Manual Integration Results

RT: 36.71
Area: 24319
Amount: 0.580131
Amount Units: pg/ul

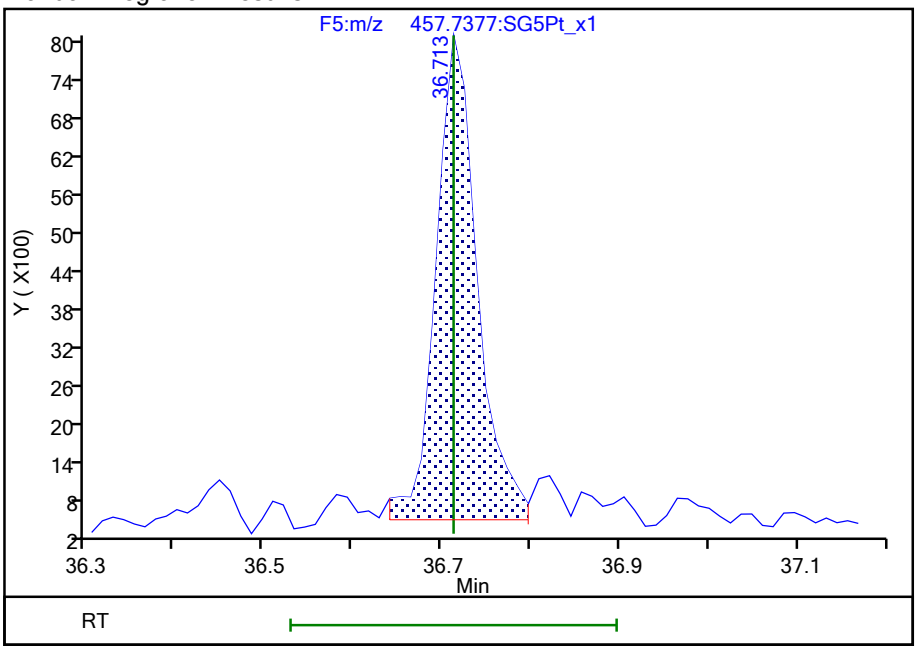

Reviewer: dadunj, 27-Aug-2021 09:26:15

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

794298

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d				
Injection Date:	25-Aug-2021 11:20:44	Instrument ID:	10D5		
Lims ID:	MB 320-515492/1-A				
Client ID:					
Operator ID:	SMA	ALS Bottle#:	4	Worklist Smp#:	3
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL		
Column:	DB-5 (0.32 mm)	Detector	F5:HRSIR		

OCDD, CAS: 3268-87-9

Signal: 2

Processing Integration Results

RT: 36.71
Area: 27522
Amount: 0.631924
Amount Units: pg/ul

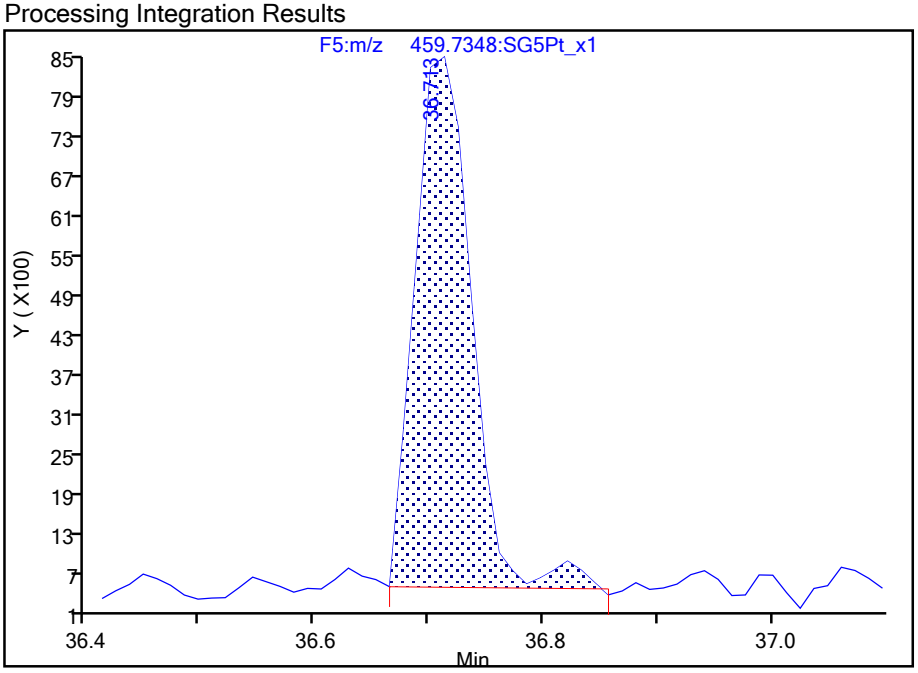

Manual Integration Results

RT: 36.71
Area: 26555
Amount: 0.580131
Amount Units: pg/ul

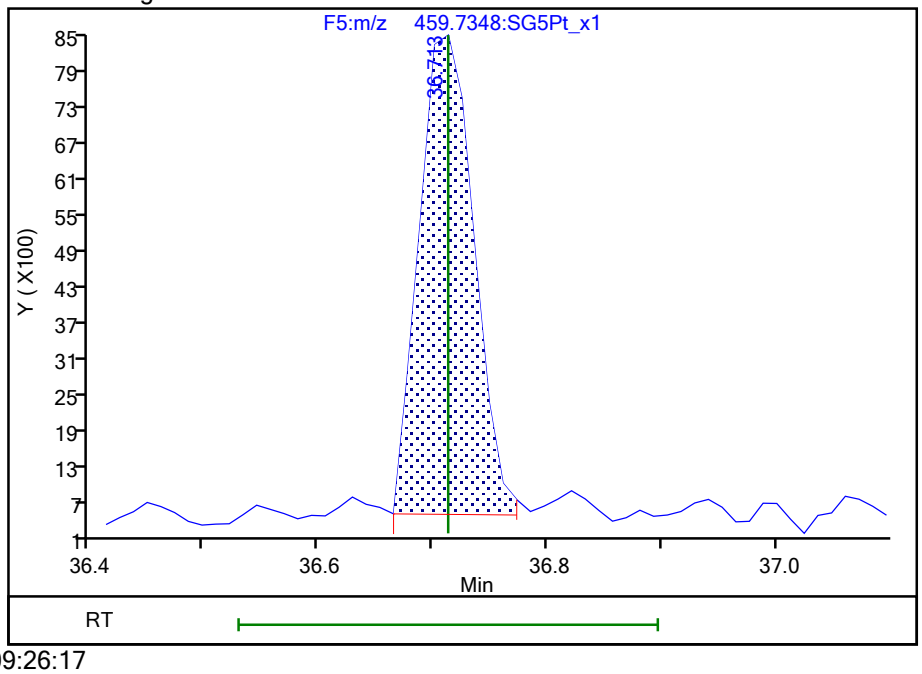

Reviewer: dadunj, 27-Aug-2021 09:26:17
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

794299

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

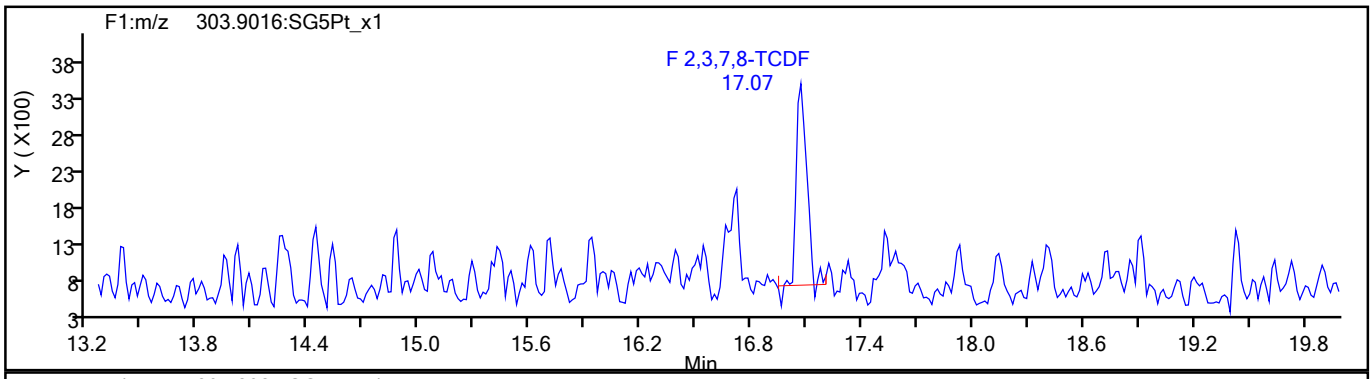

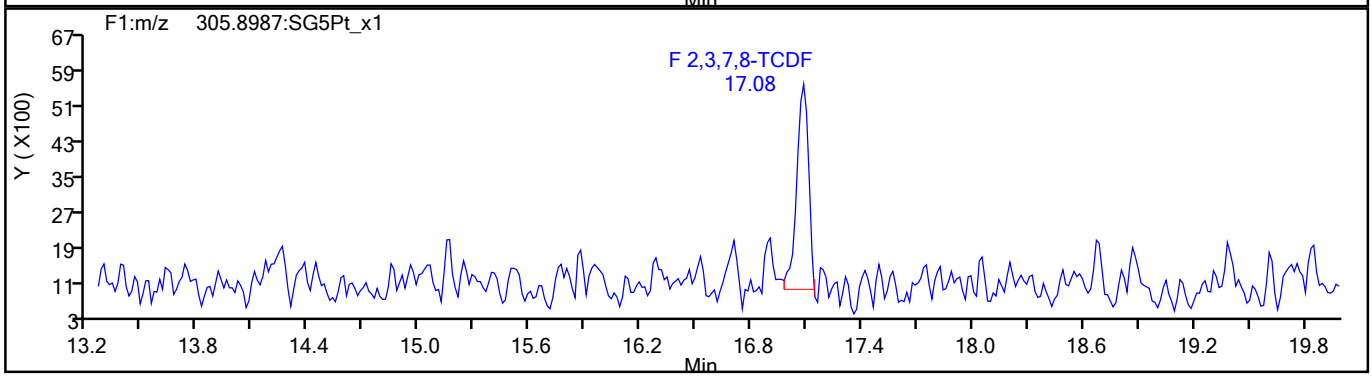

TCDF Standards

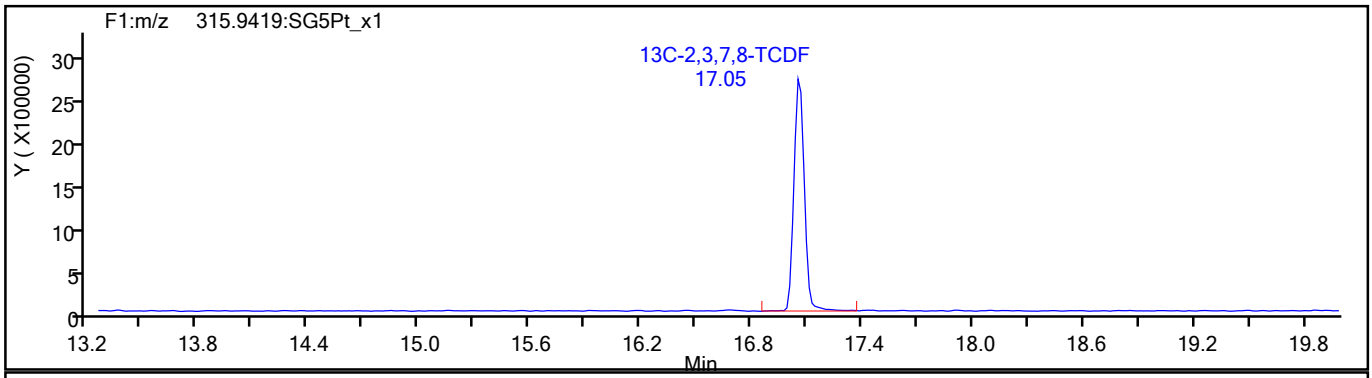

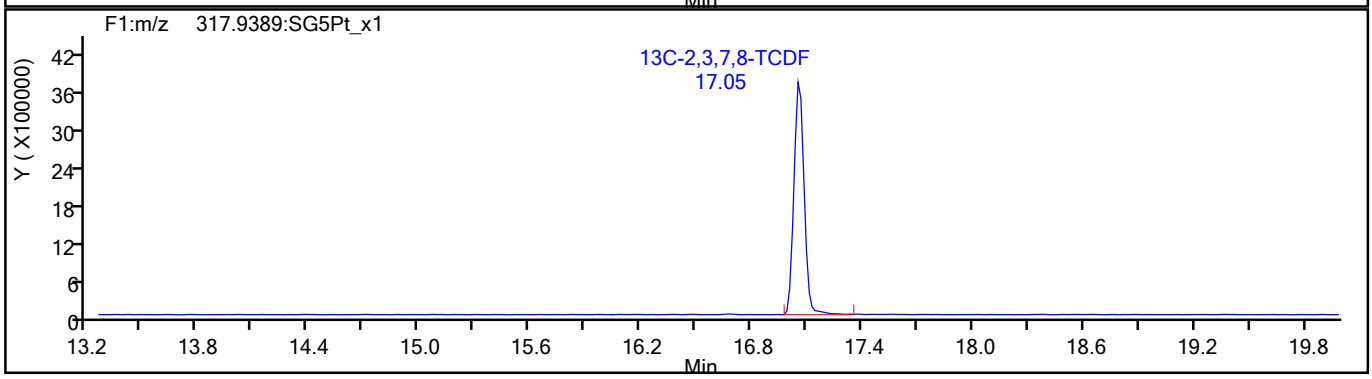

794300

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

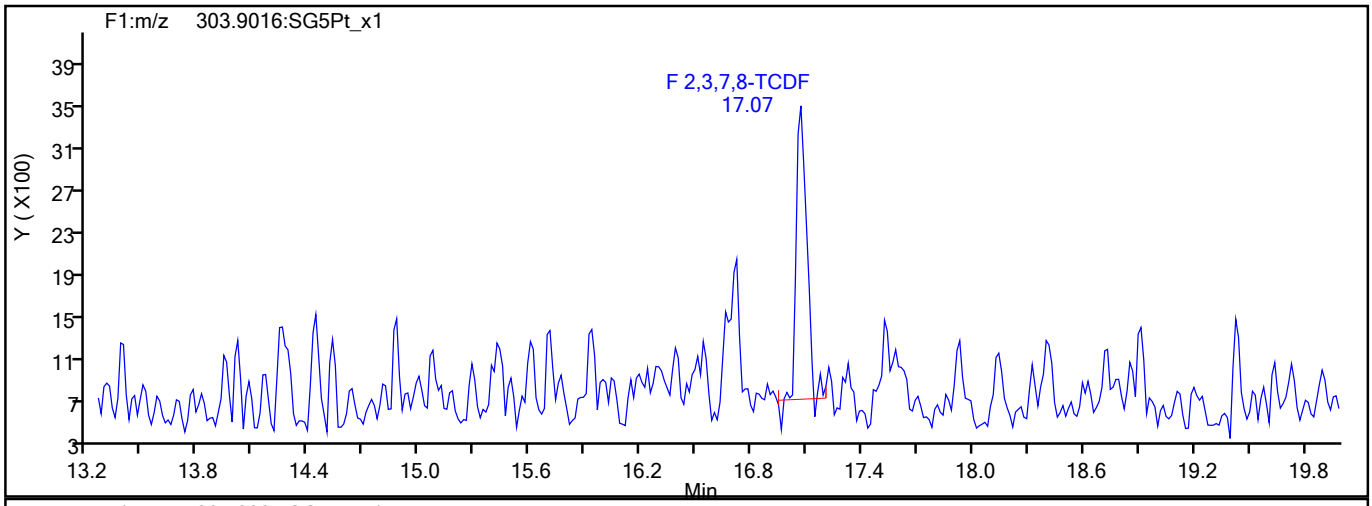

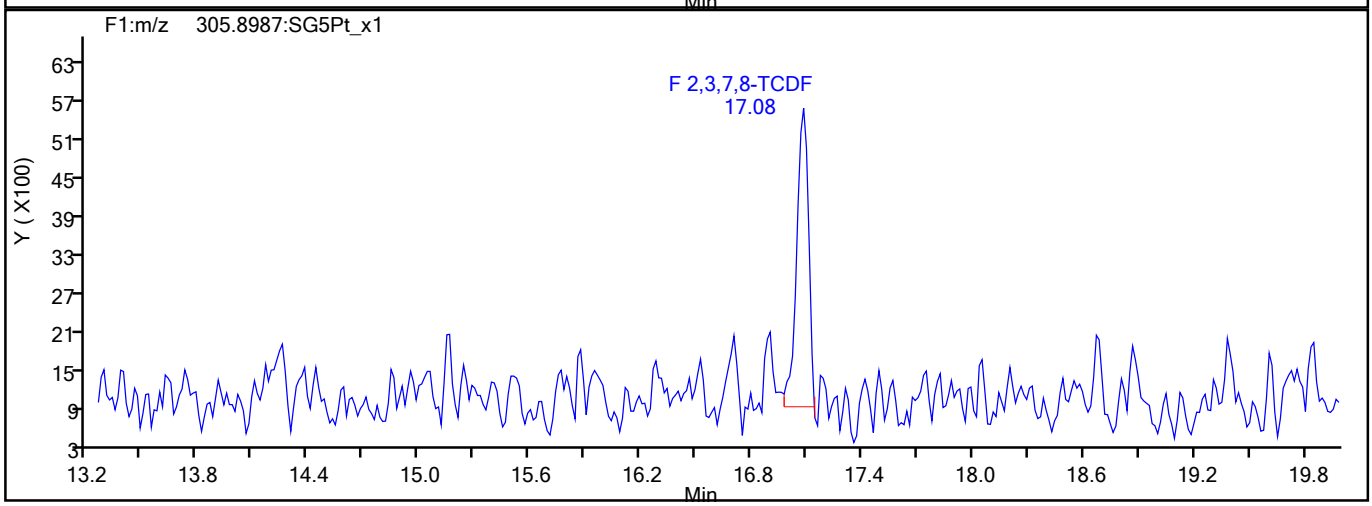

TCDF Interference Mass

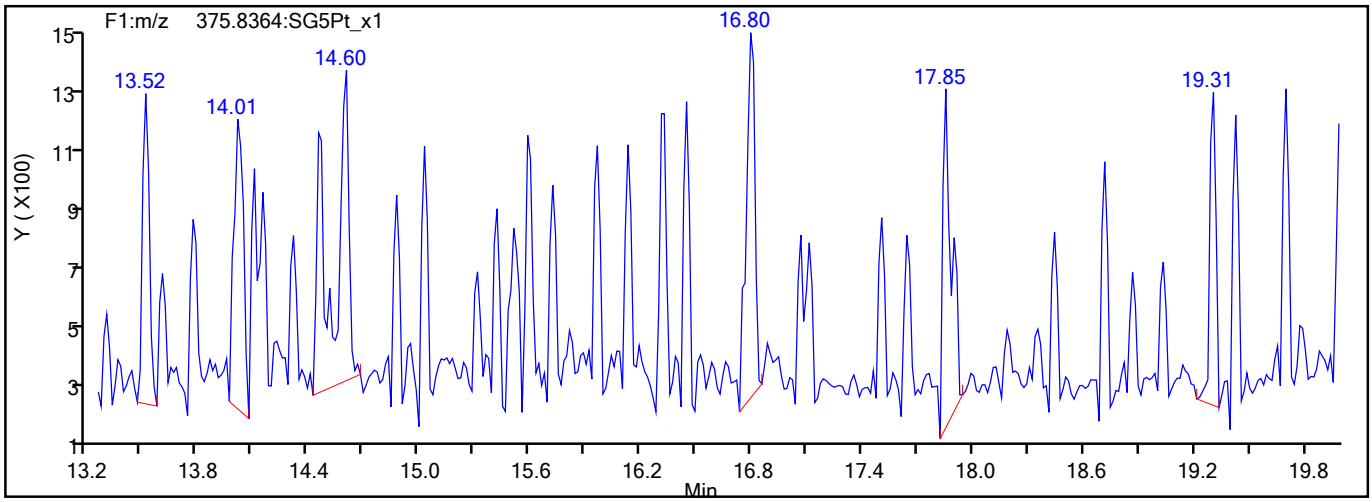

794301

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

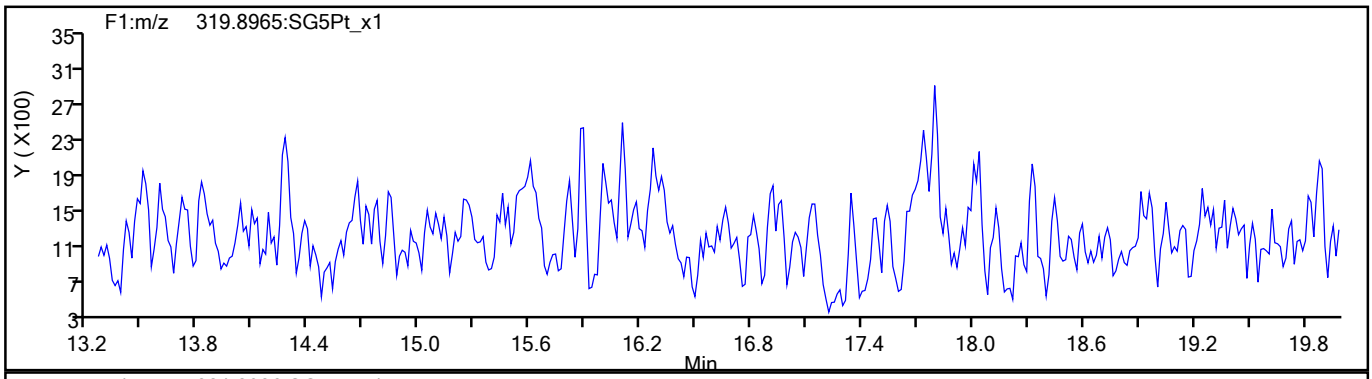

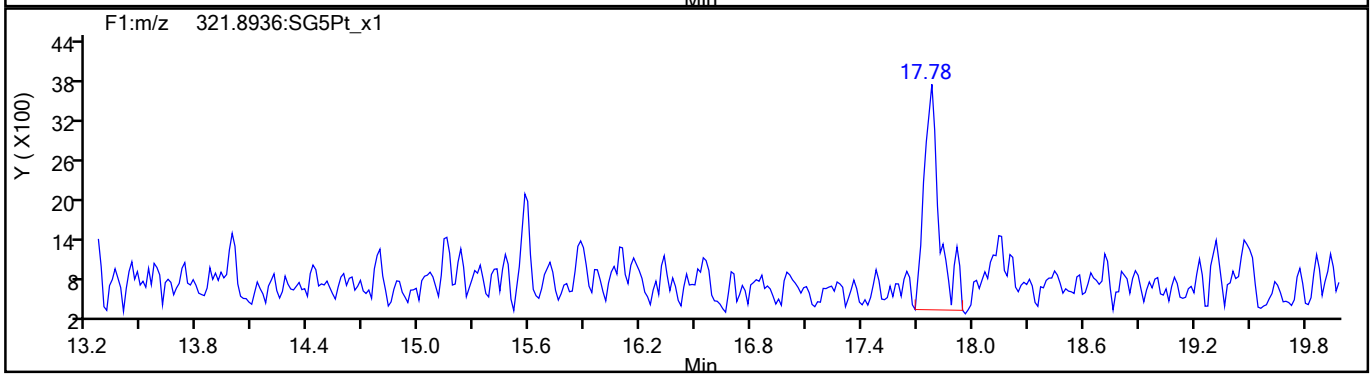

TCDD Standards

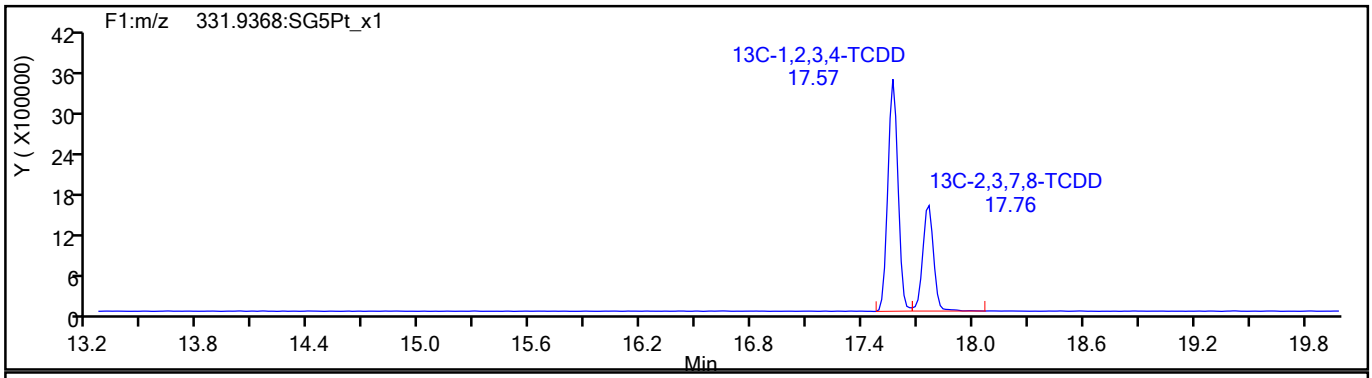

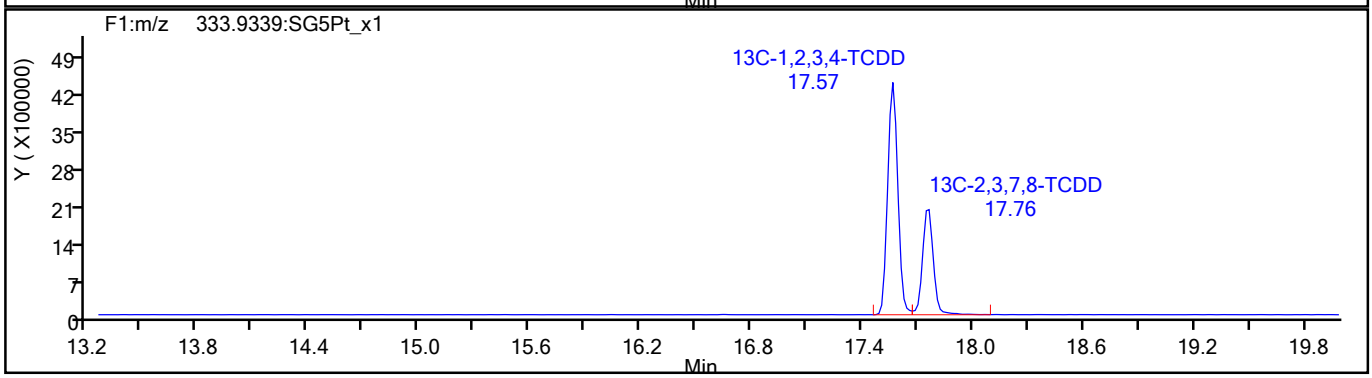

794302

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

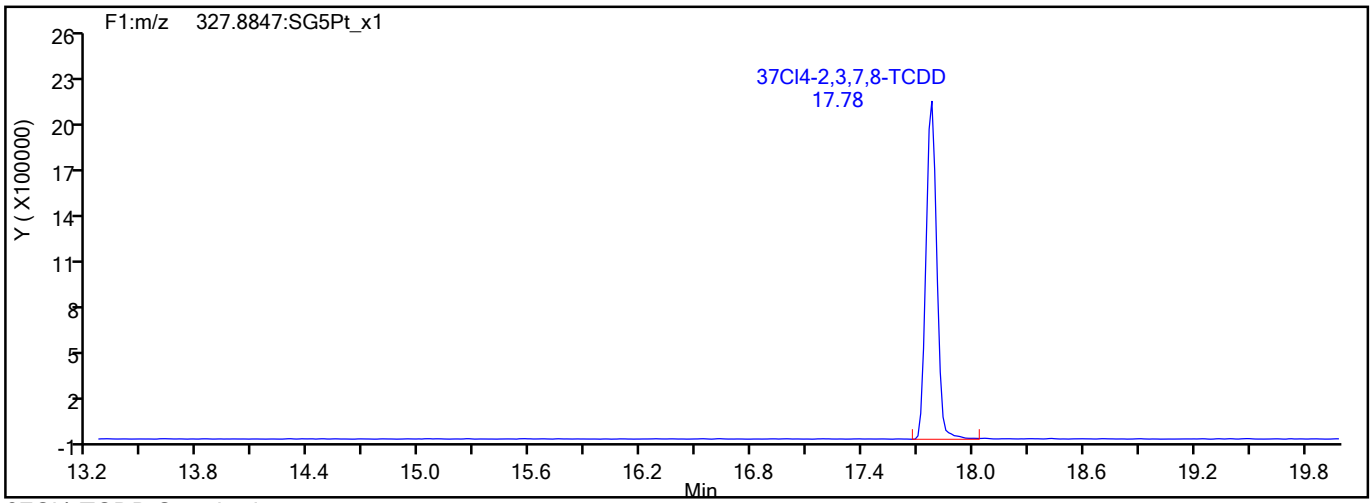

37Cl4-TCDD Standards

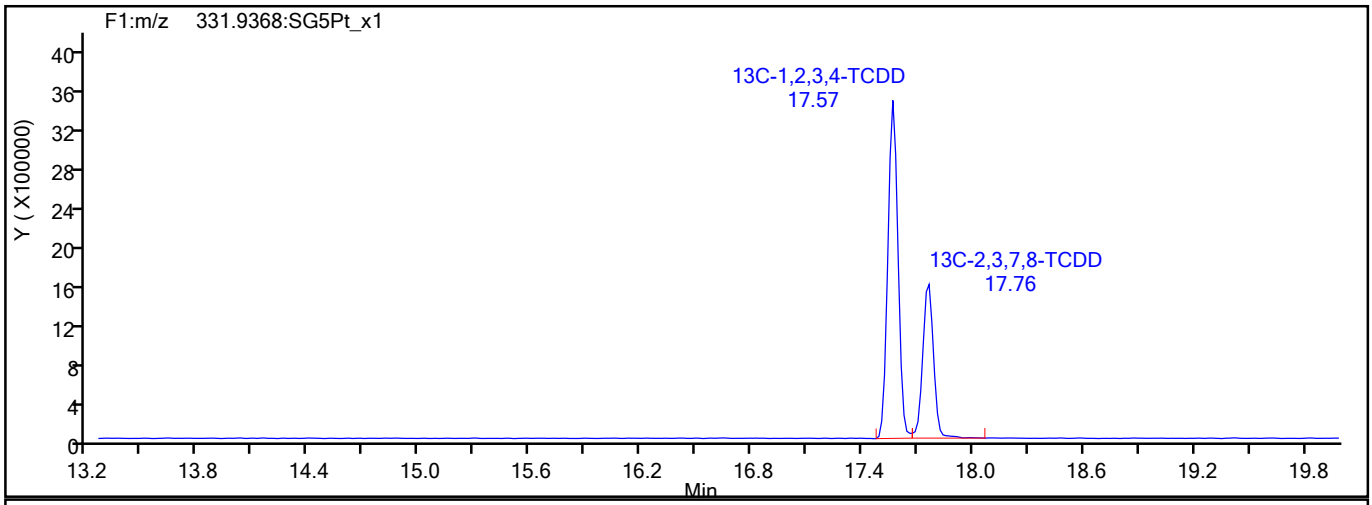

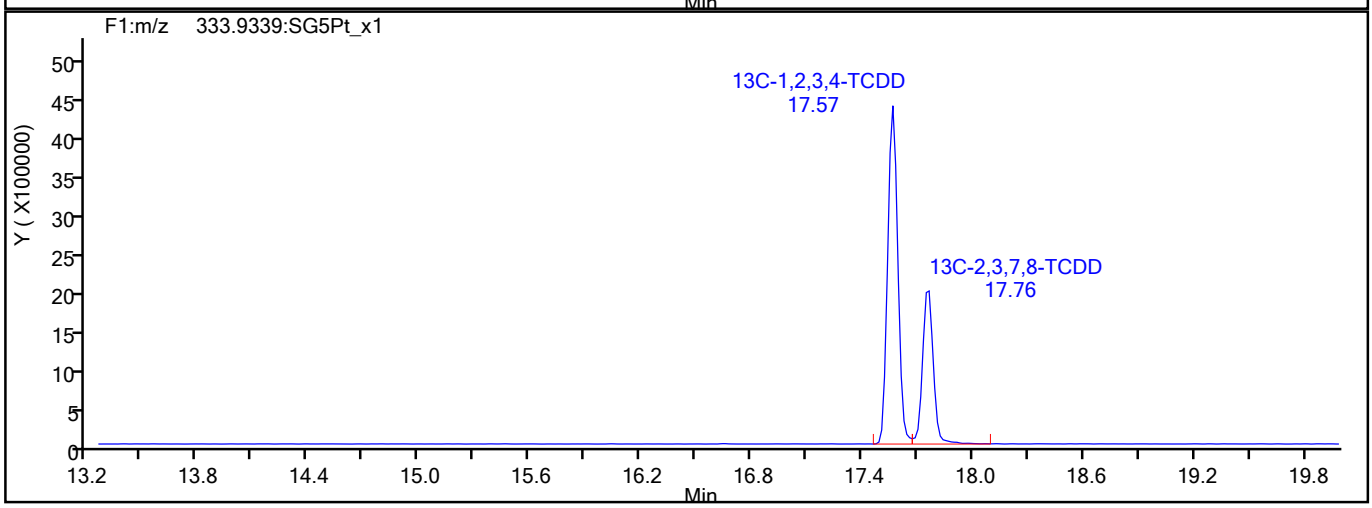

794303

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

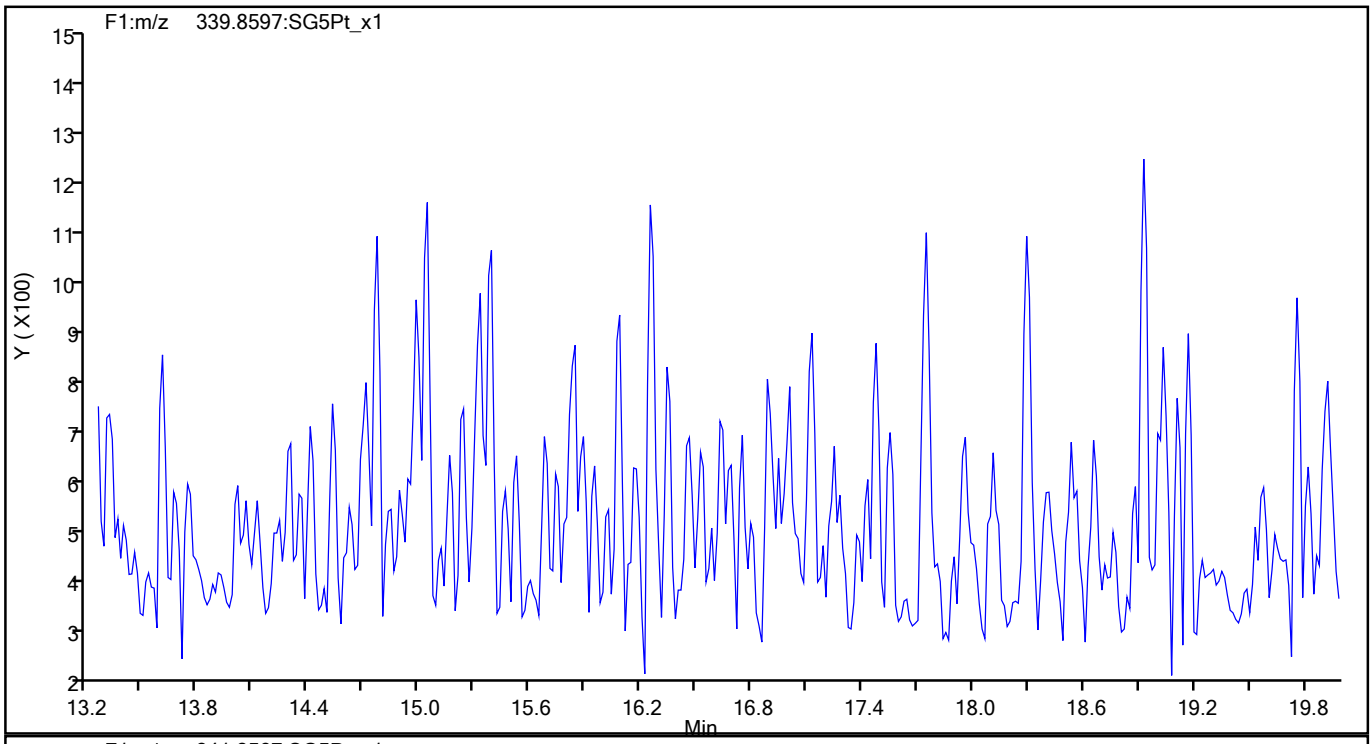

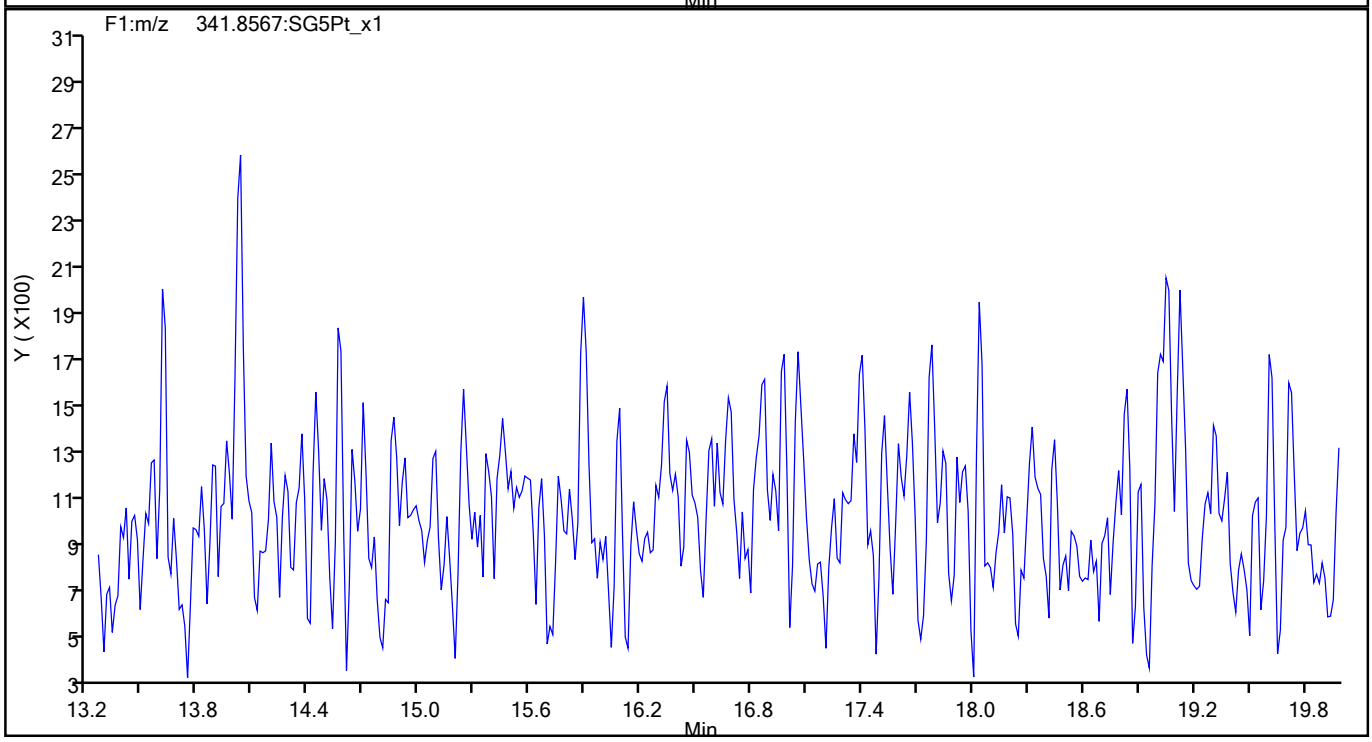

794304

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

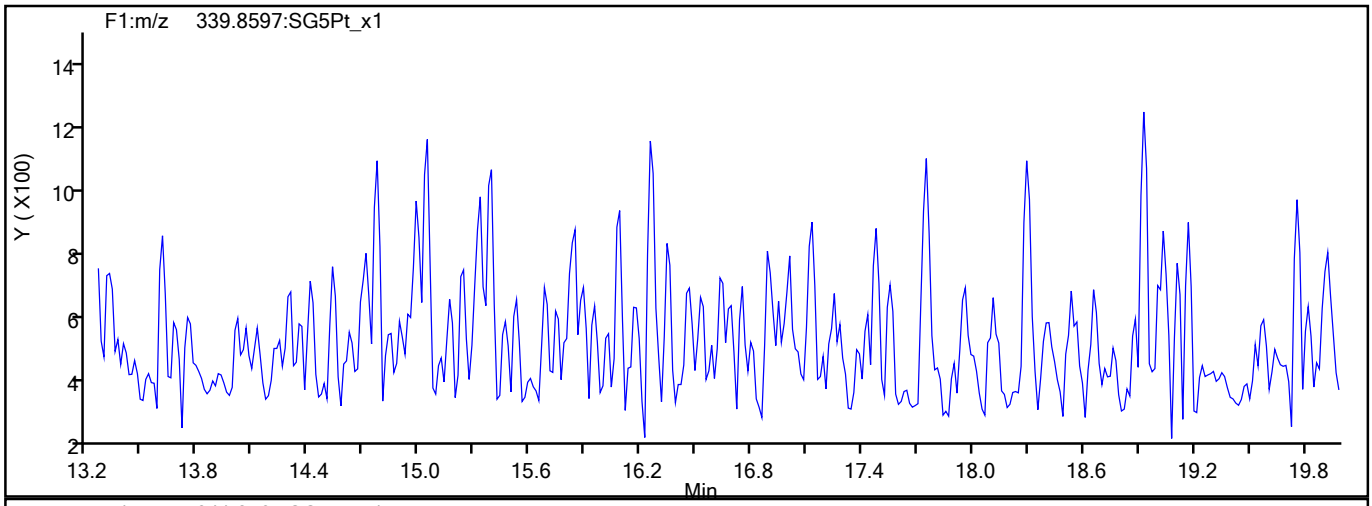

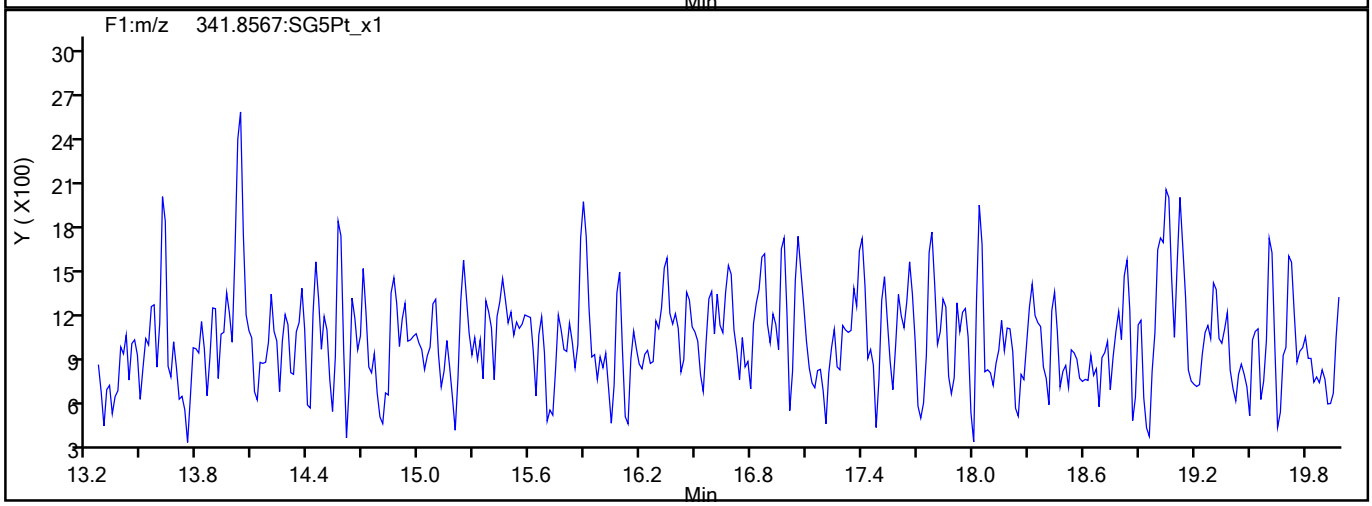

F1 PeCDFs Interference Mass

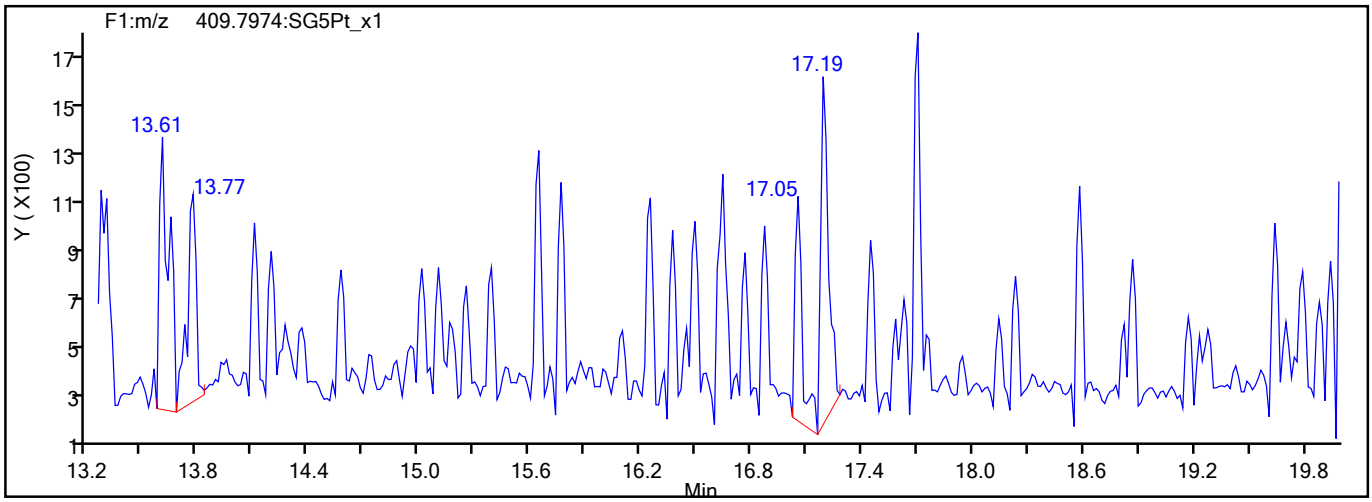

794305

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

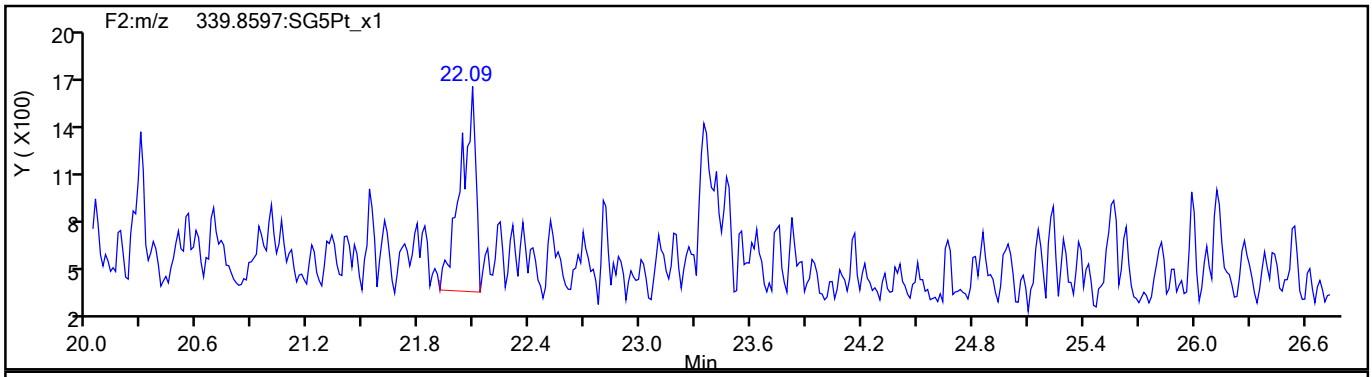

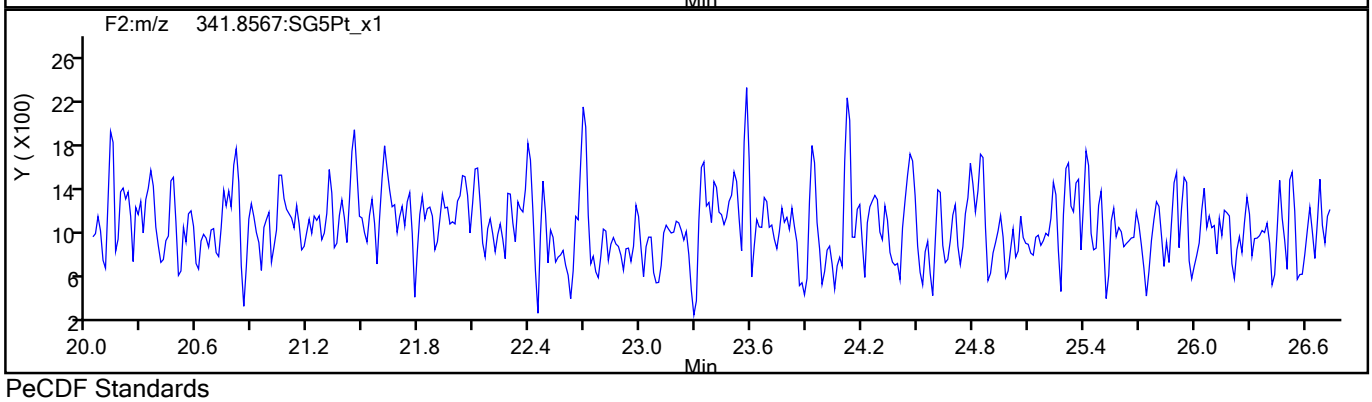

PeCDF Standards

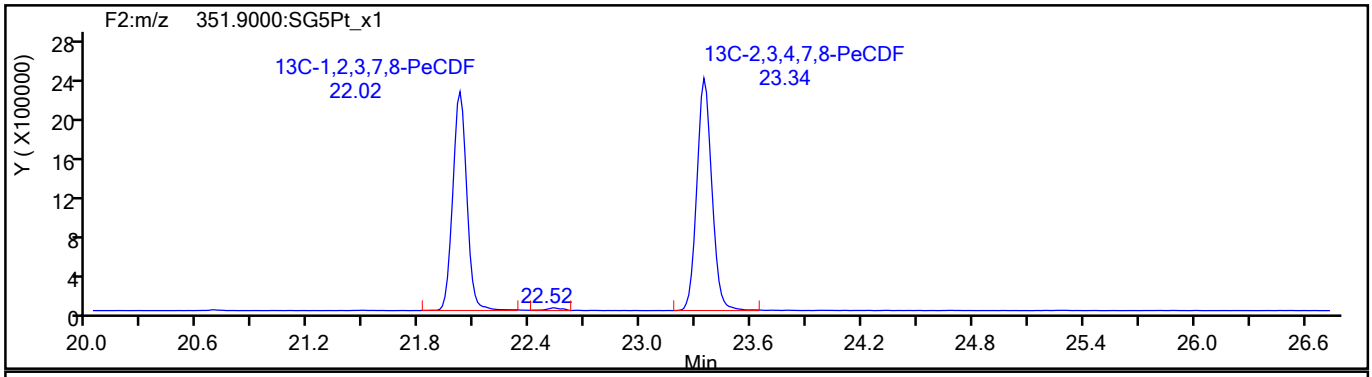

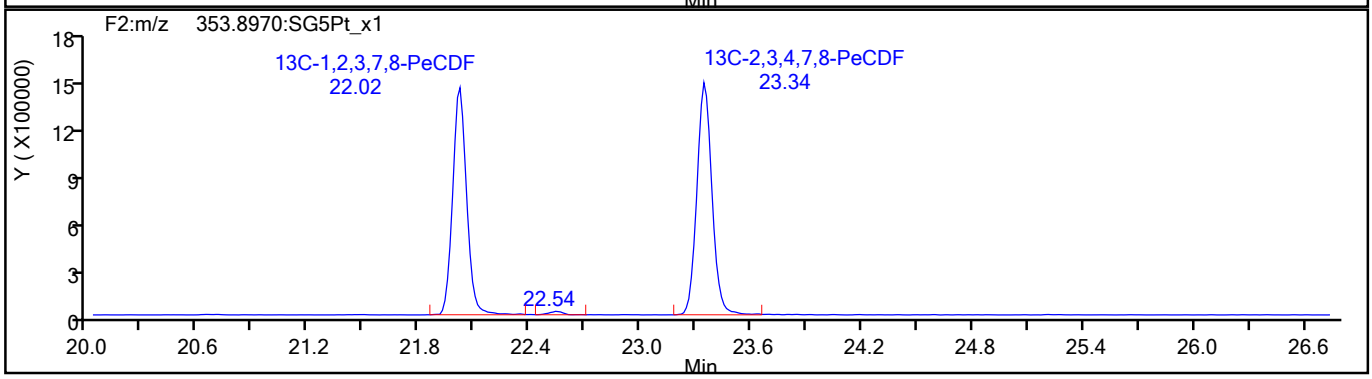

794306

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

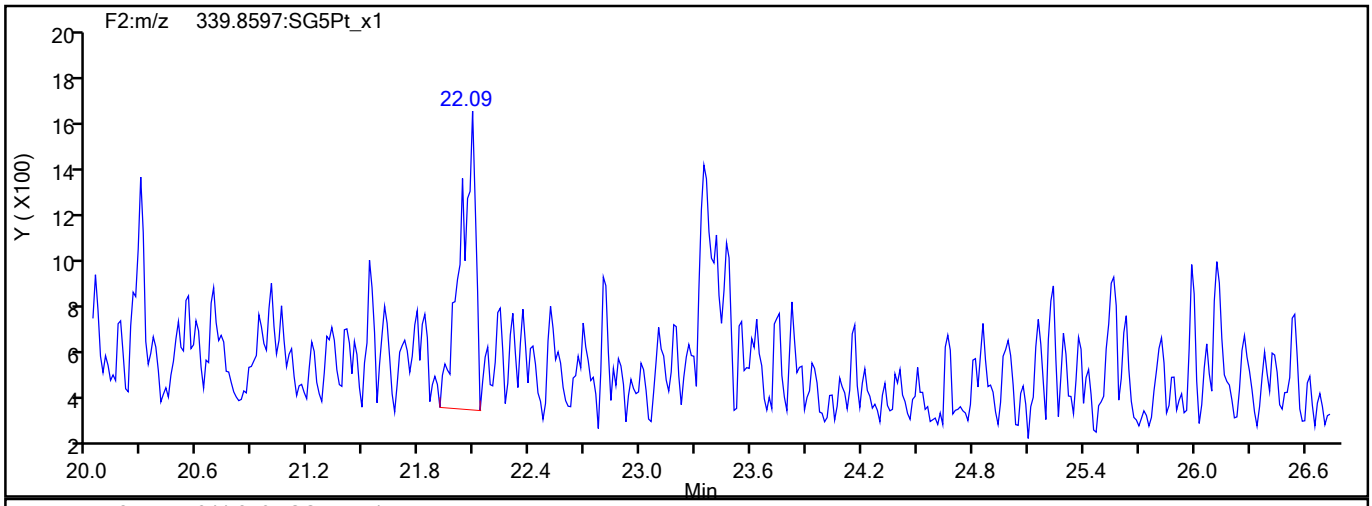

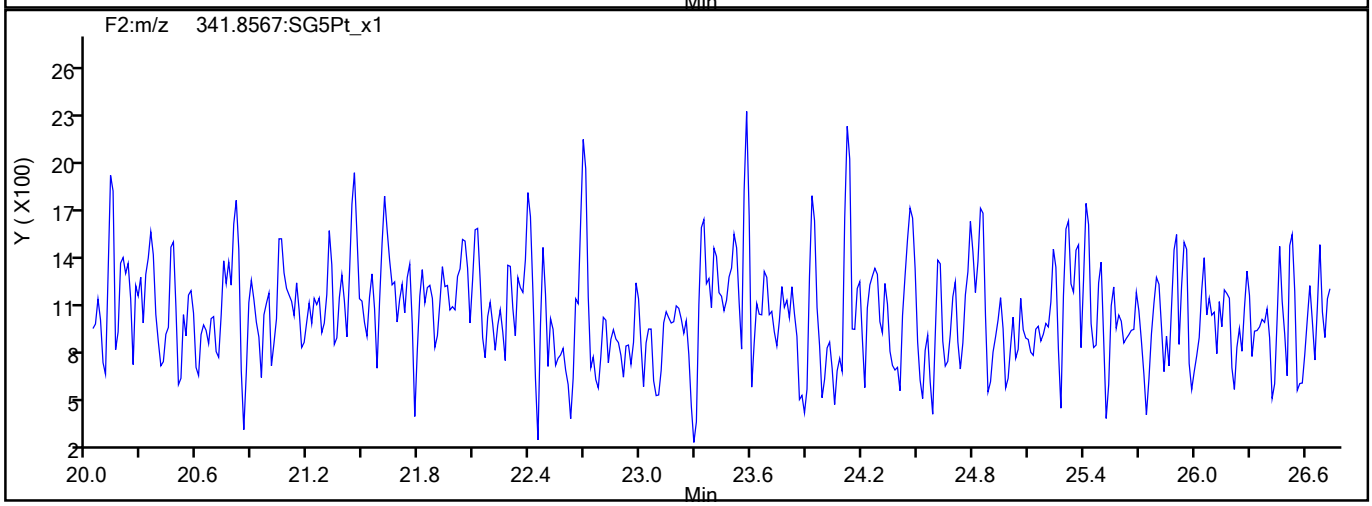

PeCDF Interference Mass

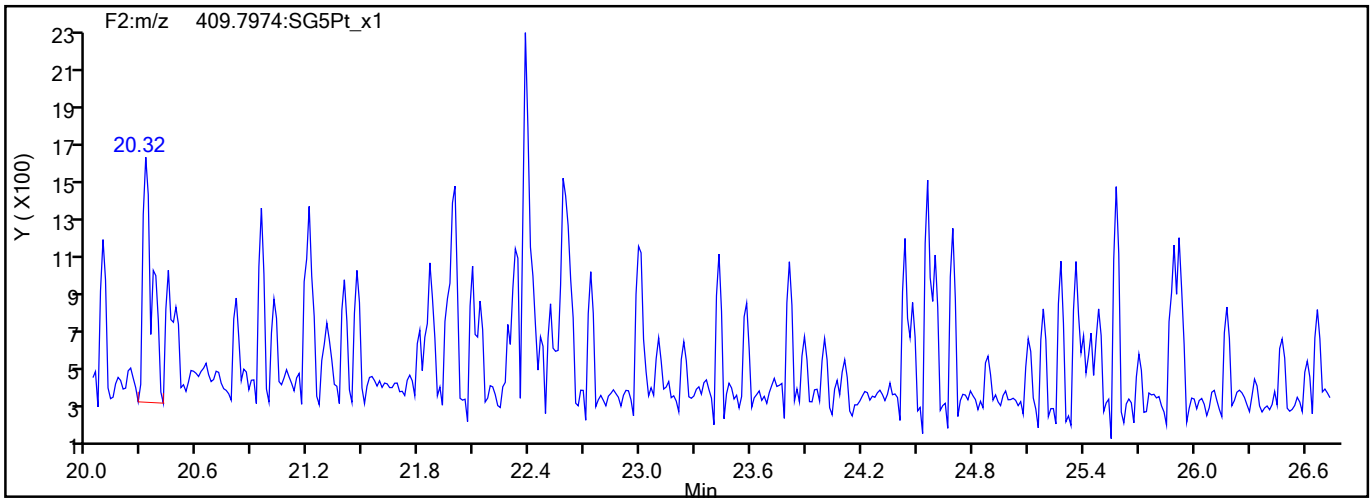

794307

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

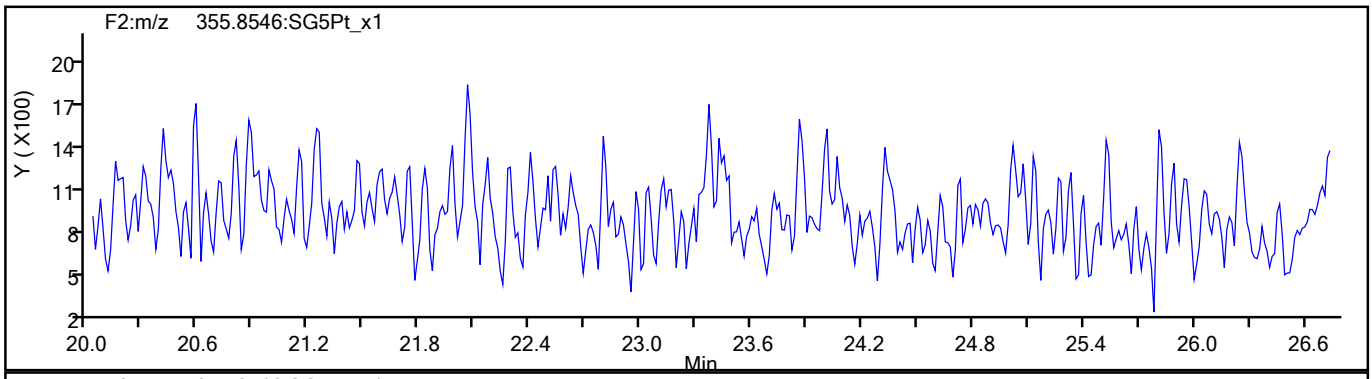

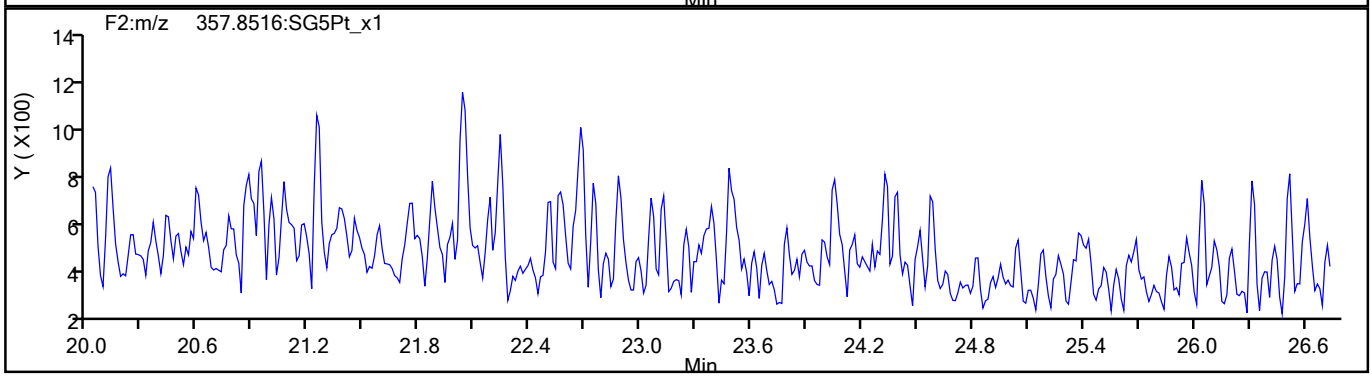

PeCDD Standards

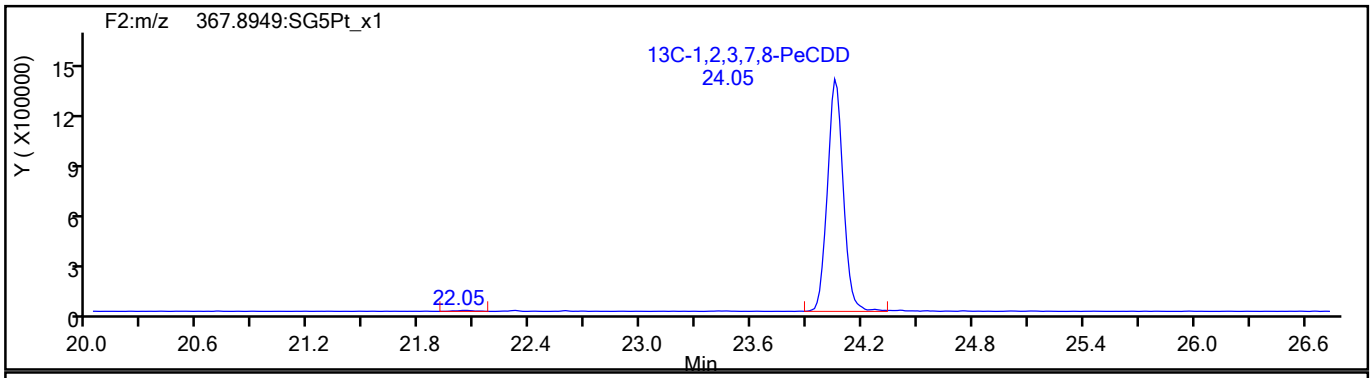

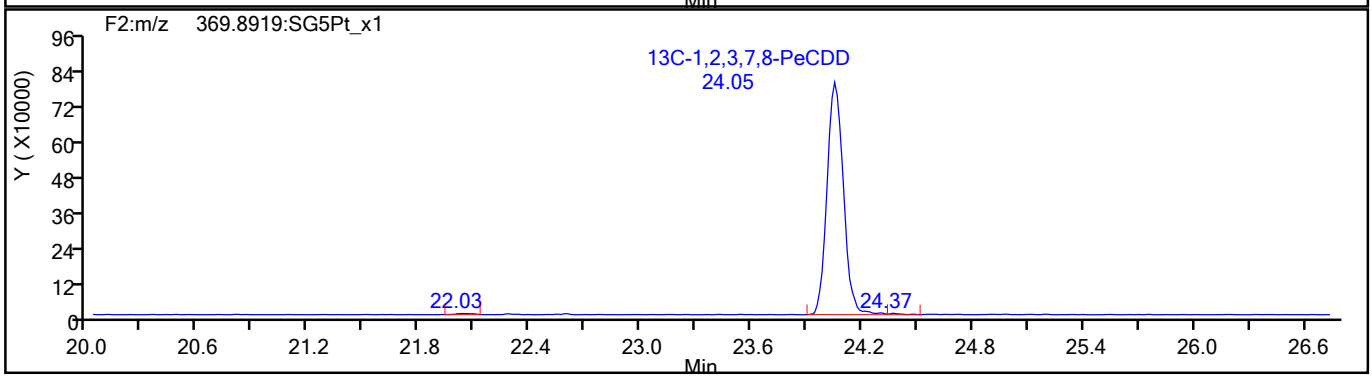

794308

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

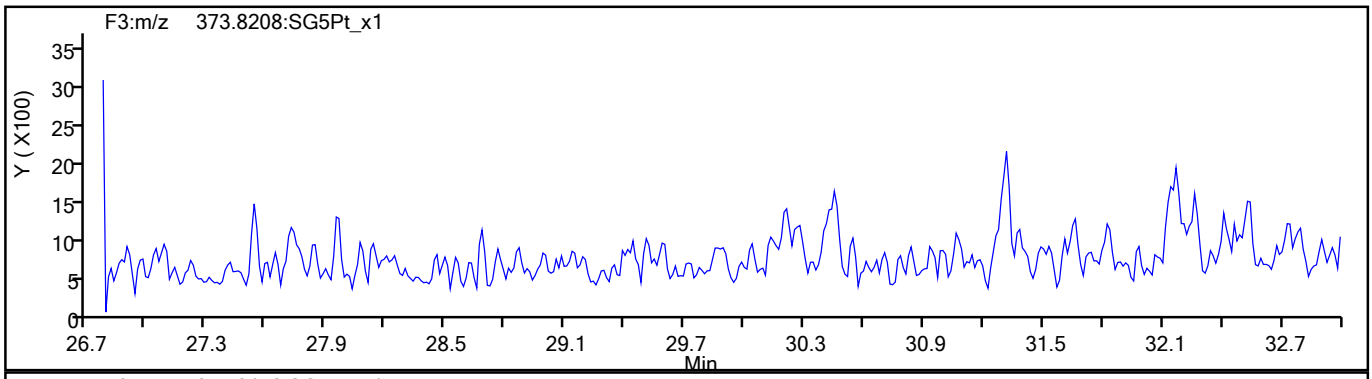

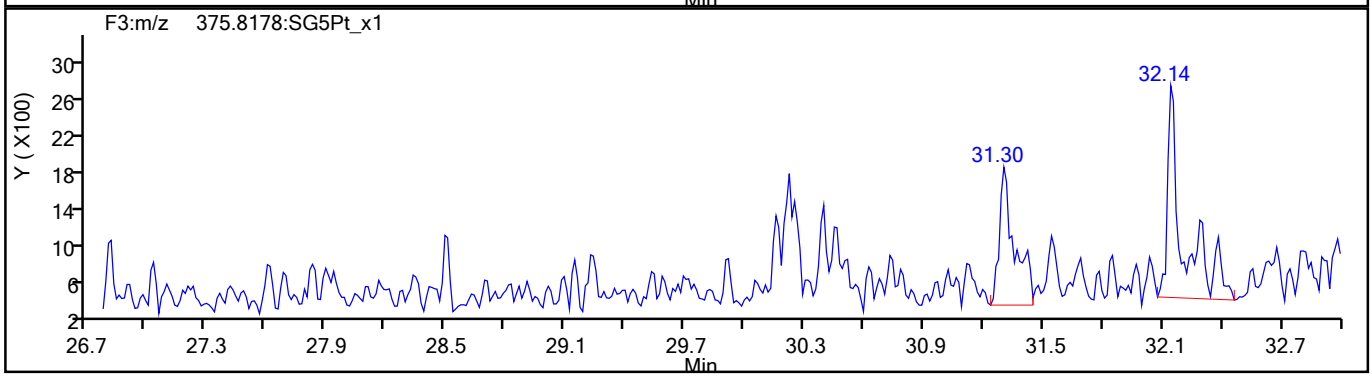

HxCDF Standards

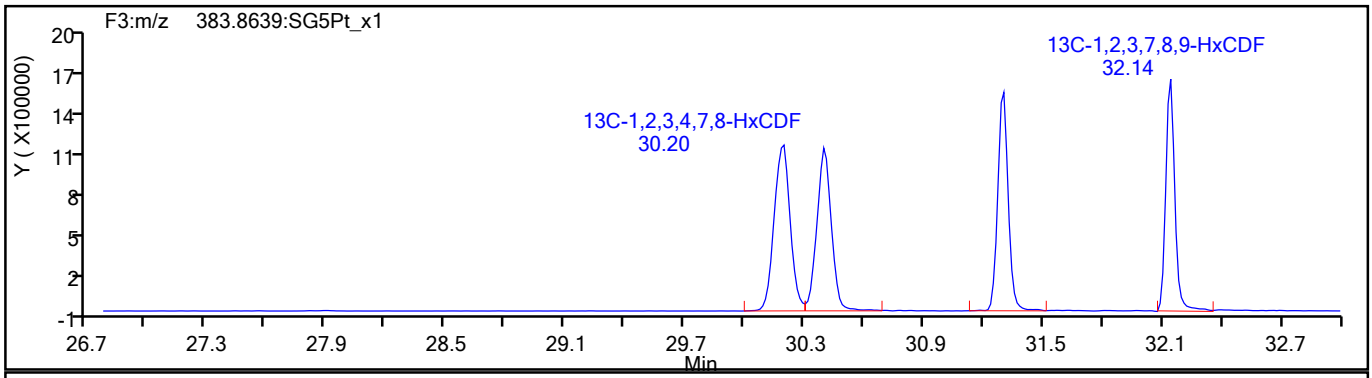

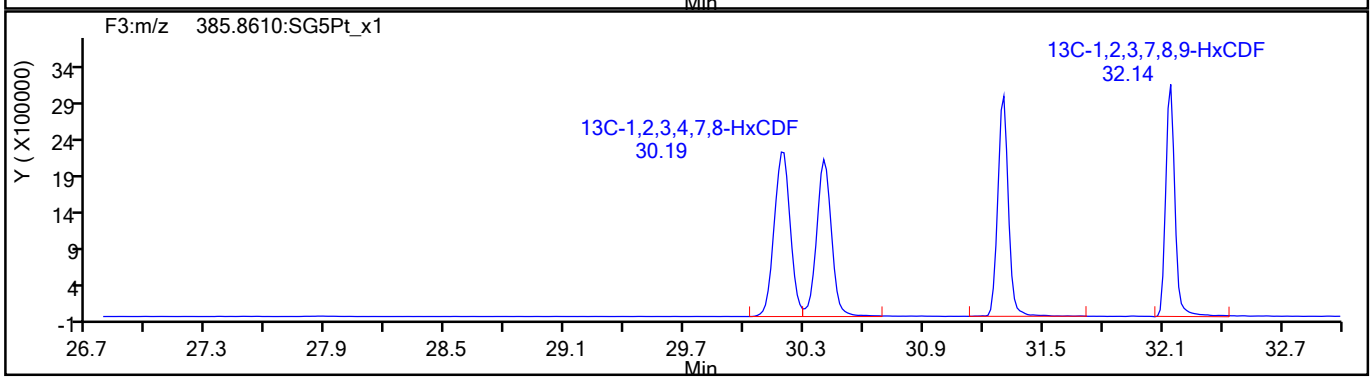

794309

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

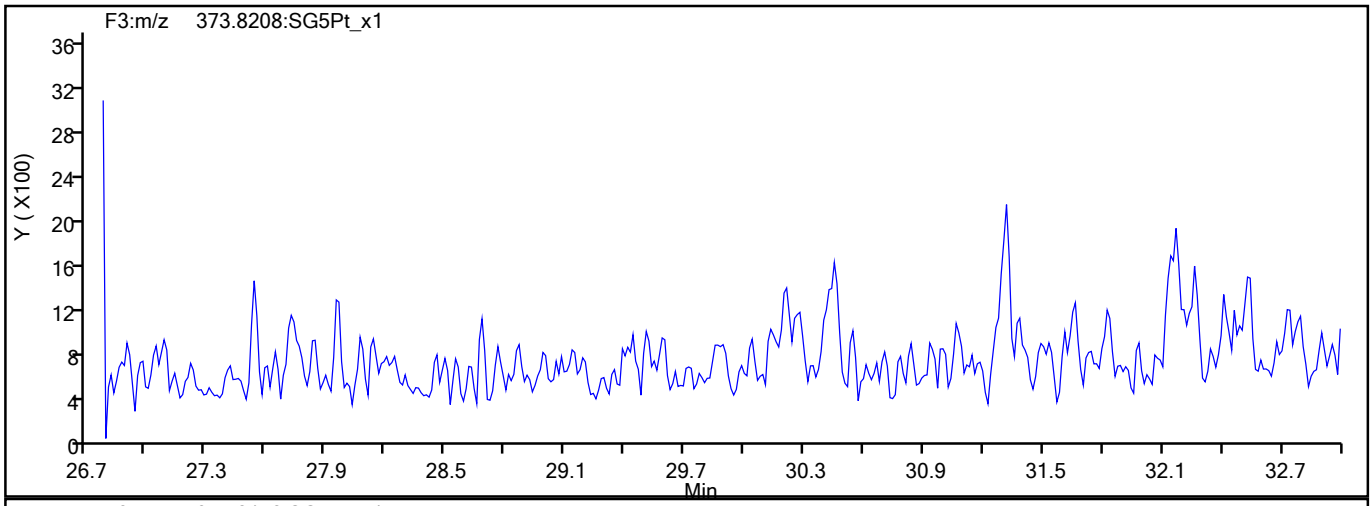

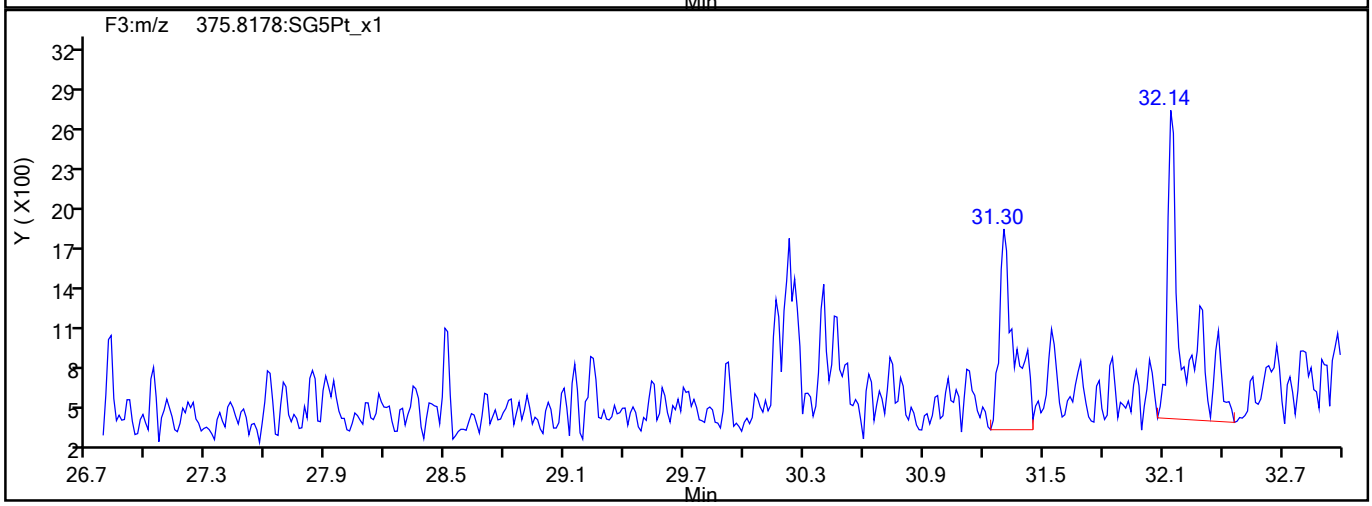

HxCDF Interference Mass

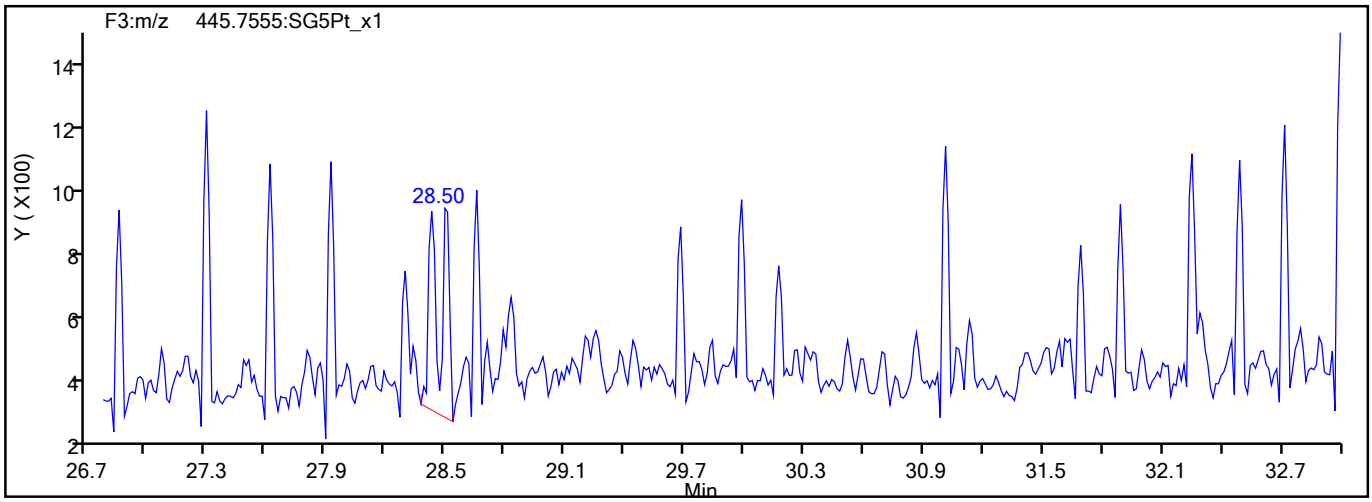

794310

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

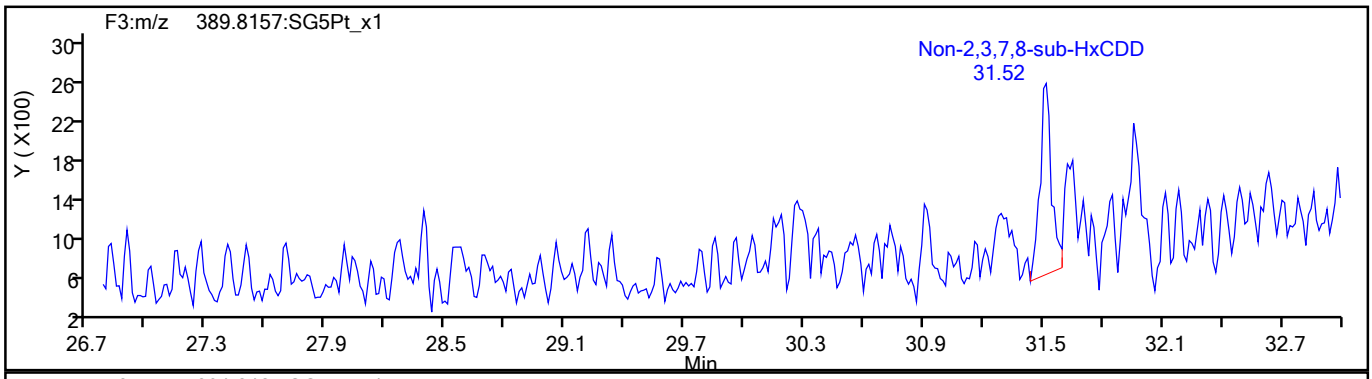

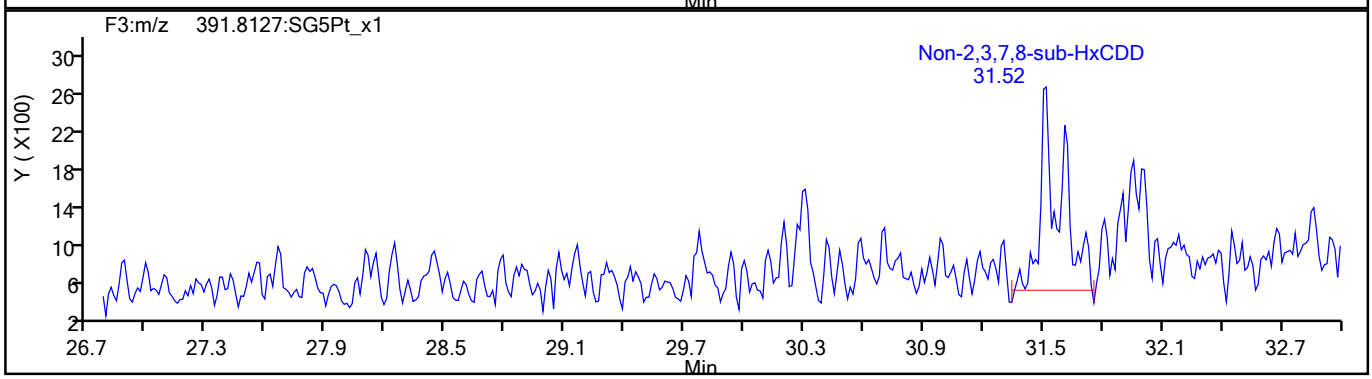

HxCDD Standards

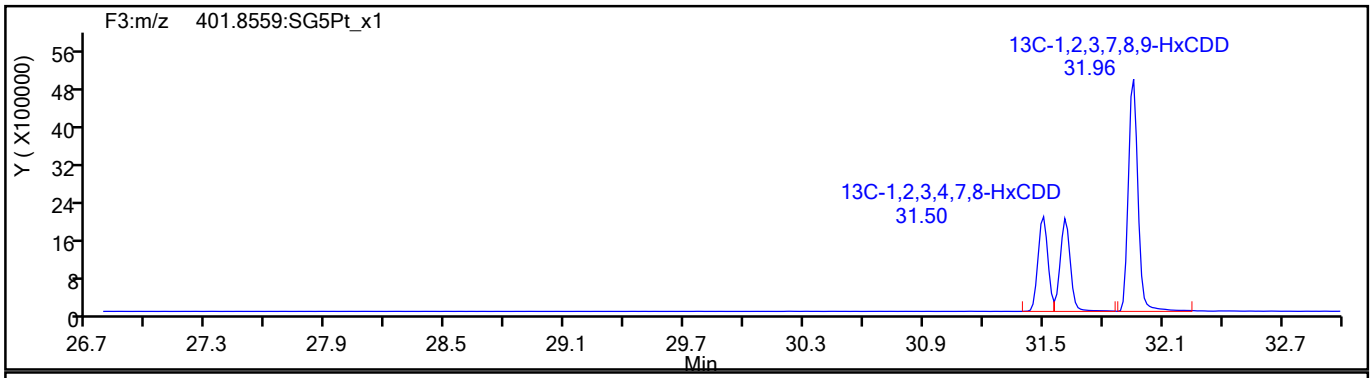

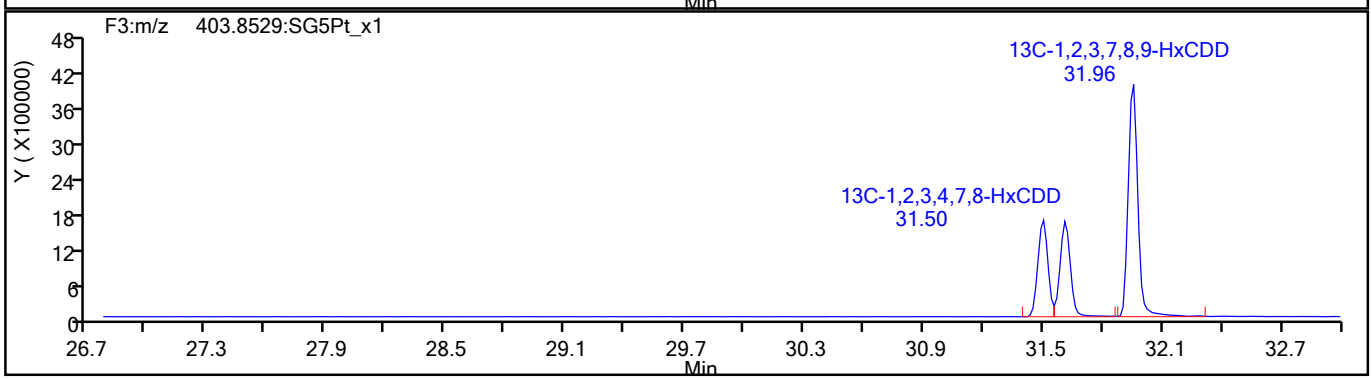

794311

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

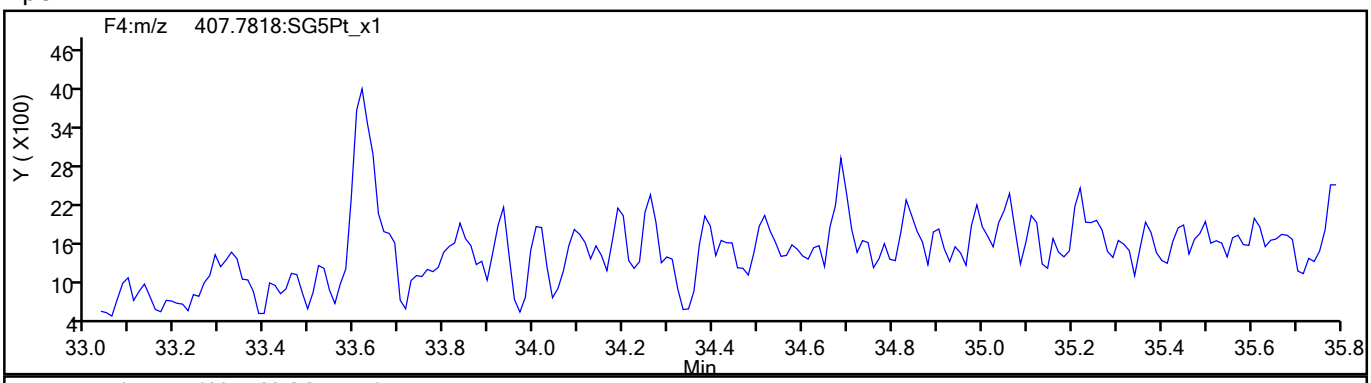

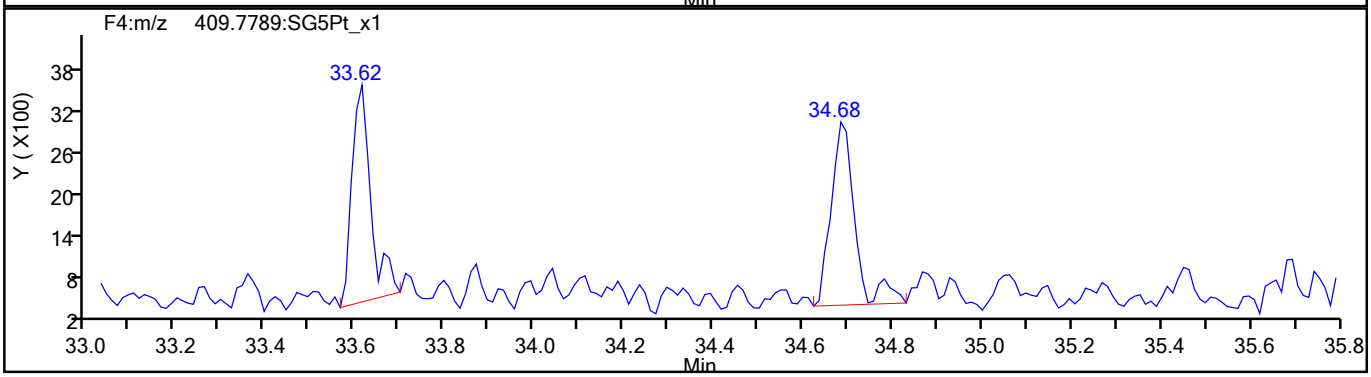

HpCDF Standards

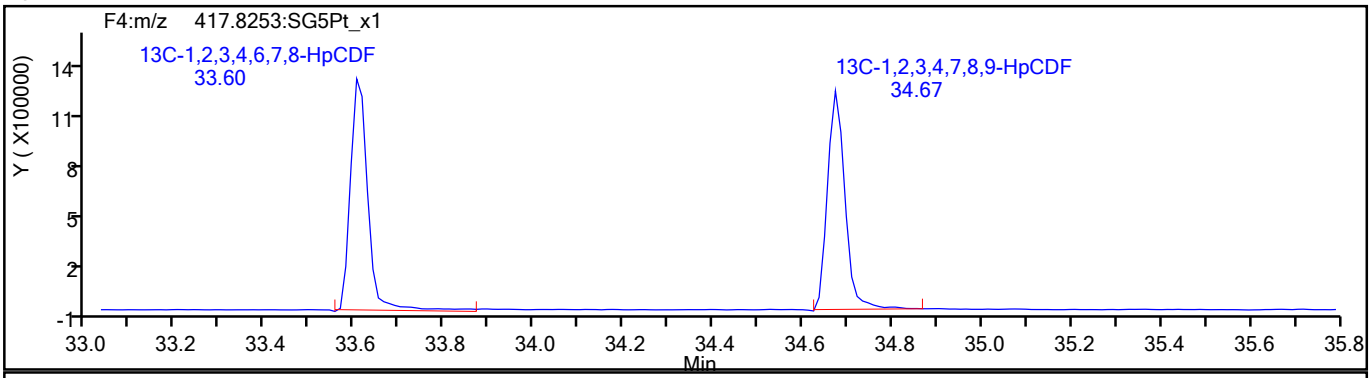

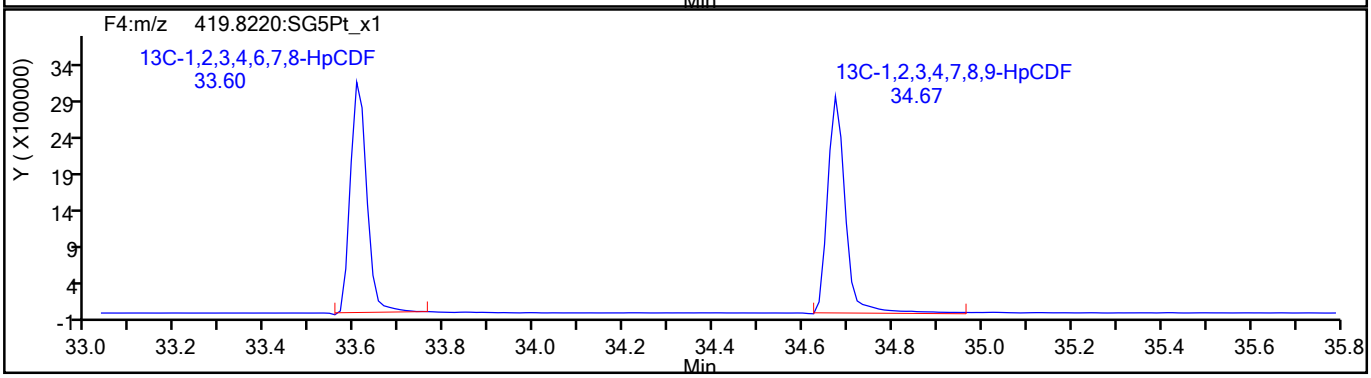

794312

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

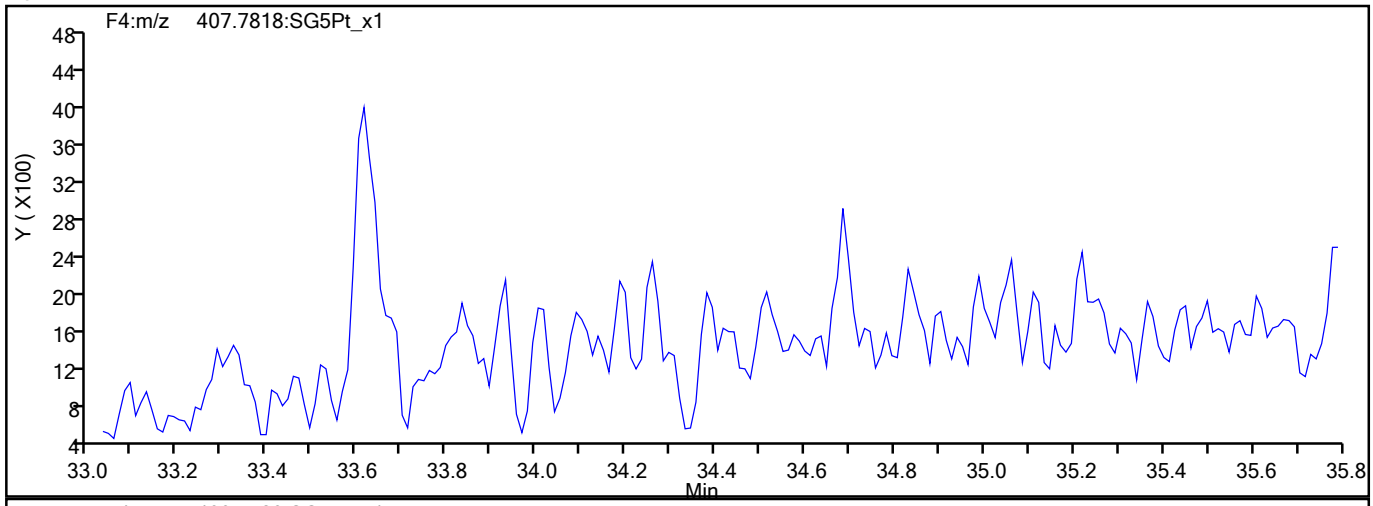

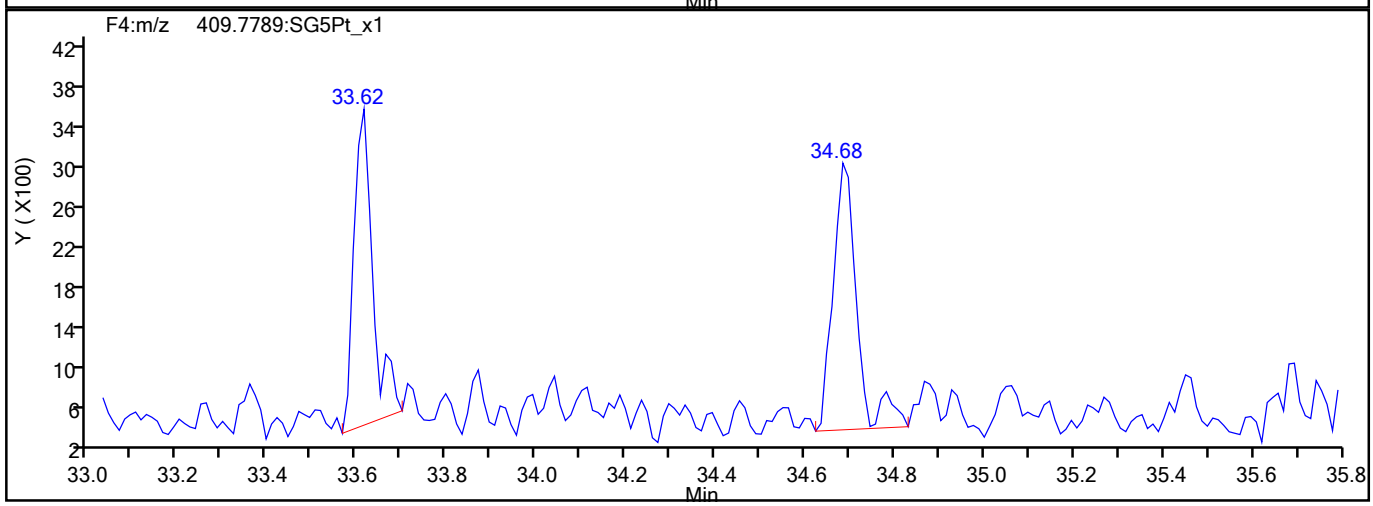

HpCDF Interference Mass

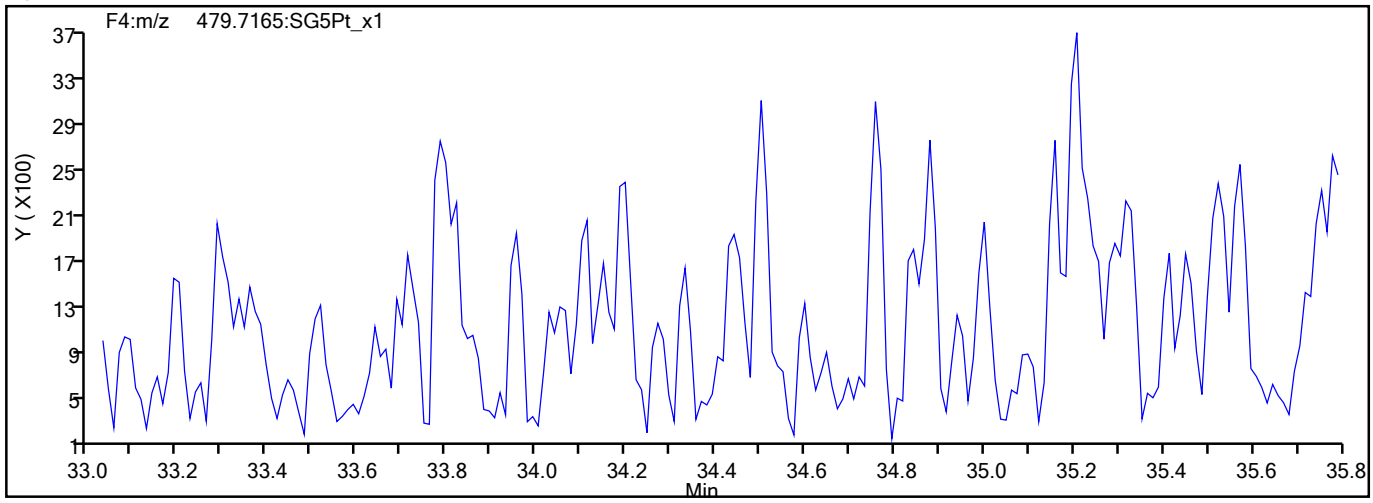

794313

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

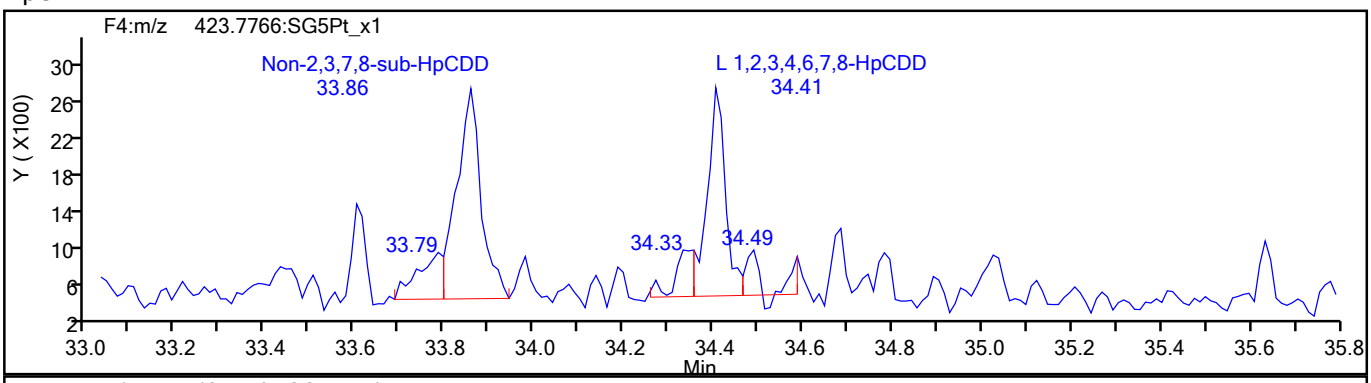

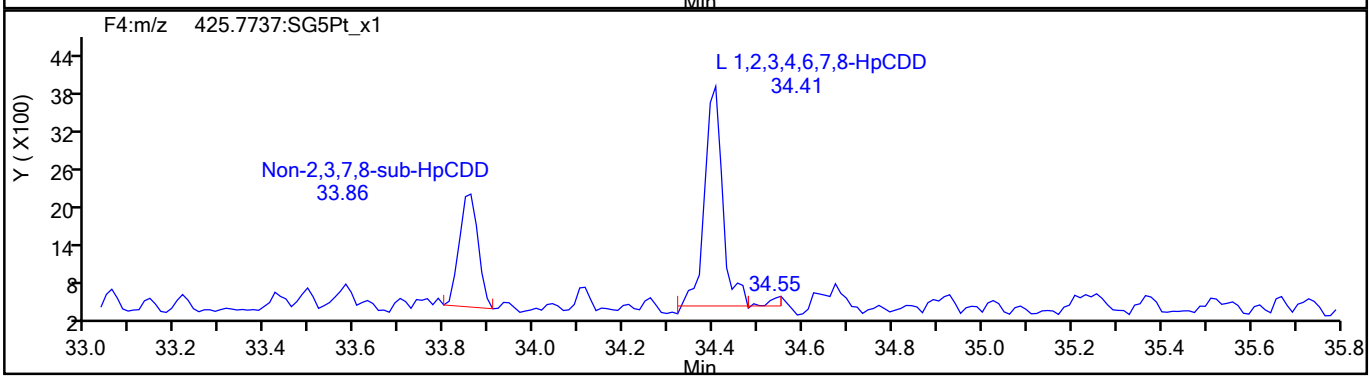

HpCDD Standards

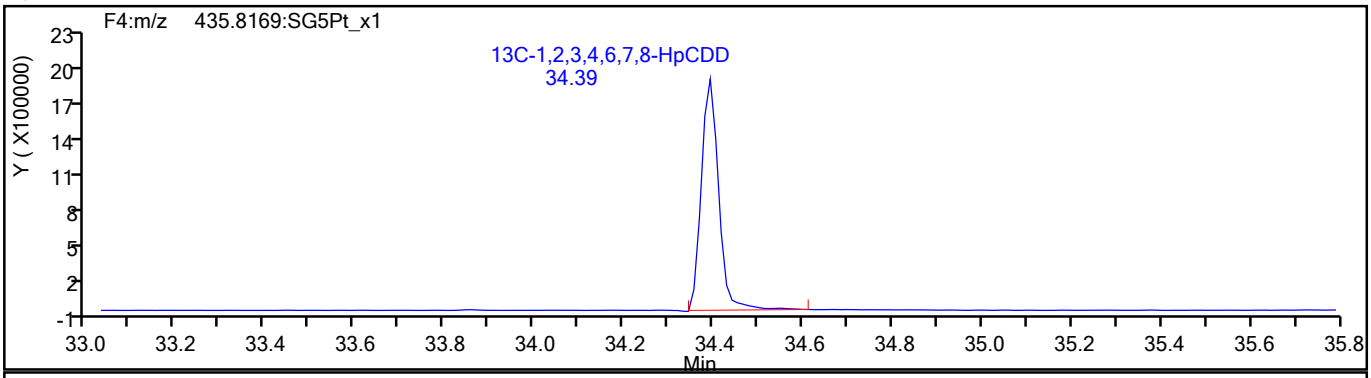

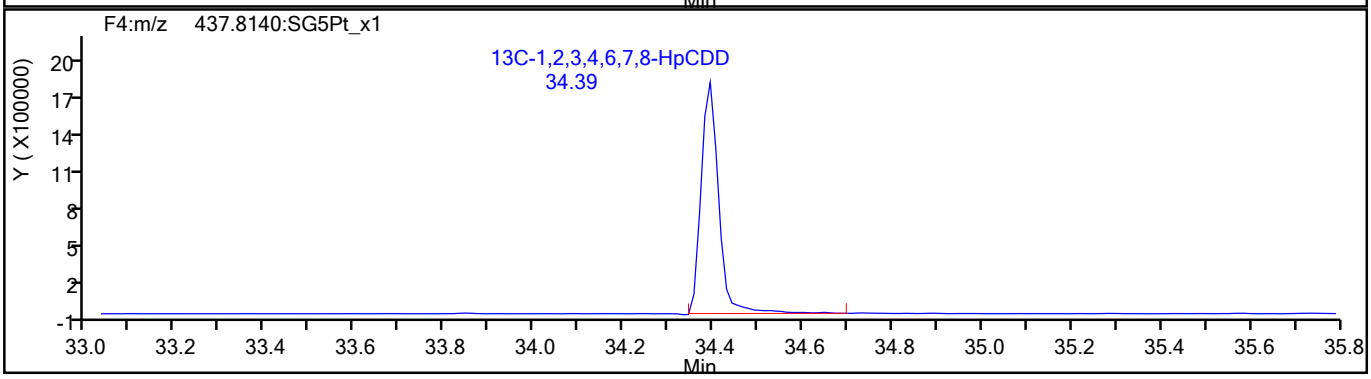

794314

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

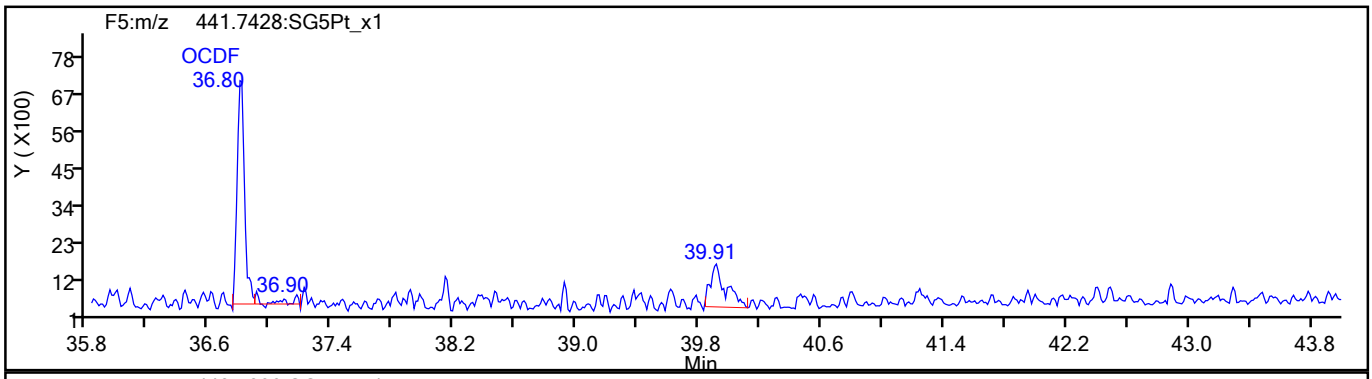

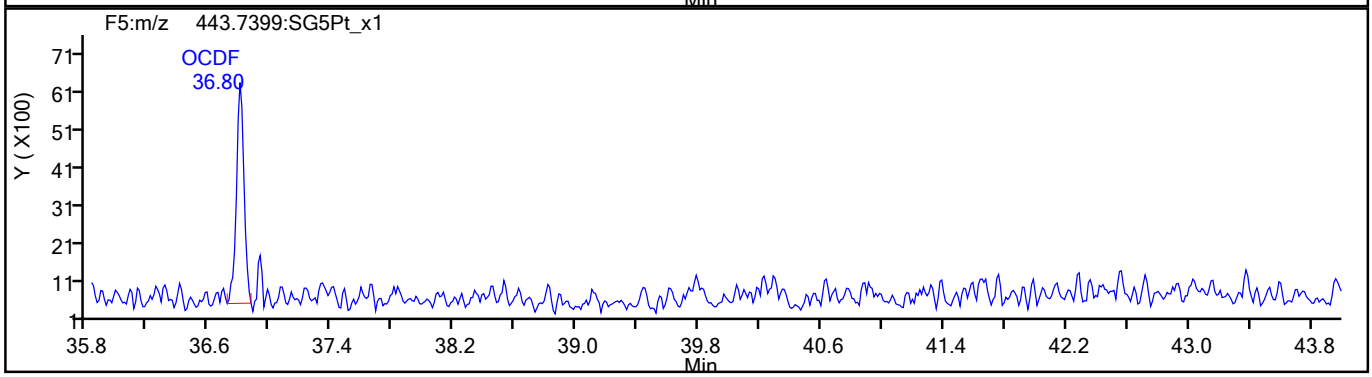

OCDF Standards

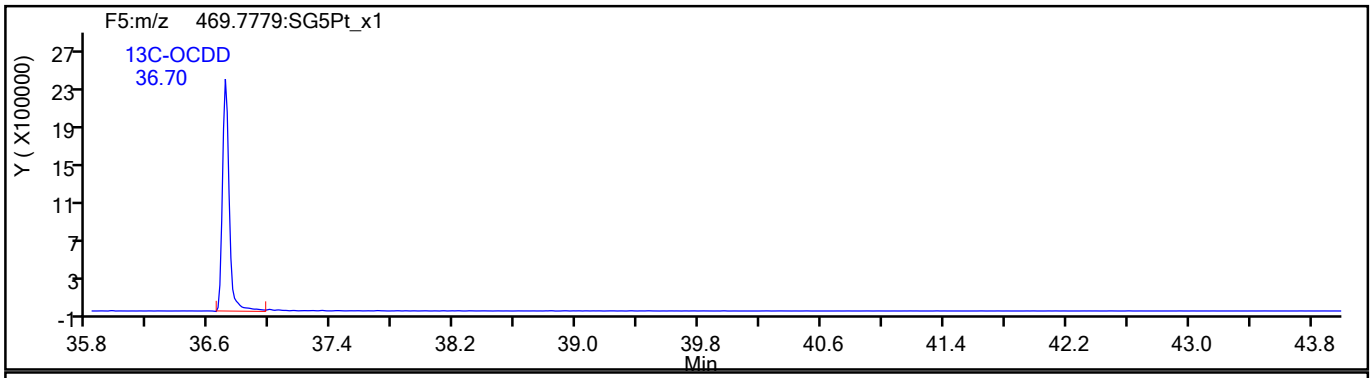

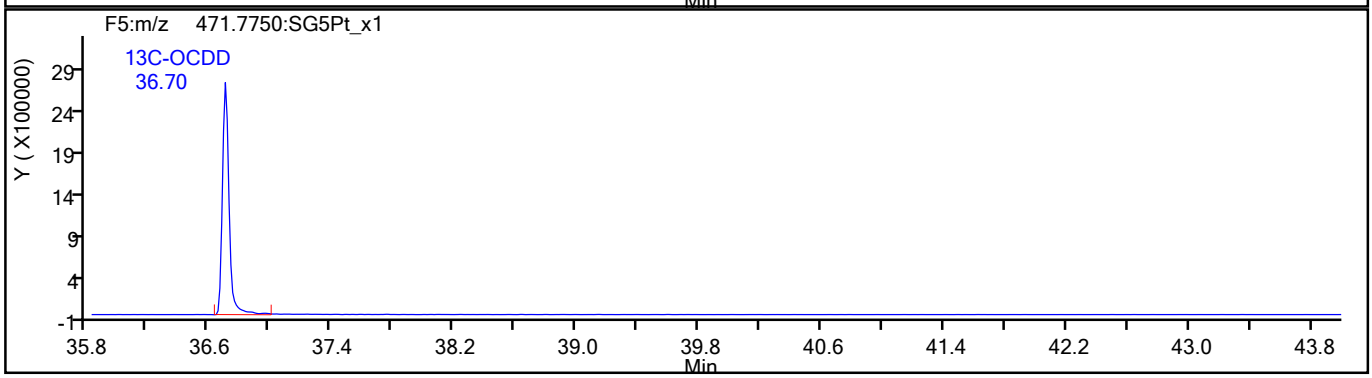

794315

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

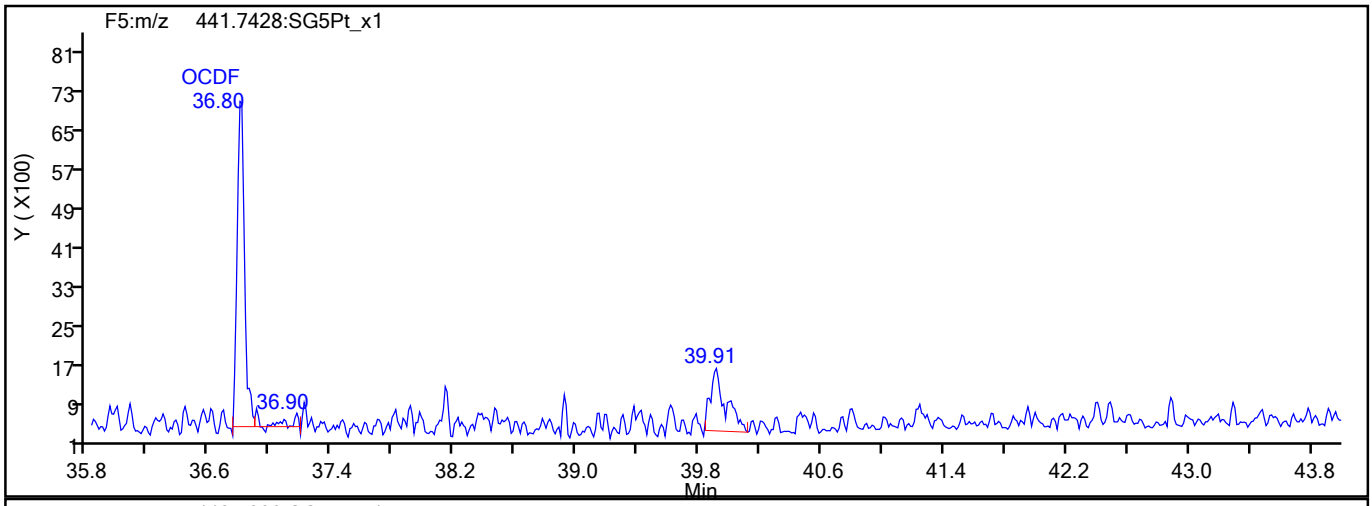

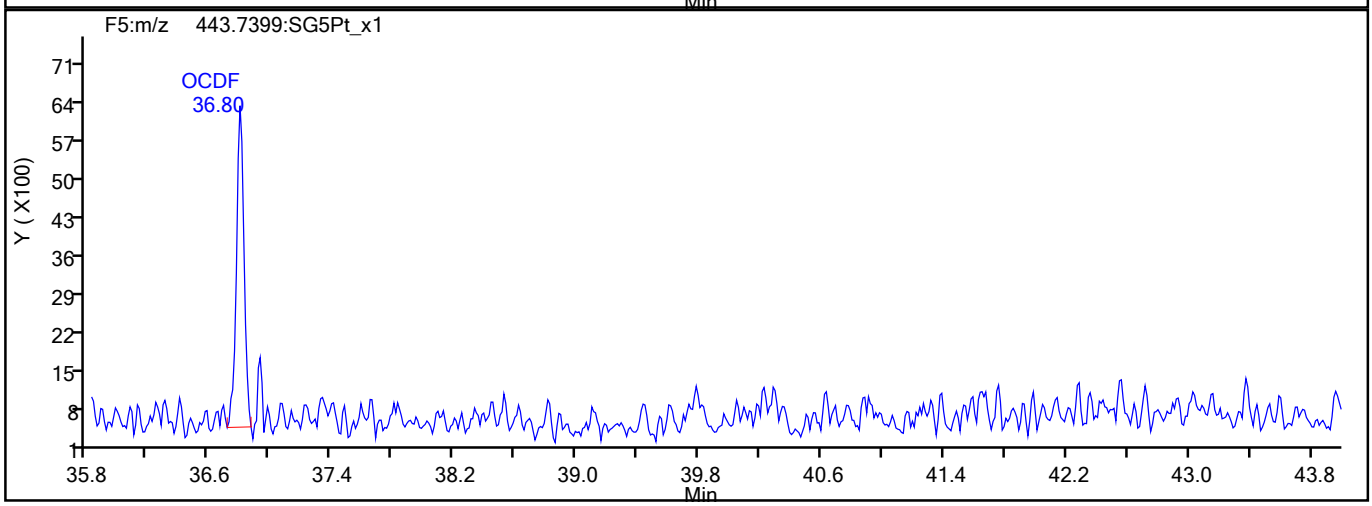

OCDF Interference Mass

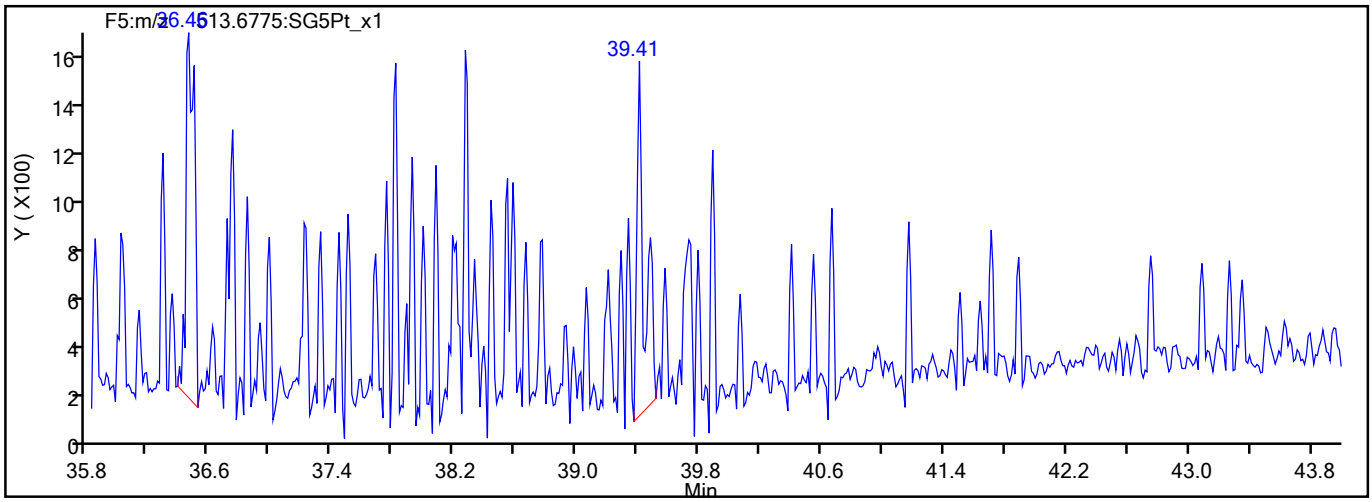

794316

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

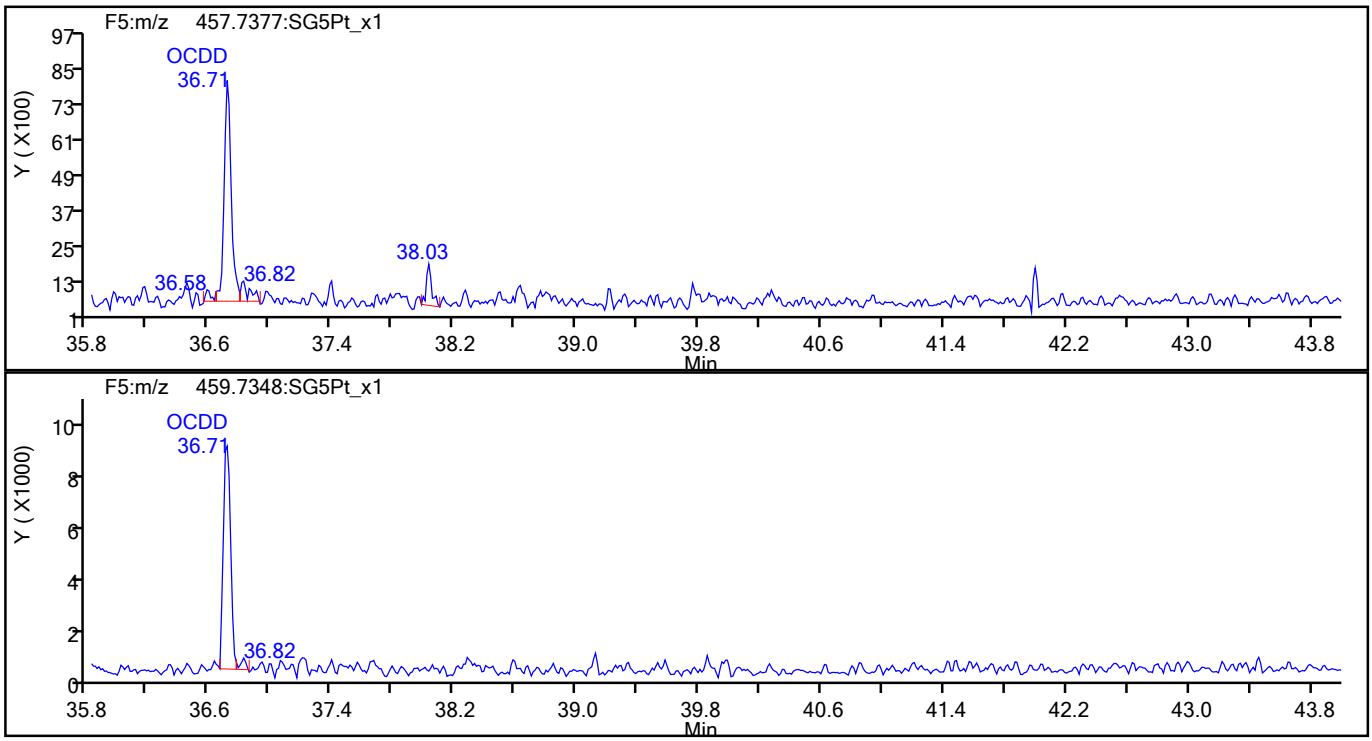

OCDD Standards

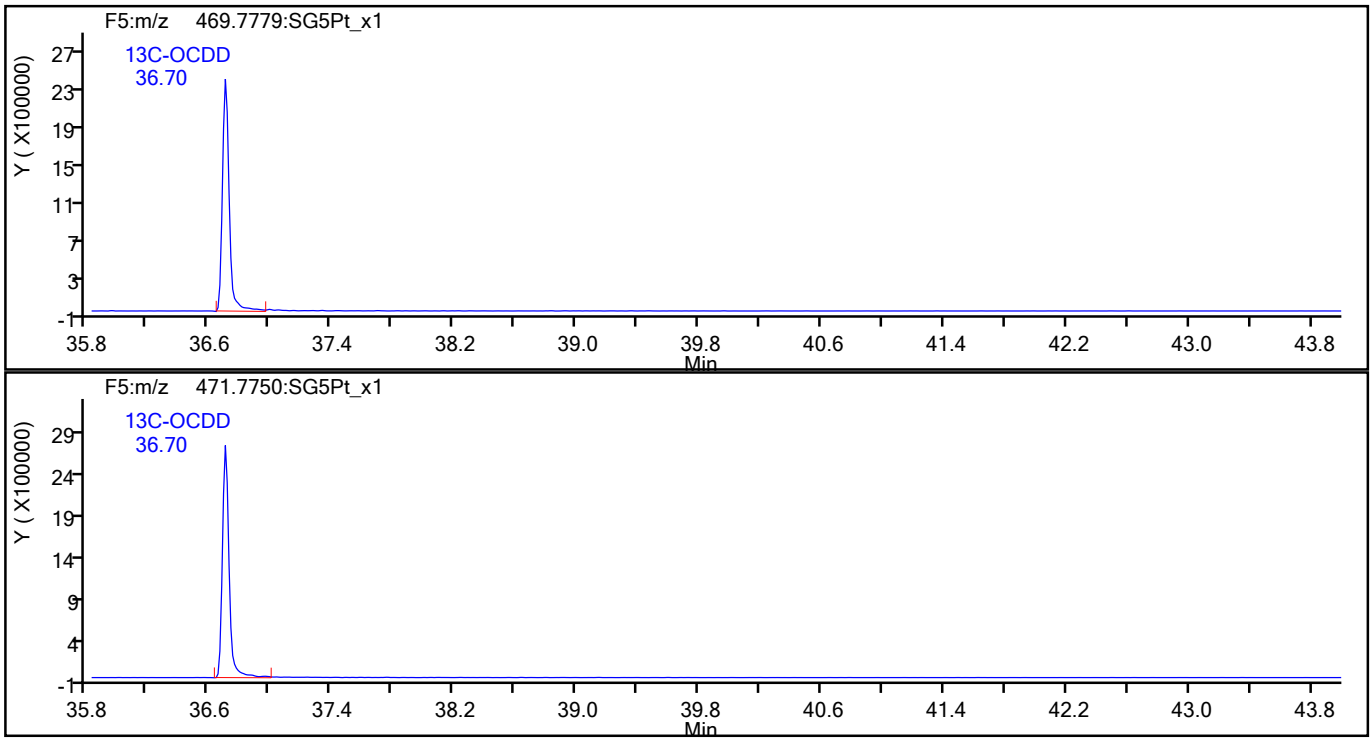

794317

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

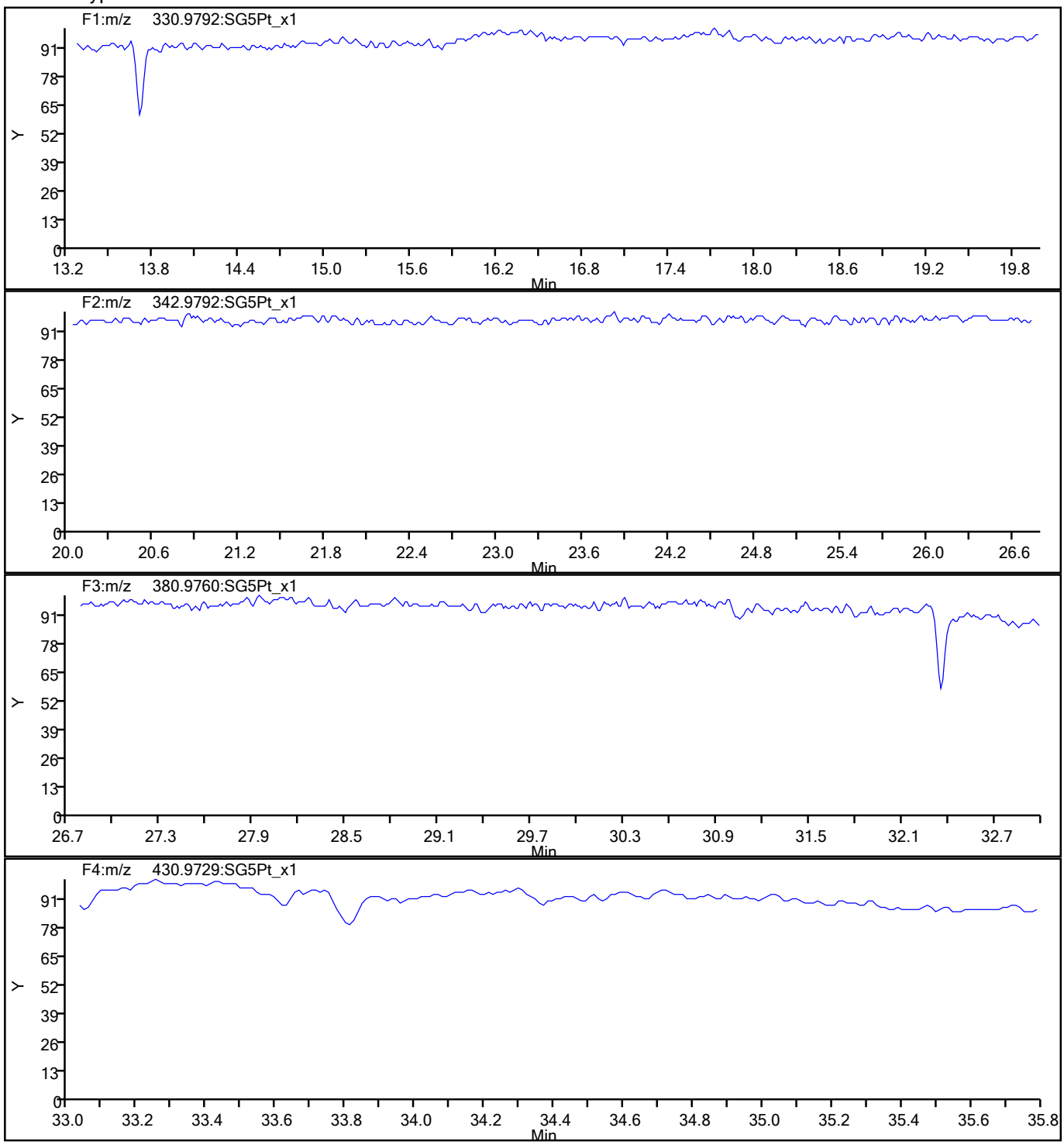

794318

Report Date: 27-Aug-2021 09:26:57 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_3.d		
Injection Date:	25-Aug-2021 11:20:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	3
Column Type:	DB-5	Column Dia:	0.32 mm

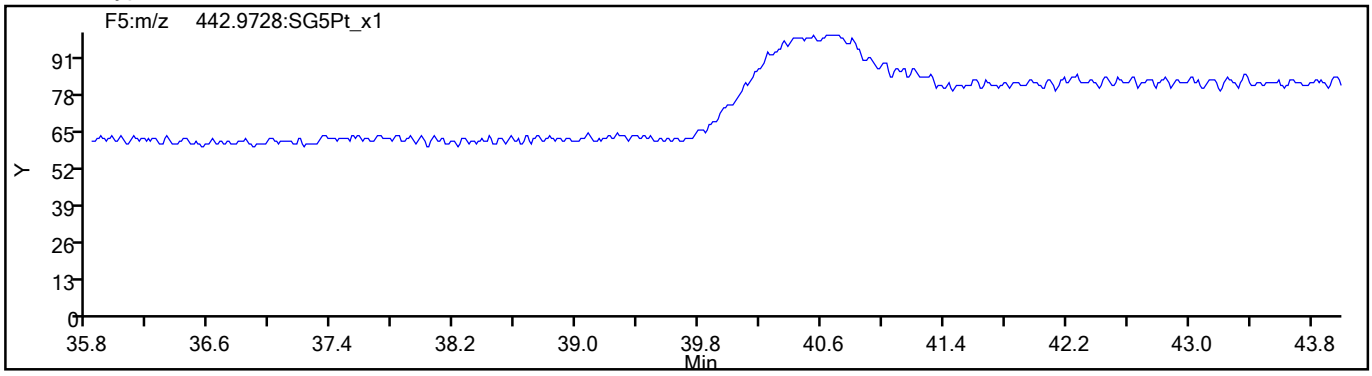

794319

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-515492/2-A
Matrix: Sediment
Lab File ID: 25AU2110D5_4.d
Analysis Method: 1613B
Date Collected:
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10(g)
Date Analyzed: 08/25/2021 12:05
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519953
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	21.3		1.0	0.056
51207-31-9	2,3,7,8-TCDF	21.7		1.0	0.044
40321-76-4	1,2,3,7,8-PeCDD	108		5.0	0.11
57117-41-6	1,2,3,7,8-PeCDF	111		5.0	0.23
57117-31-4	2,3,4,7,8-PeCDF	102		5.0	0.23
39227-28-6	1,2,3,4,7,8-HxCDD	101		5.0	0.23
57653-85-7	1,2,3,6,7,8-HxCDD	111		5.0	0.23
19408-74-3	1,2,3,7,8,9-HxCDD	107		5.0	0.21
70648-26-9	1,2,3,4,7,8-HxCDF	96.9		5.0	0.39
57117-44-9	1,2,3,6,7,8-HxCDF	108		5.0	0.39
72918-21-9	1,2,3,7,8,9-HxCDF	107		5.0	0.28
60851-34-5	2,3,4,6,7,8-HxCDF	107		5.0	0.29
35822-46-9	1,2,3,4,6,7,8-HpCDD	109		5.0	0.30
67562-39-4	1,2,3,4,6,7,8-HpCDF	108		5.0	0.66
55673-89-7	1,2,3,4,7,8,9-HpCDF	102		5.0	0.80
3268-87-9	OCDD	213		10	0.19
39001-02-0	OCDF	208		10	0.14
41903-57-5	Total TCDD	21.3		1.0	0.056
30402-14-3	Total TCDF	21.9		1.0	0.044
36088-22-9	Total PeCDD	108		5.0	0.11
30402-15-4	Total PeCDF	214		5.0	0.23
34465-46-8	Total HxCDD	319		5.0	0.22
55684-94-1	Total HxCDF	420		5.0	0.34
37871-00-4	Total HpCDD	109		5.0	0.30
38998-75-3	Total HpCDF	210		5.0	0.73

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-515492/2-A

Matrix: Sediment Lab File ID: 25AU2110D5_4.d

Analysis Method: 1613B Date Collected:

Extract. Method: HRMS-Sox Date Extracted: 08/12/2021 05:19

Sample wt/vol: 10(g) Date Analyzed: 08/25/2021 12:05

Con. Extract Vol.: 20.0(uL) Dilution Factor: 1

Injection Volume: 2(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 519953 Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	47		20-175
89059-46-1	13C-2,3,7,8-TCDF	46		22-152
109719-79-1	13C-1,2,3,7,8-PeCDD	50		21-227
109719-77-9	13C-1,2,3,7,8-PeCDF	47		21-192
116843-02-8	13C-2,3,4,7,8-PeCDF	50		13-328
109719-80-4	13C-1,2,3,4,7,8-HxCDD	54		21-193
109719-81-5	13C-1,2,3,6,7,8-HxCDD	47		25-163
114423-98-2	13C-1,2,3,4,7,8-HxCDF	54		19-202
116843-03-9	13C-1,2,3,6,7,8-HxCDF	47		21-159
116843-04-0	13C-1,2,3,7,8,9-HxCDF	47		17-205
116843-05-1	13C-2,3,4,6,7,8-HxCDF	47		22-176
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	46		26-166
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	44		21-158
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	48		20-186
114423-97-1	13C-OCDD	50		13-199

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	65		31-191

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d
Lims ID: LCS 320-515492/2-A
Client ID:
Sample Type: LCS
Inject. Date: 25-Aug-2021 12:05:46 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 320-515492/2-A LCS 320-515492/2-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:26:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:55:08

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.613	116313177	0.81	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	86197808	0.77	1.6249	45.6	45.6	0.0743	0.0743	45.61	
2,3,7,8-TCDF	17.114	9594315	0.75	1.0239	10.9	10.9	0.0219	0.0219	109	
A Non-2,3,7,8-sub-TCDF	17.076	85308	0.77	1.0239	0.0967	0.0967	0.0219	0.0967	0.00	
S Total TCDF					11.0	11.0	0.0219	0.0219		
D 13C-2,3,7,8-TCDD	17.794	49616225	0.83	0.8993	47.4	47.4	0.1397	0.1397	47.43	
2,3,7,8-TCDD	17.809	6619535	0.77	1.2541	10.6	10.6	0.0278	0.0278	106	
$ 37Cl4-2,3,7,8-TCDD	17.809	33457645		1.1071	26.0	26.0	0.0257	0.0257	64.95	
A Non-2,3,7,8-sub-TCDD	17.537						0.0278	0.0278		
S Total TCDD					10.6	10.6	0.0278	0.0278		
D 13C-1,2,3,7,8-PeCDF	22.020	65768959	1.56	1.2101	46.7	46.7	0.0712	0.0712	46.73	
1,2,3,7,8-PeCDF	22.047	38852552	1.60	1.0611	55.7	55.7	0.1140	0.1140	111	
D 13C-2,3,4,7,8-PeCDF	23.343	71589573	1.52	1.2395	49.7	49.7	0.0695	0.0695	49.66	
2,3,4,7,8-PeCDF	23.370	37165027	1.59	1.0184	51.0	51.0	0.1169	0.1169	102	
A F1 PeCDFs	19.851						0.0185	0.0185		
A Non-2,3,7,8-sub-PeCDF	23.067	333485	1.52	1.0398	0.4670	0.4670	0.1154	0.4670	0.00	
S Total PeCDF					107.1	107.1	0.1154	0.1154		
D 13C-1,2,3,7,8-PeCDD	24.052	44110503	1.61	0.7612	49.8	49.8	0.0406	0.0406	49.82	
1,2,3,7,8-PeCDD	24.065	25064557	1.59	1.0484	54.2	54.2	0.0538	0.0538	108	
A Non-2,3,7,8-sub-PeCDD	23.696						0.0538	0.0538		
S Total PeCDD					54.2	54.2	0.0538	0.0538		
D 13C-1,2,3,4,7,8-HxCDF	30.186	61084713	0.52	1.0837	54.1	54.1	0.1138	0.1138	54.11	
1,2,3,4,7,8-HxCDF	30.213	32099272	1.23	1.0851	48.4	48.4	0.1968	0.1968	96.85	
D 13C-1,2,3,6,7,8-HxCDF	30.399	55461911	0.51	1.1279	47.2	47.2	0.1094	0.1094	47.20	
1,2,3,6,7,8-HxCDF	30.412	33799121	1.22	1.1260	54.1	54.1	0.1949	0.1949	108	
D 13C-2,3,4,6,7,8-HxCDF	31.304	52535805	0.52	1.0637	47.4	47.4	0.1160	0.1160	47.41	
2,3,4,6,7,8-HxCDF	31.317	32955345	1.21	1.1675	53.7	53.7	0.1438	0.1438	107	
D 13C-1,2,3,7,8,9-HxCDF	32.143	46916272	0.51	0.9676	46.5	46.5	0.1275	0.1275	46.54	
1,2,3,7,8,9-HxCDF	32.156	29343058	1.21	1.1664	53.6	53.6	0.1397	0.1397	107	
A Non-2,3,7,8-sub-HxCDF	30.338						0.1650	0.1650		
S Total HxCDF					209.9	209.9	0.1688	0.1688		

794322

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,7,8,9-HxCDD	31.956	104179892	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.504	41185024	1.24	0.7334	53.9	53.9	0.1381	0.1381	53.90	
1,2,3,4,7,8-HxCDD	31.517	22091720	1.26	1.0640	50.4	50.4	0.1134	0.1134	101	
D 13C-1,2,3,6,7,8-HxCDD	31.610	42762799	1.25	0.8802	46.6	46.6	0.1151	0.1151	46.63	
1,2,3,6,7,8-HxCDD	31.624	23759486	1.26	1.0001	55.6	55.6	0.1172	0.1172	111	
1,2,3,7,8,9-HxCDD	31.969	25524658	1.26	1.1325	53.7	53.7	0.1050	0.1050	107	
A Non-2,3,7,8-sub-HxCDD	30.525						0.1116	0.1116		
S Total HxCDD					159.7	159.7	0.1118	0.1118		
D 13C-1,2,3,4,6,7,8-HpCDF	33.615	35780816	0.44	0.7730	44.4	44.4	0.3441	0.3441	44.43	
1,2,3,4,6,7,8-HpCDF	33.627	27838664	1.03	1.4413	54.0	54.0	0.3289	0.3289	108	
D 13C-1,2,3,4,7,8,9-HpCDF	34.685	35355129	0.43	0.7008	48.4	48.4	0.3795	0.3795	48.42	
1,2,3,4,7,8,9-HpCDF	34.685	23749131	1.05	1.3174	51.0	51.0	0.3994	0.3994	102	
A Non-2,3,7,8-sub-HpCDF	34.150						0.3616	0.3616		
S Total HpCDF					105.0	105.0	0.3641	0.3641		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	30979860	1.02	0.6472	45.9	45.9	0.1517	0.1517	45.95	
1,2,3,4,6,7,8-HpCDD	34.405	18540489	1.03	1.0943	54.7	54.7	0.1513	0.1513	109	
A Non-2,3,7,8-sub-HpCDD	34.223						0.1513	0.1513		
S Total HpCDD					54.7	54.7	0.1513	0.1513		
D 13C-OCDD	36.713	46315484	0.87	0.4472	99.4	99.4	0.0930	0.0930	49.71	
OCDF	36.809	34674091	0.89	1.4382	104.1	104.1	0.0707	0.0707	104	
OCDD	36.725	27293037	0.88	1.1070	106.5	106.5	0.0930	0.0930	106	

QC Flag Legend

Processing Flags

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d
Lims ID: LCS 320-515492/2-A
Client ID:
Sample Type: LCS
Inject. Date: 25-Aug-2021 12:05:46 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 320-515492/2-A LCS 320-515492/2-A
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:26:56 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 09:55:08

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.613	17.598	1		51952593	13128111	5283	13207	2485		
333.9339	17.613	17.598	1		64360584	16217837	9463	23657	1714	0.81(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.099	0	0.971	37571271	9880013	9672	24180	1022		
317.9389	17.099	17.099	0	0.971	48626537	12763365	4509	11272	2831	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.114	0	1.001	4122780	1076758	820	2050	1313		
305.8987	17.114	17.114	0	1.001	5471535	1458060	1212	3030	1203	0.75(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											
303.9016	16.751	17.076	-19	0.980	37078	8304	820	2050	10		
305.8987	16.736	17.076	-20	0.979	48230	12096	1212	3030	10	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.794	0	1.010	22518242	5687480	5283	13207	1077		
333.9339	17.794	17.794	0	1.010	27097983	7000657	9463	23657	740	0.83(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.809	0	1.001	2886458	712795	1115	2787	639		
321.8936	17.809	17.809	0	1.001	3733077	938463	655	1637	1433	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.011	33457645	8366742	3340	8350	2505		
A Non-2,3,7,8-sub-TCDD											
319.8965	17.537						1115	2787			
321.8936	17.537						655	1637			
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.250	40089574	7314475	5820	14550	1257		
353.8970	22.020	22.020	0	1.250	25679385	4781778	4293	10732	1114	1.56(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8-PeCDF											
339.8597	22.047	22.047	0	1.001	23884079	4450061	3262	8155	1364		
341.8567	22.047	22.047	0	1.001	14968473	2768480	2592	6480	1068	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.325	43188266	7333077	5820	14550	1260		
353.8970	23.343	23.343	0	1.325	28401307	4963080	4293	10732	1156	1.52(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370	23.370	0	1.001	22835482	3904097	3262	8155	1197		
341.8567	23.370	23.370	0	1.001	14329545	2463879	2592	6480	951	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						235	587			
341.8567	19.851						705	1762			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.565	23.067	-30	1.025	201081	34731	3262	8155	11		
341.8567	22.565	23.067	-30	1.025	132404	24626	2592	6480	10	1.52(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.052	24.052	0	1.366	27199535	4476672	2209	5522	2027		
369.8919	24.038	24.052	-1	1.365	16910968	2752118	1416	3540	1944	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.065	24.079	-1	1.001	15388216	2502571	1032	2580	2425		
357.8516	24.065	24.079	-1	1.001	9676341	1584459	598	1495	2650	1.59(1.32-1.78)	
A Non-2,3,7,8-sub-PeCDD											
355.8546	23.696						1032	2580			
357.8516	23.696						598	1495			
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.186	30.186	0	0.945	20835888	3641392	5034	12585	723		
385.8610	30.186	30.186	0	0.945	40248825	6876719	9729	24322	707	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.213	30.213	0	1.001	17675342	3113033	4542	11355	685		
375.8178	30.213	30.213	0	1.001	14423930	2508173	4441	11102	565	1.23(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.399	30.399	0	0.951	18802087	3486735	5034	12585	693		
385.8610	30.399	30.399	0	0.951	36659824	6743608	9729	24322	693	0.51(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.000	18560743	3371428	4542	11355	742		
375.8178	30.412	30.412	0	1.000	15238378	2764717	4441	11102	623	1.22(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.304	31.291	1	0.980	18048041	4638075	5034	12585	921		
385.8610	31.304	31.291	1	0.980	34487764	8737254	9729	24322	898	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.317	31.317	0	1.000	18065921	4695769	4542	11355	1034		
375.8178	31.317	31.317	0	1.000	14889424	3909435	4441	11102	880	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.143	32.143	0	1.006	15937648	4722094	5034	12585	938		
385.8610	32.143	32.143	0	1.006	30978624	9059222	9729	24322	931	0.51(0.43-0.59)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,7,8,9-HxCDF											
373.8208	32.156	32.156	0	1.000	16092574	4793547	4542	11355	1055		
375.8178	32.156	32.156	0	1.000	13250484	3941488	4441	11102	888	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.338						4542	11355			
375.8178	30.338						4441	11102			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.956	31.956	0		57564291	16579593	6674	16685	2484		
403.8529	31.956	31.956	0		46615601	13338506	5450	13625	2447	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.504	31.504	0	0.986	22810219	6222605	6674	16685	932		
403.8529	31.504	31.504	0	0.986	18374805	5005106	5450	13625	918	1.24(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.517	31.517	0	1.000	12316199	3429883	3081	7702	1113		
391.8127	31.517	31.517	0	1.000	9775521	2705714	2336	5840	1158	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.989	23741411	6426043	6674	16685	963		
403.8529	31.610	31.610	0	0.989	19021388	5128311	5450	13625	941	1.25(1.05-1.43)	
1,2,3,6,7,8-HxCDD											
389.8157	31.624	31.624	0	1.000	13248494	3512524	3081	7702	1140		
391.8127	31.624	31.624	0	1.000	10510992	2838913	2336	5840	1215	1.26(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.969	31.969	0	1.015	14223147	4116493	3081	7702	1336		
391.8127	31.969	31.969	0	1.015	11301511	3232738	2336	5840	1384	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	30.525						3081	7702			
391.8127	30.525						2336	5840			
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.615	33.603	1	1.052	10867374	4098467	10142	25355	404		
419.8220	33.615	33.603	1	1.052	24913442	9216265	21687	54217	425	0.44(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.627	33.615	1	1.000	14124100	5239793	11340	28350	462		
409.7789	33.627	33.615	1	1.000	13714564	4853678	13910	34775	349	1.03(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.685	34.672	1	1.085	10682190	3615183	10142	25355	356		
419.8220	34.685	34.672	1	1.085	24672939	8383490	21687	54217	387	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685	34.685	0	1.000	12150400	4061940	11340	28350	358		
409.7789	34.685	34.685	0	1.000	11598731	3961654	13910	34775	285	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.150						11340	28350			
409.7789	34.150						13910	34775			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.076	15638324	5390078	5306	13265	1016		
437.8140	34.393	34.393	0	1.076	15341536	5341169	6446	16115	829	1.02(0.88-1.20)	

Report Date: 27-Aug-2021 09:27:26 Chrom Revision: 2.3 13-May-2021 07:57:40
Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.405	0	1.000	9415719	3299547	3099	7747	1065		
425.7737	34.405	34.405	0	1.000	9124770	3261395	4007	10017	814	1.03(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											
423.7766	34.223						3099	7747			
425.7737	34.223						4007	10017			
13C-OCDD											
469.7779	36.713	36.701	1	1.149	21505619	6636959	2361	5902	2811		
471.7750	36.713	36.701	1	1.149	24809865	7568325	2617	6542	2892	0.87(0.76-1.02)	
OCDF											
441.7428	36.809	36.797	1	1.003	16328082	5119075	1355	3387	3778		
443.7399	36.809	36.797	1	1.003	18346009	5567496	1534	3835	3629	0.89(0.76-1.02)	
OCDD											
457.7377	36.725	36.713	1	1.000	12789551	3848755	1190	2975	3234		
459.7348	36.713	36.713	0	1.000	14503486	4417257	1735	4337	2546	0.88(0.76-1.02)	

QC Flag Legend

Processing Flags

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d
Lims ID: LCS 320-515492/2-A
Client ID:
Inject. Date: 25-Aug-2021 12:05:46 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 4

Non-2,3,7,8-sub-TCDF, RT: 17.076

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	86197808	22643378

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	86197808	22643378

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
16.751	37078	8304	48230	12096	0.0967	0.77	
Signal Totals:							
	37078	8304	48230	12096			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	85308	20400				0.77	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.0967 = (85308 * 100.000) / (86197808 * 1.024)

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d
Lims ID: LCS 320-515492/2-A
Client ID:
Inject. Date: 25-Aug-2021 12:05:46 Dil. Factor: 1.0000
Sample Type: LCS, Lab Control Sample
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519953 Lims Sample ID: 4

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	65768959	12096253
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	71589573	12296157

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	68679266	12196205

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.565	201081	34731	132404	24626	0.4670	1.52	
Signal Totals:							
	201081	34731	132404	24626			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	333485	59357				1.52	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 0.4670 = (333485 * 100.000) / (68679266 * 1.040)

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

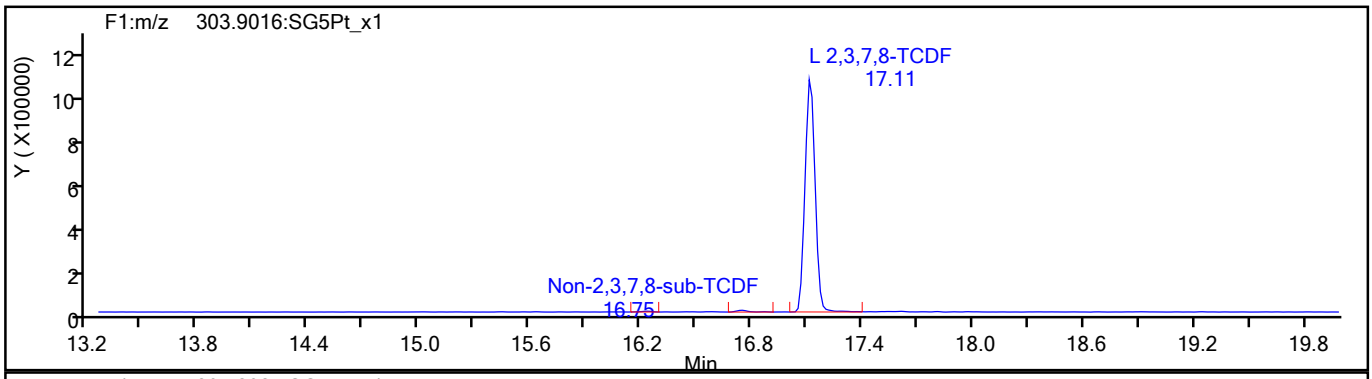

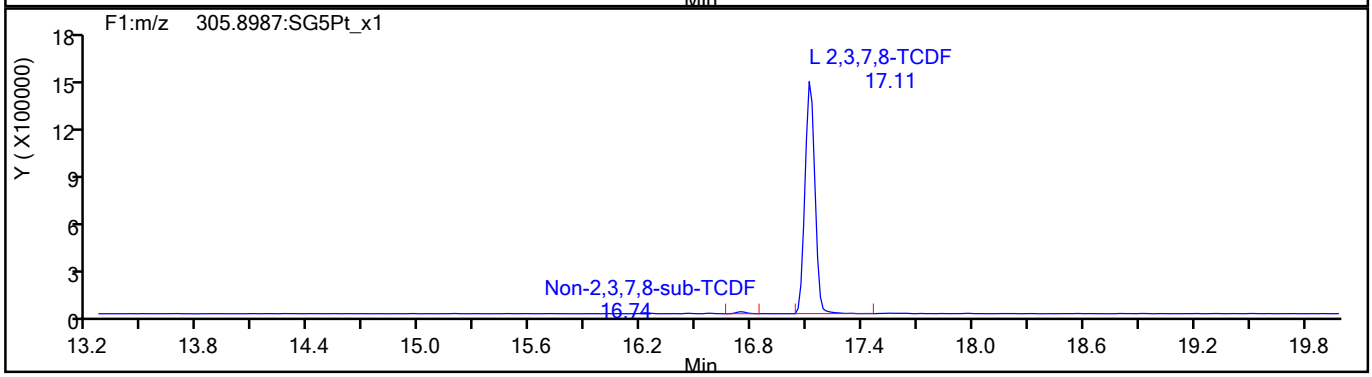

TCDF Standards

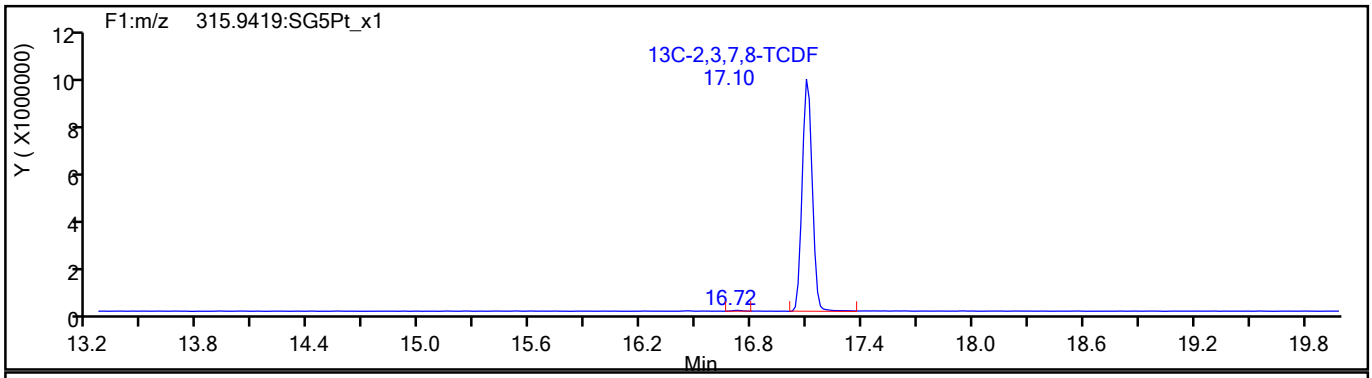

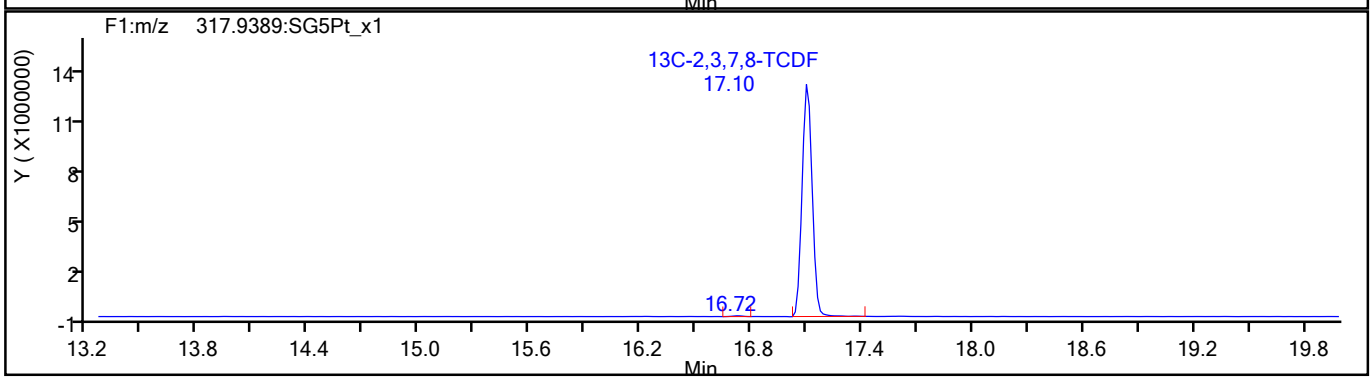

794330

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

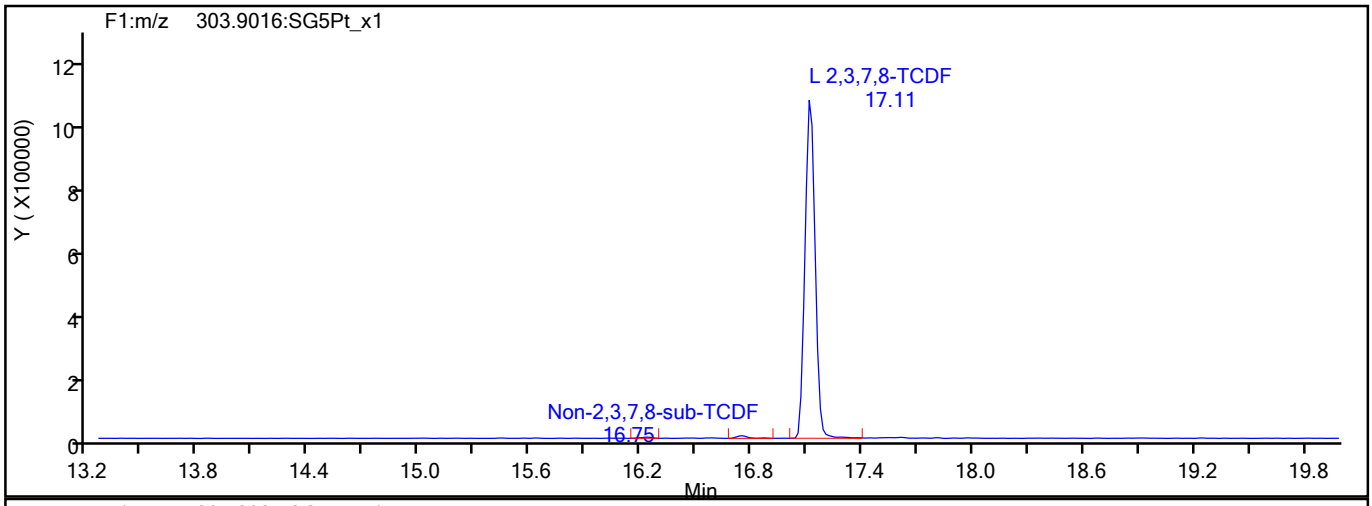

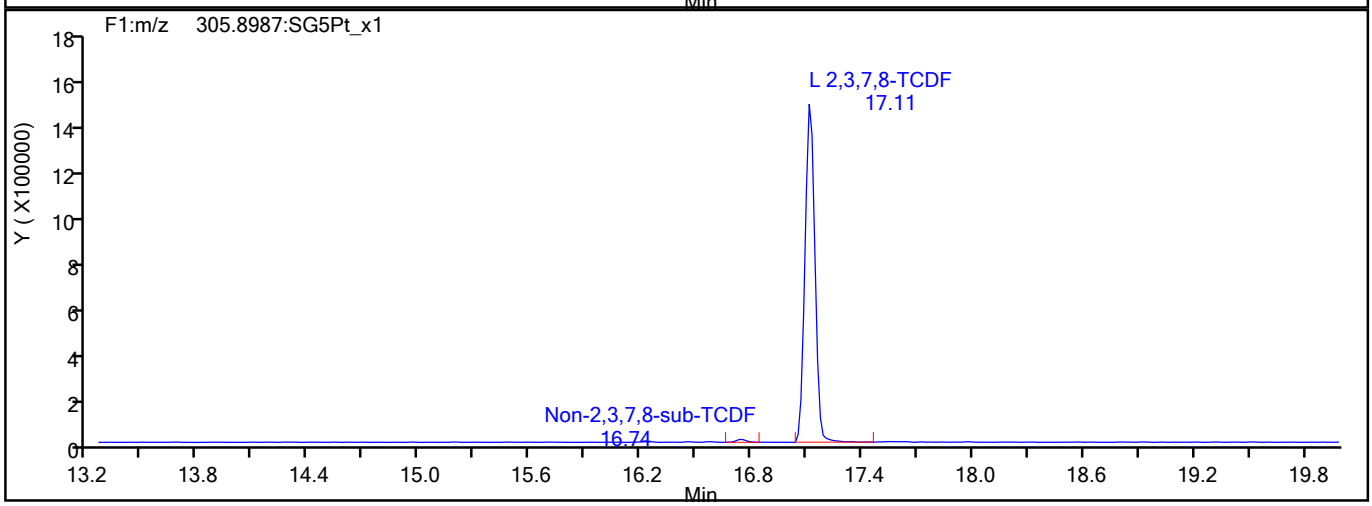

TCDF Interference Mass

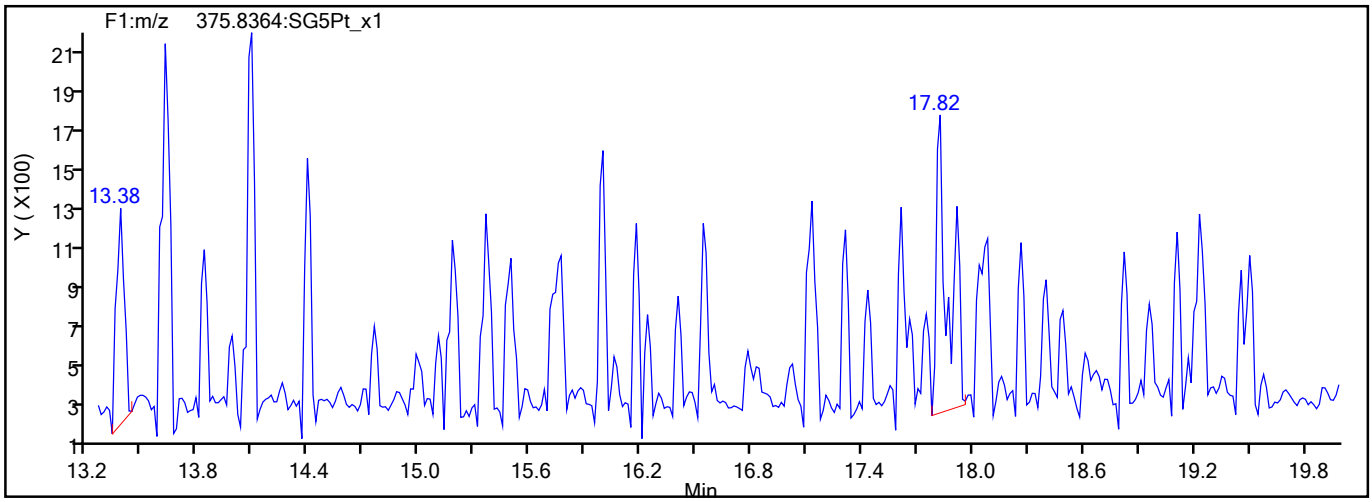

794331

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

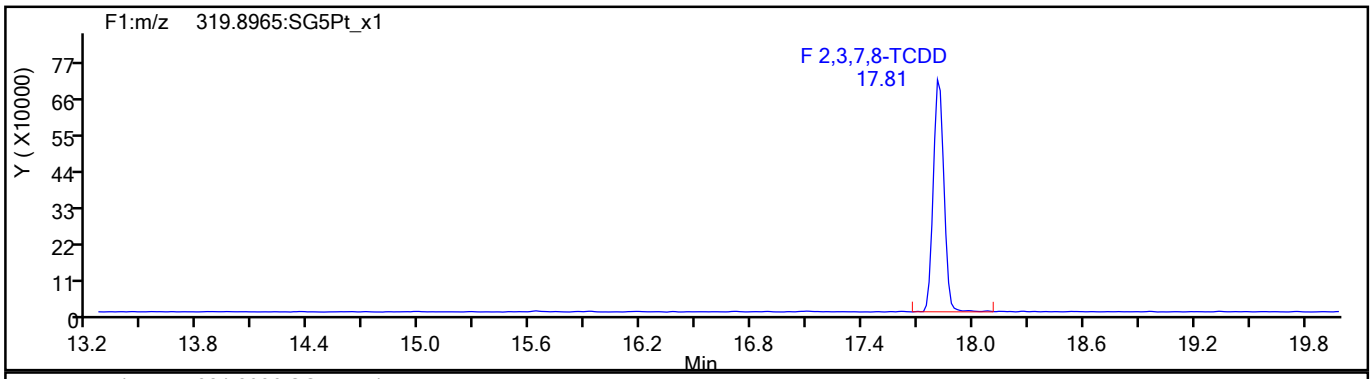

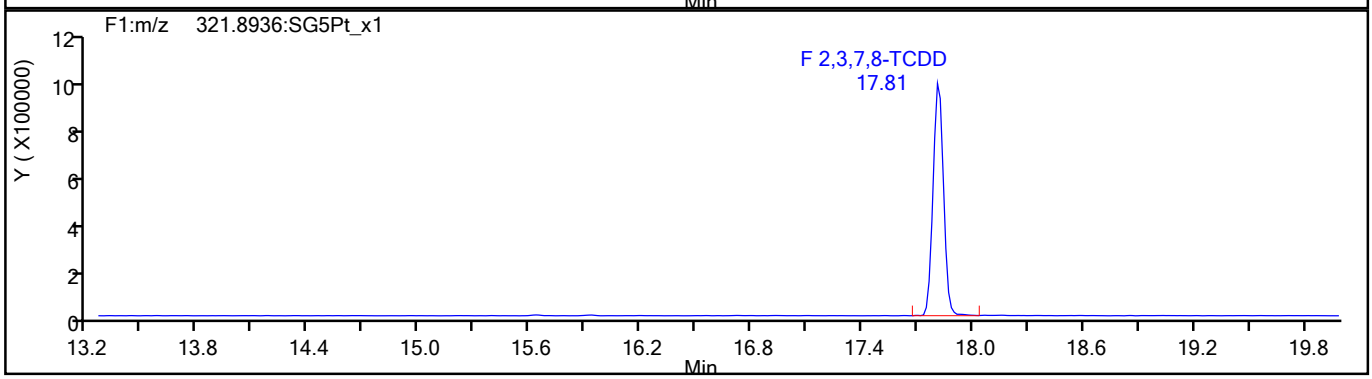

TCDD Standards

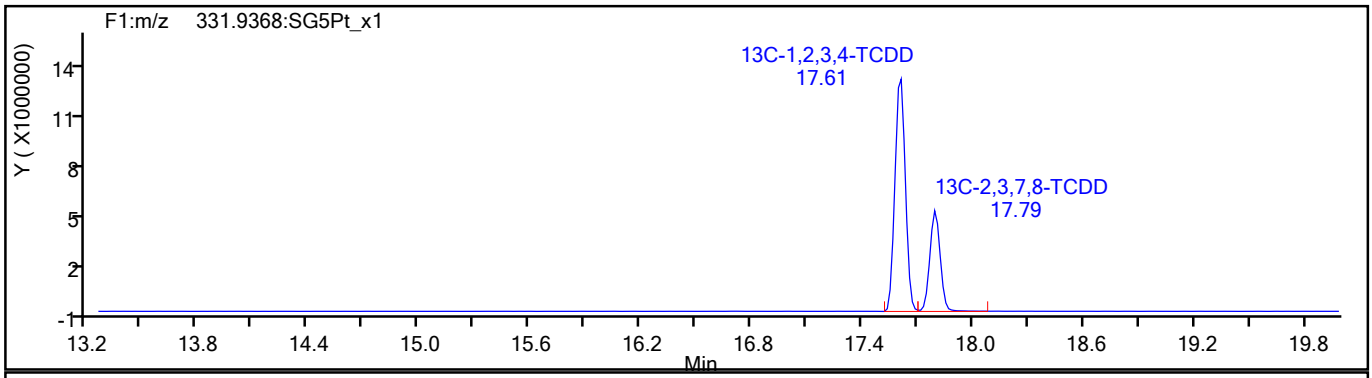

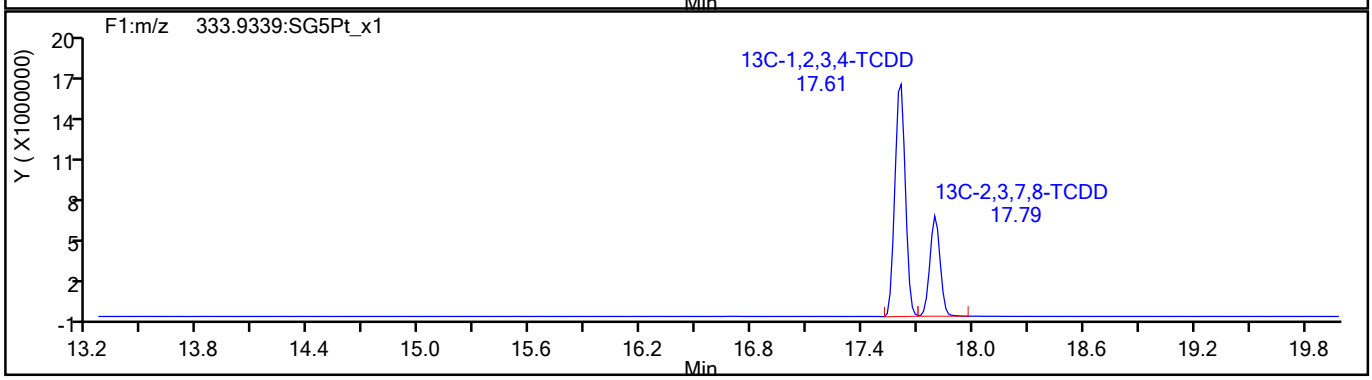

794332

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

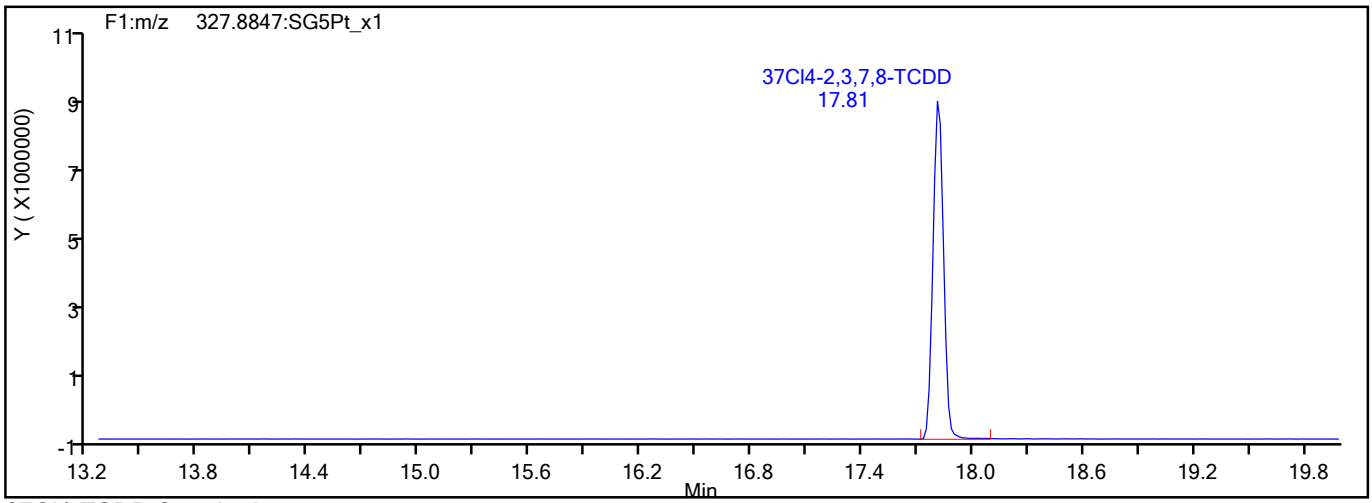

37Cl4-TCDD Standards

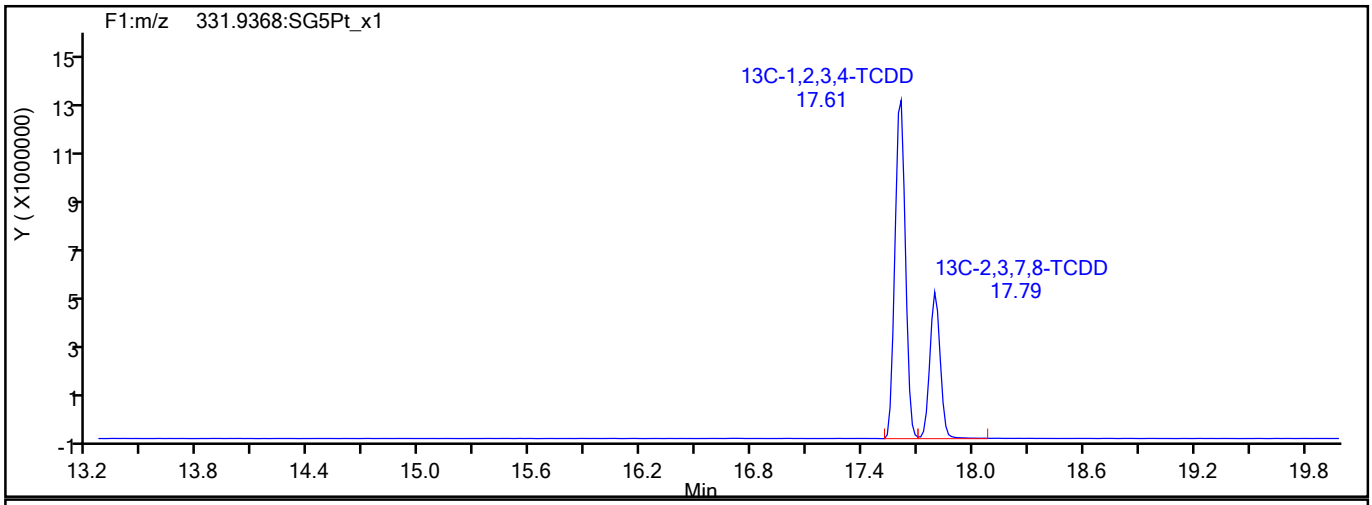

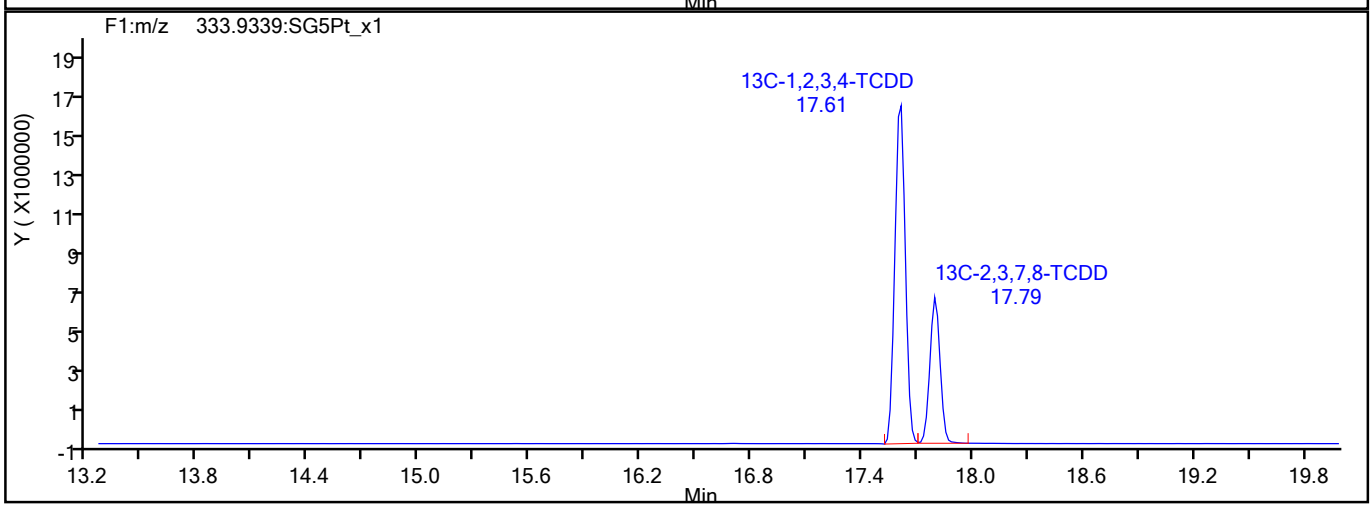

794333

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

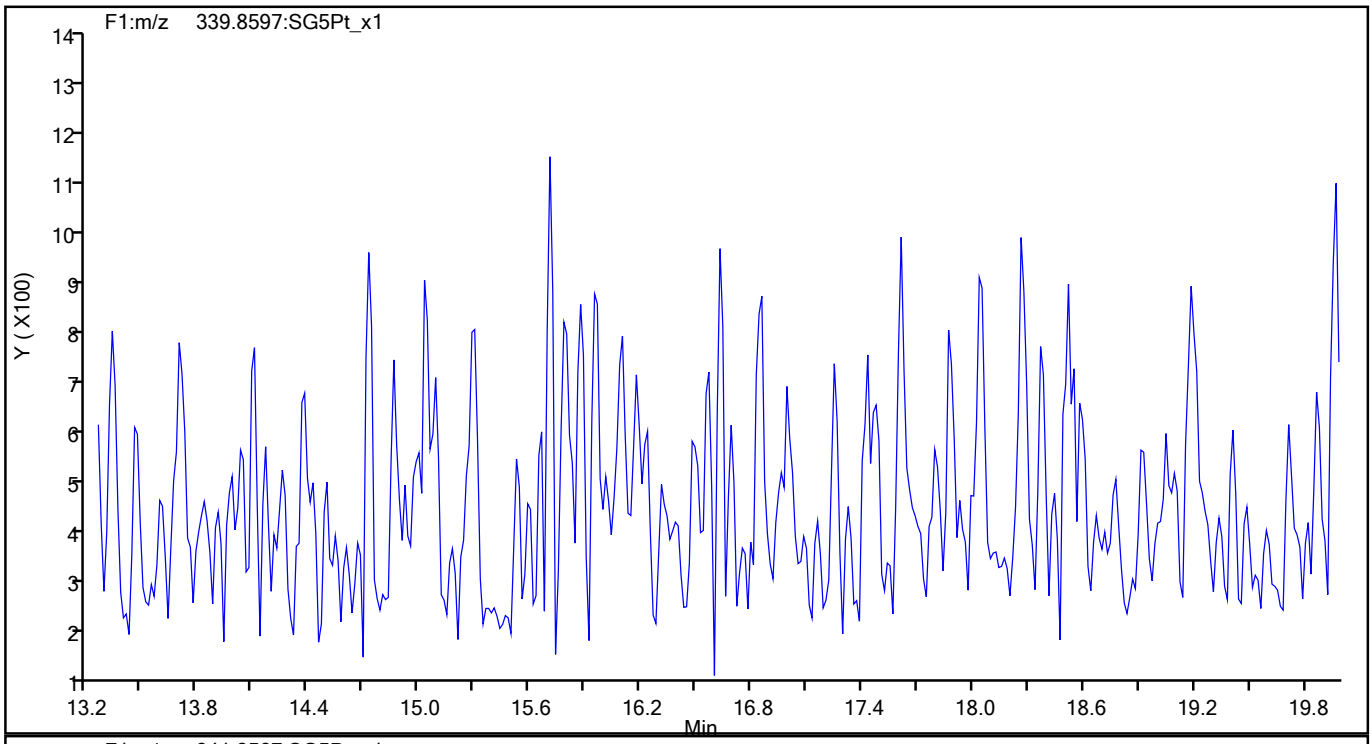

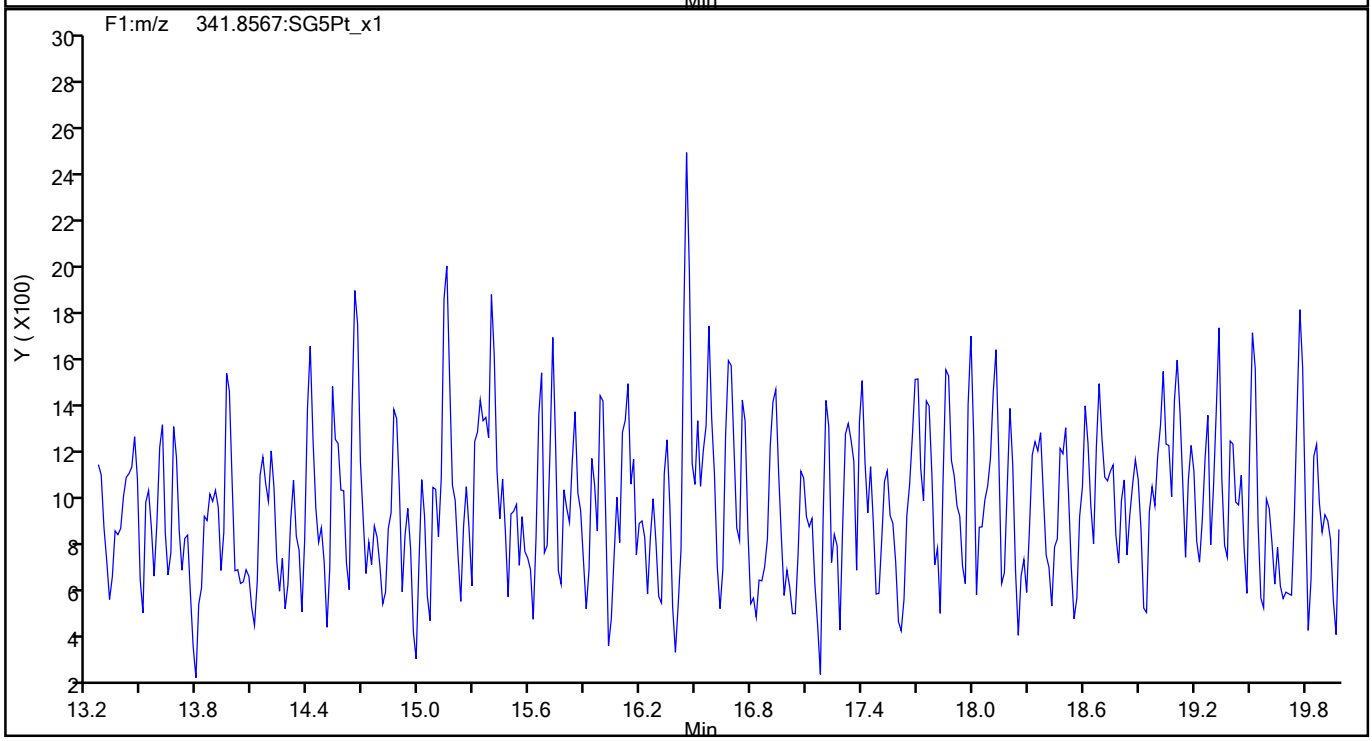

794334

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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F1 PeCDFs

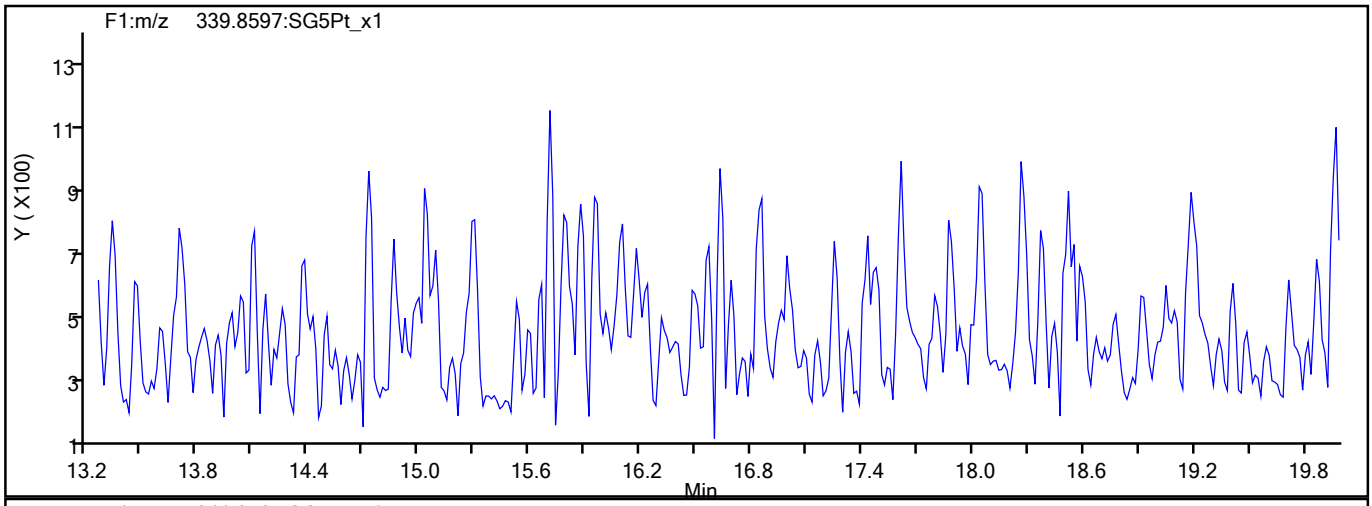

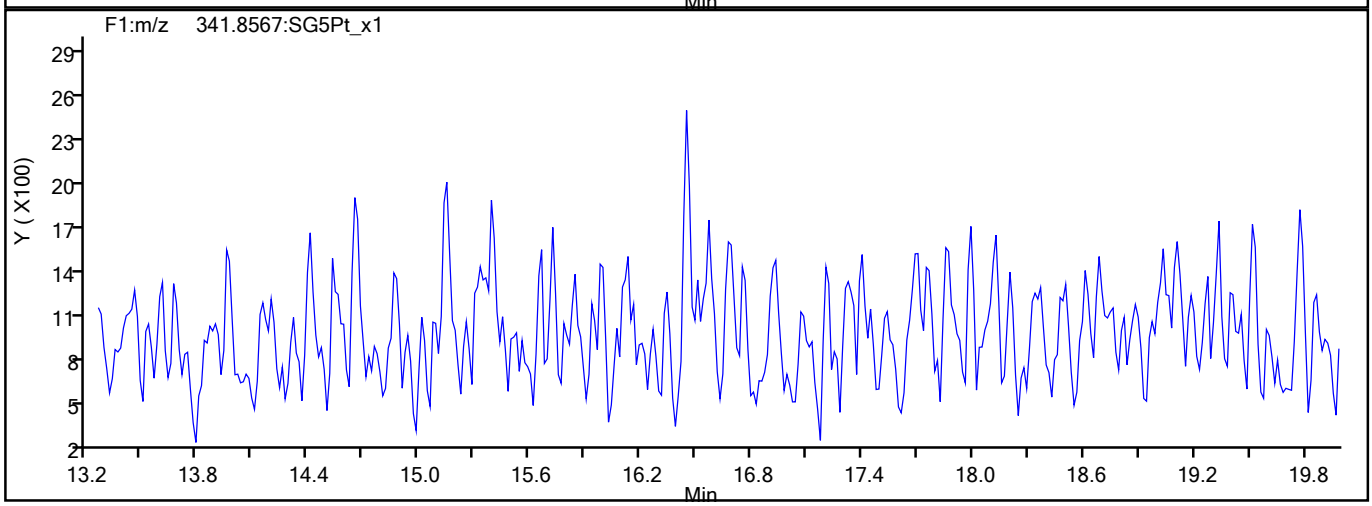

F1 PeCDFs Interference Mass

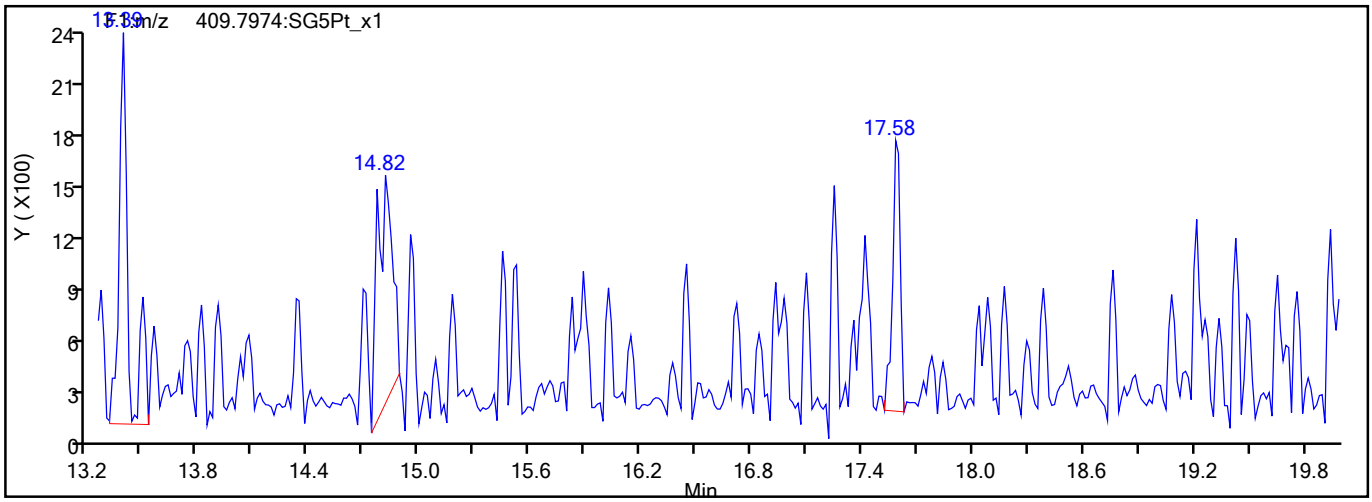

794335

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

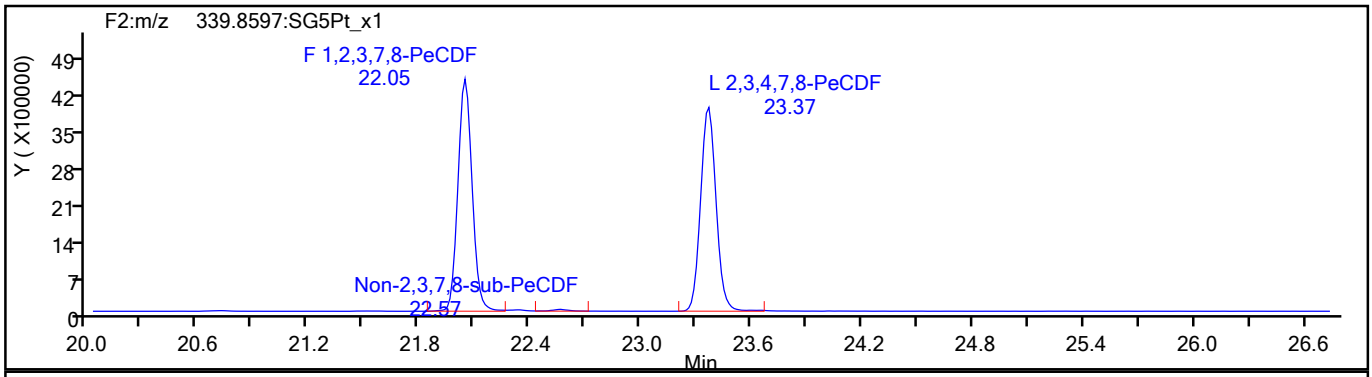

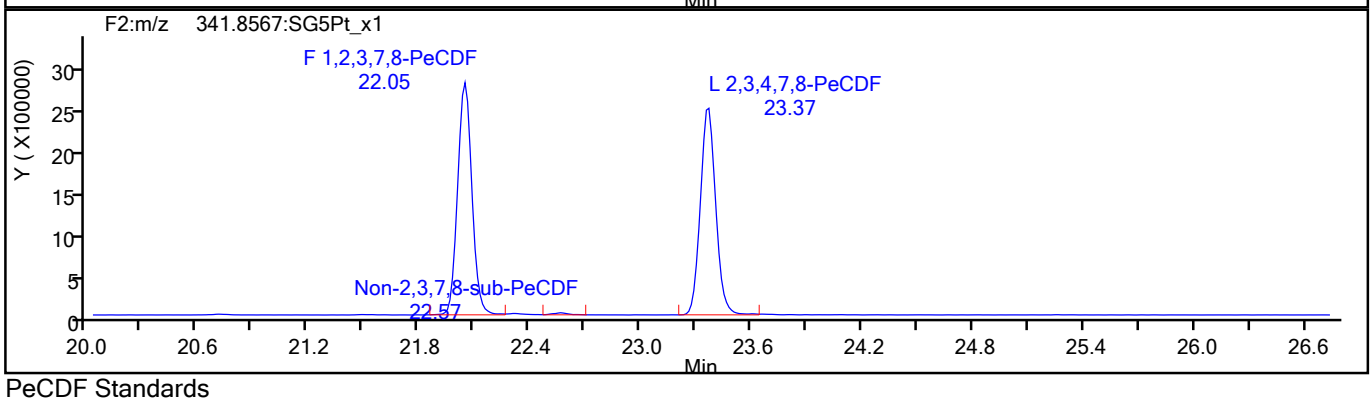

PeCDF Standards

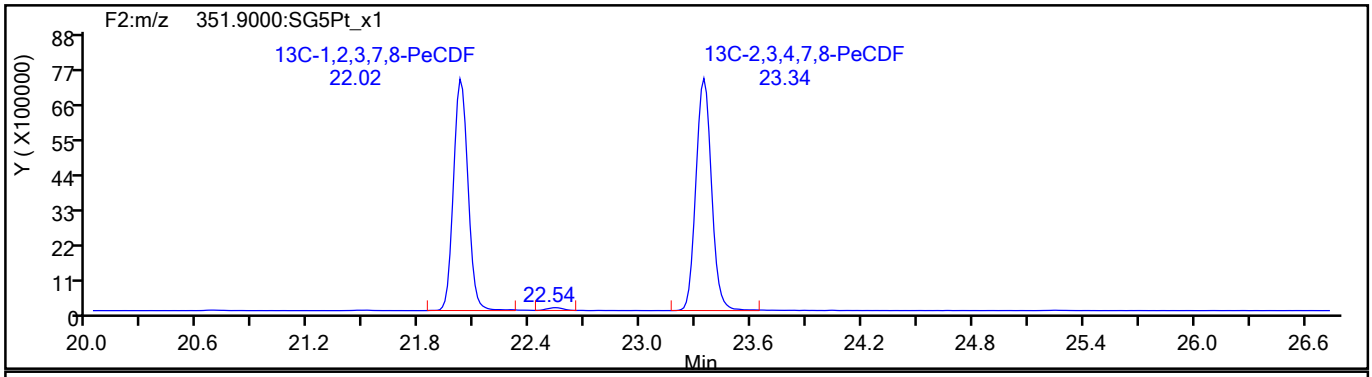

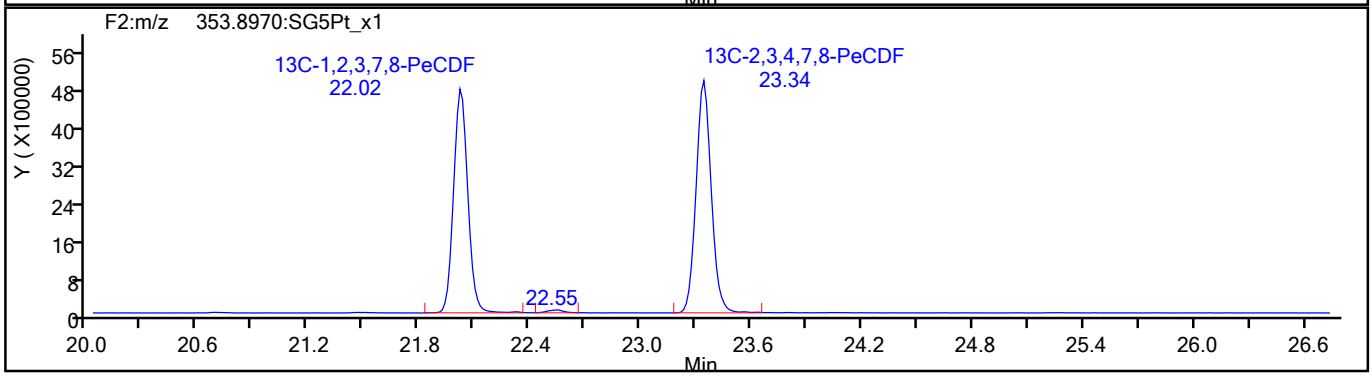

794336

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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PeCDF

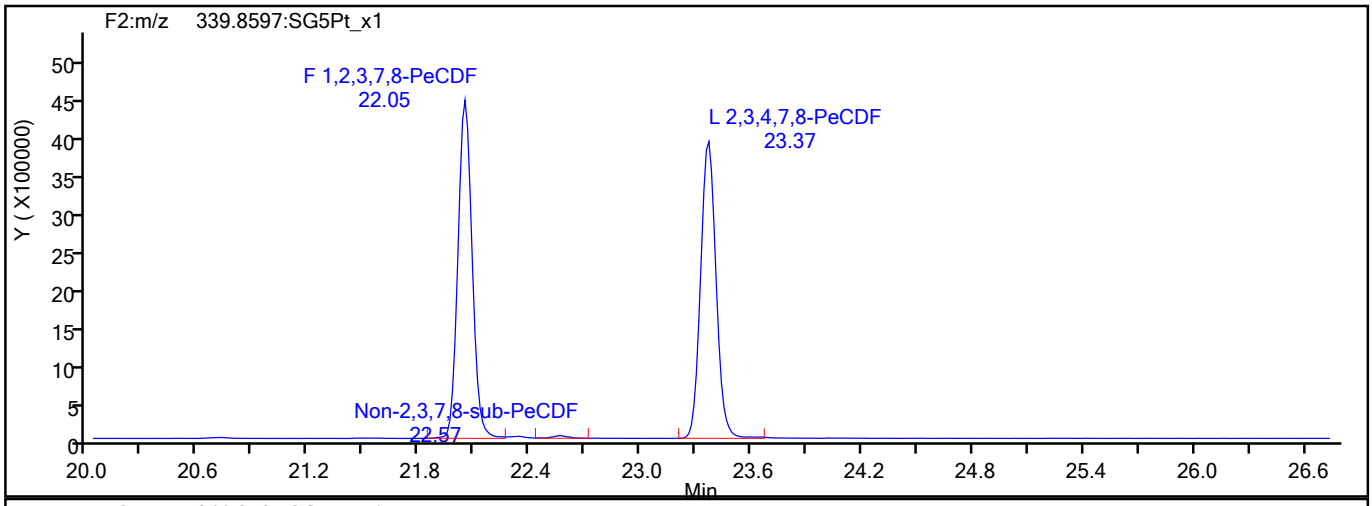

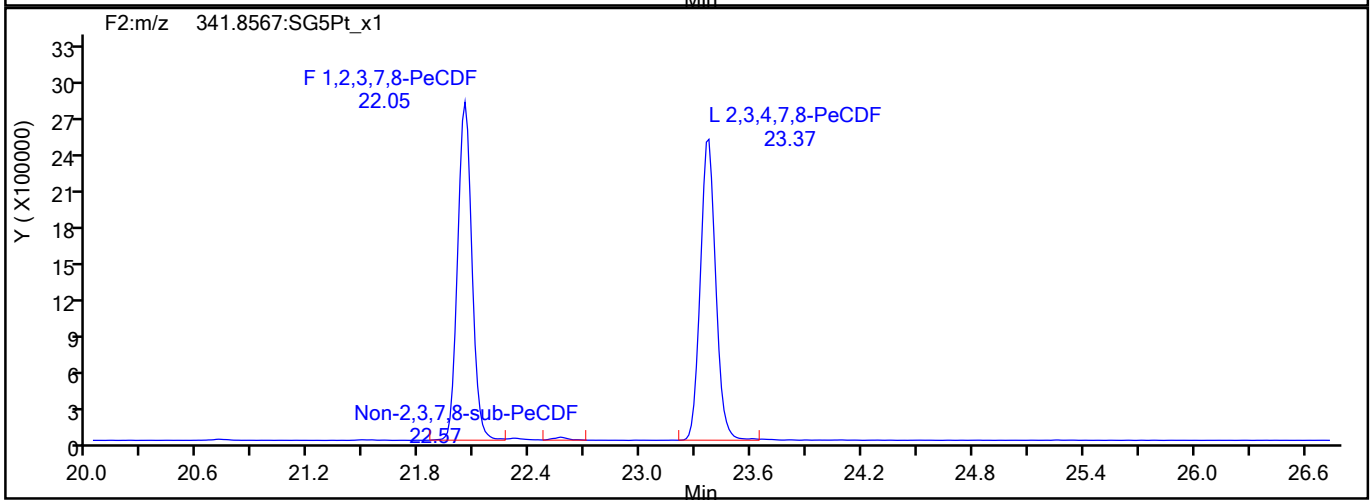

PeCDF Interference Mass

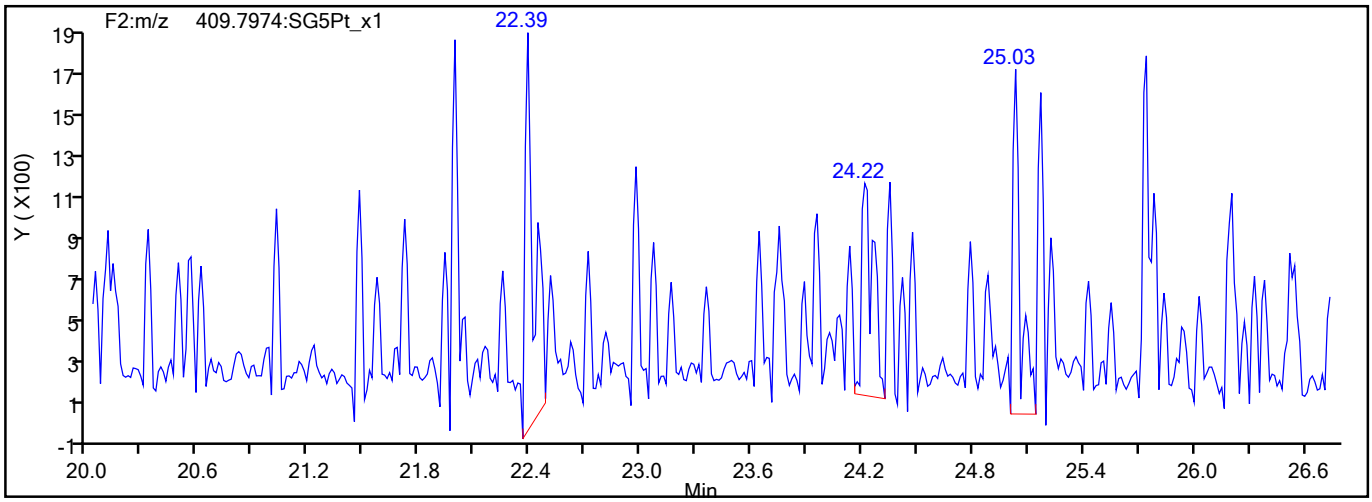

794337

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
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Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

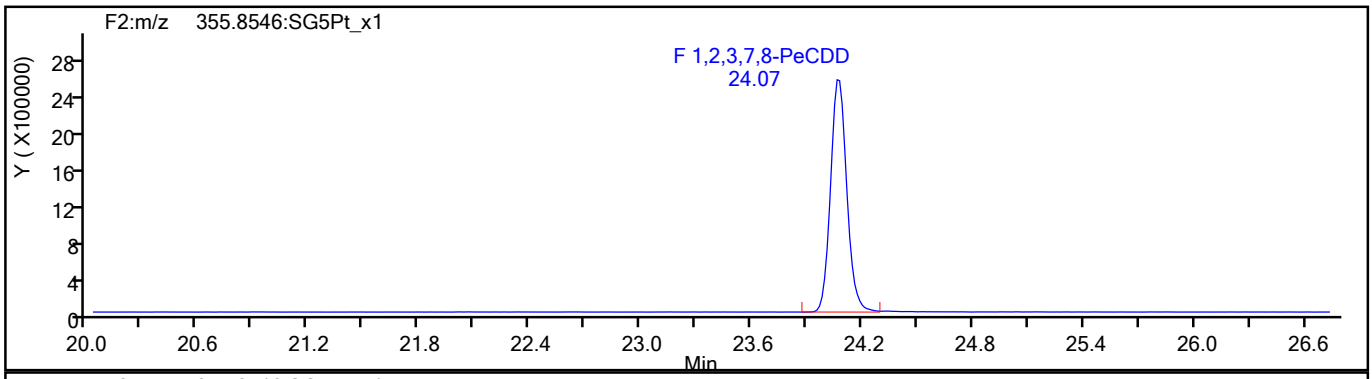

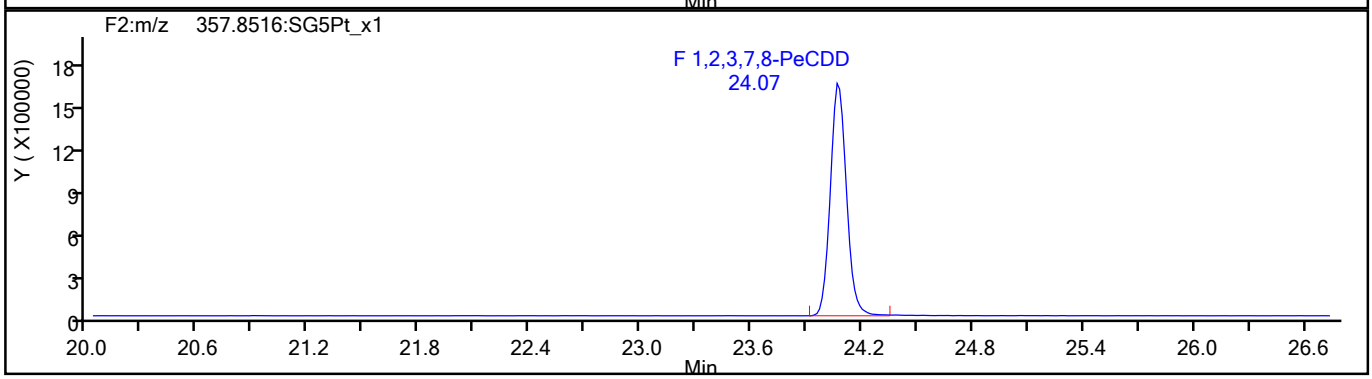

PeCDD Standards

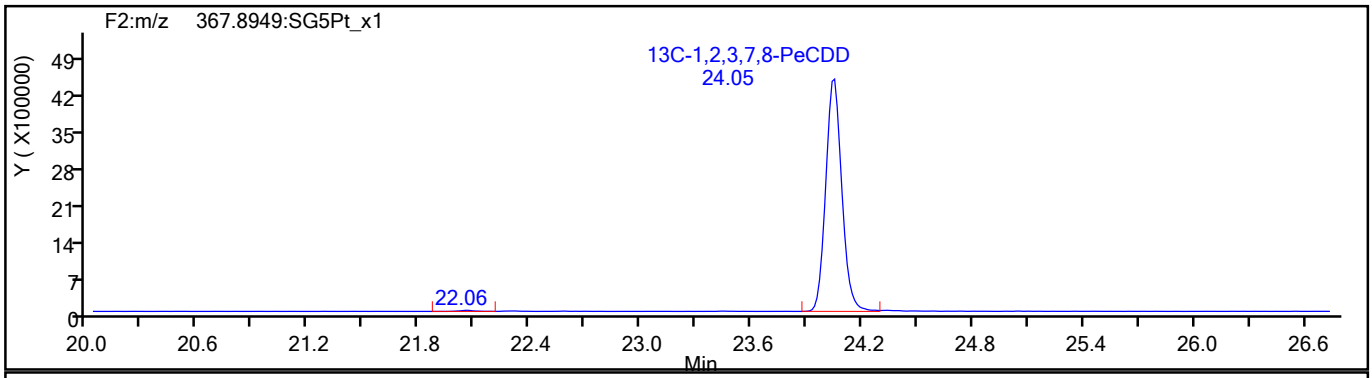

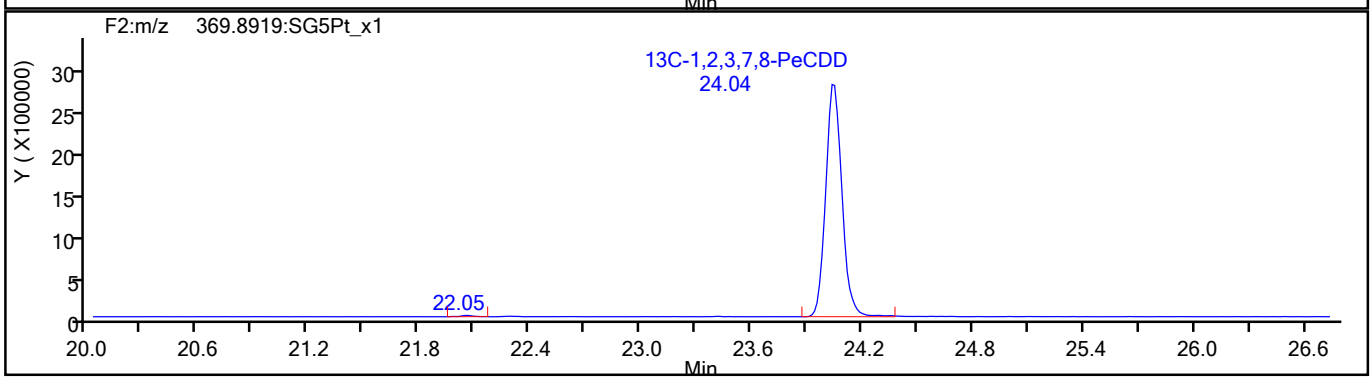

794338

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HxCDF

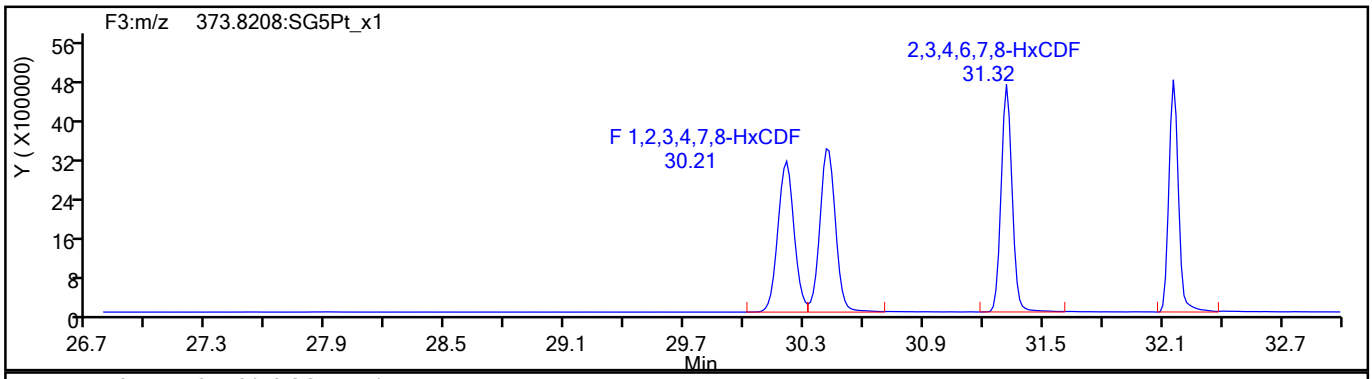

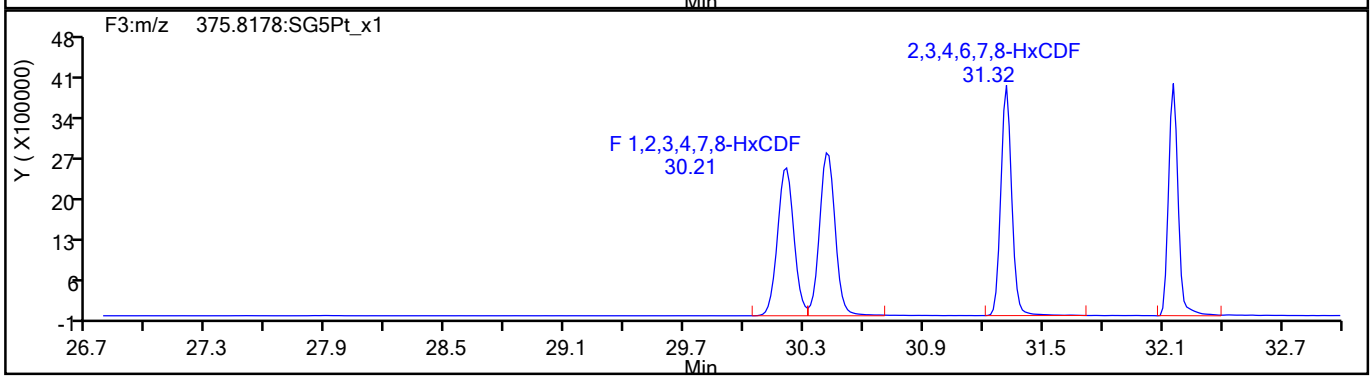

HxCDF Standards

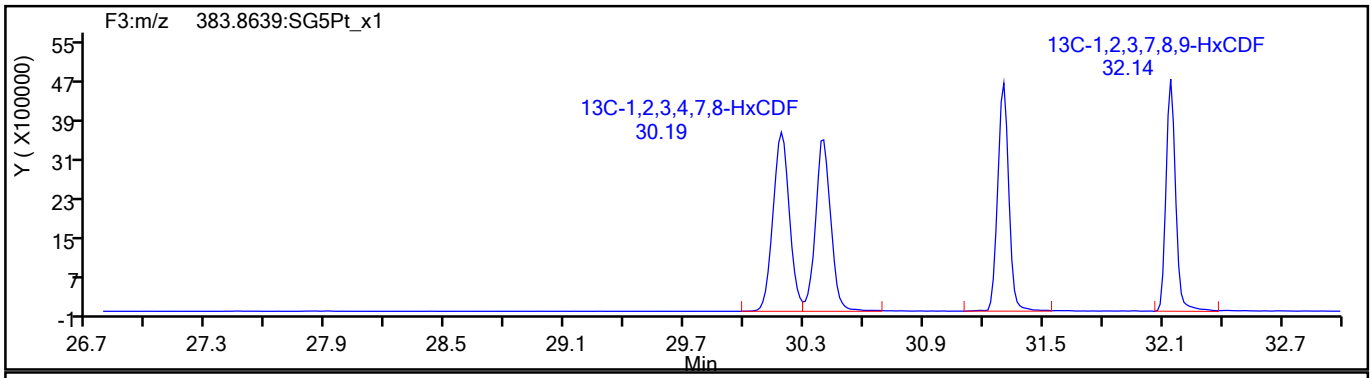

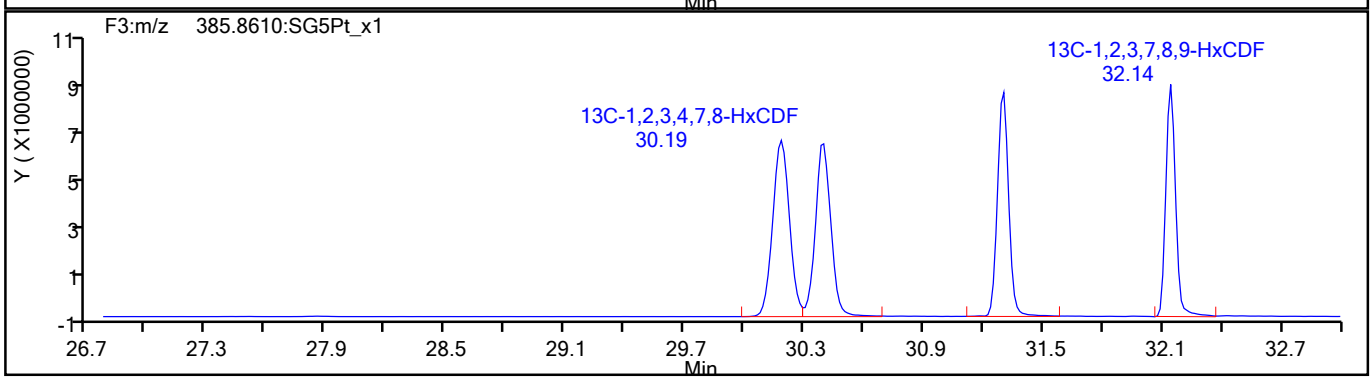

794339

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:			
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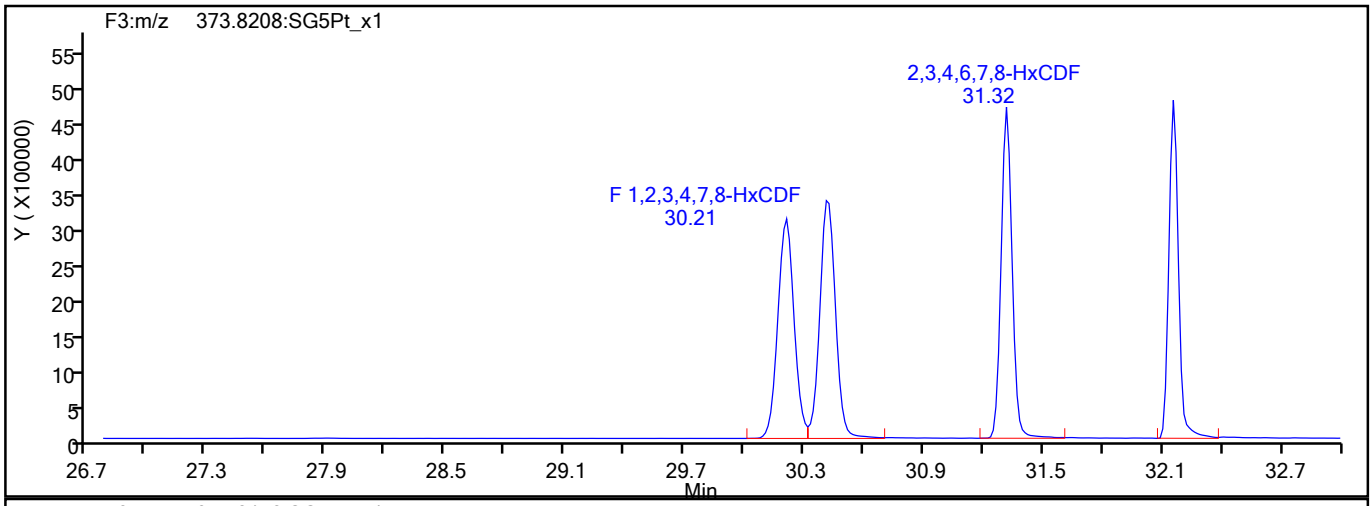

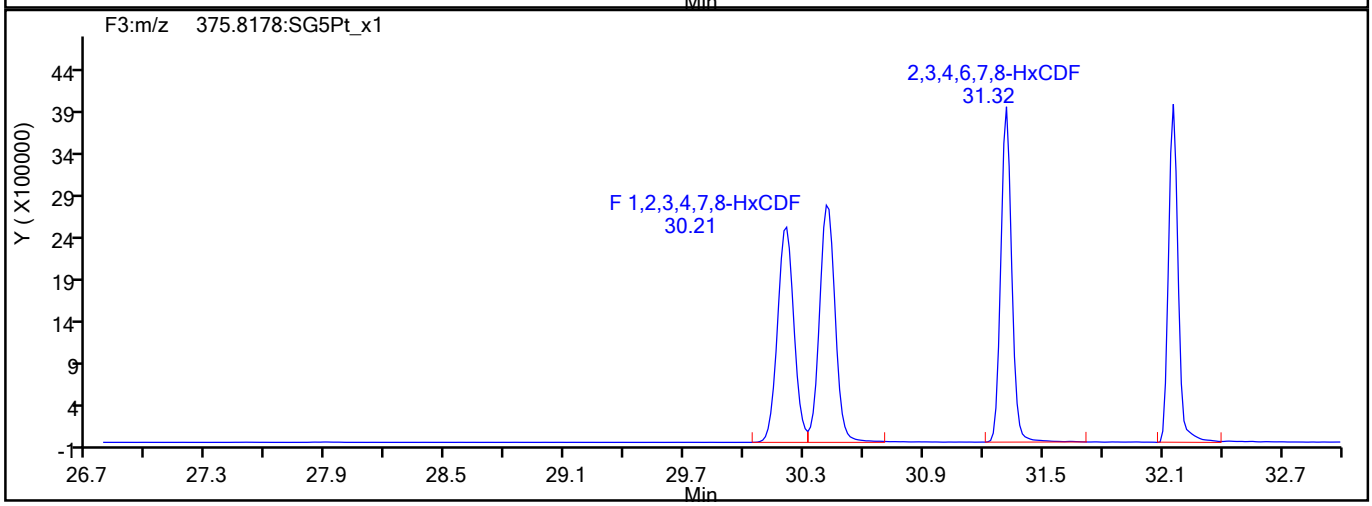

HxCDF Interference Mass

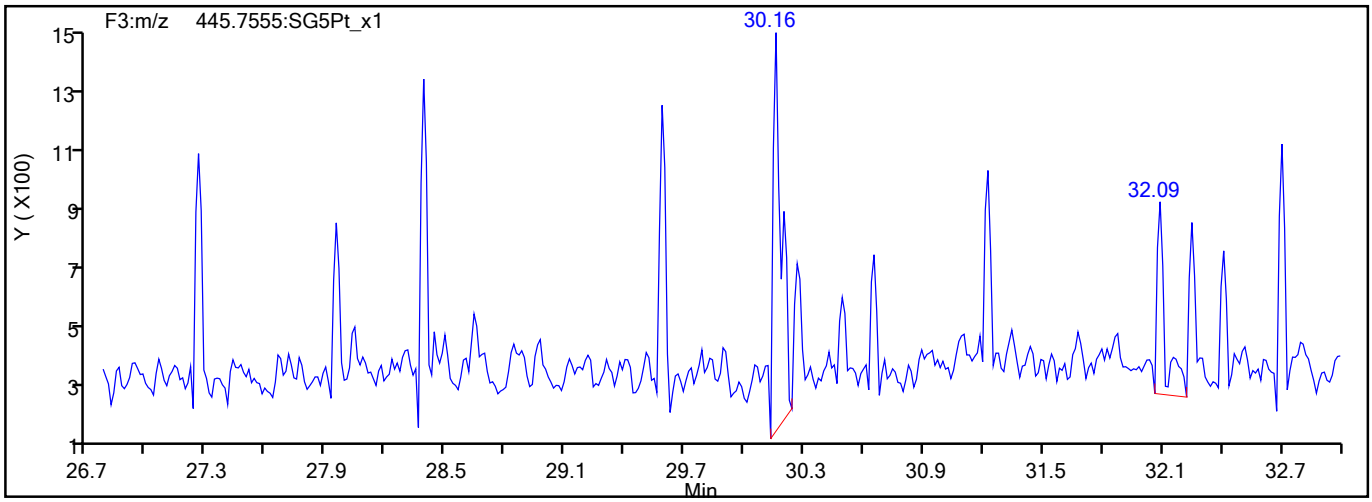

794340

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

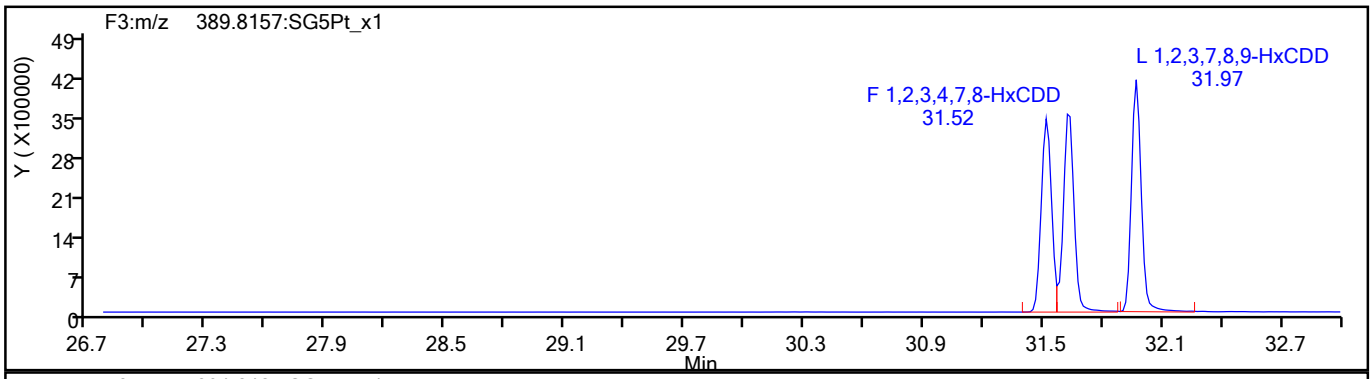

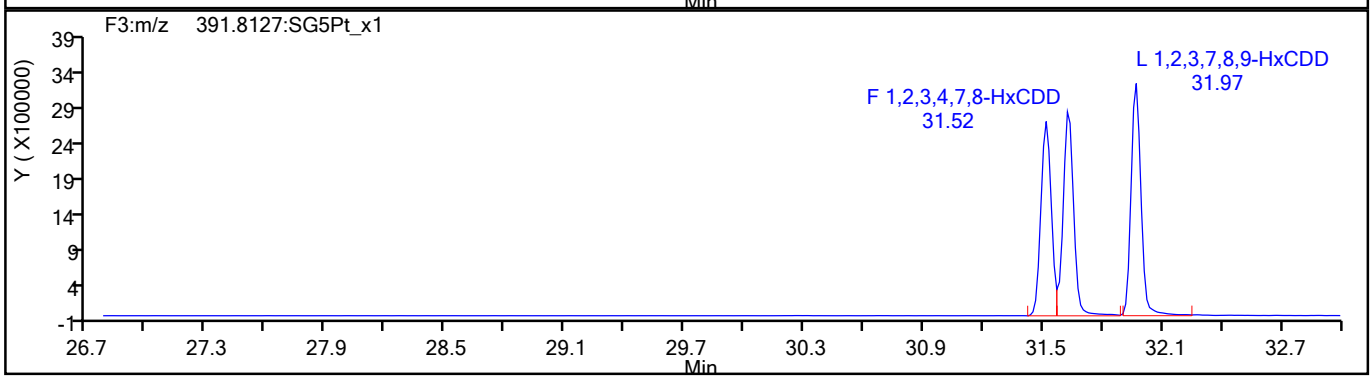

HxCDD Standards

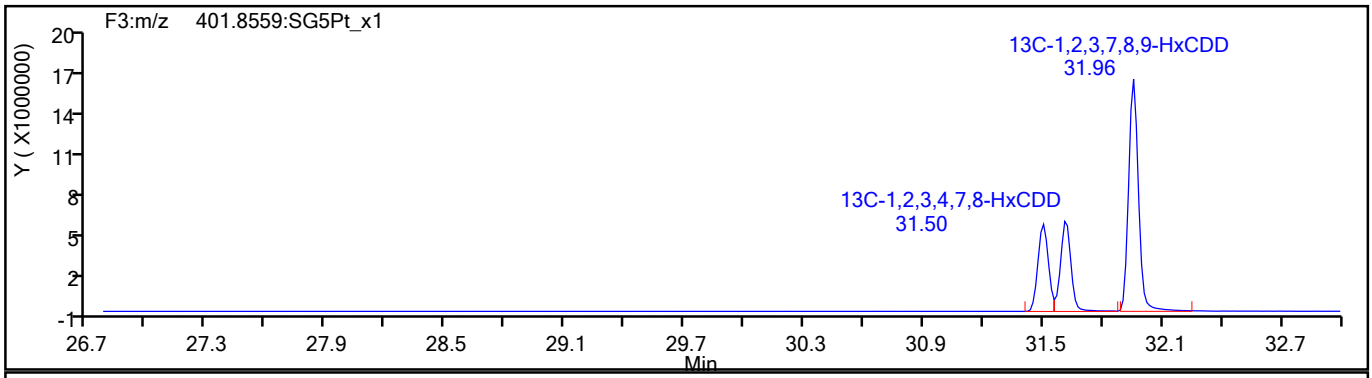

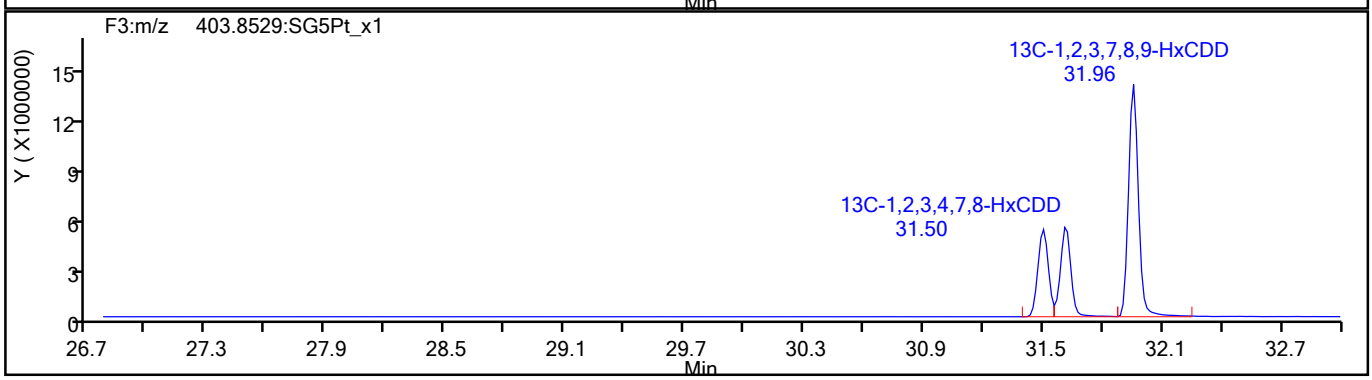

794341

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

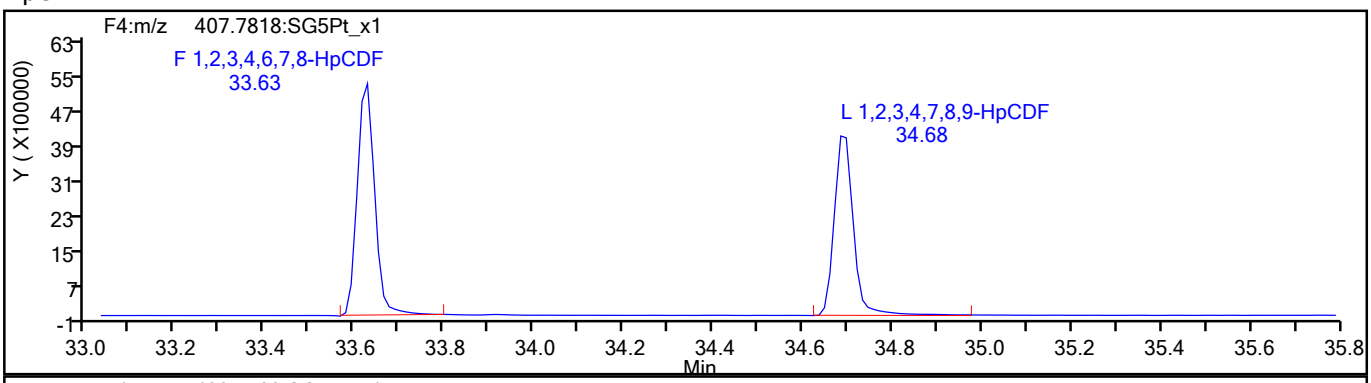

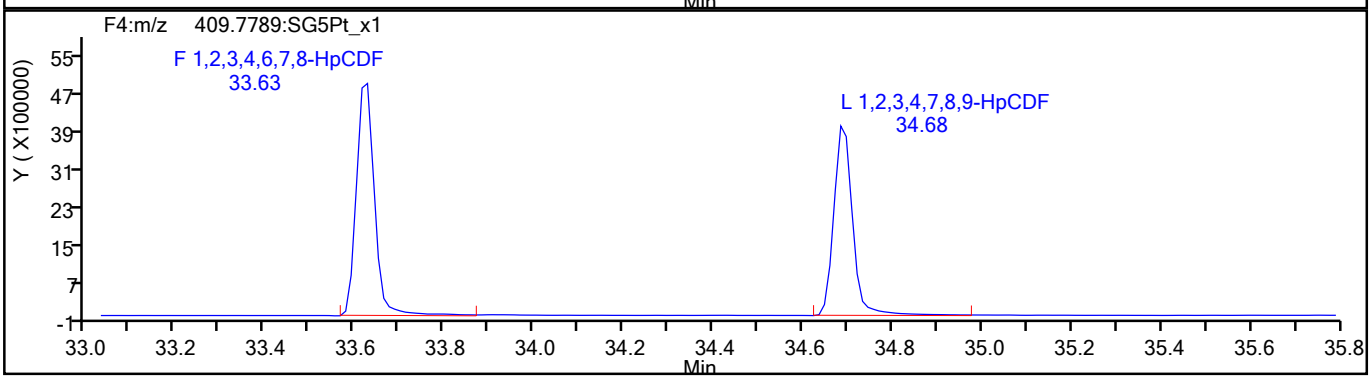

HpCDF Standards

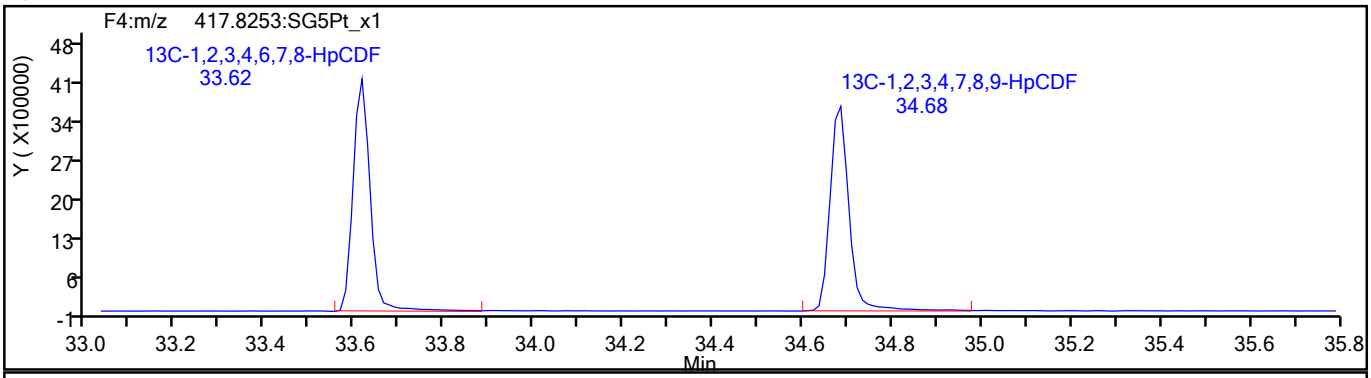

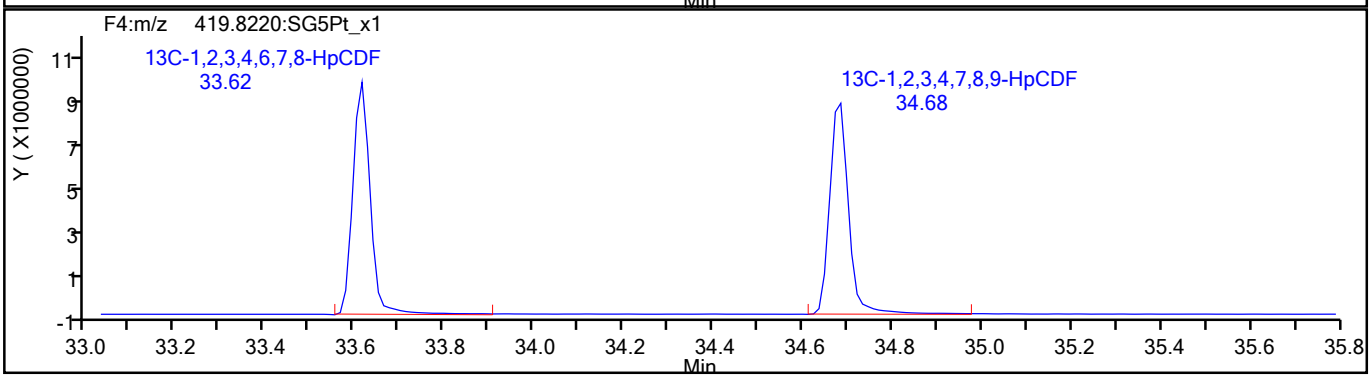

794342

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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HpCDF

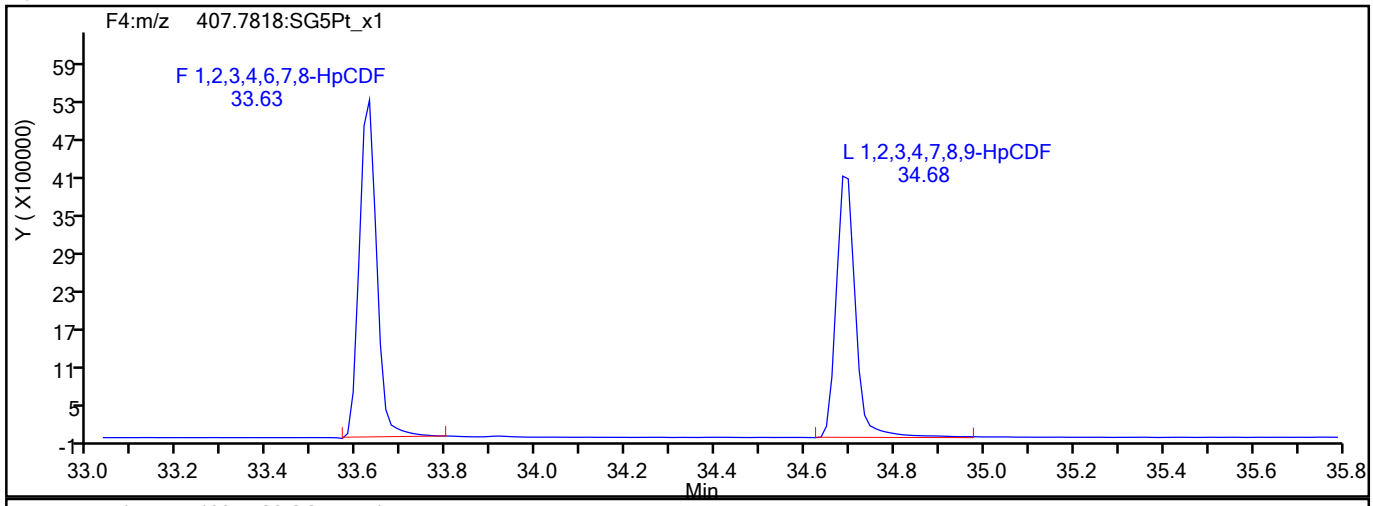

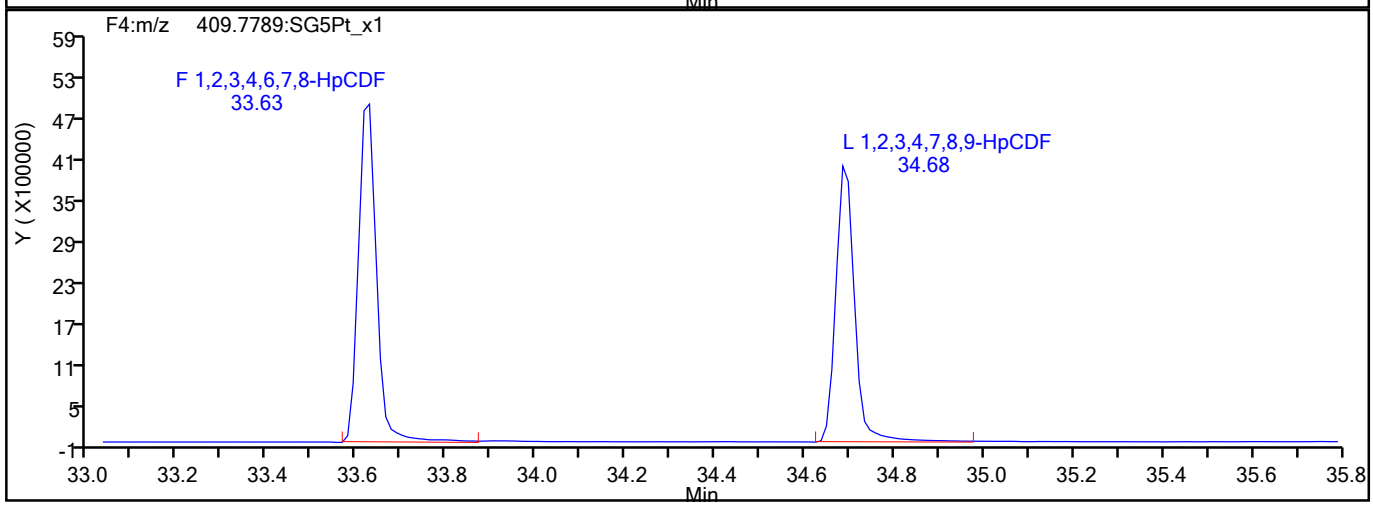

HpCDF Interference Mass

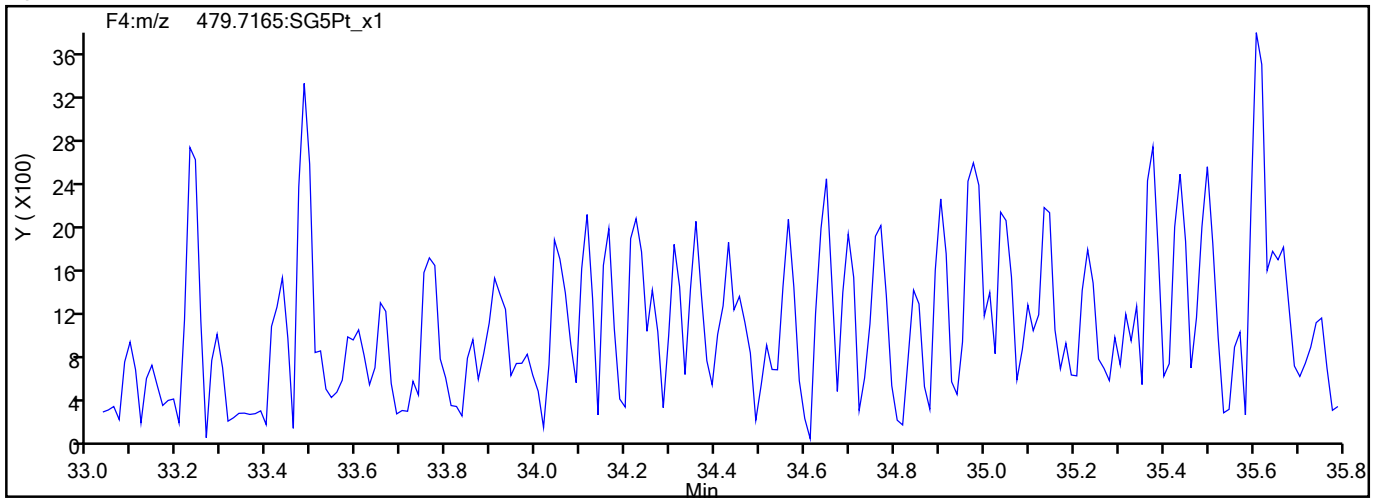

794343

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

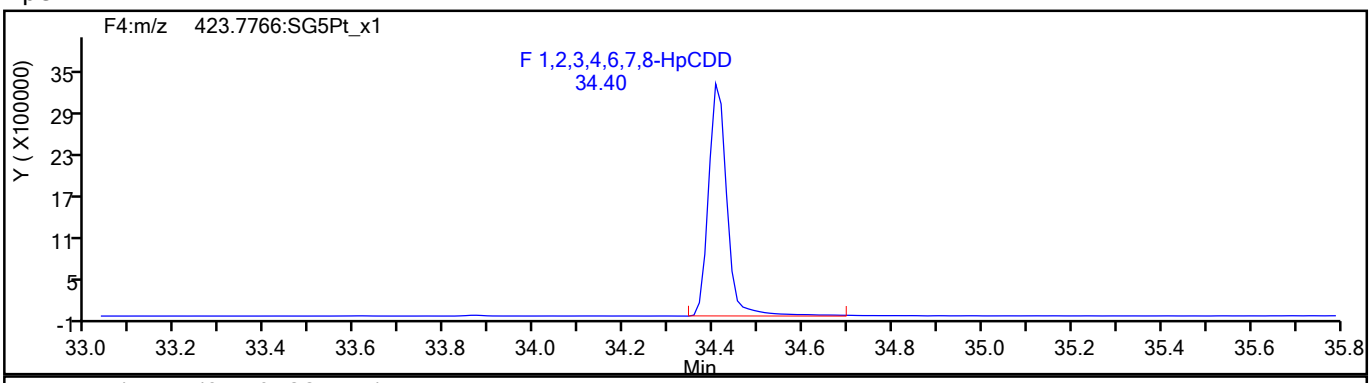

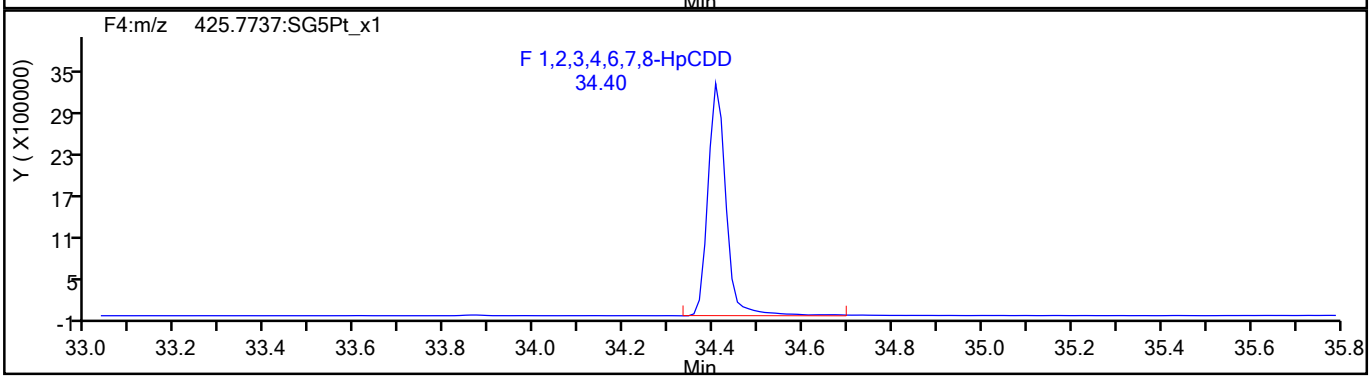

HpCDD Standards

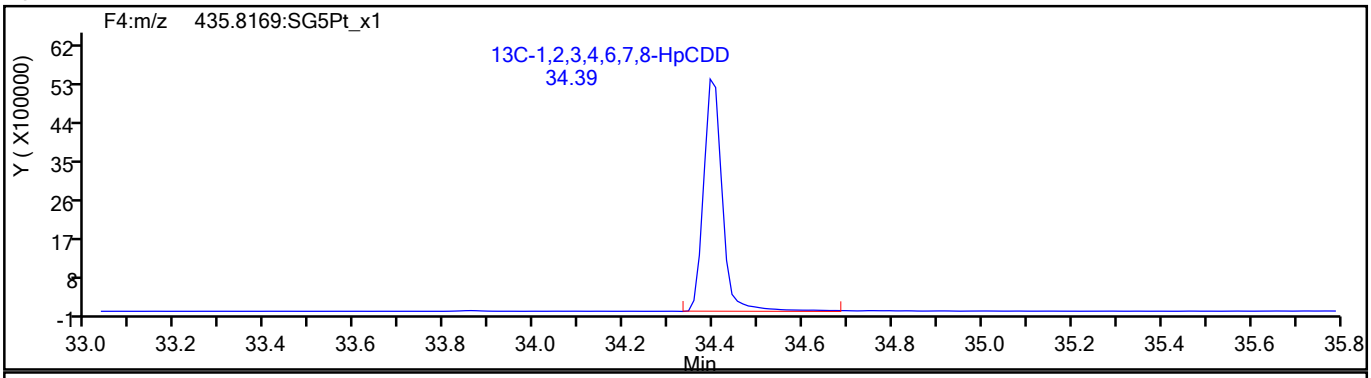

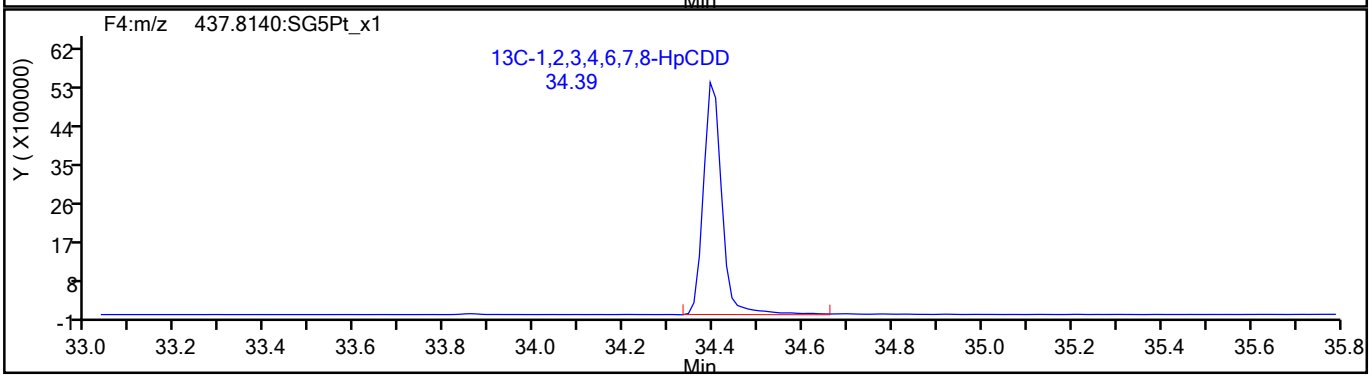

794344

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

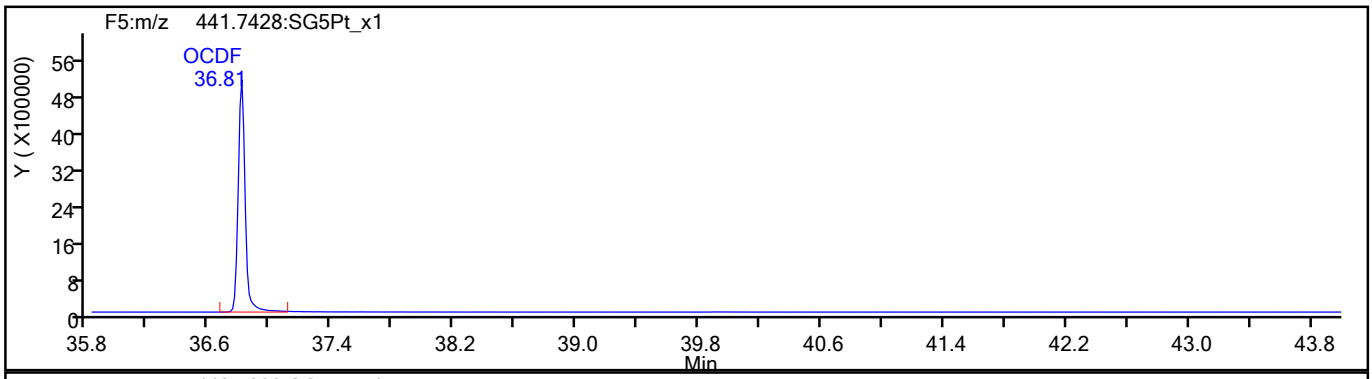

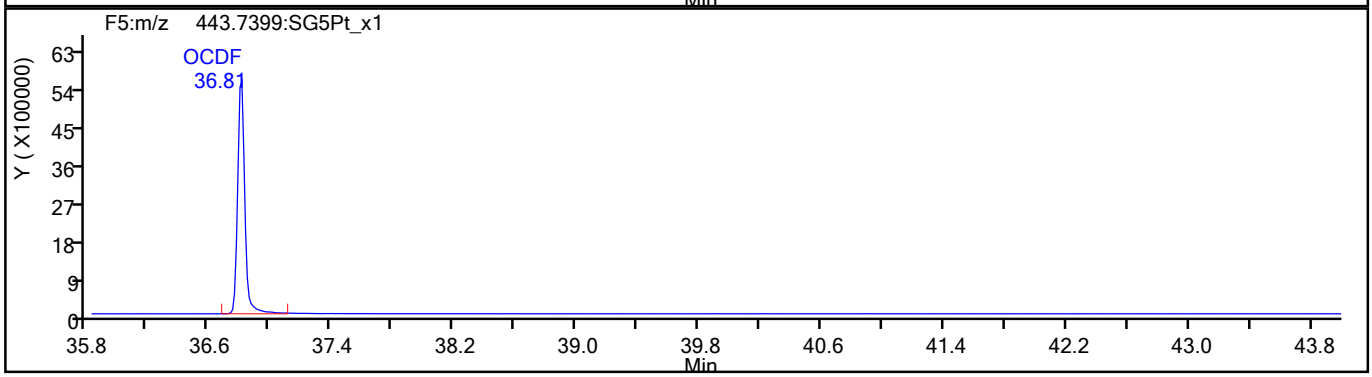

OCDF Standards

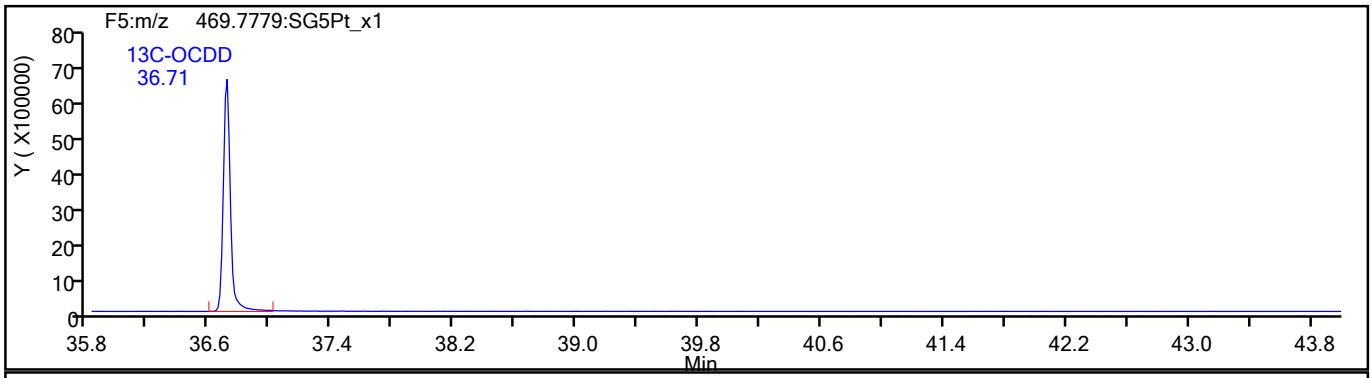

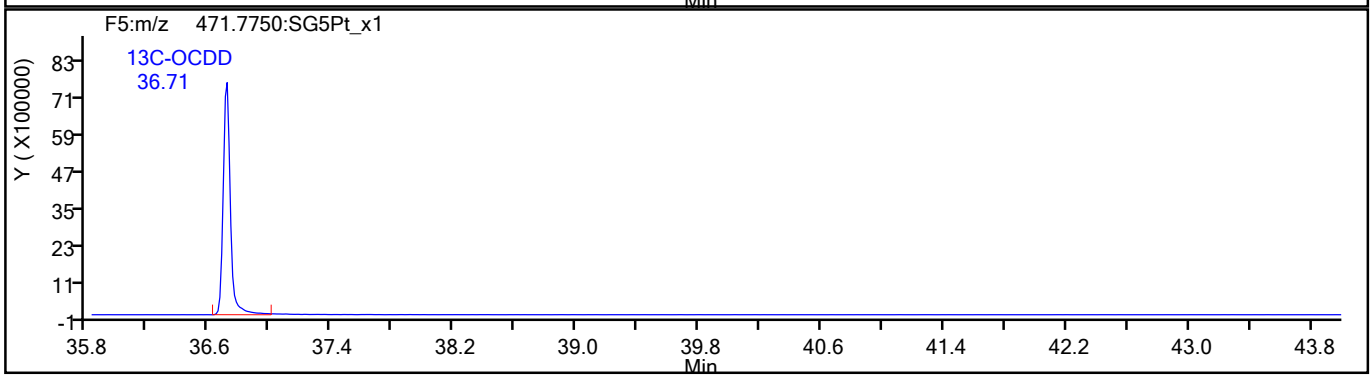

794345

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

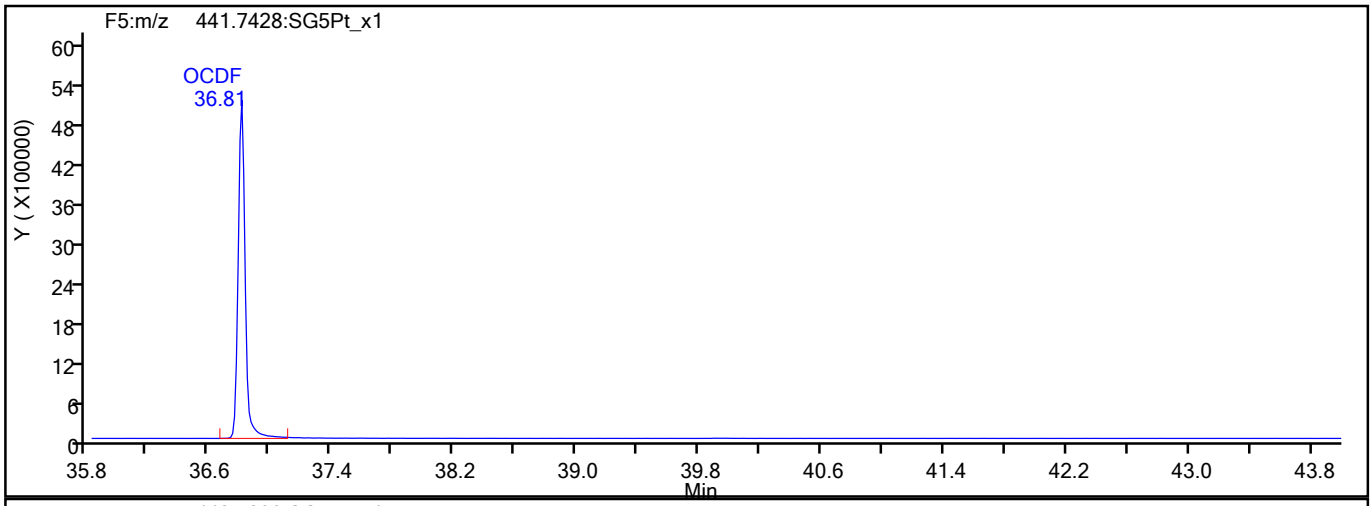

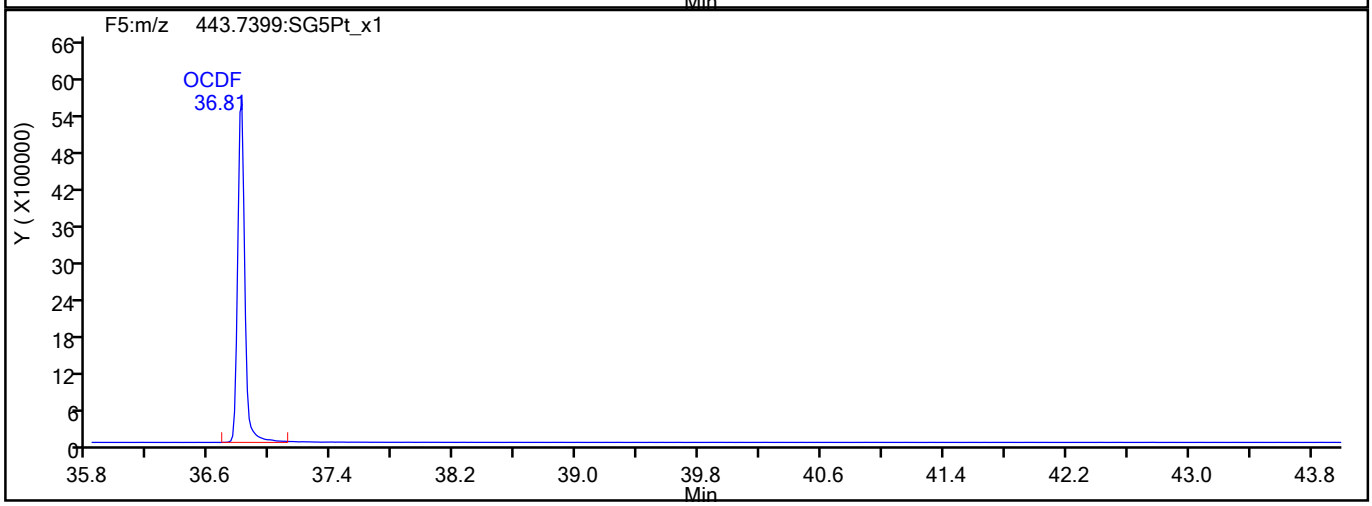

OCDF Interference Mass

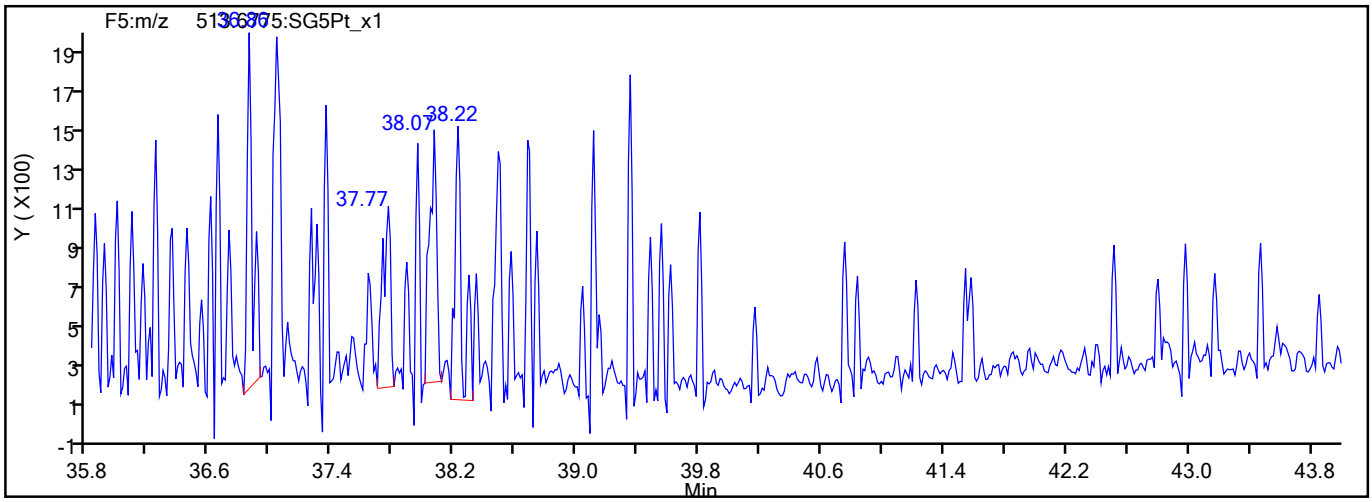

794346

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

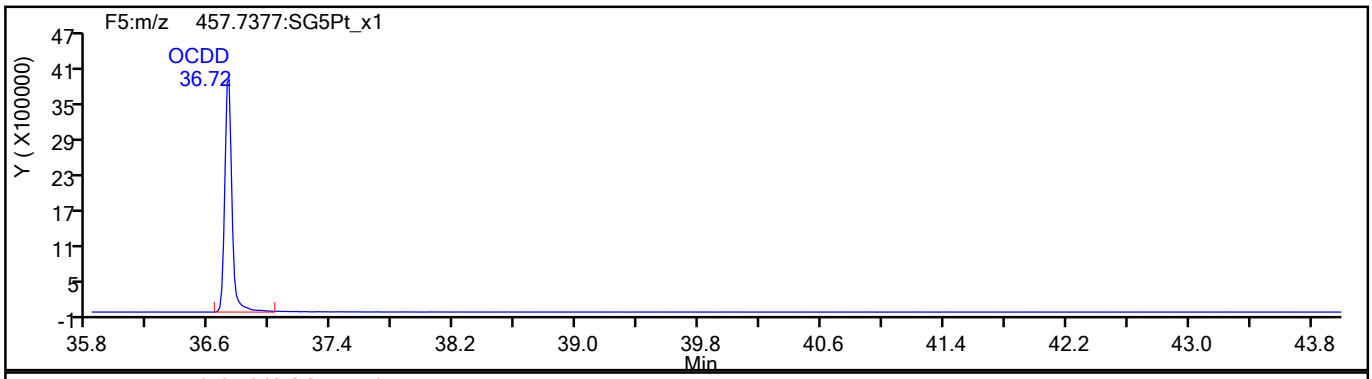

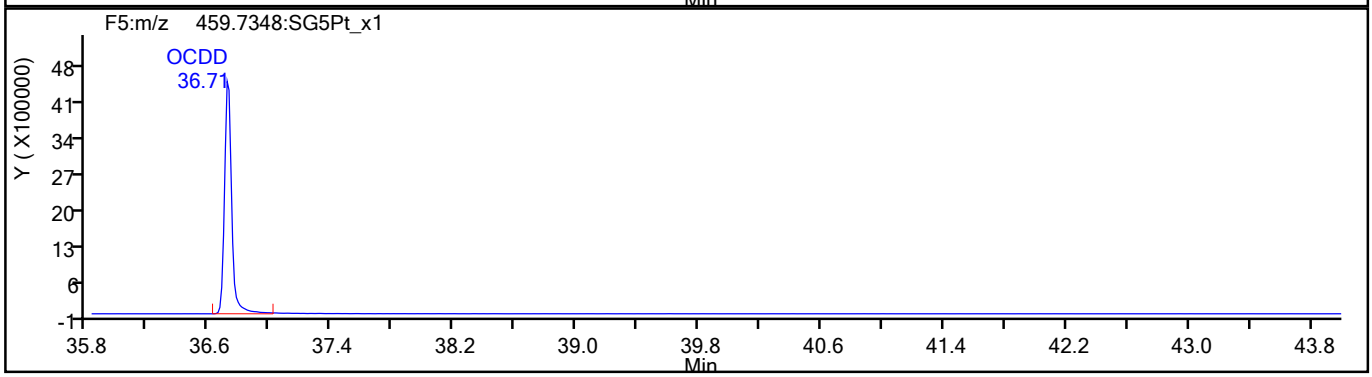

OCDD Standards

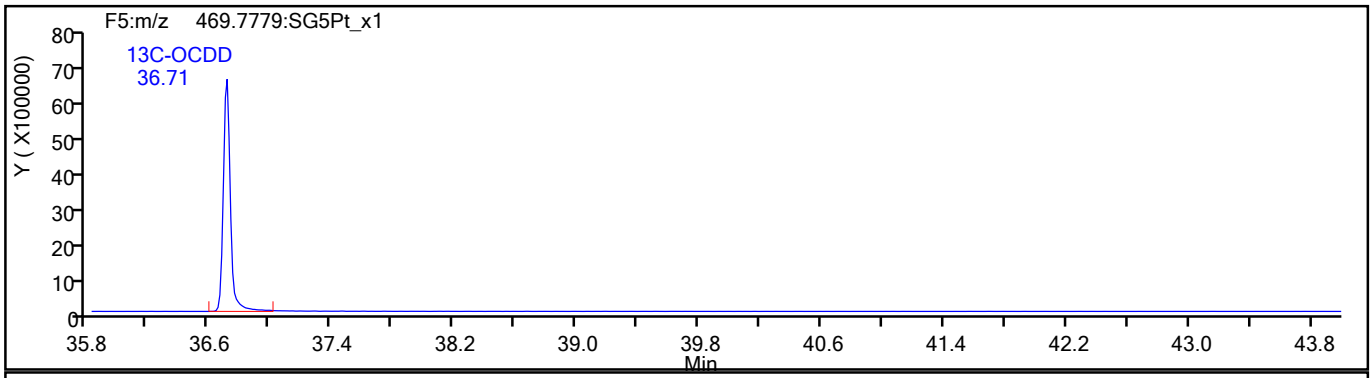

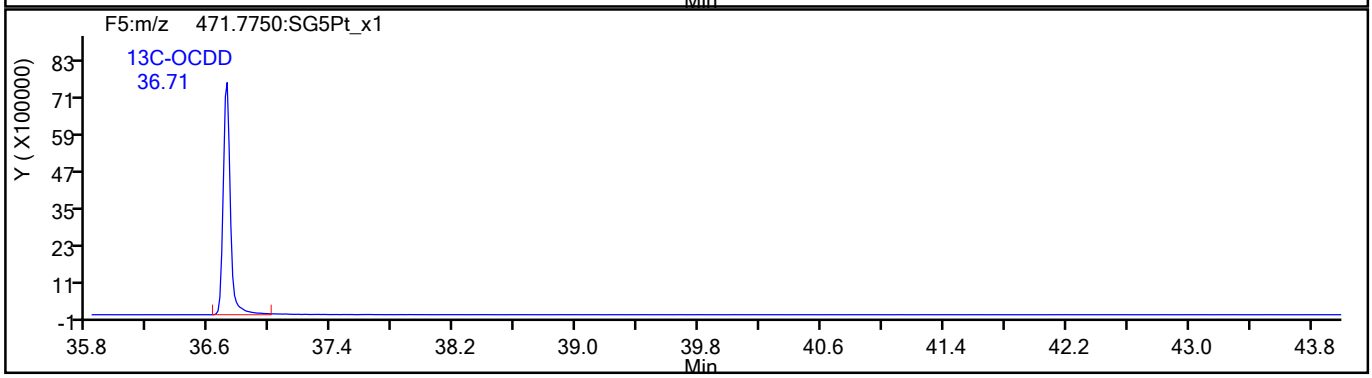

794347

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

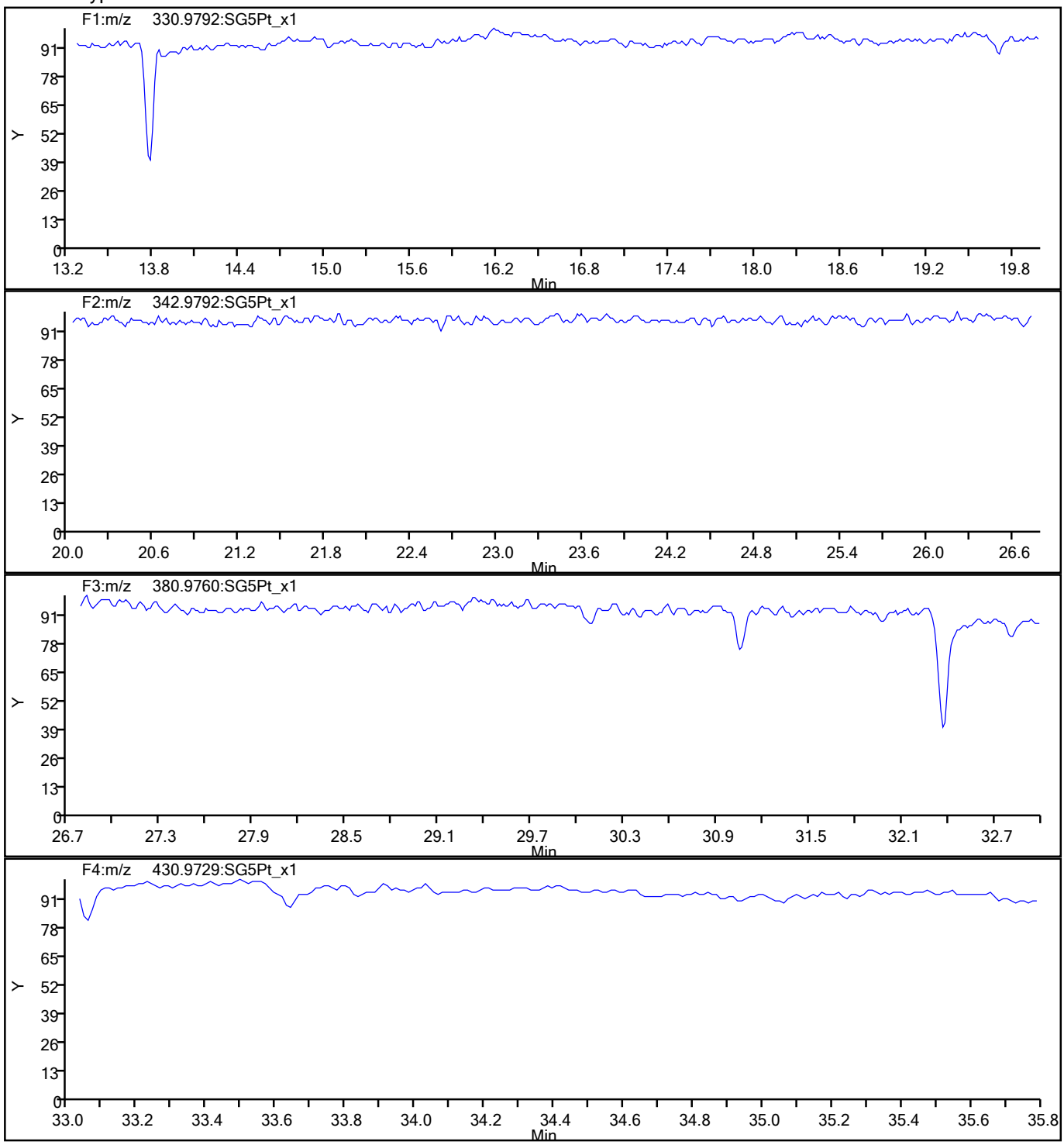

794348

Report Date: 27-Aug-2021 09:27:27 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125759.b\25AU2110D5_4.d		
Injection Date:	25-Aug-2021 12:05:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:			
Worklist#:	519953	Sample Line#:	4
Column Type:	DB-5	Column Dia:	0.32 mm

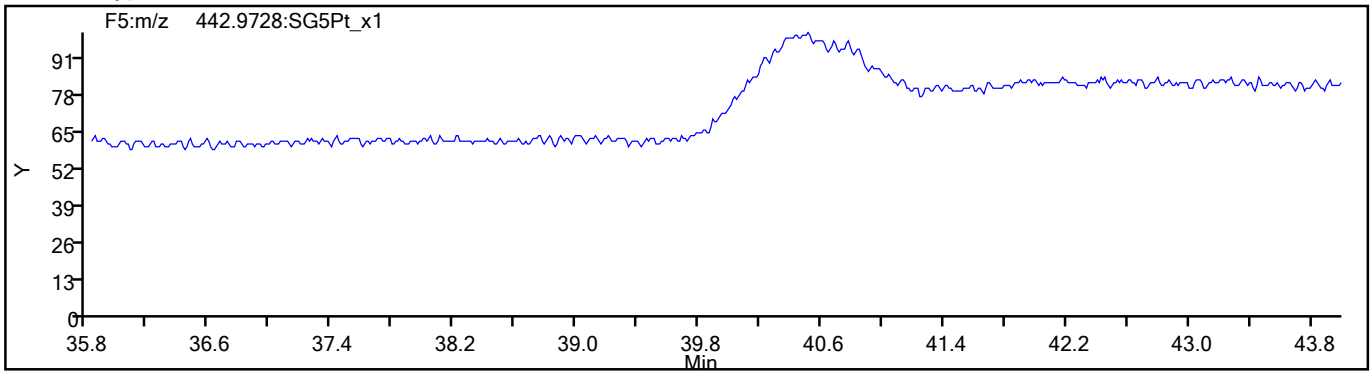

794349

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (2-4) MS
Lab Sample ID: 320-77292-2 MS
Matrix: Sediment
Lab File ID: 25AU2110D5_23.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.79(g)
Date Analyzed: 08/26/2021 02:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	37.6		1.7	0.15
40321-76-4	1,2,3,7,8-PeCDD	168		8.3	0.37
57117-41-6	1,2,3,7,8-PeCDF	172		8.3	0.39
57117-31-4	2,3,4,7,8-PeCDF	156		8.3	0.40
39227-28-6	1,2,3,4,7,8-HxCDD	154		8.3	1.2
57653-85-7	1,2,3,6,7,8-HxCDD	172		8.3	1.3
19408-74-3	1,2,3,7,8,9-HxCDD	165		8.3	1.2
70648-26-9	1,2,3,4,7,8-HxCDF	150		8.3	0.56
57117-44-9	1,2,3,6,7,8-HxCDF	169		8.3	0.57
72918-21-9	1,2,3,7,8,9-HxCDF	166		8.3	0.41
60851-34-5	2,3,4,6,7,8-HxCDF	165		8.3	0.42
35822-46-9	1,2,3,4,6,7,8-HpCDD	199		8.3	0.84
67562-39-4	1,2,3,4,6,7,8-HpCDF	165		8.3	1.3
55673-89-7	1,2,3,4,7,8,9-HpCDF	155		8.3	1.5
3268-87-9	OCDD	1050		17	0.80
39001-02-0	OCDF	317		17	0.21
41903-57-5	Total TCDD	41.9		1.7	0.15
30402-14-3	Total TCDF	58.2		1.7	0.17
36088-22-9	Total PeCDD	171		8.3	0.37
30402-15-4	Total PeCDF	329		8.3	0.40
34465-46-8	Total HxCDD	504		8.3	1.2
55684-94-1	Total HxCDF	650		8.3	0.49
37871-00-4	Total HpCDD	248		8.3	0.84
38998-75-3	Total HpCDF	320		8.3	1.4

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (2-4) MS
Lab Sample ID: 320-77292-2 MS
Matrix: Sediment
Lab File ID: 25AU2110D5_23.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.79(g)
Date Analyzed: 08/26/2021 02:50
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	58		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	59		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	58		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	62		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	67		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	66		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	57		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	58		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	58		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	58		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	54		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	61		26-138
114423-97-1	13C-OCDD	61		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	73		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d
Lims ID: 320-77292-A-2-B MS
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Sample Type: MS
Inject. Date: 26-Aug-2021 02:50:46 ALS Bottle#: 34 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-2-B MS 320-77292-A-2-B MS
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:10:24 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:43:44

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	134477030	0.82	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.099	126474313	0.76	1.6249	57.9	57.9	0.0780	0.0780	57.88	
2,3,7,8-TCDF	17.114	18802224	0.77	1.0239	14.5	14.5	0.0529	0.0529	145	
A Non-2,3,7,8-sub-TCDF	17.069	4042786	0.77	1.0239	3.310	3.122	0.0529	1.970	0.00	RQa
S Total TCDF					17.8	17.6	0.0529	0.0529		RQ
D 13C-2,3,7,8-TCDD	17.794	71509925	0.81	0.8993	59.1	59.1	0.0775	0.0775	59.13	
2,3,7,8-TCDD	17.809	10210326	0.79	1.2541	11.4	11.4	0.0442	0.0442	114	
$ 37Cl4-2,3,7,8-TCDD	17.809	43391924		1.1071	29.1	29.1	0.0281	0.0281	72.86	
A Non-2,3,7,8-sub-TCDD	17.530	1169673	0.77	1.2541	1.521	1.304	0.0442	0.4955	0.00	RQa
S Total TCDD					12.9	12.7	0.0442	0.0442		RQ
D 13C-1,2,3,7,8-PeCDF	22.020	93970363	1.56	1.2101	57.7	57.7	0.0789	0.0789	57.75	
1,2,3,7,8-PeCDF	22.034	51869045	1.62	1.0611	52.0	52.0	0.1194	0.1194	104	
D 13C-2,3,4,7,8-PeCDF	23.329	102978587	1.56	1.2395	61.8	61.8	0.0770	0.0770	61.78	
2,3,4,7,8-PeCDF	23.356	49622220	1.59	1.0184	47.3	47.3	0.1201	0.1201	94.63	
A F1 PeCDFs	19.851						0.0195	0.0195		
A Non-2,3,7,8-sub-PeCDF	23.067	477518	1.56	1.0398	0.4664	0.4664	0.1197	0.4664	0.00	
S Total PeCDF					99.8	99.8	0.1198	0.1198		
D 13C-1,2,3,7,8-PeCDD	24.038	60862373	1.61	0.7612	59.5	59.5	0.0478	0.0478	59.45	
1,2,3,7,8-PeCDD	24.066	32490952	1.58	1.0484	50.9	50.9	0.1121	0.1121	102	
A Non-2,3,7,8-sub-PeCDD	23.696	497263	1.51	1.0484	0.7793	0.7793	0.1121	0.4769	0.00	
S Total PeCDD					51.7	51.7	0.1121	0.1121		
D 13C-1,2,3,4,7,8-HxCDF	30.173	85672994	0.52	1.0837	66.4	66.4	0.1367	0.1367	66.44	
1,2,3,4,7,8-HxCDF	30.199	42287526	1.22	1.0851	45.5	45.5	0.1707	0.1707	90.97	
D 13C-1,2,3,6,7,8-HxCDF	30.386	76218947	0.52	1.1279	56.8	56.8	0.1313	0.1313	56.79	
1,2,3,6,7,8-HxCDF	30.412	43836833	1.21	1.1260	51.1	51.1	0.1736	0.1736	102	
D 13C-2,3,4,6,7,8-HxCDF	31.291	73802442	0.52	1.0637	58.3	58.3	0.1393	0.1393	58.31	
2,3,4,6,7,8-HxCDF	31.304	43109498	1.21	1.1675	50.0	50.0	0.1284	0.1284	100	
D 13C-1,2,3,7,8,9-HxCDF	32.129	66929640	0.52	0.9676	58.1	58.1	0.1531	0.1531	58.13	
1,2,3,7,8,9-HxCDF	32.156	39301578	1.22	1.1664	50.3	50.3	0.1248	0.1248	101	
A Non-2,3,7,8-sub-HxCDF	30.331						0.1464	0.1464		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					196.9	196.9	0.1494	0.1494		
* 13C-1,2,3,7,8,9-HxCDD	31.943	118989771	1.23	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.490	58880017	1.27	0.7334	67.5	67.5	0.1848	0.1848	67.47	
1,2,3,4,7,8-HxCDD	31.504	29312435	1.26	1.0640	46.8	46.8	0.3683	0.3683	93.57	
D 13C-1,2,3,6,7,8-HxCDD	31.610	58291096	1.24	0.8802	55.7	55.7	0.1540	0.1540	55.66	
1,2,3,6,7,8-HxCDD	31.624	30415907	1.28	1.0001	52.2	52.2	0.3985	0.3985	104	
1,2,3,7,8,9-HxCDD	31.956	33080647	1.27	1.1325	49.9	49.9	0.3489	0.3489	99.72	
A Non-2,3,7,8-sub-HxCDD	30.519	2471410	1.28	1.0655	3.959	3.959	0.3708	2.611	0.00	
S Total HxCDD					152.8	152.8	0.3719	0.3719		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	49936613	0.43	0.7730	54.3	54.3	0.4985	0.4985	54.29	
1,2,3,4,6,7,8-HpCDF	33.615	36036431	1.05	1.4413	50.1	50.1	0.4003	0.4003	100	
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	50543382	0.44	0.7008	60.6	60.6	0.5499	0.5499	60.61	
1,2,3,4,7,8,9-HpCDF	34.685	31286083	1.04	1.3174	47.0	47.0	0.4444	0.4444	93.97	
A Non-2,3,7,8-sub-HpCDF	34.138						0.4213	0.4213		
S Total HpCDF					97.1	97.1	0.4223	0.4223		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	44344639	0.98	0.6472	57.6	57.6	0.2171	0.2171	57.58	
1,2,3,4,6,7,8-HpCDD	34.405	29206923	1.04	1.0943	60.2	60.2	0.2533	0.2533	120	
A Non-2,3,7,8-sub-HpCDD	34.223	7277207	1.01	1.0943	15.0	15.0	0.2533	15.0	0.00	a
S Total HpCDD					75.2	75.2	0.2533	0.2533		
D 13C-OCDD	36.701	64857765	0.88	0.4472	121.9	121.9	0.1172	0.1172	60.95	
OCDF	36.797	44750146	0.90	1.4382	96.0	96.0	0.0635	0.0635	95.95	
OCDD	36.713	114695127	0.90	1.1070	319.5	319.5	0.2426	0.2426	319	
1,3,6,8-TCDF	15.224	602805	0.77							
1,3,6,8-TCDD	15.632	131302	0.82							
2,3,4,7-TCDF	17.537	437771	0.89							
1,2,3,7-TCDD	18.157	132605	0.75							
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.956						0.0	0.0		U
1,2,3,4,8,9-HxCDF	32.156						0.0	0.0		U
1,2,3,4,6,7,9-HpCDD	33.858						0.0	0.0		U
1,2,3,4,6,7,9-HpCDF	33.615						0.0	0.0		U
1,2,3,8-TCDD	0.0						0.0	0.0		
1,3,7,9-TCDD	0.0						0.0	0.0		
1,2,3,4,7-PeCDD	0.0						0.0	0.0		
1,4,7,8-TCDD	0.0						0.0	0.0		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags
U - Marked Undetected
a - User Assigned ID

Report Date: 27-Aug-2021 09:10:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d
Lims ID: 320-77292-A-2-B MS
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Sample Type: MS
Inject. Date: 26-Aug-2021 02:50:46 ALS Bottle#: 34 Worklist Smp#: 9
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-2-B MS 320-77292-A-2-B MS
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:10:24 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: bennettd Date: 26-Aug-2021 10:43:44

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		60570469	15732714	3937	9842	3996		
333.9339	17.598	17.598	0		73906561	19375955	5856	14640	3309	0.82(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.099	17.084	1	0.972	54769799	14397682	9430	23575	1527		
317.9389	17.099	17.084	1	0.972	71704514	18734375	8369	20922	2239	0.76(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.114	17.099	1	1.001	8173166	2169481	3327	8317	652		
305.8987	17.114	17.099	1	1.001	10629058	2810398	3845	9612	731	0.77(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											RQa
303.9016	15.224	17.069	-110	0.890	262951	76382	3327	8317	23		a
305.8987	15.224	17.069	-110	0.890	339854	108342	3845	9612	28	0.77(0.65-0.89)	
303.9016	15.723	17.069	-81	0.920	89905	21566	3327	8317	6		
305.8987	15.723	17.069	-81	0.920	102705	25304	3845	9612	7	0.88(0.65-0.89)	
303.9016	16.464	17.069	-36	0.963	133873	29190	3327	8317	9		
305.8987	16.464	17.069	-36	0.963	417008	42505	3845	9612	11	0.32(0.65-0.89)	
	Empc Correction				173861	37909	3845	9612	10		
303.9016	16.736	17.069	-20	0.979	1087588	300269	3327	8317	90		
305.8987	16.736	17.069	-20	0.979	1463673	402233	3845	9612	105	0.74(0.65-0.89)	
303.9016	18.898	17.069	110	1.105	169402	37383	3327	8317	11		
305.8987	18.898	17.069	110	1.105	218974	51889	3845	9612	13	0.77(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.794	17.779	1	1.011	31971549	7996903	3937	9842	2031		
333.9339	17.794	17.779	1	1.011	39538376	9883373	5856	14640	1688	0.81(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
2,3,7,8-TCDD											
319.8965	17.809	17.794	1	1.001	4496554	1131242	1598	3995	708		
321.8936	17.809	17.794	1	1.001	5713772	1451443	2369	5922	613	0.79(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	43391924	10781981	4374	10935	2465		
A Non-2,3,7,8-sub-TCDD											RQa
319.8965	15.632	17.530	-114	0.878	58964	17917	1598	3995	11		a
321.8936	15.632	17.530	-114	0.878	72338	21456	2369	5922	9	0.82(0.65-0.89)	
319.8965	15.920	17.530	-96	0.895	64764	19154	1598	3995	12		
321.8936	15.920	17.530	-96	0.895	78129	23717	2369	5922	10	0.83(0.65-0.89)	
319.8965	16.691	17.530	-50	0.938	142368	39327	1598	3995	25		
321.8936	16.691	17.530	-50	0.938	167863	42423	2369	5922	18	0.85(0.65-0.89)	
319.8965	17.583	17.530	3	0.988	53936	11251	1598	3995	7		
	Empc Correction				38880	8777	1598	3995	5		
321.8936	17.583	17.530	3	0.988	50494	11400	2369	5922	5	1.07(0.65-0.89)	
319.8965	17.704	17.530	10	0.995	199728	51045	1598	3995	32		
321.8936	17.704	17.530	10	0.995	244684	67133	2369	5922	28	0.82(0.65-0.89)	
319.8965	18.913	17.530	83	1.063	22387	5050	1598	3995	3		
321.8936	18.958	17.530	86	1.065	208048	39951	2369	5922	17	0.11(0.65-0.89)	
	Empc Correction				29074	6558	2369	5922	3		
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	57323673	10557071	7920	19800	1333		
353.8970	22.020	22.020	0	1.251	36646690	6800699	5485	13712	1240	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.034	22.047	-1	1.001	32060397	5980918	5035	12587	1188		
341.8567	22.034	22.047	-1	1.001	19808648	3716900	3761	9402	988	1.62(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.329	23.343	-1	1.326	62753017	10949011	7920	19800	1382		
353.8970	23.329	23.343	-1	1.326	40225570	7022975	5485	13712	1280	1.56(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.356	23.370	-1	1.001	30453039	5263418	5035	12587	1045		
341.8567	23.356	23.370	-1	1.001	19169181	3275398	3761	9402	871	1.59(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						438	1095			
341.8567	19.851						998	2495			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.552	23.067	-31	1.024	290626	49657	5035	12587	10		
341.8567	22.538	23.067	-32	1.024	186892	33471	3761	9402	9	1.56(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.038	24.052	-1	1.366	37541676	6140193	2942	7355	2087		
369.8919	24.038	24.052	-1	1.366	23320697	3809900	2165	5412	1760	1.61(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.066	24.079	-1	1.001	19911976	3254445	2794	6985	1165		
357.8516	24.066	24.079	-1	1.001	12578976	2029281	1883	4707	1078	1.58(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.652	23.696	-122	0.901	113674	25477	2794	6985	9		
357.8516	21.638	23.696	-123	0.900	79253	16960	1883	4707	9	1.43(1.32-1.78)	
355.8546	22.606	23.696	-65	0.940	185739	33925	2794	6985	12		
357.8516	22.606	23.696	-65	0.940	118597	23733	1883	4707	13	1.57(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.173	30.186	-1	0.945	29433579	5143408	7218	18045	713		
385.8610	30.173	30.186	-1	0.945	56239415	9822960	12986	32465	756	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.199	30.212	-1	1.001	23212581	4036940	6076	15190	664		
375.8178	30.199	30.212	-1	1.001	19074945	3309994	5014	12535	660	1.22(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.386	30.399	-1	0.951	26153835	4841751	7218	18045	671		
385.8610	30.386	30.399	-1	0.951	50065112	9345144	12986	32465	720	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.001	24020058	4469543	6076	15190	736		
375.8178	30.412	30.412	0	1.001	19816775	3642672	5014	12535	727	1.21(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.980	25182672	6366445	7218	18045	882		
385.8610	31.291	31.291	0	0.980	48619770	12125642	12986	32465	934	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.304	31.317	-1	1.000	23607189	5826131	6076	15190	959		
375.8178	31.304	31.317	-1	1.000	19502309	4890228	5014	12535	975	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.142	-1	1.006	22856987	6478412	7218	18045	898		
385.8610	32.129	32.142	-1	1.006	44072653	12564766	12986	32465	968	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.156	32.156	0	1.001	21559080	6155445	6076	15190	1013		
375.8178	32.143	32.156	-1	1.000	17742498	5085946	5014	12535	1014	1.22(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.331						6076	15190			
375.8178	30.331						5014	12535			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.956	-1		65531186	18758999	10233	25582	1833		
403.8529	31.943	31.956	-1		53458585	15335781	8249	20622	1859	1.23(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.490	31.503	-1	0.986	32897264	8939088	10233	25582	874		
403.8529	31.490	31.503	-1	0.986	25982753	7091441	8249	20622	860	1.27(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.504	31.517	-1	1.000	16356580	4342448	14233	35582	305		
391.8127	31.504	31.517	-1	1.000	12955855	3480259	10893	27232	319	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.990	32212501	8686314	10233	25582	849		
403.8529	31.610	31.610	0	0.990	26078595	7075649	8249	20622	858	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	31.624	31.623	0	1.000	17050355	4760892	14233	35582	334		
391.8127	31.624	31.623	0	1.000	13365552	3726842	10893	27232	342	1.28(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.956	31.969	-1	1.015	18494463	5213416	14233	35582	366		
391.8127	31.956	31.969	-1	1.015	14586184	4157485	10893	27232	382	1.27(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.041	30.519	-88	0.919	910688	120442	14233	35582	8		
391.8127	29.041	30.519	-88	0.919	719162	99134	10893	27232	9	1.27(1.05-1.43)	
389.8157	30.692	30.519	10	0.971	478024	101597	14233	35582	7		
391.8127	30.692	30.519	10	0.971	363536	75415	10893	27232	7	1.31(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	14895881	5537540	14834	37085	373		
419.8220	33.603	33.603	0	1.052	35040732	12536596	37725	94312	332	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.603	1	1.000	18483610	6817904	21973	54932	310		
409.7789	33.615	33.603	1	1.000	17552821	6517073	19735	49337	330	1.05(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.672	0	1.085	15340995	5404344	14834	37085	364		
419.8220	34.672	34.672	0	1.085	35202387	12405747	37725	94312	329	0.44(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685	34.673	1	1.000	15950289	5628446	21973	54932	256		
409.7789	34.685	34.673	1	1.000	15335794	5407062	19735	49337	274	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						21973	54932			
409.7789	34.138						19735	49337			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.077	21929365	7846617	8412	21030	933		
437.8140	34.393	34.393	0	1.077	22415274	7907708	10755	26887	735	0.98(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.393	1	1.000	14861314	5261009	7915	19787	665		
425.7737	34.405	34.393	1	1.000	14345609	4991361	9554	23885	522	1.04(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.858	34.223	-22	0.984	3662454	1349102	7915	19787	170		a
425.7737	33.858	34.223	-22	0.984	3614753	1317639	9554	23885	138	1.01(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.701	0	1.149	30433602	9167552	3037	7592	3019		
471.7750	36.701	36.701	0	1.149	34424163	10342153	4112	10280	2515	0.88(0.76-1.02)	
OCDF											
441.7428	36.797	36.797	0	1.003	21226136	6660442	1685	4212	3953		
443.7399	36.797	36.797	0	1.003	23524010	7321555	1881	4702	3892	0.90(0.76-1.02)	
OCDD											
457.7377	36.713	36.713	0	1.000	54254014	16396743	4490	11225	3652		
459.7348	36.713	36.713	0	1.000	60441113	18094603	5991	14977	3020	0.90(0.76-1.02)	
1,3,6,8-TCDF											
303.9016	15.224	14.710	31		262951	76382	3327	8317	23		
305.8987	15.224	14.710	31		339854	108342	3845	9612	28	0.77(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,3,6,8-TCDD											
319.8965	15.632	15.617	1		58964	17917	1598	3995	11		
321.8936	15.632	15.617	1		72338	21456	2369	5922	9	0.82(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.537	17.537	0		205854	48312	3327	8317	15		
305.8987	17.537	17.537	0		231917	57636	3845	9612	15	0.89(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.157	18.172	-1		56778	12484	1598	3995	8		
321.8936	18.157	18.172	-1		75827	18942	2369	5922	8	0.75(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.414						1598	3995			
321.8936	18.414						2369	5922			
1,2,3,9-TCDF											
303.9016	18.414						3327	8317			
305.8987	18.414						3845	9612			
1,2,8,9-TCDD											
319.8965	19.382						1598	3995			
1,2,8,9-TCDF											
303.9016	19.427						3327	8317			
305.8987	19.427						3845	9612			
1,3,4,6,8-PeCDF											
339.8597	19.669						438	1095			
341.8567	19.669						998	2495			
1,2,4,7,9-PeCDD											
355.8546	21.480						2794	6985			
357.8516	21.480						1883	4707			
1,2,3,8,9-PeCDD											
355.8546	25.790						2794	6985			
357.8516	25.790						1883	4707			
1,2,3,8,9-PeCDF											
339.8597	26.021						5035	12587			
341.8567	26.021						3761	9402			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						6076	15190			
375.8178	28.333						5014	12535			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						14233	35582			
391.8127	29.890						10893	27232			
1,2,3,4,6,7-HxCDD											U
389.8157	31.917						14233	35582			
391.8127	31.917						10893	27232			
1,2,3,4,8,9-HxCDF											U
373.8208	32.236						6076	15190			
375.8178	32.236						5014	12535			
1,2,3,4,6,7,9-HpCDD											U
423.7766	33.846						7915	19787			
425.7737	33.846						9554	23885			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,9-HpCDF											U
407.7818	33.916						21973	54932			
409.7789	33.916						19735	49337			
1,2,3,8-TCDD											
319.8965	0.0						1598	3995			
321.8936	0.0						2369	5922			
1,3,7,9-TCDD											
319.8965	0.0						1598	3995			
321.8936	0.0						2369	5922			
1,2,3,4,7-PeCDD											
355.8546	0.0						2794	6985			
357.8516	0.0						1883	4707			
1,4,7,8-TCDD											
319.8965	0.0						1598	3995			
321.8936	0.0						2369	5922			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

U - Marked Undetected

a - User Assigned ID

Report Date: 27-Aug-2021 09:10:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d		
Lims ID:	320-77292-A-2-B MS		
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Inject. Date:	26-Aug-2021 02:50:46	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	9

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	126474313	33132057

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	126474313	33132057

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.224	262951	76382	339854	108342	0.4655	0.77	a
15.723	89905	21566	102705	25304	0.1487	0.88	
16.464	133873	29190	417008	42505	0.4254	0.32	RQ
16.464	133873	29190	173861	37909	0.2376		Empc Correction
16.736	1087588	300269	1463673	402233	1.97	0.74	
18.898	169402	37383	218974	51889	0.2999	0.77	
Signal Totals:							
	1743719	464790	2299067	625677			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	4285933	1095063				0.69	RQa
	4042786	1090467					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 3.310 = (4285933 * 100.000) / (126474313 * 1.024)

Empc Amount: 3.122 = (4042786 * 100.000) / (126474313 * 1.024)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:10:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d
Lims ID: 320-77292-A-2-B MS
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Inject. Date: 26-Aug-2021 02:50:46 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 9

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	71509925	17880276

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	71509925	17880276

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.632	58964	17917	72338	21456	0.1464	0.82	a
15.920	64764	19154	78129	23717	0.1593	0.83	
16.691	142368	39327	167863	42423	0.3459	0.85	
17.583	53936	11251	50494	11400	0.1164	1.07	RQ
17.583	38880	8777	50494	11400	0.0997		Empc Correction
17.704	199728	51045	244684	67133	0.4955	0.82	
18.913	22387	5050	208048	39951	0.2569	0.11	RQ
18.913	22387	5050	29074	6558	0.0574		Empc Correction
Signal Totals:							
	527091	141270	642582	172687			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1363703	349824				0.66	RQa
	1169673	313957					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 1.521 = (1363703 * 100.000) / (71509925 * 1.254)
Empc Amount: 1.304 = (1169673 * 100.000) / (71509925 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:10:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d		
Lims ID:	320-77292-A-2-B MS		
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Inject. Date:	26-Aug-2021 02:50:46	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	9

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	93970363	17357770
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	102978587	17971986

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	98474475	17664878

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.552	290626	49657	186892	33471	0.4664	1.56	
Signal Totals:							
	290626	49657	186892	33471			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	477518	83128				1.56	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.4664 = (477518 * 100.000) / (98474475 * 1.040)

Report Date: 27-Aug-2021 09:10:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d		
Lims ID:	320-77292-A-2-B MS		
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Inject. Date:	26-Aug-2021 02:50:46	Dil. Factor:	1.0000
Sample Type:	MS, Matrix Spike		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	9

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	60862373	9950093

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	60862373	9950093

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.652	113674	25477	79253	16960	0.3023	1.43	
22.606	185739	33925	118597	23733	0.4769	1.57	
Signal Totals:							
	299413	59402	197850	40693			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	497263	100095				1.51	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.7793 = (497263 * 100.000) / (60862373 * 1.048)

Report Date: 27-Aug-2021 09:10:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d
Lims ID: 320-77292-A-2-B MS
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Inject. Date: 26-Aug-2021 02:50:46 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 9

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	58880017	16030529
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	58291096	15761963
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	58585556	15896246

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.041	910688	120442	719162	99134	2.61	1.27	
30.692	478024	101597	363536	75415	1.35	1.31	
Signal Totals:	1388712	222039	1082698	174549			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2471410	396588				1.28	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 3.959 = (2471410 * 100.000) / (58585556 * 1.066)

Report Date: 27-Aug-2021 09:10:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d
Lims ID: 320-77292-A-2-B MS
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Inject. Date: 26-Aug-2021 02:50:46 Dil. Factor: 1.0000
Sample Type: MS, Matrix Spike
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 9

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	44344639	15754325

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	44344639	15754325

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.858	3662454	1349102	3614753	1317639	15.0	1.01	a
Signal Totals:							
	3662454	1349102	3614753	1317639			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	7277207	2666741				1.01	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 14.996 = (7277207 * 100.000) / (44344639 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:10:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d		
Injection Date:	26-Aug-2021 02:50:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

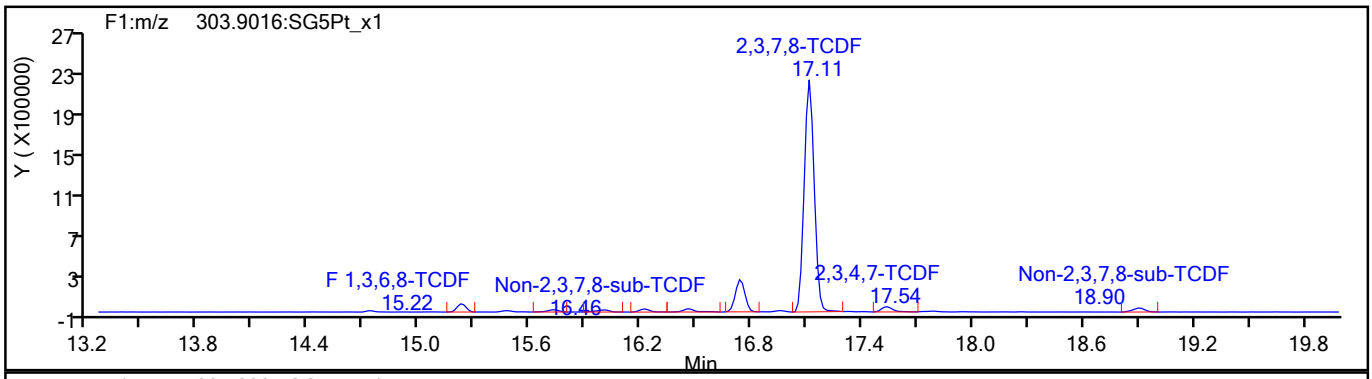

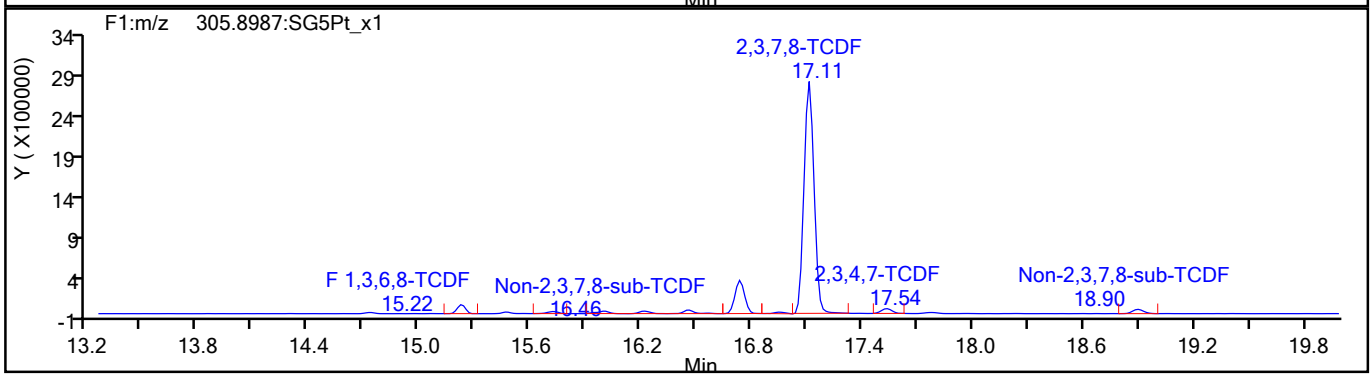

TCDF Standards

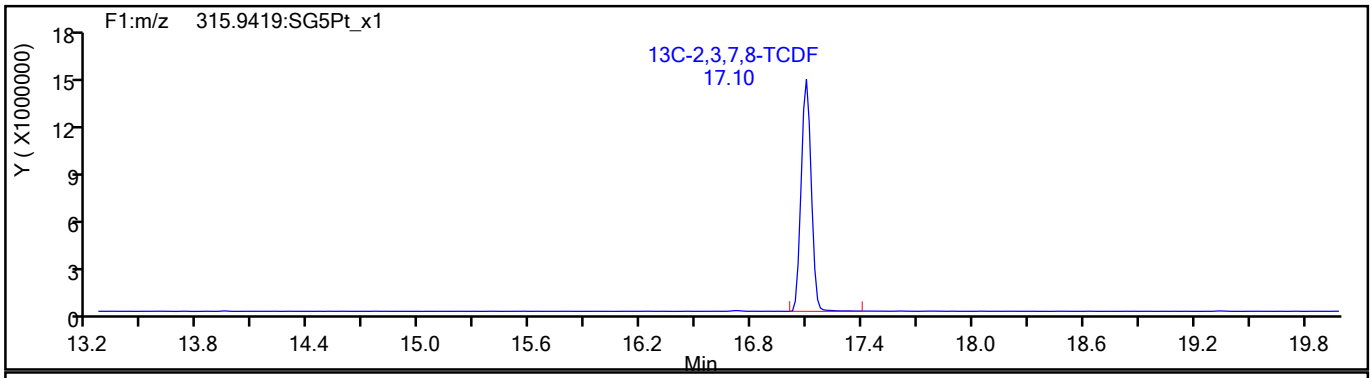

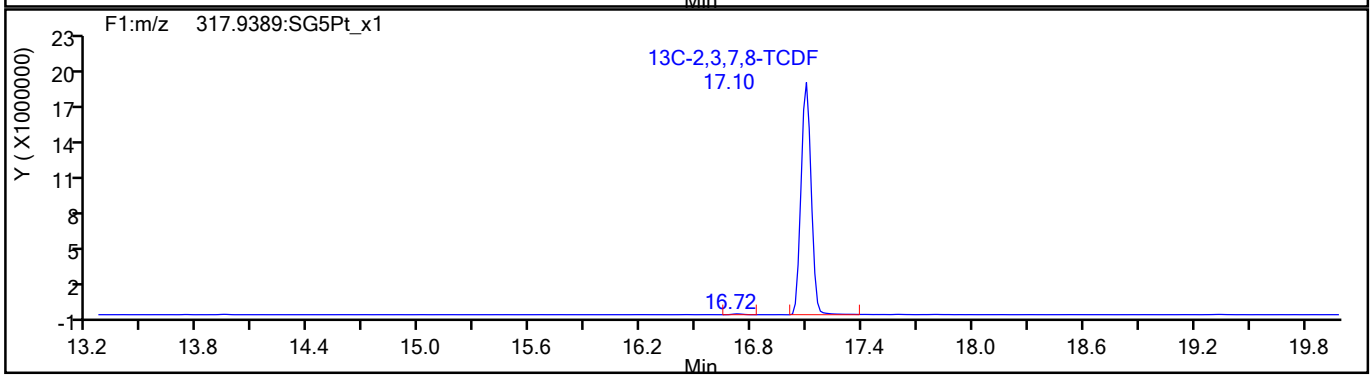

794369

Report Date: 27-Aug-2021 09:10:24 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d		
Injection Date:	26-Aug-2021 02:50:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

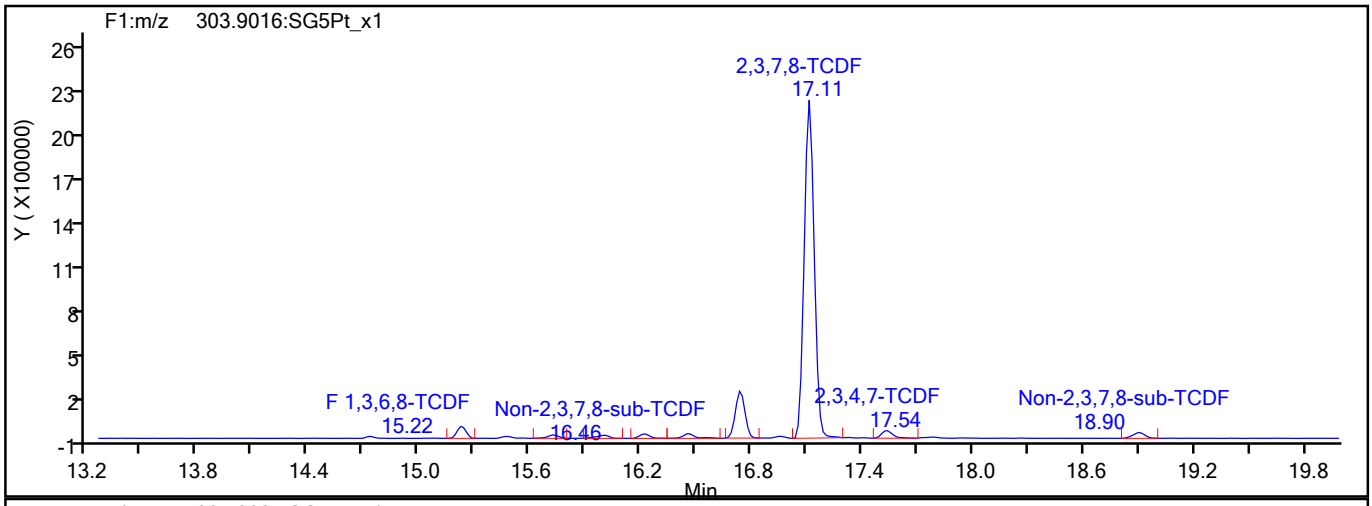

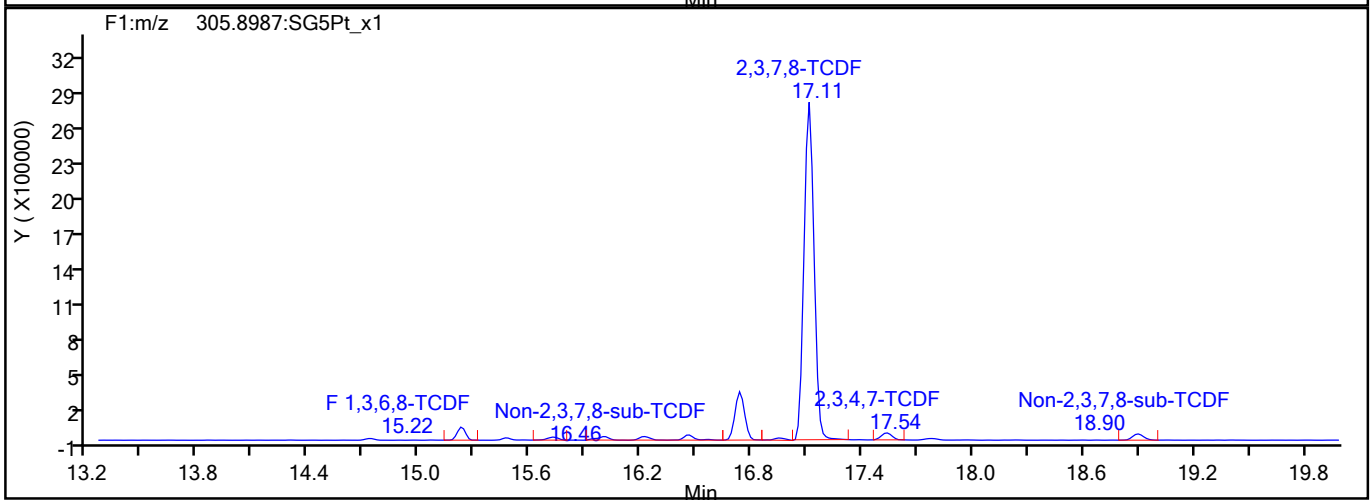

TCDF Interference Mass

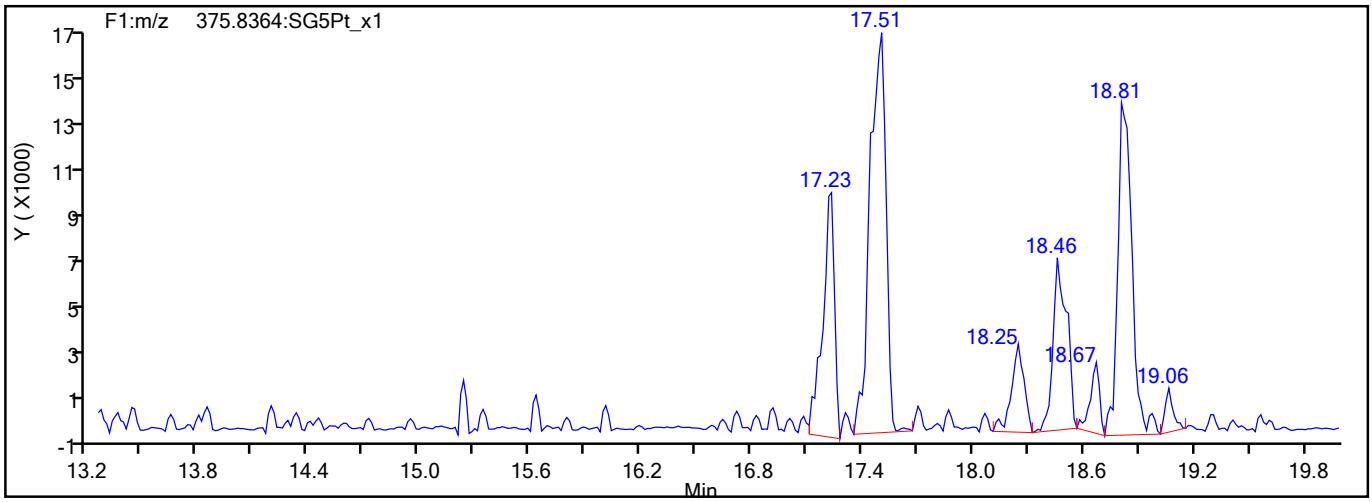

794370

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d		
Injection Date:	26-Aug-2021 02:50:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

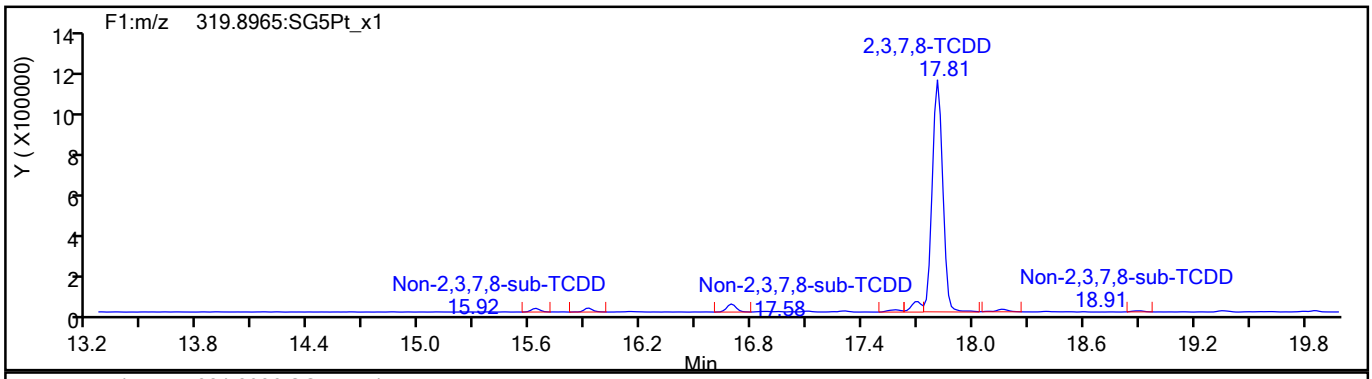

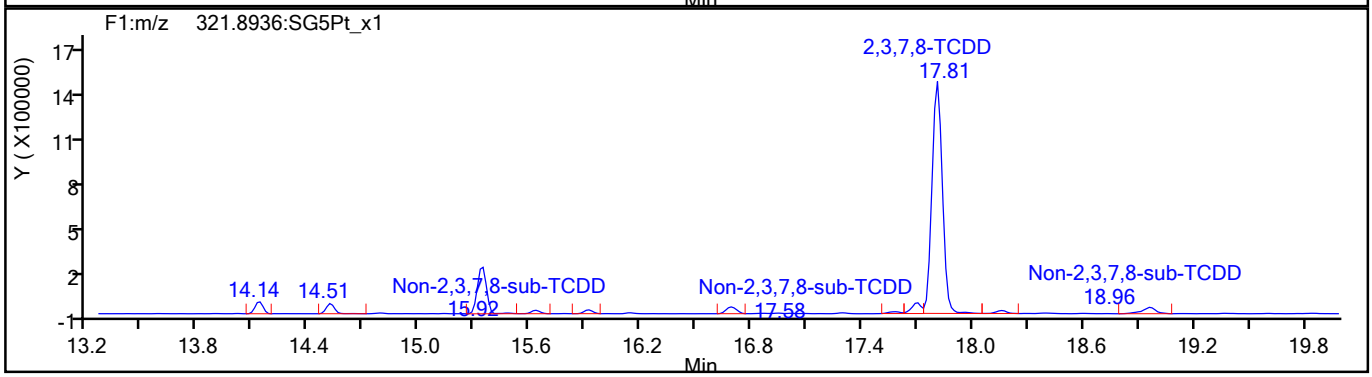

TCDD Standards

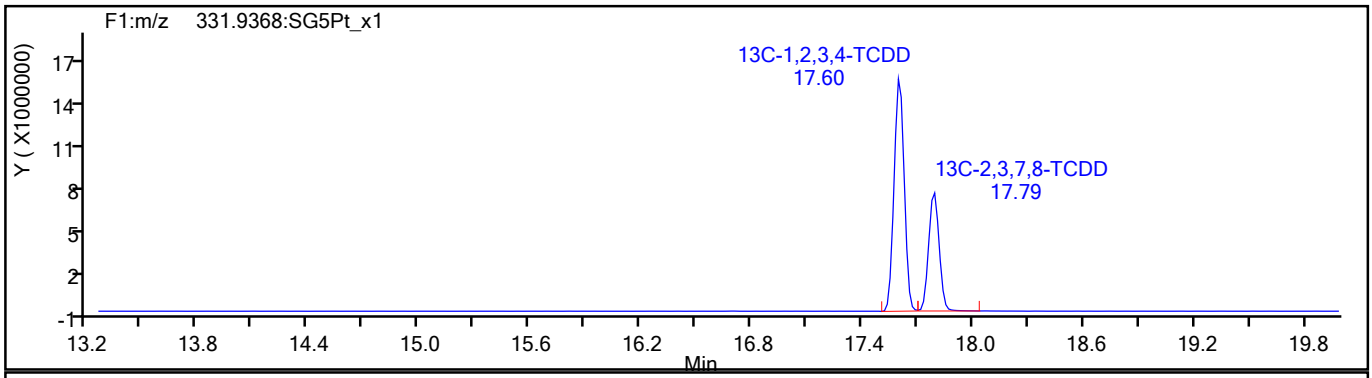

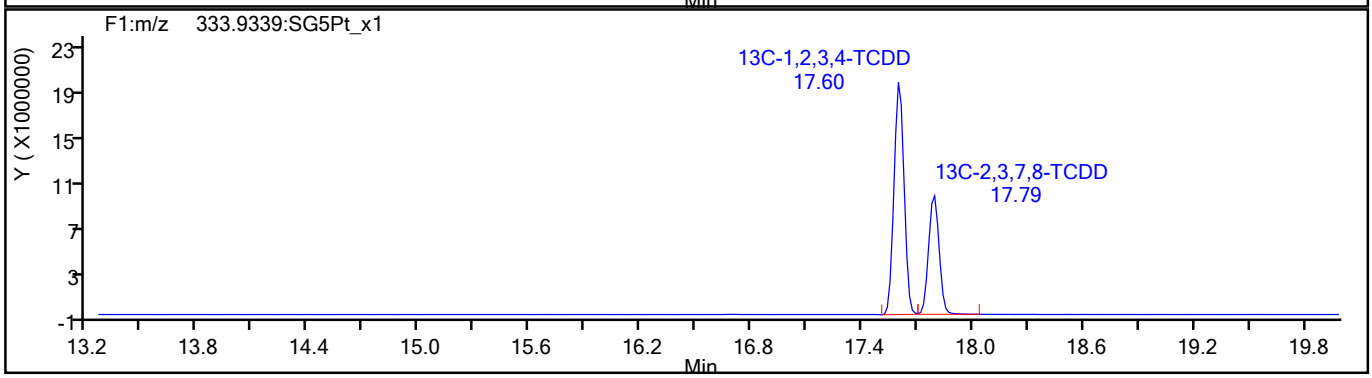

794371

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d		
Injection Date:	26-Aug-2021 02:50:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

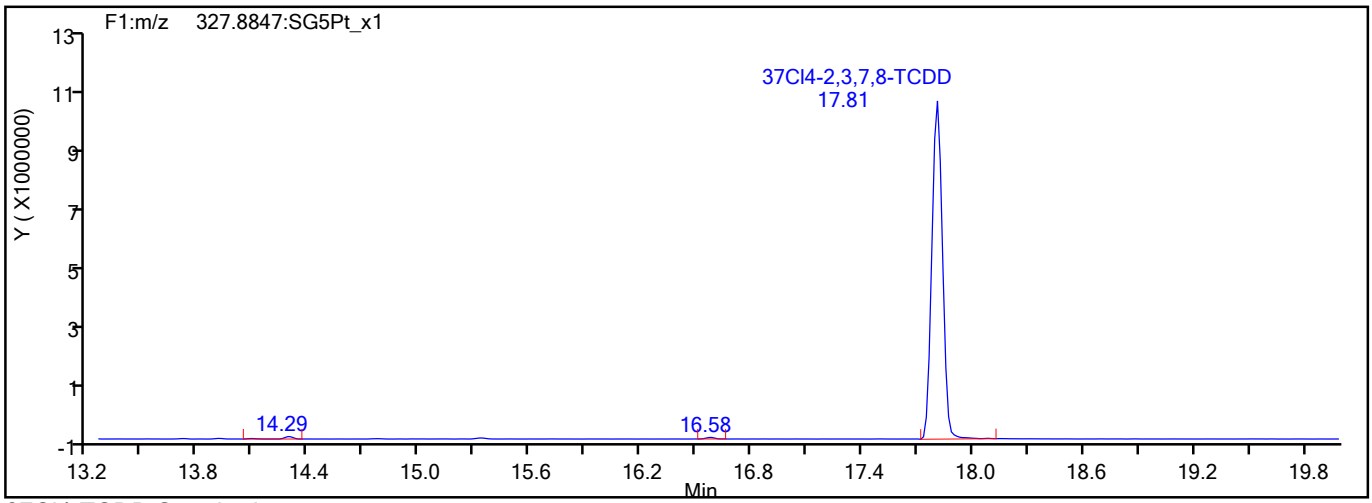

37Cl4-TCDD Standards

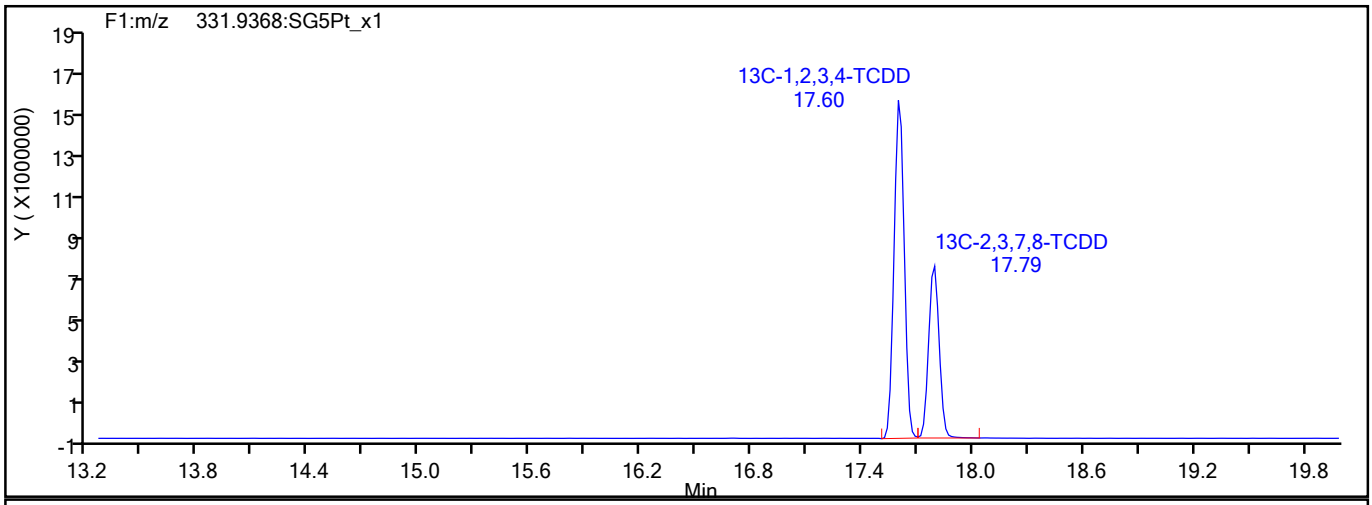

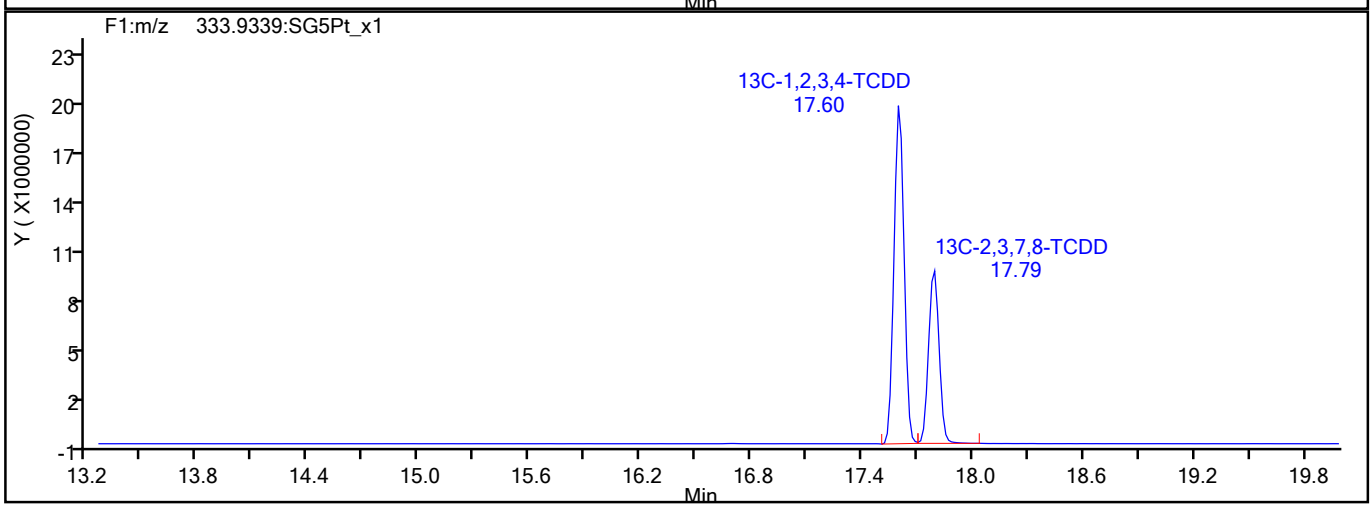

794372

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

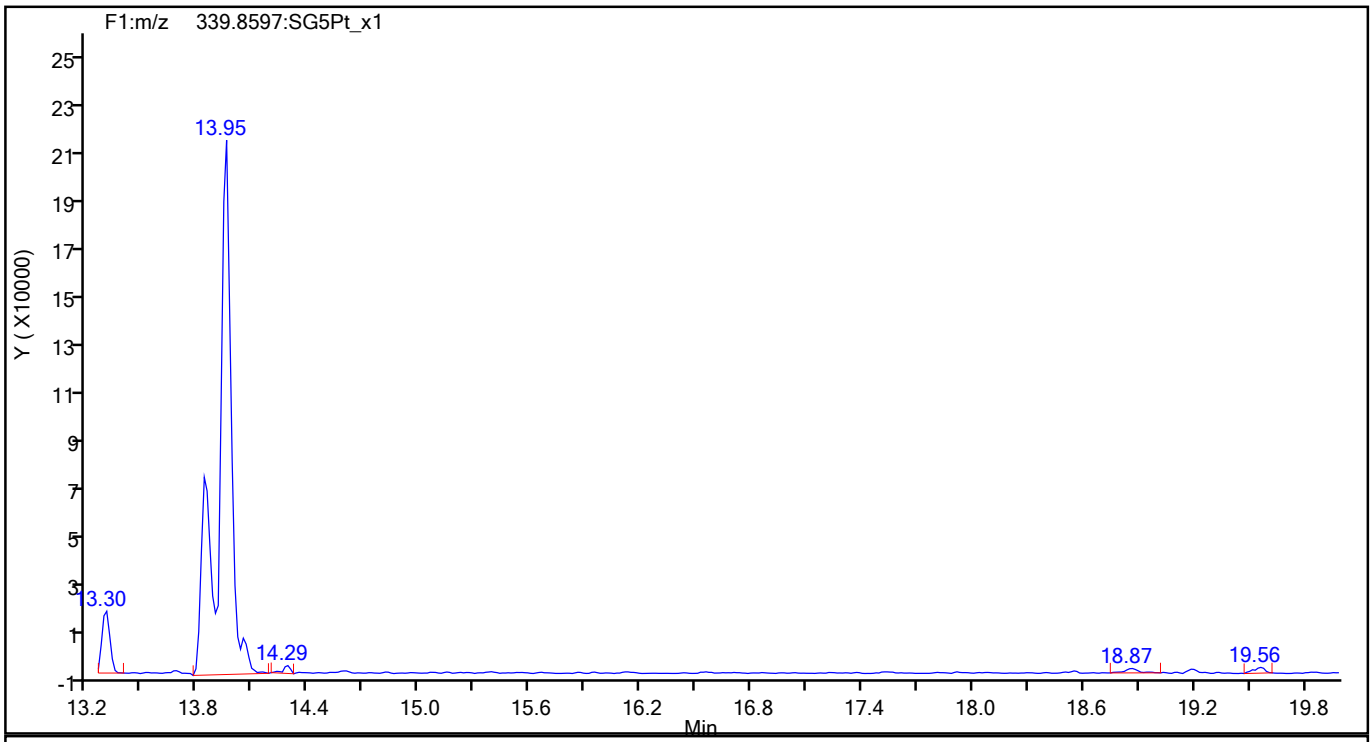

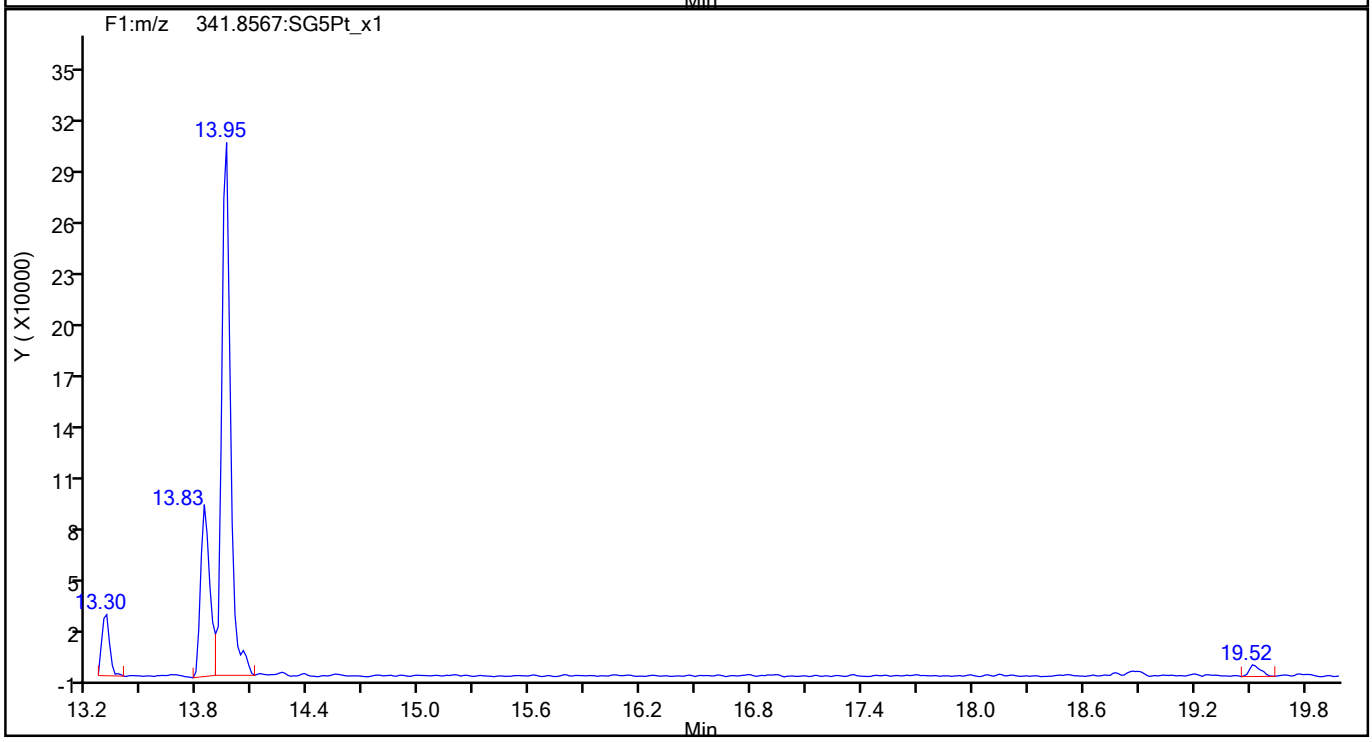

794373

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Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
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F1 PeCDFs

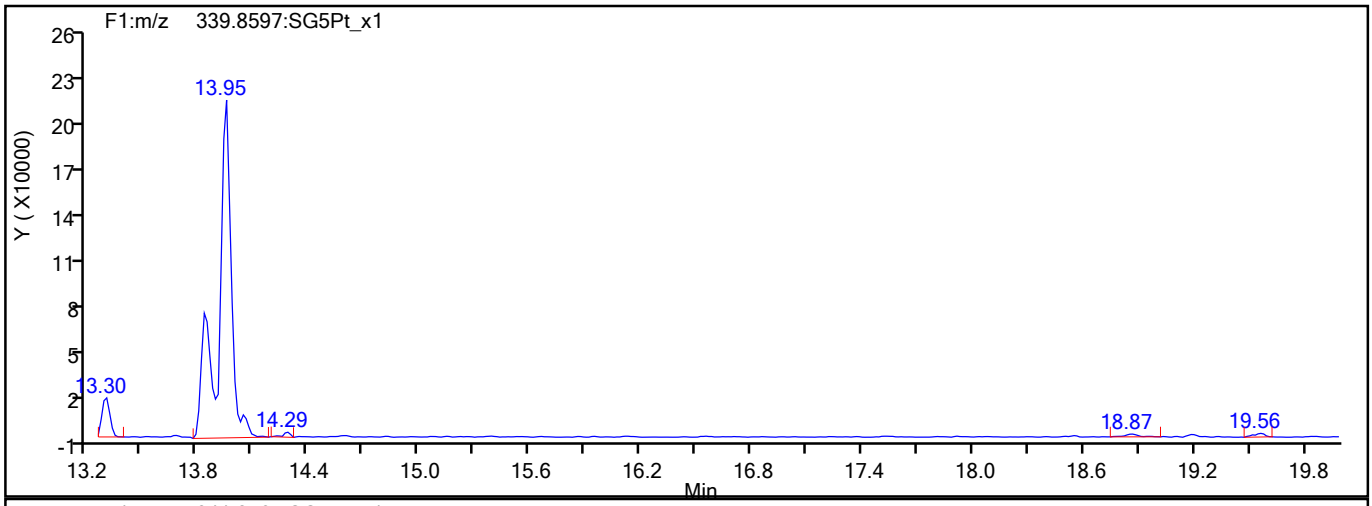

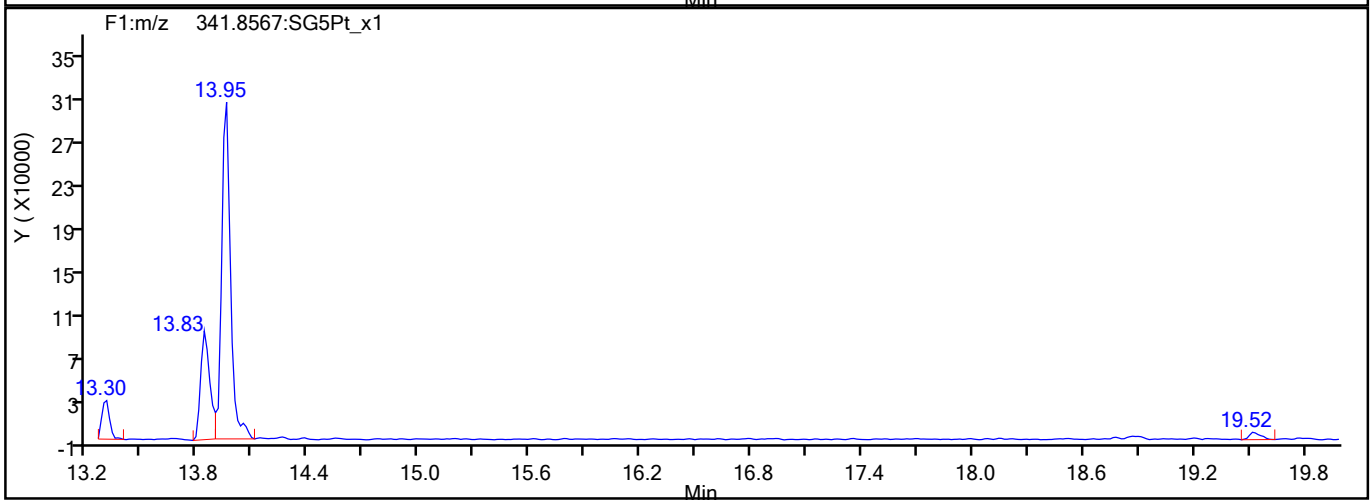

F1 PeCDFs Interference Mass

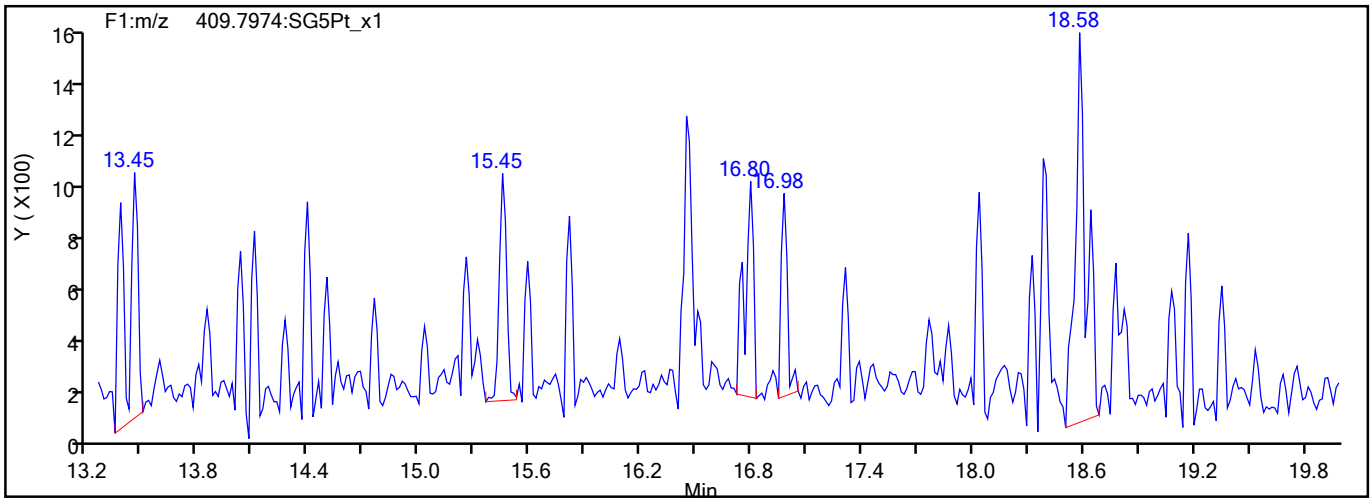

794374

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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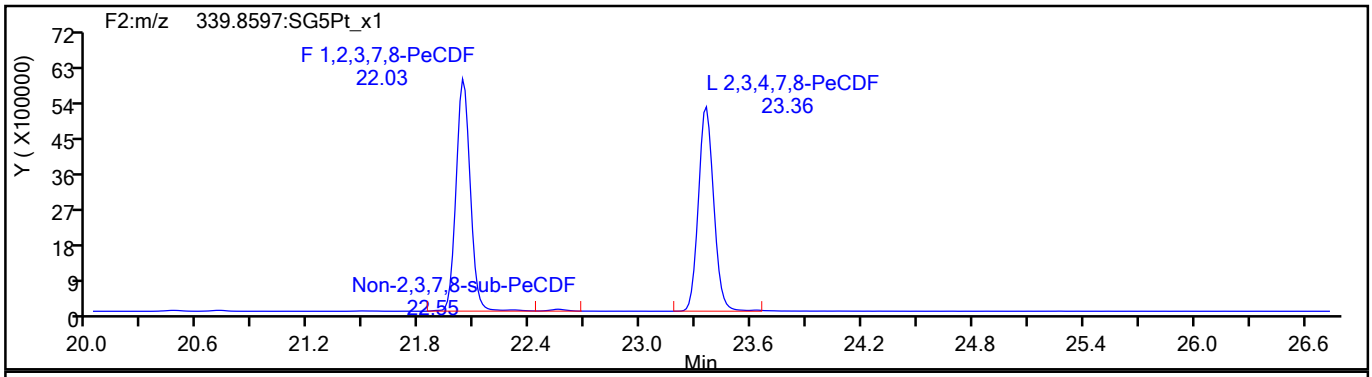

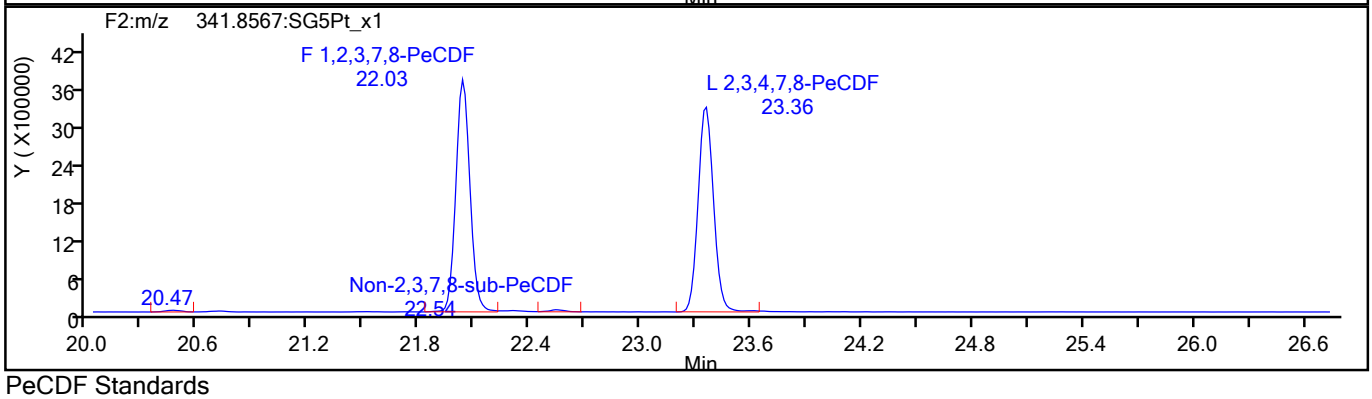

PeCDF Standards

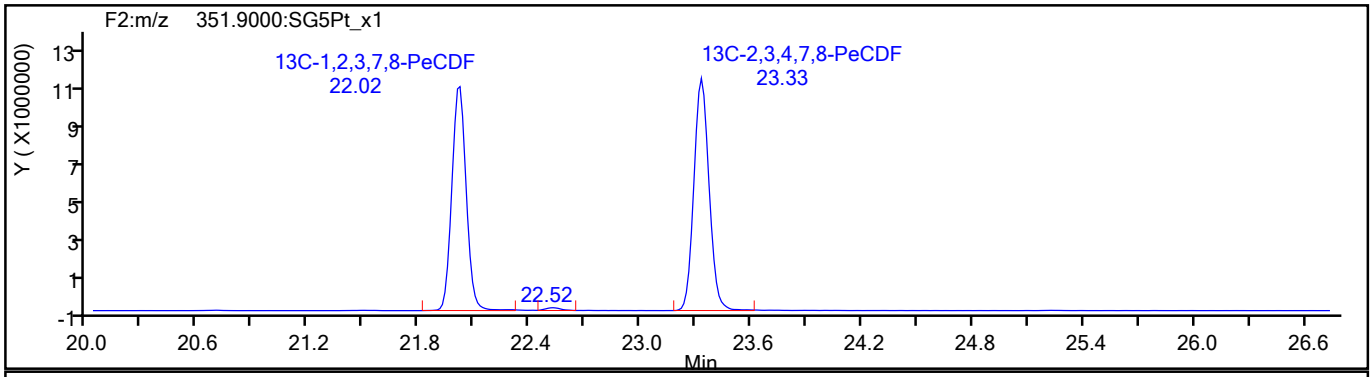

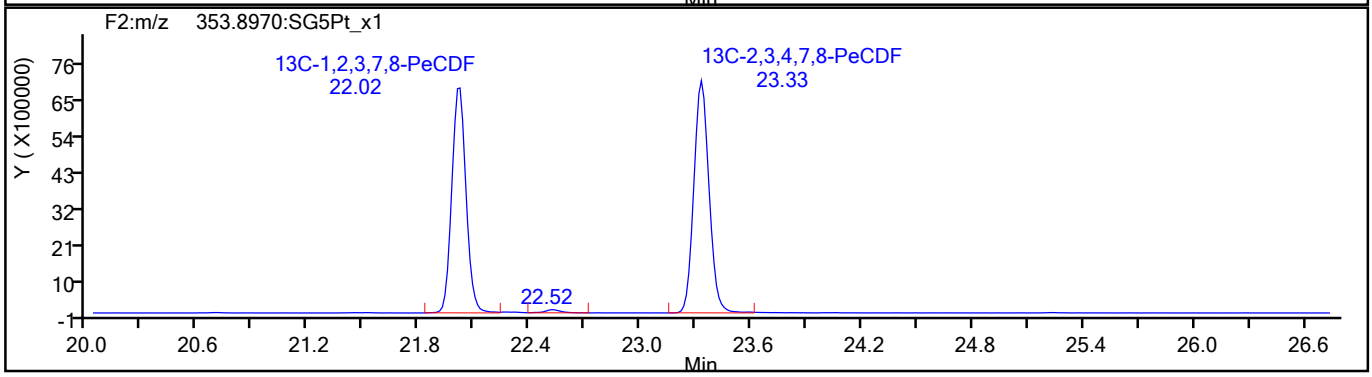

794375

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Eurofins TestAmerica, Sacramento

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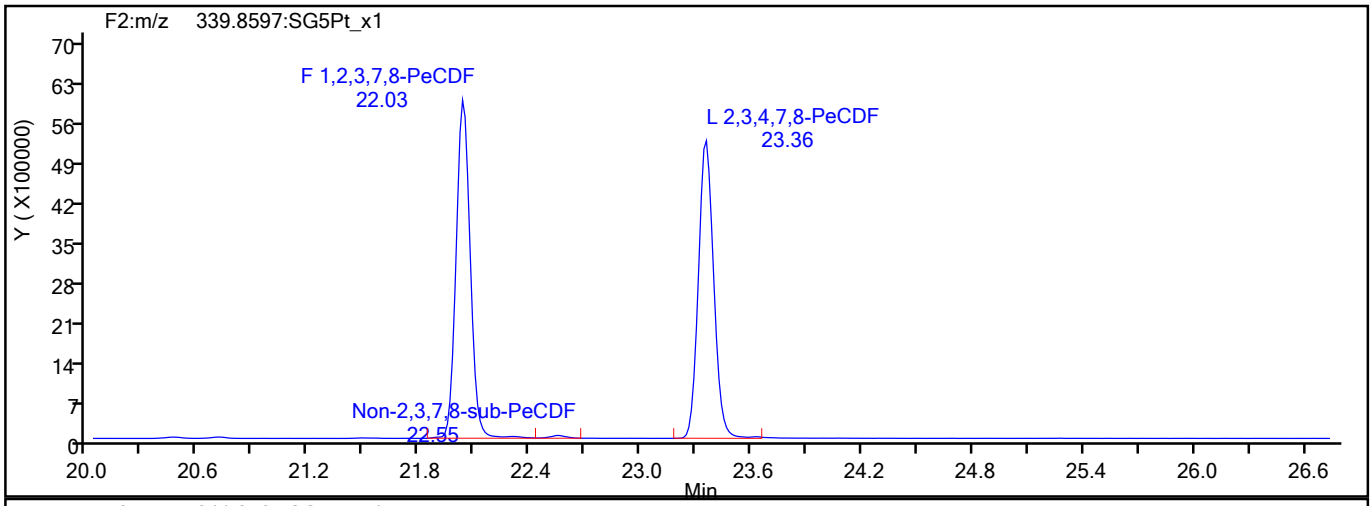

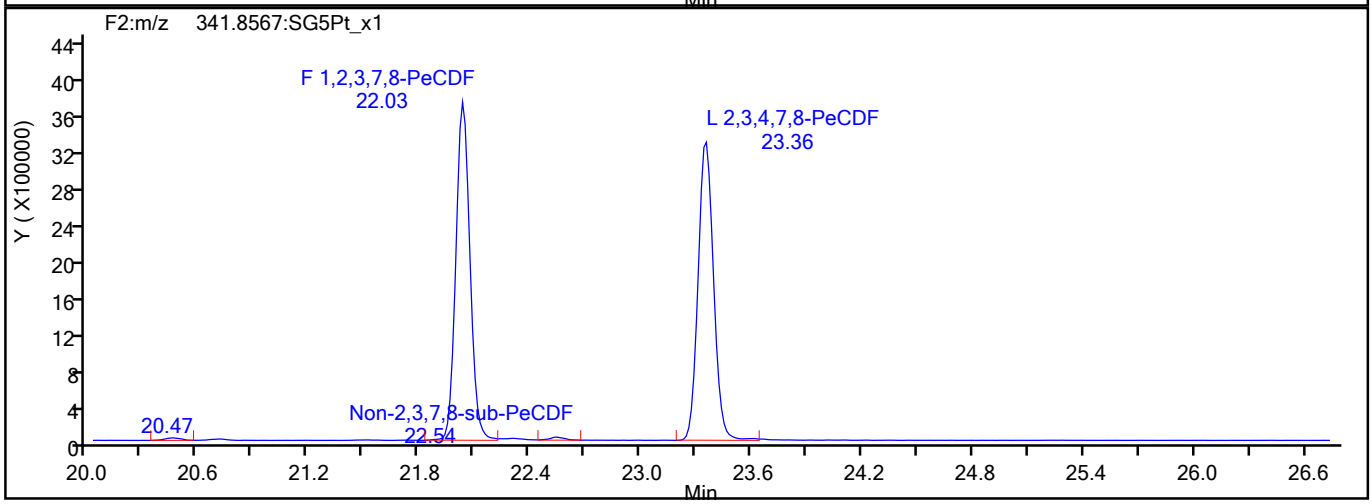

PeCDF Interference Mass

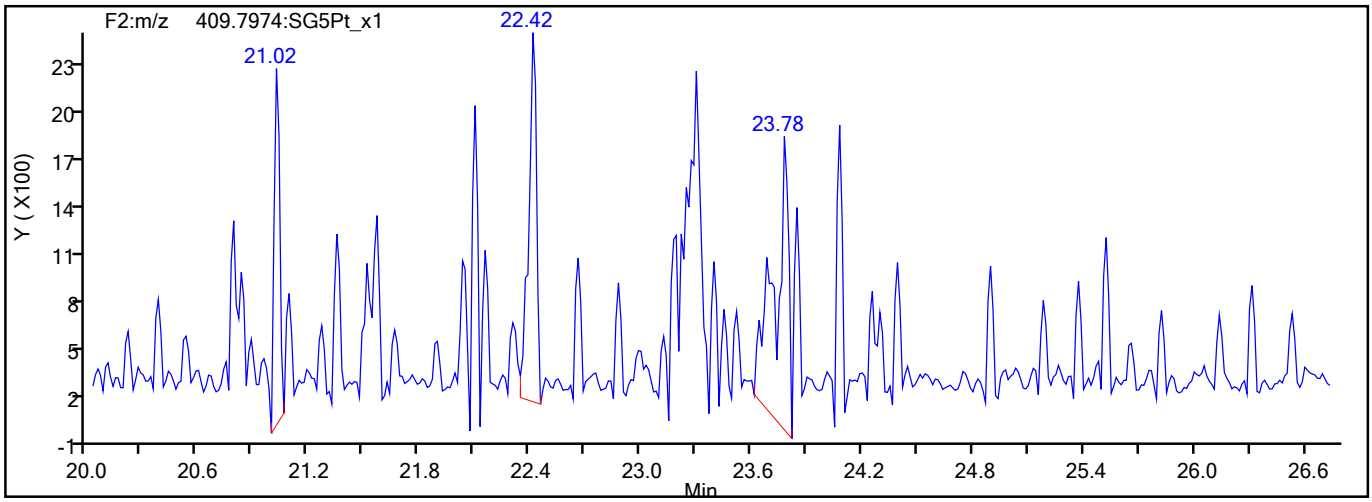

794376

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
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PeCDD

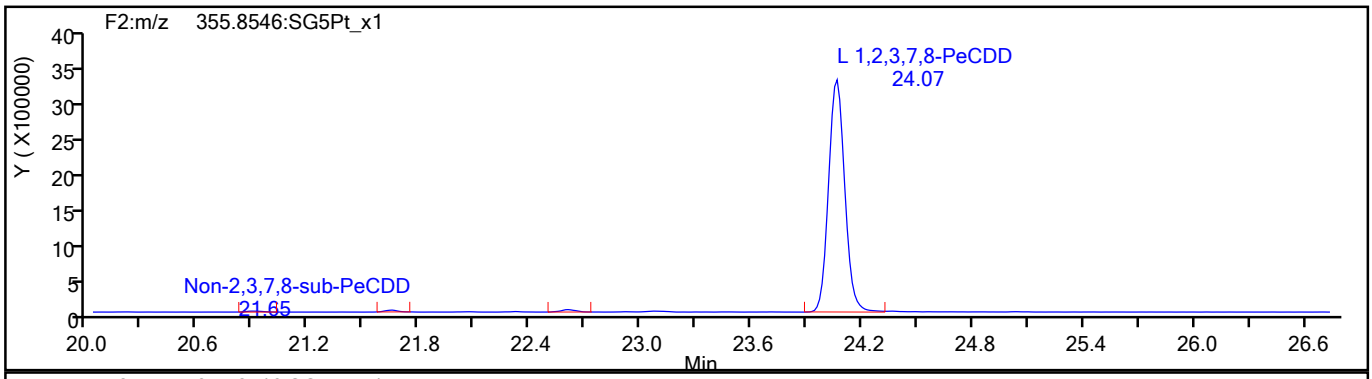

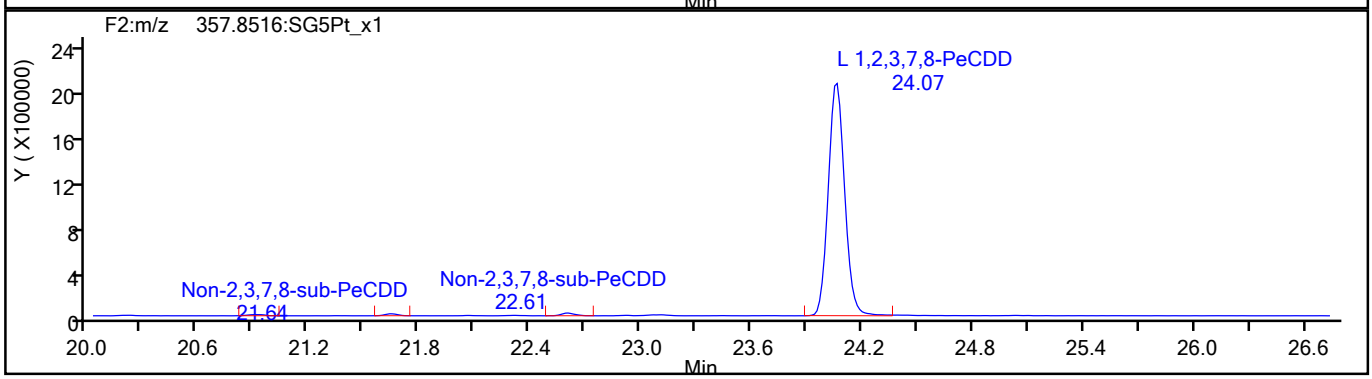

PeCDD Standards

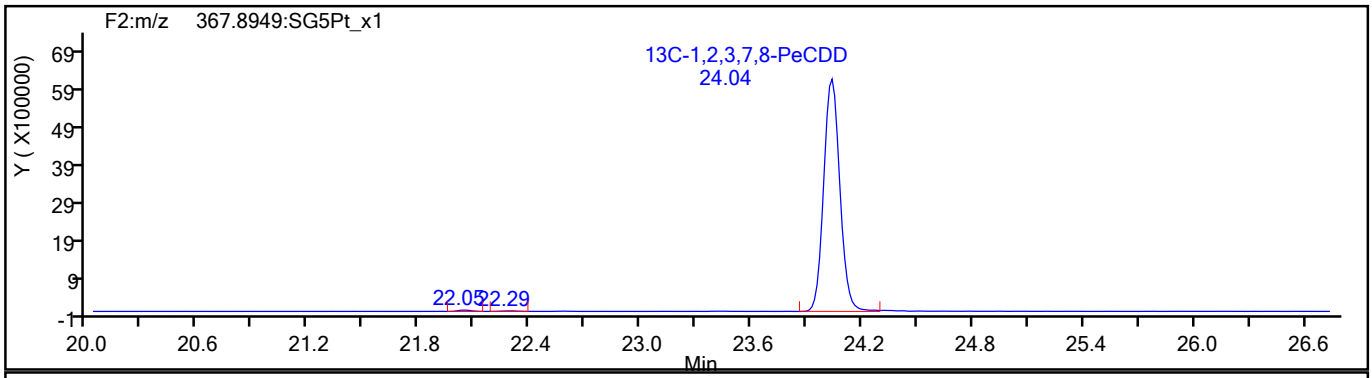

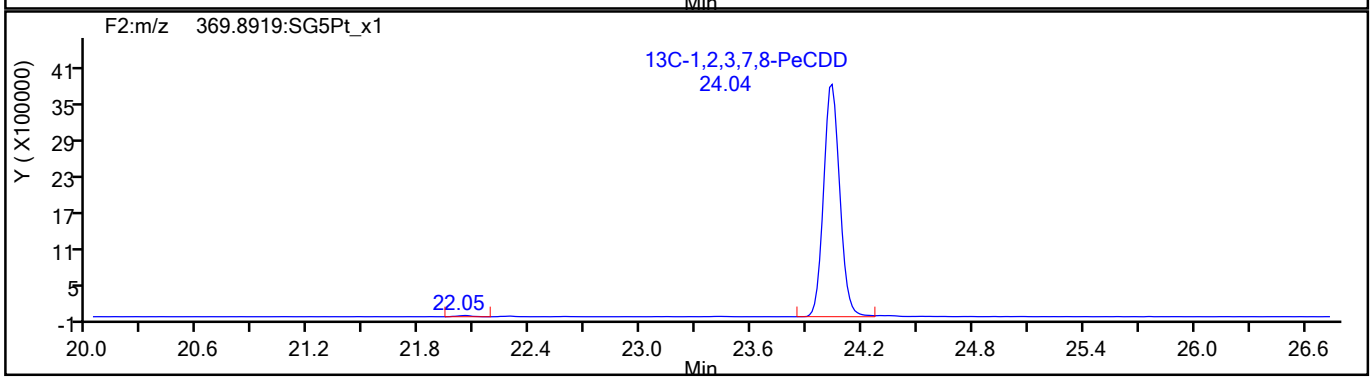

794377

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Client ID:	11215702-080321-BN-SJSB091 (2-4)		
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HxCDF

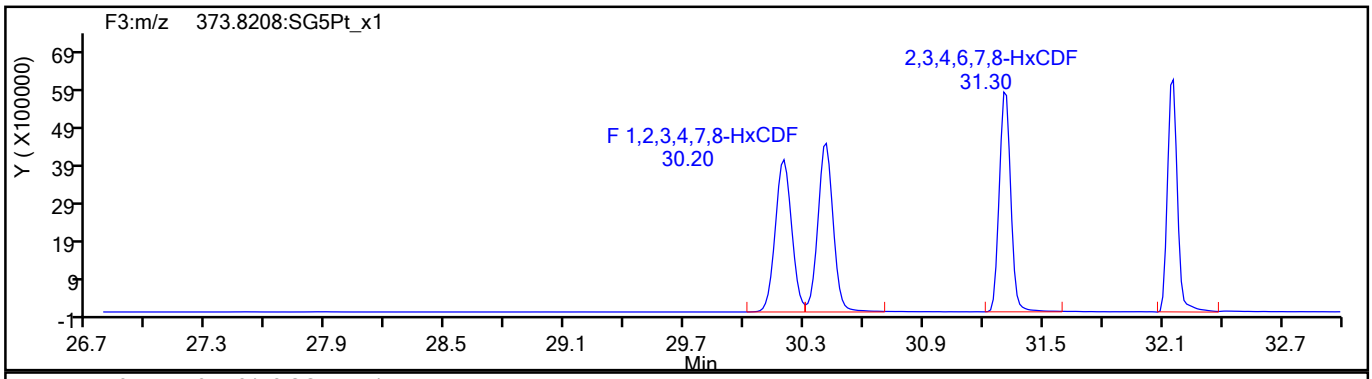

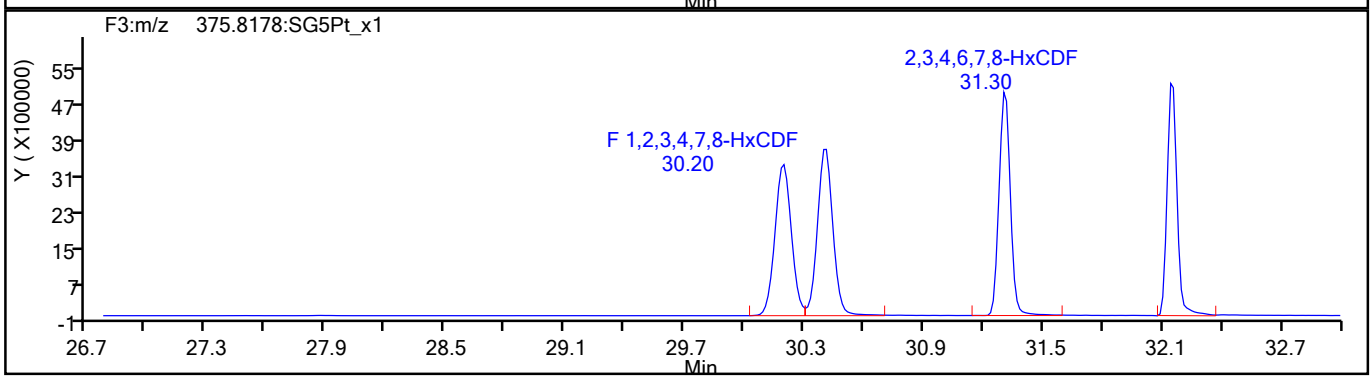

HxCDF Standards

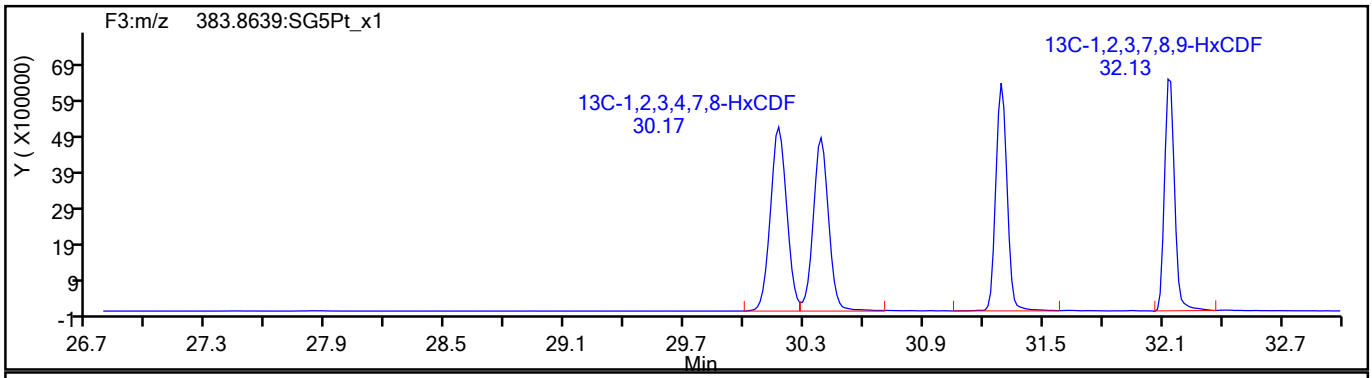

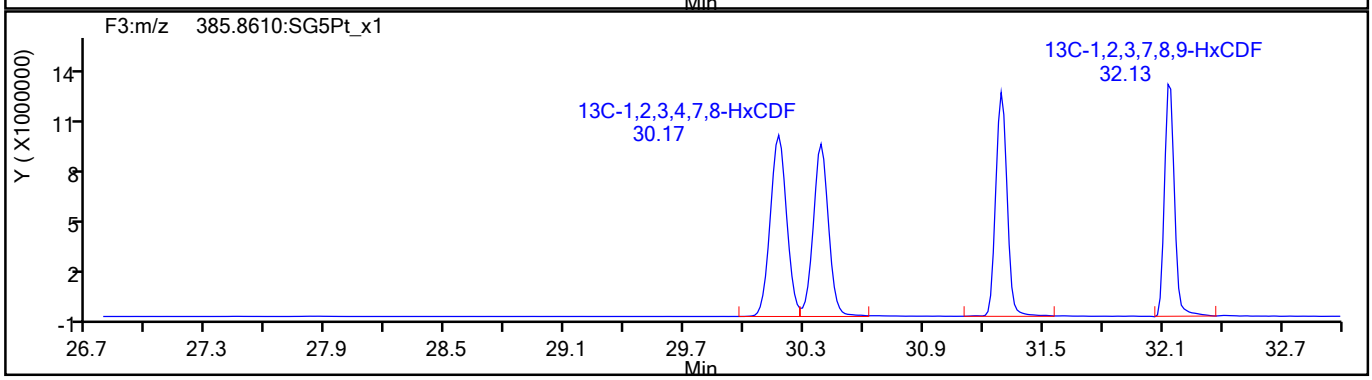

794378

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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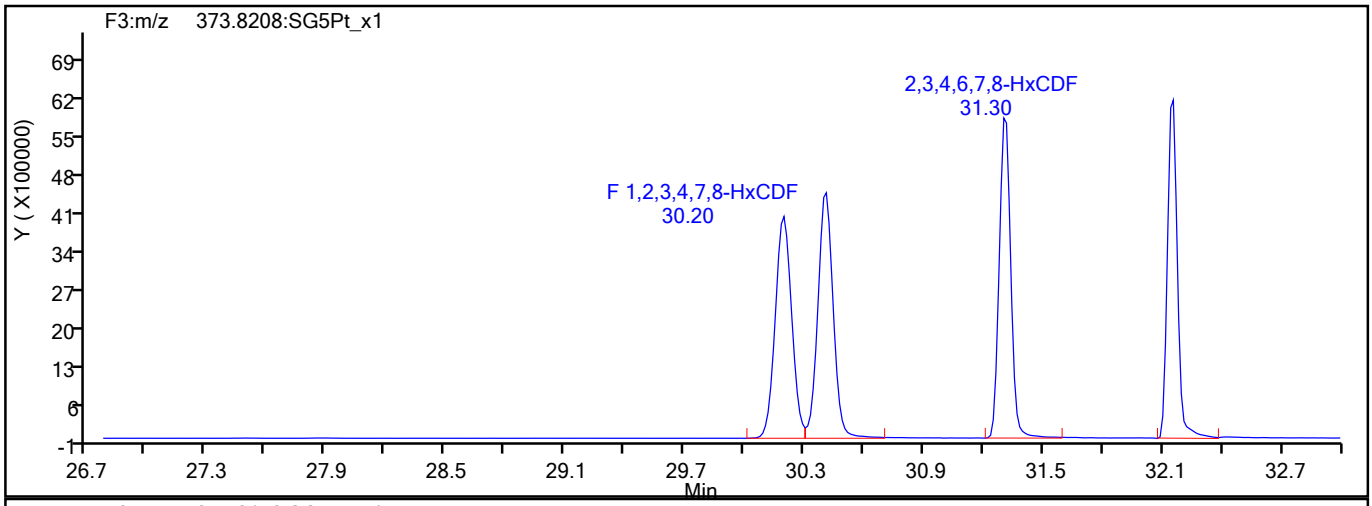

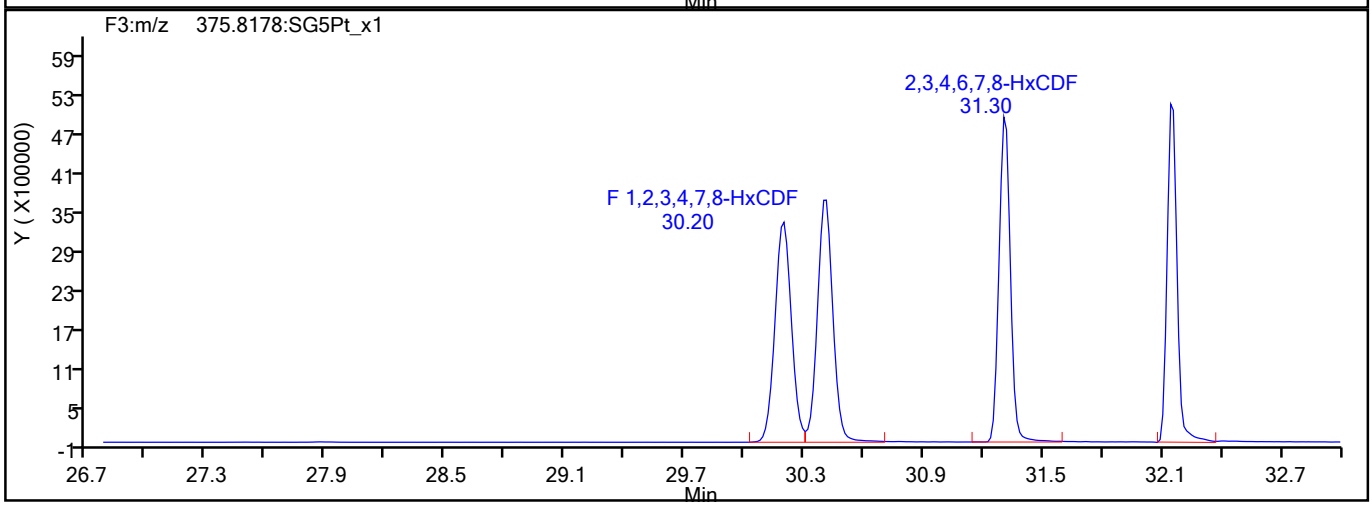

HxCDF Interference Mass

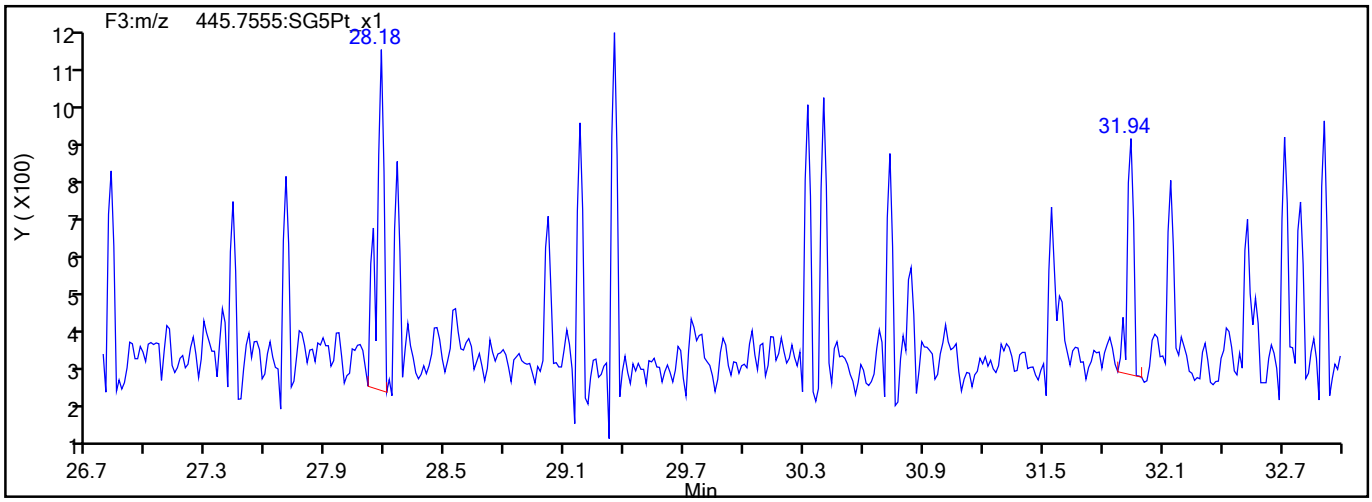

794379

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

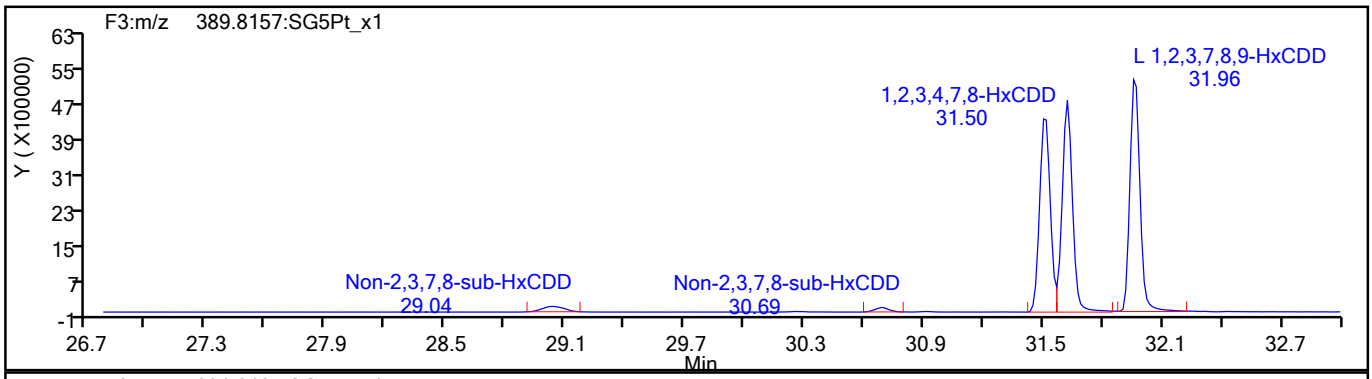

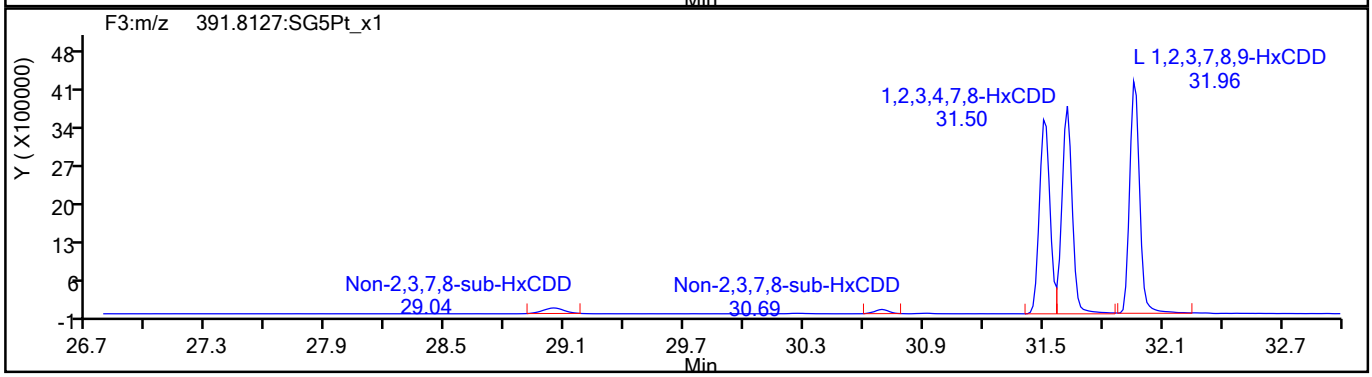

HxCDD Standards

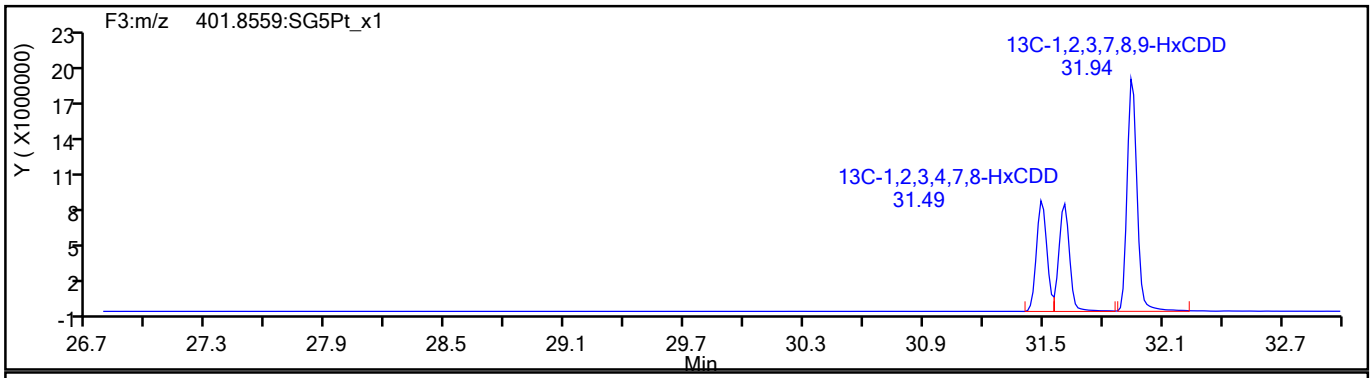

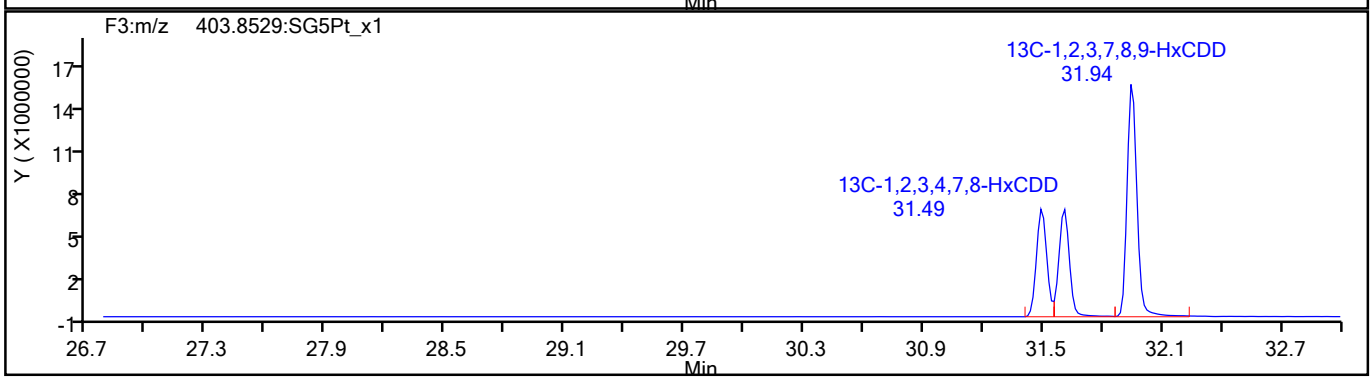

794380

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
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HpCDF

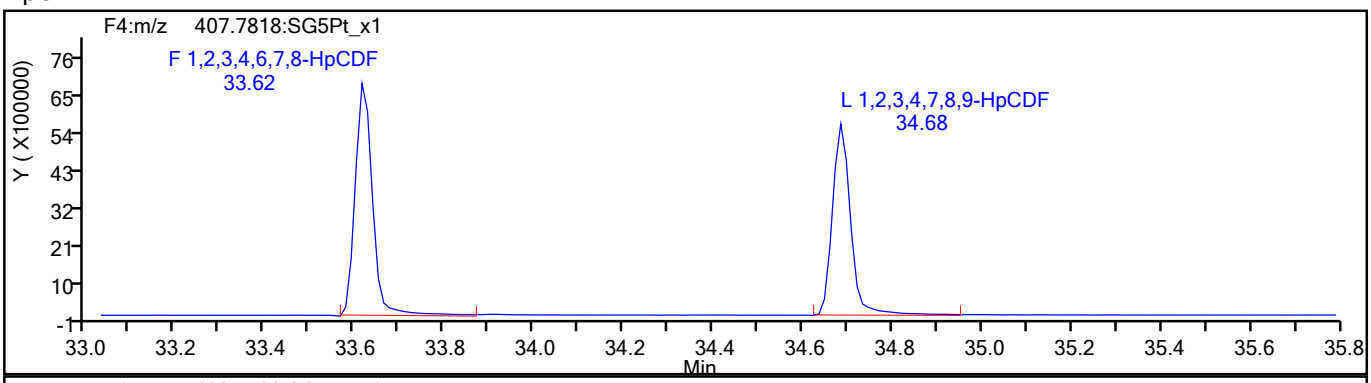

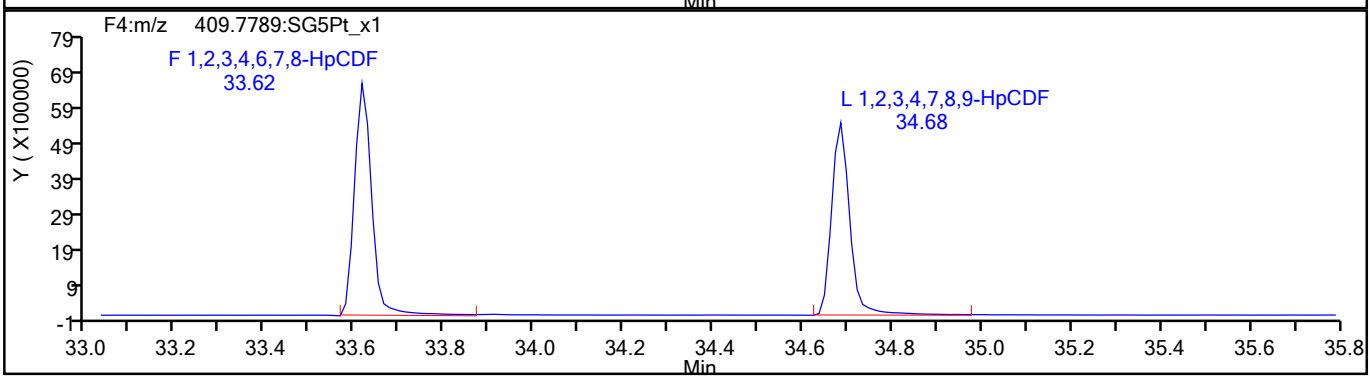

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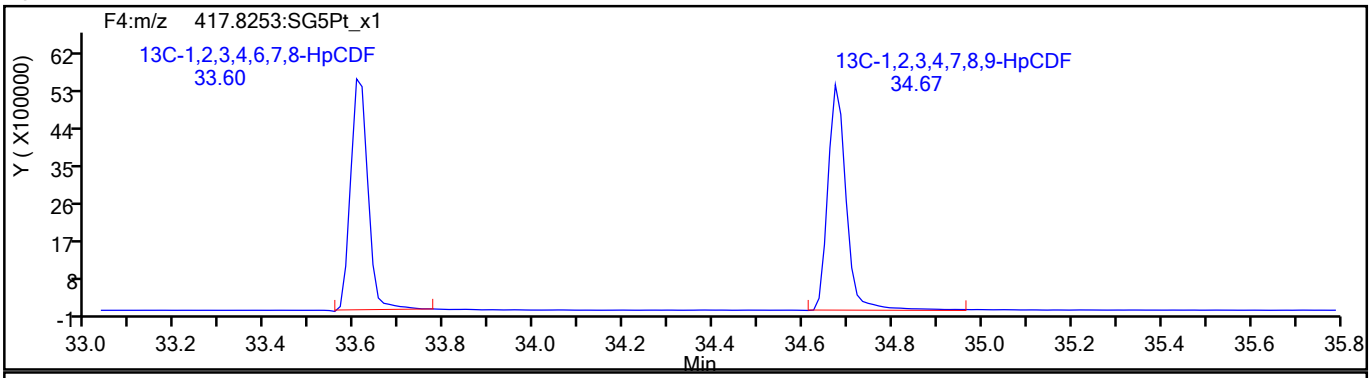

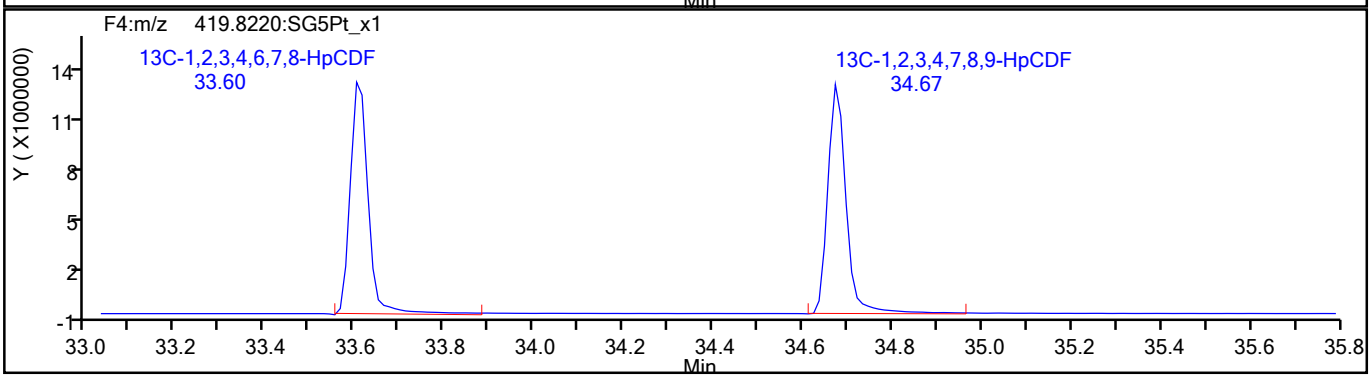

794381

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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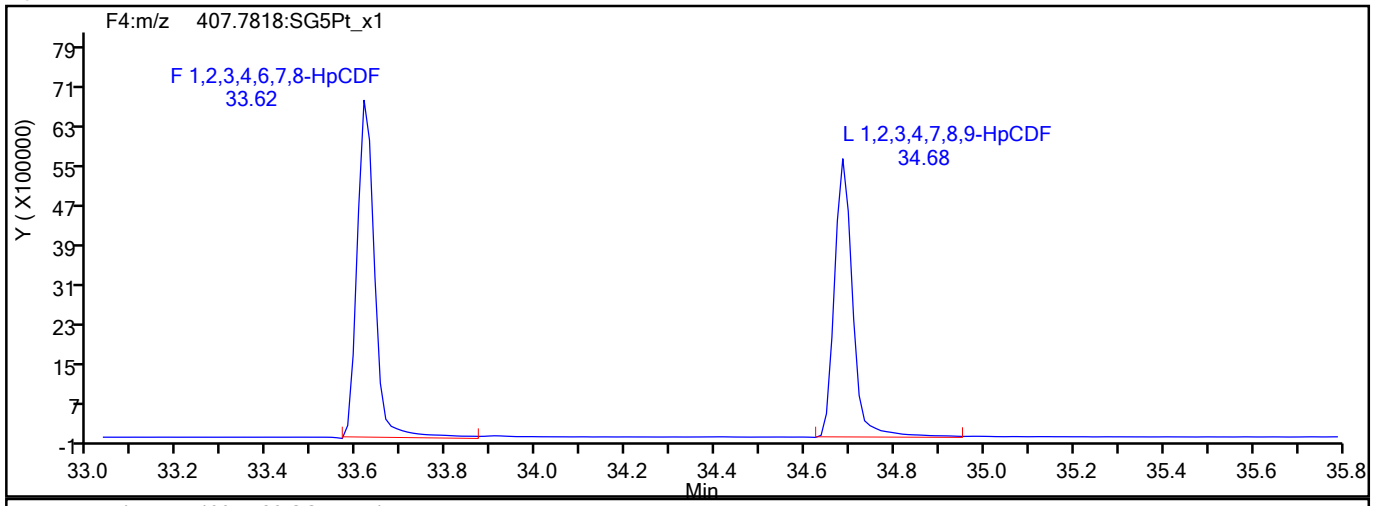

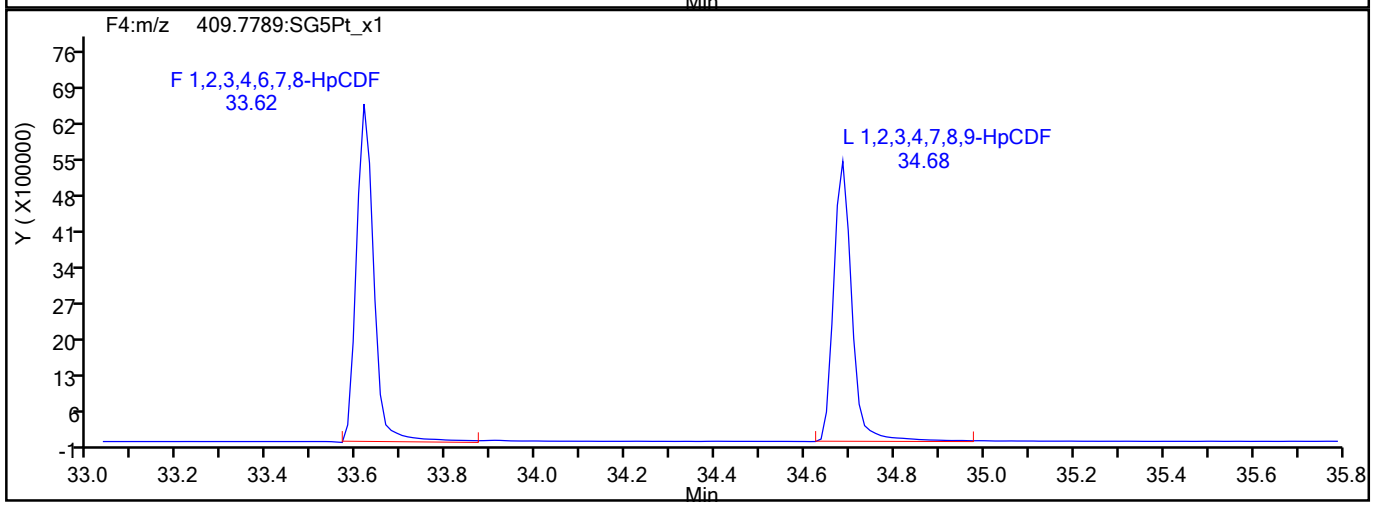

HpCDF Interference Mass

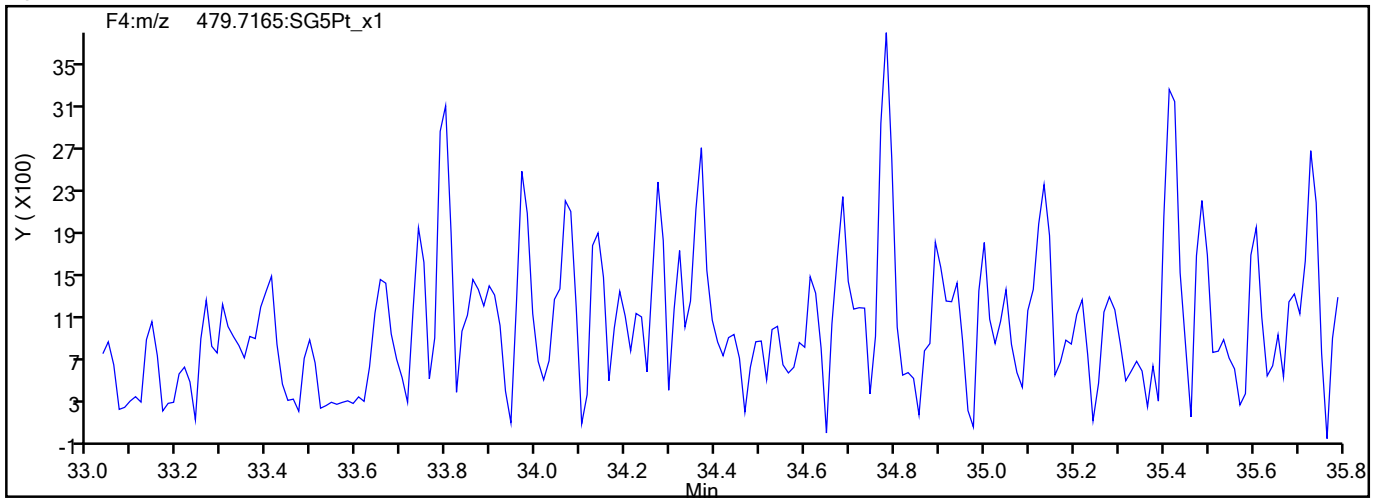

794382

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

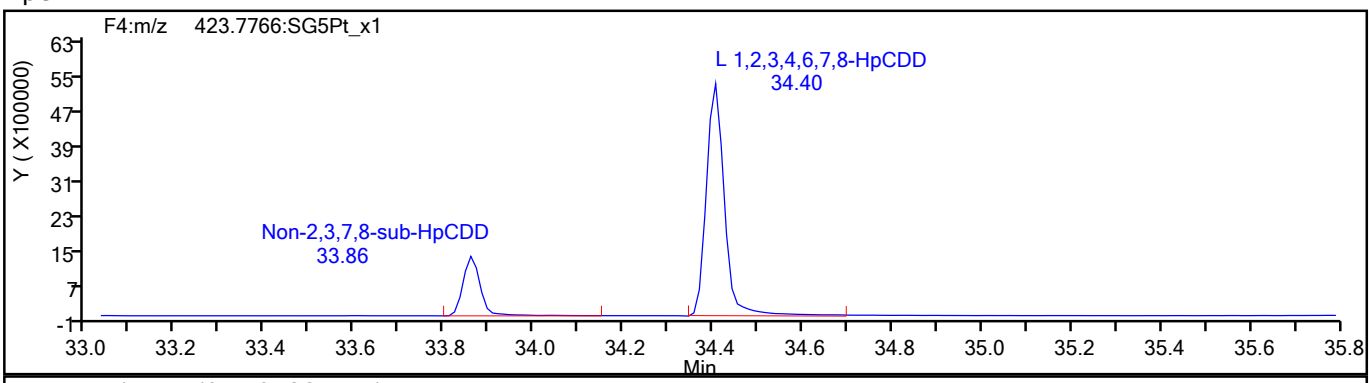

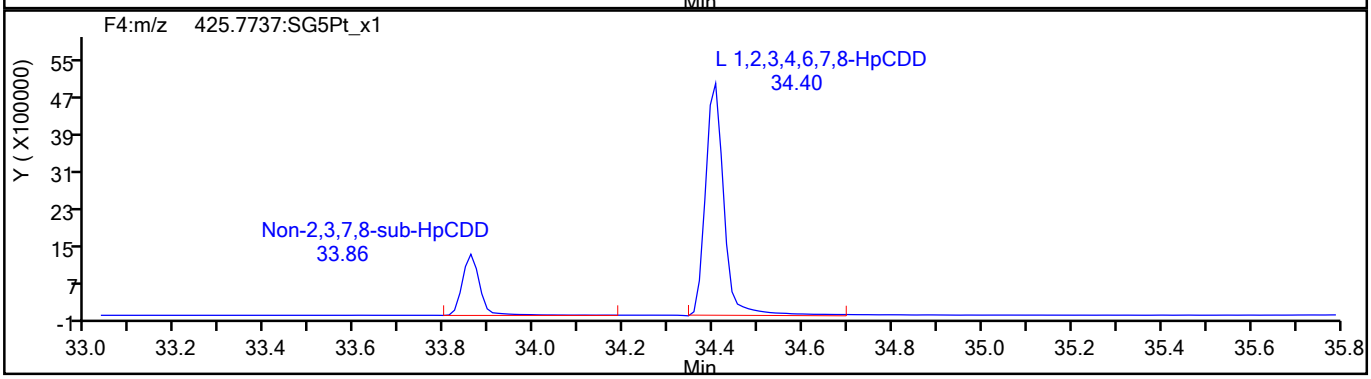

HpCDD Standards

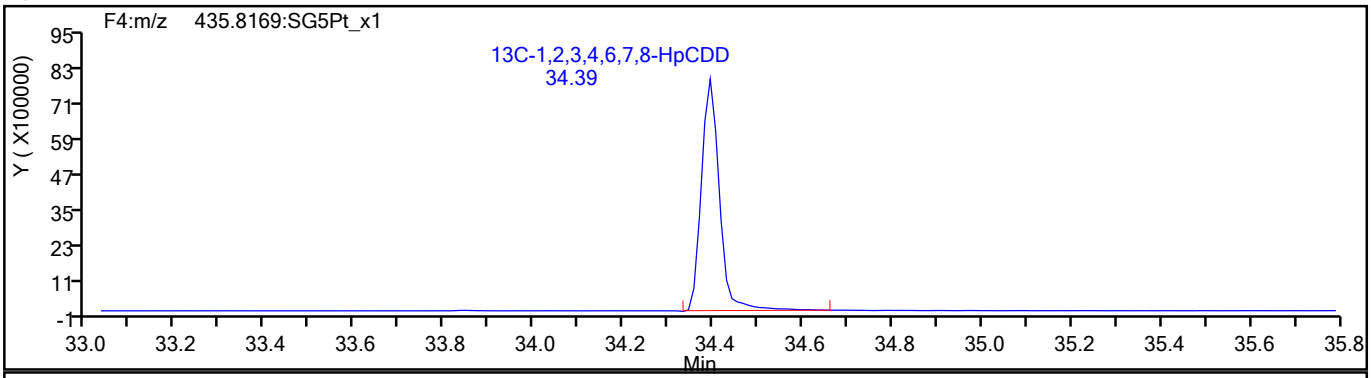

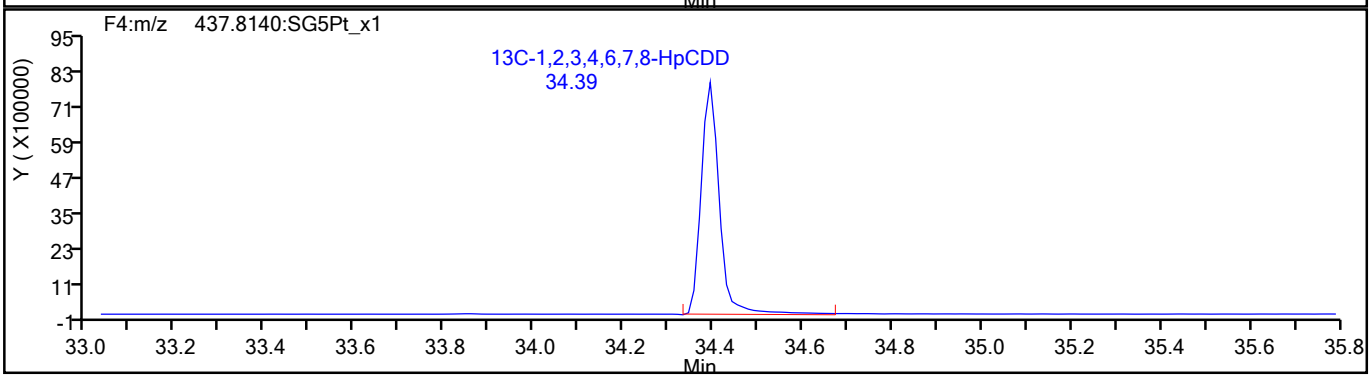

794383

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d		
Injection Date:	26-Aug-2021 02:50:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

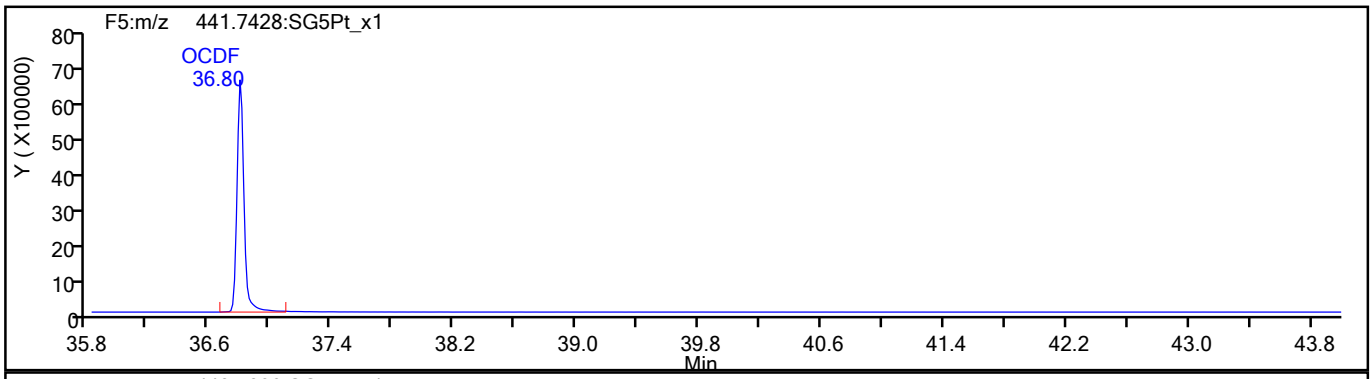

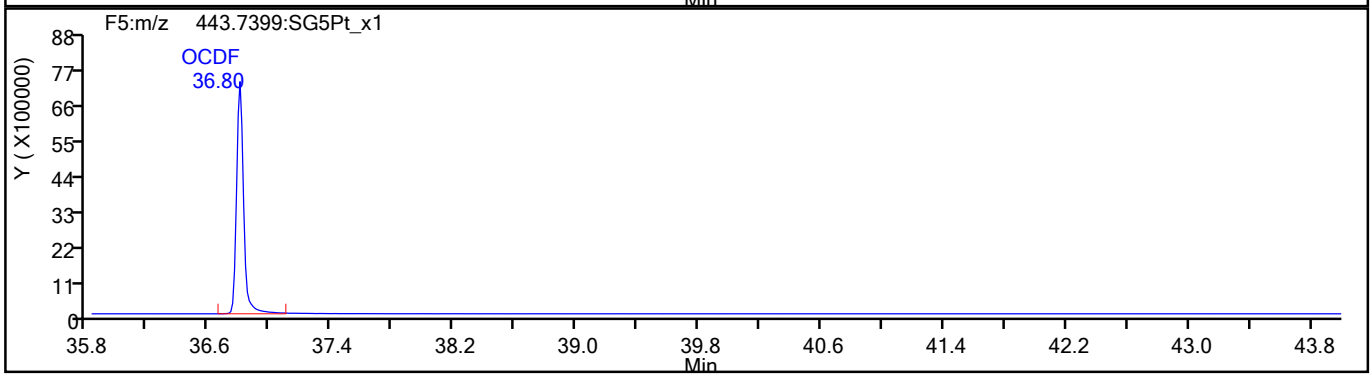

OCDF Standards

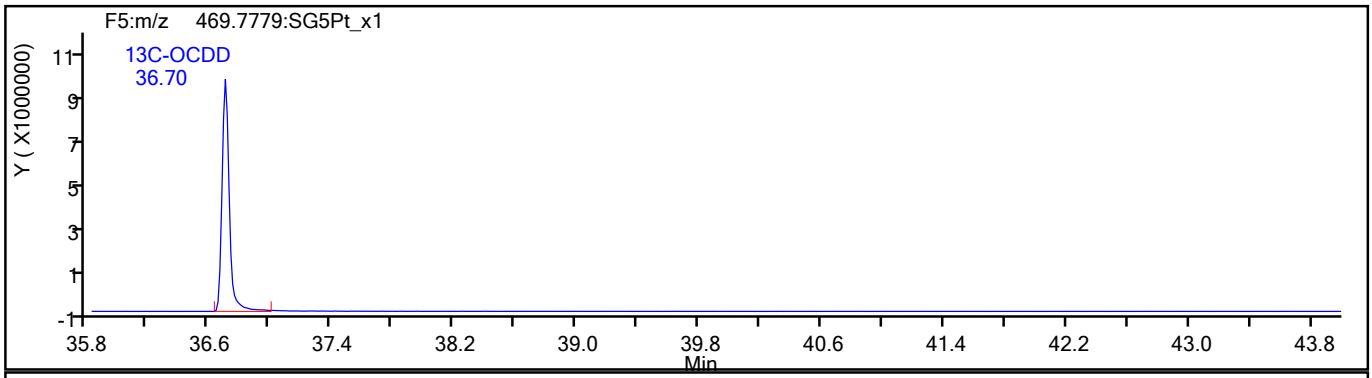

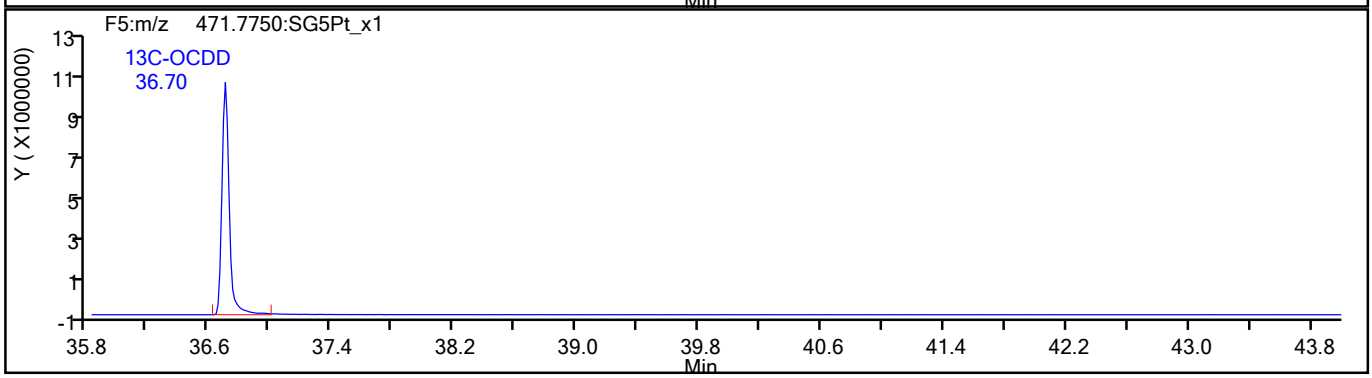

794384

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d		
Injection Date:	26-Aug-2021 02:50:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

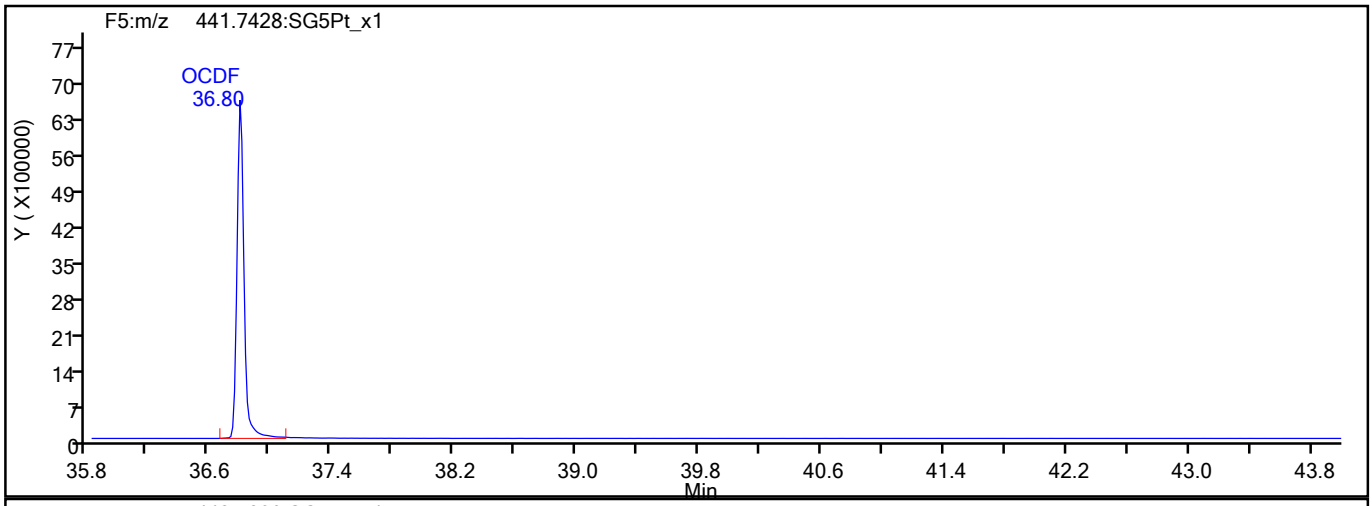

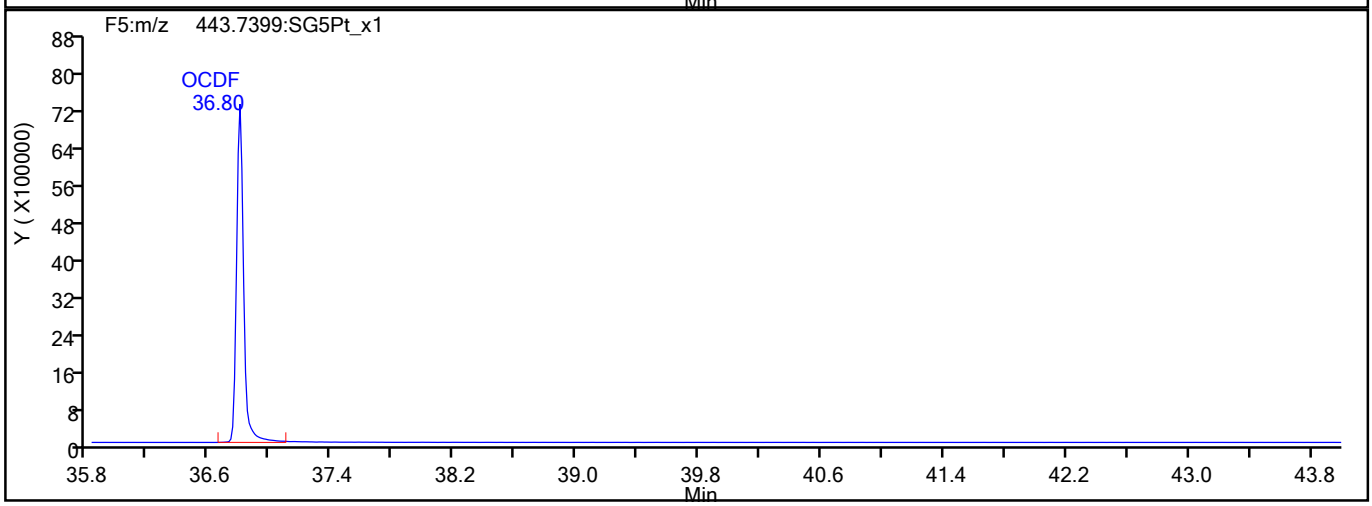

OCDF Interference Mass

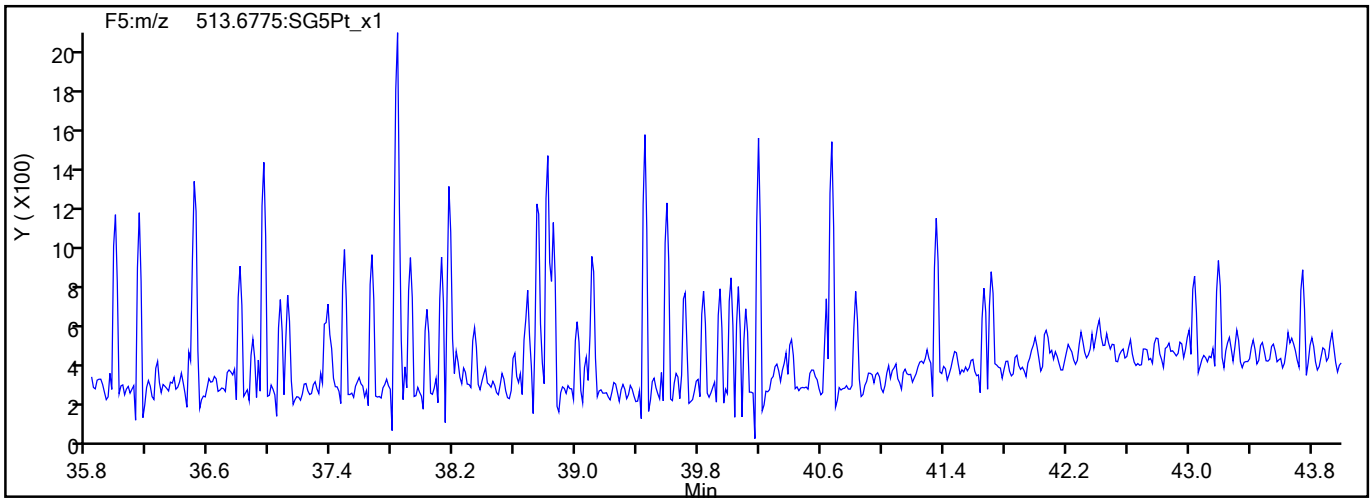

794385

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d		
Injection Date:	26-Aug-2021 02:50:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

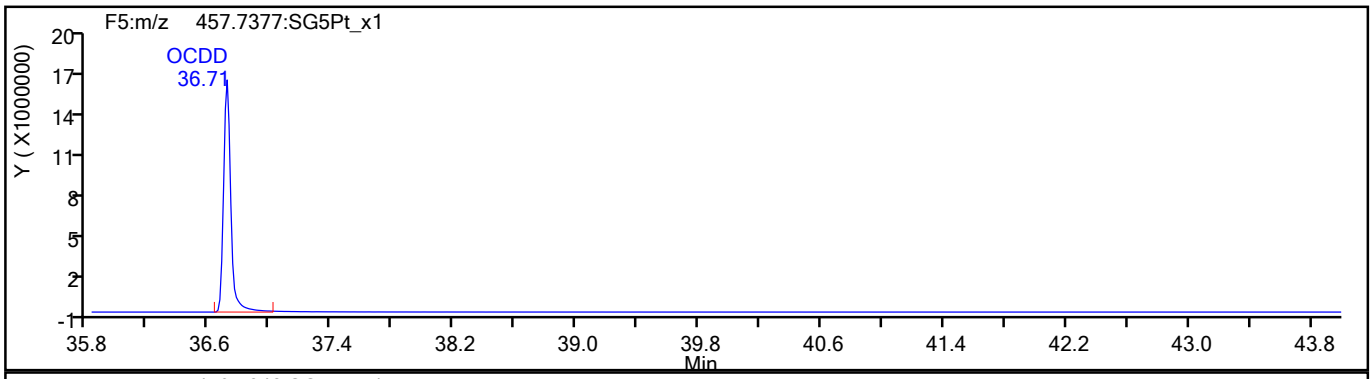

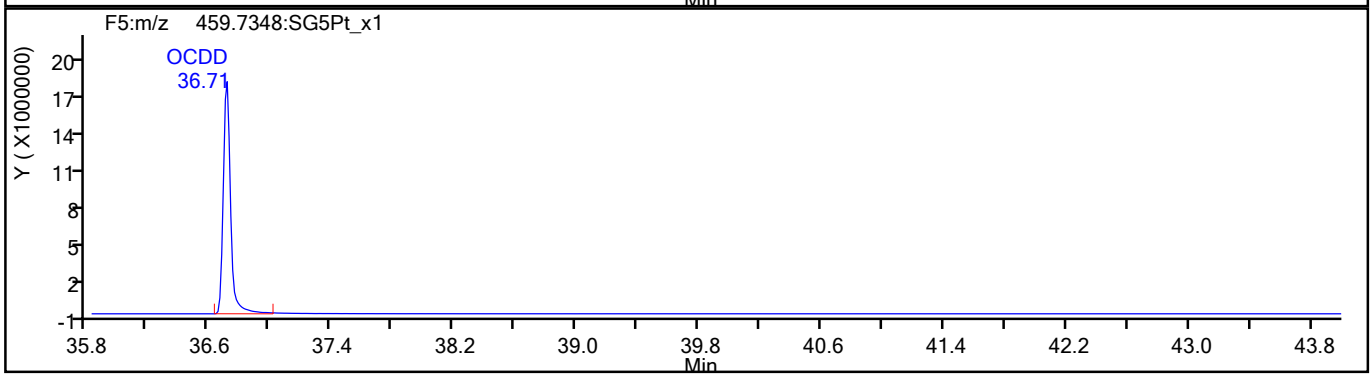

OCDD Standards

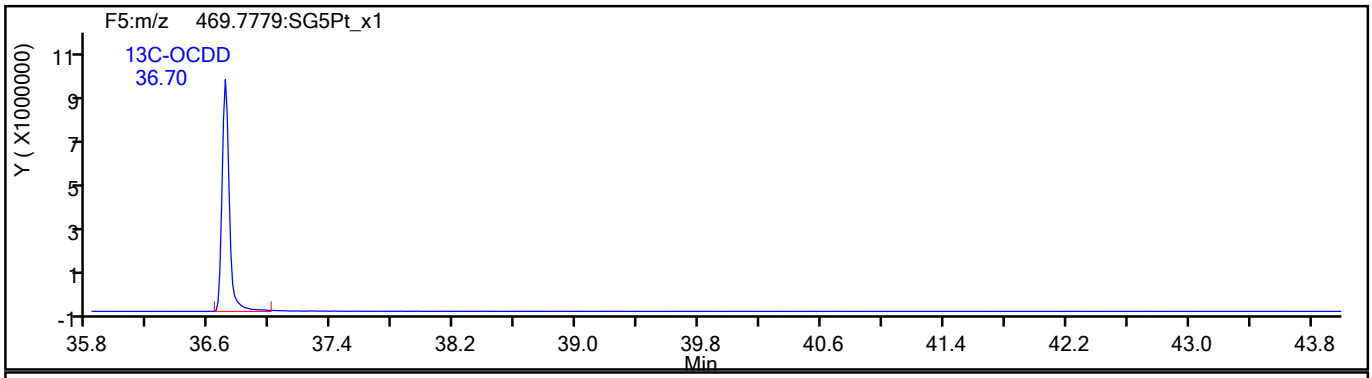

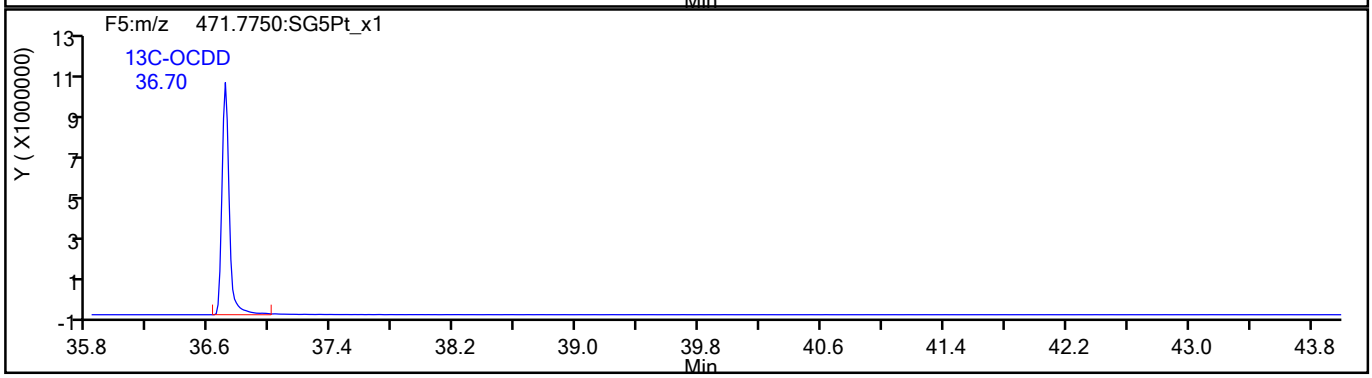

794386

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d		
Injection Date:	26-Aug-2021 02:50:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

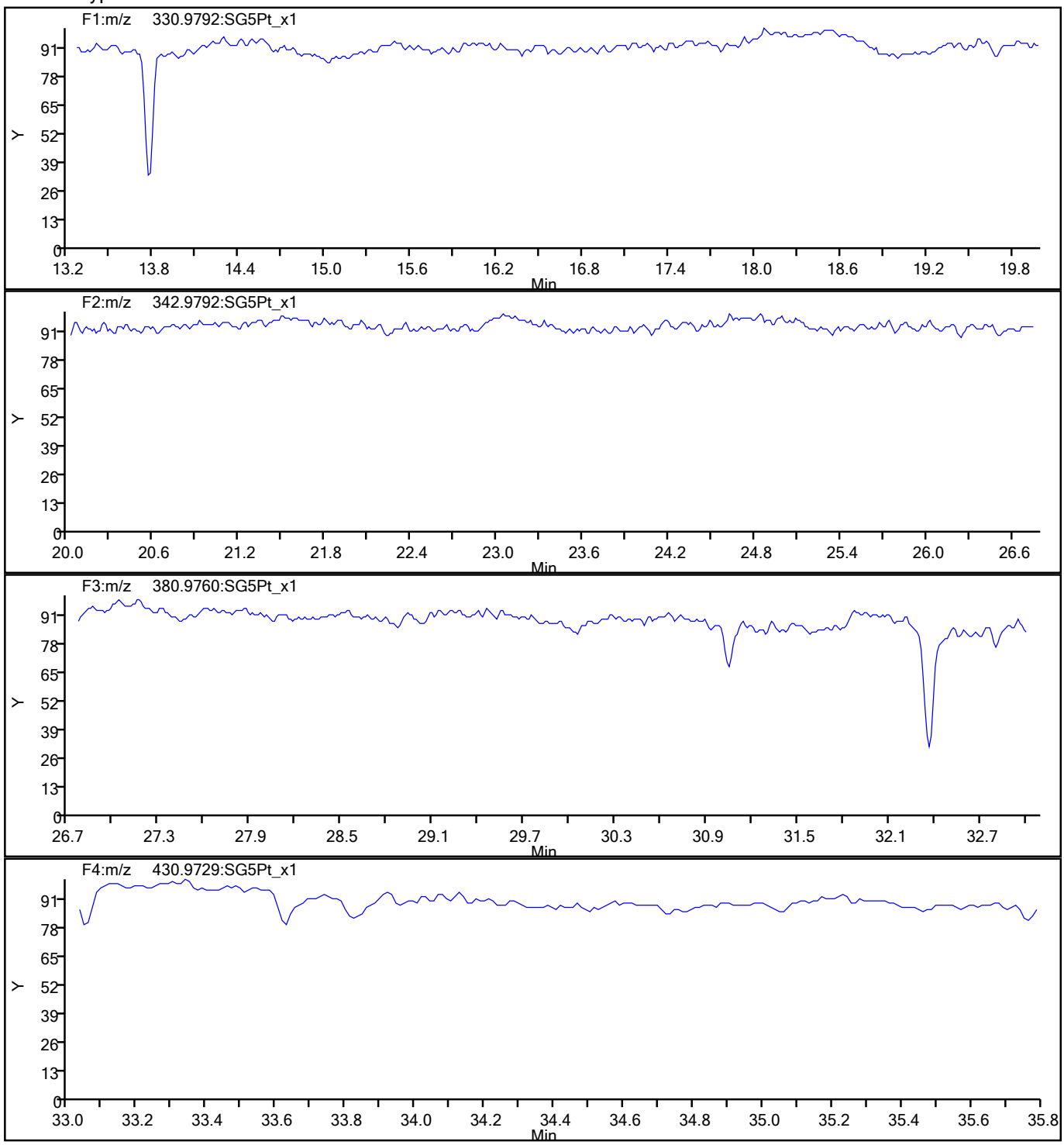

794387

Report Date: 27-Aug-2021 09:10:25 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_23.d		
Injection Date:	26-Aug-2021 02:50:46	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	9
Column Type:	DB-5	Column Dia:	0.32 mm

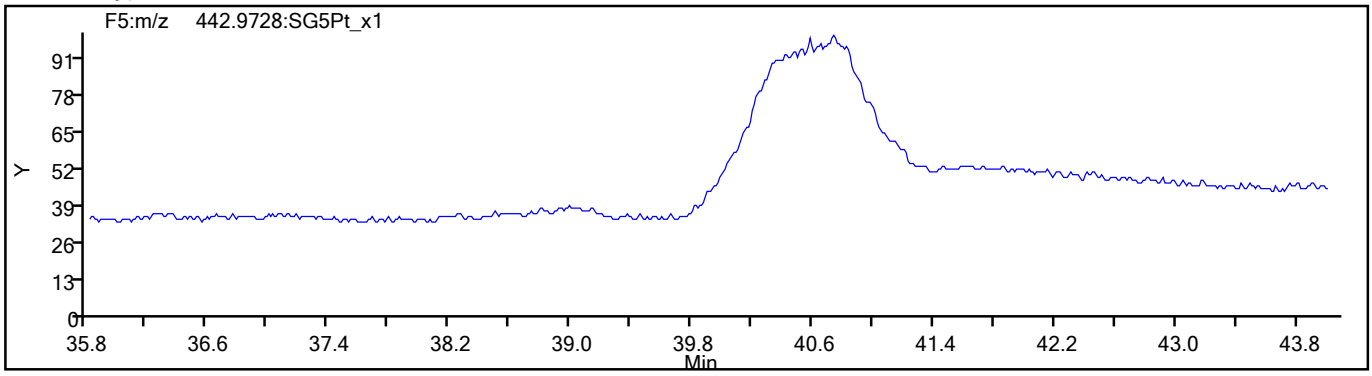

794388

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB091 (2-4) MS RA
Lab Sample ID: 320-77292-2 MS RA
Matrix: Sediment
Lab File ID: 31AU2111D2_011.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 9.79(g)
Date Analyzed: 08/31/2021 19:37
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520997
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	47.7		1.7	0.77

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	60		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_011.d
Lims ID: 320-77292-A-2-B MS
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Sample Type: MS
Inject. Date: 31-Aug-2021 19:37:06 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-2-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:41:37

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.278	41593942	0.76	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.608	33262892	0.79	1.3327	60.0	60.0	0.4131	0.4131	60.01	
2,3,7,8-TCDF	17.622	4793965	0.78	0.9978	14.4	14.4	0.2320	0.2320	144	M
D 13C-2,3,7,8-TCDD	16.058	22549978	0.73	0.8749	62.0	62.0	0.8994	0.8994	61.97	
2,3,7,8-TCDD	16.072	2779452	0.88	1.0570	11.7	11.7	0.3070	0.3070	117	
$ 37Cl4-2,3,7,8-TCDD	16.072	10332144		0.8648	28.7	28.7	0.1192	0.1192	71.81	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_011.d
Lims ID: 320-77292-A-2-B MS
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Sample Type: MS
Inject. Date: 31-Aug-2021 19:37:06 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-2-B MS
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:41:37

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.278	16.275	0		17917510	3703493	14897	37242	249		
333.9339	16.278	16.275	0		23676432	4996073	12486	31215	400	0.76(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.608	17.605	0	1.082	14718680	2689354	10825	27062	248		
317.9389	17.594	17.605	-1	1.081	18544212	3514875	8333	20832	422	0.79(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.622	17.619	0	1.001	2095113	417861	1656	4140	252		M
305.8987	17.608	17.619	-1	1.000	2698852	477706	4088	10220	117	0.78(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.058	16.055	0	0.987	9481958	2178333	14897	37242	146		
333.9339	16.044	16.055	-1	0.986	13068020	2947485	12486	31215	236	0.73(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.072	16.069	0	1.001	1300068	267697	4025	10062	67		
321.8936	16.072	16.069	0	1.001	1479384	308434	2629	6572	117	0.88(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.072	16.069	0	0.987	10332144	2300613	3586	8965	642		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_011.d				
Injection Date:	31-Aug-2021 19:37:06	Instrument ID:	11D2		
Lims ID:	320-77292-A-2-B MS				
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.62
Area: 2139088
Amount: 14.645535
Amount Units: pg/ul

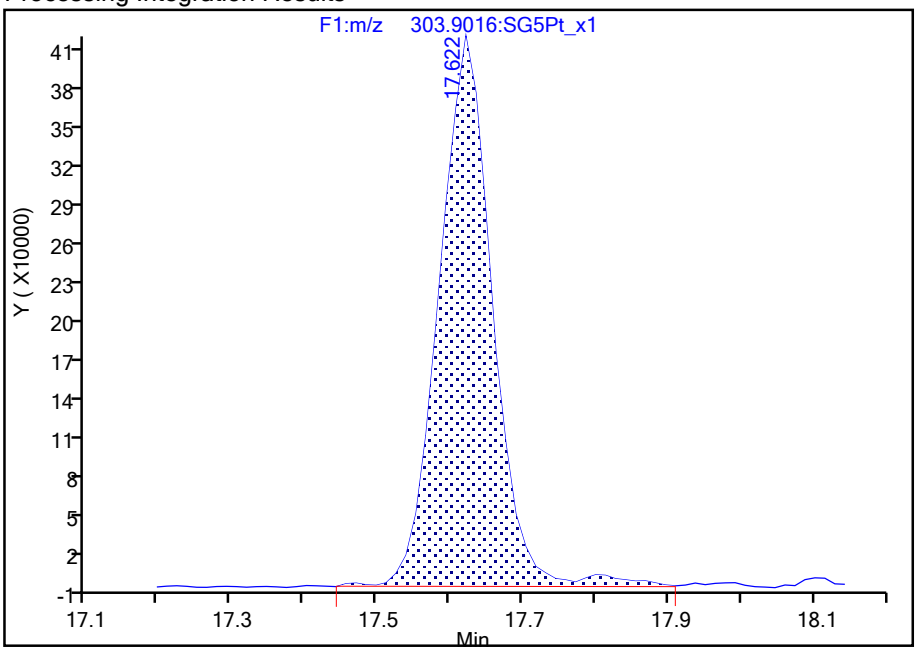

Manual Integration Results

RT: 17.62
Area: 2095113
Amount: 14.444031
Amount Units: pg/ul

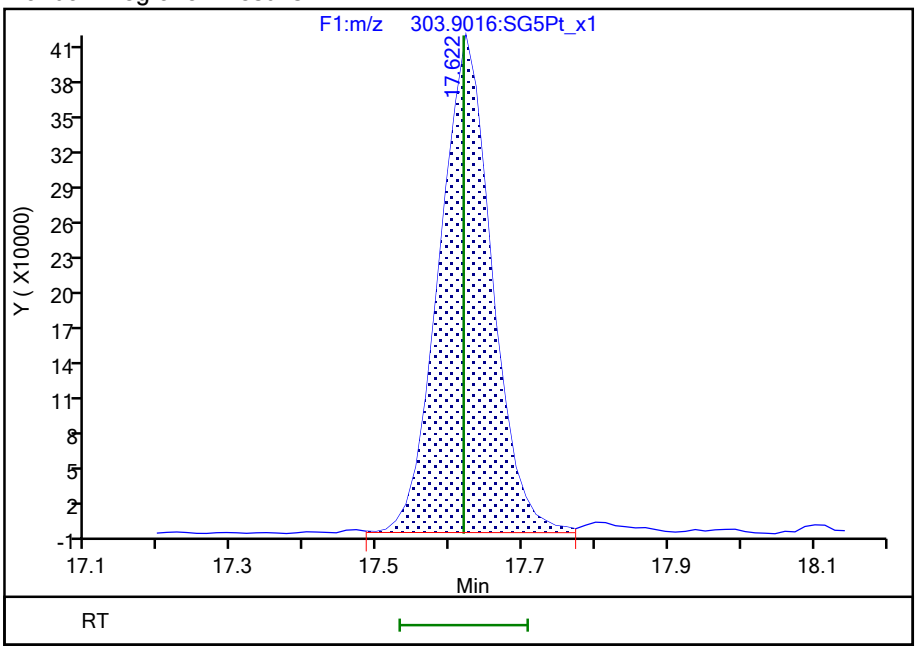

Reviewer: bennettd, 01-Sep-2021 09:41:27

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

794392

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_011.d				
Injection Date:	31-Aug-2021 19:37:06	Instrument ID:	11D2		
Lims ID:	320-77292-A-2-B MS				
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.61
Area: 2721756
Amount: 14.645535
Amount Units: pg/ul

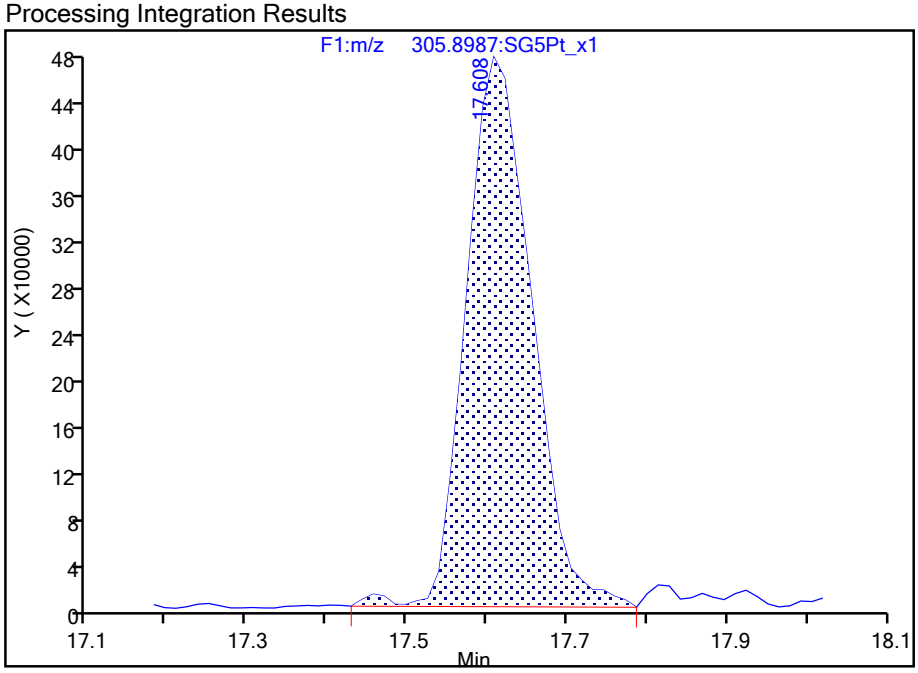

Manual Integration Results

RT: 17.61
Area: 2698852
Amount: 14.444031
Amount Units: pg/ul

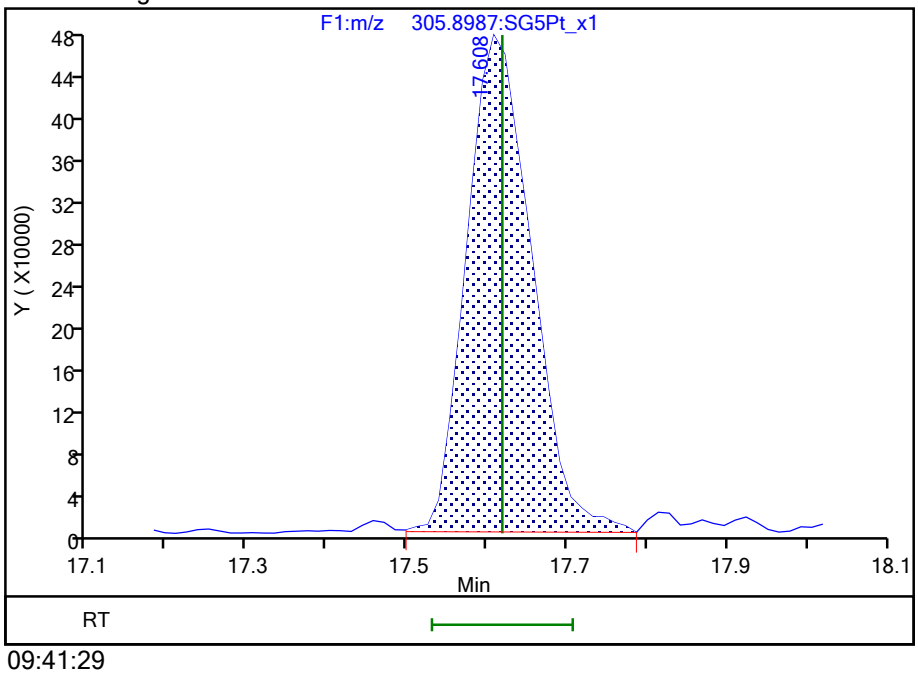

Reviewer: bennettd, 01-Sep-2021 09:41:29

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Report Date: 01-Sep-2021 09:57:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_011.d		
Injection Date:	31-Aug-2021 19:37:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	520997	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

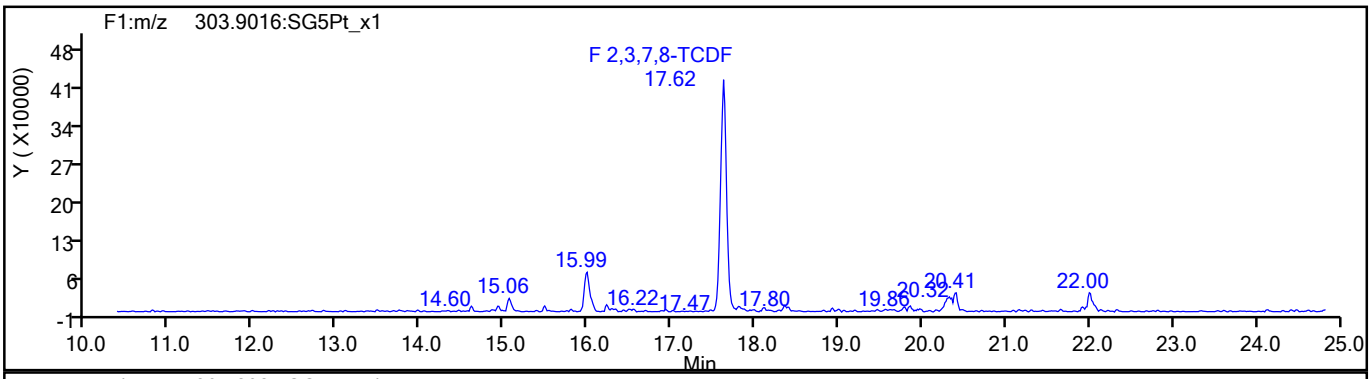

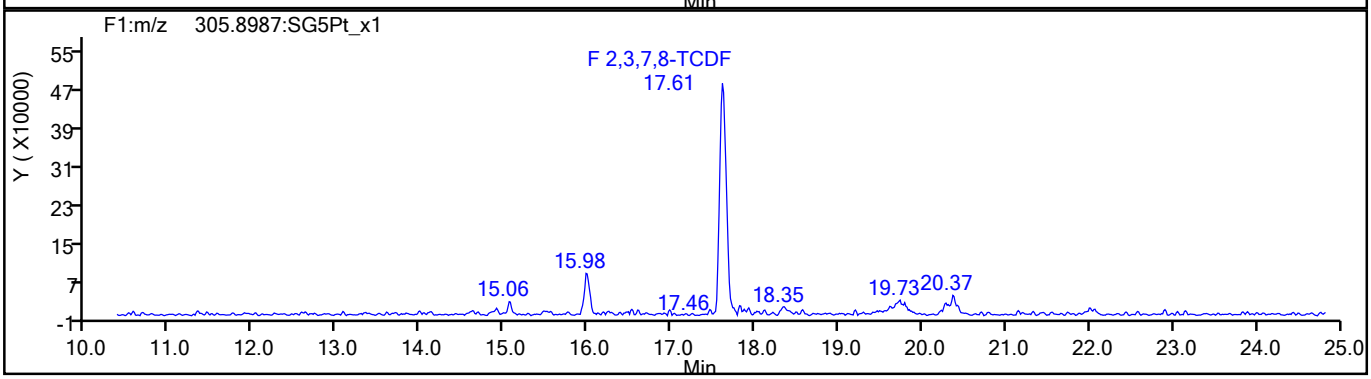

TCDF Standards

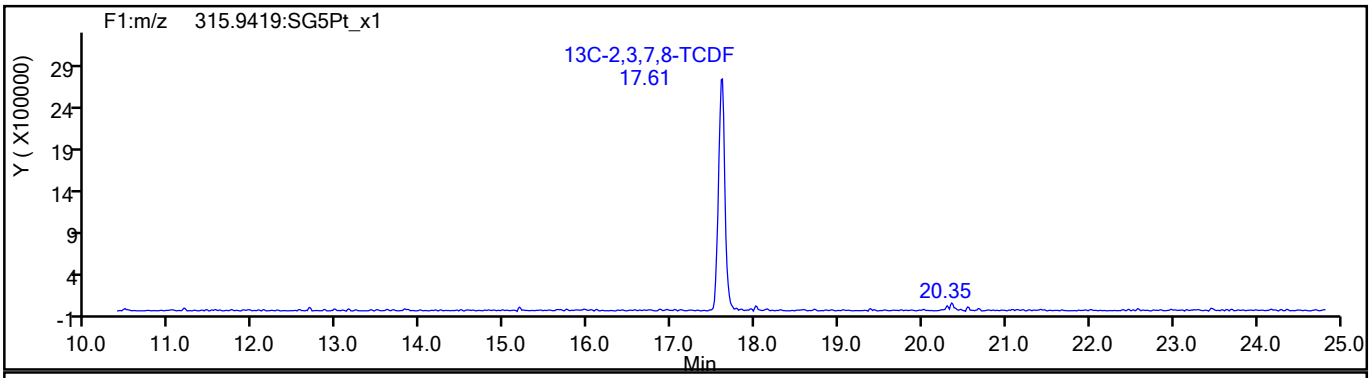

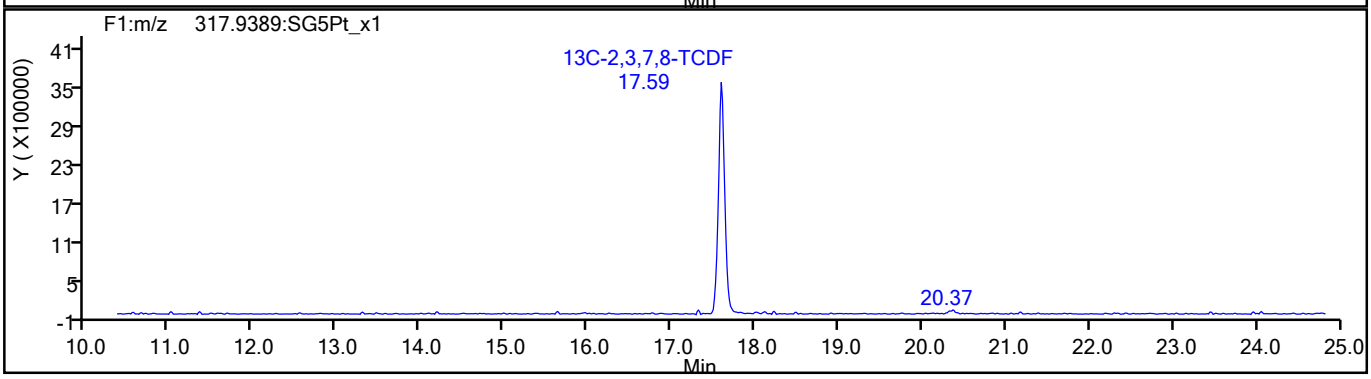

794394

Report Date: 01-Sep-2021 09:57:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_011.d		
Injection Date:	31-Aug-2021 19:37:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	520997	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

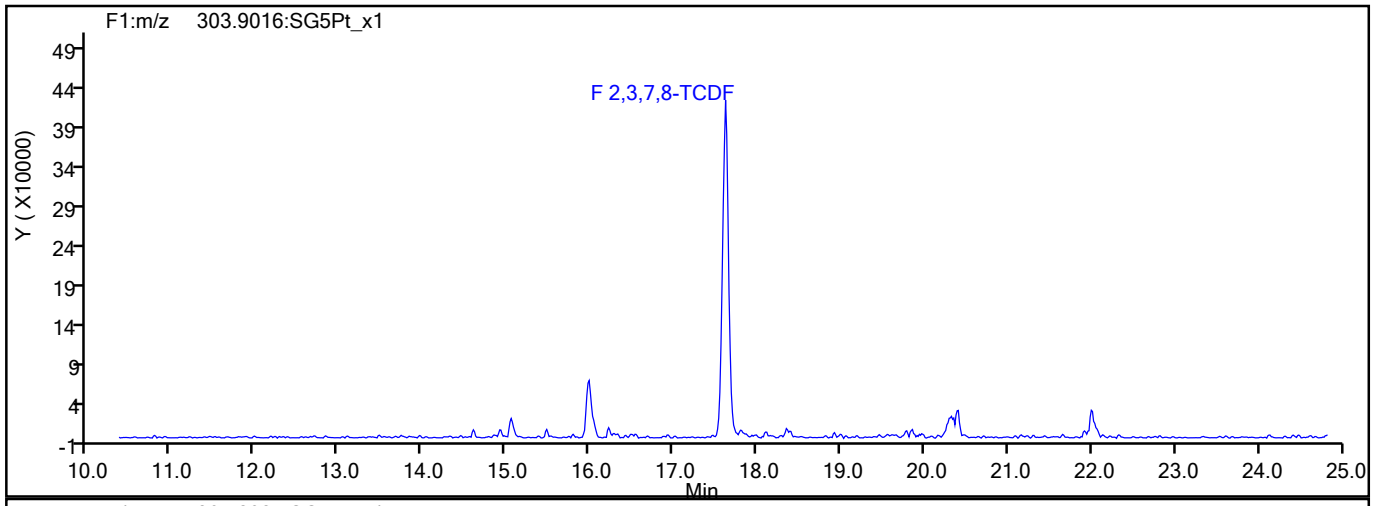

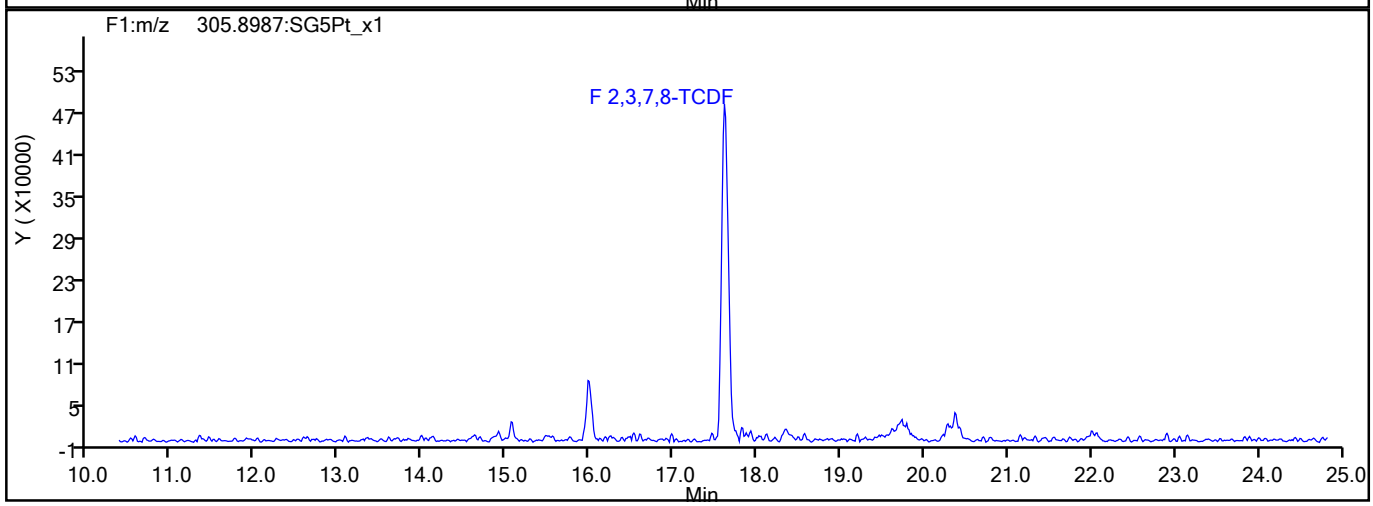

TCDF Interference Mass

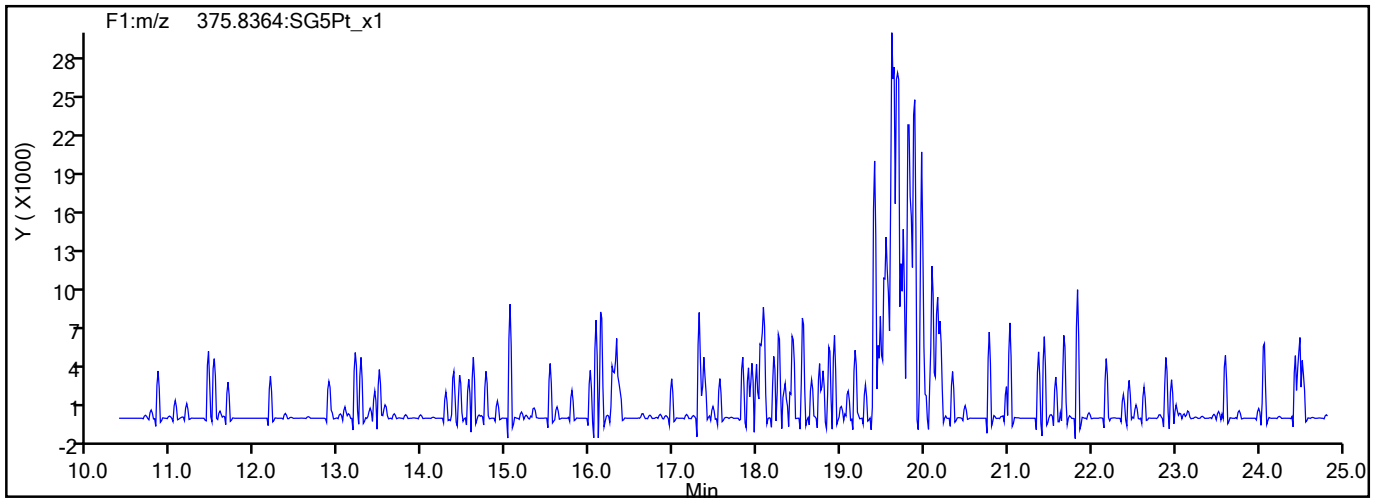

794395

Report Date: 01-Sep-2021 09:57:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_011.d		
Injection Date:	31-Aug-2021 19:37:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	520997	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

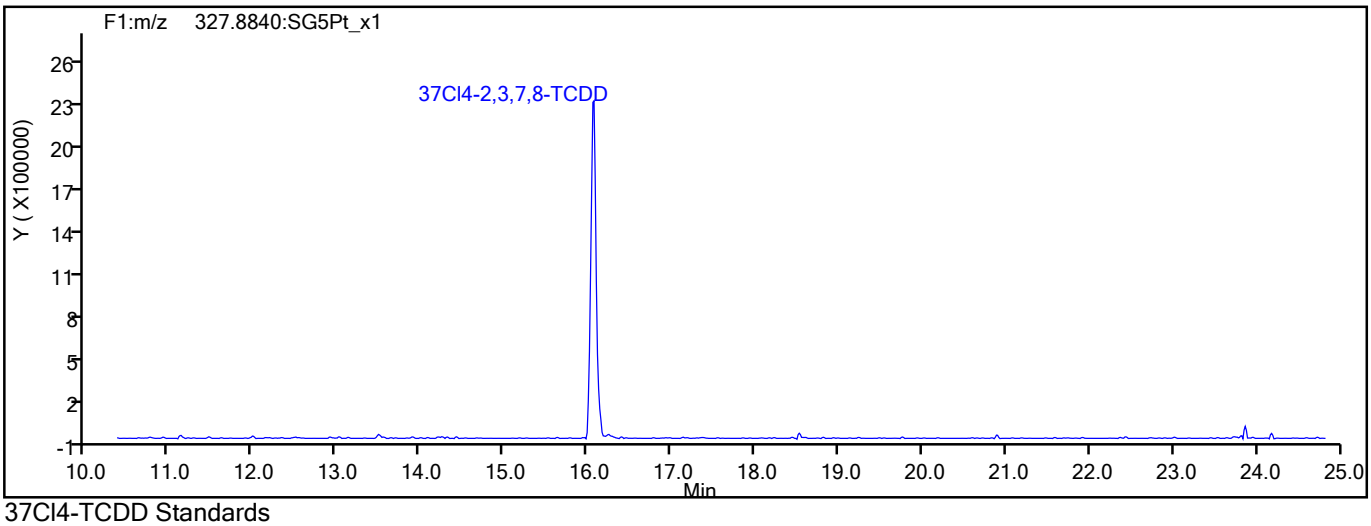

37Cl4-TCDD Standards

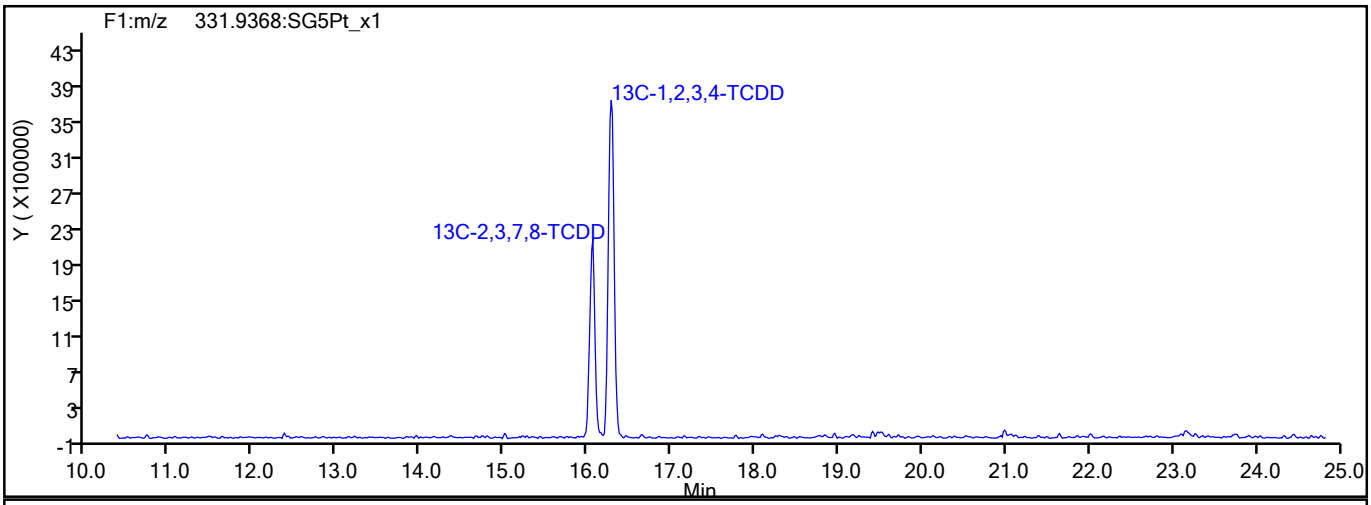

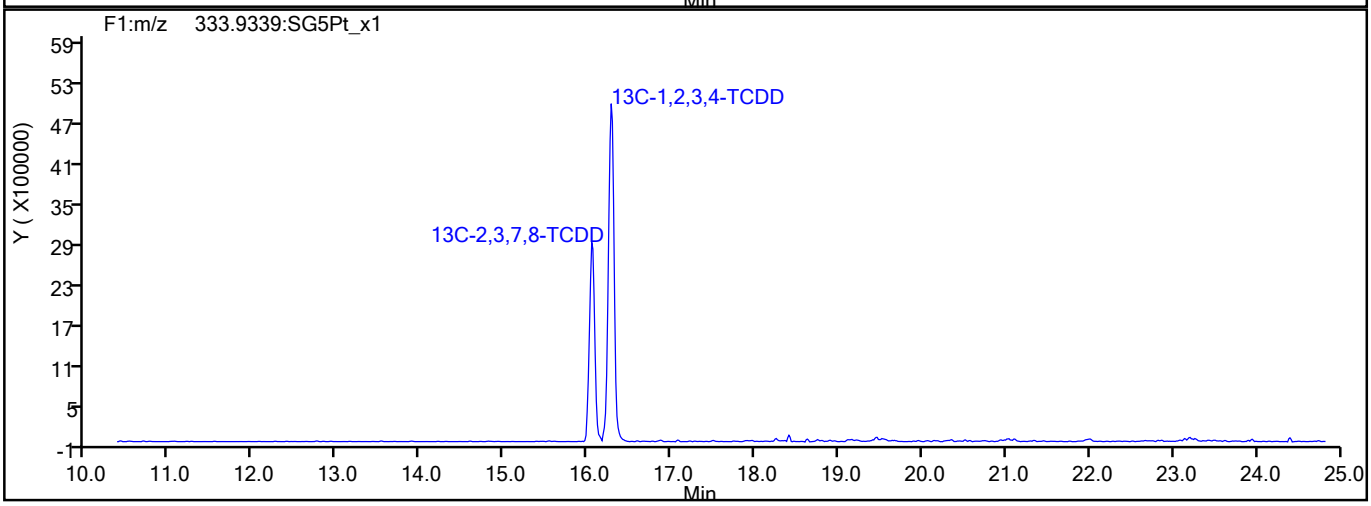

794396

Report Date: 01-Sep-2021 09:57:20 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_011.d		
Injection Date:	31-Aug-2021 19:37:06	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	520997	Sample Line#:	11
Column Type:	DB-225	Column Dia:	0.32 mm

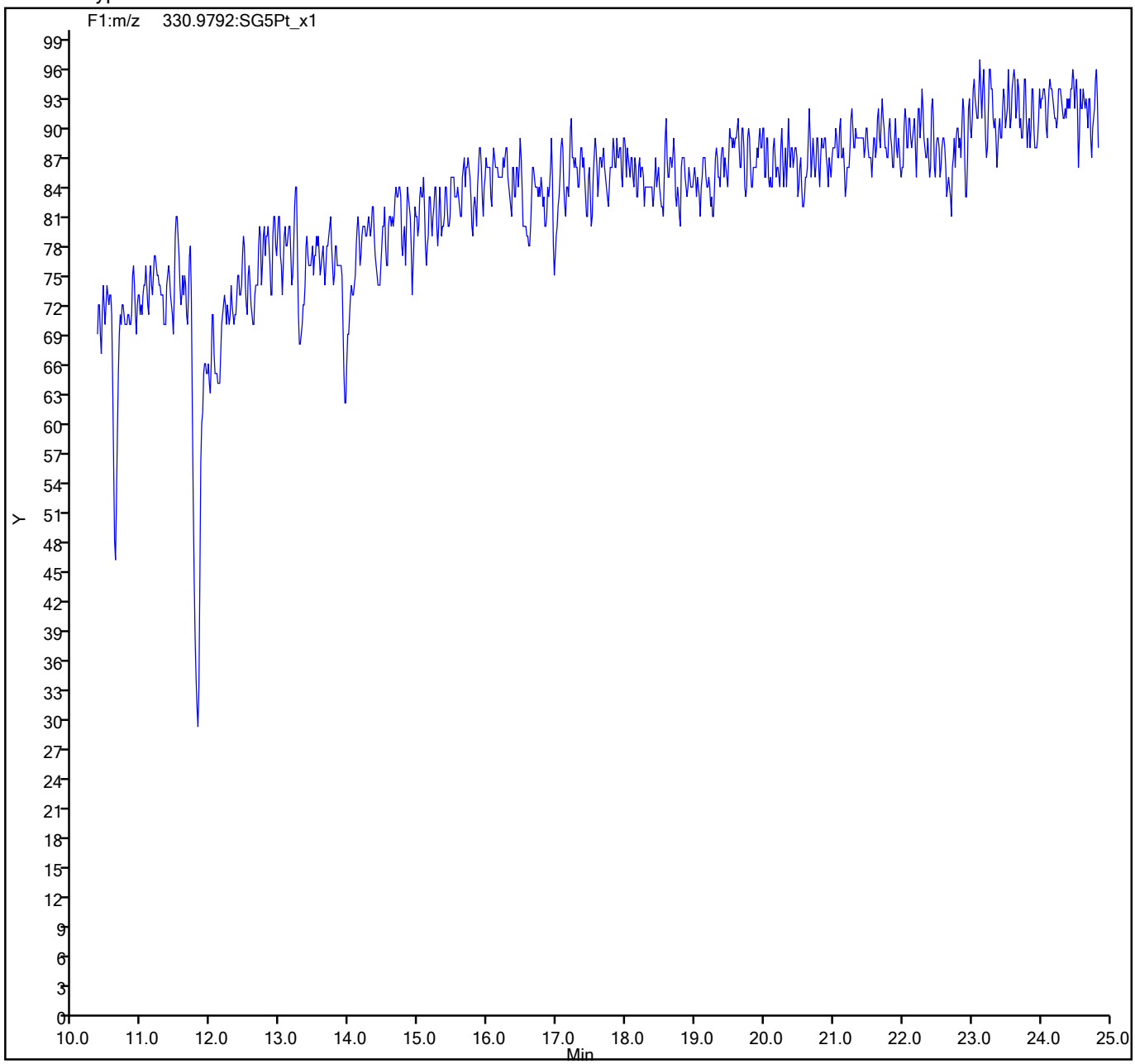

794397

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (2-4) MSD
Lab Sample ID: 320-77292-2 MSD
Matrix: Sediment
Lab File ID: 25AU2110D5_24.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.57(g)
Date Analyzed: 08/26/2021 03:35
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
1746-01-6	2,3,7,8-TCDD	36.1		1.5	0.16
40321-76-4	1,2,3,7,8-PeCDD	161		7.6	0.37
57117-41-6	1,2,3,7,8-PeCDF	162		7.6	0.37
57117-31-4	2,3,4,7,8-PeCDF	150		7.6	0.37
39227-28-6	1,2,3,4,7,8-HxCDD	153		7.6	1.4
57653-85-7	1,2,3,6,7,8-HxCDD	159		7.6	1.4
19408-74-3	1,2,3,7,8,9-HxCDD	154		7.6	1.3
70648-26-9	1,2,3,4,7,8-HxCDF	144		7.6	0.54
57117-44-9	1,2,3,6,7,8-HxCDF	162		7.6	0.55
72918-21-9	1,2,3,7,8,9-HxCDF	158		7.6	0.38
60851-34-5	2,3,4,6,7,8-HxCDF	158		7.6	0.40
35822-46-9	1,2,3,4,6,7,8-HpCDD	203		7.6	1.2
67562-39-4	1,2,3,4,6,7,8-HpCDF	161		7.6	1.7
55673-89-7	1,2,3,4,7,8,9-HpCDF	149		7.6	2.0
3268-87-9	OCDD	1330		15	1.6
39001-02-0	OCDF	301		15	0.19
41903-57-5	Total TCDD	39.6		1.5	0.16
30402-14-3	Total TCDF	69.6		1.5	0.19
36088-22-9	Total PeCDD	163		7.6	0.37
30402-15-4	Total PeCDF	314		7.6	0.37
34465-46-8	Total HxCDD	481		7.6	1.4
55684-94-1	Total HxCDF	621		7.6	0.47
37871-00-4	Total HpCDD	268		7.6	1.2
38998-75-3	Total HpCDF	309		7.6	1.9

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB09 1 (2-4) MSD
Lab Sample ID: 320-77292-2 MSD
Matrix: Sediment
Lab File ID: 25AU2110D5_24.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.57(g)
Date Analyzed: 08/26/2021 03:35
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 519955
Units: pg/g

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
76523-40-5	13C-2,3,7,8-TCDD	59		25-164
89059-46-1	13C-2,3,7,8-TCDF	55		24-169
109719-79-1	13C-1,2,3,7,8-PeCDD	58		25-181
109719-77-9	13C-1,2,3,7,8-PeCDF	57		24-185
116843-02-8	13C-2,3,4,7,8-PeCDF	61		21-178
109719-80-4	13C-1,2,3,4,7,8-HxCDD	64		32-141
109719-81-5	13C-1,2,3,6,7,8-HxCDD	56		28-130
114423-98-2	13C-1,2,3,4,7,8-HxCDF	64		26-152
116843-03-9	13C-1,2,3,6,7,8-HxCDF	54		26-123
116843-04-0	13C-1,2,3,7,8,9-HxCDF	56		29-147
116843-05-1	13C-2,3,4,6,7,8-HxCDF	56		28-136
109719-83-7	13C-1,2,3,4,6,7,8-HpCDD	55		23-140
109719-84-8	13C-1,2,3,4,6,7,8-HpCDF	50		28-143
109719-94-0	13C-1,2,3,4,7,8,9-HpCDF	58		26-138
114423-97-1	13C-OCDD	58		17-157

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	72		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d
Lims ID: 320-77292-A-2-C MSD
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Sample Type: MSD
Inject. Date: 26-Aug-2021 03:35:44 ALS Bottle#: 35 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-2-C MSD 320-77292-A-2-C MSD
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:10:24 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: dadunj Date: 27-Aug-2021 09:10:12

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	17.598	129119828	0.80	6.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.084	116183878	0.77	1.6249	55.4	55.4	0.0924	0.0924	55.38	
2,3,7,8-TCDF	17.099	20943850	0.78	1.0239	17.6	17.6	0.0625	0.0625	176	
A Non-2,3,7,8-sub-TCDF	17.069	6139797	0.77	1.0239	5.161	5.161	0.0625	3.122	0.00	a
S Total TCDF					22.8	22.8	0.0625	0.0625		
D 13C-2,3,7,8-TCDD	17.779	68053237	0.79	0.8993	58.6	58.6	0.1150	0.1150	58.61	
2,3,7,8-TCDD	17.809	10082540	0.77	1.2541	11.8	11.8	0.0515	0.0515	118	
$ 37Cl4-2,3,7,8-TCDD	17.809	40971865		1.1071	28.7	28.7	0.0190	0.0190	71.65	
A Non-2,3,7,8-sub-TCDD	17.530	978492	0.77	1.2541	1.226	1.146	0.0515	0.3978	0.00	RQa
S Total TCDD					13.0	13.0	0.0515	0.0515		RQ
D 13C-1,2,3,7,8-PeCDF	22.020	88587281	1.56	1.2101	56.7	56.7	0.0805	0.0805	56.70	
1,2,3,7,8-PeCDF	22.047	49711907	1.60	1.0611	52.9	52.9	0.1195	0.1195	106	
D 13C-2,3,4,7,8-PeCDF	23.343	97519032	1.55	1.2395	60.9	60.9	0.0786	0.0786	60.93	
2,3,4,7,8-PeCDF	23.370	48881126	1.58	1.0184	49.2	49.2	0.1217	0.1217	98.44	
A F1 PeCDFs	19.851						0.0178	0.0178		
A Non-2,3,7,8-sub-PeCDF	23.067	497077	1.65	1.0398	0.5138	0.5138	0.1206	0.5138	0.00	
S Total PeCDF					102.6	102.6	0.1206	0.1206		
D 13C-1,2,3,7,8-PeCDD	24.038	57306488	1.60	0.7612	58.3	58.3	0.0440	0.0440	58.30	
1,2,3,7,8-PeCDD	24.079	31591913	1.59	1.0484	52.6	52.6	0.1198	0.1198	105	
A Non-2,3,7,8-sub-PeCDD	23.696	502347	1.62	1.0484	0.8361	0.8361	0.1198	0.4254	0.00	
S Total PeCDD					53.4	53.4	0.1198	0.1198		
D 13C-1,2,3,4,7,8-HxCDF	30.173	81063260	0.52	1.0837	63.8	63.8	0.1574	0.1574	63.84	
1,2,3,4,7,8-HxCDF	30.199	41312804	1.24	1.0851	47.0	47.0	0.1777	0.1777	93.93	
D 13C-1,2,3,6,7,8-HxCDF	30.386	71449998	0.52	1.1279	54.1	54.1	0.1512	0.1512	54.06	
1,2,3,6,7,8-HxCDF	30.412	42612325	1.23	1.1260	53.0	53.0	0.1800	0.1800	106	
D 13C-2,3,4,6,7,8-HxCDF	31.291	69287526	0.52	1.0637	55.6	55.6	0.1603	0.1603	55.59	
2,3,4,6,7,8-HxCDF	31.304	41819885	1.21	1.1675	51.7	51.7	0.1307	0.1307	103	
D 13C-1,2,3,7,8,9-HxCDF	32.129	63417641	0.52	0.9676	55.9	55.9	0.1763	0.1763	55.93	
1,2,3,7,8,9-HxCDF	32.143	38146712	1.21	1.1664	51.6	51.6	0.1236	0.1236	103	
A Non-2,3,7,8-sub-HxCDF	30.331						0.1491	0.1491		

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
S Total HxCDF					203.2	203.2	0.1530	0.1530		
* 13C-1,2,3,7,8,9-HxCDD	31.943	117182006	1.24	6.2E+05	100.0	100.0				
D 13C-1,2,3,4,7,8-HxCDD	31.490	54740405	1.26	0.7334	63.7	63.7	0.1968	0.1968	63.69	
1,2,3,4,7,8-HxCDD	31.504	29075370	1.26	1.0640	49.9	49.9	0.4460	0.4460	99.84	
D 13C-1,2,3,6,7,8-HxCDD	31.610	57409595	1.24	0.8802	55.7	55.7	0.1640	0.1640	55.66	
1,2,3,6,7,8-HxCDD	31.624	29864489	1.25	1.0001	52.0	52.0	0.4722	0.4722	104	
1,2,3,7,8,9-HxCDD	31.956	32093266	1.26	1.1325	50.5	50.5	0.4180	0.4180	101	
A Non-2,3,7,8-sub-HxCDD	30.519	2956593	1.32	1.0655	4.948	4.948	0.4443	3.210	0.00	
S Total HxCDD					157.4	157.4	0.4454	0.4454		
D 13C-1,2,3,4,6,7,8-HpCDF	33.603	45097122	0.43	0.7730	49.8	49.8	0.5384	0.5384	49.78	
1,2,3,4,6,7,8-HpCDF	33.615	34148002	1.01	1.4413	52.5	52.5	0.5703	0.5703	105	
D 13C-1,2,3,4,7,8,9-HpCDF	34.672	47904128	0.43	0.7008	58.3	58.3	0.5939	0.5939	58.33	
1,2,3,4,7,8,9-HpCDF	34.685	30714852	1.05	1.3174	48.7	48.7	0.6487	0.6487	97.34	
A Non-2,3,7,8-sub-HpCDF	34.138						0.6075	0.6075		
S Total HpCDF					101.2	101.2	0.6095	0.6095		
D 13C-1,2,3,4,6,7,8-HpCDD	34.393	41625064	0.99	0.6472	54.9	54.9	0.2996	0.2996	54.88	
1,2,3,4,6,7,8-HpCDD	34.405	30293578	1.00	1.0943	66.5	66.5	0.3952	0.3952	133	
A Non-2,3,7,8-sub-HpCDD	34.223	9580121	0.98	1.0943	21.0	21.0	0.3952	21.0	0.00	a
S Total HpCDD					87.5	87.5	0.3952	0.3952		
D 13C-OCDD	36.701	61194181	0.88	0.4472	116.8	116.8	0.1991	0.1991	58.39	
OCDF	36.797	43349943	0.90	1.4382	98.5	98.5	0.0638	0.0638	98.51	
OCDD	36.713	147177713	0.89	1.1070	434.5	434.5	0.5086	0.5086	435	
1,3,6,8-TCDF	15.209	438751	0.78							
1,3,6,8-TCDD	15.617	103800	1.03							R
2,3,4,7-TCDF	17.522	601200	0.83							
1,2,3,7-TCDD	18.157	193072	0.69							
1,2,3,9-TCDD	18.414						0.0	0.0		
1,2,3,9-TCDF	18.414						0.0	0.0		
1,2,8,9-TCDD	19.382						0.0	0.0		
1,2,8,9-TCDF	19.427						0.0	0.0		
1,3,4,6,8-PeCDF	19.669						0.0	0.0		
1,2,4,7,9-PeCDD	21.480						0.0	0.0		
1,2,3,8,9-PeCDD	25.790						0.0	0.0		
1,2,3,8,9-PeCDF	26.021						0.0	0.0		
1,2,3,4,6,8-HxCDF	28.333						0.0	0.0		
1,2,4,6,7,9-HxCDD	29.890						0.0	0.0		
1,2,3,4,6,7-HxCDD	31.956						0.0	0.0		U
1,2,3,4,8,9-HxCDF	32.143						0.0	0.0		U
1,2,3,4,6,7,9-HpCDD	33.858						0.0	0.0		U
1,2,3,4,6,7,9-HpCDF	33.615						0.0	0.0		U
1,2,3,8-TCDD	0.0						0.0	0.0		
1,3,7,9-TCDD	0.0						0.0	0.0		
1,2,3,4,7-PeCDD	0.0						0.0	0.0		
1,4,7,8-TCDD	0.0						0.0	0.0		

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

U - Marked Undetected

a - User Assigned ID

Report Date: 27-Aug-2021 09:11:37 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d
Lims ID: 320-77292-A-2-C MSD
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Sample Type: MSD
Inject. Date: 26-Aug-2021 03:35:44 ALS Bottle#: 35 Worklist Smp#: 10
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-2-C MSD 320-77292-A-2-C MSD
Misc. Info.: 25AU2110D5
Operator ID: SMA Instrument ID: 10D5

Method: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\Dioxin_10D5.m
Limit Group: HR - 1613B - ICAL
Last Update: 27-Aug-2021 09:10:24 Calib Date: 26-Jul-2021 13:51:48
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\10D5\20210726-123621.b\26JL2110D5_7.d

Column 1 : DB-5 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1629

First Level Reviewer: dadunj Date: 27-Aug-2021 09:10:12

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	17.598	17.598	0		57333383	14864907	6232	15580	2385		
333.9339	17.598	17.598	0		71786445	18492062	7563	18907	2445	0.80(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.084	17.084	0	0.971	50396963	12651065	8869	22172	1426		
317.9389	17.084	17.084	0	0.971	65786915	16690911	11174	27935	1494	0.77(0.65-0.89)	
2,3,7,8-TCDF											
303.9016	17.099	17.099	0	1.001	9182452	2278652	3437	8592	663		
305.8987	17.099	17.099	0	1.001	11761398	2977471	4074	10185	731	0.78(0.65-0.89)	
A Non-2,3,7,8-sub-TCDF											a
303.9016	15.209	17.069	-111	0.890	191666	56256	3437	8592	16		a
305.8987	15.209	17.069	-111	0.890	247085	73458	4074	10185	18	0.78(0.65-0.89)	
303.9016	15.723	17.069	-81	0.920	99403	27766	3437	8592	8		
305.8987	15.708	17.069	-81	0.919	133879	31063	4074	10185	8	0.74(0.65-0.89)	
303.9016	15.995	17.069	-64	0.936	141956	29968	3437	8592	9		
305.8987	15.995	17.069	-64	0.936	191831	40193	4074	10185	10	0.74(0.65-0.89)	
303.9016	16.222	17.069	-51	0.950	140154	35913	3437	8592	10		
305.8987	16.207	17.069	-52	0.949	196852	49046	4074	10185	12	0.71(0.65-0.89)	
303.9016	16.449	17.069	-37	0.963	135661	34493	3437	8592	10		
305.8987	16.449	17.069	-37	0.963	184917	49376	4074	10185	12	0.73(0.65-0.89)	
303.9016	16.736	17.069	-20	0.980	1631530	430342	3437	8592	125		
305.8987	16.736	17.069	-20	0.980	2082185	546587	4074	10185	134	0.78(0.65-0.89)	
303.9016	16.948	17.069	-7	0.992	88299	19581	3437	8592	6		
305.8987	16.948	17.069	-7	0.992	101791	26766	4074	10185	7	0.87(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
303.9016	18.898	17.069	110	1.106	251350	58118	3437	8592	17		
305.8987	18.898	17.069	110	1.106	321238	75519	4074	10185	19	0.78(0.65-0.89)	
13C-2,3,7,8-TCDD											
331.9368	17.779	17.779	0	1.010	30132986	7299037	6232	15580	1171		
333.9339	17.779	17.779	0	1.010	37920251	9140754	7563	18907	1209	0.79(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	17.809	17.794	1	1.002	4374083	1086383	1935	4837	561		
321.8936	17.809	17.794	1	1.002	5708457	1374935	2314	5785	594	0.77(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8847	17.809	17.809	0	1.012	40971865	9946341	2800	7000	3552		
A Non-2,3,7,8-sub-TCDD											RQa
319.8965	15.904	17.530	-97	0.895	58811	16977	1935	4837	9		
	Empc Correction				47905	14390	1935	4837	7		
321.8936	15.904	17.530	-97	0.895	62215	18689	2314	5785	8	0.95(0.65-0.89)	
319.8965	16.691	17.530	-50	0.939	156678	39910	1935	4837	21		
321.8936	16.691	17.530	-50	0.939	179133	46802	2314	5785	20	0.87(0.65-0.89)	
319.8965	17.688	17.530	10	0.995	204859	43902	1935	4837	23		
	Empc Correction				147687	43879	1935	4837	23		
321.8936	17.688	17.530	10	0.995	191802	56986	2314	5785	25	1.07(0.65-0.89)	
319.8965	18.157	17.530	38	1.021	78852	19970	1935	4837	10		a
321.8936	18.157	17.530	38	1.021	114220	27315	2314	5785	12	0.69(0.65-0.89)	
13C-1,2,3,7,8-PeCDF											
351.9000	22.020	22.020	0	1.251	54044106	9989909	7543	18857	1324		
353.8970	22.020	22.020	0	1.251	34543175	6426330	5450	13625	1179	1.56(1.32-1.78)	
1,2,3,7,8-PeCDF											
339.8597	22.047	22.047	0	1.001	30566290	5690464	4834	12085	1177		
341.8567	22.047	22.047	0	1.001	19145617	3534136	3493	8732	1012	1.60(1.32-1.78)	
13C-2,3,4,7,8-PeCDF											
351.9000	23.343	23.343	0	1.326	59247407	10173763	7543	18857	1349		
353.8970	23.343	23.343	0	1.326	38271625	6618045	5450	13625	1214	1.55(1.32-1.78)	
2,3,4,7,8-PeCDF											
339.8597	23.370	23.370	0	1.001	29925095	5104500	4834	12085	1056		
341.8567	23.356	23.370	-1	1.001	18956031	3282092	3493	8732	940	1.58(1.32-1.78)	
A F1 PeCDFs											
339.8597	19.851						391	977			
341.8567	19.851						836	2090			
A Non-2,3,7,8-sub-PeCDF											
339.8597	22.566	23.067	-30	1.025	309395	48342	4834	12085	10		
341.8567	22.552	23.067	-31	1.024	187682	29862	3493	8732	9	1.65(1.32-1.78)	
13C-1,2,3,7,8-PeCDD											
367.8949	24.038	24.052	-1	1.366	35239583	5688784	2722	6805	2090		
369.8919	24.038	24.052	-1	1.366	22066905	3541267	1745	4362	2029	1.60(1.32-1.78)	
1,2,3,7,8-PeCDD											
355.8546	24.079	24.079	0	1.002	19405984	3148659	2857	7142	1102		
357.8516	24.066	24.079	-1	1.001	12185929	1958032	1780	4450	1100	1.59(1.32-1.78)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
A Non-2,3,7,8-sub-PeCDD											
355.8546	21.652	23.696	-122	0.901	157228	30689	2857	7142	11		
357.8516	21.652	23.696	-122	0.901	98351	22271	1780	4450	13	1.60(1.32-1.78)	
355.8546	22.620	23.696	-64	0.941	153585	30486	2857	7142	11		
357.8516	22.620	23.696	-64	0.941	93183	18704	1780	4450	11	1.65(1.32-1.78)	
13C-1,2,3,4,7,8-HxCDF											
383.8639	30.173	30.186	-1	0.945	27678178	4855124	8022	20055	605		
385.8610	30.173	30.186	-1	0.945	53385082	9313677	14719	36797	633	0.52(0.43-0.59)	
1,2,3,4,7,8-HxCDF											
373.8208	30.199	30.212	-1	1.001	22878657	4043681	6076	15190	666		
375.8178	30.199	30.212	-1	1.001	18434147	3289341	4855	12137	678	1.24(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDF											
383.8639	30.386	30.399	-1	0.951	24374362	4629127	8022	20055	577		
385.8610	30.386	30.399	-1	0.951	47075636	8852240	14719	36797	601	0.52(0.43-0.59)	
1,2,3,6,7,8-HxCDF											
373.8208	30.412	30.412	0	1.001	23471011	4391731	6076	15190	723		
375.8178	30.412	30.412	0	1.001	19141314	3576763	4855	12137	737	1.23(1.05-1.43)	
13C-2,3,4,6,7,8-HxCDF											
383.8639	31.291	31.291	0	0.980	23773822	6106449	8022	20055	761		
385.8610	31.291	31.291	0	0.980	45513704	11807780	14719	36797	802	0.52(0.43-0.59)	
2,3,4,6,7,8-HxCDF											
373.8208	31.304	31.317	-1	1.000	22925186	5861039	6076	15190	965		
375.8178	31.304	31.317	-1	1.000	18894699	4868442	4855	12137	1003	1.21(1.05-1.43)	
13C-1,2,3,7,8,9-HxCDF											
383.8639	32.129	32.142	-1	1.006	21744622	6522423	8022	20055	813		
385.8610	32.129	32.142	-1	1.006	41673019	12431011	14719	36797	845	0.52(0.43-0.59)	
1,2,3,7,8,9-HxCDF											
373.8208	32.143	32.156	-1	1.000	20883569	6097975	6076	15190	1004		
375.8178	32.143	32.156	-1	1.000	17263143	5166886	4855	12137	1064	1.21(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDF											
373.8208	30.331						6076	15190			
375.8178	30.331						4855	12137			
13C-1,2,3,7,8,9-HxCDD											
401.8559	31.943	31.956	-1		64971527	18449989	9686	24215	1905		
403.8529	31.943	31.956	-1		52210479	14883136	9557	23892	1557	1.24(1.05-1.43)	
13C-1,2,3,4,7,8-HxCDD											
401.8559	31.490	31.503	-1	0.986	30567934	8653447	9686	24215	893		
403.8529	31.490	31.503	-1	0.986	24172471	6864446	9557	23892	718	1.26(1.05-1.43)	
1,2,3,4,7,8-HxCDD											
389.8157	31.504	31.517	-1	1.000	16218836	4477797	15730	39325	285		
391.8127	31.504	31.517	-1	1.000	12856534	3612166	13724	34310	263	1.26(1.05-1.43)	
13C-1,2,3,6,7,8-HxCDD											
401.8559	31.610	31.610	0	0.990	31763999	8638970	9686	24215	892		
403.8529	31.610	31.610	0	0.990	25645596	6952840	9557	23892	728	1.24(1.05-1.43)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,6,7,8-HxCDD											
389.8157	31.624	31.623	0	1.000	16617030	4729545	15730	39325	301		
391.8127	31.624	31.623	0	1.000	13247459	3748316	13724	34310	273	1.25(1.05-1.43)	
1,2,3,7,8,9-HxCDD											
389.8157	31.956	31.969	-1	1.015	17869353	5147258	15730	39325	327		
391.8127	31.956	31.969	-1	1.015	14223913	4190230	13724	34310	305	1.26(1.05-1.43)	
A Non-2,3,7,8-sub-HxCDD											
389.8157	29.068	30.519	-87	0.920	1092314	144277	15730	39325	9		
391.8127	29.041	30.519	-88	0.919	825707	120380	13724	34310	9	1.32(1.05-1.43)	
389.8157	30.692	30.519	10	0.971	590253	116328	15730	39325	7		
391.8127	30.692	30.519	10	0.971	448319	92346	13724	34310	7	1.32(1.05-1.43)	
13C-1,2,3,4,6,7,8-HpCDF											
417.8253	33.603	33.603	0	1.052	13662383	5367459	17615	44037	305		
419.8220	33.603	33.603	0	1.052	31434739	12263600	37881	94702	324	0.43(0.37-0.51)	
1,2,3,4,6,7,8-HpCDF											
407.7818	33.615	33.603	1	1.000	17161497	6635243	27262	68155	243		
409.7789	33.615	33.603	1	1.000	16986505	6270912	30710	76775	204	1.01(0.88-1.20)	
13C-1,2,3,4,7,8,9-HpCDF											
417.8253	34.672	34.672	0	1.085	14473973	5083499	17615	44037	289		
419.8220	34.672	34.672	0	1.085	33430155	11875294	37881	94702	313	0.43(0.37-0.51)	
1,2,3,4,7,8,9-HpCDF											
407.7818	34.685	34.673	1	1.000	15742185	5461465	27262	68155	200		
409.7789	34.685	34.673	1	1.000	14972667	5098467	30710	76775	166	1.05(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDF											
407.7818	34.138						27262	68155			
409.7789	34.138						30710	76775			
13C-1,2,3,4,6,7,8-HpCDD											
435.8169	34.393	34.393	0	1.077	20717494	7321890	13147	32867	557		
437.8140	34.393	34.393	0	1.077	20907570	7066919	12709	31772	556	0.99(0.88-1.20)	
1,2,3,4,6,7,8-HpCDD											
423.7766	34.405	34.393	1	1.000	15167124	5292625	11995	29987	441		
425.7737	34.393	34.393	0	1.000	15126454	5203261	12897	32242	403	1.00(0.88-1.20)	
A Non-2,3,7,8-sub-HpCDD											a
423.7766	33.858	34.223	-22	0.984	4734718	1793427	11995	29987	150		a
425.7737	33.858	34.223	-22	0.984	4845403	1700197	12897	32242	132	0.98(0.88-1.20)	
13C-OCDD											
469.7779	36.701	36.701	0	1.149	28657532	8704791	5648	14120	1541		
471.7750	36.701	36.701	0	1.149	32536649	9923551	6223	15557	1595	0.88(0.76-1.02)	
OCDF											
441.7428	36.797	36.797	0	1.003	20525472	6488006	1620	4050	4005		
443.7399	36.797	36.797	0	1.003	22824471	7047204	1796	4490	3924	0.90(0.76-1.02)	
OCDD											
457.7377	36.713	36.713	0	1.000	69476770	20931683	12390	30975	1689		
459.7348	36.701	36.713	-1	1.000	77700943	23135902	8586	21465	2695	0.89(0.76-1.02)	
1,3,6,8-TCDF											
303.9016	15.209	14.710	30		191666	56256	3437	8592	16		
305.8987	15.209	14.710	30		247085	73458	4074	10185	18	0.78(0.65-0.89)	

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,3,6,8-TCDD											R
319.8965	15.617	15.617	0		52729	15649	1935	4837	8		
321.8936	15.617	15.617	0		51071	14369	2314	5785	6	1.03(0.65-0.89)	
2,3,4,7-TCDF											
303.9016	17.522	17.537	-1		273008	59427	3437	8592	17		
305.8987	17.522	17.537	-1		328192	76267	4074	10185	19	0.83(0.65-0.89)	
1,2,3,7-TCDD											
319.8965	18.157	18.172	-1		78852	19970	1935	4837	10		
321.8936	18.157	18.172	-1		114220	27315	2314	5785	12	0.69(0.65-0.89)	
1,2,3,9-TCDD											
319.8965	18.414						1935	4837			
321.8936	18.414						2314	5785			
1,2,3,9-TCDF											
303.9016	18.414						3437	8592			
305.8987	18.414						4074	10185			
1,2,8,9-TCDD											
319.8965	19.382						1935	4837			
1,2,8,9-TCDF											
303.9016	19.427						3437	8592			
305.8987	19.427						4074	10185			
1,3,4,6,8-PeCDF											
339.8597	19.669						391	977			
341.8567	19.669						836	2090			
1,2,4,7,9-PeCDD											
355.8546	21.480						2857	7142			
357.8516	21.480						1780	4450			
1,2,3,8,9-PeCDD											
355.8546	25.790						2857	7142			
357.8516	25.790						1780	4450			
1,2,3,8,9-PeCDF											
339.8597	26.021						4834	12085			
341.8567	26.021						3493	8732			
1,2,3,4,6,8-HxCDF											
373.8208	28.333						6076	15190			
375.8178	28.333						4855	12137			
1,2,4,6,7,9-HxCDD											
389.8157	29.890						15730	39325			
391.8127	29.890						13724	34310			
1,2,3,4,6,7-HxCDD											U
389.8157	31.917						15730	39325			
391.8127	31.917						13724	34310			
1,2,3,4,8,9-HxCDF											U
373.8208	32.236						6076	15190			
375.8178	32.236						4855	12137			
1,2,3,4,6,7,9-HpCDD											U
423.7766	33.846						11995	29987			
425.7737	33.846						12897	32242			

Signal	RT (min.)	Exp RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
1,2,3,4,6,7,9-HpCDF											U
407.7818	33.916						27262	68155			
409.7789	33.916						30710	76775			
1,2,3,8-TCDD											
319.8965	0.0						1935	4837			
321.8936	0.0						2314	5785			
1,3,7,9-TCDD											
319.8965	0.0						1935	4837			
321.8936	0.0						2314	5785			
1,2,3,4,7-PeCDD											
355.8546	0.0						2857	7142			
357.8516	0.0						1780	4450			
1,4,7,8-TCDD											
319.8965	0.0						1935	4837			
321.8936	0.0						2314	5785			

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Q - EMPC-Estimated Max. Possible Conc.

Review Flags

U - Marked Undetected

a - User Assigned ID

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d
Lims ID: 320-77292-A-2-C MSD
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Inject. Date: 26-Aug-2021 03:35:44 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 10

Non-2,3,7,8-sub-TCDF, RT: 17.069

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDF	1.024	D 13C-2,3,7,8-TCDF	100.000	116183878	29341976

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.024		100.000	116183878	29341976

Sum the Uncalibrated Results

RT	303.9016 Area	303.9016 Height	305.8987 Area	305.8987 Height	Amount	Ratio	Flags
15.209	191666	56256	247085	73458	0.3688	0.78	a
15.723	99403	27766	133879	31063	0.1961	0.74	
15.995	141956	29968	191831	40193	0.2806	0.74	
16.222	140154	35913	196852	49046	0.2833	0.71	
16.449	135661	34493	184917	49376	0.2695	0.73	
16.736	1631530	430342	2082185	546587	3.12	0.78	
16.948	88299	19581	101791	26766	0.1598	0.87	
18.898	251350	58118	321238	75519	0.4813	0.78	
Signal Totals:							
	2680019	692437	3459778	892008			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	6139797	1584445				0.77	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 5.161 = (6139797 * 100.000) / (116183878 * 1.024)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Lims ID:	320-77292-A-2-C MSD		
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Inject. Date:	26-Aug-2021 03:35:44	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	10

Non-2,3,7,8-sub-TCDD, RT: 17.530

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
2,3,7,8-TCDD	1.254	D 13C-2,3,7,8-TCDD	100.000	68053237	16439791

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.254		100.000	68053237	16439791

Sum the Uncalibrated Results

RT	319.8965 Area	319.8965 Height	321.8936 Area	321.8936 Height	Amount	Ratio	Flags
15.904	58811	16977	62215	18689	0.1418	0.95	RQ
15.904	47905	14390	62215	18689	0.1290		Empc Correction
16.691	156678	39910	179133	46802	0.3935	0.87	
17.688	204859	43902	191802	56986	0.4648	1.07	RQ
17.688	147687	43879	191802	56986	0.3978		Empc Correction
18.157	78852	19970	114220	27315	0.2262	0.69	a
Signal Totals:							
	431122	118149	547370	149792			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	1046570	270551				0.91	RQa
	978492	267941					Empc Correction

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 1.226 = (1046570 * 100.000) / (68053237 * 1.254)

Empc Amount: 1.146 = (978492 * 100.000) / (68053237 * 1.254)

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Q - EMPC-Estimated Max. Possible Conc.

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Lims ID:	320-77292-A-2-C MSD		
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Inject. Date:	26-Aug-2021 03:35:44	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	10

Non-2,3,7,8-sub-PeCDF, RT: 23.067

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDF	1.061	D 13C-1,2,3,7,8-PeCDF	100.000	88587281	16416239
2,3,4,7,8-PeCDF	1.018	D 13C-2,3,4,7,8-PeCDF	100.000	97519032	16791808

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.040		100.000	93053156	16604023

Sum the Uncalibrated Results

RT	339.8597 Area	339.8597 Height	341.8567 Area	341.8567 Height	Amount	Ratio	Flags
22.566	309395	48342	187682	29862	0.5138	1.65	
Signal Totals:							
	309395	48342	187682	29862			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	497077	78204				1.65	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.5138 = (497077 * 100.000) / (93053156 * 1.040)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Lims ID:	320-77292-A-2-C MSD		
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Inject. Date:	26-Aug-2021 03:35:44	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	10

Non-2,3,7,8-sub-PeCDD, RT: 23.696

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,7,8-PeCDD	1.048	D 13C-1,2,3,7,8-PeCDD	100.000	57306488	9230051

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.048		100.000	57306488	9230051

Sum the Uncalibrated Results

RT	355.8546 Area	355.8546 Height	357.8516 Area	357.8516 Height	Amount	Ratio	Flags
21.652	157228	30689	98351	22271	0.4254	1.60	
22.620	153585	30486	93183	18704	0.4107	1.65	
Signal Totals:							
	310813	61175	191534	40975			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	502347	102150				1.62	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 0.8361 = (502347 * 100.000) / (57306488 * 1.048)

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Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Lims ID:	320-77292-A-2-C MSD		
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Inject. Date:	26-Aug-2021 03:35:44	Dil. Factor:	1.0000
Sample Type:	MSD, Matrix Spike Duplicate		
Instrument ID:	10D5	Operator:	SMA
Lims Batch ID:	519955	Lims Sample ID:	10

Non-2,3,7,8-sub-HxCDD, RT: 30.519

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,7,8-HxCDD	1.064	D 13C-1,2,3,4,7,8-HxCDD	100.000	54740405	15517893
1,2,3,6,7,8-HxCDD	1.000	D 13C-1,2,3,6,7,8-HxCDD	100.000	57409595	15591810
1,2,3,7,8,9-HxCDD	1.133				

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.066		100.000	56075000	15554851

Sum the Uncalibrated Results

RT	389.8157 Area	389.8157 Height	391.8127 Area	391.8127 Height	Amount	Ratio	Flags
29.068	1092314	144277	825707	120380	3.21	1.32	
30.692	590253	116328	448319	92346	1.74	1.32	
Signal Totals:							
	1682567	260605	1274026	212726			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	2956593	473331				1.32	

On-Column Amount = (Rx * Qis) / (Ris * RRFn)

Quant By: Area

Amount: 4.948 = (2956593 * 100.000) / (56075000 * 1.066)

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

AreaSum WorkSheet Report

Data File: \\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d
Lims ID: 320-77292-A-2-C MSD
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Inject. Date: 26-Aug-2021 03:35:44 Dil. Factor: 1.0000
Sample Type: MSD, Matrix Spike Duplicate
Instrument ID: 10D5 Operator: SMA
Lims Batch ID: 519955 Lims Sample ID: 10

Non-2,3,7,8-sub-HpCDD, RT: 34.223

Initial Calibration RRF IsoDil Std Amount Added and Responses

Target Compound	RRF	Iso Dil Std Compound	Amount pg/ul	Area	Height
1,2,3,4,6,7,8-HpCDD	1.094	D 13C-1,2,3,4,6,7,8-HpCDD	100.000	41625064	14388809

Averages:

	RRFn		Qis	Ris Area	Ris Height
	1.094		100.000	41625064	14388809

Sum the Uncalibrated Results

RT	423.7766 Area	423.7766 Height	425.7737 Area	425.7737 Height	Amount	Ratio	Flags
33.858	4734718	1793427	4845403	1700197	21.0	0.98	a
Signal Totals:							
	4734718	1793427	4845403	1700197			

Total Responses:

	Rx Area	Rx Height			Amount	Ratio	Flags
	9580121	3493624				0.98	a

On-Column Amount = (Rx * Qis) / (Ris * RRFn)
Quant By: Area

Amount: 21.032 = (9580121 * 100.000) / (41625064 * 1.094)

QC Flag Legend

Review Flags
a - User Assigned ID

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

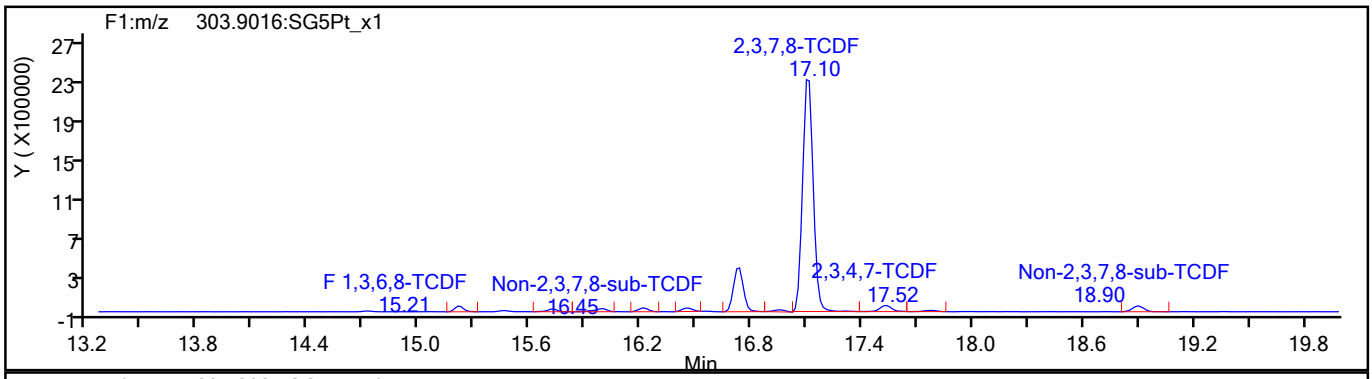

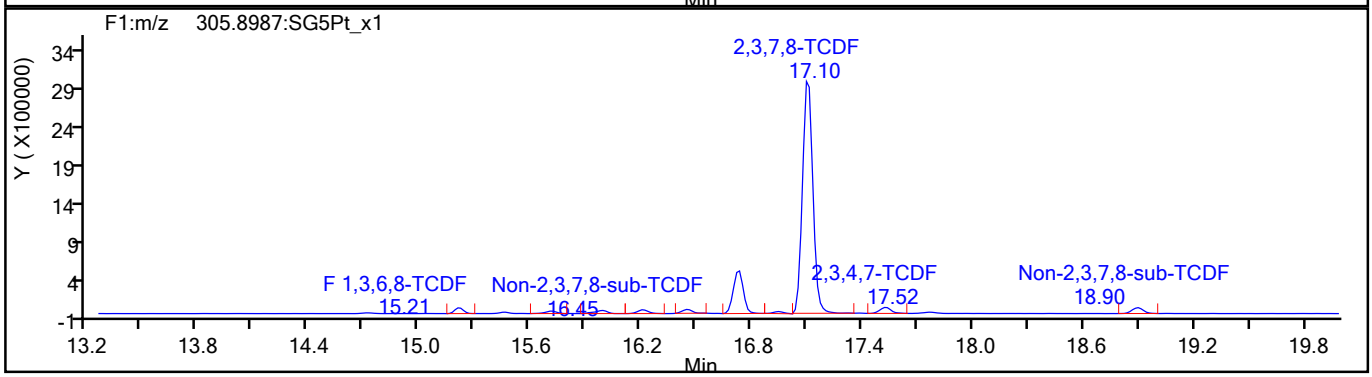

TCDF Standards

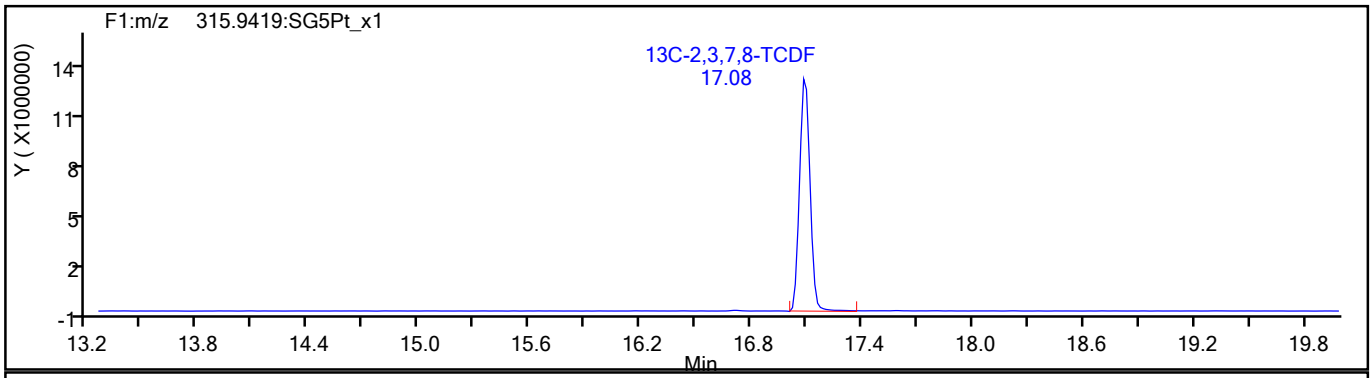

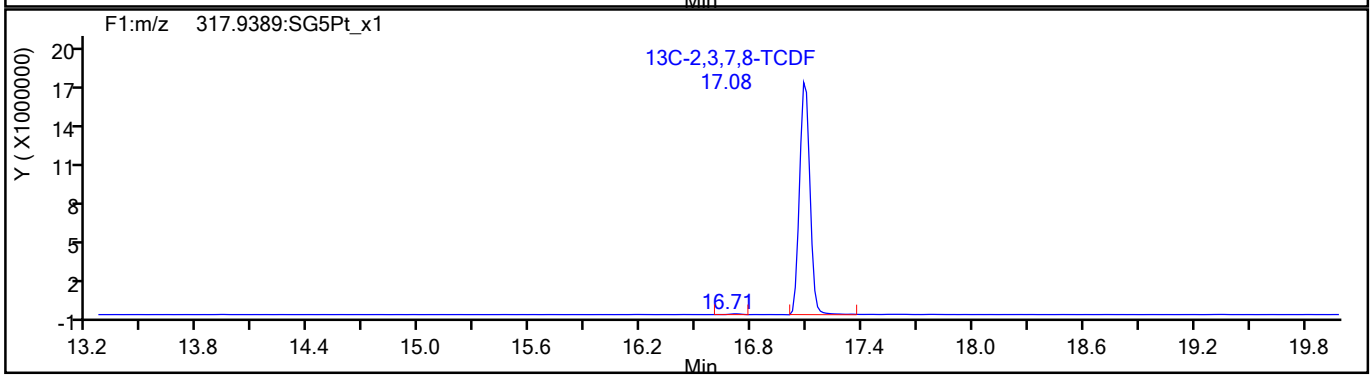

794416

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDF

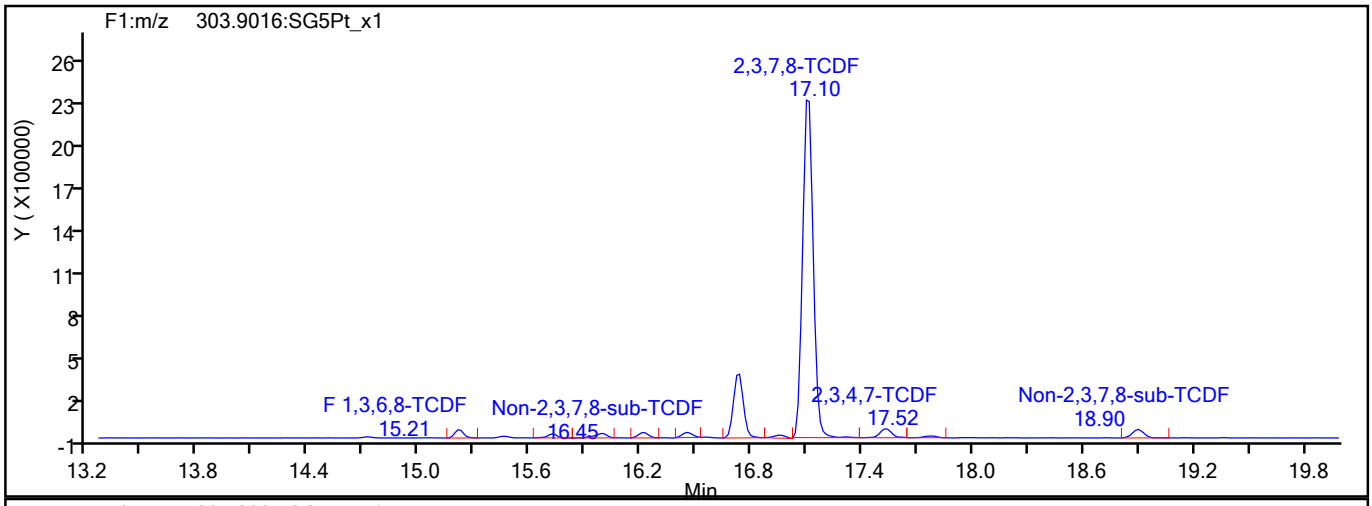

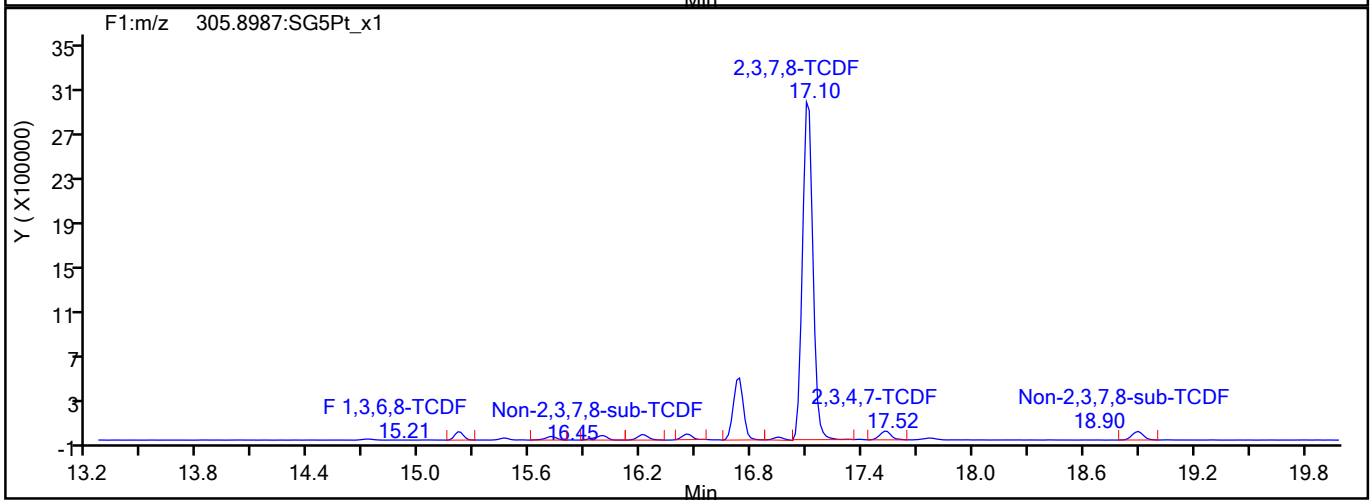

TCDF Interference Mass

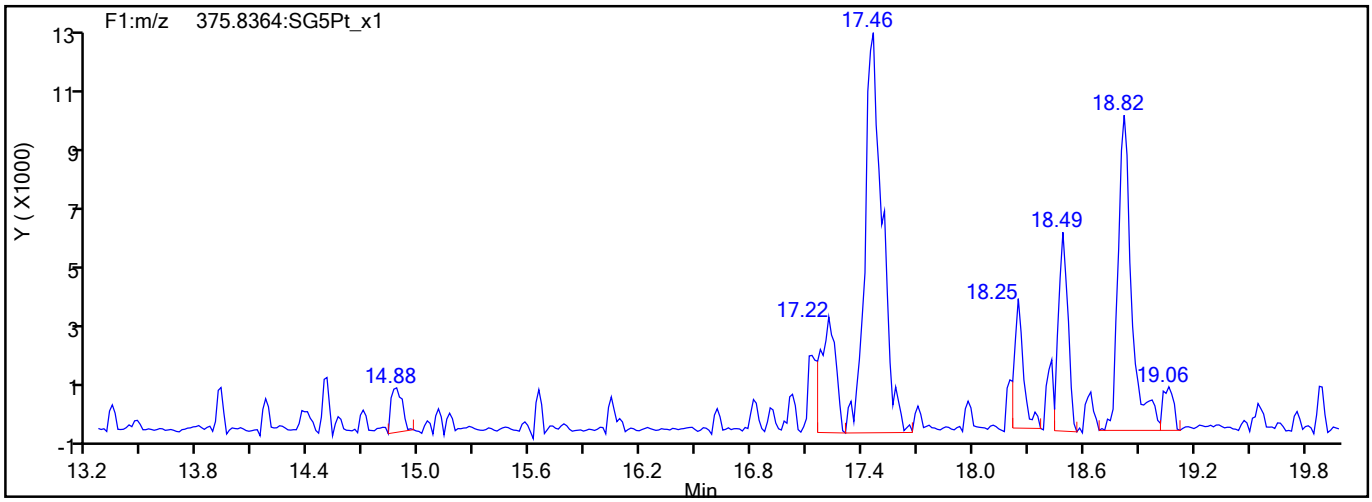

794417

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

TCDD

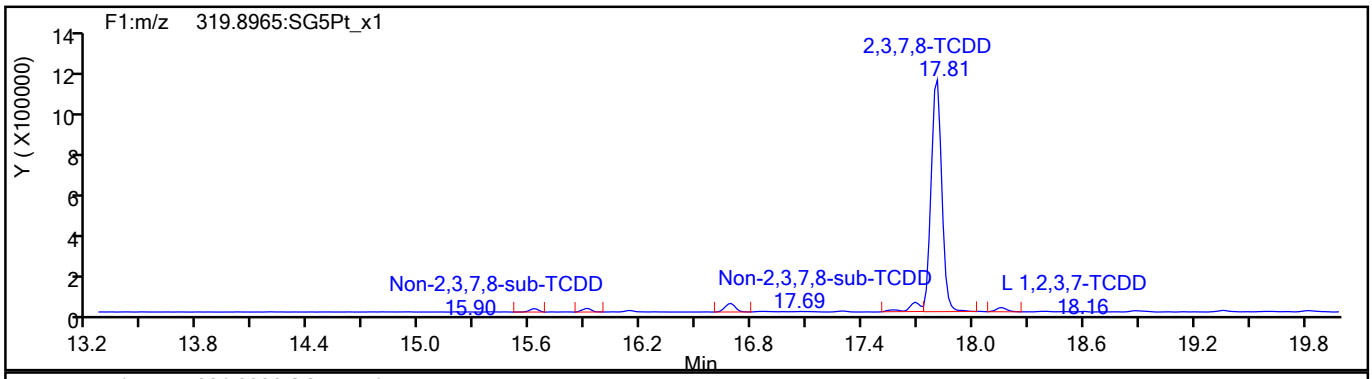

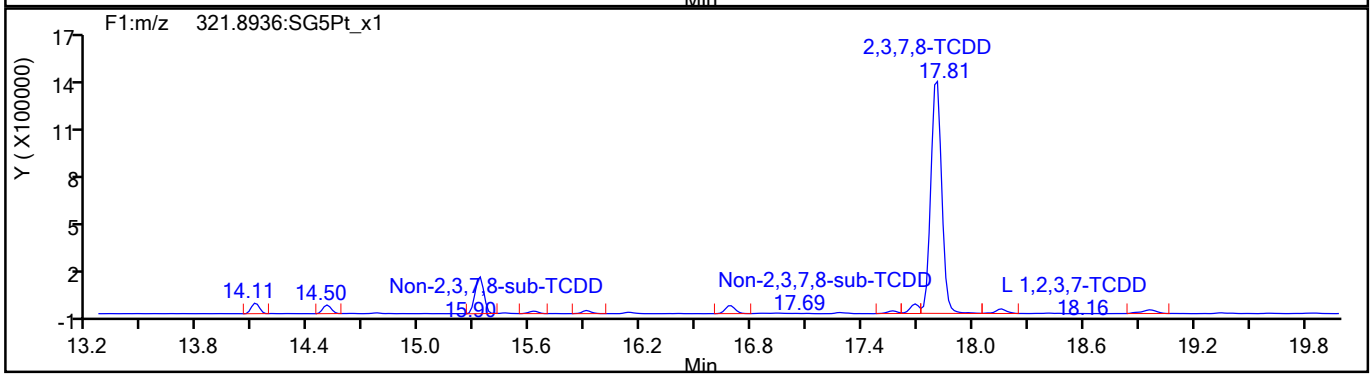

TCDD Standards

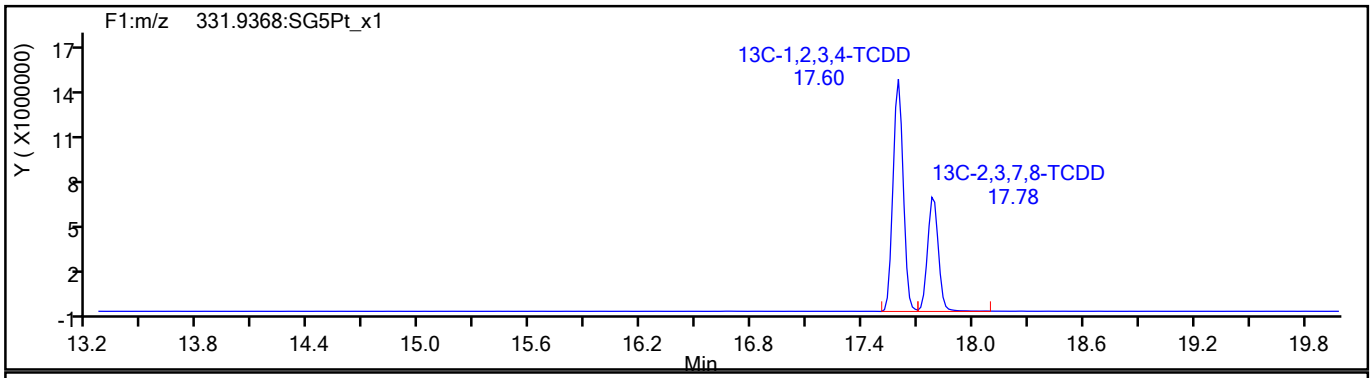

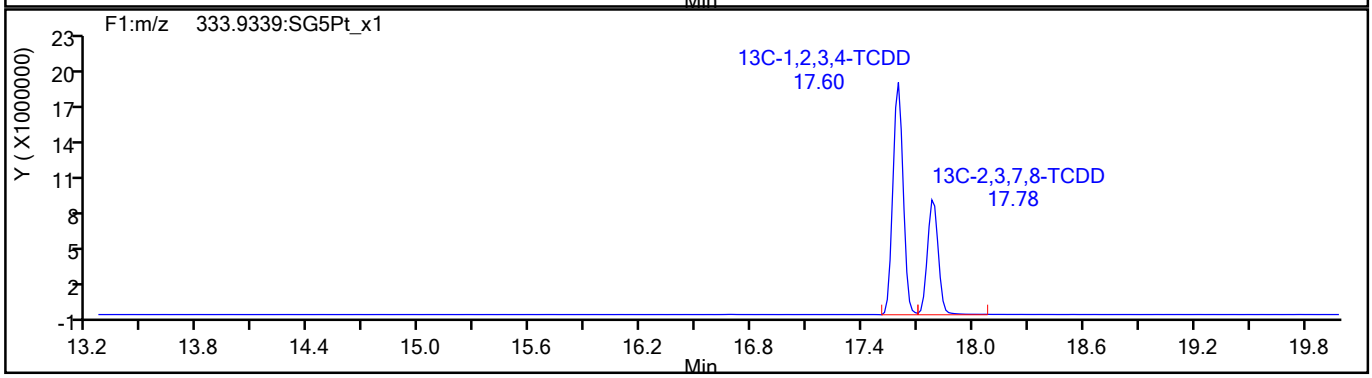

794418

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

37Cl4-TCDD

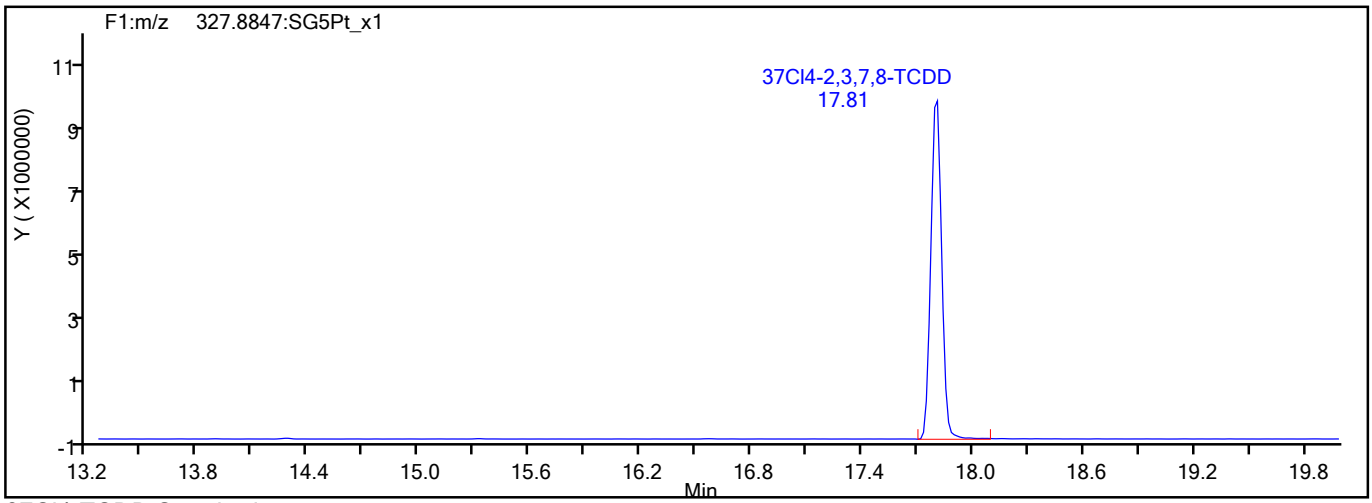

37Cl4-TCDD Standards

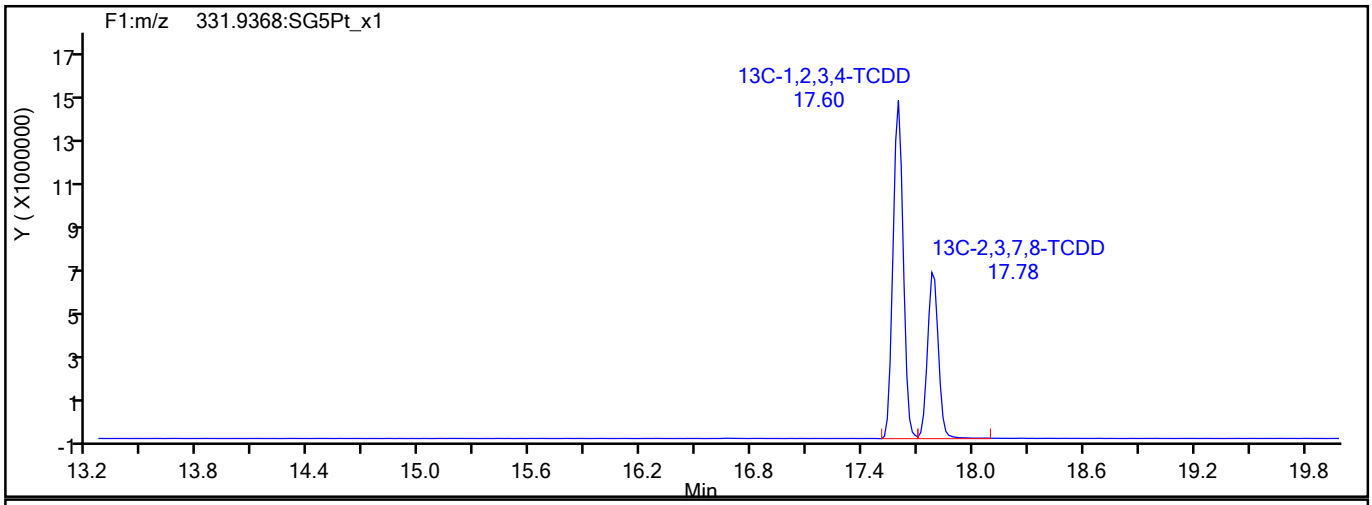

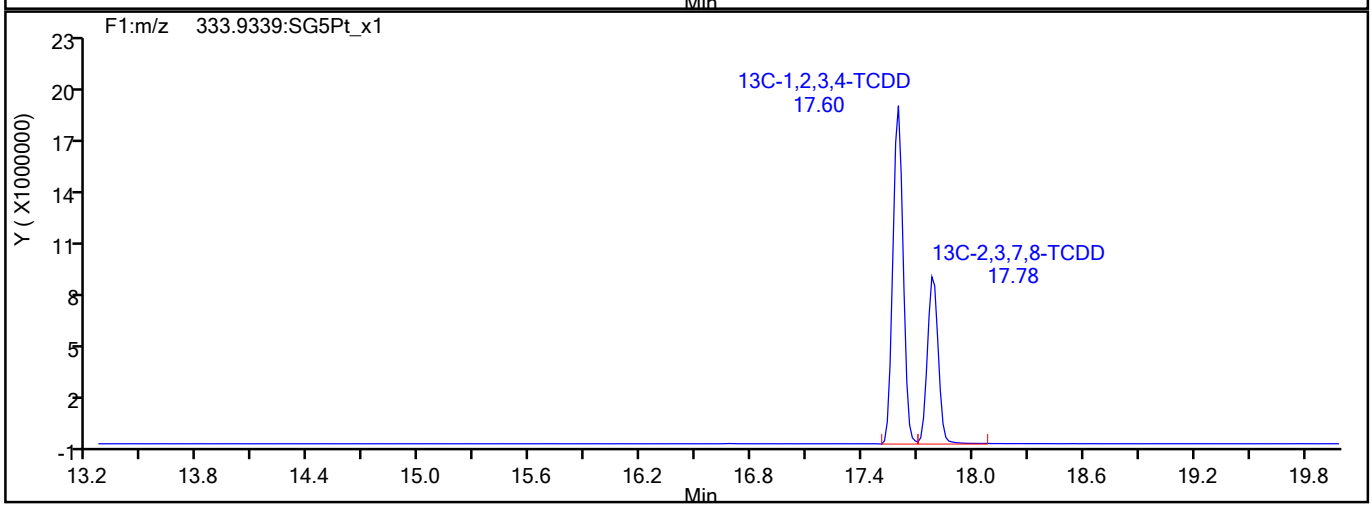

794419

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

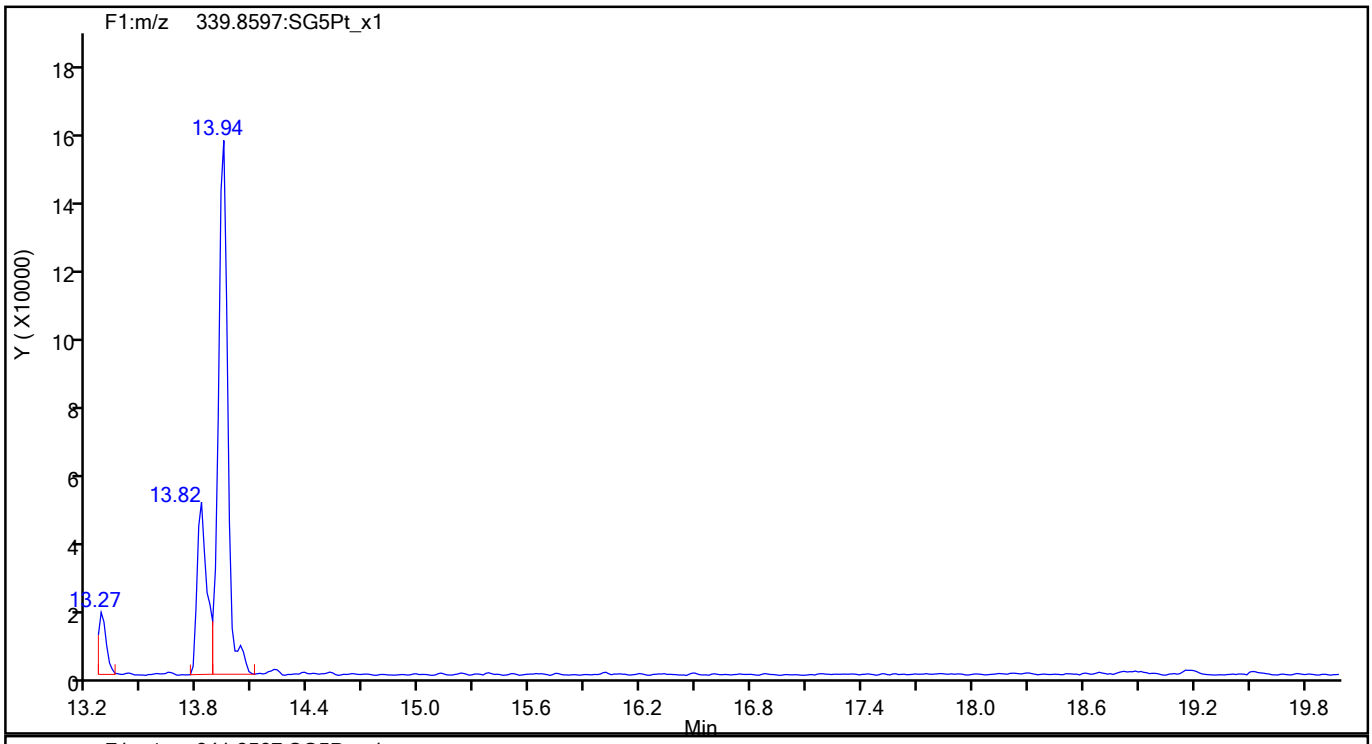

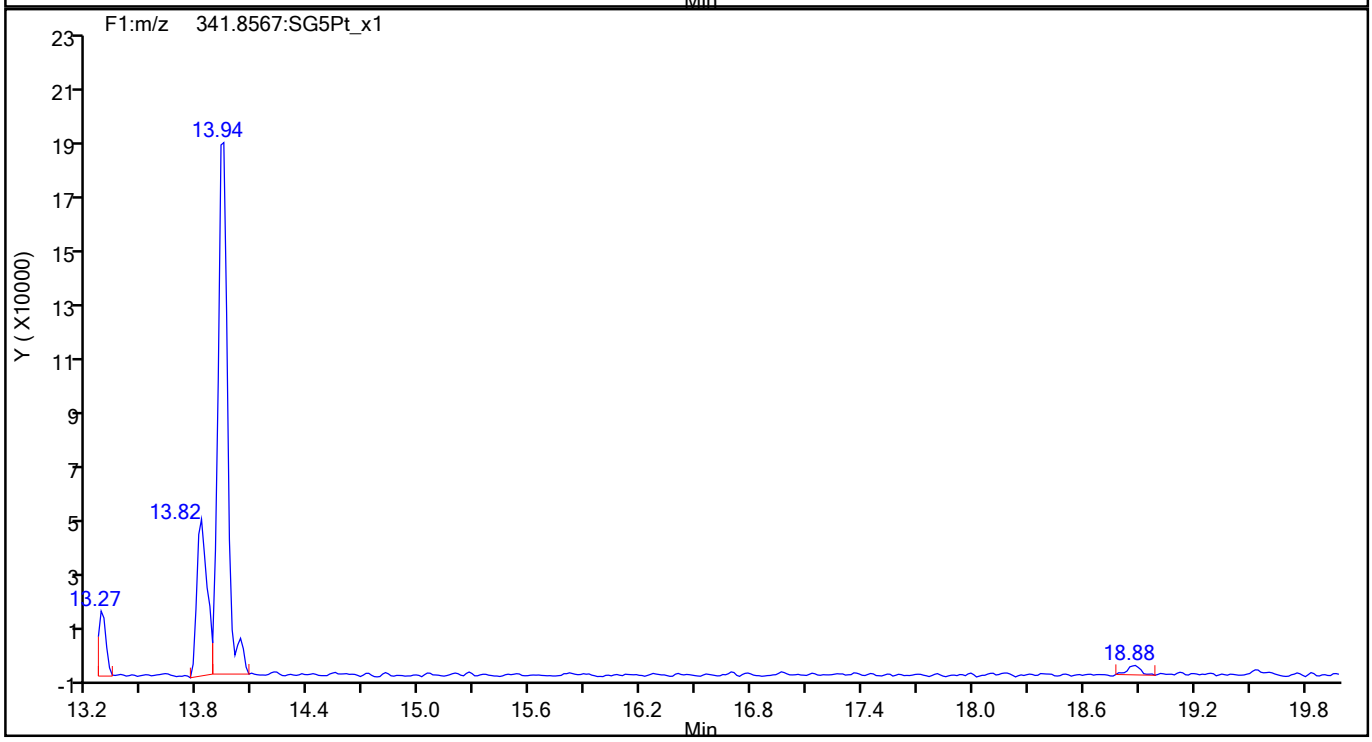

794420

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

F1 PeCDFs

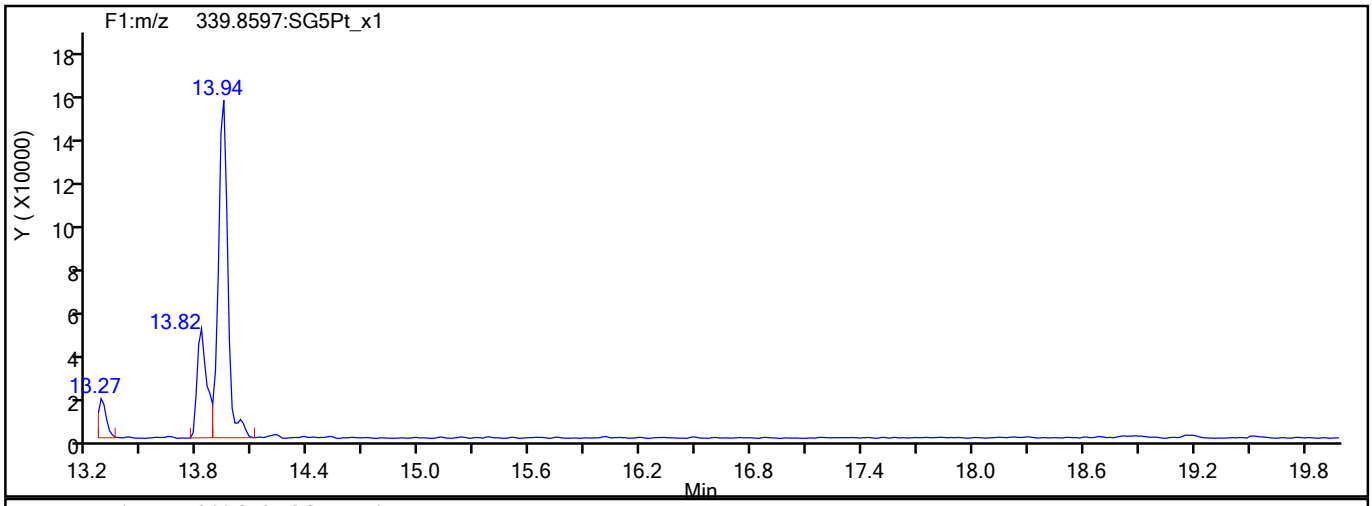

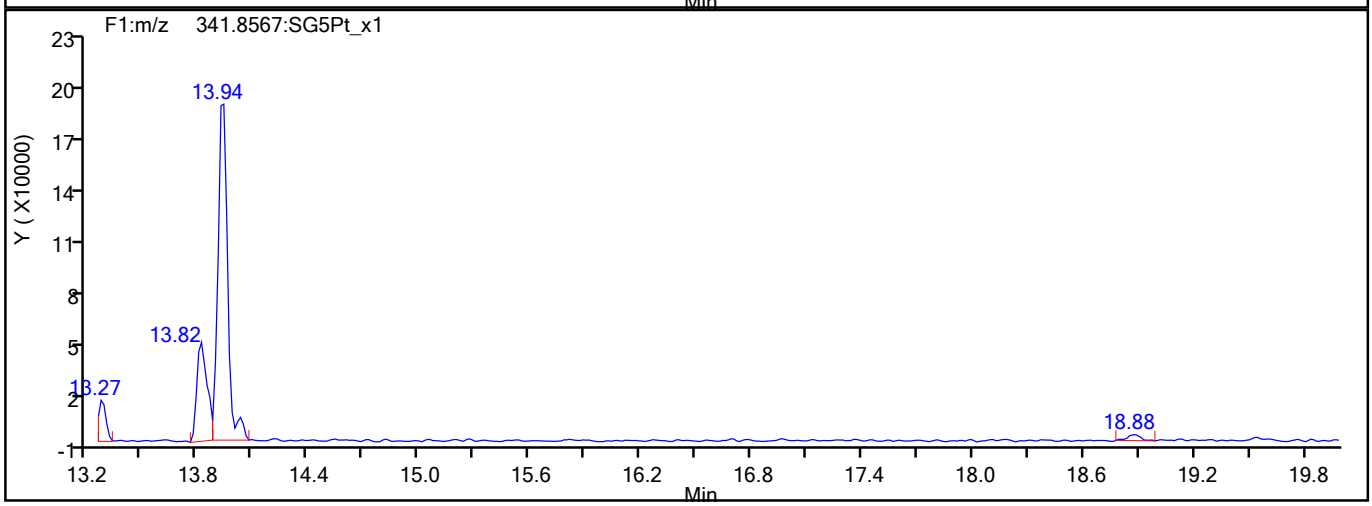

F1 PeCDFs Interference Mass

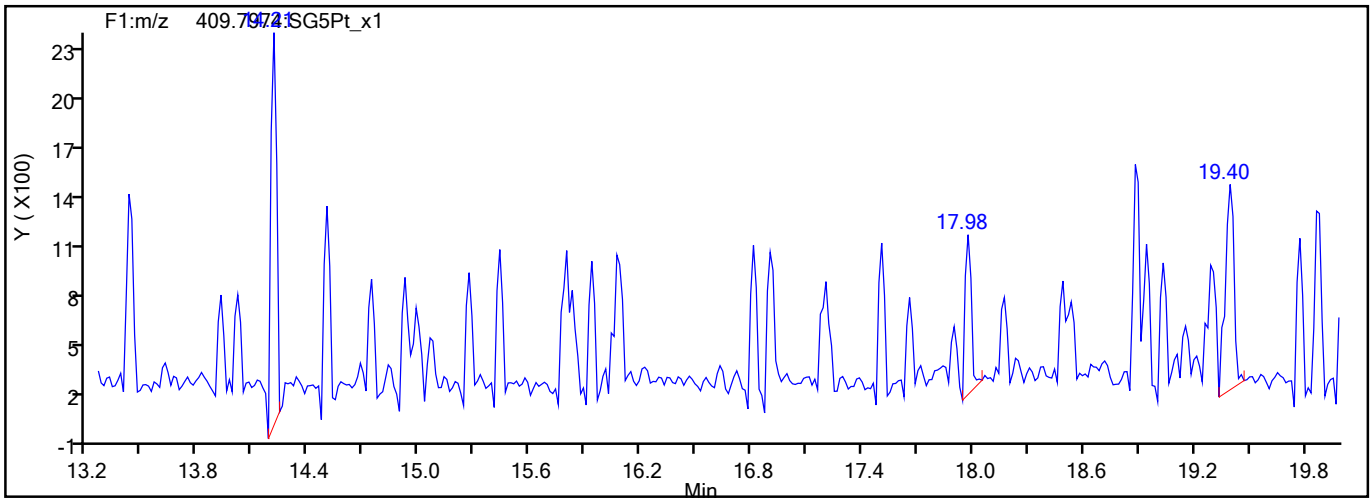

794421

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

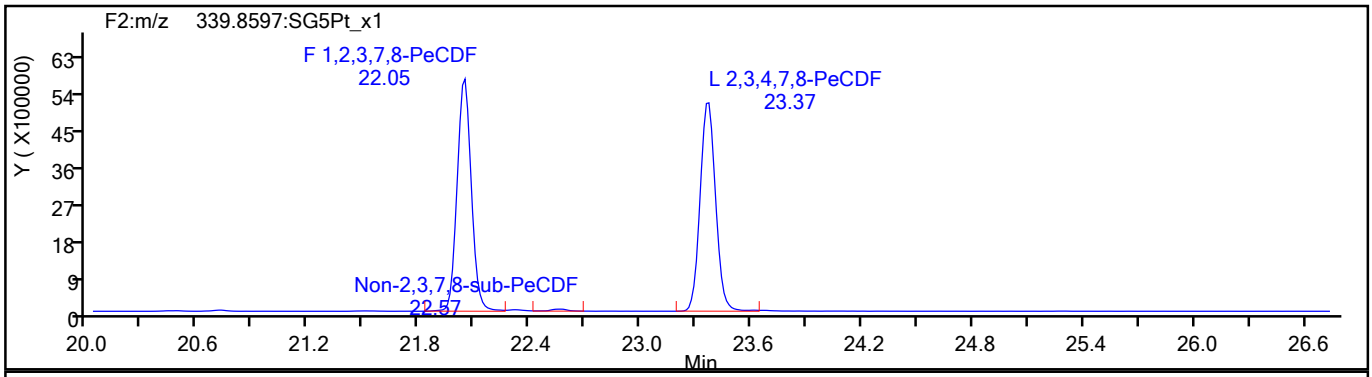

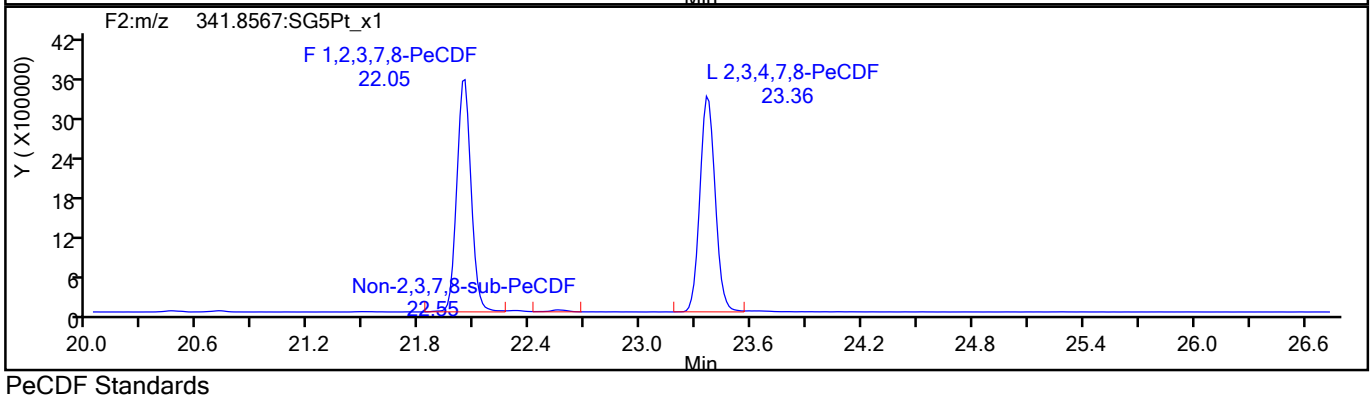

PeCDF Standards

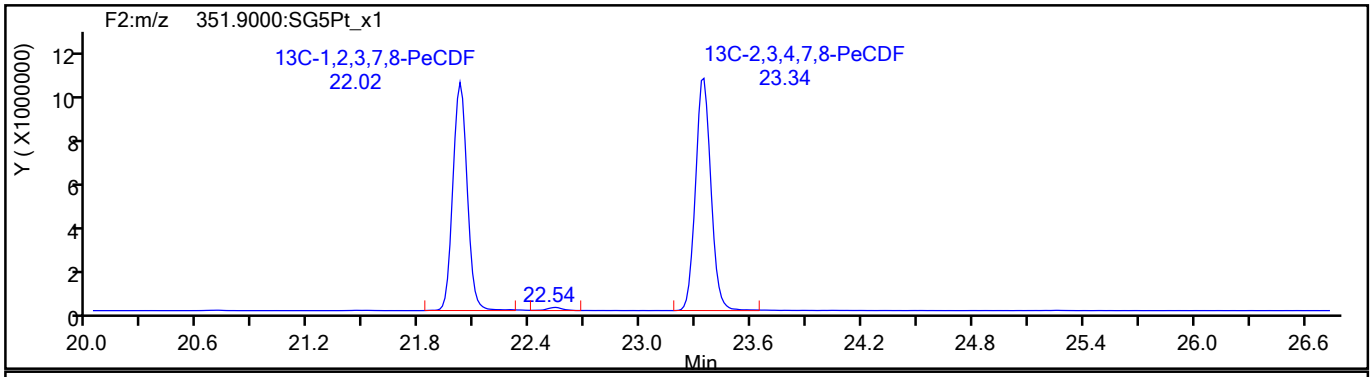

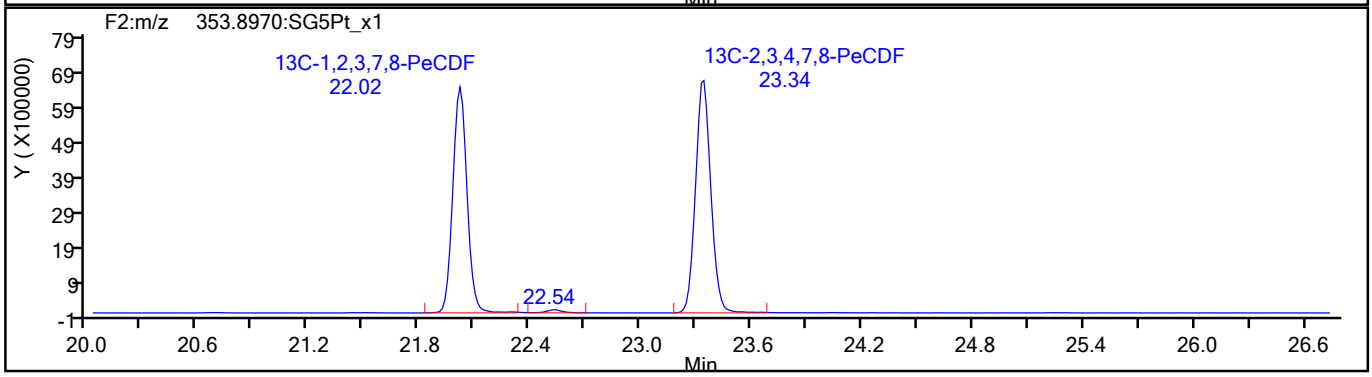

794422

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDF

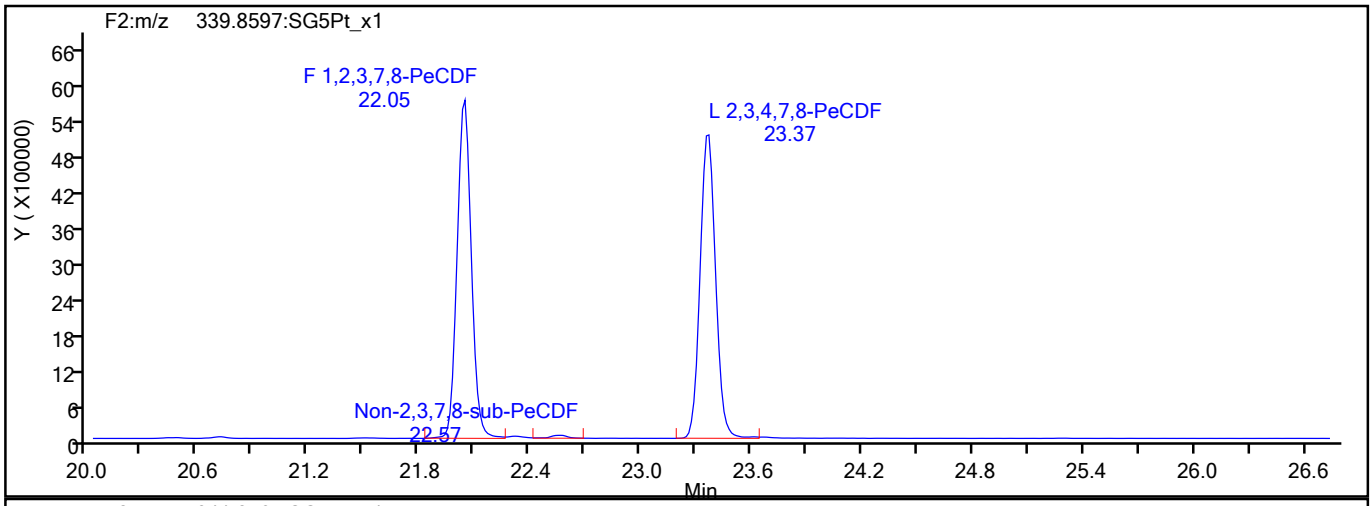

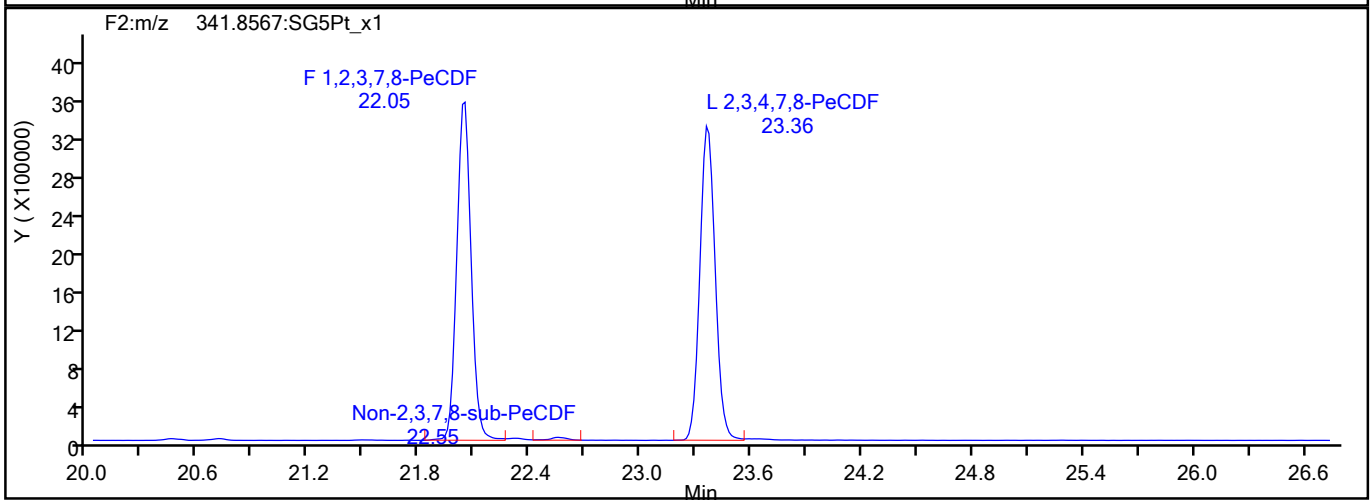

PeCDF Interference Mass

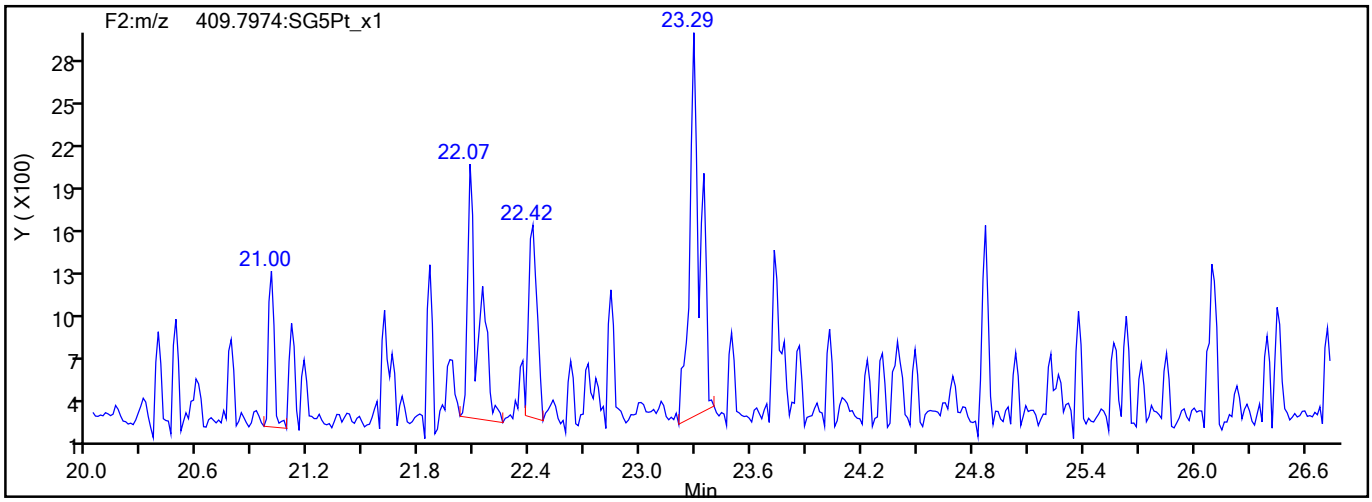

794423

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

PeCDD

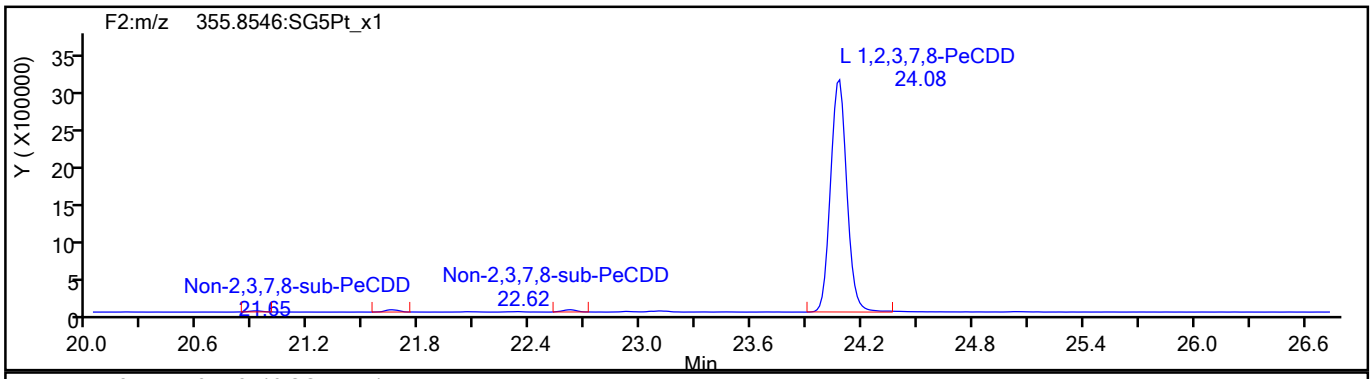

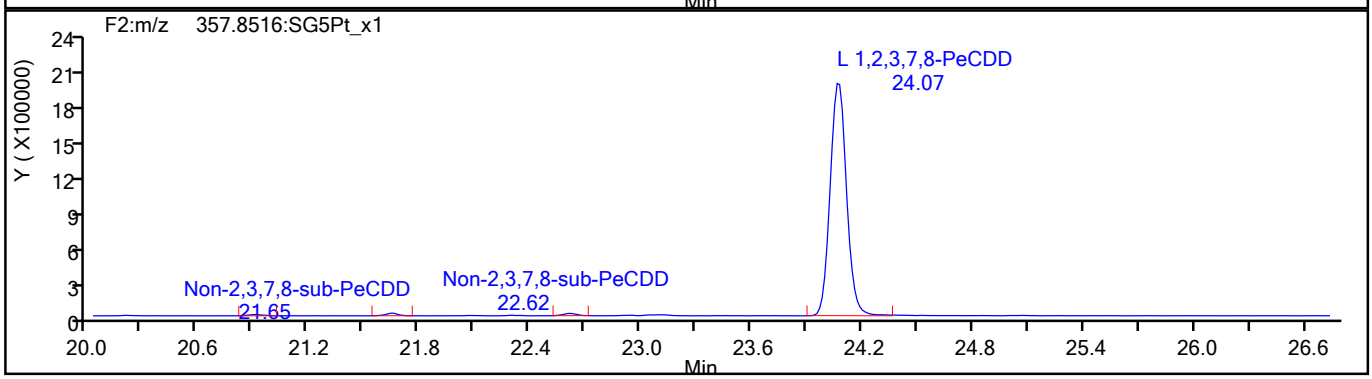

PeCDD Standards

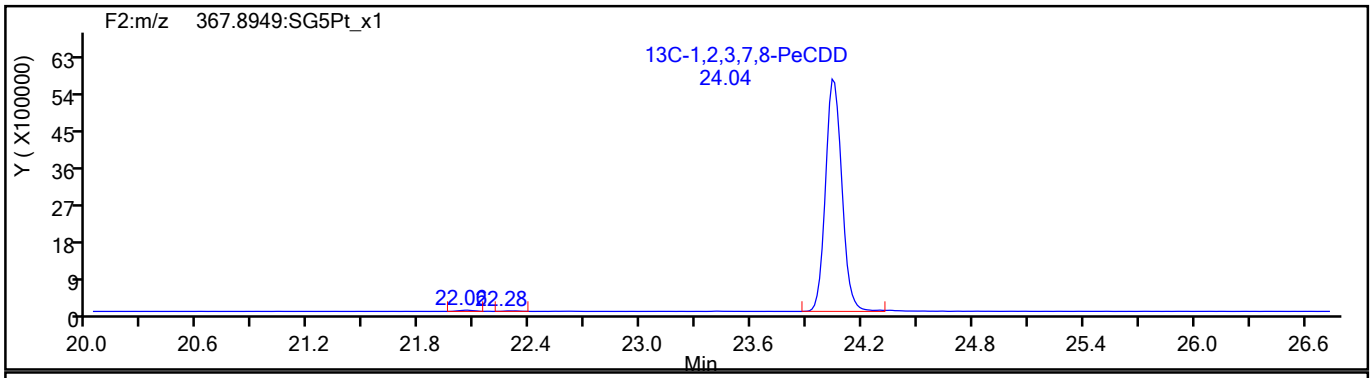

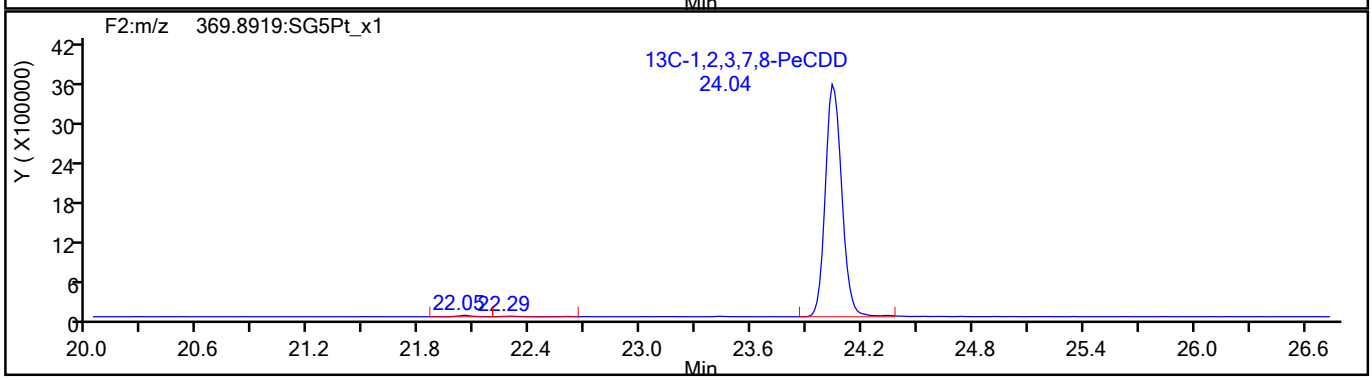

794424

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

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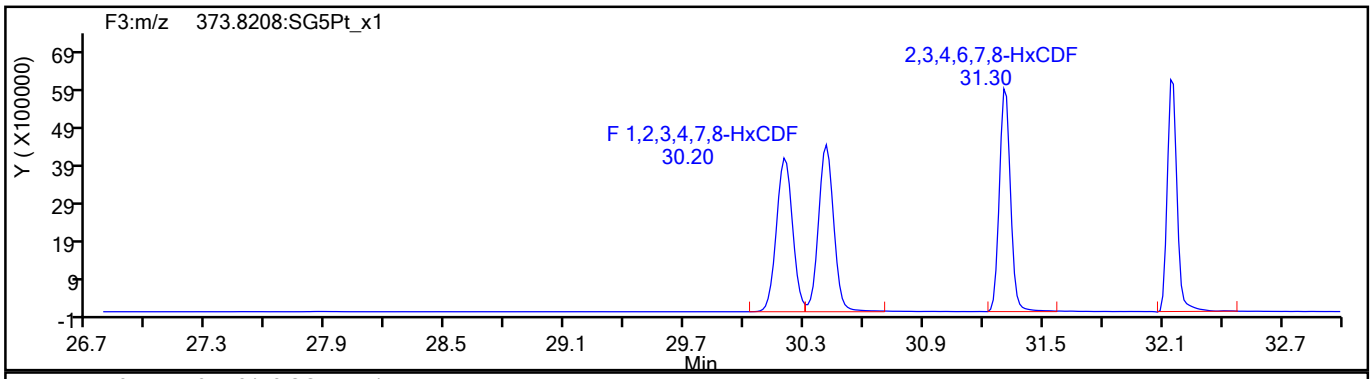

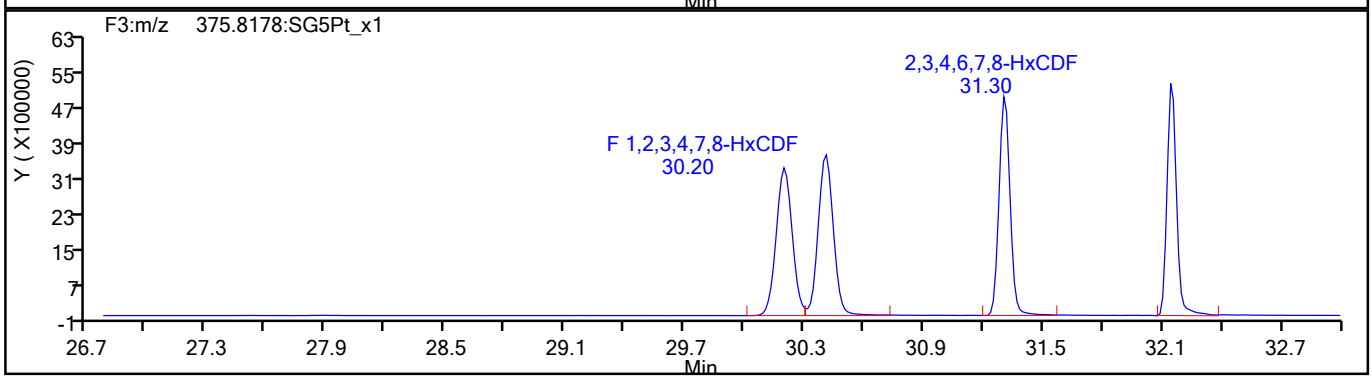

HxCDF Standards

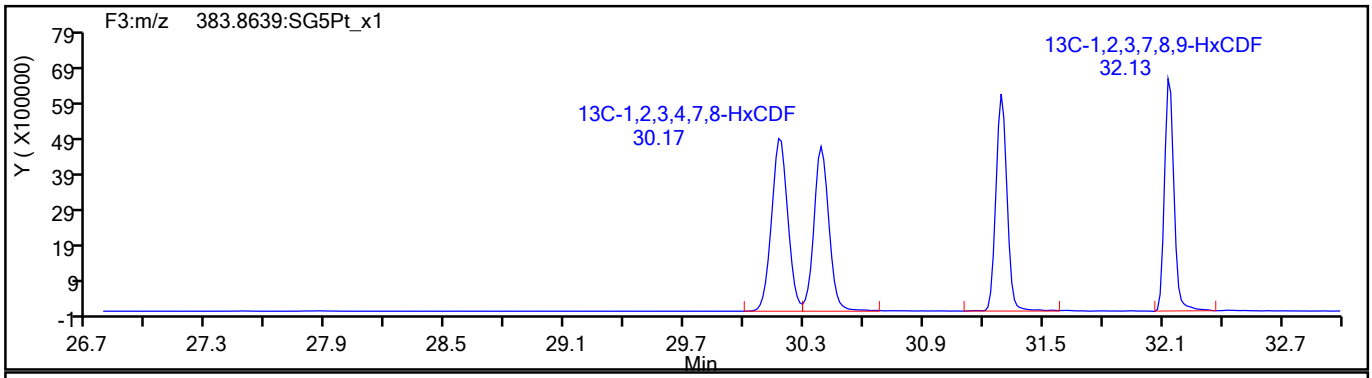

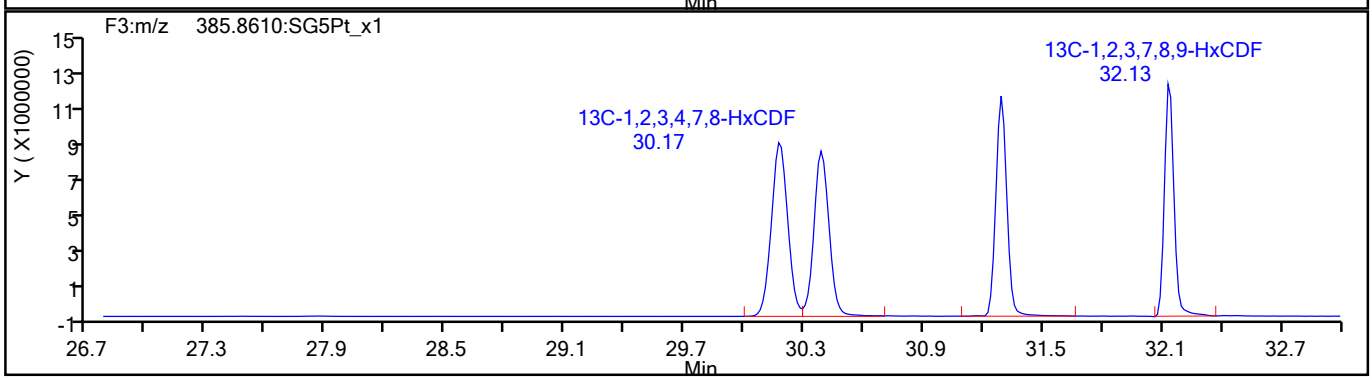

794425

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

HxCDF

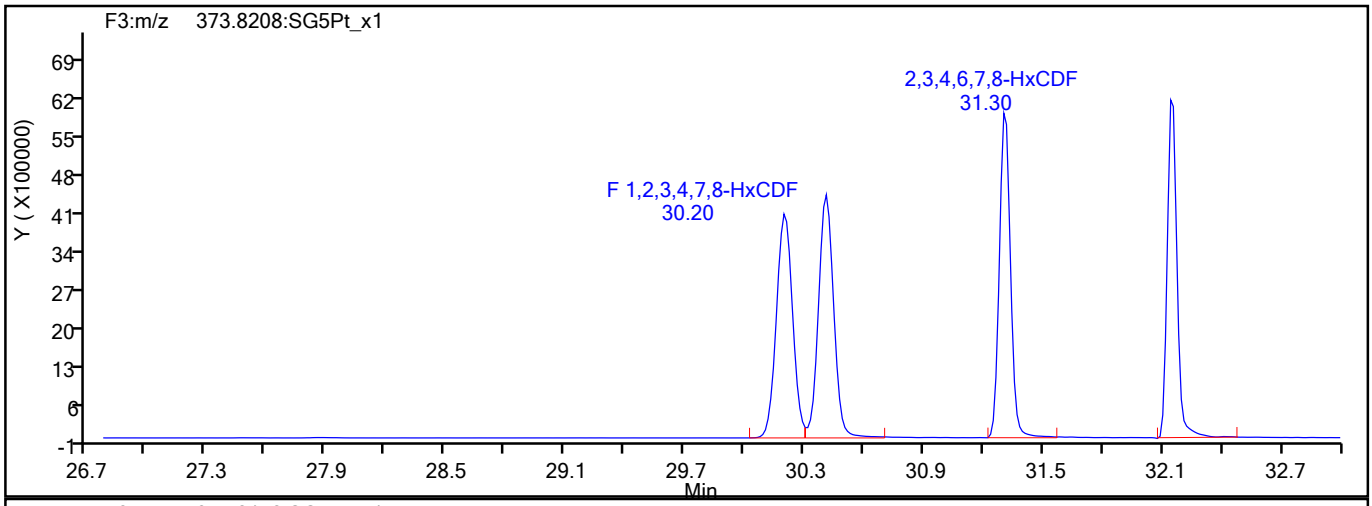

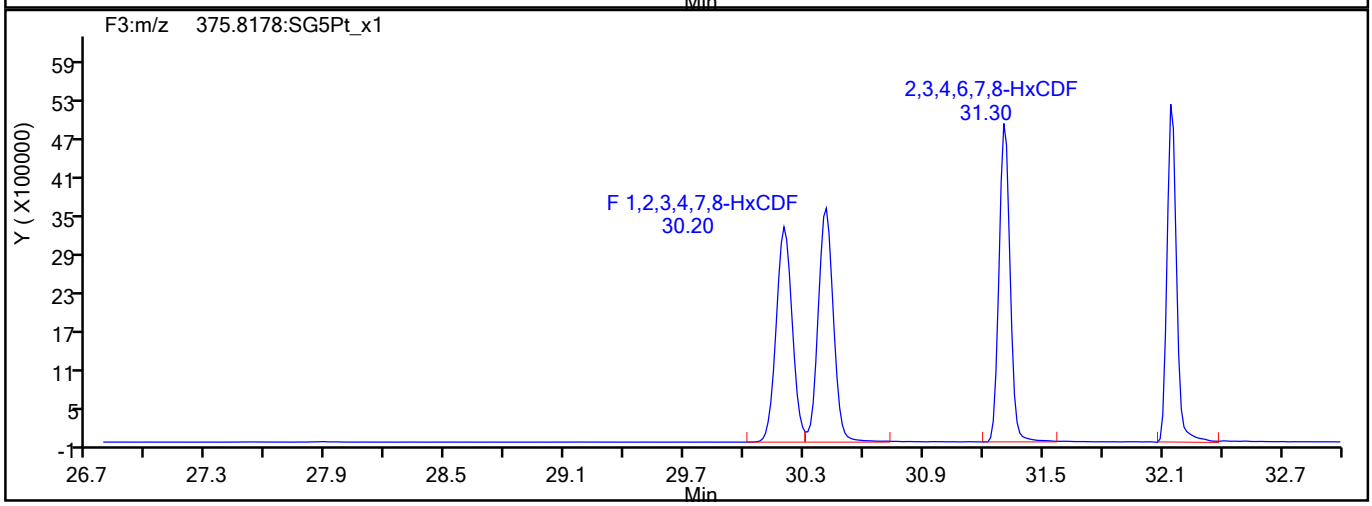

HxCDF Interference Mass

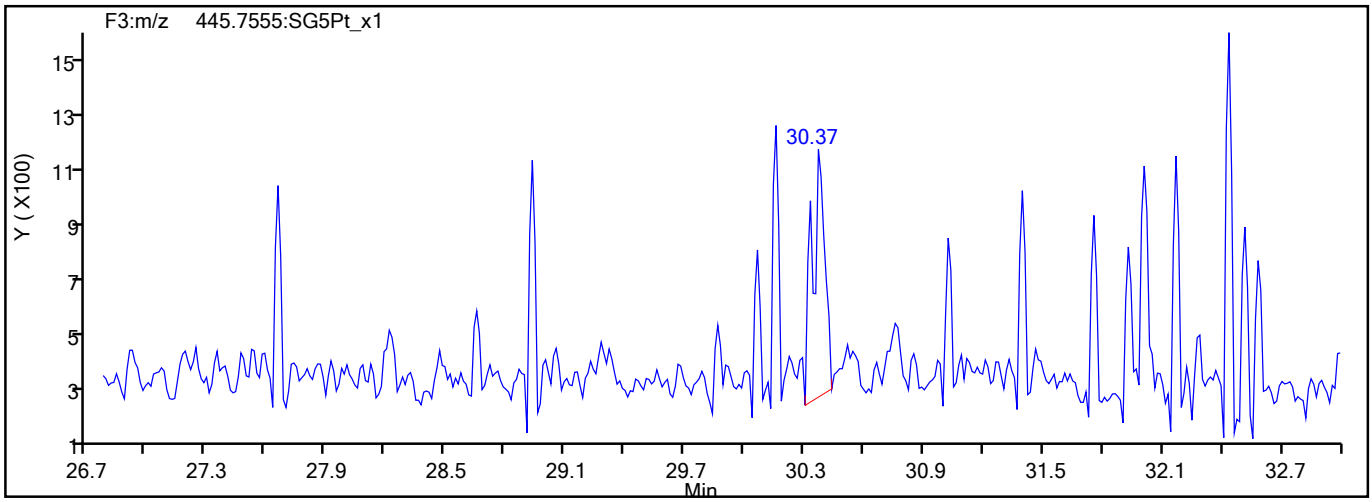

794426

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HxCDD

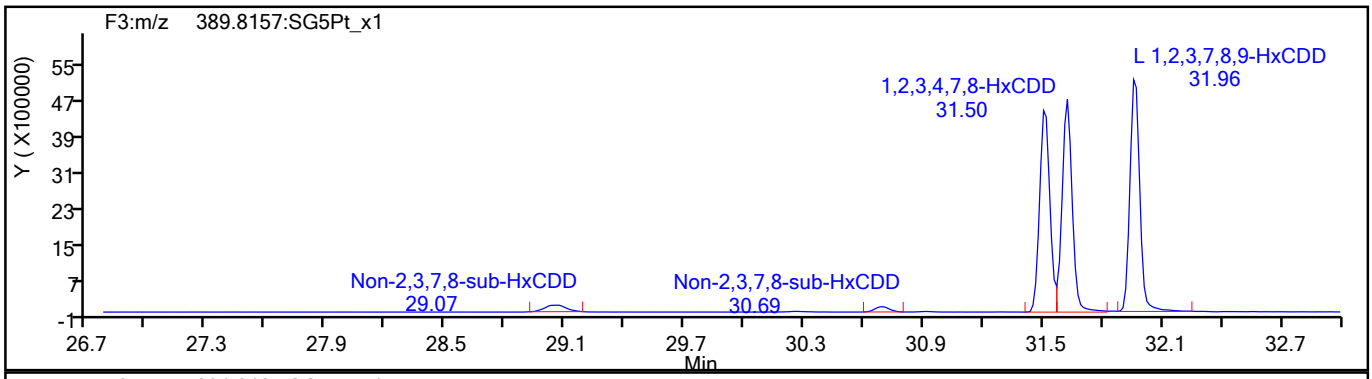

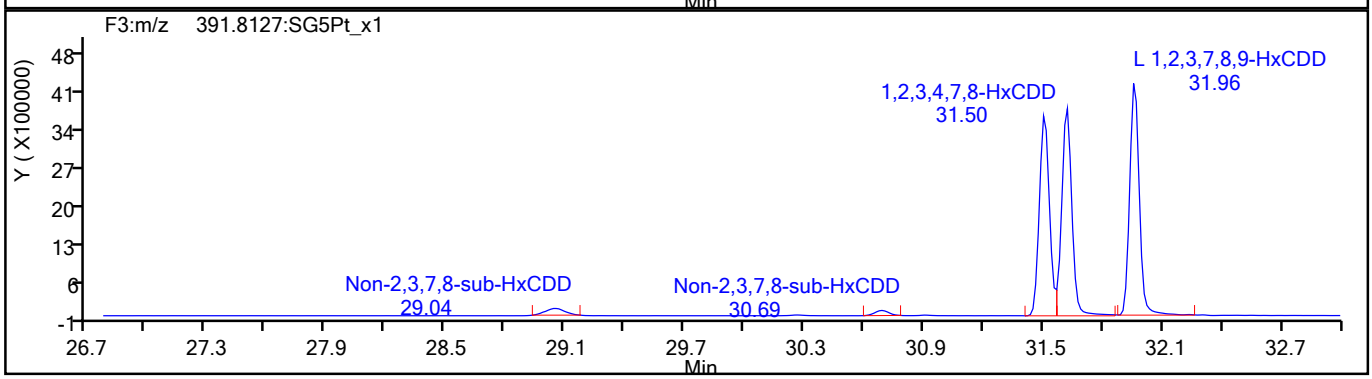

HxCDD Standards

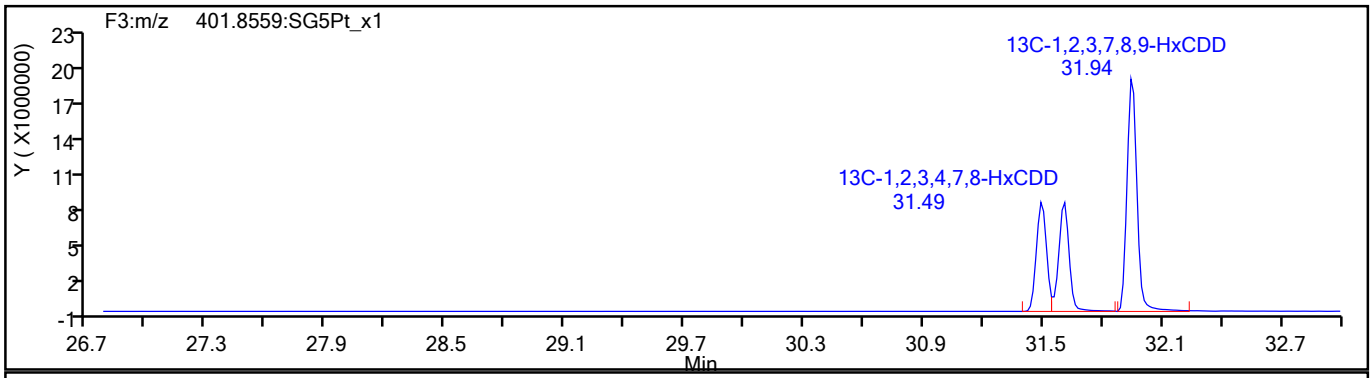

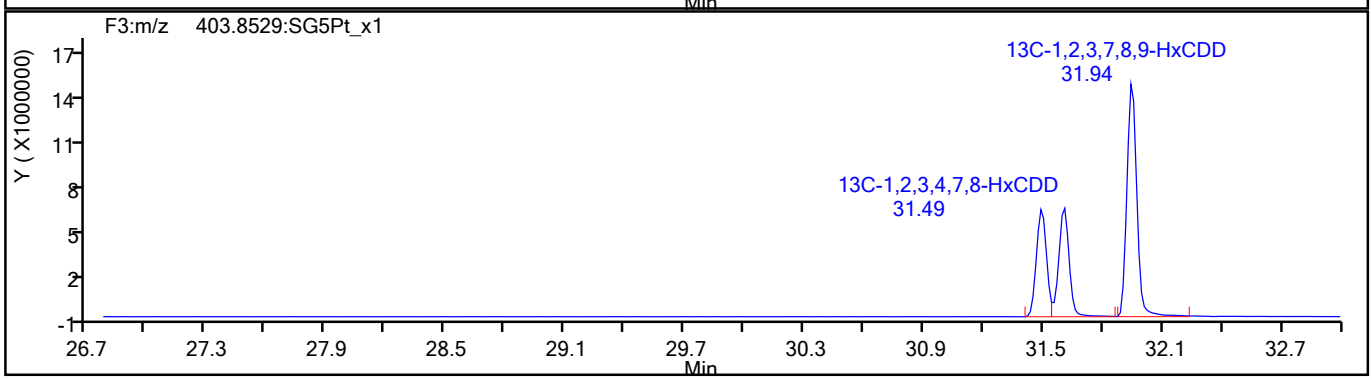

794427

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
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HpCDF

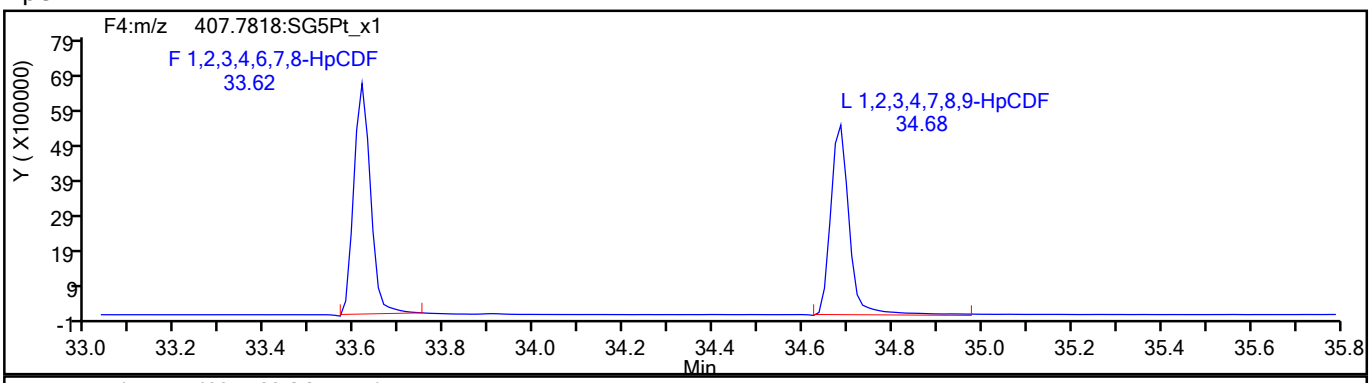

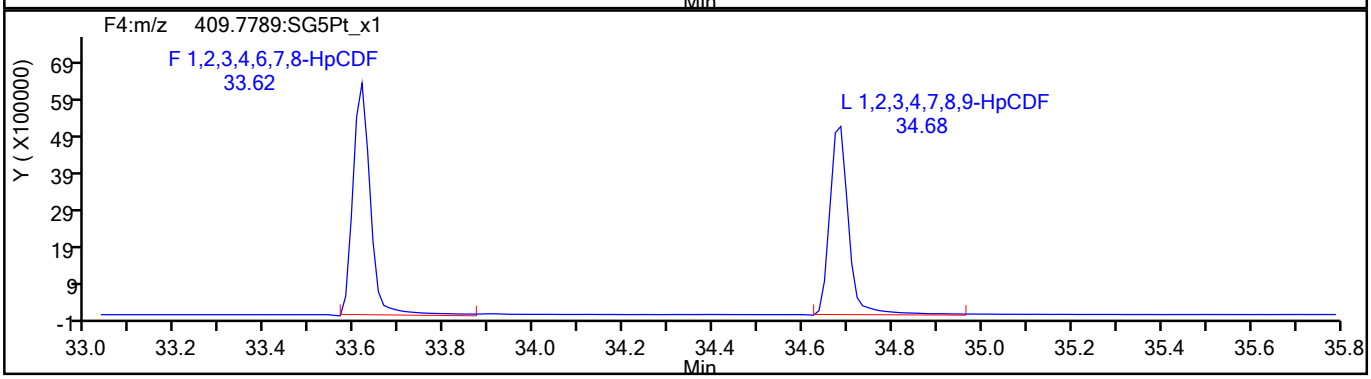

HpCDF Standards

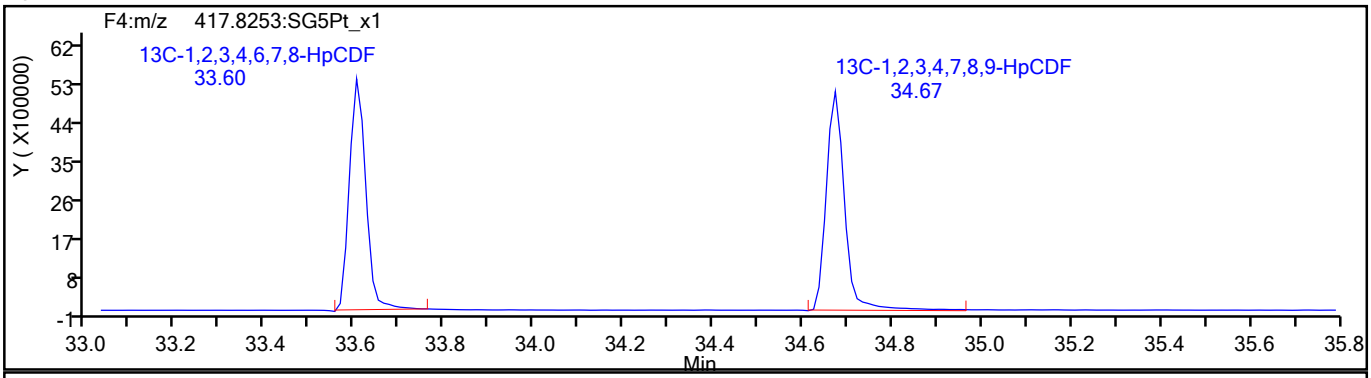

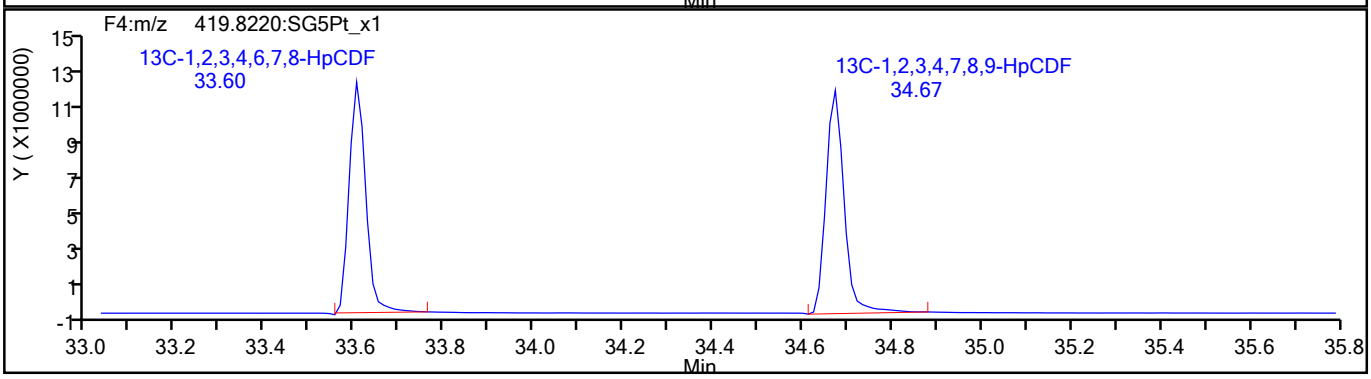

794428

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDF

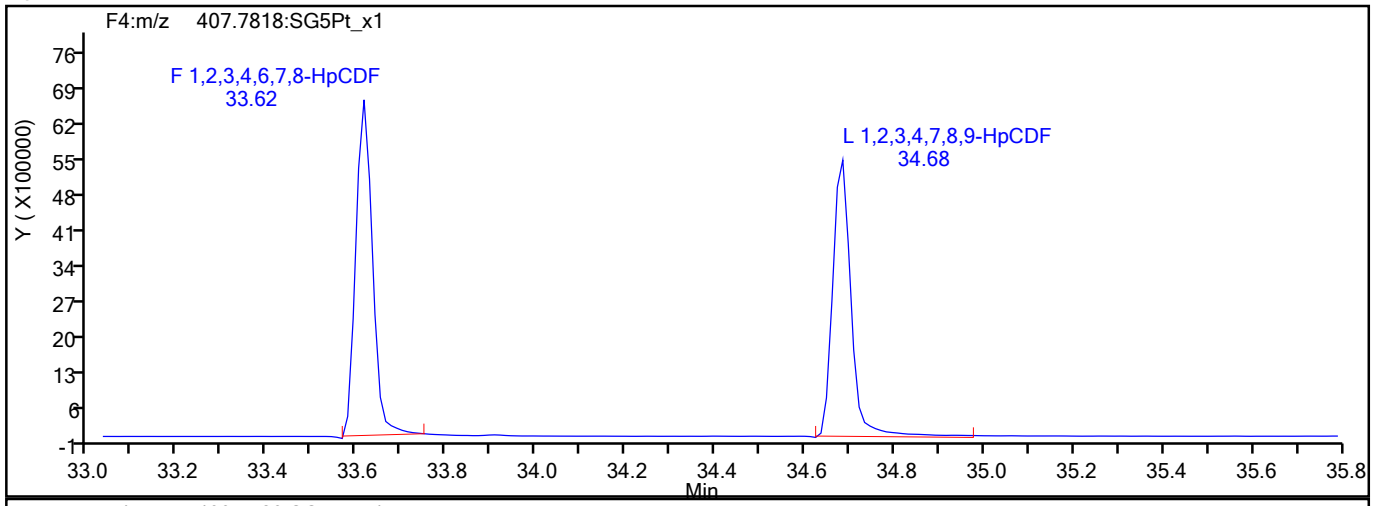

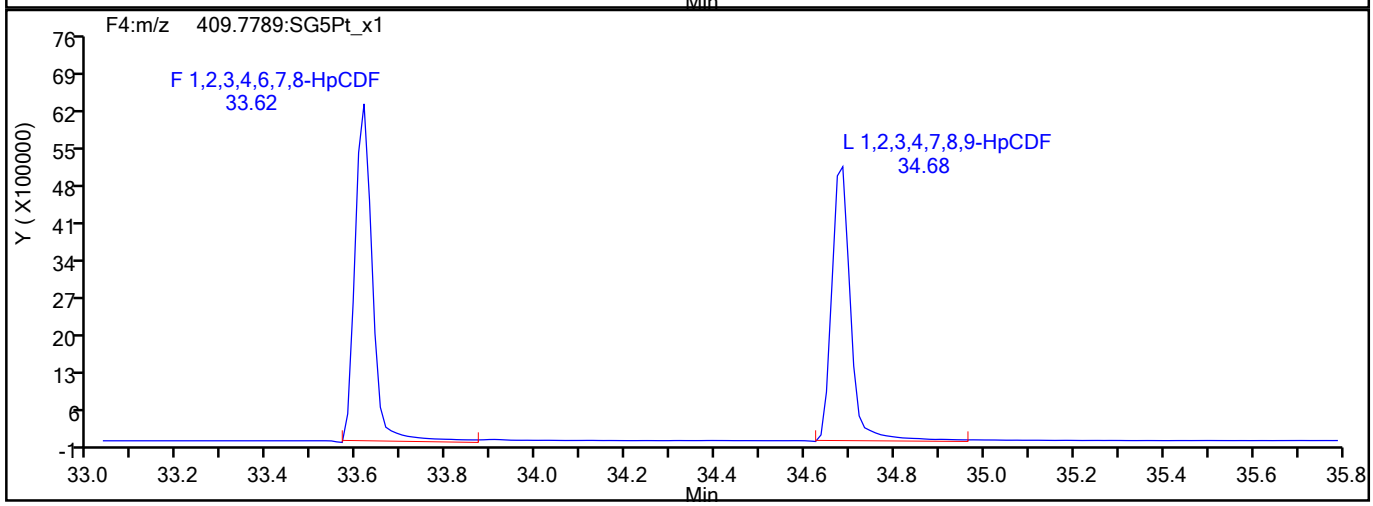

HpCDF Interference Mass

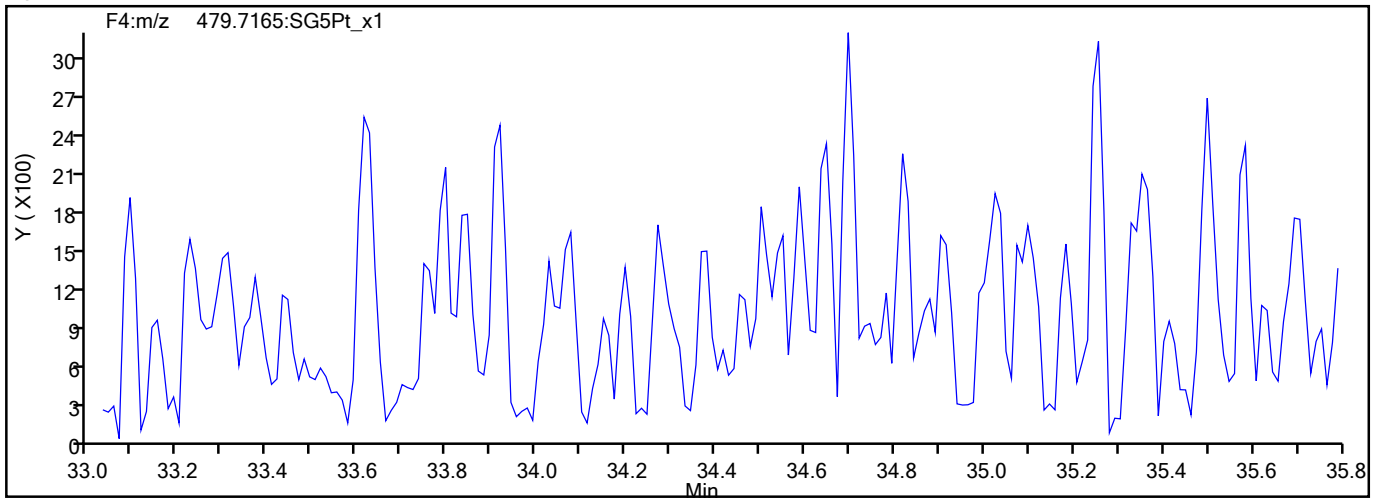

794429

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

HpCDD

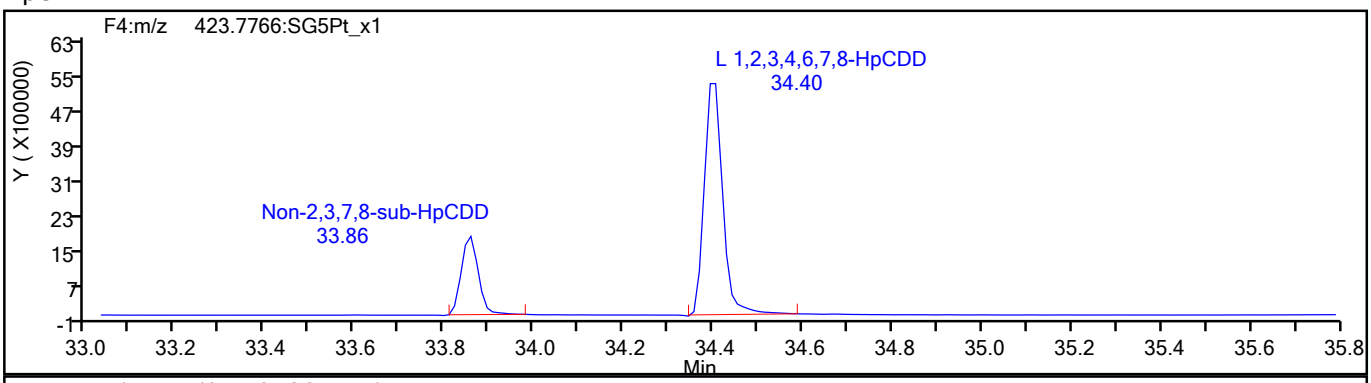

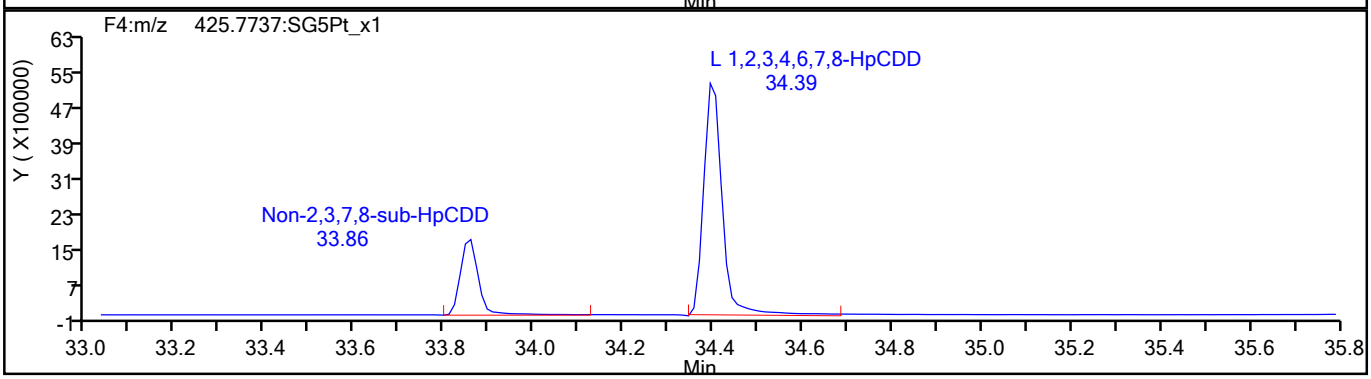

HpCDD Standards

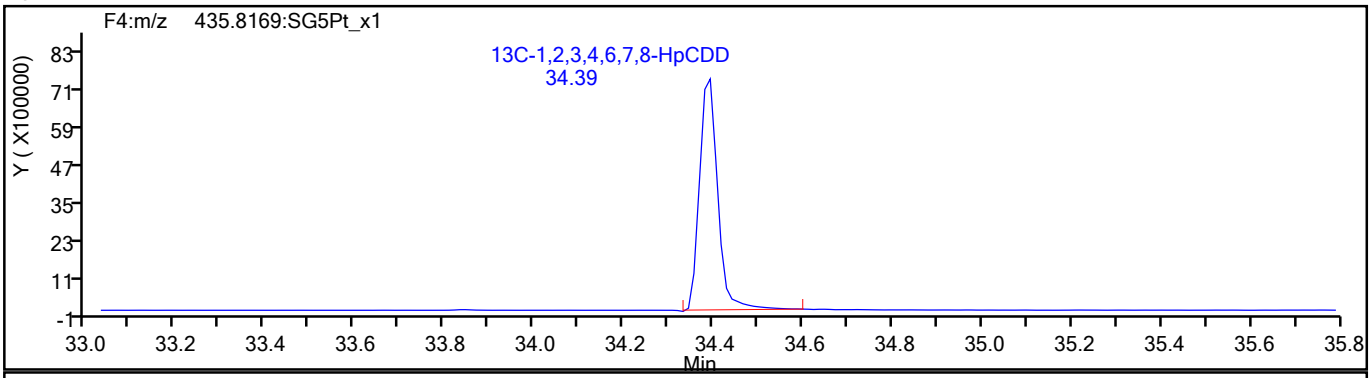

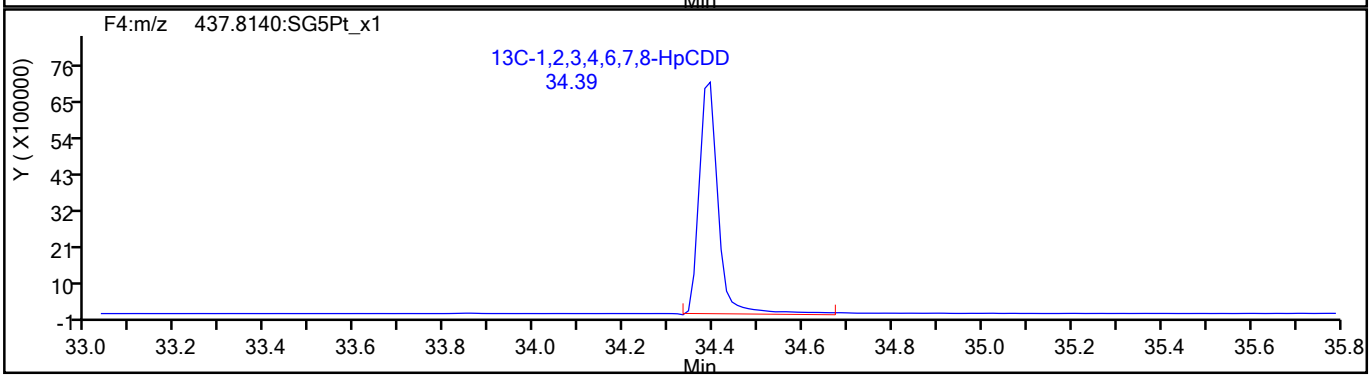

794430

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

OCDF

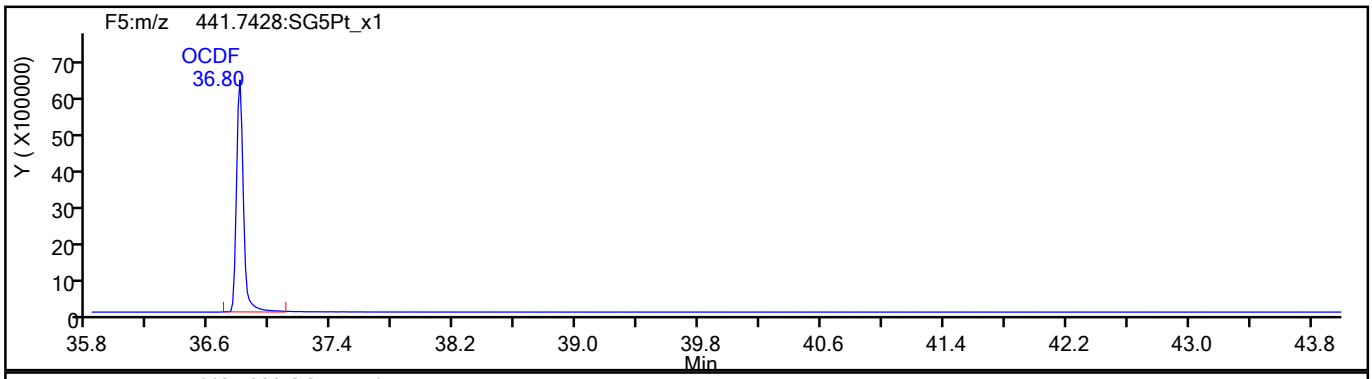

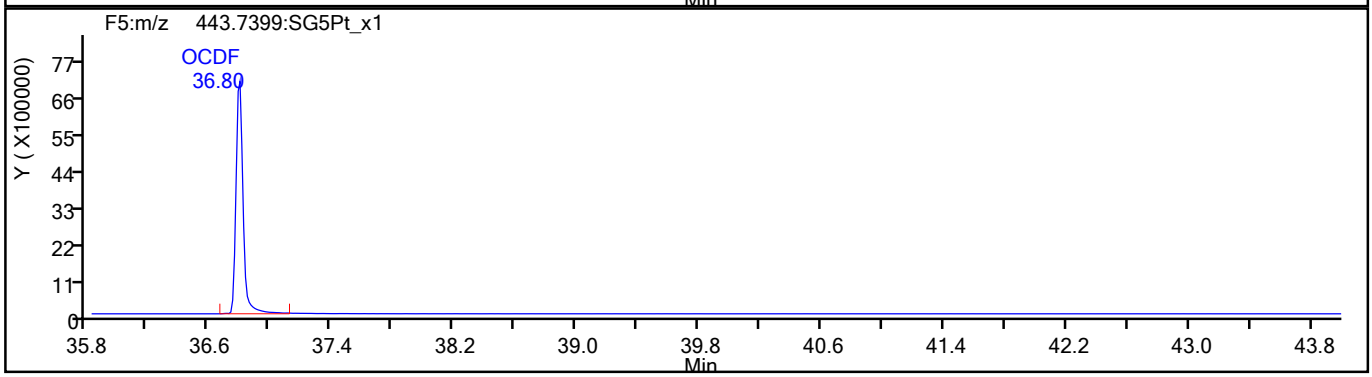

OCDF Standards

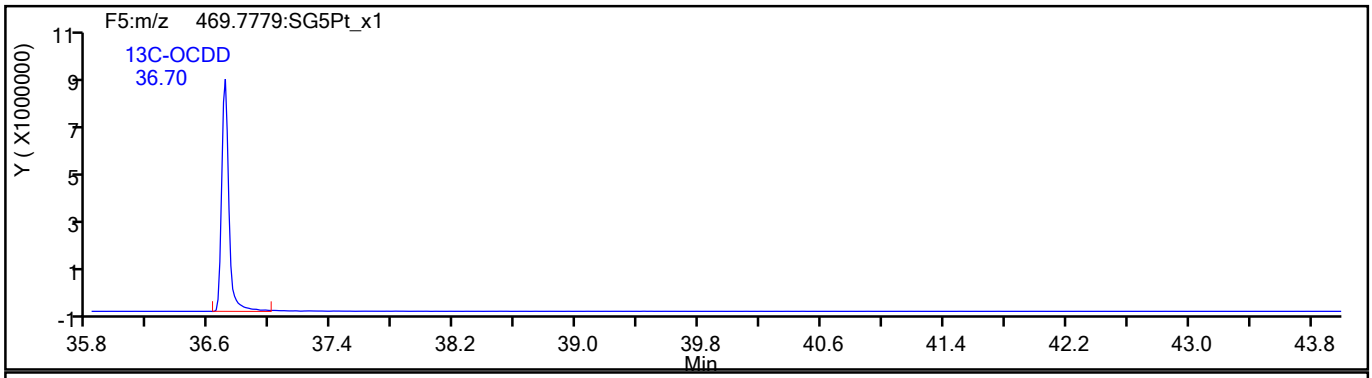

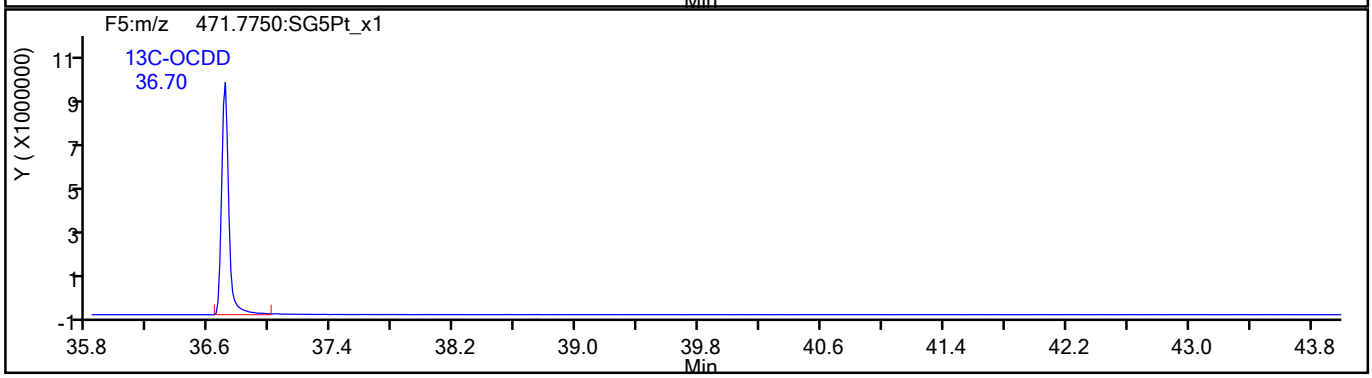

794431

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
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OCDF

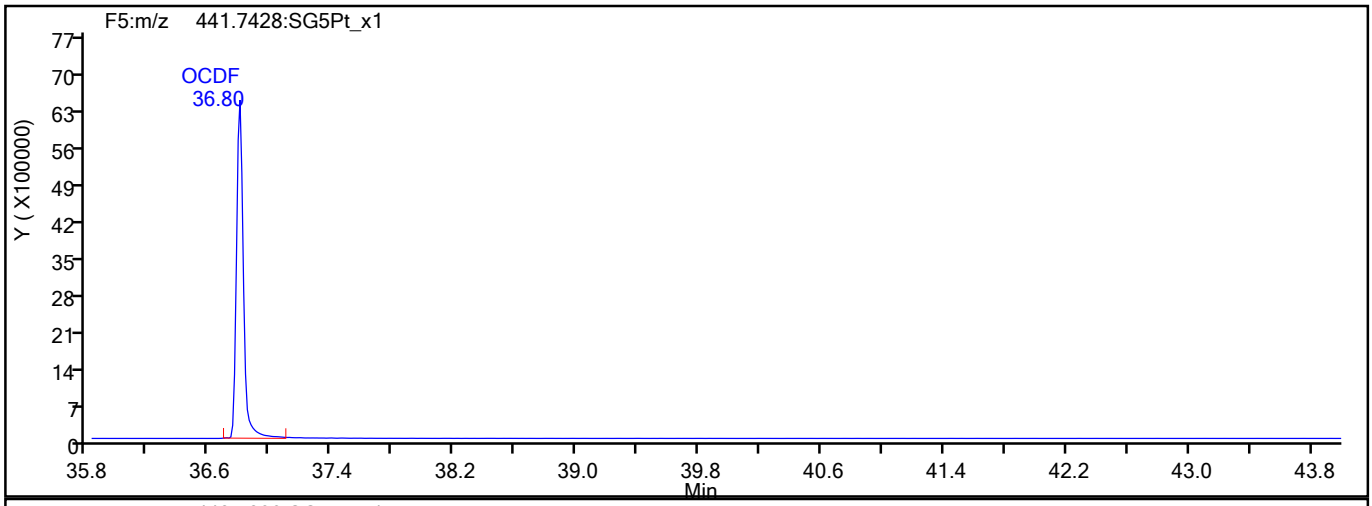

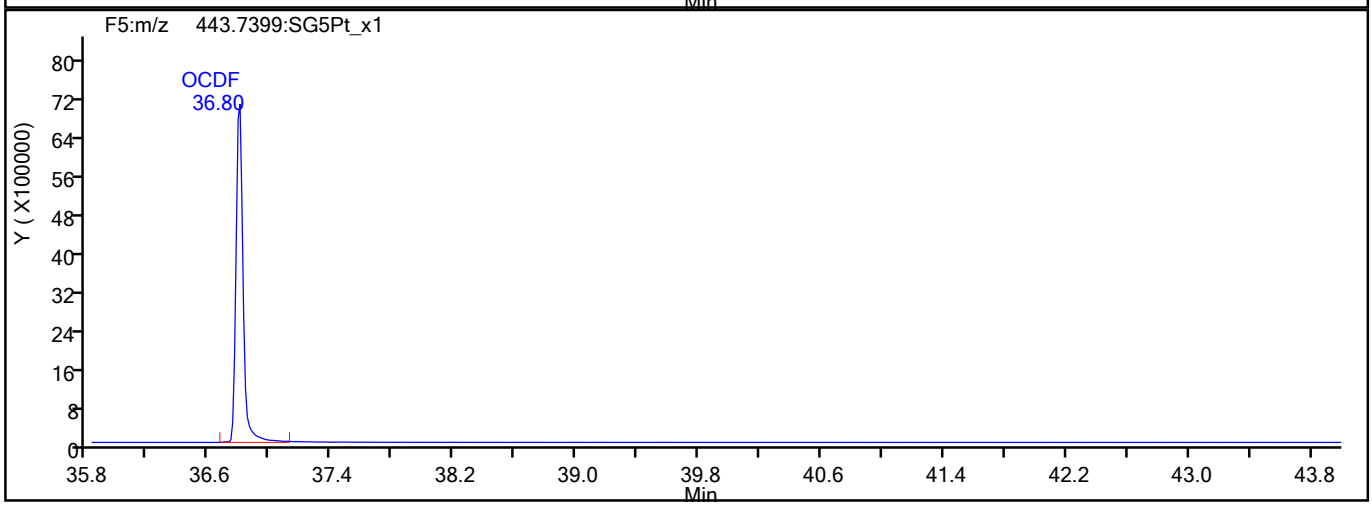

OCDF Interference Mass

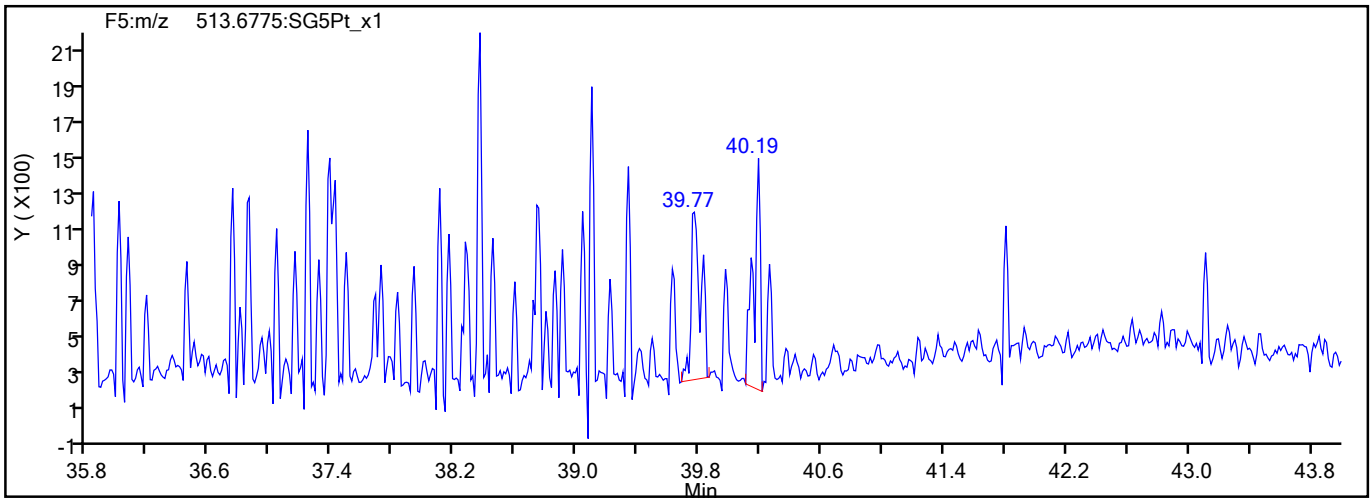

794432

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\10D5\20210826-125760.b\25AU2110D5_24.d		
Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

OCDD

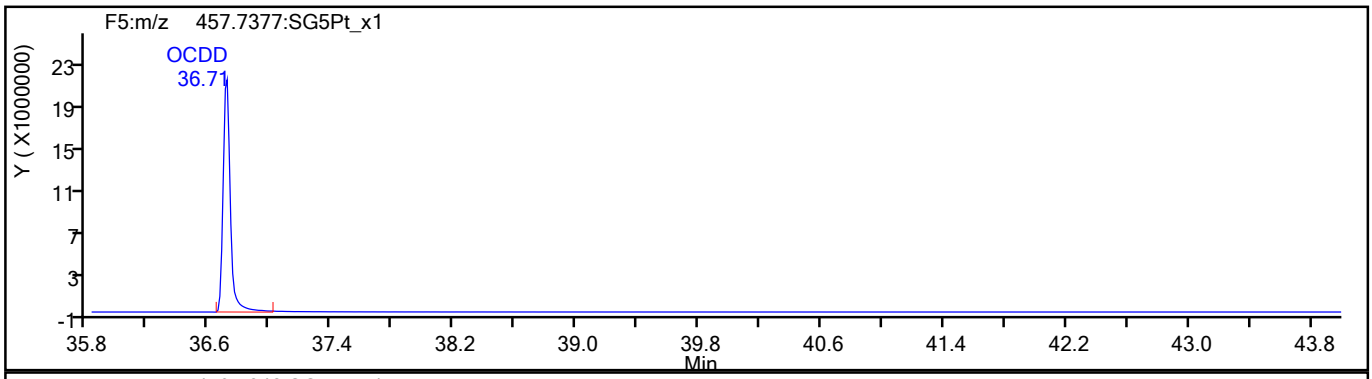

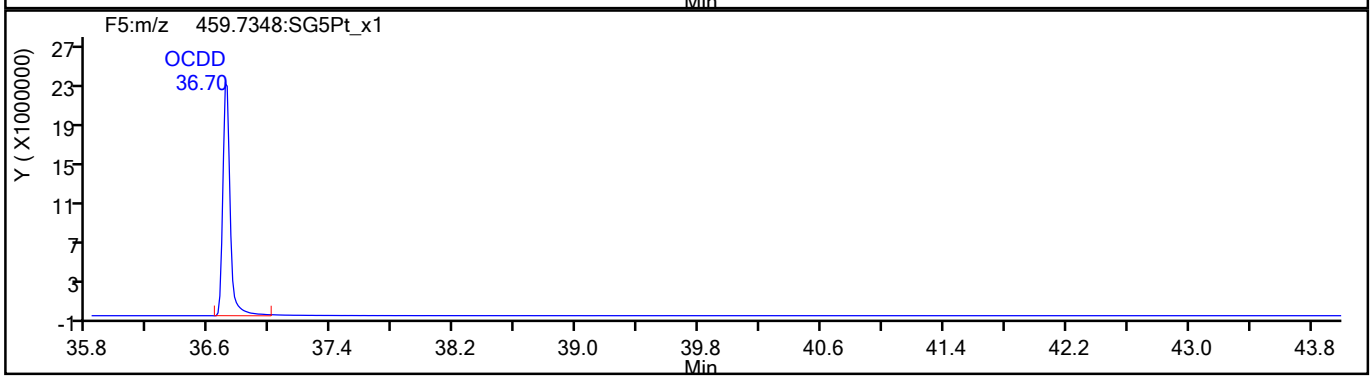

OCDD Standards

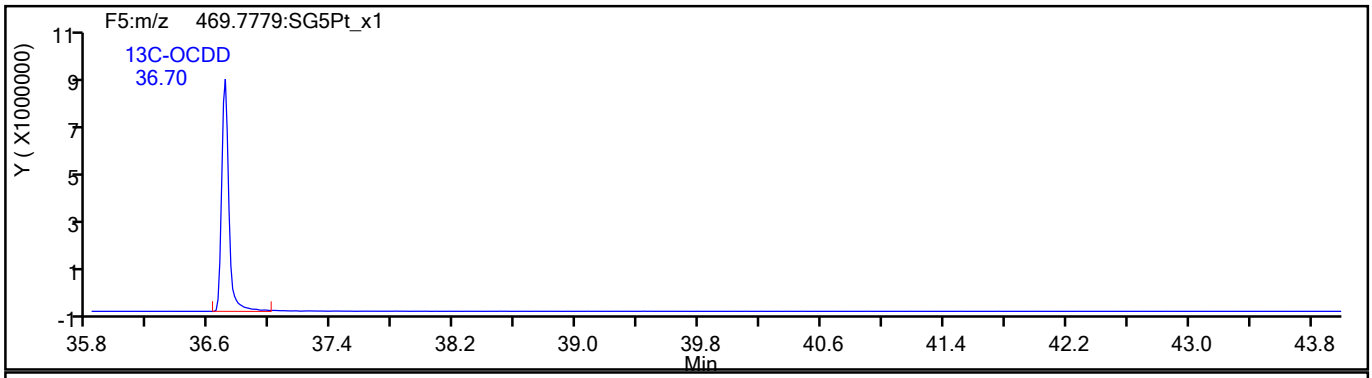

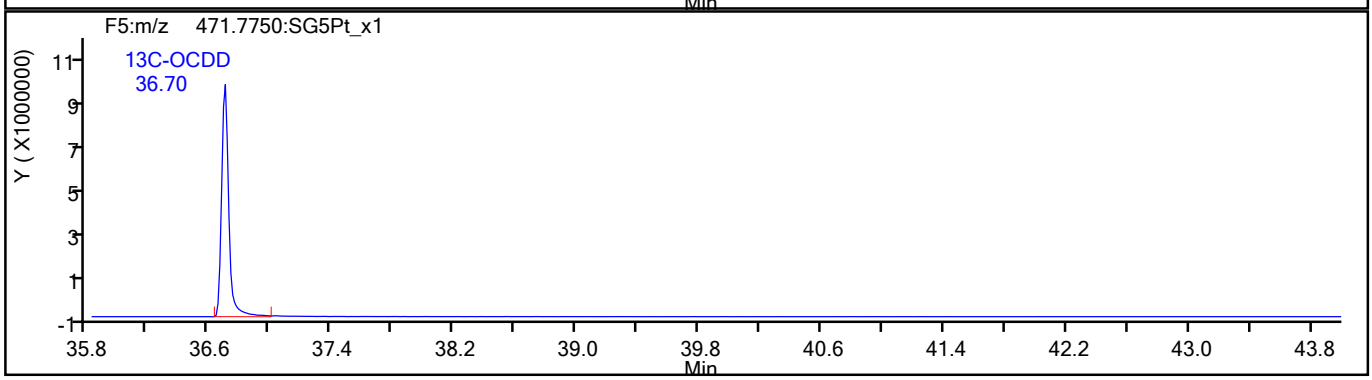

794433

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
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Column Type:	DB-5	Column Dia:	0.32 mm

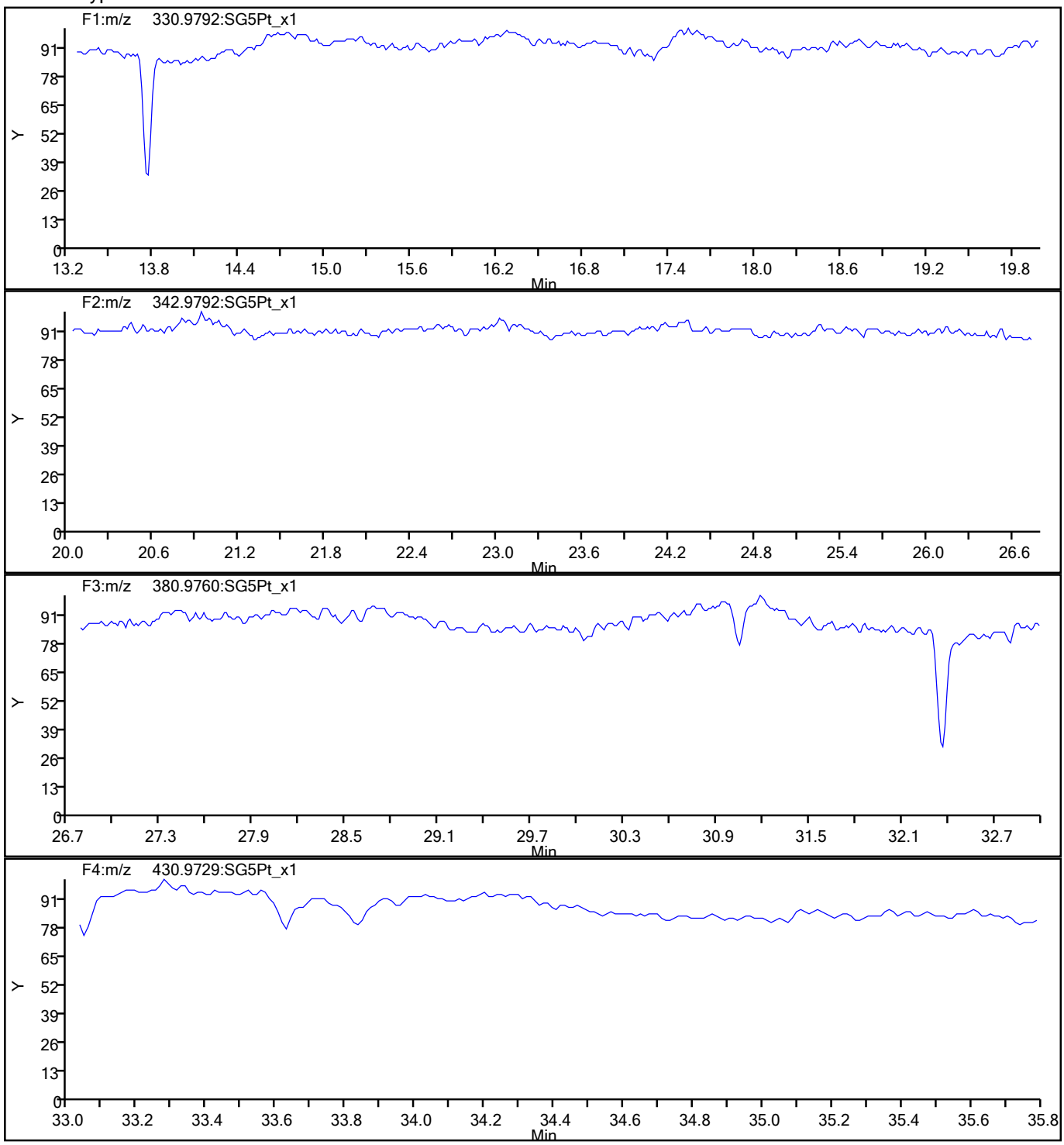

794434

Report Date: 27-Aug-2021 09:11:38 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

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Injection Date:	26-Aug-2021 03:35:44	Injection Vol:	2.0 ul
Instrument ID:	10D5	Operator ID:	SMA
Method:	Dioxin_10D5	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	519955	Sample Line#:	10
Column Type:	DB-5	Column Dia:	0.32 mm

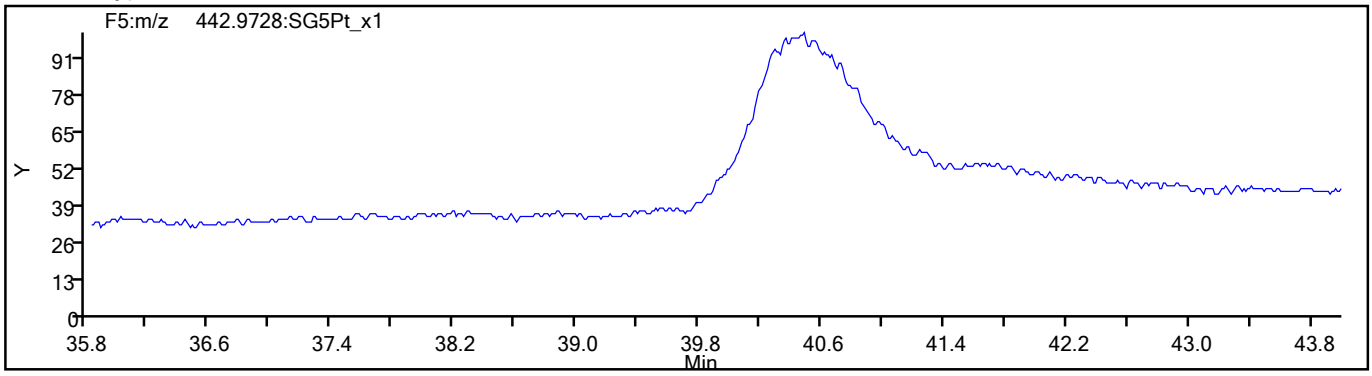

794435

FORM I
DIOXIN ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento
Job No.: 320-77292-1
SDG No.:
Client Sample ID: 11215702-080321-BN-SJSB091 (2-4) MSD RA
Lab Sample ID: 320-77292-2 MSD RA
Matrix: Sediment
Lab File ID: 31AU2111D2_012.d
Analysis Method: 1613B
Date Collected: 08/03/2021 13:35
Extract. Method: HRMS-Sox
Date Extracted: 08/12/2021 05:19
Sample wt/vol: 10.57(g)
Date Analyzed: 08/31/2021 20:15
Con. Extract Vol.: 20.0(uL)
Dilution Factor: 1
Injection Volume: 2(uL)
Level: (low/med) Low
% Moisture: 38.1
GPC Cleanup:(Y/N) N
Analysis Batch No.: 520997
Units: pg/g

CAS NO.	COMPOUND NAME	RESULT	Q	RL	EDL
51207-31-9	2,3,7,8-TCDF	49.3		1.5	0.81

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
89059-46-1	13C-2,3,7,8-TCDF	57		24-169

CAS NO.	SURROGATE	%REC	Q	LIMITS
85508-50-5	37Cl4-2,3,7,8-TCDD	74		35-197

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_012.d
Lims ID: 320-77292-A-2-C MSD
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Sample Type: MSD
Inject. Date: 31-Aug-2021 20:15:28 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-2-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:42:11

Compound	RT (min.)	Area	Ratio	Ical RRF	Amount pg/ul	EMPC pg/ul	Noise EDL	Final EDL	%Rec	Flags
* 13C-1,2,3,4-TCDD	16.286	40498377	0.79	7.2E+05	100.0	100.0				
D 13C-2,3,7,8-TCDF	17.616	30739658	0.81	1.3327	57.0	57.0	0.4046	0.4046	56.96	
2,3,7,8-TCDF	17.630	4945554	0.78	0.9978	16.1	16.1	0.2664	0.2664	161	M
D 13C-2,3,7,8-TCDD	16.052	20119159	0.74	0.8749	56.8	56.8	1.008	1.008	56.78	
2,3,7,8-TCDD	16.094	2768818	0.68	1.0570	13.0	13.0	0.3353	0.3353	130	
$ 37Cl4-2,3,7,8-TCDD	16.080	10416739		0.8648	29.7	29.7	0.1166	0.1166	74.36	
S Total 2378-Chlorinated Dioxins &							0.000100	0.000100		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Report Date: 01-Sep-2021 09:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento
Target Compound Quantitation Worksheet Report

Data File: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_012.d
Lims ID: 320-77292-A-2-C MSD
Client ID: 11215702-080321-BN-SJSB091 (2-4)
Sample Type: MSD
Inject. Date: 31-Aug-2021 20:15:28 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: 320-77292-A-2-C MSD
Misc. Info.: DB225RES
Operator ID: Instrument ID: 11D2

Method: \\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\DXN_DB225_11D2.m
Limit Group: HR - 1613B - ICAL
Last Update: 01-Sep-2021 09:57:13 Calib Date: 14-Jul-2021 14:47:36
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\chromfs\Sacramento\ChromData\11D2\20210714-122829.b\14JL2111D2_007.d

Column 1 : DB-225 (0.32 mm) Det: F1:HRSIR
Process Host: CTX1668

First Level Reviewer: bennettd Date: 01-Sep-2021 09:42:11

Signal	RT (min.)	Adj RT (min.)	Sec.	REL RT	Area	Height	Avg Noise	EDL Height	S/N	Ratio(Limits)	Flags
13C-1,2,3,4-TCDD											
331.9368	16.286	16.275	1		17880183	4124755	17713	44282	233		
333.9339	16.286	16.275	1		22618194	4979844	14411	36027	346	0.79(0.65-0.89)	
13C-2,3,7,8-TCDF											
315.9419	17.616	17.605	1	1.082	13726049	2518167	10656	26640	236		
317.9389	17.602	17.605	0	1.081	17013609	3306885	8983	22457	368	0.81(0.65-0.89)	
2,3,7,8-TCDF											M
303.9016	17.630	17.619	1	1.001	2162328	398801	2021	5052	197		M
305.8987	17.630	17.619	1	1.001	2783226	507699	4173	10432	122	0.78(0.65-0.89)	M
13C-2,3,7,8-TCDD											
331.9368	16.052	16.055	0	0.986	8550543	1768728	17713	44282	100		
333.9339	16.066	16.055	1	0.987	11568616	2503299	14411	36027	174	0.74(0.65-0.89)	
2,3,7,8-TCDD											
319.8965	16.094	16.069	1	1.003	1120965	243189	3584	8960	68		
321.8936	16.080	16.069	1	1.002	1647853	343142	2473	6182	139	0.68(0.65-0.89)	
37Cl4-2,3,7,8-TCDD											
327.8840	16.080	16.069	1	0.987	10416739	2331728	3673	9182	635		

QC Flag Legend

Processing Flags
Review Flags
M - Manually Integrated

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_012.d				
Injection Date:	31-Aug-2021 20:15:28	Instrument ID:	11D2		
Lims ID:	320-77292-A-2-C MSD				
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 1

Processing Integration Results

RT: 17.63
Area: 2208391
Amount: 16.562221
Amount Units: pg/ul

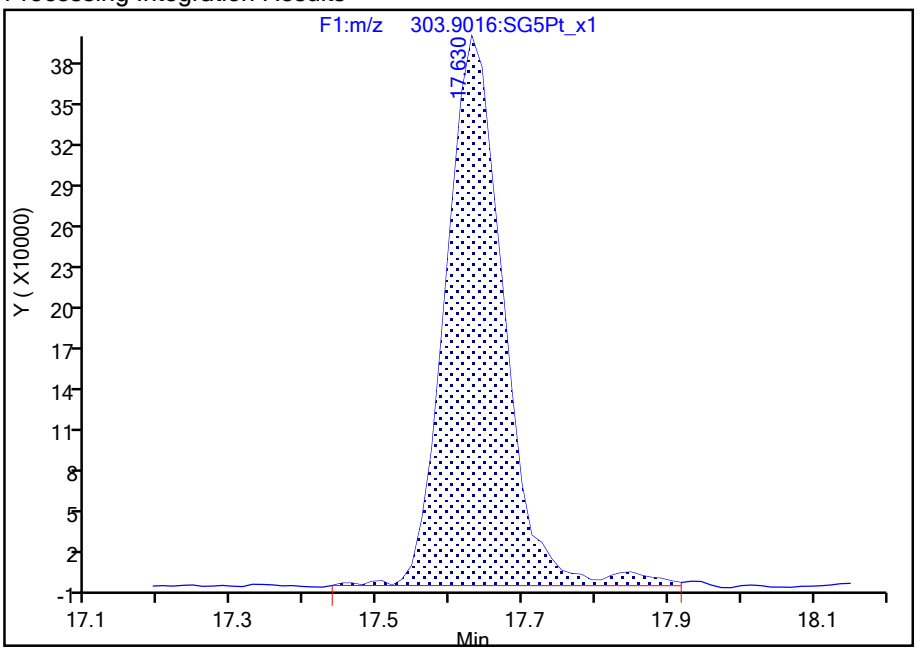

Manual Integration Results

RT: 17.63
Area: 2162328
Amount: 16.123877
Amount Units: pg/ul

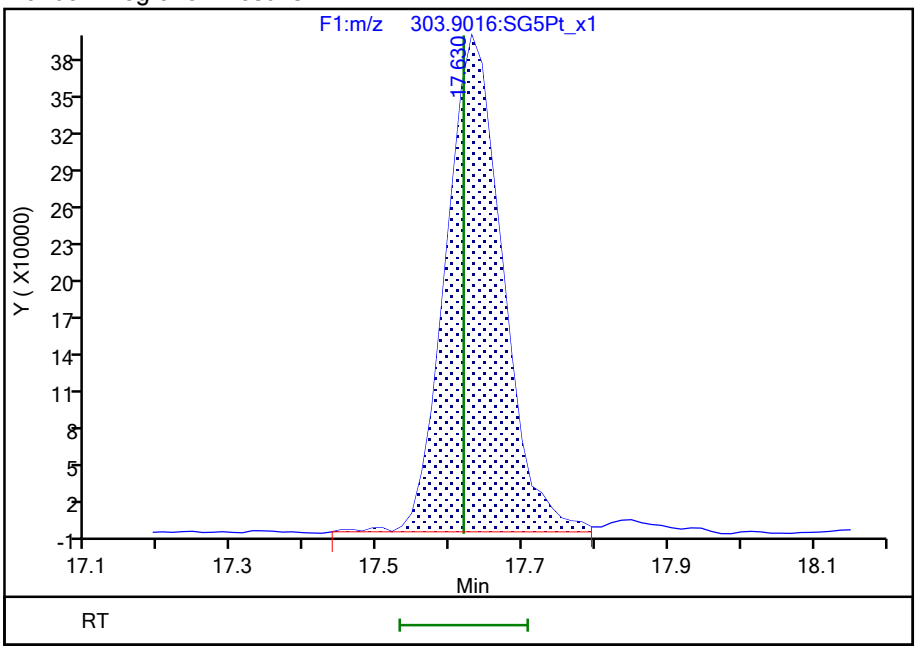

Reviewer: bennettd, 01-Sep-2021 09:42:02

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_012.d				
Injection Date:	31-Aug-2021 20:15:28	Instrument ID:	11D2		
Lims ID:	320-77292-A-2-C MSD				
Client ID:	11215702-080321-BN-SJSB091 (2-4)				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	2.0 ul	Dil. Factor:	1.0000		
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL		
Column:	DB-225 (0.32 mm)	Detector	F1:HRSIR		

2,3,7,8-TCDF, CAS: 51207-31-9

Signal: 2

Processing Integration Results

RT: 17.63
Area: 2871613
Amount: 16.562221
Amount Units: pg/ul

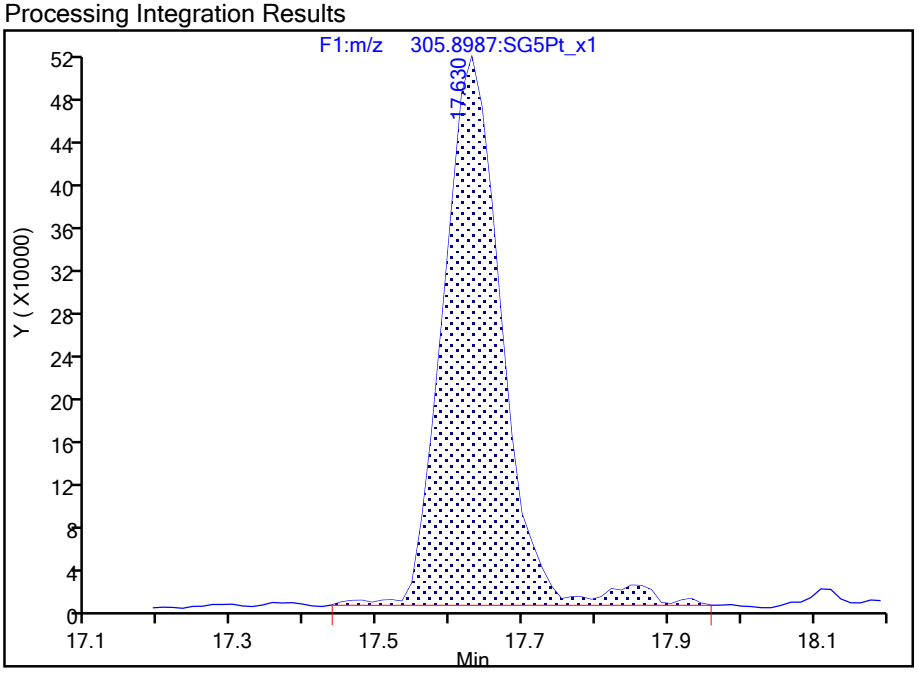

Manual Integration Results

RT: 17.63
Area: 2783226
Amount: 16.123877
Amount Units: pg/ul

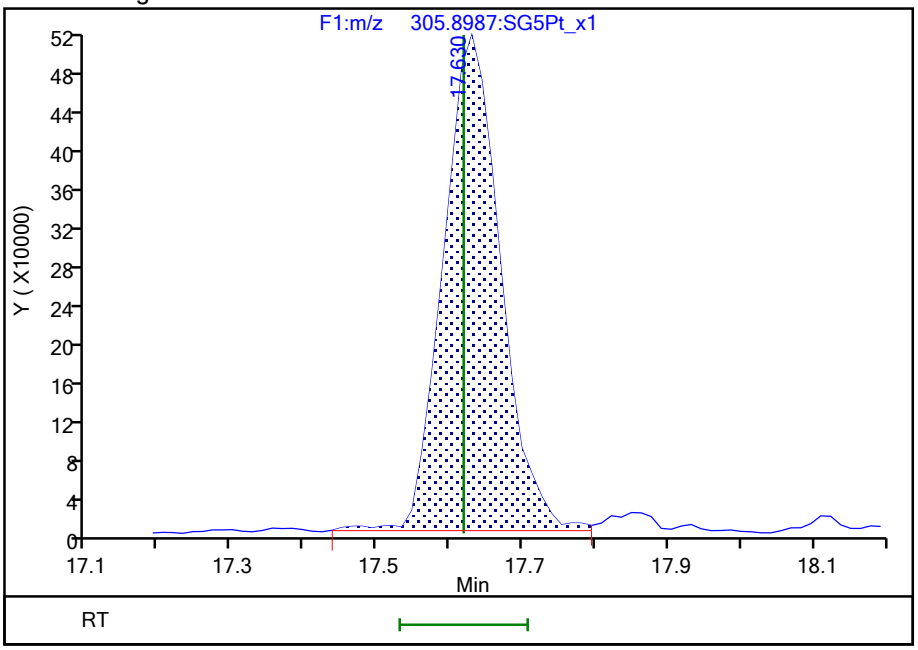

Reviewer: bennettd, 01-Sep-2021 09:42:05

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

794440

Report Date: 01-Sep-2021 09:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_012.d		
Injection Date:	31-Aug-2021 20:15:28	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	520997	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

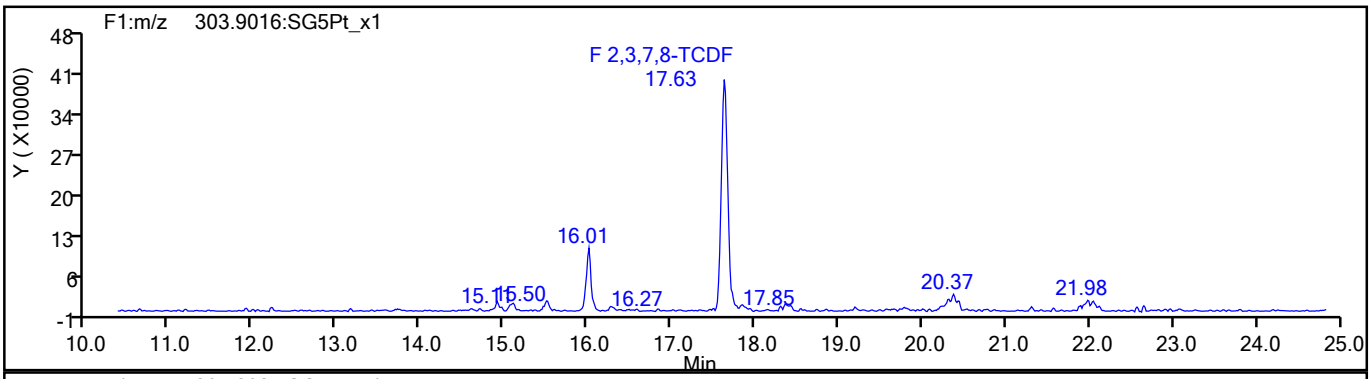

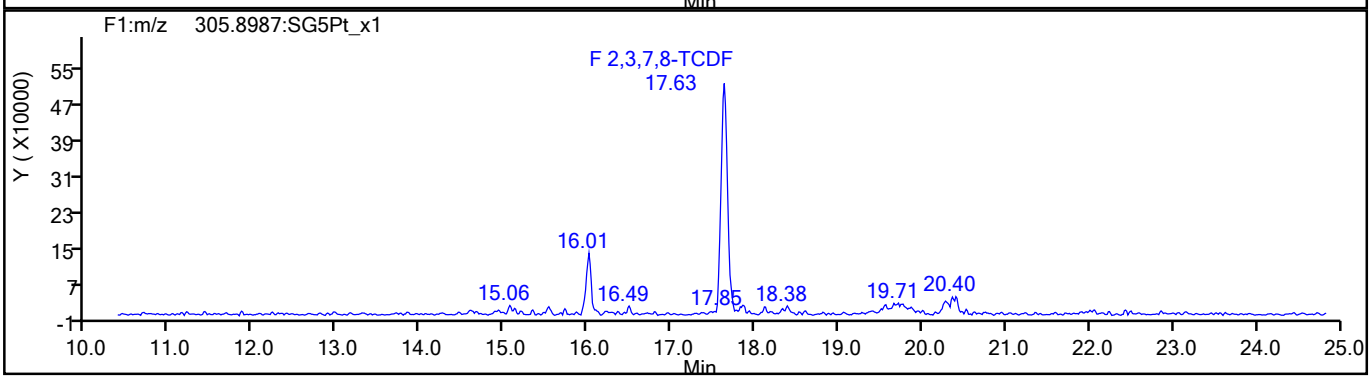

TCDF Standards

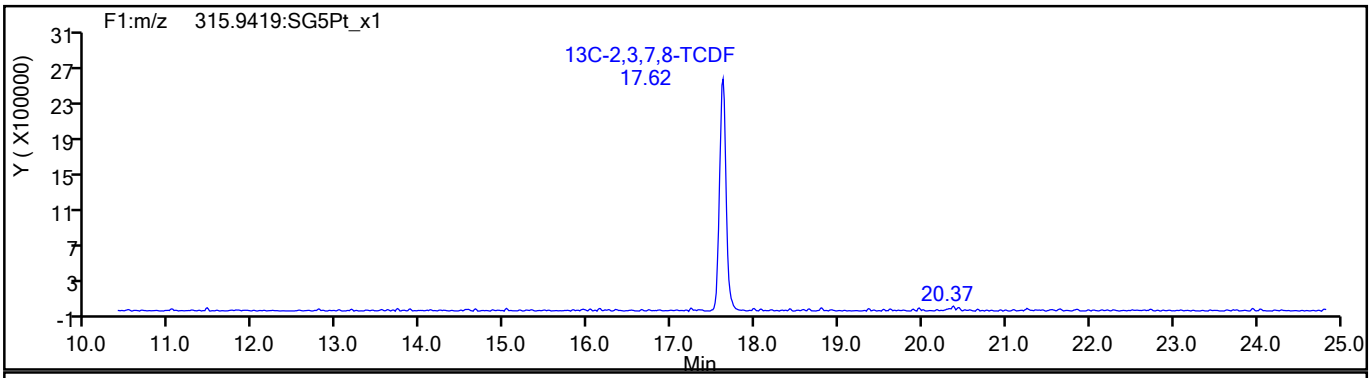

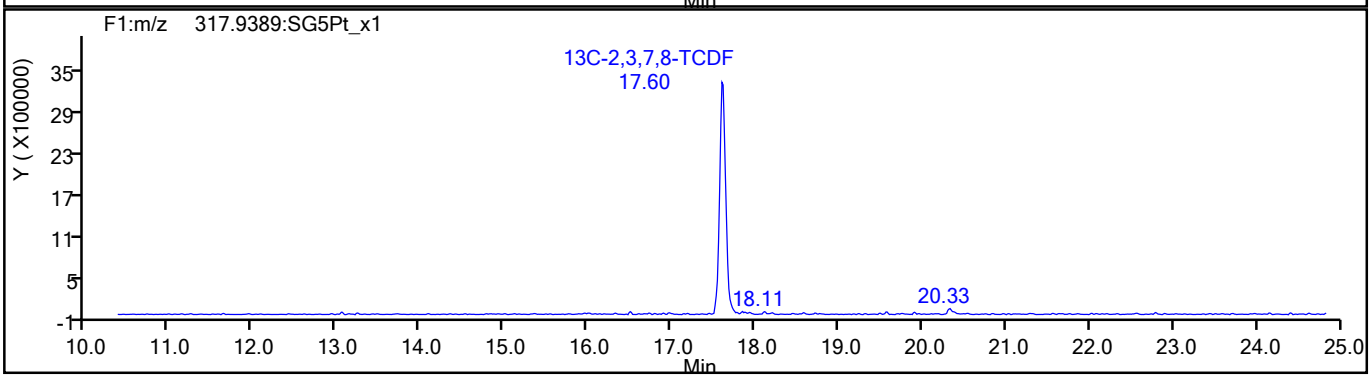

794441

Report Date: 01-Sep-2021 09:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_012.d		
Injection Date:	31-Aug-2021 20:15:28	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	520997	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

TCDF

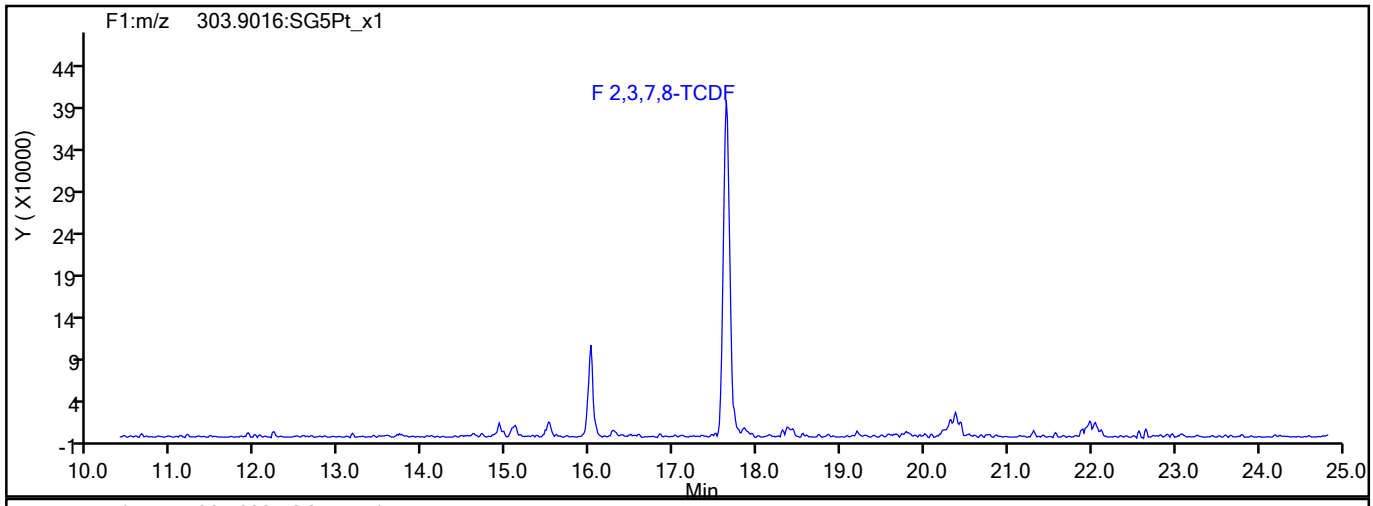

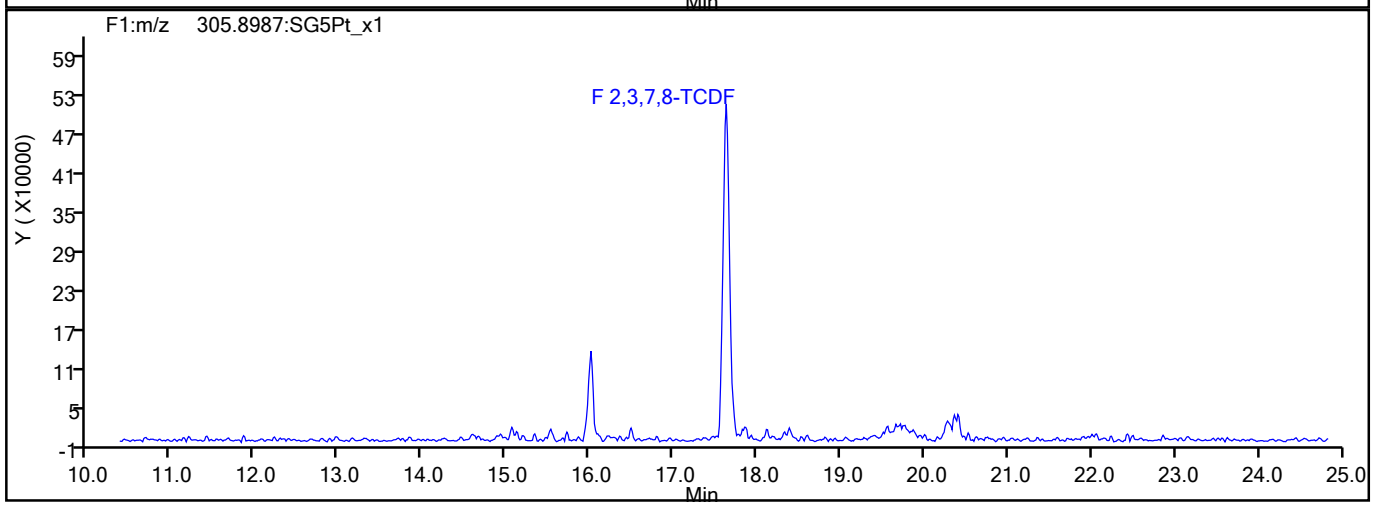

TCDF Interference Mass

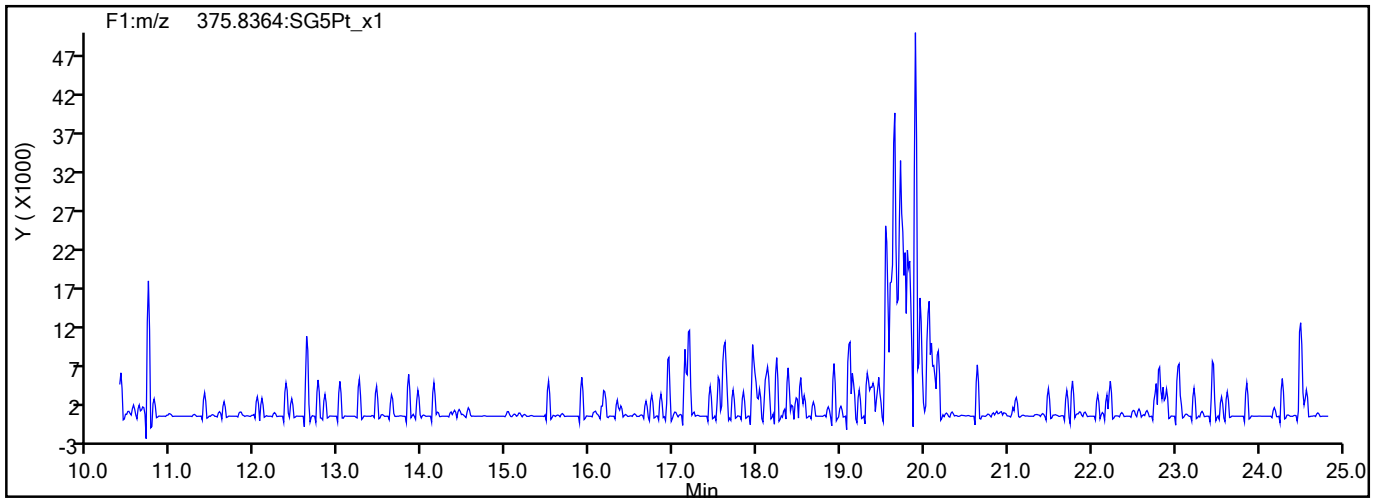

794442

Report Date: 01-Sep-2021 09:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_012.d		
Injection Date:	31-Aug-2021 20:15:28	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	520997	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

37Cl4-TCDD

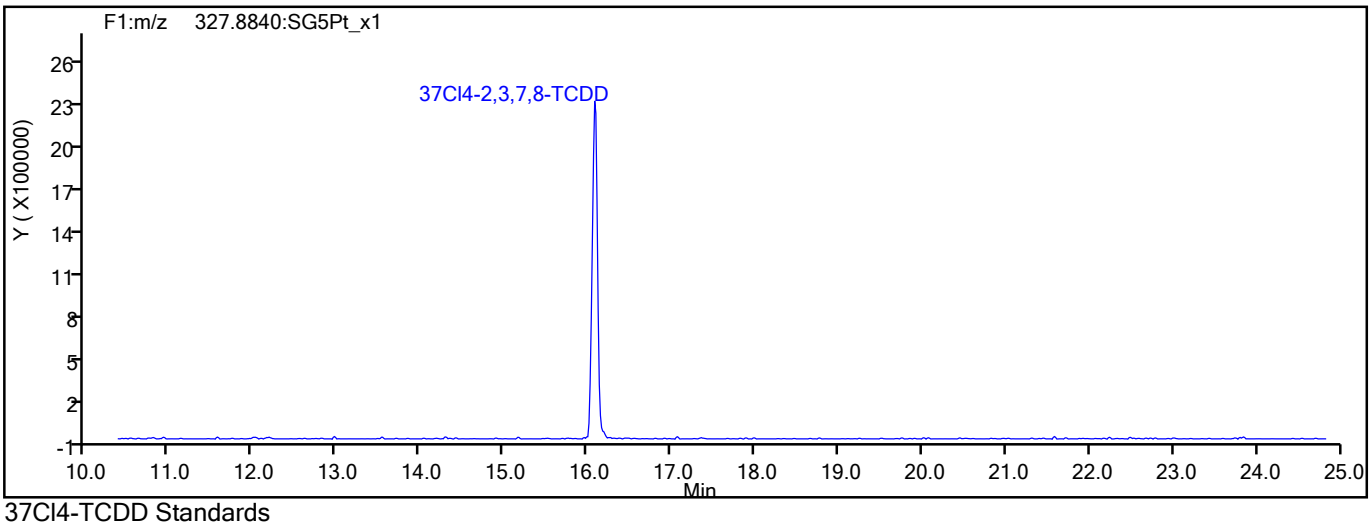

37Cl4-TCDD Standards

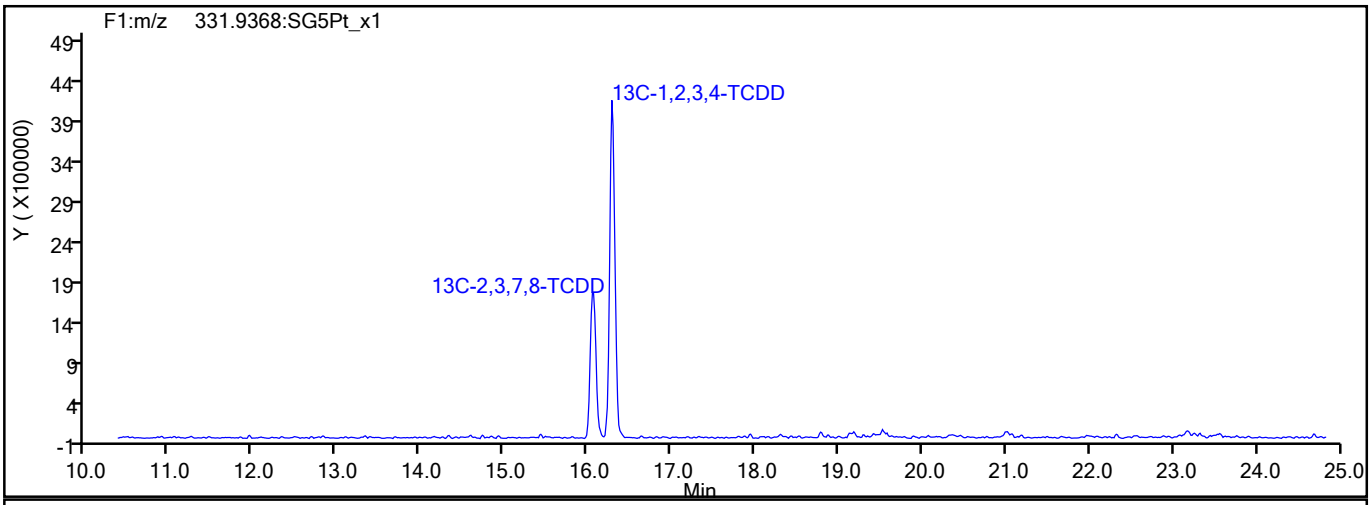

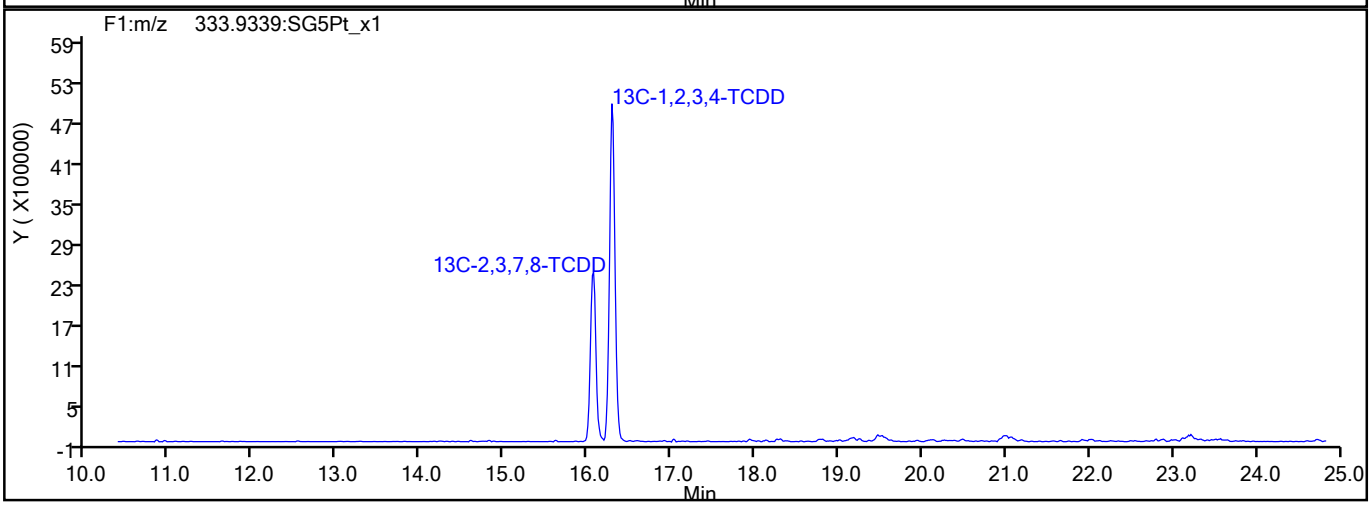

794443

Report Date: 01-Sep-2021 09:57:21 Chrom Revision: 2.3 13-May-2021 07:57:40

Eurofins TestAmerica, Sacramento

Data File:	\\chromfs\Sacramento\ChromData\11D2\20210830-126018.b\31AU2111D2_012.d		
Injection Date:	31-Aug-2021 20:15:28	Injection Vol:	2.0 ul
Instrument ID:	11D2	Operator ID:	
Method:	DXN_DB225_11D2	Limit Group:	HR - 1613B - ICAL
Client ID:	11215702-080321-BN-SJSB091 (2-4)		
Worklist#:	520997	Sample Line#:	12
Column Type:	DB-225	Column Dia:	0.32 mm

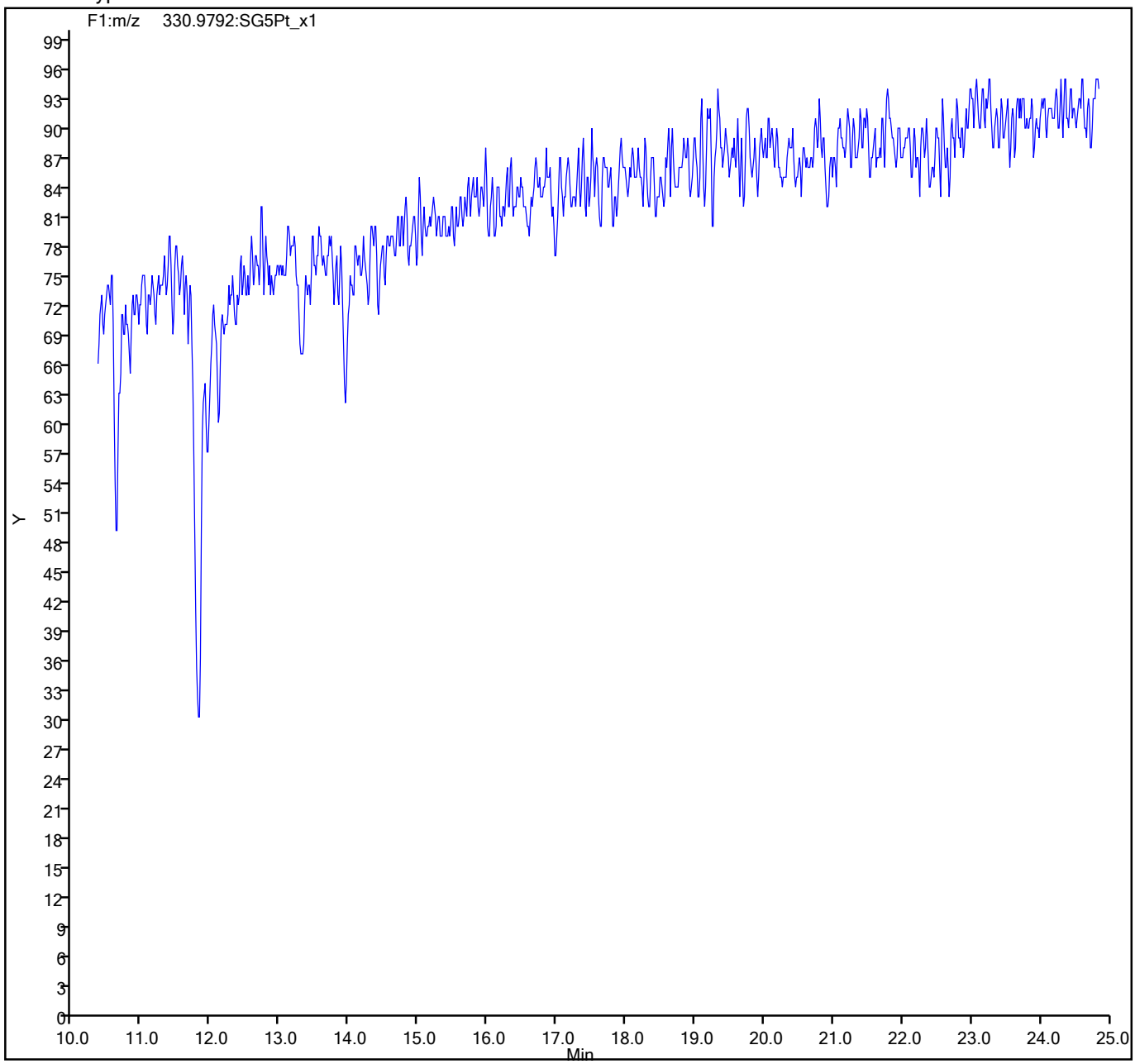

794444

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Instrument ID: 11D2 Start Date: 07/14/2021 10:57

Analysis Batch Number: 506541 End Date: 07/14/2021 16:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-506541/1		07/14/2021 10:57	1	14JL2111D2_001.d	DB-225 0.32(mm)
IC 320-506541/3		07/14/2021 12:14	1	14JL2111D2_003.d	DB-225 0.32(mm)
IC 320-506541/4		07/14/2021 12:52	1	14JL2111D2_004.d	DB-225 0.32(mm)
IC 320-506541/5		07/14/2021 13:30	1	14JL2111D2_005.d	DB-225 0.32(mm)
IC 320-506541/6		07/14/2021 14:09	1	14JL2111D2_006.d	DB-225 0.32(mm)
IC 320-506541/7		07/14/2021 14:47	1	14JL2111D2_007.d	DB-225 0.32(mm)
ICV 320-506541/9		07/14/2021 16:04	1	14JL2111D2_009.d	DB-225 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Instrument ID: 10D5 Start Date: 07/26/2021 09:21

Analysis Batch Number: 510264 End Date: 07/26/2021 15:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-510264/1		07/26/2021 09:21	1	26JL2110D5_1.d	DB-5 0.32(mm)
IC 320-510264/3		07/26/2021 10:51	1	26JL2110D5_3.d	DB-5 0.32(mm)
IC 320-510264/4		07/26/2021 11:36	1	26JL2110D5_4.d	DB-5 0.32(mm)
IC 320-510264/5		07/26/2021 12:21	1	26JL2110D5_5.d	DB-5 0.32(mm)
IC 320-510264/6		07/26/2021 13:06	1	26JL2110D5_6.d	DB-5 0.32(mm)
IC 320-510264/7		07/26/2021 13:51	1	26JL2110D5_7.d	DB-5 0.32(mm)
ICV 320-510264/9		07/26/2021 15:31	1	26JL2110D5_9.d	DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/25/2021 09:38

Analysis Batch Number: 519953 End Date: 08/25/2021 18:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
WDM 320-519953/1		08/25/2021 09:38	1	25AU2110D5_1.d	DB-5 0.32(mm)
CCV 320-519953/2		08/25/2021 10:23	1	25AU2110D5_2.d	DB-5 0.32(mm)
MB 320-515492/1-A		08/25/2021 11:20	1	25AU2110D5_3.d	DB-5 0.32(mm)
LCS 320-515492/2-A		08/25/2021 12:05	1	25AU2110D5_4.d	DB-5 0.32(mm)
ZZZZZ		08/25/2021 12:50	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 13:35	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 14:20	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 15:05	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 15:50	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 16:35	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 17:20	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 18:05	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 18:50	1		DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/25/2021 20:40

Analysis Batch Number: 519955 End Date: 08/26/2021 05:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-519955/1		08/25/2021 20:40	1	25AU2110D5_15.d	DB-5 0.32(mm)
WDM 320-519955/2		08/25/2021 21:35	1	25AU2110D5_16.d	DB-5 0.32(mm)
ZZZZZ		08/25/2021 23:05	1		DB-5 0.32(mm)
ZZZZZ		08/25/2021 23:50	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 00:35	1		DB-5 0.32(mm)
320-77292-1	11215702-080321-BN-SJ SB091 (0-2)	08/26/2021 01:20	1	25AU2110D5_21.d	DB-5 0.32(mm)
320-77292-2	11215702-080321-BN-SJ SB091 (2-4)	08/26/2021 02:05	1	25AU2110D5_22.d	DB-5 0.32(mm)
320-77292-2 MS	11215702-080321-BN-SJ SB091 (2-4) MS	08/26/2021 02:50	1	25AU2110D5_23.d	DB-5 0.32(mm)
320-77292-2 MSD	11215702-080321-BN-SJ SB091 (2-4) MSD	08/26/2021 03:35	1	25AU2110D5_24.d	DB-5 0.32(mm)
320-77292-3	11215702-080321-BN-SJ SB091 (4-6)	08/26/2021 04:20	1	25AU2110D5_25.d	DB-5 0.32(mm)
320-77292-4	11215702-080321-BN-SJ SB091 (6-8)	08/26/2021 05:05	1	25AU2110D5_26.d	DB-5 0.32(mm)
320-77292-5	11215702-080321-BN-SJ SB091 (8-10)	08/26/2021 05:50	1	25AU2110D5_27.d	DB-5 0.32(mm)

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Instrument ID: 10D5 Start Date: 08/26/2021 07:40

Analysis Batch Number: 519966 End Date: 08/26/2021 16:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 320-519966/1		08/26/2021 07:40	1	25AU2110D5_29.d	DB-5 0.32(mm)
WDM 320-519966/2		08/26/2021 08:35	1	25AU2110D5_30.d	DB-5 0.32(mm)
ZZZZZ		08/26/2021 09:20	1		DB-5 0.32(mm)
320-77292-6	11215702-080321-BN-SJ SB091 (10-12)	08/26/2021 10:05	1	25AU2110D5_32.d	DB-5 0.32(mm)
320-77292-7	11215702-080321-BN-SJ SB091 (12-14)	08/26/2021 10:50	1	25AU2110D5_33.d	DB-5 0.32(mm)
320-77292-8	11215702-080321-BN-SJ SB091 (14-16)	08/26/2021 11:35	1	25AU2110D5_34.d	DB-5 0.32(mm)
ZZZZZ		08/26/2021 12:20	1		DB-5 0.32(mm)
320-77292-13	11215702-080321-BN-DU P-18	08/26/2021 13:05	1	25AU2110D5_36.d	DB-5 0.32(mm)
ZZZZZ		08/26/2021 13:50	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 14:35	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 15:20	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 16:05	1		DB-5 0.32(mm)
ZZZZZ		08/26/2021 16:50	1		DB-5 0.32(mm)

1613B

DIOXIN ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Instrument ID: 11D2 Start Date: 08/31/2021 13:13

Analysis Batch Number: 520997 End Date: 09/01/2021 00:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CPS 320-520997/1		08/31/2021 13:13	1	31AU2111D2_001.d	DB-225 0.32(mm)
CCV 320-520997/2		08/31/2021 13:51	1	31AU2111D2_002.d	DB-225 0.32(mm)
ZZZZZ		08/31/2021 15:08	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 15:46	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 16:25	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 17:03	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 17:41	1		DB-225 0.32(mm)
320-77292-1 RA	11215702-080321-BN-SJ SB091 (0-2) RA	08/31/2021 18:20	1	31AU2111D2_009.d	DB-225 0.32(mm)
320-77292-2 RA	11215702-080321-BN-SJ SB091 (2-4) RA	08/31/2021 18:58	1	31AU2111D2_010.d	DB-225 0.32(mm)
320-77292-2 MS RA	11215702-080321-BN-SJ SB091 (2-4) MS RA	08/31/2021 19:37	1	31AU2111D2_011.d	DB-225 0.32(mm)
320-77292-2 MSD RA	11215702-080321-BN-SJ SB091 (2-4) MSD RA	08/31/2021 20:15	1	31AU2111D2_012.d	DB-225 0.32(mm)
320-77292-3 RA	11215702-080321-BN-SJ SB091 (4-6) RA	08/31/2021 20:53	1	31AU2111D2_013.d	DB-225 0.32(mm)
320-77292-4 RA	11215702-080321-BN-SJ SB091 (6-8) RA	08/31/2021 21:32	1	31AU2111D2_014.d	DB-225 0.32(mm)
ZZZZZ		08/31/2021 22:10	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 22:48	1		DB-225 0.32(mm)
ZZZZZ		08/31/2021 23:27	1		DB-225 0.32(mm)
ZZZZZ		09/01/2021 00:05	10		DB-225 0.32(mm)

1613B

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77292-1

SDG No.:

Batch Number: 515492 Batch Start Date: 08/12/21 05:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/24/21 07:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ExtractionID	RoundBottomID	RotoVapID	HRDXNIDA 00479
MB 320-515492/1		HRMS-Sox, 1613B		10 g	20.0 uL	G-1	78	1	1 mL
LCS 320-515492/2		HRMS-Sox, 1613B		10 g	20.0 uL	G-2	138	3	1 mL
320-77292-A-1	11215702-080321-BN-SJSB091 (0-2)	HRMS-Sox, 1613B	T	10.14 g	20.0 uL	I-3	128	1	1 mL
320-77292-A-2	11215702-080321-BN-SJSB091 (2-4)	HRMS-Sox, 1613B	T	10.86 g	20.0 uL	I-4	134	3	1 mL
320-77292-A-2 MS	11215702-080321-BN-SJSB091 (2-4)	HRMS-Sox, 1613B	T	9.79 g	20.0 uL	I-5	135	1	1 mL
320-77292-A-2 MSD	11215702-080321-BN-SJSB091 (2-4)	HRMS-Sox, 1613B	T	10.57 g	20.0 uL	I-6	127	3	1 mL
320-77292-A-3	11215702-080321-BN-SJSB091 (4-6)	HRMS-Sox, 1613B	T	10.09 g	20.0 uL	J-1	137	1	1 mL
320-77292-A-4	11215702-080321-BN-SJSB091 (6-8)	HRMS-Sox, 1613B	T	10.32 g	20.0 uL	J-2	125	3	1 mL
320-77292-A-5	11215702-080321-BN-SJSB091 (8-10)	HRMS-Sox, 1613B	T	10.39 g	20.0 uL	J-3	30	1	1 mL
320-77292-A-6	11215702-080321-BN-SJSB091 (10-12)	HRMS-Sox, 1613B	T	9.66 g	20.0 uL	J-4	26	3	1 mL
320-77292-A-7	11215702-080321-BN-SJSB091 (12-14)	HRMS-Sox, 1613B	T	9.98 g	20.0 uL	J-5	121	1	1 mL
320-77292-A-8	11215702-080321-BN-SJSB091 (14-16)	HRMS-Sox, 1613B	T	9.53 g	20.0 uL	J-6	133	3	1 mL
320-77292-A-13	11215702-080321-BN-DUP-18	HRMS-Sox, 1613B	T	10.21 g	20.0 uL	F-2	136	3	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
MB 320-515492/1		HRMS-Sox, 1613B		20 uL	1 mL				
LCS 320-515492/2		HRMS-Sox, 1613B		20 uL	1 mL	50 uL			
320-77292-A-1	11215702-080321-BN-SJSB091 (0-2)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77292-A-2	11215702-080321-BN-SJSB091 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77292-A-2 MS	11215702-080321-BN-SJSB091 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77292-1

SDG No.:

Batch Number: 515492 Batch Start Date: 08/12/21 05:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/24/21 07:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	HRDXNIS 00137	HRDXNSU 00255	HRDXNTA 00137			
320-77292-A-2 MSD	11215702-080321-BN-SJSB091 (2-4)	HRMS-Sox, 1613B	T	20 uL	1 mL	50 uL			
320-77292-A-3	11215702-080321-BN-SJSB091 (4-6)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77292-A-4	11215702-080321-BN-SJSB091 (6-8)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77292-A-5	11215702-080321-BN-SJSB091 (8-10)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77292-A-6	11215702-080321-BN-SJSB091 (10-12)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77292-A-7	11215702-080321-BN-SJSB091 (12-14)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77292-A-8	11215702-080321-BN-SJSB091 (14-16)	HRMS-Sox, 1613B	T	20 uL	1 mL				
320-77292-A-13	11215702-080321-BN-DUP-18	HRMS-Sox, 1613B	T	20 uL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

DIOXIN BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77292-1

SDG No.:

Batch Number: 515492 Batch Start Date: 08/12/21 05:15 Batch Analyst: Chang, Fue

Batch Method: HRMS-Sox Batch End Date: 08/24/21 07:00

Batch Notes	
20% DCM:Hexane ID	DH28_00194 mL
65% DCM:Hexane ID	DH6535_00548
Acid Silica Gel ID	SA5644_00735
Acid Alumina ID	Acid_Alumina_00019
Balance ID	QA-074
Hexane ID	Hexane_00290/289
IFB Clean Up	SKV 8/23/21
Na2SO4 ID	SodiumSulfate_00166
Analyst ID - IDA Reagent Drop	FC 8/12/21 HD05018 HRDXNIDA_00479 B-4/8 1.0 mL
Analyst ID - IDA Reagent Drop Witness	TGL 8/12/21
Analyst ID - IS Reagent Drop	TGL 08/24/21 DB15270 HRDXNSU_00137 B 1/4 20.0 uL
Analyst ID - IS Reagent Drop Witness	FC 08/24/21
Analyst ID - SU Reagent Drop	FC 8/19/21 HD05018 HRDXNSU_00255 B-5/5 1.0 mL
Analyst ID - SU Reagent Drop Witness	TGL 8/19/21
Analyst ID - TA Reagent Drop	FC 8/12/21 DB15270 HRDXNTA_00137 B-5/10 50.0 uL
Analyst ID - TA Reagent Drop Witness	TGL 8/12/21
Silica Gel ID	SilicaGel_00375
Soxhlet/Soxtherm End	8/12/21 9:45
Soxhlet/Soxtherm Start	8/12/21 6:45
Storage Box ID	DXN -270
Toluene ID	Toluene_00112

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

794454

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job Number: 320-77292-1

SDG No.:

Project: SJRWP Supplemental Design Investigation

Client Sample ID	Lab Sample ID
11215702-080321-BN-SJSB091 (0-2)	320-77292-1
11215702-080321-BN-SJSB091 (2-4)	320-77292-2
11215702-080321-BN-SJSB091 (4-6)	320-77292-3
11215702-080321-BN-SJSB091 (6-8)	320-77292-4
11215702-080321-BN-SJSB091 (8-10)	320-77292-5
11215702-080321-BN-SJSB091 (10-12)	320-77292-6
11215702-080321-BN-SJSB091 (12-14)	320-77292-7
11215702-080321-BN-SJSB091 (14-16)	320-77292-8
11215702-080321-BN-DUP-18	320-77292-13

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-77292-1

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 MDL Date: 01/01/2017 12:44

Analyte	Wavelength/ Mass	RL (%)	MDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacrament Job Number: 320-77292-1

SDG Number:

Matrix: Sediment Instrument ID: NOEQUIP

Method: D 2216 XMDL Date: 01/01/2017 12:46

Analyte	Wavelength/ Mass	XRL (%)	XMDL (%)
Percent Moisture		0.1	0.1
Percent Solids		0.1	0.1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 320-77292-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: D 2216

Start Date: 08/09/2021 11:17 End Date: 08/09/2021 11:17

Lab Sample Id	D/F	Type	Time	Analytes	
				% Sol	Moist
ZZZZZZ			11:17		
320-77346-A-1 DU	1	T	11:17	X	X
ZZZZZZ			11:17		
ZZZZZZ			11:17		
320-77292-1	1	T	11:17	X	X
320-77292-2	1	T	11:17	X	X
320-77292-3	1	T	11:17	X	X
320-77292-4	1	T	11:17	X	X
320-77292-5	1	T	11:17	X	X
320-77292-6	1	T	11:17	X	X
320-77292-7	1	T	11:17	X	X
320-77292-8	1	T	11:17	X	X
ZZZZZZ			11:17		
320-77292-13	1	T	11:17	X	X
ZZZZZZ			11:17		
ZZZZZZ			11:17		
ZZZZZZ			11:17		
ZZZZZZ			11:17		
ZZZZZZ			11:17		
ZZZZZZ			11:17		
ZZZZZZ			11:17		

Prep Types:
T = Total/NA

FORM XIII-IN

794458

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77292-1

SDG No.:

Batch Number: 514409 Batch Start Date: 08/09/21 11:17 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/10/21 09:05

Lab Sample ID	Client Sample ID	Method Chain	Basis	DISH#	DishWeight	SampleMassWet	SampleMassDry	%_Moisture	%_Solid
320-77346-A-1 DU		D 2216	T	2	1.00 g	6.95 g	6.07 g	14.7899159663866 %	85.2100840336134 %
320-77292-A-1	11215702-080321-BN-SJSB091 (0-2)	D 2216	T	5	1.00 g	9.29 g	4.68 g	55.6091676718938 %	44.3908323281062 %
320-77292-A-2	11215702-080321-BN-SJSB091 (2-4)	D 2216	T	6	1.00 g	9.82 g	6.46 g	38.0952380952381 %	61.9047619047619 %
320-77292-A-3	11215702-080321-BN-SJSB091 (4-6)	D 2216	T	7	1.01 g	9.85 g	7.93 g	21.7194570135747 %	78.2805429864253 %
320-77292-A-4	11215702-080321-BN-SJSB091 (6-8)	D 2216	T	8	1.02 g	9.64 g	6.29 g	38.8631090487239 %	61.1368909512761 %
320-77292-A-5	11215702-080321-BN-SJSB091 (8-10)	D 2216	T	9	1.00 g	12.55 g	8.08 g	38.7012987012987 %	61.2987012987013 %
320-77292-A-6	11215702-080321-BN-SJSB091 (10-12)	D 2216	T	10	1.01 g	8.34 g	5.25 g	42.1555252387449 %	57.8444747612551 %
320-77292-A-7	11215702-080321-BN-SJSB091 (12-14)	D 2216	T	11	1.01 g	12.31 g	8.15 g	36.8141592920354 %	63.1858407079646 %
320-77292-A-8	11215702-080321-BN-SJSB091 (14-16)	D 2216	T	12	1.01 g	11.62 g	7.36 g	40.1508011310085 %	59.8491988689915 %
320-77292-A-13	11215702-080321-BN-DUP-18	D 2216	T	14	1.08 g	9.48 g	6.22 g	38.8095238095238 %	61.1904761904762 %

Batch Notes	
Balance ID	QA-068
Date and Time Samples in Desiccator	08/10/2021 08:27
Date and Time Samples out of Desiccator	08/10/2021 09:05
Date samples were placed in the oven	08/09/2021
Oven Temp In	116 Degrees C
Time samples were place in the oven	11:17
Date samples were removed from oven	08/10/2021
Oven Temp Out	116 Degrees C
Time Samples were removed from oven	08:27
Oven ID	Soil Prep #2
Thermometer ID	151969607

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 320-77292-1

SDG No.:

Batch Number: 514409 Batch Start Date: 08/09/21 11:17 Batch Analyst: Saechao, Tammy C

Batch Method: D 2216 Batch End Date: 08/10/21 09:05

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

General Chemistry Raw Data Report

Job ID: 320-77292-1

Batch: 514409
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-77346-A-1 DU

Analysis Date: Aug 09, 2021 11:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	14.7899159663866	%
Percent Solids	None	1	85.2100840336134	%

Lab Sample ID: 320-77292-A-1

Analysis Date: Aug 09, 2021 11:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	55.6091676718938	%
Percent Solids	None	1	44.3908323281062	%

Lab Sample ID: 320-77292-A-2

Analysis Date: Aug 09, 2021 11:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	38.0952380952381	%
Percent Solids	None	1	61.9047619047619	%

Lab Sample ID: 320-77292-A-3

Analysis Date: Aug 09, 2021 11:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	21.7194570135747	%
Percent Solids	None	1	78.2805429864253	%

Lab Sample ID: 320-77292-A-4

Analysis Date: Aug 09, 2021 11:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	38.8631090487239	%
Percent Solids	None	1	61.1368909512761	%

Lab Sample ID: 320-77292-A-5

Analysis Date: Aug 09, 2021 11:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	38.7012987012987	%
Percent Solids	None	1	61.2987012987013	%

Lab Sample ID: 320-77292-A-6

Analysis Date: Aug 09, 2021 11:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	42.1555252387449	%
Percent Solids	None	1	57.8444747612551	%

Lab Sample ID: 320-77292-A-7

Analysis Date: Aug 09, 2021 11:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	36.8141592920354	%
Percent Solids	None	1	63.1858407079646	%

Lab Sample ID: 320-77292-A-8

Analysis Date: Aug 09, 2021 11:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	40.1508011310085	%
Percent Solids	None	1	59.8491988689915	%

General Chemistry Raw Data Report

Job ID: 320-77292-1

Batch: 514409 (Continued)
Method: D 2216

Analyst Initials: TCS
Instrument: No Equipment Assigned to The Batch

Lab Sample ID: 320-77292-A-13

Analysis Date: Aug 09, 2021 11:17

Analyte	Detector	Dilution	Raw Result	Unit
Percent Moisture	None	1	38.8095238095238	%
Percent Solids	None	1	61.1904761904762	%

eurofins | Environment Testing TestAmerica

Eurofins TestAmerica, Sacramento
Balance Calibration Check Log

Balance: QA-068 Logbook # 5844

WEIGHT #1		WEIGHT #2		DATE	INIT	WEIGHT ID	P/F
Working WT Denomination (g)	OBSERVED WEIGHT (g)	Working WT Denomination (g)	OBSERVED WEIGHT (g)				
1.00	1.00	200.00	200.00	07/20/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/21/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/22/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/23/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/26/21	NM	WT-3	P
1.00	1.00	200.00	199.99	07/27/21	NM	WT-3	P
1.00	1.00	200.00	200.00	07/28/21	NM	WT-3	P
1.00	1.00	200.00	200.00	7/29/21	KB	WT-3	P
1.00	1.00	200.00	200.00	07/30/21	NM	WT-3	P
1.00	1.00	200.00	200.00	8/1/2021	DM	WT-3	P
(1) 1.00	1.00	200.00	200.00	08/02/21	NM	WT-3	P
1.00	1.00	200.00	200.00	8/3/21	HR	WT-3	P
1.00	1.00	200.00	200.00	08/04/21	NM	WT-3	P
1.00	1.01	200.00	199.99	8/5/21	KB	WT-3	P
1.00	1.00	200.00	199.99	8/6/21	TG	WT-3	P
1.00	1.00	200.00	200.00	08/09/21	NM	WT-3	P
1.00	1.00	200.00	200.00	08/10/21	NM	WT-3	P

1 P= Pass, F= Fail. The observed weight must be within the listed tolerances in order to pass. If calibration check values fall outside acceptance limits, the balance is considered to be out of calibration.
   a) Do not move or use the balance
   b) Attach a sign instructing others not to use the balance (see front of logbook).
   c) Notify the QA department.

2 Balance Tolerances (grams): (1) Reviewed TG 8/12/21

Denomination	Range	Denomination	Range
0.500g	N/A	50.0g	49.5g – 50.5g
1.00g	0.990g – 1.01g	100g	99.0g – 101g
2.00g	1.98g – 2.02g	200g	198g – 202g
5.00g	4.95g – 5.05g	500g	495g – 505g
10.0g	9.90g – 10.1g	1000g	990g – 1010g
20.0g	19.8g – 2.02g	2000g	1980g – 2020g

Calibration range is (+/-) 1.0% for top-loading balances. The above tolerances have been rounded to meet balance read out capability.

Shipping and Receiving Documents

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605-1500
Phone (916) 373-5600 Fax (303) 467-7246

Chain of Custody Record

eurofins

Client Information			
Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:	Page: 1 of 2
Company: GHD Services Inc.			Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:		
City: Baton Rouge	TAT Requested (days): 15 business days		
State, Zip: LA, 70808			
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested		
Email: janie.smith@ghd.com	WO #:		
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702		
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001		

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=soil, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X				X	
11215702-080321-BN-SJTSB098 (0-2)	8-3-21	1330	G	S	N	N	X	X	X	1	
(2-4)		1335			N	Y	X	X	X	1	MS/MSD
(4-6)		1340			N	N	X	X	X	1	
(6-8)		1345			N	N	X	X	X	1	
(8-10)		1350			N	N	X	X	X	1	
(10-12)		1355			N	N	X	X	X	1	
(12-14)		1400			N	N	X	X	X	1	
(14-16)		1405			N	N	X	X	X	1	
(16-18)		1410			N	N	X	X	X	1	PRIORITY
(18-20)		1415			N	N	X	X	X	1	HOLD
(20-22)		1420			N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FedEx

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Breanna North	8-4-21 1500	GHD			

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

794465

Eurofins TestAmerica, Sacramento
860 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:	COC No:
Company: GHD Services Inc.			Page: 2 of 2
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:		Job #:
City: Baton Rouge	TAT Requested (days): 15 business days		
State, Zip: LA, 70808			
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested		
Email: janie.smith@ghd.com	WO #:		
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702		
Site: San Jacinto Waste Pits	SSOW#: 11215702 - 2021-001		

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	16138	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-080321-BN-SJSB09 (22-24)	8-3-21	1425	G	S	N	N	X	X	X	1	HOLD
11215702-080321-BN-DUP-~~11~~ 18	8-3-21	—	G	S	N	N	X	X	X	1	

Kwr 8/18/2021

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:		Time:	Method of Shipment: FedEx		
Relinquished by: Breanna North	Date/Time: 8-4-21 1500	Company: GHD	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

794466

794467

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

320-77292 Chain of Custody

eurofins

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:	Page: 1 of 2
Company: GHD Services Inc.			Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:		
City: Baton Rouge	TAT Requested (days): 15 business days		
State, Zip: LA, 70808			
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested		
Email: janie.smith@ghd.com	WO #:		
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702		
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001		

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-080321-BN-SJSB09 (0-2)	8-3-21	1330	G	S	N	N	X	X	X	1	
(2-4)		1335			N	Y	X	X	X	1	MS/MSD
(4-6)		1340			N	N	X	X	X	1	
(6-8)		1345			N	N	X	X	X	1	
(8-10)		1350			N	N	X	X	X	1	
(10-12)		1355			N	N	X	X	X	1	
(12-14)		1400			N	N	X	X	X	1	
(14-16)		1405			N	N	X	X	X	1	
(16-18)		1410			N	N	X	X	X	1	PRIORITY
(18-20)		1415			N	N	X	X	X	1	HOLD
(20-22)		1420			N	N	X	X	X	1	HOLD

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FedEx		
Relinquished by: Breanna North	Date/Time: 8-4-21 1500	Company: GHD	Received by: [signature]	Date/Time: 8-6-21 1105	Company: ETASAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.: 1519432		Cooler Temperature(s) °C and Other Remarks: 1.2		

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95606-1500
Phone (916) 373-5600 Fax (303) 467-7248

Chain of Custody Record

eurofins

Client Information	Sampler: Breanna North	Lab PM: Karen Dahl	Carrier Tracking No(s):	COC No:
Client Contact: Janie Smith	Phone: 501-454-9966	E-Mail:		Page: 2 of 2
Company: GHD Services Inc.				Job #:
Address: 5551 Corporate Boulevard Suite 200	Due Date Requested:			
City: Baton Rouge	TAT Requested (days): 15 business days			
State, Zip: LA, 70808				
Phone: 225-292-9007(Tel)	PO #: Purchase Order Requested			
Email: janie.smith@ghd.com	WO #:			
Project Name: SJRWP Supplemental Design Investigation	Project #: 11215702			
Site: San Jacinto Waste Pits	SSOW#: 11215702-2021-001			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1613B	TEQ	%moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
11215702-080321-BN-SJSB09 (22-24)	8-3-21	1425	G	S	N	N	X	X	X	1	HOLD
11215702-080321-BN-DUP-11	8-3-21	—	G	S	N	N	X	X	X	1	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FedEx		
Relinquished by: Breanna North	Date/Time: 8-4-21 1500	Company: GHD	Received by: [illegible]	Date/Time: 8-6-21 / 10:15	Company: ETASAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.: 1519 432
Cooler Temperature(s) °C and Other Remarks: 1.2

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-77292-1

Login Number: 77292
List Number: 1
Creator: Ortiz, Erick E

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1519432
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	